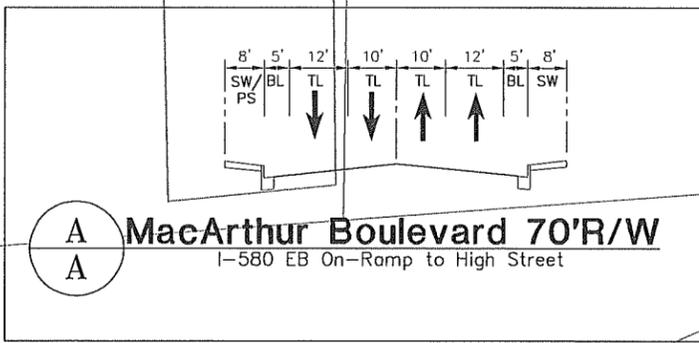
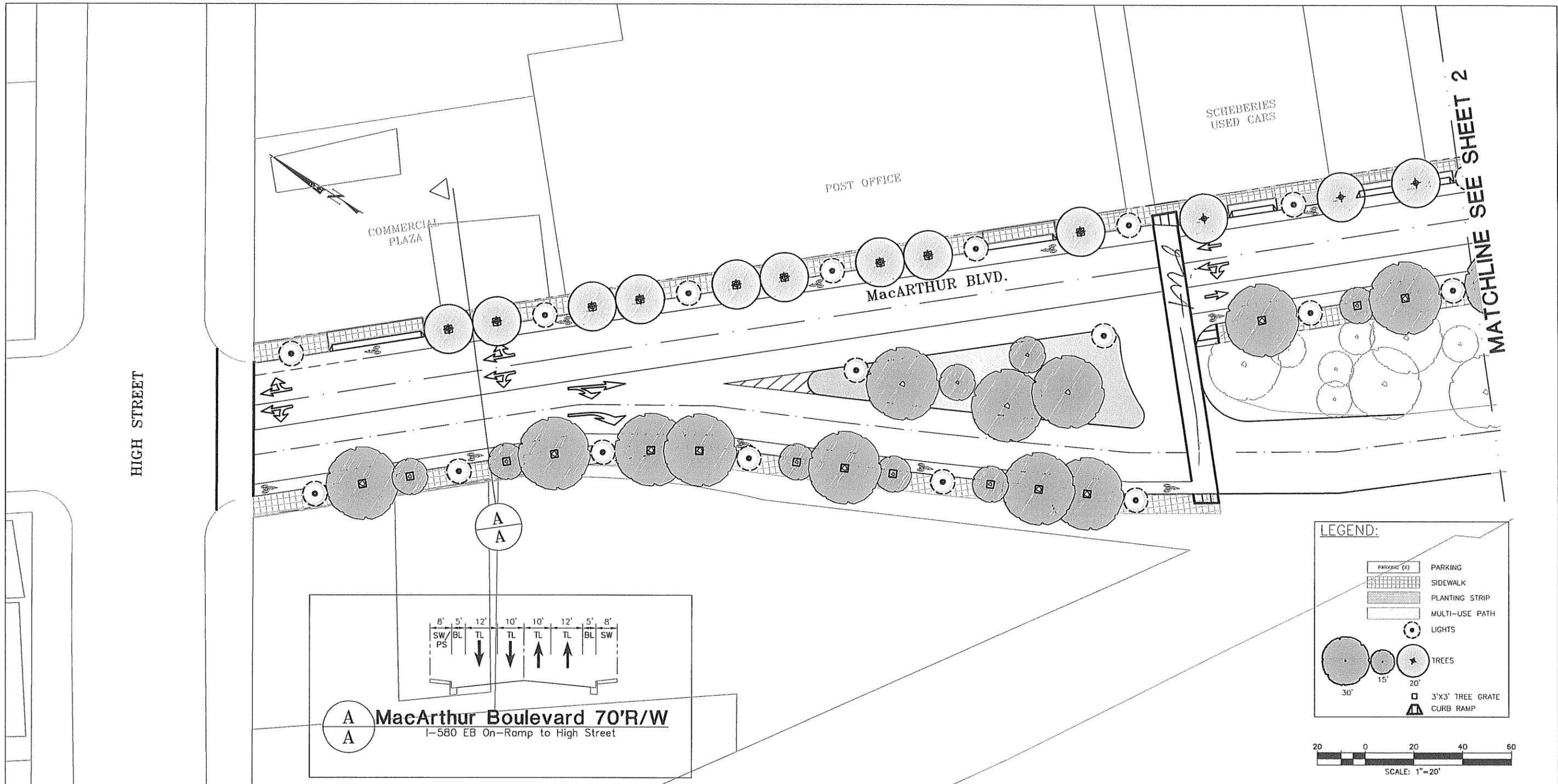


Minutes: Oakland Bicycle & Pedestrian Advisory Committee
September 17, 2010

Attendees: Carol Levine, Dave Campbell, Jason Patton, Jennifer Stanley, Jonathan Bair, Karen Smulevitz, Midori Tabata, Jake Coolidge, Dana Gregg, Iris Starr, Linda DeBolt, Paul Krupka, Ajay Martin, Rick Rickard, Kendashi Haley, Jennifer Pae, Ruth Miller, Kristin Maravilla, Robert Prinz

1. **Approval of Minutes** from July: approved
2. **Laurel Access to Mills (LAMMPS):** presentation by consultants and staff. Currently, 85th percentile speed is over 40mph all along stretch of project. Group discussion of proposed new features. Good project. Discussion highlighted the two on-ramp lanes heading south & bike lane going south; intersection at MacArthur at Buell. Next meeting is October 7 at Mills College. www.lammepsplan.com. (See attached handout.)
3. **Draft Bollard Detail:** drawing shown Oakland premier bollard design. Go to Adeline at Genoa to check one out. (See attached handout.)
4. **On-Street Bay Trail Wayfinding:** Draft memo (agenda attachment) analyzed ways that named bikeways, such as the Bay Trail, could be incorporated into the City's adopted Bicycle Wayfinding Signage system. Analysis documents that it doesn't work well. Outcome of analysis is that named bikeways will not be included on Oakland's bicycle wayfinding signs.
5. **Google App:** new Google Map showing Oakland bicycle facilities: lanes, parking signage and projects under development. www.oaklandbikes.info. The project is potentially scaleable for more information and possibly expanded to other cities. Code for America, Open Geo, Sunlight Foundation
6. **Announcements:** Oakland is a Bike-Friendly City bronze; Parking Day is Sept 17.

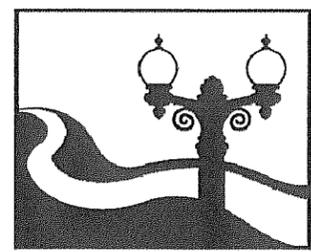
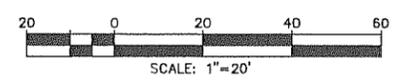
Attachments



LEGEND:

- PARKING (x) PARKING
- SIDEWALK
- PLANTING STRIP
- MULTI-USE PATH
- LIGHTS
- TREES
- 3'x3' TREE GRATE
- CURB RAMP

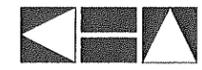
Tree symbols are shown in three sizes: 30', 15', and 20'.



