SAN FRANCISCO ESTUARY PARTNERSHIP

San Pablo Avenue Green Stormwater Spine

Project Update/30% Design Review

June 24, 2013 Joshua Bradt






San Pablo Avenue Green Stormwater Spine Project Description/Approach

- Implement green infrastructure in 7 cities
- Treat 7 acres of impervious surface (min.)
- Emphasize vegetated approaches

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Four Key Project Goals

- Demonstrate Benefits of LID Retrofits
- Improve Water Quality
- Increase Public Awareness
- Increase Municipal Acceptance

Major Project Tasks	Timeline	Funding Source
Project Management/Admin	On-going-Dec 2015	All funders
Final Design & Engineering	Late Fall 2013	EPA/UG
Environmental Review & Permits	Spring 2013	EPA/UG
Construction & Construction Management	Late Fall-Early Winter 2013	Caltrans/IRWM/UG
Water Quality & Hydrologic Monitoring	Winter 2015	IRWM
Plant Establishment/Maintenance	Summer 2014-Winter 2015	IRWM/UG
Model Green Infrastructure Ordinance	Summer 2013	EPA
Regional Outreach	On-going-Dec 2015	IRWM

Status Update - Admin

Contracts & Agreements

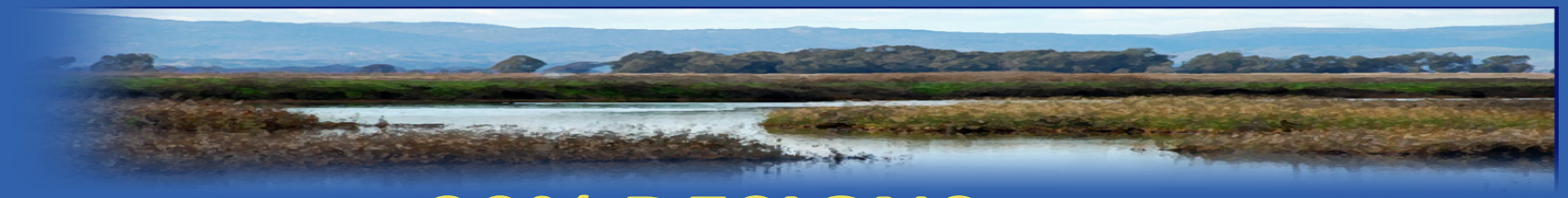
- Caltrans Cooperative Agreement
- Urban Greening Contract
- SFEI Monitoring Contract
- Bay Friendly Coalition Contract
- Design Contract Amendment
- Bay Friendly Rater (Gates & Associates)

Status Update – Admin (cont.)

- Contracts & Agreements Upcoming
  - ReNuwIt Monitoring Contract
  - City Agreements

Status Update – Design/Permits

- Topographic Surveys- complete
- Potholing- complete
- Soils Investigations- complete
- CEQA: Categorical Exemption- complete
- 30% Design Level - complete



30% DESIGNS

- 30% Title Sheet (Key Map, Notes, Legend and Abbreviations)
- 30% Demolition Plan
- 30% Street Improvement Design (including drainage improvements, signing, and striping)
- 30% Typical Cross Section(s)
- 30% Landscape Plans (with draft plant palette)
- 30% Cost Estimate
- Draft Design Report

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Oakland Site – Existing Conditions

Oakland Site #1

17th Street and San Pablo Avenue

[nev-ū-non]

Nevue | Ngan | Associates

QUADRIGA
landscape architecture and planning, inc.
sacramento | santa rosa

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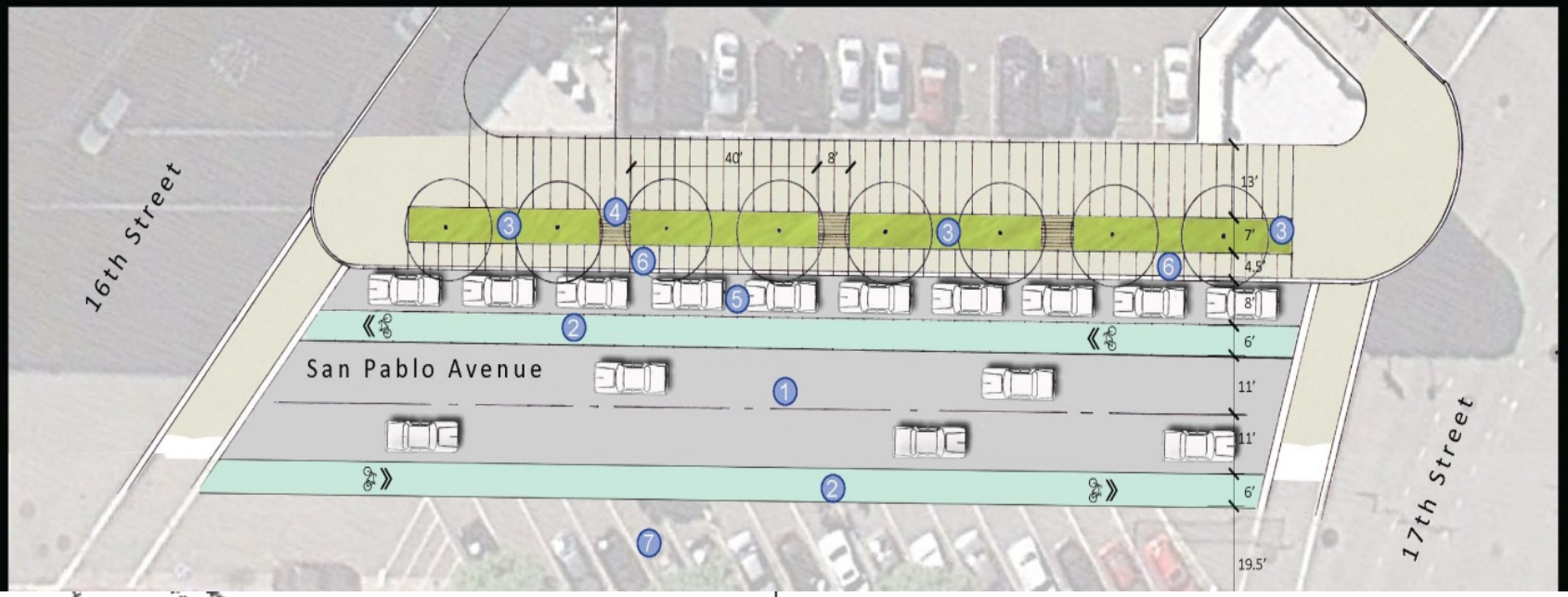

