Hawks Landing Storm Sewer Improvements

Public informational meeting

February 13, 2020

Presentation Agenda

1. **Watershed Boundaries**
2. Design Goals
   - Rainfall Design Events
   - Service Level Criteria
3. What we have we done so far
   - Pond EC-1 Project
   - Southern Project
4. Northern Project
5. Future Development Planning
6. Construction Schedule

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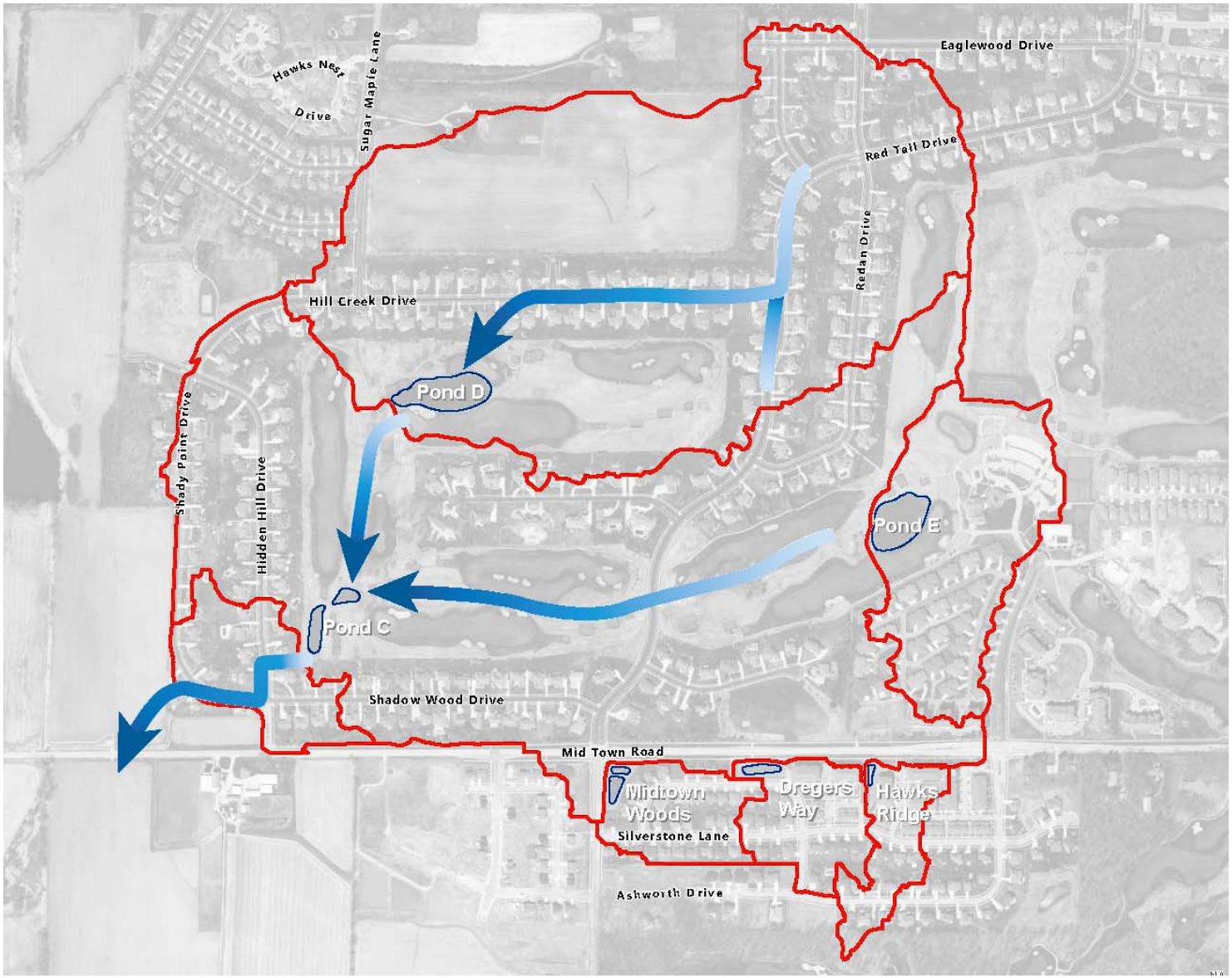
Watershed Boundaries



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Design Goals – Rainfall Design Events

- 100-yr Event
  - 1% chance of occurring in any given year
  - Does **NOT** mean that a storm will only occur once in 100 years.

Annual Exceedance Probability (AEP)	Chance of occurring in 1 Year	Return Period or Average Recurrence Interval (ARI)
100%	1 in 1	1-year
50%	1 in 2	2-year
10%	1 in 10	10-year
4%	1 in 25	25-year
1%	1 in 100	100-year
0.10%	1 in 1000	1000-year

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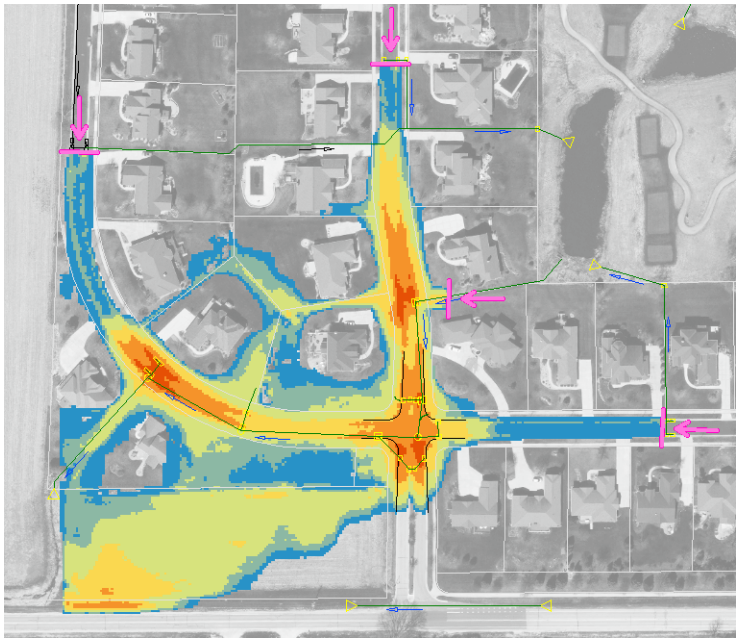
Design Goals – Rainfall Design Events

- 1% (100-yr) Storm = 6.66” in 24 hours
- August 20, 2018: 11.6” in 16 hrs*
  - <0.1% Recurrence (>1000-yr event)



** UW West Madison Agricultural Research Station*

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Design Goals – Service Level Criteria

- Eliminate flooding from storm sewer during storms with a 10% chance of occurring each year (10-yr)

- Structure (buildings, infrastructure and homes) and major roadway damage is eliminated for storms with a 1% chance of occurring each year (100-yr)

