



# Ellicott City Safe and Sound Flood Mitigation Projects Council Update

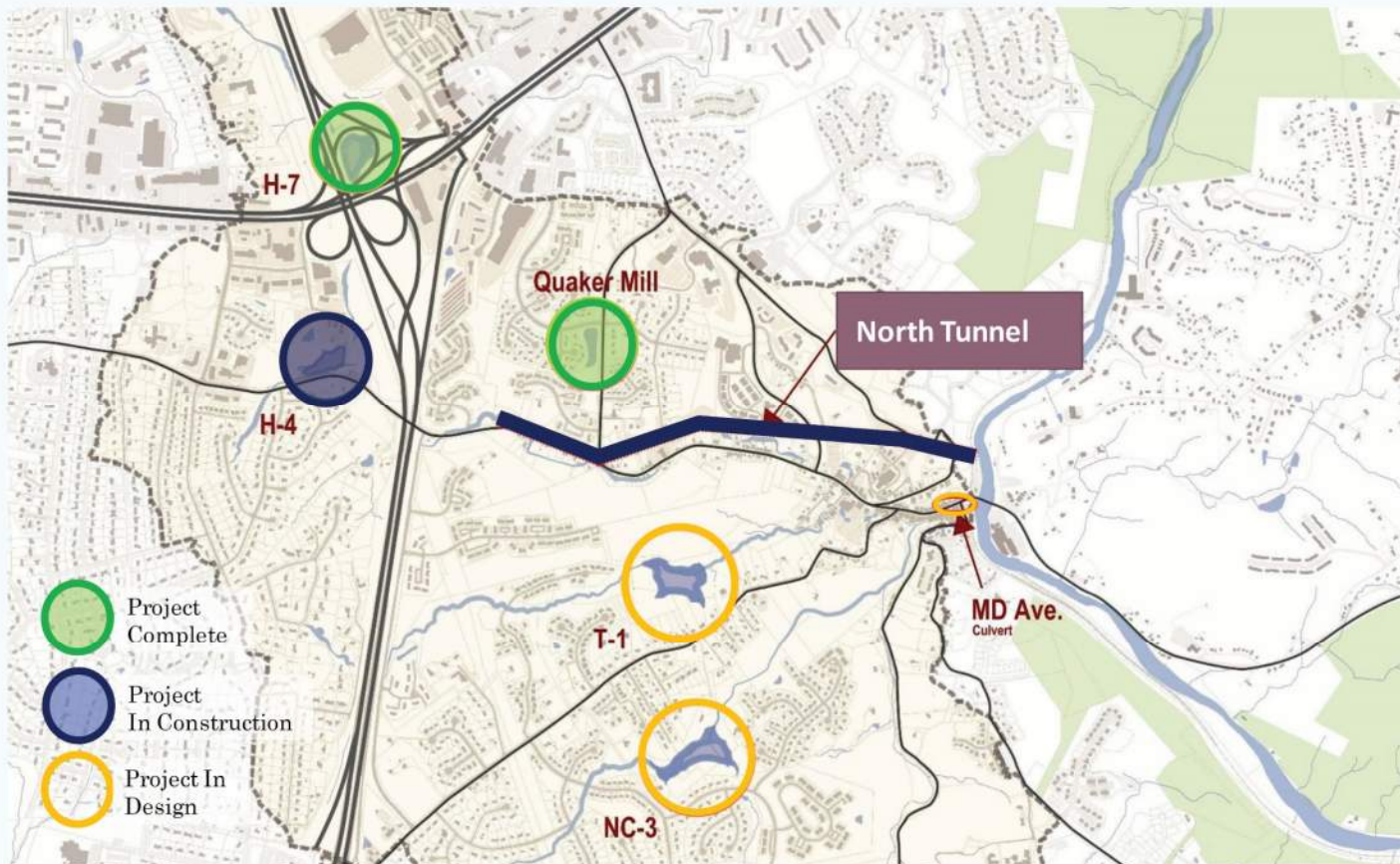
*May 7, 2025*



# PROGRESS



**Calvin Ball**  
County Executive



✓ **H-7 Pond**  
Completed October 2022

✓ **Quaker Mill Pond**  
Completed February 2023

• **H-4 Pond**  
In Construction

• **North Tunnel**  
In Construction

• **NC-3 Pond**  
In Design

• **Maryland Avenue Culverts**  
In Design

• **T-1 Pond**  
In Design

# *EC Safe & Sound* | Plan Development Process

- **Prior Administration's Plan**
  - Included removal of 10 buildings
- **Commenced review process upon taking office**
- **Goals included preservation of as many buildings as possible**
- **Considered >60 Scenarios**
  - Removal of no buildings
  - Removal of 4 buildings
  - Removal of 6 Buildings
- **Solicited Community Input**
  - 5 Plans advanced
  - Community Meeting
  - Online Comment Period
- **Selection of Option 3G7.0**
- **"Evaluation of Ellicott City Flood Risk Management Alternatives, Howard County, Maryland". December 2019.** Planning Division, US Army Corps of Engineers, Baltimore District.
  - Goal to review flood studies, evaluate County's proposed FRM measures, and generate new ideas for consideration.
  - USACE FRM Experts from outside the Baltimore District, including engineers, planners, cultural and environmental subject matter experts
  - Consulted with national experts from Federal, State, Academia, and non-profit entities

