

Appendix A

VEHICULAR DELAY AND L.O.S. ANALYSIS

Appearing in this appendix is a table in two parts displaying vehicular delays and a Level of Service (LOS) analysis for the years 2005, 2010, and 2015. The table lists all the crossings in the study area with vehicular information such as number of lanes, average daily traffic volumes, the number of trains that go through the crossing, the length of time of crossing closures and the resulting vehicle delays and LOS at each crossing.

Also appearing is summary of the assumptions and methodologies employed in the analysis of vehicular delays and the LOS analysis.

ASSUMPTIONS

ADT Growth Projections

Average annual growth rate from 2000: 1.0% per year

Estimated train length

Local: 700 feet

Through: 7,000 feet

Gate down time (per train)

$$t = [50 + ((3600 * (L + 12 * n)) / (5280 * Savg))] / 60$$

where: t = amount of time per train the crossing is closed (min.)
 L = train length (feet)
 n = number of highway lanes
 Savg = average train speed at the crossing (mph)

Probability of delay per day

$$P = T / m$$

where: P = probability of delay per day
 T = total amount of time the crossing is closed during the day (min.)
 m = 1,440 minutes in a day

Vehicles delayed per day

$$N = P * V$$

where: N = number of vehicles delayed per day
 P = probability of delay per day
 V = ADT

Duration of daily delay

$$D = [(T/2 + 0.167) * N + (N/n)^2] / 3600$$

where: D = total delay per day (vehicle-hours)
 N = number of vehicles delayed per day
 n = number of highway lanes
 $(N/n)^2$ = total delay from queue dissipation
 T = total amount of time the crossing is closed during the day (min.)
 (T/2 is the average delay per vehicle delayed by the train operation)
 0.167 delay (in minute, eq. 10 seconds) attributable to deceleration and acceleration and delay experienced while waiting for traffic to flow freely after the train has passed

Average delay for each vehicle delayed

$$A = 60 * D / N$$

where: A = average daily delay for each vehicle delayed (min./veh.)
 D = total delay per day (vehicle-hours)
 N = number of vehicles delayed per day

Average delay for all vehicles

$$a = 3600 * D / V$$

where: a = average daily delay per vehicle (sec./veh.)
 D = total delay per day (vehicle-hours)
 V = ADT

Level of service

Stopped delay per vehicle (sec)	Level of service
0.0	A
5.0	B
15.0	C
25.0	D
40.0	E
60.0	F

Average queue length per lane

$$Lq = (C * P * A * Vh) / 60$$

where: Lq = length of queue (feet)
 C = average car length: 35 feet
 P = probability of delay per day
 A = average daily delay for each vehicle delayed (min./veh.)
 Vh = number of vehicles per hour per lane in the primary direction
 $Vh = (0.10 * V * 0.6) / n * f$

where:

0.1 peak hour factor (10%)
 V = ADT
 0.6 directional split for primary direction (60%/40%)
 n = number of highway lanes for the primary direction

f = lane use adjustment factor	No. of lanes in lane group	Traffic in most heavily traveled lane	Lane utilization adjustment factor (f)
	1	100.0%	1.000
	2	52.5%	0.952
	3	36.7%	0.908
	4	30.0%	0.833

Source: HCM 2000, Table 10-23, p. 10-26

Table A-1: Vehicular Traffic, Delays, LOS and Queuing at Study Area Crossings

Table with columns: Xing No., Mile Post Number, Cross Street Name, No. of Traffic Lanes, Average daily traffic (2003, 2010, 2015), Max. Train Speed (mph), Avg. Train Speed (mph), Estimated average number of trains per day (2003, 2010, 2015) with Local/Through breakdown, Average gate down time per train (min.), Probability of delays per day (2003, 2010, 2015), Average no. of vehicles delayed per day (2003, 2010, 2015). Rows list 46 crossings with detailed traffic and delay data.

