



**AECOM**

# Taylor Run Infrastructure Stabilization Community Meeting

**November 13, 2025**

This meeting is being recorded.





# We want to hear from you!

- ▶ Use the Q&A box to submit during tonight's meeting
- ▶ Submit a comment using the Smartsheet Link:



- ▶ Public feedback and comments will be collected through Friday, November 21, 2025



# Tonight's Agenda

## ▶ Introduction of Project

*Who is involved? Where is the project located?*

## ▶ Project Overview

*Why is this important? What is the project history? What are the goals?*

## ▶ Work Completed

*What have we done so far?*

## ▶ Existing Conditions & Proposed Approach

*What does it look like now? What will it look like?*

## ▶ Project Schedule

*When will it happen?*

## ▶ Open Discussion and Q&A



# Project Team



## Transportation & Environmental Services City of Alexandria

Alex Haptemariam, P.E, CFM  
Camille Liebnitzky, PE, ENV SP  
Daniel E. Medina, PhD, PE  
Jesse E. Maines, MPA  
Brian Rahal, PE, CFM

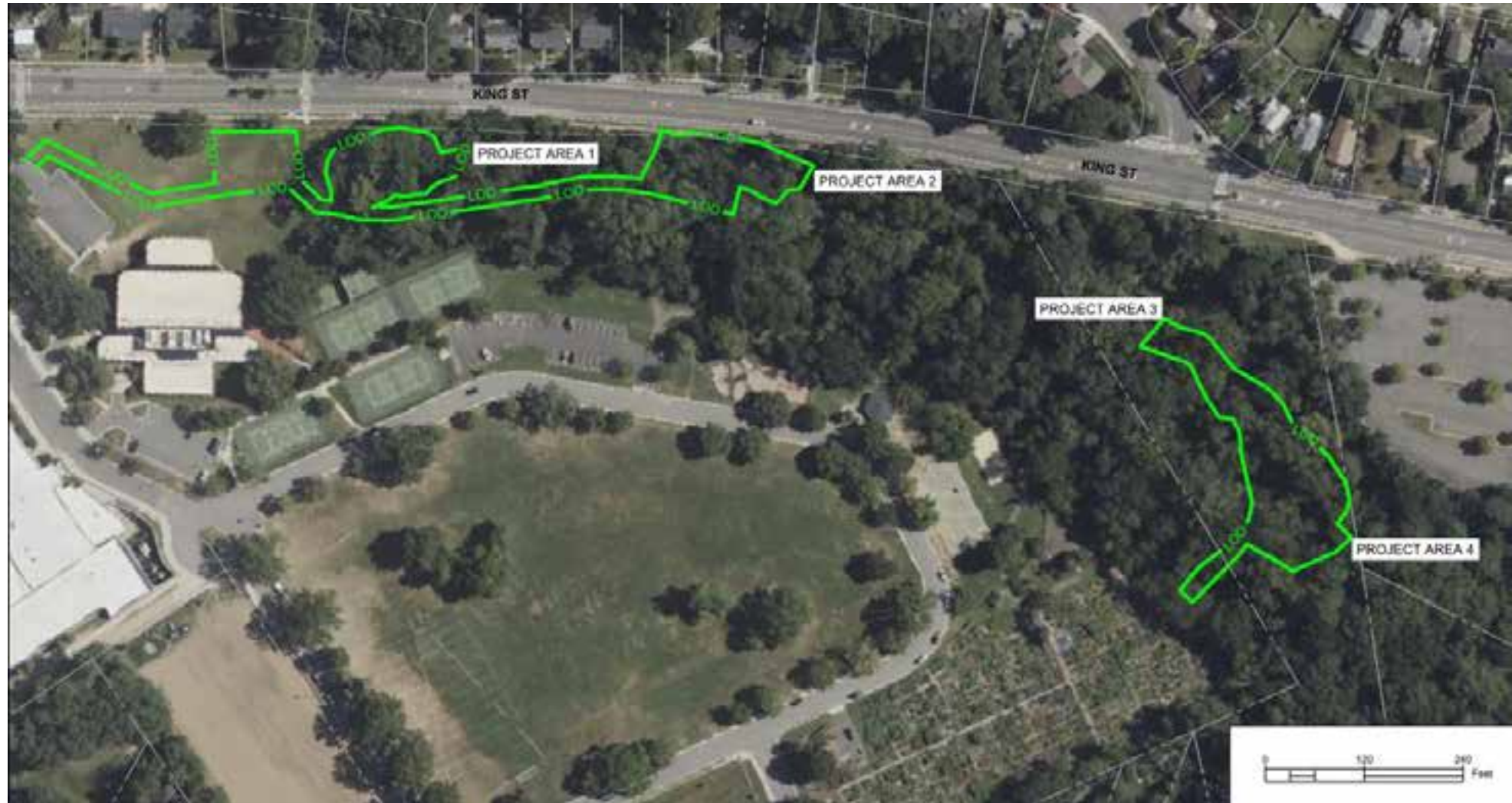


## Lead Design Consultant

Brandon Alderman, CERP  
Tori Nelson, PE  
Sean Bernheisel, EIT



# Project Location





# Project History

- ▶ Project was originally scoped as a stream restoration; however, community feedback indicated that a larger collaboration effort was needed.
- ▶ City hired an outside facilitator to lead stakeholder discussions.
- ▶ Staff presented the facilitator's recommendations to City Council in June 2023.
- ▶ Council directed staff to proceed with stream stabilization following a "minimal design" approach
- ▶ City hired a design consultant to prepare engineering plans for infrastructure protection and channel stabilization following this minimal approach



# Minimal Approach Techniques

Before



Proposed Approach



*Rendering of proposed approach: Greeley-Hansen, 2023*



# Minimal Approach Techniques

Before



Proposed Approach



*Rendering of proposed approach: Greeley-Hansen, 2023*



# Minimal Approach Techniques

**Before**



**Proposed Approach**



*Rendering of proposed approach: Greeley-Hansen, 2023*



# Revised Project Goals



Protect critical, at-risk infrastructure (e.g., sewer pipes, manholes, outfalls, and trails)



Stabilize streambanks and reduce erosion



Preserve and protect mature trees and wetlands



Minimize limits of disturbance, vegetation removal, and construction impacts





# Where will we be working?

- ▶ Four distinct areas, totaling ~600 linear, non-continuous feet
- ▶ Total disturbed area: 1.6 acres





# What have we done so far?

- ▶ Topographic survey
- ▶ Tree survey
- ▶ Geotechnical investigation
- ▶ Hydrologic and hydraulic modeling
- ▶ Performed sewer inspections using CCTV
- ▶ Performed existing condition assessment





# Existing Condition – Project Area 1

- ▶ 72" outfall in disrepair
- ▶ Undersized plunge pool causing bed scour
- ▶ Bank erosion undermining trees





