

# Welcome!

## We will begin shortly...

<b>Virtual Meeting Schedule</b>	
<b>6:00 – 6:10</b>	Welcome
<b>6:10 – 6:45</b>	Presentation
<b>6:45 – 7:00</b>	Presentation Q & A (General)
<b>7:00 – 7:45</b>	Zoom Breakout Rooms
<b>7:45 – 8:00</b>	Come Back Together/Wrap-Up





# Greentree/McKenna Watershed Study Public Information Meeting No. 3

MSA Professional Services with  
City of Madison Engineering Division  
May 12, 2022

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# Meeting Technical Housekeeping

- This meeting will be recorded and posted to the project page.
- All attendees should be muted to keep background noise to a minimum.
- Use the “chat” button for technical issues with meeting to troubleshoot with staff to assist.
- Use the “Q and A” button to type questions about presentation. Questions will be answered live after the presentation.
- Inappropriate questions may be dismissed.
- Use the “raise your hand” button to verbally ask your question. You will be prompted to unmute when it is your turn.



**This meeting is being recorded.**

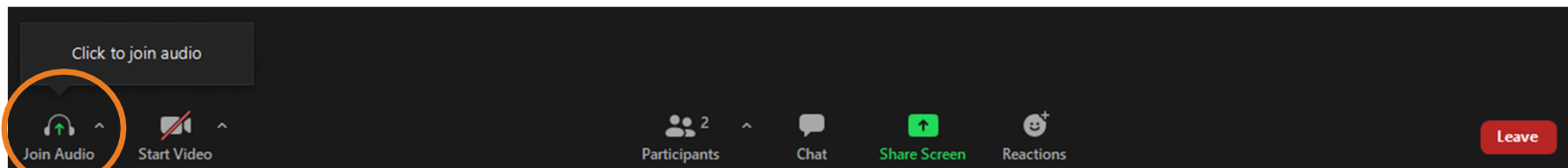
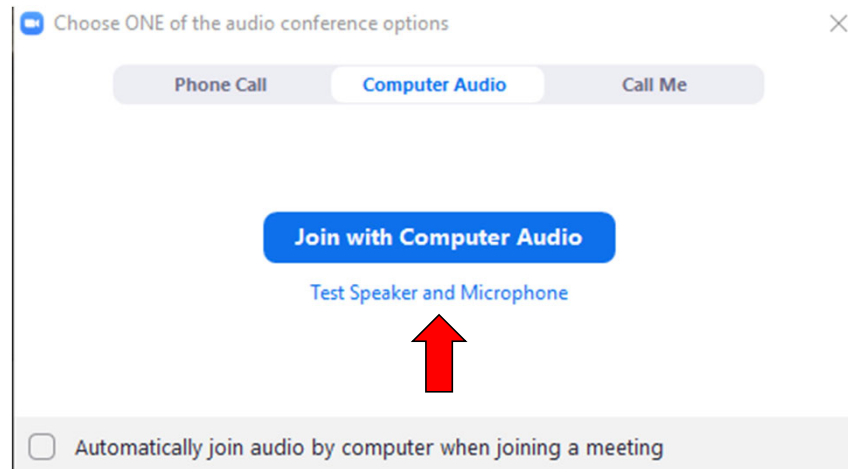
**It is a public record subject to disclosure.**

By continuing to be in the meeting, you are consenting to being recorded and consenting to this record being released to public record requestors.

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# How to Participate



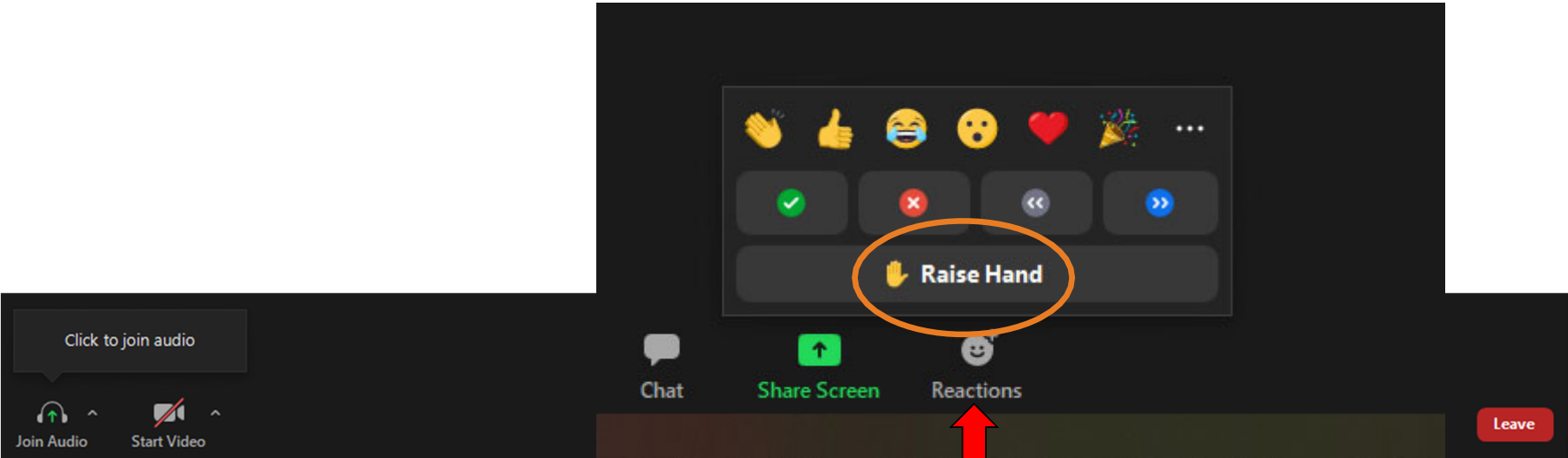
Make sure to join audio

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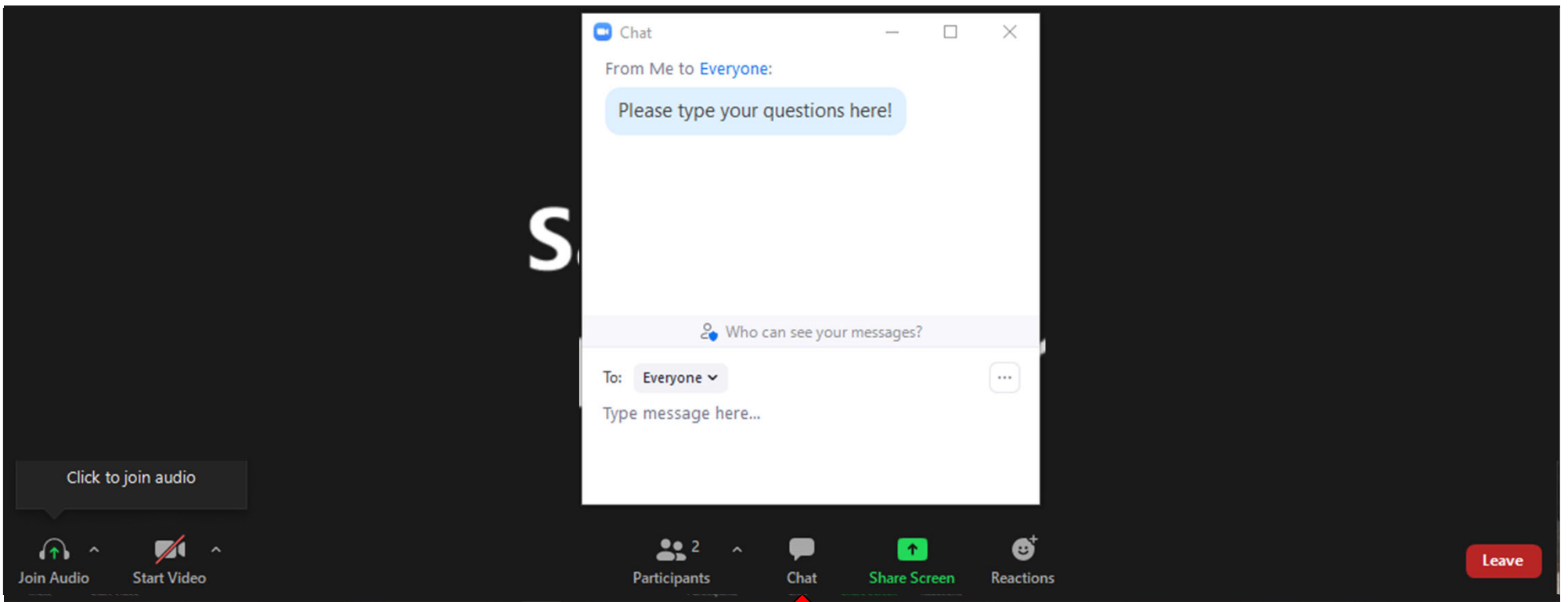


# How to Participate

Raise your hand to be unmuted for comments or ask additional questions.



# How to Participate



Use chat if you have technical issues or a question for the panelists.

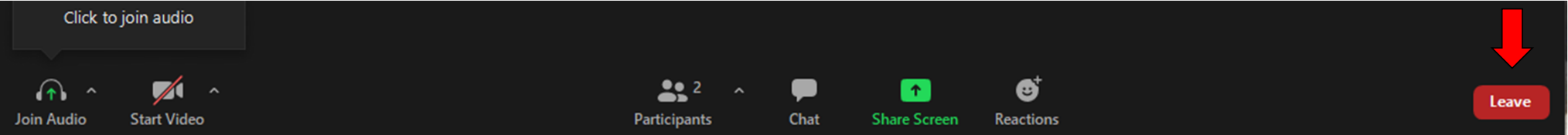
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# How to Participate

When you are ready to leave the meeting

To leave the meeting click here





# Evening Overview

- Welcome (Hannah Mohelnitzky, City of Madison)
- Presentation (Eric Thompson, MSA Professional Services)
- Q&A (facilitated by Hannah Mohelnitzky, City of Madison)
  - Submit questions through Zoom “Chat”
    - *To find the Zoom Chat Box, hover over the edge of your screen. A toolbar will appear, and you can click on “Chat”*
  - Questions answered at the end of the Presentation
- Wrap Up (Hannah Mohelnitzky, City of Madison)
- Breakout Groups (MSA and City of Madison staff)
  - An option to join breakout groups will appear on your screen



# Presentation Outline

1. Definitions of commonly used terms
2. Study location
3. Watershed study schedule
4. Flood mitigation targets
5. Inundation mapping
6. Proposed solutions development process
7. Proposed solutions
  - a. Standalone projects
  - b. Local storm sewer
8. Implementation and cost
9. Why aren't all flood targets met?
10. Next steps