Preferred Concept Plan - Sheet 1

LAMMPS: Laurel Access to Mills, Maxwell Park, and Seminary

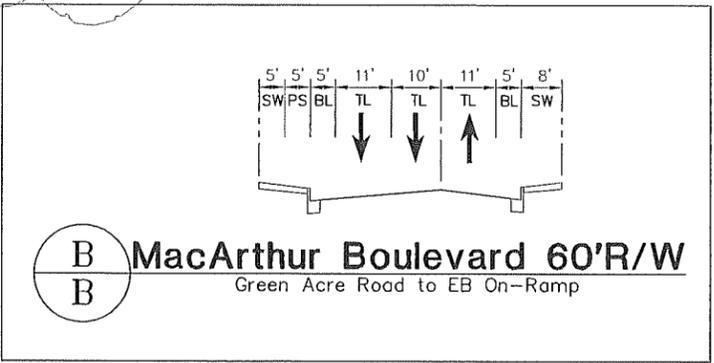
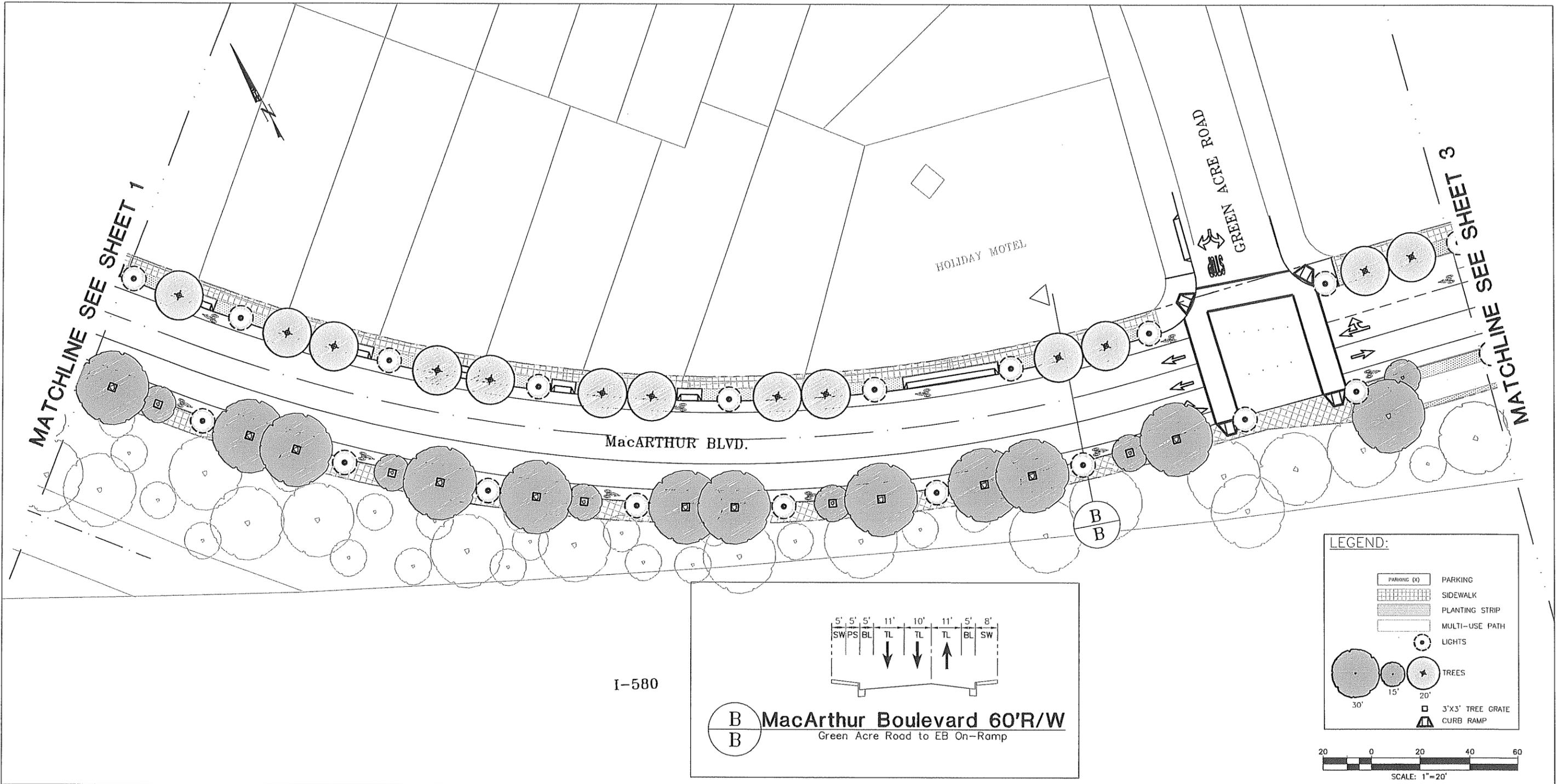
City of Oakland, California

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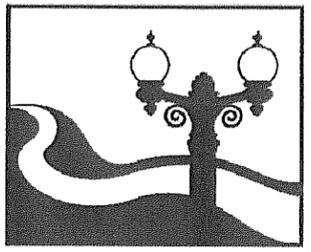
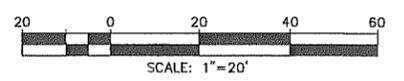


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LEGEND:

- PARKING
- SIDEWALK
- PLANTING STRIP
- MULTI-USE PATH
- LIGHTS
- TREES
- 3'x3' TREE GRATE
- CURB RAMP



Preferred Concept Plan - Sheet 2

LAMMPS: Laurel Access to Mills, Maxwell Park, and Seminary

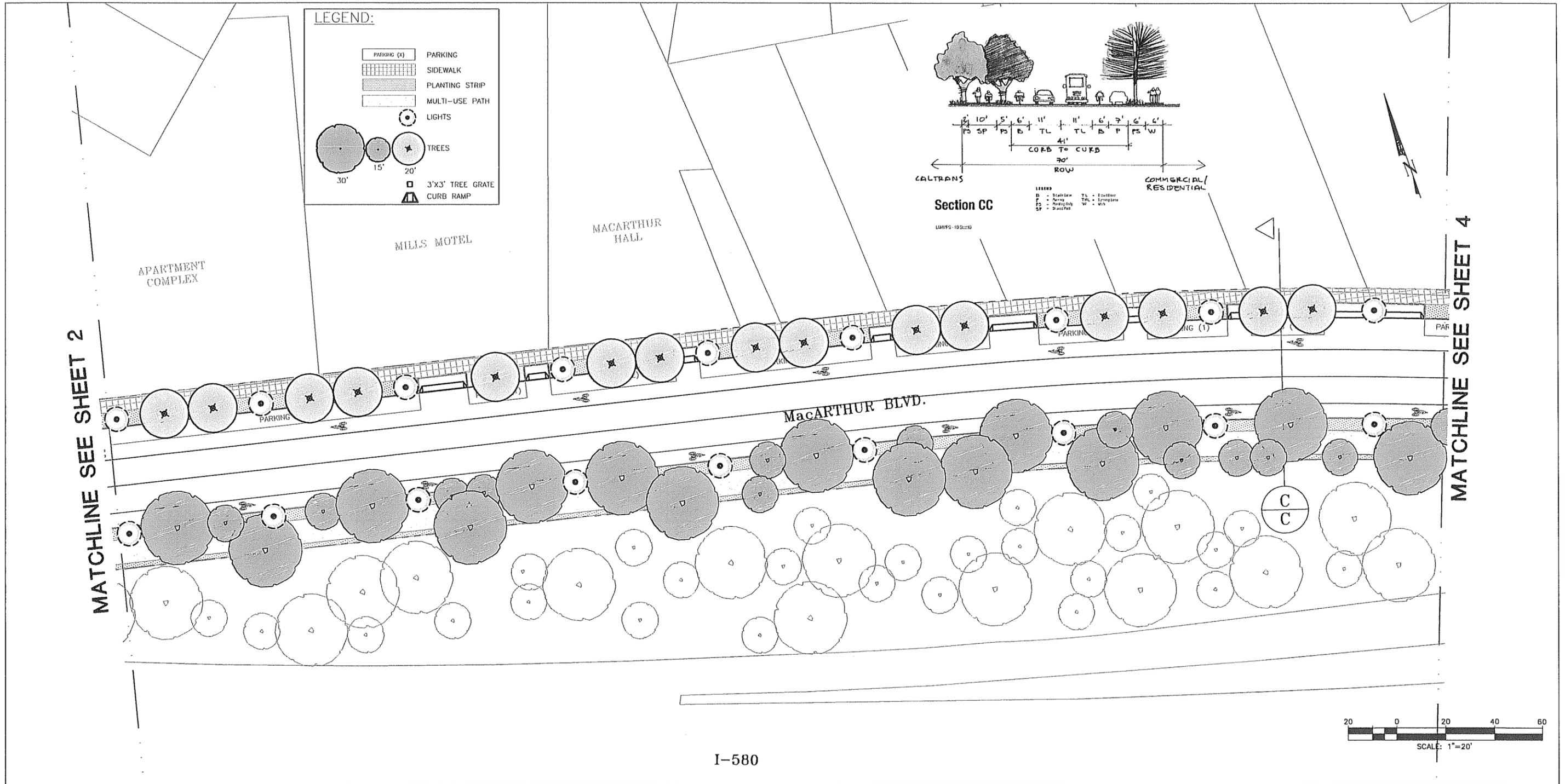
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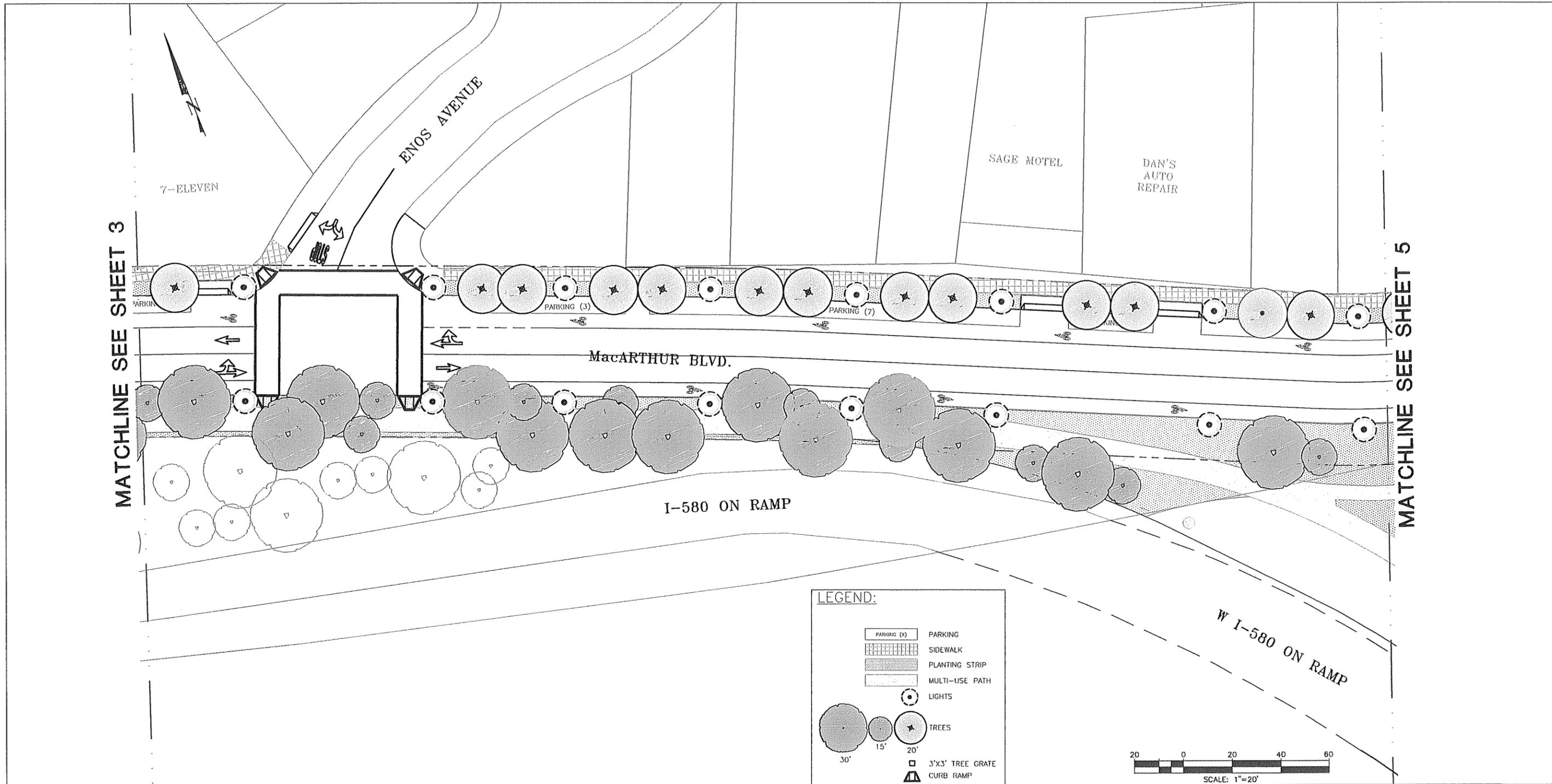
Preferred Concept Plan - Sheet 3

