04 - STRUCTURE
INDEX OF DRAWINGS

DRAWING NUMBER	DRAWING TITLE	DRAWING NUMBER	DRAWING TITLE
STR-01	INDEX OF STRUCTURE DRAWINGS	STR-19	SINGLE SLOPE PARAPET - DETAILS
STR-02	GENERAL PLAN AND CROSS SECTION	STR-20	SINGLE SLOPE PARAPET - REINFORCEMENT
STR-03	GENERAL NOTES	STR-21	ROCK WEIR DETAILS
STR-04	LAYOUT PLAN	STR-22	EXISTING CONDITIONS AND REMOVAL LIMITS
STR-05	BRIDGE ELEVATIONS	STR-23	SOUND BARRIER DETAILS
STR-06	BORING LOGS - 1	STR-24	TIMBER NOISE BARRIER WALL DETAILS
STR-07	BORING LOGS - 2		
STR-08	BORING LOGS - 3		
STR-09	STAGE 1 PLAN		
STR-10	STAGE 2 PLAN		
STR-11	STAGE 3 PLAN		
STR-12	INLET LAYOUT		
STR-13	OUTLET LAYOUT		
STR-14	WALL DETAILS - 1		
STR-15	WALL DETAILS - 2		
STR-16	BOX CULVERT LAYOUT PLAN		
STR-17	BOX CULVERT DETAILS		
STR-18	CUTOFF WALL AND HEADWALL DETAILS		

DESIGNED BY:
A. DICESARE ASSOCIATES, P.C.

STATE OF CONNECTICUT · ARTHUR A. DICESARE III · 21437 · LICENSED PROFESSIONAL ENGINEER

Arthur DiCesare
2025.08.19
12:51:30-04'00'

REV.	DATE	REVISION DESCRIPTION

SIGNATURE BLOCK:

ADA | A.DiCesare Associates, P.C.
690 Clinton Avenue
Bridgeport, CT 06604
203-696-0444
www.adicesarepc.com

DESIGNER/DRAFTER: JGV CHECKED BY: JVS

CTDOT CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE:
REPLACEMENT OF BRIDGE NO. 05585 - INTERSTATE 91 OVER GRAPE BROOK

TOWN(S):
ENFIELD

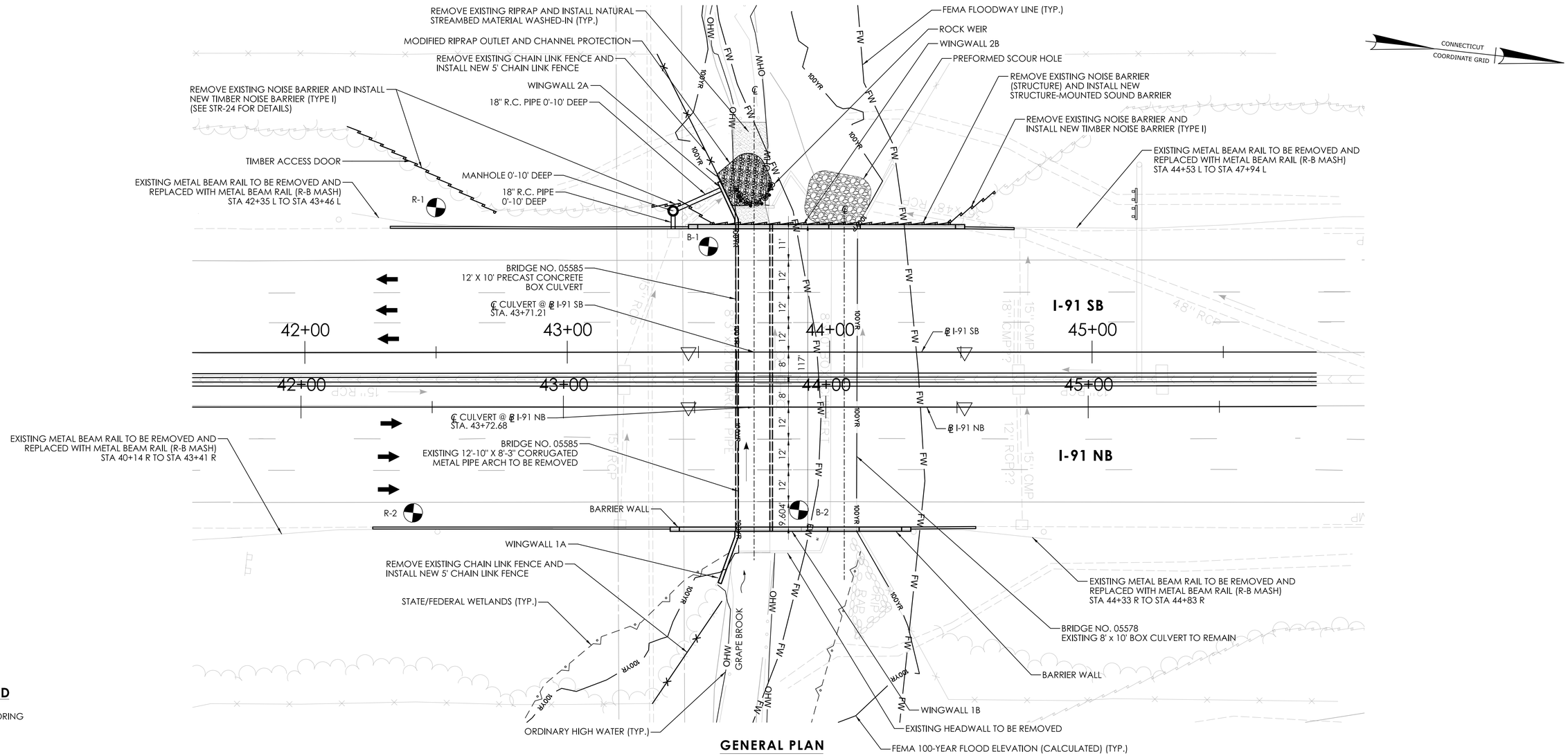
DRAWING TITLE:
INDEX OF STRUCTURE DRAWINGS

PROJECT NO.:
0048-0200

DRAWING NO.:
STR-01

SHEET NO.:
04.01

LASTED SAVED BY: ADA 036 **FILE NAME:** K:\CT_Projects\0048-0200\Bridge\Contract_Plans\HW_CP_0048_0200_STR-01.dgn
PLOTTED DATE: 7/9/2025



LEGEND

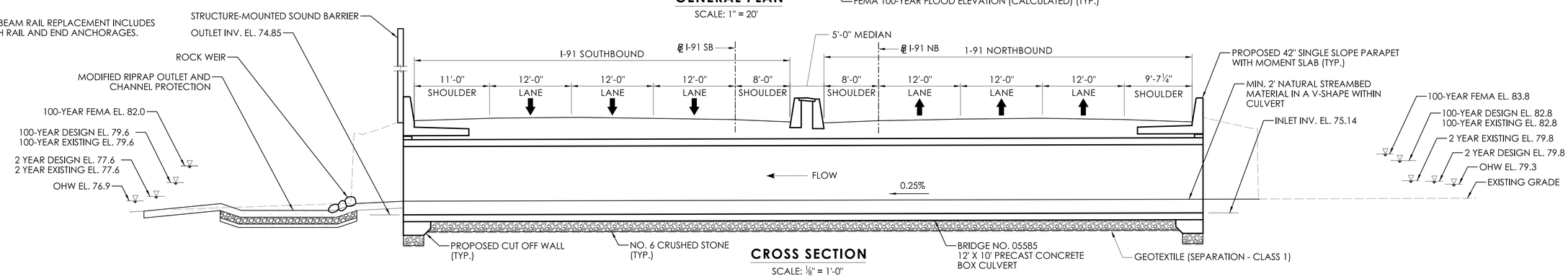
BORING

NOTE:

THE EXTENTS OF THE METAL BEAM RAIL REPLACEMENT INCLUDES RAIL TRANSITIONS, R-B MASH RAIL AND END ANCHORAGES.

GENERAL PLAN

SCALE: 1" = 20'



CROSS SECTION

SCALE: ⅛" = 1'-0"

REV.	DATE	REVISION DESCRIPTION

SIGNATURE BLOCK:

A.DiCesare Associates, P.C.
599 Clinton Avenue
Bridgeport, CT 06604
203-696-0444
www.adicesarepc.com

DESIGNER/DRAFTER: JGV CHECKED BY: JVS

SCALE AS NOTED

CTDOT CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE:
REPLACEMENT OF BRIDGE NO. 05585 - INTERSTATE 91 OVER GRAPE BROOK

TOWN(S):
ENFIELD

DRAWING TITLE:
GENERAL PLAN AND CROSS SECTION

PROJECT NO.: **0048-0200**

DRAWING NO.: **STR-02**

SHEET NO.: 04.02

LASTED SAVED BY: ADA 036 **FILE NAME:** K:\CT_Projects\0048-0200\Bridge\Contract_Plans\HW_CP_0048_0200_STR-02.dgn
PLOTTED DATE: 7/9/2025

GENERAL NOTES:

SPECIFICATIONS: CONNECTICUT DEPARTMENT OF TRANSPORTATION FORM 819 (2024), SUPPLEMENTAL SPECIFICATION DATED JANUARY 2025 AND SPECIAL PROVISIONS.

DESIGN SPECIFICATIONS: AASHTO LRFD BRIDGE DESIGN SPACIFICATIONS, 9TH EDITION 2020, AS SUPPLEMENTED BY THE CONNECTICUT DEPARTMENT OF TRANSPORTATION BRIDGE DESIGN MANUAL (2003), WITH THE LATEST REVISIONS DATED 2/2024.

MATERIAL STRENGTHS:

CONCRETE:

-CLASS PCC03340	f'c = 3,000 PSI
-CLASS PCC04462	f'c = 4,000 PSI
-CLASS PCC05562 (PRECAST CONCRETE)	f'c = 5,000 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, CAST-IN-PLACE COMPONENTS AND SECTION 5.14 - PREFABRICATED CONCRETE STRUCTURAL COMPONENTS, M14.01 - PREFABRICATED CONCRETE MEMBERS, AND NOTICE TO CONTRACTOR - PRECAST/PRESTRESSED PORTLAND CEMENT CONCRETE (PRC) MIX CLASSIFICATIONS FOR PREFABRICATED COMPONENTS.

REINFORCEMENT:

-ASTM A615 GRADE 60	fy = 60,000 PSI

LIVE LOAD: HL-93, LEGAL AND PERMIT VEHICLES

FUTURE PAVING ALLOWANCE: NONE

BITUMINOUS CONCRETE OVERLAY: SHALL CONSIST OF:
4" PMA S0.5 TRAFFIC LEVEL 3 IN 2 LIFTS ON
10" PMA S1.0 TRAFFIC LEVEL 3 IN 2 LIFTS

DIMENSIONS: WHEN ELEVATIONS 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. THEY HAVE BEEN TAKEN FROM 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 ARE SUBMITTED, THE FIELD MEASUREMENTS SHALL ALSO BE SUBMITTED.

UTILITIES: THE LOCATION OF EXISTING UTILITIES ARE NOT GUARANTEED TO BE EXACT, NOR IS IT GUARANTEED THAT ALL UNDERGROUND PIPES, CABLES, CONDUITS OR OTHER UTILITIES ARE SHOWN. THE ACTUAL LOCATION OF UTILITIES SHALL BE DETERMINED BY THE CONTRACTOR. ALL UTILITY COMPANIES SHALL BE NOTIFIED 48 HOURS PRIOR TO ANY WORK AFFECTING PIPE, CABLES, CONDUITS, OR OTHER UTILITIES.

TRAFFIC: ALL WORK SHALL BE DONE IN ACCORDANCE WITH SECTION 1.08 - PROSECUTION AND PROGRESS AND ITEM 0971001A - MAINTENANCE AND PROTECTION OF TRAFFIC.

MASH TEST LEVEL: THE SINGLE SLOPE PARAPET MEETS THE TL-4 CRITERIA FOR MASH 2016.

BRIDGE IDENTIFICATION PLACARDS: THE CONTRACTOR SHALL PROVIDE AND INSTALL NEW BRIDGE IDENTIFICATION SIGNS AT THE LEADING EDGE OF THE CULVERT IN BOTH DIRECTIONS OF I-91. THE SIGNS SHALL BE FABRICATED WITH 40 GAUGE ALUMINUM SHEET METAL. THE SIGNS SHALL BE 4" BY 12" WITH 3" WHITE REFLECTIVE BLOCK LETTERS ON GREEN REFLECTIVE SHEETING. EACH SIGN SHALL READ "05578" AND "05585". THE FINAL LOCATION AND ATTACHMENT METHOD FOR THE SIGNS SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. THE BRIDGE SIGNS SHALL BE PAID FOR UNDER ITEM NO. 1208931A - SIGN FACE SHEET ALUMINUM (TYPE IX RETROREFLECTIVE SHEETING).

CONCRETE NOTES:

EXPOSED EDGES: EXPOSED EDGES OF CONCRETE 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 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 THIS 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.

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

ITEM	BRIDGE COMPONENT	PCC CLASS
FOOTING CONCRETE	WINGWALL FOOTINGS, BARRIER WALL FOOTINGS	PCC03340
ABUTMENT AND WALL CONCRETE	WINGWALL STEMS, HEADWALLS	PCC03340
BARRIER WALL CONCRETE	BARRIER WALL STEMS AND PARAPET, MOMENT SLABS, SINGLE SLOPE PARAPETS	PCC04462

NATIVE STREAMBED MATERIAL NOTES:

NATIVE STREAMBED MATERIAL EXCAVATED DURING THE INSTALLATION OF THE PRECAST CONCRETE BOX CULVERT SHALL BE STOCKPILED AND THEN PLACED AT LOCATIONS AND TO THE DEPTH SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH THE SPECIAL PROVISION "EXCAVATION AND REUSE OF EXISTING CHANNEL BOTTOM MATERIAL".

THE EXISTING EXCAVATED STREAMBED MATERIAL SHALL BE SCREENED TO A 2"-3" MINUS FOR REUSE WITHIN THE CHANNEL. ALL LARGER MATERIAL SHALL BE REMOVED OFF-SITE.

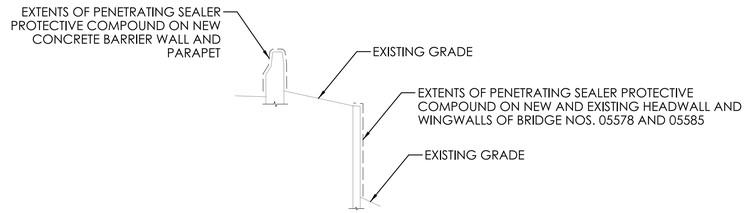
ADDITIONAL STREAMBED MATERIAL, IF REQUIRED, SHALL BE IN ACCORDANCE WITH THE SPECIAL PROVISION "SUPPLEMENTAL STREAMBED CHANNEL MATERIAL".

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

WASHING IN STREAMBED MATERIAL SHALL BE IN ACCORDANCE WITH SPECIAL PROVISION "WASHING-IN SUPPLEMENTAL STREAMBED MATERIAL".

PENETRATING SEALER PROTECTIVE COMPOUND:

PENETRATING SEALER PROTECTIVE COMPOUND SHALL BE APPLIED TO ALL EXPOSED EXISTING CONCRETE SURFACES INCLUDING PARAPETS, BARRIER WALLS, WINGWALLS, AND HEADWALLS OF BOTH THE EXISTING AND NEW BOX CULVERTS. SEE SPECIAL PROVISION.



NOT TO SCALE

ESTIMATED SHIPPING DATA				
MEMBER	SHIPPING HEIGHT	SHIPPING LENGTH	SHIPPING WIDTH	SHIPPING WEIGHT
CULVERT	12'-0"	14'-0"	6'-4"	45,000 LBS

NOTICE TO BRIDGE INSEPCTORS	
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 INSEPCTION 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	STRUCTURE SHEET REFERENCE
NONE	N/A

HYDRAULIC DATA	
DRAINAGE AREA (SQ. MI.)	2.2
DESIGN FREQUENCY (YR)	100
DESIGN DISCHARGE (CFS)	610
AVG. DAILY FLOW ELEV. (CALCULATED) (FT)	78.1
UPSTREAM DESIGN WATER SURFACE ELEV. (FT)	82.8
DOWNSTREAM DESIGN WATER SURFACE ELEV. (FT)	79.6

REV.	DATE	REVISION DESCRIPTION

SIGNATURE BLOCK:

ADA | A.DiCesare Associates, P.C.
690 Clinton Avenue
Bridgeport, CT 06604
203-696-0444
www.adicesarepc.com

DESIGNER/DRAFTER: JGV CHECKED BY: JVS

CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 05585 - INTERSTATE 91 OVER GRAPE BROOK

TOWN(S): ENFIELD

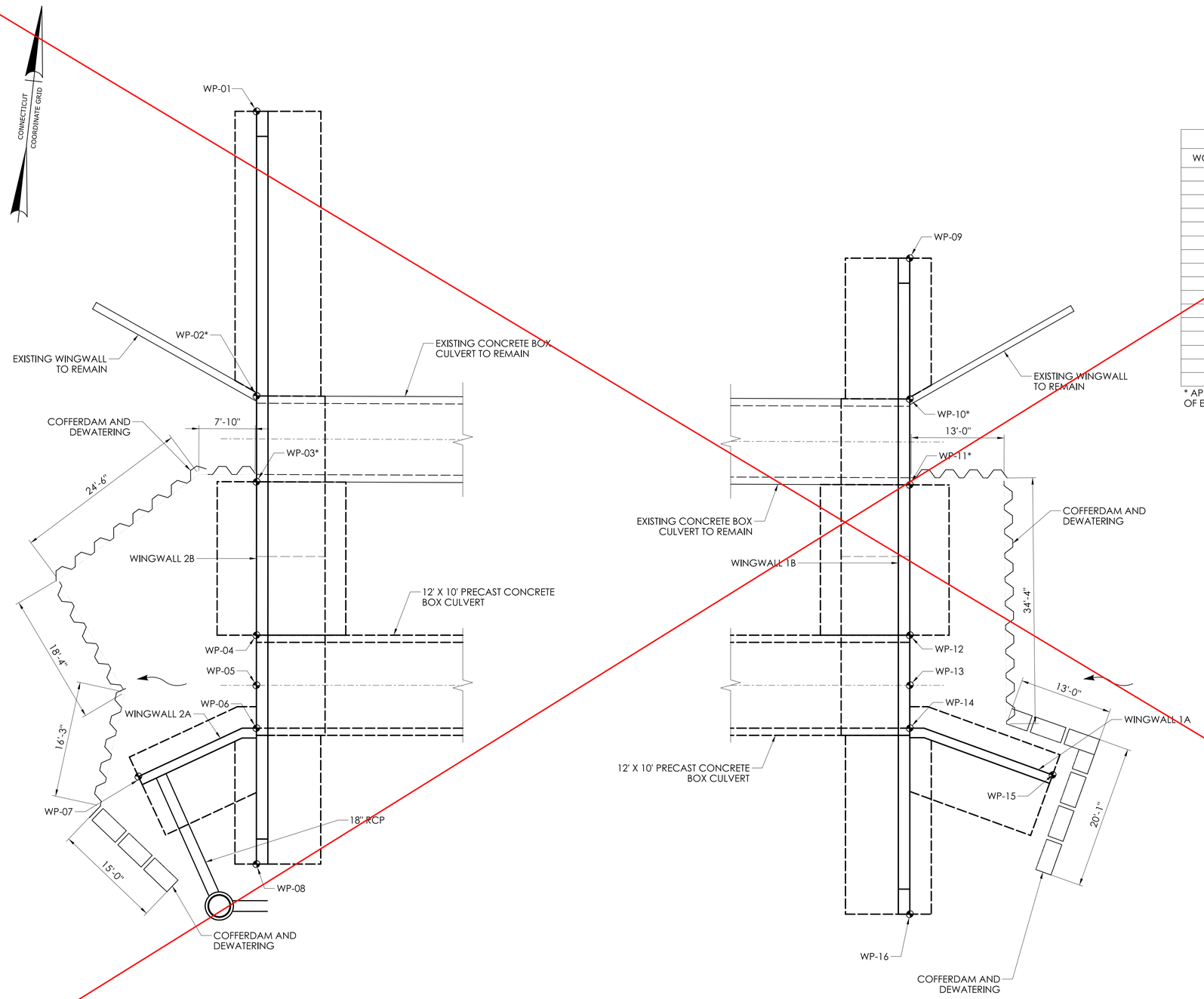
DRAWING TITLE: GENERAL NOTES

PROJECT NO.: 0048-0200

DRAWING NO.: STR-03

SHEET NO.: 04.03

LASTED SAVED BY: ADA 036 **FILE NAME:** K:\CT_Projects\0048-0200\Bridge\Contract_Plans\HW_CP_0048_0200_STR-03.dgn
PLOTTED DATE: 7/9/2025



WORKING POINTS

WORKING POINT	NORTHING	EASTING	DESCRIPTION
WP-01	927702.145	1044651.732	NORTHWEST BARRIER WALL
WP-02*	927662.596	1044656.105	NORTHWEST CORNER - EXISTING CULVERT
WP-03*	927650.668	1044657.424	SOUTHWEST CORNER - EXISTING CULVERT
WP-04	927629.352	1044659.761	BEGIN WINGWALL 2B
WP-05	927622.394	1044660.531	℄ CULVERT WEST END
WP-06	927615.437	1044661.300	BEGIN WINGWALL 2A
WP-07	927607.896	1044645.532	END WINGWALL 2A
WP-08	927597.546	1044663.279	SOUTHWEST BARRIER WALL
WP-09	927694.591	1044770.186	NORTHEAST BARRIER WALL
WP-10*	927675.022	1044772.355	NORTHEAST CORNER - EXISTING CULVERT
WP-11*	927663.095	1044773.677	SOUTHEAST CORNER - EXISTING CULVERT
WP-12	927642.205	1044775.992	BEGIN WINGWALL 1B
WP-13	927635.247	1044776.762	℄ CULVERT EAST END
WP-14	927628.289	1044777.531	BEGIN WINGWALL 1A
WP-15	927624.978	1044797.987	END WINGWALL 1A
WP-16	927603.441	1044780.279	SOUTHEAST BARRIER WALL

* APPROXIMATE NORTHING AND EASTING PROVIDED. WORKING POINTS COINCIDE WITH THE ENDS OF EXISTING BOX CULVERT.

LAYOUT PLAN
SCALE: ⅛" = 1'-0"

NOTE:
THIS SHEET REPLACED BY ADDENDUM NO. 1
DIMENSIONS SHOWN ARE APPROXIMATE INTERIOR CLEAR DIMENSIONS TO COFFERDAM.