Sources: City of Laredo, and UP and Tex-Mex railroads

Table A-1: Vehicular Traffic, Delays, LOS and Queuing at Study Area Crossings

Xing No.	Mile Post Number	Cross Street Name	No. of Traffic Lanes	Average daily traffic			Max. Train Speed	Avg. Train Speed	Estimated average number of trains per day			Average gate down time per train (min.)	Probability of delays per day			Average no. of vehicles delayed per day							
				2003	2010	2015			2003	2010	2015		2003	2010	2015	2003	2010	2015					
47	793589T	0.30	ZARAGOSA ST	2	630	700	700	10	8	2	10	2	11	2	11	1.9	11.5	8.2%	8.6%	9.1%	50	60	60
48	793543E	0.40	ITURBIDE ST	2	50	100	100	10	8	2	10	2	11	2	11	1.9	11.5	8.2%	8.6%	9.1%	0	10	10
49	793540J	0.50	HIDALGO ST	2	200	200	200	10	8	2	10	2	11	2	11	1.9	11.5	8.2%	8.6%	9.1%	20	20	20
50	Unknown	0.55	PRIVATE UP POLICE	2	50	100	100	10	8	2	10	2	11	2	11	1.9	11.5	8.2%	8.6%	9.1%	0	10	10
51	Unknown	0.60	UP LOT	2	200	200	200	10	8	2	10	2	11	2	11	1.9	11.5	8.2%	8.6%	9.1%	20	20	20
52	793547G	0.70	SANTA ISABEL AV AND WASHINGTON ST	2	2,760	3,000	3,200	10	8	2	10	2	11	2	11	1.9	11.5	8.2%	8.6%	9.1%	230	260	290
53	793548N	0.80	VIDAURRI AV	2	130	100	100	10	8	2	10	2	11	2	11	1.9	11.5	8.2%	8.6%	9.1%	10	10	10
54	793549V	0.90	SANTA RITA AV	2	1,030	1,100	1,200	10	8	2	10	2	11	2	11	1.9	11.5	8.2%	8.6%	9.1%	80	100	110
55	793550P	0.96	SANTA CLOTHIDE AV	2	1,180	1,300	1,400	10	8	2	10	2	11	2	11	1.9	11.5	8.2%	8.6%	9.1%	100	110	130
56	793551W	1.00	MAIN AV	2	1,680	1,800	1,900	10	8	2	10	2	11	2	11	1.9	11.5	8.2%	8.6%	9.1%	140	160	170
57	793552D	1.08	DAVIS AV	2	1,310	1,400	1,500	10	8	2	10	2	11	2	11	1.9	11.5	8.2%	8.6%	9.1%	110	120	140
58	793553K	1.10	SANTA MARIA AV	2	4,640	5,000	5,300	10	8	2	10	2	11	2	11	1.9	11.5	8.2%	8.6%	9.1%	380	430	480
59	793554S	1.20	JUAREZ AV	2	950	1,000	1,100	10	8	2	10	2	11	2	11	1.9	11.5	8.2%	8.6%	9.1%	80	90	100
60	793556F	1.30	CONVENT AV	2	3,200	3,400	3,600	10	8	2	10	2	11	2	11	1.9	11.5	8.2%	8.6%	9.1%	260	290	330
61	793557M	1.40	FLORES AV	2	1,360	1,500	1,600	10	8	2	10	2	11	2	11	1.9	11.5	8.2%	8.6%	9.1%	110	130	150
62	793558U	1.47	SAN AGUSTIN AV	2	1,260	1,400	1,500	10	8	2	10	2	11	2	11	1.9	11.5	8.2%	8.6%	9.1%	100	120	140
63	793559B	1.50	SAN BERNARDO AV	2	8,620	9,200	9,700	10	8	2	10	2	11	2	11	1.9	11.5	8.2%	8.6%	9.1%	710	800	880
64	793560V	1.55	IH 35 FRONTAGE RD (SANTA URSULA AV)	3	11,000	11,800	12,400	10	8	2	10	2	11	2	11	1.9	11.5	8.3%	8.7%	9.1%	910	1,020	1,130
65	793561C	1.60	IH 35 FRONTAGE RD (SAN DARIO AV)	3	11,000	11,800	12,400	10	8	2	10	2	11	2	11	1.9	11.5	8.3%	8.7%	9.1%	910	1,020	1,130
66	793562J	1.67	SAN EDUARDO AV	2	4,020	4,300	4,500	10	8	2	10	2	11	2	11	1.9	11.5	8.2%	8.6%	9.1%	330	370	410
67	793563R	1.70	SAN FRANCISCO AV	2	2,110	2,300	2,400	10	8	2	10	2	11	2	11	1.9	11.5	8.2%	8.6%	9.1%	170	200	220
68	793564X	1.80	SAN JORGE AV	2	310	300	300	10	8	2	10	2	11	2	11	1.9	11.5	8.2%	8.6%	9.1%	30	30	30
69	793565E	2.00	MONTERREY AV	2	1,480	1,600	1,700	10	8	2	10	2	11	2	11	1.9	11.5	8.2%	8.6%	9.1%	120	140	150
70	793566L	2.10	SANDERS AV	2	680	700	700	10	8	2	10	2	11	2	11	1.9	11.5	8.2%	8.6%	9.1%	60	60	60
71	793567T	2.15	CORPUS CHRISTI ST	2	9,590	10,300	10,800	10	8	2	10	2	11	2	11	1.9	11.5	8.2%	8.6%	9.1%	790	890	980
72	793568A	2.20	MARCELLA AV	2	2,110	2,300	2,400	10	8	2	10	2	11	2	11	1.9	11.5	8.2%	8.6%	9.1%	170	200	220
73	793580G	2.30	GUADALUPE ST	2	17,000	18,200	19,100	10	8	2	10	2	11	2	11	1.9	11.5	8.2%	8.6%	9.1%	1,400	1,570	1,730
74	793584J	2.36	CHIHUAHUA ST E	2	17,000	18,200	19,100	10	8	2	10	2	11	2	11	1.9	11.5	8.2%	8.6%	9.1%	1,400	1,570	1,730
75	793582V	2.50	MARKET ST E	2	17,300	18,500	19,400	10	8	2	10	2	11	2	11	1.9	11.5	8.2%	8.6%	9.1%	1,430	1,600	1,760
76	793586X	2.80	LOGAN AV	2	900	1,000	1,100	10	8	2	10	2	11	2	11	1.9	11.5	8.2%	8.6%	9.1%	70	90	100
77	793588L	3.00	HENDRICKS AV	2	1,390	1,500	1,600	10	8	2	10	2	11	2	11	1.9	11.5	8.2%	8.6%	9.1%	110	130	150
78	793591U	3.20	STONE AV	2	1,150	1,200	1,300	10	8	2	10	2	11	2	11	1.9	11.5	8.2%	8.6%	9.1%	90	100	120
79	793593H	3.30	SEYMOUR AV	2	1,440	1,500	1,600	10	8	2	10	2	11	2	11	1.9	11.5	8.2%	8.6%	9.1%	120	130	150
80	793594P	3.50	BUENA VISTA AV	2	1,440	1,500	1,600	10	8	2	10	2	11	2	11	1.9	11.5	8.2%	8.6%	9.1%	120	130	150
81	793595W	3.70	MALINCHE AV	2	2,100	2,300	2,400	10	8	2	10	2	11	2	11	1.9	11.5	8.2%	8.6%	9.1%	170	200	220
82	Unknown	3.75	BARTLETT AV	2	2,000	2,100	2,200	10	8	2	10	2	11	2	11	1.9	11.5	8.2%	8.6%	9.1%	160	180	200
83	793596D	3.80	MARKET ST	2	8,730	9,400	9,900	10	8	2	10	2	11	2	11	1.9	11.5	8.2%	8.6%	9.1%	720	810	900
84	793598S	4.20	ARKANSAS AV	2	16,550	17,700	18,600	10	8	2	10	2	11	2	11	1.9	11.5	8.2%	8.6%	9.1%	1,360	1,530	1,690

Note: AADT at Iturbide Street was increased by 10 from 40 (actual) to 50 to allow the calculation of delay, LOS, and queuing. The formulae round AADT to the nearest 100th.