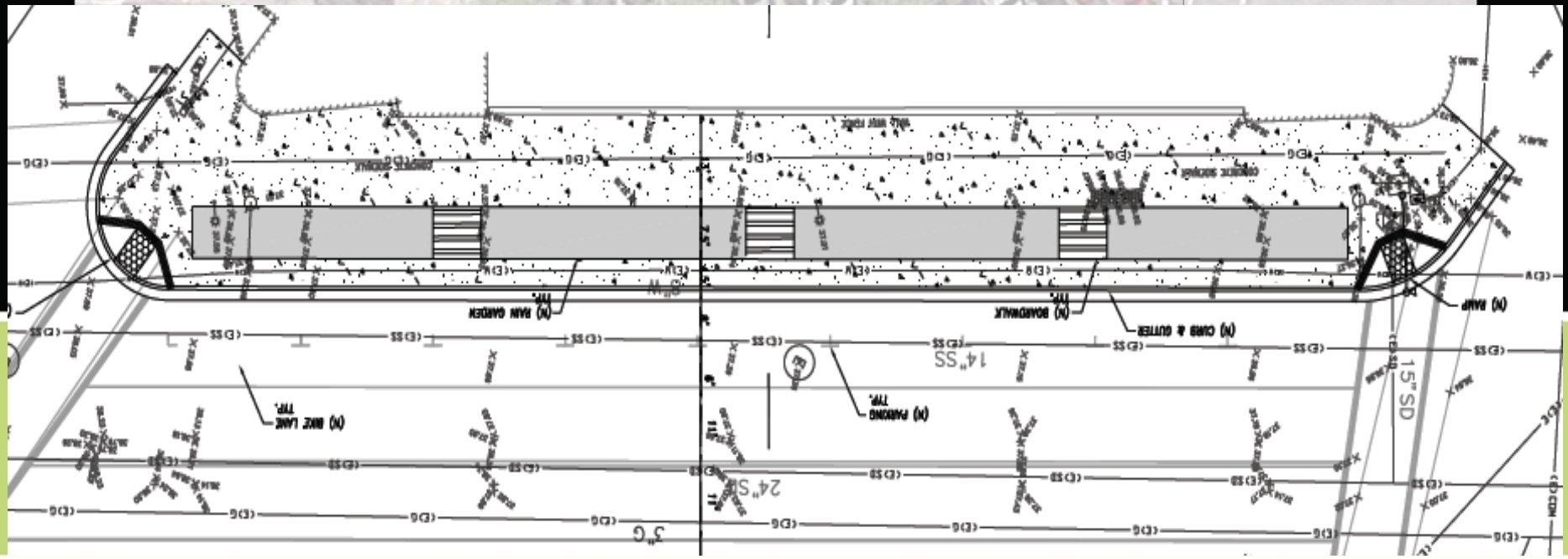

San Pablo Avenue Green Stormwater Spine Project

City of Oakland, California

[nev-ū-non] Nevue Ngan Associates

QUADRIGA landscape architecture and planning, inc. sacramento | santa rosa

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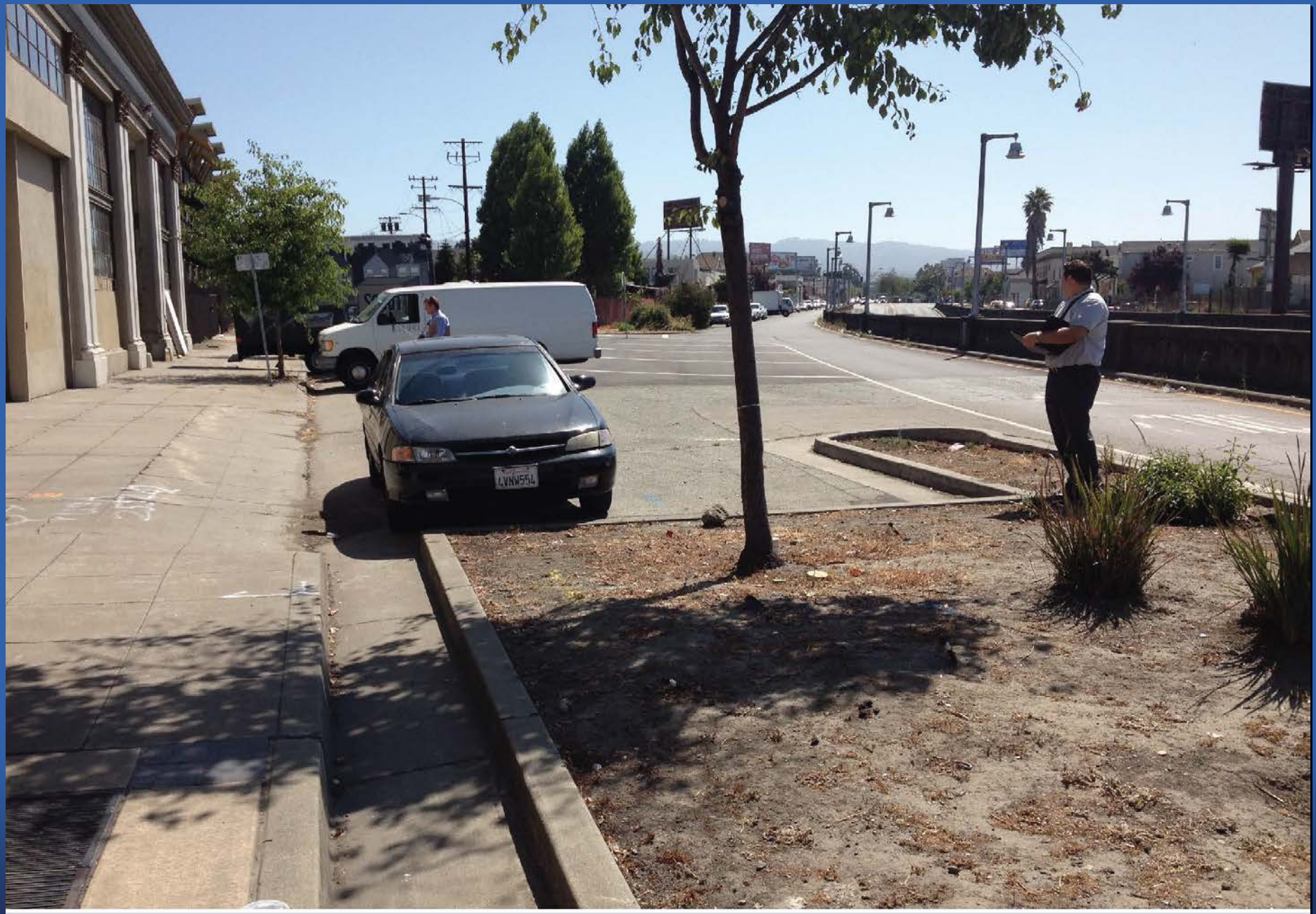
Emeryville – Existing Conditions



Emeryville Site

Apgar Street and San Pablo Avenue

[nev-ū-non]

Nevue | Ngan | Associates

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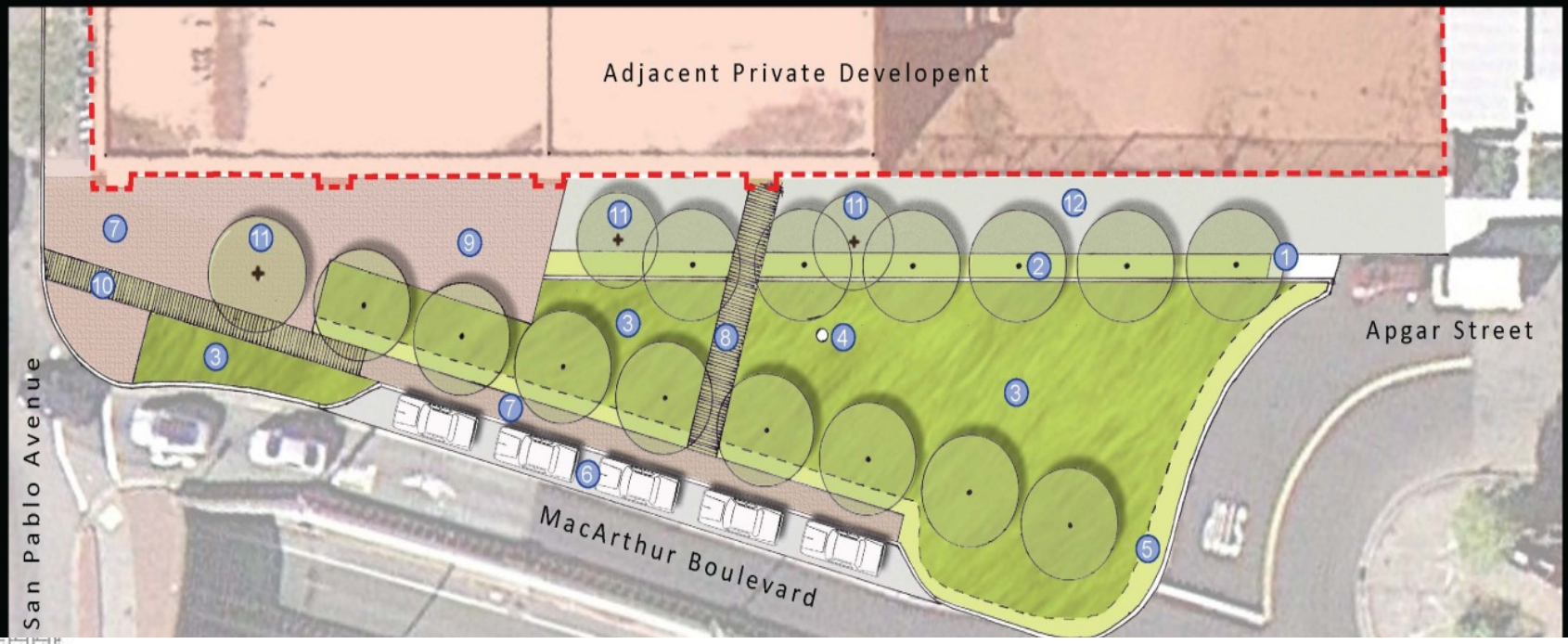
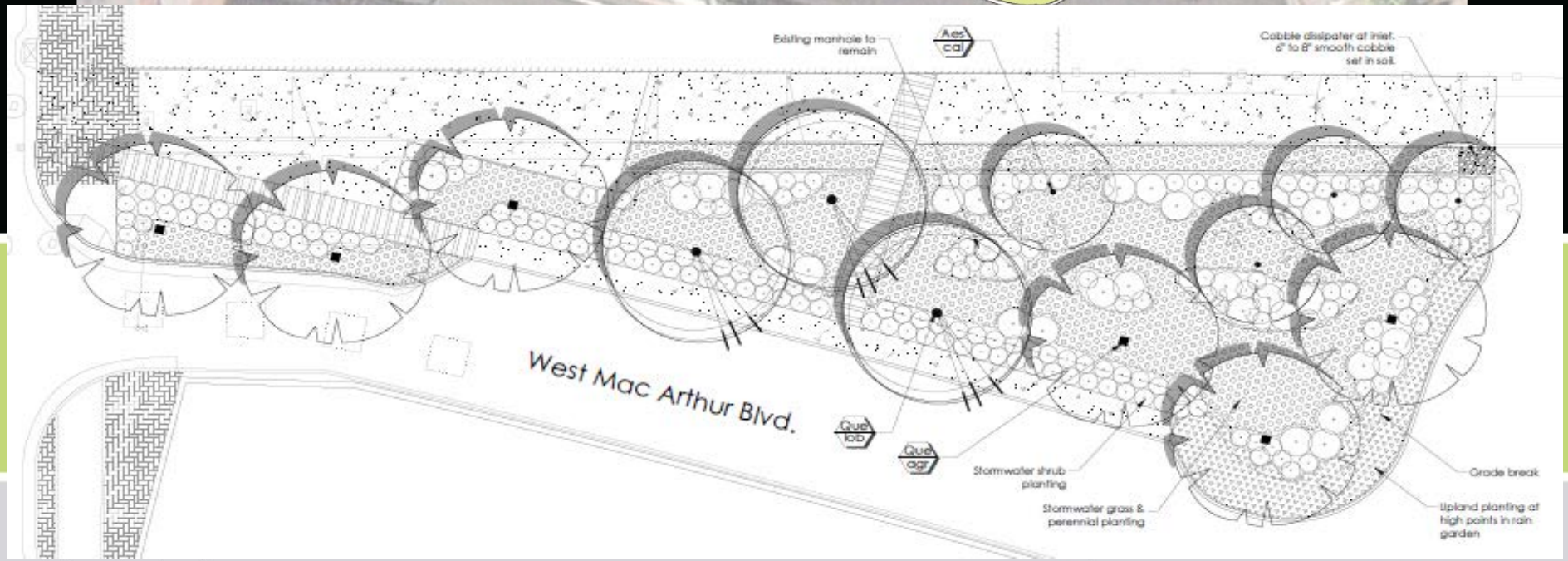
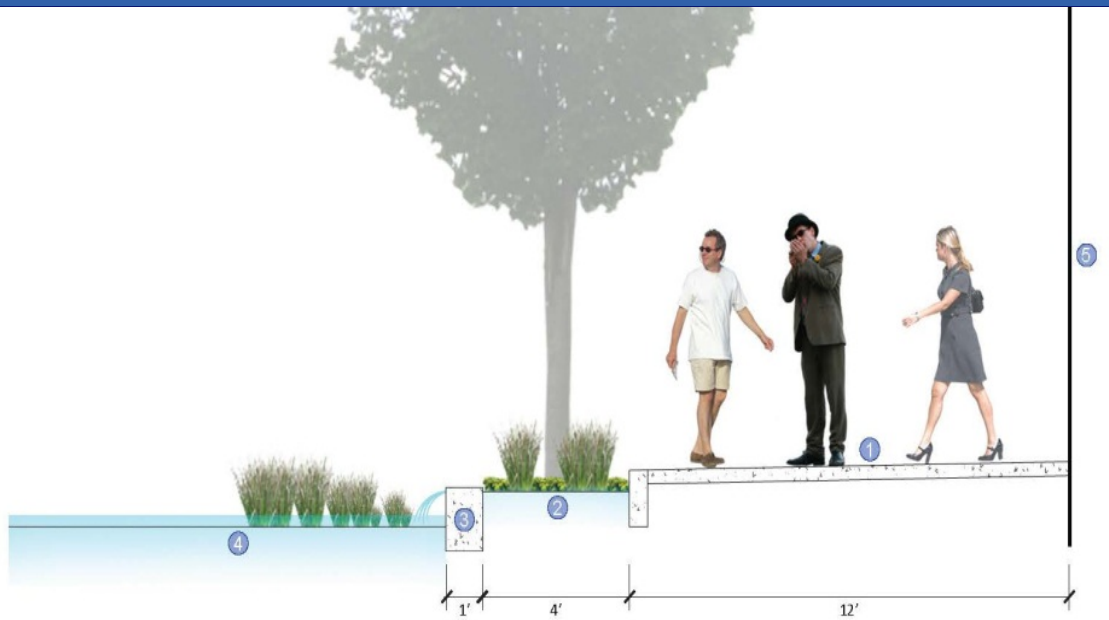
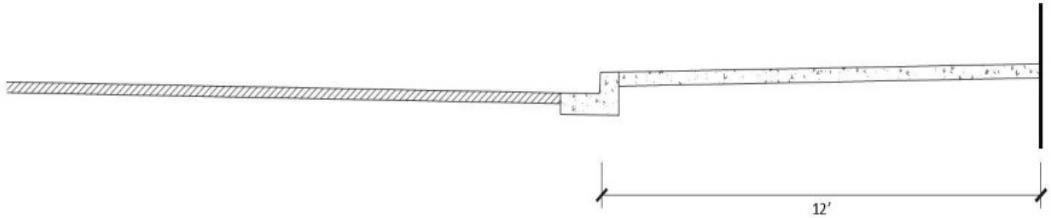

