Appendix K

Project Website (as of September 2023)

WARREN AVE BRIDGE

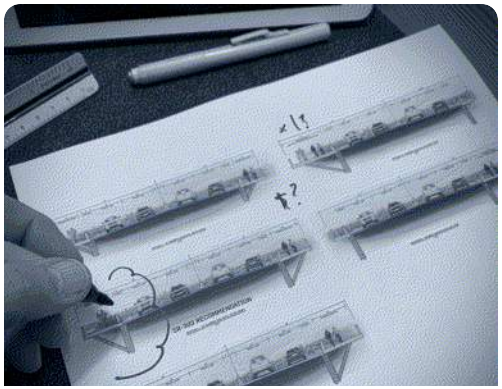
MULTIMODAL PROJECT

Welcome

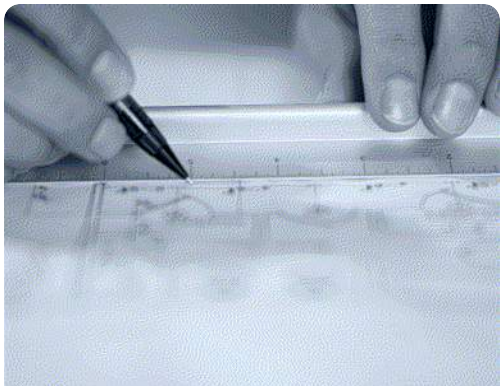
This site is dedicated to the Warren Avenue Bridge Multimodal Project, a **City of Bremerton**-led effort to improve **walking and non-motorized features** on the Warren Avenue Bridge (SR-303). Enabled by a $1.5M Washington State grant, this effort will leverage existing and related plans to work with residents, user groups, agency leads

track the process and **take part**, including event dates and times, process documents, technical memos and more. Have immediate thoughts to relay? Call or use our **contact form**.

Project Phases



Phase 1 - Alternatives Review



Phase 2 - Design

Phase 3 - Construction

Phase 1 Timeline

non-motorized needs. Subject to change (as may be required per process demand), here's our **project timeline:**

The City of Bremerton (City) assures that no person shall be discriminated against in City programs and activities based on criteria established by Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987, the Age Discrimination Act of 1975, as amended, and Title II of the American with Disabilities Act. For details on the City's Equal Opportunity Program and language, visual and hearing accommodations, see our ***EO/Access Page.***

Phase 1: Alternatives Review

Phase 1 of the Warren Bridge Multimodal Project involves looking at viable alternatives that improve crossing conditions for cars, bikes and pedestrians. Working with stakeholders, the City's Complete Streets Committee, City Council and the general public, we'll weigh everyone's needs and preferences with engineering and cost practicalities.

PROJECT NEED

While the Warren Avenue Bridge is the major connection between east and west Bremerton, its pedestrian and bicycle facilities are substandard.

- At 3.5' wide, current walkways do not meet minimum ADA requirements and are too narrow for wheelchairs and pedestrians to safely pass
- With no bike lanes, cyclists are forced to contend with high-speed traffic or use walkways

Improvements are also important because the bridge:

- Needs a pedestrian and bicycle connection to be consistent with the City's comprehensive and non-motorized transportation plans
- Provides access to facilities including Olympic College, healthcare and social services, Puget Sound Naval Shipyard (PSNS), and the ferry terminal

PROJECT INTENT

To add ADA-accessible pedestrian and bicycle facilities where none currently exist.

Other improvements may include lighting and other features to enhance traffic safety and aesthetics.

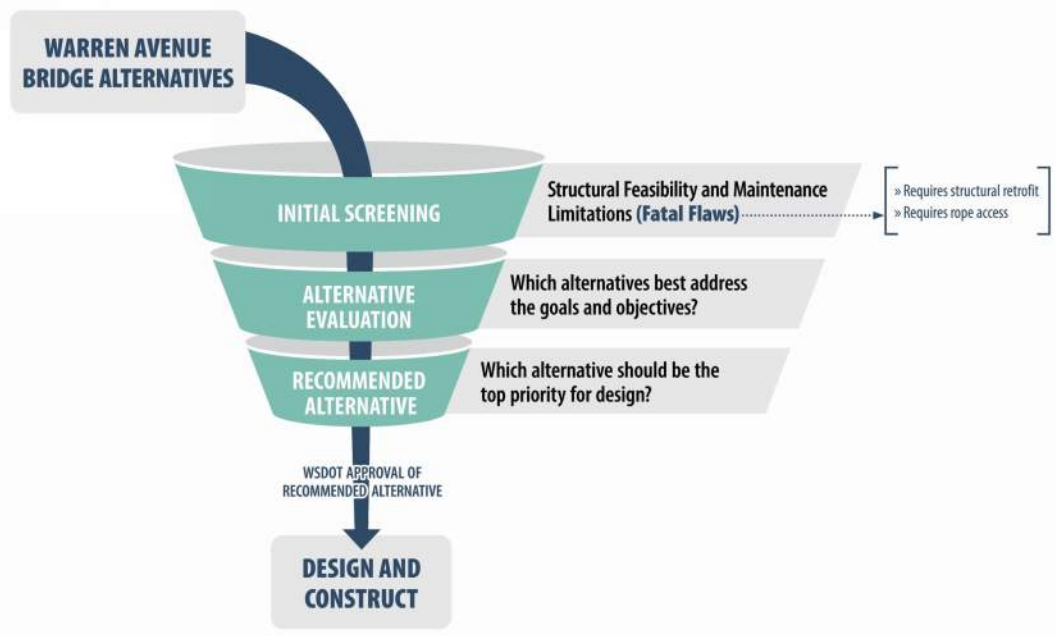
FUNDING

The current available budget for design and construction is **$26.5M**, which includes:

- A $1.5M Washington State grant to design the project, including preliminary engineering and permitting, was awarded to the City in 2020
- $25M in construction funding, secured through the Moving Ahead Washington funding package was approved during the

Alternative Screening Process

Arriving at a preferred alternative will be the result of a series of screenings and evaluations that will successively reduce the number of alternatives that move forward. This screening process includes input from the stakeholder group as well as the public.



Warren Avenue Bridge Alternatives

Department of Transportation and stakeholders. Elven alternatives were identified and evaluated using the alternative screening process. The alternatives are summarized in the table below.

Click on the image to display full-screen.

	Alternative 1	Alternative 2	Alternative 3	Alternative 4a	Alternative 4b	Alternative 5	Alternative 6	Alternative 7	Alternative 7a	Alternative 8	Alternative 8a
Alternatives	8-foot clear width Both sides	10-foot clear width Both sides	12-foot clear width Both sides	16-foot clear width West side	16-foot clear width East side	14-foot clear width Both sides	At-grade 6-foot bike lane, 6-foot sidewalk Both sides	12-foot clear width on east side; 5-ft clear width on west side Both sides	12-foot clear width East side *	14-foot clear width on east side; 5-ft clear width on west side Both sides	14-foot clear width East side *
Origin	WSDOT recommendation	SR 303 Corridor Study preferred alternative	Larger 2-sided alternative assuming purchase of new UBIT	Combined WSCC one-sided alternative with WSDOT standard for shared use path	Alternate to 4a, not requiring an undercrossing of SR 303	WSDOT Traffic Office requested	Input from the stakeholder survey	WSCC option plus 5' for ADA access on opposite side	WSCC option as presented to Council (2021)	WSCC option plus 5' for ADA access on opposite side	WSCC option as presented to Council (2021)
Overlooks	8'x24', 4 total	6'x24', 4 total	No	No	No	N/A	N/A	No	No	No	No
Structural Feasibility	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
Bridge Fully ADA Compliant	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
Maintenance/Inspection Access	Existing UBIT	Existing UBIT	Larger UBIT	Rope access required	Rope access required	Larger UBIT	Existing UBIT	Larger UBIT	Larger UBIT	Larger UBIT	Larger UBIT
Planning Level Project Cost (Design and Construction)	$23.1M	$25.6M	$29.1M	N/A	N/A	N/A	N/A	$23.0M	$17.8M	$25.6M	$20.2M

* Original West Sound Cycle Club (WSCC) proposal was for the improvement to be on the west side of the bridge but was subsequently revised to east side of the bridge at the request of WSCC.

Alternatives screening matrix

Initial Screening (Level 1)

The first step in screening the alternatives is completing a fatal flaw analysis. There were two identified fatal flaw categories for this project, structural and maintenance access. Each category is discussed in further detail below with an explanation of the features for a particular alternative that resulted in a fatal flaw determination.

The Warren Avenue Bridge Pedestrian Improvements project proposes to modify the existing Warren Avenue bridge, therefore there are limits to the amount of weight that can be added to the bridge structure. If an alternative exceeds the allowable amount of additional weight (capped at 10%), it would require a major retrofit. This retrofit would double or triple (or more) the project cost, therefore any alternative that exceeds the weight requirement is determined to be infeasible and not considered for further evaluation.

Maintenance Access Fatal Flaws

The Warren Avenue Bridge is currently inspected using a "Under Bridge Inspection Truck" or "UBIT." The Washington State Department of Transportation (WSDOT) uses UBIT trucks throughout the state to perform periodic inspections, maintenance, and repairs.

Under Bridge Inspection Truck (UBIT) Deployment

Click Here for a video demonstration of WSDOT deploying a UBIT.

An alternate method of inspection is by the use of a "rope access team". These rope access teams will repel using climbing ropes to

truck. These types of inspections are very uncommon but typical for steel bridges that are very tall. While the Warren Avenue bridge does have a steel main span, the support columns under the bridge are concrete and do not require frequent inspection access.

Rope Access Team

Through many discussions with WSDOT during the development of the feasibility and alternatives analysis, it was determined that alternatives that require the use of a rope access team were not feasible as they would put a safety burden on WSDOT for future inspections.

After removing fatally flawed alternatives, the following seven alternatives remained.

Click on the image to display full-screen.

