Appendices

Appendix A: On-Street Routes

This appendix contains the Pedestrian Route Network Survey for on-street routes. All streets included in the route network are listed along with the end-points of the route on that street, the type of route, and the location of the route by council district. The Pedestrian Route Network Survey identified shortcomings in the pedestrian infrastructure along the route network. Potential project components were then applied to particular street segments to build a long list of potential pedestrian improvements throughout the City. These components and their associated abbreviations are explained in the figure titled "Potential Project Components and Cost Estimates."

Project Context Evaluation

Given the large number of streets in the Pedestrian Route Network, a simple scheme was developed for evaluating the respective contexts of potential projects. The evaluation allows for an initial comparison of the relative importance and impact of potential projects on streets dispersed throughout the City. This section explains the numbers listed under the column titled "Context" in the figure listing "On-Street Routes." The potential projects identified in the Pedestrian Route Network survey provide a comprehensive examination of pedestrian conditions in the City. Priority projects are identified in the Implementation Plan.

Criteria were developed as yes/no questions to address the issues of safety, pedestrian activity areas, transportation connections, feasibility, and equity. "Safety" addresses how well the potential project would improve safety and access for pedestrians on the street itself. "Pedestrian Activity Areas" identifies the relative importance of particular streets based on the activity centers and pedestrian volumes that those streets serve. "Transportation Connections" considers how well the project's pedestrian improvements also support train, bus, and bike ridership. "Feasibility" specifies the practicality and effectiveness of implementing the projects. And lastly, "Equity" addresses how the benefits of potential projects are distributed.

On its own, this context evaluation is not adequate for prioritizing future pedestrian projects. Differences of one or two points between potential projects may not be significant. All evaluation criteria are given equal weight. Because this evaluation does not take into account the length of street segments, longer segments tend to be evaluated more favorably. Professional judgment and citizen input should continue to shape project prioritization. For implementation, the proposed projects would require additional review by traffic engineering and under the California Environmental Quality Act (CEQA). Furthermore, engineering judgment is necessary to determine the specific locations and features of each project.

Appendix A: On-Street Routes

The following questions were asked of each potential project identified by the Pedestrian Route Network survey. Each "yes" answer was counted as one point. The results are listed under the "Context" column in the figure titled "On-Street Routes."

Safety

- ➔ Does the project improve a street with a history of pedestrian collisions?
- ➔ Does the project improve dangerous crossings?
- ➔ Does the project complete missing sidewalks?
- ➔ Does the project improve access for persons with disabilities?

Pedestrian Activity Areas

- ➔ Does the street serve a pedestrian-oriented commercial district?
- ➔ Does the street serve a school zone?
- ➔ Does the street serve a facility for seniors or people with disabilities?
- ➔ Does the street serve a park?
- ➔ Does the street carry a high volume of pedestrians?

Transportation Connections

- ➔ Is the street located within 1/2 mile of a BART station?
- ➔ Does the street have bus service or does it connect to a street with bus service?
- ➔ Does the project improve routes specified by the Bicycle Master Plan?

Feasibility

- ➔ Does the project have local support?
- ➔ Is the project compatible with current land uses?
- ➔ Do the project's benefits substantially outweigh its costs?
- ➔ Is funding readily available for this type of project?

Equity

- ➔ Does the project contribute to the mitigation of transportation problems caused by past projects?
- ➔ Does the project address resident concerns identified in outreach presentations?

FIGURE 26 POTENTIAL PROJECT COMPONENTS AND COST ESTIMATES

	COMPONENT	UNIT COST*
CROSSING IMPROVEMENTS		
CI 1	4-foot wide minimum median with refuges for length of street	$135 (per linear foot)
CI 2	4-foot wide minimum refuge islands at regular intervals at intersections (includes improvement to existing median)	$2,525 (20 feet in length)
CI 3	6-foot bulb-outs onto Major Street with 2 curb cuts each at regular intervals at intersections (including inlet, manhole, & 50-foot drain pipe)	$24,200 (per corner)
CI 4	Signalized intersection with pedestrian signal heads at all approaches and audible pedestrian signals (per intersection)	$135,000
WIDEN SIDEWALKS		
WS 1	Replace existing sidewalk condition with minimum 10-foot sidewalk (6-foot through passage zone plus 4-foot utility zone) and add bulb-outs at major intersections (collector streets)	$135 (per linear foot)
WS 2	Replace existing sidewalk with minimum 12-foot sidewalk section (8-foot through passage zone plus 4-foot utility zone) and add bulb-outs at major intersections (arterial streets)	$155 (per linear foot)
WS 3	Tree bulb-outs, 4 X 6 curbed tree wells in the parking zone at regular intervals (approx. 30 feet)	$2,500 (per tree well)
TRAIL		
T1	Concrete 6-foot path	$50 (per linear foot)
T2	Wood staircase, 6-foot width, with wood handrails	$250 (per linear foot)
T3	Cement staircase, 6-foot width, with metal handrails	$1,000 (per linear foot)
STREETSCAPING		
L1	Pedestrian-scale historic-style lighting at 50-foot intervals on 14-foot post	$7,500 (per light standard)
S1	Rectangular pedestrian route sign indicating local destinations and posted at major decision points.	$100 (per location)

* The unit costs for potential project improvements listed in this table do not include the following additional expenses: Contingency: 25.0%, Design: 12.0%, Construction Management: 8.0%, Contract Compliance: 3.5%

Appendix A: On-Street Routes

FIGURE 27 ON-STREET ROUTES

NAME	LOCATION	ROUTE TYPE	DISTRICT	POTENTIAL PROJECT COMPONENTS	CONTEXT
105th Avenue		District	7		
106th Avenue		Neighborhood	7		
10th Avenue		Neighborhood	2		
13th Avenue		Neighborhood	2		
14th Avenue	E12th St to MacArthur Blvd	District	2,5	CI-2, CI-3	10
14th Street	Brush St. to Mandela Pkwy	City	3	CI-2, CI-3	11
16th Avenue		Neighborhood	2		
16th Street		Neighborhood	2		
17th Street		Neighborhood	3		
18th Street		Neighborhood	3		
19th Avenue		Neighborhood	2, 5		
20th Street		Neighborhood	3		
23rd Avenue	E12th to MacArthur	District	5	CI-3	10
27th Street	San Pablo Ave to Harrison	District	3	CI-2, CI-3	9
28th Avenue		Neighborhood	5		
29th Avenue		District	5		
29th Street		Neighborhood	3		
32nd Street/Brockhurst Street		Neighborhood	3		
34th Street		Neighborhood	3		
35th Avenue/Redwood Rd.	International Blvd to Redwood Rd	District	4, 5	CI-3	13
37th Avenue		Neighborhood	5		
38th Avenue	Foothill to MacArthur	District	4, 5		
38th Avenue	International to Foothhill, Spot: Mid-block	District	5	CI-3 (SPOT)	7
38th Street		Neighborhood	3		
39th Avenue		Neighborhood	4		
3rd Street	Union St to Mandela Pkwy	District	3	EXISTING PLAN: BAY TRAIL, T-1	9
40th Avenue		Neighborhood	5		
40th Street	Whole Street	District	1,3	CI-2, CI-3	10
42nd Street		Neighborhood	1		
45th Street		Neighborhood	1		
51st Street/Pleasant Valley Avenue	Shattuck Ave. to Rose Ave.	City	1	CI-2, CI-3	9
52nd Avenue		Neighborhood	5		
54th Avenue		Neighborhood	5		
54th Street		Neighborhood	1		
55th Avenue		District	6		
55th Street		Neighborhood	1		
59th Street/ Forest Avenue		Neighborhood	1		
5th Avenue		Neighborhood	2		
61st Street		Neighborhood	1		
62nd Avenue		Neighborhood	6		
63rd Street		Neighborhood	1		
64th Avenue		Neighborhood	6		
66th Avenue	San Leandro to Oakport	District	6	WS-2	9
66th Avenue/ Havenscourt Blvd.	Bancroft to Oakport	District	6	WS-1	
69th Avenue		Neighborhood	6, 7		
73rd Avenue/ Hegenberger	Highway 880 to International	City	7	CI-2, WS-2	12
73rd Avenue/ Hegenberger	International to MacArthur	City	6	CI-2, CI-3	10
77th Avenue		Neighborhood	6		
79th Avenue		Neighborhood	6		
7th Street	880 to Oakland Middle Harbor	City	3	WS-2	6
7th Street	Wood St. to Brush St.	City	3	CI-2, CI-3	13

FIGURE 27 ON-STREET ROUTES (CONTINUED)

NAME	LOCATION	ROUTE TYPE	DISTRICT	POTENTIAL PROJECT COMPONENTS	CONTEXT
81st Avenue		Neighborhood	6,7		
82nd Avenue	MacArthur to International	District	6,7	CI-3	10
85th Avenue		Neighborhood	7		
88th Avenue		Neighborhood	7		
8th Street	Union St to Pine St	District	3	EXISTING PLAN: ACORN-PRESCOTT PLAN	9
92nd Avenue		Neighborhood	7		
98th Avenue	Golf Links Road to Airport Drive	City	7		
98th Avenue	MacArthur to San Leandro	City	7	EXISTING PLAN: AIRPORT CONNECTOR, CI-3	10
9th Avenue		Neighborhood	2		
Acalanes Drive		Neighborhood	7		
Adeline Street	Whole Street	District	1, 3	WS-1	15
Aileen St		District	3		
Alameda Avenue		Neighborhood	5		
Alcatraz Avenue		District	1	CI-3	11
Alida Street		Neighborhood	4		
Apgar Street		Neighborhood	1		
Ascot Drive		Neighborhood	4		
Athol Avenue		Neighborhood	3		
Avenal Avenue		Neighborhood	6		
Bancroft Avenue	Camden to 106th	City	6,7	CI-2, CI-3	10
Bancroft Avenue	International to Camden	City	5,6	CI-3	12
Bay Pl.		District	3		
Bellvue Avenue		Neighborhood	3		
Bergedo Drive		Neighborhood	7		
Birch Street		Neighborhood	6		
Boulevard Way		Neighborhood	2		
Brann Street		Neighborhood	6		
Breed Street		Neighborhood	7		
Broadway Avenue	College to MacArthur	City	1	CI-1, CI-3	12
Broadway Avenue	Highway 13 to College	City	1	CI-2, CI-3	11
Broadway Terr.	Broadway to Highway 13 (Lake Temescal)	District	1	WS-1	7
Brookdale Avenue		Neighborhood	4, 5, 6		
Brooklyn Avenue		Neighborhood	2		
Brown Avenue		Neighborhood	4		
Cairo Rd.		Neighborhood	7		
California Street		Neighborhood	4		
Camden Street		Neighborhood	6		
Campbell Street		Neighborhood	3		
Campus Drive		Neighborhood	6		
Canon Avenue		Neighborhood	4		
Carlson Street		Neighborhood	4		
Carmel Street		Neighborhood	4		
Carrington Street/ Galindo Street		Neighborhood	5		
Carson Street		Neighborhood	4, 6		
Castle Drive		Neighborhood	4		
Chabot Rd./ Roble Rd.		Neighborhood	1		
Chetwood Street		Neighborhood	2		
Claremont Avenue	Whole Street	District	1	CI-3	10
Clarewood Drive		Neighborhood	4		
Clay Street		Neighborhood	3		
Cleveland Street		Neighborhood	2		

Appendix A: On-Street Routes

FIGURE 27 ON-STREET ROUTES (CONTINUED)

NAME	LOCATION	ROUTE TYPE	DISTRICT	POTENTIAL PROJECT COMPONENTS	CONTEXT
Clifton Street		Neighborhood	1		
Colby St		Neighborhood	1		
College Avenue	Whole Street	District	1	CI-3, WS-3	12
Columbian Drive		Neighborhood	6		
Congress Avenue		Neighborhood	4		
Coolidge Avenue	MacArthur to Foothill	District	4,5	CI-3	10
Courtland Avenue/42nd Avenue	International to High	District	5	WS-1	9
D Street		Neighborhood	7		
Davidson Way		Neighborhood	2		
Doolittle Drive		District	7		
Dover Street		Neighborhood	1		
Downtown Streetscape and Transportation Master Plans			2,3	EXISTING PLAN: DOWNTOWN STREETSCAPE AND TRANSPORTATION MASTER PLANS	
Durant Street		District	7		
E 12th Street	19th Ave to 13th Ave	District	2		
E Street		Neighborhood	7		
E. 10th Street		Neighborhood	5		
E. 12th Street	1st Ave. to 13th Ave.	District	2	EXISTING PLAN: EASTLAKE COMMUNITY PLAN	10
E. 15th Street	1st Ave. to 14th Ave	District	2		
E. 16th Street		Neighborhood	5		
E. 18th Street		Neighborhood	5		
E. 19th St		Neighborhood	2,5		
E. 21st Street		Neighborhood	2,5		
E. 23rd Street		Neighborhood	5		
E. 24th Street		Neighborhood	2		
E. 27th Street		District	5		
E. 27th Street		Neighborhood	2		
E. 28th Street		Neighborhood	2		
E. 31st Street		Neighborhood	5		
E. 38th Street		Neighborhood	2		
E. 9th Street		Neighborhood	5		
E12st Street	1st-13th Ave., 19th Ave. to Fruitvale	District	2		
E18th Street	Park Blvd to Lakeshore	District	2,3	CI-2, CI-3	11
Echo Street		Neighborhood	1		
Edes Avenue	whole street	District	7		
Edgewater Drive	Hegenberger to Damon Slough	Neighborhood	7	T-1	7
Elysian Fields		Neighborhood	7		
Embarcadero East		District	2,5		
Embarcadero West		Neighborhood	2,3		
Empire Rd.		Neighborhood	7		
Estepa Drive		Neighborhood	7		
Euclid Avenue		Neighborhood	3		
Excelsior Avenue		Neighborhood	2,4		
Fallon Street		Neighborhood	2		
Ferro Street		Neighborhood	3		
Filbert Street		Neighborhood	3		
Fleming Avenue		Neighborhood	6		
Fontaine Street		Neighborhood	7		
Foothill Blvd.	14th Ave to MacArthur	City	2,4,5,6	WS-2	14
Foothill Blvd.	Lakeshore to 14th Ave	City	2,3		
Ford Street		Neighborhood	5		

