



PUBLIC INFORMATIONAL MEETING

FOREST ROAD BRIDGE #105/035

ACWORTH, NEW HAMPSHIRE

NHDOT Project #44523

Federal Project X-A005(517)

Monday, December 16, 2024

Chris Fournier, PE

Vice President / Director of Structural Engineering
HEB Engineers, Inc.

Trevor Ricker, EIT

Staff Structural Engineer
HEB Engineers, Inc.

PROJECT ADMINISTRATION



Funding 80% of design.



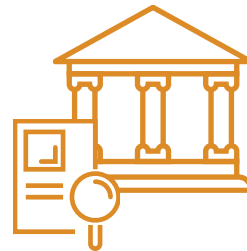
Federal Highway
Administration

Funding 80% of construction.

WHY WE ARE HERE



To provide a general overview of the project and receive public input regarding the proposed alternatives.



Funding requires Town to follow detailed requirements of LPA process



A Public Input Session was held July 29, 2024.
Tonight's meeting is the next step in the federally regulated process.

PROJECT AREA



FOREST ROAD

BERYL MOUNTAIN ROAD

THAYER BROOK ROAD

Location of
Previous
Bridge

EXISTING FEATURES PLAN

Legend

- 830 — Major contour
- 828 — Minor contour
- - - - - Vegetation line
- — — — — Paved
- — — — — Gravel
- — — — — Test boring

A. & Elliot
Mtn. Rd.
NH 03607
Day, III
B.1066, P.310

d 0.3"
" pine

3-rod-wide right-of-way per 1925 layout recorded in Conway Town Clerk's records V.9, P.151

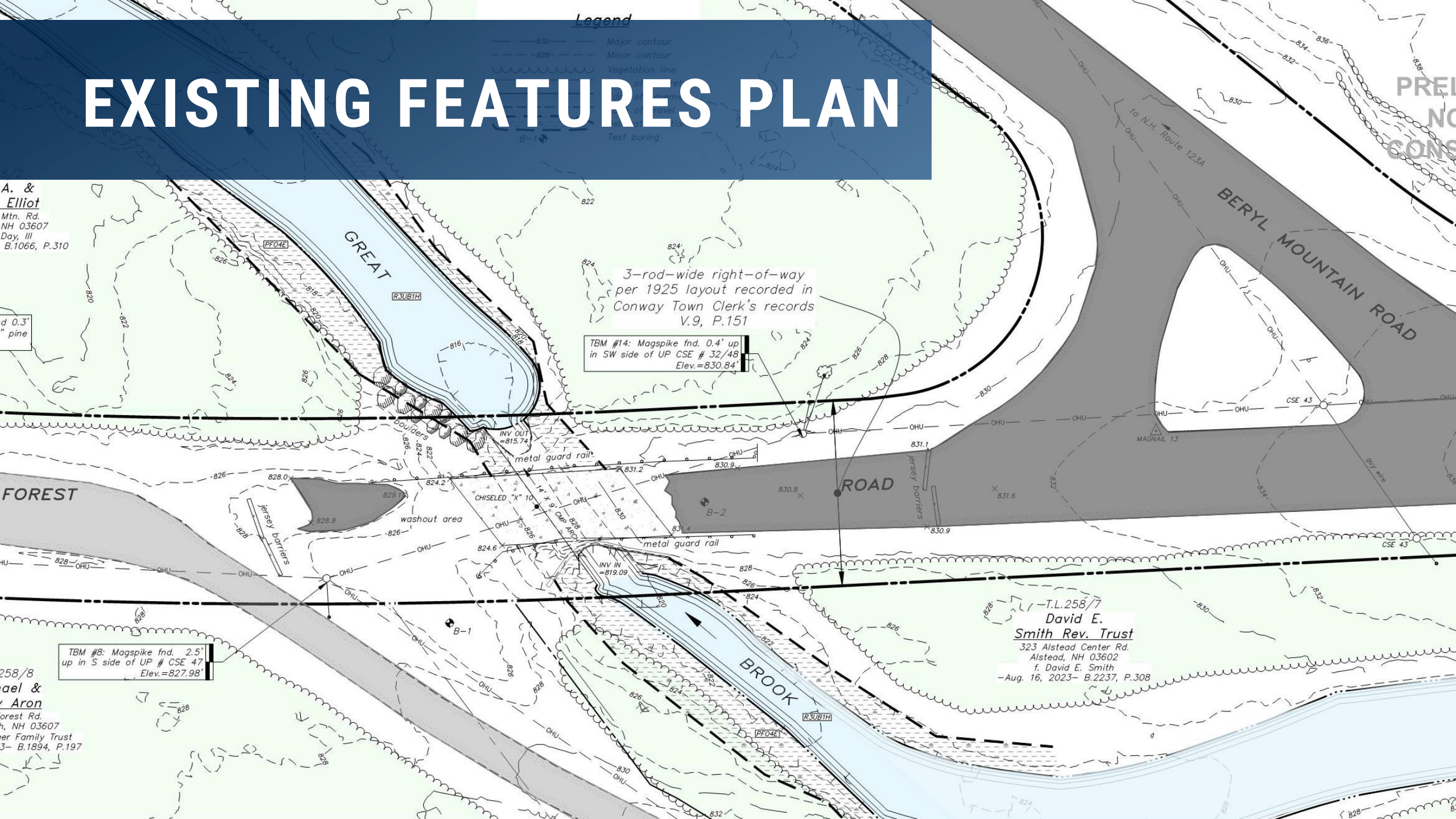
TBM #14: Magspike fnd. 0.4' up in SW side of UP CSE # 32/48 Elev.=830.84

