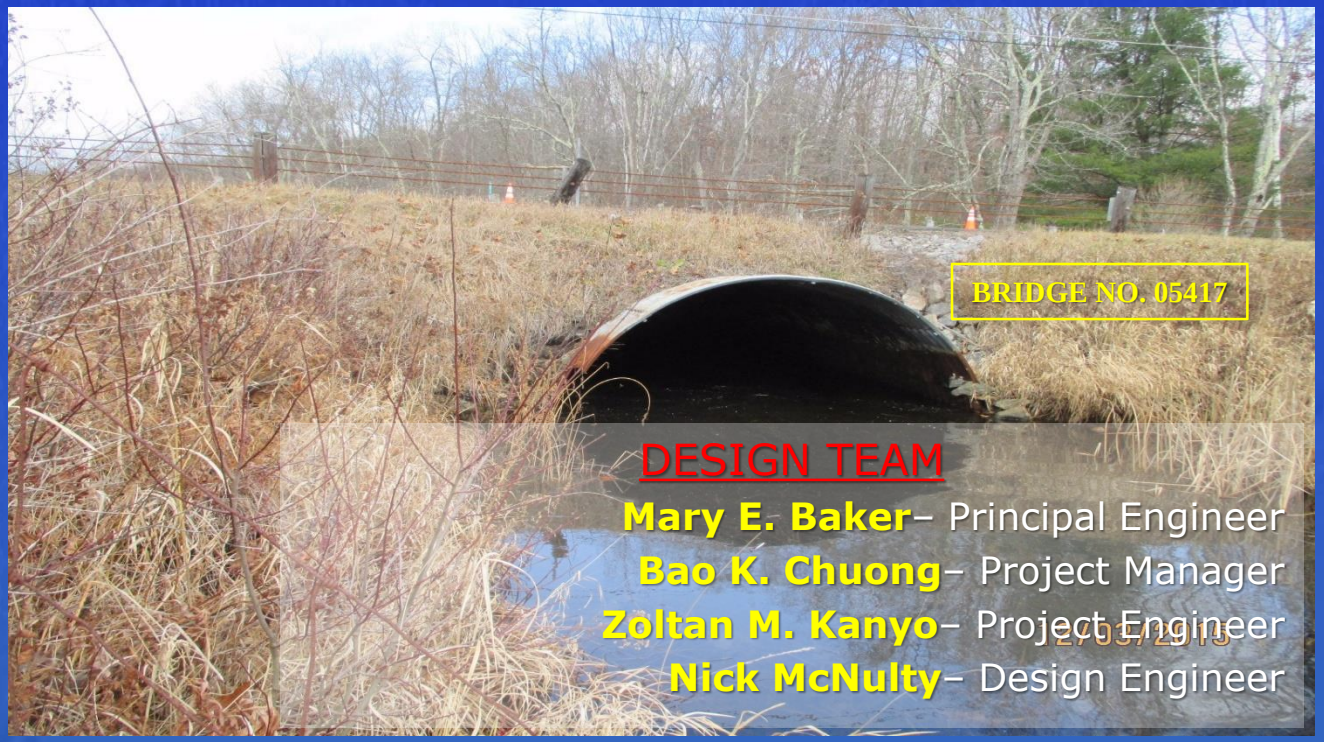
Public Information Meeting

October 9, 2019

State Project No. 0086-0092
Replacement of Bridge No. 05417
Route 109 over Nylbs Brook
Morris, CT



DESIGN TEAM

Mary E. Baker– Principal Engineer
Bao K. Chuong– Project Manager
Zoltan M. Kanyo– Project Engineer
Nick McNulty– Design Engineer

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Location of Project

Location of Project

Route 109 (Eastbound towards John Weik Road)

Route 109 (Westbound towards Cavalry Hill Road)

CTDOT Role and Mission

Responsible for engineering design, construction and inspection of transportation projects.

Our mission is to allocate State/Federal bridge program funds to address identified structural deficiencies on eligible bridges.

Project Goals

- Address poor condition of Bridge No. 05417
- Minimize disturbance to traveling public
- Complete construction in a timely manner
- Effectively use funds

Existing Bridge Data

- Bridge Number 05417
- Originally built in 1956
- Structure type: Single span corrugated steel pipe-arch culvert with 3′-6″ of fill over structure.

- Function
  - Carries Route 109 (Lakeside Road) over Nylbs Brook
  - Estimated Average Daily Traffic (ADT, 2015) is 2,100 vehicles (3% trucks)

- Dimensions
  - Opening: Width = 11′-10″ Height = 7′-7″
  - Culvert Length = 62′-4″

Existing Conditions

- Large perforations in metal culvert leading to loss of fill.
- Significant pitting and deterioration along waterline throughout the structure.

