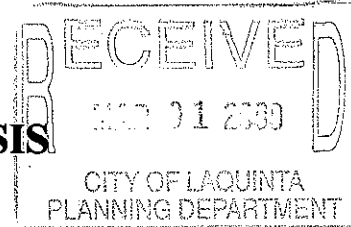


29702

**VILLA LA QUINTA
TRAFFIC IMPACT ANALYSIS**



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February 2000

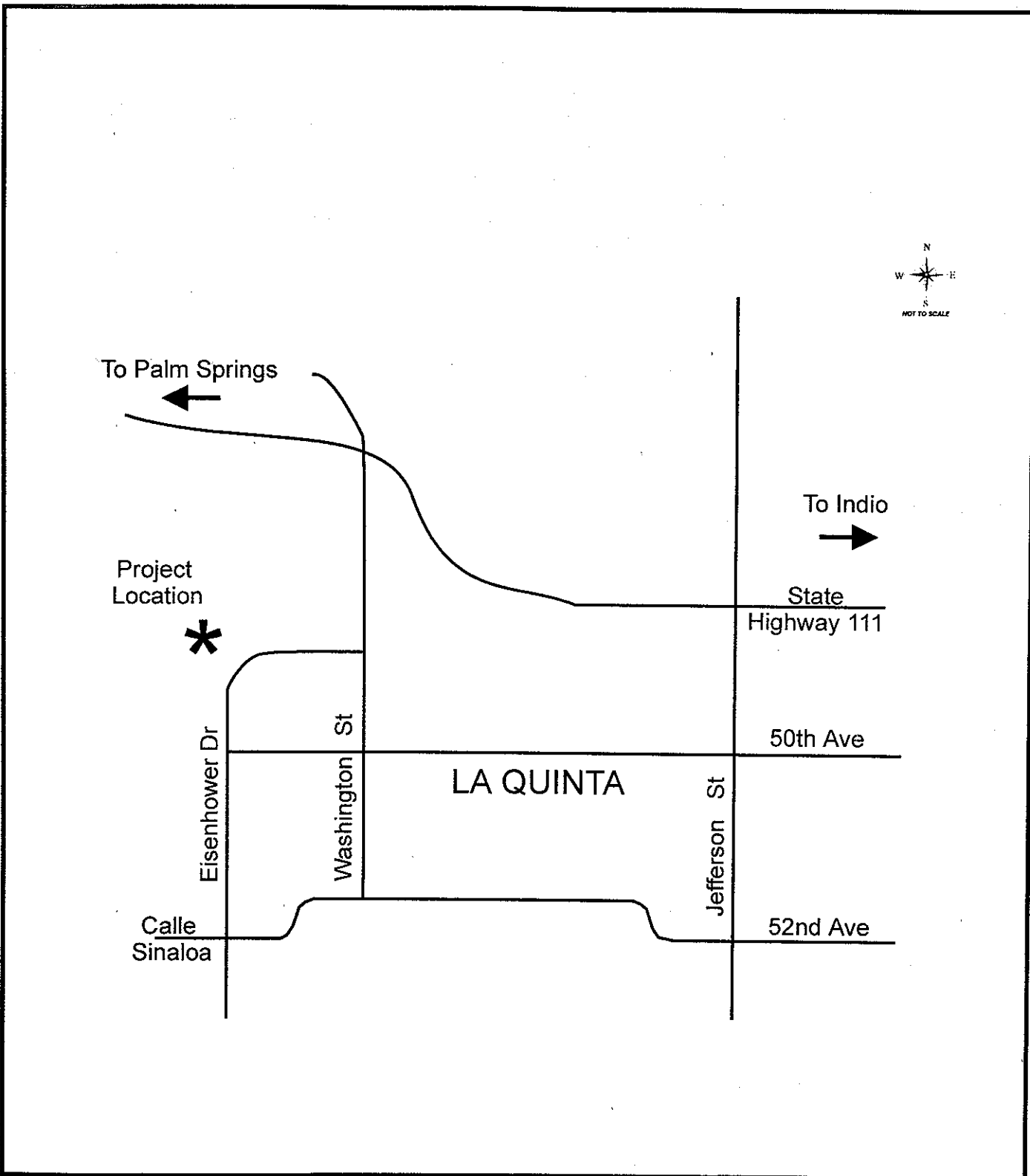
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1. INTRODUCTION

This report provides a traffic impact analysis for the Villa La Quinta project. The location of the project is in the City of La Quinta, California, as shown in Figure 1-1.


The remainder of this report is divided into chapters that provide analysis of various issues. Chapter 2 provides a description of the project. Traffic conditions are described in Chapter 3. Chapter 4 provides a summary of key traffic impact issues. Information on future traffic conditions will be provided in subsequent reports. Finally, Chapter 5 includes a summary of mitigation measures. An appendix has been included which contains capacity analysis calculations.



City of
La Quinta

La Quinta Resort
Traffic Impact Analysis

Figure 1-1
Project Location



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2. PROJECT DESCRIPTION

The project site is shown in Figure 2-1. The proposed Villa La Quinta Specific Plan would allow for a resort residential development on approximately 105.9 acres within the City of La Quinta.

The proposed project consists of approximately 300 private resort dwelling units, within 62 separate two-story buildings, held in shared ownership by club owners. There will be 600 keys for the 300 units, allowing for each unit to be "locked off" into two separate living spaces. The proposed project also provides a private resort clubhouse, a resort swimming pool that would be accessible to club owners and their guests, various water features, and a sales building. Approximately 751 parking spaces will be provided throughout the project site. The proposed project has four planning areas with the following project components:

Planning Area I – development of 300 Private Resort Dwelling Units (600 keys) on approximately 47.7 acres.

Planning Area II – development of Private Resort Clubhouse Facilities, on approximately 5 acres, consisting of:

- ◆ Member's Pool
- ◆ Convenience Store
- ◆ Fitness Center
- ◆ Restrooms and Locker Rooms
- ◆ Steam and Sauna Areas and Related Recreation Amenities

Planning Area III - development of Discovery Gallery (10,000 square feet), on approximately 9 acres consisting of:

- ◆ Executive Offices
- ◆ Sales/Marketing Operations
- ◆ Conference Room
- ◆ Restrooms

Planning Area IV – provides for undeveloped open space on approximately 45.3 acres.

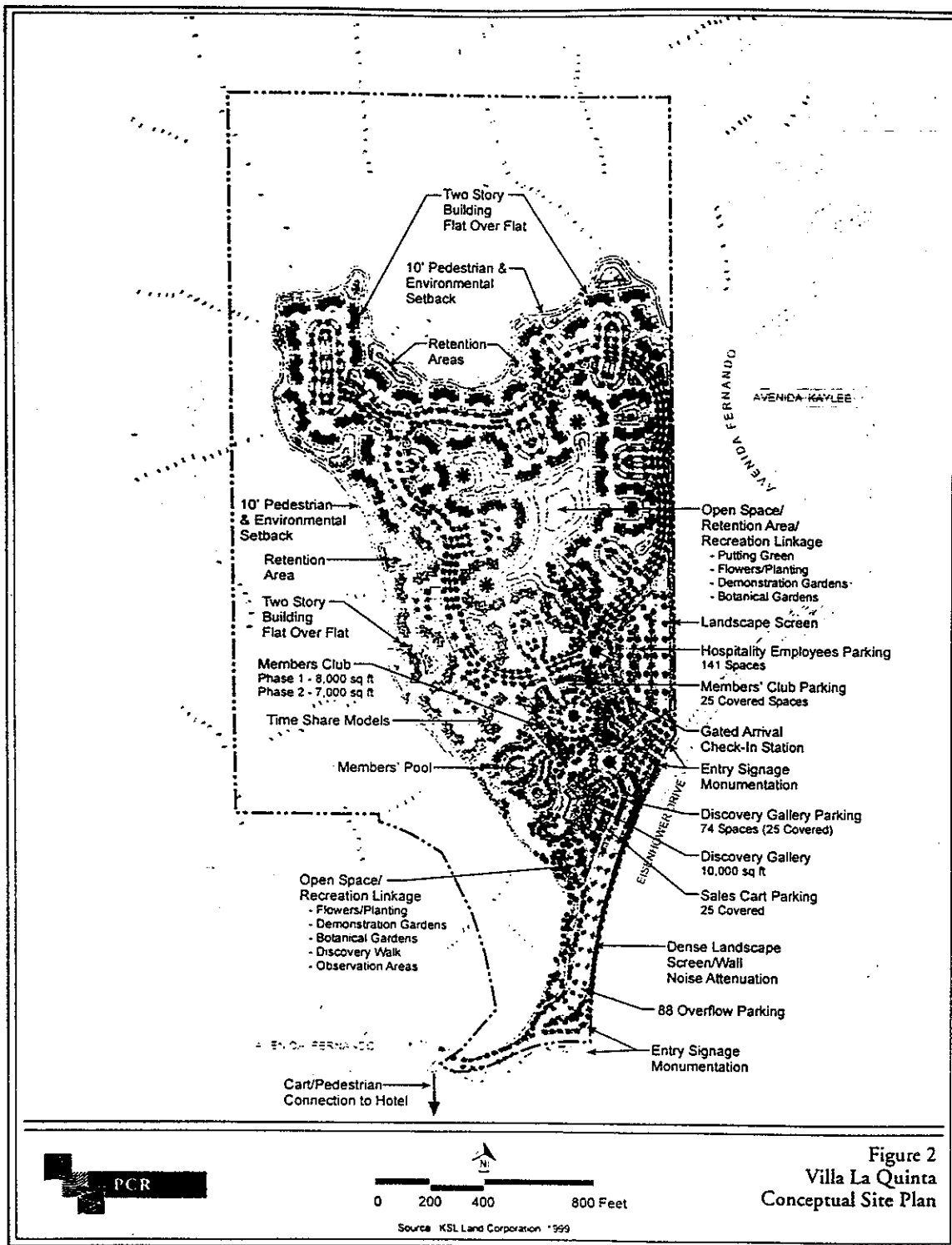


Figure 2
Villa La Quinta
Conceptual Site Plan

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La Quinta Resort
Traffic Impact Analysis

Figure 2-1 Project Site



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3. TRAFFIC CONDITIONS

Existing traffic conditions were obtained through field observations conducted by VRPA staff on March 17, 1999 and from information provided by the City of La Quinta. Figure 3-1 shows the study area for the analysis of traffic impacts. The intersections shown in Figure 3-1 were determined by VRPA in consultation with the City. Figure 3-2 shows existing traffic control at each of the key study area intersections.

3.1 EXISTING CONDITIONS

Existing traffic in the study area is shown in Figure 3-3 and Figure 3-4. Figure 3-3 shows roadway segment traffic, based on the number of vehicles that would use the roadway segment in a 24-hour period. Figure 3-4 shows intersection turning movement counts in the PM peak hour. The information shown in Figures 3-3 and 3-4 was based on counts provided by field review conducted by VRPA. All of the counts are considered to reflect 1999 peak season (winter) traffic. Existing roadway segment levels of service are shown in Table 3-1.

3.2 PROJECT TRAFFIC

Trip generation for the project is shown in Table 3-2. Trip distribution for project trips is shown in Figures 3-5. Project traffic is shown in Figure 3-6.

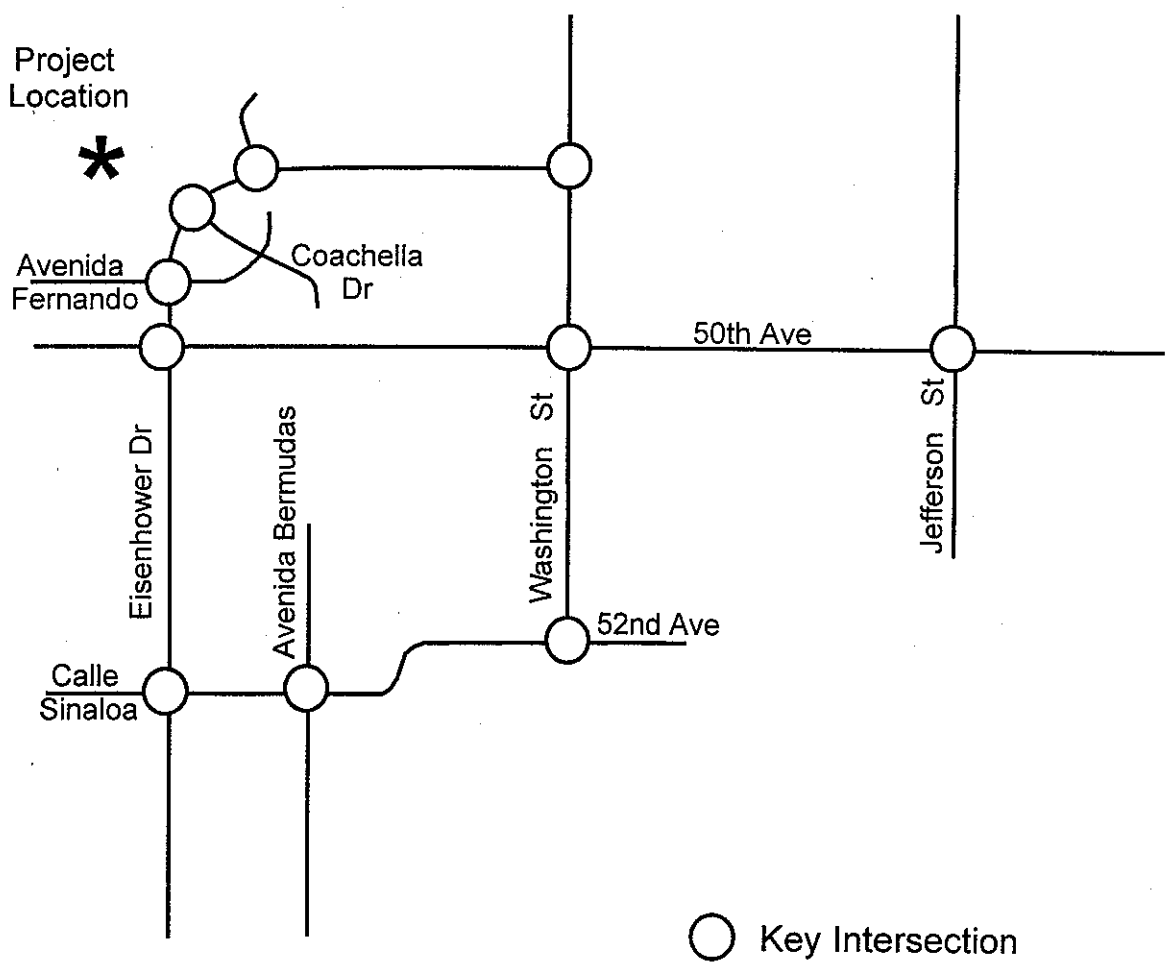
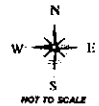
3.3 EXISTING PLUS PROJECT TRAFFIC

Existing Plus Project Traffic is shown in Figure 3-7. Level of Service (LOS) calculations are shown on Table 3-3.

