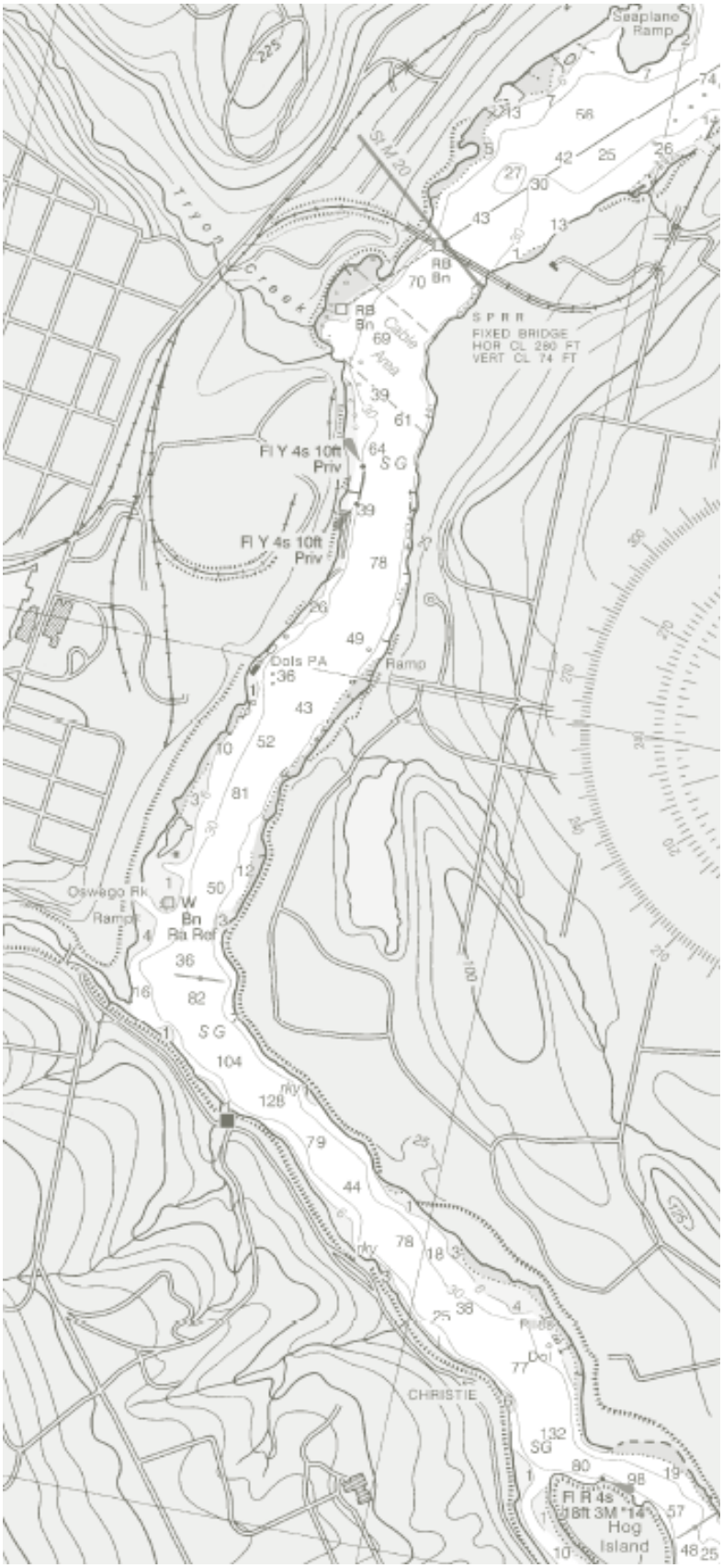

Oak Grove–Lake Oswego Pedestrian/Bicycle Bridge Feasibility Study

FINAL REPORT

January 28, 2020

CLACKAMAS COUNTY

Parametrix

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1 Executive Summary:

Background

The idea of a pedestrian/bicycle bridge crossing the Willamette River has been raised in various forums over the years. A bicycle/pedestrian bridge project was included in the project list for the Clackamas County Transportation System Plan (TSP) when it was last updated in 2013 as well as in the Lake Oswego Transportation System Plan. In addition this concept has also been raised in other conversations with regional and local pedestrian, bicycle and transportation committees. The reason for the attention focused on this idea is self-evident: between Sellwood and Oregon City the Willamette River creates a break in bicycle and pedestrian connectivity of over 9 miles, one of the largest in the Portland region. The purpose of this project is to analyze the feasibility of a bicycle/pedestrian bridge across the Willamette River to improve active transportation connective within the Portland region south of Portland.

To determine the feasibility of implementing a pedestrian/bicycle bridge project Clackamas County Department of Transportation and Development (DTD) obtained $306,000 in Active Transportation Development funds from Metro for this feasibility study and included it in the DTD Long-Range Planning Work Program for FY2018/2019. To determine if a pedestrian/bicycle bridge is feasible, this study examines potential bridge alignments and bridge type alternatives, identifies probable environmental and permitting requirements, and develops construction and operations cost estimates for a new pedestrian/bicycle bridge over the Willamette River.

The study area includes both sides of the Willamette River from Terwilliger Boulevard/Tryon Cove Park and Rivervilla Park south to a line extending from Oak Grove Boulevard to Roehr Park in Lake Oswego (see Map ES-1 on the following page). The study area was selected based on its location approximately mid-way between the north and south end of the area identified for the proposed bridge in the Clackamas County TSP. Due to the focus of this study on the Oak Grove – Lake Oswego area, throughout the study the project is referred to as the **OGLO Bridge** (**O**ak **G**rove – **L**ake **O**swego)

Feasibility

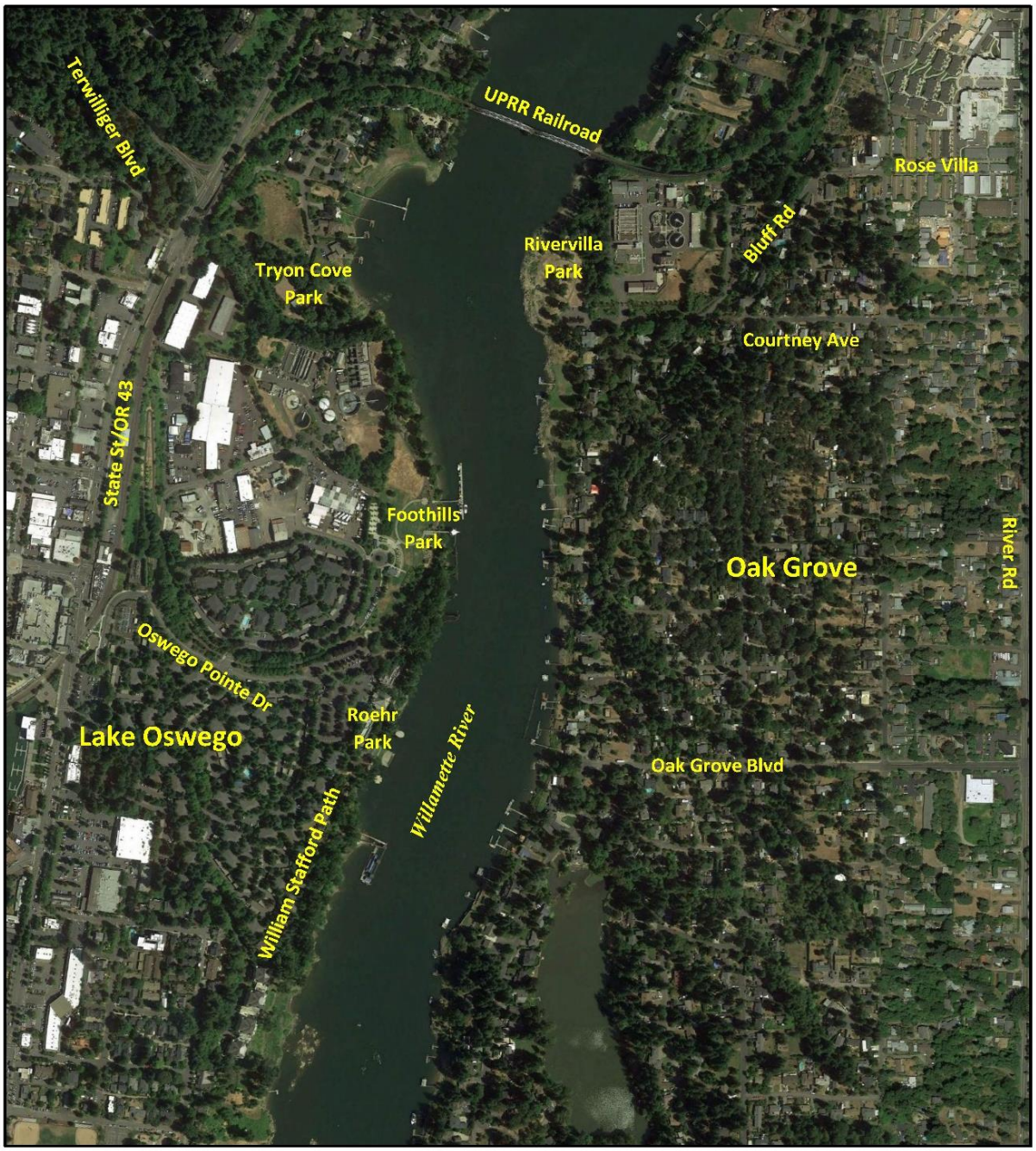
Technical Feasibility

The following are the findings for the technical criteria that were used to determine the feasibility of the bridge:

Feasible Landing Sites - Feasible landing sites were identified as being on publically owned property that would not require taking of private property. There were two landing sites meeting this criteria on the west side of the river and one on the east side of the river. These landing sites are:

1. Terwilliger Blvd right-of-way (west)
2. Portland Bureau of Environmental Services/Foothills Park (west)
3. Right-of-way of Intersection of Courtney Avenue/Fairoaks Ave

Map ES-1: Study Area



Feasible Alignments – Feasible alignments are those that connect 2 feasible landing sites and do not require impacting any private property. Two feasible alignments were identified:

1. Terwilliger Blvd to Courtney Ave
2. BES/Foothills Park to Courtney Ave

Feasibly Addresses Design Criteria – Two design criteria were identified: 1) The bridge concepts must clear the navigable envelope identified by the Coast Guard (74 feet

above ordinary high water) for the entire distance across the river; 2) The bridge must have a slope of no more than 5% at any point to meet ADA criteria. The two proposed bridge alignments meet both criteria.

Environmental Feasibility – Environmental review for this project was not undertaken in this study. When an environmental assessment is prepared the proposed bridge must not have any environmental impacts that cannot be mitigated.

Permitting Feasibility – As proposed the bridge alternatives must meet the criteria of the three main permitting agencies (Coast Guard, Lake Oswego and Clackamas County) that would allow the project to secure necessary permits. Based on the general design concepts developed for this study, the proposed bridge can meet permitting criteria with approval of a height variance.

Cost Feasibility – The estimated cost for the bridge should be within the current cost range of similar pedestrian/bicycle bridges.

Funding Feasibility – Sufficient funds should be available from federal, state and local sources identified in this study that it reasonable to expect that funding can be secured.

Based on the engineering analysis conducted in this study, that the OGLO bridge project is technically feasible.

Community Feasibility

Technical feasibility is only one aspect of project feasibility, community feasibility must also be considered. Community feasibility can be thought of as the extent to which a project is viewed as needed and important by the communities impacted by the project and those that are likely users. Community feasibility of the OGLO project within the two affected communities, Oak Grove and Lake Oswego was identified as an important aspect of the project. Several input methods were included in the project to help better understand community attitudes and concerns about the project. Specific input opportunities included an online questionnaire, public open house events, public input opportunities at project committee meetings, comments submitted via email, as well as a random, scientific survey. The following briefly describes the results of the input opportunities that were available during the project.

