

# FIRST HILL STREETCAR

A close-up, low-angle shot of a streetcar's wheel and track, showing the intricate details of the wheel's tread and the metal rails. The lighting is dramatic, with a strong orange glow on the left side, suggesting a sunset or sunrise. The background is dark and out of focus.

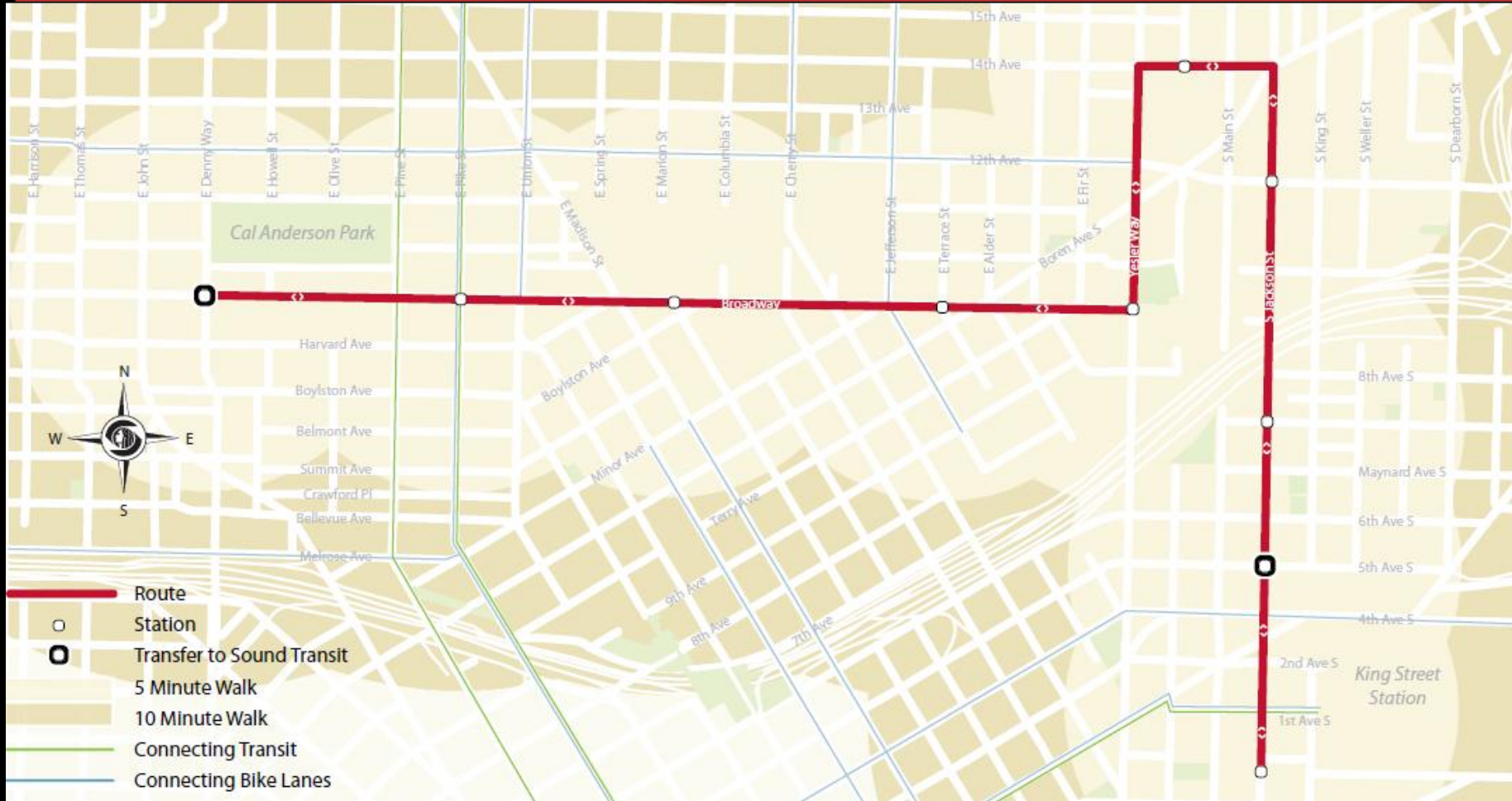
First Hill Streetcar Project Preliminary Engineer/Schematic  
Design Review

Seattle Design Commission

April 7, 2011

A large, faint, red-tinted silhouette of a streetcar is visible in the background, positioned behind the text. It shows the front and side profile of the vehicle, including the windows and wheels.

# Project Overview & Context

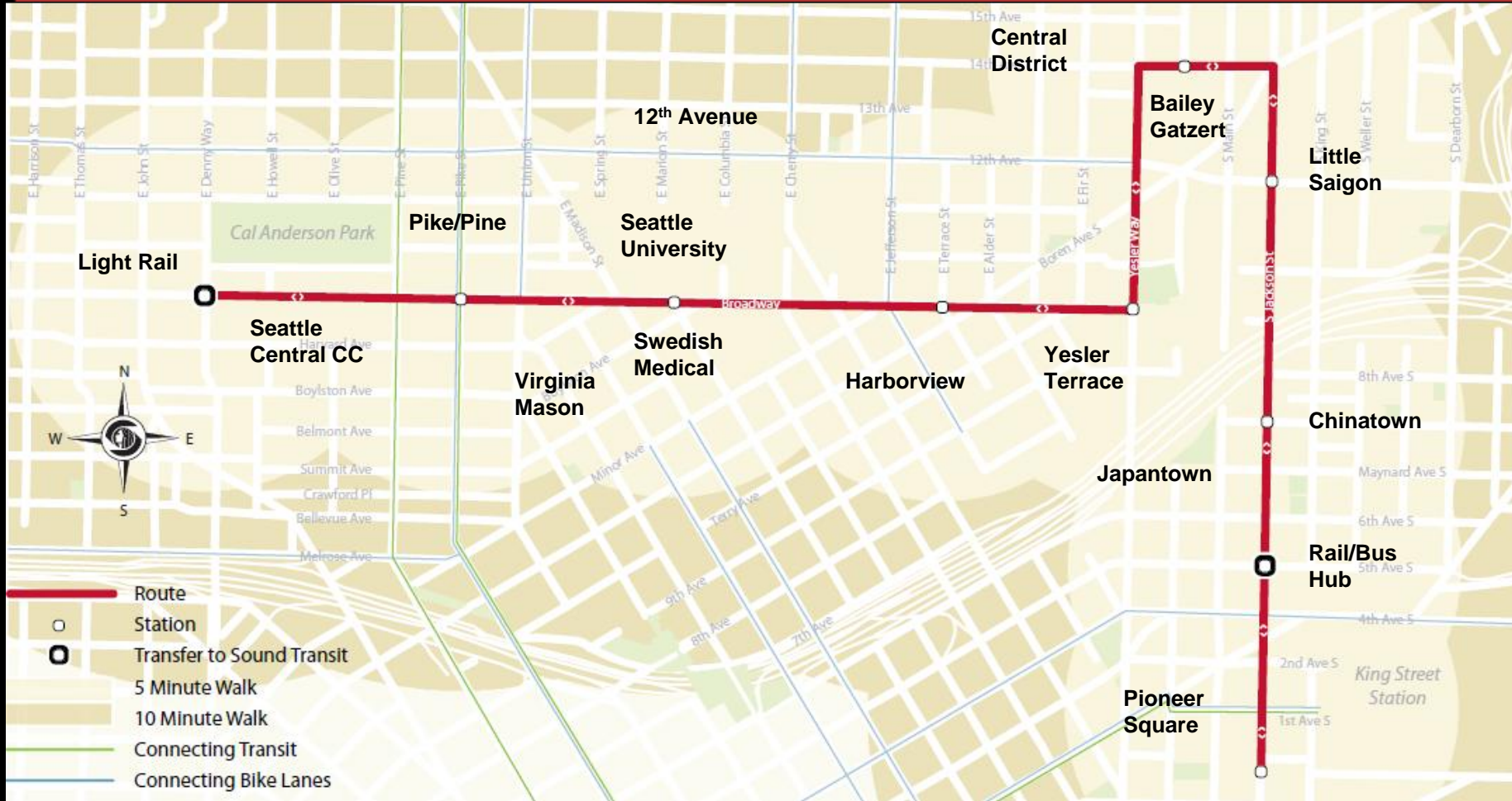


# Project Overview & Context

- Modern Streetcar Project Providing Regional Transit Connections & Center City Circulation
- Busy Arterial Environment
- Diverse Neighborhoods/Historic Districts
- Major Institutions/Small Businesses



# Project Overview & Context



# Scope Overview

- 2.5 Miles of Embedded Track & Roadway Improvements
- 10 Stops—Mix of Side & Center Platforms, with Art Program/Landscape
- Overhead Contact System
- Traffic Signals & Train Signals
- Maintenance Facility
- Utility Relocations—Primarily Water



# Trackway & Platform



# Overhead Contact System & Signals

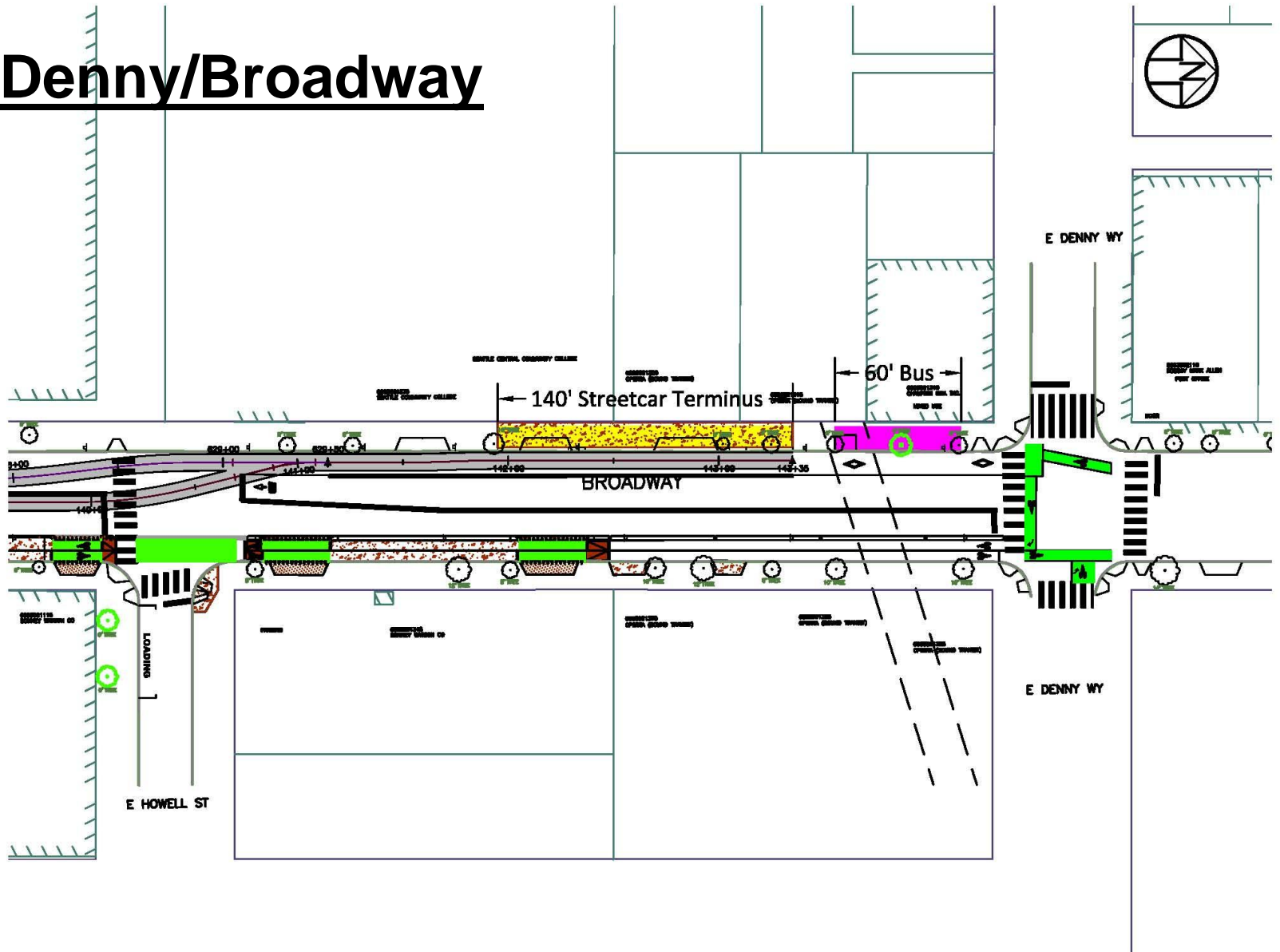


# Station Plans





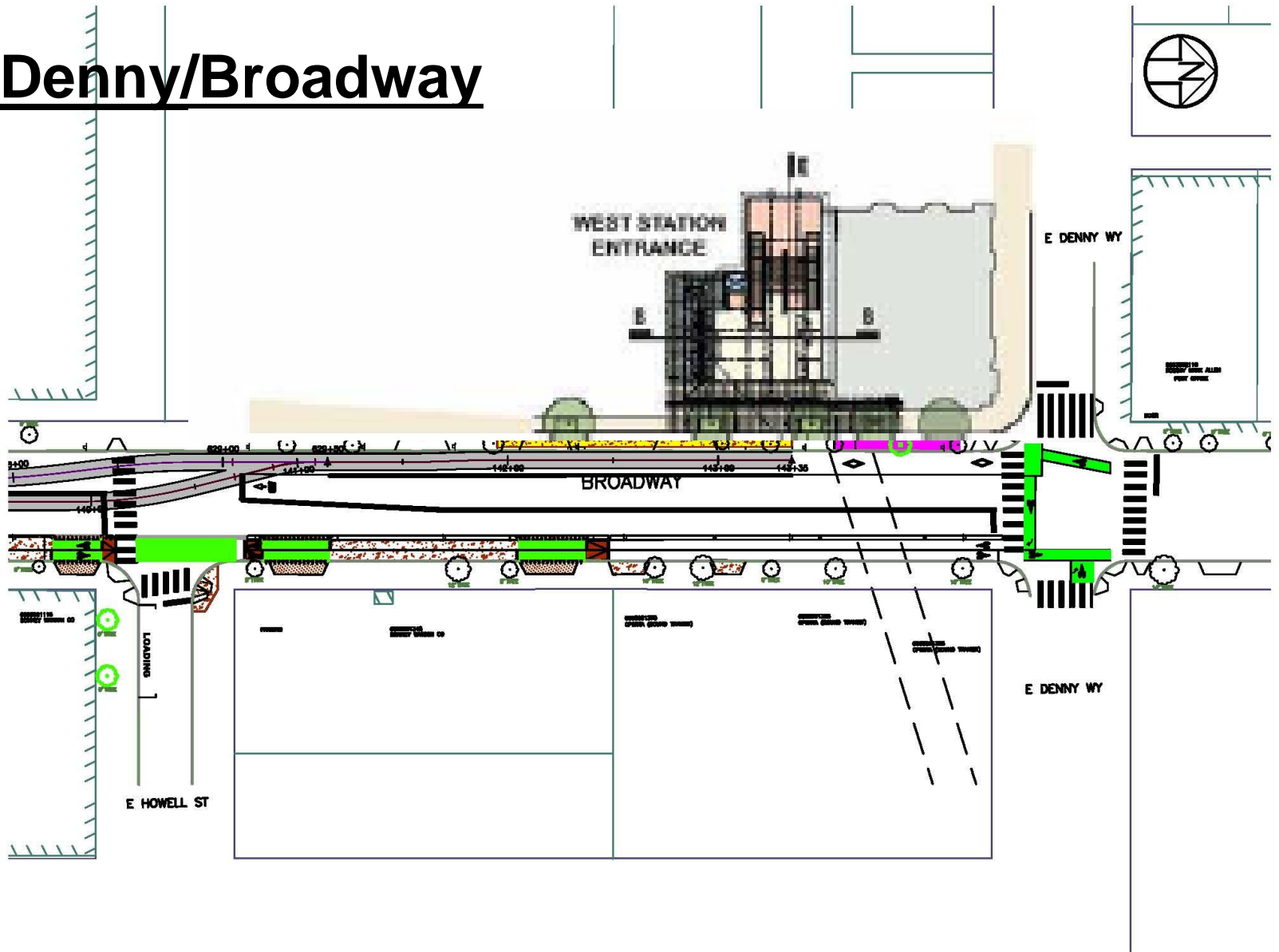
# Denny/Broadway

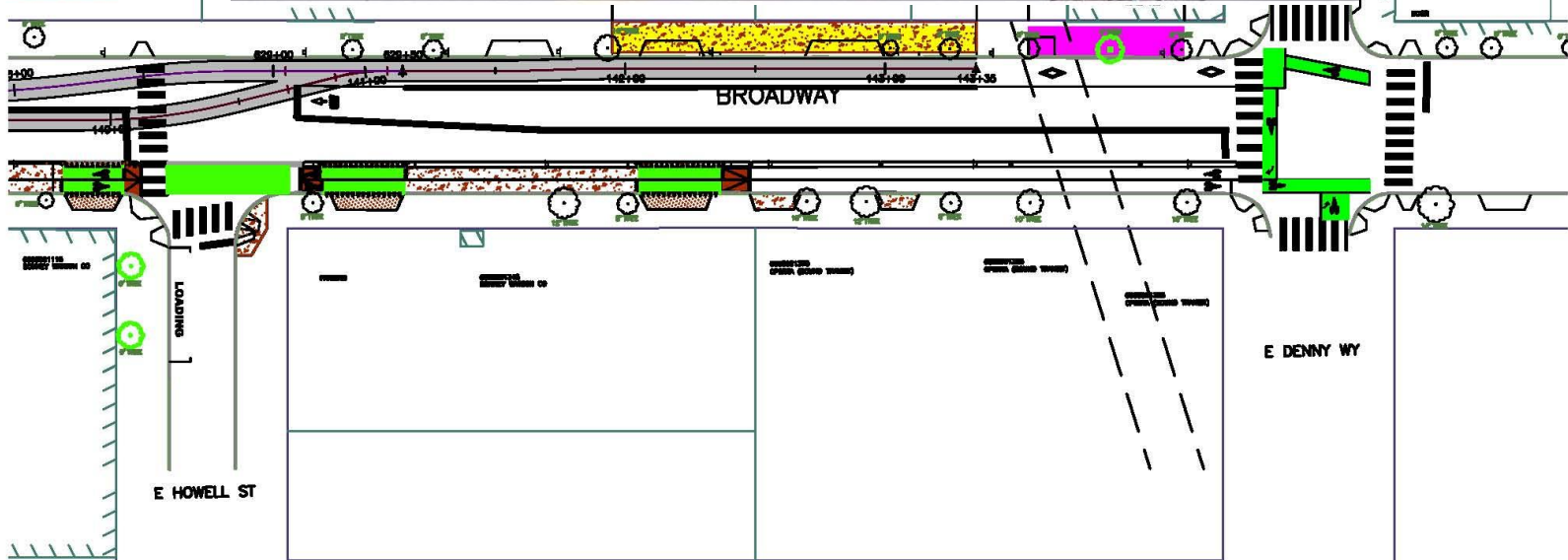
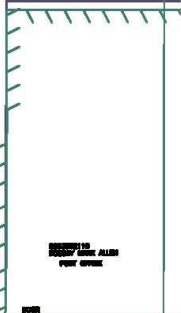
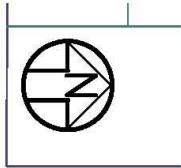




