

Deliverable For:

**Gateway Cities Traffic Signal Synchronization
and Bus Speed Improvement Project**

I-5/Telegraph Road Corridor

Deliverables 13.2 and 18.2

**CCTV Location Analysis (Expanded Area)
Final**

Submitted To:

**Los Angeles County
Department of Public Works**

Submitted By:

Siemens ITS

December 1, 2003

Revision History

Version	Date Submitted	Comments
Draft Version 1	June 2, 2003	Initial submittal
Draft Version 2	September 22, 2003	Incorporates Country comments
Final	December 1, 2003	Incorporates Country comments

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1 INTRODUCTION

1.1 Background

The County of Los Angeles Department of Public Works Traffic Signal Synchronization, Operation and Maintenance (SOM) Program has proven successful in creating an institutional infrastructure to coordinate the activities of the agencies responsible for traffic signal operations in the County. A key feature of this infrastructure is the Forums - groups of bordering agencies created to encourage and promote inter-agency cooperation. These Forums have enabled funding to be targeted at infrastructure improvements along arterial and arterial/freeway corridors in the County's sub-regions. Such projects are a critical part of what will eventually be a network of integrated ITS systems in Los Angeles County and in Southern California.

The I-5/Telegraph Road Corridor is one such project which will result in arterial infrastructure improvements along Telegraph Road in the South-East Los Angeles County (Gateway Cities) Forum. The Project area includes all major north-south and east-west streets along I-5/Telegraph Road Corridor and contains 277 intersections in 10 different jurisdictions, comprising 8 cities, the County and Caltrans.

The objective of this Project is to design, develop and deploy traffic control systems in the Corridor so that the signals along I-5/Telegraph Road can be synchronized across jurisdictional boundaries. This Project concentrates on the needs of the agencies in the Project area with respect to signal synchronization along arterials of regional significance and recommends improvements to field infrastructure (including controllers, loops, detectors, and communications) and central traffic control systems to meet those needs.

When successfully completed, each of the agencies responsible for traffic signal operations in the I-5/Telegraph Road Corridor will have full access to an Advanced Traffic Management System (ATMS) that monitors and controls the traffic signals under their jurisdiction. Agencies will be able to synchronize their signals with neighboring agencies, and exchange traffic information in real-time.

Agencies will also be able to exchange data with other agencies in the Gateway Cities region. This will allow the agencies to respond to recurrent and non-recurrent congestion in a coordinated fashion across jurisdictional boundaries. The traffic control systems therefore form part of a larger, regional approach supporting multi-agency traffic signal operations.

Earlier reports for the I-5 / Telegraph Road Corridor Project addressed the user and functional requirements for the ATMS systems, the interfacing systems, the communication system, and the local control centers. These requirements enabled development of the High Level Design Definition Report, LCC Recommendations Report and Alternative Analysis reports for ATMS, and communications systems.

This Closed Circuit Television (CCTV) Location Analysis report analyses all 78 major¹ intersections in the Project area and evaluates each intersection location for the need to deploy CCTV at that location. The locations are analyzed using a combination of factors

¹ For the purposes of this analysis an intersection is defined as a major intersection where two major project roadways meet or major project roadway meets with the freeway ramp, where major project roads are defined as having at least 4 through lanes in both directions.

such as traffic volumes, level of service, accident rates and proximity to freeways ramps. A ranking for camera placement for each location is derived based on these factors.

1.2 Methodology Used

The CCTV location analysis for the I-5/Telegraph Road Corridor Project was performed using the methodology which had been developed through a separate County Traffic Forum project. This methodology was applied as follows:

1. Development of CCTV location prioritization criteria (See Table 1):
 - a. Previous work identified four factors that affect the decision to place a camera at a given location. These are accident history (Average number of accidents per year over a 5 year period), level of service, average daily traffic volume, proximity to freeway on-ramp.
 - b. An assignment of weight to these factors (factor weight) was made based on their relative importance to camera placement decision.
 - c. For each factor, ranges were developed based on their expected values. Each range was assigned a weight (range weight) to reflect its relative effect on camera placement decision.

