

Presentation will start at 5:35pm to allow everyone to join in



City of Verona Eastside Interceptor Sewer / MMSD Pumping Station 17 Force Main Neighborhood Information Meeting Wednesday January 13, 2021

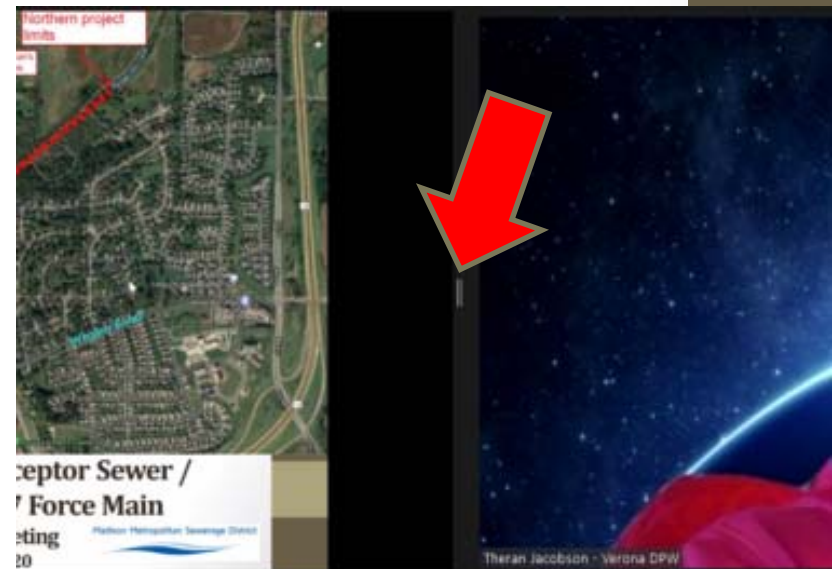


Madison Metropolitan Sewerage District



Meeting Logistics

- If you are participating by phone, you will only be able to listen to the presentation.
- Do not use the Raise Hand feature during the presentation. All questions will be taken at the end of the presentation, at which time you can use the Raise Hand feature to indicate that you wish to speak.
- Attendees will be muted until it is their time to speak.
- To provide equal opportunity to all participants who wish to speak, please try to limit statements/questions to 5 minutes.
- Note that this meeting is being recorded and broadcast on YouTube.
- To maximize the presentation on your screen, move the bar in the middle of the views



Agenda

- Instructions
- Presenter/Project Team
- History
- Project Overview
- Route Selection – Corridor
- Dane County work
- Ice Age Trail
- Restoration
- Tree planting – Renderings
- Trees & pipes
- Communication
- Construction schedule
- Questions (at end)

Presenters

- Host – Amanda Wegner (MMSD)
- Joint project between the parties below
- **City of Verona**
 - Theran Jacobson, Public Works Director
 - Dave Walker, Parks Director & Forester
- **Madison Metropolitan Sewerage District**
 - Eric Hjellen, Project Manager
- **Ice Age Trail Alliance**
 - Kevin Thusius, Director of Land Conservation
- **Dane County Parks and Land & Water Resources Department**
 - Sara Rigelman, Park Property Planner
 - Theresa Nelson, Stormwater Engineer

Project Team

- City of Verona & Madison Metropolitan Sewerage District – Owners
- Dane County Parks and Land & Water Resources Department
- Short Elliot Hendrickson – Design Engineer
- Minger Construction Companies, Inc. – General Contractor
 - Various subcontractors
- City of Verona & District Staff – Construction Inspection

Definition of Terms

- **Interceptor** – Largest pipe within a collection system that receives flow from smaller local pipes. Interceptors convey flow to large interceptors or treatment facilities.
 - Example: local roads vs interstate
- **Force main** – Pipe starting at the discharge side of a pump (lower elevation) that conveys flow under pressure to a higher elevation to a known end point.
- **Pumping station** – Structure with mechanical and electrical equipment that operates pumps to convey water from a lower elevation to a higher elevation. The pumps can discharge water near the structure or miles away through a force main.
 - Example: sump pump in residential house
- **Effluent** – Cleaned wastewater

History

- **1960:** City of Verona eastside interceptor constructed
 - Interceptor sewers typically follow creek corridors
 - Sewers flow downhill like storm water (unless pumped)
- **1996:** City of Verona connected to Sewer District for conveyance and treatment of wastewater
- **1996:** Work by Sewer District included installation of a pressurized force main through the corridor
- **1996 & 2020:** Projects to utilize common corridor
- **1996 vs 2020** projects **widely different scope of work**
- **1997:** Sewer District effluent line installed and discharges to creek
 - Approx. base flow of 9.7 MGD (MMSD effluent 3.1 MGD)
- 1997: Streambank improvements due to Sewer District effluent line
 - City removed trees along bank from Bruce to Lincoln bridge with WDNR guidance
 - To establish vegetation along banks
- Volunteer clearing with Ice Age Trail north of CTH M
 - Annual occurrence with limited success

History, cont.

1996 District Force Main

- Install 16" force main, 9-ft depth
- 4 air release structures (none along creek)
- 1 creek crossing
- Shallow-well dewatering operations

2020 City Interceptor & District Force Main

- Maintain 16" force main
 - dictated pipe alignment north of S. Main Street
- Install 24" force main, 9-ft depth
- Install 24" interceptor,
 - Depth varies 12 to 22-ft (avg. 16ft)
 - Avg. 17-ft (S. Main to Lincoln)
- Lateral separation between all 3 pipes
- 2 air release structures along creek (force main)
- 24 access structures (interceptor)
- 10 access structures (local)
- 8 creek crossings
- 9 local connections
- 2 interceptor connections
- Abandonment of structures / pipe
- By-pass pumping
- Deep-well dewatering operations
- Trenchless installation
 - S. Main (3)
 - Melody Circle

Corridor Needs

- **What occurs in the corridor (not just the trench)**
 - Erosion control installation and maintenance
 - Dewatering operations [pits (or wells), pumps, piping, and sedimentation]
 - Protection of existing trench excavations (pipes to remain in service)
 - Trench for 24-inch force main pipe
 - Trench for 24-inch gravity interceptor sewer
 - Topsoil spoil piles (material to be re-installed)
 - Trench spoil piles (material to be re-installed)
 - Pipe bedding stone
 - Storage of contractors' necessary materials during operations
 - Drive aisle to get to opposite sides of the work zone
 - Workers safety

Project Overview

- Replacement of existing eastside interceptor sewer (1960)
- Construction along Badger Mill Creek from Bruce Street to Arbor Vitae Place
- Local sewer connections to adjacent neighborhoods
- Traffic closure of Bruce Street for 6 weeks
- Minor traffic impacts to Melody Circle & Arbor Vitae Place
- Closure of the Ice Age Trail during construction
- Dane County Parks Badger Mill Creek restoration
- S. Main Street to **remain open** with shoulder closures or temporary flagging operations for deliveries and site access
- Additional District force main capacity required in 2 to 4 years. Phase 1 of District force main being built now to avoid disturbing this same corridor in 2 to 4 years and to achieve economies of scale.

- Bruce Street to S. Main Street



Project Overview - Central

- S. Main Street to Lincoln Street



Project Overview - North

- Lincoln Street to Arbor Vitae Place



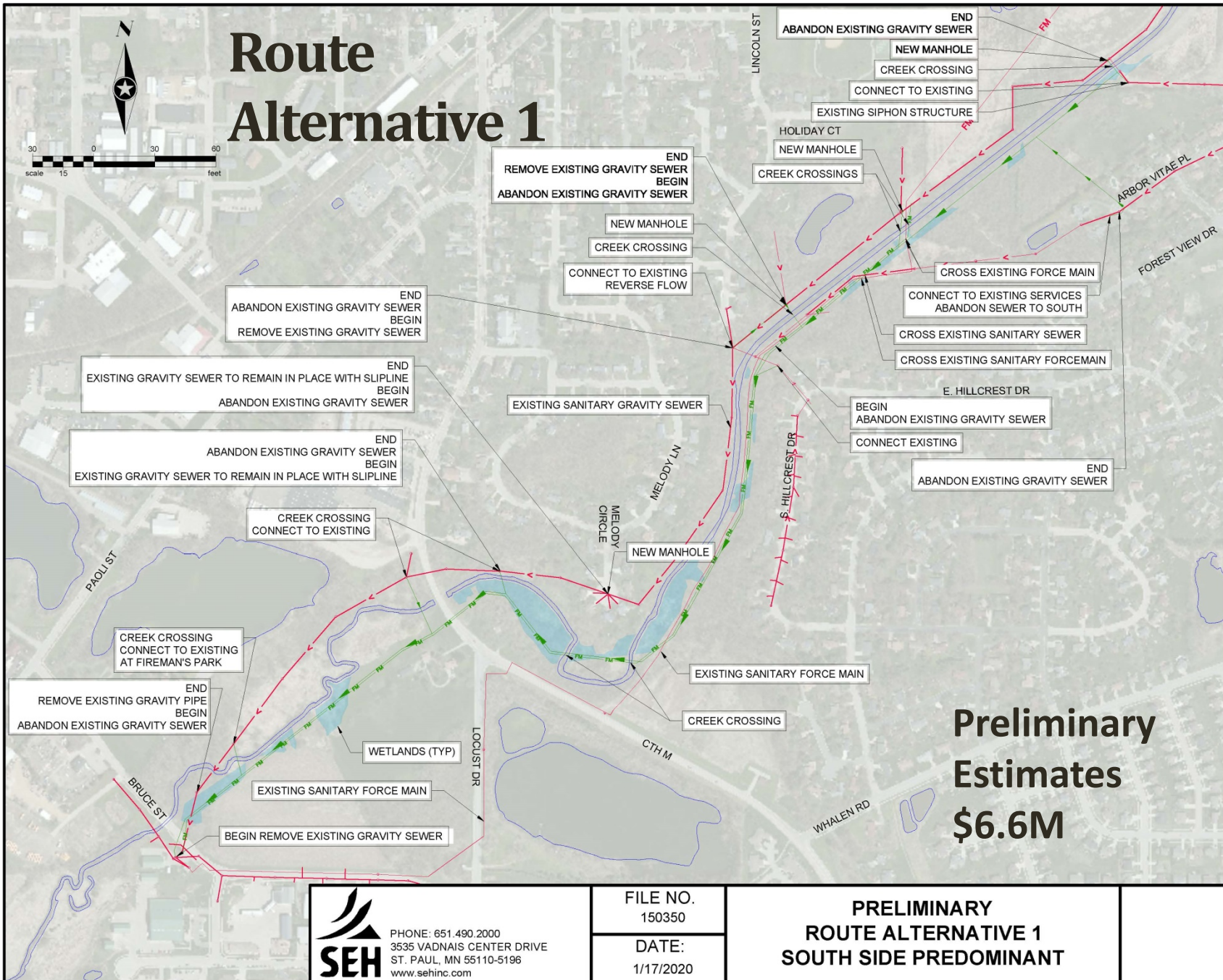
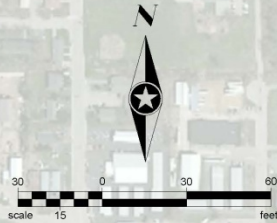
Route Selection

