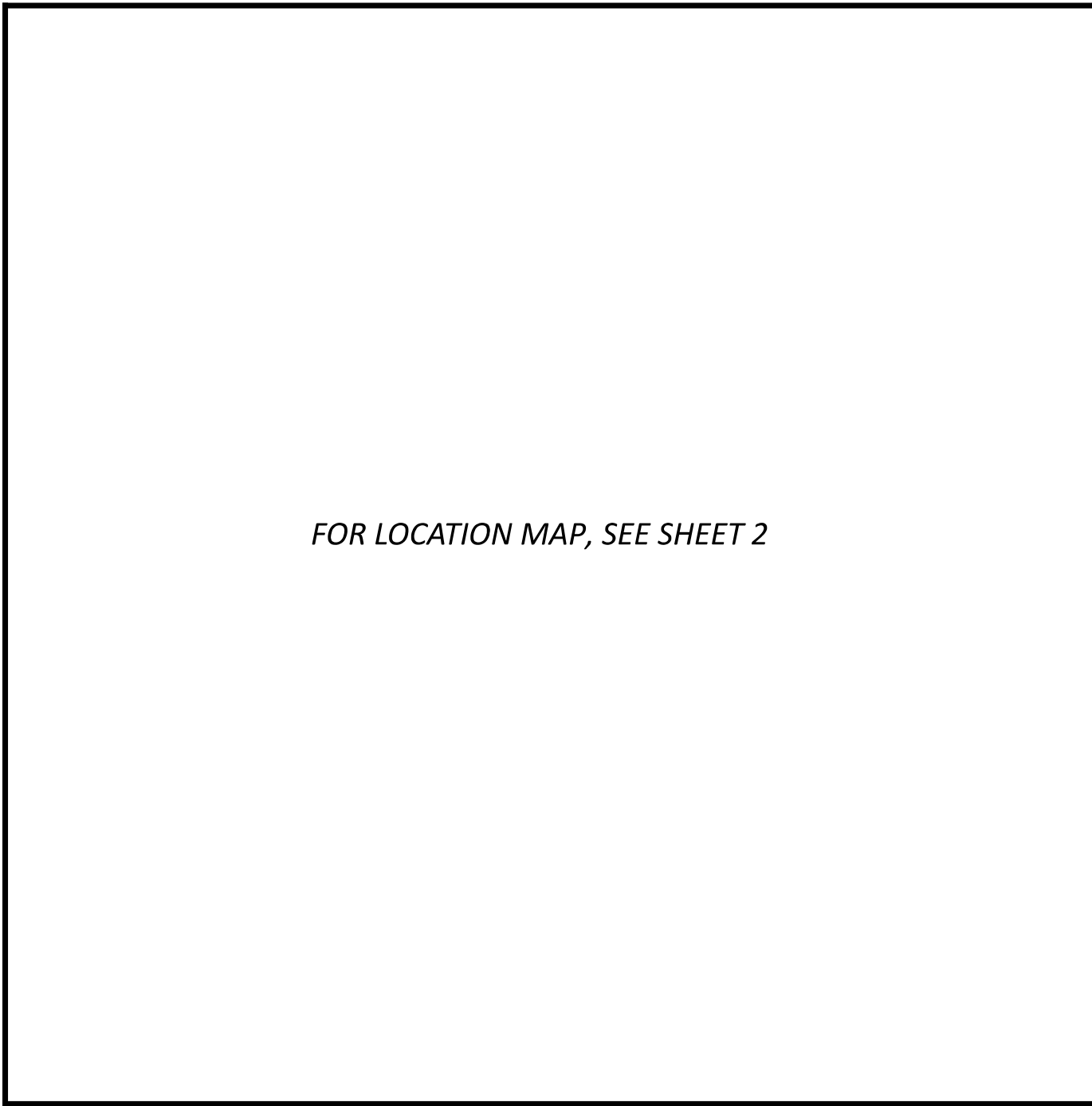


STATE OF OHIO DEPARTMENT OF TRANSPORTATION

D01-OL-FY25 ALLEN AND DEFIANCE COUNTIES



LOCATION MAP

FEDERAL PROJECT NUMBER

E240(638)

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

OVERLAY BRIDGE DECKS ON VARIOUS STRUCTURES THROUGHOUT DISTRICT ONE.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 0.0 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.0 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: N/A (NOI NOT REQUIRED)

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

2023 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS, CHANGES LISTED IN THE PROPOSAL, AND THE SUPPLEMENTAL SPECIFICATION 800 VERSION INDICATED ON THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT AS NOTED ON SHEETS 4-8, AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

Christopher A. Hughes

Christopher A. Hughes, P.E.
District 01 Deputy Director

Pamela Boratyn

Pamela Boratyn
Director, Department of Transportation

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DESIGN EXCEPTIONS

NONE REQUIRED

ADA DESIGN WAIVERS

NONE REQUIRED

UNDERGROUND UTILITIES
Contact Two Working Days
Before You Dig

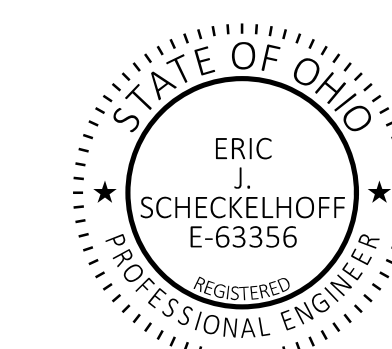
OHIO811.org
Before You Dig

OHIO811, 8-1-1, or 1-800-362-2764
(Non members must be called directly)

PLAN PREPARED BY:
OHIO DEPT. OF TRANSPORTATION, DISTRICT 1
1885 N. MCCULLOUGH ST.
LIMA, OH 45801

STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
DM-4.3	1/15/16	TC-41.20	10/18/13	800	7/19/24
DM-4.4	1/15/16	TC-42.10	10/18/13	808	7/19/24
		TC-42.20	10/18/13	832	7/19/24
		TC-52.10	10/18/13	843	1/19/24
		TC-52.20	1/15/21	848	7/19/24
MT-095.40	7/21/23			908	10/20/17
MT-096.11	7/21/23	AS-1-15	1/20/23	921	7/19/24
MT-096.20	7/21/23	PCB-91	7/17/20		
MT-097.10	4/19/19	DBR-3-11	7/15/11		
MT-101.60	4/21/23	SBR-3-11	7/19/24		
		TBR-1-11	1/18/13		
MT-101.70	7/19/24				
MT-101.75	7/21/23	BP-3.1	1/19/24		
MT-101.90	7/17/20	BP-5.1	7/15/22		
MT-104.10	1/19/24				
MT-105.10	1/17/20				

ENGINEER'S SEAL



TITLE SHEET

DESIGN AGENCY



DESIGNER
KRH

REVIEWER
EJS 11-29-24

PROJECT ID
119043

SHEET	TOTAL
1	19

D01-OL-FY25

MODEL: Sheet PAPER: 34x22 (in.) DATE: 12/2/2024 TIME: 2:38:15 PM USER: eschrecke p:\ohio\do-pw-bentley.com\ohio\do-pw-02\Documents\01 Active Projects\District 01\ D01\119043\00-Engineering\Roadway\Sheets\119043_GT001.dgn

UTILITIES

THERE ARE NO UNDERGROUND UTILITIES SHOWN ON THIS PLAN. THE NATURE OF THE WORK REQUIRED BY THIS PROJECT WILL NOT AFFECT ANY KNOWN UNDERGROUND UTILITIES THAT EXIST UNDER, OR ADJACENT TO, THE WORK AREA.

THE CONTRACTOR SHOULD BE AWARE OF THE EXISTING BRIDGE LIGHTING FACILITIES. THERE ARE EXISTING LIGHTING CONDUITS, CABLE, AND PULL-BOXES IN THE WORK AREA. THE ORIGINAL CONSTRUCTION PLANS ARE AVAILABLE FOR REFERENCING THE APPROXIMATE LOCATIONS. THE CONTRACTOR SHALL USE CAUTION WHEN WORKING NEAR THESE FACILITIES.

EXISTING PLANS

EXISTING PLANS MAY BE INSPECTED IN THE ODOT DISTRICT 1 OFFICE IN LIMA.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

TEMPORARY SEDIMENT AND EROSION CONTROL

THE FOLLOWING ITEMS HAVE BEEN INCLUDED IN THE GENERAL SUMMARY TO PERFORM THIS ITEM OF WORK:

ITEM 832, EROSION CONTROL = 1000 EACH

REVIEW OF DRAINAGE FACILITIES

PRIOR TO THE START OF WORK AND AGAIN BEFORE FINAL ACCEPTANCE, PERFORM AN INSPECTION WITH REPRESENTATIVES OF THE DEPARTMENT, CONTRACTOR AND LOCALS OF ALL EXISTING DRAINAGE FACILITIES THAT ARE TO REMAIN IN SERVICE WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCES IS DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION ARE MAINTAINED BY THE DEPARTMENT.

CONFIRM ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE-MENTIONED PARTIES ARE MAINTAINED AND LEFT IN A CONDITION COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. THE CONTRACTOR IS RESPONSIBLE TO CORRECT ANY CHANGE IN THE CONDITION RESULTING FROM THEIR OPERATIONS AS DIRECTED AND APPROVED BY THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE IS INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEMS.

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

PERSONAL PROTECTION EQUIPMENT (PPE)

THE CONTRACTOR SHALL FOLLOW ALL REQUIREMENTS OF SECTIONS XXIV AND XXXIV OF THE OHIO DEPARTMENT OF TRANSPORTATION SAFETY & HEALTH STANDARD OPERATING PROCEDURE 220-006(SP) EFFECTIVE: NOVEMBER 1, 2018 (EXCEPT AS AMENDED BELOW) AND ALL SUBSEQUENT UPDATES POSTED AT THE FOLLOWING WEBSITE:

HTTP://WWW.DOT.STATE.OH.US/POLICY/POLICIESANDSOPS/POLICIES/220-006(SP).PDF

AMENDMENTS TO THE REQUIREMENTS OF THIS DOCUMENT ARE: XXIV.

HEAD PROTECTION (HARD HATS):

ALL PERSONS WITHIN THE RIGHT-OF-WAY OF ANY HIGHWAY OR ANY OTHER TYPE OF ROADWAY OR CONSTRUCTION SITE WHO ARE EXPOSED TO EITHER TRAFFIC (VEHICLES USING THE HIGHWAY FOR PURPOSES OF TRAVEL) OR CONSTRUCTION EQUIPMENT WITHIN THE WORK AREA, REGARDLESS OF JOB TYPE, SHALL WEAR APPROPRIATE HEAD PROTECTION. ALL HARD HATS MUST MEET OR EXCEED ANSI Z89.1-2009 TYPE 1, CLASS E-G REQUIREMENTS. XXXIV.

SAFETY APPAREL AND VEST (HIGH VISIBILITY):

ALL PERSONS WITHIN THE RIGHT-OF-WAY OF ANY HIGHWAY OR ANY OTHER TYPE OF ROADWAY OR CONSTRUCTION SITE WHO ARE EXPOSED TO EITHER TRAFFIC (VEHICLES USING THE HIGHWAY FOR PURPOSES OF TRAVEL) OR CONSTRUCTION EQUIPMENT WITHIN THE WORK AREA, REGARDLESS OF JOB TYPE, SHALL WEAR A HIGH VISIBILITY SAFETY VEST THAT MEETS THE PERFORMANCE CLASS II OR CLASS III REQUIREMENTS OF THE ANSI/ISEA 107-2015 PUBLICATION ENTITLED "AMERICAN NATIONAL STANDARD FOR HIGH-VISIBILITY SAFETY APPAREL AND ACCESSORIES." WORKERS MAY WEAR AN ANSI CLASS II OR ANSI CLASS III AP-PROVED RAIN SUIT, JACKET OR OTHER APPAREL WITHOUT A SAFETY VEST OVER IT.

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (441)

A QUANTITY OF THIS ITEM SHALL BE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER. THE ITEM SHALL CONSIST OF REPAIRING AREAS EXHIBITING SURFACE DETERIORATION ADJACENT TO THE APPROACH SLABS BEING OVERLAID AND PLACING ITEM 441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (449), PG64-22. IN ADDITION, THIS ITEM SHALL BE USED TO PROVIDE A SMOOTH TRANSITION INTO THE OVERLAID APPROACH SLABS AS DIRECTED BY THE ENGINEER. FOR PLACEMENT OF ITEM 441, A PG64-22 BINDER IS REQUIRED, AND IT SHALL BE PLACED IN TWO ONE AND HALF INCH LIFT THICKNESS. THE ENGINEER SHALL DETERMINE WHICH ARE TO BE REPAIRED. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, THIS ITEM SHALL BE PERFORMED AFTER THE COMPLETION OF THE ABUTTING APPROACH SLAB OVERLAY WORK.

PAYMENT SHALL BE BASED ON THE ACTUAL NUMBER OF SQUARE YARDS OF SURFACE PAVEMENT REPAIR. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 251, PARTIAL DEPTH PAVEMENT REPAIR (441), 2510 SY

ITEM 253 - PAVEMENT REPAIR

A QUANTITY OF THIS ITEM SHALL BE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER. THIS ITEM SHALL CONSIST OF CUTTING AND REMOVING DETERIORATED PAVEMENT FULL DEPTH ADJACENT TO THE APPROACH SLABS BEING OVERLAID AND PLACING 301 ASPHALT CONCRETE BASE, PG64-22. THE MAXIMUM COMPACTED DEPTH OF ANY ONE LAYER SHALL BE 6 INCHES. THE FULL DEPTH PAVEMENT REPAIRS SHALL HAVE A SURFACE COURSE APPLIED PER THE NOTE AND REQUIREMENTS FOR ITEM 251, PARTIAL DEPTH PAVEMENT REPAIR (441). PAYMENT FOR THE SURFACE COURSE SHALL BE INCLUDED WITH ITEM 251. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, THIS ITEM SHALL BE PERFORMED AFTER THE COMPLETION OF THE ABUTTING APPROACH SLAB OVERLAY WORK.

PAYMENT SHALL BE BASED ON THE ACTUAL NUMBER OF CUBIC YARDS OF PAVEMENT REPAIR. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 253, PAVEMENT REPAIR, 45 CY

PAVEMENT MARKINGS

PAVEMENT MARKINGS MUST BE IN PLACE PRIOR TO OPENING THE ROAD TO TRAFFIC. THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER FOURTEEN (14) CALENDAR DAYS IN ADVANCE OF THE NEED TO PLACE THE PAVEMENT MARKINGS. THE PROJECT ENGINEER SHALL CONTACT THE DISTRICT ROADWAY SERVICES ENGINEER (419-999-6857, DERRICK.SCHIERLOH@DOT.OHIO.GOV) TO SCHEDULE PAVEMENT MARKING PLACEMENT PRIOR TO THE OPENING TO TRAFFIC.

ITEM 606 - GUARDRAIL, TYPE 5, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ITEM 606 AND DRAWING GR-1.1 AND GR-2.1, SHEET 10A AND 10B, THIS ITEM REQUIRES STEEL POSTS AND COMPOSITE OR POLYMER ALTERNATIVE BLOCKOUTS. THE BLOCKOUTS SHALL BE FROM THE APPROVED PRODUCTS LIST THAT IS MAINTAINED BY THE OFFICE OF ROADWAY ENGINEERING AND INSTALLED PER CMS 606 AND ALL PERTINENT STANDARD DRAWINGS. ALL COSTS ASSOCIATED WITH PROVIDING AND INSTALLING STEEL POSTS AND APPROVED ALTERNATIVE BLOCKOUTS SHALL BE INCLUDED IN THE UNIT BIDS FOR ITEM 606, GUARDRAIL, TYPE 5, AS PER PLAN

ITEM 606 - BRIDGE TERMINAL ASSEMBLY, TYPE 1, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF DRAWING GR-3.1, SHEET 10C, THIS ITEM REQUIRES THE USE OF STEEL POSTS. ALL COSTS ASSOCIATED WITH PROVIDING AND INSTALLING STEEL POSTS SHALL BE INCLUDED IN THE UNIT BID FOR ITEM 606, BRIDGE TERMINAL ASSEMBLY, TYPE 1, AS PER PLAN.

ITEM 606 - BRIDGE TERMINAL ASSEMBLY, TYPE 3, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF DRAWING GR-3.3, SHEET 10D, THIS ITEM REQUIRES THE USE OF STEEL POSTS. ALL COSTS ASSOCIATED WITH PROVIDING AND INSTALLING STEEL POSTS SHALL BE INCLUDED IN THE UNIT BID FOR ITEM 606, BRIDGE TERMINAL ASSEMBLY, TYPE 3, AS PER PLAN.

ITEM 606 - ANCHOR ASSEMBLY, TYPE T, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF DRAWING GR-4.2, SHEET 10E, THIS ITEM REQUIRES STEEL POSTS AND COMPOSITE OR POLYMER ALTERNATIVE BLOCKOUTS. THE BLOCKOUTS SHALL BE FROM THE APPROVED PRODUCTS LIST THAT IS MAINTAINED BY THE OFFICE OF ROADWAY ENGINEERING AND INSTALLED PER CMS 606 AND ALL PERTINENT STANDARD DRAWINGS. ALL COSTS ASSOCIATED WITH PROVIDING AND INSTALLING STEEL POSTS AND APPROVED ALTERNATIVE BLOCKOUTS SHALL BE INCLUDED IN THE UNIT BIDS FOR ITEM 606, ANCHOR ASSEMBLY, AS PER PLAN

CONTACT INFORMATION

THE CONTRACTOR SHALL NOT BEGIN WORK ON THE FIELD PAVING IN A COUNTY UNTIL CONTACTING THE COUNTY MANAGER AND PROJECT ENGINEER. BELOW IS A CONTACT LIST FOR COUNTY MANAGERS:

ALLEN COUNTY			
CONTACT	TITLE	OFFICE NUMBER	CELL NUMBER
BRIAN RADER	DEPARTMENT MANAGER	(419) 999-6717	-
JASON DICKMAN	TRANSPORT MGR1	(419) 999-6715	-
ANDREW WITA	TRANSPORT MGR2	(419) 999-6712	-
DEFIANCE COUNTY			
CONTACT	TITLE	OFFICE NUMBER	CELL NUMBER
JASON HOSCHAK	DEPARTMENT MANAGER	(419) 999-6711	-
JEFFERY HOLTSBERRY	TRANSPORT MGR2	(419) 999-6728	-



ITEM 614 - WORK ZONE PAVEMENT MARKING

WORK ZONE PAVEMENT MARKING SHALL BE COMPLETE AND IN PLACE ON ALL NEW PAVEMENT PRIOR TO EXPOSING IT TO TRAFFIC. THE FOLLOWING ESTIMATED QUANTITY FOR THIS ITEM HAS BEEN PROVIDED FOR USE AS DIRECTED BY THE ENGINEER.

ITEM 614 - WORK ZONE CENTER LINE, CLASS II = 0.81 MILE

ITEM 614, MAINTAINING TRAFFIC (LANES OPEN DURING HOLIDAYS OR SPECIAL EVENTS)

NO WORK SHALL BE PERFORMED ON US-30 AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR SPECIAL EVENTS:

NEW YEAR'S (OBSERVED)	GENERAL/REGULAR ELECTION DAY (NOV)
TOTAL SOLAR ECLIPSE (4/8/24)	THANKSGIVING
MEMORIAL DAY	CHRISTMAS (OBSERVED)
FOURTH OF JULY (OBSERVED)	
LABOR DAY	

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY OR SPECIAL EVENT FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

<u>DAY OF HOLIDAY OR SPECIAL EVENT</u>	<u>TIME ALL LANES MUST BE OPEN TO TRAFFIC</u>
SUNDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY
MONDAY	12:00N FRIDAY THROUGH 6:00 AM TUESDAY
MONDAY (TOTAL SOLAR ECLIPSE)	12:00N MONDAY THROUGH 6:00AM WEDNESDAY
TUESDAY	12:00N MONDAY THROUGH 6:00 AM WEDNESDAY
TUESDAY (GEN./REG. ELECTION)	5:00 AM TUESDAY THROUGH 12:00 AM WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 6:00 AM THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 6:00 AM FRIDAY
THURSDAY (THANKSGIVING ONLY)	6:00 AM WEDNESDAY THROUGH 6:00 AM MONDAY
FRIDAY	12:00N THURSDAY THROUGH 6:00 AM MONDAY
SATURDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE PER THE LANE VALUE CONTRACT (PN1 127).

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH C&MS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

ITEM 616, WATER = 2 MGAL

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE SIGN. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS AVAILABLE ON THE OFFICE OF MATERIALS MANAGEMENT WEB PAGE. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 800 FEET AND 650 FEET, RESPECTIVELY.

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. THE PCMS SHALL BE DELINEATED IN ACCORDANCE WITH C&MS 614.03.

THE PORTABLE PCMS LOCATIONS AND WORK LIMITS FOR THOSE LOCATIONS ARE SHOWN ON SHEETS 6-8 OF THE PLAN. PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED AWAY FROM ALL TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT, AND TO REVISE SIGN MESSAGES, IF NECESSARY.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

ALLOW REMOTE SIGN ACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES. THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF C&MS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS, WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS, TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE TO THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24-HOUR-PER-DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN (ASSUMING 2 PCMS SIGN(S) FOR 6 MONTH(S)) = 12 SNMT

ITEM 614, WORK ZONE SPEED LIMIT SIGN

THE FOLLOWING WORK ZONE SPEED ZONE (WZSZ) SPEED LIMIT REVISIONS(S) HAVE BEEN APPROVED FOR USE ON THIS PROJECT WHEN WORK ZONE CONDITIONS AND FACTORS ARE MET AS DESCRIBED BELOW:

WZSZ REVISION NUMBER(S)	COUNTY-ROUTE-SECTION(S)	DIRECTION(S)
WZ-	ALL-30-9.27L/9.31R	BOTH

POTENTIAL WZSZ LOCATIONS SHALL HAVE AN ORIGINAL (PRE-CONSTRUCTION) POSTED SPEED LIMIT OF 55 MPH OR GREATER, A QUALIFYING WORK ZONE CONDITION OF AT LEAST 0.5 MILE IN LENGTH, AN EXPECTED WORK DURATION OF AT LEAST THREE HOURS, AND A WORK ZONE CONDITION IN PLACE THAT REDUCES THE EXISTING FUNCTIONALITY OF THE TRAVEL LANES OR SHOULDERS (I.E., LANE CLOSURE, LANE SHIFT, CROSSOVER, CONTRAFLOW AND/OR SHOULDER CLOSURE). THE LENGTH OF THE WORK ZONE CONDITION IS MEASURED FROM THE BEGINNING OF THE TAPER FOR THE SUBJECT WORK ZONE CONDITION IMPACTING THE TRAVEL LANES AND/OR SHOULDER TO THE END OF THE DOWNSTREAM TAPER, WHERE DRIVERS ARE RETURNED TO TYPICAL ALIGNMENT. AN EXPECTED WORK DURATION OF AT LEAST THREE HOURS IS REQUIRED TO BALANCE THE ADDITIONAL EXPOSURE CREATED BY INSTALLING AND REMOVING WZSZ SIGNING WITH THE TIME NEEDED TO COMPLETE THE WORK.

IF THE WORK ZONE MEETS THESE MINIMUM CRITERIA, IT SHALL BE ANALYZED FURTHER USING TABLE 1 BELOW TO DETERMINE IF AND WHEN IT QUALIFIES FOR A SPEED LIMIT REDUCTION. DEPENDING ON THE ORIGINAL POSTED SPEED LIMIT, THE TYPE OF TEMPORARY TRAFFIC CONTROL USED, AND WHETHER OR NOT WORKERS ARE PRESENT, A WARRANTED WZSZ WILL VARY IN THE APPROVED SPEED LIMIT TO BE POSTED OVER TIME.

C&MS ITEM 614, PARAGRAPH 614.02(B), INDICATES THAT TWO DIRECTIONS OF A DIVIDED HIGHWAY ARE CONSIDERED SEPARATE HIGHWAY SECTIONS. THEREFORE, IF THE WORK ON A MULTI-LANE DIVIDED HIGHWAY IS LIMITED TO ONLY ONE DIRECTION, A SPEED LIMIT REDUCTION IN THE DIRECTION OF THE WORK DOES NOT AUTOMATICALLY CONSTITUTE A SPEED LIMIT REDUCTION IN THE OPPOSITE DIRECTION. EACH DIRECTION SHALL BE ANALYZED INDEPENDENTLY FROM EACH OTHER.

ALL WZSZS FLUCTUATE BETWEEN TWO APPROVED REDUCED SPEED LIMITS OR BETWEEN AN APPROVED REDUCED SPEED LIMIT AND THE ORIGINAL POSTED SPEED LIMIT. ONLY ONE OF TWO SIGNING STRATEGIES SHALL BE USED TO IMPLEMENT A WZSZ.

WZSZS USING DSL SIGN ASSEMBLIES SHALL BE IN ACCORDANCE WITH THIS NOTE, APPROVED LIST, SUPPLEMENTAL SPECIFICATIONS (SS) 808 AND 908, AND TRAFFIC SCD MT-104.10.

ONLY ONE WARRANTED SPEED LIMIT APPLIES AT ANY ONE TIME; SPEED LIMIT REDUCTIONS ARE NOT CUMULATIVE. WZSZS SHALL NOT BE USED FOR MOVING/MOBILE ACTIVITIES, AS DEFINED IN ODOTCD PART 6.

WHEN LOOKING UP THE WARRANTED WORK ZONE SPEED LIMITS, ALWAYS USE THE ORIGINAL, PRECONSTRUCTION, POSTED SPEED LIMIT. DO NOT USE A PRIOR OR CURRENT WORK ZONE SPEED LIMIT AS A LOOK UP VALUE IN THE TABLE. POSITIVE PROTECTION IS GENERALLY REGARDED AS PORTABLE BARRIER OR OTHER RIGID BARRIER IN USE ALONG THE WORK AREA WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WITHOUT POSITIVE PROTECTION IS GENERALLY REGARDED AS USING DRUMS, CONES, SHADOW VEHICLE, ETC., ALONG THE WORK AREA WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WORKERS ARE CONSIDERED AS BEING PRESENT WHEN ON-SITE, WORKING WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WHEN THE WORK ZONE CONDITION REDUCING THE EXISTING FUNCTIONALITY OF THE TRAVEL LANES OR SHOULDERS IS REMOVED, THE SPEED LIMIT DISPLAYED SHALL RETURN TO THE ORIGINAL POSTED SPEED LIMIT.

TABLE 1: WARRANTED WORK ZONE SPEED LIMITS (MPH) FOR WORK ZONES ON HIGH-SPEED (55 MPH OR GREATER) MULTI-LANE HIGHWAYS

ORIGINAL POSTED SPEED LIMIT	WITH POSITIVE PROTECTION		WITHOUT POSITIVE PROTECTION	
	WORKERS PRESENT	WORKERS NOT PRESENT	WORKERS PRESENT	WORKERS NOT PRESENT
70	60	65	55	65

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, WORK ZONE SPEED LIMIT SIGN	3 EACH
ITEM 808, DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY	12 SNMT

ESTIMATING 4 DSL SIGN ASSEMBLIES FOR 3 MONTHS

DESIGN AGENCY



DESIGNER
MJK

REVIEWER
EJS 11-29-24

PROJECT ID
119043

SHEET TOTAL
5 | 19

D01-OL-FY25

MODEL: Sheet_SurvFI.PAPER SIZE: 34x22 (in.) DATE: 12/2/2024 TIME: 2:01:50 PM USER: eschecke
p:\vohodo-pw-bentley.com\ohodo-pw-02\Documents\01 Active Projects\District 01\ D01119043\00-Engineering\Roadway\Sheets\119043_GG001.dgn

SHEET NUM.						PART.		ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
3	4	12	01/STR/47	02/NHS/47	EXT	TOTAL							
												ROADWAY	
					LS 975	LS 325	201 11000	LS 975				CLEARING AND GRUBBING	
						LS 325	LS 650	202 38000	975	FT		GUARDRAIL REMOVED	
						4	8	202 47000	12	EACH		BRIDGE TERMINAL ASSEMBLY REMOVED	
					975	325	650	606 13001	975	FT		GUARDRAIL, TYPE 5, AS PER PLAN	3
					2			2 26501	2	EACH		ANCHOR ASSEMBLY, TYPE T, AS PER PLAN	3
					4			4 35001	4	EACH		BRIDGE TERMINAL ASSEMBLY, TYPE 1, AS PER PLAN	3
					8			8 35121	8	EACH		BRIDGE TERMINAL ASSEMBLY, TYPE 3, AS PER PLAN	3
												EROSION CONTROL	
	1,000					200	800	832 30000	1,000	EACH		EROSION CONTROL	
												PAVEMENT	
	2,510					450	2,060	251 01000	2,510	SY		PARTIAL DEPTH PAVEMENT REPAIR (441)	
	45					10	35	253 02000	45	CY		PAVEMENT REPAIR	
							161	409 30000	161	FT		SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS	
					72			72 23000	72	FT		COMBINATION CURB AND GUTTER, TYPE 4	
												TRAFFIC CONTROL	
					6			6 00102	6	EACH		BARRIER REFLECTOR, TYPE 1 (BIDIRECTIONAL)	
					26		20	626 00110	26	EACH		BARRIER REFLECTOR, TYPE 2 (BIDIRECTIONAL)	
												STRUCTURE REPAIR (ALL-30-1.13, SFN: 0200050)	
					1,316		1,316	512 73500	1,316	SY		TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN	
					6		6	512 10050	6	SY		SEALING OF CONCRETE SURFACES (NON-EPOXY)	
					141		141	516 14600	141	FT		STRUCTURAL JOINT OR JOINT SEALER, MISC.: USING DOW CORNING 902	11
					141		141	519 11101	141	SF		PATCHING CONCRETE STRUCTURE, AS PER PLAN	11
					101		101	843 50000	101	SF		PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR	11
												STRUCTURE REPAIR (ALL-30-7.90, SFN: 0200247)	
					LS		LS	202 11200	LS			PORTIONS OF STRUCTURE REMOVED	
					978		978	202 23500	978	SY		WEARING COURSE REMOVED (T=1.25")	
					63		63	516 14600	63	FT		STRUCTURAL JOINT OR JOINT SEALER, MISC.: USING DOW CORNING 902	11
												STRUCTURE REPAIR (ALL-30-8.81, SFN: 0200301)	
					541.5		541.5	517 72750	541.5	FT		RAILING (THRIE BEAM RETROFIT)	
					35		35	519 11101	35	SF		PATCHING CONCRETE STRUCTURE, AS PER PLAN	11
					35		35	843 50000	35	SF		PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR	11
					978		978	848 10100	978	SY		LATEX MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION (T=2.25")	
					978		978	848 20000	978	SY		SURFACE PREPARATION USING HYDRODEMOLITION (T=1")	
					61.2		61.2	848 30100	61.2	CY		LATEX MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY	
					60		60	848 50000	60	SY		HAND CHIPPING	
					LS		LS	848 50100	LS			TEST SLAB	
					1		1	848 50200	1	CY		FULL-DEPTH REPAIR	
												STRUCTURE REPAIR (ALL-30-8.81, SFN: 0200301)	
					LS		LS	202 11200	LS			PORTIONS OF STRUCTURE REMOVED	
					756		756	202 23500	756	SY		WEARING COURSE REMOVED (T=1.25")	
					8		8	512 10050	8	SY		SEALING OF CONCRETE SURFACES (NON-EPOXY)	
					49		49	516 14600	49	FT		STRUCTURAL JOINT OR JOINT SEALER, MISC.: USING DOW CORNING 902	11
					507		507	517 72750	507	FT		RAILING (THRIE BEAM RETROFIT)	
					63		63	519 11101	63	SF		PATCHING CONCRETE STRUCTURE, AS PER PLAN	11
					63		63	843 50000	63	SF		PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR	11
					756		756	848 10100	756	SY		LATEX MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION (T=2.25")	11
					756		756	848 20000	756	SY		SURFACE PREPARATION USING HYDRODEMOLITION (T=1")	
					48		48	848 30100	48	CY		LATEX MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY	
					60		60	848 50000	60	SY		HAND CHIPPING	
					LS		LS	848 50100	LS			TEST SLAB	
					1		1	848 50200	1	CY		FULL-DEPTH REPAIR	

