



HERSHEY'S MILL DAM REDEVELOPMENT PROJECT

Vegetation Considerations when Converting a
Mill Pond into a Public Park

Presented by
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August 2, 2022

National Stream Restoration Conference



Acknowledgements

- These individuals were instrumental in developing and completing this project.
- I recognize their contributions to this project.

- Goshen Township – Mark Miller
- Gannett Fleming – Eric Neast, P.E.
- Gannett Fleming – Ashley McGinnis



OUTLINE

- ❖ Project Location
- ❖ History
- ❖ Design
- ❖ Construction
- ❖ Hurricane Ida
- ❖ Lessons Learned

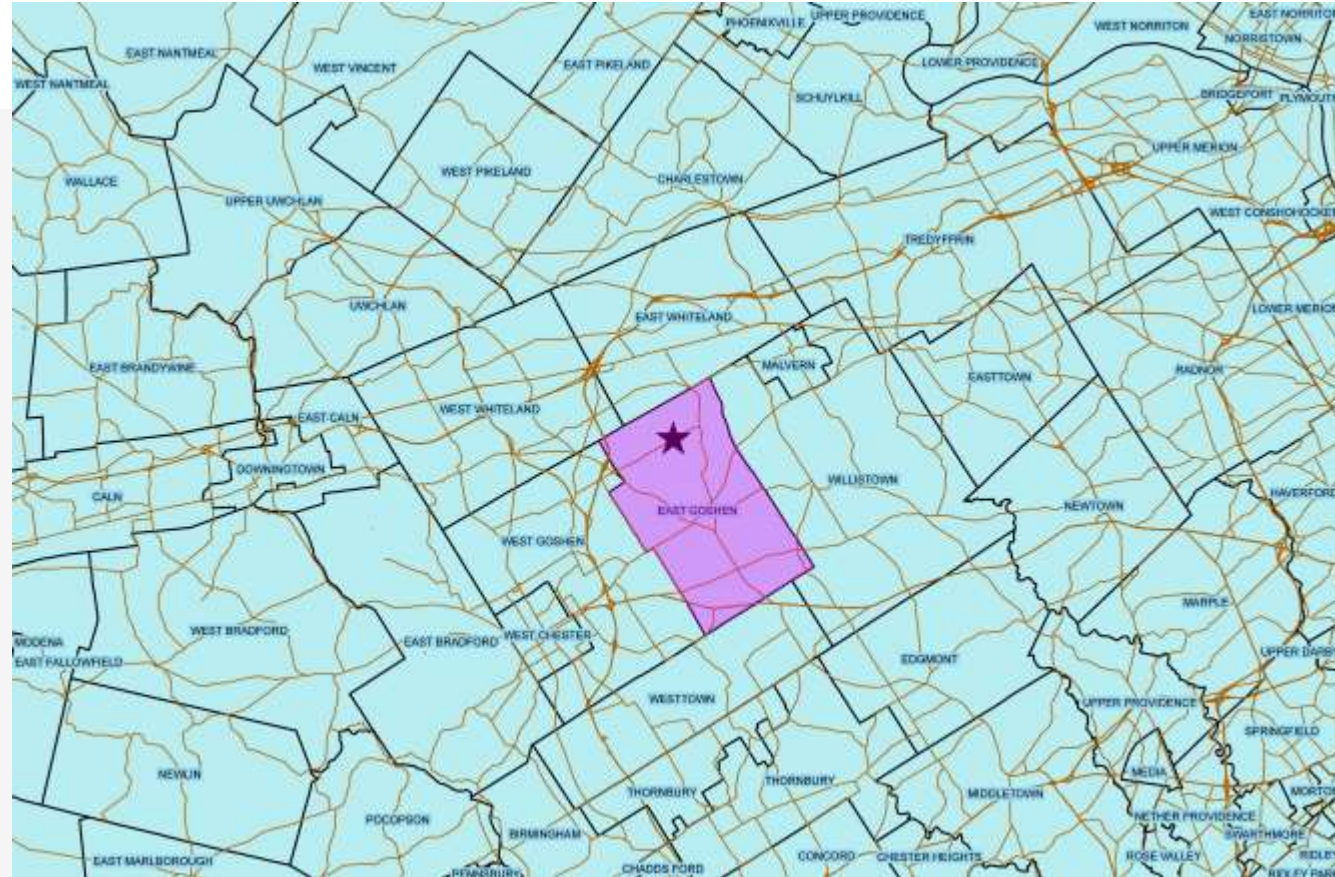
PROJECT OVERVIEW



Start of the Project



- Gannett Fleming Inc. was secured in Sept. 2016
- Design period Sept. 2016 – Sept. 2018