# Proposed Approach: Project Area 1



Boulder Weir



Rock Façade Finish



Gravity Wall with Safety Railing

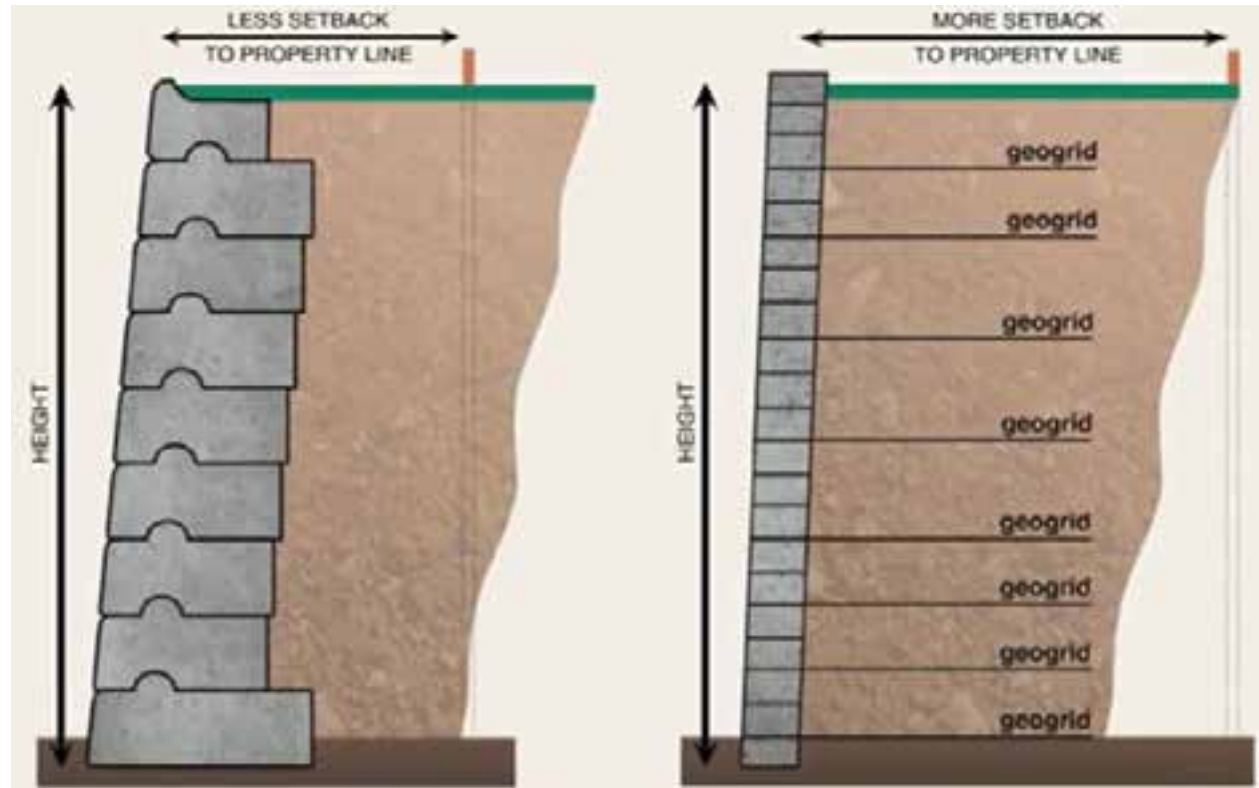


Plunge Pool



# Minimal Approach Techniques

## ► Gravity wall vs. standard retaining wall



Gravity Wall

Standard Reinforced  
Retaining Wall





## Existing Condition – Project Area 2

- ▶ Exposed sanitary sewer crossing
- ▶ 36" outfall with undercut headwall
- ▶ Severe lateral bank erosion





