Oregon City-West Linn Pedestrian and Bicycle Bridge Concept Plan

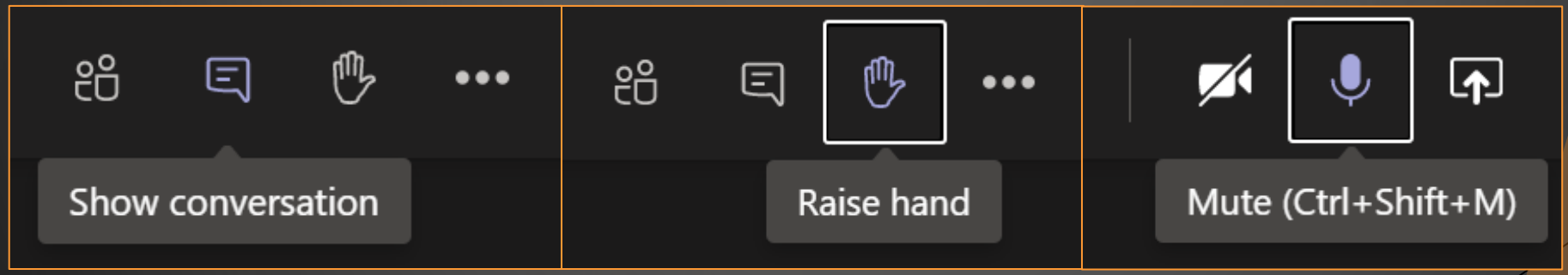
PAC#2

March 31, 2021

Welcome to Oregon City-West Linn Ped/Bike Bridge Concept Plan PAC #2

To maximize our time together, we will follow the protocols below.

- Use "Raise Hand" Feature to speak
- Keep yourself on mute to minimize background noise
- Provide comments/questions in the chat bar during the meeting



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PAC Roll Call

- Abe Moland
- Andrew Mason
- Ashton Simpson
- Benny Dean
- Brian Moore
- Dan Marsh
- Eric Underwood
- Gregg Kiona
- Kat Bringham
- Kate Buehrig
- Kurt Roedel
- Nancy Kraushaar
- Neil de Gelder
- Pamela Barlow-Lind
- Raymond Tsumpti
- Ryan Webb
- Shannon Wheeler
- Victoria Meinig

Project Leadership Team (PLT)

Commissioner Savas
Councilor Lewis
Councilor Baumgardner
Commissioner McGriff
Rian Windsheimer

Why is inclusion important to you?

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Agenda

- Welcome & Introductions
- Meeting Objectives and Agenda Overview
- Since we last met
- TM#2: Identify Crossing Alignments
- TM#3A: Preliminary Bridge Concept Plans
- TM#3B: Benefits and Impacts Analysis
- TM#4: Active Transportation Analysis
- Preliminary Findings and Recommendations
- General Discussion
- Upcoming Events
- Next Steps

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Since we last met
Activities that have occurred

- Finalized Purpose and Need
- Finalized TM#1: Evaluation Criteria
- Finalized TM#2: Identify Crossing Alignments (5 most promising)
- Conducted Focus Group Meetings
- Conducted Stakeholder Interviews
- Conducted In-person Walking Tour (2/2/21)
- Produced Draft TM#3A: Preliminary Bridge Concept Plans
- Produced Draft TM#3B: Benefits and Impacts Analysis
- Produced Draft TM#4: Active Transportation Analysis

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Since we last met
What we've learned
I-205 Abernethy Bridge

- Cantilevering off Abernethy Bridge:
  - Adds complexity to design and construction and can be more expensive than a standalone ped/bike bridge
  - Results in sub-optimal user experience due to proximity of fast-moving adjacent traffic
  - Requires longer on/off ramp connections to meet ADA grade requirements due to height of bridge and evaluation of local streets
- Attaching facility underneath the I-205 Bridge would infringe upon US Coast Guard clearance requirements
- A center running path on I-205 was not considered due to safety and feasibility concerns related to pedestrians accessing the median from either side of the river.

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HDR

Memo

Date:	Monday, March 29, 2021
Project:	ODOT WL-OC Ped Bike Bridge
To:	Sandra Hikari, ODOT Marc Butorac, Kittelson & Associates, Inc.
From:	Andrew Johnson, HDR and Mikal Mitchell, HDR
Subject:	**I-205 Abernethy Bridge Structural Considerations and Updates – Pedestrian/Bicycle Crossing Feasibility**

Introduction

In 2016, HDR was hired to provide a high-level assessment of potential bicycle and pedestrian alignments parallel to I-205 in the vicinity of the Willamette River, research the planning context for improvements and develop conceptual cost estimates for the project. The assessment was not meant to select an alternative: it was recognized that more information was going to be needed and a more public process was critical to addressing the identified bicycle facility gap in this part of the region.

I-205 Bike and Pedestrian Assessment Recap

The I-205 Bike and Pedestrian Assessment examined design and construction risks, user experience, environmental impacts and permitting complexity, system connectivity and plan consistency. The primary purpose of the study at the time was to assess whether bike and pedestrian facilities would be added to the I-205 Corridor, or if it could be better served at another location.

The bike and pedestrian Willamette River bridge options were evaluated assuming an alignment close to I-205. Our high-level assessment examined a cantilever multi-use path attached to the north and south of I-205 Abernethy Bridge, as well as providing an attached facility down the center below the I-205 bridge. A path at the deck surface down the center of I-205 was not considered due to safety and feasibility concerns related to pedestrians accessing the median from either side of the river. A few key factors arose from the assessment that are relevant to the ongoing Oregon City-West Linn Pedestrian/Bicycle Bridge Concept Plan relative to the feasibility of attaching a bike and pedestrian facility to the I-205 Abernethy bridge structure:

- Cantilevering off the side of I-205 (north or south) adds complexity to the design and construction of I-205 and can be more expensive than stand-alone bicycle/pedestrian bridge structures at locations with shorter spans. Cantilevering to the north is the most expensive option due to the cost to the I-205 structure, as well as long approach structures on either end of the bridge to ramp down to existing grade.
- Cantilever options result in a sub-optimal user experience due to the proximity of fast-moving adjacent traffic (separated by a raised barrier wall) and related noise and air concerns.

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Since we last met

What we've learned - Willamette Falls Project

Link: Willamette Falls Project | Confederated Tribes of Grand Ronde

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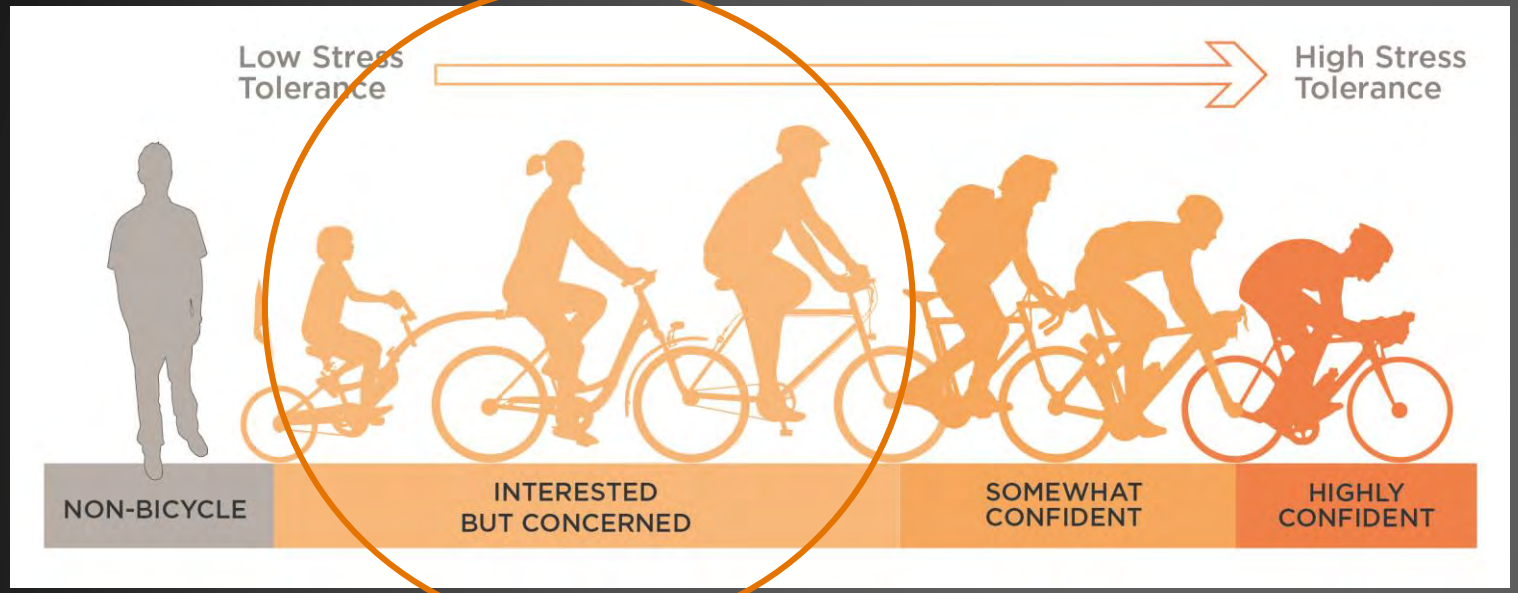
Existing Historic Arch Bridge – No Build

Designing for the "Interested but Concerned"



- Existing Arch Bridge suitable for highly confident only
- Existing Arch Bridge does not meet ADA compliance for walking facilities
- Existing conditions limit potential for active transportation use

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Stakeholder Interviews & Focus Group Feedback

- Community interests represented:
  - Local jurisdictions
  - Shoreline property owners
  - Willamette Falls Heritage Foundation
  - Willamette Falls Trust
  - Emergency services
  - Schools
  - Clackamas County equity representatives
  - Bicycle and Pedestrian Interests
  - Seniors
  - Willamette Locks Commission
  - Coast Guard
  - Army Corps of Engineers
  - Youth
  - Business interests
  - Spanish focus group (upcoming)
  - Transportation Demand Management Group (upcoming)

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Stakeholder Interviews & Focus Group Key Themes

- A new crossing generally seen as a positive community amenity
- Cultural history is significant and a priority
- Must create a safe, accessible, welcoming experience for all users
- Alignment adjacent to Arch Bridge
  - Pros: Central, "known" location Cons: May diminish design and experience of existing historic bridge
- Alignments south of Arch Bridge
  - Pros: Will support redevelopment and good view of falls Cons: Not favored by all Sovereign Nations
- Alignments north of Arch Bridge
  - Pros: Good commuter cycling route Cons: Not as convenient for pedestrians

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Observations- Diversity, Equity, Inclusion, and Access

- Historical conversations surrounding site area
- Inclusion and uplift of Native American populations
- Focus on Youth and Elderly
- Increased focus on climate change, human health, and economic stability
- Increase conversations related to Active Transportation behavior analysis and mode-shift poteintal

