

HACIENDA AVENUE GREEN STREET IMPROVEMENT PROJECT



Green Infrastructure Workshop
November 29, 2018

Hacienda Avenue





- Excessively wide right of way
- Poorly defined travel lanes
- PCI's ranged from 5 to 32
- Inconsistent pavement sections
- Severe potholes



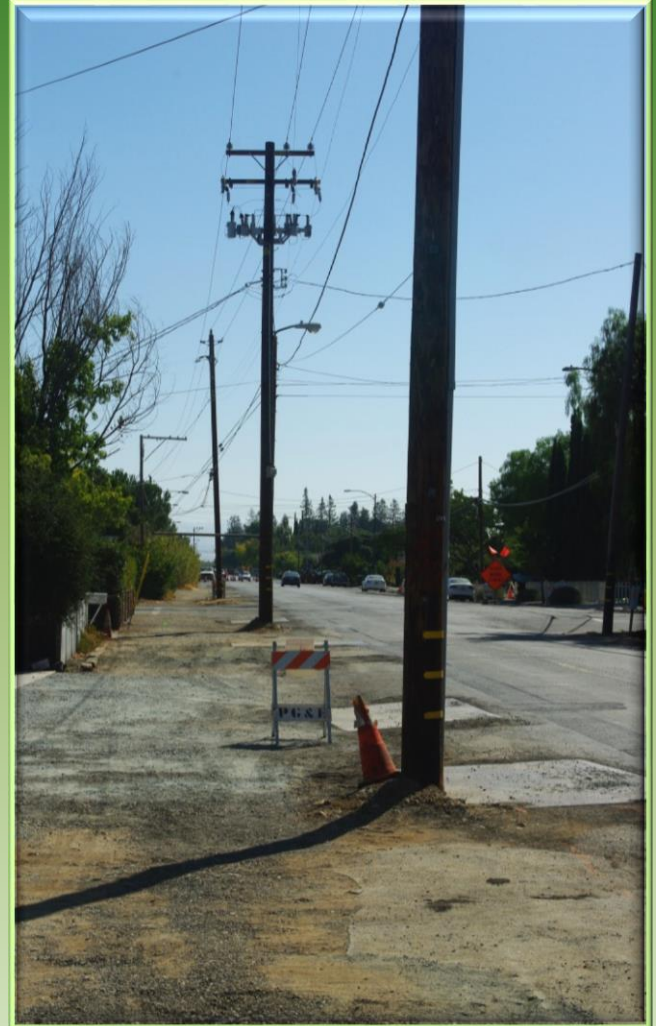


- Lack of sidewalks
- Uneven walking surface
- Missing ADA ramps





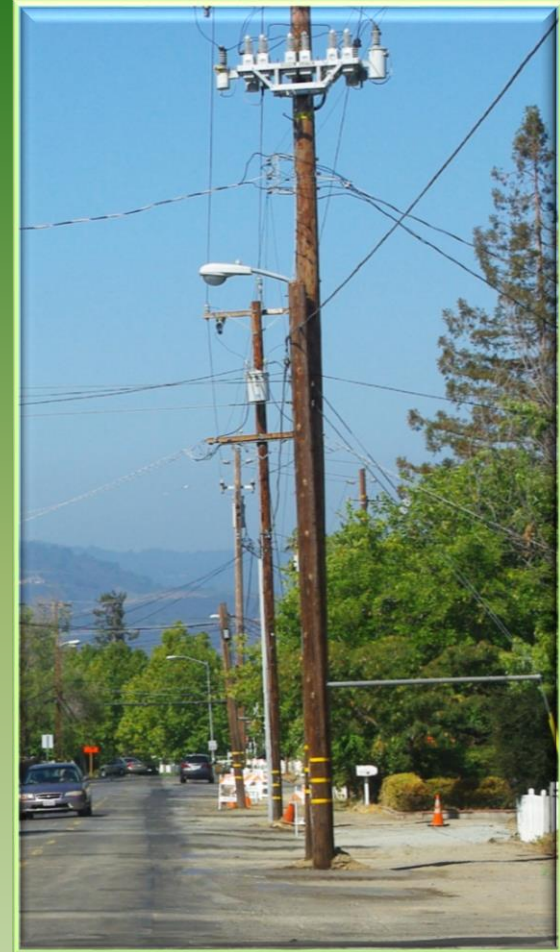
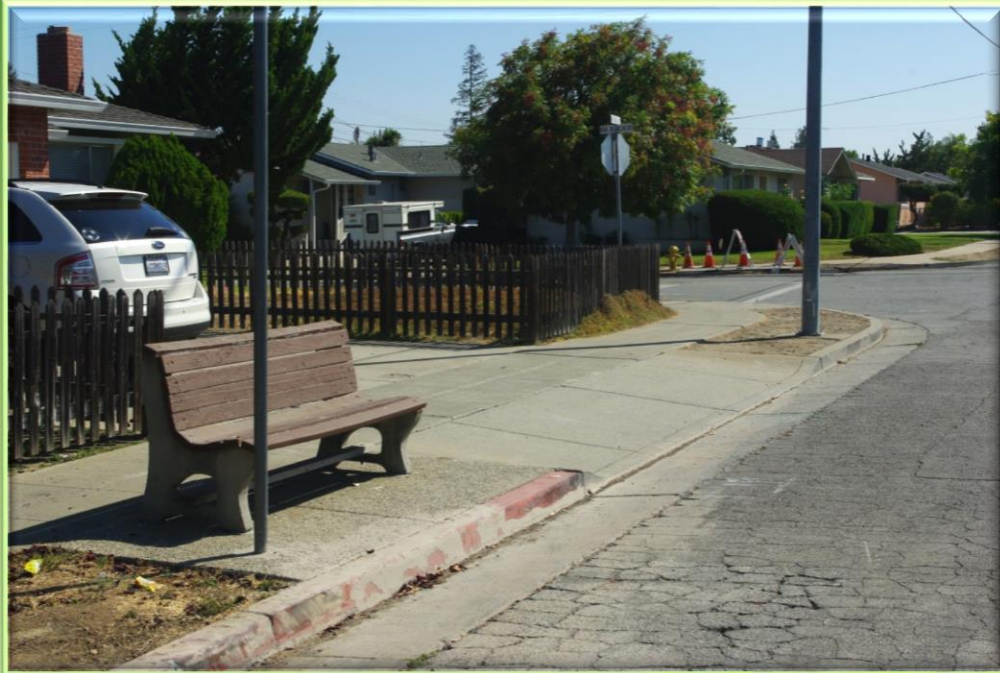