FOREST

258/8
Aron
Forest Rd.
h, NH 03607
er Family Trust
3- B.1894, P.197

TBM #8: Magspike fnd. 2.5' up in S side of UP # CSE 47 Elev.=827.98'

-T.L.258/7
David E. Smith Rev. Trust
323 Alstead Center Rd.
Alstead, NH 03602
f. David E. Smith
-Aug. 16, 2023- B.2237, P.308



EXISTING CONDITIONS

HEB
ENGINEERS



Photo by HEB 05/20/24

EXISTING CONDITIONS

HEB
ENGINEERS



Photo by HEB 03/14/24

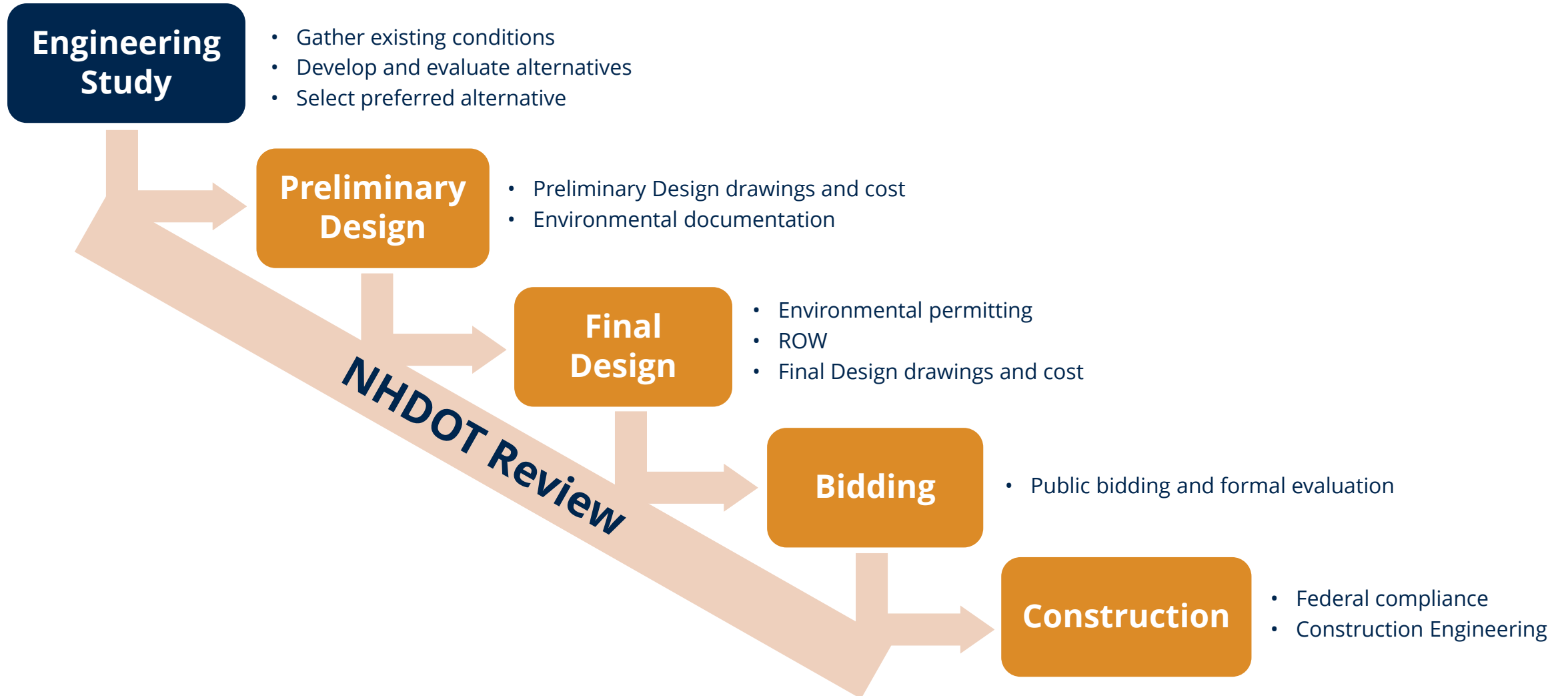
EXISTING CONDITIONS

HEB
ENGINEERS



Photo by HEB 07/09/24

NHDOT LPA PHASES



PROPOSED PROJECT SCHEDULE

EXECUTE PROJECT
AGREEMENT
(COMPLETE)

Spring
2024

ENGINEERING
STUDY

Early
2025

PRELIMINARY
DESIGN

Summer
2025

FINAL DESIGN

Summer
2026

BIDDING

Fall
2026

CONSTRUCTION

2027

PUBLIC INPUT SESSION

- » Held July 29, 2024
- » Key Takeaway: Resiliency is a priority
 - Hydrologic & Hydraulic Analysis
 - Additional Freeboard
 - Investigation of prior storm events



