SUBSET 04 - STRUCTURES
INDEX OF DRAWINGS

DRAWING NUMBER	DRAWING TITLE
S-01	INDEX OF DRAWINGS
S-02	GENERAL NOTES
S-03	GENERAL PLAN AND ELEVATION
S-04	WATER HANDLING AND STAGING PLAN - 1
S-05	WATER HANDLING AND STAGING PLAN - 2
S-06	BORING LOGS - SHEET 1 OF 2
S-07	BORING LOGS - SHEET 2 OF 2
S-08	U/S WINGWALL -PLAN, ELEVATIONS, AND TYPICAL REINFORCEMENT
S-09	D/S WINGWALL -PLAN, ELEVATIONS, AND TYPICAL REINFORCEMENT
S-10	BOX CULVERT PLAN, GEOMETRY AND REINFORCEMENT DETAILS
S-11	BOX CULVERT HEADWALL AND DETAILS
S-12	APPROACH SLAB AND DETAILS
S-13	CONCRETE CUTOFF WALL
S-14	METAL BRIDGE RAIL DETAILS - 1
S-15	METAL BRIDGE RAIL DETAILS - 2

DESIGNED BY:
JACOBS
100 GREAT MEADOW ROAD,
SUITE 707, WETHERSFIELD,
CT 06109

STATE OF CONNECTICUT · DONALD R. COSTELLO · LICENSED PROFESSIONAL ENGINEER

Digitally signed by Donald Costello
Date: 2025.10.21 16:43:57-04'00'

REV.	DATE	REVISION DESCRIPTION

SIGNATURE BLOCK: JACOBS 100 Great Meadow Rd, Suite 707 Wethersfield, CT

DESIGNER/DRAFTER: T. CHATTERJEE CHECKED BY: B. CHAMBERLIN

SCALE = FULL

CTDOT CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 06955; GLEN STREET OVER THE MATTABESSET RIVER

TOWN(S): BERLIN

DRAWING TITLE: INDEX OF DRAWINGS

PROJECT NO.: 0007-0266

DRAWING NO.: S-01

SHEET NO.: 04.01

LASTED SAVED BY: TC033974 **FILE NAME:** C:\Users\TC033974.000\OBS Engineering Group Inc (CTDOT Task Order Bridge Rehabilitation and Replacement Program - 0007-0266 Glen St. - Berlin\700 Working Documents\0007-0266 - Design\Bridge\Contract_Plans\SB_CP_0007_0266_GeneralSubset.dgn
PLOTTED DATE: 10/13/2025

GENERAL NOTES

SPECIFICATIONS:

CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS, BRIDGES, FACILITIES, AND INCIDENTAL CONSTRUCTION (FORM 819), SUPPLEMENTAL SPECIFICATIONS DATED JANUARY, 2025 AND SPECIAL PROVISIONS.

DESIGN SPECIFICATIONS: AASHTO LRFD BRIDGE SPECIFICATIONS (NINTH EDTION, 2020) AS SUPPLEMENTED BY THE CONNECTICUT DEPARTMENT OF TRANSPORTATION BRIDGE AND ROADWAY STRUCTURES DESIGN MANUAL, RELEASE 1.1.

MATERIAL STRENGTHS:

CONCRETE:

CLASS PCC03340 f'c = 3,000 PSI
CLASS PRC05060 f'c = 5,000 PSI
CLASS PCC04462 f'c = 4,000 PSI

THE SPECIFIED CONCRETE STRENGTH USED IN DESIGN, f'c, OF THE CONCRETE COMPONENTS IS NOTED ABOVE. THE MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE IN THE CONSTRUCTED COMPONENTS SHALL CONFORM TO THE REQUIREMENTS OF THE FORM 819 SECTION 6.01 "CONCRETE FOR STRUCTURES", AND M.03 "PORTLAND CEMENT CONCRETE", M.14 "PREFABRICATED CONCRETE MEMBERS", AND SPECIAL PROVISIONS.

REINFORCEMENT:

ASTM A615 GRADE 60, fy = 60,000 PSI

LIVE LOAD:

HL-93, LEGAL, & PERMIT VEHICLES

FUTURE PAVING ALLOWANCE:

NONE

BITUMINOUS CONCRETE OVERLAY:

2" HMA S0.5
4" HMA S1.0 (TRAFFIC LEVEL 2)
10" PROCESSED AGGREGATE BASE

DIMENSIONS:

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

EXISTING DIMENSIONS:

DIMENSIONS OF THE EXISTING STRUCTURE SHOWN ON THESE PLANS ARE FOR GENERAL REFERENCE ONLY, 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 APPROVAL, THE FIELD MEASUREMENTS SHALL ALSO BE SUBMITTED FOR REFERENCE BY THE REVIEWER.

UTILITIES:

UTILITIES ARE LOCATED WITHIN THE PROJECT LIMITS AND SHALL BE PROTECTED DURING CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE ALL WORK RELATED TO UTILITY PROTECTION WITH THE RESPECTIVE UTILITY COMPANIES.

DEWATERING:

BEFORE INITIATING CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT A PLAN FOR APPROVAL THAT DEFINES THE METHODS AND MATERIALS FOR CONTROLLING STREAM WATER DEWATERING, STRUCTURE EXCAVATION, AND PROTECTING THE STREAM DURING CONSTRUCTION. THE COST OF THIS WORK SHALL BE INCLUDED IN THE COST OF "HANDLING WATER" AND "COFFERDAM AND DEWATERING."

DEMOLITION:

THE CONTRACTOR SHALL SUBMIT DEMOLITION PROCEDURES PRIOR TO THE REMOVAL OF THE EXISTING STRUCTURE.

TRAFFIC:

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE SPECIAL PROVISIONS FOR "MAINTENANCE AND PROTECTION OF TRAFFIC" AND FORM 819 SECTION 1.08 "PROSECUTION AND PROGRESS."

HYDRAULIC SUMMARY DATA		
DRAINAGE AREA	8.9 SQ. MILES	
DESIGN FREQUENCY	100 YEARS	
DESIGN DISCHARGE	2,880 CFS	
AVERAGE DAILY FLOW ELEVATION	117.6 FT	
DESIGN SURFACE WATER ELEVATION	UPSTREAM	DOWNSTREAM
	126.5 FT	123.3 FT

NOTICE TO BRIDGE INSPECTORS	
THE DEPARTMENT'S BRIDGE SAFETY PROCEDURES REQUIRE THIS BRIDGE TO BE 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 FOR 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.	
COMPONENT OR DETAIL	DRAWING NUMBER REFERENCE
NONE	-

WATERCOURSE RESTRICTION:

UNCONFINED IN-STREAM IN-WATER ACTIVITIES MUST BE LIMITED TO THE TIME PERIOD JUNE 1 THROUGH SEPTEMBER 30.

NATIVE STREAMBED MATERIAL:

NATIVE STREAMBED MATERIAL EXCAVATED SHALL BE STOCKPILED AND THEN REPLACED WITHIN DISTURBED AREAS AND SUPPLEMENTAL STREAMBED CHANNEL MATERIAL AT INLET AND OUTLET TO THE DEPTH SHOWN ON THE PLANS, AS DIRECTED BY THE ENGINEER AND IN ACCORDANCE WITH THE PERMIT DOCUMENTS.

THE STOCK PILE SHALL BE LOCATED OUTSIDE THE WETLAND LIMITS AND PROTECTED WITH SEDIMENTATION CONTROL SYSTEM.

BRIDGE PLACARDS:

THE SIGN IS 4" X 12" ALUMINUM SHEET METAL WITH WHITE REFLECTIVE LETTERS ON A GREEN REFLECTIVE BACKGROUND WITH FIVE (5) NUMERALS (06955). IT SHALL BE INSTALLED ON THE SAME GUIDE RAIL POSTS THAT THE STREAM CROSSING SIGNS ARE MOUNTED. ALL COSTS ASSOCIATED WITH PROCURING AND INSTALLING THE BRIDGE PLACARDS SHALL BE COVERED UNDER "SIGN FACE - SHEET ALUMINUM (TYPE XI RETROREFLECTIVE SHEETING)". THE FINAL LOCATION AND ATTACHMENT METHOD FOR THE SIGNS SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.

MEMBER	SHIPPING LENGTH	SHIPPING HEIGHT	SHIPPING WIDTH	SHIPPING WEIGHT
NORTH CULVERT	22'-0"	3'-3"	11'-0"	42,000 LB
NORTH CULVERT	22'-0"	3'-0"	11'-0"	38,000 LB
SOUTH CULVERT	22'-0"	3'-3"	8'-6"	39,000 LB
SOUTH CULVERT	22'-0"	3'-0"	8'-6"	36,000 LB

CONCRETE NOTES

THE FOLLOWING PAY ITEMS AND CONCRERE CLASSES ARE REQUIRED FOR CAST-IN-PLACE BRIDGE COMPONENTS.

ITEM	BRIDGE COMPONENT	
ABUTMENT AND WALL CONCRETE	WINGWALL STEMS, BARRIER WALL STEMS	PCC03340
FOOTING CONCRETE	WINGWALL FOOTINGS, BARRIER WALL FOOTINGS	PCC03340
APPROACH SLAB CONCRETE	APPROACH SLAB	PCC04462
PRECAST CONCRETE	PRECAST CULVERT, CUTOFF WALLS, RETURN WALLS, NOSE WALLS AND HEADWALLS	PRC05060
PARAPET CONCRETE	RAIL BASE	PCC04462

REMAIN-IN-PLACE FORMS:

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

EXPOSED EDGES:

EXPOSED EDGES OF CONCRETE SHALL BE BEVELED 1"X1" UNLESS DIMENSIONED OTHERWISE.

CONCRETE COVER:

ALL REINFORCEMENT SHALL HAVE 3 INCHES COVER UNLESS DIMENSIONED OTHERWISE.

PREFORMED EXPANSION JOINT FILLER:

THE COST OF FURNISHING AND INSTALLING PREFORMED EXPANSION JOINT FILLER SHALL BE INCLUDED IN THE COST OF THE ITEM 1" OR ½" PREFORMED EXPANSION JOINT FILLER FOR BRIDGES" AS APPLICABLE.

JOINT SEAL:

SEE SPECIAL PROVISIONS.

REINFORCEMENT:

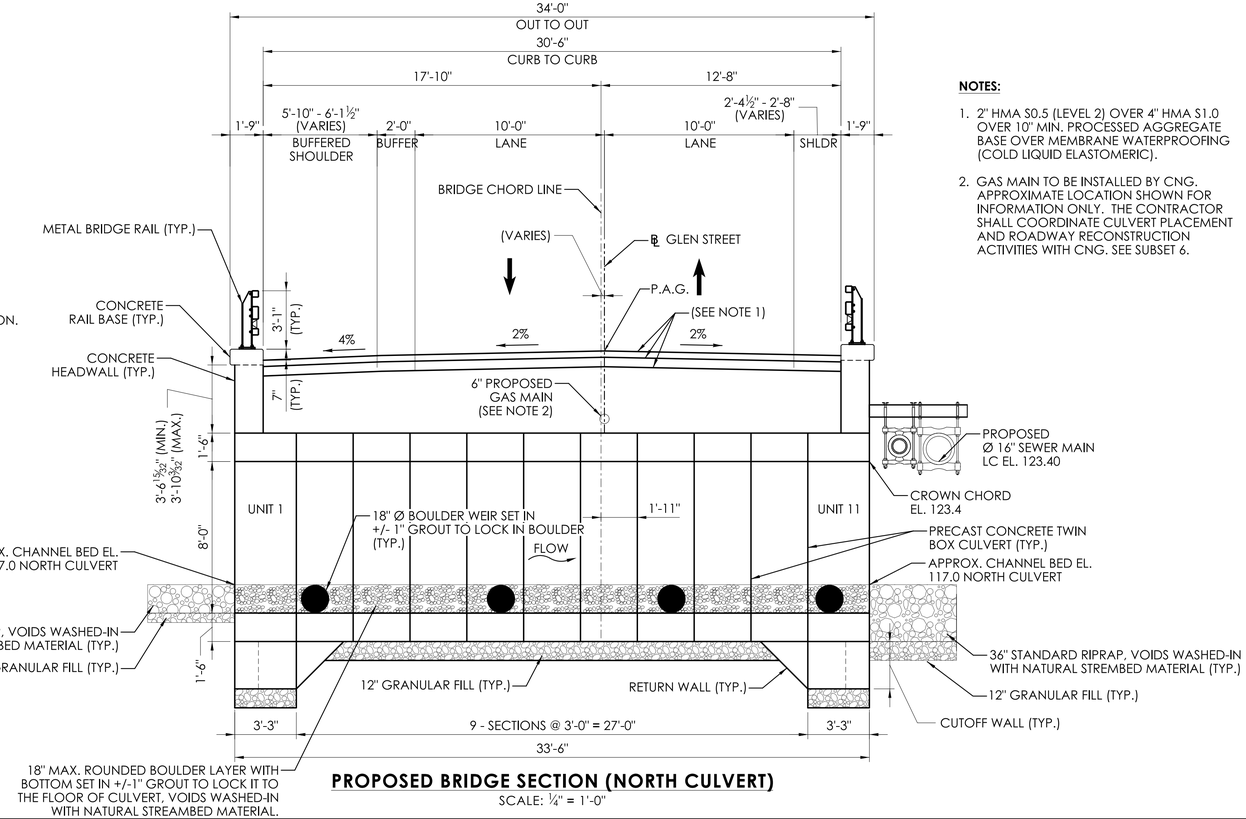
ALL REINFORCEMENT SHALL BE GALVANIZED AFTER FABRICATION UNLESS NOTED OTHERWISE. ALL REINFORCEMENT SHALL CONFORM TO THE REQUIREMENTS OF ASTM A767, CLASS 1, INCLUDING SUPPLEMENTAL REQUIREMENTS. THE COST OF FURNISHING AND PLACING THE REINFORCEMENT SHALL BE INCLUDED IN THE ITEM "DEFORMED STEEL BARS - GALVANIZED".

CONSTRUCTION JOINTS:

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

PRECAST BOX CULVERT NOTES:

1. THE CONTRACTOR SHALL MANUFACTURE, AND CONSTRUCT PRECAST BOX CULVERT IN ACCORDANCE WITH THE SPECIAL PROVISIONS FOR "PRECAST CONCRETE BOX CULVERT" AND THE DIMENSIONS, LENGTH, AND DETAILS SHOWN ON THESE PLANS.
2. ALL INSERT OR HOLES CAST INTO THE CULVERT SECTIONS FOR THE SOLE PURPOSE OF HANDLING AND SETTING THE UNITS SHALL BE GROUTED OVER TO A SMOOTH FINISH UPON COMPLETION OF THE WORK.
3. ALL REINFORCEMENT TO HAVE 2" COVER UNLESS OTHERWISE NOTED.
4. BOX SEGMENT LENGTHS SHOWN ARE SUGGESTED. CONTRACTOR MAY VARY SEGMENT LENGTHS IN ORDER TO STAGE THE CONSTRUCTION SUBJECT TO APPROVAL OF THE ENGINEER, HOWEVER THE OUT-TO-OUT LENGTH AND LAYOUT SHALL BE ACHIEVED.
5. THE WORK REQUIRED WILL INVOLVE CONSTRUCTION ACTIVITIES IN AREAS THAT MEET THE DEFINITION OF A "CONFINED SPACE". THE COST OF THE REQUIRED SAFETY PROGRAM WILL BE PAID UNDER THE ITEM "CONFINED SPACE HEALTH AND SAFETY".



PROPOSED BRIDGE SECTION (NORTH CULVERT)
SCALE: ¼" = 1'-0"

NOTES:

1. 2" HMA S0.5 (LEVEL 2) OVER 4" HMA S1.0 OVER 10" MIN. PROCESSED AGGREGATE BASE OVER MEMBRANE WATERPROOFING (COLD LIQUID ELASTOMERIC).
2. GAS MAIN TO BE INSTALLED BY CNG. APPROXIMATE LOCATION SHOWN FOR INFORMATION ONLY. THE CONTRACTOR SHALL COORDINATE CULVERT PLACEMENT AND ROADWAY RECONSTRUCTION ACTIVITIES WITH CNG. SEE SUBSET 6.

REV. | DATE | REVISION DESCRIPTION

SIGNATURE BLOCK: JACOBS, 100 Great Meadow Rd., Suite 707, Wethersfield, CT

DESIGNER/DRAFTER: T. CHATTERJEE CHECKED BY: B. CHAMBERLIN

SCALE AS NOTED

CTDOT CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: **REPLACEMENT OF BRIDGE NO. 06955; GLEN STREET OVER MATTABESSET RIVER**

TOWN(S): **BERLIN**

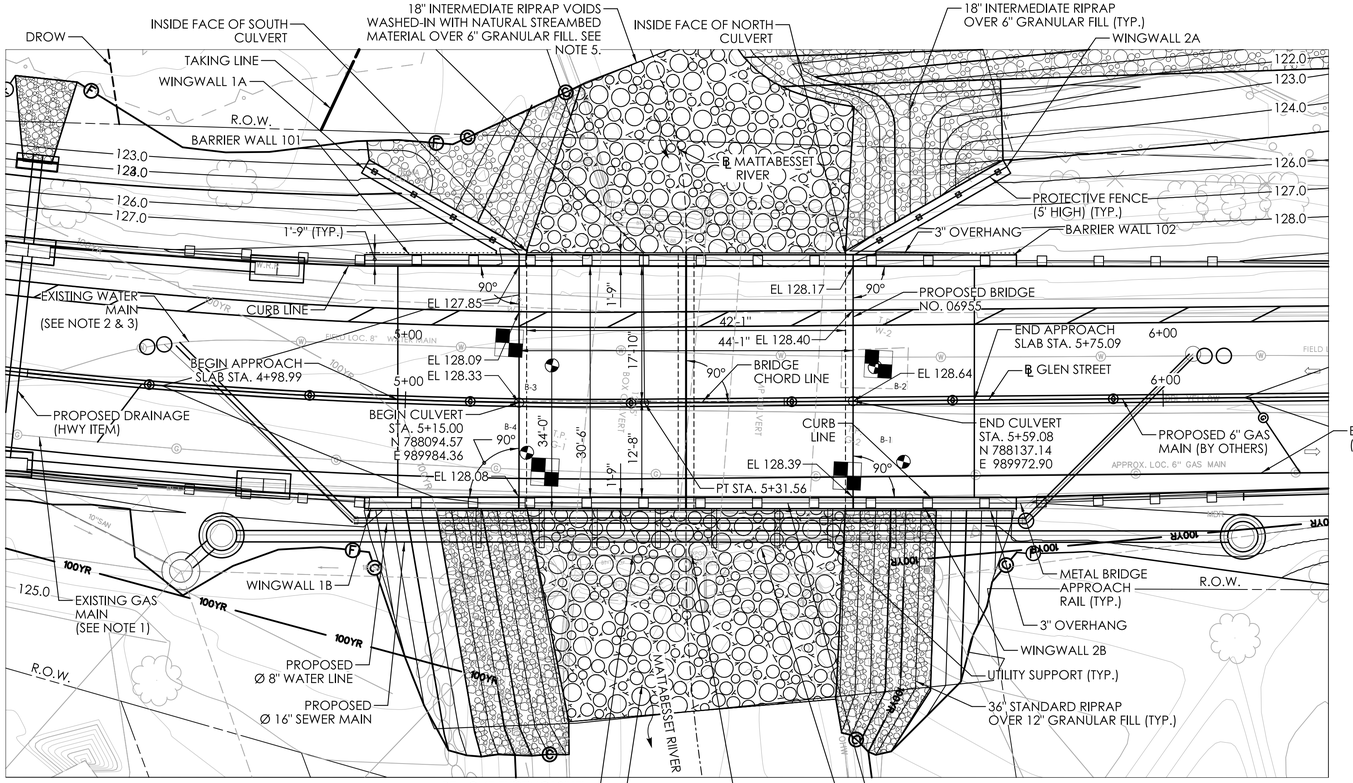
DRAWING TITLE: **GENERAL NOTES**

PROJECT NO.: **0007-0266**

DRAWING NO.: **S-02**

SHEET NO.: **04.02**

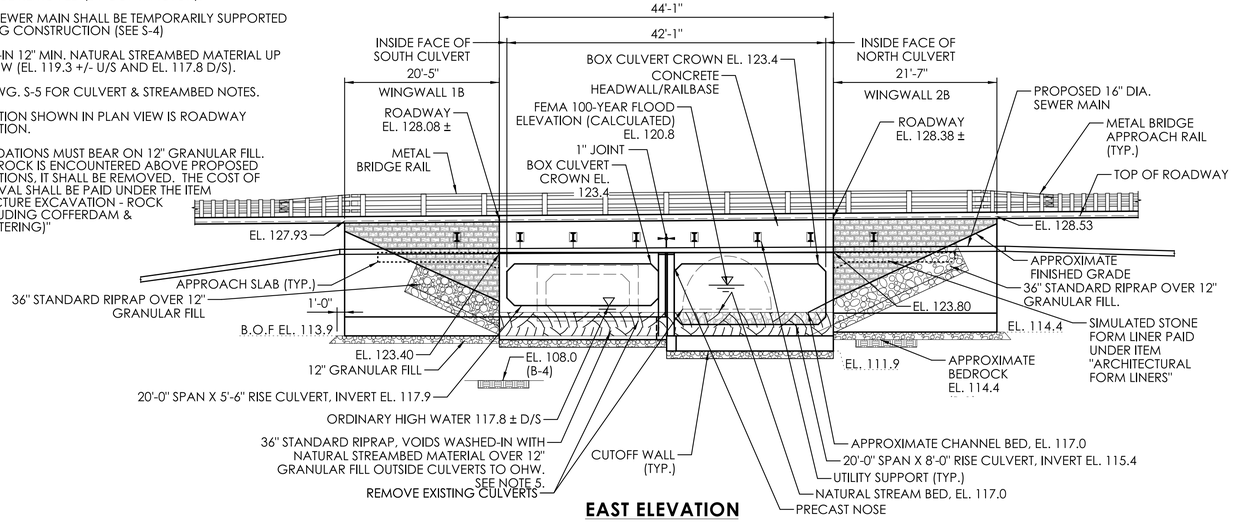
LASTED SAVED BY: SMITHC16 **FILE NAME:** C:\Users\SMITHC16\Jacobs\CTDOT Task Order Bridge Rehabilitation and Replacement Program - 0007-0266 Glen St. - Berlin\700 Working Documents\0007-0266 - Design\Bridge\Contract_Plans\SB_CP_0007_0266_Notes.dgn
PLOTTED DATE: 10/21/2025