"Overall, the USACE review team found that the County is following a **sound process** and that the FRM measures being considered are typical of the measures considered for USACE FRM projects. **The current County-selected alternative (known as 3G.7.0) can significantly reduce flood risk to downtown Ellicott City.**"

reference: "Evaluation of Ellicott City Flood Risk Management Alternatives, Howard County, Maryland". December 2019. Planning Division, US Army Corps of Engineers, Baltimore District.

5/6/2025

# EC Safe & Sound | 2019 Launch

Flood Mitigation Options Comparison	Previous 5-Year Plan (16C)	Option 3G.7.0
Modified Floodplain	10 Buildings Removed	4 Buildings Removed
Quaker Mill Pond	✓	✓
Lot D Channel Expansion (Hudson Bend)	✓	✗
T-1 Pond	✗	✓
H-7 Pond	✓	✓
NC-3 Pond	✗	✓
Maryland Avenue Culverts	✓	✓
West End Floodplain & Conveyance Projects	✓	✓
H1-UG1 and H8-UG1	✗	✗
H1-UG2	✗	✗
H-4 Pond	✗	✓
H-3 Pond	✗	✗
H8-UG2, H-8-UG3, and H8-UG4	✗	✗
North Tunnel	✗	✓
South Tunnel	✗	✗
Average Depth*	4.1 feet	2 feet
Estimated Cost	\$56.5 million	\$113.5 - \$140.5 million
Estimated Timeline	5 years	5 years

\* Average depth from Caplan's to Maryland Avenue during July 2016 storm conditions

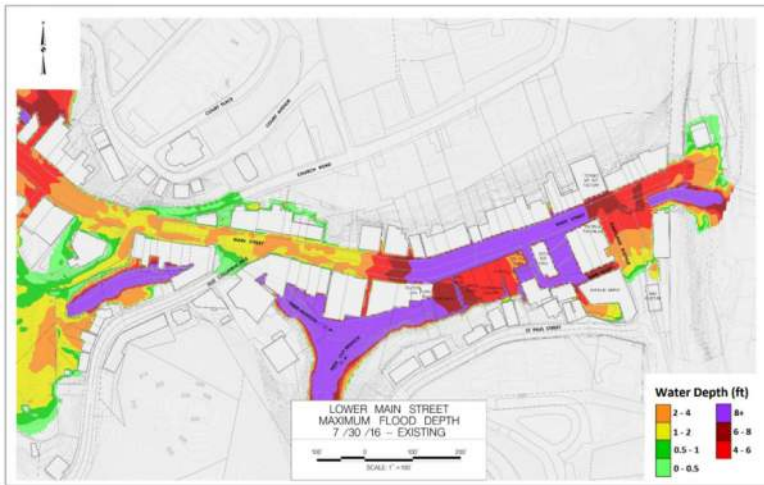
→ Would have resulted in removal of at least 6 residential properties

→ ~1600' long, 15' Diameter at the time

→ Aside from notes above, did not include:

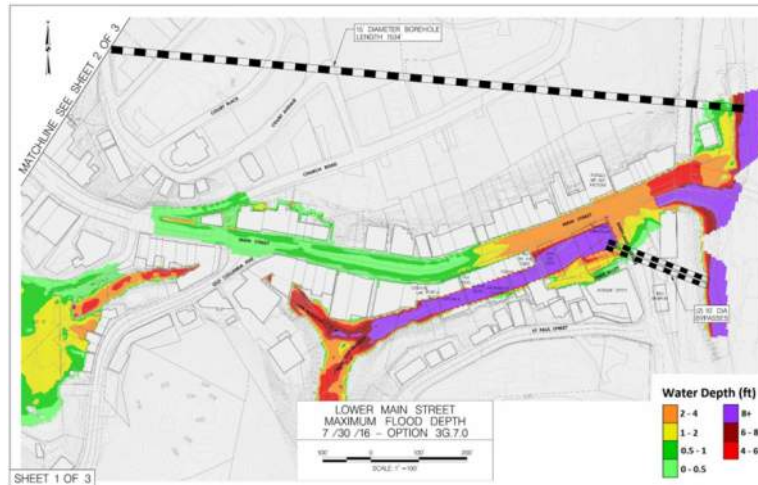
- Acquisitions
- Building Work
- Repairs / Recovery from prior floods
- Utility Impacts
- Master Plan and related projects

# EC Safe & Sound | Goals



*July 2016 Storm Event*

- Goal of reducing **depths and velocities** as much as possible.
- All projects work together **as a system** to accomplish this goal.



*Simulating July 2016 Storm Event  
With 3G7.0 implemented*

- Reduction in street-level flooding to **3 feet or less** a priority in support of non-structural flood proofing
- Reduction in flood velocities **down to 5 feet/second** (or below) are a priority in support of non-structural flood proofing

# EC Safe & Sound | Prior Event Dates

## *25 Events since 2019*

2025	2024	2023	2022	2021	2020	2019
2/18/2025	8/19/2024	12/19/2023	12/19/2022	10/30/2021	10/30/2020	11/1/2019
	5/29/2024	11/27/2023	9/7/2022	10/26/2021	8/14/2020	5/24/2019
	4/5/2024	9/25/2023	6/9/2022	5/3/2021	8/5/2020	3/22/2019
	1/10/2024		1/24/2022		8/3/2020	2/26/2019
					6/23/2020	
					4/13/2020	

*A 'Safe and Sound' Event is defined as greater than 2" of rainfall in a 24 Hour period*



# *H-7* | Completed 2022

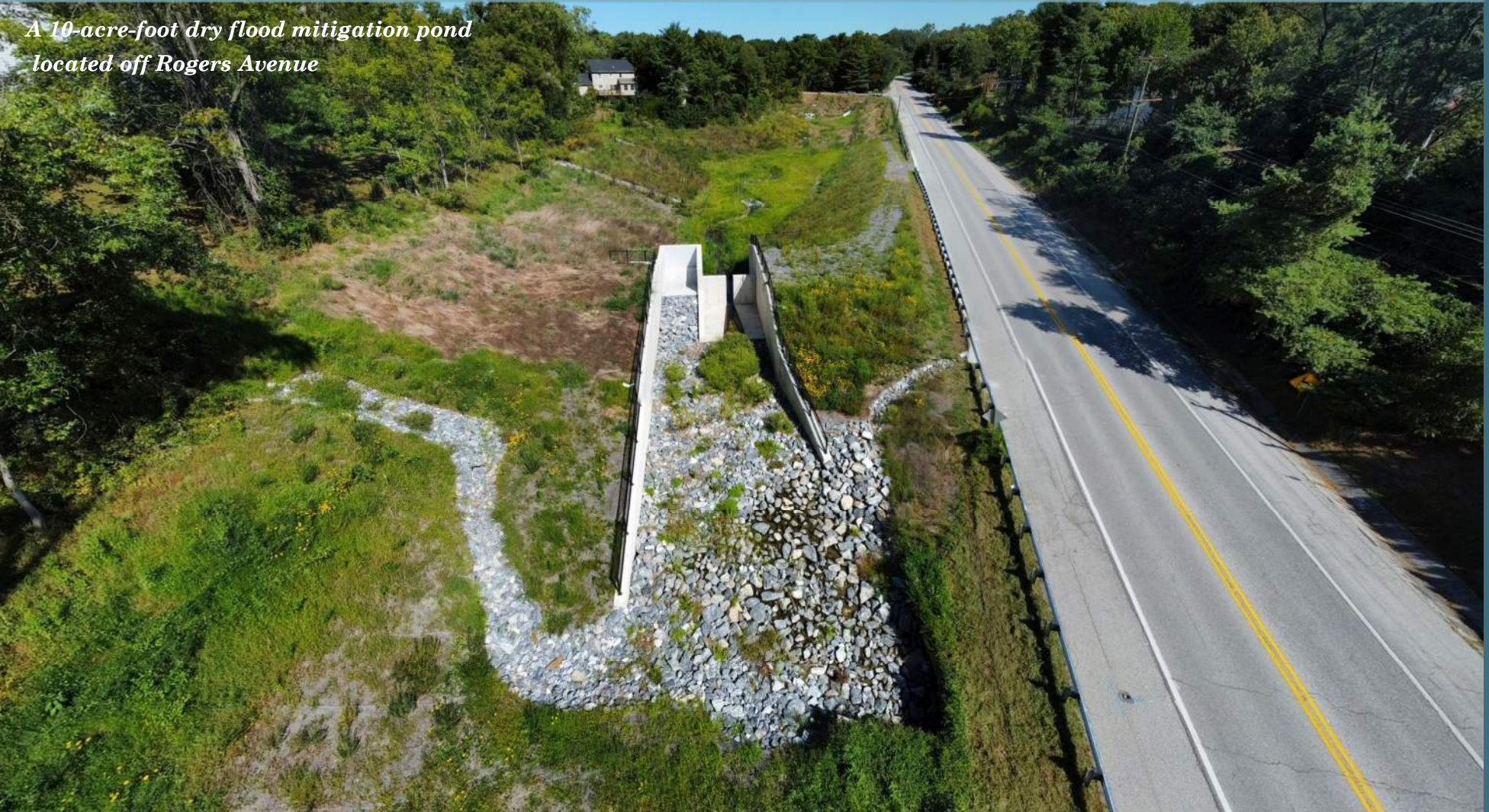
*A 13-acre-foot dry flood mitigation pond located in the US 40/US 29 interchange*