LAMMPS: Laurel Access to Mills, Maxwell Park, and Seminary
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Preferred Concept Plan - Sheet 4

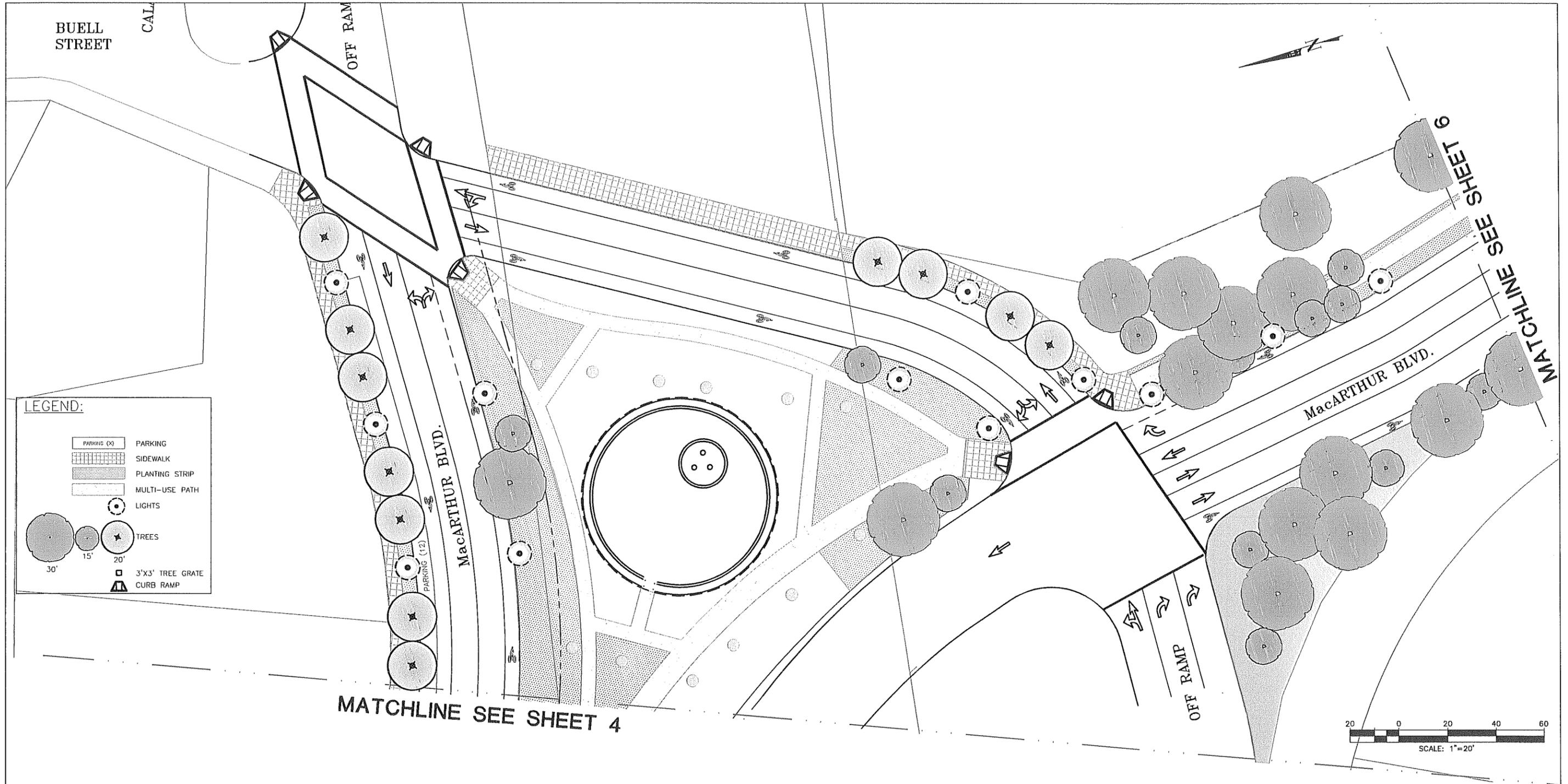
LAMMPS: Laurel Access to Mills, Maxwell Park, and Seminary

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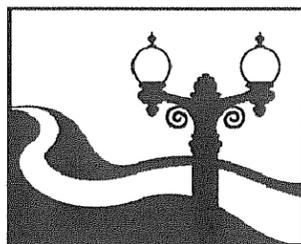