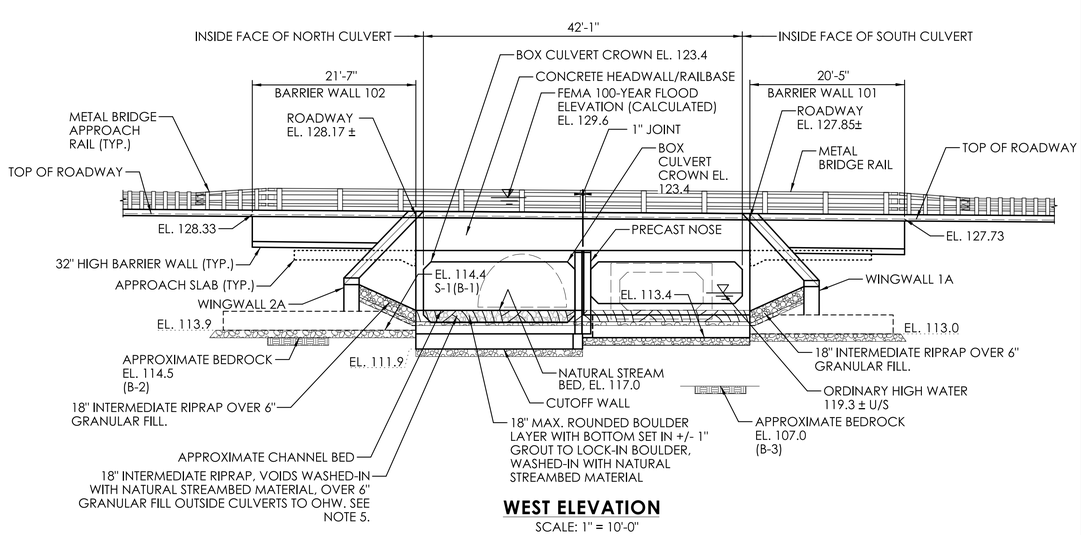
GENERAL PLAN
SCALE: 1" = 10'-0"

NOTE:

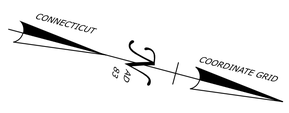
1. EXISTING GAS MAIN TO BE TEMPORARILY SHUT OFF, CAPPED (BY CNG) & REMOVED (BY CONTRACTOR).
2. EXISTING WATER MAIN SHALL BE RELOCATED AND SUPPORTED DURING CONSTRUCTION (SEE S-4).
3. EXISTING WATER MAIN WITHIN LIMITS OF CONSTRUCTION SHALL BE REMOVED (BY CONTRACTOR).
4. EXIST SEWER MAIN SHALL BE TEMPORARILY SUPPORTED DURING CONSTRUCTION (SEE S-4)
5. WASH-IN 12" MIN. NATURAL STREAMBED MATERIAL UP TO OHW (EL. 119.3 +/- U/S AND EL. 117.8 D/S).
6. SEE DWG. S-5 FOR CULVERT & STREAMBED NOTES.
7. ELEVATION SHOWN IN PLAN VIEW IS ROADWAY ELEVATION.
8. FOUNDATIONS MUST BEAR ON 12" GRANULAR FILL. IF BEDROCK IS ENCOUNTERED ABOVE PROPOSED ELEVATIONS, IT SHALL BE REMOVED. THE COST OF REMOVAL SHALL BE PAID UNDER THE ITEM "STRUCTURE EXCAVATION - ROCK (EXCLUDING COFFERDAM & DEWATERING)"

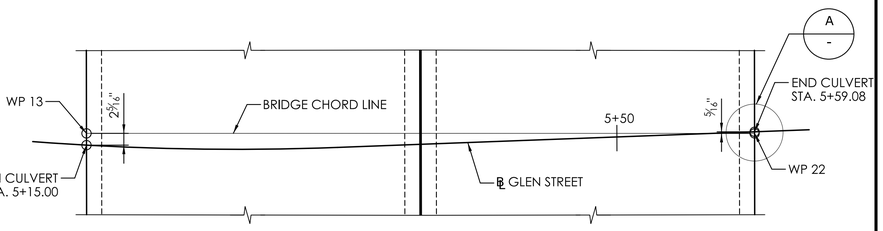


EAST ELEVATION
SCALE: 1" = 10'-0"



WEST ELEVATION
SCALE: 1" = 10'-0"





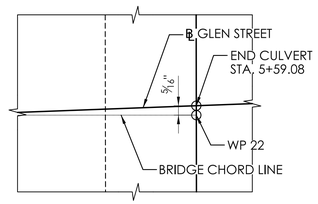
CHORD LINE DETAIL
NTS

RIPRAP LEGEND

- STANDARD RIPRAP
- ROUNDED BOULDER
- BOULDER WEIR
- INTERMEDIATE RIPRAP
- RIPRAP, VOIDS WASHED-IN WITH NATURAL STREAMBED MATERIAL

WORKING POINT NOTES:

1. FOR WORKING POINT COORDINATES, SEE DRAWING NO. S-10.



A
-
DETAIL
NO SCALE

LEGEND:

- EXISTING TEST BORINGS
- EXISTING WATER TEST PIT
- EXISTING GAS TEST PIT

REV.	DATE	REVISION DESCRIPTION

SIGNATURE BLOCK: JACOBS, 100 Great Meadow Rd., Suite 707, Wethersfield, CT

DESIGNER/DRAFTER: T. CHATTERJEE CHECKED BY: B. CHAMBERLIN

SCALE: 1" = 10'

CTDOT CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: **REPLACEMENT OF BRIDGE NO. 06955; GLEN STREET OVER THE MATTABESSET RIVER**

TOWN(S): **BERLIN**

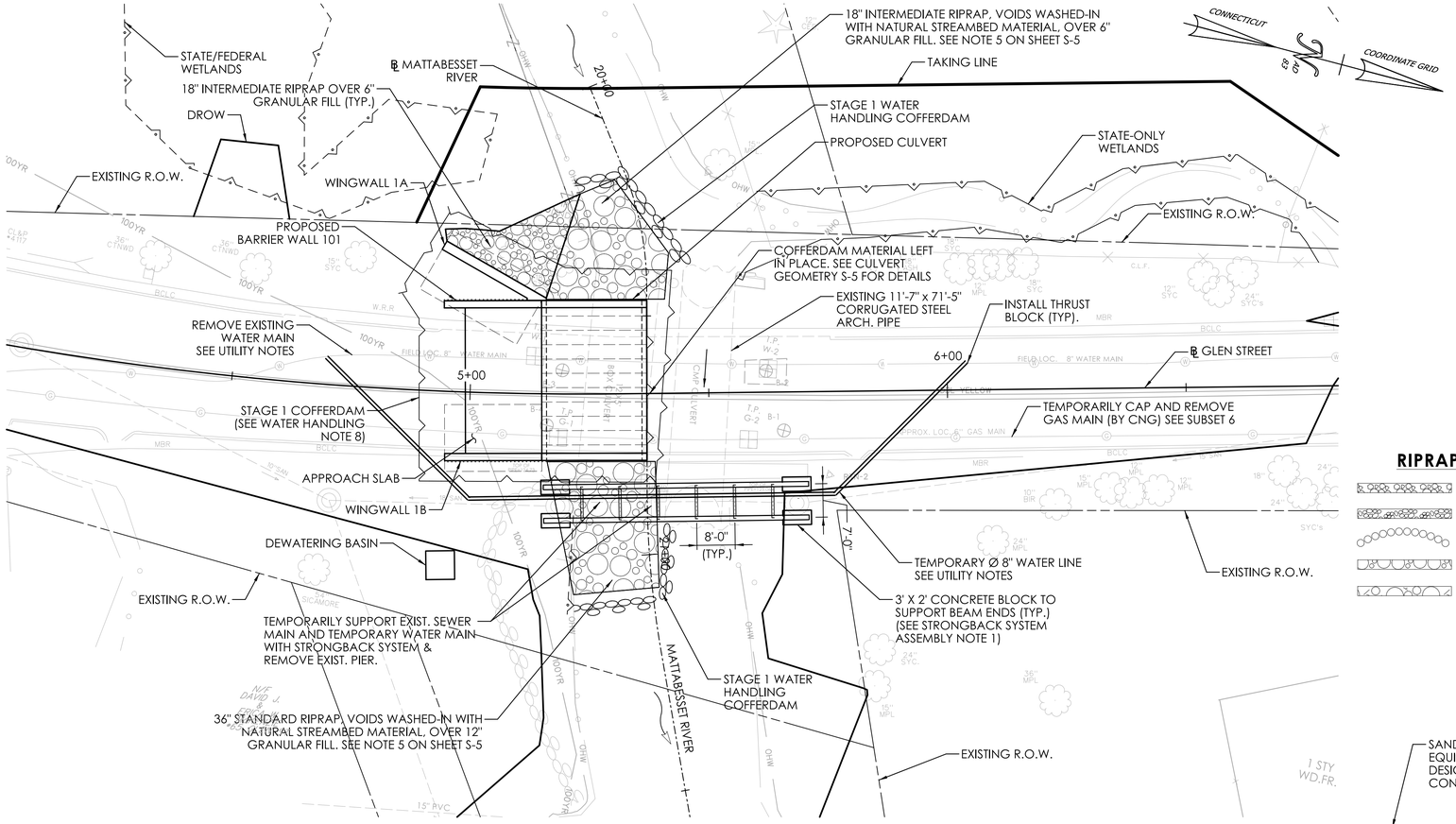
DRAWING TITLE: **GENERAL PLAN AND ELEVATION**

PROJECT NO.: **0007-0266**

DRAWING NO.: **S-03**

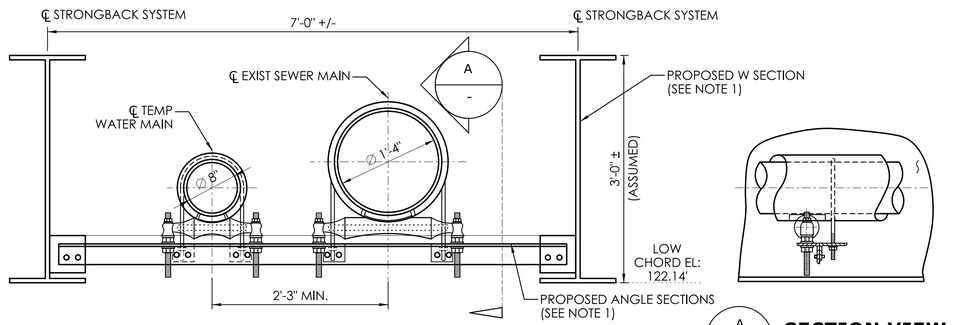
SHEET NO.: **04.03**

LASTED SAVED BY: TC033974 FILE NAME: C:\Users\tc033974\Jacobs\CTDOT Task Order Bridge Rehabilitation and Replacement Program - 0007-0266 Glen St. - Berlin\700 Working Documents\0007-0266 - Design\Bridge\Contract_Plans\SB_CP_0007_0266_GP&E.dgn
PLOTTED DATE: 10/13/2025



STAGING PLAN - PHASE 1

SCALE: 1" = 15'-0"



TEMPORARY STRONGBACK SYSTEM (LOOKING NORTH)

SCALE: 1" = 1'-0"

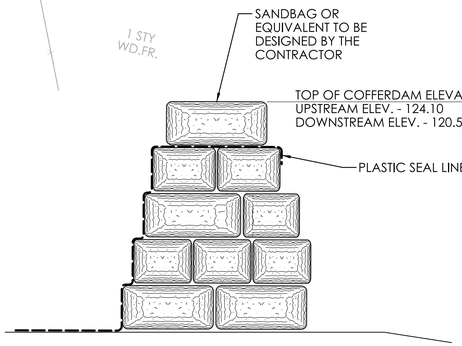
A

SECTION VIEW

SCALE: 1" = 1'-0"

RIPRAP LEGEND

- STANDARD RIPRAP
- ROUNDED BOULDER
- BOULDER WEIR
- INTERMEDIATE RIPRAP
- RIPRAP, VOIDS WASHED-IN WITH NATURAL STREAMBED MATERIAL



STAGE 1 WATER HANDLING - COFFERDAM

NOT TO SCALE

STRONGBACK SYSTEM ASSEMBLY NOTES

1. THE STEEL SECTIONS FOR STRONGBACK SYSTEM ARE CONCEPTUAL. THE SYSTEM INCLUDING THE FOUNDATION SHALL BE DESIGNED BY CONTRACTOR AND PAID UNDER ITEM "FURNISHING AND INSTALLING TEMPORARY WATER MAIN CROSSING".
2. THE LAYOUT SHOWN IS GENERIC ONLY. THE TEMP WATER MAIN SUPPORTS SHOULD BE PLACED AT A MIN. OF 2' FROM ANY ANGLES OF THE CROSS FRAME.
3. ADJUSTABLE UTILITY SUPPORT ROLLER SYSTEM SHOWN IS CONCEPTUAL ONLY. ACTUAL SUPPORTS SHALL BE SUBMITTED FOR APPROVAL. ALL COMPONENTS TO BE HOT DIPPED GALVANIZED.
4. RESTRAINED JOINT CLASS 54 WATER MAIN WITH 2 INCH RIGID INERT FOAM INSULATION WITH METAL FIBER REINFORCED MASTIC OR NON-CORROSIVE METAL JACKET (TYP.)

WATER HANDLING NOTES

1. THE CONTRACTOR SHALL MAINTAIN WATER THROUGH THE TEMPORARY WATER HANDLING SYSTEM AS REQUIRED DURING CONSTRUCTION OF THE NEW STRUCTURE.
2. TEMPORARY DEWATERING BASINS SHALL BE ESTABLISHED OUTSIDE OF THE WETLAND LIMITS AND SHALL BE PAID UNDER ITEM "HANDLING WATER."
3. TEMPORARY WATER-HANDLING-COFFERDAM SHALL CONSIST OF AN APPROVED SYSTEM THAT THE CONTRACTOR ELECTS TO USE WHICH WILL SAFELY CONVEY WATER FLOWS THROUGH THE CONSTRUCTION AREA, SHALL BE ABLE TO SUPPORT CONSTRUCTION ACTIVITY AND SHALL CONFORM TO PERMITS. TO BE PAID UNDER ITEM HANDLING WATER.
4. ANY WATER HANDLING SCHEME DEPICTED WITHIN THE DEPARTMENT'S "HANDLING WATER TYPICAL SCHEMATICS" MAY BE UTILIZED UNLESS SPECIFICALLY PROHIBITED. A MEANS AND METHOD FOR WATER HANDLING SYSTEM SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER FOR APPROVAL.
5. WATER HANDLING MEASURES SHALL NOT EXCEED IMPACT AREAS SHOWN ON THE WETLAND AND WATERCOURSE IMPACT SHEET OF THE PERMIT PLANS.
6. IF A PUMP SYSTEM IS PROPOSED DURING LOW FLOW CONDITIONS, THE PUMP SYSTEM SHALL BE DESIGNED BY THE CONTRACTOR. PUMP SYSTEM PLAN SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL.
7. BASED UPON FIELD CONDITIONS, WORK DURATION, AND EXPECTED WEATHER CONDITIONS, THE ENGINEER MAY APPROVE A CONSTRUCTION WATER HANDLING PLAN WITH LOWER PUMPING FLOWS. PROVIDED THAT THIS INCLUDES A CONTINGENCY PLAN, WHICH MINIMIZES NEGATIVE IMPACTS AND SAFELY CONVEYS LARGER FLOWS THROUGH THE WORK AREA.
8. THE COFFERDAM SHALL CONSIST OF THE SHEETING OR DRILLED SOLDIER PILES WITH TIMBER LAGGING OR ANY OTHER APPROVED SYSTEM THAT THE CONTRACTOR ELECTS TO USE WHICH WILL SAFELY CONVEY WATER FLOWS THROUGH THE CONSTRUCTION AREA, BE ABLE TO SUPPORT CONSTRUCTION ACTIVITY AND EXCAVATION AND SHALL CONFORM TO PERMITS. THE MINIMUM TOP ELEVATION OF THE COFFERDAM SHALL BE 124.1 (UPSTREAM) AND 120.5 (DOWNSTREAM). TO BE PAID UNDER ITEM "COFFERDAM AND DEWATERING".

SUGGESTED SEQUENCE OF CONSTRUCTION

STAGE 1

1. CONDUCT PRE-CONSTRUCTION CONDITION SURVEY AT 215 ROBINDALE DRIVE AND 85 GLEN STREET. THIS WORK SHALL BE PAID UNDER "CONDITION SURVEY (SITE NO. 1)".
2. INSTALL CRACK MONITORS, DEFORMATION MONITORING POINTS, AND VIBRATION MONITORS. FOR DETAILS, SEE HIGHWAY DRAWING GMP - 1.
3. INSTALL EROSION AND SEDIMENTATION CONTROL SYSTEM. REMOVE INVASIVE SPECIES. CLEAR AND GRUB.
4. ESTABLISH PROPOSED DETOUR. CLOSE ROADWAY.
5. INSTALL TEMPORARY STRONGBACK UTILITY SUPPORT SYSTEM. SUPPORT EXISTING SEWER LINE. REMOVE EXISTING PIER. INSTALL TEMPORARY WATER LINE TO STRONGBACK UTILITY SUPPORT SYSTEM.
6. REMOVE METAL BEAM GUIDE RAIL ALONG BOTH ROADWAY EDGES TO THE LIMIT SHOWN.
7. INSTALL STAGE 1 WATER HANDLING COFFERDAM AT THE INLET AND OUTLET OF THE SOUTH CULVERT BARREL TO DIVERT FLOW TO NORTH CULVERT. INSTALL DEWATERING BASIN.
8. INSTALL STAGE 1 COFFERDAM AND DEWATERING.
9. EXCAVATE AND REMOVE EXISTING SOUTH CULVERT.
10. CONSTRUCT SOUTH CELL OF PROPOSED BOX CULVERT, WINGWALLS 1A AND 1B, AND BARRIER WALL 101.
11. BACKFILL. INSTALL APPROACH SLAB.
12. PLACE COFFERDAM MATERIAL AT THE BASE OF THE SOUTH CULVERT TO RETAIN GRANULAR FILL AND EXCAVATION. INSTALL RIPRAP.
13. REMOVE STAGE 1 COFFERDAM AND WATER HANDLING COFFERDAM NOT REQUIRED FOR STAGE 2.

UTILITY NOTES

1. WORK ASSOCIATED WITH INSTALLATION OF TEMPORARY WATER MAIN SHALL BE PAID UNDER ITEM. "FURNISHING AND INSTALLING TEMPORARY WATER MAIN CROSSING" (SEE SPECIAL PROVISIONS).
2. WORK ASSOCIATED WITH REMOVAL OF EXISTING WATER MAIN SHALL BE PAID UNDER ITEM. "REMOVE WATER MAIN".

