

# City of Carver Certified Levee Improvements Project Update

Council Work Session  
January 18, 2022

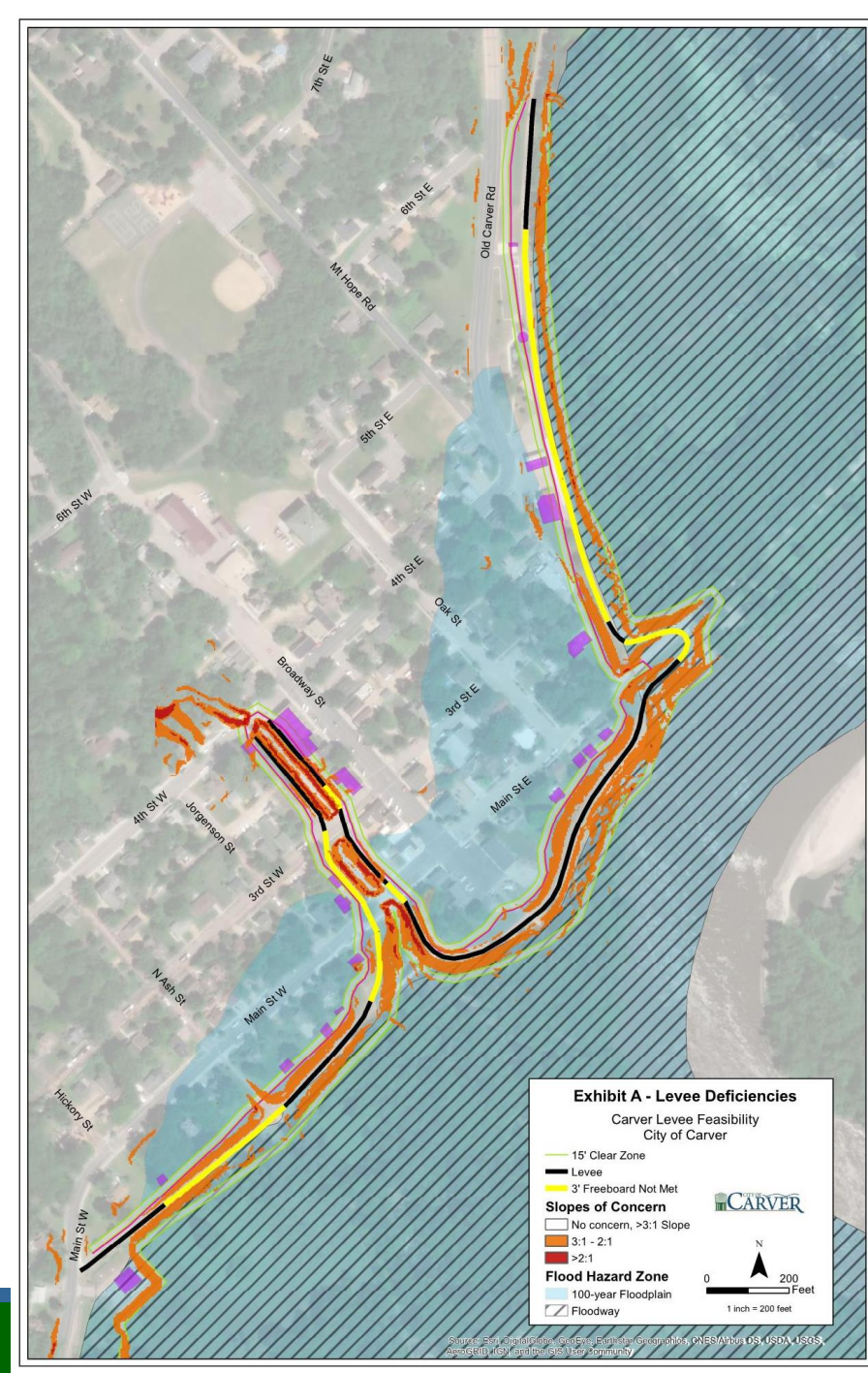
# Presentation Contents

- Background & Status Update
- 2021 Preliminary Design Findings
  - Public Engagement
  - Design Configuration
  - Potential Property Impacts
  - Cost Estimates
- Funding Updates
- Next Steps



# Background

- Levee protecting the City of Carver's Historic Downtown doesn't meet current design standards for either USACE or FEMA. Deficiencies include:
  - Freeboard
  - Clear Zone
  - Steep Slopes
  - Seepage
- ~55 Properties and businesses behind the levee are limited to 50% of property value for reinvestment due to the floodplain restriction associated with the non-FEMA certified levee.



# Status Update

- ✓ Before 2021: City begins journey of exploring feasibility of certifying levee
- ✓ Feb 1, 2021: Council reviews preliminary work plan for 2021
- ✓ March 2021: City receives funding from MN DNR and LMRWD funding partners
- ✓ April 19, 2021: Council reviews refined work plan for 2021
- ✓ Summer – Fall 2021: Public engagement, geotechnical reviews, preliminary design, construction limits, refined costs
- January 18, 2022: 2021 Findings Review & Next Steps



# CARVER LEVEE IMPROVEMENTS



## WHAT IS THE CARVER LEVEE?

For over 50 years, the Carver Levee has protected the community and Historic Downtown from major flooding events. However, it's come time for significant improvements to be made, so that it may continue protecting Carver for years to come.

## WHY DOES IT NEED TO BE IMPROVED?

Due to its state of disrepair, the levee is no longer certified by the United States Army Corps of Engineers (USACE) or Federal Emergency Management Agency (FEMA). This means that the levee is not guaranteed to protect Carver from flooding by the standards set by these two agencies. Without this certification:

- Property owners are restricted to spending less than 50% of the property's value on improvements to the property.
- Protected properties are required to purchase flood insurance.
- The City will be required to pay the full cost of any levee damage repair, whereas they would only be required to pay 20% with certification.

Additionally, major flooding events along the Minnesota River have increased greatly and are expected to continue doing so. This increase in flooding puts the City at an even greater risk of flooding, making this project vital to Carver.

## SO, WHAT NOW?

The project team will engage the public throughout preliminary design to keep the community informed, identify regulatory requirements, and receive review and input on design elements. Additionally, the team will be meeting with adjacent property owners in the coming months to identify property use and specific concerns that can be incorporated into the project as much as possible. The 2022 schedule will be shared on the website once the team hears back about future funding opportunities.

The city has received a \$150,000 MDNR Grant that is being matched by the LMRWD and the City's stormwater fund, which is anticipated to fully fund the project's preliminary design.