GENERAL SUMMARY

DESIGN AGENCY



DESIGNER

KRH

REVIEWER

EJS 11-29-24

PROJECT ID

119043

SHEET

9

TOTAL

19

D01-OL-FY25

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SHEET NUM.												PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	
4	5	12	01/STR/47	02/NHS/47																
																		STRUCTURE REPAIR (ALL-30-9.27L, SFN: 0200336)		
					424	202	23500	424	SY	WEARING COURSE REMOVED (T=1.75")										
					12	512	10050	12	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)										
					150	517	75600	150	FT	DEEP BEAM BRIDGE RETROFIT RAILING										
					130	SPECIAL	51822300	130	FT	STEEL DRIP STRIP	11									
					154	519	11101	154	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	11									
					154	843	50000	154	SF	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR	11									
					424	848	10100	424	SY	LATEX MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION (T=2.75")										
					424	848	20000	424	SY	SURFACE PREPARATION USING HYDRODEMOLITION (T=1")										
					32.5	848	30100	32.5	CY	LATEX MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY										
					64	848	50000	64	SY	HAND CHIPPING										
					LS	848	50100	LS		TEST SLAB										
					1	848	50200	1	CY	FULL-DEPTH REPAIR										
																		STRUCTURE REPAIR (ALL-30-9.31R, SFN: 0200360)		
					424	202	23500	424	SY	WEARING COURSE REMOVED (T=1.75")										
					150	517	75600	150	FT	DEEP BEAM BRIDGE RETROFIT RAILING										
					130	SPECIAL	51822300	130	FT	STEEL DRIP STRIP	11									
					424	848	10100	424	SY	LATEX MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION (T=2.75")										
					424	848	20000	424	SY	SURFACE PREPARATION USING HYDRODEMOLITION (T=1")										
					32.5	848	30100	32.5	CY	LATEX MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY										
					55	848	50000	55	SY	HAND CHIPPING										
					LS	848	50100	LS		TEST SLAB										
					1	848	50200	1	CY	FULL-DEPTH REPAIR										
																		STRUCTURE REPAIR (DEF-249-0.094, SFN: 2002280)		
					654	202	23500	654	SY	WEARING COURSE REMOVED (T=1.25")										
					400	202	38500	400	FT	BRIDGE RAILING REMOVED										
					5,412	509	10000	5,412	LB	EPOXY COATED STEEL REINFORCEMENT										
					1,120	510	10001	1,120	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	11									
					24	511	34448	24	CY	CLASS GC2 CONCRETE, BRIDGE DECK (PARAPET)										
					48	516	14600	48	FT	STRUCTURAL JOINT OR JOINT SEALER, MISC.: USING DOW CORNING 902	11									
					26.5	519	11101	26.5	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	11									
					26.5	843	50000	26.5	SF	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR	11									
					654	848	10100	654	SY	LATEX MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION (T=2.25")										
					654	848	20000	654	SY	SURFACE PREPARATION USING HYDRODEMOLITION (T=1")										
					40.9	848	30100	40.9	CY	LATEX MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY										
					45	848	50000	45	SY	HAND CHIPPING										
					LS	848	50100	LS		TEST SLAB										
					1	848	50200	1	CY	FULL-DEPTH REPAIR										

GENERAL SUMMARY

DESIGN AGENCY



DESIGNER

KRH

REVIEWER

EJS 11-29-24

PROJECT ID

119043

SHEET

9A

TOTAL

19

SHEET NUM.								PART.		ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
3	4	5	5A	12	01/STR/47	02/NHS/47		EXT	TOTAL						
													MAINTENANCE OF TRAFFIC		
	60				20	40		253	02000	60	CY		PAVEMENT REPAIR		
	2,630					2,630		254	01000	2,630	SY		PAVEMENT PLANING, ASPHALT CONCRETE(1 1/2")		
	60				20	40		407	10000	60	GAL		TACK COAT		
			225			225		407	20000	225	GAL		NON-TRACKING TACK COAT		
			110			110		441	50000	110	CY		ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22 (1 1/2")		
	30				10	20		441	70000	30	CY		ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22		
	56					56		614	11110	56	HOUR		LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE		
								LS	614	12420	LS		DETOUR SIGNING		
		3						3	614	12470	3	EACH	WORK ZONE SPEED LIMIT SIGN		
		12					2	10	614	18601	12	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	5	
			0.81					0.81	614	21400	0.81	MILE	WORK ZONE CENTER LINE, CLASS II		
			5.14					5.14	614	22326	5.14	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 873		
				5,040					614	24122	5,040	FT	WORK ZONE DOTTED LINE, CLASS I, 6", 873		
		2					1	1	616	10000	2	MGAL	WATER		
	150						50	100	617	10100	150	CY	COMPACTED AGGREGATE		
				11,820				11,820	618	40100	11,820	FT	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)		
				2,400				2,400	622	41100	2,400	FT	PORTABLE BARRIER, UNANCHORED		
									12	808	18700	12	SNMT	DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY	
													INCIDENTALS		
								LS	LS	614	11000	LS	MAINTAINING TRAFFIC		
								LS	LS	624	10000	LS	MOBILIZATION		

DESIGN AGENCY



DESIGNER	KRH
REVIEWER	EJS
PROJECT ID	119043
SHEET	10
TOTAL	19

NOTES

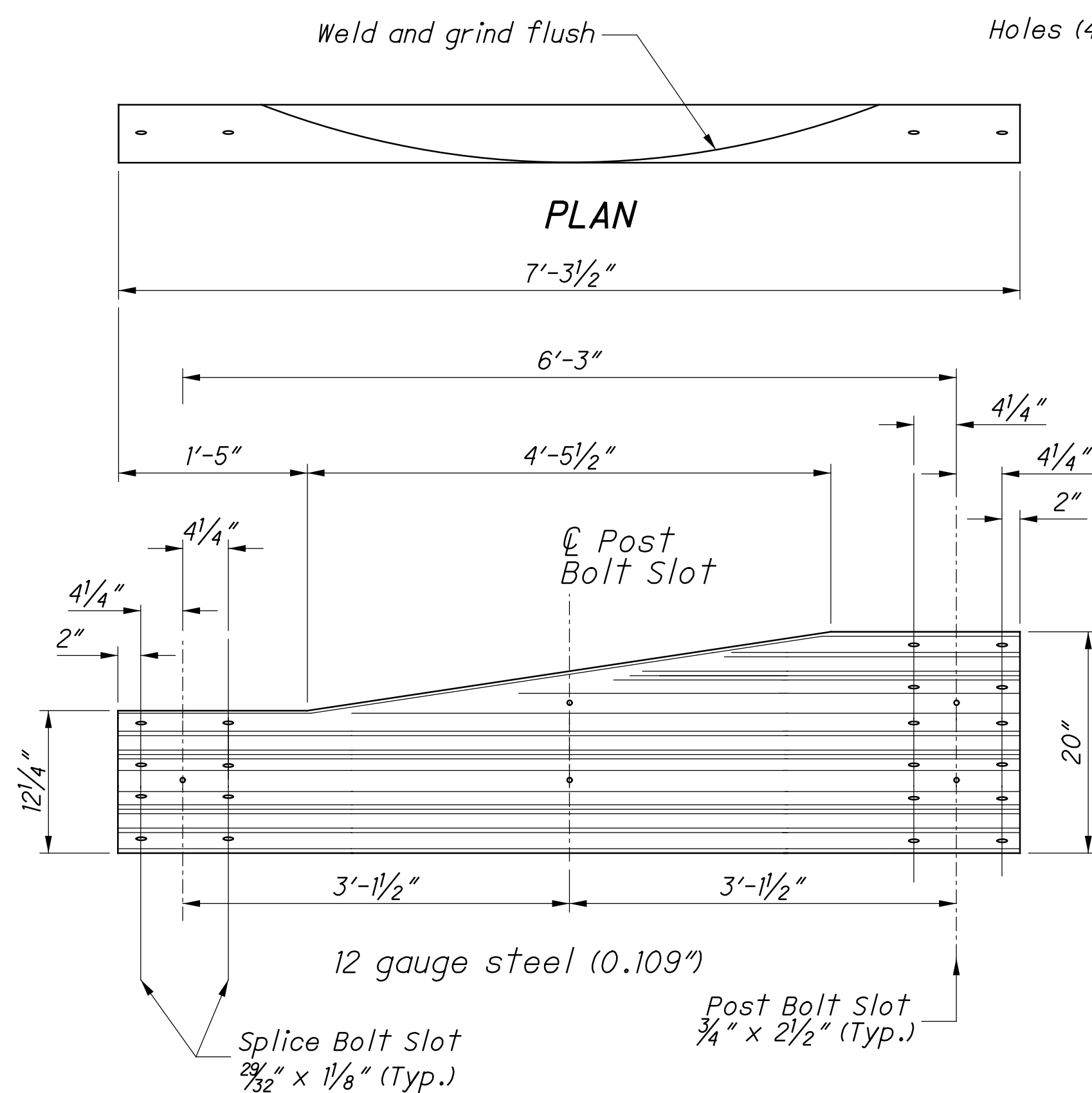
GENERAL: Components shown on this drawing are used in a variety of guardrail systems. See individual guardrail drawing for specific applications.

See CMS 606 for guardrail specifications not covered on these drawings.

Refer to AASHTO M 180 for dimensional details of W-Beam and Thrie-Beam rail elements, related buffer and end sections, beam splices, post and splice bolts, nuts, and Type 1 W-Beam to Thrie-Beam Transition sections.

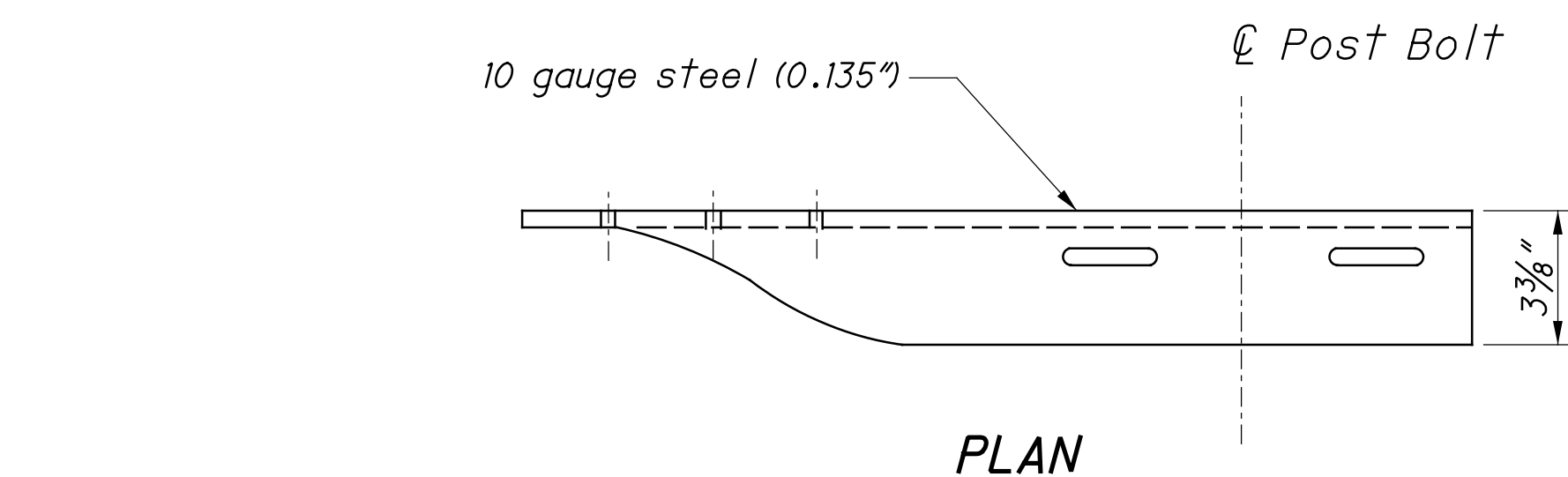
RAIL ELEMENTS: W-Beam Rail has an effective length of 12'-6" unless otherwise specified, with $\frac{3}{4}$ " x $2\frac{1}{2}$ " post bolt slots on 6'-3" centers regardless of post spacing. Field punch or drill bolt holes or slots for irregularly spaced posts as specified in CMS 606.04.

RAIL SPLICES: Lap splices between two rail elements or between a rail and terminal connector in the direction of traffic. Lap the buffer or flared end sections in the direction of traffic.

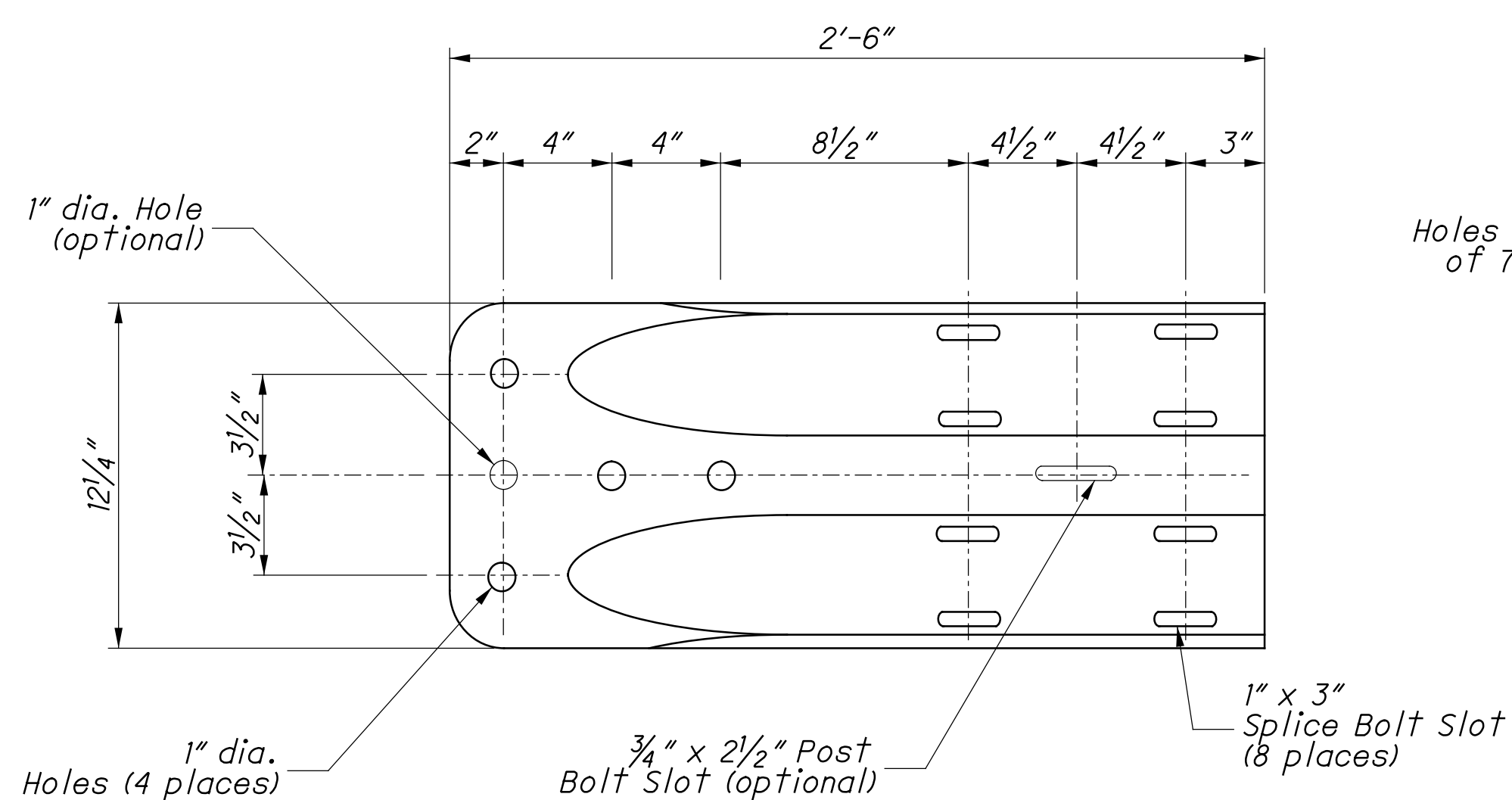


**ELEVATION
TYPE 2 TRANSITION SECTION**
(Asymmetric W to Thrie-Beam)

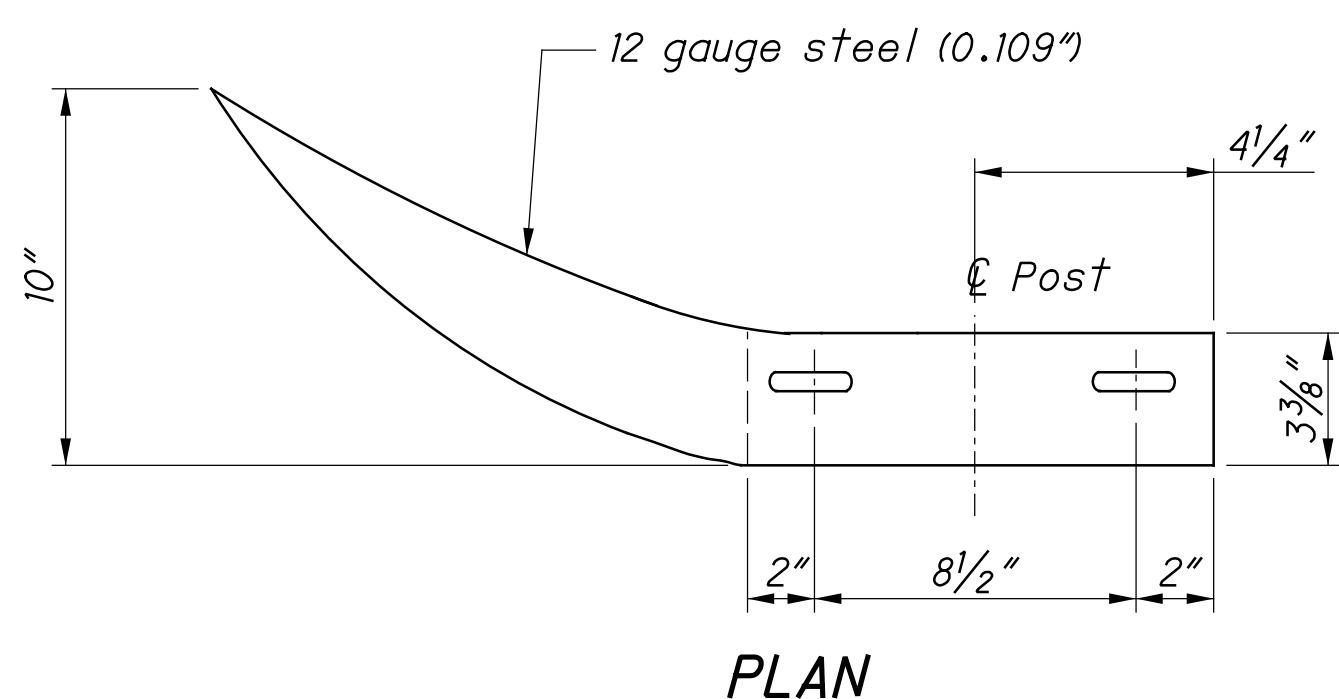
For details of Type 1 Transition Section (Symmetric), refer to AASHTO M 180, Figure 4.



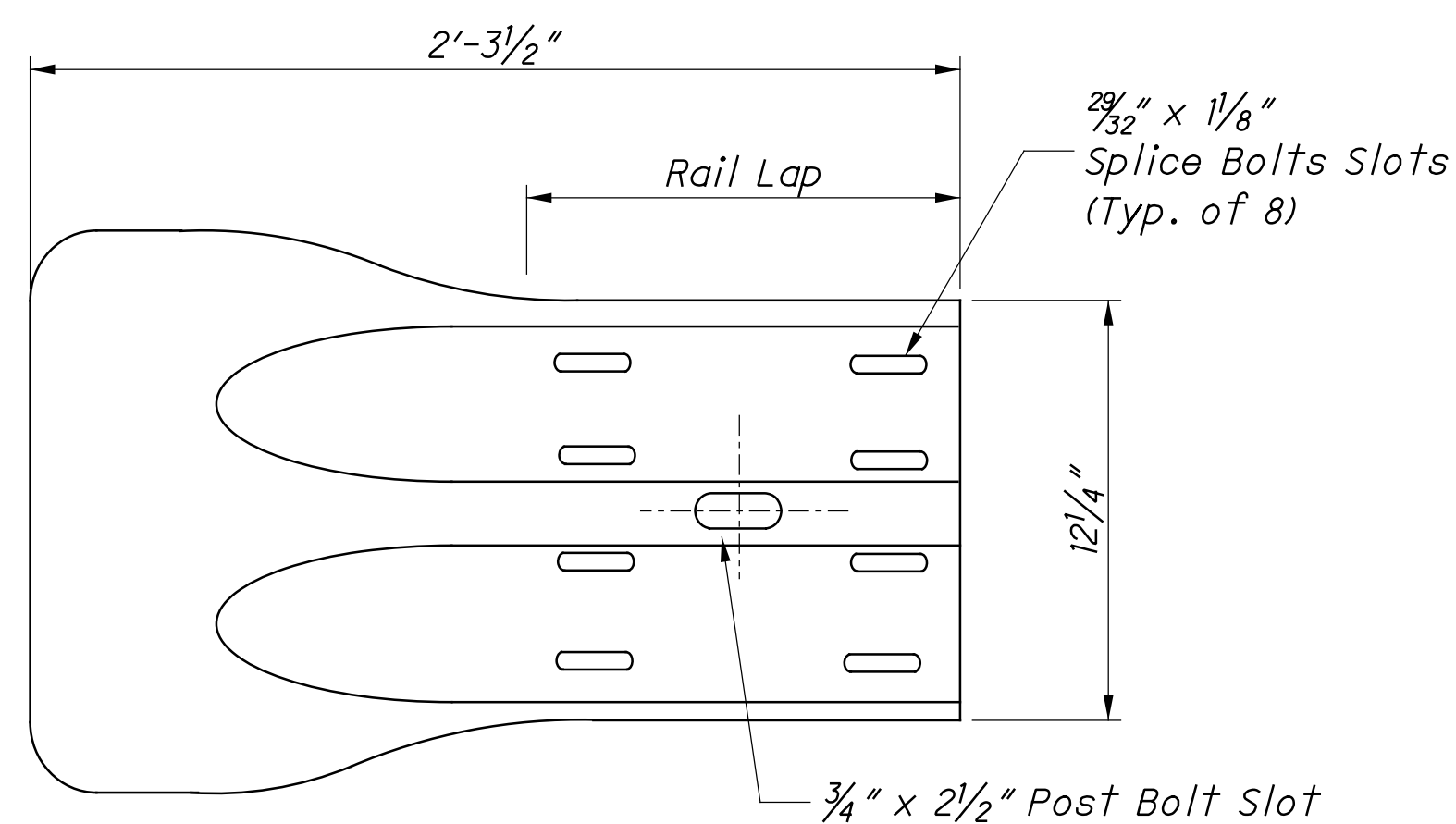
PLAN



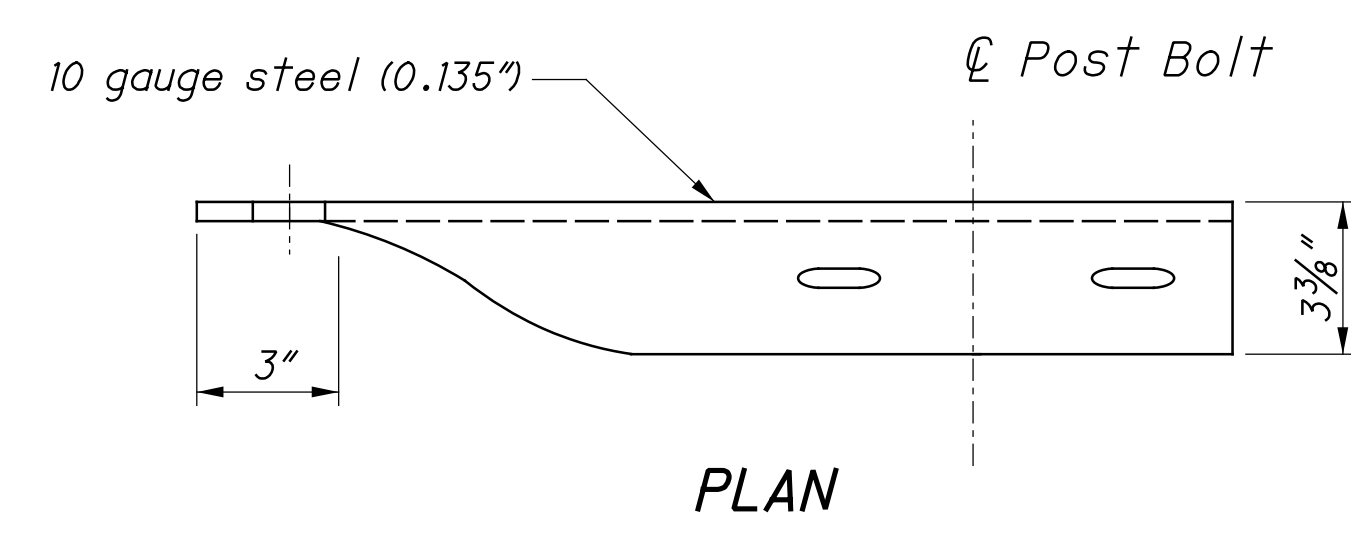
**ELEVATION
W-BEAM TERMINAL CONNECTOR**



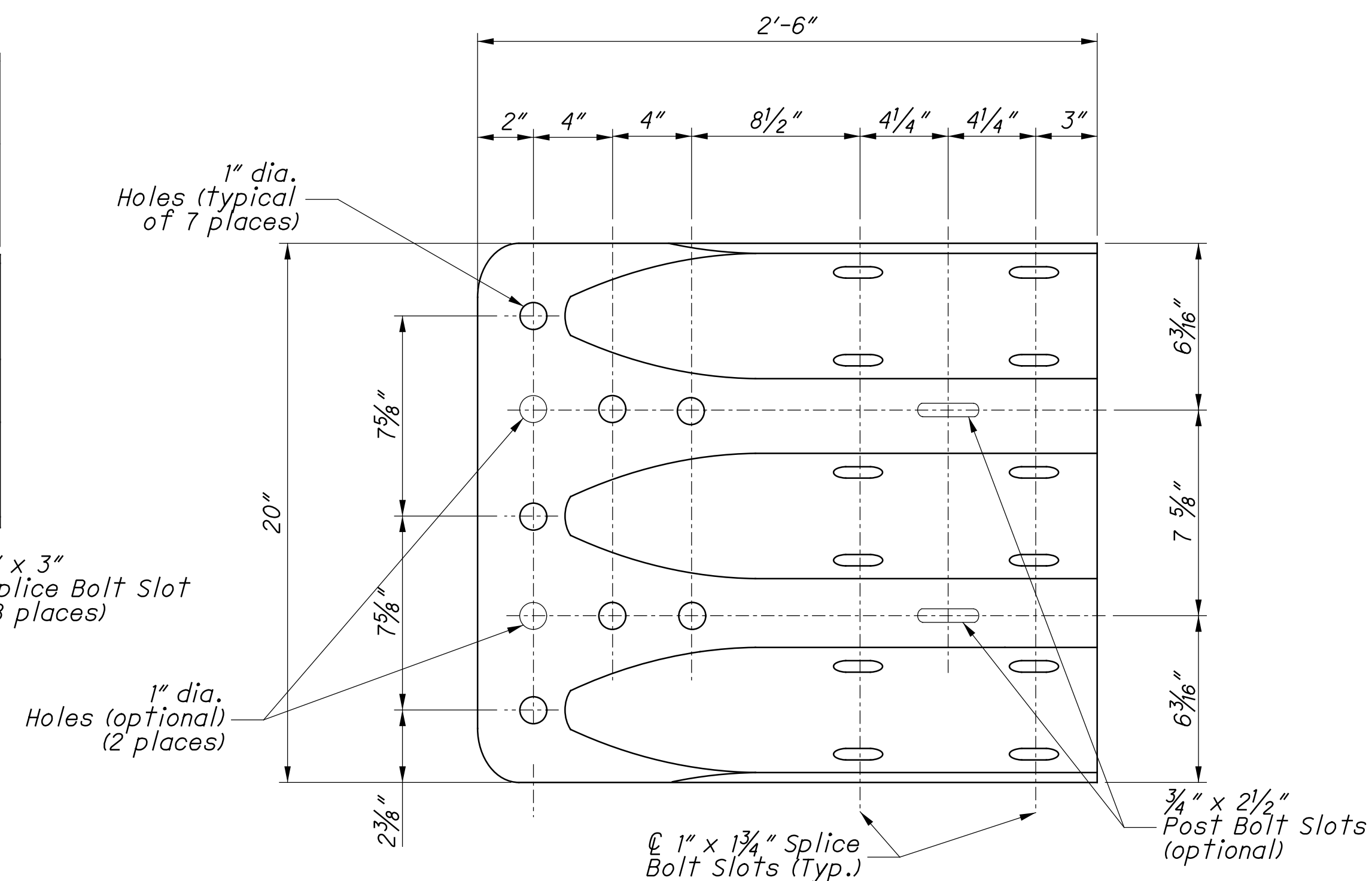
PLAN



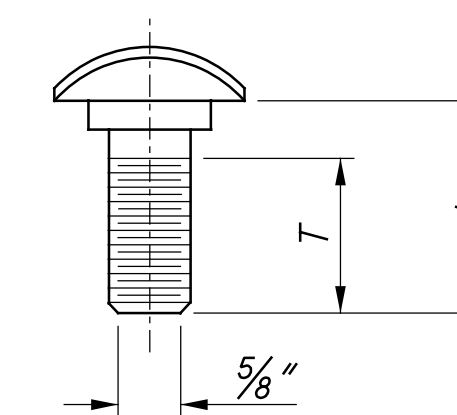
**ELEVATION
W-BEAM FLARED END SECTION**



PLAN



**ELEVATION
THRIE-BEAM TERMINAL CONNECTOR**

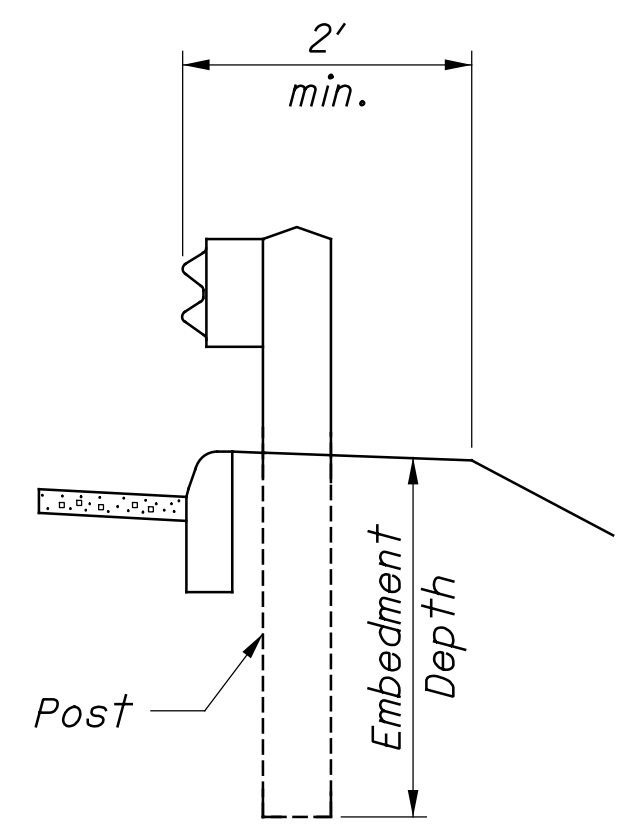


GUARDRAIL BOLT (For Post and Splice Bolts)		
L	T min.	Bolt Use
18" (Standard Rail)	4"	Type 5: WP/WB, PB
26" (Barrier Rail)		
10"	4"	Type 5: SP/WB, PB
1 1/4"	1 1/8"	Splice Bolt

WP = Wood Post WB = Wood Blockout
SP = Steel Post PB = Plastic Blockout

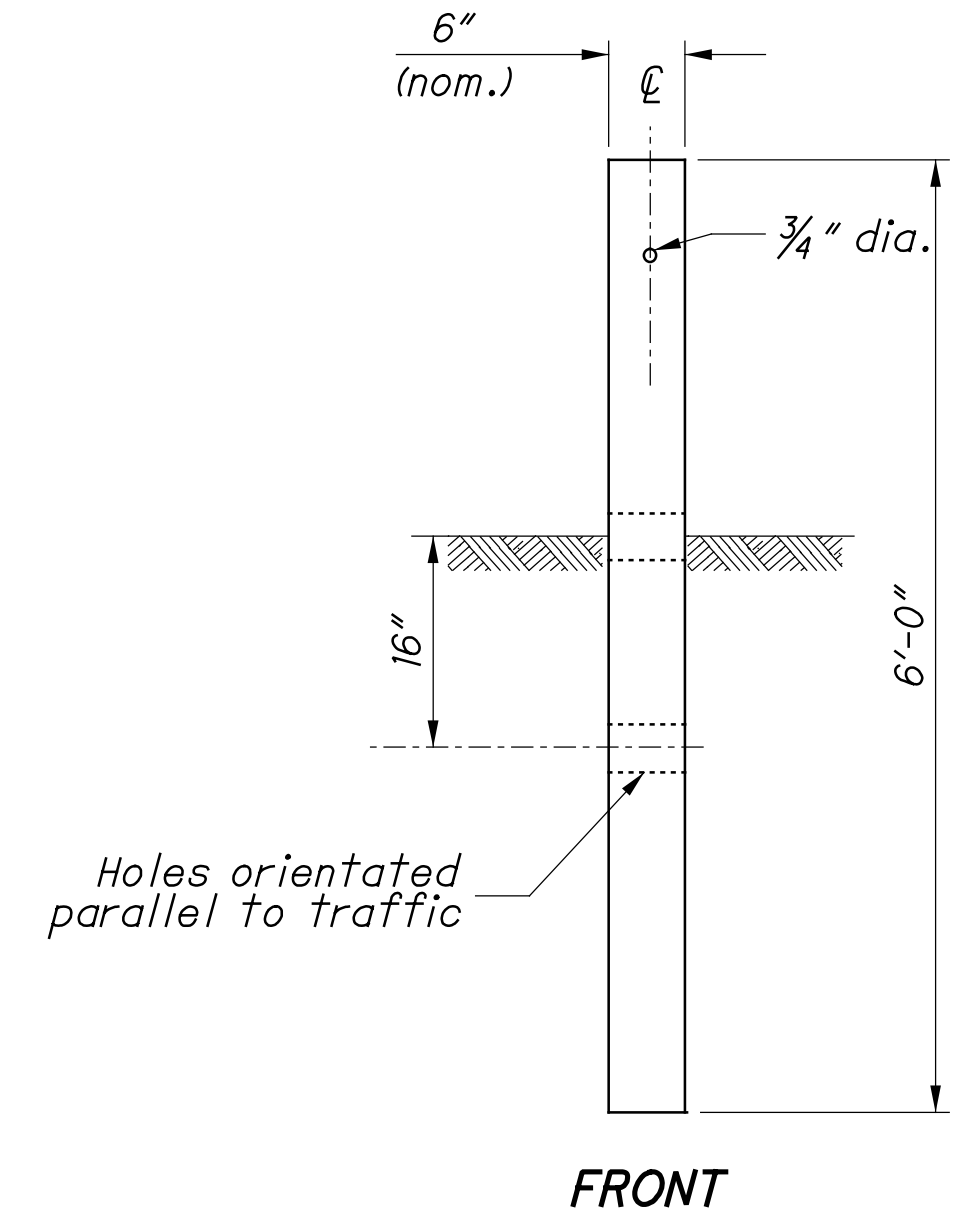
Longer Bolt may be needed for round Wood Post larger than 8" dia.