Existing Site Conditions

Inlet

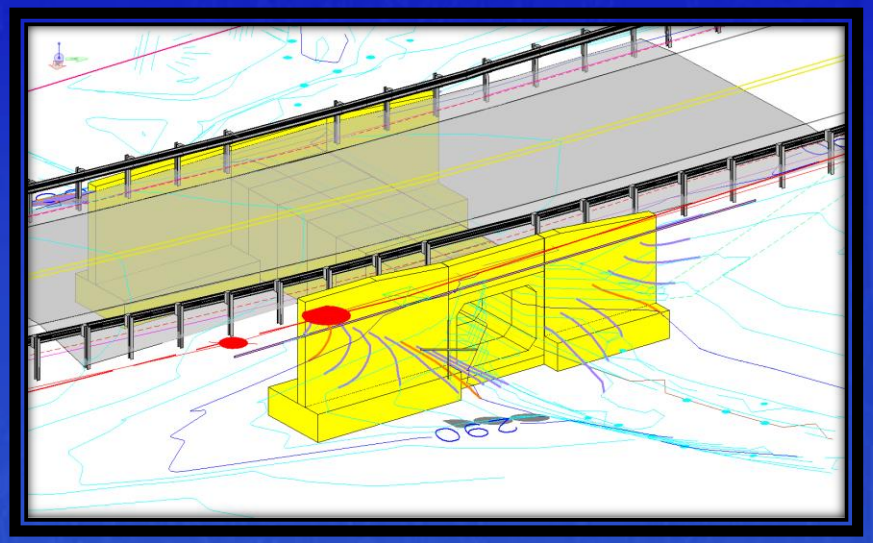
Existing Site Conditions

Outlet

Proposed Project No. 0086-0092

Replacement of Bridge No. 05417

Existing Structure:



Proposed Structure:

Reason:

- Poor condition of superstructure (rating = 4): Deterioration and pitting throughout length of metal culvert. Large perforations and loss of fill found along waterline.
- Replacement structure type meets all of the site constraints

Scope:

- Replace the existing bridge with a precast, 4-sided 10′ x 8′ box culvert buried 1.5′ in natural streambed material.

Replacement of 24” HDPE Pipe

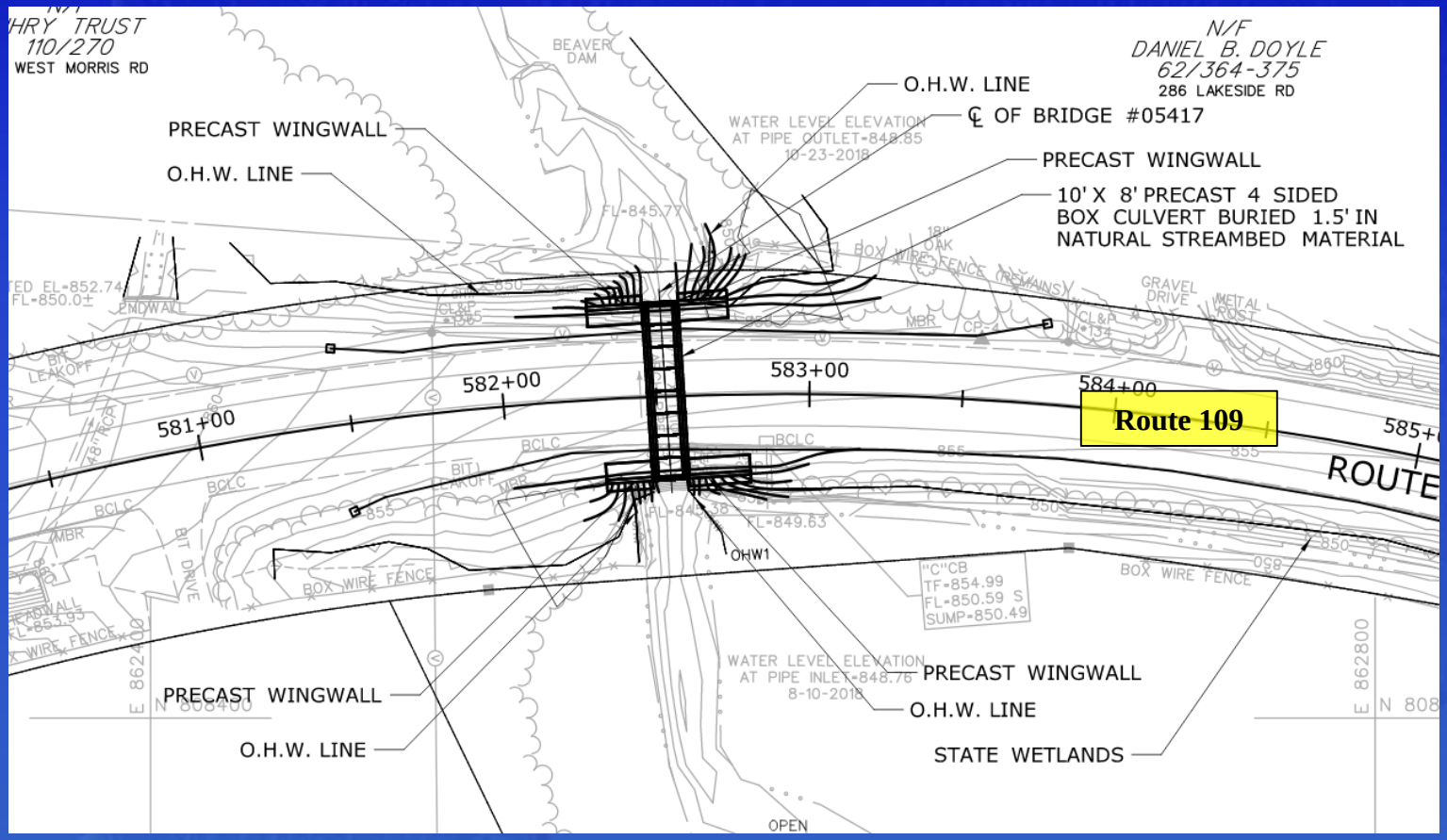
- 24” HDPE approximately 425 feet to the East near the location of the transfer station.
- Hydraulically inadequate:
  - overtops the roadway at any storm close to or exceeding the 1-year storm event.
- Replace with a 5’-0” x 2’-0” precast concrete box culvert