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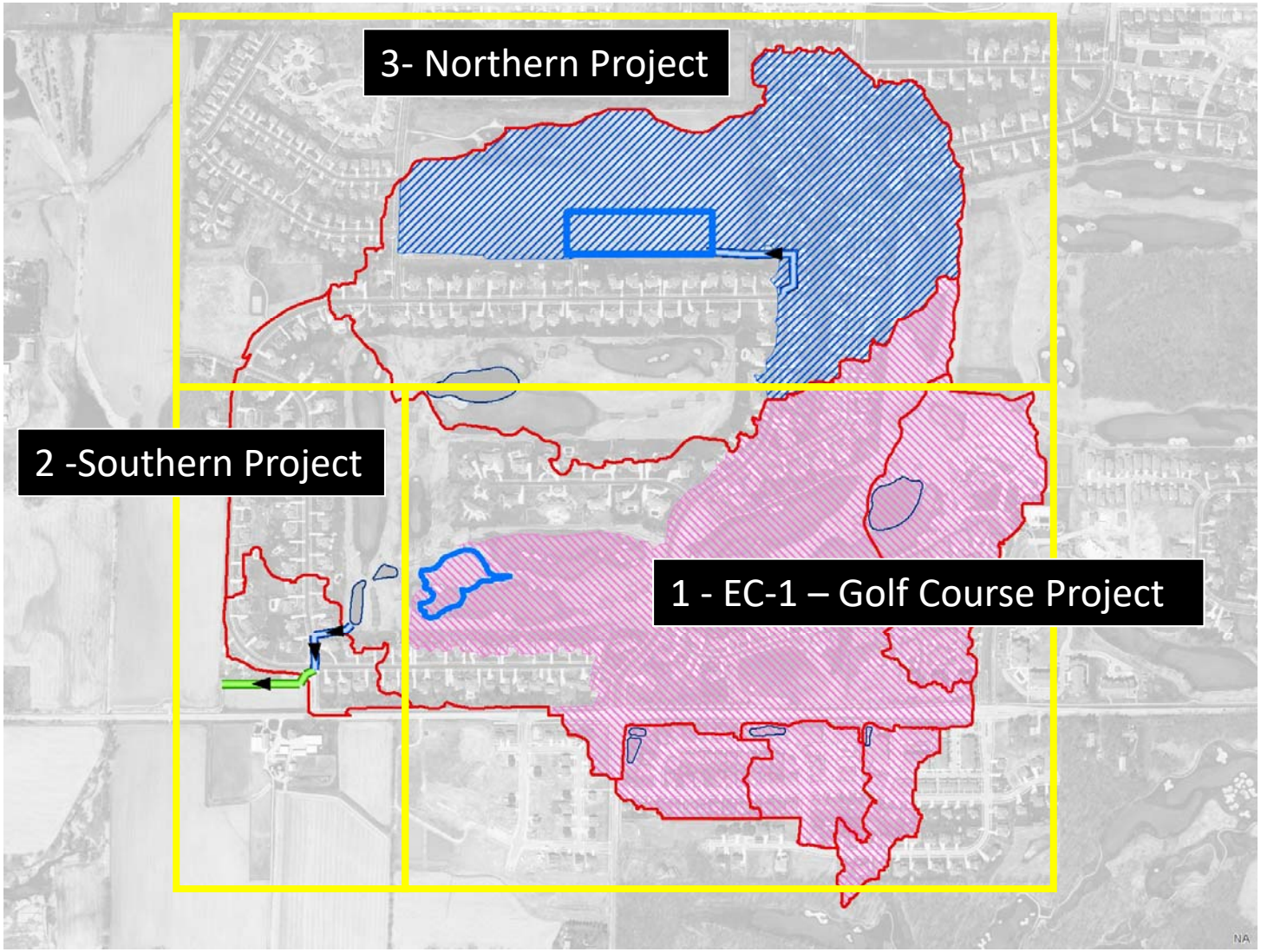
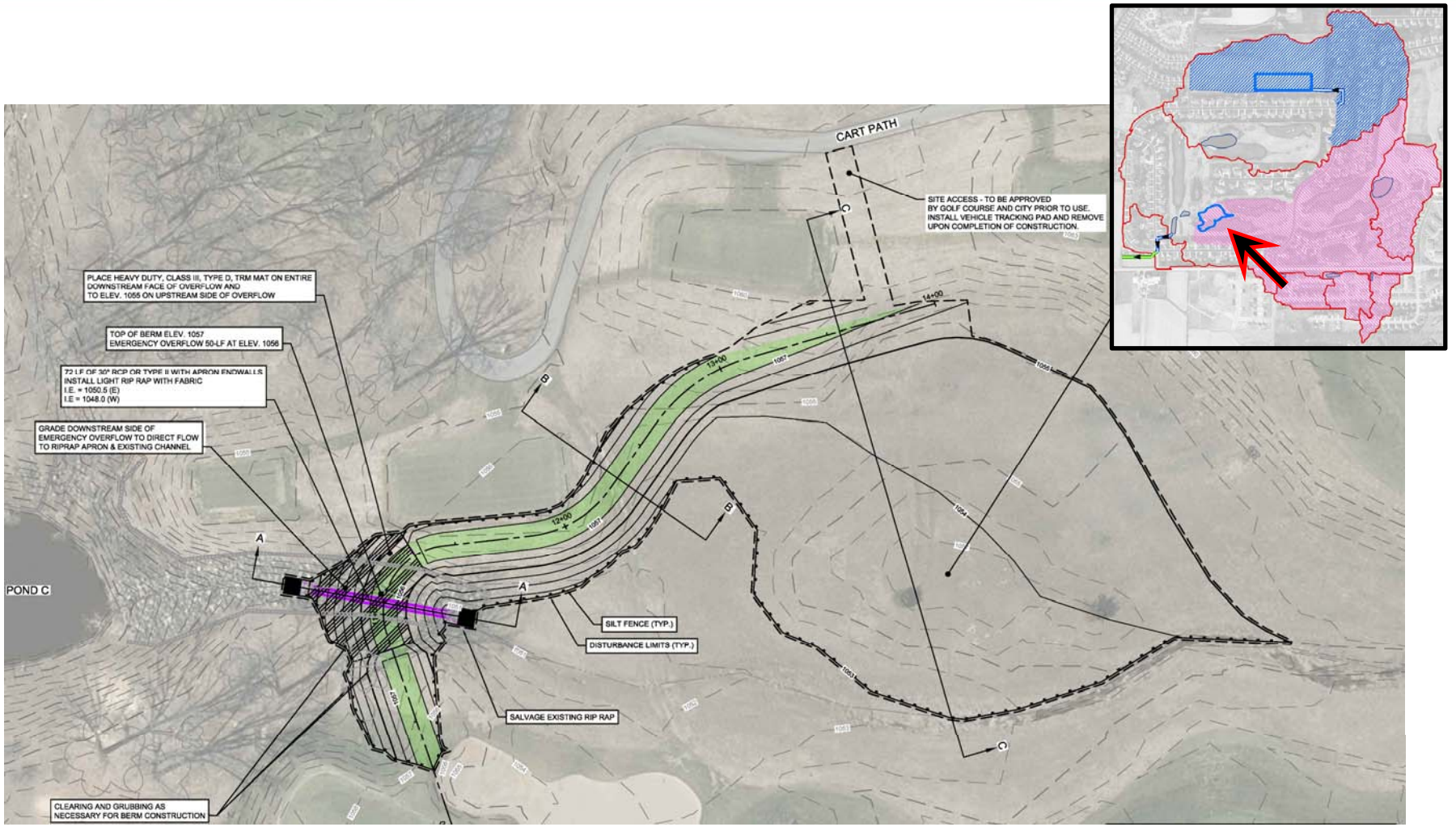
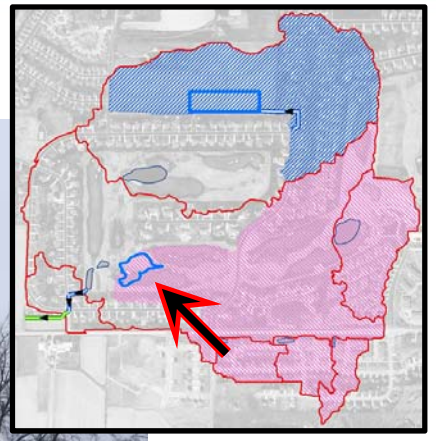
What we have done so far