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Process and Course Correction

- Added small insentives for underrepresented members of the public
- Added active transportation gap analysis, public health, environmental impact, and historical/ cultural conversation into public facing matieral
- Provided viewshed anlaysis, programming and planning poteintal, and air quality impact to technical memos
- Conducted focus groups for specific communities including: Youth, Spanish, Community at large, and Bicyle/Pedestrain Advocacy
- Prepared social media advertising for Virtual Open House
- Extended engagement into neighborhood associations and citizen coalitions
- Began to address digital equity concerns

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Next Steps

- How can we embed Diveristy, Equity, Inclusion, and Access into all aspects of project development?
- What are some ways to minimize confusion between other capital investments and planned projects in the site area?
- How can we ensure more opportunities for community members to provide feedback that do not have access to digital resources?
- How can we empower underserved community members in all aspects of the project? (Including residents in the site area, consultants, project managers, and other stakeholders)

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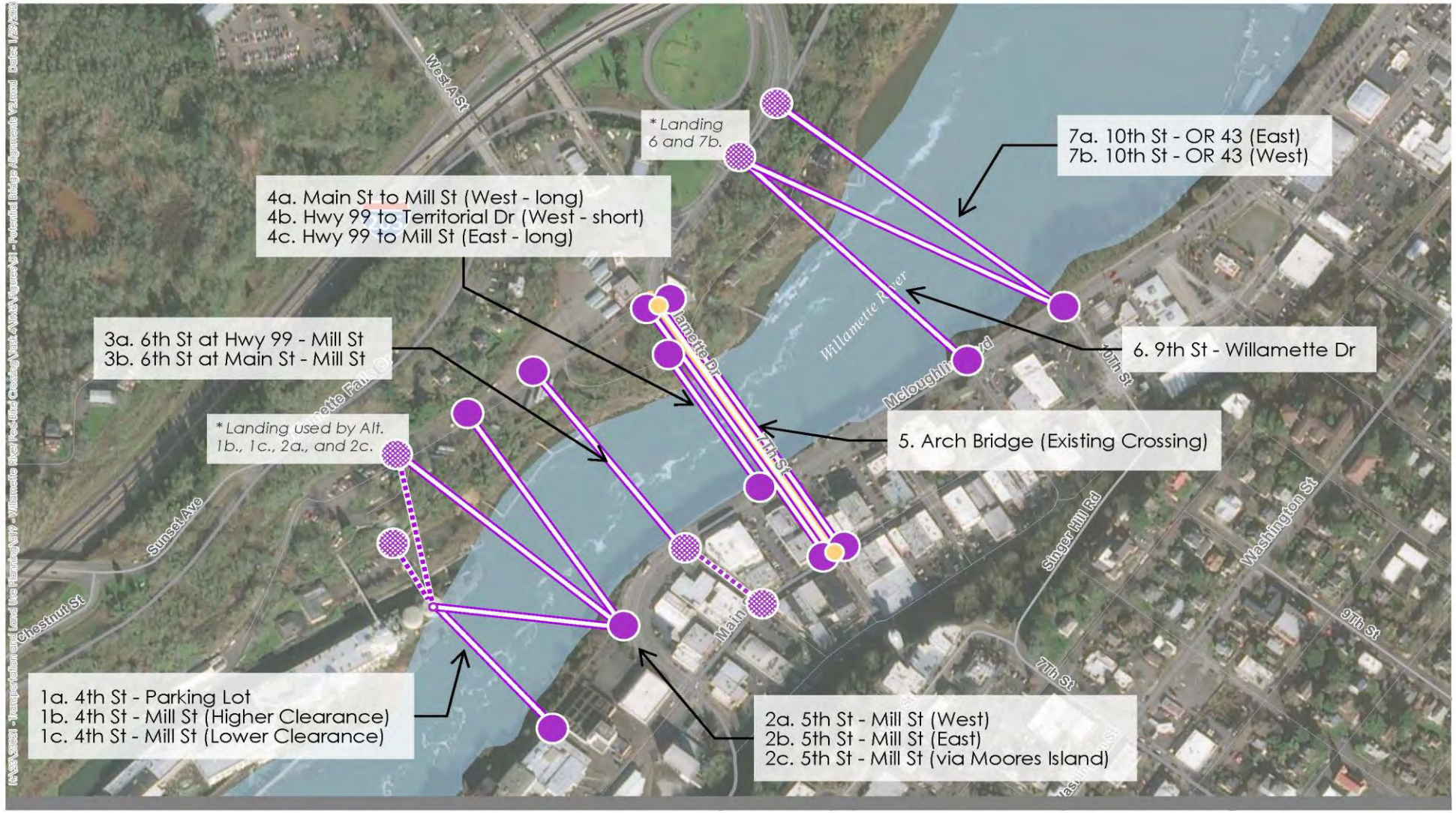
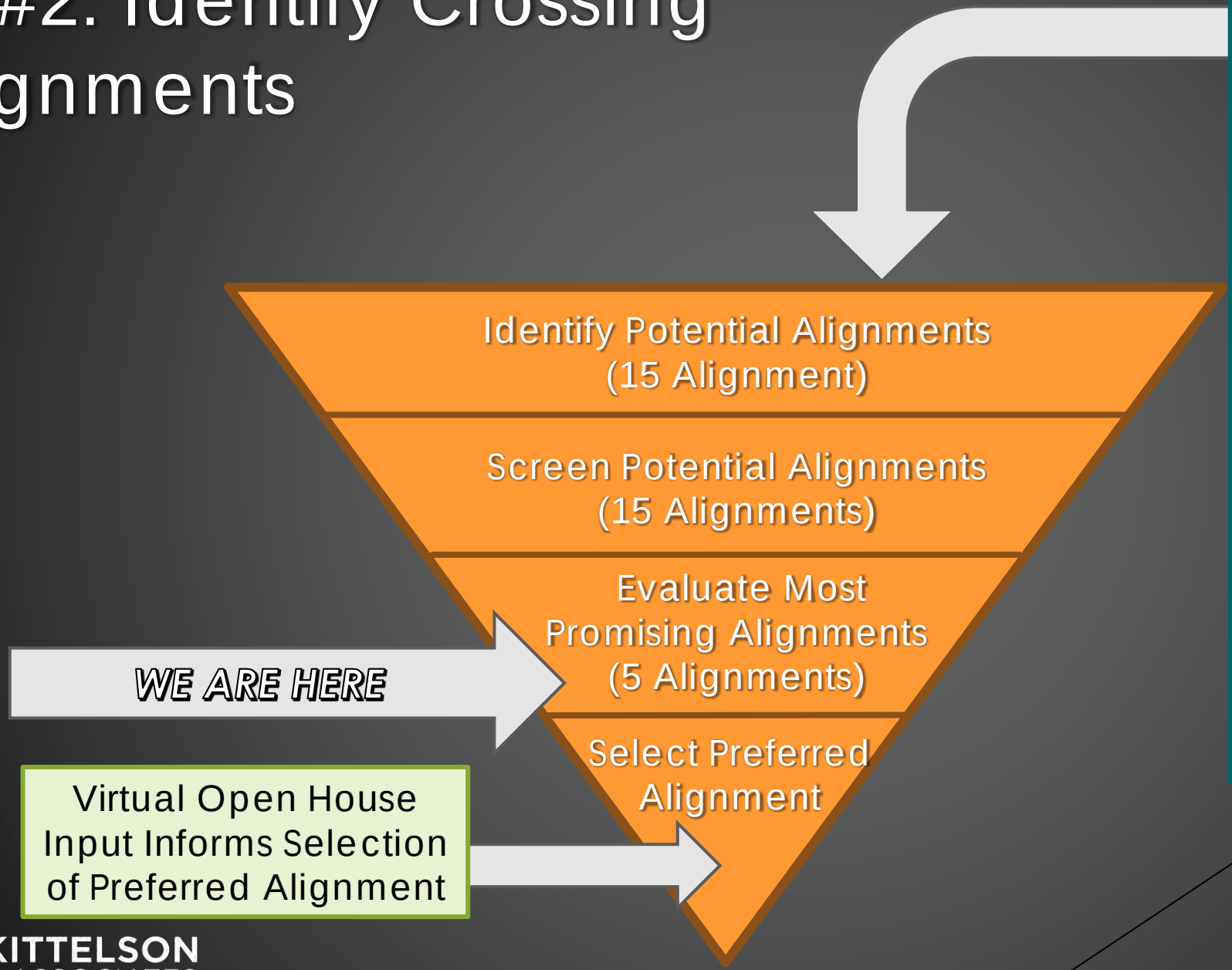
TM#2: Identify Crossing Alignments



TM#2: Identify Crossing Alignments



- 2016 Assessment Memo
- Project Leadership Team Feedback
- Project Advisory Committee Feedback
- Agency Technical Workshop #1 & #2 Feedback
- Stakeholder Interviews & Homework
- Tribal Briefings & Feedback /Homework
- Walking Tour Feedback
- Focus Group Feedback

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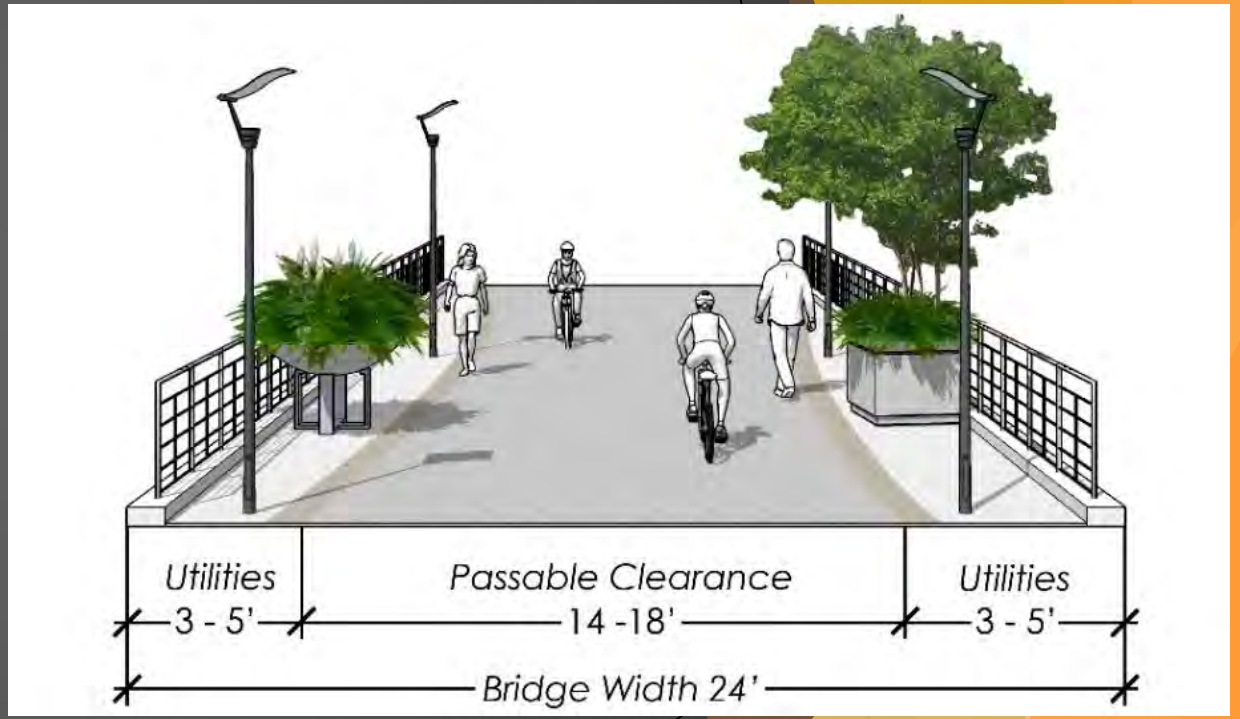
TM#2: Identify Crossing Alignments

