

PROJECT INFORMATION FOR THE REPLACEMENT OF THE BRIDGE CARRYING METRO-NORTH RAILROAD (WATERBURY BRANCH) OVER SUGARBUSH BROOK (BRIDGE No. 8277R) NAUGATUCK

STATE PROJECT No. 304-008



GENERAL INFORMATION

This project involves the complete removal of the existing steel superstructure and placement of a precast concrete box culvert. This bridge is one of four that will be replaced/rehabilitated during a 21 day outage of the Waterbury Branch Railroad. The overall project duration is estimated to be 12 months. At the present time, the project is scheduled to be advertised in September 2011 and the start of construction is anticipated to begin May 2012. The estimated construction cost is Range E.

The existing railroad bridge, which was constructed in 1905 and rehabilitated in 1940, consists of a 7'-8" wide open deck, steel girder superstructure founded on concrete abutments, with a maximum span of 18 feet over Sugar Bush Brook.

The proposed project consists of the rehabilitation of MNRR Bridge No. 08277R. Improvements include removal of the existing superstructures, placement of a 10' wide by 11' high precast concrete box culvert and wingwalls between the existing abutments, and replacement of the rail crossing.

Access to the site will be from the Borough of Naugatuck Sewage Treatment Plant located at the end of Cherry Street Extension. This property directly abuts the State of Connecticut MNRR property and a temporary construction easement will be required. From the Sewage Treatment Plant, an existing unimproved access drive along the west side of the track will be used to access the bridge site. Minor improvements may be required along drive to facilitate the transportation of heavy equipment and materials. This access drive is located entirely within the MNRR Right-of-Way.

Department of Transportation

Contractor Information

**STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION_
PROJECT SCOPE CODES FOR CONTRACT ITEMS**

AMOUNT

<u>CODE</u>	<u>FROM</u>	<u>TO</u>
"A"	LESS THAN	\$ 100,000
"B"	\$ 100,000	\$ 199,999
"C"	\$ 200,000	\$ 499,999
"D"	\$ 500,000	\$ 999,999
"E"	\$ 1,000,000	\$ 2,499,999
"F"	\$ 2,500,000	\$ 4,999,999
"G"	\$ 5,000,000	\$ 7,499,999
"H"	\$ 7,500,000	\$ 9,999,999
"I"	\$ 10,000,000	\$ 14,999,999
"J"	\$ 15,000,000	\$ 19,999,999
"K"	\$ 20,000,000	\$ 29,999,999
"L"	\$ 30,000,000	\$ 39,999,999
"M"	\$ 40,000,000	\$ 59,999,999
"N"	\$ 60,000,000	\$ 89,999,999
"O"	\$ 90,000,000	\$ 119,999,999
"P"	\$ 120,000,000	\$ 159,999,999
"Q"	\$ 160,000,000	\$ 199,999,999
"R"	\$ 200,000,000	\$ 249,999,999
"S"	\$ 250,000,000	\$ 299,999,999
"T"	\$ 300,000,000	\$ 399,999,999
"U"	\$ 400,000,000	\$ 499,999,999
"V"	\$ 500,000,000	\$ 599,999,999
"W"	\$ 600,000,000	AND OVER

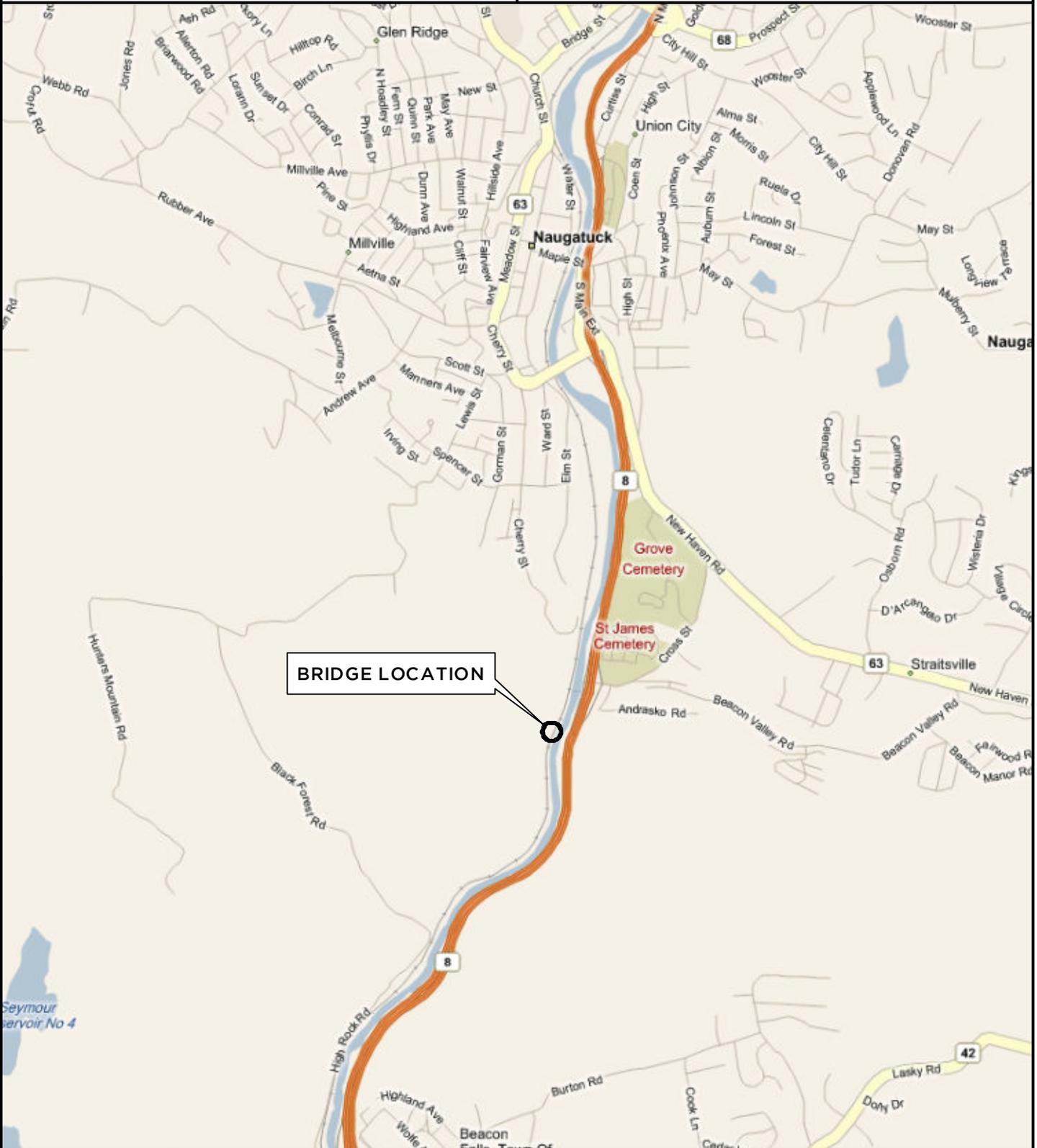
For any questions regarding this project scope code, please contact the Transportation Manager of Contracts at (860) 594-3390.



