

The logo for the Sellwood Bridge Project is a rectangular box with a white background and a thin black border. It features a green horizontal bar at the top, followed by the text 'SELLWOOD BRIDGE' in bold black letters. Below this is a green arch shape, then the word 'Project' in black. At the bottom is a blue horizontal bar with the text 'MULTNOMAH COUNTY' in white. The background of the slide is a photograph of the Sellwood Bridge over a river, with a blue sky and green foliage.

**SELLWOOD BRIDGE**

**Project**

**MULTNOMAH COUNTY**

# **Final Design & Funding**

**Board of County Commissioners**

**July 19, 2012**

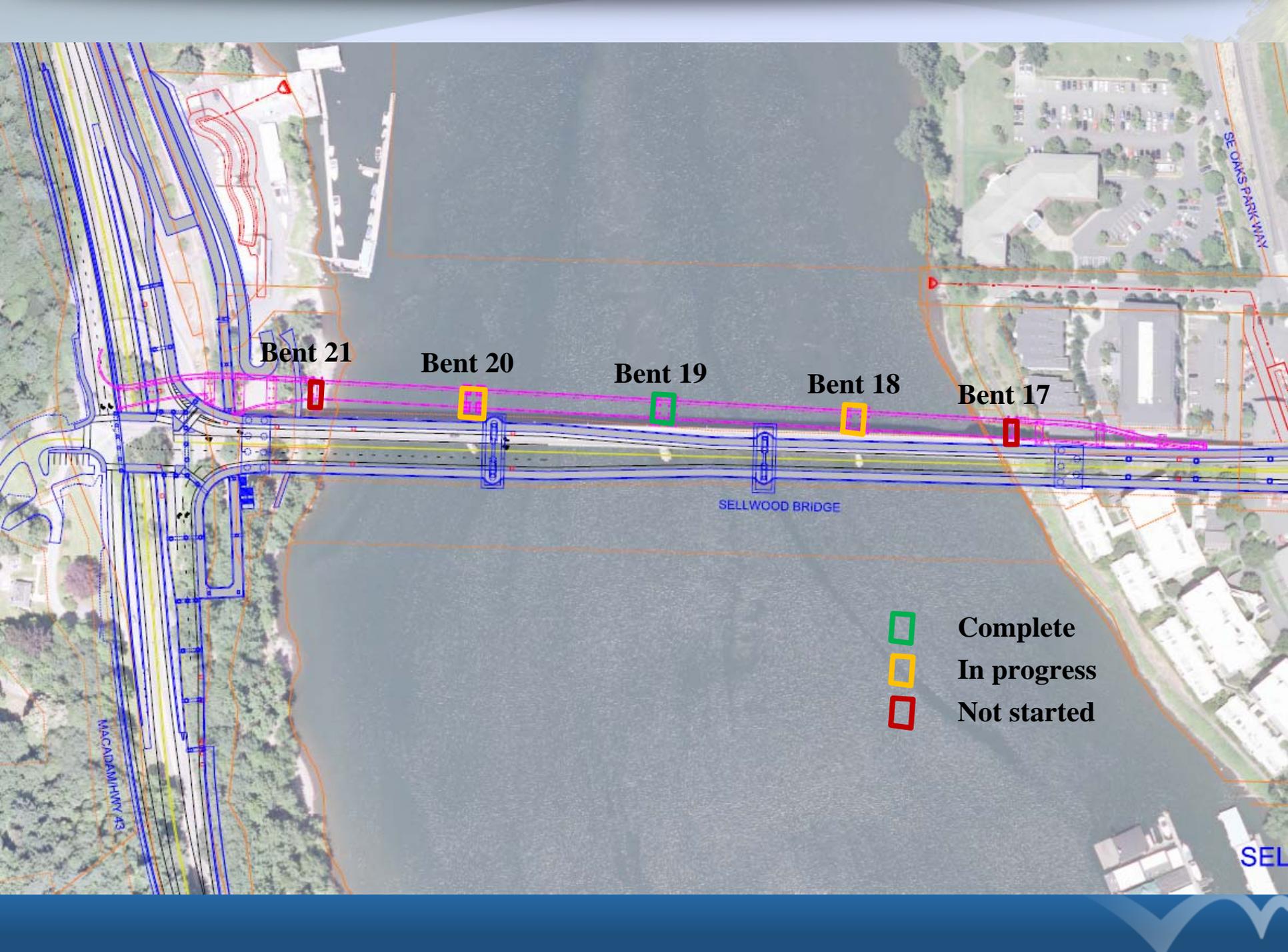
# Agenda

- Early Work Construction
- Project Schedule
- Design Progression
- Cost Management
- Proposed Design Feature Changes
- Project Funding
- Action Requested of BCC