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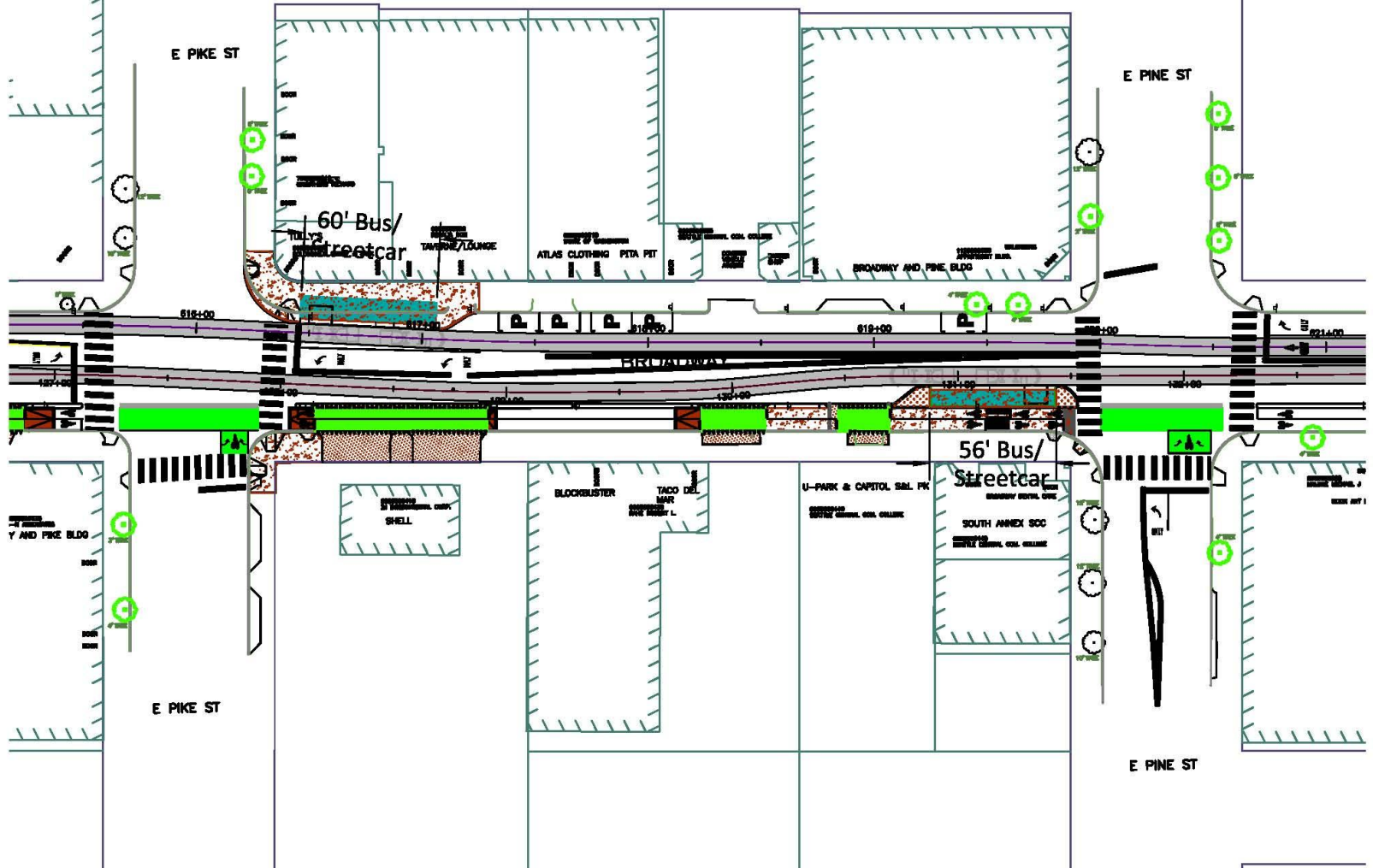
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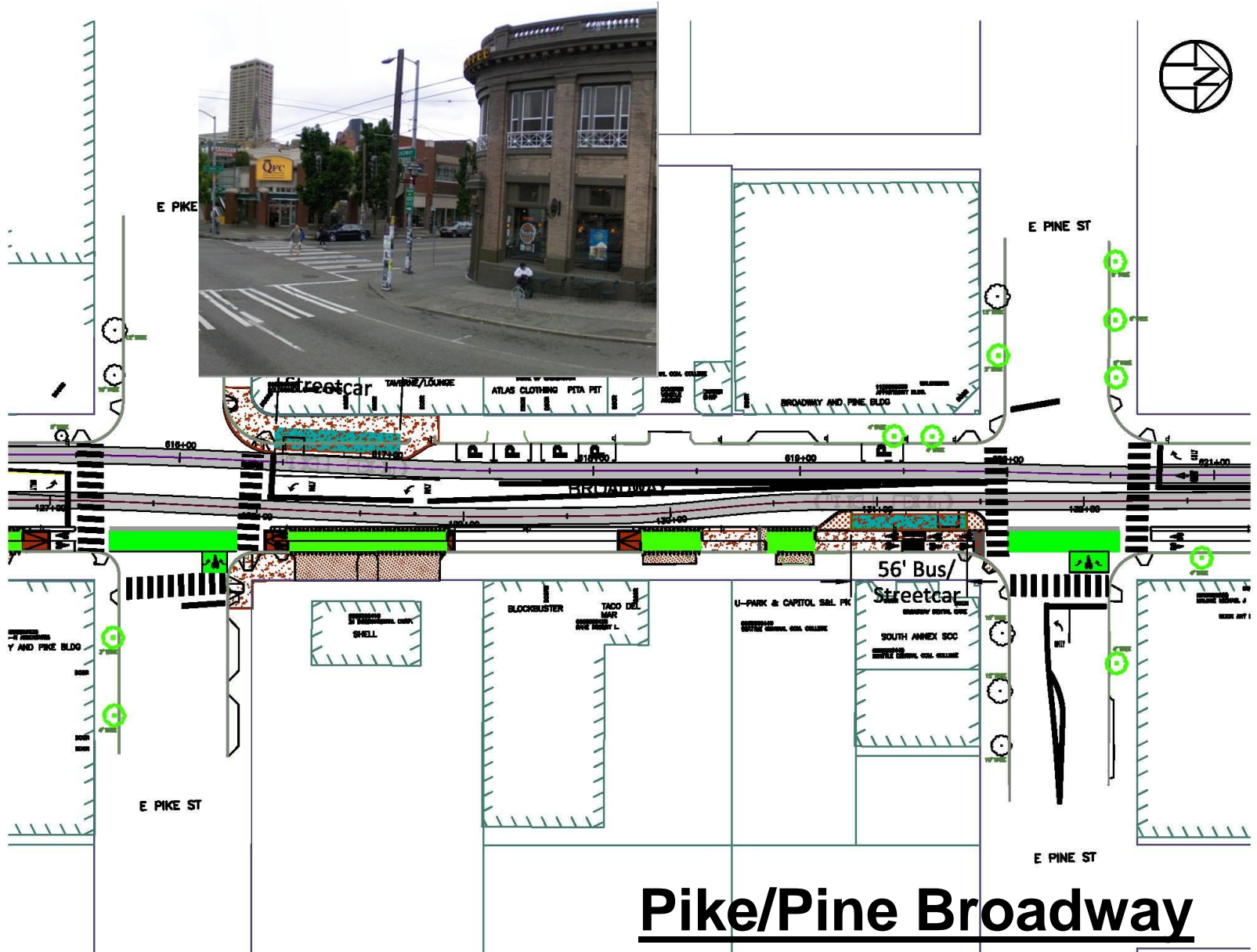