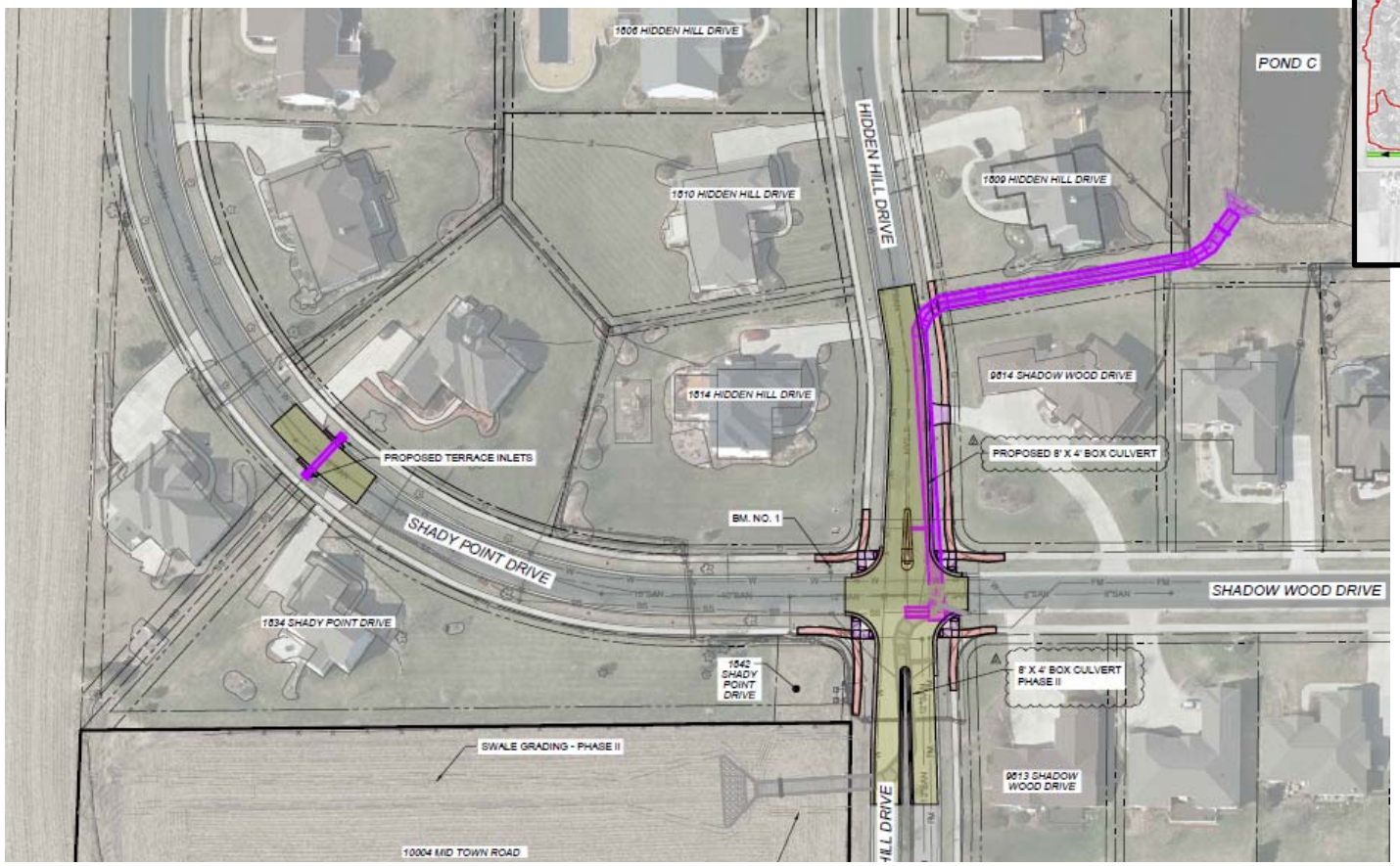
EC-1 – Golf Course Project

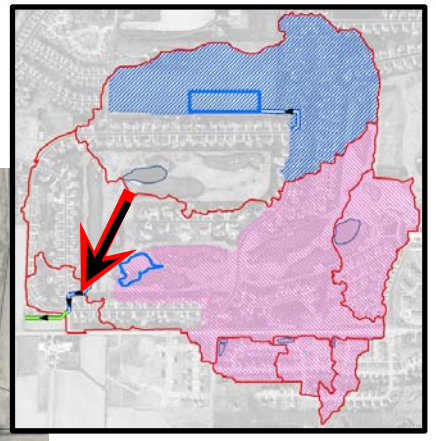


EC-1 – Golf Course Project



Southern Project





Replaced 43”x68” HERCP (54”) with 4’ x 8’ RCP Box – Double Capacity

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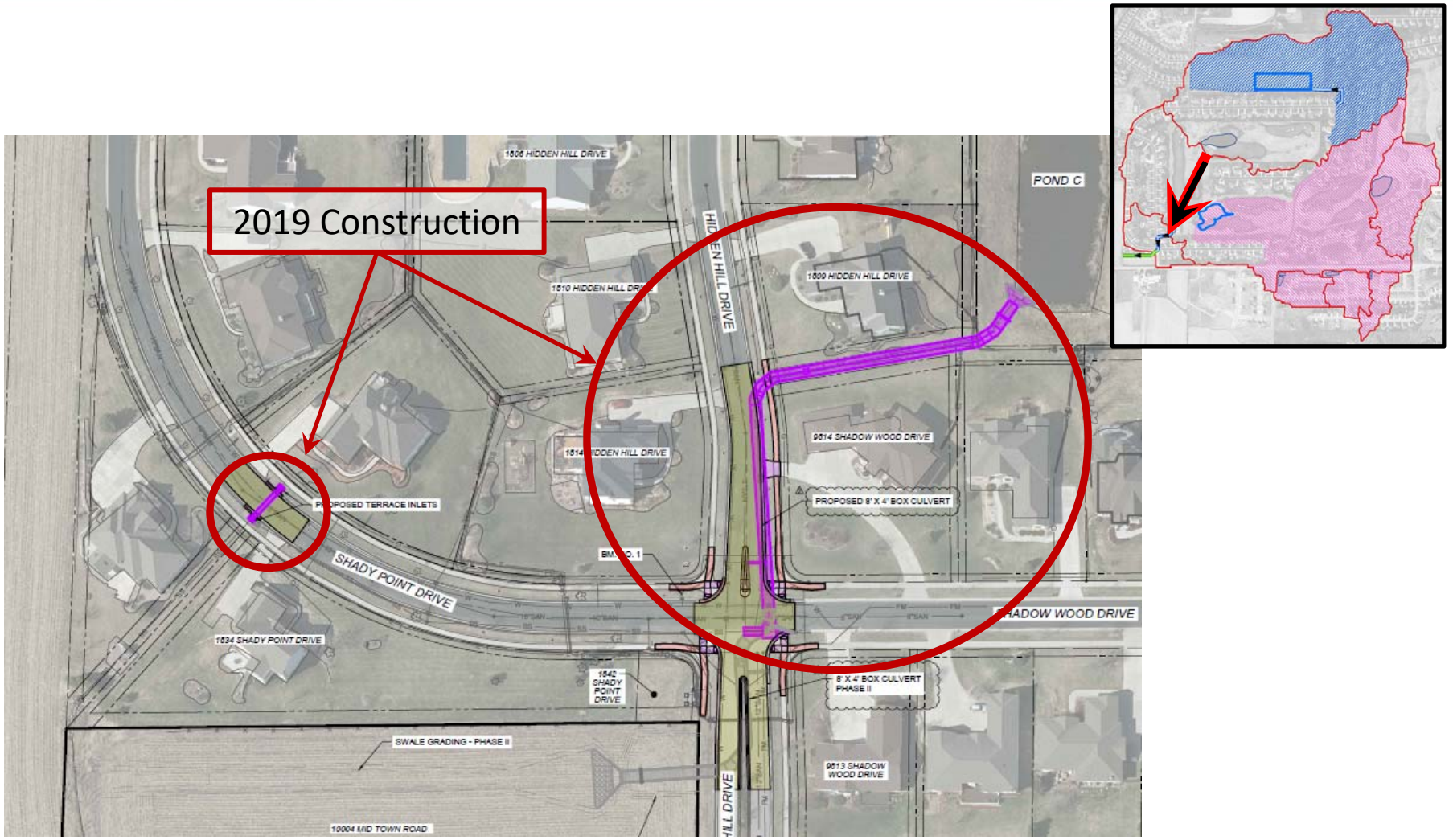
Southern Project



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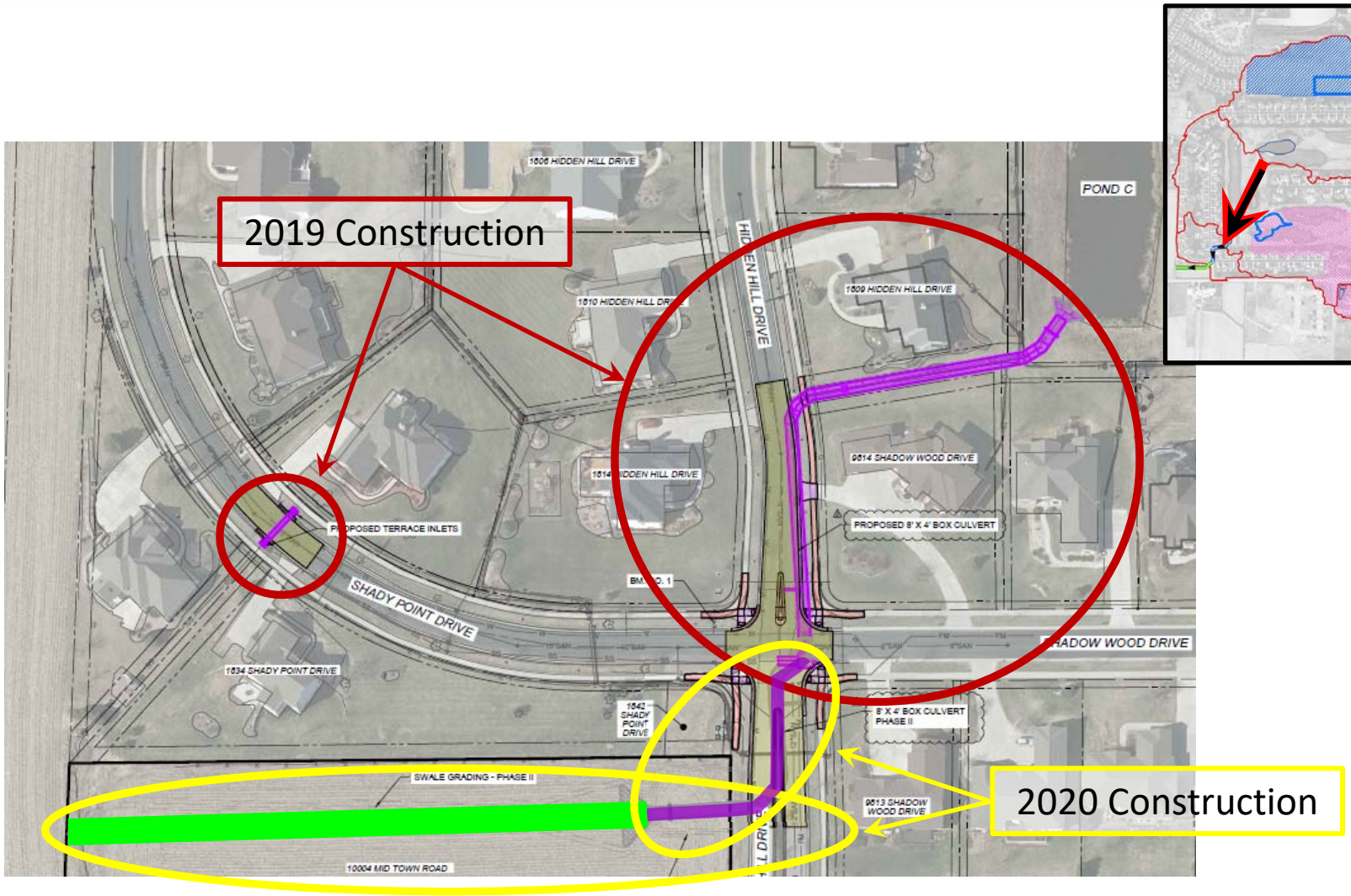

