Center City Streetcar System

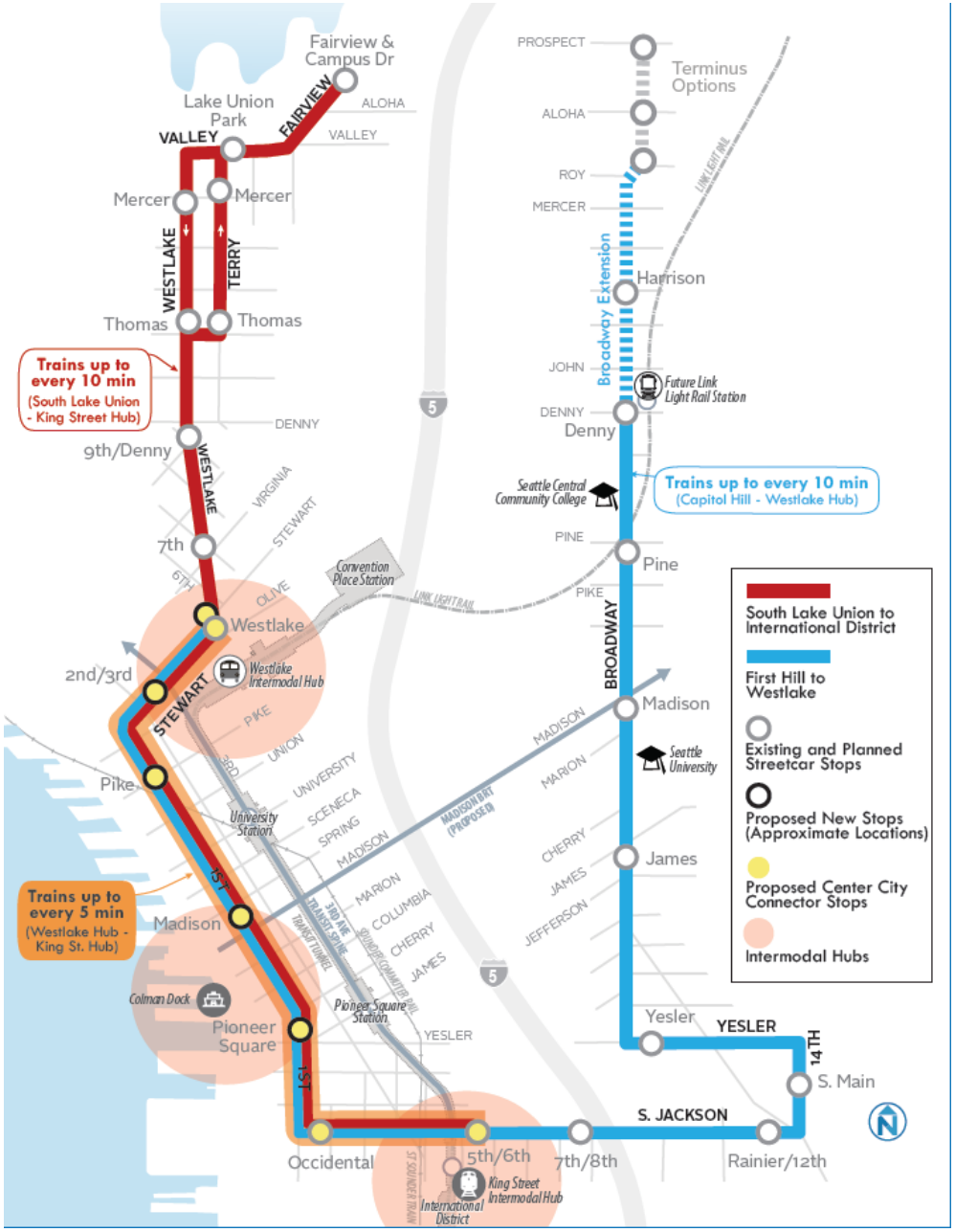
Seattle Design Commission

June 5, 2014

SDOT
Seattle Department of Transportation

Overview

- Transit In Seattle-The Role of Streetcars
- Center City Streetcar System, “Streetcar 101” & Precedents
- Broadway & Center City Segments-Purpose & Scope Overview
- Urban Design Issues & Opportunities
- Project Team Introduction



Transit in Seattle: The Role of Streetcars

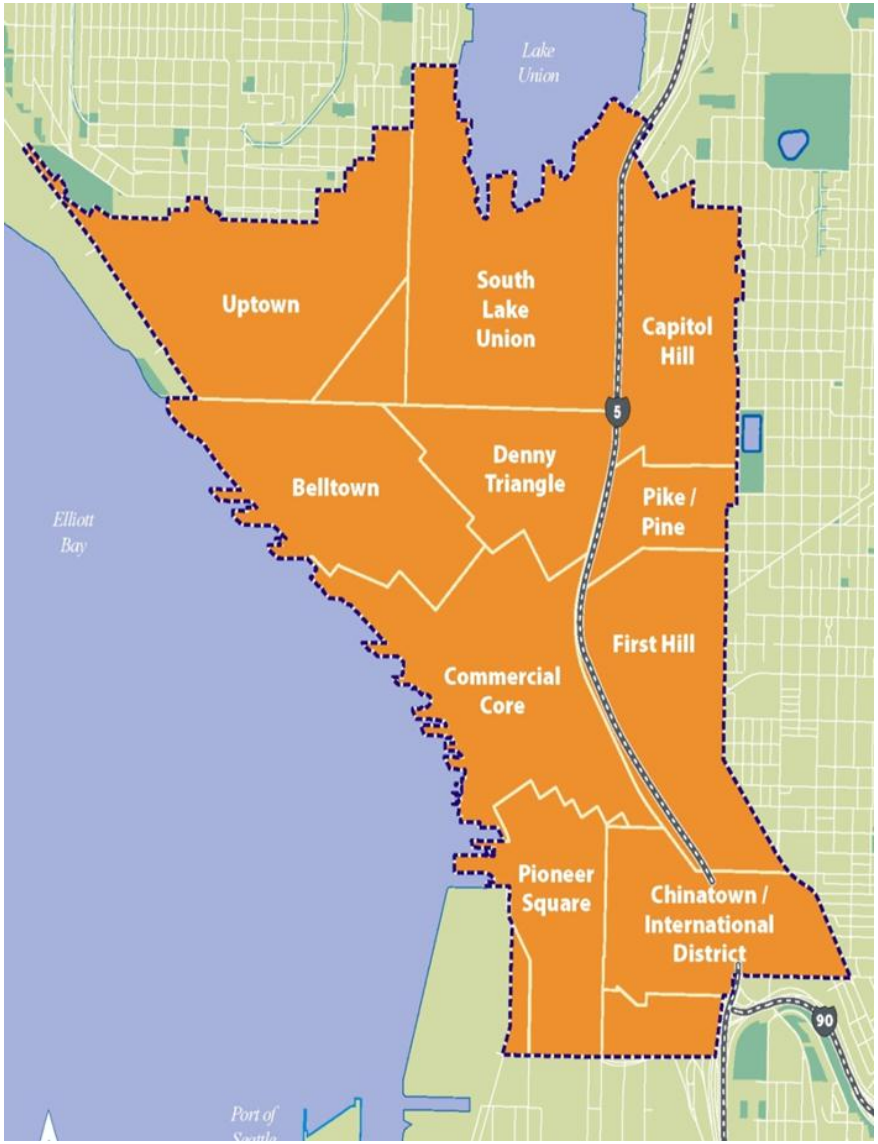
- Light Rail as Regional Spine
- Streetcar & BRT in City's High Capacity Corridors
- Buses Continue to Serve Most Transit Corridors

Transit in Seattle: The Role of Streetcars

- Ride quality, accessibility, & intangibles attract new riders
- Placemaking & catalyst for development
- Higher capacity for urban circulator service

Transit in Seattle: The Role of Streetcars

- Last-Mile Connections from Regional Transit to Center City Destinations
- Circulation within Center City



Streetcar 101 (Infrastructure)

- Embedded Track
- Traction Power System (Typically Overhead Contact System)
- Station Platforms—Typically More than a Bus Stop/Less than a Light Rail Station

Streetcar 101 (Infrastructure)

- Footprint typically limited to minimize cost & impact
- Streetscape—Strategic opportunities/phasing rather than comprehensive corridor reconstruction
- Miscellaneous upgrades as required for ADA, new code requirements, major maintenance

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Streetcar 101 (Transportation Planning)

- May operate in mixed flow or exclusive lanes
- May serve side or center platforms
- Bicycle integration
- May accommodate all modes or reprioritize modal emphasis
- Typical tradeoffs—
  On-street parking v. transit & non-motorized emphasis

