HEB ENGINEERS

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.

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

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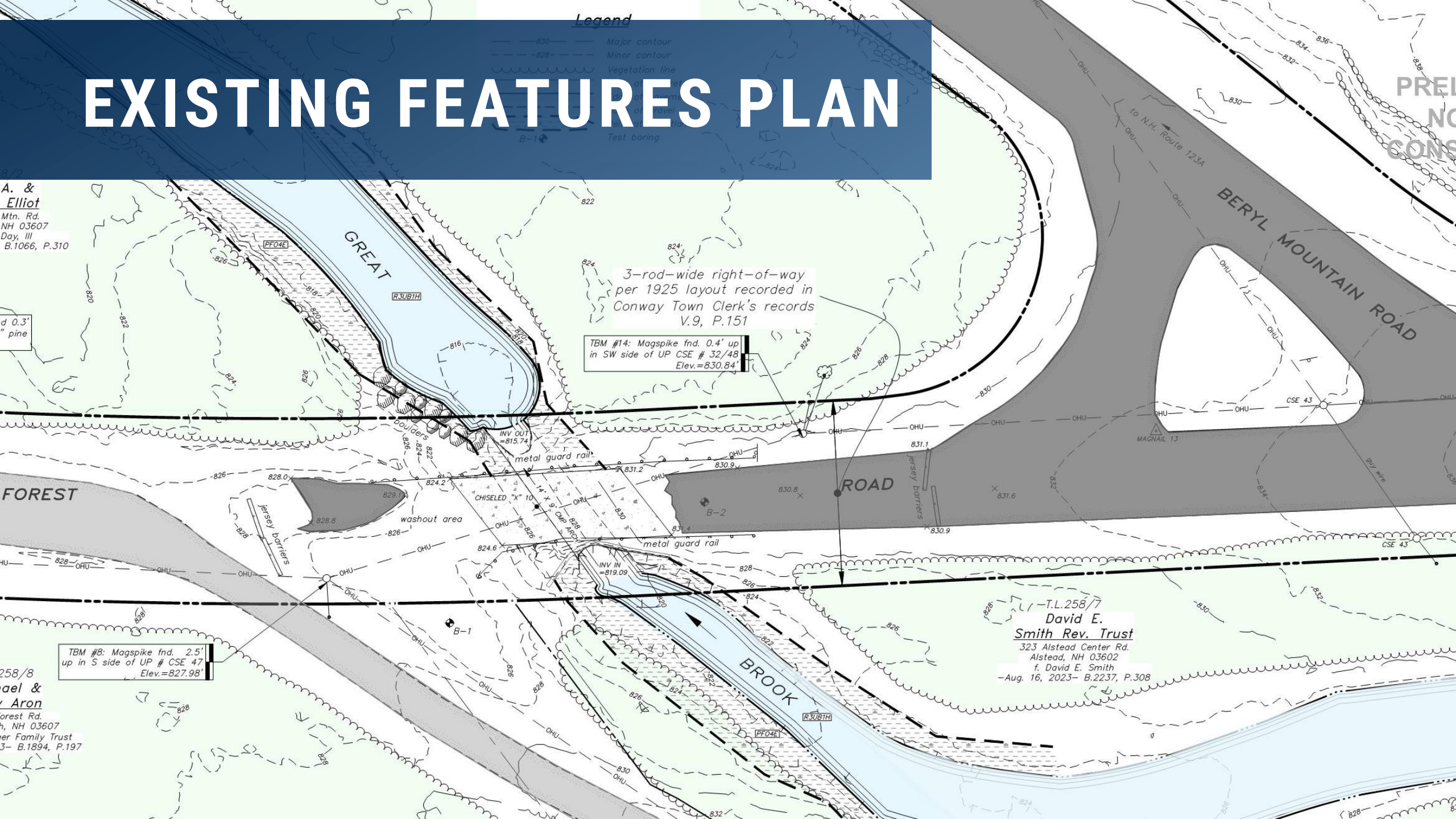
Image Source: GraniteView.unh.edu