FIGURE 27 ON-STREET ROUTES (CONTINUED)

NAME	LOCATION	ROUTE TYPE	DISTRICT	POTENTIAL PROJECT COMPONENTS	CONTEXT
Forest Avenue		Neighborhood	1		
Fruitvale Avenue	Foothill to Alameda	City	5	CI-2, CI-3	14
Fruitvale Avenue	Macarthur to Foothill	City	4,5	CI-2, CI-3	13
Genoa Street		Neighborhood	1		
Glen Park Rd.		Neighborhood	4		
Glenfield Avenue		Neighborhood	4		
Golf Links/ Grass Valley		District	7		
Grand Avenue	580 to Jean St.	City	2	CI-2, CI-3	13
Grand Avenue	580 to Mandela Parkway	City	3	EXISTING PLAN: GRAND AVE. IMPROVEMENTS	13
Greenly Drive		Neighborhood	6		
Grizzly Peak Blvd.		District	1		
Grosvenor Rd./ LaSalle Avenue		Neighborhood	2		
Hampel Street		Neighborhood	4		
Harbor Bay Pkwy.		District	7		
Harbord Drive		Neighborhood	4		
Harrison Street	Bayo Vista to Oakland Ave	District	1,3	CI-3	8
Hearst Avenue		Neighborhood	4		
Hegenberger Loop		Neighborhood	7		
High Street	MacArthur to San Leandro	District	4,5, 6	CI-2, CI-3	13
High Street	San Leandro to Alameda Ave	District	5,6	CI-3, WS-1	8
Hiller Rd.		Neighborhood	1		
International Blvd.	whole street	City	2,5,6,7	EXISTING PLAN: INTERNATIONAL BLVD. MAIN ST.; CI-2, CI-3	15
John Street		Neighborhood	1		
Jones Avenue		Neighborhood	7		
Kansas Street		Neighborhood	4		
Keller Avenue		District	6,7		
Kennedy Street		Neighborhood	5		
Kingsland Avenue		Neighborhood	6		
Knight Street		Neighborhood	7		
Krause		Neighborhood	6		
La Cresta Avenue		Neighborhood	4		
Lake Merritt Master Plan			2,3	EXISTING PLAN: LAKE MERRITT MASTER PLAN	
Lake Park Avenue	Grand Ave. to Lakeshore Ave.	District	2	EXISTING PLAN: SPLSH PAD STRTSCP. IMPRV. PLAN	11
Lakeshore Avenue/ Lakeside Drive		District	2,3		
Laurel Street		Neighborhood	4		
Lawlor Street		Neighborhood	7		
Lawton Avenue		Neighborhood	1		
Lemert Rd./ Tiffin Rd.		Neighborhood	4		
Liggett Estates Drive		Neighborhood	4		
Lincoln Avenue/ Joaquin Miller Rd.	Near Head Royce School	District	4	WS-1 (SPOT)	9
Linda Avenue		Neighborhood	1		
Longridge Rd.		Neighborhood	2		
MacArthur Blvd.	Coolidge Ave to 35th Ave	City	4	CI-3, WS-3	10
MacArthur Blvd.	Fruitvale to Park Ave	City	2,4	CI-3	12
MacArthur Blvd.	High St to 35th Ave (Laurel District)	City	4	EXISTING PLAN: LAUREL DISTRICT STREETSCAPE PLAN	12
MacArthur Blvd.	Lakeshore to Park Blvd	City	2	CI-3	9
MacArthur Blvd.	San Leandro Border to 73rd Ave	City	6,7	EXISTING PLAN: MACARTHUR REDEVELOP. PLAN	12
MacArthur Blvd.	San Pablo Ave. to Piedmont Ave.	City	1,3	CI-2, CI-3	11
MacArthur Blvd.	Seminary to 580	City	6	WS-2 (1-SIDED)	7
Maddux Drive		Neighborhood	7		
Madeline Street		Neighborhood	4		

Appendix A: On-Street Routes

FIGURE 27 ON-STREET ROUTES (CONTINUED)

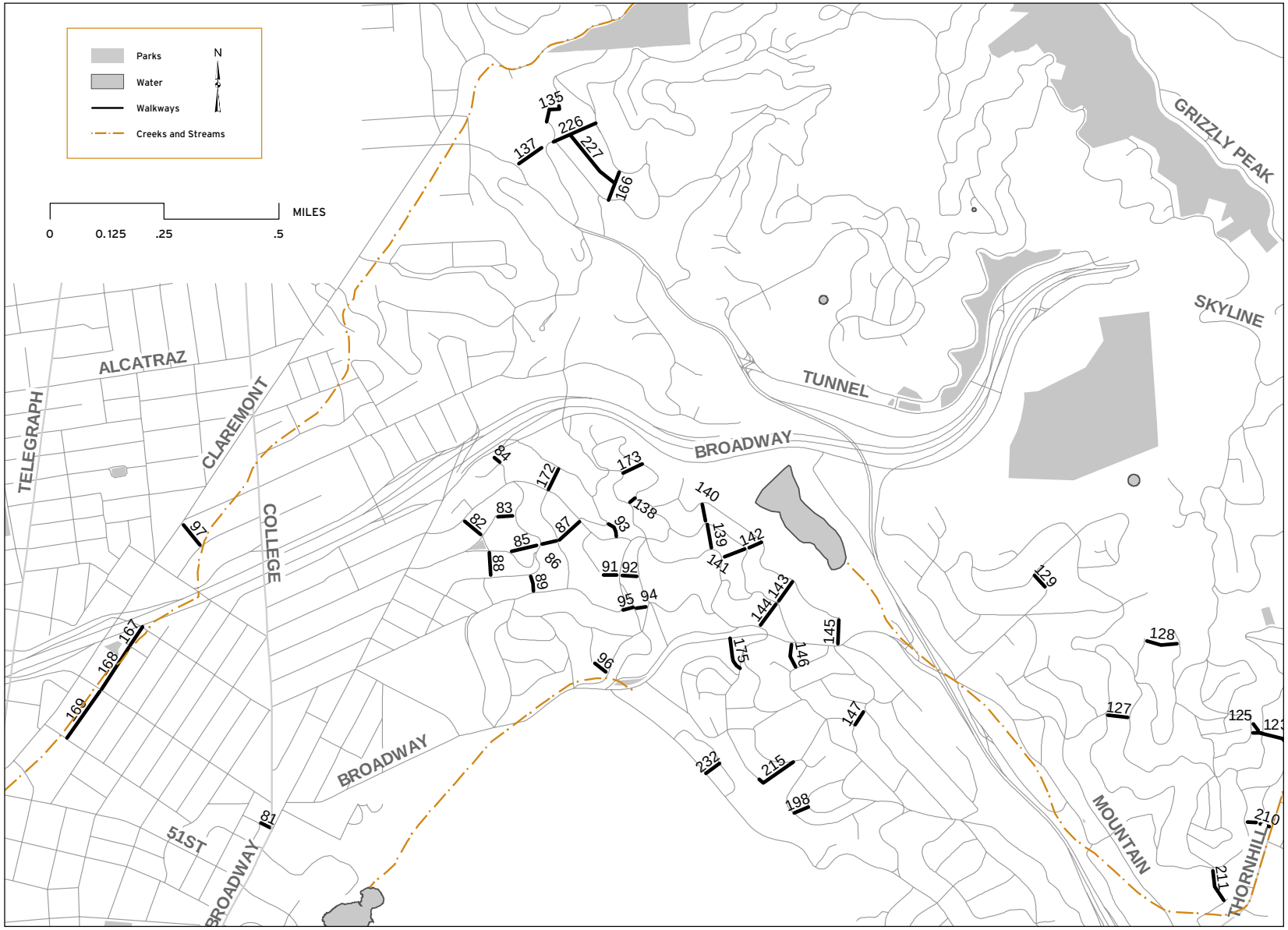
NAME	LOCATION	ROUTE TYPE	DISTRICT	POTENTIAL PROJECT COMPONENTS	CONTEXT
Malcom Avenue		Neighborhood	7		
Mandana Blvd.		Neighborhood	2		
Mandela Parkway	whole street	City	3	EXISTING PLAN: MANDELA PKWY	13
Maple Street		Neighborhood	4		
Maritime Street		District	3		
Market Street	6th St. to Alcatraz Ave.	City	1,3	WS-1	14
Middle Harbor Rd.		District	3		
MLK	47th St. to Downtown	City	1,3	WS-2	12
MLK	Alcatraz to 47th St.	City	1	CI-2, CI-3	9
Montana Street		Neighborhood	4		
Montecito Avenue/ Adams Street		Neighborhood	3		
Monteray Blvd.		Neighborhood	4		
Monticello Avenue		Neighborhood	4, 6		
Moraga Avenue	Piedmont Border to Mountain Blvd.	District	1,4	WS-1 (1-SIDED)	11
Mountain Blvd.	Whole Street	District	1,4,6,7	WS-1	10
Newton		Neighborhood	2		
Oakland Ave	Harrison to Bayo Visto	District	1,2,3	CI-3	10
Outlook Avenue		Neighborhood	6		
Park Blvd.	MacArthur to E 18th St.	City	2,3	CI-3	13
Park Blvd.	MacArthur to Highway 13	City	2, 4	CI-2, CI-3	13
Parker Avenue		Neighborhood	6		
Penniman Avenue		Neighborhood	4		
Peralta Street		District	3		11
Perkins Street		Neighborhood	3		
Picardy Drive		Neighborhood	6		
Piedmont Avenue	Whole Street	District	1,3	CI-3, WS-3	12
Plymouth Street/ Arthur Street		District	6, 7		
Redwood Rd.	Whole Street, Spot: Redwood @ Mountain	District	4,6	CI-3 (SPOT)	9
Richmond Blvd.		Neighborhood	1, 3		
Ritchie Street		Neighborhood	6		
Rudsdale Street		Neighborhood	7		
Salisbury Street		Neighborhood	5		
San Leandro	Fruitvale BART to Coliseum BART	City	5,6,7	T-1	12
San Pablo Avenue	Whole street	City	1, 3	EXISTING PLAN: SAN PABLO PLAN	13
Santa Clara Avenue	Grand Ave. to MacArthur Blvd.	District	2	CI-1, WS-1	11
School Street		District	4		
Seminary Avenue	San Leandro to Sunnymere	District	6	CI-3	12
Sequoyah Rd.		Neighborhood	7		
Shafter Avenue		Neighborhood	1		
Shattuck Avenue	Whole Street	District	1	CI-3, WS-3	12
Shepherd Canyon Rd.		Neighborhood	4		
Skyline Blvd.		District	4		
Snake Rd.		District	4		
Stanford Avenue	Whole Street, Spot: Stanford @ Powell	District	1	CI-2 (SPOT), CI-3 (SPOT) T-1	8
Steele Street		Neighborhood	4		
Sunnyhills Rd.		Neighborhood	2		
Sunnyside Street		District	7		
Suter Street		Neighborhood	4		
Telegraph Avenue	Whole Street	City	1,3	TELEGRAPH NORTHGATE PLAN; CI-2, CI-3, WS-3	13
The Uplands/ Alvarado Rd.		Neighborhood	1		
Thornhill Drive	Moraga to Alhambra	District	4	WS-1, T1	10

FIGURE 27 ON-STREET ROUTES (CONTINUED)

