NOVEMBER 8, 2023
REPLACEMENT OF BRIDGE NO. 07001
MICHAEL'S WAY OVER WEST BRANCH SAUGATUCK RIVER
TOWN OF WESTON, CT
FEDERAL PROJECT NO. 6157(012)
STATE PROJECT NO. 0157-0088

ADDENDUM NO. 03 SUMMARY

DESCRIPTION OF CHANGE:

The work under this Addendum includes the following:

1. Revised bid opening date to November 15, 2023, 2:00 pm.

2. Revisions resultant from questions received through 11/7/2023.

SPECIAL PROVISIONS

NEW SPECIAL PROVISIONS
- Item #0603474a – Metallizing Structural Steel (Site No. 1)

REVISED SPECIAL PROVISIONS
- Item #094305A – Metal Bridge Rail – Four Rail

DELETED SPECIAL PROVISIONS
- None

PLANS

NEW PLANS
- None

REVISED PLANS
The following plan sheets are hereby replaced with the like numbered Plan Sheets appended with "A3"

- 04.02.A01
- 04.03
- 04.04
- 04.17
- 04.20.A01
- 04.21

DELETED PLANS
- None

CONTRACT ITEMS

NEW CONTRACT ITEMS

- Item #0603474a – Metallizing Structural Steel (Site No. 1)

REVISED CONTRACT ITEMS

- Item #094305A – Metal Bridge Rail – Four Rail

DELETED CONTRACT ITEMS

- None

TOWN OF WESTON
SCHEDULE OF PRICES
FOR THE CONSTRUCTION OF

STATE PROJECT NO. 0157-0088, FAP #6157(012)
REPLACEMENT OF BRIDGE NO. 07001
MICHAEL'S WAY OVER WEST BRANCH SAUGATUCK RIVER

DATE OF BID SUBMISSION **November 15, 2023** TIME: **2:00 PM** **NO BIDS WILL BE ACCEPTED AFTER 2:00 PM "NO EXCEPTIONS"**

Note: --- The bidder shall fill in, under the column "Unit Prices Bid," the unit prices, written in words and in numbers, for which he proposes to perform the various items of work called for, and under the column headed "Amount," the amount of each of the items at the unit price bid. After the proposal is opened and read, the quantities will be extended and totaled in accordance with the written bid prices and the bid will be verified or corrected.

Item Number	Items	Unit	Approximate Quantities	Unit Prices Bid Figures	Unit Prices Bid Writing	Amount (Figures)
0201001	CLEARING AND GRUBBING	LS	1			
0201020A	REMOVE AND RESET WOOD FENCE	LF	215			
0201211	REMOVE SIGN	EA	1			
0202000	EARTH EXCAVATION	CY	350			
0202216A	EXCAVATION AND REUSE OF EXISTING CHANNEL BOTTOM MATERIAL BOTTOM	CY	100			
0202529	CUT BITUMINOUS CONCRETE PAVEMENT	LF	140			
0203202	STRUCTURE EXCAVATION-EARTH (EXCLUDING COFFERDAM AND DEWATERING)	CY	490			
0203304	STRUCTURE EXCAVATION - ROCK (EXCLUDING COFFERDAM AND DEWATERING)	CY	5			
0204111A	COFFERDAM AND DEWATERING	LS	1			
0204151A	HANDLING WATER	LS	1			
0205004	ROCK IN TRENCH EXCAVATION 0'-10' DEEP	CY	10			
0207000	BORROW	CY	130			
0209001	FORMATION OF SUBGRADE	SY	450			
0210821A	WATER POLLUTION CONTROL	EST	1	$ 25,000.00	TWENTY THOUSAND DOLLARS AND ZERO CENTS	$ 25,000.00
0211000	ANTI-TRACKING PAD	SY	100			
0212000	SUBBASE	CY	150			
0213100	GRANULAR FILL	CY	62			
0216000	PERVIOUS STRUCTURE BACKFILL	CY	265			
0219001	SEDIMENTATION CONTROL SYSTEM	LF	1400			
0219002	SEDIMENTATION CONTROL HAY BALE SYSTEM	LF	700			
0406170	HMA S1	TON	90			
0406171	HMA S0.5	TON	142			
0406173	HMA S0.25	TON	16			
0406236	MATERIAL FOR TACK COAT	GAL	175			
0409001	FINE MILLING OF BITUMINOUS CONCRETE (0IN TO 4IN)	SY	165			
0503001A	REMOVAL OF SUPERSTRUCTURE	LS	1			
0508050	SHEAR CONNECTORS	EA	1224			
0513003	1-1/2" POLYVINYL CHLORIDE PLASTIC PIPE	LF	13			
0586001.10	TYPE 'C' CATCH BASIN - 0' - 10' DEEP	EA	2			
0586650	RESET MANHOLE	EA	1			
0586703	CONVERT CATCH BASIN TO MANHOLE	EA	2			
0601064	ABUTMENT AND WALL CONCRETE	CY	113			
0601118	BRIDGE DECK CONCRETE	CY	113			
0601121	PARAPET CONCRETE	LF	24			
0601122	BRIDGE SIDEWALK CONCRETE	CY	31			
0601123	APPROACH SLAB CONCRETE	CY	46			
0602006	DEFORMED STEEL BARS - EPOXY COATED	LB	73000			
0603061	STRUCTURAL STEEL (SITE NO. 1)	LS	1			
0603474A	METALLIZING STRUCTURE STEEL (SITE NO 1)	LS	1			
0605201	ASHLAR STONE MASONRY	SY	30			

Kindly insert here the total amount of your Bid $ _ _ _ _ _ _ _ _ _ _ _ _
It is understood that the unit prices shall govern in case of discrepancy between the unit-prices and this amount.
This bid includes addenda no.: Three

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0651012	15" R.C. PIPE	LF	100			
0703011	INTERMEDIATE RIPRAP	CY	110			
0703012	MODIFIED RIPRAP	CY	4			
0706001	MICROPILES	EA	12			
0706002	VERIFICATION TEST FOR MICROPILES	EA	2			
0706003	PROOF TEST FOR MICROPILES	EA	2			
0706004	MICROPILE LENGTH ADJUSTMENT	LF	171			
0707009A	MEMBRANE WATERPROOFING (COLD LIQUID ELASTOMERIC)	SY	274			
0708001	DAMPPROOFING	SY	126			
0728033A	NO. 8 CRUSHED STONE	CF	700			
0755010	GEOTEXTILE (SEPARATION - MEDIUM SURVIVABILITY)	SY	4			
0815093	BITUMINOUS CONCRETE PARK CURB	LF	425			
0819002	PENETRATING SEALER PROTECTIVE COMPOUND	SY	175			
0822100.01	TEMPORARY TRAFFIC BARRIER	LF	80			
0904305A	METAL BRIDGE RAIL - FOUR RAIL	LF	149			
0905007A	RESET STONE WALL	LF	25			
0910090A	STEEL-BACKED TIMER GUIDERAIL - TYPE A	LF	170			
0910091A	STEEL-BACKED TIMBER GUIDERAIL - TERMINAL SECTION	EA	4			
0910092A	STEEL-BACKED TIMBER GUIDERAIL - BRIDGE ATTACHMENT	EA	4			
0912496	REMOVE WOOD RAIL	LF	275			
0943001	WATER FOR DUST CONTROL	M.GA	1			
0944000	FURNISHING AND PLACING TOPSOIL	SY	500			
0949000	WOOD CHIP MULCH	SY	10			
0949099	CORNUS AMOMUM, SILKY DOGWOOD 18IN-24IN HT. CONTAINER	EA	5			
0949324	LINDERA BENZOIN, COMMON SPICEBUSH 18IN-24IN HT. B.B.	EA	10			
0949584	BACCHARIS HALIMIFOLIA, GROUNDSEL TREE, 2'-3' HT. B.B.	EA	5			
0949875A	WETLAND PLANTINGS	LS	1			
0950005	TURF ESTABLISHMENT	SY	500			
0950039	EROSION CONTROL MATTING TYPE D	SY	500			
0950040A	CONSERVATION SEEDING FOR SLOPES	SY	700			
0950043A	WETLAND GRASS ESTABLISHMENT	SF	20			
0952001A	SELECTIVE CLEARING AND THINNING	LS	1			
0952051A	CONTROL AND REMOVAL OF INVASIVE VEGETATION	SY	1,000			
0969060A	CONSTRUCTION FIELD OFFICE, SMALL	MO.	6			
0970006	TRAFFICPERSON (MUNICPAL POLICE OFFICER)	EST	1	$ 5,000.00	FIVE DOLLARS AND ZERO CENTS	$ 5,000.00
0970007	TRAFFICPERSON (UNIFORMED FLAGGER)	HR	90			
0971001A	MAINTENANCE AND PROTECTION OF TRAFFIC	LS	1			
0974002A	REMOVAL OF EXISTING MASONRY	LS	1			

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0975004	MOBILIZATION AND PROJECT CLOSEOUT	LS	1			
0976002	BARRICADE WARNING LIGHTS - HIGH INTENSITY	DAY	882			
0979003	CONSTRUCTION BARRICADE TYPE III	EA	4			
0980020	CONSTRUCTION SURVEYING	LS	1			
1208929	SIGN FACE - SHEET ALUMINUM (TYPE IV REFLECTIVE SHEETING)	SF	20			
1208931A	SIGN FACE - SHEET ALUMINUM (TYPE IX RETROREFLECTIVE SHEETING)	SF	2			
1209007	PAINTED PAVEMENT MARKINGS 4" YELLOW	LF	725			
1209009	PAINTED PAVEMENT MARKINGS 12" WHITE	LF	20			
1220027A	CONSTRUCTION SIGNS	SF	430			
1303210A	DRY HYDRANT ASSEMBLY	LS	1			
1504010A	TEMPORARY SUPPORT OF UTILITIES	LS	1			

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CONTRACT TIME AND LIQUIDATED DAMAGES

Two Hundred Thirty One (231) calendar days will be allowed for completion of all work as described in the contract documents for Federal Project No. 6157(012), State Project No. 0157-0088. For this contract, an assessment for liquidated damages at a rate of One Thousand Two Hundred Dollars ($1,200) per calendar day shall be applied to each day the work runs in excess of the two hundred and thirty one (231) allowed calendar days.