Preferred Concept Plan - Sheet 5

LAMMPS: Laurel Access to Mills, Maxwell Park, and Seminary

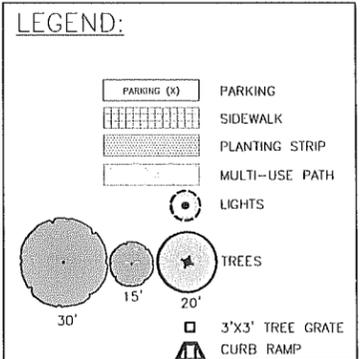
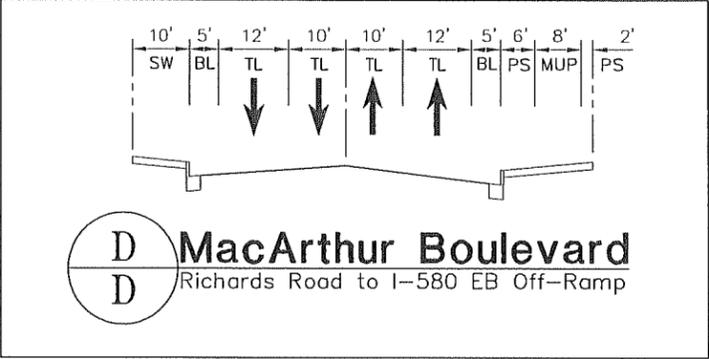
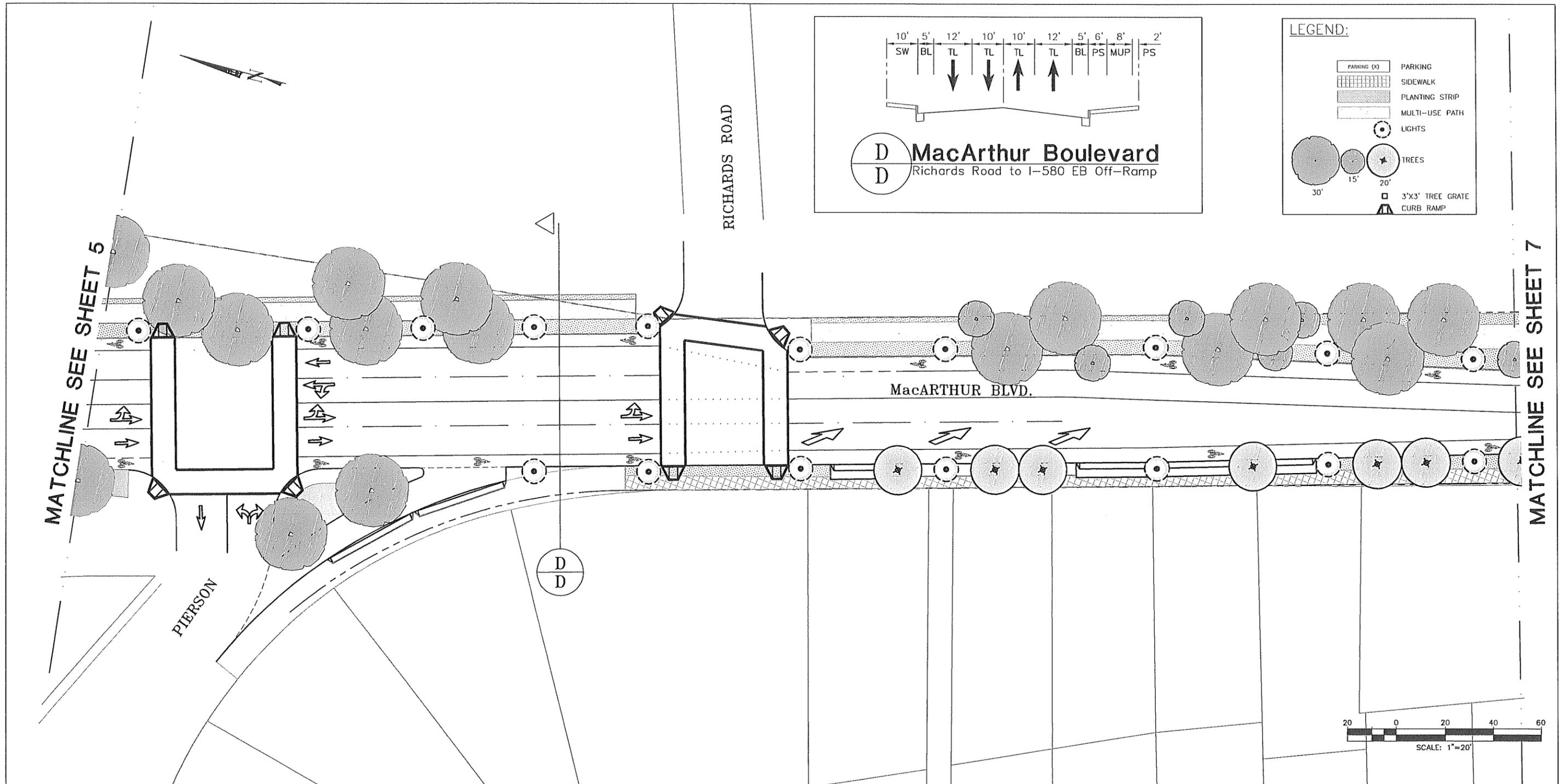
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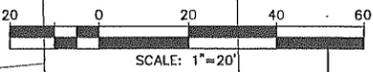
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MATCHLINE SEE SHEET 5

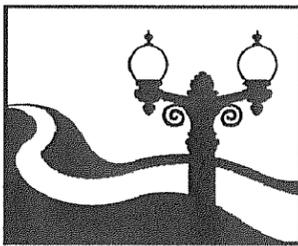
MATCHLINE SEE SHEET 7



Preferred Concept Plan - Sheet 6

LAMMPS: Laurel Access to Mills, Maxwell Park, and Seminary

City of Oakland, California



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Preferred Concept Plan - Sheet 8

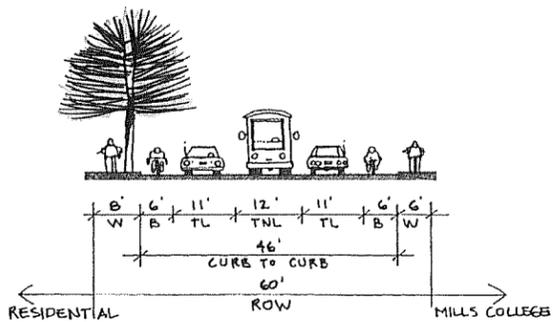
LAMMPS: Laurel Access to Mills, Maxwell Park, and Seminary
 City of Oakland, California

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MATCHLINE SEE SHEET 10



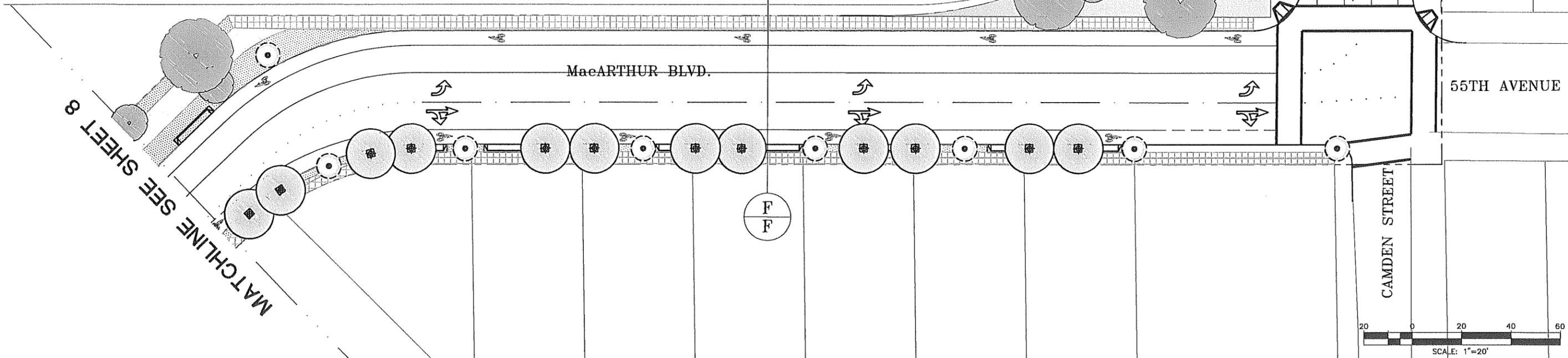
Section FF

LAMMS - 10 Sept 10

LEGEND
 B = Bight Line TL = Travel Lane
 F = Faking TWL = Turn Lane
 PS = Planting Strip W = Walk
 SP = Street Plan