# Proposed Approach: Project Area 2



Rock Façade Finish



Gravity Wall with Safety Railing



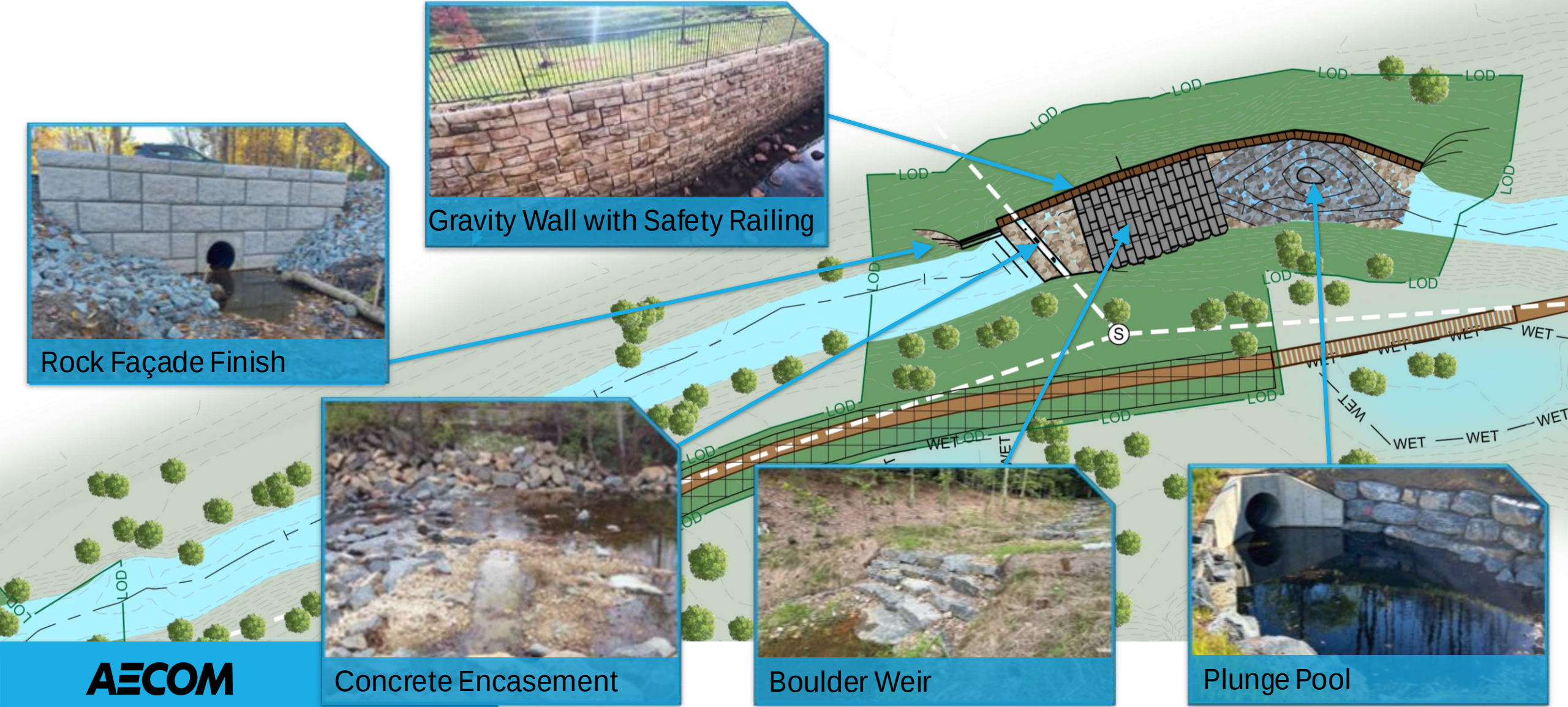
Concrete Encasement



Boulder Weir



Plunge Pool