3.4 FUTURE WITHOUT PROJECT TRAFFIC

Future conditions without the project were also analyzed. Figure 3-8 shows roadway segment traffic and Figure 3-9 shows PM Peak hour intersection turning movements for traffic conditions corresponding to the buildout of the City of La Quinta's General Plan. The following steps were used to determine traffic conditions for this scenario:

- ◆ Existing Average Daily Traffic was determined using conducted by VRPA Technologies
- ◆ Future Average Daily Traffic was determined using the Circulation Element of the General Plan
- ◆ Existing turning movements were multiplied by the expected proportional increases in traffic (Future ADT divided by Existing ADT) on adjacent street segments



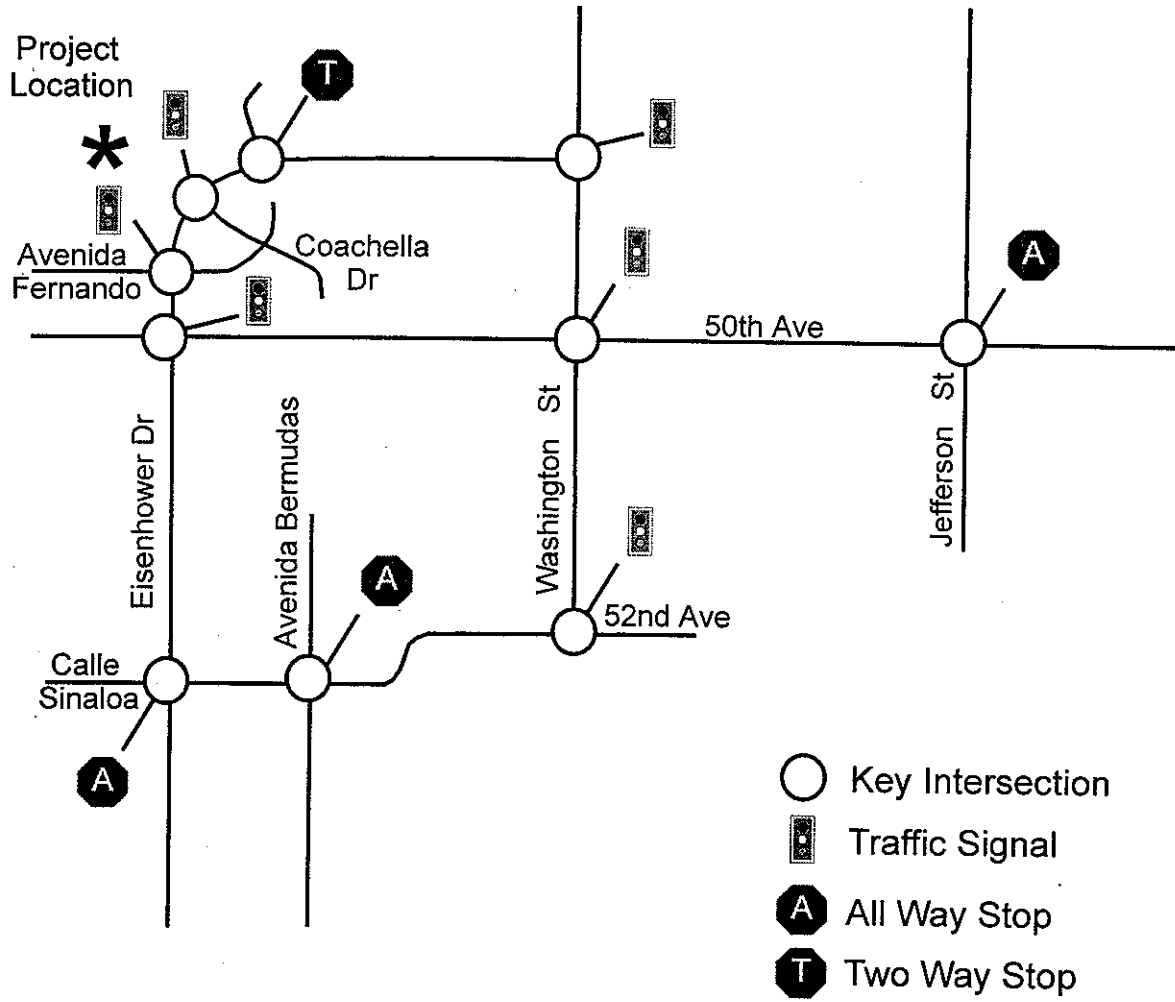
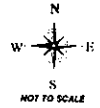
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La Quinta Resort
Traffic Impact Analysis

Figure 3-1 Study Area



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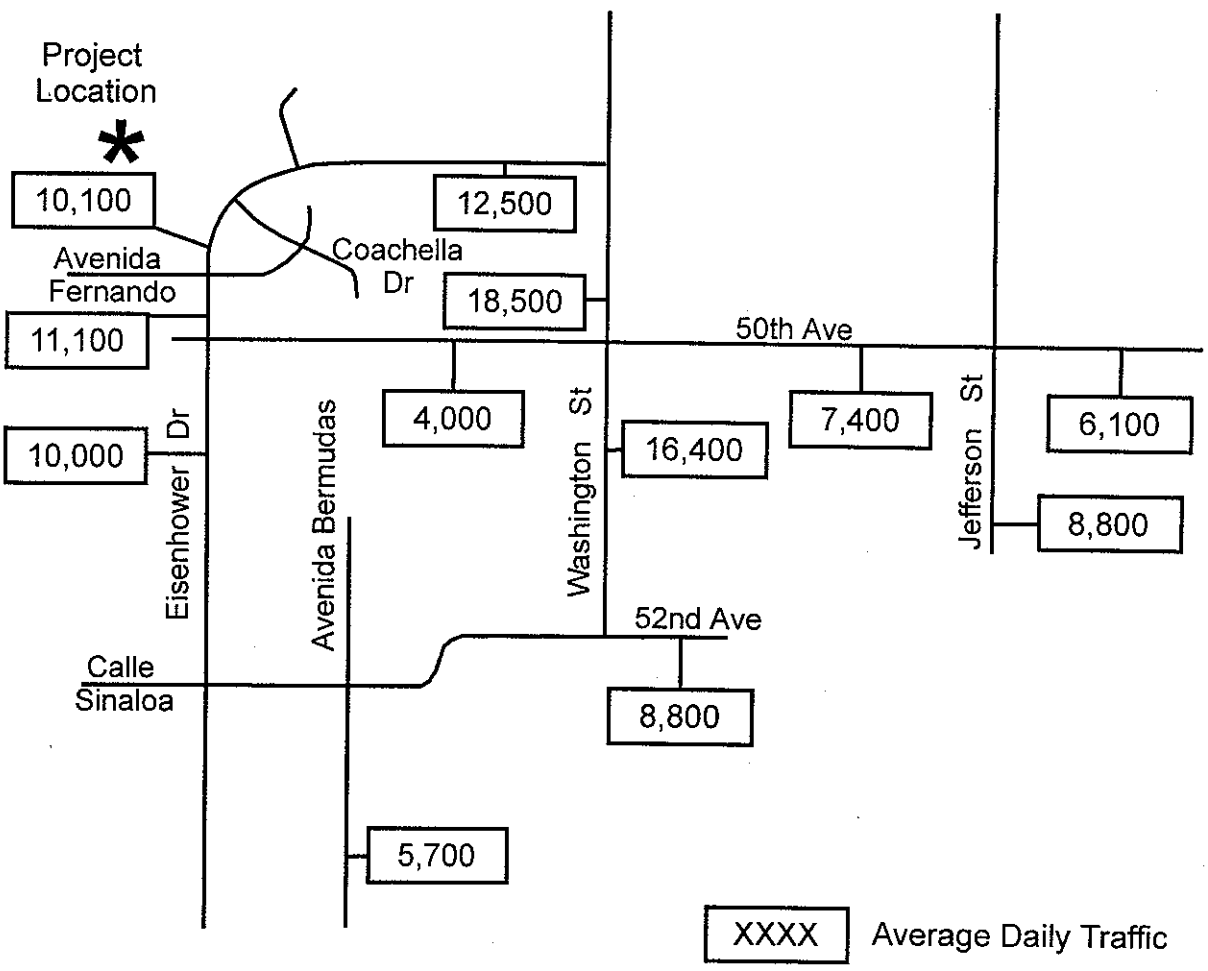
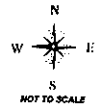


City of
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Traffic Impact Analysis

Figure 3-2 Existing Traffic Control





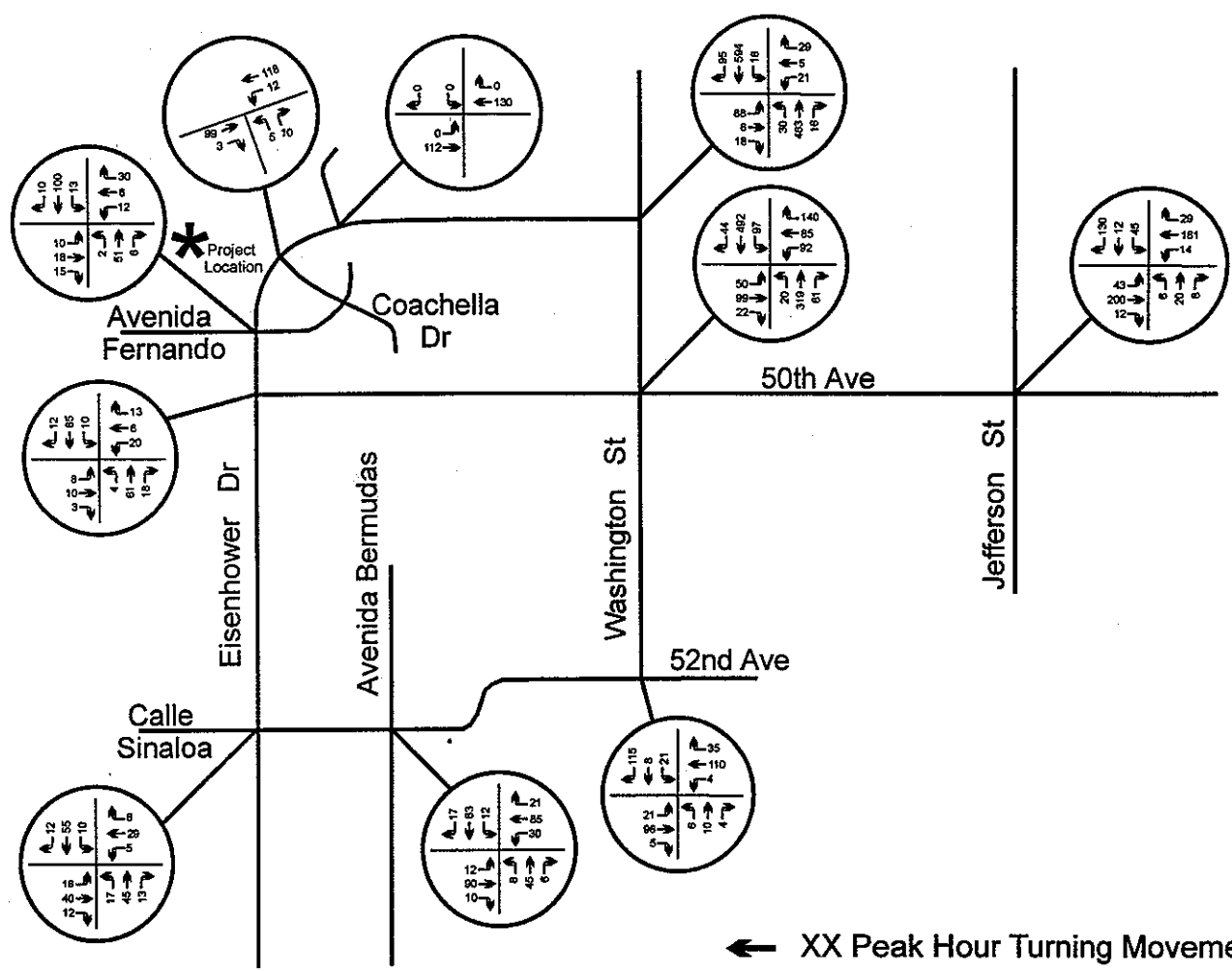
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La Quinta Resort
Traffic Impact Analysis

Figure 3-3
Existing Traffic Conditions
(Roadway Segments)

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La Quinta Resort
Traffic Impact Analysis

Figure 3-4
Existing Traffic Conditions
(Intersections)

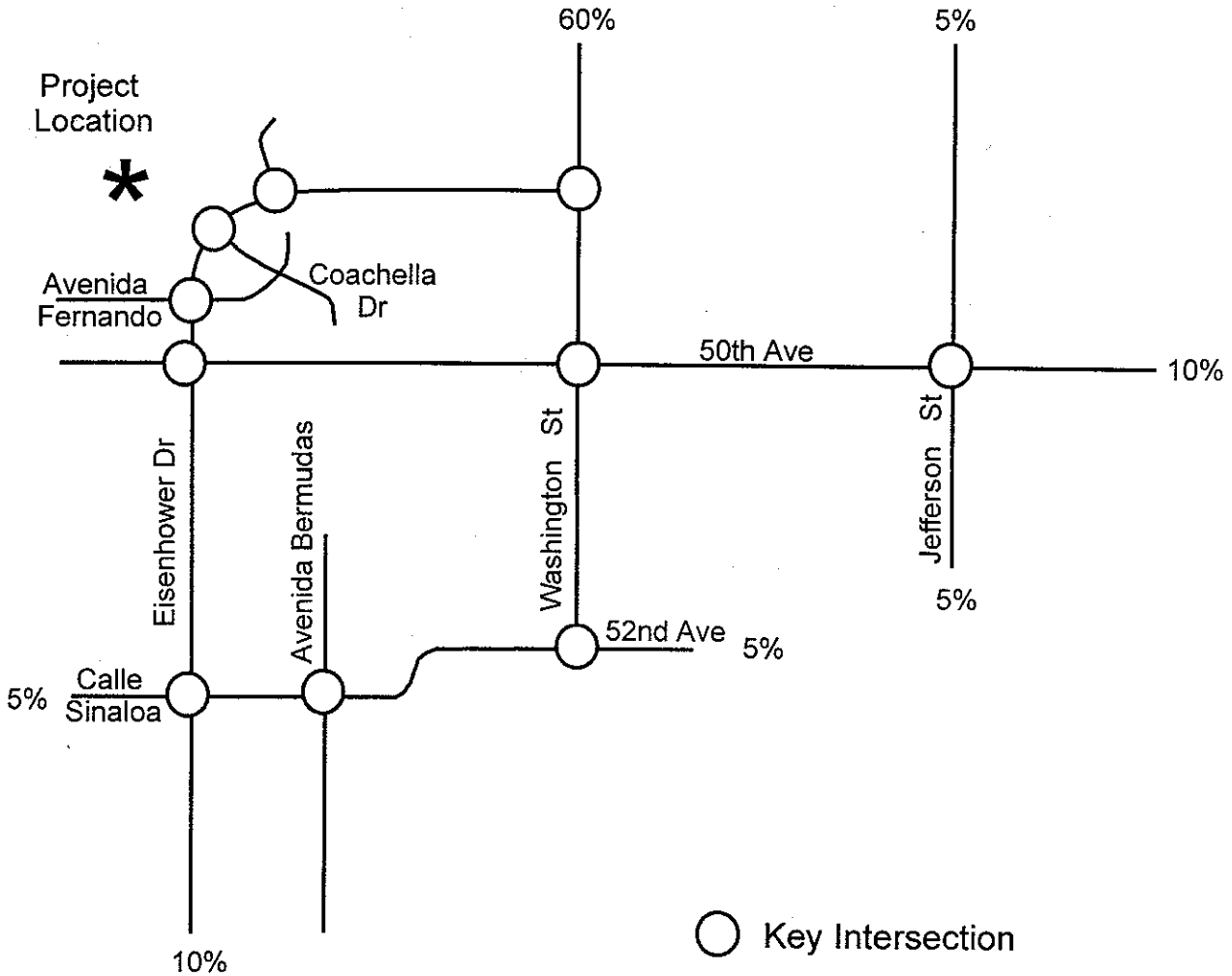
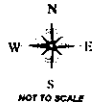


TABLE 3-1
EXISTING ROADWAY LEVELS OF SERVICE

Roadway Segment	Average Daily Traffic	Roadway Capacity	Volume to Capacity Ratio	Level of Service
Eisenhower, w/o Washington	12,500	38,000	0.33	A
Eisenhower, n/o Avenida Fernando	10,100	38,000	0.27	A
Eisenhower, n/o 50 th	11,100	38,000	0.29	A
Eisenhower, s/o 50 th	10,000	38,000	0.26	A
Avenida Bermudas, s/o Calle Sinaloa	5,700	18,000	0.32	A
Washington, n/o 50 th	18,500	38,000	0.49	A
Washington, s/o 50 th	16,400	38,000	0.43	A
Jefferson, s/o 50 th	8,800	18,000	0.49	A
50 th , w/o Washington	4,000	38,000	0.11	A
50 th , w/o Jefferson	7,400	18,000	0.41	A
50 th , e/o Jefferson	6,100	18,000	0.34	A
52 nd , e/o Washington	8,800	38,000	0.23	A

**Table 3-2
VILLA LA QUINTA PROJECT SITE TRIP GENERATION
CITY OF LA QUINTA**

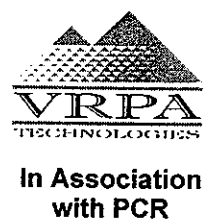
Land Use	Size	Units	ITE Code	Daily Trip Rate	Key Holder Factor	Daily Trips	% PM Peak Hour	% PM Inbound	PM Peak Hour Trips	
									In	Out
Shopping Center	300	D.U.	310	8.0	1.2	2,880	8.0%	49.0%	113	118
Total						2,880			113	118
Subtotal									113	118
Total trips									230	

