

TETAP

Harrison Street/Oakland Avenue Traffic Calming Study Project

Final Report

Prepared for:

**City of Oakland and
Metropolitan Transportation Commission (MTC)**

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1.1 Project Summary

The City of Oakland received a Traffic Engineering Technical Assistance Program (TETAP) grant from the Metropolitan Transportation Commission (MTC) to address pedestrian safety deficiencies and identify key locations to implement traffic calming improvements along Harrison Street and Oakland Avenue between 27th Street and Interstate 580. The goal of this study is to review existing pedestrian and vehicle activity in the study area and identify solutions to improve pedestrian mobility and safety. For the purpose of this report, Harrison Street and Oakland Avenue are assumed to be oriented north and south.

1.2 Project Area

Harrison Street is a two-way roadway from 27th Street to Fairmount Avenue where it splits into two roads: Harrison Street, a one-way road traveling in the southbound direction, and Oakland Avenue, a one-way road traveling in the northbound direction. Harrison Street and Oakland Avenue function as a one-way couplet to and from Interstate 580. Harrison Street and Oakland Avenue were originally two-way streets through the residential neighborhood; however in the 1960s, Interstate 580 was constructed and both streets were converted to major arterials with one-way traffic to enhance freeway access. Aside from single and multi-family residential uses fronting most of the street, this area also includes Westlake Middle School which generates significant pedestrian and vehicle traffic during morning and afternoon bell times and the First Congregational Church of Oakland, both located near the intersection of Harrison Street and 27th Street. The morning bell for Westlake Middle School rings at 8:55 AM and the afternoon bell typically rings at 3:08 PM.

Several “Early Out” days occur during the month that include:

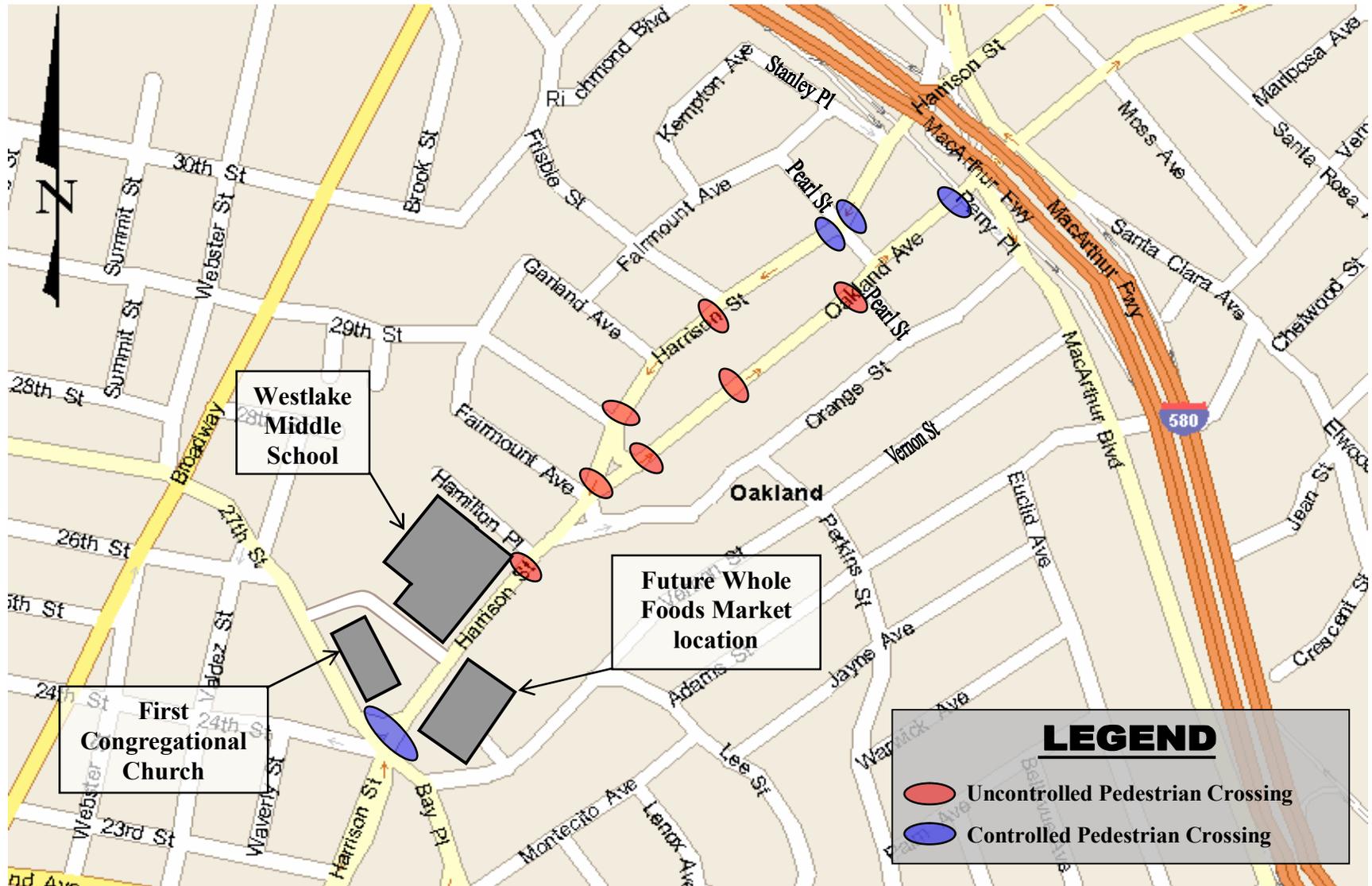
- Every Wednesday school dismisses at 2:22 PM
- District minimum day (3 times per year) 12:30 PM
- Staff development days (2 per month) 12:30 PM

Whole Foods Market is also building a new store across the street at the Harrison Street and 27th Street intersection which is anticipated to increase pedestrian and vehicle traffic.

The speed limit on all sections of the corridor is posted at 30 miles per hour. When school is in session, however, there are flashing beacons near the school which remind drivers that the speed limit is 25 miles per hour when children are present.

Figure 1 illustrates the project area.

Figure 1: Study Location and Intersections



2.1 Introduction

An initial meeting was conducted with the City of Oakland and MTC to review and discuss project objectives and to gather available data. Data collected from the City of Oakland includes the following:

- Traffic Collision History Report for the five year period between April 1, 2001 and March 31, 2006
- Draft notes from the Third Community Meeting dated October 12, 2006
- Transportation Impact Study – Oakland Whole Foods Market – Final Report, February 2004
- Whole Foods Traffic Addendum, December 8, 2004
- Contact information for Westlake Middle School and First Congregational Church of Oakland
- Aerial photographs of the project area

A copy of the draft notes from the Third Community Meeting, which highlight concerns from residents and business, is located in the **Appendix**. Kimley-Horn also received emails and data from neighborhood residents regarding traffic issues and concerns. This information is also included in the **Appendix**.

2.2 Traffic Volume Data

Twenty-four (24) hour tube counts were collected on the corridor, near the intersection of 29th Street, from Monday January 22, 2007 to Sunday January 28, 2007. The average ADT volumes were calculated and are summarized in **Figure 2** and **Table 1**.



SECTION II: DATA COLLECTION

Figure 2: Average Daily Traffic 15-Minute Volume

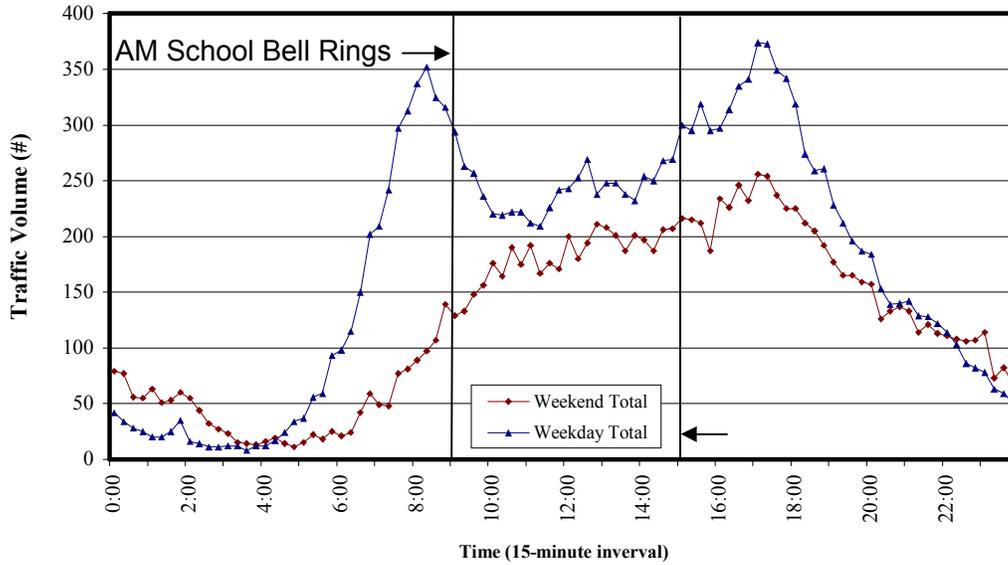


Table 1: 24-hour Average Daily Traffic Volume Summary

Location	Period	Northbound Average	Southbound Average	Total
Harrison Street (South of 29 th Street)	Weekday (M-F)	8,649	8,438	17,087
	Weekend (S-S)	6,544	5,545	12,089

24-hour tube count volume summaries, daily volume trends and daily variability graphs are included in the **Appendix**. In addition, Kimley-Horn will provide the City of Oakland and MTC with electronic copies of the counts.

SECTION II: DATA COLLECTION

2.3 Speed Summary

Traffic speed information was collected on the corridor, near the intersection of 29th Street, from Monday January 22, 2007 to Sunday January 28, 2007. The traffic speeds are summarized in **Figures 3** through **5**.

Figure 3: Weekday 'When Children Present'* Speeds

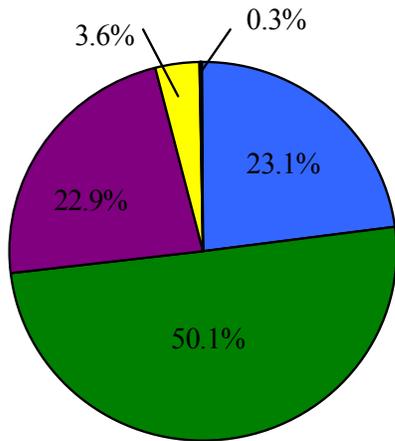
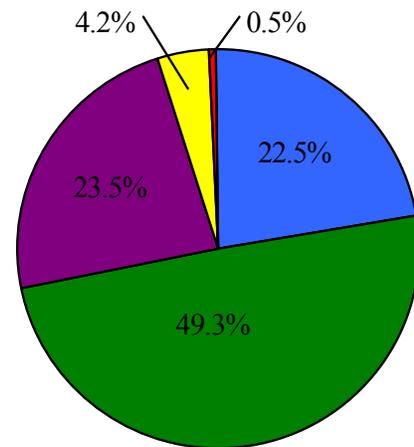


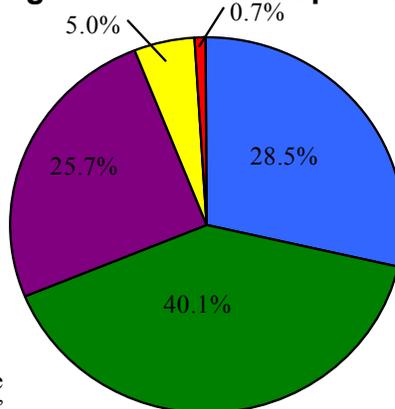
Figure 4: Weekday Non-Children Present Speeds



LEGEND

- 0-25 mph
- 26-30 mph
- 31-35 mph
- 36-40 mph
- > 40 mph

Figure 5: Weekend Speeds



* 8:00AM-9:00AM and 3:00PM-4:00PM are considered to be the 'When Children Present'



SECTION II: DATA COLLECTION

In addition, speed information for southbound Harrison Street was sampled in front of Westlake Middle School using a hand-held infrared speed measuring device. Vehicle speeds were randomly collected during the AM school drop off period and results of the observations verified that approximately 70-80% of motorists drive above the speed limit in front of the school, even though the speed limit is marked and children are present.