DETAIL A

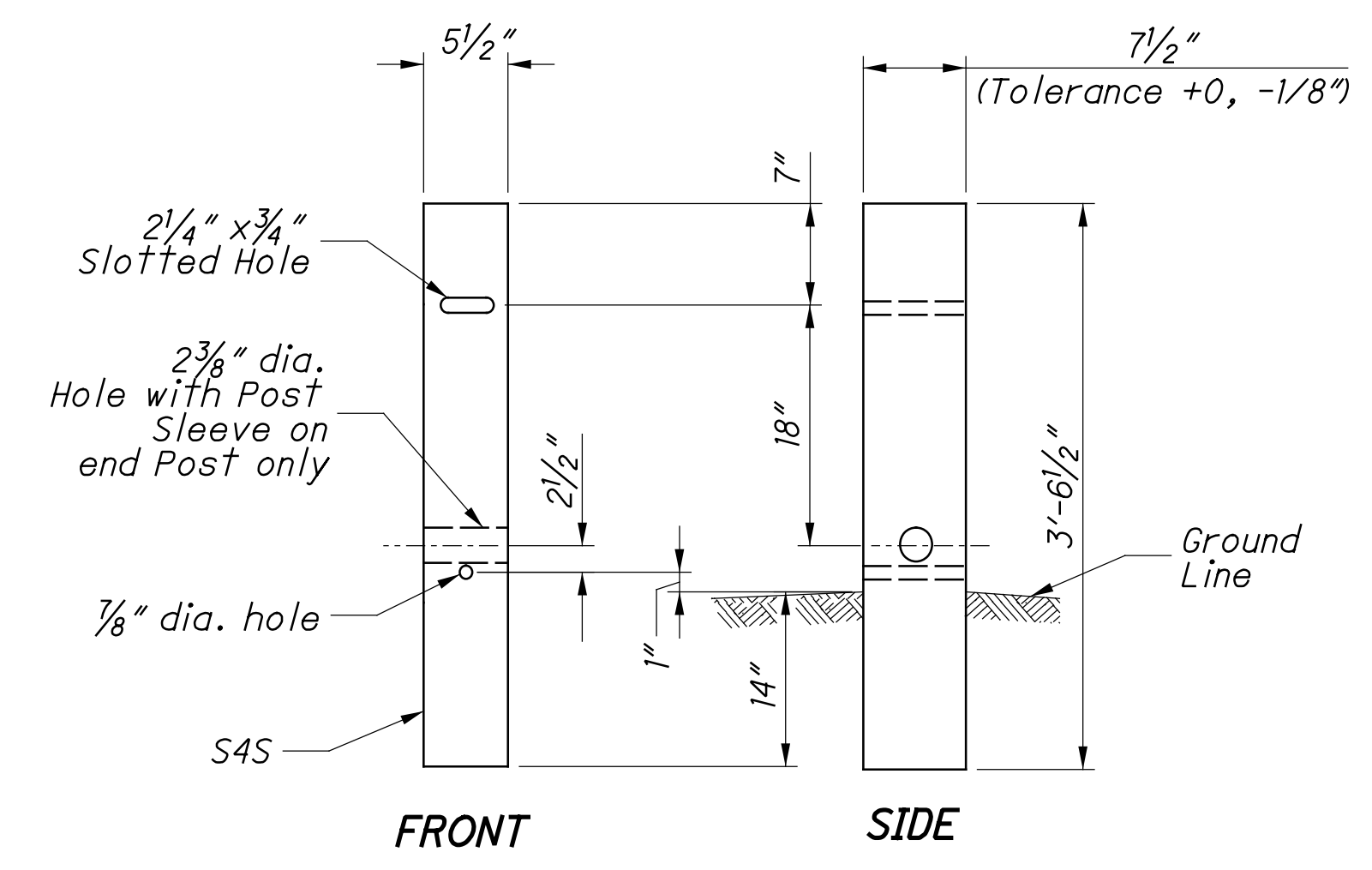
See POST EMBEDMENT DEPTH Note



FRONT

SIDE

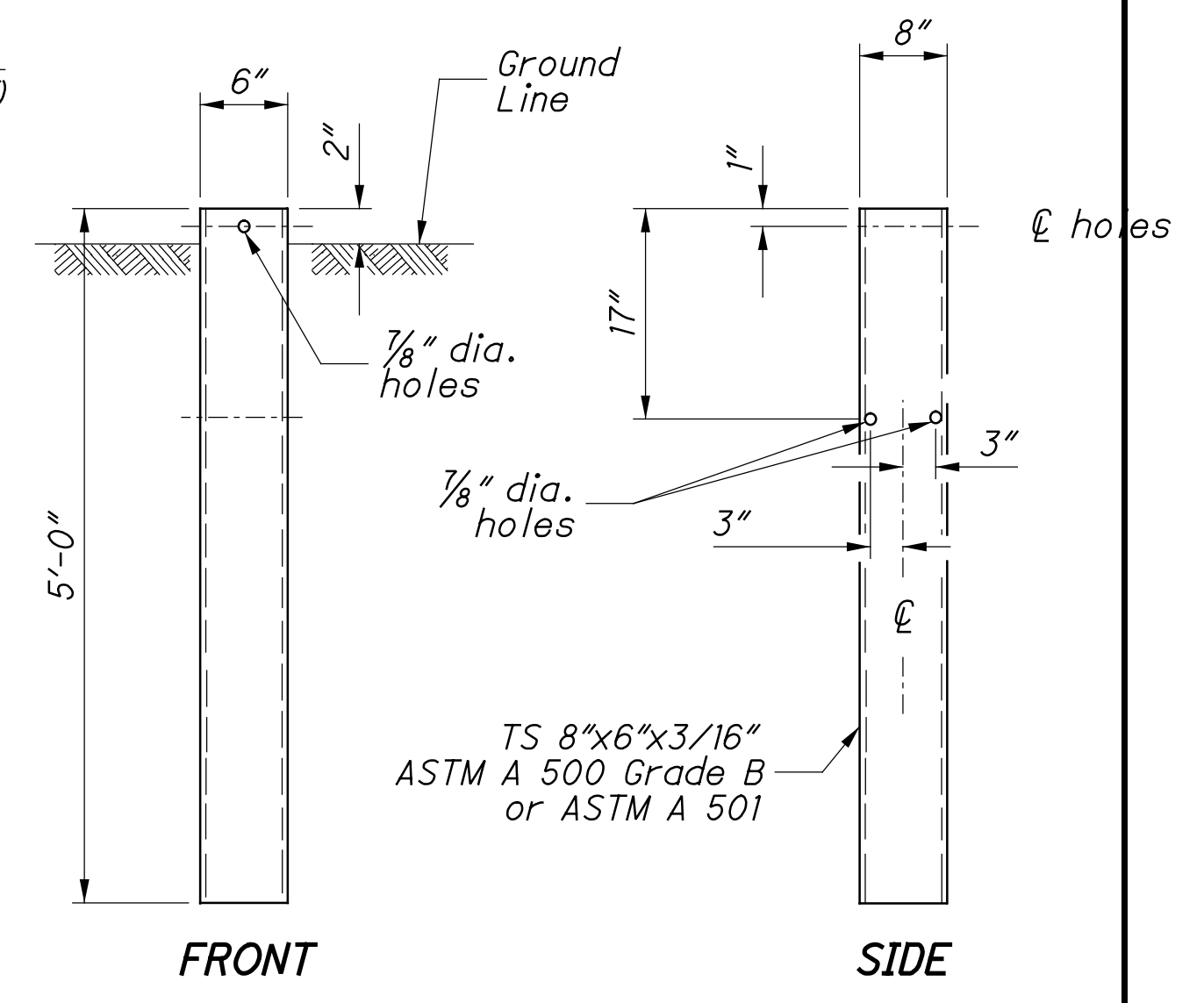
TYPE 1 BREAKAWAY CRT POST



FRONT

SIDE

TYPE 2 BREAKAWAY CRT POST



FRONT

SIDE

STEEL GROUND TUBE

NOTES

GUARDRAIL HEIGHT: For initial installation, construct the guardrail within $\pm 1"$ of the standard height, h , or **29"** to the top of W-Beam rail. (See MEASURING GUARDRAIL HEIGHT Detail.)

When subsequent projects, such as resurfacings, affect the height of existing guardrail, the finished height is to be within $\pm 2.5"$ of the standard height.

POST EMBEDMENT DEPTH: Standard embedment is 3'-5" min. Where less than 2' of graded shoulder width (10:1 or flatter) exists, measured from the face of the guardrail (see DETAIL "A"), use longer posts so that a minimum of 5'-5" embedment depth is provided. Payment for the longer posts will be made at the unit price bid for **ITEM 606 - GUARDRAIL POST, 9', Each.**

SPECIAL POST MOUNTINGS: Install posts located over a drainage inlet or structure as shown in the FOOTING ANCHOR Detail, or anchor per the details shown on **SCD GR-2.2.**

Install posts located over a footing with a cover of less than 2'-6" with a footing anchor as detailed here. (A plate, as detailed on SECTION B-B of **SCD GR-2.2**, may be used as an alternative attachment method.) Where the cover is between 2'-6" and 3'-5", the footing anchor may be omitted and the post encased instead with 4" (min.) of concrete.

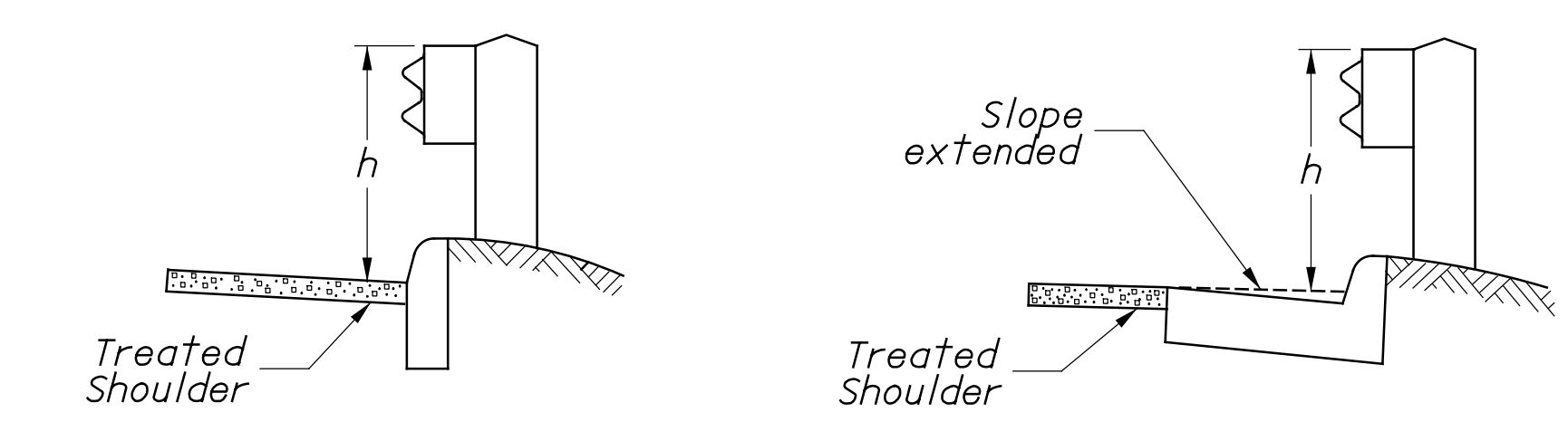
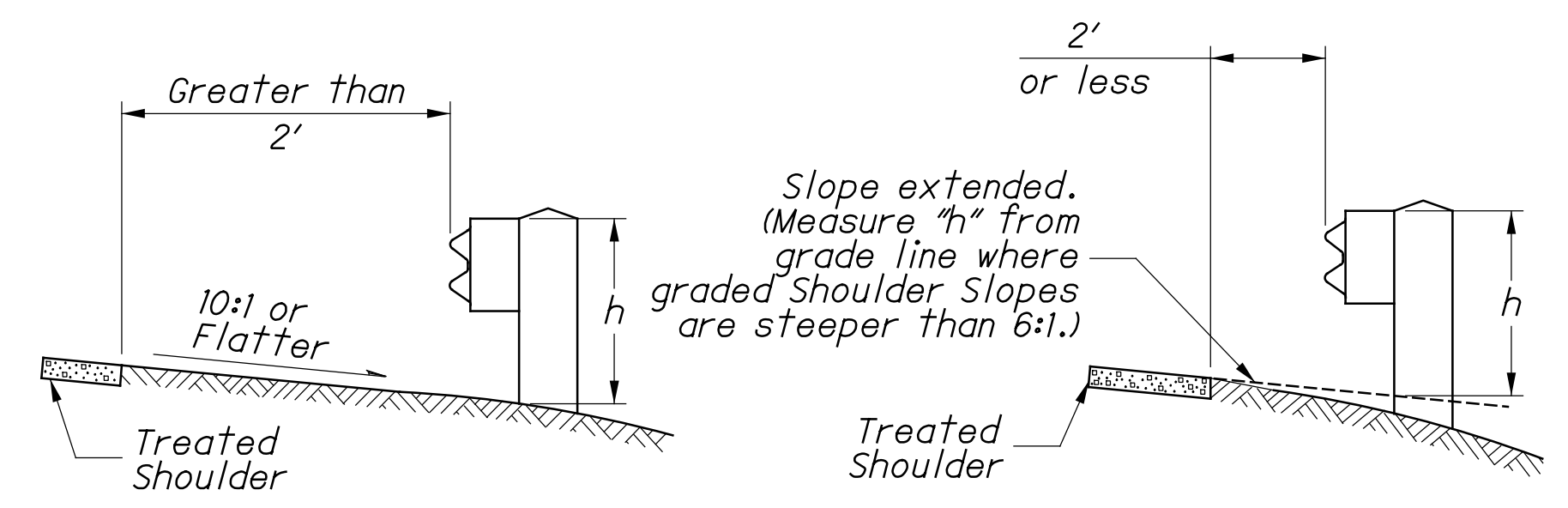
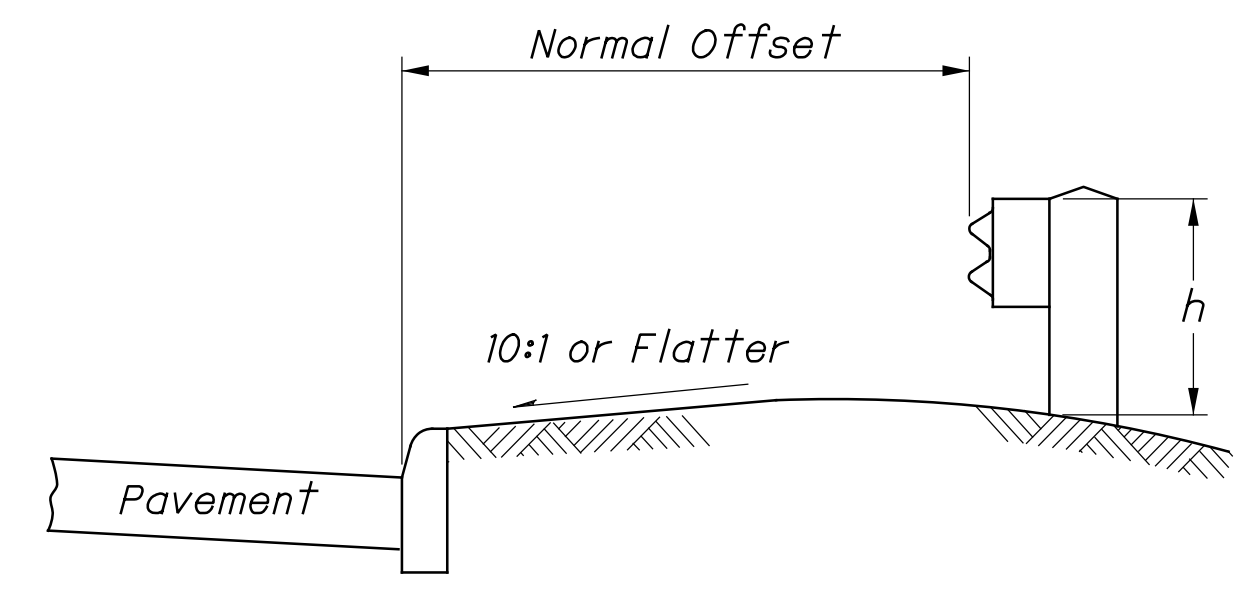
Do not drive posts located over a culvert with less than 4'-3" of cover; instead set in drilled or dug holes. Where the available post embedment depth is less than 3'-5", encase the post with a minimum of 4" concrete.

All costs associated with special post mountings are included in the unit price bid of Item 606 Guardrail of the type specified in the plans.

ANCHORS: Holes and grouting shall comply with CMS 510. Use either cement or non-shrink, nonmetallic grout.

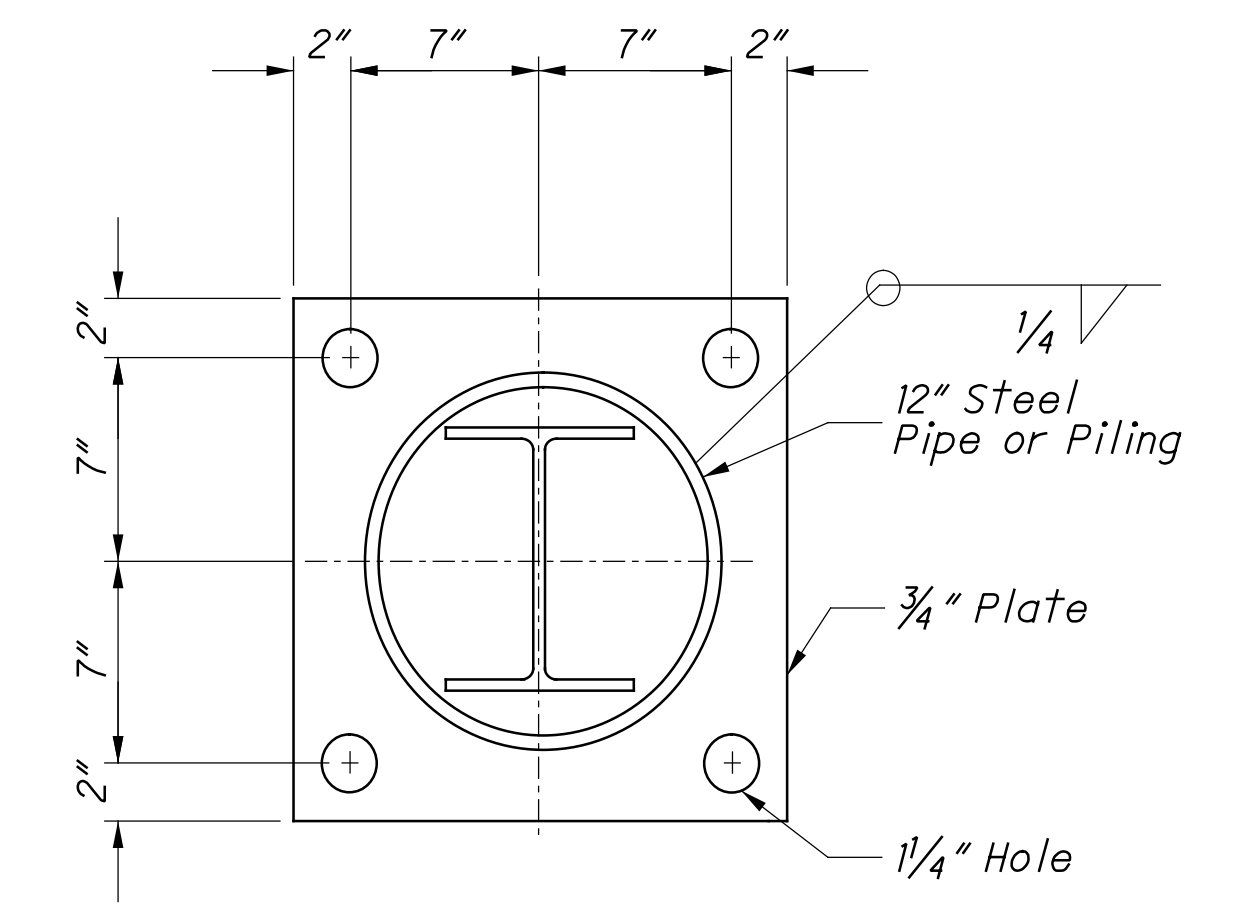
Expansion shield anchors as specified in CMS 712.01 may be substituted except where concrete deterioration has occurred, as determined by the Engineer. Where self-drilling anchors are used, drill the holes with the expansion shield (not by a drill bit) and install the shield flush with the concrete surface.

PROTECTIVE COATING: In lieu of the complying with CMS 710.06, coat expansion shields, anchors and concrete insert anchor assemblies embedded in concrete in accordance with ASTM A 153 or be of stainless steel. Any bolts screwed into these devices shall meet CMS 710.06. (See sheet 3 for Concrete Insert Anchor Assembly Detail.)



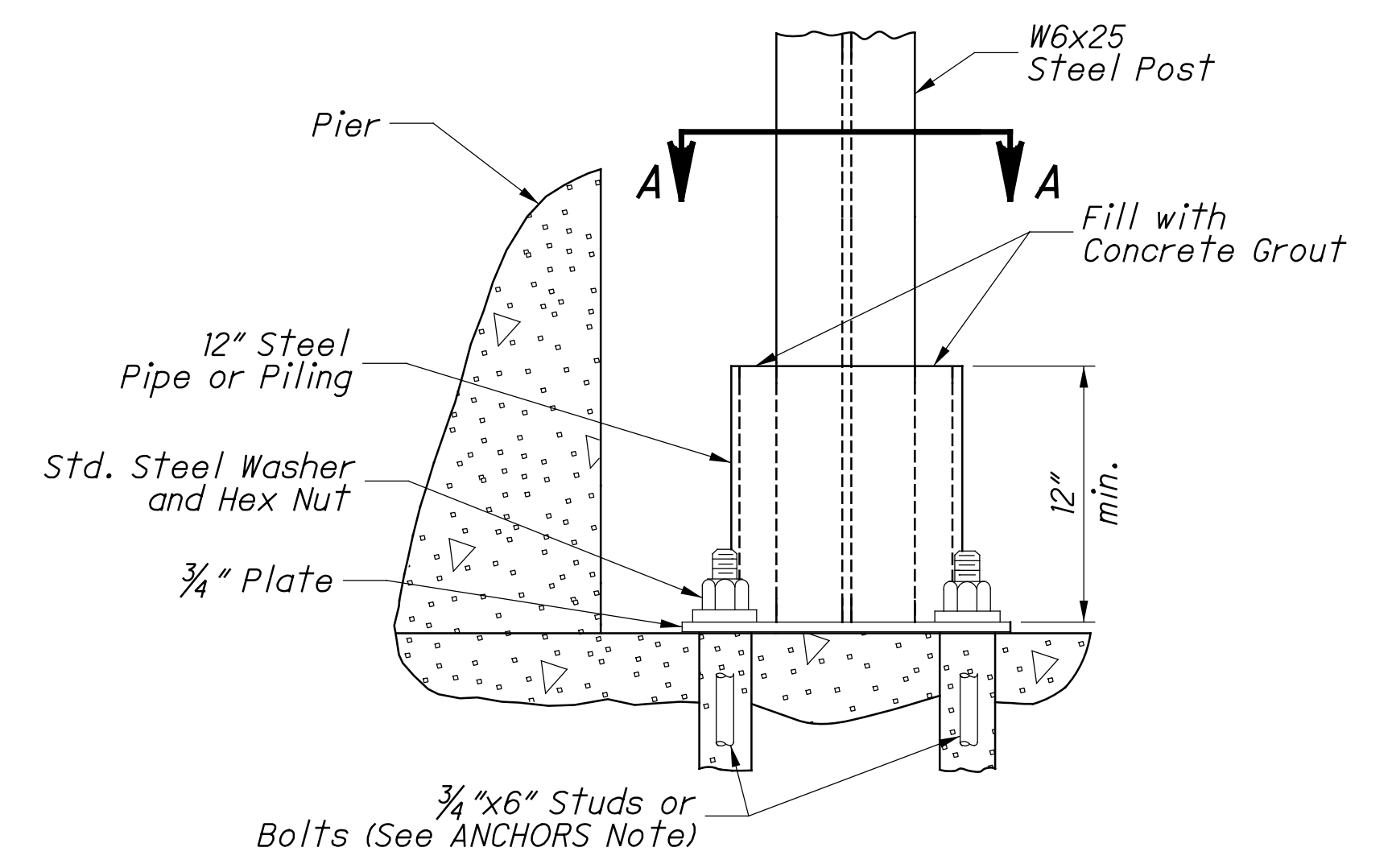
h = Standard Height (See GUARDRAIL HEIGHT Note)