1. Online Questionnaire – An online questionnaire was made available in May/June 2019 to determine the amount people expected to use the proposed bridge. Responses to that questionnaire indicated that use would average 1,598 trips per day. In the responses to the questionnaire 174 respondents stated that they would use the project and 98 indicated that they would not use it.
2. Public Open House Events – 215 people attended public open house events that were conducted in August 2019 as part of this project and provided comments on 10 possible bridge alignments that were under consideration as part of the project, with 3 alternatives being selected by a majority of those that attended the open house events as the best alternatives.
3. Comments at Project Committee Meetings – There were many comments received during public input opportunities at the meetings of the project Community Advisory Committee and the project Policy Committee meeting. An overview of those comments is included in this report starting on page 27.

4. Comments Submitted Via Email – The project managers email address was included on all project materials and community members were invited to submit comments via email. Over 400 email comments were received. In some cases duplicate emails were received from the same commenter. In such cases, the project staff where the same email was sent from the same email address to more than one individual on the project team. Overall 282 unique emails were received with 93 (32.9%) opposed to the project, 33 (11.7%) that were not in support or opposition but were seeking information, and 156 (55.3%) in support of the project. Further analysis of the emails showed that emails in opposition to the project came from 30 individuals, 17 individual sent emails seeking information and 145 individuals sent emails in support of the project.
5. Scientific Survey - The scientific survey was conducted by a survey research firm to determine community support or opposition to the project. The survey was conducted a random sample of 200 registered voters from Lake Oswego and 200 from Oak Grove. The total sample size of 400, is sufficient to provide results with 95% accuracy. The survey was conducted in September 2019 and showed 63% support for the OGLO Bridge, with 28% opposed and the remaining 9% neutral. There was some difference in the responses between the east and west sides of the river with 71% of those on the east side stating they supported the bridge, with 55% in support on the west side.

Although there are those opposed to the project, based on data collected during the project between 55% and 63% of residents of the project area support the OGLO Bridge project, between 28% and 33% are opposed, and between 9% and 11% were neutral. The input process also showed that there is a somewhat higher rate of support for the project in Oak Grove than in Lake Oswego.

Near the end of this feasibility study, the City of Lake Oswego City Council passed a motion at a City Council meeting stating: "The City of Lake Oswego will contribute no funds for construction or maintenance of a bridge from Oak Grove to Lake Oswego, The City of Lake Oswego will not support or approve infrastructure for ramps, bridge support structures or other facilities related to an OGLO bridge in Foothills or Tryon Cove Parks."

Based on support for the project by over 63% of those surveyed in September 2019, the OGLO Bridge project appears to be feasible if it can be done in a way that does not impact the City of Lake Oswego. However, as the project was completed, there is no new data to inform the policy committee with a scientific public poll regarding the current level of support.

Further information on Community Input and Intergovernmental Coordination can be found in Appendix D.

Study Findings

A. The feasibility of three landing sites was evaluated in this study. The proposed alternatives, two studied on the west side of the river at Foothills Park and Terwilliger Blvd, and the one on the east side of the river at Courtney Ave, are not feasible at this time due to the position of the City of Lake Oswego, but are technically feasible.

B. Public land and/or right-of-way is available for and can accommodate bridge landings and approaches.

C. Bridge specifications over the Willamette River will be driven by required U.S. Coast Guard (USCG) navigation clearances (74 feet above ordinary high-water mark) and Americans with Disabilities Act (ADA) slope guidelines for pedestrian/bicycle facilities (maximum 5 percent).

D. Different bridge main span and bridge approach design treatments/types are possible – steel, concrete, cable-stayed, and extradosed.

E. Two bridge alignments were found to be technically feasible:

   1. SW Terwilliger Blvd on the west side to SE Courtney Avenue on the east side (Alternative A-3)

   2. Foothills Park on the west side to SE Courtney Avenue (Alternative D-3).

F. The two preferred bridge alternatives would both accommodate light-weight emergency vehicles, e.g., police cars and ambulances.

G. In response to a request from Metro, it was determined that the inclusion of a single transit lane would be technically feasible for use of vehicles of less than 20,000 pounds gross vehicle weight as an addition to the Foothills Park to Courtney alternative. It was determined that the addition of the transit lane was only feasible for the Foothills Park-Courtney Ave alternative and that the addition of a lane to serve small shuttle bus type transit vehicles would increase the cost of that bridge by 44% to 48%. In addition, the roadway connections to the Courtney Ave landing site on the east side are not conducive to bus traffic due to limited road width on Courtney Ave between Fairoaks and River Rd. After consideration of the proposal to include a bus lane on the bridge, both the Clackamas County Board of Commissioners and the project Policy Committee chose not to support the bus lane and that option was eliminated from further consideration.

   Further information on the Bridge Alternatives Analysis can be found in Appendix A.

H. Costs for the two preferred alignment alternatives were estimated using different bridge types/treatments and percentage factors for engineering, permitting, etc. The range of cost estimates resulting from using different bridge/bridge approach types/materials are:

   - Terwilliger to Courtney (Alternative A-3) - $44.5 million to $52 million
   - Foothills Park to Courtney (Alternative D-3) - $30.3 million to $36.4 million

I. The addition of transit would increase costs for Alternative D-3 to a range of $43.6 million to $54.2 million.

J. A wide range of potential funding options were researched for the project.(see Appendix B for more information)

   1. Metro has committed $500,000 to be used for engineering and environmental studies for the development of OGLO Bridge.

   2. The Metro Parks and Open Space bond approved by voters in November 2019 identified the OGLO Bridge project as an example of a project of regional significance that could receive funding.

   3. 2020 Regional Transportation Bond Measure – A Metro regional transportation funding measure is under consideration for referral to the November 2020 ballot. At present the OGLO Bridge has not been identified as a Tier 1 priority project. If

the proposed funding measure goes forward and the OGLO Bridge project is included and the measure is approved by the voters, this funding would likely be the best funding source for potential OGLO construction because these funds would be locally controlled and available within a short timeframe.

4. Regional Flexible Funds (RFFA) – RFFA is administered by Metro using pass-through funds from federal transportation agencies. The federal funds that make up RFFA have several limitations including design requirements and provision of matching funds. Although an OGLO Bridge would be eligible for such funds, typically these funds are used for projects between $5 million and $8 million. The limited amount of funds available (less than $45 million for FY2022-24) and competitive nature of the program would likely prevent this source from being used for more than a small percentage of the total funding that would be needed to design and construct an OGLO Bridge.
5. Federal Funds Administered by Oregon DOT – Oregon Department of Transportation administers several federal pass-through programs that could supply some funding for the OGLO Bridge. These funds include: Surface Transportation Block Grant Program (STBG); Transportation Alternatives Program (TAP), which is now incorporated into STBG; and Congestion Mitigation and Air Quality (CMAQ). All federal funds have the same limitations for use on this project that are described above for the Regional Flexible Funds.
6. Direct Federal Funding – It is also possible to secure federal funds directly through national grant programs administered by USDOT. The largest such program is Better Utilizing Investments to Leverage Development (BUILD). Although the OGLO Bridge is eligible for BUILD funds, those funds are awarded through a very competitive national process.

K. Potential Bridge Operators: The feasibility study did not identify an organizational model for bridge construction/operations/maintenance. However, due to the cost and complexity of the project it seems likely that it would be undertaken by a consortium of governments and organizations with assistance by regional or state agencies.

   Further information can be found in Appendix B on Funding Opportunities.

L. The OGLO Bridge would be subject to local permitting requirements by Clackamas County and the City of Lake Oswego if it extends into the city.

M. The National Environmental Policy Act (NEPA) would apply to this project because the Willamette River is a regulated navigable waterway. Use of federal funds for the bridge construction would also trigger a NEPA analysis. The OGLO Bridge project would be subject to United States Coast Guard (USCG) permitting. USCG would be the lead federal agency for the project for the NEPA assessment of the project.

N. Other federal and state agencies that might have a permitting roles include: United States Fish & Wildlife Service (USFWS), United States Army Corps of Engineers (USACE), Oregon Department of State Lands (ODSL), Oregon Department of Environmental Quality (ODEQ), Oregon State Historic Preservation Office (SHPO) and Oregon Department of Fish & Wildlife (ODFW).The City of Lake Oswego municipal code also has requirements for structure heights that may apply depending on the bridge landing site on the west side of the Willamette River.

   Further information on Agency Permitting and Approval Requirements can be found in Appendix C.

2 Background

The idea of a pedestrian/bicycle bridge crossing the Willamette River between the unincorporated community of Oak Grove and the City of Lake Oswego has been raised in various forums over the years. The proposed bridge project was put forward and included in the project list for the Clackamas County Transportation System Plan (TSP) when it was last updated in 2013. In that plan it is project #2022 and is identified as the "Lake Oswego to Milwaukie Bridge" to be located between Sellwood and Oregon City, and described as follows: "Construct pedestrian/bicycle crossing over the Willamette River in accordance with the Active Transportation Plan." The concept has also been raised in other conversations with regional and local pedestrian, bicycle, and transportation committees.

To begin the process of implementing this project, the Clackamas County Department of Transportation and Development (DTD) secured $306,000 in Active Transportation Development funds from Metro for a feasibility study and included the project in the DTD Long-Range Planning Work Program for FY2018/2019.

This Oak Grove-Lake Oswego (OGLO) Pedestrian/Bicycle Bridge Feasibility Study examines potential bridge alignments and bridge type alternatives, identifies probable environmental and permitting requirements, and develops construction and operations cost estimates for a possible new bridge over the Willamette River.

The study area for this project was selected because it was located approximately mid-way between the north and south end of the area identified for the proposed bridge in the Clackamas County TSP. The study area includes both sides of the Willamette River. On the north end, the study extends from the vicinity of SW Terwilliger Blvd/Tryon Cove Park on the west side and Rivervilla Park on the east side. The south end of the study area is bounded by William Stafford Pathway on the west side and SE Oak Grove Blvd on the east side. Due to the expense and difficulty in securing private property, the bridge landing sites considered were limited to those in public ownership and/or public road right-of-way.

The following sections describe the feasibility study in greater depth and are organized around the following main issues studied in the Feasibility Study:

- Analysis of Alternative Locations for the Bridge
- Plan-level Costs and Funding
- Scoping for NEPA and Permitting
- Intergovernmental Coordination
- Public Involvement

3 Analysis of Alternative Alignments for the Bridge

A critical step in the feasibility study was to determine if there were technically feasible locations for bridge landings on both the east and west sides of the Willamette River. Before the feasibility study was begun, a lack of landing sites was considered the most likely finding that could result in the bridge being determined to be infeasible.

The analysis of alternative locations was conducted in several steps. Criteria were identified to use to evaluate possible bridge landing sites. These criteria focused on data to identify the potential benefits and impacts for each landing site. Benefits and impacts identified and analyzed included, but were not limited to, right-of-way, access, safety, utilities, permitting, and environmental issues. See the materials in Appendix A for further detail. See Figure 2 for a summary of the landing locations and alternative alignments that were analyzed. The following describes the landing site selection process in further detail.