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South Lake Union Streetcar

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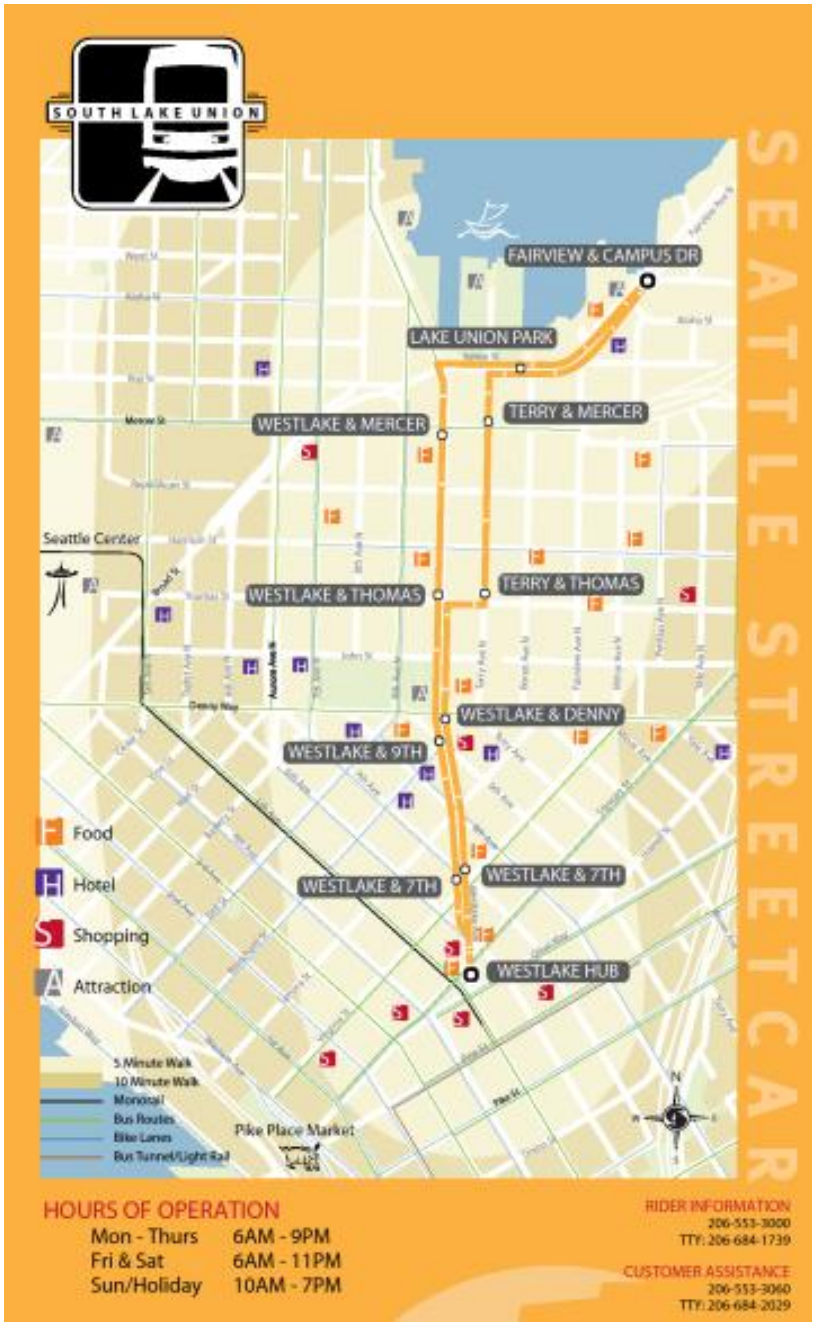
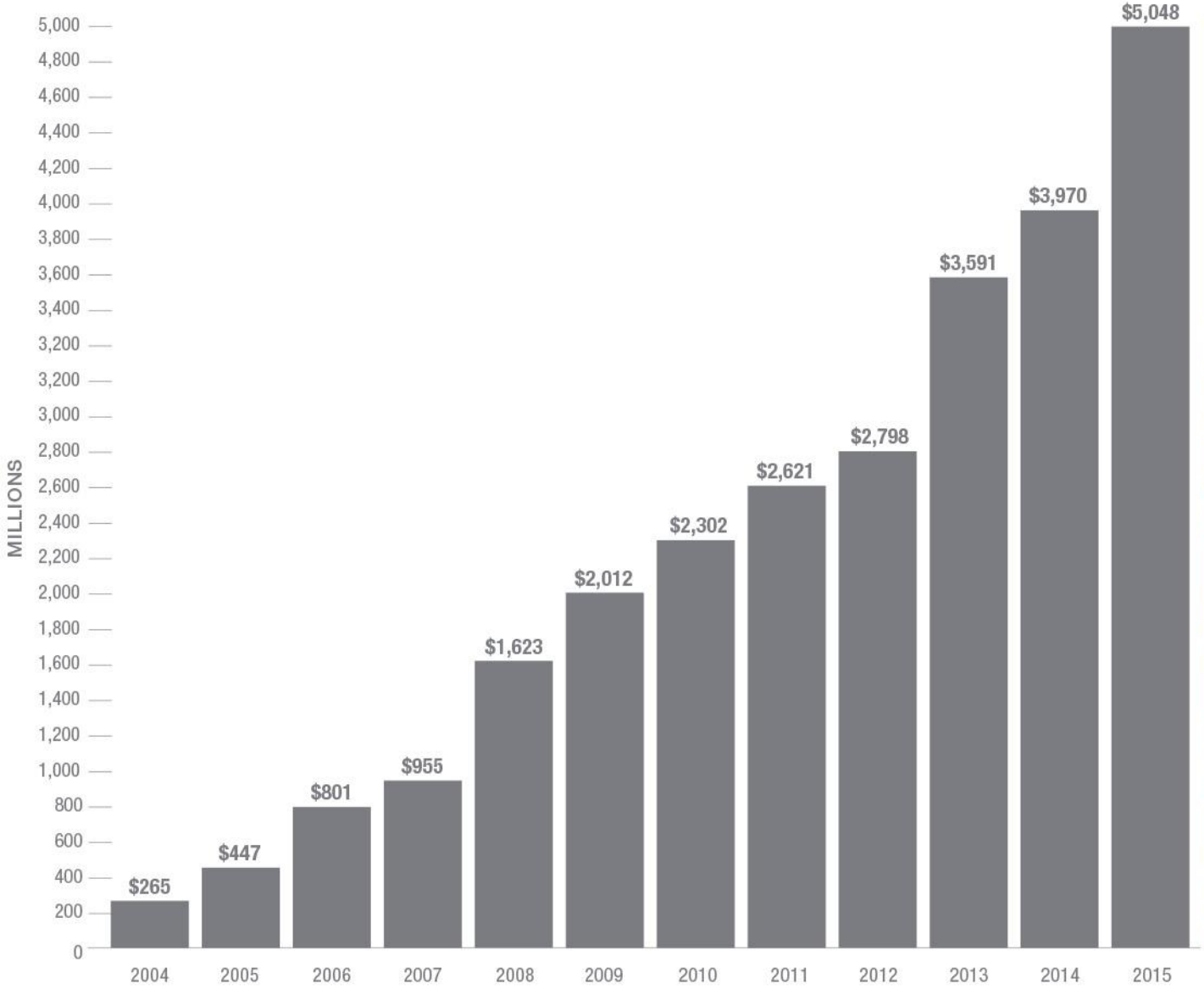
South Lake Union Streetcar

- Opened in 2007
- 900 Average Weekday Riders in 2008
- 2,600 Average Weekday Riders in 2013
- Post-Project, SDOT Completed McGraw Square Plaza & Developers Completed Terry Avenue Streetscape

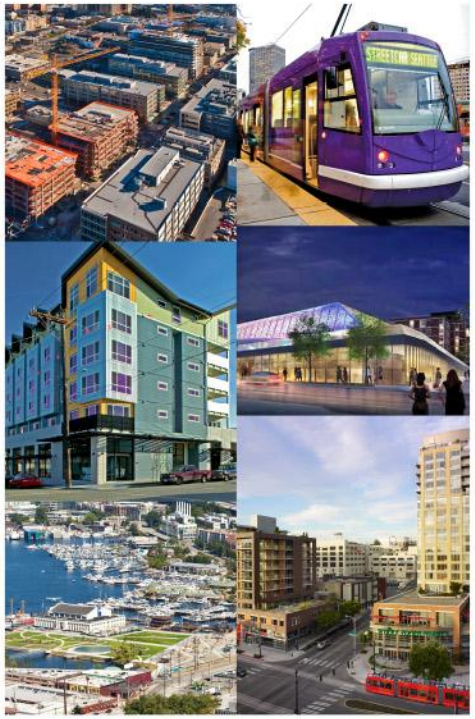


SOUTH LAKE UNION
CUMULATIVE INVESTMENT



TOTAL INVESTMENT:

$5 Billion
11,300,000 Square Feet
$4.4B Development Projects
$590M Infrastructure Improv.



First Hill Streetcar

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First Hill Streetcar

- Sound Transit (ST) 2 project
- Alternative to light rail station – connects Capitol Hill and International District
- ST agreement provides
  - $132.8 M
  - City design/construction authority, including station locations and complete streets design
  - City right to operate as part of broader system

First Hill Streetcar

- Stop locations selected to serve and connect diverse neighborhoods

First Hill Streetcar

- Broadway protected bike lanes

Center City Connector

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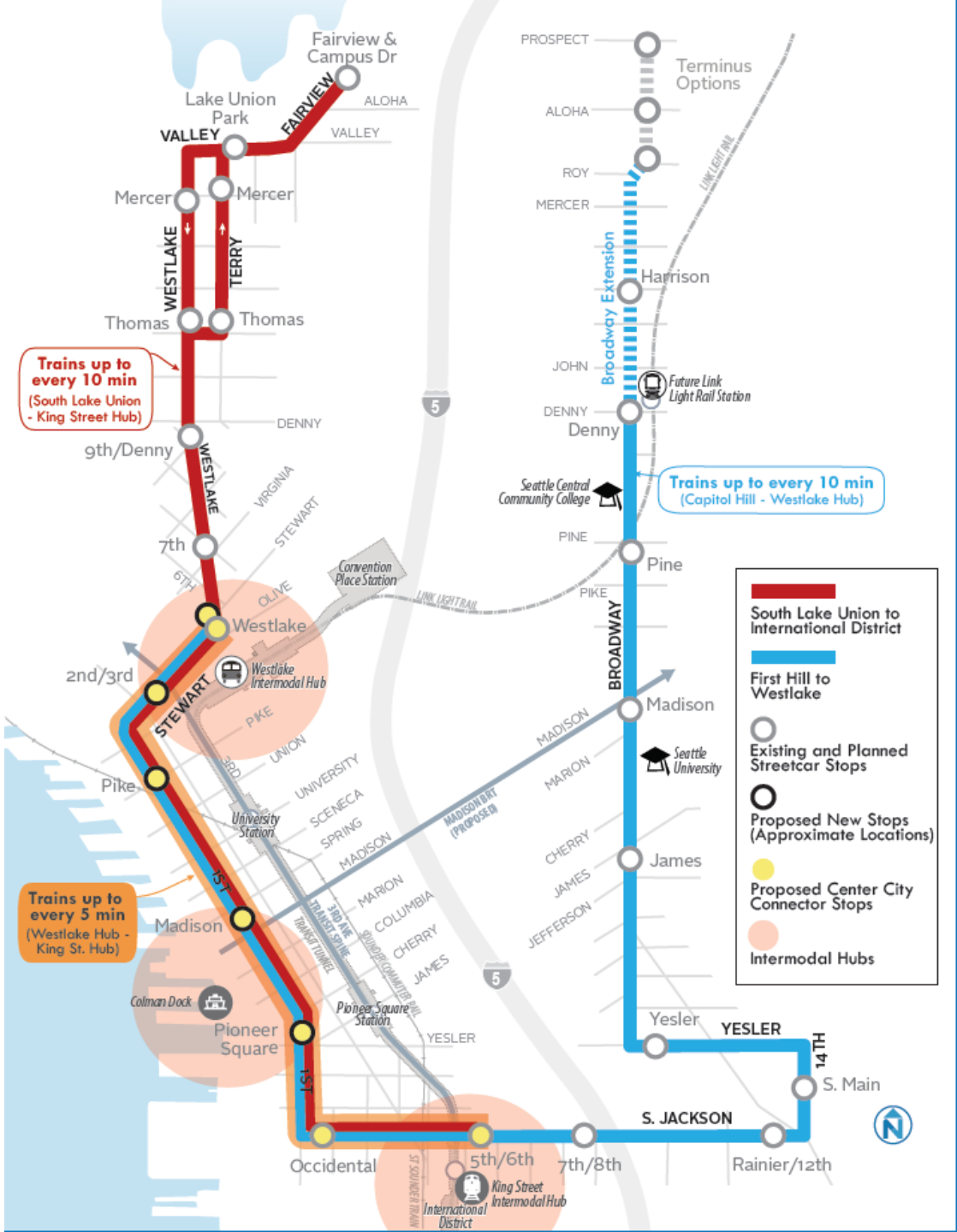
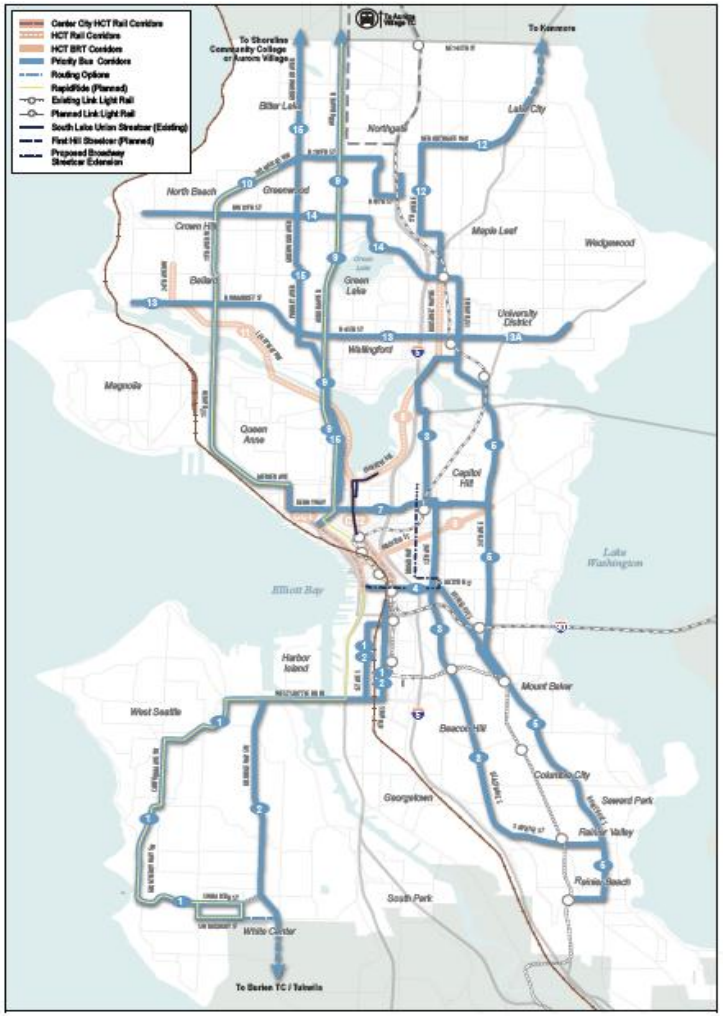
Center City Connector: Project Purpose & Need