TEMPORARY HYDRAULIC DATA (PHASE 1)		
AVERAGE DAILY FLOW (ADF)	15 CFS	
AVERAGE SPRING FLOW (ASF)	30 CFS	
2-YEAR FREQUENCY DISCHARGE	350 CFS	
TEMPORARY DESIGN DISCHARGE	350 CFS	
TEMPORARY DESIGN FREQUENCY	2-YEAR	
TEMPORARY WATER SURFACE ELEVATION	UPSTREAM	DOWNSTREAM
	123.1 FT	119.5 FT

LEGEND

	COFFERDAM
	SEDIMENTATION CONTROL SYSTEM (SCS)
	STATE/FEDERAL WETLANDS
	STATE-ONLY WETLANDS
	EDGE OF STREAM
OHW OHW	ORDINARY HIGH WATER (OHW)
	WATER HANDLING COFFERDAM

REV.	DATE	REVISION DESCRIPTION

SIGNATURE BLOCK: JACOBS, 100 Great Meadow Rd., Suite 707, Wethersfield, CT

DESIGNER/DRAFTER: A. RANJAN CHECKED BY: B. CHAMBERLIN

SCALE AS NOTED

CTDOT — CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 06955; GLEN STREET OVER THE MATTABESSET RIVER

TOWN(S): BERLIN

DRAWING TITLE: WATER HANDLING AND STAGING PLAN - 1

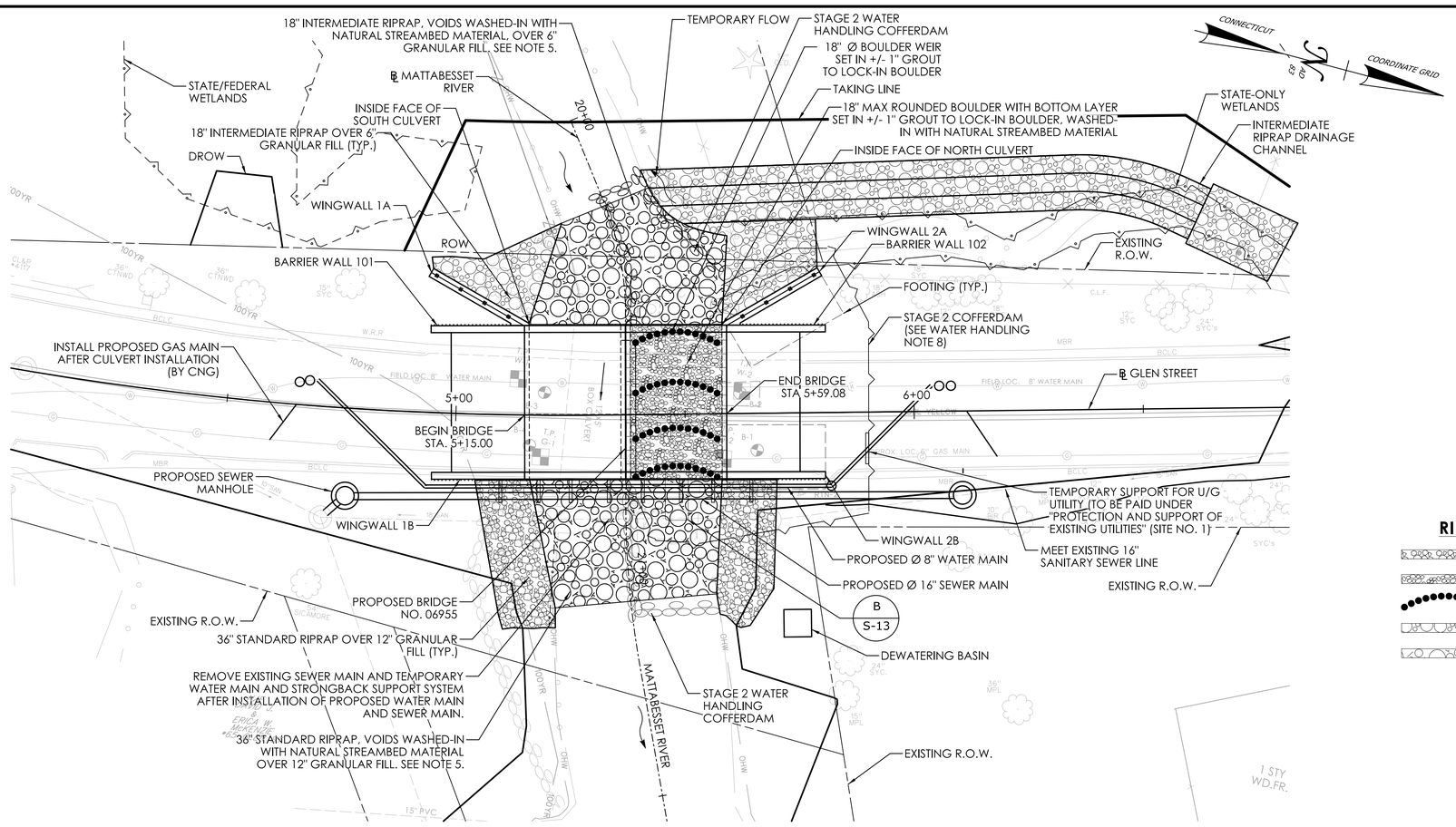
PROJECT NO.: 0007-0266

DRAWING NO.: S-04

SHEET NO.: 04.04

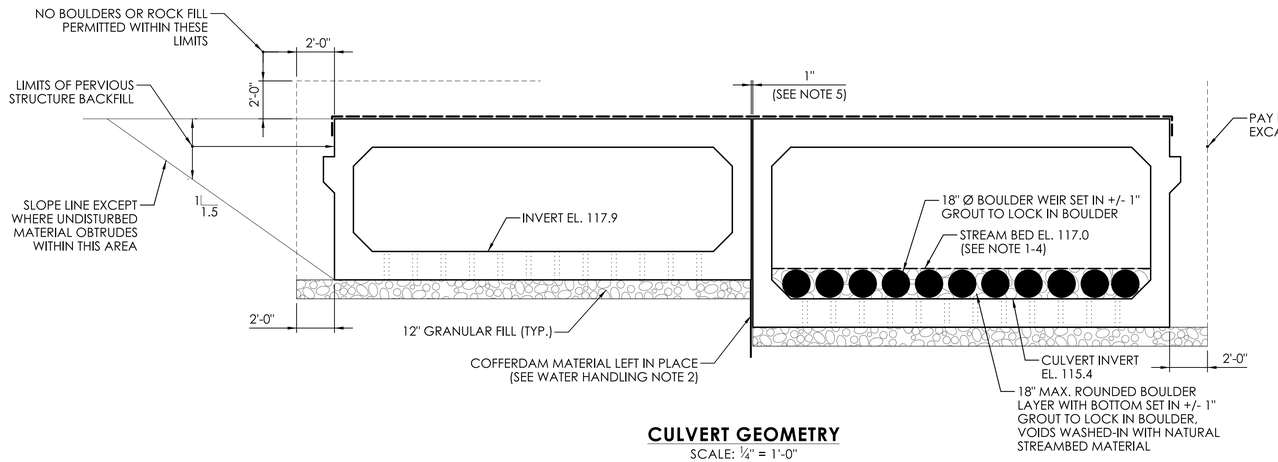
LASTED SAVED BY: TC053974 **FILE NAME:** C:\Users\TC053974\Jacobs Engineering Group Inc (CTDOT Task Order Bridge Rehabilitation and Replacement Program - 0007-0288 Glen St. - Berlin\700 Working Documents\0007-0288 - Design\Bridge\Contract_Plans\SB_CP_0007_0266_Stage1.dgn

PLOTTED DATE: 10/13/2023



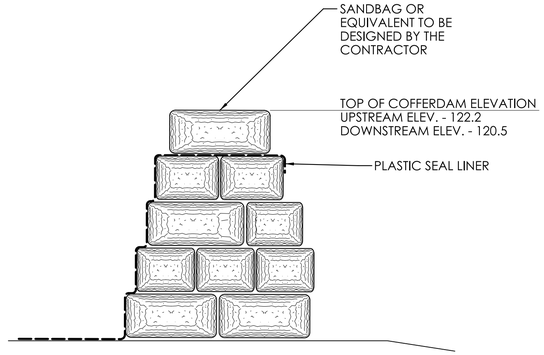
STAGING PLAN - STAGE 2

SCALE: 1" = 15'-0"



CULVERT GEOMETRY

SCALE: ¼" = 1'-0"



STAGE 2 WATER HANDLING - COFFERDAM

NOT TO SCALE

RIPRAP LEGEND

- STANDARD RIPRAP
- ROUNDED BOULDER
- BOULDER WEIR
- INTERMEDIATE RIPRAP
- RIPRAP, VOIDS WASHED-IN WITH NATURAL STREAMBED MATERIAL

WATER HANDLING NOTE

1. SEE DRAWING NO. S-04, STAGE - 1 FOR WATER HANDLING NOTES.
2. PROVIDE SUPPORT OF EXCAVATION FOR PLACEMENT OF STAGE 2 CULVERT SECTIONS. CUT OF AT BOTTOM OF STAGE 1 CULVERT. THE COST OF THIS SUPPORT SHALL BE PAID UNDER THE ITEM "COFFERDAM MATERIAL LEFT IN PLACE".

SUGGESTED SEQUENCE OF CONSTRUCTION

STAGE 2

1. INSTALL WATER HANDLING COFFERDAM AT THE INLET AND OUTLET OF THE NEW NORTH CULVERT BARREL TO DIVERT WATER THROUGH NEW CONSTRUCTION. INSTALL DEWATERING BASIN.
2. INSTALL STAGE 2 COFFERDAM.
3. EXCAVATE AND REMOVE EXISTING NORTH CULVERT.
4. CONSTRUCT NORTH CELL OF PROPOSED BOX CULVERT, WINGWALLS 2A AND 2B, AND BARRIER WALL 102.
5. INSTALL PROPOSED GAS MAIN ABOVE CULVERT.
6. PLACE PRECAST HEADWALLS.
7. INSTALL PRECAST NOSEWALL SECTION.
8. INSTALL RIPRAP AND STREAMBED MATERIAL.
9. BACKFILL. INSTALL APPROACH SLAB.
10. INSTALL DRAINAGE.
11. CONSTRUCT ROADWAY TO FINAL GRADE.
12. PERMANENTLY SUPPORT WATER MAIN AND SEWER MAIN BY THE NEW CULVERTS. REMOVE TEMPORARY WATER AND SEWER MAIN AND SUPPORTS.
13. REMOVE STAGE 2 COFFERDAM AND WATER HANDLING COFFERDAM. RESTORE DISTURBED AREAS (SEE LANDSCAPE PLAN).
14. PERFORM POST-CONSTRUCTION CONDITION SURVEY AT PROPERTIES BEING MONITORED.

TEMPORARY HYDRAULIC DATA (PHASE 2)		
AVERAGE DAILY FLOW (ADF)	15 CFS	
AVERAGE SPRING FLOW (ASF)	30 CFS	
2-YEAR FREQUENCY DISCHARGE	350 CFS	
TEMPORARY DESIGN DISCHARGE	350 CFS	
TEMPORARY DESIGN FREQUENCY	2-YEAR	
TEMPORARY WATER SURFACE ELEVATION	UPSTREAM	DOWNSTREAM
	121.2 FT	119.5 FT

STREAMBED & CULVERT NOTES:

1. INSTALL 18" MAX ROUNDED BOULDER LAYER WITH BOTTOM SET IN +/- 1" GROUT TO LOCK-IN TO CULVERT FLOOR, VOIDS WASHED -IN WITH NATURAL STREAM BED MATERIAL COLLECTED AT THE PROJECT SITE AND STOCKPILED. INSTALL FOUR 18" ROCK WEIR BOULDERS WITH BOTTOM SET IN GROUT TO BE PAID UNDER ITEM 0703031 "ROCK WEIR".
2. EXCAVATION, STOCKPILE AND REUSE OF EXISTING STREAMBED MATERIAL TO BE PAID UNDER ITEM 0202216A "EXCAVATION AND REUSE OF EXISTING CHANNEL BOTTOM MATERIAL", SEE SPECIAL PROVISIONS.
3. WASHING-IN OF EXISTING STREAMBED MATERIAL TO BE PAID UNDER ITEM 0202218A "WASHING-IN SUPPLEMENTAL STREAMBED MATERIAL", SEE SPECIAL PROVISIONS.
4. THE CONTRACTOR SHALL PROCURE A SAMPLE OF 18" MAX DIAMETER BOULDERS PROPOSED FOR THE ROCK WEIRS AND CULVERT ROUNDED BOULDER LAYER, AND CONTACT ANDREW MIANO OF CTDEEP FISHERIES AT ANDREW.J.MIANO@CT.GOV FOR REVIEW AND APPROVAL. FOLLOWING THE APPROVAL, THE CONTRACTOR SHALL NOTIFY ANDREW MIANO AT LEAST 10 DAYS BEFORE INSTALLING AND WASHING-IN THE NATURAL STREAMBED MATERIAL, SO HE CAN BE PRESENT ON SITE TO BE PAID UNDER ITEM 0202222A "BOULDER PLACEMENT IN RIVER", SEE SPECIAL PROVISIONS.
5. WASH-IN NATURAL STREAMBED MATERIAL UP TO OHW (EL. 119.3 +/- UPSTREAM AND EL. 117.8 +/- DOWNSTREAM)

LEGEND

- COFFERDAM
- SEDIMENTATION CONTROL SYSTEM (SCS)
- STATE/FEDERAL WETLANDS
- STATE-ONLY WETLANDS
- EDGE OF STREAM
- ORDINARY HIGH WATER (OHW)
- WATER HANDLING COFFERDAM

REV.	DATE	REVISION DESCRIPTION

SIGNATURE BLOCK:

JACOBS
100 Great Meadow Rd., Suite 707
Wethersfield, CT

DESIGNER/DRAFTER: A. RANJAN CHECKED BY: B. CHAMBERLIN

SCALE AS NOTED

CTDOT CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 06955; GLEN STREET OVER THE MATTABESSET RIVER

TOWN(S): BERLIN

DRAWING TITLE: WATER HANDLING AND STAGING PLAN - 2

PROJECT NO.: 0007-0266

DRAWING NO.: S-05

SHEET NO.: 04.05

DATE/TIME SAVED BY: rcoss974 **FILE NAME:** C:\Users\rcoss974\Jacobs Engineering Group Inc\CTDOT Task Order Bridge Rehabilitation and Replacement Program - 0007-0266 Glen St. - Berlin\700 Working Documents\0007-0266 - Design\Bridge\Contract_Plans\SB_CP_0007_0266_Stage2.dgn
PLOTTED DATE: 10/13/2025

BORING - B1

Connecticut DOT Boring Report

Driller:	K. Smith			Hole No.:	B-1
Inspector:	M. Cyr	Town:	Berlin	Stat./Offset:	15+66/8
Engineer:	A. McCauliffe	Project No.:	007-266	Northing:	788145
Start Date:	5-18-23	Route No.:	Glen Street	Easting:	989978
Finish Date:	5-18-23	Bridge No.:	06955	Surface Elevation:	128.4

Project Description: Glen Street Bridge 06955

Casing Size/Type: 4-in. Casing | Sampler Type/Size: 1-3/8 inch ID | Core Barrel Type: NX

Hammer Wt.: 300lb Fall: 30in. | Hammer Wt.: 140lb Fall: 30in.

Groundwater Observations: Not Recorded

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0						Asphalt	ASPHALT, (0-1 feet)	
	S-1	27 10 7 7	24	8		Misc. Fill	Red f SAND, some c-f gravel, some silt	
	S-2	5 8 8 5	24	12			Red f SAND, some c-f gravel, some silt	125
5	S-3	7 7 7 7	24	8			Red f SAND, some silt, trace f gravel	
	S-4	4 8 10 11	24	14			Red f SAND, some c-f gravel, some silt	120
10	S-5	20 12 9 8	24	10			Red ~~c-f~~ m-f GRAVEL and ~~f~~ c-f SAND, some silt	
	S-6	7 34 27 87	24	18		Glacial Till	Red f SAND, some c-f gravel, some silt, Top 9 inches Gray c-f GRAVEL, Bottom 9 inches	
	S-7	50/3"	3	0		Bedrock	Gray c-f GRAVEL, little silt, From tip	115
15								
	C-1		60	58	67		Gray, BASALT, fine, intensely fractured to moderately fractured, highly weathered, medium strong, 0° to 60° bedding angle, 3-3-3-2.5-3	110
20								
	C-2		60	41	37		Gray, BASALT, fine, intensely fractured to slightly fractured, highly weathered, medium strong, 0° to 75° bedding angle, 2-3.5-3-4.5-3.5	105
25							END OF BORING 25ft	

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test

Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 14ft Rock: 11ft	NOTES: DTE EDITS (BASED ON LAB TESTING RESULTS)	Sheet 1 of 1
No. of Soil Samples: 7 No. of Core Runs: 2		SM-001-M REV. 1/02

BORING - B2 (1 OF 2)

Connecticut DOT Boring Report

Driller:	K. Smith/M. St. John			Hole No.:	B-2
Inspector:	M. Cyr	Town:	Berlin	Stat./Offset:	15+62/4
Engineer:	A. McCauliffe	Project No.:	007-266	Northing:	788138
Start Date:	5-19-23	Route No.:	Glen Street	Easting:	989967
Finish Date:	5-22-23	Bridge No.:	06955	Surface Elevation:	128.5

Project Description: Glen Street Bridge 06955

Casing Size/Type: 4-in. Casing | Sampler Type/Size: 1-3/8 inch ID | Core Barrel Type: NX

Hammer Wt.: 300lb Fall: 30in. | Hammer Wt.: 140lb Fall: 30in.

Groundwater Observations: Not Recorded

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0						Asphalt	ASPHALT, (0-1 feet)	
	S-1	23 12 9	18	12		Misc. Fill	Red f SAND, some c-f gravel, some silt (driller took 18" sample to begin next sample at an even interval)	
	S-2	6 7 7 6	24	12			Red ~~c-f~~ m-f GRAVEL and ~~f~~ c-f SAND, little silt	125
5	S-3	4 8 13 9	24	10			Red f SAND, some c-f gravel, some silt	
	S-4	6 6 4 5	24	13			Red f-c SAND, some c-f gravel, some silt	120
10	S-5	4 3 1 5	24	8			Red f-c SAND, some c-f gravel, some silt	
						Bedrock	Driller indicated start of bedrock due to an increase in drilling pressure needed	115
15							Driller indicated potential weathered or fractured rock based on drilling effort	
								110
20	C-1		60	54	40		Gray, BASALT, fine, intensely fractured to moderately fractured, completely weathered, medium strong, 0° to 45° bedding angle, 3-5-4-4.5-4	
25								105

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test

Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 14ft Rock: 14ft	NOTES: DTE EDITS (BASED ON LAB TESTING RESULTS)	Sheet 1 of 2
No. of Soil Samples: 5 No. of Core Runs: 2		SM-001-M REV. 1/02

BORING - B2 (2 OF 2)

Connecticut DOT Boring Report

Driller:	K. Smith/M. St. John			Hole No.:	B-2
Inspector:	M. Cyr	Town:	Berlin	Stat./Offset:	15+62/4
Engineer:	A. McCauliffe	Project No.:	007-266	Northing:	788138
Start Date:	5-19-23	Route No.:	Glen Street	Easting:	989967
Finish Date:	5-22-23	Bridge No.:	06955	Surface Elevation:	128.5

Project Description: Glen Street Bridge 06955

Casing Size/Type: 4-in. Casing | Sampler Type/Size: 1-3/8 inch ID | Core Barrel Type: NX

Hammer Wt.: 300lb Fall: 30in. | Hammer Wt.: 140lb Fall: 30in.

Groundwater Observations: Not Recorded

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
25	C-2		60	56	85	Bedrock *(con't)*	Gray, BASALT, fine, highly fractured, completely weathered, medium strong, 0° to 30° bedding angle, 6-6-5-5-5	
							END OF BORING 28ft	100
30								95
35								90
40								85
45								80
50								

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test

Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 14ft Rock: 14ft	NOTES:	Sheet 2 of 2
No. of Soil Samples: 5 No. of Core Runs: 2		SM-001-M REV. 1/02

REV. | DATE | REVISION DESCRIPTION

SIGNATURE BLOCK: JACOBS DESIGNER/DRAFTER: A. RANJAN CHECKED BY: B. CHAMBERLIN	SCALE AS NOTED	CTDOT CONNECTICUT DEPARTMENT OF TRANSPORTATION	PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 06955; GLEN STREET OVER THE MATTABESSET RIVER	TOWN(S): BERLIN	DRAWING TITLE: BORING LOGS SHEET 1 OF 2	PROJECT NO.: 0007-0266	DRAWING NO.: S-06 SHEET NO.: 04.06

PLOTTED DATE: 10/13/2025

Driller: M. St. John	**Connecticut DOT Boring Report**	Hole No.: B-3 (OW)
Inspector: M. Cyr	Town: Berlin	Stat./Offset: 15+19/5
Engineer: A. McCauliffe	Project No.: 007-266	Northing: 786097
Start Date: 5-19-23	Route No.: Glen Street	Easting: 986978
Finish Date: 5-19-23	Bridge No.: 06955	Surface Elevation 128.1
Project Description: Glen Street Bridge 06955		
Casing Size/Type: 3-in. Casing	Sampler Type/Size: 1-3/8 inch ID	Core Barrel Type: NX
Hammer Wt.: 300lb Fall: 30in.	Hammer Wt.: 140lb Fall: 30in.	
Groundwater Observations: @10 ft ATD, @10 ft after 24 hrs		

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0	S-1	15 19 15 12	24	4		Asphalt	ASPHALT, (0-1 feet)	
						Misc. Fill	Red c-f SAND, little c-f gravel, trace silt, trace asphalt	125
	S-2	14 8 6 6	24	14			Red c-f SAND, little c-f gravel, little silt	
5	S-3	2 4 5 6	24	10			Red c-f SAND, little c-f gravel, little silt	
	S-4	4 5 7 7	24	6			Red c-f SAND, little c-f gravel, little silt	120
10	S-5	2 2 4 3	24	7			Red f SAND, some f-m gravel, some silt	
						Sandy Gravel		115
15	S-6	3 4 3 5	24	6			c-f Red c-f GRAVEL, little f sand, little silt	
								110
20	S-7	7 38 70/4"	16	4		Glacial Till	Gray c GRAVEL	
						Bedrock	Driller indicated start of bedrock due to an increase in driling pressure needed	105
25								

Sample Typs: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in	NOTES: Well Construction: Well set at 20 ft; screen from 10-20 feet, Riser from 0-10 feet; Sand from 8-20 feet, Betonite from 5-8 feet, Spoils from 1-5 feet, Roadbox and concrete from 0-1 feet	Sheet
Earth: 21ft Rock: 14ft	DTE EDITS (BASED ON LAB TESTING RESULTS)	1 of 2
No. of Soil Samples: 7 No. of Core Runs: 2		SM-001-M REV. 1/02

BORING - B3 (1 OF 2)

