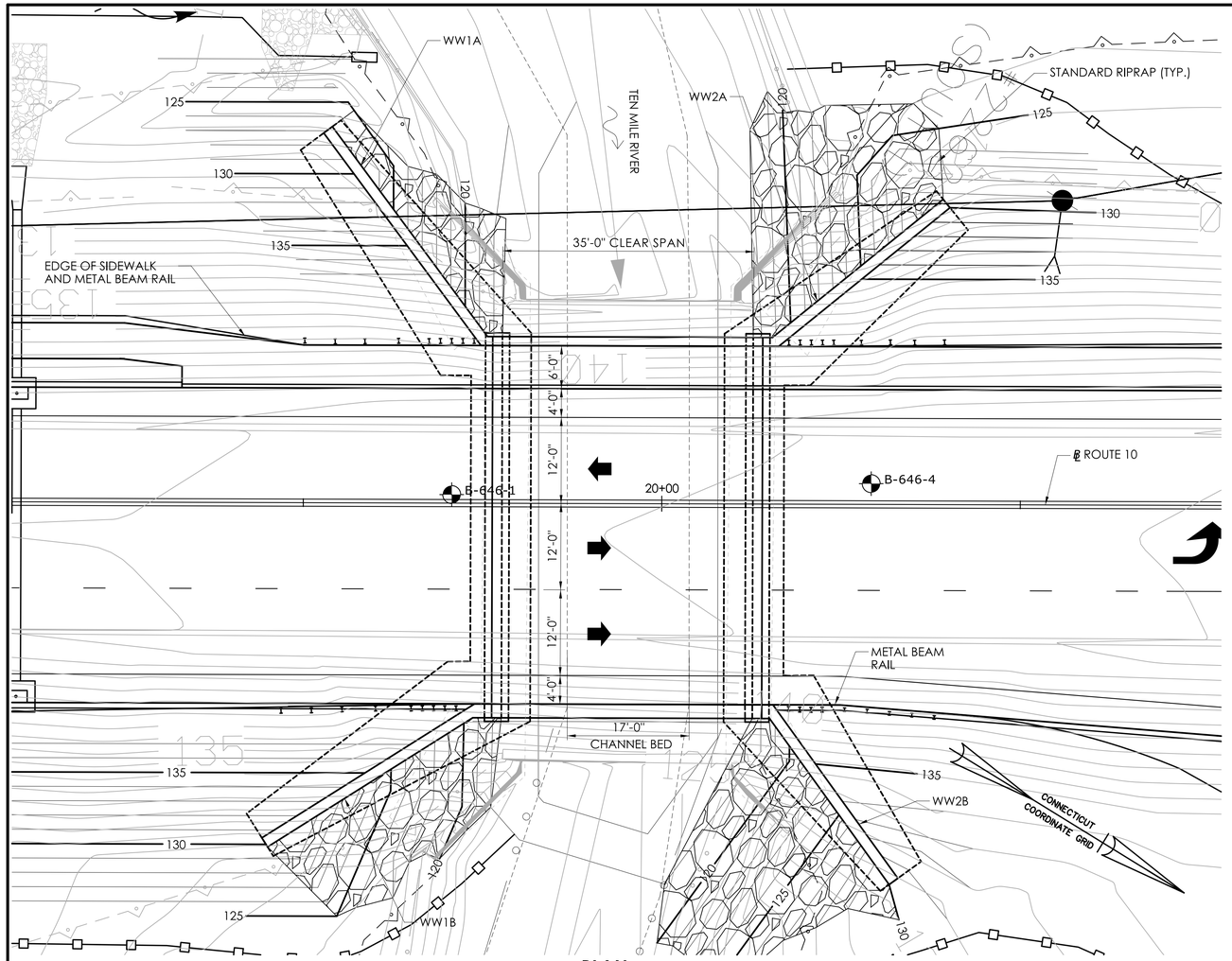
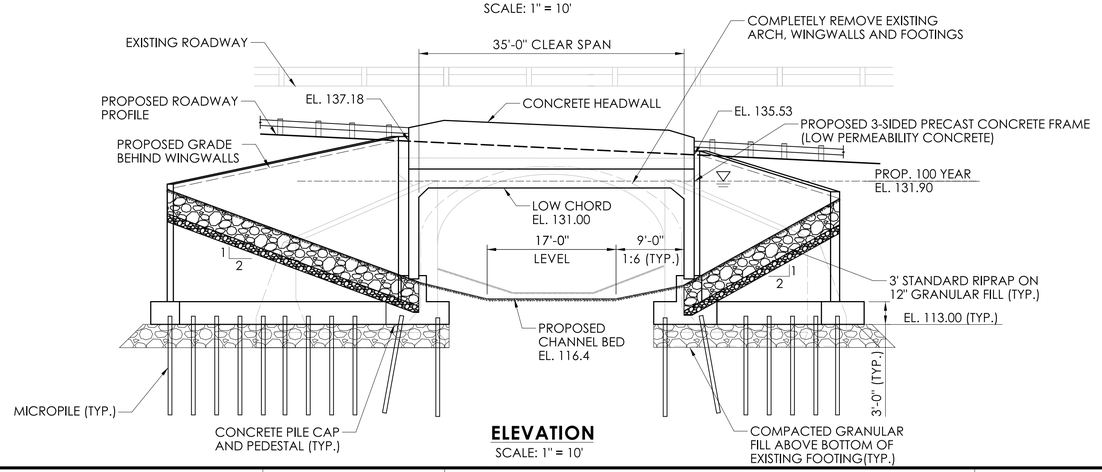