Alternatives	8-foot clear width	10-foot clear width	12-foot clear width	12-foot clear width on east side; 5-ft clear width on west side	12-foot clear width	14-foot clear width on east side; 5-ft clear width on west side	14-foot clear width
	Both sides	Both sides	Both sides	Both sides	East side *	Both sides	East side *
Origin	WSDOT recommendation	SR 303 Corridor Study preferred alternative	Larger 2-sided alternative assuming purchase of new UBIT	WSCC option plus 5' for ADA access on opposite side	WSCC option as presented to Council (2021)	WSCC option plus 5' for ADA access on opposite side	WSCC option as presented to Council (2021)
Overlooks	8'x24', 4 total	6'x24', 4 total	No	No	No	No	No
Structural Feasibility	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bridge Fully ADA Compliant	Yes	Yes	Yes	Yes	No	Yes	No
Maintenance/Inspection Access	Existing UBIT	Existing UBIT	Larger UBIT	Larger UBIT	Larger UBIT	Larger UBIT	Larger UBIT
Planning Level Project Cost (Design and Construction)	$23.1M	$25.6M	$29.1M	$23.0M	$17.8M	$25.6M	$20.2M

Feasible Alternative

Exceeds Project Budget

Remaining alternatives following the Level 1 Screening

Alternatives Evaluation(Level 2)

Community and Agency Feedback

The project team identified the following screening criteria through a comprehensive coordination process with WSDOT's Office of Equity and Civil Rights (OECR), the City's ADA committee, and a public survey completed in April of 2023.

Washington State Department of Transportation (WSDOT) provided guidance on meeting accessibility (ADA) requirements:

- City requested clarification on alternatives that leave one side unimproved, which currently does not meet ADA requirements.
- WSDOT Office of Equity and Civil Rights would not be supportive of a design that did not remove ADA barriers when there are other viable options being considered that do meet ADA requirements.

City ADA Committee met on March 20 and provided the recommendations:

- Unanimously **opposed** to options that only built improvements on one side.
- Unanimously **opposed** to a 5’ wide improvement on the west side of the bridge with a wider shared use path on the east side of the bridge
- Unanimously **supported** alternatives (2 and 3) which proposed at least a 10’ wide path on each side of the bridge

The public survey provided valuable input, including the following key preferences:

- Widening for pedestrian and bicycle use on both sides – **68% Preferred**
- Equal width walkways on both sides accommodating pedestrians and bicycles – **65% Preferred**

By combining the WSDOT guidance, City's ADA committee input, and survey results, the following preferences were developed:

PREFERENCE 1 – Widening for pedestrian and bicycle use on both sides

PREFERENCE 2 – Equal width walkways on both sides accommodating pedestrians and bicycles

PREFERENCE 3 – Minimum walkway width of 10 feet or greater

After filtering out alternatives that did not address the established preferences, the following two alternatives remained.

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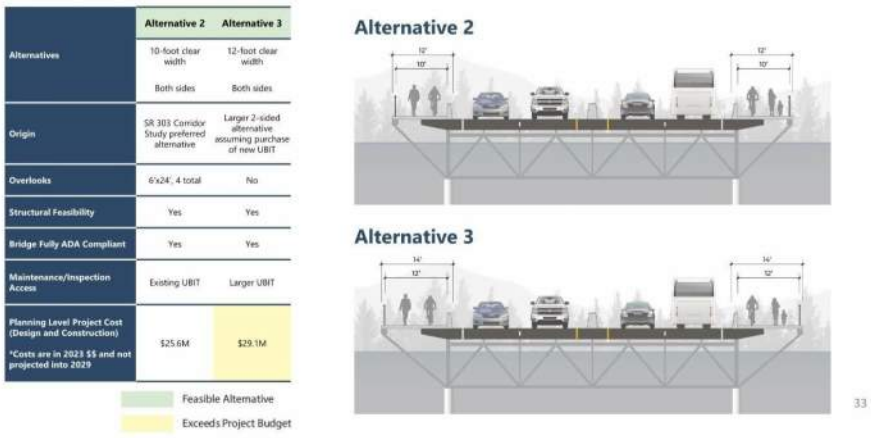

Alternatives	Alternative 2	Alternative 3
	10-foot clear width Both sides	12-foot clear width Both sides
Origin	SR 303 Corridor Study preferred alternative	Larger 2-sided alternative assuming purchase of new UBIT
Overlooks	6'x24', 4 total	No
Structural Feasibility	Yes	Yes
Bridge Fully ADA Compliant	Yes	Yes
Maintenance/Inspection Access	Existing UBIT	Larger UBIT
Planning Level Project Cost (Design and Construction) *Costs are in 2023 $$ and not projected into 2029	$25.6M	$29.1M

Feasible Alternative
Exceeds Project Budget

Remaining Alternatives following the Level 2 Screening

Alternative(Level 3)

The final step in the feasibility and alternatives analysis is to eliminate alternatives that exceed the project's budget:

- The current available budget for design and construction is **$26.5M**
- Keeping the project within the available budget is critical

Recommended Alternative: Alternative 2 - 10' Clear Width Walkways on Both Sides of the Bridge

- Alternative 3 exceeds the available budget
- **Alternative 2 is within budget and is the recommended alternative**

The City will maintain Alternative 3 as an additive bid item, should the cost estimations change as the design progresses, or if the construction bids are lower than estimated. Additive bid items are additional items of work that may be awarded as part of the contract if the bids in come within the budget specified in the contract

The Recommended Alternative will be presented to the City Council in the form of a Council Resolution. This resolution will formally

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Phase 2: Design

Phase 2 of the Warren Avenue Bridge Multimodal project takes the eventual configuration – the

and eventual project bidding. Check back in late-2023 for the Phase 2 schedule.

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Phase 3: Construction

includes the actual process to reconfigure and modernize the crossing. Looking forward to opening day for a much-improved bridge? So are we!

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Community Outreach

The City of Bremerton is developing alternatives for multimodal improvements to the Warren Avenue Bridge. The community survey and open house are intended to provide citizens of Bremerton the opportunity to provide input on the project.

JUMP TO COMMUNITY SURVEY INFORMATION

JUMP TO IN-PERSON OPEN HOUSE INFORMATION

Online Open House:

The City hosted an online open house to present the results of the alternatives analysis on Monday,
June 12, 2023. A PDF of the slides and a video of the presentation

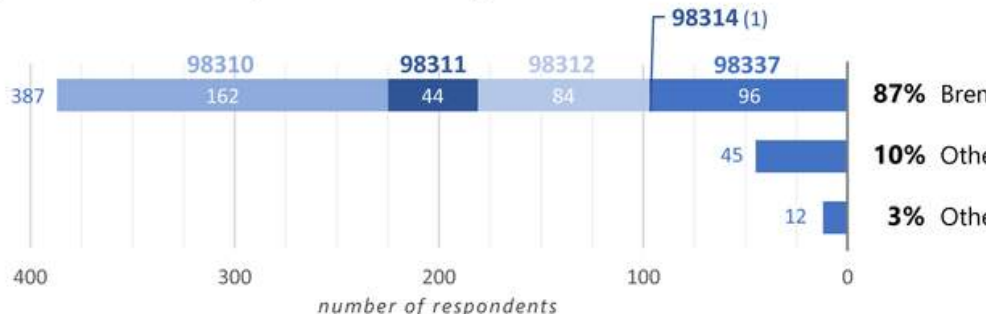
DOWNLOAD THE SLIDES AS A PDF

Project Community Survey:

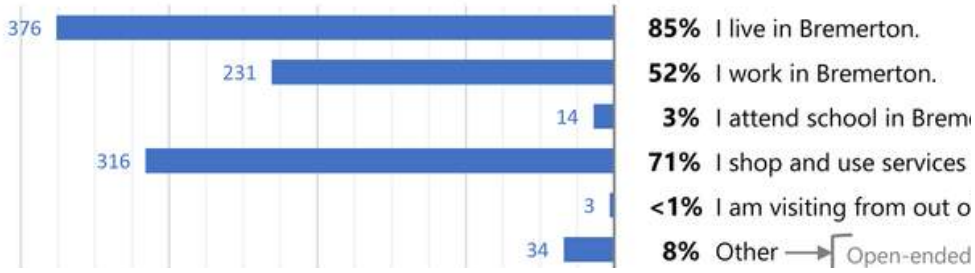
The survey closed at 4 pm on April 28, 2023.

Thank you to those who participated! In all, 417 completed surveys and 53 partial responses were received. A graphical summary of the survey results is provided below.

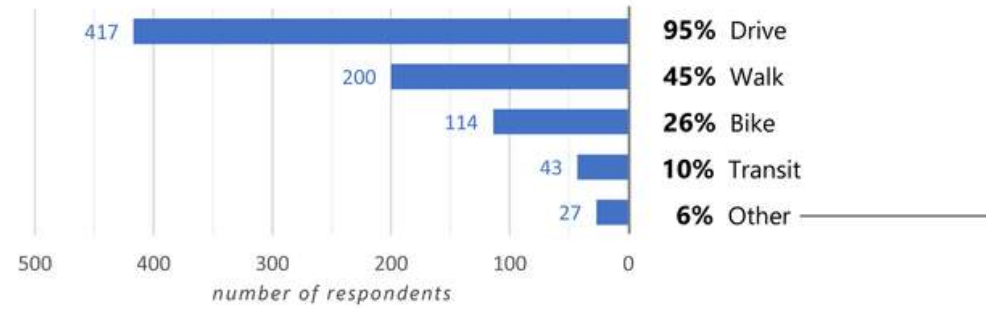
1) What is the zip code where you live?