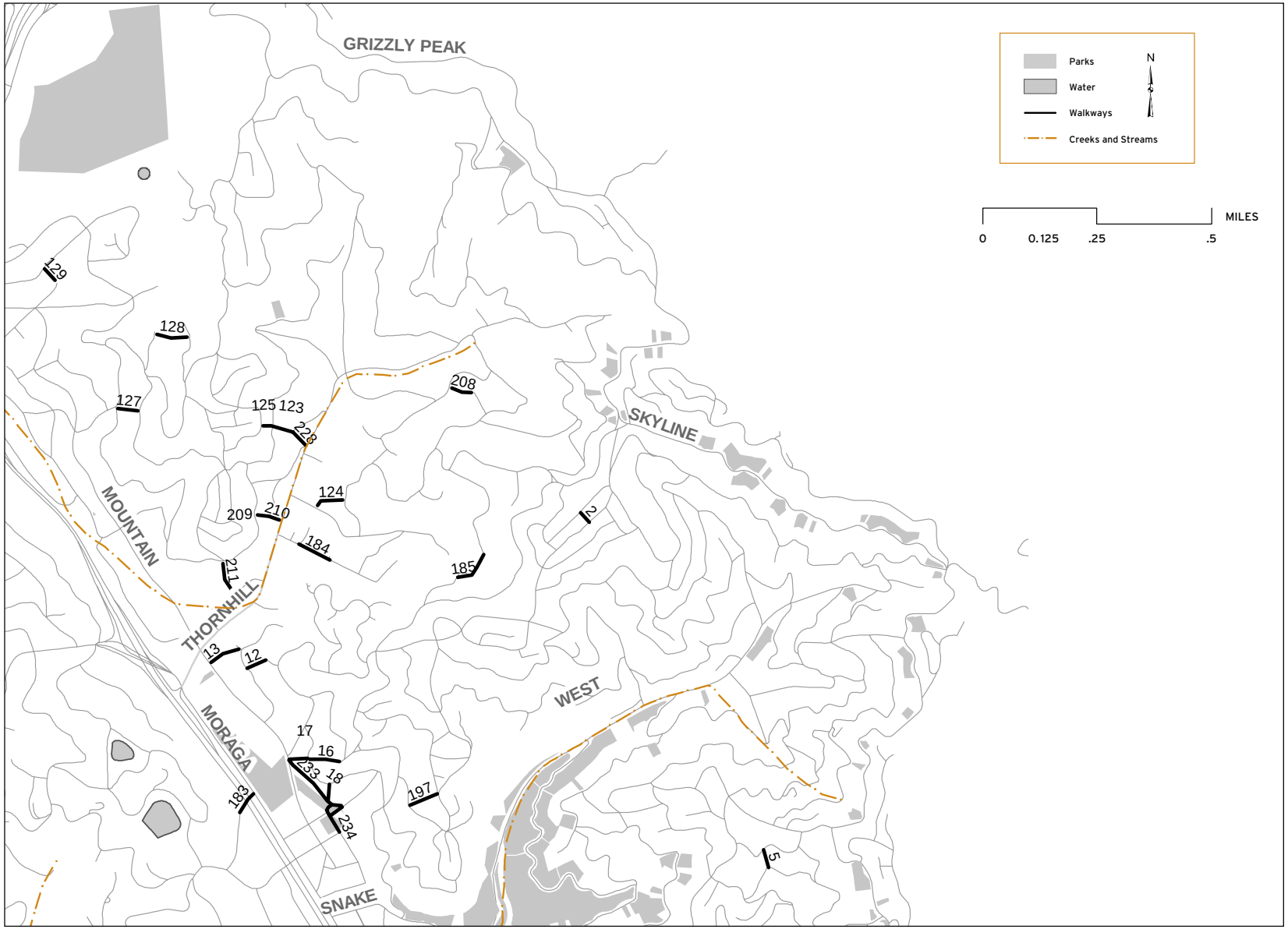
NAME	LOCATION	ROUTE TYPE	DISTRICT	POTENTIAL PROJECT COMPONENTS	CONTEXT
Tompkins Avenue		Neighborhood	4,6		
Topanga Drive		Neighborhood	7		
Trestle Glen		District	2		
Tunnel Rd.		District	1		
Union St		Neighborhood	3		
Van Dyke Avenue		Neighborhood	1		
Vicksburg Avenue		Neighborhood	4,6		
Webster Street		Neighborhood	2,3		
Wellington Street		Neighborhood	4		
West Street	MLK to 14th St.	District	1,3	WS-1, T-1	13
Wilshire Boulevard		Neighborhood	4		
Wood Street		Neighborhood	1,3		
Woodruff Avenue		Neighborhood	4		

Appendix B: Walkways

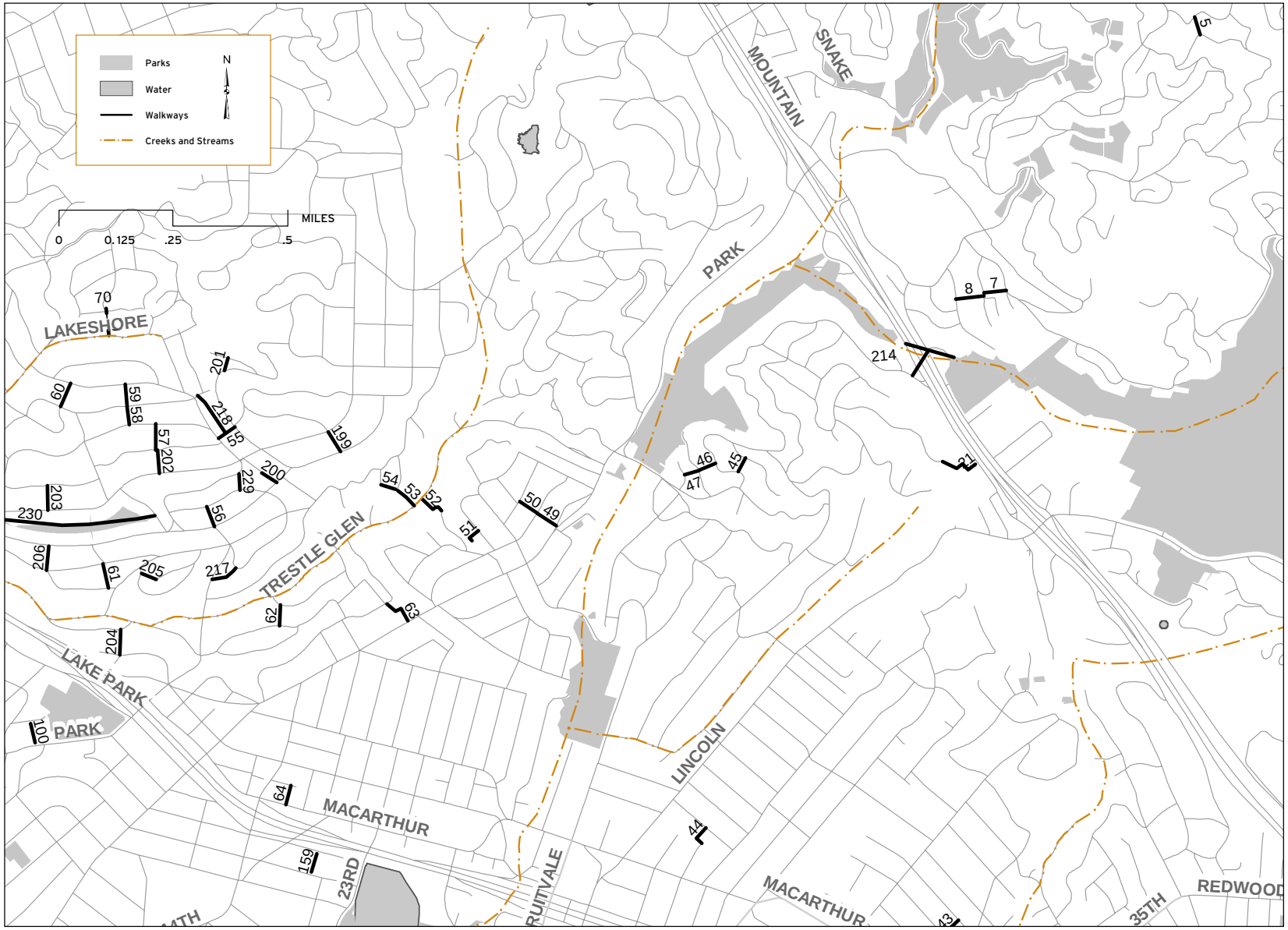
This appendix contains the Pedestrian Route Network Survey for walkways. Eight maps show walkway locations throughout the City and an accompanying table provides detailed survey information for each walkway.