## STAY UPDATED!

Visit the project website for more information and to sign up for email updates:  
[cityofcarver.com/276/Levee-Certification](http://cityofcarver.com/276/Levee-Certification)



Todd Hubmer, P.E.  
Project Liaison, 612-360-1282  
[Todd.Hubmer@bolton-menk.com](mailto:Todd.Hubmer@bolton-menk.com)

# 2021 Levee Work Plan Goals

- ✓ Project Communications & Engagement
- ✓ Geotechnical Evaluations
- ✓ Topographic Survey
- ✓ Preliminary Design Configuration
- ✓ Construction Limits & Property Impacts
- ✓ Refined Costs

## 2021 PRELIMINARY DESIGN PROJECT SCHEDULE

MAY JUNE JULY AUG SEPT OCT NOV DEC

GEOTECHNICAL INVESTIGATION

TOPOGRAPHIC SURVEY

PRELIMINARY DESIGN, CONSTRUCTION LIMITS, AND COST ESTIMATES



# Project Communications & Engagement

- **Resident & Business Engagement**
  - One on one meetings completed.
  - Positive responses received.
  - Takeaway: Communication is key!
- **Stakeholder Engagement Meetings**
  - Inform agencies ahead of critical design decisions.
  - Coordinate with adjacent trail project limits.
- **Clear & Consistent Project Messaging**
  - Branding.
  - Project website.
  - Project video.





# CARVER LEVEE IMPROVEMENTS



Dear property owner,

You are receiving this letter as your property directly abuts against the city of Carver levee. The city of Carver recently received funding from the state legislature through the Minnesota Department of natural resources flood hazard damage reduction grant program in the amount of \$150,000. The city will be matching this funding with \$75,000 from the city of Carver and \$75,000 from the Lower Minnesota River Watershed District to complete preliminary design of the new levee.

Prior to beginning the preliminary design process the project team desires to meet with you on site and discuss any concerns you may have affecting your property, or any questions you may have on the levee design process. Toward this end, we have reserved the following dates available to meet at your property:

- April 26: 2:30-6 p.m.
- April 27: 12-6 p.m.
- April 29: 8 a.m.-12 p.m.

Please contact Todd Hubmer, Project Manager, at 612-360-1282 or [thubmer@bolton-menk.com](mailto:thubmer@bolton-menk.com) to schedule your property meeting!

The city is also requesting permission to enter your property for the purposes of completing survey of the levee. We will be locating significant trees, property corners and distances to buildings and structures from the levee. This is very important to incorporate into the preliminary design to minimize future costs associated with significant design changes to address structures or vegetation that may conflict with the proposed levee improvements. Attached, is a right of entry agreement allowing the city's survey crew to access your property to collect the needed information.

We anticipate that both survey crews and soil boring crews will be present within the project area beginning as early as the first week of May.

We look forward to working with you to complete these important levee improvements, so the levee can protect your property and others for many years to come.

Thank you in advance for your cooperation and participation. If at anytime you have questions, please call me to discuss. Your team is here to keep you informed of the process throughout the duration of the improvements.

Sincerely,  
**Todd Hubmer, PE**  
Levee Project Manager

# Project Communications & Engagement

## CARVER LEVEE IMPROVEMENTS



Name: \_\_\_\_\_

Property Address: \_\_\_\_\_  
\_\_\_\_\_

The City of Carver is requesting permission to access your property for the purpose of completing survey collection work for the Carver Levee Improvements. The survey will collect the location of significant features: trees, fences, and buildings. This will assist in developing the preliminary design of the levee. By granting access to your property, you are NOT granting permission for any construction related work on your property.

With the above-mentioned understanding, I agree to grant the City of Carver and/or their representatives to access to my property for the purpose of completing a project survey.

\_\_\_\_\_  
Property Owner

\_\_\_\_\_  
Date





# Geotechnical Evaluations

- Soil Borings
- Slope Stability Review
- Seepage and Settlement Analysis

**BRAUN**  
**INTERTEC**  
The Science You Build On.

**LOG OF BORING**

See Descriptive Terminology sheet for explanation of abbreviations

**Project Number B2103346**  
**Geotechnical Evaluation**  
**City of Carver Levee**  
**Carver, Minnesota**

**BORING: ST-5**

**LOCATION:** See attached sketch

**NORTHING:** 145236

**EASTING:** 537545

**START DATE:** 05/05/21

**END DATE:** 05/05/21

**DRILLER:** J. Tatro

**LOGGED BY:**

C. Lukkarila

**SURFACE ELEVATION:** 725.7 ft

**RIG:** 75011

**METHOD:** 3 1/4" HSA

**SURFACING:**

**WEATHER:**

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q <sub>s</sub> tsf	MC %	Tests or Remarks
724.9 0.8		FILL: Apparent aggregate base material		2-2-3 (5) 5"		13	
		FILL: SILTY SAND (SM), fine to medium-grained, with Clay lenses, trace Gravel, dark brown, moist		5-7-7 (14) 18"			
719.2 6.5		FILL: SANDY LEAN CLAY (CL), with Sand lenses, gray, moist		2-3-3 (6) 18"		27	
				2-3-4 (7) 18"		28	LL=49, PL=20, PI=29
				3-4-5 (9) 18"		18	
711.7 14.0		FILL: SILTY SAND (SM), fine to medium-grained, slightly organic, with Clay lenses, trace Gravel, dark brown to gray, moist		4-6-8 (14) 16"		10	OC=2%
				5-5-4 (9) 18"		21	
707.2 18.5		SANDY LEAN CLAY (CL), with Silt lenses, trace Sand lenses, gray, moist, soft (ALLUVIUM)		2-2-2 (4) 18"		25	LL=30, PL=17, PI=13
703.7 22.0		SANDY LEAN CLAY (CL), trace Gravel, trace Sand lenses, gray, moist to wet, very soft (ALLUVIUM)		0-0-1 (1) 18"			
				0-0-1 (1) 18"		24	

