



Town of Burlington

Public Information Presentation

Replacement of Bridge No. 020006

Main Street over Whigville Brook

February, 2021

Project Team

Owner:

Town of Burlington

Prime Consultant:

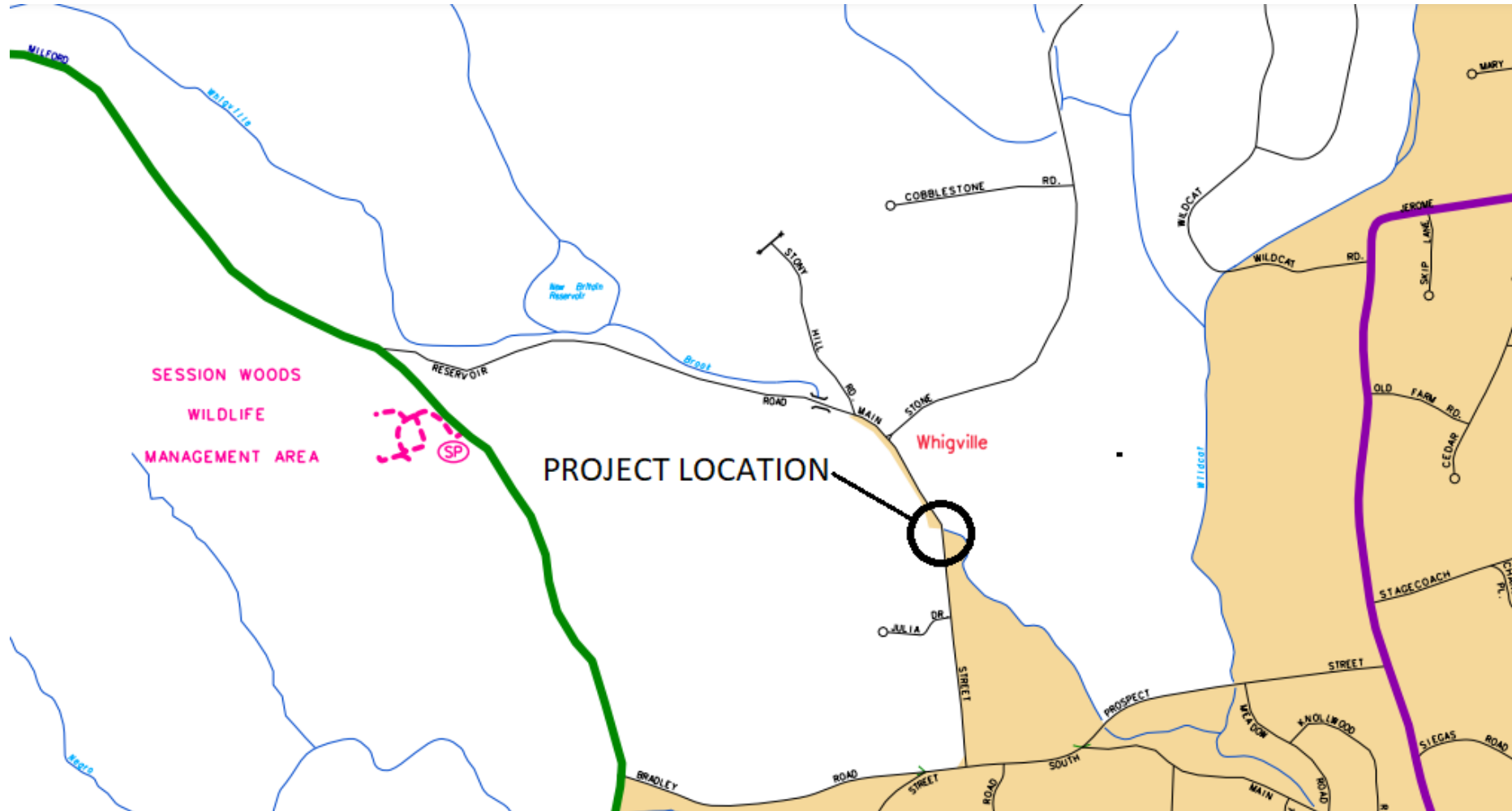
Cardinal Engineering Associates, Inc.

(Structural, Highway, Hydraulic, Drainage Design and Permitting)

Wetland Scientist and Environmental Biology:

Soil Science and Environmental Services, Inc.