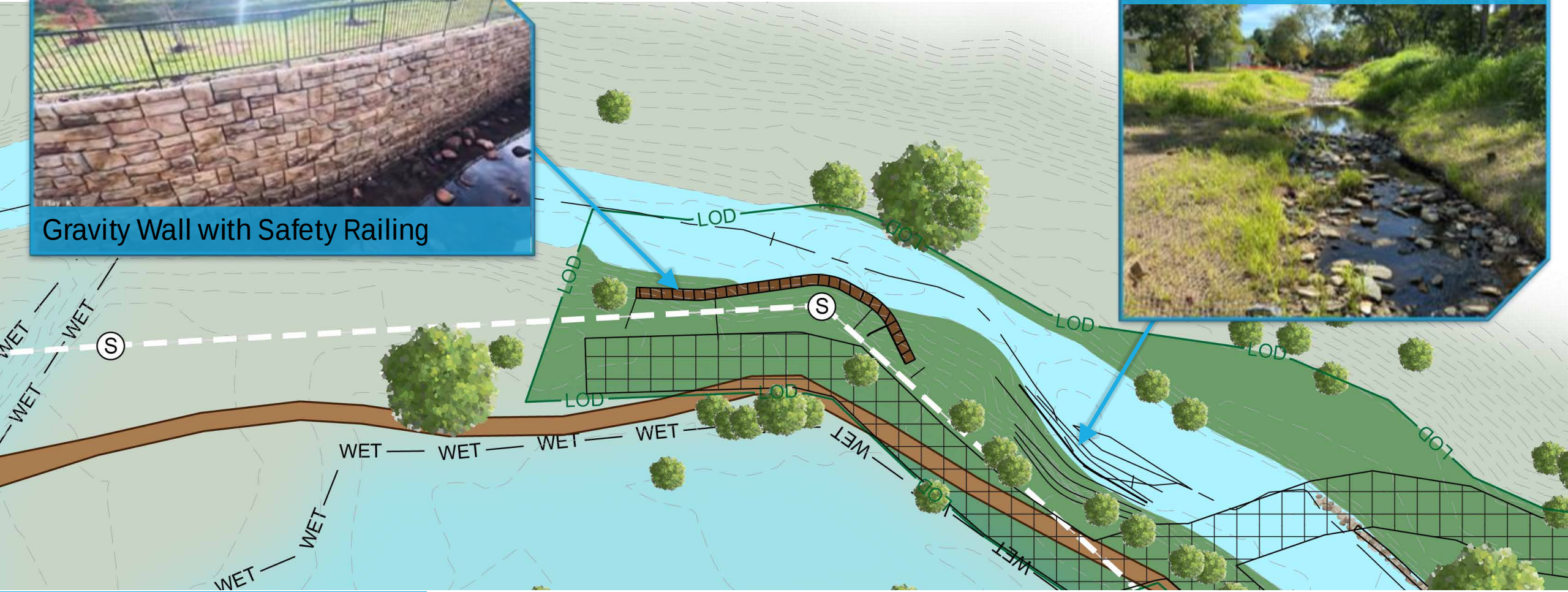
## Existing Condition – Project Area 3

- ▶ Exposed sanitary manhole with undercut concrete base
- ▶ Risked sanitary sewer exposure due to erosion
- ▶ Woody debris accumulation