Selected Structure Benefits

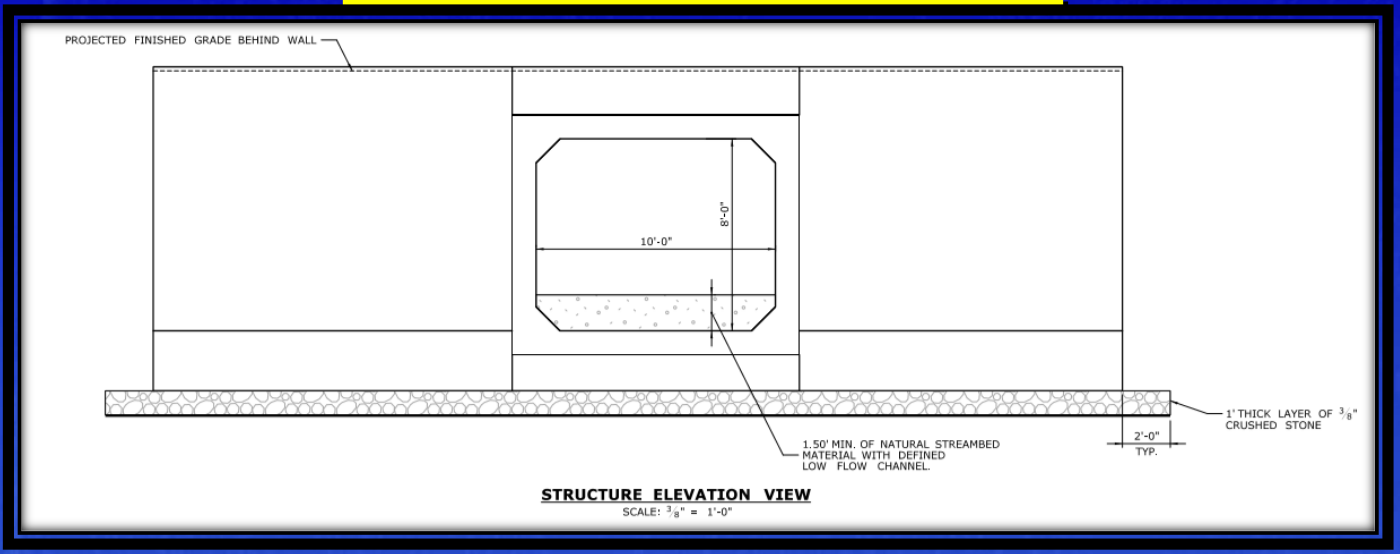
- ***Meets DEEP Fisheries recommendations:***
  - *Invert elevations set 1.5 ft lower than existing to provide 1.5 ft of natural streambed material within culvert while keeping the streambed elevations at inverts matching existing.*
- ***Designed for 100-yr flood frequency to be conveyed while maintaining greater than one foot of freeboard from the edge of Route 109***
- ***Addresses any potential scour concerns without need for a deep foundation***
- ***Limits duration of temporary watercourse impact to no more than 2 weeks***
- ***Allows accelerated construction (ABC) resulting in a short construction duration (1 season total, 14 day road closure) that falls within the DEEP Fisheries unconfined instream work restrictions***
- **Anticipated permits: ACOE PCN, IWRD General, FMC,**