# Definitions of commonly used terms

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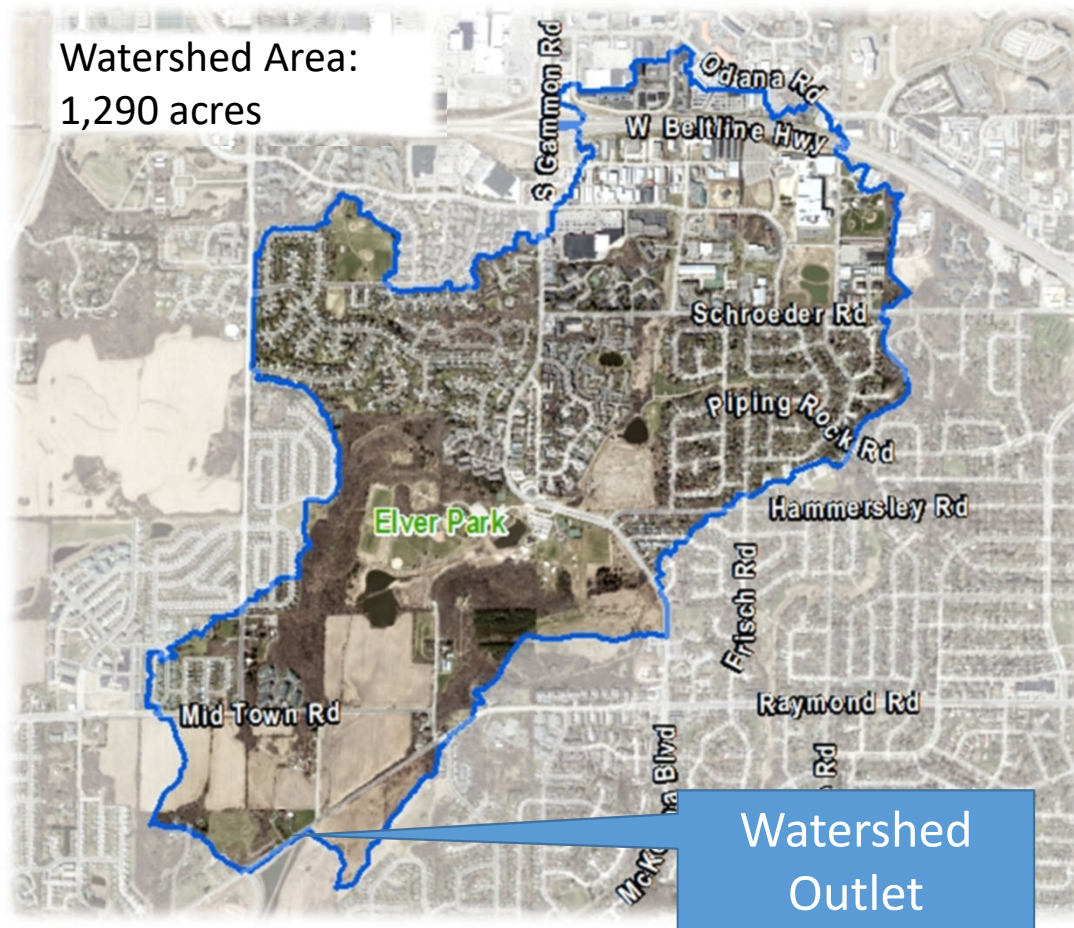
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- **Stand-alone Projects:** Flood mitigation projects that will be constructed on their own – not tied to another already-scheduled project

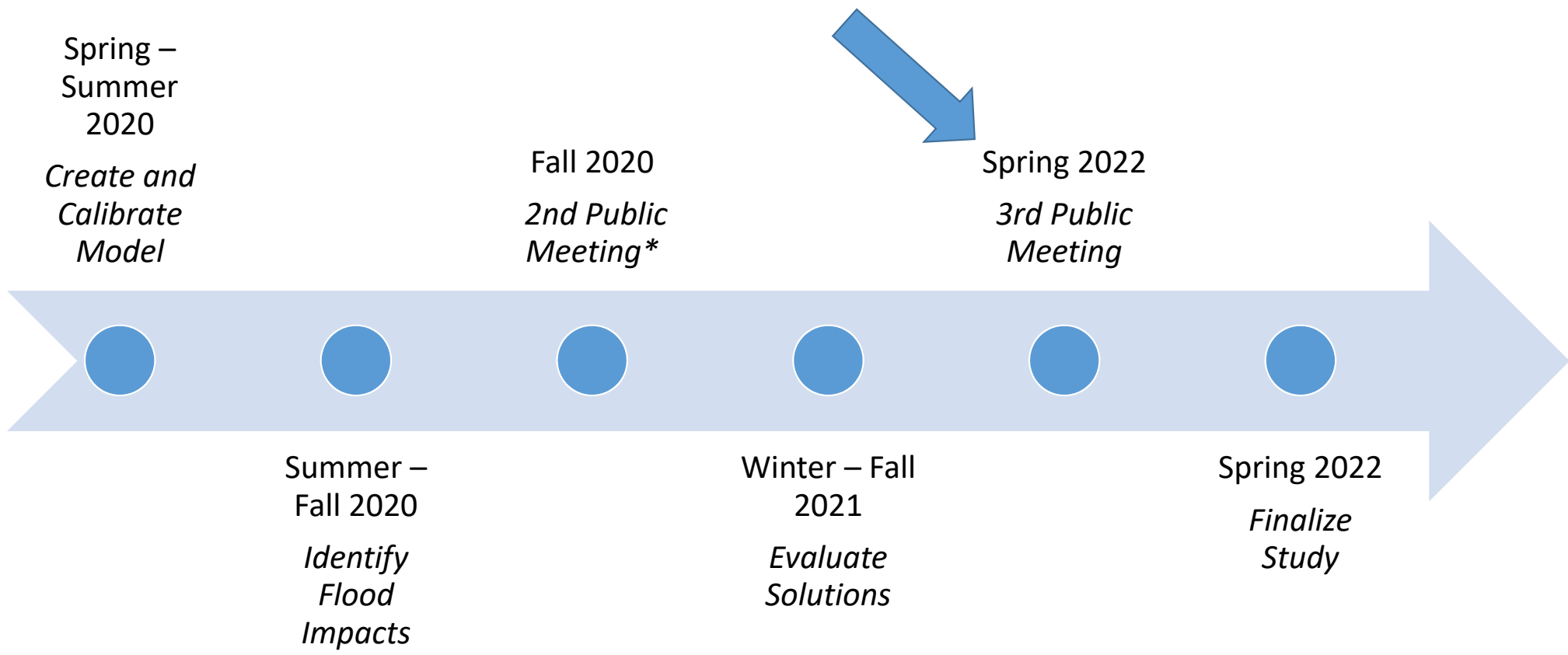
# Project Location



A watershed is an area of land that drains to a single location.

This is the Greentree/McKenna watershed in the City of Madison.

# Schedule



\*Presentations from PIM1 (Fall 2019) and PIM 2 can be found on the Watershed Study Website



# Flood Mitigation Targets for First Watershed Studies

- 10% Chance Event (4.09" rain/24 hours)
  - No surcharging of storm sewer onto roadway (storm sewer pipes are sized to carry storm)

# Flood Mitigation Targets for First Watershed Studies

- 10% Chance Event (4.09" rain/24 hours)
- 4% Chance Event (5.01" rain/24 hours)
  - 0.5' at Centerline of Road (roads passable for emergency vehicles)

# Flood Mitigation Targets for First Watershed Studies

- 10% Chance Event (4.09" rain/24 hours)
- 4% Chance Event (5.01" rain/24 hours)
- 1% Chance Event (6.66" rain/24 hours)
  - No structure (home/building) flooding
  - No greenway crossing overflow
    - *stormwater does not come out of greenway and flow over the road*

# Flood Mitigation Targets for First Watershed Studies

- 10% Chance Event (4.09" rain/24 hours)
- 4% Chance Event (5.01" rain/24 hours)
- 1% Chance Event (6.66" rain/24 hours)
- 0.2% Chance Event (8.81" rain/24 hours)
  - Safe conveyance of overflow

# Flood Mitigation Targets for First Watershed Studies

- Not all targets are met for all areas of the watershed
  - Problems are complex – mitigating factors discussed later in the presentation
  - For the Greentree/McKenna watershed with the proposed solutions, targets were met in most of the watershed





## INUNDATION MAPPING DISCLAIMER

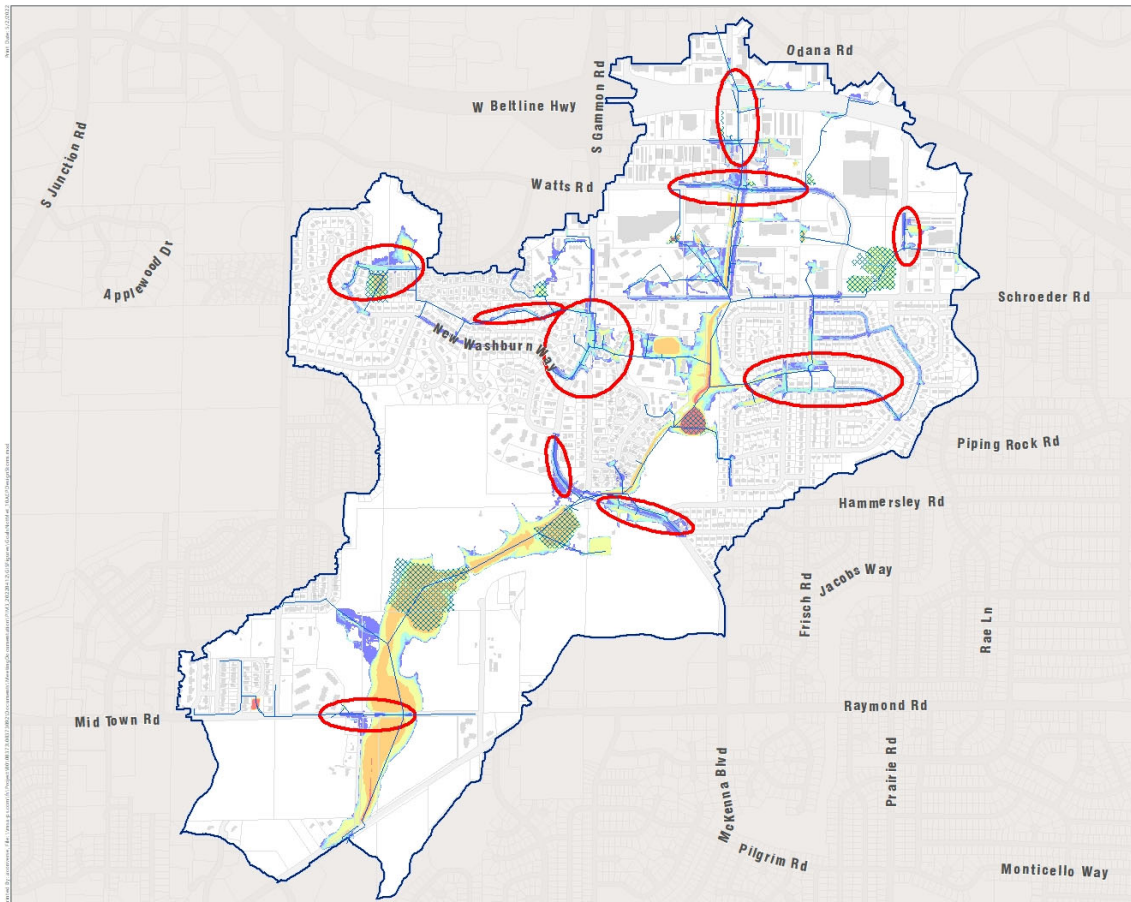
THE INTENT OF THE INUNDATION MAPS ARE TO ASSIST INDIVIDUALS IN QUICKLY FINDING GENERAL FLOOD RISK INFORMATION FOR THE INCORPORATED AND UNINCORPORATED AREAS OF THE CITY OF MADISON. INUNDATION MAPS DO NOT NECESSARILY IDENTIFY ALL AREAS SUBJECT TO FLOODING. THE CITY OF MADISON PROVIDES THE MAPS AS AN ADVISORY TOOL FOR FLOOD HAZARD AWARENESS. INDIVIDUALS SHOULD NOT USE INUNDATION MAPS AS THEIR PRIMARY RESOURCE FOR MAKING OFFICIAL FLOOD RISK DETERMINATIONS FOR INSURANCE, LENDING, OR OTHER RELATED PURPOSES. THIS IS NOT AN OFFICIAL FLOOD MAP.