MEASURING GUARDRAIL HEIGHT



Footing Anchor and hardware need not be galvanized

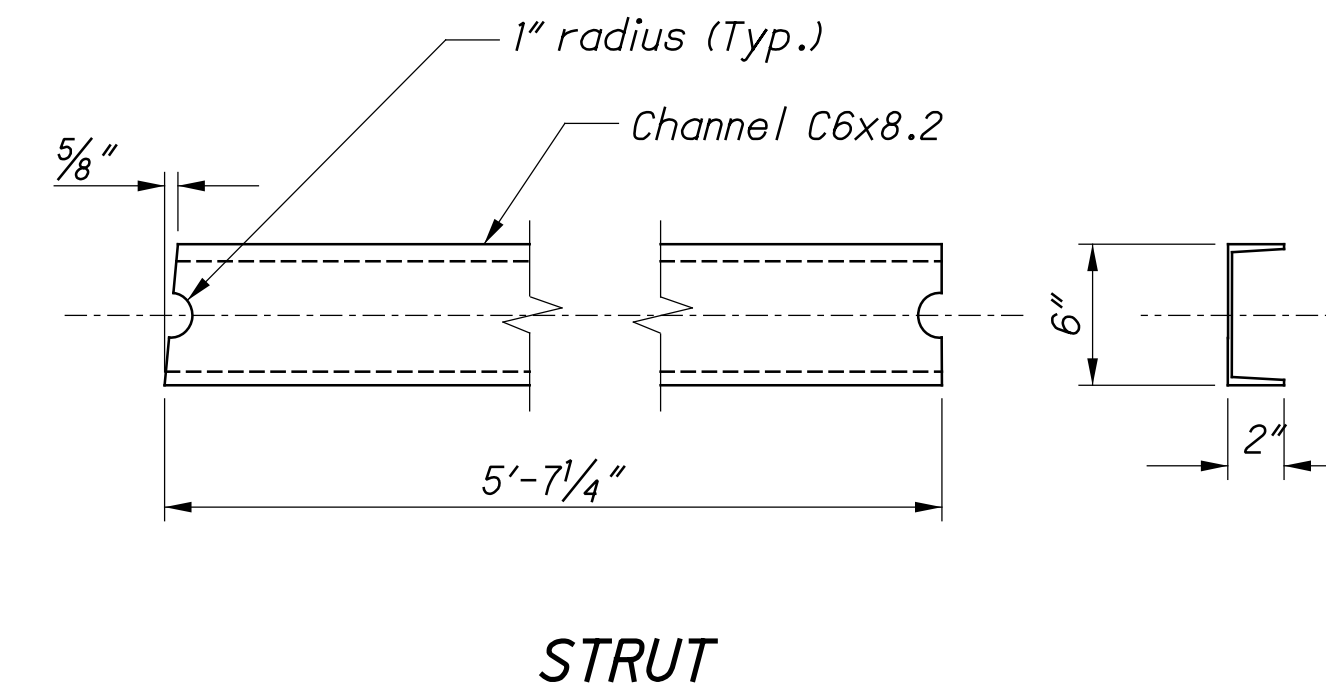
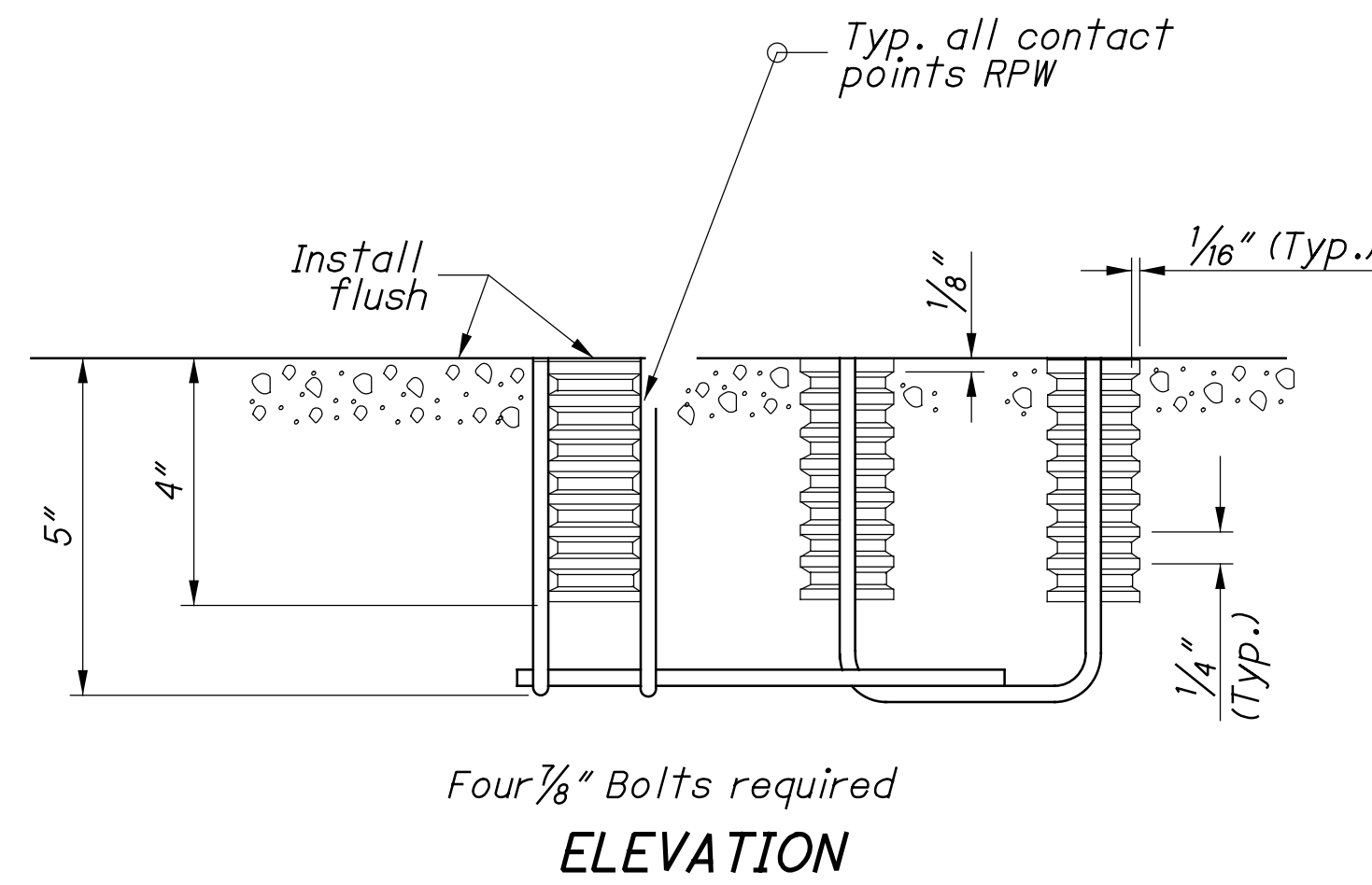
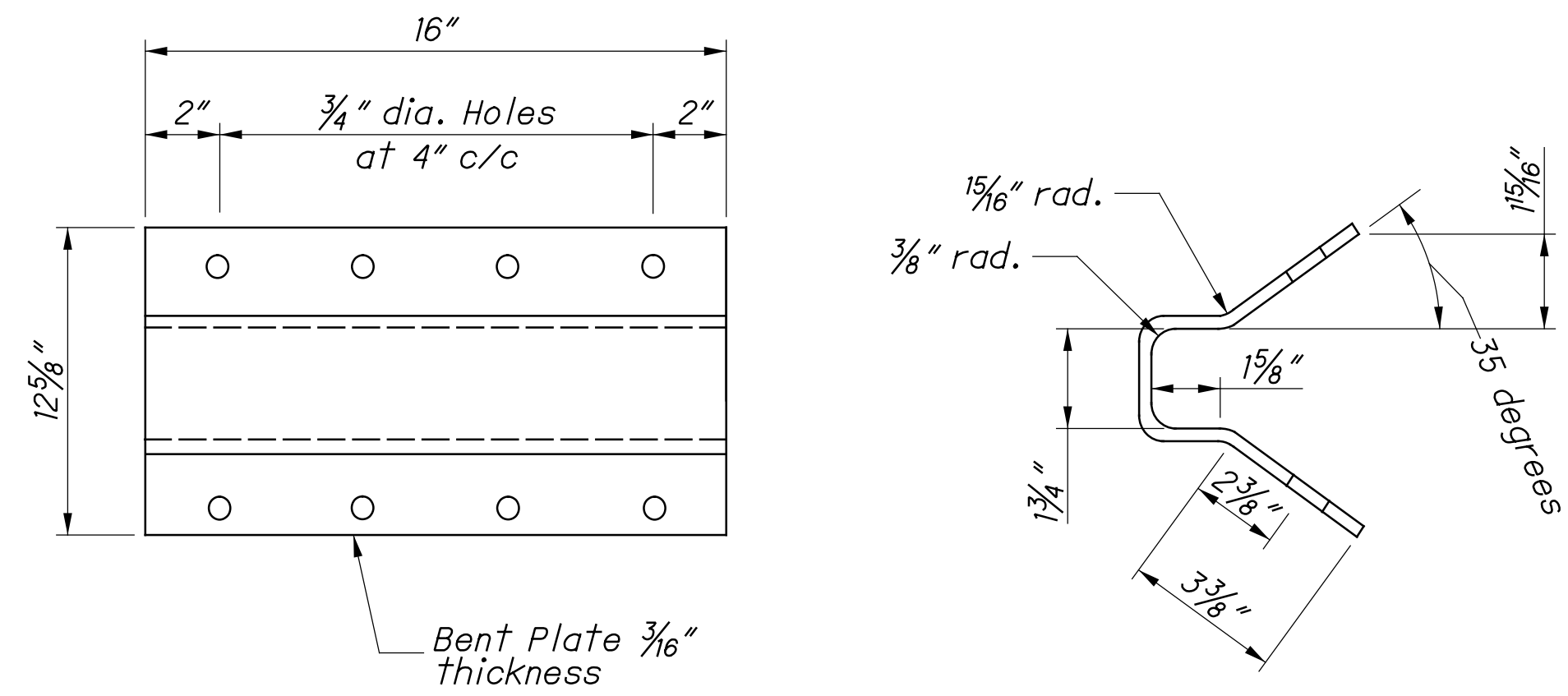
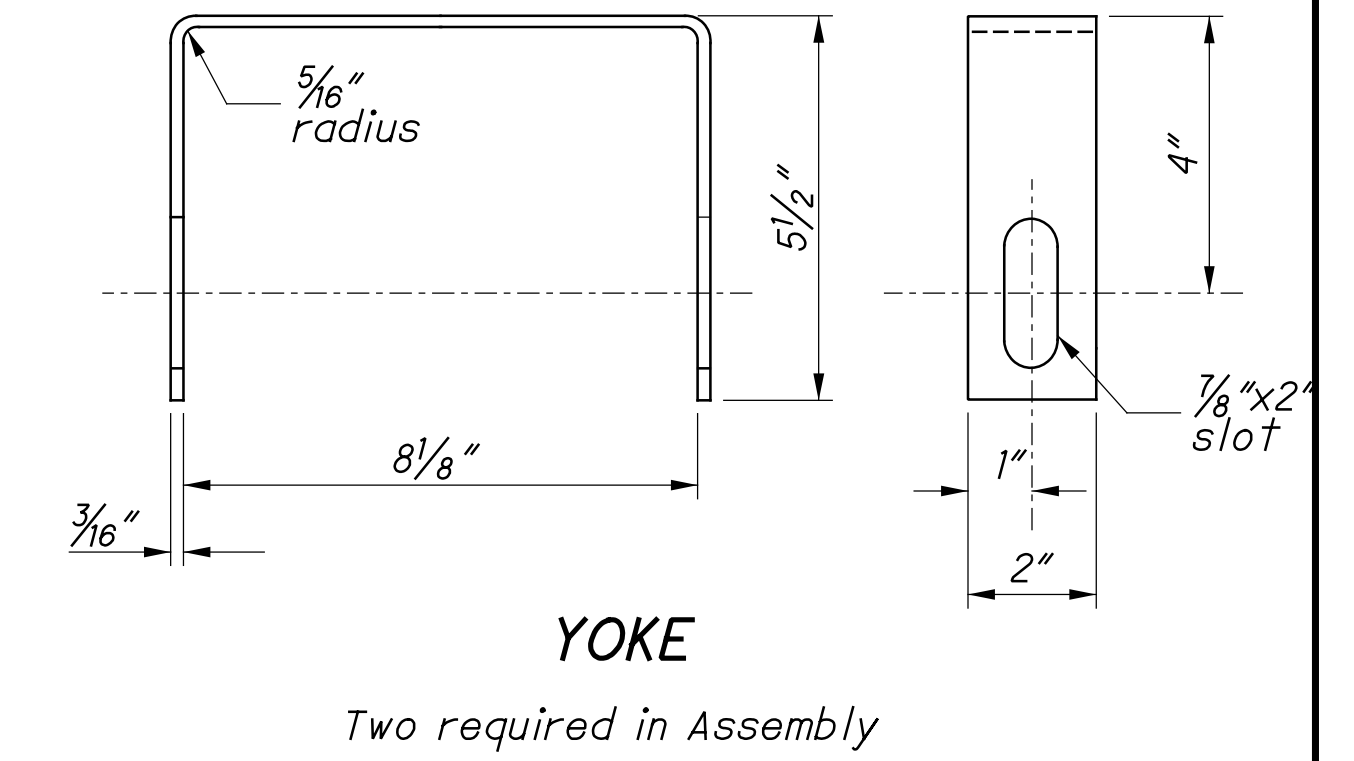
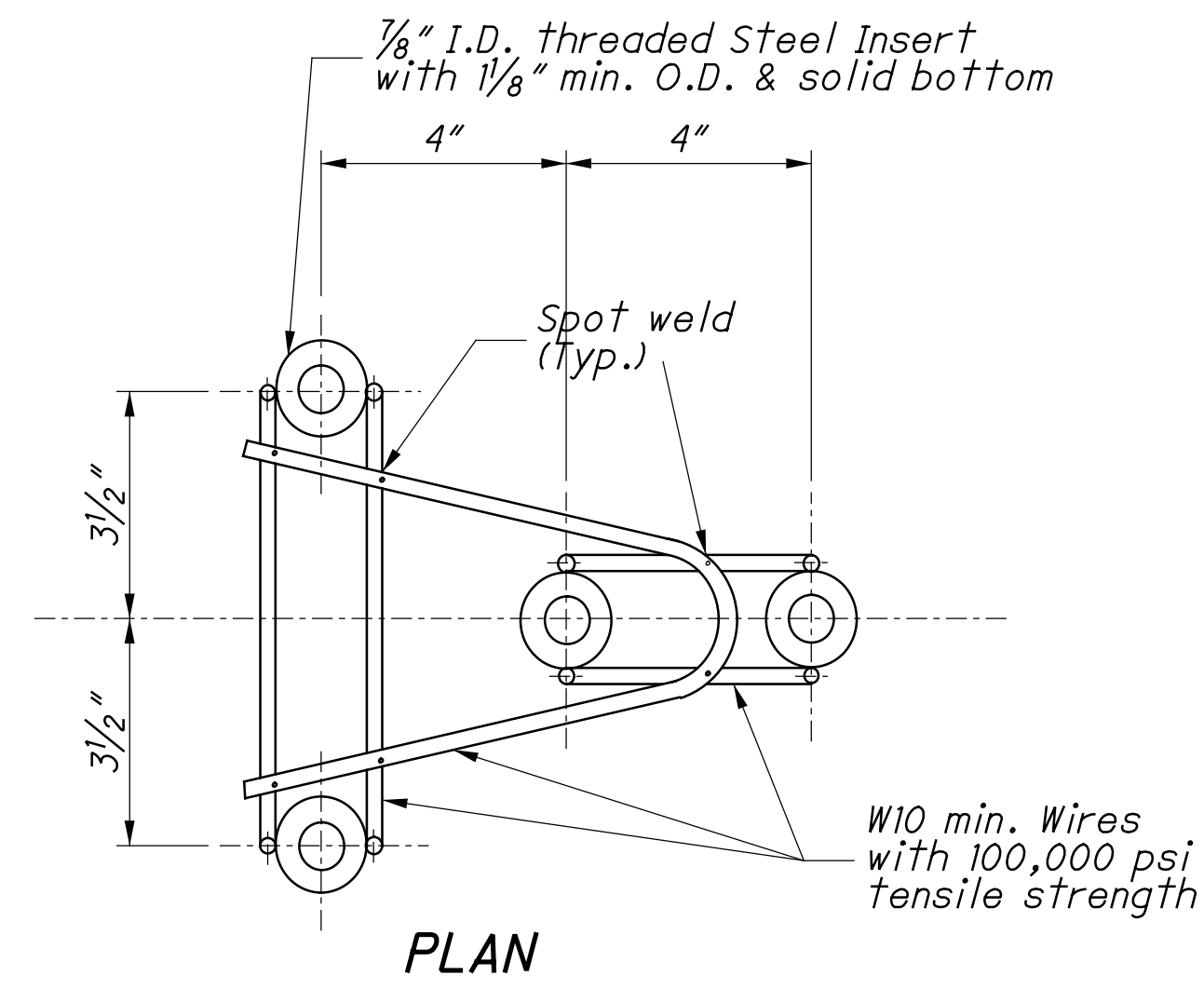
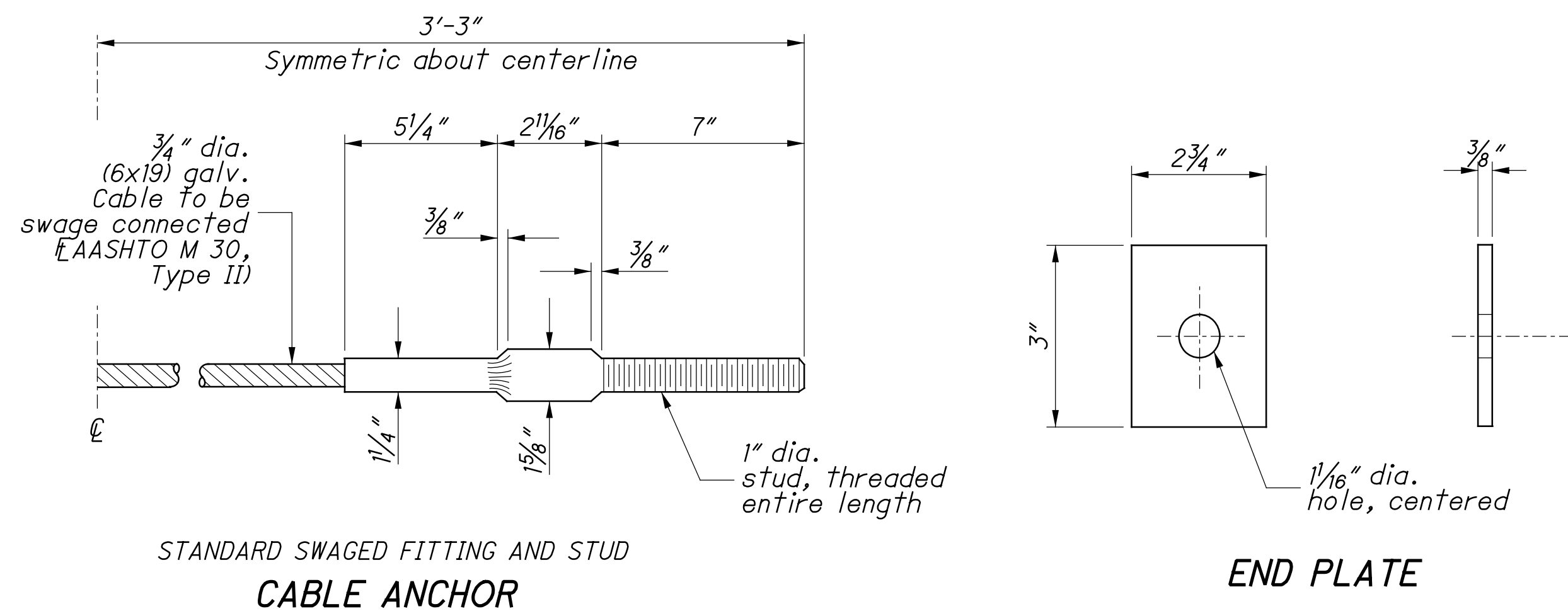
SECTION A-A



ELEVATION FOOTING ANCHOR

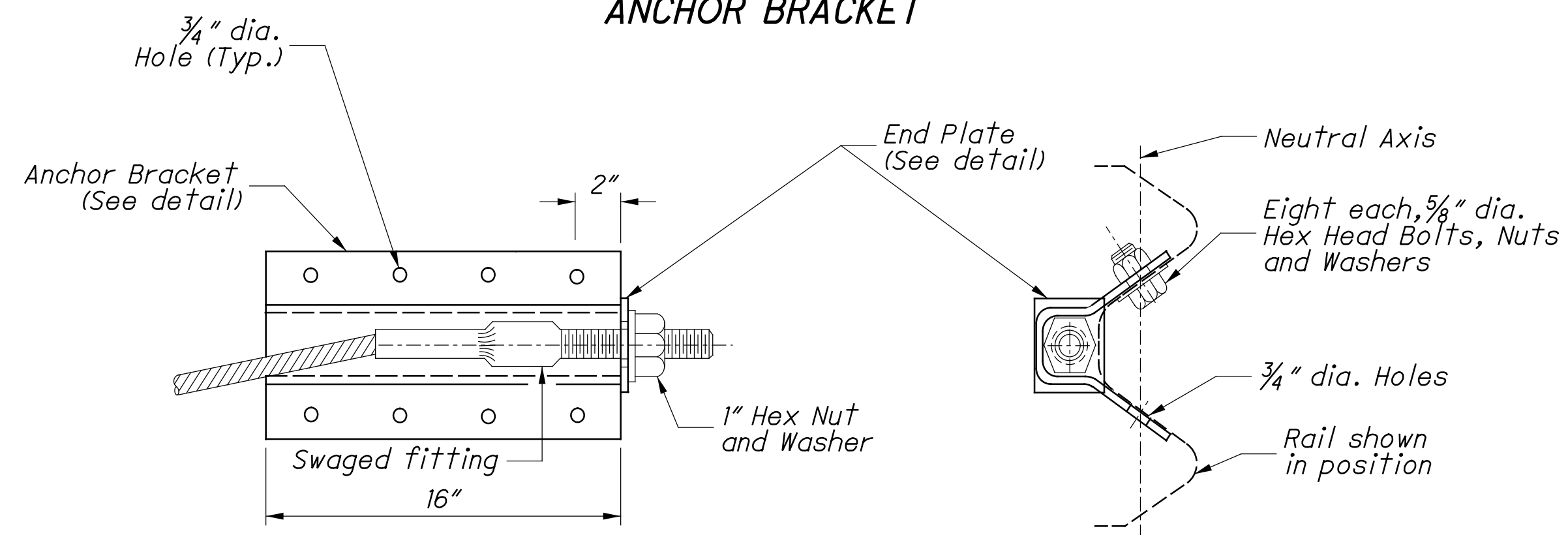
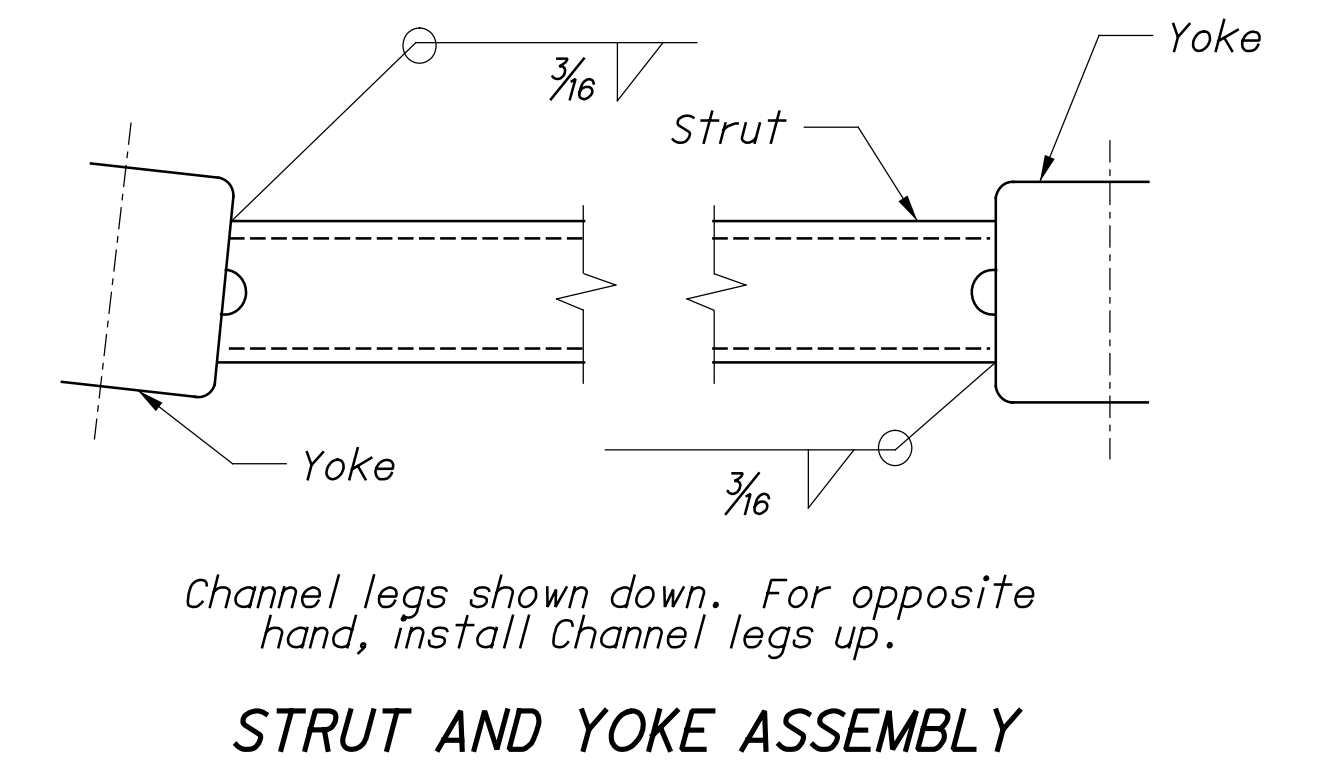
See SPECIAL POST MOUNTINGS Note.

DESIGN AGENCY	
DESIGNER	KRH
REVIEWER	XXX MM-DD-YY
PROJECT ID	119043
SUBSET	TOTAL
2	3
SHEET	TOTAL
10B	19

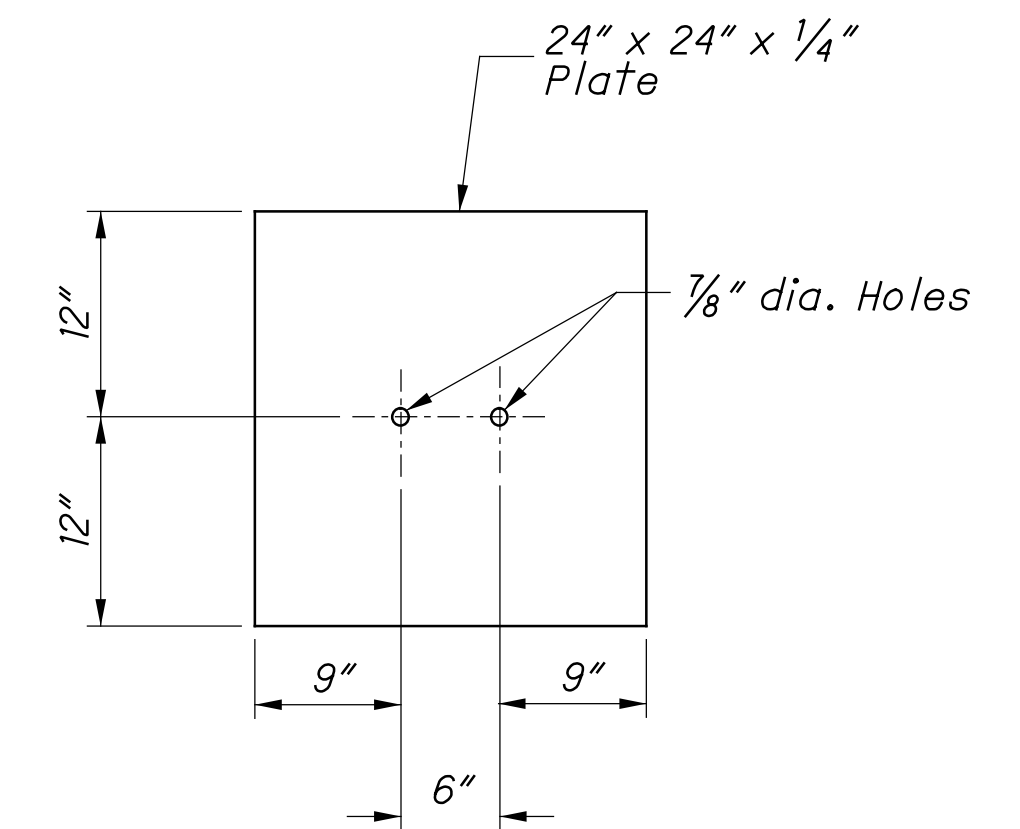
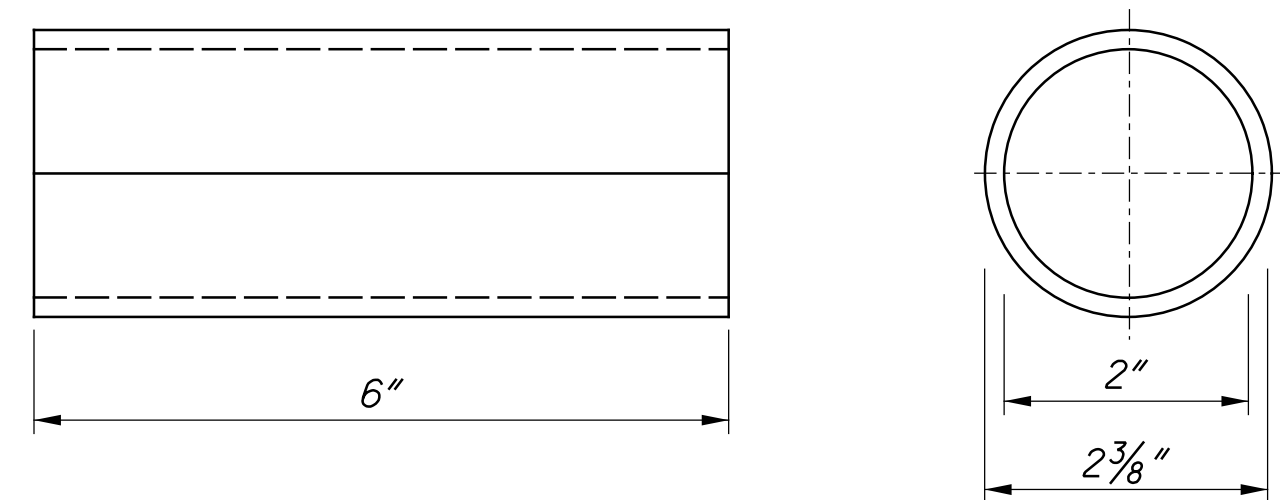


CONCRETE INSERT ANCHOR ASSEMBLY (W-BEAM ONLY)

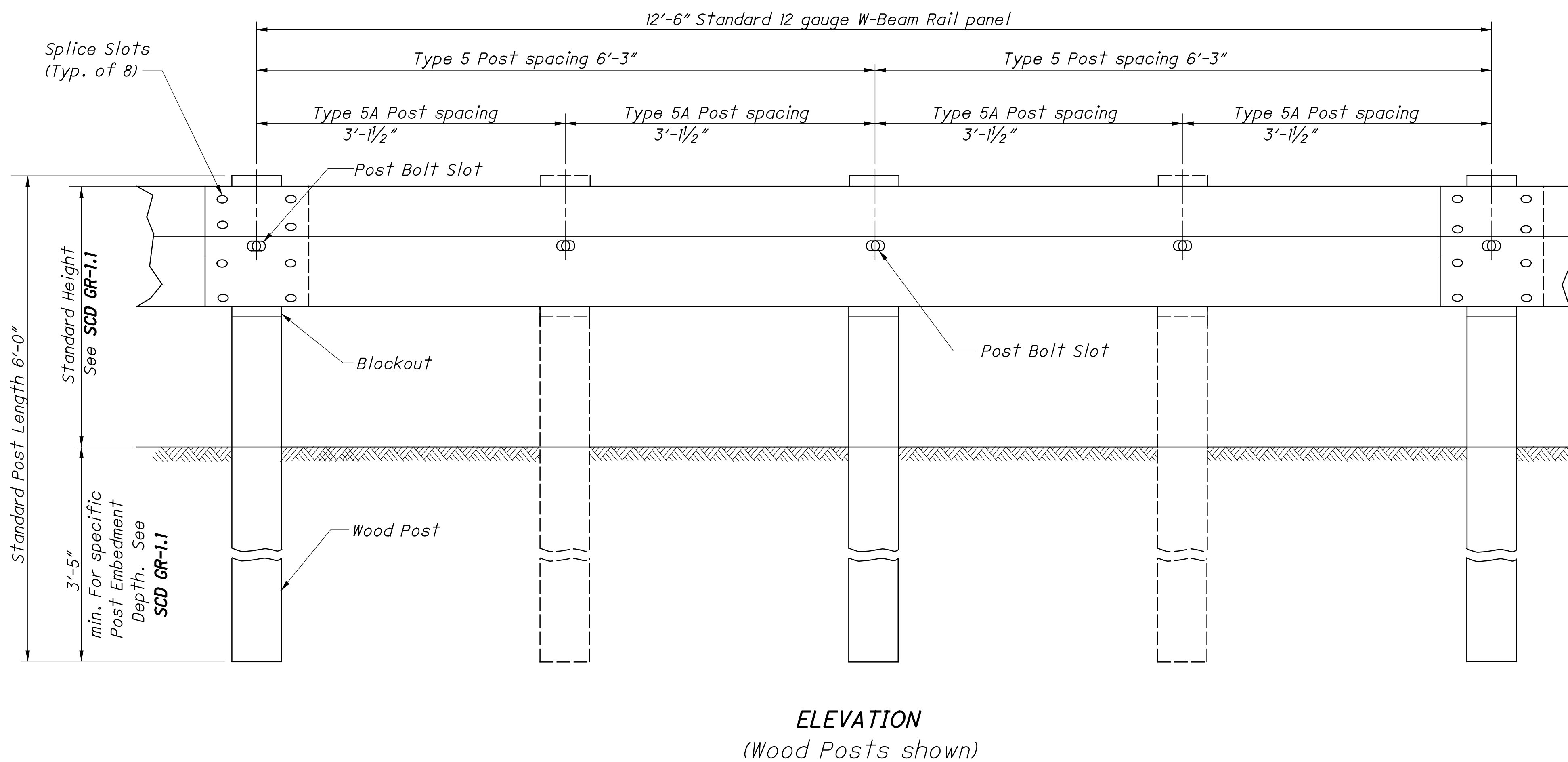
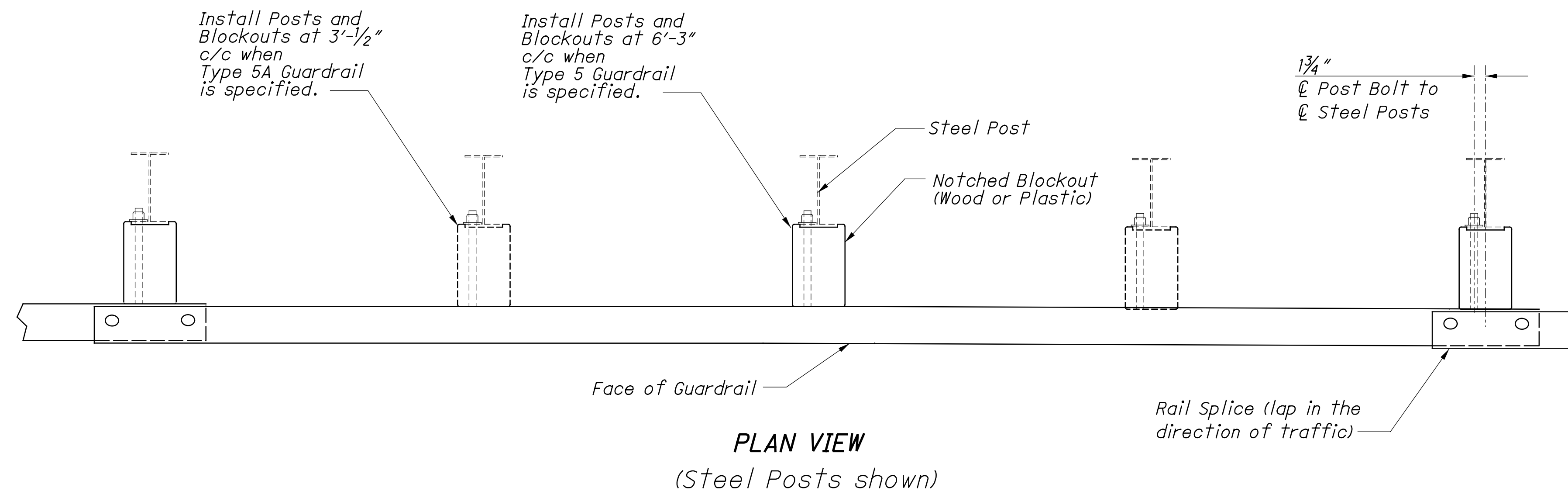
See ANCHORS and PROTECTIVE COATINGS Notes on Sheet 2



ANCHOR BRACKET ASSEMBLY DETAILS



DESIGN AGENCY		
DESIGNER	KRH	
REVIEWER	XXX MM-DD-YY	
PROJECT ID	119043	
SUBSET	TOTAL	
3	3	
SHEET	TOTAL	
10C	19	



NOTES

RAIL: Use W-Beam rail meeting AASHTO M 180 Type II Class A, as specified in CMS 606.

POSTS: Posts may be constructed of wood or steel. Wood posts may be round or 6"x8" square-sawed.

Use round wood posts on runs of single-sided rail. The round posts shall be 8"±1 in diameter at the top and not more than 3" larger at the butt with a uniform Taper.

Fabricated wood posts with square ends. Posts shall be pressure-treated as per CMS 710.14. Bore bolt holes and, if required, trim the tops of posts after the posts are set.

Steel posts are to be W6x9 or W6x8.5 galvanized steel. Use the same type of post throughout the length of the project unless otherwise specified in the plans or permitted by the Engineer.

All posts are 6'-0" long unless specified otherwise in the Contract Document. Posts may be set in drilled holes or may be driven to grade.

WELDED BEAM POSTS: Welded beam guardrail posts may be used for Item 606, Guardrail, provided the web and flange sizes are as shown here. Welding of the web to the flanges must comply with ASTM A 769, Class 1, using Grade 36 steel [250 MPa yield point] with the following exceptions:

- Sec. 7.2 Test reports of tensile properties for each lot shall accompany each shipment.
- Sec. 12 Beams that have imperfections repaired by welding shall not be accepted for use in Item 606.
- Sec. 13 Random samples shall be tested by the Department from materials delivered to the project site, or other locations designated by the Laboratory.

ALTERNATE POSTS: Engineered guardrail posts having met NCHRP 350 criteria, and listed on the **Office of Materials Management's** Approved List are permitted as an equal alternate when installed according to the Manufacturer's instructions and within the limitations shown on the Approved List.