Table 1: CCTV Prioritization Factors

Factors	Range	Range Weight	Factor Weight
1. Accident History (Average number of accidents per year over a 5 year period)	a. Over 4	4	5
	b. Between 3 and 4	3	
	c. Equal to 2	2	
	d. Less than or equal to 1	1	
2. Level of Service	a. F	4	4
	b. E	3	
	c. D	2	
	d. C,B or A	1	
3. Average Daily Traffic Volume	a. Over 60,000	4	3
	b. Between 45,000 and 60,000	3	
	c. Between 30,000 and 45,000	2	
	d. Less than 30,000	1	
4. Proximity to Freeway on -ramp	a. Adjacent	4	2
	b. Not Adjacent	0	

2. Data for each of the four factors was collected for all 78 potential CCTV locations. Appendix A presents a summary of data collection and extrapolation methodology.
3. Range weights were assigned to the factors based on their values according to the criteria.
4. For each location a weighted score was calculated by multiplying the range weight by the factor weight. The weighted scores for all factors were summed to derive a location score. (Appendix B presents the raw data; factor scores, weighted scores and location score for each location)
5. The location scores were analyzed to determine high priority, and low priority camera locations as follows:
 - a. It was observed that:
 - i. The highest score a location received is 48, the lowest score a location received is 12.
 - ii. In order to obtain the cut off score for each priority band, the cumulative location numbers were plotted against location scores as depicted in Figure 1. It was decided to assign 50% of the locations (39 locations) “high” priority and 50% of the locations (39 locations) “low” priority. It was observed that 50% of the locations had scores greater than 31. Thus the locations with scores 32 and above were assigned “High” priority and locations with score 31 and lower were assigned “Low” priority.

Table 2 & Figure 2 presents the locations of High Priority ranking cameras by Jurisdiction. Appendix C contains the CCTV location sorted by ranking scores.