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B2103346

Braun Intertec Corporation

Print Date: 05/08/2021

ST-5

page 1 of 2

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B2103346

Braun Intertec Corporation

Print Date: 06/08/2021

ST-5 page 1 of 3

Figure 2. Proposed Boring Locations

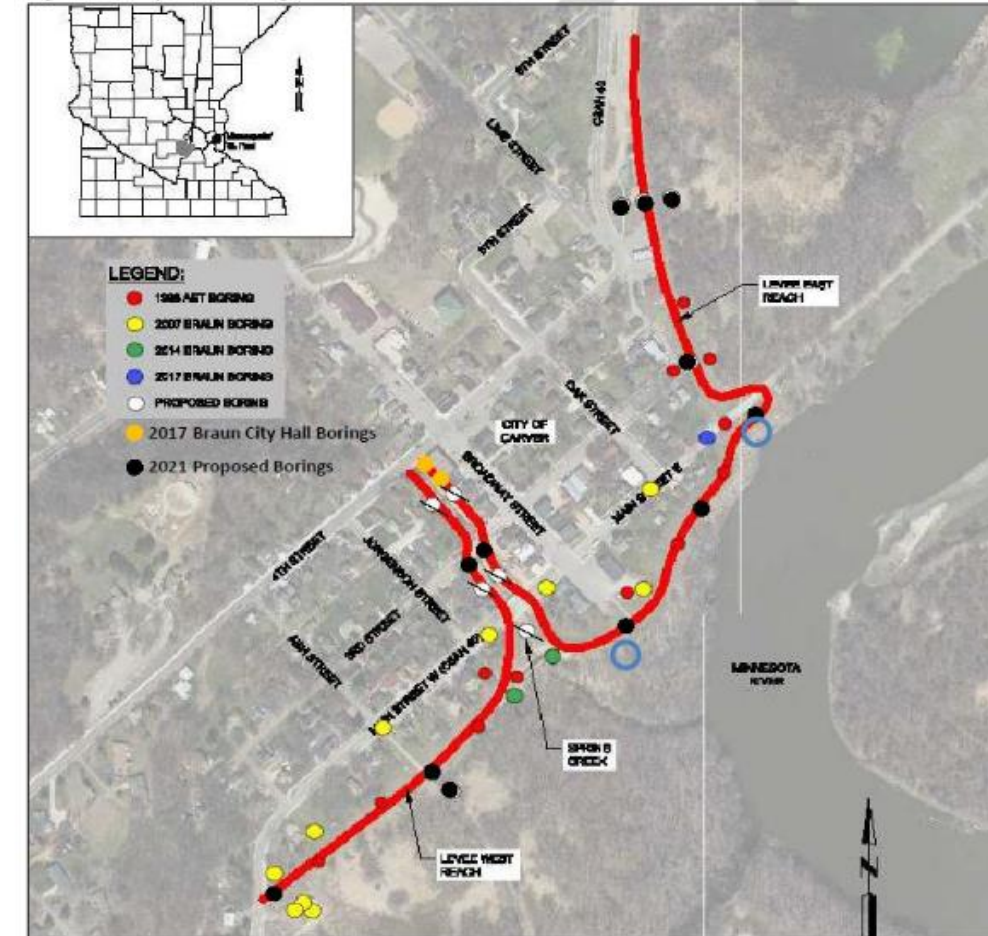


Figure provided by Mead and Hunt, dated September 22, 2017.



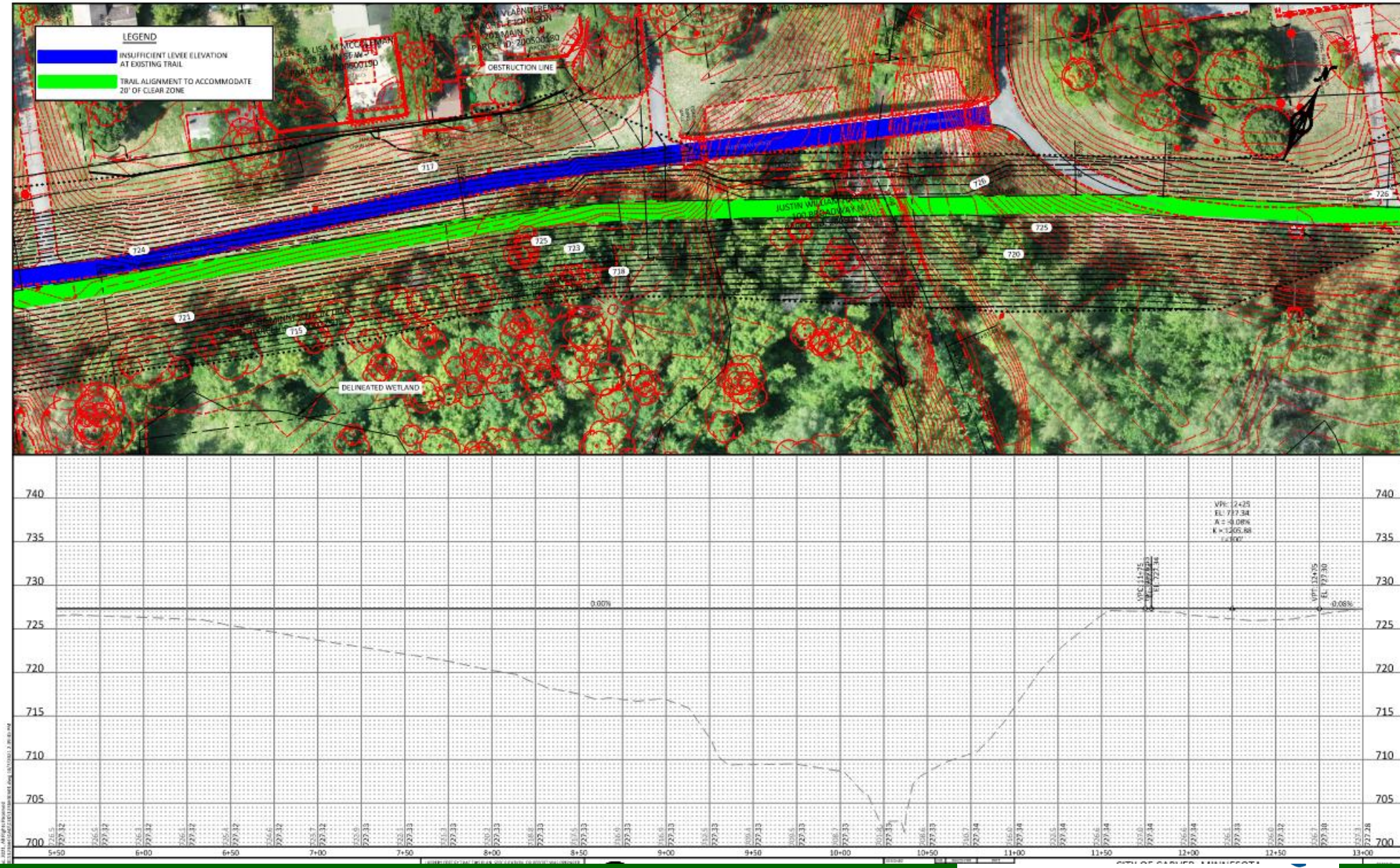
# Topographic Survey

- Identify key features within project limits
- Locate property lines, buildings, trees, etc.
- Utility locates
- Existing elevations and topography



# Preliminary Design Configuration

- Set Overall Design Configuration
- Identify Construction Limits
  - Wetland Impacts
  - Easement Needs
- Refine Cost Estimates



