



French Prairie Bridge Project Task Force Meeting #5

**Meeting Summary
Tuesday, June 4, 2019
6:00 – 8:00 PM**

Wilsonville City Hall
29799 SW Town Center Loop E,
Wilsonville, OR
Willamette River Rooms I & II

Members Present

Jeremy Appt, Heidi Bell, Steve Benson, Steven Chinn, Andrew Harvey, Tony Holt, Pete Ihrig, Charlotte Lehan, Douglas Muench, Leann Scotch, Simon Springall, Susie Stevens, Steven Van Wechel, Gary Wappes

Members Unable to Attend

Blake Arnold, Jim Bernard, Karen Houston, Samara Phelps, Patricia Rehberg, Michelle Ripple, Brian Sherrard, Ryan Sparks, David Stead,

Project Management Team and Staff

Zach Weigel, City of Wilsonville; Bob Goodrich, OBEC Consulting Engineers; Karen Buehrig, Clackamas County; Anne Pressentin, EnviroIssues; Max Farbman, EnviroIssues

Conversation is summarized by agenda item below.

Welcome and Meeting Purpose

City Councilor Susie Stevens opened the meeting and began introductions. Anne Pressentin (EnviroIssues) then reviewed the meeting objectives which included:

- Reviewing the process of the project and the selection process for the proposed bridge types to date.
- Presenting additional findings and analysis about the remaining two bridge types under consideration.
- Gathering comments on this additional analysis from the Task Force.
- Receiving public comments.
- Developing a recommendation to send to the City Council and the Board of County Commissioners on a preferred bridge type for the project.

Project Review

Zach Weigel (City of Wilsonville) gave a brief history of the project. He reminded the Task Force of the threefold purpose of the project:

- Encourage healthy communities. By connecting the Ice Age Tonquin trail to the Willamette

Scenic Bikeway, the French Prairie Bridge will encourage active transportation in the community and region which can improve the health of the community.

- Provide an emergency connection across the Willamette River that is an alternative to the I-5 Boone Bridge for first and second responders.
- Create a tourist attraction that would positively impact the Wilsonville economy.

He then detailed the process of the project to date, noting that the project began with three key questions:

- What is the preferred location of the bridge?
- What is the preferred bridge type?
- What is the cost estimate for the bridge?

Zach described how the Task Force, along with the Wilsonville City Council and the Clackamas County Board of Commissioners, answered the first question about a year ago by unanimously selecting an alignment for the bridge. The Task Force had also been working on answering the second question and would finalize that at this meeting. They had previously considered five bridge types, which they narrowed down to two bridge types – the suspension bridge and the cable-stayed bridge – at their previous meeting in December 2018. Zach noted that at the end of this meeting the project team planned for the Task Force to make a recommendation on a final bridge type to City Council and the Board of County Commissioners. To answer the final question, Zach stated that Bob Goodrich (OBEC Consulting Engineers) would present some initial cost ranges for the bridge types at this meeting and following this meeting, OBEC would conduct further analysis on the selected bridge type to develop a more detailed cost estimate.

Zach closed by reminding the Task Force of the project schedule, saying that they were approaching the end of this phase of the project and were hoping to come away from this meeting with a recommendation on a preferred bridge type to take to the City Council and the Board of County Commissioners.

Bridge Type Refinement

Bob Goodrich began his presentation with a reminder to the Task Force of the bridge selection criteria and a description of the two remaining bridge types under consideration. He then presented the results of additional research on each of these bridge types and presented the findings from an online survey conducted in April and May 2019 to get public input on the bridge types. Throughout his presentation he also took questions from Task Force members.

Bridge Selection Criteria

Bob gave the Task Force a recap of the criteria they had used to narrow the bridge types under consideration to the cable-stayed and suspension bridge types. These included:

- **Economics:** Which bridge would be the most cost-effective.
- **Constructability:** Which bridge would be the easiest to build.
- **Site impacts:** Which bridge would have the lowest impact to the Willamette River.
- **Aesthetics:** Which bridge looked the nicest and was the most appropriate for its location.

Cable-Stayed Bridge Type

Bob showed the Task Force members diagrams and renderings of the cable-stayed bridge type. He reminded them that the cable-stayed bridge type was selected for additional consideration because – given that it would not have piers in the water – it minimizes impacts to the river. It also reduces the

potential for the project to be held up by permitting processes necessary to install piers in the river.

Bob presented additional information that OBEC had gathered about the cable-stayed bridge type including:

- The bridge would need a tower height of 180 to 200 feet.
- The clearance of the bridge would match the existing navigational channel.
- The bridge would have a sub-optimal span configuration. Because of the specifics of the site location that result in short back spans, those stay cables would be steeper than the main span resulting in unbalanced forces on the towers and other foundations. This would create tension on the bridge deck which would require extra materials to resolve leading to extra costs.
- A photo of the Tillikum Crossing was shown to demonstrate a balanced configuration for a cable-stayed bridge that results in better balanced tower forces
- A pier in the marina parking lot, that at one point was considered to be unnecessary, is required because of the sub-optimal configuration. This would result in the loss of one parking space at the marina.