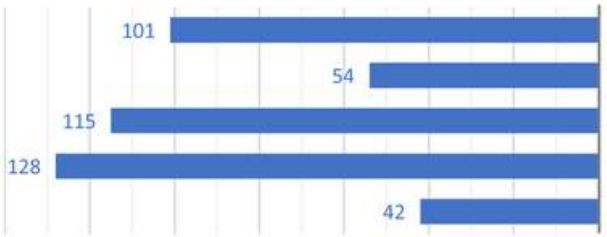
2) What is your relationship to Bremerton? Select all that apply



3) How do you currently use the Warren Avenue Bridge? Select



4) If you live in Bremerton, how long have you been a part of t

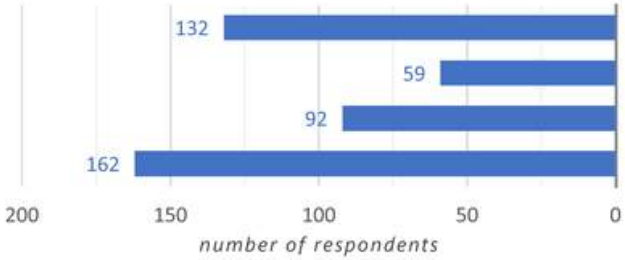


23% Longer than 25 years
12% 16 to 25 years
26% 6 to 15 years
29% < 1 to 5 years
10% I am not a Bremerton re

5) Why do you typically use the Warren Avenue Bridge? Select

46% Commuting to work or
27% Catching a ferry
43% For exercise
42% To enjoy the beautiful v
38% To access the Bridge to
40% Other → Op

6) When utilizing the existing sidewalks on the bridge, is there



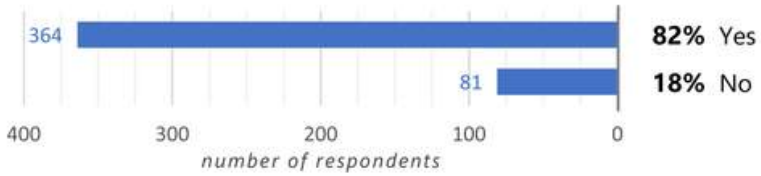
30% The East side*
13% The West side*
21% I use both sides equally
36% Not applicable; I do not

* Respondents who selected "th
prefer to use the sidewalks on

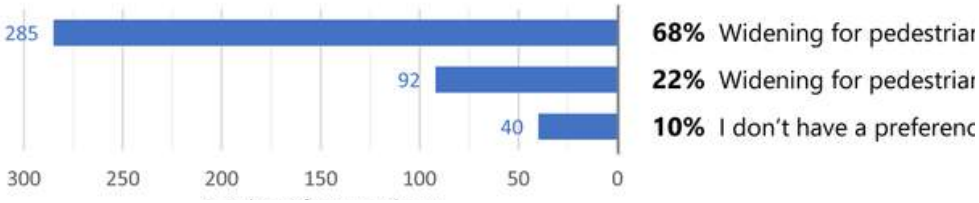
East side preference:

- Ease of access to/from my neight
- Feels safer to walk on
- Easier access for a bicycle
- More convenient for my running/
- Easier to connect to the Bridge to

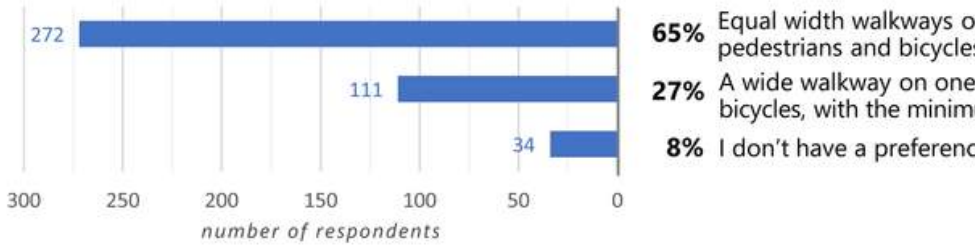
7) Do you anticipate using the bridge as a pedestrian or bicyclis



8) Do you have a preference for widening the walkways on onl both sides of the bridge?



9) If the project widens the walkways on both sides of the brid



accommodate all pedestrians and bicyclists on the bridge?

In-Person Open House:

A drop-in style open house was hosted by the City on Monday April 24, 2023. The turnout was fantastic, thank you to all those who were able to attend.

Written comments received during the open house are available for download from the link below.

DOWNLOAD THE COMMENTS AS A PDF

Open House Presentation Materials

The boards presented during the open house are provided below.

Clicking on each board will provide a full-screen view.

DOWNLOAD THE BOARDS AS A PDF (12 MB)

WARREN AVENUE BRIDGE

MULTIMODAL PROJECT

CITY OF BREMERTON

OPEN HOUSE

PROJECT DESCRIPTION

The Warren Avenue Bridge Multimodal Project is a City of Bremerton-led effort to **improve pedestrian and bicycle facilities on the Warren Avenue Bridge (SR-303).** This effort has leveraged existing and related plans to work with residents, user groups, agency leads and others to evaluate options and arrive at a preferred design.

PROJECT NEED

- While the Warren Avenue Bridge is the major connection between east and west Bremerton, its pedestrian and bicycle facilities are substandard.
  - » At 3.5' wide, current walkways do not meet minimum ADA requirements and are too narrow for wheelchairs and pedestrians to safely pass
  - » With no bike lanes, cyclists are forced to contend with high-speed traffic or use walkways
- Improvements are also important because the bridge:
  - » Is a central link in Bremerton's Bridge-to-Bridge urban trail system (see map at right)
  - » Needs a pedestrian and bicycle connection to be consistent with the City's comprehensive and non-motorized transportation plans
  - » Provides access to facilities including Olympic College, healthcare and social services, Puget Sound Naval Shipyard (PSNS), and the ferry terminal

PROJECT INTENT

- **To add ADA-accessible pedestrian and bicycle facilities where none currently exist.**
  - » Other improvements may include lighting and other features to enhance traffic safety and aesthetics.

FUNDING

- The current available budget for design and construction is **$26.5M**, which includes:
  - » A $1.5M Washington State grant to design the project, including preliminary engineering and permitting, awarded to the City in 2020
  - » $25M in construction funding, secured through the Moving Ahead Washington funding package approved during the 2022 legislative session

BRIDGE-TO-BRIDGE TRAIL

The Warren Avenue Bridge is a central link in Bremerton's Bridge-to-Bridge urban trail system.

PREVIOUS PLANNING STUDIES

SR 303 CORRIDOR STUDY (2021)

- 2-year study included a stakeholder advisory group and community outreach
- Warren Avenue Bridge identified as top priority project
  - » SR 303 Corridor Study Phase 1B – see project description from study in box at right

RECOMMENDED IMPROVEMENTS INCLUDED:

- » 10' clear width both sides of bridge
- » wayfinding
- » center barrier
- » lighting

EASTSIDE VILLAGE SUBAREA PLAN (2020)

- Examined alternatives for the future of the Eastside Village subarea (located immediately east of SR 303), with consideration and coordination of the SR 303 Corridor Study

RECOMMENDED PEDESTRIAN AND BICYCLE INFRASTRUCTURE IMPROVEMENTS INCLUDED:

- » SR 303 Warren Avenue Bridge – new 8-foot shared use pathways on both sides of bridge
- » Lower Wheaton Way from Lebo Boulevard to Sheridan Road (alternative to Cherry Avenue) – new shared use lane
- » Callahan Drive from SR 303 to Wheaton Way – new bike lane connecting between priority bike routes
- » Clare Avenue – Bike route connecting from SR 303 to the Bridge to Bridge Trail at Lebo Boulevard
- » Sheridan Road – new shared use lane

SR 303 Corridor Study Phase 1B

PROJECT DESCRIPTION

Improve safety for vehicles crossing Warren Avenue Bridge by reducing lane width and installing center barrier. Improve active transportation connectivity across the Port Washington Narrows by improving active transportation facilities across the Warren Avenue Bridge and providing additional connections north and south of the bridge. Active transportation improvements on the bridge will enhance the bridge to bridge trail connection for the City of Bremerton.

Jurisdiction	City of Bremerton
Corridor Need	Improve corridor safety Improve pedestrian and bicycle connectivity
Location	Warren Avenue Bridge
Project Length	2,400 feet
Mode	Auto, transit, active transportation
Facility Type	Roadway, sidewalk, active transportation, bicycle

PROJECT ATTRIBUTES

Project Elements	▪ Widen Warren Avenue Bridge to include 10' sidewalks on both sides ▪ Manage lane widths on Warren Avenue Bridge with a minimum of 10.5' ▪ Center barrier on Warren Avenue Bridge ▪ Construct a 3' wide low-maintenance landscape or hardscape buffer between curb and sidewalk and widen sidewalks to 10' on east side of SR 303 from north of 17th Street to the Warren Avenue Bridge ▪ Update lighting on the structure for both roadway and active transportation users ▪ Sidewalks at both north and south ends that are forward-compatible with long-term plan ▪ Active transportation facility to connect to Lebo Boulevard on the north side of the bridge ▪ Provide wayfinding for active transportation ▪ Bicycle facilities south of the bridge between SR 303 and Park Avenue
Benefits	▪ Provides safe width for cyclists and pedestrians to cross Port Washington Narrows ▪ All active transportation facilities provide a key link for a fully functional bridge to bridge trail connection ▪ Improves accessibility across corridor
Issues and Risks	▪ Cost ▪ Constructability of the cantilever section ▪ Optimizing existing bridge widths ▪ Maintenance ▪ Efficient off bridge pedestrian and bicycle routes
Notes	▪ Warren Avenue Bridge improvements would include new decking material in response to recent potholes on the bridge that impacted traffic flow and reliability ▪ Consider overlooks on either side of the bridge near the uphill end ▪ The bicycle connection between SR 303 and Park Avenue needs to be constructed after the Warren Avenue Bridge improvements ▪ Appropriate lighting will be provided for active transportation facilities