History of Hershey's Mill Dam



1904



2016



Source: PHMC, Chester County Historical Society



2010



2021

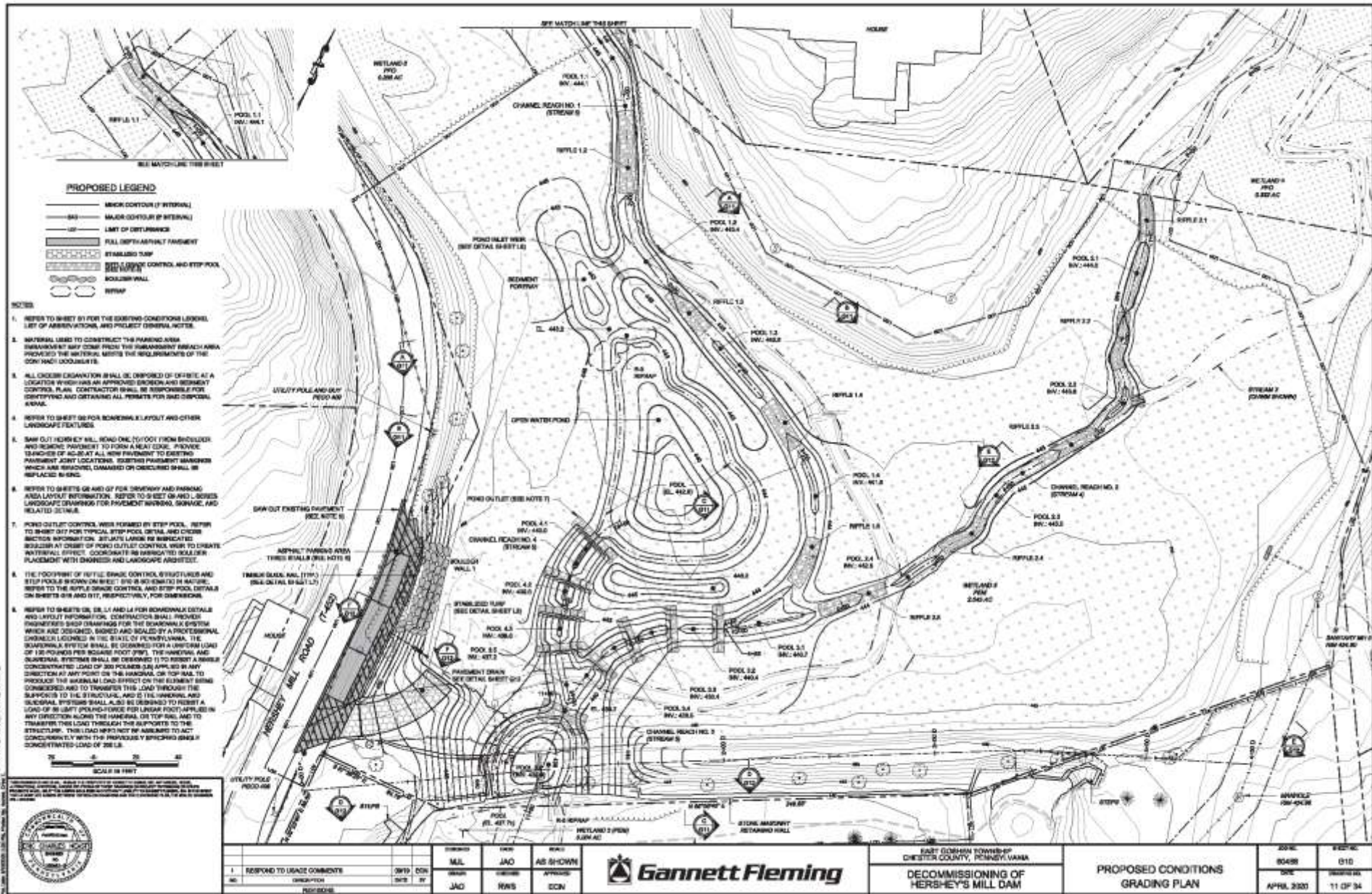


DESIGN

Concept Art by Simone Collins



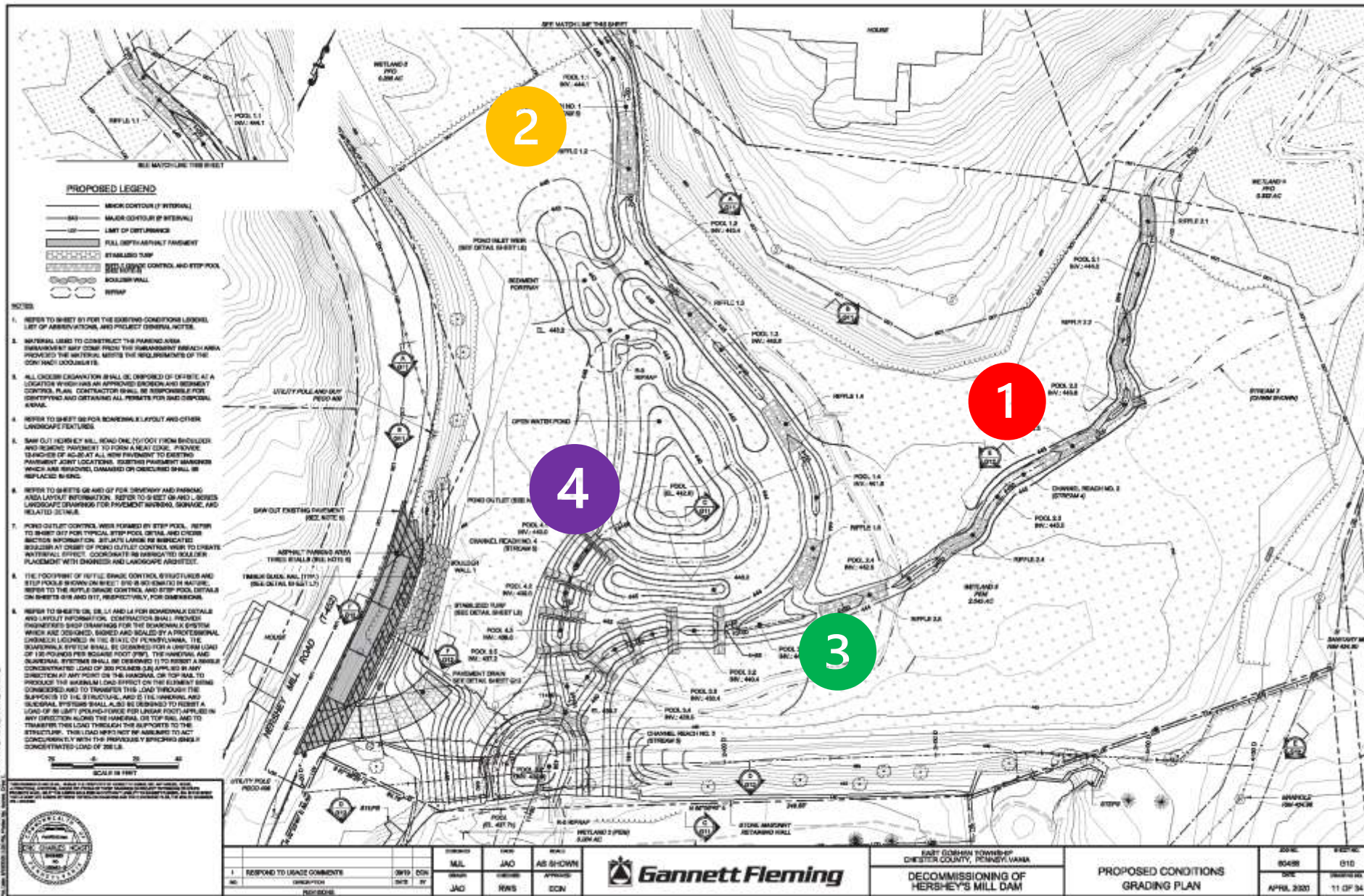
Design

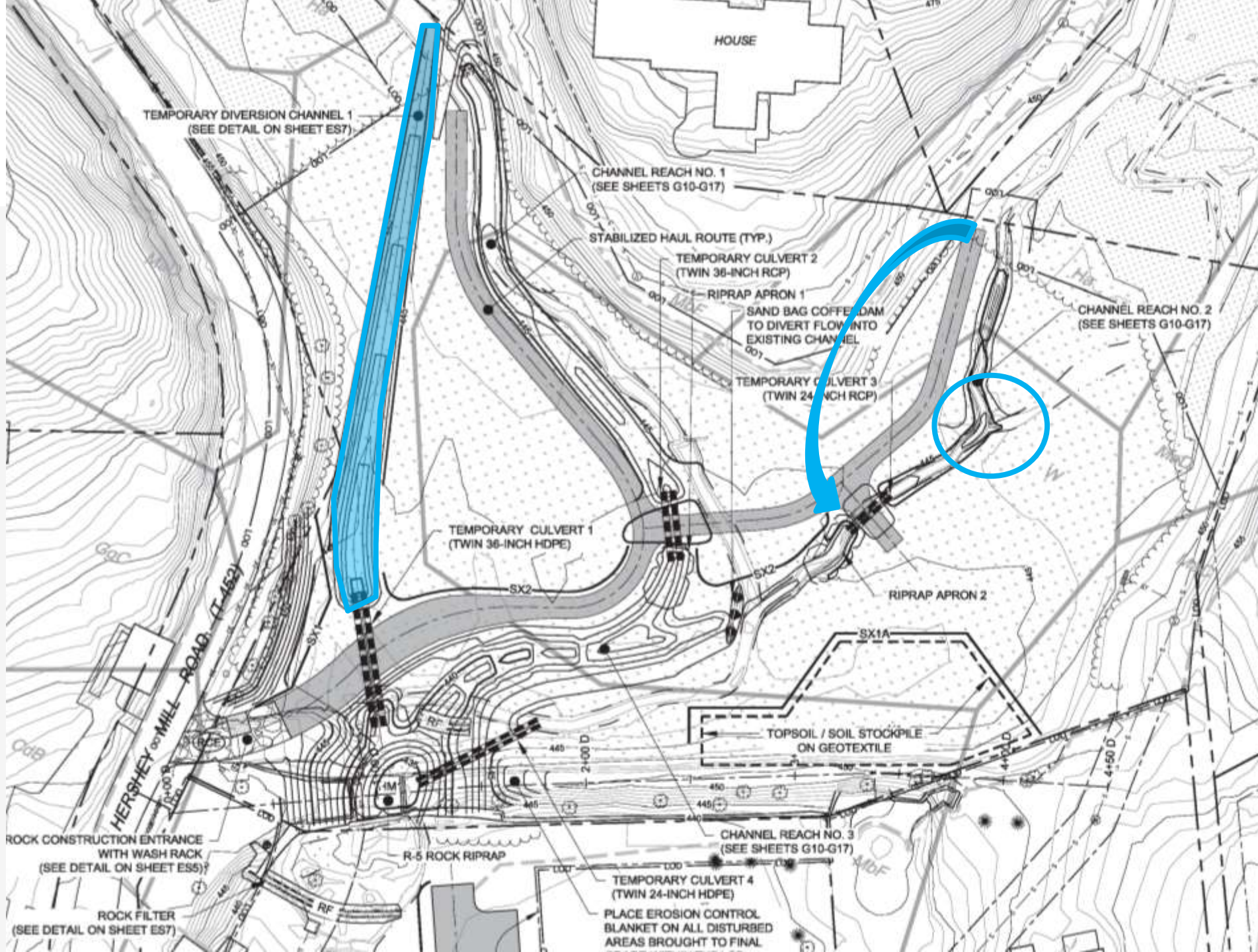


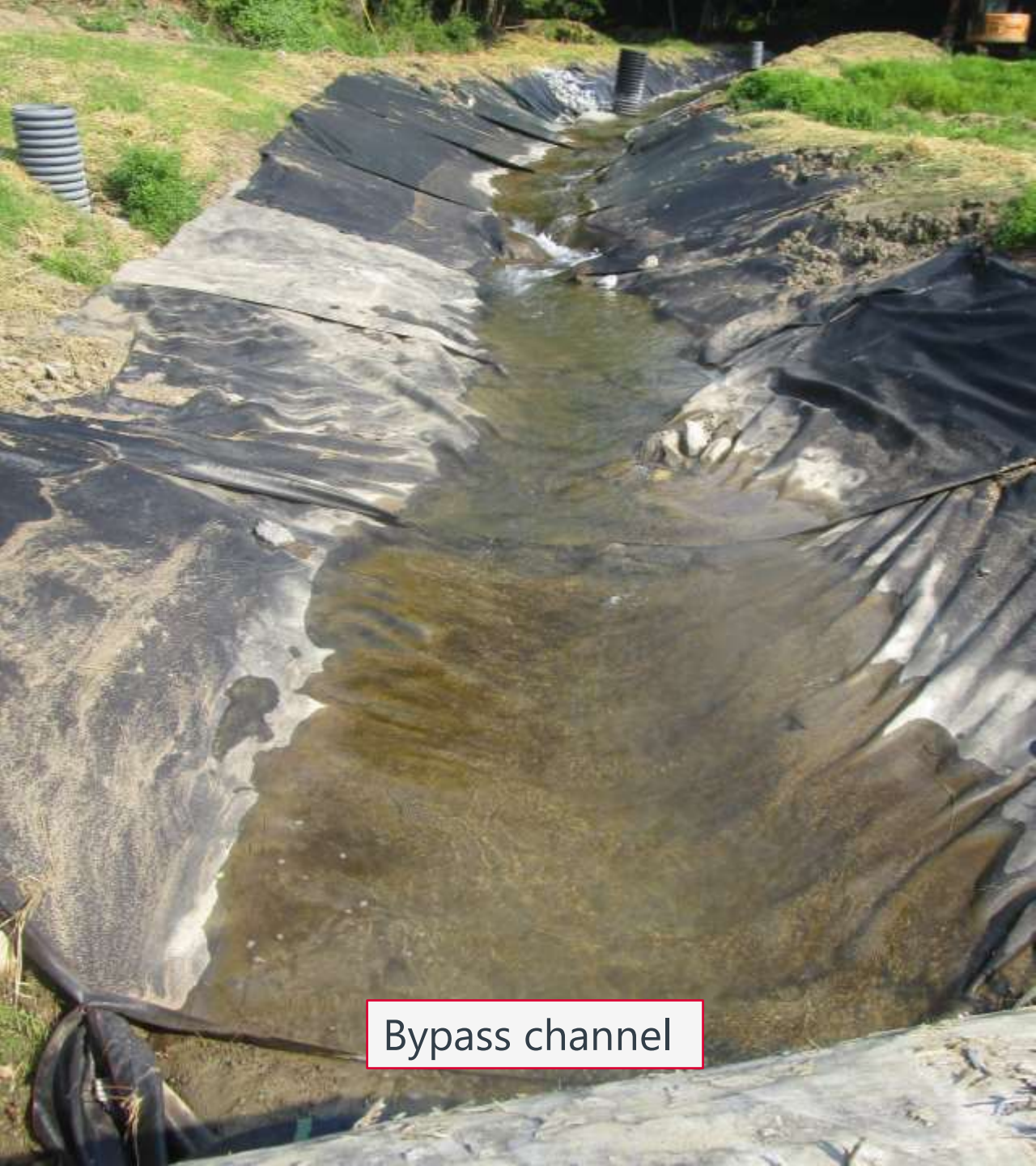
Design