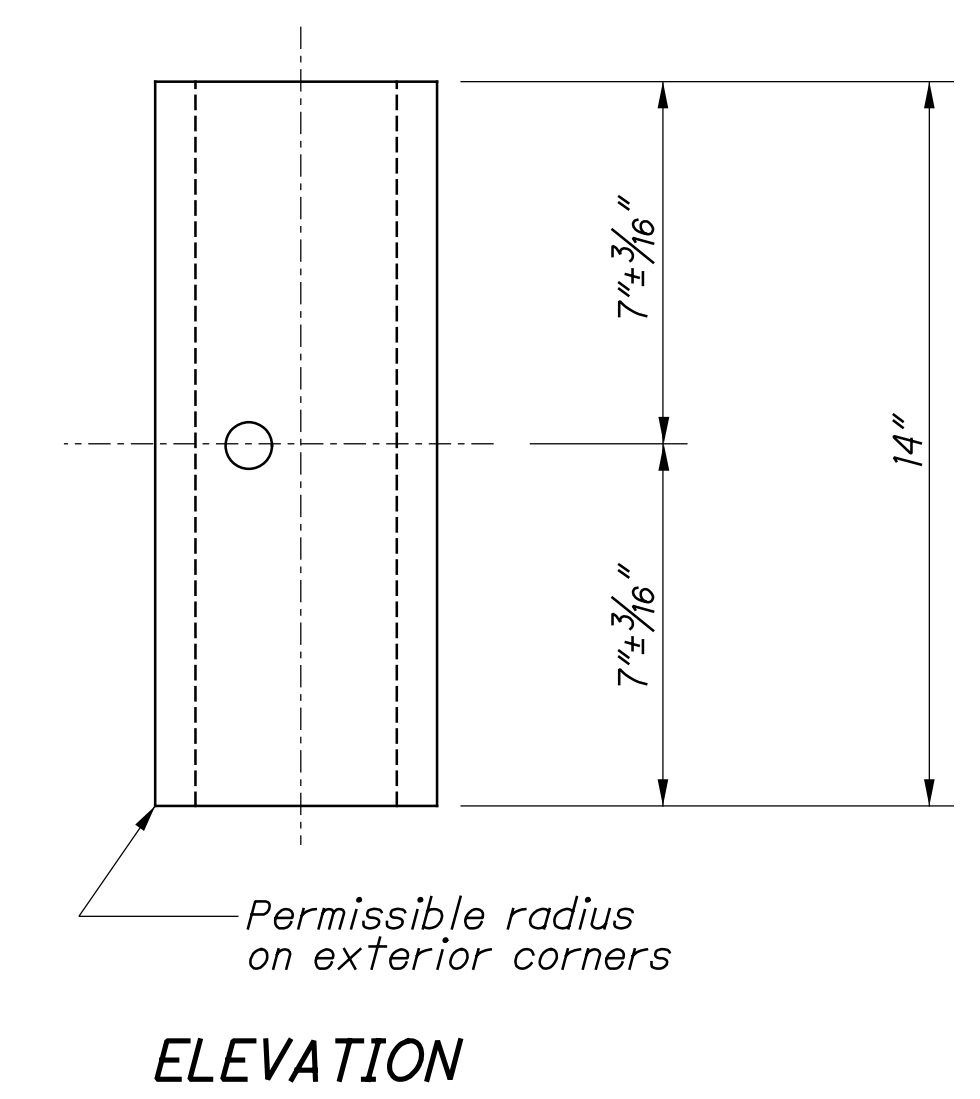
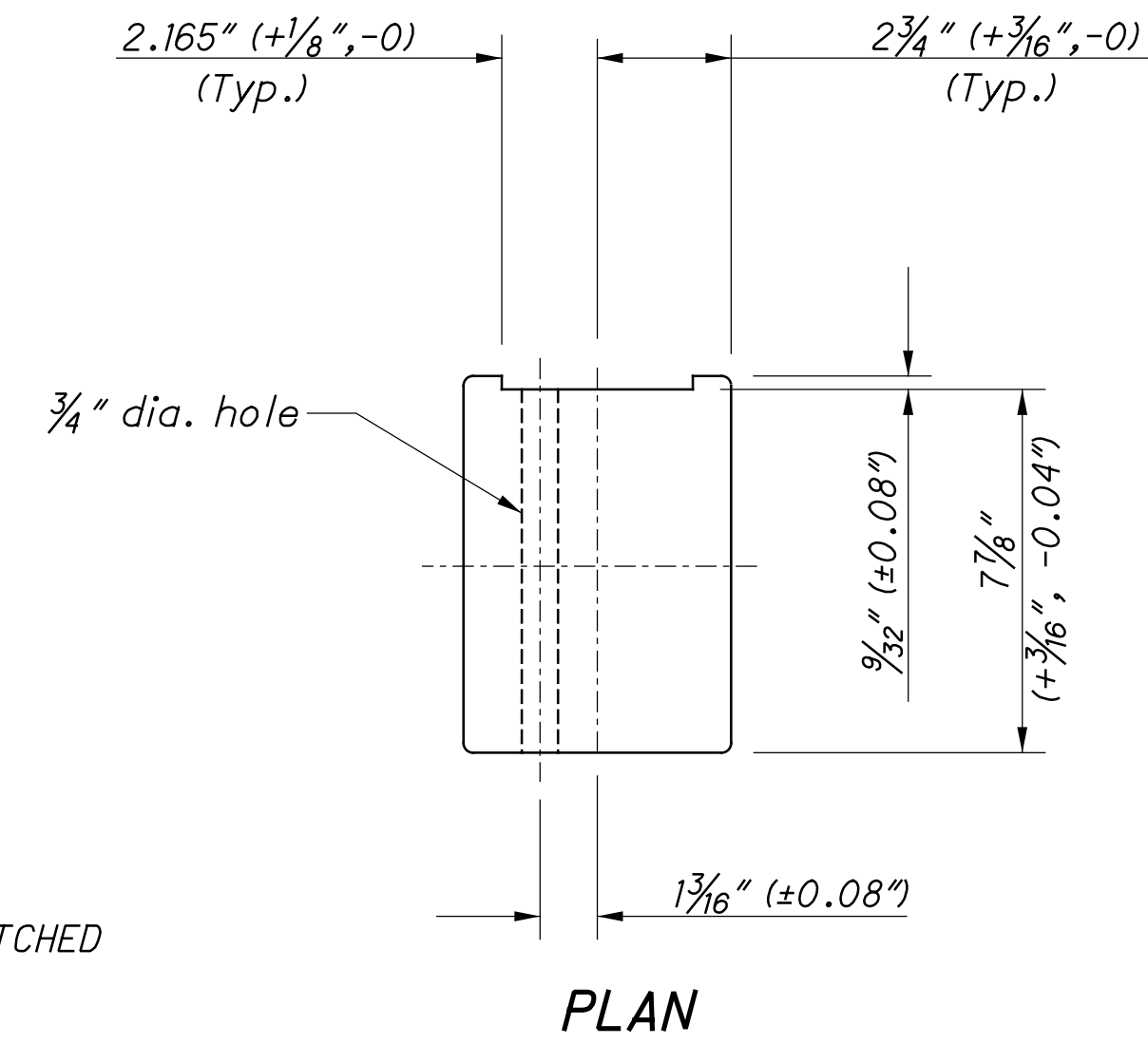
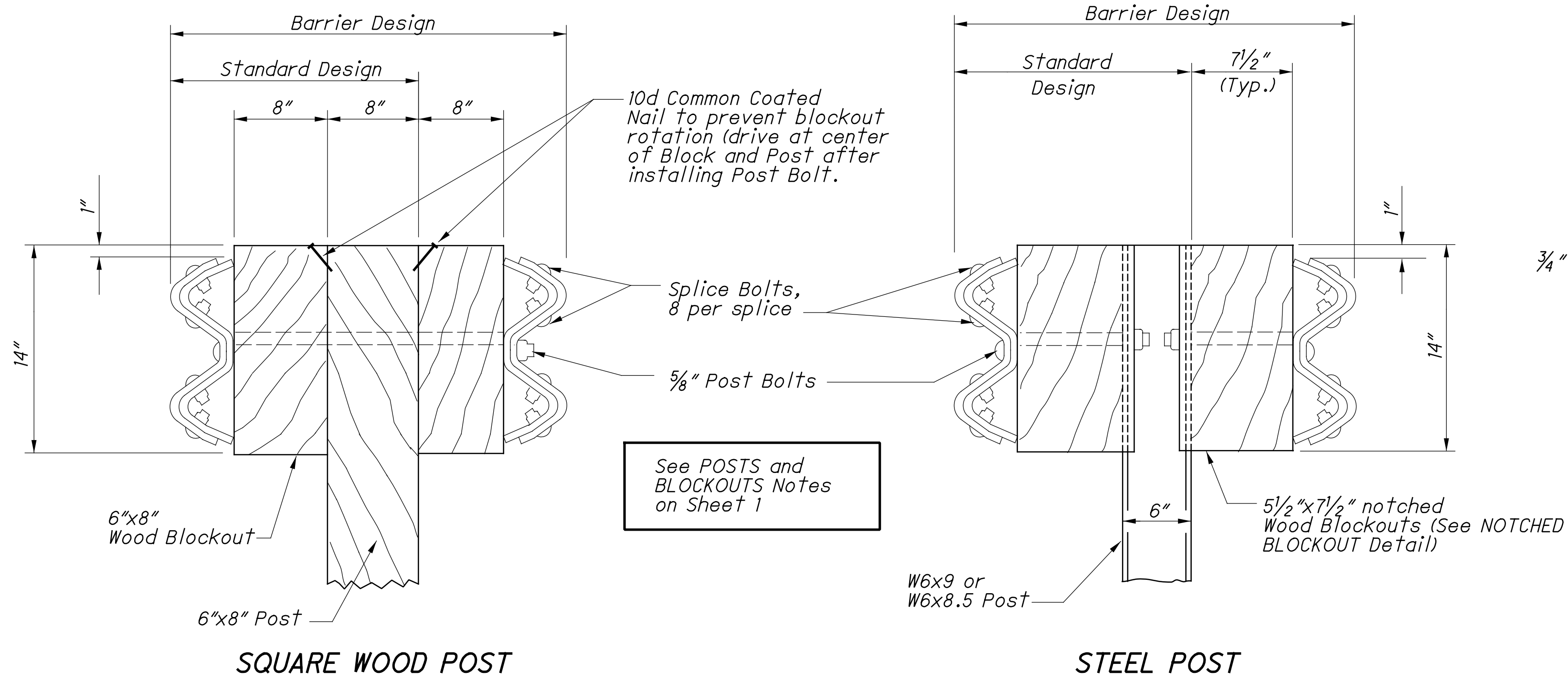
BLOCKOUTS: Blockout dimensions are dependent on post used. Wood Blockouts are to be pressure treated as specified in CMS 710.14. Bore bolt holes. Approved alternate blockouts may be used in lieu of the wood blockouts shown. The approved list is maintained by the **Office of Roadway Engineering**.

WASHERS: Install appropriate sized standard galvanized steel washers on the nut side of bolts installed on wood posts.

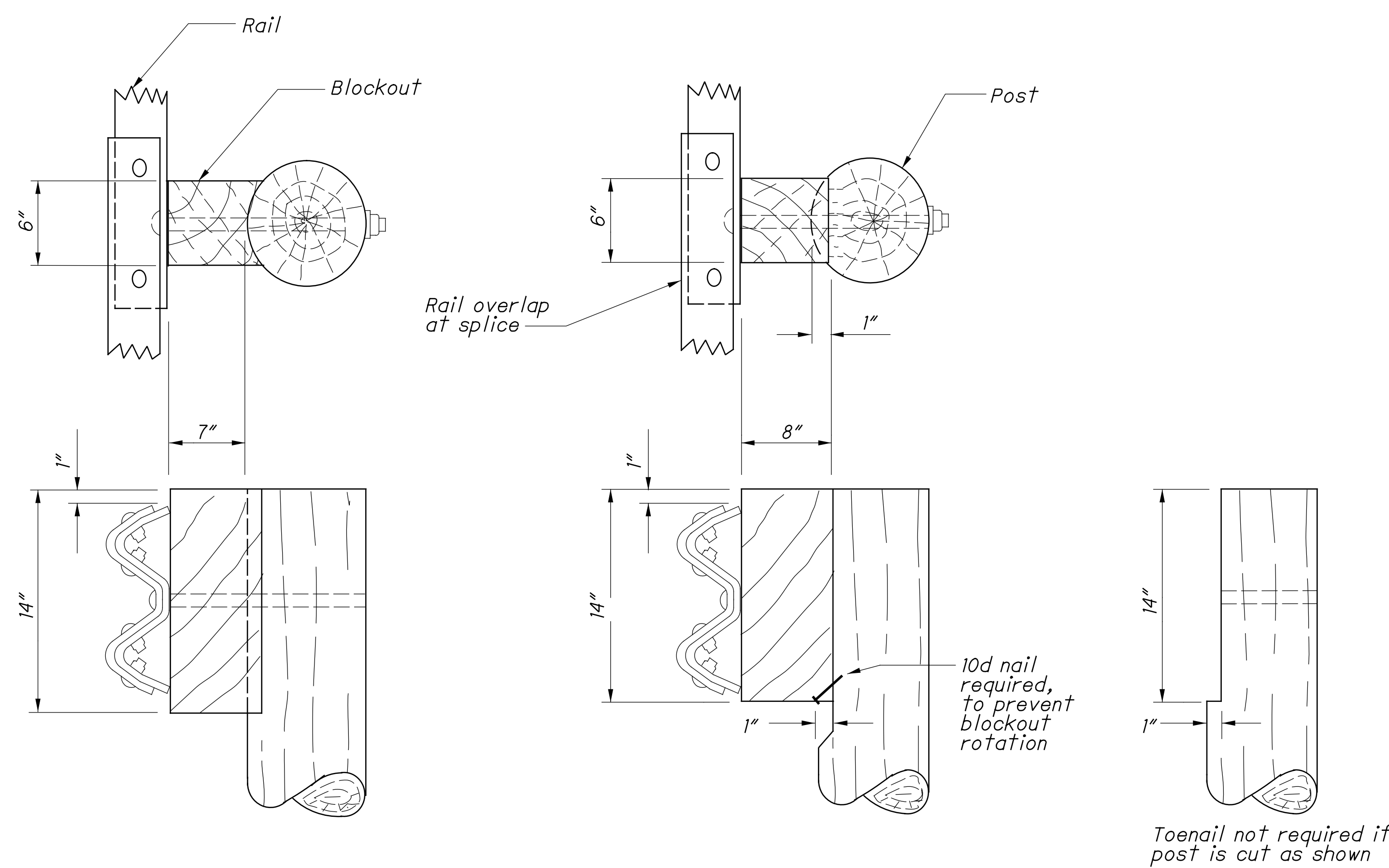
DELINEATION: For barrier reflectors, see CMS 626.

MISCELLANEOUS: For other guardrail details, see SCD GR-1.1.

STEEL BEAM POSTS (English)				
Size	Beam depth	Flange width	Flange thickness	Web thickness
Rolled W6x8.5	5.8"	3.94"	0.193"	0.170"
Rolled W6x9	5.9"	3.94"	0.215"	0.170"
Welded 6x8.5	6.0"	3.94"	0.193"	0.170"
Welded 6x9	6.0"	3.94"	0.215"	0.170"

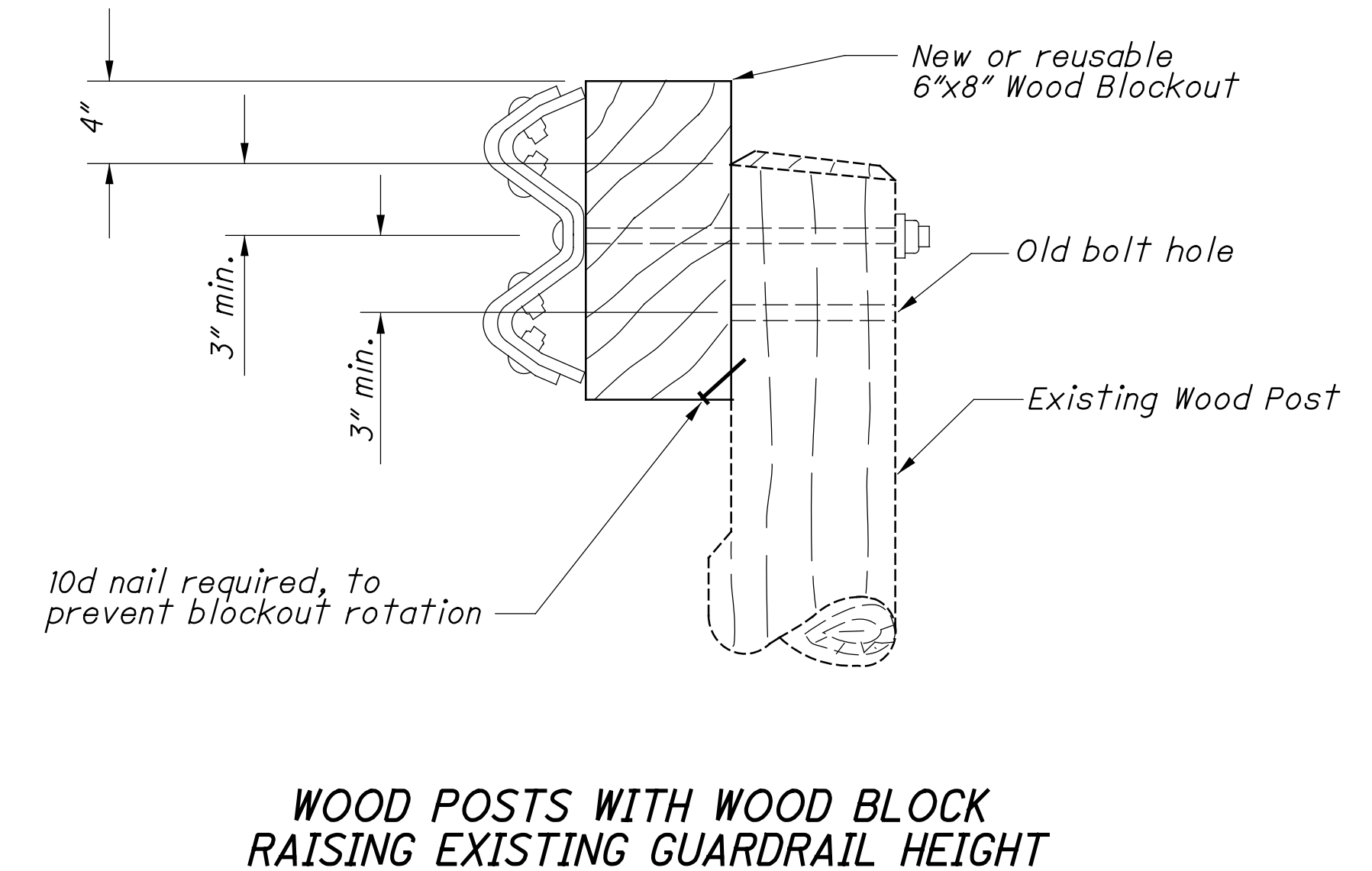


NOTCHED BLOCKOUTS FOR STEEL POSTS
 See BLOCKOUTS Note on Sheet 1

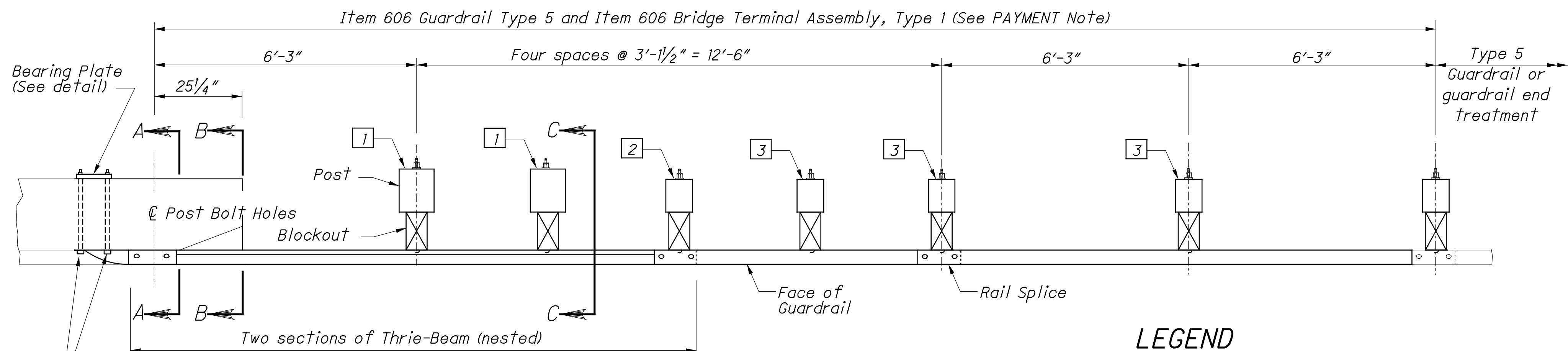


Alternate methods of placing the Blockouts on round Posts may be submitted for consideration and approved by the Engineer.

ROUND WOOD POSTS
 Single Sided runs only (Standard Design)



DESIGN AGENCY	
DESIGNER	KRH
REVIEWER	
PROJECT ID	119043
SUBSET	TOTAL
2	2
SHEET	TOTAL
10E	19

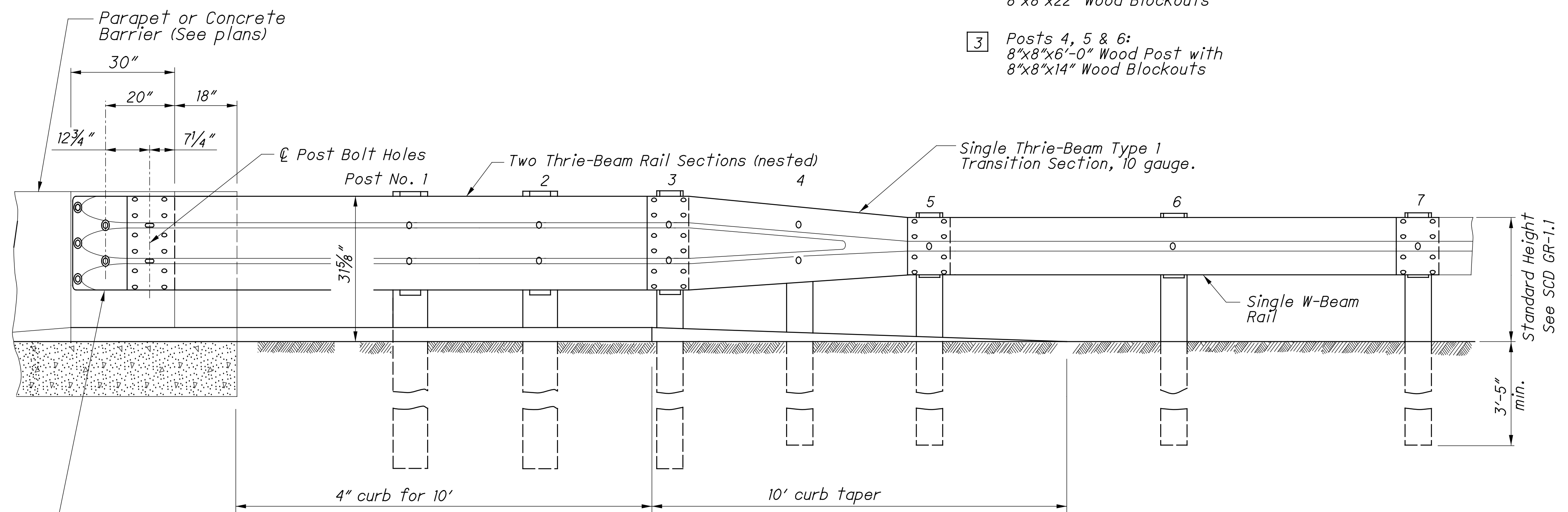


PLAN

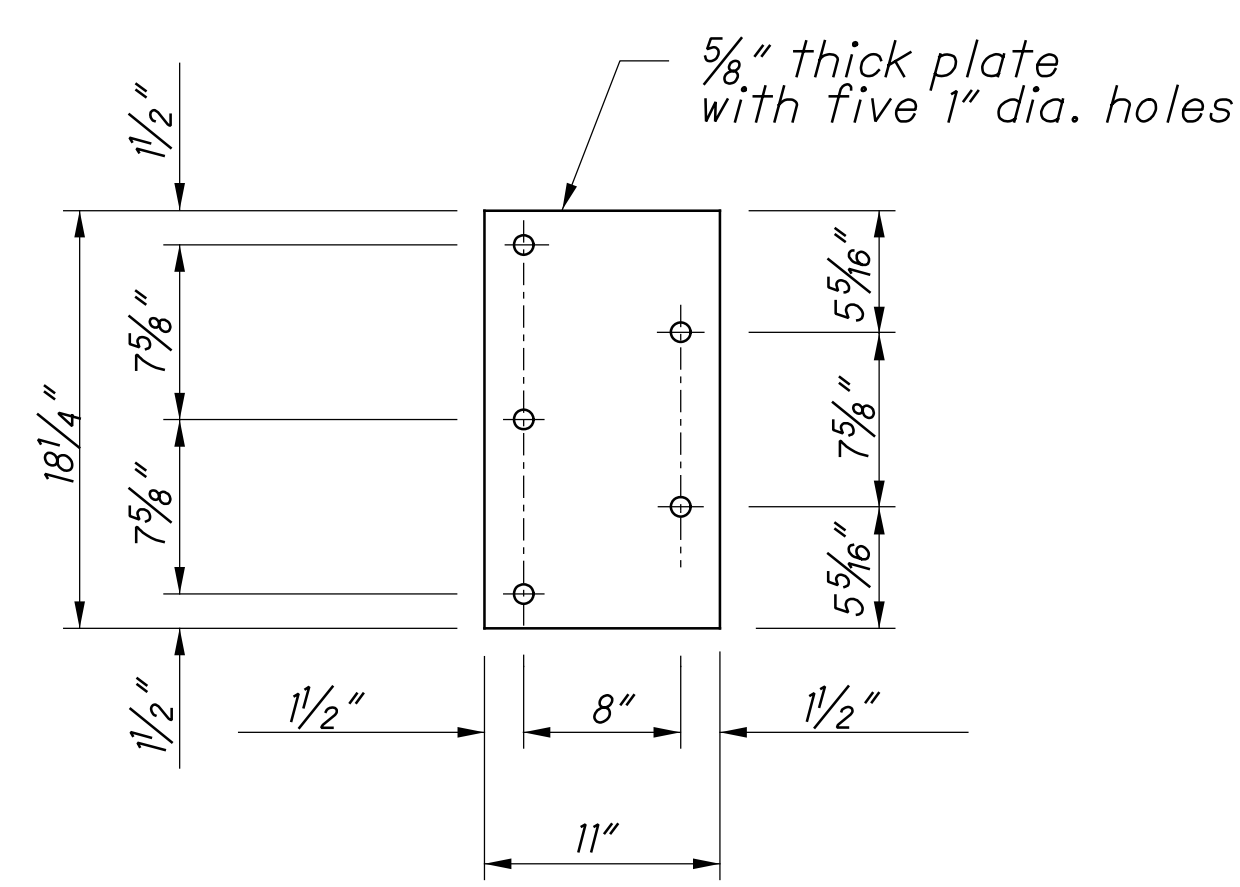
3/8" dia. ASTM A 325 through bolts (length to be determined in field in accordance with Parapet width) into Bearing Plate with standard washers and hex nuts.

LEGEND

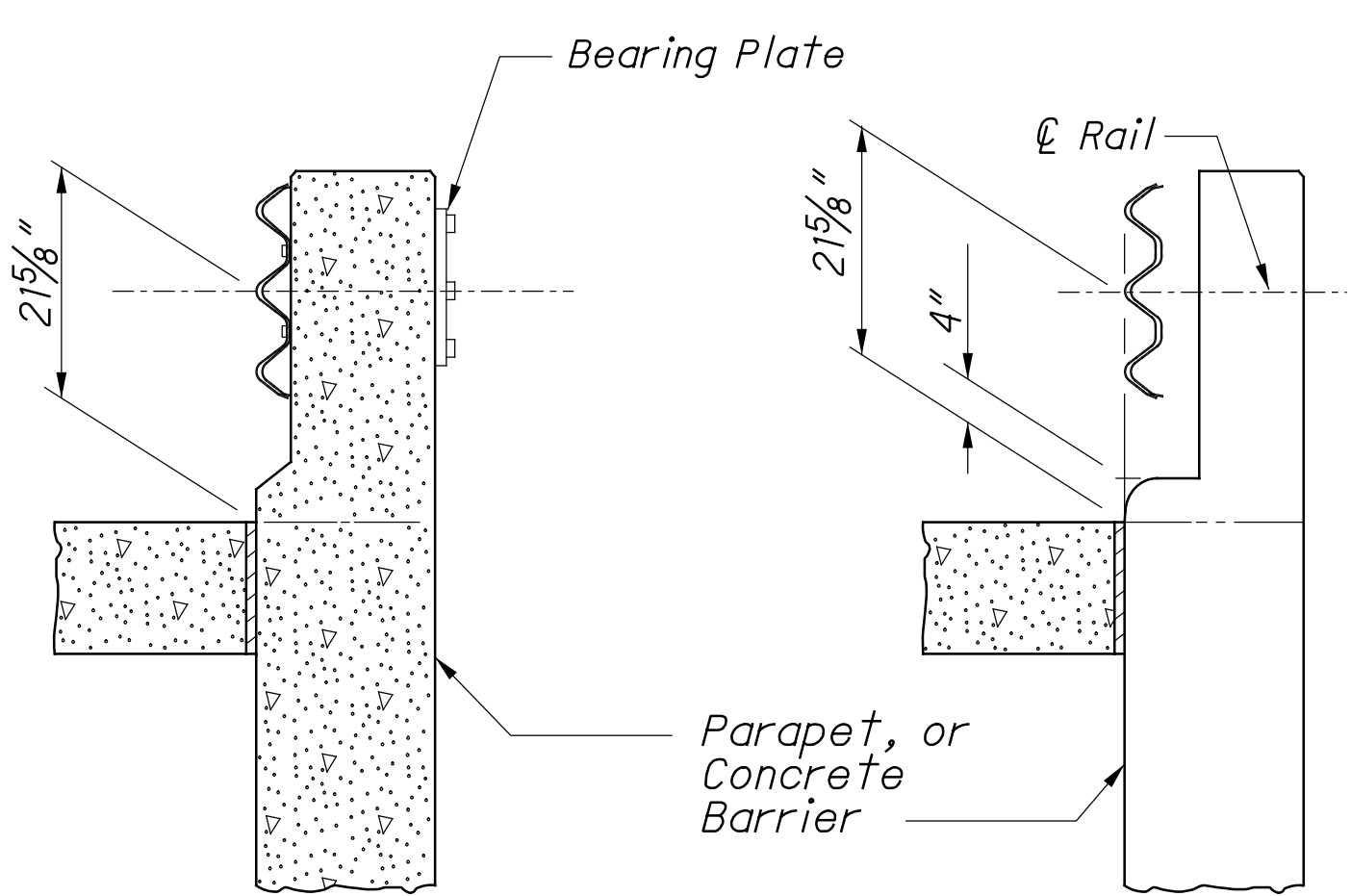
- 1 Posts 1 & 2:
10"x10"x8'-0" Wood Post with 8"x8"x22" Wood Blockouts
- 2 Post 3:
8"x8"x8'-0" Wood Post with 8"x8"x22" Wood Blockouts
- 3 Posts 4, 5 & 6:
8"x8"x6'-0" Wood Post with 8"x8"x14" Wood Blockouts