- Connect the South Lake Union and First Hill streetcars
- Improve north-south transit mobility through downtown.



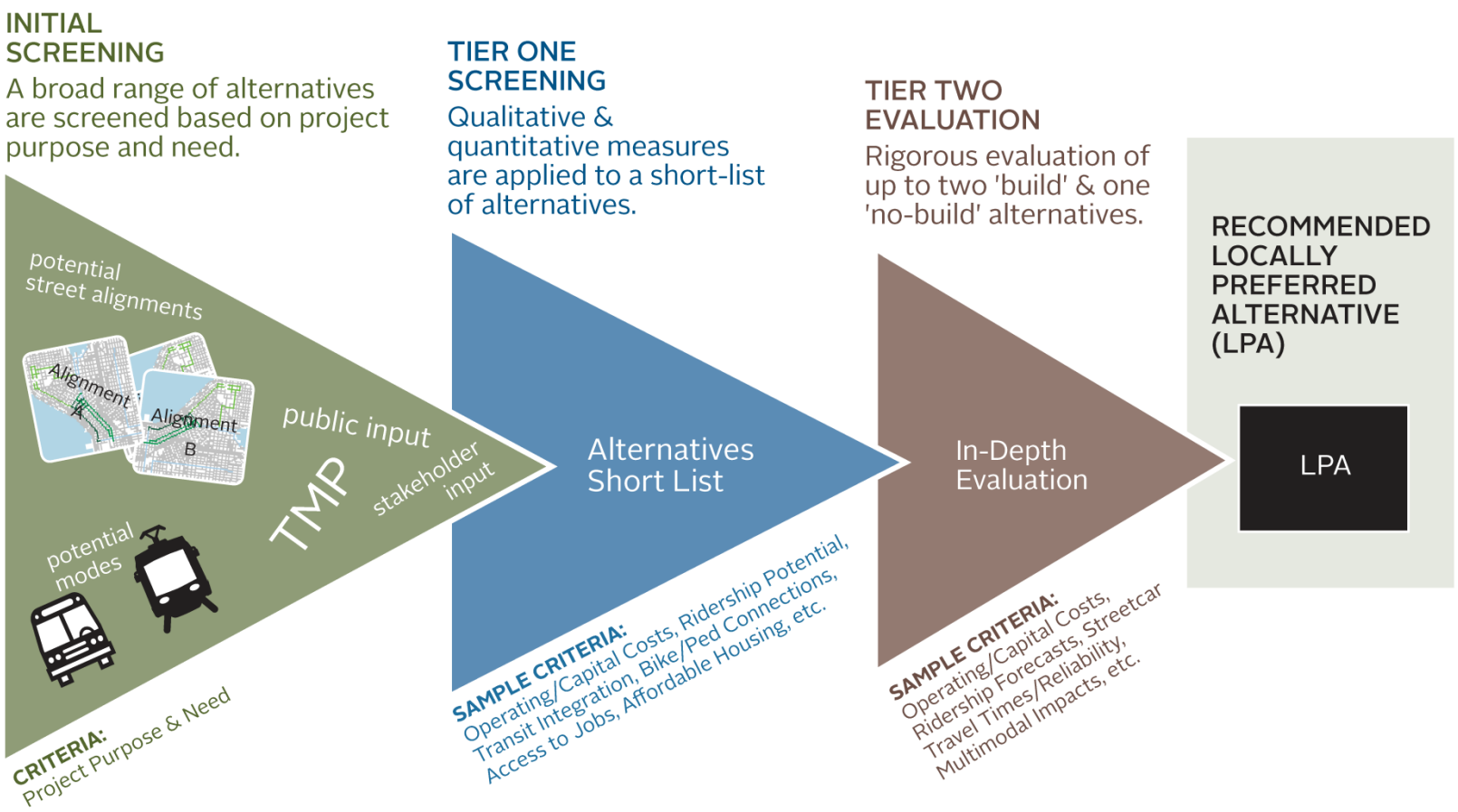
Center City Connector: Role in Seattle Transit System

- Creates critical transit capacity in constrained Center City
- Center City Streetcar System enables "Transit Grid"
- Supports expanding regional rail system



Arterial bus routes help form high frequency transit grid.

Study Evaluation Process



Public Engagement

- Stakeholder interviews
- Community meetings
- 3 Open houses
- Web survey
- Media Outreach
- Strong Support for:
  - First Avenue
  - Exclusive Running

Proposed LPA

Alignment

- 1st Ave Pike to Jackson
- East-West Options:
  - Stewart – Olive
  - Pike/Pine – 4th/5th/6th

ROW Treatment

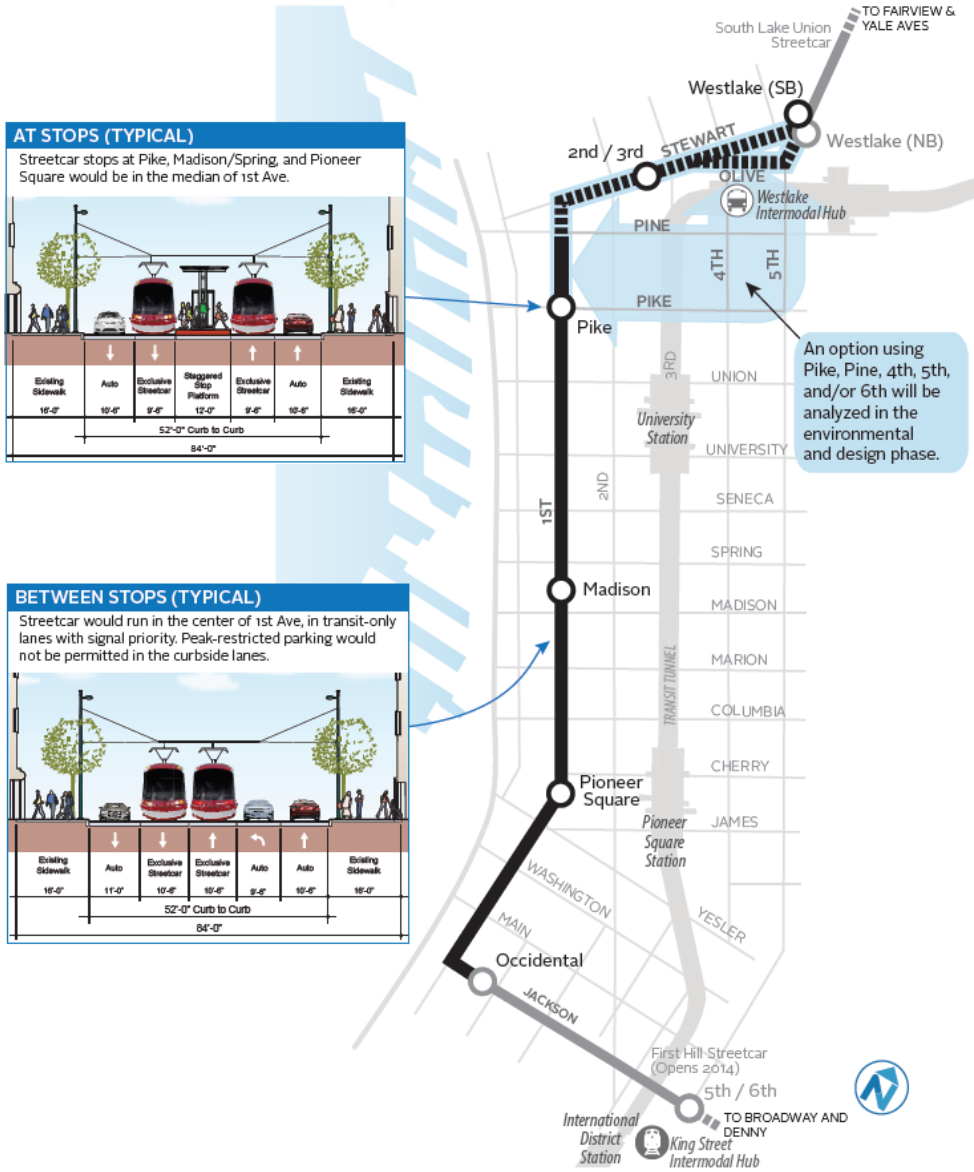
- Exclusive running
- Center running on 1st