Replaced 43”x68” HERCP (54”) with 4’ x 8’ RCP Box – Double Capacity

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Southern Project

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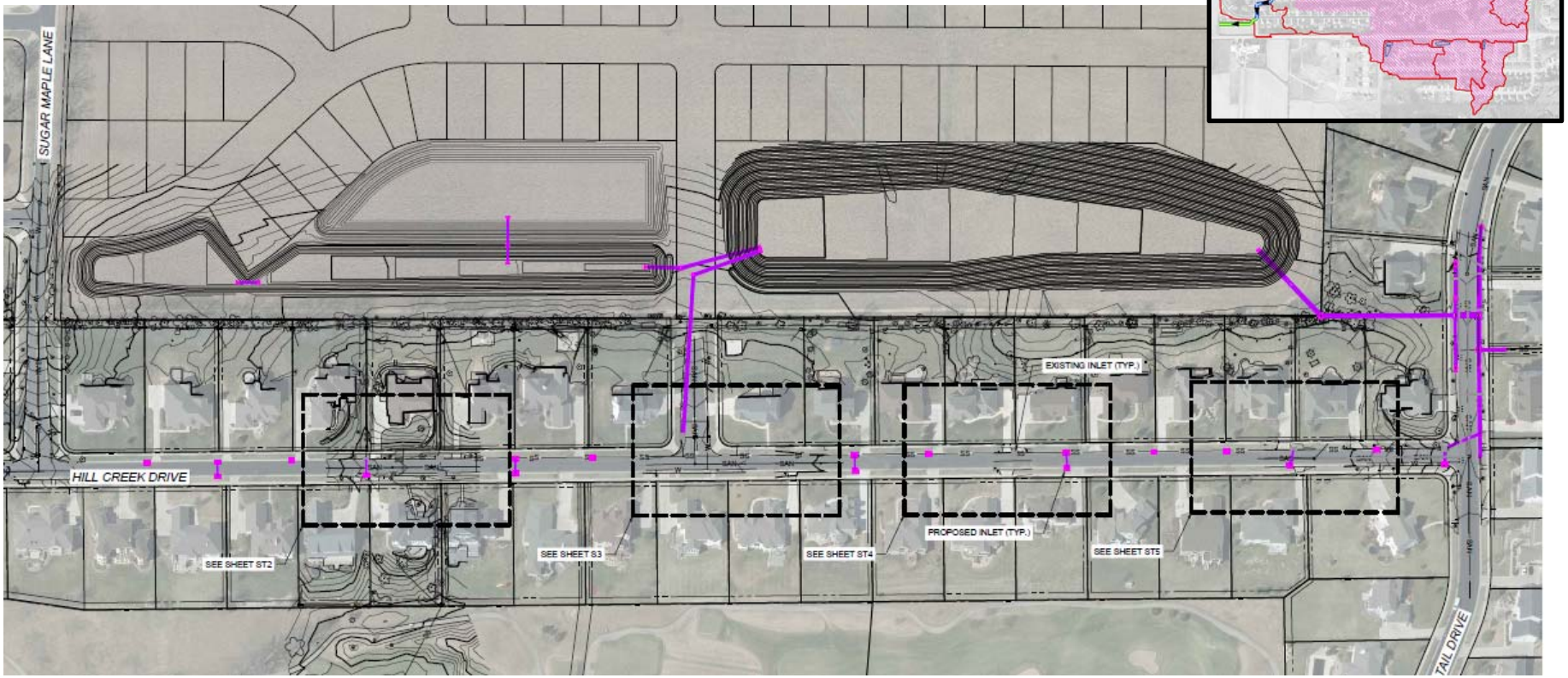
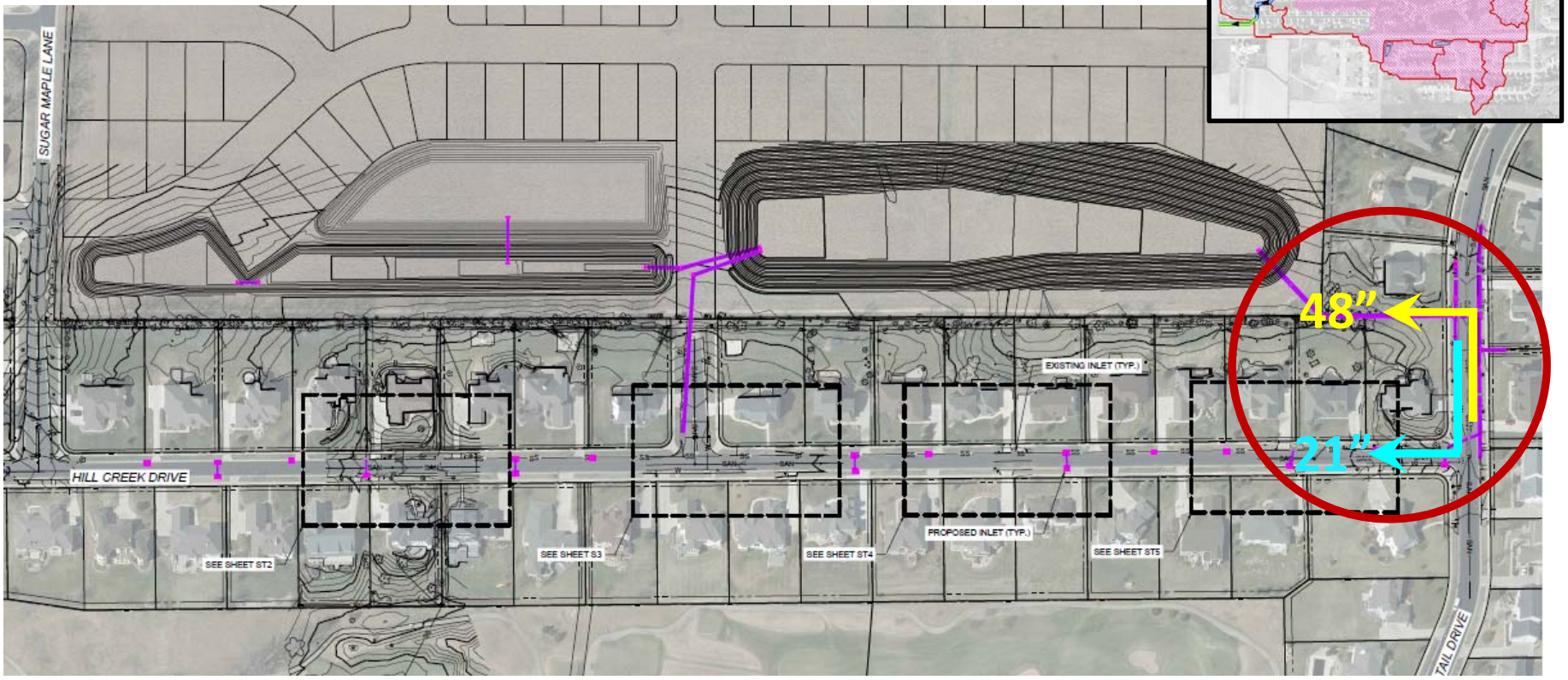
Northern Project