# *Quaker Mill* | Completed 2023

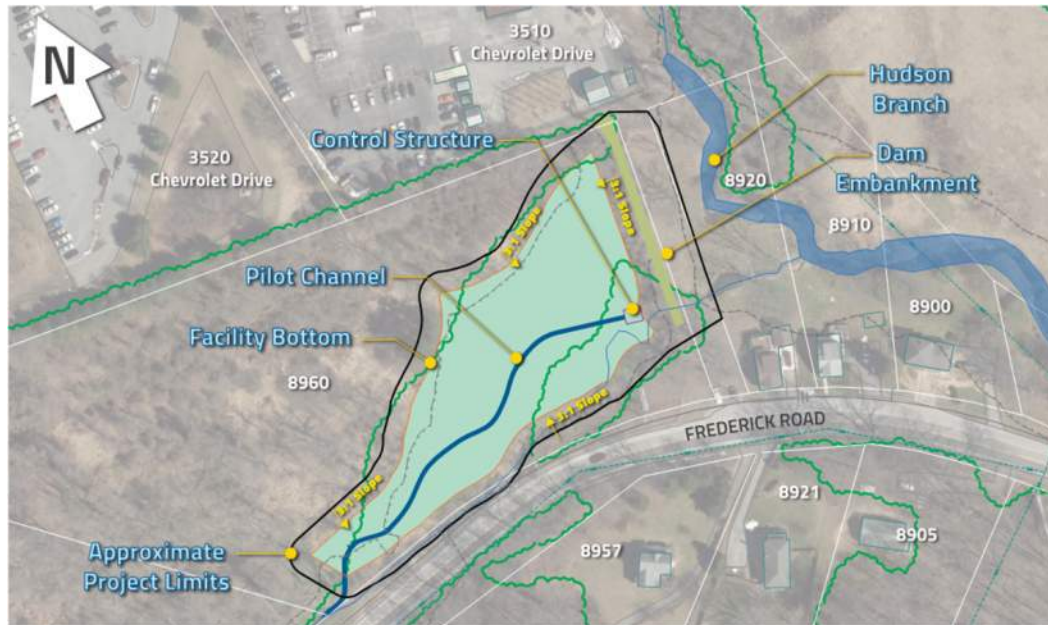
*A 10-acre-foot dry flood mitigation pond  
located off Rogers Avenue*





