

ENSIGN POND ROAD (COUNTY ROUTE 4) BRIDGE OVER MILL BROOK CULVERT REPLACEMENT

TOWN OF MORIAH
ESSEX COUNTY, NEW YORK
BIN 3372000, PIN 1762.14, D040666

PREPARED FOR:
ESSEX COUNTY DEPARTMENT OF PUBLIC WORKS
8053 U.S. ROUTE 9
ELIZABETHTOWN, NY 12932

THE LATEST REVISIONS OF THE NYS DOT STANDARD SHEETS MAINTAINED BY THE DEPARTMENT, WHICH ARE CURRENT ON THE DATE OF ADVERTISEMENT FOR BIDS, SHALL BE CONSIDERED TO BE IN EFFECT. ALL PAY ITEMS AND WORK CONTAINED IN THE CONTRACT AND ANY ADDITIONAL PAY ITEMS AND WORK ENCOUNTERED DURING THE COURSE OF THE CONTRACT SHALL BE SUBJECT TO THE APPLICABLE STANDARD SHEETS UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS.

ALL WORK CONTEMPLATED UNDER THIS CONTRACT IS TO BE COVERED BY AND IN CONFORMITY WITH THE NYS DOT STANDARD SPECIFICATIONS (AS CUSTOMARY) MAINTAINED BY THE DEPARTMENT WHICH ARE CURRENT ON THE DATE OF ADVERTISEMENT FOR BIDS EXCEPT AS MODIFIED BY THESE PLANS OR BY CHANGES SET FORTH IN THE CONTRACT DOCUMENTS.

CONTRACT PLANS HAVE BEEN DESIGNED IN ACCORDANCE WITH NYS DOT POLICIES AND GUIDELINES AND THE FINAL DESIGN REPORT APPROVED ON 08/18/2023.

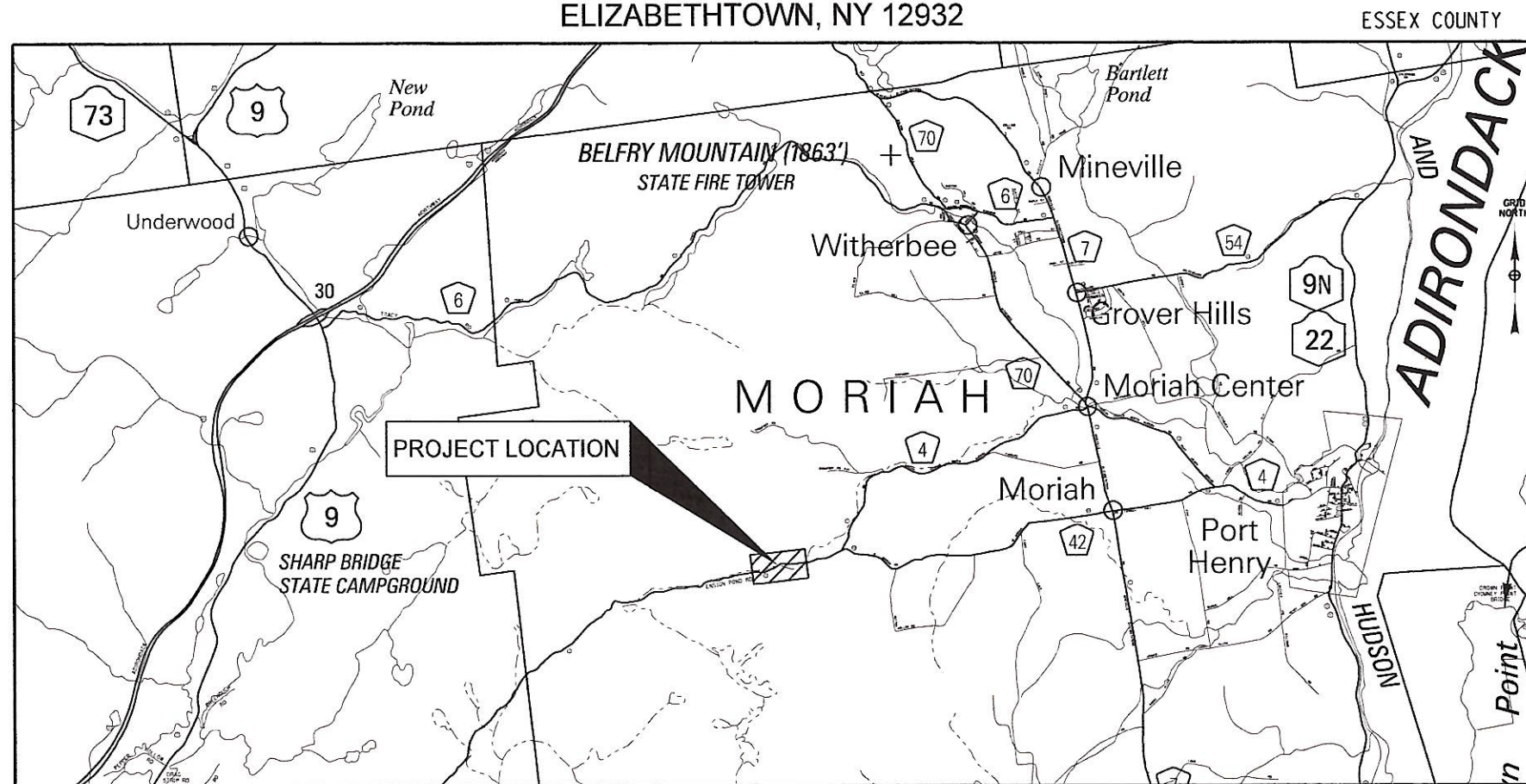
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

PROJECT DESCRIPTION

REPLACEMENT OF THE ENSIGN POND ROAD OVER MILL BROOK CULVERT AND ASSOCIATED HIGHWAY APPROACH RECONSTRUCTION AND ROADSIDE APPURTENANCES.

CONTRACT LIMITS

APPROXIMATELY 100 FT IN ALL DIRECTIONS OF CULVERT.



PROJECT LOCATION

PROJECT MANAGER C. TUTUNJIAN

CHECKED BY I. PENGU

DRAFTED BY D. RAFFERTY

CHECKED BY Z. PORTER

DESIGNED BY I. PENGU

PREPARED AND RECOMMENDED BY:

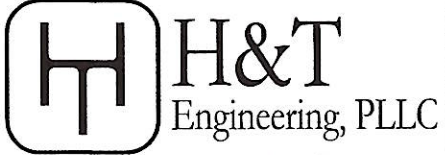


CHARLES TUTUNJIAN
LIC. NO. 074258

PREPARED & RECOMMENDED BY

CHARLES TUTUNJIAN, P.E.
H&T ENGINEERING SERVICES, PLLC.

2/22/24
DATE

			
11 Arch St, Watervliet, NY 12189 888-379-1527			
ENSIGN POND ROAD BRIDGE			
OVER MILL BROOK			
CULVERT REPLACEMENT			
BIN 3372000, PIN 1762.14			
SHEET NO.	TOTAL SHEETS	H&T#	22-055
1	31		DATE: 02/2024

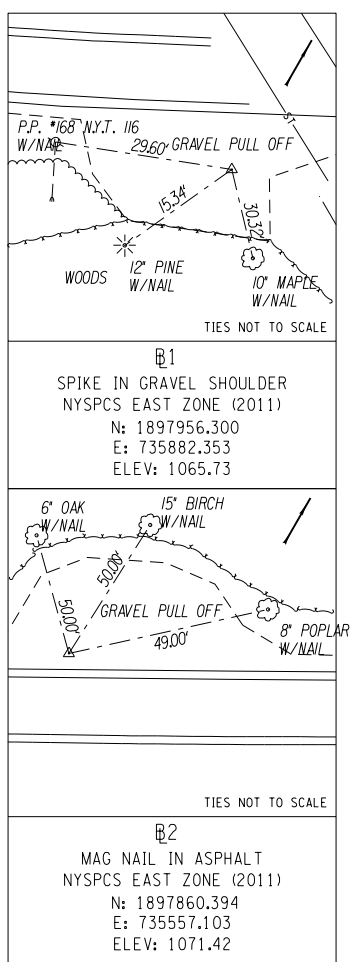
PROJECT MANAGER: C. TUTUNJIAN
 CHECKED BY: I. PENGU
 DRAFTED BY: D. RAFFERTY
 CHECKED BY: Z. PORTER
 DESIGNED BY: I. PENGU

ENSIGN POND ROAD (CR4) PLAN INDEX

SHEET NO.	DESCRIPTION	DRAWING NO.
1	COVER	COV
2	INDEX AND ESTIMATE	IA-1
3	LEGEND POINT SYMBOLOLOGY	LE-1
4	LEGEND LINE SYMBOLOLOGY	LE-2
5	GENERAL NOTES	GN-1
6	WORK ZONE TRAFFIC CONTROL - 1	WZTC-1
7	WORK ZONE TRAFFIC CONTROL - 2	WZTC-2
8	GENERAL PLAN AND ELEVATION	ST-1
9	TYPICAL SECTIONS	ST-2
10	PROFILE	ST-3
11	EARTHWORK AND EROSION CONTROL PLAN	ST-4
12	EARTHWORK SECTIONS	ST-5
13	BEGIN ABUTMENT PLAN AND ELEVATION	ST-6
14	BEGIN ABUTMENT REINFORCEMENT PLAN	ST-7
15	END ABUTMENT PLAN AND ELEVATION	ST-8
16	END ABUTMENT REINFORCEMENT PLAN	ST-9
17	BEGIN ABUTMENT SHEET PILE PLAN AND ELEVATION	ST-10
18	END ABUTMENT SHEET PILE PLAN AND ELEVATION	ST-11
19	BEARING PLAN AND SECTIONS	ST-12
20	BEARING DETAILS	ST-13
21	BRIDGE TRANSVERSE SECTION	ST-14
22	FRAMING PLAN	ST-15
23	PRECAST BEAM PLAN AND REINFORCEMENT DETAILS	ST-16
24	PRECAST BEAM DETAILS	ST-17
25	CAMBER AND DESIGN LOAD TABLES	ST-18
26	SUPERSTRUCTURE SLAB REINFORCEMENT PLAN	ST-19
27	APPROACH SLAB PLAN AND DETAILS	ST-20
28	RAILING PLAN AND DETAILS	ST-21
29	BRIDGE RAIL DETAILS	ST-22
30	TRANSITION RAIL PLAN, ELEVATION, AND DETAILS	ST-23
31	TRANSITION RAIL DETAILS - 1	ST-24

ENSIGN POND ROAD (CR4) PLAN ESTIMATE OF QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY	FINAL QUANTITY
201.06	CLEARING AND GRUBBING	LS	1	
203.02	UNCLASSIFIED EXCAVATION AND DISPOSAL	CY	932	
203.03	EMBANKMENT IN PLACE	CY	287	
203.21	SELECT STRUCTURE FILL	CY	166	
203.24010017	SHOULDER BACKUP MATERIAL	TON	21	
206.01	STRUCTURE EXCAVATION	CY	724	
206.0201	TRENCH AND CULVERT EXCAVATION	CY	87	
207.26	PREFABRICATED COMPOSITE STRUCTURAL DRAIN	SY	67	
209.13	SILT FENCE-TEMPORARY	LF	531	
209.1501	TURBIDITY CURTAIN - TEMPORARY	LF	53	
304.12	SUBBASE COURSE, TYPE 2	CY	225	
404.098301	9.5 F3 TOP COURSE ASPHALT, 80 SERIES COMPACTION	TON	36	
404.198901	19 F9 BINDER COURSE ASPHALT, 80 SERIES COMPACTION	TON	63	
404.378901	37.5 F9 BASE COURSE ASPHALT, 80 SERIES COMPACTION	TON	77	
407.0102	DILUTED TACK COAT	GAL	52	
552.11	PERMANENT STEEL SHEETING	SF	1335	
553.020001	COFFERDAMS (TYPE 2)	EACH	1	
553.020002	COFFERDAMS (TYPE 2)	EACH	1	
555.08	FOOTING CONCRETE, CLASS HP	CY	61	
555.09	CONCRETE FOR STRUCTURES, CLASS HP	CY	82	
556.0201	UNCOATED BAR REINFORCEMENT FOR CONCRETE STRUCTURES	LB	3444	
556.0202	EPOXY-COATED BAR REINFORCEMENT FOR STRUCTURES	LB	4812	
557.0501	SUPERSTRUCTURE SLAB WITH INTEGRAL WEARING SURFACE - BOTTOMFORMWORK NOT REQUIRED - TYPE 1 FRICTION	SY	139	
557.2002	STRUCTURAL APPROACH SLAB WITH INTEGRAL WEARING SURFACE - TYPE 2 FRICTION	SY	106	
557.29	WINTER SURFACE TREATMENT - SUPERSTRUCTURE SLABS AND STRUCTURAL APPROACH SLABS	SY	244	
558.02	LONGITUDINAL SAWCUT GROOVING OF STRUCTURAL SLAB SURFACE	SY	229	
559.01	PROTECTIVE SEALING OF STRUCTURAL CONCRETE ON NEW BRIDGE, DECKS AND BRIDGE DECK OVERLAYS	SF	1187	
559.02	PROTECTIVE SEALING OF NEW STRUCTURAL CONCRETE	SF	951	
563.03	PRESTRESSED CONCRETE HOLLOW SLAB UNITS	SF	1135	
565.1921	TYPE E.L. BEARING (0 TO 55 KIPS)	EACH	14	
568.51	STEEL BRIDGE RAILING (FOUR RAIL)	LF	100	
568.70	TRANSITION BRIDGE RAILING	LF	128	
606.120201	BOX BEAM GUIDE RAILING END ASSEMBLY, TYPE IIA	EACH	4	
610.1605	TURF ESTABLISHMENT PERFORMANCE	SY	192	
619.01	BASIC WORK ZONE TRAFFIC CONTROL	LS	1	
620.29010008	NATIVE/IMPORTED STREAM AND UPLAND BOULDERS (LARGE)	CY	129	
620.29010009	NATIVE STREAM BED MATERIAL (A)	CY	46	
625.01	SURVEY OPERATIONS	LS	1	
646.22	DELINEATOR, SNOWPLOWING MARKER, SUPPLEMENTARYSNOWPLOWING MARKER PANELS	EACH	6	
646.32	STEEL POST, 2.0 LB/FT	EACH	4	
697.03	FIELD CHANGE PAYMENT	DC	41940	
698.04	ASPHALT PRICE ADJUSTMENT	DC	100	
698.05	FUEL PRICE ADJUSTMENT	DC	100	
698.06	STEEL/IRON PRICE ADJUSTMENT	DC	100	
699.040001	MOBILIZATION	LS	1	



BASELINE TIES

TABLE OF HORIZONTAL ALIGNMENT				
POINT	STATION	CURVE DATA	COORDINATE	
			NORTH	EAST
POB	E 2+00.00		1897928.85	735771.38
		AZ 67°37'06.7" LENGTH = 34.0		
PC	E 2+33.98		1897941.80	735802.79
PI	E 2+62.90		1897952.83	735829.55
		RADIUS = 650 FT DELTA = 5°05'55.2" LENGTH = 57.84 FT TANGENT = 28.94 FT		
PT	E 2+91.82		1897966.18	735855.22
		AZ 62°30'29" LENGTH = 49.73		
PC	E 3+41.55		1897989.14	735899.33
PI	E 3+63.44		1897999.25	735918.76
		RADIUS = 450 FT DELTA = 5°34'22.7" LENGTH = 43.77 FT TANGENT = 21.90 FT		
PT/PC	E 3+85.32		1898011.20	735937.12
PI	E 4+38.63		1898040.30	735981.81
		RADIUS = 1320 FT DELTA = 4°38'22.4" LENGTH = 106.89 FT TANGENT = 53.47 FT		
PT	E 4+92.21		1898073.10	736024.22
		AZ 51°56'40.1" LENGTH = 7.79		
POE	E 5+00.00		1898077.90	736030.36

AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:	ENSIGN POND RD (CR4) BRIDGE OVER MILL BROOK	PIN 1762.14	BRIDGES BIN 3372000	CULVERTS	ALL DIMENSIONS IN FT UNLESS OTHERWISE NOTED	CONTRACT NUMBER D040666
	CULVERT REPLACEMENT PROJECT					INDEX AND ESTIMATE
	TOWN OF MORIAH					
	COUNTY: ESSEX	REGION: 1				

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

+

PROJECT MANAGER C. TUTUNJIAN

CHECKED BY I. PENGU

DRAFTED BY D. RAFFERTY

CHECKED BY Z. PORTER

DESIGNED BY I. PENGU

+

ALIGNMENT			DRAINAGE			ITS			ROW MAPPING			SIGNS			UTILITIES								
CELL	NAME	DESCRIPTION	CELL	NAME	DESCRIPTION	CELL	NAME	DESCRIPTION	CELL	NAME	DESCRIPTION	CELL	NAME	DESCRIPTION	CELL	NAME	DESCRIPTION						
⊗	ACC	CENTER OF CURVATURE	+	DINV	INVERT	⊕	IANT_P	ANTENNAS	⊕	MDL1P	DEED LINE, TYPE 1	⊕	S	SINGLE POST	⊕	UEB	ELECTRIC, BOX						
+	ACOGO	COGO	▨	DS	STRUCTURE, RECTANGULAR	⊕	IASCTS	ACCOU. SPEED/COUNT SNSR.S	⊕	MDL2P	DEED LINE, TYPE 2	⊕	S.P	SINGLE POST, PROPOSED	⊕	UEM	ELECTRIC, METER						
⊙	ACS	CURVE TO SPIRAL	+	DSI	STRUCTURE, INVERT	⊕	ICABPAD	CABINET & PAD	⊕	MDL3P	DEED LINE, TYPE 3	⊕	SB.P	BACK TO BACK, PROPOSED	⊕	UEMH	ELECTRIC, MANHOLE						
△	ADPL_P	DETOUR, POINT OF INTERSECT.	⊕	DSM	STRUCTURE, MANHOLE	⊕	ICCTV	CCTV SITE	⊕	MDL4P	DEED LINE, TYPE 4	⊕	SDEL	DELINEATORS	⊕	UEPT	ELECTRIC, POLE, TRANS.						
⊙	ADPL_P	DETOUR, POINT ON LINE	⊕	DSMTXX_P	STRUCTURE, MANHOLE, TYPE "XX" "XX" = 48, 60, 72, 96	⊕	ICDPD	CDPD TRANSCEIVER	⊕	MDL5P	DEED LINE, TYPE 5	⊕	SPM	PARKING METER	⊕	UGM	GAS, METER						
⊙	AEQN	EQUATION	⊕	DSR	STRUCTURE, ROUND	⊕	ICELLT	CELL PHONE TOWER	⊕	MEEP	EASEMENT, EXISTING	⊕	SRM	REFERENCE MARKERS	⊕	UGMH	GAS, MANHOLE						
⊕	AEQNAHD	EQUATION AHEAD	⊕	DST"x"CB_P	STRUCTURE, RECT., WITH CURB TYPE "X" "X" = F, G, N, O, P, R	⊕	ICJB	CONDUIT JACK OR BORING	⊕	MEPAP_P	EASEMENT, PERM., APPROX.	⊕	SRSC3	SHLD, CTY, 123 DIG.	⊕	UGLM	GAS, LINE MARKER						
⊕	AEQNBK	EQUATION BACK	⊕	DST"x"CB_P	STRUCTURE, RECT., WITH CURB TYPE "X" "X" = F, G, N, O, P, R	⊕	ICNTLCAB	CONTROLLER CABINET	⊕	MEPP_P	EASEMENT, PERM., BACK LINE	⊕	SRSC4	SHLD, CTY, 4 DIG.	⊕	UGP	GAS/FUEL PUMP						
⊙	AEVT	EVENT STATION	⊕	DST"x"CB_P	STRUCTURE, RECT., WITH CURB TYPE "X" "X" = F, G, N, O, P, R	⊕	ICPB	COMMUNICATION PULL BOX	⊕	MEPSP_P	EASEMENT, PERM., SHAPE	⊕	SRSC2	SHLD, CTY TOUR, 1-2 DIG.	⊕	UGV	GAS, VALVE						
⊙	APC	POINT OF CURVATURE	⊕	DST"x"CB_P	STRUCTURE, RECT., WITH CURB TYPE "X" "X" = F, G, N, O, P, R	⊕	ICTD	CONDUIT TURNING DOWN	⊕	MFBP_P	FEE ACQUISITION, APPROX.	⊕	SRSC4	SHLD, CTY TOUR, 3-4 DIG.	⊕	UGVT	GAS, VENT						
⊙	APCC	POINT OF COMPOUND CURVATURE	⊕	DST"x"CB_P	STRUCTURE, RECT., WITH CURB TYPE "X" "X" = F, G, N, O, P, R	⊕	ICTU	CONDUIT TURNING UP	⊕	MFP_P	FEE ACQUISITION, BACK LINE	⊕	SRS1	SHLD, INTERSTATE	⊕	ULP	LIGHTING, POLE						
△	API	POINT OF INTERSECTION	ENVIRONMENTAL			⊕	ICVTRT	COMM. VEH. ROAD TRANSCEIVER	⊕	MFSP_P	FEE ACQUISITION, SHAPE	⊕	SRSN2	SHLD, NATIONAL, 2 DIG.	⊕	ULPM	LIGHTING, POLE, MEDIAN						
△	APOB	POINT OF BEGINNING	ENVIRONMENTAL			+	IDEFAULT	DEFAULT	⊕	MHBAP	HIGHWAY BNDRY., APPROX.	⊕	SRSN3	SHLD, NATIONAL, 3 DIG.	⊕	ULPP	LIGHTING, POLE, PED.						
⊙	APOC	POINT OF CURVATURE	CULV	EIOP_P	STR., INLET, OUTLET PROT.	⊕	IEZR	E-ZPASS READER	⊕	MHBCP	HISTORICAL, BLDG. CORNERS	⊕	SRSS2	SHLD, STATE, 2 DIG.	⊕	UMFC	MISC. FILLER CAP						
△	APOE	POINT OF END	GB	EIPGB_P	STR., INLET PROT., GRAVEL BAG	⊕	IEZTR	TRANSMITTAL READER	⊕	MHBP	HIGHWAY BNDRY, PT.	⊕	SRSS3	SHLD, STATE, 3 DIG.	⊕	UOLM	OIL, LINE MARKER						
⊙	APOL	POINT ON LINE	H/S	EIPHS_P	STR., INLET PROT., HAY/STRAW	⊕	IFXCAB	FIBER OPTIC X-CONNECT CABINET	⊕	MJCP	PT., JURIS. CITY	⊕	SRSS4	SHLD, STATE, 4 DIG.	⊕	UP	POLE, WITH UTILITY						
⊙	APOS	POINT ON SPIRAL	PRFB	EIPPS_P	STR., INLET PROT., PREFAB.	⊕	IFUSSPL	FUSION SPLICE	⊕	MPBC	PT., BUILDING CORNER	TRAFFIC CONTROL			⊙	UPD	POLE, DEAD (NO UTILITY)						
⊙	APOT	POINT ON TANGENT	SF	EIPPS_P	STR., INLET PROT., SILT FENCE	⊕	IHARADV	HAR ADVISORY SIGN	⊕	MPC	PT., CROSS CUT	⊕	TCBJ	BOX, JUNCTION	⊕	UPL	POLE, WITH LIGHT						
△	APOVC	POINT ON VERTICAL CURVE	LC	EIPSF_P	STR., INLET PROT., SILT FENCE	⊕	IHARST	HAR SITE	⊕	MPDH	PT., DRILL HOLE	⊕	TCBP	BOX, PULL BOX	⊕	USMH	SANITARY SEWER MANHOLE						
△	APOVT	POINT ON VERTICAL TANGENT	PM	ERCB	RISER, CONCRETE BOX	⊕	ILC	LOAD CENTER	⊕	MPF	PT., FENCE LOCATION	⊕	TCBS	BOX, SPLICE	⊕	UTB	TELEPHONE, BOOTH						
Y	APORC	POINT ON REVERSE CURVE	M	ETRS_P	TRAP, SEDIMENT	⊕	IMECSPL	MECHANICAL SPLICE	⊕	MPIP	PT., IRON PIPE	⊕	TCMC	MICROCOMPUTER CABINET	⊕	UTLM	TELEPHONE, LINE MARKER						
⊙	APT	POINT OF TANGENCY	+	EWFG	WETLAND FLAG	⊕	IMSCS	PORT. SPEED & COUNT SENSOR	⊕	MPIR	PT., IRON ROD	⊕	TCPP	PED POLE	⊕	UTMH	TELEPHONE, MANHOLE						
⊙	APVC	POINT OF VERTICAL CURVATURE	GEOTECHNICAL			⊕	IMSCTS	MICRO SPEED & COUNT SENSOR	⊕	MPM	PT., MONUMENT	⊕	TCSH	SIGNAL HEADS	⊕	UTVLM	CABLE TV, LINE MARKER						
△	APVCC	POINT OF VERT. CMPND CURVE	⊕	GDH	DRILL HOLE	⊕	IMT	MICROWAVE TRANSCEIVER	⊕	MPMM	PT., MONUMENT, MISC.	⊕	TCSP	SIGNAL POLE	⊕	UTVPB	CABLE TV, PULL BOX						
⊕	APVI	POINT OF VERT. INTERSECTION	LANDSCAPE			⊕	IOVHMS	PERM. OVERHEAD VMS	⊕	MPN	PT., NAIL	TRAFFIC WORK ZONE			⊕	UUB	UNKNOWN, BOX						
△	APVRC	POINT OF VERT. REVERSE CURVE	+	LELS	ELEVATION, SPOT	⊕	IPASCS	PORT. ACCOU. SPD & CNT. SENSOR	⊕	MPRS	PT., RAILROAD SPIKE	⊕	TWZAP_P	ARROW PANEL	⊕	UUB	UNKNOWN, BOX						
⊙	APVT	POINT OF VERTICAL TANGENCY	⊕	LFP	FLAG POLE	⊕	IPEDS	PEDESTRIAN SIGNAL HEAD	⊕	MPSP	PT., SPIKE	⊕	TWZAPC_P	ARROW PANEL, CAUTION MODE	⊕	UUB	UNKNOWN, BOX						
⊙	ASC	SPIRAL TO CURVE	⊕	LMB	MAILBOX	⊕	IPSS	PAVEMENT SURFACE SENSOR	⊕	MPST	PT., STAKE	⊕	TWZAPT_P	ARROW PANEL, TRAILER OR SUPPORT	⊕	UUB	UNKNOWN, BOX						
△	ASPI	SPIRAL POINT OF INTERSECTION	⊕	LPB	PAPER BOX	⊕	IPVMS	PERM. VMS	⊕	MPTW	PT., TREE W/ WIRE	⊕	TWZBDC_P	BARRICADE (TYPE III)	⊕	UUB	UNKNOWN, BOX						
⊙	ASTS	SPIRAL TO SPIRAL	⊕	LPST	POST, SINGLE	⊕	IRM	RAMP METER	⊕	MPWL	PT., WALL LOCATION	⊕	TWZCZM_P	CHANGEABLE MESSAGE SIGN (PVMS)	⊕	UUB	UNKNOWN, BOX						
⊕	AST	SPIRAL TO TANGENT	⊕	LRB	ROCK, BOULDER	⊕	IRWIS	RDWY WEATHER INFO. SENSOR	ROW ACQUISITION			⊕	TWZFLG_P	FLAGGER	⊕	UUB	UNKNOWN, BOX						
⊕	ATS	TANGENT TO SPIRAL	⊕	LSHC	SHRUB, CONIFEROUS	⊕	ISP	SOLAR PANEL	⊕	MFS_P.T	FEE ACQUISITION	⊕	TWZFT_P	FLAG TREE	⊕	UUB	UNKNOWN, BOX						
△	AVEVT	VERTICAL EVENT POINT	⊕	LSHD	SHRUB, DECIDUOUS	⊕	ISST	SPREAD SPECT. TRANSCEIVER	⊕	MEPS_P.T	EASEMENT, PERMANENT	⊕	TWZIA_P	IMPACT ATTENUATOR / CRASH CUSHION (TEMPORARY)	⊕	UUB	UNKNOWN, BOX						
⊙	AVHIGH	VERTICAL HIGH POINT	⊕	LTC	TREE, CONIFEROUS	⊕	ITDB	TELEPHONE DEMARCATION BLK	⊕	METS_P.T	EASEMENT, TEMPORARY	⊕	TWZLUM_P	LUMINAIRE (TEMPORARY)	⊕	UUB	UNKNOWN, BOX						
⊙	AVLOW	VERTICAL LOW POINT	⊕	LTD	TREE, DECIDUOUS	⊕	ITP	SUBSURFACE TEMP. PROBE	⊕	METS_P.T	OCCUPANCY, TEMPORARY	⊕	TWZSDT_P	SYMBOL, DIRECTION OF TRAFFIC	⊕	UUB	UNKNOWN, BOX						
BRIDGE			⊕	LTS	TREE, STUMP	⊕	IVTRT	VEHICLE TO RDWY TRANSCEIVER	⊕	METS_P.T	OCCUPANCY, TEMPORARY	⊕	TWZSDT_P	SYMBOL, DIRECTION OF TEMPORARY TRAFFIC DETOUR	⊕	UUB	UNKNOWN, BOX						
⊕	BSC	BRIDGE, SCUPPER	⊕	LTW_P	TREE, WELL OR WALL	⊕	IWIMD	WEIGHT IN MOTION DETECTOR	⊕	MFS_P.T	FEE ACQUISITION W/O ACCESS	⊕	TWZSGN_P	SIGN (TEMPORARY)	⊕	UUB	UNKNOWN, BOX						
CONTROL			+	LUKP	UNKNOWN POINT	⊕	IWVR	WIRELESS VIDEO REPEATER	ROADWAY			⊕	TWZSIG_P	SIGNAL, TRAFFIC OR PEDESTRIAN (TEMPORARY)	⊕	UUB	UNKNOWN, BOX						
△	CBP	BASELINE, POINT	⊕	RES_P	ELEVATION, SPOT	⊕	IWVRC	WIRELESS VIDEO RECEIVER	⊕	RGA	GUIDE RAIL, ANCHOR	⊕	TWZWL_P	WARNING LIGHT	⊕	UUB	UNKNOWN, BOX						
⊙	CBPOL	BASELINE, POINT ON LINE	⊕	RGP	GUIDE POST, SINGLE	⊕	IWVTT	WIRELESS VIDEO TRANSMITTER	⊕	TWZWV_P	WORK VEHICLE	⊕	TWZWVA_P	WORK VEHICLE WITH TRUCK MOUNTED ATTENUATOR	⊕	UUB	UNKNOWN, BOX						
⊕	CBSP	BASELINE, SPUR POINT	AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:			ENSIGN POND RD (CR4) BRIDGE OVER MILL BROOK			PIN 1762.14			BRIDGES BIN 3372000			CULVERTS			ALL DIMENSIONS IN ft UNLESS OTHERWISE NOTED			CONTRACT NUMBER D040666		
⊕	CBTP	BASELINE, TIE POINT	TOWN OF MORIAH			CULVERT REPLACEMENT PROJECT			REGION: 1									DRAWING NO. LE-1					
⊕	CPBM	BENCHMARK	COUNTY: ESSEX															SHEET NO. 3					
⊕	CPH	POINT, HORIZ. PHOTOGRAMMETRY																					
⊕	CPSM	POINT, SURVEY MARKER, PERM.																					
⊕	CPSV	POINT, VERT., PHOTOGRAMMETRY																					

AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:

ENSIGN POND RD (CR4) BRIDGE OVER MILL BROOK
CULVERT REPLACEMENT PROJECT

TOWN OF MORIAH
COUNTY: ESSEX REGION: 1

PIN 1762.14

BRIDGES BIN 3372000

CULVERTS

ALL DIMENSIONS IN ft UNLESS OTHERWISE NOTED

CONTRACT NUMBER D040666

DRAWING NO. LE-1
SHEET NO. 3

LEGEND POINT SYMBOLOLOGY

H&T Engineering, PLLC

NEW YORK STATE OF OPPORTUNITY

Department of Transportation

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

+

PROJECT MANAGER C. TUTUNJIAN

CHECKED BY I. PENGU

DRAFTED BY D. RAFFERTY

CHECKED BY Z. PORTER

DESIGNED BY I. PENGU

ALIGNMENT			LANDSCAPE			ROADWAY			TRAFFIC WORK ZONE		
STYLE	NAME	DESCRIPTION	STYLE	NAME	DESCRIPTION	STYLE	NAME	DESCRIPTION	STYLE	NAME	DESCRIPTION
	AC	CONTROL (CENTERLINE)		LABL	AREA, BRUSH LINE		RCZ_P	CLEAR ZONE		TWZBT_P	BARRIER, TEMPORARY
	AD_P	DETOUR		LAHR	AREA, HEDGE ROW		RG	GUIDE RAIL, MISCELLANEOUS		TWZCD_P	CHANNELIZING DEVICE
	AT_P	TRANSITION CONTROL		LAPB	AREA, PLANTING BED		RGB	GUIDE RAIL, BOX BEAM		TWZPMRC_P	PAVEMENT MARKING REMOVAL OR COVERING
BRIDGE				LAWA	AREA, WOODED AREA OUTLINE		RGBM	GUIDE RAIL, BOX BEAM, MEDIAN	UTILITIES		
	BR	RAIL		LAWL	AREA, WATERS EDGE		RGC	GUIDE RAIL, CABLE	STYLE	NAME	DESCRIPTION
	BSHT	SHEET PILING		LCUT_P	CUT LIMIT		RCCB	GUIDE RAIL, CONCRETE BARRIER		UC	CONDUIT, UNDERGROUND
CONTROL				LFILL_P	FILL LIMIT		RGP_P	GUIDE POST		UCH	CONDUIT, HANGING
	CB	BASELINE		LFNC	FENCE		RGW	GUIDE RAIL, W BEAM		UCO	CONDUIT, OVERHEAD
	CBPR	BASELINE, PROJECTION		LTRC	TREE ROW, CONIFEROUS		RGWM	GUIDE RAIL, W BEAM, MEDIAN		UE	ELECTRIC LINE, UNDERGROUND
DRAINAGE				LTRD	TREE ROW, DECIDUOUS		RPB	PARKING BUMPER		UEH	ELECTRIC LINE, HANGING
	DCP	CULVERT PIPE		LWH	WALL, H PILE		RRC	RAIL ROAD, CATENARY		UEO	ELECTRIC LINE, OVERHEAD
	DCP_P	CULVERT PIPE (DIR)		LWR	WALL, RETAINING		RRER	RAIL ROAD, 3RD RAIL		UETO	ELECTRIC TRANSMISSION, OVERHEAD
	DDG_P	DITCH, GRASS LINED		LWS	WALL, STONE		RRPLS_P	RAIL, PHOTO, LARGE SCALE		UESS	ELECTRIC, SUBSTATIONS
	DDP_P	DITCH, PAVED INVERT	ROW MAPPING				RRPSS	RAIL, PHOTO, SMALL SCALE		UFO	FIBER OPTIC, UNDERGROUND
	DDS_P	DITCH, STONE LINED		MDL	DEED LINE		RRS	RUMBLE STRIP		UFOH	FIBER OPTIC, HANGING
	DFL_P	FLOW LINE		MEE	EASEMENT, EXISTING		RRSL_S_P	RAIL, SURVEY, LARGE SCALE		UFOO	FIBER OPTIC, OVERHEAD
	DSSD	SLOTTED DRAIN		MEP_P	EASEMENT, PERMANENT		RRSS	RAIL, SURVEY, SMALL SCALE		UG	GAS, UNDERGROUND
	DUD_P	UNDERDRAIN		MEPA_P	EASEMENT, PERMANENT, APPROX.	SIGNS				UGH	GAS, HANGING
ENVIRONMENTAL				MET_P	EASEMENT, TEMPORARY		SBLB	BILLBOARDS		UGO	GAS, OVERHEAD
	EBLHS	BALE, STRAW		META_P	EASEMENT, TEMPORARY, APPROX.		SM	MULTIPLE POST		UIC	INFORM CABLE, UNDERGROUND
	ECT	CURTAIN, TURBIDITY		MF_P	FEE ACQUISITION, W/ ACCESS		SSO	STRUCTURE, OVERHEAD		UICH	INFORM CABLE, HANGING
	EDMC	DAM, COFFER		MFA_P	FEE ACQUISITION, APPROXIMATE		SSOC	STRUCTURE, OVHD. CANTILEVER		UO	OIL LINE, UNDERGROUND
	EDMEC_P	DAM, EARTHEN CHECK		MFS_P	FEE ACQUISITION, SHAPE	STRIPING				UOH	OIL LINE, HANGING
	EDMGCSC_P	DAM, GRAVEL BAG/SAND BAG CHECK		MFWOA_P	FEE ACQUISITION, W/O ACCESS		STB	BROKEN LINE		UPBP	POLE, BRACE, PUSH BRACE
	EDMPC_P	DAM, PREFABRICATED CHECK		MHA	HISTORICAL, ACQUISITION		STDB	DOUBLE BROKEN LINE		UPCW	POLE, GUY WIRE
	EDMSC_P	DAM, STONE CHECK		MHB	HIGHWAY BOUNDARY		STDL	DOTTED LINE LONG		USA	SANITARY SEWER, UNDERGROUND
	EFNS	FENCE, SILT		MHBA	HIGHWAY BOUNDARY, APPROX.		STDS	DOTTED LINE SHORT		USAH	SANITARY SEWER, HANGING
	EFNSV	FENCE, SILT & VEGETATION		MHBW	HWY BOUNDARY, FACE OF WALL		STFB	FULL BARRIER LINE		USAF	SANITARY SEWER, FORCE MAIN, UGND
	EFNV	FENCE, VEGETATION		MHBWOA	HIGHWAY BOUNDARY, W/O ACCESS		STH	HATCH LINE		USAFH	SANITARY SEWER, FORCE MAIN, HANG
	EWAA_P	WETLAND, ADJACENT AREA		MJC	JURISDICTION, CITY		STPB	PARTIAL BARRIER LINE		UT	TELEPHONE, UNDERGROUND
	EWF	WETLAND, FEDERAL		MJCY	JURISDICTION, COUNTY		STRCT	ROUNDABOUT, CAT TRACKS		UTH	TELEPHONE, HANGING
	EWF	WETLAND, FEDERAL AND STATE		MJHD	JURISDICTION, HISTORIC DISTRICT		STRYL	ROUNDABOUT, YIELD LINE		UTO	TELEPHONE, OVERHEAD
	EWM	WETLAND, MITIGATION AREA		MJLL	JURIS., (GREAT, MILITARY) LOT LINE		STSB	STOP BAR		UTV	CABLE TV, UNDERGROUND
	EWS	WETLAND, STATE		MJN	JURISDICTION, NATION		STSE	SOLID, EDGE		UTVH	CABLE TV, HANGING
				MJPB	JURISDICTION, PUBLIC LANDS		STXL	X WALK, LADDER LINE		UTVO	CABLE TV, OVERHEAD
				MJS	JURISDICTION, STATE		STXLB	X WALK, LADDER BAR LINE		UUU	UNKNOWN, UNDERGROUND
				MJT	JURISDICTION, TOWN	TRAFFIC CONTROL				UUH	UNKNOWN, HANGING
				MJV	JURISDICTION, VILLAGE		TCSW	SIGNAL, SPAN WIRE		UUO	UNKNOWN, OVERHEAD
				MPL	PROPERTY LOT LINE					UW	WATER LINE, UNDERGROUND
				MPLA	PROPERTY LOT LINE, APPROXIMATE					UWH	WATER LINE, HANGING
				MSL	SUB LOT LINE					UWO	WATER LINE, OVERHEAD

- NOTES:**
- THE LEGEND ILLUSTRATES MAPPING FEATURES (EXISTING AND PROPOSED).
 - FEATURES ARE SHOWN AS EITHER LINEAR (ROADWAY GUIDERAIL, ROADWAY SIDEWALK, UTILITY LINES, ETC.) OR POINT (SIGN, UTILITY POLE, ETC.).
 - FEATURES SHOWN ON THE LEGEND AS EXISTING FEATURES ALSO HAVE CORRESPONDING PROPOSED FEATURES.
 - PROPOSED FEATURE SYMBOLOGY IS IDENTICAL TO EXISTING FEATURE SYMBOLOGY EXCLUDING LINE WEIGHT. LINE WEIGHT FOR PROPOSED FEATURES IS THICKER (0.015 in ON B SIZE DRAWINGS).
 - MAPPING FEATURES NOT INCLUDED ON THE LEGEND SHEET DO NOT HAVE A UNIQUE SYMBOLOGY (SUCH AS THE PAVEMENT EDGE, PAVEMENT EDGE OF TRAVEL WAY) AND SHOULD BE LABELED ON THE PLANS.
 - FEATURES SHOWN AT THE HEAVIER WEIGHT ARE PROPOSED ONLY AND DO NOT HAVE CORRESPONDING EXISTING FEATURES.

AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:	ENSIGN POND RD (CR4) BRIDGE OVER MILL BROOK	PIN 1762.14	BRIDGES BIN 3372000	CULVERTS	ALL DIMENSIONS IN ft UNLESS OTHERWISE NOTED	CONTRACT NUMBER D040666
	CULVERT REPLACEMENT PROJECT					
	TOWN OF MORIAH	REGION: 1				
	COUNTY: ESSEX					
LEGEND LINE SYMBOLOGY						DRAWING NO. LE-2 SHEET NO. 4

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

+

PROJECT MANAGER: C. TUTUNJIAN
 CHECKED BY: I. PENGU
 DRAFTED BY: D. RAFFEY
 CHECKED BY: Z. PORTER
 DESIGNED BY: I. PENGU

GENERAL NOTES:

DESIGN SPECIFICATIONS: NYS DOT LRFD BRIDGE DESIGN SPECIFICATIONS WITH ALL PROVISIONS IN EFFECT AS OF THE TIME OF ADVERTISEMENT (FOR DESIGN PURPOSES, COMPRESSIVE STRENGTH OF CONCRETE FOR SUBSTRUCTURES AND DECK SLABS AT 28 DAYS: f'c=3000 PSI.)

LIVE LOAD: AASHTO HL-93

CONSTRUCTION AND MATERIALS SPECIFICATIONS: STANDARD SPECIFICATIONS, CONSTRUCTION AND MATERIALS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, OFFICE OF ENGINEERING.

DETAILS ON THE DRAWINGS LABELED AS "NOT TO SCALE" ARE INTENTIONALLY DRAWN NOT TO SCALE FOR VISUAL CLARITY. ALL OTHER DETAILS FOR WHICH NO SCALE IS SHOWN ARE DRAWN PROPORTIONAL AND ARE FULLY DIMENSIONED.

ALL SHOP DRAWINGS SUBMITTED FOR THIS PROJECT SHALL BE IN US CUSTOMARY UNITS.

THE COST OF ALL JOINT MATERIAL SHALL BE INCLUDED IN THE UNIT PRICES BID FOR THE VARIOUS ITEMS OF THE CONTRACT, UNLESS OTHERWISE SPECIFIED ON THE PLANS.

THE LOAD RATINGS ARE IN ACCORDANCE WITH THE AASHTO MANUAL FOR BRIDGE EVALUATION.

FOUNDATION NOTES:

ALL PLACEMENTS OF SELECT STRUCTURE FILL, ITEM 203.21, SHALL BE COMPACTED TO 95 PERCENT OF STANDARD PROCTOR MAXIMUM DENSITY.

EMBANKMENT MATERIAL AND SELECT STRUCTURE FILL, ITEM 203.21, SHALL BE PLACED SIMULTANEOUSLY, IN CONTACT, ON BOTH SIDES OF THE VERTICAL PAYMENT LINE.

THE COST OF WATER USED FOR COMPACTION OF SELECT FILL ITEMS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203.21 SELECT STRUCTURE FILL.

SUBSTRUCTURE NOTES:

THE CONTRACTOR, WITH THE PERMISSION OF THE E.I.C., MAY ELECT TO INTRODUCE CONSTRUCTION JOINTS IN THE ABUTMENTS AT LOCATIONS NOT SHOWN ON THE PLANS. THESE CONSTRUCTION JOINTS SHALL BE PROVIDED WITH SHEAR KEYS AND WATERSTOPS. VERTICAL CONSTRUCTION JOINTS INTRODUCED IN THE BACKWALL SHOULD PREFERABLY BE PLACED MIDWAY BETWEEN THE PEDESTALS.

THE COST OF ALL MATERIAL AT EACH CONSTRUCTION JOINT, CONTRACTION JOINT AND CONCRETE EXPANSION JOINT SHALL BE INCLUDED IN THE UNIT PRICES BID FOR THE VARIOUS ITEMS OF THE CONTRACT, UNLESS OTHERWISE SPECIFIED ON THE PLANS.

SUPERSTRUCTURE NOTES:

THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE REQUIREMENTS OF SUBSECTION 202-3.01 GENERAL AND SAFETY REQUIREMENTS. A LIFTING PLAN SHALL BE SUBMITTED TO THE ENGINEER FIFTEEN (15) DAYS PRIOR TO BEGINNING THE ERECTION.

TOP SURFACES OF NEW BRIDGE DECKS AND APPROACH SLABS SHALL BE SEALED ACCORDING TO ITEM 559.01 - PROTECTIVE SEALING OF STRUCTURAL CONCRETE ON NEW BRIDGE DECKS AND BRIDGE DECK OVERLAYS AND ITEM 559.02 - PROTECTIVE SEALING OF NEW STRUCTURAL CONCRETE.

REMOVAL NOTES:

EXISTING PIPE CULVERTS SHALL BE REMOVED UNDER ITEM 202.19.

THERE ARE NO AREAS WITHIN THE CONTRACT LIMITS AVAILABLE FOR DISPOSAL OF DEBRIS.

HIGH VOLTAGE ELECTRICAL LINES ARE IN PROXIMITY TO THIS CULVERT.

REFER TO SUBSECTION 107-05 OF THE STANDARD SPECIFICATIONS FOR CONTRACTOR SAFETY REQUIREMENTS.

HIGHWAY MAINTENANCE:

UPON COMPLETION AND ACCEPTANCE OF THIS CONTRACT, THE HIGHWAY AND BRIDGE WILL BE MAINTAINED BY THE ESSEX COUNTY DEPARTMENT OF PUBLIC WORKS.

COFFERDAM NOTES:

WHERE A COFFERDAM IS USED, THE COST OF DEWATERING THE ENTIRE EXCAVATION, REGARDLESS OF SOURCE OF WATER, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE COFFERDAM ITEM.

DEWATERING OF THE COFFERDAM SHALL BE ACCOMPLISHED BY PUMPING THE WATER TO AN APPROVED UPLAND VEGETATED AREA OUTSIDE OF THE STREAMBED AS SHOWN ON THE PLANS AND/OR APPROVED BY THE E.I.C. TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL, SUCH AS STRAW BALES OR APPROVED EQUAL, MAY BE REQUIRED AS DETERMINED BY THE ENGINEER-IN-CHARGE. NO SETTLEMENT BASIN SHALL BE CONSTRUCTED.

ORDINARY HIGH-WATER IS ESTIMATED TO BE 1060.50. ORDINARY HIGH-WATER IS DEFINED AS THE WATER SURFACE ELEVATION FOR THE MEAN ANNUAL FLOOD, WHICH IS THE FLOOD WHICH HAS A RECURRENCE INTERVAL OF 2.33 YEARS.

ORDINARY WATER IS ESTIMATED TO BE 1059.50. THIS IS DEFINED AS THE HIGHEST SURFACE WATER ELEVATION LIKELY TO BE ENCOUNTERED DURING ON CONSTRUCTION SEASON (OTHER THAN MAJOR FLOODS). IT IS ALWAYS LESS THAN THE ORDINARY HIGH WATER ELEVATION AND IT IS USUALLY AN OBSERVED ELEVATION RATHER THAN A COMPUTED ONE.

IF PROPOSING TO USE A TEMPORARY STREAM DIVERSION STRUCTURE IN LIEU OF COFFERDAMS, THE CONTRACTOR SHALL SUBMIT TEMPORARY STREAM DIVERSION STRUCTURE PLANS TO THE ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION. PAYMENT WILL BE MADE UNDER THE COFFERDAM ITEMS.

CONTROL OF INVASIVE SPECIES NOTES:

ALL CONSTRUCTION EQUIPMENT WILL BE PRESSURE WASHED TO REMOVE SOIL CLUMPS AND DEBRIS PRIOR TO SHIPPING TO THE PROJECT SITE.

ALL SEED SPECIES (EXCEPT ANNUAL RYE AND PERENNIAL RYE GRASSES) SHALL BE NATIVE TO NEW YORK STATE. SEED SHALL MEET THE REQUIREMENTS OF NYS DOT MATERIAL SPECIFICATION 713-04 SEEDS.

CONTRACTOR SHALL MAINTAIN ALL SEEDED AREAS AGAINST INVASION AND GROWTH OF INVASIVE, NON-NATIVE SPECIES. PURPLE LOOSE STRIFE (LYTHRUM SALICARIA), COMMON REED (PHRAGMITES AUSTRALIS), AND REED CANARY-GRASS (PHALARIS ARUNDINACEA) SHALL BE DUG OR CAREFULLY PULLED IN ORDER TO GET ALL ROOTS WHEN OBSERVED INVADING THE SITE.

NO HAY BALES SHALL BE PERMITTED ON PROJECT SITE. STRAW BALES, WHICH MEET THE REQUIREMENTS OF NYS DOT MATERIAL SPECIFICATION 713-19- STRAW SHALL BE PERMITTED ON PROJECT SITE.

MULCH SHALL MEET THE REQUIREMENTS OF NYS DOT MATERIAL SPECIFICATION 713-11- WOOD FIBER MULCH.

EROSION, SEDIMENTATION AND TURBIDITY CONTROLS:

ALL WORK IN A FLOWING STREAM MUST BE KEPT TO A MINIMUM AND THE STREAM WATERS MUST BE PUMPED, PIPED OR OTHERWISE DIVERTED AROUND, OR SEPARATED FROM, THE WORK AREA. STRAW BALES OR OTHER DEVICES PLACED ACROSS THE STREAM DOWNSTREAM OF THE WORK SITE ARE NOT ACCEPTABLE POLLUTION CONTROLS. ALL WATER PUMPED FROM COFFERDAMS, SETTLING BASINS, OR OTHER WORK AREAS MUST NOT BE ALLOWED TO FLOW BACK INTO A STREAM UNLESS IT IS FIRST FILTERED UNTIL IT IS AS CLEAN (NON-TURBID) AS THE STREAM WATERS FLOWING UPSTREAM OF THE WORK SITE.

UNDER NO CIRCUMSTANCES ARE WET CONCRETE, CEMENT, WASHINGS FROM CEMENT TRUCKS, OILS, FUELS OR OTHER POLLUTANTS ALLOWED TO ENTER THE STREAM. ACCIDENTAL SPILLS ARE TO BE IMMEDIATELY CLEANED UP. ALL PETROLEUM SPILLS SHALL BE REPORTED AS REQUIRED BY REGULATION. THE STREAM BELOW THE WORK SITE SHALL BE AS CLEAR AS THE STREAM ABOVE THE WORK SITE.

WORK SHALL BE PERFORMED FROM THE STREAM BANKS TO THE EXTENT POSSIBLE TO MINIMIZE THE USE OF EQUIPMENT IN THE STREAM. UNDER NO CIRCUMSTANCES IS EQUIPMENT TO OPERATE IN FLOWING WATER UNLESS AUTHORIZED IN WRITING OR BY ON-SITE DEC REPRESENTATIVE. GRAVEL REMOVED FROM A STREAM BED MUST BE PLACED BEYOND THE REACH OF NORMAL HIGH WATER. GRAVEL WILL NOT BE PUSHED UP ON STREAM BANKS OR SLOPES UNLESS SPECIFICALLY AUTHORIZED IN WRITING, NOR SHALL ANY BE USED TO CONSTRUCT ANY DIKE, LEVEE, BERM OR OTHER OBSTRUCTION TO HIGH FLOWS. ALL WASTE MATERIAL (RUBBLE, SAND BLASTING AND CHIPPING WASTES AND RESIDUES, ETC.) RESULTING FROM CONSTRUCTION MUST BE COLLECTED AND MOVED TO AN APPROVED DISPOSAL AREA. NO MATERIAL SHALL BE ALLOWED TO ENTER, EITHER DIRECTLY OR INDIRECTLY, INTO ANY STREAM OR ANY FRESHWATER WETLAND.

ALL DISTURBED PORTIONS OF THE WORK AREA AND STREAM BANKS MUST BE GRADED TO A STABLE SLOPE, AND EITHER RIP-RAPPED OR PLANTED WITH SUITABLE GRASSES, SHRUBS OR LEGUMES, AND/OR SEEDED WITH A CONSERVATION TYPE GRASS MIXTURE AND MULCHES. MULCH SHALL BE MAINTAINED UNTIL A SUITABLE VEGETATIVE COVER HAS BEEN ESTABLISHED. LIME AND FERTILIZER SHALL BE USED AS REQUIRED.

STREAM PROTECTION NOTES:

MILL BROOK IS CLASSIFIED AS CLASS C (T) BODY OF WATER

DURING THE COURSE OF CONSTRUCTION, THE CONTRACTOR SHALL CONDUCT OPERATIONS IN SUCH A MANNER AS TO PREVENT OR REDUCE TO A MINIMUM ANY DAMAGE TO ANY STREAM FROM POLLUTION BY DEBRIS, SEDIMENT, OR OTHER FOREIGN MATERIAL, OR FROM MANIPULATION OF EQUIPMENT AND/OR MATERIALS IN OR NEAR SUCH STREAMS. THE CONTRACTOR SHALL NOT RETURN DIRECTLY TO A STREAM ANY WATER WHICH HAS BEEN USED FOR WASH PURPOSES OR OTHER SIMILAR OPERATIONS WHICH CAUSE THIS WATER TO BECOME POLLUTED WITH SAND, SILT, CEMENT, OIL, OR OTHER IMPURITIES. IF THE CONTRACTOR USES WATER FROM A STREAM, THE CONTRACTOR SHALL CONSTRUCT AN INTAKE OR TEMPORARY DAM REQUIRED TO PROTECT AND MAINTAIN WATER RIGHTS AND TO SUSTAIN FISH LIFE DOWNSTREAM.

THE CONTRACTOR SHALL ACCOMPLISH IN-STREAM WORK DURING THE PERIOD BETWEEN MAY 1ST AND SEPTEMBER 30TH. COFFERDAMS IN THE STREAM CHANNEL AND/OR STREAM DIVERSIONS OF THE CHANNEL SHALL NOT BE ALLOWED PRIOR TO MAY 1ST AND AFTER SEPTEMBER 30TH WITHOUT PRIOR WRITTEN APPROVAL FROM THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION. IF USED, COFFERDAMS AND STREAM DIVERSIONS SHALL BE SIZED WITH REGARD TO THE SEASONAL FLOW OF THE STREAM EXPECTED FOR THE TIME THEY ARE TO BE IN USE.

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE ACOE NATIONWIDE PERMIT AND NYSDEC PERMIT #5-1536-00129/00001. PERMIT IS INCLUDED IN THE PROJECT MANUAL.

IF PUMPS ARE USED AT THE END OF THE WORK DAY OR BEFORE HEAVY ANTICIPATED FLOWS, THE CONTRACTOR SHALL ESTABLISH AN UNOBSTRUCTED CHANNEL AREA SUFFICIENT TO ACCOMMODATE THE FLOW. THE CONTRACTOR SHALL SUBMIT A PROCEDURE FOR APPROVAL TO THE ENGINEER-IN-CHARGE.

RIGHT OF WAY NOTES:

ALL WORK TO BE PERFORMED UNDER THIS CONTRACT WILL BE WITHIN THE PUBLIC RIGHT-OF-WAY (ROW) IN ACCORDANCE WITH SECTION 105-15 OF THE STANDARD SPECIFICATIONS. THE CONTRACTOR IS TO ASSURE HIMSELF THAT ALL WORK IS BEING PERFORMED WITHIN THE ROW, INCLUDING BUT NOT LIMITED TO VEHICLE ACCESS; STORAGE OF EQUIPMENT, MATERIALS, DEBRIS AND WASTE; LANDSCAPING; VEGETATION REMOVAL AND MANAGEMENT; GRADING, SEEDING AND THE INSTALLATION OF TURF; AND THE INSTALLATION OF ANY FENCES OR PROTECTIVE BARRIER.

IF THE CONTRACTOR IS UNABLE TO IDENTIFY THE LIMITS OF THE RIGHTS-OF-WAY WHEN THE CONTRACT CALLS FOR WORK IN THOSE VICINITIES, THE CONTRACTOR MUST CONTACT THE PROJECT ENGINEER FOR DEFINITIVE BOUNDARY DETERMINATIONS BEFORE ANY WORK MAY BE INITIATED AT THOSE LOCATIONS (STANDARD SPECIFICATIONS SECTIONS 105-10 AND 625). THE CONTRACTOR WILL BE HELD LIABLE FOR ANY DAMAGES DONE. ANY SUCH INJURIES OR DAMAGES SHALL BE SATISFACTORY REPAIRED OR ITEMS PLACED AT THE CONTRACTOR'S EXPENSE (STANDARD SPECIFICATIONS SECTION 107-08).

REINFORCEMENT BAR LIST:

NO BAR LIST IS PROVIDED FOR SUPERSTRUCTURE SLABS, APPROACH SLABS, SUBSTRUCTURE WORK, AND/OR SIDEWALKS. SECTION 557-3.17 OF THE SPECIFICATION SHALL APPLY. EXCEPT THAT THE CONTRACTOR WILL TRANSMIT THE DOCUMENTS TO THE ENGINEER FOR REVIEW FOR CONFORMANCE WITH THE DESIGN REQUIREMENTS IN THE CONTRACT DOCUMENTS. A REVIEW TIME OF TWO DAYS PER PLACEMENT DRAWING SUBMITTED WITH A MINIMUM OF 15 DAYS FOR EACH SUBMISSION WILL BE ALLOWED UPON RECEIPT OF THE SUBMISSION. THE ENGINEER WILL NOT BE CHECKING LENGTHS, NUMBER OF BARS, WEIGHTS, OR BAR MARKS. CORRECTIONS WILL BE RETURNED TO THE CONTRACTOR. WHEN THE DOCUMENTS ARE SATISFACTORY THEY WILL BE RETURNED TO THE CONTRACTOR STAMPED "APPROVED IN ACCORDANCE WITH DESIGN REQUIREMENTS". PLACEMENT DRAWINGS REQUIRED SHALL INCLUDE PLAN VIEW DRAWINGS, SECTION VIEWS, TRANSVERSE SECTIONS, AND ANY OTHER DETAILS REQUIRED TO CLARIFY THE REBAR PLACEMENT.




UTILITY NOTES:

THIS PROJECT DOES NOT PROPOSE TO INTERFERE WITH THE UTILITIES PRESENT IN THE PROXIMITY OF THE PROJECT SITE.

TREE REMOVALS:

THE CONTRACTOR SHALL USE CARE SO AS NOT TO REMOVE OR DAMAGE EXISTING TREES THAT ARE NOTED "TO REMAIN" OR ANY ADDITIONAL TREES BEYOND THE LIMITS OF WORK. SHOULD REMOVAL OR DAMAGE OCCUR TO ANY TREES THAT ARE BEYOND THE LIMITS OF WORK OR ANY TREES NOTED "TO REMAIN", THEY SHALL BE REPLACED IN-KIND BY THE CONTRACTOR, AT NO ADDITIONAL COST TO THE COUNTY.

TREE CUTTING DATES ARE RESTRICTED TO NOVEMBER 1" THROUGH MARCH 31".

AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:	ENSIGN POND RD (CR4) BRIDGE OVER MILL BROOK	PIN 1762.14	BRIDGES BIN 3372000	CULVERTS	ALL DIMENSIONS IN f+ UNLESS OTHERWISE NOTED	CONTRACT NUMBER
	CULVERT REPLACEMENT PROJECT					D040666
	TOWN OF MORIAH					DRAWING NO. GN-1
	COUNTY: ESSEX	REGION: 1				SHEET NO. 5
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.						  

WORK ZONE TRAFFIC CONTROL NOTES:

1. GENERAL NOTES:
 - A. WORK ZONE TRAFFIC CONTROL SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 619 - WORK ZONE TRAFFIC CONTROL - OF THE NYS DOT STANDARD SPECIFICATIONS, THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES WITH REVISIONS 1 & 2, NYS DOT STANDARD SHEETS 619 SERIES, AND ANY PROVISIONS CONTAINED IN THESE PLANS.
 - B. THE TYPICAL DETAILS DEPICTED ON THE STANDARD SHEETS, THE TRAFFIC CONTROL PLANS, AND IN THE MUTCD REFLECT THE MINIMUM REQUIREMENTS. ADDITIONAL SIGNS AND/OR TRAFFIC CONTROL DEVICES MAY BE REQUIRED AS DETERMINED BY THE ENGINEER, COST TO BE INCLUDED IN THE PRICE BID FOR THE APPROPRIATE ITEMS. IF AT ANY TIME THE ENGINEER DETERMINES THAT TRAFFIC IS NOT BEING PROPERLY MAINTAINED WITHIN A WORK ZONE, THE CONTRACTOR SHALL IMMEDIATELY CORRECT THE INDICATED DEFICIENCY, AOB.
 - C. THE CONTRACTOR MUST SUBMIT TO THE ENGINEER, IN WRITING, PROPOSED REVISIONS TO THE TRAFFIC CONTROL PLAN FOR REVIEW AND APPROVAL BY THE COUNTY FIVE (5) WORKING DAYS PRIOR TO THE PLANNED IMPLEMENTATION OF SUCH PROPOSED REVISIONS, EXCEPT FOR CHANGES THAT ALTER THE BASIC CONCEPT OF THE TRAFFIC CONTROL PLAN. SUCH CONCEPTUAL CHANGES MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL BY THE COUNTY THIRTY (30) WORKING DAYS PRIOR TO IMPLEMENTATION OF SUCH REVISIONS.
 - D. THE CONTRACTOR SHALL PROVIDE THE ENGINEER, IN WRITING, WITH THE NAMES, ADDRESSES, AND TELEPHONE NUMBERS OF STAFF WHO ARE AUTHORIZED TO SECURE LABOR, MATERIALS, AND EQUIPMENT FOR EMERGENCY REPAIRS OUTSIDE NORMAL WORKING HOURS. THE ENGINEER WILL PROVIDE THE SUBMITTED INFORMATION TO NYS DOT, REGIONAL MANAGEMENT, THE NEW YORK STATE POLICE, THE RESIDENT ENGINEER, THE TOWN, THE COUNTY, AND THE LOCAL POLICE.
 - E. PRIOR TO THE START OF ANY WORK OPERATIONS, ALL RELATED WORK FOR PROPOSED WORK ZONE TRAFFIC CONTROL, AOB, SHALL BE COMPLETE. THIS INCLUDES BUT IS NOT LIMITED TO, ALL SIGNS, SIGNALS, PAVEMENT MARKINGS, BARRIERS, DELINEATION (CONES, DRUMS, ETC.) FLAGGERS, PAVEMENT MODIFICATIONS, AND ANY OTHER RELATED WORK.
 - F. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN SAFE AND ADEQUATE INGRESS AND EGRESS TO AND FROM INTERSECTION HIGHWAYS, HOMES AND COMMERCIAL ESTABLISHMENTS AT ALL TIMES TO THE SATISFACTION OF THE ENGINEER. THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH ITEM 619.01 SECTION 619-3.02(C).
2. STANDARD SHEETS 619-10, 11, AND 12 CRITERIA:
 - A. PRECONSTRUCTION POSTED SPEED LIMIT: UNPOSTED
 - B. TYPE OF ROADWAY: RURAL MAJOR COLLECTOR
 - C. SETTING: RURAL
3. TIME/DATE RESTRICTIONS:
 - A. THE CONTRACTOR SHALL NOT BEGIN WARMING UP EQUIPMENT BEFORE THE SCHEDULED START TIMES, NOR KEEP THE EQUIPMENT RUNNING AFTER THE SCHEDULED QUIT TIMES. MAINTENANCE OF EQUIPMENT ON SITE WHICH REQUIRES THE EQUIPMENT TO BE RUNNING SHALL BE APPROVED BY THE ENGINEER IF THE MAINTENANCE IS PERFORMED OUTSIDE THE WORK HOUR RESTRICTIONS.
 - B. THERE SHALL BE NO WORK OPERATIONS ALLOWED BEFORE SUNRISE OR AFTER SUNSET WITHOUT APPROVAL OF THE COUNTY/ENGINEER AND AN APPROVED LIGHTING PLAN. THE LIGHTING PLAN SHALL BE APPROVED PRIOR TO THE START OF WORK BY THE ENGINEER.
4. CONSTRUCTION VEHICLES, EQUIPMENT, AND MATERIALS:
 - A. THE CLEAR ROADSIDE AREA IS DEFINED AS THE AREA WITHIN 10 FEET OF THE EDGE OF THE TRAVEL WAY.
 - B. CONTRACTOR VEHICLES NOT IN USE AND PRIVATE VEHICLES OWNED BY CONTRACTOR'S EMPLOYEES SHALL NOT BE PARKED IN THE CLEAR ROADSIDE AREA, OR ANY OTHER LOCATION CONSIDERED BY THE ENGINEER TO BE A HAZARD. THIS REQUIREMENT IS NOT LIMITED TO THE CONTRACT LIMITS.
 - C. NO MATERIAL IS TO BE STORED WITHIN THE CLEAR ROADSIDE AREA WITHOUT THE APPROVAL OF THE ENGINEER.
 - D. VEHICLES BELONGING TO THE CONTRACTOR OR THE CONTRACTOR'S EMPLOYEES SHALL NOT BE PARKED IN A MANNER WHICH OBSTRUCTS SIGNS, BARRIERS, BARRICADES, OR OTHER TRAFFIC CONTROL DEVICES.
 - E. VEHICLES BELONGING TO THE CONTRACTOR OR THE CONTRACTOR'S EMPLOYEES SHALL NOT BE PARKED IN A MANNER WHICH INTERFERES WITH ACCESS TO ADJUTING PROPERTIES.
 - F. THE CONTRACTOR SHALL PLAN AND INCORPORATE ACCESS POINTS INTO THE WORK ZONE SUCH THAT, TO THE EXTENT PRACTICAL, THE CONTRACTOR'S VEHICLES ENTERING AND LEAVING THE WORK ZONE SHALL NOT IMPEDE THE MOVEMENT OF THROUGH TRAFFIC IN THE ADJACENT OPEN LANES.