# **Early Work Construction**

# Early Work Construction Overview

- Initial Site Preparation- ***complete***
  - Building deconstruction, fencing, erosion control
- Detour Bridge (Shoo-fly)- ***under construction***
  - \$18.4m
  - 7% DMWESB participation
  - Translation scheduled for late fall 2012
- Landslide Stabilization- ***under construction***
  - \$12.6m
  - 31% DMWESB participation
- Condominium Alteration- ***under construction***
  - \$4.3m
  - 99% DMWESB participation



**Bent 21**

**Bent 20**

**Bent 19**

**Bent 18**

**Bent 17**

SELLWOOD BRIDGE

MACADAM HWY 43

SE OAKS PARKWAY

-  Complete
-  In progress
-  Not started

SEL

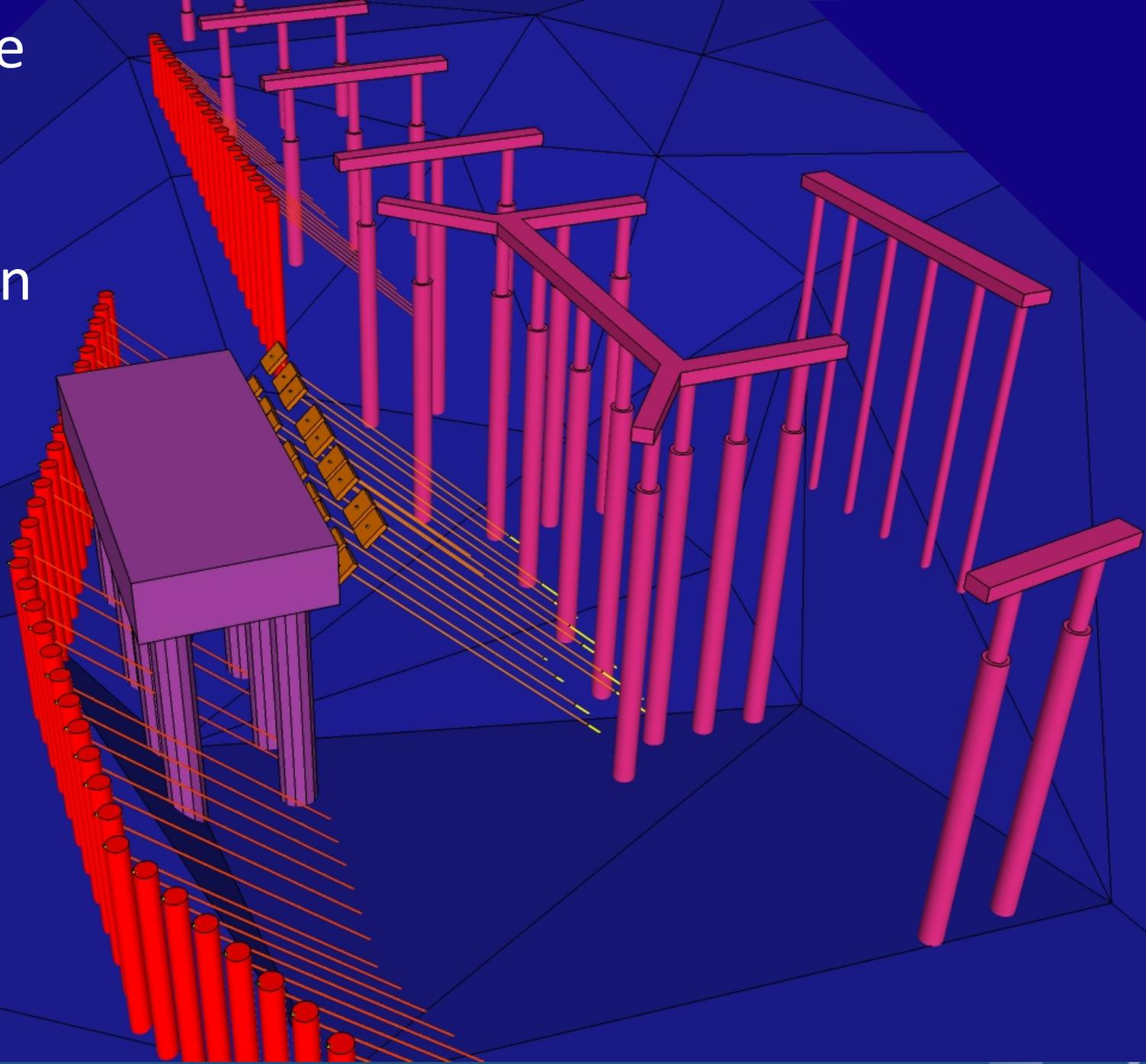
# Detour Bridge Foundations



# Bent 20



# Interchange and Slope Stabilization Exposed



# Landslide Stabilization



# **Project Schedule**

# Road to Guaranteed Maximum Price (GMP)

- Cost risk assessment workshop- January 2012
- Construction sequencing workshop/VE- March 2012
- Updated GMP submitted March 2012
  - Owner and CM/GC Reconciliation meetings- April/May 2012
- Final GMP proposal submitted by CM/GC May 2012
  - Owner and CM/GC negotiation- May-July 2012
  - Submit updated funding plan for FHWA- July 2012
  - Contract ready for execution- July 2012
- Start schedule critical work - August 2012