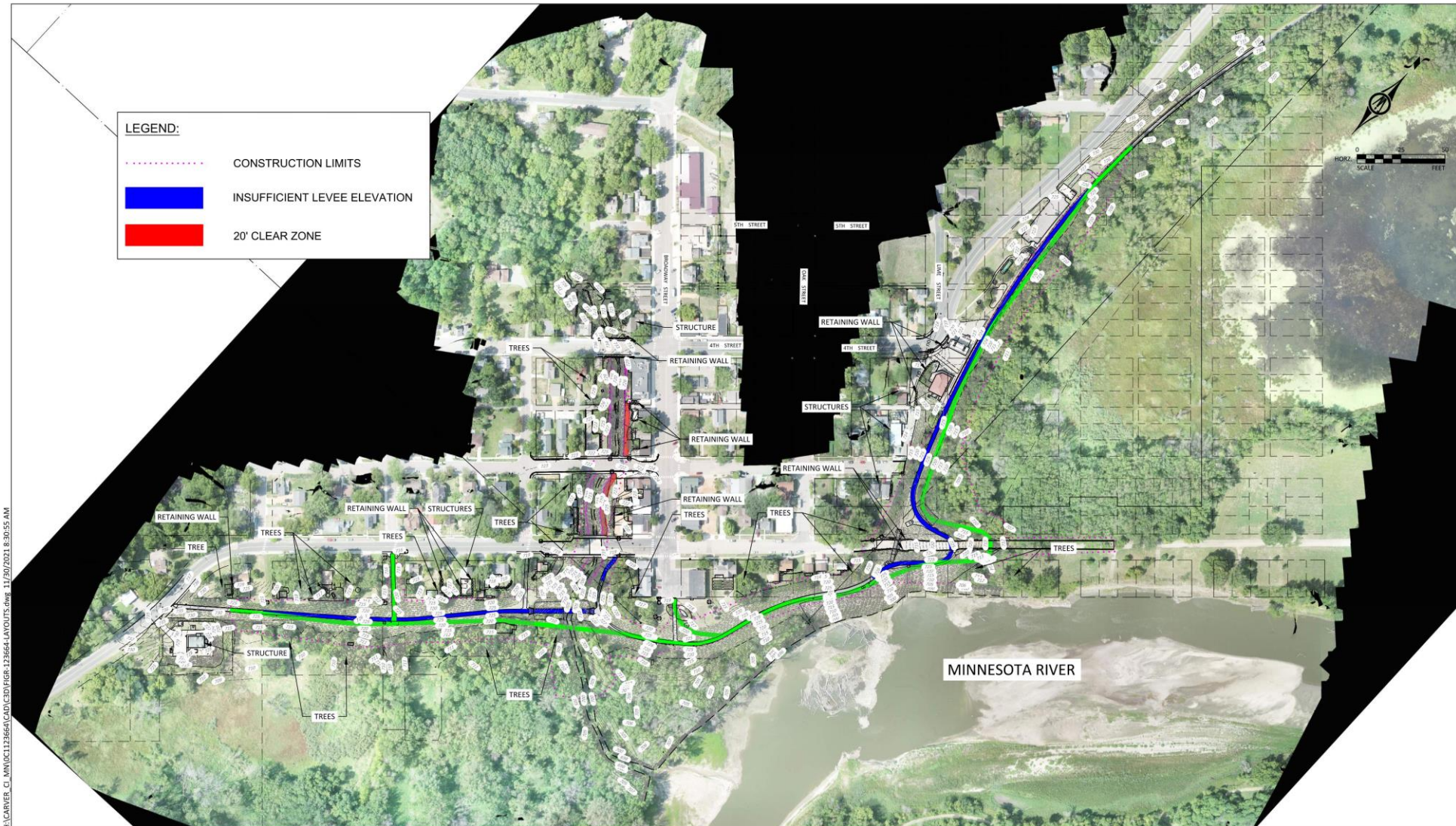


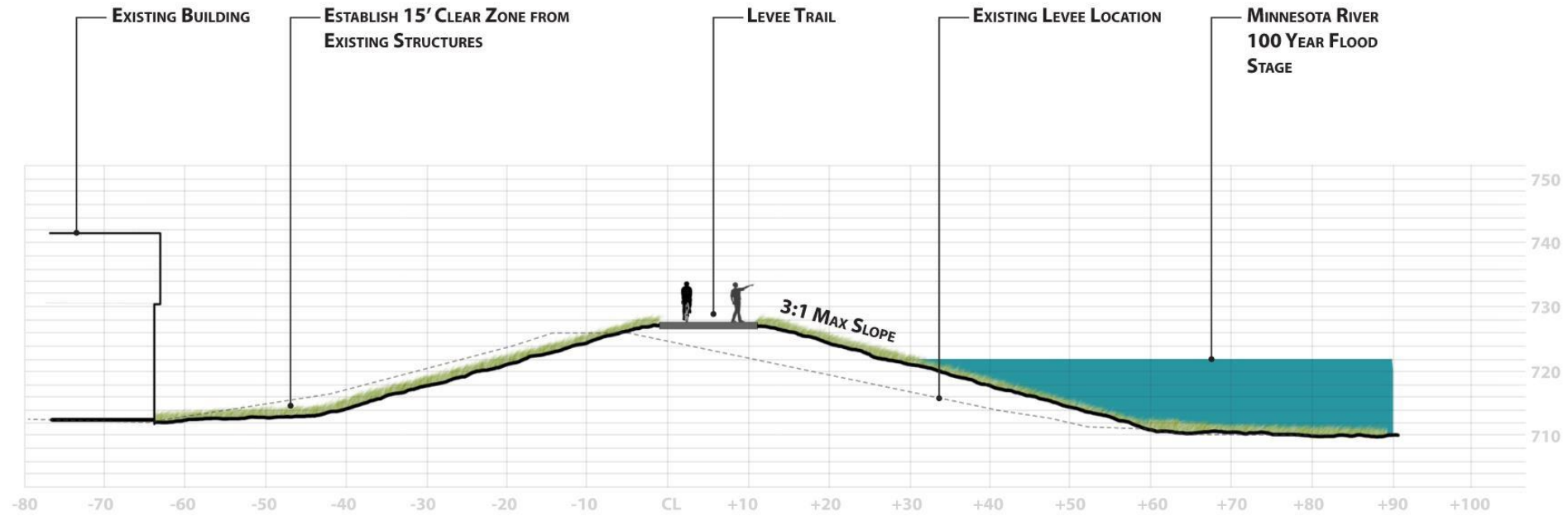
# Preliminary Design Configuration

## Certified