MAP 12 WALKWAYS UPPER ROCKRIDGE

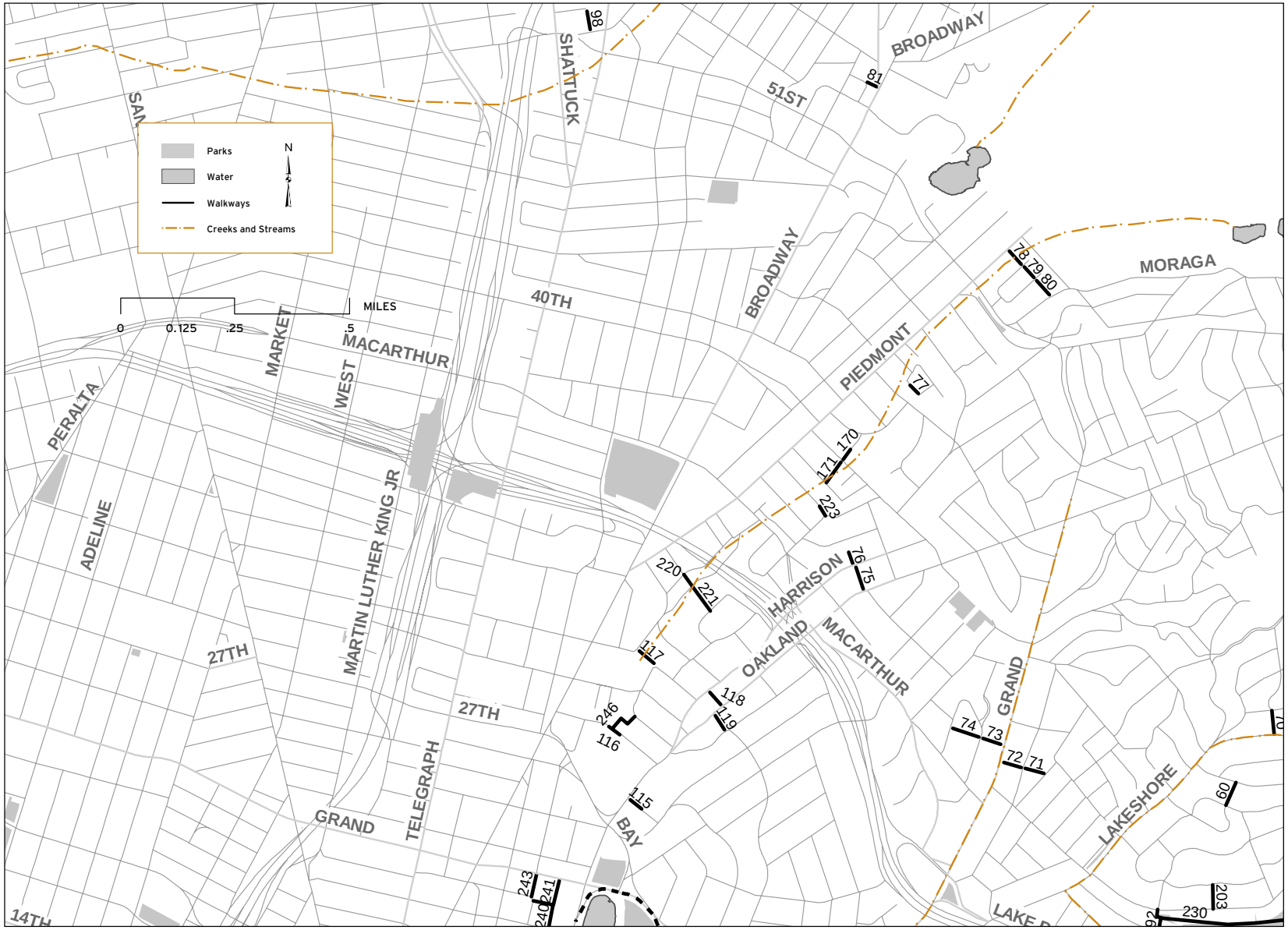


MAP 13 WALKWAYS MONTCLAIR

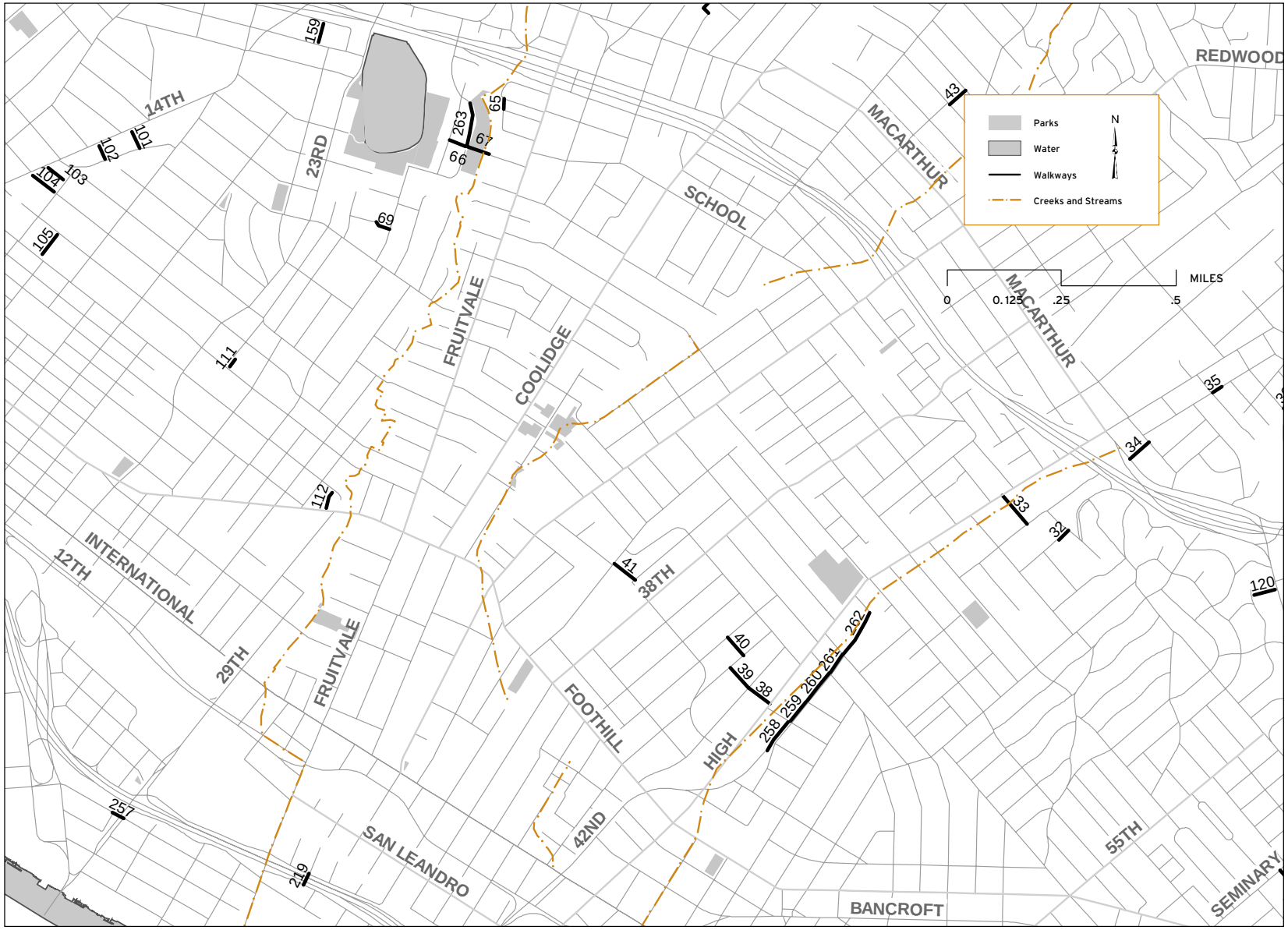


MAP 14 WALKWAYS TRESTLE GLEN AND OAKMORE

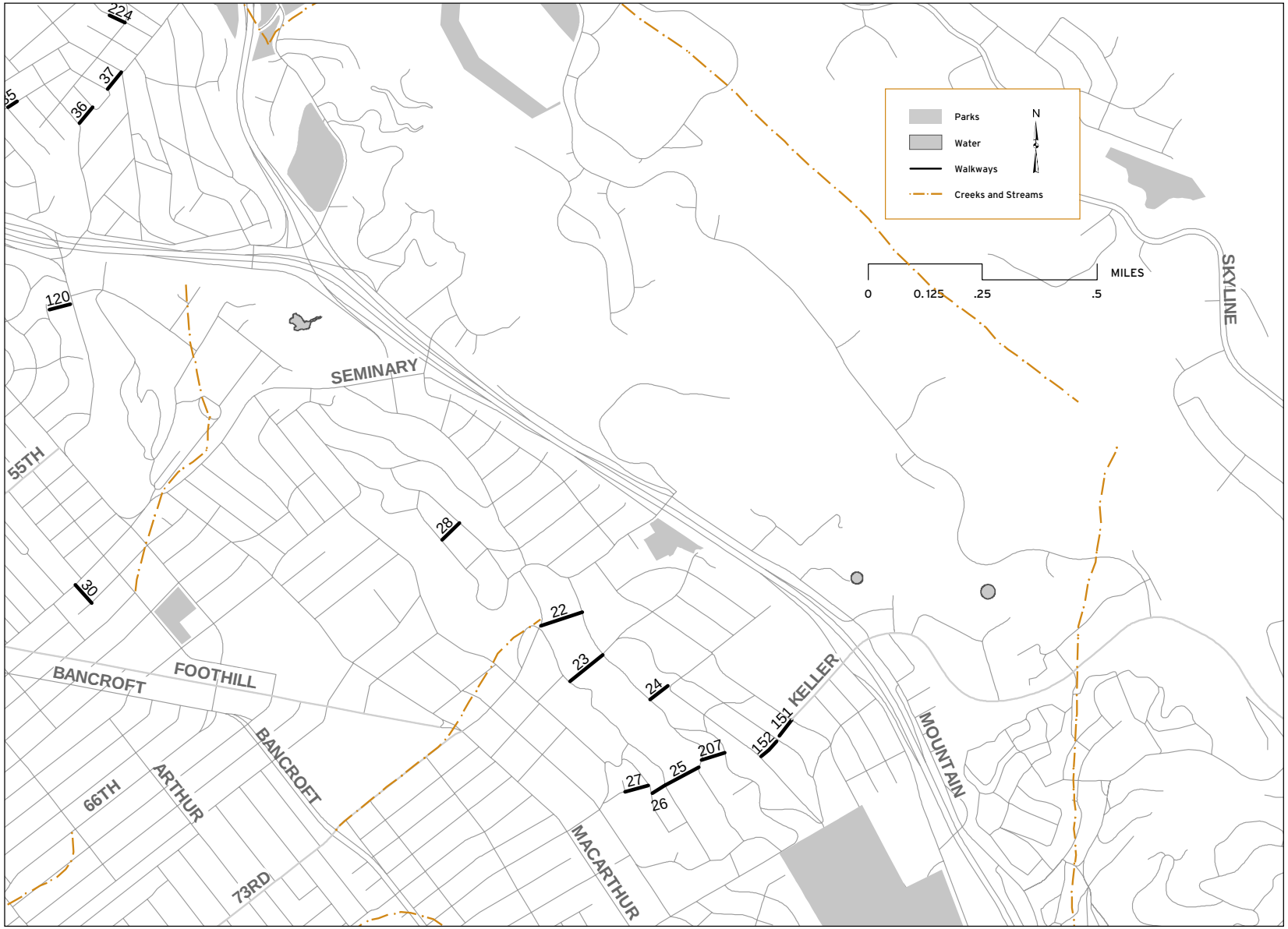
MAP 15 WALKWAYS LAKE MERRITT AND VICINITY



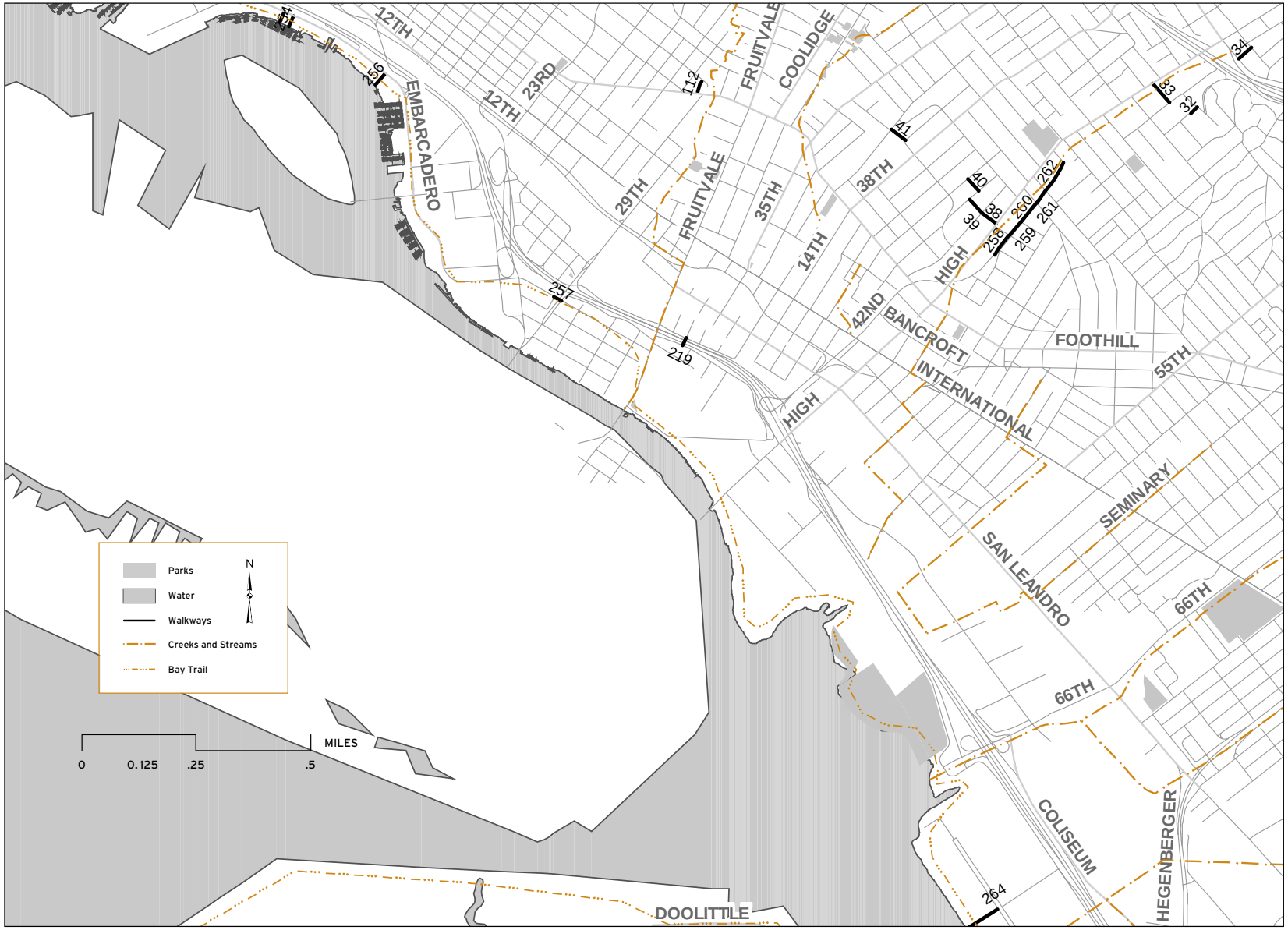
MAP 16 WALKWAYS GLEN ECHO CREEK AND GRAND LAKE