Mode

- Modern streetcar

Capital Cost (Including Fleet)

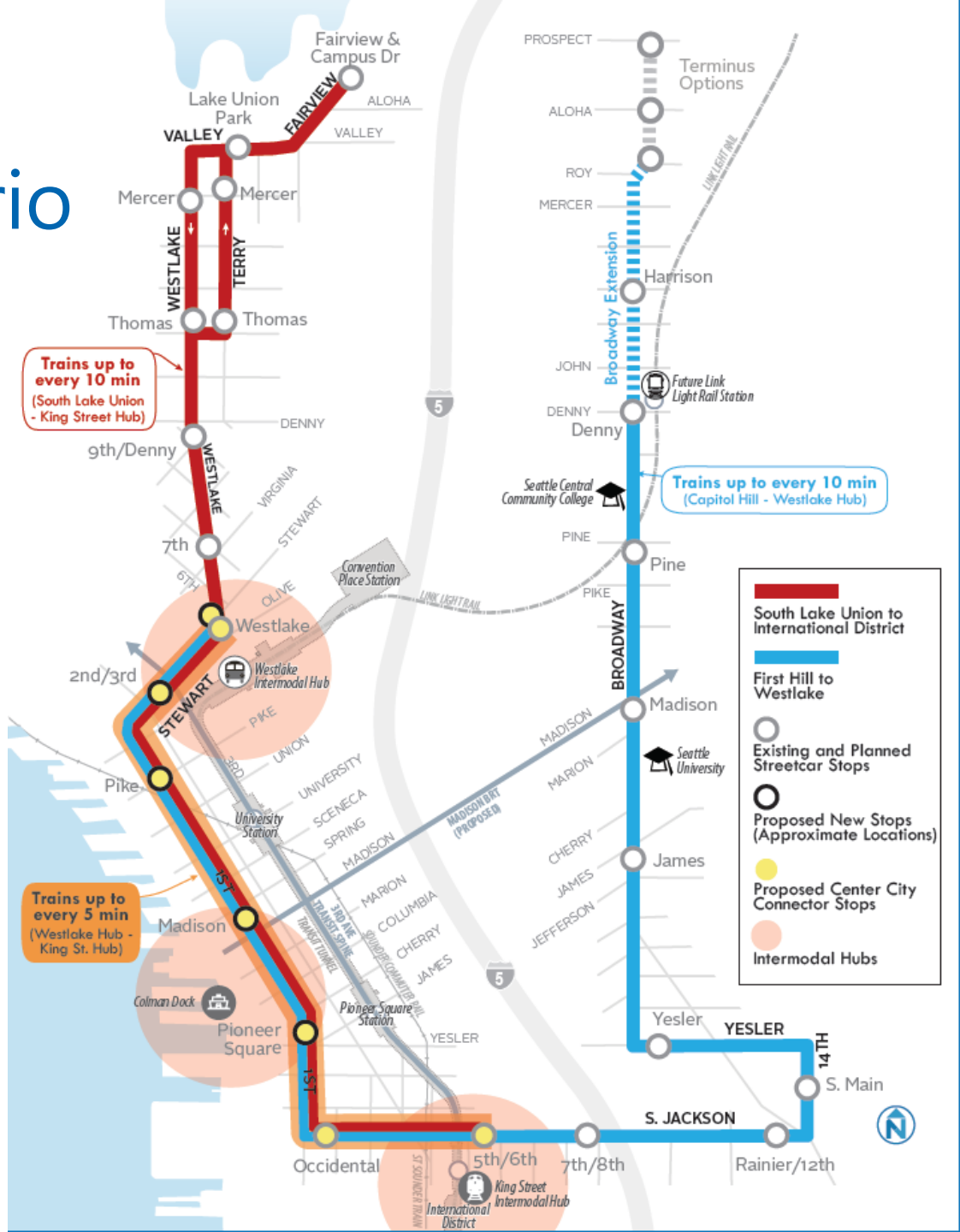
- $110 M



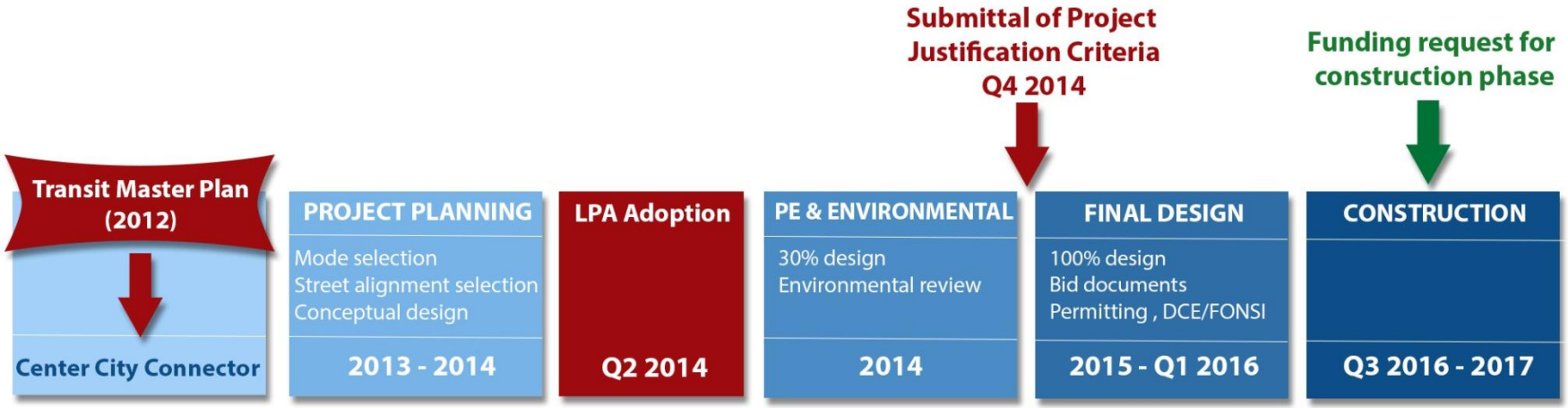
Preferred Operating Scenario

"Hub to Hub"

- 5-minute headway between Westlake and International District Hubs
- Weekday operations from 5 a.m. to 1 a.m.



Timeline: From Plan to Built Project



Center City Connector: Urban Design

…history, character, sensitive zones, context, scale, trees, poles, lighting, ground plane…

Urban Design Framework Plan

- Existing Conditions Analysis
- Guiding Principles Definition

Makers Architecture and Urban Design:

Gerald Hansmire

John Owen

Stephanie Wildhaber

Center City Connector: Urban Design

…landscape, materials, furnishings…

Urban Design Detailing

- Transit Way Delineation
- Station Design

Nelson –Nygaard:
James McGrath

Center City Connector: Urban Design

- Scope
  - Transit-way Delineation
  - Stations
  - Streetscape

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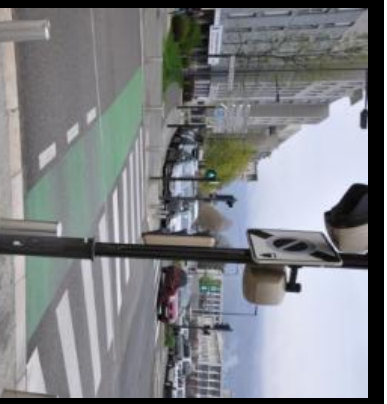
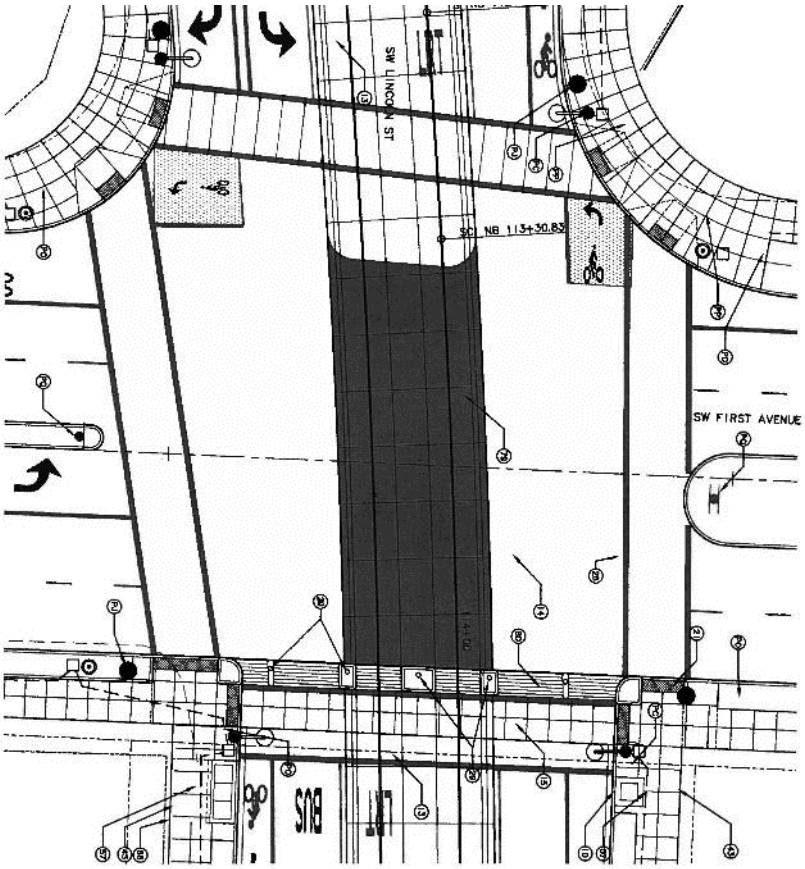
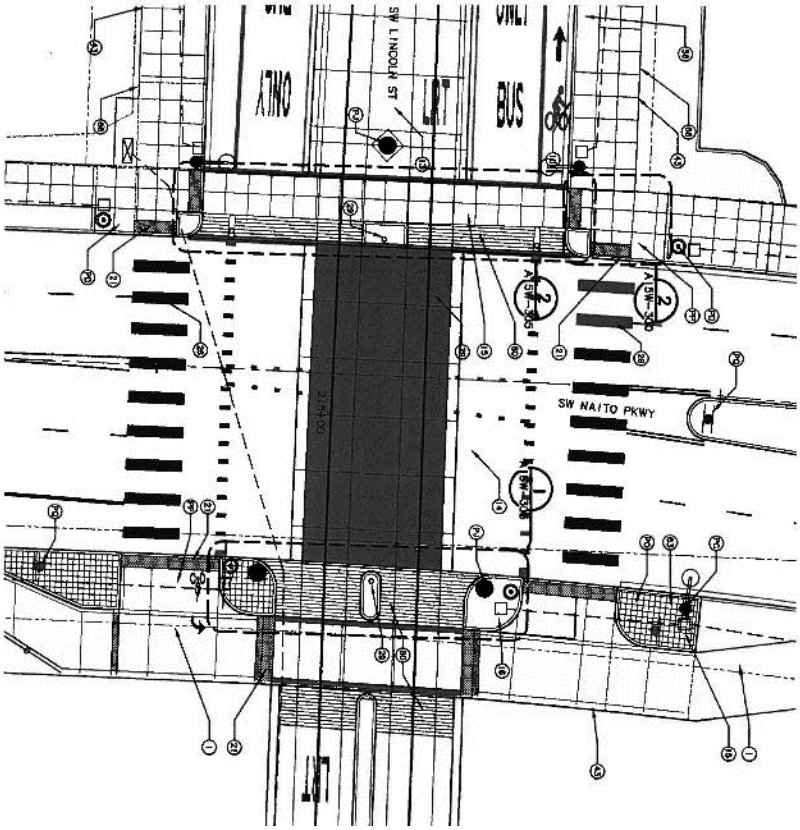
Lyon, France