Landing Site Criteria

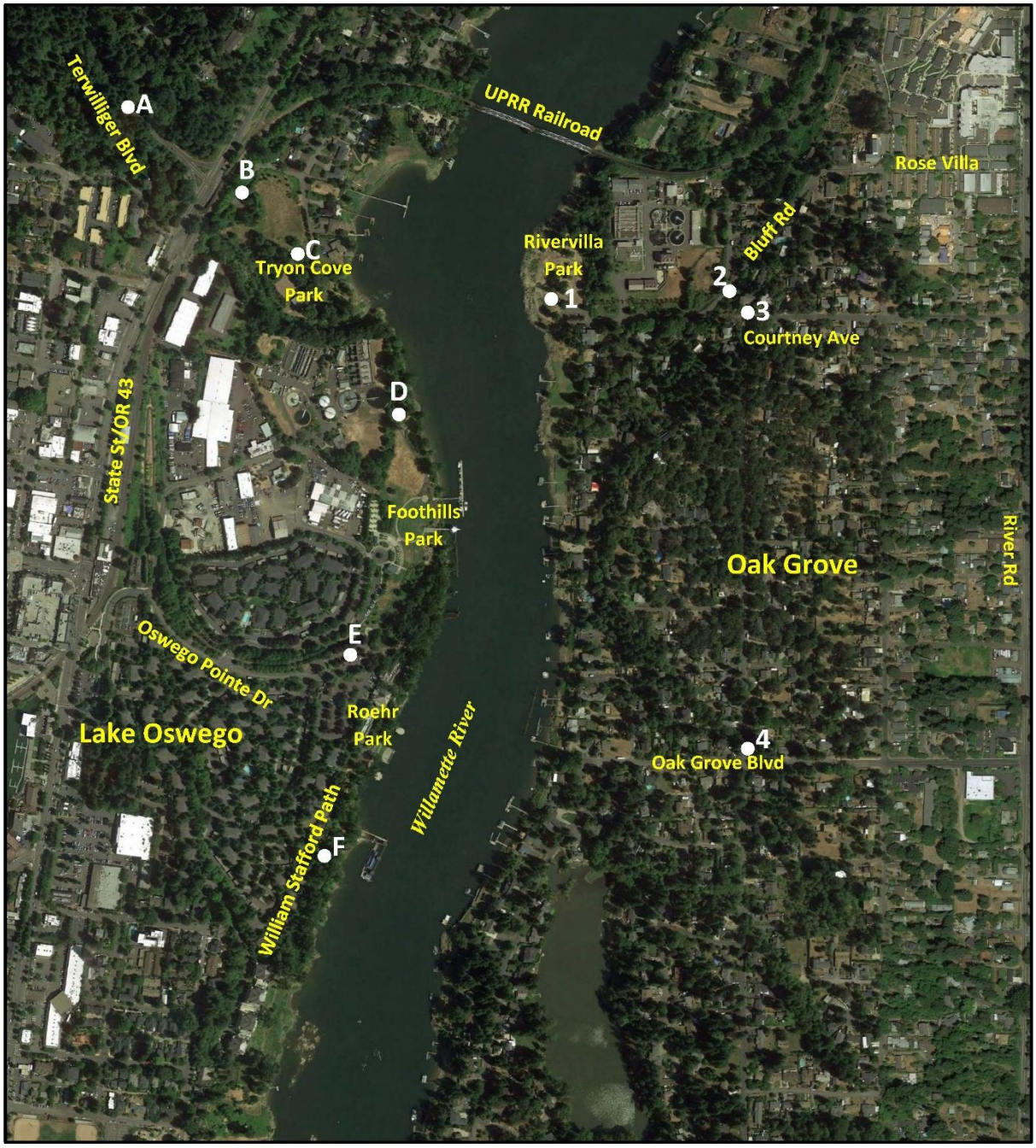
Landing site evaluation criteria and an evaluation matrix were developed to rank potential bridge landing sites. The process to identify the landing site criteria included staff from all the participating governments, the Technical Advisory Committee, the Community Advisory Committee and the Policy Committee. The following criteria were identified as the most important to form the basis of the landing site evaluation and scoring process, and to guide selection of the most optimal pairs of bridge landing sites:

- Connectivity and Safety
- Environmental Impacts
- Compatibility with Recreational Goals
- Compatibility with Existing Developments and Neighborhoods
- Cost and Economic Impact
- Compatibility with Land Use Planning

Property Inventory/Assessment of Bridge Landing Site Locations

Only sites in public ownership and/or public right-of-way were considered for potential landing site locations. Such properties adjacent to the Willamette River were investigated, and those with sufficient size to serve as bridge landing points were identified. Ten such sites were found suitable to serve as bridge landings: four on the east side of the river and six on the west side. These 10 landing sites were assessed according to the landing site evaluation criteria and ranked according to the evaluation matrix developed for the project. The landing sites that were considered are shown in Figure #1 on the following page. Landing sites identified on the west side of the Willamette River are as follows:

Figure 1: Potential Landing Sites



A. Terwilliger Boulevard
B. Tryon Cove Upper
C. Tryon Cove Lower
D. Foothills Park (owned by Lake Oswego)
E. Roehr Park (owned by Lake Oswego)
F. William Stafford Path

Landing sites identified on the east side of the Willamette River are as follows:

1. Rivervilla Park (owned by North Clackamas Parks and Recreation District)
2. Bluff Road

3. Courtney Avenue
4. Oak Grove Boulevard

Based on analysis with the landing site criteria, 5 of the landing sites were eliminated as unsuitable:

- Foothills Rd – eliminated due to the small radius turns that would be required to extend the bridge to the landing site without taking private property.
- Tryon Cove Park Lower – eliminated due to difficulty of clearing navigational envelope and lack of access.
- William Stafford Path – eliminated due to environmental impacts.
- Rivervilla Park – eliminated because a bridge landing in Rivervilla Park would require a lengthy approach ramp which would use almost the entire park to achieve the elevation needed to clear the navigational envelope.
- Oak Grove Boulevard near Fairoaks Ave – eliminated due to difficulty of extending the bridge to the location without taking private property.

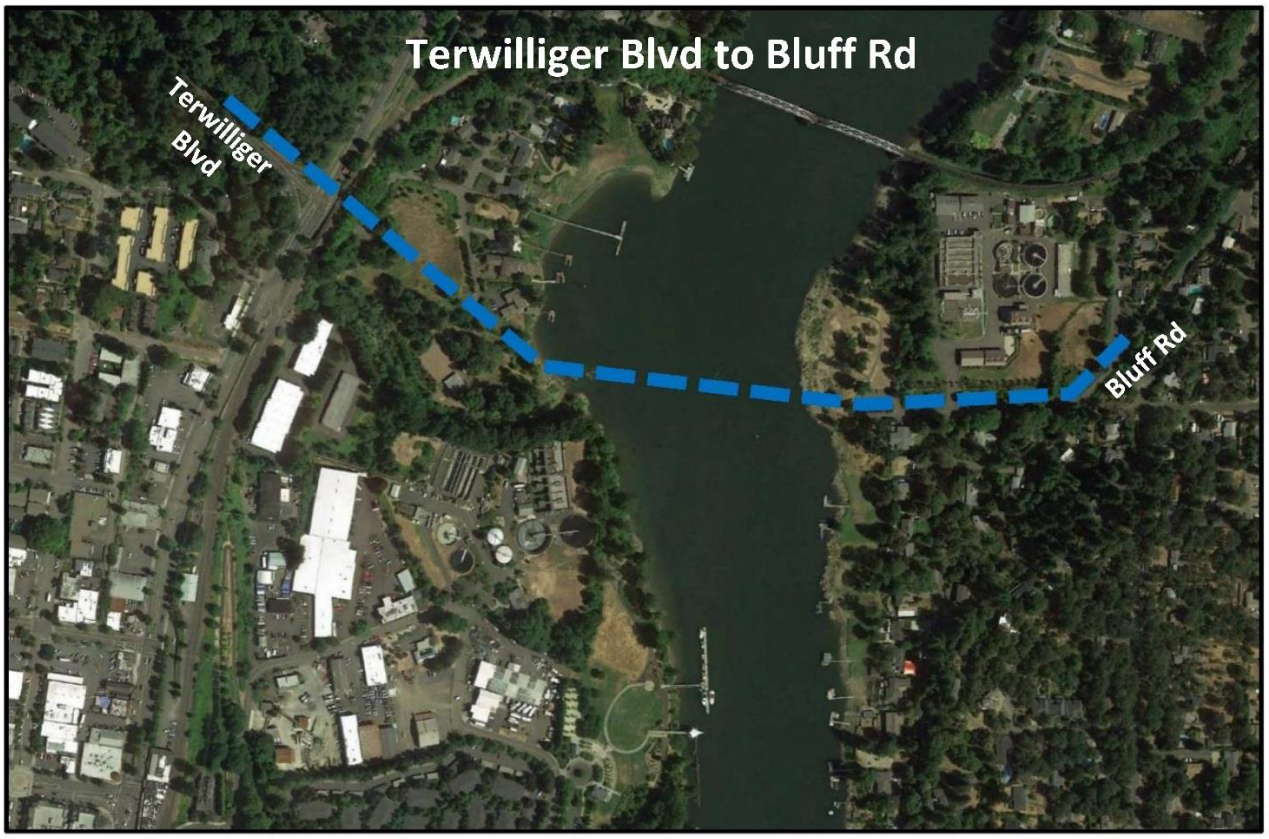
Alternative Bridge Alignments

Ten alternative bridge alignment options connecting the five remaining landing sites were developed, reviewed and discussed by the CAC and the TAC, and were also the subject of public open houses conducted in Lake Oswego and Oak Grove as well as an online open house. The bridge alignment alternatives that were identified are as follows (see maps on the following pages):

- SW Terwilliger to Bluff Road – Eliminated due to difficulty of landing on Bluff Road, which is very narrow.
- Tryon Cove Park Upper to Bluff Road – Eliminated due to impacts to Tryon Cove Park and difficulty of landing on Bluff Road.
- Tryon Cove Park Upper to Courtney Avenue – Eliminated due to impacts to Tryon Cove Park.
- Tryon Cove Park Lower to Bluff Road – Eliminated due to the difficulty of clearing the navigational envelope, impacts to Tryon Cove Park and difficulty of landing on Bluff Road.
- Foothills Park to Rivervilla Park – Eliminated due to major impact to Rivervilla Park.
- Foothills Park to Bluff Road - Eliminated due to difficulty of landing on Bluff Road.
- Roehr Park to Oak Grove Boulevard – Eliminated because the Oak Grove Boulevard landing site would require taking private property
- William Stafford Path to Oak Grove Boulevard – Eliminated because the Oak Grove Boulevard landing site would require taking private property, and also the environmental impacts at William Stafford Path.
- SW Terwilliger to Courtney Avenue – selected for further study.
- Foothills Park to Courtney Avenue – selected for further study

Following the analysis of the alternative bridge alignments, the two best alternatives were SW Terwilliger Boulevard to Courtney Avenue and Foothills Park to Courtney Avenue.