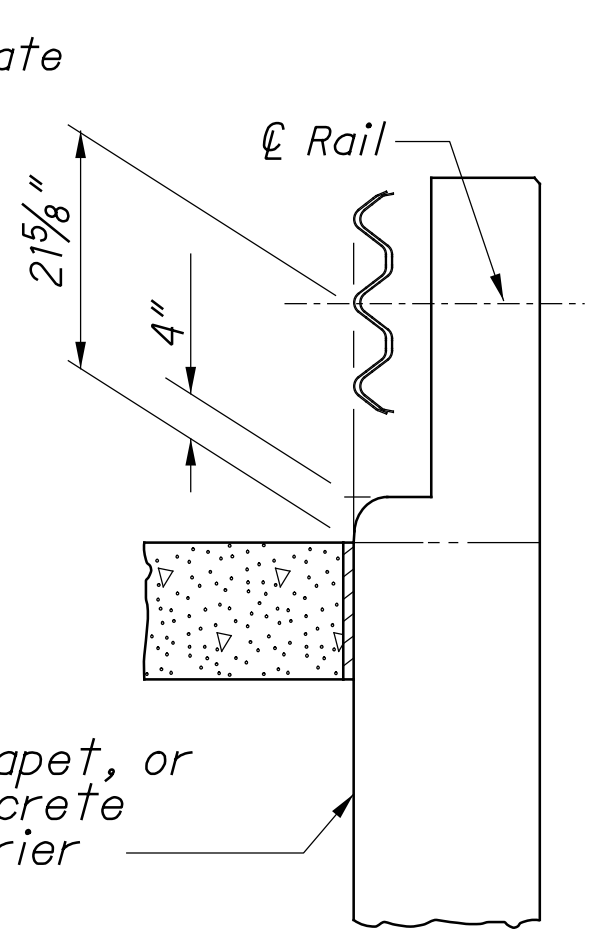
ELEVATION



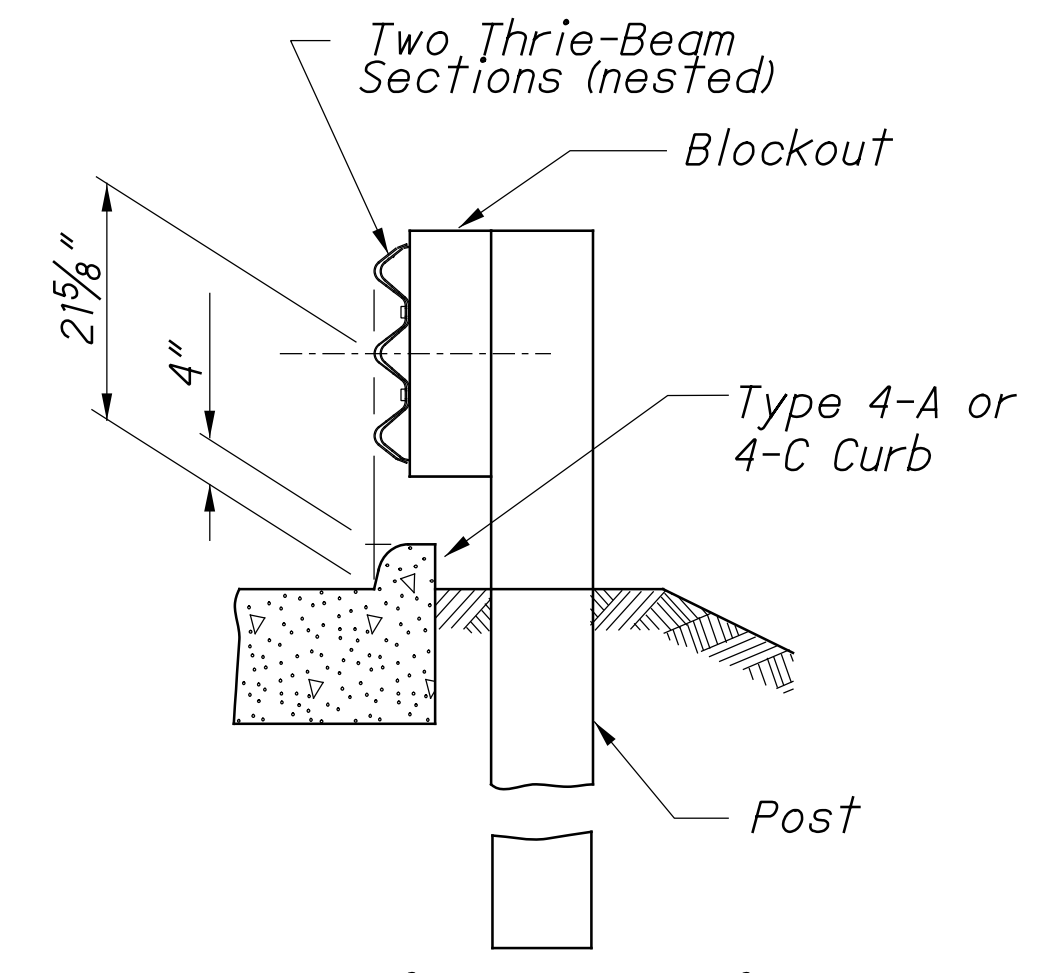
BEARING PLATE



SECTION A-A



SECTION B-B

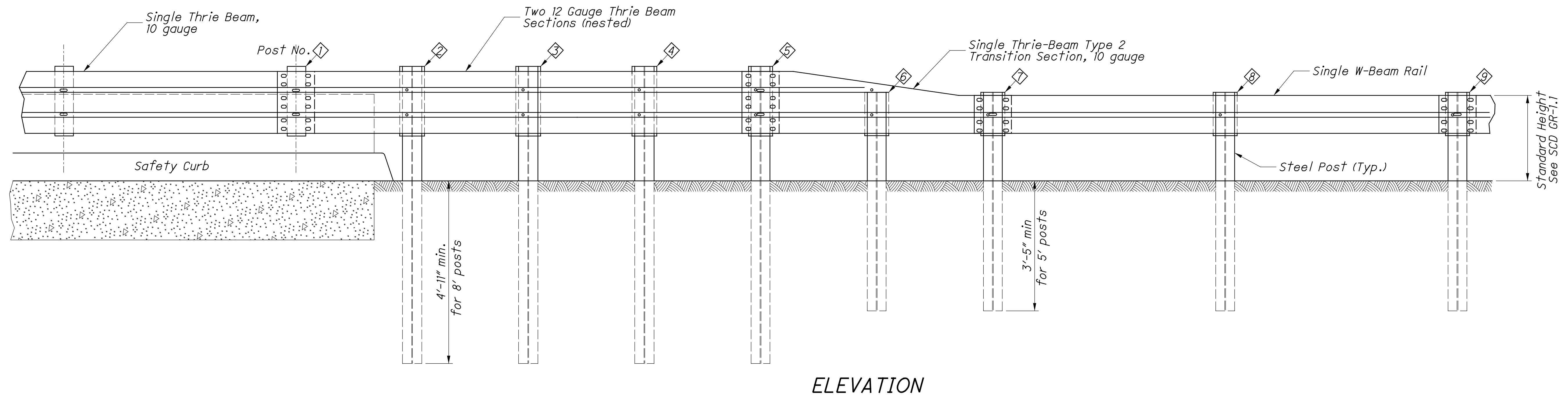
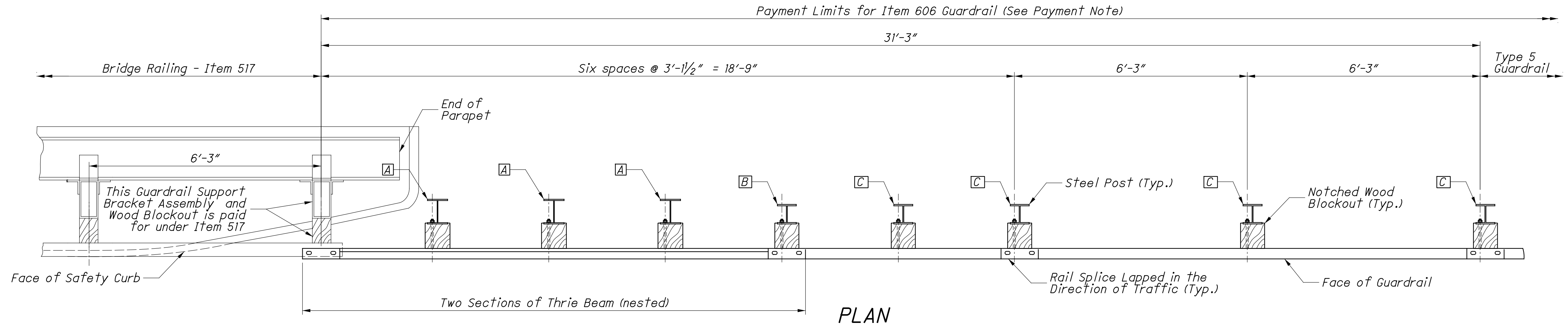


Front of curb to be flush with face of guardrail.

SECTION C-C

NOTES

- GENERAL:** For additional details, see SCD GR-1.1.
- APPLICATION:** Use Type 1 Bridge Terminal Assembly to connect guardrail runs to bridges having deflector Parapet Type Bridge Railing (see **Structural Engineering's SCD BR-1**). It may also be used to connect guardrail runs to the approach ends of Concrete Barrier (see **SCD RM-4.6**).
- On undivided, bi-directional roadways, Type 1's may be used to anchor guardrail runs to the trailing end of Deflector Parapets or Concrete Barrier installations.
- THRIE BEAM TRANSITION:** Symmetrical W-Beam to Thrie Beam transition panel shall be 10 gauge.
- POSTS:** Posts may be set in drilled holes or driven to grade. See SCD GR-1.1 for additional Post embedment details.
- WOOD POSTS -** Use square sawed pressure treated wood as per CMS 710.14 and fabricate with square ends. Bore bolt holes and trim the tops of posts, if required, after the posts are set.
- STEEL POSTS -** are allowed as an alternate. Use W8x24 for 10"x10" wood posts and use W6x25 for 8"x8" posts. Use same post material throughout assembly.
- BLOCKOUTS:** Use wood blockouts only, steel or plastic blockouts are not permitted. Use notched blockouts with steel posts.
- CURB:** Provide a Type 4A or 4C concrete curb minimum of 20', or longer as shown on plans, including a 10' taper (from curb height to flush). Front of curb to be flush with face of guardrail.
- FLARED GUARDRAIL:** Begin Standard Guardrail Flares as shown on SCD GR-5.1 preferably at or beyond Post No. 7; however, the flare may begin at Post No. 5.
- PAYMENT:** Item 606 - Bridge Terminal Assembly, Type 1, Each, includes the cost of extra components, in excess of normal guardrail, for additional and different size of posts and blockouts, nested Thrie-Beam, transition and connector sections, Bearing Plate, bolts, washers, nuts, and other hardware.
- The curb is required in this design, and is paid separately under Item 609 - Curb, Type 4A (or 4C), per Foot, for the curb and taper sections, including materials, forming and labor needed to construct as shown.



NOTES

GENERAL: For additional rail and post details, see **SCD GR-1.1**.

APPLICATION: Use Type 3 Bridge Terminal Assembly to connect guardrail runs for both the approach and trailing ends of Thrie Beam Bridge Railings. The design detailed on this sheet is approved to NCHRP 350 Test Level 3. See **Structural Engineering's SCD TBR-1-II** for the associated Bridge Railing.

THRIE BEAM TRANSITION: The asymmetrical W-Beam to Thrie Beam transition panel shall be 10 gauge.

FLARED GUARDRAIL: Start Standard Guardrail Flares as shown on **SCD GR-5.1** at or beyond Post No. 9; However, where sight constraints exist, the flare may begin at Post No. 7.

POSTS: - Use steel posts only. Wood posts are not permitted in this design. Posts may be set in drilled holes or driven to grade. After placing posts in drilled holes, backfill and tamp disturbed soil. See **SCD GR-1.1** for additional post embedment details.

BLOCKOUTS: Steel posts in this design require the use of notched wood blockouts similar to those shown on **SCD GR-2.1**. The Blockout's notch shall be sized to accept the post's flange. Steel or plastic blockouts are not permitted.

PAYMENT: ITEM 606 - Bridge Terminal Assembly, Type 3, Each, includes the cost of extra components, in excess of normal guardrail, for additional and different types of posts and blockouts, nested Thrie-Beam, transition and connector sections, and other hardware.

LEGEND

- Ⓐ Posts 2, 3, & 4:
W8x24x8'-0" Steel Post with
8"x8"x22 1/2" Notched Wood Blockout
- Ⓑ Post 5:
W6x25x8'-0" Steel Post with
8"x8"x22 1/2" Notched Wood Blockout
- Ⓒ Post 6, 7, 8, & 9:
W6x25x6'-0" Steel Post with
8"x8"x14" Notched Wood Blockout

NOTES

APPLICATION: Use Type T Anchor Assemblies on the trailing end of guardrail runs, located outside of the clear zone of opposing traffic. The assembly is 12'-6" long, none of which can be considered the Length of Need for the guardrail run.

For termination requirements at driveways, see DRIVEWAY OPENING Detail on Sheet 2. For side road approaches and Terminals at Structures, see Location & Design Manual, Volume 1, Figure 603-3.

ANCHORING OPTIONS: Contractor may choose either the foundation tube (shown on this Sheet) or the concrete footing option (Sheet 2) to construct this anchor assembly.

If the foundation tube option is chosen, the contractor will take proper care to insure that the Soil Plate fasteners are not broken during the driving process.

Concrete footings may be cast-in-place or precast. Compact fill after placing precast unit.

MATERIALS: See SCD GR-1.1 for parts used on this anchor, including the CRT Breakaway Posts, Steel Ground Tube, Post Sleeve, Cable Anchor and Bracket Assembly.

Bearing Plate and Soil Plate is ASTM A709 Grade 36. Steel Ground Tube shall be ASTM A500, Grade B, and meet CMS 707.10. All angles, channels and plates shall meet CMS 711.01. All structural steel shall be galvanized as specified in CMS 711.02. All bolt washers indicated are standard galvanized steel of the appropriate size.

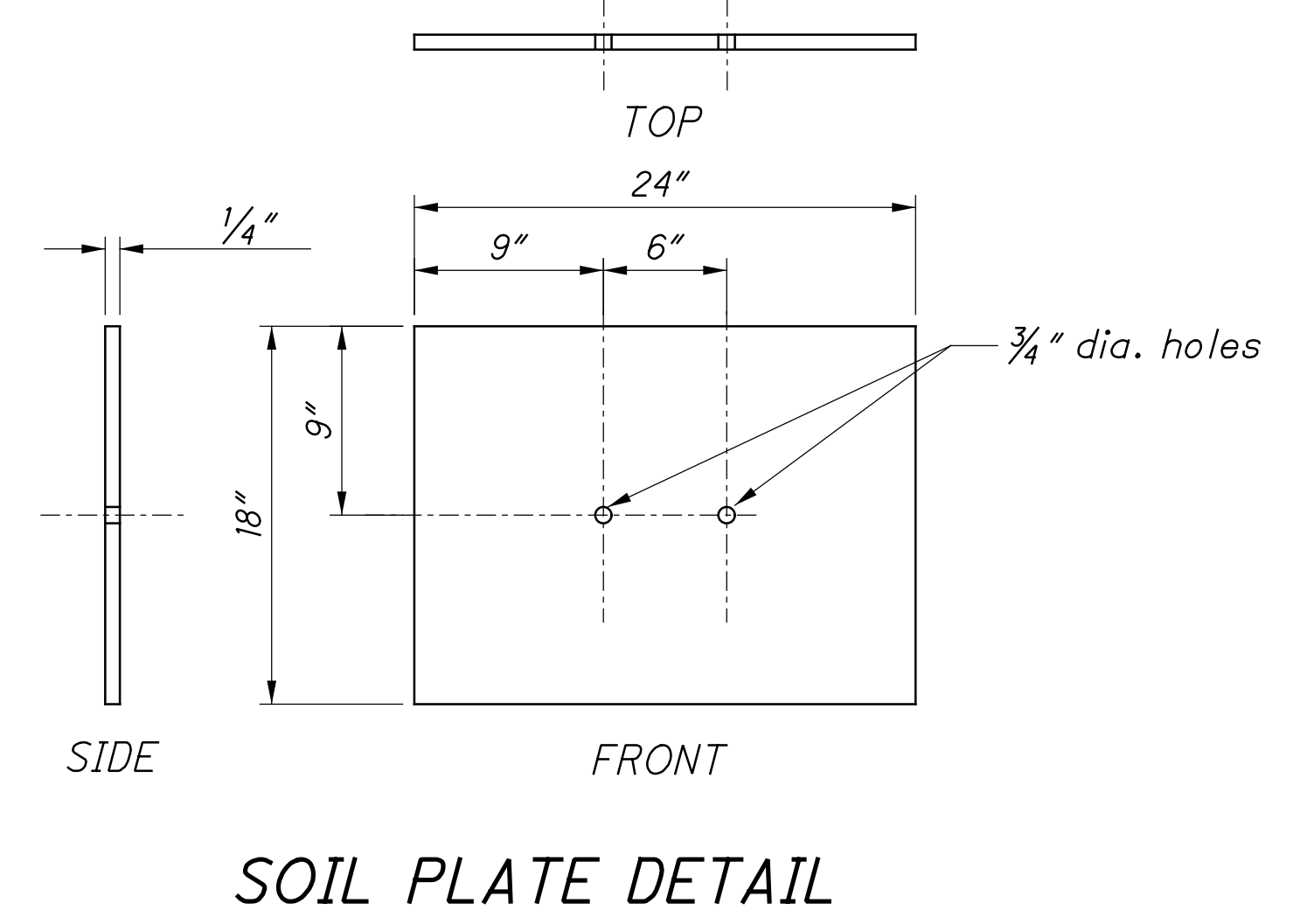
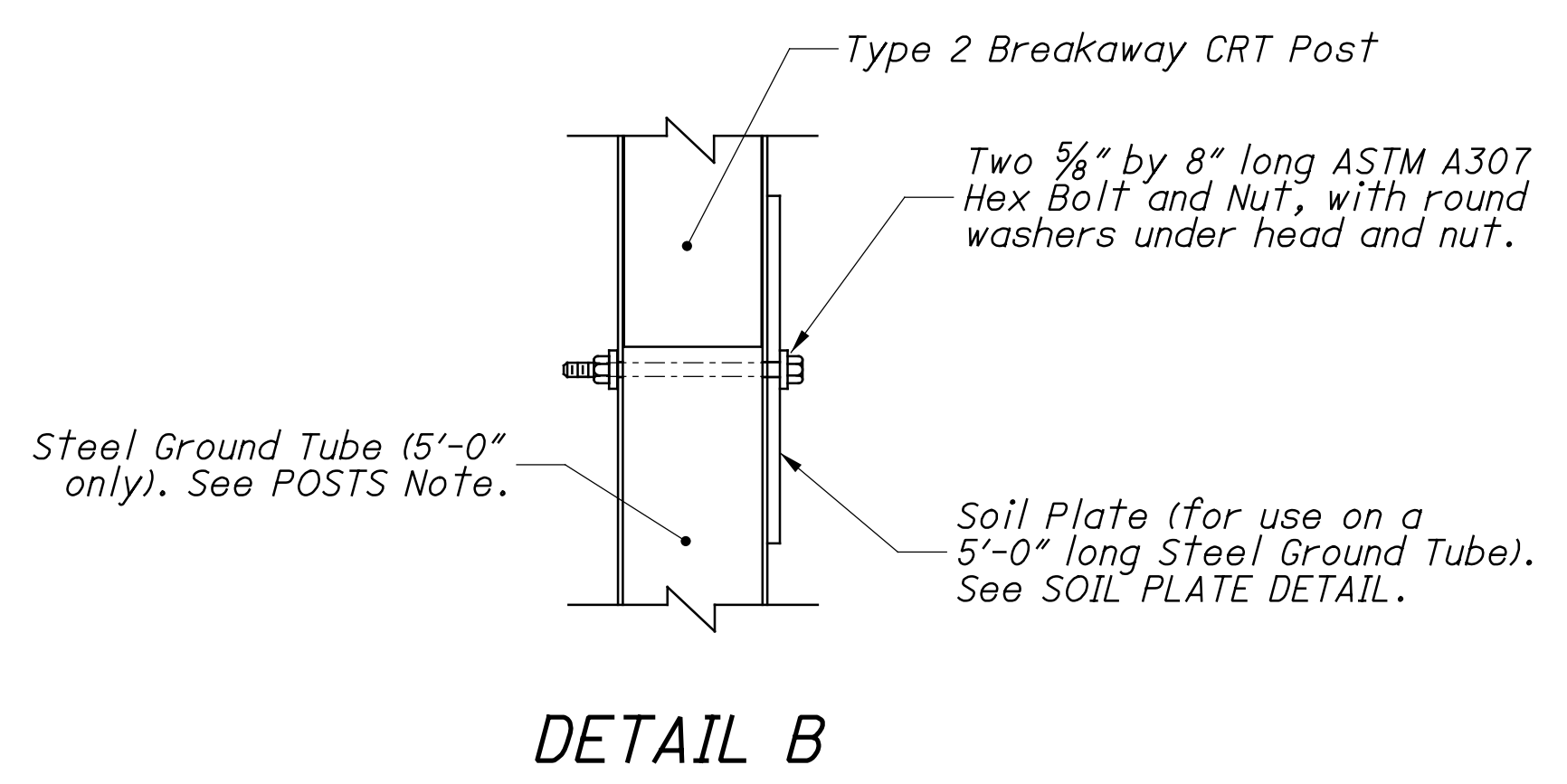
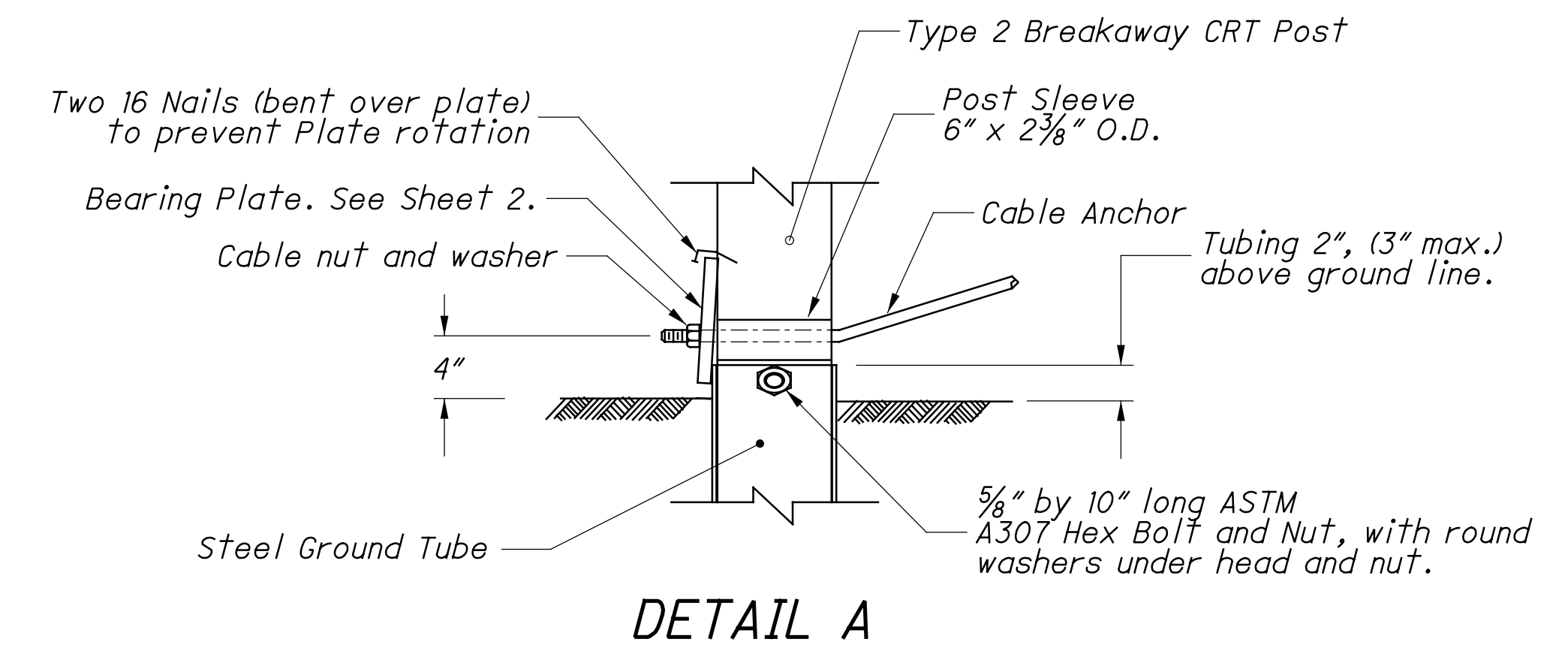
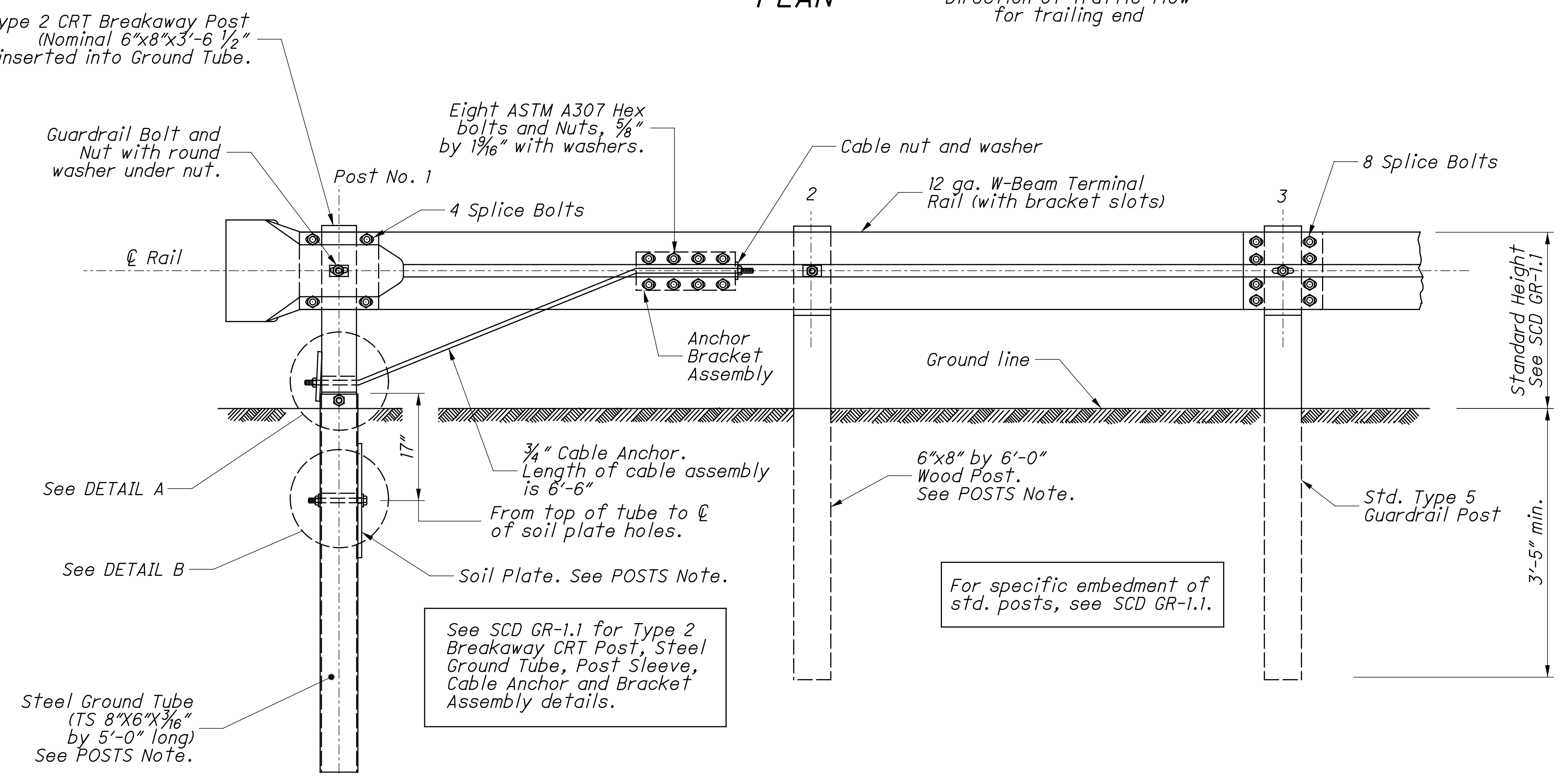
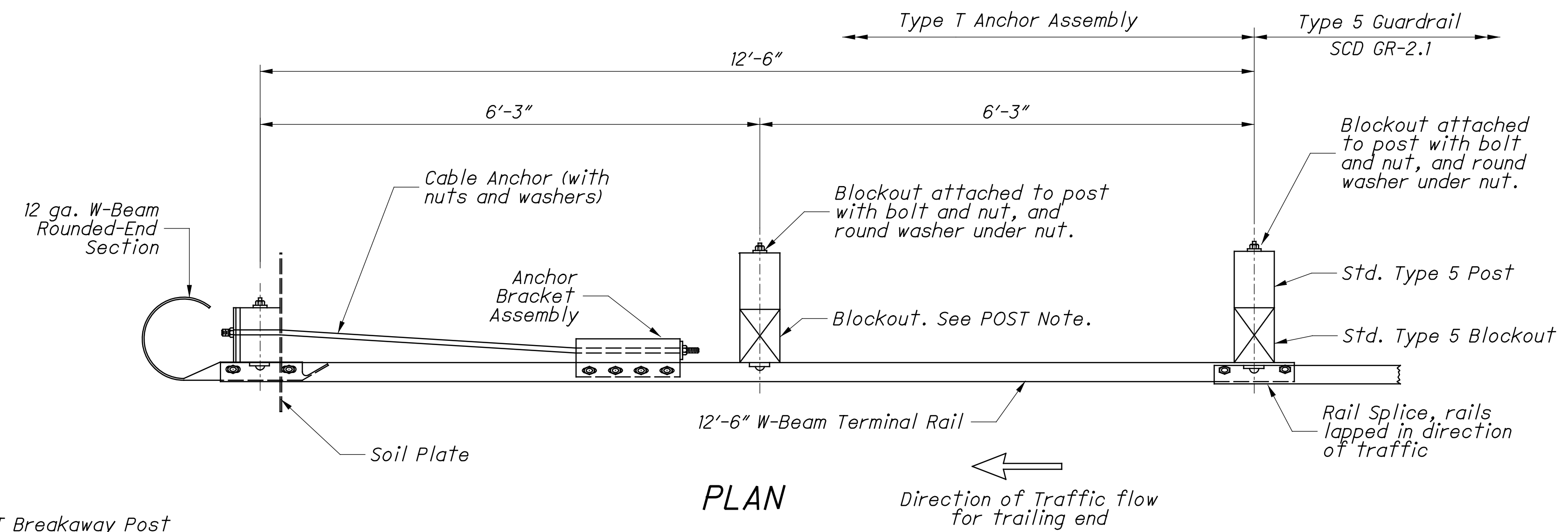
Concrete shall be class C.

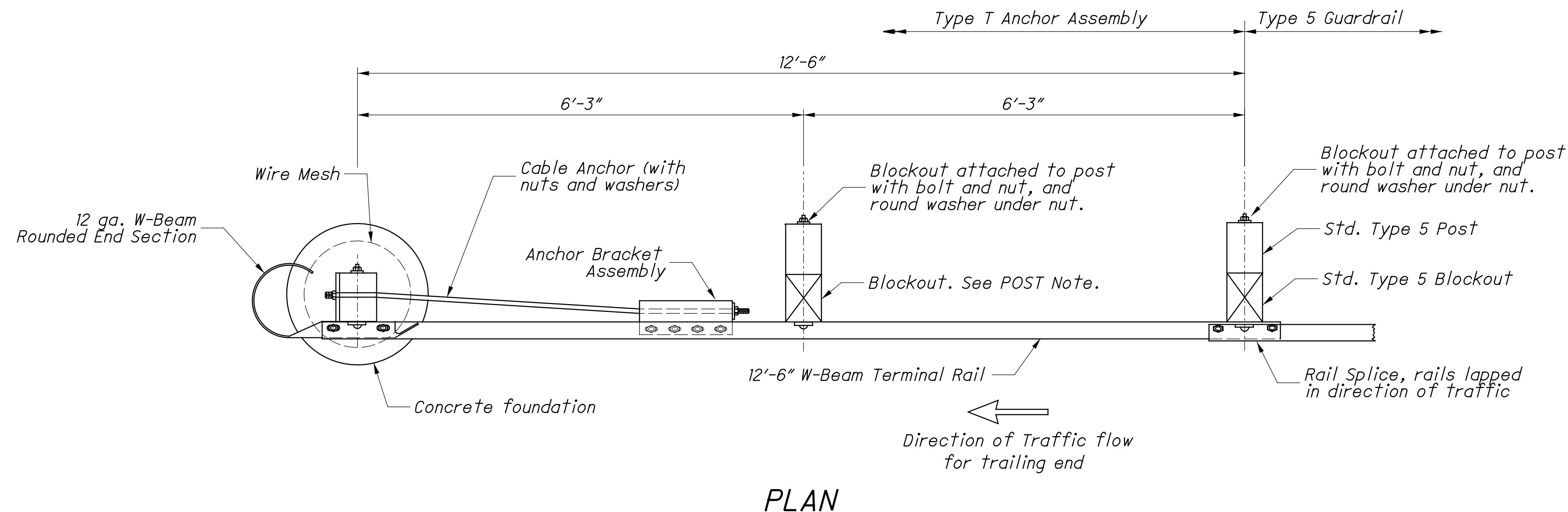
Components on this anchor that are not detailed on SCD GR-1.1 include: 1) 12'-6" W-Beam Terminal Rail (standard part RWM14a), and 2) W-Beam Rounded End Section (RWE03a). For complete details and specifications, see part descriptions in the AASHTO/AGC/ARTBA Standardized Hardware Guide.

POSTS: Post No. 1 may be an 8'-0" long Steel Ground Tube without a Soil Plate in lieu of the 5'-0" tube with Soil Plate.