Adjacent Private Developent
Apgar Street
San Pablo Avenue
MacArthur Boulevard


Existing manhole to remain
Aes cal
Cobble dissipater at inlet. 6" to 8" smooth cobble set in soil.
West Mac Arthur Blvd.
Que lob
Que agr
Stormwater shrub planting
Stormwater grass & perennial planting
Grade break
Upland planting at high points in rain garden



Proposed Cross Section

Scale: 1"=3'



Existing Cross Section

Scale: 1"=3'

1. Existing sidewalk location remains the current width and allows stormwater to sheet flow into adjacent green gutter
2. Landscaped green gutter captures runoff from Apgar Street (soil grade is slightly below existing gutter flow line
3. A concrete retaining wall is used to separate grade from the green gutter to the rain garden landscape (cuts along the concrete retain wall allows water to spill over into the rain garden)
4. Rain garden finish grade is approximately 1' below existing gutter grade at its deepest location
5. The existing building overflow runoff could potentially be redirected into the rain garden through the concrete retain wall or by using an overhead conveyance system

1

LOCATION

Harrison (west) & San Pablo Ave

Opportunities:

- Several " no parking zone"areas along curbline can be converted to landscape space
- The existing McDonald's site frontage could be potentially used as a combined stormwater facility
- Highly visible project area in close proximity of Codornices Creek

Constraints:

- Existing mature trees limit the number and size of stormwater planters
- Stormwater catchment may be below the 1 acre capture goal

Recommendation:

- This is the design team's first choice due to the potential for converting inefficient asphalt space to stormwater curb extensions. Also, the existing McDonald's site already has on-site stormwater management and could help tell a complete stormwater story

San Pablo Avenue Green Stormwater Spine Project

City of Berkeley, California

Ex. St Light. not shown.

Telecom(SB) jt box Not shown will project into planter.

Make rain garden 8'

F. H.

(N) RAIN GARDEN TYP.

(N) CURB TYP.

(E) BUILDING

8'

4

City needs to talk w/ P.O.

Remove sidewalk

Existing sidewalk does not meet ADA requirements. place New sidewalk in back 4' clear.

Leave Existing Tree and make the rain garden 8'

Remove Sidewalk and place New Sidewalk in back 4'

SAN PABLO AVENUE

(N) CURB TYP.

(N) RAIN GARDEN TYP.

8

4'

0 5 10 20 30

0 1 2 3

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Albany Site – Existing Conditions

Albany Site #1

Monroe Street and San Pablo Avenue

[nev-ū-non]