WORK ZONE TRAFFIC CONTROL NOTES CONTINUED:

5. CHANNELIZING DEVICES:
 - A. WHERE POSSIBLE ALL CHANNELIZING AND GUIDING DEVICES ARE TO BE PLACED SO AS TO PROVIDE A MINIMUM 1 FOOT LATERAL CLEARANCE TO THE TRAVELED WAY.
 - B. THE CONTRACTOR SHALL NOT MIX CHANNELIZATION DEVICES IN A LINEAR CLOSURE OR TAPER I.E. CONES, VERTICAL PANELS AND DRUMS SHALL NOT BE USED IN THE SAME TAPER OR CLOSURE. HOWEVER, DIFFERENT CHANNELIZATION DEVICES MAY BE USED IN DIFFERENT AREAS OF A PROJECT.
 - C. REFLECTORIZED PLASTIC DRUM DELINEATORS SHALL BE USED AT HAZARDOUS LOCATIONS DETERMINED BY THE ENGINEER. DELINEATORS SHALL REMAIN IN PLACE UNTIL SATISFACTORY PROTECTION IS PROVIDED. DELINEATORS SHALL BE SPACED AT A DISTANCE NOT TO EXCEED 25 FEET, OR AS DIRECTED BY THE ENGINEER.
6. FLAGGING AND TRAFFIC CONTROL:
 - A. FLAGGER SIGNS SHALL NOT BE USED FOR BRIEF PERIODS OF INCIDENTAL FLAGGING, AOB. FLAGGER SIGNS SHALL NOT BE VISIBLE WHEN FLAGGERS ARE NOT BEING USED.
 - B. WHEN A SIDE ROAD OR DRIVEWAY INTERSECTS THE ROADWAY WITHIN A WORK ZONE TRAFFIC CONTROL AREA, ADDITIONAL TEMPORARY TRAFFIC CONTROL DEVICES AND/OR FLAGGERS SHALL BE PLACED AS NEEDED. ADDITIONAL FLAGGERS SHALL BE LOCATED AS NEEDED AT ALL INTERSECTIONS AND COMMERCIAL DRIVEWAYS LOCATED WITHIN OR NEAR THE ACTIVE WORK SPACE.
7. SIGNS AND DEVICES:
 - A. DIAMOND-SHAPED ADVANCE WARNING SIGNS SHALL BE USED FOR ALL ADVANCE WARNING SIGNS SHOWN IN PART 6 OF THE MUTCD. COLOR REQUIREMENTS SHALL BE BLACK TEXT ON ORANGE BACKGROUND.
 - B. THE CORRECT SPACING OF SIGNS, EITHER PERMANENT OR TEMPORARY MUST BE MAINTAINED AT ALL TIMES IN ACCORDANCE WITH THE MUTCD UNLESS SHOWN OTHERWISE ON THE PLANS. ALL SIGNS INCLUDING GUIDE SIGNS SHALL INDICATE ACTUAL CONDITIONS AT ALL TIMES AND SHALL BE COVERED, MOVED, REMOVED, OR CHANGED IMMEDIATELY AS ORDERED BY THE ENGINEER.
 - C. THE LOCATION OF THE SIGNS SHOWN ON THE WORK ZONE TRAFFIC CONTROL PLANS AND DETAILS MAY BE ADJUSTED BASED ON SIGHT DISTANCE AND OTHER CONSIDERATIONS. THE FINAL LOCATIONS OF SIGNS ARE SUBJECT TO APPROVAL OF THE ENGINEER.
 - D. ANY EXISTING SIGNS, INCLUDING OVERHEAD SIGNS, WHICH CONFLICT WITH THE TEMPORARY TRAFFIC CONTROL SIGNS LAYOUT SHALL BE COVERED, REMOVED, STORED OR RESET, AS APPROVED BY THE ENGINEER. ALL APPROPRIATE EXISTING SIGNS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AND/OR LOCATION UNLESS OTHERWISE REPLACED IN THIS CONTRACT.
 - E. SIGNS AT OR NEAR INTERSECTIONS SHALL BE PLACED SO THAT THEY DO NOT OBSTRUCT A MOTORIST'S LINE OF SIGHT.
 - F. ALL WARNING AND REGULATORY SIGNS SHALL BE POSTED ON BOTH SIDES OF ONE-WAY STREETS. IN CASES WHERE LANE RESTRICTIONS REDUCE THE TRAVEL LANE TO ONE LANE, SIGNS SHALL BE POSTED ON THE RIGHT SIDE OF THE ACTIVE TRAVEL LANE, UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER.
 - G. THE DIMENSIONS OF WORK ZONE TRAFFIC CONTROL SIGNS TO BE USED FOR THIS PROJECT ARE DESCRIBED IN THE MUTCD AND THE NYS DOT STANDARD SHEET SERIES 619.
8. NOTIFICATION AND EMERGENCY ACCESS:
 - A. THE CONTRACTOR IS REQUIRED TO CONTACT THE APPROPRIATE SCHOOL AND EMERGENCY SERVICES ORGANIZATIONS WITH RESPECT TO THE EFFECT OF ROAD WORK, TRAVEL LANE REDUCTIONS, AND DETOURS ON OPERATIONS. THIS CONTACT SHALL BE MADE AS CONDITIONS CHANGE AND AT LEAST TWO WEEKS PRIOR TO IMPLEMENTING EACH TRAFFIC PHASE AND/OR DETOUR TO ALLOW ADEQUATE TIME FOR THE ORGANIZATIONS TO COORDINATE AND MAKE NECESSARY ADJUSTMENTS TO RESPONSE SCHEDULES AND ROUTES.
9. BICYCLISTS AND PEDESTRIANS:
 - A. THERE WILL BE NO PEDESTRIAN AND BICYCLE TRAFFIC THROUGH THE WORK AREA FOR THE DURATION OF THE CONSTRUCTION.
 - B. TEMPORARY SAFETY FENCING SHALL BE PLACED ALONG ANY SIDEWALK ADJACENT TO ANY EXCAVATION OR VERTICAL DROP-OFF OVER 6 INCHES. SAFETY FENCING SHALL BE CONTINUOUS PLASTIC FLUORESCENT ORANGE SUPPORTED BY METAL OR WOOD POSTS. THE FENCING SHALL BE A MINIMUM OF 4 FEET IN HEIGHT AND MAY INCLUDE A TOP AND BOTTOM RAIL TO PROVIDE ADDITIONAL SUPPORT, AOB. THE SAFETY FENCE SHALL CONFORM TO SECTION 107-05 OF THE STANDARD SPECIFICATIONS. ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO INSTALL AND REMOVE TEMPORARY SAFETY FENCING SHALL BE INCLUDED IN THE PRICE BID FOR BASIC WORK ZONE TRAFFIC CONTROL, ITEM 619.01.
10. PERMITS:
 - A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING HIGHWAY WORK PERMITS REQUIRED TO ERECT THE DETOUR SIGNAGE.

PROJECT MANAGER: C. TUTUNJIAN

CHECKED BY: I. PENGU

DRAFTED BY: D. RAFFERTY

CHECKED BY: Z. PORTER

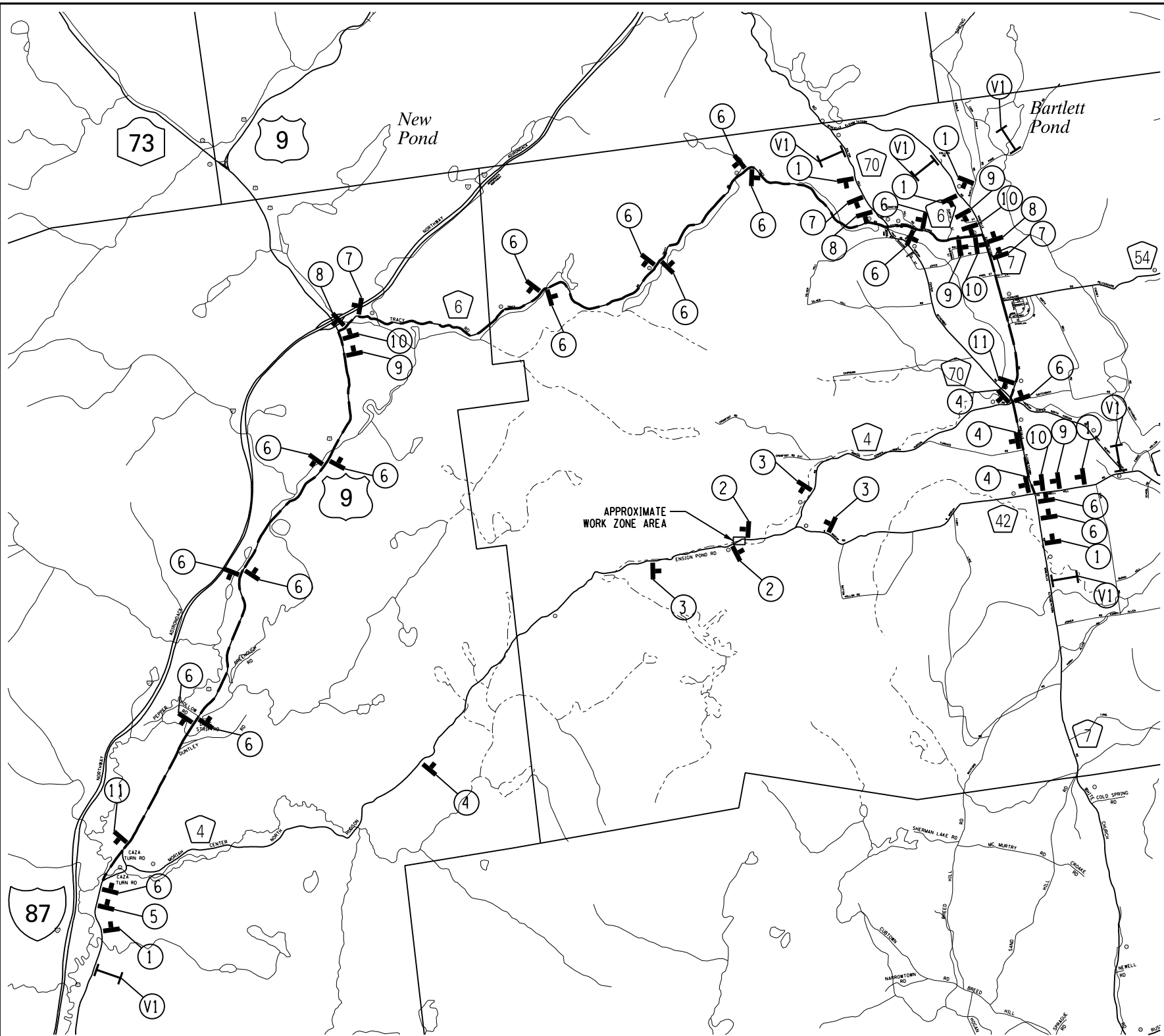
DESIGNED BY: I. PENGU

AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:	ENSIGN POND RD (CR4) BRIDGE OVER MILL BROOK	PIN 1762.14	BRIDGES BIN 3372000	CULVERTS	ALL DIMENSIONS IN ft UNLESS OTHERWISE NOTED	CONTRACT NUMBER
	CULVERT REPLACEMENT PROJECT					D040666
	TOWN OF MORIAH					WORK ZONE TRAFFIC CONTROL - 1
	COUNTY: ESSEX REGION: 1					DRAWING NO. WZTC-1 SHEET NO. 6

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.



PROJECT MANAGER: C. TUTUNJIAN
 CHECKED BY: I. PENGU
 DRAFTED BY: D. RAFFERTY
 CHECKED BY: Z. PORTER
 DESIGNED BY: I. PENGU



DETOUR PLAN
SCALE: 1" = 7500'-0"



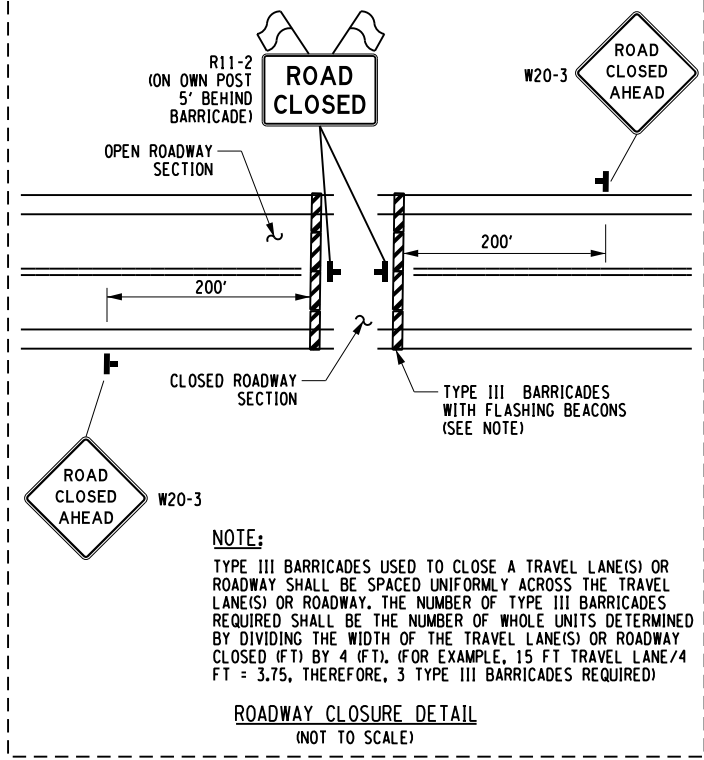
 W20-2A ①	 ROAD CLOSED 500 FT AHEAD LOCAL TRAFFIC ONLY R11-3A ②	 DETOUR M4-8 ENSIGN POND RD D3-1 M5-1L ⑦
	 ROAD CLOSED 1 MILE AHEAD LOCAL TRAFFIC ONLY R11-3A ③	 DETOUR M4-8 ENSIGN POND RD D3-1 M6-1L ⑧
	 ROAD CLOSED 4 MILES AHEAD LOCAL TRAFFIC ONLY R11-3A ④	 DETOUR M4-8 ENSIGN POND RD D3-1 M5-1R ⑨
	 ROAD CLOSED 8 MILES AHEAD LOCAL TRAFFIC ONLY R11-3A ⑤	 DETOUR M4-8 ENSIGN POND RD D3-1 M6-1R ⑩
	 DETOUR M4-8 ENSIGN POND RD D3-1 M6-3 ⑥	 ENSIGN POND RD D3-1 END DETOUR M4-8A ⑪

LEGEND

- DETOUR SIGN LOCATION
- DETOUR ROUTE
- VMS SIGN

TABLE OF PORTABLE VARIABLE MESSAGE SIGNS
(SEE PLAN FOR LOCATIONS)

LOCATION	DATES REQUIRED	MESSAGE 1	MESSAGE 2
V1	1 WEEK PRIOR TO CLOSURE	ENSIGN POND ROAD CLOSURE	WEEK OF MONTH XX
	DURING CLOSURE	ENSIGN POND ROAD CLOSURE	SEE DETOUR

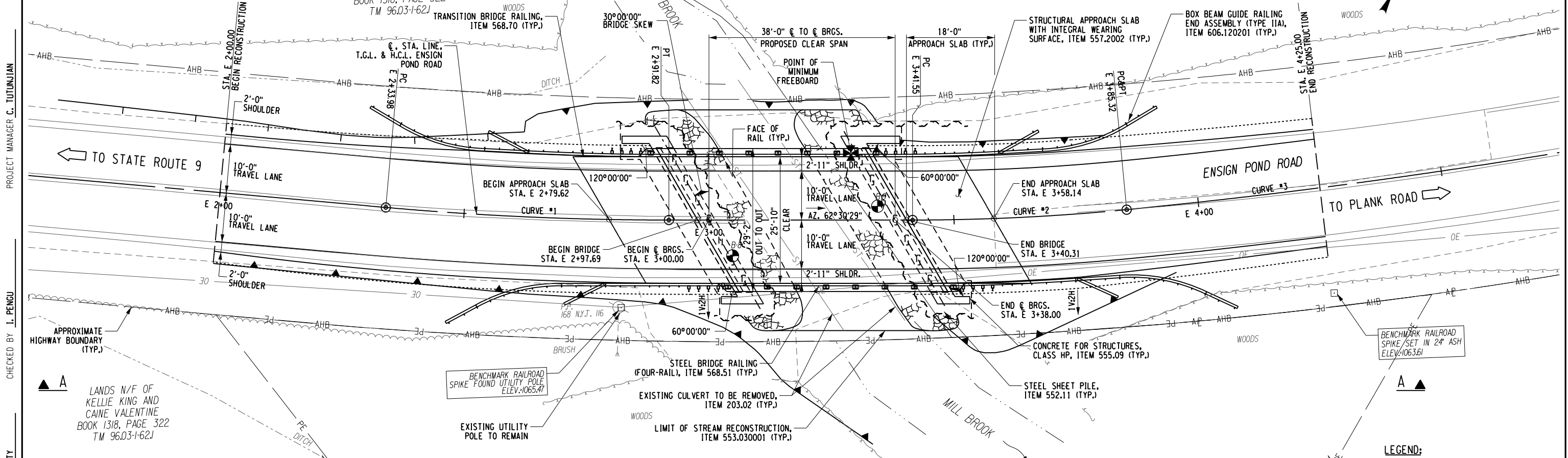
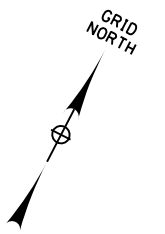


AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:	ENSIGN POND RD (CR4) BRIDGE OVER MILL BROOK	PIN 1762.14	BRIDGES BIN 3372000	CULVERTS	ALL DIMENSIONS IN FT UNLESS OTHERWISE NOTED	CONTRACT NUMBER D040666
	CULVERT REPLACEMENT PROJECT					WORK ZONE TRAFFIC CONTROL - 2
	TOWN OF MORIAH	REGION: 1				SHEET NO. 7
	COUNTY: ESSEX					

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

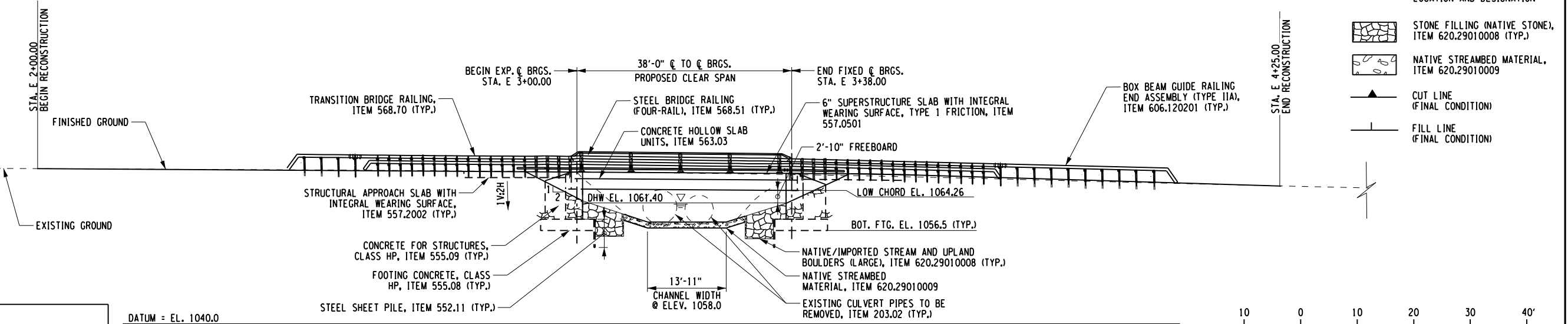
CURVE #1	CURVE #2	CURVE #3
PC = STA. E 2+33.98 PT = STA. E 2+91.82	PC = STA. E 3+41.55 PT = STA. E 3+85.32	PC = STA. E 3+85.32 PT = STA. E 4+92.21
Δ = 5°05'55.2" R = 650.00' Dc = 8°48'54.4" L = 57.84' T = 28.94'	Δ = 5°34'22.7" R = 450.00' Dc = 12°43'56.6" L = 43.77' T = 21.90'	Δ = 4°38'22.4" R = 1320.00' Dc = 4°20'25.8" L = 106.89' T = 53.47'

LANDS N/F OF
NEW TIMBER, LLC
BOOK 1982, PAGE 197
TM 96.03-1-62.21



GENERAL PLAN

LOAD RATING (LFD)		
INVENTORY	HS-25	44.6 TONS
OPERATING	HS-41	74.5 TONS
LOAD RATING (LRFR)		
INVENTORY	HL-93	1.49
OPERATING	HL-93	2.01

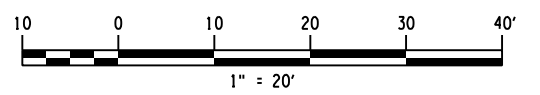


ELEVATION A-A

- LEGEND:**
- INDICATES BORING LOCATION AND DESIGNATION
 - STONE FILLING (NATIVE STONE), ITEM 620.29010008 (TYP.)
 - NATIVE STREAMBED MATERIAL, ITEM 620.29010009
 - CUT LINE (FINAL CONDITION)
 - FILL LINE (FINAL CONDITION)

HYDRAULIC DATA			
DRAINAGE AREA	5.8 SQ. MILES	BASE FLOOD	DESIGN FLOOD
REQUENCY INTERVAL (YEARS)	100	50	
PEAK DISCHARGE (CFS)	524	455	
HIGH WATER ELEVATION AT POINT OF MAX. BACKWATER	EXISTING 1062.5 PROPOSED 1061.61	1062.0 1061.40	
FREEBOARD PROVIDED (FT)	EXISTING 0.02 PROPOSED 2.65	0.57 2.85	
AVG. VELOCITY THRU STRUCT. @ DESIGN FLOOD	6.34 FT./SEC.		
SCOUR DEPTH: 1.5 FT	MINIMUM CHANNEL EL. 1058.0 FT		
SCOUR DEPTH IS MEASURED FROM MINIMUM CHANNEL ELEVATION.			

DATUM = EL. 1040.0



AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:	ENSIGN POND RD (CR4) BRIDGE OVER MILL BROOK	PIN 1762.14	BRIDGES BIN 3372000	CULVERTS	ALL DIMENSIONS IN FT UNLESS OTHERWISE NOTED	CONTRACT NUMBER D040666
	CULVERT REPLACEMENT PROJECT					DRAWING NO. ST-1
	TOWN OF MORIAH					SHEET NO. 8
	COUNTY: ESSEX	REGION: 1				

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

PROJECT MANAGER: C. TUTUNJIAN
 CHECKED BY: I. PENGU
 DRAFTED BY: D. RAFFERTY
 CHECKED BY: Z. PORTER
 DESIGNED BY: I. PENGU

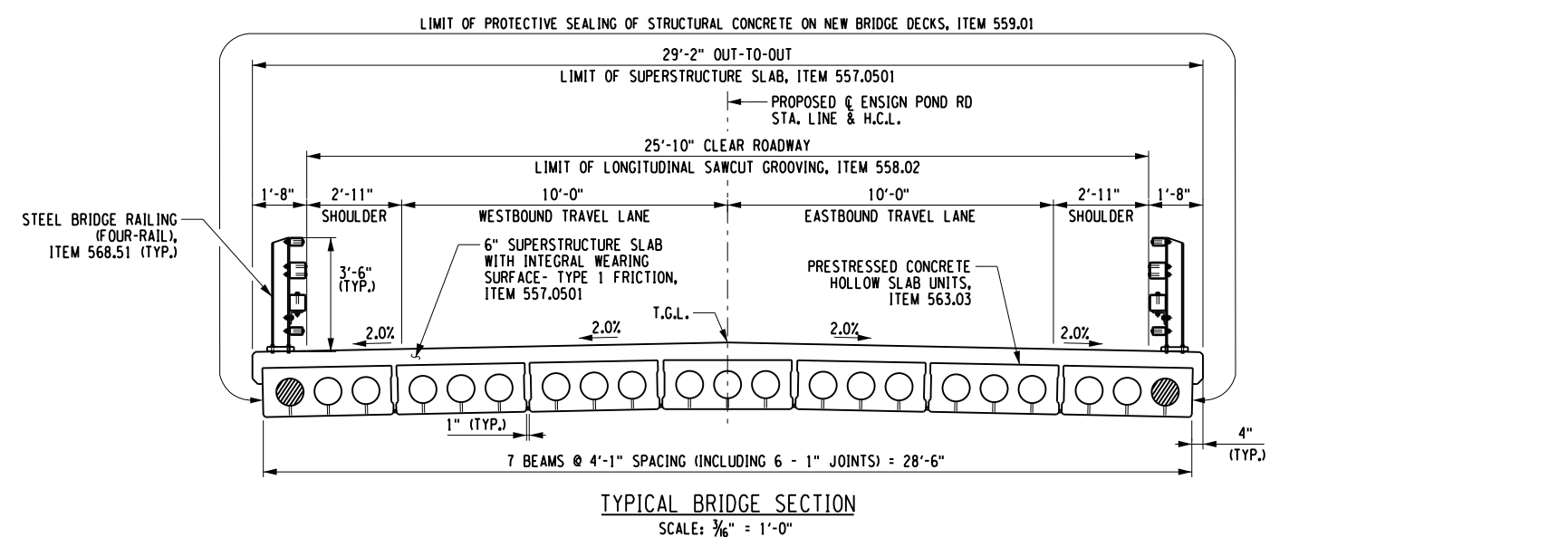
PROJECT MANAGER C. TUTUNJIAN

CHECKED BY I. PENGU

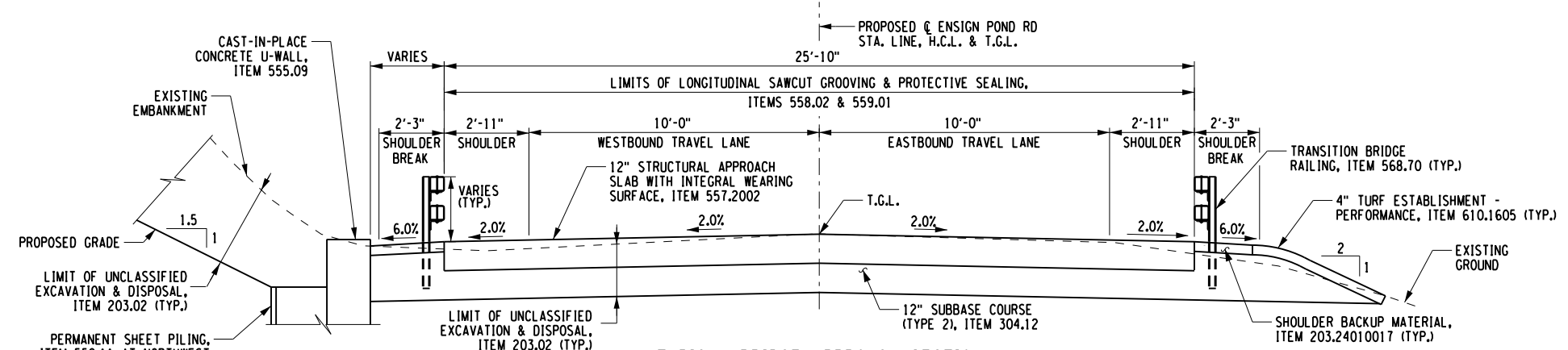
DRAFTED BY D. RAFFERTY

CHECKED BY Z. PORTER

DESIGNED BY I. PENGU



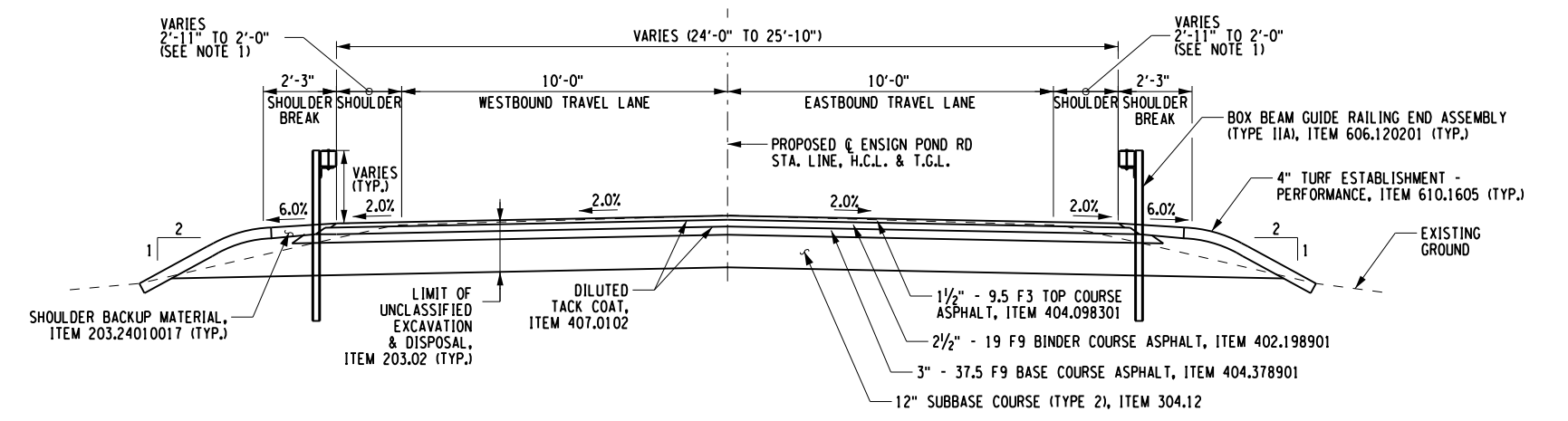
TYPICAL BRIDGE SECTION
SCALE: 3/16" = 1'-0"



TYPICAL BRIDGE APPROACH SECTION
STA. E 2+79.62 TO STA. E 2+97.69
STA. E 3+40.31 TO STA. E 3+58.14
SCALE: 3/16" = 1'-0"

NOTES:

1. TRANSITION SHOULDER FROM 2'-0" TO 2'-11" FROM STA E 2+00.00 TO E 2+50.00 AND E 4+25.00 TO E 3+75.00.



TYPICAL HIGHWAY APPROACH SECTION
STA. E 2+00.00 TO STA. E 2+79.62
STA. E 3+58.14 TO STA. E 4+25.00
SCALE: 3/16" = 1'-0"

AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:	ENSIGN POND RD (CR4) BRIDGE OVER MILL BROOK	PIN 1762.14	BRIDGES BIN 3372000	CULVERTS	ALL DIMENSIONS IN FT UNLESS OTHERWISE NOTED	CONTRACT NUMBER D040666
	CULVERT REPLACEMENT PROJECT				TYPICAL SECTIONS	DRAWING NO. ST-2
	TOWN OF MORIAH					SHEET NO. 9
	COUNTY: ESSEX	REGION: 1				

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.