# Denny/Broadway

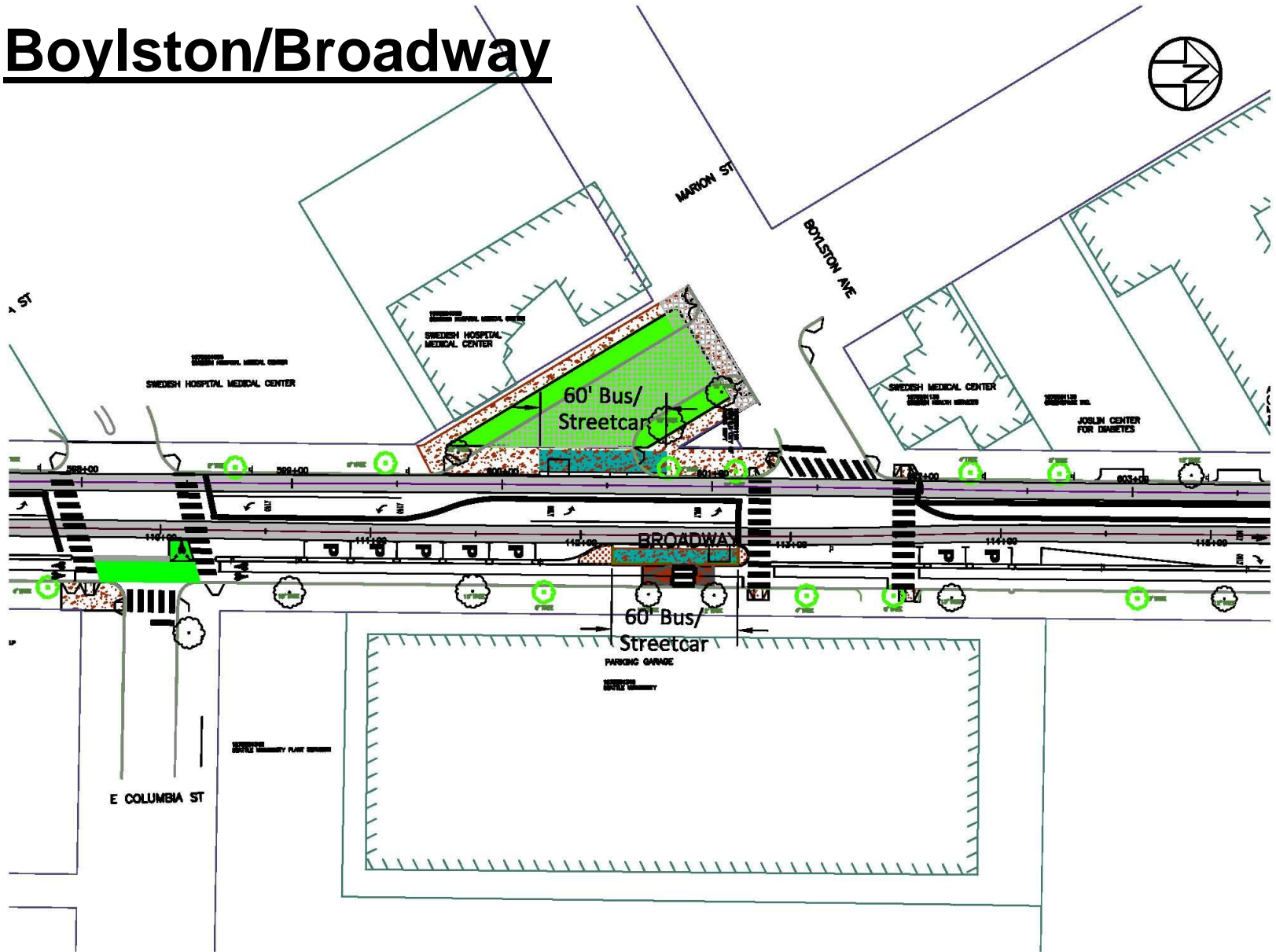
# Pike/Pine Broadway

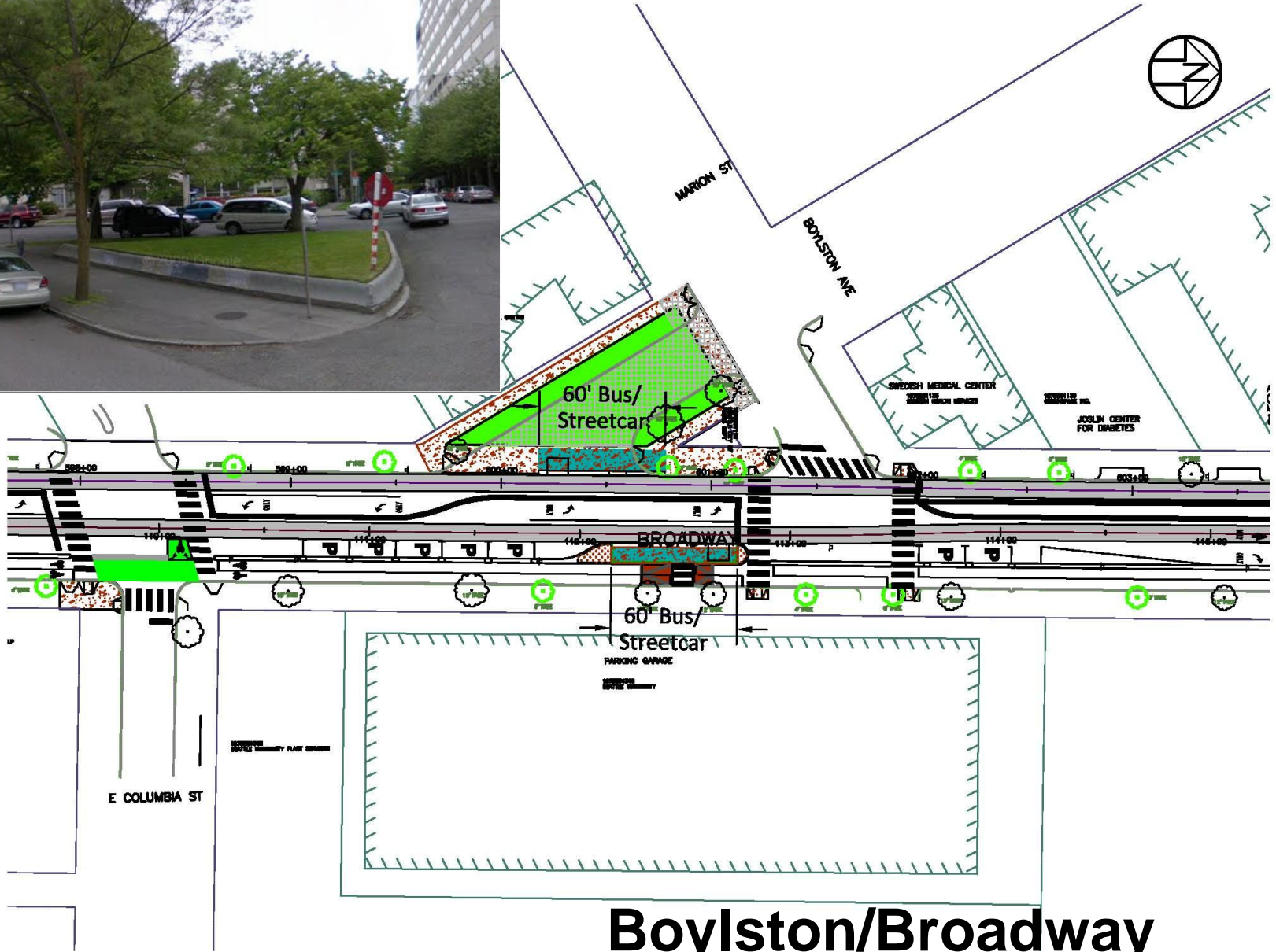




# Pike/Pine Broadway

# Boylston/Broadway





# Boylston/Broadway



# Streetcar Plazas

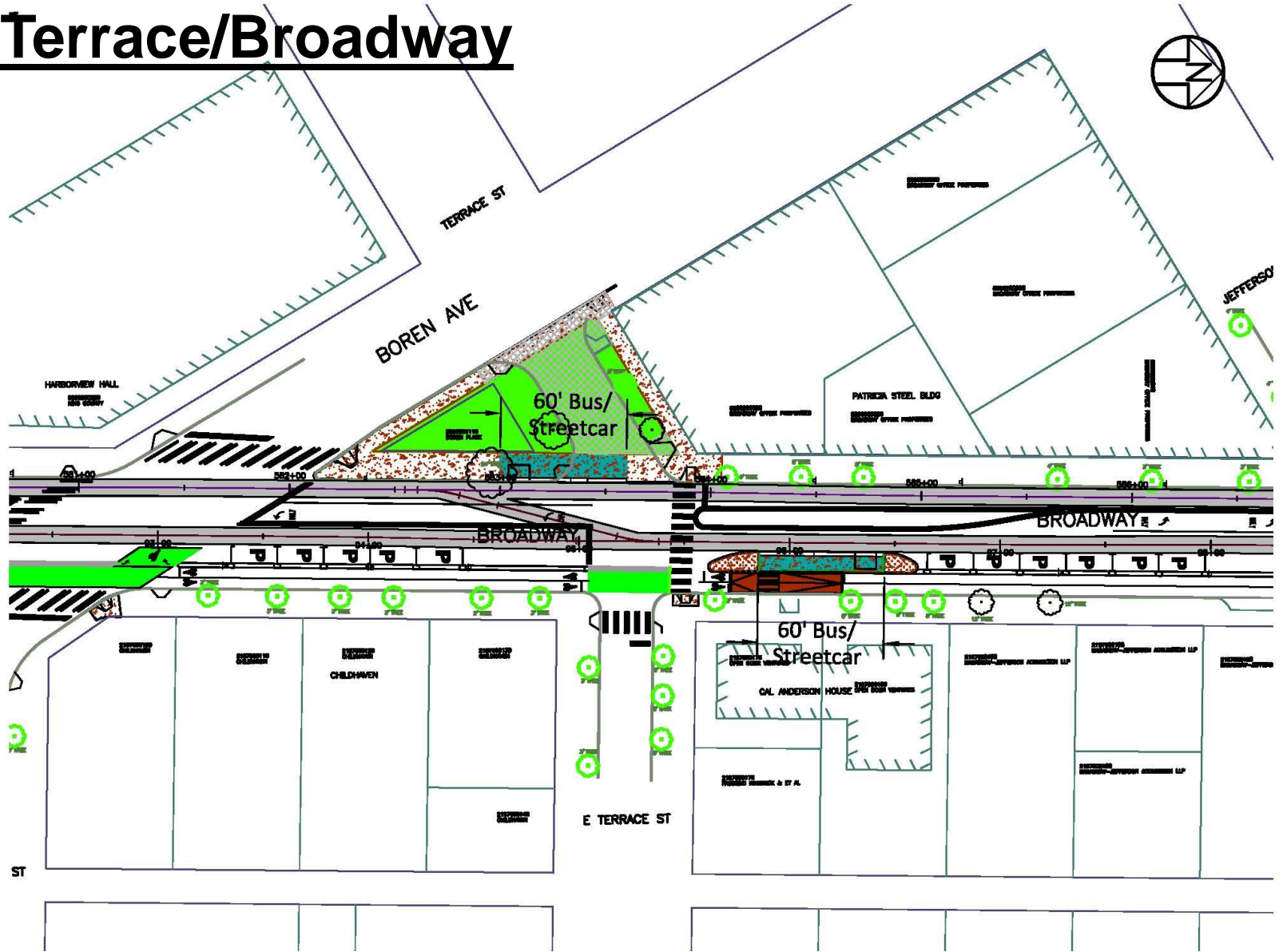


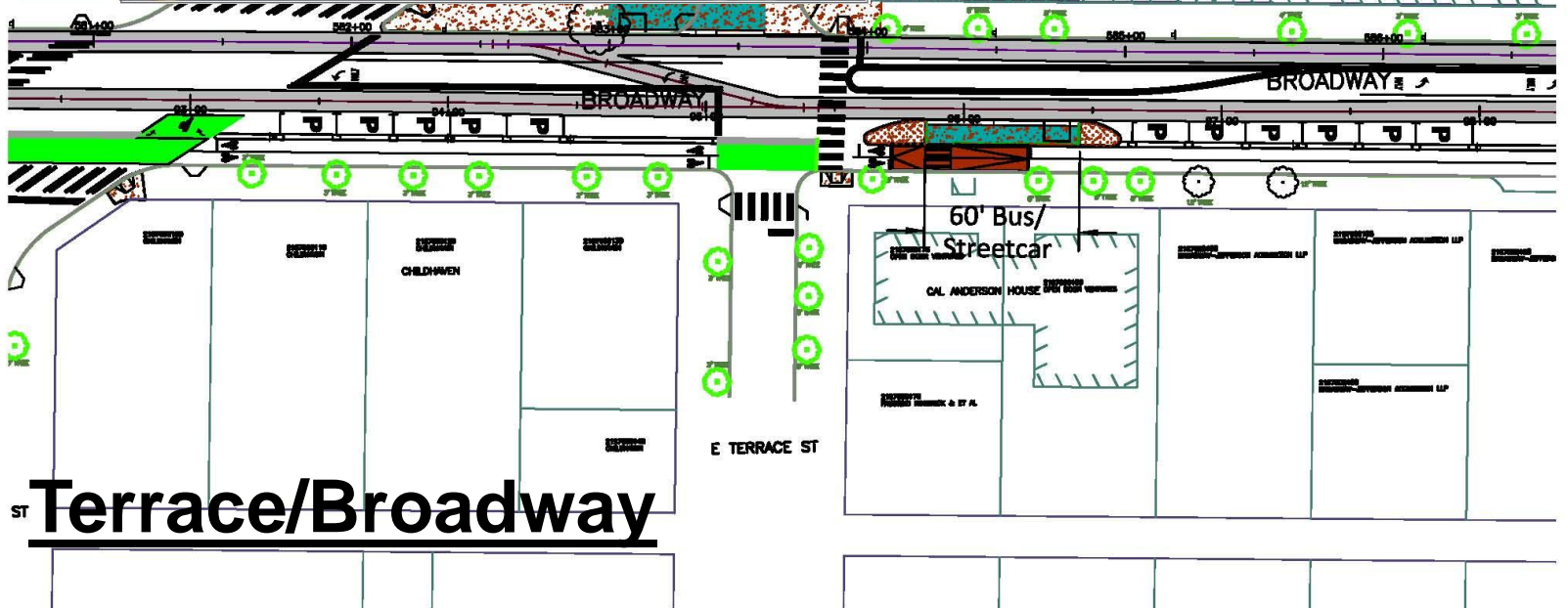
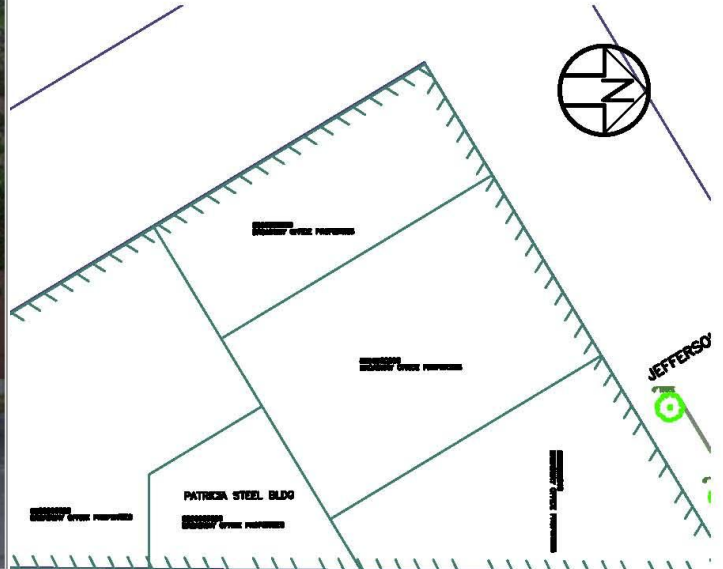
# Streetcar Plazas: Precedents

