



**Seattle**  
Department of  
Transportation

## Thornton Creek Bridges Study

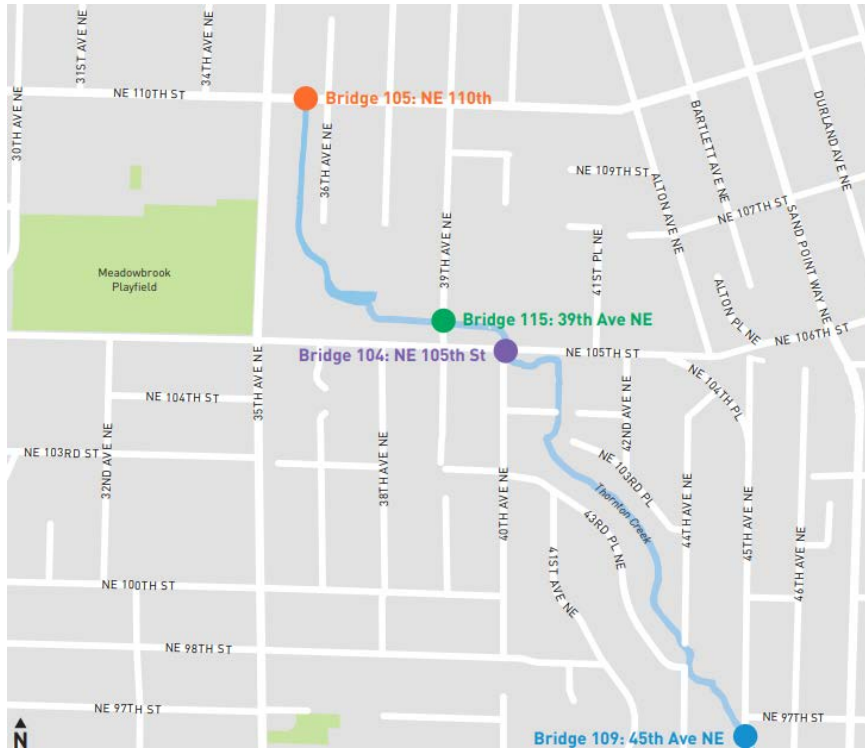
30% Design Outreach Summary

February 2020



## Introduction

The Thornton Creek Bridges Study explored rehabilitation and replacement options for 4 bridges in northeast Seattle (shown on project area map below). The bridges each carry thousands of vehicles per day across the Thornton Creek channel and are, on average, more than 65 years old.



All bridges in the city are maintained for public safety and periodically monitored. While still safe to use, these bridges are showing signs of deterioration and have been determined to be near the end of their useful life.

The primary goal of this study was to identify feasible solutions that address long-term multimodal transportation demand, such as biking, walking, driving, and riding transit.

The study was conducted as part of the 9-year Levy to Move Seattle approved by Seattle voters in 2015 and is currently funded through 30% design.

Since the spring of 2019, we've held drop-in sessions, conducted community briefings, and gathered survey responses to get feedback throughout early design. Comments and suggestions from the community informed the development of conceptual design alternatives at 30% design.

Outreach efforts from early planning to 30% design are detailed in this summary.

## Study background

Because the existing structures are functionally obsolete, feasible rehabilitation and replacement options needed to be identified to ensure the long-term use of these structures. Over an 8-month period, bridge alternatives were evaluated considering multimodal transportation needs, short- and long-term residential impacts, waterflow capacity, environmental impacts, bridge maintenance, and cost. Based upon these criteria, replacement is the most feasible option for all 4 bridges.

## Outreach at a glance

The following outreach activities were conducted to engage the community:

- Door-to-door in the project area to engage neighbors
- Mailer sent to 7,200 homes introducing the project and promoting drop-in sessions
- Email blasts with project updates
- Briefings to key community groups
- Early design drop-in sessions to share project information and collect feedback through a survey (see survey results on pages 4-7)
- Informative tabling events at local gathering spots

## Summary of drop-in sessions

### Overview

We hosted two 90-minute drop-in sessions, one on August 20 and the other on August 21, 2019, to introduce the public to the Thornton Creek Bridges Study. The sessions were held at Meadowbrook Community Center (MCC) and Saint Anne Nursing and Rehabilitation Center (Saint Anne's), respectively. To accommodate project area neighbors' varying schedules, the MCC session was held in the evening, while the Saint Anne's session was in the morning. The intent of the events was to share information about the need for the study, the project background, the bridge locations, and ways to stay informed throughout design.



*Drop-in session attendees review display boards and talk with project staff at Meadowbrook Community Center, August 20, 2019.*



## Promotion

We sent postcards to 7,200 project area addresses inviting community members to the drop-ins.

Additional promotion included announcements on the project website and emails to stakeholders and community members.

A total of 40 people attended the drop-ins: 26 at MCC and 14 at Saint Anne's.



A postcard mailer was sent to 7,200 neighbors to promote the drop-in sessions.

## Materials

Light refreshments were provided. All attendees received the project fact sheet, a printed survey, and a comment form.