PLAN

SCALE: 1" = 10'



ELEVATION

SCALE: 1" = 10'

HYDRAULIC SUMMARY DATA		
DRAINAGE AREA (MI^2)		
DESIGN FREQUENCY (YEAR)		
DESIGN DISCHARGE (CFS)		
AVERAGE DAILY FLOW ELEVATION (FT)		
100-YR DESIGN WATER SURFACE ELEVATION	DOWNSTREAM	UPSTREAM
MAXIMUM SCOUR ELEVATION (FT)		
WORST CASE SCOUR SUBSTRUCTURE UNIT		

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	STRUCTURE SHEET REFERENCE

GENERAL NOTES:

SPECIFICATIONS: CONNECTICUT DEPARTMENT OF TRANSPORTATION FORM 818 (2020), SUPPLEMENTAL SPECIFICATIONS DATED JULY 2021 AND SPECIAL PROVISIONS.

DESIGN SPECIFICATIONS: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS (9TH EDITION - 2020), AS SUPPLEMENTED BY THE CONNECTICUT DEPARTMENT OF TRANSPORTATION BRIDGE DESIGN MANUAL (2003).

MATERIAL STRENGTHS:
PCC03340.....f'c = 3,000 PSI
PCC04462.....f'c = 4,000 PSI

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

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

LIVE LOAD: HL-93, LEGAL AND PERMIT VEHICLES

FUTURE PAVING ALLOWANCE: NONE

BITUMINOUS CONCRETE OVERLAY: THIS SHALL CONSIST OF 4" HMA S0.5 (IN TWO EQUAL LIFTS) ON 6" HMA S1.0 (IN TWO EQUAL LIFTS)

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

CONCRETE NOTES:

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

ITEM	BRIDGE COMPONENTS	PCC CLASS
FOOTING CONCRETE	RIGID FRAME PEDETALS AND FOOTINGS, WINGWALL FOOTINGS	PCC03340
WINGWALL CONCRETE	WINGWALL STEMS	PCC03340
RIGID FRAME CONCRETE	PRECAST RIGID FRAME SECTIONS	PCC04462
PARAPET CONCRETE	HEADWALLS AND PARAPETS	PCC04462

PENETRATING SEALER : PENETRATING SEALER PROTECTIVE COMPOUND SHALL BE APPLIED TO ALL EXPOSED SURFACES, INCLUDING RAIL BASE, SEE SPECIAL PROVISIONS.

JOINT SEAL: SEE SPECIAL PROVISIONS.

