EARTHQUAKE READY BURNSIDE BRIDGE

Multnomah County is creating an earthquake-ready downtown river crossing.

BETTER – SAFER – CONNECTED June 15, 2020

Community Task Force – Agenda Meeting #16

Project:	Earthquake Ready Burnside Bridge
Subject:	Community Task Force Meeting #16
Date:	June 15, 2020
Time:	*Early Arrivals: 5:30 p.m. – 6:00 p.m.* Meeting Timing: 6:00 p.m. to 9:00 p.m.
Location:	WebEx Virtual Meeting

TASK FORCE MEMBERS

Art Graves, Multnomah County Bike and Pedestrian Citizen Advisory Committee
Cameron Hunt, Portland Spirit
Dan Lenzen, Old Town Community Association
Ed Wortman, Community Member
Frederick Cooper, Laurelhurst Neighborhood Emergency Team and Laurelhurst Neighborhood Association
Gabe Rahe, Burnside Skate Park
Howie Bierbaum, Portland Saturday Market
Jackie Tate, Community Member
Paul Leitman, Oregon Walks
Jennifer Stein, Central City Concern
Robert McDonald, American Medical Response
Marie Dodds, AAA of Oregon
Kiley Wilson, Portland Business Alliance
Neil Jensen, Gresham Area Chamber of Commerce
Peter Finley Fry, Central Eastside Industrial Council
Sharon Wood Wortman, Community Member
Stella Funk Butler, Coalition of Gresham Neighborhood Associations
Susan Lindsay, Buckman Community Association
Tesia Eisenberg, Mercy Corps
Timothy Desper, Portland Rescue Mission
William Burgel, Portland Freight Advisory Committee

PROJECT TEAM MEMBERS

Megan Neill, Multnomah County
Ian Cannon, Multnomah County
Mike Pullen, Multnomah County
Heather Catron, HDR
Cassie Davis, HDR
Steve Drahota, HDR
Liz Stoppelmann, HDR
Jeff Heilman, Parametrix
Allison Brown, JLA
Bridger Wineman, EnviroIssues
Sarah Omlor, EnviroIssues

Purpose:

- Make a recommendation on a Preferred Alternative.

Agenda:

Time	Session	Lead
5:30 p.m.	*Early Arrivals* • *WebEx meeting platform will be available for folks that want to join early and test computer functions before meeting start*	*Project Team*
6:00 p.m.	Welcome, Introductions and Housekeeping • Introductions (round robin) • Meeting Protocols	Allison Brown
6:05 p.m.	Public Comment • Acknowledge Any Public Comments Received	Allison Brown
6:10 p.m.	Project Process Overview	Heather Catron
6:20 p.m.	Recommendation on Preferred Alternative **CTF Discussion:** • Recommend Traffic Option During Construction • Recommend Bridge Alternative	Allison Brown/ All
8:45 p.m.	Next Steps • Type Selection Phase • Upcoming Meetings and Outreach • Closing Remarks	Heather Catron Allison Brown

The purpose of the CTF is to serve as an advisory body to Multnomah County by:

- *Considering the potential environmental impacts of the alternatives*
- *Providing informed insights and opinions on the impacts being evaluated*
- *Discussing technical recommendations, suggesting measures to avoid, minimize or mitigate potential impacts*
- *Representing the interests, needs and opinions of community, business organizations and groups*
- *Considering input and information from other community members, stakeholders and interested parties.*

CTF members approached by interest groups other than their own constituencies are encouraged to share these conversations at CTF meetings. For information contact Mike Pullen, County Communications Office at mike.j.pullen@multco.us

EARTHQUAKE READY BURNSIDE BRIDGE

Multnomah County is working to create an earthquake ready Willamette River crossing

Understanding the Long Span Alternative

FACT SHEET

BETTER – SAFER – CONNECTED

Summer 2020

What is a long span bridge?

A type of bridge that requires fewer support columns, allowing for longer spacing, or spans, between columns. A vertical support structure above the deck of the bridge is needed to accomplish the longer spans. A variety of vertical structures can be considered for this project, including tied arch, truss, and cable stayed options.

Why are we considering it?

The long span alternative allows for fewer columns in the Geotechnical Hazard Zones on each side of the river, reducing project risks and costs.

Decisions Regarding Long Span Alternative

Environmental Phase Decisions

Choosing a Preferred Alternative at this stage of the process means deciding on a class of bridge that considers high level variables including:

- Retrofit or replacement
- Alignment
- Width
- Number and approximate location of columns
- Approximate span lengths

Variables for consideration

Type Selection Phase Decisions (TS)

- Bridge superstructure type
- Column sizes and locations
- Movable bridge type

Specific to Cable Stayed option:

- Tower location

Final Design Phase Decisions (FD)