## McGraw Square



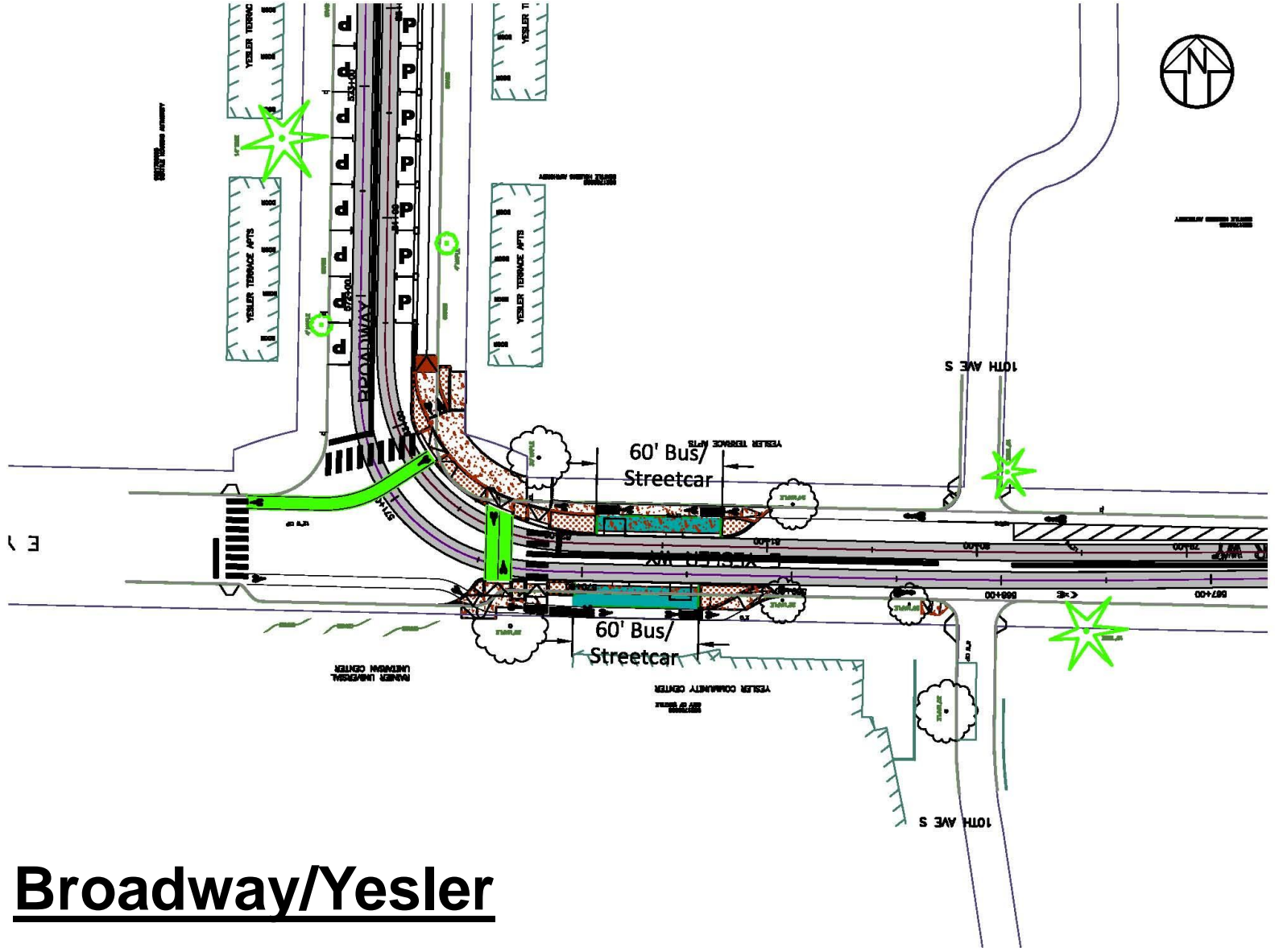
# Terrace/Broadway



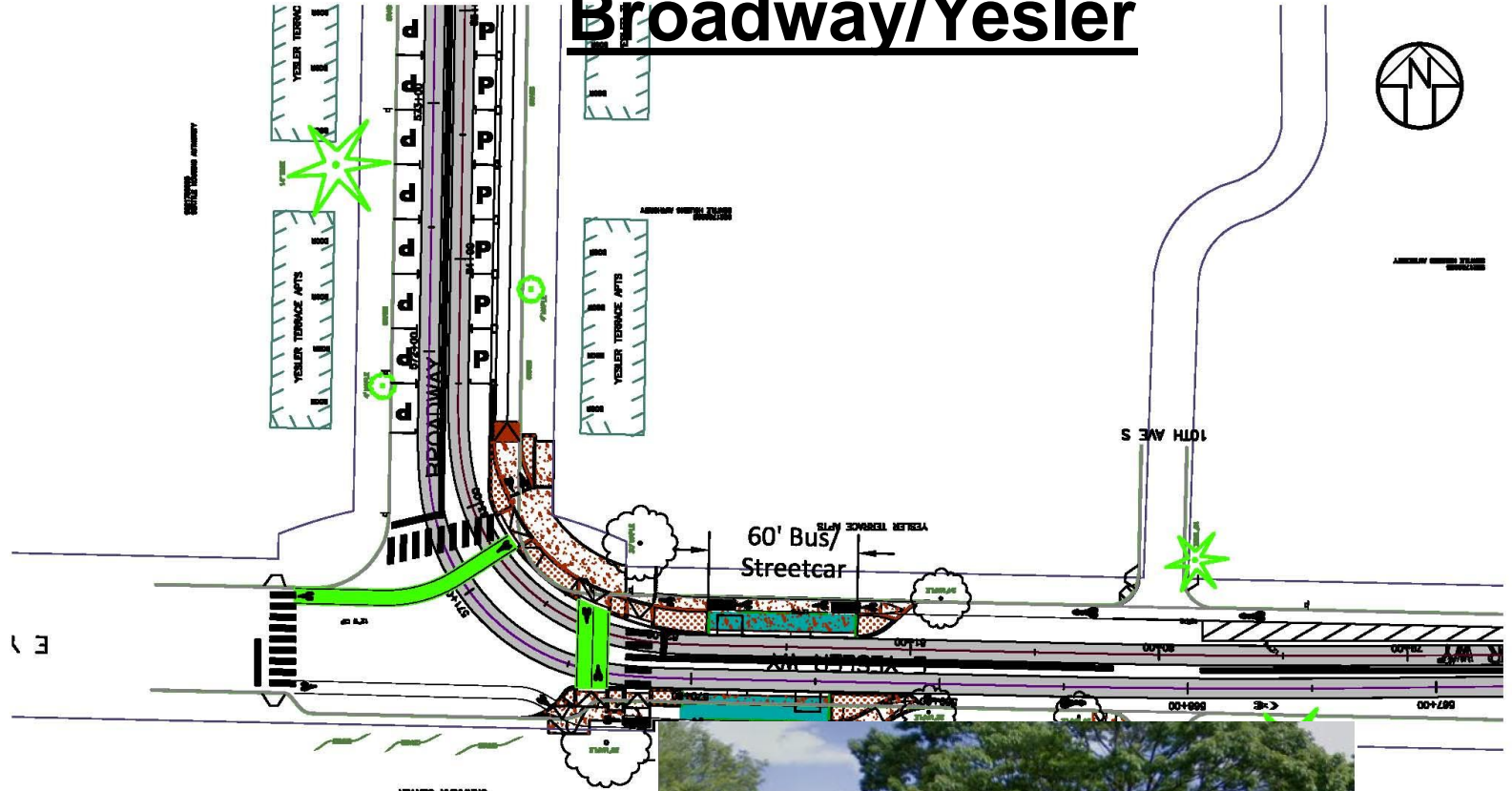


# Terrace/Broadway

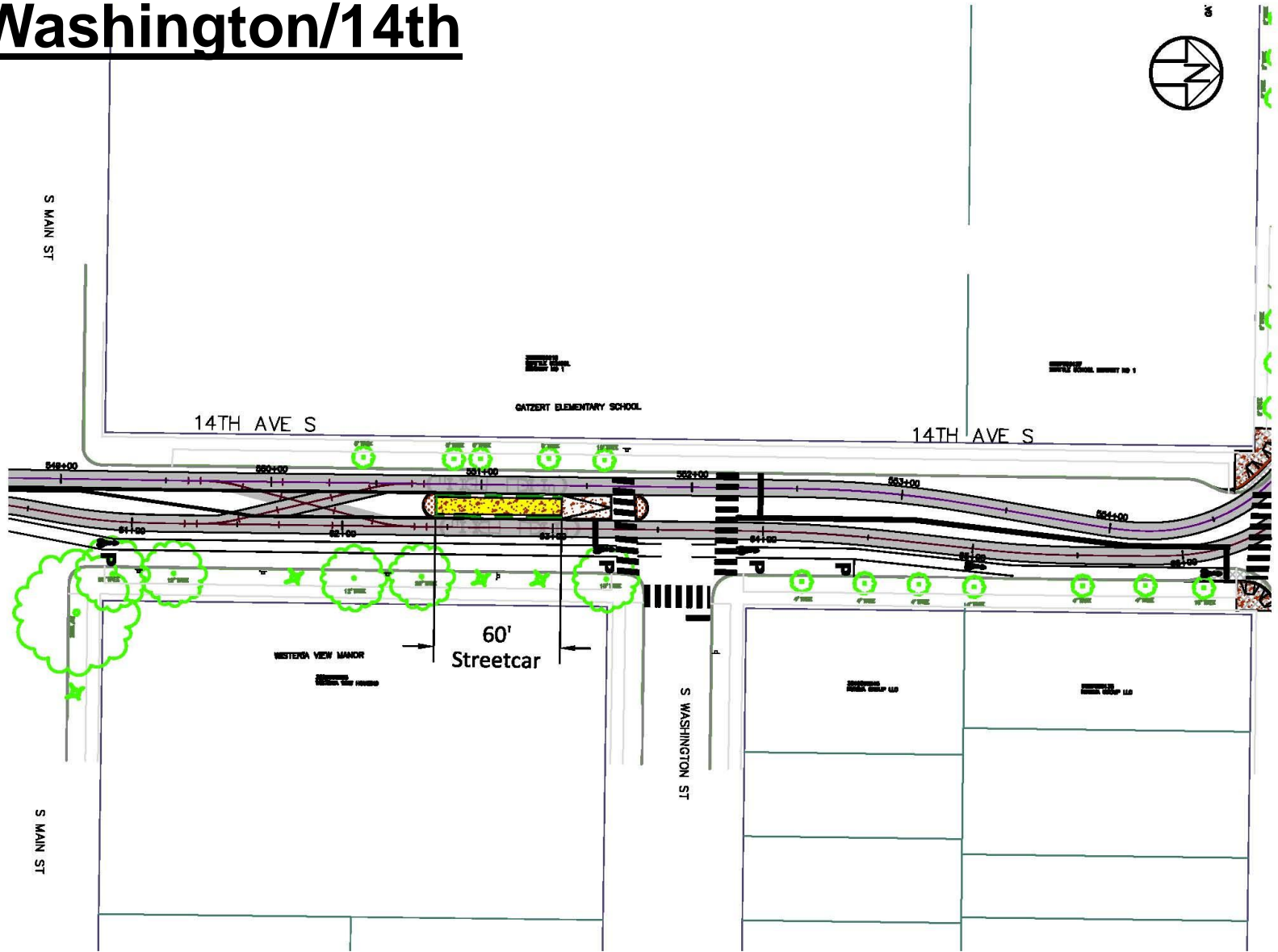
# Broadway/Yesler

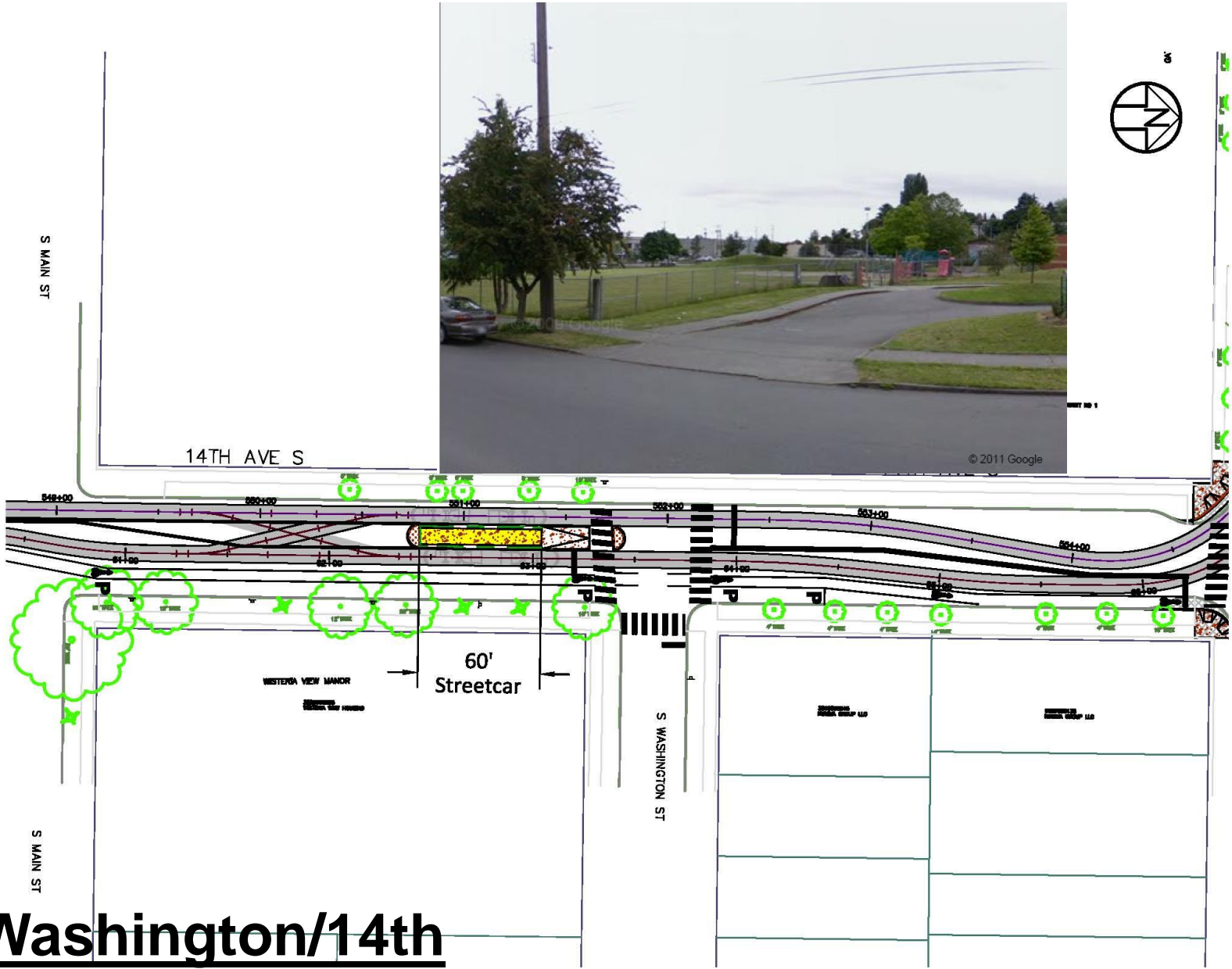


# Broadway/Yesler



# Washington/14th

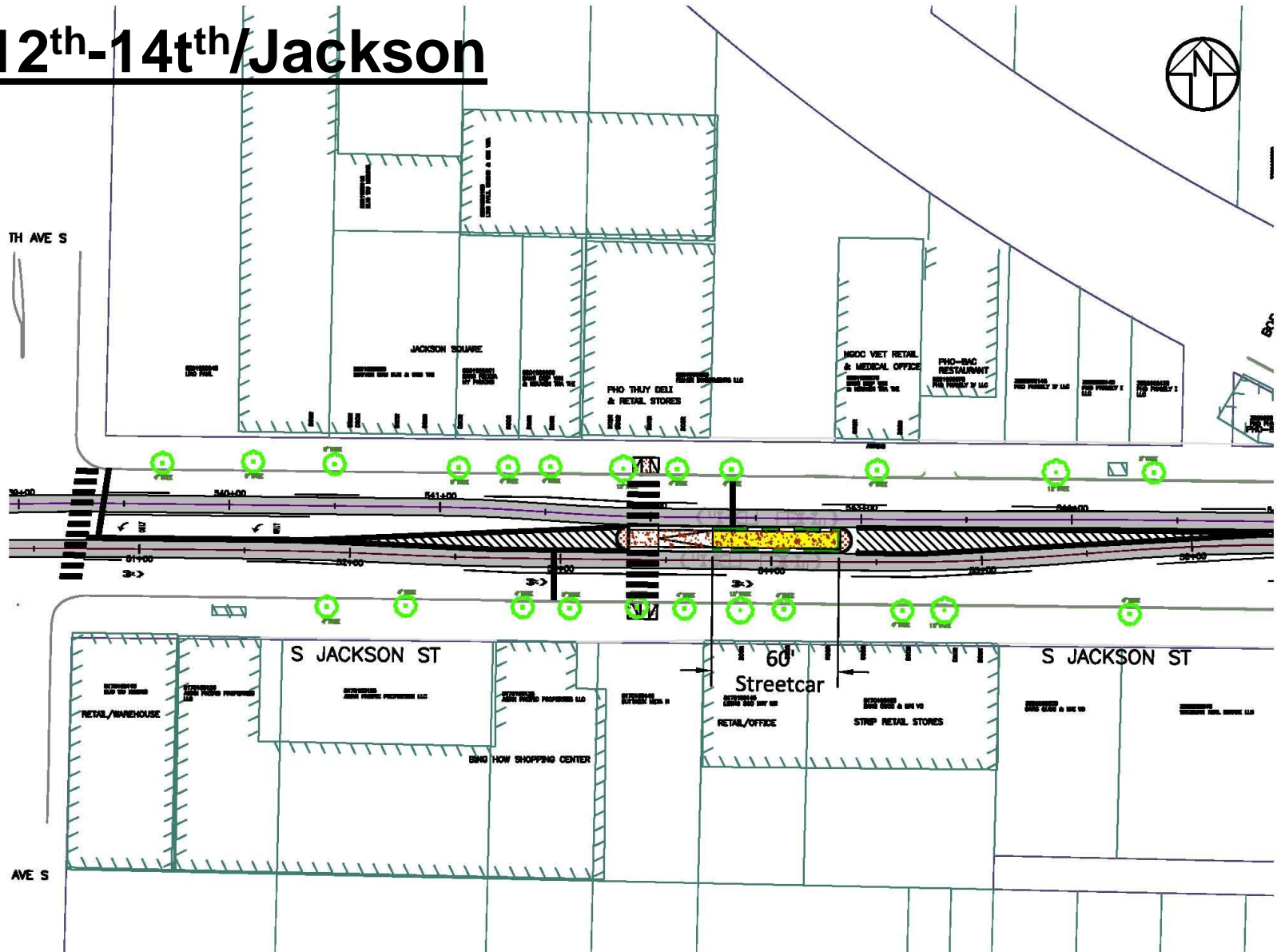




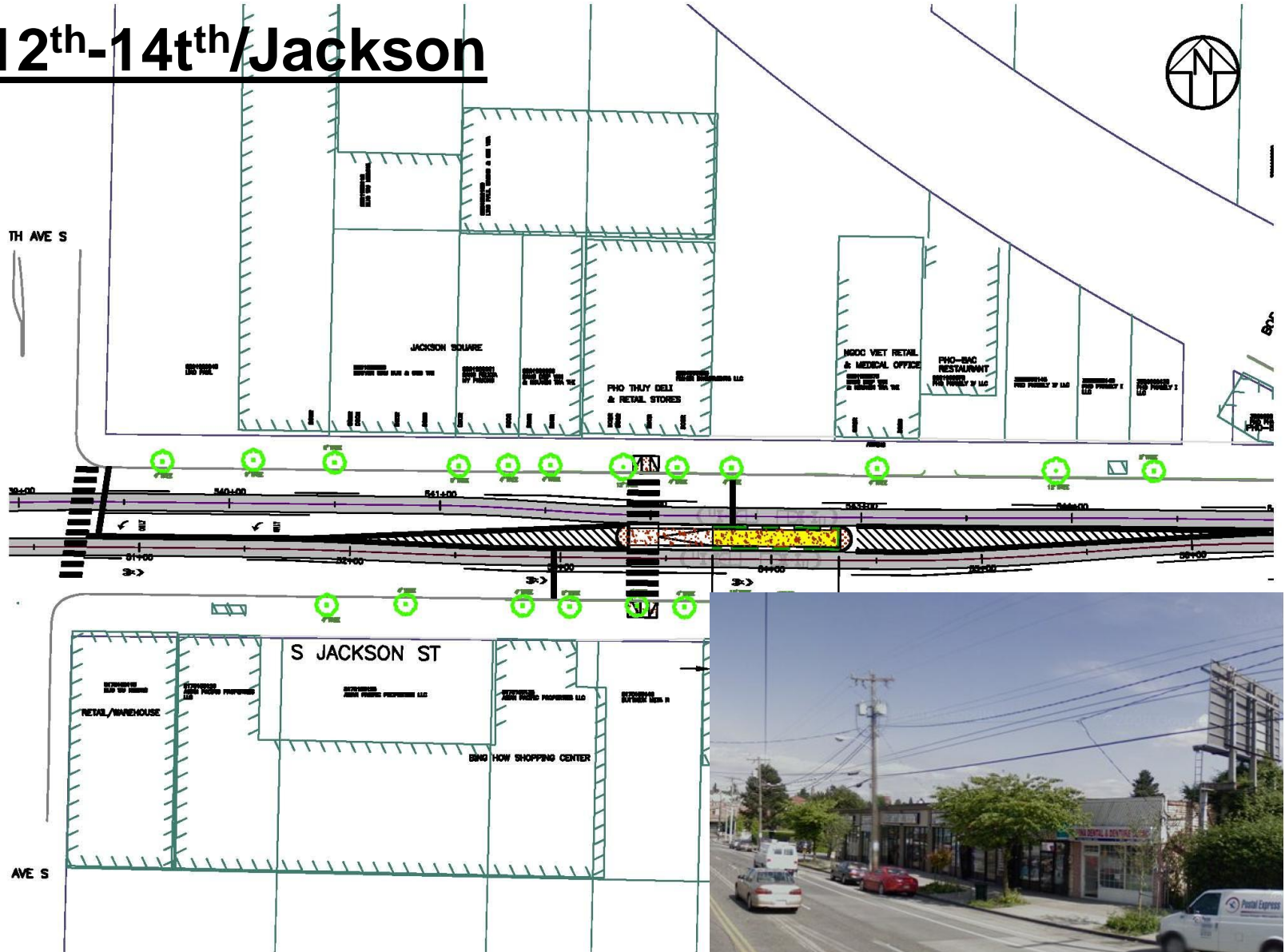
# Washington/14th



# 12<sup>th</sup>-14<sup>th</sup>/Jackson

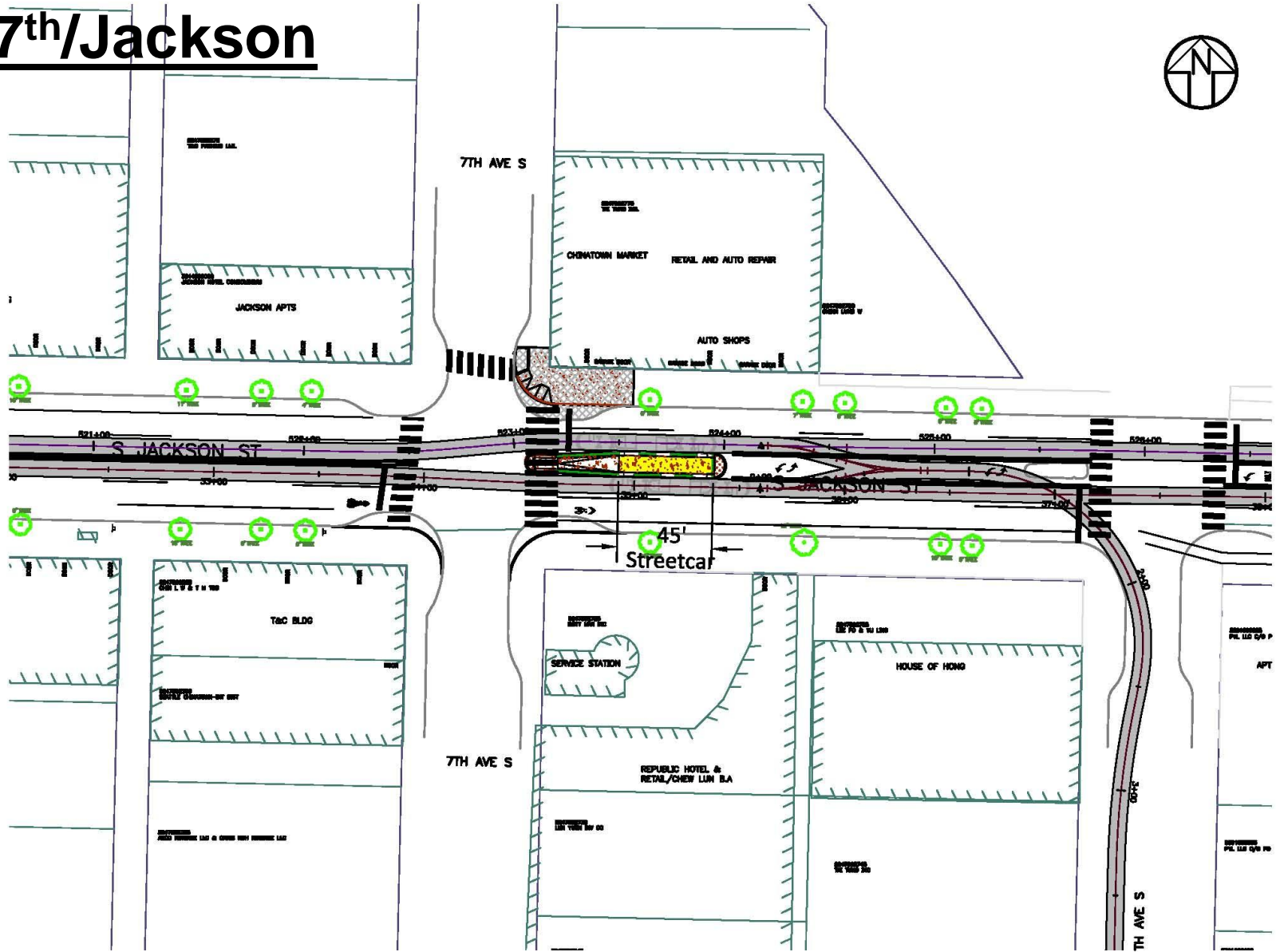


# 12<sup>th</sup>-14<sup>th</sup>/Jackson

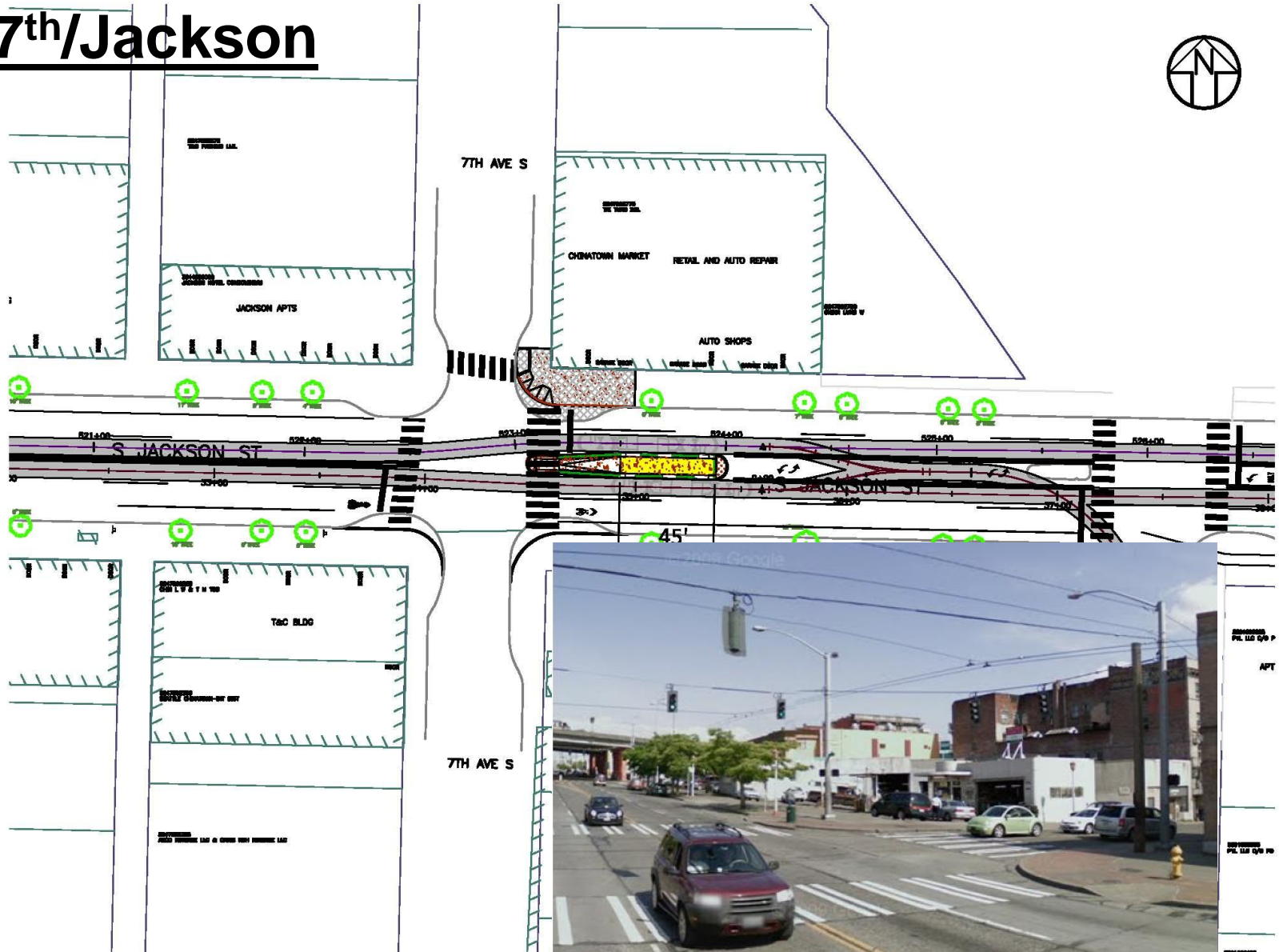


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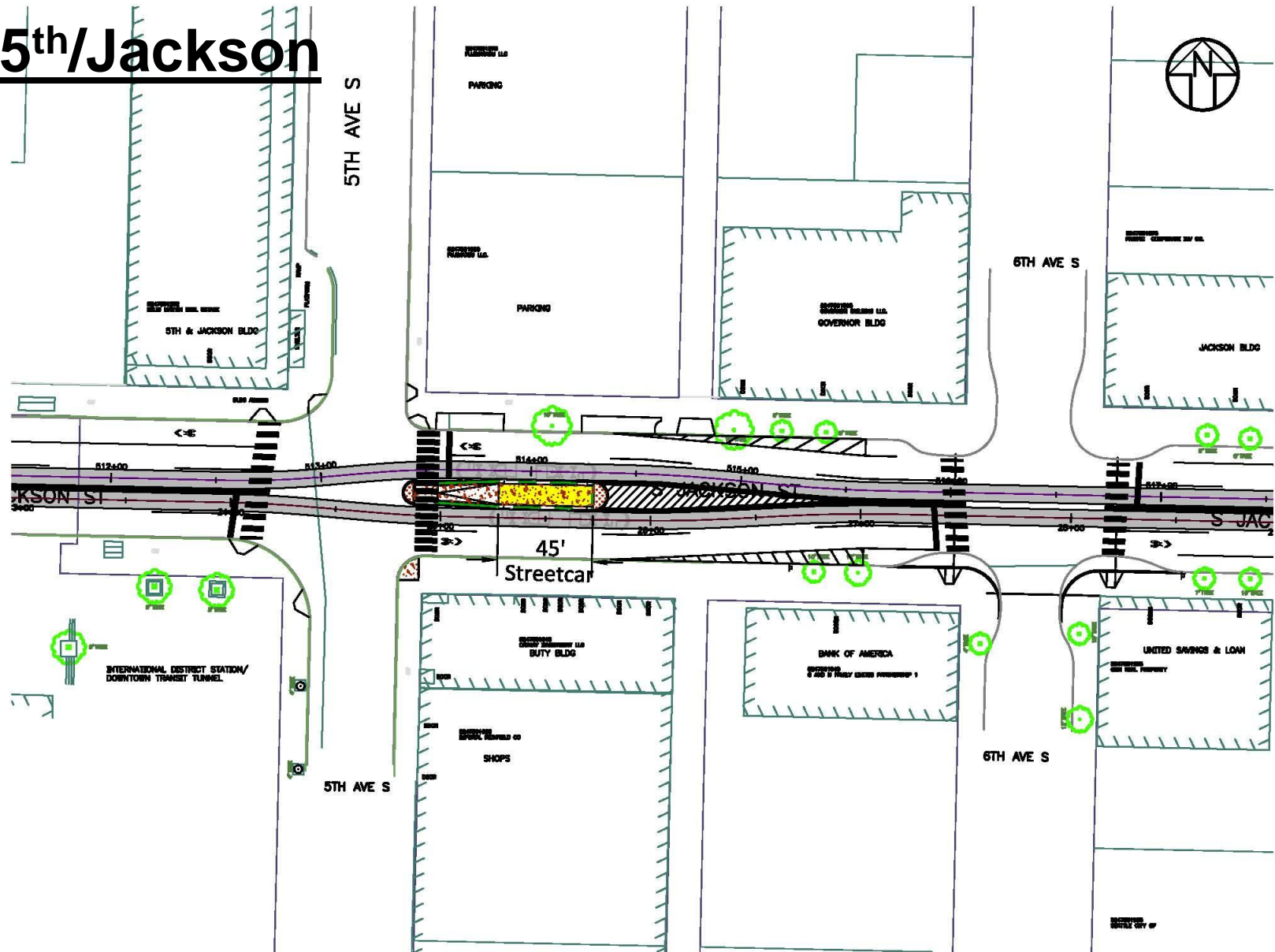
# 7<sup>th</sup>/Jackson