Note: PRIME CONTRACTOR'S REQUIREMENTS:

A. Proposal Guaranty (Bid Bond): Except when otherwise specified, no proposal will be considered unless accompanied by a proposal guaranty in the form of a bond furnished by a surety company, satisfactory to the Engineer, in an amount equal to at least 30% of the amount of the bid, or unless the bidder has on file in the Town, an annual bid bond in the proper amount.

The surety must be a corporate surety licensed to sign surety bonds in the State of Connecticut.

B. Not less than 13% of the total Contract value shall be subcontracted to, performed by, and paid to DBE.

C. If the Contractor is unable to fulfill the DBE's percentage requirement, he may request an exception of the above percentage, by completing and submitting to the Town, the "Application for Review of Pre-award Good Faith Efforts", as contained in the General Provisions.

D. Contractors must make sure that at the time of bidding, their Firms have an approved Affirmative Action Plan with the State of Connecticut, Department of Transportation.

E. Statement of Bidder's Qualifications: Each bidder is required to submit to the Town a recent sworn statement of the bidder's qualifications the form furnished by the Town for this purpose.

F. Prospective bidders must have a current sworn Statement (CON-16) on file with the Connecticut Department of Transportation and be prequalified to perform Group No. 9 (Intermediate Bridges) work. The Bidder's Prequalification approval letter signed by the CTDOT Contracts Manager shall be included as part of the bid package submitted to the Municipality.

G. Contracts will not be awarded until the above requirements have been submitted and approved.

H. Please be aware that the Town, prior to the awarding of the Contract, may require further financial and other information from any applicant who becomes the low bidder for that Contract.

I. All Bidders shall submit the Pre-award DBE Commitment Approval Request form(s) to the Town of Weston NO LATER THAN FIVE (5) calendar days after the bid opening. This is a requirement of Title 49, Code of Federal Regulations (CFR) Part 26, Participation of DBEs Failure to comply with this requirement may be cause for rejection of the bid.

Kindly insert here the total amount of your Bid $ _ _ _ _ _ _ _ _ _ _ _ _ _ _
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ITEM #0603474A - METALLIZING STRUCTURAL STEEL (SITE NO. 1)

Description: Work under this item shall consist of the surface preparation, shop application of a thermal spray (metallizing) coating, shop application of a sealer and topcoat, and field painting and touch-up painting operations of new structural steel, as shown on the plans, or as directed by the Engineer.

Materials: Only one metallizing supplier and one sealer and topcoat manufacturer may be used for the Project including material supplied for field painting and touch-up painting operations.

Abrasives:
Abrasives shall conform to the following:

1. SSPC AB 1 for mineral slag abrasives
2. SSPC AB 2 for recycled ferrous metal abrasives
3. SSPC AB 3 for new steel abrasives

Thermal Spray Coating (TSC) Materials: The thermal spray coating (TSC) wire feedstock material used for metallizing must be 85%/15% (Zn/Al alloy) and meet the Chemical Composition requirements stated in Table 2 of AWS C2.25, classification W-ZnAl-2. The Contractor shall provide a Certified Test Report (CTR) in accordance with 1.06.07 for the feedstock from the feedstock supplier.

Sealer and Topcoat: The Contractor shall select one of the following semi-gloss topcoats of the color shown on the plans from the list below:

AkzoNobel: *International Interthane 870UHS*
Carboline: *Carbothane 133 LV*
Sherwin Williams: *Hi-Solids Polyurethane 250*
or approved equal

The Contractor shall select a sealer compatible with the topcoat chosen. The sealer shall be capable of penetrating into the body of the TSC to seal the interconnected surface porosity as defined in AWS C2.18-93R.

The sealer and topcoats shall be packaged and sealed, in the original container with labeling bearing the manufacturer's name, type of material, brand name, shelf life, batch number, and instructions for mixing and thinning. The topcoat shall meet the color and gloss retention performance criteria of SSPC Paint 36, Level 3, for accelerated weathering. The Contractor shall provide Materials Certificates in accordance with 1.06.07.

Caulking Materials: Caulking shall be as recommended by the coating manufacturer.

Construction Methods: The Contractor shall implement procedures that comply with this specification. If a state or local regulation is more restrictive than the requirements of this specification, the more restrictive requirements shall prevail. The Contractor must comply with all local OSHA and EPA standards and regulations, even if the regulation or standard is not specifically referenced herein.

The complete coating system shall be shop-applied except for surfaces that are otherwise listed on the plans or otherwise noted in this specification. Such surfaces shall be coated only after all members are erected, bolts are fully tensioned, and temporary deck formwork is removed. The tops of bridge girder top flanges shall be primer coated only and shall not be metallized or sealed.

Metallizing Contractor Worker Qualifications: The Metallizing Contractor shall be certified by the SSPC Painting Contractor Certification Program QP-6, entitled "Thermal Spray (Metallizing) Contractor Certification Program" in the *enclosed shop* category or be certified in the American Institute of Steel Construction (AISC) Sophisticated Paint Endorsement (SPE) category – *enclosed shop* P1 or *covered shop* P2. A list of approved contractors can be found on the AISC website at www.AISC.org.

The Metallizing Contractor shall be fully certified, including endorsements, for the duration of the time they are doing the surface preparation and coating application. The certification(s) must be kept current for the duration of the Project work. If a Contractor's, subcontractor's or any craft-worker's certification expires, the firm will not be allowed to do any work on this item until the certification is reissued. Requests for extension of time for any delay to the completion of the Project due to an inactive certification will not be considered, and liquidated damages will apply.

Each person applying a metallized coating shall be qualified according to ANSI/AWS C2.18-93R.

The Metallizing Contractor shall have a certified NACE Coatings Inspector Program (CIP) Level 3 inspector, or approved equal, on staff for the duration of the project and actively engaged in the metallizing activities before during and after the coating application.

The Metallizing Contractor and subcontractors are required to have at least one (1) **Coating Application Specialist (CAS) (SSPC ACS/NACE No. 13)** – certified (Level II-Interim Status Minimal) craft-worker. CAS-certified (Level II-Interim Status-Minimal) craft-worker(s) are required for all crews/craft-workers up to four (4) crew members. For each crew larger than four (4), an additional CAS-certified (Level II-Interim Status-Minimal) craft-worker shall be present on each painting/blasting crew during blast cleaning and spray application (Atmospheric and Immersion Service) operations. A crew-member is a person who is on the job performing hand-held nozzle blast cleaning and/or spray application of protective coatings on a steel structure. The certification(s) must be kept current for the duration of the Project work. If a Contractor's, subcontractor's or any craft-worker's certification expires, the firm will not be allowed to do any work on this item until the certification is reissued.

Submittals: The Contractor shall submit the following to the Division of Materials Testing, the Designer of Record and the Project Engineer, for review a minimum of thirty (30) days prior to metallizing.

Metallizing Quality Control (QC) Plan, including:

A. Written procedures for the preparation of surfaces and the application of the metallizing, the sealer, and topcoat in the shop; and procedures for the repair and touch up of any damage that occurs to the newly applied metallizing or coatings. Shop and field repair procedures must be clearly identified.
B. Hold points for surface preparation, metallizing application, adhesion testing of metallizing application and top coating thickness measurements.
C. Identification of the metallizing and coating materials to be applied, including manufacturer's name, product names, and product numbers.
D. Product Data Sheets, VOC levels for liquid coatings, MSD sheets, and written application instructions including mixing requirements, proposed thinners, and manufacturer's recommended thinner amounts for liquid coatings.
E. Identification of the type and brand name of the abrasive proposed for use.
F. Metallizing Manufacturer's Slip Critical Class B Certificate of Compliance.
G. Copies of qualification records along with continuity logs for all thermal spray operators.
H. Copies of NACE CIP Level 3 certifications, or approved equal, for all staff required to possess same. Copies of CAS (SSPC ACS/NACE No. 13) certifications, for all staff required to possess same.
I. Identification of the thermal spray equipment.
J. A work schedule that includes timelines for surface preparation, metallizing, sealing and topcoating.

Notification: Contact the Division of Materials Testing at DOT.Steel@ct.gov a minimum of two (2) weeks prior to the start of work.

Surface Preparation:

A. Weld Spatter, Sharp Edges, and Holes: All slag, flux deposits, and weld spatter and steel irregularities such as fins, tears and slivers shall be removed from the surfaces to be metallized. Any resulting burrs from such removal shall be ground smooth, including burrs around holes. All corners and edges shall be rounded to a 0.0625 inch radius or chamfered to a 0.0625 inch chamfer.
B. Cleaning of Steel: All visible contaminants shall be removed from surfaces in accordance with SSPC-SP 1 using only solvents or detergents.
C. Compressed Air Cleanliness: The cleanliness of the compressed air shall be confirmed in accordance with ASTM D4285 at least once per shift for each compressor system.
D. Surface Requirements: The required surface preparation shall meet SSPC SP 5. Surface preparation shall not be performed under damp environmental conditions or when the surface temperature of the steel is less than 5°F above the dewpoint temperature as determined by a surface thermometer and an electric or sling psychrometer.
E. Abrasives/Profile:
    1. The Contractor shall use abrasives that are free of oil, soluble salts and other similar substances that could contaminate the surface.
    2. A uniform sharp angular profile with a profile of 3.0 to 6.0 mils shall be provided in accordance with ASTM D4417, Method B or C.
F. Acceptance Prior to Metallizing: The cleaned surface shall be accepted by the Engineer

before application of metallizing. Failure of the Contractor to prepare and clean the surfaces to be metallized in accordance with these specifications shall be cause for rejection by the Engineer. All surfaces that are rejected shall be re-cleaned to the satisfaction of the Engineer at no additional cost to the State.

G. Pre-Production Test Section and Bend Tests:
   1. The Contractor shall blast clean and metallize at least 9 square feet of steel surface prior to initiating the full-scale metallizing operation using the same metallizing equipment, set up, materials, and calibration and operating procedures in the test section(s) that shall be used for the production operations.
   2. Spray parameters shall be validated by passing a bend test as follows:
      a. Five (5) steel coupons 2 × 8 × 0.05 inches shall be fabricated of the same steel grade proposed as the member being coated.
      b. The coupons shall receive the same surface preparation, and metallizing as the actual member.
      c. The coupons may be fastened to larger pieces of stock during the blast cleaning and metallizing operations.
      d. Bend coupons 180 degrees around a 0.5 inch diameter mandrel.
      e. The bend test passes if there is no cracking or only minor cracking visually observed on the bend radius.
      f. The bend test fails if the coating cracks and lifts from the substrate.
   3. Additional coupons and testing may be required by the Engineer to establish the suitability of the surface preparation and the thermal spray coating. Full-scale metallizing shall not commence until the Engineer has inspected and approved the Test Section and coupons.