THE CITY OF MADISON ASSUMES NO LIABILITY FOR ANY ERRORS, OMISSIONS, INACCURACIES, COMPLETENESS OR USEFULNESS OF THE INFORMATION PROVIDED REGARDLESS OF THE CAUSE OR FOR ANY DECISION MADE, ACTION TAKEN, OR ACTION NOT TAKEN BY THE USER IN RELIANCE UPON ANY OF THE MAPS OR INFORMATION PROVIDED.

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# 10% Chance Existing Inundation Mapping



## Existing Conditions 10% Chance Event

Greentree/McKenna  
City of Madison  
Dane County, WI

- Watershed Study Area
- Goals Not Met
- Modeled Pond
- Modeled Link
- 10% Annual Exceedance Probability Storm
- Maximum Water Depth (ft)
  - 0.01 - 0.25
  - 0.25 - 0.5
  - 0.5 - 1
  - 1 - 3
  - 3 - 6
  - 6+

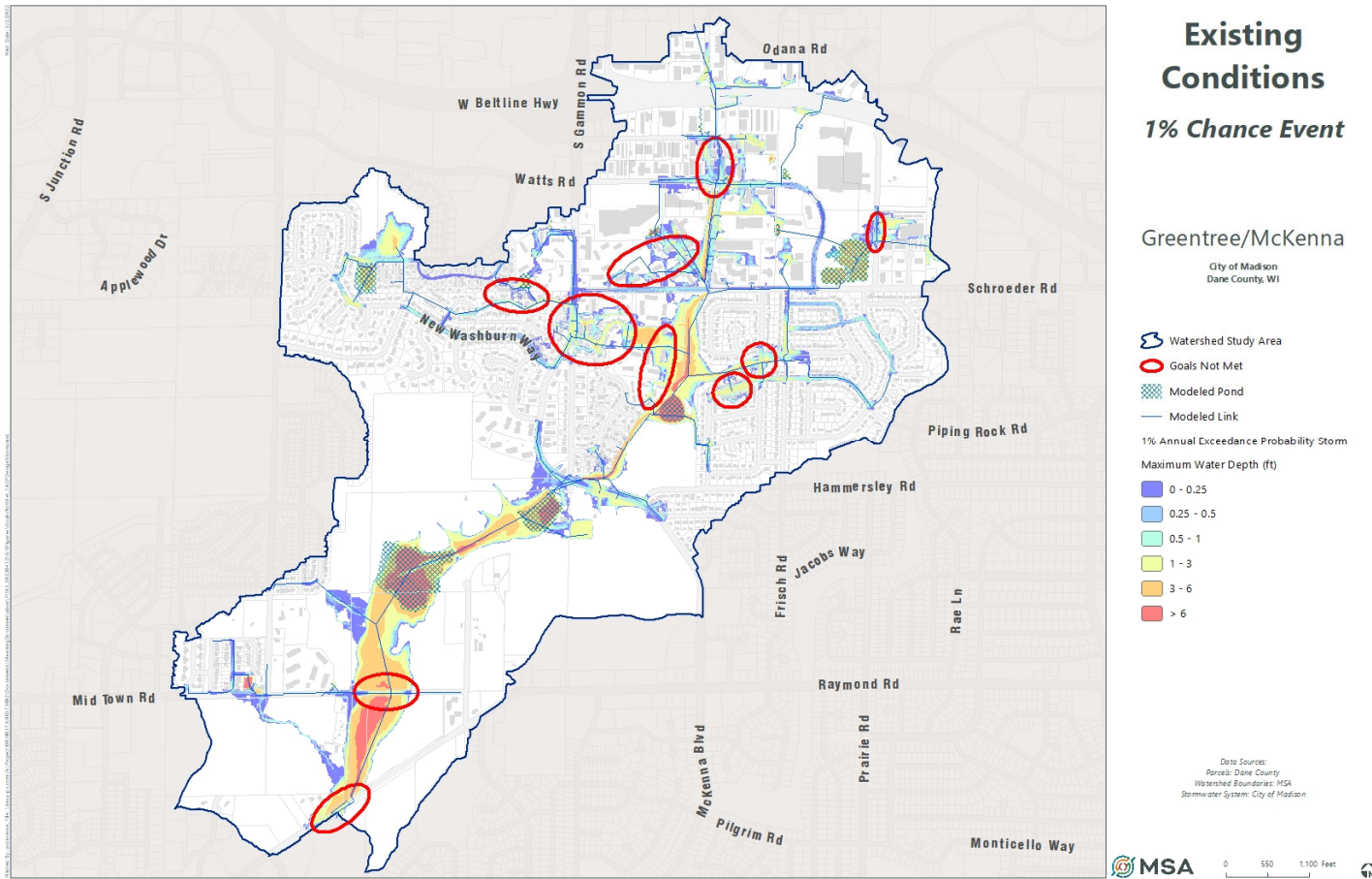
Data Sources:  
Parcels: Dane County  
Watershed Boundaries: MSA  
Stormwater System: City of Madison



▶ 189 out of 264 stormwater structures do not meet 10% target



# 1% Chance Existing Inundation Mapping



▶ 48 out of 1,325 structures do not meet 1% chance target



# Proposed Solutions Process

- Iterative process
  - Brainstormed solutions
  - Analyzed ideas and provided results
  - Some solutions not found to be viable for various reasons
  - Several meetings to develop the “suite of solutions”



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- **Met with City Agencies for feedback on:**
  - Impacts to Agency’s infrastructure/property
  - Additional solutions
  - Places for cooperation/win-win solution



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- Revised solutions based on agency feedback

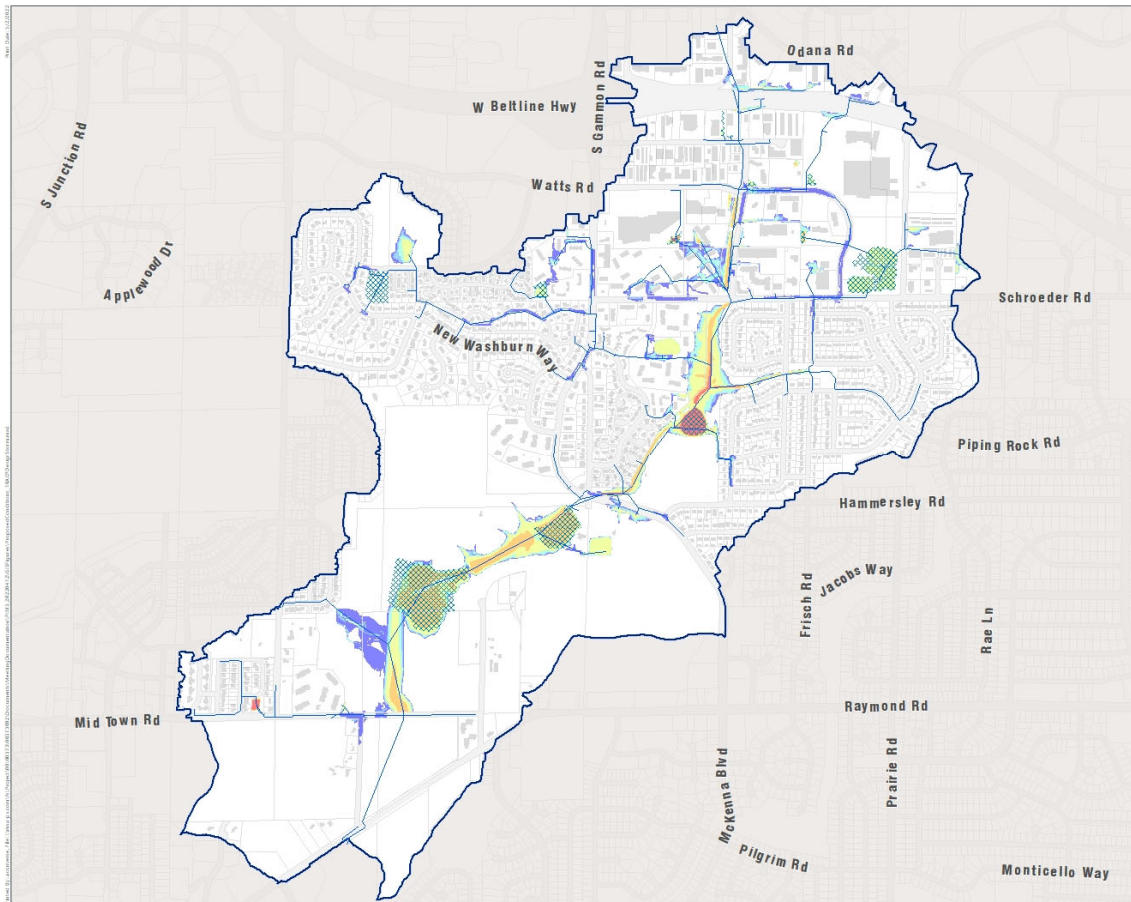


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  - Some solutions not found to be viable for various reasons
  - Several meetings to develop the “suite of solutions”
- Met with City Agencies for feedback on:
  - Impacts to Agency’s infrastructure/property
  - Additional solutions
  - Places for cooperation/win-win solution
- Revised solutions based on agency feedback
- Meeting with public this evening



# 10% Chance Proposed Inundation Mapping



**Proposed Conditions**  
**10% Chance Event**  
**Greentree/McKenna**  
City of Madison  
Dane County, WI

- Watershed Study Area
- Modeled Pond
- Modeled Link
- Maximum Water Depth (ft)
  - 0 - 0.25
  - 0.25 - 0.5
  - 0.5 - 1
  - 1 - 3
  - 3 - 6
  - >6

Data Sources:  
Parcels: Dane County  
Watershed Boundaries: MSA  
Stormwater System: City of Madison