REV. | DATE | REVISION DESCRIPTION

SIGNATURE BLOCK:
ADA A.DiCesare Associates, P.C. 690 Clinton Avenue Bridgeport, CT 06604 203-696-0444 www.adicesarepc.com
DESIGNER/DRAFTER: JGV CHECKED BY: JVS

SCALE AS NOTED

CTDOT CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 05585 - INTERSTATE 91 OVER GRAPE BROOK

TOWN(S): ENFIELD

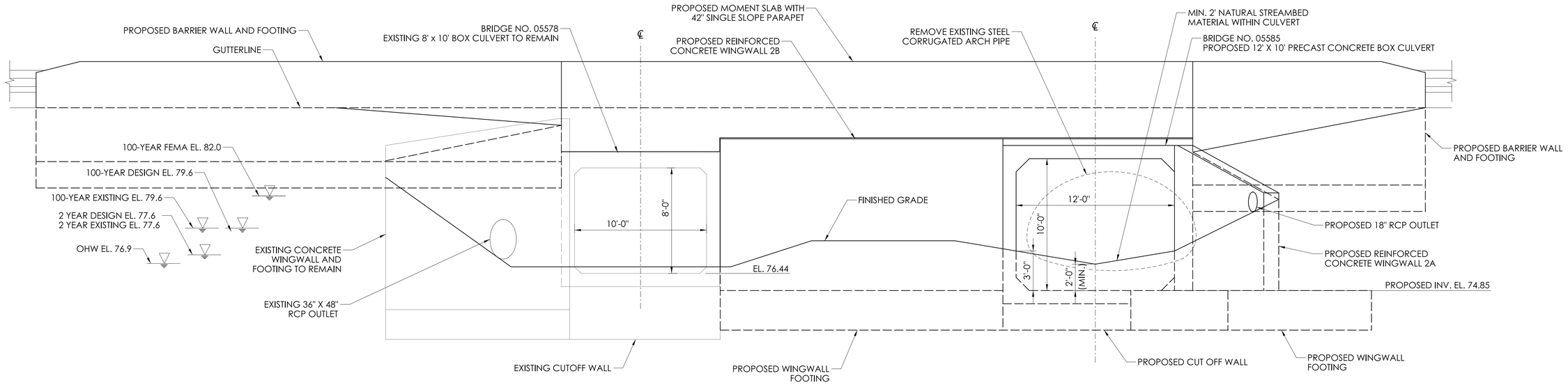
DRAWING TITLE: LAYOUT PLAN

PROJECT NO.: 0048-0200

DRAWING NO.: STR-04

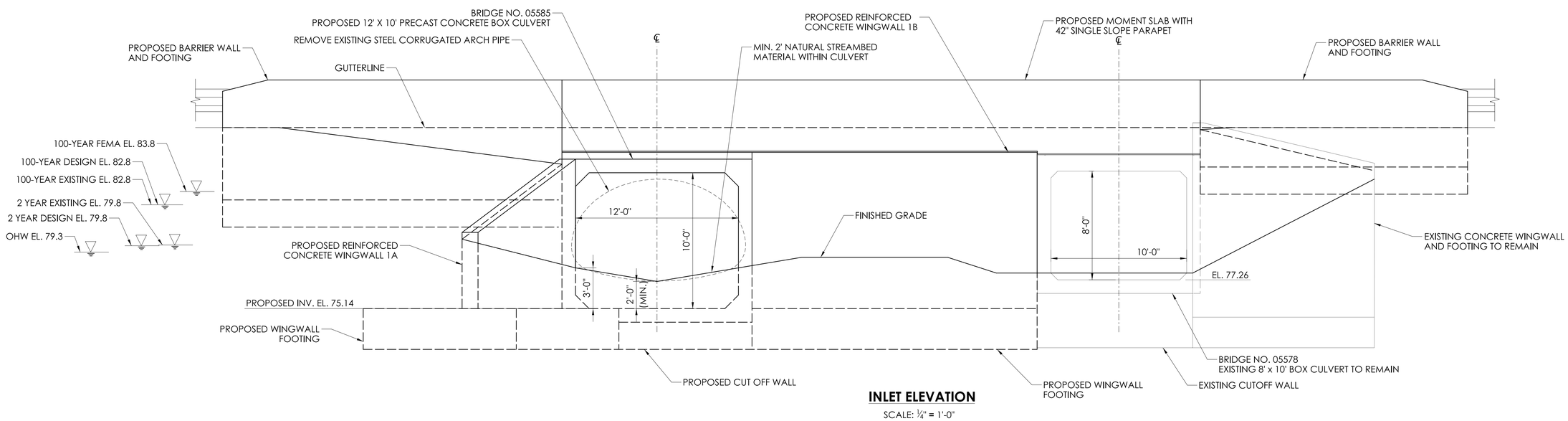
SHEET NO.: 04.04

LASTED SAVED BY: ADA 036 **FILE NAME:** K:\CT_Projects\0048-0200\Bridge\Contract_Plans\HW_CP_0048_0200_LAYOUT PLAN.dgn
PLOTTED DATE: 7/9/2025



OUTLET ELEVATION

SCALE: ¼" = 1'-0"



INLET ELEVATION

SCALE: ¼" = 1'-0"

REV.	DATE	REVISION DESCRIPTION

SIGNATURE BLOCK:

A.DiCesare Associates, P.C.
690 Clinton Avenue
Bridgeport, CT 06604
203-696-0444
www.adicesarepc.com

DESIGNER/DRAFTER: JGV CHECKED BY: JVS

SCALE AS NOTED

CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE:
REPLACEMENT OF BRIDGE NO. 05585 - INTERSTATE 91 OVER GRAPE BROOK

TOWN(S):
ENFIELD

DRAWING TITLE:
BRIDGE ELEVATIONS

PROJECT NO.:
0048-0200

DRAWING NO.:
STR-05

SHEET NO.:
04.05

LASTED SAVED BY: ADA 036 **FILE NAME:** K:\CT_Projects\0048-0200\Bridge\Contract_Plans\HW_CP_0048_0200_STR-04.dgn
PLOTTED DATE: 7/9/2025

Driller: E. Fajardo	**Boring Report**		Hole No.: R-1
Inspector: B. Vargas	Town: Enfield, Connecticut		Sta./Offset: 42+50/55L
Engineer: D. LaMesa	CTDOT Project No.: 0048-0200		Northing: 927501.156
Start Date: 1/8/2025	Bridge No.: 05584		Easting: 1044667.431
Finish Date: 1/8/2025	Interstate I91 over Grape Brook		Surface Elevation: 89.29
Project Description: Replacement of Bridge No. 05585 - I-91 Over Grape Brook			
Casing Size/Type: 4.25" ID HSA	Sampler Type/Size: 1 3/8" ID SS		Core Barrel Type: NA
Hammer Wt. NA Fall: NA	Hammer Wt. 140 Fall: 30in.		
Groundwater Observations: 12'+/- during drilling and 11' +/- in well about 24 hours after installation			

Depth (ft)	SAMPLES: 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	1 2 4 5	24	9		TOPSOIL	Dark brown, C-F SAND, some Silt, little Roots	89
5						MISCELLANEOUS FILL		85
5	S-2	4 3 2 4	24	2			Dark brown, C-F SAND, some Silt, some f Gravel	
10						10'		80
10	S-3	1 2 1 1	24	20		SANDY SILT	Gray, SILT, little F Sand, trace Clay (slight organic odor)	
15						13'		75
15	S-4	5 3 3 3	24	21			Reddish-brown, clayey SILT, trace F Sand	
20						VARVED SILT AND CLAY		70
20	S-5	1 2 2 3	24	24			Gray, clayey SILT, trace F Sand	
25								65
25	S-6	1 2 3 4	24	19			Gray, clayey SILT, trace F Sand	
30						27'		
30							END OF BORING AT 27'	
35								
40								
45								

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: 27'	Rock: 0	NOTES: 1) 2" ID diameter PVC observation well installed at this location down to 25 ft with 10' perforated and 15' riser pipe	Sheet 1 of 1
No. of Soil Samples: 6	No. of Core Runs: 0		

Driller: E. Fajardo	**Boring Report**		Hole No.: R-2
Inspector: B. Vargas	Town: Enfield, Connecticut		Sta./Offset: 42+42/40R
Engineer: D. LaMesa	CTDOT Project No.: 0048-0200		Northing: 927505.254
Start Date: 1/8/2025	Bridge No.: 05584		Easting: 1044784.075
Finish Date: 1/8/2025	Interstate I91 over Grape Brook		Surface Elevation: 89.88
Project Description: Replacement of Bridge No. 05585 - I-91 Over Grape Brook			
Casing Size/Type: 4.25" ID HSA	Sampler Type/Size: 1 3/8" ID SS		Core Barrel Type: NA
Hammer Wt. NA Fall: NA	Hammer Wt. 140 Fall: 30in.		
Groundwater Observations: 12' +/-			

Depth (ft)	SAMPLES: Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0						PAVEMENT STRUCTURE	24" Asphalt/Concrete	89
5	S-1	37 36 28 21	24	12			Reddish-brown, C-F SAND and C-F GRAVEL, little Silt	
5						MISCELLANEOUS FILL		85
5	S-2	5 6 6 4	24	17			Dark grayish-brown, C-F SAND, some Silt	
10						10'		80
10	S-3	1 2 2 4	24	20		SANDY SILT	Grayish-brown, SILT and F SAND, trace Clay (slight organic odor)	
15						14'		75
15	S-4	2 2 2 3	24	18			Reddish-brown, clayey SILT, trace F Sand	
20						VARVED SILT AND CLAY		70
20	S-5	3 5 5 5	24	18			Reddish-brown, SILT, trace Clay, trace F Sand	
25								65
25	S-6	2 4 9 9	24	18			Reddish-brown, SILT, trace Clay, little C-F Sand	
30						27'		
30							END OF BORING AT 27'	
35								
40								
45								

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: 27'	Rock: 0	NOTES:	Sheet 1 of 1
No. of Soil Samples: 6	No. of Core Runs: 0		

REVISION DESCRIPTION | DATE | REV.

SIGNATURE BLOCK:

ADA A.DiCesare Associates, P.C.
690 Clinton Avenue
Bridgeport, CT 06604
203-696-0444
www.adicesarepc.com

DESIGNER/DRAFTER: JGV CHECKED BY: JVS

CTDOT CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: **REPLACEMENT OF BRIDGE NO. 05585 - INTERSTATE 91 OVER GRAPE BROOK**

TOWN(S): **ENFIELD**

DRAWING TITLE: **BORINGS LOGS - 1**

PROJECT NO.: **0048-0200**

DRAWING NO.: **STR-06**

SHEET NO.: 04.06

LASTED SAVED BY: ADA 036 **FILE NAME:** K:\CT_Projects\0048-0200\Bridge\Contract_Plans\HW_CP_0048_0200_BORING LOGS.dgn
PLOTTED DATE: 7/9/2025

Driller:	E. Fajardo	**Boring Report**	Hole No.: B-1
Inspector:	B. Vargas	Town: Enfield, Connecticut	Sta./Offset: 43+54/40L
Engineer:	D. LaMesa	CTDOT Project No.: 0048-0200	Northing: 927605.974
Start Date:	1/8/2025	Bridge No.: 05584	Easting: 1044670.785
Finish Date:	1/10/2025	Interstate I91 over Grape Brook	Surface Elevation: 88.72
Project Description: Replacement of Bridge No. 05585 - I-91 Over Grape Brook			
Casing Size/Type: 3" ID FJ		Sampler Type/Size: 1 3/8" ID SS	Core Barrel Type: NA
Hammer Wt. 300 Fall: 30in.		Hammer Wt. 140 Fall: 30in.	
Groundwater Observations: Refer to Note 2			

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)
						PAVEMENT STRUCTURE	24" Asphalt/Concrete	
	S-1	15 15 13 13	24	18			Reddish-brown, C-F SAND, little C-F Gravel, trace Silt	85
5								
	S-2	8 8 7 7	24	15		MISCELLANEOUS FILL	Brown, C-F SAND, little Silt	
10								80
	S-3	6 9 9 6	24	11			Brown, C-F SAND, little Silt, trace Clay, Strong Petroleum Odor	
15						14'		75
	S-4	3 2 1 2	24	16			Reddish-brown, clayey SILT, trace F Sand	
20								70
	S-5	3 2 3 4	24	13			Reddish-brown, clayey SILT, trace F Sand	
25								65
	S-6	3 2 2 4	24	15			Reddish-brown, clayey SILT, trace F Sand	
30						VARVED SILT AND CLAY		60
	S-7	6 5 7 9	24	1			Reddish-brown, SILT, little C-F Sand	
35								55
	S-8	4 3 7 6	24	11			Reddish-brown, SILT, little C-F Sand	
40								50
	S-9	3 4 5 6	24	16			Gray/reddish-brown, SILT, little F Sand, trace Clay	
45								45

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: 80' Rock: 0		NOTES: 1) 4.25-inch I.D. hollow-stem augers to used to 10 feet and then 3-inch I.D. casing used thereafter.	Sheet 1 of 2
No. of Soil Samples : 17	No. of Core Runs: 0	2) Groundwater measurements could not be obtained due to drive and wash drilling methods. Refer to Test Borings R-1 and R-2 for groundwater measurements.	

Driller:	E. Fajardo	**Boring Report**	Hole No.: B-1
Inspector:	B. Vargas	Town: Enfield, Connecticut	Sta./Offset: 43+54/40L
Engineer:	D. LaMesa	CTDOT Project No.: 0048-0200	Northing: 927605.974
Start Date:	1/8/2025	Bridge No.: 05584	Easting: 1044670.785
Finish Date:	1/10/2025	Interstate I91 over Grape Brook	Surface Elevation: 88.72
Project Description: Replacement of Bridge No. 05585 - I-91 Over Grape Brook			
Casing Size/Type: 3" ID FJ		Sampler Type/Size: 1 3/8" ID SS	Core Barrel Type: NA
Hammer Wt. 300 Fall: 30in.		Hammer Wt. 140 Fall: 30in.	
Groundwater Observations: Refer to Note 2			

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)
	S -10	4 4 4 6	24	19			Gray, SILT, trace F Sand, trace Clay	
50								40
	S -11	5 3 2 4	24	18			Gray, SILT, trace F Sand, trace Clay	
55						VARVED SILT AND CLAY		35
	S-12	3 1 2 2	24	11			Reddish-brown, SILT, trace F Sand, trace Clay	
60								30
	S-13	3 4 5 5	24	3			Reddish-brown, SILT, little C-F Sand, trace Clay	
65						65'		25
	S-14	30 34 41 52	24	15			Reddish-brown, C-F SAND, some Silt, little C-F Gravel	
70								20
	S-15	25 26 30 34	24	19		GLACIAL TILL	Reddish-brown, C-F SAND, some Silt, some C-F Gravel	
75								15
	S-16	50/4"	4	4			Reddish-brown, C-F SAND AND C-F GRAVEL, little Silt	
80						79'		10
	S-17	50/1"	1	1		WEATHERED ROCK	Reddish-bown, ARKOSE fragments	
85							END OF BORING AT 80.1'	
90								

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: 80' Rock: 0		NOTES: 1) 4.25-inch I.D. hollow-stem augers to used to 10 feet and then 3-inch I.D. casing used thereafter.	Sheet 2 of 2
No. of Soil Samples : 17	No. of Core Runs: 0	2) Groundwater measurements could not be obtained due to drive and wash drilling methods. Refer to Test Borings R-1 and R-2 for groundwater measurements.	

REVISION DESCRIPTION | DATE | REV.

SIGNATURE BLOCK:

ADA A.DiCesare Associates, P.C. 690 Clinton Avenue Bridgeport, CT 06604 203-696-0444 www.adicesarepc.com

DESIGNER/DRAFTER: JGV CHECKED BY: JVS

CTDOT CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: **REPLACEMENT OF BRIDGE NO. 05585 - INTERSTATE 91 OVER GRAPE BROOK**

TOWN(S): **ENFIELD**

DRAWING TITLE: **BORINGS LOGS - 2**

PROJECT NO.: **0048-0200**

DRAWING NO.: **STR-07**

SHEET NO.: 04.07

LASTED SAVED BY: ADA 036 **FILE NAME:** K:\CT_Projects\0048-0200\Bridge\Contract_Plans\HW_CP_0048_0200_BORING LOGS.dgn
PLOTTED DATE: 7/9/2025

Driller: E. Fajardo	**Boring Report**		Hole No.: B-2
Inspector: B. Vargas	Town: Enfield, Connecticut		Sta./Offset: 43+90/39R
Engineer: D. LaMesa	CTDOT Project No.: 0048-0200		Northing: 927651.265
Start Date: 1/5/2025	Bridge No.: 05584		Easting: 1044766.868
Finish Date: 1/7/2025	Interstate I91 over Grape Brook		Surface Elevation: 88.35
Project Description: Replacement of Bridge No. 05585 - I-91 Over Grape Brook			
Casing Size/Type: 3" ID FJ	Sampler Type/Size: 1 3/8" ID SS		Core Barrel Type: NX Core Barrel
Hammer Wt. 300 Fall: 30in.	Hammer Wt. 140 Fall: 30in.		
Groundwater Observations: Refer to Note 2			

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)
						PAVEMENT STRUCTURE	24" Asphalt/Concrete	
	S-1	15 10 11 12	24	17		MISCELLANEOUS FILL	Reddish-brown, C-F SAND, some C-F Gravel, some Silt	85
5								
	S-2	8 9 9 10	24	18			Reddish-brown, C-F SAND, some C-F Gravel, some Silt	80
10						10'		
	S-3	1 2 1 4	24	8		SANDY SILT	Dark gray, SILT and F SAND, trace Clay (slight organic odor)	75
15						15'		
	S-4	3 3 3 2	24	7			Reddish-brown, clayey SILT, trace F Sand	70
20								
	S-5	1 2 3 2	24	13			Reddish-brown, clayey SILT, trace F Sand	65
25								
	ST-1		24	0			No Recovery	
	ST-2		24	21			Reddish-brown, Clayey SILT, little C-F Sand	60
30						VARVED SILT AND CLAY		
	S-6	5 7 9 9	24	14			Reddish-brown, SILT, little C-F Sand, trace Clay	55
35								
	S-7	5 3 5 5	24	17			Reddish-brown, SILT, little C-F Sand, trace Clay	50
40								
	S-8	3 5 5 6	24	18			Reddish-brown, SILT, little F Sand, trace Clay	45
45								

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: 87' Rock: 10'		NOTES: 1) 4.25-inch I.D. hollow-stem augers to used to 10 feet and then 3-inch I.D. casing used thereafter.	Sheet 1 of 3
No. of Soil Samples : 19	No. of Core Runs: 2	2) Groundwater measurements could not be obtained due to drive and wash drilling methods. Refer to Test Borings R-1 and R-2 for groundwater measurements.	

Driller: E. Fajardo	**Boring Report**		Hole No.: B-2
Inspector: B. Vargas	Town: Enfield, Connecticut		Sta./Offset: 43+90/39R
Engineer: D. LaMesa	CTDOT Project No.: 0048-0200		Northing: 927651.265
Start Date: 1/5/2025	Bridge No.: 05584		Easting: 1044766.868
Finish Date: 1/7/2025	Interstate I91 over Grape Brook		Surface Elevation: 88.35
Project Description: Replacement of Bridge No. 05585 - I-91 Over Grape Brook			
Casing Size/Type: 3" ID FJ	Sampler Type/Size: 1 3/8" ID SS		Core Barrel Type: NX Core Barrel
Hammer Wt. 300 Fall: 30in.	Hammer Wt. 140 Fall: 30in.		
Groundwater Observations: Refer to Note 2			

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)
	S -9	4 4 4 6	24	24			Gray, clayey SILT, trace F Sand	
50						VARVED SILT AND CLAY		40
	ST-3		24	13			Reddish-brown, SILT, trace F Sand, trace Clay	
55						55'		35
	S-10	6 7 9 10	24	4		SANDY SILT	Reddish-brown, SILT, little C-F Sand, trace M-F Gravel, trace Clay	
60								30
	S-11	7 7 11 12	24	11			Reddish-brown, SILT, some C-F Sand, little C-F Gravel, trace Clay	
65								25
	S-12	4 6 10 10	24	24			Reddish-brown, SILT and C-F Sand, little M-F Gravel, trace Clay	
70						70'		20
	S-13	29 33 30 28	24	15		GLACIAL TILL	Reddish-brown, C-F SAND, some Silt, some C-F Gravel	
75								15
	S-14	49 50 52 50/4"	22	22			Reddish-brown, C-F SAND AND C-F GRAVEL, some Silt	
80								10
	S-15	50 50/4"	10	10			Reddish-brown, C-F SAND, some Silt, some C-F Gravel	
85						84'		5
	S-16	50/1"	1	1		WEATHERED ROCK	Very dense, reddish-brown, ARKOSE fragments	
						87'		
	C-1			97%	59%	BEDROCK	Arkose, red-brown, fine grained, laminated, highly to moderately fractured, slightly weathered, weak to medium strong	0
90								

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: 87' Rock: 10'		NOTES: 1) 4.25-inch I.D. hollow-stem augers to used to 10 feet and then 3-inch I.D. casing used thereafter.	Sheet 2 of 3
No. of Soil Samples : 19	No. of Core Runs: 2	2) Groundwater measurements could not be obtained due to drive and wash drilling methods. Refer to Test Borings R-1 and R-2 for groundwater measurements.	

Driller: E. Fajardo	**Boring Report**		Hole No.: B-2
Inspector: B. Vargas	Town: Enfield, Connecticut		Sta./Offset: 43+90/39R
Engineer: D. LaMesa	CTDOT Project No.: 0048-0200		Northing: 927651.265
Start Date: 1/5/2025	Bridge No.: 05584		Easting: 1044766.868
Finish Date: 1/7/2025	Interstate I91 over Grape Brook		Surface Elevation: 88.35
Project Description: Replacement of Bridge No. 05585 - I-91 Over Grape Brook			
Casing Size/Type: 3" ID FJ	Sampler Type/Size: 1 3/8" ID SS		Core Barrel Type: NX Core Barrel
Hammer Wt. 300 Fall: 30in.	Hammer Wt. 140 Fall: 30in.		
Groundwater Observations: Refer to Note 2			

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)
	C-1							
95	C-2			100%	75%	BEDROCK	Arkose, red-brown, fine to medium grained, laminated, highly to moderately fractured, slightly weathered, weak to medium strong	-5
						97'		
100							END OF BORING AT 97'	

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: 87' Rock: 10'		NOTES: 1) 4.25-inch I.D. hollow-stem augers to used to 10 feet and then 3-inch I.D. casing used thereafter.	Sheet 3 of 3
No. of Soil Samples : 19	No. of Core Runs: 2	2) Groundwater measurements could not be obtained due to drive and wash drilling methods. Refer to Test Borings R-1 and R-2 for groundwater measurements.	

