MARC ELRICH
County Executive

MCDOT
Montgomery County Department of Transportation
CHRIS CONKLIN, Director

New Pedestrian Bridge Between Auth Lane and Kersey Road Montgomery County – Silver Spring, MD

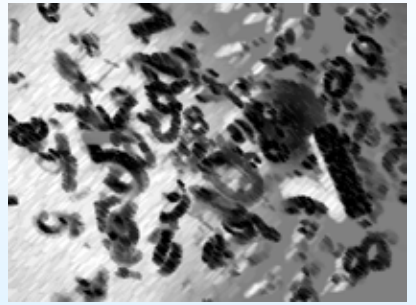
09/18/2025

AGENDA

- Introduction
- Background
- Design
- Construction
- Results
- Questions

PROJECT TEAM LEADERS

- **Montgomery County Department of Transportation (MCDOT)**



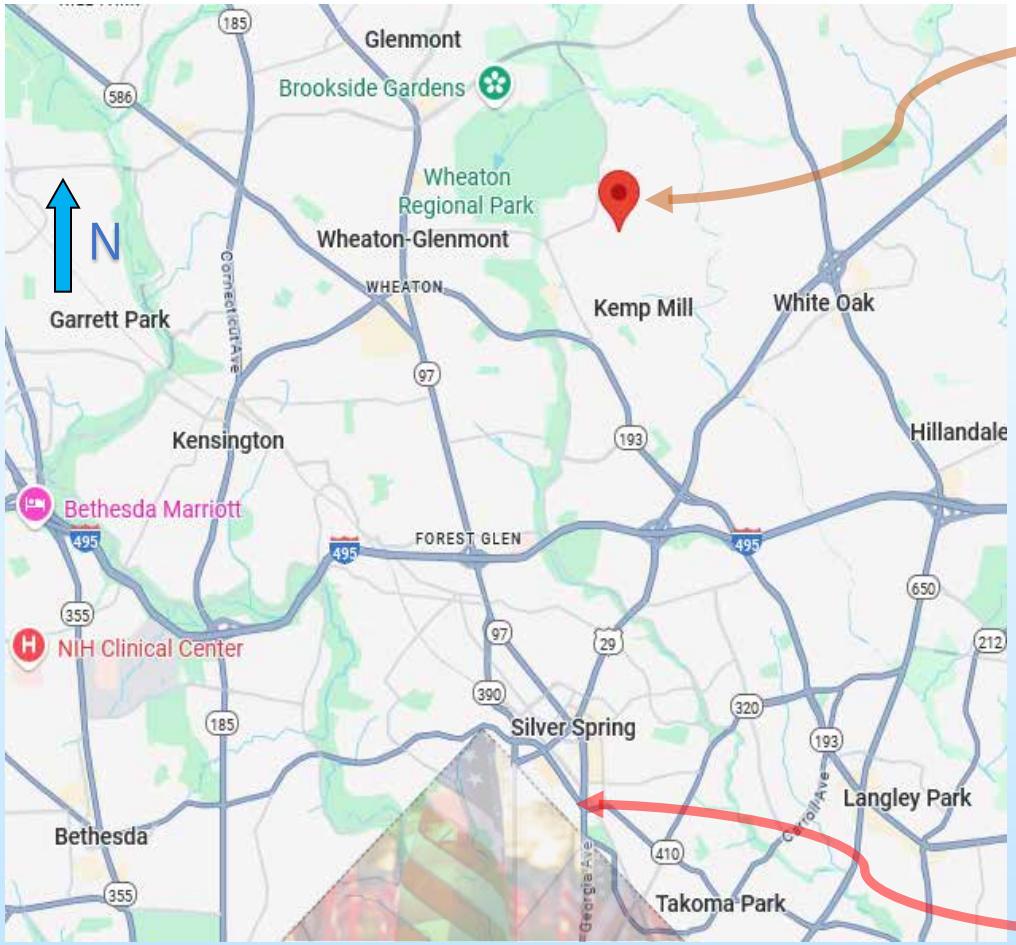
Rashid Abramov, P.E., Capital Projects Manager

Anthony Curry, Construction Supervisor

- **Mercado Consultants, Inc. – Engineering Consultant**

Michael Mercado, P.E., Project Manager

PROJECT LOCATION



Project Site

Tributary to Northwest Branch Anacostia River
3.5 miles north of Washington D.C.
Kemp Mill area of Silver Spring, MD

Washington D.C.