Nevue Ngan Associates

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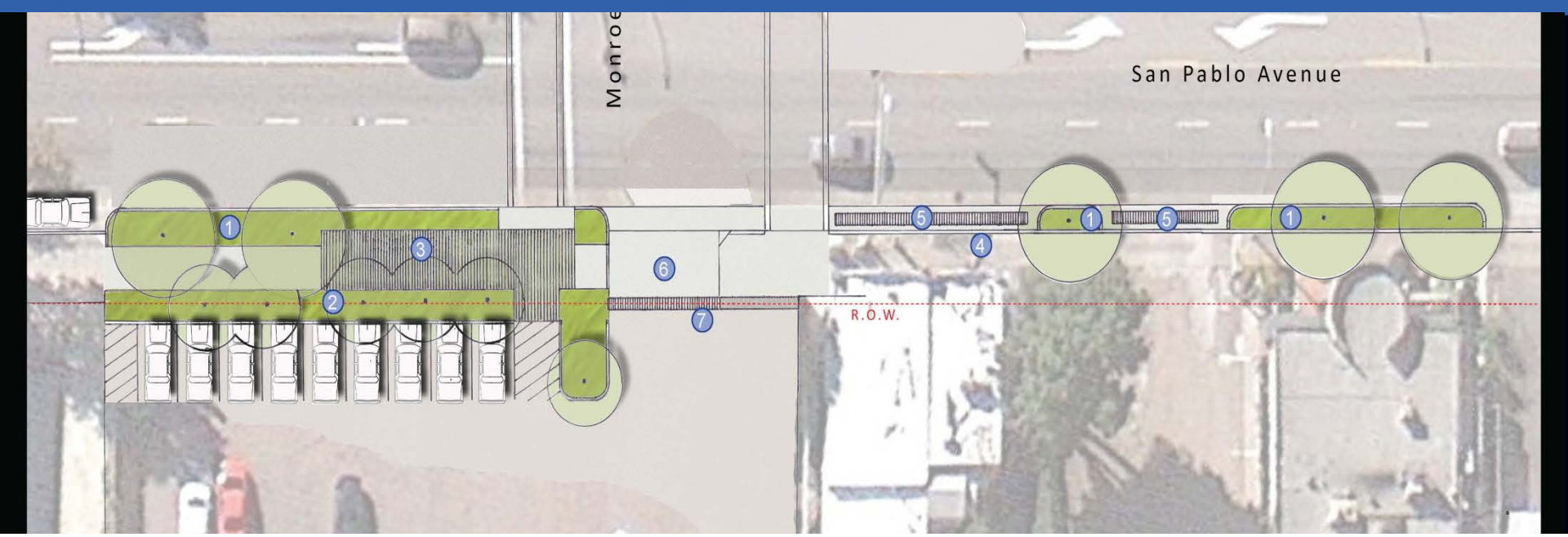
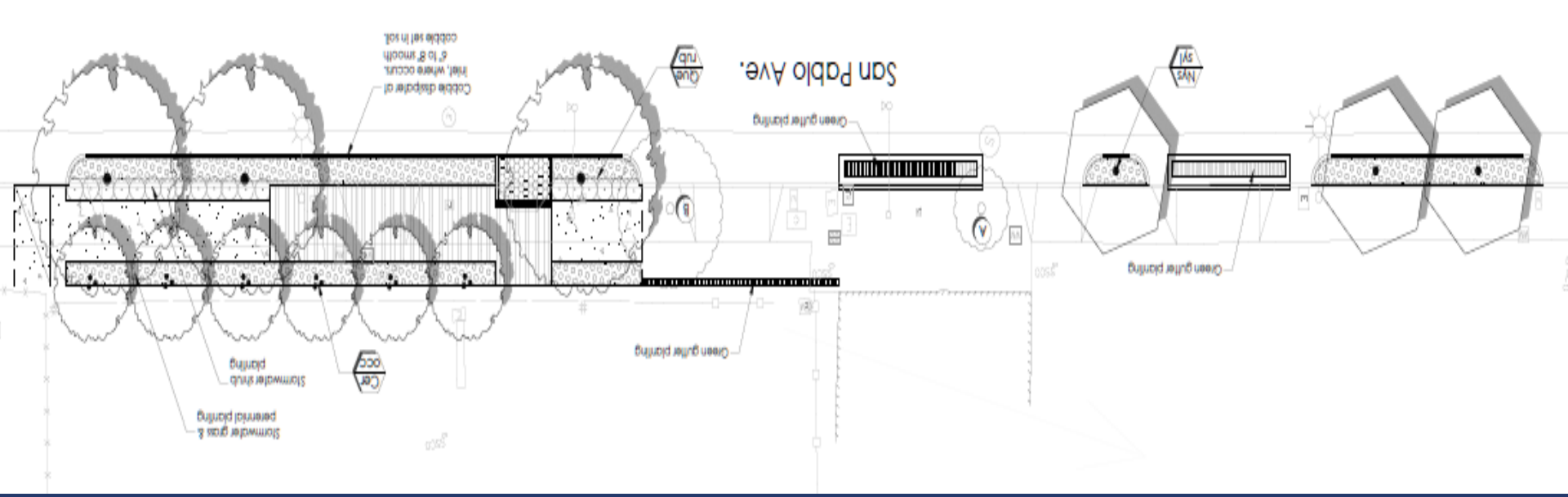
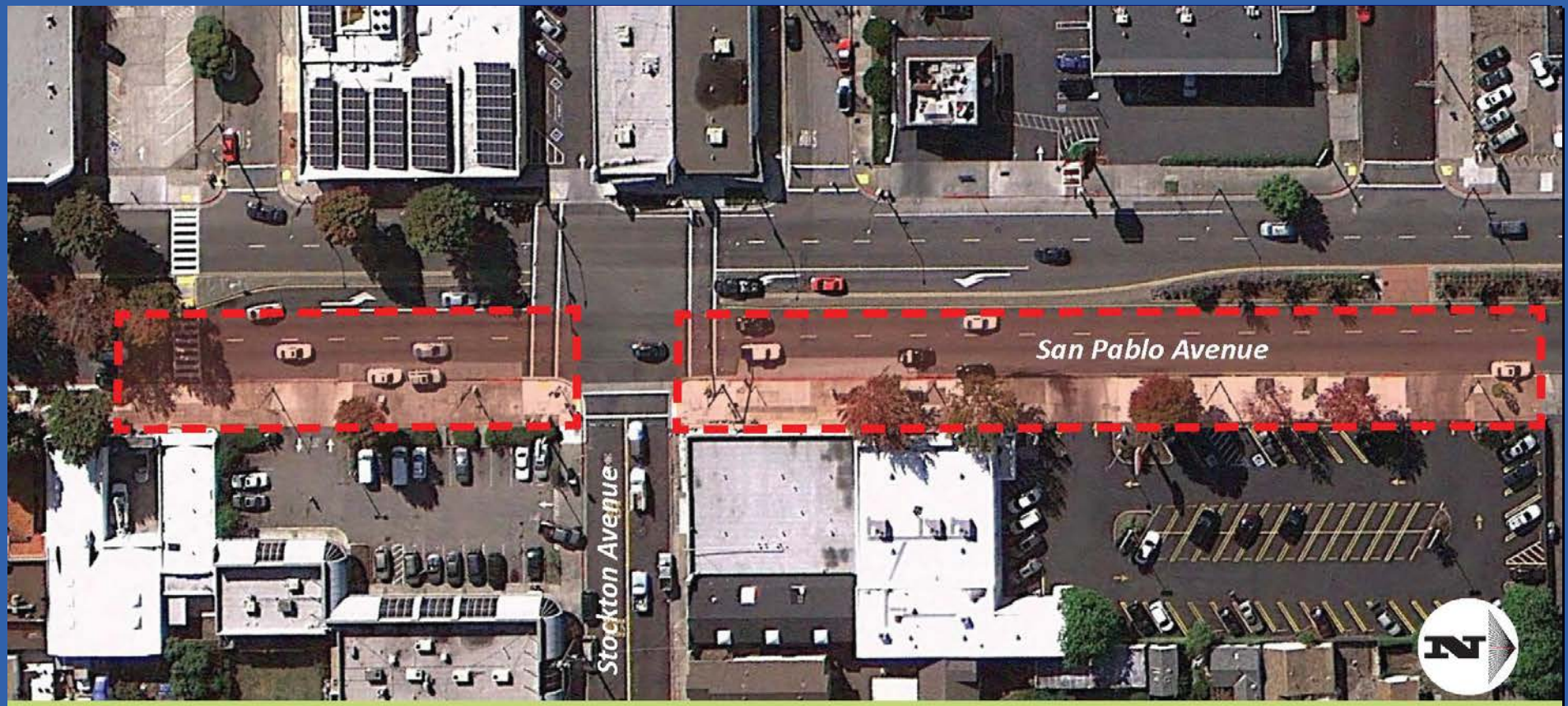

Monroe
San Pablo Avenue
1
2
3
4
5
6
7
R.O.W.


San Pablo Ave.
Green gutter planting
Green gutter planting
Green gutter planting
Stormwater gtrs &
perennial planting
Stormwater strip
planting



2

LOCATION

Stockton Ave & San Pablo Ave

Opportunities:

- Close to existing transit stop which provides a strong link to stormwater management and alternative transportation
- Could potentially manage private stormwater along San Pablo frontage
- Wide sidewalks and relatively low parking demand along San Pablo Avenue

Constraints:

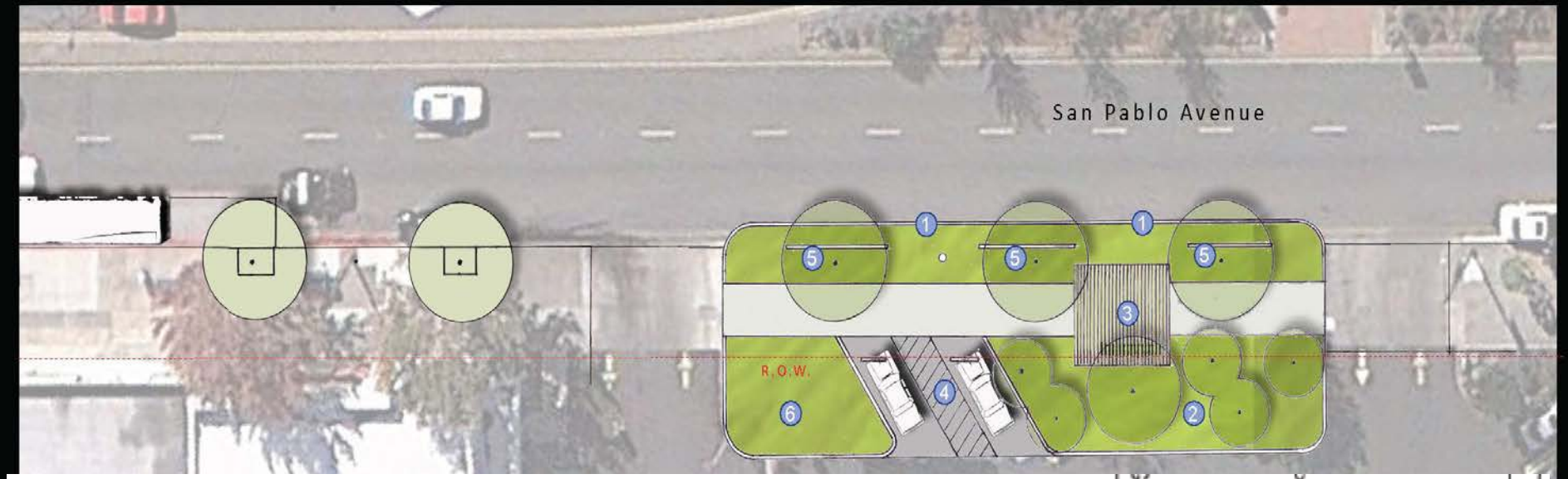
- Existing mature trees may limit the size and shape of stormwater planters
- There needs to be agreement and coordination with private developer to manage stormwater along frontage
- Considerable amount of impervious area entering the project site

