



# Hawks Landing Storm Sewer Improvements

PUBLIC INFORMATIONAL MEETING

MAY 28, 2019

# Tonight's Topics

- ▶ Hawks Landing Overview: Where the Water Goes
- ▶ Existing Conditions: Where We Are Today
- ▶ Pond EC-1: the Golf Course Fix
- ▶ Proposed Solutions: South and North
- ▶ Results of Improvements
- ▶ Schedule Going Forward



# Hawks Landing Overview

WHERE THE WATER GOES



## Legend



Hawks Landing Boundary



Public Storm Structures



Public Storm Pipes



Vegetated Buffers



Drainage Ways



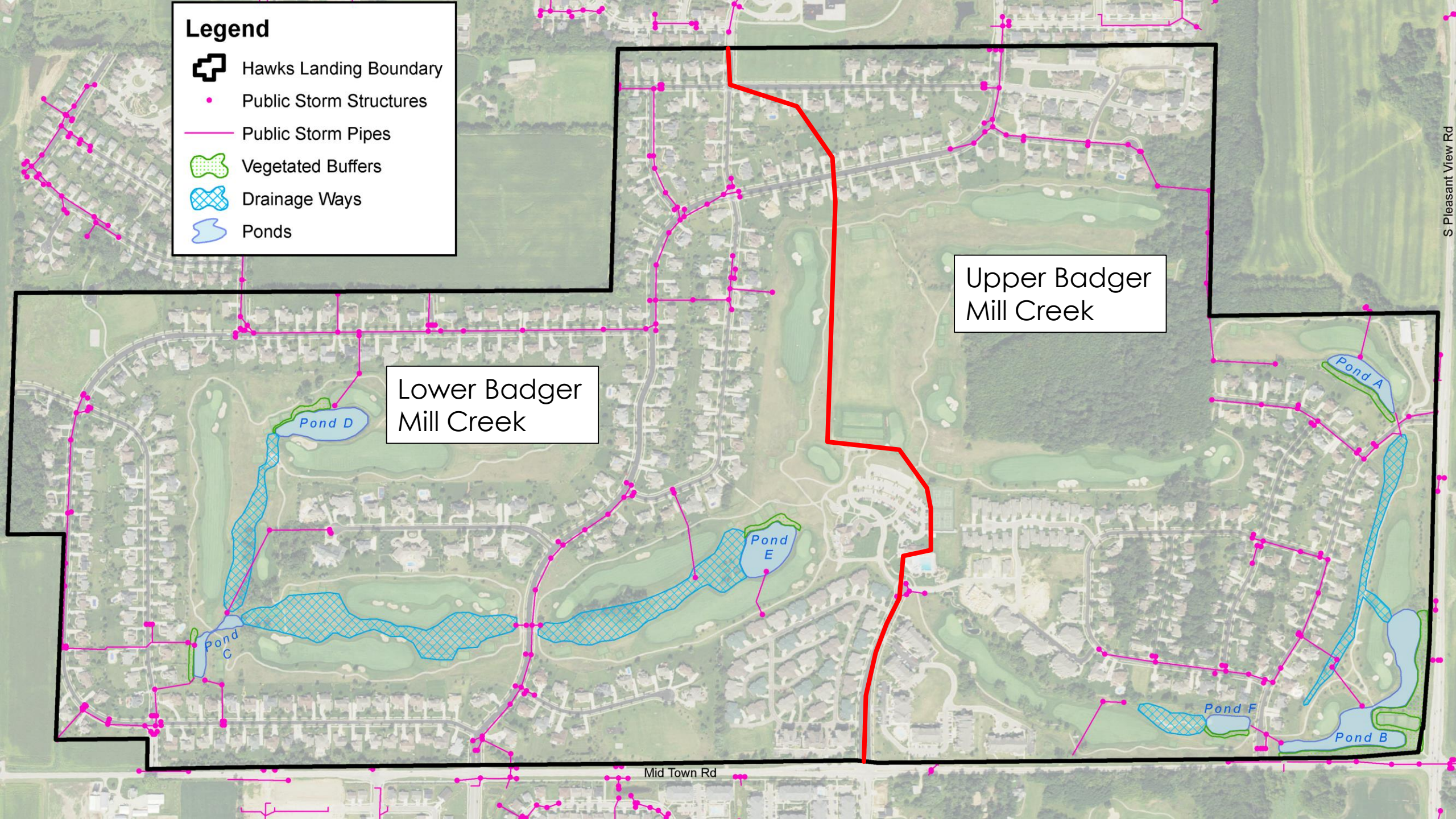
Ponds

Lower Badger  
Mill Creek

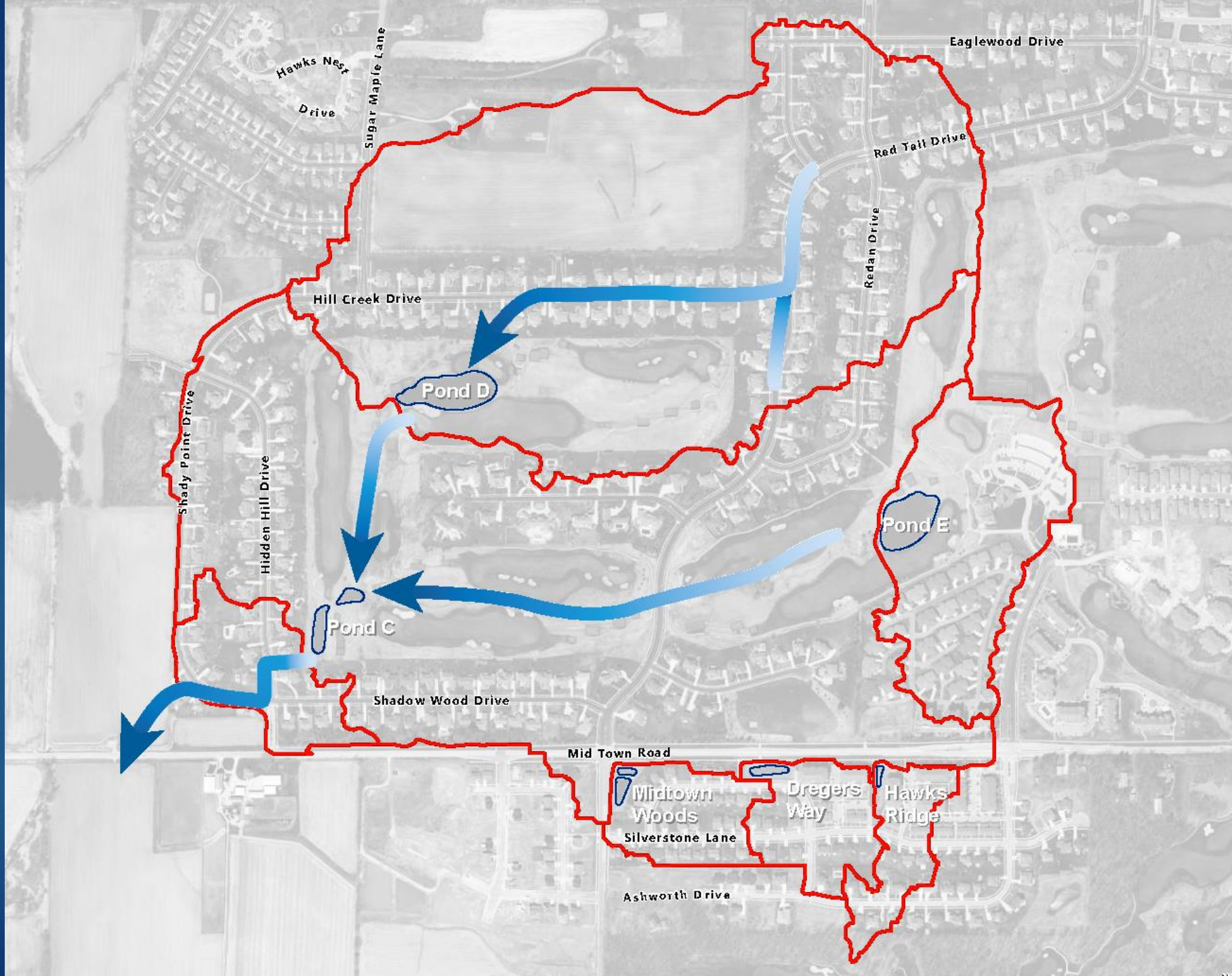
Upper Badger  
Mill Creek

Mid Town Rd

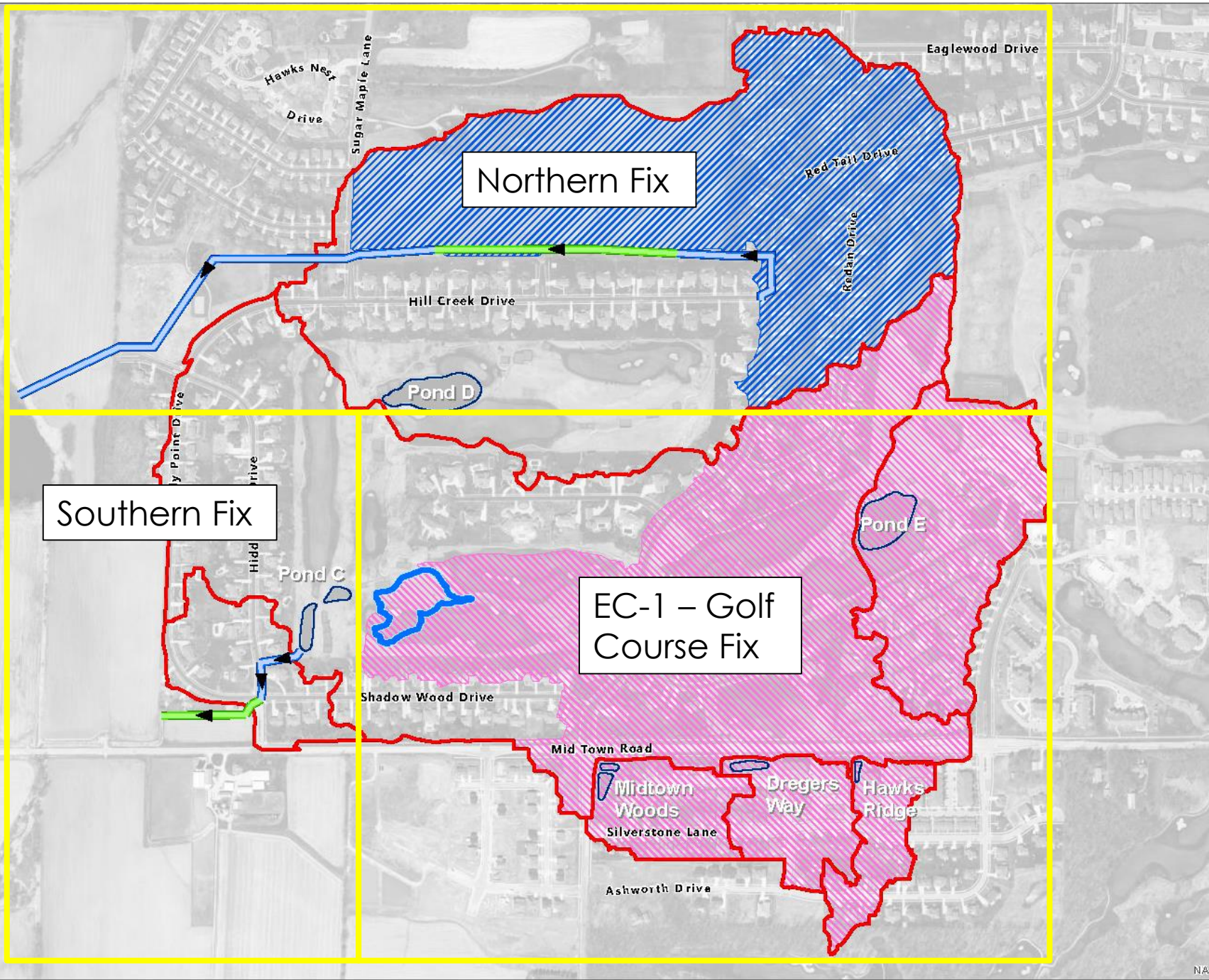
S Pleasant View Rd











## Map 2 Proposed Stormwater Management System

Hill Creek Drive Flood Reduction

City of Madison  
Dane County, WI

- Watershed
- Existing Pond
- New Stormwater Pond
- Area diverted by new storm sewer and swale system
- Area served by new stormwater pond
- Stormwater Improvements**
  - Pipe
  - Swale

Data Sources:  
Road Names: Dane County  
Aerial: Dane County (2017)

# Design Standards

- ▶ Design storm: 100-yr, 24-hr event
  - ▶ Defined by precipitation depth and intensity-duration curve
    - ▶ Precipitation depth: NOAA Atlas 14, Vol. 8 (2013)
      - ▶ Period of record: through 2010
      - ▶ In Dane County, 100-yr depth = 6.66"
    - ▶ Intensity-duration curve: MSE 4 distribution (NRCS, 2014/2015)
- ▶ August 20, 2018: 11.6" in 16 hrs (UW West Madison Agricultural Research Station)
  - ▶ >1000-yr event