REVISION DESCRIPTION | DATE | REV.

SIGNATURE BLOCK:
ADA A.DiCesare Associates, P.C. 690 Clinton Avenue Bridgeport, CT 06604 203-696-0444 www.adicesarepc.com
DESIGNER/DRAFTER: JGV CHECKED BY: JVS

CTDOT CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 05585 - INTERSTATE 91 OVER GRAPE BROOK

TOWN(S): ENFIELD

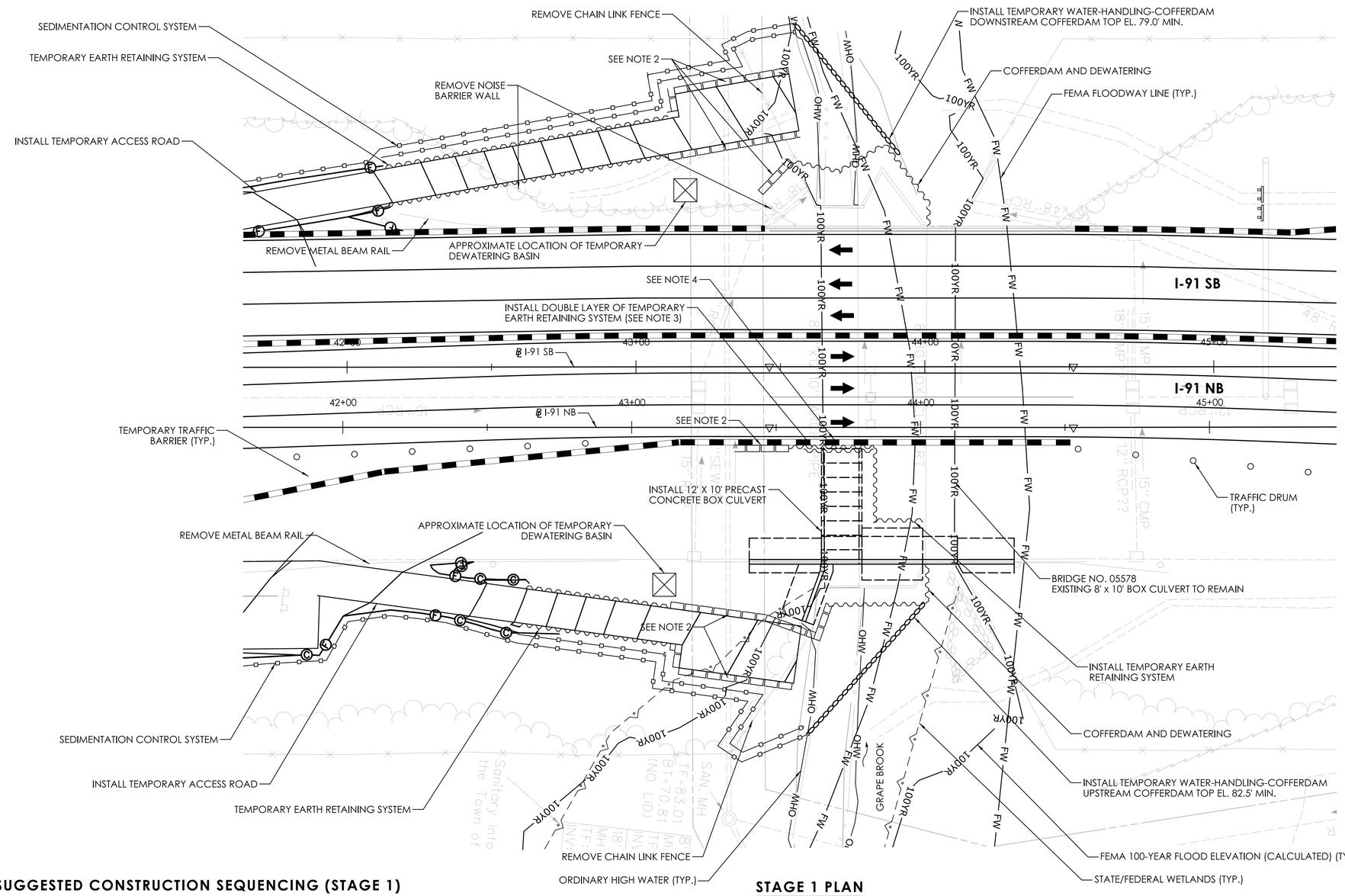
DRAWING TITLE: BORINGS LOGS - 3

PROJECT NO.: 0048-0200

DRAWING NO.: STR-08

SHEET NO.: 04.08

LASTED SAVED BY: ADA 036 **FILE NAME:** K:\CT_Projects\0048-0200\Bridge\Contract_Plans\HW_CP_0048_0200_BORING LOGS.dgn
PLOTTED DATE: 7/9/2025



STAGE 1 PLAN

SUGGESTED CONSTRUCTION SEQUENCING (STAGE 1)

1. CLEAR AND GRUB AND INSTALL SEDIMENTATION CONTROL SYSTEM.
2. CONSTRUCT TEMPORARY ACCESS ROADS.
3. INSTALL TEMPORARY WATER-HANDLING-COFFERDAM AND COFFERDAM AND DEWATERING TO REDIRECT BROOK THROUGH EXISTING 8' X 10' BOX CULVERT.
4. SHIFT TRAFFIC LANES, INSTALL TEMPORARY EARTH RETAINING SYSTEMS AT APPROACHES, EXCAVATE, AND REMOVE HEADWALL, WINGWALL AND EXISTING CULVERT, STAGE 1 SECTION.
5. INSTALL PROPOSED 12' X 10' PRECAST CONCRETE BOX CULVERT, STAGE 1 SECTION.
6. INSTALL WINGWALLS, BARRIERS WALL, MOMENT SLABS, AND PARAPETS FOR STAGE 1.
7. BACKFILL AND RECONSTRUCT ROADWAY, STAGE 1 SECTION.

TEMPORARY HYDRAULIC DATA	
AVERAGE DAILY FLOW (CFS)	4.1
AVERAGE SPRING FLOW (CFS)	7.9
TEMPORARY DESIGN FREQUENCY	2-YEAR STORM
2-YEAR FREQUENCY DISCHARGE (CFS)	140
LOW FLOW PUMPING TEMPORARY DESIGN DISCHARGE = ASF (CFS)	7.9
GRAVITY FLOW BYPAS PIPE TEMPORARY DESIGN DISCHARGE = 2-YEAR FREQUENCY (CFS)	140
2-YEAR WATER SURFACE ELEVATION UPSTREAM (FT)	81.9
2-YEAR WATER SURFACE ELEVATION DOWNSTREAM (FT)	77.6

WATER HANDLING NOTES:

THE CONTRACTOR SHALL MAINTAIN WATER THROUGH THE TEMPORARY WATER HANDLING SYSTEM AS REQUIRED DURING CONSTRUCTION OF THE NEW STRUCTURE.

A DEWATERING BASIN SHALL BE ESTABLISHED OUTSIDE OF THE WETLAND LIMITS.

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.
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.

WATER HANDLING MEASURES SHALL NOT EXCEED IMPACT AREAS SHOWN ON PERMITS.

ANY STORM DRAINAGE DISCHARGING INTO A CONFINED WORK AREA FROM EXISTING OR PROPOSED STORM DRAINAGE PIPES SHALL BE DIVERTED OR PUMPED OUTSIDE THE CONFINED AREAS. PUMPS SHALL BE SIZED BY THE CONTRACTOR TO HANDLE THE EXPECTED FLOWS AND BE DISCHARGED TO A STABLE LOCATION. THE CONTRACTOR SHALL SUBMIT THE MEANS AND METHODS OF HANDLING STORM DRAINAGE TO THE ENGINEER FOR APPROVAL AND IS INCLUDED UNDER ITEM NO. 0204151A - HANDLING WATER.

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.
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 MINIMZES NEGATIVE IMPACTS AND SAFELY CONVEYS LARGER FLOWS THROUGH THE WORK AREA.

UNCONFINED IN-STREAM WORK BMP NOTE:

ANY UNCONFINED IN-STREAM WORK WITHIN THE WATERCOURSE SHALL BE RESTRICTED TO THE PERIOD FROM JUNE 1 TO SEPTEMBER 30, INCLUSIVE. UNLESS OTHERWISE INCLUDED AS A SPECIAL PROVISION OF THE LICENSE, THE CONDITION SHALL APPLY TO THE PROJECTS IN NON-COASTAL WATERS.

THE DEPARTMENT WILL REVIEW AND MAY APPROVE THE METHODS OF UNCONFINED IN-WATER WORK WITH CONSIDERATION OF THE FOLLOWING:
- PROPOSED SCHEDULE FOR WORK OPERATIONS
- ALL UNCONFINED IN-WATER WORK SHALL BE MINOR IN NATURE
- DISTURBANCE SHALL BE LIMITED TO AREAS THAT HAVE BEEN APPROVED FOR TEMPORARY AND PERMANENT IMPACTS
- BEST MANAGEMENT PRACTICE SHALL BE UTILIZED WHEREVER POSSIBLE TO MINIMIZE TURBIDITY/SEDIMENT TRANSPORT DOWNSTREAM
- DISTURBED AREAS AND THE DURATION OF DISTURBANCE SHALL BE MINIMIZED TO THE EXTENT POSSIBLE
- IN-STREAM WORK SHALL BE DONE DURING PERIODS OF LOW FLOW.

NOTES:

1. SEE SPECIAL PROVISIONS ARTICLE 1.08.04 - PROSECUTION AND PROGRESS - LIMITATIONS OF OPERATIONS AND ITEM NO. 0971001A - MAINTENANCE AND PROTECTION OF TRAFFIC FOR TRAFFIC CONTROL PLANS AND ADDITIONAL REQUIREMENTS.
2. THE CONTRACTOR IS REPONSIBLE FOR VERIFYING THE LOCATION OF THE 18" RCP SANITARY SEWER MAIN. SHEET PILING SHALL NOT BE USED IN THE VICINITY OF THE SANITARY SEWER MAIN. ALTERNATIVE METHODS OF TEMPORARY EARTH RETAINING SYSTEM USED IN THESE LOCATIONS SHALL NOT IMPACT THE SANITARY SEWER MAIN.
3. CONTRACTOR SHALL COORDINATE THE LOCATION OF THE DOUBLE LAYER OF TEMPORARY EARTH RETAINING SYSTEM WITH BOX CULVERT INSTALLATION AND CONSTRUCTION STAGING.
4. TOP OF TEMPORARY EARTH RETAINING SYSTEM SHALL BE BELOW THE BOTTOM OF TEMPORARY TRAFFIC BARRIER (PINNED) TO ALLOW DEFLECTION OF THE BARRIER.

REV. | DATE | REVISION DESCRIPTION

SIGNATURE BLOCK:
A.DiCesare Associates, P.C.
550 Clinton Avenue
Bridgeport, CT 06604
203-696-0444
www.adicesarepc.com
DESIGNER/DRAFTER: JGV CHECKED BY: JVS

HORIZONTAL SCALE 1" = 20'

CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 05585 - INTERSTATE 91 OVER GRAPE BROOK

TOWN(S): ENFIELD

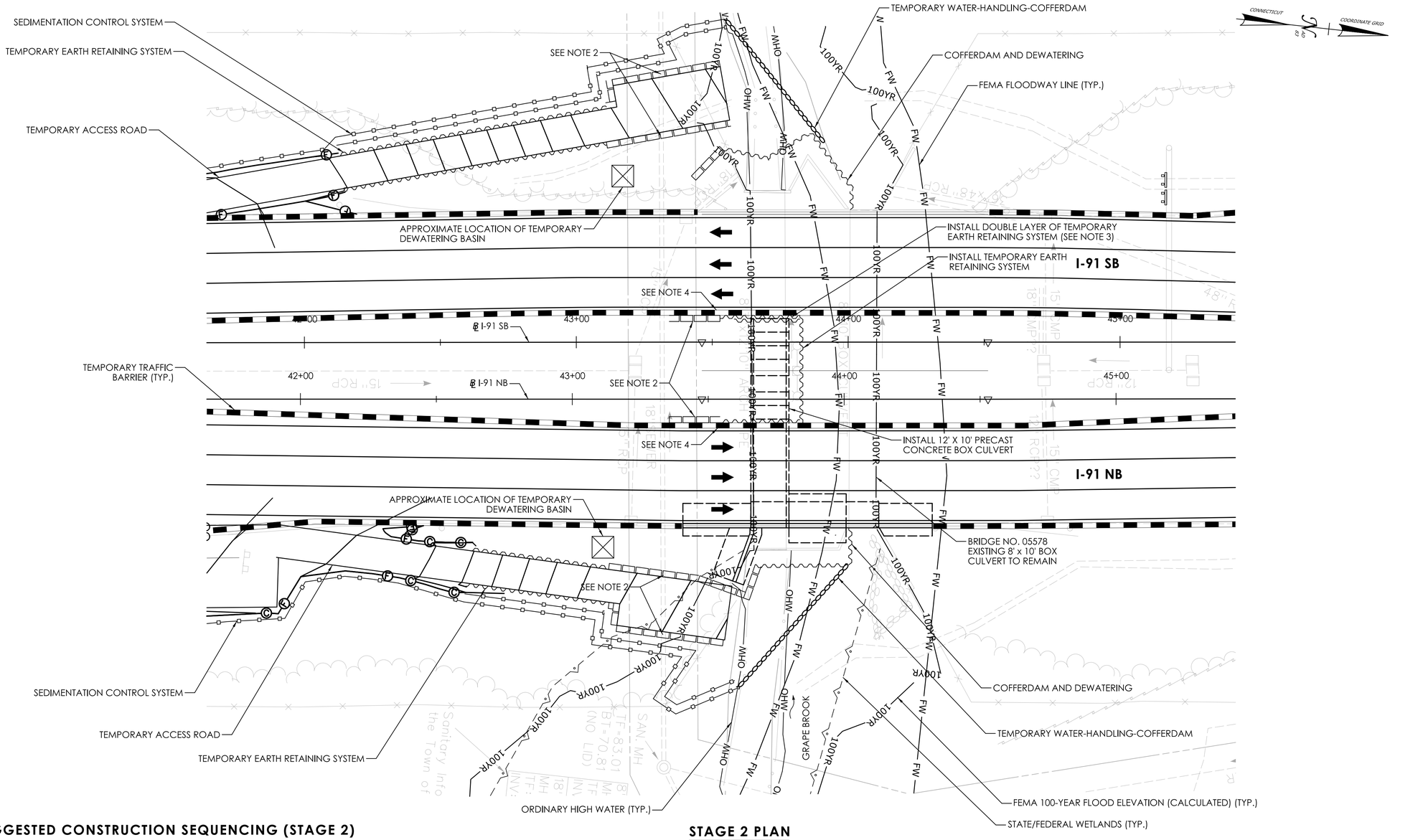
DRAWING TITLE: STAGE 1 PLAN

PROJECT NO.: 0048-0200

DRAWING NO.: STR-09

SHEET NO.: 04.09

LASTED SAVED BY: ADA 036 FILE NAME: K:\CT_Projects\0048-0200\Bridge\Contract_Plans\HW_CP_0048_0200_STR-06.dgn
PLOTTED DATE: 7/9/2025



STAGE 2 PLAN

SUGGESTED CONSTRUCTION SEQUENCING (STAGE 2)

1. SHIFT TRAFFIC LANES FOR WORK AT STAGE 2.
2. INSTALL TEMPORARY EARTH RETAINING SYSTEM AT APPROACHES, EXCAVATE, AND REMOVE EXISTING CULVERT, STAGE 2 SECTION.
3. INSTALL PROPOSED 12' X 10' PRECAST CONCRETE BOX CULVERT, STAGE 2 SECTION.
4. BACKFILL AND RECONSTRUCT ROADWAY, STAGE 2 SECTION.

TEMPORARY HYDRAULIC DATA	
AVERAGE DAILY FLOW (CFS)	4.1
AVERAGE SPRING FLOW (CFS)	7.9
TEMPORARY DESIGN FREQUENCY	2-YEAR STORM
2-YEAR FREQUENCY DISCHARGE (CFS)	140
LOW FLOW PUMPING TEMPORARY DESIGN DISCHARGE = ASF (CFS)	7.9
GRAVITY FLOW BYPAS PIPE TEMPORARY DESIGN DISCHARGE = 2-YEAR FREQUENCY (CFS)	140
2-YEAR WATER SURFACE ELEVATION UPSTREAM (FT)	81.9
2-YEAR WATER SURFACE ELEVATION DOWNSTREAM (FT)	77.6

NOTES:

1. SEE SPECIAL PROVISIONS ARTICLE 1.08.04 - PROSECUTION AND PROGRESS - LIMITATIONS OF OPERATIONS AND ITEM NO. 0971001A - MAINTENANCE AND PROTECTION OF TRAFFIC FOR TRAFFIC CONTROL PLANS AND ADDITIONAL REQUIREMENTS.
2. THE CONTRACTOR IS REPONSIBLE FOR VERIFYING THE LOCATION OF THE 18" RCP SANITARY SEWER MAIN. SHEET PILING SHALL NOT BE USED IN THE VICINITY OF THE SANITARY SEWER MAIN. ALTERNATIVE METHODS OF TEMPORARY EARTH RETAINING SYSTEM USED IN THESE LOCATIONS SHALL NOT IMPACT THE SANITARY SEWER MAIN.
3. CONTRACTOR SHALL COORDINATE THE LOCATION OF THE DOUBLE LAYER OF TEMPORARY EARTH RETAINING SYSTEM WITH BOX CULVERT INSTALLATION AND CONSTRUCTION STAGING.
4. TOP OF TEMPORARY EARTH RETAINING SYSTEM SHALL BE BELOW THE BOTTOM OF TEMPORARY TRAFFIC BARRIER (PINNED) TO ALLOW DEFLECTION OF THE BARRIER.

REVISION DESCRIPTION | DATE | REV.

SIGNATURE BLOCK:

A.DiCesare Associates, P.C.
690 Clinton Avenue
Bridgeport, CT 06604
203-696-0444
www.adicesarepc.com

DESIGNER/DRAFTER: JGV CHECKED BY: JVS

HORIZONTAL SCALE 1" = 20' (0, 20', 40')

CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: **REPLACEMENT OF BRIDGE NO. 05585 - INTERSTATE 91 OVER GRAPE BROOK**

TOWN(S): **ENFIELD**

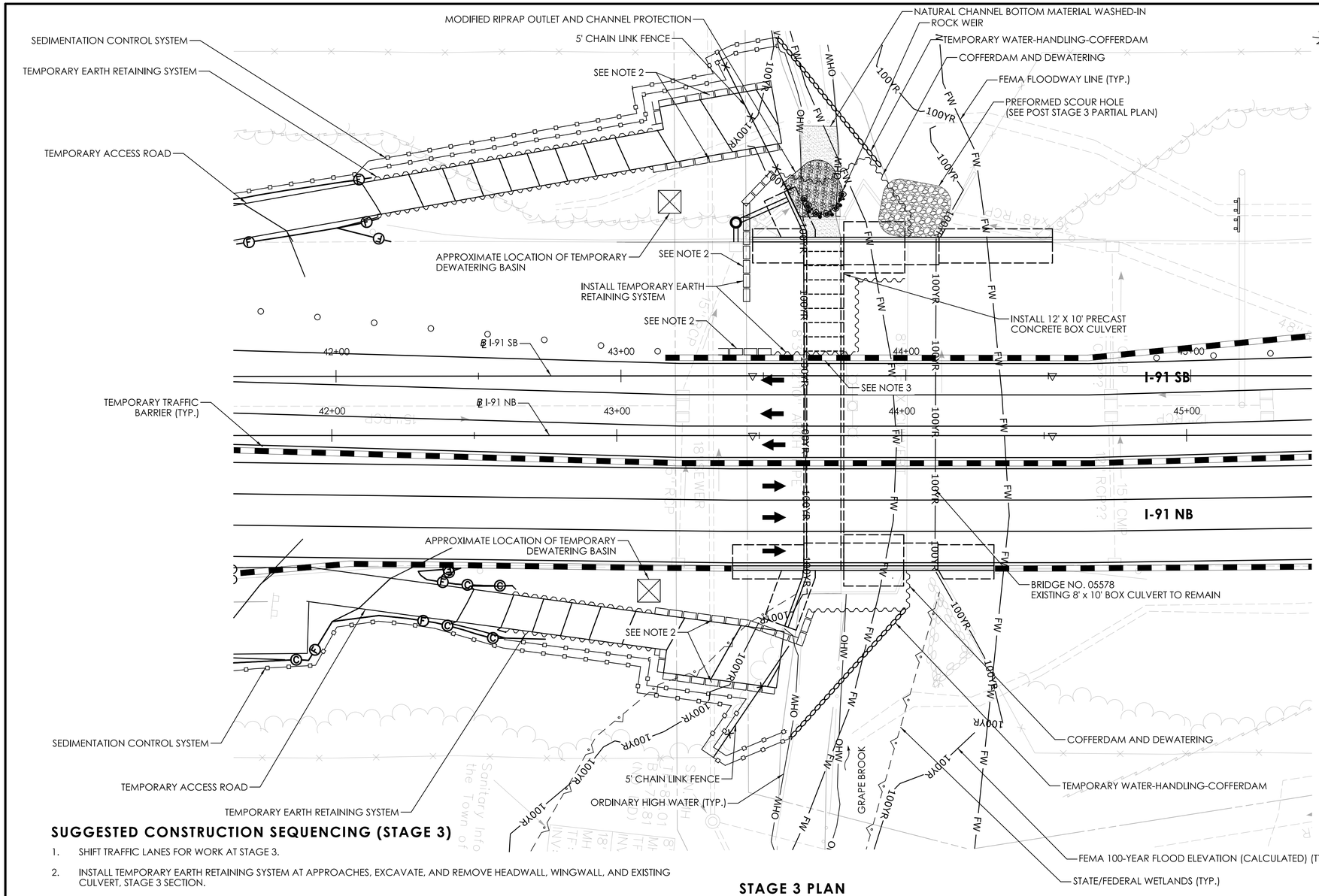
DRAWING TITLE: **STAGE 2 PLAN**

PROJECT NO.: **0048-0200**

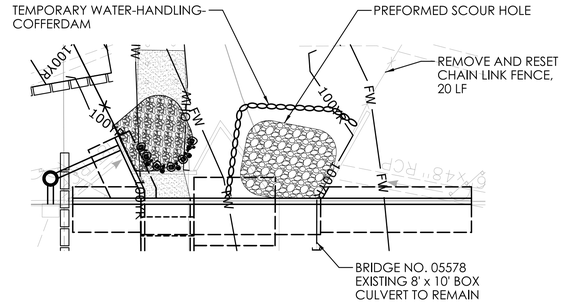
DRAWING NO.: **STR-10**

SHEET NO.: 04.10

LASTED SAVED BY: ADA 036 **FILE NAME:** K:\CT_Projects\0048-0200\Bridge\Contract_Plans\HW_CP_0048_0200_STAGE 2 PLAN.dgn
PLOTTED DATE: 7/9/2025



STAGE 3 PLAN



POST STAGE 3 PARTIAL PLAN

SUGGESTED CONSTRUCTION SEQUENCING (STAGE 3)

1. SHIFT TRAFFIC LANES FOR WORK AT STAGE 3.
2. INSTALL TEMPORARY EARTH RETAINING SYSTEM AT APPROACHES, EXCAVATE, AND REMOVE HEADWALL, WINGWALL, AND EXISTING CULVERT, STAGE 3 SECTION.
3. INSTALL PROPOSED 12' X 10' PRECAST CONCRETE BOX CULVERT, STAGE 3 SECTION.
4. INSTALL WINGWALLS, BARRIER WALLS, MOMENT SLABS, AND PARAPETS FOR STAGE 3.
5. BACKFILL AND RECONSTRUCT ROADWAY, STAGE 3 SECTION.
6. REMOVE TEMPORARY EARTH RETAINING SYSTEM AND INSTALL NATURAL STREAMBED MATERIAL AND ROCK WEIR.
7. REMOVE TEMPORARY WATER-HANDLING-COFFERDAM AND COFFERDAM AND DEWATERING.
8. INSTALL TEMPORARY WATER-HANDLING-COFFERDAM AT EXISTING CULVERT OUTLET AND INSTALL PREFORMED SCOUR HOLE. IN LIEU OF REMOVING TEMPORARY WATER-HANDLING-COFFERDAM (NO. 7 ABOVE) AND INSTALLING TEMPORARY WATER-HANDLING-COFFERDAM AT EXISTING CULVERT, CONTRACTOR MAY USE PUMPING TO INSTALL PREFORMED SCOUR HOLE AT EXISTING OUTLET, PRIOR TO REMOVING TEMPORARY WATER-HANDLING-COFFERDAM. WORK TO BE PERFORMED POST STAGE 3.
9. REMOVE TEMPORARY EARTH RETAINING SYSTEMS AT TEMPORARY ACCESS ROADS.
10. PERFORM DRAINAGE WORK AT SOUTHWEST QUADRANT.
11. FURNISH TOPSOIL, PROVIDE TURF ESTABLISHMENT AND INSTALL PLANTINGS AT DISTURBED AREAS.
12. REMOVE EROSION CONTROL MEASURES UPON STABILIZATION.