THE NEED

- **Community petitioned the County for a pedestrian bridge**
  - **Walking path between two areas of neighborhood bisected by a stream**
  - **Walking path actively used by residents**
  - **Unsafe "At- Grade" stream crossing**

Original "At-Grade" Stream Crossing
(looking west towards Kersey Road)

Original "At-Grade" Stream Crossing
(looking east towards Auth Lane)

THE CHALLENGES

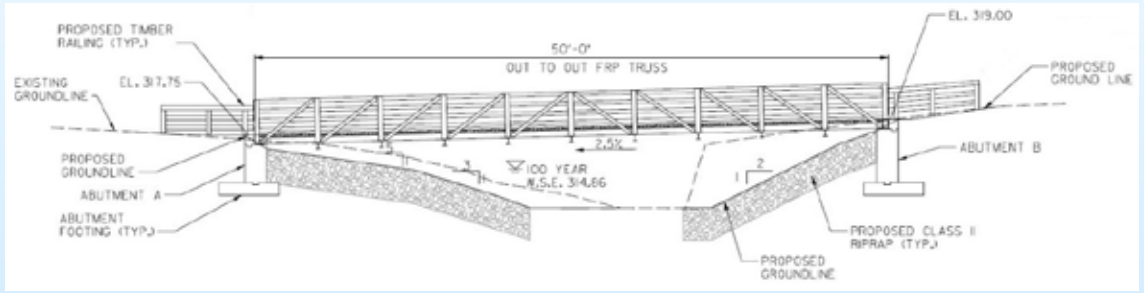
- Ongoing stream erosion
- Mature trees
- Accelerated schedule
- Cost
- Neighbors
- Material Procurement

Aerial View
(source: Google Earth)

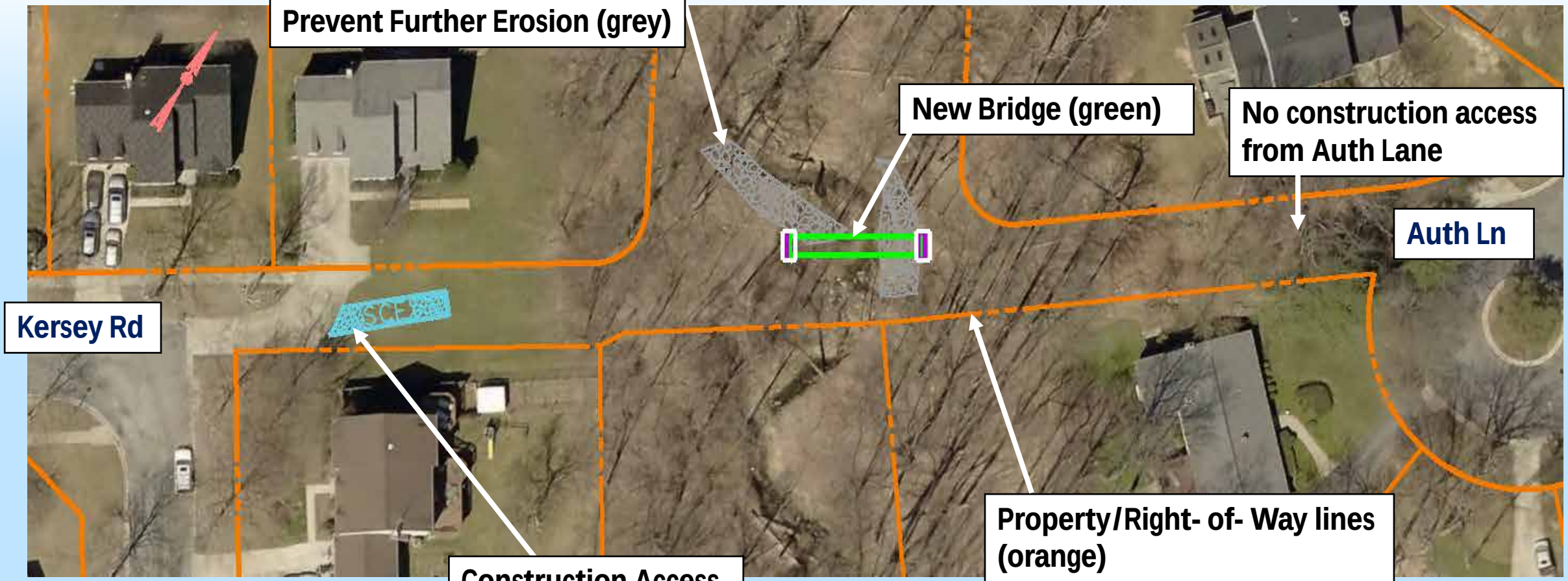
Original "At-Grade" Stream Crossing
(close up)