Travel speed summaries are included in the **Appendix**. In addition, Kimley-Horn will provide the City of Oakland and MTC with electronic copies of the speed surveys.

2.4 Collision History

To accurately identify any collision patterns that may be reduced by potential traffic calming measures, a review of the collision history between April 1, 2001 and March 31, 2006 was conducted. Collision data was provided by the City of Oakland for the project corridor. **Table 2** summarizes the collision data for the intersections located within the project corridor limits and identifies types and causes of the collisions.

Table 2: Collision Summary

Location	Collision Type	Number of Collisions	Description
Harrison Street at Hamilton Place	Pedestrian / Vehicle	1	There were approximately equal amounts of rear-end, broadside and sideswipe accidents caused by unsafe speeds, improper turning and improper passing.
	Bicycle / Vehicle	0	
	Vehicle / Vehicle	5	
Oakland Avenue / Harrison Street at Orange Street / Fairmount Avenue	Pedestrian / Vehicle	3	The prevailing collision trends include broadside, sideswipe and rear-ends caused by traffic signs, right-of-way violations and improper turning.
	Bicycle / Vehicle	1	
	Vehicle / Vehicle	8	
Harrison Street at 29 th Street	Pedestrian / Vehicle	0	There are approximately equal numbers of broadside and sideswipe accidents. The primary causes of the collisions include automobile right-of-way violations, unsafe lane changes and unsafe speeds.
	Bicycle / Vehicle	2	
	Vehicle / Vehicle	9	
Harrison Street at Garland Avenue	Pedestrian / Vehicle	0	There was one sideswipe collision at this location which involved a parked car and was caused by improper turning.
	Bicycle / Vehicle	0	
	Vehicle / Vehicle	1	
Harrison Street at Frisbie Street	Pedestrian / Vehicle	0	There were two sideswipe collisions cause by improper turning. In addition, one rear-end collision occurred at this location and was caused by unsafe speeds.
	Bicycle / Vehicle	0	
	Vehicle / Vehicle	3	
Harrison Street at Pearl Street	Pedestrian / Vehicle	1	There are approximately equal numbers of broadside, sideswipe and rear-end collisions at this location, caused by unsafe speeds, improper turning and traffic signals and signs.
	Bicycle / Vehicle	2	
	Vehicle / Vehicle	15	



SECTION II: DATA COLLECTION

Table 2, continued: Collision Summary

Location	Collision Type	Number of Collisions	Description
Harrison Street at Stanley Place	Pedestrian / Vehicle	1	The prevailing collision trend at this location is rear-end with the primary cause being unsafe speeds and improper turning.
	Bicycle / Vehicle	0	
	Vehicle / Vehicle	7	
Harrison Street at I-580 EB Off-Ramp	Pedestrian / Vehicle	0	There were approximately equal numbers of broadside, sideswipe and rear-end collisions at this location caused by unsafe speeds, traffic signals and signs and improper turning.
	Bicycle / Vehicle	0	
	Vehicle / Vehicle	10	
Oakland Avenue at Pearl Street	Pedestrian / Vehicle	2	The prevailing collision trends include rear-end and broadside caused by unsafe speeds and automobile right-of-way violations.
	Bicycle / Vehicle	0	
	Vehicle / Vehicle	2	
Oakland Avenue at Perry Place	Pedestrian / Vehicle	0	There were approximately equal numbers of broadside, sideswipe and rear-end collisions at this locations. The primary cause of the collisions include unsafe speeds, traffic signals and signs and improper turning.
	Bicycle / Vehicle	0	
	Vehicle / Vehicle	10	
Oakland Avenue at W. MacArthur Boulevard	Pedestrian / Vehicle	0	The primary collision trend is broadside collisions with several sideswipe and rear-ends. These collisions were cause by traffic signals and signs, improper turning and unsafe speeds.
	Bicycle / Vehicle	1	
	Vehicle / Vehicle	39	

According to the City of Oakland, 4 percent of all collisions that occurred in the city between July 2002 and June 2006 involved a pedestrian. In addition, 2 percent of all collisions in the city during this time period involved a bicyclist.

2.5 Field Observation Summary

A field review was conducted to observe existing vehicle, pedestrian and other operational conditions along the Harrison Street and Oakland Avenue corridors. Key observations observed in the field include:

- Flashing beacon turns on at 8:15 AM, about 30 minutes after children first start arriving at the school.
- Most parents drop their children off in the school parking lot.
- Limited amounts of parents were observed to drop their children off on Harrison Street. When this occurred, the drop off was located on the western side of the corridor adjacent to the school (at the bus stop). No parents were observed to drop their children off on the opposite side of the corridor from the school although school representatives note that this sometimes occurs.
- When drop offs on the street occurred, blockage of through traffic was minimal as the travel lanes are wide enough to accommodate both the traveling vehicle and the stopped vehicle.
- Small amount of vehicles use the on-site school bus pull out as a drop off lane.

SECTION II: DATA COLLECTION

- No signs are posted to restrict the use of the on-site bus pull out as a drop off location.
- Heaviest peak pedestrian times are between 8:30AM-9:00AM and 3:00PM-3:30PM. Residents also report heavy pedestrian activity between 5:30PM-7:30PM.
- The line of cars in the school parking lot extends to Harrison Street during peak school pick-up periods. This causes cars to block through traffic on Harrison Street as well.
- The curb radius of the school/church driveway is small and vehicles have a hard time making the turn.
- The mid-block crosswalk located on Oakland Avenue has limited sight distance. The visibility of the advanced W11-2 warning sign on the east side of the corridor is limited due to overgrown vegetation.
- Several pedestrian crossings on Harrison Street have limited sign distance due to the curvature of roadway or parked vehicles near the crossings.
- Visibility of pedestrians using the uncontrolled crosswalk at Fairmount Avenue is limited due to on-street parking and overgrown median vegetation.
- Traffic volumes do not support the need for 3 travel lanes on Harrison Street and Oakland Avenue and contribute to speeding.
- On street parking supplies are insufficient to support the residential demand.
- On street parking adjacent to the First Congregational Church of Oakland is used for long term storage of vehicles and by downtown employees wishing to avoid paying for parking. The parking has no time limit and vehicles are not required to be moved for street cleaning.
- The existing geometry at the Harrison/Oakland/Orange/Fairmount intersection creates driver confusion about proper turning paths

In addition, a field meeting was conducted with Misha Karigaca, the principal of Westlake Middle School, in which he provided the following information:

- The crosswalk from the east side of Harrison Street, just north of Westlake Middle School, is located along a horizontal curve in the roadway and oncoming vehicles have a difficult time seeing pedestrians.
- The driveway for the school/church parking lot, which connects between Harrison Street and 27th Street, is to become a one-way driveway in the near future, where the entrance to the driveway will be provided on 27th Street and the exit will be located on Harrison Street.



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- Once the driveway has become one-way, the exit to Harrison Street will have two lanes, one left turn lane and one right turn lane.
- After implementation of the one-way driveway, a chain will be used to keep vehicles from using the bus turn out as a drop off location.

3.1 Introduction

The goal of this study is to review existing pedestrian and vehicle activity in the study area and identify solutions to improve pedestrian and bicycle mobility and safety. Kimley-Horn and Associates, Inc. (Kimley-Horn) conducted a review of the conditions on Harrison Street and Oakland Avenue between 27th Street and Interstate 580 to develop recommendations to enhance pedestrian and vehicle safety along the corridor. The following sections summarize the approach used for the analysis, the considerations and recommendation.

3.2 Recommended Improvements

Various improvement options were reviewed for the project corridor to help address pedestrian and bicycle safety. The focus of the improvements was to reduce the number of conflicts between pedestrians and traveling vehicles, decrease travel speeds along the entire length of the project corridor, and to improve visibility for both the pedestrians and vehicle drivers.

The following summarizes the recommended improvements and **Figures 6** through **8** illustrate the recommended improvements.

Harrison Street Improvements

The following summarizes the recommended improvements for Harrison Street.

Freeway Guide Signs

Remove guide signs directing drivers to the freeway via Harrison Street. Instead, change signs near the intersection of Harrison Street/27th Street to direct traffic to use 27th Street to reach the freeway. The distance to the freeway is shorter via 27th Street and access provides connections to SR-24 and I-580. Provide an additional freeway guide sign on 27th Street just prior to Broadway to reinforce that freeway traffic should continue along 27th Street.

School Driveway

Assist in converting the school drop off driveway to one-way operation. Restripe the existing 90 degree angle parking spaces located between the school and the church to 60 degree angle parking in order to visually reinforce the one-way movement and make it easier to enter and exit the parking spaces during busy periods at the school or church. Remove one to two of the existing 90 degree angle spaces adjacent to the church near the site exit as needed to reduce interference with the driveway.

Encourage the school to install 'NO PARKING 7AM-9AM & 1PM-4PM during weekdays' signs and enforce the restricted parking at the on-site bus lane. The parking restriction will eliminate buses from spilling out onto Harrison Street due to parked vehicles during the school bell times.

Traffic Signal

Install a traffic signal at the Westlake Middle School driveway. The signal should have actuated operation on the driveway approach but be timed and coordinated with the signal at 27th Street to limit queuing which could interfere with the operation of the existing signal at 27th Street. The signal should also include the installation of a pedestrian crosswalk with pedestrian push buttons and countdown heads. Two parking spaces may need to be removed on the east side of Harrison Street to make room for the crosswalk. If there will be a delay in the implementation of the traffic signal, KEEP CLEAR pavement markings at the school driveway should be temporarily installed.

Transit Stop

Relocate the existing AC Transit stop on the east side of Harrison Street near Hamilton Place. Coordinate with AC Transit to relocate the stop near the recommended traffic signal at the Westlake Middle School driveway. One or two on-street parking spaces may be displaced with the new transit stop but can be added where the old stop was located. It is also recommended that the existing transit stop on the west side of Harrison Street near Hamilton Place be removed. It is on the inside of the curve and when a bus is at the stop, it compounds the sight distance blockage for vehicles trying to turn from Hamilton Place. Other stops at the school and 29th Street still provide convenient and safer locations.

Median Island

Shorten the median island located at the intersection with Fairmount Ave/Oakland Ave/Orange Street on the north end of the island and extend it on the south end so that traffic from Orange Street stays to the right side of the island when turning left onto Harrison Street.

Install a “NO LEFT OR U-TURN” (CAMUTCD R3-18) sign on the median nose to prohibit vehicles from making a southbound left turn onto Orange Street or a U-turn onto Oakland Avenue from Harrison Street.

Turning Refuge

Create a southbound left turn refuge to the west of the modified median island at Fairmount Ave/Orange Street/Oakland Ave to improve safety of traffic turning to and from Orange Street.

Striping

Add edge striping on the left side of Orange Street as it approaches the intersection at Harrison Street to align drivers and encourage them to drive around the right side of the median island on Harrison Street.

Replace the crosswalk tape to help drivers see the crosswalk. The existing crosswalk tape has pulled loose and is partially obliterated.

Remove some of the existing hatch striping near Orange Street to match the travel path of the southbound left turning vehicles. The city should monitor this intersection after improvements are completed to determine if other more significant modifications may be needed such as removing the slip lane onto Orange Street.

Pavement Legends

Install 30 mph pavement legends in each lane of southbound Harrison Street between Pearl Street and the freeway to remind drivers of the posted speed limit.

Parking

Remove uncontrolled parking on the west side of Harrison Street between the Westlake Middle School driveway and 27th Street. Currently there are no time limits or prohibition signs for street cleaning. As a result, the parking spaces are being used for long-term storage and for all day parking by downtown Oakland employees. Convert this area to a school drop off and pick up area to coincide with school bell times by prohibiting unattended vehicles between 8AM-9AM and 1PM-5PM. Between 9AM and 1PM parking should be limited to 2 hours. Creating an additional drop off/pick up area will reduce on-site congestion at the school and traffic congestion at the school exit onto Harrison Street. At the same time, the area is still available for evening parking by residents.

Remove one parking space on the northwest corner at the intersection with Harrison Street/Fairmount Avenue to improve sight distance of the crosswalk. Currently, a vehicle parked near the corner blocks southbound drivers from seeing a pedestrian while starting to cross from the west side of Harrison Street.