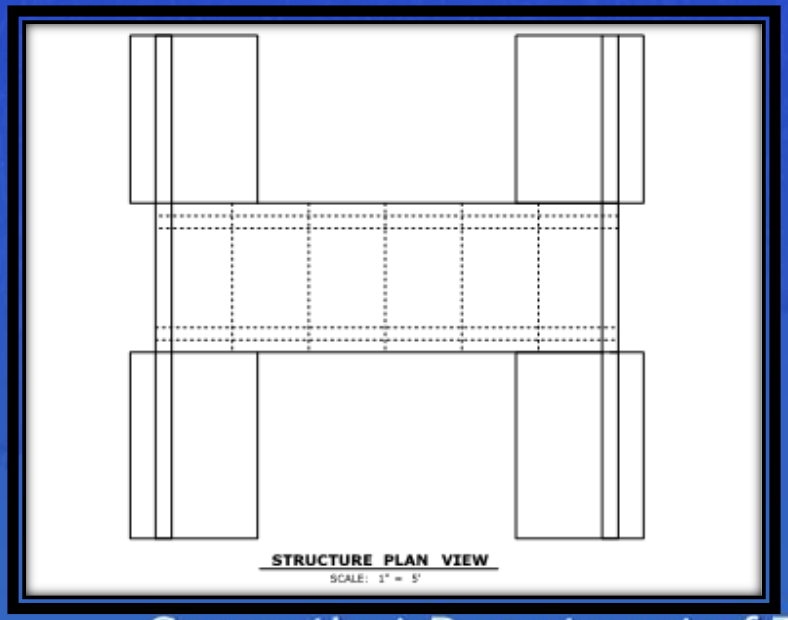
  CT-GP Addendum

Structural Plan

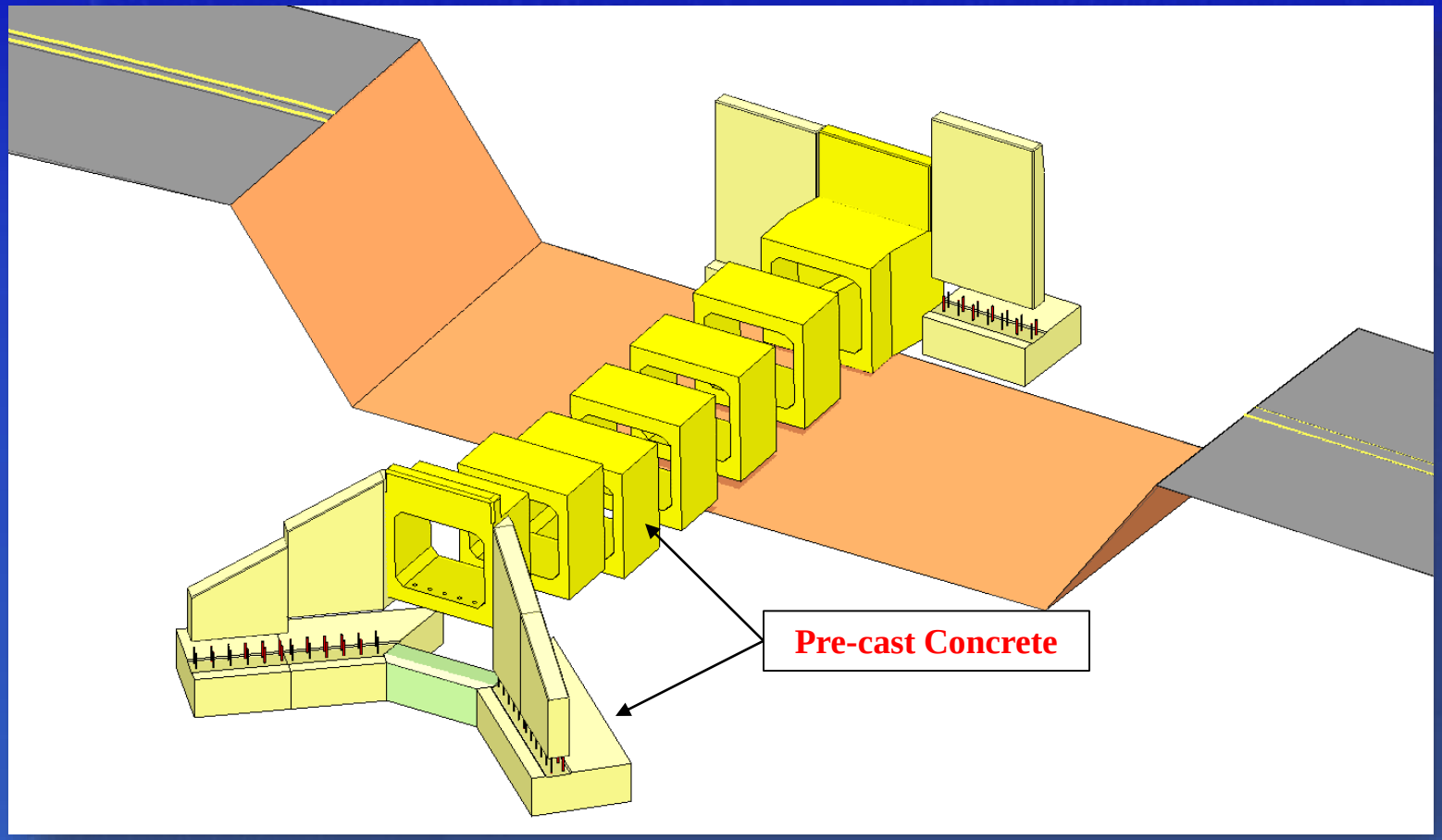


Structural Plan



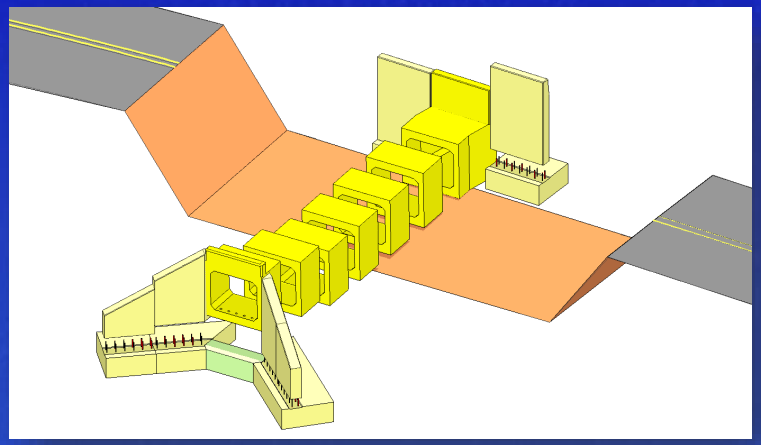


Accelerated Bridge Construction