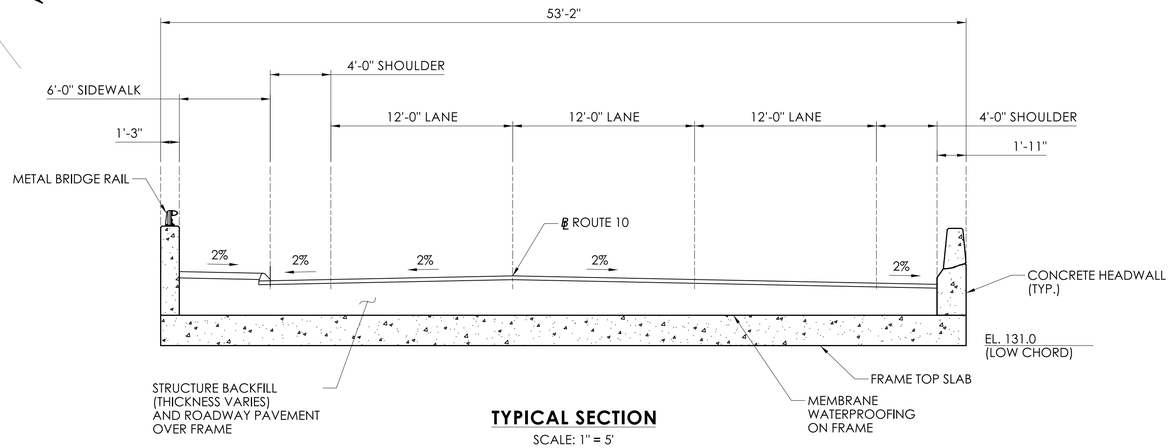
EXPOSED EDGES: EXPOSED EDGES OF CONCRETE SHALL BE BEVELED 1" x 1" UNLESS DIMENSIONS OTHERWISE.

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.

PREFORMED EXPANSION JOINT FILLED: THE COST OF FURNISHING AND INSTALLING PREFORMED EXPANSION JOINT FILLER SHALL BE INCLUDED IN THE COST OF THE ITEM " X" PREFORMED EXPANSION JOINT FILLER FOR BRIDGES."



TYPICAL SECTION

SCALE: 1" = 5'

DESIGNER/DRAFTER: CHECKED BY:

SIGNATURE/
BLOCK:

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

PROJECT NUMBER: 0131-0190
PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NO. 00646 ROUTE 10 OVER THE TEN MILE RIVER
TOWN(S): SOUTHINGTON
DRAWING TITLE: GENERAL PLAN & ELEVATION

DRAWING NO. STR-001
SHEET NO.

LASTED SAVED BY: ECofrancesco **FILE NAME:** J:\DWG\P2005\1059\B52\0131-0190\Bridge\Contract_Plans\SB_CP_Br00646_0131-0190_PLN.dgn
PLOTTED DATE: 1/21/2022

Driller:	B. Perry	**Connecticut DOT Boring Report**		Hole No.:	B-646-1
Inspector:	L. Arno/ M Shuler	Town:	Southington, Connecticut	Stat./Offset:	
Engineer:	Rob Pion	Project No.:	0131-0190	Northing:	766380
Start Date:	6-23-20	Route No.:	10	Easting:	961501
Finish Date:	6-24-20	Bridge No.:	00646	Surface Elevation:	143.6
Project Description:	Bridge 646 Replacement				
Casing Size/Type:	3" HFJ	Sampler Type/Size:	2"SS	Core Barrel Type:	NX
Hammer Wt.:	Fall: in.	Hammer Wt.:	140 Fall: 30in.		
Groundwater Observations:	@41 after 0 hours				

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	50/2"	2	2		Pavement Structure	Dark Gray, c-f SAND, trace f gravel, trace silt.	
	S-2	11 25 26 38	24	15		Gravelly Sand	Red Brown c-f SAND, some m-f gravel, trace silt.	140
5	S-3	14 9 5 7	24	11			Red Brown c-f GRAVEL, and c-f SAND, trace silt.	
10	S-4	8 8 4 3	24	4			Red Brown c-f GRAVEL, and c-f SAND, trace silt.	135
15	S-5	3 1 WOH 1	24	4		Silty Sand	Brown c-f SAND, trace silt.	130
20	S-6	3 3 4 2	24	6			Brown f-c SAND, little silt, trace f gravel.	125
25	S-7	3 5 4 11	24	0			Brown f-c SAND, little silt, trace f gravel.	120
	S-8	14 9 16 18	24	17		Clayey Silt	Red Brown SILTand CLAY (plastic) trace f-c sand	
30	S-9	6 9 11 21	24	8			Red Brown f-c SAND, some (plastic) silt, some clay, trace f gravel.	115
						Silty Sand		
35	S-10	12 15 14 15	24	8			Red Brown f-c SAND, little silt, little c-f gravel, trace clay.	110
						Weathered Bedrock		
40	S-11	50/1"	1	1			Red Brown medium grained, completely weathered sandstone	105
45	S-12	50/2"	2	2			Red Brown medium grained, completely weathered sandstone	100
50	S-13	50/2"	2	2			Red Brown medium grained, completely	95