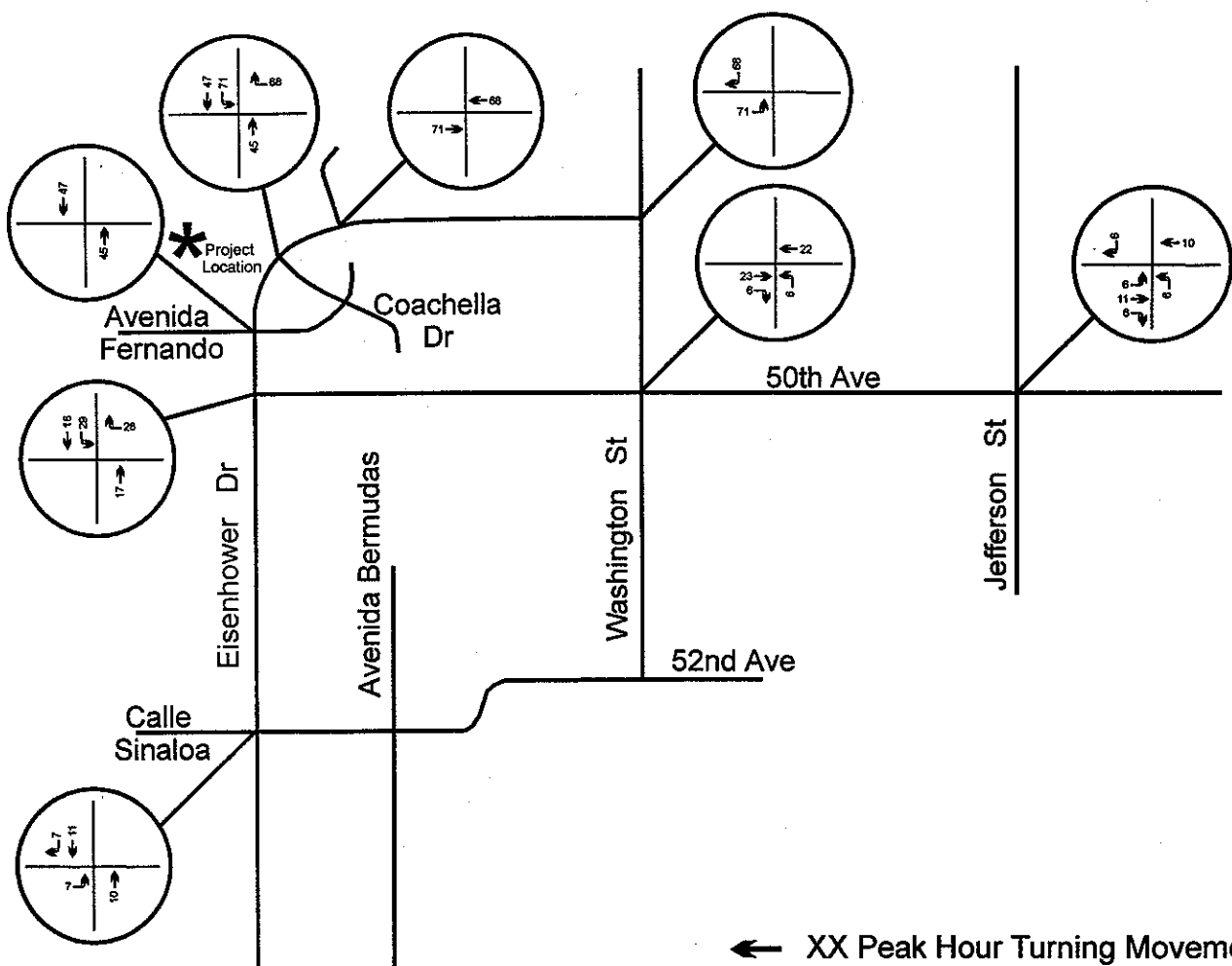


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La Quinta Resort
Traffic Impact Analysis

Figure 3-5 Trip Distribution





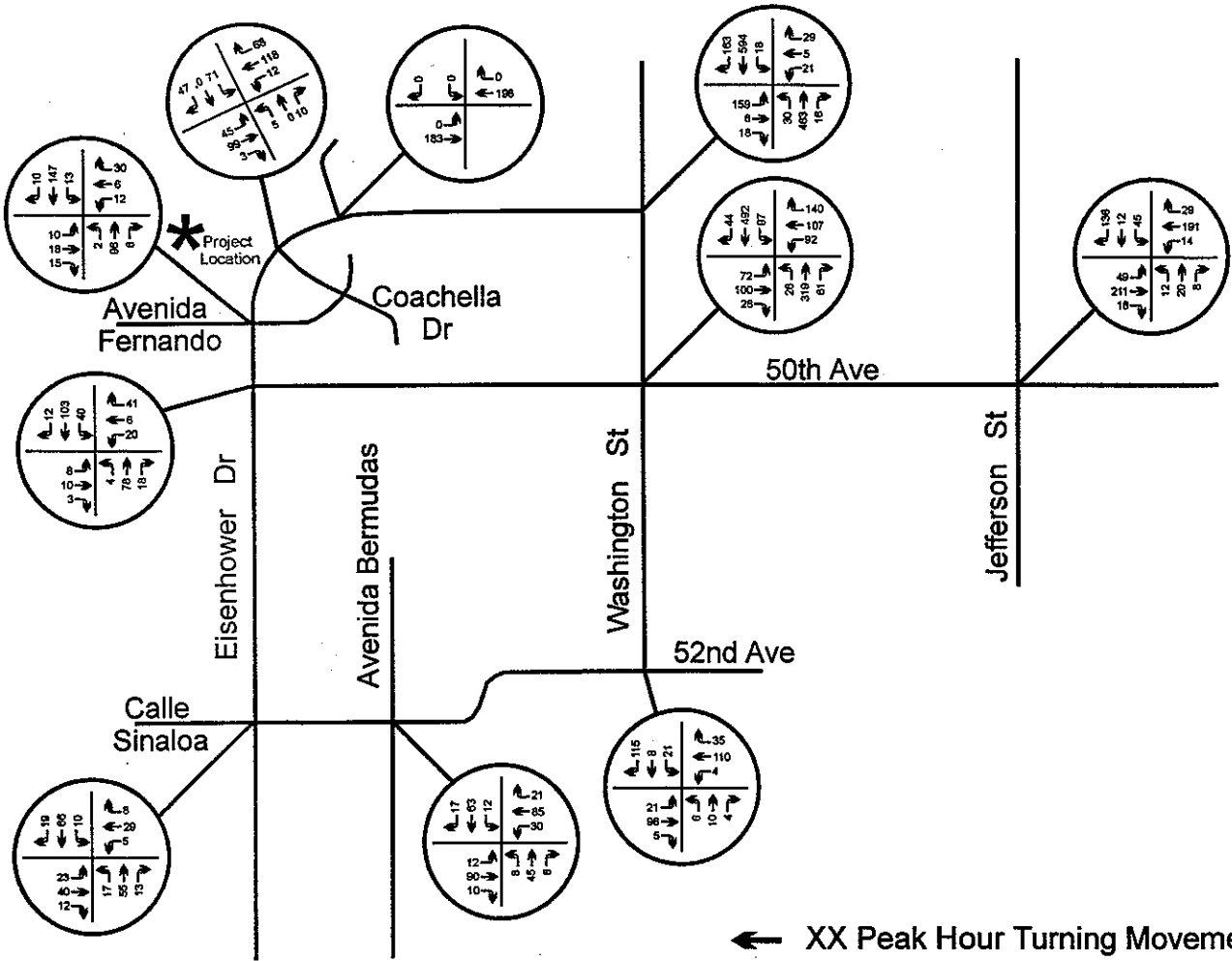
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Figure 3-6 Project Trips



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Figure 3-7
Existing + Project Trips

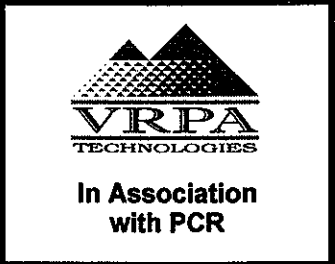
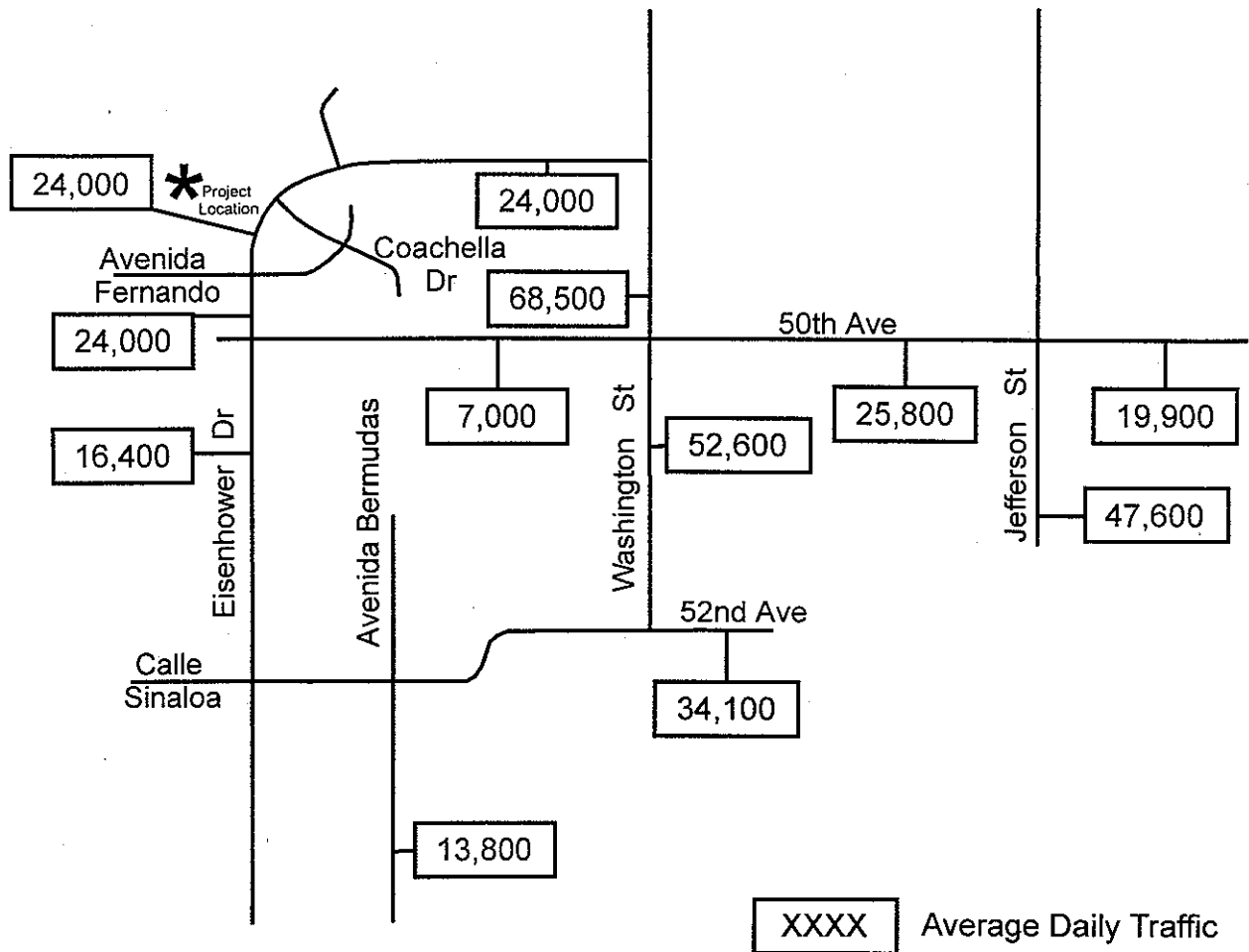
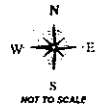


TABLE 3-3

VILLA LA QUINTA TRAFFIC IMPACT ANALYSIS
LEVEL OF SERVICE AND INTERSECTION DELAY COMPARISON

INTERSECTION	EXISTING		EXISTING + PROJECT		FUTURE		FUTURE + PROJECT		FUTURE + PROJECT with Mitigation	
	LOS	DELAY (SEC.)	LOS	DELAY (SEC.)	LOS	DELAY (SEC.)	LOS	DELAY (SEC.)	LOS	DELAY (SEC.)
1. Washington St. & 52nd Ave.	C	17.8	C	17.8	C	18.7	C	18.7		
2. Washington St. & 50th Ave.	C	21.3	C	18.0	F	*	F	*	D	36.2
3. Washington St. & Eisenhower Dr.	C	19.4	C	15.6	B	14.2	C	25.7		
4. Eisenhower Dr. & Calle Sinaloa	C	*	A	2.0	A	2.4	A	2.7		
5. Eisenhower Dr. & 50th Ave.	C	20.9	C	20.8	C	19.6	C	18.4		
6. Eisenhower Dr. & Avenida Fernando (S)	C	18.2	B	14.7	C	16.8	C	15.3		
7. Eisenhower Dr. & Coachella Dr.	B	9.7	C	20.5	B	10.2	C	20.4		
8. Jefferson St. & 50th Ave.	B	8.8	B	5.3	C	*	C	*		
9. Avenida Bermudas & 52nd Ave.	A	4.4	A	4.4	A	3.7	A	3.7		
10. Eisenhower Dr. & Avenida Fernando (N)	B	6.0	B	0.0	B	4.4	B	0.0		

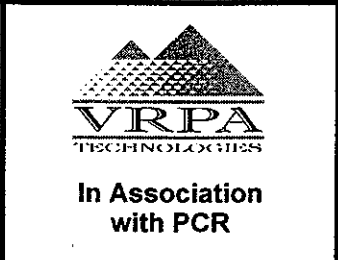
Note: * Delay over 60 seconds. Exact value can not be calculated.

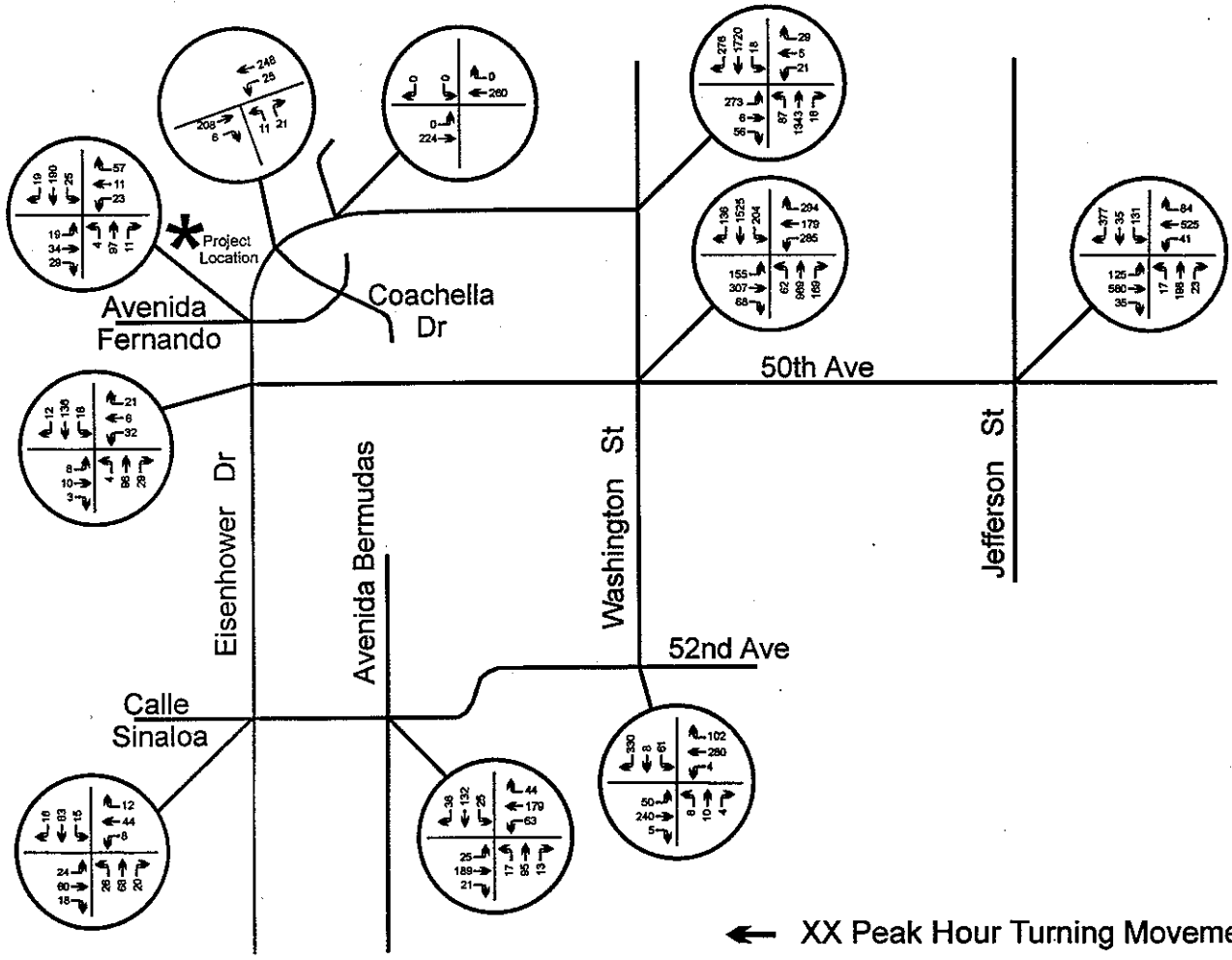


City of
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La Quinta Resort
Traffic Impact Analysis

Figure 3-8
Future Traffic Conditions
(Roadway Segments)





← XX Peak Hour Turning Movement

City of
La Quinta

La Quinta Resort
Traffic Impact Analysis

**Figure 3-9
Future Traffic Conditions
(Intersections)**



Based on the roadway segment traffic counts shown in Figure 3-8, volume to capacity ratios and levels of service can be calculated for key street segments. This analysis is shown in Table 3-4. In traffic engineering methodology, roadway operations are rated in terms of level of service ranging from level of service A (light traffic, minimal delays) to level of service F (significant traffic congestion).

3.5 FUTURE WITH PROJECT TRAFFIC

Future conditions with the project were also analyzed. Figure 3-10 shows future year conditions with the proposed project traffic.

3.6 ACCESS ANALYSIS FOR PROPERTY TO THE EAST

The property to the east of the Villa La Quinta development is expected to be developed as 169 single-family residential units. There are two alternative access scenarios under consideration for this property:

Alternative 1 (Shared Access) – Direct access to Eisenhower Drive with allowances for right turns in, right turns out, and left turns in. Left turns out would be made through an exit-only driveway to the Villa La Quinta property.

Alternative 2 (Separate Access) - Direct access to Eisenhower Drive with allowances for right turns in, right turns out, and left turns in. Left turns out would be made through a U-turn at the Eisenhower Drive/Coachella Drive intersection. This would require widening of the northeast leg of the intersection to accommodate U-turn movements.