ANCHOR
ENGINEERING SERVICES, INC.

41 Sequin Drive
Glastonbury, CT 06033
Phone: (860) 633-8770
Fax: (860) 633-5971

**METRO-NORTH BRIDGE NO. 08277R
OVER SUGAR BUSH BROOK
NAUGATUCK, CT**



BING MAPS ROAD
WEB MAPPING
2010

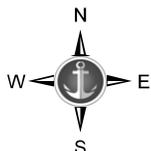
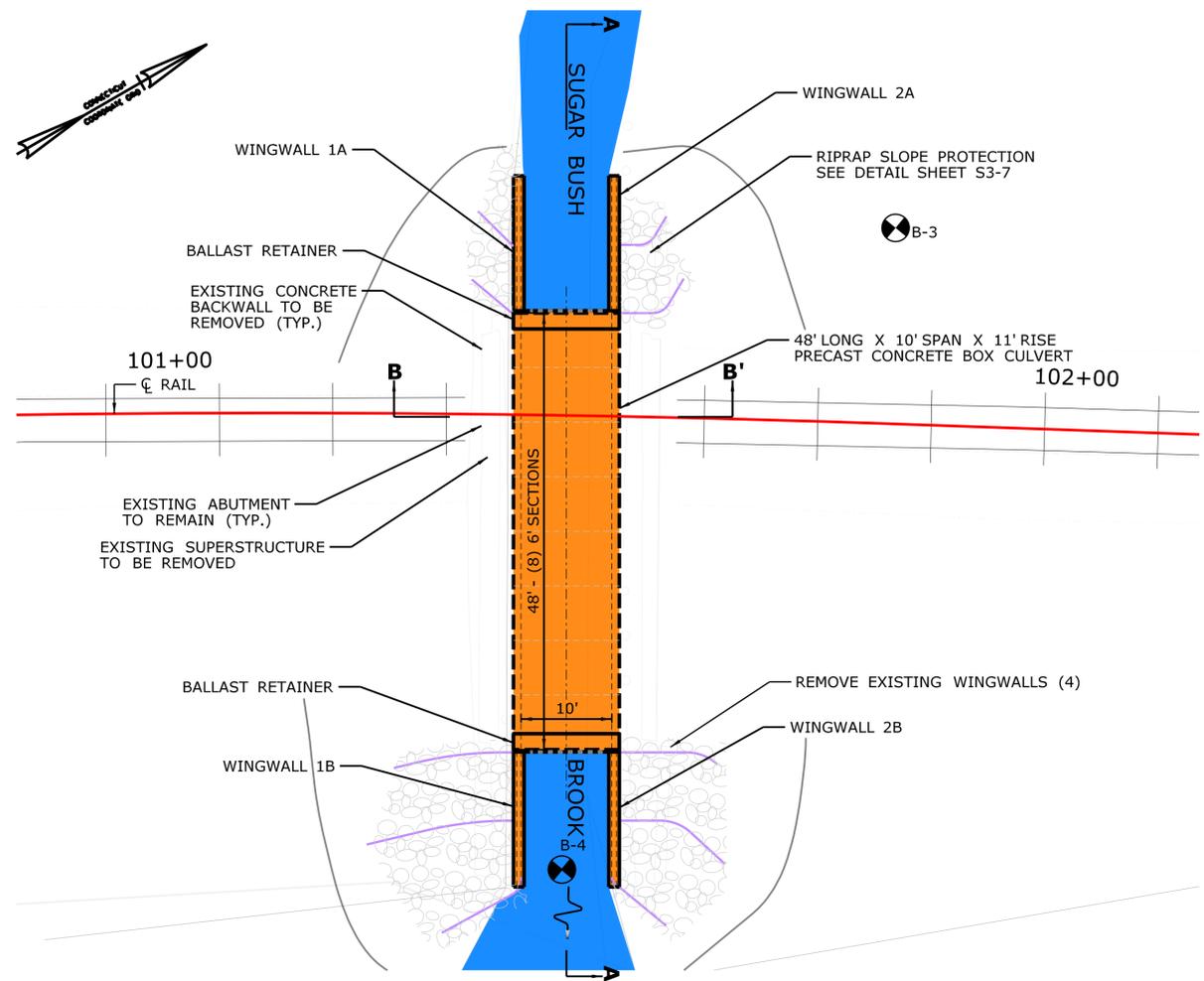