# H-4 | Construction Complete Fall 2025

*A 15.6-acre-foot dry flood mitigation pond*



Acquisitions



Design



Permitting



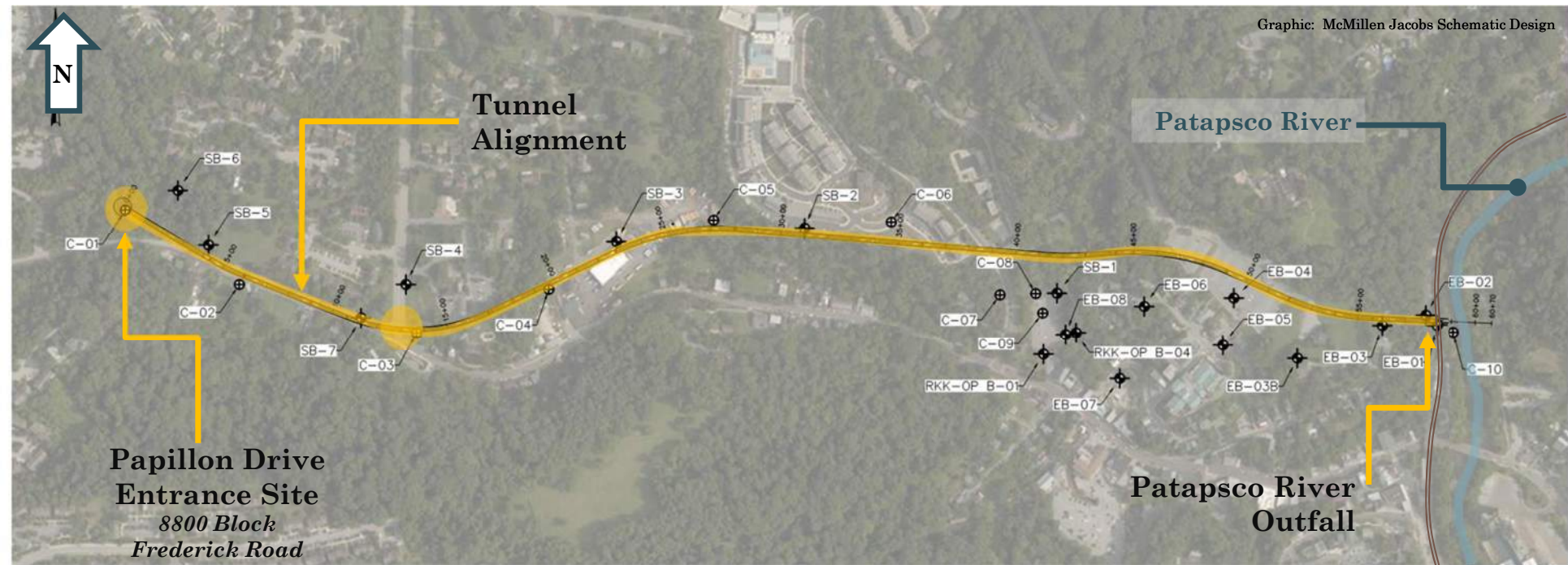
Funding



Construction



# North Tunnel | Construction Complete Fall 2027



Acquisitions



Design



Permitting



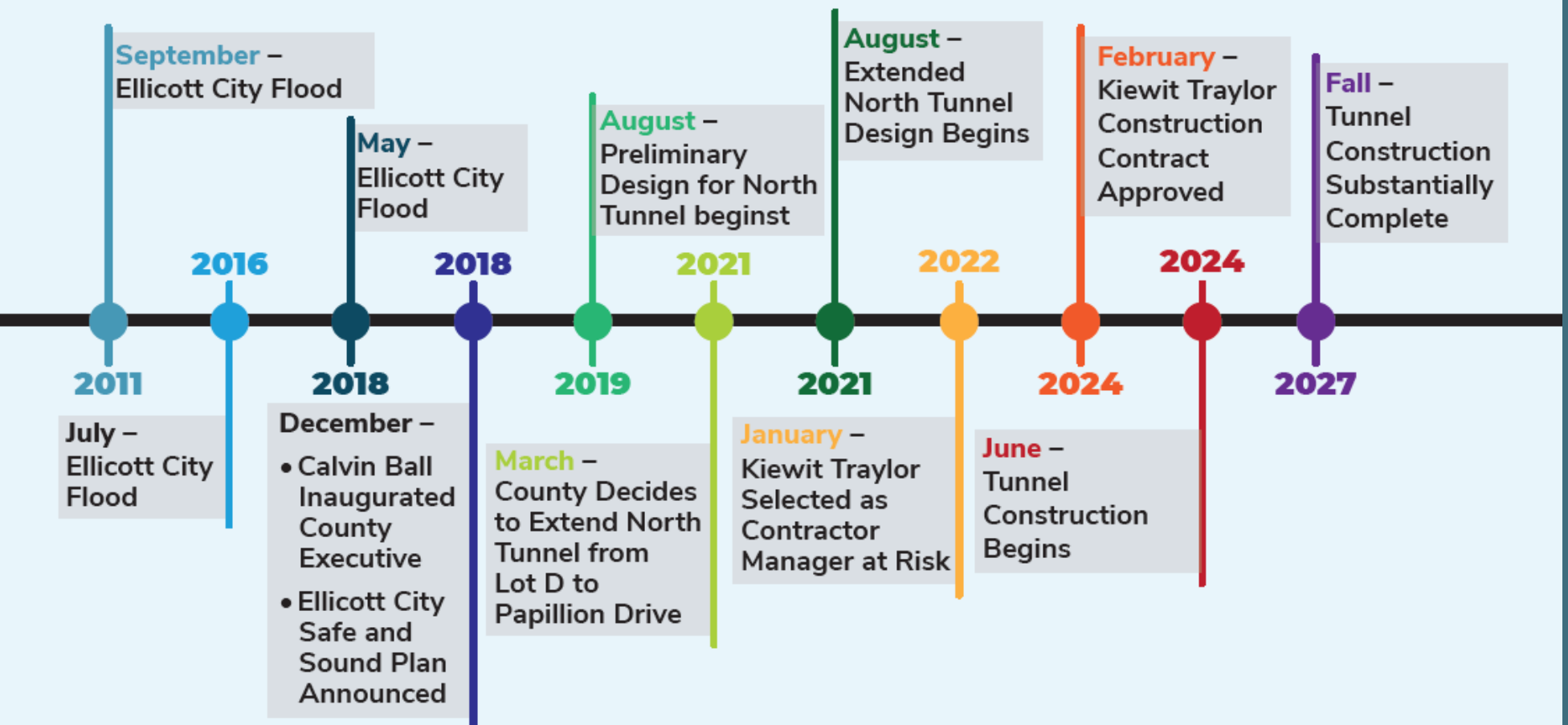
Funding



Construction