## Proposed Approach: Project Area 3





# Existing Condition – Project Area 4

- ▶ Failing sheet pile wall
- ▶ Exposed sanitary pipe and manhole
- ▶ Root exposure and damage to significant red maple tree





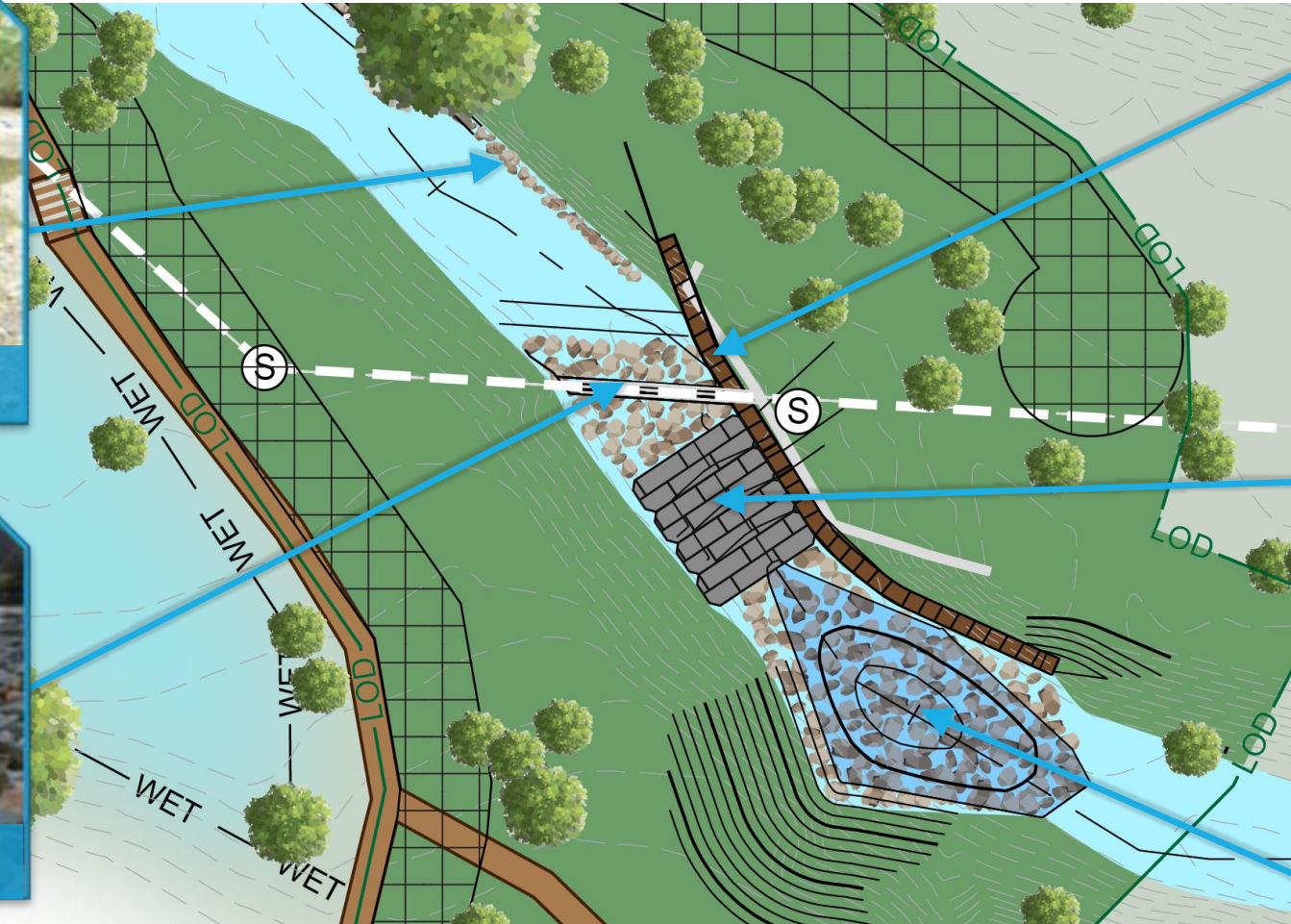
# Proposed Approach: Project Area 4



Rock Packing



Concrete Encasement



Gravity Wall with Safety Railing



Boulder Weir



Plunge Pool



# Minimal Disturbance and Replanting

- ▶ **Minimal disturbance**
  - ▶ Following “minimal approach” set by CBG and approved by Council
- ▶ **Critical Root Zone Protection**
  - ▶ Mulch and deck matting proposed to protect tree roots
- ▶ **Native Plantings**
  - ▶ Replanting anticipates 150 new trees