# Schedule Milestones

- Install Work Bridge Piling: Aug. to Oct. 2012
- Begin Wall Excavation: August 2012
- Translate Bridge: November 2012
- Install River Spans: Summer 2014
- Open Main Span to Traffic: Spring 2015
- Shoofly Removal: Summer 2015
- Wrap-up Project: Winter 2015/2016

# **Design Progression**

# DESIGN PROGRESSION

<b>60% Design Recommendation September 2011</b>	<b>PSC Design Recommendation July 2012</b>
<b>Bridge Form – Deck Arch</b>	<b>Unchanged from 60%</b>
<b>Primary Bridge Material- Steel</b>	<b>Unchanged from 60%</b>
<b>One-Stage Bridge Construction utilizing detour bridge</b>	<b>Unchanged from 60%</b>
<b>Cross section with two traffic lanes, two bike lane/shoulders, and two raised multi-use paths (2-2-2)</b>	<b>Discussed with cost management</b>

# Steel Deck Arch



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<b>Concrete Arch Culvert for Stephens Cr.</b>	<b>Unchanged from 60%</b>

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<b>East- and Westside bio-swale water treatment facilities</b>	<b>Unchanged from 60%</b>

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East- and Westside bio-swales	Unchanged from 60%
<b>Macadam Bay Access (FEIS design)</b> <ul style="list-style-type: none"><li>• <b>Adjacent to Freeman Motors thru tower</b></li><li>• <b>Regional trail along WSLC ROW</b></li></ul>	<b>Macadam Bay Access (Altern. 1c)</b> <ul style="list-style-type: none"><li>• <b>Adjacent to Freeman Motors beside new monopole</b></li><li>• <b>Regional trail onto Miles Place</b></li></ul>