- **Criteria used in selection (not in order of importance):**
 - Connection points // Re-establish local connections or add pumping stations
 - 1960 construction and local connections created the route
 - Maintenance
 - Accessibility (temporary and permanent)
 - Environmentally sensitive areas
 - Street crossings
 - Open cut vs trenchless installation
 - Service update opportunities (capacity or maintenance)
 - Easement / Land acquisition
 - Risk of condemnation and/or relocation of structures
 - Existing sewer pipe connectivity
 - Constructability
 - Construction Costs
 - Utility conflicts
 - Service outages
 - Bedrock
 - Excessive slopes

Route Alternatives

- **Four initial alternatives (Alt. 1 - 4)**
 - Preliminary estimates: \$6.6M to \$10.5M
 - Includes City and District project elements
 - Selected alternative is a combination of 1 & 4.
- **Staff & consultant prepared another in December 2020 (Alt 5)**
 - Preliminary estimate: \$25M (vs \$4.5M as bid) – City items
 - Cost is only city project elements
 - District route along creek

Route Alternative 1



**Preliminary
Estimates
\$6.6M**



PHONE: 651.490.2000
3535 VADNAIS CENTER DRIVE
ST. PAUL, MN 55110-5196
www.sehinc.com

FILE NO.
150350

DATE:
1/17/2020

**PRELIMINARY
ROUTE ALTERNATIVE 1
SOUTH SIDE PREDOMINANT**

Map showing the proposed sewer line alignment from Bruce St to the creek crossing. The alignment is marked with a red line and green arrows. Key features include:

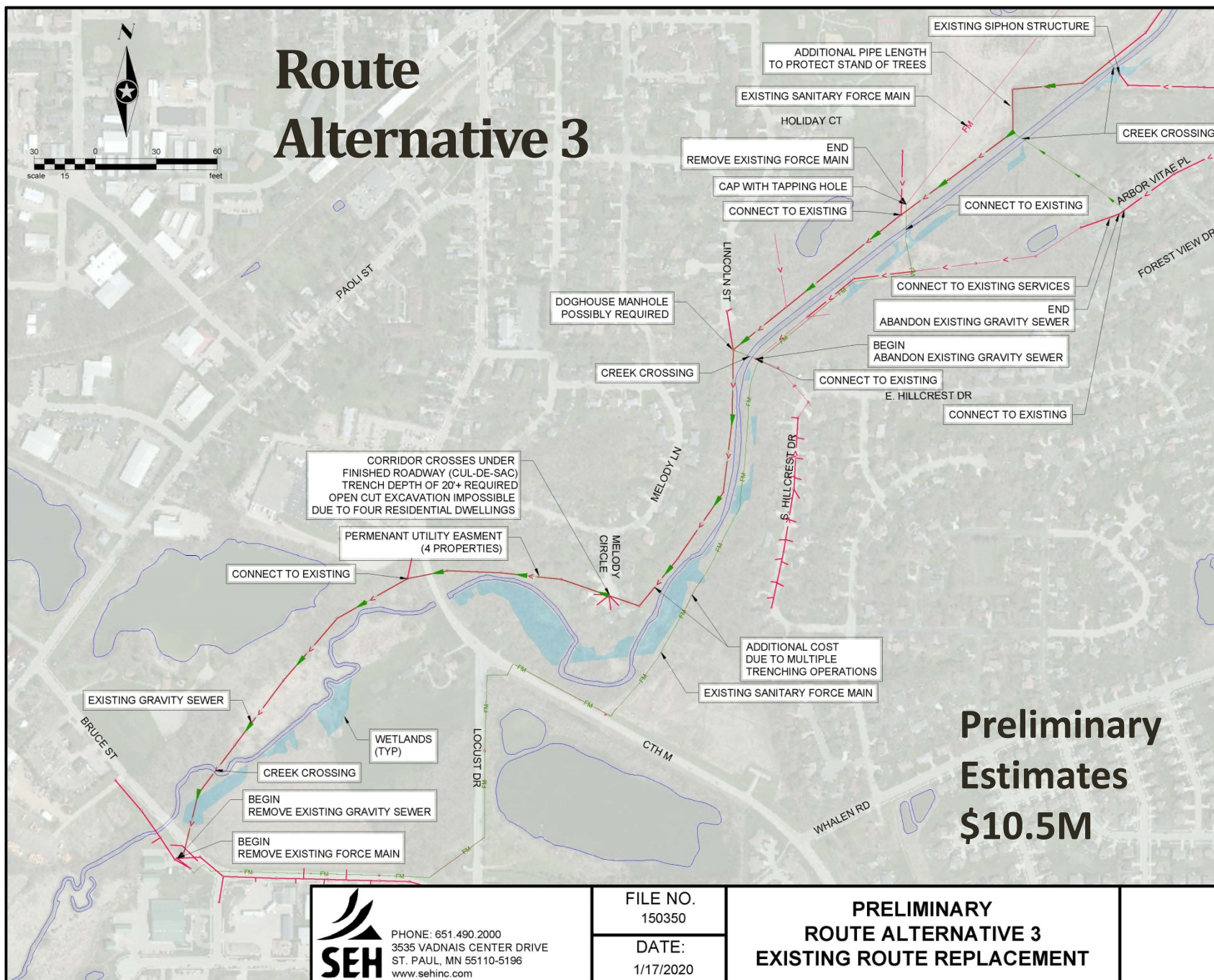
- EXISTING GRAVITY SEWER
- BRUCE ST
- WETLAND (TYP)
- CREEK CROSSING
- EXISTING SANITARY FORCE MAIN
- BEGIN ABANDON EXISTING GRAVITY SEWER



FILE NO.
150350

**PRELIMINARY
ROUTE ALTERNATIVE 2
NORTH SIDE PREDOMINANT**

Save: 1/17/2020 11:28 AM: hstadoo Plot: 1/17/2020 11:40 AM Q:\JZ\W\VERP\W15035015-final-dsgn10-Civil\adown\ext\hst\Route Alternatives.dwg



**Route
Alternative 4**

PAUL ST
END ABANDON EXISTING GRAVITY SEWER
BEGIN REMOVE EXISTING GRAVITY SEWER TO END OF PROJECT

EXISTING GRAVITY SEWER TO REMAIN IN PLACE WITH SLIPLINE
END ABANDON EXISTING GRAVITY SEWER
BEGIN EXISTING GRAVITY SEWER TO REMAIN IN PLACE WITH SLIPLINE

CREEK CROSSING CONNECT TO EXISTING

CONNECT TO EXISTING AT FIREMAN'S PARK
END REMOVE EXISTING GRAVITY PIPE
BEGIN ABANDON EXISTING GRAVITY SEWER

WETLANDS (TYP)

CREEK CROSSING
BEGIN REMOVE EXISTING GRAVITY SEWER

LOCUST DR

MELODY LN
NEW MANHOLE

S. HILLCREST DR
BEGIN ABANDON EXISTING GRAVITY SEWER

E. HILLCREST DR
CONNECT TO EXISTING
ADDITIONAL COST DUE TO MULTIPLE TRENCHING OPERATIONS
CONNECT TO EXISTING SERVICES
CONNECT TO EXISTING

DOGHOUSE MANHOLE POSSIBLY REQUIRED

LINCOLN ST
CAP WITH TAPPING HOLE
ABANDON EXISTING GRAVITY SEWER HOLIDAY CT
EXISTING SANITARY FORCE MAIN
EXISTING SIPHON STRUCTURE
CREEK CROSSING
ARBOR VITAE PL
FOREST VIEW DR

WHALEN RD
CTH M

Preliminary Estimates \$6.6M

 PHONE: 651.490.2000 3535 VADNAIS CENTER DRIVE ST. PAUL, MN 55110-5196 www.sehinc.com	FILE NO. 150350	PRELIMINARY ROUTE ALTERNATIVE 4 NORTH SOUTH HYBRID
	DATE: 1/17/2020	