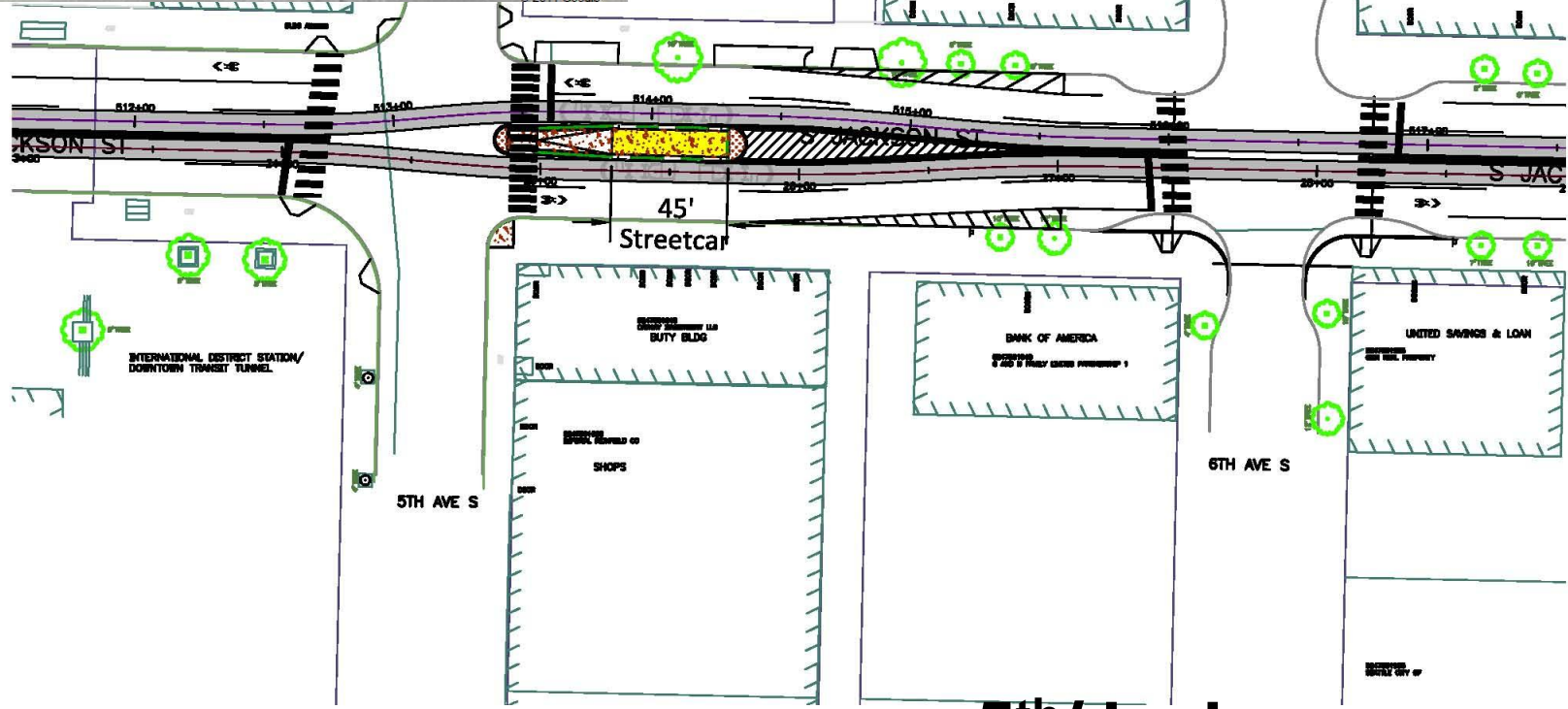


# 7<sup>th</sup>/Jackson



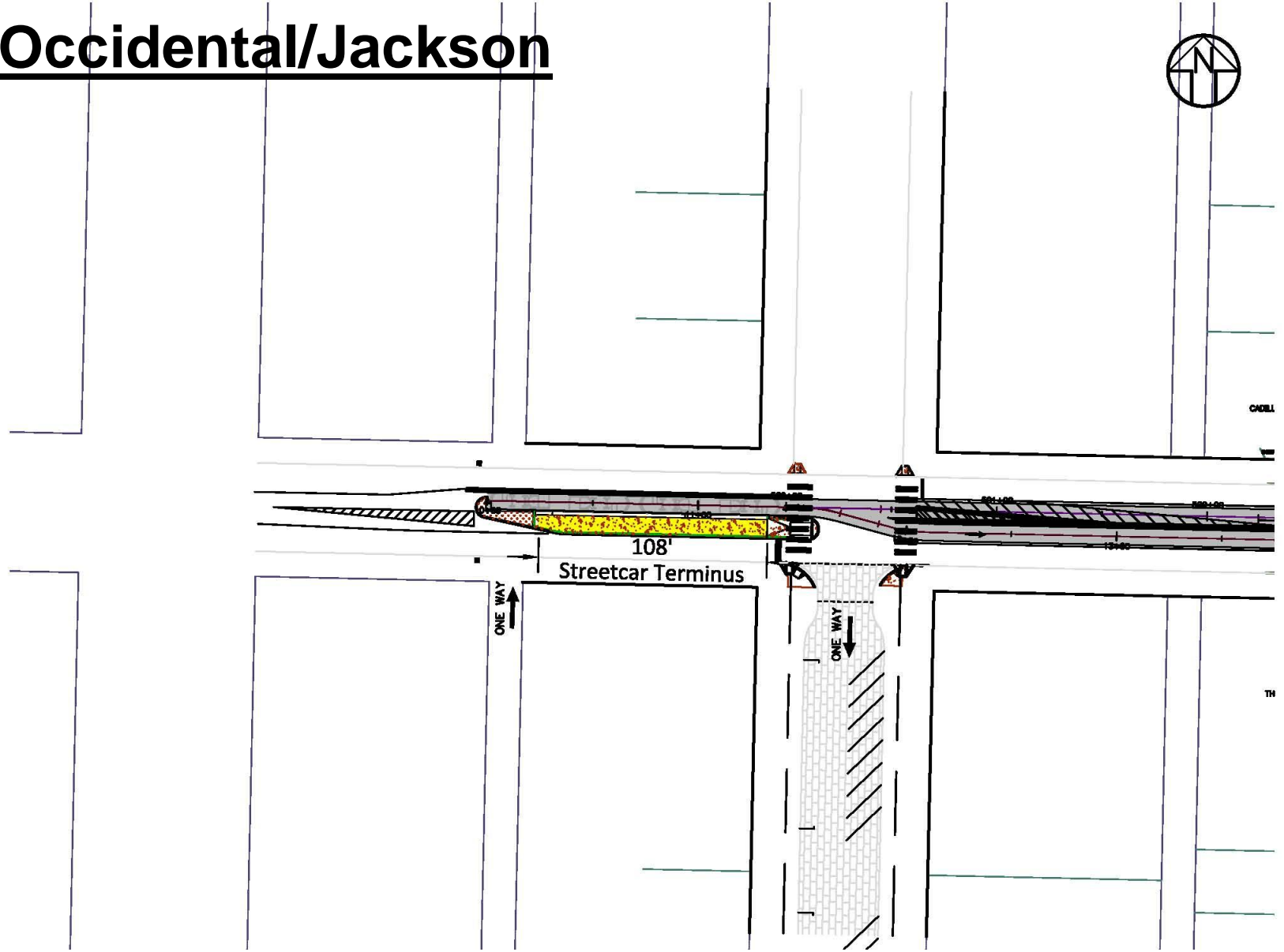
# 5<sup>th</sup>/Jackson

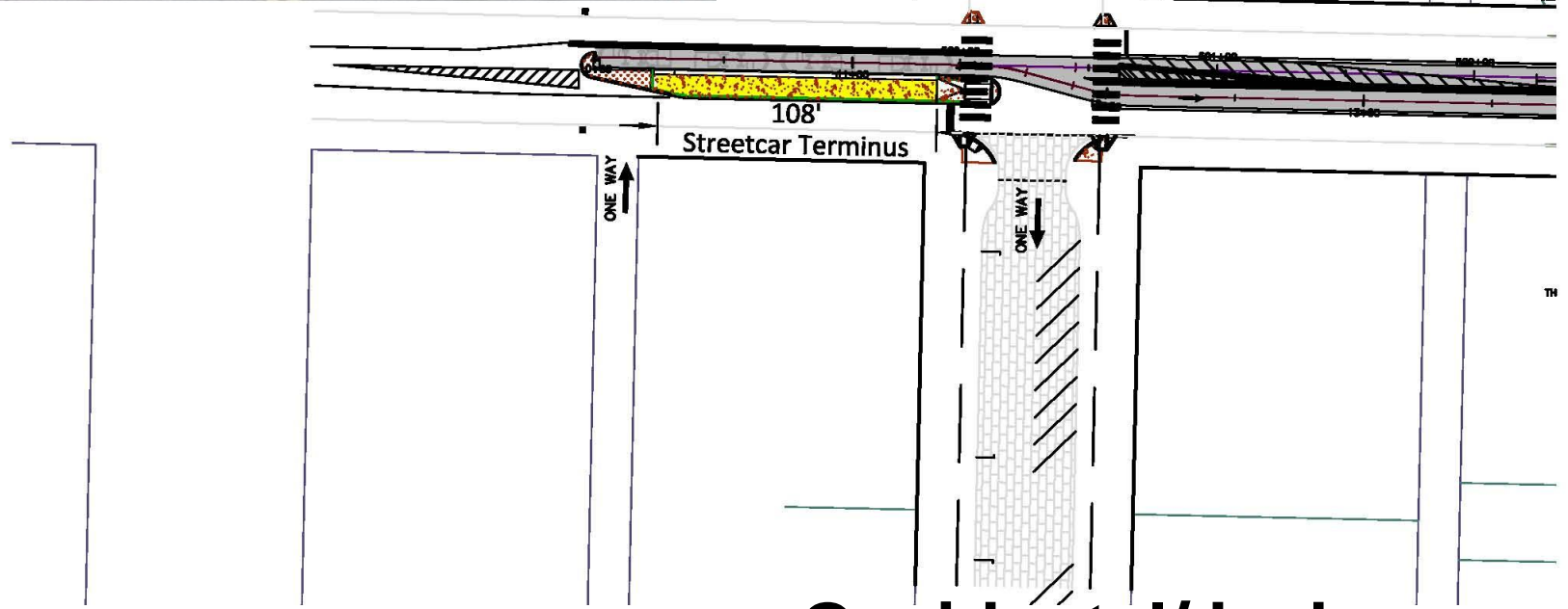
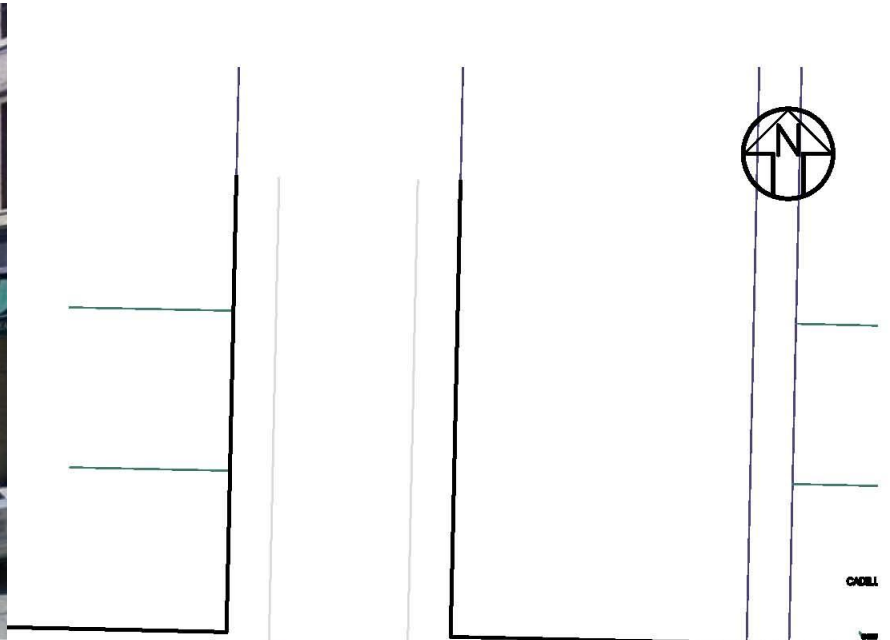




# 5<sup>th</sup>/Jackson

# Occidental/Jackson





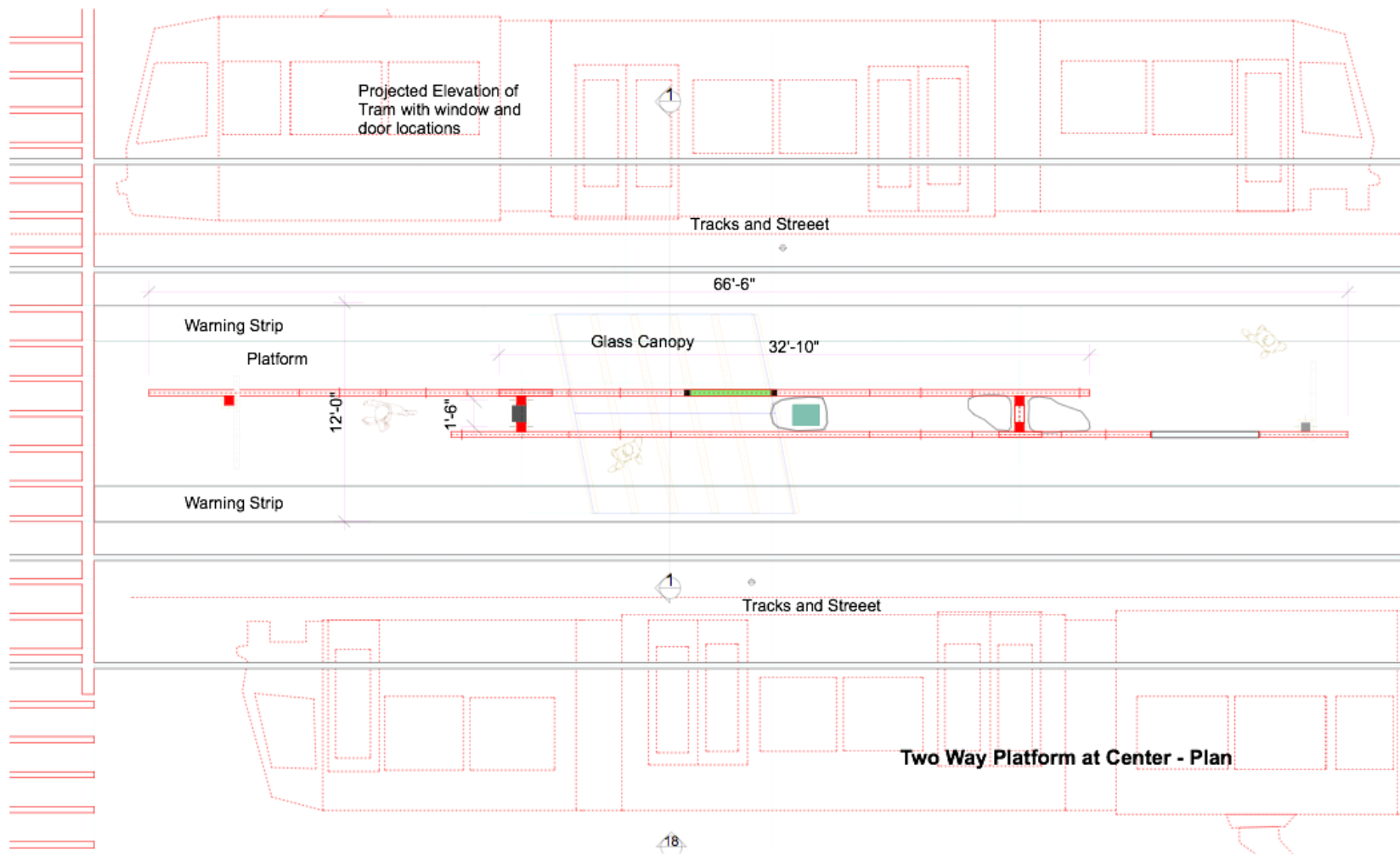
**Occidental/Jackson**

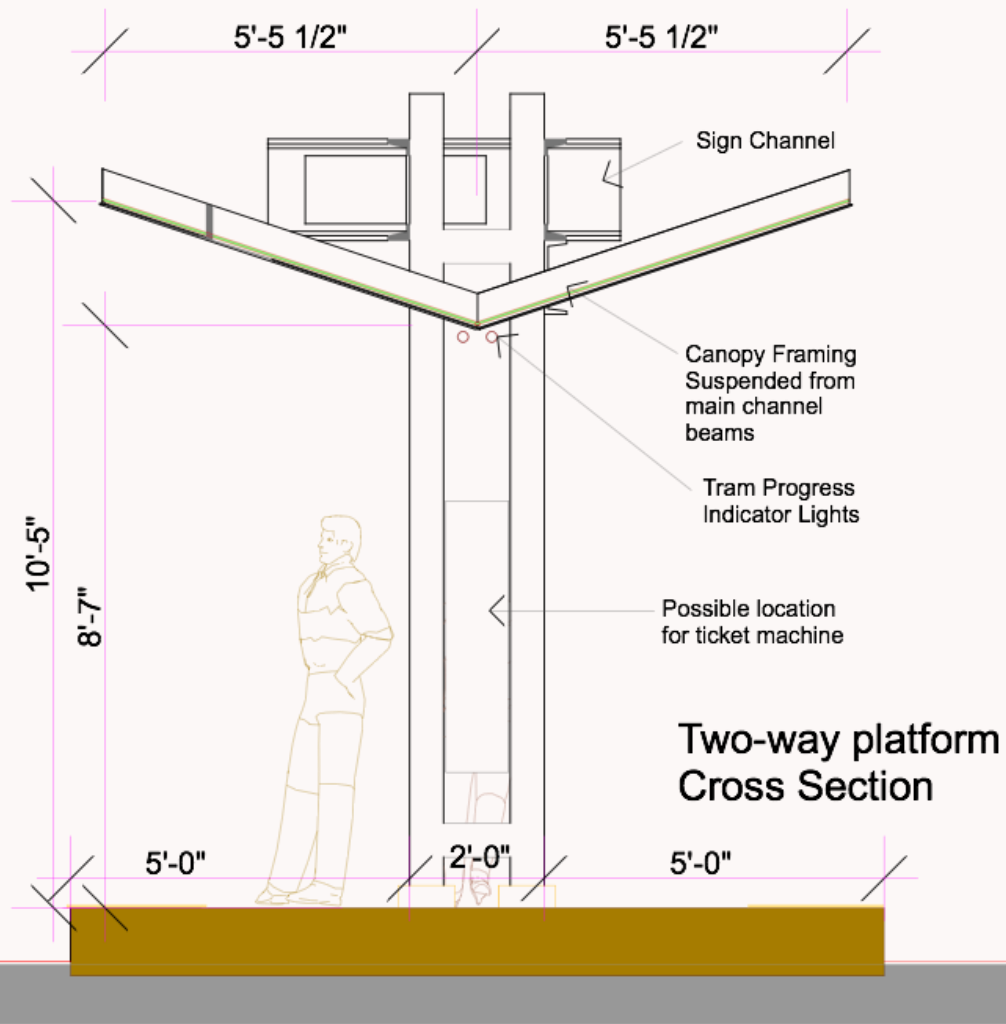


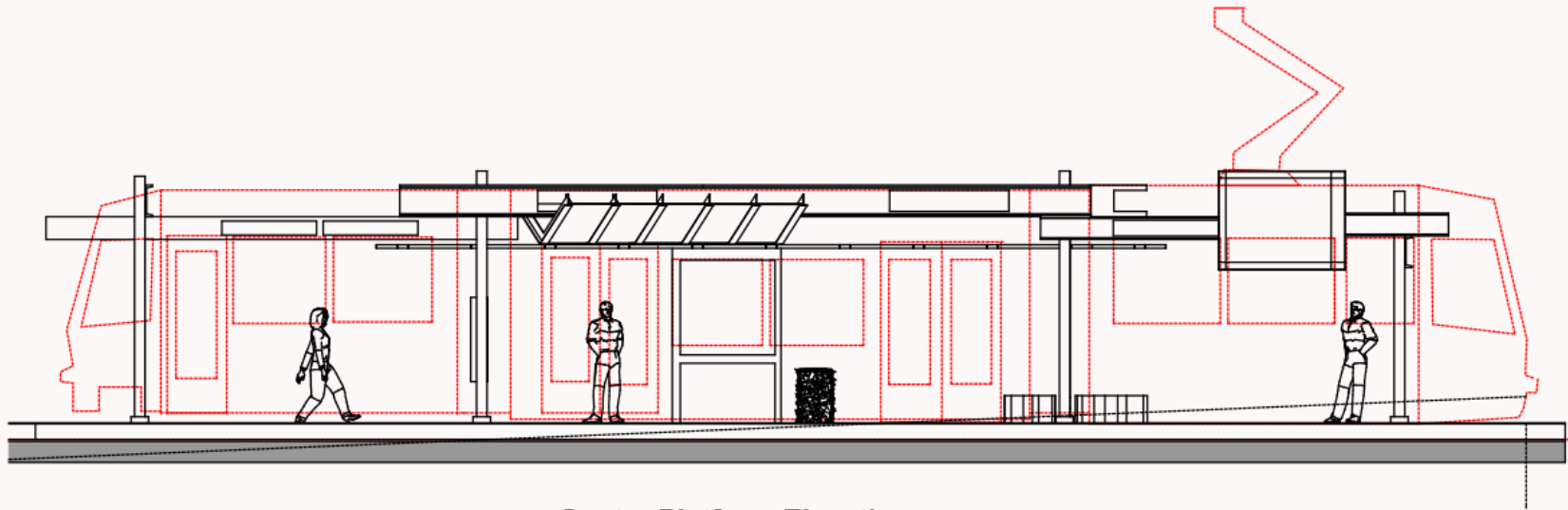
# Artist Team Shelter Concept

- Mags Harries & Lajos Heder, Artist Team
- Concept Conditionally Approved by Public Art Advisory Committee
- Schematic Design