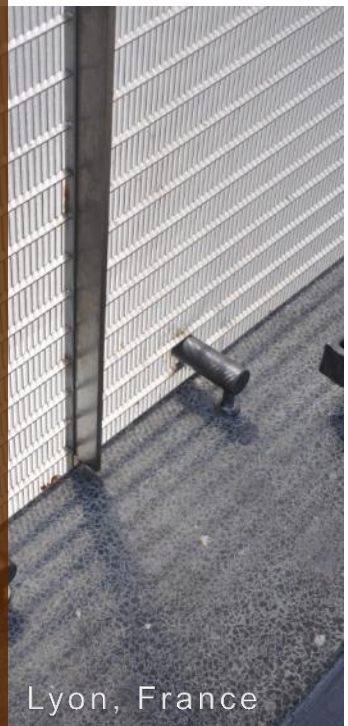
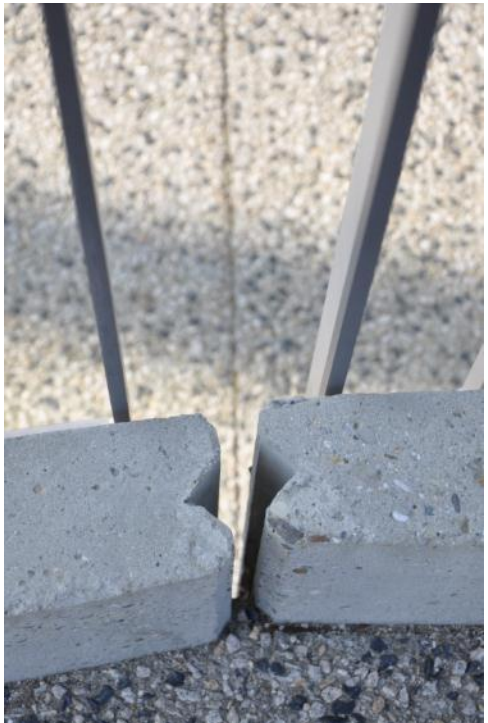

SW LINCOLN ST
SC NB 113+30.83
SW FIRST AVENUE
LRT
BUS


SW LINCOLN ST
LRT
BUS
ONLY
SW NAITO PKWY
LRT

Center City Connector: Urban Design

- Transit-way Delineation
- Stations
- Streetscape

stations

Lyon, France

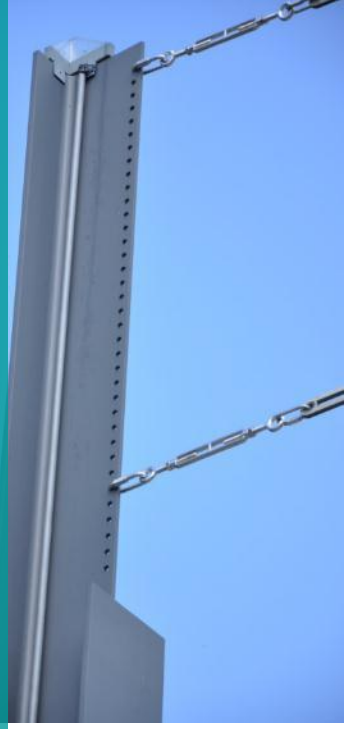
amenities

Lyon, France

Center City Connector: Urban Design

- Transit-way Delineation
- Stations
- Streetscape

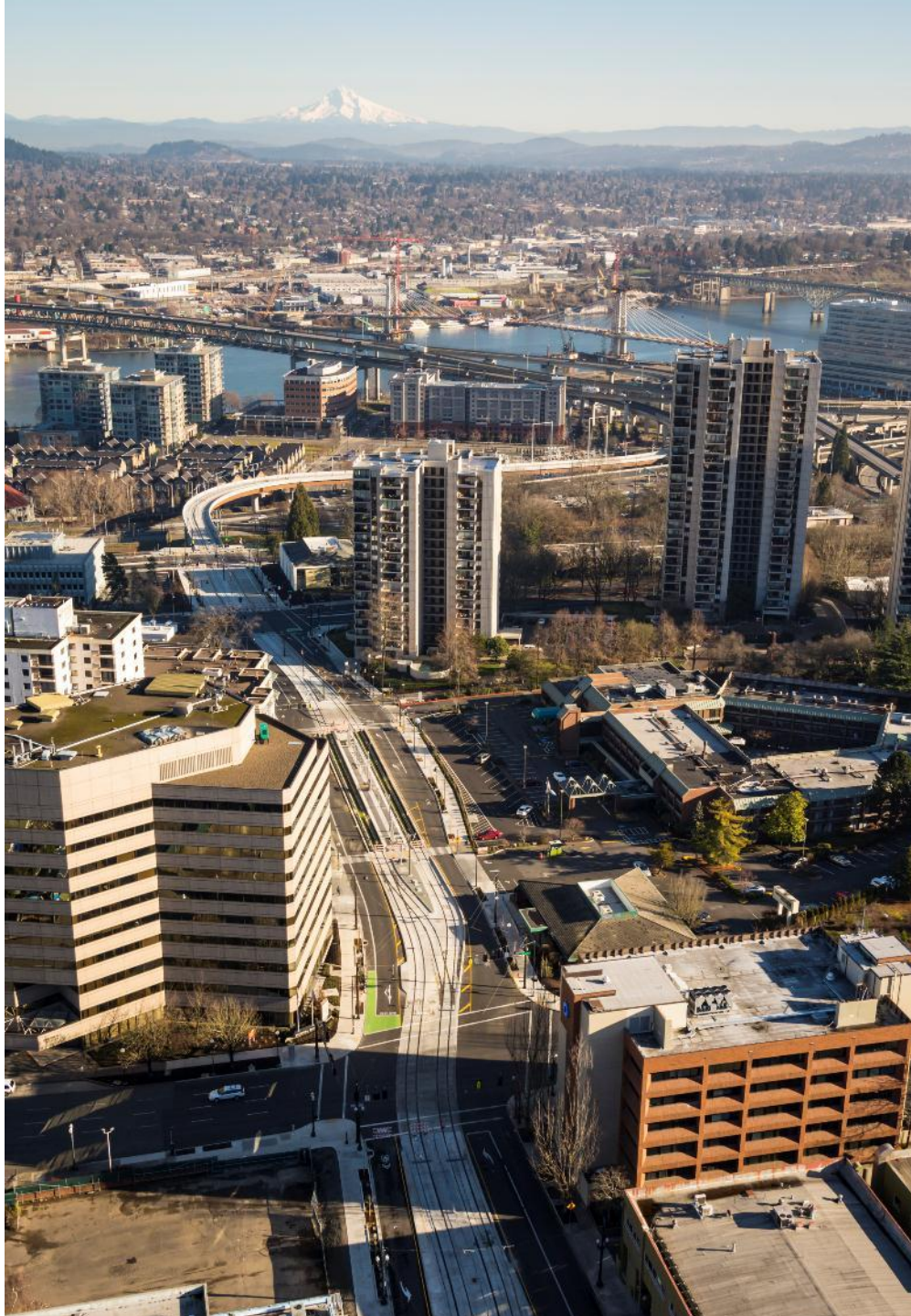
transit



Lyon, France

CH2 M Hill Team

- James McGrath, AIA, ASLA
  - Lead Urban Designer
- Sara Hoeber, LEED
  - Streetscapes
- Garrett Vandendries, AIA
  - Delineation
- Nelson Camargo, AIA
  - Stations
- Dustin Atchison, PE
  - Stormwater
- Craig Grandstrom, PE
  - Traffic



PORTLAND TRANSIT MALL REVITALIZATION

PORTLAND
MILWAUKIE
LIGHT RAIL

James McGrath, AIA, ASLA, LEED

Los Angeles, 15 October 2012

URBAN PUBLIC REALM DESIGN

RAIL`VOLUTION 2012

In 2010 James McGrath received an Architecture Foundation of Oregon Bailey Fellowship, allowing him to travel across Europe, Australasia, and Latin America to study best practices in complete streets, interview design and policy professionals, and document innovations in high-capacity transit systems, bicycle and pedestrian infrastructure, multimodal surface environments, station area development, low-impact civil engineering and eco-district planning. He brought back inspiration and expertise in street design to accommodate all modes as well as glimpses into public art, informal settlement, urban habitat and housing diversity. Please join as he distills 20,000 images into a selection of succinct precedents for intermodal stations, transit system architecture, balanced streets and intersections, neighborhood master planning and housing typology, all relevant to the Portland metro region.

