



INFORMATIONAL MEMORANDUM

TO: Transportation and Infrastructure Services Committee
FROM: Hari Ponnekanti, Public Works Director/City Engineer
BY: Adam Cox, Transportation Program Manager
CC: Mayor Allan Ekberg
DATE: March 19, 2021
SUBJECT: 42nd Ave South Bridge Replacement
Project No. 91810404
Project Update on 30% Design

ISSUE

Information regarding the 42nd Ave South Bridge Replacement Project.

BACKGROUND

The 42nd Ave South Bridge is an important arterial that crosses the Duwamish River and connects the City of Tukwila to surrounding communities and resources. The bridge serves over 10,000 vehicles daily, as well as pedestrians and cyclists connecting to the Green River Trail, the Tukwila Community Center, the Tukwila Park & Ride, and the Allentown neighborhood. It was built in 1949 and designed to last 50 years; it has exceeded its original design life by over 20 years.

In August 2017, the City received the 42nd Ave S Bridge Structural Assessment by TranTech Engineering LLC, which determined that, "...the existing bridge is both structurally deficient and functionally obsolete." It also revealed that the bridge has a sufficiency rating of 7.56 out of 100, which forced the City to implement vehicle load restrictions, reduced speed limits of 15 mph, and limited passage of one truck at a time - regulations that were implemented to reduce structural impacts and increase safety until the bridge can be replaced.

The City applied for state funding to replace the bridge in 2017 and 2019 through federally supported grants programs but was unsuccessful in these requests.

In 2020, the City reached out to state and federal officials, who recommended that the City may be more successful in future funding requests by moving forward with the design of the 42nd Ave South Bridge. Therefore, the City put forward a request for qualifications for design. In November 2020, the City Council approved \$1.078 million in funding for a 30% design for the 42nd Ave S Bridge Replacement. Included in this project is extensive community outreach to the Allentown neighborhood and other impacted communities, which is just in the beginning phase.

At this point in time, the bridge is not effectively supporting the capacity and load requirements needed to be efficient, and its poor structural integrity makes it a hazard. If one or more of the beams were impacted by a large seismic event or vehicle collision, it could cause the bridge to collapse into the river.

ANALYSIS

The City's goal is to build a new bridge that will support the community for the next 75+ years, as it is the primary route for the Allentown neighborhood. TranTech Engineering LLC is developing preliminary designs for the 42nd Ave S Bridge Replacement, which will give the City multiple design/material options for the bridge replacement. The options will be presented to the City in the

Type, Size, and Location (TS&L) report. The TS&L report options will implement variables such as increasing weight capacity for vehicles, wider lanes, and improved walkways for pedestrian safety.

The City is working with a community engagement consultant, EnviroIssues, who was hired by TranTech Engineering LLC to facilitate interviews of stakeholders and residents who would utilize the new structure. The City is currently in the process of embarking on those interviews and the Public Works Director is scheduling a stakeholder meeting with a small group of Allentown residents in the coming weeks.

The City is also planning to have a virtual open house in late April to give Allentown residents an update on the project and gather input regarding the structure. The Department is working with the design team to disseminate information regarding the 42nd Ave South Bridge Replacement Project and increase communication strategies with the public.

Continuing updates are being shared through the City's website and the Hazelnut. The 42nd Ave S Bridge inspection updates were shared through a postcard mailing and a Hazelnut article in July of 2020. The Public Overview attachment provides a summary and schedule of our public outreach strategy.

FISCAL IMPACT

The 30% design contract with TranTech Engineering LLC for \$1,078,487.00 was approved by Council on November 2, 2020. The 30% design is scheduled to be completed by end of 2021.

The total project cost for the 42nd Ave South Bridge Replacement Project is estimated to be \$21.5 million. The Department is actively applying for local, state, and federal grants to supplement the remaining funding required to finalize the 42nd Ave South Bridge Replacement Project. Recent applications have included:

1. Washington House Transportation Budget Request – 2021 (Rep. Hackney)
2. 2021 Washington Senate Democratic Caucus Transportation Budget Form (Sen. Hasegawa)
3. Local Bridge Program Grant (formally known as BRAC)
4. Office of Senator Patty Murray Funding Solicitation
5. National League of Cities Budget Request

The City continues to explore other possible funding sources to accelerate the replacement of the 42nd Ave South Bridge. The Department is currently working on applications for the following granting agencies:

1. Federal grant programs (BUILD grant)
2. State grant programs, including Public Works Board
3. Transportation Improvement Board (TIB)
4. Washington Freight Mobility Strategic Investment Board (FMSIB)
5. Puget Sound Regional Council (PSRC)
6. Transportation, Housing and Urban Development (THUD)

RECOMMENDATION

Discussion only.

