JANUARY 21, 2021
RESURFACING, BRIDGE & SAFETY IMPROVEMENTS ON ROUTE 2
FEDERAL AID PROJECT NO. 0032(203)
STATE PROJECT NO. 42-317
CITY OF HARTFORD & TOWNS OF EAST HARTFORD,
WETHERSFIELD & GLASTONBURY

ADDENDUM NO. 5

This Addendum addresses the following questions and answers contained on the "CT DOT QUESTIONS AND ANSWERS WEBSITE FOR ADVERTISED CONSTRUCTION PROJECTS":

Question and Answer Nos. 82, 84, 95, 99, 102, 106, 107, 108, 109, 110, 111, 115, 117, 120, 125, 129, 138, 145, 149

SPECIAL PROVISIONS

NEW SPECIAL PROVISIONS

The following Special Provisions are hereby added to the Contract:

- ITEM NO. 0520033A – REMOVAL OF ELASTOMERIC CONCRETE EXPANSION JOINT
- ITEM NO. 0651727A – 36" DUCTILE IRON PIPE

REVISED SPECIAL PROVISIONS

The following Special Provisions are hereby deleted in their entirety and replaced with the attached like-named Special Provisions:

- SECTION 1.08 – PROSECUTION AND PROGRESS
- ITEM NO. 0603111.01A – TEMPORARY BRIDGE (SITE NO. 1)
  ITEM NO. 0603111.02A – TEMPORARY BRIDGE (SITE NO. 2)

DELETED SPECIAL PROVISIONS

The following Special Provisions are hereby deleted in their entirety:

- ITEM NO. 0602911A – DRILLING HOLES AND GROUTING ANCHOR BOLTS
- ITEM NO. 1206025A – REMOVAL AND RELOCATION OF EXISTING OVERHEAD SIGNS

CONTRACT ITEMS

NEW CONTRACT ITEMS

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
0206000	DITCH EXCAVATION	C.Y.	75 C.Y.
0815001	BITUMINOUS CONCRETE LIP CURBING	L.F.	294 L.F.

REVISED CONTRACT ITEMS

ITEM NO.	DESCRIPTION	ORIGINAL QUANTITY	REVISED QUANTITY
0520033A	REMOVAL OF ELASTOMERIC CONCRETE EXPANSION JOINT	210 L.F.	105 L.F.
0586707	CONVERT CATCH BASIN TO SPECIAL TYPE CATCH BASIN	3 EA.	4 EA.
0601733.40	CLASS PCC03340	23 C.Y.	213 C.Y.
0822001	TEMPORARY PRECAST CONCRETE BARRIER CURB	6,000 L.F.	20,100 LF
1802210.02	TEMPORARY SAND BARREL (200 LB.)	4 EA.	8 EA.
1802210.04	TEMPORARY SAND BARREL (400 LB.)	2 EA.	4 EA.
1802210.07	TEMPORARY SAND BARREL (700 LB.)	6 EA.	12 EA.
1802210.14	TEMPORARY SAND BARREL (1400 LB.)	8 EA.	16 EA.
1802210.21	TEMPORARY SAND BARREL (2100 LB.)	4 EA.	8 EA.
1802211.02	RELOCATION OF TEMPORARY SAND BARREL (200 LB.)	60 EA.	76 EA.
1802211.04	RELOCATION OF TEMPORARY SAND BARREL (400 LB.)	30 EA.	40 EA.
1802211.07	RELOCATION OF TEMPORARY SAND BARREL (700 LB.)	90 EA.	116 EA.
1802211.14	RELOCATION OF TEMPORARY SAND BARREL (1400 LB.)	120 EA.	160 EA.
1802211.21	RELOCATION OF TEMPORARY SAND BARREL (2100 LB.)	60 EA.	80 EA.

DELETED CONTRACT ITEMS

ITEM NO.	DESCRIPTION	ORIGINAL QUANTITY	REVISED QUANTITY
0586311.20	SPECIAL 'BEEHIVE' CATCH BASIN - 0' - 20' DEEP	1 EA.	0
0602911A	DRILLING HOLES AND GROUTING ANCHOR BOLTS	8 EA.	0
1206025A	REMOVAL AND RELOCATION OF EXISTING OVERHEAD SIGNS	L.S.	0

PLANS

NEW PLANS

The following Plan Sheets are hereby added to the Contract:

- 08.053-1.A5 – CONSTRUCTION PLAN STAGE 2
- 08.063-1.A5 - 08.063-5.A5 - CONSTRUCTION PLAN STAGE 3

REVISED PLANS

The following Plan Sheets are hereby deleted and replaced with the like-numbered Plan Sheets:

- 02.01.A4 – REVISIONS
- 03.145 – DRAINAGE AND EROSION CONTROL
- 03.154 through 03.156 – STORMWATER MANAGEMENT PLAN
- 03.159 through 03.161 – STORMWATER MANAGEMENT PLAN
- 04.28 – BRIDGES 00378A&B BEARING DETAILS
- 04.29 – BRIDGES 00378A&B DECK PLAN
- 04.47.A3 – BRIDGES 06109 & 06110 GENERAL PLAN
- 04.48 – BRIDGES 06109 & 06110 PREFORMED JOINT SEAL
- 04.49 – BRIDGES 06109 & 06110 PARAPET DETAILS
- 04.57 – ASPHALTIC PLUG DECK JOINT DETAILS (1 OF 2)
- 08.052 & 08.053 – CONSTRUCTION PLANS STAGE 2
- 09.06 through 09.21 – ILLUMINATION PLAN
- 09.23 – ILLUMINATION PLAN LED CONVERSION AREA

DELETED PLANS

The following Plan Sheets are hereby deleted in their entirety:

- 08.070 & 08.071 – TEMPORARY ROADWAY SUTTON AVE – EB CLOSURE
- 08.072 & 08.073 – TEMPORARY ROADWAY SUTTON AVE – WB CLOSURE
- 08.078 & 08.079 – TEMPORARY ROADWAY WILLOW ST – EB CLOSURE
- 08.080 & 08.081 – TEMPORARY ROADWAY WILLOW ST – WB CLOSURE

The Bid Proposal Form has been revised to reflect these changes.