Figure 2: Potential Bridge Alignments



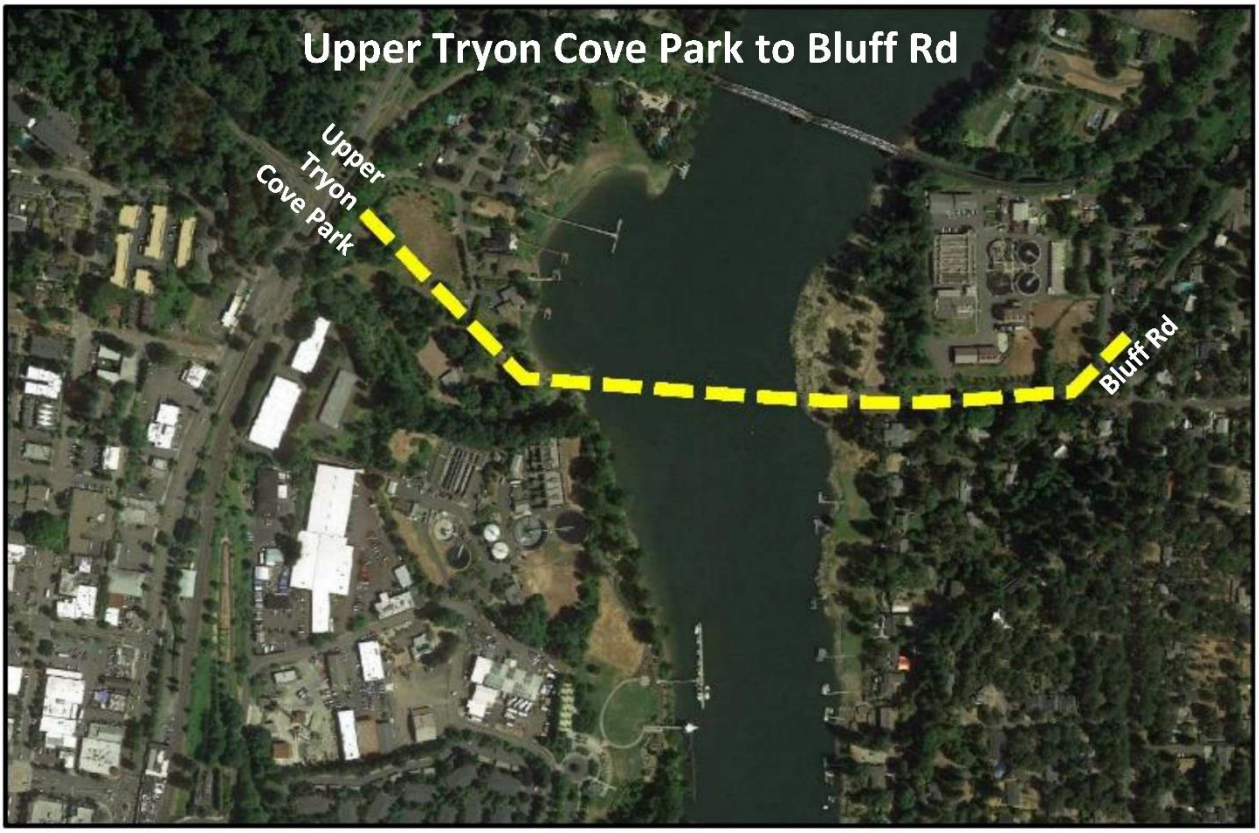


Figure 2 (cont): Potential Bridge Alignments

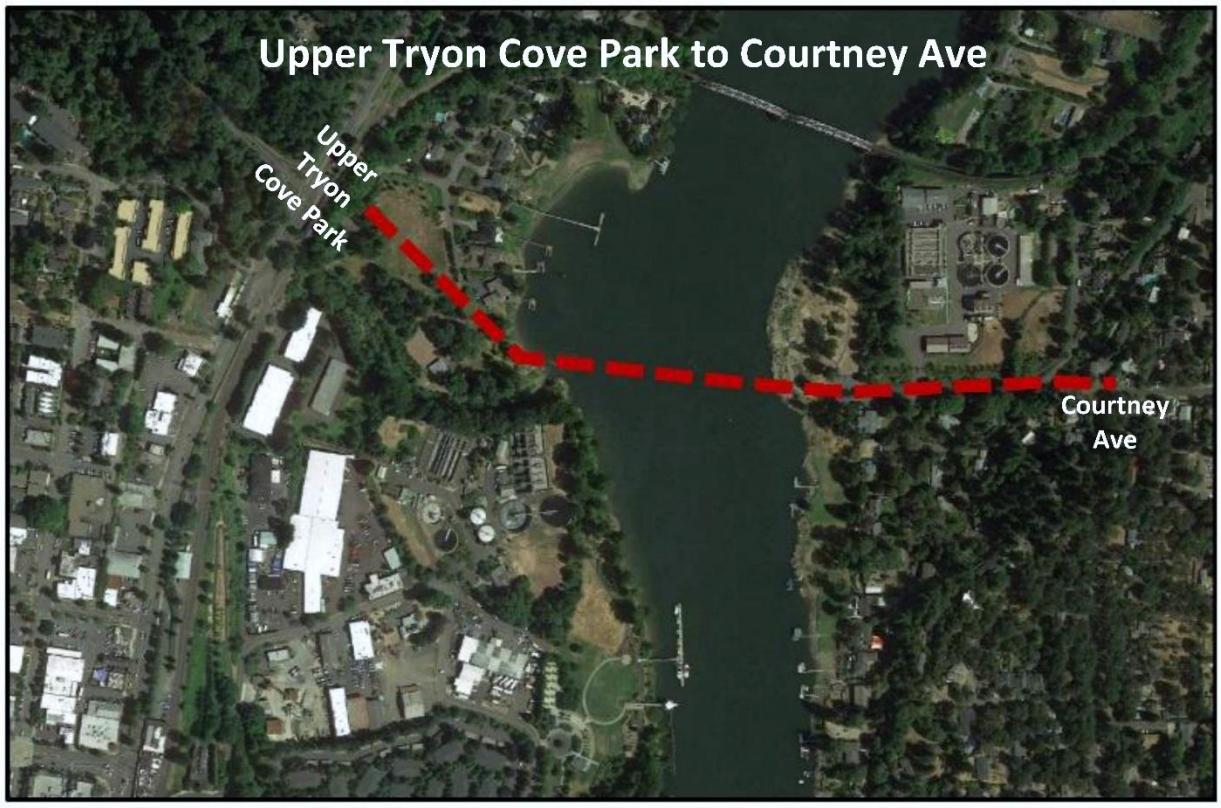


Figure 2 (cont): Potential Bridge Alignments

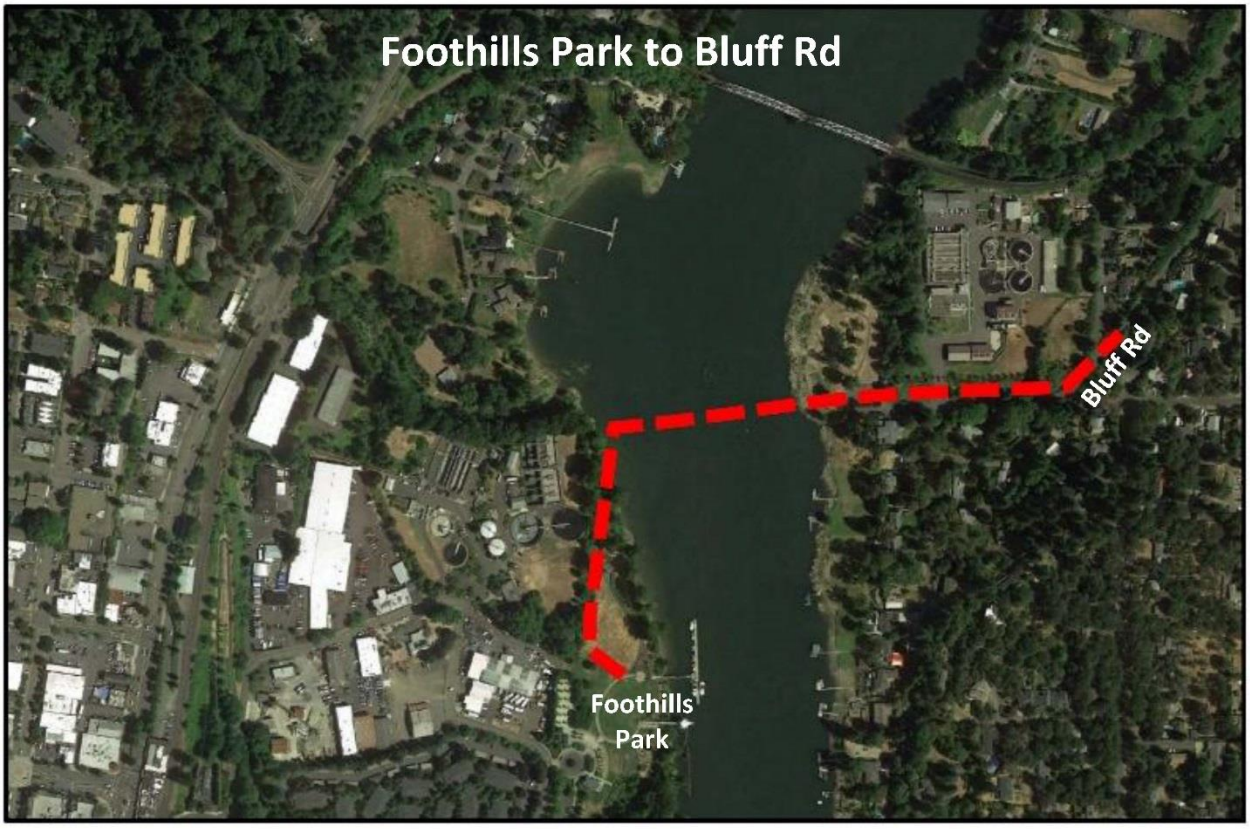


Figure 2 (cont): Potential Bridge Alignments

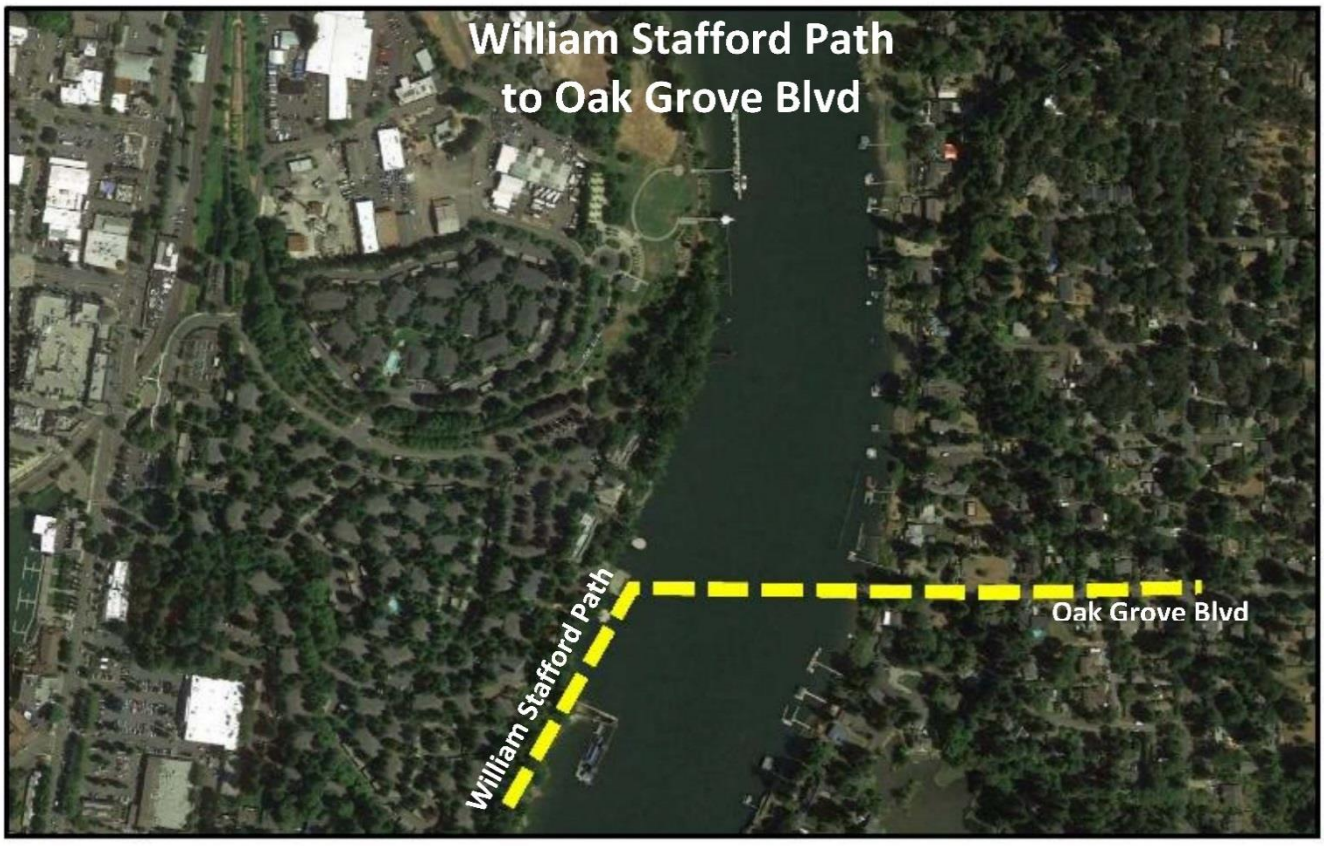
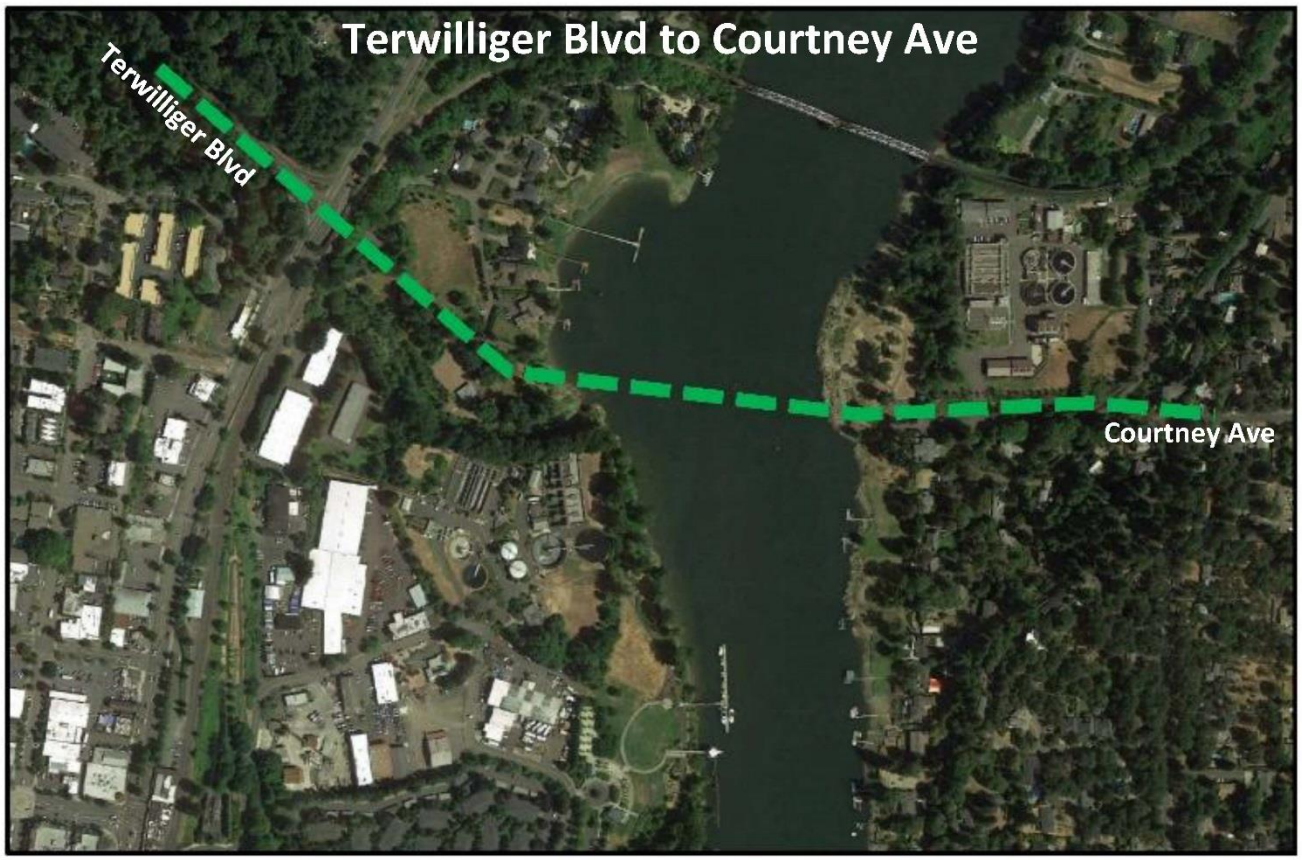


