

# ITEM 4: REVIEW OF WEST MAIN STREET PEDESTRIAN BRIDGE

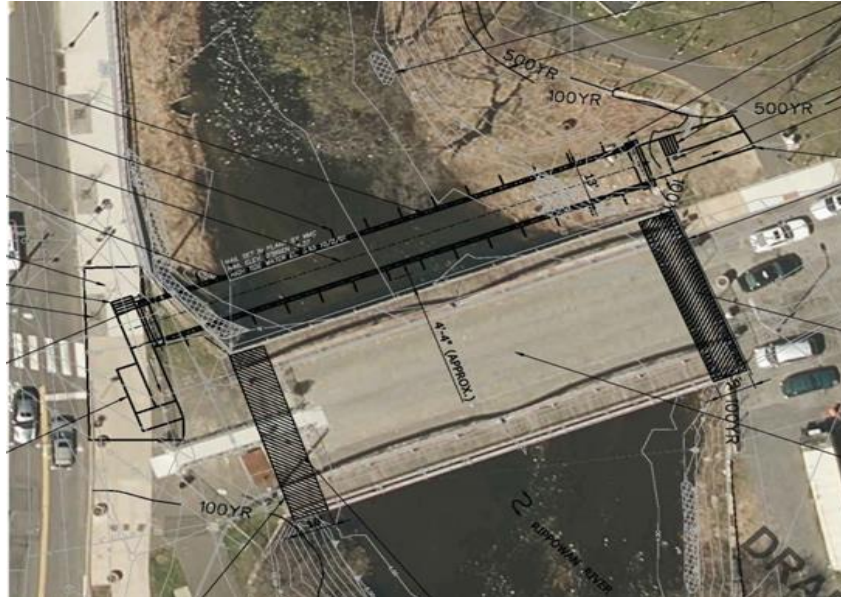
## BOARD OF REPRESENTATIVES - OPERATIONS COMMITTEE

12/30/2019 - Review Item Held

1/28/2020 - Report Made & Held by Committee 8-0-0

7/28/2020 – Progress Update

5/25/2021 – Progress Update



# SLR Hydraulic Analysis

This work was completed following the Michael Baker report dated July, 2020 to examine the following :

- 1) To determine a bridge elevation that will not create a rise in water surface elevation
- 2) To determine a bridge elevation that will minimize ramping

# SLR Hydraulic Analysis

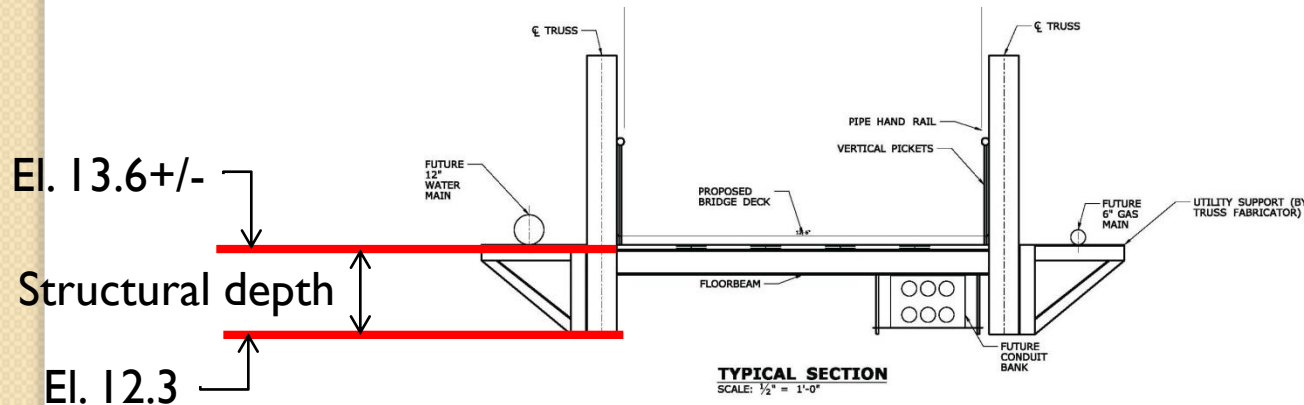
Jan 5, 2021, received an agreement to perform hydraulic analysis.

- SLR completed the hydraulic model for Proposed Scenario #1 (Baker design lowered by 2.5 ft. to minimize ramping) on 2/11/21. The hydraulic analysis indicated up to .4' rise in water surface elevation in the floodway which upon confirmation with local EPB and a meeting with CT DEEP triggers a FEMA Conditional Letter of Map Revision (CLOMR) application (12 months or more process). There are 2 private properties impacted by the rise.
- SLR completed the hydraulic model for Proposed Scenario #2 (no rise in floodway) on 3/15/21. The hydraulic model indicated the low chord of the bridge would need to be above the 100yr flood elevation (12.3) to avoid a rise in floodway. This would be similar to Baker preliminary report options and require switch back ramps.

# Following Hydraulic Model Analysis

Reached out to prefabricated bridge manufacturers to investigate structures with minimum structural depth.

- Parameters 145ft. long 10ft. wide and support 14K lb. emergency vehicle



# Prefabricated Bridge Manufacturer Comparison

Manufacturer	Span Size	Structural Depth	Cost	Remarks
Bridge Brothers	10'x145'	1.2 ft.	\$251,500	<p>Low chord of structure will be above 100' flood elevation (12.3) to avoid rise in floodway. Say 12.4. Elevation at approaches would be approximately 13.6 but with no ramping. Existing elevation at approaches approx. 13.2 .</p> <p>16 weeks from NTP to site delivery.</p>
True North	10'x145'	2.4 ft.	\$185,500	<p>Low chord of structure will be above 100' flood elevation (12.3) to avoid rise in floodway. Say 12.4 Elevation at approaches would be 14.7 and will require ramping. Due to ramp not accessible to vehicular travel.</p>
Con-Tech	10'x145'	2.7 ft	\$300,000	<p>Low chord of structure will be above 100' flood elevation (12.3) to avoid rise in floodway. Say 12.4 Elevation at approaches would be 15.0 and will require ramping. Due to ramp not accessible to vehicular travel.</p>

# Bridge Proposal by Bridge Brothers





# Bridge Proposal by True North



# Next Steps

- Finalize RFP for a prefabricated bridge
- Select Design Firm (2 months)
- Design Phase 4-6 months. Possible that permitting can be done within this timeframe but hard to predict.

## Design work includes:

- Abutment design
- Utility coordination
- Staging and logistics
- Coordinate with steel prefabricator
- Survey and site layout and design
- Obtaining permit approvals\*

\* Permit Requirements – Local CAM Inland Wetlands Permit confirming hydraulic impact consistent with local flood regs, flood proofing of structure, DEEP, and ACOE

- Construction : 1 Season