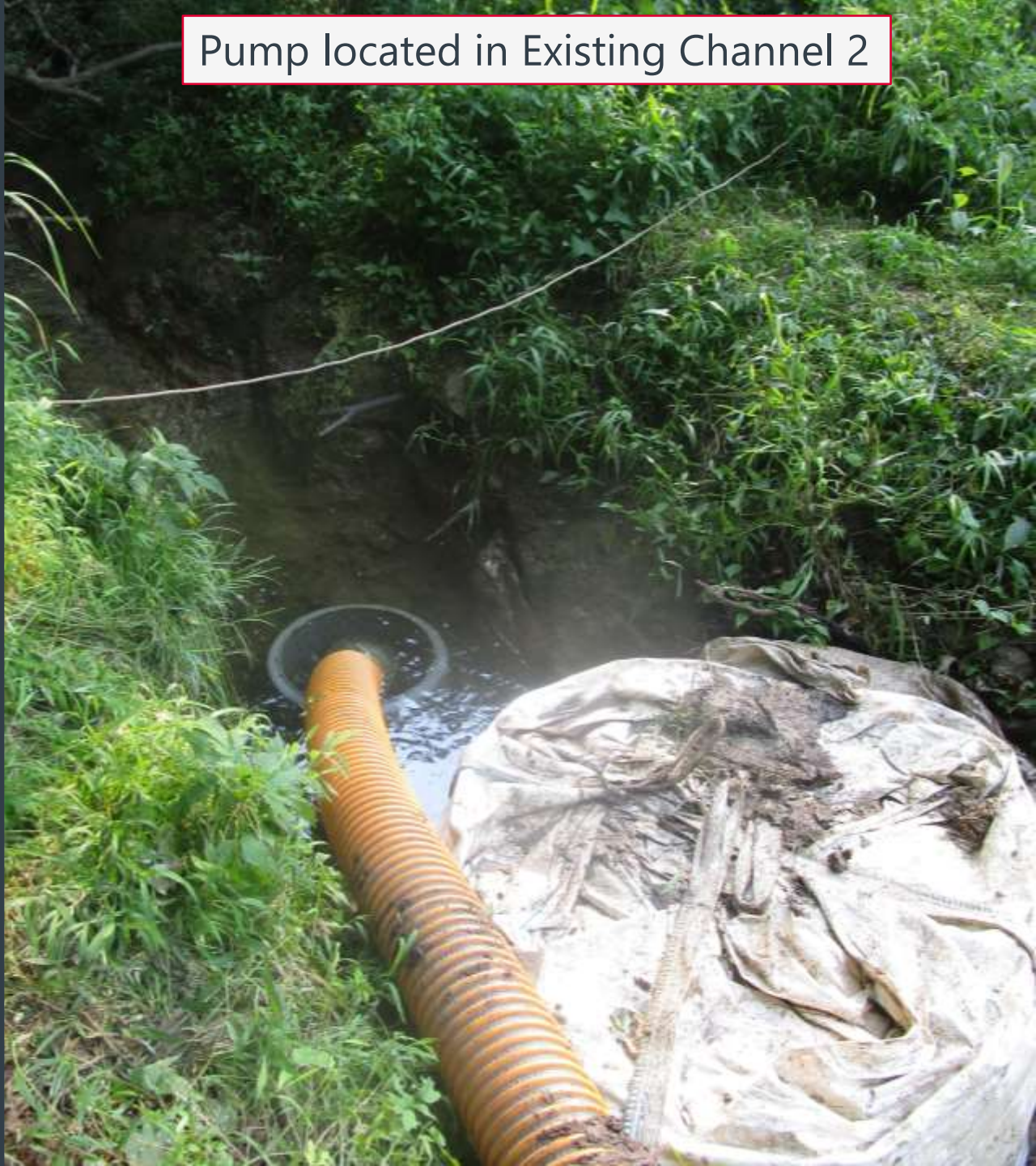
Sequence of Construction







Bypass channel

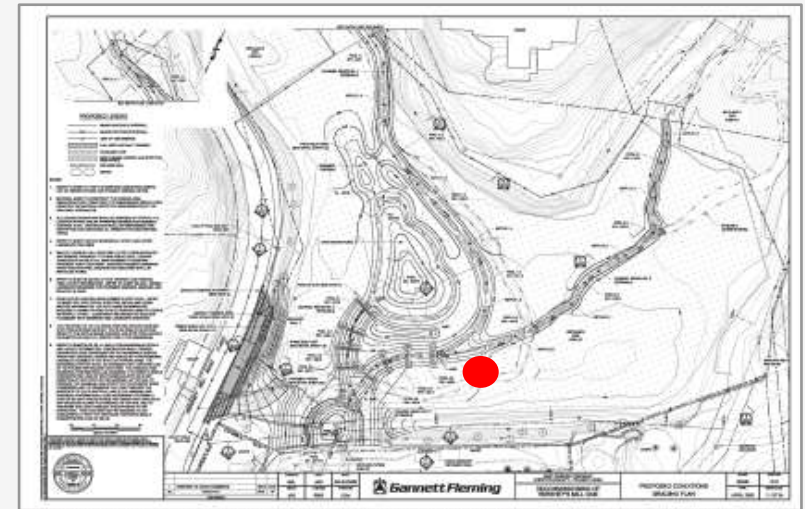


Pump located in Existing Channel 2

CONSTRUCTION



Post Draw Down,
Before Restoration



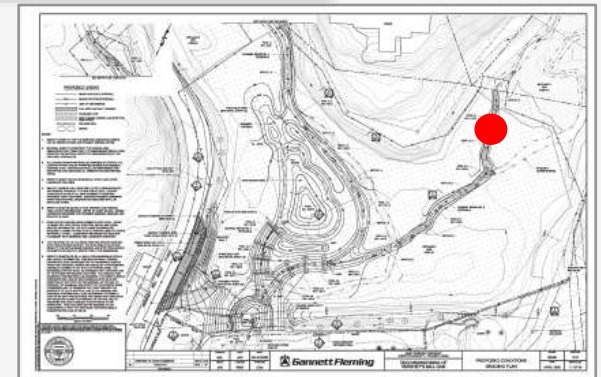


Riffles



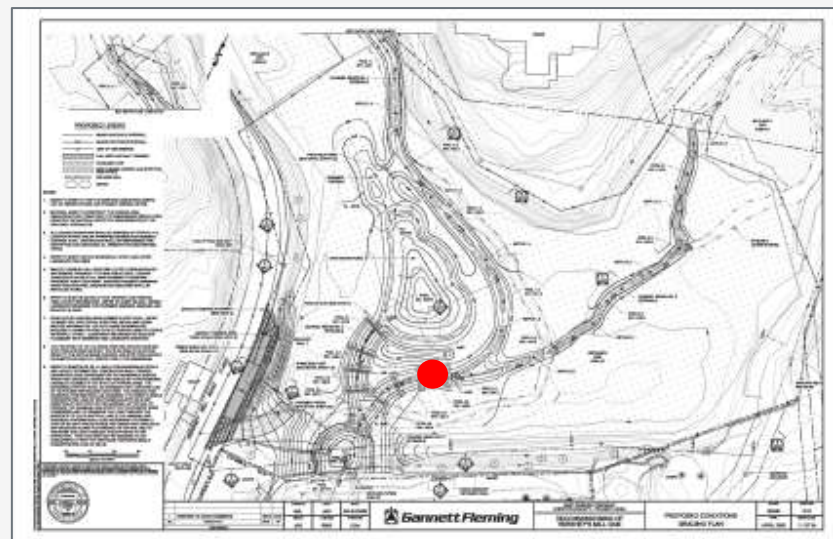


Pools



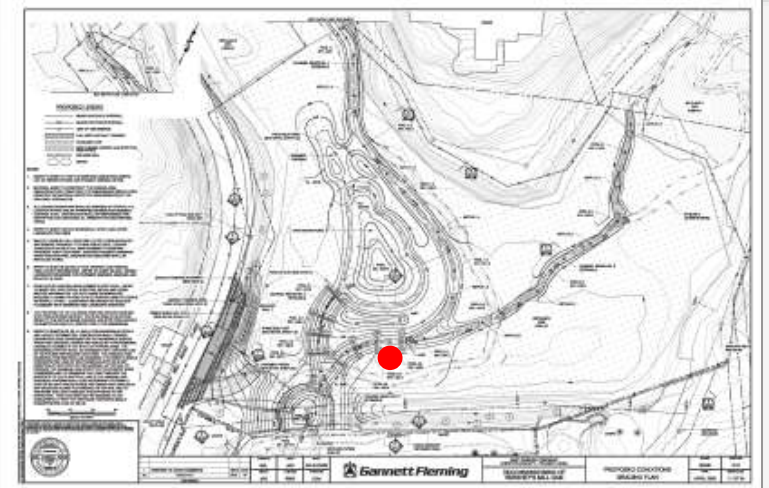