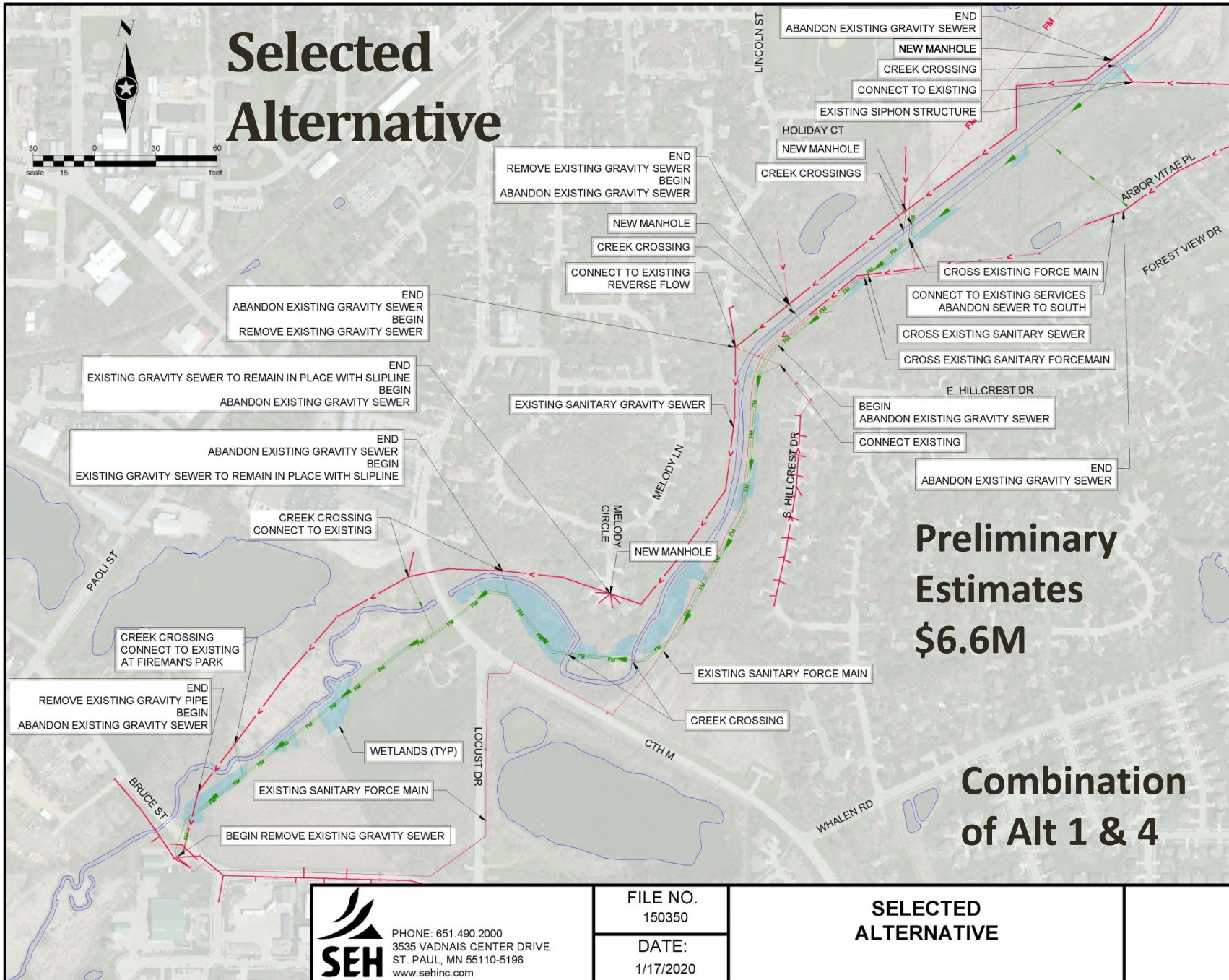


PHONE: 651.490.2000
3535 VADNAIS CENTER DRIVE
ST. PAUL, MN 55110-5196
www.sehinc.com

DATE:
1/17/2020

**PRELIMINARY
ROUTE ALTERNATIVE 4
NORTH SOUTH HYBRID**

Combination of Alt 1 & 4

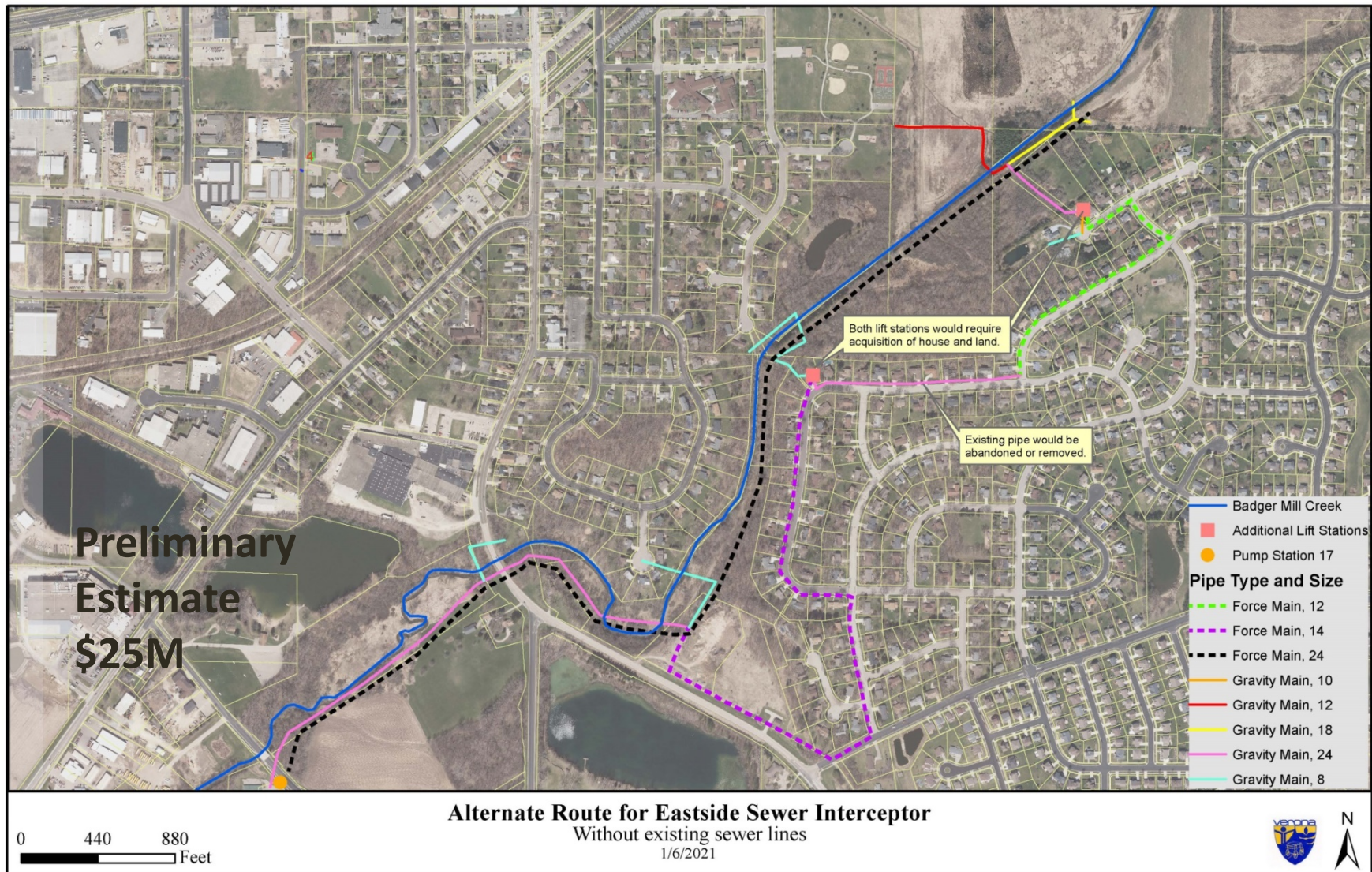


Selected Route

- **Reasons for selection**

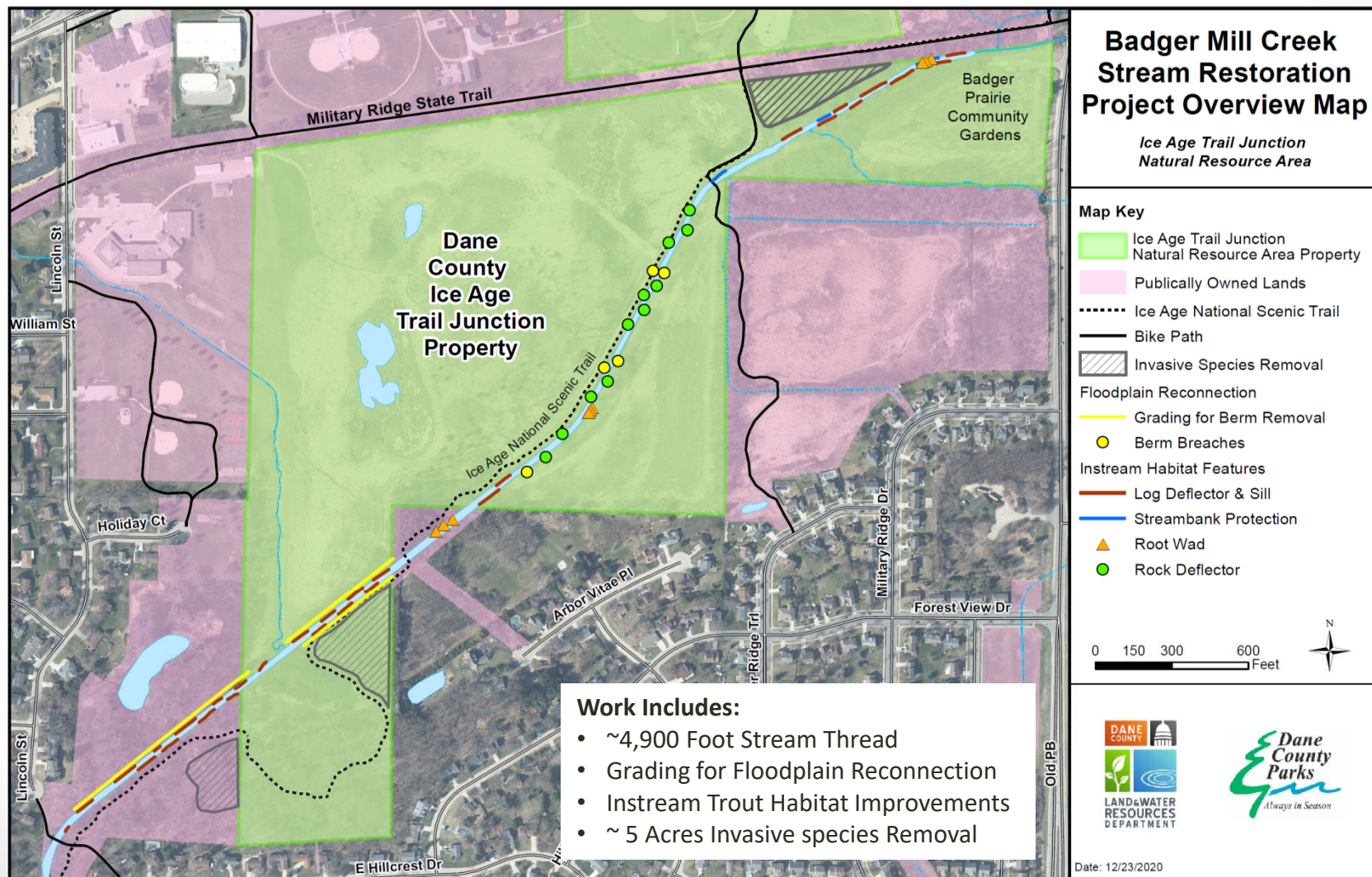
- Minimal easement acquisition
- Utilize common corridor for MMSD existing force main
- Confined corridor (all pipes are on one side)
- Least constructability challenges
- Engage in Ice Age Trail improvements
- Lowest cost
- Reduce by-pass pumping
- Shortest length overall and tunnelling
- Ease of connectivity to existing local sewers
- Allows abandonment of other local sewers
- Ease of access for maintenance - inspections
- District and City benefits from economies of scale in the project

Route Alternative 5



Project Overview - Dane Co.