Questions from the Task Force on the Cable-Stayed Bridge Type

- A member asked what would make the configuration of the bridge optimal.
 - Bob explained that the site would need to accommodate longer back spans to balance the stay cable arrangement.
- The member followed up, asking if the bridge was safe even in this configuration.
 - Bob assured him that the bridge would be perfectly safe, it would just be more expensive and complicated to design and construct.
- A member asked if the pylons of the bridge could be moved closer together to improve the configuration.
 - Bob responded that this was technically possible but would bring the pylons within a FEMA floodway and a regulated work area in the river which would make permitting and construction much more challenging and expensive.
- A member asked how the configuration would affect the ability of the bridge to withstand an earthquake.
 - Bob stated that the configuration would not impact the seismic performance of the bridge.
- A member asked if they could improve the configuration of the bridge by having fewer cables on the back span.
 - Bob explained that this would not solve the problem because the force exerted by each cable would increase if the number of cables was decreased.

Suspension Bridge Type

Bob showed the Task Force diagrams and renderings of the suspension bridge type and reminded them that the suspension bridge type has similar advantages and disadvantages of the cable-stayed bridge type. He then presented the additional findings for the bridge type. These included:

- The suspension bridge could have a shorter pylon than the cable-stayed bridge.
- The suspension bridge would be more efficient from an engineering standpoint than the cable-stayed bridge.
- No additional impacts to the river were identified for the suspension bridge.

Questions from the Task Force on the Suspension Bridge Type

- A member asked if the pylon height of the suspension bridge would be 80 feet or 100 feet.

- Bob explained that the height would be 80 feet and that the inconsistency in the report would be addressed.
- A member asked if the issue of imbalance with the cable-stayed bridge would be an issue with the suspension bridge.
 - Bob confirmed that it would not be an issue.
- A member asked if the suspension bridge would require a deeper foundation than the cable-stayed bridge.
 - Bob said they did not yet know because this would be dictated by the soil quality, but the two bridge types would likely have similar foundation sizes and depths.
- A member asked how the space on the bridge deck would be apportioned to pedestrians and cyclists.
 - Bob said that the bridge deck would be approximately 17 feet wide, but they have not yet determined how it will be apportioned to different modes. Zach noted that this is something they will determine in the preliminary design phase.

Cost Ranges of the Bridge Types

Bob provided estimated cost ranges for the bridge types. OBEC calculated these by creating a list of the major elements of each bridge type, and pricing out these elements. Each bridge type had a “low-range” construction cost which included the major bridge elements, \$1 million for ancillary elements (such as streetlights, traffic signals, etc.), and a 20 percent “construction contingency.” The construction contingency captures unknowns that could increase the cost of the bridge as the design progresses. The “high-range” estimate includes the major bridge elements, \$2 million for ancillary items, a 40 percent construction contingency, and \$5 million for ground improvements that may be required to address poor soils supporting the bridge that could be vulnerable during an earthquake.

The cost range for the cable-stayed bridge was \$39.1 million to \$51.6 million and the range for the suspension bridge was \$37.1 million to \$49.3 million. Bob noted that this is not a big difference in cost given the 20 to 40 percent contingency cost included in each.

Questions from the Task Force on Cost Ranges

- A member asked if the high-range estimate was more realistic.
 - Bob explained that the cost would likely be closer to the high-range. Zach clarified that there is still a lot more work to be done to determine the cost.
- A member asked if they had included construction costs in the cost range.
 - Bob confirmed that they had.
- A member asked if there was a difference in the construction timeline between the bridge types.
 - Bob said that they did not look at this in detail, but it would take two to three years to construct either bridge type.
- A member asked if there was a difference in the height above the deck of the pylons on the north and south bank for either bridge type.
 - Bob explained that both pylons for both bridge types would be the same height above the deck.
- A member asked if the team had figured out how to pay for the bridge yet.
 - Zach responded that determining how to pay for the bridge will come as a follow-up to the current work. They need to first narrow down the bridge type and get a more detailed cost range, and then they can study how to fund the bridge.
- A member asked Bob to rate the two bridge types against each other in terms of their risks and

benefits and state if one seemed better than the other from a technical point of view.