Step Pools



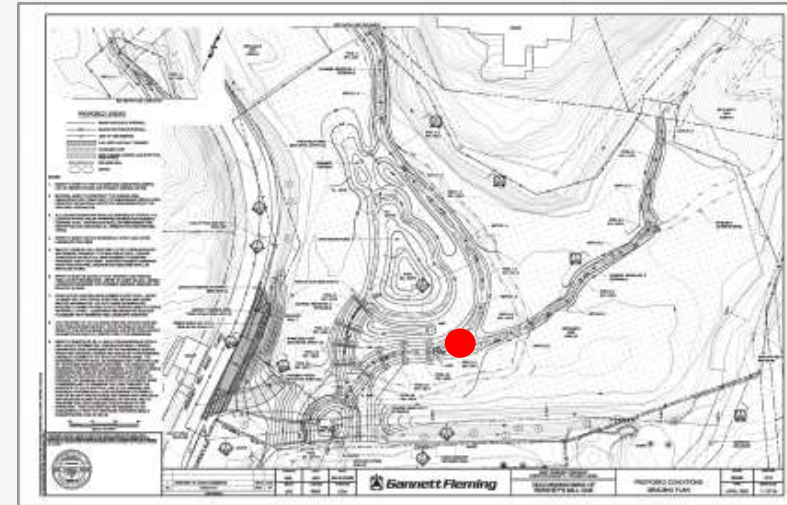


Step Pools





Confluence



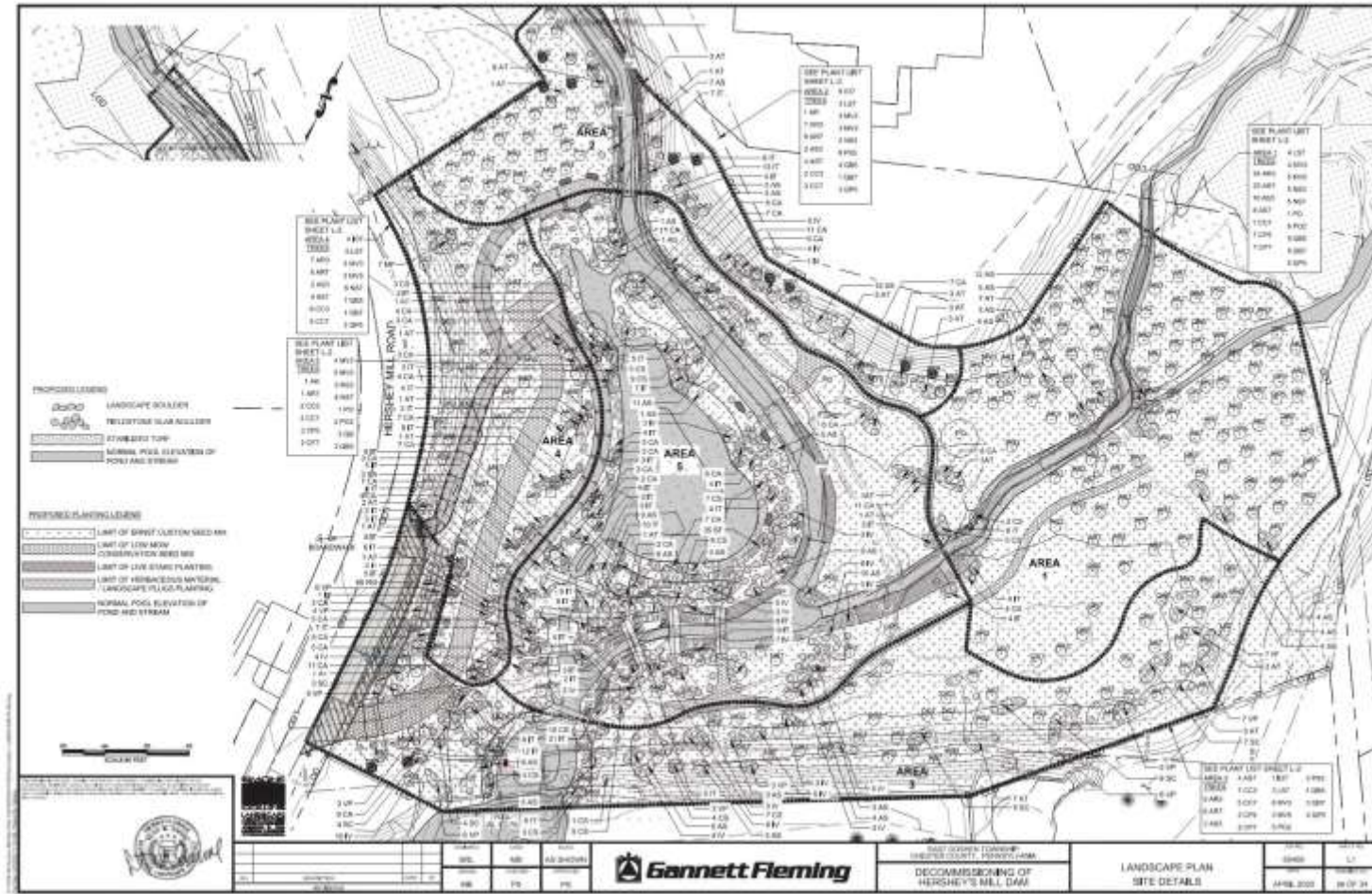


Open Water Pond



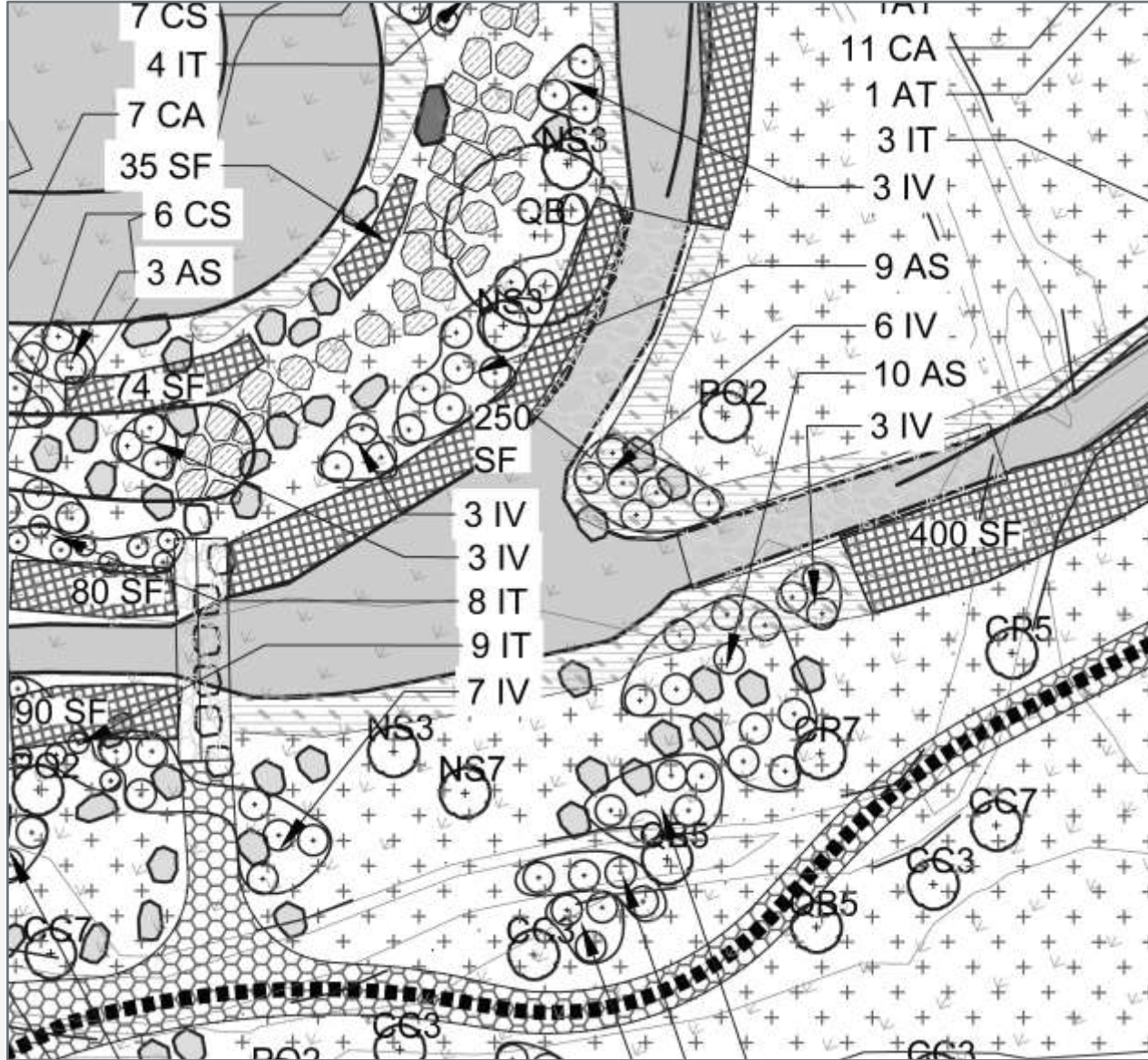
Vegetation Considerations

- Native vegetation
- 5 planting areas with 4 habitat types
- Meadow establishment with 27 species in the seed mix
- 12 species of trees planted
- 10 shrub species planted
- 21 herbaceous plugs
- 3 live stake species



Vegetation Considerations

Species from the proposed plant list



Red Maple *Acer rubrum*



Smooth Alder *Alnus serrulata*



Swamp Milkweed
Asclepias incarnata



Blue flag *Iris versicolor*

A closeup of the planting plan showing the confluence between Streams 1 and 2.