Source: SR 303 Corridor Study, 2021

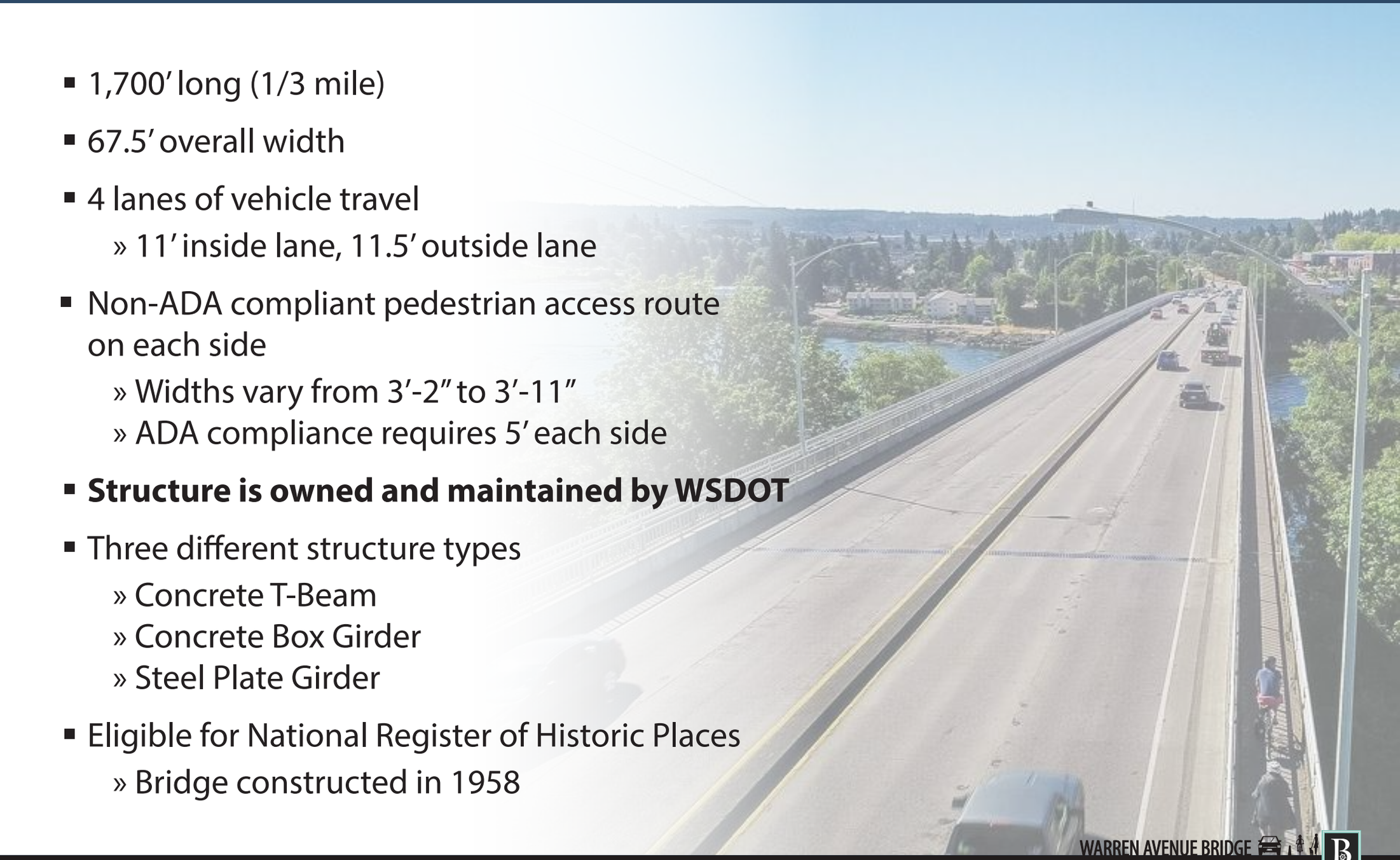
PROJECT AREA

Note: Conceptual drawing only. Channelization and sidewalk improvements north of the Warren Avenue Bridge are not included in this phase.

Note: Conceptual drawing only. Bicycle facilities along 18th Street and tunnel undercrossing are not included in this phase.

EXISTING BRIDGE CONDITIONS

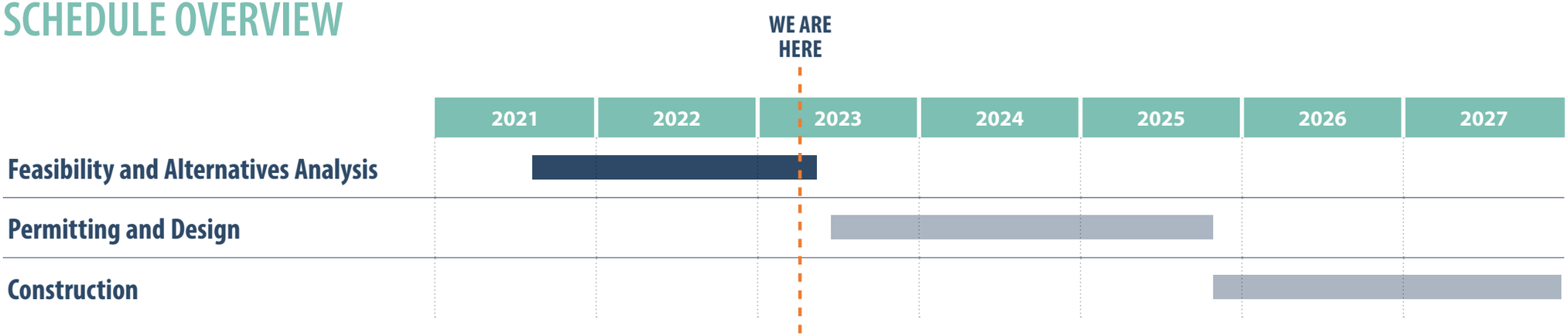
- 1,700’ long (1/3 mile)
- 67.5’ overall width
- 4 lanes of vehicle travel
  - » 11’ inside lane, 11.5’ outside lane
- Non-ADA compliant pedestrian access route on each side
  - » Widths vary from 3’-2” to 3’-11”
  - » ADA compliance requires 5’ each side
- **Structure is owned and maintained by WSDOT**
- Three different structure types
  - » Concrete T-Beam
  - » Concrete Box Girder
  - » Steel Plate Girder
- Eligible for National Register of Historic Places
  - » Bridge constructed in 1958



EXISTING BRIDGE CONDITIONS

PROJECT SCHEDULE

SCHEDULE OVERVIEW



FEASIBILITY AND ALTERNATIVES ANALYSIS

SEPT 2021 – JAN 2022

Project Kickoff

- Project Website Setup
- Presentation to Complete Streets Committee: Nov. 4, 2021

JAN 2022 – MAY 2022

Engage Stakeholders

- Form Stakeholders Advisory Group (SAG)
- SAG Meeting #1: Feb. 4, 2022
- Distribute and Analyze Stakeholder Survey
- SAG Meeting #2: Mar. 28, 2022

MAY 2022 – WINTER/SPRING 2023

Develop Alternatives and Feasibility Analysis

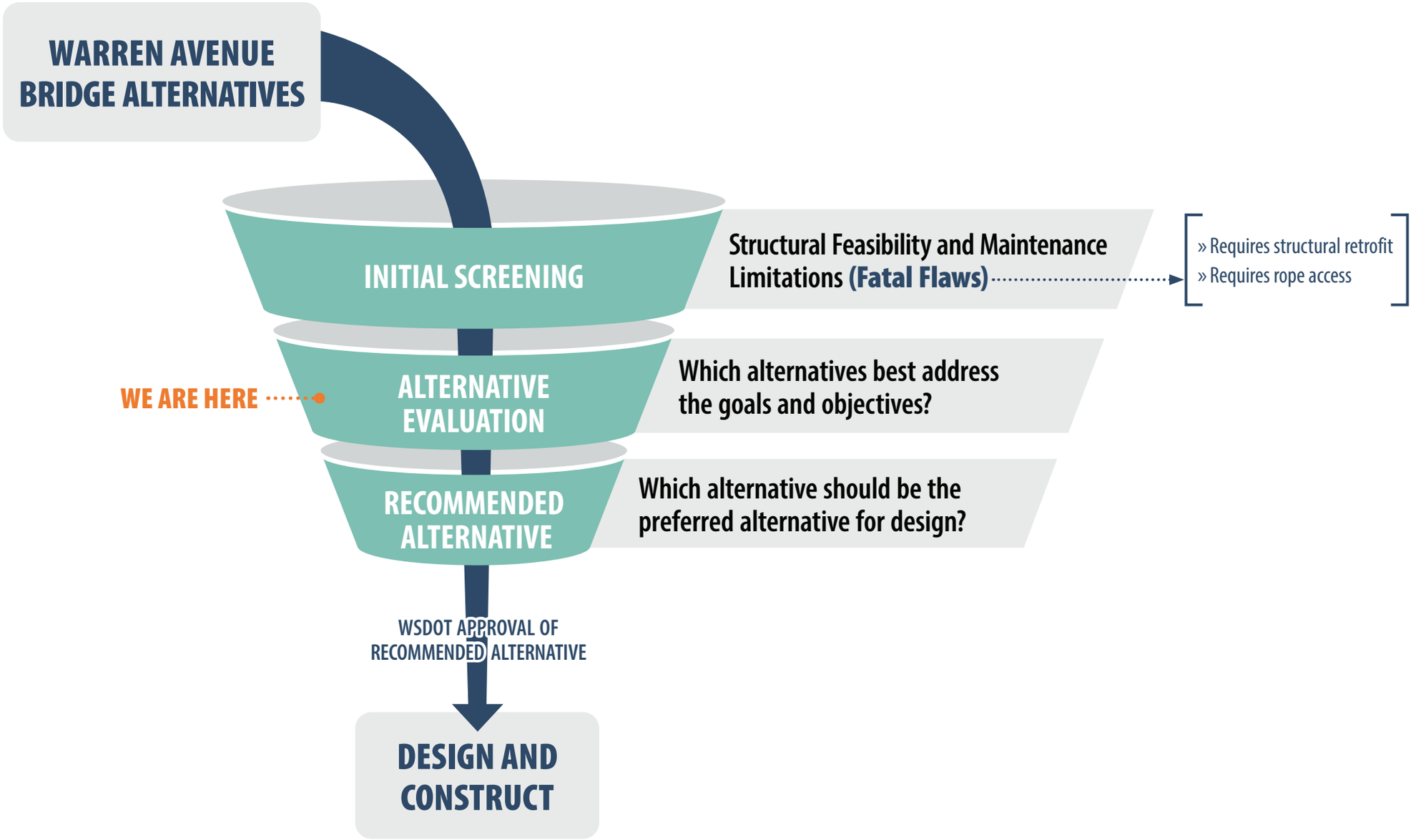
- SAG Meeting #3: Sept. 12, 2022

WINTER/SPRING 2023 – SUMMER 2023

Refine Alternatives and Select Preferred Alternative

- SAG Meeting #4: Nov. 30, 2022
- Public Survey: Apr. 10–28, 2023
- Open House #1: Apr. 24, 2023
- SAG Meeting #5: May 2023
- Open House #2: June 2023
- Preferred Alternative Resolution to City Council: Summer 2023

ALTERNATIVES ANALYSIS



INITIAL SCREENING – HELPFUL TERMS

SEISMIC RETROFIT

Modification of existing structures to make them more resistant to seismic activity, ground motion, or soil failure due to earthquakes. This is required on existing bridges when a project adds extra weight beyond the structure's original safety factors.