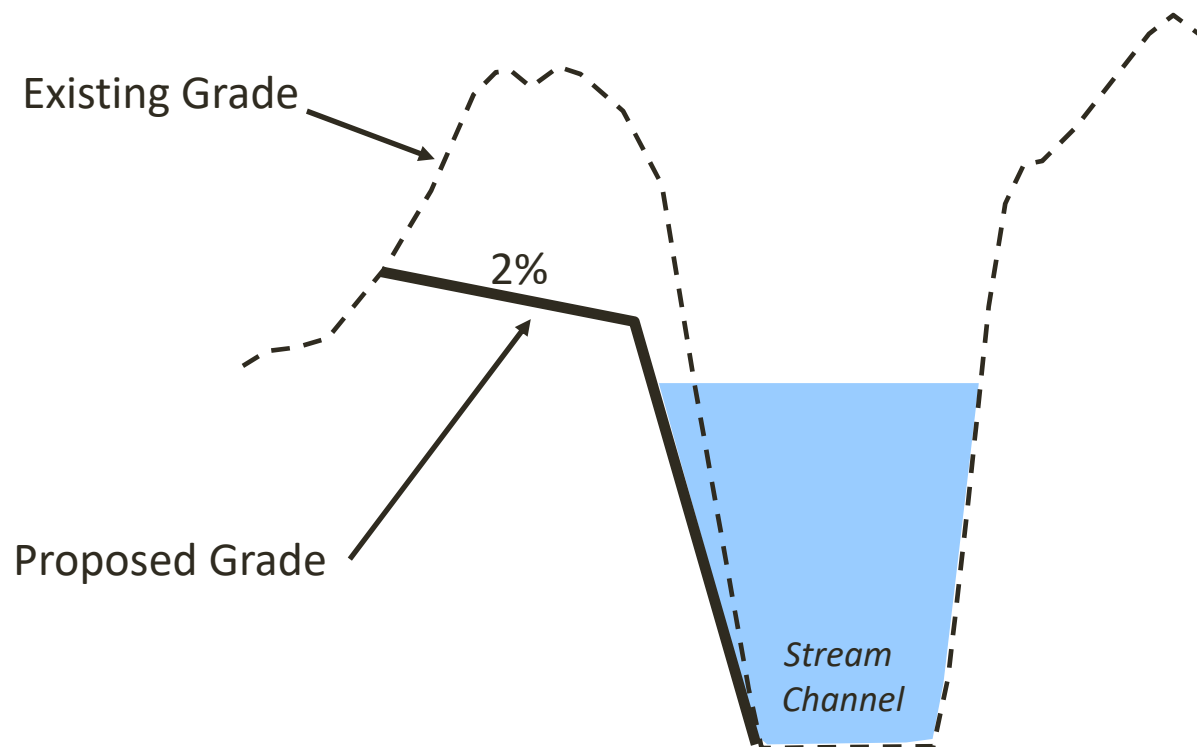
- Badger Mill Creek restoration – Lincoln Street to Old PB



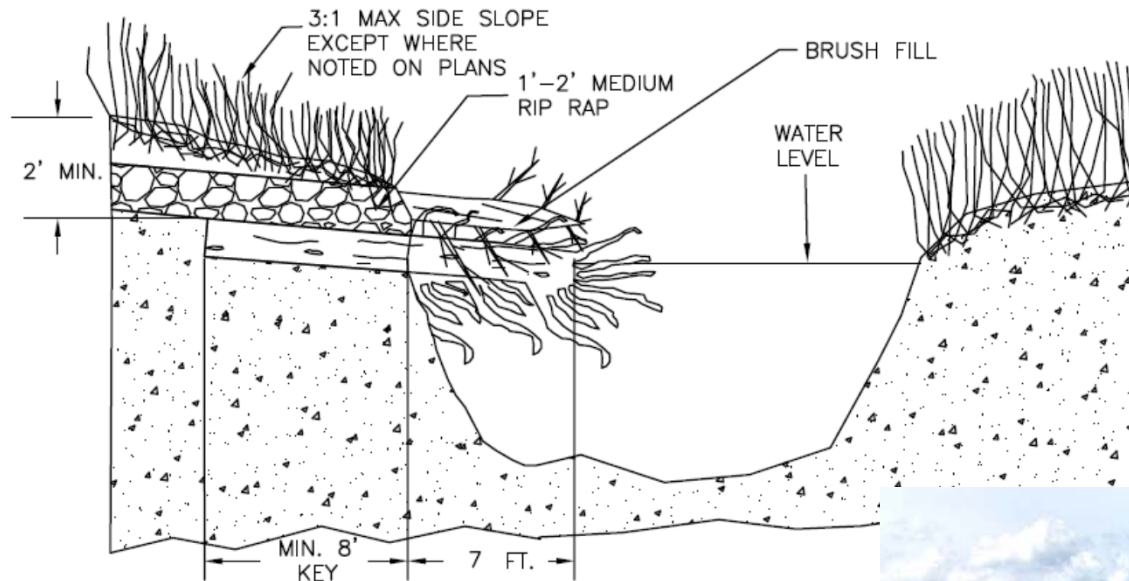
<https://www.danecountyparks.com/project/detail/Badger-Mill-Creek-Stream-Restoration>

Grading for Floodplain Reconnection – Dane Co.

- Berm removal and berm breeches



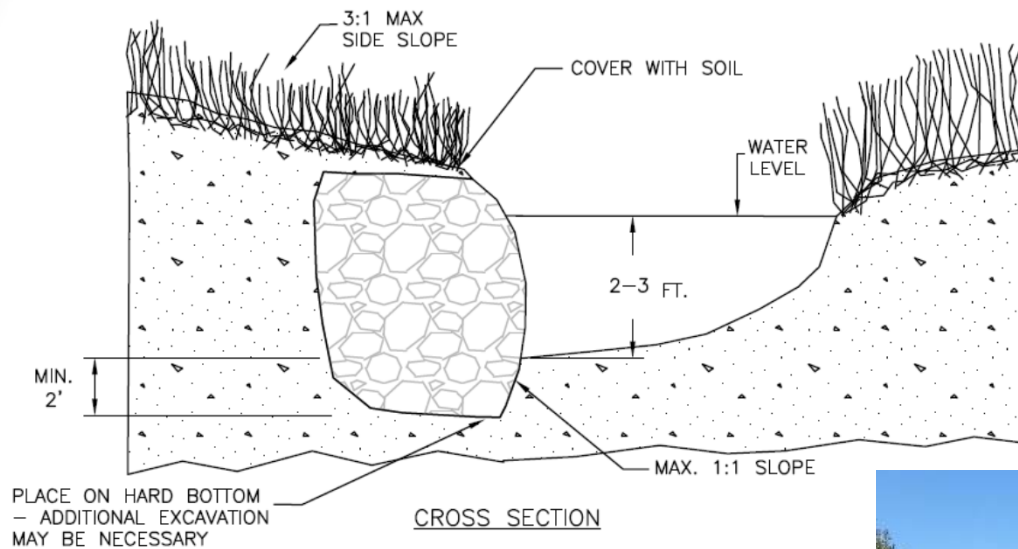
Instream Trout Habitat Improvement – Dane Co.



Log Deflectors
and Sills



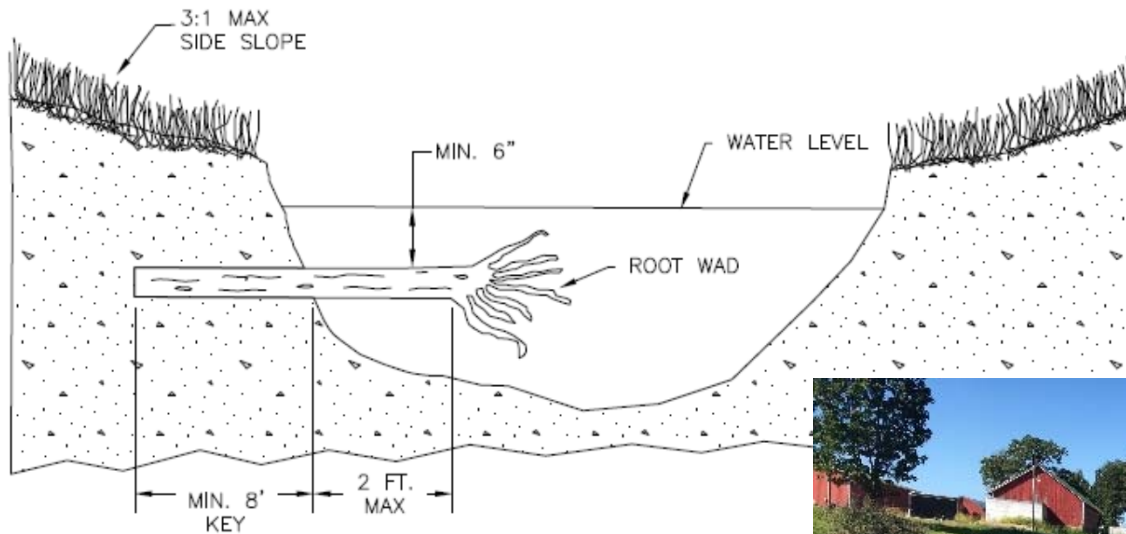
Instream Trout Habitat Improvement – Dane Co.