Add parking along the east side of Harrison Street between 29th Street and Fairmount Avenue but prohibit the parking near the Fairmount Avenue crosswalk (i.e. approximately 50 feet) so that parked vehicles do not block sight distance to the pedestrians.

Reduce number of travel lanes

Restripe the lane alignments at the Harrison Street/Santa Clara Avenue/MacArthur Boulevard/I-580 ramps so that Harrison Street between the freeway and Fairmount Avenue can also be converted to two travel lanes. Add edge striping on the east and west sides of Harrison Street to create more buffer on the sides of the street for parking and cycling. The capacity of the existing three travel lanes on Harrison Street exceed traffic volumes and convey to the driver that it is a major arterial where speeds above 30 mph are acceptable. The restriping of Harrison Street should have a general cross section with two 11 foot traffic lanes and right and left edge striping. The edge striping on the right side of the street is wider than the left to provide additional safety for cyclists.

Striping Transition

Transition the proposed striping to match with the existing striping on Harrison Street between 29th Street and Fairmount Street.

Install transition striping on Harrison Street near I-580 to reduce number of travel lanes from three to two.

Crosswalks

Remove the crosswalk on Harrison Street near Hamilton Place. On-street parking has already been prohibited near the crosswalk but due to the roadway geometry, visibility of crossing pedestrians remains inadequate. Pedestrians may use the existing crossing at Fairmount Avenue or the recommended traffic signal at Westlake Middle School. Remove the red curb near the crosswalk and add on-street parking where feasible.

Keep all crosswalk striping and marking well maintained. Crosswalks should be consistently marked.

Adjust the start of the overhead flashing beacon at the school to start at 7:45 AM to coincide when children start arriving at the school.

Oakland Avenue Improvements

The following summarizes the recommended improvements for Oakland Avenue.

Edge Striping

Add edge striping on the east side of Oakland Avenue and on the west side (where currently not existing) to narrow the traffic lanes and create more buffer on the sides of the street for parking and cycling. Edge striping should extend from Orange Street to Pearl Street. The restriping of Oakland Avenue should have a general cross section with two 11 foot traffic lanes and right and left edge striping. The edge striping on the right side of the street should be wider than the left to provide additional safety for cyclists.

Parking

Install back-in angle parking on the east side of Oakland Avenue for a half block north of Pearl Street. The cross section should have two 11 foot travel lanes and left edge striping.

Also install back-in angle parking just prior to Pearl Street. The addition of this parking will reduce confusion as the roadway at this section is wide and drivers may think this is a third travel lane.

Pavement Legends

Install 30 mph pavement legends in each lane of northbound Oakland Avenue at the start of the uphill grade before 29th Street to remind drivers of the posted speed limit.

Electronic Speed Sign

Install an electronic speed display sign on Oakland Avenue near/north of the intersection with 29th Street to help keep vehicle speeds lower as drivers start up the hill. This location is where drivers rapidly accelerate as they travel toward I-580.

Crosswalks

Add crosswalk signs and advance crosswalk signs (CAMUTCD W11-2) for the crosswalk located at the intersection of Oakland Avenue and Pearl Street. The corner of the T-intersection is obscured by the street trees and adjacent buildings and the crosswalk appears to drivers to be located mid-block where it is somewhat unexpected.

Repaint the crosswalk on Oakland Avenue near 29th Street. The existing crosswalk striping has deteriorated and is difficult for vehicle drivers to see.

Overhead Beacon

Install an overhead sign structure and flashing beacon on Oakland Avenue at the mid-block crossing between Orange Street and Pearl Street.

Vegetation

Trim trees on Oakland Avenue around existing crosswalk signs to increase visibility of signs and crosswalk. Trim other vegetation as noted in **Figures 6** through **8** to increase visibility.

Other considerations

A traffic signal was considered at the Harrison/Oakland/Orange/Fairmount intersection; however, side street traffic volumes and vehicle delay are very low and do not justify the need for a signal at this location. Furthermore, the geometry of the intersection would make it expensive to reconfigure the intersection to be compatible with a traffic signal.

An opening of the raised median along 27th Street was considered to permit traffic to make a left turn from 27th into the school driveway. At this location the width of the median is not sufficient to safely store a vehicle and having the vehicle turn from the existing left lane is expected to create a traffic hazard because it is the dedicated left turn lane for the signal at 27th and Harrison. Furthermore, as part of a planned project at the 27th/Harrison intersection, the traffic signal will be modified to provide protected left turns and U-turns. Therefore, school traffic can use the 27th/Harrison signal to make a U-turn and reach to the school driveway.

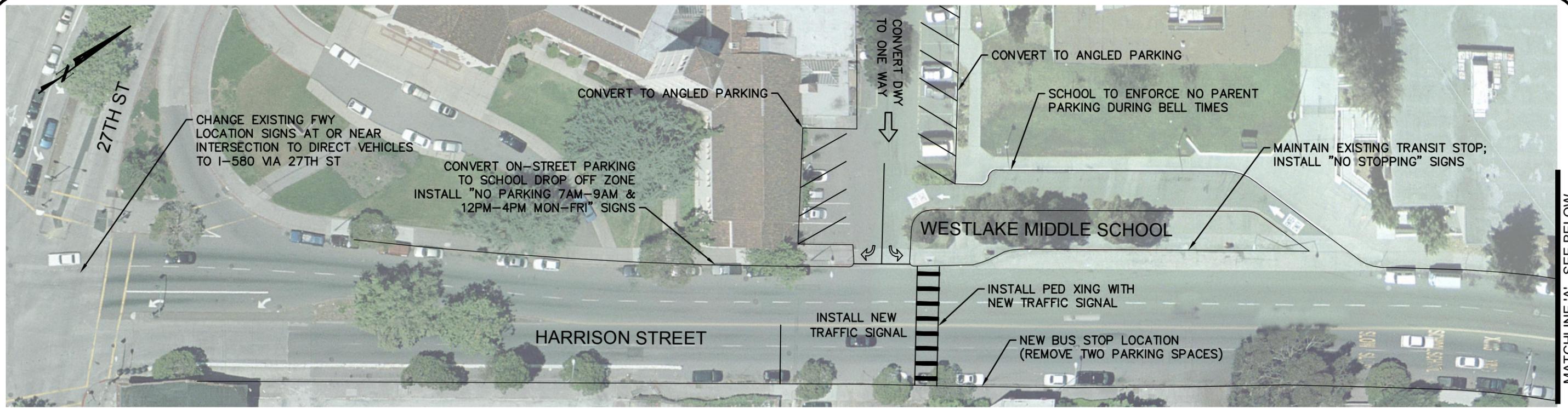
Curb extensions (i.e. bulbouts) were considered at intersections but were not recommended because measures in this report are expected to significantly improve pedestrian crossing safety such as narrow travel lanes with wide parking/bike areas. Furthermore, because of the curved alignment along Harrison Street and parts of Oakland Avenue, curb extensions may create a traffic hazard with the potential for bicyclists and automobiles to collide with the extended curbs.

Additional angled parking was considered at various locations on Harrison Street and Oakland Avenue. However, based on the existing roadway widths and high number of driveways, angled parking would not result in a notable increase of on-street parking.

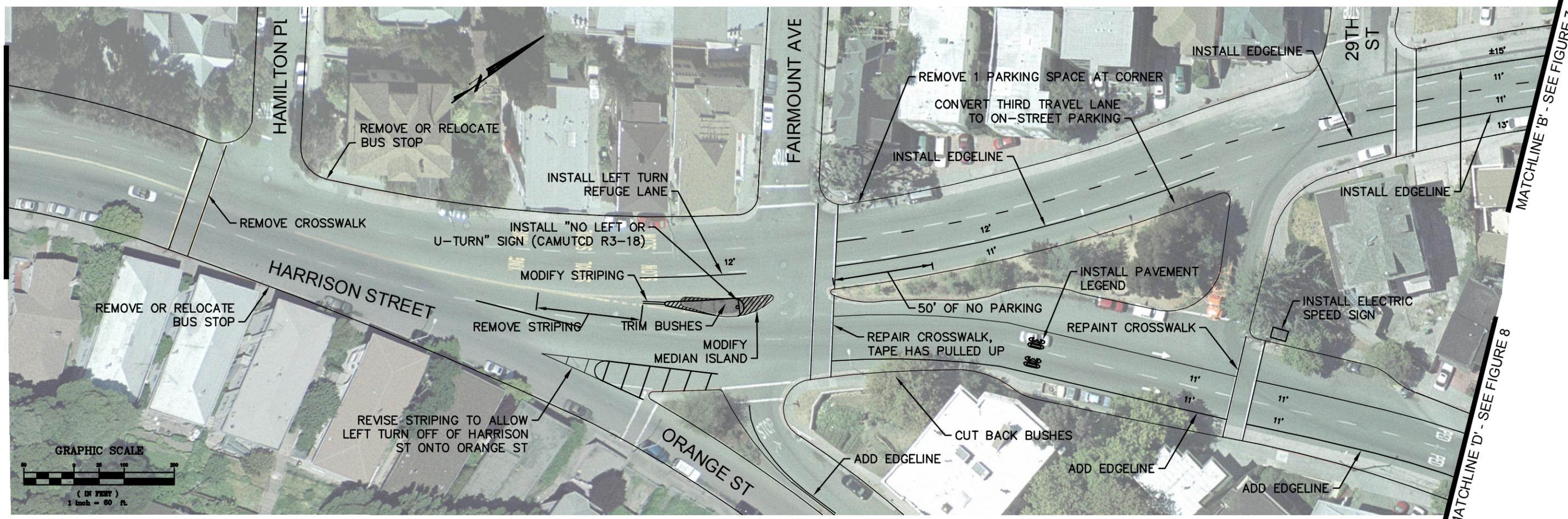
Reducing the speed limit along Harrison Street and Oakland Avenue was considered but not recommended. While it is desirable that vehicles travel slower along both roadways, speed limits must be set per California Vehicle Code (CVC) requirements and based on a detailed speed survey which is outside the scope of this project. Previous speed surveys have indicated that the posted speed limit is consistent with CVC requirements; therefore it is recommended that the city conduct a new survey after traffic calming measures are implemented to see if the street can be reposted to a lower 25 mph limit.

Striping and signing of a Class II bike lane was considered but not advised due to the current width of the roadways.

Raised pavement markers along the proposed edge lines were considered but not advised as they will create additional noise and may pose a slipping hazard for bicycles.