Driller: M. St. John	**Connecticut DOT Boring Report**	Hole No.: B-3 (OW)
Inspector: M. Cyr	Town: Berlin	Stat./Offset: 15+19/5
Engineer: A. McCauliffe	Project No.: 007-266	Northing: 786097
Start Date: 5-19-23	Route No.: Glen Street	Easting: 986978
Finish Date: 5-19-23	Bridge No.: 06955	Surface Elevation 128.1
Project Description: Glen Street Bridge 06955		
Casing Size/Type: 3-in. Casing	Sampler Type/Size: 1-3/8 inch ID	Core Barrel Type: NX
Hammer Wt.: 300lb Fall: 30in.	Hammer Wt.: 140lb Fall: 30in.	
Groundwater Observations: @10 ft ATD, @10 ft after 24 hrs		

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
25						Bedrock (cont)		
	C-1		60	48	28		Gray, BASALT, fine, intensely fractured, slightly weathered, medium strong, 0° to 75° bedding angle, Seams with orange ciscoloration; 4-4-4-4-4.5	100
30								
	C-2		60	44	73		Gray, BASALT, fine, highly fractured, slightly weathered, medium strong, 0° to 45° bedding angle, 5-6-5-5-5	95
35							END OF BORING 35ft	
								90
40								
								85
45								
								80
50								

Sample Typs: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in	NOTES: Well Construction: Well set at 20 ft; screen from 10-20 feet, Riser from 0-10 feet; Sand from 8-20 feet, Betonite from 5-8 feet, Spoils from 1-5 feet, Roadbox and concrete from 0-1 feet	Sheet
Earth: 21ft Rock: 14ft		2 of 2
No. of Soil Samples: 7 No. of Core Runs: 2		SM-001-M REV. 1/02

BORING - B3 (2 OF 2)

Driller: M. St. John	**Connecticut DOT Boring Report**	Hole No.: B-4
Inspector: M. Cyr	Town: Berlin	Stat./Offset: 15+16/7
Engineer: A. McCauliffe	Project No.: 007-266	Northing: 786097
Start Date: 5-18-23	Route No.: Glen Street	Easting: 986990
Finish Date: 5-18-23	Bridge No.: 06955	Surface Elevation 128.1
Project Description: Glen Street Bridge 06955		
Casing Size/Type: 3-in. Casing	Sampler Type/Size: 1-3/8 inch ID	Core Barrel Type: NX
Hammer Wt.: 300lb Fall: 30in.	Hammer Wt.: 140lb Fall: 30in.	
Groundwater Observations: Not Recorded		

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0	S-1	10 10 7 6	24	15		Asphalt	ASPHALT, (0-1 feet)	
						Misc. Fill	Red c-f SAND, little c-f gravel, trace silt.	125
	S-2	7 12 15 17	24	4			Red c-f SAND, little c-f gravel, trace silt.	
5	S-3	12 19 20 22	24	5			Red c-f SAND, little c-f gravel, trace silt.	
	S-4	9 9 8 6	24	5			Red and black c-f SAND, some f-m gravel, trace silt	120
10	S-5	6 6 19 18	24	13			c-f c-f Red and brown f-m GRAVEL, some f sand, some silt	
						Sandy Gravel		115
15	S-6	14 13 16 21	24	0			No recovery	
								110
20	S-7	84 50/1"	7	4		Bedrock	Bedrock fragments	
								105
25								

Sample Typs: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in	NOTES: DTE EDITS (BASED ON LAB TESTING RESULTS)	Sheet
Earth: 20ft Rock: 17ft		1 of 2
No. of Soil Samples: 8 No. of Core Runs: 2		SM-001-M REV. 1/02

BORING - B4 (1 OF 2)

Driller: M. St. John	**Connecticut DOT Boring Report**	Hole No.: B-4
Inspector: M. Cyr	Town: Berlin	Stat./Offset: 15+16/7
Engineer: A. McCauliffe	Project No.: 007-266	Northing: 786097
Start Date: 5-18-23	Route No.: Glen Street	Easting: 986990
Finish Date: 5-18-23	Bridge No.: 06955	Surface Elevation 128.1
Project Description: Glen Street Bridge 06955		
Casing Size/Type: 3-in. Casing	Sampler Type/Size: 1-3/8 inch ID	Core Barrel Type: NX
Hammer Wt.: 300lb Fall: 30in.	Hammer Wt.: 140lb Fall: 30in.	
Groundwater Observations: Not Recorded		

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
25	S-8	50/0"	0	0		Bedrock (cont)	No Recovery	
	C-1		60	52	55		Gray, BASALT, fine, intesenly fractured, slightly weathered, medium strong, 0° to 60° bedding angle, Seams with orange ciscoloratio; 5-5-5-5-5	100
30								
	C-2		60	57	90		Gray, BASALT, fine, highly fractured, slightly weathered, medium strong, 0° to 45° bedding angle, Seams with orange ciscoloration; 5-5-5-5-5	95
35								
							END OF BORING 37ft	90
40								
								85
45								
								80
50								

Sample Typs: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in	NOTES:	Sheet
Earth: 20ft Rock: 17ft		2 of 2
No. of Soil Samples: 8 No. of Core Runs: 2		SM-001-M REV. 1/02

BORING - B4 (2 OF 2)

REVISION DESCRIPTION | DATE | REV.

SIGNATURE BLOCK: JACOBS, 100 Great Meadow Rd., Suite 707, Wethersfield, CT

DESIGNER/DRAFTER: A. RANJAN CHECKED BY: B. CHAMBERLIN

SCALE AS NOTED

CTDOT CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: **REPLACEMENT OF BRIDGE NO. 06955; GLEN STREET OVER THE MATTABESSET RIVER**

TOWN(S): **BERLIN**

DRAWING TITLE: **BORING LOGS SHEET 2 OF 2**

PROJECT NO.: **0007-0266**

DRAWING NO.: **S-07**

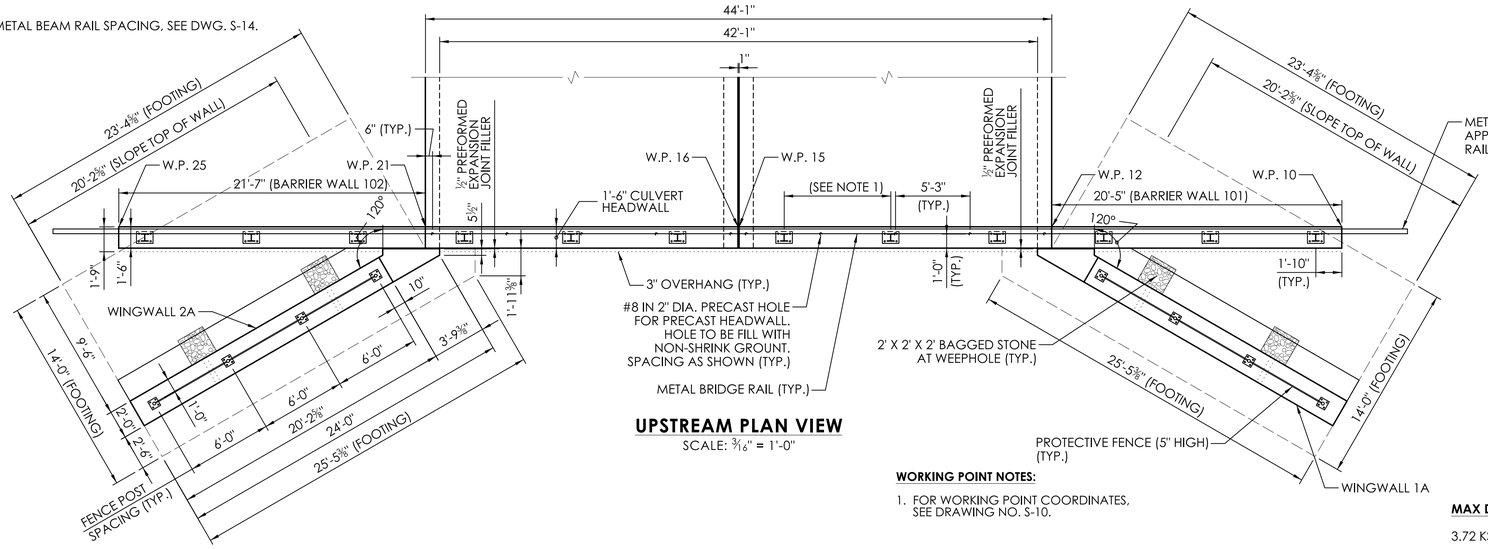
SHEET NO.: **04.07**

LASTED SAVED BY: TCUSSY4 **FILE NAME:** C:\Users\tcussy4\Jacobs Engineering Group Inc (CTDOT Task Order Bridge Rehabilitation and Replacement Program - 0007-0266 Glen St. - Berlin\700 Working Documents\0007-0266 - Design\Bridge\Contract_Plans\SB_CP_0007_0266_BRLogs2.dgn

PLOTTED DATE: 10/13/2023

NOTES:

1. FOR METAL BEAM RAIL SPACING, SEE DWG. S-14.

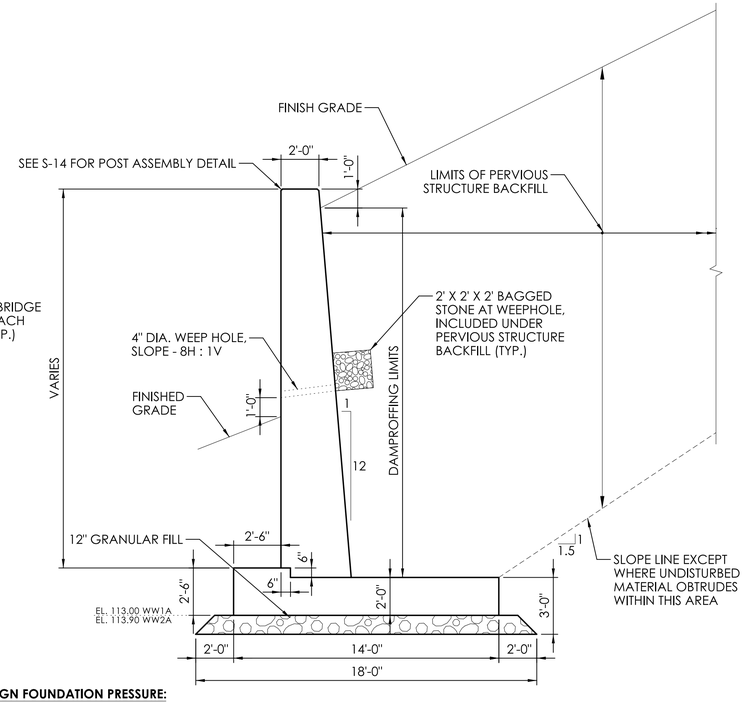


UPSTREAM PLAN VIEW

SCALE: 3⁄16" = 1'-0"

WORKING POINT NOTES:

1. FOR WORKING POINT COORDINATES, SEE DRAWING NO. S-10.

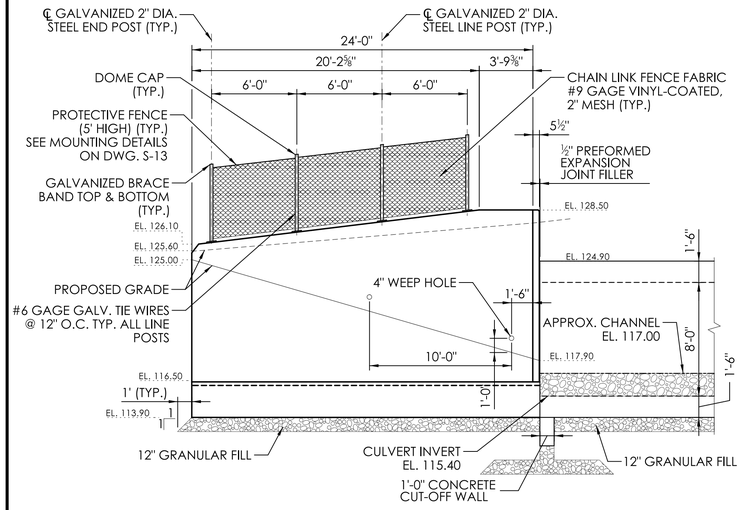


MAX DESIGN FOUNDATION PRESSURE:

3.72 KSF STRENGTH I

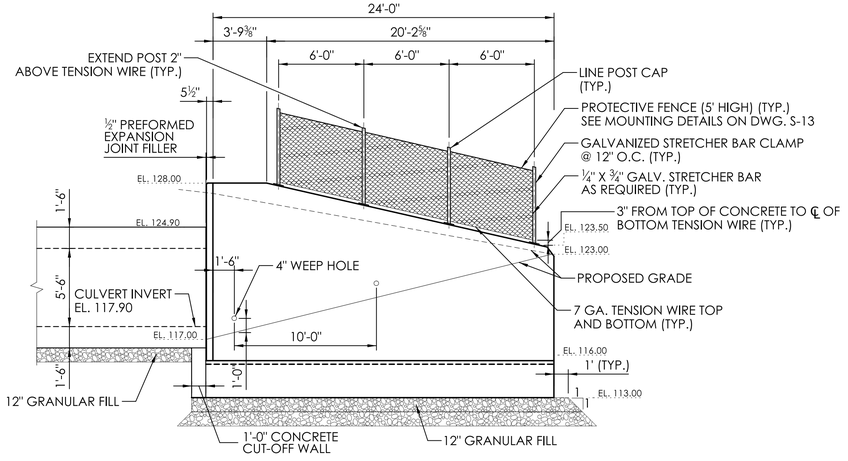
2.66 KSF SERVICE I

PAY LIMITS FOR STRUCTURE EXCAVATION - EARTH (EXCLUDING COFFERDAM AND DEWATERING)



WINGWALL 2A - ELEVATION

SCALE: 3⁄16" = 1'-0"

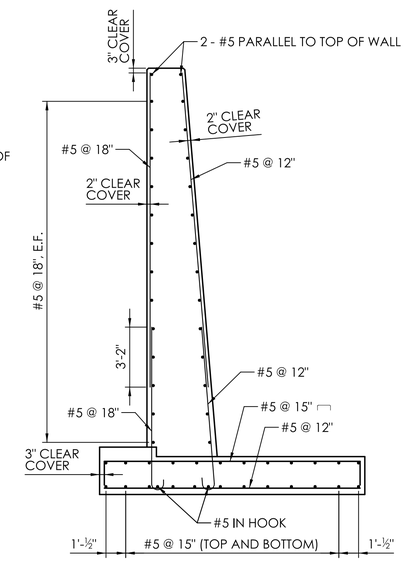


WINGWALL 1A - ELEVATION

SCALE: 3⁄16" = 1'-0"

TYPICAL WINGWALL 1A AND 2A SECTION

SCALE: ¼" = 1'-0"



TYPICAL WINGWALL 1A AND 2A REINFORCEMENT

SCALE: ¼" = 1'-0"

WINGWALL NOTES:

1. THE CLEAR COVER FOR THE FOOTINGS IS 3" AND THE CLEAR COVER FOR THE WALL STEMS IS 2".

REV.	DATE	REVISION DESCRIPTION

SIGNATURE BLOCK: JACOBS, 100 Great Meadow Rd., Suite 707, Wethersfield, CT

DESIGNER/DRAFTER: A. RANJAN CHECKED BY: B. CHAMBERLIN

SCALE AS NOTED

CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 06955; GLEN STREET OVER THE MATTABESSET RIVER

TOWN(S): BERLIN

DRAWING TITLE: U/S WINGWALL-PLAN, ELEVATIONS, AND TYPICAL REINFORCEMENT

PROJECT NO.: 0007-0266

DRAWING NO.: S-08

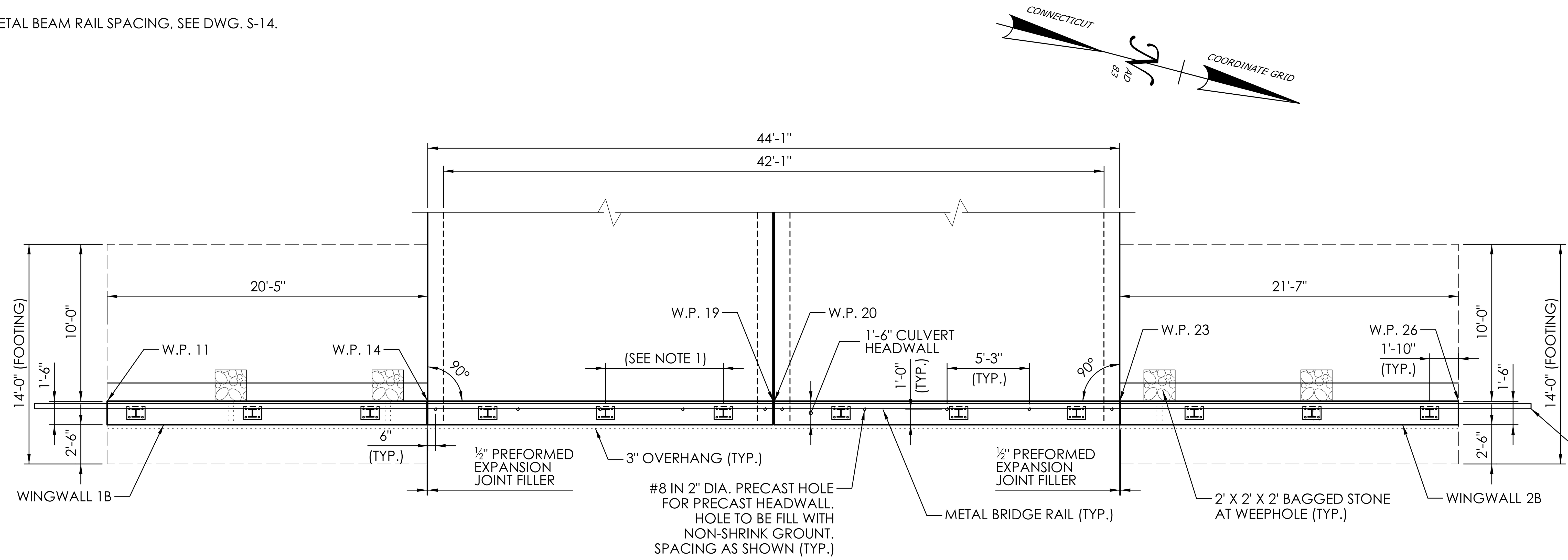
SHEET NO.: 04.08

LASTED SAVED BY: TC053974 **FILE NAME:** C:\Users\TC053974\Jacobs Engineering Group Inc (CTDOT Task Order Bridge Rehabilitation and Replacement Program - 0007-0288 Glen St. - Berlin\900 Working Documents\0007-0288 - Design\Bridge\Contract_Plans\SB_CP_0007_0266_WWDetail1.dgn

PLOTTED DATE: 10/13/2023

NOTES:

1. FOR METAL BEAM RAIL SPACING, SEE DWG. S-14.

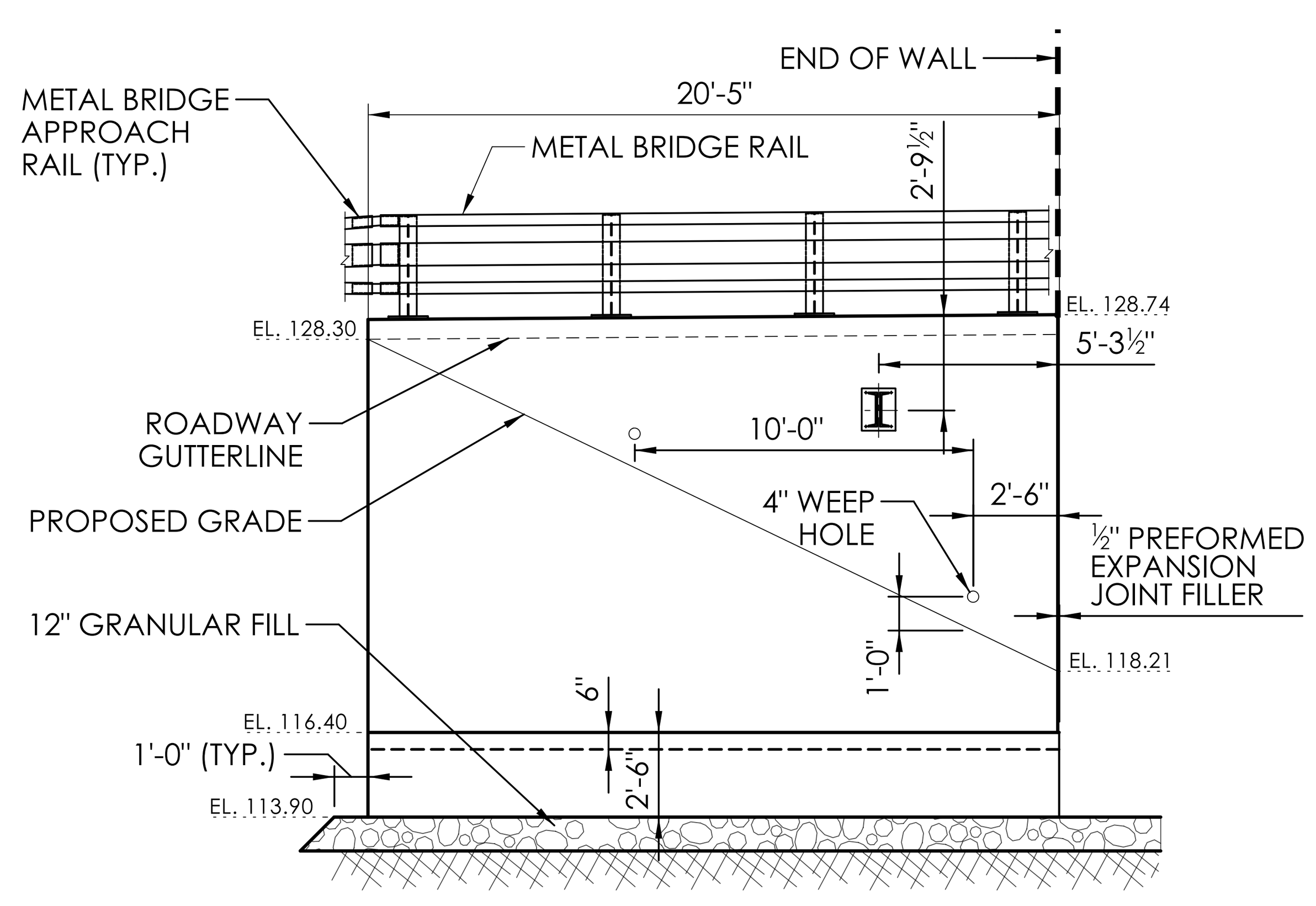


DOWNSTREAM PLAN VIEW

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

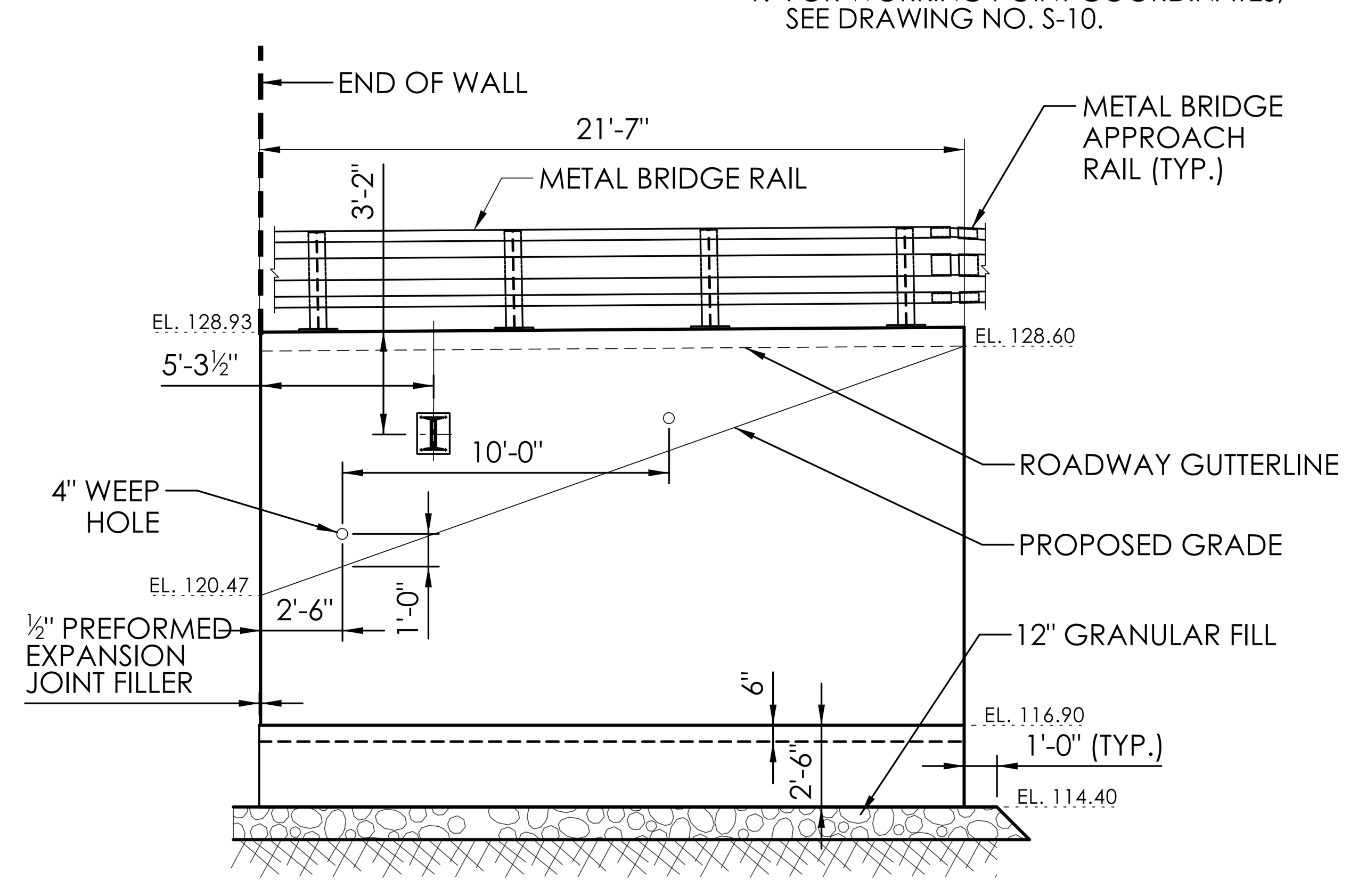
WORKING POINT NOTES:

1. FOR WORKING POINT COORDINATES, SEE DRAWING NO. S-10.



WINGWALL 1B - ELEVATION

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



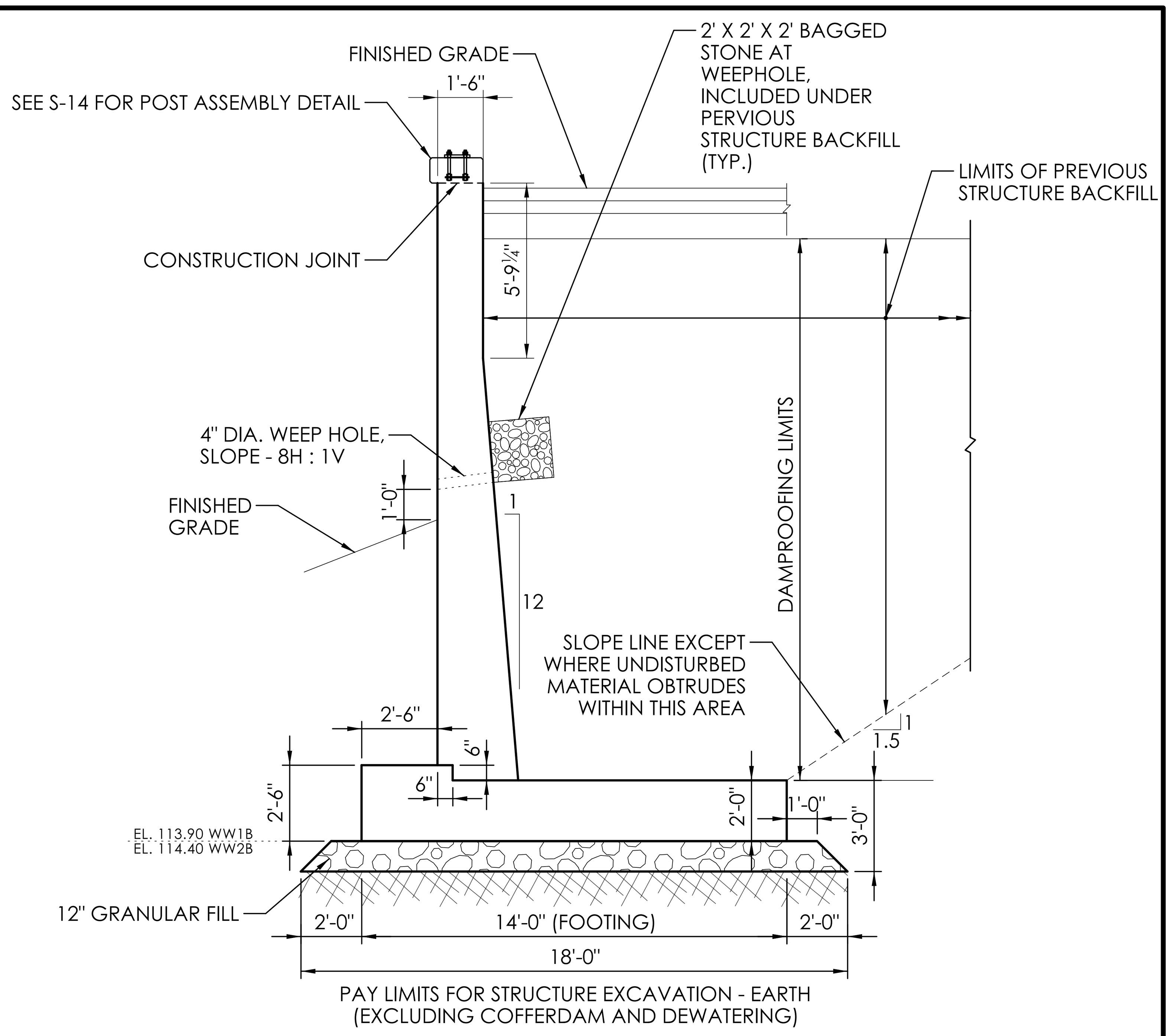
WINGWALL 2B - ELEVATION

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

MAX DESIGN FOUNDATION PRESSURE:

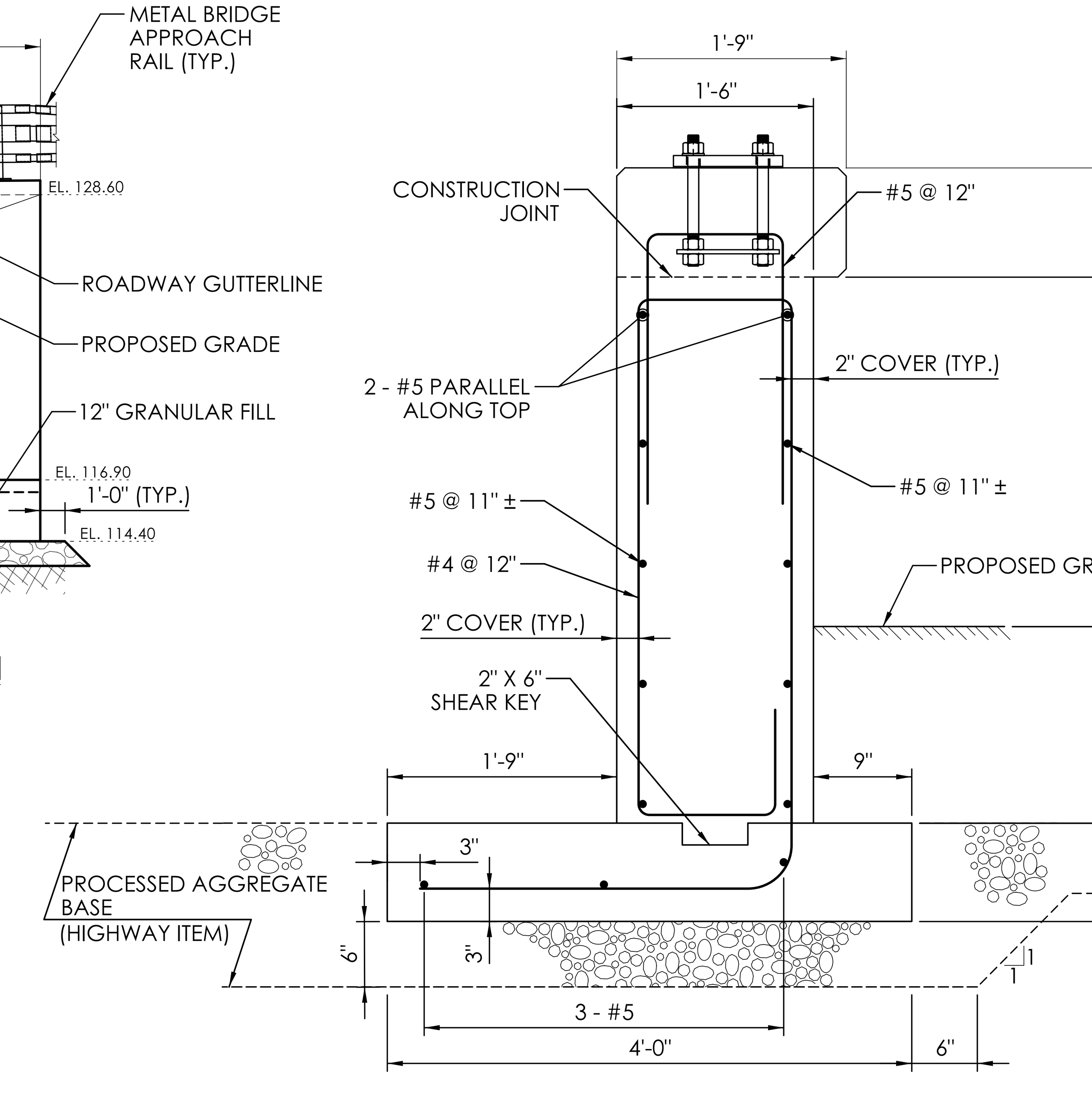
3.05 KSF STRENGTH I

2.24 KSF SERVICE I



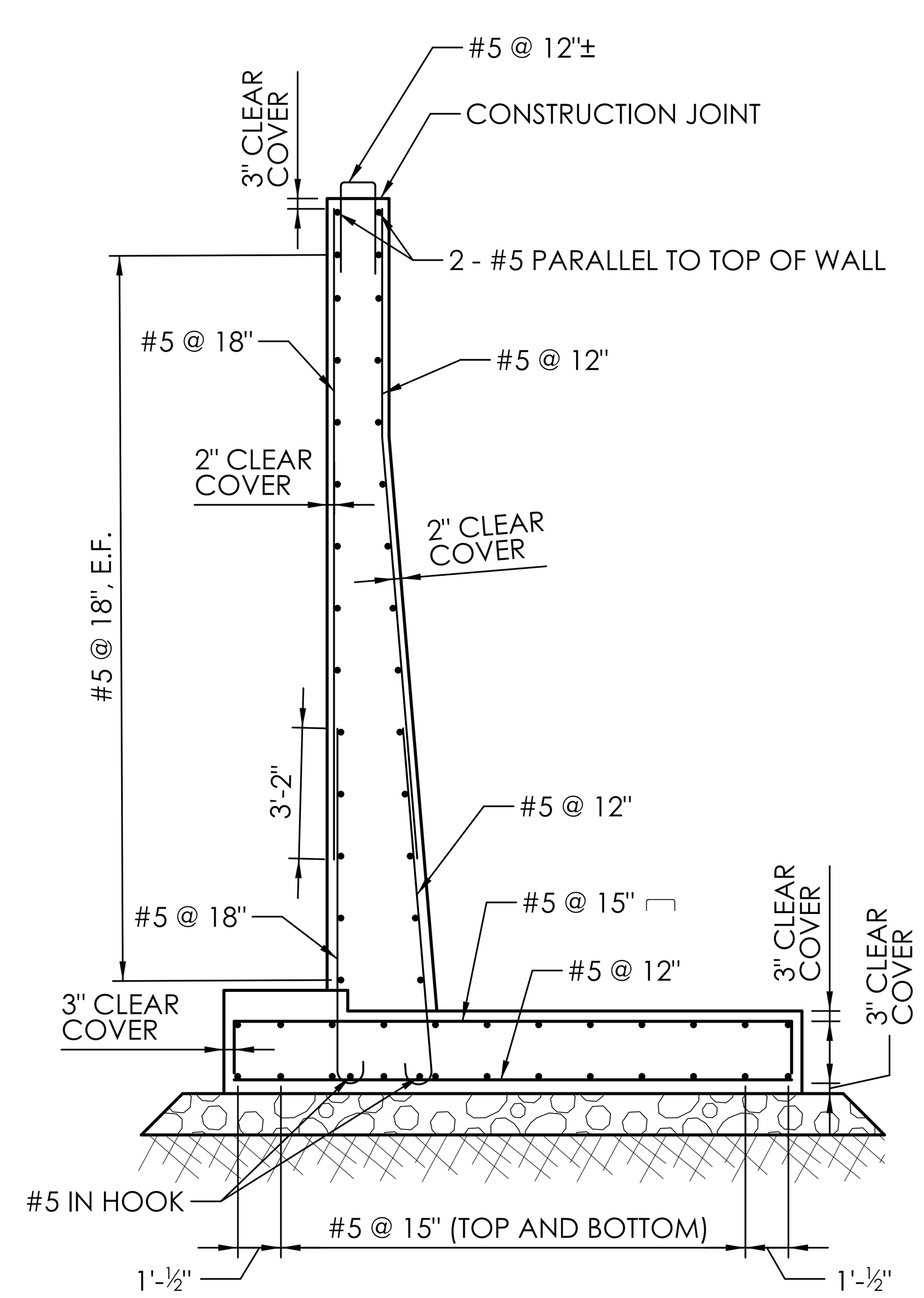
TYPICAL WINGWALL 1B AND 2B SECTION

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



CONCRETE BARRIER WALL (32" HIGH)

SCALE: 1" = 1'-0"



TYPICAL WINGWALL 1B AND 2B REINFORCEMENT

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

WINGWALL NOTES:

1. THE CLEAR COVER FOR THE FOOTINGS IS 3" AND THE CLEAR COVER FOR THE WALL STEMS IS 2".

REV.	DATE	REVISION DESCRIPTION

DESIGNER/DRAFTER: A. RANJAN — CHECKED BY: B. CHAMBERLIN

SCALE AS NOTED

CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 06955; GLEN STREET OVER THE MATTABESSET RIVER

TOWN(S): BERLIN

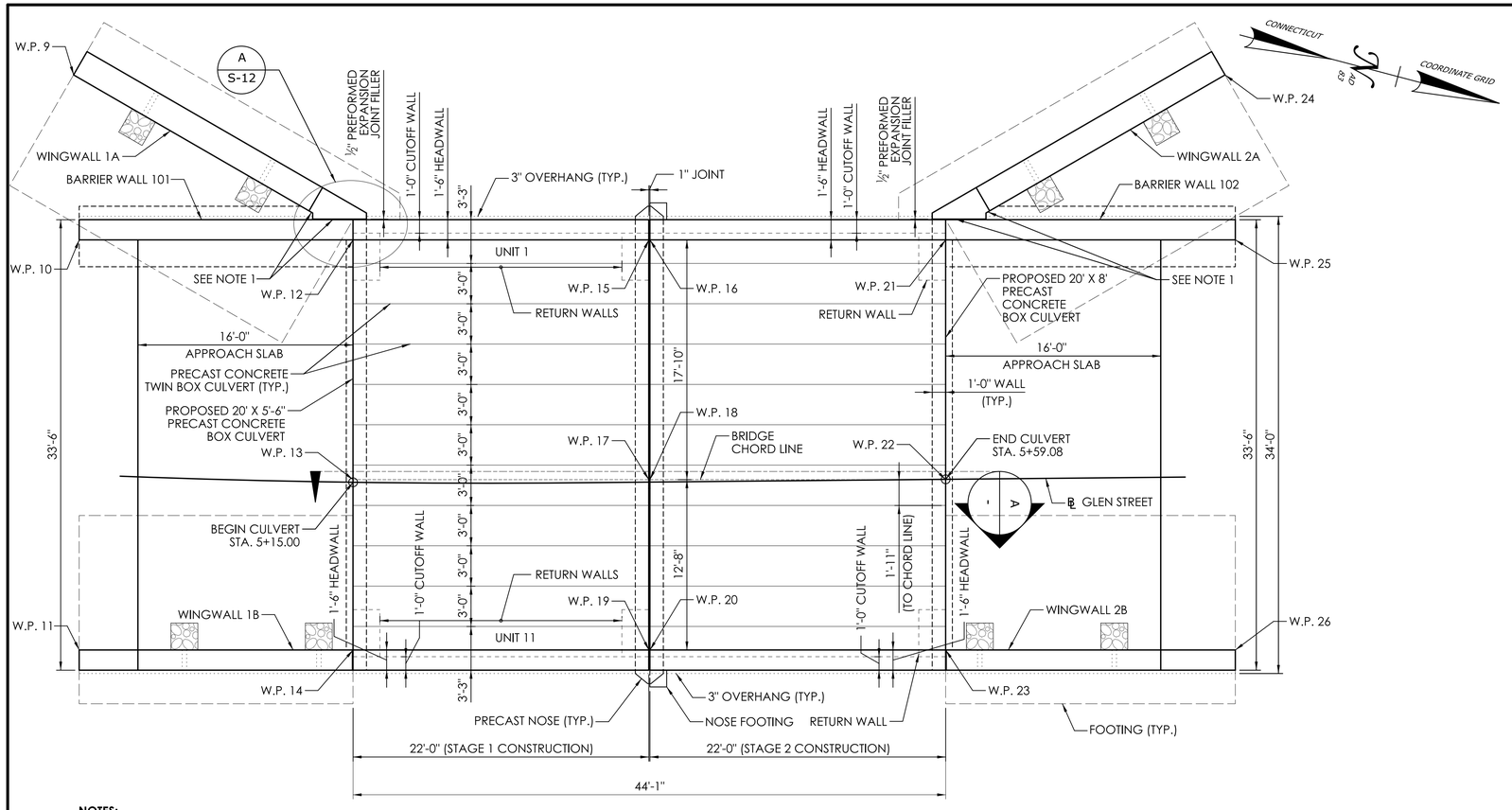
DRAWING TITLE: D/S WINGWALL-PLAN, ELEVATIONS, AND TYPICAL REINFORCEMENT

PROJECT NO.: 0007-0266

DRAWING NO.: S-09

SHEET NO.: 04.09

PLOTTED DATE: 10/13/2025

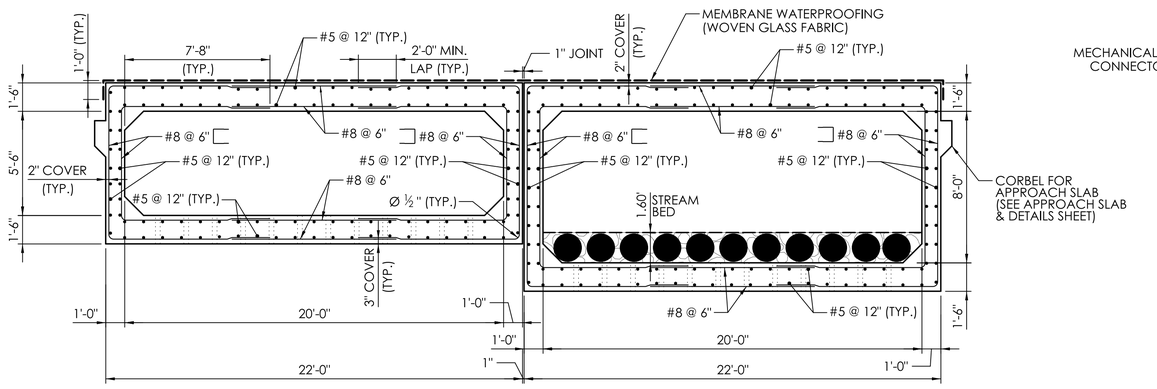


CULVERT PLAN

SCALE: $\frac{3}{16}$" = 1'-0"