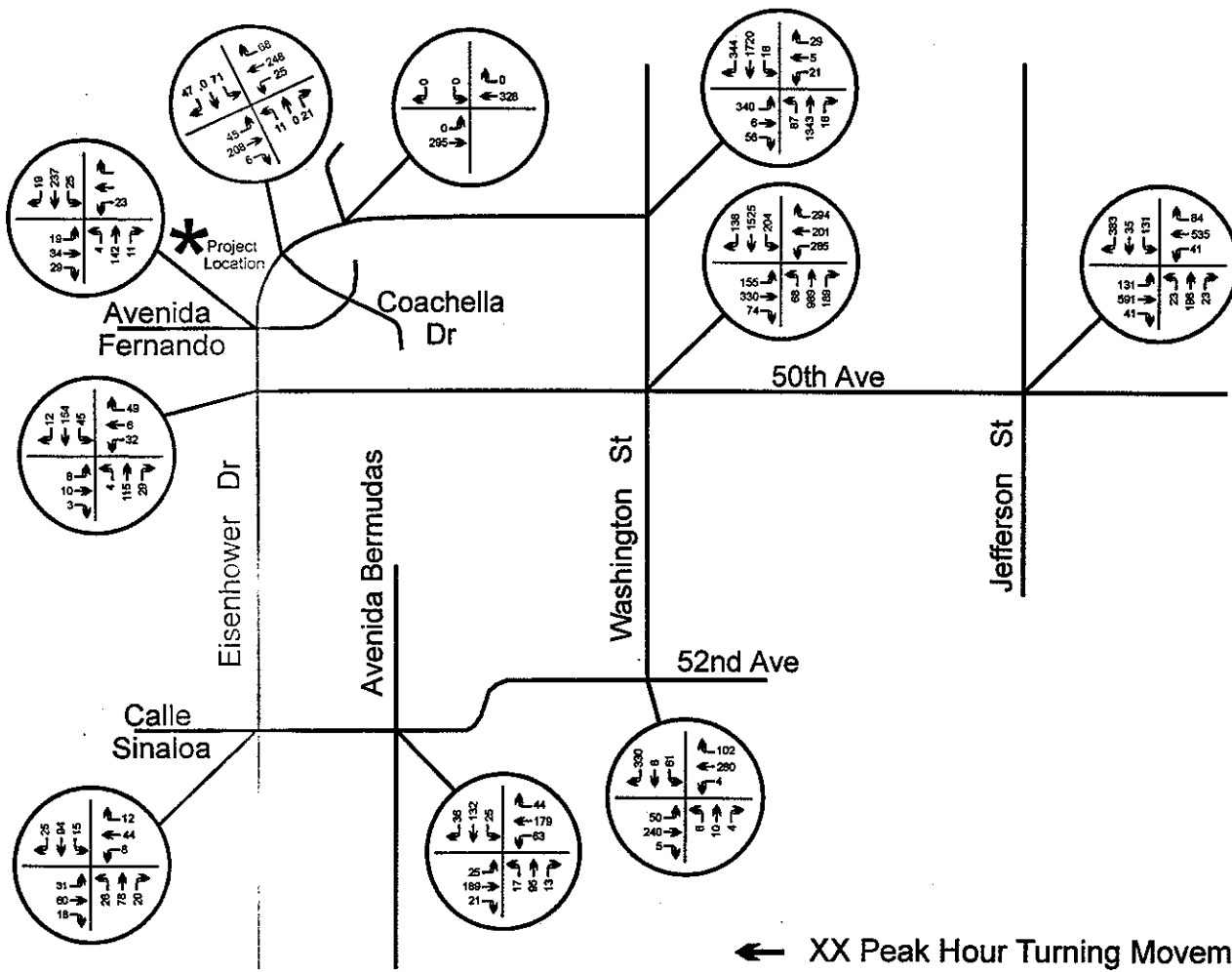
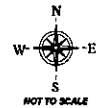
Figure 3-11 shows the expected traffic forecasts for these two alternatives. No changes in levels of service would occur in either of these alternatives and no changes in levels of service would occur compared to the Future Plus Project scenario. It is recommended that the decision between these alternatives be made based on the cost of the required improvements and the desirability of shared access.

3.7 PARKING ANALYSIS

The project applicant for the has proposed a parking requirement of 1.5 spaces per unit and has supplied research to support this proposal. VRPA has reviewed the research provided by the applicant as well as other parking demand sources and it is recommended that the parking ratio of 1.5 spaces per unit be accepted by the City of La Quinta.

TABLE 3-4
FUTURE without PROJECT ROADWAY LEVELS OF SERVICE

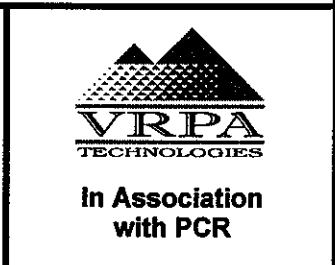
Roadway Segment	Average Daily Traffic	Roadway Capacity	Volume to Capacity Ratio	Level of Service
Eisenhower, w/o Washington	24,000	38,000	0.63	A
Eisenhower, n/o Avenida Fernando	24,000	38,000	0.63	A
Eisenhower, n/o 50 th	24,000	38,000	0.63	A
Eisenhower, s/o 50 th	16,400	38,000	0.43	A
Avenida Bermudas, s/o Calle Sinaloa	13,800	18,000	0.77	D
Washington, n/o 50 th	68,500	54,000	1.27	F
Washington, s/o 50 th	52,600	54,000	0.97	E
Jefferson, s/o 50 th	47,600	54,000	0.88	E
50 th , w/o Washington	7,000	38,000	0.18	A
50 th , w/o Jefferson	25,800	38,000	0.68	C
50 th , e/o Jefferson	19,900	38,000	0.52	A
52 nd , e/o Washington	34,100	38,000	0.90	E

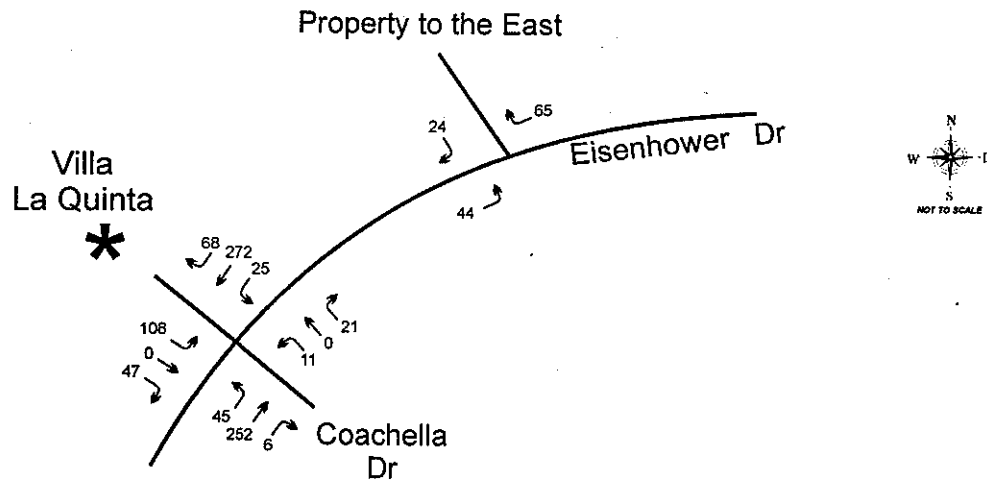


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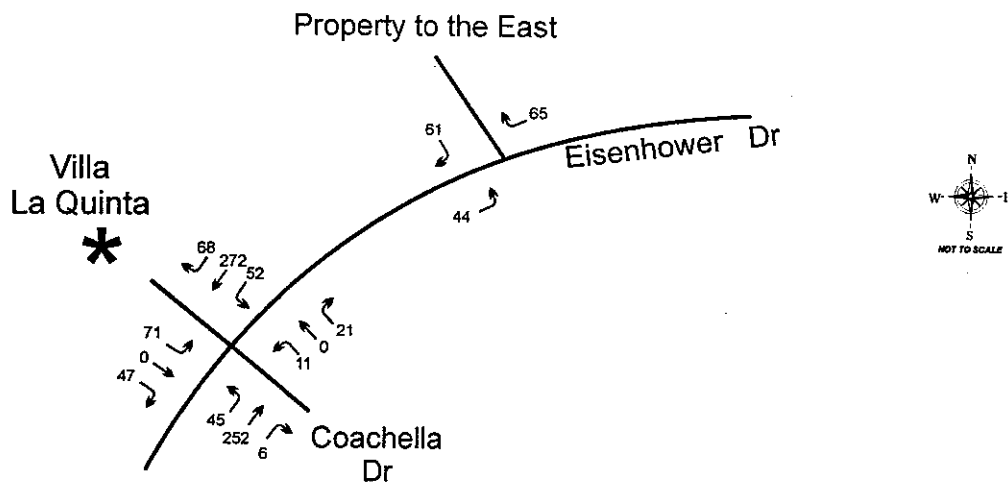
La Quinta Resort
Traffic Impact Analysis

Figure 3-10
Future + Project Trips
(Intersections)





Alternative 1 -Shared Access with Villa La Quinta



Alternative 2 -Seperate Access

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La Quinta Resort
Traffic Impact Analysis

Figure 3-11
Access Alternatives for
Property to the East

Future + Project Conditions



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4 KEY TRAFFIC IMPACT ISSUES

Based on the analysis described above as well as VRPA's field review and discussions with the City of La Quinta, the following conclusions can be drawn regarding the traffic impact analysis for the La Quinta Resort:

- ◆ There appear to be no major traffic constraints to development of the project as currently envisioned.
- ◆ For the Existing Plus Project Scenario, the project will add traffic to the regional street system and will create a small incremental increase in delay to regional roadways.
- ◆ For the Future Plus Project Scenario, the project will add traffic to the regional street system and will create a small incremental increase in delay to regional roadways. In addition, the project would contribute a small increment of traffic to the intersection of Washington Street and 50th Avenue. This intersection is expected to operate at level of service F under this scenario, which exceeds the City's standard of level of service D.
- ◆ No access or parking impacts are expected to result based on implementation of the project.

5. MITIGATION MEASURES

This section documents recommended mitigation measures. For the Existing Plus Project scenario, the following mitigation measure is recommended.

- ◆ The project is expected to be required to pay a fair share of traffic improvements related to any traffic impacts caused by project traffic. This will include a contribution toward the Transportation Uniform Mitigation Fee (TUMF) as is required of all major development projects in the Coachella Valley.

For the Future With Project scenario, the following mitigation measures are recommended:

- ◆ For the intersection of Washington Street and 50th Avenue, addition of one right turn lane for northbound movement is the addition for this movement. The southbound movement requires the addition of a left turn lane and one thru lane for this movement. The eastbound and westbound movements would only require the addition of one thru lane. These improvements would bring up the level of service for this intersection would be LOS D. The project's contribution to the TUMF is considered to provide adequate project mitigation for this improvement.
- ◆ Improvement of the intersection of Eisenhower Drive and Avenida Fernando is expected to be required in order to provide adequate access to the project.
- ◆ The project is expected to be required to pay a fair share of traffic improvements related to any traffic impacts caused by project traffic. This will include a contribution toward the Transportation Uniform Mitigation Fee (TUMF) as is required of all major development projects in the Coachella Valley.

APPENDIX

Intersection Capacity Calculations

Intersection Capacity Calculations

EXISTING CONDITIONS

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4g 11-03-1999
 Center For Microcomputers In Transportation

Streets: (N-S) Washington St. (E-W) 52nd Ave.
 Analyst: Jose Nunez File Name: WSH52MR.HC9
 Area Type: Other 3-22-99 PK HR
 Comment: Existing conditions (March 17th, 99)

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	> 1	< 0	2	> 1	1	2	2	< 0	1	2	1
Volumes	3	3	4	118	4	114	155	141	1	7	146	132
Lane W (ft)	12.0			12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
RTOR Vols	0			11			0			13		
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
NB Left	*				EB Left	*		
Thru	*				Thru	*		
Right	*				Right	*		
Peds	*				Peds	*		
SB Left		*			WB Left		*	
Thru		*			Thru		*	
Right		*			Right		*	
Peds		*			Peds		*	
EB Right					NB Right			
WB Right		*			SB Right	*		
Green	10.0A	40.0A			Green	39.0A	15.0A	
Yellow/AR	4.0	4.0			Yellow/AR	4.0	4.0	
Cycle Length: 120 secs Phase combination order: #1 #2 #5 #6								

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
NB	LTR	134	1466	0.074	0.092	32.2	D	32.2	D
SB	L	1142	3343	0.077	0.342	17.3	C	11.2	B
	LT	575	1683	0.075	0.342	17.2	C		
	R	1046	1495	0.103	0.700	3.8	A		
EB	L	1203	3610	0.140	0.333	18.1	C	18.0	C
	TR	1265	3796	0.123	0.333	18.0	C		
WB	L	241	1805	0.029	0.133	29.2	D	22.4	C
	T	507	3800	0.320	0.133	30.5	D		
	R	767	1615	0.163	0.475	11.6	B		

Intersection Delay = 17.8 sec/veh Intersection LOS = C
 Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.145

Streets: (N-S) Washington St. (E-W) 50th Ave.
 Analyst: Jose Nunez File Name: WSH50MR.HC9
 Area Type: Other 3-17-99 PK HR
 Comment: Existing conditions (March 17th, 99)

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	< 0	1	1	1	1	1	1	1	1	< 0
Volumes	27	443	48	96	509	60	43	62	19	47	64	102
Lane W (ft)	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
RTOR Vols			5			6			2			10
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
NB Left	*				EB Left	*		
Thru		*			Thru	*		
Right		*			Right	*		
Peds		*			Peds	*		
SB Left	*				WB Left	*		
Thru		*			Thru	*		
Right		*			Right	*		
Peds	*				Peds	*		
EB Right					NB Right			
WB Right					SB Right			
Green	16.0A	44.0A			Green	48.0A		
Yellow/AR	4.0	4.0			Yellow/AR	4.0		
Cycle Length: 120 secs Phase combination order: #1 #2 #5								

Intersection Performance Summary

	Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:		
								Mvmts	Cap	Flow
NB	L		237	1671	0.118	0.142	29.1	D	18.6	C
	TR		1302	3471	0.413	0.375	18.0	C		
SB	L		237	1671	0.427	0.142	31.2	D	26.8	D
	T		660	1759	0.813	0.375	27.1	D		
	R		561	1495	0.102	0.375	15.7	C		
EB	L		416	1018	0.108	0.408	14.2	B	14.1	B
	T		776	1900	0.084	0.408	14.1	B		
	R		659	1615	0.027	0.408	13.7	B		
WB	L		600	1469	0.082	0.408	14.0	B	14.8	B
	TR		707	1732	0.230	0.408	15.0	B		

Intersection Delay = 21.3 sec/veh Intersection LOS = C
 Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.497

Streets: (N-S) Washington St. (E-W) Eisenhower Dr.
 Analyst: Jose Nunez File Name: WSHHMR.HC9
 Area Type: Other 3-17-99 PK HR
 Comment: Existing conditions (March 17th, 99)

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	1	1	2	1	2	> 1	1	0	> 1	< 0
Volumes	15	608	13	43	795	452	419	7	8	22	10	35
Lane W (ft)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		
RTOR Vols	1			45			0			4		
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
NB Left	*				EB Left	*		
Thru		*			Thru	*		
Right		*			Right	*		
Peds					Peds	*		
SB Left		*			WB Left		*	
Thru			*		Thru		*	
Right			*		Right		*	
Peds			*		Peds	*		
EB Right		*			NB Right		*	
WB Right					SB Right	*		
Green	12.0A	40.0A			Green	40.0A	16.0A	
Yellow/AR	0.0	4.0			Yellow/AR	4.0	4.0	
Cycle Length: 120 secs Phase combination order: #1 #2 #5 #6								

Intersection Performance Summary

	Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	
								Mvmts	Cap
NB	L	125	1671	0.128	0.075	33.5	D	21.3	C
	T	1202	3519	0.559	0.342	21.2	C		
	R	723	1495	0.018	0.483	10.4	B		
SB	L	125	1671	0.359	0.075	34.9	D	18.3	C
	T	1202	3519	0.731	0.342	24.0	C		
	R	1059	1495	0.405	0.708	4.8	A		
EB	L	1233	3610	0.249	0.342	18.4	C	18.3	C
	LT	620	1814	0.242	0.342	18.3	C		
	R	673	1615	0.012	0.417	13.3	B		
WB	LTR	221	1557	0.304	0.142	30.0	D	30.0	D

Intersection Delay = 19.4 sec/veh Intersection LOS = C
 Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.450

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Streets: (N-S) Eisenhower Dr. (E-W) Calle Sinaloa
 Analyst..... Jose Nunez
 Date of Analysis..... 3/17/99
 Other Information..... Existing conditions (March 17th, 99)
 All-way Stop-controlled Intersection

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	< 1	1	2	< 0	0	> 1	< 0	1	1	1
Volumes	1	135	25	18	135	23	12	26	1	67	26	14
PHF	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95

Volume Summary and Capacity Analysis WorkSheet

	NB	SB	EB	WB
LT Flow Rate	1	19	13	71
RT Flow Rate	26	24	1	15
Approach Flow Rate	169	185	41	113
Proportion LT	0.01	0.10	0.32	0.63
Proportion RT	0.15	0.13	0.02	0.13
Opposing Approach Flow Rate	185	169	113	41
Conflicting Approaches Flow Rate	154	154	354	354
Proportion, Subject Approach Flow Rate	0.33	0.36	0.08	0.22
Proportion, Opposing Approach Flow Rate	0.36	0.33	0.22	0.08
Lanes on Subject Approach	4	3	1	3
Lanes on Opposing Approach	3	4	3	1
LT, Opposing Approach	19	1	71	13
RT, Opposing Approach	24	26	15	1
LT, Conflicting Approaches	84	84	20	20
RT, Conflicting Approaches	16	16	50	50
Proportion LT, Opposing Approach	0.10	0.01	0.63	0.32
Proportion RT, Opposing Approach	0.13	0.15	0.13	0.02
Proportion LT, Conflicting Approaches	0.55	0.55	0.06	0.06
Proportion RT, Conflicting Approaches	0.10	0.10	0.14	0.14
*Range limit(s) exceeded (see below)	*	*	*	*

Range Limit(s) Exceeded

Range limits from HCM Table 10-7 (p. 10-47), implementing HCM
Range of Model Validity (p. 10-37).