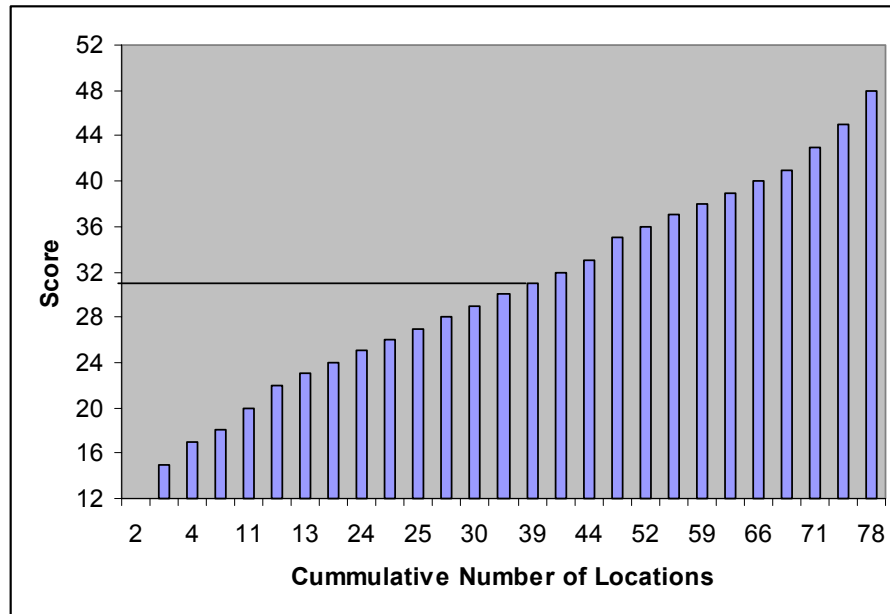


Figure 1: Cumulative Number of Locations vs. Location Scores

Table 2: Locations of High Priority Ranking Cameras

ID	Signal Intersection	Location Score	Jurisdiction
74	Telegraph Rd./Bartley Avenue I-605 Northbound Ramps	48	SFS (Owned by Caltrans)
21	Florence Ave. /Pioneer Blvd.	45	Santa Fe Springs
22	Florence Ave. /Norwalk Blvd.	45	Santa Fe Springs
23	Florence Ave. /Telegraph Rd./Mills Ave.	45	County
53	Pioneer Blvd./ Washington Blvd.	45	County
56	Pioneer Blvd./ Imperial hwy.	45	Norwalk
75	Telegraph Rd./Valley View Avenue	45	County
28	La Mirada Blvd. /Imperial Hwy.	43	La Mirada
58	Rosemead Blvd. / Whittier Blvd.	43	Pico Rivera (Owned by Caltrans)
64	Lakewood Blvd. / Firestone Blvd.	43	Downey
8	Bloomfield Ave. /Florence Ave.	41	Santa Fe Springs
54	Pioneer Blvd./ Slauson Ave.	41	County
34	Mills Ave. /Whittier Blvd.	40	Whittier (Owned by Caltrans)
37	Norwalk Blvd./ Whittier Blvd.	40	Whittier (Owned by Caltrans)
44	Norwalk Blvd./Rosecrans Ave.	40	Norwalk
51	Paramount Blvd. / I-5 Fwy Ramp	40	Downey (Owned by Caltrans)
67	Slauson Ave. /I-605 Ramp	40	County (Owned by Caltrans)
40	Norwalk Blvd./ Telegraph Rd.	39	Santa Fe Springs
59	Rosemead Blvd. / Washington Blvd.	39	Pico Rivera (Owned by Caltrans)
5	Beverly Blvd./Rosemead Blvd.	38	Pico Rivera (Owned by Caltrans)
9	Bloomfield Ave./ Imperial Hwy.	38	Norwalk
14	Carmenita Rd. /Telegraph Rd.	38	Santa Fe Springs
17	Carmenita Rd. /Rosecrans Ave.	38	Santa Fe Springs
52	Paramount Blvd. / Firestone Blvd.	38	Downey
60	Rosemead Blvd. / Slauson Ave.	37	Pico Rivera (Owned by Caltrans)
65	Santa Fe Springs Rd. / Whittier Blvd. /Washington Blvd.	37	Whittier (Owned by Caltrans)
29	La Mirada Blvd. /Rosecrans Ave.	36	La Mirada
47	Paramount Blvd. / Whittier Blvd.	36	Pico Rivera (Owned by Caltrans)
16	Carmenita Rd. /Imperial Hwy.	35	Santa Fe Springs
20	Florence Ave. /I-605	35	Downey (Owned by Caltrans)
38	Norwalk Blvd./ Washington Blvd.	35	County
62	Lakewood Blvd. /I-5 North Ramp	35	Downey (Owned by Caltrans)
73	Telegraph Rd./Cedardale Drive I-605 Southbound Ramps	35	SFS (Owned by Caltrans)
77	Valley View Ave. /Imperial Hwy.	35	County
4	Beverly Blvd./Paramount Blvd.	33	Pico Rivera
18	Florence Ave. /Paramount Blvd.	33	Downey
49	Paramount Blvd. / Slauson Ave.	33	Pico Rivera
55	Pioneer Blvd./ Telegraph Rd.	32	Santa Fe Springs
61	Rosemead Blvd. /Lakewood Blvd. / Telegraph Rd.	32	Pico Rivera (Owned by Caltrans)

Figure 2: I-5 / Telegraph Road Project Area Showing High Priority CCTV Locations



Appendix A: Summary of Data Collection and Extrapolation

1. Accident History Data Collection and Data Reduction

Data Requirements: Annual Average Accident Data.

Data Sources:

1. California CHP
Data provider: Roberta Tanger: 916-375-2850
CHP provided Traffic Accident Records for all project intersections for last 5 years (01/01/1998 to 12/31/2002).

Data Extrapolation:

- The data received from CHP was converted into annual average accident data.

Note: For some locations, accident data was available from more than one source; City, County, CHP. The data from different sources differed greatly. In order to keep data consistent, Siemens ITS requested CHP to provide data for all intersections. Thus, the CHP data was used for all intersections, and data from all other sources was ignored.

2. Level Of Service Data

Data Requirements: LOS data for each Intersection.

Data Sources:

The County of Los Angeles, and cities of Santa Fe Springs and Whittier provided LOS data for some intersections.

Data Extrapolation:

In order to keep the data consistent over all intersections, LOS calculations were made as follows:

1. If both two approach at the intersection are project roads;
Maximum East-West Directional Volume = $\text{Max}\{(\text{InWB}, \text{InEB})\}$
Maximum North-South Directional Volume = $\text{Max}\{(\text{InSB}, \text{InNB})\}$
if the intersection is freeway ramp intersection which has only one directional Volume (East-West or North-South), only the major street volume was used.
2. Assume peak hour volume is approximately 1/10th of ADT, therefore the Directional Peak Hour Volume is: $\text{Max. Directional Volume} * 0.1$
3. Calculate Capacity as;
 $\text{Number of lanes} * 1600$
4. Calculate V/C Ratio by dividing Directional Peak Hour Volume by Capacity
5. Calculate total V/C = $\text{Max (East-West V/C)} + \text{Max (North-South V/C)} + 0.1$
If the intersection is freeway ramp intersection, the

V/C = East-West V/C or North-South V/C+0.1

6. Assign LOS values as follows:

V/C Ratio	LOS
0 – 0.60	A
0.601 – 0.70	B
0.701 – 0.80	C
0.801 – 0.90	D
0.901 – 1.00	E
Over 1.001	F