The Detailed Estimate Sheets do not reflect these changes.

There will be no change in the number of calendar days due to this Addendum.

The foregoing is hereby made a part of the contract.

SECTION 1.08 - PROSECUTION AND PROGRESS

Article 1.08.03 - Prosecution of Work:

Add the following:

The contractor shall stake the limits of the concrete sidewalks and ramps in conjunction with staking the locations of foundations to ensure that pedestrian push buttons will be located appropriately and will be accessible from a landing area.

The Contractor will not be allowed to install traffic signal or pedestrian heads until the controllers are on hand and ready for installation. Once installation of this equipment commences, the Contractor shall complete this work in a most expeditious manner.

The Contractor shall notify the project engineer on construction projects, when all traffic signal work is completed. This will include all work at signalized intersections including loop replacements, adjusting existing traffic signals or any relocation work including handholes. The project engineer will notify the Division of Traffic Engineering and contact person with the Town to coordinate a field inspection of all work.

The Contractor shall notify the **Traffic Signal Lab at Telephone (860) 258-0346 or (860) 258-0349 FORTY FIVE (45) days** prior to starting work on computer controlled signalized State intersection #042-271. This notice will initiate work to be completed by others. The Contractor shall be responsible for any timely updates that need to be reported to this Unit for the successful coordination of work by others.

Prosecution and Progress

The Contractor shall adopt the following sequence of operations or submit to the Engineer for approval an alternative phase plan, sequence, and schedule for approval. The Contractor shall complete one stage or phase before moving to the next to minimize the number of traffic pattern shifts, disruption of traffic, and disturbed area during construction.

Pre-Stage 1: Construct the WSA (Waste Stockpile Area)

Stage 1, Phase 1: Local Road Improvements and Gore Reconstruction (Night Work)

- Construct improvements to Main Street & Broad Street (to be completed before closing 5B WB On-Ramp and 5B EB Off-Ramp)
- Construct improvements to Main Street at Ramp 5A (to be completed before closing 5B WB On-Ramp and 5B EB Off-Ramp)
- Close 5B WB On-Ramp and 5B EB Off-Ramp – Remove Sutton Ave. Exit signs at Station 432+40, 457+75 and 511+00. Reconstruct Cambridge Drive (Daytime Operations)
- Reconstruct the following ramp gore areas (allows for traffic shift for the ramp traffic before other outside shoulders are re-constructed):
    - 5C EB Off-Ramp

  - 5C WB On-Ramp
  - 5A WB Off-Ramp
  - 5A EB On-Ramp
  - 5A WB On-Ramp
  - 5A EB Off-Ramp
  - 5 WB On-Ramp
- Construct partial improvements for realignment of 5C WB On-Ramp (Maple Street) at intersection
- Construct embankments beyond existing curb line (no pavement) during daytime operation behind temporary precast concrete barrier curb (TPCBC) and maintain existing striping for the following:
  - 5C WB On-Ramp – Maple Street
  - 5A EB On-Ramp – High Street
  - 5A WB Off-Ramp – Main Street
- Install overhead sign support and signs at 410+40 +/- (Night operation)
- Construct temporary access road at Goodwin College
- Construct both drainage outlets at Connecticut River
- Perform pipe jacking operations at Station 482+63
- Coordinate with Project 53-190 and install IMS 4-inch multi-duct conduit and fiber optic cable from Pullbox 33.82 on I-91 SB and continuing along Route 3 to Pullbox 02.29 connecting Existing Mini-hub R2-B-S (CCTV 2E-124) at the Route 2 interchange.

Stage 1, Phase 2: Outside Shoulder Reconstruction (Night Work)

- Complete the 5C WB On-Ramp improvement at local road intersection (requires temporary closure)
- Install overhead sign support foundation and sign support 22082 to be constructed prior to removal of existing overhead sign support at 432+40
- Construct retaining wall (daytime operations)
  - Existing sign structure at 432+40 to be removed prior to construction of retaining wall.
- Shift Route 2 EB and WB traffic to inside shoulder (one 12-foot lane, 2-foot shoulders. Night operation)
- Construct outside shoulders on EB and WB Route 2 (night operations)
  - Construct drainage structures along right shoulders
  - Retain existing guiderail where possible. In areas of widening replace guiderail as shown on plans.
  - Open to traffic in morning, place traffic drums at edge of work zone
  - Install curbing in reconstructed areas
- Construct the following ramps on previously constructed embankment:
    - 5C WB On-Ramp – Maple Street
    - 5A EB On-Ramp – High Street
    - 5A WB Off-Ramp – Main Street
    - Place TPBC at edge of pavement. Metal Bean Rail to be installed after final paving

- Removal and installation of IMS CCTV Cameras, conduit and fiber optic cable. See special provision Notice to Contractor – Incident Management System Equipment Installations. Installation of CCTV-3N-NEW shall be coordinated with Project 53-190 so that proposed IMS equipment is installed at final grade.

Stage 2: Median Reconstruction and Partial Deck Replacement (Day and Night Work)

- Shift traffic on Route 2 EB & WB to outside shoulder (two 12-foot lanes, two 2-foot shoulders)
  - Place TPCBC as required where existing MBR has been removed
- Widen to lengthen Exit 5 EB On-Ramp acceleration lane
- Construct median, full depth left shoulders
  - Sawcut along existing outside edge of travel lane
  - Excavate down approximately 23 inches to remove existing shoulder.
    - Place 12 inches of subbase and 6 inches of S1.0
      - Top of 6 inches of S1.0 should match the top of existing concrete in travel lane
- Construct drainage structures along median and concrete median barrier except where Willow St. and Sutton Ave. temporary roadways will be installed in Stage 3. Set top of median structures 3" higher than top of 6" of S1.0
- Construct bridge medians and deck repair/replacements (Ensign St., High St. and Main St.)
- Remove existing median portions of Sutton Ave. and Willow Street bridges, place/adjust median girders and pour new cast-in place concrete deck; new concrete median deck is designed to carry two lanes of traffic (two 11-foot lanes and two 1-foot shoulders) in Stage 3

Stage 3: Concrete Subbase Repair and Partial Deck Replacement (Night Work)

- Mill Route 2 EB and WB lanes and right shoulder, down to concrete base. Milling limited to ½ mile sections or as directed by engineer. Contractor to mill in left travel lane first and then move into the right travel lane and shoulder, removing curbing installed in Stage 1 Phase 2 and installing new curbing to be retained during Stage 4.
  - When shifting traffic, any drainage structures that could fall within vehicular wheel paths shall be reset or have temporary bituminous wedges placed around them. Bituminous wedges will be placed at a slope of 6 horizontal feet per vertical inch around all sides of drainage structures.
- Install temporary pavement markings; match existing
- Perform partial depth/full depth patch/full slab replacement. Concrete unsuitable for carrying traffic or that which will require full depth repair, that cannot be addressed prior to opening the roadway to traffic, will require a temporary concrete patch for stabilization until a permanent repair can be made. Concrete pavement repair markouts shall be performed by the District. Remove and replace all existing Duracal concrete patches in concrete subbase.