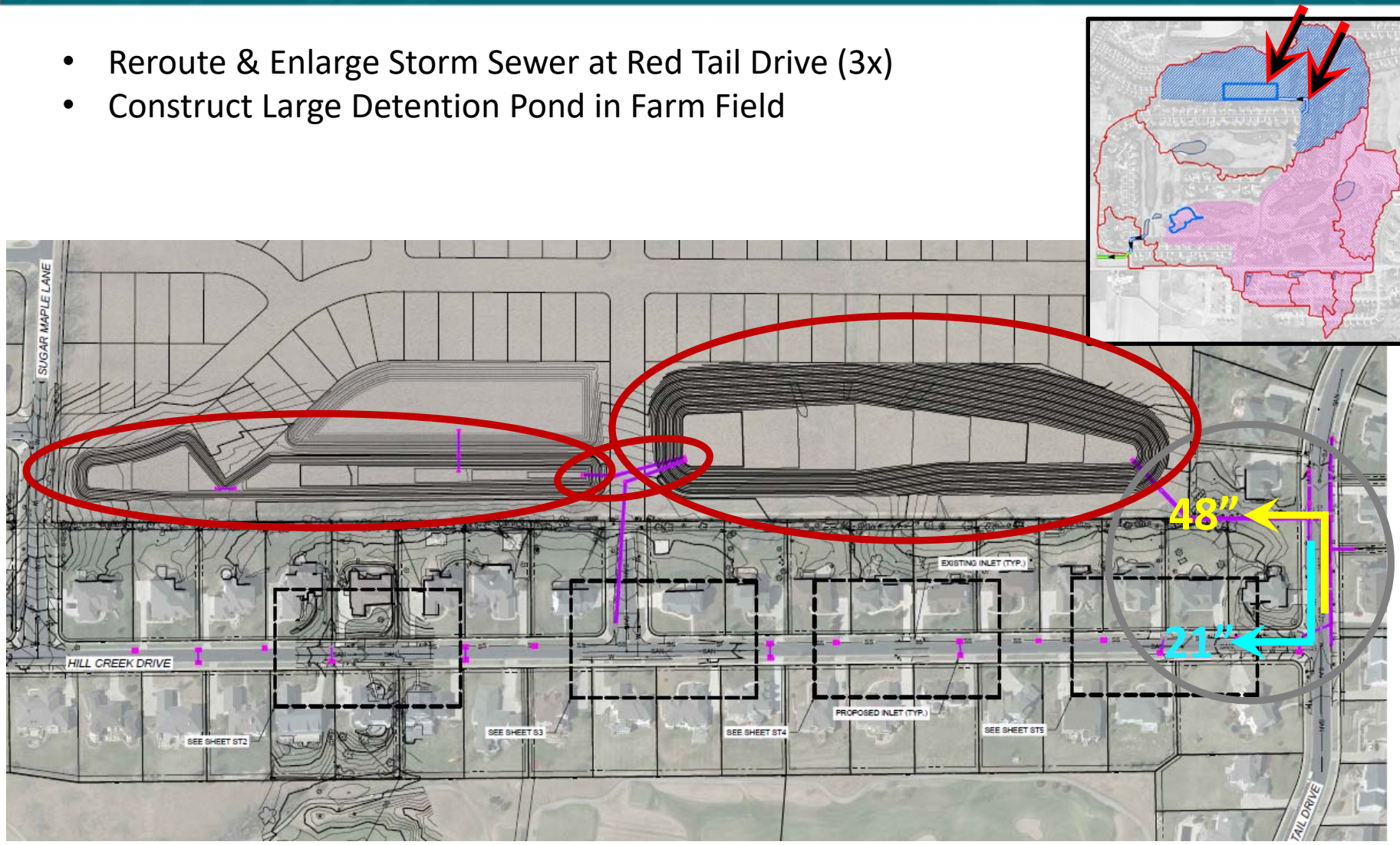
Northern Project

- Reroute & Enlarge Storm Sewer at Red Tail Drive (3x)



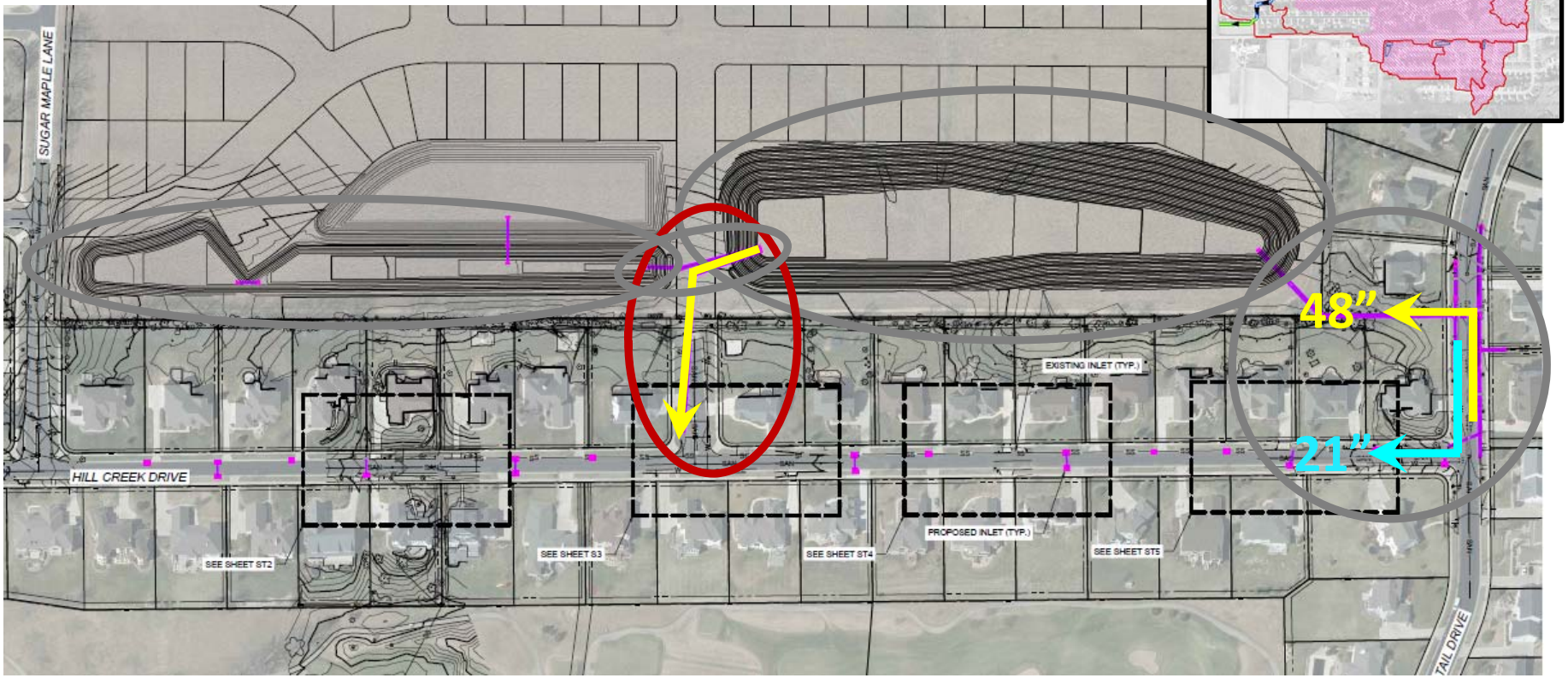
Northern Project

- Reroute & Enlarge Storm Sewer at Red Tail Drive (3x)
- Construct Large Detention Pond in Farm Field