- No defined bike lane
- Potholes, rough pavement
- Parked cars



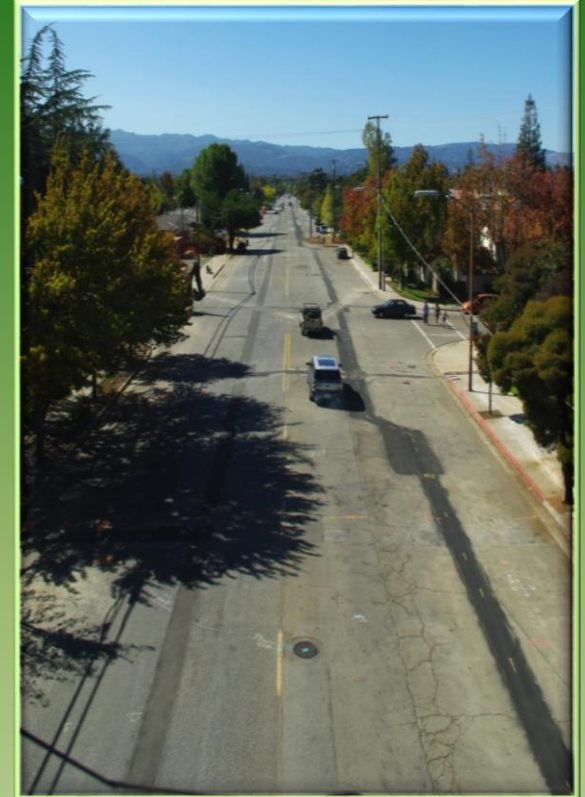
- Inadequate storm drain facilities
- Areas of localized flooding
- Flat grate inlets at various low point



- **Outdated bus stops**
- **Poorly located**



- **Inconsistent street lighting**
- **HPS street lights on wood poles**



- **Excessively wide pavement – speeding, passing on right**
- **Divides community**