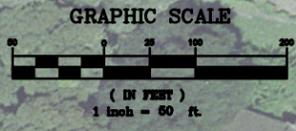
MATCHLINE 'A' - SEE BELOW



MATCHLINE 'A' - SEE ABOVE

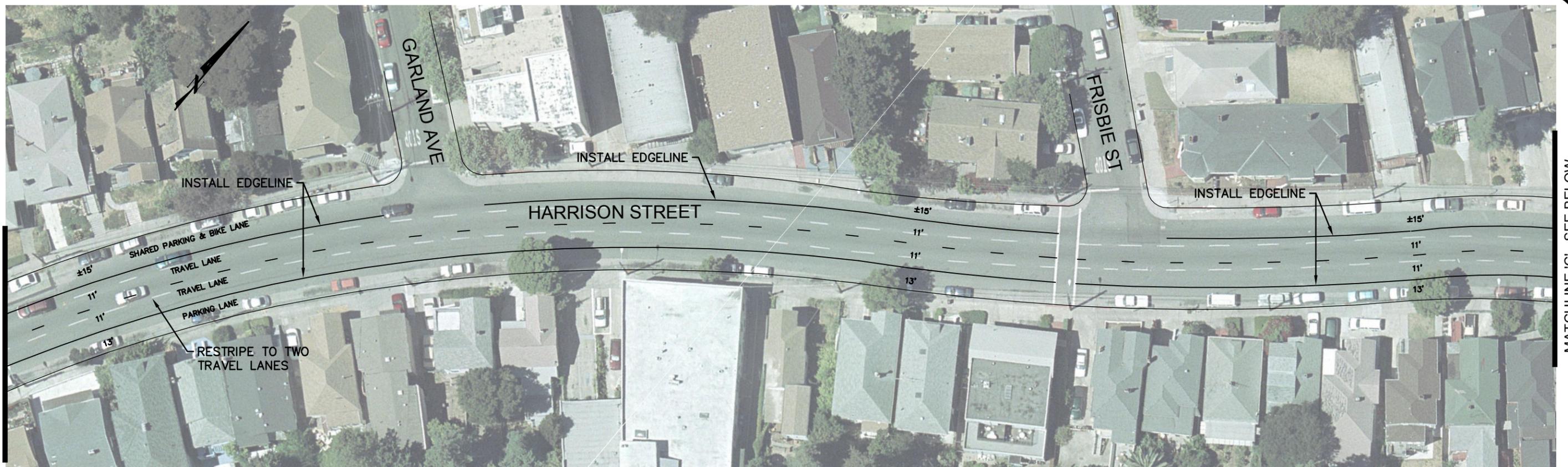
MATCHLINE 'B' - SEE FIGURE 7

MATCHLINE 'D' - SEE FIGURE 8



**FIGURE 6 - RECOMMENDED IMPROVEMENTS
HARRISON STREET (27TH ST TO 29TH ST) AND OAKLAND AVENUE (FAIRMOUNT AVE TO 29TH ST)**

MATCHLINE 'B' - SEE FIGURE 6



MATCHLINE 'C' - SEE BELOW

MATCHLINE 'C' - SEE ABOVE

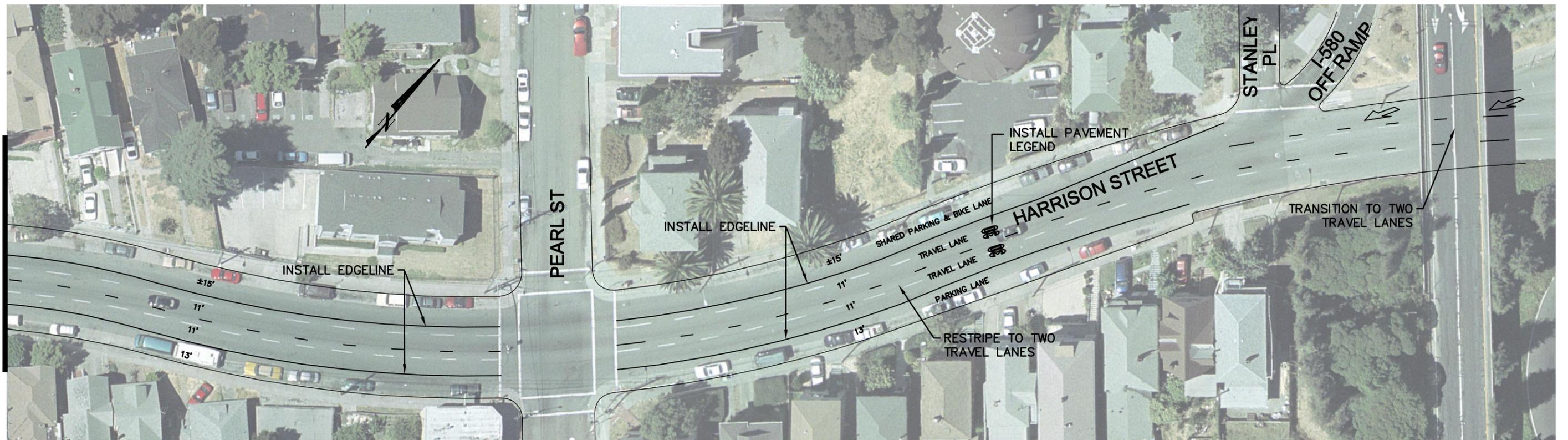
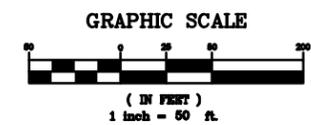
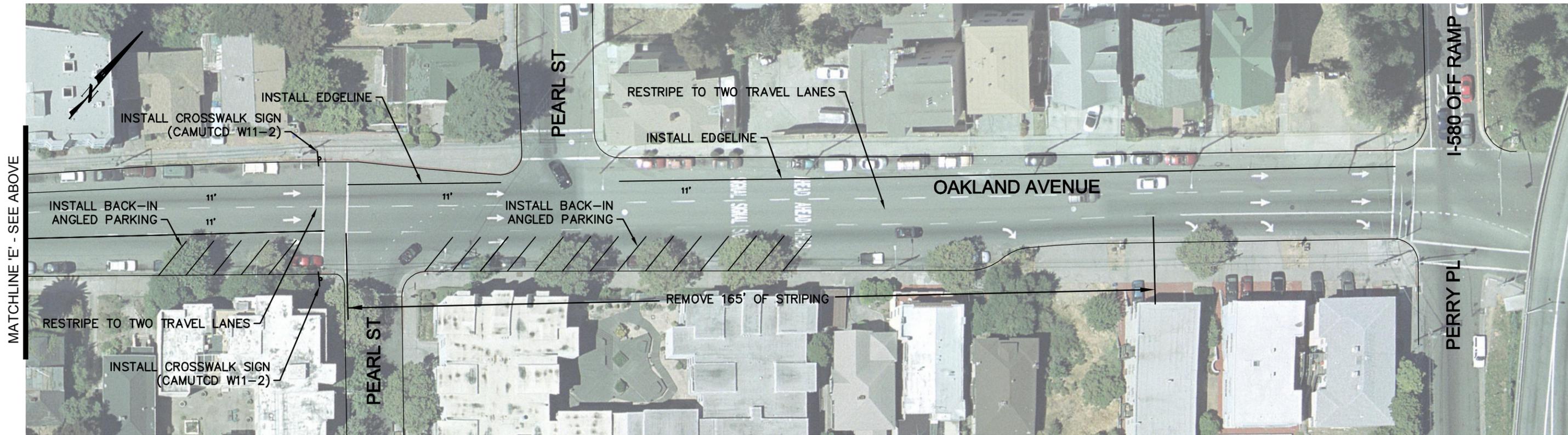
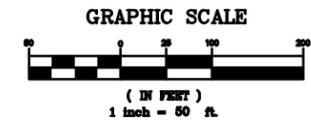


FIGURE 7 - RECOMMENDED IMPROVEMENTS
HARRISON STREET (29TH ST TO I-580)





**FIGURE 8 - RECOMMENDED IMPROVEMENTS
OAKLAND AVENUE (29TH ST TO I-580)**





APPENDIX



Volume Trends

RSTP San Pablo Avenue

Corridor: Harrison Street
Location: South of 29th Street
Date: January 22, 2007 thru January 28, 2007

7-day, 24-hour Mechanical Tube Traffic Counts

Time	Monday		Tuesday		Wednesday		Thursday		Friday		Saturday		Sunday		Weekday			Weekend		
	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	Total	NB	SB	Total
0:00	24	20	12	21	18	20	22	28	22	20	30	37	50	40	20	22	42	40	39	79
0:15	19	16	23	13	15	10	23	16	20	14	42	41	42	29	20	14	34	42	35	77
0:30	10	10	17	15	15	9	20	14	7	20	24	32	26	30	14	14	28	25	31	56
0:45	12	10	13	14	9	10	14	15	10	14	30	24	27	28	12	13	25	29	26	55
1:00	9	13	11	8	9	9	11	7	15	9	27	27	40	31	11	9	20	34	29	63
1:15	4	10	13	8	6	8	4	13	12	19	21	22	30	28	8	12	20	26	25	51
1:30	5	10	15	11	16	8	16	12	16	15	26	24	31	23	14	11	25	29	24	53
1:45	14	11	21	9	17	12	30	12	38	12	32	21	35	30	24	11	35	34	26	60
2:00	8	9	10	9	7	9	11	8	6	3	26	24	36	24	8	8	16	31	24	55
2:15	2	5	6	8	8	13	7	10	3	7	18	18	26	26	5	9	14	22	22	44
2:30	4	5	3	2	4	7	5	9	7	8	14	17	19	13	5	6	11	17	15	32
2:45	4	4	2	9	1	5	5	8	7	10	13	12	14	13	4	7	11	14	13	27
3:00	1	4	3	6	9	8	8	9	4	9	7	17	12	8	5	7	12	10	13	23
3:15	6	6	4	6	9	5	5	4	5	8	6	11	6	6	6	6	12	6	9	15
3:30	3	6	2	5	5	7	2	4	3	4	7	8	6	6	3	5	8	7	7	14
3:45	3	10	6	7	5	8	1	7	4	9	7	4	5	9	4	8	12	6	7	13
4:00	6	9	6	7	6	6	3	5	3	10	5	11	9	6	5	7	12	7	9	16
4:15	4	10	7	12	10	12	9	8	5	7	4	8	7	17	7	10	17	6	13	19
4:30	13	15	9	18	9	15	9	13	7	15	8	6	5	8	9	15	24	7	7	14
4:45	7	28	9	21	16	22	8	25	9	22	3	7	6	5	10	24	34	5	6	11
5:00	12	29	15	28	10	25	12	21	12	20	6	9	6	9	12	25	37	6	9	15
5:15	18	46	16	36	15	41	15	38	9	42	11	17	5	11	15	41	56	8	14	22
5:30	9	48	13	49	10	54	13	44	14	38	7	16	2	9	12	47	59	5	13	18
5:45	21	83	14	73	17	82	20	72	19	66	16	16	8	10	18	75	93	12	13	25
6:00	38	70	32	77	30	61	30	69	24	57	11	17	6	7	31	67	98	9	12	21
6:15	29	85	29	73	40	95	35	69	38	84	11	17	12	6	34	81	115	12	12	24
6:30	53	97	42	113	49	104	39	123	33	98	19	38	15	12	43	107	150	17	25	42
6:45	64	136	63	149	67	141	47	144	55	145	21	51	16	28	59	143	202	19	40	59
7:00	80	143	71	124	75	138	77	132	78	126	20	41	18	19	76	133	209	19	30	49
7:15	78	159	77	146	82	160	89	167	88	163	18	42	19	16	83	159	242	19	29	48
7:30	109	195	105	201	101	190	108	175	111	187	38	63	26	27	107	190	297	32	45	77
7:45	111	205	125	198	112	198	115	193	99	211	32	64	20	45	112	201	313	26	55	81
8:00	127	214	132	206	118	205	142	223	108	214	49	54	41	34	125	212	337	45	44	89
8:15	159	219	141	205	155	190	145	219	120	205	49	72	30	42	144	208	352	40	57	97
8:30	113	209	138	200	130	177	116	192	129	221	69	64	41	40	125	200	325	55	52	107
8:45	131	194	139	205	109	178	122	199	105	199	70	94	41	72	121	195	316	56	83	139
9:00	100	182	123	183	106	187	104	198	101	184	67	76	49	65	107	187	294	58	71	129
9:15	106	165	103	184	97	165	100	160	86	149	64	101	53	46	98	165	263	59	74	133
9:30	91	149	97	166	86	156	107	161	123	150	85	90	62	57	101	156	257	74	74	148
9:45	88	151	83	144	92	134	98	140	111	140	90	96	53	71	94	142	236	72	84	156
10:00	81	121	110	118	101	113	114	125	106	113	83	103	92	72	102	118	220	88	88	176
10:15	91	111	83	127	98	111	97	128	114	133	74	93	77	82	97	122	219	76	88	164
10:30	95	129	112	110	110	120	102	115	88	133	98	105	83	93	101	121	222	91	99	190
10:45	120	104	93	137	103	119	106	98	121	105	90	81	84	94	109	113	222	87	88	175
11:00	103	104	107	93	94	109	106	104	114	126	116	92	100	76	105	107	212	108	84	192
11:15	110	92	101	115	117	106	95	102	109	100	93	86	75	79	106	103	209	84	83	167
11:30	119	119	104	101	111	120	124	111	99	124	93	93	80	85	111	115	226	87	89	176
11:45	136	123	113	118	120	117	135	104	119	124	102	79	84	77	125	117	242	93	78	171
12:00	120	107	137	119	136	93	130	123	130	118	116	97	96	91	131	112	243	106	94	200
12:15	115	119	118	135	136	118	126	113	153	130	102	86	89	82	130	123	253	96	84	180
12:30	135	141	155	134	117	118	113	122	163	144	101	98	94	94	137	132	269	98	96	194
12:45	114	126	113	116	102	109	124	127	127	134	110	103	112	97	116	122	238	111	100	211
13:00	124	128	120	119	130	113	122	128	146	113	122	98	99	96	128	120	248	111	97	208
13:15	124	123	134	119	124	120	135	129	108	122	111	114	96	80	125	123	248	104	97	201
13:30	117	111	119	98	124	129	122	117	133	118	96	96	91	90	123	115	238	94	93	187
13:45	112	118	133	104	117	117	121	104	110	122	88	96	114	103	119	113	232	101	100	201
14:00	126	117	126	104	146	127	152	109	153	107	98	92	106	97	141	113	254	102	95	197
14:15	128	118	130	111	140	123	148	118	124	108	108	83	103	78	134	116	250	106	81	187
14:30	148	99	136	121	171	134	138	98	169	126	105	103	101	102	152	116	268	103	103	206
14:45	148	114	143	115	140	127	150	105	171	134	101	94	111	107	150	119	269	106	101	207
15:00	151	120	172	131	172	128	186	133	182	123	115	106	105	105	173	127	300	110	106	216