- Bob pointed out that the two bridge types generally have the same risks and benefits. He added that the sub-optimal configuration for the cable-stayed bridge is the main differentiator between the two. This configuration adds more cost, uncertainty, and some additional complexities to the design and construction.
- Zach followed up saying that another key difference between the bridge types is that the cable-stayed bridge will take up an extra space in the marina parking lot while the suspension bridge will not. Other than that, he stated, the decision mostly comes down to aesthetics.
- Another member asked which bridge would be more seismically resilient.
 - Bob stated that they would be designed to be equally resilient.
- A member asked how far the French Prairie Bridge would be from adjacent railroad bridge.
 - Bob noted that it would be 50 to 100 feet away – far enough that if the railroad bridge collapses in an earthquake it will not damage the new bridge.

Community Survey

Bob then presented the results of a community survey to the Task Force. The online survey was meant to gauge public opinion on which bridge type was better for the project. It was available to the public from April 17 to May 8, 2019, and received 210 responses.

One section of the survey asked respondents to rate the suspension bridge type and the cable-stayed bridge type on their ability to fulfill the following criteria:

- The bridge fits in with the natural environment.
 - The majority of respondents thought either bridge type would fit well, but slightly more respondents thought the suspension bridge would fit with the natural environment.
- The bridge provides a good user experience.
 - The majority of respondents thought either bridge type would provide a good user experience. Again, slightly more thought the suspension bridge would fulfill this criterion.
- The bridge will be a memorable landmark and provide positive economic benefits.
 - The majority of respondents thought either bridge type would serve this function. Again, slightly more stated that the suspension bridge would serve this function.

Bob noted that respondents were also asked to rank the importance of different comparison criteria to them. Three criteria were rated as having high importance:

- Having the bridge fit with the natural setting.
- Having the bridge provide a memorable landmark.
- The bridge's height.

Two criteria were rated as having a medium level of importance:

- The bridge's effect on tourism.
- The bridge's effect on parking at the adjacent marina.

A member asked where survey respondents were from and Anne noted that 65 percent were from the 97070 zip code and half were from neighborhoods other than those provided as options on the survey. The neighborhoods provided as options were Charbonneau, Villebois, Wilsonville Meadows, Canby, Old Town, and Daydream Ranch.

Bob then presented the results of a question asking the public to compare the two bridges type on which better fit the following criteria:

- Fits the natural setting
 - Respondents generally thought that the suspension bridge type better fit the natural setting.
- Tourism promotion
 - Respondents were generally neutral on which bridge type would better promote tourism.
- Marina parking impacts
 - Respondents were generally neutral on which bridge type would have less impact on marina parking.
- Providing a memorable landmark
 - Respondents generally thought that the cable-stayed bridge type would provide a more memorable landmark.
- Bridge design is right-sized
 - Respondents generally thought that the suspension bridge type was a better size for the proposed location.

Bob summarized the results of the closed-ended questions of the survey, noting that the survey responses did not indicate a clear direction on which bridge type was preferred by the public.

The final question of the survey was an open-ended question asking respondents if there were any other considerations they thought were important for the project team to think about. Bob highlighted the key takeaways from the open-ended responses which were that:

- Both bridges could fulfill the aesthetic needs of the project.
- There is a slight preference towards the suspension bridge.
- There is a preference towards selecting the lower cost bridge type.
- There is mixed opinion about the current need for the project.

Group Discussion

Following Bob's presentation, each Task Force member shared their thoughts on the decision between the two bridge types and stated which bridge type they preferred.

Most of the Task Force members preferred the suspension bridge type for the following reasons:

- They thought the suspension bridge would better blend in with the surroundings and not detract from the natural beauty of the river.
- They were concerned with the sub-optimal configuration of the cable-stayed bridge.
- They felt the suspension bridge was a classic design that would not go out of style.
- They disliked the height and lack of symmetry of the cable-stayed bridge.

Some of the Task Force members preferred the cable-stayed bridge for the following reasons:

- They thought the cable-stayed bridge would stand out and serve as a more memorable landmark.
- They thought the cable-stayed bridge would attract more tourists and have a larger economic impact.

While all Task Force members ultimately expressed a preference for one bridge over the other, the

majority stated that they thought the two bridges were very similar and would be content with either one.

Public Comment

One member of the public, John Budiao, came to the meeting to provide comment. He stated that he preferred the suspension bridge type because he thought it was a more iconic bridge type and would fit better with the local surroundings and the history of the area.

Recommendation for City Council and Board of County Commissioners

After every Task Force member had shared their opinion, the group observed that most members preferred the suspension bridge and some preferred the cable-stayed bridge. Members reflected that having a unanimous recommendation to City Council would make a stronger statement. The Task Force then decided to unanimously recommend the suspension bridge.

Next Steps

A Task Force member asked what the next steps for the project were. Zach explained that they have a little money left to start field work and then they need to work on securing more funding to move the project forward.

Closing Comments

Councilor Lehan thanked the Task Force and asked the project team if the Task Force would be involved with future decisions on the project. Zach explained that this was the last official Task Force meeting but the project team would explore involving the group in future decisions.