Eastbound approach:

A model prediction of LOS F has caused a range check
to be made for this approach.

The following range limit(s) have been exceeded:

The proportion of the volume on the subject approach
is 0.08.

This is outside the permitted range of 0.20 - 0.50.

The number of lanes on the conflicting approach
is 7.

This is outside the permitted range of 1 - 5.

The proportion of left turns on the opposing approach
is 0.63.

This is outside the permitted range of 0.00 - 0.36.

Streets: (N-S) Eisenhower Dr. (E-W) 50th Ave.
 Analyst: Jose Nunez File Name: EH50MR.HC9
 Area Type: Other 3-17-99 PK HR
 Comment: Existing conditions (March 17th, 99)

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	< 0	1	2	< 0	0	> 1	1	1	1	1
Volumes	24	193	37	29	208	35	35	24	24	33	24	49
Lane W (ft)	12.0	12.0		12.0	12.0			12.0	12.0	12.0	12.0	12.0
RTOR Vols			4			4			2			5
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
NB Left	*							
Thru		*						
Right			*					
Peds	*				*			
SB Left	*						*	
Thru		*					*	
Right			*				*	
Peds	*						*	
EB Right	*							
WB Right	*							
Green	20.0A	40.0A			29.0A	19.0A		
Yellow/AR	4.0	0.0			4.0	4.0		
Cycle Length: 120 secs Phase combination order: #1 #2 #5 #6								

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio			Delay	LOS	
NB	L	292	1671	0.085	0.175	26.8	D	20.6	C
	TR	1061	3441	0.236	0.308	20.0	C		
SB	L	292	1671	0.106	0.175	26.9	D	20.8	C
	TR	1063	3449	0.249	0.308	20.1	C		
EB	LT	461	1845	0.134	0.250	22.6	C	20.0	C
	R	686	1615	0.034	0.425	13.0	B		
WB	L	301	1805	0.116	0.167	27.5	D	22.4	C
	T	317	1900	0.079	0.167	27.3	D		
	R	592	1615	0.079	0.367	16.0	C		

Intersection Delay = 20.9 sec/veh Intersection LOS = C
 Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.165

=====
 Streets: (N-S) Eisenhower Dr. (E-W) Avenida Fernando (S)
 Analyst: Jose Nunez File Name: EHAVFRMR.HC9
 Area Type: Other 3-17-99 PK HR
 Comment: Existing conditions (March 17th, 99)
 =====

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	< 0	1	2	< 0	1	1	< 0	0	> 1	< 0
Volumes	55	217	2	1	306	72	121	1	68	3	1	1
Lane W (ft)	12.0	12.0		12.0	12.0		12.0	12.0			12.0	
RTOR Vols			0			7			7			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations											
Phase Combination		1	2	3	4			5	6	7	8
NB	Left		*			EB	Left	*			
	Thru			*			Thru	*			
	Right			*			Right	*			
	Peds			*			Peds	*			
SB	Left		*			WB	Left	*			
	Thru			*			Thru	*			
	Right			*			Right	*			
	Peds		*				Peds	*			
EB	Right					NB	Right				
WB	Right					SB	Right				
Green		16.0A	40.0A			Green	52.0A				
Yellow/AR		4.0	4.0			Yellow/AR	4.0				
Cycle Length: 120 secs Phase combination order: #1 #2 #5											

Intersection Performance Summary									
	Lane	Group:	Adj Sat	v/c	g/C			Approach:	
	Mvmts	Cap	Flow	Ratio	Ratio	Delay	LOS	Delay	LOS
NB	L	237	1671	0.245	0.142	29.7	D	20.3	C
	TR	1201	3514	0.201	0.342	18.0	C		
SB	L	237	1671	0.004	0.142	28.6	D	19.2	C
	TR	1170	3425	0.351	0.342	19.2	C		
EB	L	785	1778	0.162	0.442	13.0	B	12.9	B
	TR	715	1619	0.092	0.442	12.6	B		
WB	LTR	694	1572	0.007	0.442	12.1	B	12.1	B

Intersection Delay = 18.2 sec/veh Intersection LOS = C
 Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.244

Streets: (E-W) Eisenhower Dr. (N-S) Coachella Dr.
 Analyst: J.NUNEZ File Name: ESCHEX.HC9
 Area Type: Other 2-29-0 Peak Hr
 Comment: Existing Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	1	0	1	0	2	< 0	1	1	0
Volumes				5		10		99	3	12	118	
Lane W (ft)				12.0		12.0		12.0		12.0	12.0	
RTOR Vols						0			0			30
Lost Time				3.00		3.00		3.00	3.00	3.00	3.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left								
Thru						*		
Right						*		
Peds		*						
WB Left		*						
Thru						*		
Right		*						
Peds		*						
NB Right								
SB Right								
Green	51.0A				61.0A			
Yellow/AR	4.0				4.0			

Cycle Length: 120 secs Phase combination order: #1 #5

Intersection Performance Summary

Lane Group:	Mvmts	Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach:	Delay	LOS
WB L	767		1770	0.007	0.433	12.5	B		12.5	B
R	686		1583	0.016	0.433	12.5	B			
NB TR	1917		3710	0.058	0.517	9.3	B		9.3	B
SB L	709		1372	0.018	0.517	9.1	B		9.6	B
T	962		1863	0.129	0.517	9.7	B			

Intersection Delay = 9.7 sec/veh Intersection LOS = B
 Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.077

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Streets: (N-S) Jefferson St. (E-W) 50th Ave.
 Analyst..... Jose Nunez
 Date of Analysis..... 3/17/99
 Other Information..... Existing conditions (March 17th, 99)
 All-way Stop-controlled Intersection

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	> 1	< 0	0	> 1	< 0	0	> 1	< 0	0	> 1	< 0
Volumes	68	249	20	54	237	84	78	108	31	10	76	48
PHF	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95

Volume Summary and Capacity Analysis WorkSheet

	NB	SB	EB	WB
LT Flow Rate	72	57	82	11
RT Flow Rate	21	88	33	51
Approach Flow Rate	355	394	229	142
Proportion LT	0.20	0.14	0.36	0.08
Proportion RT	0.06	0.22	0.14	0.36
Opposing Approach Flow Rate	394	355	142	229
Conflicting Approaches Flow Rate	371	371	749	749
Proportion, Subject Approach Flow Rate	0.32	0.35	0.20	0.13
Proportion, Opposing Approach Flow Rate	0.35	0.32	0.13	0.20
Lanes on Subject Approach	1	1	1	1
Lanes on Opposing Approach	1	1	1	1
LT, Opposing Approach	57	72	11	82
RT, Opposing Approach	88	21	51	33
LT, Conflicting Approaches	93	93	129	129
RT, Conflicting Approaches	84	84	109	109
Proportion LT, Opposing Approach	0.14	0.20	0.08	0.36
Proportion RT, Opposing Approach	0.22	0.06	0.36	0.14
Proportion LT, Conflicting Approaches	0.25	0.25	0.17	0.17
Proportion RT, Conflicting Approaches	0.23	0.23	0.15	0.15
Approach Capacity	657	617	434	283

Intersection Performance Summary

Movement	Approach Flow Rate	Approach Capacity	V/C Ratio	Average Total Delay	LOS
NB	355	657	0.54	7.8	B
SB	394	617	0.64	11.3	C
EB	229	434	0.53	7.4	B
WB	142	283	0.50	6.7	B

Intersection Delay = 8.8
 Level of Service (Intersection) = B

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Streets: (N-S) Avenida Bermudas (E-W) 52nd Ave.
 Analyst..... Jose Nunez
 Date of Analysis..... 3/17/99
 Other Information..... Existing conditions (March 17th, 99)
 All-way Stop-controlled Intersection

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	> 1	1	0	> 1	1	1	2	< 0	1	2	< 0
Volumes	1	69	199	15	95	19	16	70	1	160	78	34
PHF	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95

Volume Summary and Capacity Analysis WorkSheet

	NB	SB	EB	WB
LT Flow Rate	1	16	17	168
RT Flow Rate	209	20	1	36
Approach Flow Rate	283	136	92	286
Proportion LT	0.00	0.12	0.18	0.59
Proportion RT	0.74	0.15	0.01	0.13
Opposing Approach Flow Rate	136	283	286	92
Conflicting Approaches Flow Rate	378	378	419	419
Proportion, Subject Approach Flow Rate	0.36	0.17	0.12	0.36
Proportion, Opposing Approach Flow Rate	0.17	0.36	0.36	0.12
Lanes on Subject Approach	2	2	3	3
Lanes on Opposing Approach	2	2	3	3
LT, Opposing Approach	16	1	168	17
RT, Opposing Approach	20	209	36	1
LT, Conflicting Approaches	185	185	17	17
RT, Conflicting Approaches	37	37	229	229
Proportion LT, Opposing Approach	0.12	0.00	0.59	0.18
Proportion RT, Opposing Approach	0.15	0.74	0.13	0.01
Proportion LT, Conflicting Approaches	0.49	0.49	0.04	0.04
Proportion RT, Conflicting Approaches	0.10	0.10	0.55	0.55
Approach Capacity	551	648	667	838

Intersection Performance Summary

Movement	Approach Flow Rate	Approach Capacity	V/C Ratio	Average Total Delay	LOS
NB	283	551	0.51	7.0	B
SB	136	648	0.21	2.2	A
EB	92	667	0.14	1.7	A
WB	286	838	0.34	3.7	A

Intersection Delay = 4.4
 Level of Service (Intersection) = A

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=====
 Streets: (N-S) Avenida Fernando (N) (E-W) Eisenhower Dr.
 Major Street Direction.... NS
 Length of Time Analyzed... 15 (min)
 Analyst..... Jose Nunez
 Date of Analysis..... 3/17/99
 Other Information..... Existing conditions (March 17th, 99)
 Two-way Stop-controlled Intersection
 =====

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	1	0	1	1	2	0	0	1	< 0
Stop/Yield			N			N						
Volumes				28		3	2	362			398	0
PHF				.95		.95	.95	.95			.95	.95
Grade					0			0			0	
MC's (%)												
SU/RV's (%)												
CV's (%)												
PCE's				1.10			1.10	1.10			1.10	1.10

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.50	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.50	3.30
Left Turn Minor Road	7.00	3.40

Worksheet for TWSC Intersection

Step 1: RT from Minor Street	WB	EB

Conflicting Flows: (vph)	0	
Potential Capacity: (pcph)	1385	
Movement Capacity: (pcph)	1385	
Prob. of Queue-Free State:	1.00	

Step 2: LT from Major Street	SB	NB

Conflicting Flows: (vph)	0	
Potential Capacity: (pcph)	1714	
Movement Capacity: (pcph)	1714	
Prob. of Queue-Free State:	0.98	

Step 3: TH from Minor Street	WB	EB

Conflicting Flows: (vph)	32	29
Potential Capacity: (pcph)	1045	1049
Capacity Adjustment Factor due to Impeding Movements	0.98	0.98
Movement Capacity: (pcph)	1025	1029
Prob. of Queue-Free State:	0.55	0.59

Step 4: LT from Minor Street	WB	EB

Conflicting Flows: (vph)		240
Potential Capacity: (pcph)		744
Major LT, Minor TH Impedance Factor:		0.54
Adjusted Impedance Factor:		0.64
Capacity Adjustment Factor due to Impeding Movements		0.64
Movement Capacity: (pcph)		476

Intersection Performance Summary

Movement	Flow Rate (pcph)	Move Cap (pcph)	Shared Cap (pcph)	Avg. Total Delay (sec/veh)	95% Queue Length (veh)	LOS	Approach Delay (sec/veh)
EB L	2	476		7.6	0.0	B	
EB T	419	1029		5.9	2.2	B	5.9
WB T	461	1025 >					6.4
WB R	0	1385 > 1025		6.4	2.5	B	
SB L	32	1714		2.1	0.0	A	1.9

Intersection Delay = 6.0 sec/veh

Intersection Capacity Calculations

EXISTING + PROJECT CONDITIONS

Streets: (N-S) Washington St. (E-W) 52nd Ave.
 Analyst: Jose Nunez File Name: WSH52MRP.HC9
 Area Type: Other 11-2-99 PK HR
 Comment: Existing + Project Conditions (March 17th, 99)

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	> 1	< 0	2	> 1	1	2	2	< 0	1	2	1
Volumes	3	3	4	118	4	114	155	141	1	7	146	132
Lane W (ft)	12.0			12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
RTOR Vols	0			11			0			13		
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
NB Left	*				EB Left	*		
NB Thru	*				EB Thru	*		
NB Right	*				EB Right	*		
NB Peds	*				EB Peds	*		
SB Left		*			WB Left		*	
SB Thru		*			WB Thru		*	
SB Right		*			WB Right		*	
SB Peds		*			WB Peds		*	
EB Right					NB Right			
WB Right			*		SB Right	*		
Green	10.0A	40.0A			Green	39.0A	15.0A	
Yellow/AR	4.0	4.0			Yellow/AR	4.0	4.0	
Cycle Length: 120 secs Phase combination order: #1 #2 #5 #6								

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio			Delay	LOS	
NB	LTR	134	1466	0.074	0.092	32.2	D	32.2	D
SB	L	1142	3343	0.112	0.342	17.5	C	11.3	B
	LT	601	1759	0.007	0.342	16.8	C		
	R	1047	1495	0.103	0.700	3.8	A		
EB	L	1203	3610	0.140	0.333	18.1	C	18.0	C
	TR	1265	3796	0.123	0.333	18.0	C		
WB	L	241	1805	0.029	0.133	29.2	D	22.4	C
	T	507	3800	0.320	0.133	30.5	D		
	R	767	1615	0.163	0.475	11.6	B		

Intersection Delay = 17.8 sec/veh Intersection LOS = C
 Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.149

Streets: (E-W) 50th Ave. (N-S) Washington St.
 Analyst: J.NUNEZ File Name: WSH50EP.HC9
 Area Type: Other 2-29-0 Peak Hr
 Comment: Existing + Project Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	1	1	1	< 0	1	2	< 0	1	1	1
Volumes	72	100	28	92	107	140	26	319	61	97	492	44
Lane W (ft)	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	12.0
RTOR Vols			3			14			6			4
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left	*		
Thru	*				Thru		*	
Right	*				Right		*	
Peds					Peds		*	
WB Left		*			SB Left	*		
Thru		*			Thru		*	
Right		*			Right		*	
Peds					Peds		*	
NB Right					EB Right			
SB Right					WB Right			
Green	44.0A				Green	14.0A 50.0A		
Yellow/AR	4.0				Yellow/AR	4.0 4.0		
Cycle Length: 120 secs Phase combination order: #1 #5 #6								

Intersection Performance Summary

	Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:		
								Mvmts	Cap	Flow
EB	L		276	736	0.275	0.375	17.0	C	16.3	C
	T		699	1863	0.150	0.375	16.1	C		
	R		594	1583	0.044	0.375	15.4	C		
WB	L		475	1267	0.204	0.375	16.4	C	17.4	C
	TR		642	1712	0.382	0.375	17.8	C		
NB	L		221	1770	0.122	0.125	30.1	D	15.4	C
	TR		1548	3643	0.267	0.425	14.5	B		
SB	L		221	1770	0.461	0.125	32.6	D	20.6	C
	T		792	1863	0.654	0.425	18.8	C		
	R		673	1583	0.062	0.425	13.2	B		

Intersection Delay = 18.0 sec/veh Intersection LOS = C
 Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.518

Streets: (E-W) Eisenhower Dr. (N-S) Washington St.
 Analyst: J.NUNEZ File Name: WSHESHEP.HC9
 Area Type: Other 2-29-0 Peak Hr
 Comment: Existing + Project Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	> 1	1	0	> 1	< 0	1	2	1	1	2	1
Volumes	159	6	16	21	5	29	30	463	15	18	594	163
Lane W (ft)	12.0	12.0	12.0		12.0		12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vols			2			3			2			10
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left	*		
Thru	*				Thru		*	
Right	*				Right		*	
Peds					Peds		*	
WB Left		*			SB Left	*		
Thru		*			Thru		*	
Right		*			Right		*	
Peds					Peds		*	
NB Right					EB Right			
SB Right					WB Right			
Green	25.0A	16.0A			Green	12.0A	55.0A	
Yellow/AR	4.0	0.0			Yellow/AR	4.0	4.0	
Cycle Length: 120 secs Phase combination order: #1 #2 #5 #6								