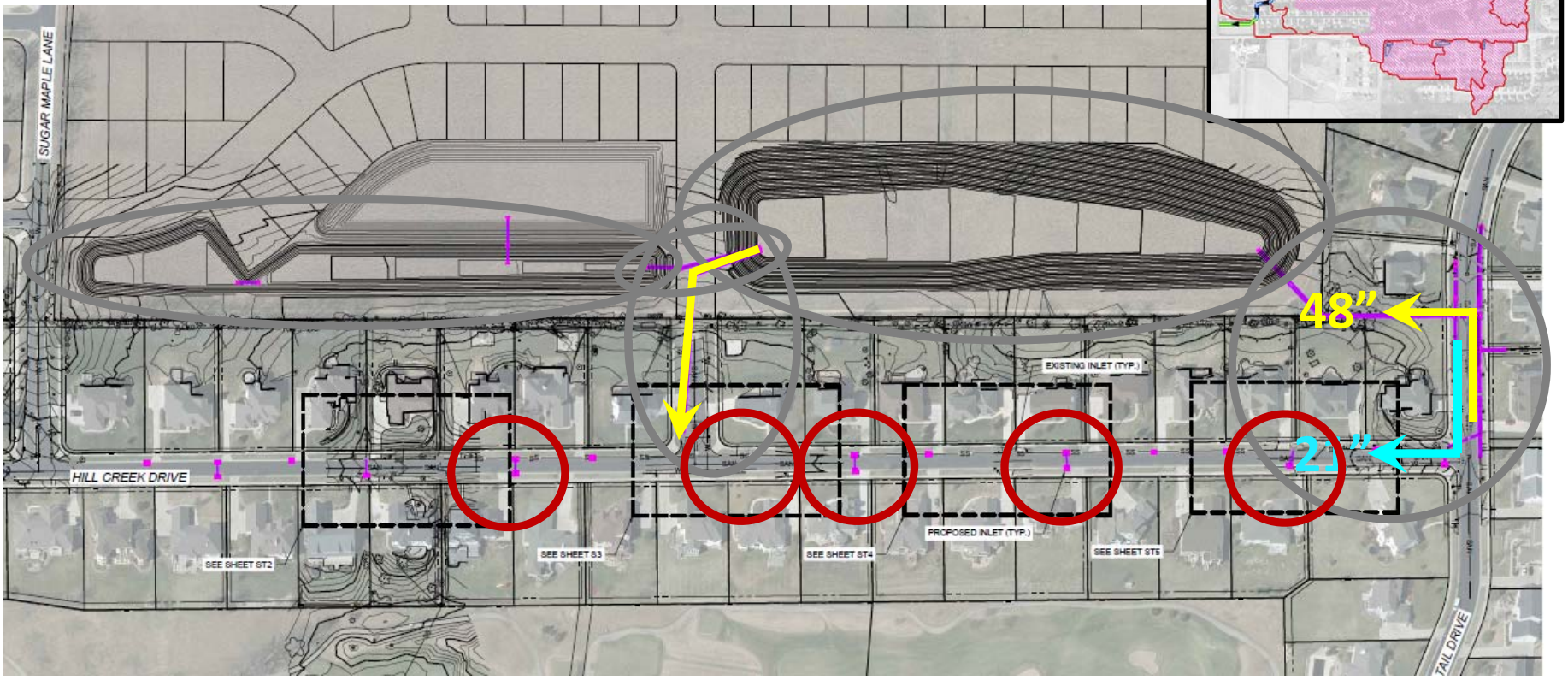
Northern Project

- Reroute & Enlarge Storm Sewer at Red Tail Drive (3x)
- Construct Large Detention Pond in Farm Field
- Direct Flow Back to Hill Creek Storm Sewer Via Small Pipe



Northern Project

- Reroute & Enlarge Storm Sewer at Red Tail Drive (3x)
- Construct Large Detention Pond in Farm Field
- Direct Flow Back to Hill Creek Storm Sewer Via Small Pipe
- Construct Additional Inlets on Hill Creek



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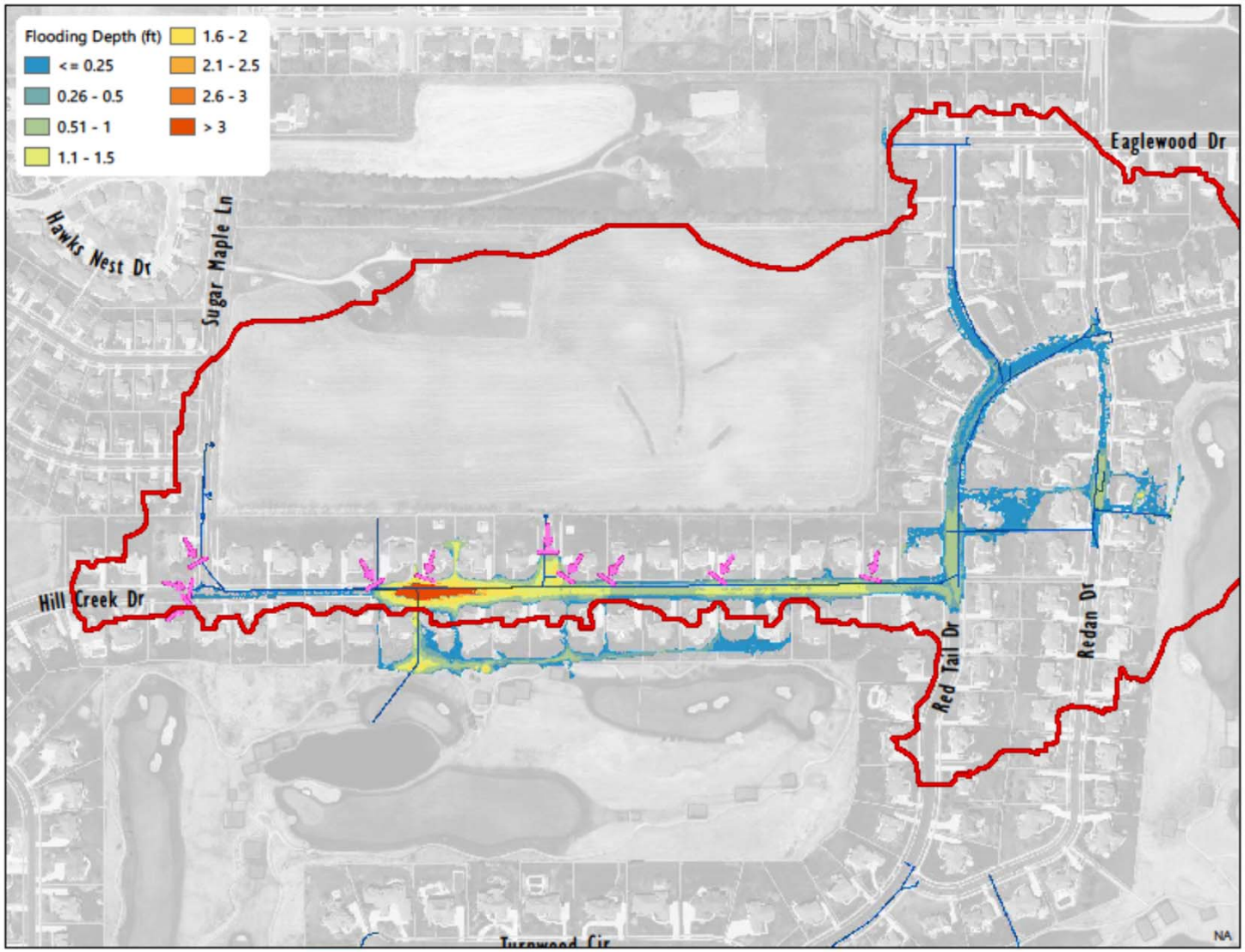
Northern Project Area – Existing Conditions