MAP 17 WALKWAYS FRUITVALE AND VICINITY



MAP 18 WALKWAYS EASTMONT AND VICINITY



MAP 19 WALKWAYS ALLENDALE AND FAIRFAX

Appendix B: Walkways

WALKWAY NUMBER	FROM	TO	WALKWAY NAME	LENGTH	WIDTH	PUBLIC/PRIVATE (B/P)	PASSABLE/IMPASSABLE (P/I)	STAIRS (Y/N/NUMBER)	HAND RAIL (Y/N)	MATERIALS (CONCRETE, ASPHALT, DIRT, WOOD, GRAVEL, BRICK, STONE)	NUMBER OF SIGNS	LIGHT (Y/N/NUMBER)	NUMBER OF RESIDENCES/BUILDINGS	NEAR SCHOOL (Y/N)	NEAR TRANSIT (Y/N)	SLOPE (NONE, MODERATE, STEEP)	PLANTS (LIGHT, MODERATE, HEAVY)	CONDITION (GOOD, OK, BAD)
2	6947 Colton	2 Lodge Ct.		110	5	B	P	0	N	A	0	0	2	N	Y	N	M	G
5	6259 Clive	2751 Darnby		200	3	B	P	11	N	CA	0	0	4	N	Y	M	L	OK
7	2700 Las Aromas	2701 Mountain Gate @ Castle		245	6	B	P	8	N	A	0	0	4	Y	N	S	L	OK
8	2646 Camino Lenada	2700 Las Aromas		320	6	B	P	16	Y	AS	0	0	4	Y	N	S	L	OK
12	15 Diaz Pl.	5680 Cabot		200	4	B	P	98	Y	C	0	0	4	Y	Y	M	L	G
13	1670 Mountain	5707 Cabot		250	4	B	P	180	Y	C	0	0	3	Y	Y	M	M	OK
16	1844 Magellan	Gaspar (dead end)		300	4	B	P	187	Y	C	0	0	4	Y	Y	S	L	G
17	5600 Colton	1833 Magellan		250	4	B	P	143	Y	C	0	0	4	Y	Y	S	L	G
18	1893 Magellan	Cortereal (dead end)		300	4	B	I	0	N	D	0	0	2	Y	Y	M	H	B
21	2220 Braemar	driveway of Beehive Center (2735 Monterey)		300	3	B	P	52	Y	DWC	0	0	3	N	Y	S	M	OK
22	3601 73rd	7209 Sunkist	Mayfield Path	400	10	B	P	13	Y	ADW	1	Y	6	Y	Y	S	M	B
23	7500 Hillmont	7501 Sunkist		400	10	B	P	0	N	D	0	0	4	Y	Y	S	M	OK
24	7695 Crest	7640 Sunkist		250	10	B	I	0	N	D	0	0	4	N	N	S	M	B
25	7864 Hillmont	7879 Michigan		300	8	B	I	0	N	D	0	0	4	N	N	M	H	B
26	7852 Outlook	7852 Hillmont	Cumberland Way	250	8	B	I	0	N	D	1	0	4	N	N	M	M	B
27	7835 Outlook	2920 Parker		400	5	B	I	0	N	D	0	0	4	N	Y	M	L	B
28	6624 Simson	6625 Mokelumne		300	10	B	I	0	N	DA	0	0	4	Y	Y	M	M	B
30	2848 Seminary	2851 60th		225	6	B	P	0	N	C	1	0	4	Y	Y	N	L	G
32	3226 Herriott	4511 Camden		150	4	B	P	0	N	A	0	0	3	N	N	S	L	OK
33	3151 Courtland	3150 High St.		350	6	P	I	0	N	D	0	Y	20	N	Y	N	L	B
34	4415 Masterson	4412 MacArthur	Madrone Path	200	5	B	P	0	N	C	2	0	4	N	Y	N	L	G
35	4400 Pampas	3811 Madrone		100	5	B	P	11	N	C	0	0	3	N	N	M	L	G
36	4500 Steele	4451 Worden		175	5	B	P	0	N	C	0	0	4	Y	N	M	L	G
37	4445 Tompkins	4456 Hyacinth		175	5	B	P	0	N	C	0	0	4	Y	Y	N	M	G
38	2198 42nd	2185 High	San Carlos Walk	250	5	B	P	8	Y	C	2	0	4	Y	Y	M	M	OK
39	2190 41st	2195 42nd		250	5	B	P	26	Y	C	0	0	5	Y	Y	N	M	OK
40	2215 41st	2201 Rosedale		200	5	B	P	0	N	C	0	0	4	Y	N	M	M	G
41	2102 Harrington	2141 Ransom	Carrington Way	250	5	B	P	73	Y	C	2	Y	5	Y	Y	S	M	B
43	3136 Madeline	3111 California		250	6	B	P	0	N	C	0	0	4	N	N	M	M	G
44	3579 Wilson	2511 Damuth		200	5	B	P	7	N	AC	0	0	4	N	Y	N	M	OK
45	1921 Oakview	1745 Leimert		200	5	B	P	93	N	AW	0	0	4	N	Y	S	L	B
46	1774 Leimert	4350 Bridgeview	Bridgeview Path	250	5	B	P	87	N	C	0	0	4	N	Y	S	M	OK
47	4326 Arden Pl.	4341 Bridgeview	Bridgeview Path	200	5	B	P	36	Y	C	1	0	4	N	Y	S	L	G
49	4645 Park Blvd.	4658 Edgewood Ave.	Elsinore Walk	175	4.5	B	P	0	N	C	2	0	4	N	Y	N	L	G
50	4630 San Sebastian	4639 Edgewood Ave.		200	4.5	B	P	12	Y	C	0	0	4	N	N	M	L	G
51	1075 Glendora	dead end walkway	Glendora Path	325	4	B	P	3	N	C	1	0	10	N	N	M	M	G
52	1601 Trestle Glen	1000 Elbert		400	3	B	P	42	Y	C	0	1	3	N	N	M	M	OK
53	1586 Trestle Glen	4 Bowles		250	4	B	P	97	N	CAW	0	0	4	N	N	S	H	B
54	5 Bowles	2 Van Sicklen Pl.		150	4	B	P	31	N	AW	0	0	4	N	N	S	H	B
55	920 Carlston	839 Portal		250	2.5	B	P	0	N	CA	0	1	4	N	N	M	H	OK
56	1000 Longridge	853 Paramount		200	5	B	P	10	N	C	0	0	4	Y	Y	M	M	G
57	805 Calmar	800 Santa Ray		300	5.5	B	P	141	N	C	0	0	4	N	N	S	M	G
58	4117 Balfour	786 Calmar		250	6	B	P	63	N	C	0	0	4	N	N	S	H	B
59	4117 Balfour	713 Wala Vista		250	6	B	P	104	N	C	0	0	4	N	N	S	H	G

WALKWAY NUMBER	FROM	TO	WALKWAY NAME	LENGTH	WIDTH	PUBLIC/PRIVATE (B/P)	PASSABLE/IMPASSABLE (P/I)	STAIRS (Y/N/NUMBER)	HAND RAIL (Y/N)	MATERIALS (CONCRETE, ASPHALT, DIRT, WOOD, GRAVEL, BRICK, STONE)	NUMBER OF SIGNS	LIGHT (Y/N/NUMBER)	NUMBER OF RESIDENCES/BUILDINGS	NEAR SCHOOL (Y/N)	NEAR TRANSIT (Y/N)	SLOPE (NONE, MODERATE, STEEP)	PLANTS (LIGHT, MODERATE, HEAVY)	CONDITION (GOOD, OK, BAD)
60	3879 Balfour	647 Wala Vista		250	6	B	P	75	N	C	0	2	4	N	Y	M	M	G
61	500 Rosemount	872 Northvale		300	5	B	P	22	N	C	0	0	4	Y	N	M	M	G
62	1329 Barrows	1332 Holman		300	5	B	P	78	Y	CWA	0	0	4	N	Y	S	H	G
63	4168 Greenwood	4187 Park Blvd		500	5	B	P	83	Y	C	0	4	30	N	Y	M	L	G
64	1443 E 36th	1442 MacArthur		200	5	B	P	16	Y	CA	0	1	5	Y	Y	M	M	G
65	2441 Castello	2543 Pleasant		100	5	B	P	0	N	C	0	0	2	N	Y	N	H	G
66	3020 Sheffield	3021 McKillop		150	3	B	P	0	N	AD	0	0	3	Y	N	M	H	B
67	2600 School	2906 McKillop		500	5	B	P	0	Y	A	0	0	3	Y	Y	S	M	OK
69	2745 25th	2397 Grande Vista Pl.		150	5	B	P	15	Y	C	0	0	8	Y	N	M	M	G
70	4079 Lakeshore	1052 Annerley Rd.	Portsmouth Walk	200	5	B	P	8	N	C	2	0	5	N	Y	M	M	G
71	853 Walker	847 Vermont	Davidson Way	250	8	B	P	146	N	C	1	Y	20	N	Y	M	M	OK
72	853 Walker	3560 Grand	Davidson Way	200	7	B	P	60	Y	C	1	Y	4	N	Y	M	L	G
73	564 Valle Vista	3629 Grand	Bonham Way	250	5	B	P	Y	N	C	1	0	6	Y	Y	M	M	G
74	538 Mira Vista	564 Valle Vista	Bonham Way	400	5	B	P	20	N	C	1	0	6	Y	Y	M	M	G
75	3800 Harrison	601 Oakland		300	5	B	P	9	Y	C	1	0	50	N	N	N	M	G
76	602 El Dorado	Harrison St.	Oscar's Alley	250	5	B	P	0	N	C	1	0	75	N	N	M	M	G
77	4200 Entrada	4215 Glen		130	5	B	P	0	N	C	0	0	3	N	N	N	L	OK
78	4507 Pleasant Valley	4466 Piedmont		230	8	B	P	13	Y	CW	0	0	0	N	Y	M	L	OK
79	4486 Pleasant Valley	4507 Pleasant Valley		185	8	B	P	0	N	C	0	0	0	N	Y	N	L	OK
80	4463 Moraga	4486 Pleasant Valley Ct. S.		230	8	B	P	17	Y	C	0	0	1	N	N	N	L	OK
81	Broadway at College	318 Hemphill		100	10	B	P	0	N	C	0	Y	1	Y	Y	N	M	G
82	6098 Rockridge Blvd.	N. 6001 Ocean View	Ridgeview Path	250	6	B	P	47	Y	C	1	0	0	N	N	M	M	OK
83	6041 Margarido	6135 Rockridge Blvd. N.		170	6	B	P	72	N	C	0	0	4	N	N	M	M	OK
84	6132 Margarido	Freeway @ Broadway		150	6	B	P	111	Y	C	0	0	0	Y	Y	N	M	OK
85	6128 Rockridge Blvd S.	5972 Margarido	Prospect Steps	350	6	B	P	47	N	C	2	0	4	N	N	M	M	OK
86	5972 Margarido	5975 Manchester	Prospect Steps	165	6	B	P	76	N	C	2	0	4	N	Y	M	M	OK
87	6141 Ocean View	6000 Manchester	West Lane	320	8	B	P	31	Y	C	2	0	2	N	Y	S	L	OK
88	5361 Margarido	6101 Rockridge Blvd. S.		270	5	B	P	56	N	C	0	0	4	N	Y	M	M	OK
89	5000 Acacia	5918 Margarido	Quail Lane	200	6	B	P	42	Y	C	1	0	4	N	Y	M	H	G
91	101 Alpine Terrace	6247 Acacia	Locarno Path	160	10	B	P	62	N	C	2	0	0	N	N	M	M	OK
92	6247 Acacia	245 Cross Rd.	Locarno Path	220	8	B	P	88	N	C	1	0	4	N	N	M	M	OK
93	6188 Oceanview	6394 Brookside	Brookside Lane	180	6	B	P	63	Y	C	2	0	3	Y	N	M	M	G
94	200 Cross	6196 Mathieu	Verona Path	150	6	B	P	52	Y	C	1	0	0	N	N	M	M	G
95	6196 Mathieu	6190 Acacia	Verona Path	115	6	B	P	21	Y	C	2	0	3	N	Y	M	M	G
96	5850 Romany	59 Yorkshire Dr.	Andeer Path	210	5	B	P	43	Y	CA	2	Y	2	N	Y	M	M	G
97	5766 Claremont	5651 Oak Grove	Pedestrian Way	300	7	B	P	0	N	C	2	Y	4	N	Y	N	M	G
98	516 52nd St.	517 53rd St.		200	6	B	P	0	N	C	0	1	5	N	Y	N	L	G
100	3101 Park Blvd	33 Home Place		200	10	B	I	Y	Y	CA	0	0	17	Y	Y	M	M	G
101	2622 14th Ave	2573 Wallace	E. 26th St. Way	150	6	B	P	61	Y	C	2	0	8	N	Y	M	M	G
102	2505 Wallace	2510 14th Ave.	E. 25th St. Way	150	6	B	P	5	N	C	2	0	10	N	Y	M	L	G
103	2315 17th Ave	2342 14th Ave	Comstock Way	200	6	B	P	52	Y	C	2	1	6	N	Y	M	M	OK
104	2300 14th Ave.	2301 17th Ave.		250	6	B	P	90	Y	C	0	1	10	N	Y	S	L	G
105	1747 22nd Ave	1740 21st Ave		200	6	B	P	0	N	DA	0	Y	4	Y	Y	M	H	B
111	2350 E. 22nd	2216 Inyo		100	6	B	P	Y	N	C	0	0	3	Y	Y	M	M	OK