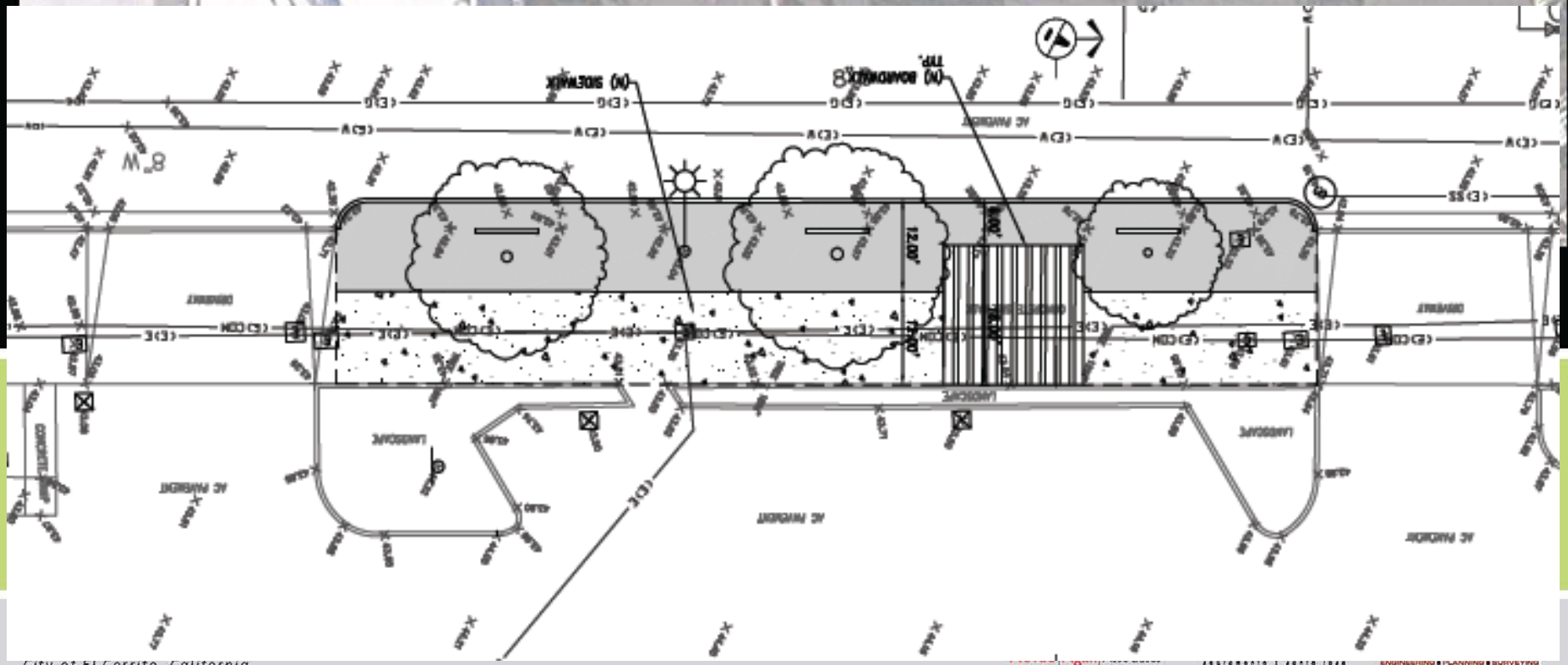
Recommendation:

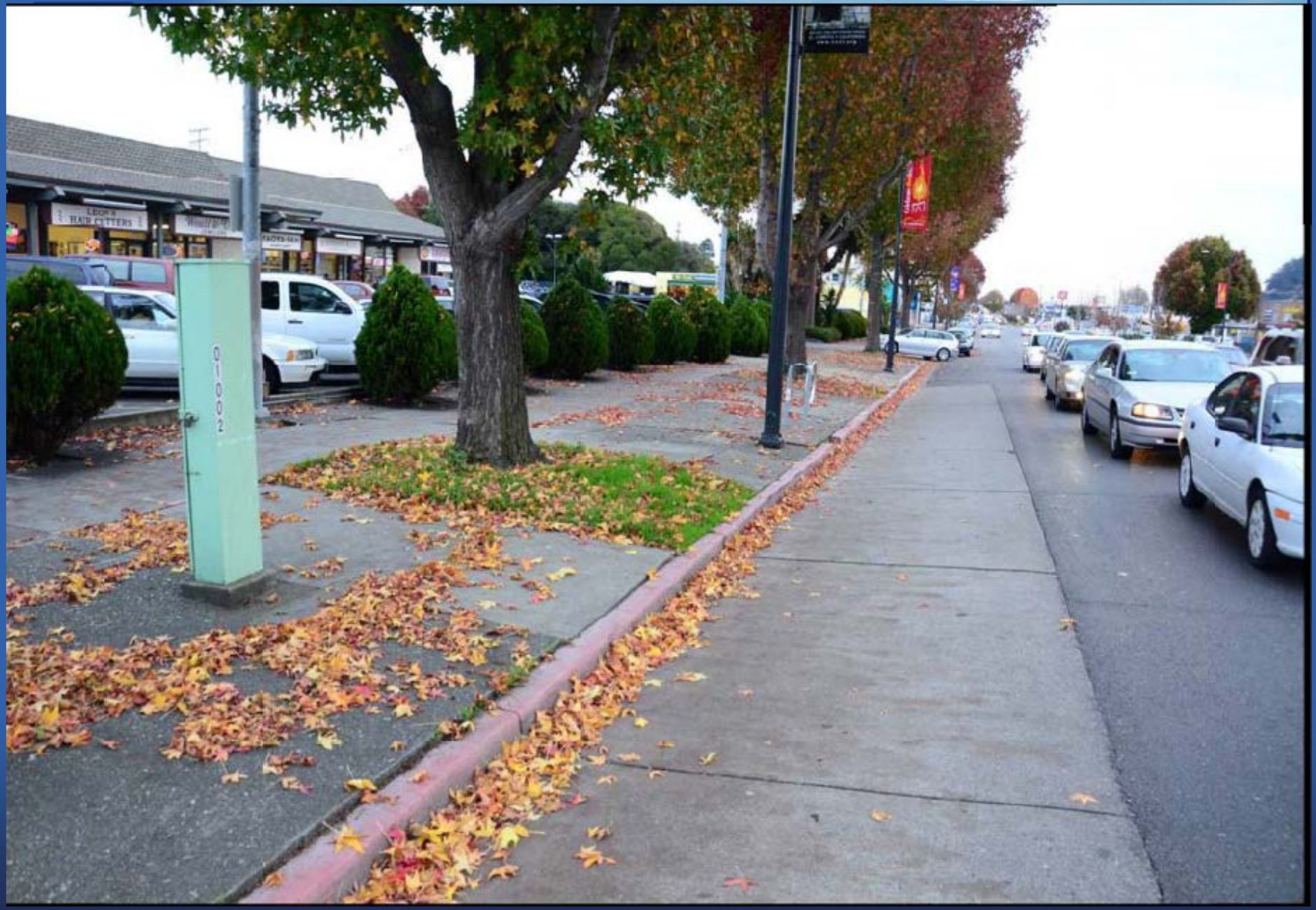
- Along with Site #1, this is the design team's first choice due to low parking demand along San Pablo Avenue, the potential to manage private stormwater along the San Pablo Avenue frontage, and the close proximity of a bus transit stop.

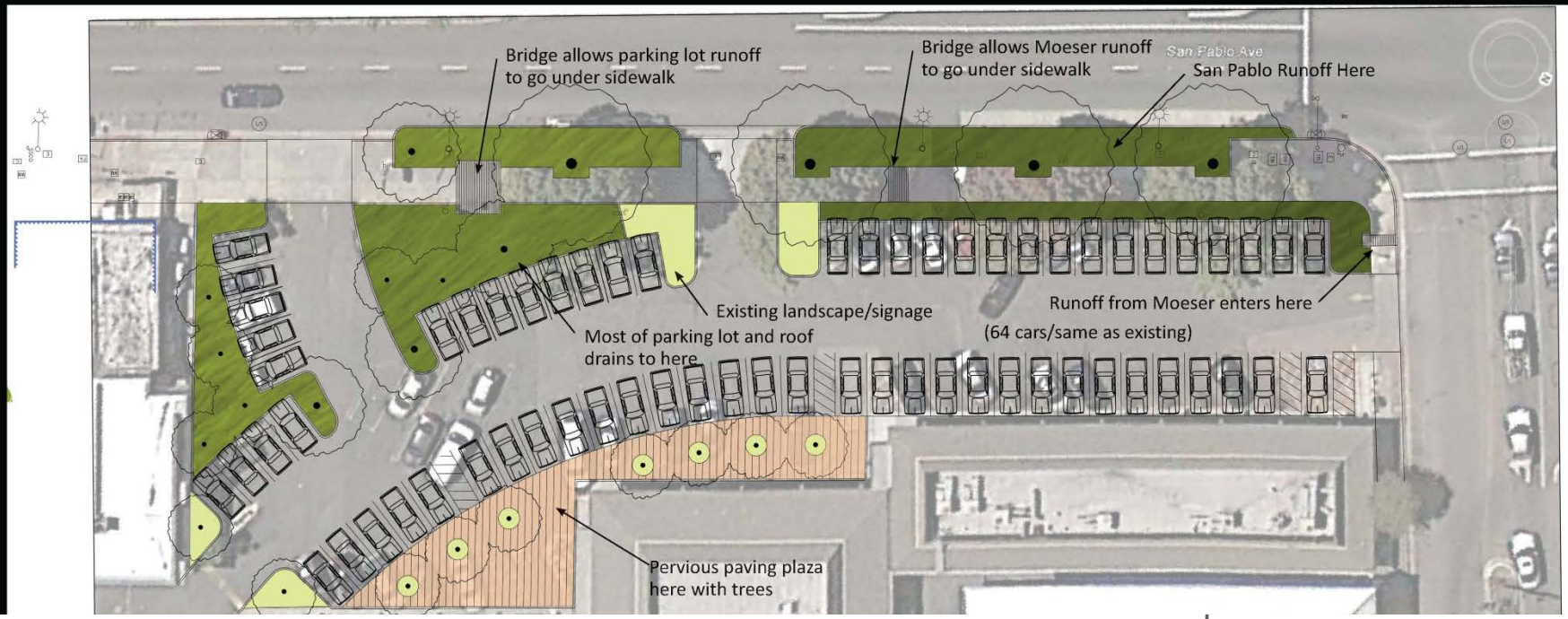
San Pablo Avenue Green Stormwater Spine Project