Attachments: Photos

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[TranTech Structural Assessment Summary Link](#)

Public Outreach Overview



Photograph 1: Overall view of the in-depth inspection.



Photograph 2: Crack in the concrete pier on the northside of the river



Photograph 3: Frozen bearings on the bridge not allowing bridge to adjust for temperature



Photograph 4: Washed away embankment material on the north pier



Photograph 5: Typical area of rust on critical areas of the bridge



Photograph 6: Area of pack rust on the diagonal bridge beam



Photograph 7: Typical accumulation of pigeon guano causing corrosion



Photograph 8: Impact damage due to truck collision on the south approach

CITY OF TUKWILA CAPITAL PROJECT SUMMARY

2021 to 2026

PROJECT: 42nd Ave S Bridge Replacement

Project No. 91810404

DESCRIPTION: Design and construct a replacement structure for the existing 42nd Ave S Bridge near the Tukwila Community Center. Council approved 30% design with City funding of \$1M in 2020, remaining scheduled in 2022.

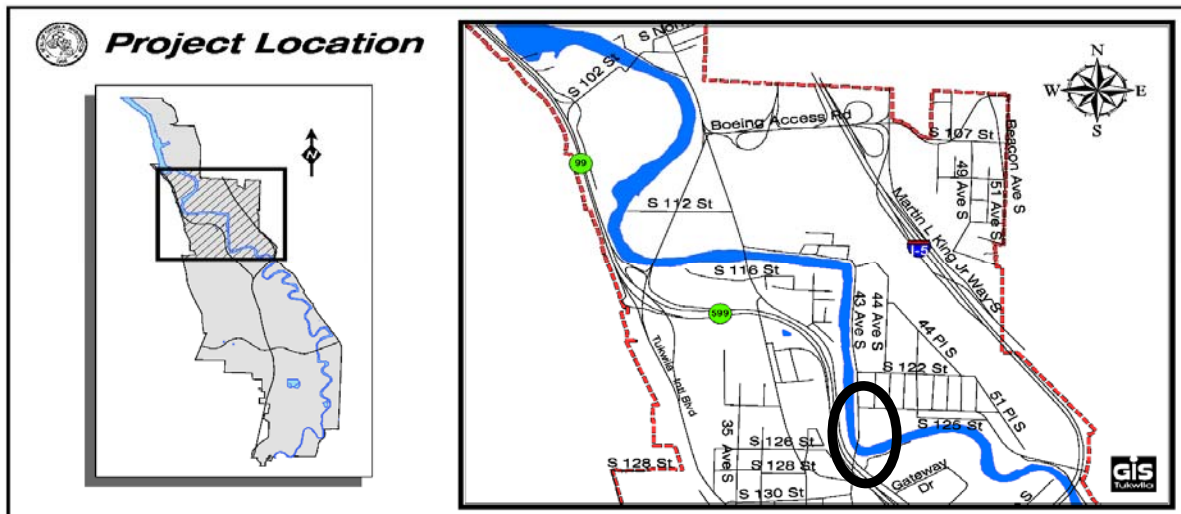
JUSTIFICATION: The current bridge has a sufficiency rating of 7.6 (out of 100), is load restricted for AASHTO Type 3 trucks and is structurally deficient. Truck speed was reduced to 15 mph in 2018.

STATUS: In 2017 and 2019, Bridge Replacement Advisory Committee (BRAC) funding was submitted, but not awarded. Staff will apply for future BRAC funding during the next call. Applying for STP funding in 2020 for \$1.5m for design.

MAINT. IMPACT: New bridge.

COMMENT: STP funding has 13.5% match requirement. BRAC funding would be at 80% match for up to \$12 million. Project partners may include FMSIB & BNSF Railroad as they have over 1,800 trips a day on the 42nd Ave S Bridge and it is the only ingress/egress available for their intermodal yard. Also State TIB for \$3M.

FINANCIAL (in \$000's)	Through Estimated									TOTAL
	2019	2020	2021	2022	2023	2024	2025	2026	BEYOND	
EXPENSES										
Design	19	200	878		1,252					2,349
Land (R/W)					30					30
Const. Mgmt.					250	1,650	1,650			3,550
Construction						7,800	7,800			15,600
TOTAL EXPENSES	19	200	878	0	1,532	9,450	9,450	0	0	21,529
FUND SOURCES										
Awarded Grant										0
Proposed BRAC Grant						6,000	6,000			12,000
Proposed STP Grant						1,000	1,000			2,000
Proposed TIB						1,500	1,500			3,000
Proposed FMSIB							500			500
Solid Waste Utility Tax			650	700	700	710	720	549		4,029
City Oper. Revenue	19	200	228	(700)	832	240	(270)	(549)	0	0
TOTAL SOURCES	19	200	878	0	1,532	9,450	9,450	0	0	21,529





42nd Ave S Bridge Replacement Project

February 2021

Project Overview

The 42nd Ave S Bridge is an important arterial that crosses the Duwamish River and connects the City of Tukwila to surrounding communities and resources. The bridge, built in 1949, is reaching the end of its life span and needs to be replaced. In April 2017, the existing bridge received a sufficiency rating of 7.56 out of 100 and is considered Structurally Deficient and Functionally Obsolete by the Federal Highway Administration. The City is exploring options for a new bridge design and will be gathering feedback from the public on a variety of project features.