Live stakes along Channel 3



Woody plantings near Channel 2



Hurricane Ida



September 2, 2021

The West Chester 1.8
SE Station recorded
6.8 inches of rainfall

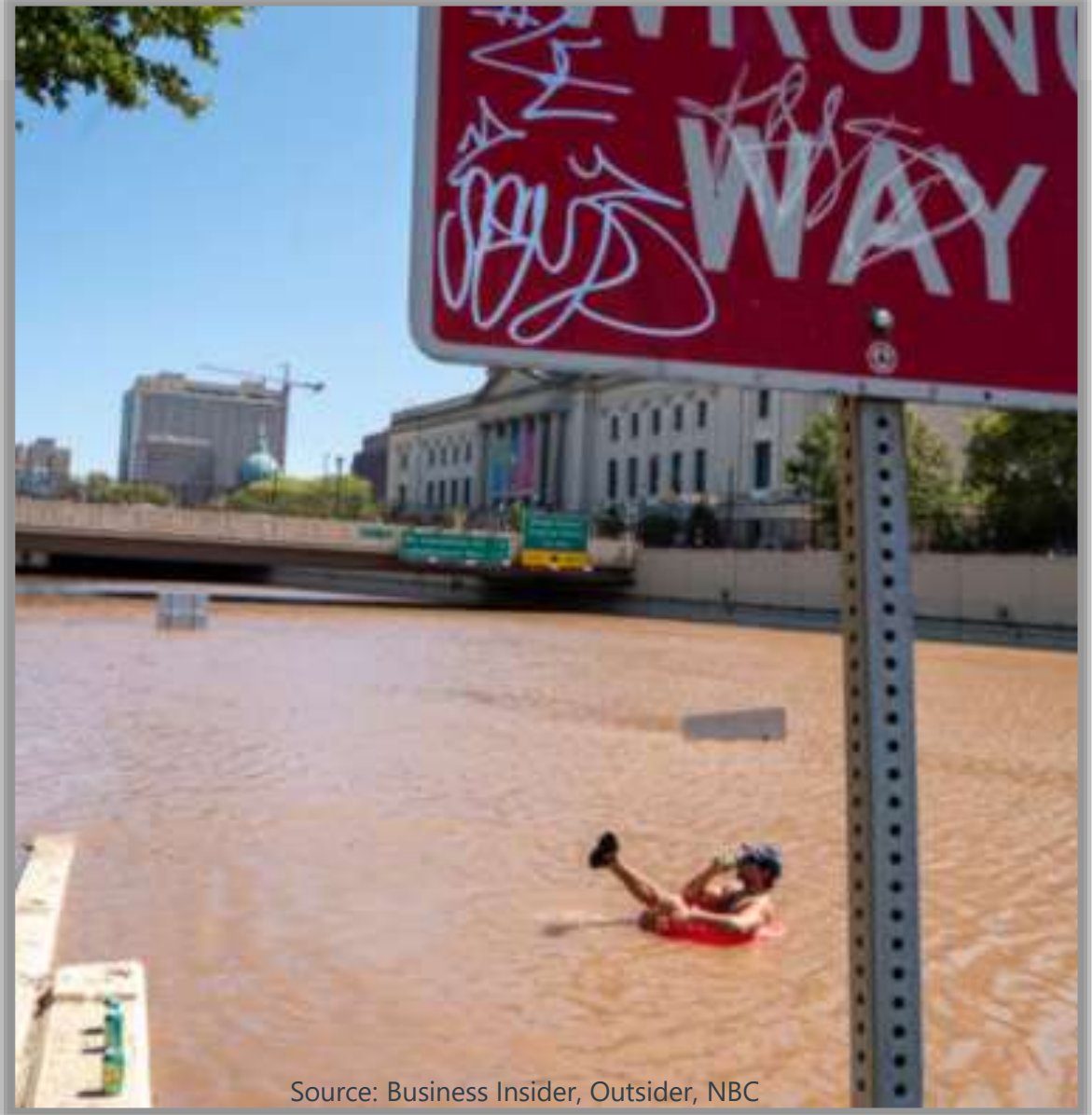


Bridgeport, PA



I-676, Philadelphia, PA

I-676, Philadelphia, PA



Source: Business Insider, Outsider, NBC

Damage From Hurricane Ida

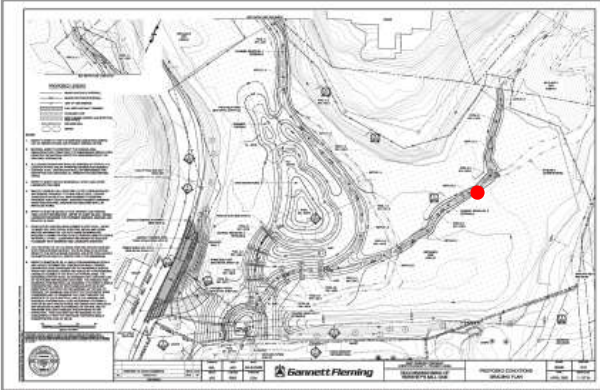


July 28, 2021



Sept. 26, 2021

Riffle 2.3



Damage From Hurricane Ida

Pool 3.5



July 6, 2021