PROJECT PURPOSE

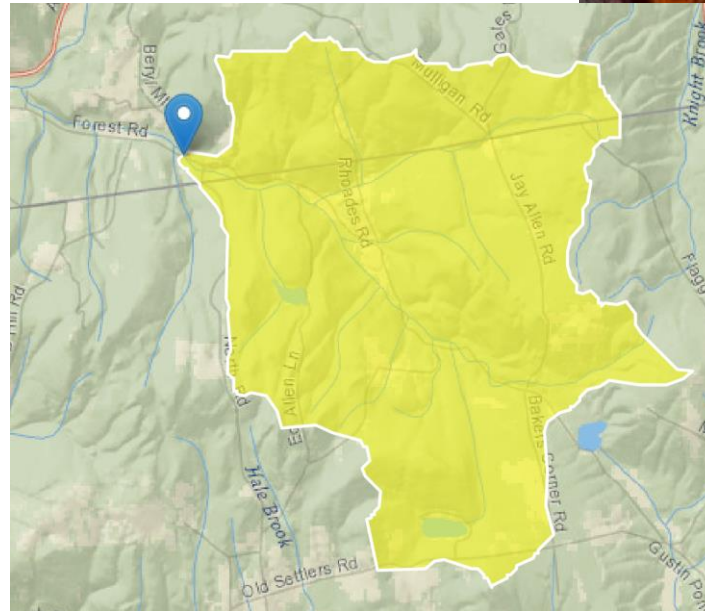
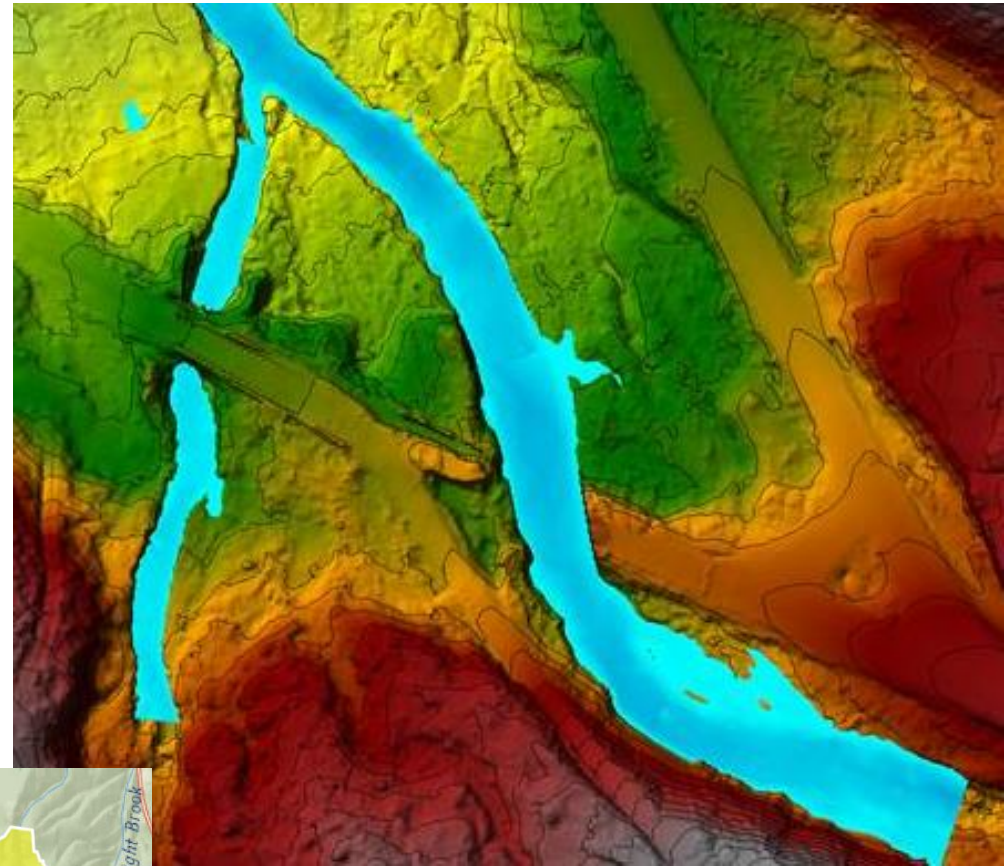
PURPOSE:

- » Restore the **connectivity** of Forest Road
- » Provide a **resilient crossing**
- » Minimize **lifecycle costs**



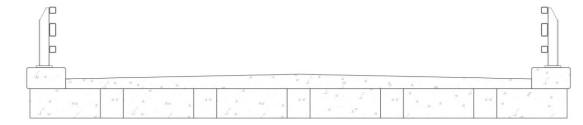
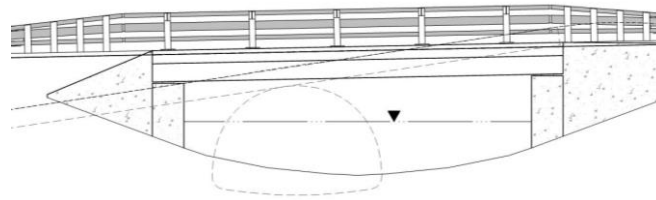
H&H ASSESSMENT

- » Hydrologic and Hydraulic Assessment
- » Two Options Studied:
 - Hydraulic Minimum Span – 22 feet
 - Stream Crossing Compliant Span – 44 feet
- » Storm Frequency Analysis
 - July 10, 2023
 - ~6" of rain in 12 hours
 - 0.2% - 0.5% AEP
 - 200 year – 500 year storm