Table A-1: Vehicular Traffic, Delays, LOS and Queuing at Stud

Xing No.	Mile Post Number	Cross Street Name	Average delay per day (veh-hours)			Average delay for each vehicle delayed (min./veh.)			Average delay per vehicle (sec./veh.)			Estimated Level of Service at the Crossing			Average vehicles per hour per lane in the primary direction			Avg. queue length per lane (feet)			
			2003	2010	2015	2003	2010	2015	2003	2010	2015	2003	2010	2015	2003	2010	2015	2003	2010	2015	
1	446694P	406.03	SAN LORENZO DR	10	14	16	2.1	2.6	2.7	12.5	15.8	17.5	B	C	C	170	190	200	20	30	35
2	448359U	406.03	LAS CRUCES DR	110	132	160	6.0	6.4	7.0	34.9	39.0	44.9	D	D	E	680	730	770	230	275	335
3	448377S	406.04	TEJAS LOOP	0	6	7	0.0	2.0	2.1	0.0	11.8	13.4	A	B	B	100	110	110	0	15	15
4	446696D	407.00	PRIVATE GREAT LAKES CHEMICAL	0	0	0	0.0	1.3	1.3	0.0	7.6	8.0	A	B	B	10	10	10	0	0	0
5	446697K	407.40	FM 1472 MINES RD	90	108	128	2.3	2.5	2.6	13.5	15.1	17.1	B	C	C	530	570	590	70	85	100
6	446699Y	408.10	INDUSTRIAL BL	20	27	31	2.8	3.3	3.5	16.2	20.0	22.2	C	C	C	270	290	300	45	55	65
7	446700R	408.30	MANN RD	0	6	7	0.0	1.6	1.7	0.0	5.2	5.8	A	B	B	220	240	250	0	10	15
8	446704T	408.10	ISLAND AV	0	2	2	0.0	1.1	1.2	0.0	3.6	4.0	A	A	A	100	110	110	0	5	5
9	446707N	409.25	JUSTO PENN ST	0	2	2	0.0	1.0	1.1	0.0	3.5	3.9	A	A	A	90	100	100	0	5	5
10	446709C	409.30	CALTON RD	20	20	24	2.9	2.6	2.8	9.2	8.5	9.8	B	B	B	470	500	530	40	40	50
11	446760A	409.70	MARKLEY LN	0	2	2	0.0	1.0	1.1	0.0	3.3	3.7	A	A	A	90	100	110	0	5	5
12	446780L	409.90	CHICAGO ST	20	31	38	2.3	3.1	3.4	7.2	10.2	12.0	B	B	B	600	650	680	40	65	80
13	446788R	410.30	BALTIMORE ST	0	3	4	0.0	1.3	1.4	0.0	4.1	4.9	A	A	A	160	170	170	0	5	10
14	446796H	410.90	JEFFERSON ST	0	5	7	0.0	1.5	1.7	0.0	5.0	6.0	A	A	B	220	230	250	0	10	15
15	446802J	411.60	SANCHEZ ST	0	5	7	0.0	1.7	1.9	0.0	8.2	9.4	A	B	B	130	140	150	0	10	15
16	447866Y	412.80	ZARAGOZA ST	0	3	3	0.0	1.9	2.0	0.0	14.7	15.3	A	B	C	40	40	40	0	5	5
17	446701X	408.10	MANN RD	10	7	8	2.9	1.7	1.8	9.7	6.2	6.8	B	B	B	220	240	250	20	15	15
18	446702E	408.20	PRIVATE EXXON NORTH	0	0	0	0.0	0.8	0.8	0.0	2.3	2.4	A	A	A	10	10	10	0	0	0
19	446703L	408.25	PRIVATE EXXON SOUTH	0	0	0	0.0	0.8	0.8	0.0	2.3	2.4	A	A	A	10	10	10	0	0	0
20	446705A	408.80	ISLAND AV	0	2	2	0.0	1.1	1.2	0.0	4.0	4.4	A	A	A	100	100	110	0	5	5
21	Unknown	409.00	PRIVATE SCALES NORTH	0	0	0	0.0	0.8	0.8	0.0	4.5	4.7	A	A	A	10	10	10	0	0	0
22	Unknown	409.10	PRIVATE SALES SOUTH	0	0	0	0.0	0.8	0.8	0.0	4.5	4.7	A	A	A	10	10	10	0	0	0
23	446706G	409.30	JUSTO PENN ST	0	2	2	0.0	1.1	1.2	0.0	3.7	4.7	A	A	A	90	100	100	0	5	5
24	446708V	409.30	CALTON RD	10	14	16	1.4	1.6	1.8	4.6	5.9	6.6	A	B	B	310	340	350	15	20	20
25	848242R	409.50	PRIVATE PEPSI	0	0	0	0.0	0.8	0.8	0.0	2.3	2.4	A	A	A	10	10	10	0	0	0
26	446761G	409.70	MARKLEY LN	0	2	2	0.0	1.1	1.2	0.0	4.0	4.4	A	A	A	90	100	110	0	5	5
27	446781T	409.90	CHICAGO ST	30	36	44	3.2	3.4	3.7	10.8	12.0	13.8	B	B	B	600	650	680	65	75	90
28	446782A	409.95	PACE ST	0	0	0	0.0	0.8	0.8	0.0	4.5	4.7	A	A	A	10	10	10	0	0	0
29	446784N	410.00	UGARTE ST	0	0	0	0.0	0.8	0.8	0.0	2.3	2.4	A	A	A	10	10	10	0	0	0
30	446785V	410.10	PHILADELPHIA ST	0	0	0	0.0	0.8	0.8	0.0	2.3	2.4	A	A	A	10	10	10	0	0	0
31	446786C	410.20	BOSTON ST	0	1	1	0.0	0.9	0.9	0.0	3.5	3.7	A	A	A	30	40	40	0	0	0
32	446787J	410.30	PIERCE ST	0	0	0	0.0	0.8	0.8	0.0	3.2	3.3	A	A	A	20	20	20	0	0	0
33	446789X	410.40	BALTIMORE ST	0	4	4	0.0	1.4	1.5	0.0	5.2	5.6	A	B	B	160	170	170	0	10	10
34	446790S	410.50	LAFAYETTE ST	0	1	1	0.0	0.9	0.9	0.0	3.5	3.7	A	A	A	30	40	40	0	0	0
35	446791Y	410.60	MADISON ST	0	1	1	0.0	0.9	0.9	0.0	3.0	3.1	A	A	A	40	40	40	0	0	0
36	446792F	410.70	BLAIR ST	0	1	1	0.0	0.9	0.9	0.0	3.0	3.1	A	A	A	40	40	40	0	0	0
37	446793M	410.80	FRANKFORT ST	0	0	0	0.0	0.8	0.8	0.0	2.3	2.4	A	A	A	10	10	10	0	0	0
38	446795B	410.90	JEFFERSON ST	10	6	7	3.0	1.7	1.8	10.0	5.9	6.5	B	B	B	220	230	250	20	15	15
39	448448L	411.00	SHEA ST	0	0	0	0.0	0.8	0.8	0.0	3.2	3.3	A	A	A	20	20	20	0	0	0
40	446801C	411.05	GONZALEZ ST	0	0	0	0.0	0.8	0.8	0.0	2.3	2.4	A	A	A	10	10	10	0	0	0
41	446799D	411.10	BRUNI ST	0	0	0	0.0	0.8	0.8	0.0	3.2	3.3	A	A	A	20	20	20	0	0	0
42	446800V	411.15	PARK ST	10	7	8	2.7	1.7	1.9	9.4	6.0	7.0	B	B	B	230	250	260	20	15	20
43	446801C	411.20	SANCHEZ ST	0	3	3	0.0	1.3	1.4	0.0	4.5	4.9	A	A	A	130	140	150	0	5	5
44	446803R	411.25	GARZA ST	0	0	0	0.0	0.8	0.8	0.0	2.3	2.4	A	A	A	10	10	10	0	0	0
45	848264R	411.80	SANTA ISABEL AV	0	4	4	0.0	1.4	1.5	0.0	5.2	5.6	A	B	B	160	170	170	0	10	10
46	446805E	411.90	SCOTT ST	20	21	24	3.6	3.3	3.5	28.7	27.6	30.5	D	D	D	150	160	170	40	45	50