TM#3A: Preliminary Bridge Concept Plans

- Potential Bridge Types
- Conceptual Bridge Design Considerations
  - Horizontal and Vertical Bridge Approaches and Alignments
  - Landing Area Size
  - River Vessel Navigational Clearance
  - Vehicular Clearance
  - Emergency Vehicle Accommodations
  - Hydraulic (Flood) Clearance
  - Initial Geological Considerations
- Planning Level Bridge Construction Cost



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TM#3A: Preliminary Bridge Concept Plans

- Potential Bridge Types

Long-span (arch, suspension, cable-supported)

Girder (steel I-girder, steel or concrete box)

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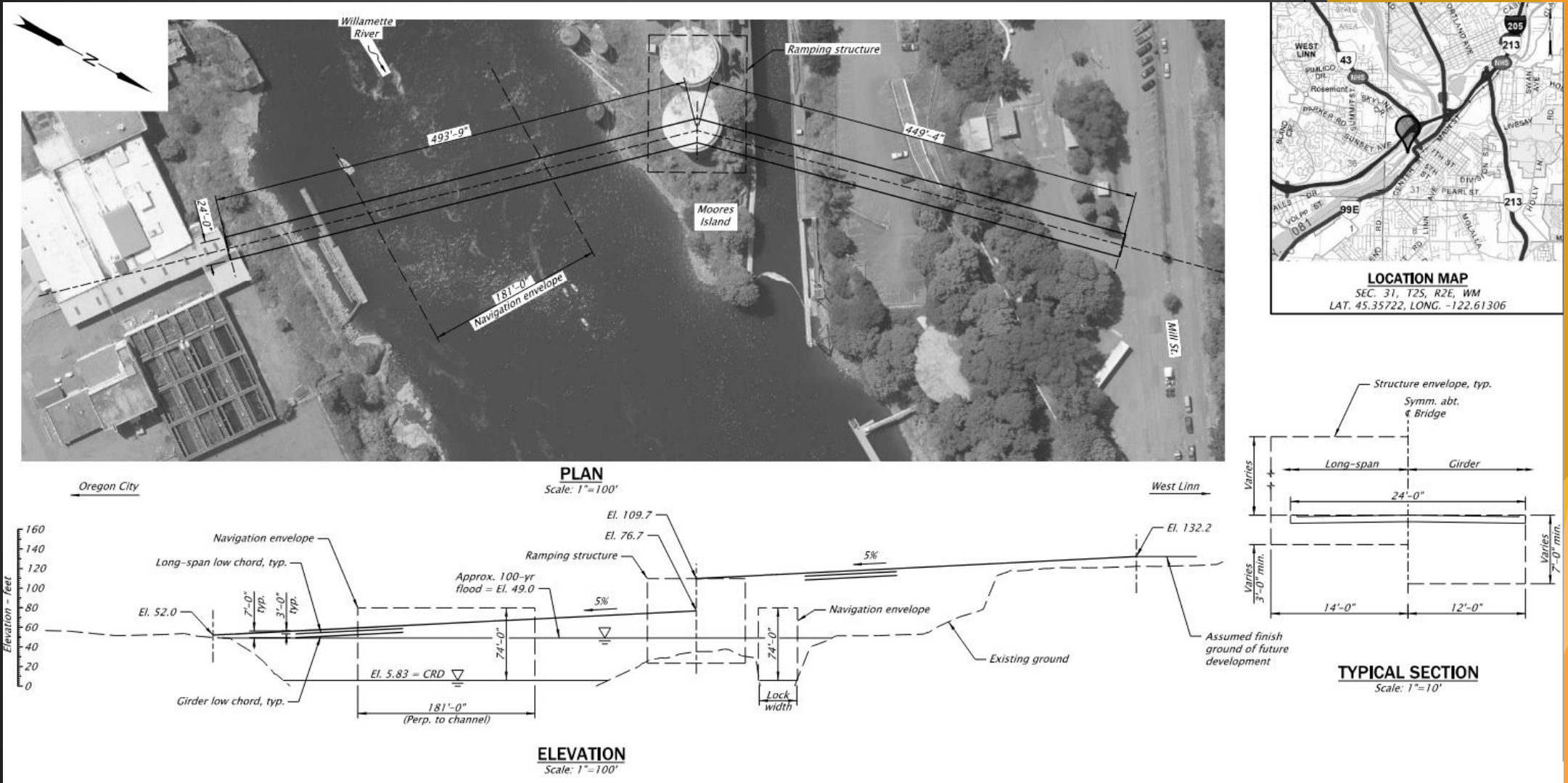
TM#3A: Alignment 1c



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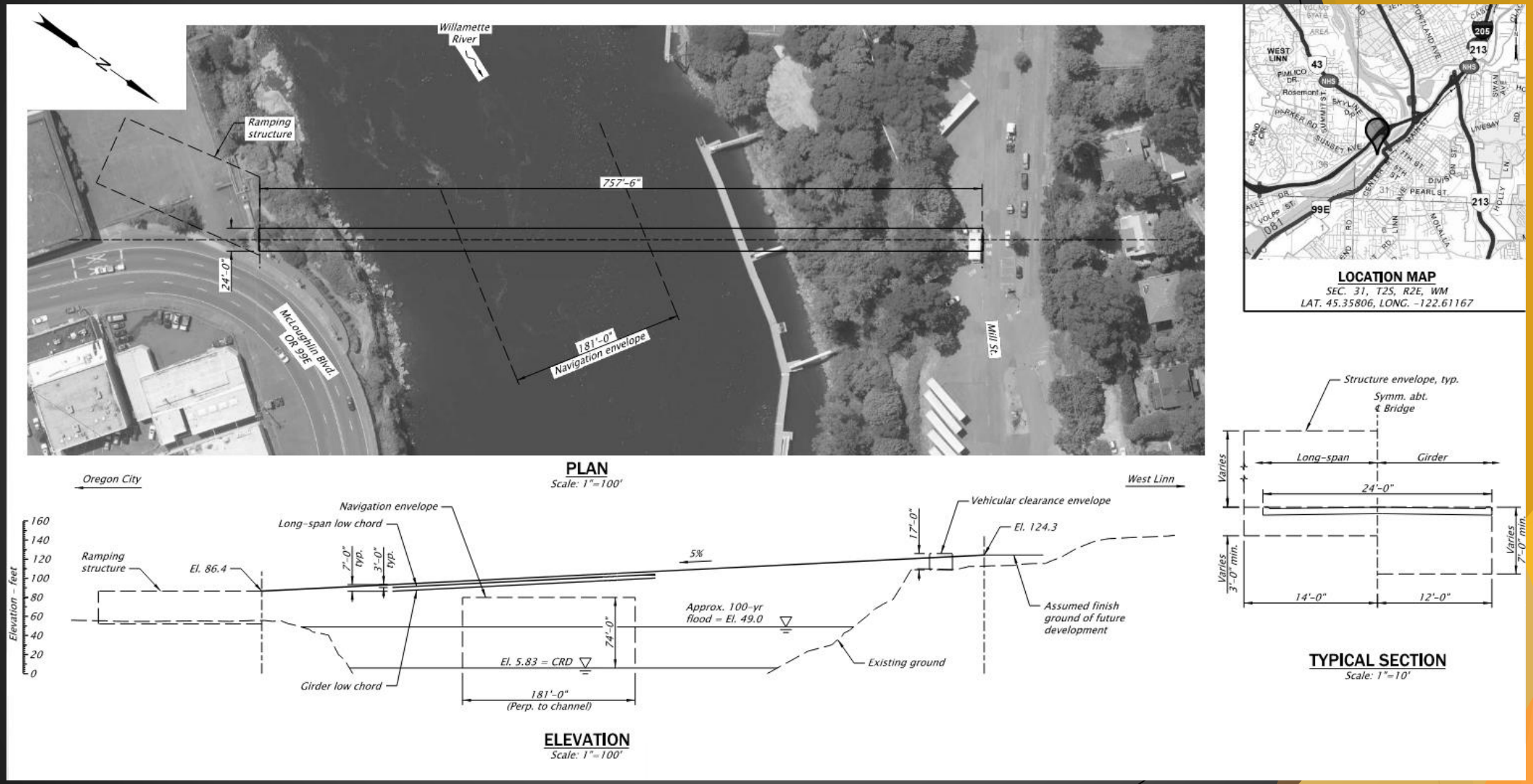
TM#3A: Alignment 2b