Intersection Performance Summary

	Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
	Mvmts	Cap	Flow	Ratio	Ratio			Delay		LOS
EB	L	767	3539	0.224	0.217	25.0	C	24.9		C
	LT	404	1863	0.015	0.217	23.9	C			
	R	343	1583	0.044	0.217	24.0	C			
WB	LTR	164	1518	0.334	0.108	32.3	D	32.3		D
NB	L	192	1770	0.167	0.108	31.4	D	13.8		B
	T	1739	3725	0.294	0.467	12.8	B			
	R	739	1583	0.019	0.467	11.1	B			
SB	L	192	1770	0.099	0.108	31.2	D	13.6		B
	T	1739	3725	0.377	0.467	13.4	B			
	R	739	1583	0.218	0.467	12.3	B			

Intersection Delay = 15.6 sec/veh Intersection LOS = C
 Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.310

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 Streets: (N-S) Eisenhower Dr. (E-W) Calle Sinaloa
 Analyst..... J. NUNEZ
 Date of Analysis..... 2/29/0
 Other Information..... Existing + Project Conditions
 All-way Stop-controlled Intersection
 =====

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	> 1	< 0	1	1	1	1	2	< 0	1	2	< 0
Volumes	23	40	12	5	29	8	17	55	13	10	66	19
PHF	.95	.95	.95	.85	.95	.95	.95	.95	.95	.95	.95	.95

 Volume Summary and Capacity Analysis WorkSheet

	EB	WB	NB	SB
LT Flow Rate	24	6	18	11
RT Flow Rate	13	8	14	20
Approach Flow Rate	79	45	90	100
Proportion LT	0.30	0.13	0.20	0.11
Proportion RT	0.16	0.18	0.16	0.20
Opposing Approach Flow Rate	45	79	100	90
Conflicting Approaches Flow Rate	190	190	124	124
Proportion, Subject Approach Flow Rate	0.25	0.14	0.29	0.32
Proportion, Opposing Approach Flow Rate	0.14	0.25	0.32	0.29
Lanes on Subject Approach	1	3	3	3
Lanes on Opposing Approach	3	1	3	3
LT, Opposing Approach	6	24	11	18
RT, Opposing Approach	8	13	20	14
LT, Conflicting Approaches	29	29	30	30
RT, Conflicting Approaches	34	34	21	21
Proportion LT, Opposing Approach	0.13	0.30	0.11	0.20
Proportion RT, Opposing Approach	0.18	0.16	0.20	0.16
Proportion LT, Conflicting Approaches	0.15	0.15	0.24	0.24
Proportion RT, Conflicting Approaches	0.18	0.18	0.17	0.17
Approach Capacity	255	769	795	768

 Intersection Performance Summary

Movement	Approach Flow Rate	Approach Capacity	V/C Ratio	Average Total Delay	LOS
EB	79	255	0.31	3.2	A
WB	45	769	0.06	1.2	A
NB	90	795	0.11	1.5	A
SB	100	768	0.13	1.6	A

Intersection Delay = 2.0
 Level of Service (Intersection) = A

Streets: (N-S) Eisenhower Dr. (E-W) 50th Ave.
 Analyst: Jose Nunez File Name: EH50MRP.HC9
 Area Type: Other 11-2-99 PK HR
 Comment: Existing + Project Conditions (March 17th, 99)

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	< 0	1	2	< 0	0	> 1	1	1	1	1
Volumes	24	210	37	29	225	63	35	24	24	33	24	77
Lane W (ft)	12.0	12.0		12.0	12.0			12.0	12.0	12.0	12.0	12.0
RTOR Vols			4			4			2			5
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
NB Left	*				EB Left	*		
Thru		*			Thru	*		
Right			*		Right	*		
Peds	*				Peds	*		
SB Left	*				WB Left		*	
Thru		*			Thru		*	
Right			*		Right		*	
Peds	*				Peds		*	
EB Right	*				NB Right			
WB Right	*				SB Right			
Green	20.0A	40.0A			Green	27.0A	21.0A	
Yellow/AR	4.0	0.0			Yellow/AR	4.0	4.0	
Cycle Length: 120 secs Phase combination order: #1 #2 #5 #6								

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:
Mvmts	Cap	Flow	Ratio	Ratio			Delay LOS
NB	L	292	1671	0.085	0.175	26.8	D 20.7 C
	TR	1063	3446	0.253	0.308	20.1	C
SB	L	292	1671	0.106	0.175	26.9	D 21.1 C
	TR	1051	3409	0.299	0.308	20.5	C
EB	LT	430	1845	0.144	0.233	23.6	C 20.9 C
	R	659	1615	0.035	0.408	13.8	B
WB	L	331	1805	0.106	0.183	26.4	D 20.2 C
	T	348	1900	0.072	0.183	26.2	D
	R	619	1615	0.123	0.383	15.5	C

Intersection Delay = 20.8 sec/veh Intersection LOS = C
 Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.187

Streets: (N-S) Eisenhower Dr. (E-W) Avenida Fernando (S)
 Analyst: Jose Nunez File Name: EHAVFMRP.HC9
 Area Type: Other 11-2-99 PK HR
 Comment: Existing + Project Conditions (March 17th, 99)

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	< 0	1	2	< 0	1	1	< 0	0	> 1	< 0
Volumes	55	262	2	1	351	72	121	1	68	3	1	1
Lane W (ft)	12.0	12.0		12.0	12.0		12.0	12.0			12.0	
RTOR Vols			0			7			7			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
NB Left	*				EB Left	*		
Thru			*		Thru	*		
Right			*		Right	*		
Peds			*		Peds	*		
SB Left		*			WB Left	*		
Thru			*		Thru	*		
Right			*		Right	*		
Peds		*			Peds	*		
EB Right					NB Right			
WB Right					SB Right			
Green		14.0A	40.0A		Green	54.0A		
Yellow/AR		4.0	4.0		Yellow/AR	4.0		
Cycle Length: 120 secs Phase combination order: #1 #2 #5								

Intersection Performance Summary

	Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:		
								Mvmts	Cap	Flow
NB	L		209	1671	0.278	0.125	30.9	D	20.4	C
	TR		1201	3515	0.243	0.342	18.3	C		
SB	L		209	1671	0.005	0.125	29.7	D	19.5	C
	TR		1174	3435	0.392	0.342	19.5	C		
EB	L		815	1778	0.156	0.458	12.3	B	12.1	B
	TR		742	1619	0.089	0.458	11.9	B		
WB	LTR		721	1573	0.007	0.458	11.4	B	11.4	B

Intersection Delay = 18.4 sec/veh Intersection LOS = C
 Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.260

=====
 Streets: (E-W) Avenida Fernando (S) (N-S) Eisenhower Dr.
 Analyst: J.NUNEZ File Name: EHAVFEXP.HC9
 Area Type: Other 2-29-0 Peak Hr
 Comment: Existing + Project Conditions
 =====

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	< 0	0	> 1	< 0	1	2	< 0	1	2	< 0
Volumes	10	18	15	12	6	30	2	96	6	13	147	10
Lane W (ft)	12.0	12.0			12.0		12.0	12.0		12.0	12.0	
RTOR Vols			2			3			1			1
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left	*		
EB Thru	*				NB Thru		*	
EB Right	*				NB Right		*	
EB Peds	*				NB Peds		*	
WB Left		*			SB Left	*		
WB Thru		*			SB Thru		*	
WB Right		*			SB Right		*	
WB Peds		*			SB Peds		*	
NB Right					EB Right			
SB Right					WB Right			
Green	42.0A				Green	16.0A	50.0A	
Yellow/AR	4.0				Yellow/AR	4.0	4.0	
Cycle Length: 120 secs Phase combination order: #1 #5 #6								

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio			Delay	LOS	
EB	L	563	1572	0.020	0.358	16.1	C	16.2	C
	TR	625	1744	0.053	0.358	16.3	C		
WB	LTR	530	1480	0.091	0.358	16.5	C	16.5	C
NB	L	251	1770	0.008	0.142	28.6	D	13.5	B
	TR	1572	3699	0.071	0.425	13.2	B		
SB	L	251	1770	0.056	0.142	28.8	D	14.6	B
	TR	1569	3692	0.110	0.425	13.4	B		

Intersection Delay = 14.7 sec/veh Intersection LOS = B
 Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.094

Streets: (E-W) Coachella Dr. (N-S) Eisenhower Dr.
 Analyst: J.NUNEZ File Name: ESCHEXP.HC9
 Area Type: Other 2-29-0 Peak Hr
 Comment: Existing + Project Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	< 0	1	1	< 0	1	1	< 0	1	1	< 0
Volumes	71	1	47	5	1	10	45	99	3	12	118	68
Lane W (ft)	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
RTOR Vols			5			1			1			7
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left	*		
Thru	*				Thru		*	
Right	*				Right		*	
Peds	*				Peds		*	
WB Left		*			SB Left	*		
Thru		*			Thru		*	
Right		*			Right		*	
Peds		*			Peds		*	
NB Right					EB Right			
SB Right					WB Right			
Green	23.0A	25.0A			Green	15.0A	45.0A	
Yellow/AR	4.0	0.0			Yellow/AR	4.0	4.0	
Cycle Length: 120 secs Phase combination order: #1 #2 #5 #6								

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
EB	L	354	1770	0.212	0.200	26.0	D	25.8	D
	TR	318	1590	0.142	0.200	25.5	D		
WB	L	324	1770	0.015	0.183	25.9	D	26.0	D
	TR	295	1609	0.037	0.183	26.0	D		
NB	L	236	1770	0.199	0.133	30.0	D	20.0	C
	TR	712	1857	0.149	0.383	15.6	C		
SB	L	236	1770	0.055	0.133	29.3	D	17.4	C
	TR	677	1767	0.279	0.383	16.6	C		

Intersection Delay = 20.5 sec/veh Intersection LOS = C
 Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.203

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Streets: (N-S) Jefferson St. (E-W) 50th Ave.
 Analyst..... J. NUNEZ
 Date of Analysis..... 2/29/0
 Other Information..... Existing + Project Conditions
 All-way Stop-controlled Intersection

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	> 1	< 0	0	> 1	< 0	0	> 1	< 0	0	> 1	< 0
Volumes	49	211	18	14	191	29	12	20	8	45	12	136
PHF	.95	.95	.95	.85	.95	.95	.95	.95	.95	.95	.95	.95

Volume Summary and Capacity Analysis WorkSheet

	EB	WB	NB	SB
LT Flow Rate	52	16	13	47
RT Flow Rate	19	31	8	143
Approach Flow Rate	293	248	42	203
Proportion LT	0.18	0.06	0.31	0.23
Proportion RT	0.06	0.13	0.19	0.70
Opposing Approach Flow Rate	248	293	203	42
Conflicting Approaches Flow Rate	245	245	541	541
Proportion, Subject Approach Flow Rate	0.37	0.32	0.05	0.26
Proportion, Opposing Approach Flow Rate	0.32	0.37	0.26	0.05
Lanes on Subject Approach	1	1	1	1
Lanes on Opposing Approach	1	1	1	1
LT, Opposing Approach	16	52	47	13
RT, Opposing Approach	31	19	143	8
LT, Conflicting Approaches	60	60	68	68
RT, Conflicting Approaches	151	151	50	50
Proportion LT, Opposing Approach	0.06	0.18	0.23	0.31
Proportion RT, Opposing Approach	0.13	0.06	0.70	0.19
Proportion LT, Conflicting Approaches	0.24	0.24	0.13	0.13
Proportion RT, Conflicting Approaches	0.62	0.62	0.09	0.09
Approach Capacity	811	748	396	331

Intersection Performance Summary

Movement	Approach Flow Rate	Approach Capacity	V/C Ratio	Average Total Delay	LOS
EB	293	811	0.36	3.9	A
WB	248	748	0.33	3.5	A
NB	42	396	0.11	1.5	A
SB	203	331	0.61	10.3	C

Intersection Delay = 5.3
 Level of Service (Intersection) = B

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Streets: (N-S) Avenida Bermudas (E-W) 52nd Ave.
 Analyst..... Jose Nunez
 Date of Analysis..... 11/2/99
 Other Information..... Existing + Project Conditions (March 1
 7th, 99)

All-way Stop-controlled Intersection

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	> 1	1	0	> 1	1	1	2	< 0	1	2	< 0
Volumes	1	69	199	15	95	19	16	70	1	160	78	34
PHF	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95

Volume Summary and Capacity Analysis WorkSheet

	NB	SB	EB	WB
LT Flow Rate	1	16	17	168
RT Flow Rate	209	20	1	36
Approach Flow Rate	283	136	92	286
Proportion LT	0.00	0.12	0.18	0.59
Proportion RT	0.74	0.15	0.01	0.13
Opposing Approach Flow Rate	136	283	286	92
Conflicting Approaches Flow Rate	378	378	419	419
Proportion, Subject Approach Flow Rate	0.36	0.17	0.12	0.36
Proportion, Opposing Approach Flow Rate	0.17	0.36	0.36	0.12
Lanes on Subject Approach	2	2	3	3
Lanes on Opposing Approach	2	2	3	3
LT, Opposing Approach	16	1	168	17
RT, Opposing Approach	20	209	36	1
LT, Conflicting Approaches	185	185	17	17
RT, Conflicting Approaches	37	37	229	229
Proportion LT, Opposing Approach	0.12	0.00	0.59	0.18
Proportion RT, Opposing Approach	0.15	0.74	0.13	0.01
Proportion LT, Conflicting Approaches	0.49	0.49	0.04	0.04
Proportion RT, Conflicting Approaches	0.10	0.10	0.55	0.55
Approach Capacity	551	648	667	838

Intersection Performance Summary

Movement	Approach Flow Rate	Approach Capacity	V/C Ratio	Average Total Delay	LOS
NB	283	551	0.51	7.0	B
SB	136	648	0.21	2.2	A
EB	92	667	0.14	1.7	A
WB	286	838	0.34	3.7	A

Intersection Delay = 4.4
 Level of Service (Intersection) = A

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=====
 Streets: (N-S) Avenida Fernando (N) (E-W) Eisenhower Dr.
 Major Street Direction.... EW
 Length of Time Analyzed... 15 (min)
 Analyst..... J. NUNEZ
 Date of Analysis..... 2/29/0
 Other Information..... Existing + Project Conditions
 Two-way Stop-controlled Intersection
 =====

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	0	1	< 0	0	0	0	1	0	1
Stop/Yield			N			N						
Volumes	0	183			198	0				0		0
PHF	.95	.95			.95	.95				.95		.95
Grade		0			0						0	
MC's (%)	0									0		0
SU/RV's (%)	2									5		5
CV's (%)	3									5		5
PCE's	1.04									1.08		1.08

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.00	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.00	3.30
Left Turn Minor Road	6.50	3.40

Worksheet for TWSC Intersection

Step 1: RT from Minor Street NB SB

Conflicting Flows: (vph) 208
 Potential Capacity: (pcph) 1086
 Movement Capacity: (pcph) 1086
 Prob. of Queue-Free State: 1.00

Step 2: LT from Major Street WB EB

Conflicting Flows: (vph) 208
 Potential Capacity: (pcph) 1364
 Movement Capacity: (pcph) 1364
 Prob. of Queue-Free State: 1.00

Step 4: LT from Minor Street NB SB

Conflicting Flows: (vph) 401
 Potential Capacity: (pcph) 620
 Major LT, Minor TH
 Impedance Factor: 1.00
 Adjusted Impedance Factor: 1.00
 Capacity Adjustment Factor due to Impeding Movements 1.00
 Movement Capacity: (pcph) 620

Intersection Performance Summary

Movement	Flow Rate (pcph)	Move Cap (pcph)	Shared Cap (pcph)	Avg. Total Delay (sec/veh)	95% Queue Length (veh)	LOS	Approach Delay (sec/veh)
SB L	0	620		5.8	0.0	B	0.0
SB R	0	1086		3.3	0.0	A	0.0
EB L	0	1364		2.6	0.0	A	0.0

Intersection Delay = 0.0 sec/veh

Intersection Capacity Calculations

FUTURE CONDITIONS

=====
 Streets: (N-S) Washington St. (E-W) 52nd Ave.
 Analyst: Jose Nunez File Name: WSH52BO.HC9
 Area Type: Other 11-2-99 PK HR
 Comment: Future Conditions
 =====

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	> 1	< 0	2	> 1	1	2	2	< 0	1	2	1
Volumes	6	10	4	61	8	330	50	240	5	4	280	102
Lane W (ft)	12.0			12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
RTOR Vols	0			33			0			10		
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
NB Left		*			EB Left	*		
NB Thru		*			EB Thru		*	
NB Right		*			EB Right		*	
NB Peds		*			EB Peds	*		
SB Left		*			WB Left	*		
SB Thru		*			WB Thru		*	
SB Right		*			WB Right		*	
SB Peds		*			WB Peds		*	
EB Right					NB Right			
WB Right		*			SB Right	*		
Green	40.0A	15.0A			Green	20.0A	29.0A	
Yellow/AR	4.0	4.0			Yellow/AR	4.0	4.0	
Cycle Length: 120 secs Phase combination order: #1 #2 #5 #6								

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
NB	LTR	202	1516	0.104	0.133	29.5	D	29.5	D
SB	L	1142	3343	0.058	0.342	17.1	C	12.7	B
	LT	601	1759	0.013	0.342	16.9	C		
	R	773	1495	0.404	0.517	11.6	B		
EB	L	632	3610	0.087	0.175	26.8	D	24.1	C
	TR	947	3789	0.286	0.250	23.5	C		
WB	L	316	1805	0.013	0.175	26.4	D	19.7	C
	T	950	3800	0.326	0.250	23.8	C		
	R	996	1615	0.096	0.617	6.1	B		

Intersection Delay = 18.7 sec/veh Intersection LOS = C
 Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.338

Streets: (N-S) Washington St. (E-W) 50th Ave.
 Analyst: Jose Nunez File Name: WSH50BO.HC9
 Area Type: Other 11-2-99 PK HR
 Comment: Future Conditions

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	< 0	1	1	1	1	1	1	1	1	< 0
Volumes	62	989	189	204	1525	136	155	307	68	285	179	294
Lane W (ft)	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
RTOR Vols			6			4			2			1
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
NB Left	*				EB Left	*		
Thru		*			Thru	*		
Right			*		Right	*		
Peds			*		Peds	*		
SB Left		*			WB Left	*		
Thru			*		Thru	*		
Right			*		Right	*		
Peds		*			Peds	*		
EB Right					NB Right			
WB Right					SB Right			
Green	15.0A	44.0A			Green	49.0A		
Yellow/AR	4.0	4.0			Yellow/AR	4.0		
Cycle Length: 120 secs Phase combination order: #1 #2 #5								

Intersection Performance Summary

	Lane	Group:	Adj Sat		v/c	g/C	Delay	LOS	Approach:	
			Flow	Ratio					Delay	LOS
NB	L		223	1671	0.292	0.133	30.5	D	44.1	E
	TR		1288	3436	1.006	0.375	44.8	E		
SB	L		223	1671	0.965	0.133	70.5	F	*	*
	T		660	1759	2.433	0.375	*	*		
	R		561	1495	0.248	0.375	16.7	C		
EB	L		67	160	2.448	0.417	*	*	*	*
	T		792	1900	0.408	0.417	16.0	C		
	R		673	1615	0.104	0.417	13.8	B		
WB	L		235	564	1.277	0.417	*	*	*	*
	TR		718	1723	0.691	0.417	20.0	C		

Intersection Delay = * (sec/veh) Intersection LOS = *
 (g/C) * (V/c) is greater than one. Calculation of D1 is infeasible.