TEMPORARY HYDRAULIC DATA	
AVERAGE DAILY FLOW (CFS)	4.1
AVERAGE SPRING FLOW (CFS)	7.9
TEMPORARY DESIGN FREQUENCY	2-YEAR STORM
2-YEAR FREQUENCY DISCHARGE (CFS)	140
LOW FLOW PUMPING TEMPORARY DESIGN DISCHARGE = ASF (CFS)	7.9
GRAVITY FLOW BYPAS PIPE TEMPORARY DESIGN DISCHARGE = 2-YEAR FREQUENCY (CFS)	140
2-YEAR WATER SURFACE ELEVATION UPSTREAM (FT)	81.9
2-YEAR WATER SURFACE ELEVATION DOWNSTREAM (FT)	77.6

NOTES:

1. SEE SPECIAL PROVISIONS ARTICLE 1.08.04 - PROSECUTION AND PROGRESS - LIMITATIONS OF OPERATIONS AND ITEM NO. 0971001A - MAINTENANCE AND PROTECTION OF TRAFFIC FOR TRAFFIC CONTROL PLANS AND ADDITIONAL REQUIREMENTS.
2. THE CONTRACTOR IS REPONSIBLE FOR VERIFYING THE LOCATION OF THE 18" RCP SANITARY SEWER MAIN. SHEET PILING SHALL NOT BE USED IN THE VICINITY OF THE SANITARY SEWER MAIN. ALTERNATIVE METHODS OF TEMPORARY EARTH RETAINING SYSTEM USED IN THESE LOCATIONS SHALL NOT IMPACT THE SANITARY SEWER MAIN.
3. TOP OF TEMPORARY EARTH RETAINING SYSTEM SHALL BE BELOW THE BOTTOM OF TEMPORARY TRAFFIC BARRIER (PINNED) TO ALLOW DEFLECTION OF THE BARRIER.

REV. | DATE | REVISION DESCRIPTION

SIGNATURE BLOCK:
ADA | A.DiCesare Associates, P.C. | 690 Clinton Avenue | Bridgeport, CT 06604 | 203-696-0444 | www.adicesarepc.com
DESIGNER/DRAFTER: JGV CHECKED BY: JVS

0 20' 40'
HORIZONTAL SCALE 1" = 20'

CTDOT CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 05585 - INTERSTATE 91 OVER GRAPE BROOK

TOWN(S): ENFIELD

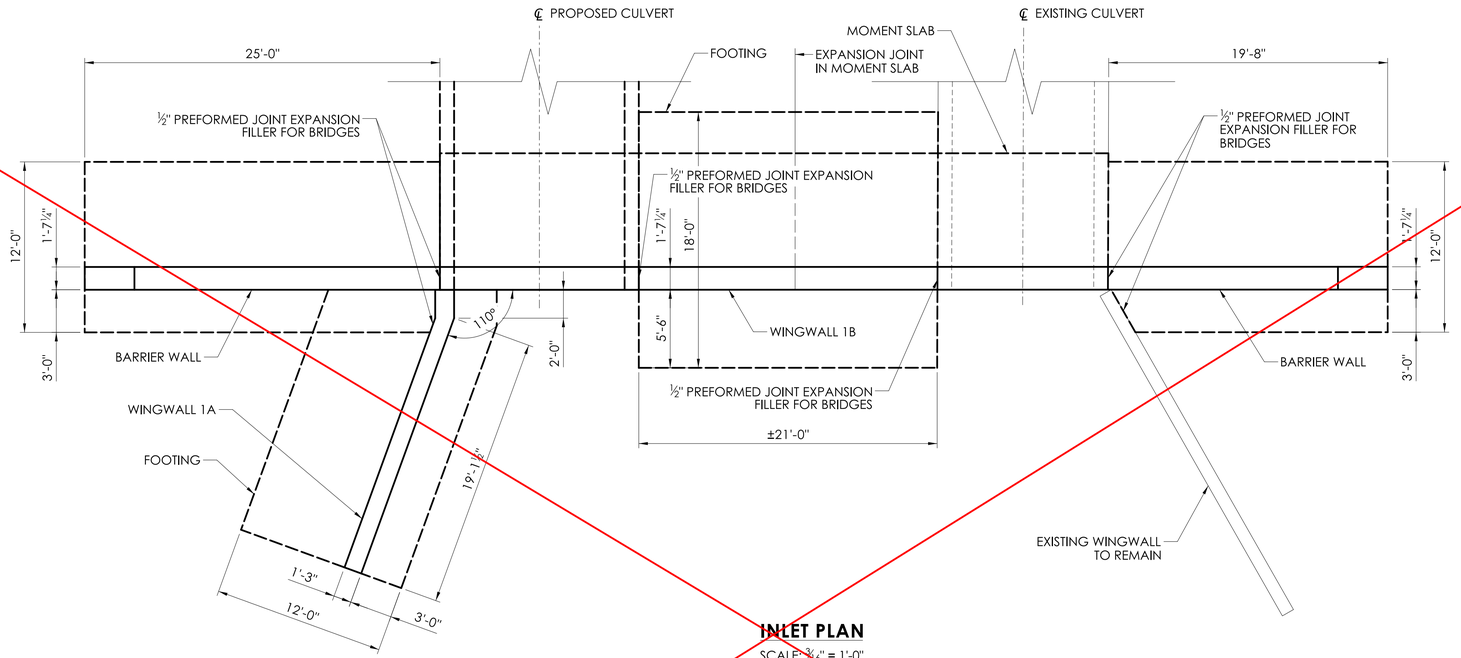
DRAWING TITLE: STAGE 3 PLAN

PROJECT NO.: 0048-0200

DRAWING NO.: STR-11

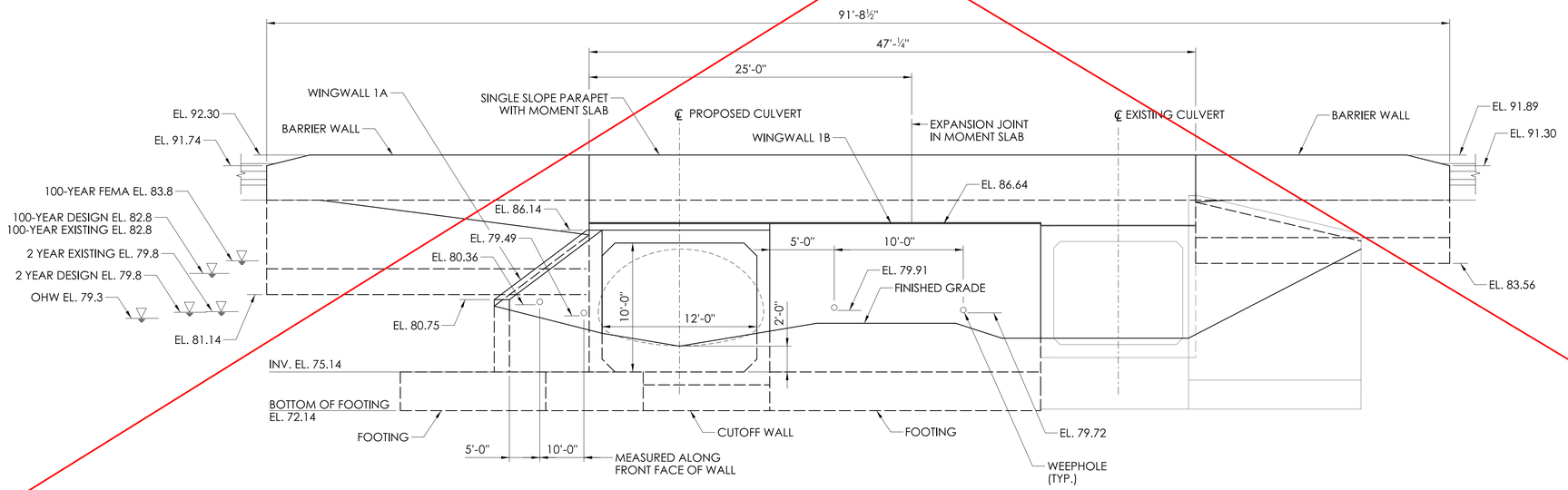
SHEET NO.: 04.11

LASTED SAVED BY: ADA 036 **FILE NAME:** K:\CT_Projects\0048-0200\Bridge\Contract_Plans\HW_CP_0048_0200_STAGE 3 PLAN.dgn
PLOTTED DATE: 7/9/2025



INLET PLAN

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



INLET ELEVATION

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

NOTE: NO. 6 CRUSHED STONE NOT SHOWN.

CONNECTICUT COORDINATE GRID

THIS SHEET REPLACED BY ADDENDUM NO. 1

REV.	DATE	REVISION DESCRIPTION

SIGNATURE BLOCK:

ADA A.DiCesare Associates, P.C.
690 Clinton Avenue
Bridgeport, CT 06604
203-696-0444
www.adicesarepc.com

DESIGNER/DRAFTER: JGV CHECKED BY: JVS

SCALE AS NOTED

CTDOT CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: **REPLACEMENT OF BRIDGE NO. 05585 - INTERSTATE 91 OVER GRAPE BROOK**

TOWN(S): **ENFIELD**

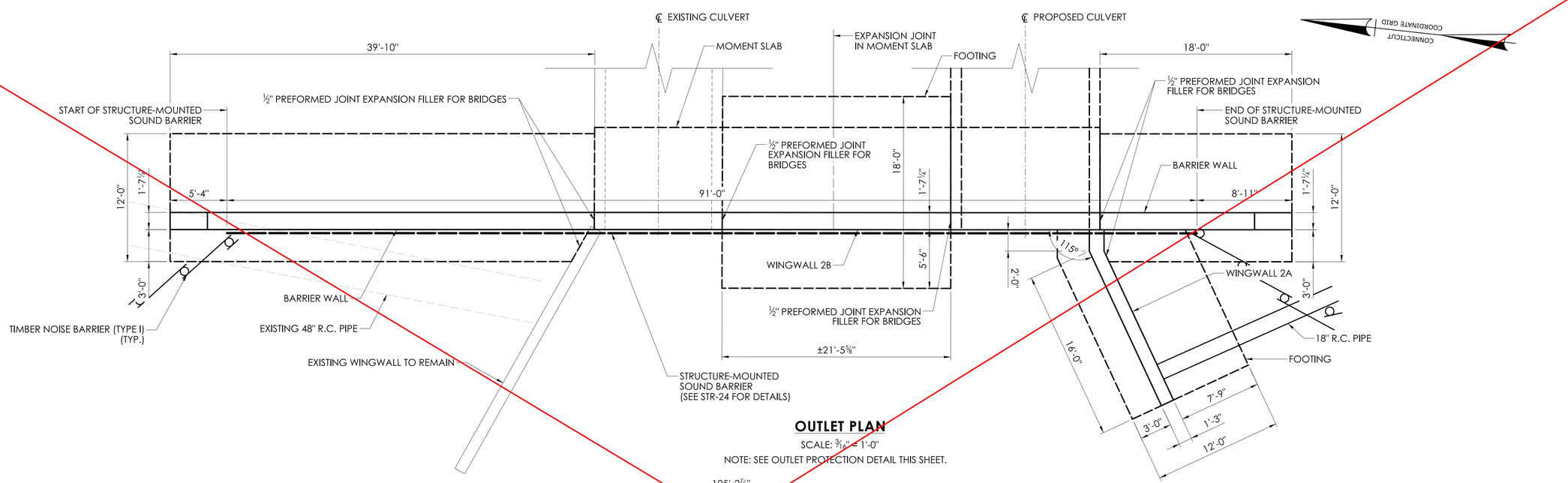
DRAWING TITLE: **INLET LAYOUT**

PROJECT NO.: **0048-0200**

DRAWING NO.: **STR-12**

SHEET NO.: 04.12

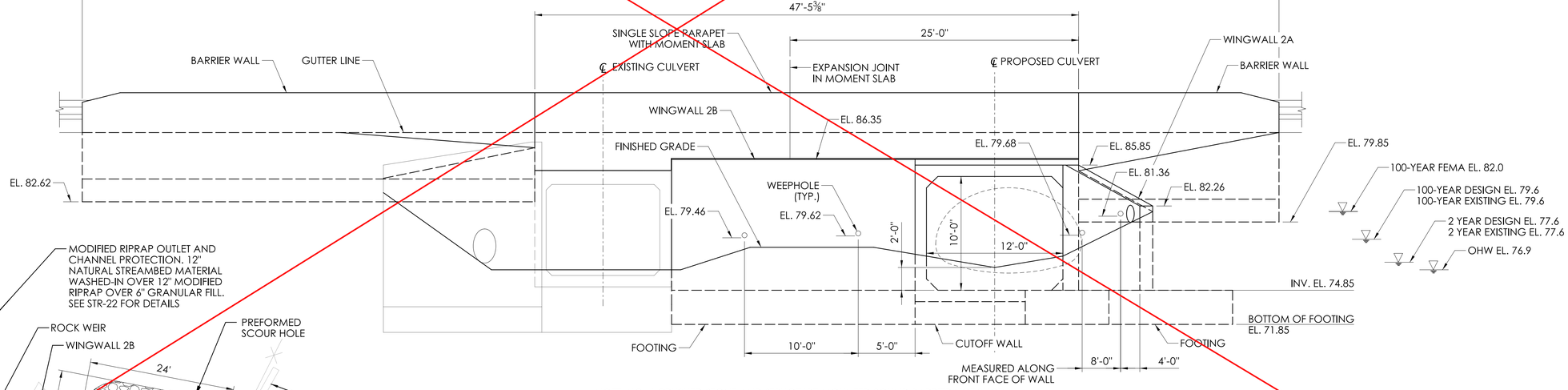
LASTED SAVED BY: ADA 036 **FILE NAME:** K:\CT_Projects\0048-0200\Bridge\Contract_Plans\HW_CP_0048_0200_INLET LAYOUT.dgn
PLOTTED DATE: 7/9/2025



OUTLET PLAN

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

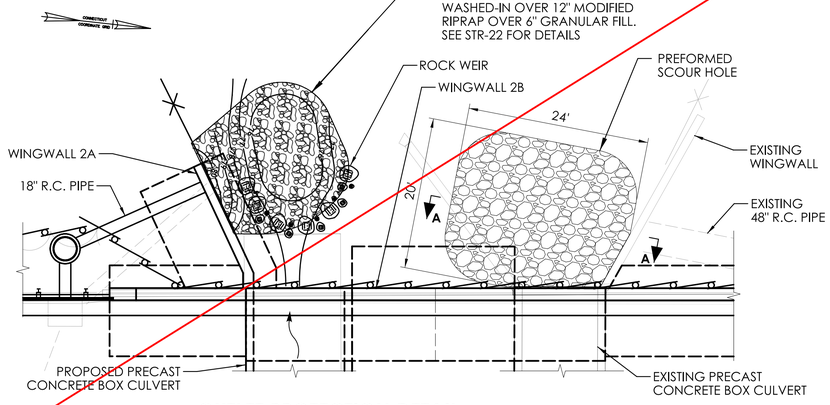
NOTE: SEE OUTLET PROTECTION DETAIL THIS SHEET.



OUTLET ELEVATION

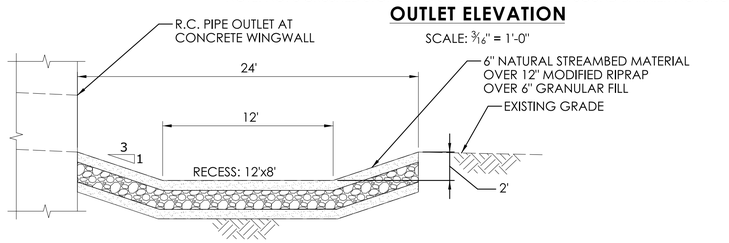
SCALE: 3/16" = 1'-0"

NOTE: NO. 6 CRUSHED STONE AND STRUCTURE-MOUNTED SOUND BARRIER NOT SHOWN.



OUTLET PROTECTION DETAIL

NOT TO SCALE



SECTION A-A

NOT TO SCALE

THIS SHEET REPLACED BY ADDENDUM NO. 1

REV.	DATE	REVISION DESCRIPTION

SIGNATURE BLOCK:

ADA — A.DiCesare Associates, P.C.
690 Clinton Avenue
Bridgeport, CT 06604
203-696-0444
www.adicesarepc.com

DESIGNER/DRAFTER: JGV CHECKED BY: JVS

SCALE AS NOTED

CTDOT — CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 05585 - INTERSTATE 91 OVER GRAPE BROOK

TOWN(S): ENFIELD

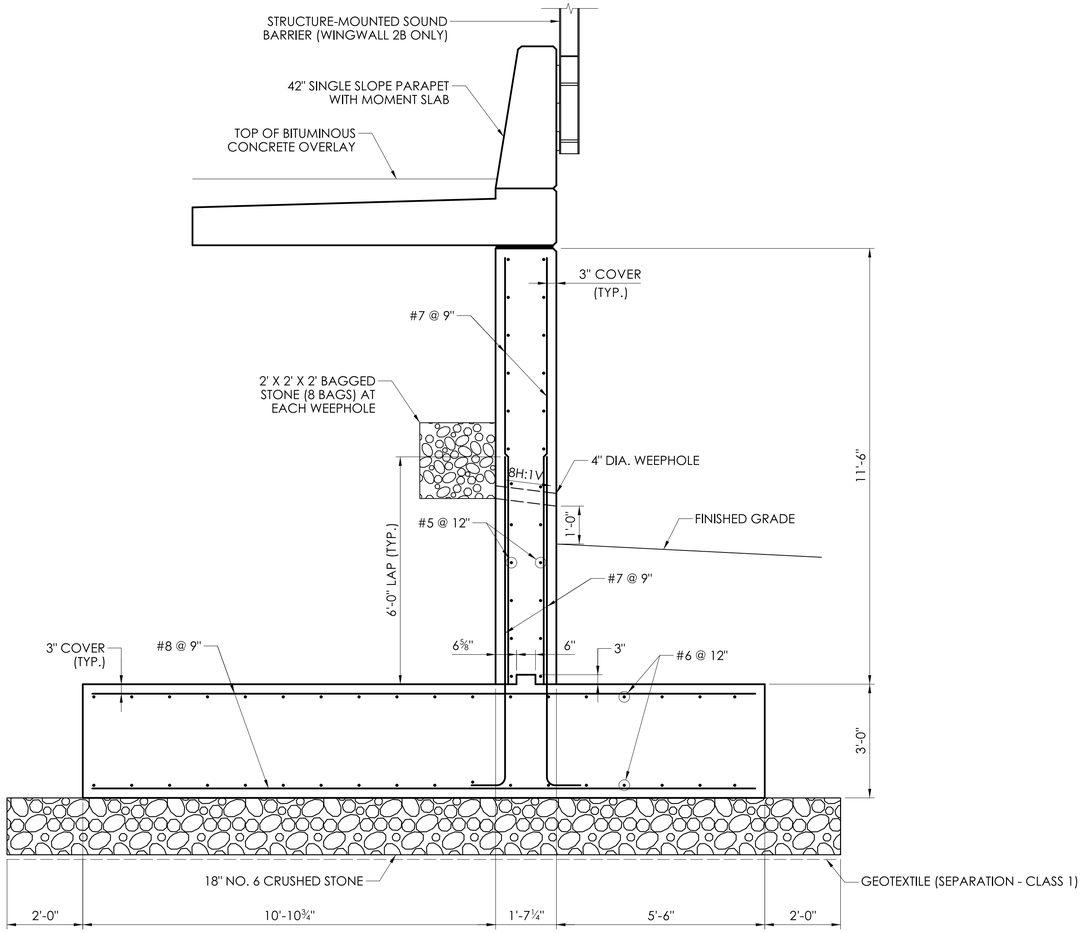
DRAWING TITLE: OUTLET LAYOUT

PROJECT NO.: 0048-0200

DRAWING NO.: STR-13

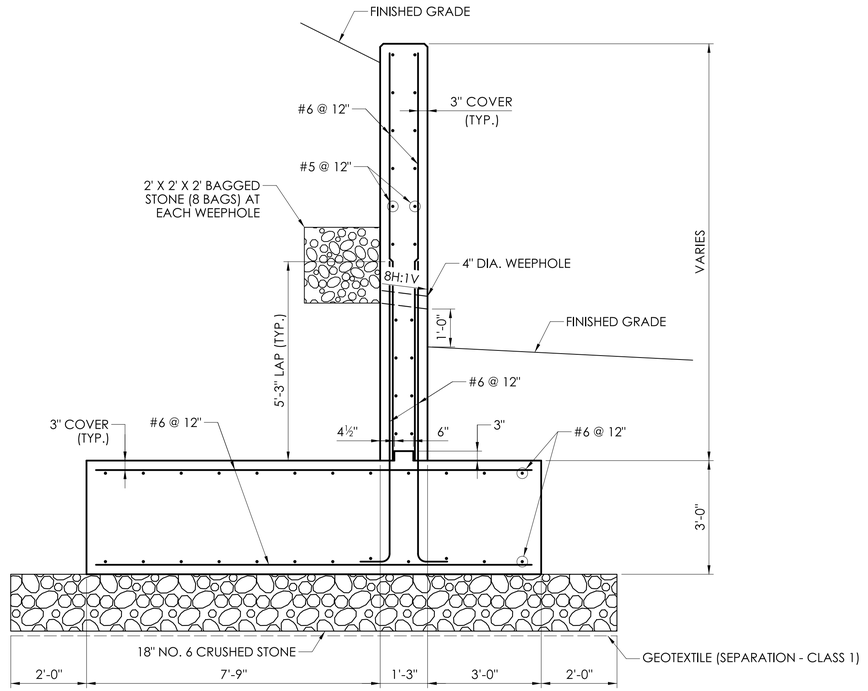
SHEET NO.: 04.13

LASTED SAVED BY: ADA 036 **FILE NAME:** K:\CT_Projects\0048-0200\Bridge\Contract_Plans\HW_CP_0048_0200_OUTLET LAYOUT.dgn
PLOTTED DATE: 7/9/2025



