

Briarcliff Road Drainage Improvement Project

Public Meeting
January 29, 2020

Agenda

Project Overview / History
of Dam

Utility and Traffic Impacts

Proposed Design and
Project Impacts

Current Project Status

Project Overview

- Reduce the frequency of flooding of Briarcliff Road at Briarlake Road
 - South Culvert
 - 10'x7' RCB with weir control structure at inlet
 - Overtops in the 5-yr event
 - Primary source of overtopping to be addressed
 - North Culvert
 - 2-8'x10' RCB
 - Overtops in the 50-yr event
 - Not a focus since it's not the primary source due to the lower probability



December 24, 2015 (Source: Echo Lake HOA)



Project Overview

- South Culvert
 - 732 Acres
 - 12-pct Impervious
 - 71-pct Developed
- North Culvert
 - 634 Acres
 - 15-pct Impervious
 - 72-pct Developed
- Echo Lake (Total)
 - 1464 Acres
 - 13-pct Impervious
 - 72-pct Developed

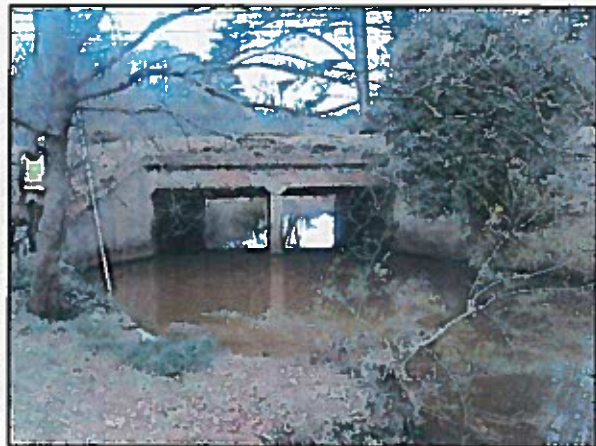


Project Overview

South Culvert: 10'x7' RCB with weir control structure at inlet



North Culvert: 2-8'x10' RCB



History of Dam



TABLE

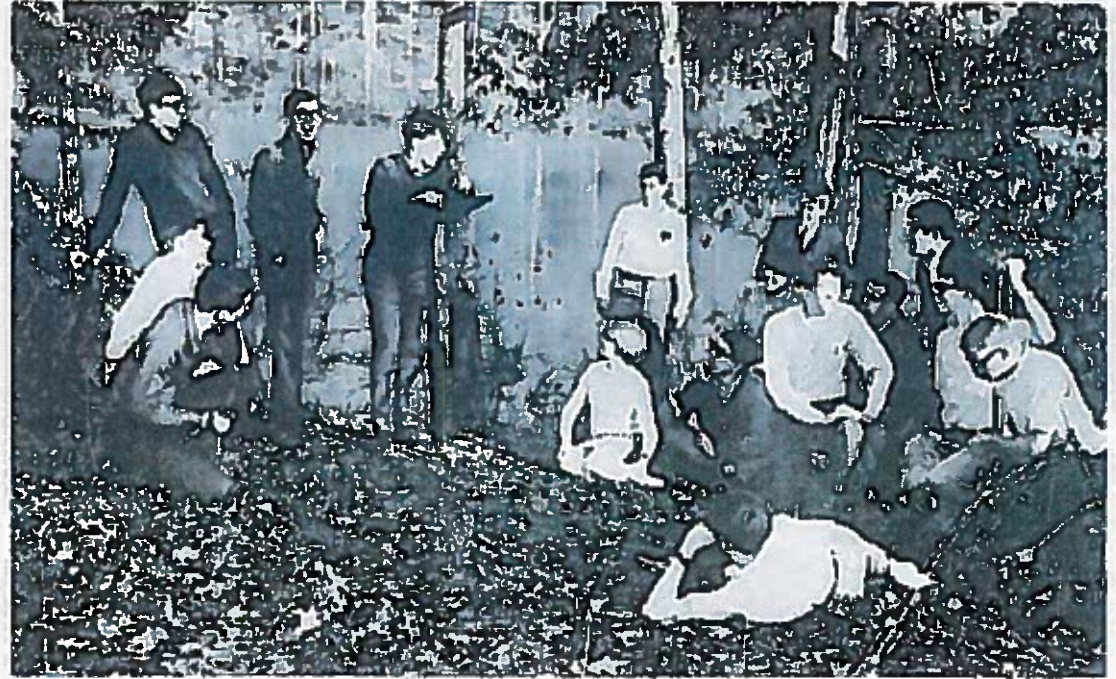
Little Echo Lake	1
Echo Lake	2
Greely Lake	3
Simmons Lake	4
Doreen Lake	5

- 1938: Echo Lake and Simmons Lake Dams constructed by NRCS
- 1969: Simmons Lake Dam breached

1960 Aerial of the Lakes at North Fork Peachtree Creek Tributary D-1

Source: DeKalb County Land Development Engineering Division, "Scope of Work for the Echo Lake Watershed Stormwater Study", 2016.