LEGEND:

	PARKING
	SIDEWALK
	PLANTING STRIP
	MULTI-USE PATH
	LIGHTS
	TREES
	3'x3' TREE GRATE
	CURB RAMP



Preferred Concept Plan - Sheet 9

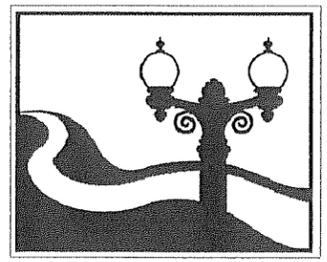
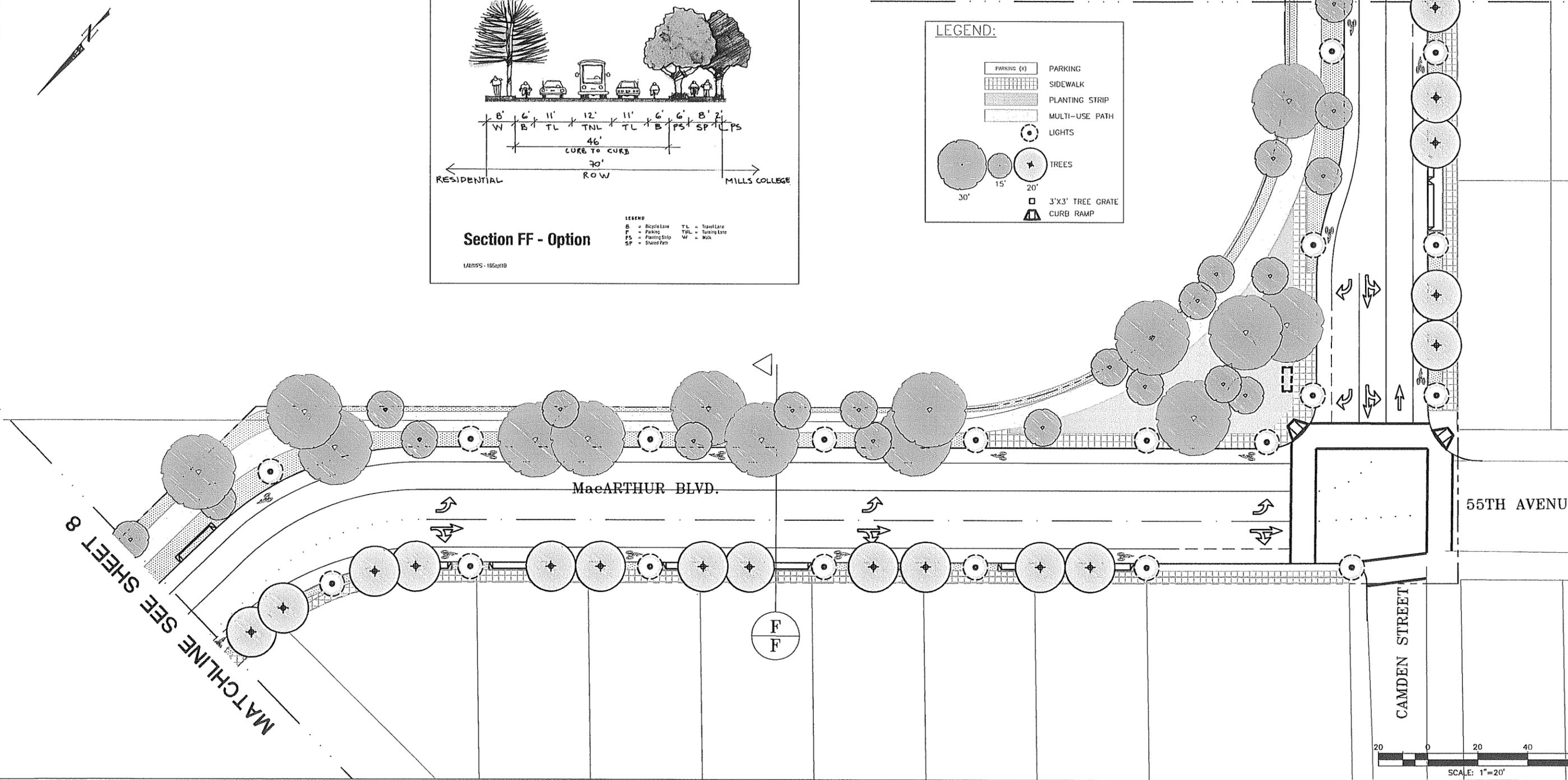
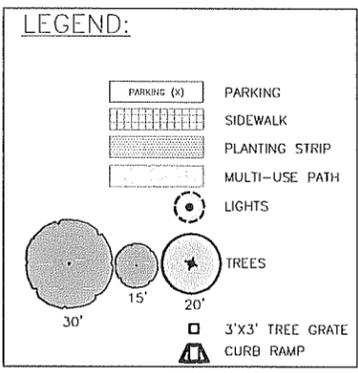
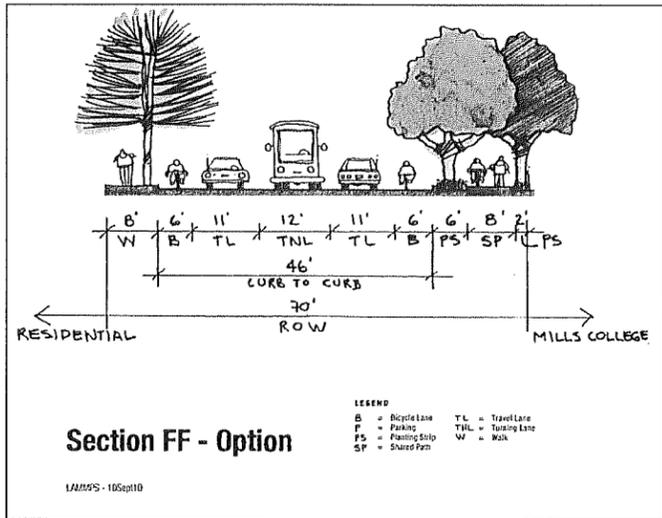
LAMMPS: Laurel Access to Mills, Maxwell Park, and Seminary
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MATCHLINE SEE SHEET 10



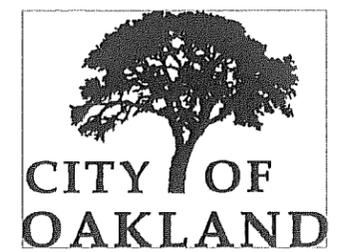
Preferred Concept Plan - Sheet 9A

LAMMPS: Laurel Access to Mills, Maxwell Park, and Seminary

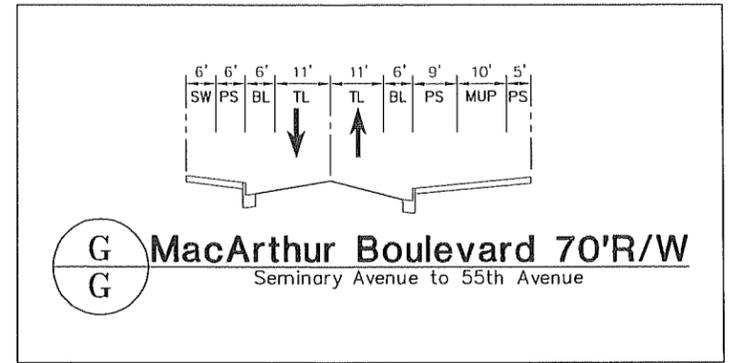
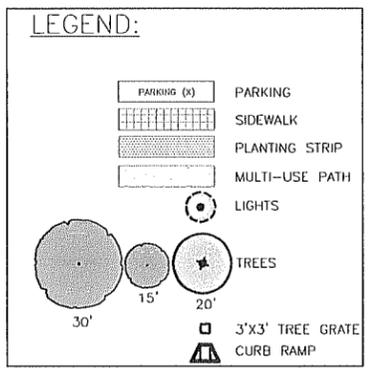
City of Oakland, California