RSTP San Pablo Avenue

Corridor: Harrison Street
Location: South of 29th Street
Date: January 22, 2007 thru January 28, 2007

7-day, 24-hour Mechanical Tube Traffic Counts

Time	Monday		Tuesday		Wednesday		Thursday		Friday		Saturday		Sunday		Weekday			Weekend		
	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	Total	NB	SB	Total
15:15	161	142	161	123	157	123	200	124	168	120	126	101	115	87	169	126	295	121	94	215
15:30	198	128	188	133	186	107	204	141	188	123	120	95	110	99	193	126	319	115	97	212
15:45	174	119	188	137	166	119	159	106	179	129	106	87	92	88	173	122	295	99	88	187
16:00	176	116	179	109	170	120	182	131	175	127	116	109	175	67	176	121	297	146	88	234
16:15	189	110	197	139	177	138	189	113	188	131	105	85	188	73	188	126	314	147	79	226
16:30	207	126	201	131	197	121	211	133	199	148	115	100	199	77	203	132	335	157	89	246
16:45	226	135	207	135	221	136	203	123	189	129	115	84	189	75	209	132	341	152	80	232
17:00	244	137	230	134	254	129	246	133	223	141	114	88	223	86	239	135	374	169	87	256
17:15	216	156	243	129	247	127	233	137	225	152	101	104	225	78	233	140	373	163	91	254
17:30	244	128	216	129	217	127	199	125	208	149	100	91	208	75	217	132	349	154	83	237
17:45	198	131	214	146	197	134	197	155	183	154	110	85	183	71	198	144	342	147	78	225
18:00	192	108	206	126	197	124	181	130	195	139	91	94	195	70	194	125	319	143	82	225
18:15	169	107	166	97	187	92	187	105	151	111	101	91	151	81	172	102	274	126	86	212
18:30	154	106	171	110	156	96	140	93	146	125	84	99	146	80	153	106	259	115	90	205
18:45	130	119	163	102	144	115	155	115	146	113	82	86	146	70	148	113	261	114	78	192
19:00	136	86	142	96	134	98	126	88	128	107	80	85	128	60	133	95	228	104	73	177
19:15	113	94	101	110	126	84	133	86	103	109	79	85	103	62	115	97	212	91	74	165
19:30	117	78	117	84	122	80	117	80	101	83	82	82	101	63	115	81	196	92	73	165
19:45	119	63	107	77	125	77	117	83	96	72	85	74	96	62	113	74	187	91	68	159
20:00	116	73	116	71	95	64	118	83	109	75	83	68	109	53	111	73	184	96	61	157
20:15	67	62	115	73	71	66	96	64	74	75	61	62	74	54	85	68	153	68	58	126
20:30	84	46	78	54	81	59	82	59	82	70	65	55	82	63	81	58	139	74	59	133
20:45	70	68	73	65	72	53	83	55	82	80	63	69	82	59	76	64	140	73	64	137
21:00	72	49	93	52	100	59	88	62	72	65	55	76	72	61	85	57	142	64	69	133
21:15	75	46	67	69	83	52	78	52	58	66	59	61	58	49	72	57	129	59	55	114
21:30	58	44	70	60	70	51	79	69	73	65	52	58	73	58	70	58	128	63	58	121
21:45	63	55	69	62	83	67	65	46	49	50	71	62	49	43	66	56	122	60	53	113
22:00	61	43	73	53	64	54	57	50	67	52	65	51	67	39	64	50	114	66	45	111
22:15	43	37	50	37	58	45	58	42	69	73	55	61	69	31	56	47	103	62	46	108
22:30	44	28	40	37	49	39	42	33	68	49	58	52	68	34	49	37	86	63	43	106
22:45	34	35	31	34	28	41	36	44	68	62	60	50	68	35	39	43	82	64	43	107
23:00	36	24	28	26	42	36	38	41	73	49	56	61	73	37	43	35	78	65	49	114
23:15	24	24	24	37	35	25	31	35	43	38	33	51	43	18	31	32	63	38	35	73
23:30	24	26	20	23	18	25	32	32	45	47	43	52	45	23	28	31	59	44	38	82
23:45	23	21	23	26	27	12	19	22	37	39	37	45	37	17	26	24	50	37	31	68
Total	8,469	8,304	8,676	8,440	8,660	8,250	8,774	8,369	8,665	8,808	6,053	6,066	6,989	4,984	8,649	8,438	17,087	6,544	5,545	#####

Peak Hour Summary

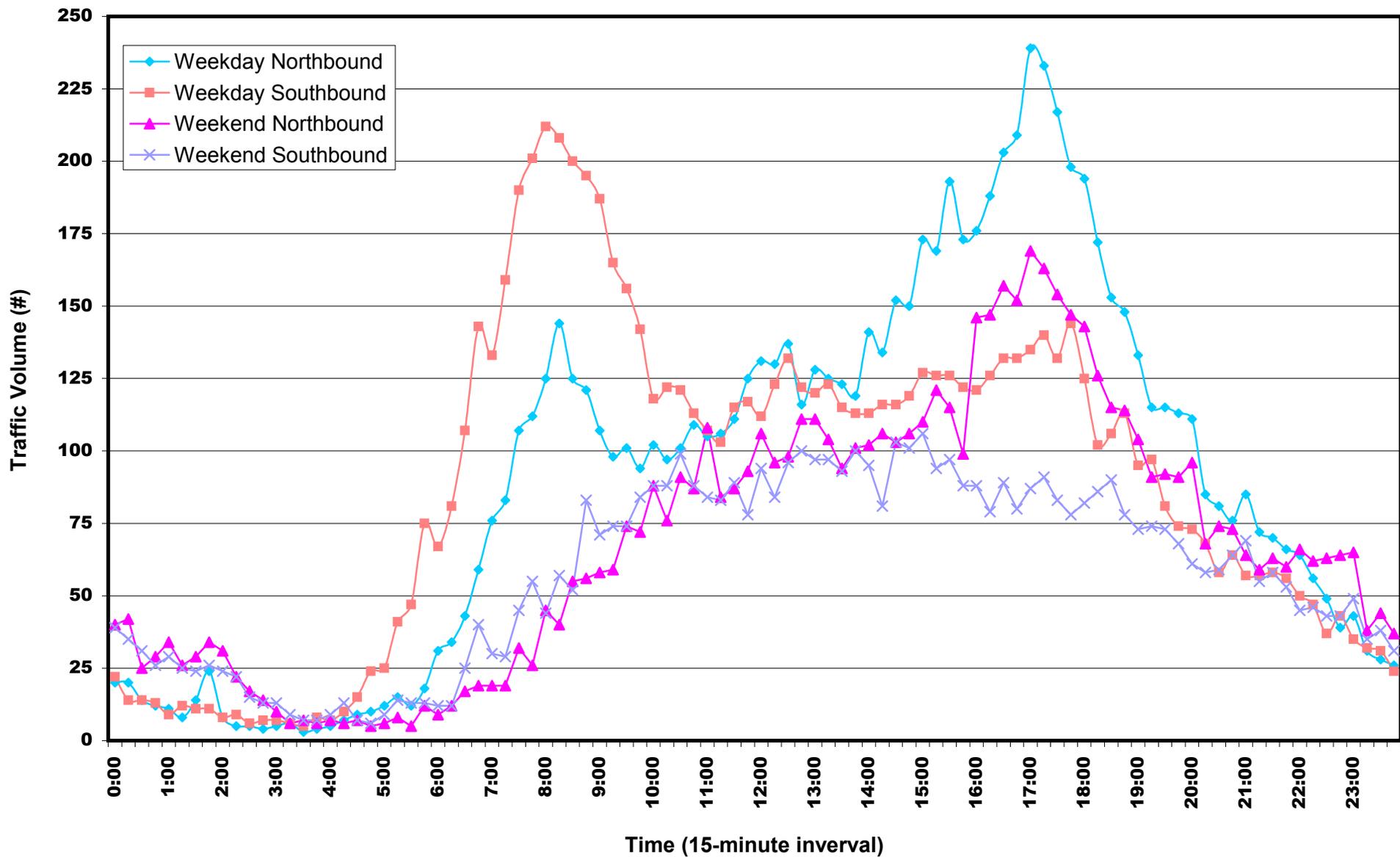
AM Peak: 1330 veh/hour 8:00 AM to 9:00 AM
 Midday Peak: 1008 veh/hour 12:15 PM to 1:15 PM
 PM Peak: 1438 veh/hour 5:00 PM to 6:00 PM

TETAP - Oakland Traffic Calming

Average Daily Traffic (ADT) Volume - Directional Distribution

January 2007

Harrison Street
(South of 29th Street)

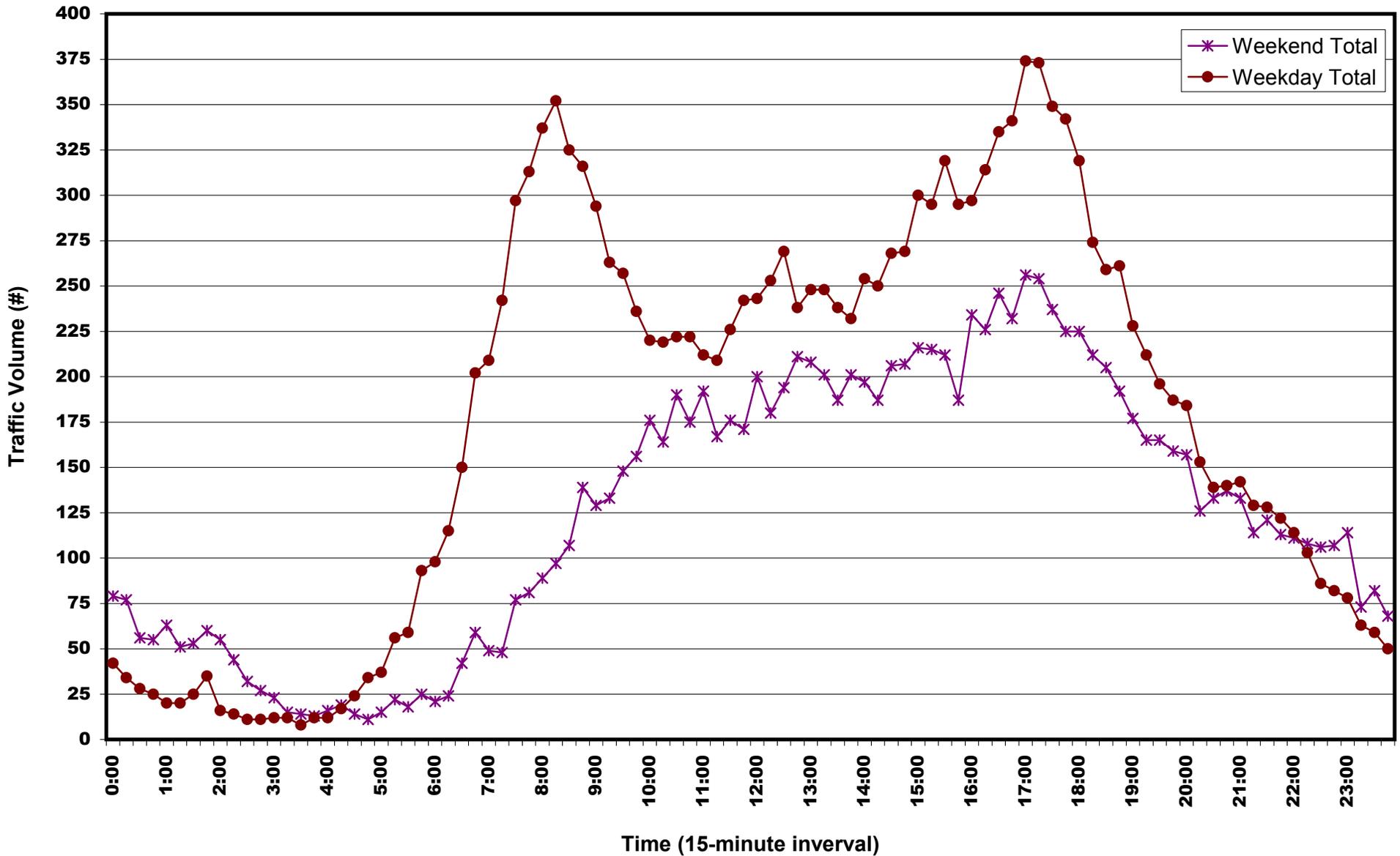


TETAP - Oakland Traffic Calming

Average Daily Traffic (ADT) Volume - Total Volume Trend

January 2007

Harrison Street
(West of 29th Street)