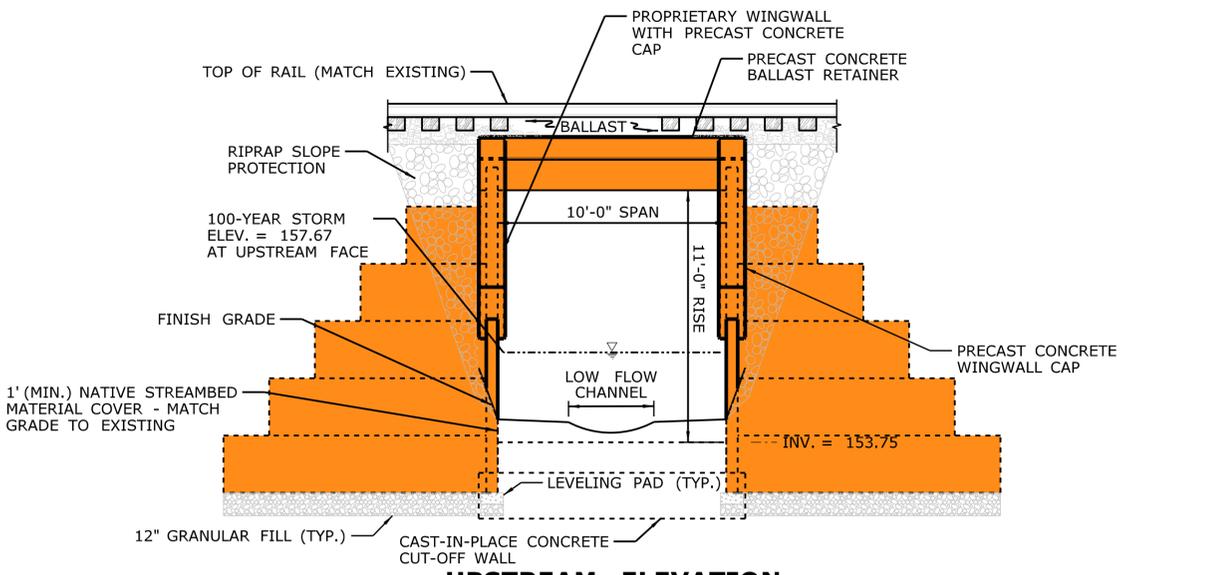
FIGURE
LOCATION PLAN

PROJECT
304-008

DATE
MAR. 2011



PLAN
SCALE: 1" = 10'



UPSTREAM ELEVATION
SCALE: 1/4" = 1'-0"

TRANSPORTATION DIMENSION AND WEIGHT		
	ALLOWANCE	PROVIDED
VEHICLE WIDTH	8'-6"	8'-6"
VEHICLE LENGTH	48'-0"	48'-0"
VEHICLE HEIGHT	13'-6"	13'-8"
VEHICLE WEIGHT	80,000 LBS FOR 51' WHEELBASE	
AXLE WEIGHTS OF VEHICLES	20,000 LBS PER AXLE	

MEMBER	SHIPPING LENGTH	SHIPPING HEIGHT	SHIPPING WIDTH	SHIPPING WEIGHT
BC 1A-1H	13'-8"	11'-8"	6'-0"	45,300 LBS

DESCRIPTION	COLOR
ROW OR PROPERTY LINES	Red
FULL DEPTH PAVEMENT RECONSTRUCTION	Yellow
WETLANDS	Pink
STRUCTURES / SIDEWALK	Orange
CUT	Brown
FILL	Green
WATERCOURSE	Blue
CONSTRUCTION ACCESS	Grey
EXISTING SIDEWALK	Dark Grey

HYDRAULIC DATA	
DRAINAGE AREA	0.33 SQ. MI
DESIGN FREQUENCY	100-YEAR
DESIGN DISCHARGE	252.9 CFS
AVERAGE DAILY FLOW ELEVATION	157.76 FT.
UPSTREAM DESIGN WATER SURFACE ELEV.	
DOWNSTREAM DESIGN WATER SURFACE ELEV.	
MAXIMUM SCOUR ELEVATION	
FREQUENCY	100-YEAR
DISCHARGE	252.9 CFS
WORST CASE SCOUR SUBSTRUCTURE UNIT	