SOLUTION

- Develop a concept
- Present to Community
- Go back to the drawing board
- New simplified concept
- Keep construction inhouse
- “Bridge Contract” for material procurement
- Plant trees

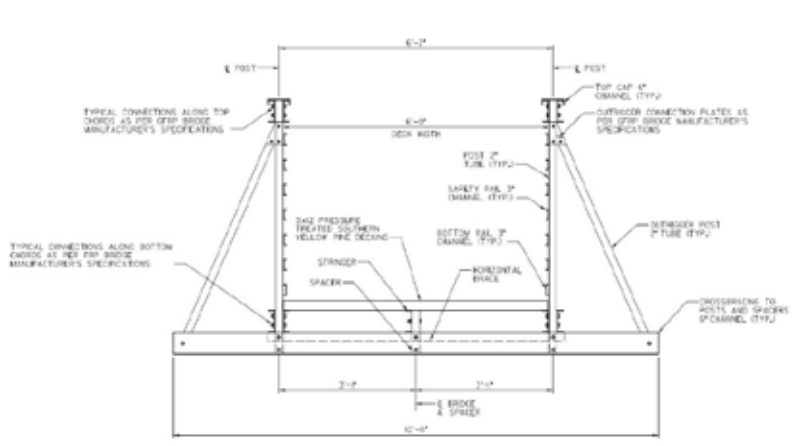


PROJECT SITE – AERIAL MAP

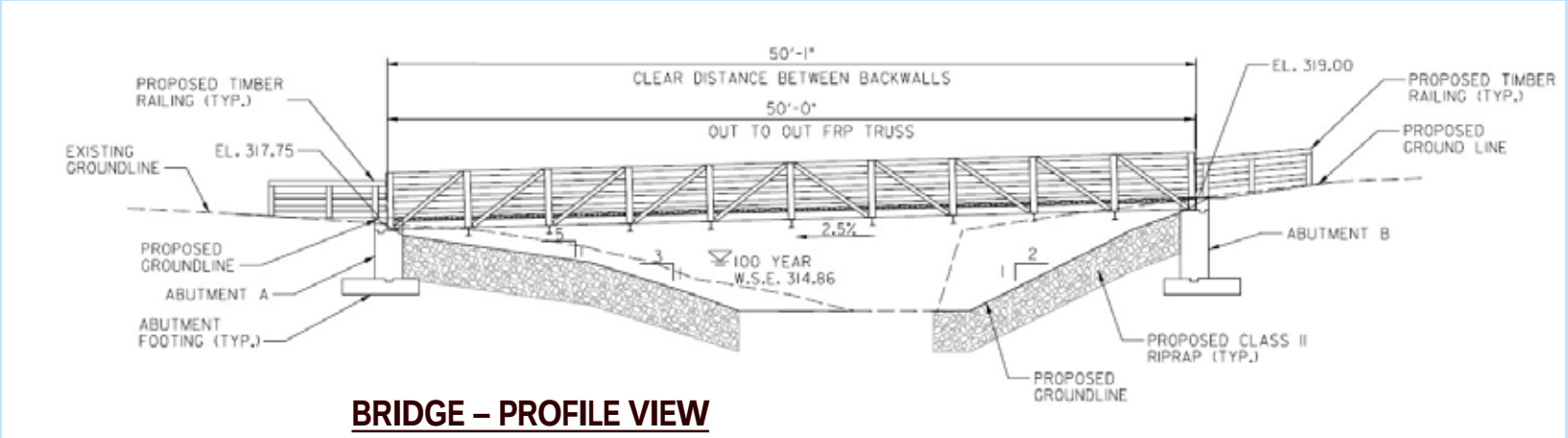


Design

- 50’ Long
- Prefabricated Truss FRP Pedestrian Bridge
- 3”x12” Timber decking
- 6’ Wide clear width of the Walkway
- 3’-6” High Railings on Both Sides
- Reinforced concrete abutments
- Riprap Slope Protection for Stream Stabilization