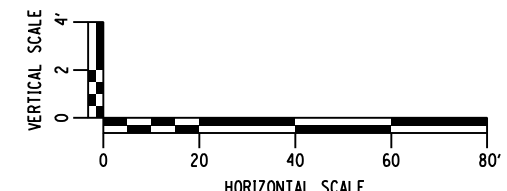
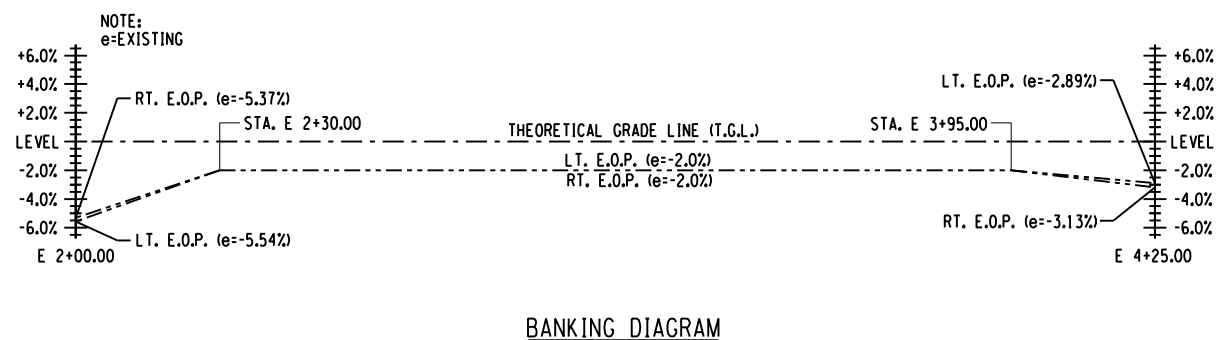
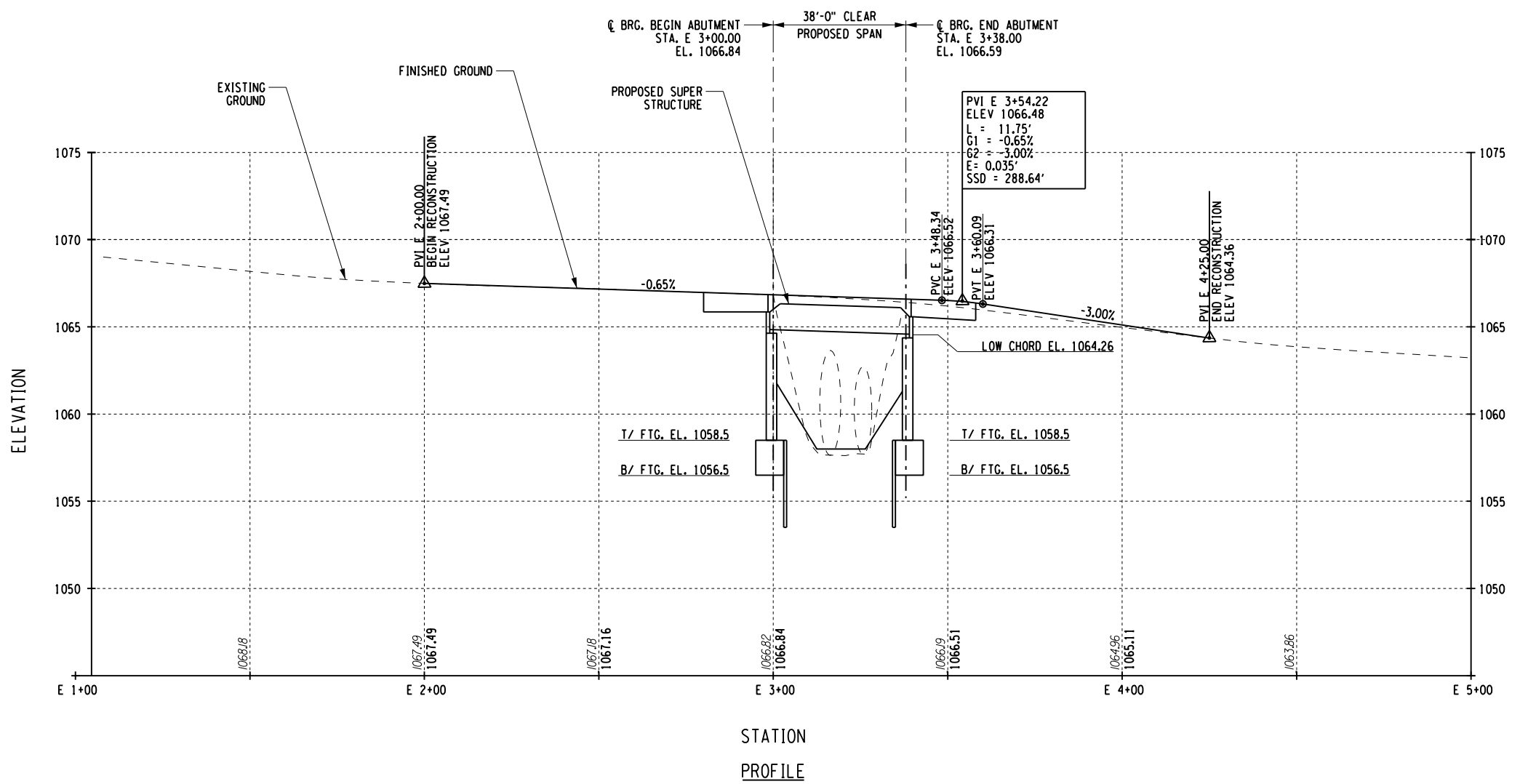
PROJECT MANAGER: C. TUTUNJIAN

CHECKED BY: I. PENGU

DRAFTED BY: D. RAFFERTY

CHECKED BY: Z. PORTER

DESIGNED BY: I. PENGU



AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:	ENSIGN POND RD (CR4) BRIDGE OVER MILL BROOK	PIN 1762.14	BRIDGES	ALL DIMENSIONS IN FT UNLESS OTHERWISE NOTED	CONTRACT NUMBER
	CULVERT REPLACEMENT PROJECT		BIN 3372000		D040666
	TOWN OF MORIAH		CULVERTS		DRAWING NO. ST-3
	COUNTY: ESSEX	REGION: 1			SHEET NO. 10
PROFILE					
<p>IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.</p>					
					 Department of Transportation

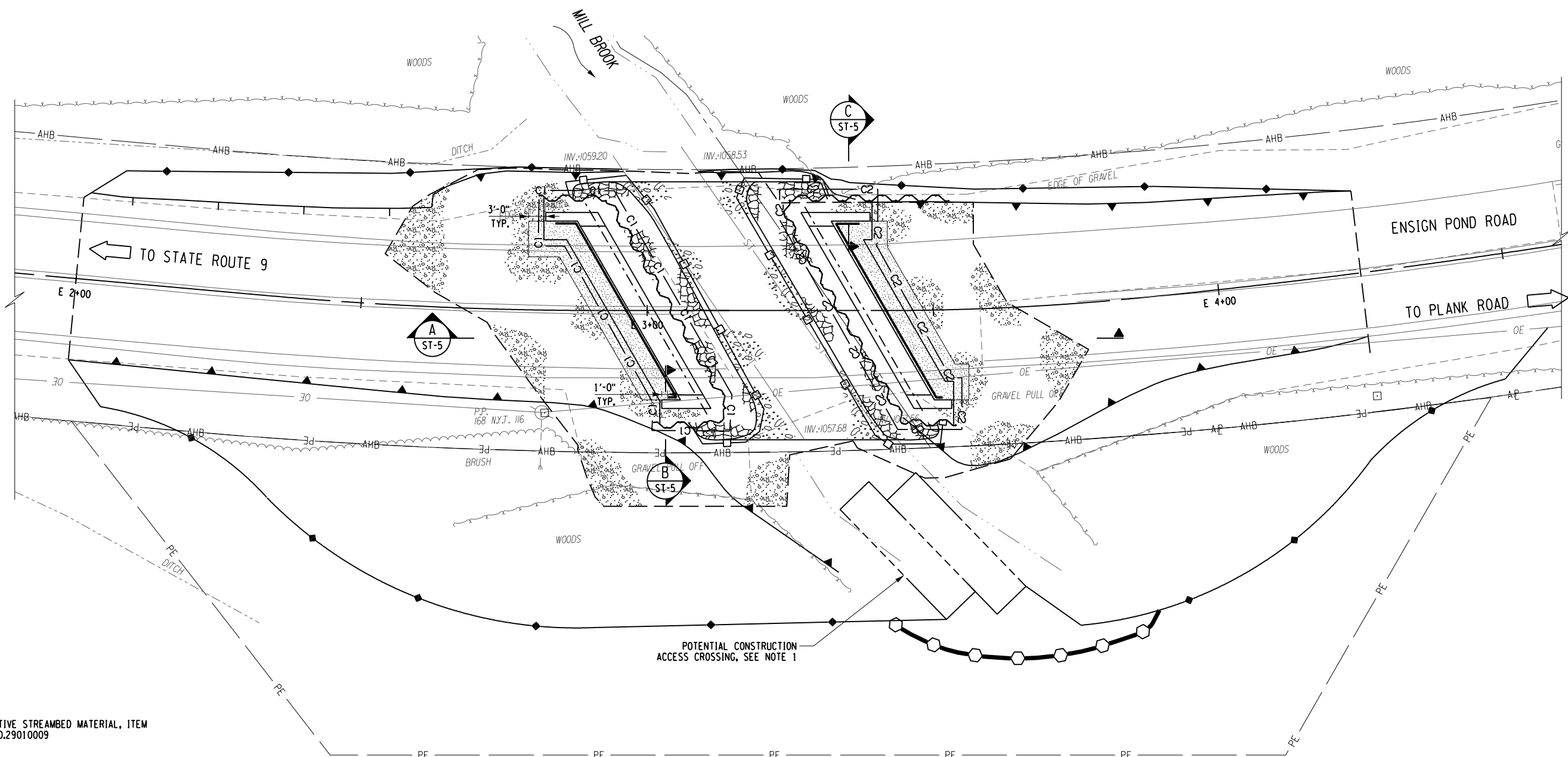
PROJECT MANAGER C. TUTUNJIAN

CHECKED BY I. PENGU

DRAFTED BY D. RAFFERTY

CHECKED BY Z. PORTER

DESIGNED BY I. PENGU



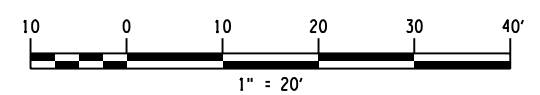
LEGEND:

- NATIVE STREAMBED MATERIAL, ITEM 620.29010009
- NATIVE/IMPORTED STREAM AND UPLAND BOULDERS (LARGE), ITEM 620.29010008
- EMBANKMENT IN PLACE, ITEM 203.03
- SELECT STRUCTURE FILL, ITEM 203.21
- LIMITS OF STRUCTURE EXCAVATION, ITEM 206.01
- TRENCH AND CULVERT EXCAVATION, ITEM 206.0201
- PREFABRICATED COMPOSITE STRUCTURAL DRAIN, ITEM 207.26
- SILT FENCE, ITEM 209.13
- TURBIDITY CURTAIN, ITEM 209.1501
- TYPE 2 COFFERDAM, ITEMS 553.020001 & 553.020002
- CUT LINE (FINAL CONDITION)
- FILL LINE (FINAL CONDITION)

EARTHWORK AND EROSION CONTROL PLAN

NOTES:

1. THE CONTRACTOR MAY CHOOSE TO BUILD A TEMPORARY CONSTRUCTION CROSSING ON SITE TO FACILITATE CONSTRUCTION AND AVOID LONG DETOURS FOR CONSTRUCTION EQUIPMENT AROUND THE PROJECT SITE. THE CROSSING SHALL CONFORM TO THE REQUIREMENTS OF NYSEDEC PERMIT ISSUED FOR THIS PROJECT.



AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:	ENSIGN POND RD (CR4) BRIDGE OVER MILL BROOK	PIN 1762.14	BRIDGES BIN 3372000	CULVERTS	ALL DIMENSIONS IN ft UNLESS OTHERWISE NOTED	CONTRACT NUMBER D040666
	CULVERT REPLACEMENT PROJECT				EARTHWORK AND EROSION CONTROL PLAN	DRAWING NO. ST-4
	TOWN OF MORIAH					SHEET NO. 11
	COUNTY: ESSEX	REGION: 1				

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

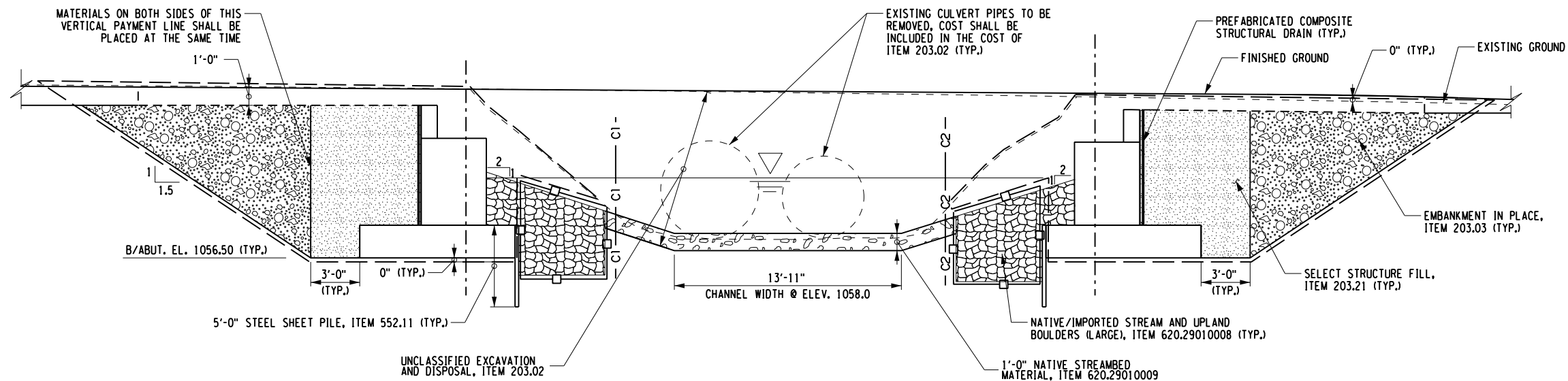
PROJECT MANAGER C. TUTUNJIAN

CHECKED BY I. PENGU

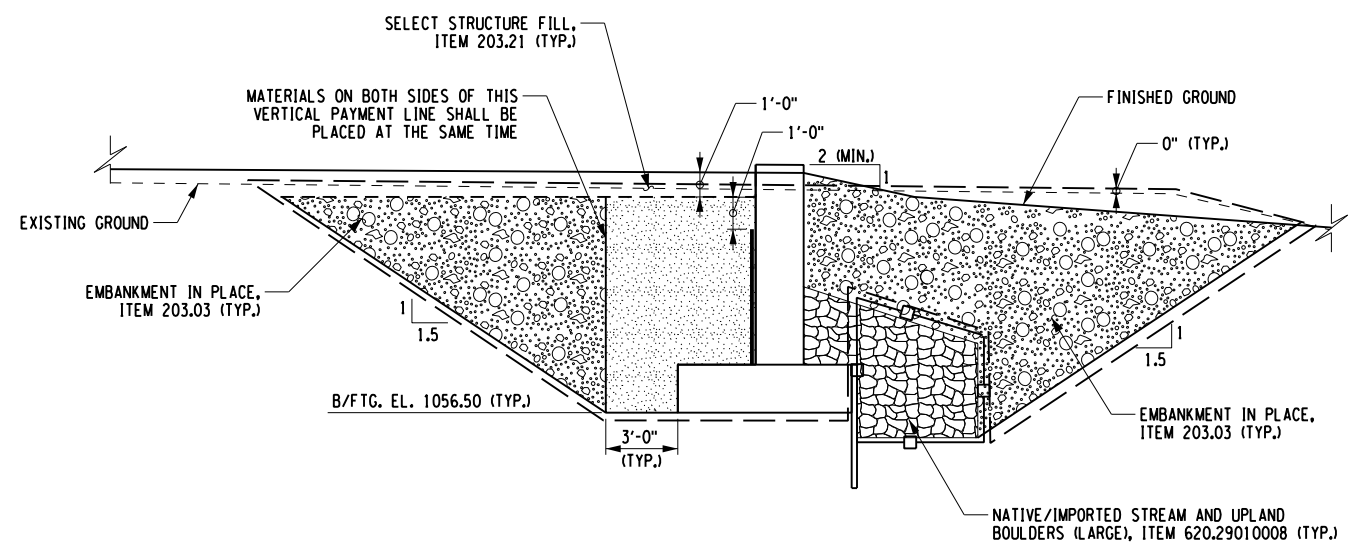
DRAFTED BY D. RAFFERTY

CHECKED BY Z. PORTER

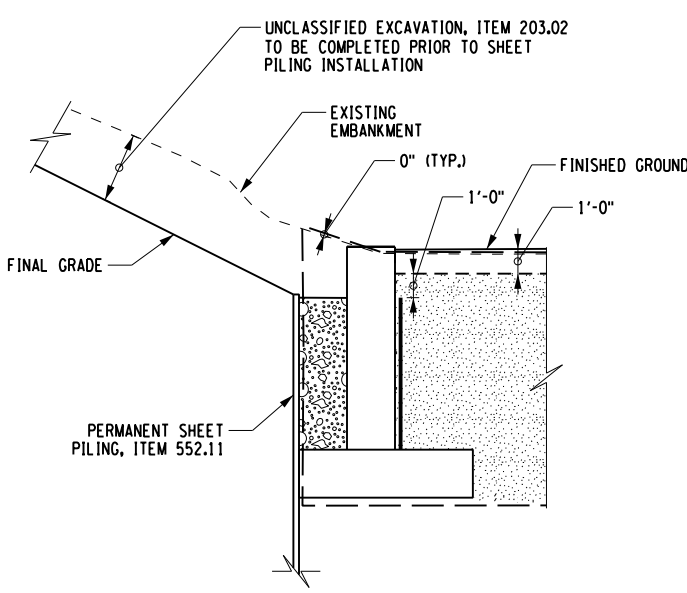
DESIGNED BY I. PENGU



A BUTTRESS EARTHWORK SECTION
 ST-4 SCALE: 1/8" = 1'-0"












B TYPICAL WINGWALL EARTHWORK SECTION
 ST-4 SCALE: 1/8" = 1'-0"



C NORTHWEST WINGWALL EARTHWORK SECTION
 ST-4 SCALE: 1/8" = 1'-0"

LEGEND:

-  SELECT STRUCTURE FILL, ITEM 203.21
-  EMBANKMENT IN PLACE, ITEM 203.03
-  NATIVE/IMPORTED STREAM AND UPLAND BOULDERS (LARGE), ITEM 620.29010008
-  NATIVE STREAMBED MATERIAL, ITEM 620.29010009
-  COFFERDAM TYPE 2, ITEMS 553.020001 & 553.020002
-  EXISTING GROUND SURFACE
-  PREFABRICATED COMPOSITE STRUCTURAL DRAIN, ITEM 207.26
-  LIMITS OF STRUCTURE EXCAVATION, ITEM 206.01
-  TRENCH AND CULVERT EXCAVATION, ITEM 206.0201

AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:	ENSIGN POND RD (CR4) BRIDGE OVER MILL BROOK	PIN 1762.14	BRIDGES BIN 3372000	CULVERTS	ALL DIMENSIONS IN FT UNLESS OTHERWISE NOTED	CONTRACT NUMBER D040666
	CULVERT REPLACEMENT PROJECT				EARTHWORK SECTIONS	DRAWING NO. ST-5
	TOWN OF MORIAH					SHEET NO. 12
	COUNTY: ESSEX	REGION: 1				

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

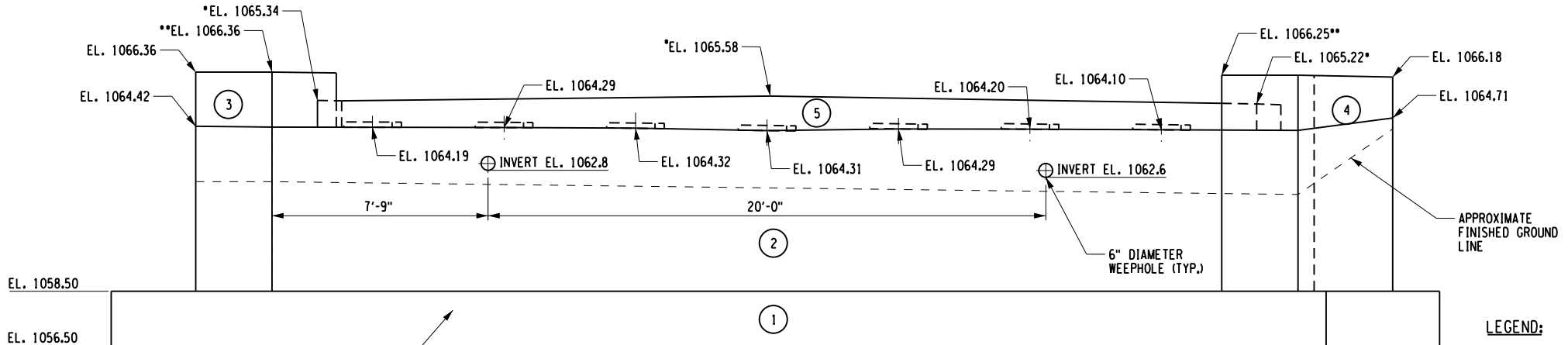
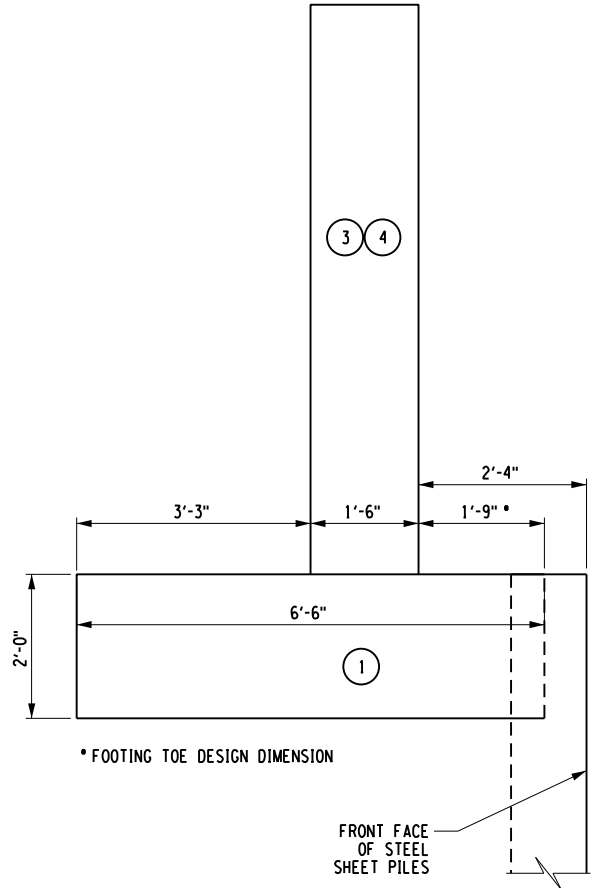
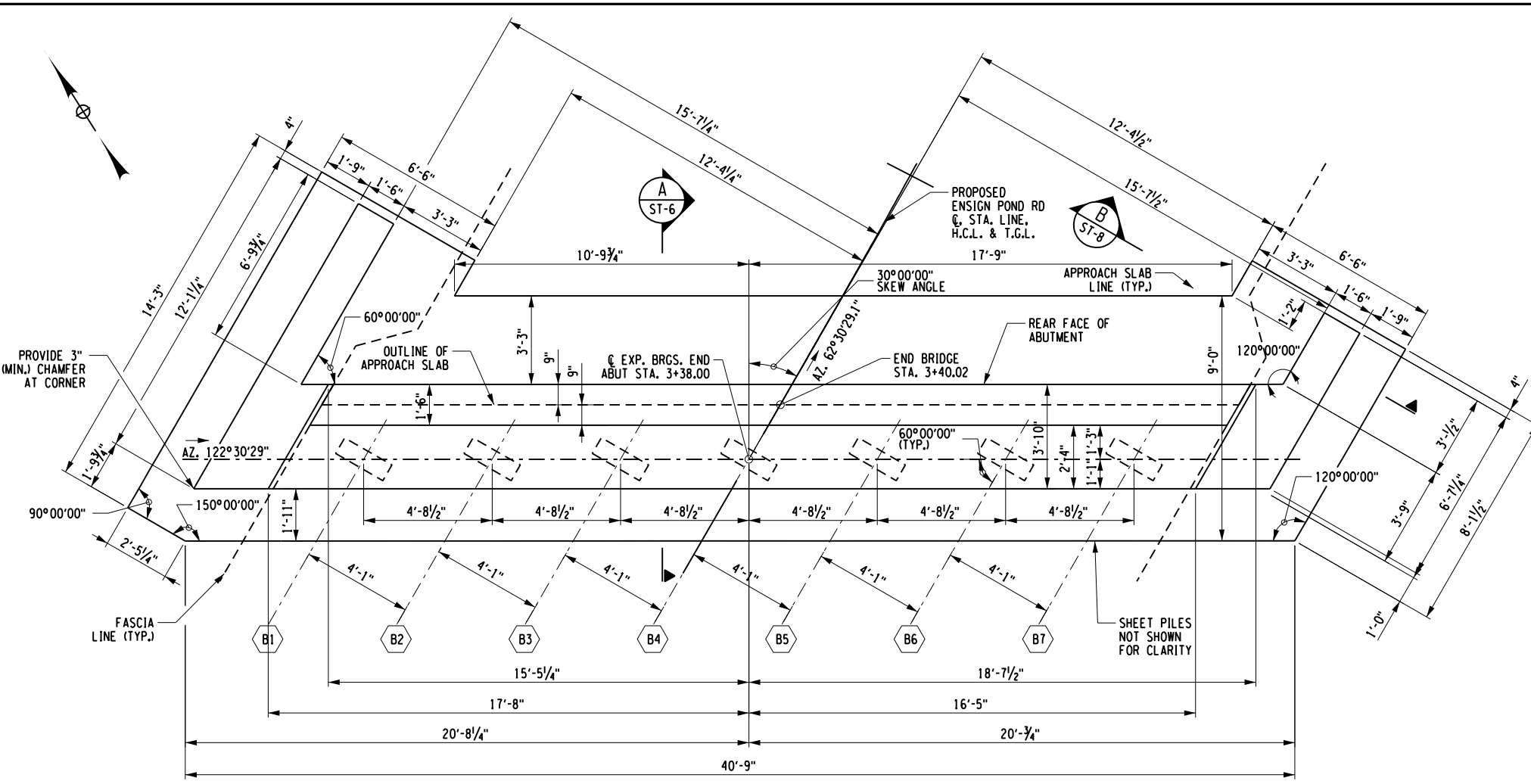
PROJECT MANAGER C. TUTUNJIAN

CHECKED BY I. PENGU

DRAFTED BY D. RAFFERTY

CHECKED BY Z. PORTER

DESIGNED BY I. PENGU



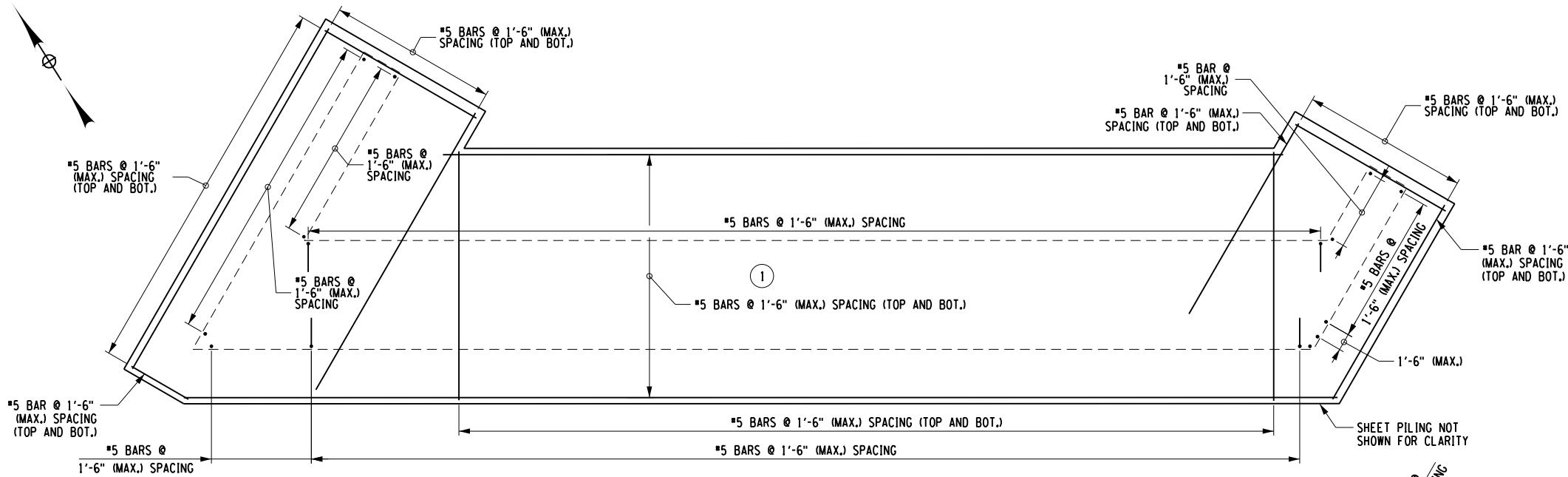
LEGEND:

- (X) INDICATES CONCRETE PLACEMENT NUMBER
- (BX) INDICATES BEAM NUMBER

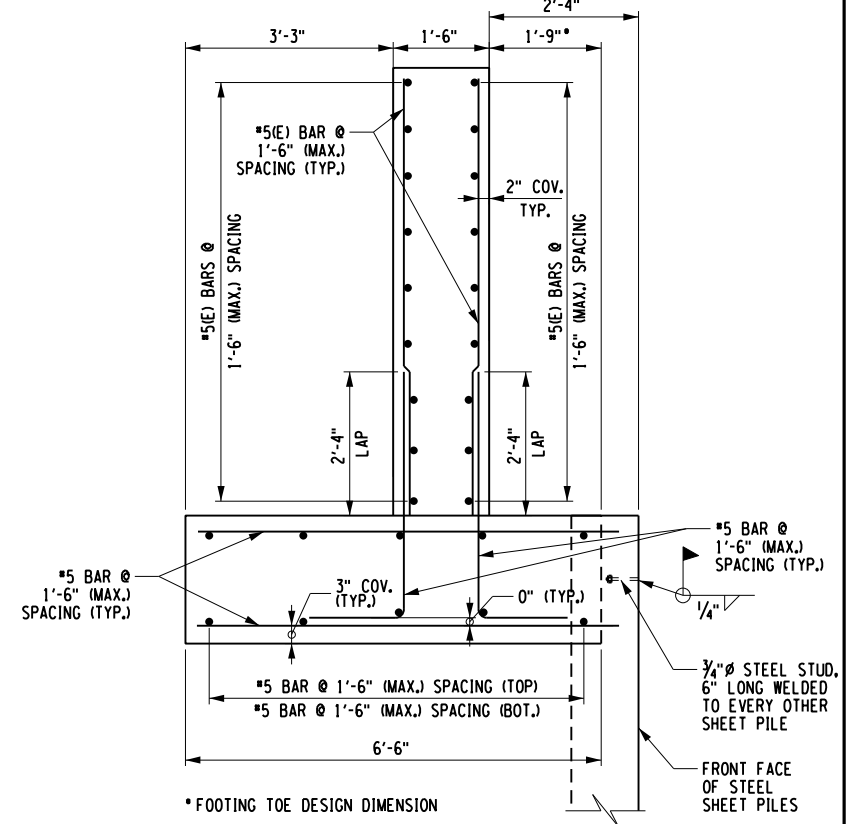
AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:	ENSIGN POND RD (CR4) BRIDGE OVER MILL BROOK	PIN 1762.14	BRIDGES BIN 3372000	CULVERTS	ALL DIMENSIONS IN ft UNLESS OTHERWISE NOTED	CONTRACT NUMBER D040666
	CULVERT REPLACEMENT PROJECT					END ABUTMENT PLAN AND ELEVATION
	TOWN OF MORIAH	REGION: 1				
	COUNTY: ESSEX					

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

PROJECT MANAGER: C. TUTUNJIAN
 CHECKED BY: I. PENGU
 DRAFTED BY: D. RAFFERTY
 CHECKED BY: Z. PORTER
 DESIGNED BY: I. PENGU



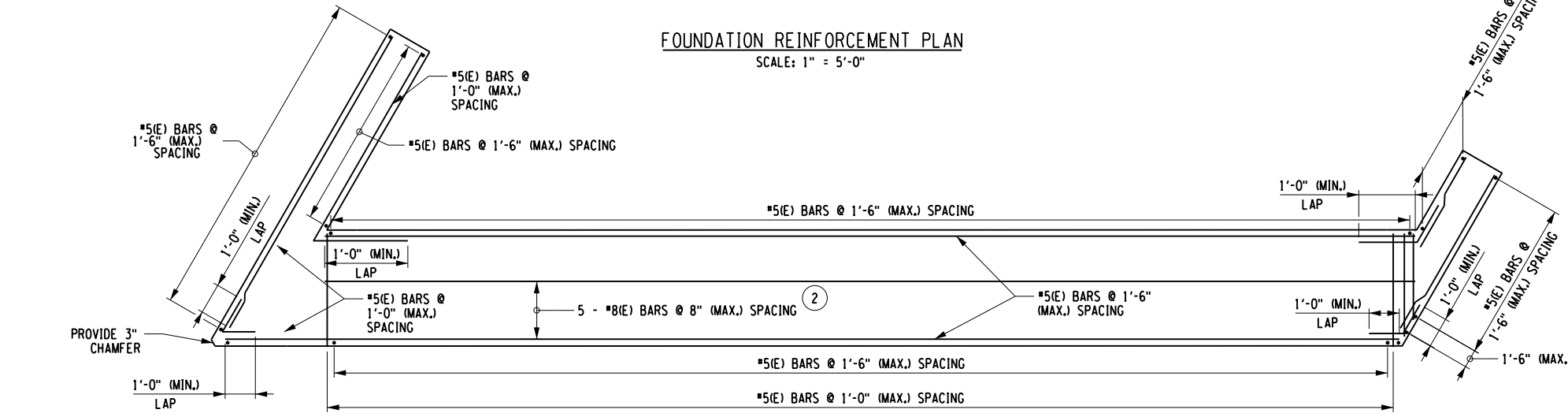
FOUNDATION REINFORCEMENT PLAN
SCALE: 1" = 5'-0"



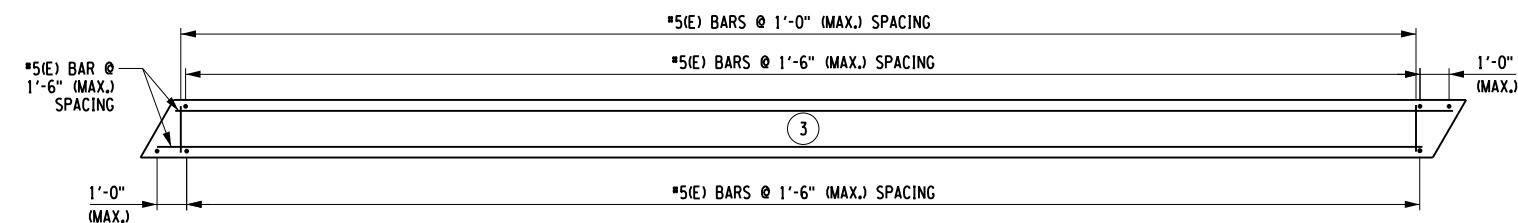
TYPICAL WINGWALL SECTION
SCALE: 1" = 3'-0"

NOTES:
 1. COVER FOR STEEL REINFORCEMENT IN FOOTING SHALL BE 3" UNLESS OTHERWISE NOTED. ALL OTHER COVER SHALL BE 2" UNLESS OTHERWISE NOTED.