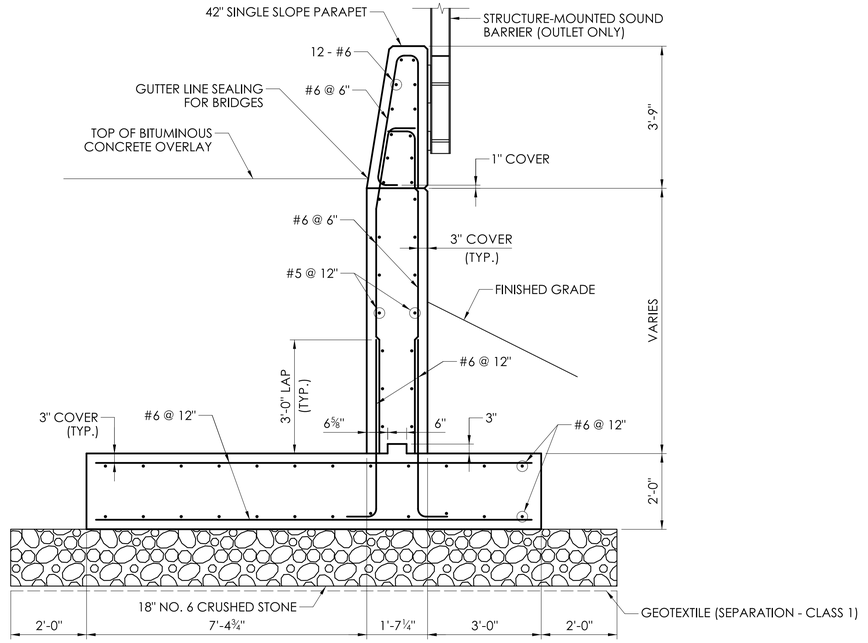
WINGWALL 1B/2B SECTION

SCALE: ½" = 1'-0"



WINGWALL 1A/2A SECTION

SCALE: ½" = 1'-0"



BARRIER WALL SECTION

SCALE: ½" = 1'-0"

NOTES:

1. THE COST FOR FURNISHING AND INSTALLING BAGGED STONE SHALL BE INCLUDED IN THE COST FOR PERVIOUS STRUCTURE BACKFILL.
2. THE COST FOR FURNISHING AND INSTALLING WEEPHOLES SHALL BE INCLUDED IN THE COST FOR ABUTMENT AND WALL CONCRETE.
3. MAXIMUM DESIGN FOUNDATION PRESSURE:

   WINGWALLS 1A/2A = 1.97 KSF (STRENGTH I)
   1.50 KSF (SERVICE I)

   WINGWALLS 1B/2B = 2.16 KSF (STRENGTH I)
   1.65 KSF (SERVICE I)

   BARRIER WALLS = 1.40 KSF (STRENGTH I)
   1.07 KSF (SERVICE I)

REVISION DESCRIPTION | DATE | REV.

SIGNATURE BLOCK:
ADA A.DiCesare Associates, P.C. 690 Clinton Avenue Bridgeport, CT 06604 203-696-0444 www.adicesareapc.com
DESIGNER/DRAFTER: JGV CHECKED BY: JVS

SCALE AS NOTED

CTDOT CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 05585 - INTERSTATE 91 OVER GRAPE BROOK

TOWN(S): ENFIELD

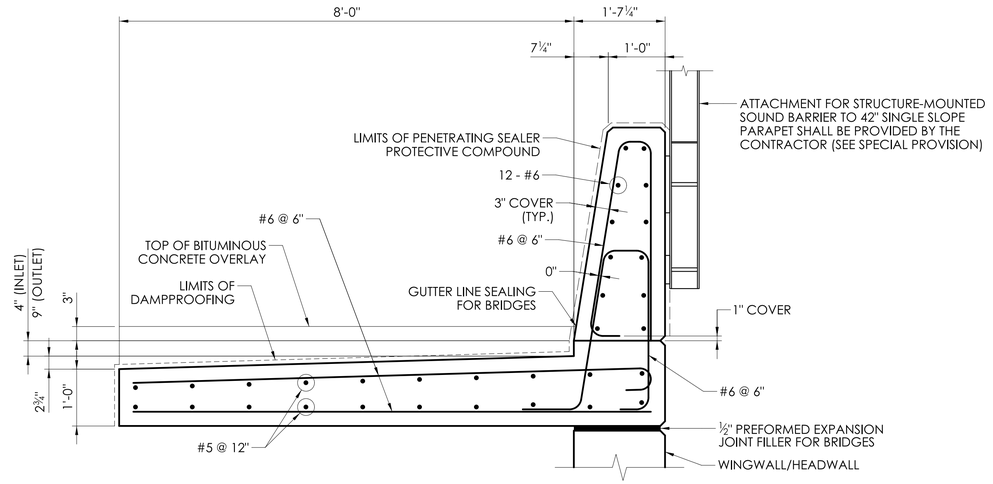
DRAWING TITLE: WALL DETAILS - 1

PROJECT NO.: 0048-0200

DRAWING NO.: STR-14

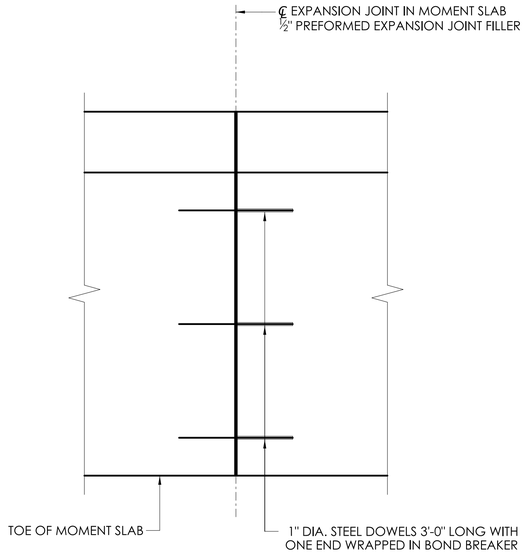
SHEET NO.: 04.14

LASTED SAVED BY: ADA 036 **FILE NAME:** K:\CT_Projects\0048-0200\Bridge\Contract_Plans\HW_CP_0048_0200_WINGWALL DETAILS.dgn
PLOTTED DATE: 7/9/2025



MOMENT SLAB SECTION

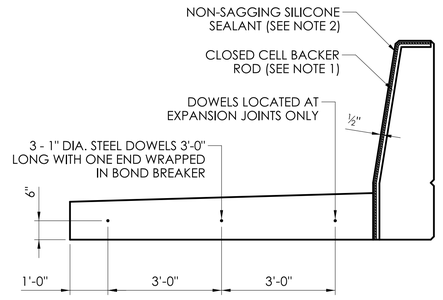
SCALE: ¾" = 1'-0"



PARTIAL PLAN - MOMENT SLAB

SCALE: ½" = 1'-0"

NOTE: MOMENT SLAB REINFORCEMENT NOT SHOWN FOR CLARITY.

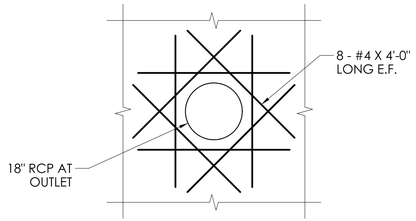


SECTION AT EXPANSION JOINT

SCALE: ½" = 1'-0"

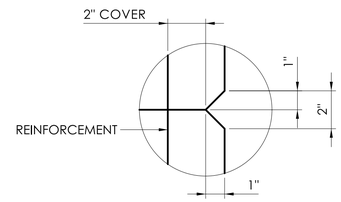
NOTES:

1. THE CLOSED CELL BACKER ROD SHALL BE PLACED A MINIMUM OF 2" FROM THE OUTSIDE FACE OF PARAPET.
2. THE NON-SAGGING SILICONE SEALANT SHALL BE PLACED ON THE BACKER ROD ½" THICK.
3. PRIOR TO INSTALLING THE SILICONE SEALANT, CLEAN JOINT SIDES BY SANDBLASTING. DUST SHALL BE REMOVED BY THE METHOD APPROVED BY THE ENGINEER. THIS WORK SHALL BE PAID FOR UNDER THE ITEM "BARRIER WALL CONCRETE".
4. STEEL DOWELS AT EXPANSION JOINTS SHALL BE ASTM A36 AND GALVANIZED IN CONFORMANCE WITH ASTM A153.



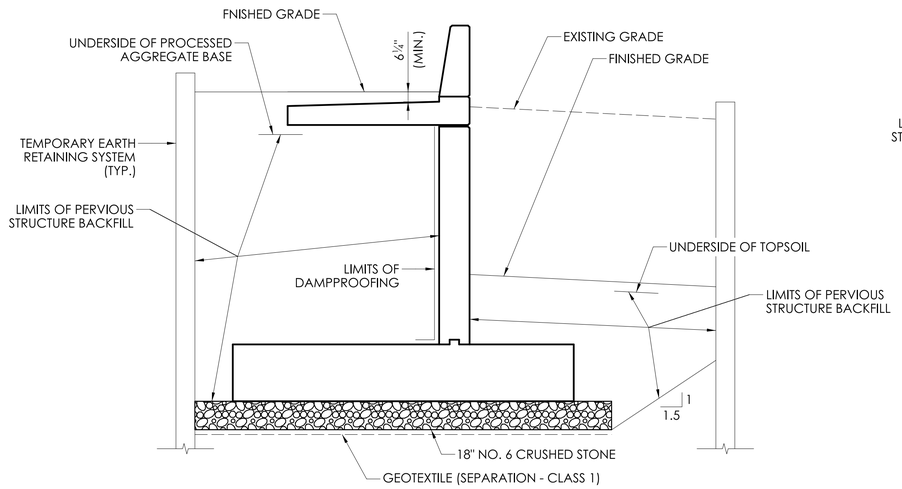
WALL PENETRATION DETAIL

SCALE: ½" = 1'-0"



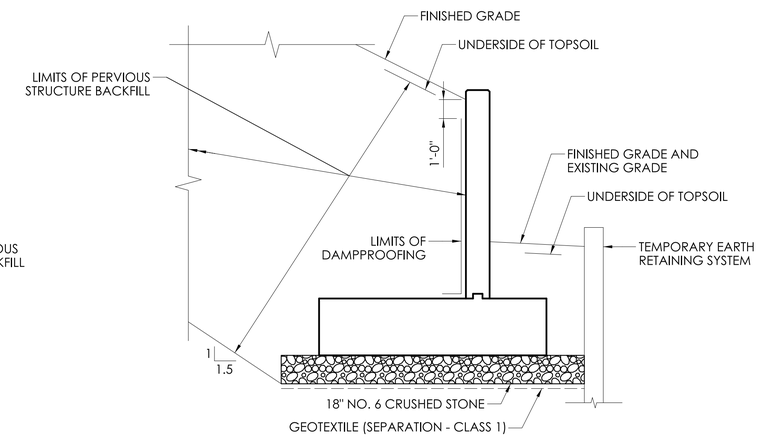
RUSTICATION DETAIL

SCALE: 3" = 1'-0"



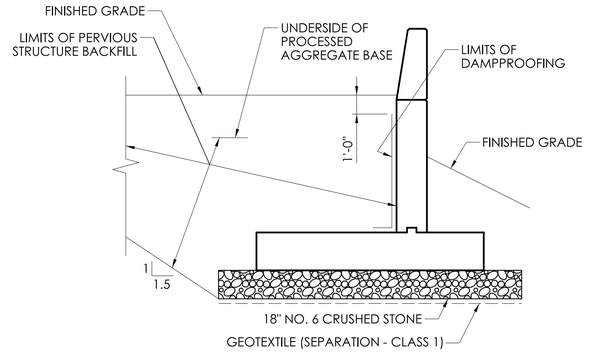
PAY LIMITS AT WINGWALLS 1B/2B

SCALE: ¼" = 1'-0"



PAY LIMITS AT WINGWALLS 1A/2A

SCALE: ¼" = 1'-0"



PAY LIMITS AT BARRIER WALLS

SCALE: ¼" = 1'-0"

REV.	DATE	REVISION DESCRIPTION

SIGNATURE BLOCK:

ADA A.DiCesare Associates, P.C.
690 Clinton Avenue
Bridgeport, CT 06604
203-696-0444
www.adicesarepc.com

DESIGNER/DRAFTER: JGV CHECKED BY: JVS

SCALE AS NOTED

CTDOT CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 05585 - INTERSTATE 91 OVER GRAPE BROOK

TOWN(S): ENFIELD

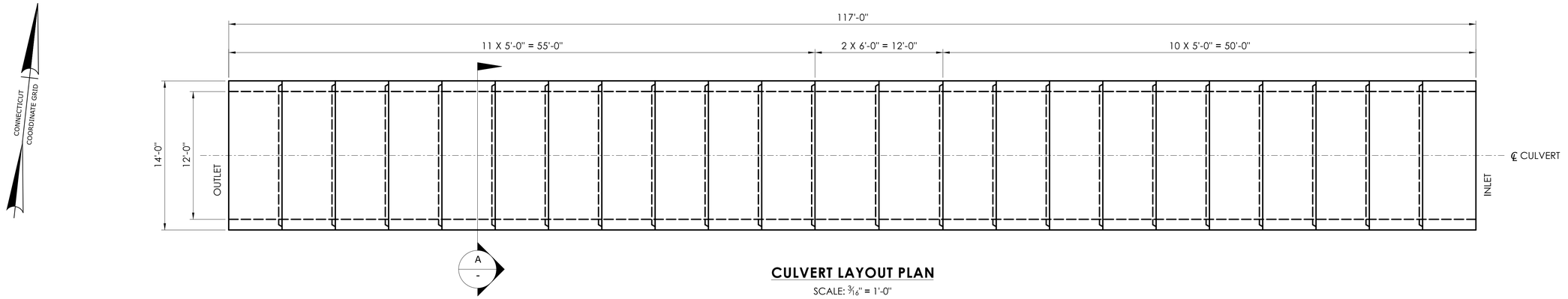
DRAWING TITLE: WALL DETAILS - 2

PROJECT NO.: 0048-0200

DRAWING NO.: STR-15

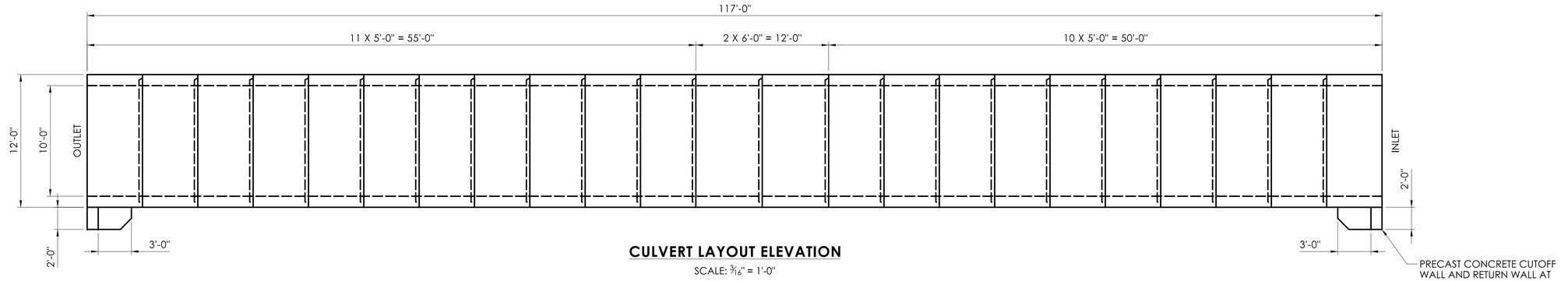
SHEET NO.: 04.15

LASTED SAVED BY: ADA 036 **FILE NAME:** K:\CT_Projects\0048-0200\Bridge\Contract_Plans\HW_CP_0048_0200_WINGWALL DETAILS.dgn
PLOTTED DATE: 7/9/2025



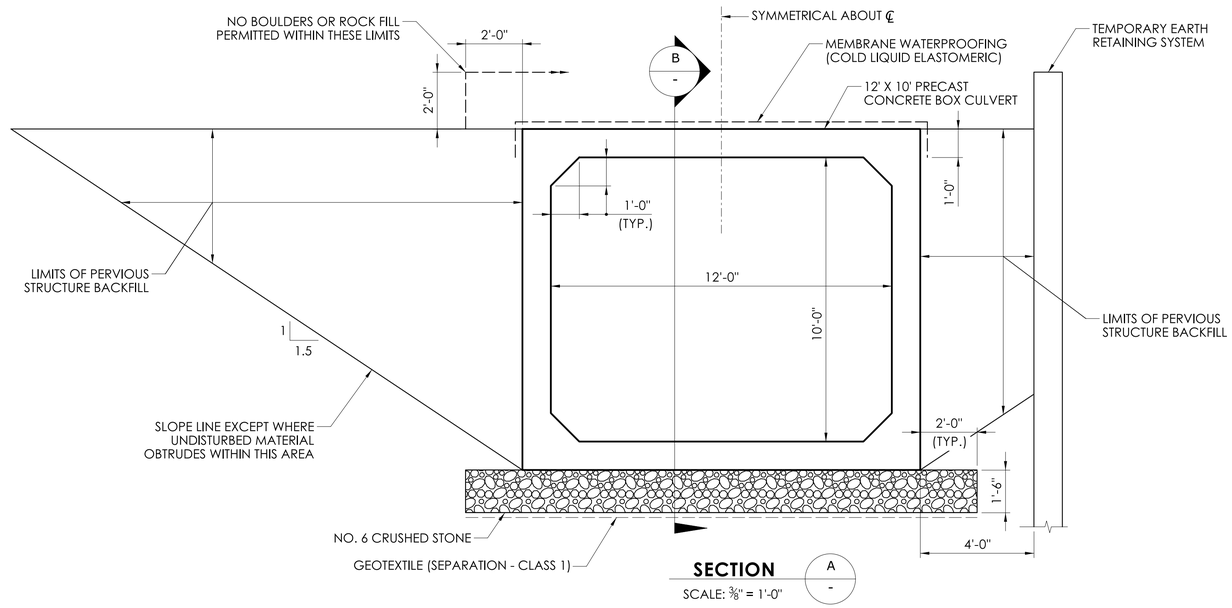
CULVERT LAYOUT PLAN

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



CULVERT LAYOUT ELEVATION

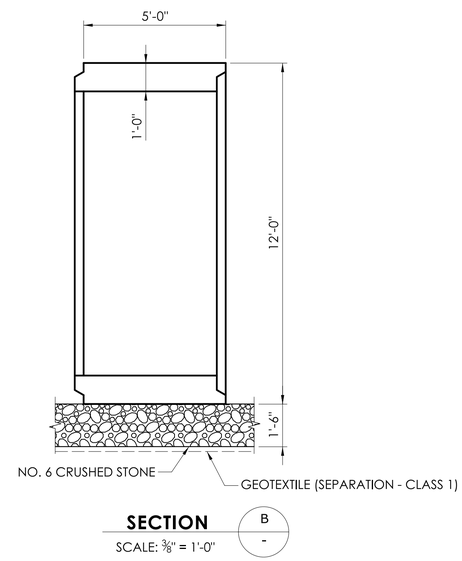
SCALE: 3/16" = 1'-0"



SECTION

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

A
-



SECTION

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

B
-

REV.	DATE	REVISION DESCRIPTION

SIGNATURE BLOCK:

ADA A.DiCesare Associates, P.C.
690 Clinton Avenue
Bridgeport, CT 06604
203-696-0444
www.adicesarepc.com

DESIGNER/DRAFTER: JGV CHECKED BY: JVS

SCALE AS NOTED

CTDOT CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: **REPLACEMENT OF BRIDGE NO. 05585 - INTERSTATE 91 OVER GRAPE BROOK**