LOS Calculation Example:

Intersection Name: Rosemead Blvd. /Lakewood Blvd. /Telegraph Rd.
 ADT: InWB =15707 veh, InEB=11969,veh InSB=12564 veh, InNB=12564 veh
 Lane Number: WB =3, EB =3, SB =2, NB =2

- 1) Max. East-West Directional Volume = $\text{Max}\{(\text{InWB}, \text{InEB})\}=15707$,
 Direction is InWB
 Max. North-South Directional Volume = $\text{Max}\{(\text{InSB}, \text{InNB})\}=12564$,
 Direction is InNB
- 2) Max. Directional Peak Hour Volume for E-W: $15707*0.1=1571$
 Max. Directional Peak Hour Volume for N-S: $12564*0.1=1256$
- 3) Capacity for E-W: $1600*3=4800$
 Capacity for N-S: $1600*2=3200$
- 4) V/C Ratio for E-W: $1571/4800 = 0.33$
 V/C Ratio for N-S: $1258/3200= 0.39$
- 5) Total V/C = $0.33+0.39+0.1=0.82$
- 6) Because 0.82 is greater than 0.801 and less than 0.90, the LOS = D

3. Average Daily Traffic Data

Data Requirements: Approach (In EB, In NB, In WB, In SB) Daily Traffic Volumes.

Data Sources:

1. County of Los Angeles Department of Public Works
 Data provider: Patrick Smith 626-300-4788
 County provided the edition of Traffic Volumes book, which covers traffic volume counts taken by the County of Los Angeles DPW during the years of 1997 through 2001.
 The traffic volume included most of the unincorporated areas of the County and some of the cities in the project areas.
 All are approach traffic counts.
2. City of Commerce
 Data provider: Sheree Wynn 323-722-4805. ext. 2238
 No data available for Project intersections from the City.
 Data provided by County was used for analysis.
3. City of Montebello
 Data provider: A. Alcantara 323-887-1472
 Data provided for years 1998 and 1999.

Section (Link) volume data provided for some links and being populated to approach volume. Other intersections data was supplemented by County Data.

4. City of Pico Rivera
Data provider: Michael Moore 562-801-4420
Year: Feb/Mar 2000
Approach traffic counts provided for all intersections in the Project area. City and county Data were used for analysis.
5. City of Downey
Data provider: Stephen Yanez 562-904-7108
The data of the City of Downey are from the Downey Signal System Master Plan: existing condition (year 2000).
Section (Link) volume data provided for some links and being populated to approach volume. Other intersections data was supplemented by County Data.
6. City of Whittier
Data provider: James Keena: 562-464-3523
Only intersection volume data provided for years 2002. The data could not be used in the form provided for analysis purposes. Data provided by County was used for analysis.
7. City of Santa Fe Springs
Data provider: Tony Olms 562-868-0511. ext 7543
Robert Garcia 562-868-0511. ext 7545
Intersection approach data and section data provided for project intersections for years 1980s to 1990s. Other intersections data was supplemented by County Data.
8. City of Norwalk
Data provider: Joanne Itagaki: 562-929-5725
Data provided by County and Kimley-Horn were used for analysis.
9. City of La Mirada
No data available for Project intersections.
Data provided by County and Kimley-Horn were used for analysis.
10. Kimley-Horn and Associates, Inc
Data compiled from I-5 Intercounty Smart Street Feasibility Study project. It covers about 20 intersections in the project area for years 2001.

Data Extrapolation:

- In cases when only section volume data was available, all intersections within the section were populated with the available volume data. To estimate approach volumes, the link volumes were halved.
- If data was available for the same location from more than one source, the latest data was used.
- If data was available only for one approach of a pair, (e.g. EB in an EB/WB direction), the data for the opposite approach (WB) was assumed to be same.

- If data was unavailable for all the previous conditions, the same direction data from upstream intersection was used.
- Raw data were normalized to the year 2002 by applying an annual growth factor of 1.4%.
- ADT equals to the sum of all approach data (InWB, InEB, InSB, InNB)

4. Proximity to Freeway On-Ramp

Data Requirements: Distance between the intersection and Freeway On-Ramp

Data Sources: Microsoft Street 98 software

Data Extrapolation: Those intersections which distance to Freeway On-Ramp is smaller than 0.5 miles were categorized as “Adjacent”. Others were categorized as: “Not Adjacent”.