Levee Improvements

### City of Carver

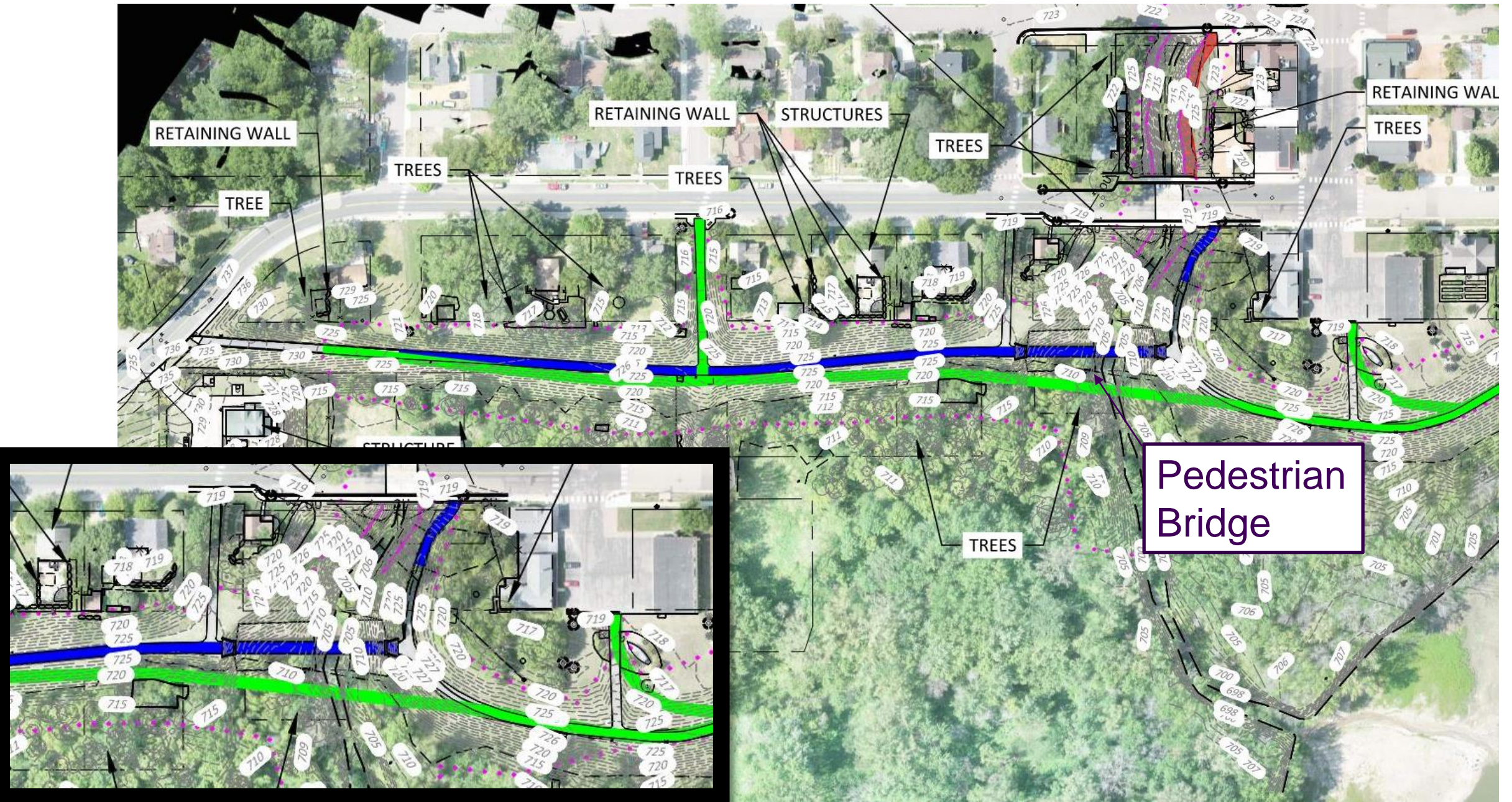
**Figure 1: Project Overview**  
November 2021