Benefits of Accelerated Bridge Construction (ABC)

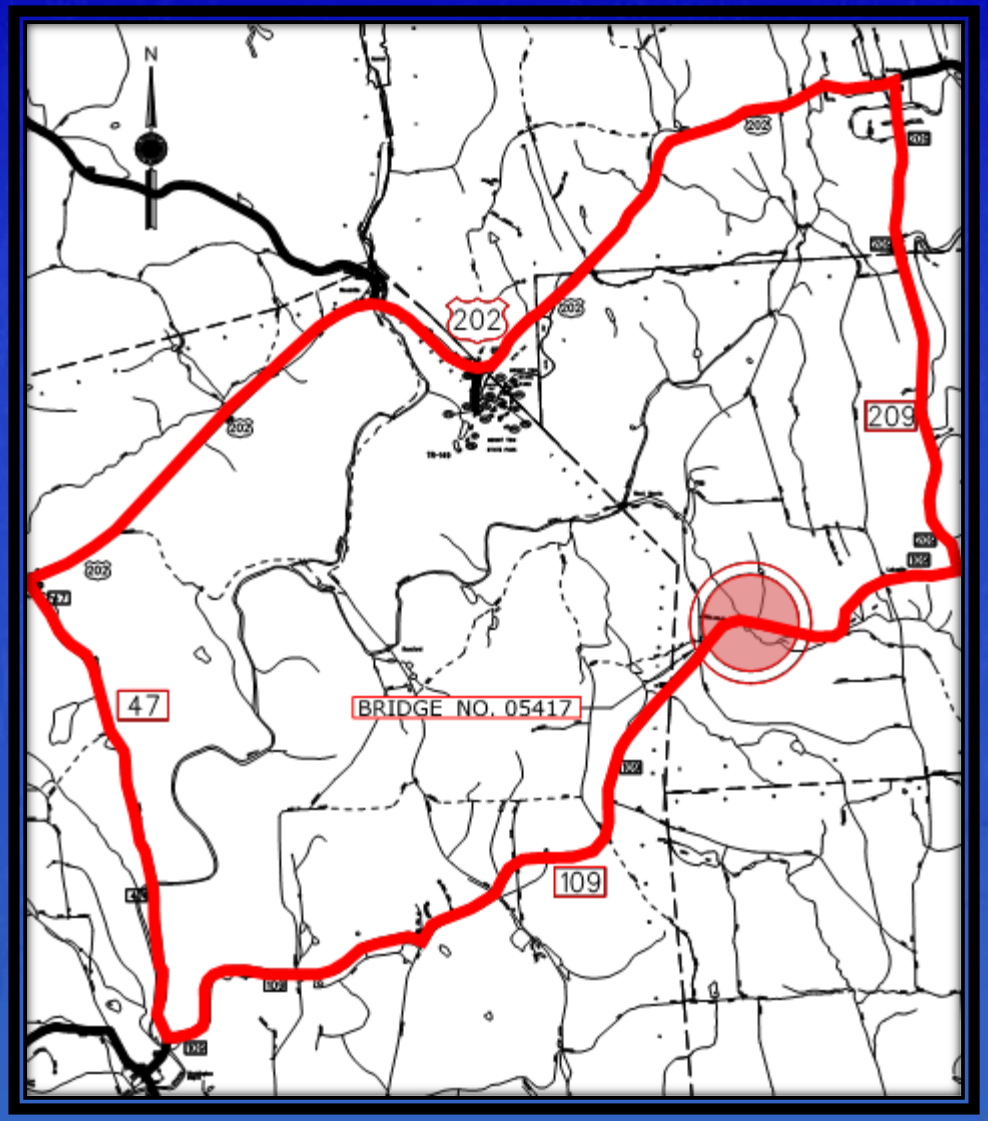
- Minimize traffic impacts
- Improve work-zone safety
- Reduce total project delivery time