BRIDGE - TYPICAL CROSS SECTION



BRIDGE – PROFILE VIEW

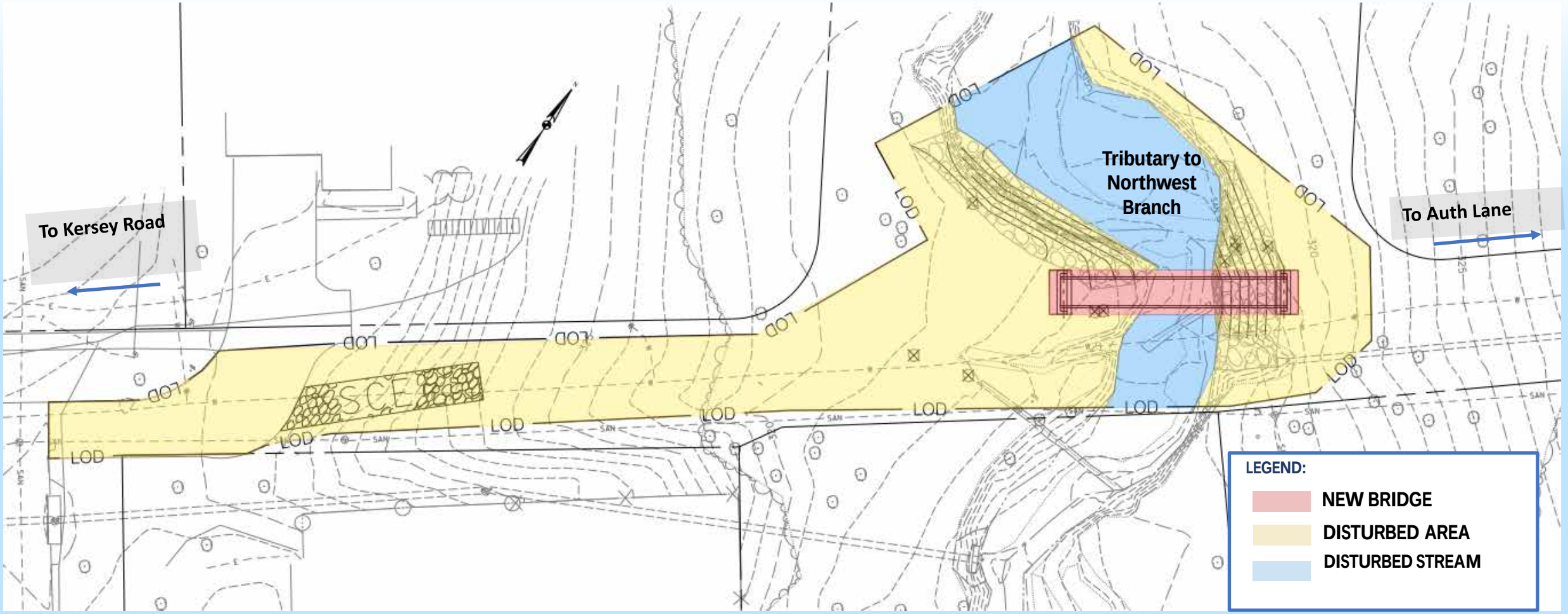
Fiber Reinforced Polymer Pedestrian Bridges

- **What is FRP?**
  - Composite material with fibers consisting of glass or carbon.
  - Very high corrosion resistance.
  - Low modulus of elasticity compared to steel. Typical design is based on serviceability requirements for meeting minimum deflection.
  - Members have typical shapes – tubes, channels, etc.
  - Fabricated by pultrusion

Pultrusion Process

- **Ideal for span lengths from 10' to 55'.**
- **Lightweight - Approximately 40 lbs/foot of bridge. No crane needed!**
- **Governed by AASHTO Guide Specifications for Design of FRP Bridges**
- **Limitations:**
  - Not suited for heavy traffic loads
  - Best at locations above 100-year floodplain with limited flood debris impact risk

Project Site – Plan View



Permits

- Forest Conservation from Montgomery Planning
- Authorizations from MDE & USACE
- Floodplain District from local Permitting Authority
- Sediment Control Permit from local Permitting Authority

CONSTRUCTION

11/25/2024

02/03/2025

02/26/2025

CONSTRUCTION

04/22/2025

04/24/2025

04/25/2025

05/03/2025

06/25/2025

06/25/2025

PROJECT COSTS & SCHEDULE

Costs:

- Cost estimate (before project simplified): $647,000.00
- Construction budget: $250,000.00

Schedule:

- Initial Request — Fall 2020
- Start Design — Fall 2022
- Complete Design — Fall 2024
- Begin Construction — November 2024
- End Construction — June 2025

FINAL RESULT

- Safe Stream Crossing
- Stabilized Stream
- Happy Residents

NEW PEDESTRIAN BRIDGE BETWEEN AUTH LANE AND KERSEY ROAD

Rashid Abramov
Rashid.Abramov@montgomerycountymd.gov