Table A-1: Vehicular Traffic, Delays, LOS and Queuing at Study

Xing No.	Mile Post Number	Cross Street Name	Average delay per day (veh-hours)			Average delay for each vehicle delayed (min./veh.)			Average delay per vehicle (sec./veh.)			Estimated Level of Service at the Crossing			Average vehicles per hour per lane in the primary direction			Avg. queue length per lane (feet)			
			2002	2010	2015	2002	2010	2015	2002	2010	2015	2002	2010	2015	2002	2010	2015	2002	2010	2015	
47	793580T	0.30	ZARAGOSA ST	0	1	1	0.0	1.3	1.3	0.0	6.6	6.9	A	B	B	40	40	40	0	5	5
48	793543E	0.40	ITURBIDE ST	0	0	0	0.0	1.1	1.1	0.0	6.5	6.8	A	B	B	0	10	10	0	0	0
49	793540J	0.50	HIDALGO ST	0	0	0	0.0	1.1	1.2	0.0	6.7	7.1	A	B	B	10	10	10	0	0	0
50	Unknown	0.55	PRIVATE UP POLICE	0	0	0	0.0	1.1	1.1	0.0	6.5	6.8	A	B	B	0	10	10	0	0	0
51	Unknown	0.60	UP LOT	0	0	0	0.0	1.1	1.2	0.0	6.7	7.1	A	B	B	10	10	10	0	0	0
52	793547G	0.70	SANTA ISABEL AV AND WASHINGTON ST	10	9	11	2.6	2.1	2.3	13.0	11.0	12.5	B	B	B	170	180	190	20	20	25
53	793548N	0.80	VIDAURRI AV	0	0	0	0.0	1.1	1.1	0.0	6.5	6.8	A	B	B	10	10	10	0	0	0
54	793549V	0.90	SANTA RITA AV	0	2	3	0.0	1.5	1.6	0.0	7.9	8.5	A	B	B	60	70	70	0	5	5
55	793550P	0.96	SANTA CLOTHIDE AV	0	3	4	0.0	1.5	1.6	0.0	7.6	9.1	A	B	B	70	80	80	0	5	5
56	793551W	1.00	MAIN AV	0	5	5	0.0	1.7	1.8	0.0	9.1	9.7	A	B	B	100	110	110	0	10	10
57	793552D	1.08	DAVIS AV	0	3	4	0.0	1.5	1.7	0.0	7.9	9.4	A	B	B	80	80	90	0	5	10
58	793553K	1.10	SANTA MARIA AV	20	20	25	3.2	2.8	3.1	15.5	14.6	16.8	C	B	C	280	300	320	40	45	50
59	793554S	1.20	JUAREZ AV	0	2	3	0.0	1.4	1.5	0.0	7.6	8.2	A	B	B	60	60	70	0	5	5
60	793556F	1.30	CONVENT AV	10	11	14	2.3	2.2	2.5	11.3	11.5	13.6	B	B	B	190	200	220	20	25	30
61	793557M	1.40	FLORES AV	0	3	4	0.0	1.6	1.7	0.0	8.2	9.7	A	B	B	80	90	100	0	5	10
62	793558U	1.47	SAN AGUSTIN AV	0	3	4	0.0	1.5	1.7	0.0	7.9	9.4	A	B	B	80	80	90	0	5	10
63	793559B	1.50	SAN BERNARDO AV	50	58	70	4.2	4.4	4.8	20.9	22.8	25.9	C	C	D	520	550	580	105	120	145
64	793560V	1.55	IH 35 FRONTAGE RD (SANTA URSULA AV)	40	50	60	2.6	2.9	3.2	13.1	15.2	17.4	B	C	C	440	470	500	55	70	85
65	793561C	1.60	IH 35 FRONTAGE RD (SAN DARIO AV)	40	50	60	2.6	2.9	3.2	13.1	15.2	17.4	B	C	C	440	470	500	55	70	85
66	793562J	1.67	SAN EDUARDO AV	10	16	19	1.8	2.6	2.8	9.0	13.3	15.3	B	B	C	240	260	270	20	35	40
67	793563R	1.70	SAN FRANCISCO AV	0	6	7	0.0	1.9	2.0	0.0	9.8	11.1	A	B	B	130	140	140	0	15	15
68	793564X	1.80	SAN JORGE AV	0	1	1	0.0	1.2	1.2	0.0	7.0	7.3	A	B	B	20	20	20	0	0	0
69	793565E	2.00	MONTERREY AV	0	4	4	0.0	1.6	1.7	0.0	8.5	9.1	A	B	B	90	100	100	0	10	10
70	793566L	2.10	SANDERS AV	0	1	1	0.0	1.3	1.3	0.0	6.6	6.9	A	B	B	40	40	40	0	5	5
71	793567T	2.15	CORPUS CHRISTI ST	60	70	85	4.6	4.7	5.2	22.5	24.6	28.2	C	C	D	580	620	650	125	150	180
72	793568A	2.20	MARCELLA AV	0	6	7	0.0	1.9	2.0	0.0	9.8	11.1	A	B	B	130	140	140	0	15	15
73	793580G	2.30	GUADALUPE ST	160	198	239	6.9	7.6	8.3	33.9	39.2	45.1	D	D	E	1,020	1,090	1,150	335	415	505
74	793584J	2.36	CHIHUAHUA ST E	160	198	239	6.9	7.6	8.3	33.9	39.2	45.1	D	D	E	1,020	1,090	1,150	335	415	505
75	793582V	2.50	MARKET ST E	170	206	247	7.1	7.7	8.4	35.4	40.0	45.9	D	D	E	1,040	1,110	1,160	355	430	520
76	793586X	2.80	LOGAN AV	0	2	3	0.0	1.4	1.5	0.0	7.6	8.2	A	B	B	50	60	70	0	5	5
77	793588L	3.00	HENDRICKS AV	0	3	4	0.0	1.6	1.7	0.0	8.2	9.7	A	B	B	80	90	100	0	5	10
78	793591U	3.20	STONE AV	0	2	3	0.0	1.5	1.6	0.0	7.3	8.8	A	B	B	70	70	80	0	5	5
79	793593H	3.30	SEYMOUR AV	0	3	4	0.0	1.6	1.7	0.0	8.2	9.7	A	B	B	90	90	100	0	5	10
80	793594P	3.50	BUENA VISTA AV	0	3	4	0.0	1.6	1.7	0.0	8.2	9.7	A	B	B	90	90	100	0	5	10
81	793595W	3.70	MALINCHE AV	0	6	7	0.0	1.9	2.0	0.0	9.8	11.1	A	B	B	130	140	140	0	15	15
82	Unknown	3.75	BARTLETT AV	0	5	6	0.0	1.8	1.9	0.0	9.2	10.5	A	B	B	120	130	130	0	10	15
83	793596D	3.80	MARKET ST	50	60	73	4.2	4.4	4.8	20.6	22.8	26.4	C	C	D	520	560	590	105	125	150
84	793598S	4.20	ARKANSAS AV	150	189	229	6.6	7.4	8.1	32.6	38.5	44.3	D	D	E	990	1,060	1,120	315	395	485

Note: AADT at Iturbide Street was increased by 10 from 40 (actual) to 50 to allow

Table A-2: Vehicular Traffic, Delays, Queuing and LOS with Street Closures Assumed for Laredo Quiet Zone Analysis