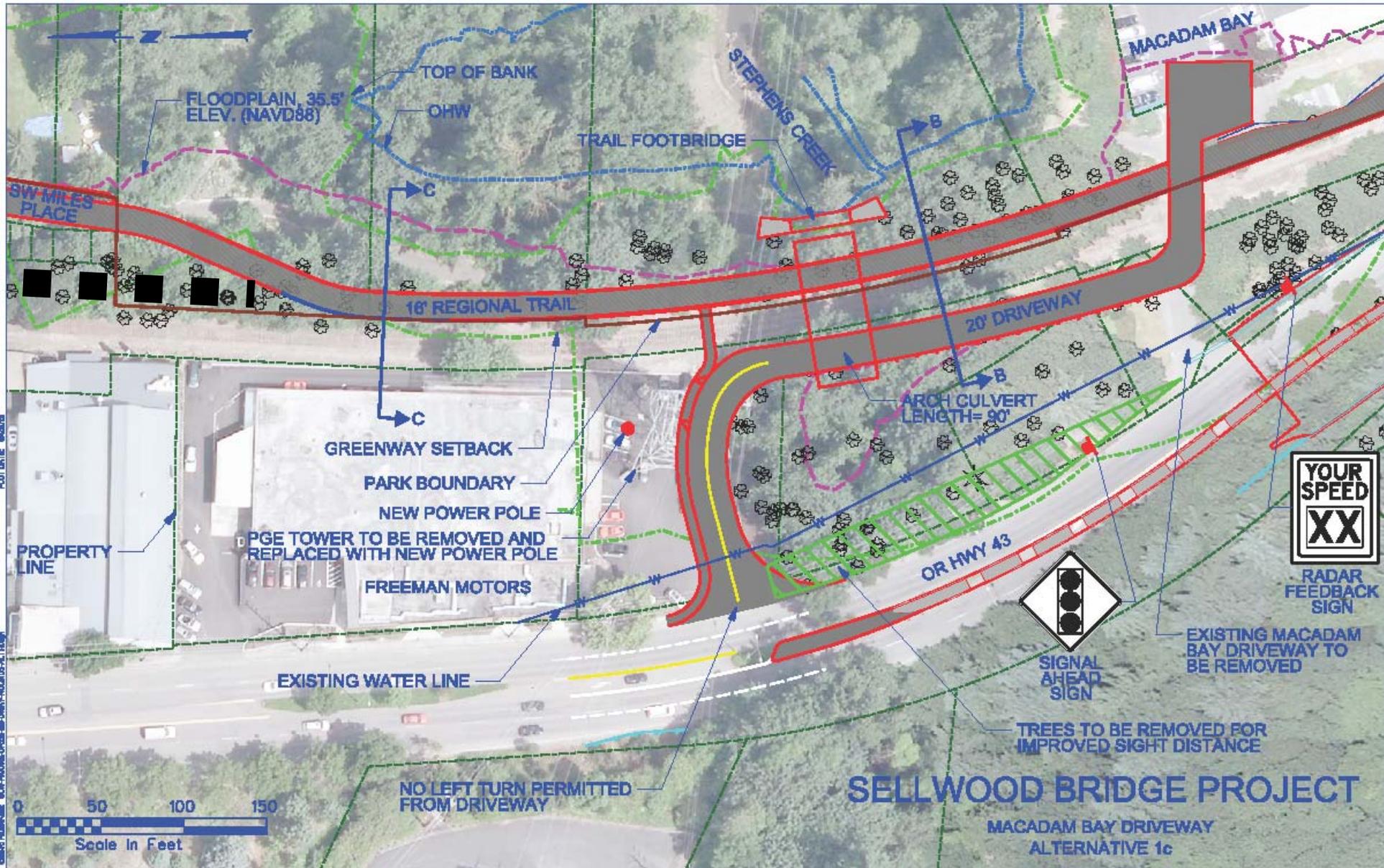
# Stakeholders

- Miles Place residents
- Miles Street residents
- Macadam Bay residents
- Area businesses
- Trail Users
- ODOT
- PBOT
- Portland Parks
- BES
- PGE
- Multnomah County

# Public Involvement

- Open House – April 17
- CAC – April 23
- CAC Walk Through – May 14
- CAC/PSC Public Meeting – May 17
- Miles Place Neighbors – May 24
- Area Businesses – May 31
- County Commissioner
- CAC recommendation – June 4

# Alternative 1c



A photograph of a parking lot. In the background, a large, complex metal structure, possibly a tower or observation deck, stands on concrete pillars. The structure is made of silver metal beams and has a walkway or platform at the top. The parking lot is paved with asphalt. Several cars are parked or driving in the lot. A group of people is standing near the center of the lot. To the right, there are green trash bins and a chain-link fence. The area is surrounded by lush green trees. The lighting suggests it is daytime.

Lot South of  
Freeman  
Motors  
looking East

# Alternative 1c





**DRAFT**

Neighborhood  
Greenway Concept  
Miles Place looking  
South from Miles Street

# Alternative 1c Attributes

- Construction cost 1c - \$5,090,000
- Regional trail on Miles Place, acceptable to both residents and trail users
- Doesn't mix Macadam Bay vehicles with regional trail users
- No signal at Macadam Bay driveway/OR43
- No left from Macadam Bay driveway to OR43
- Doesn't add vehicles to Miles Place
- No impact to area businesses, minimizes impact to Freeman Motors
- Adds safety treatments for driveway
- Work with stakeholders to further refine

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Macadam Bay Access (FEIS design)	Macadam Bay Access (Altern. 1c)
Tacoma/6th signal under consideration	Full signal at Tacoma and 6th

# 6th & Tacoma Signal- Background

- Public safety concerns with crossing SE Tacoma Street raised during EIS process
- EIS identified a signalized pedestrian-only crossing
- Traffic control standards have been revised since EIS
- Project team investigated/vetted several options with stakeholders

# Full Signal at 6th & Tacoma Signal

- Coordinated with adjacent signals for optimized corridor traffic flow
- Better accommodates Oaks Park event traffic demand
- Reduces side-street delay
- Potential cut through
  - Likely from 13<sup>th</sup> to Umatilla to 6<sup>th</sup> (AM)
  - Not much to and from the north
- 140 second cycle length during peaks

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Tacoma/6th signal under consideration	Full signal at Tacoma and 6 <sup>th</sup>
<b>CAC Requested Design Features</b>	<ul style="list-style-type: none"> <li>• Gateway Art</li> <li>• Structural Lighting</li> <li>• Belvederes</li> <li>• Benches</li> <li>• Enhanced Protective Fencing</li> <li>• Enhanced street lighting</li> </ul>

# Gateway Art



Coordinated through RACC

# Structural Lighting



# Belvedere



# Enhanced Protective Fencing & Street Lighting



# **Cost Management**



# Cost Drivers Since 60% Design (Sept. '11)

- Rock cut instability requires substantial increase in retaining walls
- Landslide stabilization requires additional work
- Substantial increase in contaminated soil
- Market pricing for materials (e.g., steel and fuel)
- Design complexity responds to site conditions and other constraints
- Real bid pricing (not estimates) based on detailed design

