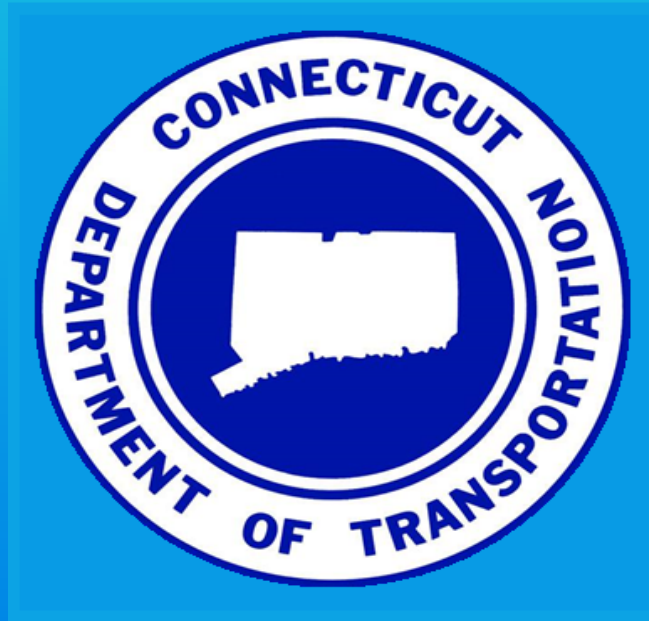


FORECASTING CONFLICTS

- UTILITIES -

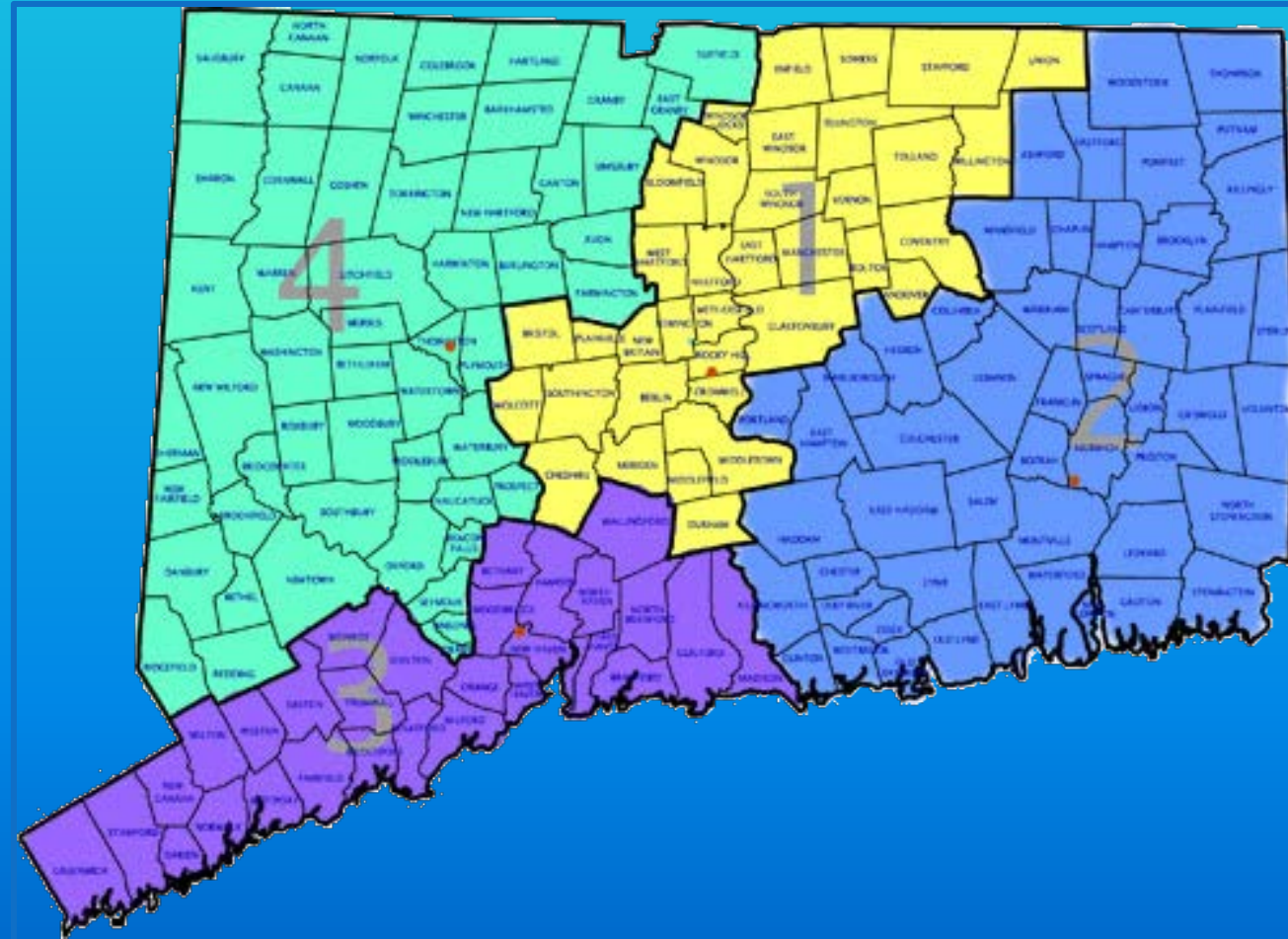


Seth Burgess, P.E.

Transportation Engineer III (CE)

District 2 - Bridge Maintenance

CTDOT BRIDGE MAINTENANCE





POTENTIAL CONFLICTS

- Additional structures (bridges, culverts, drainage, pipes)
- Potential Developments – Residential/Commercial
- Original Design Aesthetics
- Staging Areas / Storage
- Any possible future impedance
- UTILITIES!