Xing No.	Mile Post Number	Cross Street Name	No. of Traffic Lanes	Average daily traffic			Max. Train Speed (mph)	Avg. Train Speed (mph)	Estimated average number of trains per day						Average gate down time per train (min.)		Probability of delays per day			Average no. of vehicles delayed per day		
				2003	2010	2015			2003		2010		2015		Local	Through	2003	2010	2015	2003	2010	2015
									Local	Through	Local	Through	Local	Through								
1	446694P	406.03 SAN LORENZO DR	2	2,870	3,100	3,300	20	15	12	20	13	21	13	22	1.4	6.2	9.7%	10.2%	10.7%	280	320	350
2	448359U	406.03 LAS CRUCES DR	2	11,340	12,200	12,800	20	15	12	20	13	21	13	22	1.4	6.2	9.7%	10.2%	10.7%	1,100	1,240	1,370
3	448377S	406.04 TEJAS LOOP	2	1,680	1,800	1,900	20	15	12	20	13	21	13	22	1.4	6.2	9.7%	10.2%	10.7%	160	180	200
4	446696D	407.00 PRIVATE GREAT LAKES CHEMICAL	2	100	100	100	20	15	12	20	13	21	13	22	1.4	6.2	9.7%	10.2%	10.7%	10	10	10
5	446697K	407.40 FM 1472 MINES RD	6	24,000	25,700	27,000	20	15	12	20	13	21	13	22	1.4	6.2	9.8%	10.3%	10.8%	2,350	2,640	2,910
6	446699Y	408.10 INDUSTRIAL BL	2	4,440	4,800	5,000	20	15	12	20	13	21	13	22	1.4	6.2	9.7%	10.2%	10.7%	430	490	530
7	446700R	408.30 MANN RD	2	3,710	4,000	4,200	20	15	10	10	11	11	11	11	1.4	6.2	5.2%	5.5%	5.8%	190	220	240
8	446704T	408.10 ISLAND AV	2	1,670	1,800	1,900	20	15	10	10	11	11	11	11	1.4	6.2	5.2%	5.5%	5.8%	90	100	110
9	446707N	409.25 JUSTO PENN ST	2	1,480	1,600	1,700	20	15	10	10	11	11	11	11	1.4	6.2	5.2%	5.5%	5.8%	80	90	100
10	446709C	409.30 CALTON RD	2	7,790	8,400	8,800	20	15	10	10	11	11	11	11	1.4	6.2	5.2%	5.5%	5.8%	410	460	510
11	446760A	409.70 MARKLEY LN	2	1,550	1,700	1,800	20	15	10	10	11	11	11	11	1.4	6.2	5.2%	5.5%	5.8%	80	90	100
12	446780L	409.90 CHICAGO ST	2	10,130	10,900	11,500	20	15	10	10	11	11	11	11	1.4	6.2	5.2%	5.5%	5.8%	530	600	660
13	446788R	410.30 BALTIMORE ST	2	2,650	2,800	2,900	20	15	10	10	11	11	11	11	1.4	6.2	5.2%	5.5%	5.8%	140	150	170
14	446796H	410.90 JEFFERSON ST	2	3,600	3,900	4,100	20	15	10	10	11	11	11	11	1.4	6.2	5.2%	5.5%	5.8%	190	210	240
15	446802J	411.60 SANCHEZ ST	2	2,200	2,400	2,500	20	15	10	10	11	11	11	11	1.4	6.2	7.4%	7.8%	8.2%	160	190	210
16	447866Y	412.80 ZARAGOZA ST	2	630	700	700	20	15	24	23	25	24	26	25	1.4	6.2	12.1%	12.7%	13.4%	80	90	90
17	446701X	408.10 MANN RD	2	3,710	4,000	4,200	20	15	14	10	15	11	15	11	1.4	6.2	5.6%	5.9%	6.2%	210	240	260
18	446702E	408.20 PRIVATE EXXON NORTH	2	200	200	200	20	15	14	10	15	11	15	11	1.4	6.2	5.6%	5.9%	6.2%	10	10	10
19	446703L	408.25 PRIVATE EXXON SOUTH	2	200	200	200	20	15	14	10	15	11	15	11	1.4	6.2	5.6%	5.9%	6.2%	10	10	10
20	446705A	408.80 ISLAND AV	2	1,610	1,700	1,800	20	15	14	10	15	11	15	11	1.4	6.2	5.6%	5.9%	6.2%	90	100	110
21	Unknown	409.00 PRIVATE SCALES NORTH	2	100	100	100	20	15	14	10	15	11	15	11	1.4	6.2	5.6%	5.9%	6.2%	10	10	10
22	Unknown	409.10 PRIVATE SALES SOUTH	2	100	100	100	20	15	14	10	15	11	15	11	1.4	6.2	5.6%	5.9%	6.2%	10	10	10
23	446706G	409.30 JUSTO PENN ST	2	1,480	1,600	1,700	20	15	14	10	15	11	15	11	1.4	6.2	5.6%	5.9%	6.2%	80	90	110
24	446708V	409.30 CALTON RD	3	7,790	8,400	8,800	20	15	14	10	15	11	15	11	1.4	6.2	5.6%	5.9%	6.2%	440	500	550
25	848242R	409.50 PRIVATE PEPSI	2	200	200	200	20	15	14	10	15	11	15	11	1.4	6.2	5.6%	5.9%	6.2%	10	10	10
26	446761G	409.70 MARKLEY LN	2	1,550	1,700	1,800	20	15	14	10	15	11	15	11	1.4	6.2	5.6%	5.9%	6.2%	90	100	110
27	446781T	409.90 CHICAGO ST	2	10,030	10,800	11,400	20	15	14	10	15	11	15	11	1.4	6.2	5.6%	5.9%	6.2%	560	640	710
28	446782A	409.95 PACE ST	2	0	0	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
29	446784N	410.00 UGARTE ST	2	150	200	200	20	15	14	10	15	11	15	11	1.4	6.2	5.6%	5.9%	6.2%	10	10	10
30	446785V	410.10 PHILADELPHIA ST	2	0	0	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
31	446786C	410.20 BOSTON ST	2	875	900	900	20	15	14	10	15	11	15	11	1.4	6.2	5.6%	5.9%	6.2%	50	50	60
32	446787J	410.30 PIERCE ST	2	0	0	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
33	446789X	410.40 BALTIMORE ST	2	3,060	3,300	3,500	20	15	14	10	15	11	15	11	1.4	6.2	5.6%	5.9%	6.2%	170	190	220
34	446790S	410.50 LAFAYETTE ST	2	0	0	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
35	446791Y	410.60 MADISON ST	2	905	1,000	1,100	20	15	14	10	15	11	15	11	1.4	6.2	5.6%	5.9%	6.2%	50	60	70
36	446792F	410.70 BLAIR ST	2	710	800	800	20	15	14	10	15	11	15	11	1.4	6.2	5.6%	5.9%	6.2%	40	50	50
37	446793M	410.80 FRANKFORT ST	2	0	0	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
38	446795B	410.90 JEFFERSON ST	2	3,850	4,100	4,300	20	15	14	10	15	11	15	11	1.4	6.2	5.6%	5.9%	6.2%	220	240	270
39	448448L	411.00 SHEA ST	2	0	0	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
40	446801C	411.05 GONZALEZ ST	2	2,340	2,500	2,600	20	15	14	10	15	11	15	11	1.4	6.2	5.6%	5.9%	6.2%	130	150	160
41	446799D	411.10 BRUNI ST	2	0	0	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
42	446800V	411.15 PARK ST	2	0	0	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
43	446801C	411.20 SANCHEZ ST	2	2,200	2,400	2,500	20	15	14	10	15	11	15	11	1.4	6.2	5.6%	5.9%	6.2%	120	140	150
44	446803R	411.25 GARZA ST	2	0	0	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
45	848264R	411.80 SANTA ISABEL AV	2	2,620	2,800	2,900	20	15	14	10	15	11	15	11	1.4	6.2	5.6%	5.9%	6.2%	150	170	180
46	446805E	411.90 SCOTT ST	2	2,510	2,700	2,800	20	15	50	20	53	21	55	22	1.4	6.2	13.3%	14.0%	14.7%	330	380	410