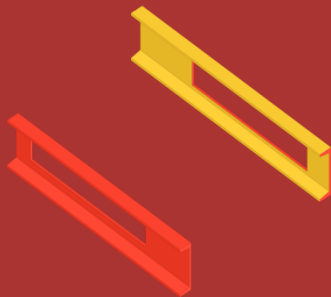




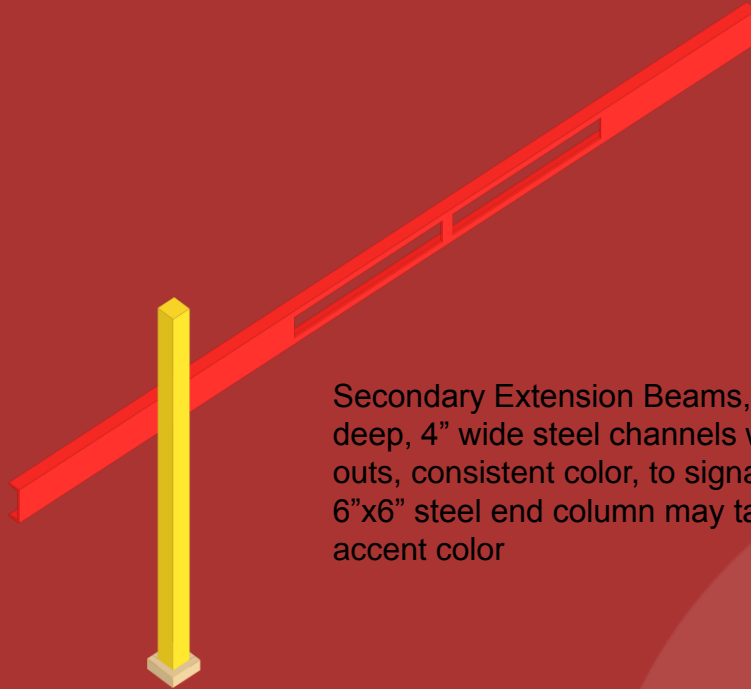




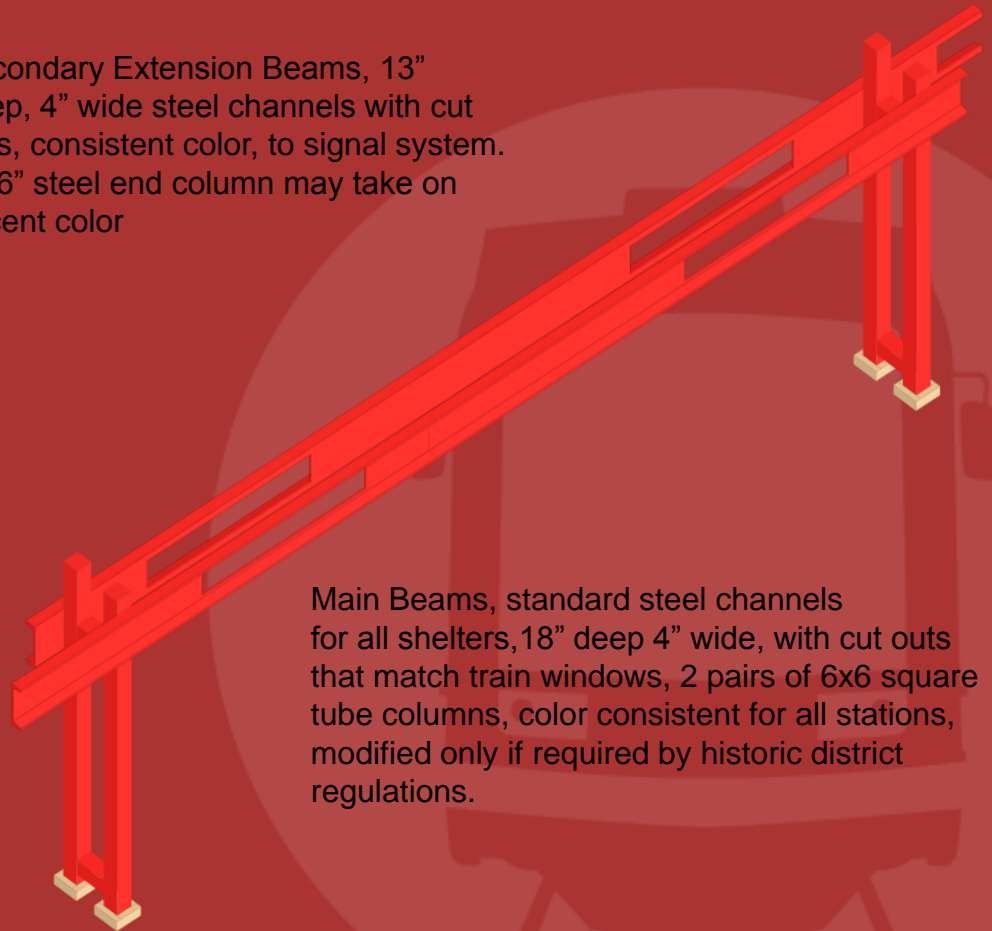
Center Platform Elevation



Perpendicular sign steel channel Beams, can take on accent colors

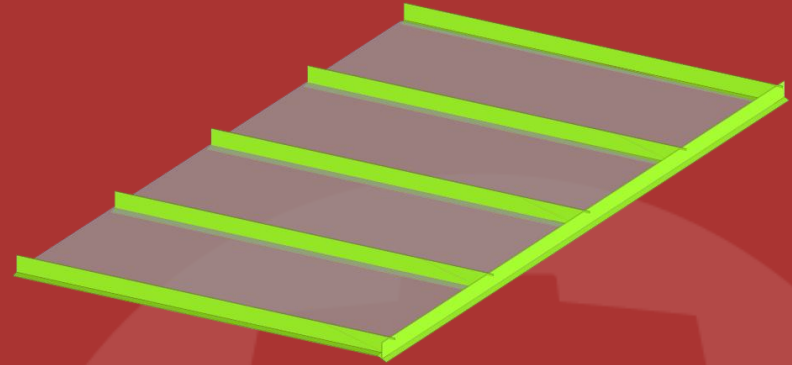
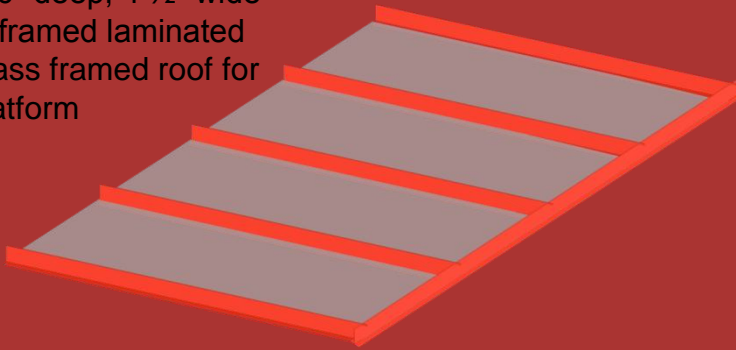


Secondary Extension Beams, 13" deep, 4" wide steel channels with cut outs, consistent color, to signal system. 6"x6" steel end column may take on accent color



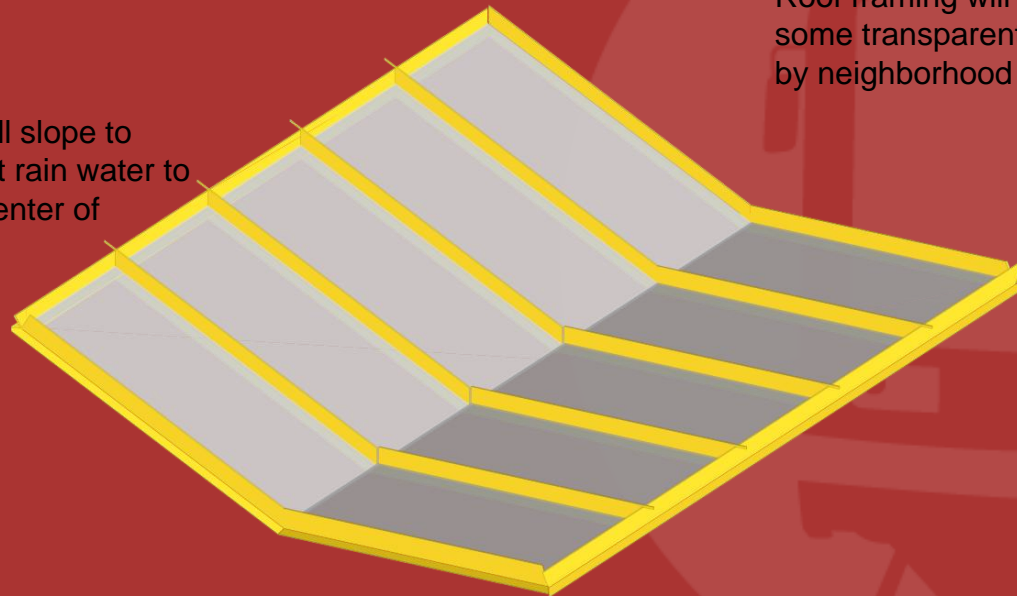
Main Beams, standard steel channels for all shelters, 18" deep 4" wide, with cut outs that match train windows, 2 pairs of 6x6 square tube columns, color consistent for all stations, modified only if required by historic district regulations.

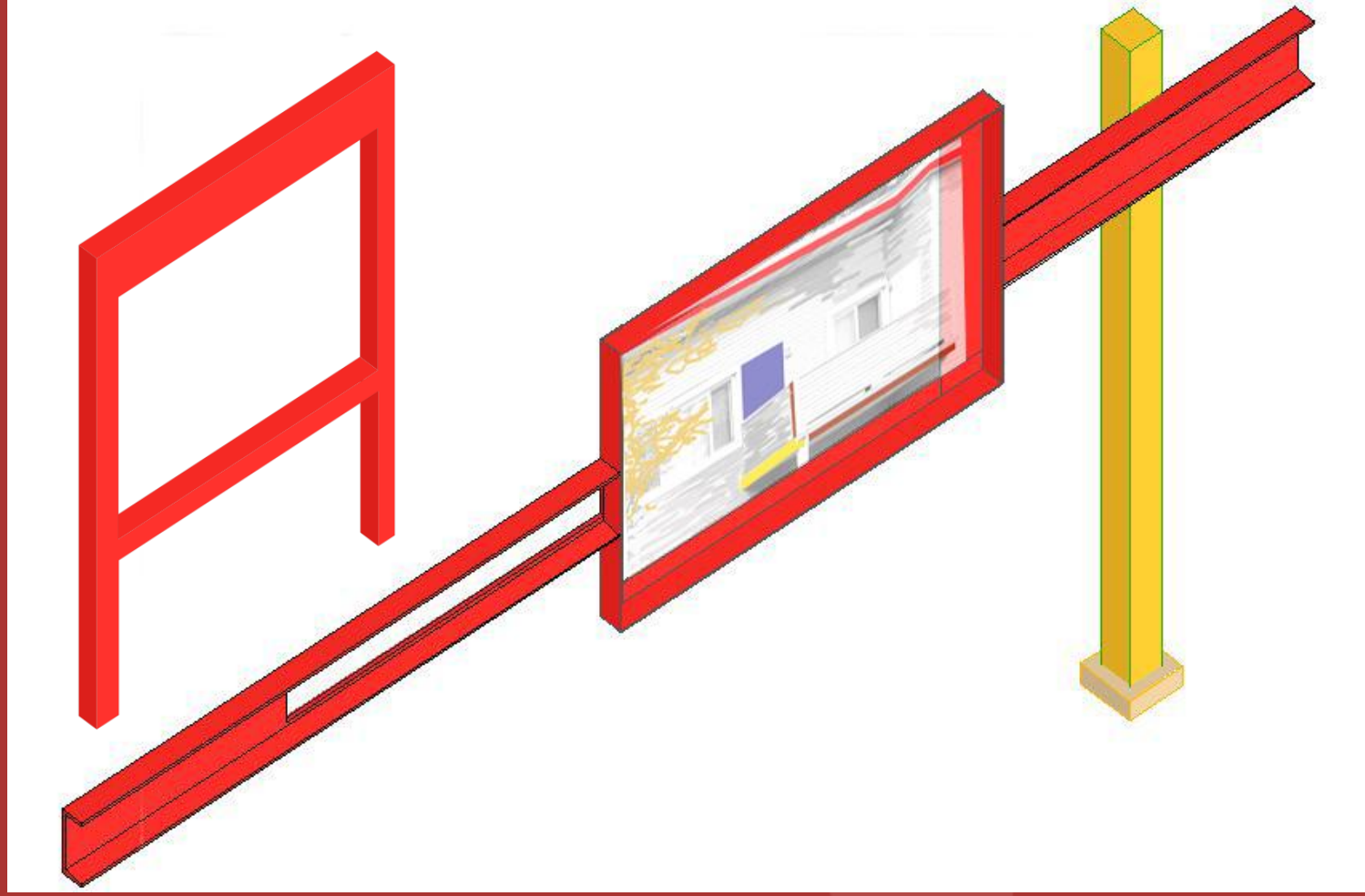
Inverted 6" deep, 4 1/2" wide steel "T" framed laminated safety glass framed roof for single platform



Roof framing will use accent colors and some transparent inserts in glass, varied by neighborhood

2-way platform roofs will slope to middle and can conduct rain water to Small planting bed at center of platform





# Wayfinding/Signage

- “Community Window”
- Alignment Map/Neighborhood Map
- Static or Digital TBD





Tuesday, November 16, 2010  
8:15 AM  
50°  
Wind: S at 8 mph  
Humidity: 83%



Local News:

Power outages affected 230,000 customers. High winds caused major power outages throughout Puget Sound, but the utilities that provide the power hope to have it restored Tuesday.

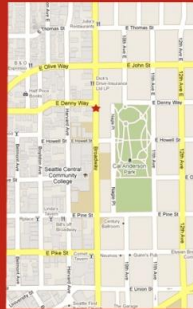


Directions

Places to Eat

Events

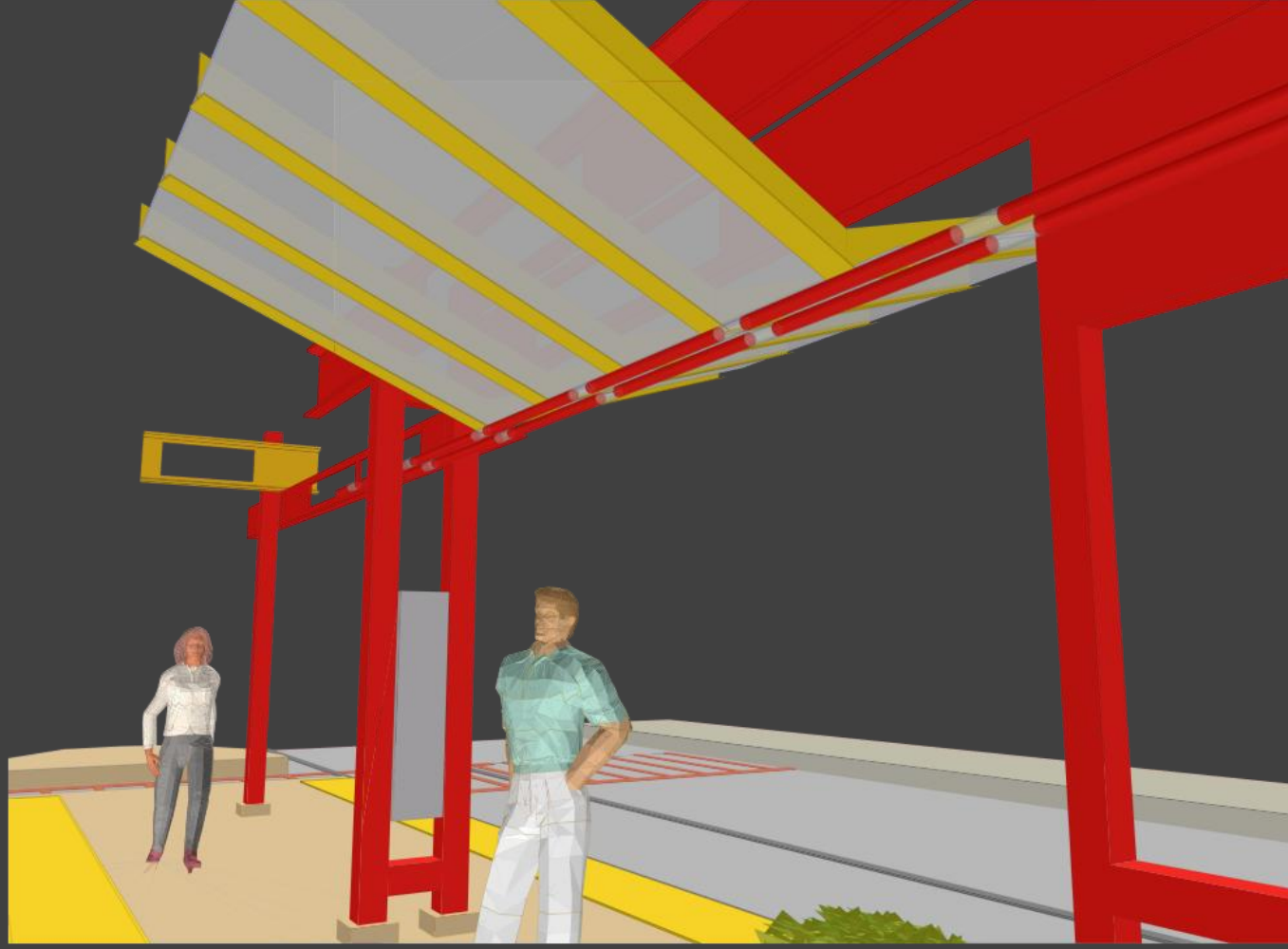
Info



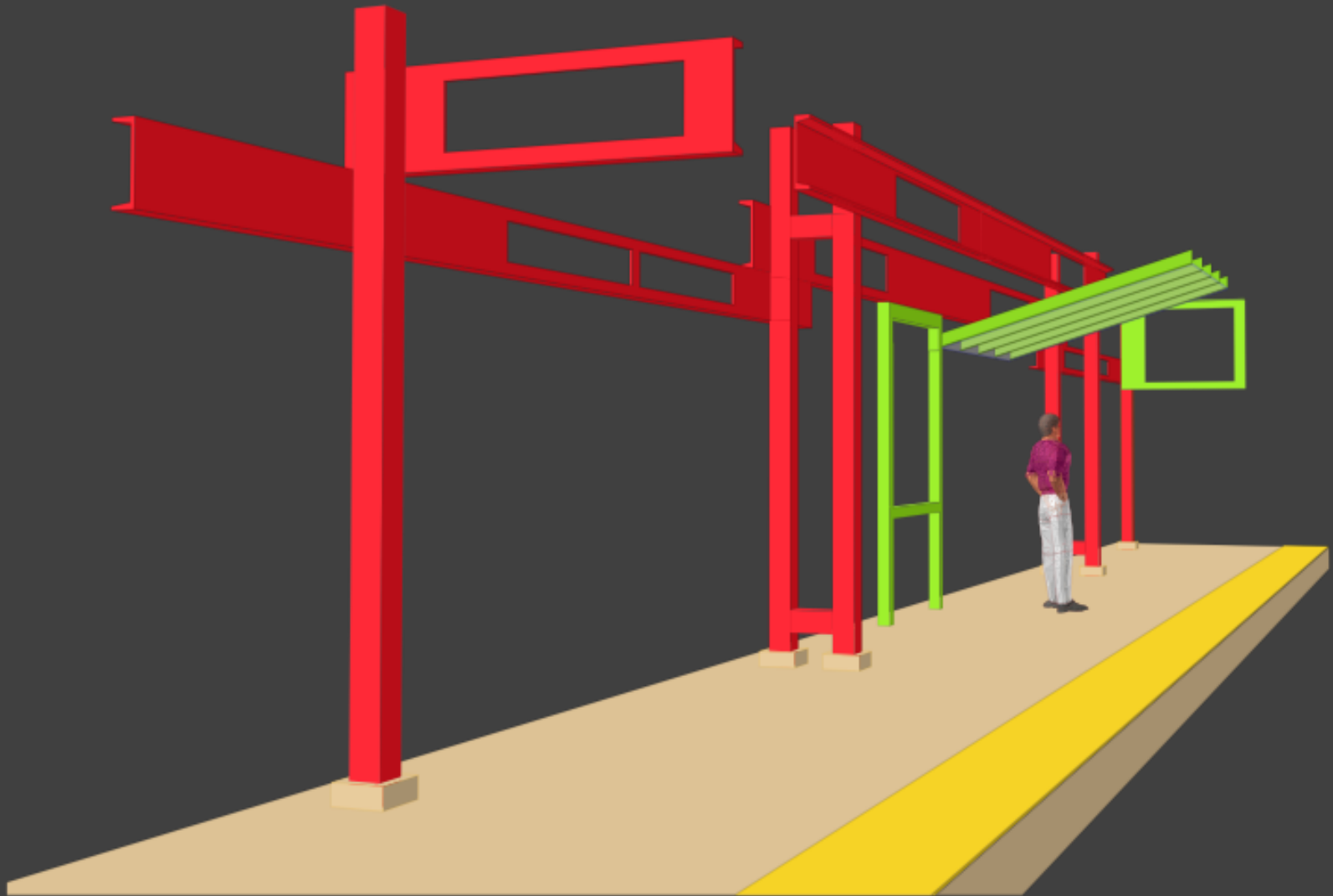
If sponsorship were found, the Community Window can become an Electronic Bulletin Board