Sept. 26, 2021



Challenges of Hershey's Mill Dam



Issues along the way



Incorrect materials brought on site



Inexperience working in saturated soils

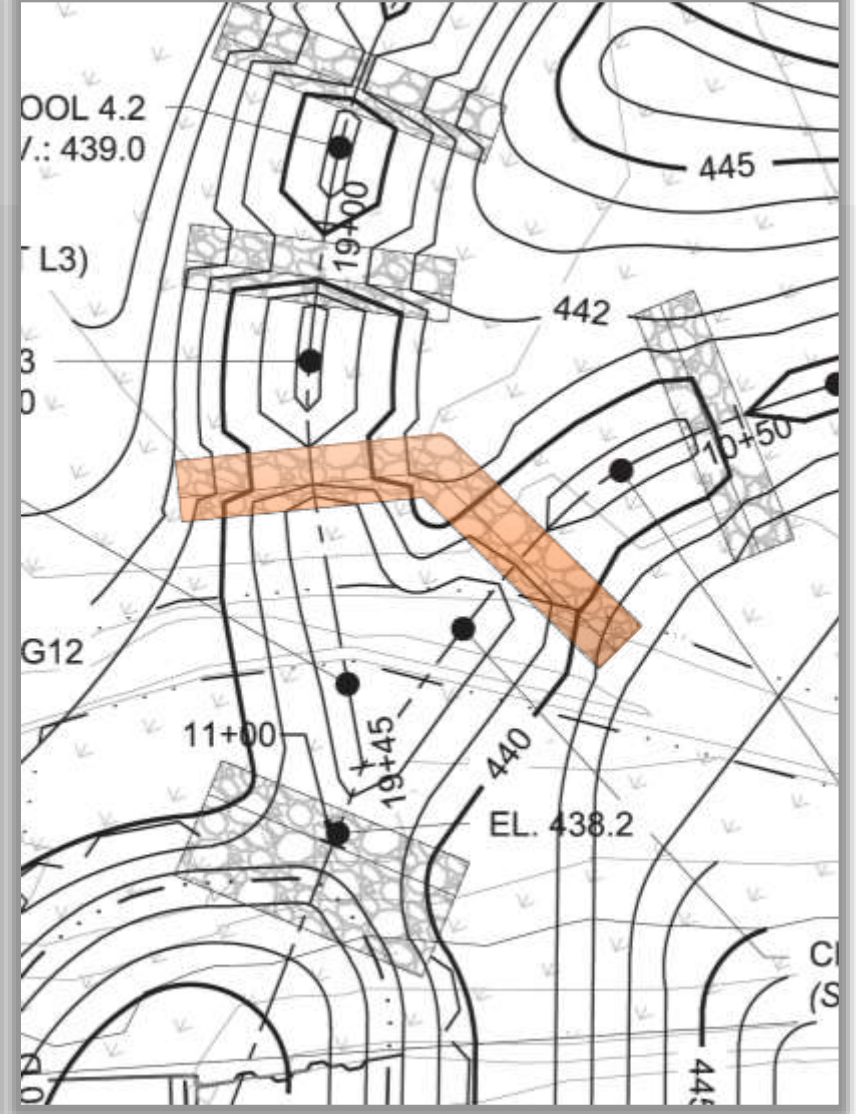
Issues along the way



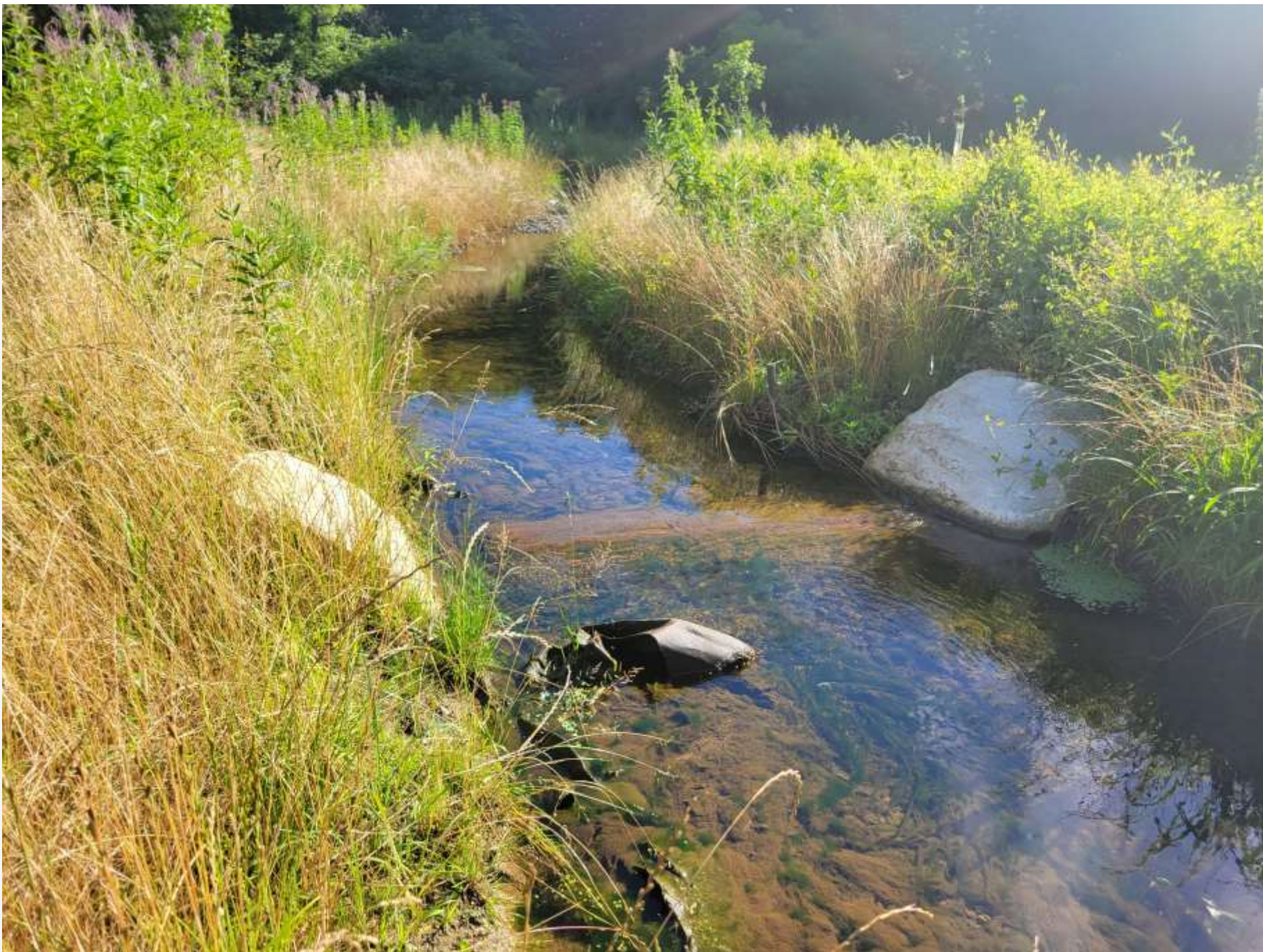
Missing stakes along channel reach 2



Rocks pictured are too small for constructing weirs

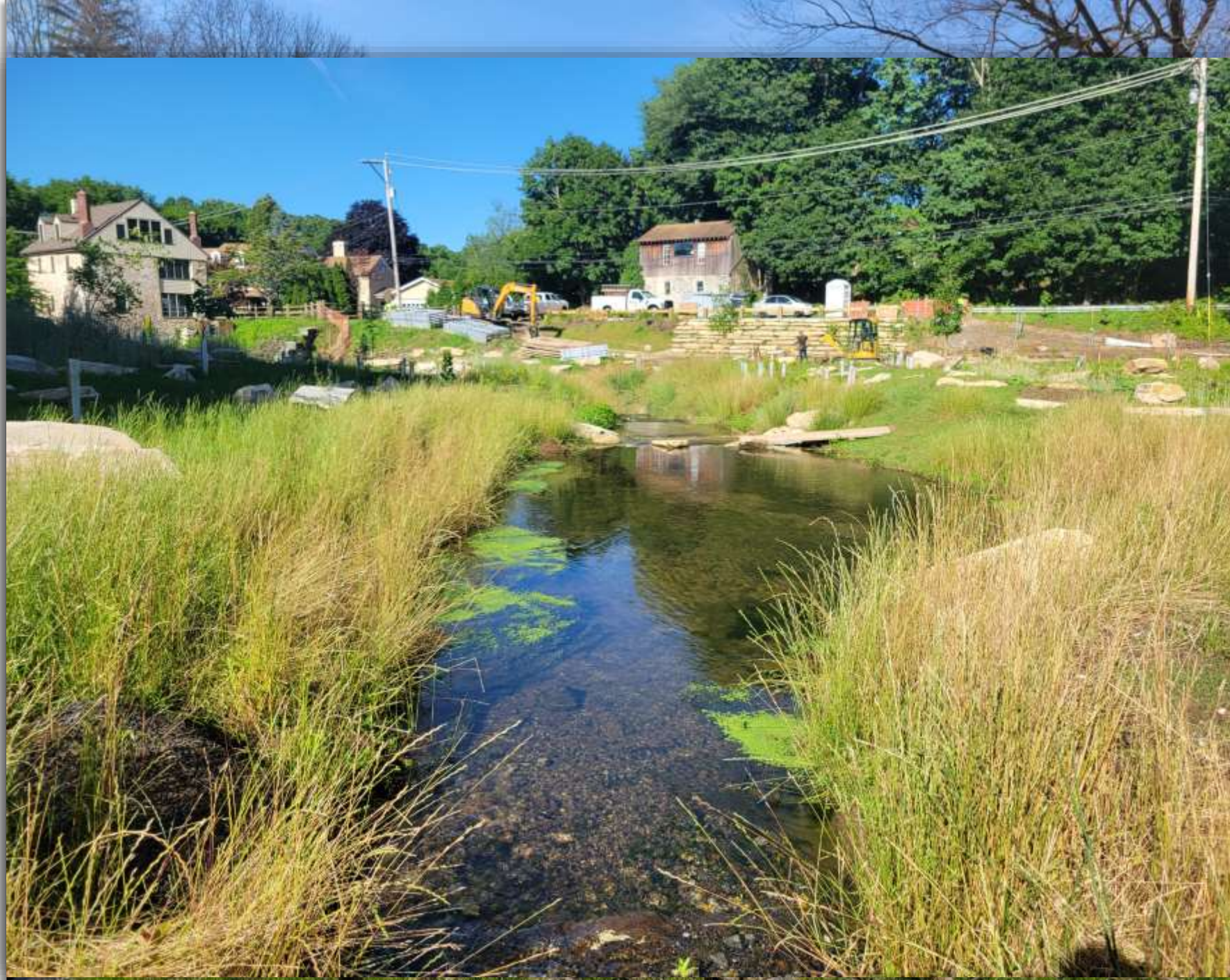






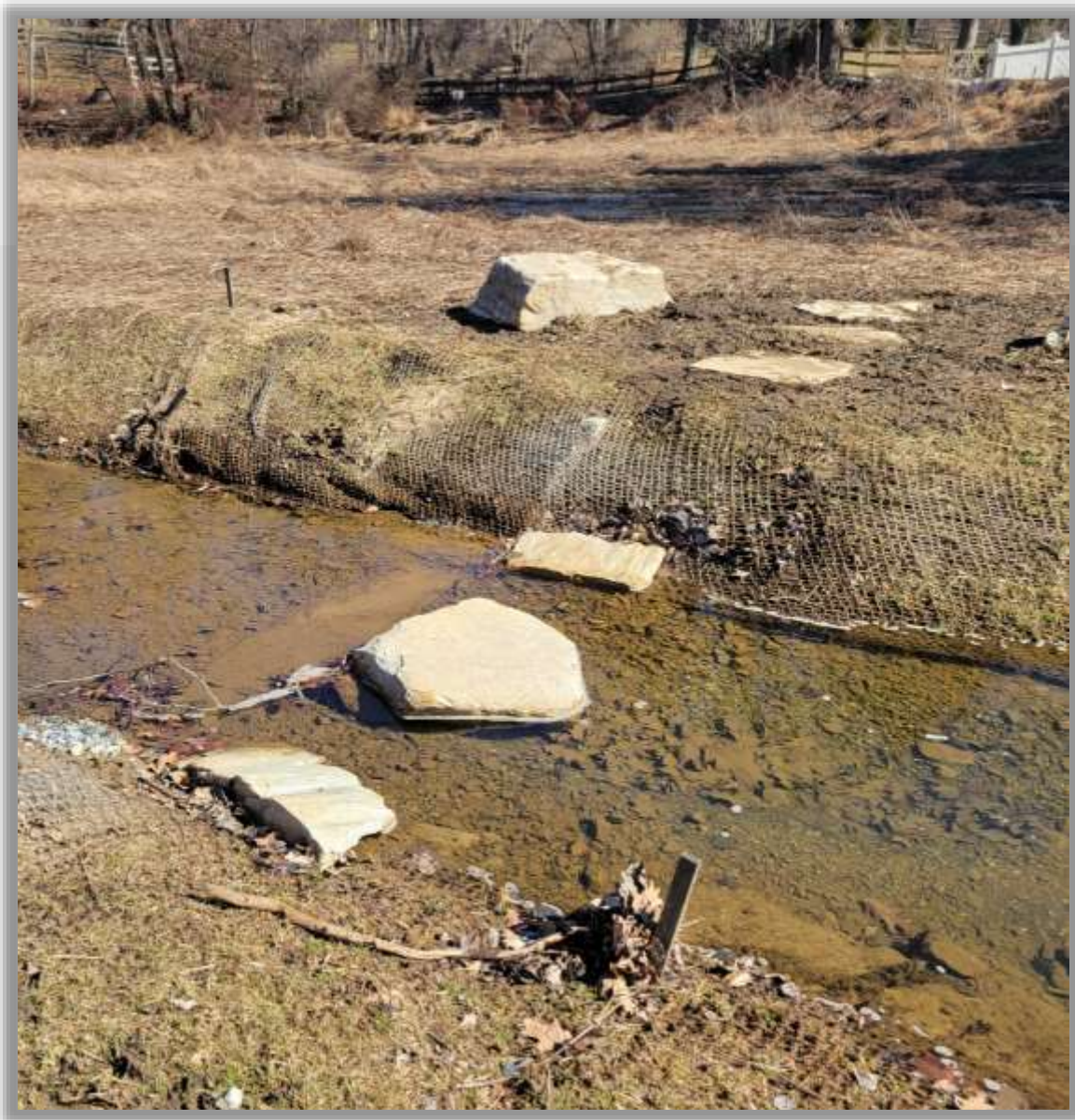
Lessons Learned

**Experience
pays off!**