- Column shape
- Bridge lighting, railings, color and texture

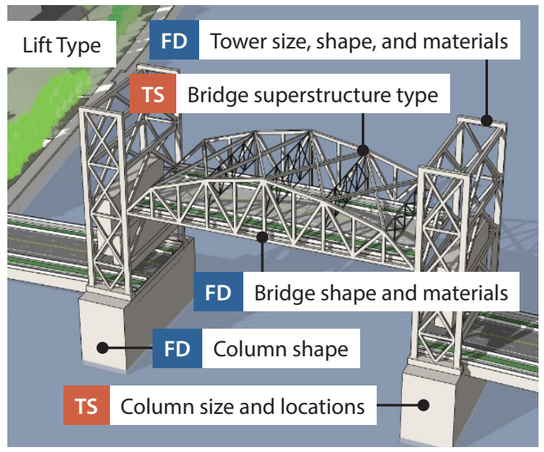
Specific to Tied Arch option:

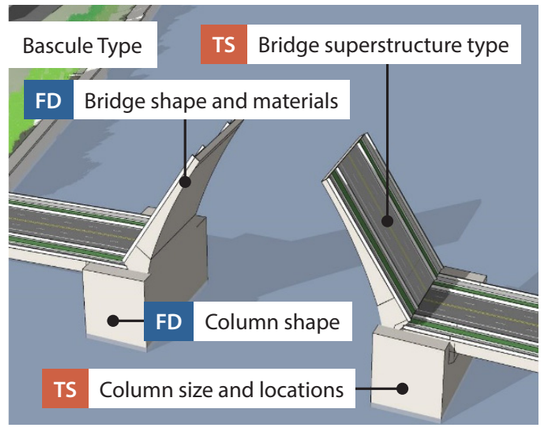
- Arch height
- Arch rib materials, size, curvature, and shape
- Cross-frame size and shape
- Cable size and pattern

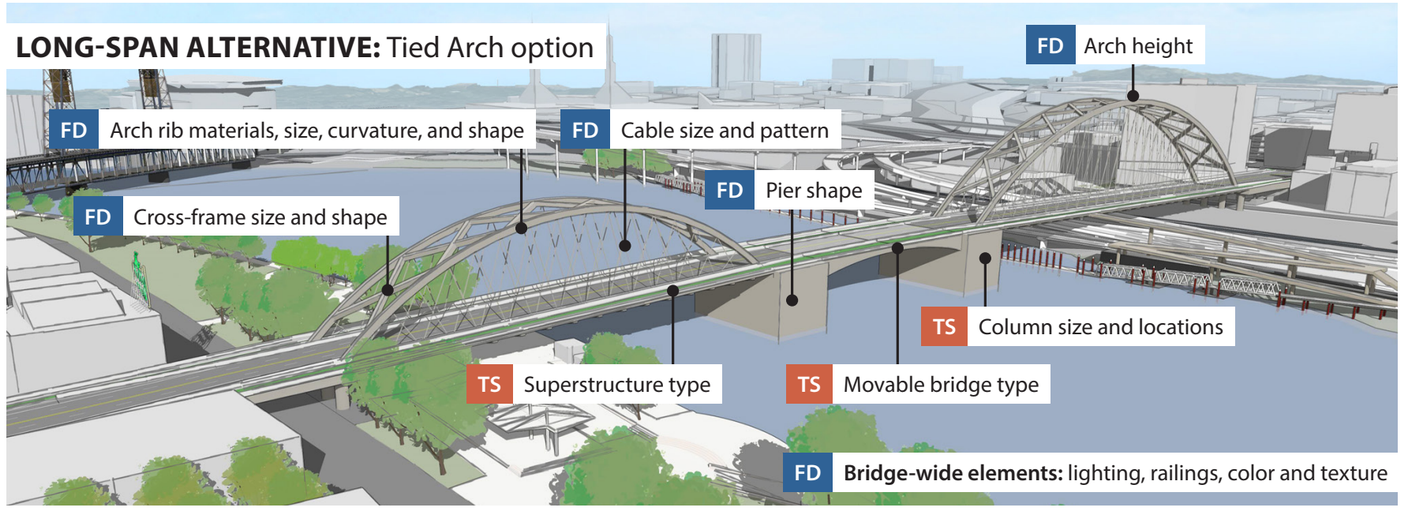
Specific to Cable Stayed option:

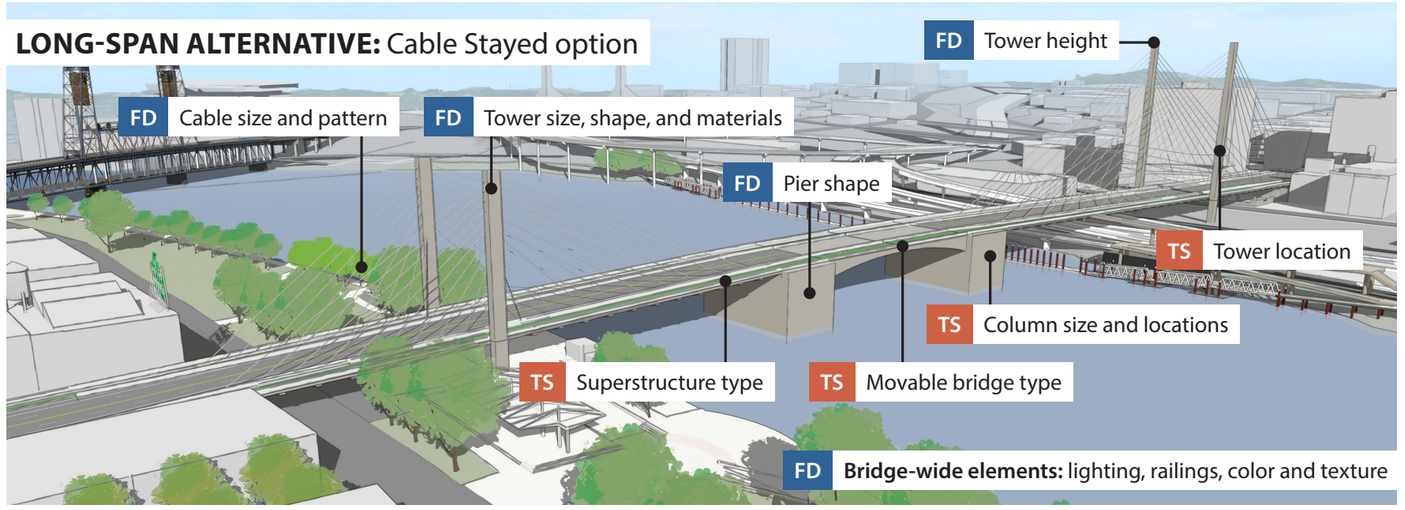
- Tower height, size, shape, and materials
- Cable size and pattern

Movable Span Type: variables for consideration

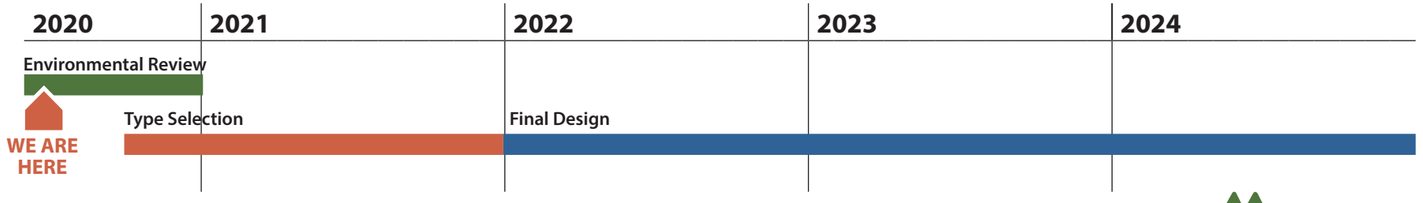








Schedule



Working with the community and agency professionals, we will develop urban design guidelines and evaluation criteria to help in refining aesthetic features during Type Selection and Final Design.

Multnomah County

MOVABLE SPAN: Vertical Lift examples

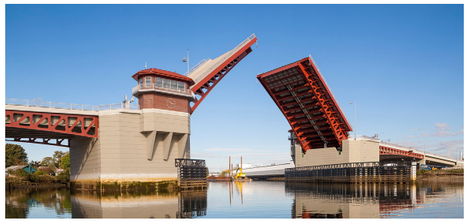
Teregganu Bridge


Fore River Bridge


Pont Jacques Chaban - Delmas


Manchester Millenium Bridge, England

MOVABLE SPAN: Bascule examples


South Park Bridge


Harbor Bridge, Spain


New Johnson St. Bridge, Canada


Woodrow Wilson Bridge

BRIDGE TYPE OPTION: Tied Arch examples


Hastings Bridge, Minnesota


Torikai Ohas Bridge, Japan


Siuslaw River Bridge, Oregon


Tacony-Palmyra Bridge, Pennsylvania


Gateway Bridge, Michigan

BRIDGE TYPE OPTION: Cable Stayed examples


Indian River Inlet Bridge, Delaware


Chongqing Expressway Bridge


Copper River Bridge


Tilikum Crossing Bridge, Oregon

BRIDGE TYPE OPTION: Through Truss examples


Triboro (Harlem River) Bridge


Existing Burnside Bridge

For information about this project in other languages, please call 503-209-4111 or email burnsidebridge@multco.us. | Para obtener información sobre este proyecto en español, ruso u otros idomas, llame al 503-209-4111 o envíe un correo electronico a burnsidebridge@multco.us | Для получения информации об этом проекте на испанском, русском или других языках, свяжитесь с нами по телефону 503-209-4111 или по электронной почте: burnsidebridge@multco.us.