Metallizing Application:

A. Quality of Surface Preparation: The Contractor shall verify that the surface meets the specified SSPC-SP 5 surface requirements immediately prior to application of the metallized coating.
B. Surface Cleanliness: Subsequent coats shall not be applied until overspray, spent abrasive, dirt, dust, and other contaminants have been removed in accordance with SSPC-SP 1.
C. Ambient Conditions: Metallizing shall be applied when the relative humidity is less than 80%. Metallizing shall not be applied under damp environmental conditions or when the surface temperature of the steel is less than 5°F above the dewpoint temperature as determined by a surface thermometer and an electric or sling psychrometer.
D. Metallizing: The coating shall be applied by thermal spray employing multiple passes to achieve a uniform thickness of 0.008 to 0.012 inches (8-12 mils) unless otherwise specified. No single pass shall deposit more than 0.004 inches.
E. Metallizing Adhesion: Adhesion strength of the metallizing shall be 700 psi minimum as measured with approved equipment per ASTM D4541, Annex A4. Measurements shall be taken on companion coupons 4 × 6 × 0.25 inches of the same steel grade as the member being coated and processed concurrently. If adhesion is less than 700 psi but greater than 560 psi, four (4) additional adhesion tests shall be made. If any of the additional adhesion tests are less than 700 psi, the coating shall be removed and re-applied. Any single adhesion test result less than 560 psi, will be justification for the Engineer to have the Contractor

remove the entire coating. All corrective action will be at the Contractor's expense.

F. Quality Control of Metallizing Operation:
   1. The Metallizing Contractor shall verify proper spray equipment set up, calibration, and operating procedures by performing a bend test at the beginning of each work shift that metallizing is to be applied in accordance with requirements described in the Pre-Production Test Section.
   2. In addition to the bend test, a cut test shall be performed on the companion coupons, one during the production day and one at the end of each shift, to confirm that metallizing is being properly applied. The cut test consists of a single cut 1.5 inches long through the thermal spray coating to the substrate without severely cutting the substrate. A cut shall be made with a hammer and sharp chisel. The chisel cut shall be made at a shallow angle. The bond of the metallizing is considered unsatisfactory if any part of the metallizing lifts from the substrate along the cut.
   3. The Engineer shall be notified immediately of any unsatisfactory tests.

G. Bolted Connections and Other Areas:
   1. The Contractor shall state in writing to the Engineer a list of areas they believe are inaccessible prior to the start of work. The Engineer will have the final determination as to the accessibility of those areas.
   2. Bolted connections shall be processed in a manner that achieves the required Slip Critical Classification detailed on the approved steel shop drawings.
   3. Thickness in bolted, Class B, connection areas shall not exceed those listed on the Metallizing Manufacturer's Class B Slip Critical Certificate of Compliance. Under no circumstance shall any thickness reading exceed 16 mils.
   4. All connection points shall be appropriately masked off either before or after metalizing and prior to the application of seal coat.
   5. After members have been erected in the field, all previously masked areas that remain exposed shall be thoroughly cleaned and lightly sanded by hand to receive a brush-applied coat of the same sealer and topcoat used in the shop.
   6. Areas such as bolt holes, backs of snipes and other similar areas where the standard application of a metallized coating cannot be performed shall be cleaned and free of dirt and any loose overspray, and shall receive a brush applied coating of the approved coating system.
   7. The top of the top flange shall NOT be metallized but shall be coated with an inorganic zinc-rich primer from the NEPCOAT Qualified Products List. No sealer shall be applied over the zinc-rich primer.
   8. Metallized coating applied to surfaces not required to be coated may remain if found to be tightly adhered, as determined by the Engineer.

Sealer and Topcoat Application:

A. The sealer shall be applied in a single mist coat followed by a full topcoat.
   1. The Metallizing Contractor shall apply the sealer in accordance with the manufacturer's recommendations, unless otherwise specified.
   2. The sealer shall be applied no more than 8 hours after application of the metallizing, and in no case shall the sealer be applied over dust, rust that may have bled through (if there was not enough thickness), loose oxides or other visible contaminants that would

interfere with the sealer.

3. When conventional spray equipment is used, the Contractor shall verify that the compressed air supply is clean and dry as determined by the blotter test (ASTM D4285).
4. The topcoat shall be applied to achieve a 4 to 6 mils dry film thickness and shall be applied after the seal coat has been allowed to dry as required by the recoat time in the manufacturer's written instructions, but in no case shall a coat remain exposed for longer than ten (10) calendar days prior to overcoating.

B. Coverage and Continuity: All surfaces shall be completely coated and free of voids, runs, sags or other defects. Special attention shall be given to hard-to-reach or inaccessible areas and irregular surfaces. Some configurations may require spraying from multiple directions to assure complete coverage.

C. Sealer and Topcoat Adhesion to Metallized Surfaces:
1. The Metallizing Contractor shall apply the sealer and topcoat in such a manner to assure adherence to the underlying surface. Any lifting of an underlying coat, or poor adhesion between coats or to the substrate, will require removal of the coating in the affected area to adjacent intact, adherent, coating, and reapplication of the material.
2. Topcoat adhesion shall be verified using adhesion tests in accordance with ASTM D4541 as directed by the Engineer.

D. Coating Thickness
1. Wet Film Thickness: The Contractor shall verify and document the thickness of each liquid coat at the time of application using wet film thickness gages in accordance with ASTM D4414.
2. Dry Film Thickness: The dry film thicknesses of the completed coating shall be:

Metallizing	8 to 12 mils
Topcoat	4 to 6 mils
TOTAL SYSTEM	12 to 18 mils

The Contractor shall measure the thickness of each coat using nondestructive magnetic dry film thickness gages. The procedure shall comply with SSPC-PA2 for the calibration and use of the gages, and the frequency of thickness measurements. Spot readings both 20% above and 20% below the thicknesses shown above are permitted, provided the average thicknesses are within the specified tolerances.

Field Required Coating Operations: Any areas requiring sealer or topcoat after erection shall be done in accordance with the previously submitted and approved field coating procedures and shall be in accordance with the manufacturer's recommendations.

Repair of Film Discontinuities and Damage to Coating System after Erection: A repair procedure shall be submitted for concurrence by the Engineer prior to the start of repair work.

Shipping and Storage: All materials shall be shipped and stored in a manner to prevent damage from all physical and environmental factors.

Date of Completion: The words "METALLIZED AND TOPCOATED" followed by the month and year the coating of the structure is completed along with the CTDOT Project Number and the manufacturer's abbreviations, shall be stenciled on the inside of a fascia girder at mid-depth of the girder in three (3) inch high block letters located near the abutment, so as to be clearly visible from

the ground below. Paint for stenciling information shall be of a contrasting color and be compatible with the topcoat and shall be approved by the Engineer prior to application of the stenciled information.

Method of Measurement: The work under this item, being paid on a lump sum basis, will not be measured for payment.

Basis of Payment: The coating of structural steel, incorporated in the completed and accepted structure, will be paid for at the Contract lump sum price for "Metallizing Structural Steel (Site No. X)." The lump sum price shall include all materials, equipment, tools, transportation, repairs, corrective actions, inspection access, and labor incidental thereto

A schedule of values shall be submitted to the Engineer for review and comment prior to application of the metallizing coating.

Pay Item	Pay Unit
Metallizing Structural Steel (Site No. 1)	l.s.

Rev. 12/20/2022

ITEM #0904305A – METAL BRIDGE RAIL - FOUR RAIL

Description: Work under this item shall consist of fabricating, galvanizing, powder coating, transporting, furnishing and erecting curb mounted metal bridge railing comprising of anchor plates, anchors, posts, tubes and bolts, in accordance with the plans and specifications. Metal bridge railing shall be galvanized after fabrication

Materials: Provide rail bars according to ASTM A 500 Grade B, rail post according to ASTM A709, Grade 50, and all other shapes and plates according to ASTM A 709, Grade 36. Provide anchorstuds, nuts, and washers according to ASTM F1554, Grade 55, and all other bolts and nuts ASTM F1554 Grade 36.

Galvanizing: Tubes and post assemblies shall be hot-dip galvanized in accordance with ASTM A123.Steel items designated on the plans to have a controlled content of silicon shall have silicon in either ofthe ranges 0-0.4% or 0.15%-0.25%. Before galvanizing, submit mill test certificates verifying silicon content to the Engineer and the galvanizer.

Where powder coating is called for on the plans:

A. Hot-dipped galvanized components to be powder coated shall not receive a water quench or chromate quench.
B. Galvanized components shall not be left outside or allowed to get wet prior to powder coating.
C. Powder coating shall be the color dark brown. Submit a color chart for approval.
D. All drainage spikes and surface defects shall be removed.

Prohibit welded splices for steel rail tubes.

Provide elastomeric bearing pads that are a Grade 2 with a durometer hardness of 60 according to Section 18.2 of the AASHTO LRFD *Bridge Construction Specifications*. Ensure that the materials and fabrication of bridge bearing pads conform to Section 18 of the AASHTO LRFD *Bridge Construction Specifications*.

Construction Methods: Before fabrication and erection, the Contractor shall submit shop drawings to the Engineer for approval in accordance with Article 1.05.02. a layout plan showing post spacing, post to baseplate connection, rail to post connections, anchorage details, expansion joint locations, material designations and the name and telephone number of a person to contact who can answer question about the shop drawings.

Welding and fabrication of steel shall conform to the AASHTO Standard Specifications for Highway Bridges and the ANSI/AASHTO/AWS D1.5 Bridge Welding Code. If the members are tubular sections, the fabrication and welding shall conform to the ANSI/AWS D1.1 Structural Welding Code-Steel. Anchorages: The threaded rods shall be securely bolted to anchor plates to

create anchor assemblies. The anchorage assemblies shall be installed perpendicular to the grade of the baseline.