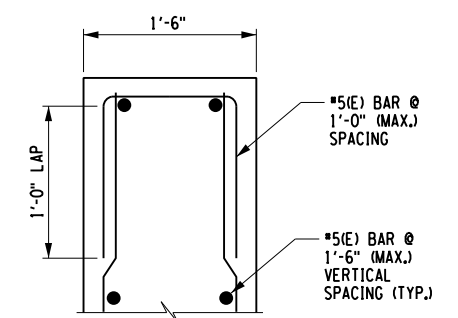
LEGEND:
 (NO.) - INDICATES CONCRETE PLACEMENT NUMBER



STEM AND LOWER WINGWALL REINFORCEMENT PLAN
SCALE: 1" = 5'-0"



BACKWALL REINFORCEMENT PLAN
SCALE: 1" = 5'-0"



1 TOP OF BACKWALL DETAIL
ST-7 (NOT TO SCALE)

AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:	ENSIGN POND RD (CR4) BRIDGE OVER MILL BROOK	PIN 1762.14	BRIDGES BIN 3372000	CULVERTS	ALL DIMENSIONS IN FT UNLESS OTHERWISE NOTED	CONTRACT NUMBER D040666
	CULVERT REPLACEMENT PROJECT					END ABUTMENT REINFORCEMENT PLAN
	TOWN OF MORIAH					
	COUNTY: ESSEX	REGION: 1				

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

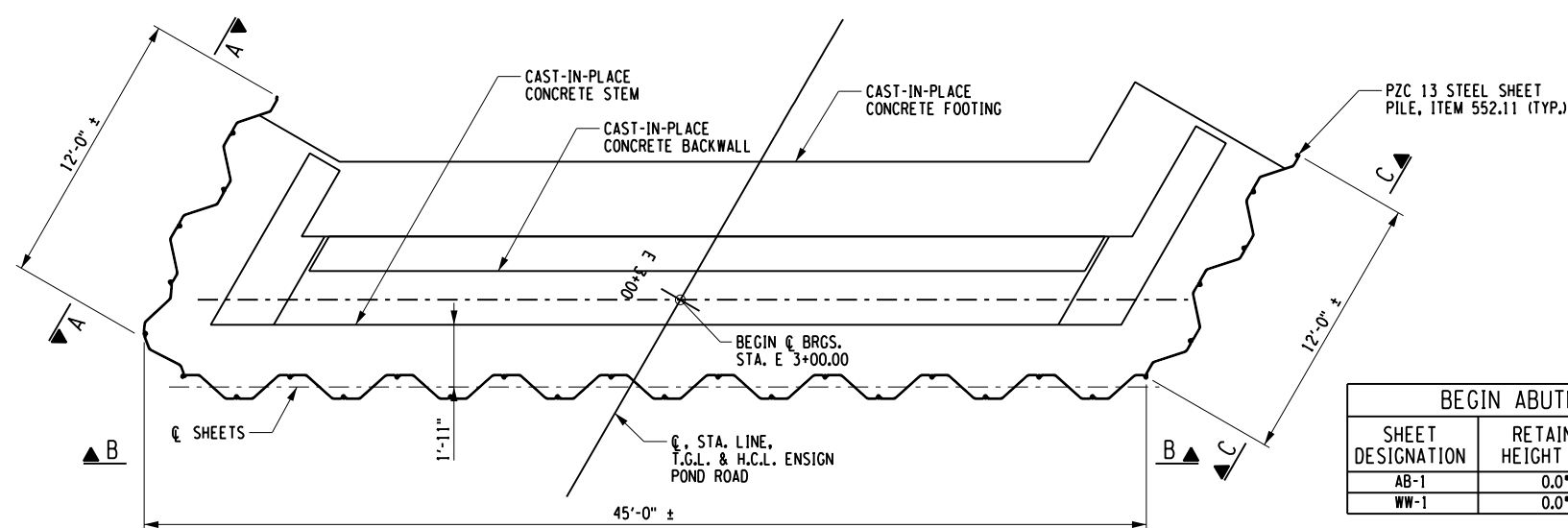
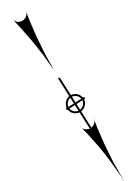
PROJECT MANAGER C. TUTUNJIAN

CHECKED BY I. PENGU

DRAFTED BY D. RAFFERTY

CHECKED BY Z. PORTER

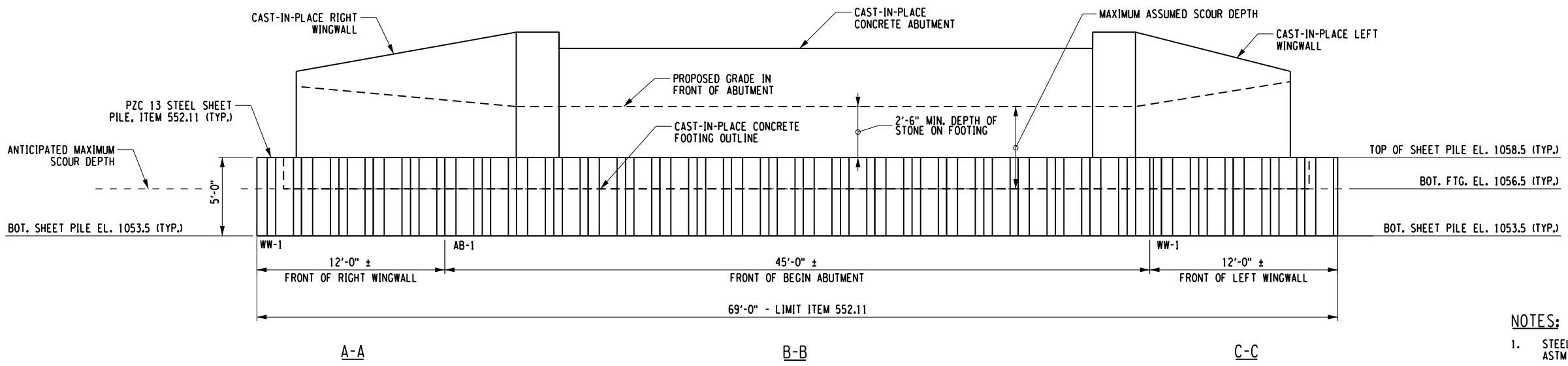
DESIGNED BY I. PENGU



SHEET DESIGNATION	RETAINED HEIGHT (FT)	MIN. EMBEDMENT DEPTH (FT)	SECTION MODULUS (IN ³ /FT)	APPROX. TOP OF SHEET PILE ELEVATION (FT)
AB-1	0.0*	5.0	11.5	1058.5
WW-1	0.0*	5.0	11.5	1058.5

*RETAINED HEIGHT FOR 4'-6" OF SCOUR DEPTH, 2'-6" OF STONE ON TOP OF FTG. (MIN.) + 2'-0" FOOTING DEPTH

BEGIN ABUTMENT SHEET PILE PLAN
SCALE: 1/8" = 1'-0"



- NOTES:
- STEEL SHEET PILING MATERIAL SHALL CONFORM TO ASTM A572 GR. 50 (MIN.).

BEGIN ABUTMENT SHEET PILE ELEVATION
SCALE: 1/8" = 1'-0"

AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:	ENSIGN POND RD (CR4) BRIDGE OVER MILL BROOK	PIN 1762.14	BRIDGES BIN 3372000	CULVERTS	ALL DIMENSIONS IN FT UNLESS OTHERWISE NOTED	CONTRACT NUMBER D040666
	CULVERT REPLACEMENT PROJECT					BEGIN ABUTMENT SHEET PILE PLAN AND ELEVATION
	TOWN OF MORIAH					
	COUNTY: ESSEX	REGION: 1				

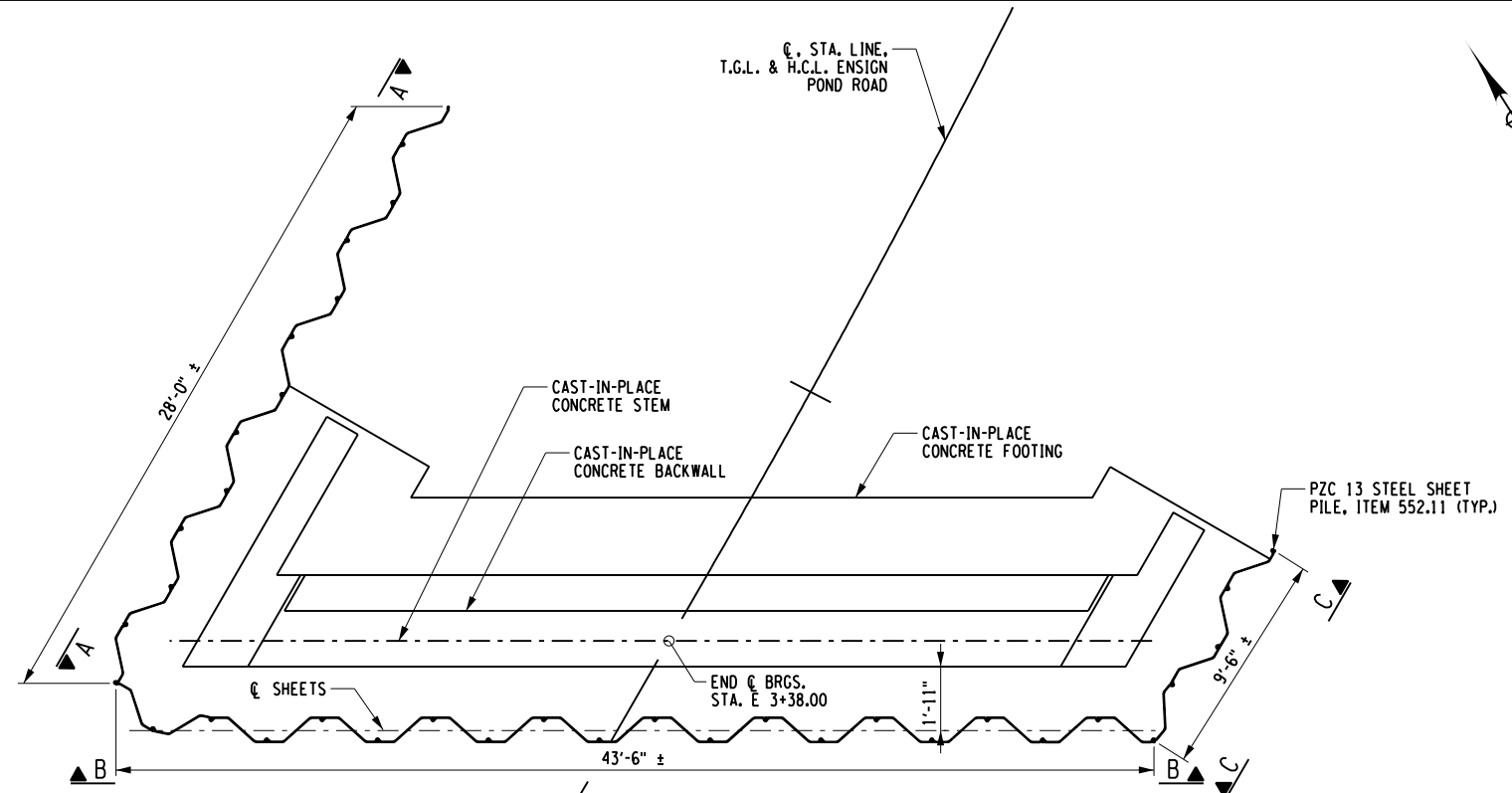
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY, IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.



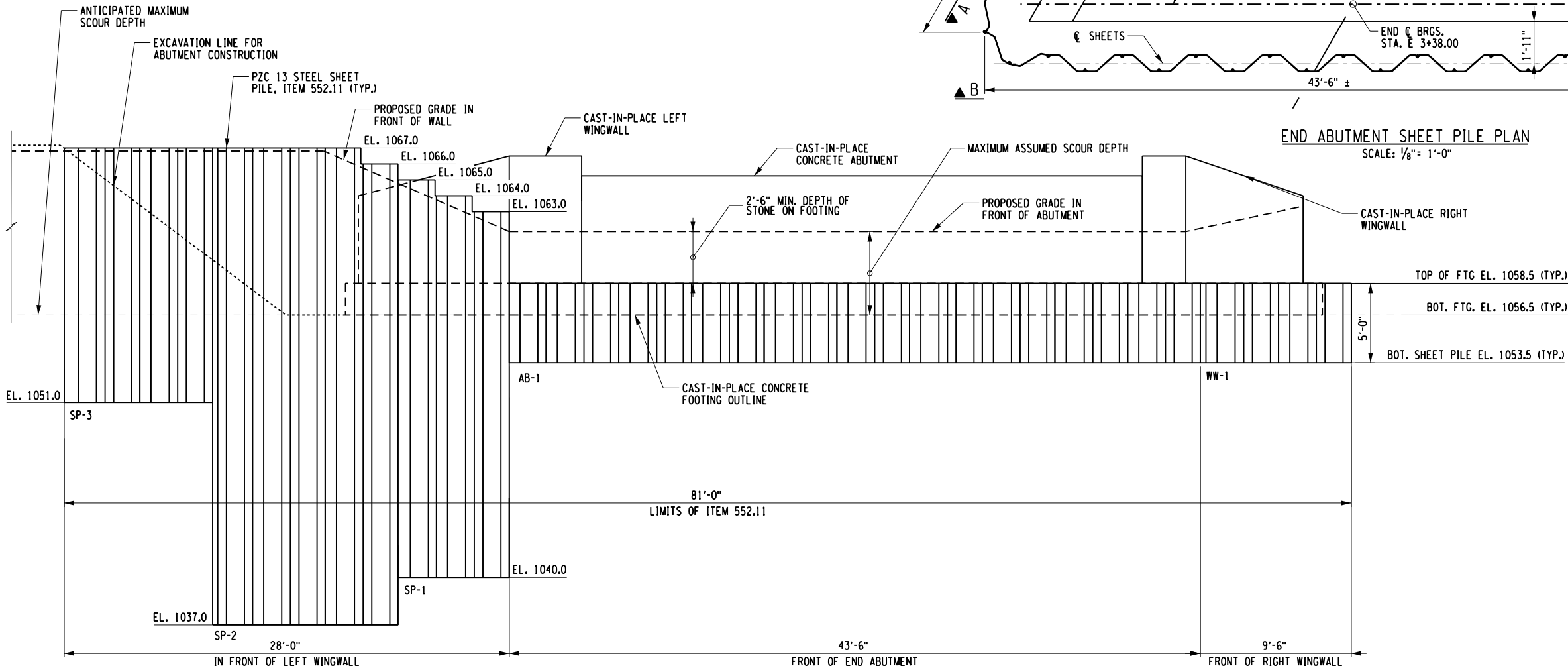
PROJECT MANAGER: C. TUTUNJIAN
 CHECKED BY: I. PENGU
 DRAFTED BY: D. RAFFERTY
 CHECKED BY: Z. PORTER
 DESIGNED BY: I. PENGU

END ABUTMENT SHEET PILE DESIGN TABLE					
SHEET DESIGNATION	RETAINED HEIGHT (FT)	MIN. EMBEDMENT DEPTH (FT)	DESIGN SURCHARGE (PSF)	SECTION MODULUS (IN ³ /FT)	APPROX. TOP OF SHEET PILE ELEVATION (FT)
AB-1	0.0*	5.0	N/A	11.5	1058.5
WW-1	0.0*	5.0	N/A	11.5	1058.5
SP-1	8.0	15.0	0**	24.2	VARIES
SP-2	10.5	20.0	0**	24.2	VARIES
SP-3	5.0	9.0	0**	24.2	1067.0

* RETAINED HEIGHT FOR 4'-6" OF SCOUR DEPTH, 2'-6" OF STONE ON TOP OF FTG. (MIN.) + 2'-0" FOOTING DEPTH
 ** THE SHEETING IN FRONT OF THE LEFT WINGWALL WAS DESIGNED FOR THE WORST-CASE SCENARIO; THE CONTROLLING DESIGN CASE IS DURING STRUCTURE EXCAVATION



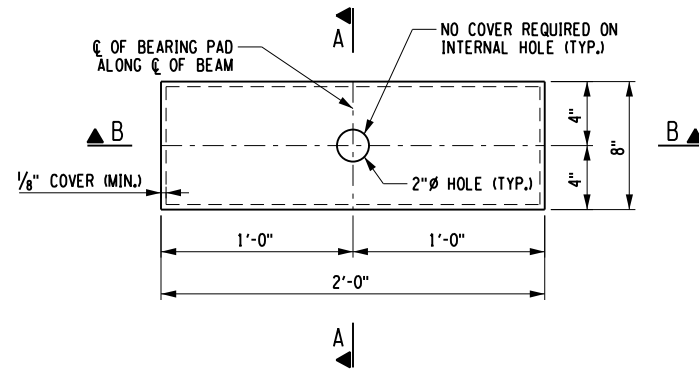
END ABUTMENT SHEET PILE PLAN
 SCALE: 1/8" = 1'-0"



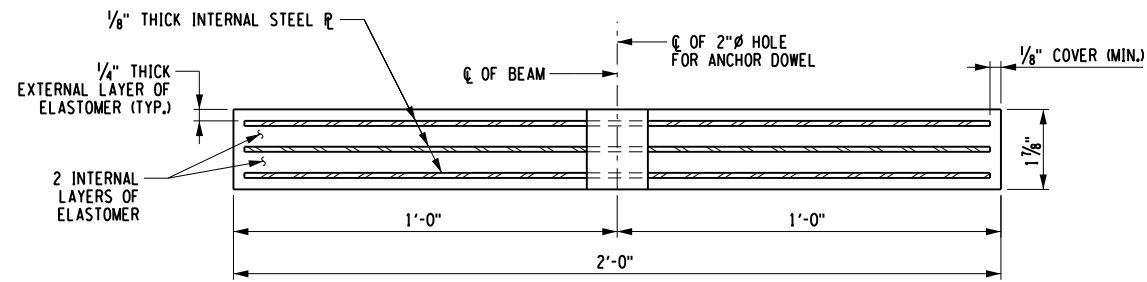
END ABUTMENT SHEET PILE ELEVATION
 SCALE: 1/8" = 1'-0"

- NOTES:**
- STEEL SHEET PILING MATERIAL SHALL CONFORM TO ASTM A572 GR. 50 (MIN.).
 - FINAL GRADES TO BE ESTABLISHED AT THE NORTHWEST CORNER PRIOR TO SHEET PILE DRIVING OPERATIONS BEGIN.
 - STRUCTURE EXCAVATION TO TAKE PLACE ONLY AFTER THE SHEETING HAS BEEN INSTALLED TO THE ELEVATIONS SHOWN ON THIS DWG. THE RETAINED HEIGHT OF SOIL FOR EACH SHEET PILE SHALL NOT EXCEED THE VALUE SHOWN ON THIS DWG. FOR THE CORRESPONDING EMBEDMENT DEPTH.

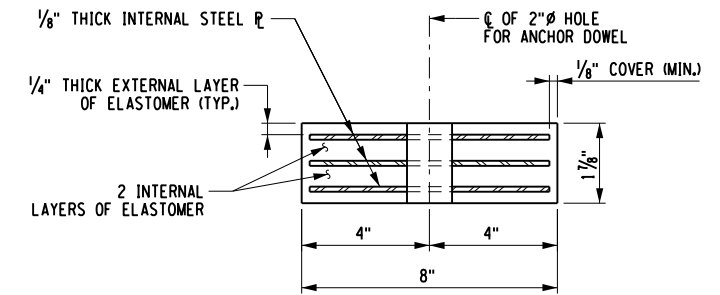
AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:	ENSIGN POND RD (CR4) BRIDGE OVER MILL BROOK	PIN 1762.14	BRIDGES BIN 3372000	CULVERTS	ALL DIMENSIONS IN FT UNLESS OTHERWISE NOTED	CONTRACT NUMBER D040666
	CULVERT REPLACEMENT PROJECT				END ABUTMENT SHEET PILE PLAN AND ELEVATION	DRAWING NO. ST-11
	TOWN OF MORIAH					SHEET NO. 18
	COUNTY: ESSEX	REGION: 1				
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY, IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.						
					Department of Transportation	



PLAN
SCALE: 1" = 1'-0"



SECTION A-A
(NOT TO SCALE)



SECTION B-B
(NOT TO SCALE)

TYPICAL RECTANGULAR STEEL LAMINATED ELASTOMERIC BEARING (TYPE E.L.)

STEEL LAMINATED ELASTOMERIC BEARING (TYPE E.L.) TABLE

LOCATION (Q)	FIX./EXP.	ITEM NO.	QUANTITY REQUIRED	D.L. + S.D.L. (KIPS) *	I.L. WITHOUT IMPACT (KIPS) *	TOTAL DESIGN REACTION (KIPS) *	SHAPE FACTOR	ELASTOMER LAYER				h _r † (IN.)	COMP. AREA (SQ. IN.)	SHEAR AREA (SQ. IN.)	BRG. H (IN.) ***	ANCHOR DOWEL DIAMETER (IN.)
								THK/LAYER (IN.)	NO. LAYERS	L (IN.)	W (IN.)					
STA. E 3+00.00	EXP.	565.1921	7	25.7	19.5	45.1	5.374	0.5	2	8.0	24.0	1.5	184.06	192.00	1.875	1.0
STA. E 3+38.00	FIX.	565.1921	7	25.7	19.5	45.1	5.374	0.5	2	8.0	24.0	1.5	184.06	192.00	1.875	1.0

- * LOADS ARE UNFACTORED
- ** S₁ IS UPSTATION OF S₂
- *** H IS TAKEN AT THE CENTERLINE OF THE BEARING

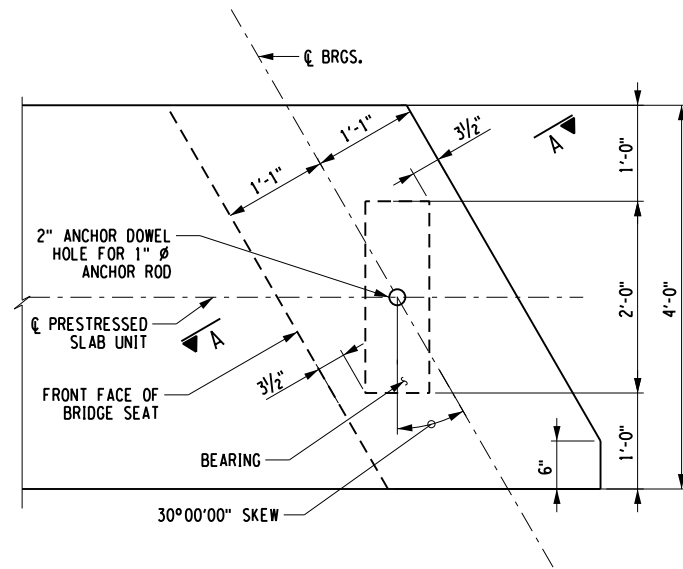
NOTES:

1. THE BEARINGS SHALL MEET THE REQUIREMENTS OF N.Y.S. STANDARD SPECIFICATION SECTION 565 UNLESS OTHERWISE NOTED.
2. ELASTOMER SHALL BE 50 DUROMETER HARDNESS ON THE SHORE A SCALE.
3. INSTALLATION ALIGNMENT: THE MAXIMUM VARIATION FROM PERFECT ALIGNMENT UNDER FULL DEAD LOAD SHALL NOT EXCEED 3/16 IN. THIS VARIATION SHALL BE MEASURED AS THE HORIZONTAL DISTANCE BETWEEN THE CENTERLINE OF THE HIGHEST ELASTOMER SURFACE AND THE CENTERLINE OF THE LOWEST ELASTOMER SURFACE.
4. CONCRETE SURFACES UNDER THE BEARINGS SHALL CONFORM TO SUBSECTION 565-3.02 "CONCRETE BEARING SURFACE PREPARATION" OF THE N.Y.S. STANDARD SPECIFICATIONS, CONSTRUCTION AND MATERIALS.
5. FOR TYPE E.L. BEARINGS: ALL EXTERNAL ELASTOMER LAYERS ARE ONE-HALF THE THICKNESS OF THE INTERNAL ELASTOMER LAYERS.

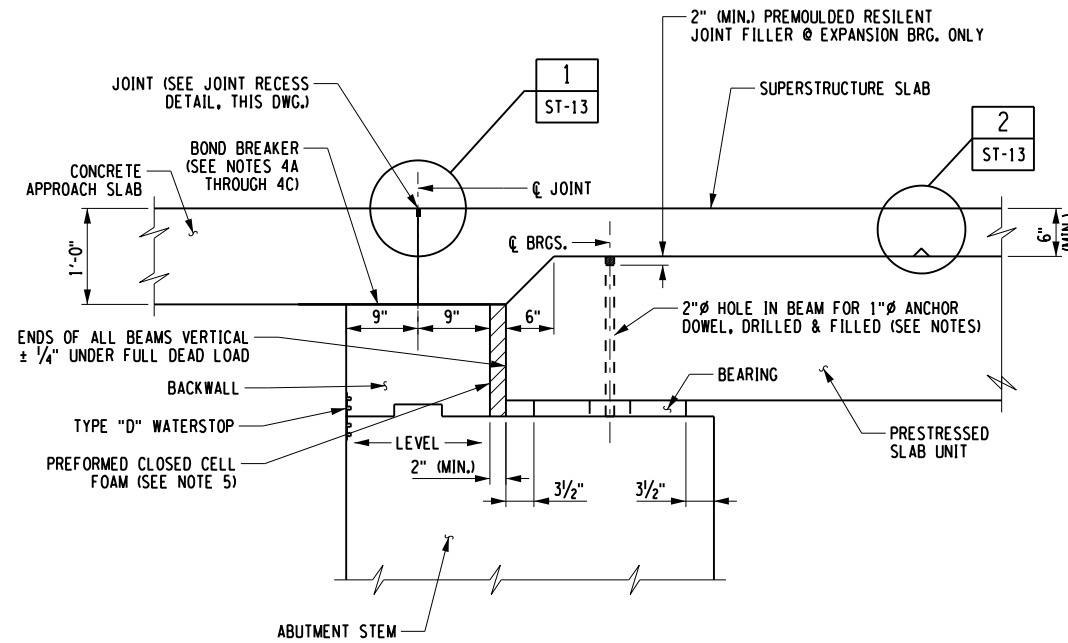
AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:	ENSIGN POND RD (CR4) BRIDGE OVER MILL BROOK	PIN 1762.14	BRIDGES BIN 3372000	CULVERTS	ALL DIMENSIONS IN ft UNLESS OTHERWISE NOTED	CONTRACT NUMBER D040666
	CULVERT REPLACEMENT PROJECT					DRAWING NO. ST-12
	TOWN OF MORIAH				BEARING PLAN AND SECTIONS	SHEET NO. 19
	COUNTY: ESSEX REGION: 1					

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY, IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

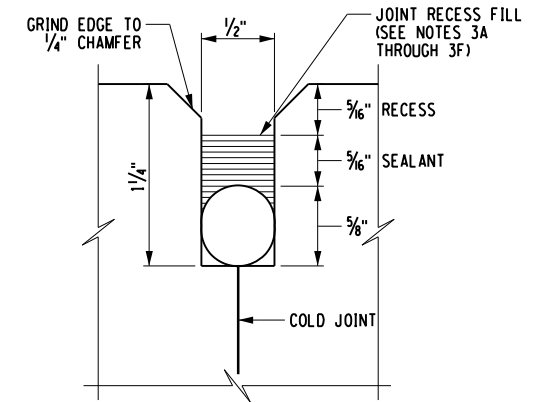




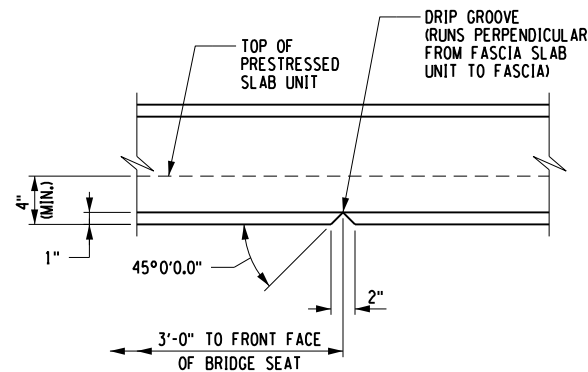
BEARING PLACEMENT SKEWED PARTIAL PLAN
SCALE: 1" = 2'-0"



BEARING PLACEMENT SECTION
SCALE: 1" = 2'-0"



1 JOINT RECESS DETAIL
ST-13 (NOT TO SCALE)



2 DECK OVERHANG DRIP GROOVE DETAIL
ST-13 (NOT TO SCALE)

**SEQUENCE OF CONSTRUCTION
SINGLE STAGE ADJACENT SLAB UNITS:**

1. PLACE BEARING AS SHOWN ON THE CONTRACT PLANS.
2. PLACE THE BOX BEAMS OR SLAB UNITS ON THE BEARINGS
3. DRILL AND CLEAN DOWEL HOLES IN THE BRIDGE SEAT.
4. INSTALL ANCHOR DOWELS.
5. WASH SHEAR KEYS THOROUGHLY TO REMOVE ANY FOREIGN MATERIAL. INSTALL BACKER RODS IN THE SHEAR KEYS.
6. GROUT AND CURE THE SHEAR KEYS WITH AN APPROVED GROUT MATERIAL FOLLOWING MANUFACTURERS INSTRUCTIONS. ALL SHEAR KEYS SHALL BE COMPLETELY FILLED.
7. TENSION THE TRANSVERSE TENDONS TO 28 KIPS/STRAND NO SOONER THAN 24 HOURS AFTER BUT WITHIN 21 DAYS AFTER PLACEMENT OF GROUT IN THE LAST SHEAR KEY.
8. CLEAN AND PRE-WET THE TOP SURFACES OF THE BEAMS PRIOR TO PLACING CONCRETE FOR DECK POUR. CURE THE SLAB USING APPROPRIATE APPROVED METHODS.