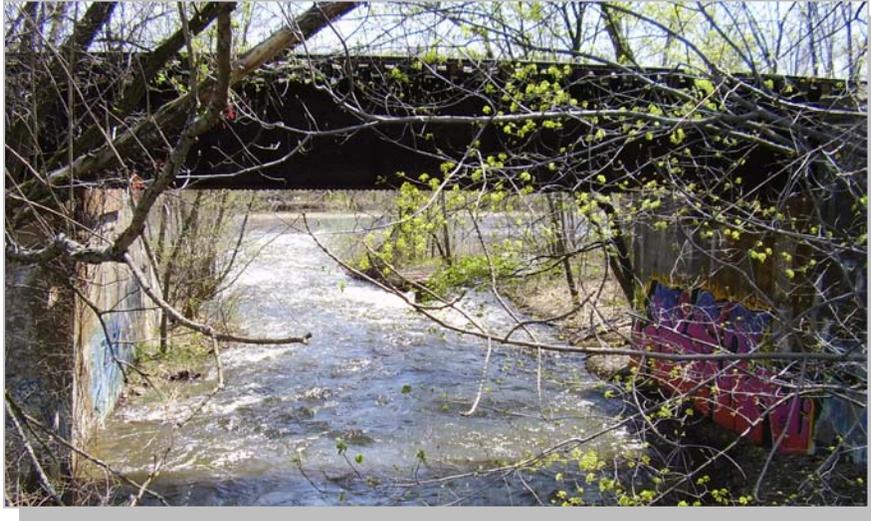
GENERAL NOTES

- SPECIFICATIONS: CONNECTICUT DEPARTMENT OF TRANSPORTATION FORM 816 (2004), SUPPLEMENTAL SPECIFICATIONS DATED JULY 2010 AND SPECIAL PROVISIONS.
- DESIGN SPECIFICATIONS: STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES (AASHTO 2002), AND THE AMERICAN RAILROAD ENGINEERING AND MAINTENANCE-OF-WAY ASSOCIATION MANUAL FOR RAILWAY ENGINEERING (AREMA 2008), AS SUPPLEMENTED BY THE CONNECTICUT DEPARTMENT OF TRANSPORTATION BRIDGE DESIGN MANUAL (2003), INCLUDING REVISION TO 2008.
- ALLOWABLE DESIGN STRESSES:
 CLASS "A" CONCRETE BASED ON F'C = 3,000 PSI
 CLASS "F" CONCRETE BASED ON F'C = 4,000 PSI
 REINFORCEMENT (ASTM A615 GRADE 60) FY = 60,000 PSI
 PRECAST UNITS F'C = 4,000 PSI
- LIVE LOADS: COOPER E80 LOADING
- BITUMINOUS CONCRETE OVERLAY: N/A
- FOUNDATION PRESSURES: THE VARIOUS GROUP LOADINGS NOTED. REFER TO THE GROUP LOADS AS GIVEN IN THE AMERICAN RAILROAD ENGINEERING AND MAINTENANCE-OF-WAY ASSOCIATION MANUAL FOR RAILWAY ENGINEERING (AREMA 2008).
- 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.
- EXISTING STRUCTURES: THE LOCATIONS OF THE EXISTING ABUTMENT AND WINGWALL FOOTINGS ARE APPROXIMATE AND ARE SHOWN FOR GRAPHICAL PURPOSES ONLY. THE APPROXIMATE LOCATIONS HAVE BEEN DETERMINED BASED ON FIELD LOCATION OF THE VISIBLE PORTIONS OF THE EXISTING SUBSTRUCTURE.
- CLASS "A" CONCRETE: CLASS "A" CONCRETE SHALL BE USED THROUGHOUT, EXCEPT AS NOTED UNDER CLASS "F" CONCRETE.
- CLASS "F" CONCRETE: CLASS "F" CONCRETE SHALL BE USED FOR THE BALLAST RETAINERS AND WINGWALL CAPS.
- JOINT SEAL: SEE SPECIAL PROVISIONS.
- EXPOSED EDGES: EXPOSED EDGES OF CONCRETE SHALL BE BEVELED 1"X1" UNLESS DIMENSIONED OTHERWISE.
- REINFORCEMENT: ALL REINFORCEMENT SHALL BE ASTM A615 GRADE 60.
- CONCRETE COVER: ALL REINFORCEMENT SHALL HAVE TWO INCHES COVER UNLESS DIMENSIONED OTHERWISE.
- EPOXY COATED REINFORCING BARS: ALL REINFORCEMENT IN THE BALLAST RETAINERS AND WINGWALL CAPS SHALL BE EPOXY COATED UNLESS OTHERWISE NOTED. THESE BARS SHALL BE INCLUDED IN THE PAY ITEM FOR "DEFORMED STEEL BARS (EPOXY COATED)."
- PREFORMED EXPANSION JOINT FILLER: THE COST OF FURNISHING AND INSTALLING PREFORMED EXPANSION JOINT FILLER SHALL BE INCLUDED IN THE COST OF THE ITEM "CLASS 'F' CONCRETE."
- CONSTRUCTION JOINTS: CONSTRUCTION JOINTS, OTHER THAN THOSE SHOWN ON THE PLANS, WILL NOT BE PERMITTED WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.
- WINGWALLS: WINGWALLS 1A, 1B, 2A, AND 2B SHALL BE PAID FOR UNDER THE ITEM "RETAINING WALL (SITE NO. 3)"

DESIGNER/DRAFTER: M. APPLEBY	 STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION	SIGNATURE/BLOCK: ANCHOR ENGINEERING SERVICES, INC. APPROVED BY: _____ DATE: _____	PROJECT TITLE: BRIDGE NO. 08277R METRO-NORTH RAILROAD (WATERBURY BRANCH) MP20.11 OVER SUGARBUSH BROOK	TOWN: NAUGATUCK	PROJECT NO. 304-008
CHECKED BY: T. YOUNG					
SCALE AS NOTED	FILENAME: S3-02_SB_MSH_304_008_MNRR_08277R_GPN01.dgn	DRAWING TITLE: GENERAL PLAN		SHEET NO. 31	

PROJECT INFORMATION FOR THE REPLACEMENT OF THE BRIDGE CARRYING METRO-NORTH RAILROAD (WATERBURY BRANCH) OVER HOP BROOK (BRIDGE No. 8283R) NAUGATUCK

STATE PROJECT No. 304-008



GENERAL INFORMATION

This project involves removing the existing steel superstructure and installing a precast concrete arch. This bridge is one of four that will be replaced/rehabilitated during a 21 day outage of the Waterbury Branch Railroad. The overall project duration is estimated to be 12 months. At the present time, the project is scheduled to be advertised in September 2011 and the start of construction is anticipated to begin May 2012. The estimated construction cost is Range E.

The existing bridge was constructed in 1904 and consists of a simple span steel girder bridge supporting timber ties and rails. The abutments and wingwalls are concrete gravity type. The original bridge was constructed wide enough to carry two tracks, currently there is one set of tracks.

The proposed rehabilitation will consist of removing the existing superstructure and installing a precast concrete arch between the existing abutments. The existing wingwalls will remain and will receive a new concrete facing. New reinforced concrete spread footings and toe-walls for the precast arch will be cast against the existing abutment. The headwalls (ballast retainers) are precast and will be attached to the precast arch.