UNDER BRIDGE INSPECTION TRUCK (UBIT)

A specialized truck used by WSDOT to inspect and perform maintenance activities on the bridge. The truck provides access to all parts of the underside of the bridge within arms reach.

WSDOT ROPE ACCESS TEAM

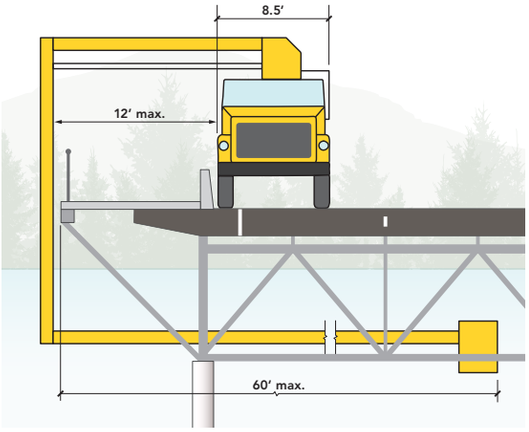
Certified bridge inspectors who also hold rope access certification and use rope rappelling techniques to access the under side of the bridge.

INITIAL SCREENING–MAINTENANCE CONSIDERATIONS

ROPE ACCESS TEAMS

- The Warren Avenue bridge does not easily lend itself to rope access without extensive effort for rigging.
- The ability for rescue must also be provided in accordance with L&I.
  - » This would require a means to get workers back up, or down to standby rescue boats in the water.
- Using Rope Access Teams is time- and personnel-intensive, and also involves greater risk.
  - » To plan for a design that requires this is contrary to current practices of safety risk management.
  - » This is not considered a viable method for our project due to worker safety.

LARGER UNDER BRIDGE INSPECTION TRUCK (UBIT) FEASIBILITY



- Some alternatives include the purchase of a larger UBIT to provide WSDOT with inspection/ maintenance access.
- Response from WSDOT:
  - » WSDOT's existing fleet has been selected to serve the highest number of bridges.
  - » A larger UBIT will not be able to serve many of the existing bridges, therefore cannot replace an existing UBIT.
  - » City mitigation will be required if the purchase of a larger UBIT is necessitated.
    - ▫ WSDOT is open to the City purchasing a new, larger UBIT for their fleet, but this option needs to be evaluated and is considered mitigation for the project (cost to the City for purchase of a new UBIT has not been fully determined).

ALTERNATIVE SCREENING

INITIAL SCREENING MATRIX

	Alternative 1	Alternative 2	Alternative 3	Alternative 4a	Alternative 4b	Alternative 5	Alternative 6	Alternative 7	Alternative 7a	Alternative 8	Alternative 8a
Alternatives	8-foot clear width Both sides	10-foot clear width Both sides	12-foot clear width Both sides	16-foot clear width West side	16-foot clear width East side	14-foot clear width Both sides	At-grade 6-foot bike lane, 6-foot sidewalk Both sides	12-foot clear width on east side; 5-ft clear width on west side Both sides	12-foot clear width East side	14-foot clear width on east side; 5-ft clear width on west side Both sides	14-foot clear width East side
Origin	WSDOT recommendation	SR 303 Corridor Study preferred alternative	Larger 2-sided alternative assuming purchase of new UBIT	Combined WSCC one-sided alternative with WSDOT standard for shared use path	Alternate to 4a, not requiring an undercrossing of SR 303	WSDOT Traffic Office requested	Input from the stakeholder survey	WSCC requested one-sided alternative	Alternate to 7, keeping existing sidewalk on west side	WSCC requested one-sided alternative	Alternate to 8, keeping existing sidewalk on west side
Overlooks	8'x24', 4 total	6'x24', 4 total	No	No	No	N/A	N/A	No	No	No	No
Structural Feasibility	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
Bridge Fully ADA Compliant	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
Maintenance/Inspection Access	Existing UBIT	Existing UBIT	Larger UBIT	Rope access required	Rope access required	Larger UBIT	Existing UBIT	Larger UBIT	Larger UBIT	Larger UBIT	Larger UBIT
Planning Level Project Cost (Design and Construction)	$23.1M	$25.6M	$29.1M	N/A	N/A	N/A	N/A	$23.0M	$17.8M	$25.6M	$20.2M

Notes:

- Project scope includes on-structure improvements only (including minimal tie-in to the existing sidewalk).
- Budget available for Design and Construction is $26.5M.
- "Clear width" is defined as the lateral distance of the path free from any obstructions, including barriers or railings. The minimum clear width for an ADA pedestrian accessible route is typically 5 feet.

Feasible Alternative

Eliminated Alternative
(not moving forward into the analysis or next phase)

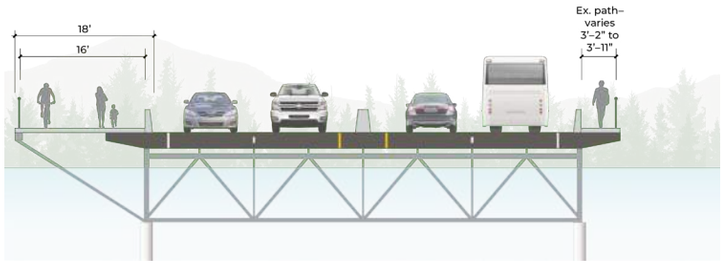
Exceeds Project Budget

ELIMINATED ALTERNATIVES

ALTERNATIVE 4a

Fatal flaw(s):

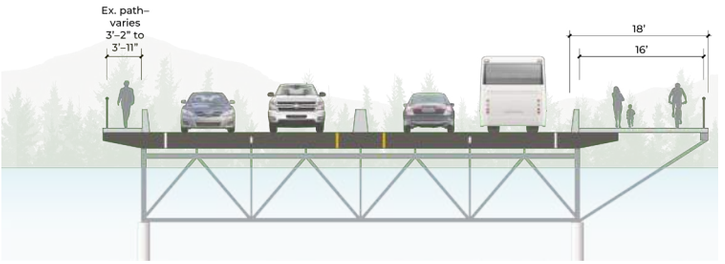
» Requires rope access



ALTERNATIVE 4b

Fatal flaw(s):

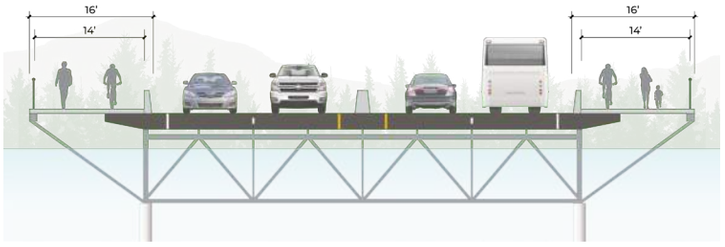
» Requires rope access



ALTERNATIVE 5

Fatal flaw(s):

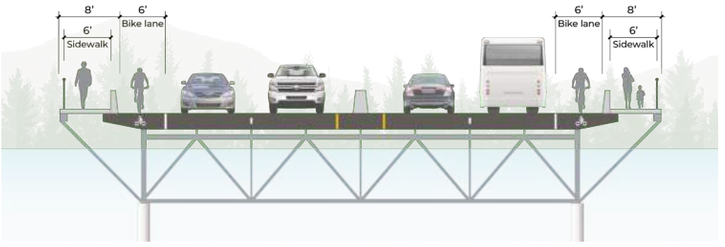
» Requires structural retrofit



ALTERNATIVE 6

Fatal flaw(s):

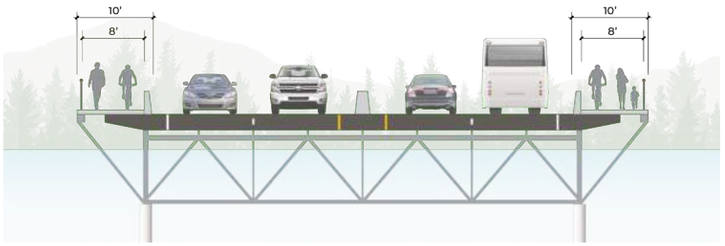
» Requires structural retrofit



FEASIBLE ALTERNATIVES

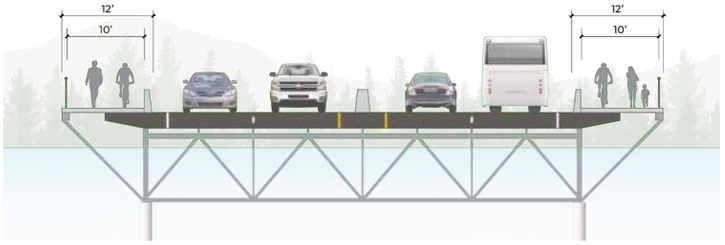
ALTERNATIVE 1

Cost Estimate:
$23.1M



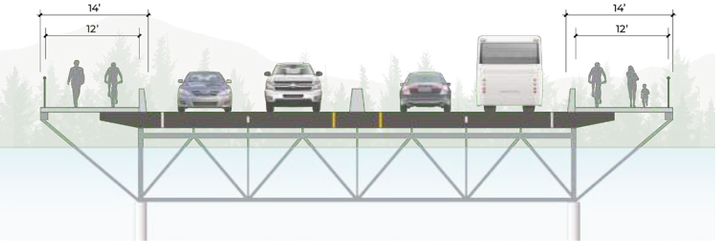
ALTERNATIVE 2

Cost Estimate:
$25.6M



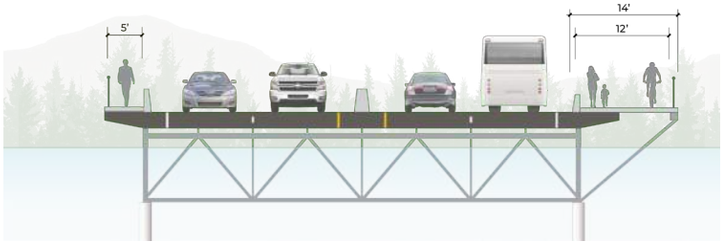
ALTERNATIVE 3

Cost Estimate:
$29.1M
(exceeds project budget)