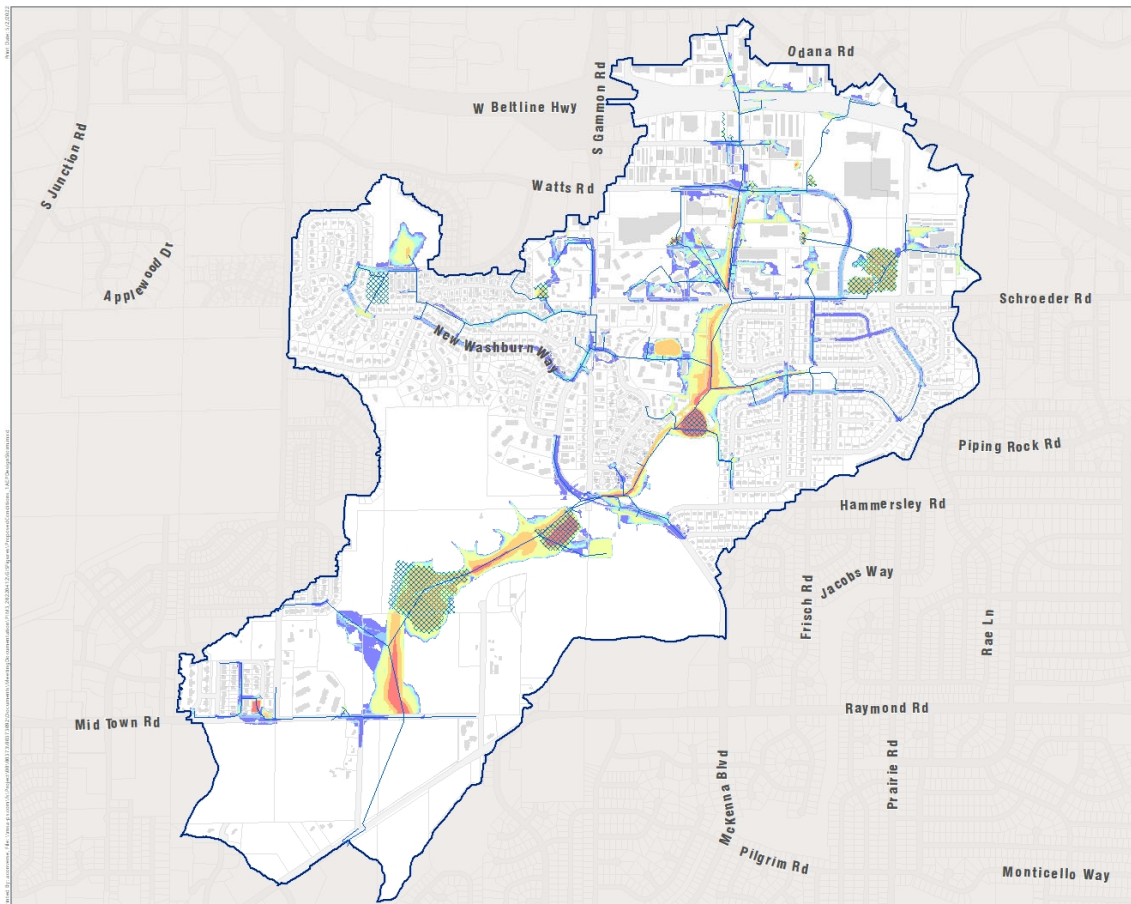
MSA 0 550 1,100 Feet

- ▶ 94 additional stormwater structures will meet 10% target





# 1% Chance Proposed Inundation Mapping



## Proposed Conditions 1% Chance Event

Greentree/McKenna  
City of Madison  
Dane County, WI

- Watershed Study Area
- Modeled Pond
- Modeled Link
- 1% Annual Exceedance Probability Storm
- Maximum Water Depth (ft)
- 0 - 0.25
- 0.25 - 0.5
- 0.5 - 1
- 1 - 3
- 3 - 6
- > 6

Data Sources:  
Parcels: Dane County  
Watershed Boundaries: MSA  
Stormwater System: City of Madison

MSA 0 550 1,100 Feet

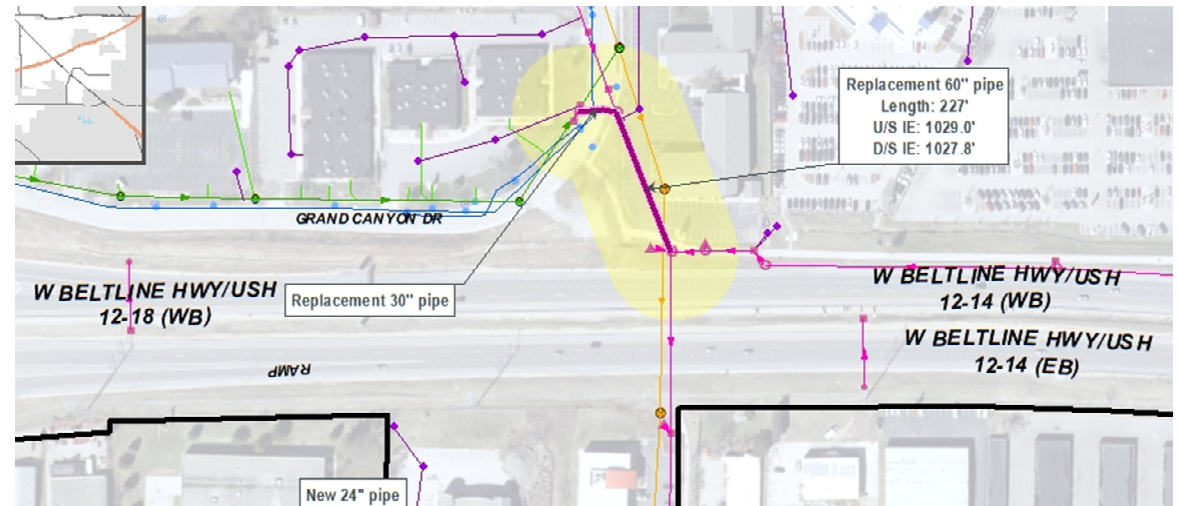
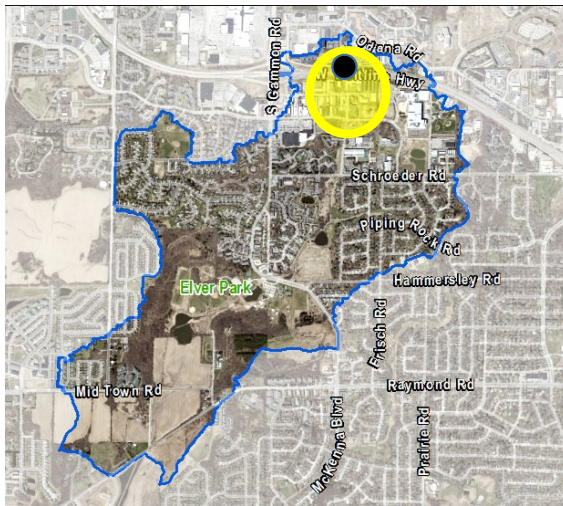
- ▶ 28 additional structures will meet 1% chance storm target



# Proposed Solutions

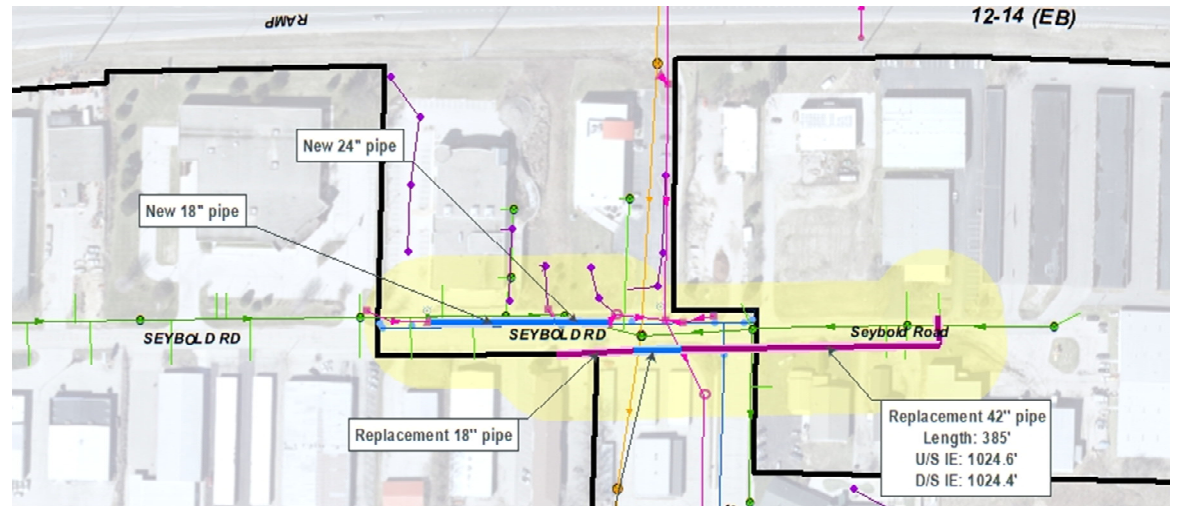
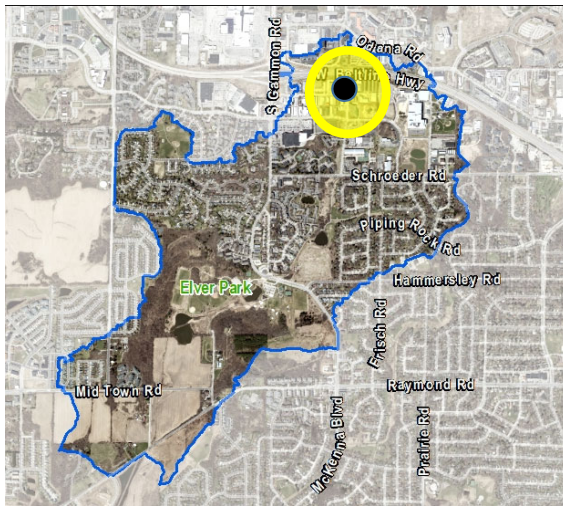
1. Struck Street, Seybold Road, and Watts Road Reconstruction
2. Forward Drive Reconstruction
3. Schroeder Road Reconstruction
4. New Washburn Way and S Gammon Road Reconstruction
5. Valhalla Way and N Holt Circle Reconstruction
6. High Point Estates Pond Reconstruction
7. Chapel Hill Road and Greenway Reconstruction
8. Piping Rock Road and Laurie Drive Reconstruction
9. McKenna Boulevard Storm Sewer Improvements
10. Elver Park Greenway Reconstruction
11. Marty Road/Mid Town Road Regional Pond

# 1. Struck St., Seybold Rd., and Watts Rd. Reconstruction



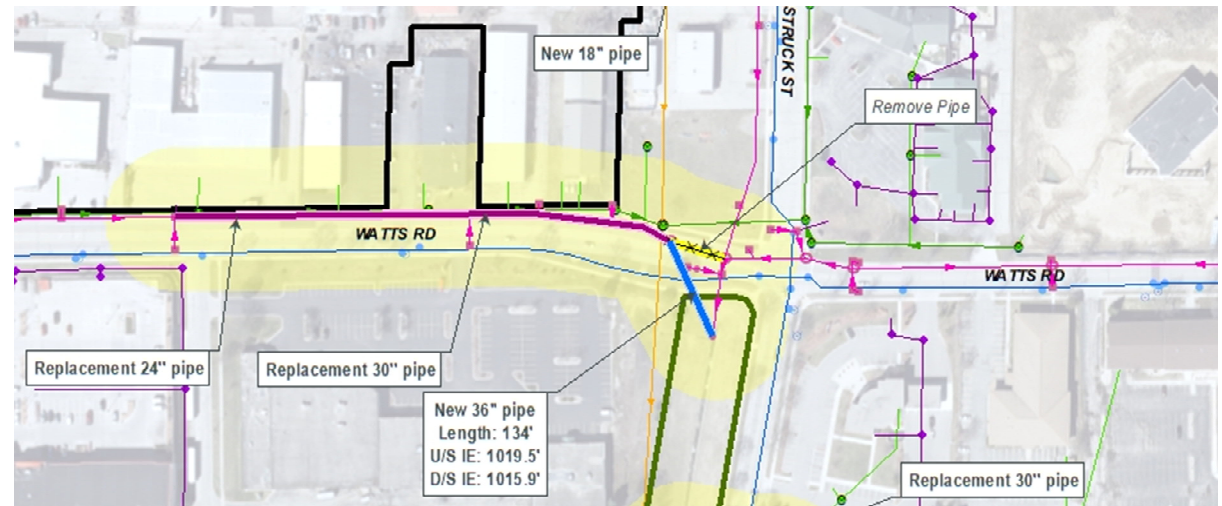
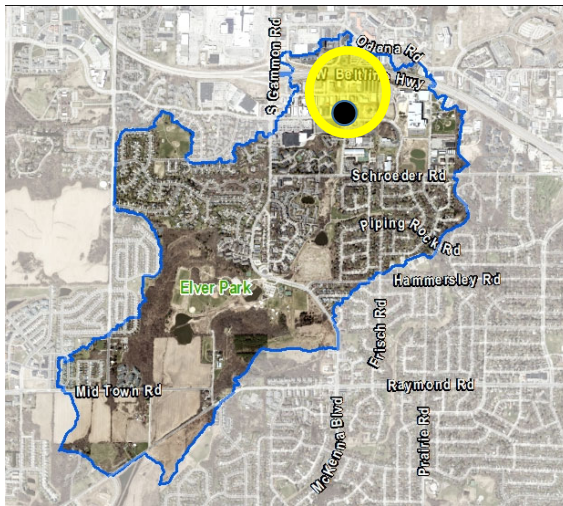
- **Goal: Reduce flooding during 10%, 4%, and 1% events**
- Increase storm sewer size
- New storm sewer on Seybold Rd.
- Removes 4 structures from flooding
- Reduces street ponding for more frequent events
- Est. cost - \$1.67 million