The assemblies shall then be carefully placed and tied to reinforcement steel at the correct locations on the bridge. The assemblies shall then be cast into the bridge curbing per the plans and in accordance with Article 6.01.03. Special attention shall be taken during the concrete pour to insure that there are no air voids around the anchor plates.

Base plates shall be set on 1/8 inch thick molded fabric bearing pads. If additional shimming of the base plates is required, the shims shall be of the same material as the base plates. The edges of the base plates shall be caulked to make a water tight joint.

Shop fabrication of the steel four-tube rail system shall conform to the requirements of Article 6.03.03-3. The posts shall be located, positioned, and attached to the bridge as shown on the plans or as directed by the Engineer.

Lengths of rails shall be sufficient to be attached to at least two rail posts.

Rail splice expansion joints shall be provided between any two posts which span a bridge transverse expansion joint. Bolts located at the expansion joints shall be provided with lock nuts and shall be tightened only to a point that will allow rail movement.

The posts, base plates, rails, and splice tubes shall be galvanized after fabrication in accordance with AASHTO M 111.

Galvanized areas that have been damaged shall receive two coats of 98% zinc rich paint that conforms to the requirements of Federal Specification TT-P-641. The paint shall be applied by brush. Spray painting is not allowed.

Powder Coating:

1. Surface Preparation
    - A. If contamination of the galvanizing has occurred or is suspected, clean the galvanizing with a solvent/detergent designed for pre-cleaning and completely rinsed off prior to powder coating. Solvents should only be applied with lint-free rags or soft bristled nylon brushes. Once rinsed, the components must be allowed to completely air dry.
    - B. If ash residue from galvanizing is present, remove it using a solution of one to two percent ammonia. Apply the ammonia solution with a nylon brush, rinse thoroughly with hot water and allow the galvanizing to dry completely.
    - C. Pressure wash all surfaces to be coated using equipment operating at a minimum pressure of 3,000 psi, and a minimum flow of 4gal. /minute. The nozzle shall be held at a distance of 6 inches to 12 inches from the surface.
    - D. When the washing is completed, the cleaned surfaces shall be free of dust, dirt, oil and grease, animal waste, salts, and other debris. Oil and grease shall be removed

by solvent cleaning as described in SSPC SPI Solvent Cleaning. The areas shall be pressure washed again following this cleaning.

E. Once cleaned, all galvanized surfaces shall receive a light sweep blast using abrasive blasting equipment. All compressed air used to satisfy the requirements of this specification shall be clean. The cleanliness shall be verified with a white blotter test according to ASTM D4285 at least once per shift. The light blast shall remove zinc oxides from the galvanizing and etch the surface. The sweep blast shall impart to the galvanized surface an anchor profile of 1 to 1.5 mils as measured using profile tape and a spring-loaded micrometer in accordance with ASTM D4417.

F. The initial thickness of the galvanizing prior to sweep blasting shall be established using a magnetic thickness gage, in a manner as described under ASTM A123. If the sweep blast results in a 15% or greater loss of galvanized coating, the article shall be rejected. The sweep blast shall be performed in a manner that does not result in disbondment or flaking of the galvanizing. After sweep blasting, the galvanized surfaces shall be thoroughly blown down with clean compressed air to remove all blast residues. Any sharp, protruding defects in the galvanized surface, such as that commonly found on edges and holes, shall be removed by hand tools.

Powder Coating

A. Powder coating shall be conducted in a powder coating facility. B. Perform the powder coating application within 1 hour of sweep blasting the galvanized surface. If more than 1-hour elapses prior to coating, the galvanized surfaces shall be re-blasted. If re-blasted, the item shall not have lost 15% or more of its original galvanized coating thickness.

C. Exterior surfaces of the railing shall be coated with a urethane or triglycidyl isocyanurate (TGIC) polyester powder of a degassing grade only to a minimum dry film thickness of 4 mils.

D. Preheat all galvanized articles to be powder coated in an oven to the temperature recommended by the manufacturer of the powder coat to avoid pinholing during powder cure.

E. Apply coating electrostatically and cure in a gas fired convection oven by heating the coated components to a specified temperature, and holding that temperature for a duration of time as recommended by the manufacturer of the powder coat (see Product Data Sheet for powder coat) to ensure sufficient stoving time to meet curing
specifications of the powder. Adjust pre-heating and line speed to ensure full cure.

F. Check for correct cure by solvent testing. The powder coating shall achieve a minimum hardness of 2H as per ASTM D3363. It shall be capable of withstanding an impact test of 130 lb-ft as per ASTM D2794 without any sign of cracking or lack of adhesion.

G. The powder coating for exterior surfaces shall be the color shown in the Contract Documents from the Federal Standard Colors 595 Fan Deck, color shall be dark brown color No. 20040.

Damaged Coating

A. Transport powder coated articles carefully to the work site in such a manner as to prevent any damage to the coating. Woven straps shall be used to unload the articles and they shall be carefully placed on timber dunnage while awaiting installation. Powder coated articles that arrive at the worksite with damage to the coating greater than 1 inch (in any dimension) and/or extending to the galvanized coating will be rejected. Powder coated articles that are damaged while awaiting installation or are damaged during installation shall be subject to the same restrictions/requirements. The contractor shall return to the powder coating facility such articles for cleaning and powder coating at no additional cost to the Town. The cleaning procedure shall not remove galvanizing excessively as noted in this specification. Damage to the coating that is 1 inch or smaller shall be repaired in the field using surface preparation techniques and repair material recommended by the powder coating manufacturer. The manufacturer's recommendations shall be followed in the application and curing of the repair material.

B. If the damage to the coating is smaller than 1 inch but has occurred at numerous locations on an article such that the Engineer believes the aesthetic value of the coating has been compromised, then this article will be rejected and returned by the contractor to the shop for powder coating (as described earlier) at no additional cost to the Town.

The post shall be set plumb except in those locations where the roadway grade is less than 1.50% in which case they shall be set normal to the grade.

After installation, all rails and posts shall be free of burrs, sharp edges and irregularities.

Material to be stored shall be placed on skids above the ground. It shall be kept clean and properly drained.

Bolting: Procedures for the installation of high strength bolts shall conform to Section 6.03. During installation, the Contractor shall take necessary precautions to prevent any injury or property damage from any falling materials.

All work shall proceed in accordance with the special provisions "Maintenance and Protection of Traffic" and "Prosecution and Progress".

Method of Measurement: This work will be measured for payment by the actual number of linear feet of open bridge rail installed and accepted, measured along the rail from one rail end to the other end, as delineated on the plans.

Basis of Payment: This work will be paid for at the contract unit price per linear foot for "Metal Bridge Rail – Four Rail" complete and accepted in place, which price shall include all materials, equipment, tools, labor, and work incidental thereto.

Pay Item Pay	Unit
Metal Bridge Rail – Four Rail	L.F.

REV. No.	SHEET No.	DATE mm/dd/yy	NEW	REV.	DEL.	DESCRIPTION	BY
A1	04.02.A01	10/24/23		✔		GAS LINE NOTE REVISION	Prime
A1	04.10.A01	10/24/23		✔		GAS LINE NOTE REVISION	Prime
A1	04.20.A01	10/24/23		✔		GAS LINE NOTE REVISION	Prime
A3	04.02.A03	11/7/23		✔		GIRDER METALLIZING REVISION	Prime
A3	04.03.A03	11/7/23		✔		GIRDER METALLIZING REVISION	Prime
A3	04.04.A03	11/7/23		✔		GIRDER METALLIZING REVISION	Prime
A3	04.17.A03	11/7/23		✔		GIRDER METALLIZING REVISION	Prime
A3	04.20.A03	11/7/23		✔		GIRDER METALLIZING REVISION	Prime
A3	04.21.A03	11/7/23		✔		GIRDER METALLIZING REVISION	Prime

REV. No.	SHEET No.	DATE mm/dd/yy	NEW	REV.	DEL.	DESCRIPTION	BY

REV. No.	SHEET No.	DATE mm/dd/yy	NEW	REV.	DEL.	DESCRIPTION	BY

SIGNATURE/
BLOCK:

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

PROJECT NUMBER: 0157-0088
PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NO. 07001 MICHAELS WAY OVER WEST BRANCH SAUGATUCK RIVER
TOWN(S): WESTON
DRAWING TITLE: LIST OF REVISIONS