Rock Deflectors



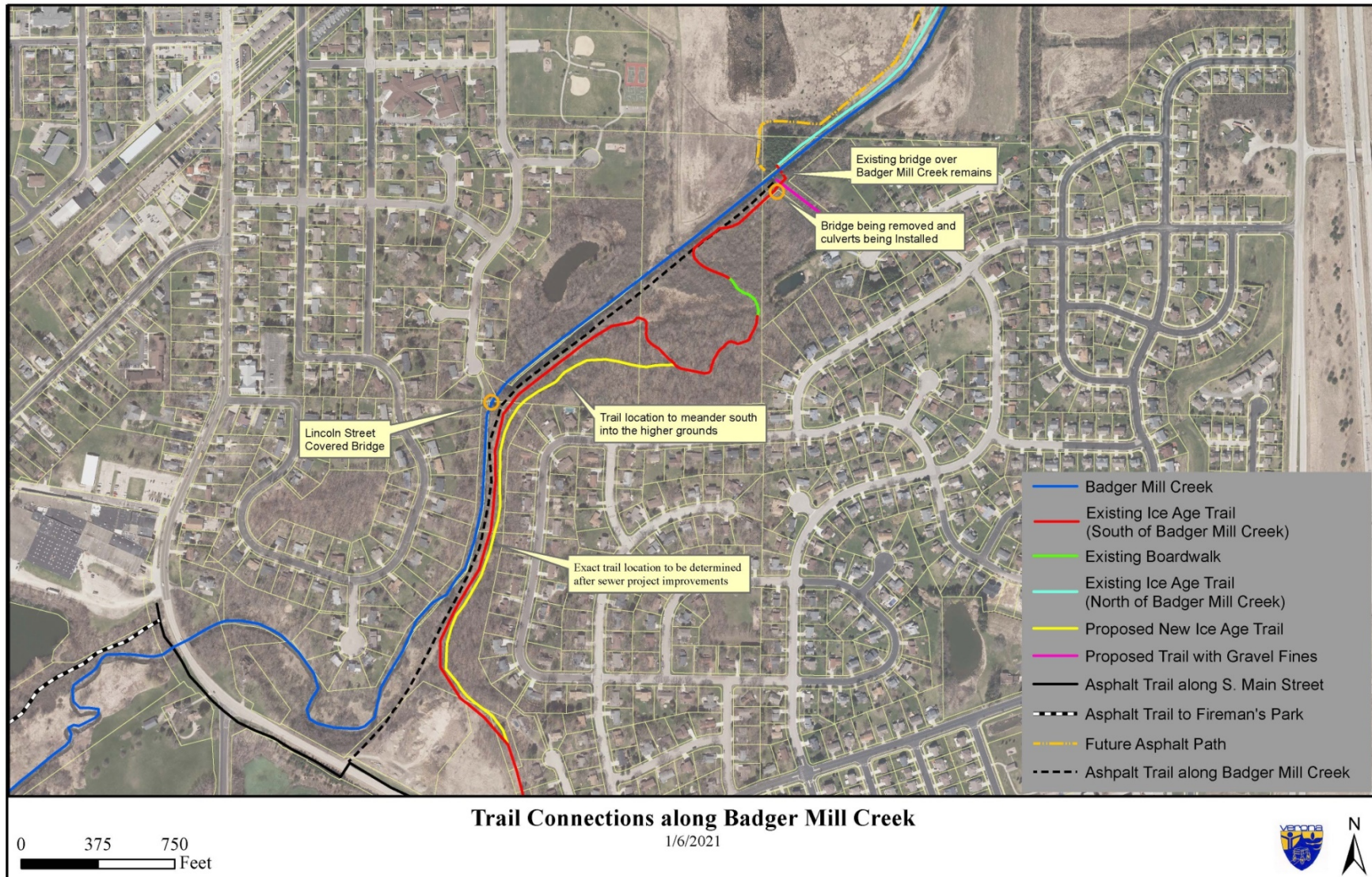
Instream Trout Habitat Improvement – Dane Co.



Root Wads

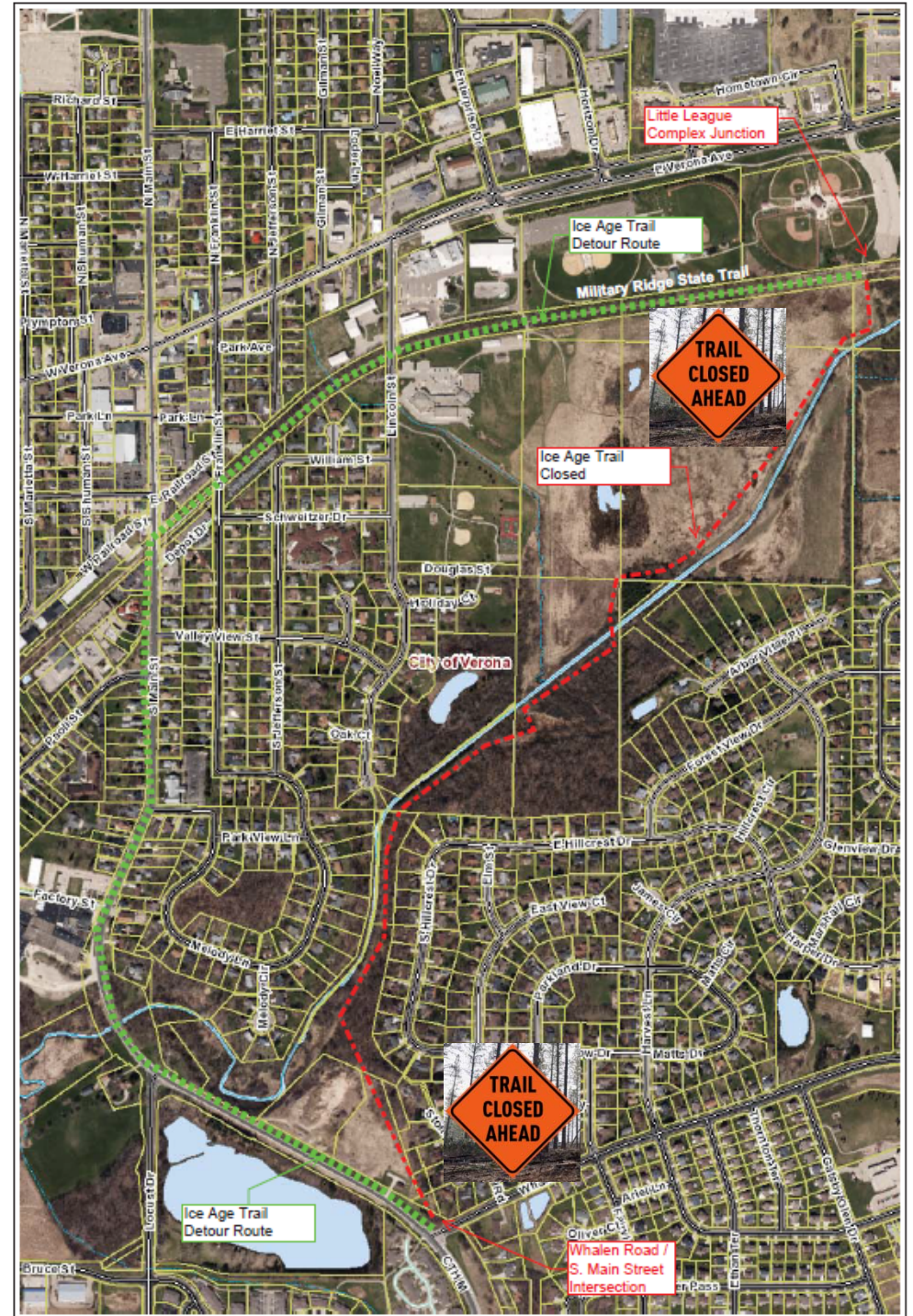


Ice Age Trail



Detour for Ice Age Trail

- Ice Age Trail to be detoured to Military Ridge State Trail & S. Main Street

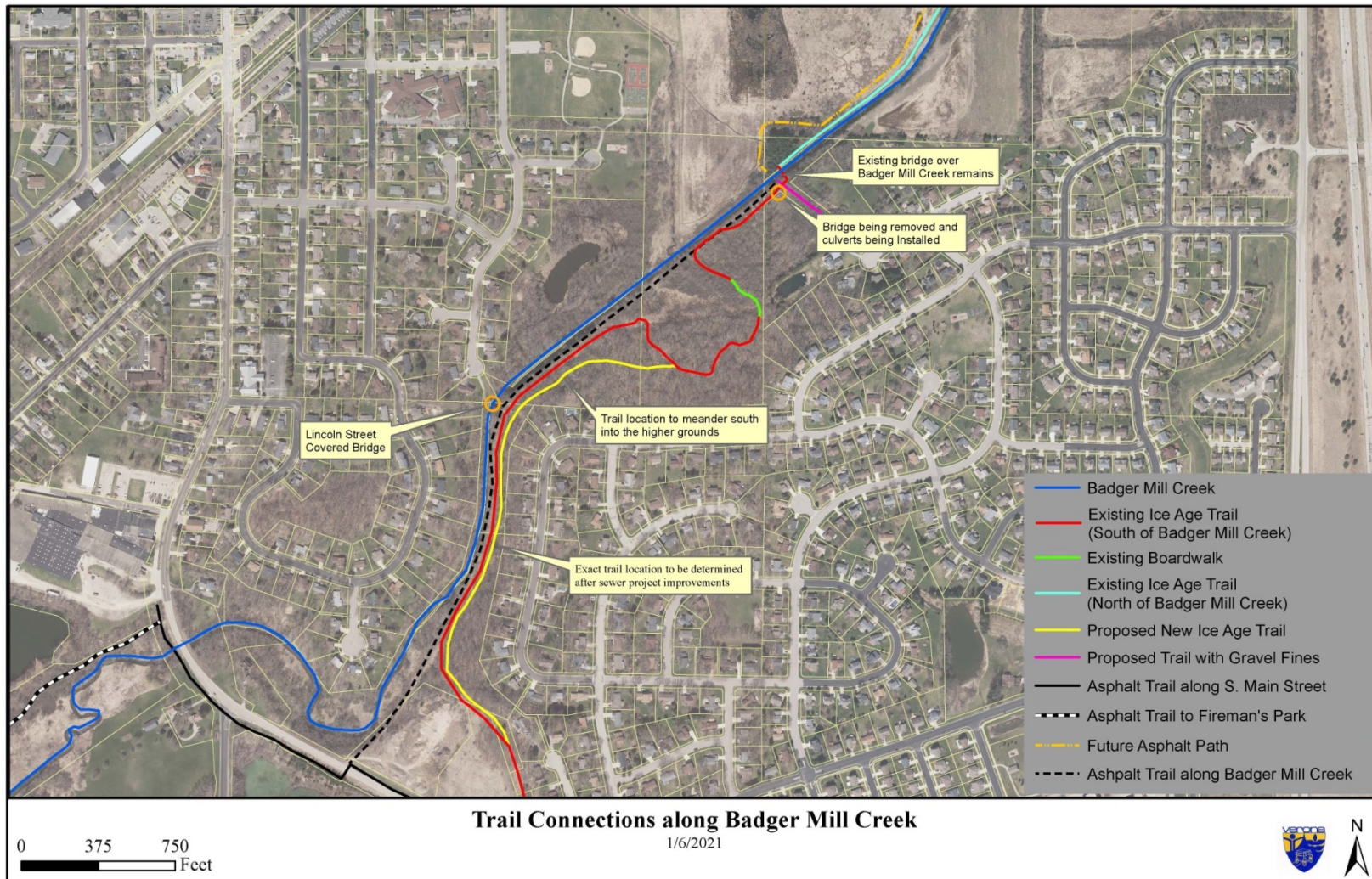


Tree Species along Corridor

- Vast majority within corridor were volunteer species
 - **Volunteer Trees**
 - Cottonwood
 - Box elder
 - Willow
 - Silver maple
 - Elm
 - Mulberry
 - **Invasive Species**
 - Buckthorn
 - Honeysuckle
- **Oak Corridor**
 - Eastern slope along S. Hillcrest

Multi-Use Path Purpose

- Connection to Parks – Fireman's to Little League
- Off-street connection for East View



Restoration – ground cover

- Disturbed ground to be restored with native mix including wildflowers, grasses, sedges, and rushes.
- Location varies throughout project.