- Reduce project costs incurred by temporary structures, remote site locations and limited construction periods
- Improve site constructability
- Reduce environmental impacts

Proposed Detour Plan

- Preliminary analysis deemed closure/detour feasible.
- Adds approximately 6.5 miles to through traffic.
- Proposed detour route is the same that was used for the construction of Project 150-131, bridge No. 06786.



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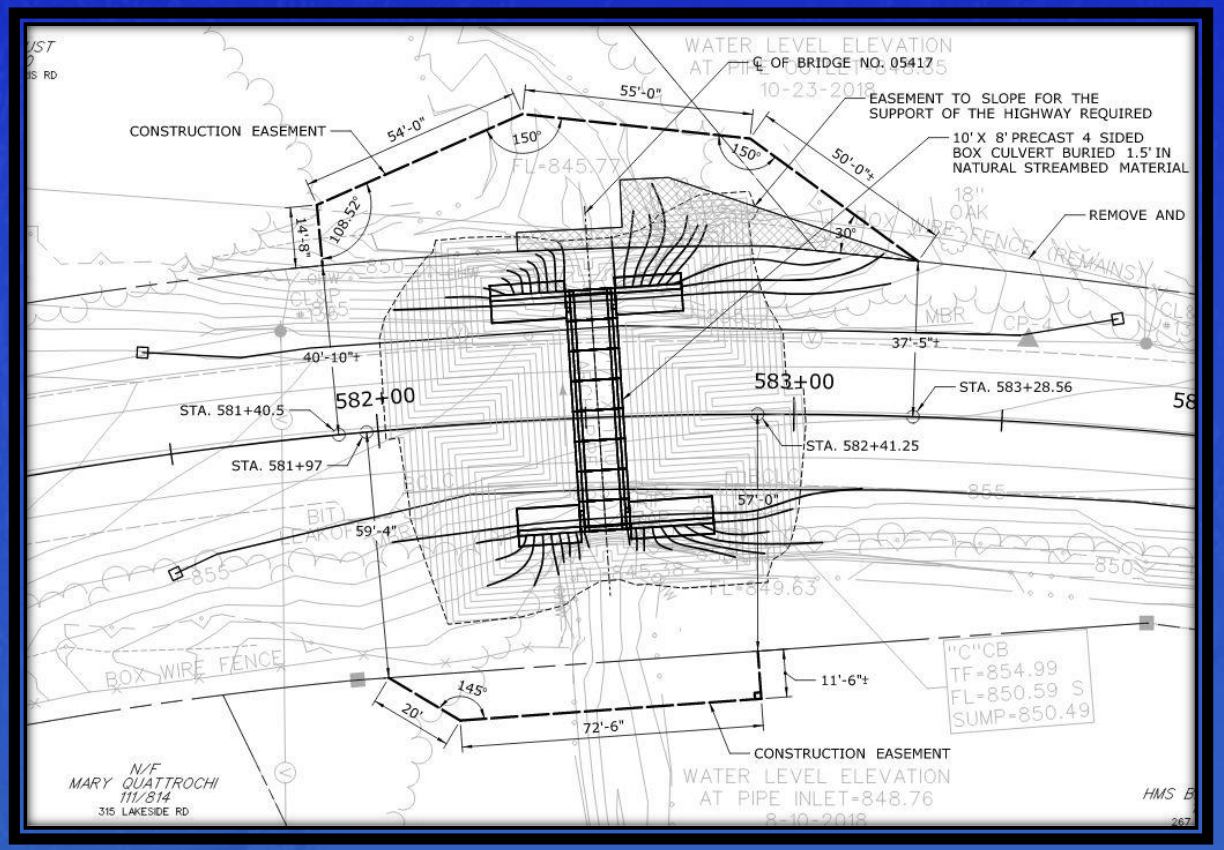
Preliminary Rights of Way Impacts