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: 54ft Rock: 10ft	NOTES: Pavement structure consits of 8" of bituminous concrete pavement on 7" of Portland cement concrete pavement on 24 inches of subbase Rollerbit through cobbles from 8-9' and 28-29' and 32-34', and 44-49'	Sheet 1 of 2
No. of Soil Samples: 14 No. of Core Runs: 2		SM-001-M REV. 1/02

Driller:	B. Perry	**Connecticut DOT Boring Report**		Hole No.:	B-646-1
Inspector:	L. Arno/ M Shuler	Town:	Southington, Connecticut	Stat./Offset:	
Engineer:	Rob Pion	Project No.:	0131-0190	Northing:	766380
Start Date:	6-23-20	Route No.:	10	Easting:	961501
Finish Date:	6-24-20	Bridge No.:	00646	Surface Elevation:	143.6
Project Description:	Bridge 646 Replacement				
Casing Size/Type:	3" HFJ	Sampler Type/Size:	2"SS	Core Barrel Type:	NX
Hammer Wt.:	Fall: in.	Hammer Wt.:	140 Fall: 30in.		
Groundwater Observations:	@41 after 0 hours				

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)
50						Weathered Bedrock *(con't)*	weathered sandstone	
	S-14	50/0	0	0		Bedrock	Red Brown medium grained, completely weathered sandstone	90
55	C-1		60	54	100		Red Brown coarse grained, medium bedded, slightly fractured, slightly weathered sandstone Core times in min/ft: 3.0, 3.0, 2.5, 3.5, 3.0	
60	C-2		60	42.5	71		Red Brown coarse grained, medium bedded, slightly fractured, slightly weathered sandstoone Core times in min/ft: 2.5, 3.5, 3.5, 4.0, 4.0	85
65								80
70							END OF BORING 64ft	75
75								70
80								65
85								60
90								55
95								50
100								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: 54ft Rock: 10ft	NOTES: Pavement structure consits of 8" of bituminous concrete pavement on 7" of Portland cement concrete pavement on 24 inches of subbase Rollerbit through cobbles from 8-9' and 28-29' and 32-34', and 44-49'	Sheet 2 of 2
No. of Soil Samples: 14 No. of Core Runs: 2		SM-001-M REV. 1/02

DESIGNER/DRAFTER: CHECKED BY:

SIGNATURE/ BLOCK:

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

PROJECT NUMBER: 0131-0190
PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NO. 00646 ROUTE 10 OVER THE TEN MILE RIVER
TOWN(S): SOUTHINGTON
DRAWING TITLE: BORING LOGS 1

DRAWING NO. STR-002
SHEET NO.

LASTED SAVED BY: ECofrancesco **FILE NAME:** J:\DWG\P2005\1059\852\0131-0190\Bridge\Contract_Plans\SB_CP_Br00646_0131-0190_BOR1.dgn
PLOTTED DATE: 1/21/2022

Driller:	B. Perry	**Connecticut DOT Boring Report**		Hole No.:	B-646-4
Inspector:	M Shuler/G. Arzt	Town:	Southington, Connecticut	Stat./Offset:	
Engineer:	Rob Pion	Project No.:	0131-0190	Northing:	766429
Start Date:	6-24-20	Route No.:	10	Easting:	961469
Finish Date:	6-25-20	Bridge No.:	00646	Surface Elevation:	144.4
Project Description:	Bridge 646 Replacement				
Casing Size/Type:	3" HFJ, Spun	Sampler Type/Size:	2"SS	Core Barrel Type:	NX
Hammer Wt.:	Fall: in.	Hammer Wt.:	140 Fall: 30in.		
Groundwater Observations:	@23.0833 after 0 hours, @22 after 24+ hours				