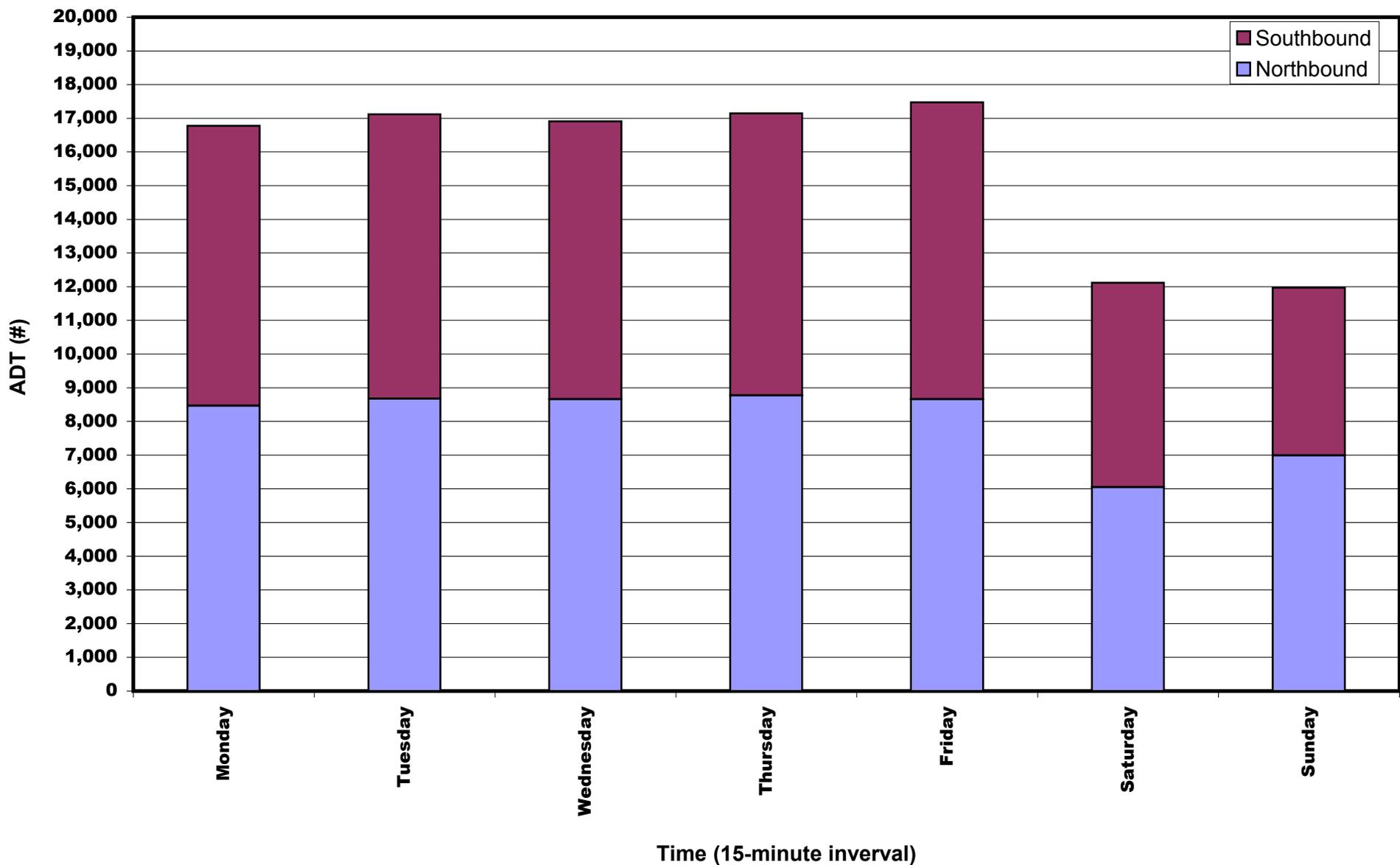


TETAP - Oakland Traffic Calming

Average Daily Traffic (ADT) Volume - Daily Variability

January 2007

Harrison Street (South of 29th Street)





Speed Data

TETAP - Oakland Traffic Calming

Corridor: Harrison Street
Location: South of 29th Street
Date: January 22, 2007 thru January 28, 2007

7-day, 24-hour Mechanical Tube Speed Data

midnight-8, 9-3 and 4-midnight

Speed (mph)	Number of Vehicles																					% of Total											
	Monday			Tuesday			Wednesday			Thursday			Friday			Saturday			Sunday			Weekday			Weekend			Weekday			Weekend		
	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total
0-15	57	52	109	54	55	109	43	45	88	65	41	106	63	50	113	53	48	101	65	47	112	56	49	105	59	48	107	0.8%	0.7%	0.7%	1.4%	1.0%	1.2%
16-20	362	153	515	412	165	577	384	121	505	383	142	525	443	195	638	408	127	535	427	126	553	397	155	552	418	127	545	5.3%	2.2%	3.8%	9.6%	2.6%	5.9%
21-25	1633	918	2551	1659	1005	2664	1584	961	2545	1529	884	2413	1828	1093	2921	1128	755	1883	1571	689	2260	1647	972	2619	1350	722	2072	22.2%	13.7%	18.0%	31.0%	14.7%	22.4%
26-30	3963	3068	7031	3985	3116	7101	4096	3085	7181	4118	3058	7176	3977	3355	7332	2642	2404	5046	338	1892	2230	4028	3136	7164	1490	2148	3638	54.2%	44.1%	49.3%	34.2%	43.8%	39.3%
31-35	1126	2240	3366	1168	2212	3380	1239	2263	3502	1275	2293	3568	1068	2179	3247	974	1604	2578	863	1316	2179	1175	2237	3412	919	1460	2379	15.8%	31.4%	23.5%	21.1%	29.7%	25.7%
36-40	105	462	567	125	478	603	111	489	600	120	530	650	99	535	634	132	391	523	89	304	393	112	499	611	111	348	459	1.5%	7.0%	4.2%	2.5%	7.1%	5.0%
41-45	9	54	63	10	62	72	10	50	60	9	68	77	8	62	70	11	52	63	9	35	44	9	59	68	10	44	54	0.1%	0.8%	0.5%	0.2%	0.9%	0.6%
46-50	0	5	5	3	3	6	0	6	6	1	11	12	0	4	4	1	7	8	1	5	6	1	6	7	1	6	7	0.0%	0.1%	0.0%	0.0%	0.1%	0.1%
51-55	0	5	5	0	1	1	0	1	1	0	1	1	0	0	0	0	1	1	0	1	1	0	2	2	0	1	1	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
56-60	0	0	0	1	1	2	0	0	0	0	0	0	0	1	1	0	1	1	1	2	3	0	0	0	1	2	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
61-65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
66-70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
71-75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
>75	0	2	2	0	2	2	0	2	2	0	4	4	0	0	0	0	3	3	0	0	0	0	2	2	0	2	2	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	7,255	6,959	14,214	7,417	7,100	14,517	7,467	7,023	14,490	7,500	7,032	14,532	7,486	7,474	14,960	5,349	5,393	10,742	3,364	4,417	7,781	7,425	7,117	14,542	4,359	4,908	9,267						

8-9 & 3-4

Speed (mph)	Number of Vehicles																					% of Total											
	Monday			Tuesday			Wednesday			Thursday			Friday			Saturday			Sunday			Weekday			Weekend			Weekday			Weekend		
	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total
0-15	2	17	19	5	6	11	9	10	19	6	6	12	5	6	11	5	8	13	3	6	9	5	9	14	4	7	11	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
16-20	75	27	102	59	34	93	76	30	106	76	21	97	61	31	92	41	9	50	44	16	60	69	29	98	43	13	56	0.9%	0.4%	0.7%	1.0%	0.3%	0.6%
21-25	236	191	427	224	196	420	252	161	413	326	203	529	368	214	582	138	66	204	112	108	220	281	193	474	125	87	212	3.8%	2.7%	3.3%	2.9%	1.8%	2.3%
26-30	662	668	1330	718	575	1293	635	547	1182	675	640	1315	593	647	1240	369	257	626	313	232	545	657	615	1272	341	245	586	8.8%	8.6%	8.7%	7.8%	5.0%	6.3%
31-35	219	364	583	233	436	669	211	392	603	175	377	552	143	355	498	135	264	399	96	148	244	196	385	581	116	206	322	2.6%	5.4%	4.0%	2.7%	4.2%	3.5%
36-40	19	66	85	17	88	105	10	77	87	16	85	101	9	74	83	15	60	75	7	54	61	14	78	92	11	57	68	0.2%	1.1%	0.6%	0.3%	1.2%	0.7%
41-45	1	11	12	3	5	8	0	10	10	0	5	5	0	5	5	1	7	8	0	3	3	1	7	8	1	5	6	0.0%	0.1%	0.1%	0.0%	0.1%	0.1%
46-50	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	1	1	0	0	0	0	0	0	0	1	1	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
51-55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
56-60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
61-65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
66-70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
71-75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
>75	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	1,214	1,345	2,559	1,259	1,340	2,599	1,193	1,227	2,420	1,274	1,337	2,611	1,179	1,334	2,513	704	673	1,377	575	567	1,142	1,223	1,316	2,539	641	622	1,263						



Kimley-Horn
and Associates, Inc.

Third Community Meeting Notes

Notes from Third Community Meeting

Thursday, October 12, 2006

7:00 p.m. to 9:00 p.m.

Harrison Corridor, etc., Traffic Issues

Participating from the City:

Nancy Nadel
Claudia Cappio
Raul Godinez
Wlad Wlassowsky
Jason Patton
Joe Wang
Darian Avelino
Jennifer Stanley
Stacey Perry

Question: Is anything being done to make the Vernon/Bay Place intersection more pedestrian-friendly? In particular, to make the crossing distance (across Vernon at Bay Place) shorter.

Answer: Although the traffic island is being removed, the crossing distance is being reduced by sidewalk widening in front of the project site as well as a new pedestrian refuge island near the center of Vernon Street.

outside of study area.

The traffic signal will have pedestrian push buttons with audible and tactile signals plus pedestrian countdown signals.

Question: What is being done to limit trucks on Harrison Street?

Suggestions: -Route trucks to come off Grand Avenue
-Have another community meeting with Manager of Whole Foods prior to opening

Answer: The City requires WF to do a truck circulation loading and unloading plan prior to opening as part of the Conditions of Approval (COA). Will incorporate suggestions above and will alert Whole Foods to community preferences.

Questions: What improvements have been done to date?