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ROW - Relevant Law

- **State of Connecticut**

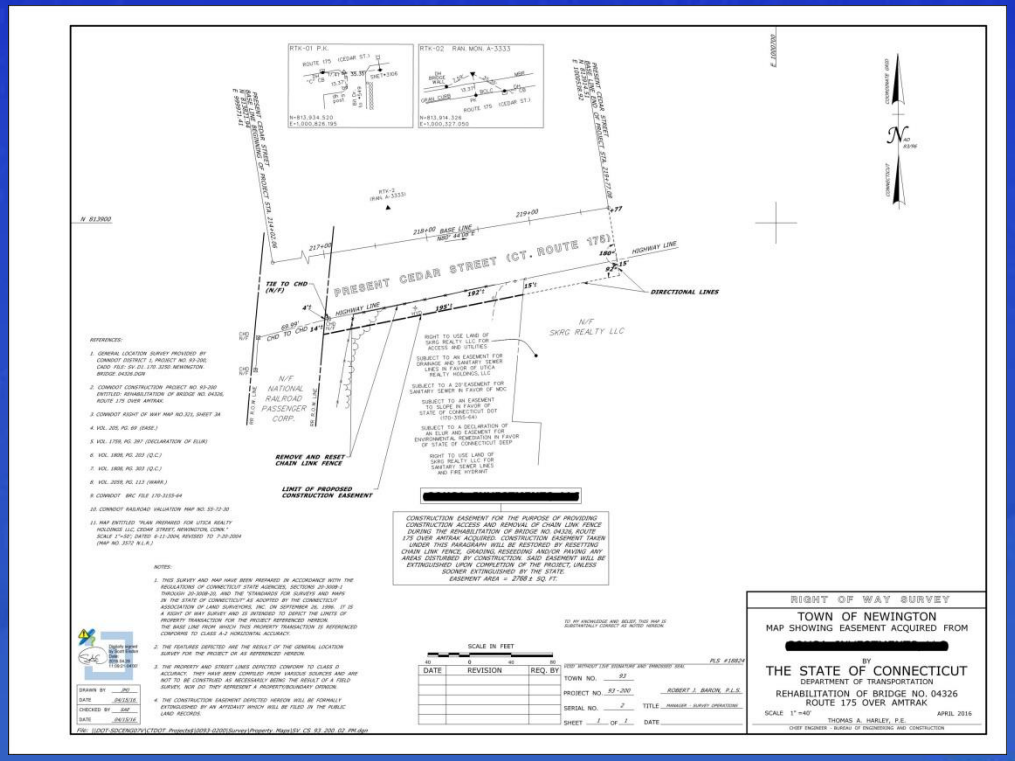
  C.G.S. Sections 13a-73 & 13a-98e

- **Federal**

  Uniform Relocation Assistance and Real Properties Acquisition Policies Act of 1970, as amended.

ROW - Acquisition Process

- Letter of Intent to Acquire
- Valuation
- Offer of Just Compensation
- Negotiation
- Acquisition
  - Agreement
  - Eminent Domain/Condemnation
    - » 6 month appeal period



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Project Schedule & Cost

Schedule:

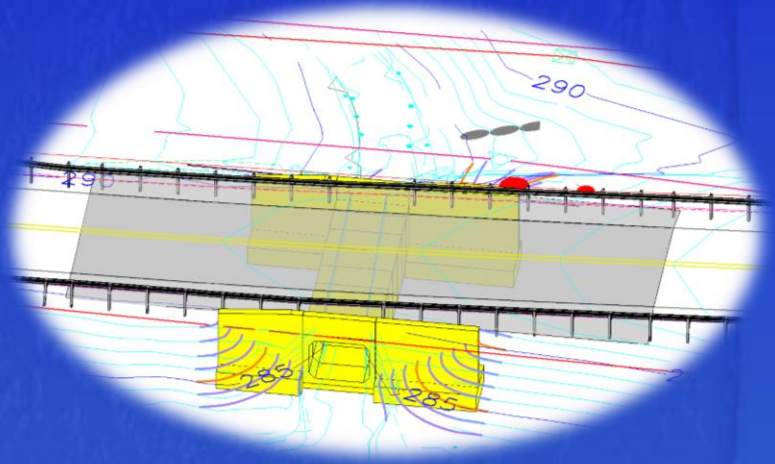
- Construction is anticipated to start in April 2022