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						Pavement Stucture	Dark Brown c-f GRAVEL, some c-f sand, trace silt (subbase).	
	S-1	14 21 19 22	24	7		Gravelly Sand		
5	S-2	2 16 40 20	24	12			Red Brown c-f SAND and c-f GRAVEL, trace silt.	140
						Silty Sand		
10	S-3	7 11 7 3	24	2			Brown c-f SAND, trace silt.	135
	S-4	1 1 1 17	24	9		Gravelly Sand	Brown c-f SAND, trace gravel, trace silt.	130
15								
	S-5	7 9 10 11	24	10			Black Brown c-f GRAVEL, some c-f sand, trace silt.	125
20								
	S-6	9 8 5 4	24	6			Brown c-f SAND, some c-f gravel, trace silt (strong voc odor).	120
25								
	S-7	14 15 25 26	24	.5			Brown piece m GRAVEL.	115
30	S-8	40 46 41 53/5	23	7			Red Brown c-f SAND, some m-f gravel, trace silt.	
						Weathered Bedrock		
35	C-1		60	57	55		Red Brown medium grained, medium bedded, moderately fractured, moderately weathered sandstone Core times in min/ft: 2.5, 3.5, 3.0, 5.0, 3.5	110
	S-9	20/1	1	1			Red Brown c-f SAND, trace silt.	
40	C-2		54	41	43		Red Brown medium grained, medium bedded, moderately fractured, highly weathered sandstone Core times in min/ft: 4.0, 2.5, 3.0, 2.0, 1.5	105
	S-10	11 20 50/2	14	12				
45	C-3		60	59	74		Red Brown medium grained, medium bedded, moderately fractured, highly weathered sandstone Core times in min/ft: 4.0, 2.5, 3.0, 2.0, 1.5	100
50		50/5	5	5			Red Brown medium grained, medium bedded,	95

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	NOTES:	Sheet
Earth: 33.5ft Rock: 25.9ft		1 of 2
No. of Soil Samples: 12 No. of Core Runs: 5		SM-001-M REV. 1/02

Driller:	B. Perry	**Connecticut DOT Boring Report**		Hole No.:	B-646-4
Inspector:	M Shuler/G. Arzt	Town:	Southington, Connecticut	Stat./Offset:	
Engineer:	Rob Pion	Project No.:	0131-0190	Northing:	766429
Start Date:	6-24-20	Route No.:	10	Easting:	961469
Finish Date:	6-25-20	Bridge No.:	00646	Surface Elevation:	144.4
Project Description:	Bridge 646 Replacement				
Casing Size/Type:	3" HFJ, Spun	Sampler Type/Size:	2"SS	Core Barrel Type:	NX
Hammer Wt.:	Fall: in.	Hammer Wt.:	140 Fall: 30in.		
Groundwater Observations:	@23.0833 after 0 hours, @22 after 24+ hours				

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)
50	S-11					Weathered Bedrock *(con't)*	slightly fractured, highly weathered sandstone Core times in min/ft: 2.0, 2.0, 2.0, 2.5, 2.5	
	C-4		60	54	81		Red Brown medium grained, medium bedded, slightly fractured, highly weathered sandstone	
55	S-12	13 50/2	8	13			Red Brown coarse grained, massive bedded, slightly fractured, highly weathered sandstone.	90
	C-5		60	60	100		Core times in min/ft: 3.0, 3.0, 3.0, 3.0, 3.5	
						Bedrock	Red Brown coarse grained, massive bedded, slightly fractured, highly weathered sandstone	
60							Red Brown coarse grained, massive bedded, unfractured, slightly weathered sandstone Core times in min/ft: 2.5, 2.5, 3.5, 3.0, 4.0	85
65							END OF BORING 59.42ft	80
70								75
75								70
80								65
85								60
90								55
95								50
100								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	NOTES:	Sheet
Earth: 33.5ft Rock: 25.9ft		2 of 2
No. of Soil Samples: 12 No. of Core Runs: 5		SM-001-M REV. 1/02

DESIGNER/DRAFTER: CHECKED BY:

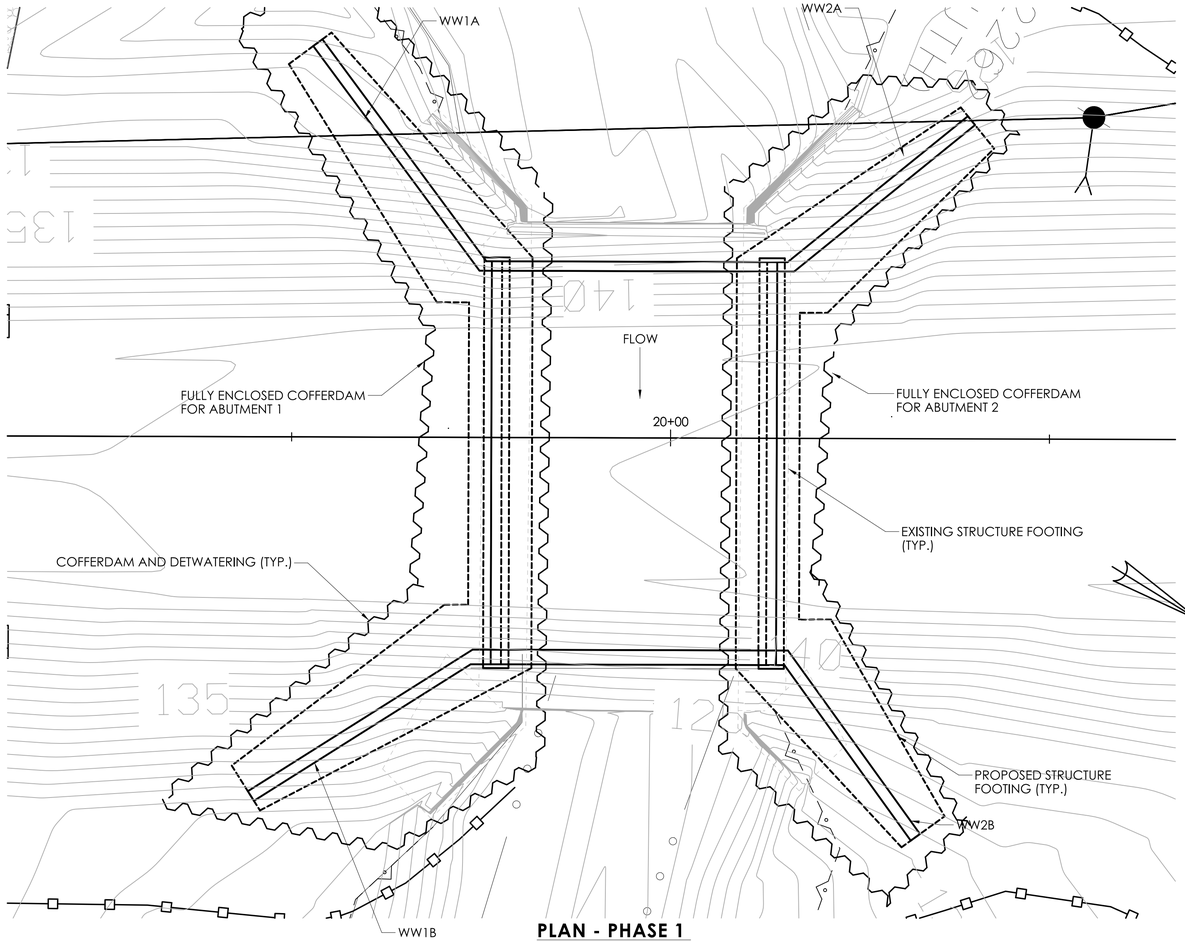
SIGNATURE/ BLOCK:

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

PROJECT NUMBER: 0131-0190
PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NO. 00646 ROUTE 10 OVER THE TEN MILE RIVER
TOWN(S): SOUTHINGTON
DRAWING TITLE: BORING LOGS 2