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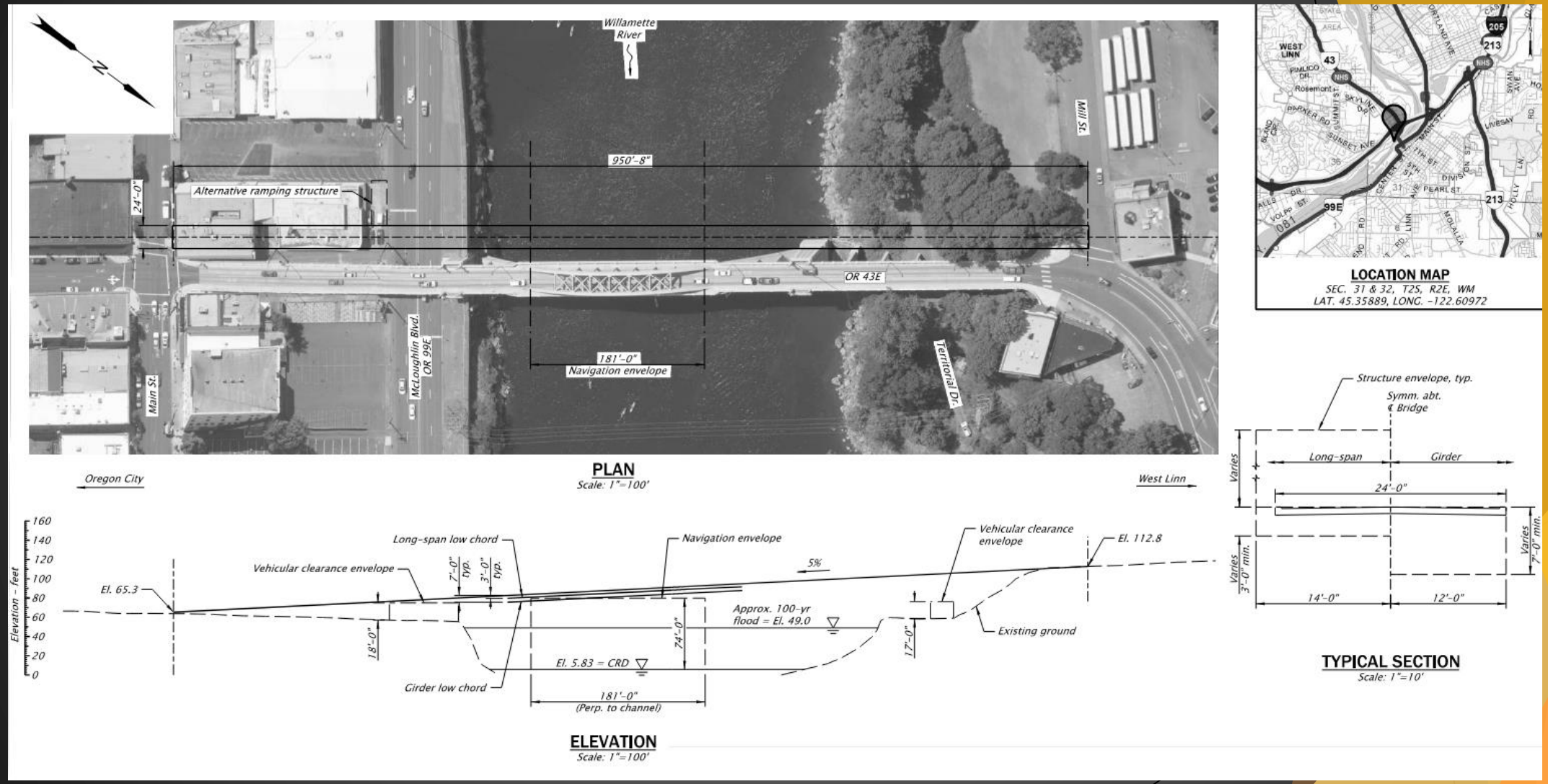
TM#3A: Alignment 4a



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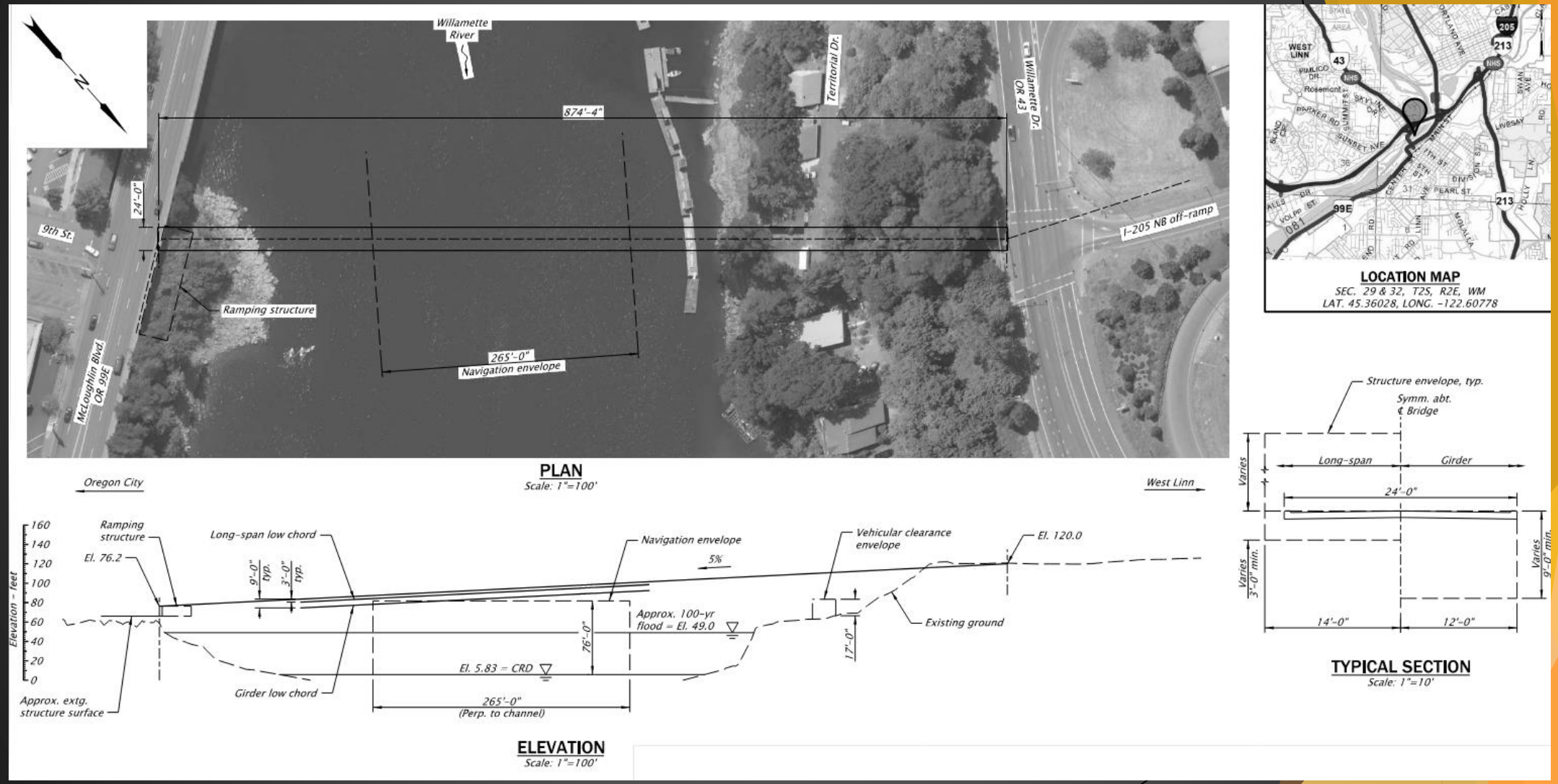
TM#3A: Alignment 6



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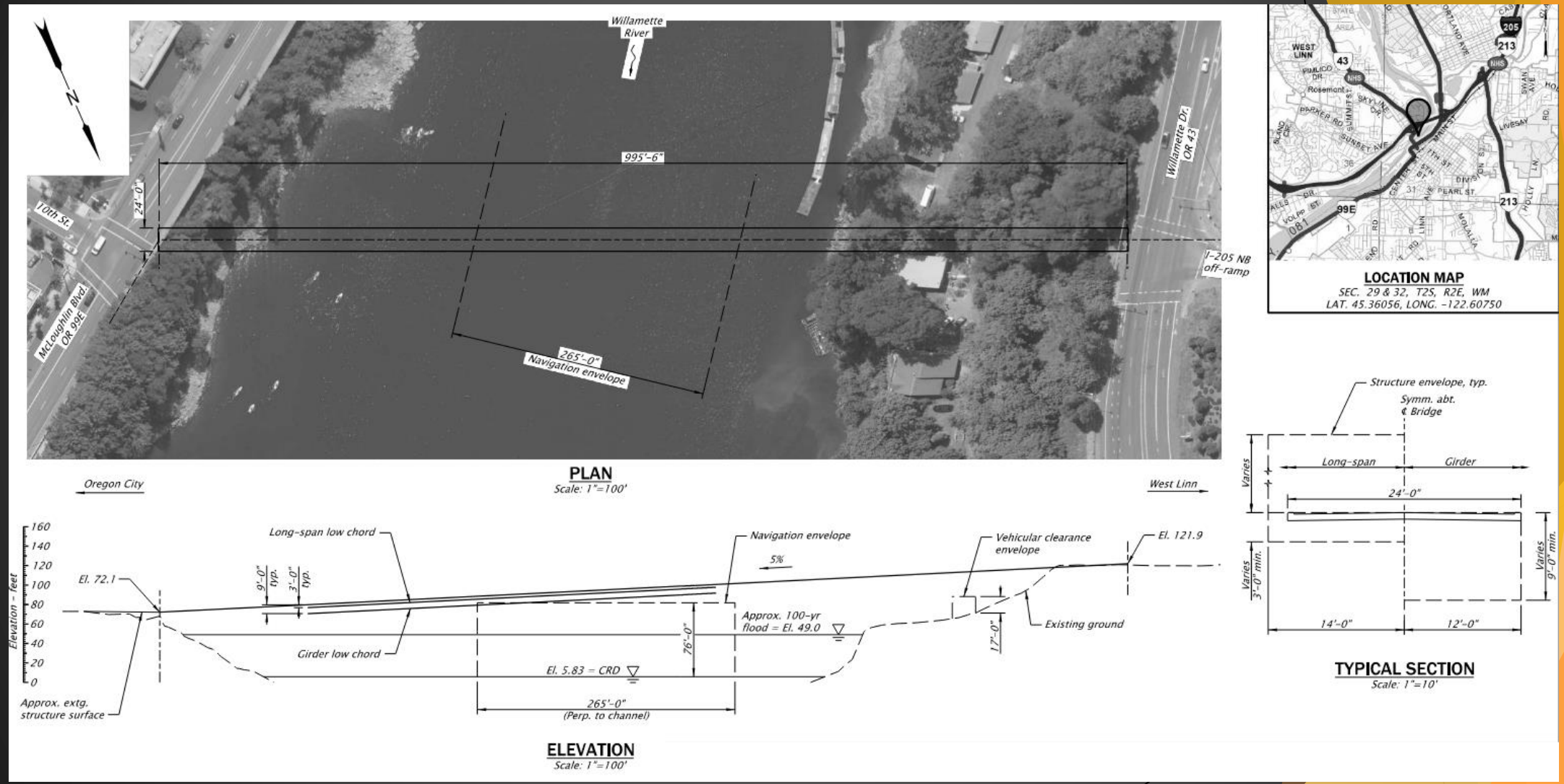
TM#3A: Alignment 7b



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TM#3A: Preliminary Bridge Concept Plans

Alignment	Planning-level bridge construction costs
Alignment 1c: 4th Street to Mill Street	$27M - $40M
Alignment 2b: 5th Street to Mill Street	$22M - $32M
Alignment 4a: Main Street to Mill Street	$23M - $35M
Alignment 6: 9th Street to Willamette Drive	$25M - $36M
Alignment 7b: 10th Street to OR 43	$25M - $37M