DRAWING NO. REV-3
SHEET NO. 02.01.A3

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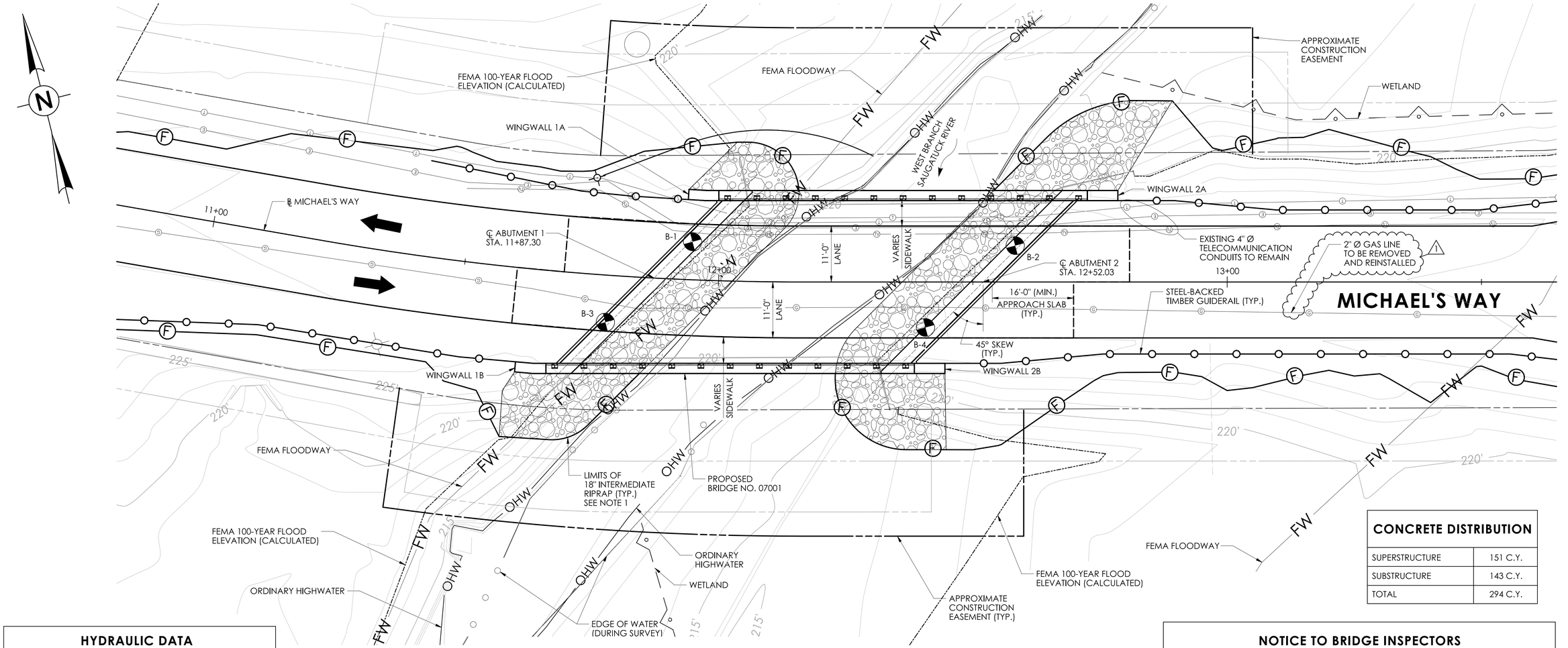
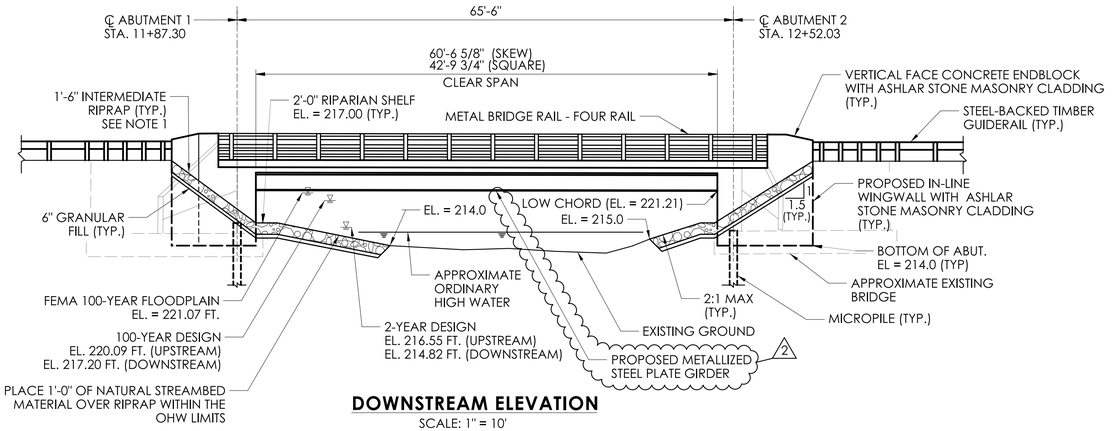


GENERAL PLAN

SCALE: 1" = 10'



DOWNSTREAM ELEVATION

SCALE: 1" = 10'

CONCRETE DISTRIBUTION

SUPERSTRUCTURE	151 C.Y.
SUBSTRUCTURE	143 C.Y.
TOTAL	294 C.Y.

HYDRAULIC DATA

DRAINAGE AREA	6.25 SQ. MILES
DESIGN FREQUENCY	100 YEAR
DESIGN DISCHARGE	1,530 CFS
AVERAGE DAILY FLOW ELEVATION	212.45 FT (ESTIMATED)
UPSTREAM DESIGN WATER SURFACE ELEVATION	220.09 FT
DOWNSTREAM DESIGN WATER SURFACE ELEVATION	217.20 FT
MAXIMUM SCOUR ELEVATION	206.00 FT
FREQUENCY	500-YEAR
DISCHARGE	1,960 CFS
WORST CASE SCOUR SUB-STRUCTURE UNIT	ABUTMENT 2

TRANSPORTATION DIMENSIONS AND WEIGHT

MEMBER	SHIPPING LENGTH	SHIPPING HEIGHT	SHIPPING WIDTH	SHIPPING WEIGHT
G-1 - G-6	67'-2"	2.17'	1.33'	10,200 LBS

NOTICE TO BRIDGE INSPECTORS

THE DEPARTMENT'S BRIDGE SAFETY PROCEDURES REQUIRE THIS BRIDGE TO INSPECTED FOR, BUT NOT LIMITED TO, ALL APPROPRIATE COMPONENTS INDICATED IN THE GOVERNING MANUALS FOR BRIDGE INSPECTION. ATTENTION MUST BE GIVEN TO INSPECTING THE FOLLOWING SPECIAL COMPONENTS AND DETAILS. (THE LISTING OF COMPONENTS FOR SPECIFIC ATTENTION SHALL NOT BE CONSTRUED TO REDUCE THE IMPORTANCE OF INSPECTION OF ANY OTHER COMPONENT OF THE STRUCTURE). THE FREQUENCY OF INSPECTION OF THIS STRUCTURE SHALL BE IN ACCORDANCE WITH THE GOVERNING MANUALS FOR BRIDGE INSPECTION, UNLESS OTHERWISE DIRECTED BY THE MANAGER OF BRIDGE SAFETY AND EVALUATION.

COMPONENTS OR DETAIL	STRUCTURE SHEET REFERENCE
NONE	NONE

LEGEND

BORING LOCATION

18" INTERMEDIATE RIPRAP

NOTE

1. PLACE 1'-0" OF NATURAL STREAMBED MATERIAL OVER ANY RIPRAP WITHIN THE OHW LIMITS

REV.	DATE	REVISION DESCRIPTION
2	11/03/23	GIRDER METALLIZING REVISION
1	10/24/23	GAS LINE REVISION

DESIGNER/DRAFTER: DRW/SLM CHECKED BY: DMK

HORIZONTAL SCALE 1" = 10' (0, 10', 20')

SIGNATURE/ BLOCK:

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

PROJECT NUMBER: 0157-0088
PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NO. 07001 MICHAEL'S WAY OVER WEST BRANCH SAUGATUCK RIVER
TOWN(S): WESTON
DRAWING TITLE: GENERAL PLAN AND ELEVATION

DRAWING NO. S-02
SHEET NO. 04.02.A3

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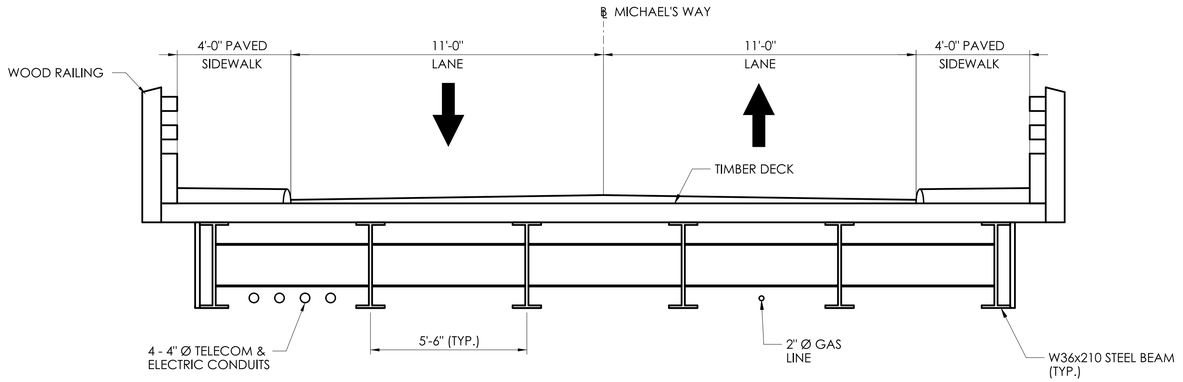
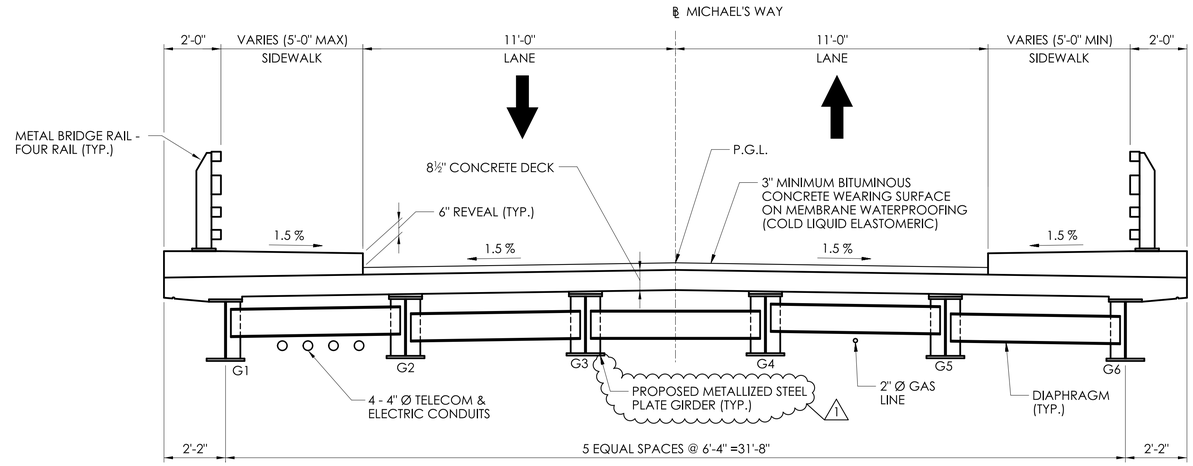
PLOTTED DATE: 11/7/2023



EXISTING BRIDGE CROSS SECTION

SCALE: ⅜" = 1'-0"



PROPOSED BRIDGE CROSS SECTION

SCALE: ⅜" = 1'-0"

REV.	DATE	REVISION DESCRIPTION
1	11/03/23	GIRDER METALLIZING REVISION

DESIGNER/DRAFTER: DRW/SLM CHECKED BY: DMK

SIGNATURE/ BLOCK:

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

PROJECT NUMBER: 0157-0088
PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NO. 07001 MICHAEL'S WAY OVER WEST BRANCH SAUGATUCK RIVER
TOWN(S): WESTON
DRAWING TITLE: TYPICAL BRIDGE CROSS SECTIONS

DRAWING NO. S-03
SHEET NO. 04.03.A3

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PLOTTED DATE: 11/7/2023

GENERAL NOTES

SPECIFICATIONS: CONNECTICUT DEPARTMENT OF TRANSPORTATION FORM 818 (2020), SUPPLEMENTAL SPECIFICATIONS DATED JULY 2022, AND SPECIAL PROVISIONS.