Figure 2 (cont): Potential Bridge Alignments



Following the analysis of the alternative bridge alignments and public input the two final alternatives were identified as SW Terwilliger Boulevard to Courtney Avenue and Foothills Park to Courtney Avenue. These two alignments were further analyzed with the following opportunities and challenges identified for each:

SW Terwilliger Blvd to SE Courtney Ave (Alternative A-3):

1. Minimal impact to Rivervilla Park
2. Minor impact to Tryon Cove Park
3. Lack of parking at either end of the bridge alignment
4. Provides a crossing of OR 43 and a connection to the Terwilliger Trail
5. Connection to Foothills Park when the City of Lake Oswego builds the proposed Tryon Cove Bridge
6. The longest and most expensive bridge alternative studied
7. Could be used for small emergency response vehicles such as ambulances and police cars

Foothills Park to SE Courtney Ave (Alternative D-3):

1. Minimal impact to Rivervilla Park
2. Minor impacts to Foothills Park
3. Potential availability for parking at Foothills Park
4. Direct connection to Foothills Park
5. Surface street connection to Trolley Trail
6. The shortest and lowest cost bridge alternative studied
7. Could be used for small emergency response vehicles such as ambulances and police cars

Engineering Design Criteria

Key engineering design criteria were established for the identification, evaluation, and determination of feasible structural bridge configurations. Criteria included environmental and sustainability considerations, civil design, bridge architecture and aesthetic treatments, landscaping design, structural engineering design, lighting design, ADA accessibility, and bridge service life. The most important engineering design criteria were identified as:

- A vertical profile clearing the navigational envelopes for the Willamette River. Based on bridges up and downstream, it was anticipated that the minimum clearance would be 74 feet over ordinary high water mark (OHWM).
- The bridge would be required to comply with Americans with Disabilities Act (ADA) requirements which would limit the bridge slope to no more than 5%.
- The bridge would include two 6-foot pedestrian/bicycle lanes with a one-foot shoulder on the outside of each lane and a railing. As a result, the bridge would be between 16 feet and 18 feet wide.
- Horizontal alignments that minimized the main span lengths over the Willamette River.
- Radii for any turns on the bridge main span or approaches sufficient for access by a small emergency response vehicle such as an ambulance or police car.
- Approach spans that would avoid conflicts with existing and planned land uses.

The bridge types presented a variety of solutions in material type, span lengths, aesthetics, and construction methods. Additional consideration was given to the estimated costs, construction challenges and duration, expected bridge service life,

Figure 3: Terwilliger Blvd to Courtney Ave

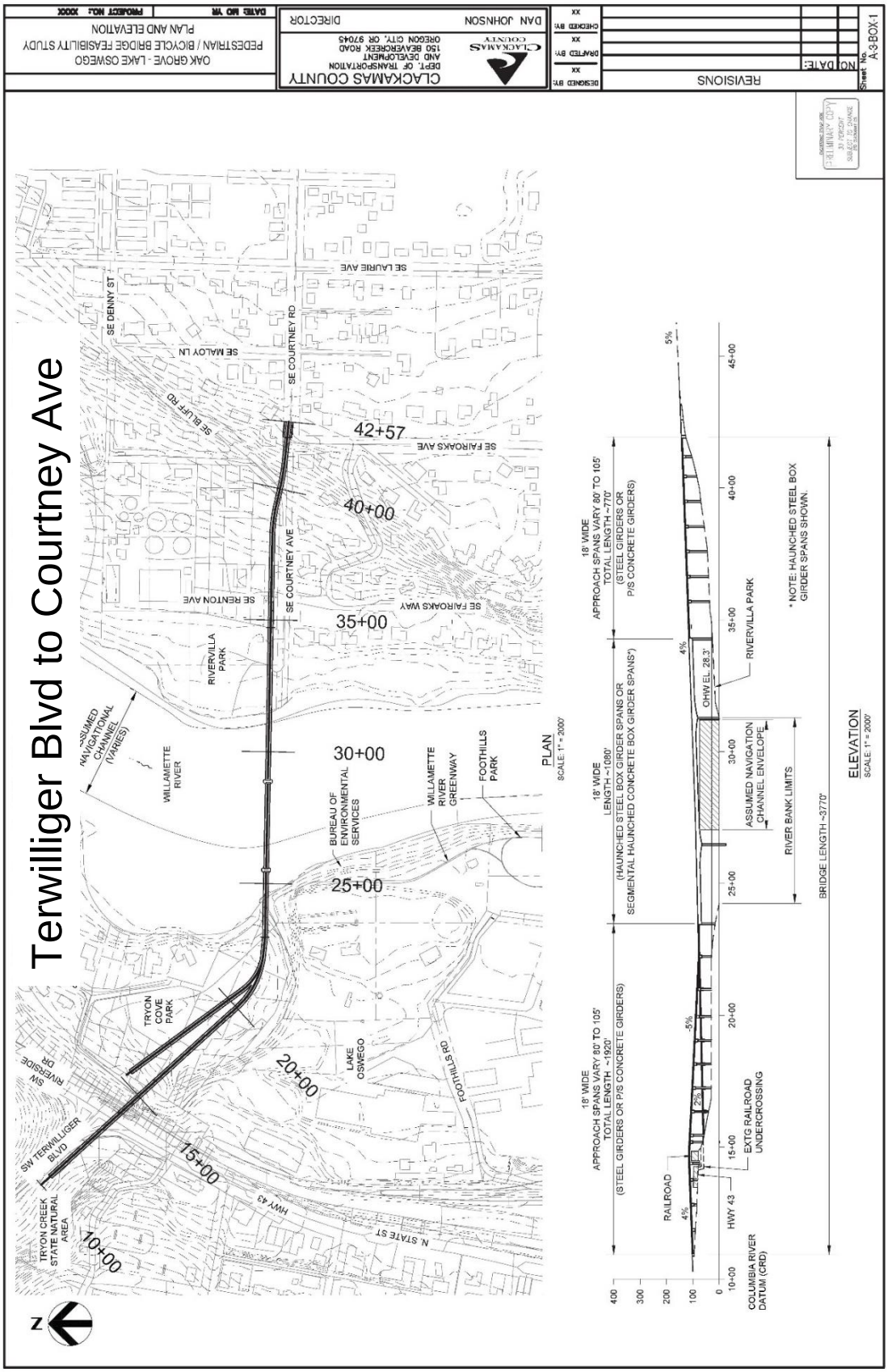
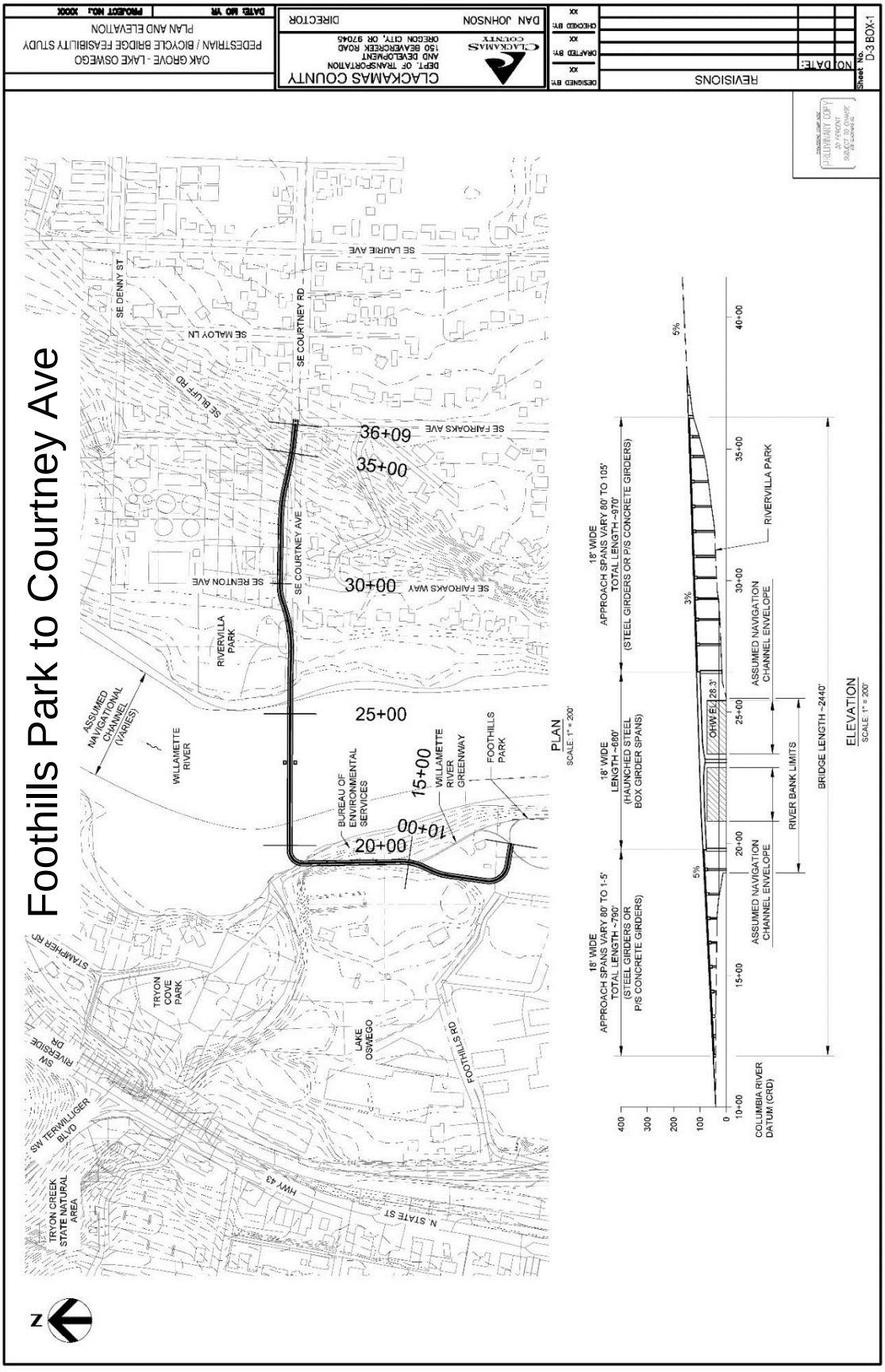


Figure 4: Foothills Park to Courtney Ave



environmental impacts, maintenance requirements, estimated permittability, and potential for USCG acceptance of the bridge alignments.