Appendix B: Walkways

WALKWAY NUMBER	FROM	TO	WALKWAY NAME	LENGTH	WIDTH	PUBLIC/PRIVATE (B/P)	PASSABLE/IMPASSABLE (P/I)	STAIRS (Y/N/NUMBER)	HAND RAIL (Y/N)	MATERIALS (CONCRETE, ASPHALT, DIRT, WOOD, GRAVEL, BRICK, STONE)	NUMBER OF SIGNS	LIGHT (Y/N/NUMBER)	NUMBER OF RESIDENCES/BUILDINGS	NEAR SCHOOL (Y/N)	NEAR TRANSIT (Y/N)	SLOPE (NONE, MODERATE, STEEP)	PLANTS (LIGHT, MODERATE, HEAVY)	CONDITION (GOOD, OK, BAD)
112	2777 21st	2784 Foothill		175	6	B	P	0	N	C	0	Y	5	Y	Y	N	L	OK
114	627 Beacon St.	569 Merritt Ave.		150	8	B	P	Y	Y	C	0	0	13	N	N	S	M	G
115	Harrison	171 Vernon Terrace		250	5	B	P	56	Y	C	0	2	4	Y	Y	S	M	G
116	128 Hamilton	251 28th St.		250	4	B	P	86	Y	C	0	Y	100+	N	Y	S	L	G
117	261, 269 Fairmont Ter.	3000 Richmond Ave.		250	5	B	P	76	Y	C	0	4	50	N	Y	M	M	OK
118	309 Oakland Ave	3020 Harrison	Frisbie Way	175	5	B	P	14	Y	C	1	2	4	N	Y	M	L	G
119	243 Orange	264 Oakland Ave.	Perkins Way	150	10	B	P	17	Y	C	1	2	4	N	Y	N	M	G
120	14 Wyman	MacArthur at Richards Rd.		300	10	B	I	9	N	WD	0	0	3	Y	Y	S	H	B
123	5500 Doncaster	6086 Valley View	Merriewood Stairs	250	5	B	P	168	Y	WG	0	0	3	N	Y	S	L	G
124	drvy of 1716 Gouldin	6067 Aspinwall		300	4	B	P	0	N	D	0	0	3	Y	Y	M	M	B
125	6086 Valley View	5921 Merriewood	Merriewood Stairs	150	5	B	P	122	Y	W	0	1	4	N	Y	M	N	G
127	7007 Broadway Ter.	151 Taurus		200	3	B	I	35	Y	DW	0	0	4	N	Y	M	M	B
128	Virgo (dead end)	Taurus (dead end)		500	2	?	I	0	N	D	0	0	2	N	N	M	M	B
129	6150 Pinewood	6106 Fairlane Dr.		150	4	B	P	62	Y	C	0	0	2	N	N	M	L	G
135	1 Evergreen Ln	50 Alvarado Pl	Evergreen Path	400	5	B	P	128	Y	CA	2	0	3	N	N	S	L	G
137	73 Alvarado	Claremont Hotel parking lot		250	6	B	P	45	N	CAS	0	0	1	N	Y	S	M	OK
138	5859 Buena Vista	5501 Golden Gate	Gondo Path	75	5	B	P	31	Y	C	1	0	2	Y	N	S	L	G
139	6000 Buena Vista	5232 Golden Gate	Chaumont Path	275	6	B	P	48	N	C	2	0	4	N	Y	M	M	OK
140	5991 Contra Costa	6000 Buena Vista	Chaumont Path	220	6	B	P	76	N	C	2	0	4	N	Y	M	M	OK
141	5176 Golden Gate	6105 Buena Vista	Belalp Path	250	6	B	P	58	Y	C	2	0	2	N	Y	M	H	OK
142	6105 Buena Vista	6100 Contra Costa	Belalp Path	160	6	B	P	71	Y	C	2	0	4	N	Y	M	M	OK
143	6190 Buena Vista	6192 Contra Costa	Arbon Path	250	6	B	P	111	Y	C	2	0	2	N	Y	M	M	OK
144	6190 Buena Vista	6190 Broadway Terrace	Arbon Path	290	6	B	P	67	Y	C	2	0	4	N	Y	M	M	OK
145	6370 Broadway Ter.	6353 Contra Costa	Erba Path	295	5	B	P	80	Y	C	2	0	0	Y	Y	M	L	G
146	6261 Broadway Ter.	155 Florence	Ratondo Path	250	6	B	I	0	N	DC	1	0	4	Y	Y	S	M	B
147	5891 Morpeth	4905 Proctor		175	5	B	P	83	N	C	0	0	3	N	N	M	M	G
151	7873 Greenly	7886 Sterling		250	10	B	I	0	N	D	0	0	4	Y	Y	S	M	B
152	7887 Sterling	7920 Crest		300	10	B	I	0	N	D	0	0	4	Y	Y	S	M	B
153	8901 Seneca	8900 Burr		375	5	B	I	90	Y	CAWD	0	0	4	Y	Y	S	H	B
154	8500 Thermal	8522 MacArthur		450	6	B	P	164	Y	C	0	2	8	Y	Y	S	L	OK
155	3239 Blandon	9110 Fontaine		160	5	B	P	0	N	C	0	0	4	Y	Y	N	M	G
159	Palmer Ave (dead end)	1647 E 33rd St		50	5	B	P	17	N	C	0	Y	6	N	Y	M	L	G
163	Frank Ogawa Plaza	Broadway	Kahn Alley	175	35	B	P	0	N	C	0	Y	0	N	Y	N	L	G
166	169 Alvarado	277 Alvarado	Willow Walk	300	5	B	P	77	Y	CSA	2	0	4	N	N	S	L	OK
167	Hudson St at freeway	482 Hardy St		150	6	B	P	0	N	A	0	0	1	N	Y	N	M	G
168	485 Hardy St.	482 Clifton St.		600	6	B	P	0	N	AC	0	0	25	N	Y	N	M	G
169	485 Clifton St	Cavour St at Redondo		400	6	B	P	0	N	A	0	0	10	N	N	N	M	OK
170	2020 Panama Ct.	109 Monte Vista		150	6	B	P	0	N	C	0	0	4	N	Y	M	M	G
171	109 Monte Vista	72 Montel		270	4	B	P	0	Y	A	0	0	2	N	Y	M	M	OK
172	6142 Ocean View	6245 Brookside Ave	Claremont Path	250	6	B	P	65	Y	C	2	0	4	Y	Y	M	M	G
173	5600 Golden Gate Av.	5747 Buena Vista Rd.	Arollo Path	140	6	B	P	64	Y	C	2	0	4	Y	Y	S	L	G
175	200' Broadway Ter.	50 Mandalay		200	2	B	I	0	N	D	0	0	1	Y	Y	S	M	B
183	6025 Bruns	Montclair Park	Bruns Overcrossing	300	6	B	P	65	Y	C	0	5	1	Y	Y	M	L	G
184	Alhambra Ln at Thornhill Elementary	1715 Alhambra Ln		250	3	B	I	0	N	D	0	0	3	Y	Y	S	H	B

WALKWAY NUMBER	FROM	TO	WALKWAY NAME	LENGTH	WIDTH	PUBLIC/PRIVATE (B/P)	PASSABLE/IMPASSABLE (P/I)	STAIRS (Y/N/NUMBER)	HAND RAIL (Y/N)	MATERIALS (CONCRETE, ASPHALT, DIRT, WOOD, GRAVEL, BRICK, STONE)	NUMBER OF SIGNS	LIGHT (Y/N/NUMBER)	NUMBER OF RESIDENCES/BUILDINGS	NEAR SCHOOL (Y/N)	NEAR TRANSIT (Y/N)	SLOPE (NONE, MODERATE, STEEP)	PLANTS (LIGHT, MODERATE, HEAVY)	CONDITION (GOOD, OK, BAD)
185	Armour Dr (N)	S) Armour Dr.		300	3	B	I	0	N	D	0	0	1	Y	Y	S	H	B
192	Calmar at Mandana	704 Longridge		250	5	B	P	96	N	AC	0	0	4	N	Y	M	M	OK
197	5945 Zinn	Drake/Asilomar		200	3	B	I	33	N	DW	0	0	4	N	Y	M	M	B
198	4900 Harbord	72 Sonia		200	3	B	P	18	N	CDB	0	0	4	Y	N	M	M	OK
199	1096 Clarendon	1099 Mandana		200	5	B	P	7	Y	C	0	0	4	Y	Y	M	M	OK
200	1116 Longridge	32 Mandana Circle		250	5	B	P	41	N	C	0	0	4	Y	Y	M	M	OK
201	903 Wawona	939 Portal		150	5	B	P	77	Y	C	0	0	3	N	N	M	M	G
202	801 Santa Ray	800 Mandana		200	5	B	P	6	N	C	0	0	4	N	Y	M	M	OK
203	700 Mandana	689 Santa Ray		200	5	B	P	16	N	AWD	0	0	4	N	Y	M	M	OK
204	1085 Brookwood	850 Alma		250	5	B	P	148	Y	AW	0	0	4	N	Y	S	L	OK
205	906 Hillcroft	924 Larkspur Rd		175	5	B	P	58	N	CWA	0	0	4	N	N	S	M	OK
206	796 Rosemount	801 Longridge		200	6	B	P	27	N	C	0	0	4	N	Y	M	M	OK
207	7867 Sunkist	7872 Michigan		300	6	B	I	Y	Y	DW	0	0	4	N	N	M	M	B
208	1837 Indian	25 Overlake Ct.		250	4	B	P	107	N	AW	0	1	5	Y	Y	M	N	OK
209	5607 Merriewood	5901 Marden Ln		100	4	B	P	110	Y	WA	0	1	4	Y	Y	M	N	G
210	5901 Marden Ln	5925 Thornhill		100	4	B	P	72	Y	WA	0	0	4	Y	Y	M	N	OK
211	Florence & Merriewood	5733 Grisborne Ave.		175	3	B	I	0	N	D	0	0	5	Y	Y	M	M	B
214	Leimert @ Monterey	Joaquin Miller Ct. 6 @ Mountain	Dimond Canyon Trail	170	8	B	P	0	N	C	2	0	0	N	Y	N	L	G
215	Morpeth & Harbor	30 Mandalay (backside of St. Theresa Church)		250	10	B	P	0	N	A	0	0	8	Y	Y	M	L	G
216	10th & Alice	11th and Alice		200	6	B	P	0	N	A	0	0	0	Y	Y	N	L	OK
217	1011 Hubert	982 Grosvenor		200	4	B	P	9	N	A	0	0	6	N	N	M	M	G
218	849 Walavista	walkway 55		800	5	B	P	0	N	CAD	0	Y	20	N	N	N	M	OK
219	3331 E 8th St	E. 9th St. & 34th Ave.		100	5	B	P	0	N	C	0	0	0	Y	Y	N	L	B
220	Croxton & Richmond	3084 Richmond		100	6	B	P	Y	Y	C	0	0	20	N	N	M	L	OK
221	3084 Richmond	3287 Kempton		250	6	B	P	159	Y	C	0	Y	20	N	N	M	M	OK
222	1733 Broadway	1720 Telegraph		125	10	B	P	0	N	C	0	Y	0	N	Y	N	L	G
223	78 Rio Vista	645 Fairmount		175	2x5'	B	P	Y	Y	C	0	0	7	N	N	S	M	OK
224	4305 Harbor View	4069 Huntington		175	5	B	P	0	N	D	0	0	4	N	N	M	L	G
225	1568 Madison	1547 Lakeside		300	4	P	P	0	N	C	0	6	80	N	Y	M	L	G
226	81 Alvarado	681 Alvarado	Eucalyptus Path	400	5	B	P	139	Y	CA	2	3	10	N	N	S	M	G
227	mid. of Euc. Path	middle of Willow Walk	Sunset Trail	900	4	B	P	0	N	A	1	0	20	N	N	N	L	OK
228	6101 Thornhill	5500 Doncaster	Merriewood Stairs	200	5	B	P	98	Y	WG	0	0	3	N	Y	S	L	G
229	780 Carlston	910 Paramount		200	5	B	I	101	N	C	0	0	3	Y	Y	S	H	OK
230	walkway 192	619 Paloma		1700	10	B	P	0	N	D	0	0	30	N	N	N	L	G
231	717 Longridge	707 Rosemount		50	5	B	P	7	N	CG	0	0	1	N	Y	M	M	G
232	1 Clarewood Mall	7 Clarewood Mall	Clarewood Mall	150	5	V	P	2	N	C	3	3	8	N	N	N	M	G
233	1900 Mountain	Cortereal (dead end)		300	6	B	P	15	Y	CDA	0	0	1	Y	Y	M	L	G
234	LaSalle (dead end)	Medau (dead end)		150	4	B	P	0	N	C	0	0	1	N	Y	N	L	G
235	Cortereal (dead end)	walkway 234		100	3	B	P	0	N	C	0	0	1	N	Y	N	L	G
236	Swan's Market	Swan's Market		200	10	V	P	0	N	C	0	Y	25	N	Y	N	L	G
237	Clay St.	Jefferson St.		250	20	V	P	8	Y	SB	0	Y	1	N	Y	N	L	G
238	Jefferson St.	MLK Jr Way		250	25	B	P	0	N	C	0	Y	1	N	Y	N	L	G
239	Castro St.	13th at Preservation Park Way		50	5	V	P	0	N	C	0	0	3	N	Y	N	L	G
240	21st St	walkway 241		200	30	V	P	8	Y	SB	0	0	1	N	Y	M	L	G