# 1. Struck St., Seybold Rd., and Watts Rd. Reconstruction



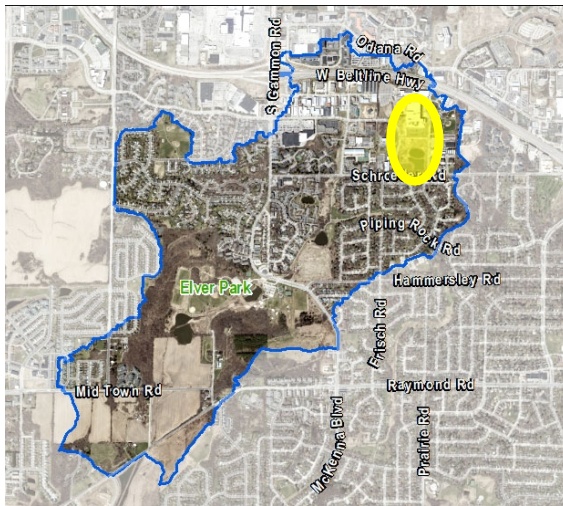
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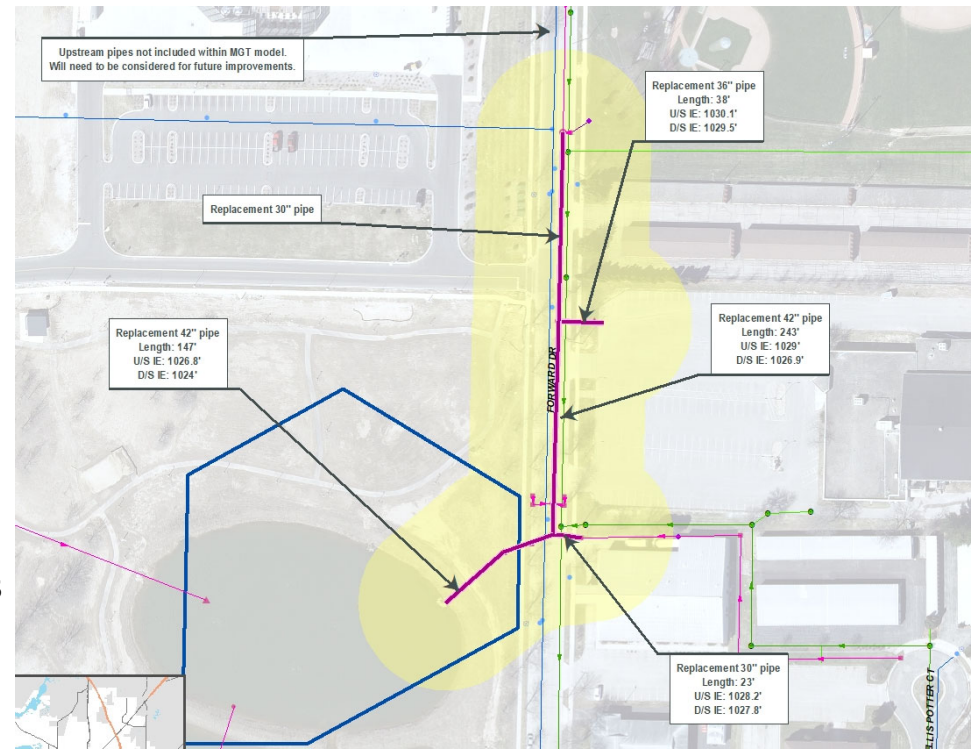


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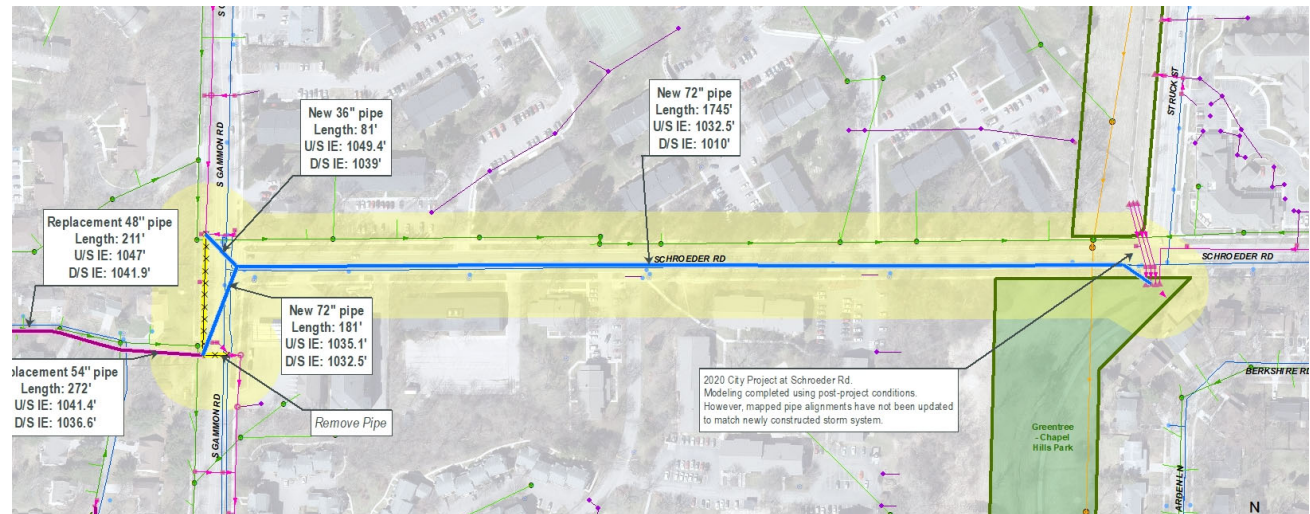
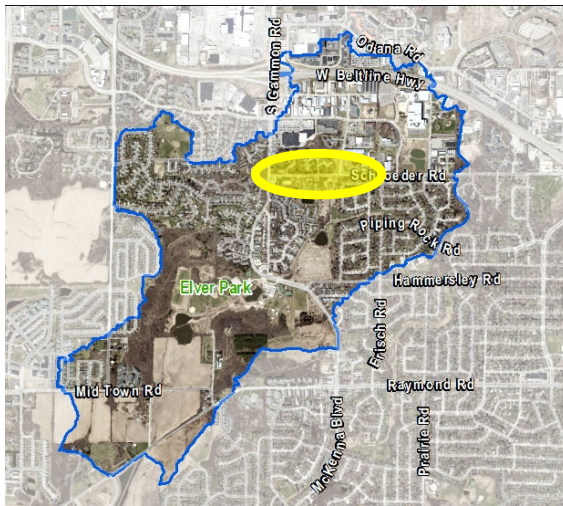
## 2. Forward Drive Reconstruction



- **Goal: Reduce flooding during 10%, 4%, and 1% events**
- Increase storm sewer size
- No structures removed from flooding (1 remains)
- Reduces street ponding for more frequent events
- Est. cost - \$480,000

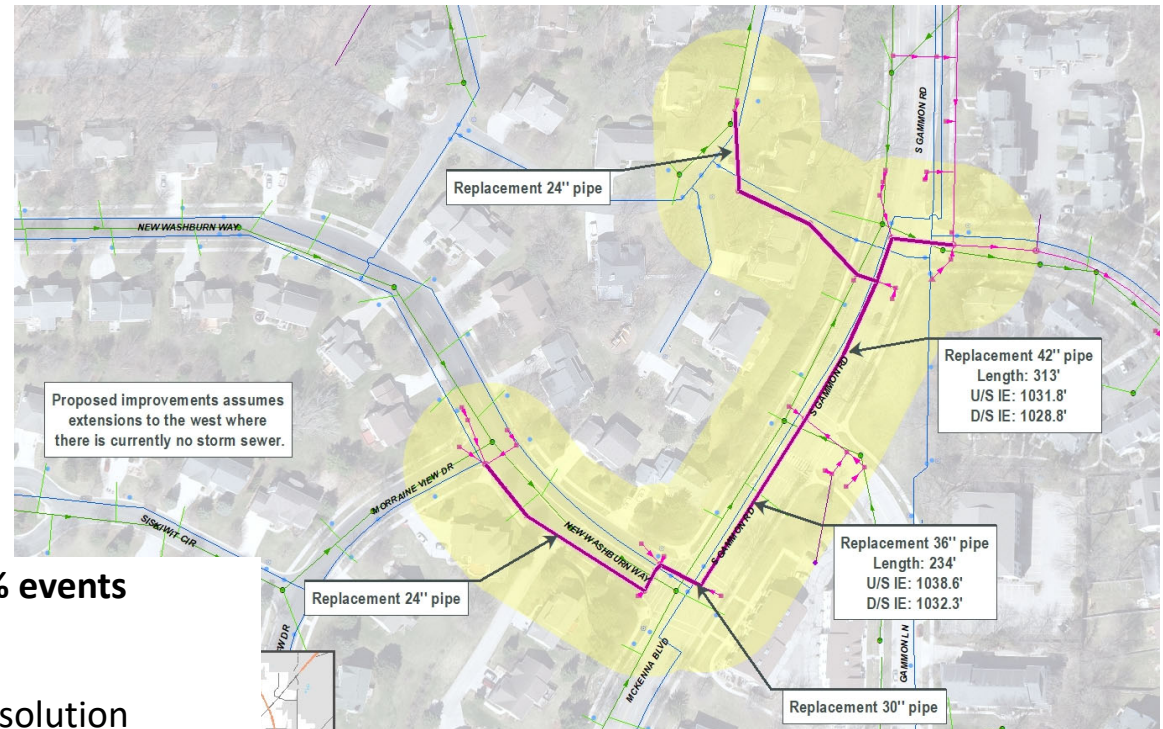
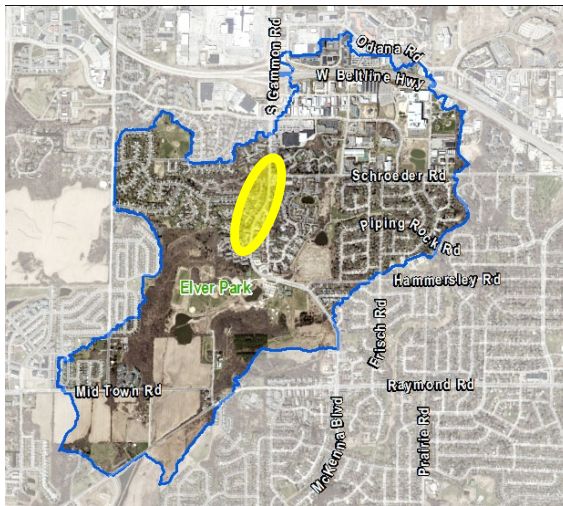


### 3. Schroeder Road Reconstruction



- **Goal: Reduce flooding during 10%, 4%, and 1% events**
- New storm sewer on Schroeder Rd.
- Relieves undersized storm sewer to the south
- Removes 15 structures from flooding
- Greatly reduces street ponding
- Est. cost - \$2.10 million