Approach span bridge type alternatives considered included the following:

- Precast, prestressed concrete girders
- Steel plate girders

Main span bridge type alternatives included the following:

- Segmental haunched concrete box girder
- Haunched steel box girder
- Extradosed (a bridge structure that combines the main elements of a prestressed box girder bridge and a cable stayed bridge, requiring shorter stay towers)
- Cable-stayed

Based on the above engineering considerations the following bridge types were identified as suitable for each of the bridge alignments:

- SW Terwilliger Blvd to SE Courtney Ave (Alternative A-3): Concrete, steel, and extradosed main span options (See conceptual plan on page 15).
- Foothills Park to SE Courtney Ave (Alternative D-3): Steel and cable-stay main span options (See conceptual plan on page 16).

Final selection of bridge type would occur following further engineering study in the design process if the project moves forward.

Inclusion of a Transit Lane

During the study process Metro requested that the inclusion of an exclusive transit lane on the bridge be studied. Analysis by the consultant team showed that inclusion of the transit lane would significantly change the design criteria, cost and impacts of the bridge. Identified changes included the following:

- The addition of a 10-foot wide transit lane with 2-foot wide shoulders on the outside and also between the transit lane and the pedestrian/bicycle lanes.
- The addition of a barrier approximately 2 feet wide between the transit lane and the pedestrian/bicycle lanes.
- Sufficient carrying capacity for a 20,000-pound gross vehicle weight vehicle. A small shuttle bus would meet the weight criteria, but larger transit vehicles would require increasing the carrying capacity of the bridge.
- Gates or barriers at each end of the bridge that would prevent use of the transit lane by bicyclists or pedestrians.
- A control system that would prevent use of the bridge by more than one transit vehicle at a time.
- Improvements to provide access from the bridge to surrounding roads for use by the transit vehicle.
- A design that provided sufficient width and turning radius for access by a small transit vehicle. If a transit lane were included the SW Terwilliger Boulevard to SE Courtney Ave alternative would be infeasible due to the narrow width of SW Terwilliger Boulevard, leaving Foothills Park to SE Courtney Ave as the only feasible alternative.

- Although a small transit shuttle vehicle could use the OGLO bridge, strong concerns were expressed by members of the public of the impacts on surrounding land uses of transit on SE Courtney Ave between the bridge and SE River Road.
- Addition of a transit lane and related systems would increase the cost of the Foothills Park to SE Courtney Ave alternative by 44% to 48% or $14 million and $18 million.

After consideration of the impacts that would result from the addition of a transit lane, both the Clackamas County Board of Commissioners and the study Policy Committee determined that the OGLO Bridge would not be feasible if a transit lane were included.

4 Plan-Level Cost Estimates and Funding

Both one-time and ongoing costs are an important consideration for the governments studying a possible OGLO Bridge. Cost estimates at a plan level of detail were developed for bridge engineering and construction, as well as for operation and maintenance (O&M). Potential sources of OGLO construction funding and potential OGLO Bridge operators were also identified. The following is a summary of the findings on cost and sources of funding. The full report on these issues is in Appendix C.

Cost Estimates

Construction cost estimates were developed for the following:

- Three bridge main span options for Terwilliger to Courtney (steel, concrete and extradosed).
- Two bridge main span options for the Foothills to Courtney location (steel and cable stay), plus variations that incorporate a one-way shuttle bus lane.

See the table on the following page for details of the cost estimates.

To account for unknown costs at this very early feasibility level of design, a 40% construction contingency was added to the final construction cost. Other discipline-specific (engineering, right-of-way, permitting, etc.) percentages were uniformly applied to the total construction cost estimates. The following estimated costs were determined for each bridge alternative and type:

SW Terwilliger Blvd to SE Courtney Ave (Alternative A-3)

- Steel main span $44,500,000
- Concrete main span $45,300,000
- Extradosed main span $52,000,000

Foothills Park to SE Courtney Ave (Alternative D-3)

- Steel main span $30,300,000
- Cable-stay main span $36,400,000

Foothills Park to SE Courtney Ave with transit lane

- Steel main span $43,600,000
- Cable-stay main span $54,200,000

The construction cost estimates do not take into account any soil mitigation or substructure strengthening to reduce the effects of liquefaction or lateral spreading due to a seismic event. The preliminary geotechnical report indicated that there are zones

Oak Grove-Lake Oswego - Pedestrian/Bicycle Bridge Construction Contingency 40%	Terwilliger to Courtney: Steel Main Span A-3	Terwilliger to Courtney: Concrete Main Span A-3	Terwilliger to Courtney: Extradosed Main Span A-3	Foothills to Courtney: Steel Main Span D-3	Foothills to Courtney: Cable Stay Main Span D-3
Main Span Sub-Total/Unit Cost	$ 778 / SF $ 16,800,000	$ 801 / SF $ 17,300,000	$ 962 / SF $ 22,600,000	$ 838 / SF $ 11,400,000	$ 1169 / SF $ 15,900,000
Approach Span Steel Girders Sub-Total/Unit Cost	$ 423 / SF $ 20,500,000	$ 423 / SF $ 20,500,000	$ 429 / SF $ 20,100,000	$ 436 / SF $ 13,800,000	$ 432 / SF $ 13,700,000
Approach Span Concrete Girders Sub-Total/Unit Cost	$ 339 / SF $ 16,400,000	$ 339 / SF $ 16,400,000	$ 346 / SF $ 16,200,000	$ 350 / SF $ 11,100,000	$ 350 / SF $ 11,100,000
Total Bridge Only Cost using Steel Approaches	$ 533 / SF $ 37,300,000	$ 540 / SF $ 37,800,000	$ 607 / SF $ 42,700,000	$ 557 / SF $ 25,200,000	$ 654 / SF $ 29,600,000
Total Bridge Only Cost using Concrete Approaches	$ 474 / SF $ 33,200,000	$ 481 / SF $ 33,700,000	$ 552 / SF $ 38,800,000	$ 497 / SF $ 22,500,000	$ 596 / SF $ 27,000,000
Engineering 10.5%	$ 3,500,000	$ 3,600,000	$ 4,100,000	$ 2,400,000	$ 2,900,000
Civil and Geotechnical 3.5%	$ 1,200,000	$ 1,200,000	$ 1,400,000	$ 800,000	$ 1,000,000
Architectural and Landscape Architecture 3.0%	$ 1,000,000	$ 1,100,000	$ 1,200,000	$ 700,000	$ 900,000
Environmental Permitting 1.5%	$ 500,000	$ 600,000	$ 600,000	$ 400,000	$ 500,000
Right of Way 10.0%	$ 3,400,000	$ 3,400,000	$ 3,900,000	$ 2,300,000	$ 2,700,000
Construction Engineering 5.0%	$ 1,700,000	$ 1,700,000	$ 2,000,000	$ 1,200,000	$ 1,400,000
Subtotal of ROW, Design, & Construction Engineering costs	$ 11,300,000	$ 11,600,000	$ 13,200,000	$ 7,800,000	$ 9,400,000
Total Bridge Cost using Concrete Approaches	$ 44,500,000	$ 45,300,000	$ 52,000,000	$ 30,300,000	$ 36,400,000

Oak Grove-Lake Oswego - Pedestrian/Bicycle Bridge Construction Contingency 40% Transit Alternative	Foothills to Courtney: Steel Main Span D-3 Transit	Foothills to Courtney: Cable Stay Main Span D-3 Transit
Main Span Sub-Total/Unit Cost	$ 774 / SF $ 17,900,000	$ 1021 / SF $ 25,700,000
Approach Span Steel Girders Sub-Total/Unit Cost	$ 366 / SF $ 21,900,000	$ 366 / SF $ 21,900,000
Approach Span Concrete Girders Sub-Total/Unit Cost	$ 242 / SF $ 14,500,000	$ 242 / SF $ 14,500,000
Total Bridge Only Cost using Steel Approaches	$ 480 / SF $ 39,800,000	$ 560 / SF $ 47,600,000
Total Bridge Only Cost using Concrete Approaches	$ 391 / SF $ 32,400,000	$ 473 / SF $ 40,200,000
Engineering 10.5%	$ 3,500,000	$ 4,300,000
Civil and Geotechnical 3.5%	$ 1,200,000	$ 1,500,000
Architectural and Landscape Architecture 3.0%	$ 1,000,000	$ 1,300,000
Environmental Permitting 1.5%	$ 500,000	$ 700,000
Right of Way 10.0%	$ 3,300,000	$ 4,100,000
Construction Engineering 5.0%	$ 1,700,000	$ 2,100,000
Subtotal of ROW, Design, & Construction Engineering costs	$ 11,200,000	$ 14,000,000
Total Bridge Cost using Concrete Approaches	$ 43,600,000	$ 54,200,000

within the project area that may be susceptible to ground movement during a seismic event. The full extent of the resulting hazard cannot be determined without site-specific subsurface investigation. Additionally, the cost of mitigation cannot be determined without finalized structure design criteria. Both would be investigated and determined during the next phase of design.

Operation and Maintenance (O&M) Costs

The same six bridge locations/type alternatives for which construction cost estimates were calculated were also assessed for estimated O&M costs. The total O&M costs over a 75-year life for each of the bridge types studied are shown in the table below.

Table #1. Estimated 75-Year Cost for Operation and Maintenance Costs for the Range of Bridge Alternatives (Total Year-of-Expenditure Costs with Escalation for 75-Year Design Life)

Alignment	Main Span Type	Estimated 75-year Cost		Average Annual O&M Cost per year
		Concrete	Steel	
Terwilliger Blvd to Courtney Ave (A-3)	Haunched Concrete Box	$9,950,000	$18,900,000	$133,000 to $252,000
Foothills Park to Courtney Ave (D-3)	Extradosed	$11,900,000	$19,810,000	$159,000 to $264,000
	Haunched Steel Box	$17,140,000	$23,830,000	$229,000 to $318,000
	Cable-Stayed	$10,710,000	$16,600,000	$143,000 to $221,000
	Haunched Steel Box (Transit)	$20,190,000	$26,020,000	$269,000 to $347,000
	Cable-Stayed (Transit)	$13,110,000	$18,990,000	$175,000 to $253,000

Potential Funding Sources

A wide range of potential OGLO construction funding options were researched and are reported in Appendix C. The most applicable and feasible sources for bridge construction would include the programs listed below. These programs might not, however, be sufficient to fund the entire bridge project. See Appendix C for more information.

A. 2020 Regional Transportation Bond Measure – A Metro regional transportation funding measure is under consideration for referral to the November 2020 ballot. At present the OGLO Bridge has not been identified as a Tier 1 priority project. If the proposed funding measure goes forward, includes the OGLO Bridge and is approved by the voters, this funding source would likely be the best source for potential OGLO construction because these funds would be locally controlled and available within a short timeframe.

B. Regional Flexible Funds (RFFA) – RFFA is administered by Metro using pass-through funds from federal transportation agencies. The federal funds that make up RFFA have several limitations including design requirements and provision of matching funds. Although an OGLO Bridge would be eligible for such funds, the limited amount of funds available (less than $45 million for FY2022-24) and competitive nature of the program would likely prevent this source from being used for more than a small percentage of the total funding that would be needed to design and construct an OGLO bridge.