=====
 Streets: (N-S) Washington St. (E-W) Eisenhower Dr.
 Analyst: Jose Nunez File Name: WSHWRBO.HC9
 Area Type: Other 11-2-99 PK HR
 Comment: Future Conditions
 =====

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	1	1	2	1	2	> 1	1	0	> 1	< 0
Volumes	87	1343	16	18	1720	276	273	6	56	21	5	29
Lane W (ft)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	
RTOR Vols			2			10			2			3
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
NB Left	*				EB Left	*		
Thru		*			Thru	*		
Right			*		Right	*		
Peds					Peds	*		
SB Left		*			WB Left	*		
Thru			*		Thru	*		
Right			*		Right	*		
Peds			*		Peds	*		
EB Right	*				NB Right			
WB Right					SB Right			
Green	18.0A	74.0A			Green	20.0A		
Yellow/AR	0.0	4.0			Yellow/AR	4.0		
Cycle Length: 120 secs Phase combination order: #1 #2 #5								

Intersection Performance Summary

	Lane Group:	Mvmts	Cap	Adj Sat	v/c	g/C	Delay	LOS	Approach:	
									Flow	Ratio
NB	L	209		1671	0.440	0.125	32.4	D	11.3	B
	T	2199		3519	0.675	0.625	10.0	B		
	R	935		1495	0.016	0.625	5.5	B		
SB	L	209		1671	0.091	0.125	30.0	D	13.8	B
	T	2199		3519	0.865	0.625	14.7	B		
	R	935		1495	0.300	0.625	6.8	B		
EB	L	510		2913	0.581	0.175	30.6	D	28.6	D
	LT	332		1900	0.018	0.175	26.5	D		
	R	525		1615	0.109	0.325	18.3	C		
WB	LTR	270		1545	0.203	0.175	27.4	D	27.4	D

Intersection Delay = 14.3 sec/veh Intersection LOS = B
 Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.754
 =====

Streets: (N-S) Eisenhower Dr. (E-W) 50th Ave.
 Analyst: Jose Nunez File Name: EH50THBO.HC9
 Area Type: Other 11-2-99 PK HR
 Comment: Future Conditions

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	< 0	1	2	< 0	0	> 1	1	1	1	1
Volumes	4	98	29	16	136	12	8	10	3	32	6	21
Lane W (ft)	12.0	12.0		12.0	12.0			12.0	12.0	12.0	12.0	12.0
RTOR Vols			3			1			0			2
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
NB Left	*							
Thru			*					
Right			*					
Peds	*							
SB Left	*							
Thru			*					
Right			*					
Peds	*							
EB Right	*							
WB Right	*							
Green	15.0A	43.0A			30.0A	20.0A		
Yellow/AR	4.0	0.0			4.0	4.0		
Cycle Length: 120 secs Phase combination order: #1 #2 #5 #6								

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
NB	L	223	1671	0.018	0.133	29.2	D	18.3	C
	TR	1135	3406	0.122	0.333	18.0	C		
SB	L	223	1671	0.076	0.133	29.4	D	19.1	C
	TR	1159	3478	0.141	0.333	18.1	C		
EB	LT	481	1861	0.040	0.258	21.5	C	20.6	C
	R	633	1615	0.005	0.392	14.4	B		
WB	L	316	1805	0.108	0.175	26.9	D	23.7	C
	T	332	1900	0.018	0.175	26.5	D		
	R	538	1615	0.037	0.333	17.4	C		

Intersection Delay = 19.6 sec/veh Intersection LOS = C
 Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.096

Streets: (N-S) Eisenhower Dr. (E-W) Avenida Fernando (S)
 Analyst: Jose Nunez File Name: EHAVFRBO.HC9
 Area Type: Other 11-2-99 PK HR
 Comment: Future Conditions

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	< 0	1	2	< 0	1	1	< 0	0	> 1	< 0
Volumes	4	97	11	25	190	19	19	34	29	23	11	57
Lane W (ft)	12.0	12.0		12.0	12.0		12.0	12.0			12.0	
RTOR Vols			1			2			3			6
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
NB Left	*				EB Left	*		
Thru		*			Thru	*		
Right		*			Right	*		
Peds		*			Peds	*		
SB Left	*				WB Left	*		
Thru		*			Thru	*		
Right		*			Right	*		
Peds	*				Peds	*		
EB Right					NB Right			
WB Right					SB Right			
Green	16.0A	40.0A			Green	52.0A		
Yellow/AR	4.0	4.0			Yellow/AR	4.0		
Cycle Length: 120 secs Phase combination order: #1 #2 #5								

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
NB	L	237	1671	0.017	0.142	28.6	D	17.8	C
	TR	1185	3467	0.100	0.342	17.4	C		
SB	L	237	1671	0.110	0.142	29.0	D	19.1	C
	TR	1187	3475	0.193	0.342	18.0	C		
EB	L	588	1331	0.034	0.442	12.3	B	12.5	B
	TR	784	1775	0.082	0.442	12.5	B		
WB	LTR	646	1464	0.139	0.442	12.9	B	12.9	B
Intersection Delay = 16.8 sec/veh Intersection LOS = C									
Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.155									

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4g 02-29-2000
 Center For Microcomputers In Transportation

Streets: (E-W) Eisenhower Dr. (N-S) Coachella Dr.
 Analyst: J.NUNEZ File Name: ESCHFU.HC9
 Area Type: Other 2-29-0 Peak Hr
 Comment: Future Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	1	0	1	0	2	< 0	1	1	0
Volumes				11		21		208	6	25	248	
Lane W (ft)				12.0		12.0		12.0		12.0	12.0	
RTOR Vols						2			1			30
Lost Time				3.00		3.00		3.00	3.00	3.00	3.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left								
Thru								
Right								
Peds		*				*		
WB Left		*				*		
Thru						*		
Right		*						
Peds		*						
NB Right								
SB Right								
Green		51.0A				61.0A		
Yellow/AR		4.0				4.0		
Cycle Length:	120 secs Phase combination order: #1 #5							

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio			Delay	LOS	
WB	L	767	1770	0.016	0.433	12.5	B	12.6	B
	R	686	1583	0.029	0.433	12.6	B		
NB	TR	1918	3713	0.122	0.517	9.7	B	9.7	B
SB	L	564	1093	0.046	0.517	9.3	B	10.4	B
	T	962	1863	0.271	0.517	10.6	B		

Intersection Delay = 10.2 sec/veh Intersection LOS = B
 Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.161

=====
 Center For Microcomputers In Transportation
 University of Florida
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 Gainesville, FL 32611-2083
 Ph: (904) 392-0378
 =====

Streets: (N-S) Eisenhower Dr. (E-W) Calle Sinaloa
 Analyst..... Jose Nunez
 Date of Analysis..... 11/2/99
 Other Information..... Future Conditions
 All-way Stop-controlled Intersection
 =====

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	< 1	1	2	< 0	0	> 1	< 0	1	1	1
Volumes	26	68	20	15	83	18	24	60	18	8	44	12
PHF	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95

 Volume Summary and Capacity Analysis WorkSheet

	NB	SB	EB	WB
LT Flow Rate	27	16	25	8
RT Flow Rate	21	19	19	13
Approach Flow Rate	120	122	107	67
Proportion LT	0.22	0.13	0.23	0.12
Proportion RT	0.17	0.16	0.18	0.19
Opposing Approach Flow Rate	122	120	67	107
Conflicting Approaches Flow Rate	174	174	242	242
Proportion, Subject Approach Flow Rate	0.29	0.29	0.26	0.16
Proportion, Opposing Approach Flow Rate	0.29	0.29	0.16	0.26
Lanes on Subject Approach	4	3	1	3
Lanes on Opposing Approach	3	4	3	1
LT, Opposing Approach	16	27	8	25
RT, Opposing Approach	19	21	13	19
LT, Conflicting Approaches	33	33	43	43
RT, Conflicting Approaches	32	32	40	40
Proportion LT, Opposing Approach	0.13	0.22	0.12	0.23
Proportion RT, Opposing Approach	0.16	0.17	0.19	0.18
Proportion LT, Conflicting Approaches	0.19	0.19	0.18	0.18
Proportion RT, Conflicting Approaches	0.18	0.18	0.17	0.17
Approach Capacity	984	661	269	803

 Intersection Performance Summary

Movement	Approach Flow Rate	Approach Capacity	V/C Ratio	Average Total Delay	LOS
NB	120	984	0.12	1.6	A
SB	122	661	0.18	2.0	A
EB	107	269	0.40	4.5	A
WB	67	803	0.08	1.4	A

Intersection Delay = 2.4
 Level of Service (Intersection) = A

Center For Microcomputers In Transportation
 University of Florida
 512 Weil Hall
 Gainesville, FL 32611-2083
 Ph: (904) 392-0378

Streets: (N-S) Avenida Bermudas (E-W) 52nd Ave.

Analyst..... Jose Nunez
 Date of Analysis..... 11/2/99
 Other Information..... Future Conditions
 All-way Stop-controlled Intersection

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	> 1	1	0	> 1	1	1	2	< 0	1	2	< 0
Volumes	17	95	13	25	132	36	25	189	21	63	179	44
PHF	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95

Volume Summary and Capacity Analysis WorkSheet

	NB	SB	EB	WB
LT Flow Rate	18	26	26	66
RT Flow Rate	14	38	22	46
Approach Flow Rate	132	203	247	300
Proportion LT	0.14	0.13	0.11	0.22
Proportion RT	0.11	0.19	0.09	0.15
Opposing Approach Flow Rate	203	132	300	247
Conflicting Approaches Flow Rate	547	547	335	335
Proportion, Subject Approach Flow Rate	0.15	0.23	0.28	0.34
Proportion, Opposing Approach Flow Rate	0.23	0.15	0.34	0.28
Lanes on Subject Approach	2	2	3	3
Lanes on Opposing Approach	2	2	3	3
LT, Opposing Approach	26	18	66	26
RT, Opposing Approach	38	14	46	22
LT, Conflicting Approaches	92	92	44	44
RT, Conflicting Approaches	68	68	52	52
Proportion LT, Opposing Approach	0.13	0.14	0.22	0.11
Proportion RT, Opposing Approach	0.19	0.11	0.15	0.09
Proportion LT, Conflicting Approaches	0.17	0.17	0.13	0.13
Proportion RT, Conflicting Approaches	0.12	0.12	0.16	0.16
Approach Capacity	497	502	790	830

Intersection Performance Summary

Movement	Approach Flow Rate	Approach Capacity	V/C Ratio	Average Total Delay	LOS
NB	132	497	0.27	2.7	A
SB	203	502	0.40	4.6	A
EB	247	790	0.31	3.3	A
WB	300	830	0.36	3.9	A

Intersection Delay = 3.7
 Level of Service (Intersection) = A

Center For Microcomputers In Transportation
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Streets: (N-S) Avenida Fernando (N) (E-W) Eisenhower Dr.
 Major Street Direction.... NS
 Length of Time Analyzed... 15 (min)
 Analyst..... Jose Nunez
 Date of Analysis..... 11/2/99
 Other Information.....Future Conditions
 Two-way Stop-controlled Intersection

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	1	0	1	1	2	0	0	1	0
Stop/Yield			N			N						
Volumes				0		0	0	224			260	0
PHF				.95		.95	.95	.95			.95	.95
Grade					0			0			0	
MC's (%)												
SU/RV's (%)												
CV's (%)												
PCE's				1.10			1.10	1.10			1.10	1.10

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.50	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.50	3.30
Left Turn Minor Road	7.00	3.40

Worksheet for TWSC Intersection

Step 1: RT from Minor Street	WB	EB

Conflicting Flows: (vph)	0	
Potential Capacity: (pcph)	1385	
Movement Capacity: (pcph)	1385	
Prob. of Queue-Free State:	1.00	

Step 2: LT from Major Street	SB	NB

Conflicting Flows: (vph)	0	
Potential Capacity: (pcph)	1714	
Movement Capacity: (pcph)	1714	
Prob. of Queue-Free State:	1.00	

Step 3: TH from Minor Street	WB	EB

Conflicting Flows: (vph)	0	0
Potential Capacity: (pcph)	1091	1091
Capacity Adjustment Factor due to Impeding Movements	1.00	1.00
Movement Capacity: (pcph)	1091	1091
Prob. of Queue-Free State:	0.72	0.76

Step 4: LT from Minor Street	WB	EB

Conflicting Flows: (vph)		137
Potential Capacity: (pcph)		865
Major LT, Minor TH Impedance Factor:		0.72
Adjusted Impedance Factor:		0.79
Capacity Adjustment Factor due to Impeding Movements		0.79
Movement Capacity: (pcph)		681

Intersection Performance Summary

Movement	Flow Rate (pcph)	Move Cap (pcph)	Shared Cap (pcph)	Avg. Total Delay (sec/veh)	95% Queue Length (veh)	LOS	Approach Delay (sec/veh)

EB L	0	681		5.3	0.0	B	
EB T	260	1091		4.3	1.0	A	4.3
WB T	301	1091	>				4.6
WB R	0	1385	> 1091	4.6	1.3	A	
SB L	0	1714		2.1	0.0	A	0.0

Intersection Delay = 4.4 sec/veh

Intersection Capacity Calculations

FUTURE + PROJECT CONDITIONS

Streets: (N-S) Washington St. (E-W) 52nd Ave.
 Analyst: Jose Nunez File Name: WSH52BO.HC9
 Area Type: Other 11-2-99 PK HR
 Comment: Future + Project Conditions

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	> 1	< 0	2	> 1	1	2	2	< 0	1	2	1
Volumes	6	10	4	61	8	330	50	240	5	4	280	102
Lane W (ft)	12.0			12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
RTOR Vols	0			33			0			10		
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
NB Left		*			EB Left	*		
NB Thru		*			EB Thru		*	
NB Right		*			EB Right		*	
NB Peds		*			EB Peds	*		
SB Left		*			WB Left	*		
SB Thru		*			WB Thru		*	
SB Right		*			WB Right		*	
SB Peds		*			WB Peds		*	
EB Right					NB Right			
WB Right		*			SB Right	*		
Green	40.0A	15.0A			Green	20.0A	29.0A	
Yellow/AR	4.0	4.0			Yellow/AR	4.0	4.0	
Cycle Length: 120 secs Phase combination order: #1 #2 #5 #6								

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
NB	LTR	202	1516	0.104	0.133	29.5	D	29.5	D
SB	L	1142	3343	0.058	0.342	17.1	C	12.7	B
	LT	601	1759	0.013	0.342	16.9	C		
	R	773	1495	0.404	0.517	11.6	B		
EB	L	632	3610	0.087	0.175	26.8	D	24.1	C
	TR	947	3789	0.286	0.250	23.5	C		
WB	L	316	1805	0.013	0.175	26.4	D	19.7	C
	T	950	3800	0.326	0.250	23.8	C		
	R	996	1615	0.096	0.617	6.1	B		

Intersection Delay = 18.7 sec/veh Intersection LOS = C
 Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.338

Streets: (E-W) 50th Ave.