FORENSIC SOCIETY

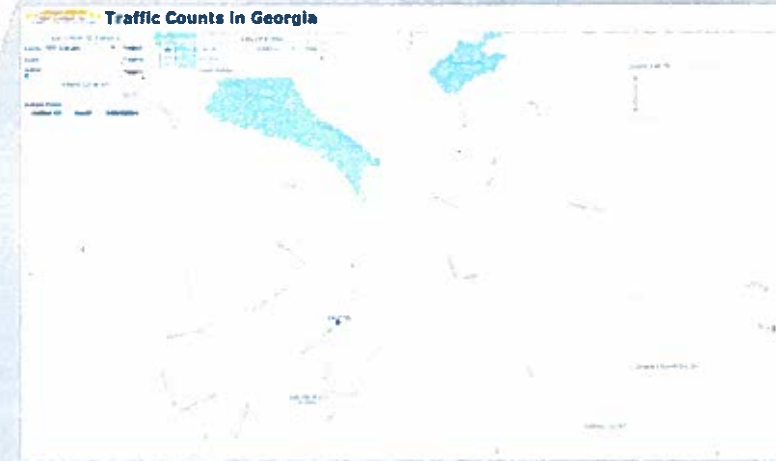


History of Dam

- Captured in 1968 Lakeside High School Yearbook

Utility and Traffic Impacts

- 30-inch Watermain
 - Portion would have to be relocated for any culvert solution
- 12-inch DIP Gravity Sewer
 - Cannot be relocated due to tie-in with 18-inch SS main
- Traffic
 - 12,600 ADT on Briarcliff
 - 6,400 ADT on Briarlake
 - Lakeside High School
 - Extended road closure for culvert construction



Design Alternatives

Alternative 1:
14 5'x2.5' RCBs

Alternative 2:
5 9'x4' RCBs

Alternative 3:
Reconstruct Simmons Lake Dam

Proposed Design

Reconstruct Simmons Lake Dam for Flood Control

Summary:

- 94 LF 6'x5' RCB Principal Spillway
- Dry detention flood control
- Retention time in reservoir is approximately 6 hours.
- 425 LF wall along Briarcliff and Briarlake

Cost:

- \$1.4 M estimated cost

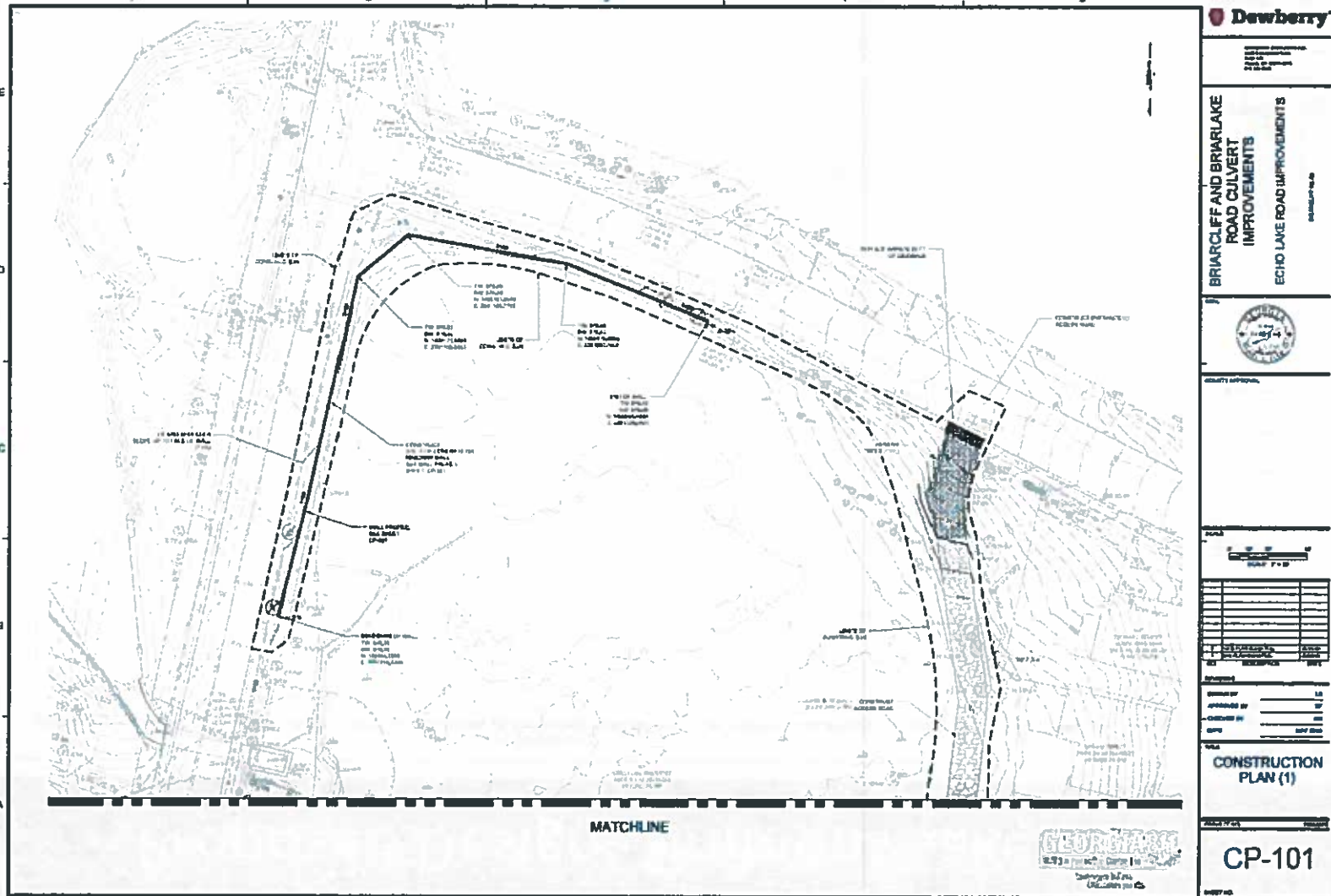
Pros:

- 100-yr LOS for Briarcliff South Culvert