Answers:

1. Signs have been installed directing traffic to use 27th to access I-580 and CA-24 (signs are on Harrison at 27th).

2. One new ladder-style crosswalk at Fairmont - making crosswalk more visible. All marked crosswalks on Harrison from 27th to I-580 will be ladder style.
3. Staff has been working with Westlake School on the drop off issue and those conversations are ongoing. Darian Avelino, traffic engineering, is involved in those conversations along with Stacey Perry and Carmela Chase, Safe Schools.
4. Looking at speed bumps for Vernon St.
5. Vernon and Lee: Working with consultant to narrow opening so that it becomes more of a regular intersection. Construction scheduled to start in summer of 2007.
6. Have received grant for \$20,000 to address pedestrian safety and identify key locations to implement feasible improvements.
7. Bike study on 27th – propose reducing lanes on 27th to two and adding a bike lane. This also coincides with fact that portion of 27th is slated for resurfacing (Broadway to MLK).
8. Staff working on long-term planning grant for Harrison Corridor up to Monte Vista and down to 27th. Seeking \$200,000.

Question: What is being done to address Westlake School concerns?

Answers:

1. Councilmember Nadel will pay for one traffic signal from her discretionary funds. Depending on Traffic Engineering to determine where best to put the signal.

Suggestions: -Right in front of school (argument: that is too close to 27th – could cause traffic back up.)

-Hamilton Place (argument: too far from school and parents/students may not take advantage of it.)

- Near Fairmont/29th/Oakland/Orange

2. City staff is having ongoing conversations with Westlake faculty and the community. To date, have considered:
 - a. putting signs up in parking lot telling parents which way to turn;
 - b. changing the parking lot so that it is “one way” traffic only
 - c. if can modify lanes and get bus stop on other side of school, may be able to white stripe curb in front of the school; however, it depends on where bus stop will go.

Question: What happened to traffic calming at Orange?

Answer: There was no community support for PWA's specific proposal so the project was pulled from the current traffic island program to allow more time to develop a more comprehensive solution (as per the grants for additional study).

Question: Regarding the \$20,000 grant for the traffic consultant—will there be interface with the community?

Answer: No, it is a technical grant and very specific on how it can be used. However, City staff will interface with consultant and strike a balance with the community.

Question: When will consultant begin?

Answer: The consultant will begin in next couple of weeks to start looking at data. Consultant will do study and make recommendations. There is no construction funding regarding use of the consultant. Construction will not start right away, so there will be time for community input.

Question: How can the community be sure the right questions are being asked?

Answer: The City has met with the community numerous times and will incorporate the concerns from those meetings.

Question: Who will be the point of contact for questions and input into the grant?

Answer: Darian Avelino, Project Manager, 510/238-6602 aauuggh

Comment: Some of the community were concerned that not enough attention is geared toward making the streets safe for humans.

Answer: State mandate and Oakland policy requires addressing the needs of motor vehicles as well as bikes and pedestrians.

Continuing Issues:

- Slip turns on 25th and 27th
- Open up median for trucks to turn left down Harrison to 27th
- School drop off plan
- Location for bus stop
- Location for additional traffic light
- Input from community on data to be measured in the \$20K grant
- Next time bring a map to aid discussion
- Want pedestrians and bicyclists to be considered as equal or higher priority than cars
- Creating a community consensus
- Synchronizing signals on 27th so people will use 27th (too slow)

Next meeting: date to be determined

DRAFT



Kimley-Horn
and Associates, Inc.

Resident Traffic Issues and Concerns

BLOCK GROUP HUDDLE

This format was provided by a City of Oakland Neighborhood Services Coordinator to catalog community issues.

PRINCIPLES:

We are a coalition of residents, neighborhood associations, parents of the Westlake Middle School children, people who work in area and members of the church. For over 12 years, members of the community have expressed concerns to City Council and Traffic Engineering regarding the unsafe conditions for pedestrians and Quality-of-Life impact of the Harrison St / Oakland Avenue corridor from MacArthur (Route 580) to 27th Street. The seriousness of the issues has motivated us to come together and present this list.

We share common goals and principles: to create a safe and pleasant neighborhood environment that accomplishes the following:

- 1) Every intersection should be designed to allow safe and convenient movement for all pedestrians (especially seniors, school children, disabled) across and along Harrison St and Oakland Ave. Sidewalk usability needs to be improved.
- 2) Reduce traffic volume and speed: Vehicular access should be maintained along Harrison and Oakland, but through traffic should be discouraged and traffic speeds must be reduced.
- 3) Make space for bicycles: allow safe access for bicycle from Piedmont to downtown Oakland
- 4) Street beautification -Improve the street environment with street trees, planting, artwork bus stops, signage and pedestrian level lighting to make the streets a neighborhood asset, not a blight. Litter, dumping and drug dealing are additional issues related to the traffic.
- 5) Maintain and expand existing parking- Keep existing public parking along streets and look for opportunities to increase neighborhood parking capacity.

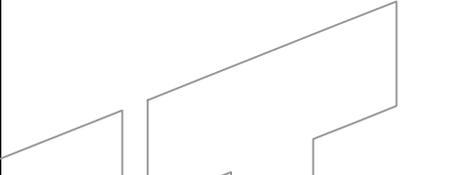
During our collaborative effort we found that some suggestions are likely to address multiple problems (eg: Reducing the streets to two lanes provides the visual cue that this is a residential neighborhood and addresses other issues: creates room for angled parking which will increase parking spaces, reduces the distance for pedestrian crossing, and eliminates the confusing spot where lanes merge/disappear.) Thus, some of the suggestions repeat throughout this document. The repeating suggestions carry unanimous consensus.

The freeway interchange in our neighborhood created most of the problems; redesign is a complex endeavor, but it would ultimately resolve the majority of the concerns.

PRIORITY #	ONGOING CONCERN OR INTEREST <i>(INCLUDES QUOTED "PUBLIC COMMENTS" FROM RESIDENTS)</i>	LOCATIONS: ADDRESS, BLOCK, OR NEIGHBORHOOD -WIDE?	WHAT HAVE YOU DONE TO ADDRESS IT? WHO DID YOU WORK WITH?	WHAT OTHER IDEAS/ SUGGESTIONS DO YOU HAVE TO POSSIBLY ADDRESS IT?	WHAT RESOURCES DO YOU THINK YOU STILL NEED?
1	<p>SPEEDING AND PEDESTRIAN CROSS WALKS THE POSTED SPEED OF 30 IS OFTEN VIOLATED AND RARELY ENFORCED. STATE Vehicle Code 21949 "safe and convenient pedestrian and travel access" should be in mind as we examine the corridor.</p> <p>The width of the roadway, the freeway interchange (combined with lack of signage to inform drivers of <u>other</u> freeway access routes) obscures the residential nature of these roads. Drivers speed over hilly and curving terrain with limited visibility.</p> <p>Harrison/Oakland were converted from two-way streets into three-lane-wide one-way streets after 580 was constructed. They no longer look like residential streets, and drivers don't treat them as such.</p> <p>"speeders going from Harrison to Broadway and vice versa, and as always, trying to cross Harrison / Oakland on foot."</p> <p>Speeding Traffic has crashed into homes and into legally parked cars. The roadway width and freeway ramps imply 'speedway' and not 'residential'.</p> <p>Pedestrians have difficult time crossing the street. Street is very WIDE and drivers often exceed the speed limit.</p> <p>Disabled pedestrians (low-vision, low mobility, wheelchair, etc...) are not able to cross safely.</p>	<p>ENTIRE CORRIDOR IS AFFECTED BY SPEEDING.</p> <p>Pedestrian crossing is hazardous specifically at:</p> <p>(a) Harrison St. at Westlake Middle School (crosswalk was removed)</p> <p>(b) Harrison St. at Hamilton Place (crosswalk at #11 Bus Stop on both side of the street)</p> <p>(c) 29th street @Harrison, crossover to Oakland Ave..</p> <p>(d) Fairmount, Oakland Ave, Harrison St, Orange Ave intersection (Note confusion for drivers on Orange who wish to turn Left onto Harrison St.) Bicyclists traveling up</p>	<p>Met with Traffic Engineers (Wlad Wlassowsky, Joe Wang and Si Lau on February 23rd, 2006 to observe the issues)</p> <p>Ongoing meetings between Westlake Parents (OPT) and City Council.</p> <p>Ongoing meetings between HarriOak, Traffic Engineering, City Council. (2006: Feb, March, May, July, October)</p> <p>Locations 'a', 'b', 'c' and 'e' have not been addressed at all.</p> <p>Location 'd' received reflective, wide tape to mark the cross walk, but the tape is coming off the pavement.</p> <p>SOLVED Elsewhere <u>Mid-Block Pedestrian Crossings with Signals:</u> ~Kaiser 3505 Broadway (B'way</p>	<p>1. For Locations (a)/(b) which are in close proximity to each other and to the Middle School: <u>Pedestrian Operated Cross Walk Light</u> or regular traffic signal.</p> <p>2. For the entire corridor, <u>convert Harrison/Oakland to two lanes</u> This narrows the crossing distance and it restores a sense of the residential nature of the neighborhood.</p> <p>3. For entire corridor, <u>post speed limit</u> (currently 30mph) in very <u>large signs</u> and <u>paint the speed limit onto the pavement</u>. Current Sign not visible across 3 lanes of busy traffic.</p> <p>4. Install <u>permanent Radar/Speed signs</u> (approx \$20k each) to alert drivers of their actual speed.</p> <p>5. <u>Enforce</u> the Speed Limit</p> <p>6. <u>Use heavy, bright Reflective Tape</u> at all pedestrian crossings</p> <p>7. <u>Crosswalk posts</u> like Oakland Ave@ Linda.</p> <p>8. (a) <u>Bulbouts</u> and (b) <u>widen traffic islands</u> and extend the planted areas to narrow streets and to enhance the sense of residential</p>	<p>Support of City Council & Traffic Engineering; FUNDS: -Safe Crossing to Schools - City Council - Traffic Engineering - CalTrans</p> <p>Stacey Perry (at OPD) can schedule a temporary radar trailer, but permanent signs are far better.</p> <p>Suggestion #12 involves CalTrans and perhaps working with the Kaiser Expansion.</p>

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	<p>Children are not able to cross safely. Since there are many children going to the Westlake Middle School, this problem has a lot of 'stakeholders'.</p> <p>Location 'c' comment from resident EC: My kitchen window looks out on the 29th street crossover to Oakland and I see/hear accidents and near misses almost daily</p> <p>Speeding cars create a hazard for people bicycling, walking or attempting to cross Harrison and Oakland all the way from 580 ramps to Bay St/27th. There is only one "safe" crossing, the light at Pearl. This is a particular problem for children trying to cross to reach Westlake Middle School, people walking to Lake Merritt and downtown, and for people walking north up to MacArthur (in front of on-and-off ramps) to reach the Piedmont Ave and Grand Ave business districts.</p> <p>The reckless speed of drivers on these streets causes many serious vehicle and property accidents. Last year a car smashed into the liquor store at Harrison and Pearl (located just after the light on a one-way street). Drunk drivers have caused multiple-car accidents involving parked cars.</p> <p>(from NS) New Years Day Drunk Driver: a Mustang crashed into three parked, emergency-braked vehicles, none of them small. The first car moved ten feet, my car moved eleven feet, and the one behind mine about fifteen. The back end of my car is about three feet shorter than it used to be.</p>	<p>Harrison need to watch for cars veering into Orange.</p> <p>(e) Oakland Avenue at the Perkins Stairs (visibility blocked by the hill) near A&M Market</p>	<p>is 4 lanes, just like Harrison near the school.)</p> <p>~Kaiser: Howe St (near MacArthur)</p> <p>~City Hall 14th Street at Frank Ogawa Plaza, near City Hall</p> <p>~City Center Clay Street near City Center and Federal Bldgs</p> <p>~Grocery Outlet 29th Street (near Grocery Outlet)</p> <p>~Lakeshore Shopping District near Peets</p> <p>~Grand Avenue Shopping district</p>	<p>neighborhood.</p> <p>Especially relevant at Location 'c' 29th Street and 'd' Fairmount/Orange/Oakland/Harrison.</p> <p>9. <u>Mark the bike route</u> (This is a Class II bike route; see end of document for illustration)</p> <p>10. <u>Make it a 25-mile zone.</u></p> <p>Plenty of kids are crossing.</p> <p>11. <u>Additional Traffic Lights</u> (at 29th street or at Orange)</p> <p>12. <u>Reduce freeway access</u> (eliminating just one entrance or exit ramp could help; ideally, only maintain access for Route 980 since 24 East, 580 and 80 are all accessible from other locations. – see ADDENDUM w/Maps at end of this document)</p> <p>13. <u>Change both Harrison and Oakland to TWO-WAY streets.</u> Historically, they were two-way streets.</p>	