EXISTING FEATURES PLAN



EXISTING CONDITIONS

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Photo by HEB 05/20/24

EXISTING CONDITIONS

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Photo by HEB 03/14/24

EXISTING CONDITIONS

Photo by HEB 07/09/24

NHDOT LPA PHASES

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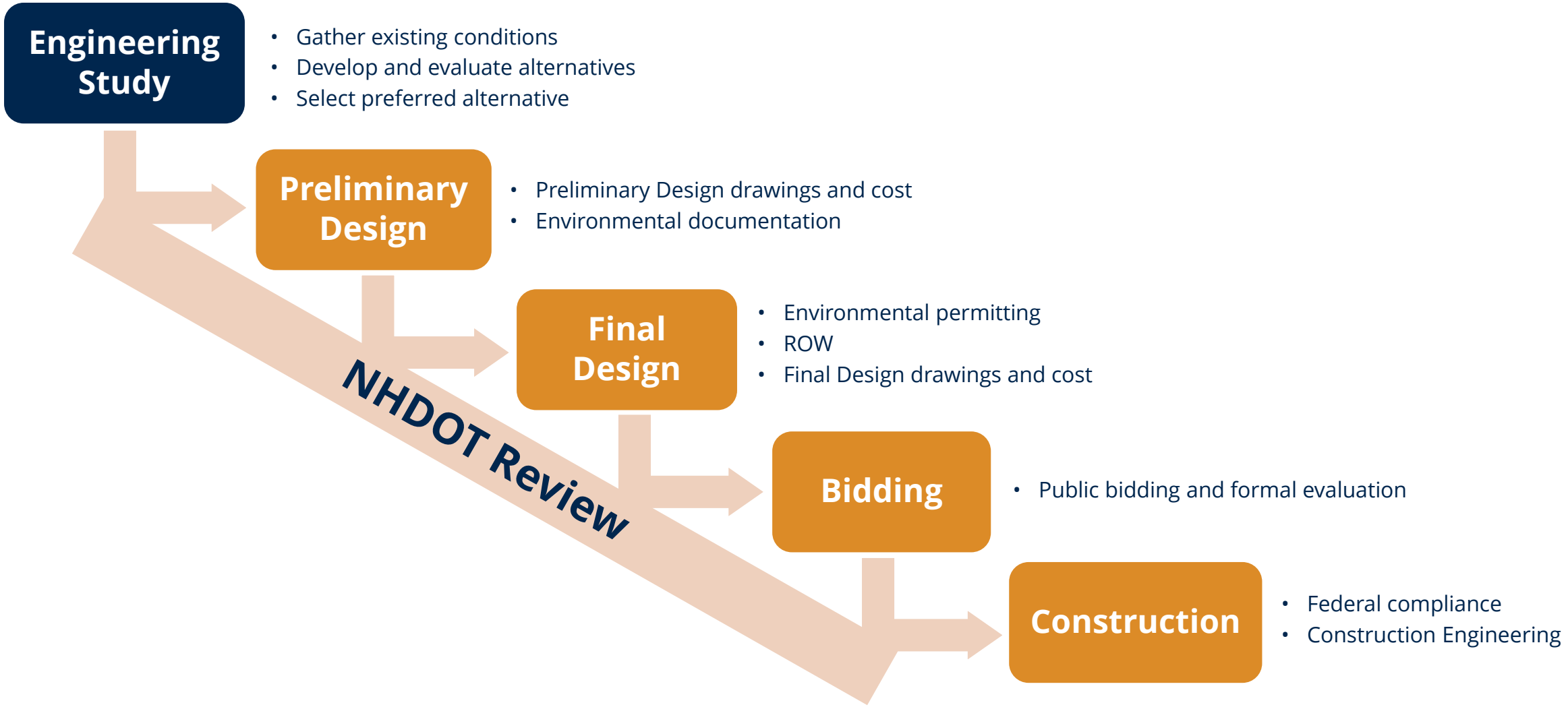
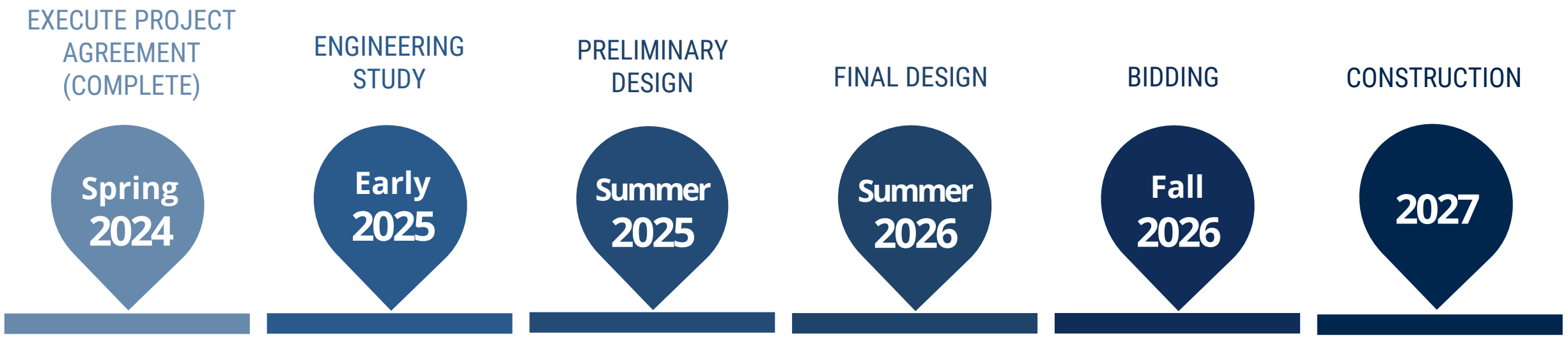