Display boards included information on the following topics (see Appendix for screenshots):

- Project background
- Project purpose
- Information on each bridge
- Potential improvements
- SDOT street standards
- Ways to stay informed

## High-level feedback themes

We used a short survey to help us understand:

- How the community uses the 4 bridges (e.g., frequency, travel mode)
- Community priorities when considering bridge rehabilitation and replacement options (e.g., length of construction, impacts to private property, protecting natural resources)



Drop-in session attendees complete comment forms and survey while reviewing display boards at Meadowbrook Community Center, August 20, 2019.

- What elements are most important to consider in future bridge designs (e.g., pedestrian or biking improvements, landscaping, roadway improvements)

## Survey findings

The 23 respondents' feedback is sorted into key themes below.

### Overview

- **Bridge use (number of users):** NE 110th St Bridge (17), NE 105th St Bridge (14), 39th Ave NE Bridge (13), 45th Ave NE Bridge (9)
- **Frequency of use:** Daily (13), weekly (6), monthly (1)
- **Method of transportation:** Driving (16), walking (16), biking (8)

Respondents were asked to rank what was most important to them regarding rehabilitation and replacement options. Considerations, listed in order of importance, were:

- Protecting natural resources and the Thornton Creek channel
- Maintaining current aesthetics of each bridge location
- Impacts to private property
- Changes in traffic flow
- Length of construction
- Construction impacts (i.e., noise, dust, detours)
- Other\*

*\*Includes: Drainage, safety, relative cost of replacement versus repair, structural integrity, safe pedestrian accommodation and ADA*

We also asked people to rank bridge improvement elements that we should consider. Improvements, listed in order of importance, were:

- Pedestrian improvements (sidewalks, ADA-compliant curb ramps, guardrails)
- Roadway improvements (repaving and reconfigurations)

**Thornton Creek Bridges Study**  
August 20 and 21, 2019 drop-in sessions  
Survey

Thank you for taking our Thornton Creek Bridges Study survey! Your feedback is important to our team. Please feel free to answer only the questions with which you feel comfortable. All surveys, regardless of their completeness, will be considered and documented.

1) What's your name?

2) Which of the following bridge(s) do you use?  
 NE 105th St at 40th Ave NE (Bridge 104)  
 NE 110th St, west of 36th Ave NE (Bridge 105)  
 45th Ave NE, just south of NE 97th St (Bridge 109)  
 39th Ave NE, just north of NE 105th St (Bridge 115)

3) If you use any of the bridges in this study, how often do you use them?  
 Daily  
 Weekly  
 Monthly  
 Other \_\_\_\_\_

4) When you use the bridge(s), how are you getting around?  
 Biking and other wheeled devices  
 Driving  
 Walking  
 Other \_\_\_\_\_

5) Though we're in the early planning stages of the project, we'd like to know what's most important to you when considering rehabilitation and replacement options for each bridge. Please rank the following considerations from 1 to 6, with 1 being the most important and 6 being the least important:  
 Changes in traffic flow  
 Protecting natural resources and the Thornton Creek channel  
 Maintaining current aesthetics of each bridge location  
 Impacts to private property  
 Length of construction  
 Noise, dust, detours, and other construction impacts  
 Other: \_\_\_\_\_

6) Please rank the following improvements from 1 to 4, with 1 being the most important and 4 being the least important:  
 Pedestrian improvements (sidewalks, ADA-compliant curb ramps, guardrails, etc.)  
 Roadway improvements (repaving and reconfigurations, etc.)  
 Biking improvements (protected bike lanes and wider roads, etc.)  
 Adding landscaping and greenery  
 Other: \_\_\_\_\_

7) Is there anything else you'd like to add?

- Biking improvements (protected bike lanes and wider roads)
- Landscaping and greenery
- Other\*
  - \*Includes: Drainage, flood control, repair and maintenance of existing bridges, roadway lighting for people walking, safe structures, maintaining the current aesthetics of bridges – feeling of “rural” landscape

### Bridge use

Most respondents use more than one of the bridges daily. The most frequently used bridge is NE 110th St bridge (bridge 105). Driving and walking are the most common ways people use the bridges.

### Environmental

Protecting natural resources and Thornton Creek channel was ranked as the most important consideration for bridge rehabilitation or replacement.

### Safety for people walking

- Pedestrian improvements were ranked as the bridge improvement element most important to focus on
- Respondents suggested:
  - Installing sidewalks on the bridges
  - Enhancing access to public transit near the bridges
  - Installing lighting on pedestrian routes and bridges
  - Installing ADA ramps for people to access sidewalks on or near the bridges
- Respondents also expressed concerns about:
  - Safe passage for students to schools
  - Bridge work taking away from the already few resources for sidewalks
  - The use of bridges as bike routes



August 21 drop-in session at Saint Anne's



August 20 drop-in session at Meadowbrook Community Center

## Drainage and flooding

- Respondents expressed concern about existing drainage issues near the bridges, especially west of NE 110th St bridge (bridge 105), and about flood control