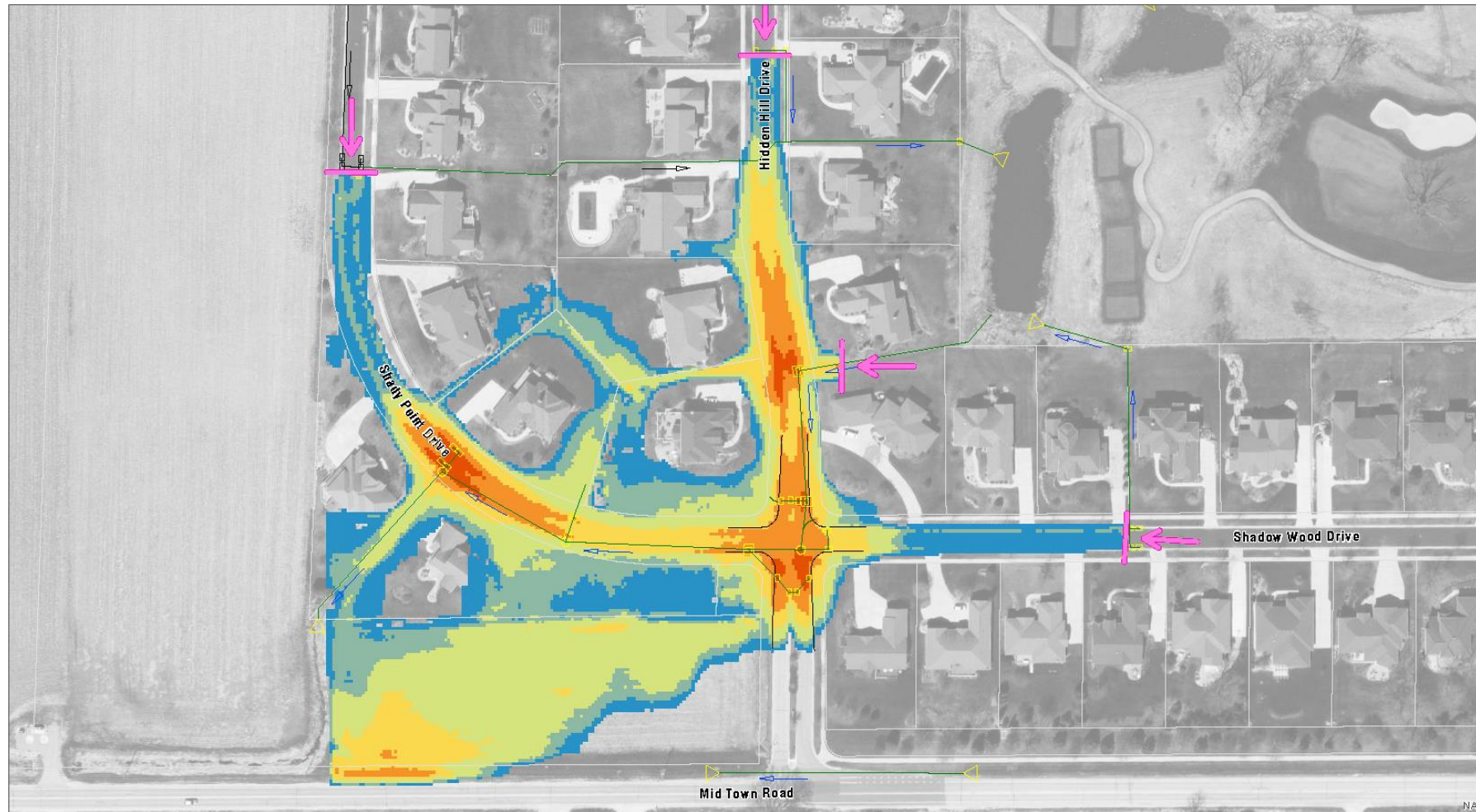


# Existing Conditions

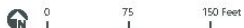
WHERE WE ARE TODAY



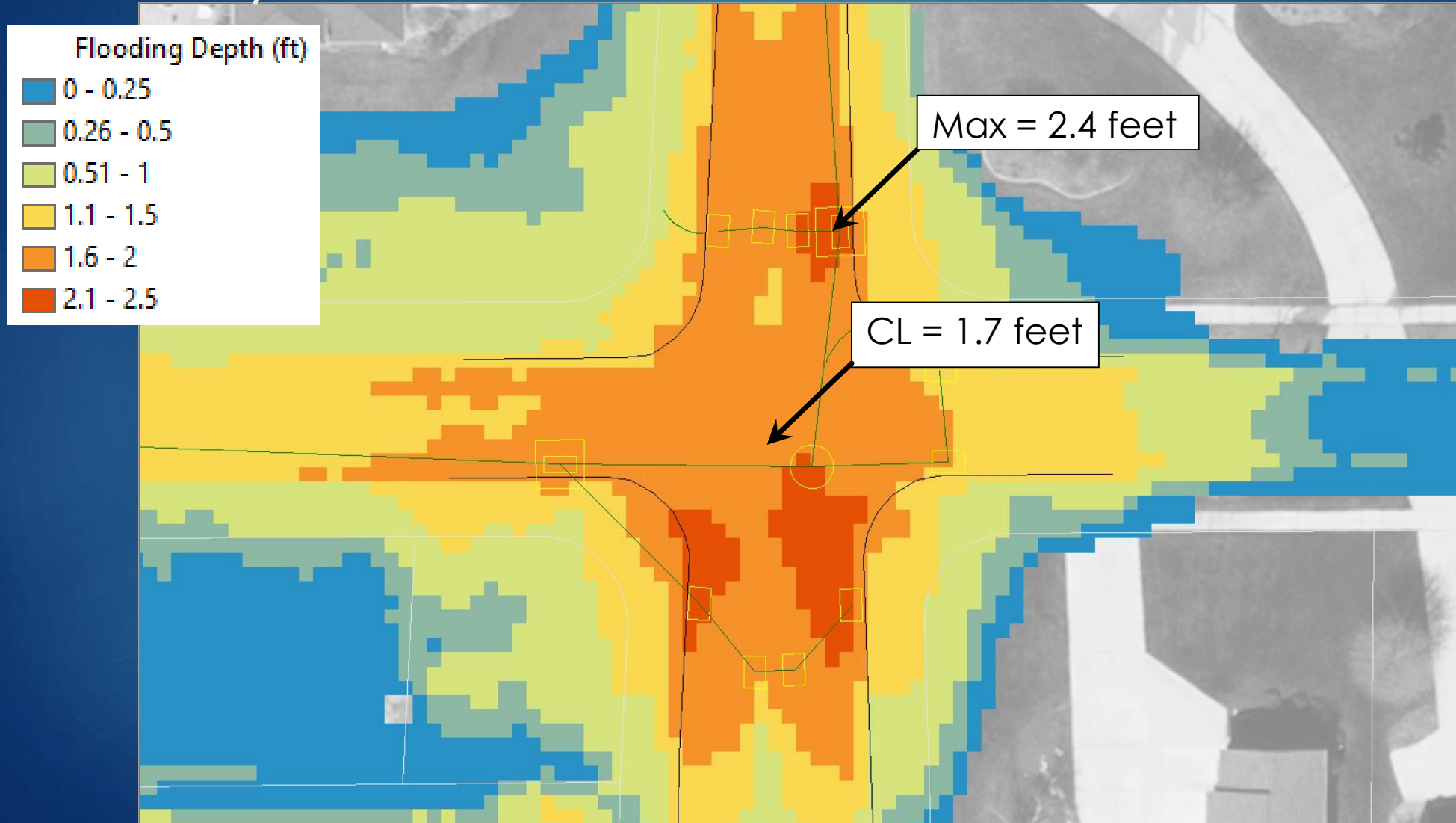
# South Existing Conditions (Modeled)



Data Sources:  
Parcels: Dane County (2018)  
Aerial: Dane County (2017)  
Storm System: City of Madison



# Existing Conditions – Hidden Hill Dr and Shady Point Dr



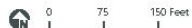
100-yr Flood Depths  
Hidden Hill Dr. at  
Shady Point Dr.



# North Existing Conditions (Modeled)



Data Sources:  
Parcels: Dane County (2018)  
Aerial: Dane County (2017)  
Storm System: City of Madison



- Stormline
- Storm Structure
- Parcel
- Point of Inflow to 2D Model

Flooding Depth (ft)	
<= 0.25	1.6 - 2
0.26 - 0.5	2.1 - 2.5
0.51 - 1	2.6 - 3
1.1 - 1.5	> 3

100-year Rainfall Event:  
6.66"

Map 3  
Northern Existing Conditions  
Hill Creek Drive Flood Reduction Study

City of Madison  
Dane County, WI

# Pond EC-1

THE GOLF COURSE FIX (FALL 2018)