# Cost Management

- Bridge type selection
- Ongoing process of Value Engineering
  - Shrinking interchange & eliminating horseshoe ramp
  - Detour bridge
  - Others shown today
- CM/GC project delivery method
- Schedule

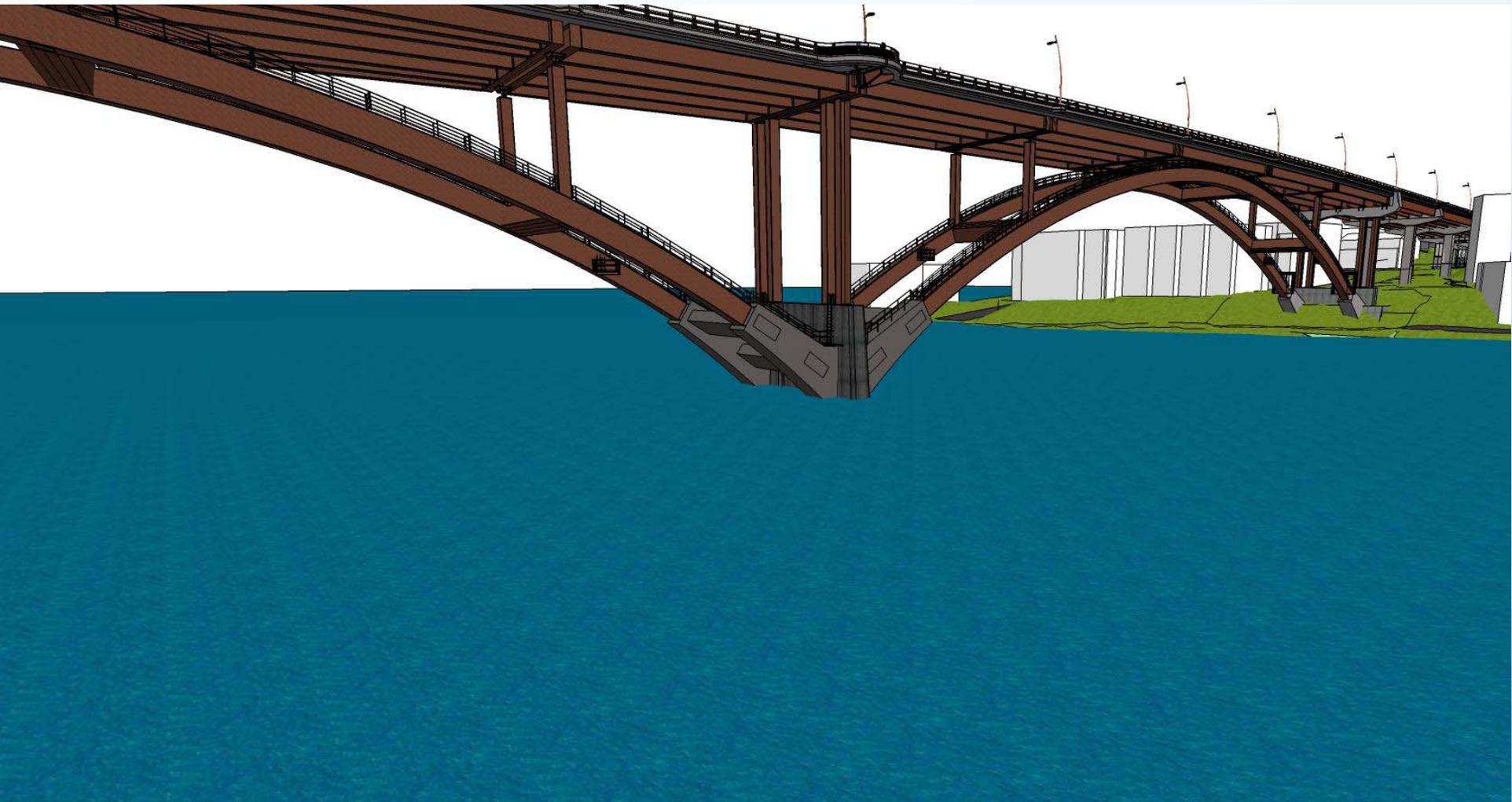
# Cost Management

- ***Value engineering***- identifying more cost-effective ways to achieve similar functions
- ***Contractor means and methods***- recommendations from the owner's Independent Construction Estimate and major subs to reduce the GMP based on construction best practices and experience
- ***Scope reduction***- substituting or eliminating specific aspects of the project without adversely affecting the function or safe user experience
- ***Contractor efficiencies***- better and faster ways to work
- ***Construction oversight efficiencies***