The Search for Funding



The Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 (Proposition 84)



Source/Use of Funds

Source of Funds:

• City Funds (60%)	\$ 4,023,525
• Grant Funds (40%)	<u>\$ 2,634,000</u>
Total Source of Funds	\$ 6,657,525

Use of Funds:

• Design (6%)	\$ 429,000
• Construction Engineering (7%)	\$ 459,000
• Construction (87%)	<u>\$ 5,769,525</u>
Total Use of Funds	\$ 6,657,525

Schedule

- Original proposal to include Hacienda in CIP 2007-2008
- Grant applications and awards 2009-2012
- Approval of conceptual design Nov. 2012
- PS&E approval Oct. 2013
- Caltrans – authorization to proceed (E76) Feb. 2014
- Advertise for bids / Begin utility relocations March 2014
- Open bids April 2014
- Award construction contracts June 2014
- Begin construction July 2014
- End construction Fall 2015

Green Street (90% Complete)





Completed Improvements



Condition:

Major puddles, inadequate storm drainage

Recommended Treatment:

Redesign street, treat stormwater in bio-infiltration basins

- Move curb line toward street - install bio-infiltration
- No-mow sod and diverse plantings
- Basins designed for 80% capture
- Street trees in parking lane



Storm Water Treatment

- Treatment Details
 - Sized Using SCVURPPP Methodology
 - Combination Flow and Volume Approach
 - Total Project Drainage Area = 18 acres
 - 63 Individual Drainage Areas
 - Capturing 0.95 ac-ft of runoff (Greater than 80% of the average annual rainfall-project wide)



Storm Water Treatment (cont'd)

- Bio-Infiltration Areas

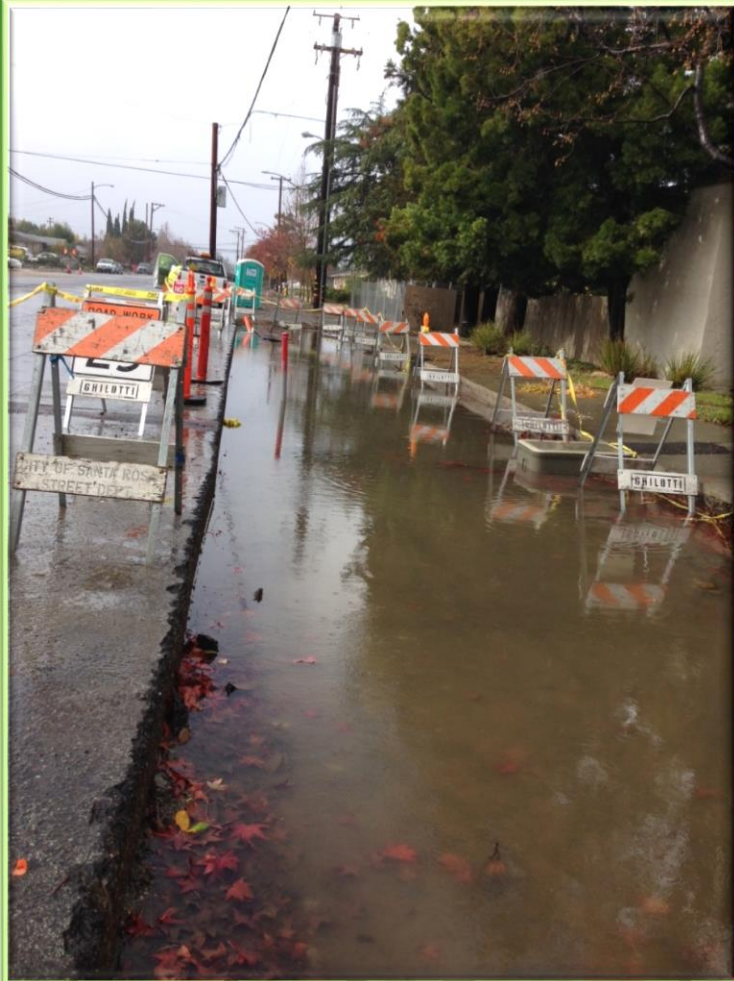
- 3 ft Deep Section
- 3:1 Side Slopes
- Overflow Pipes
- Perc. at 4 inch/hr

- Water Monitoring

- San Francisco Estuary Institute (SFEI)