Deck Mat/Construction Access Road



# Minimal Disturbance for Tree Preservation

| Location       | Living trees proposed for removal | Dead trees proposed for removal | Total trees proposed for removal |
|----------------|-----------------------------------|---------------------------------|----------------------------------|
| Project Area 1 | 19                                | 12                              | 31                               |
| Project Area 2 | 2                                 | 1                               | 3                                |
| Project Area 3 | 2                                 | 0                               | 2                                |
| Project Area 4 | 3                                 | 4                               | 7                                |
| <b>Total</b>   | <b>26</b>                         | <b>17</b>                       | <b>43</b>                        |

- 53 trees estimated for removal in 2023 minimal design impact concept
- Of living trees proposed for removal, 11 are above 12" DBH and one is above 24" DBH



# Tree Preservation: Project Area 1

Living trees  
proposed for  
removal

19

Dead trees  
proposed for  
removal

12

Total trees  
proposed for  
removal

31





# Tree Preservation: Project Area 2

Living trees  
proposed for  
removal

2

Dead trees  
proposed for  
removal

1

Total trees  
proposed for  
removal

3





# Tree Preservation: Project Area 3

Living trees  
proposed for  
removal

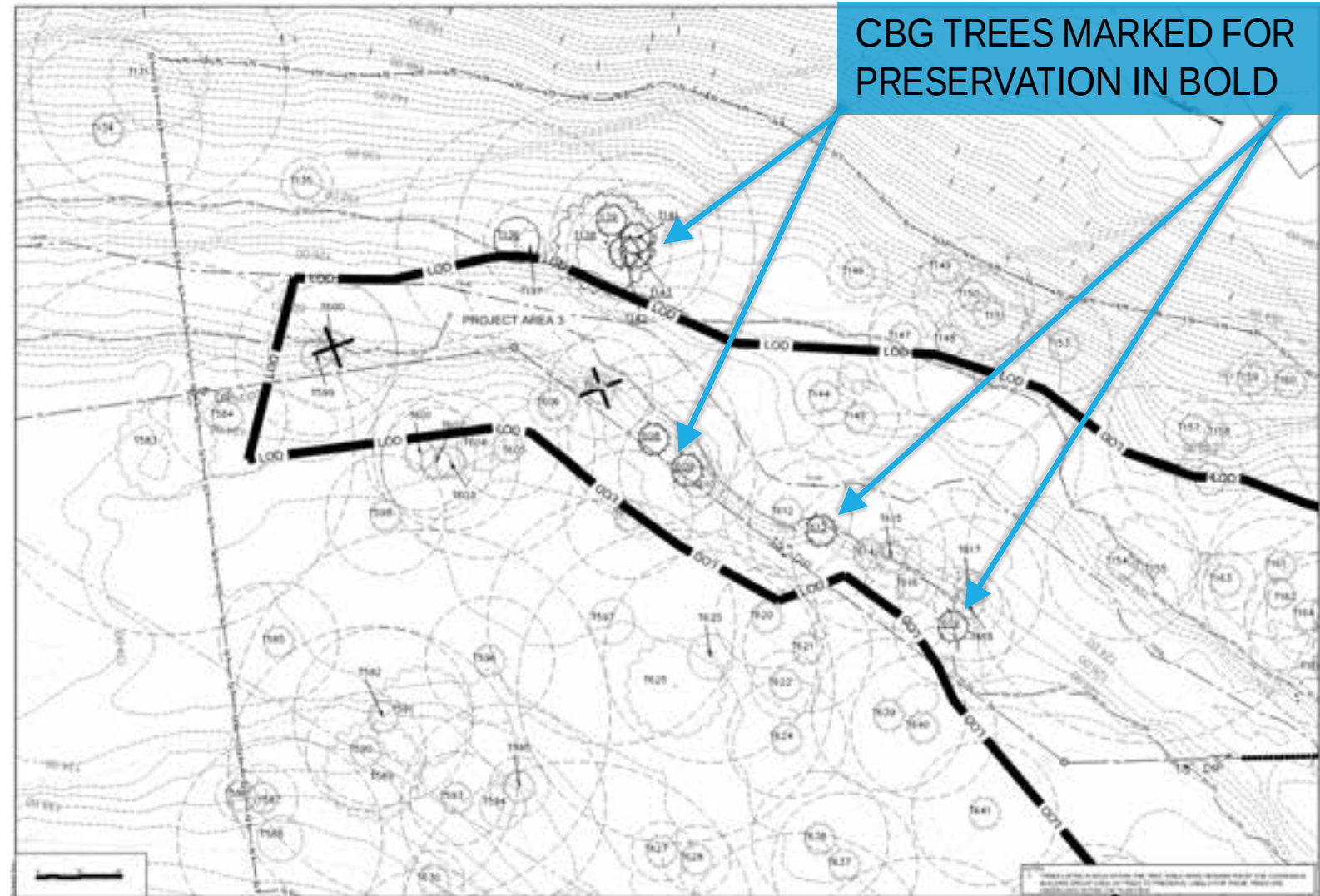
2

Dead trees  
proposed for  
removal