- Construct temporary roadways at Sutton and Willow St. Bridges. See drawings MPT-46 through MPT-80
    - Shift traffic to temporary roadways. Perform bridge deck replacements at Sutton and Willow St. Bridges
    - Remove temporary roadways. Perform concrete repairs and install concrete median barrier on areas previously covered by temporary roadways
- The contractor will pave at the completion of repairs for each ½ mile section, unless directed otherwise by CTDOT Construction staff.
    - Place 1" S0.25, 0.50" to 1.25" wedge course of S0.25 as needed for cross slope, 1.25" to 2" courses of S0.375 as needed to match final grade, and 2" of S0.50, curb to curb.
    - Open to traffic in the morning

Stage 4: Final Operations and Finalize Deck Replacement

- Perform final closure pour on bridge decks
- Reset all drainage structures to final grade
- Perform final paving, 2" of S0.50. Install all remaining curbing, striping and guiderail
- Retain curbing installed in Stage 3

Milling and Overlay of Flexible Pavement:

The milling and overlay of flexible pavement can be performed independently of the full depth reconstruction / concrete repair area. The Contractor must ensure there is no conflict with lane arrangements used in the stages listed above. The Contractor must adhere to the Limitations of Operations Tables listed below.

Hockanum River Bridge Parapet Construction:

The construction of the Hockanum River Bridge Parapet can be completed independently of the Stages previously described. Refer to MPT plans for lane shifts / closures.

Article 1.08.04 - Limitation of Operations - Add the following:

In order to provide for traffic operations as outlined in the Special Provision "Maintenance and Protection of Traffic," the Contractor will not be permitted to perform any work which will interfere with the described traffic operations on all project roadways as follows:

Route 2 and Route 3

The Contractor shall not perform any work that will interfere with traffic operations during the below State observed Legal Holidays and Legal Holiday Periods.

A. On the following State observed Legal Holidays:

New Year's Day	Labor Day
Good Friday	Thanksgiving Day
Memorial Day	Columbus Day
Independence Day	Christmas Day

B. During the following Legal Holiday Periods:

i. When an above Legal Holiday is celebrated on a Sunday or Monday: From 6:00 a.m. the immediately preceding Friday to 6:00 a.m. the immediately following Tuesday.
ii. When an above Legal Holiday is celebrated on a Tuesday, Wednesday, or Thursday: From 6:00 a.m. the day before to 6:00 a.m. the day after, except Thanksgiving (see below for Thanksgiving specific restrictions).
iii. When an above Legal Holiday is celebrated on a Friday or Saturday: From 6:00 a.m. the immediately preceding Thursday to 6:00 a.m. the immediately following Monday.
iv. Thanksgiving: From 6:00 a.m. the Wednesday before to 6:00 a.m. the Monday after.

During all other times:

A. The Contractor shall maintain and protect traffic as shown on the accompanying "Limitation of Operations" charts, which dictate the maximum number of lanes allowed to be closed and the allowable hours for implementing a rolling roadblock operation for each day of the week. The Contractor shall refer to the Notice to Contractor - Special Events and coordinate with the Engineer in advance of all events to ensure disruptions to the traveling public are mitigated or eliminated.
B. The Contractor will be allowed to halt traffic for a period not to exceed 10 minutes to actively perform the erection and setting of structural steel, and for the removal of the existing bridge superstructure, as approved by the Engineer, between 12:01 a.m. and 5:00 a.m. during all non-Legal Holiday Periods.
C. The Contractor will not be allowed to interfere with traffic on Route 2 Eastbound from April 1, 2021 to May 31, 2021. This time period is the anticipated duration of the detour under Project 0063-0654.
D. Lane closures required for work on the Hockanum River Bridge shall only be permitted for a 3-month period, once closures are installed.

Limitation of Operations Chart – Maximum Number of Lanes Allowed to be Closed and Hours Allowed for a Rolling Roadblock (RRB)