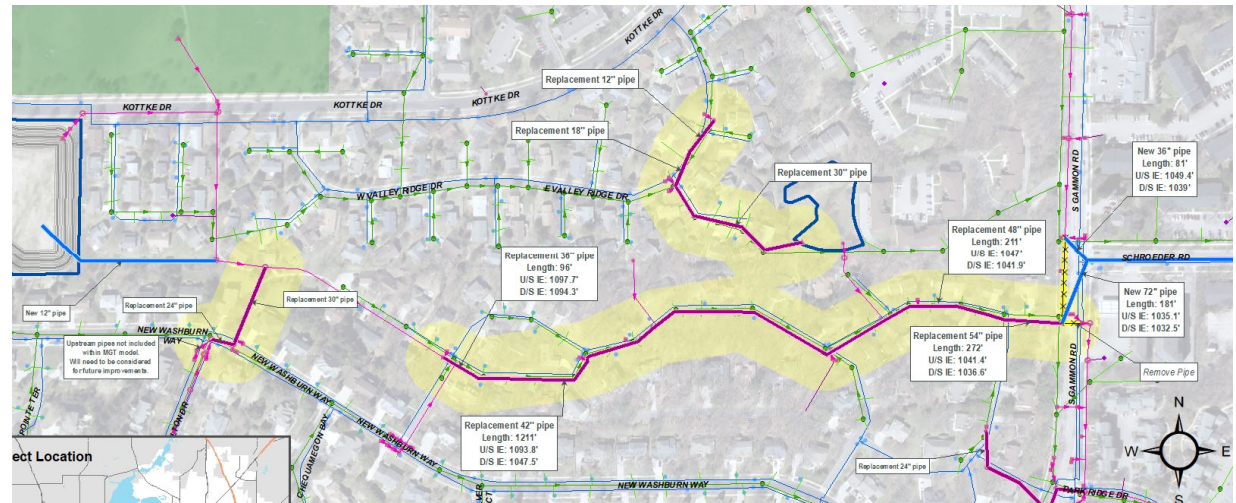
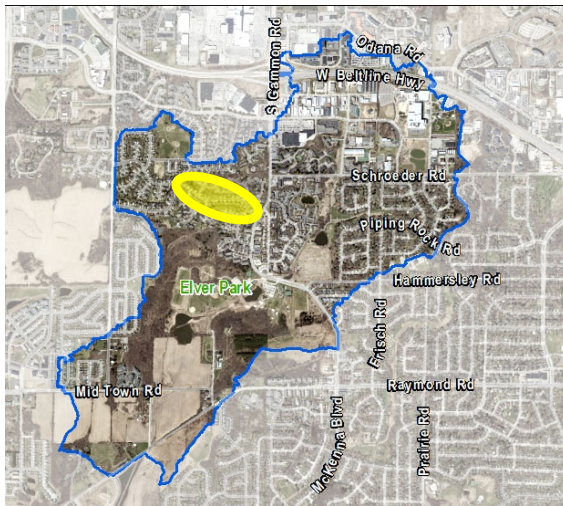
## 4. New Washburn Way and S Gammon Rd. Reconstruction



- **Goal: Reduce flooding during 10% and 4% events**
- Increase storm sewer size
- Performance is contingent upon previous solution
- Greatly reduces street ponding for more frequent events
- Est. cost - \$790,000

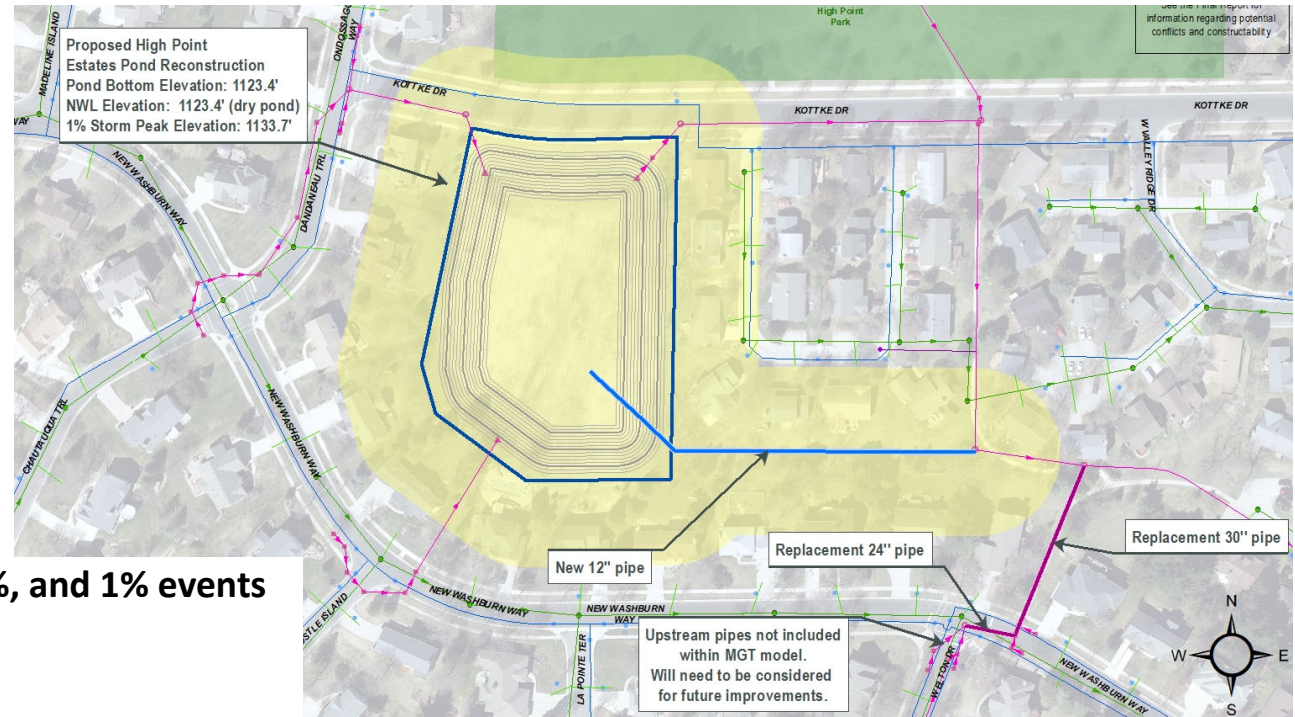
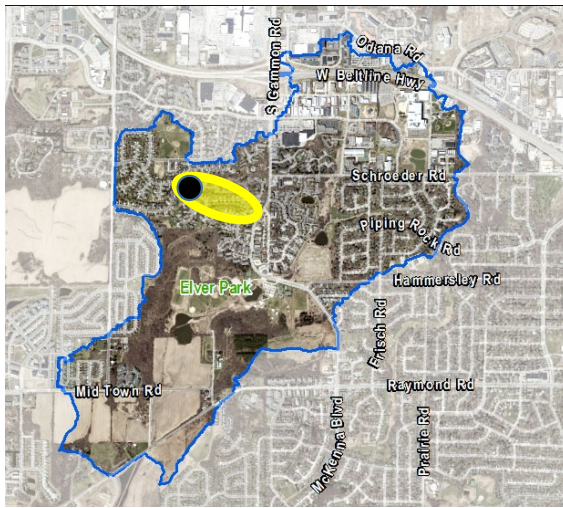


## 5. Valhalla Way and N Holt Circle Reconstruction



- **Goal: Reduce flooding during 10%, 4%, and 1% events**
- Increase public storm sewer size under private streets
- Removes 3 structures from flooding
- Eliminates street ponding for more frequent events
- Est. cost - \$1.93 million

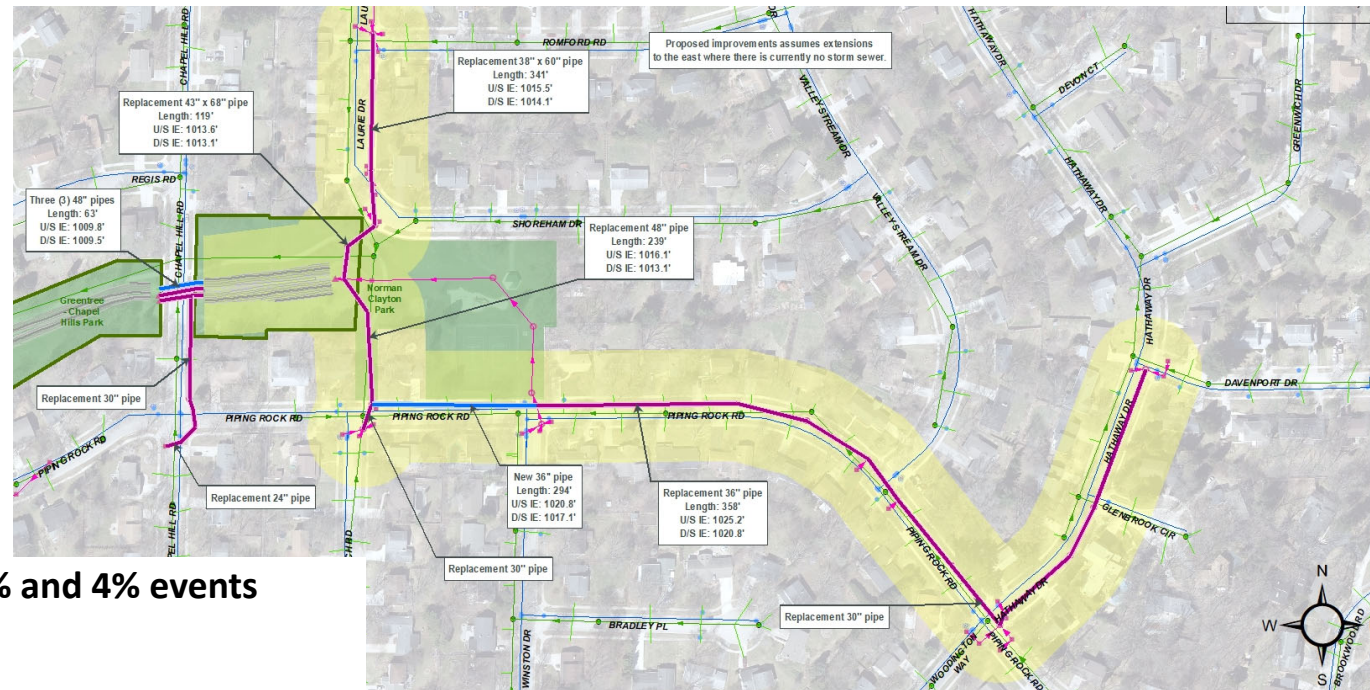
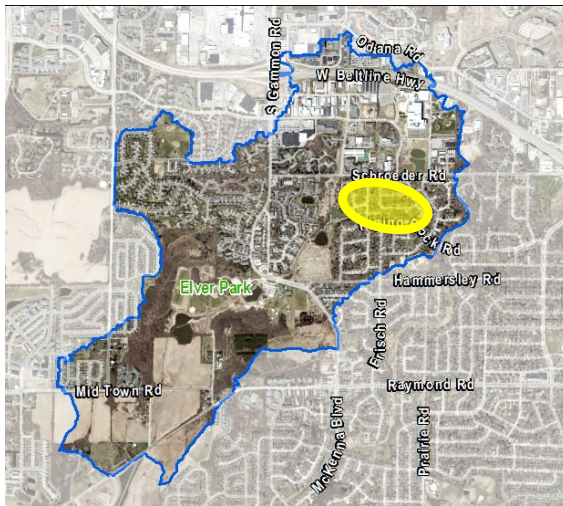
# 6. High Point Estates Pond Reconstruction



- **Goal: Reduce flooding during 10%, 4%, and 1% events**
- Add new pond outlet
- Excavate to add storage
- Frees up capacity in downstream pipes
- No structures removed from flooding
- Reduces street ponding for more frequent events
- Est. cost - \$1.11 million