Appendix B: Walkways

WALKWAY NUMBER	FROM	TO	WALKWAY NAME	LENGTH	WIDTH	PUBLIC/PRIVATE (B/P)	PASSABLE/IMPASSABLE (P/I)	STAIRS (Y/N/NUMBER)	HAND RAIL (Y/N)	MATERIALS (CONCRETE, ASPHALT, DIRT, WOOD, GRAVEL, BRICK, STONE)	NUMBER OF SIGNS	LIGHT (Y/N/NUMBER)	NUMBER OF RESIDENCES/BUILDINGS	NEAR SCHOOL (Y/N)	NEAR TRANSIT (Y/N)	SLOPE (NONE, MODERATE, STEEP)	PLANTS (LIGHT, MODERATE, HEAVY)	CONDITION (GOOD, OK, BAD)
241	walkway 240	Grand Ave		150	15	V	P	12	Y	C	0	0	1	N	Y	M	L	G
242	walkway 240	Kaiser Plaza		150	15	V	P	0	N	C	0	0	2	N	Y	N	L	G
243	Grand at Valdez	21st at Kaiser Plaza		150	15	V	P	0	N	C	0	Y	2	N	Y	N	L	G
244	Lakeshore Ave	Merritt Ave at Cleveland St	Cleveland Cascade	250	8	B	P	135	Y	C	1	0	40	N	Y	S	M	G
245	Clay St	Jeferson St		250	25	V	P	0	N	C	0	Y	1	N	Y	N	L	G
246	walkway 116	111 Fairmount (into church parking lot)		150	5	B	P	43	Y	CW	0	0	100+	N	Y	M	L	G
247	Oak St	Madison St		250	10	V	P	0	N	C	0	Y	1	N	Y	N	L	G
248	Madison St	Jackson St		250	10	V	P	0	N	C	0	Y	1	N	Y	N	L	G
249	Jackson St	Alice St		250	10	V	P	0	N	C	0	Y	2	N	Y	N	L	G
250	Alice St	Harrison St		250	10	V	P	0	N	C	0	Y	0	N	Y	N	L	G
251	Harrison St	Webster St		250	6	V	P	0	N	C	0	Y	3	N	Y	N	L	G
252	Alice at 2nd St	Amtrak Station		200	60	V	P	0	N	B	0	Y	1	N	Y	N	L	G
253	Alice at Embarc. W	Amtrak Station		150	10	V	P	120	Y	C	0	Y	100+	N	Y	N	L	G
254	1103 Embarcadero E	Bay Trail		150	10	B	P	0	N	C	1	Y	2	N	N	N	L	G
255	1103 Embarcadero E	Bay Trail		150	10	V	P	0	N	C	1	Y	1	N	N	N	L	G
256	1755 Embarcadero E	Bay Trail		150	10	B	P	0	N	C	1	2	2	N	N	N	L	G
257	E 7th at 29th Ave	E 7th at 29th Ave		100	6	B	P	0	N	C	4	0	0	N	N	N	L	OK
258	Courtland at Thompson	Courtland at San Carlos		250	10	B	P	0	N	G	0	0	20	Y	Y	N	L	G
259	Courtland/San Carlos	Courtland at Tyrell		250	6	B	P	0	N	G	0	0	20	Y	Y	M	L	G
260	Courtland at Tyrell	Courtland at Congress		325	5	B	P	0	N	G	0	0	20	Y	Y	N	L	G
261	Courtland at Congress	Courtland at Fairfax		200	5	B	P	0	N	AG	0	0	15	Y	Y	M	L	OK
262	Courtland at Fairfax	Courtland at Brookdale		550	10	B	P	0	N	AD	0	5	20	Y	Y	N	M	OK
263	3186 McKillop	2600 School		500	4	B	P	43	Y	A	0	0	2	Y	Y	M	L	OK

Appendix C: Street Transformations

The following examples of street transformations are offered as visions for progressive pedestrian planning. These projects are only conceptual, serving as illustrations of ideas. However, they illustrate the extent of possible changes that may begin with a greater emphasis on designing and planning for pedestrians.

City Route Before and After

City routes connect multiple districts and define the city as a whole. They are busy commercial and residential streets lined with storefronts and apartment buildings. Large numbers of pedestrians, drivers, transit riders, and bicyclists use city routes. Existing conditions often include wide lanes, large intersections, limited traffic signals and crosswalks, and dedicated turn lanes that create an inhospitable environment for pedestrians.

In contrast, consider a city route with the following improvements: wide sidewalks, pedestrian-scale lighting, high visibility crosswalks with curb ramps, pedestrian refuge islands, bike lanes, and street furniture including bike racks and bus shelters with signage for riders. On-street parking, planter boxes, and street trees help buffer the sidewalk from motor vehicle traffic. The result is boulevards that promote social and economic activity and define the character of the city.

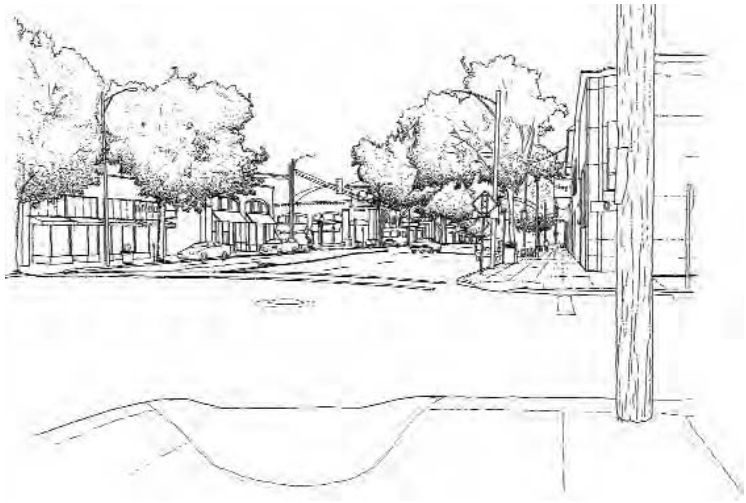


ILLUSTRATION 47 CITY ROUTE BEFORE

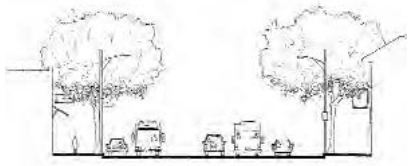


ILLUSTRATION 48 CITY ROUTE SECTION BEFORE

ILLUSTRATION 49 CITY ROUTE AFTER

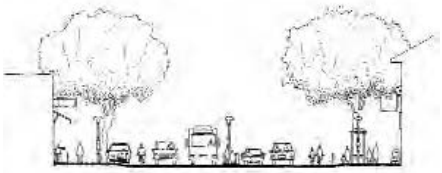


ILLUSTRATION 50 CITY ROUTE SECTION AFTER

District Route Before and After

District routes serve districts of the city by connecting schools, community centers, and neighborhood shops. They commonly have cross-town bus routes that connect residential neighborhoods to commercial districts and transit hubs. A typical district route might include four travel lanes and narrow sidewalks that are interrupted by utility poles, broken concrete, and driveway curbcuts.

In contrast, consider a district route after a "road diet" from two travel lanes in each direction to one travel lane in each direction plus a center turn lane. The extra room makes way for wider sidewalks, street trees, and bike lanes. Pedestrian route signs provide guidance to important neighborhood destinations and pedestrian-scale lighting improves safety by providing continuous illumination of the sidewalks. Proposals for lane reductions require careful study and City Council approval because such reconfigurations may create motor vehicle congestion.

Appendix C: Street Transformations

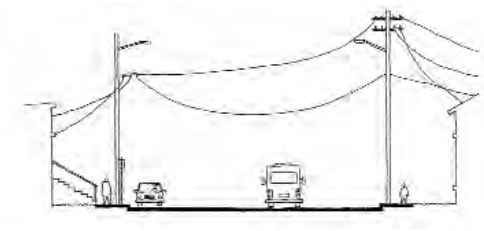


ILLUSTRATION 51 DISTRICT ROUTE SECTION BEFORE

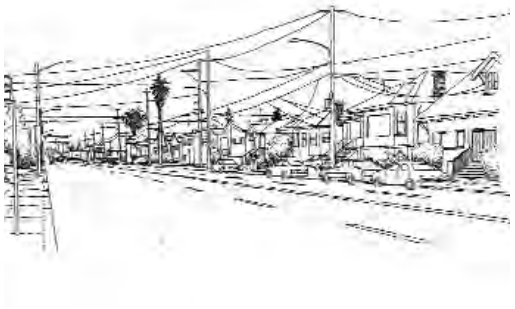


ILLUSTRATION 52 DISTRICT ROUTE BEFORE

Neighborhood Route Before and After

Neighborhood routes are residential streets with one travel lane in each direction plus on-street parallel parking. At their best, they have sidewalks that are continuous, unobstructed, and well-maintained. Motor vehicles move slowly because of speed humps and stop signs. The illustration shows the addition of street trees, slow points, pedestrian-scale lighting, and signage for an exemplary pedestrian neighborhood route. The speed humps and slow points reinforce each other in slowing traffic while the lighting and trees create a vertical buffer between the sidewalk and the street.

Trail Route Before and After

Underused areas beneath BART lines and along railroad tracks provide opportunities for mixed-use paths and greenways in the City's most urbanized neighborhoods. Existing conditions may include underutilized rail tracks, no sidewalks or trails, and poor connections to the neighborhood. By adding mixed-use paths, ball fields, playgrounds, dog runs, and other public facilities, these kinds of projects could be as successful as the Ohlone Trail in Berkeley, Albany, and El Cerrito. While rights-of-way may not currently exist, natural features like creeks, ridges, and shorelines may also define routes for such trails. The continuing development of the Bay Trail and the Ridge Trail attest to the importance of long range planning and the value of natural features in bringing such trails to fruition.

ILLUSTRATION 53 DISTRICT ROUTE SECTION AFTER

ILLUSTRATION 54 DISTRICT ROUTE AFTER

Appendix C: Street Transformations

ILLUSTRATION 55 NEIGHBORHOOD ROUTE BEFORE

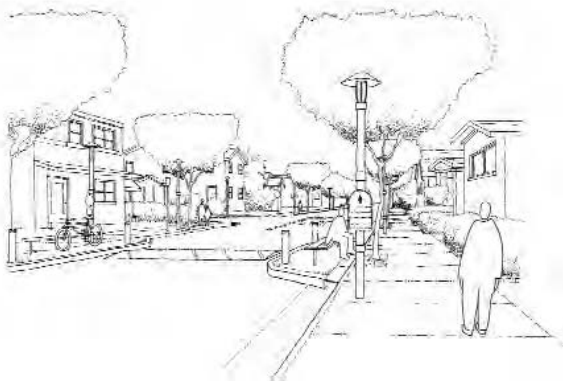


ILLUSTRATION 56 NEIGHBORHOOD ROUTE AFTER

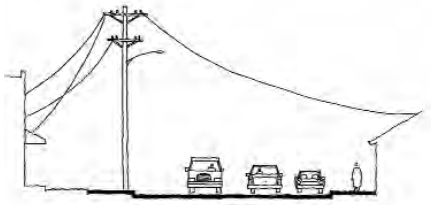


ILLUSTRATION 57 NEIGHBORHOOD ROUTE SECTION BEFORE

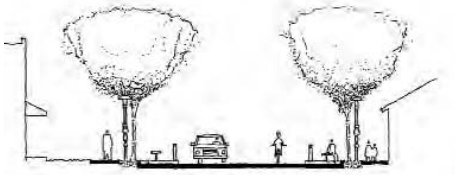


ILLUSTRATION 58 NEIGHBORHOOD ROUTE SECTION AFTER

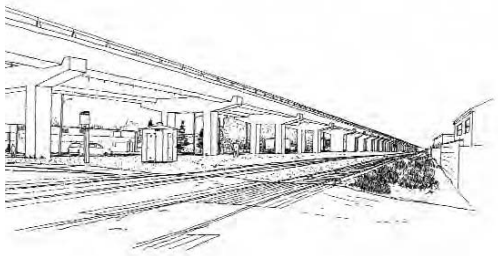


ILLUSTRATION 59 TRAIL ROUTE BEFORE

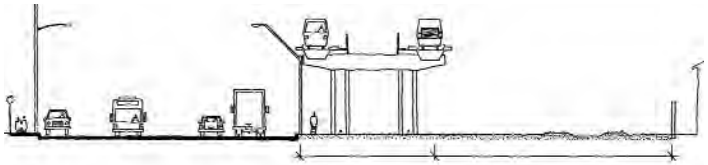


ILLUSTRATION 61 TRAIL ROUTE SECTION BEFORE

ILLUSTRATION 60 TRAIL ROUTE AFTER

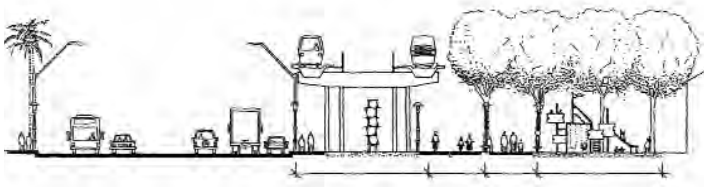


ILLUSTRATION 62 TRAIL ROUTE SECTION AFTER

Appendix D: FHWA Crosswalk Guidelines

The following table is from "Safety Effects of Marked vs. Unmarked Crosswalks at Uncontrolled Locations: Executive Summary and Recommended Guidelines" by the Federal Highway Administration (FHWA 2002a, p. 19).

ROADWAY TYPE (NUMBER OF TRAVEL LANES AND MEDIAN TYPE)	VEHICLE ADT <9,000			VEHICLE ADT >9000 TO 12,000			VEHICLE ADT <12,000 - 15,000			VEHICLE ADT >15,000		
	SPEED LIMIT**											
	≤30 MPH	35 MPH	40 MPH	≤30 MPH	35 MPH	40 MPH	≤30 MPH	35 MPH	40 MPH	≤30 MPH	35 MPH	40 MPH
2-LANES	C	C	P	C	C	P	C	C	N	C	P	N
3-LANES	C	C	P	C	P	P	P	P	N	P	N	N
MULTI-LANE (4 OR MORE LANES) WITH RAISED MEDIAN	C	C	P	C	P	N	P	P	N	N	N	N
MULTI-LANE (4 OR MORE LANES) WITHOUT RAISED MEDIAN	C	P	N	P	P	N	N	N	N	N	N	N

TABLE 29 RECOMMENDATIONS FOR INSTALLING MARKED CROSSWALKS AND OTHER NEEDED PEDESTRIAN IMPROVEMENTS AT UNCONTROLLED LOCATIONS.