BurnsideBridge.org

@MultCoBridges, #ReadyBurnside

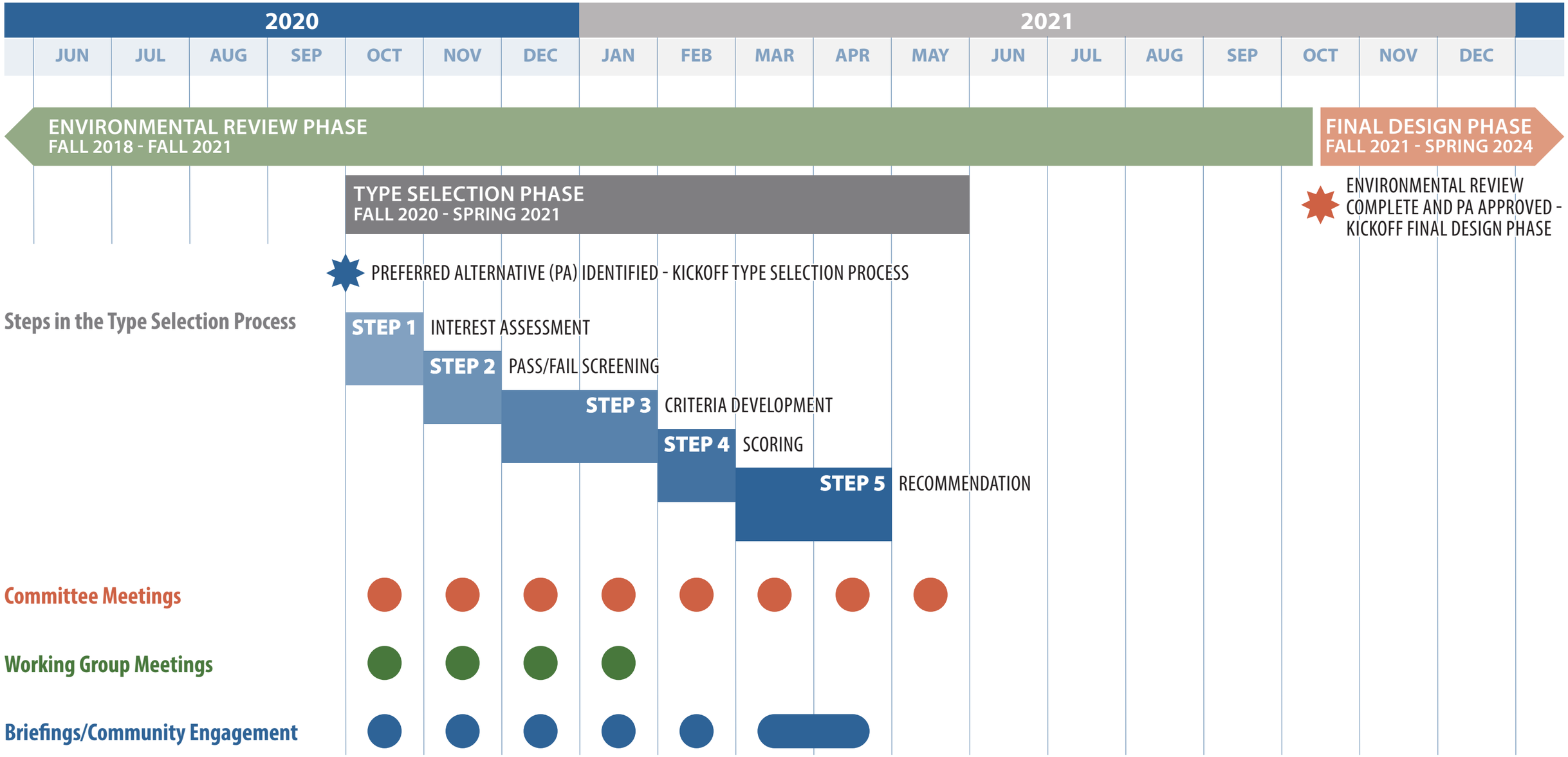
Multnomah County

EARTHQUAKE READY BURNSIDE BRIDGE

TYPE SELECTION PHASE TIMELINE

BETTER – SAFER – CONNECTED

June 2020



Multnomah County

EARTHQUAKE READY BURNSIDE BRIDGE

Multnomah County is creating an earthquake-ready downtown river crossing.

BETTER – SAFER – CONNECTED MAY 18, 2020

Community Task Force Meeting #15

Meeting information

Project:	Earthquake Ready Burnside Bridge
Subject:	CTF, Meeting #15
Date:	Monday, May 18, 2020
Time:	6:00 to 8:00 p.m.
Location:	WebEx Meeting and Livestream

Attendees:

CTF Members:
Art Graves, Multnomah County Bike and Pedestrian Citizen Advisory Committee
Cameron Hunt, Portland Spirit
Ed Wortman, Community Member
Frederick Cooper, Laurelhurst Neighborhood Emergency Team and Laurelhurst Neighborhood Association
Gabe Rahe, Burnside Skate Park
Howie Bierbaum, Portland Saturday Market
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Project Team Members:
Megan Neill, Multnomah County
Ian Cannon, Multnomah County
Mike Pullen, Multnomah County
Heather Catron, HDR
Cassie Davis, HDR
Steve Drahota, HDR
Liz Stoppelmann, HDR
Jeff Heilman, Parametrix
Allison Brown, JLA
Laura Peña, EnviroIssues
Sarah Omlor, EnviroIssues

Apologies: Dan Lenzen, Old Town Community Association
Timothy Desper, Portland Rescue Mission

Summary Notes

This online virtual meeting was held over WebEx and livestreamed to the public via Vbrick. 20 public attendees logged in to view the livestream. In advance of the meeting, the public was invited to submit comments to the Community Task Force (CTF). Comments received in advance of the meeting were shared with the CTF and acknowledged in the meeting during the public comment period.

This summary includes the nature and dialogue of the meeting, including questions and comments submitted by CTF members through the WebEx chat function.