Route: 2 Eastbound 2 Lane Section I-84 EB On Ramp to I-84 WB On Ramp MP 0.71 – MP 0.93								Route: 2 Eastbound 3 Lane Section I-84 WB On Ramp to Lane Drop E/O Charter Oak Bridge MP 0.93 – MP 1.49							
Hour Beginning	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Hour Beginning	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Mid	1*	1*	1*	1*	1*	1*	1*	Mid	2*	2*	2*	2*	2*	1*	1*
1 AM	1*	1*	1*	1*	1*	1*	1*	1 AM	2*	2*	2*	2*	2*	1*	1*
2 AM	1*	1*	1*	1*	1*	1*	1*	2 AM	2*	2*	2*	2*	2*	1*	1*
3 AM	1*	1*	1*	1*	1*	1*	1*	3 AM	2*	2*	2*	2*	2*	1*	1*
4 AM	1*	1*	1*	1*	1*	1*	1*	4 AM	2*	2*	2*	2*	2*	1*	1*
5 AM	1*	1*	1*	1*	1*	1*	1*	5 AM	2*	2*	2*	2*	2*	1*	1*
6 AM	1	1	1	1	1	1*	1*	6 AM	1	1	1	1	1	1*	1*
7 AM	S	S	S	S	S	1*	1*	7 AM	1	1	1	1	1	1*	1*
8 AM	S	S	S	S	S	1*	1*	8 AM	1	1	1	1	1	1	1*
9 AM	1	1	S	S	S	1	1	9 AM	1	1	1	1	1	1	1
10 AM	1	1	1	S	S	S	1	10 AM	1	1	1	1	1	S	1
11 AM	1	1	1	S	S	S	S	11 AM	1	1	1	1	1	S	1
Noon	1	1	1	S	S	S	S	Noon	1	1	1	1	1	S	S
1 PM	1	1	S	S	S	S	S	1 PM	1	1	1	1	1	S	S
2 PM	S	S	S	S	S	S	S	2 PM	S	S	S	S	S	S	S
3 PM	S	S	S	S	S	S	S	3 PM	S	S	S	S	S	S	S
4 PM	S	S	S	S	S	S	S	4 PM	S	S	S	S	0	S	S
5 PM	S	S	S	S	S	S	S	5 PM	S	S	S	S	0	S	S
6 PM	1	S	S	S	S	S	S	6 PM	1	1	1	S	S	1	1
7 PM	1	1	1	1	S	S	1	7 PM	1	1	1	1	S	1	1
8 PM	1*	1*	1*	1*	1	1	1	8 PM	2	2	2	1	1	1	1
9 PM	1*	1*	1*	1*	1*	1*	1*	9 PM	2*	2*	2*	2*	1	1	2
10 PM	1*	1*	1*	1*	1*	1*	1*	10 PM	2*	2*	2*	2*	1	1	2
11 PM	1*	1*	1*	1*	1*	1*	1*	11 PM	2*	2*	2*	2*	2*	2	2*

On Legal Holidays and within Legal Holiday Periods, all hours shall be '0.'
"0" = No closures allowed = all available travel lanes, including exit only lanes, climbing lanes, gore areas, and all available shoulder widths shall be open to traffic during this time period.
"S" = Shoulders are allowed to be closed = all available travel lanes, including exit only lanes, climbing lanes, and gore areas shall be open to traffic during this time period.
"1" = One lane closure is allowed. Adjacent shoulder(s) and/or gore areas may also be closed.
"2" = Two lane closure is allowed. Adjacent shoulder(s) and/or gore areas may also be closed.
"*" = The hours that a rolling roadblock may be implemented with the approval of the Engineer.

Limitation of Operations Chart – Maximum Number of Lanes Allowed to be Closed and Hours Allowed for a Rolling Roadblock (RRB)

Route: 2 Eastbound 2 Lane Section Lane Drop E/O Charter Oak Bridge to Exit 7 Off Ramp MP 1.49 – MP 5.03								Route: 2 Westbound 3 Lane Section I-84 On Ramps to Willow St. On Ramp MP 0.92 – MP 1.85							
Hour Beginning	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Hour Beginning	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Mid	1*	1*	1*	1*	1*	1*	1*	Mid	2*	2*	2*	2*	2*	2*	2*
1 AM	1*	1*	1*	1*	1*	1*	1*	1 AM	2*	2*	2*	2*	2*	2*	2*
2 AM	1*	1*	1*	1*	1*	1*	1*	2 AM	2*	2*	2*	2*	2*	2*	2*
3 AM	1*	1*	1*	1*	1*	1*	1*	3 AM	2*	2*	2*	2*	2*	2*	2*
4 AM	1*	1*	1*	1*	1*	1*	1*	4 AM	2*	2*	2*	2*	2*	2*	2*
5 AM	1*	1*	1*	1*	1*	1*	1*	5 AM	2	2*	2*	2*	2*	2*	2*
6 AM	0	0	0	0	0	1*	1*	6 AM	S	S	S	S	S	2*	2*
7 AM	0	0	0	0	0	S	1*	7 AM	S	S	S	S	S	1	2*
8 AM	0	0	0	0	0	S	S	8 AM	S	S	S	S	S	1	1
9 AM	0	0	0	0	0	S	S	9 AM	1	1	1	1	1	1	1
10 AM	0	0	0	0	0	S	S	10 AM	1	1	1	1	1	1	1
11 AM	0	0	0	0	0	0	S	11 AM	1	1	1	1	1	S	S
Noon	0	0	0	0	0	0	0	Noon	1	1	1	1	1	S	S
1 PM	0	0	0	0	0	0	0	1 PM	1	1	1	1	1	S	S
2 PM	0	0	0	0	0	0	0	2 PM	1	1	1	1	S	S	S
3 PM	0	0	0	0	0	0	0	3 PM	S	S	S	S	S	S	S
4 PM	0	0	0	0	0	0	0	4 PM	S	S	S	S	S	S	S
5 PM	0	0	0	0	0	0	0	5 PM	S	S	S	S	S	S	S
6 PM	0	0	0	0	0	0	0	6 PM	1	1	1	1	S	1	1
7 PM	S	S	S	S	S	S	S	7 PM	1	1	1	1	1	1	1
8 PM	1	1	1	S	S	S	S	8 PM	2	2	2	2	1	1	1
9 PM	1*	1*	1*	1	S	S	1	9 PM	2*	2*	2	2	2	1	2
10 PM	1*	1*	1*	1*	S	S	1*	10 PM	2*	2*	2*	2*	2	1	2*
11 PM	1*	1*	1*	1*	1*	1*	1*	11 PM	2*	2*	2*	2*	2*	2	2*

On Legal Holidays and within Legal Holiday Periods, all hours shall be '0.'
"0" = No closures allowed = all available travel lanes, including exit only lanes, climbing lanes, gore areas, and all available shoulder widths shall be open to traffic during this time period.
"S" = Shoulders are allowed to be closed = all available travel lanes, including exit only lanes, climbing lanes, and gore areas shall be open to traffic during this time period.
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"2" = Two lane closure is allowed. Adjacent shoulder(s) and/or gore areas may also be closed.
"*" = The hours that a rolling roadblock may be implemented with the approval of the Engineer.