# North Tunnel | Timeline





# *North Tunnel | Papillon – Current*





# *North Tunnel* | Construction Team

*Preserving History,  
Safeguarding Tomorrow*



**KIEWIT-TRAYLOR JV**

Ellicott City North Tunnel

# Maryland Avenue Culvert

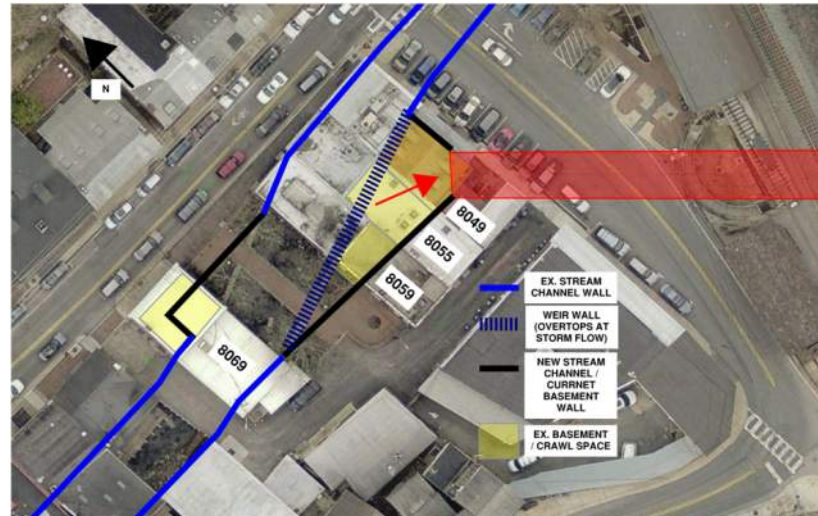
*Two 10-foot diameter culverts installed under Maryland Avenue connecting the Tiber-Hudson to the Patapsco*