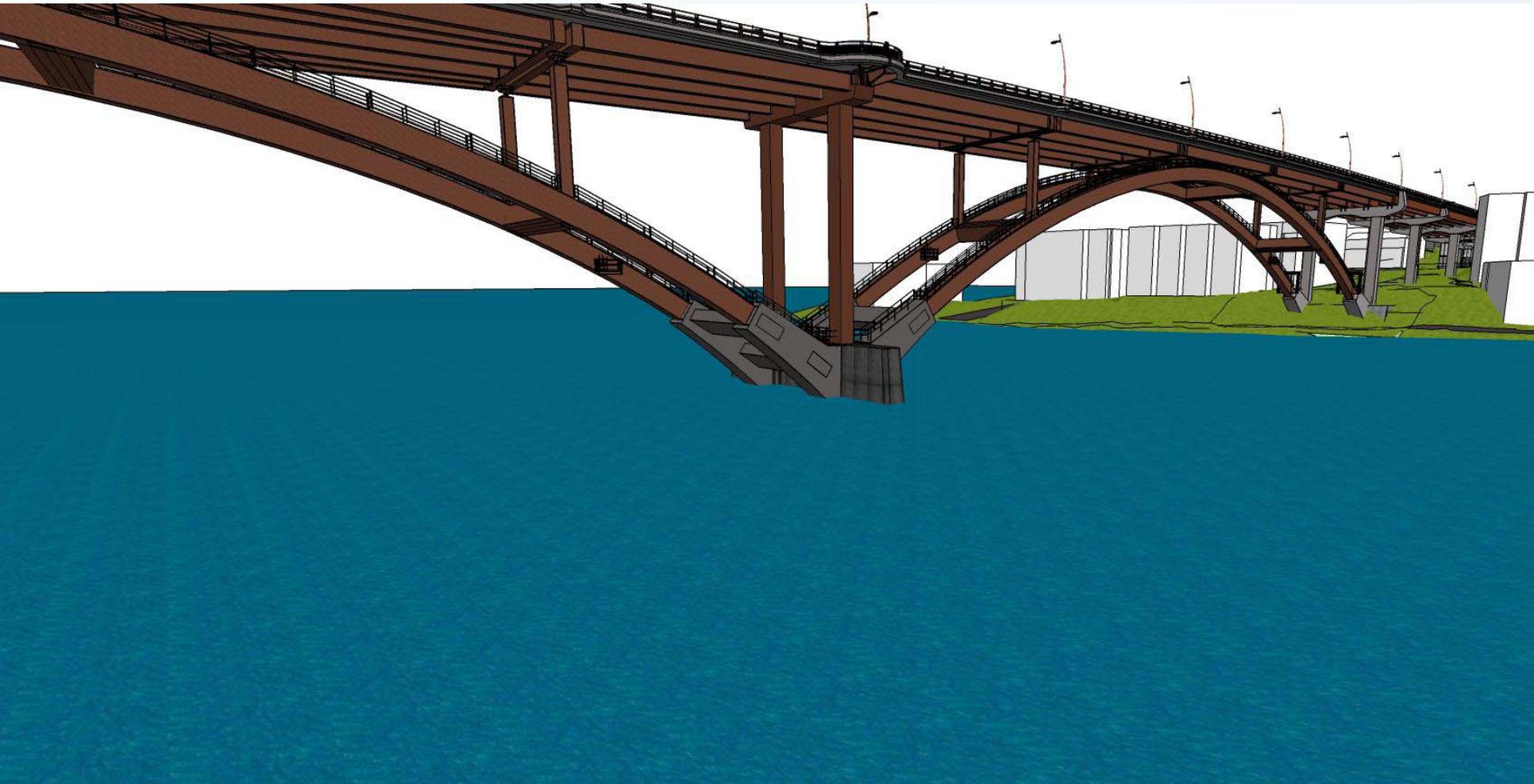
# Examples

- Change main pier columns to concrete
- Eliminate 1 NB OR 43 to EB turn lane (proposed)
- Shift OR 43 retaining wall 6-feet out of hillside
- Simplify some CAC requested design features