Limitation of Operations Chart – Maximum Number of Lanes Allowed to be Closed and Hours Allowed for a Rolling Roadblock (RRB)

Route: 2 Westbound 2 Lane Section Willow St. On Ramp to Exit 7 (Rte 17) On Ramp MP 1.85 – MP 5.33							
Hour Beginning	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Mid	1*	1*	1*	1*	1*	1*	1*
1 AM	1*	1*	1*	1*	1*	1*	1*
2 AM	1*	1*	1*	1*	1*	1*	1*
3 AM	1*	1*	1*	1*	1*	1*	1*
4 AM	1*	1*	1*	1*	1*	1*	1*
5 AM	1*	1*	1*	1*	1*	1*	1*
6 AM	0	0	0	0	0	1*	1*
7 AM	0	0	0	0	0	S	1*
8 AM	0	0	0	0	0	S	S
9 AM	0	0	0	0	0	S	S
10 AM	0	0	0	0	0	S	S
11 AM	0	0	0	0	0	0	0
Noon	0	0	0	0	0	0	0
1 PM	0	0	0	0	0	0	0
2 PM	0	0	0	0	0	0	S
3 PM	0	0	0	0	0	0	S
4 PM	0	0	0	0	0	0	S
5 PM	0	0	0	0	0	S	S
6 PM	0	0	0	0	0	S	S
7 PM	S	S	S	S	S	S	S
8 PM	1	1	1	1	S	S	S
9 PM	1*	1*	1*	1*	1	S	1
10 PM	1*	1*	1*	1*	1	1	1*
11 PM	1*	1*	1*	1*	1*	1	1*

On Legal Holidays and within Legal Holiday Periods, all hours shall be '0.'
"0" = No closures allowed = all available travel lanes, including exit only lanes, climbing lanes, gore areas, and all available shoulder widths shall be open to traffic during this time period.
"S" = Shoulders are allowed to be closed = all available travel lanes, including exit only lanes, climbing lanes, and gore areas shall be open to traffic during this time period.
"1" = One lane closure is allowed. Adjacent shoulder(s) and/or gore areas may also be closed.
"2" = Two lane closure is allowed. Adjacent shoulder(s) and/or gore areas may also be closed.
"*" = The hours that a rolling roadblock may be implemented with the approval of the Engineer.

Limitation of Operations Chart – Maximum Number of Lanes Allowed to be Closed and Hours Allowed for a Rolling Roadblock (RRB)

Route: 3 Southbound 2 Lanes								Route: 3 Northbound 2 Lanes							
Hour Beginning	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Hour Beginning	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Mid	1*	1*	1*	1*	1*	1*	1*	Mid	1*	1*	1*	1*	1*	1*	1*
1 AM	1*	1*	1*	1*	1*	1*	1*	1 AM	1*	1*	1*	1*	1*	1*	1*
2 AM	1*	1*	1*	1*	1*	1*	1*	2 AM	1*	1*	1*	1*	1*	1*	1*
3 AM	1*	1*	1*	1*	1*	1*	1*	3 AM	1*	1*	1*	1*	1*	1*	1*
4 AM	1*	1*	1*	1*	1*	1*	1*	4 AM	1*	1*	1*	1*	1*	1*	1*
5 AM	1*	1*	1*	1*	1*	1*	1*	5 AM	1*	1*	1*	1*	1*	1*	1*
6 AM	1	1	1	1	1	1*	1*	6 AM	1	1	1	1	1	1*	1*
7 AM	0	0	0	0	0	1*	1*	7 AM	0	0	0	0	0	0	1
8 AM	0	0	0	0	0	1	1*	8 AM	0	0	0	0	0	0	1
9 AM	1	1	1	1	1	1	1*	9 AM	0	0	0	0	0	0	0
10 AM	1	1	1	1	1	1	1*	10 AM	0	0	0	0	0	0	0
11 AM	1	1	1	1	1	0	0	11 AM	0	0	0	0	0	0	0
Noon	1	1	1	1	1	0	0	Noon	0	0	0	0	0	0	0
1 PM	1	1	1	1	1	1	1	1 PM	0	0	0	0	0	0	0
2 PM	1	1	1	1	0	1	1	2 PM	0	0	0	0	0	0	0
3 PM	0	0	0	0	0	0	0	3 PM	0	0	0	0	0	0	0
4 PM	0	0	0	0	0	0	0	4 PM	S	S	S	S	S	0	0
5 PM	0	0	0	0	0	0	0	5 PM	S	S	S	S	S	S	0
6 PM	1	1	1	0	0	0	0	6 PM	0	0	0	0	0	0	0
7 PM	1*	1*	1*	1*	1	1	1*	7 PM	1*	1	1	1	0	0	0
8 PM	1*	1*	1*	1*	1*	1*	1*	8 PM	1*	1*	1*	1*	1	1	1
9 PM	1*	1*	1*	1*	1*	1*	1*	9 PM	1*	1*	1*	1*	1*	1*	1*
10 PM	1*	1*	1*	1*	1*	1*	1*	10 PM	1*	1*	1*	1*	1*	1*	1*
11 PM	1*	1*	1*	1*	1*	1*	1*	11 PM	1*	1*	1*	1*	1*	1*	1*

On Legal Holidays and within Legal Holiday Periods, all hours shall be '0.'
"0" = No closures allowed = all available travel lanes, including exit only lanes, climbing lanes, gore areas, and all available shoulder widths shall be open to traffic during this time period.
"S" = Shoulders are allowed to be closed = all available travel lanes, including exit only lanes, climbing lanes, and gore areas shall be open to traffic during this time period.
"1" = One lane closure is allowed. Adjacent shoulder(s) and/or gore areas may also be closed.
"2" = Two lane closure is allowed. Adjacent shoulder(s) and/or gore areas may also be closed.
"*" = The hours that a rolling roadblock may be implemented with the approval of the Engineer.

Route 2 Westbound Exit 5C On-Ramp

The ramp may be closed during the allowable periods, when one lane closure or more is allowed on the mainline. Detour Changeable Message Signs shall be placed two weeks in advance of the closure.

All Other Limited-Access Highway Ramps

The Contractor shall maintain and protect existing traffic operations. Excepted therefrom will be those periods, during the allowable periods, when the Contractor is actively working, at which time the Contractor shall be allowed to maintain and protect a minimum of one lane of traffic, on a paved travel path not less than 12 feet in width.