CH2MHILL®

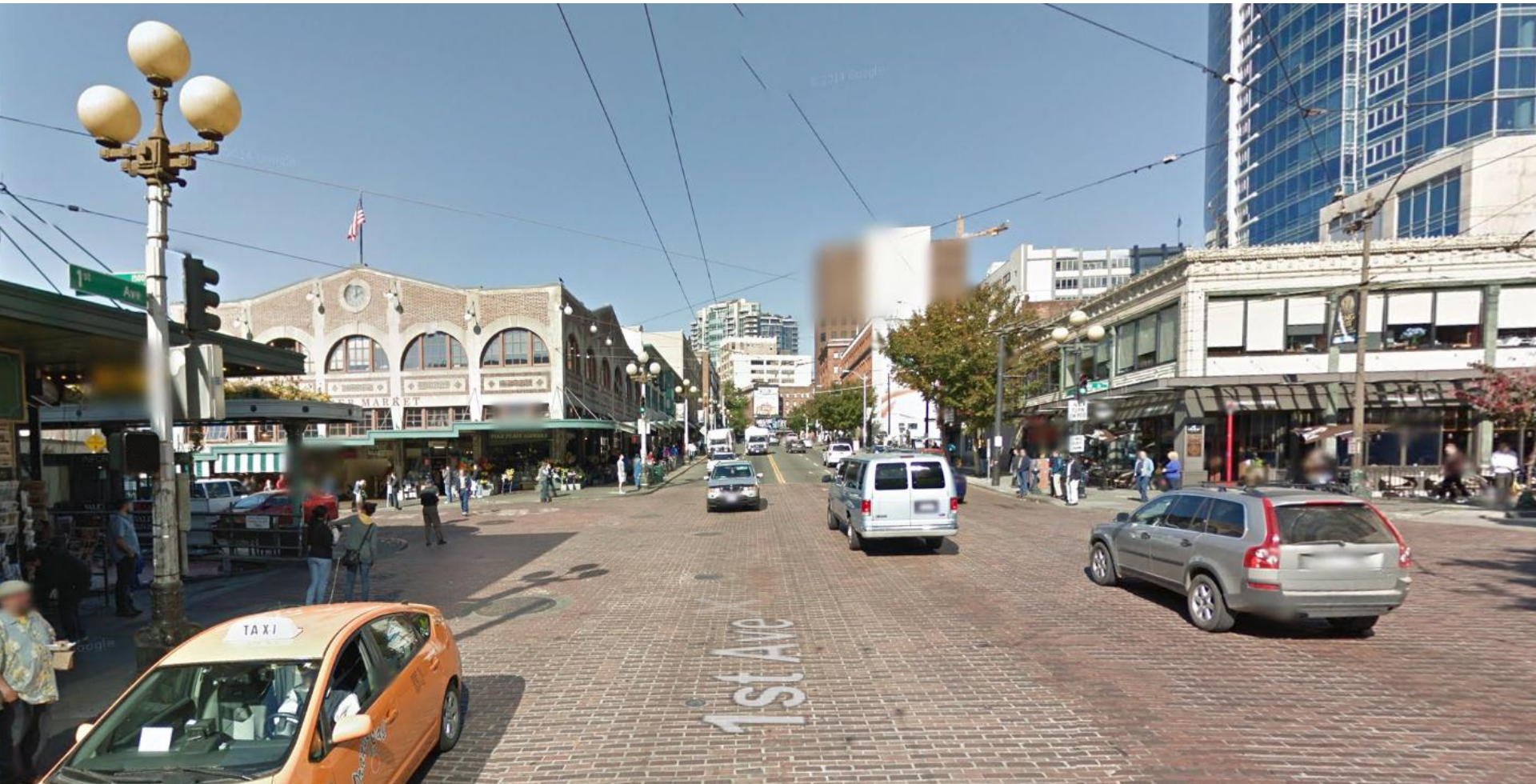
van evera bailey fellowship – complete streets, settlement pattern and transit infrastructure