Access to the site will be from the Polish American Club's rear parking lot (see attached) which is off of Bridge Street (General Pulaski Walk). This area is within the State of Connecticut Metro-North Railroad property. An existing access road along the south side of the track will be used for access to the bridge site. Temporary fill will be placed for a crane platform; no fill will be placed in the wetland. The proposed project will not require construction easements.

LOCHNER

2110 Silas Deane Highway
Rocky Hill, CT 06067
www.hwlochner.com

Department of Transportation

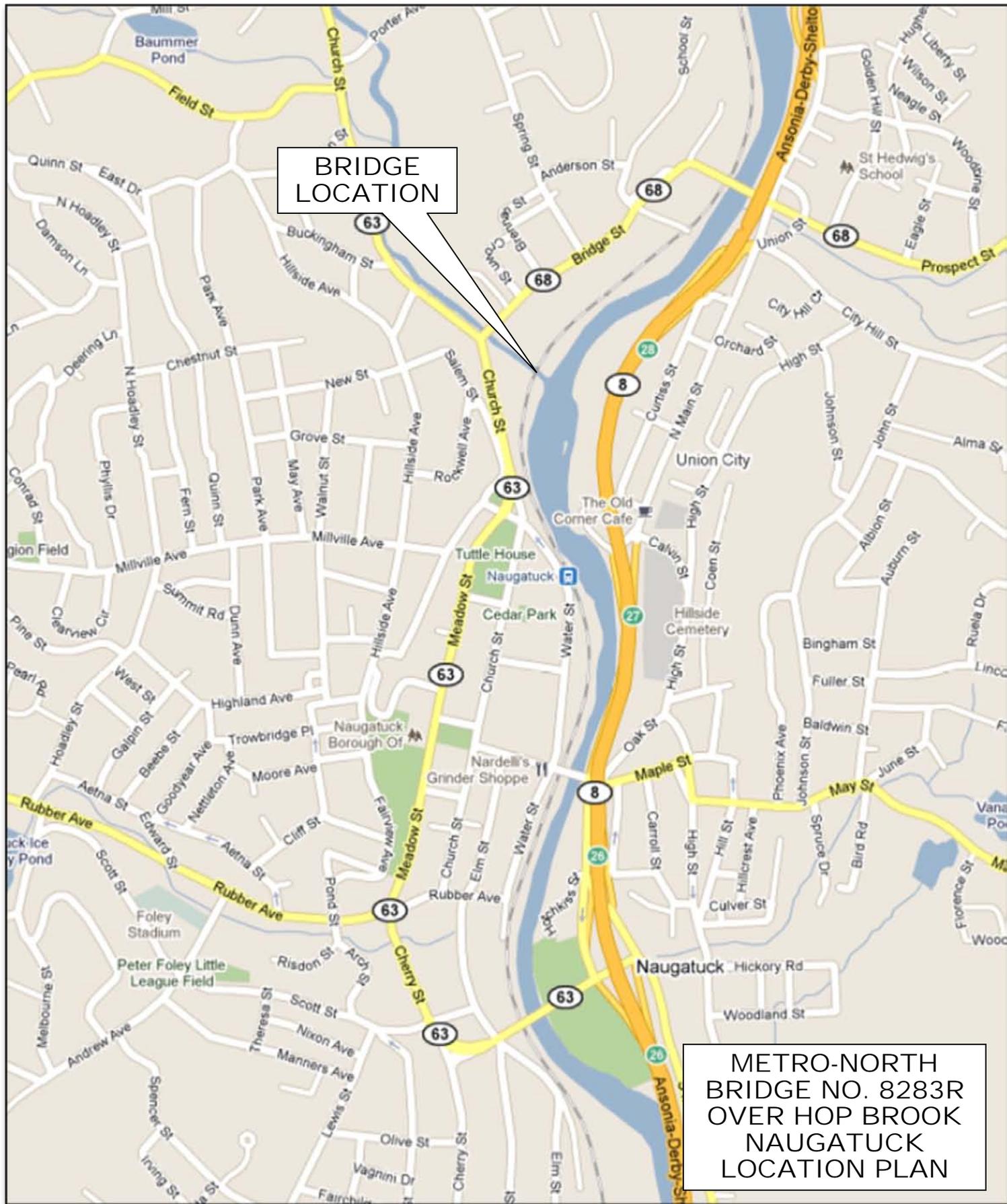
Contractor Information

**STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION_
PROJECT SCOPE CODES FOR CONTRACT ITEMS**

AMOUNT

<u>CODE</u>	<u>FROM</u>	<u>TO</u>
"A"	LESS THAN	\$ 100,000
"B"	\$ 100,000	\$ 199,999
"C"	\$ 200,000	\$ 499,999
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"T"	\$ 300,000,000	\$ 399,999,999
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"V"	\$ 500,000,000	\$ 599,999,999
"W"	\$ 600,000,000	AND OVER

For any questions regarding this project scope code, please contact the Transportation Manager of Contracts at (860) 594-3390.