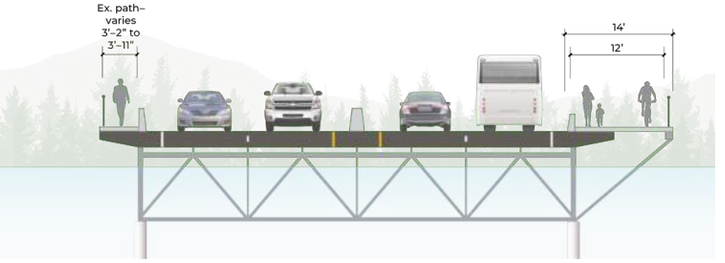
ALTERNATIVE 7

Cost Estimate:
$23.0M



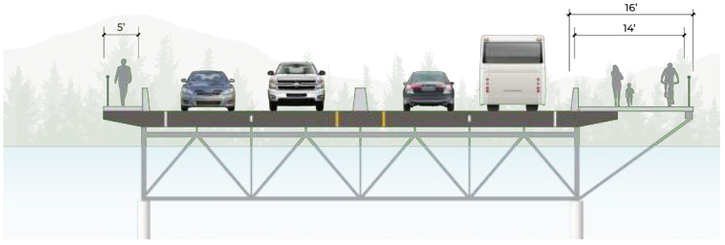
ALTERNATIVE 7a

Cost Estimate:
$17.8M



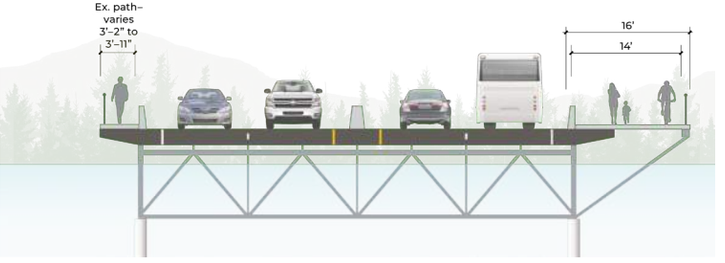
ALTERNATIVE 8

Cost Estimate:
$25.6M



ALTERNATIVE 8a

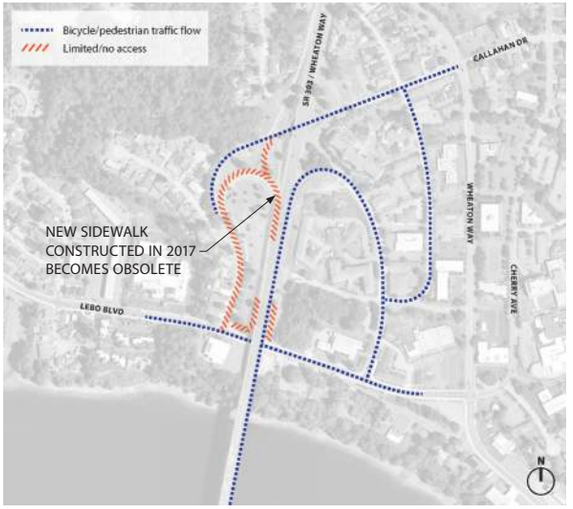
Cost Estimate:
$20.2M



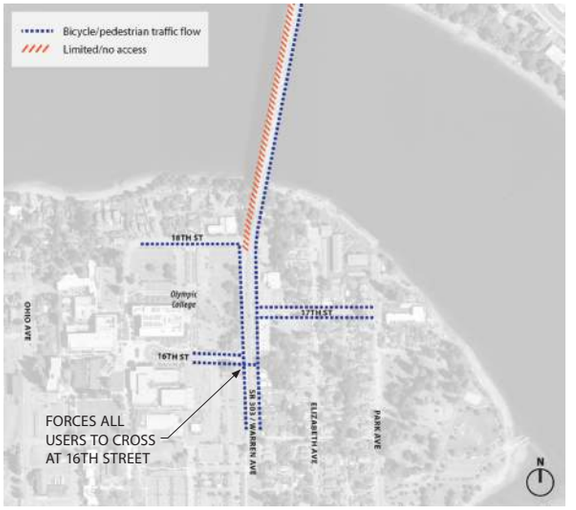
OFF BRIDGE MULTIMODAL CONNECTIVITY

ONE-SIDED VS. TWO-SIDED BRIDGE IMPROVEMENTS

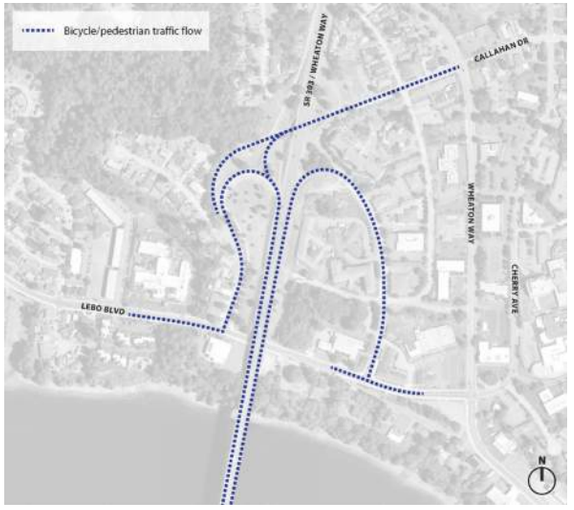
NORTH END –
wide walkway on the east side only



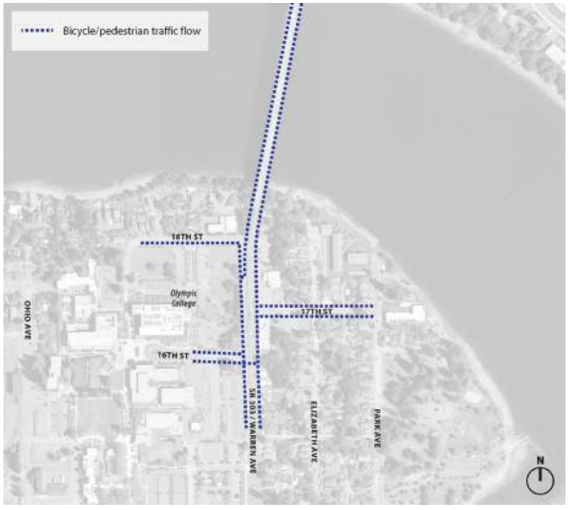
SOUTH END –
wide walkway on the east side only



NORTH END –
wide walkway on both sides



SOUTH END –
wide walkway on both sides



OFF BRIDGE CONNECTIVITY CONCEPTS

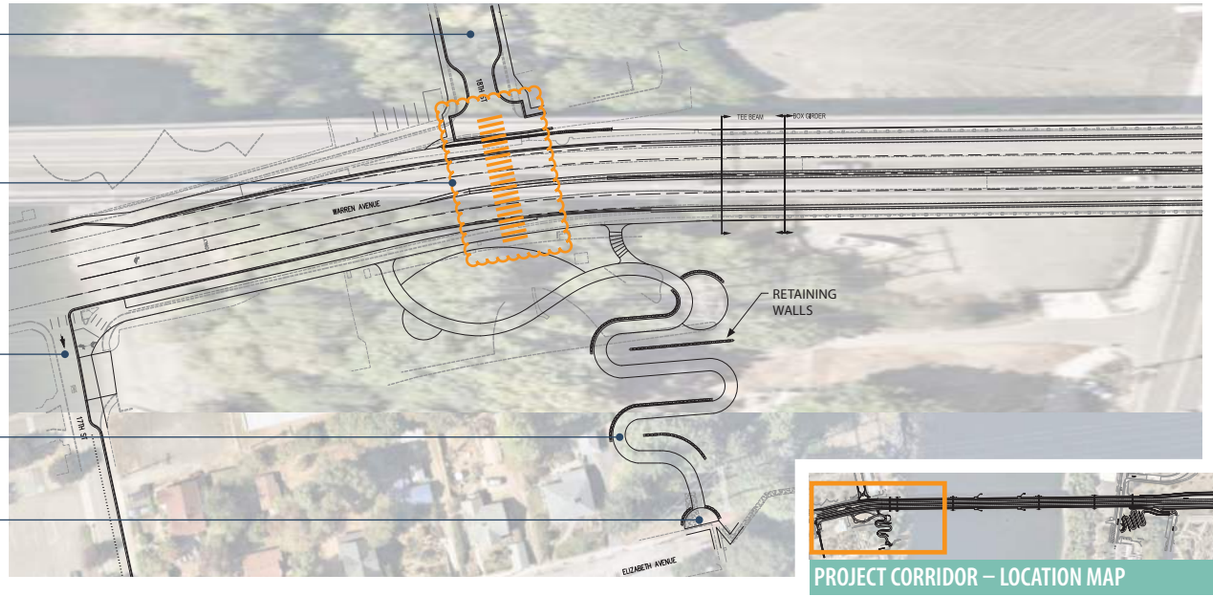
18TH STREET RAMP CLOSURE

POTENTIAL NON-MOTORIZED CONNECTION (TUNNEL)