Appendix B: Raw Data, Factor Scores, Weighted Scores and Location Scores

ID	Signal Intersection	Accident History (Weight =5)			LOS (Weight =4)			AADT (Weight =3)			Proximity to Freeway on-ramp (Weight =2)			Location Score
		Raw Data	Raw Score	Weighted Score	Raw Data	Raw Score	Weighted Score	Raw Data	Raw Score	Weighted Score	Raw Data	Raw Score	Weighted Score	
1	Alonda Blvd. / Pioneer Blvd.	2	2	10	B	1	4	30,430	2	6	Not Adjacent	0	0	20
2	Alonda Blvd. / Norwalk Blvd.	4	3	15	D	2	8	41,958	2	6	Not Adjacent	0	0	29
3	Alonda Blvd. / Bloomfield Ave.	1	2	10	B	1	4	30,587	2	6	Not Adjacent	0	0	20
4	Beverly Blvd./Paramount Blvd.	7	4	20	C	1	4	46,162	3	9	Not Adjacent	0	0	33
5	Beverly Blvd./Rosemead Blvd.	2	2	10	F	4	16	61,364	4	12	Not Adjacent	0	0	38
6	Beverly Blvd./Norwalk Blvd.	3	3	15	C	1	4	40,577	2	6	Not Adjacent	0	0	25
7	Bloomfield Ave. /Telegraph Rd./Santa Fe Springs Rd.	5	4	20	C	1	4	44,379	2	6	Not Adjacent	0	0	30
8	Bloomfield Ave. /Florence Ave.	7	4	20	E	3	12	48,824	3	9	Not Adjacent	0	0	41
9	Bloomfield Ave./ Imperial Hwy.	1	2	10	F	4	16	61,886	4	12	Not Adjacent	0	0	38
10	Bloomfield Ave. / I-5 NB On-ramp	0	1	5	B	1	4	9,634	1	3	Adjacent	4	8	20
11	Bloomfield Ave. / Firestone Blvd.	1	2	10	A	1	4	10,193	1	3	Not Adjacent	0	0	17
12	Bloomfield Ave. / Rosecrans Ave.	6	4	20	B	1	4	36,351	2	6	Not Adjacent	0	0	30
13	Carmenita Rd. /Painter Ave. /Walburg St.	2	3	15	D	2	8	39,288	2	6	Not Adjacent	0	0	29
14	Carmenita Rd. /Telegraph Rd.	2	2	10	F	4	16	63,162	4	12	Not Adjacent	0	0	38
15	Carmenita Rd. /Florence Ave.	2	2	10	D	2	8	42,000	2	6	Not Adjacent	0	0	24
16	Carmenita Rd. /Imperial Hwy.	1	2	10	F	4	16	56,351	3	9	Not Adjacent	0	0	35
17	Carmenita Rd. /Rosecrans Ave.	2	2	10	F	4	16	64,607	4	12	Not Adjacent	0	0	38
18	Florence Ave. /Paramount Blvd.	1	1	5	F	4	16	72,885	4	12	Not Adjacent	0	0	33
19	Florence Ave. /Lakewood Blvd.	0	1	5	E	3	12	73,619	4	12	Not Adjacent	0	0	29
20	Florence Ave. /I-605	0	1	5	F	4	16	41,333	2	6	Adjacent	4	8	35
21	Florence Ave. /Pioneer Blvd.	5	4	20	F	4	16	56,666	3	9	Not Adjacent	0	0	45
22	Florence Ave. /Norwalk Blvd.	6	4	20	F	4	16	59,092	3	9	Not Adjacent	0	0	45
23	Florence Ave. /Telegraph Rd./Mills Ave.	6	4	20	F	4	16	53,264	3	9	Not Adjacent	0	0	45
24	Greenwood Blvd. /Washington Blvd.	3	3	15	C	1	4	50,044	3	9	Not Adjacent	0	0	28
25	Greenwood Blvd. /Telegraph Rd.	2	2	10	C	1	4	41,282	2	6	Not Adjacent	0	0	20
26	Colima Rd. /Whittier Blvd.	4	3	15	A	1	4	30,018	2	6	Not Adjacent	0	0	25
27	La Mirada Blvd. /Mulberry Dr.	5	4	20	B	1	4	43,087	2	6	Not Adjacent	0	0	30
28	La Mirada Blvd. /Imperial Hwy.	3	3	15	F	4	16	62,327	4	12	Not Adjacent	0	0	43
29	La Mirada Blvd. /Rosecrans Ave.	2	3	15	E	3	12	52,396	3	9	Not Adjacent	0	0	36
30	Los Nietos Rd. / Pioneer Blvd.	1	1	5	B	1	4	29,346	1	3	Not Adjacent	0	0	12
31	Los Nietos Rd. / Norwalk Blvd.	3	3	15	B	1	4	31,864	2	6	Not Adjacent	0	0	25
32	Los Nietos Rd. / Painter Ave.	1	1	5	A	1	4	22,290	1	3	Not Adjacent	0	0	12
33	Mills Ave. /Mulberry Dr.	7	4	20	C	1	4	44,637	2	6	Not Adjacent	0	0	30
34	Mills Ave. /Whittier Blvd.	2	3	15	F	4	16	57,981	3	9	Not Adjacent	0	0	40
35	Mulberry Dr. /Santa Fe Springs Rd./Slauson Ave.	5	4	20	C	1	4	44,507	2	6	Not Adjacent	0	0	30