NOTES:

1. CAST EDGE OF BARRIER WALL STEM AND FOOTING AGAINST PREVIOUSLY CONSTRUCTED WINGWALL



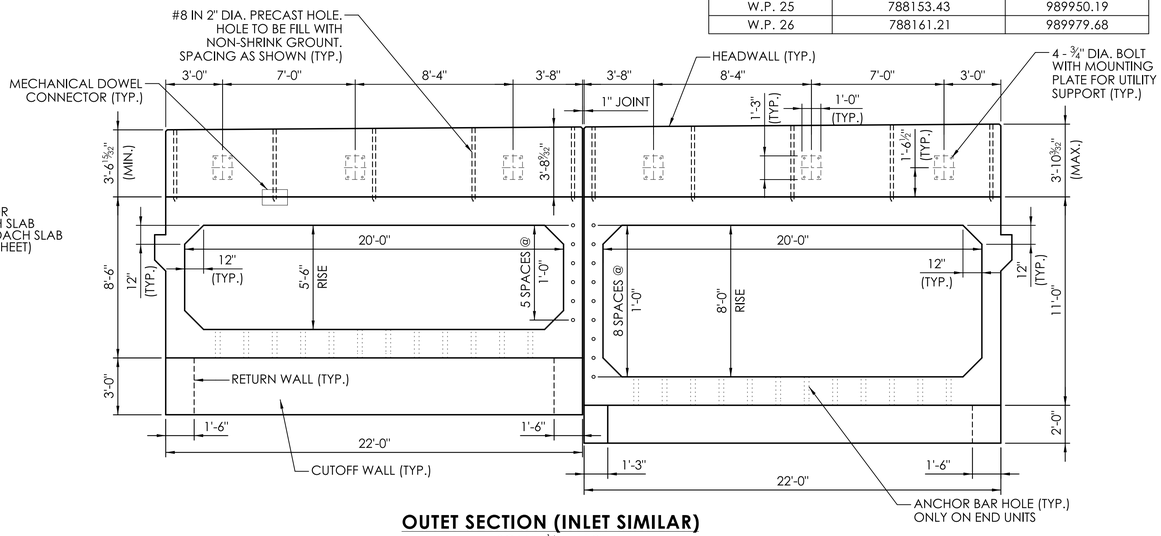
CULVERT GEOMETRY AND REINFORCEMENT

SCALE: ¼" = 1'-0"

MAX DESIGN FOUNDATION PRESSURE:

2.27 KSF STRENGTH I

1.50 KSF SERVICE I



OUTET SECTION (INLET SIMILAR)

SCALE: ¼" = 1'-0"

PRECAST NOTES:

1. PROTECTIVE FENCE (5' HIGH) ON WW1A AND WW2A NOT SHOWN FOR CLARITY.
2. THE CLEAR COVER FOR THE FOOTINGS IS 3" AND THE CLEAR COVER FOR THE WALL STEMS IS 2".
3. THE CONTRACTOR SHALL MANUFACTURE AND CONSTRUCT PRECAST BOX CULVERT IN ACCORDANCE WITH THE SPECIAL PROVISIONS FOR "(A' X B') PRECAST CONCRETE BOX CULVERT" AND THE INSIDE DIMENSIONS, LENGTH AND DETAILS SHOWN ON THESE PLANS.
4. THE CONTRACTOR SHALL MANUFACTURE AND CONSTRUCT PRECAST CONCRETE HEADWALLS, CUTOFF WALL, NOSEWALLS AND RETURN WALLS IN ACCORDANCE WITH THE SPECIAL PROVISION"PRECAST CONCRETE WALLS" AND THE DIMENSIONS, LENGTHS, AND DETAILS SHOWN ON THE PLANS.
5. ALL INSERTS OR HOLES CAST INTO THE CULVERT SECTIONS FOR THE SOLE PURPOSE OF HANDLING AND SETTING THE UNITS SHALL BE GROUTED OVER TO A SMOOTH FINISH UPON COMPLETION OF THE WORK.
6. ADHESIVE ANCHORING MATERIAL SHALL BE USED TO GROUT THE ANCHOR BAR.
7. THE COST OF FURNISHING AND INSTALLING INSERTS SHALL BE INCLUDED IN THE ITEM "PRECAST CONCRETE BOX CULVERT" AND SHALL BE ONE OF THE FOLLOWING:
   a. STAR EXPANSION INDUSTRIES CORP. TYPE P-35-T
   b. RICHMOND SCREW ANCHOR CO.
   c. DAYTON SUPERIOR CORP. TYPE F-57

   ALL INSERTS SHALL HAVE A CORROSIVE RESISTANT COATING.
8. ALL BARS WITH THREADED END SHALL BE COMPATIBLE WITH THE THREADED INSERTS (SEE NOTE 4). THREADS SHALL BE LONG ENOUGH TO FULLY ENGAGE THE INSERTS. THE THREADED BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A615, GRADE 60.
9. ALL REINFORCEMENT TO HAVE 2" COVER UNLESS OTHERWISE NOTED.

WORKING POINT LAYOUT

WORKING POINT	NORTHING	EASTING
W.P. 9	788066.74	989960.36
W.P. 10	788070.27	989972.12
W.P. 11	788078.05	990001.61
W.P. 12	788089.97	989966.93
W.P. 13	788094.52	989984.17
W.P. 14	788097.75	989996.42
W.P. 15	788111.24	989961.32
W.P. 16	788111.32	989961.29
W.P. 17	788115.79	989978.56
W.P. 18	788115.87	989978.54
W.P. 19	788119.02	989990.81
W.P. 20	788119.10	989990.79
W.P. 21	788132.59	989955.68
W.P. 22	788137.14	989972.93
W.P. 23	788140.37	989985.18
W.P. 24	788149.56	989938.52
W.P. 25	788153.43	989950.19
W.P. 26	788161.21	989979.68

REV.	DATE	REVISION DESCRIPTION

SIGNATURE BLOCK: JACOBS, 100 Great Meadow Rd., Suite 707, Wethersfield, CT

DESIGNER/DRAFTER: A. RANJAN CHECKED BY: B. CHAMBERLIN

SCALE AS NOTED

CTDOT CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 06955; GLEN STREET OVER THE MATTABESSET RIVER

TOWN(S): BERLIN

DRAWING TITLE: BOX CULVERT PLAN, GEOMETRY AND REINFORCEMENT DETAILS

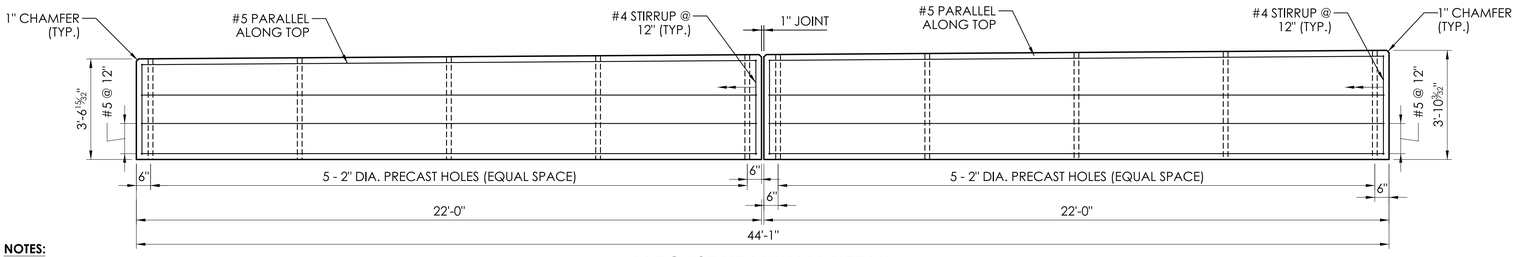
PROJECT NO.: 0007-0266

DRAWING NO.: S-10

SHEET NO.: 04.10

PLOTTED BY: C.GRIFFIN FILE NAME: C:\Users\CGRIFFIN\Jacobs Engineering Group Inc\CTDOT Task Order Bridge Rehabilitation and Replacement Program - 0007-0288 Glen St. - Berlin\700 Working Documents\0007-0288 - Design\Bridge\Contract_Plans\SB_CP_0007_0266_BCDetail.dgn

PLOTTED DATE: 10/13/2025

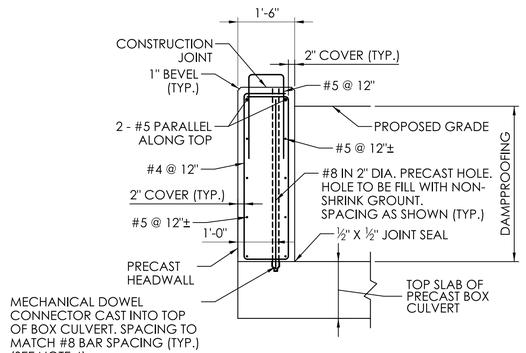


PRECAST HEADWALL DETAIL

SCALE: 3/8" = 1'-0"

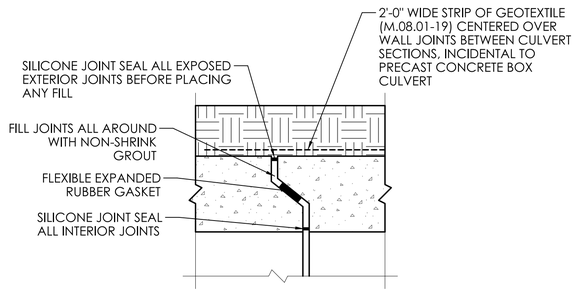
NOTES:

1. WEST ELEVATION SHOWN (EAST ELEVATION SIMILAR OPPOSITE HAND).
2. UTILITY HANGER BRACKETS NOT SHOWN FOR CLARITY, SEE SHEET S-10 FOR DETAILS.



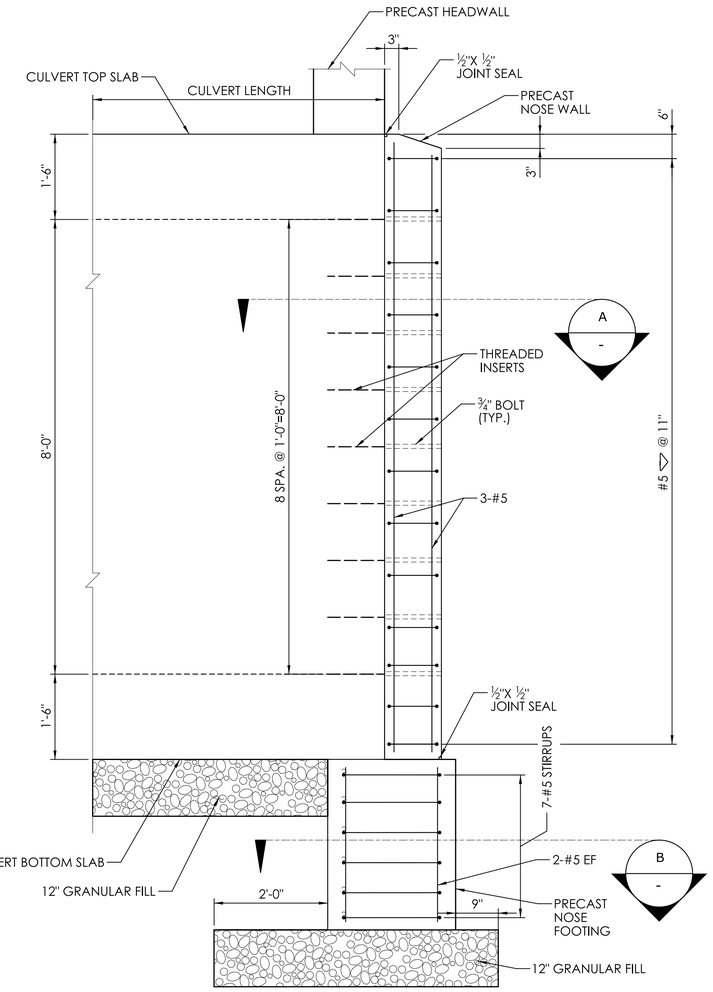
TYPICAL PRECAST HEADWALL DETAIL

SCALE: ½" = 1'-0"
(NOTE: CURB NOT SHOWN FOR CLARITY)



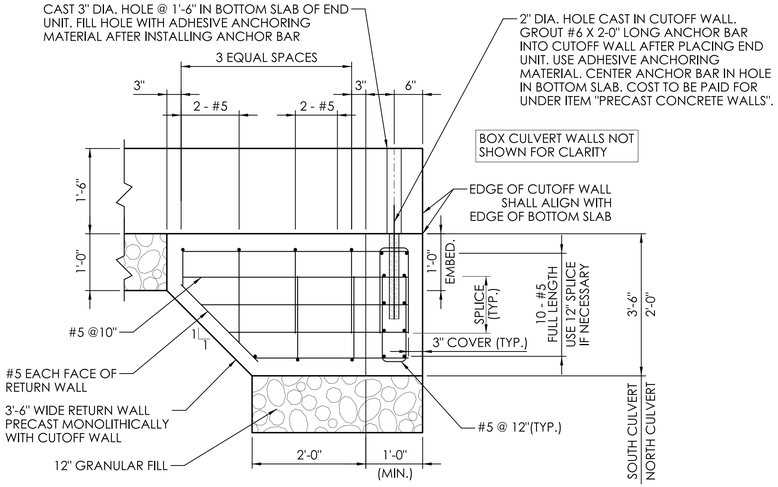
TYPICAL JOINT DETAIL BETWEEN CULVERT SECTIONS

SCALE: 1" = 1'-0"



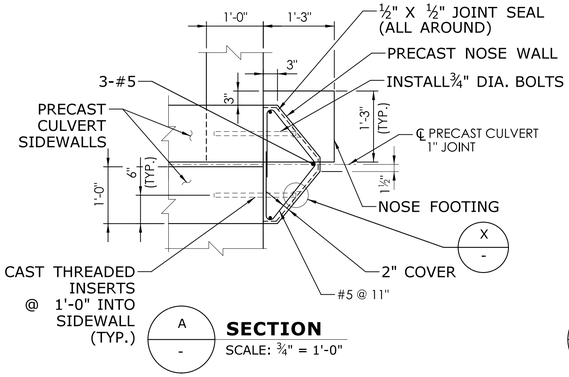
PRECAST NOSE AND FOOTING DETAIL

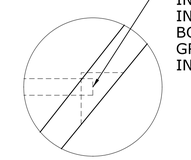
SCALE: ¾" = 1'-0"
(PROPOSED 20' X 8'-0" PRECAST CONCRETE CULVERT SHOWN)
(NOSE AND FOOTING FOR 20' X 5'-6" CULVERT SIMILAR)

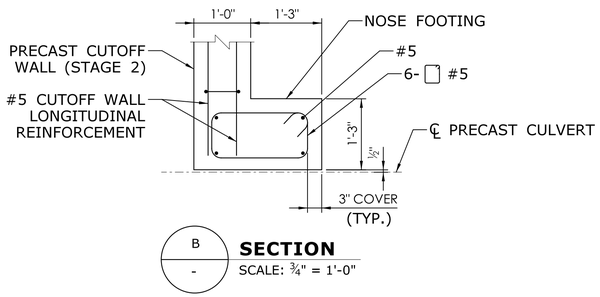


PRECAST CUTOFF AND RETURN WALL DETAIL

SCALE: ¾" = 1'-0"







NOTES:

1. THE NORTH CULVERT CUTOFF / RETURN WALL IN THE S-13 SHEET SHOWS FOR DETAIL GEOMETRY.

REVISION DESCRIPTION | DATE | REV.

SIGNATURE BLOCK: JACOBS 100 Great Meadow Rd., Suite 707 Wethersfield, CT

DESIGNER/DRAFTER: T. CHATTERJEE CHECKED BY: B. CHAMBERLIN

SCALE AS NOTED

CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 06955; GLEN STREET OVER THE MATTABESSET RIVER

TOWN(S): BERLIN

DRAWING TITLE: BOX CULVERT HEADWALL AND DETAILS

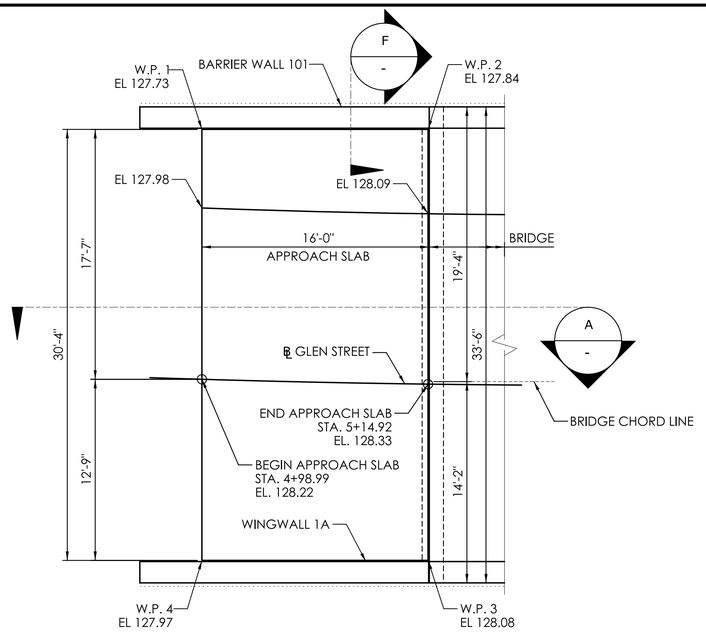
PROJECT NO.: 0007-0266

DRAWING NO.: S-11

SHEET NO.: 04.11

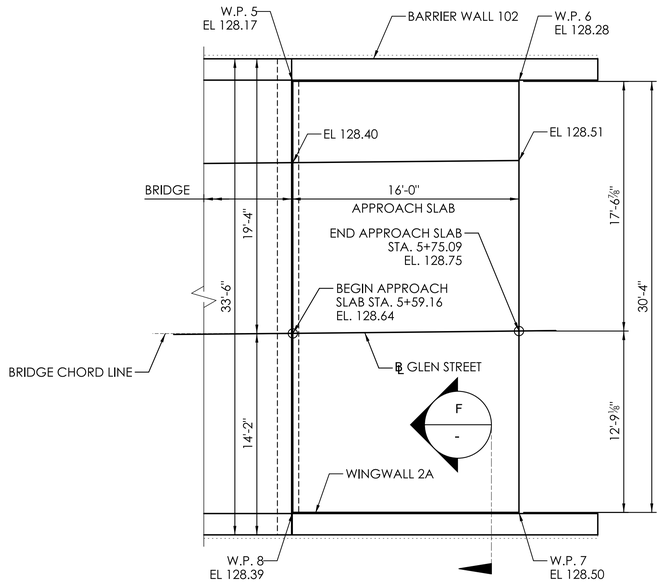
LASTED SAVED BY: TCUS974 **FILE NAME:** C:\Users\TCUS974\JACOBS Engineering Group Inc (CTDOT Task Order Bridge Rehabilitation and Replacement Program - 0007-0288 Glen St. - Berlin)\00 Working Documents\0007-0288 - Design\Bridge\Construct Plans\SB_CP_0007_0266_HWDetail.dgn

PLOTTED DATE: 10/13/2025



BEGIN CULVERT APPROACH SLAB PLAN

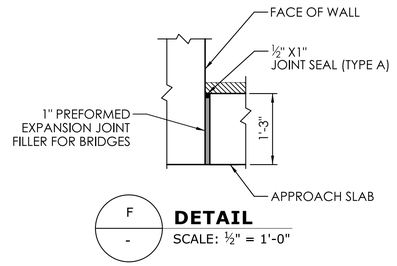
SCALE: 3/16" = 1'-0"