Secondary Roads: Maple St, Main St, Broad St, Sutton Ave, Cambridge Drive, High St, Willowbrook Rd, King Ct, Riverside Drive, Willow St

No closures are allowed Monday through Friday between 6:00 a.m. and 9:00 a.m. & between 3:00 p.m. and 6:00 p.m. as well as Saturday and Sunday between 10:00 a.m. and 6:00 p.m.

Additional Restrictions:

A. The Contractor shall be allowed to maintain an alternating one-way traffic operation for a duration not to exceed 60 consecutive days.
B. The Contractor shall notify the Engineer at least 14 days in advance of the start of closures.

All Other Roadways

The Contractor shall maintain and protect a minimum of one lane of traffic in each direction, each lane on a paved travel path not less than 11 feet in width.

Where turn lanes exist, the Contractor shall provide an additional 10 feet of paved travel path to be used for turning vehicles only. This additional 10 feet of travel path shall be a minimum length of 150 feet. It shall be implemented so that sufficient storage, taper length, and turning radius are provided.

Excepted therefrom will be those periods, as allowed by CTDOT Traffic, when the Contractor is actively working, at which time the Contractor shall maintain and protect at least an alternating one-way traffic operation, on a paved travel path not less than 11 feet in width. The length of the alternating one-way traffic operation shall not exceed 300 feet and there shall be no more than one alternating one-way traffic operation within the project limits without prior approval of the Engineer.

Additional Lane Closure Restrictions

It is anticipated that work on adjacent projects will be ongoing simultaneously with this project. The Contractor shall be aware of those projects and anticipate that coordination will be required to maintain proper traffic flow at all times on all project roadways, in a manner consistent with these specifications and acceptable to the Engineer.

The Contractor will not be allowed to perform any work that will interfere with traffic operations on a roadway when traffic operations are being restricted on that same roadway, unless there is at least a one mile clear area length where the entire roadway is open to traffic or the closures have been coordinated and are acceptable to the Engineer. The one mile clear area length shall be measured from the end of the first work area to the beginning of the signing pattern for the next work area.

Incident Management System

The Contractor will not be allowed to perform any work that will disrupt the normal operation of the Incident Management System (IMS) as follows:

- On Monday through Friday from 5:00 AM to 9:00 PM and on Saturday and Sunday.
- On any of the days identified above under the "Route 2 and Route 3" section.

In order to maintain continuous operation of the Incident Management System, the Contractor shall adhere to the requirements in the special provision and "Notice to Contractor – Installation Qualifications" and "Notice to Contractor – Incident Management System Equipment Installations".

ITEM #0520033A – REMOVAL OF ELASTOMERIC CONCRETE EXPANSION JOINT

Description: Work under this item shall consist of removal of a bridge joint system including headers, if applicable, removal of concrete to provide a blockout envelope in deck and curb, removal of bituminous pavement as shown on the plans, application of membrane waterproofing system as shown on the plans, as directed by the Engineer, and in accordance with these specifications. It also includes installation and removal of all temporary materials used to complete this work. Where steel plates cover the joint, it includes removal of steel plates.

Construction Methods: The ends of bridge decks and portions of backwalls/approach slabs to be removed shall be exposed and ½" minimum depth sawcuts shall be made at the removal limits with care taken to avoid cutting existing steel being retained. The concrete shall be removed with hand operated pneumatic or electric chipping hammers with care taken to protect the concrete and reinforcing steel to remain.

If exposed during concrete removal, existing reinforcing steel shall be cleaned, and any uncoated reinforcing shall be coated with a zinc rich coating.

The Contractor shall create a blockout at the end(s) of the concrete deck, approach slab, parapet and/or curb sections that is to receive the proposed preformed seal joint system with elastomeric concrete headers, by removing the existing joint system and modifying the appropriate structure elements as detailed in the contract plans.

Care shall be taken to limit damage to the structure elements and the reinforcement to remain. After removal of bituminous overlay, and before concrete removal begins, delineate the removal area with saw cuts as shown on the plans. Where necessary to construct headers in backwalls, additional bituminous concrete and or subbase material shall be removed. Concrete shall be removed by means of pneumatic hammers approved by the Engineer.

The weight of pneumatic hammers shall not exceed 30 pounds for concrete removal above the top reinforcing steel nor 15 pounds for concrete removal below the top reinforcing steel. The depth of concrete removal shall be at least that shown in the details, 1-inch below the existing concrete deck surface, but shall be such as to include all spalled, delaminated, or otherwise deteriorated concrete. The Engineer will be sole determiner of what constitutes deteriorated concrete, using sounding methods or other evaluation measures at his discretion.

Where the existing reinforcing steel is damaged or corroded, it shall be cut out and replaced with new reinforcing steel of the same size. Where existing reinforcing steel which is to remain in place is determined by the Engineer to have insufficient cover, it shall be either replaced or adjusted as directed. New steel shall be attached beneath existing steel with a minimum lap of 15". Concrete shall be removed to a minimum of depth of 1" below the new steel. Any sound reinforcing steel damaged during the concrete removal operations, shall be repaired or replaced by the Contractor at his expense as directed by the Engineer. Sound reinforcing steel which is in

the proper position in the slab shall be left in place and cleaned of all concrete, the smaller fragments to be removed with hand tools.

Adequate measures shall be taken by the Contractor to prevent concrete debris, tools and/or materials from dropping below the structure. All debris shall be satisfactorily disposed of by the Contractor.

Holes for the dowels shall be located as shown on the plans. The holes shall clear the existing reinforcement and provide the minimum cover as shown on the plans. If existing reinforcing is encountered during the drilling operation, the hole shall be relocated.

Hole drilling methods shall not cause spalling, cracking, or other damage to the existing concrete. The weight of the drill shall not exceed 15 pounds. Those areas damaged by the Contractor shall be repaired in a manner suitable to the Engineer and at no expense to the State.

The entire concrete surface shall be dampened and cleaned. All free water shall be removed from the area.

The removal of the elastomeric concrete expansion joint shall be removed at the locations shown on the plans and in stages in accordance with the traffic requirements in the special provisions "Maintenance and Protection of Traffic" and "Prosecution and Progress".