TOWN(S): **ENFIELD**

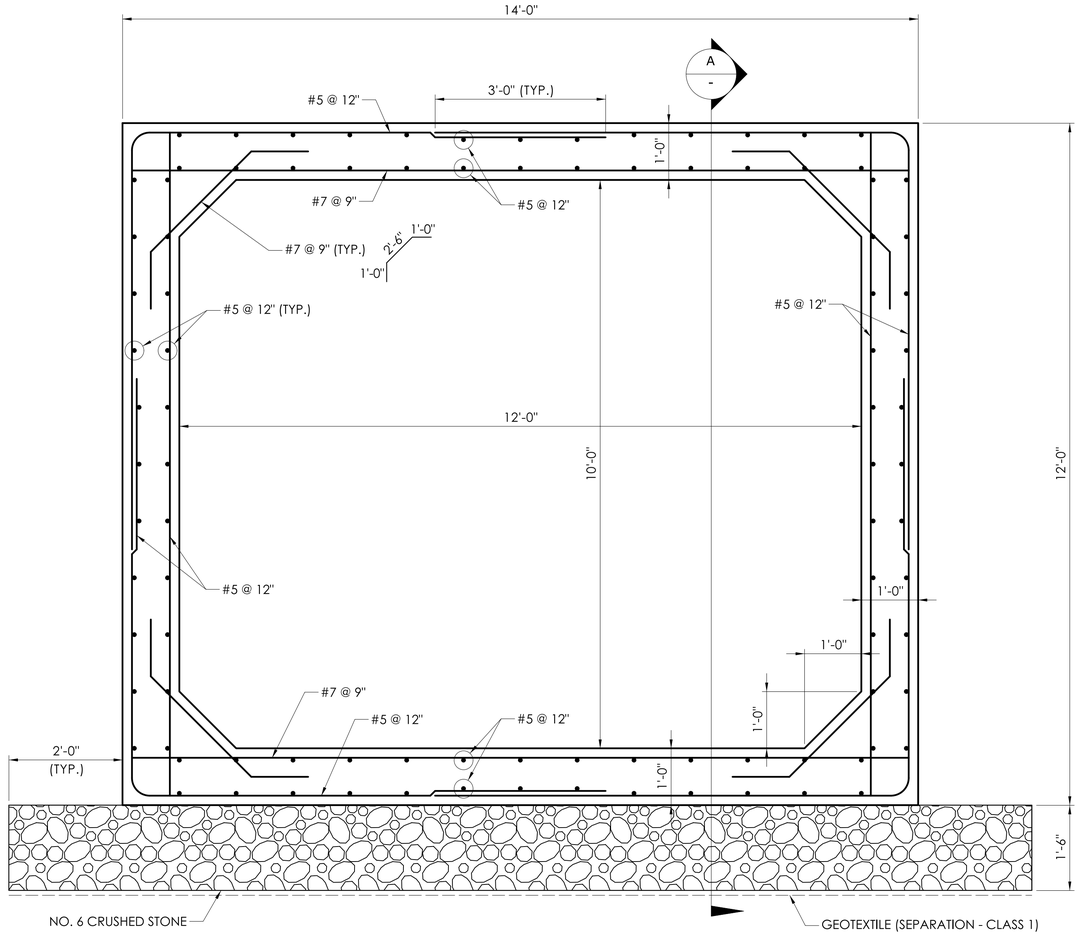
DRAWING TITLE: **BOX CULVERT LAYOUT PLAN**

PROJECT NO.: **0048-0200**

DRAWING NO.: **STR-16**

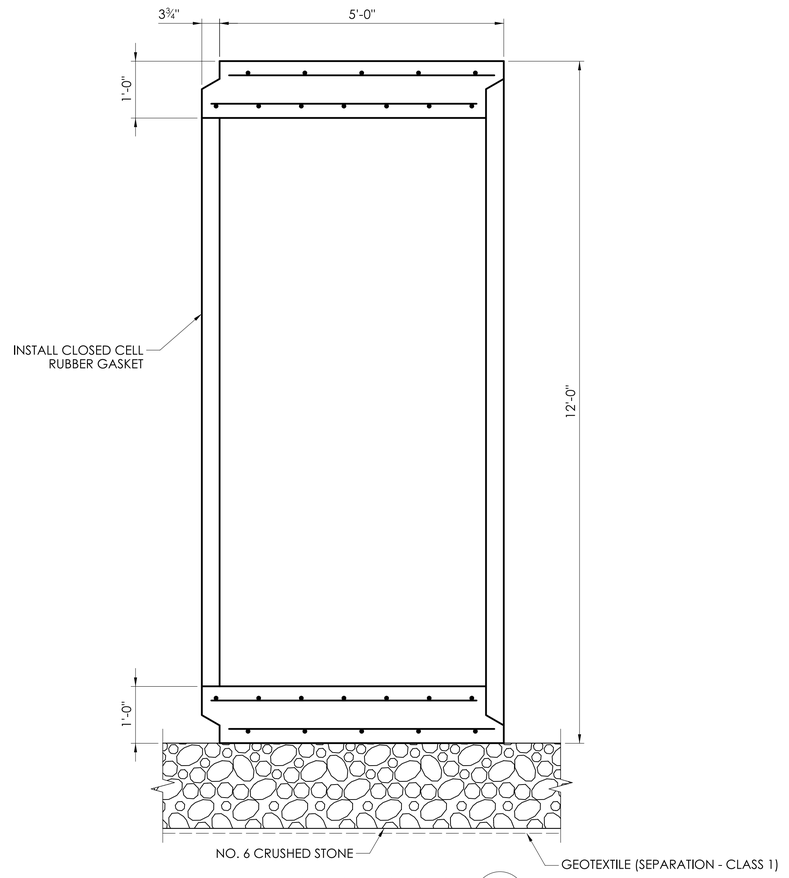
SHEET NO.: 04.16

LASTED SAVED BY: ADA 036 **FILE NAME:** K:\CT_Projects\0048-0200\Bridge\Contract_Plans\HW_CP_0048_0200_CULVERT LAYOUT.dgn
PLOTTED DATE: 7/9/2025



CULVERT GEOMETRY AND REINFORCEMENT

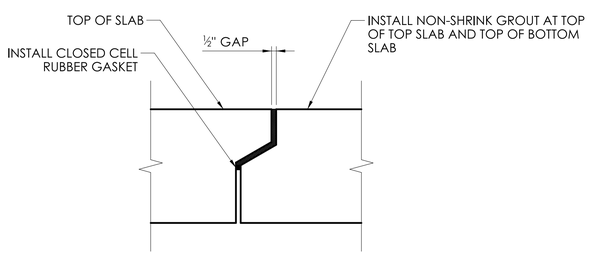
SCALE: ¾" = 1'-0"



TYPICAL SIDE SECTION

A
-

SCALE: ¾" = 1'-0"



BOX CULVERT LAP JOINT DETAIL

SCALE: 1½" = 1'-0"

PRECAST CONCRETE NOTES:

SPECIFICATIONS: CONNECTICUT DEPARTMENT OF TRANSPORTATION FORM 819 (2024) AND SPECIAL PROVISION "12'-0" X 10'-0" PRECAST CONCRETE BOX CULVERT".

DESIGN SPECIFICATIONS: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION 2020, AS SUPPLEMENTED BY THE CONNECTICUT DEPARTMENT OF TRANSPORTATION BRIDGE DESIGN MANUAL (2003) WITH THE LATEST REVISIONS DATED 2/2024.

THE FIRST DIMENSION GIVEN IN THE BOX CULVERT ITEM NAME IS THE NOMINAL INTERIOR WIDTH. THE SECOND DIMENSION GIVEN IN THE BOX CULVERT ITEM NAME IS THE NOMINAL INTERIOR HEIGHT.

CONCRETE COVER: REINFORCEMENT IN PRECAST CONCRETE BOX CULVERT SHALL HAVE TWO INCHES COVER.

THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE DESIGN OF THE LIFTING DEVICES, WHICH SHALL BE ADEQUATE FOR THE SAFETY FACTORS REQUIRED BY THE ERECTION PROCEDURE.

ALL INTERIOR JOINTS BETWEEN BOX CULVERT SECTIONS SHALL BE GROUTED AS OUTLINED IN THE SPECIFICATION FOR "12' X 10' PRECAST CONCRETE BOX CULVERT".

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.

NON-SHRINK GROUT SHALL BE USED TO GROUT THE REINFORCEMENT. NON-SHRINK GROUT SHALL BE INCLUDED IN THE ITEM "12' X 10' PRECAST CONCRETE BOX CULVERT".

REV. | DATE | REVISION DESCRIPTION

SIGNATURE BLOCK:

ADA A.DiCesare Associates, P.C.
690 Clinton Avenue
Bridgeport, CT 06604
203-696-0444
www.adicesarepc.com

DESIGNER/DRAFTER: JGV CHECKED BY: JVS

SCALE AS NOTED

CTDOT CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 05585 - INTERSTATE 91 OVER GRAPE BROOK

TOWN(S): ENFIELD

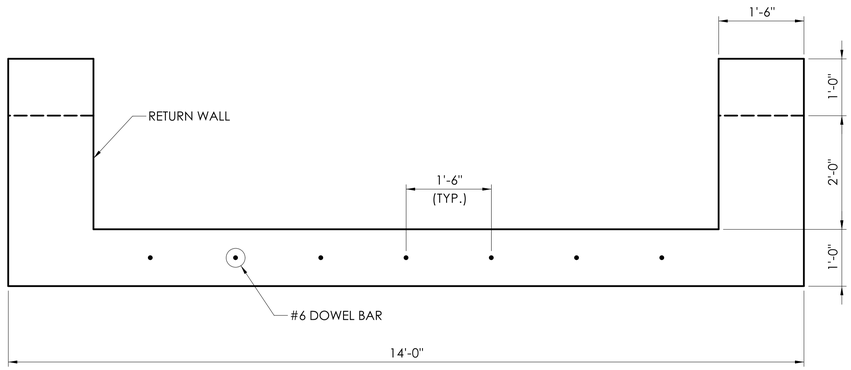
DRAWING TITLE: BOX CULVERT DETAILS

PROJECT NO.: 0048-0200

DRAWING NO.: STR-17

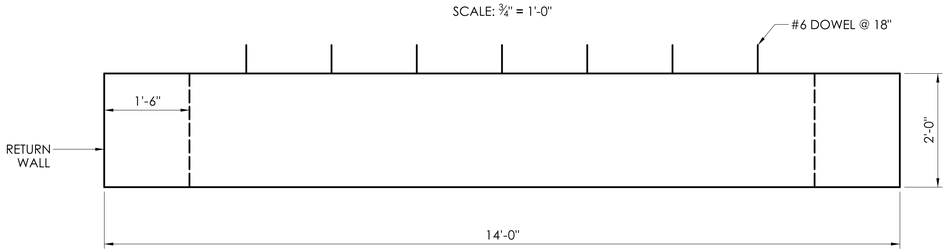
SHEET NO.: 04.17

LASTED SAVED BY: ADA 036 **FILE NAME:** K:\CT_Projects\0048-0200\Bridge\Contract_Plans\HW_CP_0048_0200_BOX CULVERT DETAILS.dgn
PLOTTED DATE: 7/9/2025



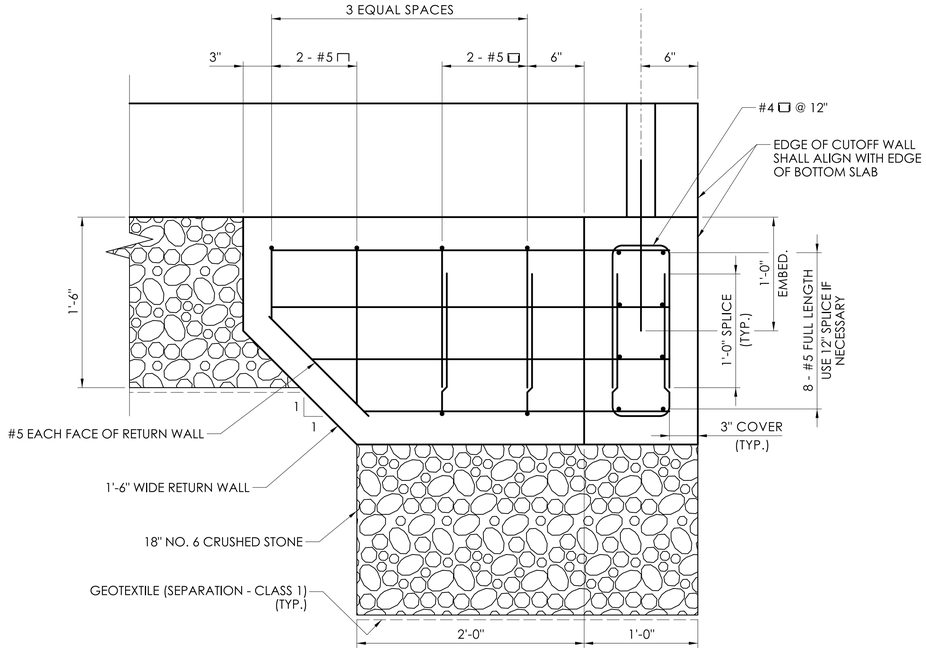
CUTOFF AND RETURN WALL PLAN

SCALE: ¾" = 1'-0"



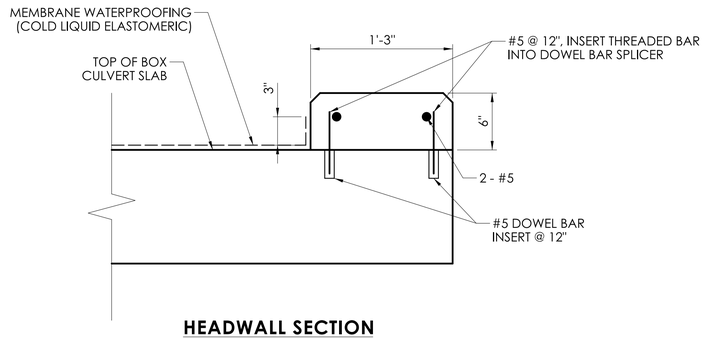
CUTOFF AND RETURN WALL ELEVATION

SCALE: ¾" = 1'-0"



CUTOFF AND RETURN WALL SECTION

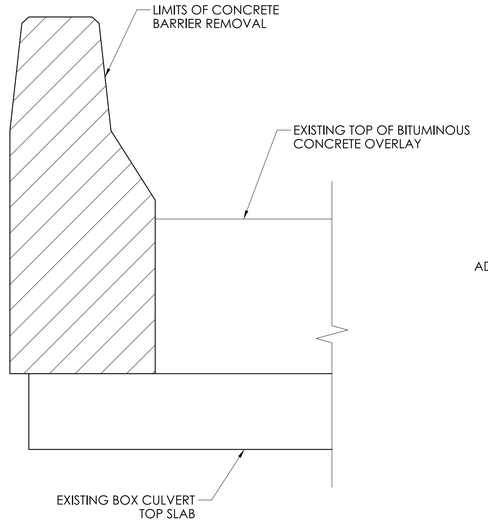
SCALE: 1½" = 1'-0"



HEADWALL SECTION

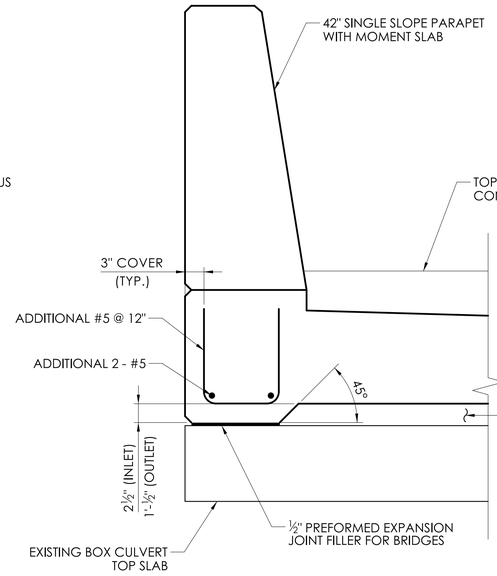
SCALE: 1½" = 1'-0"

NOTE: CAST DOWEL BAR SPLICER INSERTS AT HEADWALLS SHALL BE INCLUDED IN THE ITEM FOR "12' X 10' PRECAST CONCRETE BOX CULVERT".



EXISTING HEADWALL - BR. NO. 05578

SCALE: 1" = 1'-0"



PROPOSED HEADWALL - BR. NO. 05578

SCALE: 1" = 1'-0"

REVISION DESCRIPTION | DATE | REV.

SIGNATURE BLOCK: ADA A.DiCesare Associates, P.C. 690 Clinton Avenue Bridgeport, CT 06604 203-696-0444 www.adicesarepc.com

DESIGNER/DRAFTER: JGV CHECKED BY: JVS

SCALE AS NOTED

CTDOT CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 05585 - INTERSTATE 91 OVER GRAPE BROOK

TOWN(S): ENFIELD

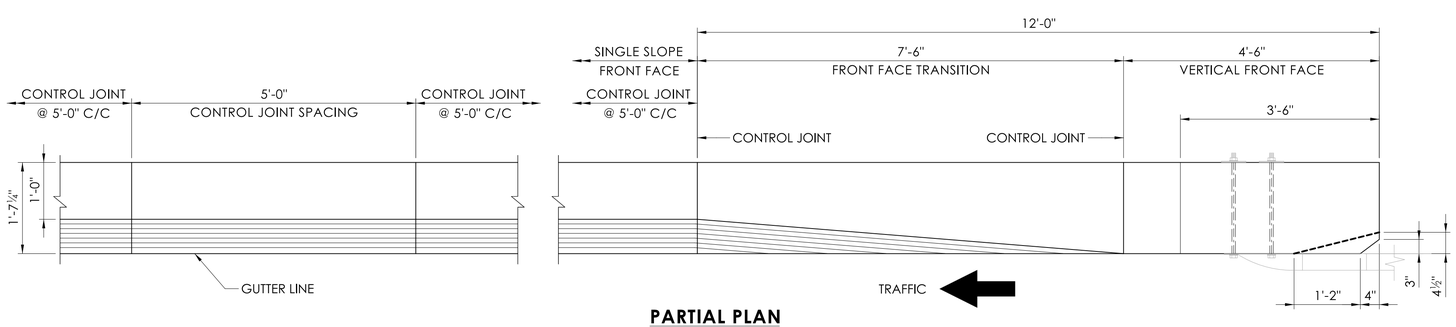
DRAWING TITLE: CUTOFF WALL AND HEADWALL DETAILS

PROJECT NO.: 0048-0200

DRAWING NO.: STR-18

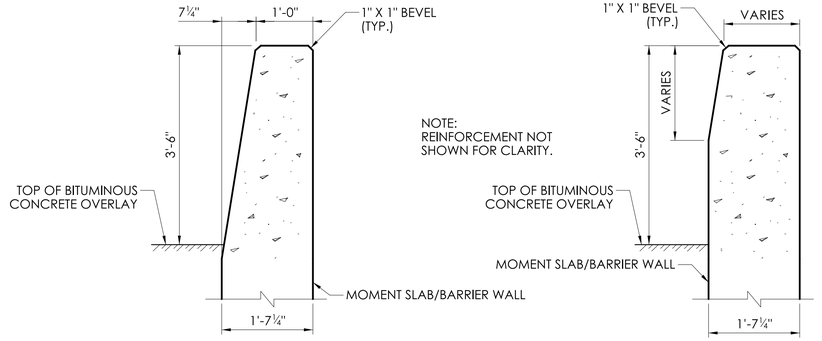
SHEET NO.: 04.18

LASTED SAVED BY: ADA 036 **FILE NAME:** K:\CT_Projects\0048-0200\Bridge\Contract_Plans\HW_CP_0048_0200_CUTOFF WALL AND HEADWALL DETAILS.dgn
PLOTTED DATE: 7/9/2025



PARTIAL PLAN

SCALE: ¾" = 1'-0"



SECTION - SINGLE SLOPE PARAPET

SCALE: ¾" = 1'-0"

A

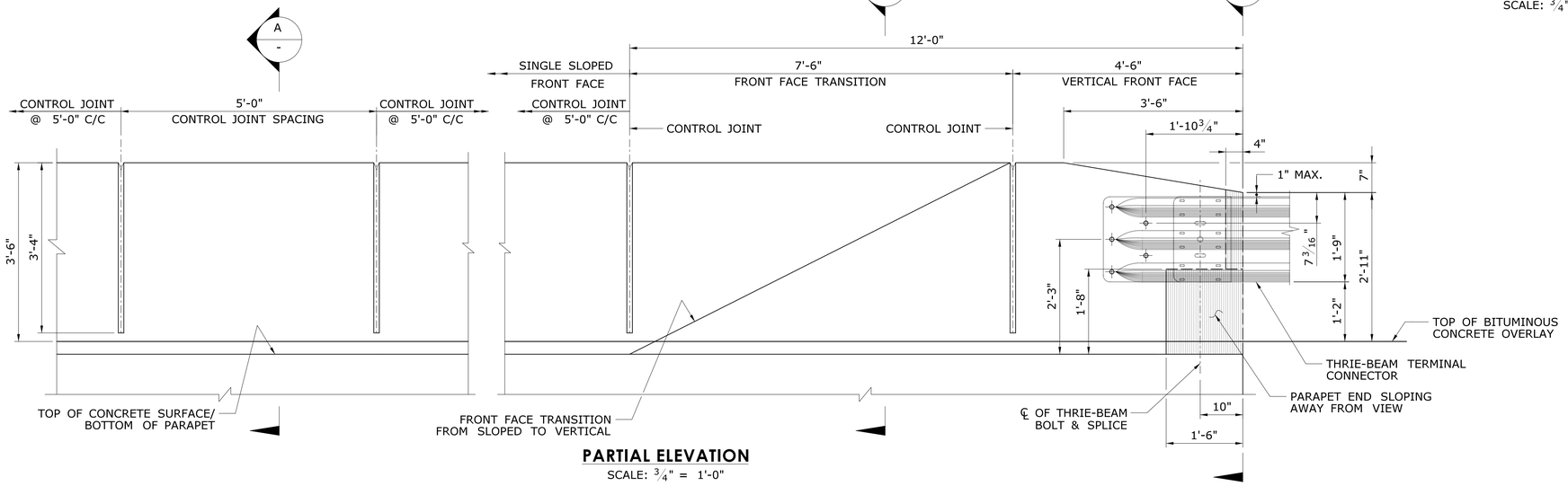
-

SECTION - PARAPET TRANSITION

SCALE: ¾" = 1'-0"

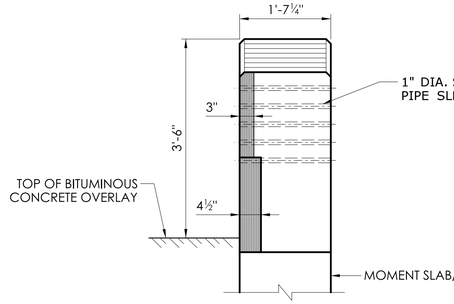
B

-



PARTIAL ELEVATION

SCALE: ¾" = 1'-0"

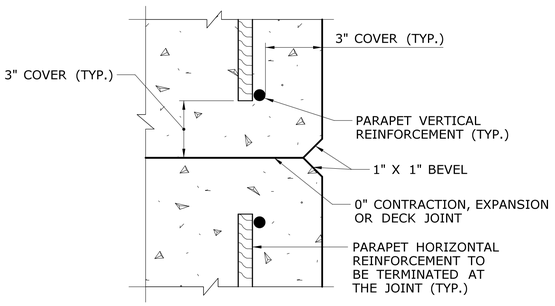


SECTION - END VIEW

SCALE: ¾" = 1'-0"

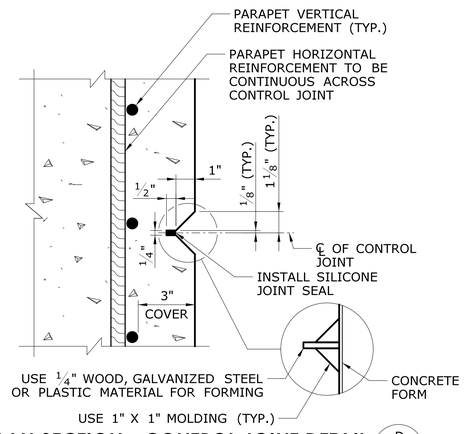
C

-



PLAN SECTION - PARAPET JOINT DETAIL

SCALE: N.T.S.