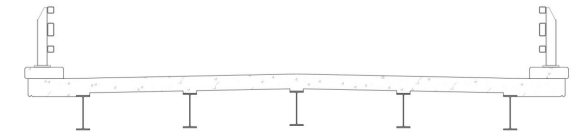


ALTERNATIVE ANALYSIS

Alternative 1: Hydraulic Minimum

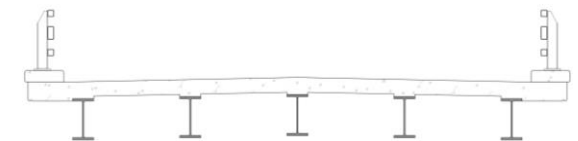
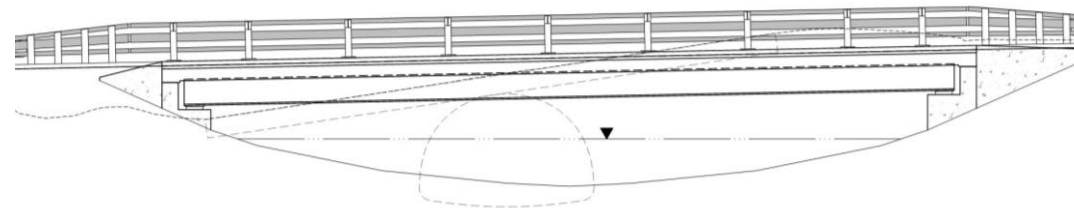


1A: Concrete Girder



1B: Steel Girder

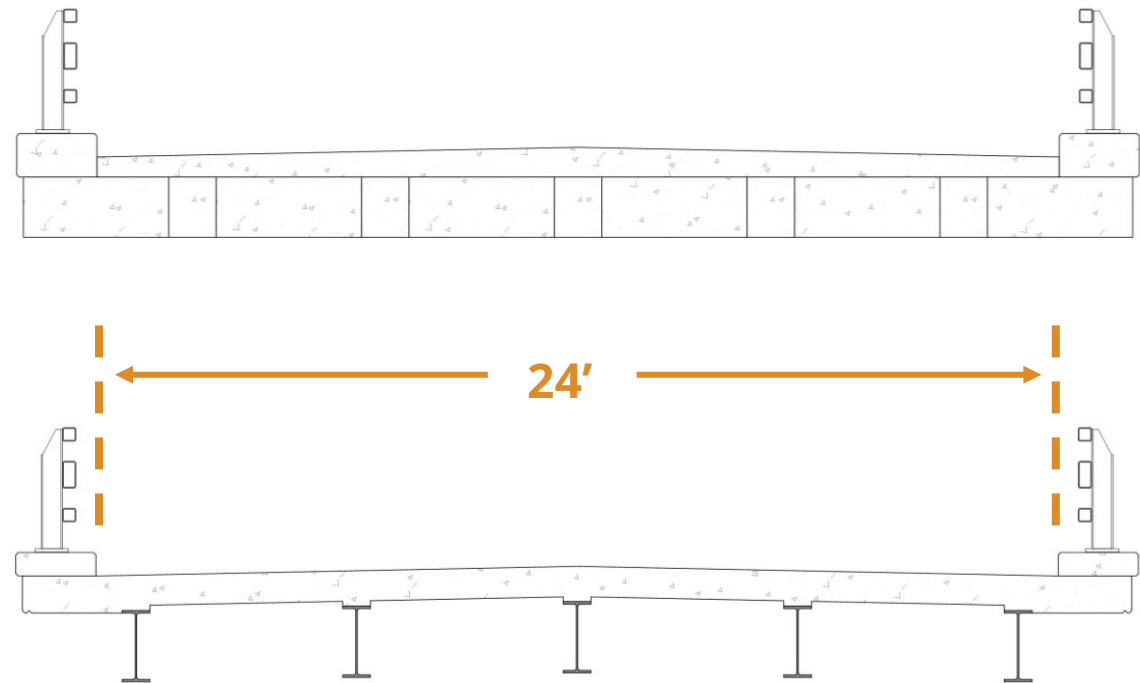
Alternative 2: Stream Crossing Compliant



Steel Girder

TYPICAL CHARACTERISTICS

- » Concrete abutments
- » Exposed concrete deck with stainless steel reinforcing
- » 24' clear width
- » Additional Freeboard: > 2' over Q100
- » T3 Bridge rails
- » 4 – 6 month construction duration
- » 120-year lifespan with regular maintenance, preservation, and rehabilitation activities.