WELCOME, INTRODUCTIONS AND HOUSEKEEPING

Allison Brown, JLA, welcomed everyone to the meeting, went over the virtual meeting protocols and took roll call. She said this meeting may result in a Preferred Alternative (PA) if the group feels ready to make a recommendation.

- Susan Lindsay: Doesn't it feel a little rushed to make a decision since the committee wasn't able to have much discussion at the last meeting?
    - Mike Pullen: We have another meeting in June so there is no pressure to make that decision now if you don't feel comfortable. We've noticed that some members may be ready to make a decision, but you shouldn't feel pressured to do so today.
    - Allison: We will check in with the whole group after the scoring results presentation to make sure the group feels ready.

PUBLIC COMMENT

Allison shared that verbal public comments will not be taken within the virtual meeting format, but written comments were accepted prior to the meeting. She reminded the group that a public comment was shared with them before the meeting. The public comment was provided by Pacific Coast Fruit Company, a business which will be impacted by bridge construction on the east side. The comment shared the company's origins and values and highlights its central east side location as critical to their success.

PROJECT UPDATE

Heather Catron, HDR, began with a project update by reviewing the project timeline. The group would review the scoring results tonight and make a recommendation on the PA if they felt comfortable. If the committee needs more time to discuss, another meeting will be held in June. The recommended PA will be shared with the public in August and the CTF will then reconvene in September to review public feedback and make adjustments if needed. From there, the formal recommendation will go to the Policy Group in October before being folded into the draft Environmental Impact Statement (DEIS).

Heather noted that the committee has been working towards this milestone for 18 months over the course of 15 meetings.

SCORING PROCESS AND RESULTS

Heather reiterated that tonight's meeting would include a presentation of the scoring results and the technical team's key findings.

EVALUATION WEIGHTING, RATING AND SCORING

Heather recapped the CTF's development of the criteria and weighting which guided the scoring results. She shared that the meeting packets include a detailed scoring sheet for each alternative as well as a detailed spreadsheet for those who were interested in how the results were calculated.

Allison reiterated the meeting's objective to make a recommendation if the group felt ready. She said she would take a vote to see if the members were ready to decide or not before asking for a decision. If the group decides to vote she reminded them that per the committee's charter, members will be able to share comments for the record if they want to include more than just a 'yes' or 'no' vote.

Allison called for questions before the results process began. The committee had no comments.

BRIDGE ALTERNATIVES

Heather reviewed the four alternatives and clarified how it was that the long span came to be added as a fourth alternative. She said that the long span option was presented at the CTF's February meeting as one of the replacement possibilities. She reminded the group that the replacement option began as an 'in-kind replacement' meaning that it would be in the same alignment as the current bridge. After further study, project engineers recognized that there was a possibility for a long or short span design and that the long span had many benefits. Once the project team began sharing this information it became confusing to have multiple options under the in-kind replacement alternative so the long span was added as a fourth alternative and the in-kind replacement was renamed as a short span, in-kind replacement.

- Jackie Tate: I was out of town for some of this. Is the long span option the one that extended very far to the east and west of the bridge?
    - Heather: I think you're talking about the high fixed bridge that we had as an alternative a few months ago. That alternative was ruled out because the approaches extended too far into the city to the east and west. The long span ends at the same place as the existing bridge does now, but it doesn't require as many supports.

Scoring Results

Heather reviewed a graph of the scoring results. She explained that there were two scores for each alternative to reflect the two different traffic options. The long span bridge with a full closure during construction scored the highest.

- Bill Burgel: This is based on the criteria that we voted on, correct? And I assume that the length of construction time was one of the factors taken into account?

- Heather: The CTF developed the criteria. Construction duration is factored in and Steve and Jeff will be presenting that in more detail shortly.
- Steve reiterated that the CTF's work over the past few months has led up to these scoring results. He drew the group's attention to the detailed spreadsheet that includes all of the factors that were taken into account, including construction durations and modal travel times both with and without a temporary bridge. All of the ratings for the individual measures rolled up into the overarching scores shared in the graph on slide 14 of the PowerPoint.

- Susan: I looked over all of this before the meeting, but I still don't really get the long span. Aesthetically it's scary but it has scored the highest. I'm hoping you can further explain why you all are leaning towards that option when aesthetically it isn't great.
  - Steve: Explaining the long span alternative in detail is exactly what we aim to do in this presentation.
  - Heather: Let me clarify that the scores are based on the criteria and measures that the CTF developed. They are not a reflection of where the project team is leaning. Also keep in mind that the scores are only a tool. They are purely numerical results to help the committee look at the facts, but the scoring results are not the recommendation itself.

Highlights

Steve presented a graph showing a cost comparison of the alternatives with and without the temporary bridge. The long span replacement is the least expensive alternative. Steve shared that the project team had assumed that the retrofit would be the cheapest option, but it turned out to be the second most expensive alternative. The most expensive option is the replacement with Couch Extension because it includes a large portion of additional bridge structure that does not currently exist.