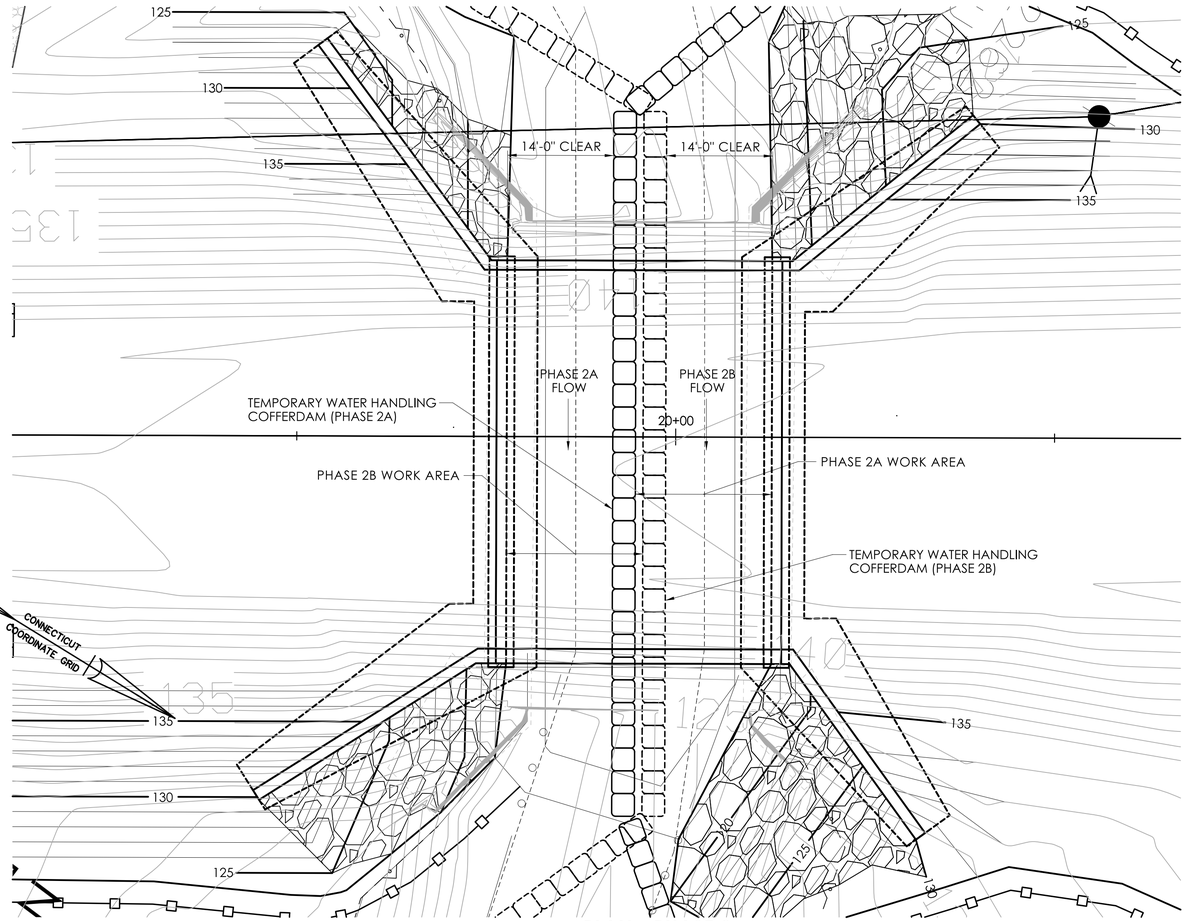
DRAWING NO. STR-003
SHEET NO.

LASTED SAVED BY: ECofrancesco **FILE NAME:** J:\DWG\P2005\1059\B52\0131-0190\Bridge\Contract_Plans\SB_CP_Br00646_0131-0190_BOR2.dgn
PLOTTED DATE: 1/21/2022



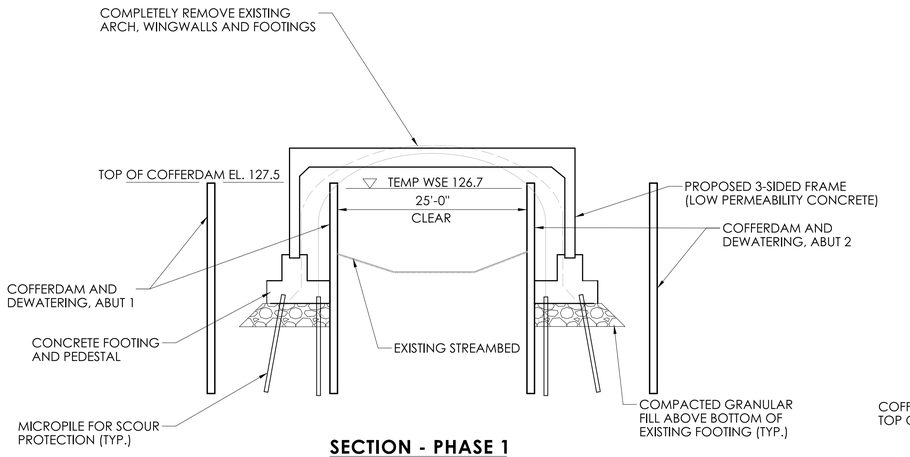
PLAN - PHASE 1
BRIDGE RECONSTRUCTION

SCALE: 1" = 10'