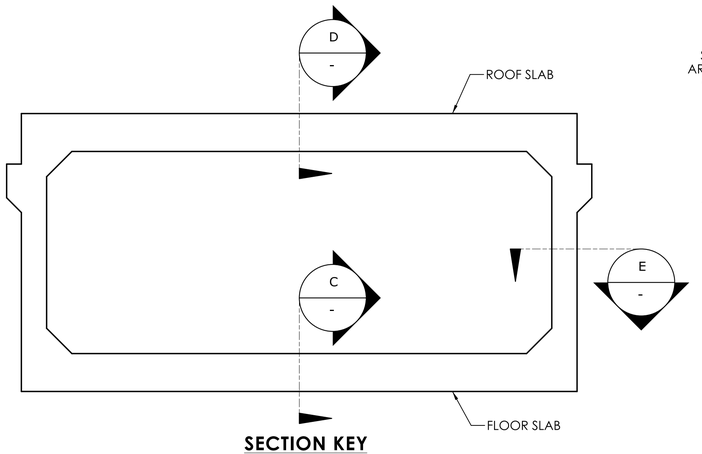
END CULVERT APPROACH SLAB PLAN

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

WORKING POINT LAYOUT - APPROACH SLABS		
WORKING POINT	NORTHING	EASTING
W.P. 1	788074.52	989971.09
W.P. 2	788089.91	989967.03
W.P. 3	788097.65	989996.36
W.P. 4	788082.25	990000.42
W.P. 5	788132.70	989955.74
W.P. 6	788148.09	989951.68
W.P. 7	788155.82	989981.01
W.P. 8	788140.43	989985.07

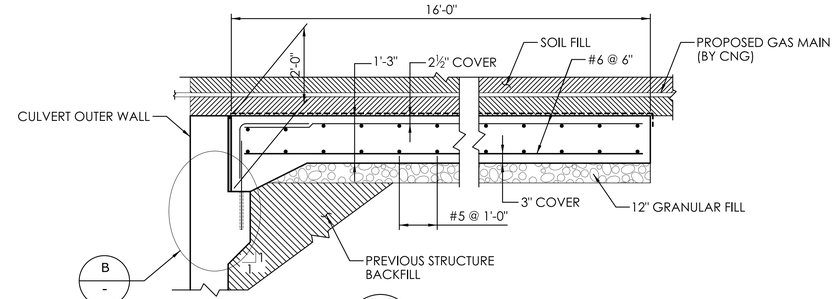


F
-
DETAIL
SCALE: ½" = 1'-0"

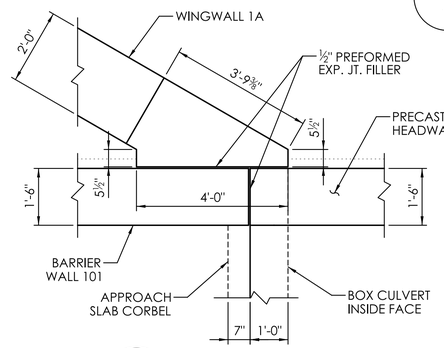


SECTION KEY

SCALE: ⅛" = 1'-0"



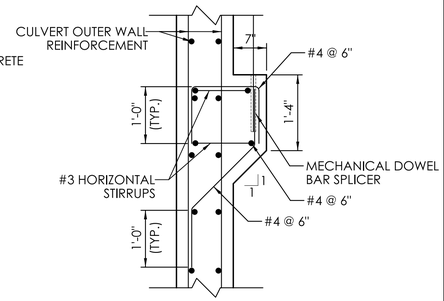
A
-
SECTION
SCALE: ½" = 1'-0"



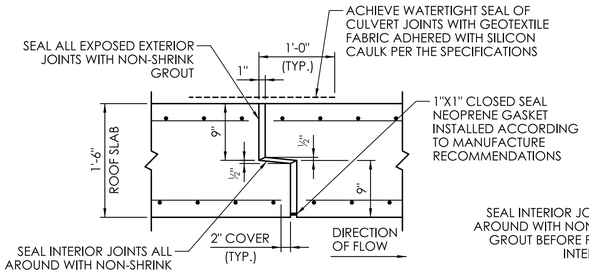
NOTES:

1. WW 1A SHOWN. WW2A SIMILAR, OPPOSITE HAND.

A
S-10
JOINT DETAIL
SCALE: ½" = 1'-0"
(SEE NOTE 1)

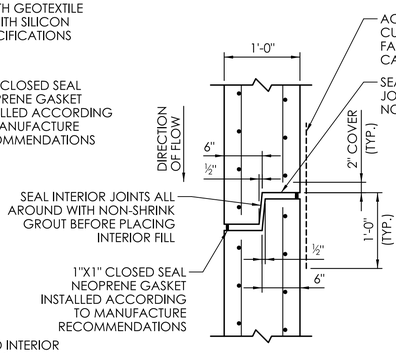


B
-
CORBEL DETAIL
SCALE: ¾" = 1'-0"



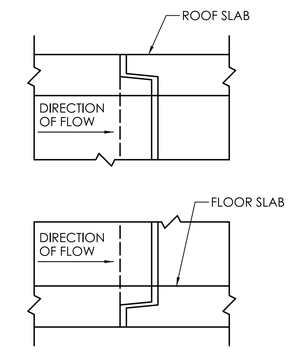
SECTION D-D

SCALE: 1" = 1'-0"



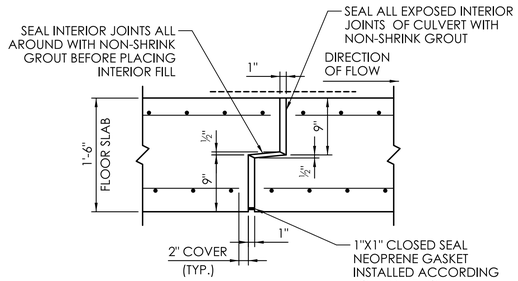
SECTION E-E

SCALE: 1" = 1'-0"



TYPICAL JOINT SCHEMATIC

SCALE: 1" = 1'-0"



SECTION C-C

SCALE: 1" = 1'-0"

REV.	DATE	REVISION DESCRIPTION

SIGNATURE BLOCK: JACOBS, 100 Great Meadow Rd., Suite 707, Wethersfield, CT

DESIGNER/DRAFTER: T. CHATTERJEE CHECKED BY: B. CHAMBERLIN

SCALE AS NOTED

CTDOT — CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: **REPLACEMENT OF BRIDGE NO. 06955; GLEN STREET OVER THE MATTABESSET RIVER**

TOWN(S): **BERLIN**

DRAWING TITLE: **APPROACH SLAB AND DETAILS**

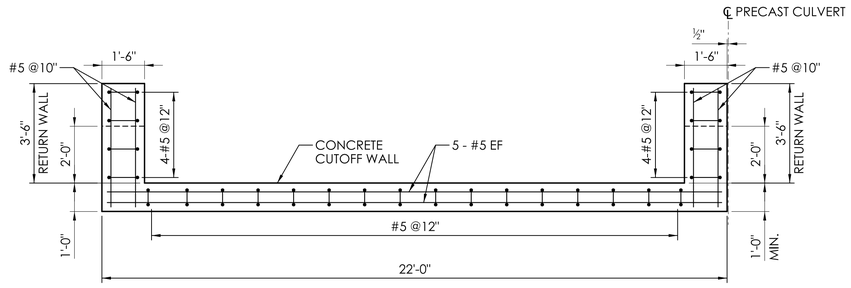
PROJECT NO.: **0007-0266**

DRAWING NO.: **S-12**

SHEET NO.: **04.12**

LAST SAVED BY: TC053974 **FILE NAME:** C:\Users\tc053974\AppData\Local\Temp\Jacobs Engineering Group Inc\CTDOT Task Order Bridge Rehabilitation and Replacement Program - 0007-0266 Glen St. - Berlin\700 Working Documents\0007-0266 - Design\Bridge\Contract_Plans\SB_CP_0007_0266_ASDetail.dgn

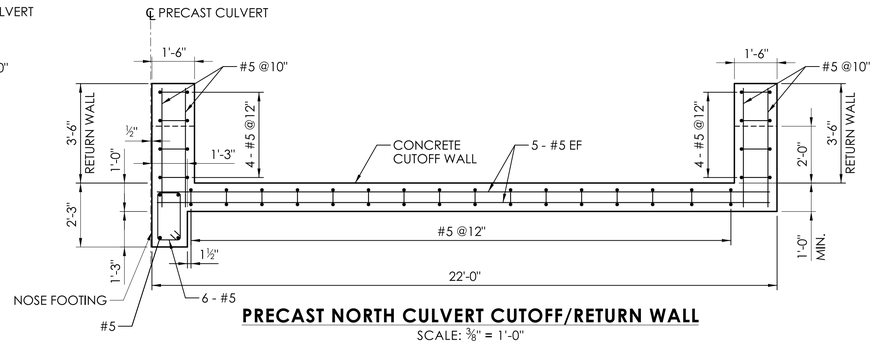
PLOTTED DATE: 10/13/2025



PRECAST SOUTH CULVERT CUTOFF/RETURN WALL

SCALE: 3/8" = 1'-0"

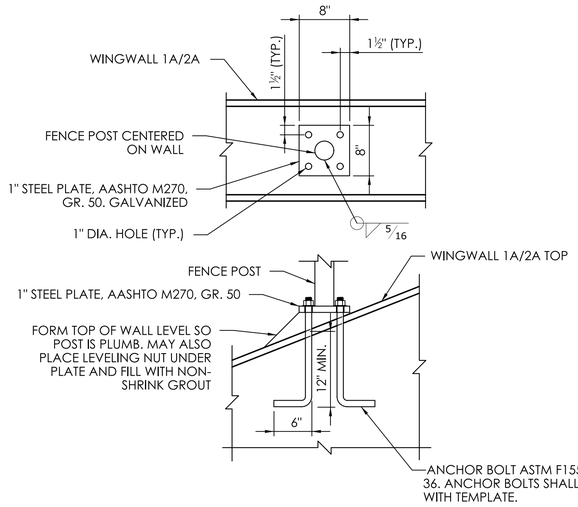
(DOWNSTREAM SHOWN, UPSTREAM SIMILAR)



PRECAST NORTH CULVERT CUTOFF/RETURN WALL

SCALE: 3/8" = 1'-0"

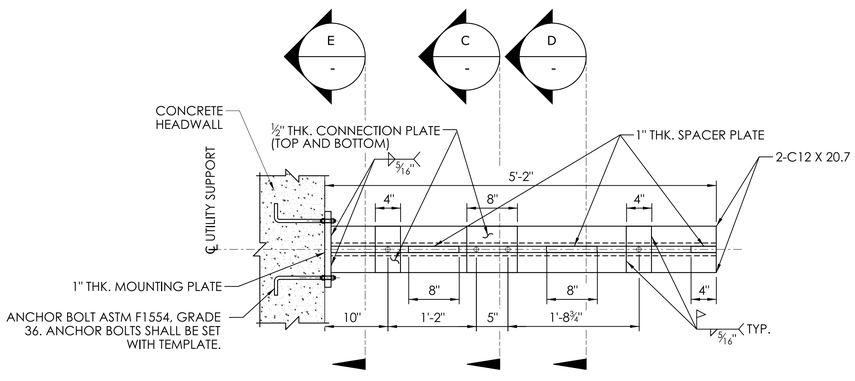
(DOWNSTREAM SHOWN, UPSTREAM SIMILAR)



NOTE:
ALL STEEL AND HARDWARE SHALL BE GALVANIZED.

FENCE PLATE MOUNT DETAIL

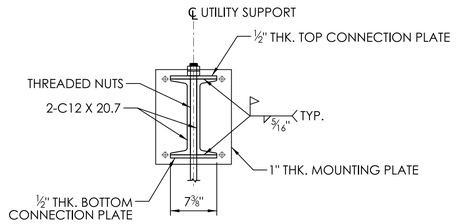
SCALE: 1" = 1'-0"



B
S-05

UTILITY SUPPORT

SCALE: 1" = 1'-0"



C
-

SECTION

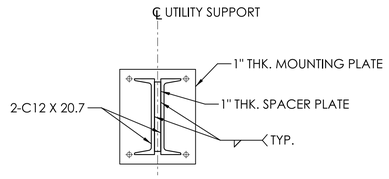
SCALE: 1" = 1'-0"

PROTECTIVE FENCE NOTES:

1. THE CHAIN LINK FABRIC SHALL BE MADE OF POLYVINYL CHLORIDE (PVC) COATED STEEL CHAIN LINK TYPE, CONFORMING TO THE SPECIFICATIONS OF ASTM F668, CLASS 2B. #9 GAGE CORE WIRE SHALL BE GALVANIZED PRIOR TO PVC COATING. IT SHALL HAVE A 2" MESH, KNUCKLED AT BOTH TOP AND BOTTOM.
2. CONTRACTOR SHALL FABRICATE CHAIN LINK FENCE FABRIC TO MEET VARYING SLOPES AND CHAIN LINK FENCE HEIGHT REQUIREMENTS.
3. THE POST AND RAILS SHALL BE STANDARD (SCHEDULE 40) STEEL PIPE AND CONFORMING TO THE REQUIREMENTS OF ASTM A53, TYPE E OR S, GRADE B. THE POST AND RAIL DIAMETERS ARE NOMINAL.
4. STEEL FOR BASE PLATES SHALL CONFORM TO ASTM A709, GRADE 36.
5. ALL BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307, GRADE A. THE WASHERS SHALL BE STANDARD, CIRCULAR PLATE WASHERS CONFORMING TO ASTM A844.
6. THE PRESET ANCHORAGE WIRE STRUTS SHALL CONFORM TO ASTM A510, GRADE 1030. FERRUELS SHALL CONFORM TO ASTM A108, GRADE 12L14.
7. ALL FENCE COMPONENTS, INCLUDING THE POST-BASED ASSEMBLY, RAILS, FITTINGS, AND ANCHORAGES SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123.
8. THE ANCHORAGE ASSEMBLIES SHALL BE INSTALLED FOLLOWING THE GRADE OF TOP OF THE WALLS AS SHOWN ON THE PLANS. THE ANCHORAGES SHALL BE FIRMLY AND ACCURATELY HELD IN POSITION PRIOR TO AND DURING THE PLACING OF CONCRETE.
9. ALL POSTS SHALL BE INSTALLED VERTICALLY (PLUMB). ALL TENSION WIRES SHALL BE INSTALLED PARALLEL TO THE TOP OF THE WALL.
10. THE FABRICATION AND INSTALLATION OF PRETECTIVE FENCE, INCLUDING THE PRESET ANHORAGE, SHALL BE PAID FOR UNDER ITEM "PROTECTIVE FENCE (5' HIGH)".

UTILITY SUPPORT NOTES:

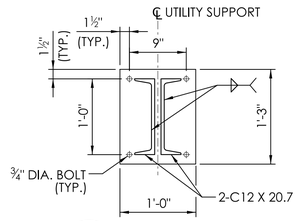
1. THE COST TO FABRICATE AND INSTALL UTILITY SUPPORTS SHALL BE PAID UNDER ITEM "STRUCTURAL STEEL - MISCELLANEOUS".
2. PIPE HANGERS SHALL BE MDC STANDARD DETAILS. THE COST TO PROVIDE WATER PIPE HANGERS SHALL BE PAID UNDER ITEM "8" DUCTILE IRON PIPE (WATER MAIN)." THE COST TO PROVIDE SANITARY SEWER LINE HANGARS SHALL BE PAID UNDER ITEM "16" DUCTILE IRON PIPE (SANITARY SEWER).
3. ALL STEEL SHAPES AND PLATES SHALL BE SHOP METALLIZED IN ACCORDANCE WITH THE SPECIAL PROVISION "METALLIZING STRUCTURAL STEEL (SITE NO. 1)". THE COLOR OF THE TOP COAT MATERIAL ON THE STEEL SHALL CONFORM TO FEDERAL STANDARDNO. 17038 (BLACK).



D
-

SECTION

SCALE: 1" = 1'-0"



E
-

SECTION

SCALE: 1" = 1'-0"

REV.	DATE	REVISION DESCRIPTION

SIGNATURE BLOCK: JACOBS, 100 Great Meadow Rd., Suite 707, Wethersfield, CT

DESIGNER/DRAFTER: A. RANJAN CHECKED BY: B. CHAMBERLIN

SCALE AS NOTED

CTDOT — CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 06955; GLEN STREET OVER MATTABESSET RIVER

TOWN(S): BERLIN

DRAWING TITLE: CONCRETE CUTOFF WALL

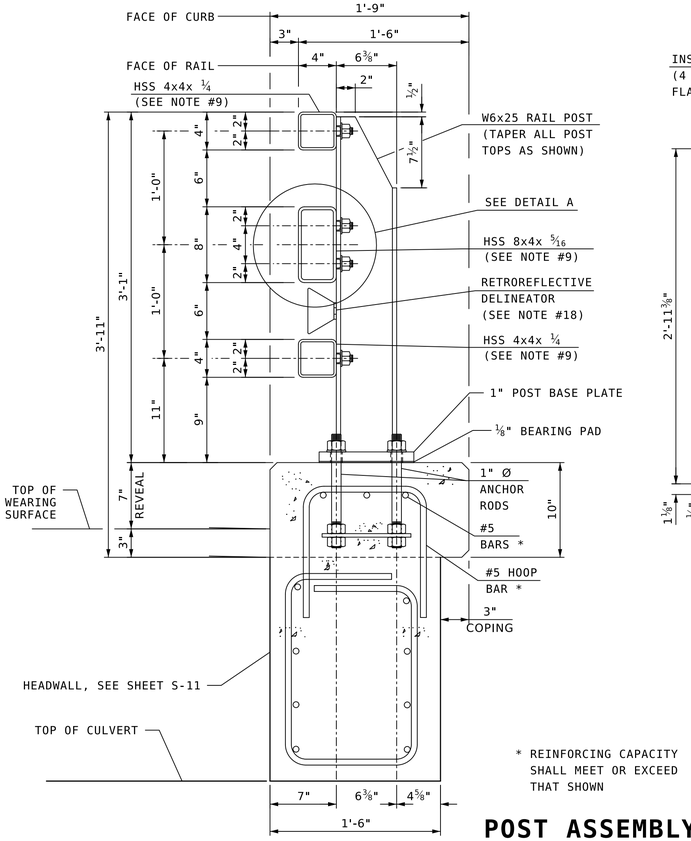
PROJECT NO.: 0007-0266

DRAWING NO.: S-13

SHEET NO.: 04.13

LASTED SAVED BY: TC033974 **FILE NAME:** C:\Users\SMITHC16\Jacobs\CTDOT Task Order Bridge Rehabilitation and Replacement Program - 0007-0266 Glen St. - Berlin\700 Working Documents\0007-0266 - Design\Bridge\Contract_Plans\SB_CP_0007_0266_CutoffWall.dgn

PLOTTED DATE: 10/21/2025

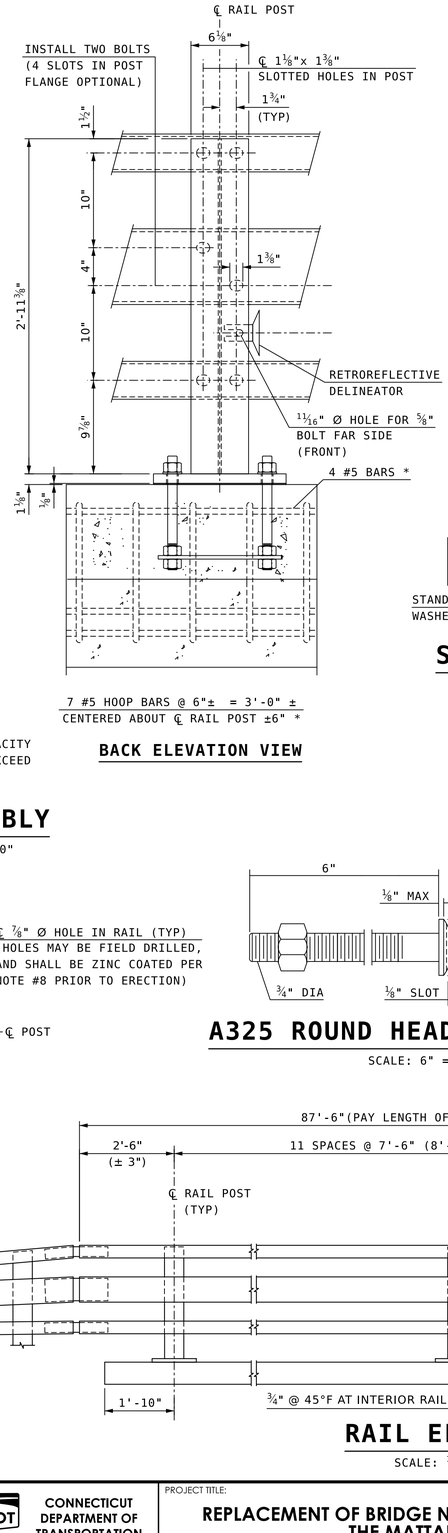


SECTION VIEW

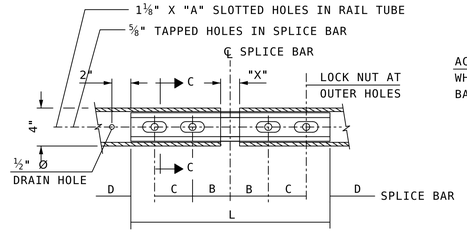
* REINFORCING CAPACITY SHALL MEET OR EXCEED THAT SHOWN

POST ASSEMBLY

SCALE: 1½" = 1'-0"

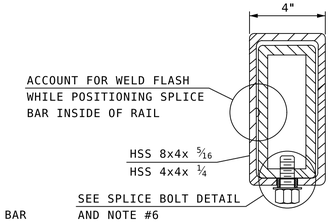


BACK ELEVATION VIEW

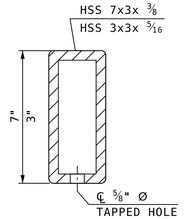


RAIL SPLICE (BOTTOM VIEW)

SCALE: 1½" = 1'-0"