DESIGN SPECIFICATIONS: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS - 8TH EDITION, 2017 AS SUPPLEMENTED BY THE CONNECTICUT DEPARTMENT OF TRANSPORTATION BRIDGE DESIGN MANUAL (2003) WITH REVISIONS THROUGH 2019.

MATERIAL STRENGTHS:

CONCRETE:
CLASS PCC04462 f'c = 4,000 PSI
CLASS PCC03340 f'c = 3,000 PSI

THE CONCRETE STRENGTH, f'c, USED IN DESIGN OF THE CONCRETE COMPONENTS IS NOTED ABOVE. THE COMPRESSIVE STRENGTH OF THE CONCRETE IN THE CONSTRUCTED COMPONENTS SHALL CONFORM TO THE REQUIREMENTS OF 6.01 - CONCRETE FOR STRUCTURES, AND M.03 - PORTLAND CEMENT CONCRETE.

REINFORCEMENT:
(ASTM A615 GRADE 60) Fy = 60,000 PSI

STRUCTURAL STEEL:
(ASTM M270 GRADE 50 METALLIZED) Fy= 50,000 PSI

1

LIVE LOAD: HL93, LEGAL AND PERMIT VEHICLES

STRUCTURAL STEEL: SEE STRUCTURAL STEEL NOTES FOR DESIGNATIONS AND REQUIREMENTS

PAINT: PAINTING OF THE STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIAL PROVISIONS "METALLIZING STRUCTURAL STEEL". THE COLOR OF THE TOPCOAT MATERIAL ON THE STRUCTURAL STEEL SHALL CONFORM TO FEDERAL STANDARD 595, COLOR NO. 20040 (BROWN)

1

BITUMINOUS CONCRETE OVERLAY: THIS SHALL CONSIST OF TWO LIFTS, 2" HMA S0.5 TRAFFIC LEVEL 2 ON 1" HMA S0.25 TRAFFIC LEVEL 2.

SALVAGE: NONE

PILE LOADS: THE VARIOUS GROUP LOADINGS NOTED ON THE SUBSTRUCTURE PLAN SHEETS REFERS TO THE GROUP LOADS AS GIVEN IN THE AASHTO *LRFD BRIDGE DESIGN SPECFICIATIONS.*

DIMENSIONS: WHEN DECIMAL DIMENSIONS ARE GIVEN TO LESS THAN THREE DECIMAL PLACES, THE OMITTED DIGITS SHALL BE ASSUMED TO BE ZEROS

EXISTING DIMENSIONS: DIMENSIONS OF THE EXISTING STRUCTURE SHOWN ON THESE PLANS ARE FOR GENERAL REFERENCE ONLY. THEY HAVE BEEN TAKEN FROM THE ORIGINAL DESIGN DRAWINGS AND ARE NOT GUARANTEED. THE CONTRACTOR SHALL TAKE ALL FIELD MEASUREMENTS NECESSARY TO ASSURE PROPER FIT OF THE FINISHED WORK AND SHALL ASSUME FULL RESPONSIBILITY FOR THEIR ACCURACY. WHEN SHOP DRAWINGS BASED ON FIELD MEASUREMENTS ARE SUBMITTED FOR REVIEW, THE FIELD MEASUREMENTS SHALL ALSO BE SUBMITTED FOR REFERENCE BY THE REVIEWER.

UTILITIES: THE FOLLOWING UTILITIES ARE LOCATED WITHIN THE PROJCET LIMITS AND SHALL BE PROTECTED DURING CONSTRUCTION:

EVERSOURCE GAS
FRONTIER COMMUNICATIONS
EVERSOURCE ELECTRIC

MASH TEST LEVEL: THE FOUR BAR STEEL BRIDGE RAIL MEETS THE TL-4 CRITERIA FOR MASH 2016.

BRIDGE IDENTIFICATION PLACARDS: THE CONTRACTOR SHALL PROVIDE AND INSTALL NEW BRIDGE IDENTIFICATION SIGNS AT THE LEADING END OF EACH BRIDGE PARAPET ON THE TRAFFIC SIDE. THE SIGNS SHALL BE FABRICATED WITH 40 GAUGE ALUMINUM SHEET METAL. THE SIGNS SHALL BE 4" X 12" WITH 3" WHITE REFLECTIVE BLOCK LETTERS ON GREEN SHEETING. EACH SIGN SHALL READ: 07001. ALL COSTS ASSOCIATED WITH PROVIDING AND INSTALLING THE BRIDGE SIGNS SHALL BE COVERED UNDER "SIGN FACE-SHEET ALUMINUM (TYPE IX RETROREFLECTIVE SHEETING)". THE FINAL LOCATION AND ATTACHMENT METHOD FOR THE SIGNS SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.

CONCRETE NOTES

REMAIN-IN-PLACE FORMS: THE USE OF REMAIN-IN-PLACE FORMS ON THIS STRUCTURE IS NOT ALLOWED.

COMPOSITE CONSTRUCTION: NO TEMPORARY INTERMEDIATE SUPPORTS SHALL BE USED DURING THE PLACING AND SETTING OF THE CONCRETE DECK SLAB. TEMPORARY SUPPORTS MAY BE USED FOR STRUCTURAL STEEL ERECTION ONLY. CONSTRUCTION LOADS AND DEAD LOADS WILL BE PERMITTED WHEN DIRECTED BY THE ENGINEER BUT ONLY WHEN THE CONCRETE HAS REACHED A STRENGTH OF f'c=3500psi. LIVE LOADS (TRAFFIC) WILL BE PERMITTED ON THE STRUCTURE AFTER THE CONCRETE HAS REACHED A STRENGTH OF f'c=4000psi.

THE FOLLOWING PAY ITEMS AND CONCRETE CLASSES ARE REQUIRED FOR CAST-IN-PLACE BRIDGE COMPONENTS:

ITEM	BRIDGE COMPONENT	PCC CLASS
ABUTMENTS & WINGWALLS	ABUTMENTS BELOW BEAMS AND WINGWALLS	PCC03340
BRIDGE DECK CONCRETE	BRIDGE DECK, ABUTMENTS ABOVE BEAM SEAT,	PCC04462
SIDEWALK CONCRETE	SIDEWALKS	PCC04462
BRIDGE RAIL CONCRETE	CONCRETE END BLOCKS	PCC04462

EXPOSED EDGES: EXPOSED EDGES SHALL BE BEVELED 1"x1" UNLESS DIMENSIONED OTHERWISE.

CONCRETE COVER: ALL REINFORCEMENT SHALL HAVE TWO INCHES COVER UNLESS DIMENSIONED OTHERWISE.

REINFORCEMENT: ALL REINFORCEMENT SHALL BE EPOXY COATED OTHERSWISE NOTED.

CONSTRUCTION JOINTS: CONSTRUCTION JOINTS, OTHER THAN THOSE SHOWN ON THE PLANS, WILL NOT BE PERMITTED WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.

REV.	DATE	REVISION DESCRIPTION
1	11/03/23	GIRDER METALLIZING REVISION

DESIGNER/DRAFTER: DRW/SLM CHECKED BY: DMK

SIGNATURE/ BLOCK:

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

PROJECT NUMBER: 0157-0088
PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NO. 07001 MICHAEL'S WAY OVER WEST BRANCH SAUGATUCK RIVER
TOWN(S): WESTON
DRAWING TITLE: GENERAL NOTES

DRAWING NO. S-04
SHEET NO. 04.04.A3

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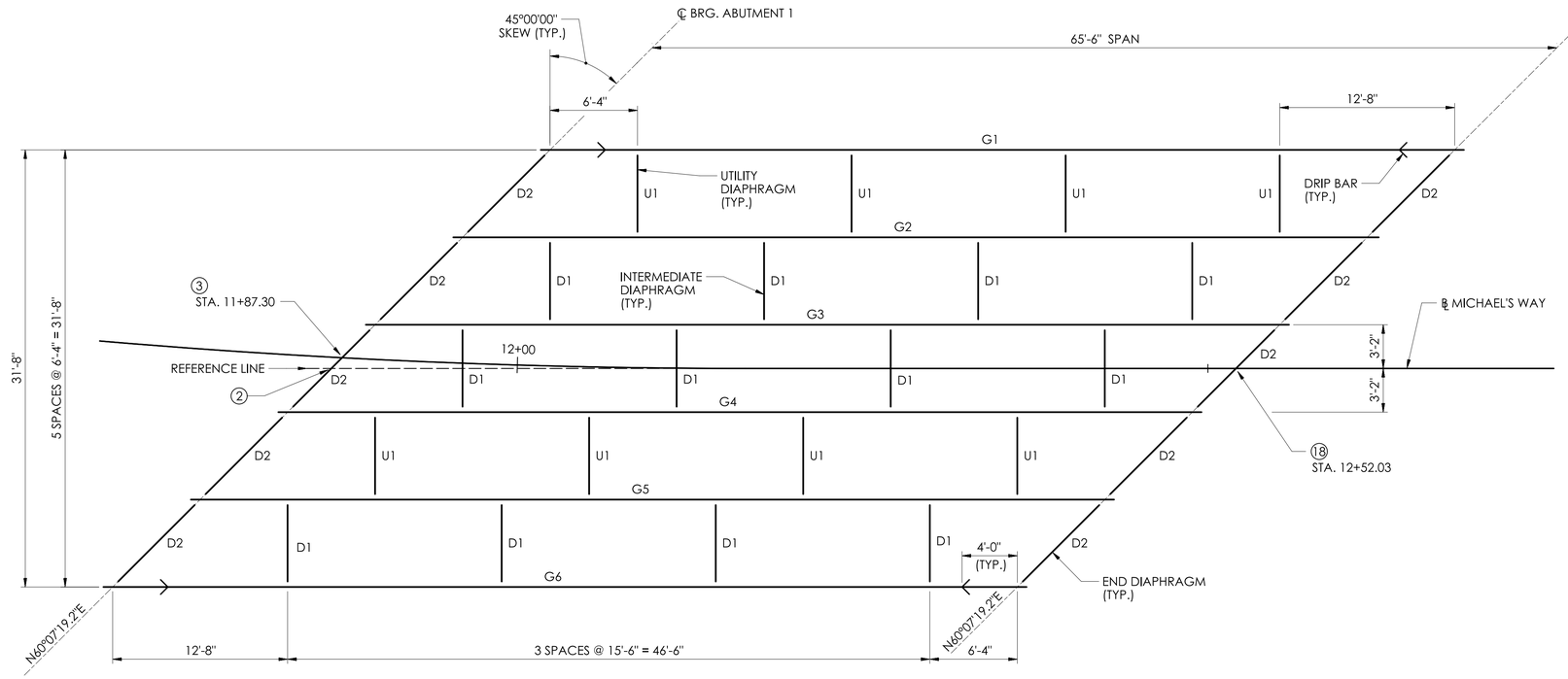
PLOTTED DATE: 11/8/2023