17TH STREET ONE-WAY EASTBOUND CONVERSION

ROTO VISTA PARK PATHWAY

ELIZABETH AVENUE CONNECTION

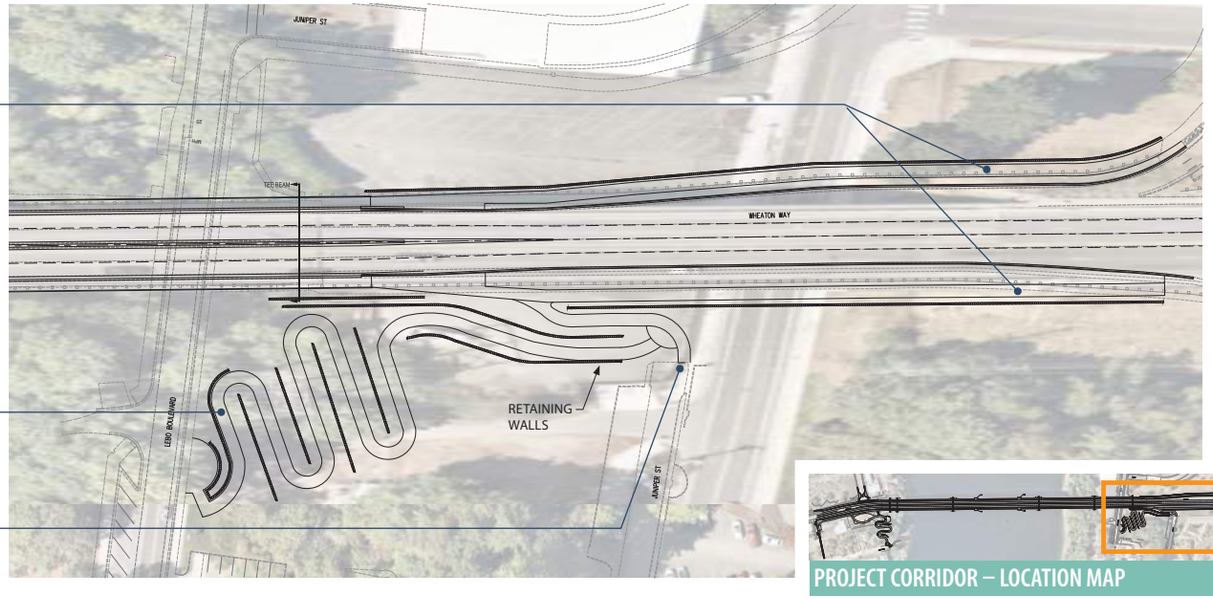


PROJECT CORRIDOR – LOCATION MAP

SIDEWALK EXTENSION ALONG WHEATON WAY

LEBO BOULEVARD PATHWAY

JUNIPER STREET CONNECTION



PROJECT CORRIDOR – LOCATION MAP

TUNNEL.....$10.0M

LEBO BOULEVARD PATHWAY.....$2.6M

ROTO VISTA PARK PATHWAY.....$2.2M

ROADWAY/SIDEWALK IMPROVEMENTS..... $5.8M

Note: *The above listed projects are examples of potential off bridge improvements, and are conceptual designs only. Public outreach efforts will occur once additional funding is obtained to identify the community's preferred off bridge improvements.*

Stakeholder Advisory Group

The Stakeholder group includes representatives of the Chamber of Commerce, Olympic College, Bremerton Parks Department, Bremerton Police Department, Bremerton Fire Department, the West Sound Cycle Club, Naval Base Kitsap, the Complete Streets Committee, Kitsap Transit, Kitsap Public Health, WSDOT, the Mayor, City Council President, and several others.

The goal of these stakeholder meetings is to engage the broad group of entities with a vested in the project in a free exchange of ideas, and to select a preferred alternative that meets the needs of the community, and all stakeholders.

The project team held a kickoff meeting with stakeholders to introduce the project and its goals. A survey was then distributed to participants to determine what about the project they value. Watch the full meeting recording below.

Stakeholder Meeting #2

Following the survey distributed at the end of Stakeholder Meeting #1, the project team reconvened with stakeholders to discuss survey results. Watch the full meeting recording below.

Stakeholder Meeting #3

The project team met with stakeholders once more to review alternatives identified as having a fatal flaw, and explain why they have been removed them from further consideration. Watch the full meeting recording below.

Stakeholder Meeting #4

an open discussion with WSDOT Bridge and Structures Engineering. The presentation also included reviews of project elements off of the bridge structure and cost estimations for each of the remaining alternatives. The meeting was 'hybrid' with stakeholders attending both in-person and remote. Watch the full meeting recording below. Note that the first 5 minutes of the recording were lost due to a technical error.

Stakeholder Meeting #5

The project team met with stakeholders for the final time to provide a review of the alternatives analysis and discuss the recommended preferred

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Documents

Here’s our collection of studies and documents, including past efforts that will inform the Warren Bridge Multimodal Project. Look for more process items as we move forward!

UNDER BRIDGE INSPECTION TRUCK ACCESS MEMO

WSDOT currently uses a UBIT to conduct inspection and maintenance operations on the Warren Avenue Bridge. The biggest UBIT they currently have in their fleet is an A62 manufactured by Aspen Aerials. A larger A62T model UBIT is also available. This memo summarizes the capabilities of the two UBITs in reference to the sidewalk widening options.

DOWNLOAD

BRIDGE TO BRIDGE TRAIL MAP

Following the success of **Kitsap Sun** reporter Josh Farley's 2018 Bridge to Bridge Tour, **Leadership Kitsap** decided to help develop a promotional map of the route. Here's a link to that file, spotlighting stops along the three-mile loop where runners, walkers, and riders can enjoy views and other attractions between the Manette and Warren Avenue Bridges.

DOWNLOAD

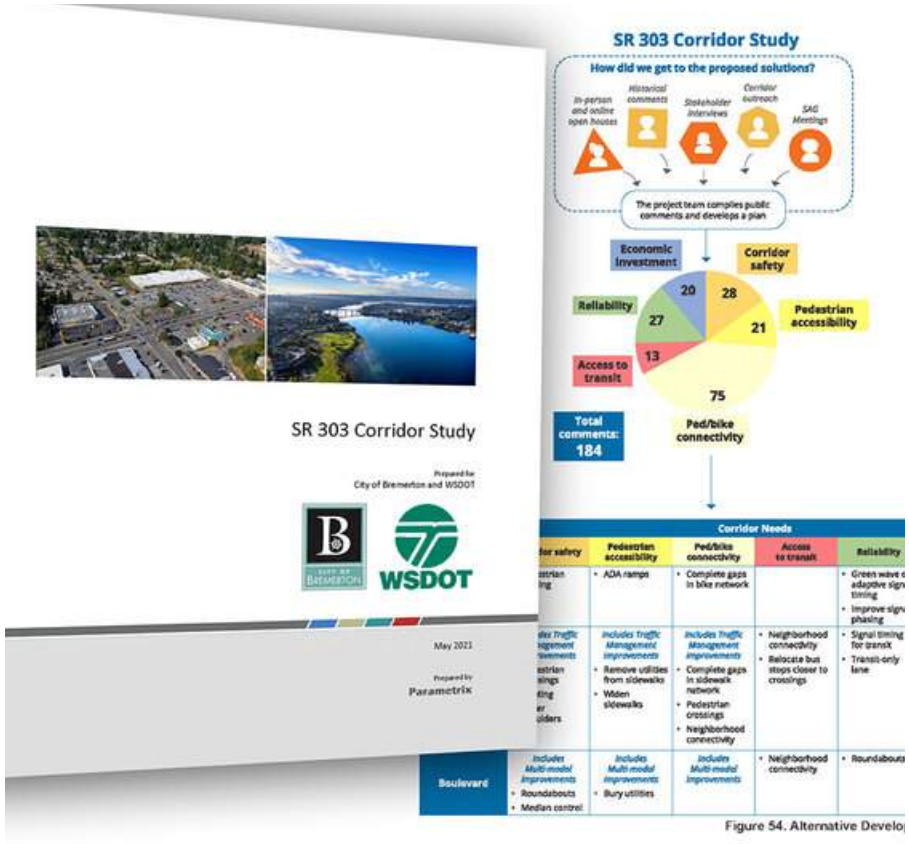
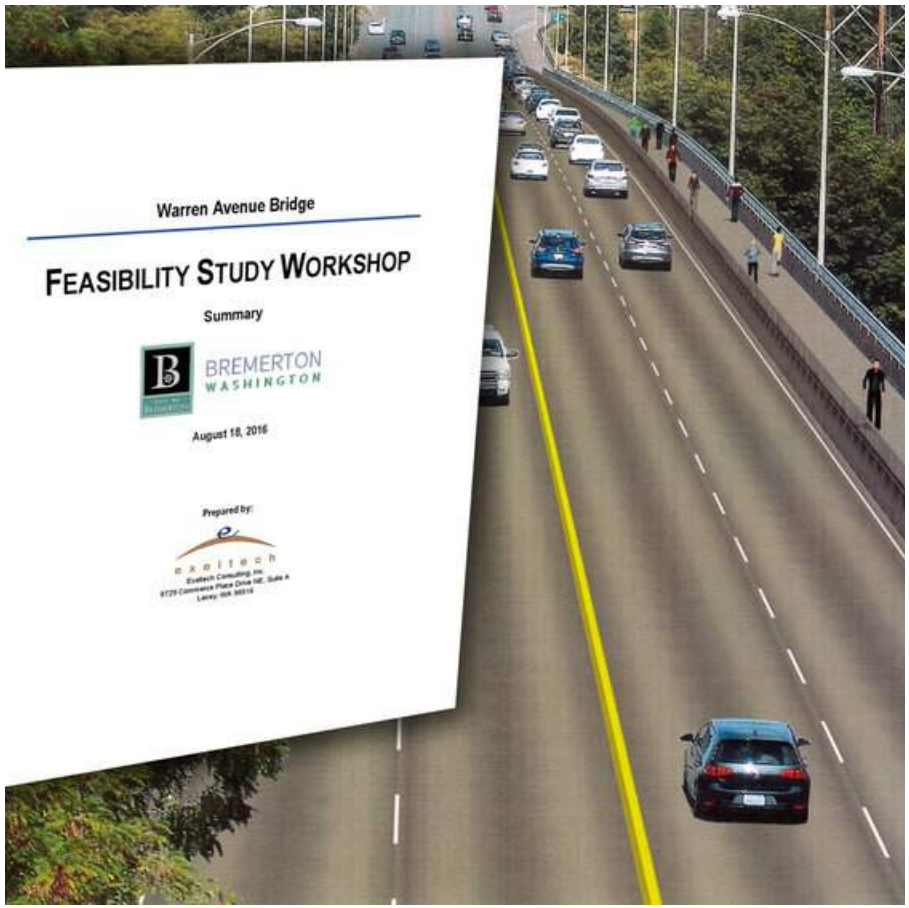


Figure 54. Alternative Develo

2021 SR-303 STUDY

Beginning in 2019, the City of Bremerton and WSDOT joined to commission and oversee the creation of a design study for SR-303, assessing constraints and providing prioritized projects to help meet corridor needs as identified by a study team, a Stakeholder Advisory Group (SAG), and the public.