- Fred Cooper: Earlier we were told that the temporary bridge would be about $160 million but the graph shows it at $90 million. Is this showing a bike and pedestrian only bridge?
  - Steve: No, we thought that the temporary bridge would cost more initially but it turned out to be about $90 million. That includes one general purpose lane each direction for vehicles, as well as bike and pedestrian lanes in both directions.
- Susan: Why is the short span more expensive than the long span?
  - Steve: It primarily has to do with the number of columns in the geotechnical hazard zone (GHZ). The short span requires a lot more columns in this area than the long span. Adding columns in this zone is expensive because there are a lot of risks that come with mitigating the liquefiable soil.
- Bill Burgel: Is the Saturday Market relocation included in this cost for the temporary bridge?

- Steve: We will have to relocate the Saturday Market building for all of the alternatives, regardless of a temporary bridge or not; which means that yes, a cost is included.

Steve presented the cross-sections for each alternative. He explained the key difference between the retrofit and the replacement option is the width. The replacements allow for a wider bridge and change the existing hourglass shape to a more rectangular shape. That allows the replacement options to include wider bike lanes and sidewalks as well as a physical barrier between bike, pedestrian, and car traffic. The retrofit would keep the existing lane configuration and the plastic delineators between vehicles and bicyclists.

Next, Steve showed a graph of construction duration times with or without a temporary bridge. A temporary bridge would extend the construction timeline by 1.5 to 2 years, subject to the alternative.

Steve then reviewed highlights for each alternative beginning with the enhanced seismic retrofit. This option would require the existing supports to be encased in concrete which would significantly increase the footprint of the bridge.

He showed a rendering of the bridge with the liquefaction zone highlighted in light orange (slide 20). He explained how the bedrock below the surface slopes towards the river with softer alluvial soil on top. This is the area that would turn to 'soup' in the event of a major earthquake. The retrofit option would require reinforcing the current supports in this area.

- Jennifer: Can you point out where the public comment came from on this image?
  - Allison: Can you clarify what you mean?
  - Cassie Davis: I think she means where is Pacific Coast Fruit Company on this image. They are located in the GHZ zone north of the bridge on the east side.
- Bill: The colors of the liquefaction zone are hard to see on the screen. Can you clarify further?
  - Steve called attention to the lighter orange color on the slide versus the red color for the columns.

Steve moved to the next slide showing the view from Waterfront Park. He noted that the retrofit options would require the longest full closure of Waterfront Park.

The next slide showed the east side of the river at 2nd Ave looking at the Burnside Skatepark. The retrofit option would require a pier be built through the Skatepark's current location. Another view showed the Eastbank Esplanade access ramp. This would be built to be ADA accessible and is being included in the NEPA process.

- Cameron: Would the "big pipe" sewer systems (CSOs) be impacted?
  - Steve: No, each big pipe has an easement that the bridge has to be built around. We are conforming with those easements.

Jeff Heilman, Parametrix, clarified that the Skatepark would be severely impacted by the retrofit option and could not be reconstructed in the same spot that it exists today. However, the retrofit alternative is the only alternative that doesn't completely remove the historic Burnside Bridge.

Another aspect of the historic resources criteria is potential buried archeological resources. Jeff said all alternatives except for the long span require 'jet grouting' which would destroy any pre- or post-contact archaeological resources that are underground in those areas. The long span would minimize this because it wouldn't require supports or jet grouting in most of the geological hazard area.

Jeff also noted that the White Stag sign is not currently listed on the National Register of Historic Places and it is not contributing to the historic districts in that area, however, it has been recommended for the National Register as its own historic resource. The retrofit, short span, and Couch extension have the least impact on views of the sign because they do not have above deck structures, other than the structure associated with a potential vertical lift for the movable span in the center of the river.

Steve moved on to talk about the replacement short span alternative. He said this option replaces all of the bridge pieces to modern design standards while keeping the existing alignment. This alternative most closely resembles the 'in-kind' replacement with an option for either a vertical lift or bascule lift. He noted that the decision around movable bridge type isn't a part of the Preferred Alternative recommendation; that decision will come during Type Selection, and aesthetics on that will come during Final Design.

Steve showed an image of the number of columns for the short span. He noted that the short span requires fewer supports than the existing bridge because of modern design techniques, but there are still several sets of columns in the GHZ.

- Bill: Is there any historical data of a vertical lift versus bascule lift being better able to withstand an earthquake?
    - Steve: This is a common question within the engineering team. Right now, there is no clear data, but there are pros and cons for each. More research and analysis is needed, which is one of the reasons why we are not deciding between those options at this point.
- Jackie: It looks like all of the supports are in the GHZ in this option.
    - Steve: It's hard to see from this angle but there are some supports on the east side of the GHZ, both as you approach MLK Jr. Blvd. and closer to the downtown end on the west side.

Steve then showed the view of this alternative from Waterfront Park. There would be fewer columns in that area than the retrofit.

Steve said that the short span alternative is able to span over the Stakepark and avoids significant long-term impacts to it. This assumes that there is no temporary bridge, which would have an impact and this will be discussed later in the meeting.

Jeff emphasized that all the replacement alternatives can avoid access closures to Portland Rescue Mission. He said the retrofit would block their client access for an estimated two to three months during construction, which is considered a significant impact within the environmental justice criterion.