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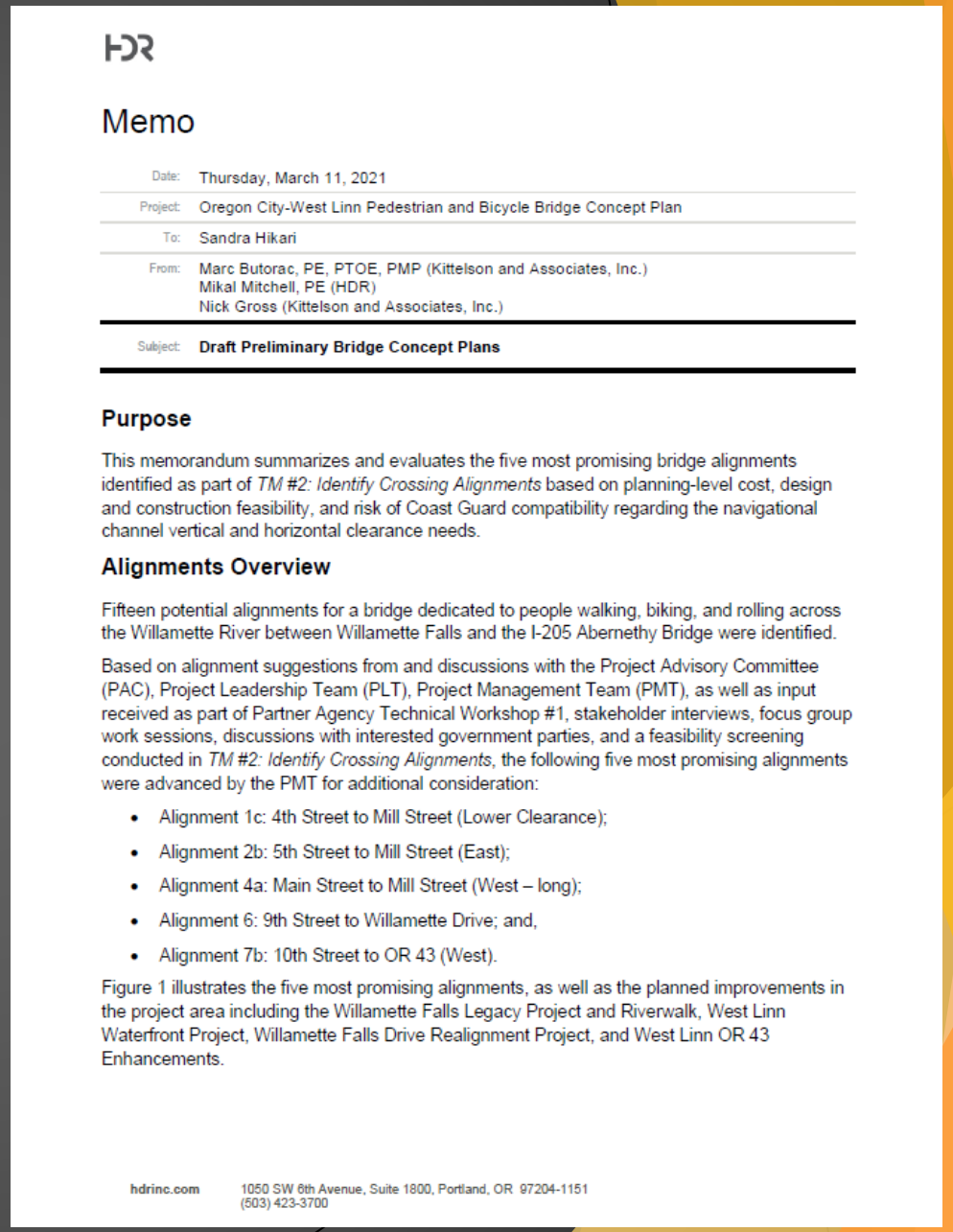
TM#3A: Preliminary Bridge Concept Plans

- Planning Considerations
  - Viewshed Considerations
  - Connectivity Considerations
  - Placemaking Opportunities
  - Economic Development Opportunities



HDR

Memo

Date:	Thursday, March 11, 2021
Project:	Oregon City-West Linn Pedestrian and Bicycle Bridge Concept Plan
To:	Sandra Hikari
From:	Marc Butorac, PE, PTOE, PMP (Kittelson and Associates, Inc.) Mikal Mitchell, PE (HDR) Nick Gross (Kittelson and Associates, Inc.)
Subject:	**Draft Preliminary Bridge Concept Plans**

Purpose

This memorandum summarizes and evaluates the five most promising bridge alignments identified as part of *TM #2: Identify Crossing Alignments* based on planning-level cost, design and construction feasibility, and risk of Coast Guard compatibility regarding the navigational channel vertical and horizontal clearance needs.

Alignments Overview

Fifteen potential alignments for a bridge dedicated to people walking, biking, and rolling across the Willamette River between Willamette Falls and the I-205 Abernethy Bridge were identified.

Based on alignment suggestions from and discussions with the Project Advisory Committee (PAC), Project Leadership Team (PLT), Project Management Team (PMT), as well as input received as part of Partner Agency Technical Workshop #1, stakeholder interviews, focus group work sessions, discussions with interested government parties, and a feasibility screening conducted in *TM #2: Identify Crossing Alignments*, the following five most promising alignments were advanced by the PMT for additional consideration:

- Alignment 1c: 4th Street to Mill Street (Lower Clearance);
- Alignment 2b: 5th Street to Mill Street (East);
- Alignment 4a: Main Street to Mill Street (West – long);
- Alignment 6: 9th Street to Willamette Drive; and,
- Alignment 7b: 10th Street to OR 43 (West).

Figure 1 illustrates the five most promising alignments, as well as the planned improvements in the project area including the Willamette Falls Legacy Project and Riverwalk, West Linn Waterfront Project, Willamette Falls Drive Realignment Project, and West Linn OR 43 Enhancements.

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Conceptual Alignments – Fly Through Model

Link: Willamette Bicycle and Pedestrian River Crossing (arcgis.com)

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TM#3A: Identify Crossing Alignments

- Viewshed Considerations – Alignment 1c

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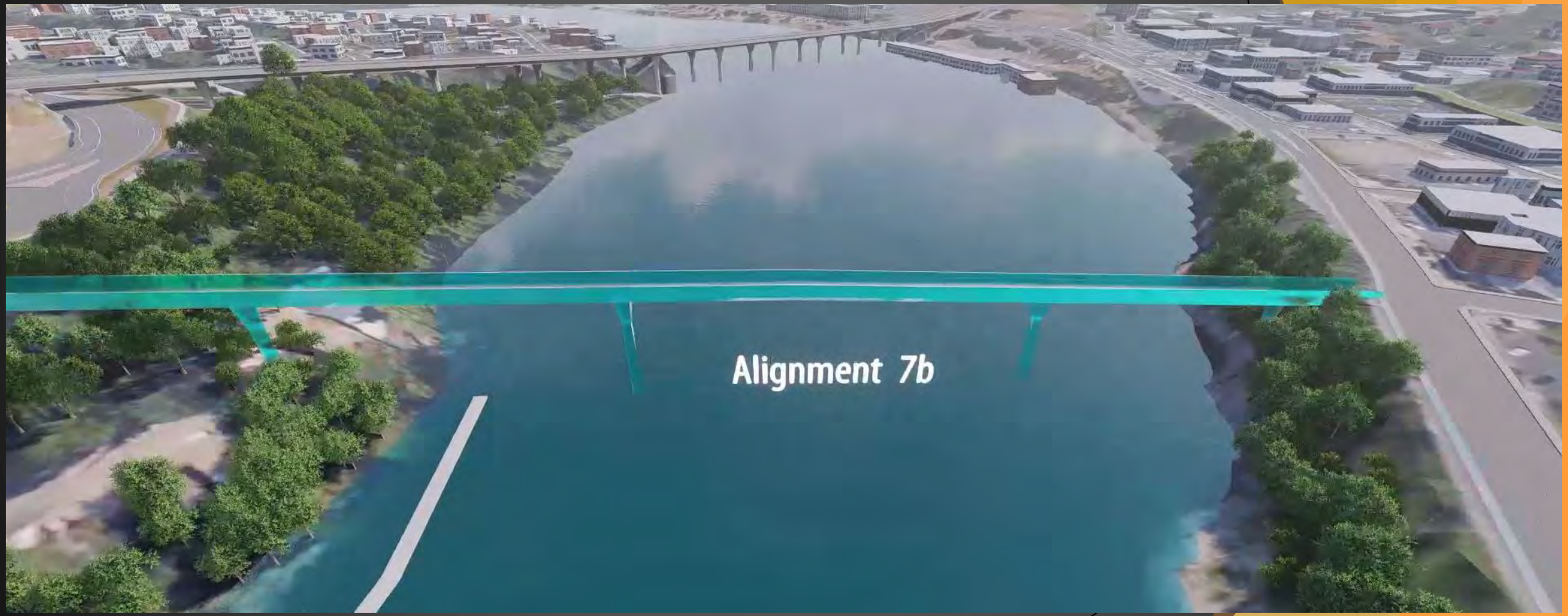
TM#3A: Identify Crossing Alignments

- Connectivity Considerations – Alignment 7b



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TM#3A: Identify Crossing Alignments

- Placemaking Opportunities – Alignment 2b

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TM#3A: Identify Crossing Alignments

- Economic Development Considerations – Alignment 1c

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TM#3A: Identify Crossing Alignments

- Alignment evaluation criteria summary

- Alignment 1c 
- Alignment 2b 
- Alignment 4a 
- Alignment 6 
- Alignment 7b 

Design Feasibility
Planning Level Cost
Viewsheds
Connectivity
Placemaking
Economic Development

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TM#3B: Benefits and Impacts Analysis

- User Experience
  - Sense of place and personal security
  - Cultural and historic experience
- Health outcomes
  - Physical activity
  - Air quality
  - Social cohesion
  - Mental health