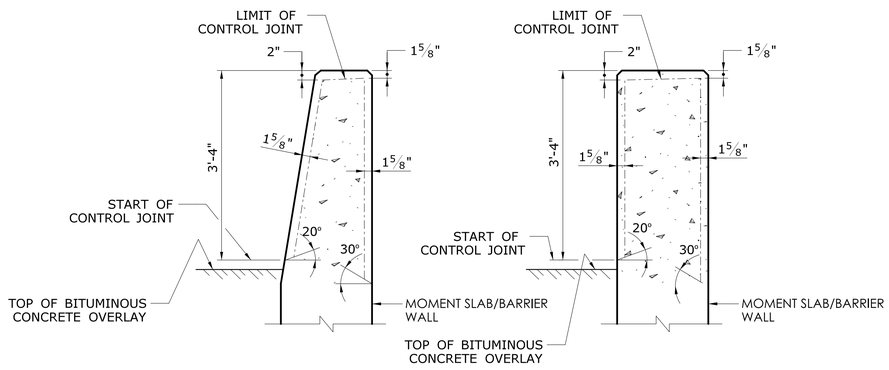


PLAN SECTION - CONTROL JOINT DETAIL

SCALE: N.T.S.

D

-



TYPICAL SLOPED FACE

TYPICAL VERTICAL FACE

SECTION - PARAPET CONTROL JOINT DETAIL

SCALE: ¾" = 1'-0"

REVISION DESCRIPTION

DATE

REV.

SIGNATURE BLOCK:

ADA — A.DiCesare Associates, P.C.
690 Clinton Avenue
Bridgeport, CT 06604
203-696-0444
www.adicesarepc.com

DESIGNER/DRAFTER: JGV CHECKED BY: JVS

SCALE AS NOTED

CTDOT — CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 05585 - INTERSTATE 91 OVER GRAPE BROOK

TOWN(S): ENFIELD

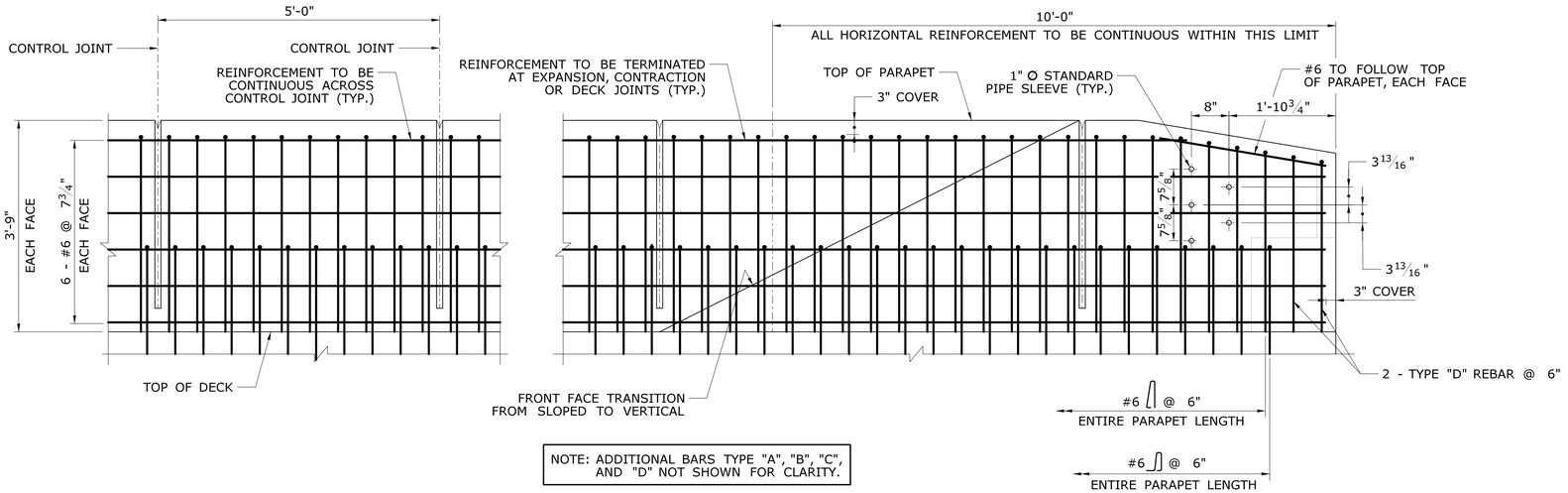
DRAWING TITLE: SINGLE SLOPE PARAPET - DETAILS

PROJECT NO.: 0048-0200

DRAWING NO.: STR-19

SHEET NO.: 04.19

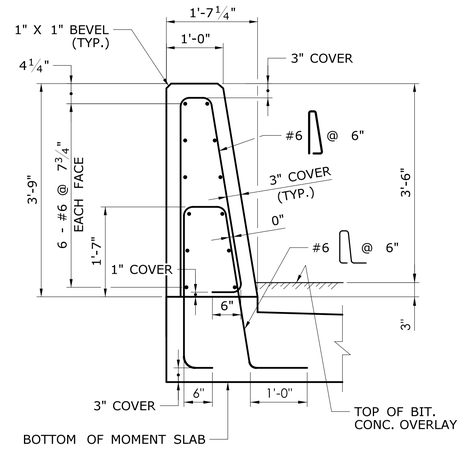
LASTED SAVED BY: ADA 036 **FILE NAME:** K:\CT_Projects\0048-0200\Bridge\Contract_Plans\HW_CP_0048_0200_PARAPET DETAILS.dgn
PLOTTED DATE: 7/9/2025



NOTE: ADDITIONAL BARS TYPE "A", "B", "C", AND "D" NOT SHOWN FOR CLARITY.

PARTIAL ELEVATION - TYPICAL REINFORCED CONCRETE PARAPET DETAILS

SCALE: 3/4" = 1'-0"



PARAPET ON MOMENT SLAB

SCALE: 3/4" = 1'-0"

PLAN SECTION - VERTICAL TO SINGLE SLOPE TRANSITION (A)

SCALE: 3/4" = 1'-0"

PLAN SECTION - VERTICAL TO SINGLE SLOPE TRANSITION (B)

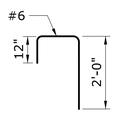
SCALE: 3/4" = 1'-0"

REINFORCEMENT SPLICE NOTES

1. THE SPLICE LENGTH FOR THE REINFORCEMENT IN THE PARAPETS SHALL BE AS FOLLOWS UNLESS DIMENSIONED OTHERWISE:

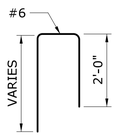
BAR SIZE	SPLICE LENGTH
#6	2'-6"

2. THE SPLICES SHALL BE ALTERNATED SO THAT 50% OR LESS OF THE LONGITUDINAL BARS ARE SPLICED AT THE SAME LOCATION.



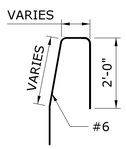
TYPE "A" REBAR

SCALE: N.T.S.



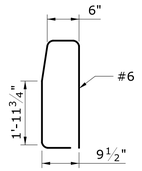
TYPE "B" REBAR

SCALE: N.T.S.



TYPE "C" REBAR

SCALE: N.T.S.



TYPE "D" REBAR

SCALE: N.T.S.

REV.	DATE	REVISION DESCRIPTION

SIGNATURE BLOCK:
ADA A.DiCesare Associates, P.C. 690 Clinton Avenue Bridgeport, CT 06604 203-696-0444 www.adicesarepc.com
DESIGNER/DRAFTER: JGV CHECKED BY: JVS

CTDOT CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 05585 - INTERSTATE 91 OVER GRAPE BROOK

TOWN(S): ENFIELD

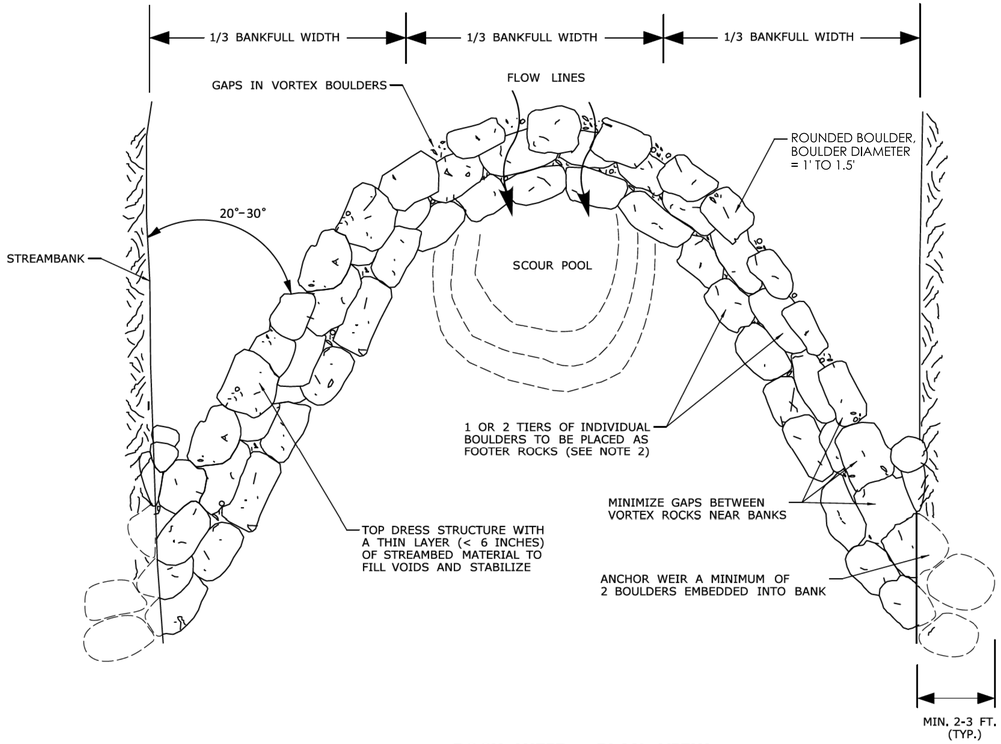
DRAWING TITLE: SINGLE SLOPE PARAPET - REINFORCEMENT

PROJECT NO.: 0048-0200

DRAWING NO.: STR-20

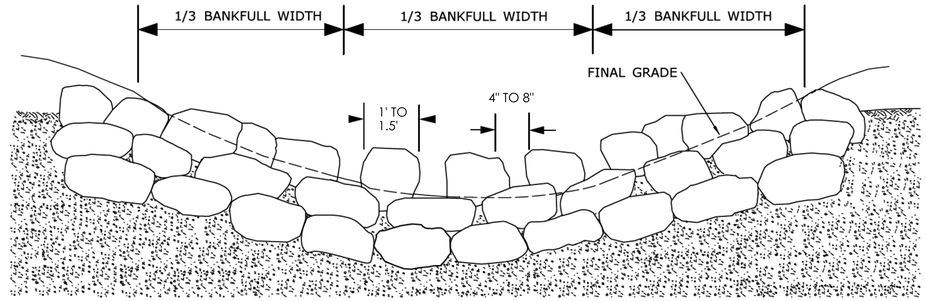
SHEET NO.: 04.20

LASTED SAVED BY: ADA 036 **FILE NAME:** K:\CT_Projects\0048-0200\Bridge\Contract_Plans\HW_CP_0048_0200_PARAPET REINFORCEMENT.dgn
PLOTTED DATE: 7/9/2025



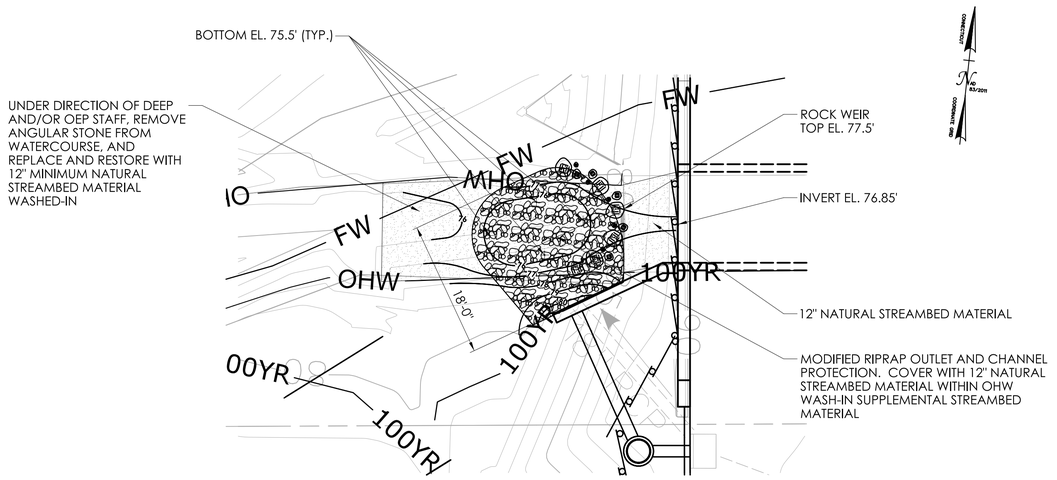
ROCK WEIR - PLAN VIEW

N.T.S.



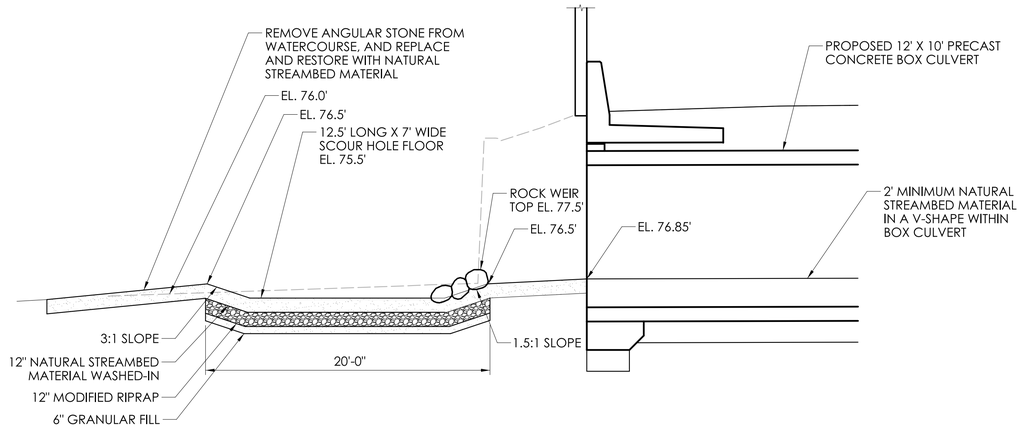
ROCK WEIR - SECTION VIEW (UPSTREAM)

N.T.S.



ROCK WEIR AND OUTLET PROTECTION - PLAN VIEW

N.T.S.



ROCK WEIR AND OUTLET PROTECTION - PROFILE VIEW

N.T.S.

ROCK WEIR NOTES:

1. PLACEMENT OF THE ROCK WEIR SHALL BE UNDER THE SUPERVISION OF CTDEEP FISHERIES DIVISION STAFF (OR THEIR AUTHORIZED DELEGATE). THE CONTRACTOR SHALL COORDINATE THROUGH THE ENGINEER A MINIMUM OF 10-DAYS IN ADVANCE OF THE WEIR INSTALLATION TO ALLOW FOR CTDEEP FISHERIES DIVISION TO BE PRESENT ON SITE.
2. FOOTER ROCKS SHALL SERVE AS THE FOUNDATION FOR THE TOP LAYER OF THE WEIR. FOOTER ROCKS SHALL HAVE REASONABLY FLAT TOPS AND BOTTOMS TO ENABLE BETTER PLACEMENT OF THE TOP LAYER OF THE WEIR.
3. BOULDERS SHALL BE ROUNDED, 1' TO 1.5' IN DIAMETER AS SPECIFIED BY DEEP FISHERIES OR AS RECOMMENDED BY THE OFFICE OF ENVIRONMENTAL PLANNING (OEP). CONTRACTOR SHALL COORDINATE TYPE AND SIZE WITH DEEP FISHERIES OR OEP.
4. ALL WORK ASSOCIATED WITH THE INSTALLATION OF THE ROCK WEIR SHALL BE PAID FOR UNDER THE ITEM FOR "ROCK WEIR". EXISTING OR NATURAL STREAMBED MATERIAL SHALL BE PAID FOR UNDER THE ITEM FOR "EXCAVATION AND REUSE OF EXISTING CHANNEL BOTTOM MATERIAL" AND "SUPPLEMENTAL STREAMBED CHANNEL MATERIAL."
5. BOULDERS SHALL BE PLACED WITHIN THE DEPARTMENT'S RIGHT-OF-WAY OR EASEMENT.

REV. | DATE | REVISION DESCRIPTION

SIGNATURE BLOCK: ADA | A.DiCesare Associates, P.C. 690 Clinton Avenue Bridgeport, CT 06604 203-696-0444 www.adicesarepc.com

DESIGNER/DRAFTER: JGV | CHECKED BY: JVS

SCALE AS NOTED

CTDOT CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 05585 - INTERSTATE 91 OVER GRAPE BROOK

TOWN(S): ENFIELD

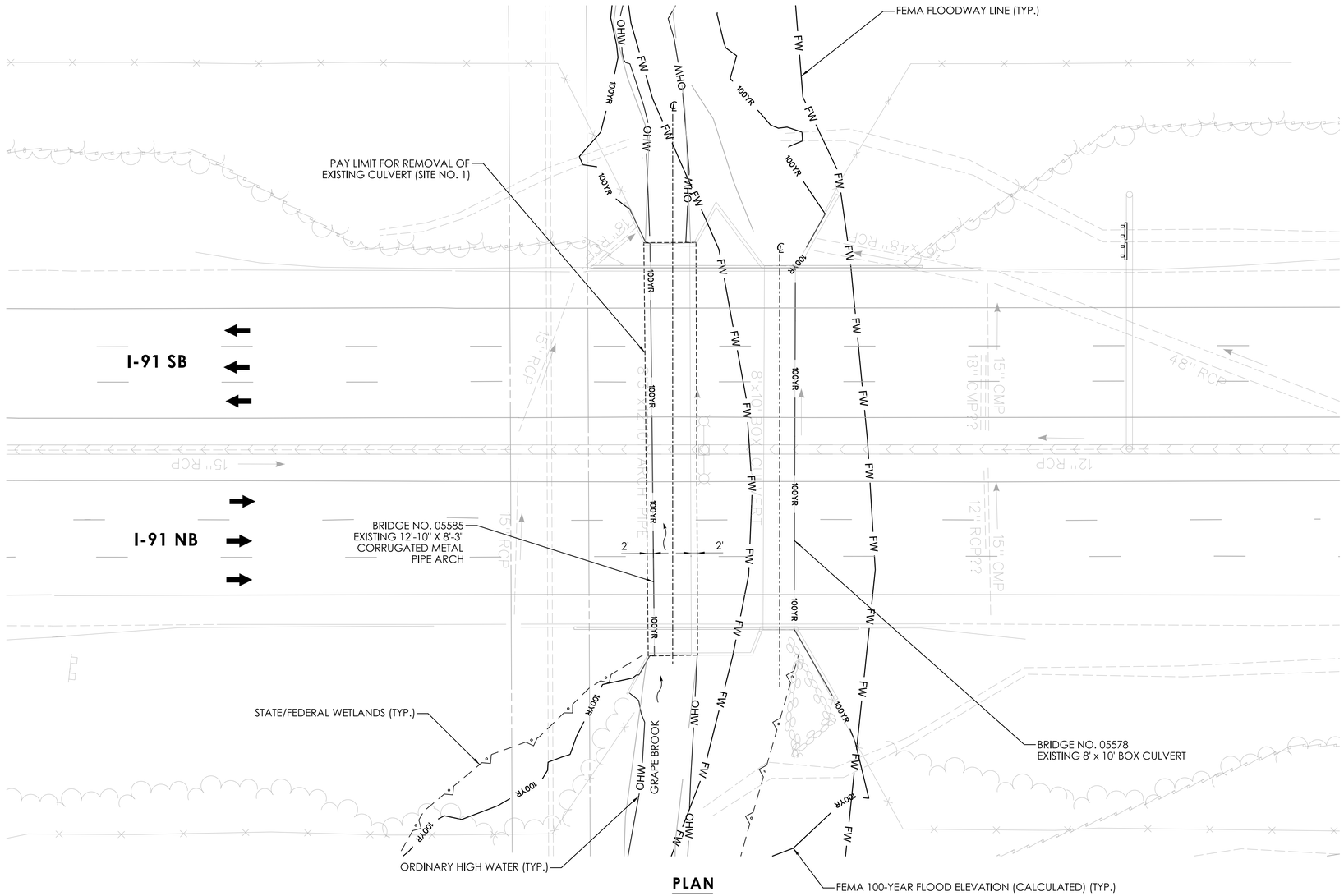
DRAWING TITLE: ROCK WEIR DETAILS

PROJECT NO.: 0048-0200

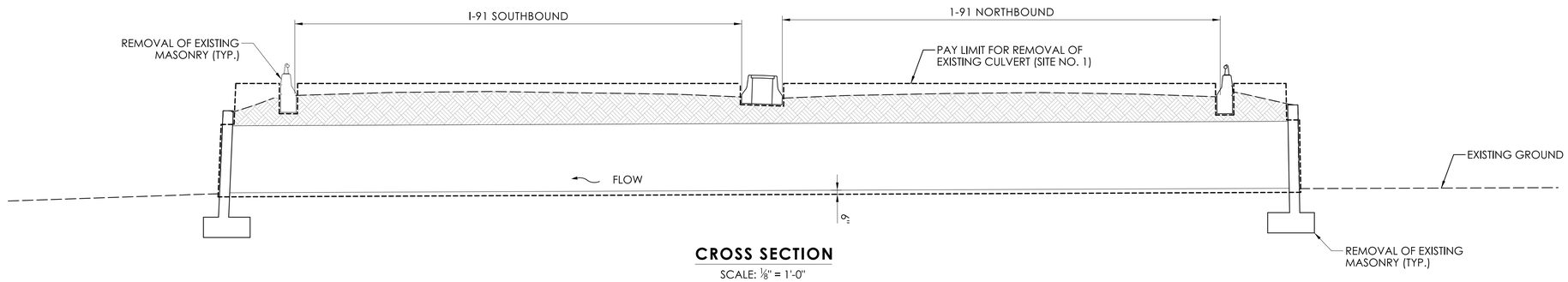
DRAWING NO.: STR-21

SHEET NO.: 04.21

LASTED SAVED BY: ADA 036 **FILE NAME:** K:\CT_Projects\0048-0200\Bridge\Contract_Plans\HW_CP_0048_0200_STR-08.dgn
PLOTTED DATE: 7/9/2025