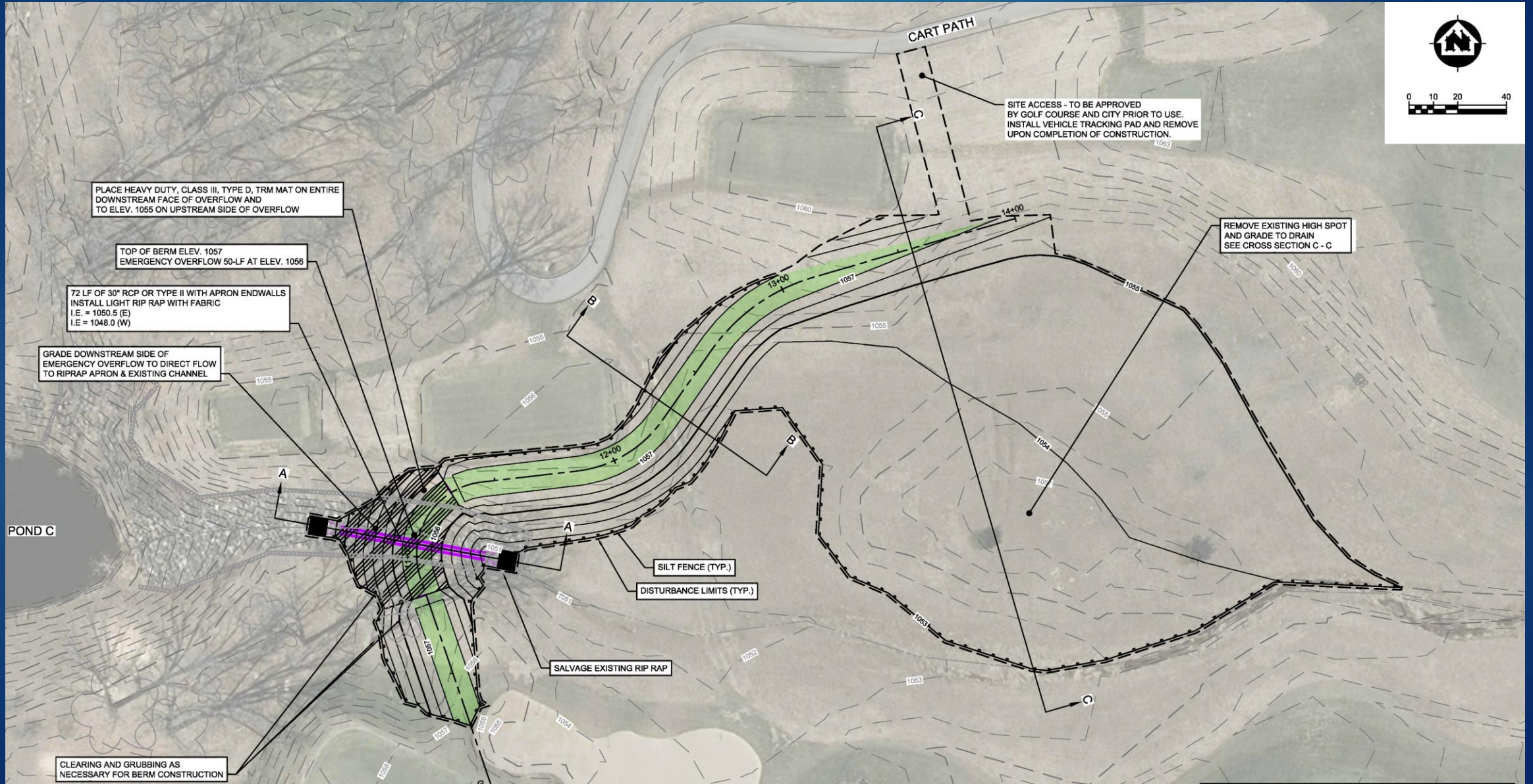


# EC-1 – “Golf Course Fix”





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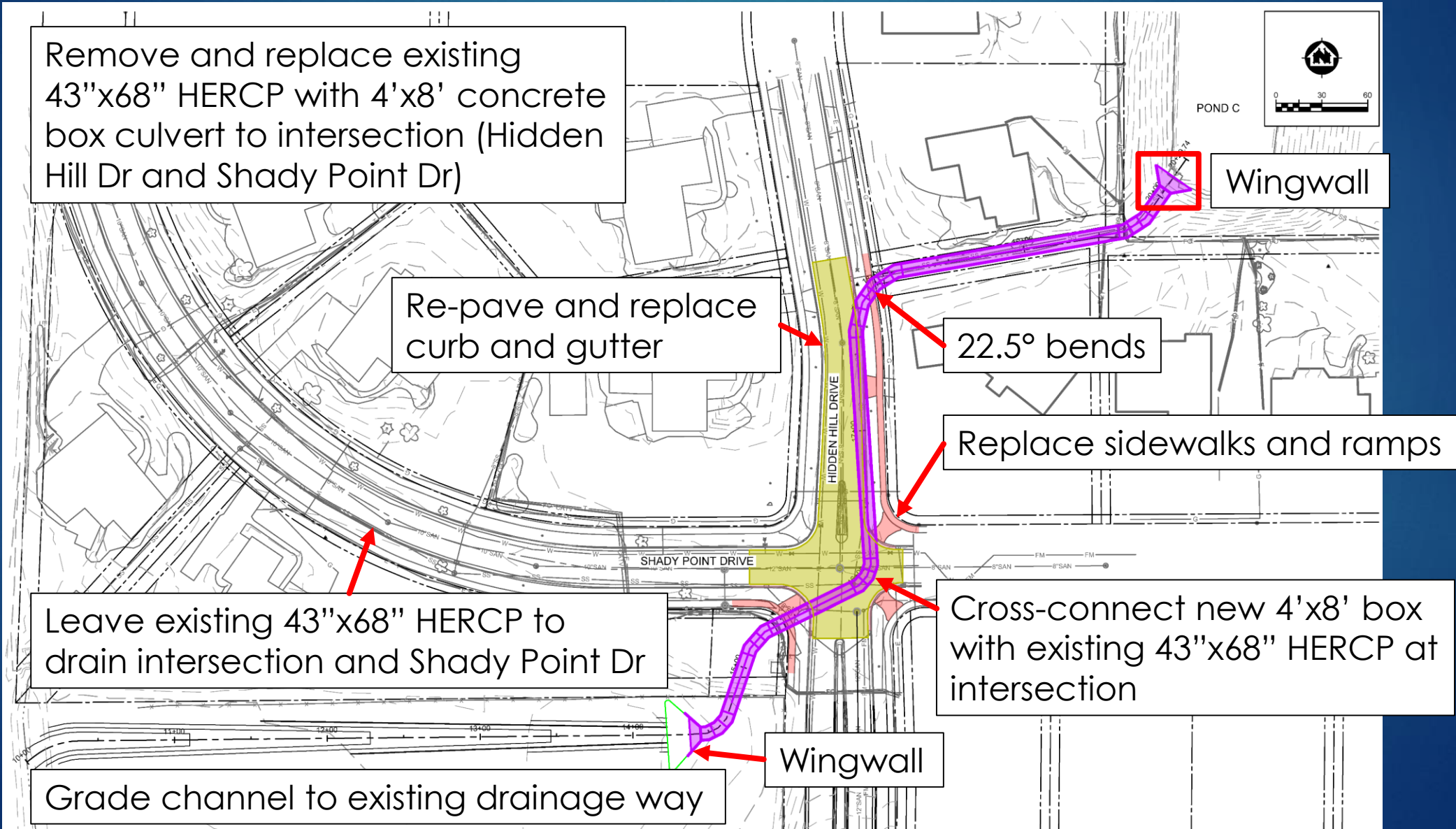