- Reduced flows and 100YR BFEs in Echo Lake
- No road closure or utility impacts

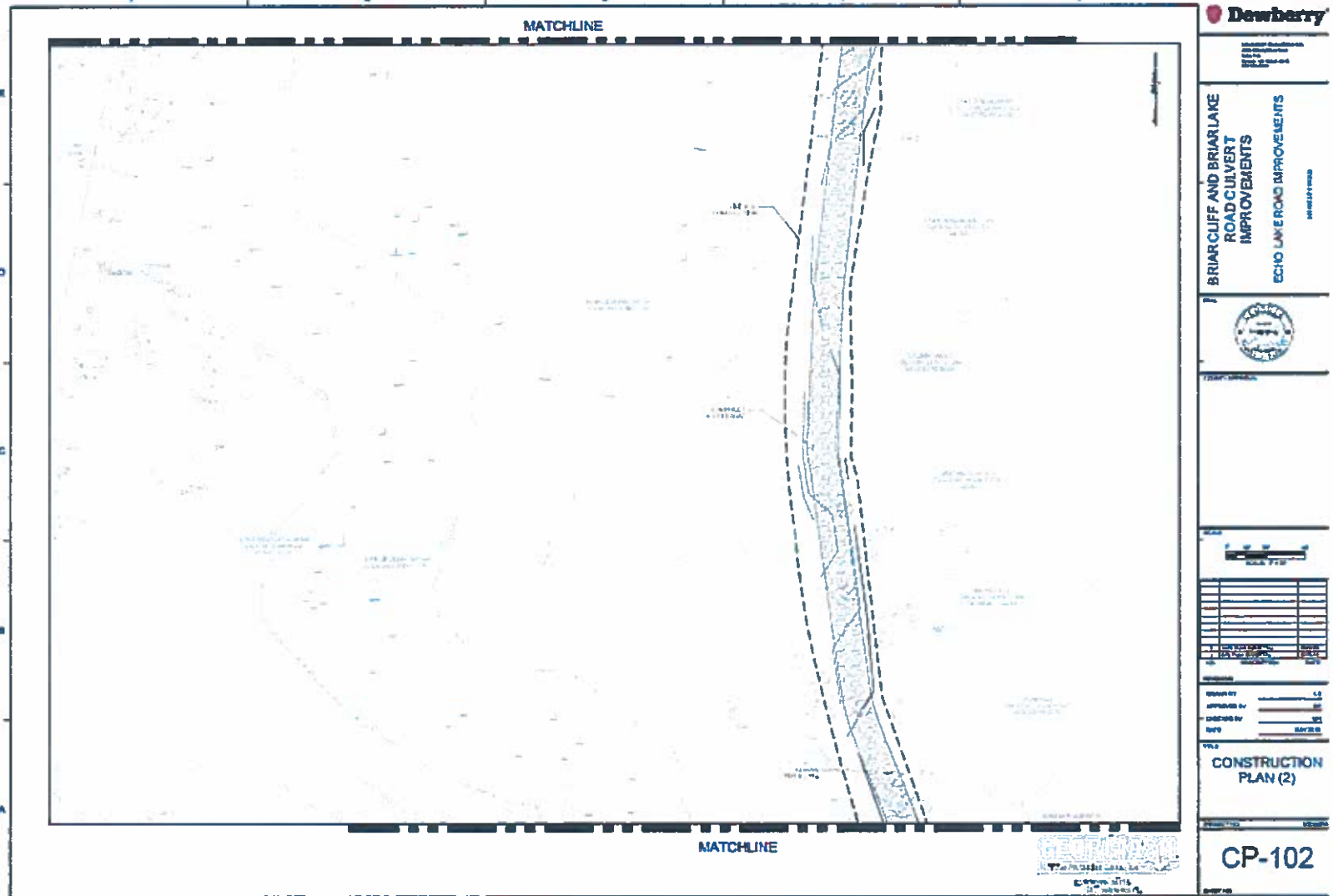
Cons:

- Increased BFEs upstream of proposed dam
- Land Acquisition

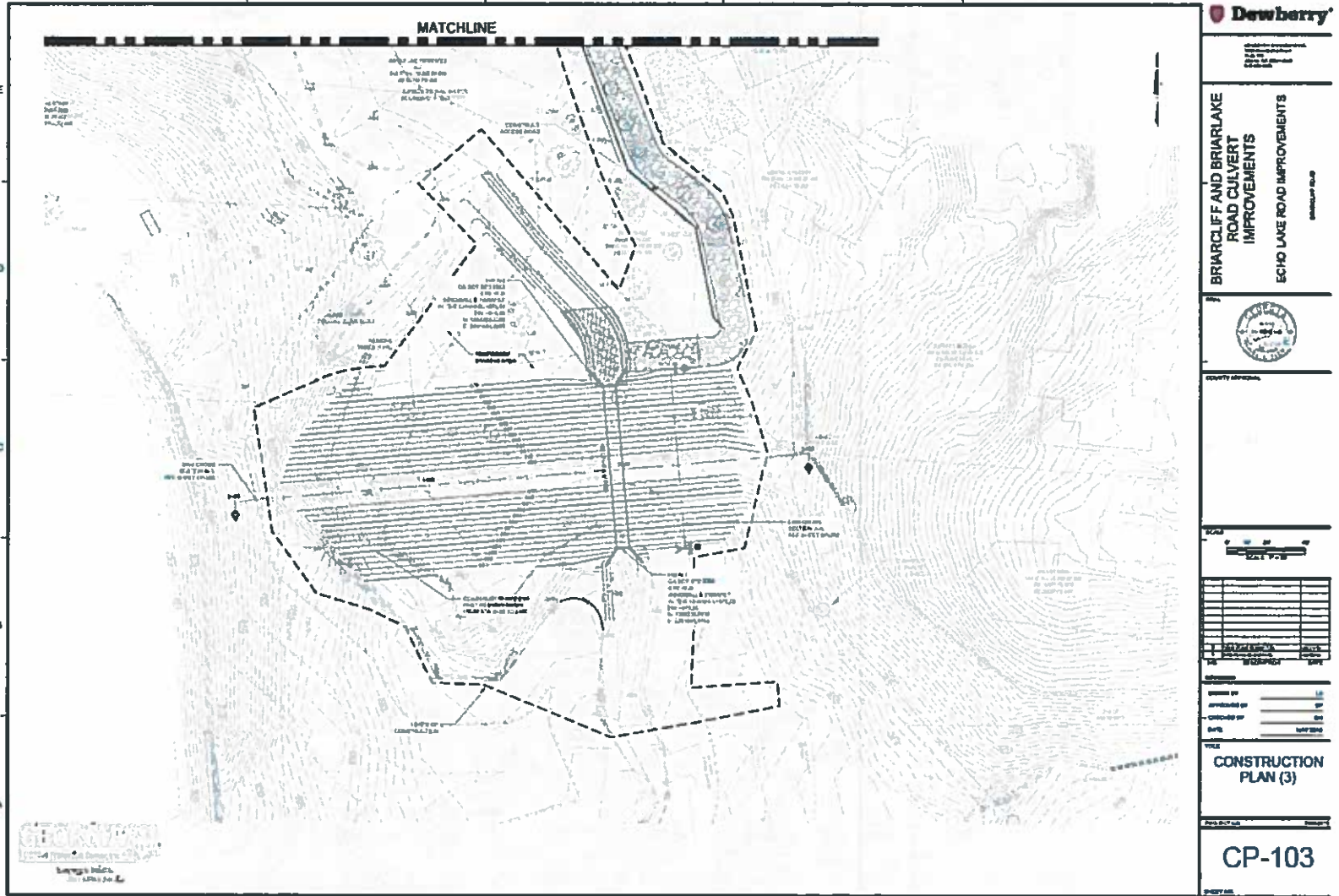
Proposed Design: Simmons Lake Dam



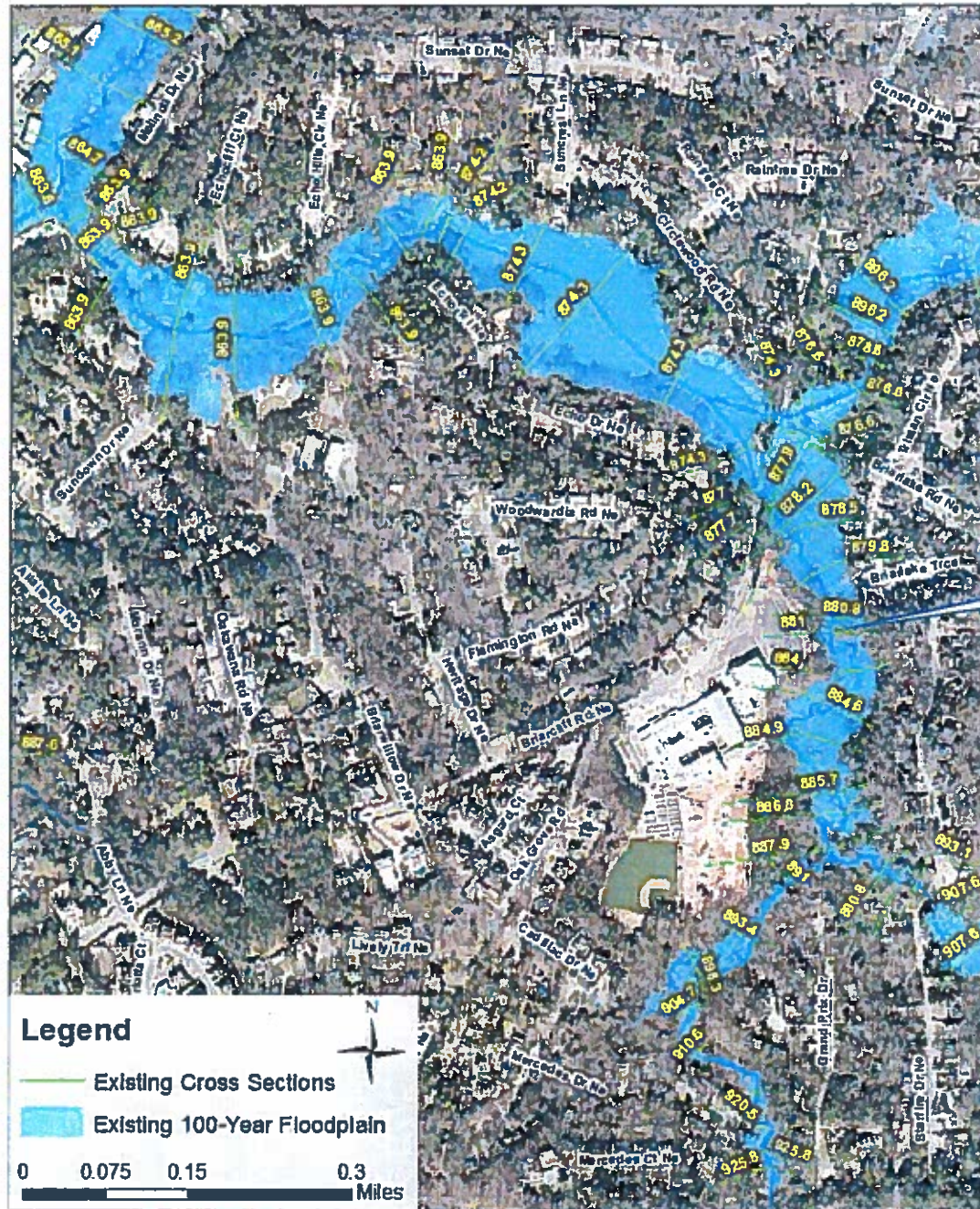
Proposed Design: Simmons Lake Dam



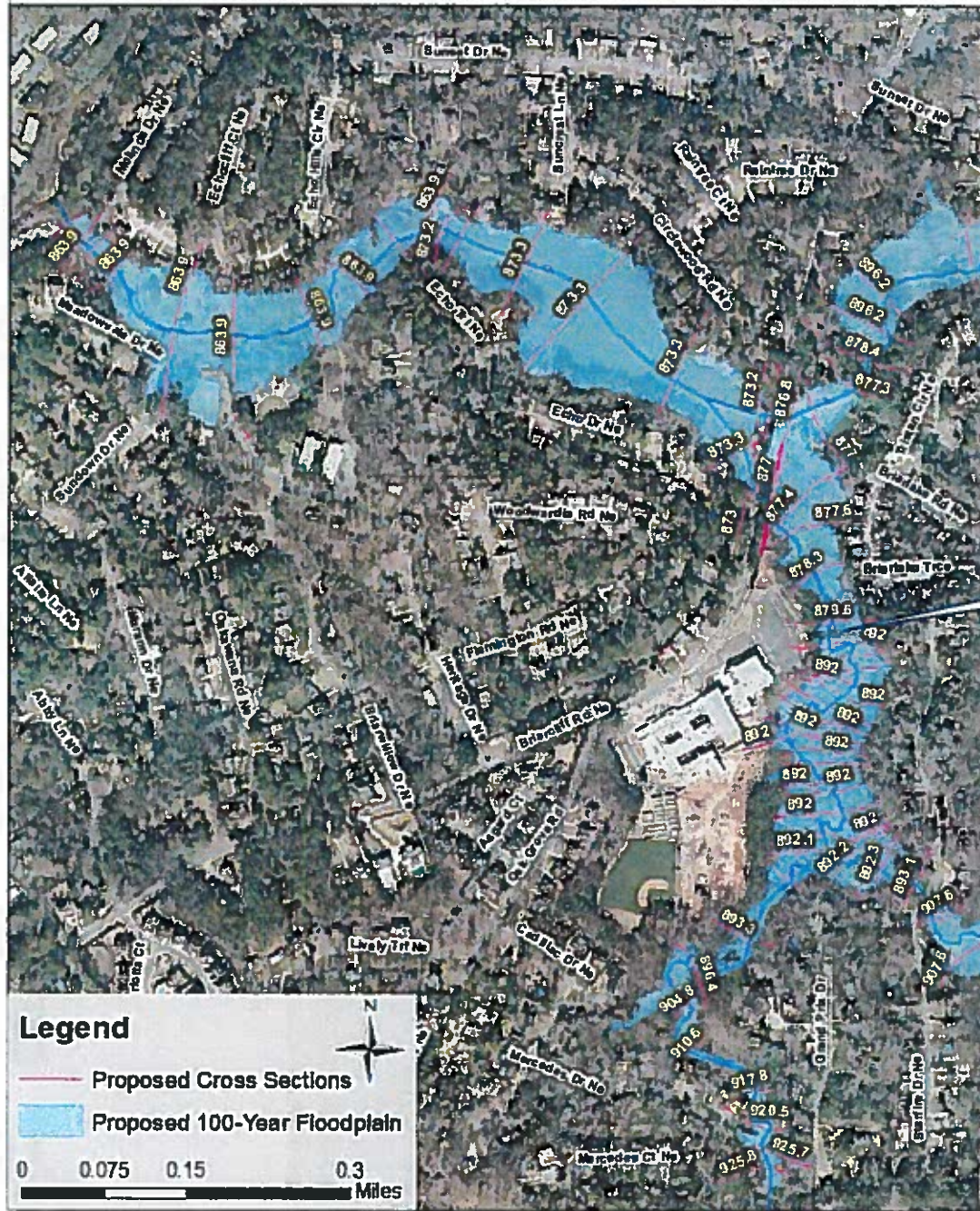
Proposed Design: Simmons Lake Dam



Existing 100-Year Water Surface Elevations

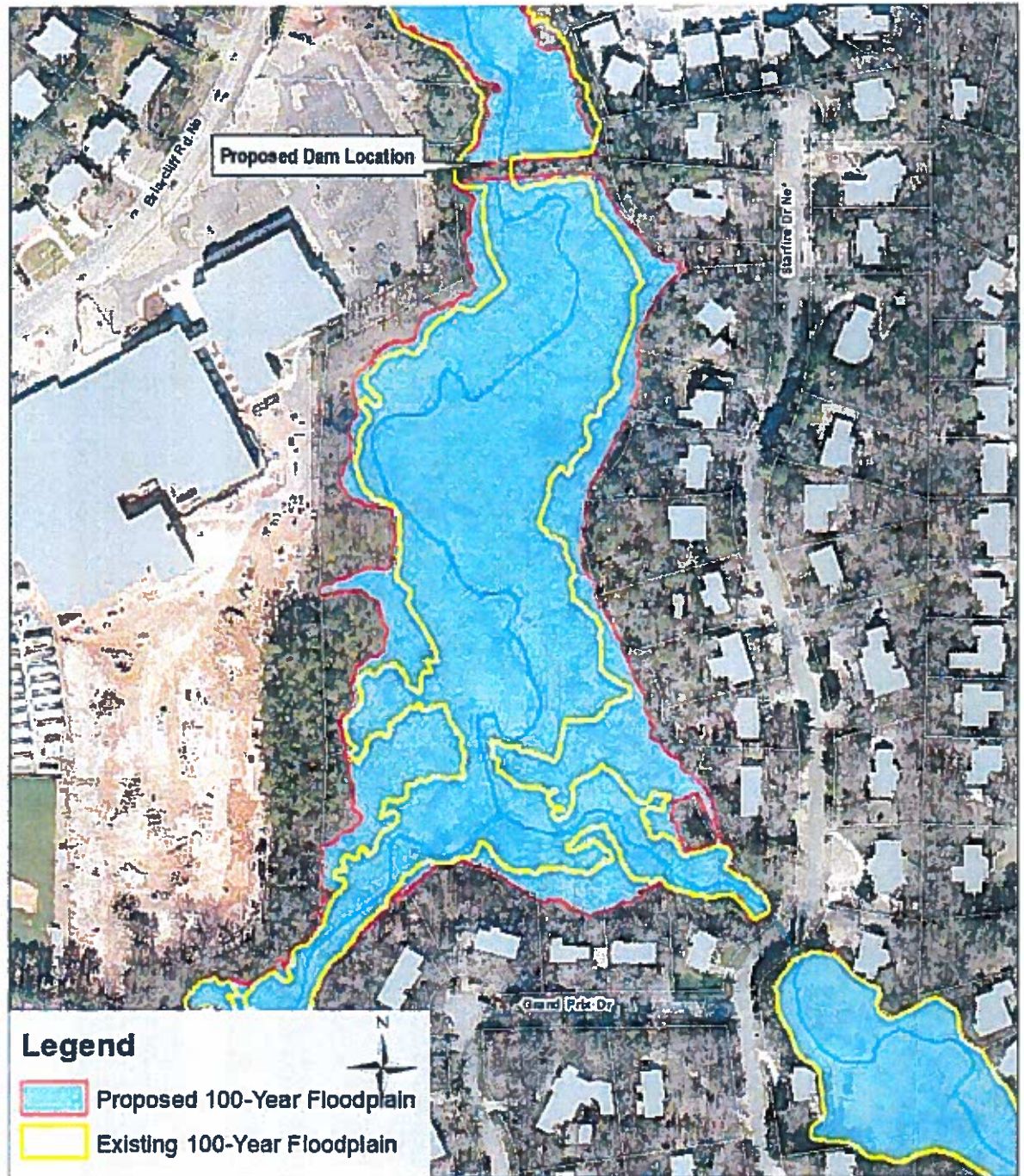


Proposed 100-Year Water Surface Elevations



100-Year Flooding Impacts

- WSEL increases up to 8 ft upstream of dam to Starfire Dr and Grand Prix Dr
- No residential structures impacted by increases
- Permanent drainage easements to be obtained by DeKalb County
- Decreases in WSEL and flow downstream of dam
- No overtopping at Briarcliff South Culvert for 100-Year event



Current Project Status

USACE Permitting

- Pre-Construction Notification submitted July 2019
- Comments received from USACE requiring more extensive permitting processes
- Individual Permit likely required in order to construct project

FEMA Permitting

- CLOMR submitted July 2019
- Comments received from FEMA requiring updates pending final USACE determination