NOTES:

1. PREMOULDED RESILIENT JOINT FILLER SHALL MEET THE REQUIREMENTS OF 705-07 AND BE PAID FOR UNDER BEARING ITEM.
2. THE ENDS OF BEAMS AND ANCHOR DOWEL HOLES SHALL BE MADE VERTICAL $\pm 1/4$ " UNDER D.L. AND GRADE. ANCHOR DOWELS TO BE PAID FOR UNDER BEARING ITEM. DOWEL HOLE FILL MATERIAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ELASTOMERIC BEARING ITEM AND SHALL MEET MATERIAL REQUIREMENTS AS FOLLOWS:
 - A. EXPANSION END MATERIAL SHALL MEET THE REQUIREMENTS OF N.Y.S. MAT. SPEC. 702-0700 - ASPHALT FILLER.
 - B. FIXED END MATERIAL OPTIONS:
 - N.Y.S. MAT. SPEC. 721-03 - EPOXY POLYSULFIDE GROUT WITH SAND**
 - N.Y.S. MAT. SPEC. 721-01 - EPOXY RESIN SYSTEM WITH SAND**
 - N.Y.S. MAT. SPEC. 701-05 - CONCRETE GROUTING MATERIAL
 - N.Y.S. MAT. SPEC. 701-06 - CEMENT BASED GROUT MATERIALS FOR SHEAR KEYS
3. FOR EXPANSION ANCHOR DOWEL HOLE DETAILS, SEE BD-PC7E.
 - ** - MOISTURE FREE, SANDBLAST SAND SHALL BE ADDED IN THE RATIO OF (1) PART EPOXY TO (2) PARTS SAND.
 - ACUTE CORNERS ARE SQUARED OFF FOR SKEWS 20° AND OVER MAXIMUM ALLOWABLE SKEW ANGLE IS 50°.

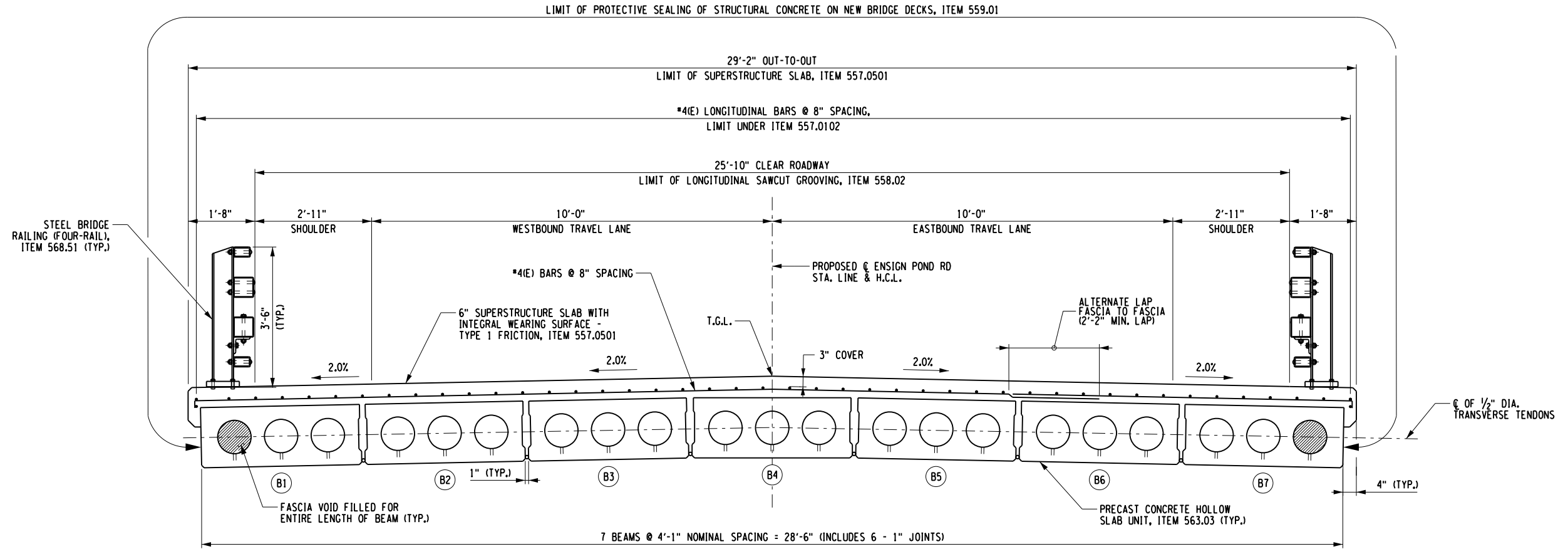
NOTES (CONTINUED):

3. JOINT RECESS FILL MATERIALS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE APPROACH SLAB ITEM AND SHALL MEET MATERIAL REQUIREMENTS GIVEN IN THE PROCEDURE AS FOLLOWS:
 - A. FILL THE RECESS WITH A STRUCTURAL JOINT MATERIAL, SILICONE SEALANT, FROM THE DEPARTMENT'S APPROVED LIST FOR ITEM 567.51-16.
 - B. IF THE RECESS IS SAW CUT, WATER BLAST IMMEDIATELY FOLLOWING CUTTING TO REMOVE ANY RESIDUAL SLURRY BEFORE IT DRIES.
 - C. CLEAN THE VERTICAL FACES OF THE RECESS BY ABRASIVE BLAST, AND AIR BLOW THE RESIDUE FROM THE RECESS.
 - D. PRIME THE VERTICAL FACES WITH THE MANUFACTURER'S RECOMMENDED PRIMER, AND ALLOW TO DRY.
 - E. PLACE A 5/8" DIA. SOFT CLOSED CELL BACKER ROD IN THE BOTTOM OF THE RECESS.
 - F. POUR THE SILICONE SEALANT TO A DEPTH OF APPROX. 5/16".
4. BOND BREAKER MATERIALS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE APPROACH SLAB ITEM AND SHALL MEET MATERIAL REQUIREMENTS AS FOLLOWS:
 - A. TOP OF BACKWALL SHALL BE STEEL TROWEL FINISHED.
 - B. SHEET GASKET (TREATED ON BOTH SIDES) MATERIAL SPECIFICATION 728-06, SHALL BE PLACED ON THE TOP OF BACKWALLS.
 - C. TWO 1/16" THICK SHEETS SHALL BE USED.
5. PREFORMED CLOSED CELL FOAM SHALL BE SELECTED FROM NYS DOT APPROVED MATERIAL LIST, SPECIFICATION 705-08. FOAM AS SHOWN IS ONLY REQUIRED IF BACKWALL IS POURED AFTER SLAB UNIT IS PLACED.

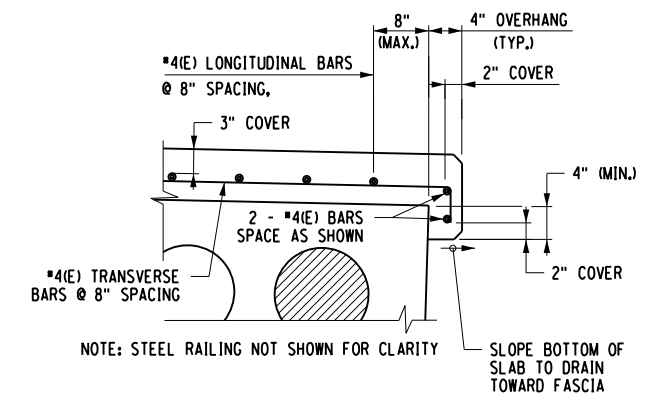
AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:	ENSIGN POND RD (CR4) BRIDGE OVER MILL BROOK	PIN 1762.14	BRIDGES BIN 3372000	CULVERTS	ALL DIMENSIONS IN FT UNLESS OTHERWISE NOTED	CONTRACT NUMBER D040666
	CULVERT REPLACEMENT PROJECT					
	TOWN OF MORIAH					
	COUNTY: ESSEX REGION: 1					
BEARING DETAILS						DRAWING NO. ST-13 SHEET NO. 20

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

PROJECT MANAGER: C. TUTUNJIAN
 CHECKED BY: I. PENGU
 DRAFTED BY: D. RAFFERTY
 CHECKED BY: Z. PORTER
 DESIGNED BY: I. PENGU



BRIDGE TRANSVERSE SECTION
SCALE: 1" = 3'-0"

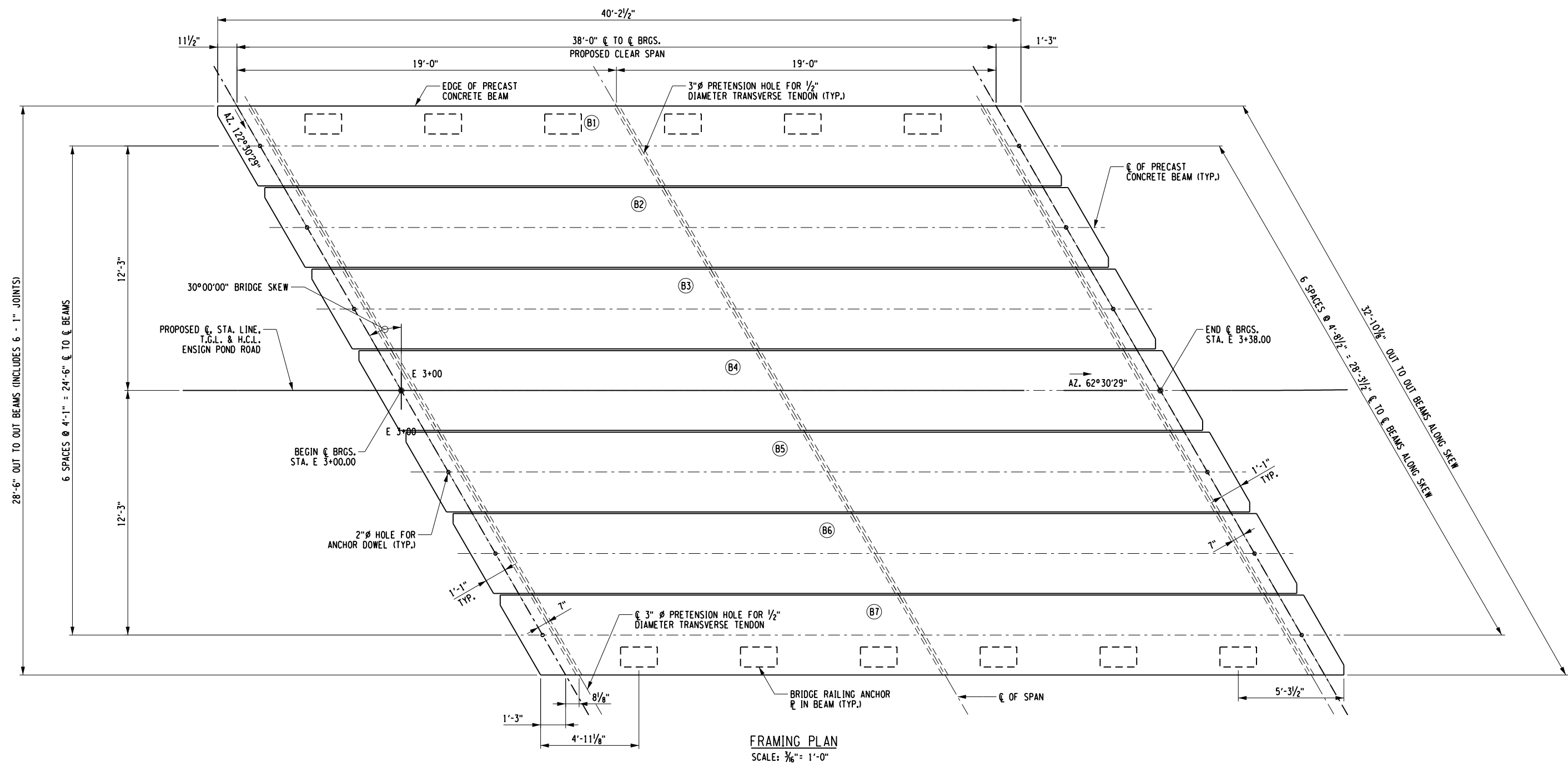
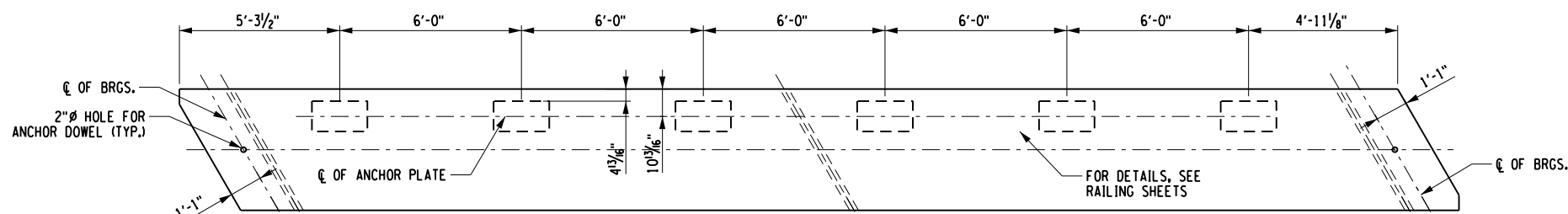


CONCRETE DECK OVERHANG
(NOT TO SCALE)

AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:	ENSIGN POND RD (CR4) BRIDGE OVER MILL BROOK	PIN 1762.14	BRIDGES BIN 3372000	CULVERTS	ALL DIMENSIONS IN FT UNLESS OTHERWISE NOTED	CONTRACT NUMBER D040666
	CULVERT REPLACEMENT PROJECT				BRIDGE TRANSVERSE SECTION	DRAWING NO. ST-14
	TOWN OF MORIAH					SHEET NO. 21
	COUNTY: ESSEX REGION: 1					

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY, IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

DESIGNED BY I. PENGU
CHECKED BY Z. PORTER
DRAFTED BY D. RAFFERTY
CHECKED BY I. PENGU
PROJECT MANAGER C. TUTUNJIAN



AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:	ENSIGN POND RD (CR4) BRIDGE OVER MILL BROOK	PIN 1762.14	BRIDGES BIN 3372000	CULVERTS	ALL DIMENSIONS IN FT UNLESS OTHERWISE NOTED	CONTRACT NUMBER D040666
	CULVERT REPLACEMENT PROJECT					DRAWING NO. ST-15
	TOWN OF MORIAH				FRAMING PLAN	SHEET NO. 22
	COUNTY: ESSEX	REGION: 1				
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY, IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.						
				H&T Engineering, PLLC	NEW YORK STATE OF OPPORTUNITY.	Department of Transportation

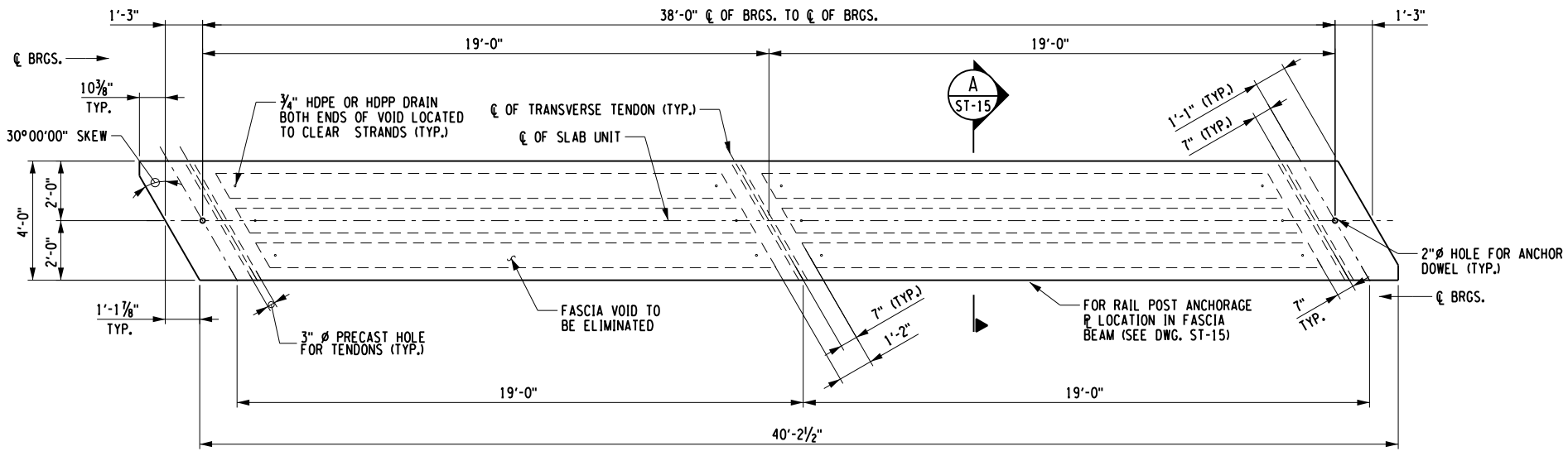
PROJECT MANAGER: C. TUTUNJIAN

CHECKED BY: I. PENGU

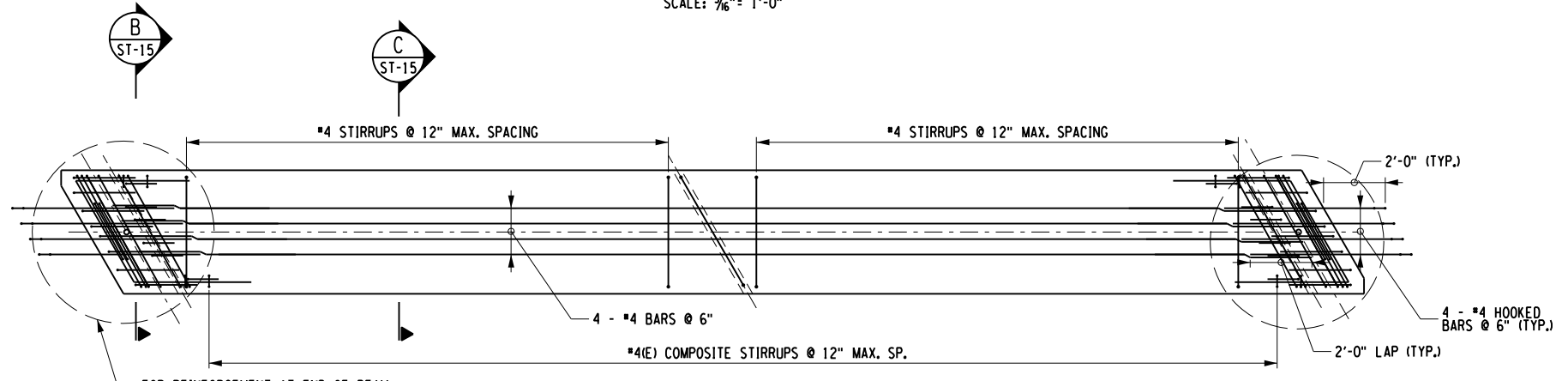
DRAFTED BY: D. RAFFERTY

CHECKED BY: Z. PORTER

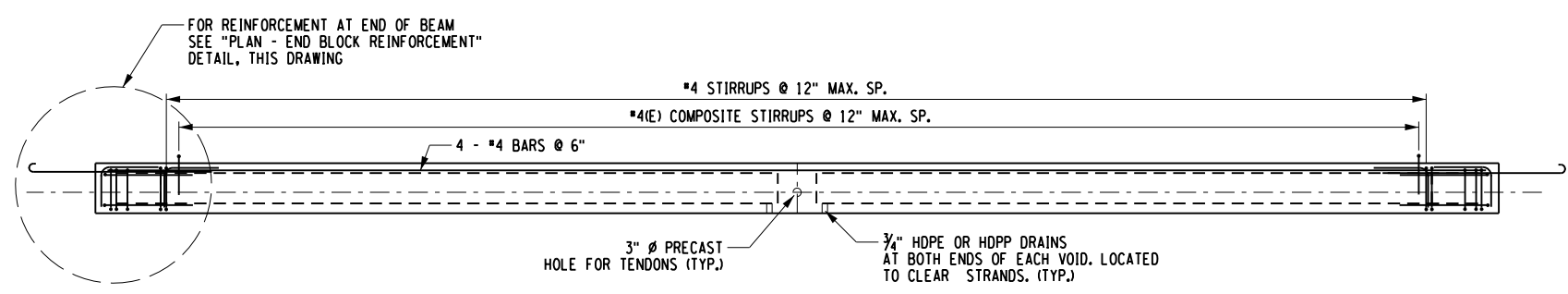
DESIGNED BY: I. PENGU



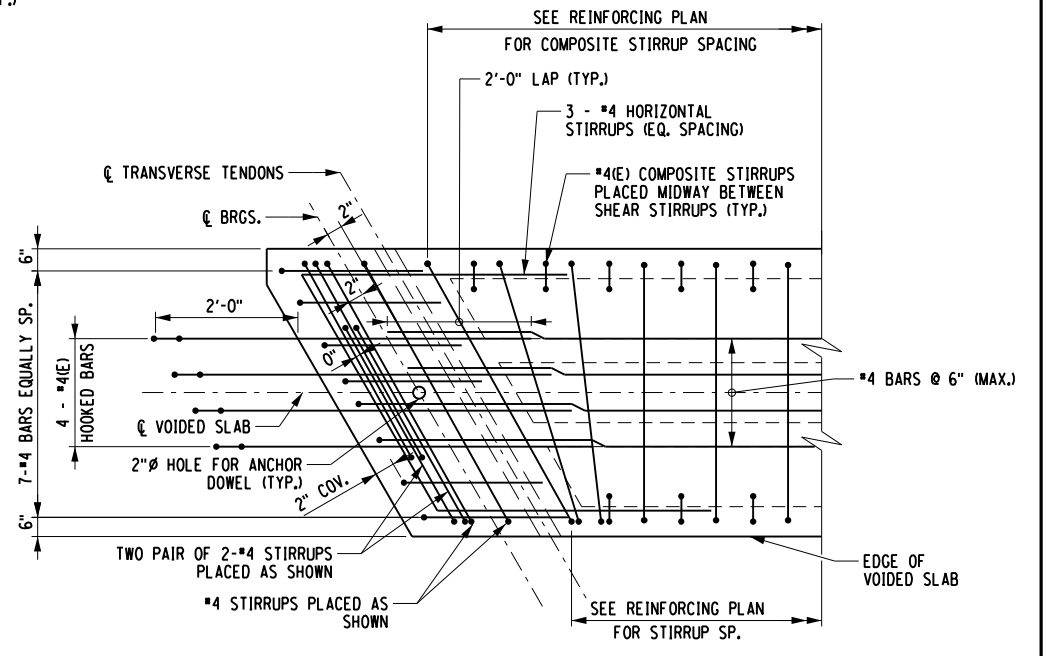
SLAB UNIT PLAN
SCALE: 3/16" = 1'-0"



SLAB UNIT REINFORCEMENT PLAN
SCALE: 3/16" = 1'-0"



SLAB UNIT REINFORCEMENT ELEVATION
SCALE: 3/16" = 1'-0"



PLAN - END BLOCK REINFORCEMENT
NOT TO SCALE

PRESTRESSED CONCRETE NOTES

1. THE PRESTRESSING STRANDS SHALL BE LOW RELAXATION 0.6" DIAMETER WITH A GUARANTEED ULTIMATE STRENGTH OF 270 KSI
2. JACKING FORCE = 43.9 KIPS PER STRAND
3. REQUIRED MINIMUM CONCRETE STRENGTH AT TRANSFER = 7 KSI
4. REQUIRED MINIMUM CONCRETE STRENGTH AT 56 DAYS = 10 KSI
5. THE ALLOWABLE TENSION IN THE PRESTRESSED CONCRETE UNITS:
AT TRANSFER = 0.165 KSI
AT SERVICE LIMIT STATE = 0.155 KSI (HL-93)
6. THE PRESTRESSED CONCRETE UNITS SHALL MEET THE REQUIREMENTS OF THE NYSPPCM THIRD EDITION, APRIL 2019, WITH ALL CURRENT ADDENDUM AND MODIFICATIONS.
7. THE LOCATION AND TYPE OF ALL TEMPORARY INSERTS SHALL BE APPROVED BY THE ENGINEER AND DETAILED ON THE PRESTRESSED CONCRETE "SHOP DRAWINGS".
8. BAR REINFORCEMENT SHALL BE ASTM 615, GRADE 60.
9. MINIMUM CONCRETE COVER TO MILD STEEL SHALL BE 1 1/2" OR AS SHOWN ON THE PLANS.
10. THE TOPS OF PRESTRESSED UNITS SHALL RECEIVE A TRANSVERSE ROUGHENED FINISH WITH AN AMPLITUDE OF 1/4".
11. ALL EXPOSED CORNERS, EXCEPT THE TOP, SHALL BE CHAMFERED 3/4".
12. DIMENSIONAL TOLERANCES OF PRECAST MEMBERS SHALL BE IN ACCORDANCE WITH THE NEW YORK STATE PRESTRESSED CONCRETE CONSTRUCTION MANUAL (P.C.C.M.)
13. 3/4" DIAMETER DRAIN HOLES OF AN APPROVED MATERIAL SHALL BE PROVIDED AT THE LOWER END OF EACH VOID OF THE PRESTRESSED BOX BEAM UNITS.
14. FASCIA BEAMS SHALL BE RUBBED AND FINISHED WITHIN 4 DAYS OF CASTING.
15. THE FABRICATOR IS FULLY RESPONSIBLE FOR THE DESIGN OF THE LIFTING DEVICES WHICH WILL BE ADEQUATE FOR THE SAFETY FACTORS REQUIRED BY THE ERECTION PROCEDURES.
16. THE CONTRACTOR MAY PROPOSE DEBONDING OF PRETENSIONING STRANDS FOR 6 INCHES FROM ENDS OF BEAMS TO REDUCE THE TENDENCY FOR BEAM ENDS TO CRACK. TOTAL NUMBER OF DEBONDED STANDS (DESIGN BONDING SHOWN ON THE CONTRACT PLANS AND CRACK CONTROL DEBONDING COMBINED) SHALL NOT EXCEED 50% OF TOTAL NUMBER OF STRANDS.
17. PRESTRESSING STRANDS CUT FLUSH WITH THE END OF THE BEAM OR EXTENDED FOR INTEGRAL ABUTMENT APPLICATIONS SHALL BE PROTECTED AGAINST CORROSION BY THE APPLICATION OF ZINC PAINT IN ACCORDANCE WITH THE "REPAIR" PORTION OF THE NYS STANDARD SPECIFICATIONS SECTION 719.01. THE COST OF COATING THE STRANDS SHALL BE INCLUDED IN THE PRICE BID FOR THE BEAM ITEM.

AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:	ENSIGN POND RD (CR4) BRIDGE OVER MILL BROOK	PIN 1762.14	BRIDGES BIN 3372000	CULVERTS	ALL DIMENSIONS IN FT UNLESS OTHERWISE NOTED	CONTRACT NUMBER D040666
	CULVERT REPLACEMENT PROJECT				PRECAST BEAM PLAN AND REINFORCEMENT DETAILS	DRAWING NO. ST-16
	TOWN OF MORIAH					SHEET NO. 23
	COUNTY: ESSEX	REGION: 1				

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

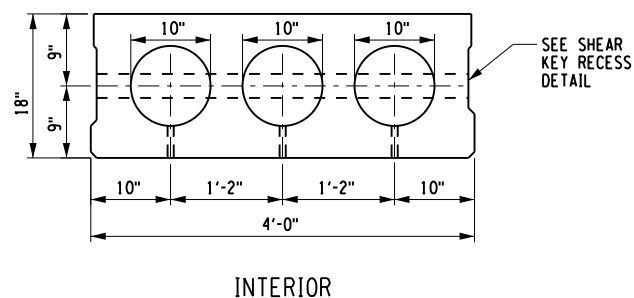
PROJECT MANAGER C. TUTUNJIAN

CHECKED BY I. PENGU

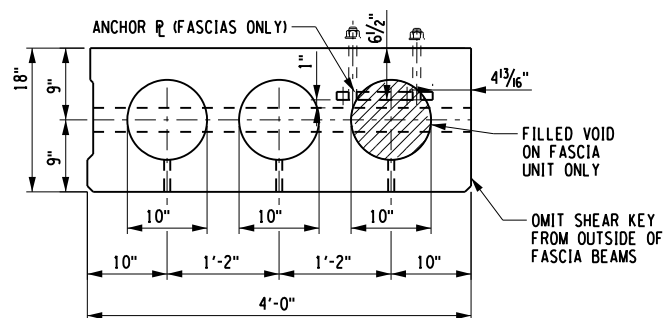
DRAFTED BY D. RAFFERTY

CHECKED BY Z. PORTER

DESIGNED BY I. PENGU

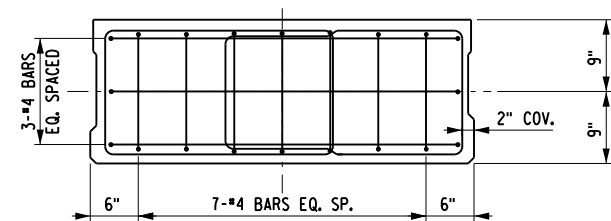


INTERIOR

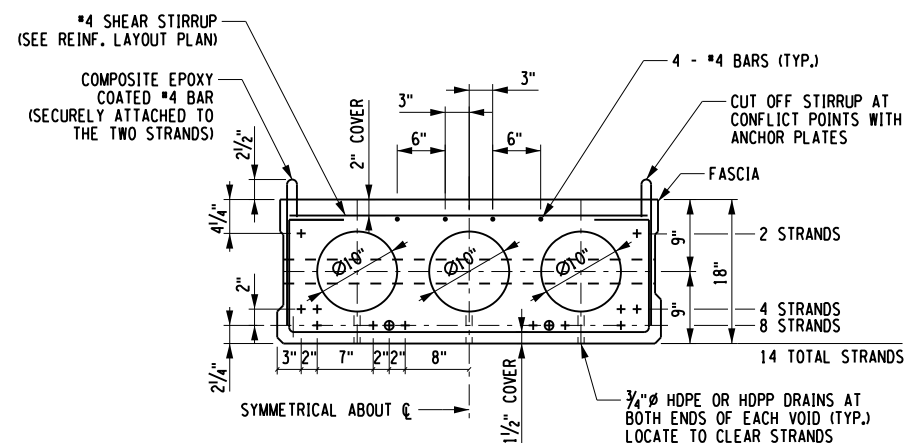


FASCIA

A VOIDED SLAB UNIT SECTION
ST-14 SCALE: 1" = 2'-0"



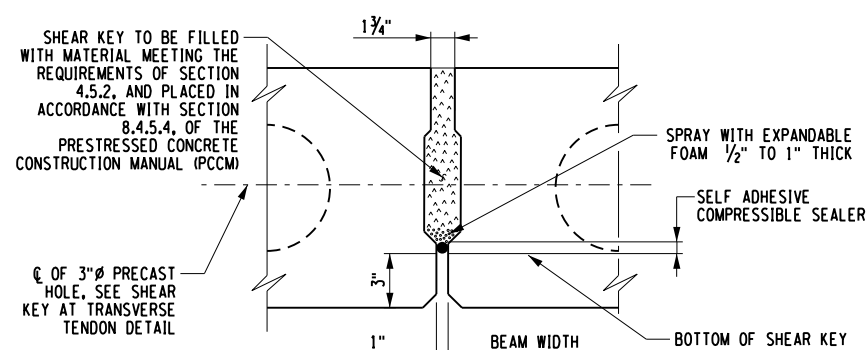
B END BLOCK SLAB UNIT REINFORCEMENT SECTION
ST-14 SCALE: 1" = 2'-0"