# Proposed Solutions

SOUTH AND NORTH

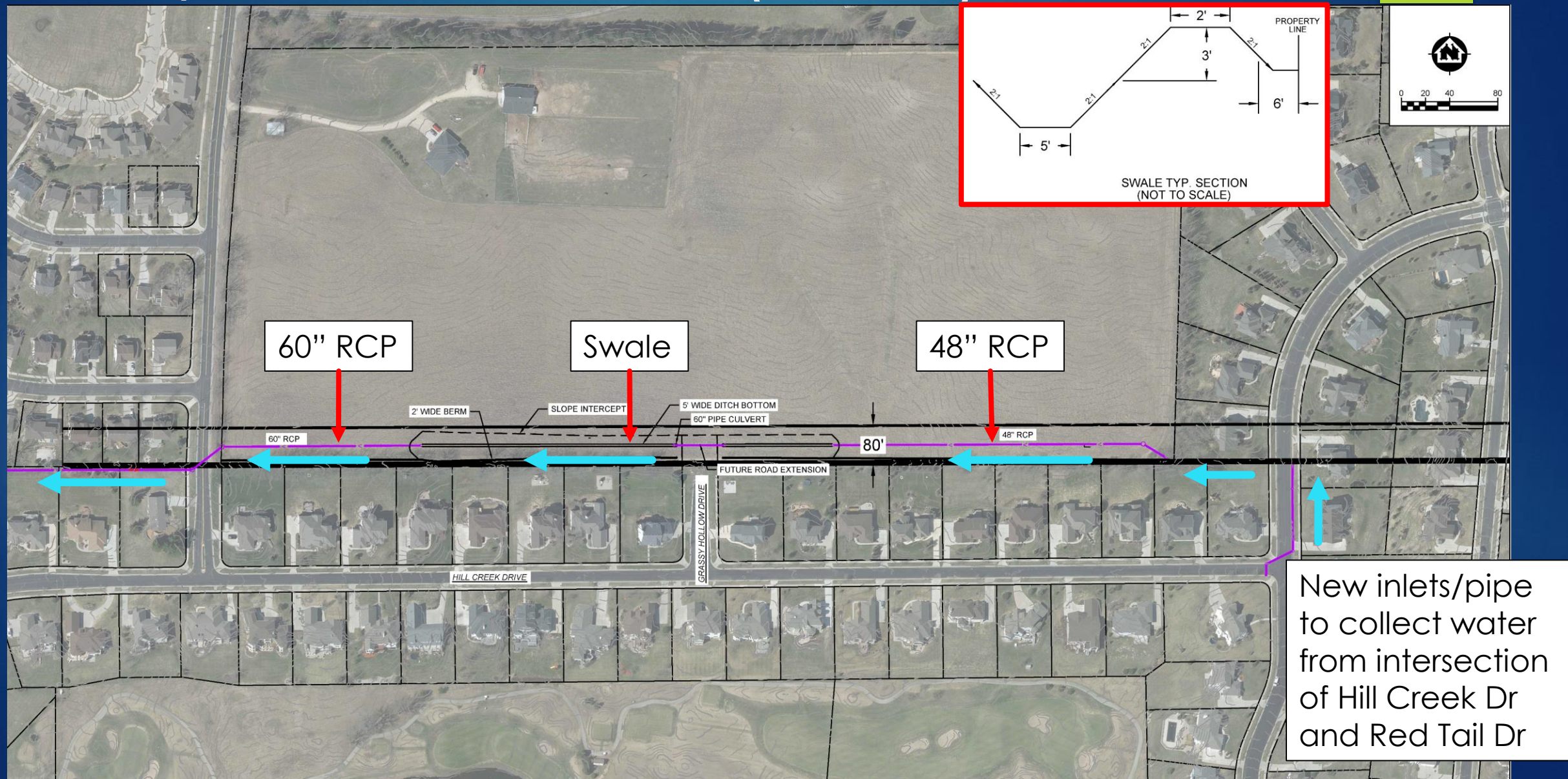


# Proposed Solution (South)

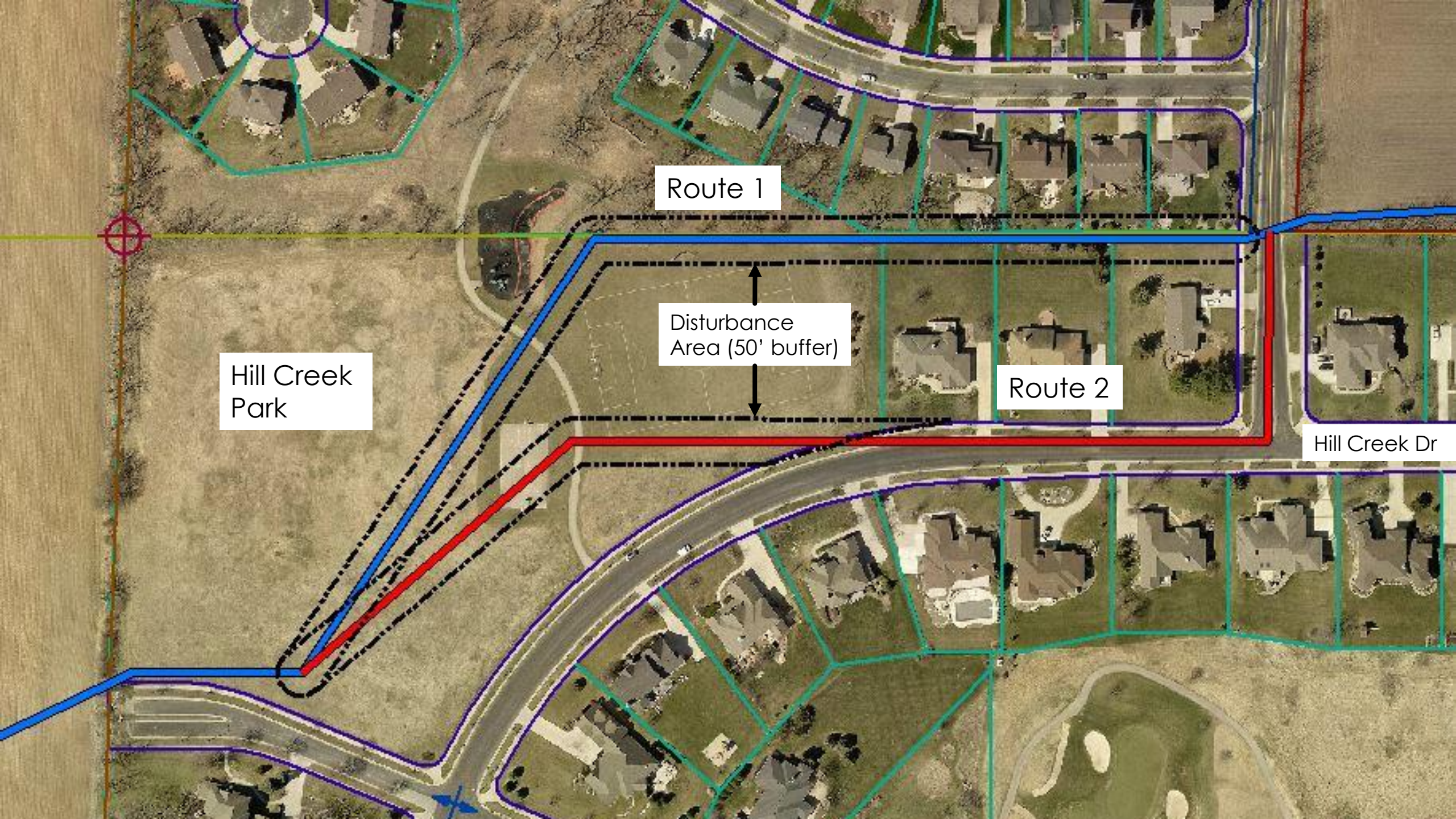




# Proposed Channel (North)







Route 1

Disturbance  
Area (50' buffer)