# Steel Columns Over Main Piers

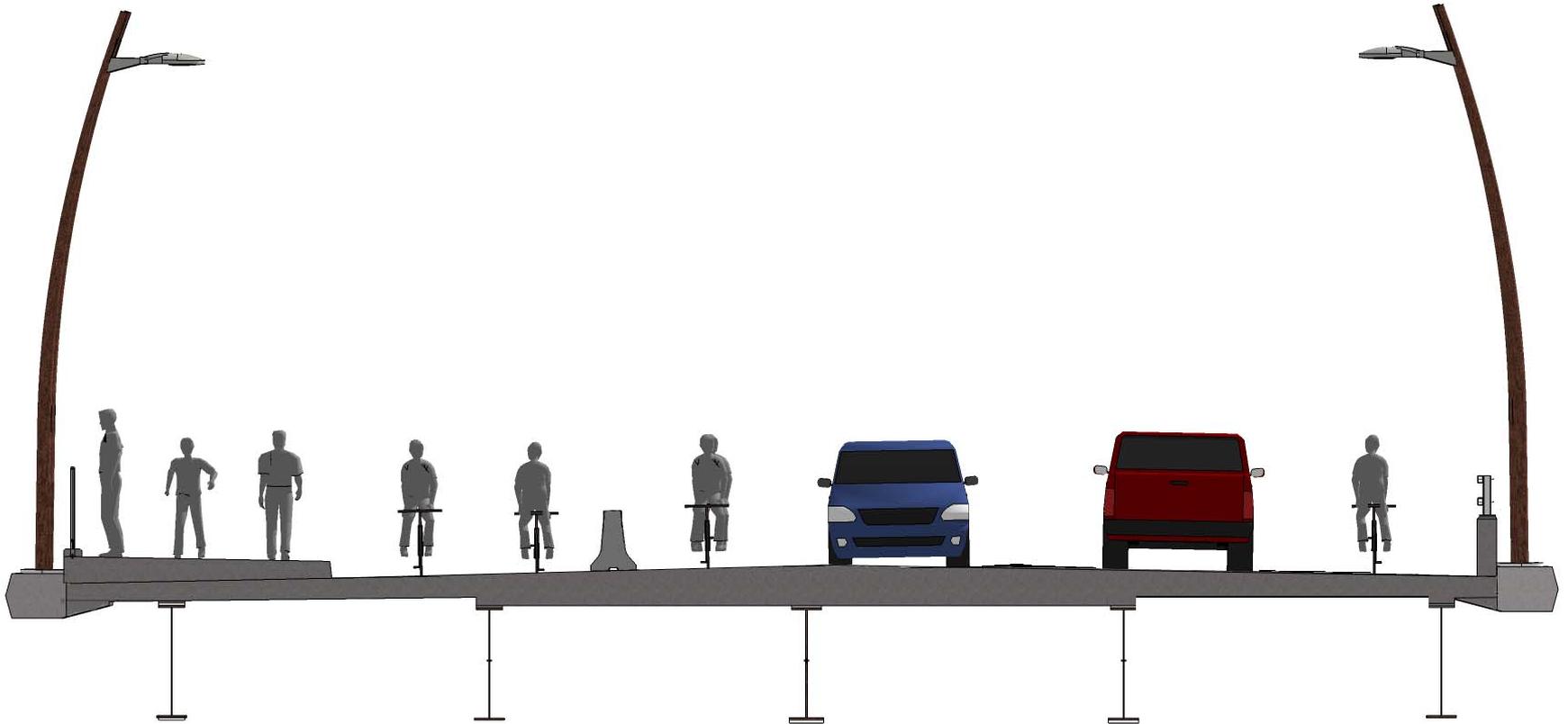


# Concrete Columns Over Main Piers

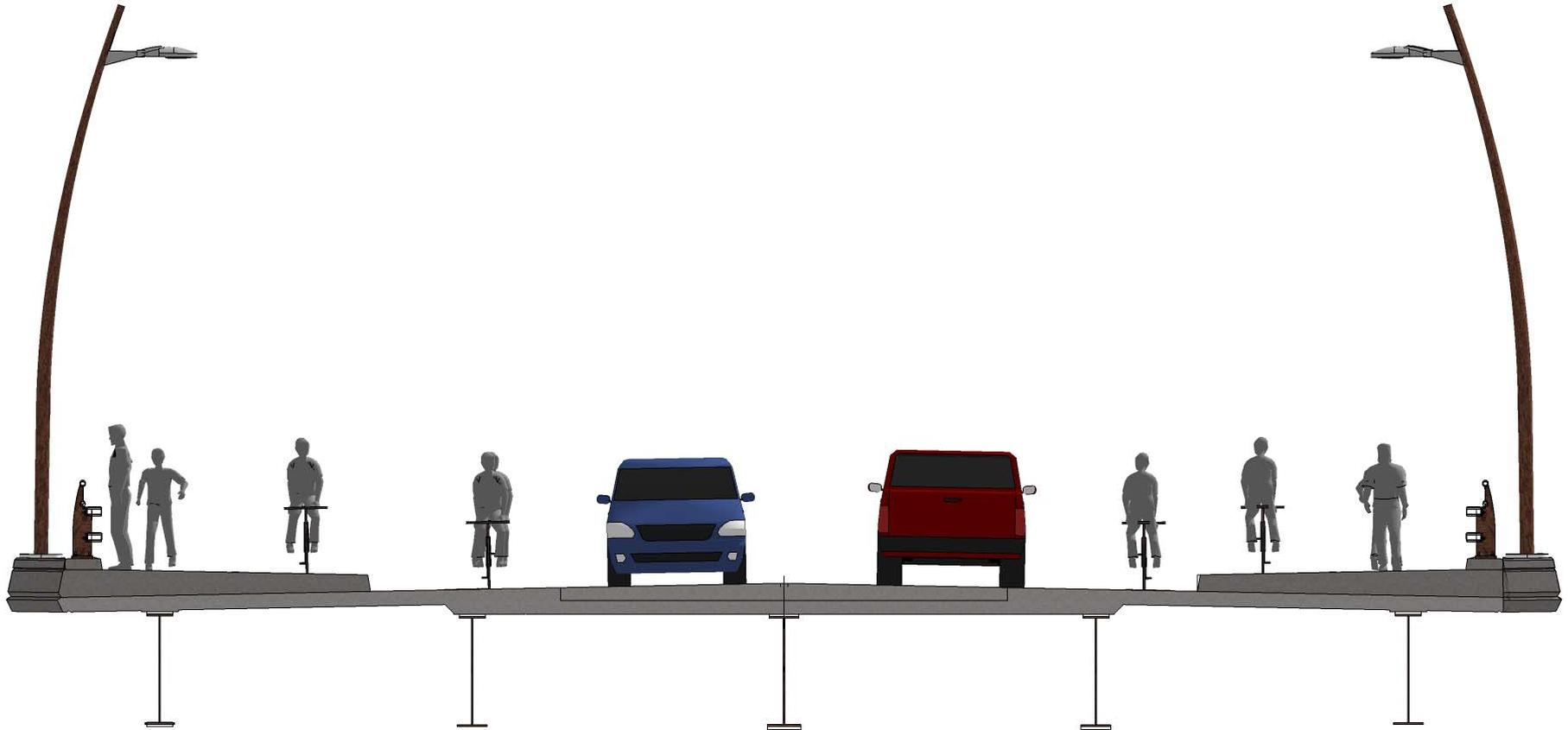




# Asymmetric X-Section (23' on North)



# Center Span Cross Section (2-2-2) (PSC Recommendation)



# **Proposed Design Feature Changes**



# CAC Requested Design Features

## Design Features

Structural Element Surface Treatments	<b>Simplified</b>
Gateway Feature (through RACC)	<b>Yes</b>
Bike Lane & Multi-use Path Surface Treatments	<b>Simplified</b>
Structural Lighting	<b>Yes</b>
Belvederes	<b>Yes</b>
Benches	<b>Yes</b>
Enhanced Protective Fencing	<b>Yes</b>
Enhanced Street Lighting	<b>Yes</b>

*Note: RACC- Regional Arts and Culture Council*

# Structural Surface Treatments



# Structural Surface Treatments



# Features Retained

- Steel deck arch
- Bridge width
  - 2 vehicular traffic lanes
  - 2 shoulder/bike lanes
  - 2 raised multi-use paths
- Gateway Art
- Signal at 6<sup>th</sup> and Tacoma
- Belvederes with benches
- Protective fencing
- Structural lighting
- Improved interchange
- West side trail
- Surface water treatment
- Improved culvert at Stephen's Creek
- Limited bridge closure

# **Project Funding**

# Project Estimate

- Total project - \$299 million
- Includes PE, ROW, CE, Construction
- Assumes Scope Reductions and Value Engineering items identified

# Funding Plan

<b>MultCo VRF (collected)</b>	\$18,000,000
<b>MultCo VRF (bond)</b>	\$128,142,000
<b>Federal</b>	\$15,658,000
<b>State (JTA)</b>	\$30,000,000
<b>State (SB 1543)</b>	\$5,000,000
<b>Portland (IGA)</b>	\$84,500,000
<b>Federal TIGER III</b>	\$17,700,000
<b>Total</b>	<b>\$ 299,000,000</b>

- Multnomah County Vehicle Registration Fee (VRF) unchanged at \$19 per year
- Low interest rates favorable for local agency bonding

# Requested BCC Action

Recommend that the Multnomah County Board of Commissioners advance:

- The final project design as presented
- Incorporate identified Value Engineering and Scope Reductions
- Project staff to work with interested stakeholders on refinements of design for Macadam Bay access road and regional trail on SW Miles Place
- Target project budget of \$299 million with identified funding sources
- Continue to actively manage project costs