**Storm
prep!**





Stepping stones across Reach 2





Aesthetic Stone Wall & Waterfalls

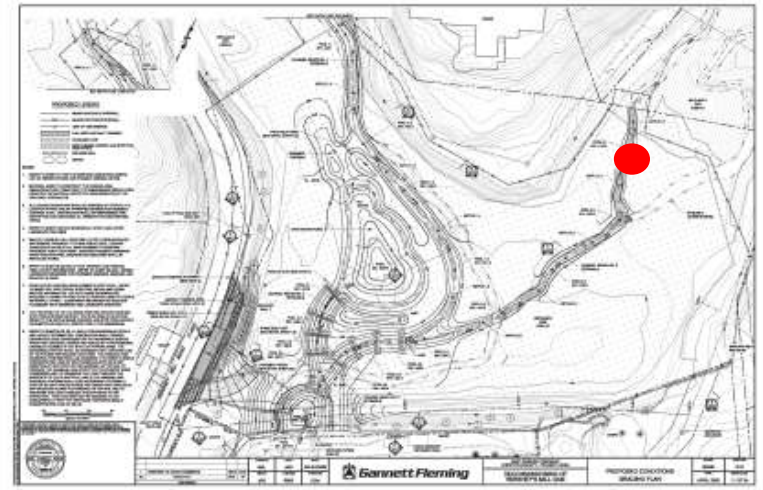


Pond to Allow Fishing



Before and After

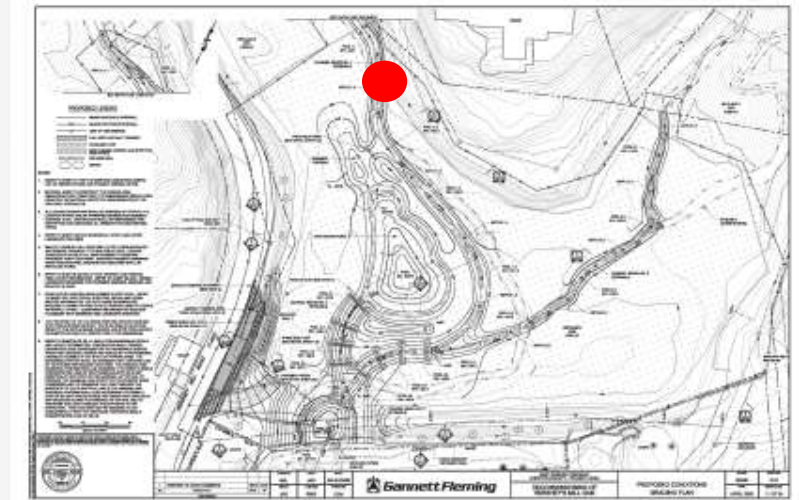
Riffle 2.1





Before and After

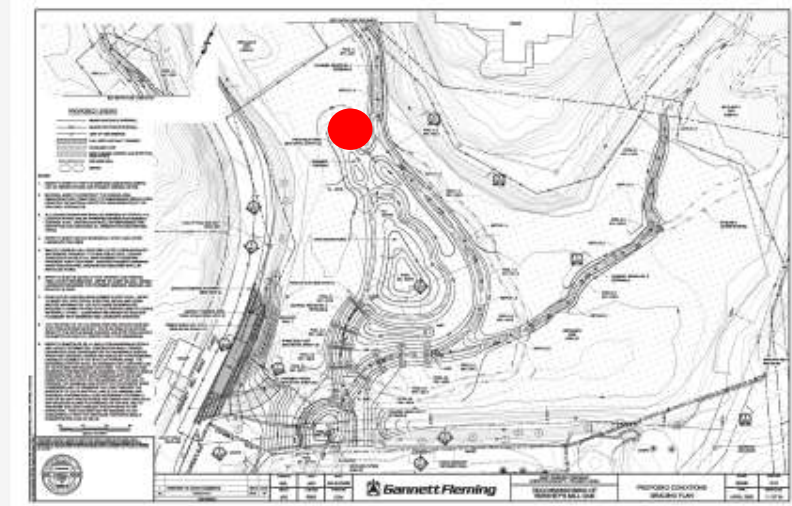
Riffle 1.2





Before and After

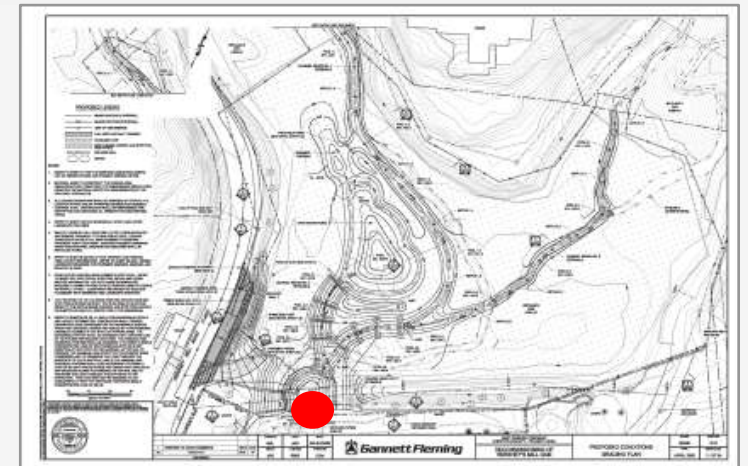
Open Water Pond





117 Years Later

Before and After



Questions?

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