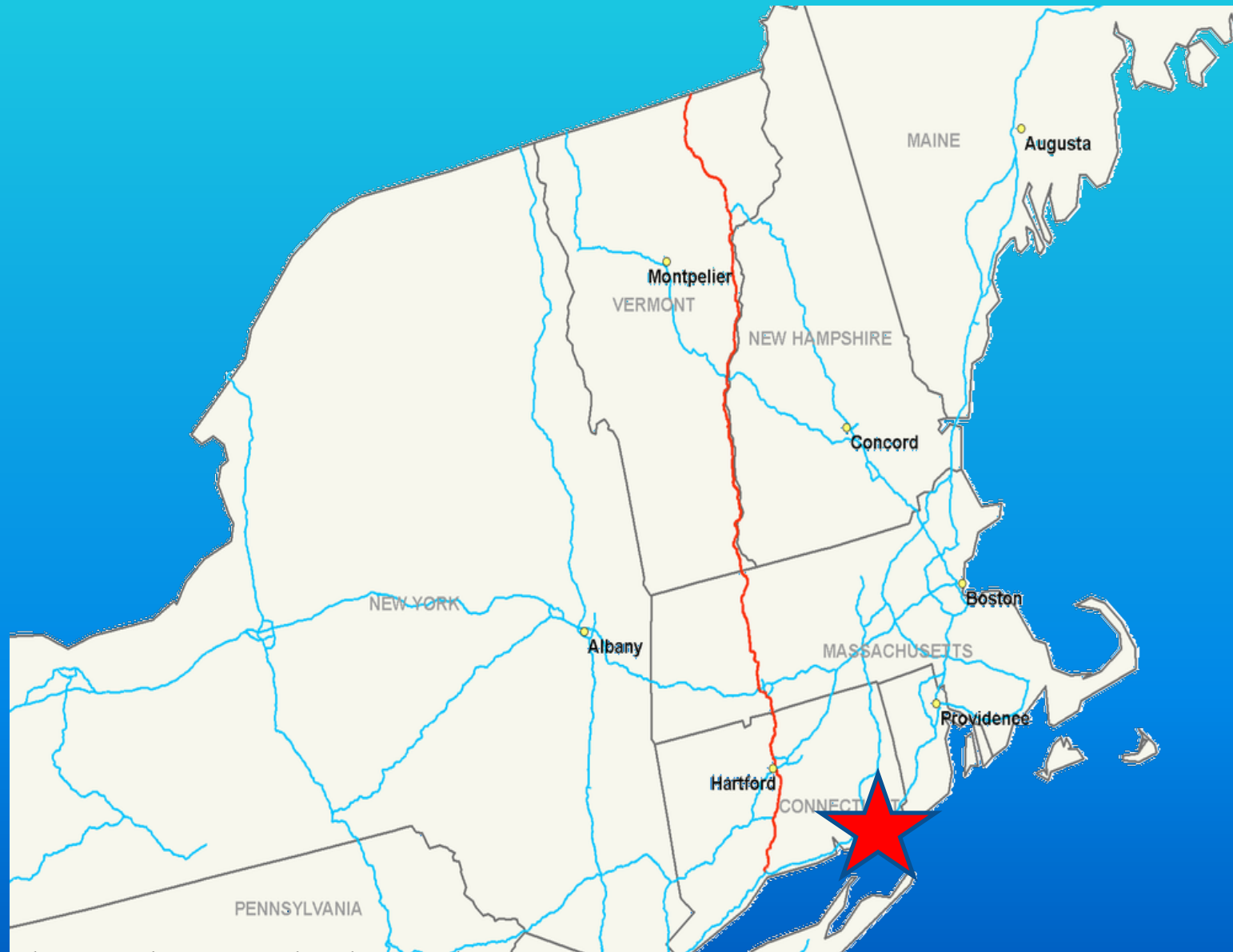
OVERVIEW



BRIDGE #'s 01791 & 01792

- Built in 1964
- Carries I-95NB & SB over Route 27 in Stonington, CT
- Adjacent to Mystic Aquarium and major throughway for the Mystic Seaboard Area
- Five overhead lines were attached to underside of bridges (Communication/Cable, Power, Fire Alert), plus DOT Highway Lighting Conduit
- Close proximity prevented ability to gain access

OVERVIEW



BRIDGE #'s 01791 & 01792





HISTORY

- Construction Project Initiated but scope not properly developed – communication....
- Beam end and Bearing Preservation Project was closed out late 2013
- Overall project included eight sites total
- Utility relocation costs not included for four sites

HISTORY



- Total Estimated costs for four sites = \$1.1M in 2012
- \$470,000 just for Route 27
- Funding limitations prevented inclusion into project, Construction unable to address
- Deterioration continued to progress.....
 - Concrete Substructure
 - Steel Beam Ends
 - Bearings

BRIDGE #'s 01791 & 01792



BRIDGE #'s 01791 & 01792



BRIDGE #'s 01791 & 01792



BRIDGE #'s 01791 & 01792



REPAIR PROGRESSION



- Bridge Safety determined to conduct annual inspections following Project to track deterioration
- Informed Bridge Maintenance of need and stressed importance – Almost declared Emergency!
- Bridge Maintenance solidified funding following estimates from Utilities.
 - First ever Utility Relocation Project initiated by Maintenance Department
- Process took approx. one year to obtain funding

REPAIR PROGRESSION



- Utilities broke ground Spring 2017
 - Approx. 1.5 years from initiation
- Completed Utility Relocations in June 2017
- **Total Utility**
Cost = \$650,000+
- **Underground Vault:**
 - Power, Cable, Fire
 - State owned highway luminaires relocated



Taken From:
<https://sites.google.com/site/mantricoaching/news/howtochoachtiminggroupsofswimmerswithastopwatch>