afo

THE OREGON COMMUNITY FOUNDATION

Urban Design
Issues & Opportunities

- Integration with market



Urban Design Issues & Opportunities

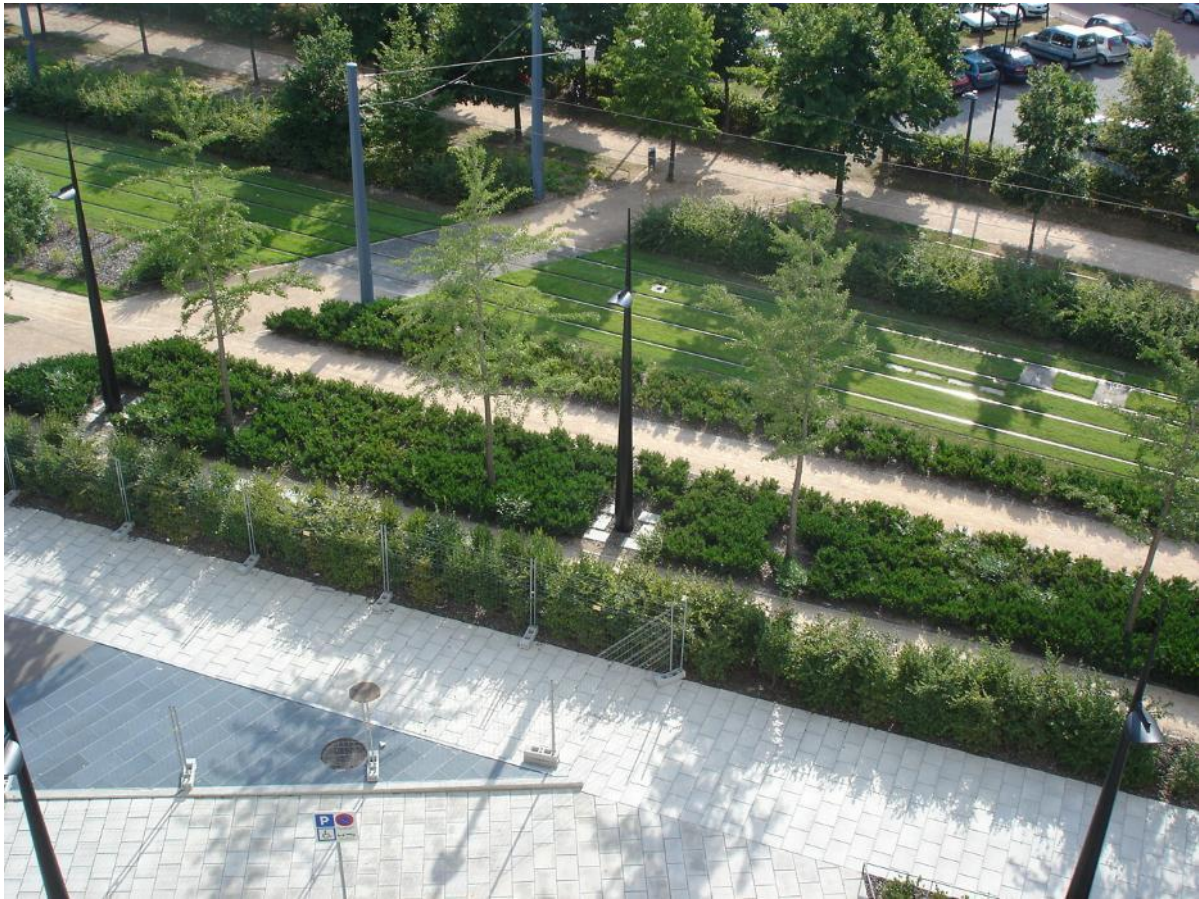
- Integration with market

Urban Design
Issues & Opportunities

- Relation to open spaces

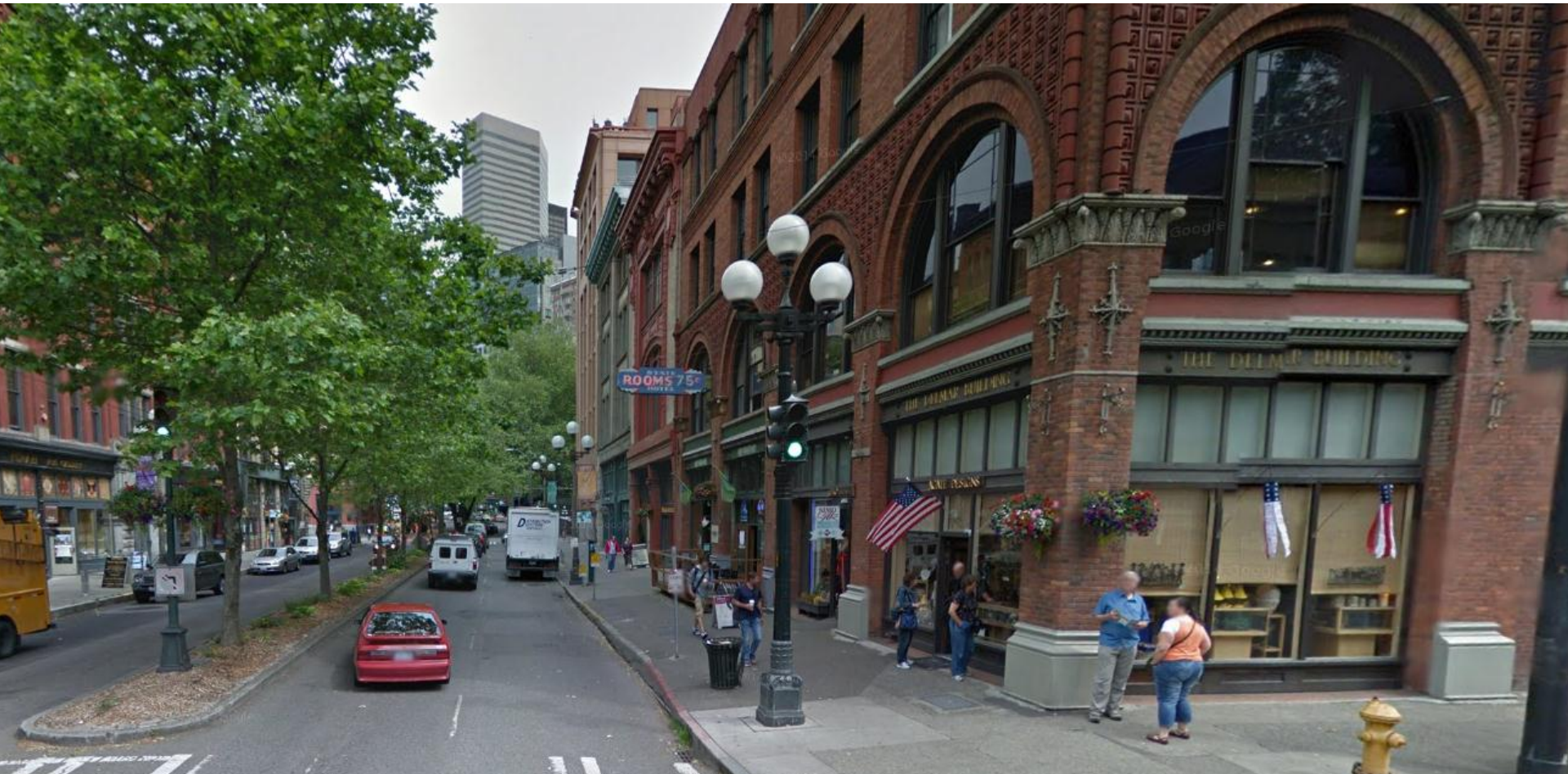
Urban Design
Issues & Opportunities

- Relation to open spaces



Urban Design
Issues & Opportunities

- Response to context

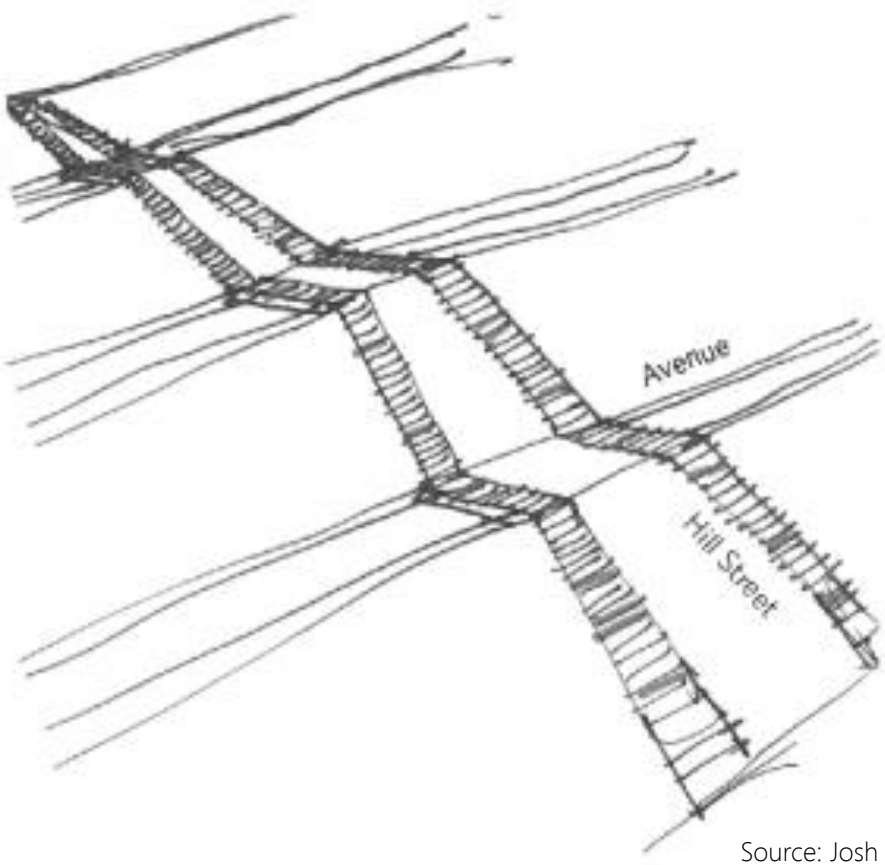


Urban Design Issues & Opportunities

- Response to context

Urban Design
Issues & Opportunities

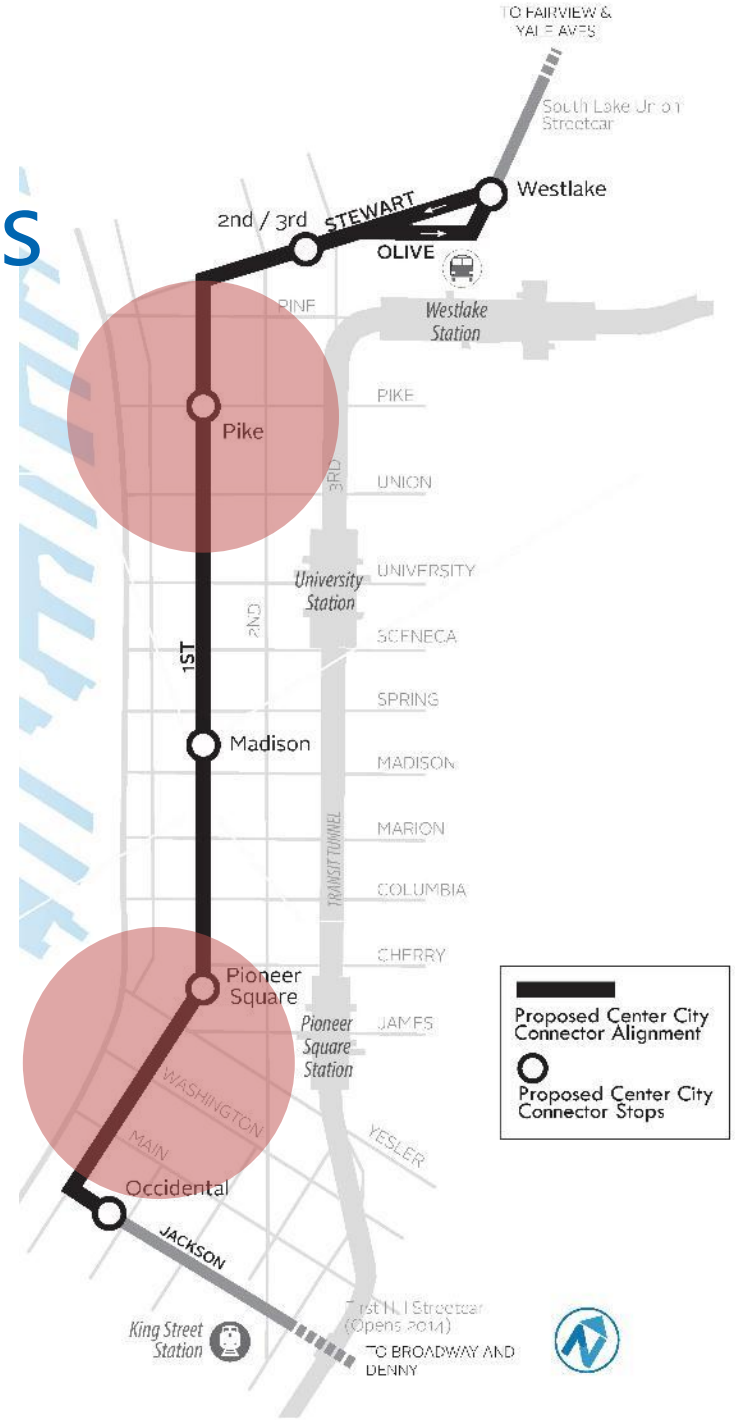
- Primacy of north/south
  - Waterfront
  - CCC
  - Third Ave
  - Transit tunnel
  - 5th and 6th spine
  - Etc…



Source: Josh Feit

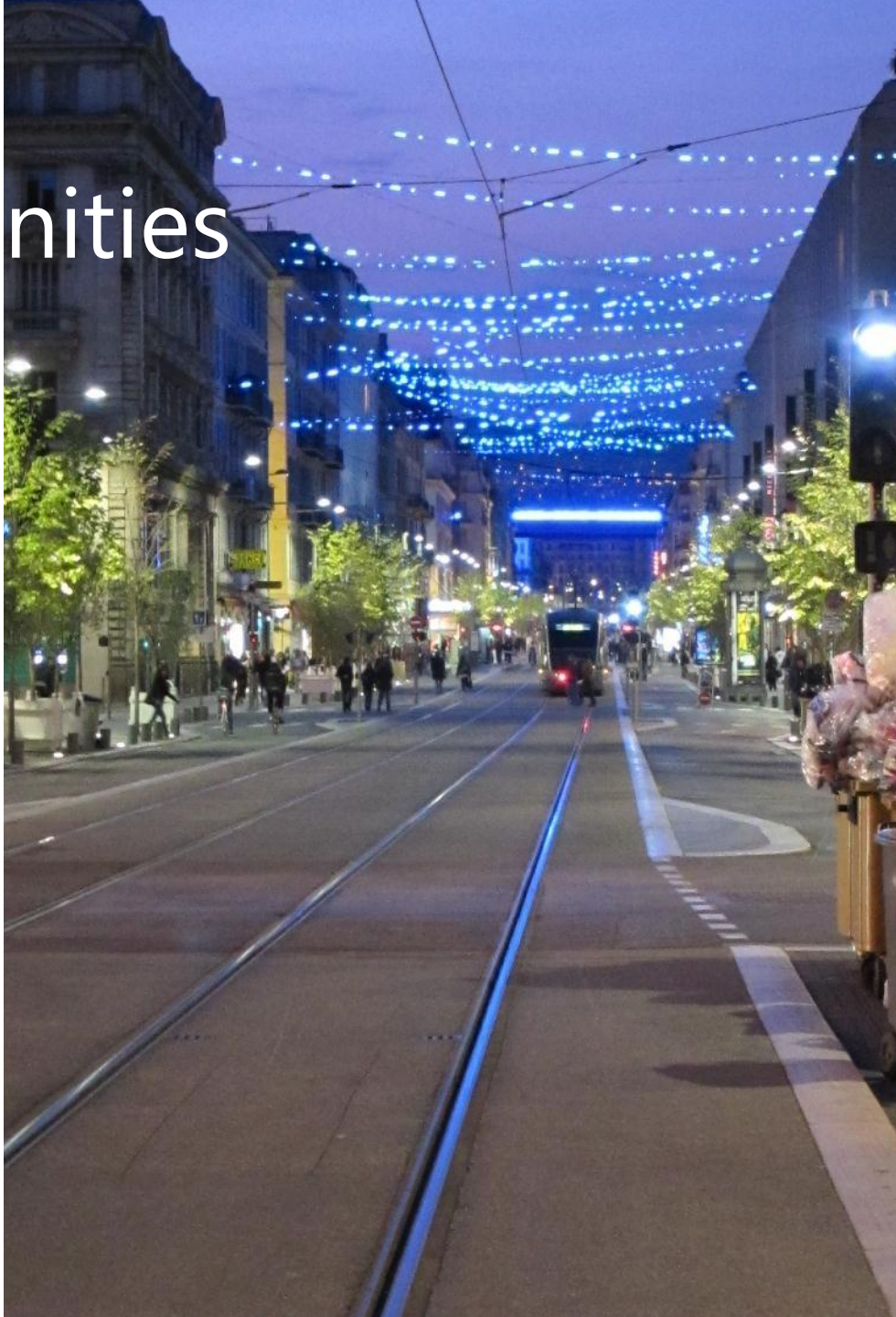
Urban Design Issues & Opportunities

- Continuity and legibility
  - respecting historic fabric of Pioneer Square
  - integrating with unique character of Pike Place
  - balancing this need for responsiveness with overall system identity and ease of use for all
    - Visitors
    - Drivers
    - Cyclists