Method of Measurement: This work will be measured for payment by the number of linear feet of elastomeric concrete expansion joint, removed and disposed, measured from gutterline to gutterline, unless otherwise noted in the plans, along the centerline of the joint. Work at the parapet or curb turn-up sections will not be measured for payment but shall be considered included in the general cost of the work.

Basis of Payment: This This work will be paid for at the contract unit price per linear foot for "Removal of Elastomeric Concrete Expansion Joint", removed and disposed, which price shall include all materials, equipment, tools, and labor incidental thereto.

Pay Item	Pay Unit
Removal of Elastomeric Concrete Expansion Joint	l.f.

ITEM # 0603111.01A – TEMPORARY BRIDGE (SITE NO. 1)
ITEM # 0603111.02A – TEMPORARY BRIDGE (SITE NO. 2)

Description: Work under this item shall consist of designing, furnishing, maintaining and subsequently removing any type of adequately designed temporary bridge, complete with reinforced concrete deck and rail system as shown as shown on the plans and in accordance with these specifications or as otherwise approved by the Engineer.

Materials: The Contractor shall use materials that are in sound condition, capable of safely carrying the specified loads, and meet the approval of the Engineer.

Structural Steel – All structural steel shall be of domestic (USA) manufacture with full material traceability provided upon customer request and shall conform to AASHTO M270, Grade 50.

- Temporary Diaphragms: Both intermediate and end diaphragms shall be fabricated, installed and removed from the temporary bridge.
- Prefabricated Steel Bolsters: Steel bolsters shall be shop fabricated in a manner that shall be easily installed and removed with the proposed bearings. Bolster heights shall match the plan dimensions to provide the appreciate temporary bridge cross slope.

Structural Fasteners – All bolts for steel components shall be ASTM A325 Type 3. Galvanized bolts shall be A325 Type 1, hot dip galvanized in accordance with ASTM A-153 specifications.

Anchor Bolts - The anchor bolts supplied shall be ASTM A449 Full Thread Studs Hot Dip Galvanized as per ASTM A153. Each anchor bolt shall be provided with one A563 Galvanized Heavy Hex Nut and one F436 Galvanized Flat Washer.

Bearings – The permanent bearing plates shall be paid under the Item Structural Steel - Low Alloy, and Steel Laminated Elastomeric Bearings. The temporary bolsters must be manufactured to be used with the permanent bearings as depicted in the Contract Plans.

Jacking of Girders - The median girders shall be jacked to fit on the temporary bolsters to meet the temporary deck cross slope. Additionally, these girders will need to be jacked to remove the temporary bolsters and reset in the final condition.

Stay-In-Place Forms for Concrete Deck - The Stay-in-Place (SIP) corrugated metal decking forms shall have a minimum depth of 2", Type 8.5P, as supplied by Wheeling Corrugated or Approved Equal. The minimum thickness shall be 20 gage and shall have G165 Galvanized Coating. The minimum laying width per sheet of decking shall be 34". The SIP forms shall be supported by support angles "field welded" to the stringer beams. SIP form shall be attached to support angles using self- tapping screws approved by the SIP manufacturer.

Temporary Slab Supports – Removal of the existing and proposed deck shall require support of the remaining bridge decking cantilevering from the top flange of the girders. Temporary slab supports must be provided for the entire length of the span, and may be supported of the steel girders. Contractor designed shop drawings shall be submitted to the Engineer for review.

Concrete - Concrete materials and strengths shall be noted in the Engineering Drawings. Concrete shall be formed, mixed, placed, consolidated, finished and cured in accordance with the Project Specifications referenced in the Engineering Drawings and as approved by the Engineer in the field. Concrete shall not be placed until the forms and reinforcing steel have been inspected by the Engineer.

Membrane Waterproofing – Membrane waterproofing for the temporary bridge deck shall be cold liquid elastomeric. The membrane water proofing shall cover the entire top of deck surface area of the temporary bridge deck.

Concrete Reinforcement - Reinforcing steel materials and strengths shall be as noted in the Engineering Drawings. Reinforcement steel shall be epoxy coated and placed in accordance with the Project Specifications referenced in the Engineering Drawings and as approved by the Engineer in the field. Concrete shall not be placed until the forms and reinforcing steel have been inspected by the Engineer.

Backwall Filler – The backwall shall be constructed to the final cross slope elevations. In the contract plans Stage 3 of construction the temporary bridge will be constructed to a cross slope and higher elevations, and a ridged backwall filler material shall be used to retain the roadway fill and support the end of temporary deck slab.

PMA S0.5, HMA S0.25, Material for Tack Coat, Asphaltic Joints – Temporary bridge structures will support traffic during phases construction and shall be paved in accordance with the highway pavement plan. The deck slab shall have asphaltic plug joints between the temporary bridge deck and the temporary paved roadway.

Elastomeric Bond Breaker – Between construction phases, the temporary bridge deck shall maintain independent from the existing and proposed bridge sections along the entire span length as noted in the contract plans.

Shear Connectors – Shear connectors on the proposed and existing girders shall be installed in the proposed connector spacing as detailed in the plans. Shear connectors shall be salvaged, or replaced after the removal of the temporary deck, cleaned and dried prior to the placement of the final deck concrete.

Removal of Temporary Bridge Deck – The temporary bridge deck shall be demolished to carefully preserve the steel girders, girder stiffener plates, and welded shear studs. The deck

HMA, concrete, deck reinforcement, and temporary steel diaphragms shall be removed and disposed.

Engineering

Design Computations- The Contractor is fully responsible for the design, detailing, and additional specifications required. The designer must have designed at least three similar superstructures within the last three years.

Licensure - The engineering design of the Bridge shall be performed by, or under the direct supervision of a Licensed Professional Engineer in the State of Connecticut. The design shall be completed in accordance with recognized engineering principles and design practices and with a standard of care commensurate with the Manufacturer's role in the project.