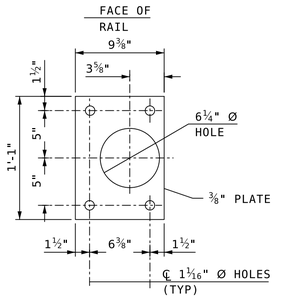
SECTION C-C



SPLICE BAR SECTION

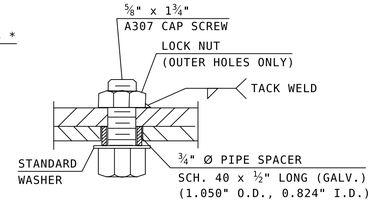
RAIL SPLICE DETAILS

SCALE: 3" = 1'-0"



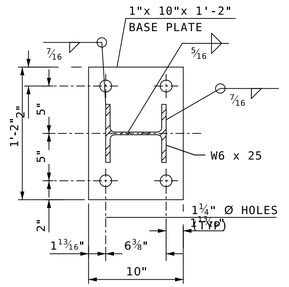
ANCHOR PLATE

SCALE: 1½" = 1'-0"



SPLICE BOLT DETAIL

SCALE: 6" = 1'-0"



POST BASE PLATE

SCALE: 1½" = 1'-0"

METAL BRIDGE RAIL NOTES

1. FOR USE ON ALL INTERSTATE, STATE, AND LOCAL ROADS.
2. MEETS MASH TL-4 BY LS-DNYA SIMULATION: *"DEVELOPMENT OF MASH COMPUTER SIMULATED STEEL BRIDGE RAIL AND TRANSITION DETAILS"* (NETC), APRIL 2020. FIELD PERFORMANCE CRASHWORTHINESS (29 YEARS):*"IN-SERVICE PERFORMANCE EVALUATION OF NETC BRIDGE RAILING"*, JUNE 2022. HAS THE SAME GEOMETRIC'S AS T2 WITH AN ADDED 4-IN TOP RAIL. T2 WAS CRASH TESTED (NETC 1994) AND ACCEPTED AS NCHRP 350 TL-4 (FHWA LETTER: HMHS-B50, MARCH 1999).
3. ITEM NO. 0904990, METAL BRIDGE RAIL , SHALL INCLUDE POSTS, BASE PLATES, ANCHOR PLATES, ANCHOR RODS, PREFORMED PADS, RAIL ASSEMBLY BOLTS, NUTS, WASHERS, STUDS STRUCTURAL TUBING, SPLICE BARS, PIPE SPACERS, ALL APPURTENANCES.
4. BRIDGE RAIL POSTS SHALL BE SET NORMAL (90 DEGREES) TO THE PROFILE GRADE, EXCEPT ON GRADES OVER 5% WHERE POSTS SHALL BE SET VERTICAL.
5. ENDS OF RAIL TUBE SECTIONS SHALL BE SAWED OR MILLED AND SHALL BE TRUE AND SMOOTH. ALL CUT EDGES OF ALL MATERIAL SHALL BE GROUND SMOOTH.
6. EACH PIECE OF RAIL TUBING SHALL BE ATTACHED TO A MINIMUM OF THREE (3) POSTS.
7. BOLT HOLES SHALL BE DRILLED OR PUNCHED. FLAME CUTTING MAY BE USED TO FINISH SLOTTED HOLES IF MECHANICALLY GUIDED.
8. AT INTERIOR SPLICES, PIPE SPACERS SHALL BE USED ON ONLY ONE SIDE OF THE SPLICE TO ALLOW MOVEMENT ON THAT SIDE. AT EXPANSION SPLICES, AND AT AT END SPLICES, PIPE SPACERS SHALL BE USED ON BOTH SIDES OF THE SPLICE TO ALLOW MOVEMENT ON EACH SIDE. ALL RAILS IN A SPLICE SHALL RECEIVE THE SAME TREATMENT.
9. MILL OR SHOP TRANSVERSE WELDS SHALL NOT BE PERMITTED ON ANY RAIL ELEMENT. RAIL ELEMENTS USED ON CURVES SHALL USE ⅜" WALL TUBES AND SHALL BE SHOP FORMED TO THE REQUIRED CURVATURE.
10. NO PUNCHING, DRILLING, CUTTING OR WELDING SHALL BE PERMITTED AFTER METALLIZING, EXCEPT AS ALLOWED IN DETAIL A, AND FOR INSTALLATION OF DELINEATORS. DAMAGED AREAS OF METALLIZING SHALL BE THOROUGHLY CLEANED, PRETREATED, AND PAINTED WITH TWO COATS OF ORGANIC ZINC-RICH REPAIR PAINT, HAVING A MINIMUM 92% ZINC BY WEIGHT, TO A THICKNESS EQUAL TO THE ORIGINAL COATING, ACCORDING TO SECTION 550.2.9.1 AND ASTM A780.
11. NUTS FOR 1" Ø THREADED ANCHOR RODS CONNECTING THE BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL 1/8 TURN.
12. THREADS FOR ANCHOR RODS MAY BE ROLLED OR CUT. IF CUT THREADS ARE USED, BOLT DIAMETER SHALL NOT BE LESS THAN NOMINAL DIAMETER. IF ROLLED THREADS ARE USED, ROD DIAMETER SHALL NOT BE LESS THAN ROOT DIAMETER OF THREADS.

DETAIL A

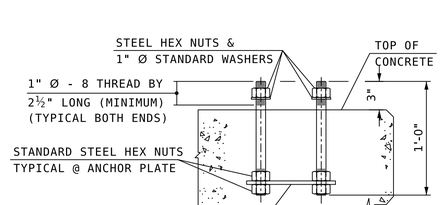
SCALE: 3" = 1'-0"

SECTION A-A

SCALE: 3" = 1'-0"

A325 ROUND HEAD BOLT DETAIL

SCALE: 6" = 1'-0"

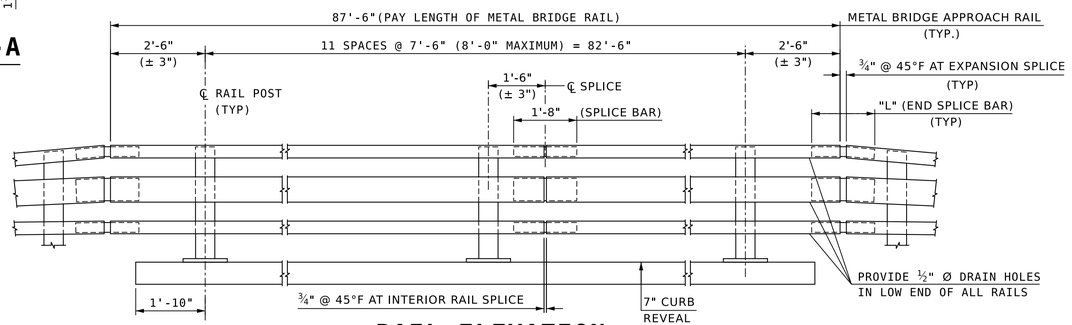


POST ANCHOR ASSEMBLY

SCALE: 1½" = 1'-0"

SPLICE BAR DIMENSION TABLE							
	T	A	B	C	D	X	L
	INTERIOR	2½"	4"	4"	2"	¾"	1'-8"
**	≤ 3¼"	2½"	4"	4"	2"	2"	1'-8"
**	3¼" < T ≤ 5¼"	3½"	5"	5"	2½"	3"	2'-1"

T = TOTAL MOVEMENT OF BRIDGE
** = END SPLICE BAR



RAIL ELEVATION

SCALE: ½" = 1'-0"

MATERIAL NOTES

13. STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500, GRADE B, STRUCTURAL STEEL TUBING. RAIL TUBING SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH REQUIREMENTS OF 15 FT-LBS AT 0°F. FOR ASTM A500, GRADE B, THE TEST SAMPLES SHALL BE TAKEN AFTER FORMING THE TUBES. CHARPY V-NOTCH IS NOT REQUIRED FOR SPLICE TUBES.
14. RAIL POSTS AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A572 GR 50, EXCEPT ANCHOR PLATES MAY BE ASTM A36.
15. DETAIL A BOLTS SHALL BE ASTM A325 OR A449. ALL OTHER BOLTS AND NUTS SHALL CONFORM TO ASTM A307 AND ASTM 563 GRADE A RESPECTIVELY OR BETTER, EXCEPT THAT ASTM A307 NUTS MAY BE USED ON THE BOTTOM OF ANCHOR ASSEMBLY. WASHERS SHALL BE HARDENED STEEL COMMERCIAL TYPE A PLAIN WIDE WASHERS AND SHALL MEET THE DIMENSIONAL REQUIREMENTS OF A.N.S.I. B18.22. ANCHOR RODS SHALL CONFORM TO ASTM A449.
16. ALL STEEL SHAPES, PLATES AND HOLLOW STRUCTURAL SECTIONS SHALL BE SHOP METALLIZED IN ACCORDANCE WITH THE SPECIAL PROVISION "METALLIZING STRUCTURAL STEEL (SITE NO. 1)" THE COLOR OF THE TOP COAT MATERIAL ON THE STEEL SHALL CONFORM TO FEDERAL STANDARD NO. 17038 (BLACK).
17. PREFORMED BEARING PADS (1/8" THICK) SHALL CONFORM TO AASHTO M251.
18. RETROREFLECTIVE DELINEATORS, BOLTS, NUTS, WASHERS AND FIELD DRILLING OF POSTS, INCLUDING METALIZING TOUCH-UP, SHALL BE SUBSIDIARY TO ITEM METAL BRIDGE RAIL.
19. A SILICON SEALANT SHALL BE APPLIED AT RAIL SPLICE LOCATIONS AND TO PREVENT MOISTURE INFILTRATION. SILICON SEALANT SHALL BE PAID FOR UNDER THE ITEM "METAL BRIDGE RAIL".

REV.	DATE	REVISION DESCRIPTION

SIGNATURE BLOCK: JACOBS, 100 Great Meadow Rd, Suite 707, Wethersfield, CT

DESIGNER/DRAFTER: A. RANJAN CHECKED BY: B. CHAMBERLIN

SCALE AS NOTED

CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 06955; GLEN STREET OVER THE MATTABESSET RIVER

TOWN(S): BERLIN

DRAWING TITLE: METAL BRIDGE RAIL DETAILS - 1

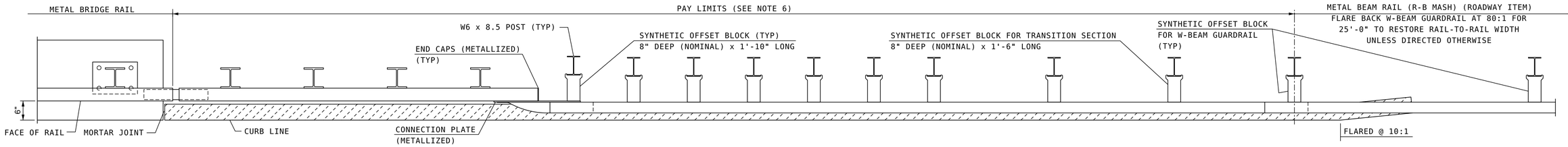
PROJECT NO.: 0007-0266

DRAWING NO.: S-14

SHEET NO.: 04.14

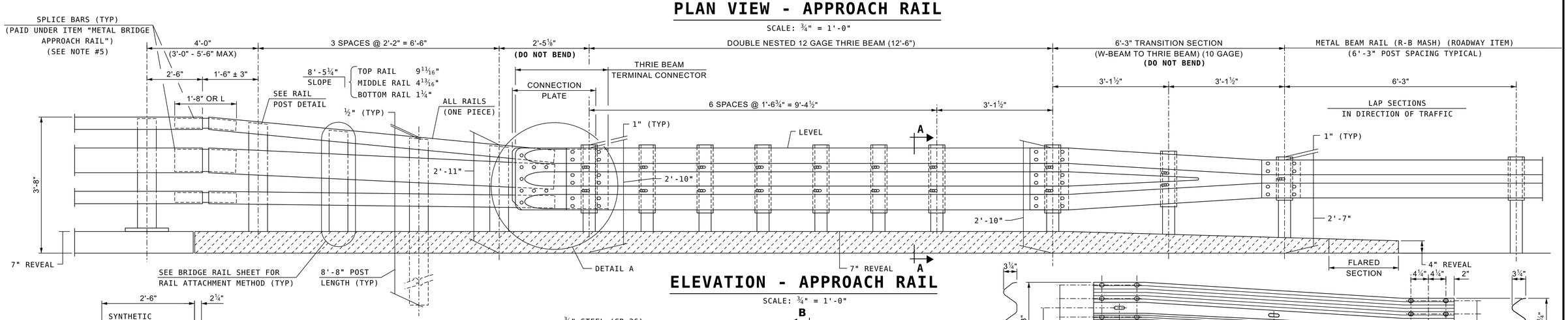
LASTED SAVED BY: TC053974 **FILE NAME:** C:\Users\TC053974\JACOBS Engineering Group Inc (CTDOT Task Order Bridge Rehabilitation and Replacement Program - 0007-0288 Glen St. - Berlin\700 Working Documents\0007-0288 - Design\Bridge\Contract Plans\SB_CP_0007_0266_T3SteelBridge-Rail.dgn

PLOTTED DATE: 10/13/2023



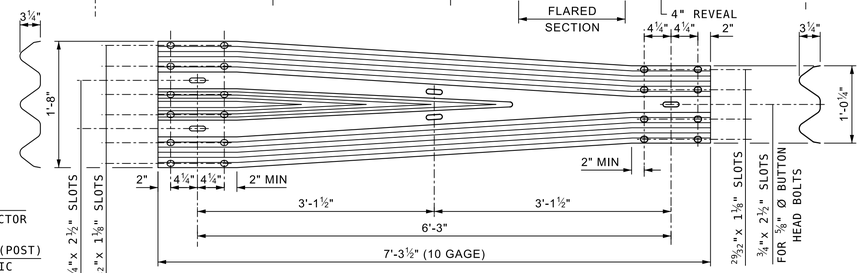
PLAN VIEW - APPROACH RAIL

SCALE: ¾" = 1'-0"



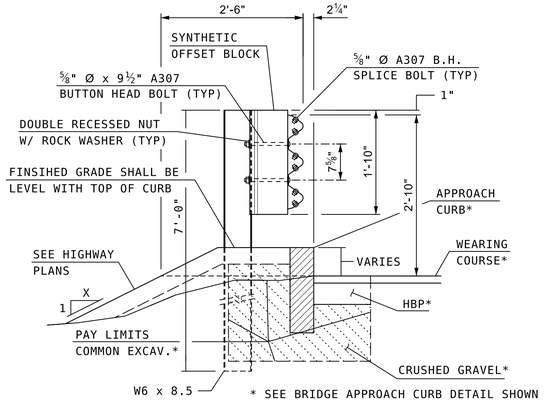
ELEVATION - APPROACH RAIL

SCALE: ¾" = 1'-0"



THRIE-BEAM TO W-BEAM TRANSITION SECTION

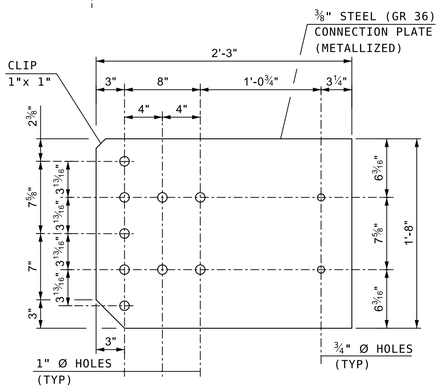
SCALE: 1" = 1'-0"



* SEE BRIDGE APPROACH CURB DETAIL SHOWN ELSEWHERE IN THE CONTRACT PLANS.

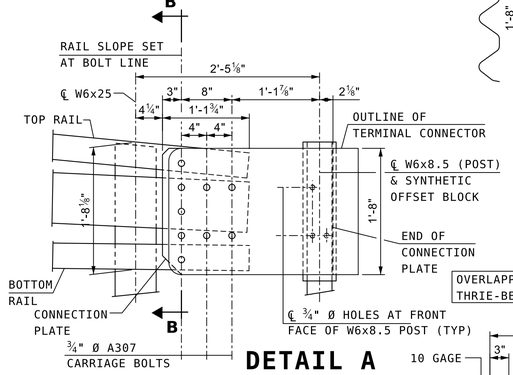
SECTION A-A (POST RAIL ASSEMBLY)

SCALE: ¾" = 1'-0"



CONNECTION PLATE

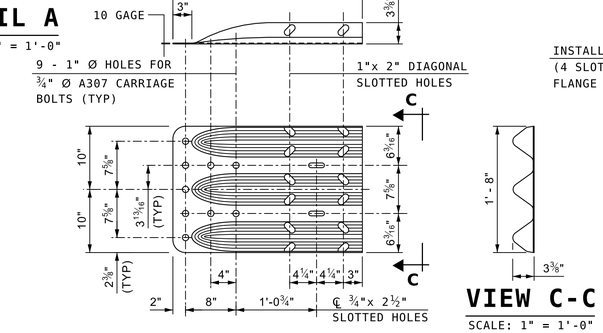
SCALE: 1½" = 1'-0"



DETAIL A

SCALE: 1" = 1'-0"

OVERLAPPING OF DOUBLE NESTED THRIE-BEAM NOT SHOWN FOR CLARITY

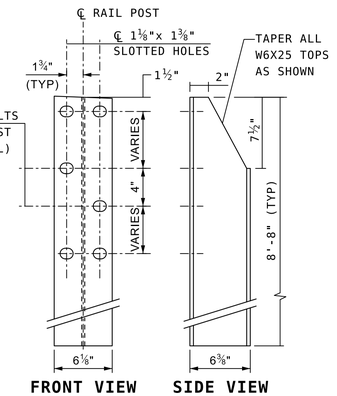


THRIE-BEAM TERMINAL CONNECTOR

SCALE: 1" = 1'-0"

VIEW C-C

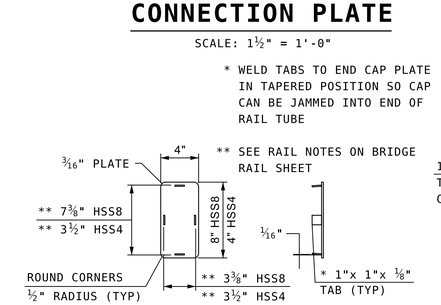
SCALE: 1" = 1'-0"



FRONT VIEW SIDE VIEW

RAIL POST (W6x25)

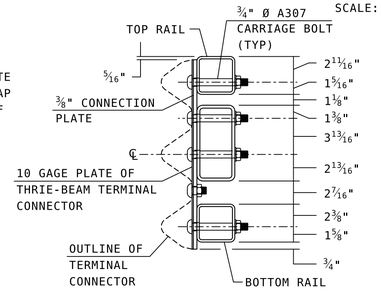
SCALE: 1½" = 1'-0"



* WELD TABS TO END CAP PLATE IN TAPERED POSITION SO CAP CAN BE JAMMED INTO END OF RAIL TUBE

END CAP DETAILS

SCALE: 1½" = 1'-0"



SECTION B-B (CONNECTION PLATE)

SCALE: 1½" = 1'-0"

NOTES:

1. MEETS MASH TL-4 BY LS-DNYA SIMULATION: "DEVELOPMENT OF MAS COMPUTER SIMULATED STEEL BRIDGE RAIL AND TRANSITION DETAILS" (NETC), APRIL 2020. FIELD PERFORMANCE CRASHWORTHINESS (29 YEARS): "IN-SERVICE PERFORMANCE EVALUATION OF NETC BRIDGE RAILING", JUNE 2022. CRASH TESTED (NETC 2005) AND ACCEPTED AS NCHRP 350 TL-4 (FHWA LETTER: HSSD/B-146, JULY 2008).
2. ALL BRIDGE APPROACH RAIL MATERIALS, DIMENSIONS, SIZES, AND NOTES, SHALL BE THE SAME AS THOSE OF THE BRIDGE RAIL, UNLESS OTHERWISE NOTED. SEE BRIDGE RAIL SHEET FOR NOTES AND ADDITIONAL INFORMATION.
3. W6 x 25 POSTS SHALL BE THE SAME MATERIAL AS THE BRIDGE RAIL POSTS. W6 x 8.5 POSTS SHALL BE THE SAME MATERIAL AS THE W-BEAM GUARDRAIL POSTS.
4. CARRIAGE BOLTS SHALL BE ASTM A307, AND NUTS SHALL BE ASTM A563 GRADE A OR BETTER (GALVANIZED).
5. WELD BARS ADUSTED FOR SLOPE & BEND. USE COMPLETE JOINT PENETRATION BUTT WELD.
6. THE COST TO FURNISH AND INSTALL APPROACH RAIL SECTIONS SHALL BE INCLUDED IN ITEM "METAL BRIDGE APPROACH RAIL".

REV.	DATE	REVISION DESCRIPTION

SIGNATURE BLOCK: JACOBS, 100 Great Meadow Rd., Suite 707, Wethersfield, CT

DESIGNER/DRAFTER: A. RANJAN CHECKED BY: B. CHAMBERLIN

SCALE AS NOTED

CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 06955; GLEN STREET OVER MATTABESSET RIVER

TOWN(S): BERLIN

DRAWING TITLE: METAL BRIDGE RAIL DETAILS - 2

PROJECT NO.: 0007-0266

DRAWING NO.: S-15

SHEET NO.: 04.15

LASTED SAVED BY: TCUSSY74 FILE NAME: C:\Users\SMITHC16\DOCUMENTS\CTDOT Task Order Bridge Rehabilitation and Replacement Program - 0007-0266 Glen St. - Berlin (V06 Working Documents 0007-0266 - Design Bridge (Contract_Plans\SB_CP_0007_0266_1StreetBridge\A1-Rail.dgn

PLOTTED DATE: 10/21/2025