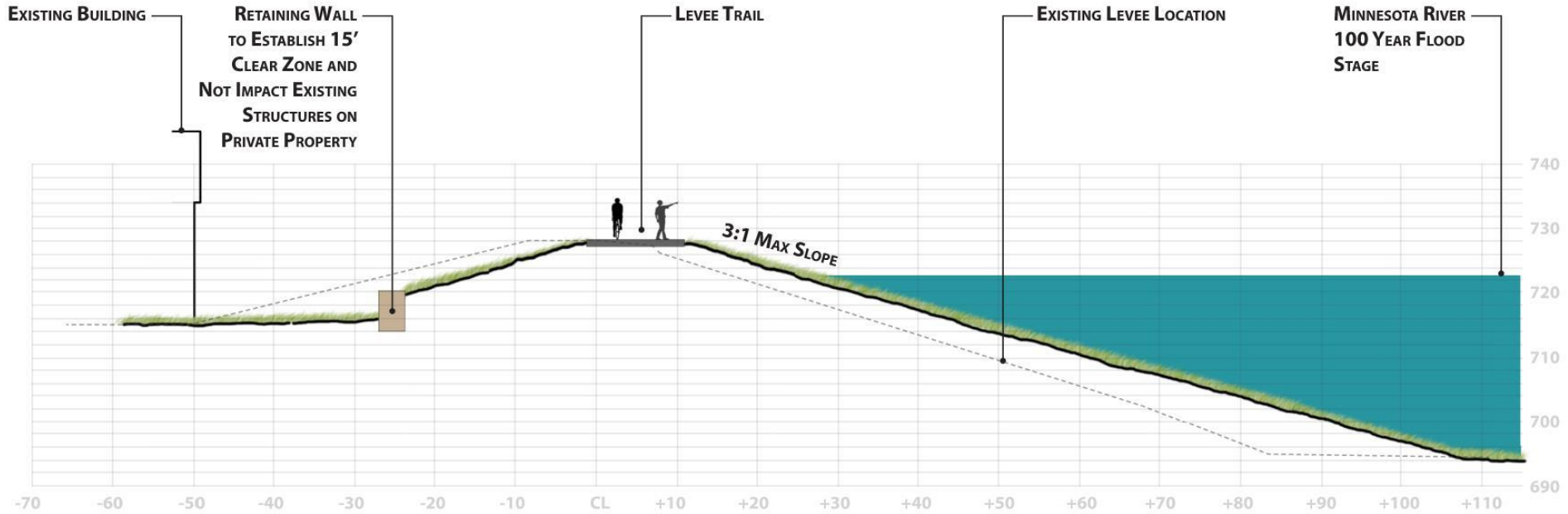




# Main Levee – West of Spring Creek

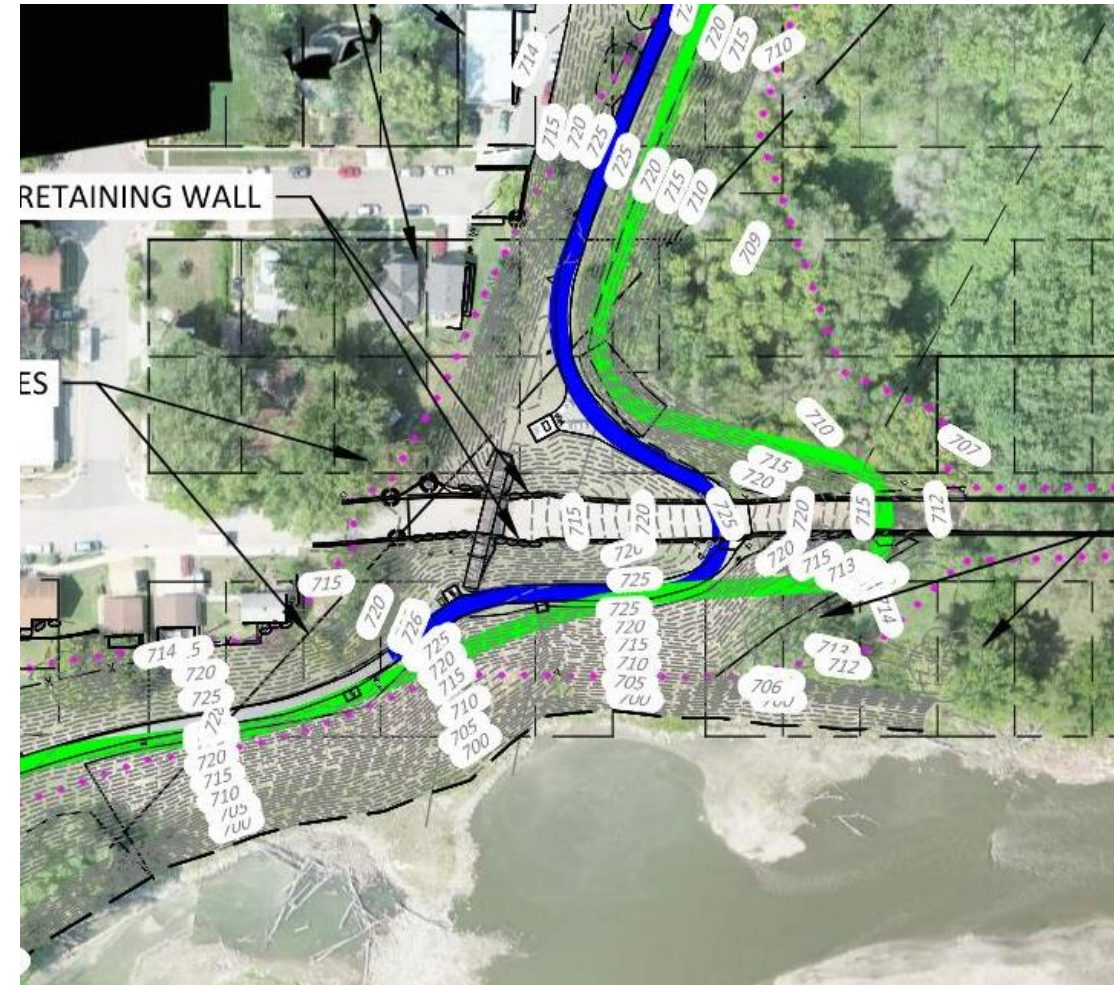
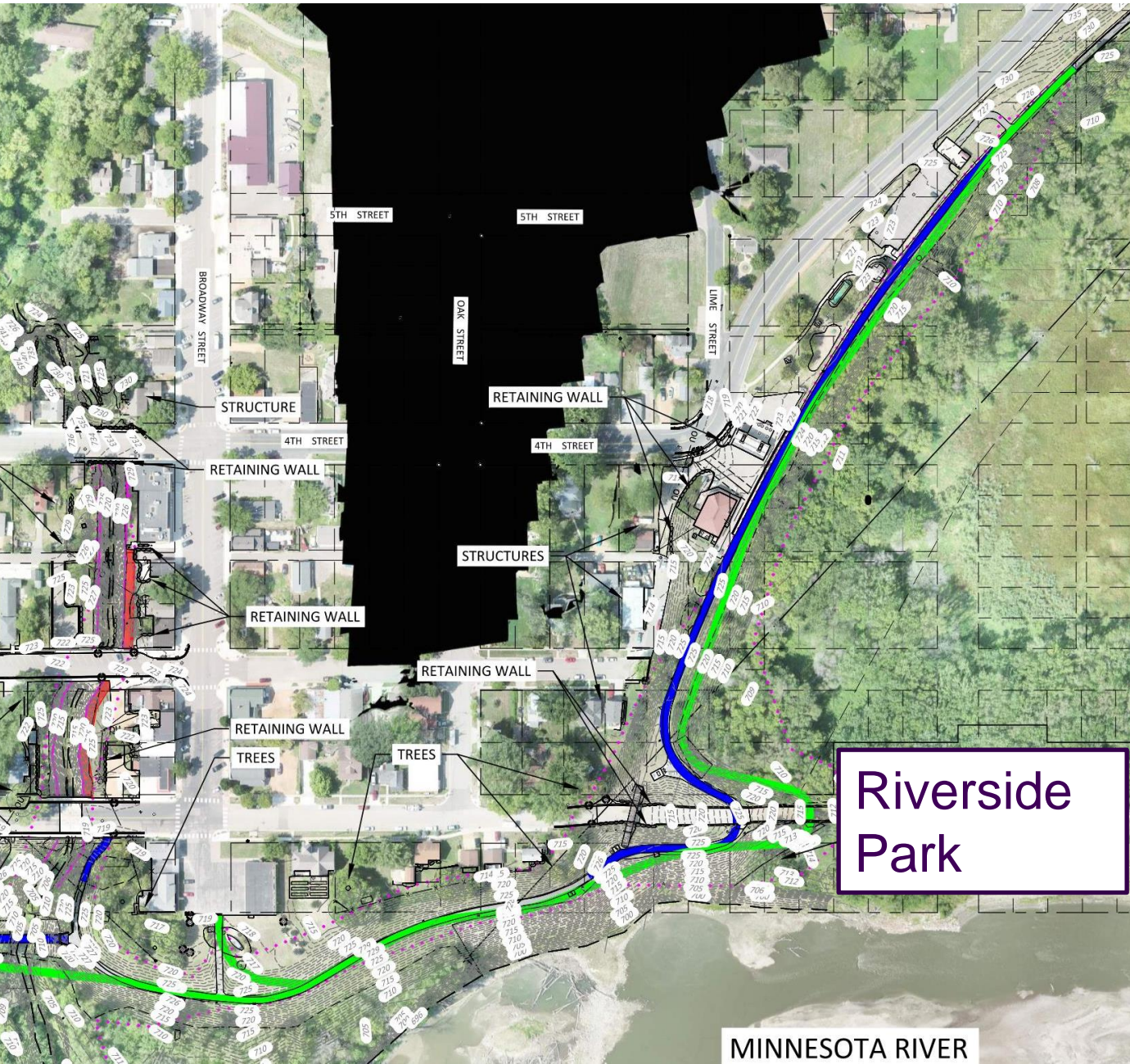