Designer's Liability Insurance: The Designer of the temporary bridge shall secure and maintain at no direct cost to the Department, a Professional Liability Insurance Policy for errors and omissions in the minimum amount of One Million Dollars ($1,000,000). The Designer may, at his election, obtain a policy containing a maximum Two Hundred Fifty Thousand Dollars ($250,000) deductible clause, but if he should obtain a policy containing such a clause, the Designer shall be liable to the extent of the deductible amount. The Designer shall obtain the appropriate and proper endorsement to its Professional Liability Policy to cover the indemnification clause in this contract as the same relates to negligent acts, errors or omissions in the work performed by the Designer. The Designer shall continue this liability insurance coverage for a period of two years from the date of the acceptance of the Temporary Bridge by the agency head as evidenced by a certificate of acceptance issued to the contractor or for one year after the removal of the Temporary Bridge from Service, whichever is later, subject to the continued commercial availability of such insurance

The Designer shall supply the certificate of this insurance to the Engineer prior to the start of construction. The designer's insurance company shall be licensed in the State of Connecticut.

Design Specifications – AASHTO LRFD Bridge Design Specifications (2012), with Interim Specifications up to and including 2013, as supplemented by the Connecticut Department of Transportation Bridge Design Manual (2003).

Specifications – Connecticut Department of Transportation Form 818 (2020), Supplemental Specification dated January 2013 and these Specifications.

Working Drawing and Design Computations - Prior to construction, the Contractor shall submit working drawings and design computations for the bridge superstructure components, to the Engineer for review in accordance with Article 1.05.02 of The Connecticut Department of Transportation Form 818 (2020).

Working drawings shall be submitted on 11" x 17" (279 mm x 432 mm) (Ledger/Tabloid) sheets with an appropriate border and title block. Design computations, procedures and other supporting data shall be submitted on 8 ½" x 11" (216 mm x 279 mm) (Letter) sheets.

The working drawings and design computations shall be sealed by a Professional Engineer, licensed in the State of Connecticut, who shall also be available for consultation in interpreting his computations and drawings, and in the resolution of any problems which may occur during the performance of the work. Please note that each working drawing must be sealed.

The design computations shall include inventory and operating live load ratings for the bridge. The rating computations, including a summary form and supporting computations, shall be packaged separately. The rating analysis shall be performed using the Load and Resistance Factor Rating Method described in the AASHTO Manual for Bridge Evaluation (Second Edition).

The Contractor shall verify that the quality of the materials and workmanship employed in the construction of the bridge are consistent with that assumed in the design.

Construction Methods: Temporary bridge systems shall be designed, constructed, and maintained, and demolished as necessary for the proper performance of the work. The Contractor is responsible for evaluating existing site conditions and determining applicable soil design parameters based on all evaluation criteria the Contractor deems necessary to determine such parameters.

The temporary bridge systems shall be designed in accordance with AASHTO LRFD Bridge Design Specifications (2010), with Interim Specifications up to and including 2010, as supplemented by the Connecticut Department of Transportation Bridge Manual (2002), amended as follows, unless otherwise noted on the plans:

Design Loads - The temporary bridge shall be designed to support an HL 93 live load, including a dynamic load allowance, for the applicable AASHTO Load Combination Groups.

Alignment - The horizontal and vertical alignment of the bridge shall be as shown on the plans.

Clearances - Any minimum vertical and horizontal clearances for the bridge shall be as shown on the plans.

Roadway Width - The minimum roadway width (the sum of the lane and shoulder widths) on the bridge shall be as shown on the plans.

Barriers – The temporary bridge deck will support Temporary Precast Concrete Barrier Curb (anchored) and shall be paid for under the item "Temporary Precast Concrete Barrier Curb (Anchored)."

AASHTO LRFD Bridge Design Specifications (2012) with Interim Specifications up to and including 2013.
The elevations of the temporary bridge concrete bearing pads relative to one another shall be at the same relative elevations of the final structure bridge concrete bearing pads to ensure proper detailing of final condition bridge geometry.

A periodic inspection of the temporary bridge systems shall be maintained by the Contractor as directed by the Engineer. The contractor shall correct any deficiencies noted or otherwise present as directed by the Engineer. Unless otherwise ordered by the Engineer, all parts of the temporary bridge systems shall be removed upon completion of the work.

Method of Measurement: This work, being paid for on a lump sum basis, will not be measured for payment. The Contract Plans approach recommends a lump sum bid price to include the quantity breakdown on the table below:

SUB ITEM NO.	ITEM DESCRIPTION	0603111.01	0603111.02	UNIT
0406159	PMA S0.5	18	11	Ton
0406173	HMA S0.25	9	6	Ton
0503420	REMOVAL OF CONCRETE DECK(BRIDGE)	38	22	SY
0503941	RESET EXISTING BEAMS	5	5	EA
0503948	REMOVAL OF EXISTING DIAPHRAGMS	4	12	EA
0520036	ASPHALTIC PLUG EXPANSION JOINT SYSTEM	17	13	CF
0600118	BRIDGE DECK CONCRETE	40	24	CY
0601066	COLUMN AND CAP CONCRETE	3	2	CY
0601639	1/2" CLOSED CELL ELASTOMER	3494	5304	CI
0602030	DEFORMED STEEL BARS - GALVANIZED	9349	7453	LBS
0603851	STRUCTURAL STEEL (LOW ALLOY)	42	39	CWT
0603893	TEMPORARY SLAB SUPPORT	206	156	LF
0707009	MEMBRANE WATERPROOFING (COLD LIQUID ELASTOMERIC)	152	89	SY

Basis of Payment: This work will be paid for at the contract lump sum price for "Temporary Bridge (Site No.), which price shall include designing, furnishing, maintaining, and removing temporary bridge systems, including all concrete, galvanized steel reinforcing, temporary slab supports, structural steel diaphragms and bolsters, membrane waterproofing, elastomeric bond breakers, salvage of the proposed shear connectors, concrete sawcuts, temporary backwall filler

material, matching highway HMA lifts and tack coating, complete temporary deck removal and disposal, and all equipment, tools, and labor incidental thereto.

Pay Item	**Pay Unit**
Temporary Bridge (Site No. 1)	LS
Temporary Bridge (Site No. 2)	LS

ITEM #0651727A – 36” DUCTILE IRON PIPE

36” Ductile Iron Pipe shall be constructed in accordance with Section 6.86, supplemented as follows:

Article 06.86.02 – Materials: Add the following:

Ductile Iron Pipe shall meet the requirements of ASTM A716.

Pay Item	Pay Unit
36” Ductile Iron Pipe	l.f.