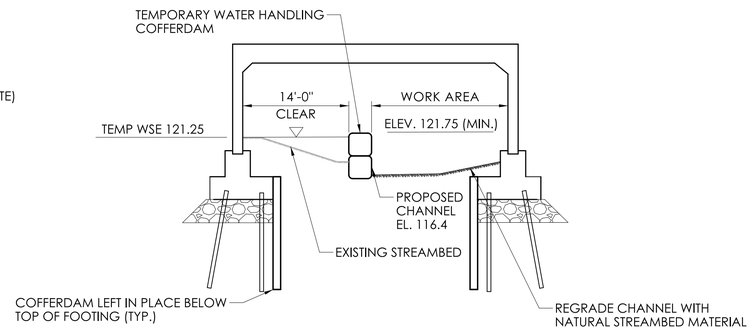
PLAN - PHASE 2
CHANNEL RECONSTRUCTION

SCALE: 1" = 10'



SECTION - PHASE 1

SCALE: 1" = 10'



SECTION - PHASE 2A (PHASE 2B SIMILAR)

SCALE: 1" = 10'

NOTES:

1. SEE SPECIAL PROVISIONS, ITEM #0204101A - COFFERDAM AND DEWATERING.
2. COFFERDAM LAYOUT AND TYPE SHOWN SCHEMATICALLY ONLY, FINAL DESIGN TO BE PROVIDED BY THE CONTRACTOR.
3. A MINIMUM TEMPORARY HYDRAULIC OPENING OF 25' DURING PHASE 1 AND 14' DURING PHASE 2 SHALL BE MAINTAINED AT ALL TIMES, AS SHOWN ON THE PLANS.

SUGGESTED SEQUENCE:

1. EXCAVATE AND DEMOLISH EXISTING STRUCTURE TO ELEVATION REQUIRED FOR COFFERDAM INSTALLATION.
2. INSTALL FULLY ENCLOSED COFFERDAM SYSTEMS AROUND THE EXISTING STRUCTURE FOUNDATIONS.
3. COMPLETE DEMOLITION OF EXISTING STRUCTURE.
4. INSTALL PROPOSED MICROPILES, FOOTINGS AND PEDESTALS. INSTALL PRECAST RIGID FRAME SECTIONS AND WINGWALLS.
5. REMOVE ALL SECTIONS OF COFFERDAM WHICH ARE ACCESSIBLE OUTSIDE OF RIGID FRAME. COFFERDAM SECTIONS UNDERNEATH THE RIGID FRAME MAY CUT OFF AND LEFT IN PLACE BELOW THE TOP OF FOOTINGS.
6. INSTALL BULK BAG COFFERDAM ALONG CENTER OF RIVER, MAINTAINING A MINIMUM HYDRAULIC WIDTH OF 14' AS SHOWN ON THE PLANS. PERFORM CHANNEL RECONSTRUCTION AND GRADING INSIDE COFFERDAM.
7. RELOCATE BULK BAGS TO RECONSTRUCTED SIDE AND PERFORM BED RECONSTRUCTION AND GRADING ON OPPOSITE SIDE.
8. REMOVE BULK BAG COFFERDAM.

DESIGNER/DRAFTER: CHECKED BY:

SIGNATURE/ BLOCK:

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

PROJECT NUMBER: 0131-0190
PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NO. 00646 ROUTE 10 OVER THE TEN MILE RIVER
TOWN(S): SOUTHINGTON
DRAWING TITLE: WATER HANDLING PLAN

DRAWING NO. STR-004
SHEET NO.

LASTED SAVED BY: ECofrancesco **FILE NAME:** J:\DWG\P2005\1059\B52\0131-0190\Bridge\Contract_Plans\SB_CP_Br00646_0131-0190_WHP.dgn
PLOTTED DATE: 1/21/2022