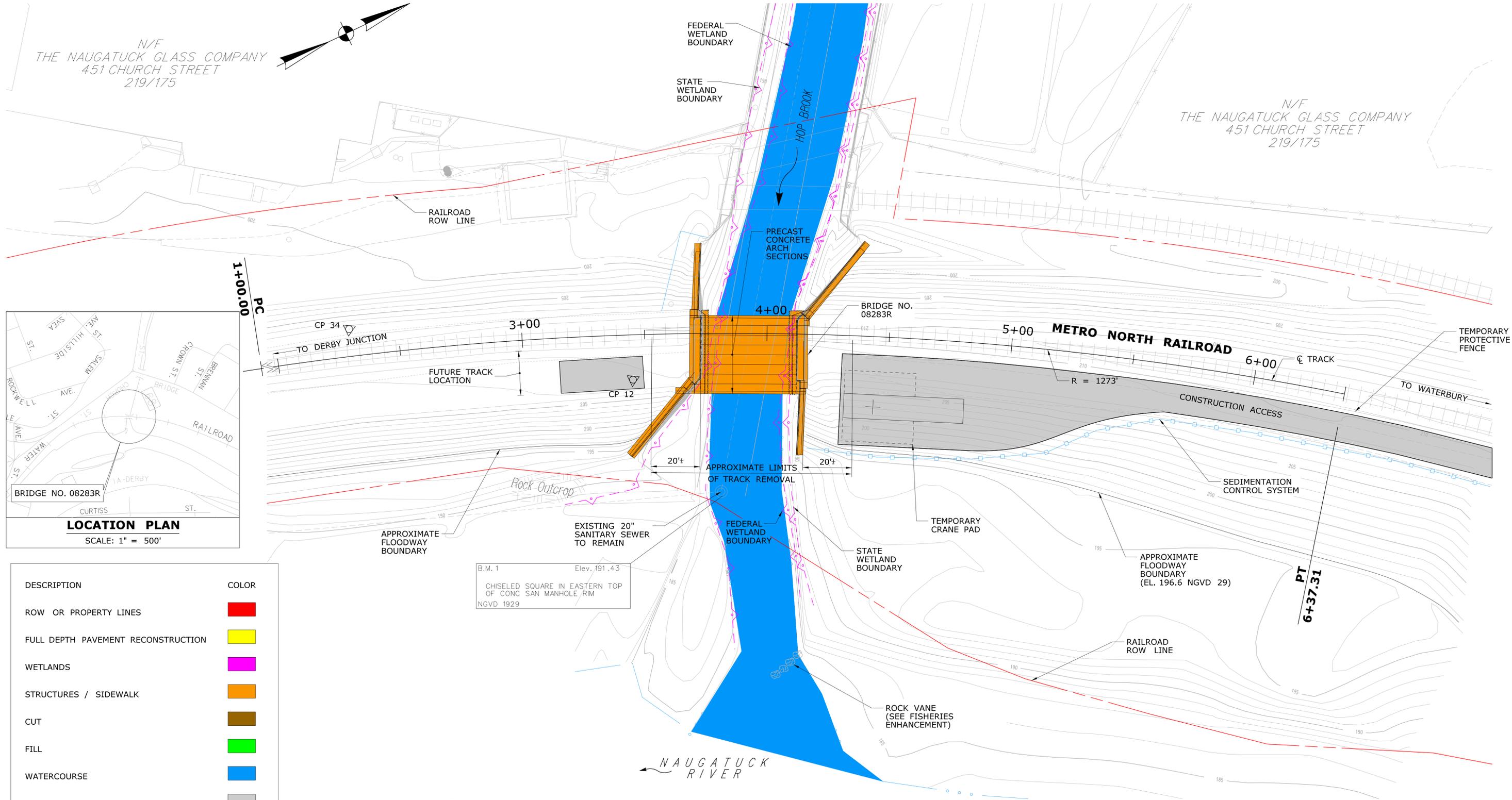
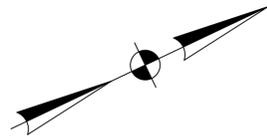


BRIDGE
LOCATION

METRO-NORTH
BRIDGE NO. 8283R
OVER HOP BROOK
NAUGATUCK
LOCATION PLAN

N/F
THE NAUGATUCK GLASS COMPANY
451 CHURCH STREET
219/175

N/F
THE NAUGATUCK GLASS COMPANY
451 CHURCH STREET
219/175



DESCRIPTION	COLOR
ROW OR PROPERTY LINES	█
FULL DEPTH PAVEMENT RECONSTRUCTION	█
WETLANDS	█
STRUCTURES / SIDEWALK	█
CUT	█
FILL	█
WATERCOURSE	█
CONSTRUCTION ACCESS	█
EXISTING SIDEWALK	█

SITE PLAN
SCALE: 1" = 20'