Existing 42nd Ave S Bridge

What's Happening Now?

Crews are onsite conducting fieldwork activities that will inform engineers of existing site conditions so they can begin preparing preliminary design plans. We have begun engaging surrounding stakeholders and the public to identify design options and project opportunities.

Project Timeline

The project is currently in the design phase which will continue through 2024.

Sign up for project updates:

<http://TukwilaWA.gov/42nd>

Early 2021

- Stakeholder interviews
- Submit federal funding applications

Spring 2021

- Online Open House
- Type/Size/ Location Report

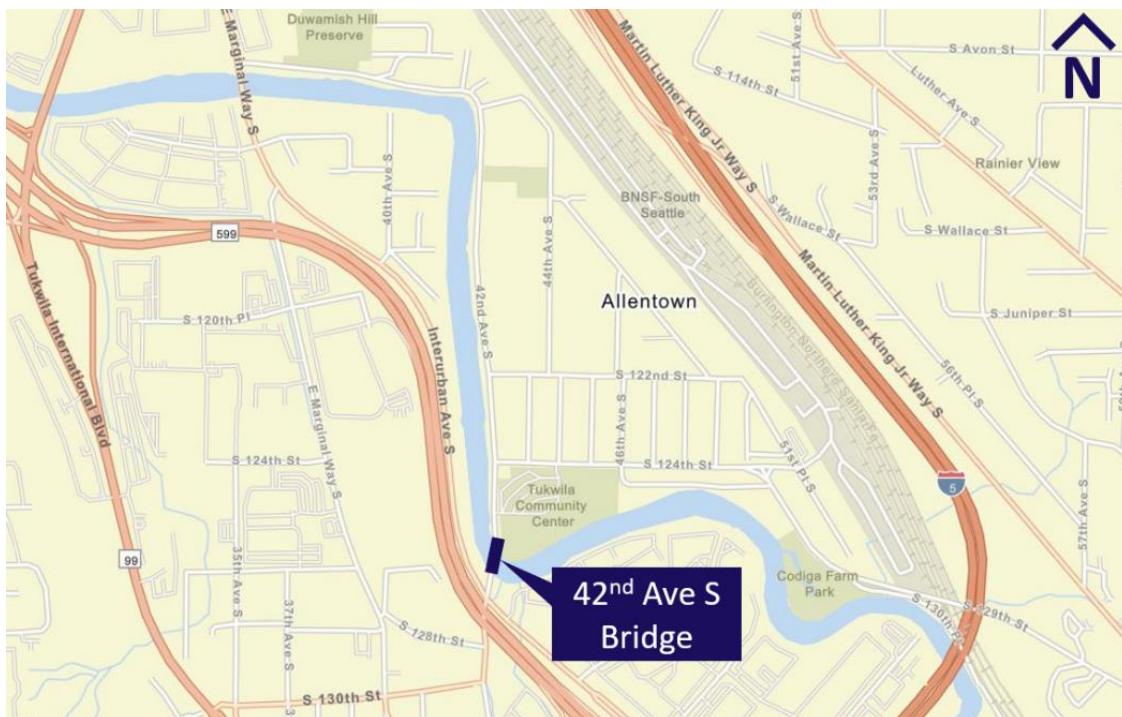
Summer 2021

- Develop project alternatives

Late Fall 2021

- 30% Design
- Virtual meeting presentations

Project Area Map



Project Contact

Adam Cox, Project Manager

(206) 431-2446 Adam.Cox@TukwilaWa.gov

42nd Ave S Bridge Replacement Project



Stakeholder Interview Summary

February 12, 2021

Purpose/Goals

The first phase of community engagement for the 42nd Ave S Bridge project is focusing on building relationships with key stakeholders, establishing local avenues for project communications, and ensuring outreach plans are in alignment with stakeholder needs. Outreach during this phase includes interviews and briefings with key community stakeholders to gather initial feedback about the project, potential solutions, decision criteria and tradeoffs and outreach approach.

The goal of the first round of stakeholder interviews is to:

- Build relationships with key stakeholders to facilitate continued coordination through the life of the project and future coordination with the City of Tukwila on other projects.
- Share initial information about the project need and timeline.
- Provide an opportunity to stakeholders to share their project needs and concerns.
- Gather feedback on local avenues for project communications and engagement and how stakeholders would like to stay informed throughout the project.