Table A-2: Vehicular Traffic, Delays, Queuing and LOS with Street Closures Assumed for Laredo Quiet Zone Analysis

Xing No.	Mile Post Number	Cross Street Name	No. of Traffic Lanes	Average daily traffic			Max. Train Speed (mph)	Avg. Train Speed (mph)	Estimated average number of trains per day						Average gate down time per train (min.)		Probability of delays per day			Average no. of vehicles delayed per day		
				2003	2010	2015			2003		2010		2015		Local	Through	2003	2010	2015	2003	2010	2015
									Local	Through	Local	Through	Local	Through								
47	793589T	0.30 ZARAGOSA ST	2	640	700	700	10	8	2	10	na	na	na	na	1.9	11.5	8.2%	8.6%	9.1%	50	60	60
48	793543E	0.40 ITURBIDE ST	2	0	0	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
49	793540J	0.50 HIDALGO ST	2	230	200	200	10	8	2	10	na	na	na	na	1.9	11.5	8.2%	8.6%	9.1%	20	20	20
50	Unknown	0.55 PRIVATE UP POLICE	2	0	0	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
51	Unknown	0.60 UP LOT	2	250	300	300	10	8	2	10	na	na	na	na	1.9	11.5	8.2%	8.6%	9.1%	20	30	30
52	793547G	0.70 SANTA ISABEL AV AND WASHINGTON ST	2	2,700	2,900	3,000	10	8	2	10	na	na	na	na	1.9	11.5	8.2%	8.6%	9.1%	220	250	270
53	793548N	0.80 VIDAURRI AV	2	0	0	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
54	793549V	0.90 SANTA RITA AV	2	1,750	1,900	2,000	10	8	2	10	na	na	na	na	1.9	11.5	8.2%	8.6%	9.1%	140	160	180
55	793550P	0.96 SANTA CLOTHIDE AV	2	0	0	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
56	793551W	1.00 MAIN AV	2	2,925	3,100	3,300	10	8	2	10	na	na	na	na	1.9	11.5	8.2%	8.6%	9.1%	240	270	300
57	793552D	1.08 DAVIS AV	2	0	0	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
58	793553K	1.10 SANTA MARIA AV	2	5,770	6,200	6,500	10	8	2	10	na	na	na	na	1.9	11.5	8.2%	8.6%	9.1%	480	540	590
59	793554S	1.20 JUAREZ AV	2	0	0	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
60	793556F	1.30 CONVENT AV	2	4,985	5,300	5,600	10	8	2	10	na	na	na	na	1.9	11.5	8.2%	8.6%	9.1%	410	460	510
61	793557M	1.40 FLORES AV	2	0	0	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
62	793558U	1.47 SAN AGUSTIN AV	2	0	0	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
63	793559B	1.50 SAN BERNARDO AV	2	9,930	10,600	11,100	10	8	2	10	na	na	na	na	1.9	11.5	8.2%	8.6%	9.1%	820	920	1,010
64	793560V	1.55 IH 35 FRONTAGE RD (SANTA URSULA AV)	3	11,000	11,800	12,400	10	8	2	10	na	na	na	na	1.9	11.5	8.3%	8.7%	9.1%	910	1,020	1,130
65	793561C	1.60 IH 35 FRONTAGE RD (SAN DARIO AV)	3	11,000	11,800	12,400	10	8	2	10	na	na	na	na	1.9	11.5	8.3%	8.7%	9.1%	910	1,020	1,130
66	793562J	1.67 SAN EDUARDO AV	2	4,020	4,300	4,500	10	8	2	10	na	na	na	na	1.9	11.5	8.2%	8.6%	9.1%	330	370	410
67	793563R	1.70 SAN FRANCISCO AV	2	2,420	2,600	2,700	10	8	2	10	na	na	na	na	1.9	11.5	8.2%	8.6%	9.1%	200	220	250
68	793564X	1.80 SAN JORGE AV	2	0	0	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
69	793565E	2.00 MONTERREY AV	2	1,820	2,000	2,100	10	8	2	10	na	na	na	na	1.9	11.5	8.2%	8.6%	9.1%	150	170	190
70	793566L	2.10 SANDERS AV	2	0	0	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
71	793567T	2.15 CORPUS CHRISTI ST	2	9,590	10,300	10,800	10	8	2	10	na	na	na	na	1.9	11.5	8.2%	8.6%	9.1%	790	890	980
72	793568A	2.20 MARCELLA AV	2	2,450	2,600	2,700	10	8	2	10	na	na	na	na	1.9	11.5	8.2%	8.6%	9.1%	200	220	250
73	793580G	2.30 GUADALUPE ST	2	17,000	18,200	19,100	10	8	2	10	na	na	na	na	1.9	11.5	8.2%	8.6%	9.1%	1,400	1,570	1,730
74	793584J	2.36 CHIHUAHUA ST E	2	17,000	18,200	19,100	10	8	2	10	na	na	na	na	1.9	11.5	8.2%	8.6%	9.1%	1,400	1,570	1,730
75	793582V	2.50 MARKET ST E	2	17,300	18,500	19,400	10	8	2	10	na	na	na	na	1.9	11.5	8.2%	8.6%	9.1%	1,430	1,600	1,760
76	793586X	2.80 LOGAN AV	2	900	1,000	1,100	10	8	2	10	na	na	na	na	1.9	11.5	8.2%	8.6%	9.1%	70	90	100
77	793588L	3.00 HENDRICKS AV	2	1,390	1,500	1,600	10	8	2	10	na	na	na	na	1.9	11.5	8.2%	8.6%	9.1%	110	130	150
78	793591U	3.20 STONE AV	2	0	0	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
79	793593H	3.30 SEYMOUR AV	2	0	0	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
80	793594P	3.50 BUENA VISTA AV	2	1,440	1,500	1,600	10	8	2	10	na	na	na	na	1.9	11.5	8.2%	8.6%	9.1%	120	130	150
81	793595W	3.70 MALINCHE AV	2	2,100	2,300	2,400	10	8	2	10	na	na	na	na	1.9	11.5	8.2%	8.6%	9.1%	170	200	220
82	Unknown	3.75 BARTLETT AV	2	2,000	2,100	2,200	10	8	2	10	na	na	na	na	1.9	11.5	8.2%	8.6%	9.1%	160	180	200
83	793596D	3.80 MARKET ST	2	8,730	9,400	9,900	10	8	2	10	na	na	na	na	1.9	11.5	8.2%	8.6%	9.1%	720	810	900
84	793598S	4.20 ARKANSAS AV	2	16,550	17,700	18,600	10	8	2	10	na	na	na	na	1.9	11.5	8.2%	8.6%	9.1%	1,360	1,530	1,690