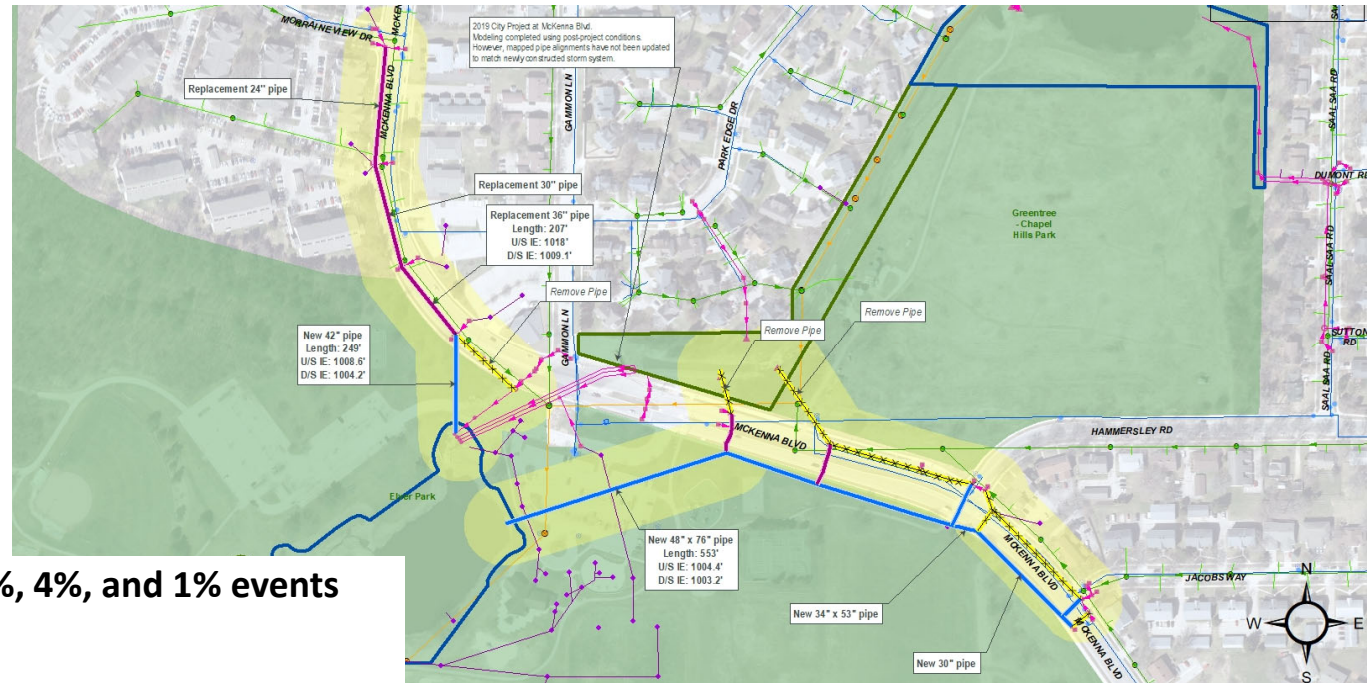
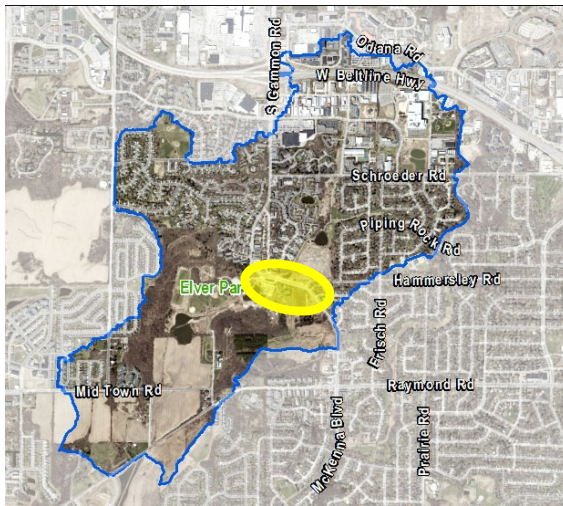


## 8. Piping Rock Road and Laurie Drive Reconstruction



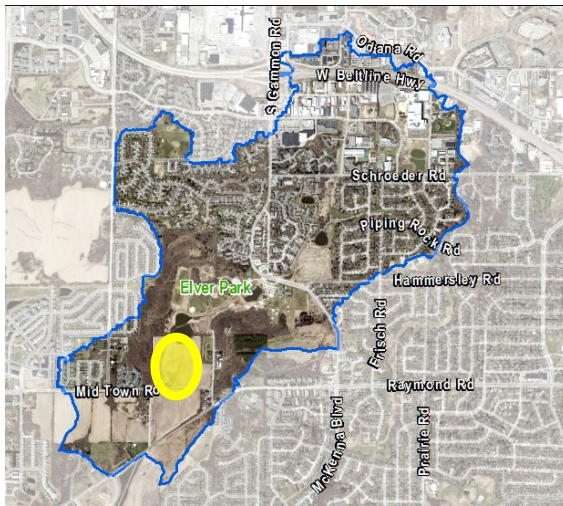
- **Goal: Reduce flooding during 10% and 4% events**
- Increase storm sewer size
- Add new pipe on Piping Rock Rd.
- Eliminates street ponding for more frequent events
- Est. cost - \$1.99 million

# 9. McKenna Boulevard Storm Sewer Improvements

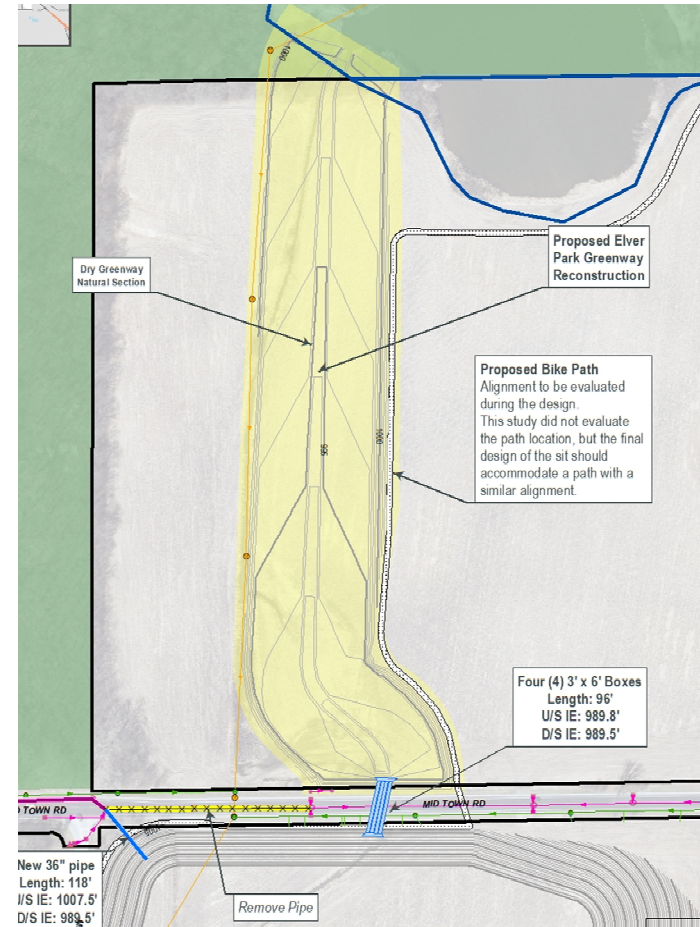


- **Goal: Reduce flooding during 10%, 4%, and 1% events**
- Increase storm sewer size
- Add new pipes
- Removes 1 structures from flooding
- Greatly reduces street ponding for more frequent events
- Est. cost (N) - \$630,000
- Est. cost (S) - \$1.38 million

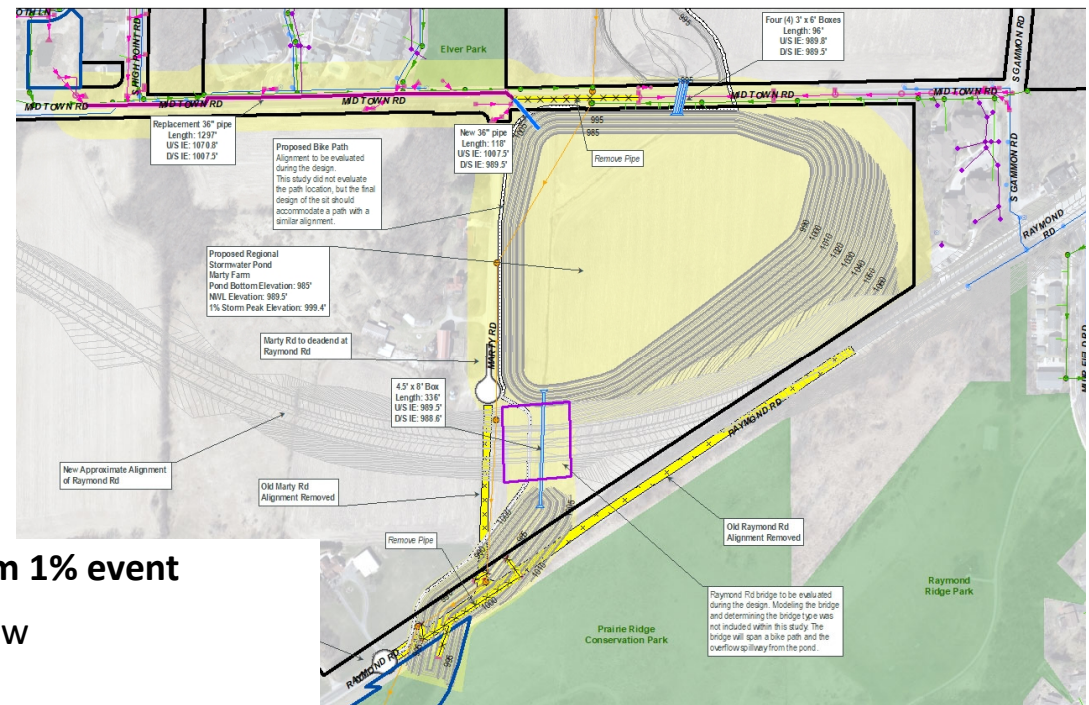
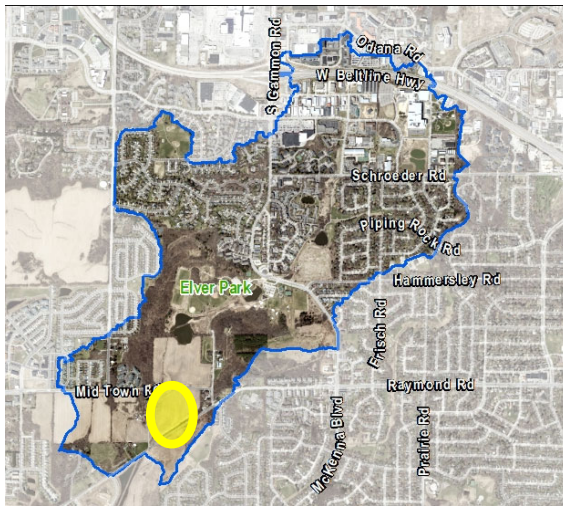
# 10. Elver Park Greenway Reconstruction



- **Goal: Provide Conveyance for 1% event**
- Excavate new greenway channel
- Increase culvert size under Mid Town Rd.
- Eliminates overtopping of Mid Town Rd.
- MMSD sanitary sewer interceptor to avoid
- Est. cost - \$2.08 million
- Land acquisition needed