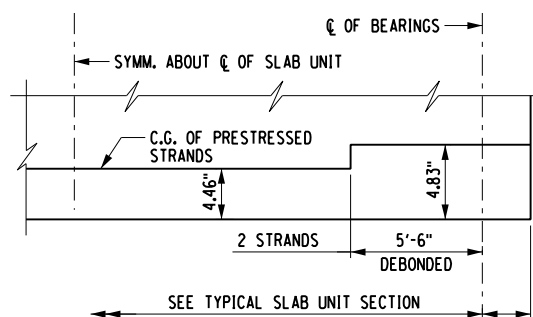
C TYPICAL SLAB UNIT REINFORCEMENT SECTION
ST-14 SCALE: 1" = 2'-0"

LEGEND:

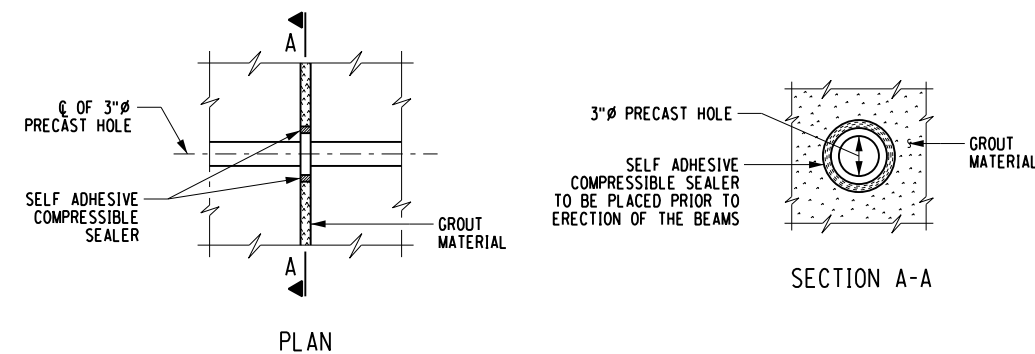
- + - DENOTES STRAIGHT BONDED STRANDS
- o - DENOTES DEBONDED STRANDS



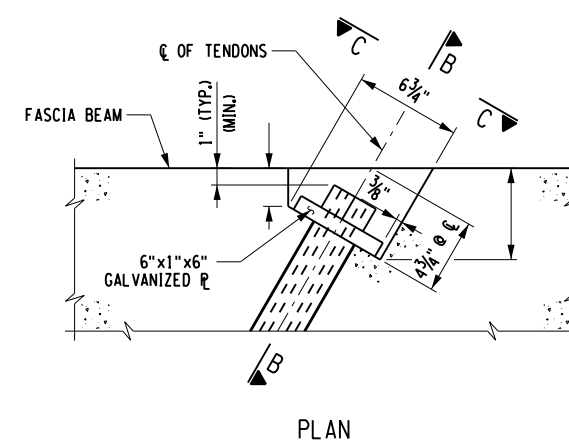
SLAB UNIT SHEAR KEY DETAIL
(NOT TO SCALE)



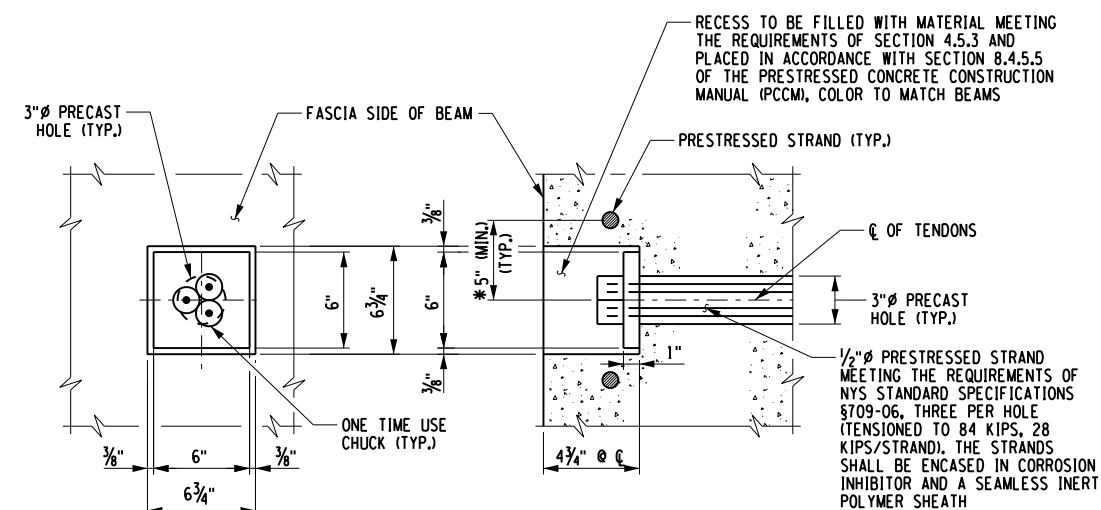
SCHEMATIC DETAIL FOR DEBONDED STRANDS
(NOT TO SCALE)



SHEAR KEY AT TRANSVERSE TENDON DETAIL
(NOT TO SCALE)



PLAN



SECTION C-C

SECTION B-B

TRANSVERSE TENDON RECESS DETAIL @ 30° SKEW
(NOT TO SCALE)

AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:	ENSIGN POND RD (CR4) BRIDGE OVER MILL BROOK	PIN 1762.14	BRIDGES BIN 3372000	CULVERTS	ALL DIMENSIONS IN FT UNLESS OTHERWISE NOTED	CONTRACT NUMBER D040666
	CULVERT REPLACEMENT PROJECT				PRECAST BEAM DETAILS	DRAWING NO. ST-17
	TOWN OF MORIAH					SHEET NO. 24
	COUNTY: ESSEX	REGION: 1				
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY, IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.						

BEAM	SLAB THICKNESS TABLE	C. OF BRGS. BEG. ABUT.				C. OF BRGS. END ABUT.
		0.25 L1	0.5L1	.75 L1		
B1	A. REQ'D TOP OF SLAB ELEVATION	1066.64	1066.58	1066.51	1066.45	1066.39
	B. TOP OF BEAM EL. (FIELD MEASURED)					
	C. A - B					
	D. SLAB AND S.D.L. DEFLECTION	0.000	0.007	0.010	0.007	0.000
	E. ACTUAL SLAB THICKNESS = C + D					
	F. THEORETICAL SLAB THICKNESS*	0.542	0.517	0.510	0.526	0.542
B2	A. REQ'D TOP OF SLAB ELEVATION	1066.70	1066.64	1066.58	1066.52	1066.46
	B. TOP OF BEAM EL. (FIELD MEASURED)					
	C. A - B					
	D. SLAB AND S.D.L. DEFLECTION	0.000	0.006	0.009	0.006	0.000
	E. ACTUAL SLAB THICKNESS = C + D					
	F. THEORETICAL SLAB THICKNESS*	0.542	0.514	0.509	0.514	0.542
B3	A. REQ'D TOP OF SLAB ELEVATION	1066.77	1066.71	1066.65	1066.59	1066.52
	B. TOP OF BEAM EL. (FIELD MEASURED)					
	C. A - B					
	D. SLAB AND S.D.L. DEFLECTION	0.000	0.006	0.009	0.006	0.000
	E. ACTUAL SLAB THICKNESS = C + D					
	F. THEORETICAL SLAB THICKNESS*	0.542	0.514	0.509	0.514	0.542
B4	A. REQ'D TOP OF SLAB ELEVATION	1066.84	1066.78	1066.71	1066.65	1066.59
	B. TOP OF BEAM EL. (FIELD MEASURED)					
	C. A - B					
	D. SLAB AND S.D.L. DEFLECTION	0.000	0.006	0.009	0.006	0.000
	E. ACTUAL SLAB THICKNESS = C + D					
	F. THEORETICAL SLAB THICKNESS*	0.542	0.514	0.509	0.514	0.542
B5	A. REQ'D TOP OF SLAB ELEVATION	1066.74	1066.68	1066.62	1066.56	1066.49
	B. TOP OF BEAM EL. (FIELD MEASURED)					
	C. A - B					
	D. SLAB AND S.D.L. DEFLECTION	0.000	0.006	0.009	0.006	0.000
	E. ACTUAL SLAB THICKNESS = C + D					
	F. THEORETICAL SLAB THICKNESS*	0.542	0.514	0.509	0.514	0.542
B6	A. REQ'D TOP OF SLAB ELEVATION	1066.64	1066.58	1066.52	1066.46	1066.39
	B. TOP OF BEAM EL. (FIELD MEASURED)					
	C. A - B					
	D. SLAB AND S.D.L. DEFLECTION	0.000	0.006	0.009	0.006	0.000
	E. ACTUAL SLAB THICKNESS = C + D					
	F. THEORETICAL SLAB THICKNESS*	0.542	0.514	0.509	0.514	0.542
B7	A. REQ'D TOP OF SLAB ELEVATION	1066.54	1066.46	1066.42	1066.36	1066.30
	B. TOP OF BEAM EL. (FIELD MEASURED)					
	C. A - B					
	D. SLAB AND S.D.L. DEFLECTION	0.000	0.007	0.010	0.007	0.000
	E. ACTUAL SLAB THICKNESS = C + D					
	F. THEORETICAL SLAB THICKNESS*	0.542	0.517	0.510	0.526	0.542

* F IS THE THEORETICAL THICKNESS OF THE DECK SLAB BASED ON ASSUMED BEAM CAMBER. IT IS SHOWN TO ASSIST IN ESTIMATING THE MINIMUM SLAB THICKNESS AS WELL AS CONCRETE VOLUME. ALL MEASUREMENTS ARE TAKEN AT CENTERLINE OF SLAB UNIT

ALL VALUES SHOWN IN FEET

CAMBER DUE TO PRESTRESSED FORCE AND BEAM DEAD LOAD AT TRANSFER	↑	0.618"
CAMBER DUE TO PRESTRESSED FORCE AND BEAM DEAD LOAD WITH GROWTH**	↑	0.927"
DEFLECTION DUE TO SLAB DEAD LOAD	↓	0.120"
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD	↓	0.042"

**CAMBER GROWTH IS ASSUMED TO 50% OF THE CAMBER AT TRANSFER




CAMBER DUE TO PRESTRESSED FORCE AND BEAM DEAD LOAD AT TRANSFER	↑	0.618"
CAMBER DUE TO PRESTRESSED FORCE AND BEAM DEAD LOAD WITH GROWTH**	↑	0.927"
DEFLECTION DUE TO SLAB DEAD LOAD	↓	0.107"
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD	↓	0.019"

**CAMBER GROWTH IS ASSUMED TO 50% OF THE CAMBER AT TRANSFER

CAMBER DUE TO PRESTRESSED FORCE AND BEAM DEAD LOAD AT TRANSFER	↑	0.618"
CAMBER DUE TO PRESTRESSED FORCE AND BEAM DEAD LOAD WITH GROWTH**	↑	0.927"
DEFLECTION DUE TO SLAB DEAD LOAD	↓	0.107"
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD	↓	0.023"

**CAMBER GROWTH IS ASSUMED TO 50% OF THE CAMBER AT TRANSFER

		UNIT	REACTION AT ABUTMENT (KIPS)	MAX MOMENT MIDSPAN (KIP-FT)
BEAMS 1 AND 7	D.L.	SLAB UNIT	14.1	126.0
		DECK SLAB	7.5	66.4
		HAUNCH	0.5	4.8
	S.D.L.	ADD'L SELF LOAD	1.6	14.8
		TOTAL:	23.7	212.0
		RAILING	0.5	4.3
L.L.	FUTURE W.S.	1.5	14.4	
	TOTAL:	2.0	18.7	
	HL-93	24.1	310.4	
BEAMS 2, 3, 5, 6	D.L.	SLAB UNIT	14.1	126.0
		DECK SLAB	6.6	59.0
		HAUNCH	0.5	4.8
	S.D.L.	ADD'L SELF LOAD	0.0	0.0
		TOTAL:	21.2	189.8
		RAILING	0.5	4.3
L.L.	FUTURE W.S.	1.5	14.4	
	TOTAL:	2.0	18.7	
	HL-93	24.1	228.1	
BEAM 4	D.L.	SLAB UNIT	14.1	126.0
		DECK SLAB	6.6	59.0
		HAUNCH	0.5	4.8
	S.D.L.	ADD'L SELF LOAD	0.3	2.3
		TOTAL:	21.5	192.1
		RAILING	0.5	4.3
L.L.	FUTURE W.S.	1.5	14.4	
	TOTAL:	2.0	18.7	
	HL-93	24.1	228.1	

AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:	ENSIGN POND RD (CR4) BRIDGE OVER MILL BROOK	PIN 1762.14	BRIDGES BIN 3372000	CULVERTS	ALL DIMENSIONS IN FT UNLESS OTHERWISE NOTED	CONTRACT NUMBER D040666
	CULVERT REPLACEMENT PROJECT					DRAWING NO. ST-18
	TOWN OF MORIAH	SHEET NO. 25				
	COUNTY: ESSEX REGION: 1					
<p>IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY, IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.</p>						  

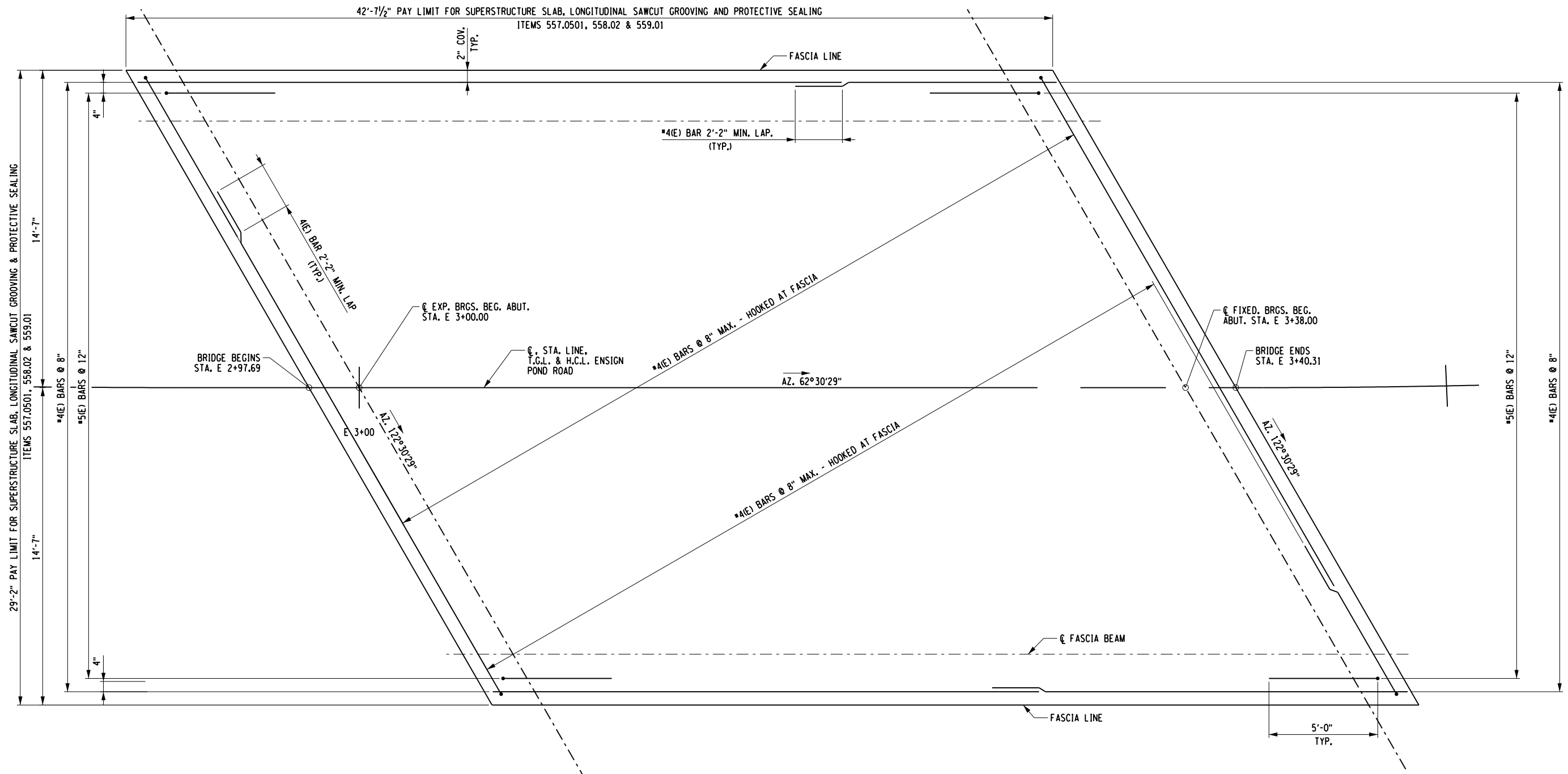
PROJECT MANAGER C. TUTUNJIAN

CHECKED BY I. PENGU

DRAFTED BY D. RAFFERTY

CHECKED BY Z. PORTER

DESIGNED BY I. PENGU



NOTES:

1. CONCRETE PLACEMENT AND FINISHING OPERATIONS SHALL BE PERFORMED AS RAPIDLY AS POSSIBLE. THE ENGINEER MAY ORDER THE CONTRACTOR TO STOP PLACEMENT OPERATIONS AT ANY TIME, IF IN THE ENGINEER'S OPINION, CONCRETE PLACED DURING THE PLACEMENT HAS STARTED TO SET, OR IS ABOUT TO SET, AND FURTHER PLACEMENT OF CONCRETE WILL CAUSE DEFLECTION CRACKING.
2. WET BURLAP CURING BLANKETS ARE REQUIRED TO BE PLACED ON THE CONCRETE DECK WITHIN 30 MINUTES OF THE CONCRETE BEING DEPOSITED INTO THE FORMS OR 5 MINUTES AFTER FINISHING, WHICHEVER COMES FIRST. THE PLACEMENT OF THE TURF DRAG TEXTURE SHALL NOT INTERFERE WITH THESE REQUIREMENTS.
3. IN THE EVENT THE CONTRACTOR'S DECK PLACEMENT OPERATION IS STOPPED PRIOR TO COMPLETION, WHETHER BY THE CONTRACTOR'S OWN DECISION OR BY THE ORDER OF THE ENGINEER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A FINISHED DECK GRADE WHICH MATCHES THE PLANNED PROFILE. ANY SUBSEQUENT REVISIONS TO DECK FORMS MADE NECESSARY BY SUCH ACTION SHALL BE AT THE CONTRACTOR'S EXPENSE.

CONCRETE DECK PLAN
SCALE: 1" = 5'-0"

SUPERSTRUCTURE SLAB TABLE		
SUPERSTRUCTURE SLAB ITEM 557.0501 & WINTER SURFACE TREATMENT ITEM 557.29	LONGITUDINAL SAWCUT GROOVING ITEM 558.02	PROTECTIVE SEALING OF STRUCTURAL CONCRETE ITEM 559.01
138.1 SY	122.4 SY	1187 SF

AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:	ENSIGN POND RD (CR4) BRIDGE OVER MILL BROOK	PIN 1762.14	BRIDGES BIN 3372000	CULVERTS	ALL DIMENSIONS IN FT UNLESS OTHERWISE NOTED	CONTRACT NUMBER D040666
	CULVERT REPLACEMENT PROJECT					SUPERSTRUCTURE SLAB REINFORCEMENT PLAN
	TOWN OF MORIAH	REGION: 1				

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.



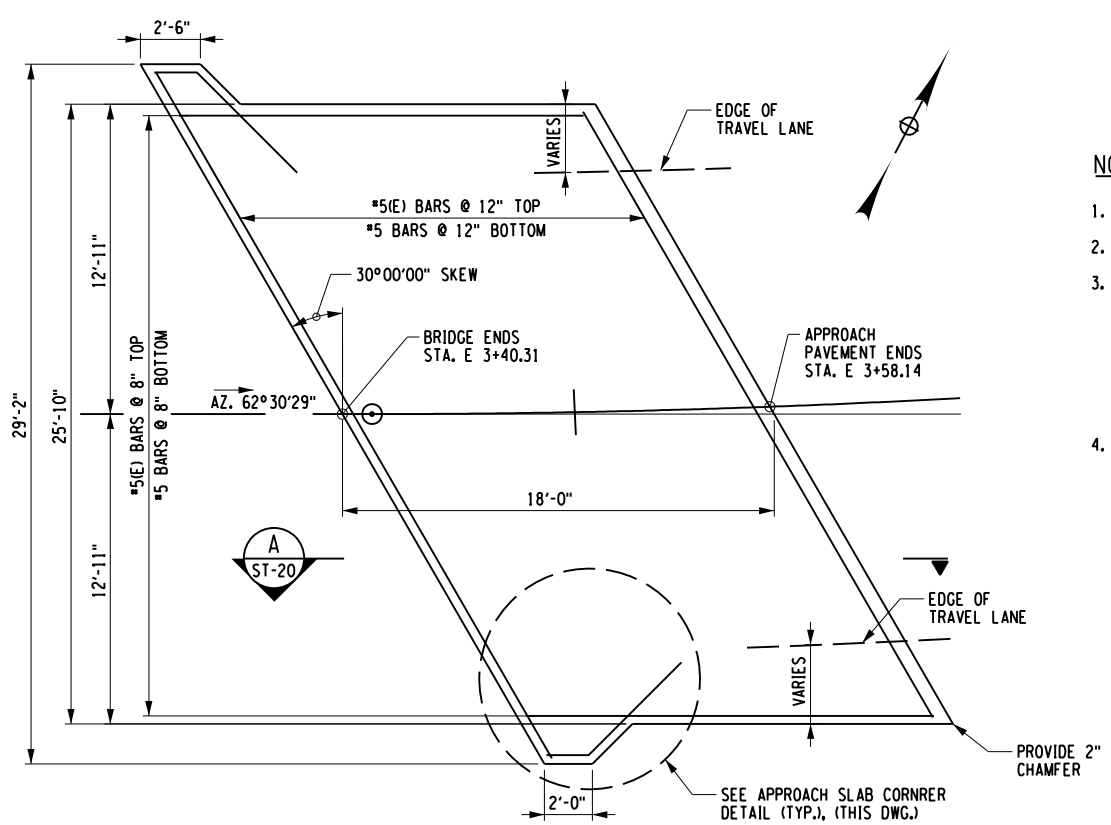
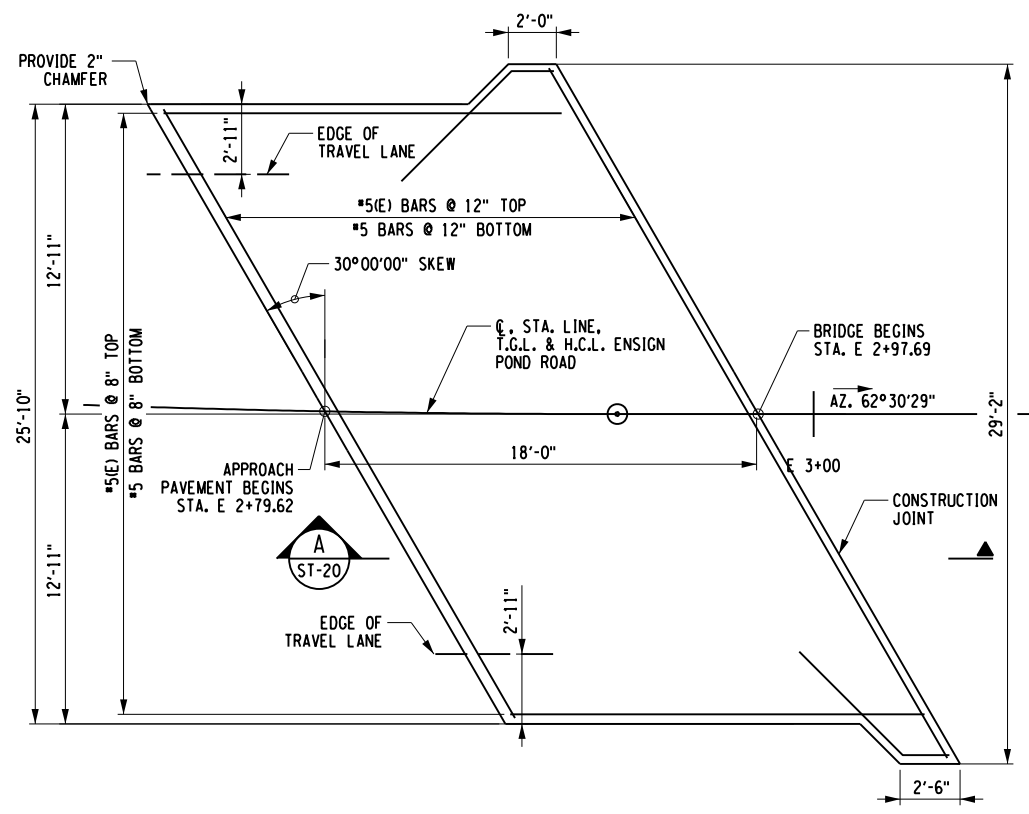
PROJECT MANAGER: C. TUTUNJIAN

CHECKED BY: I. PENGU

DRAFTED BY: D. RAFFERTY

CHECKED BY: Z. PORTER

DESIGNED BY: I. PENGU

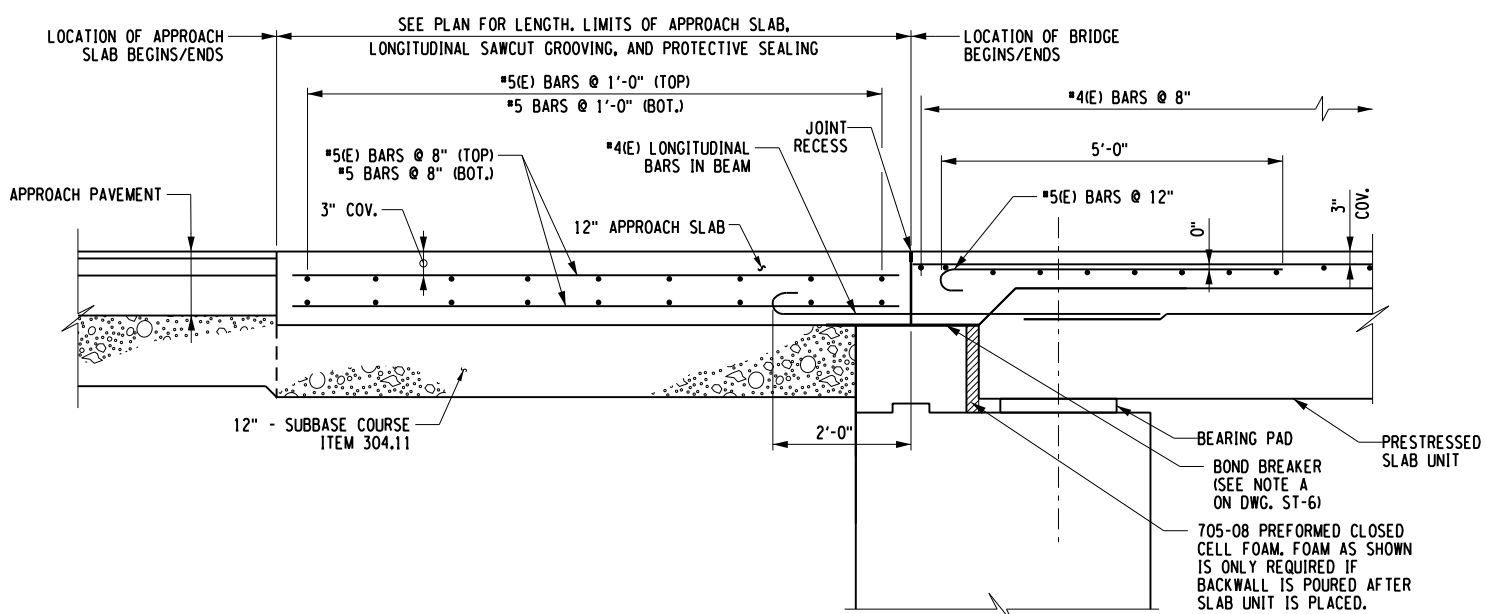


NOTES:

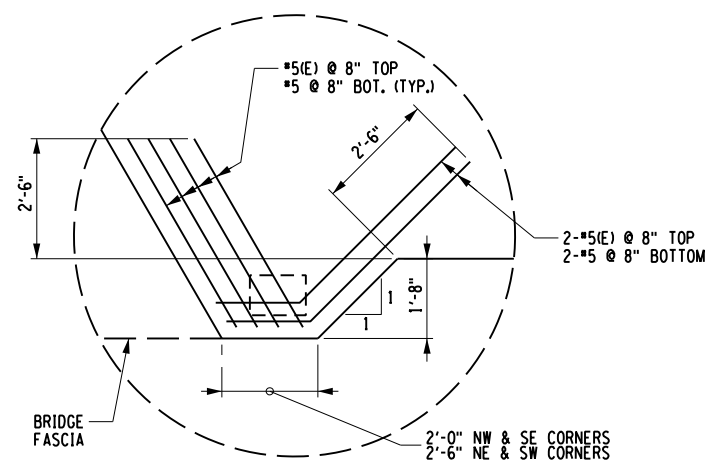
1. ALL REINFORCEMENT SHALL HAVE 3 in. COVER UNLESS OTHERWISE NOTED.
2. (E) DENOTES EPOXY COATED BARS
3. TO PERMIT UNHINDERED LONGITUDINAL MOVEMENT OF THE SLAB, THE SURFACE OF THE SUBBASE COURSE MUST BE ACCURATELY CONTROLLED TO FOLLOW AND BE PARALLEL TO THE ROADWAY GRADE AND CROSS SLOPE. POLYETHYLENE CURING COVERS (WHITE OPAQUE) IN ACCORDANCE WITH MATERIAL SPECIFICATION SUBSECTION 711-04 SHALL BE PLACED ON THE FINISHED SUBBASE COURSE THE FULL WIDTH OF THE APPROACH SLAB PRIOR TO PLACEMENT OF THE REINFORCEMENT. THE CURING COVERS SHALL BE .004 in. THICK, AND LAPS SHALL BE 2 ft. MINIMUM.
4. TOP SURFACES OF APPROACH SLABS SHALL BE GROOVED UNDER THE SAWCUT GROOVING OF STRUCTURAL SLAB SURFACE ITEM.

APPROACH SLAB PLAN
SCALE: 1/8" = 1'-0"

APPROACH SLAB TABLE			
LOCATION	STRUCTURAL APPROACH SLAB, ITEM 557.2002	LONGITUDINAL SAWCUT GROOVING, ITEM 558.02	PROTECTIVE SEALING OF NEW STRUCTURAL CONCRETE (SF) ITEM 559.02
BEGIN APPROACH SLAB	52.8 SY	51.7 SY	476 SF
END APPROACH SLAB	52.8 SY	51.7 SY	476 SF



A APPROACH SLAB SECTION
NOT TO SCALE



APPROACH SLAB CORNER DETAIL
(BEGIN RIGHT CORNER SHOWN, ALL OTHERS SIMILAR)
SCALE: 1/2" = 1'-0"

AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:	ENSIGN POND RD (CR4) BRIDGE OVER MILL BROOK	PIN 1762.14	BRIDGES	CULVERTS	ALL DIMENSIONS IN ft UNLESS OTHERWISE NOTED	CONTRACT NUMBER
	CULVERT REPLACEMENT PROJECT		BIN 3372000			D040666
	TOWN OF MORIAH	REGION: 1			APPROACH SLAB PLAN AND DETAILS	DRAWING NO. ST-20
	COUNTY: ESSEX					SHEET NO. 27

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.