Table A-2: Vehicular Traffic, Delays, Queuing and LOS with Stre

Xing No.	Mile Post Number	Cross Street Name	Average delay per day (veh-hours)			Average delay for each vehicle delayed (min./veh.)			Average delay per vehicle (sec./veh.)			Estimated Level of Service at the Crossing			Average vehicles per hour per lane in the primary direction			Avg. queue length per lane (feet)		
			2003	2010	2015	2003	2010	2015	2003	2010	2015	2003	2010	2015	2003	2010	2015	2003	2010	2015
1	446694P	406.03 SAN LORENZO DR	10	14	16	2.1	2.6	2.7	12.5	15.8	17.5	B	C	C	170	190	200	20	30	35
2	448359U	406.03 LAS CRUCES DR	110	132	160	6.0	6.4	7.0	34.9	39.0	44.9	D	D	E	680	730	770	230	275	335
3	448377S	406.04 TEJAS LOOP	0	6	7	0.0	2.0	2.1	0.0	11.8	13.4	A	B	B	100	110	110	0	15	15
4	446696D	407.00 PRIVATE GREAT LAKES CHEMICAL	0	0	0	0.0	1.3	1.3	0.0	7.6	8.0	A	B	B	10	10	10	0	0	0
5	446697K	407.40 FM 1472 MINES RD	90	108	128	2.3	2.5	2.6	13.5	15.1	17.1	B	C	C	530	570	590	70	85	100
6	446699Y	408.10 INDUSTRIAL BL	20	27	31	2.8	3.3	3.5	16.2	20.0	22.2	C	C	C	270	290	300	45	55	65
7	446700R	408.30 MANN RD	0	6	7	0.0	1.6	1.7	0.0	5.2	5.8	A	B	B	220	240	250	0	10	15
8	446704T	408.10 ISLAND AV	0	2	2	0.0	1.1	1.2	0.0	3.6	4.0	A	A	A	100	110	110	0	5	5
9	446707N	409.25 JUSTO PENN ST	0	2	2	0.0	1.0	1.1	0.0	3.5	3.9	A	A	A	90	100	100	0	5	5
10	446709C	409.30 CALTON RD	20	20	24	2.9	2.6	2.8	9.2	8.5	9.8	B	B	B	470	500	530	40	40	50
11	446760A	409.70 MARKLEY LN	0	2	2	0.0	1.0	1.1	0.0	3.3	3.7	A	A	A	90	100	110	0	5	5
12	446780L	409.90 CHICAGO ST	30	32	38	3.4	3.2	3.4	10.7	10.4	11.9	B	B	B	610	650	690	65	65	80
13	446788R	410.30 BALTIMORE ST	0	3	4	0.0	1.3	1.4	0.0	4.1	4.9	A	A	A	160	170	170	0	5	10
14	446796H	410.90 JEFFERSON ST	0	5	7	0.0	1.5	1.7	0.0	5.0	6.0	A	A	B	220	230	250	0	10	15
15	446802J	411.60 SANCHEZ ST	0	5	7	0.0	1.7	1.9	0.0	8.2	9.4	A	B	B	130	140	150	0	10	15
16	447866Y	412.80 ZARAGOZA ST	0	3	3	0.0	1.9	2.0	0.0	14.7	15.3	A	B	C	40	40	40	0	5	5
17	446701X	408.10 MANN RD	10	7	8	2.9	1.7	1.8	9.7	6.2	6.8	B	B	B	220	240	250	20	15	15
18	446702E	408.20 PRIVATE EXXON NORTH	0	0	0	0.0	0.8	0.8	0.0	2.3	2.4	A	A	A	10	10	10	0	0	0
19	446703L	408.25 PRIVATE EXXON SOUTH	0	0	0	0.0	0.8	0.8	0.0	2.3	2.4	A	A	A	10	10	10	0	0	0
20	446705A	408.80 ISLAND AV	0	2	2	0.0	1.1	1.2	0.0	4.0	4.4	A	A	A	100	100	110	0	5	5
21	Unknown	409.00 PRIVATE SCALES NORTH	0	0	0	0.0	0.8	0.8	0.0	4.5	4.7	A	A	A	10	10	10	0	0	0
22	Unknown	409.10 PRIVATE SALES SOUTH	0	0	0	0.0	0.8	0.8	0.0	4.5	4.7	A	A	A	10	10	10	0	0	0
23	446706G	409.30 JUSTO PENN ST	0	2	2	0.0	1.1	1.2	0.0	3.7	4.7	A	A	A	90	100	100	0	5	5
24	446708V	409.30 CALTON RD	10	14	16	1.4	1.6	1.8	4.6	5.9	6.6	A	B	B	310	340	350	15	20	20
25	848242R	409.50 PRIVATE PEPSI	0	0	0	0.0	0.8	0.8	0.0	2.3	2.4	A	A	A	10	10	10	0	0	0
26	446761G	409.70 MARKLEY LN	0	2	2	0.0	1.1	1.2	0.0	4.0	4.4	A	A	A	90	100	110	0	5	5
27	446781T	409.90 CHICAGO ST	30	36	44	3.2	3.4	3.7	10.8	12.0	13.8	B	B	B	600	650	680	65	75	90
28	446782A	409.95 PACE ST	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
29	446784N	410.00 UGARTE ST	0	0	0	0.0	0.8	0.8	0.0	2.3	2.4	A	A	A	10	10	10	0	0	0
30	446785V	410.10 PHILADELPHIA ST	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
31	446786C	410.20 BOSTON ST	0	1	1	0.0	0.9	1.0	0.0	3.1	4.0	A	A	A	50	50	50	0	0	0
32	446787J	410.30 PIERCE ST	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
33	446789X	410.40 BALTIMORE ST	0	5	6	0.0	1.5	1.7	0.0	5.2	6.3	A	B	B	180	200	210	0	10	15
34	446790S	410.50 LAFAYETTE ST	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
35	446791Y	410.60 MADISON ST	0	1	1	0.0	1.0	1.0	0.0	3.5	4.0	A	A	A	50	60	70	0	0	5
36	446792F	410.70 BLAIR ST	0	1	1	0.0	0.9	1.0	0.0	3.4	3.6	A	A	A	40	50	50	0	0	0
37	446793M	410.80 FRANKFORT ST	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
38	446795B	410.90 JEFFERSON ST	10	7	8	2.7	1.7	1.9	9.4	6.0	7.0	B	B	B	230	250	260	20	15	20
39	448448L	411.00 SHEA ST	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
40	446801C	411.05 GONZALEZ ST	0	3	4	0.0	1.3	1.4	0.0	4.8	5.2	A	A	B	140	150	160	0	5	10
41	446799D	411.10 BRUNI ST	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
42	446800V	411.15 PARK ST	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
43	446801C	411.20 SANCHEZ ST	0	3	3	0.0	1.3	1.4	0.0	4.5	4.9	A	A	A	130	140	150	0	5	5
44	446803R	411.25 GARZA ST	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
45	848264R	411.80 SANTA ISABEL AV	0	4	4	0.0	1.4	1.5	0.0	5.2	5.6	A	B	B	160	170	170	0	10	10
46	446805E	411.90 SCOTT ST	20	21	24	3.6	3.3	3.5	28.7	27.6	30.5	D	D	D	150	160	170	40	45	50