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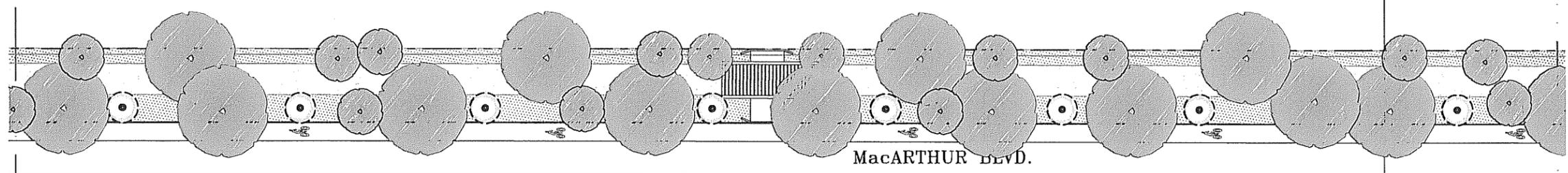
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- October 7, 2010



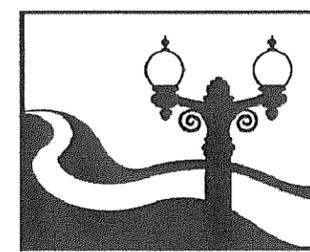
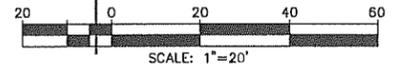
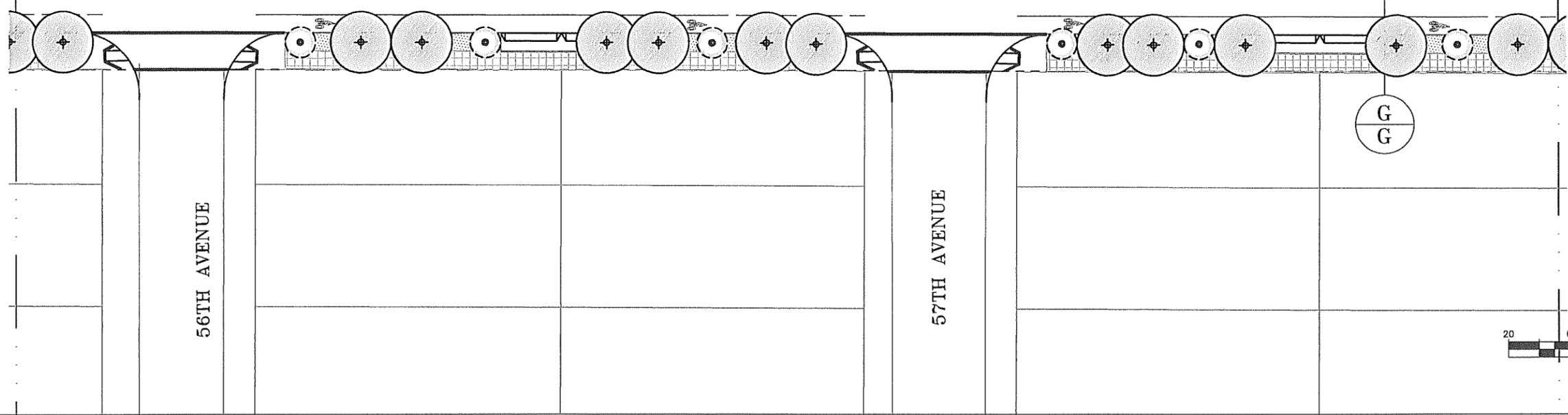
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MATCHLINE SEE SHEET 9



MATCHLINE SEE SHEET 11



Preferred Concept Plan - Sheet 10

LAMMPS: Laurel Access to Mills, Maxwell Park, and Seminary

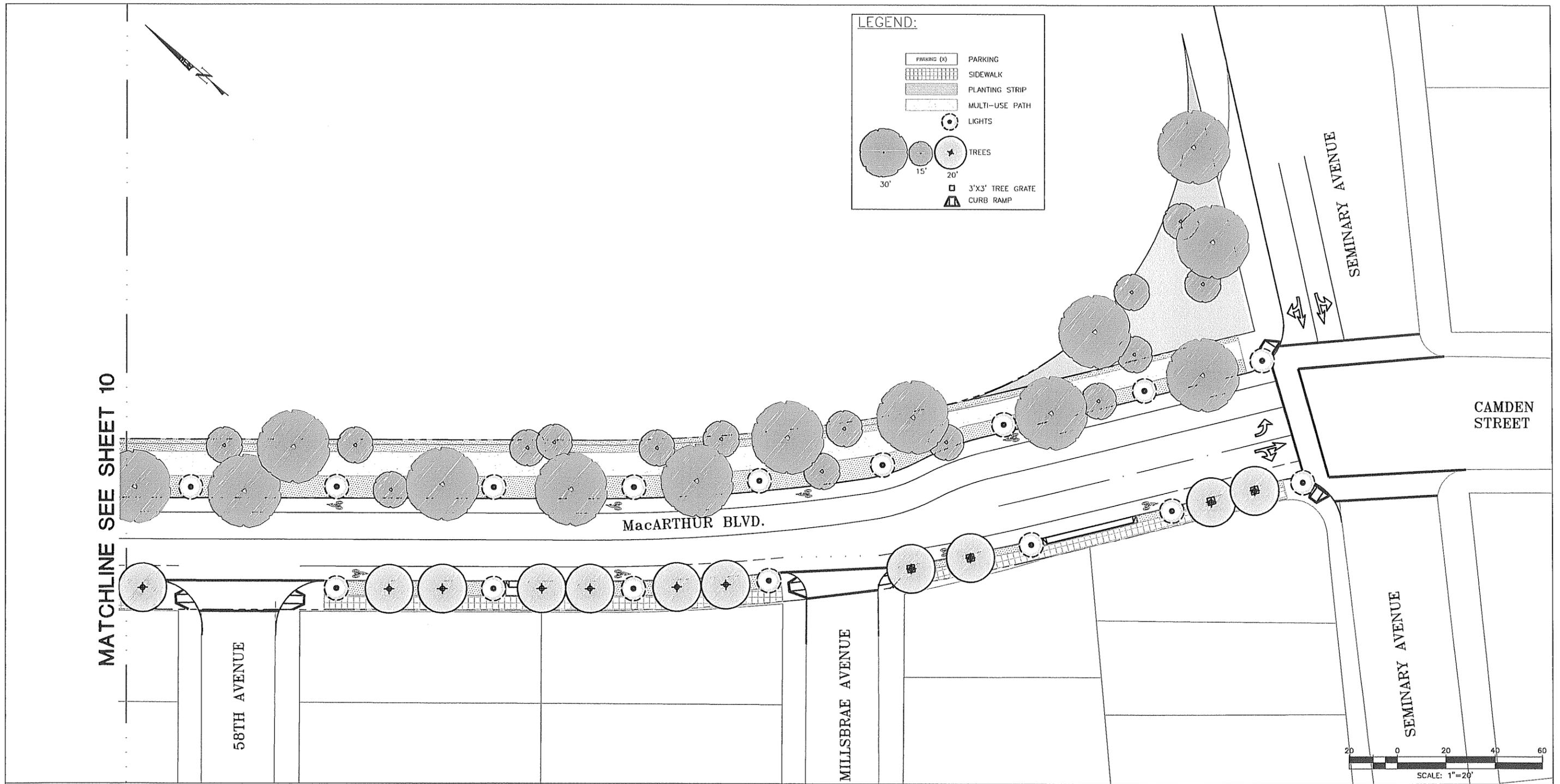
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Preferred Concept Plan - Sheet 11

LAMMPS: Laurel Access to Mills, Maxwell Park, and Seminary
 City of Oakland, California



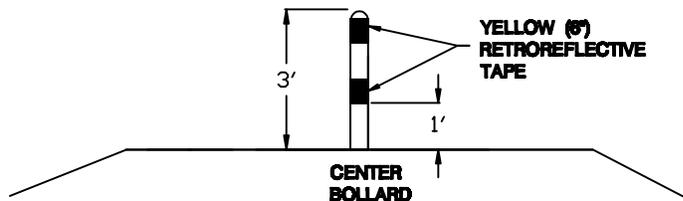
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CENTER BOLLARD