Jeff showed the view of the White Stag sign for the short span alternative. The views of the sign would not be affected unless the vertical lift option is chosen down the line. He reminded everyone that the specific type of bridge or liftspan is not being decided now.

- Art Graves: Is the height of the bridge the same for the short span and long span?
    - Steve: Yes, the deck elevation is similar to where it is today. The Couch Connection alternative would require a little more elevation to connect to the realigned 'S' curve but still be comparable to the existing bridge.
    - Jeff: Isn't the vertical clearance of the long span a bit greater than the short span?
    - Steve: Yes, from a vertical clearances standpoint, even though the top of bridge deck elevation is the same, there would be more clearance because the bridge structural system is primarily above the deck. I'll discuss clearances further when I go over the long span graphics.

Steve moved on to the replacement long span alternative. He noted that the key difference for this alternative is that the bridge would be able to span from the piers in the river to Naito Parkway on the west side, and to about 2nd Ave on the east side without additional columns in between. In order to accomplish this, an above-deck structural members are required. Steve noted that the above-deck structure could incorporate arches like the Fremont Bridge or cable stays like the Tilikum Bridge, for example. There are multiple types of long span bridge types that serve the purpose of eliminating columns in the GHZ.

Steve then showed that the long span option only requires one set of supports to be in the GHZ, on the far end of the east side. He reassured the group that although it might seem like a brand-new option, the engineering team has been studying it for a while and that the CTF was briefed about it in February. He added that the rendering provided for the cable stayed option showed the columns being built between the freeways on the east side, but the location is being re-examined.

- Fred: Would Pacific Coast Fruit be less impacted by the long span?
    - Steve: Possibly, but we can't say that for sure yet. The soil improvement techniques will be different for each alternative, and more analysis needs to be done before we can definitely say that the long span will result in a smaller impact. There is a chance, though.

- Ed: Steve emphasized that the cable stayed design option would require a pylon, possibly located in between the freeway interchange. That would be extremely hard to build. Maybe it could be moved to the east? I think whether or not this is possible would be a big factor in deciding on the long span or not.
    - Steve: The engineering team just recently found that it is possible to move the east tower, or pylon to the east. It can be built east of the railroad and closer to The Yard building.
- Art: Could you speak to the cost difference between these long span design options?
    - Steve: I would say, on the surface, the cable stayed is slightly more expensive than the tied arch; but please remember that the long span alternative is offsetting the cost of drilling into the GHZ, so it would still be cheaper than the other alternatives overall. The cost difference really comes down to construction techniques, the specific impacts to the GHZ and other features, and construction/impacts to the freeways.
- Susan: How much more expensive? Because those arches are hard to see through.
    - Steve: That would be determined during the Type Selection Phase, if this alternative is selected as the Preferred Alternative. Also keep in mind that these are early renderings and not quite true to life yet. And the view you'll most often see is probably under the bridge on the waterfront.
- Bill: Would it be an option to add one support into the GHZ in order to have two smaller arches?
    - Steve: Yes, we could look at that during Type Selection, if the Long span alternative is selected as the Preferred Alternative, but there will be tradeoffs. Adding another support in the GHZ would add cost.

Steve moved to the next slide showing the view from Waterfront Park. He noted how much extra space there is under the bridge without the need for supports in that area. The long span also allows the depth of the bridge deck to be minimized, which allows for more vertical clearance under the bridge. Another rendering showed the same view but with the cable stayed option. That would require two columns in the park, but still much fewer than the existing bridge, and still less than the Short Span alternative in Waterfront Park.

Jeff reiterated that the long span option originated from the desire to avoid the risk of having supports in the GHZ, but there are other benefits such as more space in Waterfront Park. This also provides a crime reduction and personal safety benefit because it enhances 'natural surveillance' by providing more open sightlines. He noted that the long span also has a shorter duration of closures for the Esplanade by about eight months compared to the retrofit and a full year shorter compared to the other replacements. The long span has a natural resource habitat advantage because it requires fewer supports and construction in the water.

Next, Jeff showed some views of the White Stag sign. Separate renderings showed the view from the north and south side of the bridge for both the arch design option and the cable stayed option. The south side of the bridge would have more impact because the arches or cables would be between the viewer and the sign. Views from the north side would not be impacted. Drivers would have a "dynamic view" because it would be intermittently disrupted, but not fully obscured. On the Esplanade there is a current 'peek a boo' view of the sign that would be slightly interrupted by the long span.

Jeff also reminded the group that the visual and aesthetics criteria had two main points, existing views and new visual opportunities. He said the long span scores the lowest on impacts to existing views but the highest for potential to create new visual experiences.

- Susan: All of the renderings look to the west. Is there an impact to the east?
    - Jeff: Do you mean to a historic resource on the east side?
    - Susan: Not necessarily, just curious what it looks like looking east.
    - Jeff: We only showed the views to the west because the primary concern raised by the CTF at the last meeting was impacts on the views of the sign, but you can see a little bit of the impacts to the east side on slide 35.
    - Steve: More graphics are being developed as the design progresses too.
- Bill: Could you show the oblique downstream view of the cable stayed bridge again? For some reason, I thought there was only one cable-stayed bridge on the east side.