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

DESIGNER/DRAFTER:
A. MORTON
CHECKED BY:
R. BRAY
SCALE AS NOTED

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

FILENAME: ...SB_MSH_Br08283R_304_008_Board_01.dgn

SIGNATURE/BLOCK:
LOCHNER
APPROVED BY: _____ DATE: _____

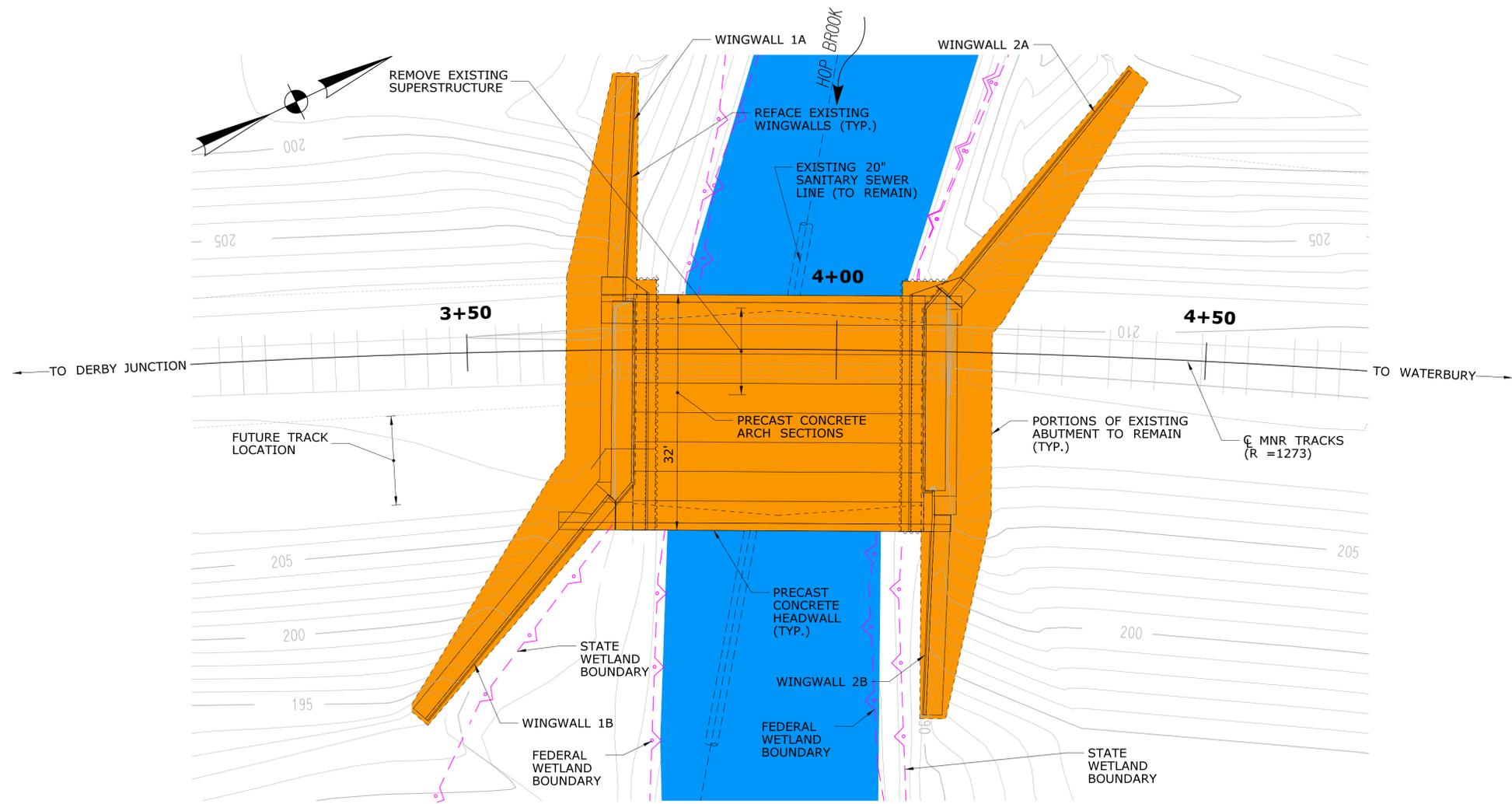
PROJECT TITLE:
BRIDGE NO. 08283R METRO-NORTH RAILROAD (WATERBURY BRANCH) MP 22.42 OVER HOP BROOK

TOWN:
NAUGATUCK
DRAWING TITLE:
SITE PLAN

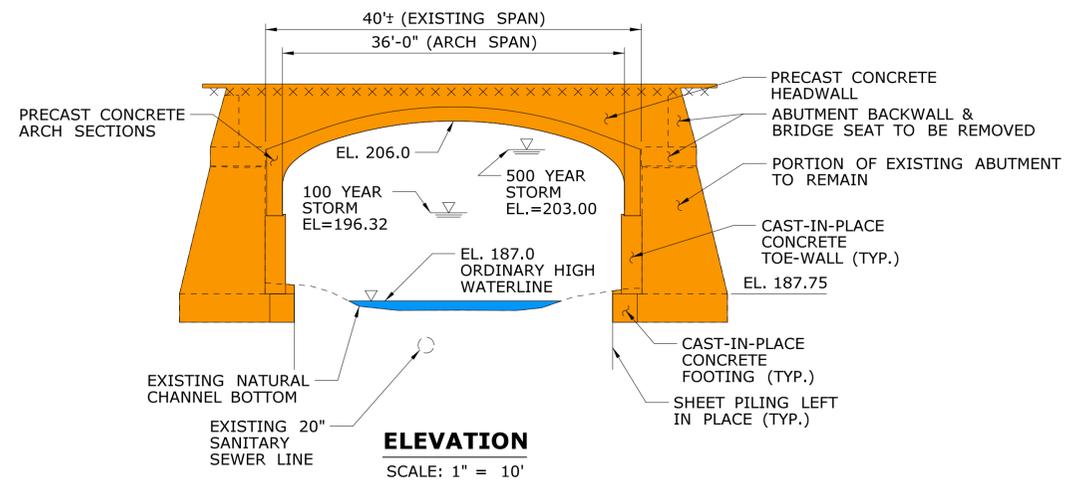
PROJECT NO.
304-008
DRAWING NO.
S4-1
SHEET NO.
40

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

PLOTTED: 3/10/2011



PLAN
SCALE: 1" = 10'



ELEVATION
SCALE: 1" = 10'

DESCRIPTION	COLOR
ROW OR PROPERTY LINES	Red
FULL DEPTH PAVEMENT RECONSTRUCTION	Yellow
WETLANDS	Magenta
STRUCTURES / SIDEWALK	Orange
CUT	Brown
FILL	Green
WATERCOURSE	Blue
CONSTRUCTION ACCESS	Light Gray
EXISTING SIDEWALK	Dark Gray