ID	Signal Intersection	Accident History (Weight =5)			LOS (Weight =4)			AADT (Weight =3)			Proximity to Freeway on-ramp (Weight =2)			Location Score
		Raw Data	Raw Score	Weighted Score	Raw Data	Raw Score	Weighted Score	Raw Data	Raw Score	Weighted Score	Raw Data	Raw Score	Weighted Score	
36	Mulberry Dr. /Painter Ave.	3	3	15	B	1	4	39,894	2	6	Not Adjacent	0	0	25
37	Norwalk Blvd./ Whittier Blvd.	4	3	15	F	4	16	45,444	3	9	Not Adjacent	0	0	40
38	Norwalk Blvd./ Washington Blvd.	1	2	10	F	4	16	57,855	3	9	Not Adjacent	0	0	35
39	Norwalk Blvd./ Slauson Ave.	0	1	5	C	1	4	45,835	3	9	Not Adjacent	0	0	18
40	Norwalk Blvd./ Telegraph Rd.	4	3	15	E	3	12	66,869	4	12	Not Adjacent	0	0	39
41	Norwalk Blvd./ Imperial Hwy.	2	2	10	E	3	12	54,984	3	9	Not Adjacent	0	0	31
42	Norwalk Blvd./ San Antonio Dr. / Firestone Blvd.	3	3	15	C	1	4	41,574	2	6	Not Adjacent	0	0	25
43	San Antonio Dr. / Rosecrans Ave./Pioneer Blvd.	3	3	15	B	1	4	29,751	1	3	Not Adjacent	0	0	22
44	Norwalk Blvd./Rosecrans Ave.	3	3	15	F	4	16	48,303	3	9	Not Adjacent	0	0	40
45	Painter Ave. /Whittier Blvd.	3	3	15	B	1	4	34,370	2	6	Not Adjacent	0	0	25
46	Painter Ave. / Telegraph Rd.	3	3	15	C	1	4	43,479	2	6	Not Adjacent	0	0	25
47	Paramount Blvd. / Whittier Blvd.	3	3	15	E	3	12	49,897	3	9	Not Adjacent	0	0	36
48	Paramount Blvd. / Washington Blvd.	2	3	15	C	1	4	53,329	3	9	Not Adjacent	0	0	28
49	Paramount Blvd. / Slauson Ave.	5	4	20	C	1	4	53,148	3	9	Not Adjacent	0	0	33
50	Paramount Blvd. / Telegraph Rd.	2	2	10	C	1	4	38,411	2	6	Not Adjacent	0	0	20
51	Paramount Blvd. / I-5 Fwy Ramp	2	2	10	F	4	16	37,632	2	6	Adjacent	4	8	40
52	Paramount Blvd. / Firestone Blvd.	1	2	10	F	4	16	66,056	4	12	Not Adjacent	0	0	38
53	Pioneer Blvd./ Washington Blvd.	7	4	20	F	4	16	57,879	3	9	Not Adjacent	0	0	45
54	Pioneer Blvd./ Slauson Ave.	6	4	20	E	3	12	48,817	3	9	Not Adjacent	0	0	41
55	Pioneer Blvd./ Telegraph Rd.	2	3	15	D	2	8	54,269	3	9	Not Adjacent	0	0	32
56	Pioneer Blvd./ Imperial hwy.	4	4	20	F	4	16	51,962	3	9	Not Adjacent	0	0	45
57	Pioneer Blvd./ Firestone Blvd.	0	1	5	C	1	4	44,616	2	6	Not Adjacent	0	0	15
58	Rosemead Blvd. / Whittier Blvd.	2	3	15	F	4	16	61,400	4	12	Not Adjacent	0	0	43
59	Rosemead Blvd. / Washington Blvd.	3	3	15	E	3	12	66,047	4	12	Not Adjacent	0	0	39
60	Rosemead Blvd. / Slauson Ave.	5	4	20	D	2	8	58,519	3	9	Not Adjacent	0	0	37
61	Rosemead Blvd. /Lakewood Blvd. / Telegraph Rd.	3	3	15	D	2	8	52,803	3	9	Not Adjacent	0	0	32
62	Lakewood Blvd. /I-5 North Ramp	1	1	5	F	4	16	33,622	2	6	Adjacent	4	8	35
63	Lakewood Blvd. /I-5 South Ramp	0	1	5	C	1	4	33,622	2	6	Adjacent	4	8	23
64	Lakewood Blvd. / Firestone Blvd.	3	3	15	F	4	16	82,358	4	12	Not Adjacent	0	0	43
65	Santa Fe Springs Rd. / Whittier Blvd. /Washington Blvd.	5	4	20	D	2	8	47,516	3	9	Not Adjacent	0	0	37
66	Slauson Ave. /Telegraph Rd.	1	1	5	F	4	16	59,554	3	9	Not Adjacent	0	0	30
67	Slauson Ave. /I-605 Ramp	2	2	10	F	4	16	36,106	2	6	Adjacent	4	8	40
68	Telegraph Rd./Atlantic Boulevard	4	3	15	B	1	4	43,417	2	6	Not Adjacent	0	0	25
69	Telegraph Rd./Camfield Avenue I-5 Northbound Ramps	1	2	10	B	1	4	18,633	1	3	Adjacent	4	8	25
70	Telegraph Rd./Casino I-5 Northbound Ramps	2	2	10	A	1	4	10,040	1	3	Adjacent	4	8	25
71	Telegraph Rd./Washington Blvd.	5	4	20	A	1	4	38,642	2	6	Not Adjacent	0	0	30