SECTION VIEW

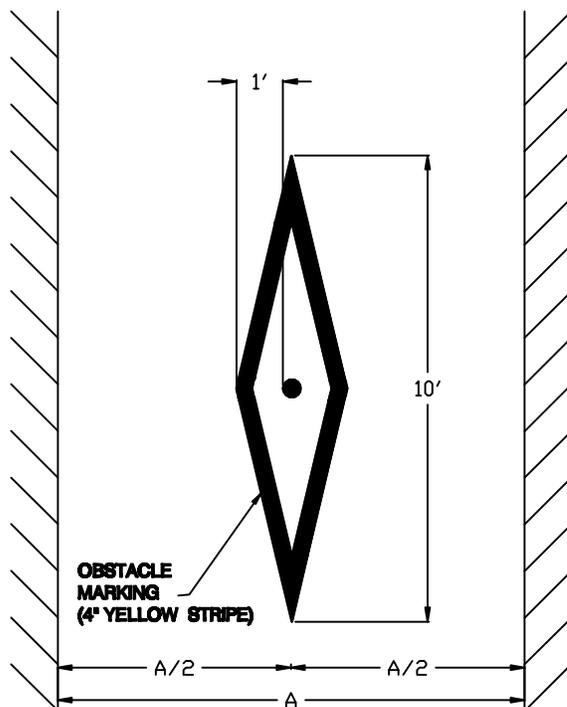


NOTE:
MUTCD Section 9C.101(CA) Barrier Posts on Class I Bikeways

Support: Before a decision is made to install barrier posts, consideration needs to be given to the implementation of other remedial measures, such as Bike Path Exclusion (R44A(CA)) signs (see Section 9B.07) and/or redesigning the path entry so that motorists do not confuse it with vehicle access.

Guidance: Such devices should be used only where extreme problems are encountered.

PLAN VIEW



Oakland Standard:

1. Avoid the use of bollards wherever possible.
2. When deemed necessary, a center bollard shall be located in the middle of path and delineated by yellow (6") retroreflective tape at the top and midpoint of the bollard and by a yellow (4") obstacle marking stripe around the base of the bollard.
3. When additional bollards are deemed necessary, flanking bollards shall be placed in line with the center bollard and perpendicular to the direction of travel. the bollards shall be spaced with a minimum 5' clearance between bollards and all other vertical elements. Each flanking bollard shall be delineated by white(6") retroreflective tape at the top and midpoint of each bollard and by a white(4") obstacle marking stripe around the base of the bollard. See Dwg. X-2.
4. Removable bollards shall have a mount point that is flush with the travel surface.

CITY OF OAKLAND

DEPARTMENT OF ENGINEERING AND CONSTRUCTION



BOLLARD PLACEMENT AND MARKINGS FOR BICYCLE AND PEDESTRIAN PATHS

TRANSPORTATION DIVISION MANAGER

DATE: APRIL 2009

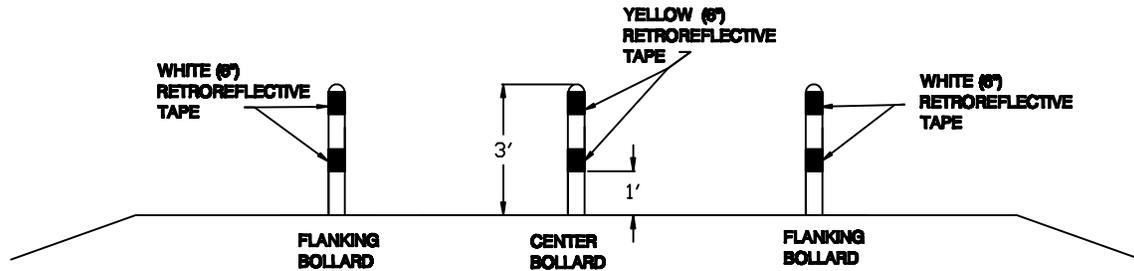
REV. DATE: _____

DWG.

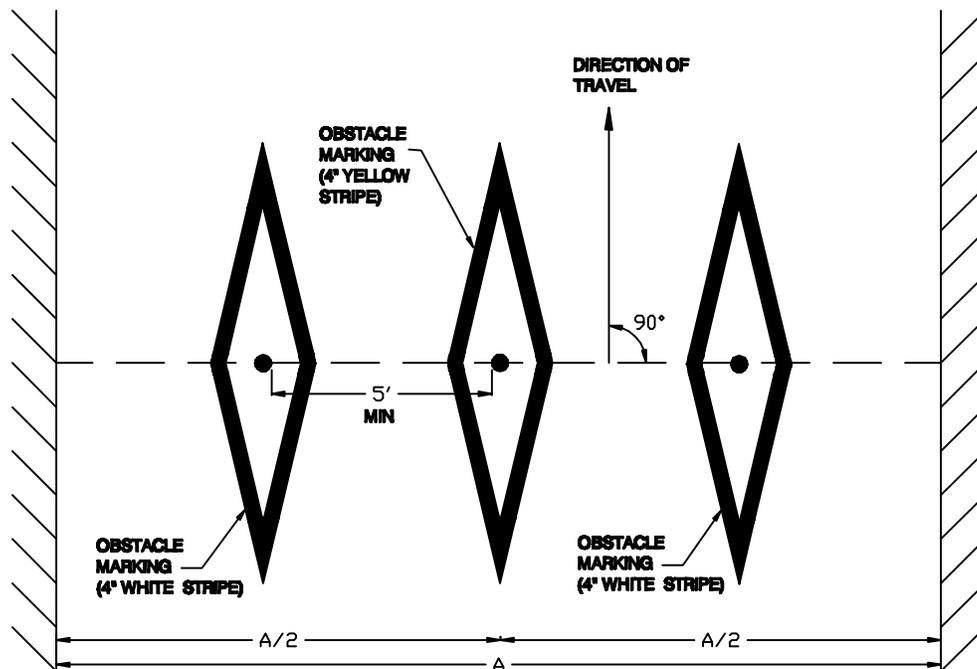
X-1

CENTER BOLLARD WITH FLANKING BOLLARDS

SECTION VIEW



PLAN VIEW



SEE NOTES FROM DWG. X-1

CITY OF OAKLAND

DEPARTMENT OF ENGINEERING AND CONSTRUCTION



**BOLLARD PLACEMENT AND MARKINGS
FOR BICYCLE AND PEDESTRIAN PATHS**

TRANSPORTATION DIVISION MANAGER

DATE: APRIL 2009
REV. DATE: _____

DWG.
X-2

Introduction

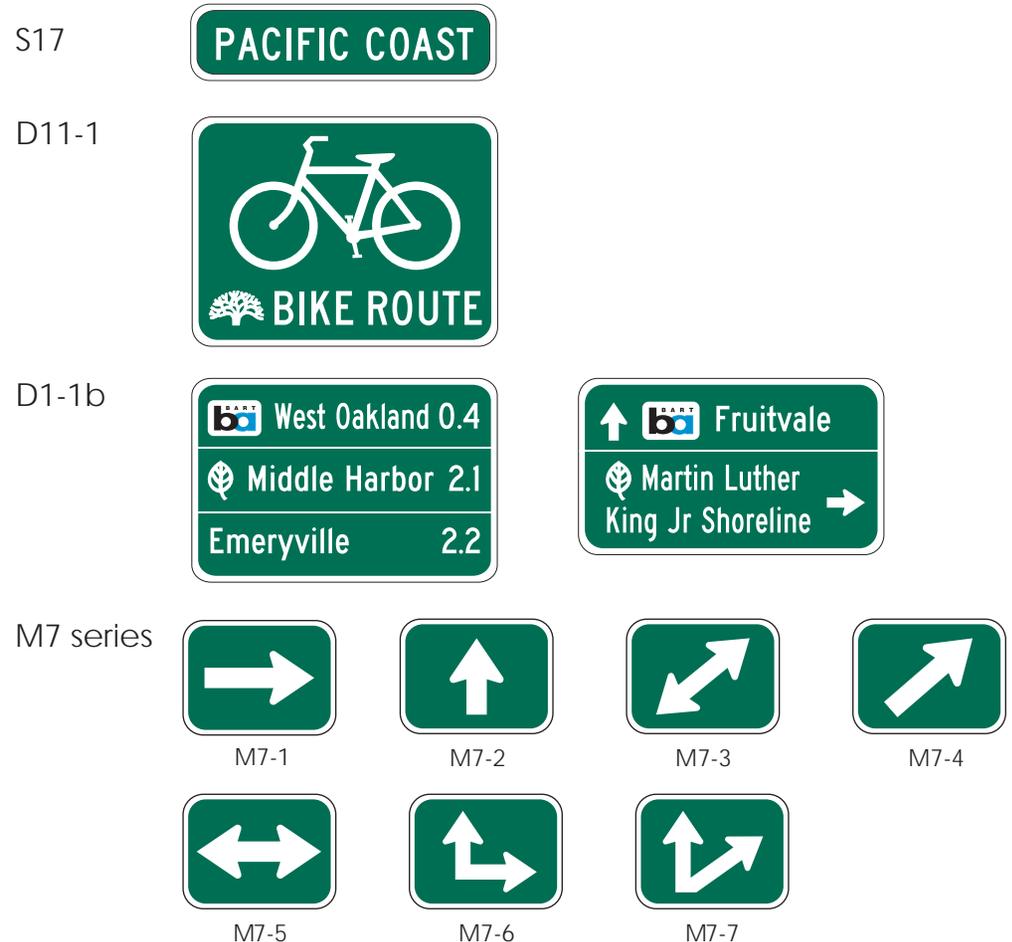
Oakland staff has explored the possibilities of incorporating named bikeways (such as “Bay Trail” and “East Bay Greenway”) into the bicycle wayfinding signage system adopted by the City in July 2009. The alternatives shown here document staff’s efforts and include the intent and problems of each approach. Through sketching out a variety of alternatives and applying actual Oakland scenarios, staff concluded that named bikeways are not compatible with the system adopted in 2009. In summary, the problems encountered are:

- 1) Insurmountable ambiguity
- 2) Necessarily cluttered and/or large signs that would be expensive to design and manufacture
- 3) The near-impossibility of supporting intersecting, named bikeways

Overall approach of Oakland’s Wayfinding Signage System (2009):

- Select standard signs, adopted in the federal and state MUTCDs, based on their:
 - legibility (white on green background, FHWA lettering style, 2 inch cap height)
 - durability (*maximum* width: 24 in).
- Modify these standard signs to include more information.

Standard Sign Types



S17 with bikeway logo

Intent

An S17 indicates the bikeway name and can include a bikeway logo, if available. The logo is included on individual lines of the D1-1b to indicate the direction of the named bikeway at an intersection.

Problems

Turn signs are ambiguous. It is not clear that the arrow applies to both the named bikeway and the bike route sign. On decision signs, multiple logos and lines of text are required to attempt to communicate the direction of the bikeway, but result in ambiguity nevertheless.

Confirmation Sign



Turn Sign



Ambiguity:
 Do both the Bay Trail and the Bike Route turn right?

Decision Signs



Ambiguity:
 Is the Bay Trail a destination in addition to the airport?



Clutter:
 Logo appears 3 times in one assembly.

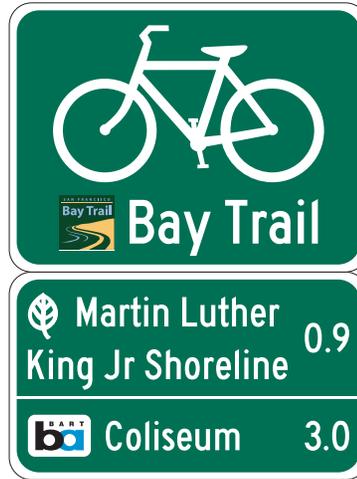
Clutter:
 Multiple logos and stacked text.

Modified D11-1

Intent

The standard "BIKE ROUTE" lettering on the D11-1 is replaced with the bikeway name and logo, if available. The logo is also included on the D1-1b at decision points to indicate the continuing direction of the named bikeway.

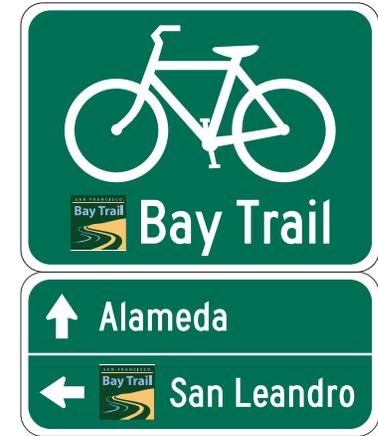
Confirmation Sign



Turn Sign



Decision Signs



Ambiguity:
Does the Bay Trail
also continue ahead
towards Alameda?

Problems

Decision sign assemblies cannot clearly and effectively communicate both wayfinding destinations and a named bikeway due to ambiguity and the need to include multiple logos and multiple lines of text.

The direction of the named bikeway, in relation to the wayfinding destinations, is ambiguous. The decision sign at the upper right provides an example: continuing on the Bay Trail requires a left turn, towards San Leandro, but it is unclear whether the Bay Trail continues in the straight-ahead direction as well.

As in the S17 alternative, assemblies have redundant bikeway logos and clutter resulting from multiple logos and stacked text.

Other bikeway names, like "East Bay Greenway," would require a taller D11-1.



Clutter:
Logo appears
3 times in one
assembly.



Clutter:
Multiple logos
and stacked text.

Modified M7

Intent

Indicates the named bikeway using a logo, if available, with a sign placed below the main assembly. The direction of the named bikeway at turns and intersections is indicated by adding the bikeway logo to a modified M7.

Extricates the Bay Trail logo from the wayfinding assembly, retaining space on the D1-1bs for wayfinding information.

Problems

Named bikeway information is read after the destination information, which is not entirely intuitive.

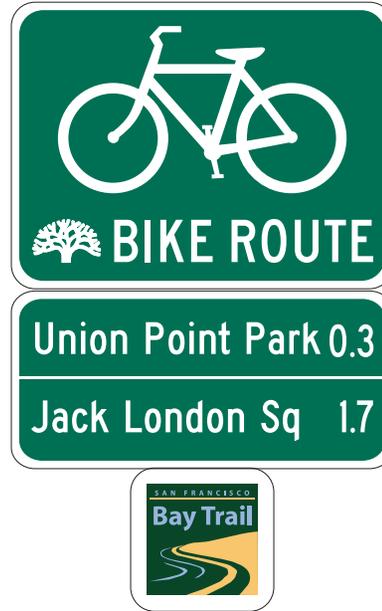
The resulting assemblies are taller and potentially confusing.

Turn signs are ambiguous: does the regular Bike Route continue ahead while the Bay Trail turns?

The decision sign presents two sets of decisions in one assembly.

When no logo is available and a name is used instead, the result is an excessively tall and difficult-to-read sign, particularly when named bike-ways intersect (see M7 series alternative on pg 6).

Confirmation Sign



Turn Sign



Ambiguity:
Do both the Bay Trail
and the bike route
turn right?

Decision Sign



**Custom D1-1b,
 "Highway Diagram" style**

Intent

Expresses the directions of named bikeways diagrammatically, somewhat like highway signs expressing complex highway junctions.

The direction of the named bikeway is indicated with arrows; the color of the arrows differentiates the named bikeway from unnamed city bike routes.

In addition, the arrow is labeled with the bikeway name in small text with the same color.

Problems

Diagrams are difficult for moving cyclists to read. Turn signs are ambiguous; does the Bike Route continue straight while the Bay Trail continues to the right?

Each D1-1b would be complicated both to design and manufacture. Costs per sign would be significantly higher.

An additional color or line symbol would be needed for other named bikeways, but would not improve comprehension.

The small text used to label named bikeways diverges from layout criteria and is too small to be visible to moving bicyclists; the destinations on the decision signs also depart from layout criteria.

Confirmation Sign



Turn Sign



Decision Sign



Additional Decision Sign Examples

Intersecting Named Bikeways

S17 alternative



"To Grizzly Peak" indicates that a cyclist should turn left onto the Grizzly Peak Bikeway to access the destination, Berkeley, while the Skyline Bikeway continues straight to EBRP Sibley. The resulting assembly is extremely tall, and difficult to interpret.

Modified D11-1 alternative



The bike symbol is used as a bikeway logo. The bike symbol does not effectively convey that the Skyline Bikeway continues straight to Redwood Rd and an unnamed bikeway can be taken to reach Canyon. Were another logo to be added, it would be ambiguous as to which direction the Skyline Bikeway continues.

M7 series alternative



Multiple M7 blades are used to indicate the names and direction of two named bikeways. The result is an excessively tall and difficult to read sign.

Highway Diagram-style alternative



Without exception, the problems incurred when incorporating one named bikeway into a wayfinding assembly are compounded when signing the intersection of two named bikeways, as these examples demonstrate.