## Aesthetics

- Respondents suggested maintaining current aesthetics of bridges, repainting the bridges, and placing signage to emphasize the bridges' connection to the creek
- Respondents expressed concerns about maintenance of the bridges



*Project team and attendees discuss the project at August 21, 2019, drop-in session at Saint Anne's.*

## Roadway

- Roadway improvements were ranked the second most important bridge improvement element to focus on
- Respondents expressed a need for intersection improvements near NE 105th St bridge (bridge 104)
- Respondents expressed concerns that:
  - Planting strips and bike lanes will take away from parking and vehicle lanes
  - Removing space for vehicle parking will negatively impact property values

## General

- Many respondents expressed appreciation for early outreach efforts on the project
- Respondents expressed concerns for the safety of people walking and biking and for the structural integrity of bridges







# Purpose of the study

Our primary goal is to identify feasible solutions that address long-term multimodal transportation demand, such as biking, walking, driving, and taking transit.



Our objectives are to:

- Explore rehabilitation and replacement options
- Produce a detailed report that includes current conditions of the soil, structures, and waterflow; environmental impacts; and recommendations for future conceptual designs

These bridges will remain safe to use while we conduct this study.

# NE 110th St Bridge (105)

## Existing bridge

- Bridge is 27 feet wide, with a roadway width of 22 feet
- A pedestrian crossing on each side
- The structure shows some deterioration, primarily in the timber railing, timber pile, and supporting elements
- There are minor signs of deterioration in the support beams
- The Washington Department of Fish and Wildlife classifies this bridge as a partial blockage to fish passage



## 45th Ave NE Bridge (109)

### Existing bridge

- Bridge is 31 feet wide with a roadway width of 24 feet
- Pedestrian sidewalk on each side
- 45th Ave NE has no sidewalks or landscaping
- Bridge has a concrete railing with timber protective fencing
- Structure shows some deterioration, primarily in the timber pile elements and concrete bridge railing



Street view of 45th Ave NE bridge (109) facing south toward NE 95th St



Looking west toward 45th Ave NE bridge (109)

## NE 105th St Bridge (104)

### Existing bridge

- Bridge is 27 feet wide, with a roadway width of 22 feet
- No sidewalk on west side
- Sidewalk on east side of roadway abruptly ends before the intersection
- Guardrail runs along the sides
- Minor signs of deterioration in asphalt settling and the timber railing



Street view of NE 105th St bridge (104) facing east



Looking north at NE 105th St bridge (104) from 40th Ave NE

# 39th Ave NE Bridge (115)

## Existing bridge

- Bridge is 23 feet wide, with a roadway width of 20 feet
- A timber pedestrian bridge provides a pedestrian crossing approximately 30 feet to the west of Bridge 115, along a trail system surrounding Meadowbrook Pond
- The structure shows some deterioration, primarily in the timber pile and supporting elements
- There are minor signs of deterioration in the timber railing and channel girders, and some settling of the asphalt at the bridge corners



Street view of 39th Ave NE bridge (115)



Looking west at 39th Ave NE bridge (115)

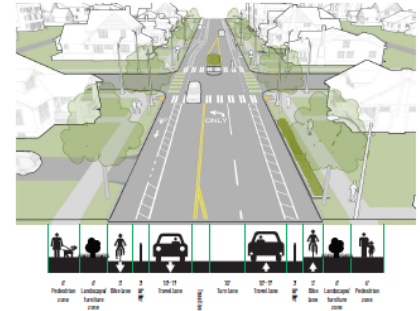
# Street standards

SDOT "street standards" are design criteria that have a significant impact on the livability of the city as well as the health, safety, and welfare of its citizens.

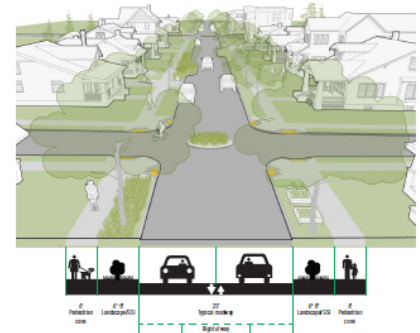
Examples include:

- Width of a sidewalk
- Diameter of a curb radius
- Number of lanes in the right-of-way
- Location of utilities

## Street standards for NE 110th St bridge (105)



## Street standards for NE 105th St bridge (104) and 45th Ave NE bridge (109) and 39th Ave NE bridge (115)



These illustrations show how street standards would apply to the Thornton Creek bridges.

# Potential improvements

Potential improvements to the 4 bridges may include, but are not limited to, the following:

- Increasing bridge widths
- Replacing or repairing existing structures
- Building new foundational elements
- Planting of landscaping and vegetation
- Adding sidewalks and curb ramps
- Roadway restructuring
- Creek realignment



[www.seattle.gov/transportation/thornton](http://www.seattle.gov/transportation/thornton)



# Stay informed

We'll share information and seek public input throughout this project.

Your participation will help ensure that bridge designs reflect feedback from the community.



If funding is available, the project will move forward to bridge design.

## Project contact

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[www.seattle.gov/transportation/thornton](http://www.seattle.gov/transportation/thornton)