FRAMING PLAN

SCALE: 3/16" = 1'-0"

LEGEND

D#	DIAPHRAGM TYPE #
G#	GIRDER NO. #
(X)	WORK POINT
<	DRIP BAR

CAMBER TABLE (INCHES)

GIRDER MARK		CL BRG. ABUT. 1	0.10 L	0.20 L	0.30 L	0.40 L	0.50 L	0.60 L	0.70 L	0.80 L	0.90 L	CL BRG. ABUT. 2
G1 & G6	STRUCTURAL STEEL DEFLECTION	0.00	0.14	0.26	0.36	0.42	0.44	0.42	0.36	0.26	0.14	0.00
	ADDITIONAL DEAD LOAD DEFLECTION	0.00	0.61	1.15	1.57	1.84	1.93	1.84	1.57	1.15	0.61	0.00
	COMPOSITE DEAD LOAD DEFLECTION	0.00	0.17	0.32	0.43	0.51	0.53	0.51	0.43	0.32	0.17	0.00
	TOTAL DEAD LOAD CAMBER	0.00	0.91	1.72	2.36	2.76	2.90	2.76	2.36	1.72	0.91	0.00
	VERTICAL CURVE ORDINATE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	EXTRA CAMBER	0.00	0.13	0.26	0.39	0.52	0.66	0.52	0.39	0.26	0.13	0.00
	TOTAL CAMBER	0.00	1.95	3.71	5.11	6.05	6.46	6.05	5.11	3.71	1.95	0.00
G2-G4	STRUCTURAL STEEL DEFLECTION	0.00	0.14	0.26	0.36	0.42	0.44	0.42	0.36	0.26	0.14	0.00
	ADDITIONAL DEAD LOAD DEFLECTION	0.00	0.61	1.15	1.57	1.84	1.93	1.84	1.57	1.15	0.61	0.00
	COMPOSITE DEAD LOAD DEFLECTION	0.00	0.17	0.32	0.43	0.51	0.53	0.51	0.43	0.32	0.17	0.00
	TOTAL DEAD LOAD CAMBER	0.00	0.91	1.72	2.36	2.76	2.90	2.76	2.36	1.72	0.91	0.00
	VERTICAL CURVE ORDINATE	0.00	0.14	0.13	0.09	0.07	0.06	0.05	0.03	0.02	0.01	0.00
	EXTRA CAMBER	0.00	0.00	0.14	0.30	0.46	0.60	0.48	0.36	0.24	0.12	0.00
	TOTAL CAMBER	0.00	1.96	3.71	5.11	6.05	6.46	6.05	5.11	3.71	1.95	0.00

STRUCTURAL STEEL NOTES

1. ALL STRUCTURAL STEEL (LOW ALLOY) SHALL CONFORM TO AASHTO M270 GRADE 50 T2 AND SHALL BE METALLIZED. (1)
2. WELDING DETAILS, PROCEDURES AND TESTING METHODS SHALL CONFORM TO THE LATEST ANSI/AASHTO/AWS D1.5 - BRIDGE WELDING CODE, UNLESS OTHERWISE NOTED ON THE PLANS.
3. FIELD SPLICES WILL NOT BE ALLOWED EXCEPT WITH THE WRITTEN PERMISSION OF THE ENGINEER PRIOR TO THE SUBMISSION OF SHOP PLANS. IF ALLOWED, THESE SPLICES SHALL BE DESIGNED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. THE COST OF THESE SPLICES, INCLUDING THE COST OF DESIGN, SHALL BE AT NO EXTRA EXPENSE TO THE STATE.
4. ALL WEB TO FLANGE, WEB TO BEARING STIFFENER AND BEARING STIFFENER TO FLANGE FILLET WELDS SHALL BE INSPECTED BY THE MAGNETIC PARTICLE METHOD.
5. MULTIPLE PASS WELDS, INSPECTED BY THE MAGNETIC PARTICLE METHOD, SHALL HAVE EACH PASS OR LAYER INSPECTED AND ACCEPTED BEFORE PROCEEDING TO THE NEXT PASS OR LAYER, AS DETERMINED BY THE ENGINEER.
6. SHOP FLANGE SPLICES SHALL BE LOCATED A MINIMUM OF 6 INCHES FROM WEB SPLICES.
7. FLANGE OR WEB SPLICES SHALL BE LOCATED A MINIMUM OF 6 INCHES FROM STIFFENERS AND CONNECTION PLATES.
8. ENDS OF BEAMS SHALL BE VERTICAL AFTER THE APPLICATION OF FULL DEAD LOADS.
9. THE STRUCTURAL STEEL FABRICATORS SHALL BE CERTIFIED UNDER THE AISC CERTIFICATION PROGRAM CATEGORY BRIDGE FABRICATOR INTERMEDIATE (IBR).
10. THE CONTRACTOR SHALL TAKE THE PROPER PRECAUTIONS TO ENSURE STABILITY OF ALL STRUCTURE ELEMENTS UNTIL THE TOTAL STRUCTURE IS IN BEING.
11. ALL BOLTED CONNECTIONS SHALL BE SLIP-CRITICAL WITH CLASS B FAYING SURFACES AND MADE WITH ASTM A325, TYPE 3, 7/8" DIAMETER HIGH STRENGTH BOLTS.

REV.	DATE	REVISION DESCRIPTION
1	11/03/23	GIRDER METALLIZING REVISION

DESIGNER/DRAFTER: DRW/SLM CHECKED BY: DMK

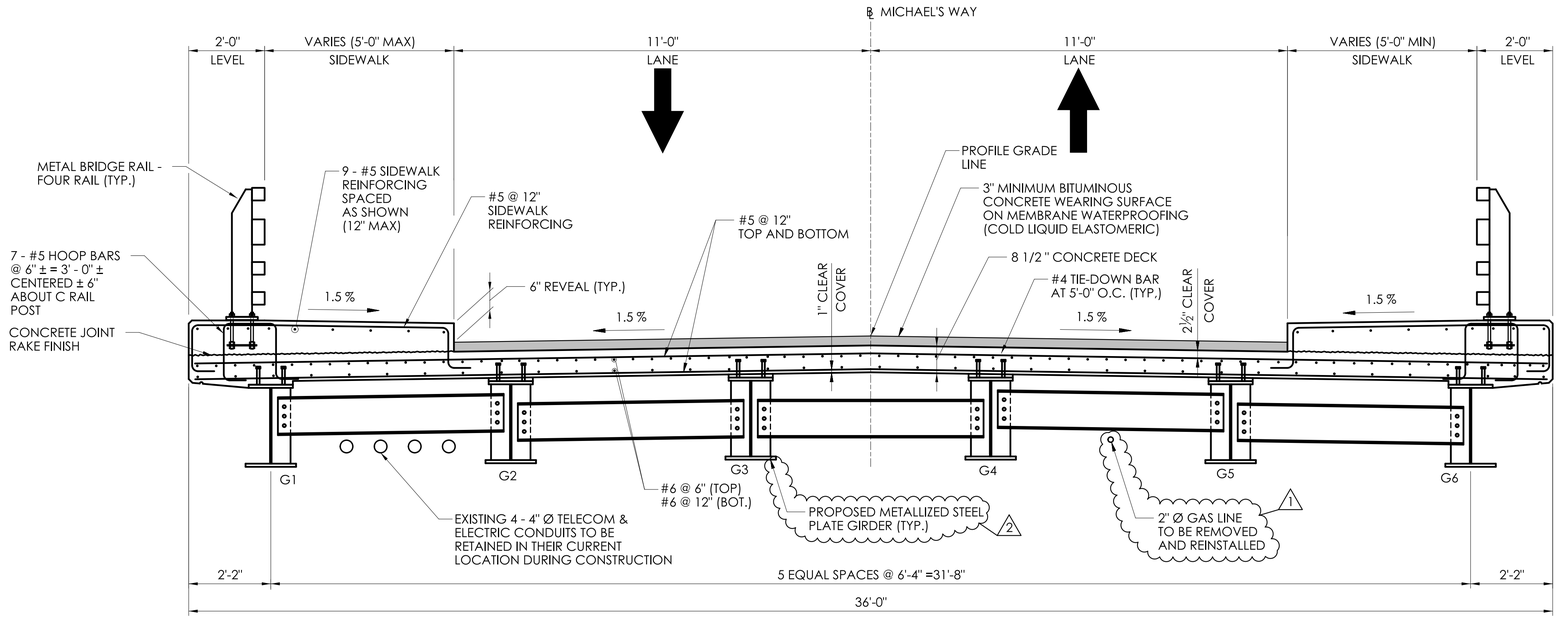
SIGNATURE/ BLOCK:

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

PROJECT NUMBER: 0157-0088
PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NO. 07001 MICHAEL'S WAY OVER WEST BRANCH SAUGATUCK RIVER
TOWN(S): WESTON
DRAWING TITLE: FRAMING PLAN AND DETAILS