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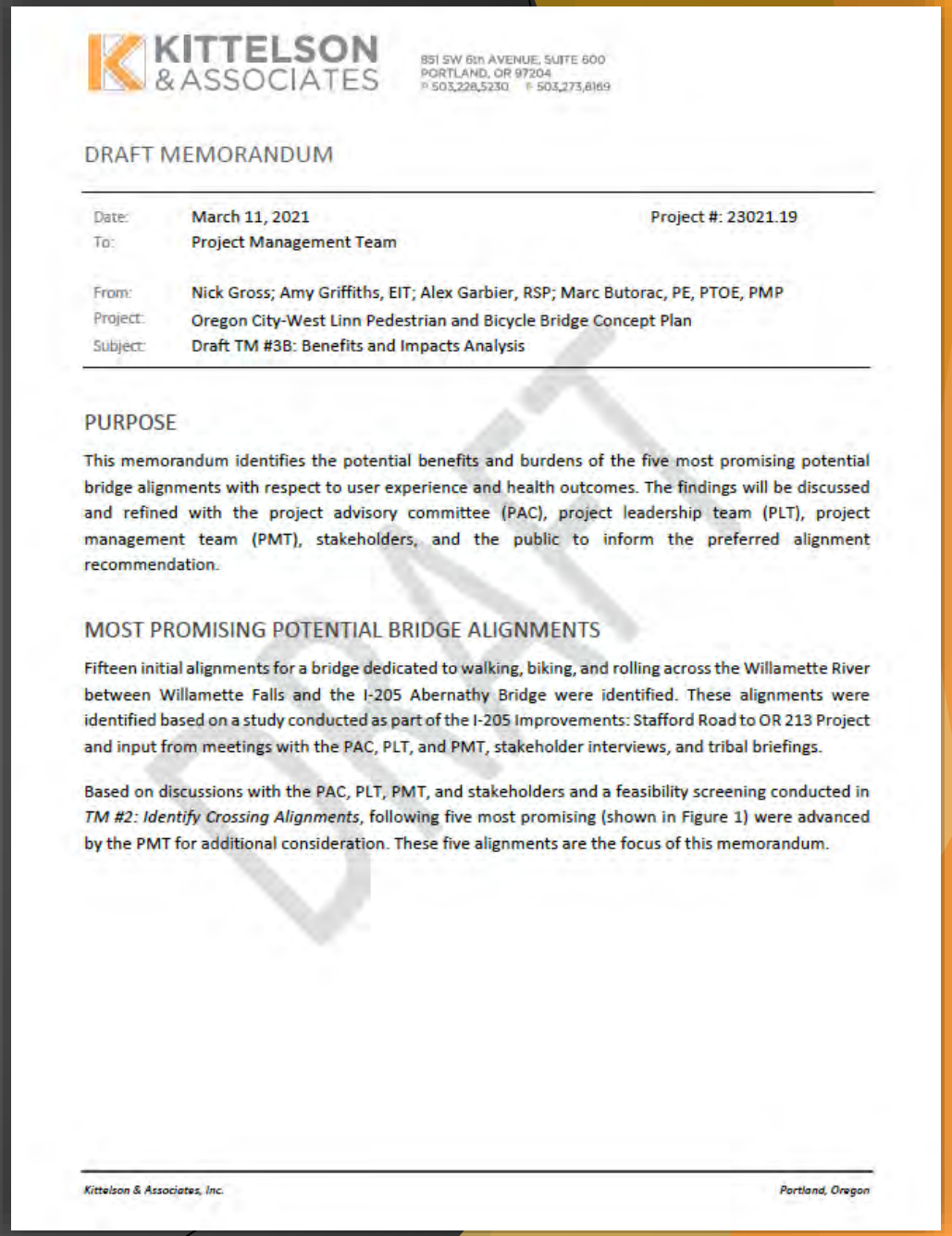

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DRAFT MEMORANDUM

Date: March 11, 2021 Project #: 23021.19
To: Project Management Team

From: Nick Gross; Amy Griffiths, EIT; Alex Garbier, RSP; Marc Butorac, PE, PTOE, PMP
Project: Oregon City-West Linn Pedestrian and Bicycle Bridge Concept Plan
Subject: Draft TM #3B: Benefits and Impacts Analysis

PURPOSE

This memorandum identifies the potential benefits and burdens of the five most promising potential bridge alignments with respect to user experience and health outcomes. The findings will be discussed and refined with the project advisory committee (PAC), project leadership team (PLT), project management team (PMT), stakeholders, and the public to inform the preferred alignment recommendation.

MOST PROMISING POTENTIAL BRIDGE ALIGNMENTS

Fifteen initial alignments for a bridge dedicated to walking, biking, and rolling across the Willamette River between Willamette Falls and the I-205 Abernathy Bridge were identified. These alignments were identified based on a study conducted as part of the I-205 Improvements: Stafford Road to OR 213 Project and input from meetings with the PAC, PLT, and PMT, stakeholder interviews, and tribal briefings.

Based on discussions with the PAC, PLT, PMT, and stakeholders and a feasibility screening conducted in *TM #2: Identify Crossing Alignments*, following five most promising (shown in Figure 1) were advanced by the PMT for additional consideration. These five alignments are the focus of this memorandum.

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TM#3B: Benefits and Impacts Analysis

- Sense of place and personal security
  - Bridge Span Length, ramping, lighting, activity at Bridgeheads

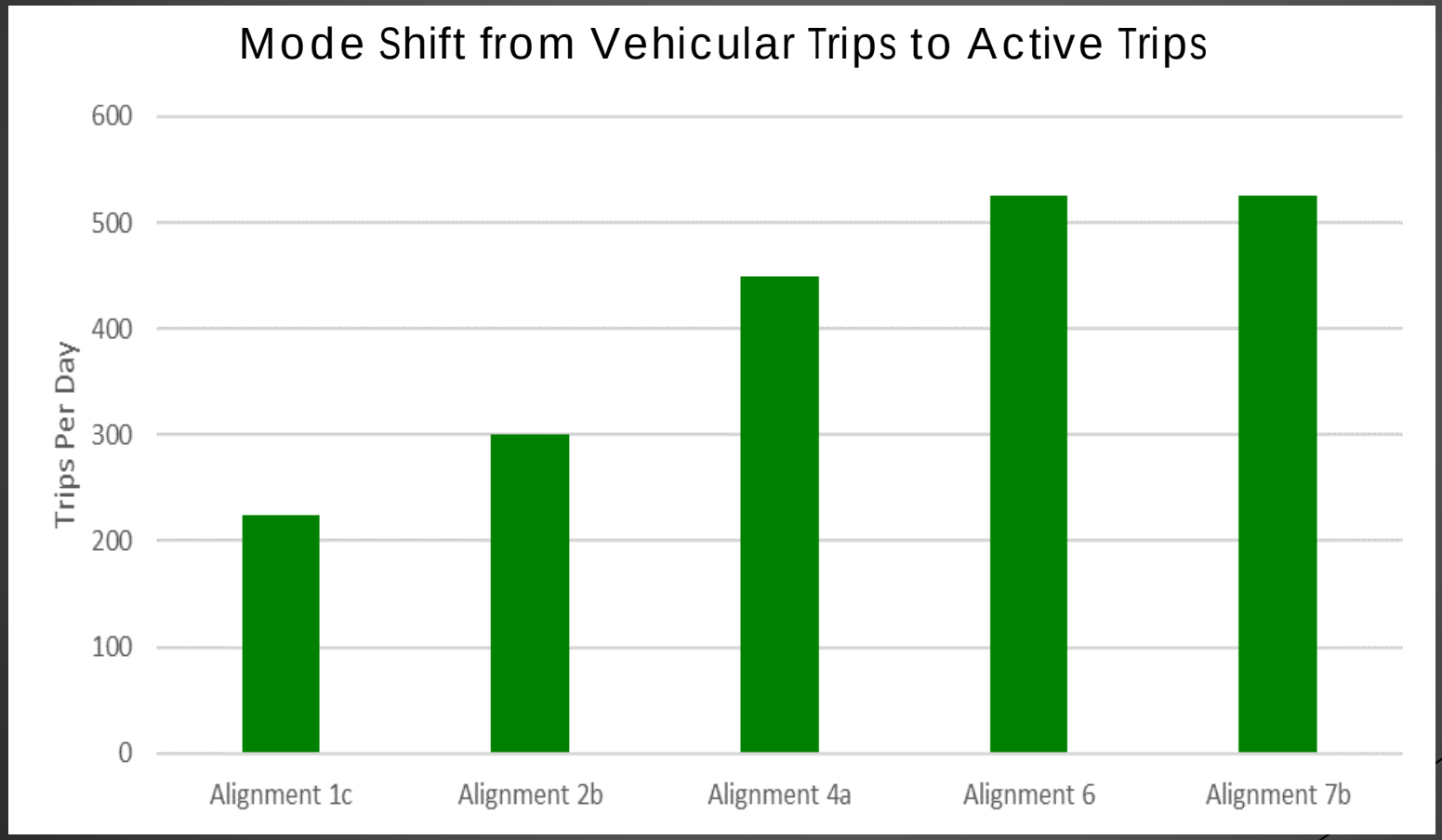
Alignment 1c	Alignment 2b	Alignment 4a	Alignment 6	Alignment 7b
• Negative (current) • Average span length; substantial ramping required • Lack of activity • Lack of lighting • *Future development will improve lighting and increase activity*	• Negative (current) • Short span length; substantial ramping required • Lack of activity • Lack of lighting • *Future development will improve lighting and increase activity*	• Very positive • Average span length; little ramping required • Well lit at both bridgeheads • Existing activity at both bridgeheads	• Neutral • Average span length; moderate ramping • Some lighting at both bridgeheads • Some activity at both bridgeheads	• Neutral • Long span length; no ramping required • Some lighting at both bridgeheads • Some activity at both bridgeheads

TM#3B: Benefits and Impacts Analysis

- Cultural and Historic Experience
  - Views, sounds, elevation change
  - Connection to historic architecture and cultural and ethnic resources

Alignment 1c	Alignment 2b	Alignment 4a	Alignment 6	Alignment 7b
• Best views • Provides access to historic and cultural resources • No loud traffic sounds • Grade change and ramping may be challenging for some users	• Best views • Provides access to historic and cultural resources • No loud traffic sounds • Grade change and ramping may be challenging for some users	• Good views • Connects to the municipal elevator • Loud traffic sounds from vehicles travelling along the Arch Bridge • Moderate grade changes that are accessible for most users	• Good views • No loud traffic sounds • Moderate grade changes that are accessible for most users • Does not provide direct connection to historic architecture	• Good views • No loud traffic sounds • Moderate grade changes that are accessible for most users • Does not provide direct connection to historic architecture

TM#3B: Benefits and Impacts Analysis



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TM#3B: Benefits and Impacts Analysis

- Alignment evaluation criteria summary

  - Alignment 1c 
  - Alignment 2b 
  - Alignment 4a 
  - Alignment 6 
  - Alignment 7b 

Sense of Place
Personal Security
Cultural Experience
Historic Experience
Health Outcomes

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TM#4: Active Transportation Analysis

- Essential destinations
- Existing and planned walking, biking and rolling networks
- Level of Traffic Stress
- Existing activity and forecasted demand