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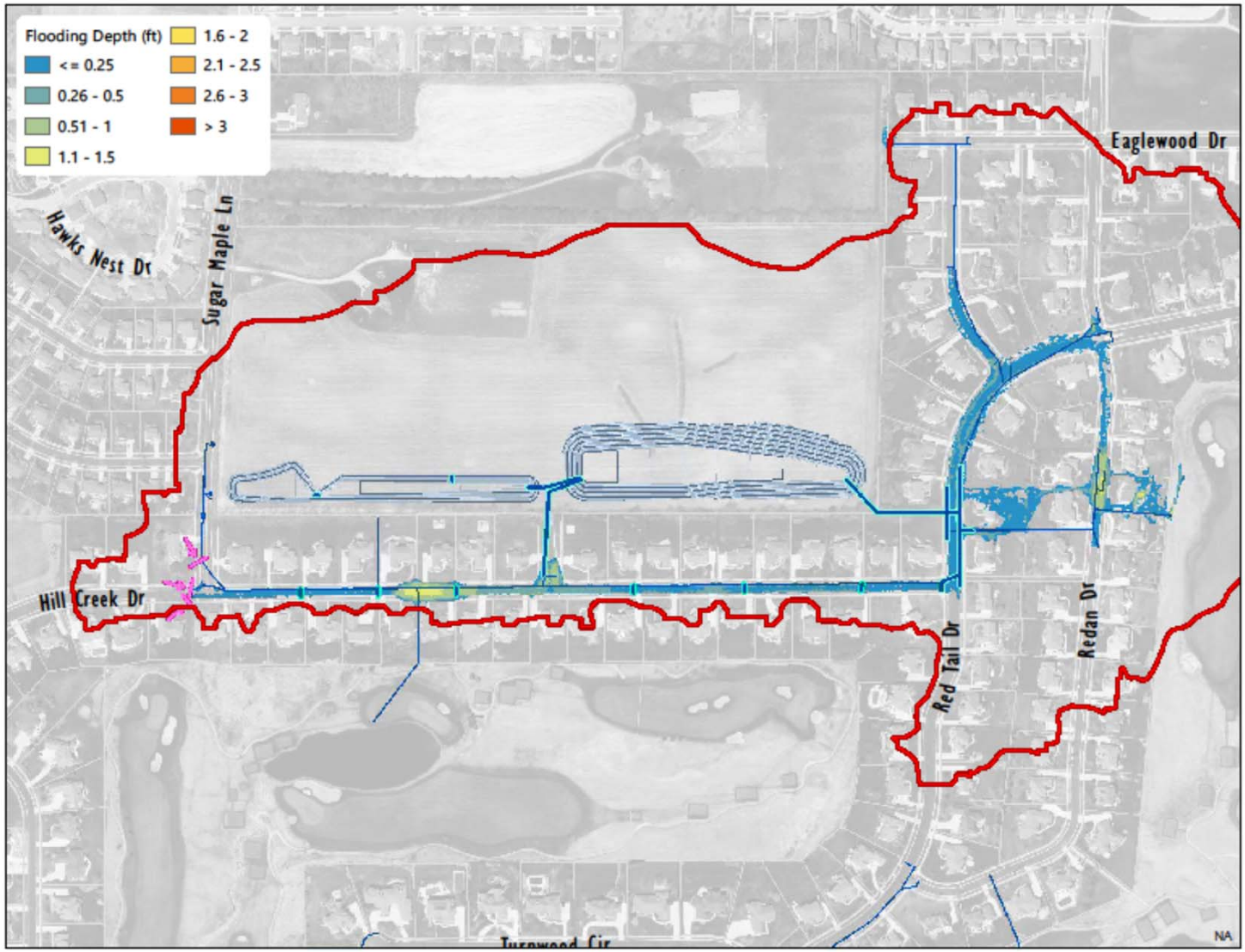
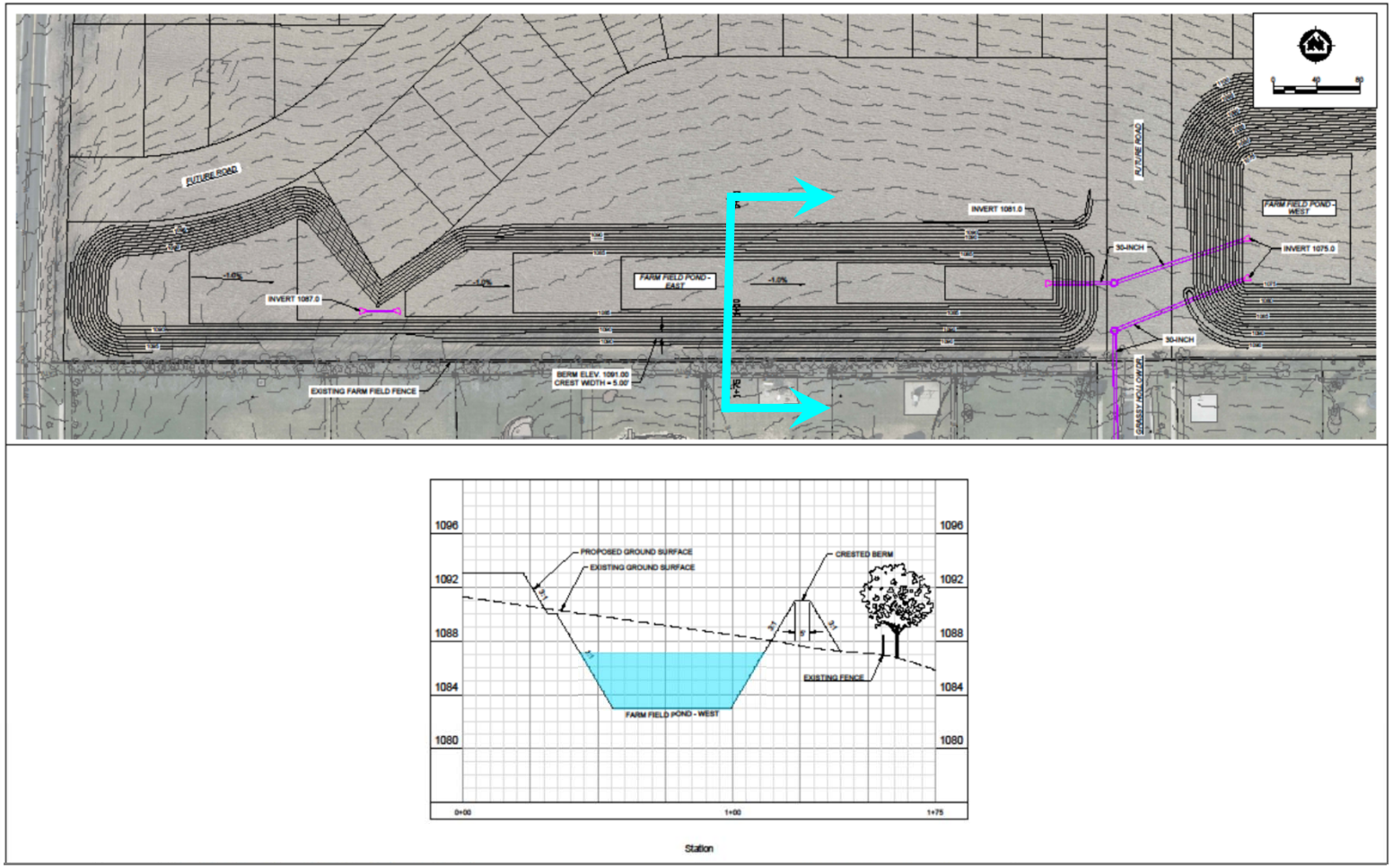
Northern Project Area – Improved Conditions



Northern Project Area – Farm Pond



Pond will normally be dry, but will fill with water for a time following rainfall events