# 11. Marty Road/Mid Town Road Regional Pond



- **Goal: Provide Storage and Control of Runoff from 1% event**
- Add regional stormwater storage to attenuate flow
- Reflects assumed realignment of Raymond Road
- Bike path under new Raymond Rd.
- Substantial reduction in 100-yr peak watershed outflow
- Est. cost - \$11.26 million
- Land acquisition needed

# Citywide Prioritization Tool

- City creating prioritization tool to help guide scheduling and budgeting of proposed solutions
  - Will include all flood mitigation solutions in the City (22 watersheds)



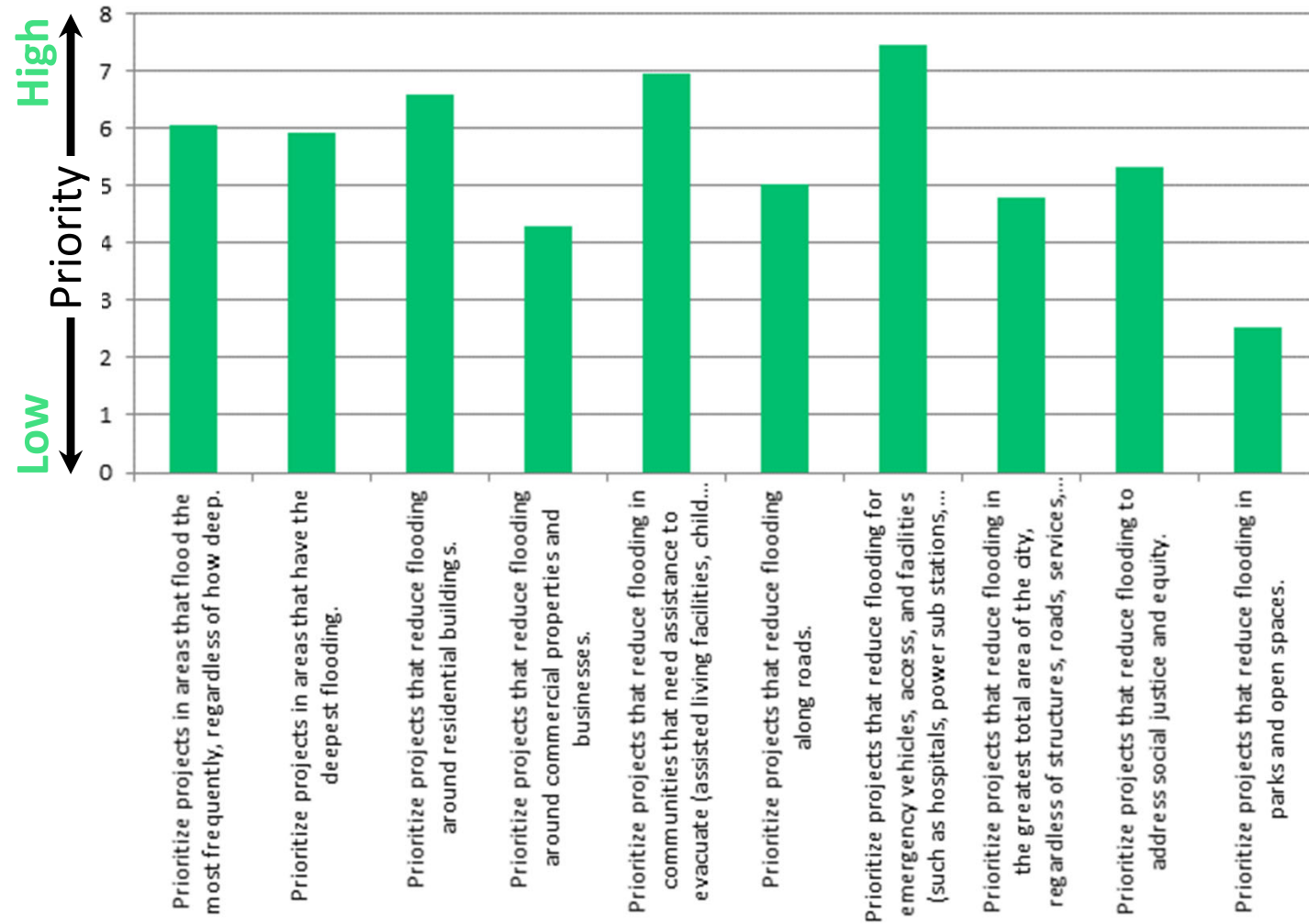
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- **Solutions prioritized based on:**
  - Flood reduction abilities
  - Racial Equity and Social Justice
  - Ability to improve emergency service access
  - Cost/available funding sources (water quality grant funding)
  - Co-benefits to other City facilities (streets, etc.)

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  - Racial Equity and Social Justice
  - Ability to improve emergency service access
  - Cost/available funding sources (water quality grant funding)
  - Co-benefits to other City facilities (streets, etc.)
- See survey to provide input on how solutions are prioritized

# Current Prioritization Survey Results



If you haven't, please take the survey.

A link can be found on the Greentree/McKenna Project Webpage

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# Why Aren't All Targets Met for the Watershed?

- Space constraints
- Conflict with other major utilities *(drinking water wells, large gas mains, etc.)*
- Property ownership
- Cost impacts
- Adverse downstream impacts
- Neighborhood resistance



# Next Steps

- Finalize draft report
- Post draft final report for 30-day public comment
- Finalize report
- Finalize prioritization process
- Budget for projects
- Once included in budget, start design and separate project-specific outreach



# Budgeting Considerations

- Not all projects are yet identified throughout the City
  - Currently identified approximately 50 projects in 5 watersheds totally \$150 million (22 watersheds will be studied citywide)

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  - Double digit rate increases – not sustainable
  - Without additional funding sources, only 1-2 medium to large projects can be completed in a year

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  - Currently identified approximately 50 projects in 5 watersheds totally \$150 million (22 watersheds will be studied citywide)
- Stormwater Utility fees fund projects
  - Double digit rate increases – not sustainable
  - Without additional funding sources, only 1-2 medium to large projects can be completed in a year
- **Must identify additional funding mechanisms**
  - Grants, appropriations, earmark funds



# Budgeting Considerations

- Not all projects are yet identified throughout the City
  - Currently identified approximately 50 projects in 5 watersheds totally \$150 million (22 watersheds will be studied citywide)
- Stormwater Utility fees fund projects
  - Double digit rate increases – not sustainable
  - Without additional funding sources, only 1-2 medium to large projects can be completed in a year
- Must identify additional funding mechanisms
  - Grants, appropriations, earmark funds
- Most projects take 1 ½ – 2 years to design & permit before they can be constructed

# Contact Information & Resources

- Project Manager: Matt Allie, [mallie@cityofmadison.com](mailto:mallie@cityofmadison.com)
- Public Information Officer: Hannah Mohelnitzky, [hmoelnitzky@cityofmadison.com](mailto:hmoelnitzky@cityofmadison.com)
- Project Webpage: <https://www.cityofmadison.com/engineering/projects/greentree-mckenna-watershed-study>
  - Sign-up for project email updates on the website
  - Report flooding, past or current on the Report Flooding form
  - Learn ways to protect your property from flooding with on-site fixes
- New Flooding Website: [www.cityofmadison.com/flooding](http://www.cityofmadison.com/flooding)
- Everyday Engineering Podcast
- Facebook – City of Madison Engineering
- Twitter – @MadisonEngr
- Provide your feedback! <https://www.cityofmadison.com/news/survey-open-city-engineering-works-to-prioritize-flood-projects>



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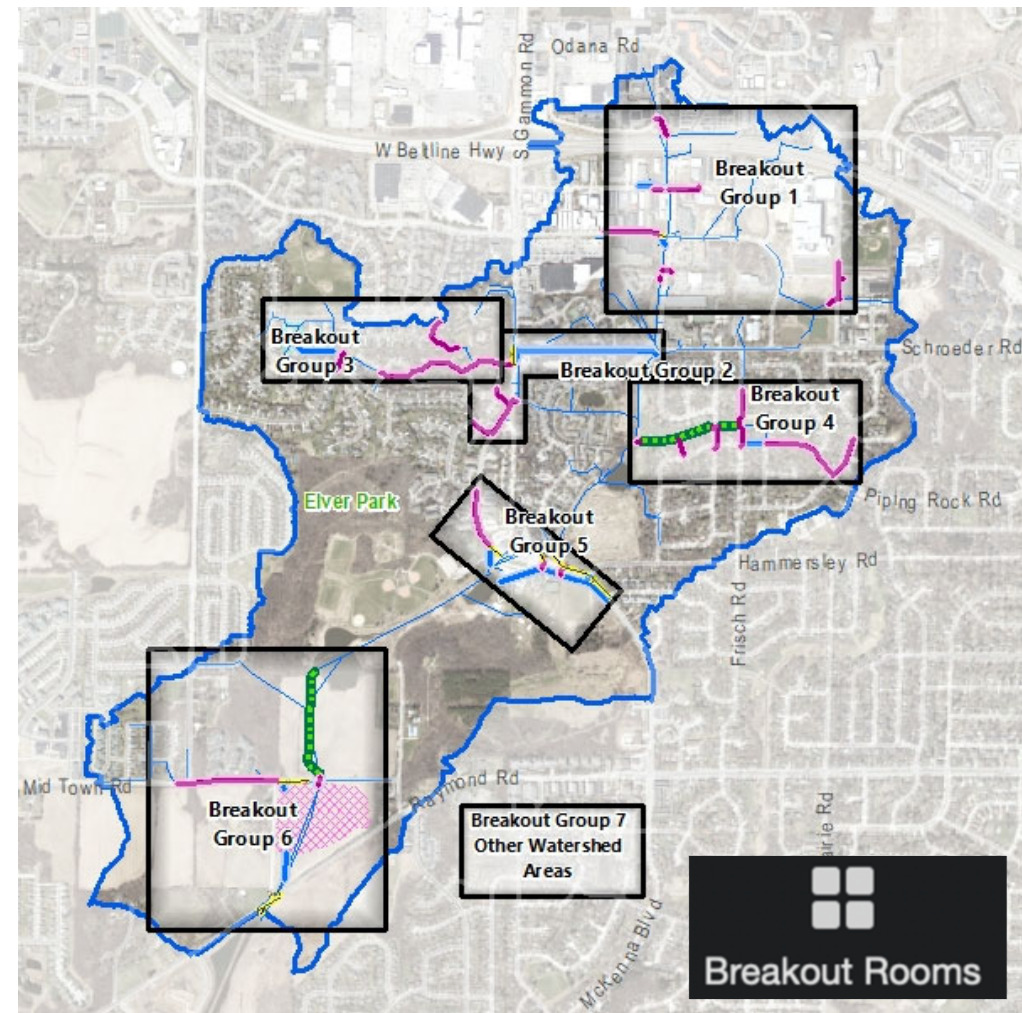
# Zoom Breakout Rooms

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- Join a Zoom Breakout Room Session
  - Window will pop up where you can select which group you'd like to join
  - If a window doesn't pop up, look for a button on the bottom that says "Breakout Rooms." Click the button and room options will appear.

# Breakout Groups

1. Struck/Seybold/Watts and Forward Dr. Reconstruction Projects
2. Schroeder Rd. and New Washburn Way Reconstruction Projects
3. Valhalla Way Reconstruction and High Point Estates Pond
4. Piping Rock Rd., Chapel Hill Rd. and Greenway Reconstruction
5. McKenna Blvd. Storm Sewer Improvements
6. Elver Park Greenway and Marty Road/Mid Town Road Regional Pond
7. Other Watershed Areas



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