These guidelines include intersection and midblock locations with no traffic signals or stop sign on the approach to the crossing. They do not apply to schoolcrossings. A two-way center turn lane is not considered a median. Crosswalks should not be installed at locations which could present an increased safety risk to pedestrians, such as where there is poor sight distance, complex or confusing designs, substantial volumes of heavy trucks, or other dangers, without first providing adequate design features and/or traffic control devices. Adding crosswalks alone will not make crossings safer, nor necessarily result in more vehicles stopping for pedestrians. Whether marked crosswalks are installed, it is important to consider other pedestrian facility enhancements, as needed, to improve the safety of the crossing (e.g., raised median, traffic signal, roadway narrowing, enhanced overhead lighting, traffic calming measures, curb extensions). These are general recommendations; good engineering judgment should be used in individual cases for deciding where to install crosswalks.** Where speed limit exceeds 40 mph, marked crosswalks alone should not be used at unsignalized locations. Candidate sites for marked crosswalks. Marked crosswalks must be installed carefully and selectively. Before installing new marked crosswalks, an engineering study is needed to show whether the location is suitable for a marked crosswalk. For an engineering study, a site review may be sufficient at some locations, while a more in-depth study of pedestrian volumes, vehicle speeds, sight distance, vehicle mix, etc. may be needed at other sites. It is recommended that a minimum of 20 pedestrian crossings per peak hour (or 15 or more elderly and/or child pedestrians) exist at a location before placing a high priority on the installation of a marked crosswalk alone. Possible increase in pedestrian crash risk may occur if crosswalks are added without other pedestrian facility enhancements. These locations should be closely monitored and enhanced with other pedestrian crossing improvements, if necessary, before adding a marked crosswalk. Marked crosswalks alone are not recommended, since pedestrian crash risk may be increased with marked crosswalks. Consider using other treatments, such as traffic signals with pedestrian signals to improve crossing safety for pedestrians. The raised median or crossing island must be at least 4 ft wide and 6 ft long to adequately serve as a refuge area for pedestrians in accordance with MUTCD and AASHTO guidelines.

Appendix E: Future Directions in Pedestrian Planning

This appendix provides a brief overview of two emerging tools of significant importance to pedestrian planning. Current research on pedestrian level of service is developing algorithms to analyze the safety and comfort – as well as capacity – of pedestrian facilities. Space-syntax uses modeling to compute pedestrian volumes based on a street grid's connectivity and its accompanying land uses. While insufficiently developed for the completion of this Plan, these tools are identified here as potential resources for future pedestrian planning.

Pedestrian Level of Service

Level of service (LOS) is a standard measure for evaluating the performance of street segments and intersections based on motor vehicle traffic flow with a simple ranking system of "A" through "F." LOS A signifies a facility where each motor vehicle's movement is minimally impeded by the presence of other motor vehicles. LOS B, C, and D signify an increasing volume of motor vehicles and increasing impediments to any particular driver by the presence of other motor vehicles. LOS E indicates maximum use of a facility with a large number of motor vehicles still moving at reasonable speeds. LOS F indicates the breakdown of traffic flow where large numbers of motor vehicles are moving at inefficient speeds. The Highway Capacity Manual also specifies an analogous system of evaluation that measures the capacity of a sidewalk in relation to the number of pedestrians using the facility (Transportation Research Board 2000). In this case, LOS A signifies a sidewalk where pedestrian movement is not impeded by the presence of other pedestrians. At the other extreme, LOS F indicates a crowded sidewalk where pedestrians cannot take full steps and are likely bumping into each other.

For pedestrian planning, existing LOS poses two significant problems. First, while the pedestrian level of service measures sidewalk capacity it does not address the safety or quality of the pedestrian's experience. Streets with adequate sidewalk capacity may also be unpleasant places to walk and dangerous places to cross. Second, there are no accepted methodologies for measuring the inadequacies of a pedestrian facility, quantifying the benefits of pedestrian improvements, or weighing how service "improvements" for one transportation mode impact service for other modes. Consequently, service improvements for motor vehicles may be identified and justified in precise terms whereas service improvements for pedestrians often are limited to qualitative justifications on the benefits of "alternative" transportation.

The Florida Department of Transportation is developing a multimodal level of service analysis to address these and other concerns with existing LOS. The analysis applies to areas designated as multimodal transportation districts that are characterized by mixed-use development, tran-

sit service, and street priority for non-automobile modes. This research identifies the following most significant street factors shaping the pedestrian experience:

- ➔ presence (or absence) of a sidewalk
- ➔ distance between pedestrians and motor vehicles
- ➔ presence of physical barriers in the buffer space separating pedestrians and vehicles
- ➔ volume and speed of motor vehicles

A number of other inputs characterizing street geometry, traffic signalization, and vehicle flow are also used to compute pedestrian LOS. This output is also used as an input for computing transit LOS.

For future pedestrian planning, such a methodology would be useful for identifying inadequacies in existing pedestrian facilities and specifying the benefits of potential pedestrian improvements. A significant shortcoming of this methodology is that it does not include an analysis of pedestrian crossings. At a broader level of criticism, pedestrian level of service does not account for contextual factors like residential and commercial densities, street level activity, and connectivity of the street grid that are crucial factors to overall walkability.

For additional information, see Guttenplan (2001) and the Florida Department of Transportation (http://www11.myflorida.com/planning/systems/sm/los/default.htm).

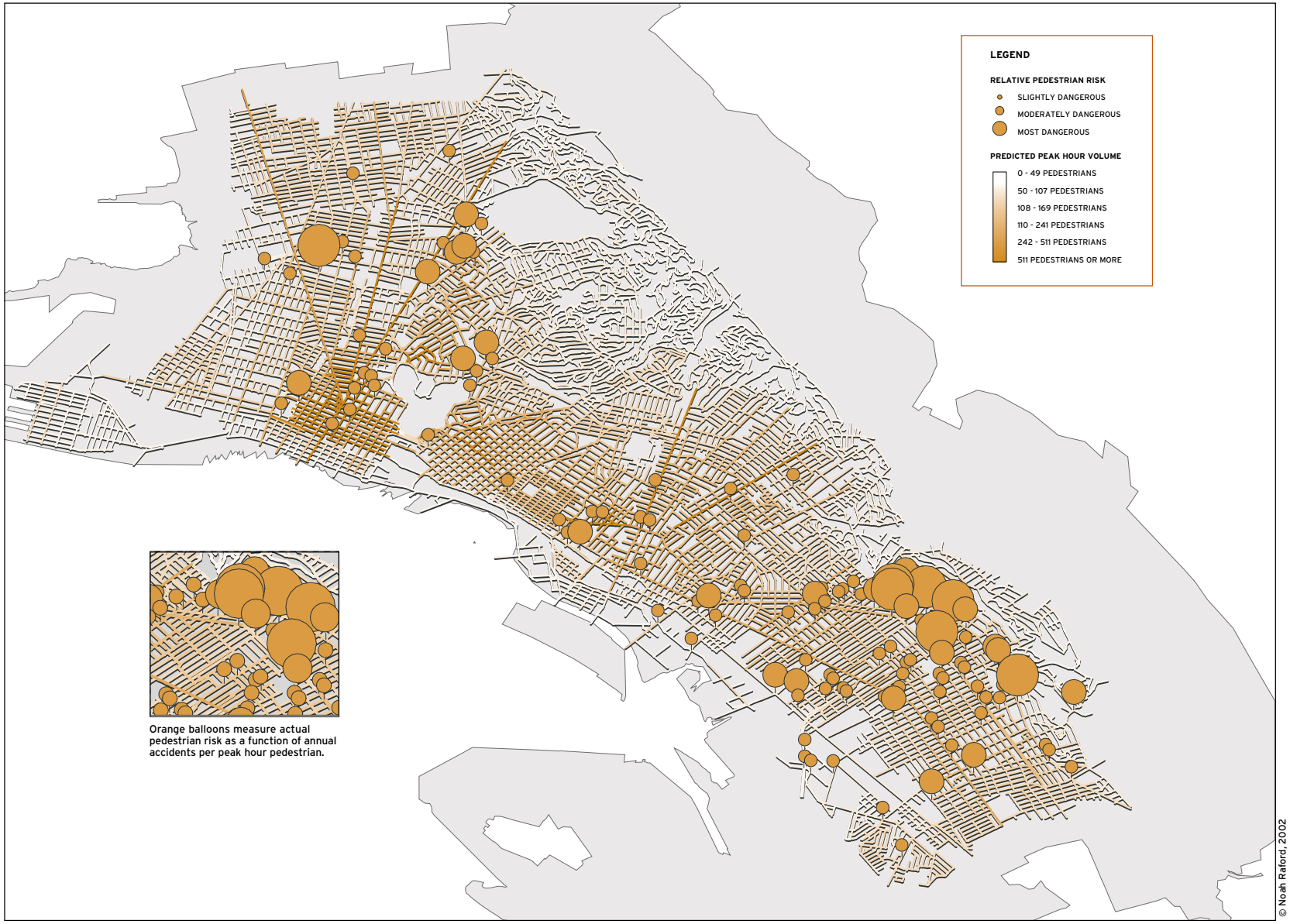
Space-Syntax

Space Syntax is a suite of modeling tools and simulation techniques used to analyze pedestrian movement and to predict pedestrian volume. Space Syntax uses the layout and connectivity of urban street grids to generate "movement potentials" which it compares to sampled pedestrian counts at key locations and land-use indicators such as population density. The resulting correlations are used to predict pedestrian volumes on a street by street level for an entire city. Space Syntax was created at the University College of London in the mid-1980's and is widely used throughout Europe and Asia.

Despite these uses, Space Syntax is largely unknown in the United States. The National Highway Traffic Safety Administration (NHTSA) and the Federal Highway Administration (FHWA) recently identified pedestrian exposure data as the least understood and most important area of research for pedestrian planners and decision-makers (NHTSA 2000). Space Syntax addresses this need by providing pedestrian volume predictions that may be analyzed with pedestrian collision data. The resulting risk index provides planners with an intersection by intersection list, normalized by volume, of a city's most dangerous intersections.

To predict pedestrian volumes in the City of Oakland, GIS centerline files were used to construct a model network of the City's approximately 7,000 streets. This network was fed into the

MAP 20 CITY OF OAKLAND PEDESTRIAN VOLUMES–SPACE SYNTAX MODEL



Volume estimates are accurate +/- 23% (R=0.7713, p<0.0001). Values should be taken as estimates only. Thanks to the Space Syntax Laboratory, the UC Berkeley Traffic Safety Center, Urbitran Associates, and the Oakland Pedestrian Safety Project.

Appendix E: Future Directions in Pedestrian Planning

Ovation Space Syntax processing engine for processing. The model's initial output was weighted with 2000 Census population density at the block group level and calibrated with pedestrian counts. Ninety-four pedestrian counts were used spanning 42 different intersections. The preliminary model produced a .56 correlation coefficient between predicted pedestrian volumes, population density, and observed pedestrian counts. A second round of calibration including population density modifiers to the central business district resulted in a .77 correlation coefficient.* This model was used to estimate pedestrian volumes for streets throughout the City. These data were segmented by intersection and compared to SWITRS pedestrian collision data to establish the risk index.

Map 20 shows predicted pedestrian volumes by street segment where darker shades represent higher volumes. The pedestrian volume map displays peak hour pedestrian flow in shades of orange. White colored streets equal low volume, while orange equals high volume. Orange balloons of varying size represent the level of pedestrian risk for the city's most dangerous intersections. This was determined by dividing the annual number of collisions by the peak hour pedestrian flow to create a Pedestrian Risk Index.

This innovative approach allows decision makers to include city-wide pedestrian exposures in their safety analysis for the first time, a key factor in determining actual pedestrian risk. The highest pedestrian volumes are predicted in downtown with other high volume predictions for the north and east of Lake Merritt and the area surrounding the intersection of Fruitvale Avenue and Foothill Boulevard. Downtown streets account for nearly 5% of the City's total pedestrian volume yet comprise only 1% of total street area. The mean peak hour pedestrian flow for downtown was 245 pedestrians per peak hour with several streets including Broadway exhibiting much higher predictions.

Despite its limitations as a model, Space Syntax is effective for predicting pedestrian volumes in great detail. Unlike traditional travel demand models analyzing traffic by Traffic Analysis Zone (TAZ) or census tract, Space Syntax provides fine detail by modeling street segments and intersections. The model is also less complicated than other pedestrian modeling packages (such as Paramics) which use micro-simulation, cellular automata, and other "agent-based" approaches. However, the Space Syntax interface is complicated and requires advanced knowledge of GIS, spatial projections, and database manipulation. In terms of the modeling, little work has been done to integrate more sophisticated land-use measures into the analysis.

*Very few people live in Oakland's central business district, resulting in very low estimates of daytime population density from the 2000 Census. Density modifiers were derived from 2000 employment statistics provided by the State of California's Economic Development Department

For example, the Space Syntax model for Oakland under-predicted several key intersections in the downtown because it does not include mass transit as a source of pedestrian activity. Similarly, recreational activity on the streets surrounding Lake Merritt was not included in the model. Space Syntax also does not address behavioral factors such as street preferences, perceptions of safety, aesthetics, and the like.

For additional information, see the Space Syntax Laboratory (http://www.spacesyntax.com/).

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