REPAIR PROGRESSION

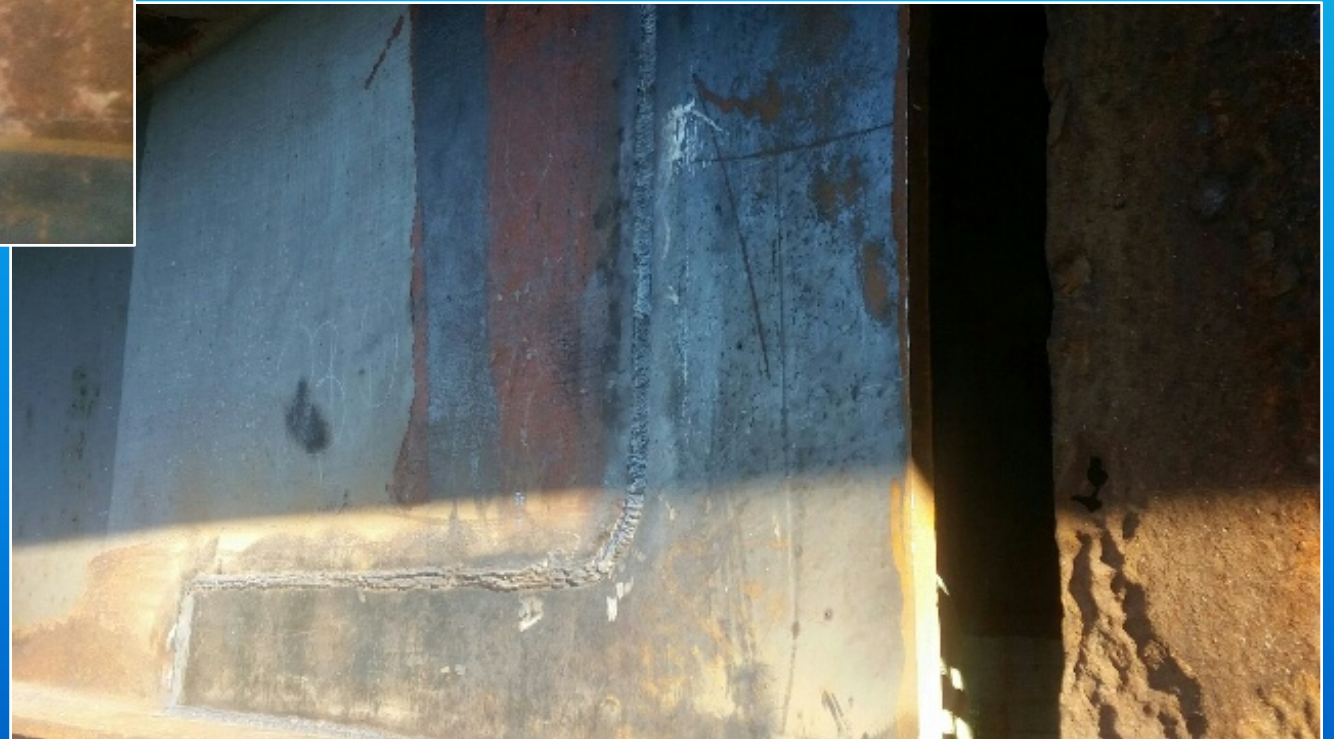


- ENTER BRIDGE MAINTENANCE!!!!

REPAIR PROGRESSION



REPAIR PROGRESSION



REPAIR PROGRESSION



Currently under repair, to be continued....



LESSONS LEARNED



- Predict impacts on future Maintenance/Rehab/Bridge Inspection during Design Phase
 - Reduces future incidental repair costs
 - Allows for proper maintenance
 - Eases access for preservation
 - Allows inspection access
- Encompass all necessary work at time of repair/rehab/replacement
 - Prevent “kicking the can down the road” mentality
 - Saves on future costs, even though burdensome at point in time (+/- \$200,000)