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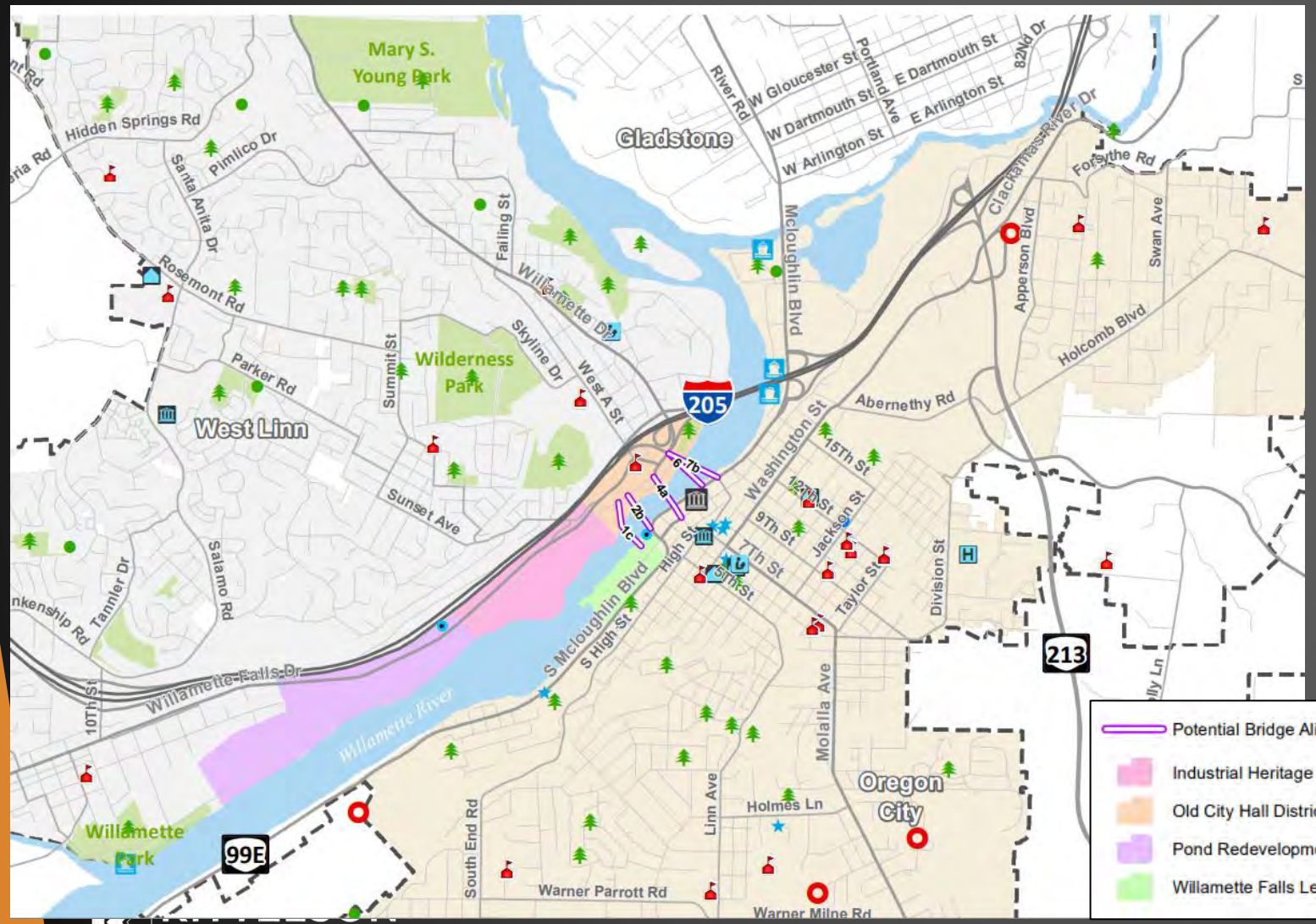
TM#4: Active Transportation Analysis

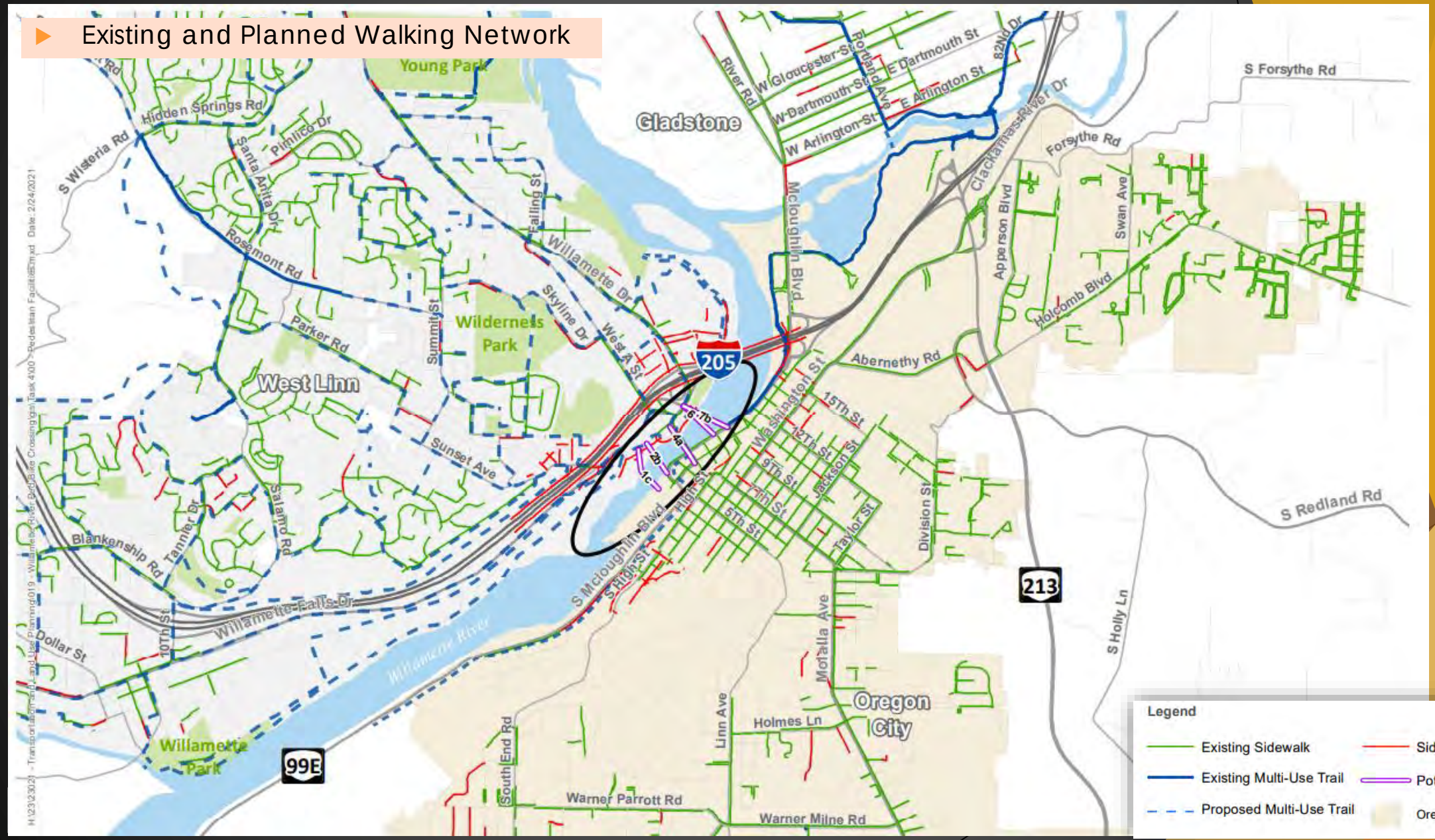
- Essential destinations



Alignment	Destinations within ½ Mile
Alignment 1c	23
Alignment 2b	22
Alignment 4a	26
Alignment 6	28
Alignment 7b	29