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2	<p>TRAFFIC VOLUME AND PUBLIC HEALTH: AIR QUALITY AND NOISE POLLUTION As long as the freeway access (entrance/exit) exists, there will be traffic. By reducing volume and maintaining smooth flow for the remaining traffic we can improve air quality.</p> <p>Freeway access at MacArthur is redundant given the # of entrance & exit ramps within ½ mile</p> <p>Note: <u>EPA Guidelines</u>: The standard is 35 micrograms per cubic meter.</p> <ul style="list-style-type: none"> - Air quality should be measured, but it feels bad during commute hours. - NOISE is related to volume during commute hours and speed other times. Noise interferes with conversations. It also prevents being heard during emergency. <p>Long-range studies (covering 3 to 8 years with large populations) conclude that exhaust has negative health affects on lung development. October 2006 New York University Study linking Truck Traffic with Asthma: 26-January-2007 issue of The Lancet) (see 'Addendum' for more info on the studies)</p>	Harrison St and Oakland Ave corridor from 580 to 27 th St (a Residential Corridor)	<p>Letters from HarriOak Neighborhood Association (from 1995 to 2006) & meetings with City Council and Traffic Engineering. We have requested signs that inform drivers of other routes to access freeways.</p> <p>A small sign was placed (hard to see) at Grand to direct traffic leaving downtown Oakland to use 27th St for freeway (580/80/Route 24). Sign is very inconspicuous!</p>	<ol style="list-style-type: none"> 1. <u>Re-Direct traffic headed toward 580, 24, or 80 to use the equally close 27th Street and Grand Avenue entrances: LARGE Signs with better placement to direct traffic to use 27th Street, Grand Ave to access freeway. SEE MAP on Page 8</u> 2. <u>REMOVE</u> the sign directing traffic up Oakland Ave (sign located at intersection of Bay Place & Harrison St.) 3. Request all businesses (Whole Foods, Cathedral) <u>websites provide driving directions that emphasize Grand Ave and 27th Street</u> 4. Reduce freeway access (removing just one entrance or exit ramp could help) ~ See Map on p8 for alternates ~Design additional freeway access near Broadway (a commercial road near the 580/24 interchanges) The Kaiser Expansion Project is an ideal opportunity to implement a design vision. 	<p>SIGNS: Traffic Engineering,</p> <p>FUTURE: DPW, Traffic engineering, CalTrans</p> <p>California Air Resources Board for air quality information</p>
3	IMPAIRED/LIMITED VISIBILITY FOR DRIVERS on Oakland Ave & Harrison St. (even 30mph is a hazard with such limited visibility)	(a) Oakland Ave near Perkins Stairs(at the A&M Market),	Letters to City Council and to Traffic Engineering.	<ol style="list-style-type: none"> 1. <u>SIGNAGE: Limited Visibility Warnings</u> 2. <u>Road Diet: Convert Harrison and</u> 	

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	<p>Both Oakland and Harrison are dominated by curves or slopes, which impair visibility at crosswalks. 30mph is unsafe.</p> <p>At location 'a': cars pick up speed as they climb the hill but have no visibility into what is ahead of them (people in the cross-walk)</p>	<p>(b) Curve on Harrison just before Hamilton Place</p> <p>(c) Curve on Harrison just before 29th St.</p>	<p>Walked the streets with Traffic Engineering (Feb 23rd, 2006)</p>	<p><u>Oakland</u> from three lanes to two lanes.</p> 	
4	<p>PEDESTRIAN/BIKE SAFETY FOR RESIDENTIAL USE: Insufficient room on roadway for safe bicycle movement, Traffic Speeding, Traffic Volume</p> <p>NOTE: Harrison St/Oakland Ave are considered Class II Bike Routes: http://www.oaklandpw.com/Asset139.aspx</p> <p>(Comment from DB) <i>The most important thing for me is to be able to walk without fear with my toddler (or bike) down Harrison to Grand, and to do that, At some point these nice streets were turned into extended freeway on- and off ramps, and I'd love to see them look and feel like residential streets again</i></p>	<p>Harrison St. btw Pearl and Grand Avenue</p>	<p>Repeated letters to City Council (Nancy Nadel) and Traffic Engineering, Meetings with City and Traffic Engineering, Walking the streets with Traffic Engineering....</p> <p>During meetings, we've tried to raise awareness and request long range plans, while immediately implement low-cost remedies to help in the meantime. (such as improved signage and enforcement)</p>	<ol style="list-style-type: none"> 1. <u>Reduce Harrison St & Oakland Avenue to two lanes all the way up to the freeway,</u> 2. <u>Add a bike lane.</u> 3. <u>Tree planting</u> 4. <u>Crosswalk posts like Oakland Ave@ Linda.</u> 5. <u>Bulbouts at each pedestrian crossing to narrow the distance</u> 6. <u>Permanent RADAR speed signs</u> 7. <u>Direct traffic to the alternative freeway ramps</u> <i>SEE MAP on Page 8</i> 8. <u>Close 24th St access from Harrison.</u> <p>Structural changes have proven to reduce speeding (see addendum for source info)</p>	
5a	<p>INSUFFICIENT PARKING</p> <p>Residents cannot park (see next line item for combination of parking and litter issues since a shared solution could have positive impact on both issues)</p>	<p>(corridor from 580 to 27th St): Oakland Ave, Harrison St, 29th, etc..</p>	<p>Informally, residents park in a way to leave as much room as possible for another vehicle.</p>	<ol style="list-style-type: none"> (1) <u>issue residential parking permits</u> (2) <u>create angled parking</u> (safest model is <u>reversed angle parking</u>, as done in other US Cities) This addresses the problem of car doors opening into the bike lane. 	

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5b	<p>INSUFFICIENT PARKING & LITTER: related problems & related solutions</p> <p>(from VW) We get trailers, RV's, incorrectly parked cars, and people who rarely move their cars. I can't believe this BUSY stretch of Harrison and Oakland Ave from 27th to MacArthur only gets swept once a month.</p> <p>(From BM) Regular dumping on & near my property (next to A&M Market), mostly those parking/passing through I pick up litter all the time in front of our house.</p> <p>I see cars dumped on Harrison that broke down or got wrecked on 580. They sit taking up space for weeks, before someone calls and gets them towed.</p>	Entire Corridor (including some side streets)	<p>SOLVED ELSEWHERE</p> <p>As soon as you go down Harrison past 27th St it is swept 3 times a WEEK.</p> <p>Other similar 580 ramps/exits Fruitvale, Park blvd, High, Grand, Broadway are getting swept at least weekly, most 3 times a week.</p>	<p>(1) <u>Weekly or at least more frequent street sweeping.</u> Our neighborhood streets are just as busy. We have more than 10,000 cars a day on our streets, 2 liquor stores, a school, and a new Whole Foods on the way. It could help with our parking problem in addition to cleaning up our dirty streets.</p>	
6	<p>TRUCK TRAFFIC IS CAUSING 100-YEAR OLD SEWAGE PIPES TO BURST. We need to redirect heavy trucks to streets that have been built to carry the load. (The Whole Foods Market is a known truck destination)</p>	Harrison St / Oakland Ave from 27 th Street to Freeway	Requested that all trucks use 27 th Street, Broadway, Grand Avenue for all arrival/departure	<u>Be sure that trucks exiting WhFds can turn left onto Harrison so they can head to freeways via 27th St or Grand Avenue</u>	Whole Foods managers & Traffic Engineers
7	<p>DRUG DEALING & TRAFFIC (RELATED)</p> <p>(comment from BM) Some dope dealers frequent our streets because the access & escape for them, and their (usually non-local) "clients," are quick & easy. Zipoff 580! Zipback!</p> <p>(drug dealing is a known problem in our area, in part due to freeway access)</p>	<p>Oakland Ave near Perkins Stairs</p> <p>Oakland Ave near Frisbie Alley</p> <p>Harrison at Pearl St.</p>	<p>Alerted the city to the problem of the drug dealing; frequent calling of 238-DRUG.</p> <p>SOLUTIONS ELSEWHERE: a Berkeley neighborhood posted semi-professional signs that say something like, "We write down license plate numbers and call the police." with a 'No DRUGS' symbol.</p>	<p>1. <u>OPD Surveillance Of Perkins Stairs, Frisbie Alley, etc.</u> Regular police patrol would curtail <i>some</i> commuter impact -drug deals, speed, litter/dumping</p> <p>The city could rake in a bundle with speeding citations issued on Harrison and Oakland.</p> <p>2. A sign similar to the one in Berkeley</p>	Caltrans needs to be involved.

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8	<p>HARRISON ST: LANE MERGES FROM 3 LANES TO 2 LANES WITHOUT WARNING</p> <p>(From KO) I hear brakes squeeling and honking horns at this merge.</p>	<p>Harrison Street heading from 580 to 27th Street, btw. Fairmount and Hamilton Place</p>	<p>Repeated emails/ letters/discussions with Traffic Engineering to raise awareness of the danger to pedestrians and drivers</p>	<p>1. <u>Reduce lanes along Harrison ST. to 2 lanes</u> for the entire stretch from 580 to (actually from Monte Vista where Harrison St. begins) to 27th St.</p> <p>2. <u>SIGNAGE</u>: until lane reduction is implemented, install signs and paint arrow on road to indicate lane merge and which lane has right of way.</p>	
9	<p>SIDEWALKS ARE NARROW</p> <p>In many stretches of the corridor, the sidewalks cannot be safely used by people in wheelchairs or otherwise low-mobility.</p>	<p>Corridor</p>		<p>This is another reason to reduce the Harrison/Oakland Avenue width: to widen the sidewalks.</p>	

ADDENDUM

See 26-January-2007 issue of **The Lancet**

Over an eight-year period, researchers studied developing lung function in 1,445 children (from ages 10 to 18) living in 12 Southern California communities. The closer the children lived to a freeway, the more likely they were to experience reduced growth in lung function as measured by the standard tests. "Our finding of a larger impact on small lung airways is consistent with what is known about the types of pollutants that are emitted from the tailpipe," said W. James Gauderman, the lead author and an associate professor of preventive medicine at the University of Southern California. "These pollutants can be inhaled deeply into the lung and may have the largest impact on the smallest lung airways. Our findings were observed in all of these children, including those living in areas of lower pollution."

www.TrafficCalming.org

collection of studies and data from medium-sized cities whose traffic issues are similar to ours. Site includes statistics on effectiveness of various solutions. Note that traffic lights are not always the best solution for speeding, but certainly are excellent to allow street crossing.

MAPS: (from the Bicycle / Pedestrian Advisory Committee, Oakland DPW website) show the relevant streets.

OVALS show the **Whole Foods site** and the **School/Church site**.

RECTANGLES show the freeway ramps:

~ 27th Street for Routes 24 and 580 (connects to Route 80) [commercially zoned]

~ Grand Ave for 580 interchange [commercially zoned]

~ The Harrison/Oakland Ave interchange with 580 (at MacArthur) is covered by the map's title. This is the problem for the residential neighborhood.

THESE MAPS do not show that 29th St continues through to Oakland Ave!!! but the city is well aware that 29th continues to Oakland Ave. An opaque arrow shows the road continues to Oakland Ave.

Bicycle lane:

<http://www.oaklandpw.com/Page122.aspx>

Harrison Street is a class II bike route from Bay Place/27th Street to where Oakland Ave splits off and continues up Oakland Avenue.

"A bicycle lane is an on-street facility ("Class II facility") established on roadways with high bicycle demand. Bicycle lanes must be a minimum of 1.5 meters (approximately five feet) in width, and are delineated by a six inch stripe on the left-hand side of the lane, an optional four inch stripe on the right side of the lane, and in-pavement markings such as the symbol of a cyclist with a helmet. Bicycle lanes are also denoted by bike lane "BEGIN" and "END" signs."