## Current Status:

- Ongoing CSX engagement
- Preconstruction
- Final Design

## Next Steps:

- Complete Final Design



Acquisitions



Design



Permitting



Funding



Construction





# NC-3

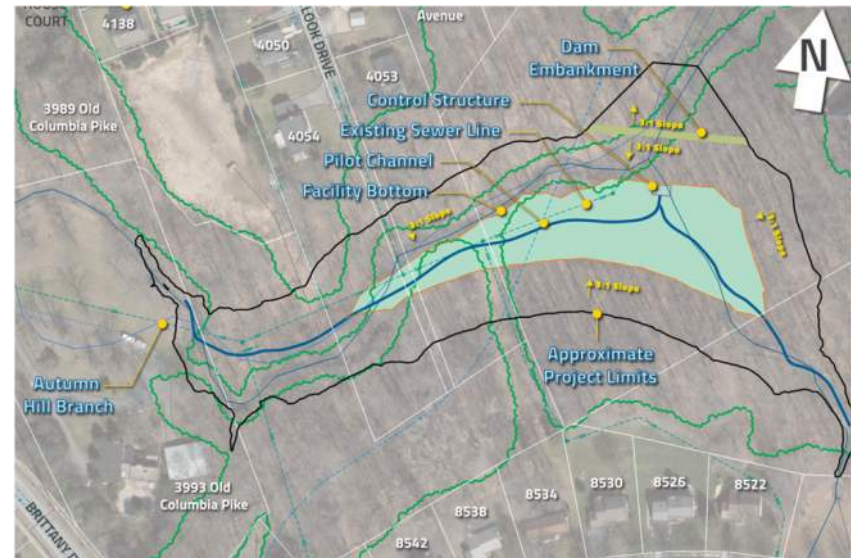
*A 63-acre-foot dry flood mitigation pond located the Autumn Branch in the New Cut watershed*

## Current Status:

- Schematic Design

## Next Steps:

- Solicit Construction Manager at Risk
- Secure Construction Funding



Acquisitions



Design



Permitting



Funding



Construction



# T-1

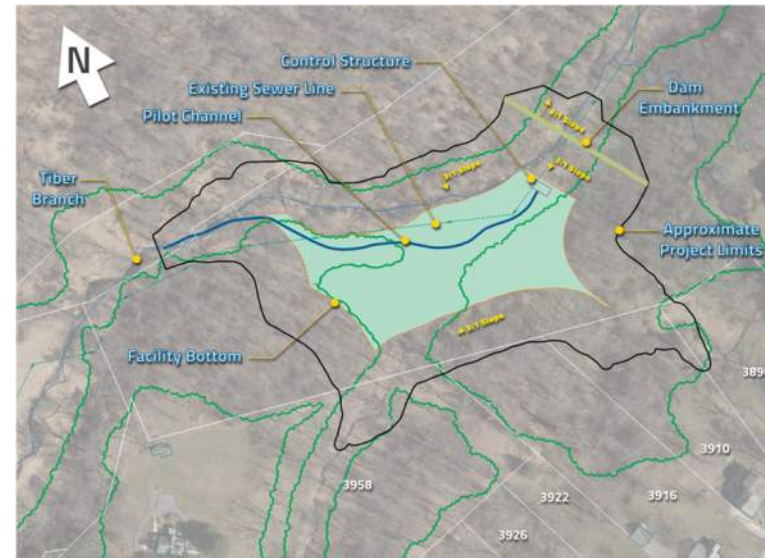
*A 70-acre-foot dry flood mitigation pond located on the Tiber tributary*

## Current Status:

- Preliminary Design

## Next Steps:

- Advance Preliminary Design to Final Design



Acquisitions



Design



Permitting



Funding



Construction



# Modeling Scenarios

<i>Scenario</i>	<i>100-Year Event</i>	<i>July 2016 Event</i>
Baseline (July 2016 Event)	>8'	>8'
Quaker Mill, H4, H7, North Tunnel, & Channel Constriction / Full Building Removals	5.0'	6.6'
+ North Tunnel Lot F Diversion Chamber	4.4'	5.8'
+ Maryland Avenue Culverts	3.3'	4.4'
+ NC3 & T1	1.5'	2.9'

**Safe and Sound Plan Goal**

**< 3'**

*Note: Values are approximate. NC3 & T1 each account for approximately half of the reduction noted.*



# Channel Constriction | Near Completion

*Removal of the rear section of 8085, 8095, 8111-8113 and 8125  
Main Street to alleviate constrictions above channel*