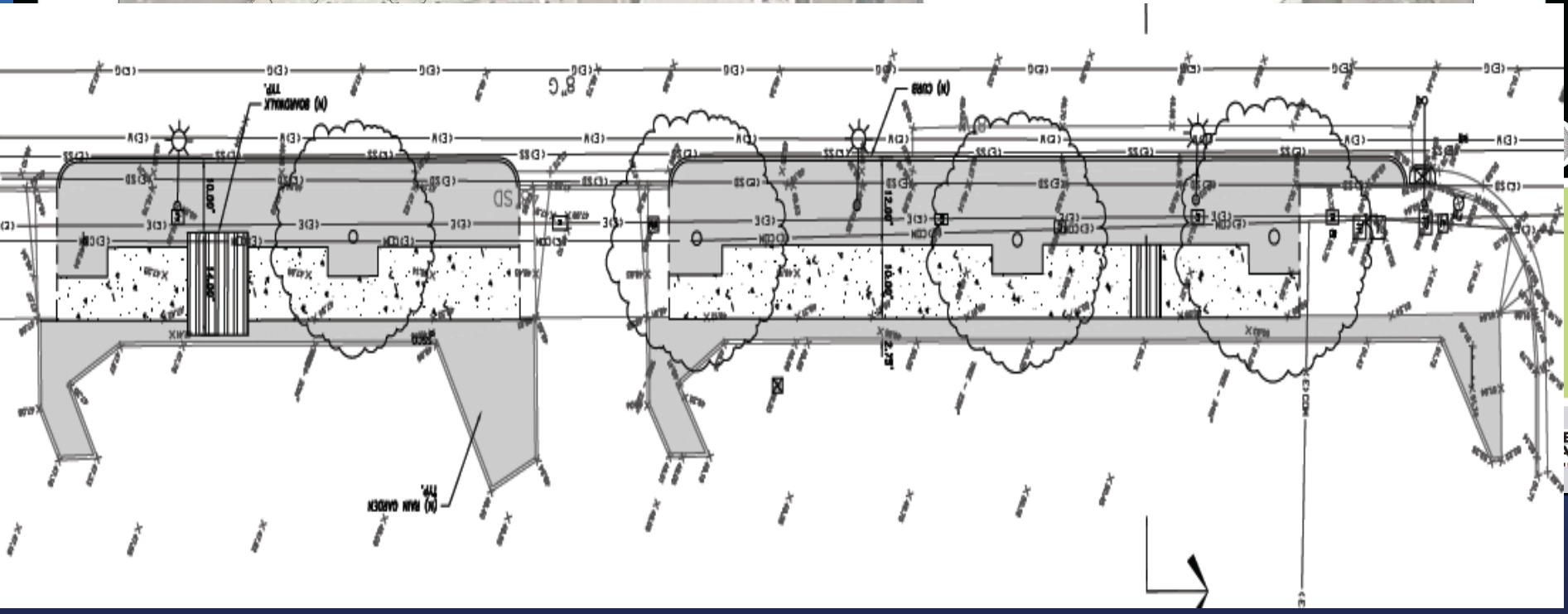
City of El Cerrito, California


San Pablo Avenue
R.O.W.
1
2
3
4
5
6




LEO'S
HAIR CUTTERS
01002


Bridge allows parking lot runoff to go under sidewalk
Bridge allows Moeser runoff to go under sidewalk
San Pablo Ave
San Pablo Runoff Here
Existing landscape/signage
Most of parking lot and roof drains to here
Runoff from Moeser enters here
(64 cars/same as existing)
Pervious paving plaza here with trees




PARKING AT REAR
Super COIN LAUNDRY
ANDERSON APPLIANCE
SMOG and GO
SMOG CHECK
IN BACK
BIKE ROUTE
I-80 BIKEWAY
EL CERRITO
ANDERSON APPLIANCE
Super COIN-OP Laundry
STOVES
REFRIGERATORS
FREEZERS
WASHERS
& DRYERS

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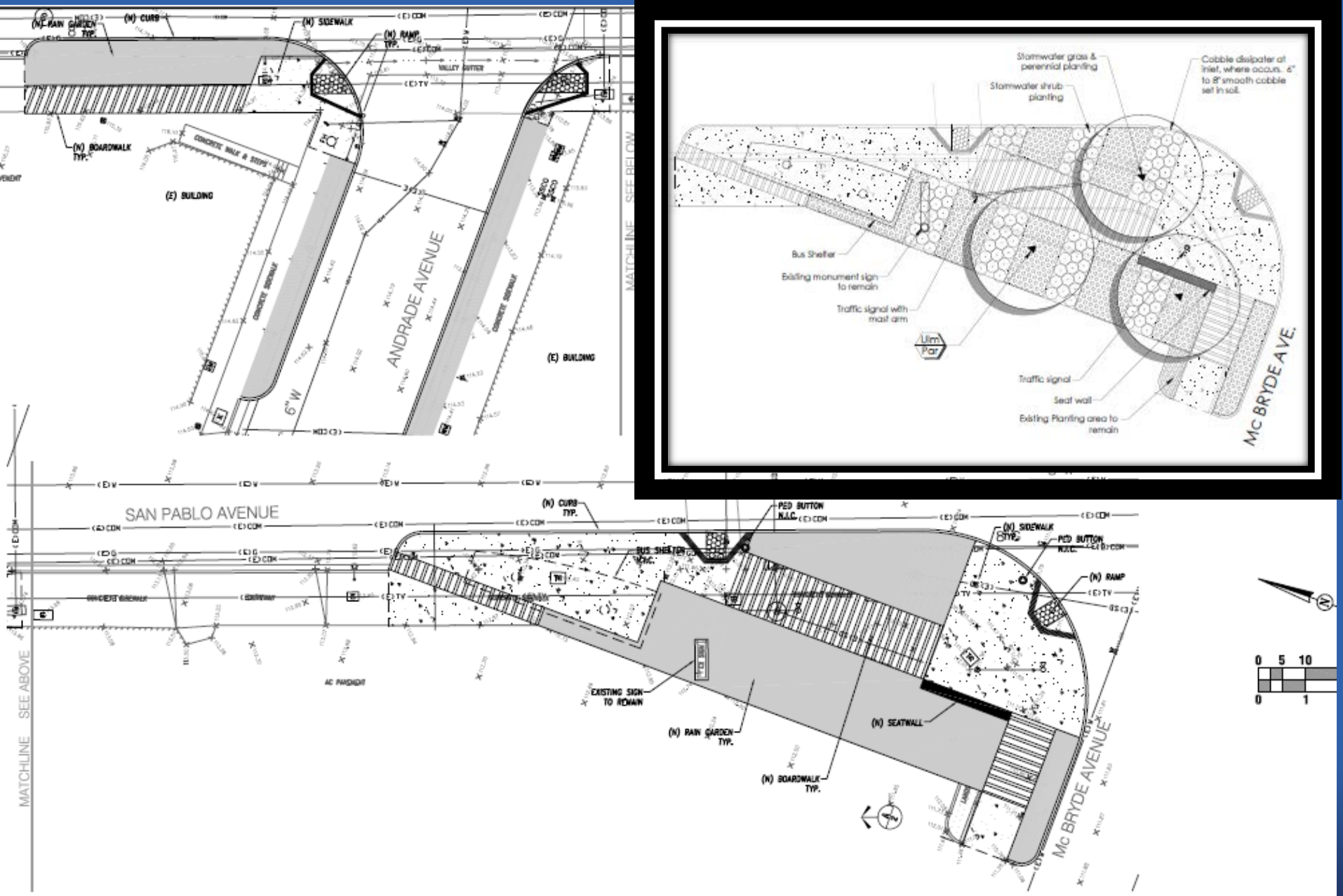
Stormwater Improvement Concept Plan