C. Federal Funds Administered by Oregon DOT – Oregon Department of Transportation administers several federal pass-through programs that could supply some funding for the OGLO Bridge. These funds include: Surface Transportation Block Grant Program (STBG); Transportation Alternatives Program (TAP), which is now incorporated into STBG; and the Congestion Mitigation and Air Quality (CMAQ). All federal funds have the same limitations for use on this project that are described above for the Regional Flexible Funds.

D. Direct Federal Funding – It is also possible to secure federal funds directly through national grant programs administered by USDOT. The largest such program is Better Utilizing Investments to Leverage Development (BUILD). Although the OGLO Bridge is eligible for BUILD funds, those funds are awarded through a very competitive national process.

Potential Bridge Owner/Operators

Owning and operating the OGLO Bridge would be a large and complex task due to annual O&M requirements, reducing the number of agencies with the necessary expertise and funding. Several owner/operators could be considered:

A. Oregon Department of Transportation (ODOT) – Although ODOT is the owner/operator for numerous highway bridges across the Willamette River, it is highly unlikely that ODOT would be the owner/operator for an OGLO Bridge. The Willamette River bridges operated by ODOT are all part of the state highway system and provide connectivity across the Willamette River for vehicular traffic on that system. While the OGLO Bridge would be a major bridge across the Willamette River, it would not serve vehicle traffic or provide a parallel bike and pedestrian connection for an existing state highway. As a result, the bridge would fall outside ODOT's typical jurisdiction.

B. Clackamas County – Clackamas County has expertise in bridge maintenance. However, the annual O&M cost is significant enough to reduce the funding available for other county responsibilities to unacceptably low levels.

C. Intergovernmental Partnership – The most likely owner/operator of an OGLO bridge would likely be a coalition of local governments and agencies with a shared interest in supporting bicycle and pedestrian transportation, and reducing dependence on motor vehicles for local trips. Such coalitions are the owner/operators of many major bicycle and pedestrian bridges in other parts of Oregon and across the country. Such coalitions allow the administrative responsibilities and costs for owning and operating a major bridge to be shared with each member making a contribution. Organizations that could participate in such a coalition might include Clackamas County, neighboring cities, the North Clackamas Parks & Recreation District (NCPRD), and Metro.

5 Scoping for NEPA and Permitting

The OGLO Bridge would be subject to the requirements of the National Environmental Policy Act (NEPA). NEPA ensures that a federal action considers impacts on the human and natural environment. The NEPA process would be required on this project because the Willamette River is a navigable waterway regulated by the USCG, which would trigger the requirement for a federal permit. Use of federal funds for construction would also trigger the requirement for a NEPA environmental assessment.

To determine environmental issues and permitting requirements that would need to be addressed for the proposed OGLO Bridge, information was gathered from permitting agencies that would potentially be involved during engineering and construction phases. It was determined that the best way to ensure an efficient permitting process would be to present the proposed project and relevant permitting information to representatives from state and federal resource agencies including United States Fish & Wildlife Service (USFWS), United States Army Corps of Engineers (USACE), Oregon Department of State Lands (DSL), Oregon Department of Environmental Quality (ODEQ), Oregon State Historic Preservation Office (SHPO) and Oregon Department of Fish & Wildlife (ODFW).

Key permitting issues that could impact bridge design/engineering and project timelines, are:

A. United States Coast Guard (USCG) – The proposed project would be subject to USCG permit approval under the provisions of Section 9 of the Rivers and Harbors Act of 1899 and the General Bridge Act of 1946. Pursuant to these Acts, the USCG would be the federal lead agency for the proposed project. Per the USCG, a minimum navigation clearance of 74 feet above the ordinary high-water mark (OHWM) would be required for OGLO bridge.

B. Oregon Department of Fish and Wildlife (ODFW) – Depending on the timing of construction, a cumulative impact analysis of sediment loading based on the level of ongoing Portland Harbor clean-up work at that time could be required.

C. Oregon State Historic Preservation Office (SHPO) – There is potential that archaeological and historic resources could be found along the shores of the Willamette River in and around possible bridge landings. SHPO did not respond to requests to provide information. In the environmental assessment process a Section 106 consultation with SHPO would be required based on federal permitting requirements.

D. Local Government Permitting – The bridge would be subject to the provisions of local permitting and adopted zoning requirements. This would include Clackamas County and Lake Oswego if the bridge extended into the city.

Further information on NEPA assessment and permitting requirements can be found in Appendix B. A Summary of Anticipated Agency Permit and Approval Requirements, and a log of meetings with potential permitting agencies is also in Appendix B.

6 Intergovernmental Coordination

The OGLO Bridge project is an intergovernmental project with participation by several governments and organizations including Clackamas County, the cities of Lake Oswego and Milwaukie, Metro, and the North Clackamas Parks & Recreation District. All of these partners were engaged in the feasibility study. As part of the engagement process, all partners had roles in all project committees and all aspects of the study.

Several intergovernmental advisory committees were formed to advise on project analysis and recommendations. The list of committee members and affiliations are included in the acknowledgements of this report.

Policy Committee (PC)

The Policy Committee, the decision-making body for this feasibility study, was formed to make recommendations to the partner governments at key decision points. The PC included one elected official each from Clackamas County, the cities of Lake Oswego and Milwaukie, and Metro. The PC met four times over the course of the project. Meeting records are in Appendix D.

Community Advisory Committee (CAC)

The 28-member Community Advisory Committee was made up of study area residents and business owners, as well as representatives of community groups with an interest in the project. The CAC made recommendations to the PC and the TAC on key decisions in the feasibility study. Clackamas County appointed 10 members to the CAC, Lake Oswego appointed 10 members, Milwaukie appointed 4 members and Metro appointed 4 members. The CAC met three times. CAC activities and outcomes are summarized in Appendix D: Public Involvement.

Technical Advisory Committee (TAC)

The TAC included staff representatives from Clackamas County, North Clackamas Parks & Recreation District, the cities of Lake Oswego and Milwaukie, and Metro. The TAC met nine times over the course of the project. The TAC made recommendations to the PC and CAC on key decisions during the feasibility study.

7 Public Involvement

An active public involvement process took place as part of this project that provided a number of ways for the public to engage with the project during the study process. Two of the committees formed for the project became primary points for public involvement in the project.

A. The Policy Committee (PC), made up of elected officials from each of the partner jurisdictions, accepted public comments at each of its meetings.

B. The Community Advisory Committee (CAC) was made of up of a variety of community members with an equal number from each side of the river. In addition to providing a public forum for discussion at key decision points for the project, the CAC was informed by public input opportunities included in its meeting agenda.

Other public involvement activities and opportunities included:

A. A website with an introductory community questionnaire (through online survey software) that received responses from 580 users.

B. Two in-person open houses (one held in Lake Oswego and one held in Oak Grove) that were coordinated with online open houses conducted through the project website. The sign-in sheets for the in-person open houses showed that 215 people attended. In addition, there were 640 responses to the online open houses.

C. A statistically significant, scientific telephone survey conducted by a survey research firm.

D. Postcard mailings to all addresses in the project area; community presentations; website updates; social media; press releases, and emails to interested parties to provide broader public information and invitations to meetings.

Clackamas County used the following forms of notification to share project information and invite people to the public meetings:

A. Website – A webpage was set up on the Clackamas County website in spring 2019 and regular project updates were posted before and after CAC and PC meetings and in advance of open houses and online input opportunities. Agendas, committee meeting summaries, meeting presentations, survey results, factsheets, maps including bridge alignments, contact information, etc. were posted.

B. Social media – Information was posted on Facebook, Twitter, and Nextdoor social platforms in and outside of the project area beginning in June 2019.

C. Newsletter articles – Articles were published in newsletters for the partner jurisdictions, including the June and August 2019 *Hello LO*, August 2019 *Milwaukie Pilot* and August 2019 *ClackCo Quarterly*.

D. Postcards – Postcards informing recipients about the project and upcoming open houses were mailed to 4,346 Lake Oswego and Oak Grove residents in July 2019.

E. Emails – The county sent project updates, notices of upcoming meetings and information about website changes to people on an email list established at the beginning of the project. That list grew throughout the study as more people expressed an interest in the project. Emails were also distributed through existing email networks.

F. Media – Various news media reported on the study between June 2019 and January 2020 and helped generate interest in the project in advance of meetings. Reports were made by The Oregonian, LO Review, BikePortland.org, KGW and OPB.

The following sections describe in detail the input received during the study through the online survey conducted in May/June 2019, the public open house meetings, public comments received at committee meetings, and through the scientific survey.

Online Questionnaire

An online questionnaire was conducted from May 16 to June 17, 2019 to provide an opportunity for people to share their opinions of the OGLO Bridge. A total of 546 people provided input using the online questionnaire. Of those, 280 stated that they lived in Lake Oswego or on the west side of the river, while 170 stated they lived in Oak Grove or on the east side of the study area and 83 stated they lived elsewhere in the Portland region.
Of those that lived or worked in Lake Oswego

- 103 were neutral (neither support nor oppose) on whether there should be a bridge
- 83 were supportive of a bridge
- 77 were opposed to a bridge

Of those that lived or worked in Oak Grove:

- 49 were neutral
- 72 were supportive
- 10 were opposed

Of those that lived elsewhere in the region:

- 24 were neutral
- 19 were supportive
- 11 were opposed

Those responding were also asked how often they thought they would use the bridge:

- Daily – 19
- A few times a week – 81
- A few times a month – 151
- Once a year or less – 61
- Every few years – 78
- Never – 154

Those responding were also asked how they would use the new bridge:

- Recreation or exercise – 287
- Ride a bike – 280
- Enjoy views of river – 275
- Walk/jog/run – 269
- Connect with the Willamette River – 178
- Reach destination in Lake Oswego – 170
- Reach regional destinations – 117
- Reach destination in Oak Grove – 88
- Commute to work – 52
- Use a mobility device - 11

Of those that provided input 134 expressed general support for the proposed bridge and 98 expressed general opposition. The concerns that were mentioned most often were:

- Funding/cost (97)
- Safety (62)

- Concerns related to the homeless (53)
- Increase in crime (32)
- Neighborhood impacts (28)
- Traffic (20)
- Parking (15 responses)
- Environmental Impacts (14)
- Money should be spent for road improvements (8)
- Concern about the location of the bridge (7)
- Concern about appearance of the bridge (5)

Benefits that were most often mentioned were:

- Connection across the river reducing the length of commutes (71)
- Active transportation opportunities (60)
- Trail Connections across the river (15)
- Reduction in single occupant vehicle use (14)
- Economic benefits (11)
- Recreation opportunities (8)
- Health benefits (5)

Analysis of the responses on their support or opposition to the bridge the data shows that in Lake Oswego 32% of those with an opinion supported the bridge, 29% opposed it and 39% have no opinion. In Oak Grove 55% of those with an opinion support the bridge, 37% oppose the bridge and 8% have no opinion.

Analysis of the responses from the online questionnaire suggests several important pieces of information related to the use of the bridge:

- Analysis of the data on how often people expected to use the bridge shows that on average there will be 1,459 trips per week per 1,000 population. Analysis of the census tract data from the American Community Survey (Census) shows that there are 7,660 people living within ½ mile of the bridge in Oak Grove and Lake Oswego. As a result, an average of 1,598 trip per day can be expected on the bridge.
- Metro estimated daily trips on the bridge using the agencies travel demand model. Their estimate was 1,400 trips per day.
- Using the average of those two estimates it can be expected that there will be 1,499 trips per day on the bridge.
- Based on responses on the purpose for people's use of the bridge 48.7% said they would use the bridge for exercise, 26.4% said they would use the bridge to view the river, and 24.9% said that they would use the bridge to reach a destination on the opposite side of the river.
- Using those rates for each trip purpose and the estimate of 1,499 trips per day, results in an estimate of 730 uses of the bridge for exercise, 396 to view the river and 373 to reach a destination.