Acquisitions



Design



Permitting



Funding



Construction



# Caplan's – Micro Retail

*Reopening the Caplan's Building for Micro-Retail*





# Four Building Removal | Complete Fall 2024

*Full removal of  
8049-8069 Main Street*





# Four Building Removal | Complete Fall 2024





# Interim Expanded Tiber Park | Complete Fall 2024





# Interim Expanded Tiber Park | Complete Fall 2024









# Safe and Sound Related Efforts

<i>High Ground Access Points</i>	<i>Tone Alert System</i>	<i>Debris Removal</i>	<i>Grant Program</i>	<i>Monitoring</i>
<p>Implementation of signage and controls to permit egress to high ground</p> <p>Completed Fall 2019</p> 	<p>Implementation of alert system to broadcast sirens in a flood event</p> <p>Completed Spring 2020</p> 	<p>Ongoing removal of debris from the stream channel upon certain weather events</p> <p>Ongoing</p> 	<p>Provided support to property owners to improve the resilience of their properties (non-structural flood mitigation)</p> <p>Ongoing</p> 	<p>Provided support for improvements to CCTV network to monitor stream channels; installed additional instrumentation; installed signage and supported coordination between OEM, HCPD, and DFRS</p> <p>Ongoing</p> 

# Other related efforts

<i>Expanded Tiber Park</i>	<i>Streetscape</i>	<i>Wayfinding Signage</i>	<i>St. Paul Street Pocket Park</i>	<i>Vehicle Drop Arms</i>
<b>Current Status:</b> <ul style="list-style-type: none"> <li>○ Concept Design</li> </ul> <b>Next Steps:</b> <ul style="list-style-type: none"> <li>○ Public Engagement</li> </ul>	<b>Current Status:</b> <ul style="list-style-type: none"> <li>○ Completed Welcome Center Improvements</li> <li>○ Completed design for Pedestrian Safety Improvements</li> <li>○ Completed Mid-Block Crossing at 8125 Main</li> </ul>	<b>Current Status:</b> <ul style="list-style-type: none"> <li>○ In Design</li> </ul> <b>Next Steps:</b> <ul style="list-style-type: none"> <li>○ Historic Preservation Commission engagement</li> </ul>	<b>Current Status:</b> <ul style="list-style-type: none"> <li>○ Concept Design</li> <li>○ Completed initial public engagement</li> <li>○ Completed HPC engagement</li> </ul> <b>Next Steps:</b> <ul style="list-style-type: none"> <li>○ Advance to Design Development</li> </ul>	<b>Current Status:</b> <ul style="list-style-type: none"> <li>○ Design Complete</li> <li>○ Bidding</li> </ul> <b>Next Steps:</b> <ul style="list-style-type: none"> <li>○ Construct Prototype Design</li> </ul>
Design	Complete	Design	Design	Design
				

# Safe and Sound Key Components Overview

## C0337 - Ellicott City Safe and Sound - Key Project Components Estimate (\$ in millions)

	Spent/ Encumb.	Future Options (Est. as of 5/5/2025)	Total	Note
Pond H-7	5.4		5.4	project complete
Pond H-4	7.8		7.8	project completion Fall 2025
Quaker Mill Pond	3.5		3.5	project complete
North Tunnel	168.6		168.6	spent/encumbered
Crossing CSX and main street bridge etc.		40.6	40.6	funding available
Lot F		45.0	45.0	appr. \$20M available, rest pending
Rogers Ave.		13.0	13.0	pending \$ / decision
MD Ave Culverts	9.7	50.0	59.7	pending \$ / decision
Pond T-1	2.9	38.0	40.9	pending \$ / decision
Pond NC-3	1.9	16.5	18.4	pending \$ / decision
Building Construction Removal/Rehab	11.2	0.6	11.8	funding available
<b>Total S&amp;S Cost (Estimate)</b>	<b>211.1</b>	<b>203.7</b>	<b>414.8</b>	
Non-S&S	15.7		15.7	
<b>Total C0337</b>	<b>226.8</b>		<b>430.5</b>	

## C0337 - Total Appropriation (prior \$297.4M +FY26 proposed \$23.2M = \$320.6M)

	Spent/ Encumb.	Available	Total	Grants / Loans awarded (Available)
	226.8	93.8	320.6	MD Av: \$17.9M, T-1: \$7M, NC-3: \$8M

FY26 & 27 will focus on using existing appropriation to continue and complete N. Tunnel and crossing CSX. / mainstreet bridge

Future projects timeline and decisions will depend on funding available (primarily State or Federal) and strategic priorities.

--Lot F and MD Ave. Culvert are assigned higher technical value (water flow effect) among the rest of project components.



# Questions