DRAWING NO. S-17
SHEET NO. 04.17.A3

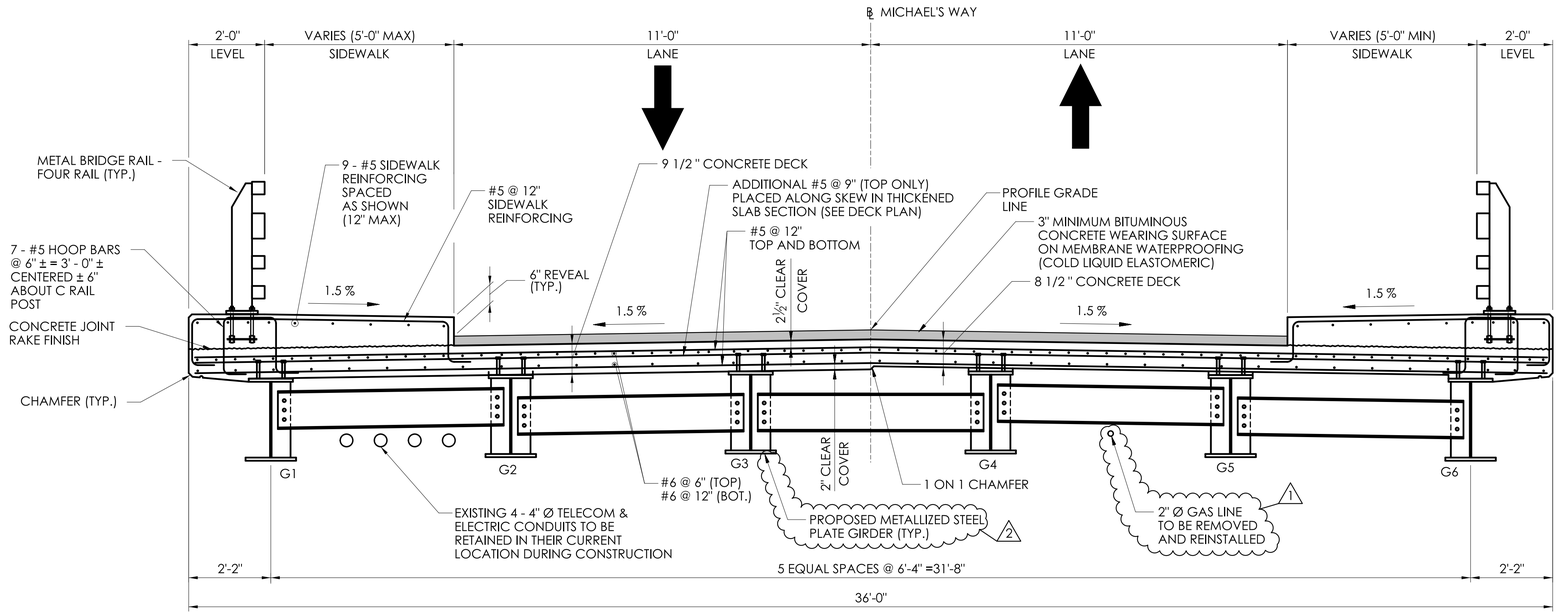
LASTED SAVED BY: smerkwan **FILE NAME:** M:\DDE\Worksets\CTDOT\0157-0088\Bridge\Contract_Plans\Revisions to Contract Plans 2023-1103\A1_SB_CP_0157_0088_FramingPlan.dgn
PLOTTED DATE: 11/7/2023



DECK REINFORCEMENT SECTION

SCALE: ½" = 1'-0"

NOTE: TIE DOWN BARS NOT SHOWN FOR CLARITY



DECK REINFORCEMENT AT THICKENED SLAB SECTION

SCALE: ½" = 1'-0"

NOTE: TIE DOWN BARS NOT SHOWN FOR CLARITY

REV.	DATE	REVISION DESCRIPTION
1	11/03/23	GIRDER METALLIZING REVISION
2	10/24/23	GAS LINE REVISION

DESIGNER/DRAFTER: DRW/SLM CHECKED BY: DMK

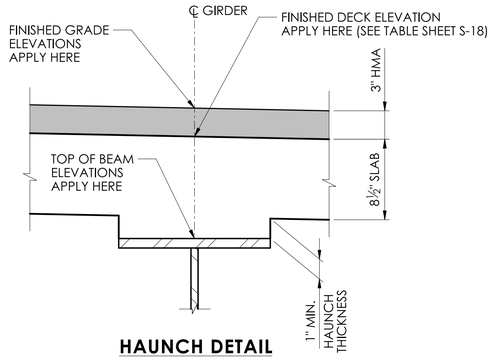
SIGNATURE/ BLOCK:

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

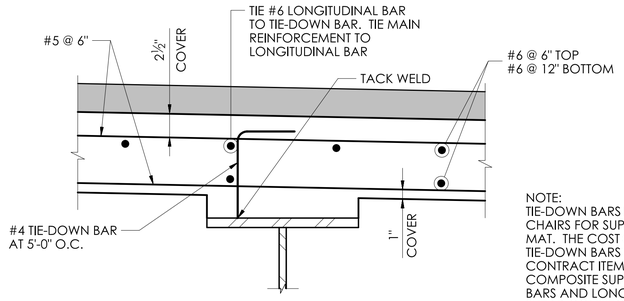
PROJECT NUMBER: 0157-0088
PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NO. 07001 MICHAEL'S WAY OVER WEST BRANCH SAUGATUCK RIVER
TOWN(S): WESTON
DRAWING TITLE: DECK REINFORCEMENT SECTIONS

DRAWING NO. S-20
SHEET NO. 04.20.A3

LASTED SAVED BY: smerkwan **FILE NAME:** M:\DDE\Worksets\CTDOT\0157-0088\Bridge\Contract_Plans\Revisions to Contract Plans 2023-1103\A2_SB_CP_0157_0088_Reinforcement_Sections.dgn
PLOTTED DATE: 11/7/2023

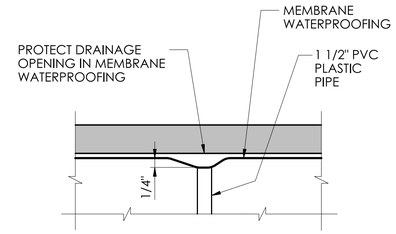


HAUNCH DETAIL
SCALE: 1½" = 1'-0"

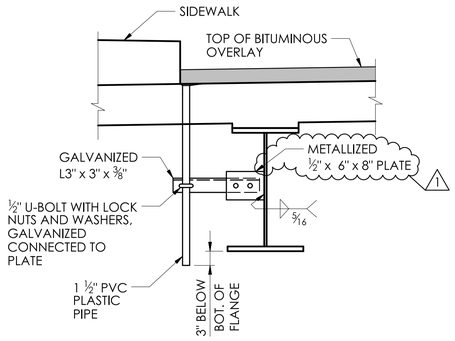


NOTE:
TIE-DOWN BARS DO NOT EXCLUDE THE USE OF CHAIRS FOR SUPPORTING THE REINFORCEMENT MAT. THE COST OF FURNISHING AND PLACING TIE-DOWN BARS TO BE INCLUDED IN THE CONTRACT ITEM "PRECAST CONCRETE/STEEL COMPOSITE SUPERSTRUCTURE". TIE-DOWN BARS AND LONGITUDINAL BARS SHALL CLEAR SHEAR CONNECTORS.

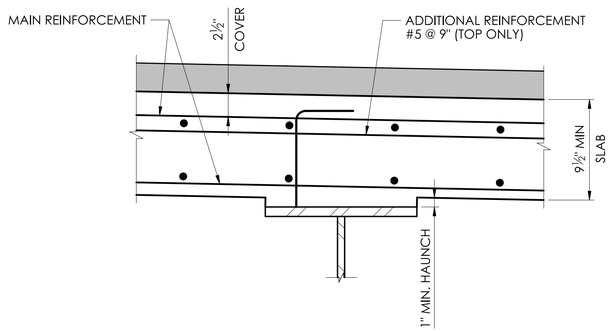
TIE-DOWN FOR SLAB REINFORCEMENT
SCALE: 1½" = 1'-0"
NOTE: SHEAR STUDS NOT SHOWN FOR CLARITY



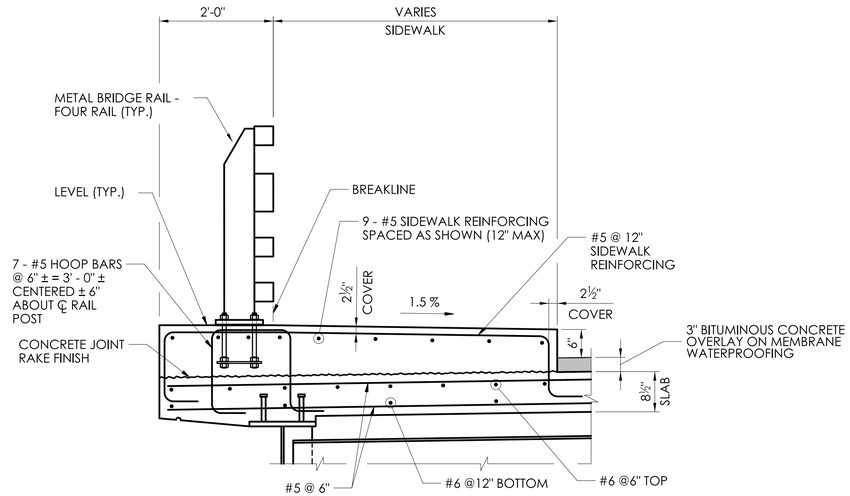
TYPICAL DRAIN DETAIL
NOT TO SCALE



DECK WEEPHOLE DETAIL
SCALE: ¾" = 1'-0"



THICKENED SLAB SECTION
SCALE: 1½" = 1'-0"
NOTE: SHEAR STUDS NOT SHOWN FOR CLARITY



TYPICAL SIDEWALK SECTION
SCALE: ¾" = 1'-0"
NOTE: 8½" SLAB SECTION SHOWN, THICKENED SLAB SIMILAR

REV.	DATE	REVISION DESCRIPTION
1	11/03/23	GIRDER METALLIZING REVISION

DESIGNER/DRAFTER: DRW/SLM CHECKED BY: DMK

SIGNATURE/ BLOCK:

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

PROJECT NUMBER: 0157-0088
PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NO. 07001 MICHAEL'S WAY OVER WEST BRANCH SAUGATUCK RIVER
TOWN(S): WESTON
DRAWING TITLE: DECK DETAILS

DRAWING NO. S-21
SHEET NO. 04.21.A3

LASTED SAVED BY: smerkwan **FILE NAME:** M:\DDE\Worksets\CTDOT\0157-0088\Bridge\Contract_Plans\Revisions to Contract Plans 2023-1103\A1_SB_CP_0157_0088_DeckPlan.dgn
PLOTTED DATE: 11/7/2023