Hill Creek  
Park

Route 2

Hill Creek Dr



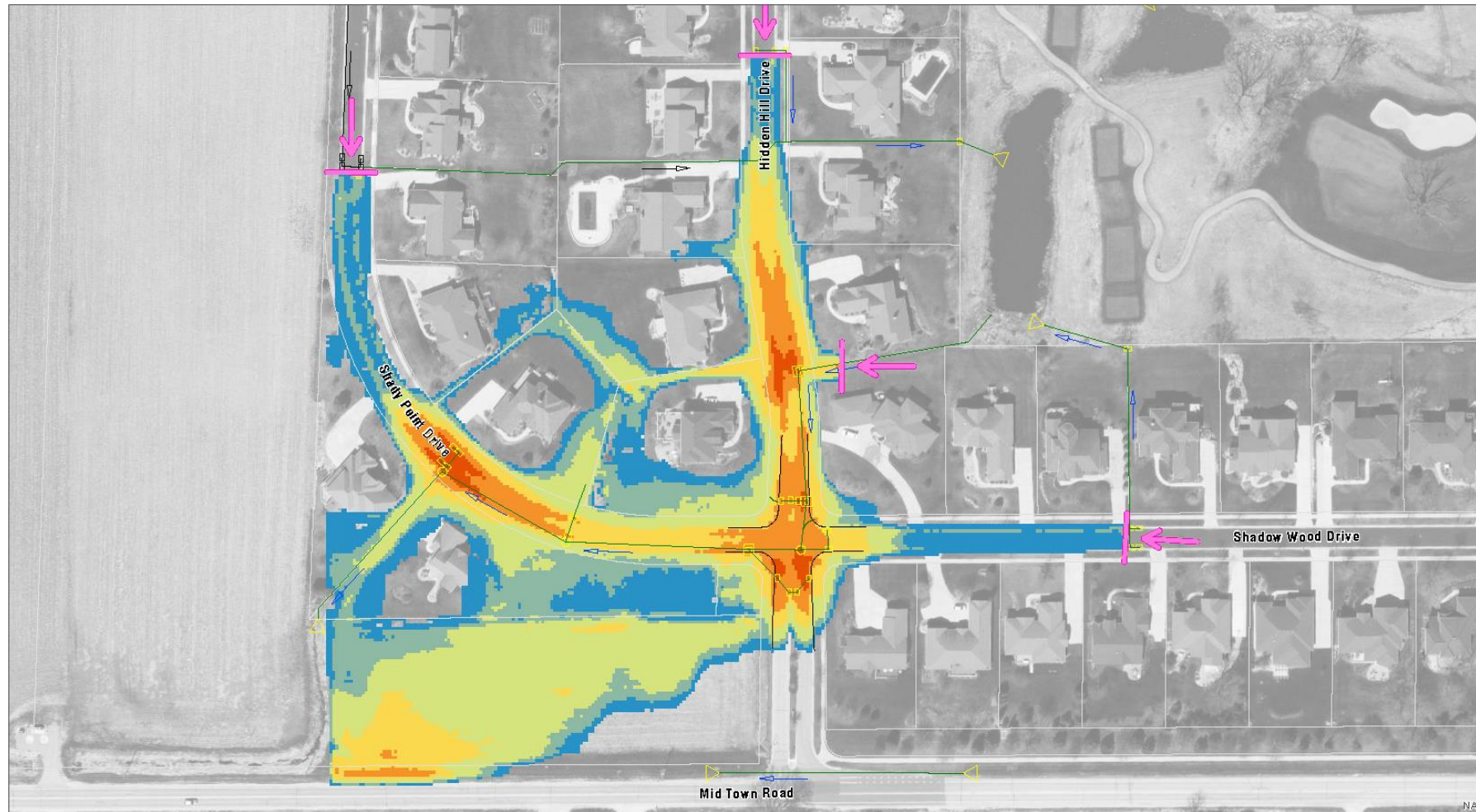


# Results of Improvements

THE ENDGAME



# South Existing Conditions



Data Sources:  
Parcels: Dane County (2018)  
Aerial: Dane County (2017)  
Storm System: City of Madison



Flooding Depth (ft)

0 - 0.25	0.26 - 0.5	0.51 - 1
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1.1 - 1.5	1.6 - 2	2.1 - 2.5
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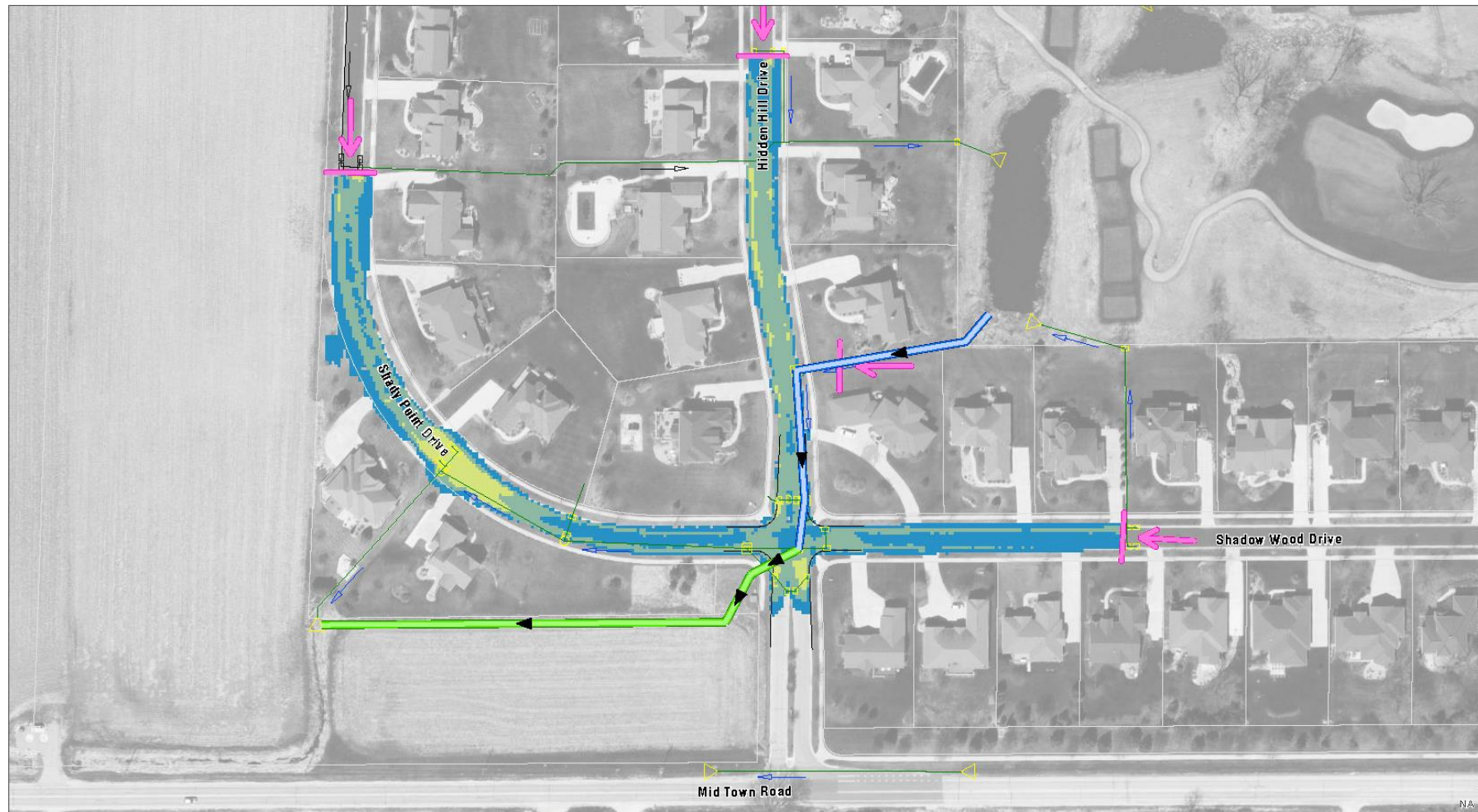
100-year Rainfall Event:  
6.66"