Floodplain Mix (wet areas)

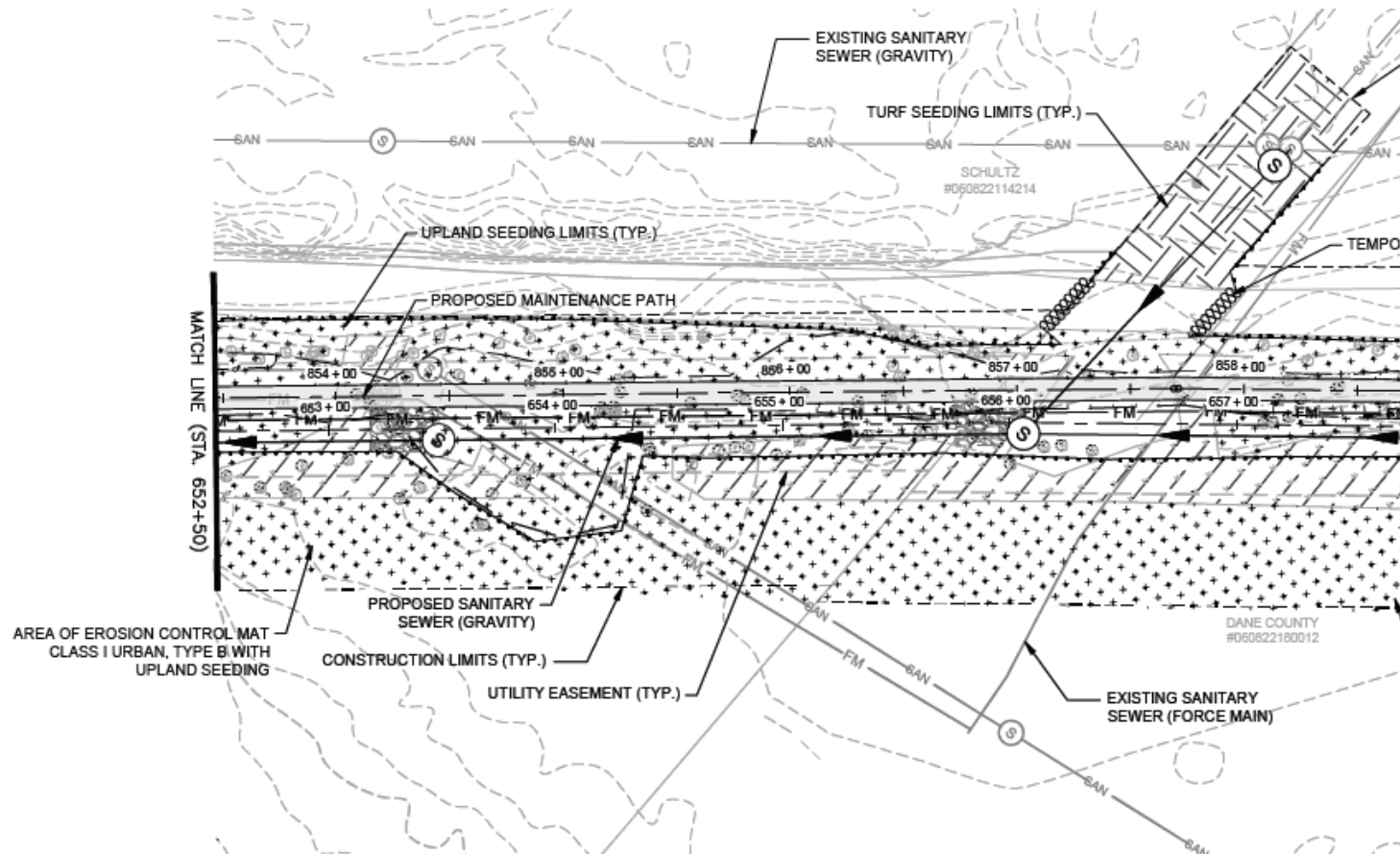
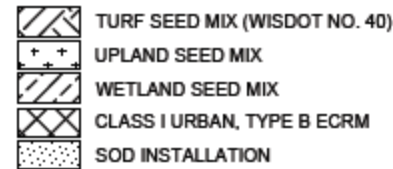


Savanna Woodland
Mix (upland areas)



Restoration – ground cover

- Location varies throughout project



Tree planting

- Schedule for installation – Native hardwoods **Spring** plant
- Location to be determined but along sewer corridor
- Earliest – 2022 after sewer project is completed

- **Species**

- **Upland**

- Red & white oak
 - Sugar maple
 - Shagbark hickory
 - Hackberry

- **Riparian**

- River birch
 - Swamp white oak
 - Basswood

- **Conifers**

- White pine
 - White spruce
 - Hemlock

Tree planting - Approach

- CTH M – Lincoln Bridge
 - Upland area east of multi-use path
 - Riparian area west of multi-use path
- Lincoln Bridge to County Land
 - Upland area south of multi-use path
 - Riparian area north of multi-use path
 - Conifers intermixed throughout

Trees & Pipes

- PVC pipe materials are improved over clay pipe but still risks
- PVC Pipe
 - Gasket joint
 - 13-ft pipe length
 - Pipe can deflect
 - Rubber collar at manhole
- Old Clay Pipe
 - Oakum with lead joints
 - 4-6-ft pipe length
 - Pipe can deflect
 - Concrete collar at manhole
- Staff reached out to a third-party consultant for their professional recommendation. Best practice is to not plant trees within the utility easement.
 - Minimize risk of root intrusion (reduce inflow and infiltration sources)
 - High ground water conditions
 - Inspections along the pipe
 - Maintenance crews need access with large equipment
 - Locating of utilities

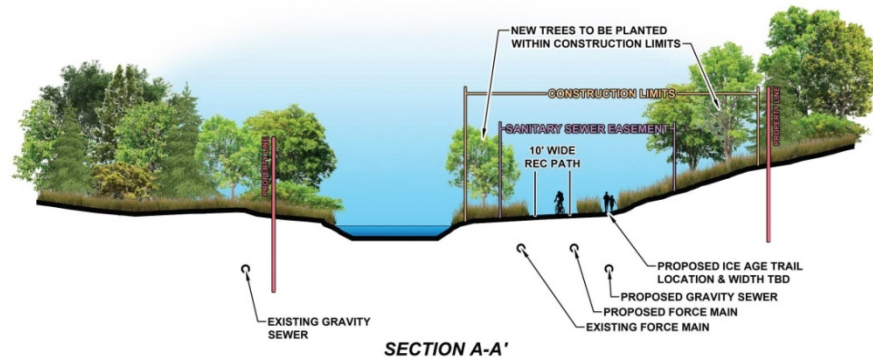
Rendering / north of CTH M / South Lincoln