ALTERNATIVE 1: HYDRAULIC MINIMUM



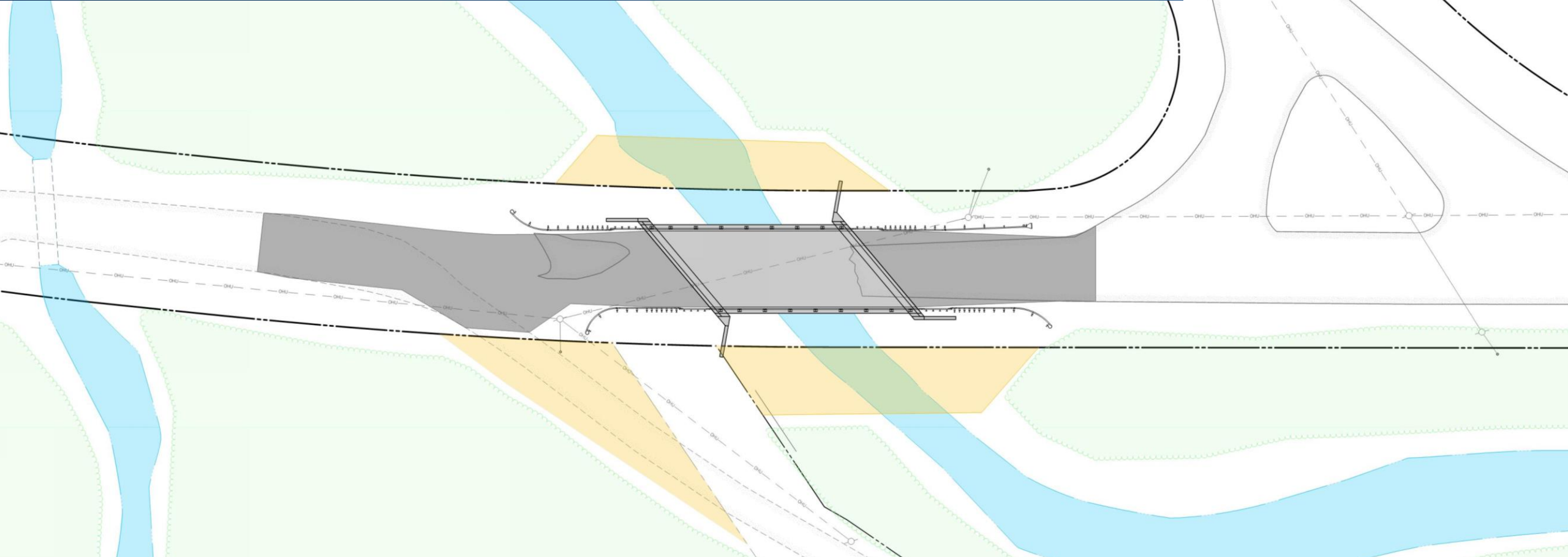
Bridge Span
30'

NHDES Alternative
Design Request
Yes

Project Cost
\$2.1M

Maintenance Costs
\$4k (Avg / Year)

ALTERNATIVE 2: STREAM CROSSING COMPLIANT



Bridge Span
60'

NHDES Alternative
Design Request
No

Project Cost
\$2.7M

Maintenance Costs
\$8k (Avg / Year)

ALTERNATIVE ANALYSIS

	Alternative 1A	Alternative 1B	Alternative 2
Superstructure	Concrete	Steel	Steel
Bridge Span	30'	30'	60'
NHDES Alternative Design Request	Yes	Yes	No
Project Cost	\$2.1M	\$2.1M	\$2.7M
Maintenance Cost (Avg / Year)	\$4k	\$4k	\$8k

ALTERNATIVE ANALYSIS

	Alternative 1A	Alternative 1B	Alternative 2
Superstructure	Concrete	Steel	Steel
Bridge Span	30'	30'	60'
NHDES Alternative Design Request	Yes	Yes	No
Project Cost	\$2.1M	\$2.1M	\$2.7M
Maintenance Cost (Avg / Year)	\$4k	\$4k	\$8k

**Flood
Resiliency**

Lifecycle Costs

NEXT STEPS

**Submit Draft
Engineering
Study Report**

**Select the
Preferred
Alternative**

**Submit Final
Engineering
Study Report to
NHDOT**

An aerial photograph of a wooded area with a road and some buildings. The image is dark and has a blue tint. A road runs diagonally across the center. There are several buildings scattered throughout the area, some with dark roofs. The trees are dense and green.

CONTACT:

Charlotte Comeau

Town of Acworth
(603) 835-6879
townoff@sover.net

Chris Fournier, PE

HEB Engineers, Inc.
(603) 356-6936
cfournier@hebengineers.com