DeKalb County Permitting

- Plans submitted June 2019
- Resubmittal pending on USACE and FEMA comments

DeKalb County Land Acquisition

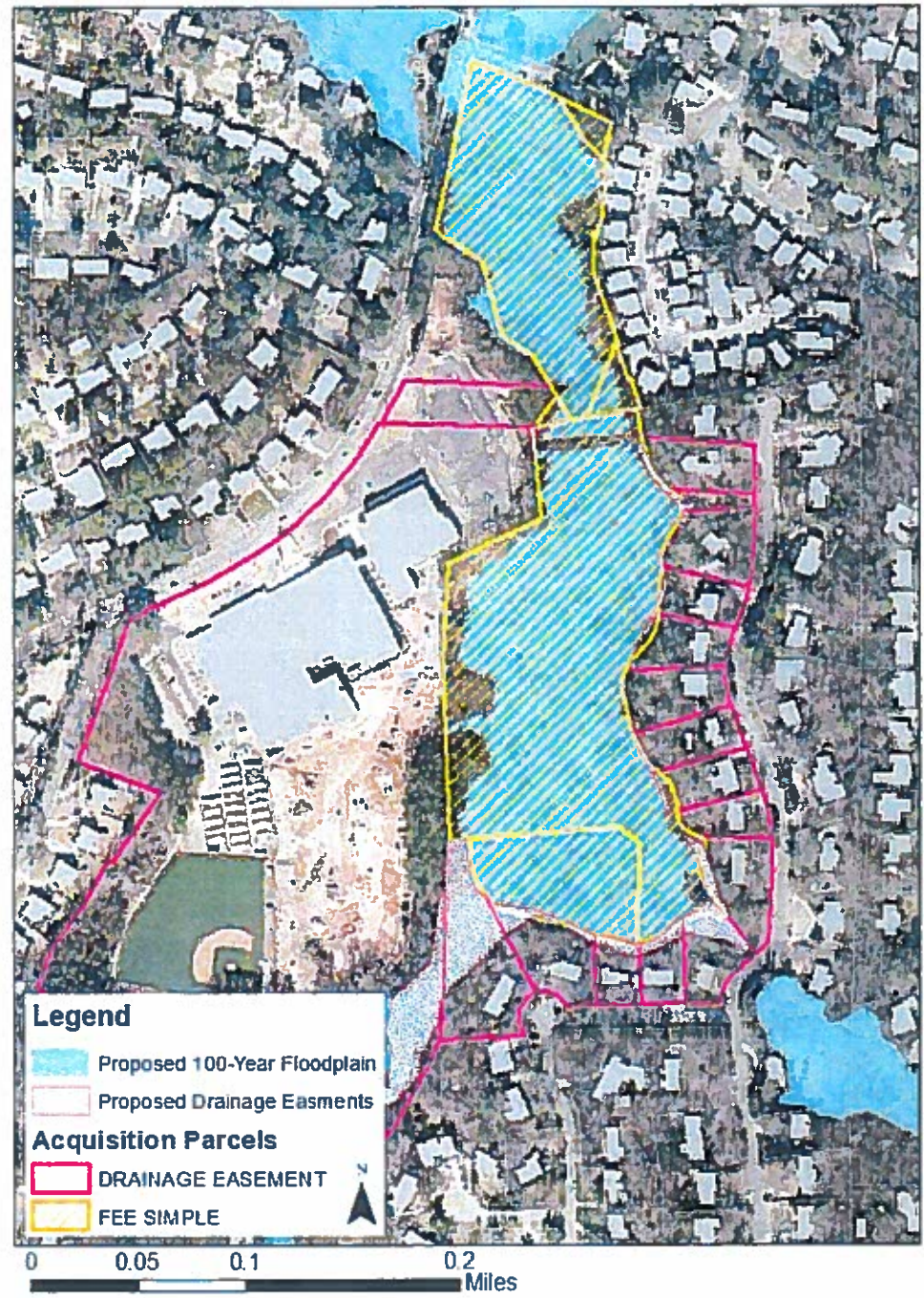
- Documents developed for DeKalb County Land Acquisition to begin acquisition process

HMGP Funding

- Submitted application to GEMA in July 2018
- Currently pending final review from FEMA
- 75% Federal, 10% State, 15% County Cost Share

Recommended Land Acquisition

- 6 parcels for Fee Simple Acquisition
- 16 parcels with permanent drainage easements
- 2 parcels with temporary construction easements



Q & A