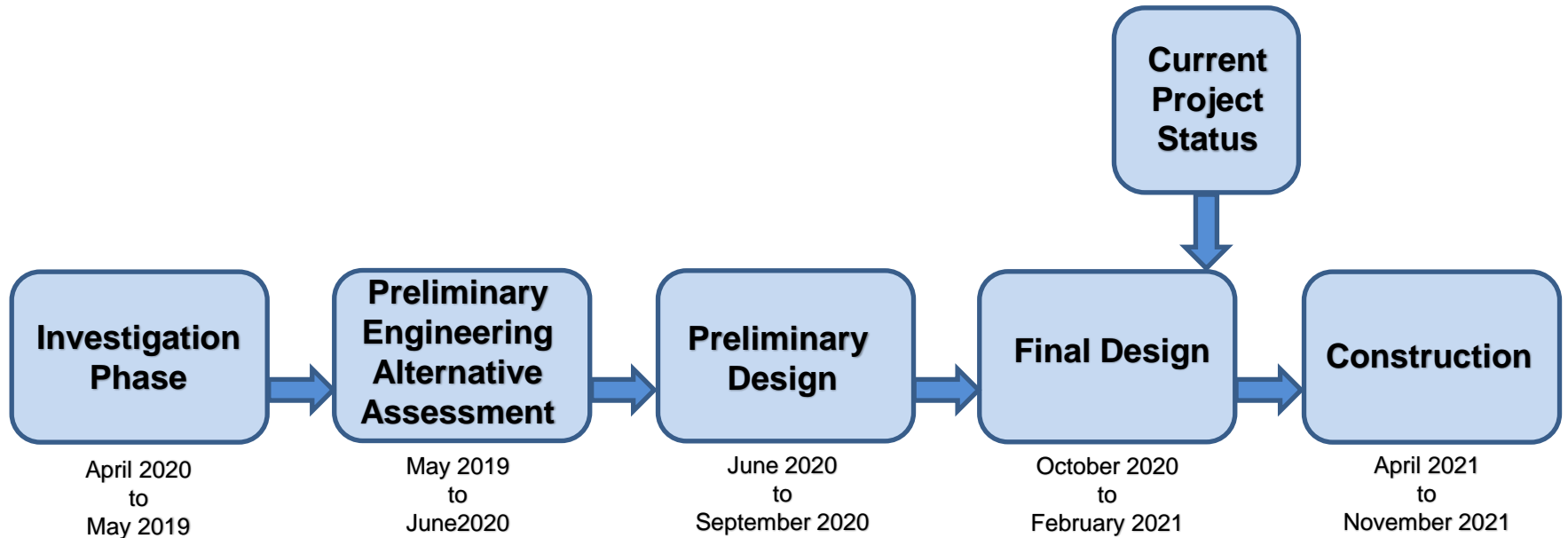
Location Map



Aerial View



Project Timeline



Project Goals

- Correct Existing Deficiencies of the Bridge (Structural)
- Maintain / Enhance Safety at the Bridge Crossing
- Meet Local Requirements
- MAINTAIN AESTHETICS OF THE SETTING

Existing Conditions



Whigville Brook (looking upstream)



Whigville Brook (looking downstream)



Alternating One-Way Traffic

TOWN OF BURLINGTON / MAIN STREET BRIDGE REPLACEMENT

Existing Bridge

- 18-foot structure, built 1950
- Steel beam superstructure on concrete/masonry abutments.
- Structurally deficient.
- Functionally Obsolete – bridge width is 20-feet for two-way traffic.
- ADT : ≈ 100 vpd.

Existing Conditions



Fascia Beam – Significant Section Loss



Underside of Superstructure



Abutment - Undermining with Vertical Crack



Upstream Scour Hole

Proposed Project

Purpose and Need:

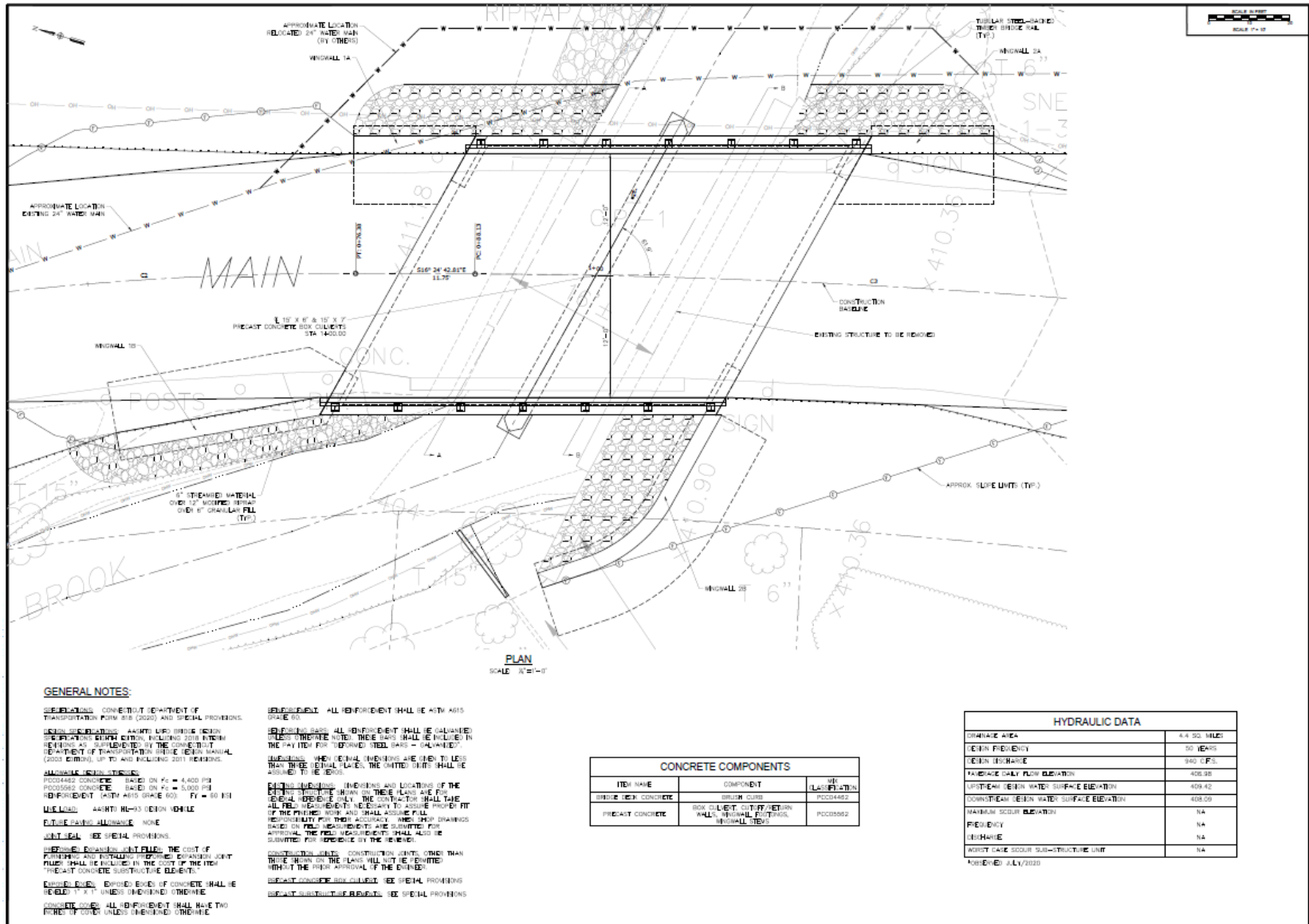
Existing Bridge:

- Functionally Obsolete – Narrow deck Width
- Substandard Bridge Parapets
- Structurally Deficient-Heavy Rust & Section Loss on all Steel Girders
- Substructure Deficiencies – South Abutment Footing Undermined – North Abutment Corner Showing Settlement
- Hydraulically Inadequate – Overtops during a 25±-year storm event

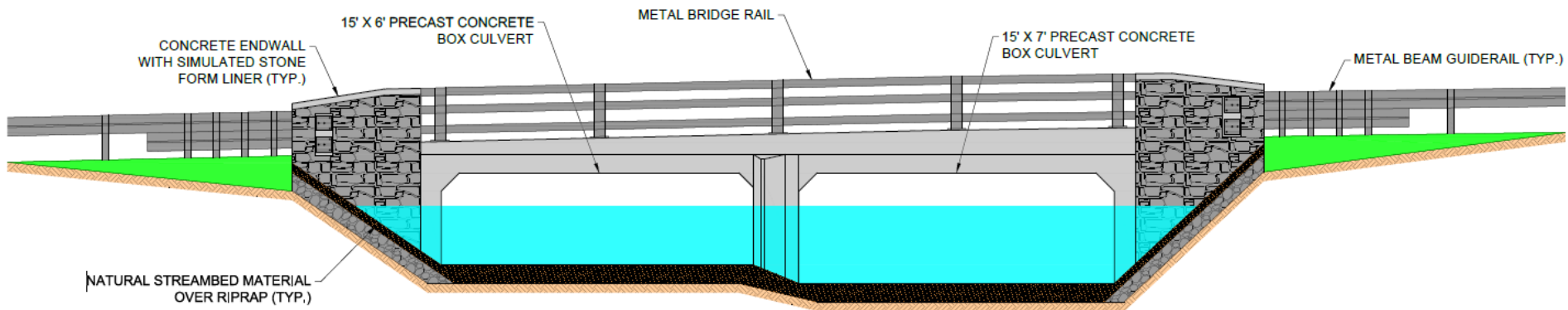
Proposed Structure:

- Twin-Cell Precast Concrete Box Culvert with Cast-in-Place Wingwalls
- Invert on one cell will be depressed. One-foot of Natural Streambed Material placed in both cells
- Existing River Channel Remains in Natural Condition
- Passes 50-year design flow with 0.8-feet of Freeboard and the 100-year flow with no Freeboard at Roadway Low point and no under clearance
- Riprap Use Minimized to Only Protect Wingwall Footings
- Maintains Fish Passage

Proposed Project



Proposed Elevation of New Structure



Construction Schedule / Cost

Anticipated Project Schedule:

- Design / Permit Completion: February 2021
- Start of construction: Spring 2021
- End of Construction: Fall 2021

Estimated Construction Cost:

- \$1,010,000



Contact Information

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Questions

THANK YOU QUESTIONS