Stakeholders Interviewed

February 1, 2021 - BNSF Intermodal: Johan Hellman, Benjamin Marx, Megan Shea, Cheryl Townlian

February 2, 2021 - Tukwila Community Center: John Dunn

February 5, 2021 - Baker Commodities / Seattle Southside Chamber of Commerce: Mike Bulleri

Stakeholders reached out to but not interviewed

Seattle Southside Chamber of Commerce: Andrea Reay

Green River Trail: Kris Kelly and Matt Austin

Interview Approach

Stakeholders were identified based on their proximity to and reliance on the existing 42nd Ave S bridge, and services provided to the Allentown neighborhood. Once stakeholders were identified, the community engagement team reached out by email to schedule times to meet virtually on Zoom. The interviews were staffed by the City of Tukwila Project Manager, technical team staff, and the community engagement team.

At the interview, the team shared a project overview including project purpose, community engagement and design schedules, and answered any outstanding questions before jumping into interview questions. Below is a list of interview questions, shared ahead of meetings, to help guide the conversation. Depending on the stakeholder, not all questions were asked, and some clarifying questions not listed below were asked.

Interview questions (sent prior to stakeholder interview)

Experience using the bridge

- Before we get started, are there any questions you have about the project that you would like to make sure we cover?
- What methods of travel do you use that take you over the bridge?
- What has been your experience crossing the bridge?
- What kind of issues, if any, do you and your [membership/students/staff/customers/etc.] experience when using the bridge?

Future use of the bridge

- What ideas do you have for making the bridge a welcoming gateway into the Tukwila or Allentown community?

- Keeping in mind federal funding limitations, what do you hope the City of Tukwila prioritizes and considers when developing design and construction concepts for the bridge?

Engagement

- Due to COVID-19, we are unable to meet with folks in person and hold an in-person open house. As an alternative we plan to host a virtual presentation (if we can) and an online open house for project neighbors and bridge users. We're planning to engage businesses, community organizations and other stakeholders via phone conversations and virtual meetings to share design and construction concepts. Are there other ways you would suggest the City gather feedback from the community?
- What is the best way for us to keep you and your [business/organization] informed and engaged throughout the project?
- Are there other specific community groups that you suggest we also talk to?

Conclusion and next steps

- Do you have any remaining questions about the project that we didn't cover?
- Do you have any additional thoughts that you want to make sure we capture?

What We Heard

Current bridge uses

Several project stakeholders identified the 42nd Ave S Bridge as critical infrastructure that supports the transportation options of the surrounding area. The bridge is a primary corridor into the Allentown neighborhood. For the freight and industrial community, the bridge is a critical link in the freight network on a local scale and regional scale as goods and products are shipped and moved cross-country to freight hubs. Baker Commodities and third-party truck companies use the 42nd Ave S Bridge to access the Allentown neighborhood-area when doing business.

Design opportunities

BNSF requests that the new bridge be designed to handle current and future load capacity as well as incorporate the ability to support double-trailer trucks. Baker Commodities also advocates that the bridge be designed with large trailer trucks in mind. The Tukwila Community Center viewed the design of the new 42nd Ave S Bridge as an opportunity to create better cohesion between the community center, the bridge, and the Green River Trail in an effort create a welcoming gateway to the Allentown neighborhood.

Baker Commodities, BNSF, and the Tukwila Community Center all voiced concern about access during construction since the bridge closure would directly impact how people travel to and from the area.

Future communication and outreach opportunities

Several stakeholders suggested continuing to plan communications and engagement activities in a virtual setting for the foreseeable future. For minor project updates, stakeholders thought digital engagement through social media and email updates were most appropriate. Stakeholders were receptive to the idea of future briefings prior to outreach and project milestones so they are kept in the loop. Several stakeholders also offered to share project updates through in-house communication channels as well as post hard copies of project materials in their organizations' common spaces. Stakeholders provided a list of languages to consider when translating materials for engagement activities and communications. In alphabetic order, the languages identified include Amharic, Burmese, Dari, East African, Farsi, Indian languages, Nepalese, Somali, Spanish, Tigrinya, Ukrainian, and Vietnamese.

Next Steps

The community engagement team will follow-up with previously identified stakeholders (Andrea Reay, Seattle Southside Chamber of Commerce; Kris Kelly and Matthew Austin, Green River Trail) and offer another briefing opportunity. The community engagement will also begin outreach to additional stakeholders to learn more about the Allentown neighborhood and surrounding businesses. As interviews are conducted, this summary will be expanded to include their feedback. The information gathered during the stakeholder interviews will inform planning and execution of future community engagement efforts, including future online public meetings.