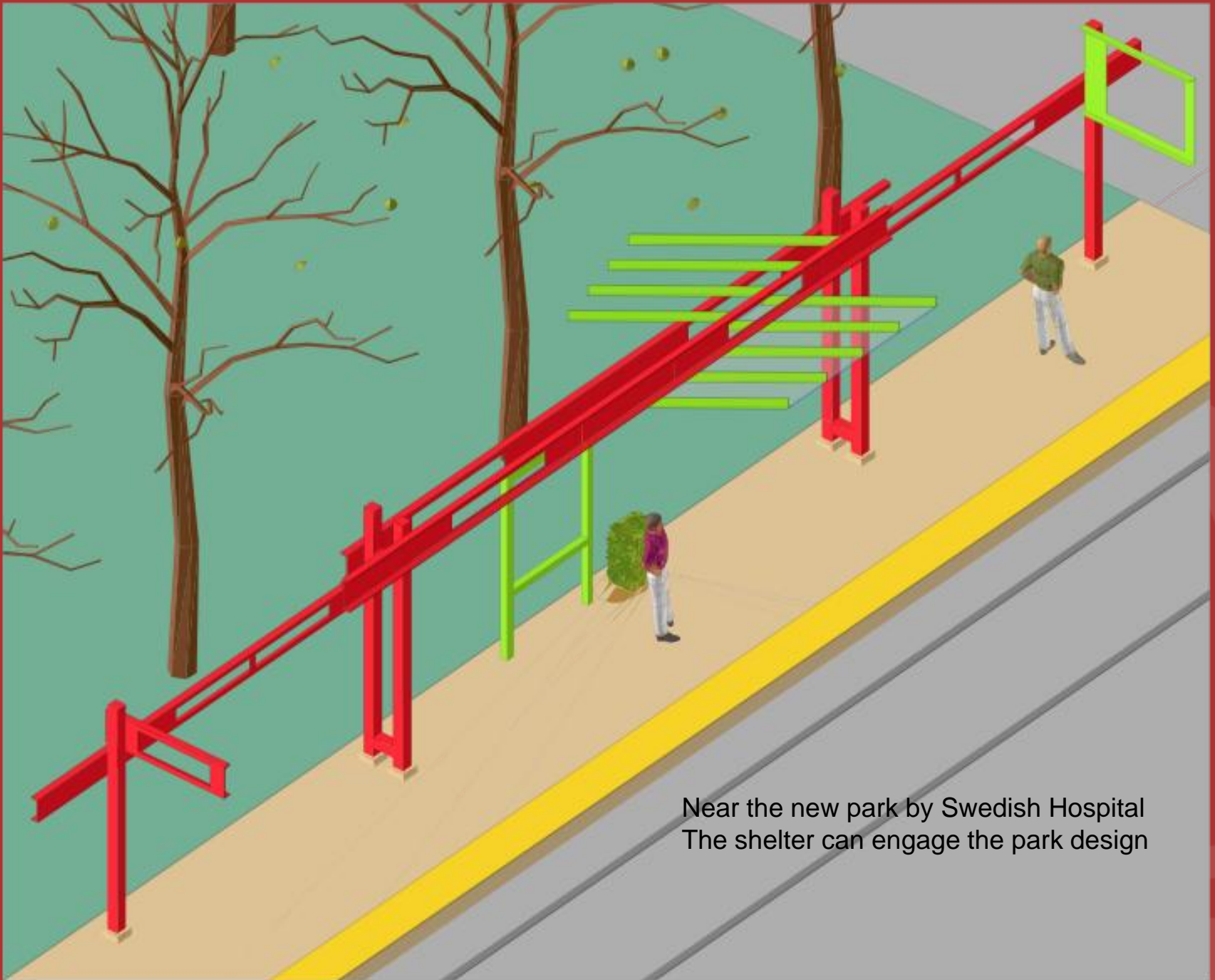


FIRST HILL STREETCAR



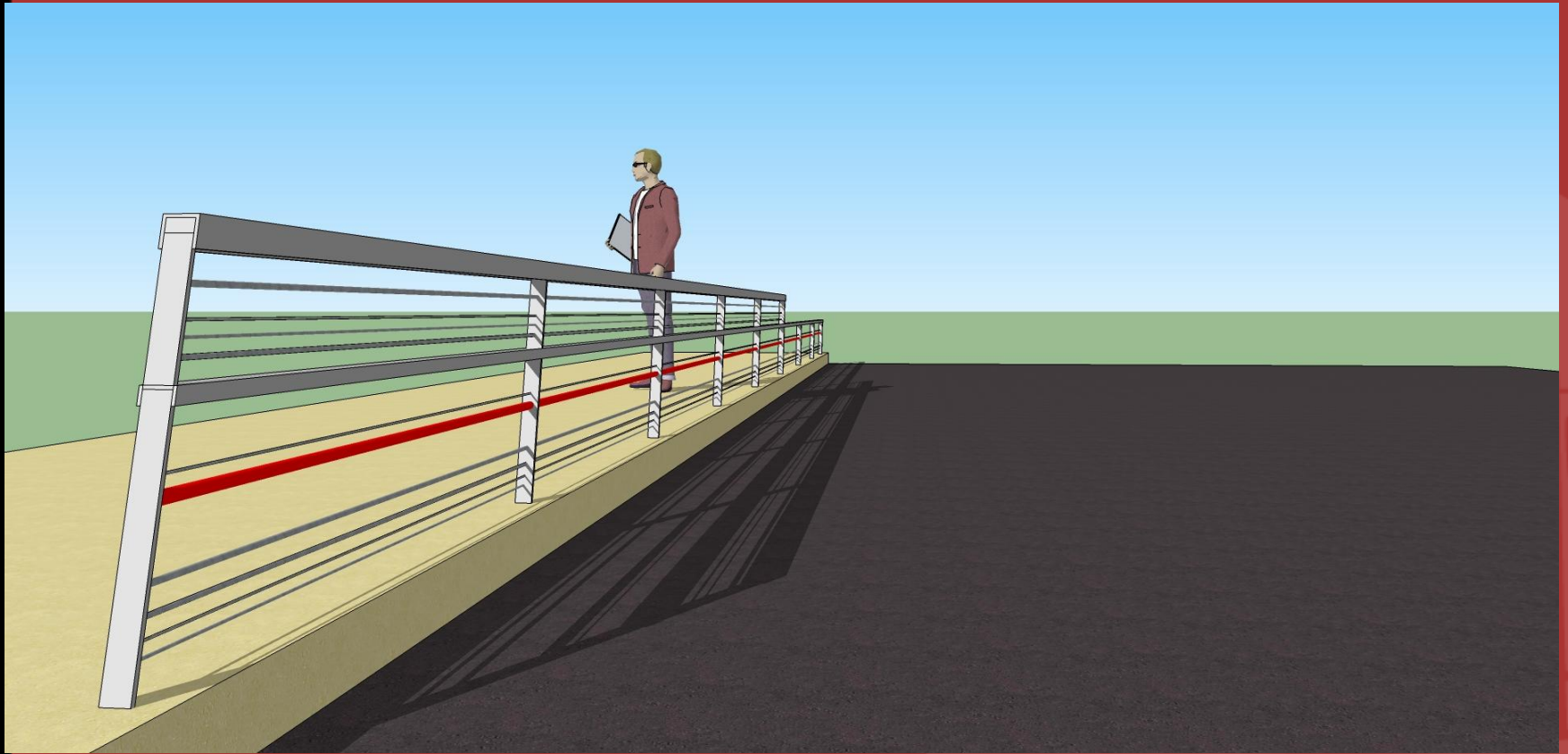
Green accents are proposed for near  
New parks on Broadway and on 14<sup>th</sup> Avenue



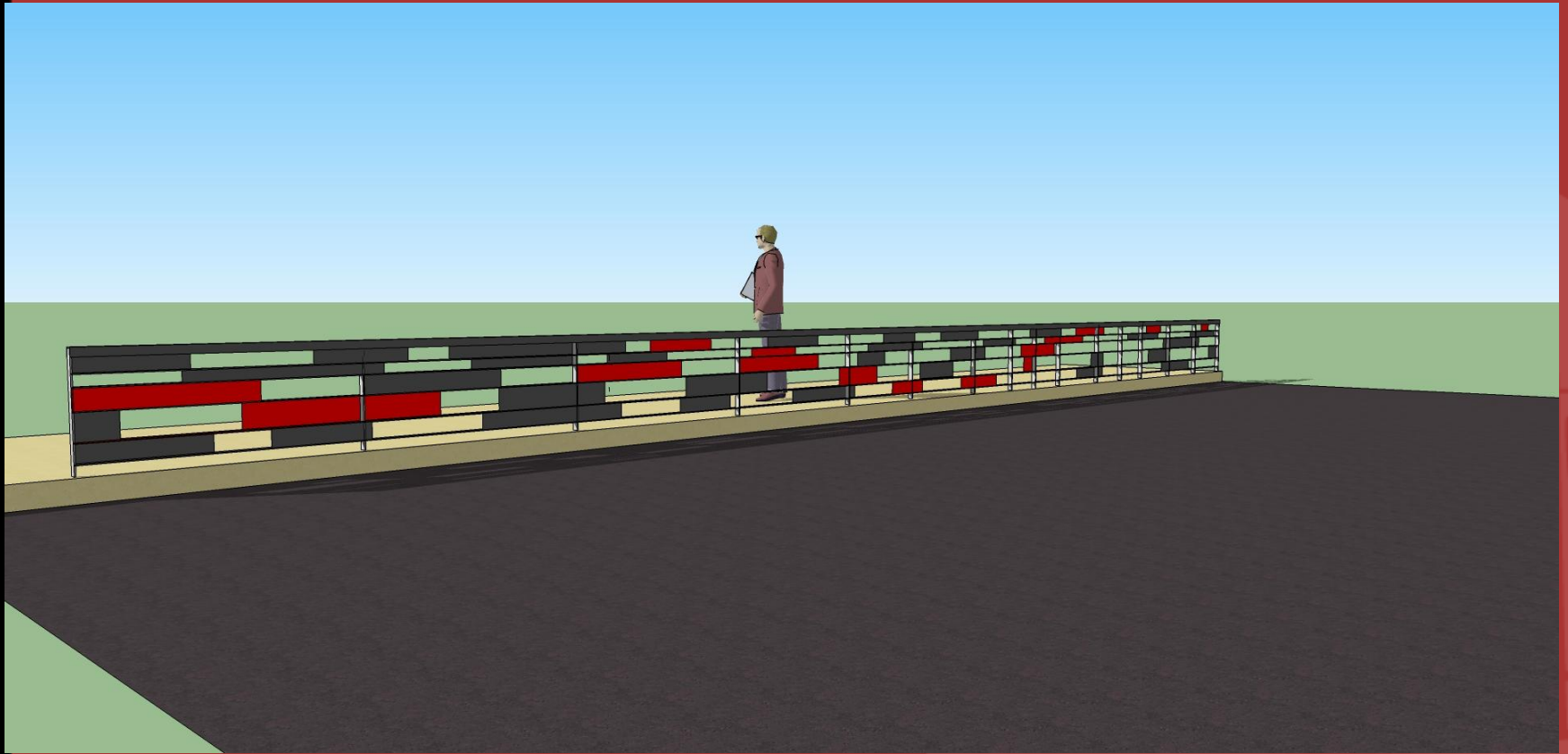


Near the new park by Swedish Hospital  
The shelter can engage the park design

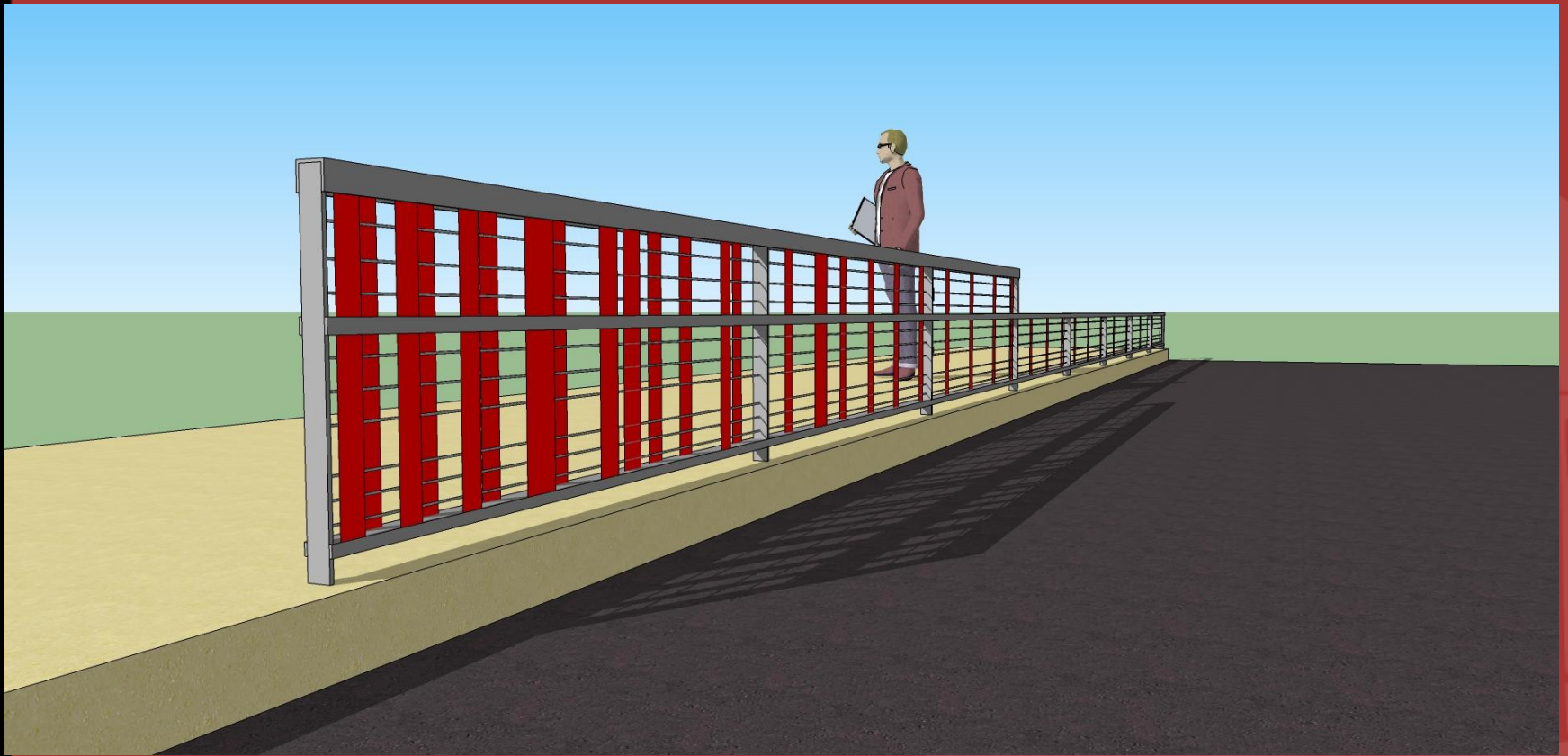
# Platform Railings Concept



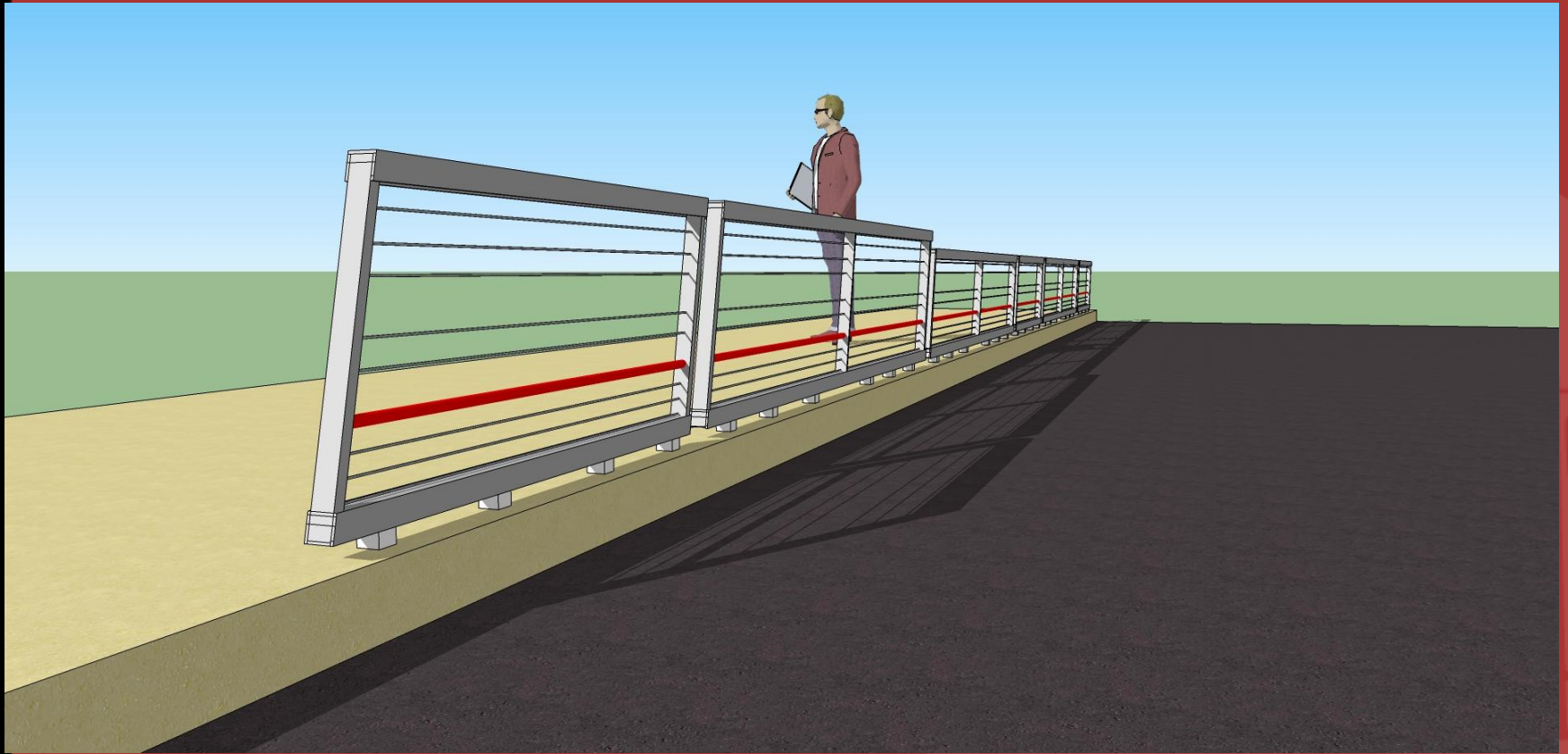
# Platform Railings Concept



# Platform Railings Concept



# Platform Railings Concept





# Platform Lighting

- Pavement Luminaires
- Linear, 6'-8' On Center
- White or Blue Light
- Street Lighting Provides Primary Lighting