Scale: 1"=25'
May 2013

1. Stormwater curb extensions capture runoff from San Pablo Avenue, Andrade Avenue, and McBryde Avenue.
2. A new rain gardens capture stormwater from private parking lot. This will require acceptance and coordination of improvements with private owner.
3. Boardwalks allow stormwater to be connected between the curb extensions and rain garden.
4. Existing parking spaces are modified to allow for only parallel parking, however, additional parallel parking is allowed on McBryde Avenue
5. A new bus stop canopy conveys stormwater to adjacent rain garden (by others).
6. Trench drains used for stormwater conveyance.
7. A new corner plaza for placemaking opportunity (art, pedestrian seating, other amenities by others).
8. Boardwalk allows for additional stormwater storage adjacent to stormwater curb extension.
9. Existing private signage/utilities are to be protected within rain garden.
10. Optional new bike racks (by others)



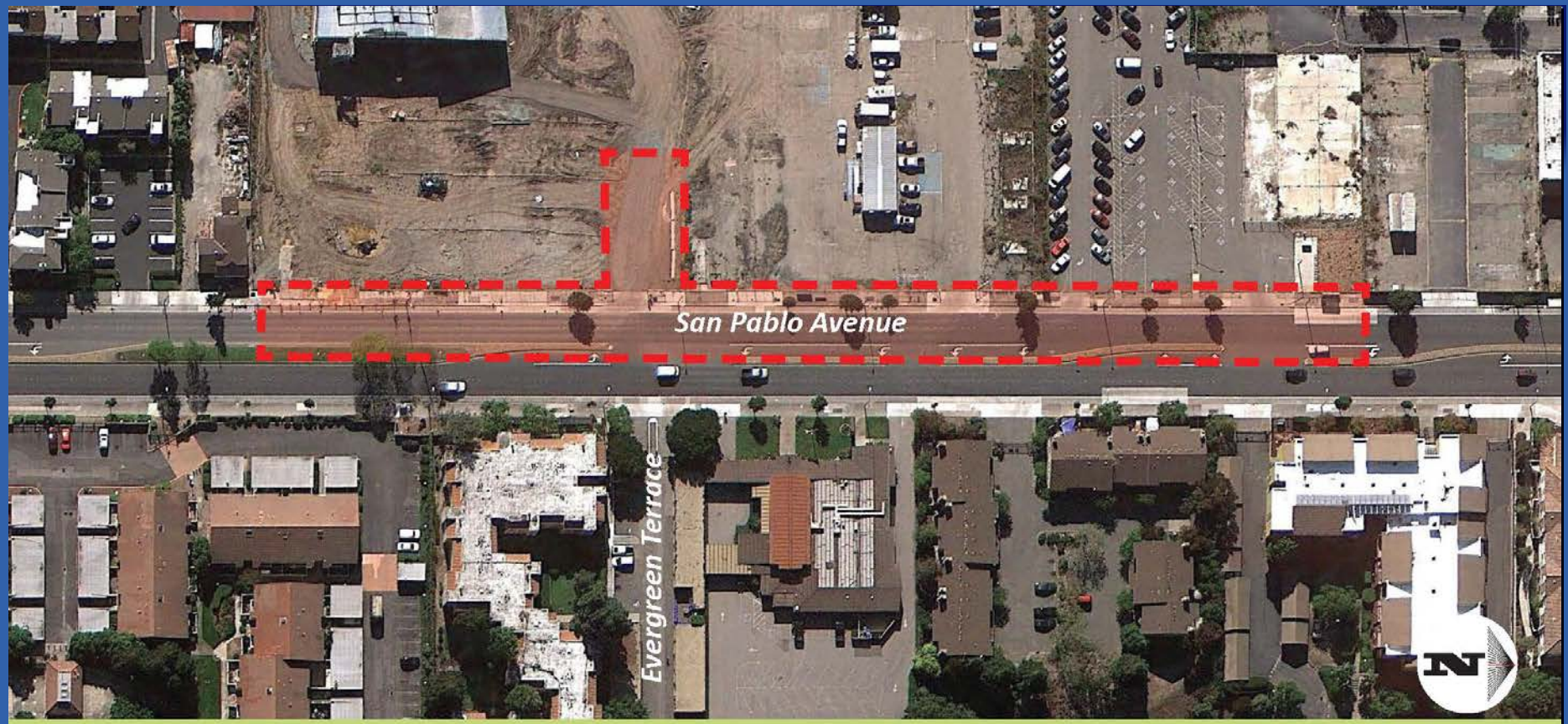
SAN FRANCISCO ESTUARY PARTNERSHIP
1212 CLAY STREET, SUITE 1400
OAKLAND, CA 94612

NO.	DATE	ISSUE / REVISION DESCRIPTION	BY
1	09/10/13	30% DESIGN SUBMITTAL	BSD

WILSEY HAM
ENGINEERING • PLANNING • SURVEYING
2130 La Salva Street, Suite 100
San Mateo, CA 94403
650 / 349-2765
Fax 650 / 349-4921

Project Mgr.	S.Davis	09/06/13
Project Engr.	S. Cohen	09/06/13
Designed	S. Cohen	09/06/13
Checked	S. Davis	09/06/13
Drawn	P.Bullinger	09/06/13
Submitted	bdavis	09/06/13
	BY	DATE

SAN PABLO AVENUE
GREEN STORMWATER SPINE
RICHMOND, CA SITE
STREET IMPROVEMENTS
CONTRA COSTA COUNTY



1

LOCATION

Evergreen Terrace & San Pablo Ave

Opportunities:

- Could potentially manage building and street stormwater along the San Pablo frontage
- Highly visible site with many users
- Can potentially route a portion of San Pablo Street overflow runoff into adjacent private development stormwater facilities

Constraints:

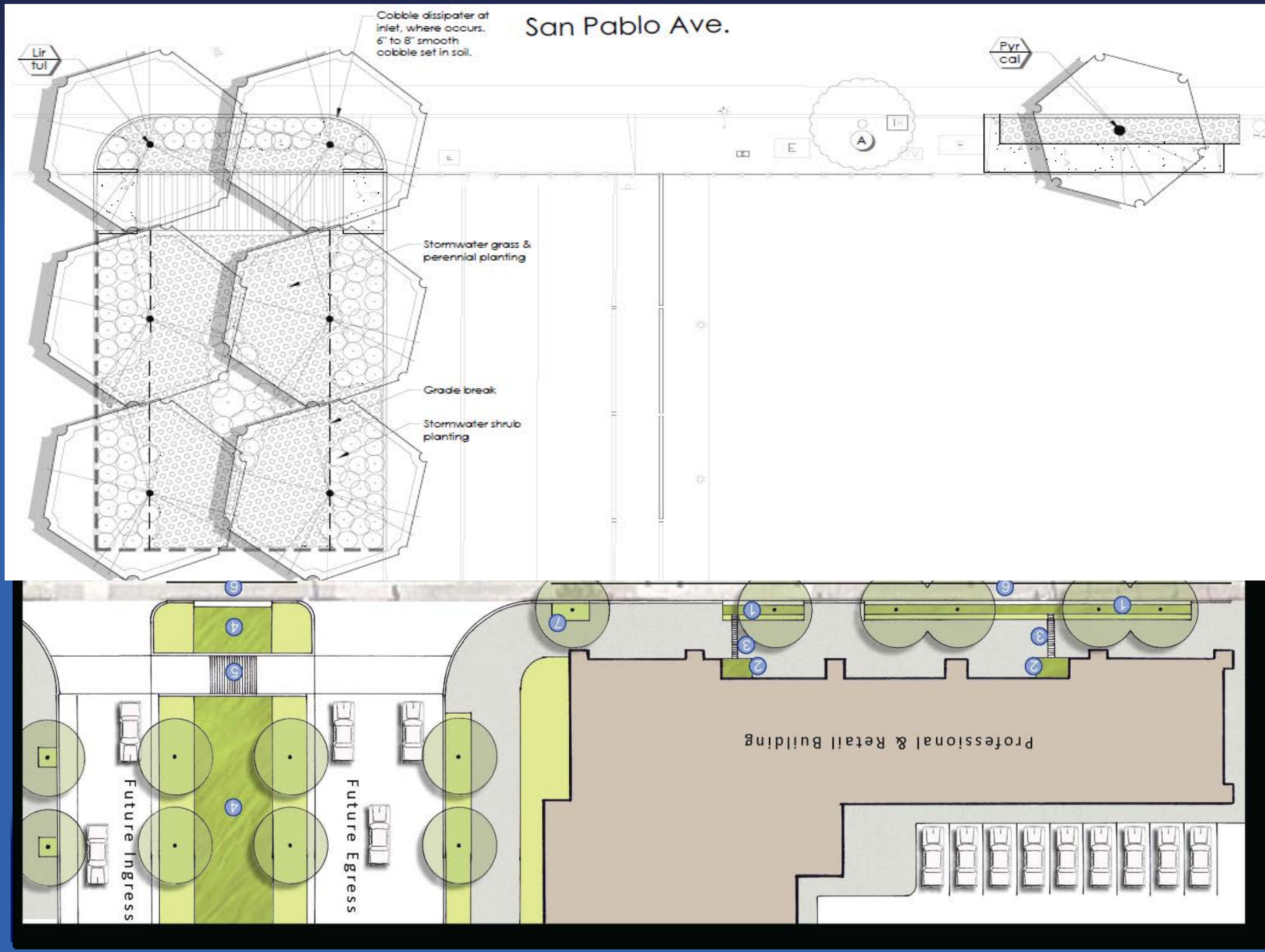
- Minimal opportunity to manage stormwater within the street due to existing bike infrastructure
- Existing mature trees exclude or limit the use of stormwater planters