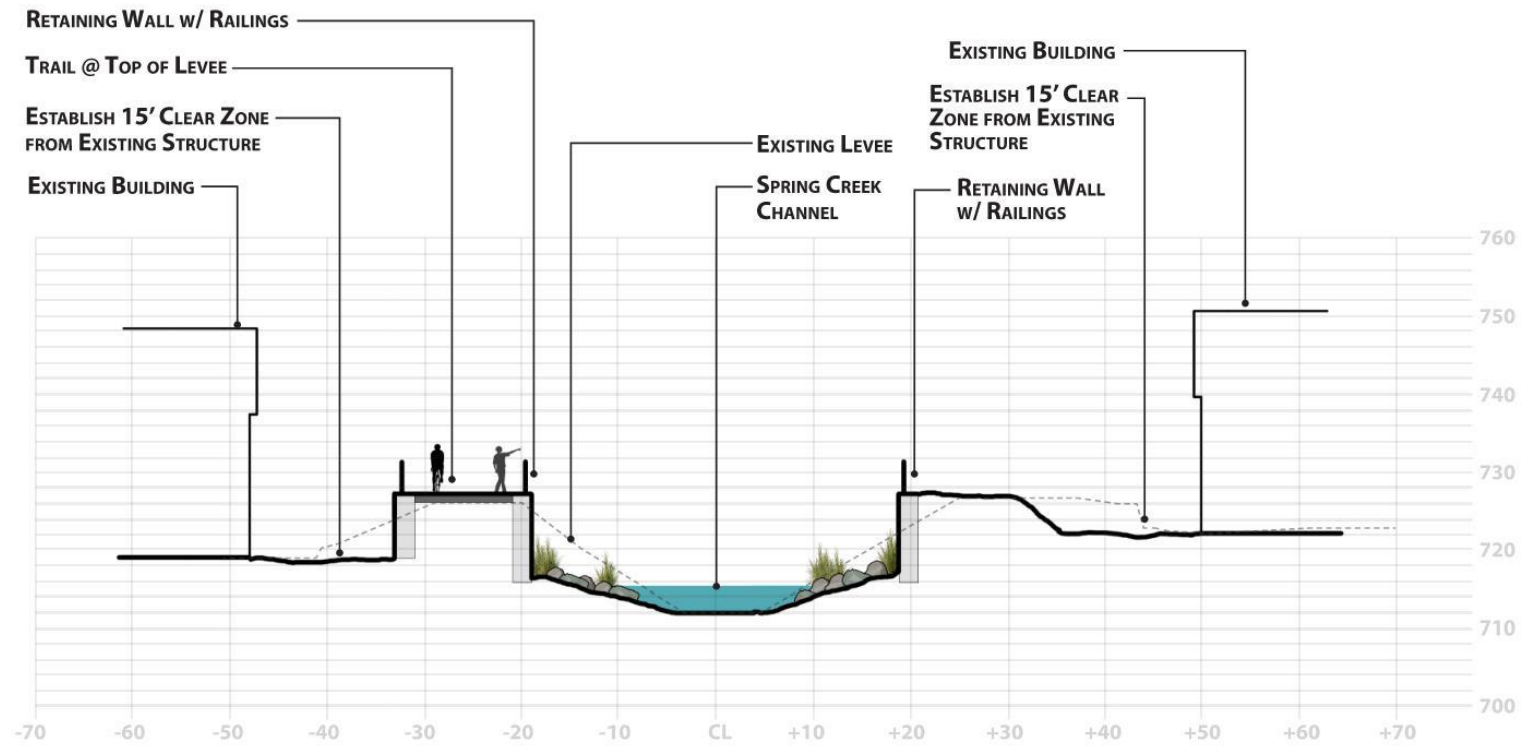




# Main Levee – East of Spring Creek

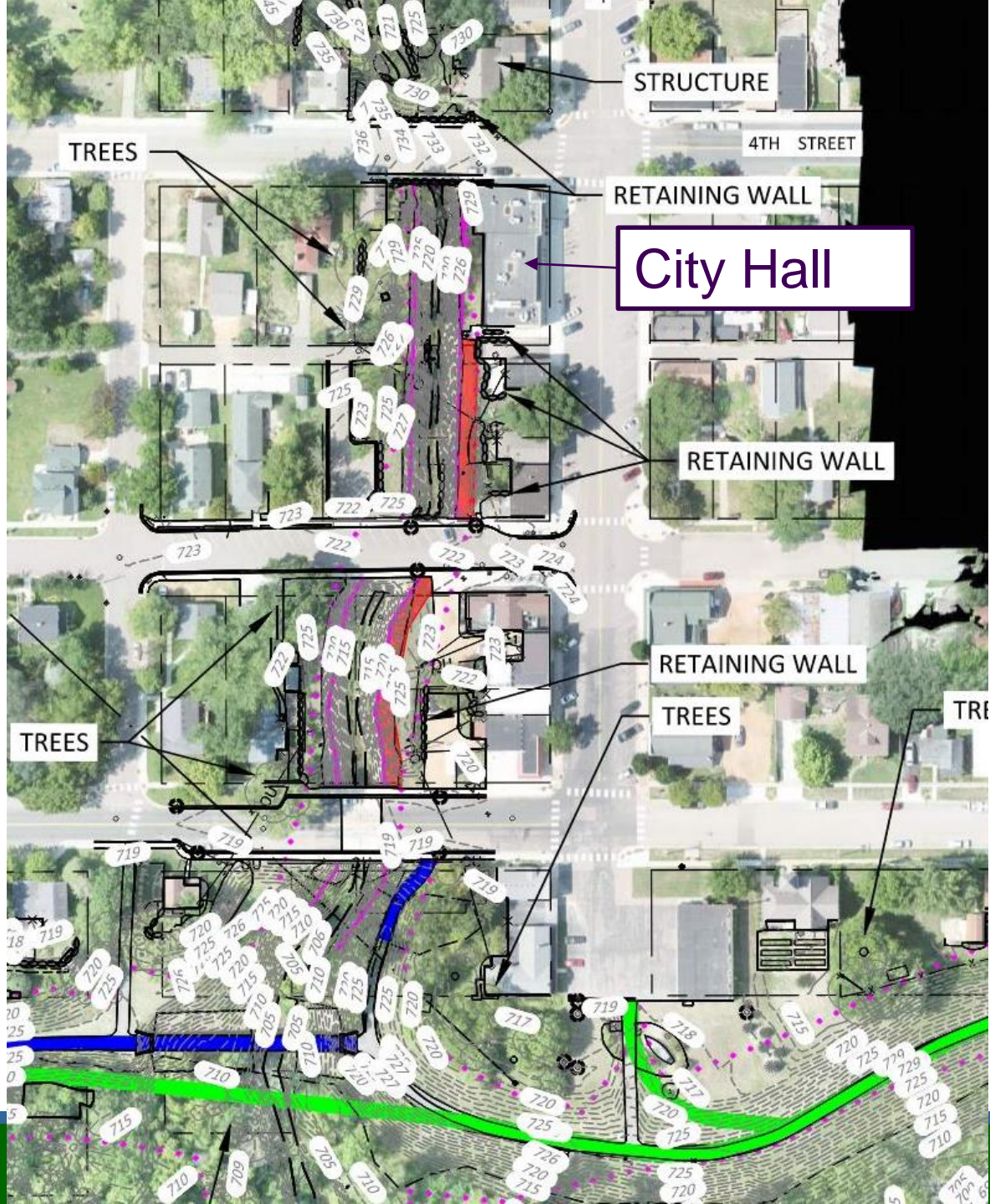






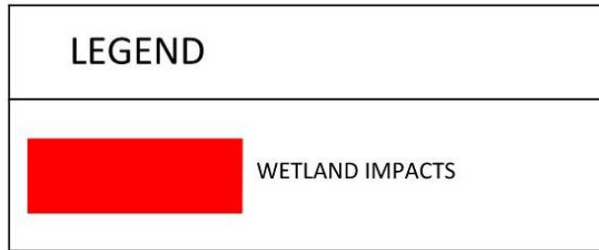


# Spring Creek Levee

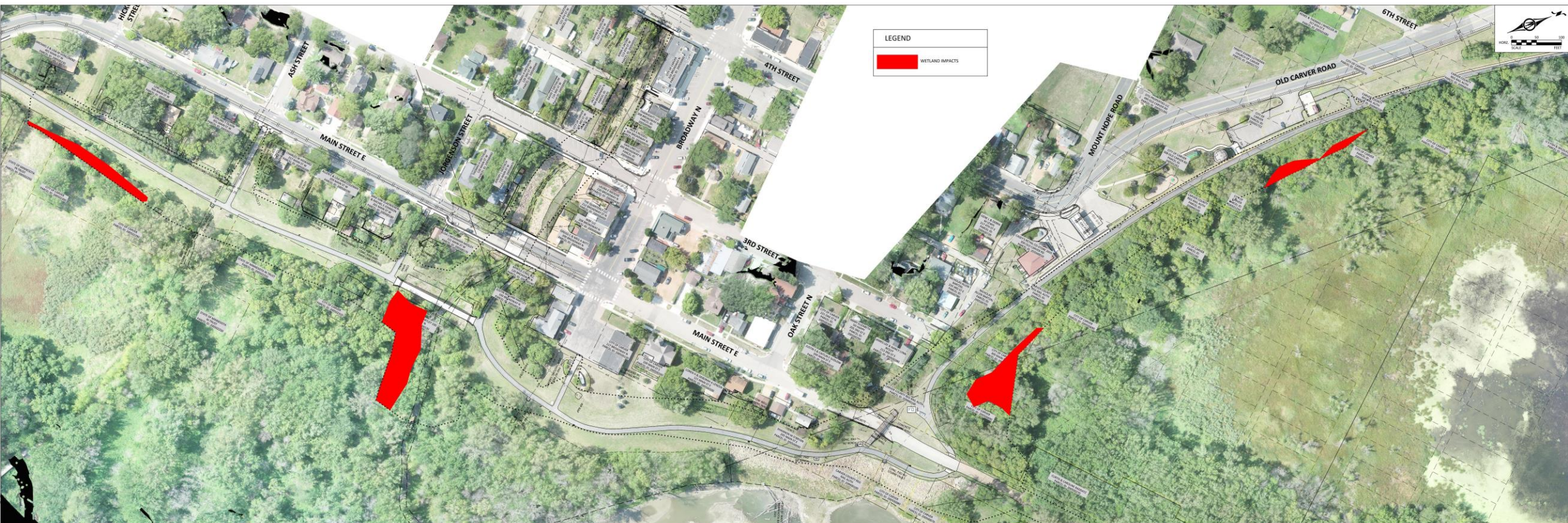




# Wetland Impacts

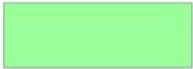



- Wetland delineation work completed.
- Preliminary wetland impacts identified based on preliminary design.
- Preliminary wetland impacts = 1.3 Acres





# Property Impacts

LEGEND	
	PUBLICLY OWNED PARCELS
	PRIVATELY OWNED PARCELS

- Identify preliminary easement needs based on preliminary design configuration.
- Coordinating land swap with US Fish & Wildlife Service to obtain land east of main levee (near completion).





# Funding Updates

- 3 Meetings with Congress
  - US Congressman Tom Emmer
  - House Capital Investment Committee Tour
  - Senate Finance Committee Tour
- Pursuit of Federal Infrastructure Dollars
- 2022 MN Bonding Session



# Preliminary Cost Estimate

Item	Current Preliminary Estimate	Spring 2021 Concept Estimate
Levee Improvements – West of Spring Creek	\$ 2,700,000	
Levee Improvements – East of Spring Creek	\$ 3,000,000	
Levee Improvements – Spring Creek	\$ 6,300,000	
Total	\$12,000,000	\$11,150,000

# Financing & Funding Summary

Source	Contribution
Minnesota DNR Flood Damage Reduction Grant	\$ 9,500,000
Lower Minnesota River Watershed District	\$ 150,000
City of Carver (other local sources)	\$ 2,350,000
Federal Funding	TBD
Total	\$12,000,000



# Next Steps

- **Continued Public Engagement**
  - Launch project video.
  - 2022 Communications Plan
  - Open houses, pop up events, project signage.
  - Continue one on one meetings.
- **Seek Funding Opportunities**
  - 2022 State Bonding Bill
  - Federal Funds
  - Contact Legislature!
- **Refine Project Work Plan**
  - Project Delivery Schedule
  - Construction Phasing Options
  - Continued Agency Coordination
- **30% Preliminary Design to Final Design**

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GEOTECHNICAL INVESTIGATION			PRELIMINARY DESIGN, CONSTRUCTION LIMITS, AND COST ESTIMATES				
TOPOGRAPHIC SURVEY							

**Questions?**