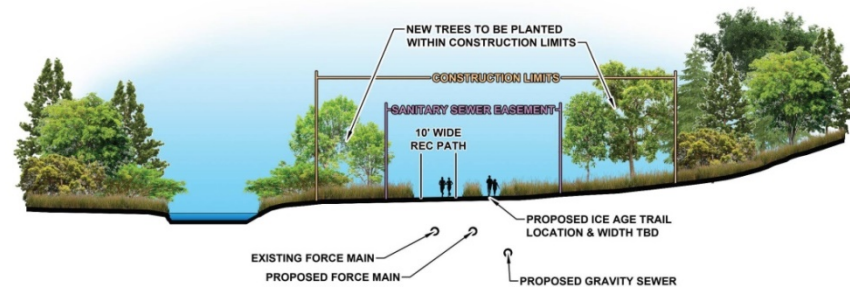
VERONA SANITARY SEWER INTERCEPTOR

PROPOSED CROSS SECTIONS

CITY OF VERONA, WISCONSIN
JANUARY 4, 2021 20-01-101



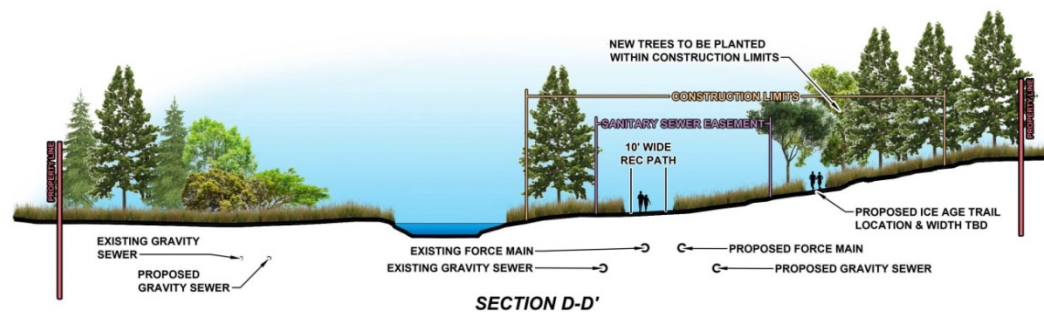
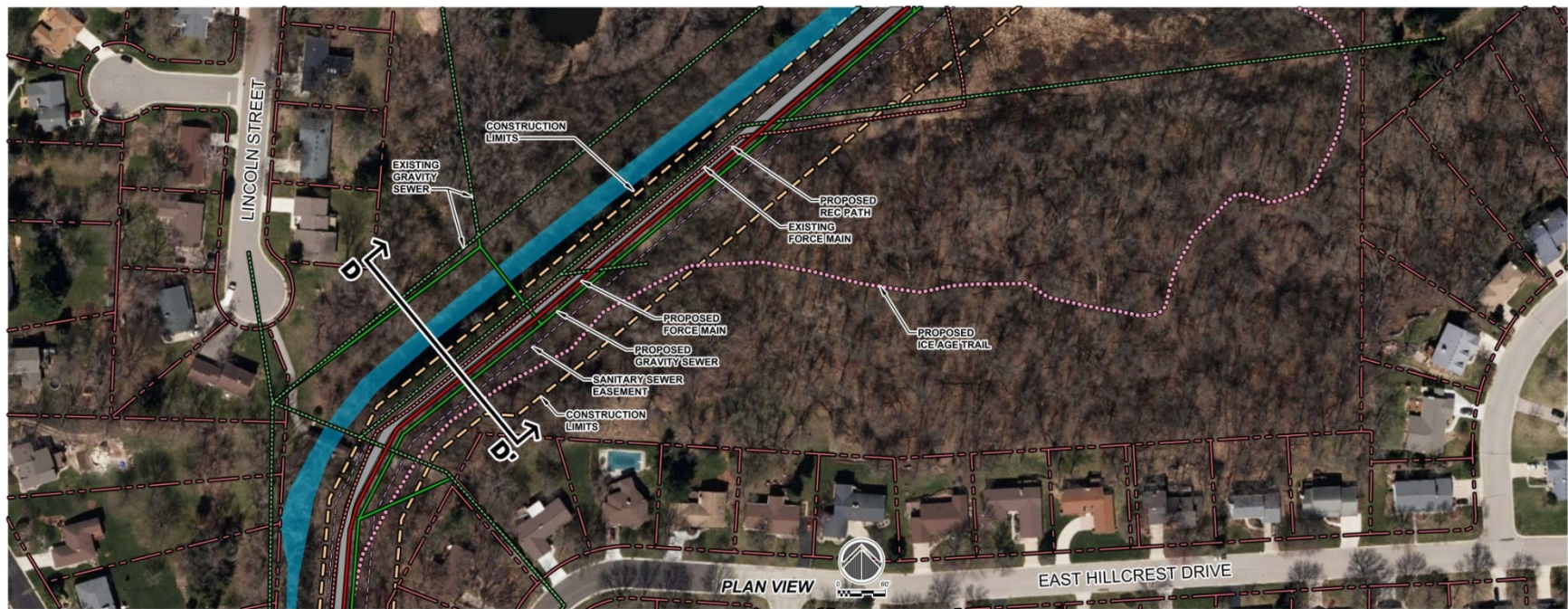
SECTION A-A'



SECTION B-B'

D'ONDRIO KOTTKE AND ASSOCIATES, INC.
7550 Westward Way, Madison, WI 53711
Phone: 608.533.7310 • Fax: 608.533.1089
YOUR NATURAL RESOURCE FOR LAND DEVELOPMENT

Rendering / East Lincoln Street Bridge



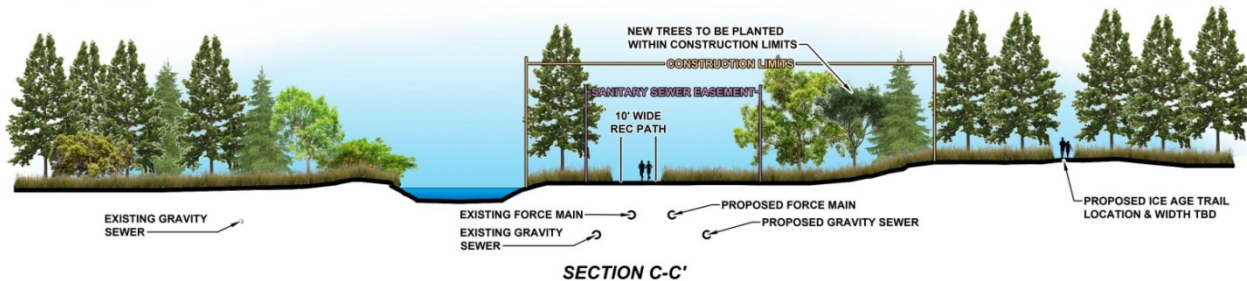
VERONA SANITARY SEWER INTERCEPTOR

PROPOSED CROSS SECTIONS
CITY OF VERONA, WISCONSIN
JANUARY 4, 2021 20-01-101

JANUARY 4, 2021 20-01-101


D'ONOFRIO KOTTKE AND ASSOCIATES, INC.
7430 Westward Way, Madison, WI 53717
Phone: 608.833.7430 • Fax: 608.833.1089
YOUR NATURAL RESOURCE FOR LAND DEVELOPMENT

Rendering / East Lincoln Street Bridge



VERONA SANITARY SEWER INTERCEPTOR

PROPOSED CROSS SECTIONS

CITY OF VERONA, WISCONSIN
JANUARY 4, 2021 20-01-101

© DMFRID KOTKE AND ASSOCIATES, INC.
4540 Watwood Way, Madison, WI 53711
Phone: 608.833.7530 • Fax: 608.833.1089
YOUR NATURAL RESOURCE FOR LAND DEVELOPMENT

City Watershed Improvements

- **Capital / Maintenance Projects within Badger Mill Creek Watershed**
 - 2013: Lincoln Street channel rehabilitation, Phase I
 - 2017: Lincoln Street channel rehabilitation, Phase II
 - 2018: Silent Street pond dredging
 - 2018: Lincoln Street pond – design
 - 2019: Gateway pond conveyance improvements
 - 2020: Pond sampling
 - 2020: Harmony pond dredging
 - 2021: Lincoln Street pond – construction
 - 2021: Prairie Heights pond investigation/potential dredging
- **Localized improvements vs regional**

Communication

- Monthly Zoom meetings
 - Third Wednesday of the month at **5pm starting January 20, 2021** and the last meeting occurring on **September 15, 2021**. This meeting will include a schedule update on the project and then open dialog for questions from the public.
 - <https://zoom.us/j/98510880099>
or by phone
+1 312 626 6799
Webinar ID: 985 1088 0099
 - Schedule update
 - Staff will answer questions on construction progress
- Website has zoom link
- Questions are encouraged to be asked

Schedule - Overview

- Overall November 2020 – October 2021
- Badger Mill Creek restoration = July – August
- Schedule is always subject to change depending on weather

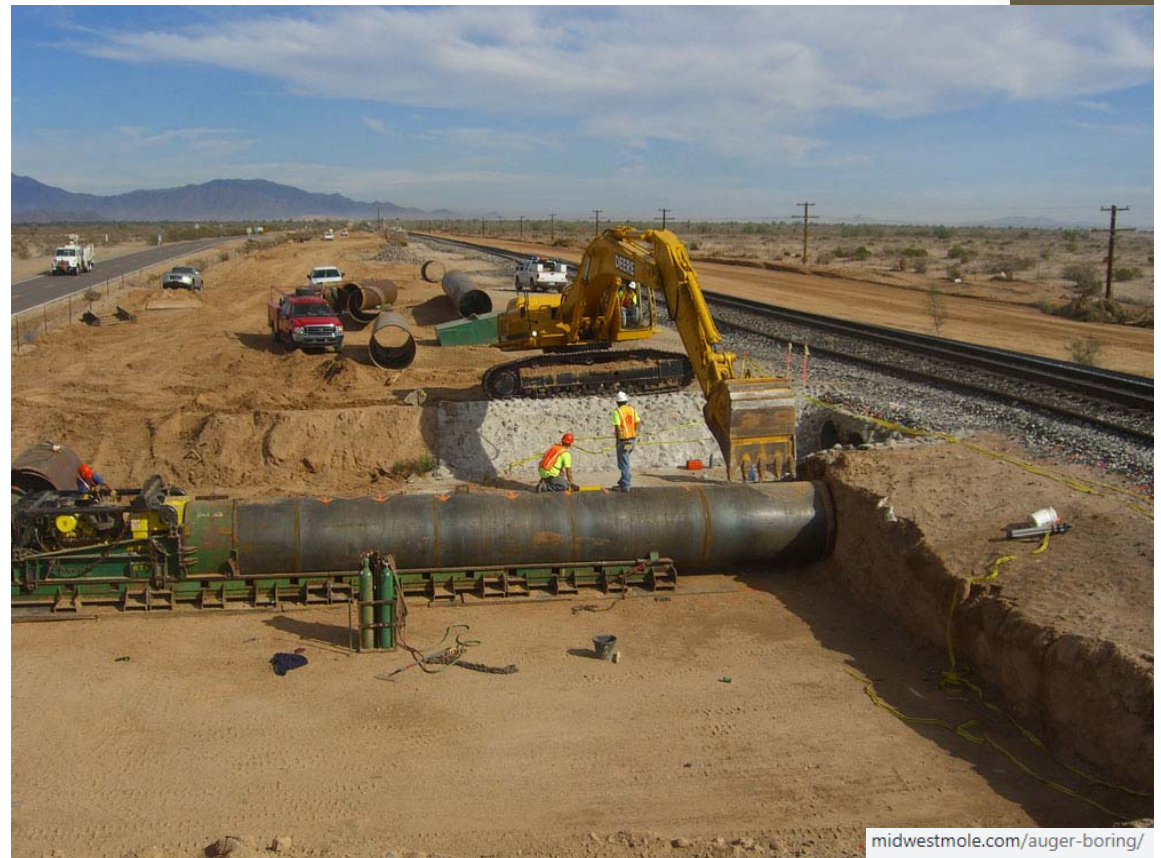
Schedule:

Milestone	Dates
Clearing of project corridor	Nov. 2020 thru Dec. 2020
Bruce St. to CTH M (pipe installation)	Dec. 2020 thru April 2021
CTH M Crossing (Trenchless pipe installation)	Jan. 2021 thru March 2021
CTH M to Lincoln St. (pipe installation)	March 2021 – June 2021
Lincoln St. to North Limits (pipe installation)	June 2021 – Aug. 2021
Local Connections and retirement of old Interceptor	Aug. 2021 – Sept. 2021
Maintenance Path Construction	Aug. 2021 – Sept. 2021
Project Restoration	Sept. 2021