Public Open Houses

In August 2019, two public open houses were held, one in Lake Oswego and one in Oak Grove. A combined total of 215 people attended the open houses, 47 in Lake Oswego and 165 in Oak Grove. Overall, there was support and opposition expressed at both public open house meetings. Those who supported the project supported the connection

across the river, improved active transportation facilities, increased path/trail connections, and thought that the project would reduce single occupant vehicle use. Those who opposed the project were concerned about funding and cost, crime and the homeless, neighborhood impacts, traffic, parking and environmental impacts.

At both open houses those in attendance had the opportunity to identify the bridge location/alignment they thought would be best. Those that were most selected were:

- Alignment A-3: SW Terwilliger Blvd to SE Courtney (upper)
- Alignment B-3: Tryon Cover Park (upper) to SE Courtney (upper)
- Alignment D-3: Foothills Park to SE Courtney (upper)

In the same time period, an online open house was conducted that provided the same materials and opportunities to provide comments and identify the best alignment. There were 640 responses to the online open house, with 27% from Lake Oswego, 37% from Oak Grove and 34% from elsewhere in the region. Those who participated in the online open house identified the same three alignments as the best.

Further information on the public open houses and the online open house can be found in Appendix D.

Public Input at Committee Meetings

Two committees were formed for the project that conducted public meetings and accepted public input at the committee meetings. The Policy Committee was composed of one elected official each from Clackamas County Board of Commissioners, the Lake Oswego City Council, the Milwaukie and Metro. The Policy Committee met four times during the course of the study and was responsible to represent their government and also make decisions regarding the direction of the project. Comments received at the Policy Committee meetings included the following:

- There has been a need for an additional bridge and Metro should use the information from this study to help identify issues for a traffic bridge.
- This bridge should be designed to allow use by vehicles.
- This project will hurt Rivervilla Park.
- This is a foolish project that would benefit few people but not alleviate traffic congestion.
- This project should post more information and public comment on line.
- I am concerned about the northern Lake Oswego landing sites but could live with the southern one.
- At a time when society needs to reduce its carbon footprint, this bridge is a necessity.
- Spend money to expand light rail instead.
- I am from Lake Oswego and I support the bridge.
- I am an 80 year old bicyclist and I am in favor of the bridge.
- I want to know more about property taxes, wildlife, neighborhood impacts and air quality.
- Connectivity is important to encourage bike use.
- It is short-sighted not to study the possibility of including transit.
- Homelessness and litter would be a problem in my neighborhood from this bridge.
- This should not be a bridge that only benefits a minority of people.

- This is a good public process, and there should be more.
- This is an overreach by Metro.
- I represent the Portland Audubon Society. We would like you to move forward.
- I am from Oak Grove and am surprised at all the opposition. People in my neighborhood like the idea of using the bridge to walk to Lake Oswego.
- I represent the Lake Oswego Sustainability Committee. This project is sustainable for the area and I support it.
- Improvements on Courtney from the river to Fairoaks as part of the project.
- Establish a dedicated force to patrol the bike paths so the police don't have to.
- Parking will be a problem at Foothills Park.
- This bridge is a crucial link in the regional trails system
- This bridge must be built for people who want a more walkable Portland region.
- This bridge will create a crucial connection across the river and would be very important in the case of earthquake.
- This would reduce my bike commute from 53 minutes to 24 minutes and the distance from 10 miles to 2.4 miles.
- Bike sales in the area are up 65% and electric bikes are growing 73% year after year. Biking is becoming more viable and bikes are better than cars and better for the environment. Let's look to the future.

A Community Advisory Committee was also formed to provide a forum for discussion by community members regarding the project. The committee was made up of 10 members from the Oak Grove area, 10 members from the Lake Oswego area, 4 members from Milwaukie and 4 members appointed by Metro. Comments received at the Community Advisory Committee included:

- This bridge would impact fish in Tryon Creek and the environment.
- Can we get word to Metro that transit on the bridge is a bad idea? It complicates the whole project and TriMet is not interested.
- Stampher Road is a dangerous place because it is narrow and steep with two hairpin turns.
- You should use the railroad bridge.
- The intersection of Courtney and Fairoaks is a narrow and dangerous intersection.
- This bridge will deteriorate Lake Oswego and open it up to crime.

Email Comments

Throughout the course of the study members of the public submitted emails to the Board of County Commissioners, members of the Policy Committee and project staff. Once duplicates were eliminated 282 unique emails were received. Overall, the comments received in the emails were very similar to those received from the public at the open houses, the online open house, and at meetings of the Community Advisory Committee and the Policy Committee.

Staff analyzed the emails to identify the number of people submitting emails that were against the OGLO Bridge project, neutral (expressing neither opposition or support), or in favor of the OGLO Bridge project. Of the emails received:

- 93 (32.9%) were opposed to the project,
- 33 (11.7%) were neutral and seeking further information,

- 156 (55.3%) were in favor.

Staff also analyzed the number of individuals who submitted email comments.

- 93 emails submitted that were opposed to the project came from 30 people for a rate of 3.1 emails per person.
- 33 emails submitted that were neutral on the project came from 17 individuals for a rate of 1.9 emails per person.
- 156 emails submitted in support of the project came from 145 individuals for a rate of 1.1 emails per person.

Scientific Survey

The public outreach process for this study resulted in a great deal of input from interested local and regional community members and organizations, a lot of which was either strongly “for” or “against” the proposed bridge. This input helped the study team understand points of support or concern for the project, but provided little insight into the actual share of those in the study area that were in support of or opposed to the proposed bridge.

Given the strength of the views expressed by interested parties, the Technical Advisory Committee felt that it was necessary to conduct a scientific survey, based on a randomly selected sample to determine actual levels of support or opposition to the project within the communities on both the east and west sides of the Willamette River.

To gauge support or opposition to the project, Riley Research Associates (RRA) was retained to conduct a scientific random sample telephone survey in September 2019 of 400 voters (200 on the west side of the Willamette River in Lake Oswego and 200 on the east side of the river in Oak Grove and Milwaukie). A voter sample was used to ensure that participants were from the specific geographic areas of interest. The sample of 400 produces information accurate to within a margin of error of +/-5%, or a 95% level of confidence. The sample was monitored to ensure that it was proportionally representative of the geographic areas of Oak Grove, Lake Oswego, and Milwaukie, Oregon.

The questionnaire included eight questions about the issues, as well as demographics. The full report on the survey findings can be found in Appendix D. The following are the key findings from the survey:

- Overall, residents on both sides of the river supported having Clackamas County continue to explore the viability of the pedestrian-bike bridge, with 63% in favor of the idea, 9% unsure and 28% opposing the idea. The highest support was on the east side of the river, with 71% support compared to 55% support on the west side.

- The proposal to add a lane for transit shuttle vehicles to the project dropped the overall support from 63% to 52%. Those unsure increased from 9% to 16% and those opposed increased from 28% to 32%. Support among west-siders decreased from 55% to 46%.

- Survey respondents were given an open-ended opportunity to express their thoughts about concerns or benefits related to the bridge. Those who supported the bridge exceeded those who opposed it by 35%, but those who opposed the bridge expressed more comments and concerns. Overall comments were 55%

negative, 33% positive, and 26% neutral, with the largest single issues being the cost (19%) and tax implications (13%), followed by traffic/parking/noise (17%), and security/safety issues (12%). Security was cited by 18% of those on the west side, but only 7% of east-siders. Among the positive responses, those most frequently mentioned were connectivity (15%) and transit connections (6%), encouraging low-impact transportation (8%), and encouraging exercise (6%).

- Survey respondents were asked how they or their family members would most likely access the bridge. Seventy percent (70%) stated that they would walk, bike or use transit to access the bridge and 50% stated that they would drive to one side of the bridge or the other.

8 Equitable Development Analysis

A concern that was identified and included in the scope of work for this study was the impact of this new amenity on housing costs within the project area. The addition of bicycle and pedestrian facilities in other metropolitan regions such as Indianapolis, Dallas, Atlanta, Minneapolis and also across the country have shown that improved walkability/bikeability is viewed a valuable amenity that attracts new residents to the area. This increase in amenity will result in an increase of value of housing units in the surrounding area. In areas with potential for new development, the market responds to this increased value by providing more housing units in the area. The availability of these new rental and ownership housing units allows those who are attracted by new walk/bike amenities to locate in the area without a large impact on rental rates or the cost of units for sale. However, in areas that are largely developed, the increased demand that results from the additional amenity cannot spur additional development and instead leads to increased rents or values of homes for sale. Due to the fact that areas of Oak Grove and Lake Oswego in the project area are already largely developed that the possibility exists for increases in rents or sale prices for homes. If the OGLO bridge is built Clackamas County and Lake Oswego might consider changes to local development policies in the immediate area around that bridge that will allow for additional units to be created and maintain the balance between housing supply and demand. Since the area is already largely developed, policies that facilitate redevelopment could be the best approach. Further information on the equitable development analysis can be found in Appendix E.

9 Final Action

At a meeting on January 28, 2020, the project Policy Committee received the final report and considered four options for next steps on the project:

Option #1: Accept the final report and move forward into the next steps in the project development process for the two alternatives, which would include:

A. Additional public engagement

B. Preliminary engineering design

C. Preparation of a NEPA assessment of the environmental impacts of the proposed project

Option #2: Accept the final report, declare this feasibility study to be completed and move forward with to study a pedestrian/bicycle crossing of the Willamette River at additional locations north and south of the City of Lake Oswego, which would include:

A. Additional public engagement

B. Analysis of alternative bridge locations

C. Analysis of cost of construction, operations and maintenance for the alternatives

D. Analysis of environmental issues and permitting requirements

Option #3: Accept the final report and authorize a study of a boat/ferry/water taxi crossing of the Willamette River between Sellwood Bridge to the north and Oregon City to the south with the study to include:

A. Additional public engagement

B. Identification of possible landing sites on both shores of the river

C. Forecast ridership/demand for the boat/ferry/water taxi service

D. Analysis of operations of boat, ferry, and water taxi alternatives including daily trips and schedule,

E. Determine the shore facilities necessary for each service including landing facilities, parking, and storage

F. Analyze the costs for each of the service alternatives including costs for shore facilities and also annual operating costs

G. Project fares for each service and anticipated annual operating subsidies

H. Identify organizational models for each type of service with consideration of potential public private partnership opportunities.

Option #4: Accept the final report, and based on the recent withdrawal of the City of Lake Oswego from the process, identify the bridge across the Willamette River with landing points in Oak Grove and Lake Oswego infeasible at this time.

Once the Policy Committee has identified the next steps for the project discussions should be initiated with Metro in regard to the manner in which those steps will be funded and carried out.

In discussion, the Policy Committee members proposed several wording changes to portions of the final report as follows:

> Page 4, Number A “the proposed alternatives, the two studied on the west and the one on the east, are not feasible at this time, but they are technically feasible”. He ran this by the Board of County Commissioners and received support.
>
> Page 5, Number E “Two bridge alignments were found technically feasible”
>
> Page 5, Number G – Insert the term “technically” before feasible
>
> Page 4, 5th paragraph, add the phrasing “However, as the process wrapped, there’s no new data to inform the policy committee with a scientific public poll regarding the current level of support.”

After reaching agreement on the wording changes, Commissioner Paul Savas made a motion to accept the feasibility study with the proposed amendments, Metro Councilor Christine Lewis seconded the motion, and the Policy Committee approved the motion unanimously. The wording changes identified above were incorporated into the January 28, 2020 version of the final report.

In addition, the Policy Committee discussed next steps for the study of a pedestrian and bicycle crossing of the Willamette River. After discussion, a motion was made by Commissioner Paul Savas to approve the following that was put forward by the Board of County Commissioners at their January 28, 2020 meeting and amended during discussion by the Policy Committee:

a) Given the political realities with the recent withdrawal of the City of Lake Oswego from the process and that the current landing point are not supported by the communities at this time instruct staff to take no further action on the proposed alignments.
b) Undertake a study of a pedestrian/bicycle crossing of the Willamette River at additional locations north and south of the City of Lake Oswego consistent with the adopted Clackamas County TSP Project #2022 which identifies the project area for the bridge as being “Sellwood to Oregon City” and should include landing options that may require taking of private property. Metro will need to be consulted in regard to the funding set aside for further study.

The motion was seconded by Metro Councilor Christine Lewis and approved unanimously by the Policy Committee.