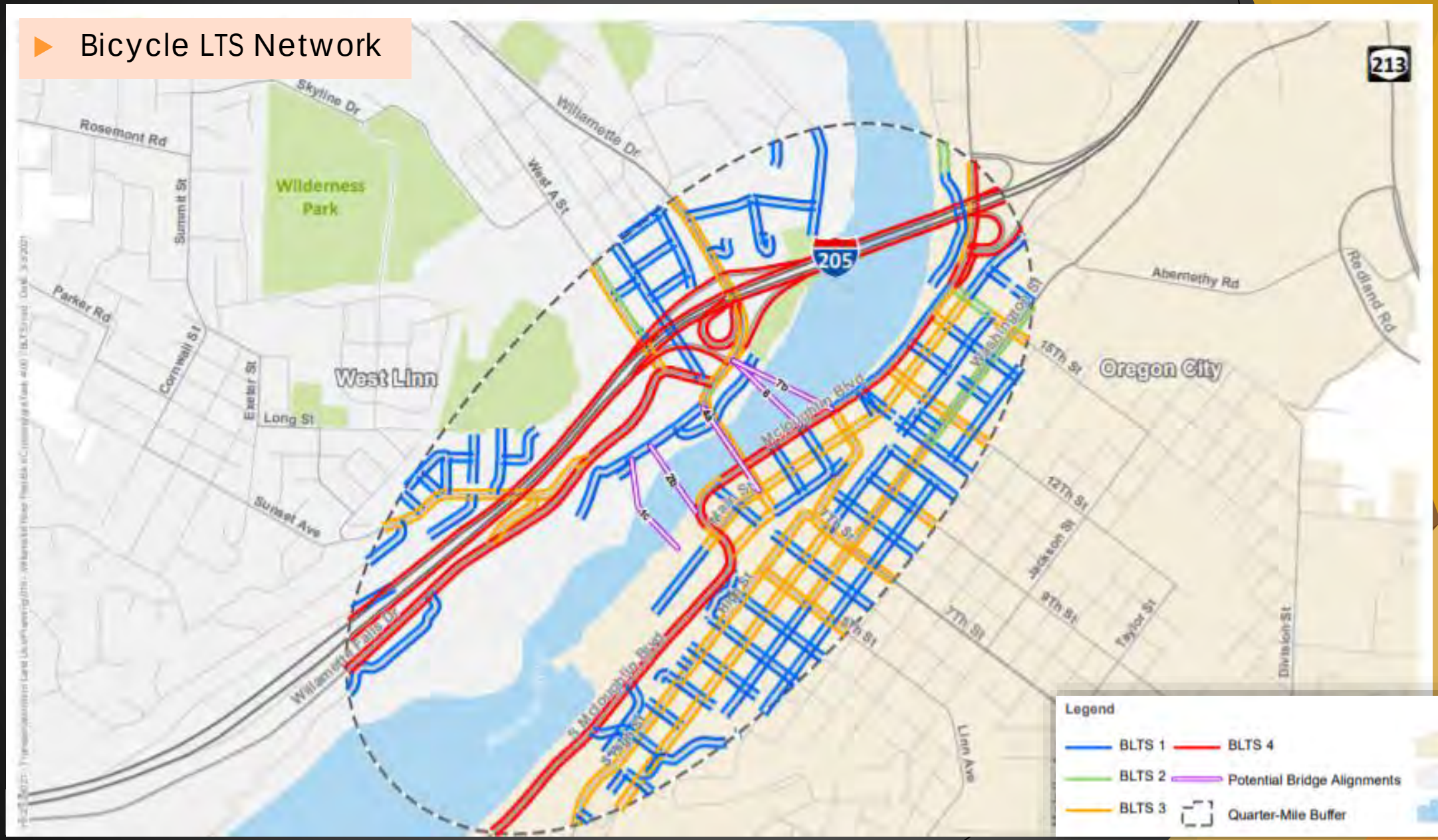
TM#4: Active Transportation Analysis

- Existing and Planned Walking Network



TM#4: Active Transportation Analysis

- Bicycle LTS Network

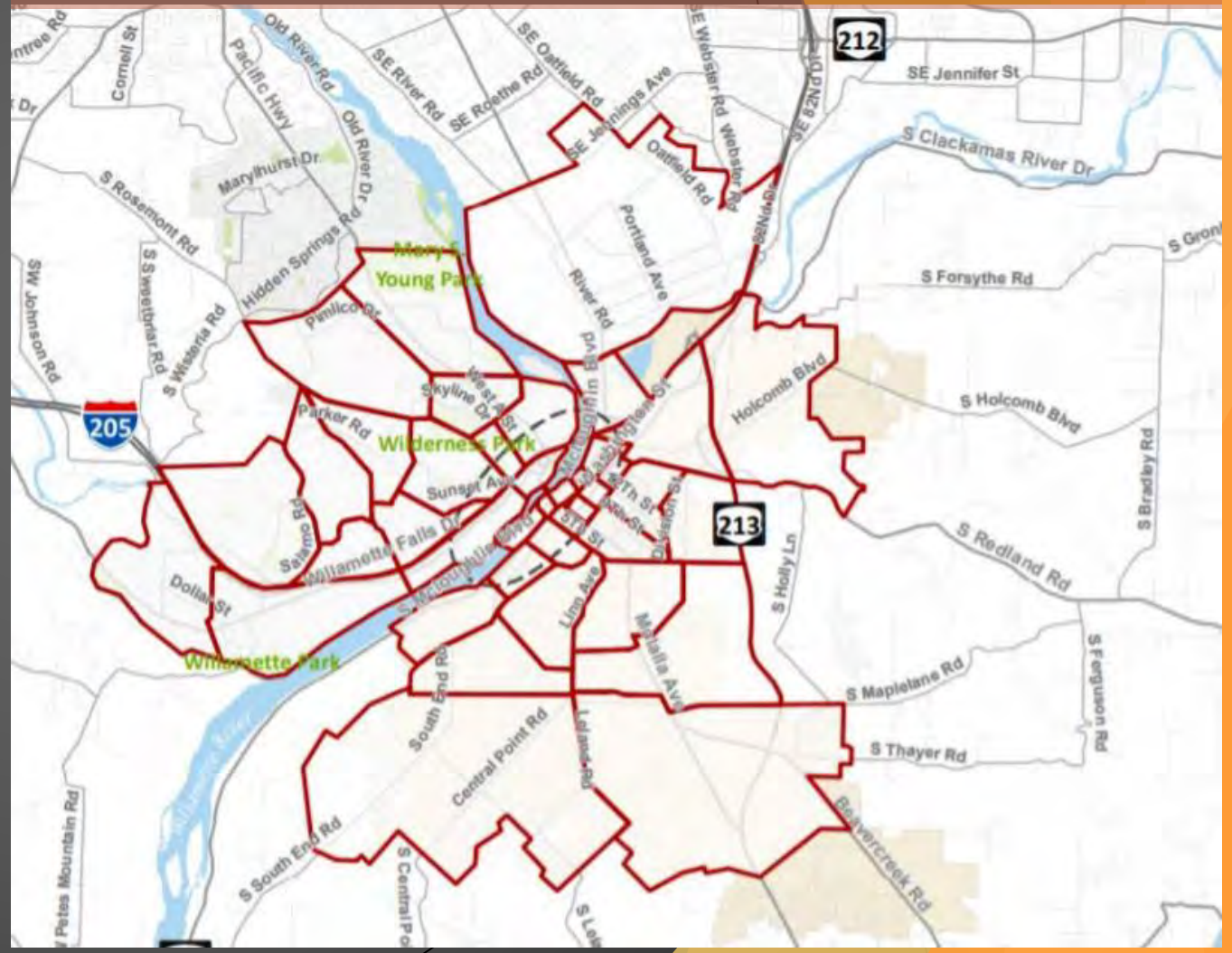


TM#4: Active Transportation Analysis

Demand Model Inputs / Considerations

- Inputs / Considerations
  - Existing Travel Patterns
  - Planned Land Use Changes
  - Route Characteristics
    - Distance to Bridge
    - Comfort (LTS)
    - Slope of Path
  - Survey Data on Mode Choice and Recreation Activity

Model Travel Zones



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TM#4: Active Transportation Analysis

- All alignments increase walking and biking relative to baseline
- 7b, 6, and 4a greatest increase
  - Greater population density north of Historic Arch Bridge
  - More direct connection to public elevator and to Singer Hill in Oregon City
- 1c and 2b expect ~25% of people walking, biking, and rolling to continue using the Arch Bridge

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TM#4: Active Transportation Analysis

- Alignment evaluation criteria summary

- Alignment 1c 
- Alignment 2b 
- Alignment 4a 
- Alignment 6 
- Alignment 7b 

Essential Destinations
Existing Facilities
Planned Facilities
Level of Traffic Stress
Walking Demand
Biking Demand

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Preliminary Findings and Recommendations

- Feedback received from TAC, PMT, and homework assignments:
  - Create a direct transportation connection first, and then consider tourism and private development
  - Alignments with minimal ramping structures are highly preferred
  - Viewsheds to Willamette Falls and to/from the Historic Arch bridge are important to maintain
  - Alignment 7b performs well due to its minimal viewshed impacts, minimal ramping, and connectivity to downtown Oregon City via the signalized intersection of 10th Street
  - Alignment 1c was noted for the opportunity to be a landmark destination and leverage planned redevelopment
  - Alignment 4a is seen as challenging due to proximity to the existing Arch bridge

Consultant Team Preliminary Findings

- Alignments 7b and 1c are the most promising
  - Alignment 7b provides a direct, regional connection
  - Alignment 7b avoids potential impacts to Willamette Falls and Historic Arch Bridge
  - Alignment 1c provides development potential
  - Alignment 1c draws more recreational walking and biking activity
- PAC, public input and further environmental analysis will be used to select the preferred alignment

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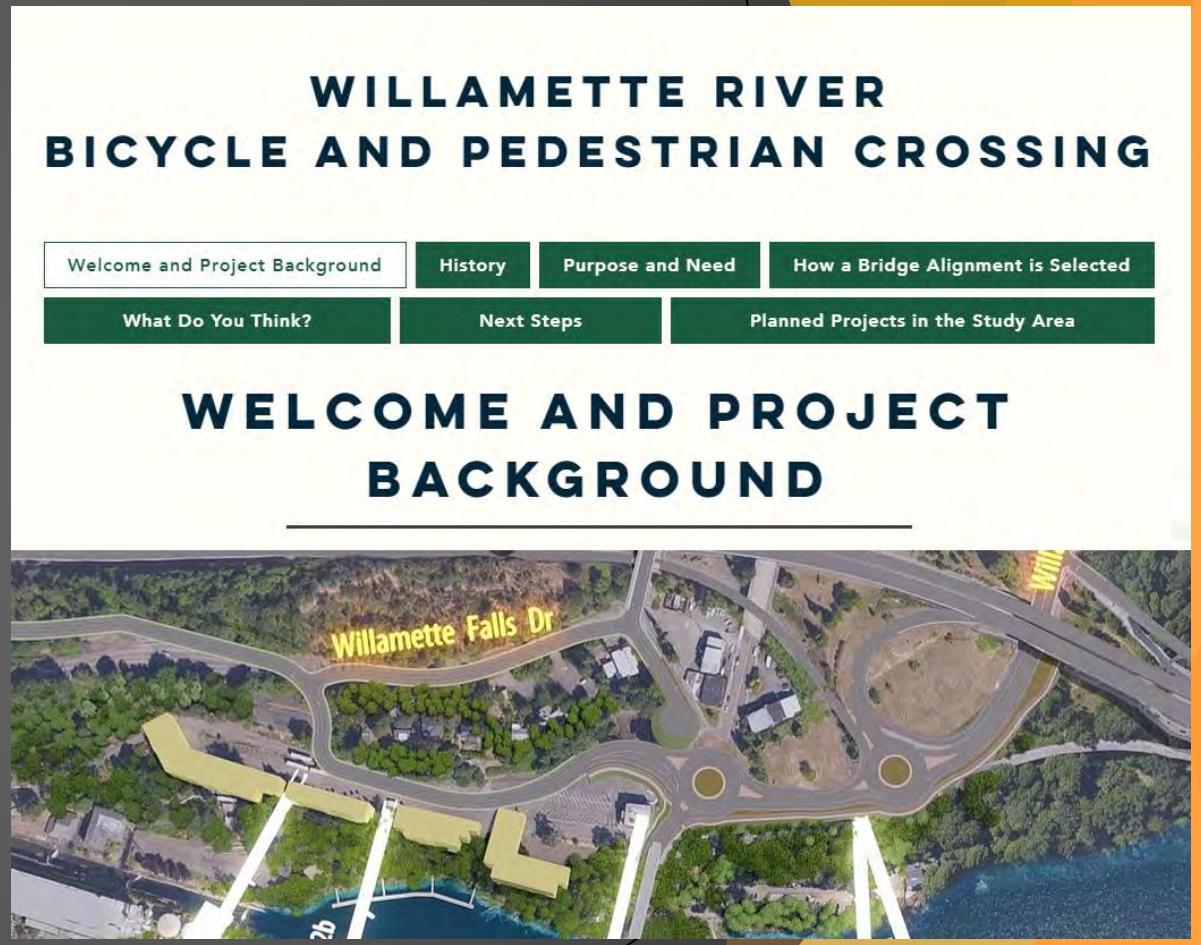
Breakout Groups

- Based on the considerations identified in TM#3A, TM#3B, and TM#4, which top two alignments do you believe are most promising at this time?

Virtual Open House

- Virtual Open House is Live through April 13th!
- Virtual Public Meeting
  - April 6th at 6:30PM
- Links to meetings:
  - tinyurl.com/WalkBikeRoll



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Next Steps

- PAC Meeting #3: May 5 | 3:00 to 5:00 PM
  - Preliminary Scope for NEPA
  - TM #5: Executive Summary and Recommendations
  - TM #6: Preferred Crossing Alignment Location & Implementation Plan
  - Draft Concept Plan
- Comments on TM#3A, TM#3B, and TM#4 due April 2
- Homework packet #2 due April 2
- Consultant team drafting TM#5

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