**Map 3**  
**Southern Existing Conditions**

Hill Creek Drive Flood Reduction Study

City of Madison  
Dane County, WI

# South Proposed Conditions



Data Sources:  
Parcels: Dane County (2018)  
Aerial: Dane County (2017)  
Storm System: City of Madison



Flooding Depth (ft)	1.1 - 1.5
0 - 0.25	1.6 - 2
0.26 - 0.5	2.1 - 2.5
0.51 - 1	

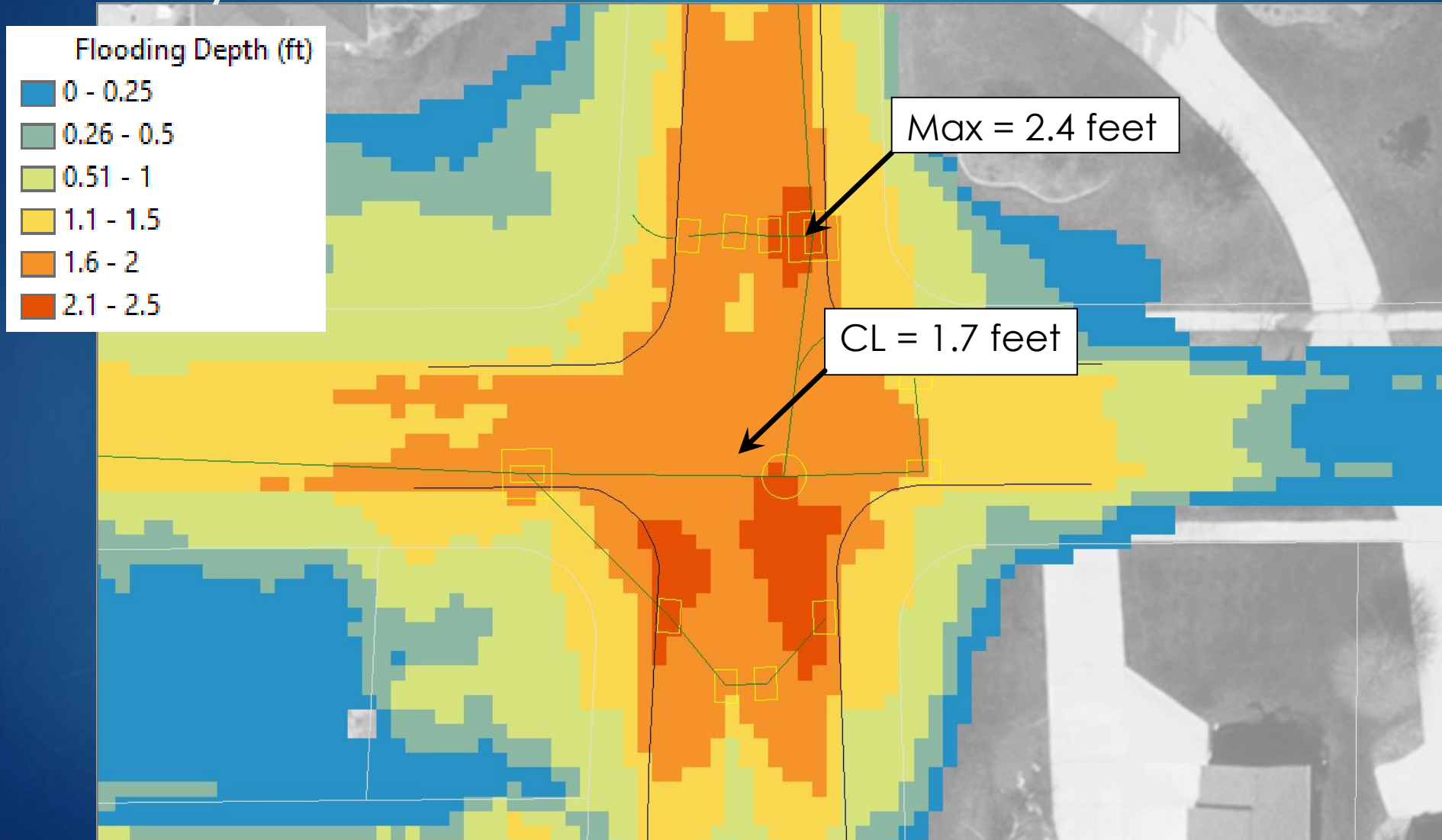
100-year Rainfall Event:  
6.66"