0

Total trees  
proposed for  
removal

2





# Tree Preservation: Project Area 4

Living trees  
proposed for  
removal

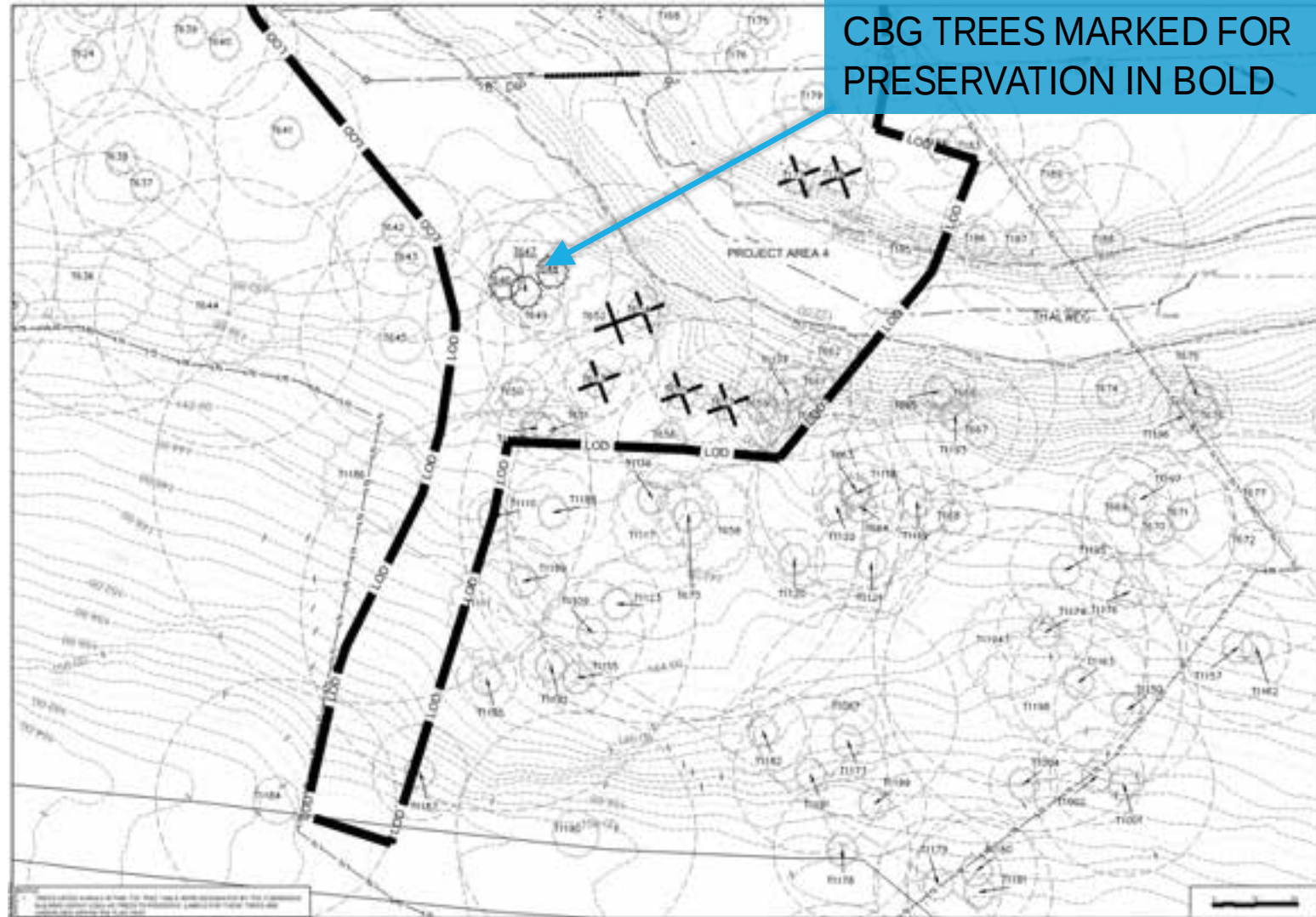
3

Dead trees  
proposed for  
removal

4

Total trees  
proposed for  
removal

7





# Project Schedule

June 15, 2025 -  
December 15, 2025  
Duration: 6 Months

May 15, 2026 –  
July 31, 2026  
Duration: 2.5 Months

October 1, 2026 –  
February 28, 2027  
Duration: 5 Months

September 1, 2027 –  
December 15, 2027  
Duration: 3.5 Months



December 15, 2025  
– May 15, 2026  
Duration: 5 Months

August 1, 2026 –  
September 30, 2026  
Duration: 2 Month

March 1, 2027 –  
September 1, 2027  
Duration: 6 Months



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# Additional Information



# What Will It Look Like?

## ▶ **Streambank and Trail Stabilization**

### ▶ Gravity Retaining Walls

- ▶ Installed along eroded banks in Project Areas 1, 2, and 4
- ▶ Rock façade finish for natural aesthetics
- ▶ Safety railings added near public access points

## ▶ **Sheet Piles Installed at wall base to prevent undermining and bed scour**

- ▶ Chosen over deeper wall embedment for reduced impact, cost, and constructability

## ▶ **Removal of Significant Woody Debris**



# What Will It Look Like?

## ► Gravity Retaining Wall Textures



**Ledgestone**

Ledgestone blocks give retaining walls a random, stacked stone look. Because they're made using architectural-grade precast concrete, the level of detail is outstanding.