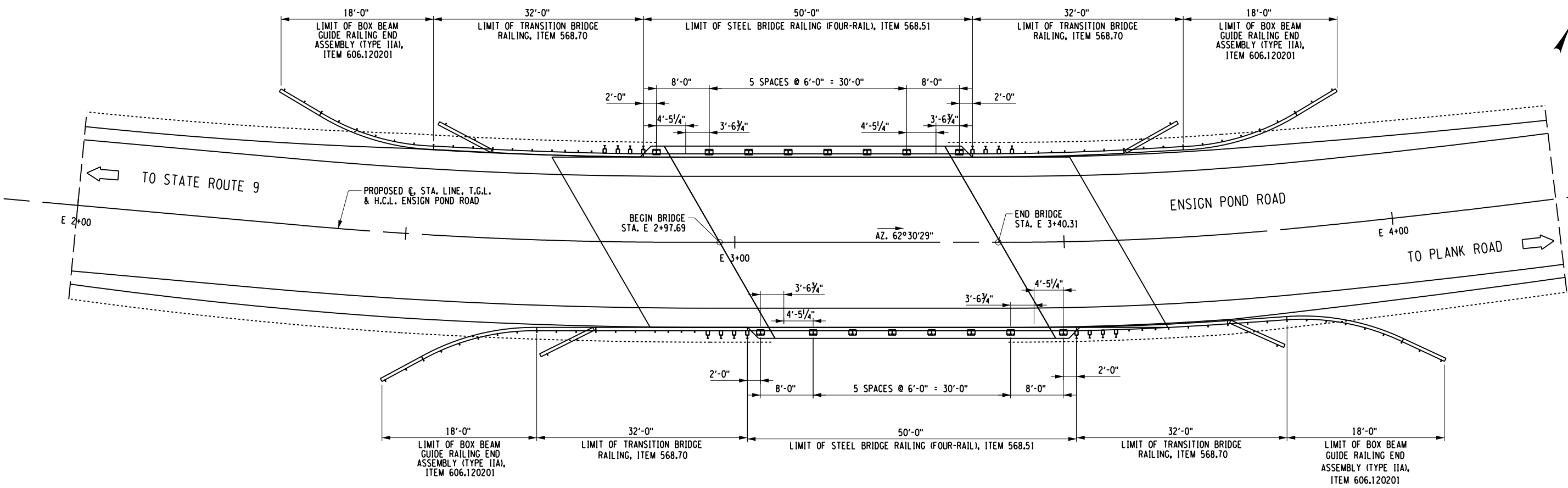
PROJECT MANAGER: C. TUTUNJIAN

CHECKED BY: I. PENGU

DRAFTED BY: D. RAFFERTY



CHECKED BY: Z. PORTER

DESIGNED BY: I. PENGU



BRIDGE RAILING PLAN
SCALE: 1/16" = 1'-0"

TABLE OF SNOW PLOW MARKERS			
STATION	SIDE	ITEM 646.22	ITEM 646.32
E 2+75.00	RT	2	1
E 2+65.00	LT	1	1
E 3+75.00	RT	1	1
E 3+70.00	LT	2	1
	TOTALS	6 EA	4 EA
ITEM NO.	DESCRIPTION		
646.22	DELINEATOR, SNOW PLOWING MARKER, SUPPLEMENTARY SNOW PLOWING MARKER PANELS (GREEN)		
646.32	STEEL POST, 2.0 LB/FT (7'-0" LONG)		

AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:	ENSIGN POND RD (CR4) BRIDGE OVER MILL BROOK	PIN 1762.14	BRIDGES BIN 3372000	CULVERTS	ALL DIMENSIONS IN FT UNLESS OTHERWISE NOTED	CONTRACT NUMBER D040666
	CULVERT REPLACEMENT PROJECT					DRAWING NO. ST-21 SHEET NO. 28
	TOWN OF MORIAH	COUNTY: ESSEX	REGION: 1	RAILING PLAN AND DETAILS   Department of Transportation		

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

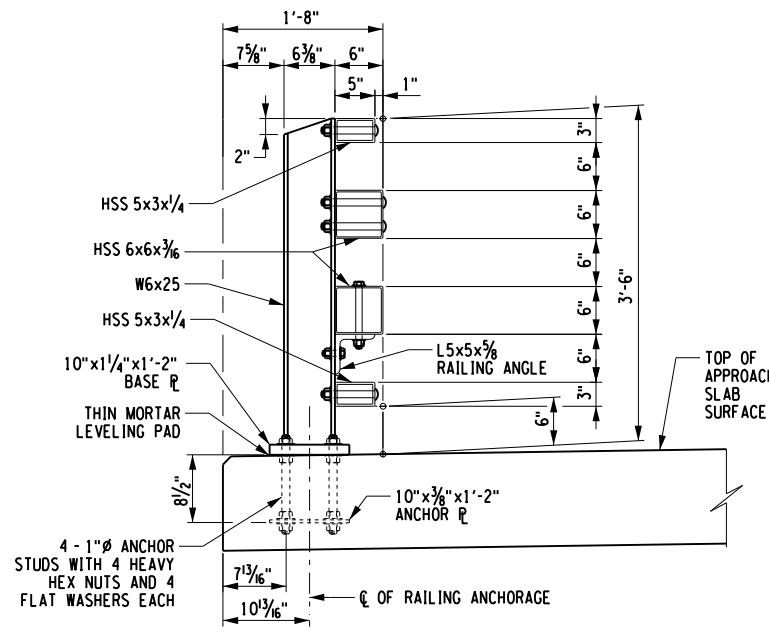
PROJECT MANAGER: C. TUTUNJIAN

CHECKED BY: I. PENGU

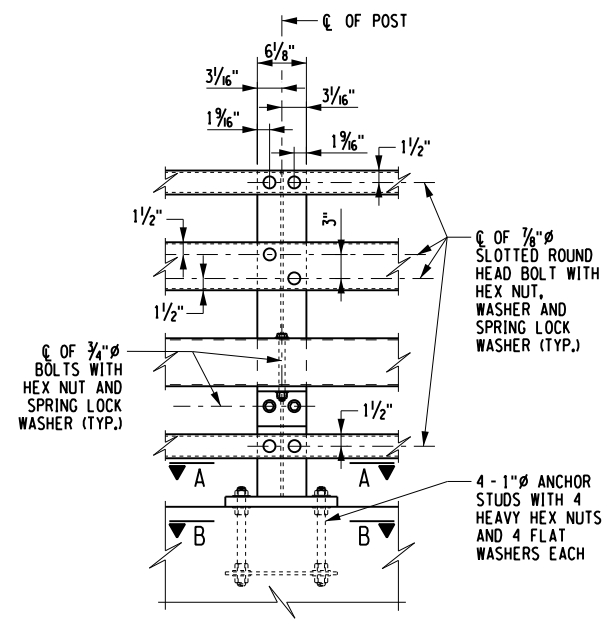
DRAFTED BY: D. RAFFERTY

CHECKED BY: Z. PORTER

DESIGNED BY: I. PENGU



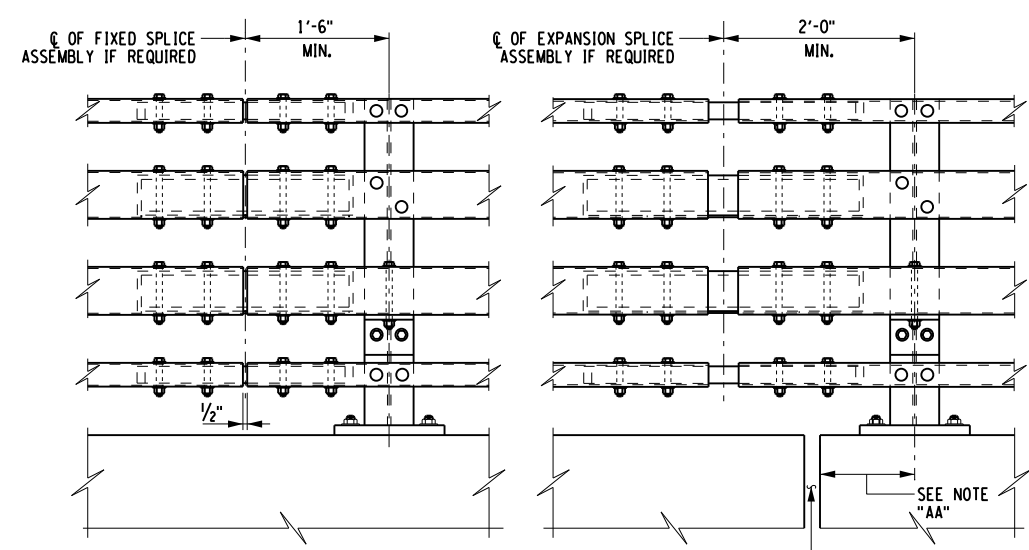
SECTION



ELEVATION

STEEL BRIDGE RAILING (FOUR-RAIL) - CURBLESS

(NOT TO SCALE)

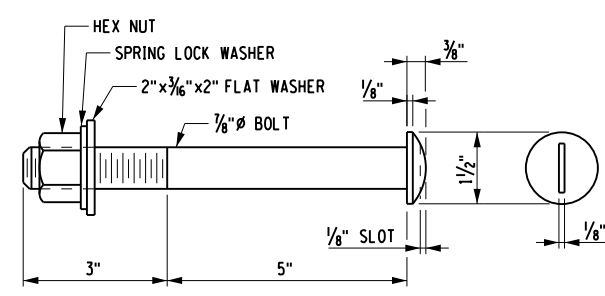


STEEL BRIDGE RAILING (FOUR-RAIL) - CURBLESS SPLICE DETAIL ELEVATION

(NOT TO SCALE)

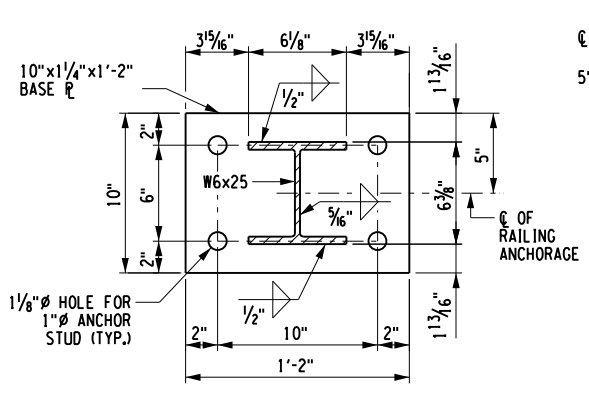
A RAILING EXPANSION SPLICE IS REQUIRED IN ANY POST SPACING THAT CONTAINS A SUPERSTRUCTURE EXPANSION JOINT

SEE NOTE "AA"

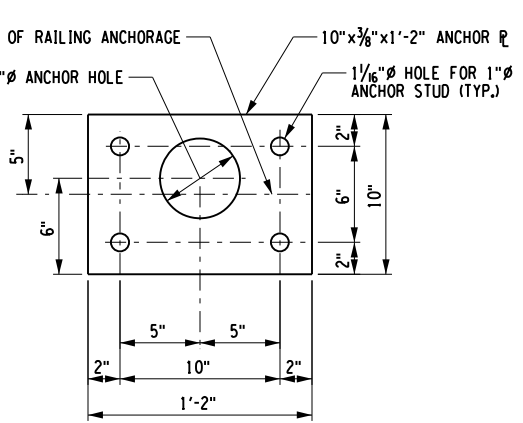


SLOTTED ROUND HEAD BOLT

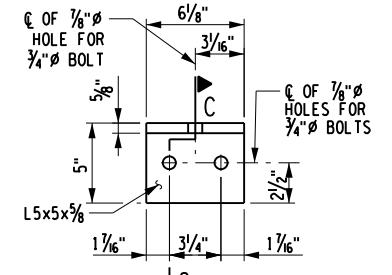
(NOT TO SCALE)



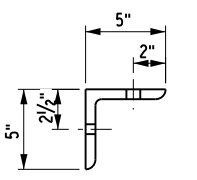
SECTION A-A



SECTION B-B



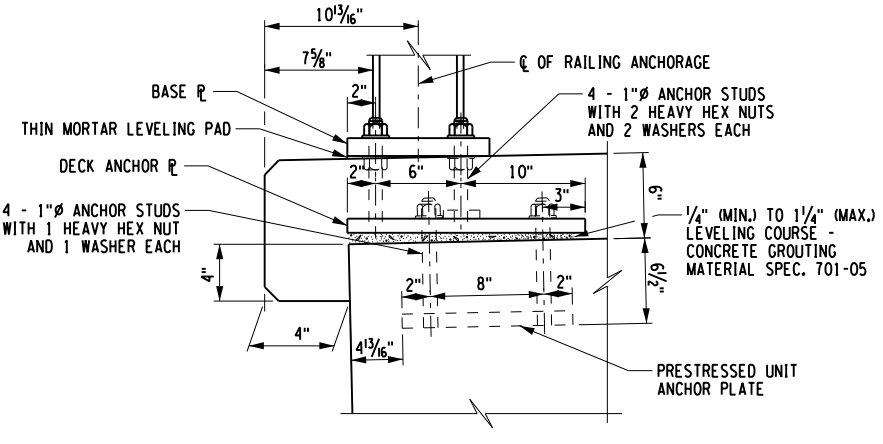
ELEVATION



SECTION C-C

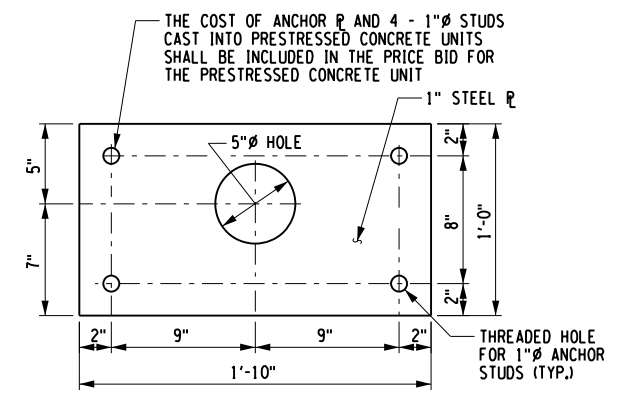
RAILING ANGLE DETAILS

(NOT TO SCALE)



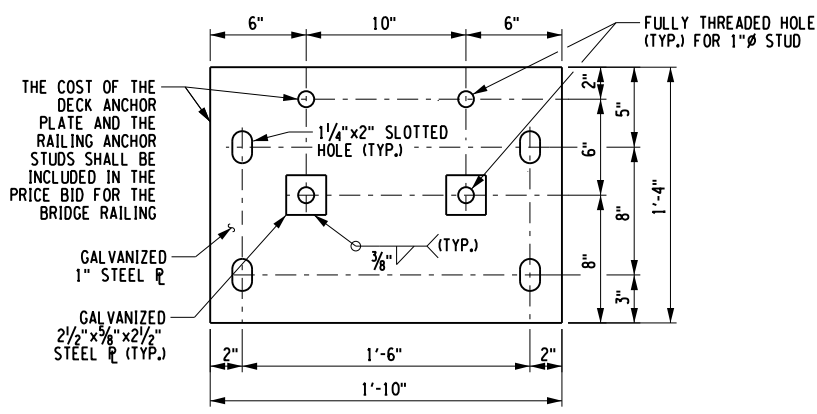
STEEL BRIDGE RAILING ANCHORAGE FOR PRESTRESSED CONCRETE BRIDGE

(NOT TO SCALE)



PRESTRESSED UNIT ANCHOR PLATE DETAIL

(NOT TO SCALE)



DECK ANCHOR PLATE DETAIL

(NOT TO SCALE)

AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:	ENSIGN POND RD (CR4) BRIDGE OVER MILL BROOK	PIN 1762.14	BRIDGES BIN 3372000	CULVERTS	ALL DIMENSIONS IN FT UNLESS OTHERWISE NOTED	CONTRACT NUMBER D040666
	CULVERT REPLACEMENT PROJECT				BRIDGE RAIL DETAILS	DRAWING NO. ST-22
	TOWN OF MORIAH					SHEET NO. 29
	COUNTY: ESSEX	REGION: 1				

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY, IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.



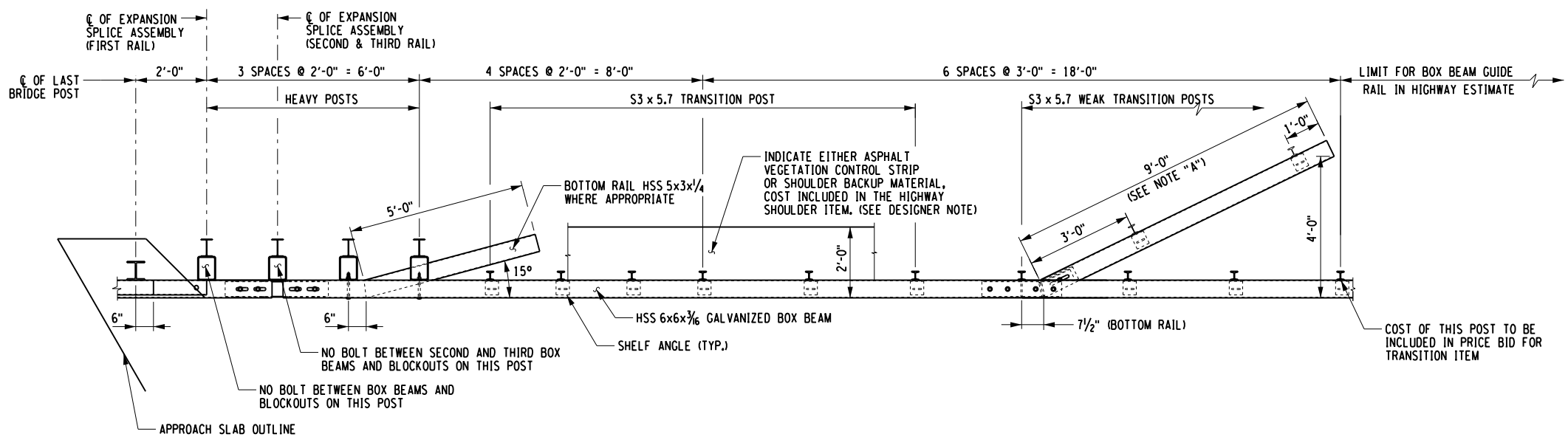
PROJECT MANAGER C. TUTUNJIAN

CHECKED BY I. PENGU

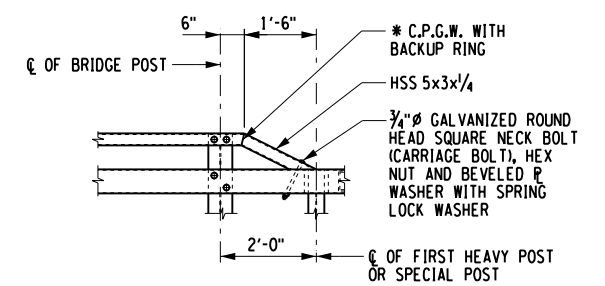
DRAFTED BY D. RAFFERTY

CHECKED BY Z. PORTER

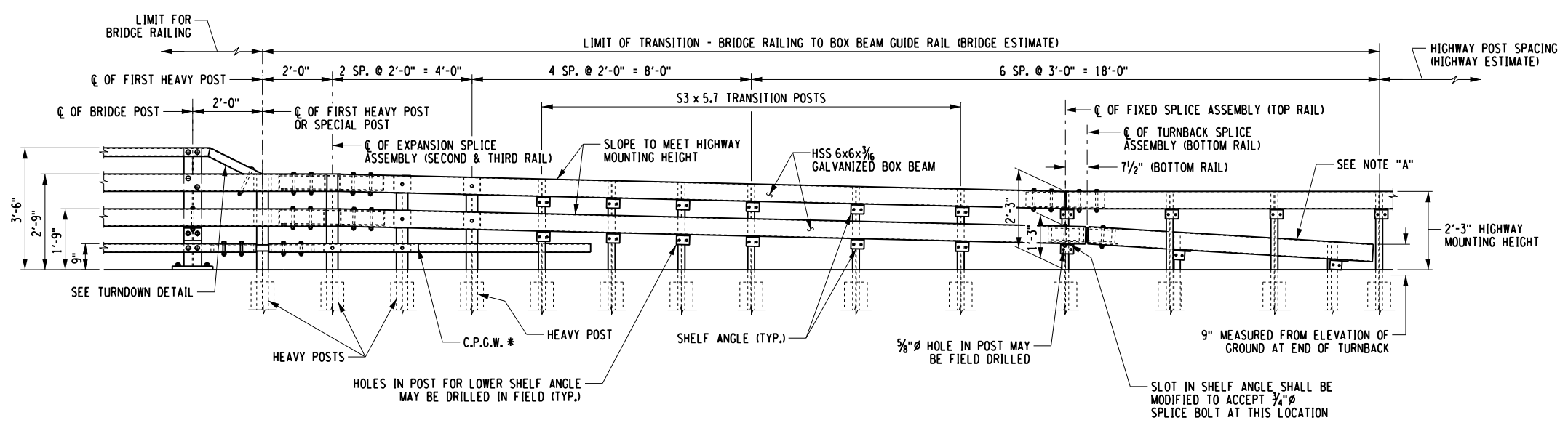
DESIGNED BY I. PENGU



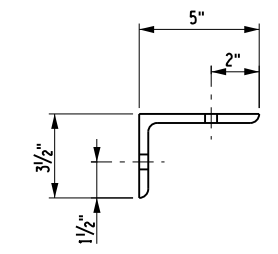
TRANSITION RAIL PLAN (NOT TO SCALE)



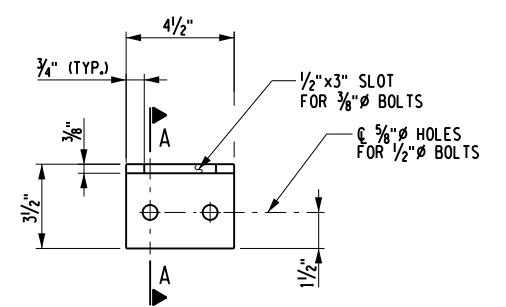
TURNDOWN DETAIL (NOT TO SCALE)



TRANSITION RAIL ELEVATION (NOT TO SCALE)



SECTION A-A

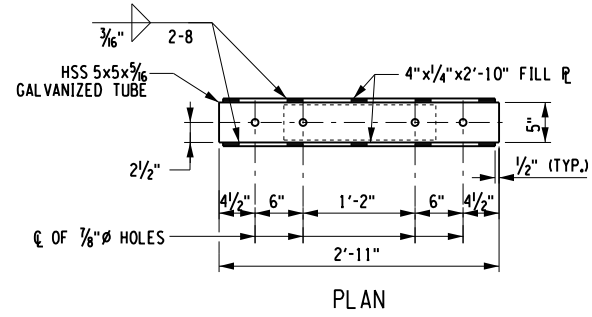


ELEVATION SHELF ANGLE DETAILS (NOT TO SCALE)

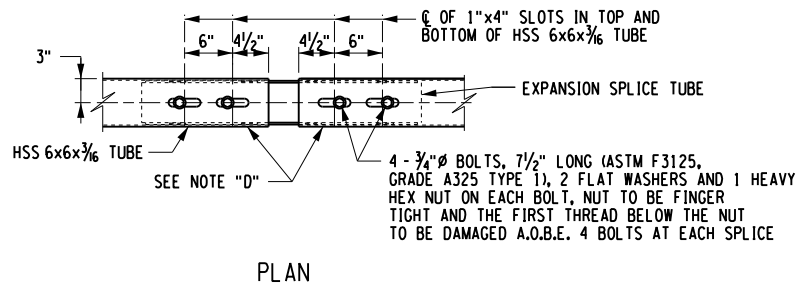
AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:	ENSIGN POND RD (CR4) BRIDGE OVER MILL BROOK	PIN 1762.14	BRIDGES	CULVERTS	ALL DIMENSIONS IN FT UNLESS OTHERWISE NOTED	CONTRACT NUMBER
	CULVERT REPLACEMENT PROJECT		BIN 3372000			D040666
	TOWN OF MORIAH				TRANSITION RAIL PLAN, ELEVATION, AND DETAILS	DRAWING NO. ST-23
	COUNTY: ESSEX REGION: 1					SHEET NO. 30

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY, IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

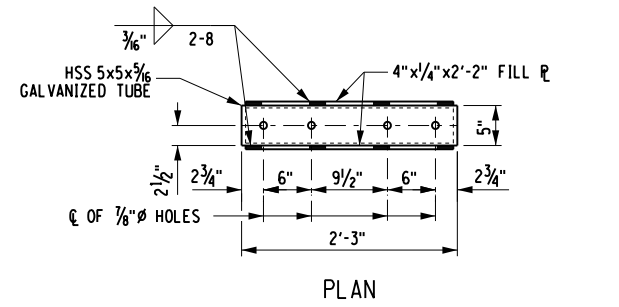
PROJECT MANAGER: C. TUTUNJIAN
 CHECKED BY: I. PENGU
 DRAFTED BY: D. RAFFERTY
 CHECKED BY: Z. PORTER
 DESIGNED BY: I. PENGU



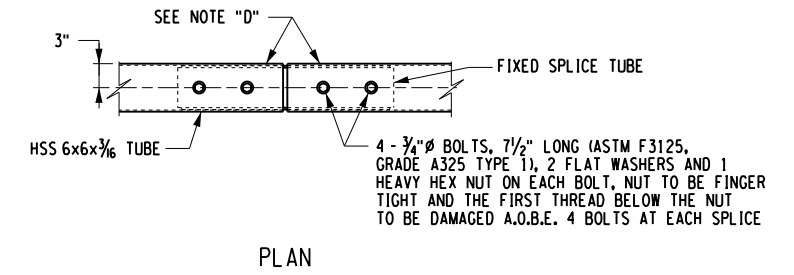
PLAN



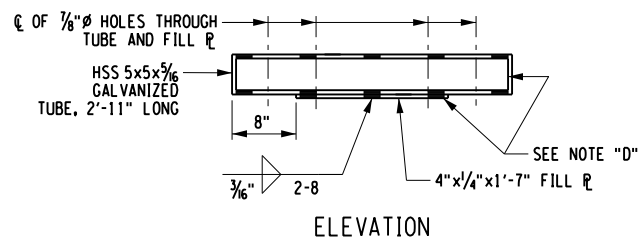
PLAN



PLAN

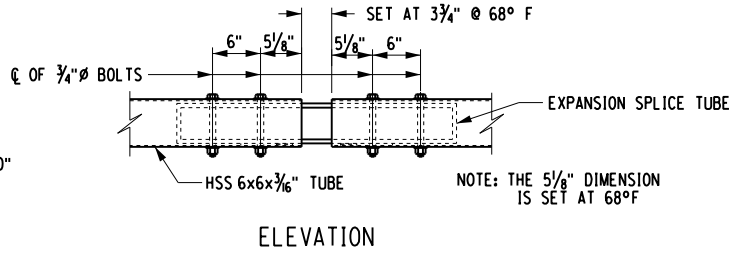


PLAN



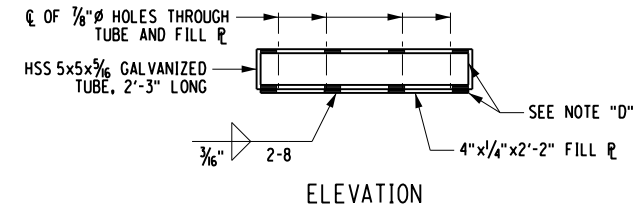
ELEVATION

EXPANSION SPLICE TUBE
(NOT TO SCALE)



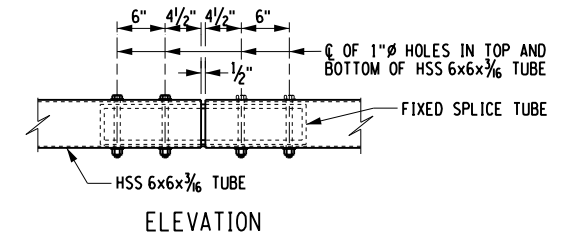
ELEVATION

EXPANSION SPLICE ASSEMBLY
(NOT TO SCALE)



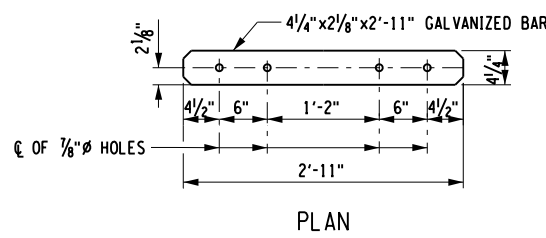
ELEVATION

FIXED SPLICE TUBE
(NOT TO SCALE)

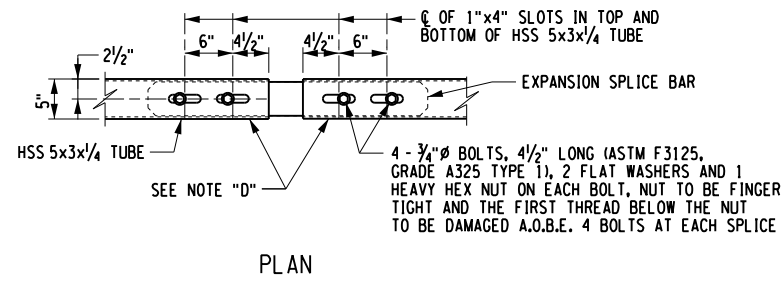


ELEVATION

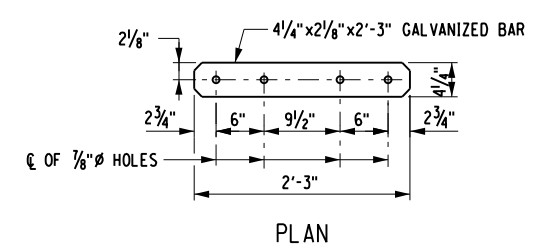
FIXED SPLICE ASSEMBLY
(NOT TO SCALE)



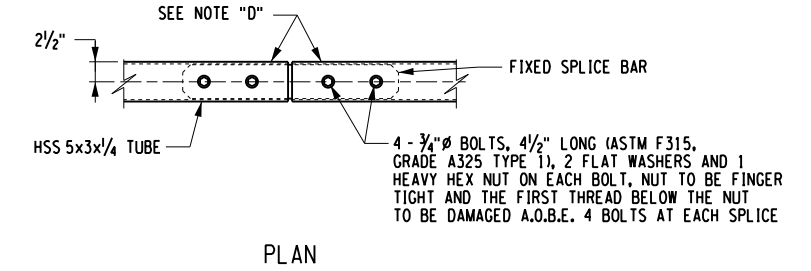
PLAN



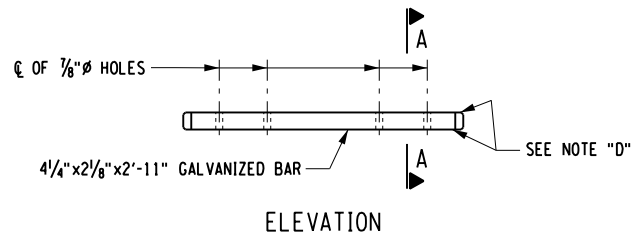
PLAN



PLAN

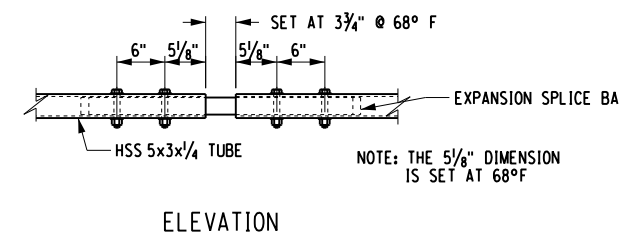


PLAN



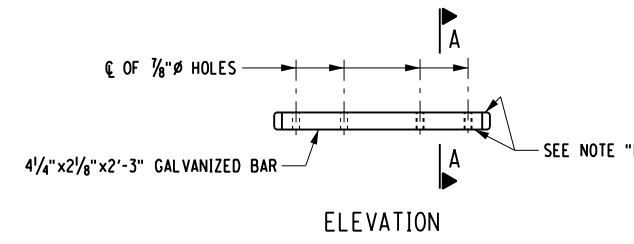
ELEVATION

EXPANSION SPLICE BAR
(NOT TO SCALE)



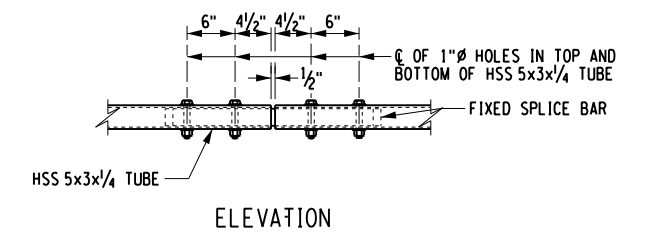
ELEVATION

EXPANSION SPLICE ASSEMBLY
(NOT TO SCALE)



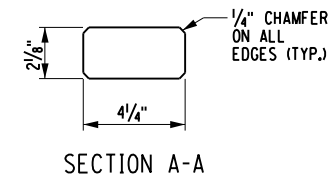
ELEVATION

FIXED SPLICE BAR
(NOT TO SCALE)



ELEVATION

FIXED SPLICE ASSEMBLY
(NOT TO SCALE)



SECTION A-A

AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:	ENSIGN POND RD (CR4) BRIDGE OVER MILL BROOK	PIN 1762.14	BRIDGES BIN 3372000	CULVERTS	ALL DIMENSIONS IN FT UNLESS OTHERWISE NOTED	CONTRACT NUMBER D040666
	CULVERT REPLACEMENT PROJECT					DRAWING NO. ST-24
	TOWN OF MORIAH				TRANSITION RAIL DETAILS - 1	SHEET NO. 31
	COUNTY: ESSEX	REGION: 1				

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