Here’s a copy of the finished document, which includes numerous recommendations regarding the full corridor, including the Warren Avenue Bridge.



2016 FEASIBILITY STUDY

In 2016, engineers from the City of Bremerton took part in a four-day workshop to consider ways to provide shared use access across the Warren Avenue Bridge, developing and evaluating several

details regarding the bridge and will help streamline efforts for this project.

DOWNLOAD

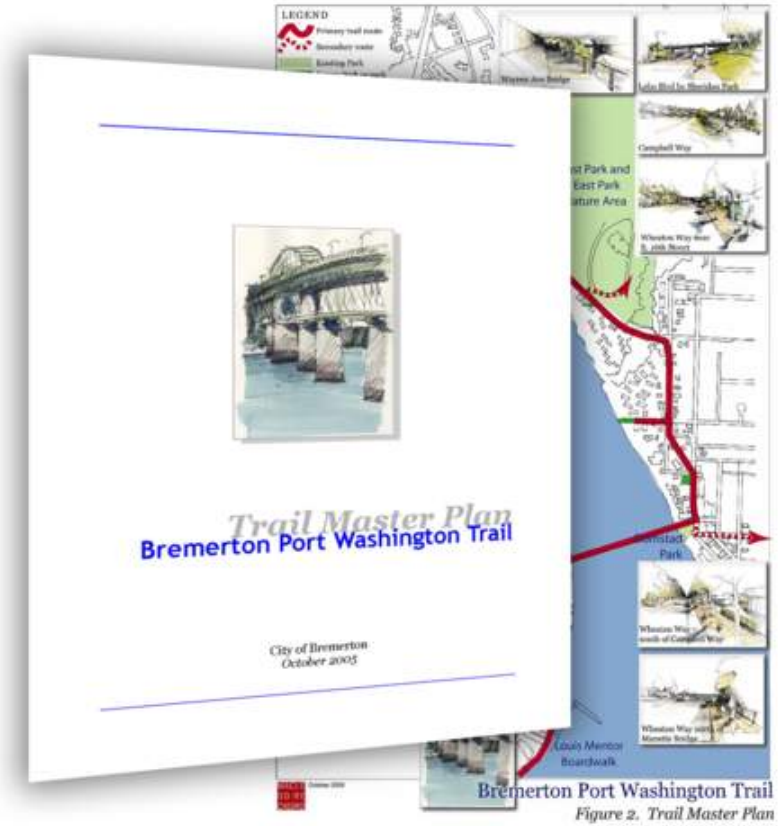


Figure 2. Trail Master Plan

In 2005, the City of Bremerton completed an effort envisioning a 3.5-mile loop trail including the Warren Avenue Bridge, implementing "...a desire to create a more interconnected, pedestrian-friendly, livable Bremerton, by creating an urban trail from the City's street network." Here's a copy of that document, including numerous illustrations and conceptual designs that may influence decisions for this process.

DOWNLOAD

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Videos

Here's our video collection of meetings, presentations and site footage related to the multi-modal project. Look for fresh posts as we move forward!

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There are no upcoming events at this time.

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Frequently Asked Questions

Here's a collection of answers to **Frequently-Asked-Questions** regarding the Warren Avenue Bridge Multimodal Project. We'll add more as the process moves forward and other questions emerge, so if there's something we've missed or needs clarification, feel free to reach out using the **Contact Us** form!

Q: What is the project intended to accomplish?

A: *The Warren Avenue Bridge is the major connection between east and west Bremerton, but walkways on the bridge are extremely narrow – too narrow for wheelchairs and strollers to pass, and difficult for bicycles and pedestrians to pass as well. Pedestrians have been observed climbing on bridge handrails to pass wheelchairs. The posted speed limit for the bridge is 35 MPH, however speeding is a known issue.*

This project proposes to add ADA-accessible pedestrian and bicycle facilities where none currently exist. Other improvements may include lighting and other features to enhance traffic safety and aesthetics.

A: *The existing bridge includes four 11-foot vehicle lanes, four-foot shoulders, with a central median, and 3.5-foot walkways on each side of the bridge. Existing curb-to-curb width is 56 feet, with the overall deck measuring approximately 67.5 feet. Bridge length is 1,718 feet (approximately 1/3-mile). No bike lanes are included.*

Q: Why should the walkways be improved at all?

A: *At just 3.5 feet, current walkways do not meet minimum ADA requirements and are too narrow for wheelchairs and pedestrians to safely pass. With no bike lanes, cyclists are forced to contend with high-speed traffic or use walkways. Other considerations:*

• The bridge is a central link in the City's ***Bridge to Bridge Urban Trail*** *system and needs a connection to be consistent with the City's comprehensive and non-motorized transportation plans.*

• The bridge is the primary connection between east and west Bremerton, providing access to facilities such as Olympic College, healthcare and social services, Puget Sound Naval Shipyard (PSNS), the ferry terminal, and other key destinations.

• The Bremerton population has higher percentage of persons with ambulatory disabilities (needing ADA-compliant facilities) than elsewhere

• Bremerton's poverty rates are nearly double that of Kitsap County and well above statewide averages. As a result, rates of vehicle ownership are likely lower, too. Therefore, accessible walking and bicycling facilities are important to serve these communities.

• Transit services, while helpful, are infrequent and often inconvenient for residents.

*• The recently-completed **SR-303 Corridor Study**, prepared by the City of Bremerton and WSDOT, envisions extensive "active transportation" improvements both north and south of the bridge.*

Q: What's the historic background of the Warren Avenue Bridge?

***A:** The bridge was completed in 1958, with landward portions constructed of concrete and the mid-section made of steel girders. The bridge is listed on the Washington Historic Registry and has been deemed eligible for the National Register of Historic Places. The significant engineering feature of this bridge is its 606-foot, three-span, continuous riveted steel plate girder unit. When constructed in 1958, this was the longest continuous plate girder unit in the state. More information on the historic significance of the bridge can be found on the National Register of Historic Places **Registration Form** completed for the bridge in 2002.*

walkway issues?

A: *Yes. At least three previous efforts have considered ways to improve multimodal conditions on the bridge, and to a large extent, this effort seeks to refine and implement recommendations made in the most recent plan (SR-303 Corridor Study). Key efforts include:*

- ***SR-303 Corridor Study****, 2021*
- ***Bremerton Port Washington Trail: Trail Master Plan****, 2005*
- ***Warren Avenue Bridge Feasibility Study Workshop****, 2016*

Q: Why not just implement recommendations from the 2021 SR-303 Corridor Study?

A: *Early coordination with the* ***Washington State Department of Transportation*** *(WSDOT) suggested pathways narrower than study recommendations due to structural limitations and access for bridge maintenance trucks. In June of 2021, City Council requested further study of WSDOT's proposed eight-foot pathway option and chose to proceed with a feasibility and alternatives analysis (which is this current effort), which will include a structural analysis, maintenance considerations, and many other criteria.*

necessary?

A: *A structural analysis of the existing bridge is an important part of determining feasibility of the alternatives developed. The additional weight of proposed improvements, as well as reconfigurations of the traffic lanes on the bridge, can affect the existing structure's ability to carry vehicle loads. Additionally, weight added to the bridge increases the demands on the existing structure during earthquakes. Alternatives will need to be configured to maintain available capacity for vehicle loadings and maintain resilience during earthquakes.*

Q: What are the next steps after this feasibility and alternatives analysis?

A: *The "preferred alternative" selected by City Council during the first part of this project will be used to move forward into the final design/engineering phase. The final construction phase will occur once additional funding is secured.*

Q: How long will the project take?

preferred alternative is selected, design will begin and will last through the end of 2024. Construction is scheduled to be complete by the end of 2027.

Q: How is this project funded?

A: *In 2019, the City received a $1.5M Washington State grant to design the project, intended to cover preliminary engineering and permitting for pedestrian and bicycle safety improvements, plus design of improvements on Warren Avenue to the south and north of the bridge, as identified in the separate* ***SR-303 Corridor Study****.*

Construction funding of $25M was secured through the ***Moving Ahead Washington*** *funding package approved during the 2022 legislative session*

Contact Us

Improving a feature as important as the Warren Avenue Bridge requires lots of community input. In addition to taking part in meetings and tracking progress, feel free to share your questions, thoughts and ideas using the **form below**. Want to chat with the project manager directly? Contact **Shane Weber** at the City's engineering department.

Shane Weber, PE
City of Bremerton, Engineering
345 6th Street, Suite 500
Bremerton, WA 98337
360-473-2354

Name (required)

First Name

Last Name

Email Address (required)

Message

The City of Bremerton (City) assures that no person shall be discriminated against in City programs and activities based on criteria established by Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987, the Age Discrimination Act of 1975, as amended, and Title II of the American with Disabilities Act. For details on the City's Equal Opportunity Program and language, visual and hearing accommodations, see our ***EO/Access Page.***

Equal Opportunity + Access

Notice of Non-Descrimination

The City of Bremerton (City) assures that no person shall be discriminated against in City programs and activities based on their race, color, national origin, religion, sex, age, sexual orientation, genetic information, marital or veteran status, or the presence of any disability as provided by Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987 (P.L. 100.259), the Age Discrimination Act of 1975, as amended, and Title II of the American with Disabilities Act. Further details regarding the City's non-discrimination policies are published on its Equal Opportunity Program page, linked **here**.

as well as language, visual, and hearing accommodations are available at the City's Equal Opportunity Program page, linked **here**.

Accommodations

Language, visual, and hearing accommodations for meetings and study materials will be made available upon request. Please contact Katie Ketterer at 360-473-5334 or by email at Katie.Ketterer@ci.bremerton.wa.us.

Alamin at ibahagi ang inyong mga ideya sa pamamagitan ng pagbisita sa BremertonWa.gov/JCTP o tumawag sa 360-473-5334. Magagamit ang mga serbisyo sa pagsasalin kapag hiniling.

La ciudad de Bremerton y la Base Naval de Kitsap - Bremerton están analizando formas de facilitar el desplazamiento de las personas en Bremerton. Obtenga más información y comparta sus ideas visitando BremertonWa.gov/JCTP o llame al 360-473-5334. Servicios de traducción disponibles a petición.

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