Cost:

- Approximately $1,200,000

Duration:

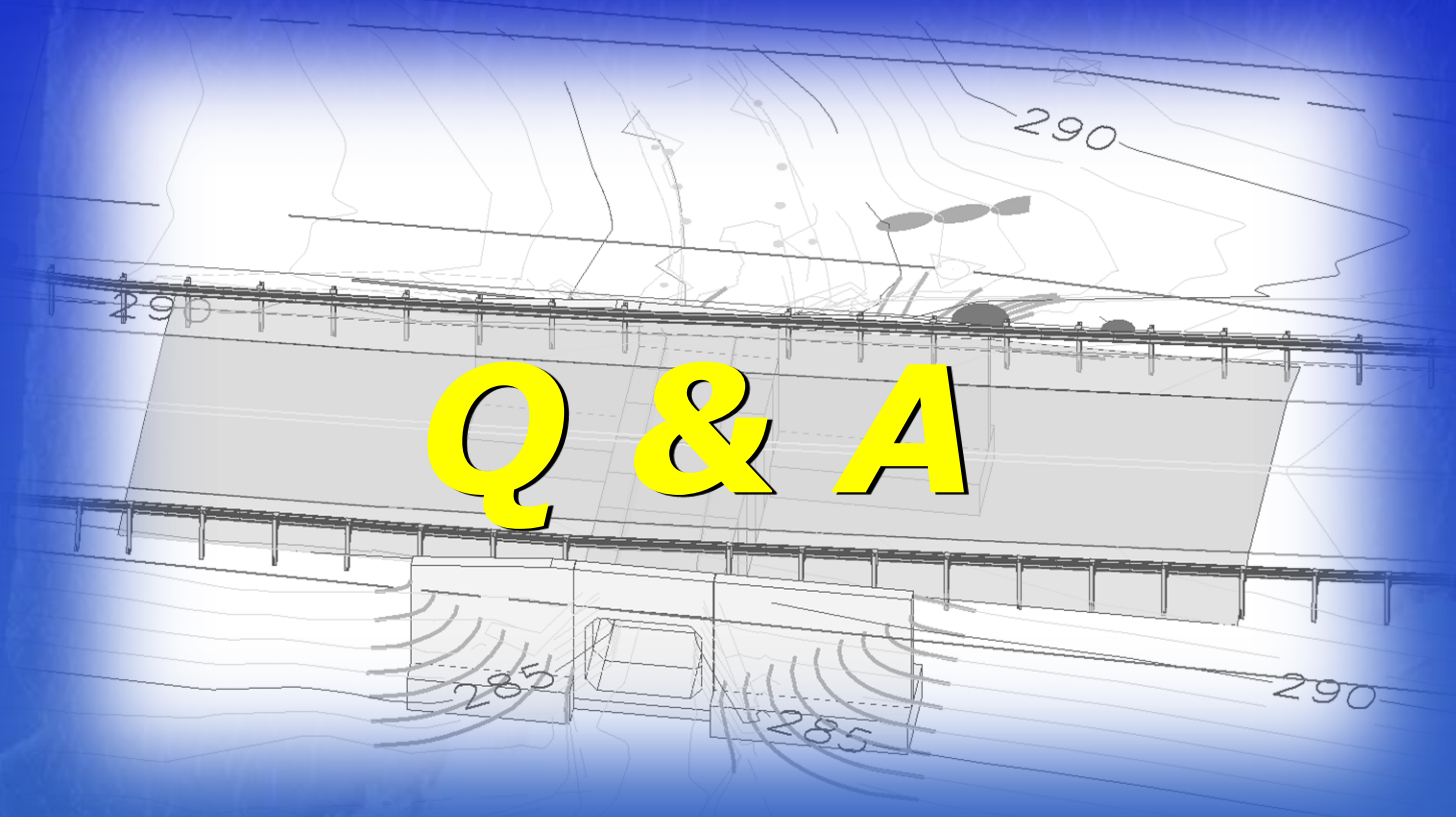
- Overall: Approximately 5 months



Construction Method:

- Accelerated Bridge Construction (ABC)
- Road closure: 14 consecutive days in Late July/Early August of 2022

THANK YOU FOR YOUR TIME AND ATTENTION!!



Q & A

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For Additional Information

- To access this presentation via the internet, please go to: "Calendar of DOT Events" on the Connecticut DOT website (www.ct.gov/dot)

- **Contact us:**

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