(N-S) Washington St.

Analyst: J.NUNEZ

File Name: WSH50FP.HC9

Area Type: Other

2-29-0 Peak Hr

Comment: Future + Project Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	1	1	1	< 0	1	2	< 0	1	1	1
Volumes	155	330	74	285	201	294	68	989	189	204	1525	136
Lane W (ft)	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	12.0
RTOR Vols			7			29			19			14
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left	*	*	
Thru		*			Thru	*	*	
Right		*			Right	*	*	
Peds		*			Peds		*	
WB Left	*				SB Left	*		
Thru		*			Thru		*	
Right		*			Right		*	
Peds		*			Peds		*	
NB Right					EB Right			
SB Right					WB Right			
Green	16.0A	34.0P			Green	14.0A	10.0A	26.0P
Yellow/AR	4.0	4.0			Yellow/AR	4.0	4.0	4.0
Cycle Length: 120 secs	Phase combination order: #1 #2 #5-#6 #7							

Intersection Performance Summary

	Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:		
								Mvmts	Cap	Flow
EB	L		251	1770	0.650	0.142	41.0	E	31.9	D
	T		543	1863	0.639	0.292	29.2	D		
	R		462	1583	0.154	0.292	24.0	C		
WB	L		251	1770	1.197	0.142	*	*	*	*
	TR		497	1704	0.986	0.292	55.5	E		
NB	L		428	1770	0.168	0.242	27.4	D	52.9	E
	TR		1245	3643	1.029	0.342	54.3	E		
SB	L		221	1770	0.972	0.125	78.7	F	*	*
	T		419	1863	3.829	0.225	*	*		
	R		356	1583	0.359	0.225	30.1	D		

Intersection Delay = * (sec/veh) Intersection LOS = *
 (g/C)*(V/c) is greater than one. Calculation of D1 is infeasible.

Streets: (E-W) Eisenhower Dr. (N-S) Washington St.
 Analyst: J.NUNEZ File Name: WSHESHFP.HC9
 Area Type: Other 2-29-0 Peak Hr
 Comment: Future + Project Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	> 1	1	0	> 1	< 0	1	2	1	1	2	1
Volumes	340	6	56	21	5	29	87	1343	15	18	1720	344
Lane W (ft)	12.0	12.0	12.0		12.0		12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vols			6			3			2			34
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left	*		
Thru	*				Thru		*	
Right	*				Right		*	
Peds	*				Peds		*	
WB Left		*			SB Left	*		
Thru		*			Thru		*	
Right		*			Right		*	
Peds		*			Peds		*	
NB Right					EB Right	*		
SB Right					WB Right			
Green	25.0A				Green 18.0A 65.0A			
Yellow/AR	4.0				Yellow/AR 4.0 4.0			
Cycle Length:	120 secs Phase combination order: #1 #5 #6							

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
EB	L	647	2986	0.570	0.217	28.0	D	26.3	D
	LT	404	1863	0.015	0.217	23.9	C		
	R	633	1583	0.084	0.400	14.4	B		
WB	LTR	328	1516	0.167	0.217	24.7	C	24.7	C
NB	L	280	1770	0.328	0.158	29.2	D	14.6	B
	T	2049	3725	0.725	0.550	13.7	B		
	R	871	1583	0.016	0.550	7.9	B		
SB	L	280	1770	0.068	0.158	27.8	D	19.2	C
	T	2049	3725	0.928	0.550	20.7	C		
	R	871	1583	0.374	0.550	10.0	B		

Intersection Delay = 18.3 sec/veh Intersection LOS = C
 Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.742

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 Streets: (N-S) Eisenhower Dr. (E-W) Calle Sinaloa
 Analyst..... J. NUNEZ
 Date of Analysis..... 2/29/0
 Other Information..... Future + Project Conditions
 All-way Stop-controlled Intersection
 =====

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	> 1	< 0	1	1	1	1	2	< 0	1	2	< 0
Volumes	31	60	18	8	44	12	26	78	20	15	94	25
PHF	.95	.95	.95	.85	.95	.95	.95	.95	.95	.95	.95	.95

 Volume Summary and Capacity Analysis WorkSheet

	EB	WB	NB	SB
LT Flow Rate	33	9	27	16
RT Flow Rate	19	13	21	26
Approach Flow Rate	115	68	130	141
Proportion LT	0.29	0.13	0.21	0.11
Proportion RT	0.17	0.19	0.16	0.18
Opposing Approach Flow Rate	68	115	141	130
Conflicting Approaches Flow Rate	271	271	183	183
Proportion, Subject Approach Flow Rate	0.25	0.15	0.29	0.31
Proportion, Opposing Approach Flow Rate	0.15	0.25	0.31	0.29
Lanes on Subject Approach	1	3	3	3
Lanes on Opposing Approach	3	1	3	3
LT, Opposing Approach	9	33	16	27
RT, Opposing Approach	13	19	26	21
LT, Conflicting Approaches	43	43	42	42
RT, Conflicting Approaches	47	47	32	32
Proportion LT, Opposing Approach	0.13	0.29	0.11	0.21
Proportion RT, Opposing Approach	0.19	0.17	0.18	0.16
Proportion LT, Conflicting Approaches	0.16	0.16	0.23	0.23
Proportion RT, Conflicting Approaches	0.17	0.17	0.17	0.17
Approach Capacity	261	778	790	765

 Intersection Performance Summary

Movement	Approach Flow Rate	Approach Capacity	V/C Ratio	Average Total Delay	LOS
EB	115	261	0.44	5.3	B
WB	68	778	0.09	1.4	A
NB	130	790	0.16	1.9	A
SB	141	765	0.18	2.0	A

Intersection Delay = 2.7
 Level of Service (Intersection) = A

Streets: (E-W) 50th Ave. (N-S) Eisenhower Dr.
 Analyst: J.NUNEZ File Name: EH50FP.HC9
 Area Type: Other 2-29-0 Peak Hr
 Comment: Future + Project Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	> 1	1	1	1	1	1	2	< 0	1	2	< 0
Volumes	8	10	3	32	6	49	4	115	29	45	154	12
Lane W (ft)		12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
RTOR Vols			1			5			2			1
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left	*		
EB Thru	*				NB Thru		*	
EB Right	*				NB Right		*	
EB Peds	*				NB Peds		*	
WB Left		*			SB Left	*		
WB Thru		*			SB Thru		*	
WB Right		*			SB Right		*	
WB Peds		*			SB Peds		*	
NB Right					EB Right	*		
SB Right					WB Right	*		
Green	23.0A	25.0A			Green	15.0A	45.0A	
Yellow/AR	4.0	0.0			Yellow/AR	4.0	4.0	
Cycle Length: 120 secs Phase combination order: #1 #2 #5 #6								

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:
Mvmnts	Cap	Flow	Ratio	Ratio			Delay LOS
EB	LT	365	1824	0.052	0.200	25.1	D 24.3 C
	R	528	1583	0.004	0.333	17.2	C
WB	L	324	1770	0.105	0.183	26.4	D 21.4 C
	T	342	1863	0.018	0.183	25.9	D
	R	541	1583	0.087	0.342	17.3	C
NB	L	236	1770	0.017	0.133	29.2	D 15.8 C
	TR	1387	3617	0.113	0.383	15.4	C
SB	L	236	1770	0.199	0.133	30.0	D 18.5 C
	TR	1413	3687	0.129	0.383	15.5	C

Intersection Delay = 18.4 sec/veh Intersection LOS = C
 Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.118

=====
 Streets: (E-W) Avenida Fernando (S) (N-S) Eisenhower Dr.
 Analyst: J.NUNEZ File Name: EHAVFFP.HC9
 Area Type: Other 2-29-0 Peak Hr
 Comment: Future + Project Conditions
 =====

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	< 0	0	> 1	< 0	1	2	< 0	1	2	< 0
Volumes	19	34	29	23	11	57	4	142	11	25	237	19
Lane W (ft)	12.0	12.0			12.0		12.0	12.0		12.0	12.0	
RTOR Vols			3			6			1			2
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left	*		
Thru	*				Thru		*	
Right	*				Right		*	
Peds	*				Peds		*	
WB Left	*				SB Left	*		
Thru	*				Thru		*	
Right	*				Right		*	
Peds	*				Peds		*	
NB Right					EB Right			
SB Right					WB Right			
Green	42.0A				Green	16.0A 50.0A		
Yellow/AR	4.0				Yellow/AR	4.0 4.0		
Cycle Length: 120 secs Phase combination order: #1 #5 #6								

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:
Mvmts	Cap	Flow	Ratio	Ratio			Delay LOS
EB	L	483	1348	0.041	0.358	16.2	C 16.5 C
	TR	624	1741	0.103	0.358	16.6	C
WB	LTR	513	1433	0.175	0.358	17.0	C 17.0 C
NB	L	251	1770	0.016	0.142	28.6	D 13.8 B
	TR	1567	3687	0.107	0.425	13.4	B
SB	L	251	1770	0.104	0.142	29.0	D 15.2 C
	TR	1567	3688	0.179	0.425	13.9	B

Intersection Delay = 15.2 sec/veh Intersection LOS = C
 Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.166

Streets: (E-W) Coachella Dr. (N-S) Eisenhower Dr.
 Analyst: J.NUNEZ File Name: ESCHFP.HC9
 Area Type: Other 2-29-0 Peak Hr
 Comment: Future + Project Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	< 0	1	1	< 0	1	1	< 0	1	1	< 0
Volumes	71	1	47	11	1	21	45	208	6	25	248	68
Lane W (ft)	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
RTOR Vols			5			1			1			7
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left	*		
Thru	*				Thru		*	
Right	*				Right		*	
Peds	*				Peds		*	
WB Left		*			SB Left	*		
Thru		*			Thru		*	
Right		*			Right		*	
Peds		*			Peds		*	
NB Right					EB Right			
SB Right					WB Right			
Green	23.0A	25.0A			Green	15.0A	45.0A	
Yellow/AR	4.0	0.0			Yellow/AR	4.0	4.0	
Cycle Length: 120 secs Phase combination order: #1 #2 #5 #6								

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:
Mvmts	Cap	Flow	Ratio	Ratio			Delay LOS
EB	L	354	1770	0.212	0.200	26.0	D 25.8 D
	TR	318	1590	0.142	0.200	25.5	D
WB	L	324	1770	0.037	0.183	26.0	D 26.1 D
	TR	293	1596	0.075	0.183	26.2	D
NB	L	236	1770	0.199	0.133	30.0	D 19.1 C
	TR	712	1857	0.315	0.383	16.8	C
SB	L	236	1770	0.110	0.133	29.6	D 19.1 C
	TR	693	1807	0.471	0.383	18.3	C

Intersection Delay = 20.4 sec/veh Intersection LOS = C
 Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.292

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Streets: (N-S) Jefferson St. (E-W) 50th Ave.
 Analyst..... J. NUNEZ
 Date of Analysis..... 2/29/0
 Other Information.....Future + Project Conditions
 All-way Stop-controlled Intersection
 =====

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	> 1	< 0	0	> 1	< 0	0	> 1	< 0	0	> 1	< 0
Volumes	131	591	41	41	535	84	23	198	23	131	35	383
PHF	.95	.95	.95	.85	.95	.95	.95	.95	.95	.95	.95	.95

Range Limit(s) Exceeded

From HCM Range of Model Validity (p. 10-37):

The intersection volume exceeds 2100 vph.

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Streets: (N-S) Avenida Bermudas (E-W) 52nd Ave.
 Analyst..... Jose Nunez
 Date of Analysis..... 11/2/99
 Other Information..... Future + Project Conditions
 All-way Stop-controlled Intersection

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	> 1	1	0	> 1	1	1	2	< 0	1	2	< 0
Volumes	17	95	13	25	132	36	25	189	21	63	179	44
PHF	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95

Volume Summary and Capacity Analysis WorkSheet

	NB	SB	EB	WB
LT Flow Rate	18	26	26	66
RT Flow Rate	14	38	22	46
Approach Flow Rate	132	203	247	300
Proportion LT	0.14	0.13	0.11	0.22
Proportion RT	0.11	0.19	0.09	0.15
Opposing Approach Flow Rate	203	132	300	247
Conflicting Approaches Flow Rate	547	547	335	335
Proportion, Subject Approach Flow Rate	0.15	0.23	0.28	0.34
Proportion, Opposing Approach Flow Rate	0.23	0.15	0.34	0.28
Lanes on Subject Approach	2	2	3	3
Lanes on Opposing Approach	2	2	3	3
LT, Opposing Approach	26	18	66	26
RT, Opposing Approach	38	14	46	22
LT, Conflicting Approaches	92	92	44	44
RT, Conflicting Approaches	68	68	52	52
Proportion LT, Opposing Approach	0.13	0.14	0.22	0.11
Proportion RT, Opposing Approach	0.19	0.11	0.15	0.09
Proportion LT, Conflicting Approaches	0.17	0.17	0.13	0.13
Proportion RT, Conflicting Approaches	0.12	0.12	0.16	0.16
Approach Capacity	497	502	790	830

Intersection Performance Summary

Movement	Approach Flow Rate	Approach Capacity	V/C Ratio	Average Total Delay	LOS
NB	132	497	0.27	2.7	A
SB	203	502	0.40	4.6	A
EB	247	790	0.31	3.3	A
WB	300	830	0.36	3.9	A

Intersection Delay = 3.7
 Level of Service (Intersection) = A

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Streets: (N-S) Avenida Fernando (N) (E-W) Eisenhower Dr.
 Major Street Direction.... EW
 Length of Time Analyzed... 15 (min)
 Analyst..... J. NUNEZ
 Date of Analysis..... 2/29/0
 Other Information..... Future + Project Conditions
 Two-way Stop-controlled Intersection
 =====

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	0	1	< 0	0	0	0	1	0	1
Stop/Yield			N			N						
Volumes	0	295			328	0				0		0
PHF	.95	.95			.95	.95				.95		.95
Grade		0			0						0	
MC's (%)	0									0		0
SU/RV's (%)	2									5		5
CV's (%)	3									5		5
PCE's	1.04									1.08		1.08

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.00	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.00	3.30
Left Turn Minor Road	6.50	3.40

Worksheet for TWSC Intersection

Step 1: RT from Minor Street	NB	SB

Conflicting Flows: (vph)		345
Potential Capacity: (pcph)		926
Movement Capacity: (pcph)		926
Prob. of Queue-Free State:		1.00

Step 2: LT from Major Street	WB	EB

Conflicting Flows: (vph)		345
Potential Capacity: (pcph)		1174
Movement Capacity: (pcph)		1174
Prob. of Queue-Free State:		1.00

Step 4: LT from Minor Street	NB	SB

Conflicting Flows: (vph)		656
Potential Capacity: (pcph)		442
Major LT, Minor TH		
Impedance Factor:		1.00
Adjusted Impedance Factor:		1.00
Capacity Adjustment Factor due to Impeding Movements		1.00
Movement Capacity: (pcph)		442

Intersection Performance Summary

Movement	Flow Rate (pcph)	Move Cap (pcph)	Shared Cap (pcph)	Avg. Total Delay (sec/veh)	95% Queue Length (veh)	LOS	Approach Delay (sec/veh)

SB L	0	442		8.1	0.0	B	
SB R	0	926		3.9	0.0	A	0.0
EB L	0	1174		3.1	0.0	A	0.0

Intersection Delay = 0.0 sec/veh

Intersection Capacity Calculations

MITIGATION MEASURES

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4g 02-29-2000
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Streets: (E-W) 50th Ave. (N-S) Washington St.
 Analyst: J.NUNEZ File Name: WSH50FPW.HC9
 Area Type: Other 2-29-0 Peak Hr
 Comment: Future + Project Conditions with Mitigation

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	< 0	1	2	< 0	1	2	1	2	2	1
Volumes	155	330	74	285	201	294	68	989	189	204	1525	136
Lane W (ft)	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vols			7			29			19			14
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left	*		
Thru			*		Thru		*	
Right			*		Right		*	
Peds			*		Peds		*	
WB Left		*	*		SB Left	*	*	
Thru			*	*	Thru		*	*
Right			*	*	Right		*	*
Peds			*	*	Peds		*	*
NB Right					EB Right			
SB Right					WB Right			
Green	13.0A	6.0A	20.0A		Green	7.0A	15.0A	35.0P
Yellow/AR	4.0	4.0	4.0		Yellow/AR	4.0	4.0	4.0
Cycle Length: 120 secs	Phase combination order: #1 #2 #3 #5 #6 #7							

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
EB	L	206	1770	0.790	0.117	51.5	E	40.9	E
	TR	635	3631	0.691	0.175	37.0	D		
WB	L	354	1770	0.848	0.200	47.0	E	36.3	D
	TR	881	3408	0.584	0.258	30.1	D		
NB	L	118	1770	0.610	0.067	47.5	E	42.4	E
	T	1118	3725	0.978	0.300	44.9	E		
	R	475	1583	0.377	0.300	25.4	D		
SB	L	796	3539	0.278	0.225	29.3	D	30.7	D
	T	1708	3725	0.987	0.458	32.2	D		
	R	726	1583	0.176	0.458	14.6	B		

Intersection Delay = 36.2 sec/veh Intersection LOS = D
 Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.870