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ID	Signal Intersection	Accident History (Weight =5)			LOS (Weight =4)			AADT (Weight =3)			Proximity to Freeway on-ramp (Weight =2)			Location Score
		Raw Data	Raw Score	Weighted Score	Raw Data	Raw Score	Weighted Score	Raw Data	Raw Score	Weighted Score	Raw Data	Raw Score	Weighted Score	
72	Telegraph Rd./Church Road I-5 Northbound Ramps	1	1	5	A	1	4	13,829	1	3	Adjacent	4	8	20
73	Telegraph Rd./Cedardale Drive I-605 Southbound Ramps	0	1	5	F	4	16	42,726	2	6	Adjacent	4	8	35
74	Telegraph Rd./Bartley Avenue I-605 Northbound Ramps	3	3	15	F	4	16	52,230	3	9	Adjacent	4	8	48
75	Telegraph Rd./Valley View Avenue	4	4	20	F	4	16	48,249	3	9	Not Adjacent	0	0	45
76	Telegraph Rd./Imperial Highway	6	4	20	A	1	4	19,930	1	3	Not Adjacent	0	0	27
77	Valley View Ave. /Imperial Hwy.	1	2	10	F	4	16	55,387	3	9	Not Adjacent	0	0	35
78	Valley View Ave. / Rosecrans Ave.	1	2	10	E	3	12	53,453	3	9	Not Adjacent	0	0	31