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Xing No.	Mile Post Number	Cross Street Name	Average delay per day (veh-hours)			Average delay for each vehicle delayed (min./veh.)			Average delay per vehicle (sec./veh.)			Estimated Level of Service at the Crossing			Average vehicles per hour per lane in the primary direction			Avg. queue length per lane (feet)		
			2003	2010	2015	2003	2010	2015	2003	2010	2015	2003	2010	2015	2003	2010	2015	2003	2010	2015
47	793589T	0.30 ZARAGOSA ST	0	1	1	0.0	1.3	1.3	0.0	6.6	6.9	A	B	B	40	40	40	0	5	5
48	793543E	0.40 ITURBIDE ST	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
49	793540J	0.50 HIDALGO ST	0	0	0	0.0	1.1	1.2	0.0	6.7	7.1	A	B	B	10	10	10	0	0	0
50	Unknown	0.55 PRIVATE UP POLICE	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
51	Unknown	0.60 UP LOT	0	1	1	0.0	1.2	1.2	0.0	7.0	7.3	A	B	B	20	20	20	0	0	0
52	793547G	0.70 SANTA ISABEL AV AND WASHINGTON ST	10	9	10	2.7	2.1	2.2	13.3	10.8	12.0	B	B	B	160	170	180	20	20	20
53	793548N	0.80 VIDAURRI AV	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
54	793549V	0.90 SANTA RITA AV	0	5	6	0.0	1.7	1.8	0.0	8.6	9.9	A	B	B	110	110	120	0	10	10
55	793550P	0.96 SANTA CLOTHIDE AV	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
56	793551W	1.00 MAIN AV	10	10	12	2.5	2.2	2.3	12.3	11.3	12.8	B	B	B	180	190	200	20	20	25
57	793552D	1.08 DAVIS AV	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
58	793553K	1.10 SANTA MARIA AV	20	30	35	2.5	3.3	3.6	12.5	17.2	19.3	B	C	C	350	370	390	40	60	75
59	793554S	1.20 JUAREZ AV	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
60	793556F	1.30 CONVENT AV	20	23	27	2.9	3.0	3.2	14.4	15.4	17.6	B	C	C	300	320	340	40	50	60
61	793557M	1.40 FLORES AV	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
62	793558U	1.47 SAN AGUSTIN AV	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
63	793559B	1.50 SAN BERNARDO AV	60	75	89	4.4	4.9	5.3	21.8	25.4	28.9	C	D	D	600	640	670	125	155	190
64	793560V	1.55 IH 35 FRONTAGE RD (SANTA URSULA AV)	40	50	60	2.6	2.9	3.2	13.1	15.2	17.4	B	C	C	440	470	500	55	70	85
65	793561C	1.60 IH 35 FRONTAGE RD (SAN DARIO AV)	40	50	60	2.6	2.9	3.2	13.1	15.2	17.4	B	C	C	440	470	500	55	70	85
66	793562J	1.67 SAN EDUARDO AV	10	16	19	1.8	2.6	2.8	9.0	13.3	15.3	B	B	C	240	260	270	20	35	40
67	793563R	1.70 SAN FRANCISCO AV	10	7	9	3.0	2.0	2.1	14.9	9.9	11.9	B	B	B	150	160	160	20	15	20
68	793564X	1.80 SAN JORGE AV	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
69	793565E	2.00 MONTERREY AV	0	5	6	0.0	1.7	1.9	0.0	8.9	10.2	A	B	B	110	120	130	0	10	15
70	793566L	2.10 SANDERS AV	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
71	793567T	2.15 CORPUS CHRISTI ST	60	70	85	4.6	4.7	5.2	22.5	24.6	28.2	C	C	D	580	620	650	125	150	180
72	793568A	2.20 MARCELLA AV	10	7	9	3.0	2.0	2.1	14.7	9.9	11.9	B	B	B	150	160	160	20	15	20
73	793580G	2.30 GUADALUPE ST	160	198	239	6.9	7.6	8.3	33.9	39.2	45.1	D	D	E	1,020	1,090	1,150	335	415	505
74	793584J	2.36 CHIHUAHUA ST E	160	198	239	6.9	7.6	8.3	33.9	39.2	45.1	D	D	E	1,020	1,090	1,150	335	415	505
75	793582V	2.50 MARKET ST E	170	206	247	7.1	7.7	8.4	35.4	40.0	45.9	D	D	E	1,040	1,110	1,160	355	430	520
76	793586X	2.80 LOGAN AV	0	2	3	0.0	1.4	1.5	0.0	7.6	8.2	A	B	B	50	60	70	0	5	5
77	793588L	3.00 HENDRICKS AV	0	3	4	0.0	1.6	1.7	0.0	8.2	9.7	A	B	B	80	90	100	0	5	10
78	793591U	3.20 STONE AV	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
79	793593H	3.30 SEYMOUR AV	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
80	793594P	3.50 BUENA VISTA AV	0	3	4	0.0	1.6	1.7	0.0	8.2	9.7	A	B	B	90	90	100	0	5	10
81	793595W	3.70 MALINCHE AV	0	6	7	0.0	1.9	2.0	0.0	9.8	11.1	A	B	B	130	140	140	0	15	15
82	Unknown	3.75 BARTLETT AV	0	5	6	0.0	1.8	1.9	0.0	9.2	10.5	A	B	B	120	130	130	0	10	15
83	793596D	3.80 MARKET ST	50	60	73	4.2	4.4	4.8	20.6	22.8	26.4	C	C	D	520	560	590	105	125	150
84	793598S	4.20 ARKANSAS AV	150	189	229	6.6	7.4	8.1	32.6	38.5	44.3	D	D	E	990	1,060	1,120	315	395	485