# Sustainability Features

- Filtera Stormwater Management System
- Platform Natural Drainage Opportunities
- Maintenance Facility LEED Gold Target
- Vehicle Onboard Energy Storage/Regenerative Braking

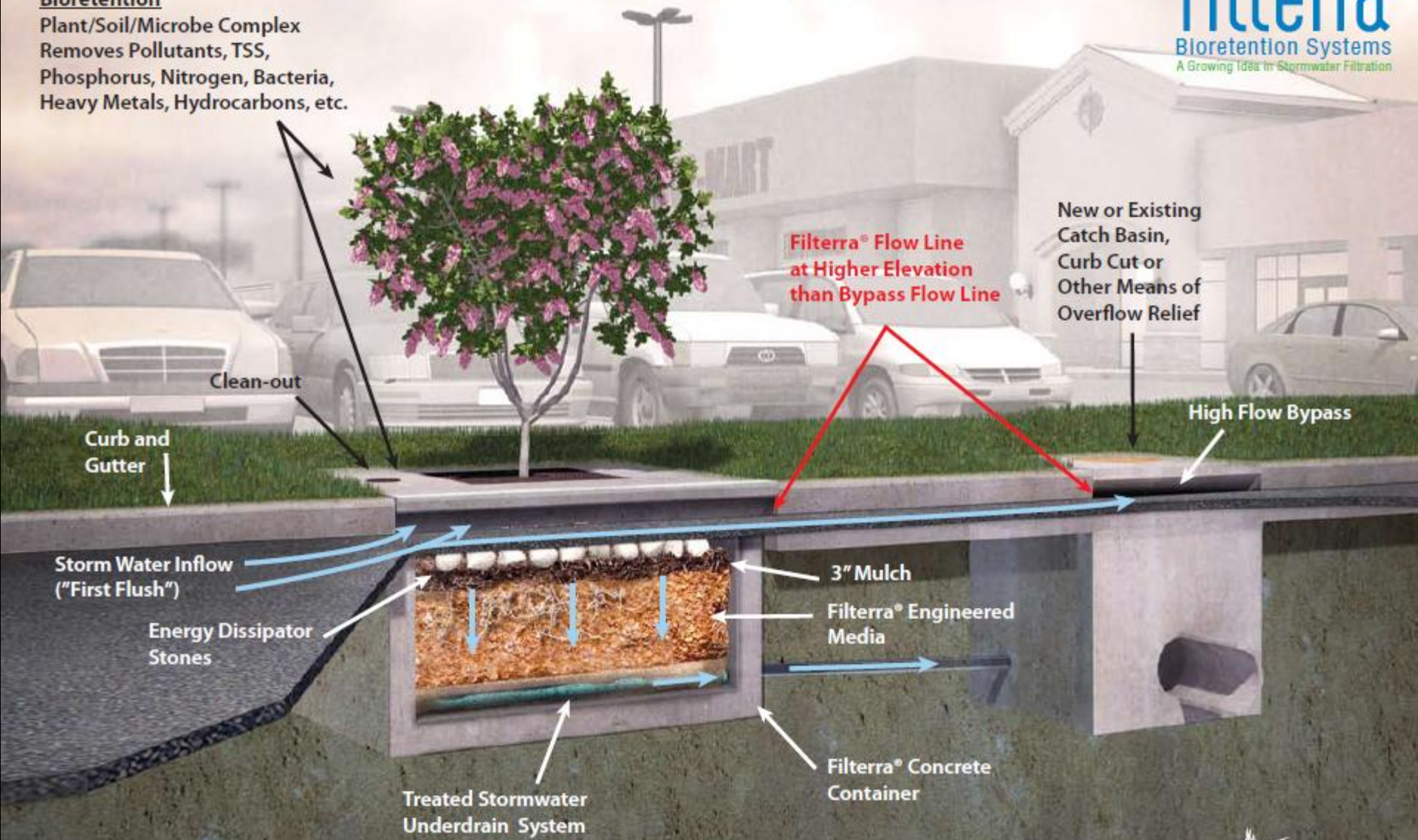




**filtererra**  
Bioretention Systems  
A Growing Idea in Stormwater Filtration

**Bioretention**

Plant/Soil/Microbe Complex  
Removes Pollutants, TSS,  
Phosphorus, Nitrogen, Bacteria,  
Heavy Metals, Hydrocarbons, etc.



**Filtererra® Flow Line  
at Higher Elevation  
than Bypass Flow Line**

New or Existing  
Catch Basin,  
Curb Cut or  
Other Means of  
Overflow Relief

High Flow Bypass

Storm Water Inflow  
("First Flush")

Energy Dissipator  
Stones

3" Mulch

Filtererra® Engineered  
Media

Filtererra® Concrete  
Container

Treated Stormwater  
Underdrain System

# MAINTENANCE FACILITY

## Site Program

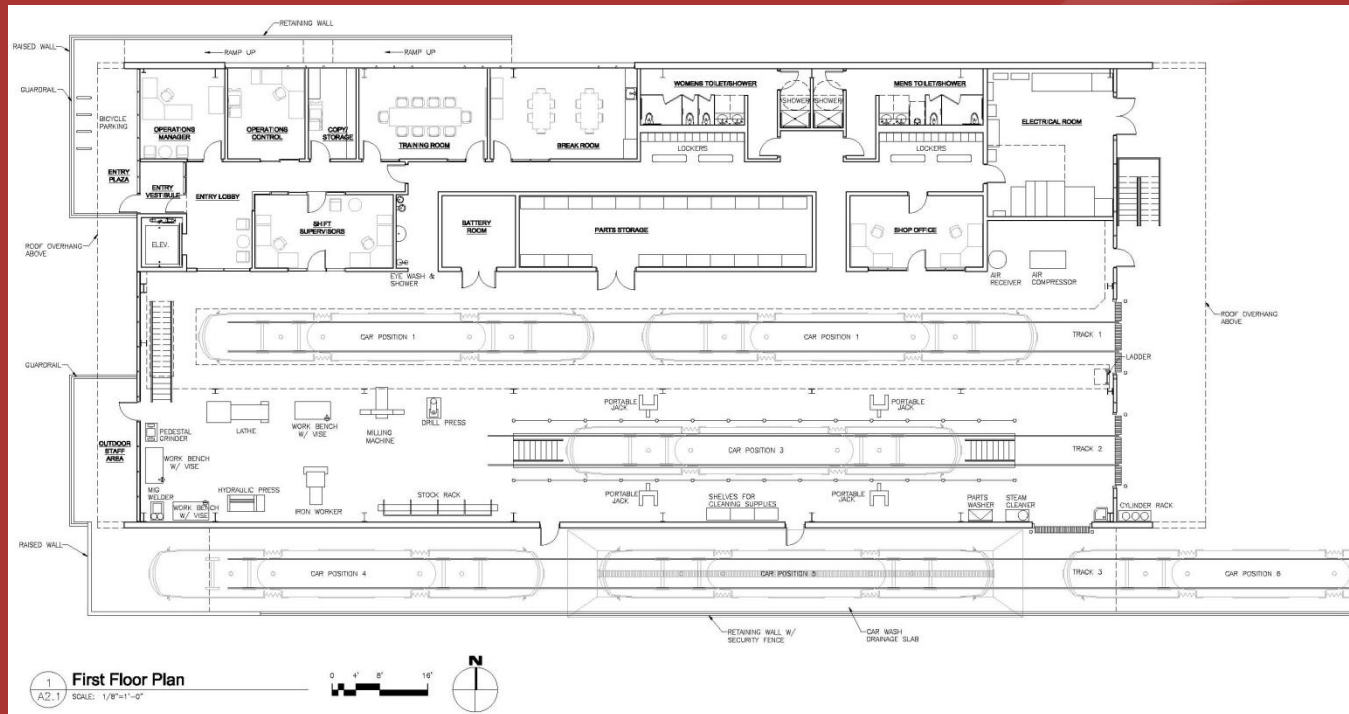
- Tracks for connection to the mainline
- Vehicle operations and maintenance facility (12,500 sq. ft. footprint, 20,000 sq. ft. total)
- A covered exterior vehicle storage and wash track
- Parking/loading spaces
- Refuse and recycling



# MAINTENANCE FACILITY

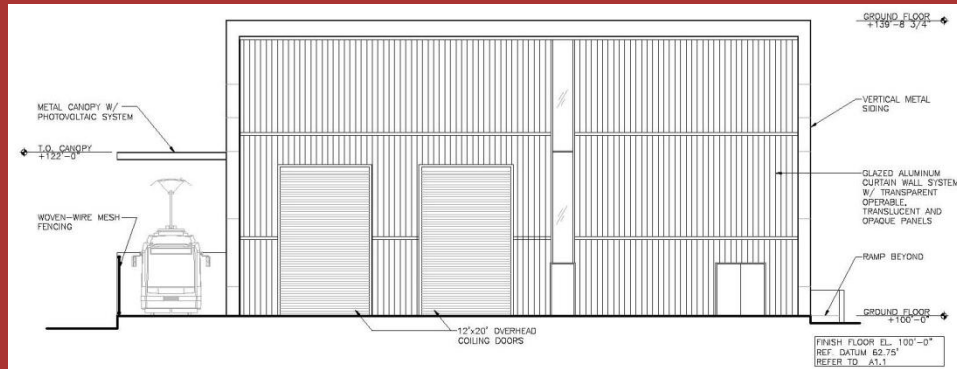
## Building Program

- 2 vehicle positions with platforms for top of vehicle maintenance
- 1 vehicle position with pit and jacking capability
- Machine shop
- Support spaces including: Operations, Training, Breakroom, Battery Room, Parts Storage, Toilet/Locker Rooms

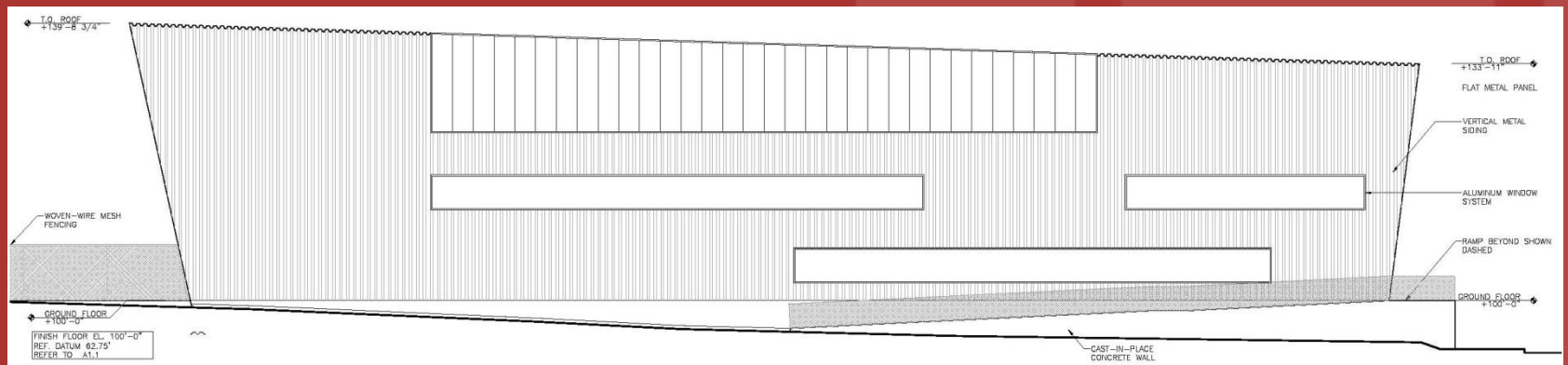


# MAINTENANCE FACILITY

## Building Elevations



East

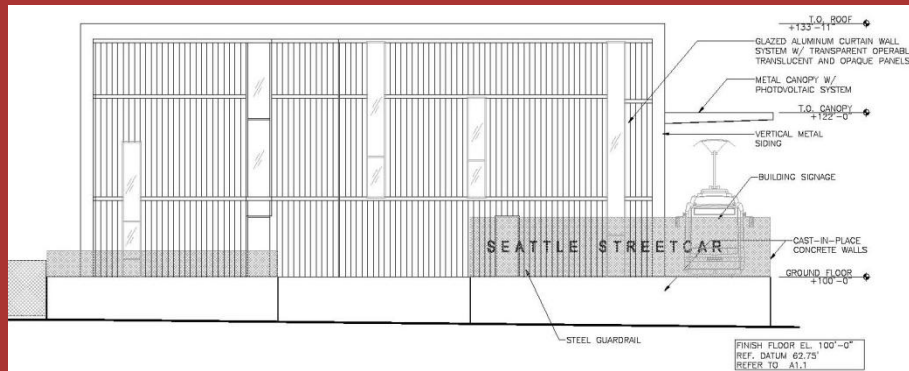


North

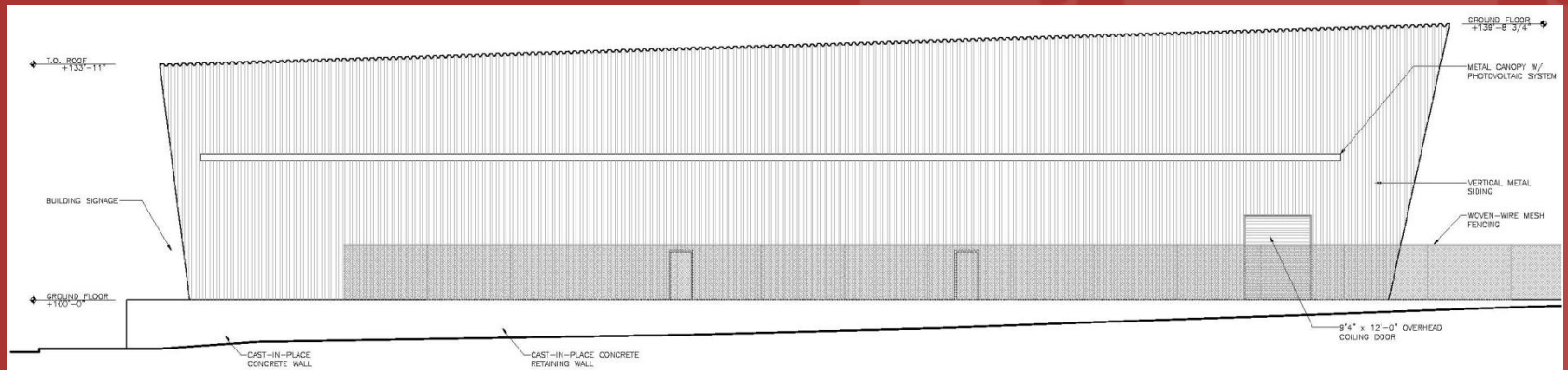
# MAINTENANCE FACILITY

## Building Elevations

FIRST HILL STREETCAR



West

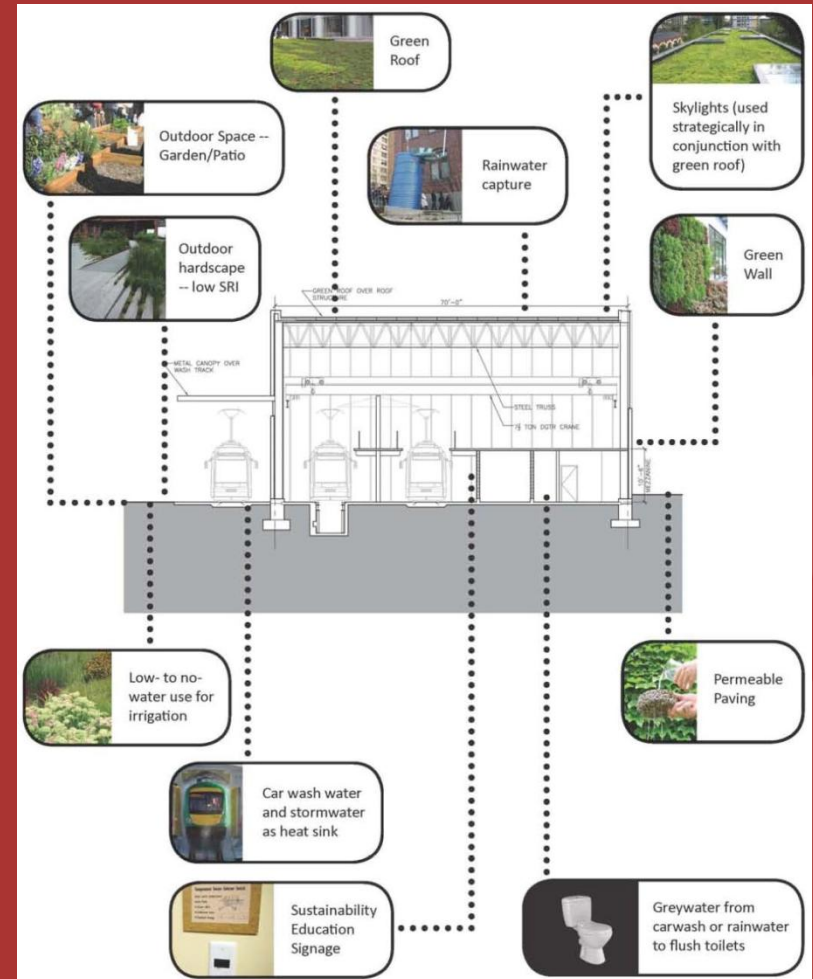


South

# MAINTENANCE FACILITY

## Sustainability Features

- Minimum LEED Silver Certification
- Integrated Design Process
- Extensive Stormwater Mitigation Features: full green roof, pervious paving, green wall
- Renewable Energy: PV (photovoltaic) array
- Energy Efficiency: highly efficient heating system (variable refrigerant flow [VRF] and radiant flooring), daylighting to offset electric lighting, occupancy and daylighting sensors, natural ventilation
- Occupant Health and Comfort: natural daylighting, access to views, low to no-toxicity building materials
- Locally Sourced Materials
- Electric Car Charging Stations





# MAINTENANCE FACILITY

## Rendering



FIRST HILL STREETCAR

first hill streetcar- charles street concept  
8th ave perspective

 waterleaf  
architecture, interiors & planning

# Vehicles & Operations

- Similar to South Lake Union Line
- Wireless Operating Segments
- Passenger Information Systems (On-Board/At Platforms)