Appendix C: CCTV Ranking By Scores

ID	Signal Intersection	Location Score	Priority Ranking
55	Pioneer Blvd./ Telegraph Rd.	32	High
61	Rosemead Blvd. /Lakewood Blvd. / Telegraph Rd.	32	High
4	Beverly Blvd./Paramount Blvd.	33	High
18	Florence Ave. /Paramount Blvd.	33	High
49	Paramount Blvd. / Slauson Ave.	33	High
16	Carmenita Rd. /Imperial Hwy.	35	High
20	Florence Ave. /I-605	35	High
38	Norwalk Blvd./ Washington Blvd.	35	High
62	Lakewood Blvd. /I-5 North Ramp	35	High
73	Telegraph Rd./Cedardale Drive I-605 Southbound Ramps	35	High
77	Valley View Ave. /Imperial Hwy.	35	High
29	La Mirada Blvd. /Rosecrans Ave.	36	High
47	Paramount Blvd. / Whittier Blvd.	36	High
60	Rosemead Blvd. / Slauson Ave.	37	High
65	Santa Fe Springs Rd. / Whittier Blvd. /Washington Blvd.	37	High
5	Beverly Blvd./Rosemead Blvd.	38	High
9	Bloomfield Ave./ Imperial Hwy.	38	High
14	Carmenita Rd. /Telegraph Rd.	38	High
17	Carmenita Rd. /Rosecrans Ave.	38	High
52	Paramount Blvd. / Firestone Blvd.	38	High
40	Norwalk Blvd./ Telegraph Rd.	39	High
59	Rosemead Blvd. / Washington Blvd.	39	High
34	Mills Ave. /Whittier Blvd.	40	High
37	Norwalk Blvd./ Whittier Blvd.	40	High
44	Norwalk Blvd./Rosecrans Ave.	40	High
51	Paramount Blvd. / I-5 Fwy Ramp	40	High
67	Slauson Ave. /I-605 Ramp	40	High
8	Bloomfield Ave. /Florence Ave.	41	High
54	Pioneer Blvd./ Slauson Ave.	41	High
28	La Mirada Blvd. /Imperial Hwy.	43	High
58	Rosemead Blvd. / Whittier Blvd.	43	High
64	Lakewood Blvd. / Firestone Blvd.	43	High
21	Florence Ave. /Pioneer Blvd.	45	High
22	Florence Ave. /Norwalk Blvd.	45	High
23	Florence Ave. /Telegraph Rd./Mills Ave.	45	High
53	Pioneer Blvd./ Washington Blvd.	45	High
56	Pioneer Blvd./ Imperial hwy.	45	High
75	Telegraph Rd./Valley View Avenue	45	High
74	Telegraph Rd./Bartley Avenue I-605 Northbound Ramps	48	High
39	Norwalk Blvd./ Slauson Ave.	18	Low
1	Alonda Blvd. / Pioneer Blvd.	20	Low
3	Alonda Blvd. / Bloomfield Ave.	20	Low
10	Bloomfield Ave. / I-5 NB On-ramp	20	Low
25	Greenwood Blvd. /Telegraph Rd.	20	Low
50	Paramount Blvd. / Telegraph Rd.	20	Low

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ID	Signal Intersection	Location Score	Priority Ranking
72	Telegraph Rd./Church Road I-5 Northbound Ramps	20	Low
43	San Antonio Dr. / Rosecrans Ave./Pioneer Blvd.	22	Low
63	Lakewood Blvd. /I-5 South Ramp	23	Low
15	Carmenita Rd. /Florence Ave.	24	Low
6	Beverly Blvd./Norwalk Blvd.	25	Low
26	Colima Rd. /Whittier Blvd.	25	Low
31	Los Nietos Rd. / Norwalk Blvd.	25	Low
36	Mulberry Dr. /Painter Ave.	25	Low
42	Norwalk Blvd./ San Antonio Dr. / Firestone Blvd.	25	Low
45	Painter Ave. /Whittier Blvd.	25	Low
46	Painter Ave. / Telegraph Rd.	25	Low
68	Telegraph Rd./Atlantic Boulevard	25	Low
69	Telegraph Rd./Camfield Avenue I-5 Northbound Ramps	25	Low
70	Telegraph Rd./Casino I-5 Northbound Ramps	25	Low
76	Telegraph Rd./Imperial Highway	27	Low
24	Greenwood Blvd. /Washington Blvd.	28	Low
48	Paramount Blvd. / Washington Blvd.	28	Low
2	Alonda Blvd. / Norwalk Blvd.	29	Low
13	Carmenita Rd. /Painter Ave. /Walburg St.	29	Low
19	Florence Ave. /Lakewood Blvd.	29	Low
7	Bloomfield Ave. /Telegraph Rd./Santa Fe Springs Rd.	30	Low
12	Bloomfield Ave. / Rosecrans Ave.	30	Low
27	La Mirada Blvd. /Mulberry Dr.	30	Low
33	Mills Ave. /Mulberry Dr.	30	Low
35	Mulberry Dr. /Santa Fe Springs Rd./Slauson Ave.	30	Low
66	Slauson Ave. /Telegraph Rd.	30	Low
71	Telegraph Rd./Washington Blvd.	30	Low
41	Norwalk Blvd./ Imperial Hwy.	31	Low
78	Valley View Ave. / Rosecrans Ave.	31	Low
30	Los Nietos Rd. / Pioneer Blvd.	12	Low
32	Los Nietos Rd. / Painter Ave.	12	Low
57	Pioneer Blvd./ Firestone Blvd.	15	Low
11	Bloomfield Ave. / Firestone Blvd.	17	Low