PLAN
SCALE: 1" = 20'



CROSS SECTION
SCALE: ⅛" = 1'-0"

REV.	DATE	REVISION DESCRIPTION

SIGNATURE BLOCK:

ADA A.DiCesare Associates, P.C.
690 Clinton Avenue
Bridgeport, CT 06604
203-696-0444
www.adicesarepc.com

DESIGNER/DRAFTER: JGV CHECKED BY: JVS

SCALE AS NOTED

CTDOT CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: **REPLACEMENT OF BRIDGE NO. 05585 - INTERSTATE 91 OVER GRAPE BROOK**

TOWN(S): **ENFIELD**

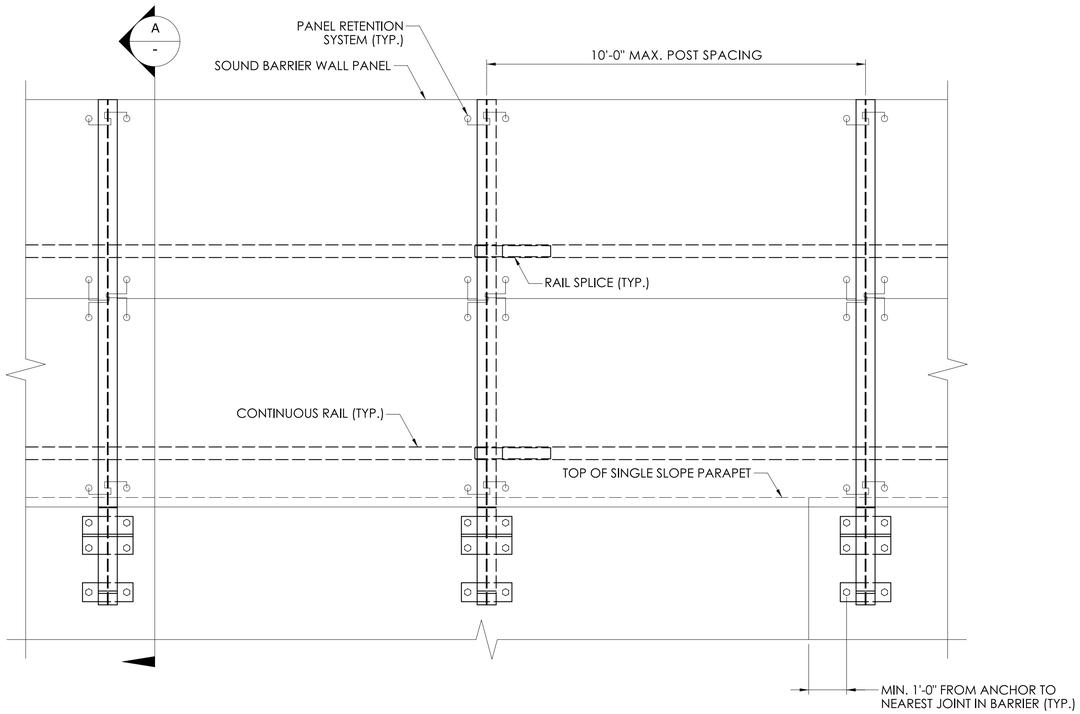
DRAWING TITLE: **EXISTING CONDITIONS AND REMOVAL LIMITS**

PROJECT NO.: **0048-0200**

DRAWING NO.: **STR-22**

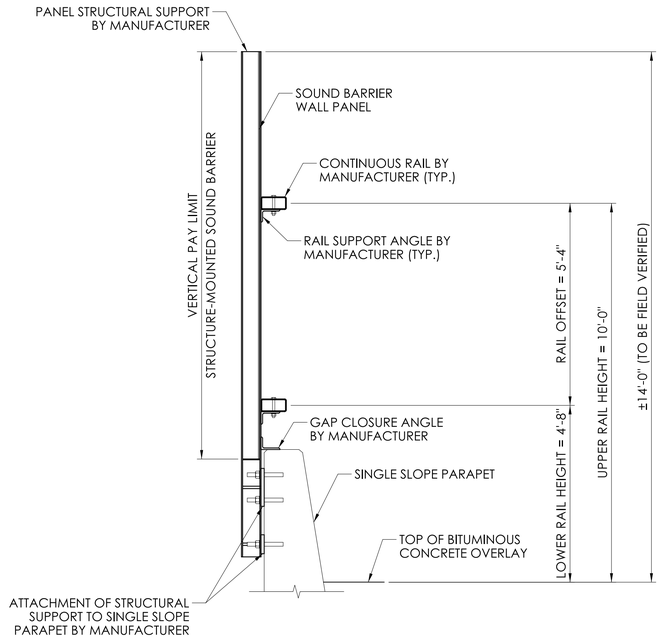
SHEET NO.: 04.22

LASTED SAVED BY: ADA 036 **FILE NAME:** K:\CT_Projects\0048-0200\Bridge\Contract_Plans\HW_CP_0048_0200_STR-22.dgn
PLOTTED DATE: 7/9/2025



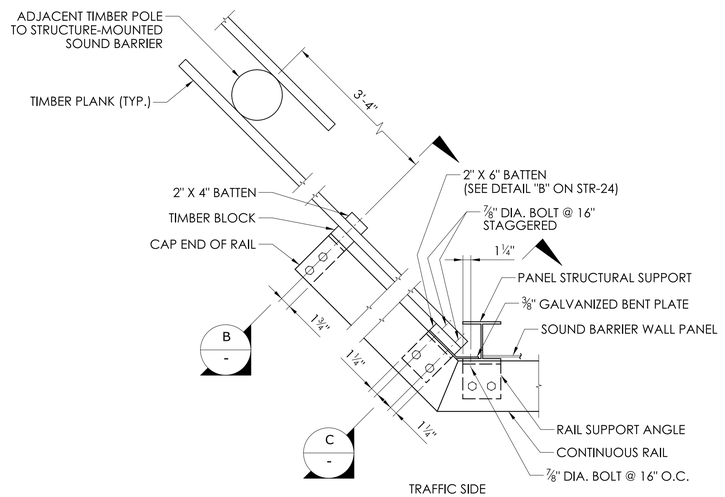
PARTIAL ELEVATION - STRUCTURE-MOUNTED SOUND BARRIER

SCALE: ½" = 1'-0"



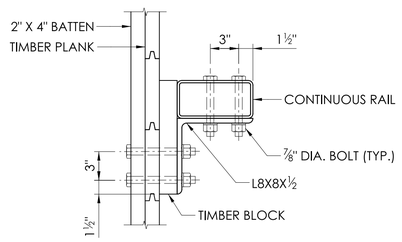
SECTION

SCALE: ½" = 1'-0"



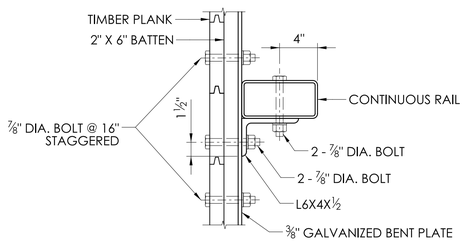
SOUND BARRIER CONNECTION DETAIL

SCALE: 1" = 1'-0"



SECTION

SCALE: 1½" = 1'-0"



SECTION

SCALE: 1½" = 1'-0"

NOTES:

1. ATTACHMENT OF STRUCTURAL SUPPORT TO SINGLE SLOPE PARAPET SHALL NOT BE IN CONFLICT WITH PARAPET REINFORCEMENT.
2. CONTRACTOR SHALL DESIGN THE STRUCTURE-MOUNTED SOUND BARRIER. THE DETAILS ON THIS SHEET PERTAINING TO THE STRUCTURE-MOUNTED SOUND BARRIER ARE FOR SCHEMATIC PURPOSES ONLY.
3. A GAP CLOSURE ANGLE/PLATE BETWEEN THE TOP OF PARAPET AND SOUND BARRIER SHALL BE DESIGNED TO PREVENT THE TRANSMISSION OF DEBRIS FROM ONE SIDE OF THE PARAPET TO THE OTHER. THE GAP CLOSURE ANGLE/PLATE SHALL BE INCLUDED FOR PAYMENT UNDER THE ITEM "STRUCTURE-MOUNTED SOUND BARRIER".
4. THE WALL PANELS SHALL BE SECURED TO THE OVERALL SOUND BARRIER SYSTEM IN SUCH A WAY THAT ELEMENTS, PIECES, OR FRAGMENTS DO NOT FALL WHEN THEY ARE DEFORMED OR BROKEN.
5. THE EXTENSION OF THE HORIZONTAL CONTINUOUS RAILS TO THE TIMBER NOISE BARRIER SHALL BE INCLUDED FOR PAYMENT UNDER THE ITEM "STRUCTURE-MOUNTED SOUND BARRIER".
6. CONTRACTOR SHALL FIELD SURVEY EXISTING STRUCTURE-MOUNTED NOISE BARRIER WALL (LENGTH AND HEIGHT) WITHIN LIMITS TO BE REMOVED AND REAPLCE WITH "STRUCTURE-MOUNTED SOUND BARRIER" TO THE SURVEYED MEASUREMENTS.

REV. | DATE | REVISION DESCRIPTION

SIGNATURE BLOCK:
ADA A.DiCesare Associates, P.C. 690 Clinton Avenue Bridgeport, CT 06604 203-696-0444 www.adicesarepc.com
DESIGNER/DRAFTER: JGV CHECKED BY: JVS

SCALE AS NOTED

CTDOT CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 05585 - INTERSTATE 91 OVER GRAPE BROOK

TOWN(S): ENFIELD

DRAWING TITLE: SOUND BARRIER DETAILS

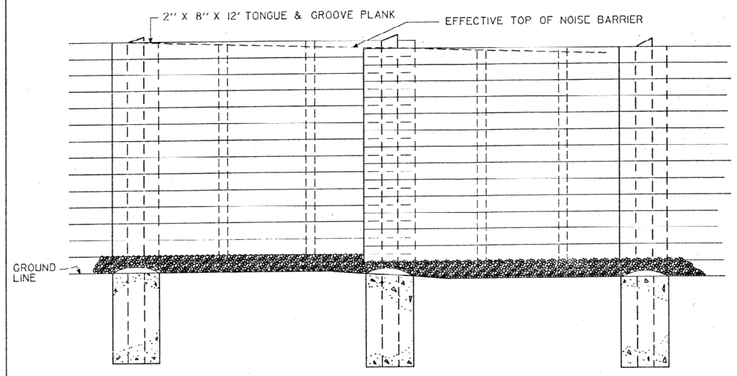
PROJECT NO.: 0048-0200

DRAWING NO.: STR-23

SHEET NO.: 04.23

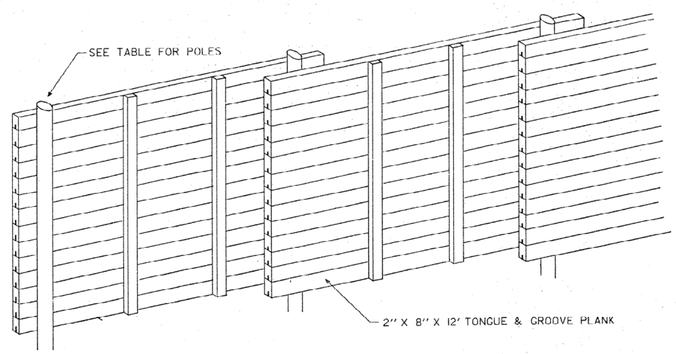
LASTED SAVED BY: ADA 036 **FILE NAME:** K:\CT_Projects\0048-0200\Bridge\Contract_Plans\HW_CP_0048_0200_WINGWALL DETAILS.dgn
PLOTTED DATE: 7/10/2025

F.H.W.A. REGION NO.	STATE	TOWN	FED. AID PROJ. NO.	PROJ. NO.	YEAR	ROUTE NO.	SHEET NO.	TOTAL SHEETS
1	CONN.							

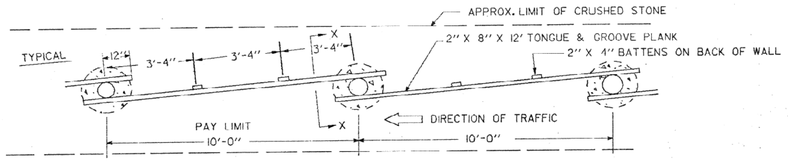


ELEVATION

AT END POLES, PLANKS TO BE NAILED TO THE FRONT SIDE OF POLE.



ISOMETRIC VIEW - SIDE AWAY FROM HIGHWAY



PLAN VIEW

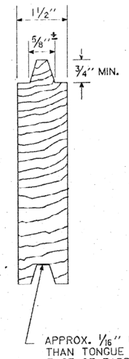


TABLE - PIER DEPTH-"D"-FT. (GRANULAR SOIL ONLY)

WALL HGT. "H"	POLE DIA. AT TOP OF PIER	MIN. ALLOWABLE DIA. AT TOP OF POLE	PIER DEPTH "D"		
			CASE # 1	CASE # 2	CASE # 3
6'	7"	5.5"	4'	6'	6'
8'	8"	6"	5'	6'	7'
10'	9"	6.5"	5'	7'	8'
12'	10"	7"	6'	8'	9'
14'	11"	7.5"	7'	9'	10'
16'	12"	8"	7'	10'	10'
18'	13"	8.5"	8'	10'	11'
20'	14"	9"	8'	11'	12'
22'	15"	9.5"	9'	12'	12'

CASE #1 FLAT SURFACE WITH WATER TABLE BELOW BOTTOM OF HOLE.
CASE #2 FLAT SURFACE WITH WATER TABLE ABOVE BOTTOM OF HOLE.
CASE #3 A SIDE SLOPE OF 2 : 1 WITH WATER TABLE BELOW BOTTOM OF HOLE.

1. CONCRETE SHALL BE CLASS "A" IN CONFORMANCE WITH SECTION 6.01.

2. LUMBER & POLES
ALL LUMBER SHALL BE NO. 1KD OR BETTER SOUTHERN YELLOW PINE OR DOUGLAS FIR-LARCH, SURFACED FOUR SIDES. ALL LUMBER AND POLES SHALL BE COMMERCIALLY INSPECTED BY AN INDEPENDENT COMPANY. ALL CCA TREATED LUMBER AND POLES SHALL BE KILN DRIED TO 15% MOISTURE CONTENT AFTER TREATMENT. POLES TO BE SOUTHERN YELLOW PINE OR DOUGLAS FIR CONFORMING TO AWPB CP-88.

3. TREATING SPECIFICATIONS
TWO TYPES OF TREATMENT ARE ACCEPTABLE:
A: CCA IN ACCORDANCE WITH AWPA P-5
B: PENTACHLOROPHENOL IN ACCORDANCE WITH AWPA P-9, TYPE B (L.P.G.)
ALL MATERIAL SHALL HAVE A MINIMUM TREATMENT AS FOLLOWS:
PENTACHLOROPHENOL 0.50 LBS. PER CU. FT.
CCA 0.40 LBS. PER CU. FT.
CCA (POLES) 0.60 LBS. PER CU. FT.
TREATMENT TO CONFORM TO AWPA C-2 FOR PLANK, PANELS, BATTENS AND AWPA C-4 FOR POLES.
ALL MATERIAL SHALL BE PROTECTED FROM WEATHER UNTIL INSTALLED.

4. THE PLANK ENDS SHALL BE IN A VERTICAL STRAIGHT LINE AND ALL PLANKS SHALL FIT TIGHTLY AT THE TIME OF INSTALLATION. ANY PLANK WHICH DOES NOT FIT TIGHTLY SHALL BE REJECTED.

5. FIELD CUTS AND HOLES SHALL BE TREATED IN ACCORDANCE WITH AWPA M4.

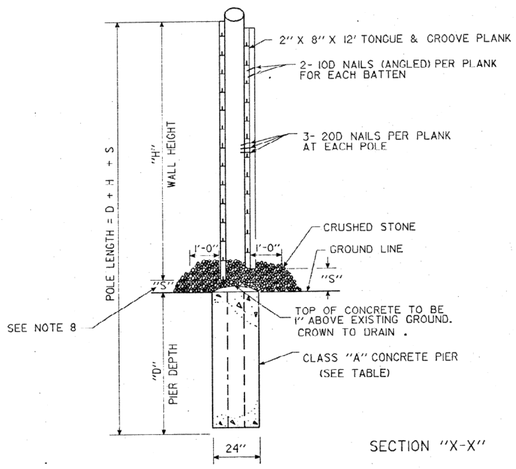
6. STAIN - PENETRATING EXTERIOR OIL BASE SEMI-TRANSPARENT STAIN COMPATIBLE WITH THE PRESERVATIVE TREATMENT. (COLOR SHALL BE GREEN UNLESS OTHERWISE NOTED ON THE PLAN)

7. ALL METAL SHALL BE STAINLESS STEEL TYPE 304 OR 316. 20D NAILS SHALL BE A MINIMUM DIAMETER OF .190 INCHES AND SHALL BE A MINIMUM OF 4 INCHES LONG. 10D NAILS SHALL HAVE A MINIMUM DIAMETER OF .145 INCHES AND SHALL BE A MINIMUM OF 2¾" INCHES LONG. ALL NAILS SHALL BE RINGSHANKED. LAG BOLTS SHALL BE ¼" DIAMETER X 4" LONG.

8. THE CRUSHED STONE SHALL CONFORM TO ARTICLE M.01.01. PLACED TO A MIN. DEPTH OF 2" ABOVE THE BOTTOM OF THE PANEL PLANKS. "S" SHALL BE A MINIMUM OF 2".

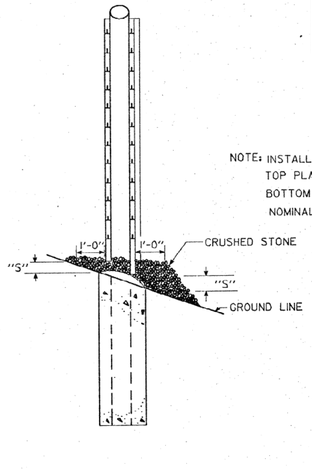
TEST CERTIFICATION REQUIRED - REF. ARTICLE 1.06.07	
CERTIFIED TEST REPORT	MATERIAL CERTIFICATE
LUMBER & POLES	
TREATMENT	

A CERTIFICATE OF COMPLIANCE IS ALSO REQUIRED ON THE ABOVE ITEMS.



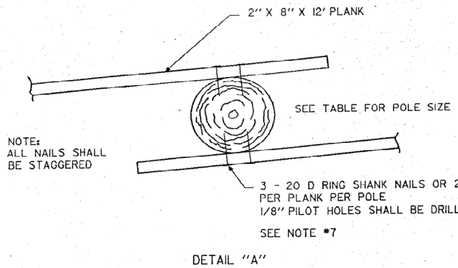
SECTION "X-X"

INSTALLED ON LEVEL GROUND

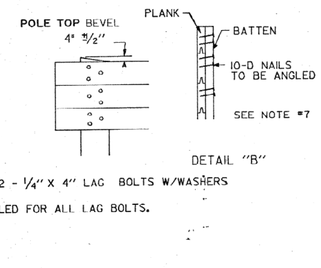


INSTALLED ON SLOPE

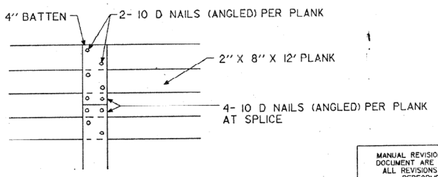
NOTE: INSTALL PLANKS **WITH TONGUE UP.**
TOP PLANK SHALL NOT HAVE TONGUE.
BOTTOM PLANK MAY HAVE GROOVE.
NOMINAL LUMBER DIMENSIONS WILL BE SATISFACTORY.



DETAIL "A"



DETAIL "B"



MANUAL REVISIONS TO THIS DOCUMENT ARE PROHIBITED. ALL REVISIONS MUST BE PERFORMED ON
Cadd File: 0SA2d200.2003964A.DGN

CONNECTICUT DOT — COMPUTER AIDED DESIGN — OFFICE OF ENGINEERING

STANDARD SHEET
CONN. DEPT. OF TRANSPORTATION

TIMBER NOISE BARRIER WALL
TYPE 1

REVISIONS			Designed by: T.MCMAHON	Date: 9-81
NO.	DATE	DESCRIPTION	Drafted by: S.A.ROBERTS	Date: 5-89
			Reviewed by: T.MCMAHON	Date: 6-91
			Approval Rec.: M.SHAW	Date: 6-91
			Approved:	Date: 2-97
			F.H.W.A. Approval:	Date: 9-18-91

Scale: NOT TO SCALE

STANDARD NUMBER 916-A

REVISION DESCRIPTION | DATE | REV.

SIGNATURE BLOCK: ADA — A.DiCesare Associates, P.C., 690 Clinton Avenue, Bridgeport, CT 06604, 203-696-0444, www.adicesarepc.com
DESIGNER/DRAFTER: JGV CHECKED BY: JVS

CTDOT — CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 05585 - INTERSTATE 91 OVER GRAPE BROOK

TOWN(S): ENFIELD

DRAWING TITLE: TIMBER NOISE BARRIER WALL DETAILS

PROJECT NO.: 0048-0200

DRAWING NO.: STR-24

SHEET NO.: 04.24

LASTED SAVED BY: ADA 036 **FILE NAME:** K:\CT_Projects\0048-0200\Bridge\Contract_Plans\HW_CP_0048_0200_EXISTING PLANS.dgn
PLOTTED DATE: 7/9/2025