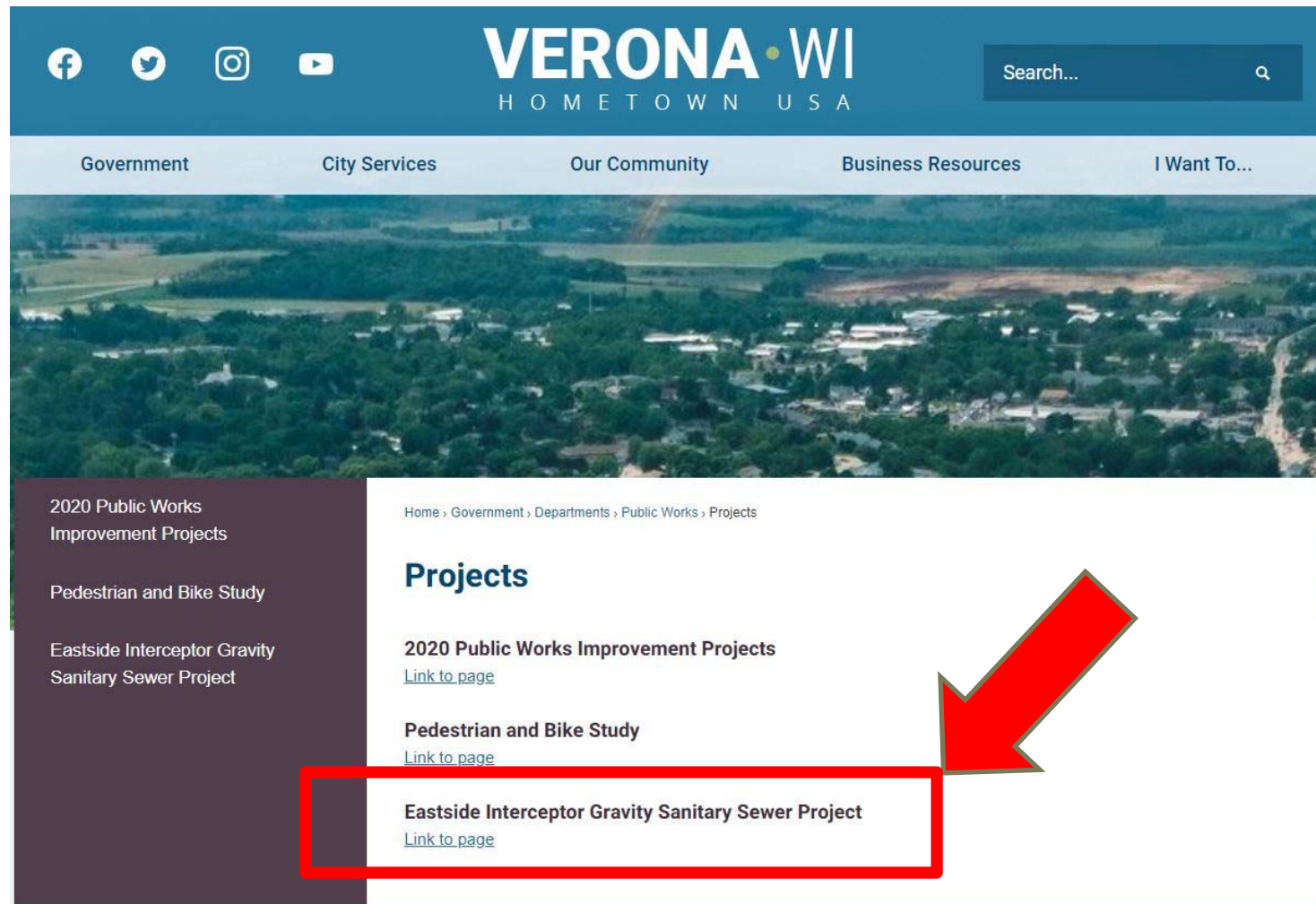
Schedule



- Bruce Street Closure
 - Reopened on January 12, 2021
 - One week closure in May to restore road
- S. Main Street tunneling operations to install pipe
 - The pipe will be installed by trenchless technology method to allow S. Main Street to remain open
 - January 2021 through February 2021

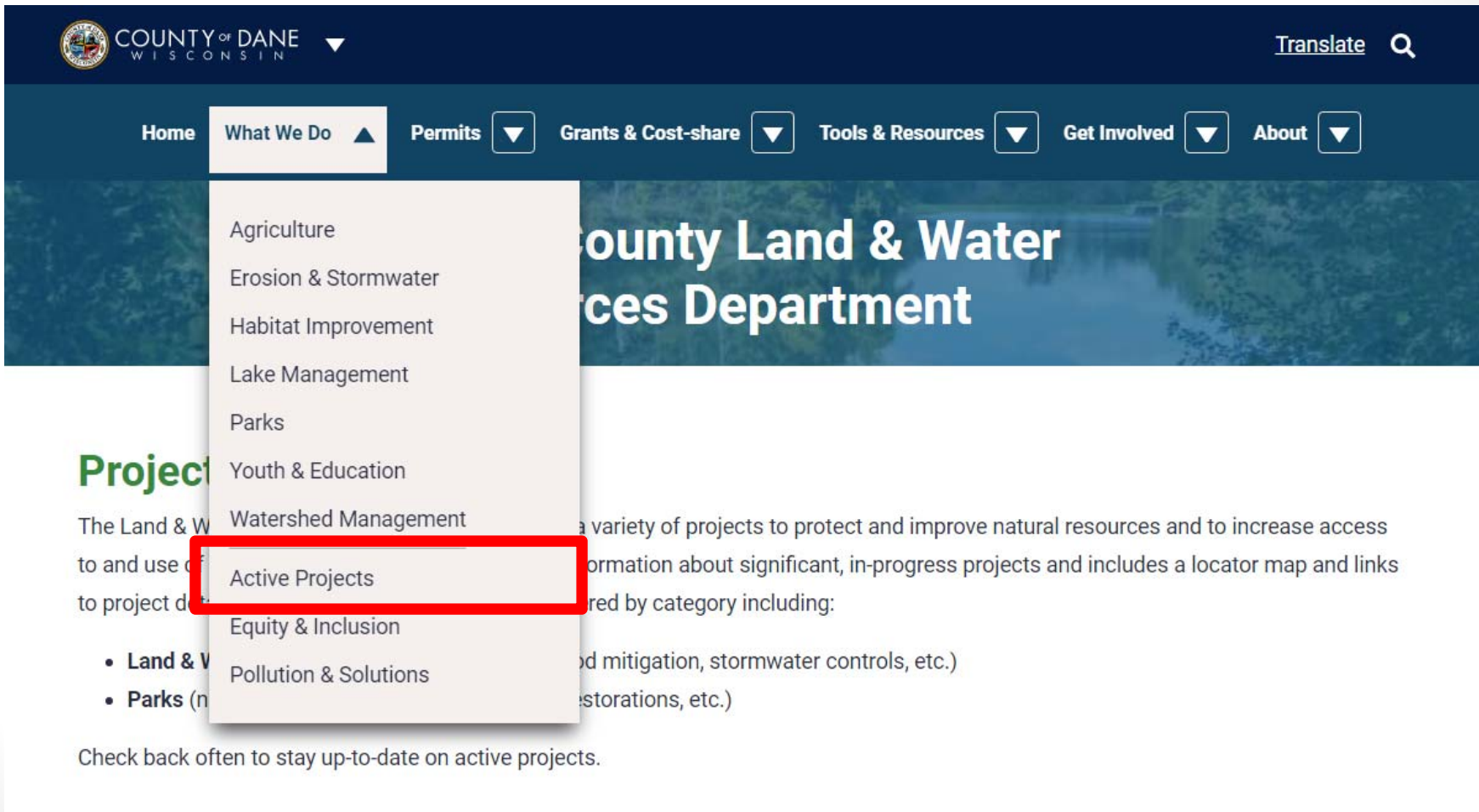


Website Information



- Schedule updates on City of Verona website:
 - www.ci.verona.wi.us/729/Eastside-Interceptor-Gravity-Sanitary-Se
 - Home > Government > Departments > Public Works > Projects

Website Information – Dane Co.



The screenshot shows the website for the Dane County Land & Water Resources Department. The header includes the County of Dane logo and navigation links: Home, What We Do, Permits, Grants & Cost-share, Tools & Resources, Get Involved, and About. A 'Translate' button and a search icon are also present. The 'What We Do' dropdown menu is open, listing various categories: Agriculture, Erosion & Stormwater, Habitat Improvement, Lake Management, Parks, Youth & Education, Watershed Management, Active Projects (highlighted with a red box), Equity & Inclusion, and Pollution & Solutions. The main content area features a large banner for the 'County Land & Water Resources Department' and a section titled 'Project' with a description of the department's work and a list of active projects.

COUNTY OF DANE
WISCONSIN

Translate

Home What We Do Permits Grants & Cost-share Tools & Resources Get Involved About

County Land & Water Resources Department

Project

The Land & Water Resources Department manages a variety of projects to protect and improve natural resources and to increase access to and use of these resources. This page provides information about significant, in-progress projects and includes a locator map and links to project details.

- Land & Water
- Parks (natural resources)

Check back often to stay up-to-date on active projects.

www.danecountyparks.com/parksproject/detail/Badger-Mill-Creek-Stream-Restoration

Questions?

Theresa Nelson, P.E.

Stormwater Engineer
Dane County Land And Water
(608) 577-4879
nelson.theresa@countyofdane.com

Theran Jacobson, P.E.

Public Works Director
City of Verona
(608) 845-6695
theran.jacobson@ci.verona.wi.us

Dave Walker

Parks Director & Forester
City of Verona
(608) 845-6695
dave.walker@ci.verona.wi.us

Sara Rigelman

Park Property Planner
Dane County Parks
(608) 212-1235
rigelman@countyofdane.com

Eric Hjellen, P.E.

Project Engineer
Madison Metropolitan Sewerage District
(608) 222-1201 ext. 348
erich@madsewer.org

Kevin Thusius

Director of Land Conservation
Ice Age Trail Alliance
(608) 798-4453 ext. 224
kevin@iceagetrail.org