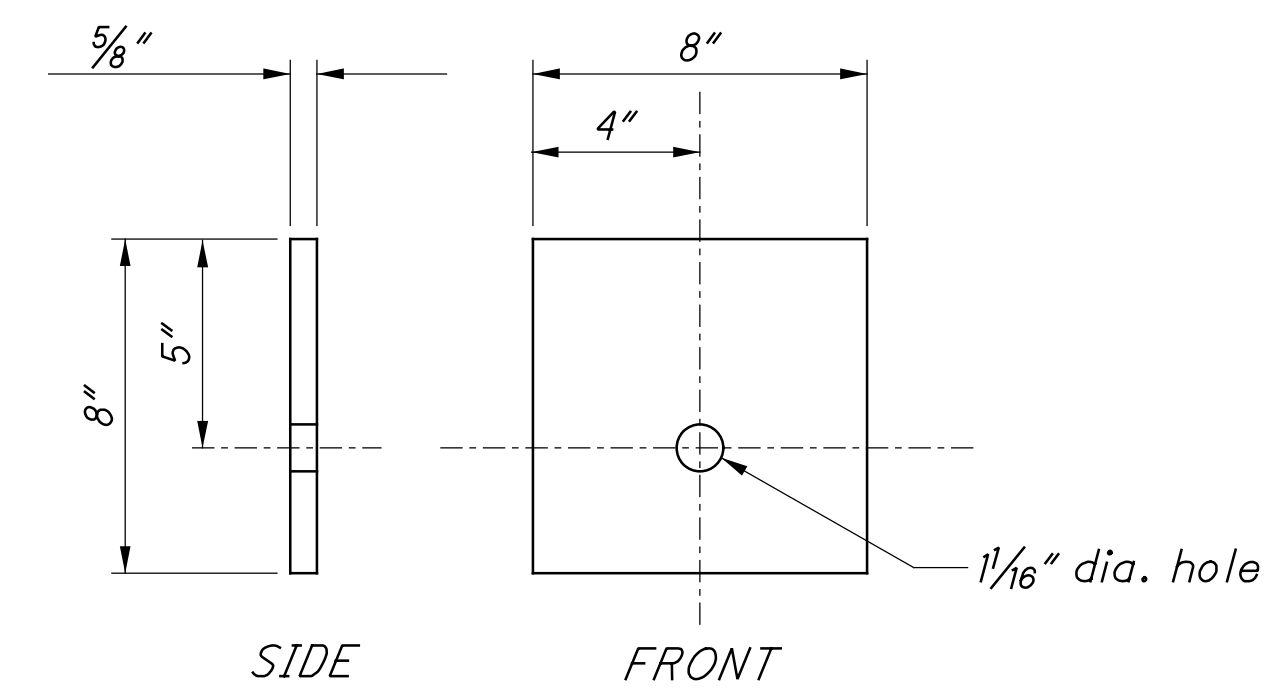
Post No. 2 can be W6x9 (or W6x8.5) with notched wood blockouts or a standard Type 5 post and blockout. Recycled plastic blockouts are permitted.

PAYMENT: All labor and materials, including the W-Beam Rounded End Section and the W-Beam Terminal Rail for the 12'-6" anchor assembly shall be included in the unit price bid for Item 606 - Anchor Assembly, Type T, Each.

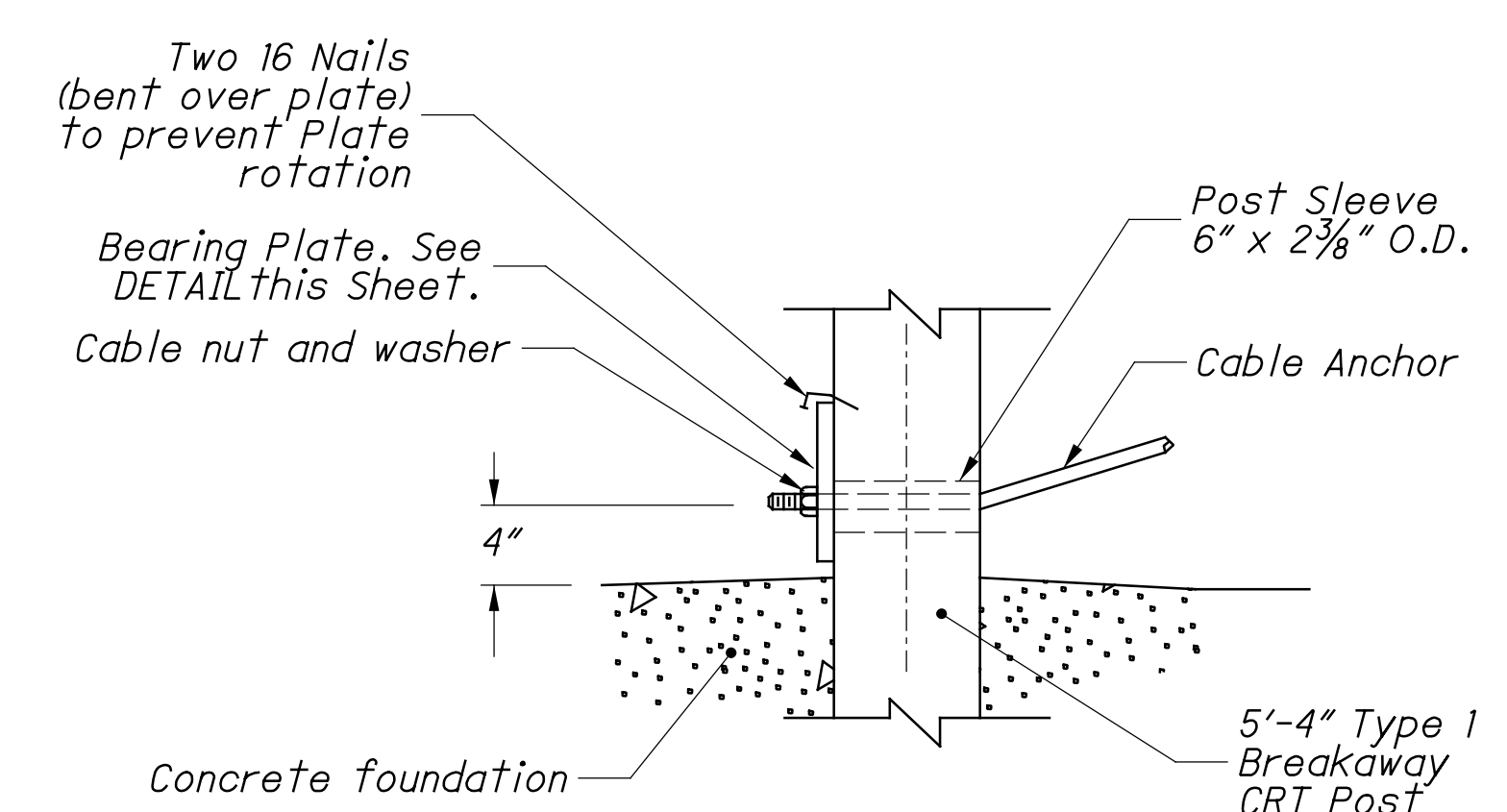




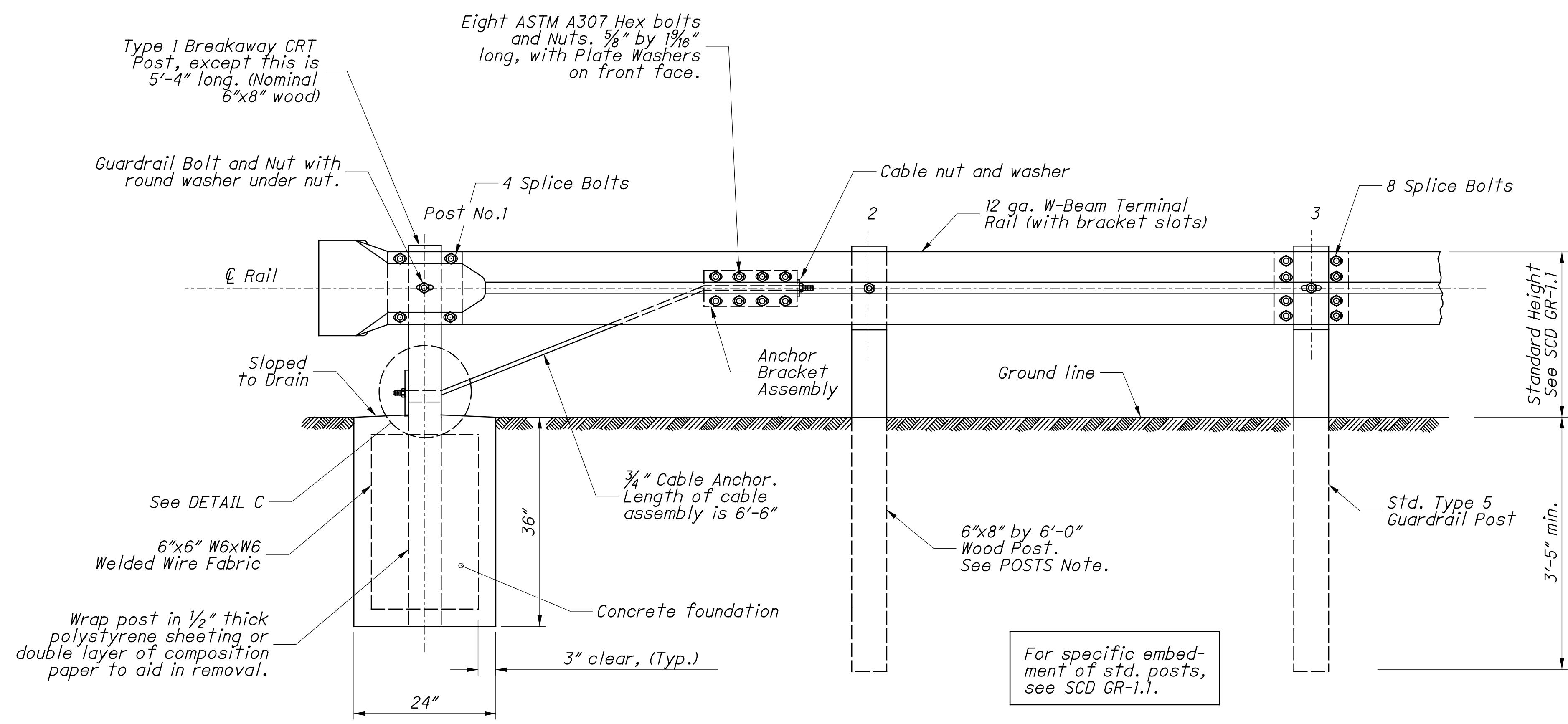
PLAN



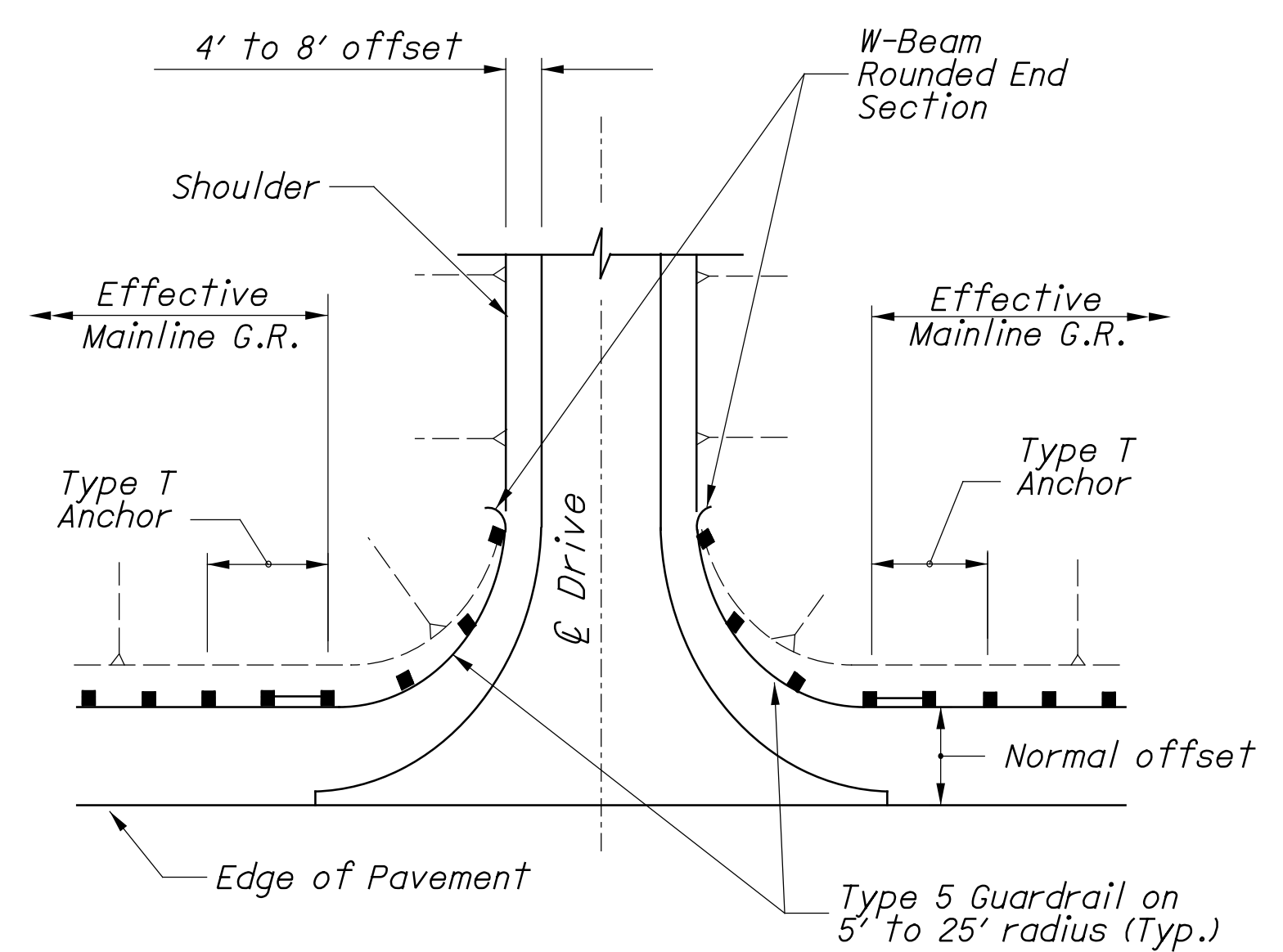
BEARING PLATE DETAIL



DETAIL C



ELEVATION - CONCRETE FOOTER



DRIVEWAY OPENING

DESIGN AGENCY	
DESIGNER	KRH
REVIEWER	XXX MM-DD-YY
PROJECT ID	119043
SUBSET	TOTAL
2	2
SHEET	TOTAL
101	19

SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

- DBR-3-11 DATED 7/15/11
- PSB-91 DATED 7/17/20
- SBR-3-20 DATED 7/19/24
- TBR-1-11 DATED 1/18/13

REFER TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

- 843 DATED 10/18/19
- 848 DATED 1/15/21

DECK PROTECTION METHOD

LATEX MODIFIED CONCRETE OVERLAY

EXISTING BRIDGE PLANS

EXISTING PLANS ARE AVAILABLE AND MAY BE INPECTED IN THE ODOT DISTRICT 1 OFFICE IN LIMA.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO C&MS, SECTIONS 102.05 AND 105.02. BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

FINISHING EQUIPMENT SUPPORT PLAN

THE CONTRACTOR IS HEREBY ADVISED THAT HE/SHE SHALL NOT BE PERMITTED TO USE THE RETROFIT RAILING TO SUPPORT THE FINISHING EQUIPMENT. THE CONTRACTOR SHALL SUBMIT TO THE DISTRICT CONSTRUCTION ENGINEER FOR APPROVAL BY THE DIRECTOR, A PLAN DETAILING THE METHOD TO BE USED TO SUPPORT THE FINISHING EQUIPMENT. THIS PLAN SHALL BE SUBMITTED AND APPROVED PRIOR TO THE PLACING OF PROPOSED DECK OVERLAY.

ITEM 512 - SEALING OF CONCRETE SURFACES (NON-EPOXY)

THE CONTRACTOR SEAL ALL LOCATIONS DESCRIBED IN THE TABLE BELOW AND SHOWN ON THE TRANSVERSE SECTION ON SHEET 13.

STRUCTURE	SEALING LOCATIONS
ALL-30-1.130	SUPERSTRUCTURE

PAYMENT FOR SEALING THE LOCATIONS ABOVE SHALL BE AT THE UNIT PRICE BID PER SY FOR ITEM 512 - SEALING OF CONCRETE SURFACES (NON-EPOXY) WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

DEMOLITION DEBRIS

THE CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID AND/OR LIMIT DEMOLITION FROM ENTERING THE WATERWAY/RIVER. ANY MATERIAL THAT DOES ENTER THE WATERWAY/RIVER SHALL BE IMMEDIATELY REMOVED.

ITEM 848 - SURFACE PREPARATION USING HYDRODEMOLITION, AS PER PLAN

THIS ITEM SHALL FOLLOW SUPPLEMENTAL SPECIFICATION 848 EXCEPT THAT THE TOP SURFACE OF THE CONCRETE BRIDGE DECK SHALL BE COMPLETELY REMOVED TO A DEPTH "D" OF 1.25".

ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

A QUANTITY OF THIS ITEM IS INCLUDED IN THE ESTIMATED QUANTITIES TO REPAIR DETERIORATED AREAS OF CONCRETE WHERE THE DEPTH OF THE PATCH IS GREATER THAN 3 INCHES, AS LOCATED BY THE PROJECT ENGINEER.

PRIOR TO THE SURFACE CLEANING SPECIFIED IN C&MS 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED STEEL REINFORCEMENT. ACCEPTABLE METHODS INCLUDE: HIGH-PRESSURE WATER BLASTING WITH, OR WITHOUT, ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT OR VACUUM ABRASIVE BLASTING.

A LIST OF ESTIMATED LOCATIONS AND ESTIMATED QUANTITIES FOR PATCHING ARE LISTED IN THE STRCUTURE PLAN SHEETS AND ESTIMATED QUANTITIES.

PAYMENT FOR PATCHING AS DESCRIBED ABOVE SHALL BE AT THE UNIT PRICE BID PER SF FOR ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 843 - PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR

A QUANTITY IS INCLUDED IN THE ESTIMATED QUANTITIES TO REPAIR ANY DETERIORATED AREAS ON THE LEFT AND RIGHT PARAPETS AND SAFETY CURBS, AND THE DECK EDGES WITH ITEM 843 - PATCHING CONCRETE STRUCTURES WITH TROWEL-ABLE MORTAR WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.

ITEM 510 - DOWL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN

IN ADDITION TO THE PROVISIONS OF ITEM 510, USE EITHER OF THE BELOW APPROVED ADHESIVE ANCHORING SYSTEMS PROVIDED OR AN APPROVED EQUIVALENT. SUSBSTITUTE ADHESIVE ANCHORING SYSTEMS SHALL MEET THE REQUIREMENTS OF ICCES AC308 TABLE 3.8.

- DEWALT - POWERS FASTERNERS - PURE110+ EPOXY ADHESIVE ANCHOR SYSTEM AND POST-INSTALLED REINFORCING BAR CONNECTION SYSTEM IN CRACKED AND UNCRACKED CONCRETE.

- HILTI INC. - HILTI HIT-HY 200 ADHESIVE ANCHORS AND POST-INSTALLED REINFORCING BAR CONNECTIONS IN CONCRETE.

ITEM 509 - EPOXY COATED STEEL REINFORCEMENT, AS PER PLAN

IN ADDITION TO THE PROVISIONS OF ITEM 509, FIELD BEND AND/OR FIELD CUT THE STEEL REINFORCEMENT DESIGNATED IN THE PLANS, AS NECESSARY, IN ORDER TO MAINTAIN THE REQUIRED CLEARANCES AND BAR SPACINGS. REPAIR ALL DAMAGE TO THE EPOXY COATING, AS A RESULT OF THIS WORK, ACCORDING TO C&MS 709.00

ITEM 516 - STRUCTURAL JOINT OR JOINT SEALER. MISC.: USING DOWSIL 902 (RCS)

ALL NECESSARY LABOR, MATERIALS AND EQUIPMENT TO CLEAN AND SEAL THE EXISTING SLIDING DECK JOINTS.

THE SEALANT SHALL BE DOWSIL 902 RCS OR APPROVED EQUIVALENT.

JOINTS SHALL BE THOROUGHLY CLEANED BY ABRASIVE BLASTING AND/OR POWER TOOLS AND WITH A SUFFICIENT AMOUNT OF COMPRESSED AIR TO REMOVE ANY DIRT OR DELETERIOUS MATTER WHEN THE SURFACES ARE THOROUGHLY CLEAN AND DRY. JUST PRIOR TO PLACING THE JOINT SEALER, COMPRESSED AIR HAVING A PRESSURE OF AT LEAST 90 P.S.I. SHALL BE USED TO BLOW OUT THE JOINT AND REMOVE ALL TRACES OF DUST.

AFTER CLEANING AND DRYING, THE JOINT SHALL BE PRIMED WITH CARBOLINE CARBOGUARD 635 OR EQUIVALENT. DOW CORNING® 902 RCS JOINT SEALANT INSTALLATION GUIDELINES (FORM NO. 62-272). AFTER PLACEMENT OF THE CARBOLINE CARBOGUARD 635 OR EQUIVALENT WAIT A MINIMUM OF 1 HOUR BEFORE APPLYING JOINT SEALANT OR ALLOWING TRAFFIC TO PASS OVER THE PRIMED JOINT. A BOND-BREAKER MATERIAL SHALL BE APPLIED TO THE BOTTOM OF THE JOINT.

THE SILICONE SEALANT MATERIALS SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS, EXCEPT AS MODIFIED BY THESE NOTES. THE SEALANT SHALL BE INSTALLED WHEN THE AMBIENT TEMPERATURE IS 60 DEGREES F OR HIGHER. TRAFFIC SHALL NOT BE ALLOWED ON THE JOINT FOR ONE HOUR AFTER THE APPLICATION OF THE SEALANT.

SEE BRIDGE PLAN SHEET 9 (PLAN SHEET 19) FOR ADDITIONAL DETAILS.

PAYMENT FOR ALL EQUIPMENT, MATERIALS, AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE AND AS SHOWN ON BRIDGE PLAN SHEET 9 (PLAN SHEET 19), INCLUDING THE PRIMER (CARBOLINE CARBOGUARD 635) FOR THE JOINT, SHALL BE INCLUDED IN THE UNIT PRICE BID PER FT FOR ITEM 516 - STRUCTURAL JOINT OR JOINT SEAL, MISC.: USING DOWSIL 902 RCS, UNLESS SEPARATELY ITEMIZED IN THE PLANS.

DESIGN AGENCY



DESIGNER

KRH

REVIEWER

EJS 11-29-24

PROJECT ID

119043

SUBSET TOTAL

1 9

SHEET TOTAL

11 19

ESTIMATED QUANTITIES (CARRIED TO GENERAL SUMMARY)										
ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	APP. SLAB	ABUT.	SUPER.	GEN.	PIER	SHEET #
ALL-30-1.130										
512	73500	1316	SY	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN (AND APP. SLABS)	257		1059			
512	10050	6	SY	SEALING OF CONCRETE SURFACES (NONEPOXY)					6	
516	14600	104	FT	STRUCTURAL JOINT OR JOINT SEALER, MISC.: USING DOW CORNING 902		104				2 (11/19)
519	11101	141	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN		78		23	40	2 (11/19)
843	50000	141	SF	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR		78		23	40	2 (11/19)
ALL-30-7.897										
202	11200	LS		PORTIONS OF STRUCTURE REMOVED			LS			
202	23500	978	SY	WEARING COURSE REMOVED (T=1.25")	178		800			
202	38000	325	FT	GUARDRAIL REMOVED #				325		
202	47000	4	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED #				4		
516	14600	63	FT	STRUCTURAL JOINT OR JOINT SEALER MISC.: USING DOW CORNING 902		63				2 (11/19)
517	72750	541.5	FT	RAILING (THRIE BEAM RETROFIT)			541.5			
519	11101	35	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN			35			2 (11/19)
606	13001	325	FT	GUARDRAIL, TYPE 5, AS PER PLAN #				325		(3/19)
606	35121	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 3, AS PER PLAN #				4		(3/19)
626	110	10	EACH	BARRIER REFLECTOR, TYPE 2 (BIDIRECTIONAL) #				10		
843	50000	35	SF	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR			35			2 (11/19)
848	10100	978	SY	LATEX MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION (T=2.25")	178		800			
848	20000	978	SY	SURFACE PREPARATION USING HYDRODEMOLITION (T=1.0")	178		800			
848	30100	61.2	CY	LATEX MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY	11.2		50			
848	50000	60	SY	HAND CHIPPING	60					
848	50100	LS		TEST SLAB				LS		
ALL-30-8.807										
202	11200	LS		PORTIONS OF STRUCTURE REMOVED			LS			
202	23500	756	SY	WEARING COURSE REMOVED (T=1.25")	134		622			
202	38000	325	FT	GUARDRAIL REMOVED #				325		
202	47000	4	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED #				4		
512	10050	8	SY	SEALING OF CONCRETE SURFACES (NONEPOXY)					8	
516	14600	49	FT	STRUCTURAL JOINT OR JOINT SEALER MISC.: USING DOW CORNING 902		49				2 (11/19)
517	72750	507	FT	RAILING (THRIE BEAM RETROFIT)			507			
519	11101	103	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN		63		40		2 (11/19)
606	13001	325	FT	GUARDRAIL, TYPE 5, AS PER PLAN #				325		(3/19)
606	35121	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 3, AS PER PLAN #				4		(3/19)
626	110	10	EACH	BARRIER REFLECTOR, TYPE 2 (BIDIRECTIONAL) #				10		
843	50000	103	SF	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR			63		40	2 (11/19)
848	10100	756	SY	LATEX MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION (T=2.25")	134		622			
848	20000	756	SY	SURFACE PREPARATION USING HYDRODEMOLITION (T=1.0")	134		622			
848	30100	48	CY	LATEX MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY	9		39			
848	50000	60	SY	HAND CHIPPING	60					
848	50100	LS		TEST SLAB				LS		


- ROADWAY ITEMS INCLUDED WITH STRUCTURE ITEMS AND CARRIED TO GENERAL SUMMARY AND PLACED UNDER ROADWAY, PAVEMENT OR TRAFFIC CONTROL SECTIONS.

NOTE: FOR SHEET #, THE FIRST DIGIT IS THE BRIDGE PLAN SHEET NUMBER, THE FOLLOWING NUMBERS IN PARENTHESES ARE THE OVER ALL PLAN SHEET NUMBER.

ESTIMATED QUANTITIES (CARRIED TO GENERAL SUMMARY)										
ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	APP. SLAB	ABUT.	SUPER.	GEN.	PIER	SHEET #
ALL-30-9.268L										
202	23500	424	SY	WEARING COURSE REMOVED (T=1.75")						135
409	30000	80	FT	SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS						80
512	10050	12	SY	SEALING OF CONCRETE SURFACES (NONEPOXY)						12
517	75600	150	FT	DEEP BEAM BRIDGE RETROFIT RAILING						147
SPECIAL	51822300	130	FT	STEEL DRIP STRIP						130
519	11101	154	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN						154
843	50000	154	SF	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR						154
848	10100	424	SY	LATEX MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION (T=2.75")	135		289			
848	20000	424	SY	SURFACE PREPARATION USING HYDRODEMOLITION (T=1.0")	135		289			
848	30100	32.5	CY	LATEX MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY	10.4		22.1			
848	50000	64	SY	HAND CHIPPING	55		9			
848	50100	LS		TEST SLAB						LS
848	50200	1	CY	FULL-DEPTH REPAIR						1
ALL-30-9.306R										
202	23500	424	SY	WEARING COURSE REMOVED (T=1.75")						135
409	30000	80	FT	SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS						80
517	75600	150	FT	DEEP BEAM BRIDGE RETROFIT RAILING						147
SPECIAL	51822300	130	FT	STEEL DRIP STRIP						130
848	10100	424	SY	LATEX MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION (T=2.75")	135		289			
848	20000	424	SY	SURFACE PREPARATION USING HYDRODEMOLITION (T=1.0")	135		289			
848	30100	32.5	CY	LATEX MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY	10.4		22.1			
848	50000	55	SY	HAND CHIPPING	55		9			
848	50100	LS		TEST SLAB						LS
848	50200	1	CY	FULL-DEPTH REPAIR						1
DEF-249-0.094										
202	23500	654	SY	WEARING COURSE REMOVED (T=1.25")						134
202	38000	325	FT	GUARDRAIL REMOVED #						325
202	38500	400	FT	BRIDGE RAILING REMOVED						400
202	47000	4	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED #						4
509	10000	5808	LB	EPOXY COATED STEEL REINFORCEMENT						5808
510	10001	1120	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN						1120
511	34448	25.2	CY	CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET)						25.2
516	14600	48	FT	STRUCTURAL JOINT OR JOINT SEALER MISC.: USING DOW CORNING 902					48	2 (11/19)
519	11101	26.5	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN					26.5	2 (11/19)
606	13001	325	FT	GUARDRAIL, TYPE 5, AS PER PLAN #						325
606	26501	2	EACH	ANCHOR ASSEMBLY, TYPE T, AS PER PLAN #						2
606	35001	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 1, AS PER PLAN #						4
609	23000	72	FT	COMBINATION CURB AND GUTTER, TYPE 4 #						72
626	00102	6	EACH	BARRIER REFLECTOR, TYPE 1 (BIDIRECTIONAL) #						6
626	00110	6	EACH	BARRIER REFLECTOR, TYPE 2 (BIDIRECTIONAL) #						6
843	50000	26.5	SF	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR						26.5
848	10100	654	SY	LATEX MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION (T=2.25")	134		520			
848	20000	654	SY	SURFACE PREPARATION USING HYDRODEMOLITION (T=1.0")	134		520			
848	30100	40.9	CY	LATEX MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY	8.4		32.5			
848	50000	45	SY	HAND CHIPPING	45					
848	50100	LS		TEST SLAB						LS
848	50200	1	CY	FULL-DEPTH REPAIR						1

ESTIMATED QUANTITIES
VARIOUS STRUCTURES

DESIGN AGENCY

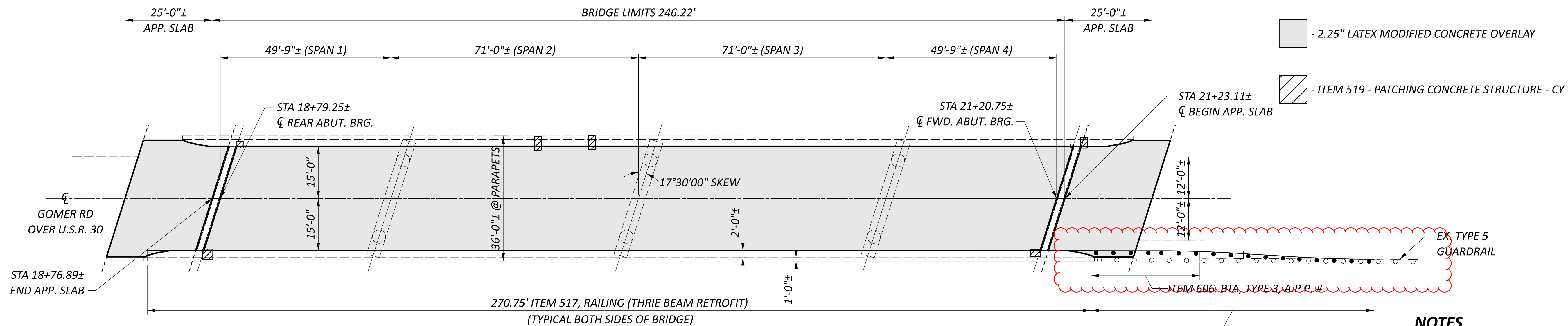


DESIGNER
KRH

REVIEWER
EJS 11-29-24

PROJECT ID
119043

SUBSET	TOTAL
2	9
SHEET	TOTAL
12	19



- 2.25" LATEX MODIFIED CONCRETE OVERLAY
- ITEM 519 - PATCHING CONCRETE STRUCTURE - CY

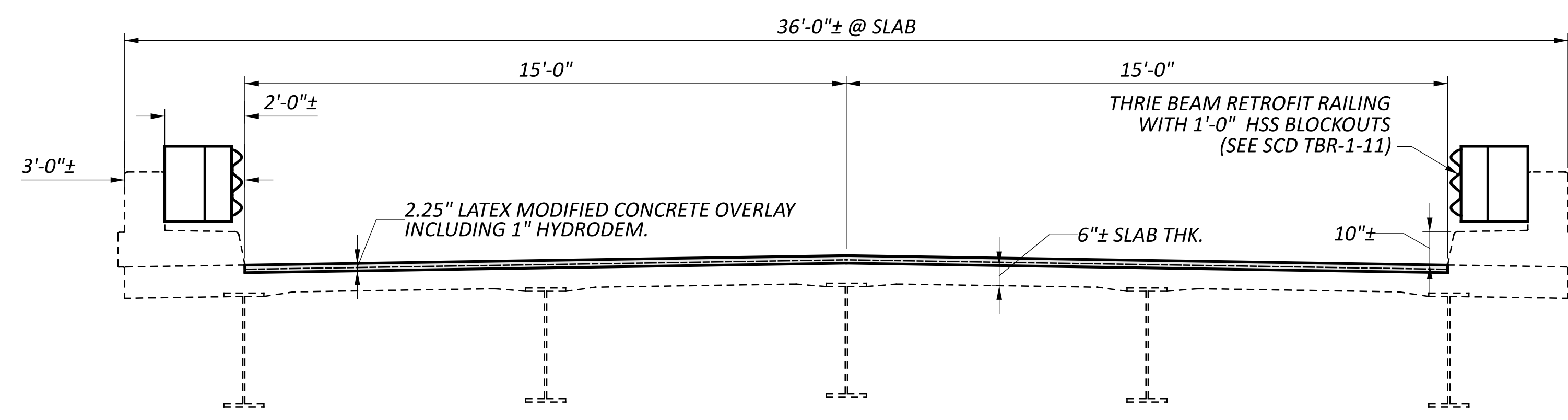
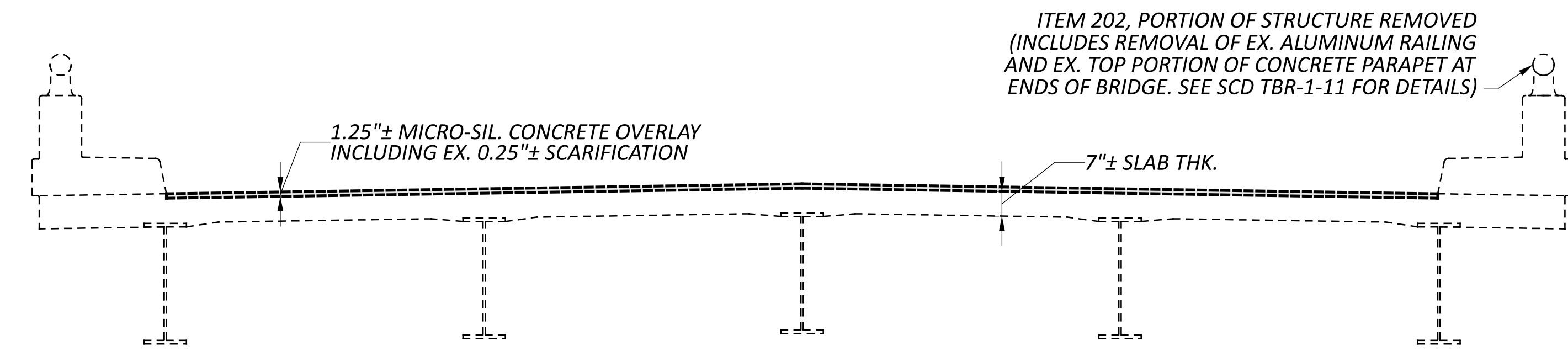
81.25' - ITEM 202, GUARDRAIL REMOVED #
 1 - ITEM 202, BTA REMOVED #
 81.25' - ITEM 606, GUARDRAIL, TYPE 5 #

NOTES

DETAILS SHOWN ARE TAKEN FROM EXISTING PLANS AND ARE FOR REFERENCE ONLY.