Before
(No Bio-Infiltration)



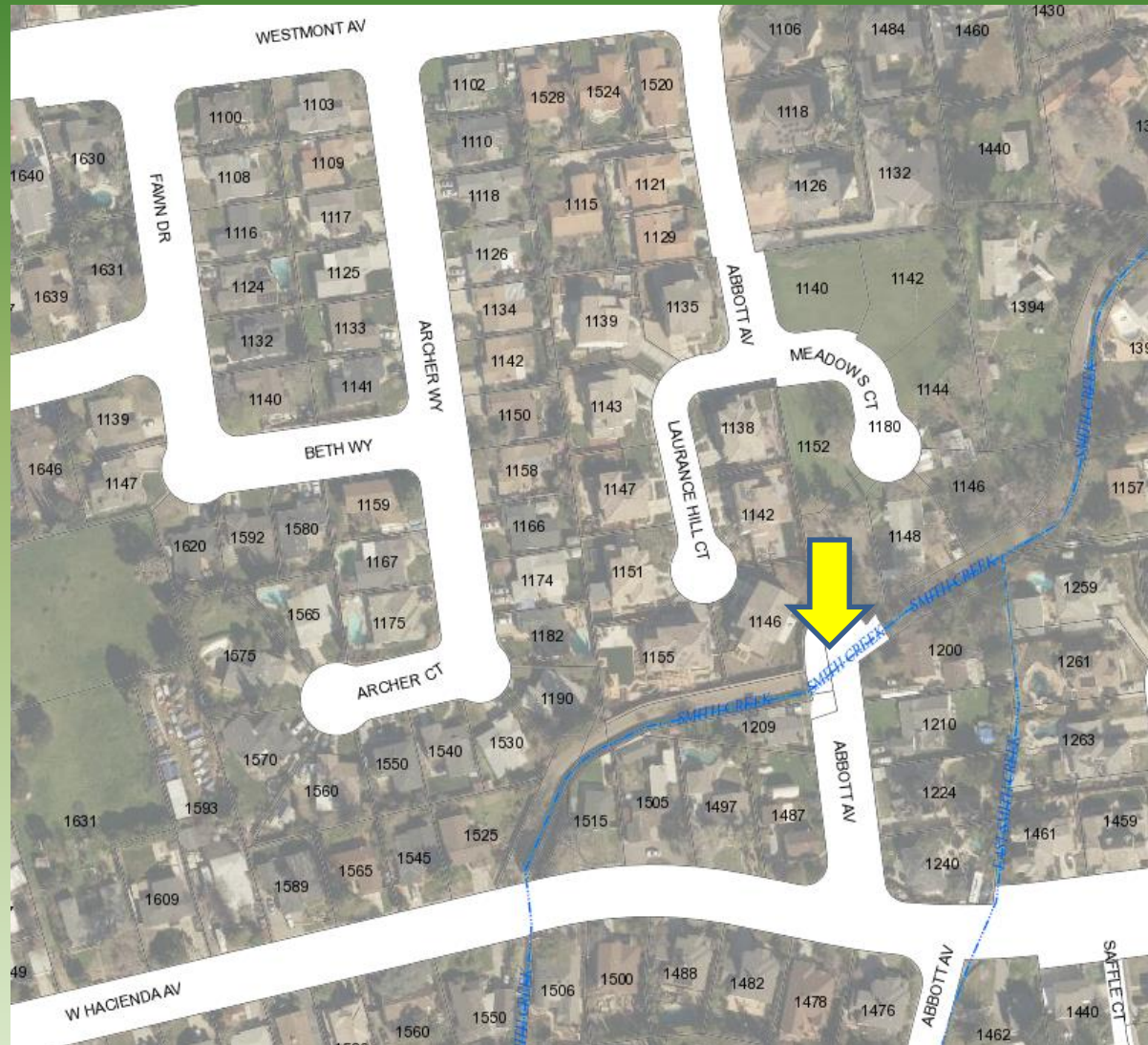
After
(Bio-Infiltration)



Abbott Avenue Pervious Concrete



Abbott Avenue Pervious Concrete



Abbott Avenue Pervious Concrete



Abbott Avenue Pervious Concrete



Abbott Avenue Pervious Concrete



Thank You!

Questions?