PROPOSED PROJECT SCHEDULE



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

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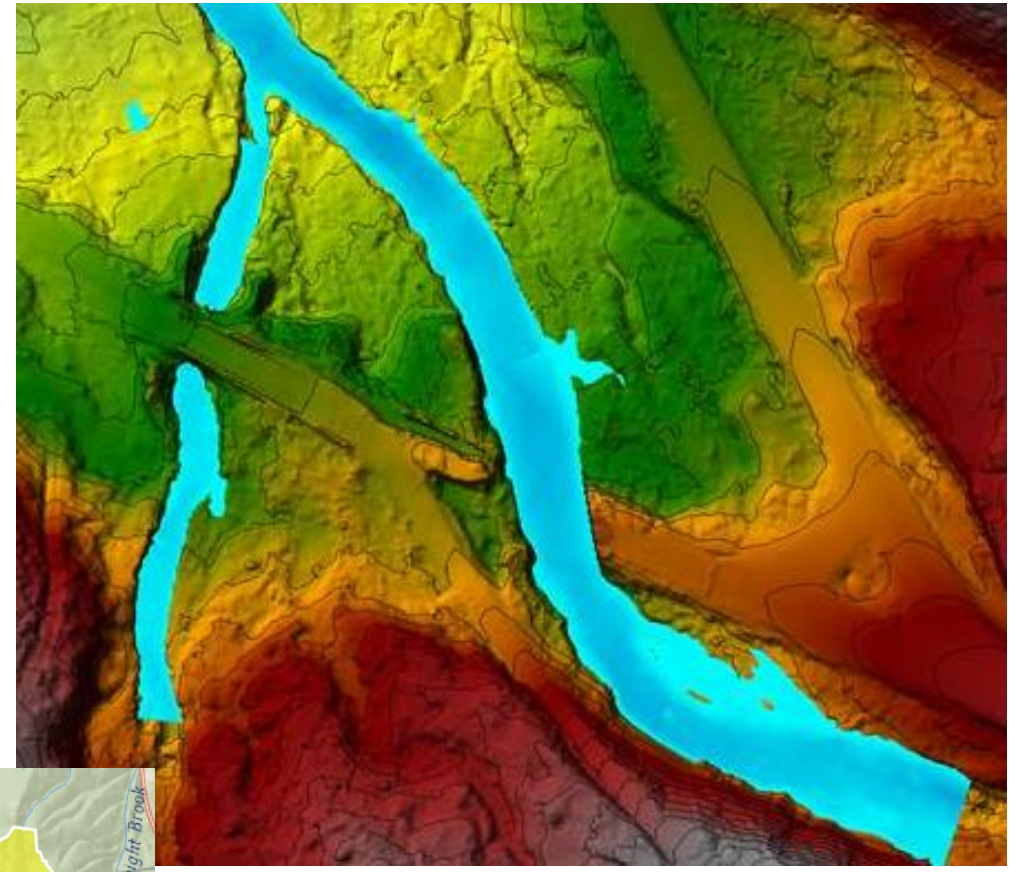
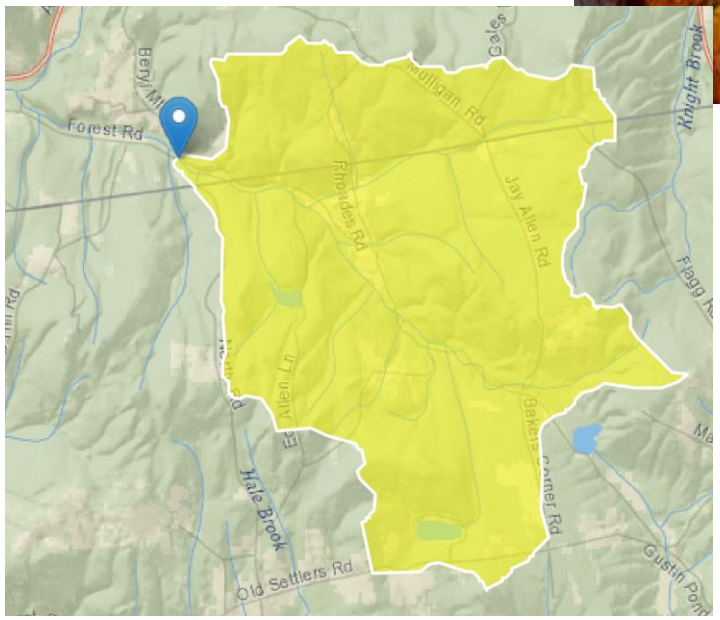
PURPOSE:

- **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



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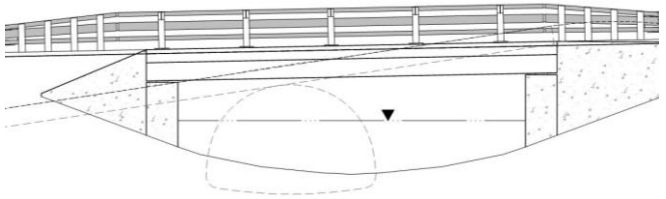
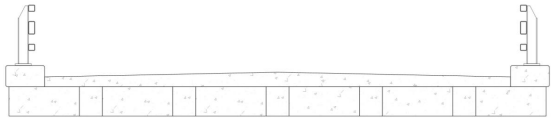
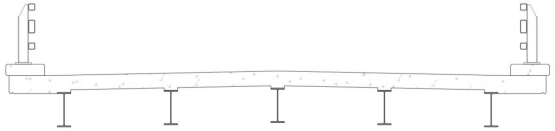
ALTERNATIVE ANALYSIS