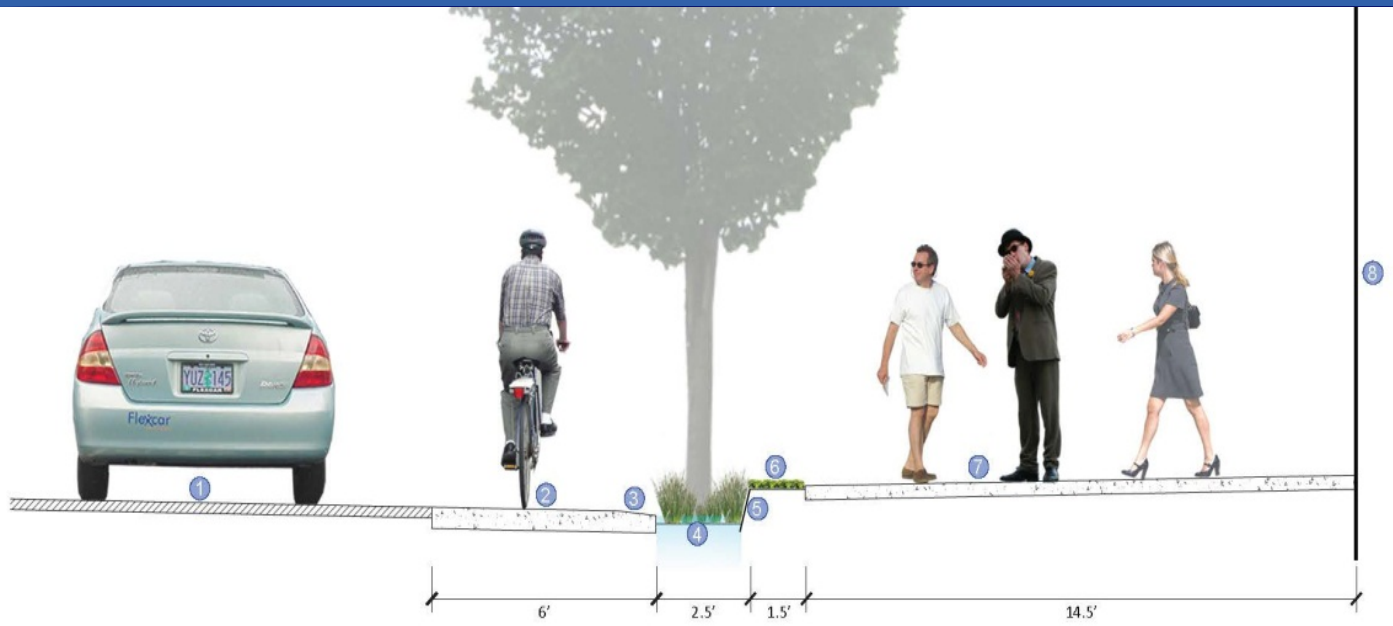
Recommendation:

- The design team recommends this site due to it's proximity to a highly used development project and the ability to potentially manage building and street runoff along the San Pablo Avenue frontage

San Pablo Avenue Green Stormwater Spine Project

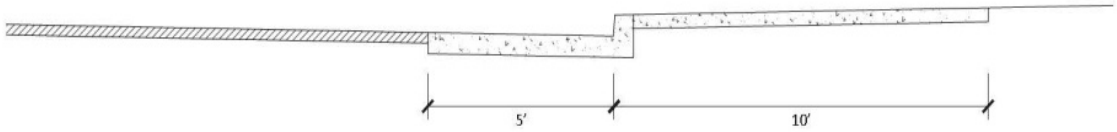
City of San Pablo, California


San Pablo Ave.
Cobble dissipater at inlet, where occurs. 6" to 8" smooth cobble set in soil.
Lir
tul
Pyr
cal
Stormwater grass & perennial planting
Grade break
Stormwater shrub planting
Future Ingress
Future Egress
Professional & Retail Building



Proposed Cross Section

Scale: 1"=3'



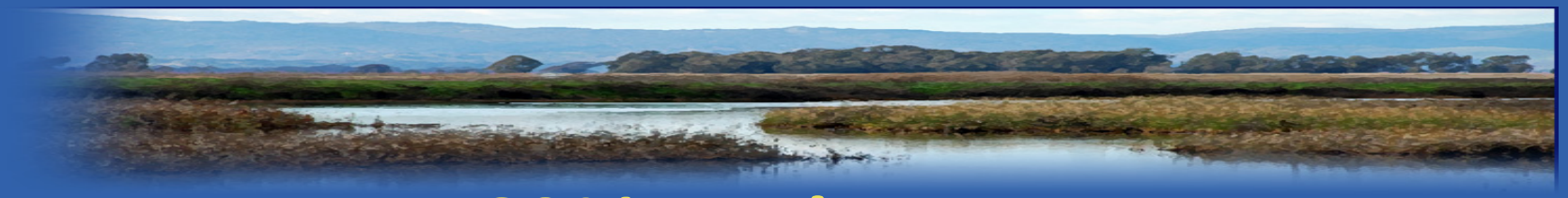
Existing Cross Section

Scale: 1"=3'

1. Existing asphalt travel lane remains the same
2. Existing concrete bike lane/gutter pan is widened to 6 feet.
3. Outside edge of bike lane is graded to incent stormwater sheet flow into green gutter as lessens grade change between bike surface and landscape surface
4. Stormwater is captured in shallow green gutter system
5. A thin profile metal retaining wall is used to separate grade from the sidewalk zone to the green gutter landscape (The grade change from the sidewalk to the landscape area is only about 9")
6. An 18" landscape strip captures sidewalk runoff and acts as a tactile warning measure along the sidewalk zone.
7. Sidewalk zone is expanded from the current 10' to approximately 14.5'
8. Approximate building face location (varies)

30% Design Summary Info

- **Total Area Treated:** 10.9 acres (9.4 ac to Caltrans)
- **Total Cost:** $1.7M (no contingency, no irrigation)
  - Irrigation estimate: $100K for all sites, including design
- Total with Irrigation + Contingency (25%) = $2.25M



60% Design

- 60% Title Sheet
- 60% Demolition Plan
- 60% Street Improvement Designs (including utility relocations)
- 60% Typical Cross Section(s)
- 60% Landscape Planting Plans
- 60% Construction and Planting Details
- 60% Cost Estimate
- Special Provisions (Caltrans format: single edition TBD)

Draft Green Streets Model Ordinance

- Literature Search
- Compiled Existing & Model Ordinances and Guidance Documents
- Solicited support from select City Partners
- Draft Ordinance & Memorandum on Basecamp for review/feedback

DRAFT COMMUNITY MEETING AGENDA

- **Project Overview**
  - Goals
  - Funders/Partners
  - Roles
  - Schedule
- **Review Draft Plans**
  - Highlights of each plan
  - Why selected (opportunities/constraints)
- **Identify Local Issues/Concerns**
- **Breakout – Posters (Community attendees)**
  - Sticky notes + drawing on plan sets

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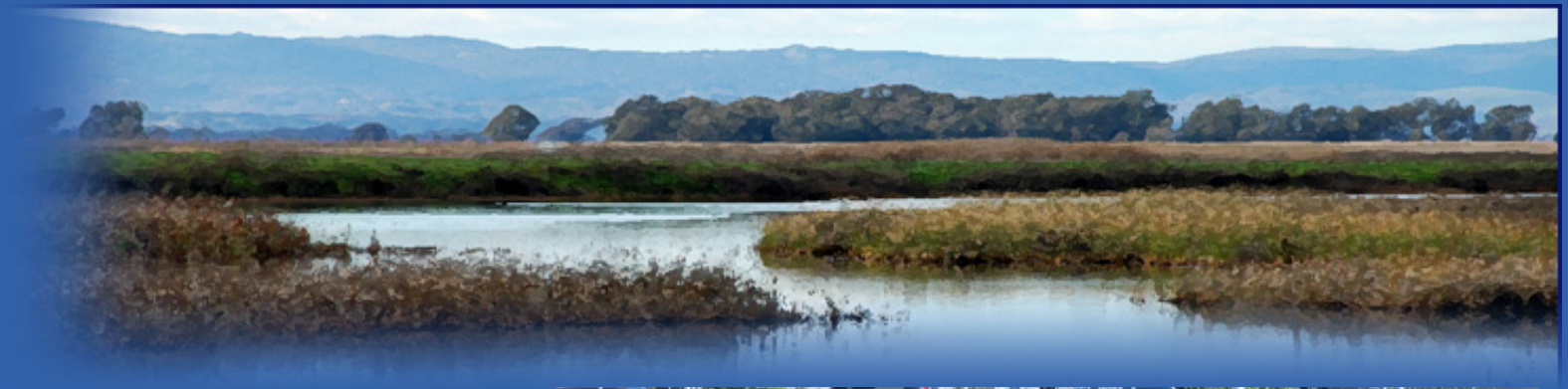

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