Urban Design Issues & Opportunities

- Delight and light



Broadway Streetcar

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Broadway Streetcar

- Half-Mile to ¾ Mile Extension of First Hill Streetcar
- Ongoing Evaluation of Terminus Options (Broadway/Roy or 10th/Prospect)

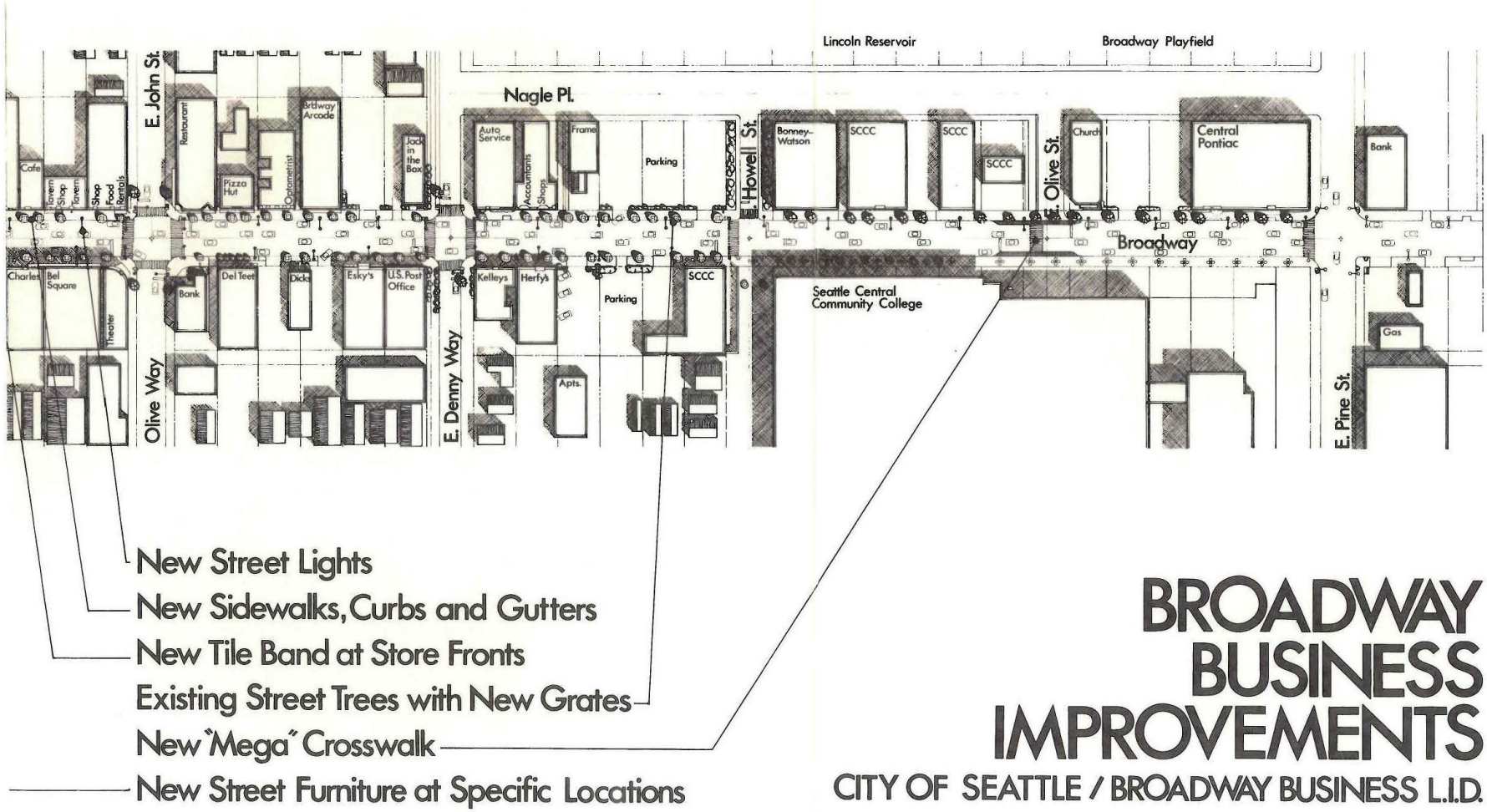
Broadway Streetcar

- Serves Commercial Core of Broadway
- Increases Multimodal Access to Link Station
  - Extends Protected Bike Lanes
  - Frequent, Higher Capacity Transit

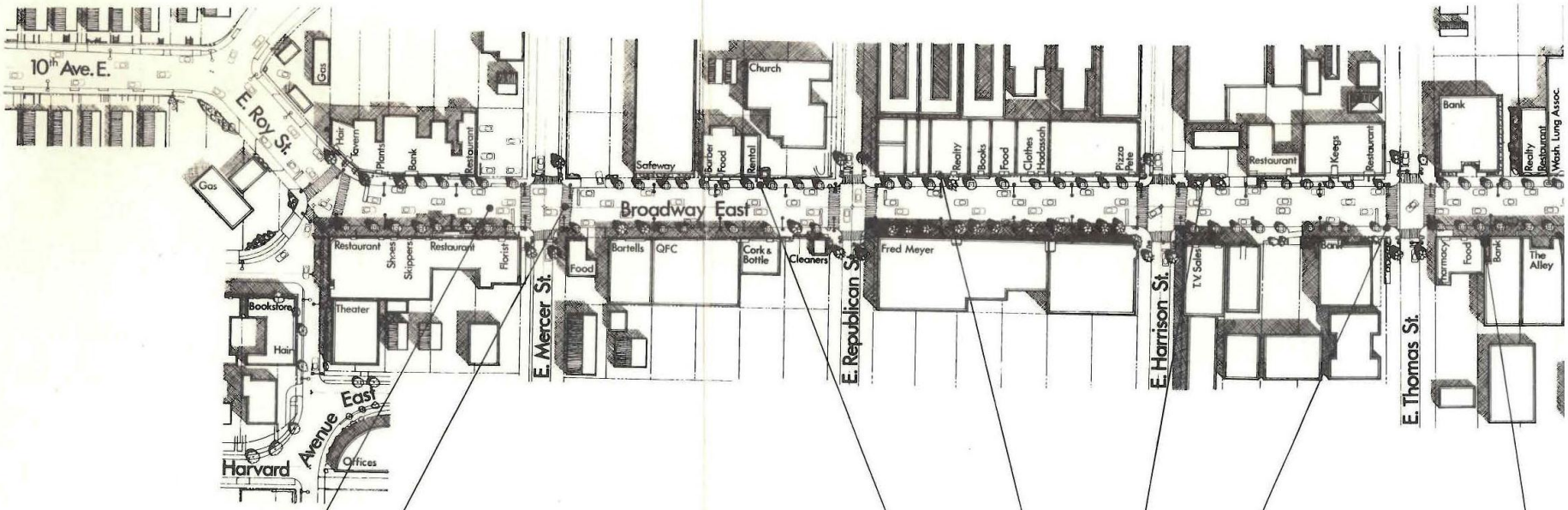
Broadway Streetcar: Urban Design

- Opportunity for Continuity with First Hill Streetcar (Protected Bike Lanes/Reclaiming the Street)
- Opportunity for Preservation/ Enhancement of Existing Broadway District Streetscape Features

Broadway Streetcar: Urban Design



Broadway Streetcar: Urban Design



Pedestrian Crosswalks

New Street Surfacing Throughout

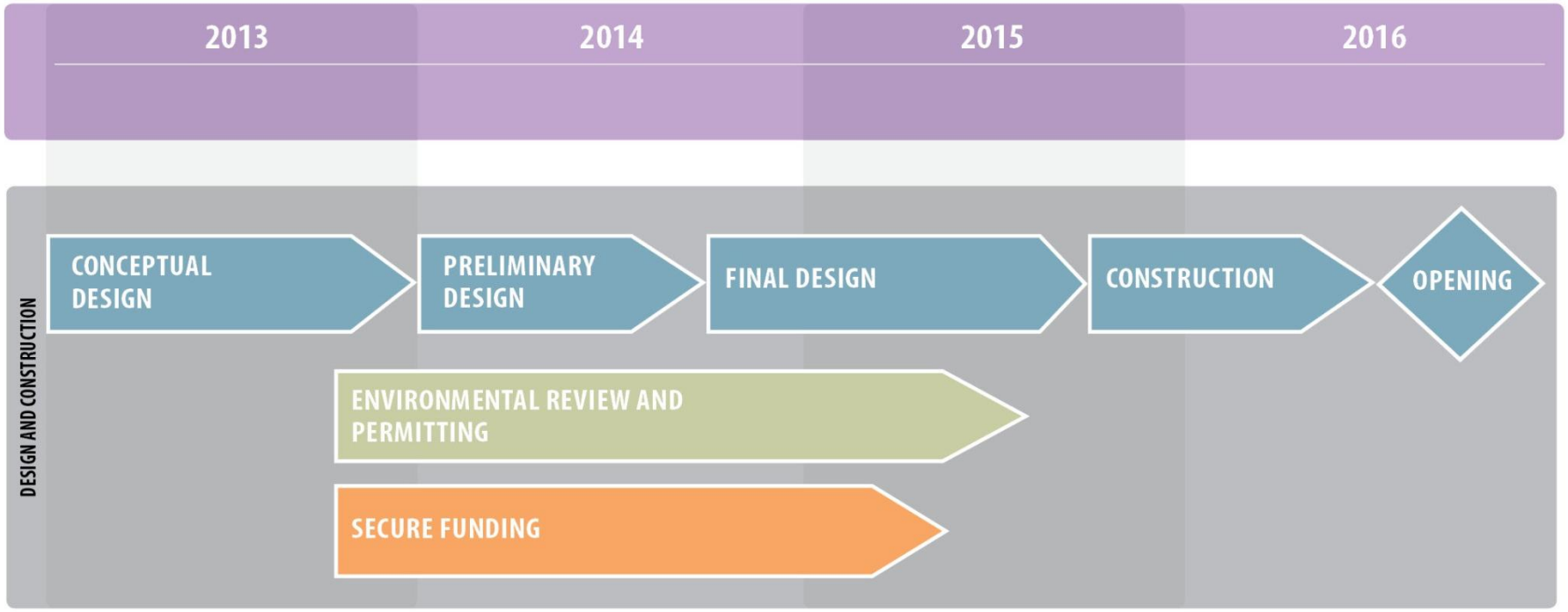
Electrical Undergrounding

New Pedestrian Lights at Specific Locations

New Planters and Screening

New and Modernized Signals at all Intersections

Broadway Streetcar: Timeline



Thanks!

http://www.seattle.gov/transportation

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