Alternative 1:
Hydraulic Minimum



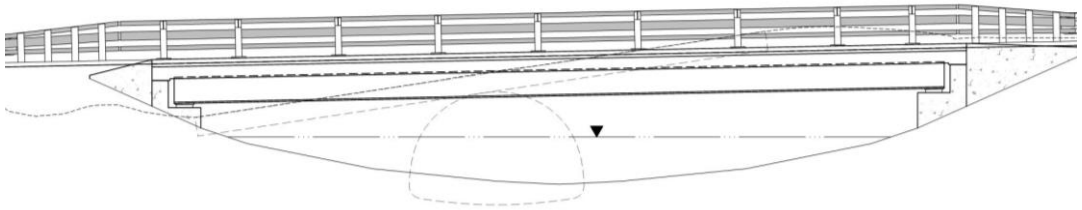


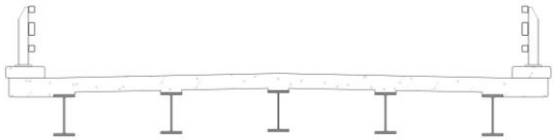
1A: Concrete Girder



1B: Steel Girder

Alternative 2:
Stream Crossing Compliant

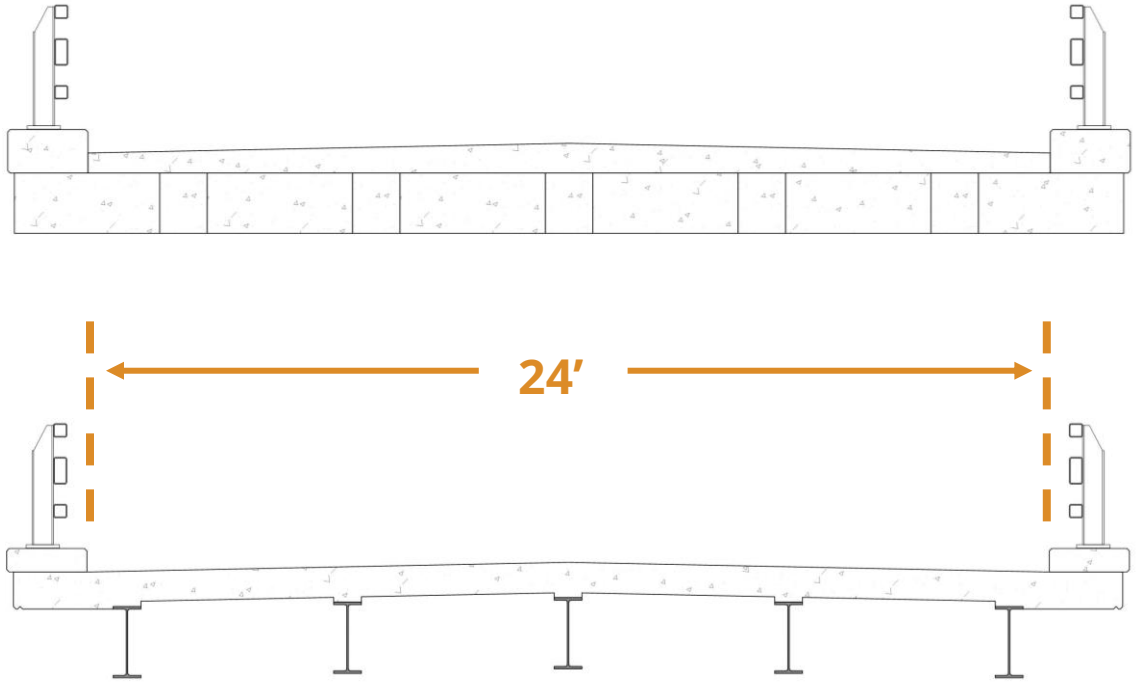




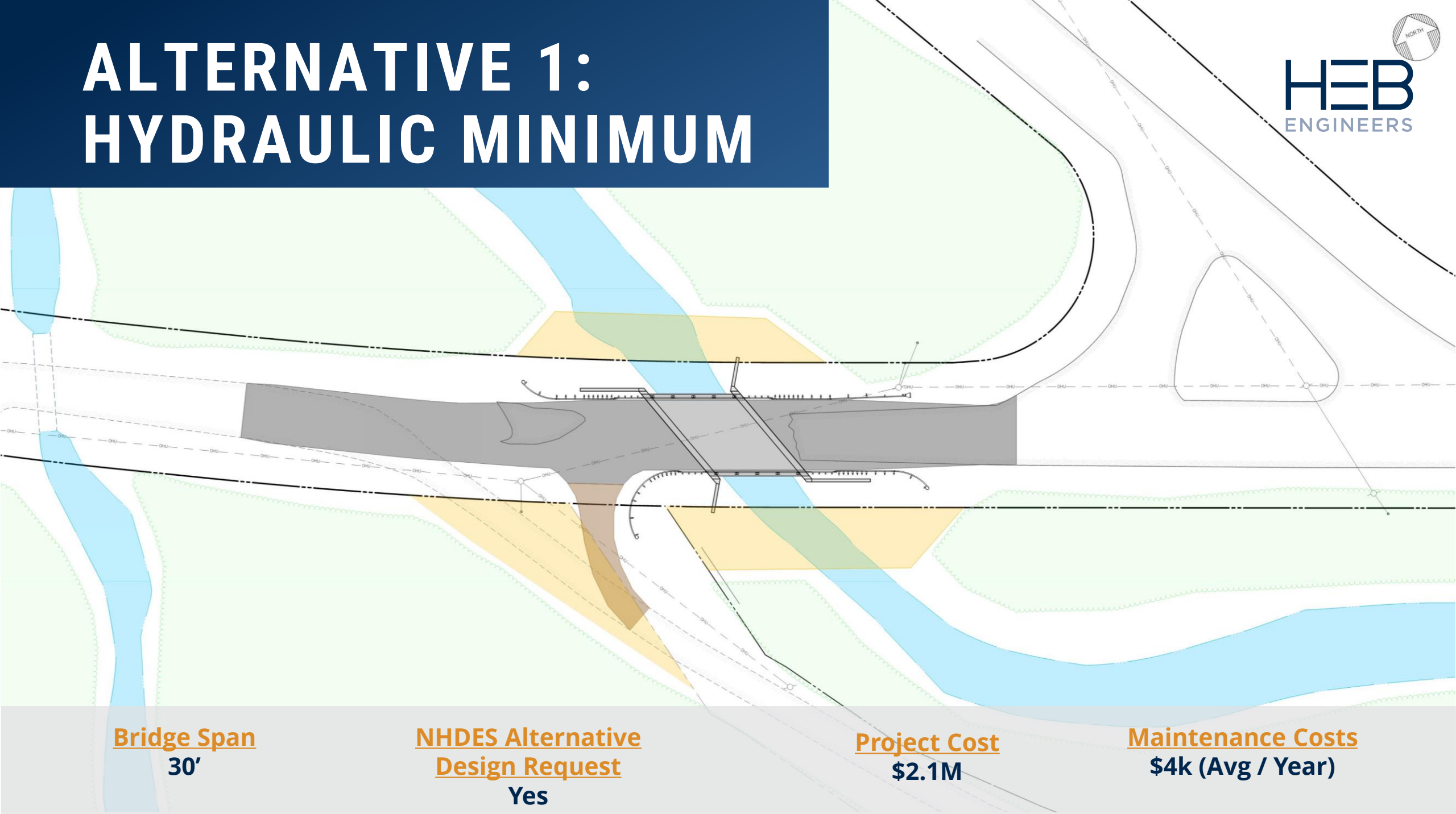
Steel Girder

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