**Map 5**  
**Southern Improved Conditions**  
Hill Creek Drive Flood Reduction Study

City of Madison  
Dane County, WI

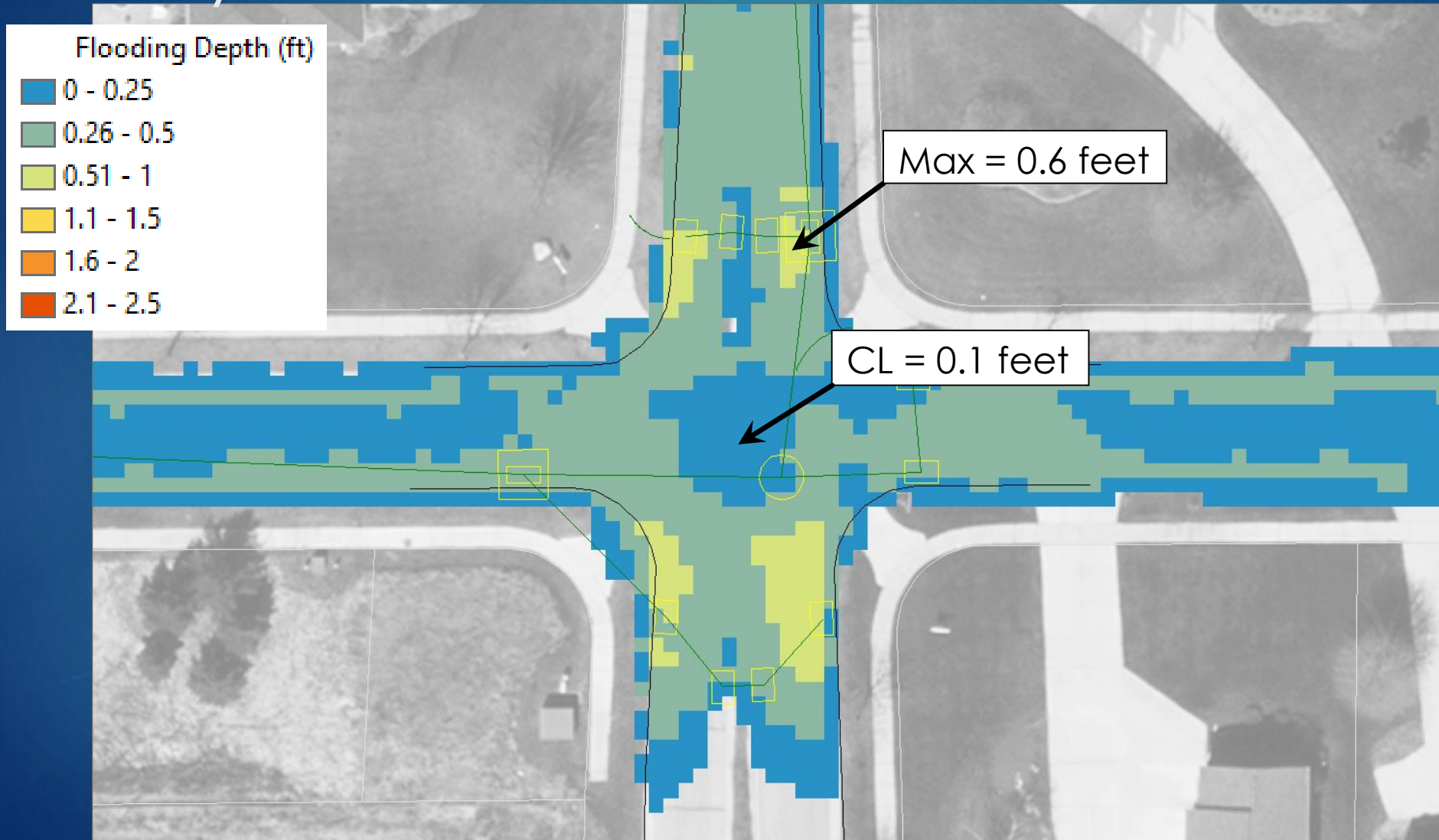


# Existing Conditions – Hidden Hill Dr and Shady Point Dr



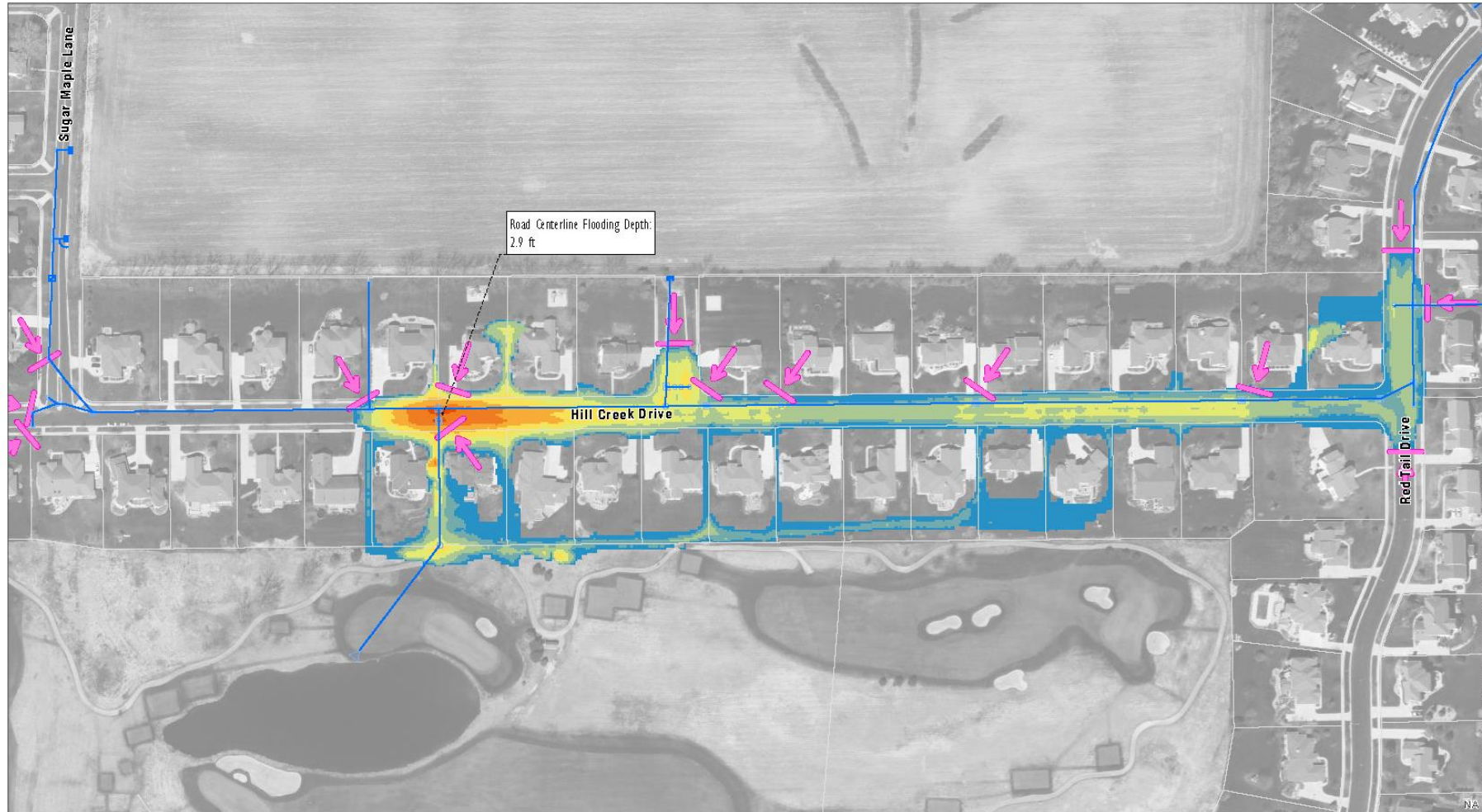
100-yr Flood Depths  
Hidden Hill Dr. at  
Shady Point Dr.

# Proposed Conditions – Hidden Hill Dr at Shady Point Dr





# North Existing Conditions



Data Sources:  
Parcels: Dane County (2018)  
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Storm System: City of Madison



- Stormline
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100-year Rainfall Event:  
6.66"

## Map 3 Northern Existing Conditions

Hill Creek Drive Flood Reduction Study

City of Madison  
Dane County, WI

# North Proposed Conditions

- ▶ No street flooding aside from water between inlets
- ▶ Hydraulic grade line remains below the street surface for 100-yr event



# South Project Schedule

- ▶ Project approved by City of Madison Board of Public Works on May 22, 2019
- ▶ Will go to Common Council on June 4, 2019 for approval
- ▶ Project will be bid on June 6, 2019
- ▶ Bids received and opened on June 20, 2019
- ▶ Final Common Council approval of bid will occur July 16, 2019
- ▶ Construction can begin in mid-August 2019

# Land Acquisition Schedule

- ▶ Southern property (south of Shady Point Dr)
  - ▶ Relocation order process will begin at Common Council on June 11, 2019, with final approval by Council on July 16, 2019
  - ▶ Appraisal will begin on June 11, run in parallel with relocation order process
  - ▶ Southern ditch will be completed in late 2019 or 2020
  - ▶ New 4'x8' concrete box culvert will be cross-connected with existing 43"x68" HERCP until ditch is complete
- ▶ Other property (north and south)
  - ▶ Relocation order process will begin at Common Council on August 6, 2019, with final approval by Council on September 3, 2019
  - ▶ Property acquisition will take 6-9 months
  - ▶ Construction will likely occur in late 2020



# Hawks Landing Maintenance Agreement

- ▶ New Hawks Landing Maintenance Agreement for stormwater infrastructure in Hawks Landing Golf Course
  - ▶ Drafted by City of Madison and Jeff Haen
- ▶ Approved by Board of Public Works on May 22, 2019
- ▶ Common Council will consider on June 4, 2019
- ▶ Goal: signed by City of Madison and Jeff Haen by the end of June 2019
- ▶ New agreement an improvement over existing agreement for City, golf course and residents