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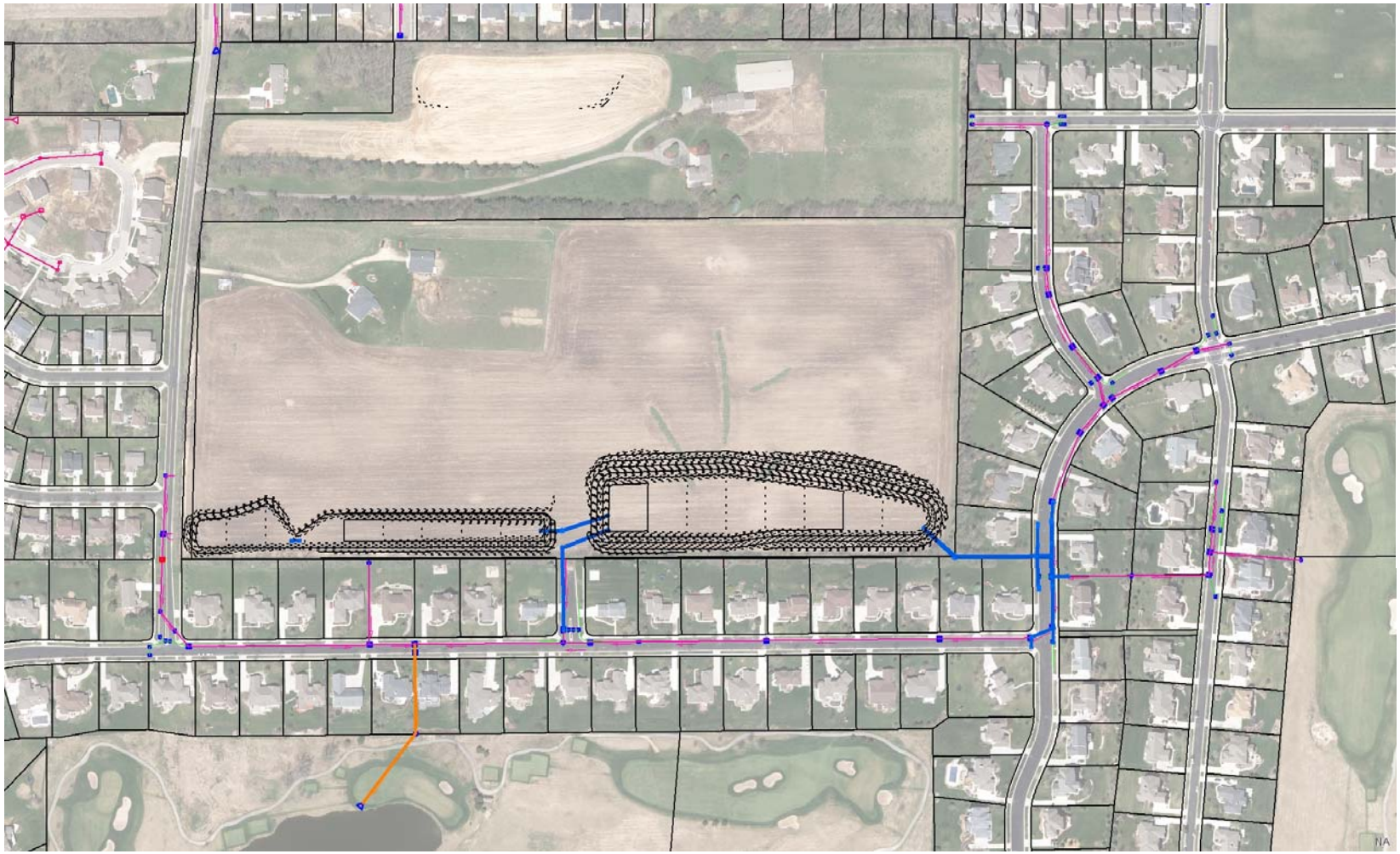
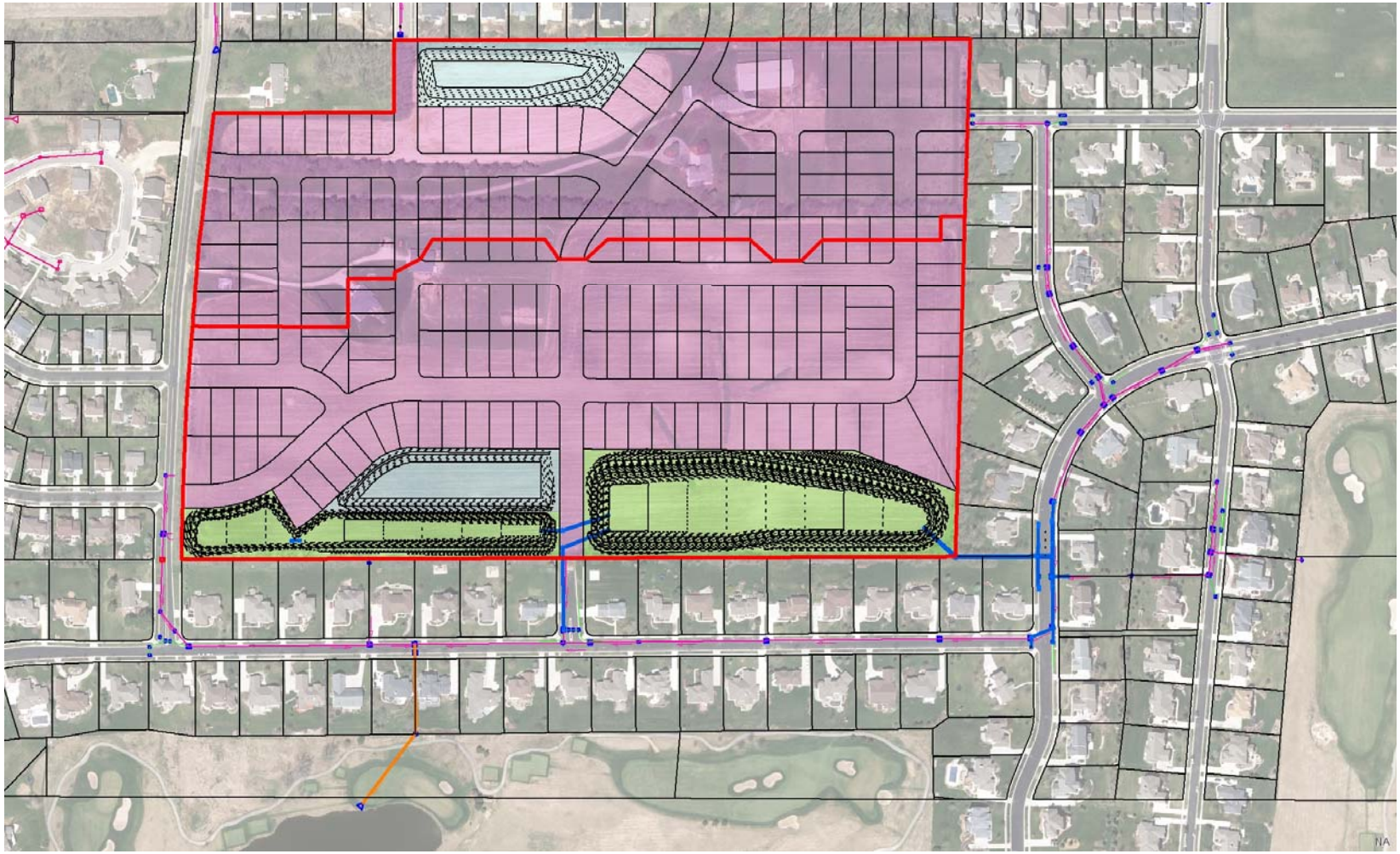
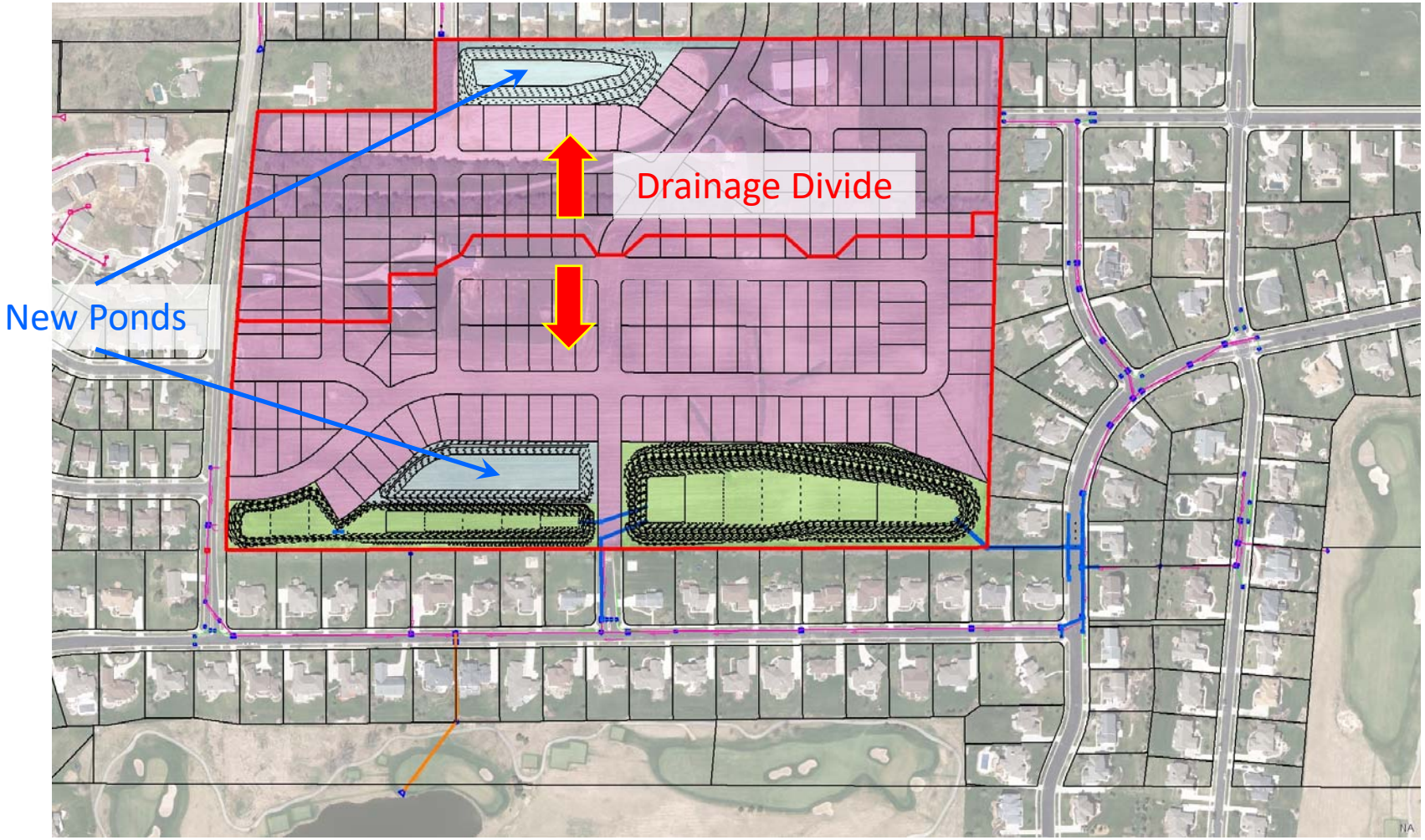
Future Development Planning



Future Development Planning



Future Development Planning



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Construction Schedule

- Design: Winter – Early Spring 2020
- Land Acquisition: Spring – Fall 2020
  (6-8 month process)
- Bidding: Fall 2020 – Winter 2021
- Construction: Winter – Summer 2021

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