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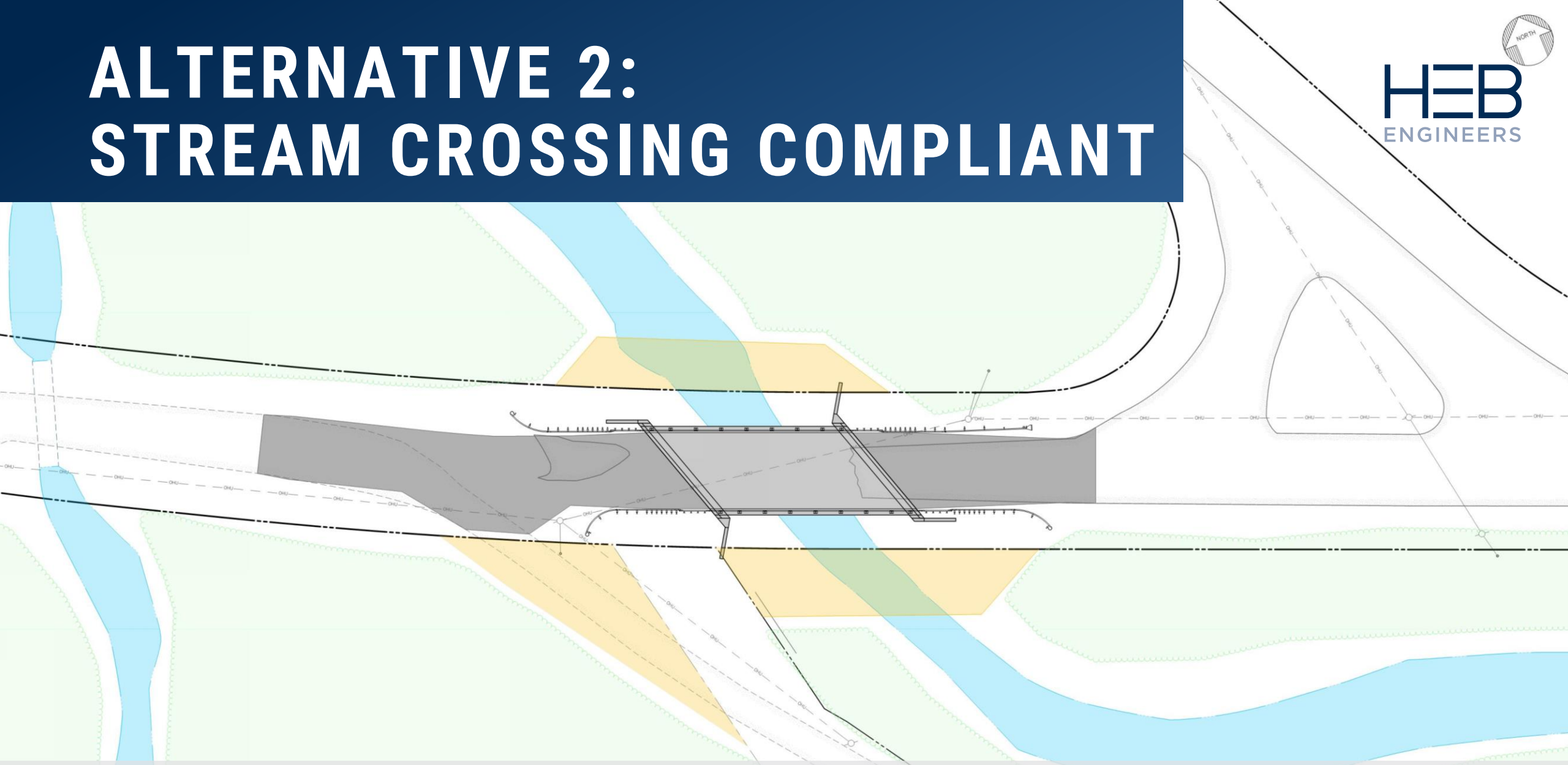

Bridge Span
60’

NHDES Alternative Design Request
No

Project Cost
$2.7M

Maintenance Costs
$8k (Avg / Year)

ALTERNATIVE ANALYSIS

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	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

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	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

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- Submit Draft Engineering Study Report
- Select the Preferred Alternative
- Submit Final Engineering Study Report to NHDOT

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