**Cobblestone**

Cobblestone blocks have a great quarried stone aesthetic. Each one-ton block features the appearance of six smaller blocks, making it a great look for any size project.



**Limestone**

Limestone blocks have a natural split limestone texture that beautifully mimics real quarried limestone. The massive size of each block face gives walls an impressive scale.



**Kingstone**

Striking a balance between the scale of Limestone and relief of Ledgestone, Kingstone appears weathered by water and time like the crown of a natural stone outcropping.



**Smooth**

When you're looking for something a little more modern, the Redi-Rock Smooth texture with its crisp, clean lines provides the sophistication you're after.



# What Will It Look Like?

## ▶ Streambed Improvements

### ▶ Boulder Cascades

- ▶ Project Area 1: 56 ft cascade, 4 ft drop
- ▶ Project Area 2: 95 ft cascade, 7.5 ft drop
- ▶ Project Area 4: 73 ft cascade, 3.4 ft drop

### ▶ Plunge Pool Redesign

- ▶ Type I pool (36' x 30' x 3') to meet VDEQ standards
- ▶ Energy dissipation and grade control

### ▶ Thalweg Realignment & Substrate Mix

- ▶ Stabilizes flow path and reduces erosion



# What Will It Look Like?

## ► Boulder Cascade and Plunge Pool



Boulder Cascade



Plunge Pool



# What Will It Look Like?

## ► Gravity Walls Around Manholes



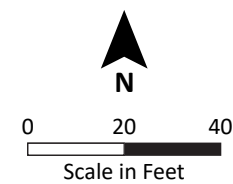


# What Will It Look Like?

## ► Concrete Encasement



- Project Boundary
- Stream
- Limit of Disturbance (LOD)
- Temporary Access Road
- Gravity Wall
- Existing Trail
- Wetland
- Approximate Stream Thalweg
- Sanitary Sewer
- Boulder Weir
- Rock Armoring



### Project Area 1

### Project Area 2