Allison moved the committee on for the sake of time.

Steve moved on to the last alternative, replacement with a Couch extension. Steve said the only differences with this option and the short span replacement are on the east side. This bridge would have even more supports in the GHZ than the retrofit because of the extra supports needed for the additional bridge structure smoothing out the current 'S' curve on Couch Street. He noted that the amount of extra supports needed is almost cost prohibitive. He added that the team looked at a long span option with the Couch extension but it wasn't feasible and it would create a much more visual impairment to the Yard building.

He showed the view from Waterfront Park and noted it is the same as the short span.

He showed the view from 2nd Avenue on the east side and noted that the bridge width is a little narrower on Couch because of the distance between buildings.

Jeff shared that the visual aesthetics team noted that the Couch extension would eliminate a public open space just north of The Yard building. He also shared a comment from Peter Finley Fry about how the 'S' curve is considered a characteristic urban design view, acting as a unique gateway to downtown, that the Couch extension would eliminate.

Jeff also mentioned that the Couch extension would affect access to some commercial and residential building enrances.

Allison acknowledged that there were 15 minutes left in the meeting and traffic options had yet to be discussed. She confirmed that the CTF would not be voting on a PA until their June 15th meeting.

- Bill: Concerning the length of time of construction, is the time solely dependent on the in-water work periods, or, if the contractor were incentivized appropriately, could significant construction time be saved?
    - Steve: It's driven by in-water work periods. There could be some changes or accelerations based on contractor innovations, but I don't expect the schedule to change much due the significant amount of regulated in-water work needed.

TRAFFIC OPTIONS DURING CONSTRUCTION

Steve briefly reviewed the alternatives scoring results again emphasizing the impact of the temporary bridge. He said the long span with a full closure got the highest rating. He also reviewed the cost differences.

Steve noted that the temporary bridge would partially destroy the Skatepark during construction, but would be rebuilt. He noted some of the main impacts of a temporary bridge including far more in-water work, greater impacts to trees, impacts to the Ankeny pump station, additional work and cost to build temporary piers, especially around the freeway and railroad tracks. He reminded the group that it would cost an additional $90 million and add up to two years of construction time to the project.

CTF DISCUSSION

- Fred: Can Steve explain the sensitivity analysis that was applied to see if differences in the weighting factors changes the results?
    - Steve: Sensitivity tests were done for all criteria, and the same conclusion was reached each time. The team maxed out the weightings for each criterion and ran the scores for each alternative and each time the results were very similar to the scores shared today. In other words, the Long Span with No Temporary bridge option rated highest in every sensitivity test.
- Cameron: Is there any difference between the height or lift span length of the different options in terms of marine traffic?
    - Steve: Not very much, and the same horizontal and vertical criteria would be applied to every alternative for the final bridge construction.
    - Cameron: Other boaters are concerned that it will be a narrower span.
    - Steve: No, the horizontal clearance will not be narrower than today, and the vertical clearance would be at least 147' over the Ordinary High Water elevation.

- Bill: Would the temporary bridge survive a seismic event?
    - Steve: No, it would not be built to those standards.
- Susan: How much say would we have on those long span support arch design types?
    - Steve: Good question, that's what we want to discuss next. But as a precursor, no matter what option goes forward, the CTF will be making recommendations around specific type and locations of whatever the Preferred Alternative is, and this will come later during the Type Selection phase.
- Bill: A temporary bridge is probably not needed if COVID-19 remains a factor.
- Jackie: Can you send an email soliciting questions or comments so we could just reply if we have a question for the team members?
    - Heather: Yes, we will do that.
- Fred: If questions are submitted, please summarize them as part of our next meeting's packet.
    - Allison: Great points Jackie and Fred!
- Jackie: Are you sending out an invite for June? I don't have one on my calendar. Thanks.
    - Heather: Yes, we will send out an invitation if you don't have one already.
- Cameron: I'm guessing that the design is all built in Sketchup, I'm wondering if I can get access to those files to see different views on my own. I understand if there are proprietary concerns with that.
    - Heather: That's a good question. Let me check with team and get back to you.

NEXT STEPS

Heather reviewed the project's upcoming meetings and milestones. She reiterated that the CTF would meet on June 15th and if the members have final questions in order to make a decision on the PA they should email the project team. She said a calendar invite would be sent out the next day.

Mike acknowledged that this was the 15th meeting of this phase and thanked members for their time. He let the members know what their options were for continuing with the task force or giving up their seat if needed. He reminded members that the Bridge Type Selection would begin in the fall, followed by the Final Design Phase, and then construction. September will be the last chance for the CTF to revise their recommendations after hearing the public's input during August and noted that after this meeting would be a logical time for members to move on from the CTF if they wanted to.

He assured the group that they didn't need to commit now and that the project team would follow up later in the summer. He thanked the members for their commitment thus far.

ADJOURN

Allison closed the discussion and told the group that if they have further questions that will be helpful in their decision on a PA they should reach out to the project team as soon as possible so they can come

prepared to the June meeting. She noted that the June meeting will have a small presentation so that most of the meeting is reserved for member discussion.