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

DESIGNER/DRAFTER:
A. MORTON
CHECKED BY:
R. BRAY
SCALE AS NOTED

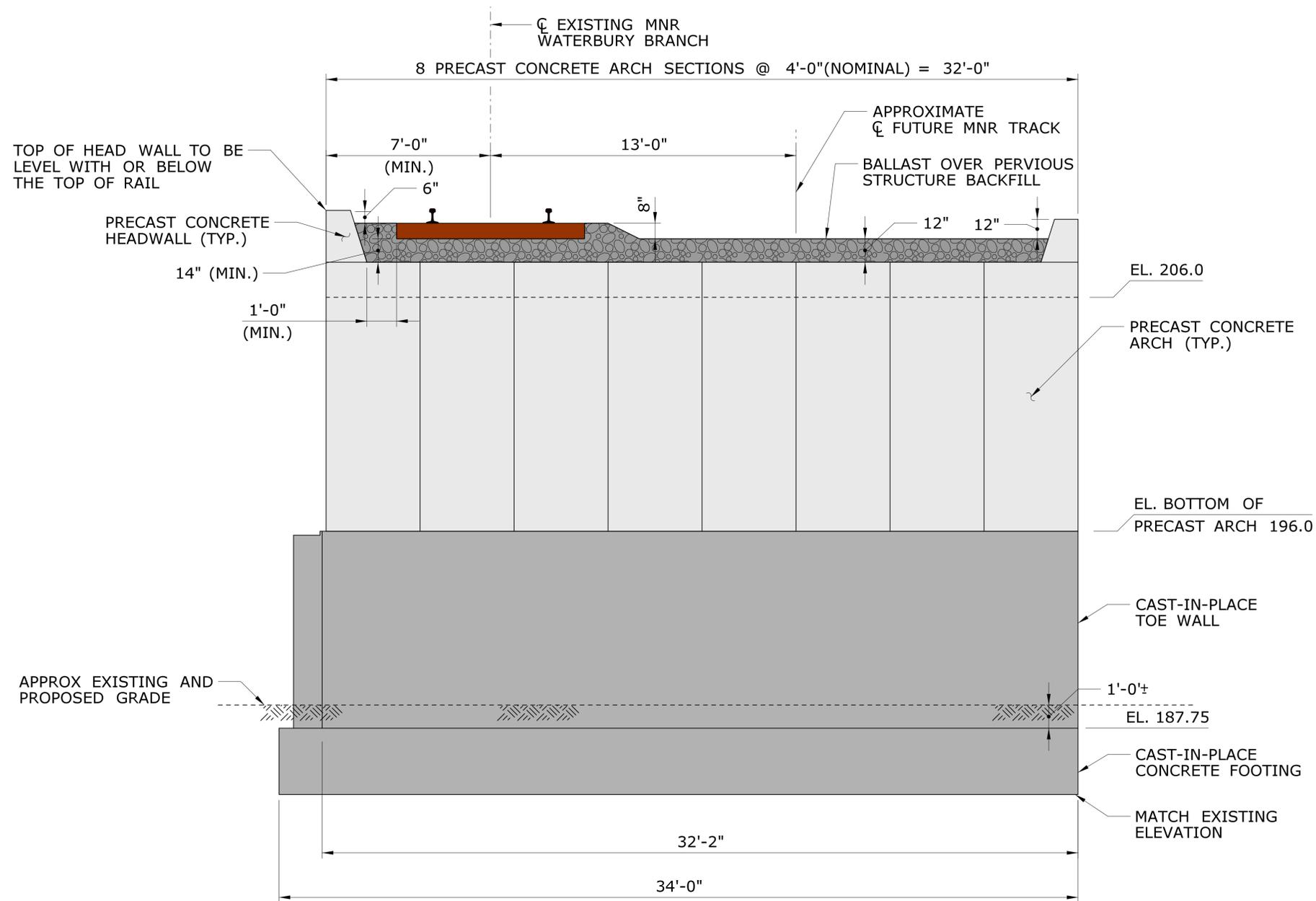


SIGNATURE/
BLOCK:
LOCHNER
APPROVED BY: DATE:

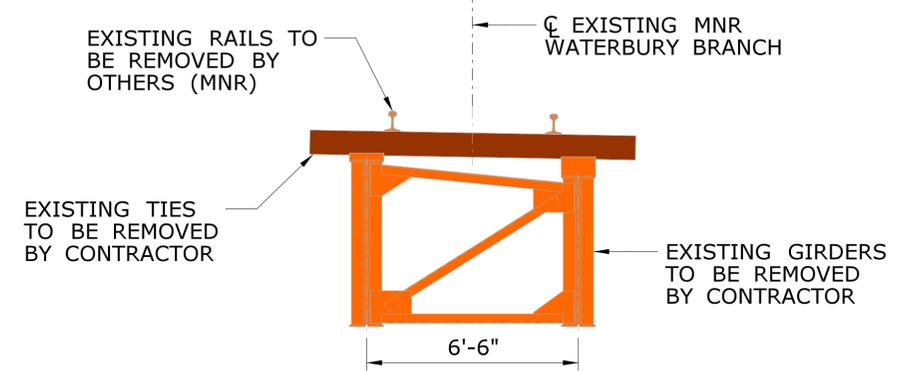
PROJECT TITLE:
BRIDGE NO. 08283R METRO-NORTH RAILROAD (WATERBURY BRANCH) MP 22.42 OVER HOP BROOK

TOWN:
NAUGATUCK
DRAWING TITLE:
GENERAL PLAN

PROJECT NO.
304-008
DRAWING NO.
S4-2
SHEET NO.
41



PROPOSED SECTION



EXISTING SECTION

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

DESIGNER/DRAFTER:
 A. MORTON
 CHECKED BY:
 R. BRAY
 SCALE AS NOTED



SIGNATURE/
 BLOCK:
LOCHNER
 APPROVED BY: DATE:

PROJECT TITLE:
**BRIDGE NO. 08283R METRO-NORTH
 RAILROAD (WATERBURY BRANCH)
 MP 22.42 OVER HOP BROOK**

TOWN:
NAUGATUCK
 DRAWING TITLE:
TYPICAL SECTIONS

PROJECT NO.
304-008
 DRAWING NO.
 SHEET NO.