ALL DIMENSIONS CONSIDERED APPROXIMATE.

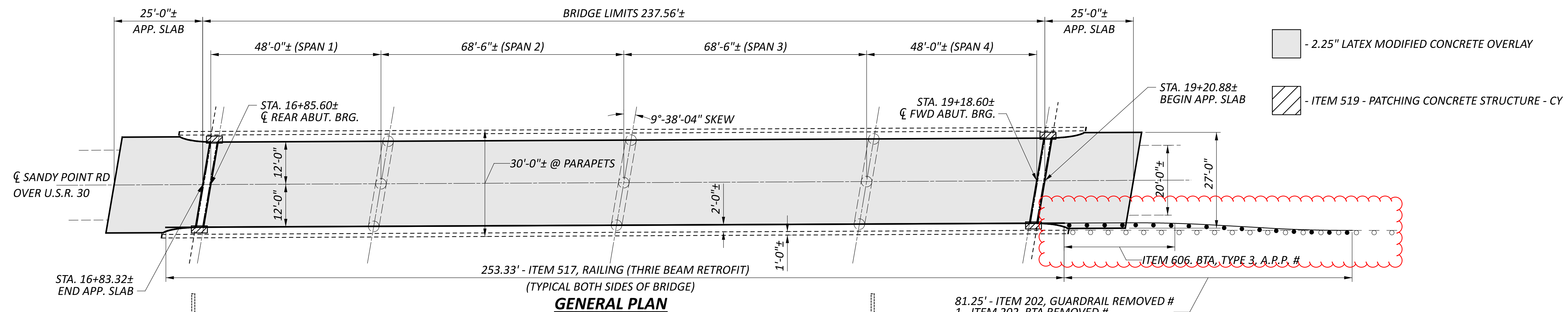
- ONE PROPOSED GUARDRAIL APPROACH AND TRANSITION DETAIL SHOWN, BUT APPLIES TO ALL FOUR GUARDRAIL APPROACHES AND TRANSITIONS.



PROPOSED WORK	
1.)	REMOVE EX. OVERLAY 1.25"± MICRO-SIL. CONC. HYDRODEM. 1"
2.)	OVERLAY THE DECK AND APPROACH SLABS WITH 2.25" OF LATEX MODIFIED CONCRETE
3.)	SEAL EXP. JOINTS - DOW CORNING
4.)	MINOR PATCHING ON SAFETY CURB
5.)	UPDATE RAILING SYSTEM

EXISTING STRUCTURE	
TYPE: 4 SPAN CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE.	
SPANS: 49'-9" , 71'-0" , 71'-0" , 49'-9"	
ROADWAY: 30'-0" F/F; 2' SAFETY CURBS	
SKEW: 17°-30'-00" L.F.	
WEARING SURFACE: 1" MONOLITHIC	
APPROACH SLABS: 25'-0" LONG (SPECIAL)	
ALIGNMENT: Tangent	
STRUCTURAL FILE NUMBER: 0200247	
DATE BUILT: 1969	
DISPOSITION: TO BE REHABILITATED	

SFN	
0200247	
DESIGN AGENCY	
DESIGNER	CHECKER
KRH	
REVIEWER	
XXX XXX	
PROJECT ID	
119043	
SUBSET	TOTAL
4	9
SHEET	TOTAL
14	19



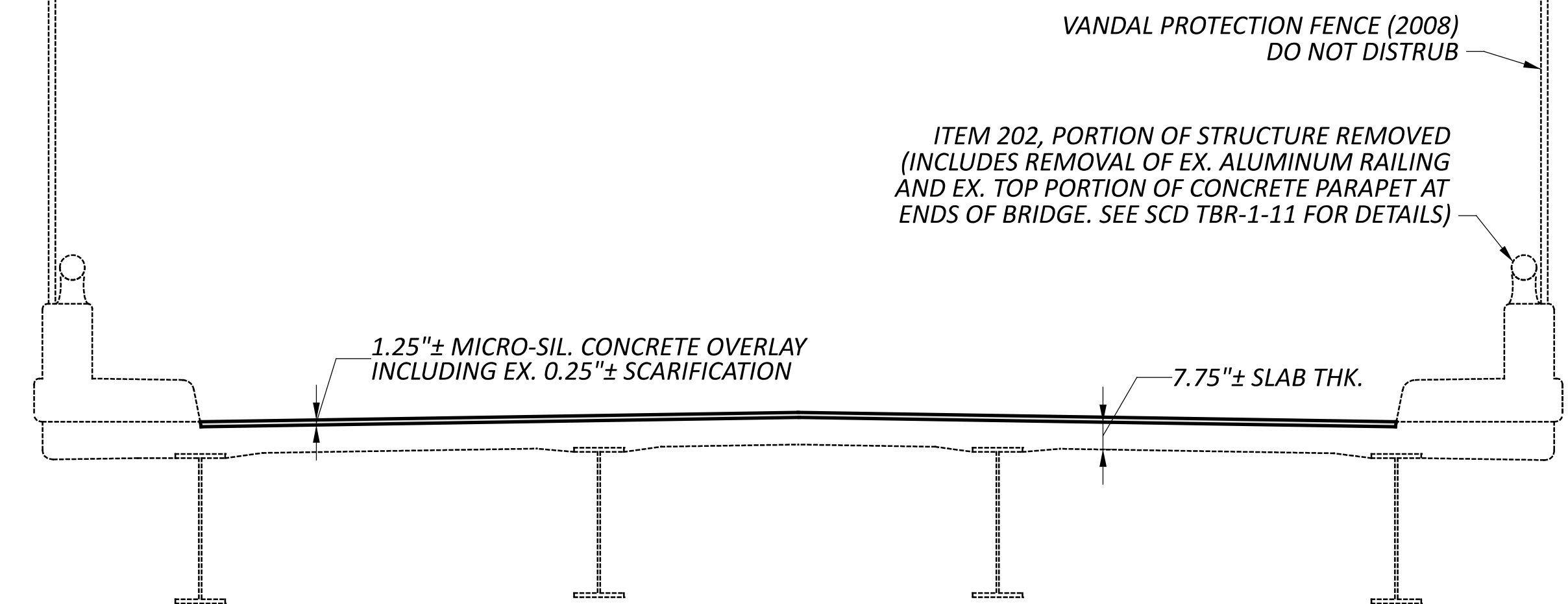
- 2.25" LATEX MODIFIED CONCRETE OVERLAY
- ITEM 519 - PATCHING CONCRETE STRUCTURE - CY

GENERAL PLAN

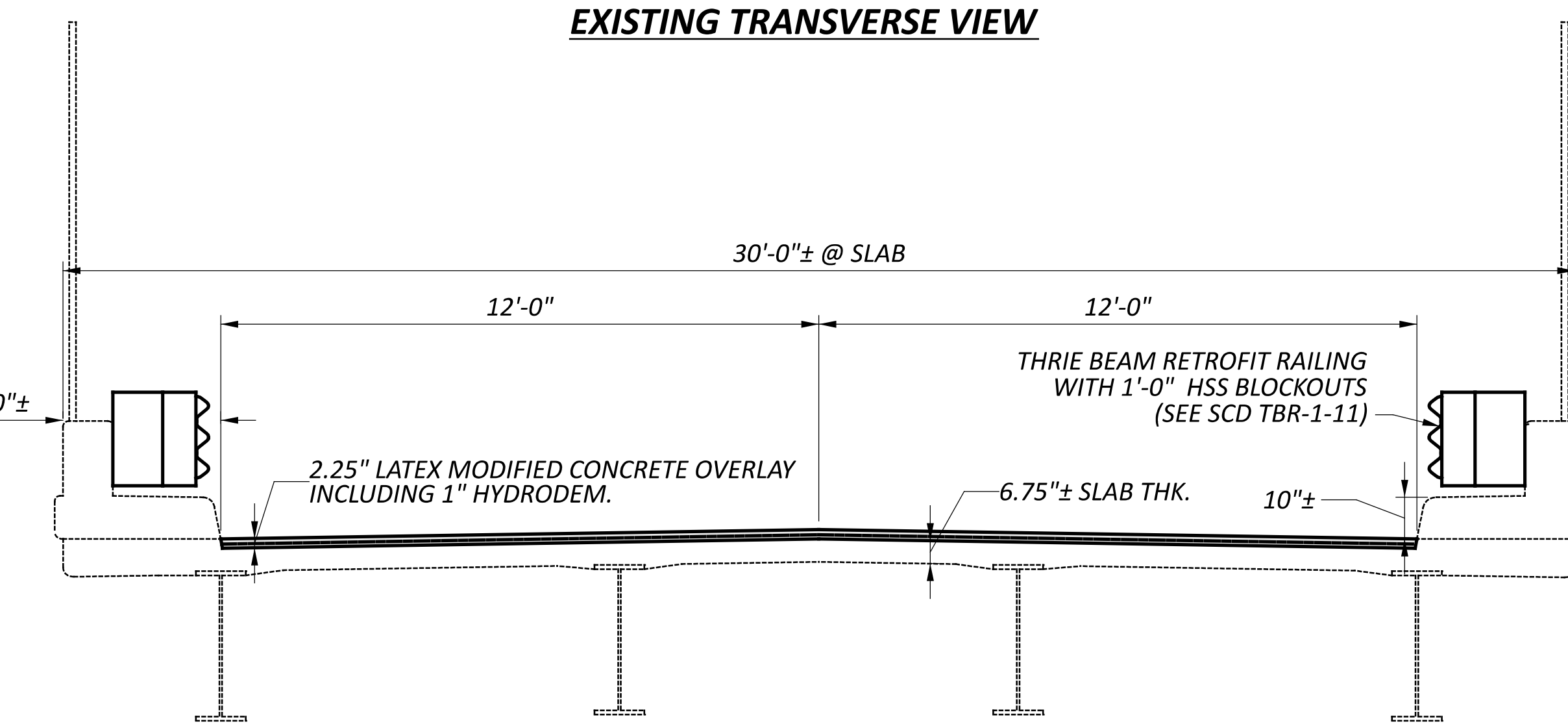
- 81.25' - ITEM 202, GUARDRAIL REMOVED #
- 1 - ITEM 202, BTA REMOVED #
- 81.25' - ITEM 606, GUARDRAIL, TYPE 5 #

NOTES

DETAILS SHOWN ARE TAKEN FROM EXISTING PLANS AND ARE FOR REFERENCE ONLY.
 ALL DIMENSIONS CONSIDERED APPROXIMATE.
 # - ONE PROPOSED GUARDRAIL APPROACH AND TRANSITION DETAIL SHOWN, BUT APPLIES TO ALL FOUR GUARDRAIL APPROACHES AND TRANSITIONS.




EXISTING TRANSVERSE VIEW

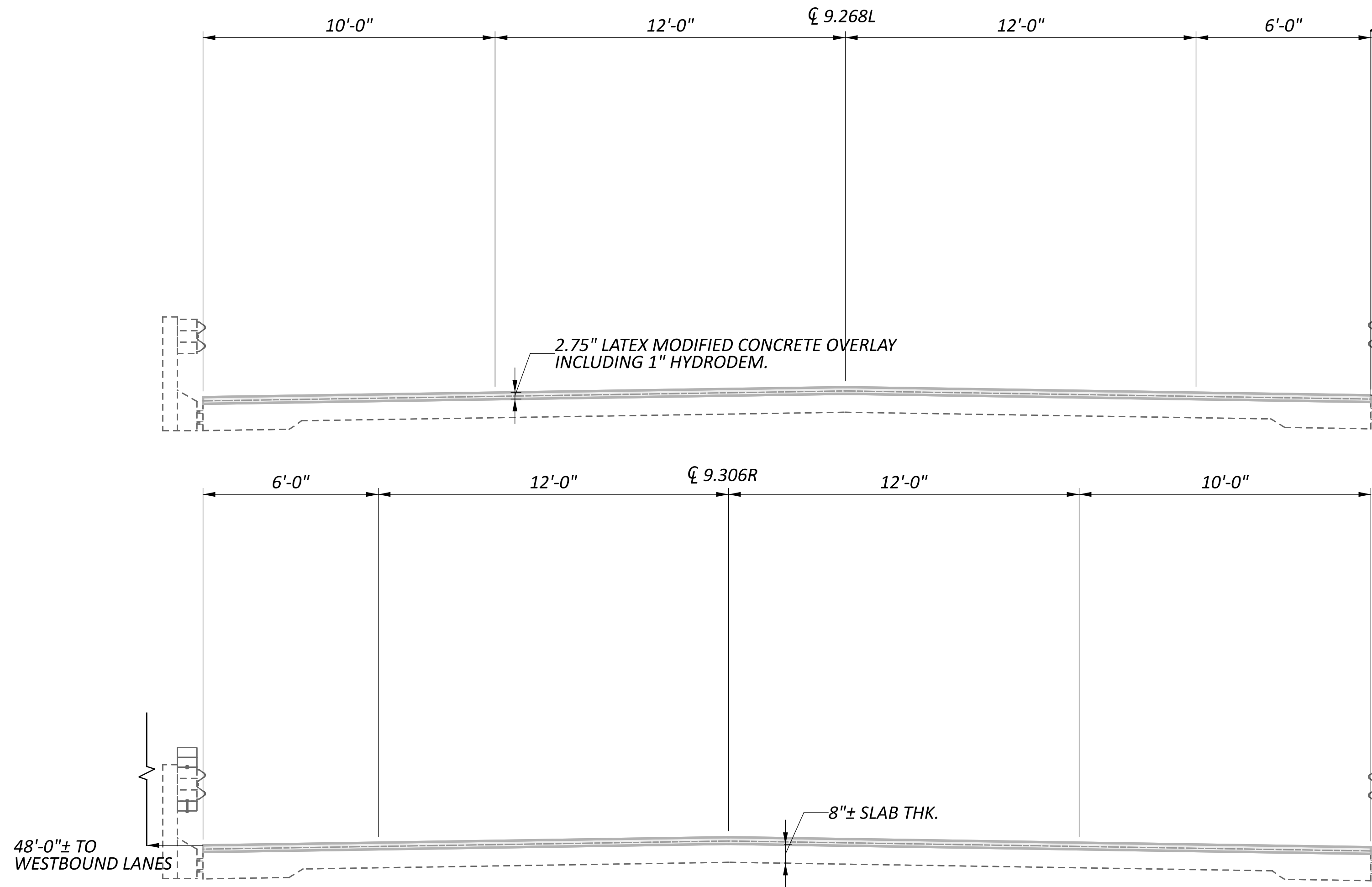


PROPOSED TRANSVERSE VIEW

PROPOSED WORK	
1.)	REMOVE 1.25"± MICRO-SIL. CONCRETE HYDRODEM. 1"
2.)	OVERLAY THE DECK AND APPROACH SLABS WITH 2.25" OF LATEX MODIFIED CONCRETE
3.)	SEAL EXP. JOINT - DOW CORNING
4.)	PATCH THE SAFETY CURB
5.)	PATCH AND SEAL THE LEFT REAR PIER COLUMN. (FURTHEST SW COLUMN)
6.)	UPDATE RAILING SYSTEM

EXISTING STRUCTURE	
TYPE: 4 SPAN CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE.	
SPANS: 48'-0" , 68'-6" , 68'-6" , 48'-0"	
ROADWAY: 24'-0" F/F; 2'-0" SAFETY CURBS	
SKEW: 9°-38'-04" L.F. TO TANGENT	
WEARING SURFACE: 1.25" MICRO-SIL. CONC.	
APPROACH SLABS: 25'-0" LONG (SPECIAL)	
ALIGNMENT: Tangent	
STRUCTURAL FILE NUMBER: 0200301	
DATE BUILT: 1969 (REHAB 1996)	
DISPOSITION: TO BE REHABILITATED	

SFN		0200301	
DESIGN AGENCY			
			
DESIGNER	CHECKER	REVIEWER	
KRH		XXX	XXX
PROJECT ID			
119043			
SUBSET	TOTAL		
5	9		
SHEET	TOTAL		
15	19		



PROPOSED TRANSVERSE VIEW

NOTES

DETAILS SHOWN ARE TAKEN FROM EXISTING PLANS AND ARE FOR REFERENCE ONLY.

ALL DIMENSIONS CONSIDERED APPROXIMATE.

PROPOSED WORK (ALL-30-9.267L)

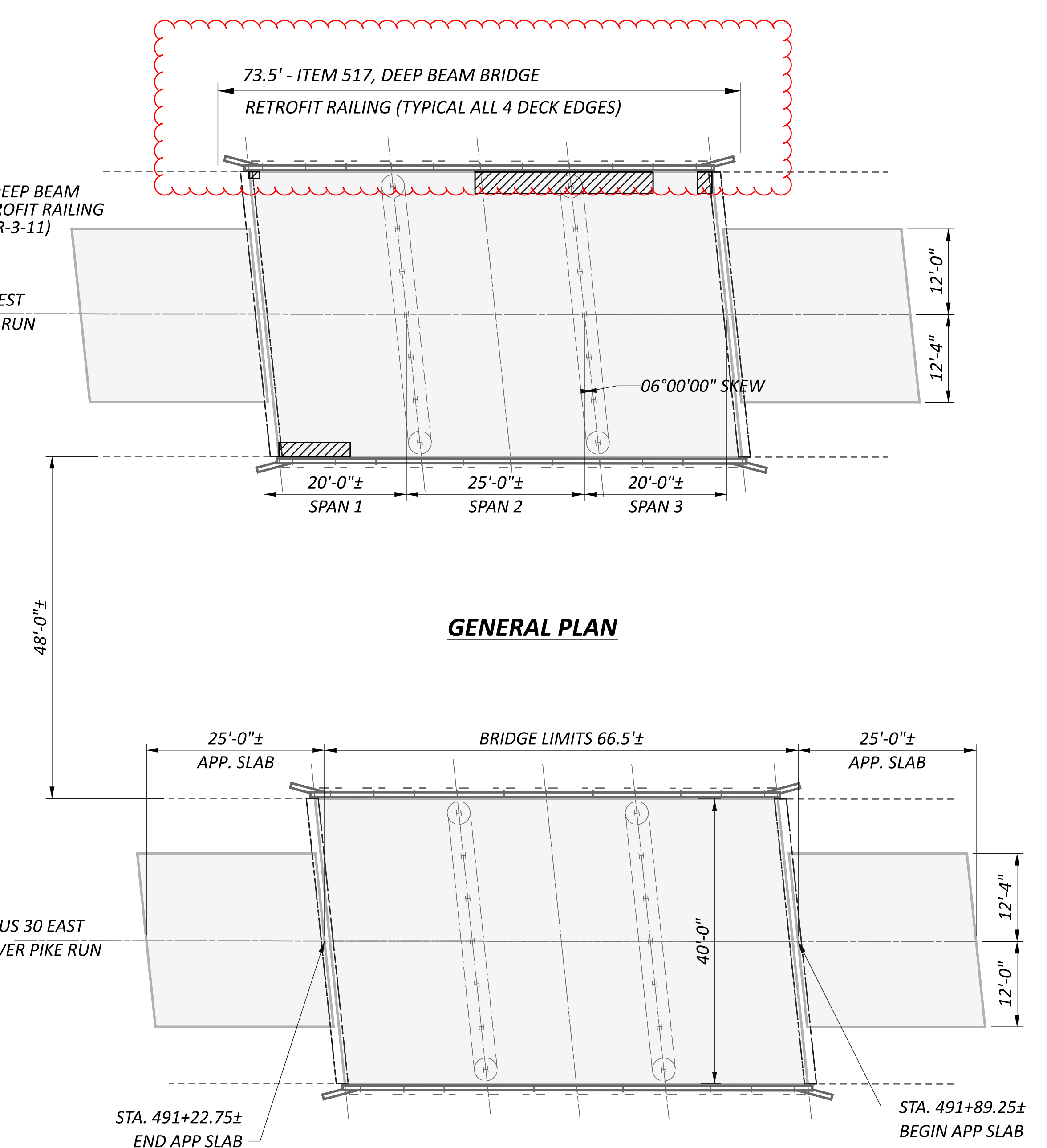
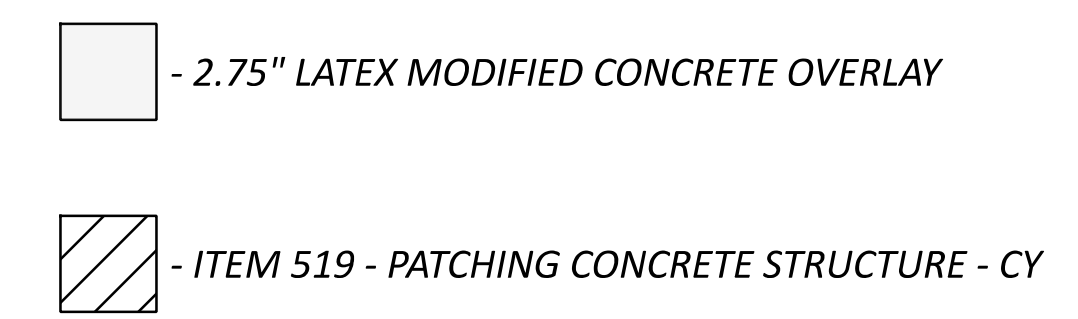
- 1.) REMOVE 1.75"± MICRO-SIL. CONCRETE HYDRODEM. 1"
- 2.) OVERLAY THE DECK AND APPROACH SLABS WITH 2.75" OF LATEX MODIFIED CONCRETE
- 3.) DEEP PATCHING ON DECK EDGES - SEAL
- 4.) REPLACE THE DRIP STRIP
- 5.) SAW AND SEAL THE JOINTS
- 6.) RETROFIT RAILING

PROPOSED WORK (ALL-30-9.306R)

- 1.) REMOVE 1.75"± MICRO-SIL. CONCRETE HYDRODEM. 1"
- 2.) OVERLAY THE DECK AND APPROACH SLABS WITH 2.75" OF LATEX MODIFIED CONCRETE
- 3.) PATCH DECK EDGES - SEAL
- 4.) SAW AND SEAL THE JOINTS
- 5.) RETROFIT RAILING

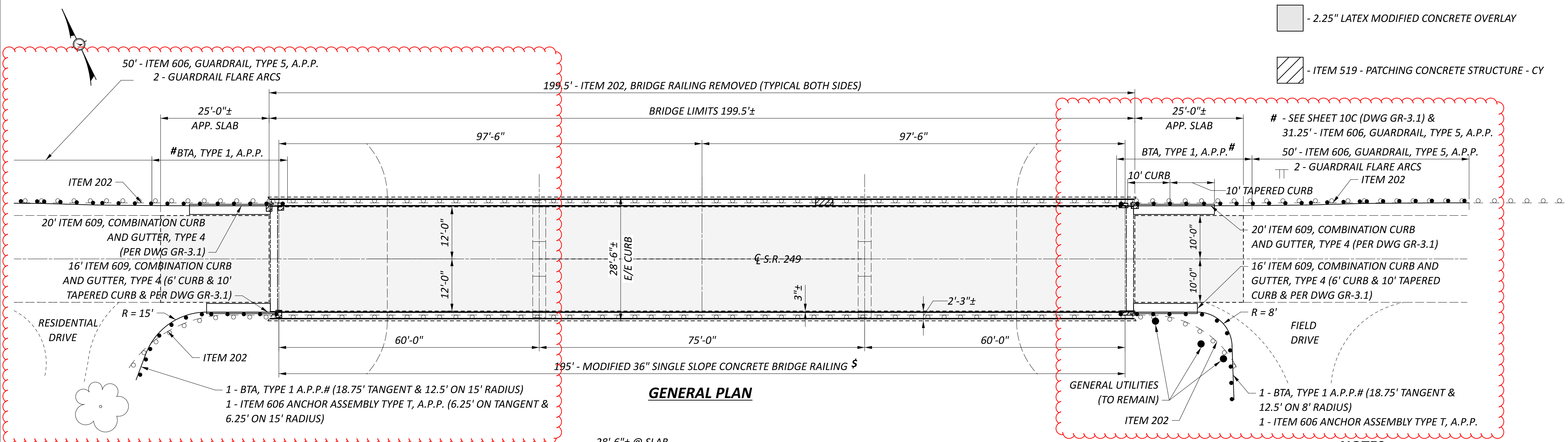
EXISTING STRUCTURES

TYPE: 3 SPAN CONTINUOUS REINFORCED CONCRETE SLAB ON CAPPED PILE SUBSTRUCTURE
 SPANS: 20'-0"±, 25'-0"±, 20'-0"±
 ROADWAY: 40'-0"± F/F GUARDRAIL
 SKEW: 6°-00'-00" L.F.
 WEARING SURFACE: 1.75" MICRO-SIL. CONCRETE
 APPROACH SLABS: 25'-0" LONG (STD. DWG. AS-1-67)
 ALIGNMENT: Tangent
 STRUCTURAL FILE NUMBER: LT. 0200336 RT. 0200360
 DATE BUILT: 1969 (REHAB. 1996)
 DISPOSITION: TO BE REHABILITATED

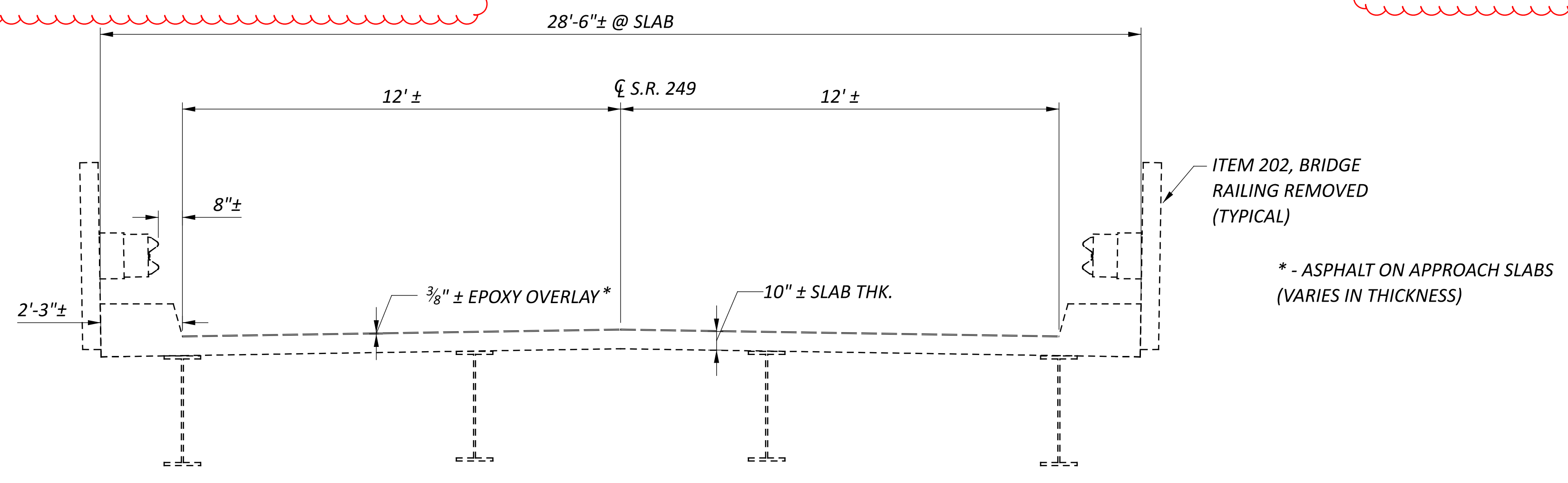


GENERAL PLAN

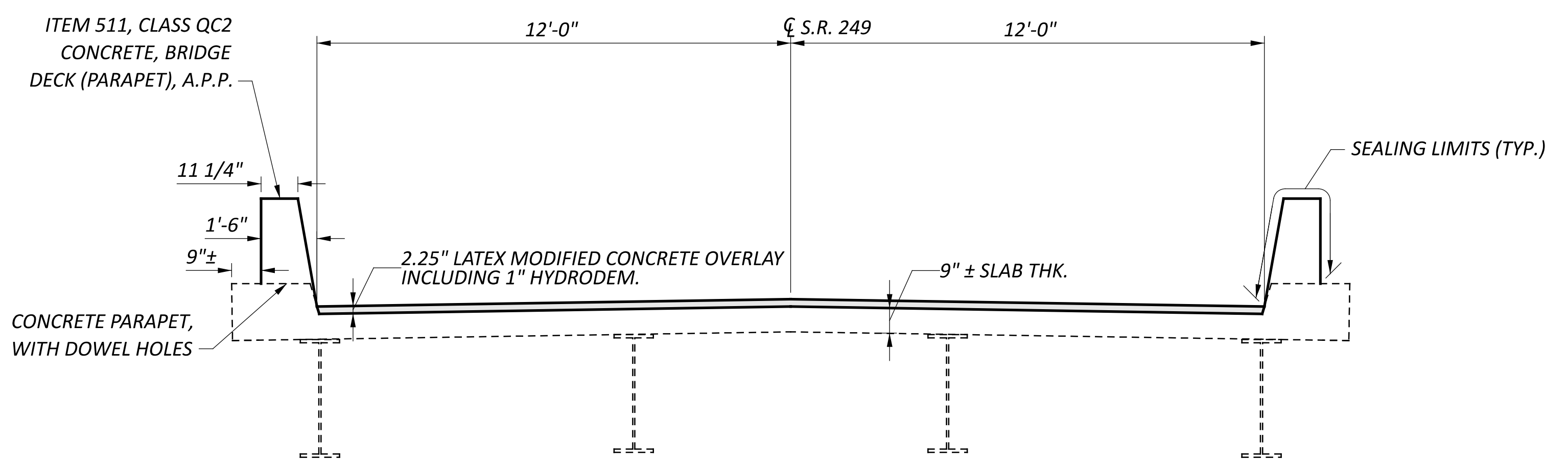
SFN 0200336/0200360	
DESIGN AGENCY STATE OF OHIO DEPARTMENT OF TRANSPORTATION	
DESIGNER KRH	CHECKER
REVIEWER XXX XXX	
PROJECT ID 119043	
SUBSET 5	TOTAL 9
SHEET 16	TOTAL 19



GENERAL PLAN



EXISTING TRANSVERSE VIEW



PROPOSED TRANSVERSE VIEW

- 2.25" LATEX MODIFIED CONCRETE OVERLAY
- ITEM 519 - PATCHING CONCRETE STRUCTURE - CY


- NOTES**
- # - SEE SHEET 10C (DWG GR-3.1) & 31.25' - ITEM 606, GUARDRAIL, TYPE 5, A.P.P.
 - 50' - ITEM 606, GUARDRAIL, TYPE 5, A.P.P.
 - 2 - GUARDRAIL FLARE ARCS
 - ITEM 202
 - 10' CURB
 - 10' TAPERED CURB
 - 20' ITEM 609, COMBINATION CURB AND GUTTER, TYPE 4 (PER DWG GR-3.1)
 - 16' ITEM 609, COMBINATION CURB AND GUTTER, TYPE 4 (6' CURB & 10' TAPERED CURB & PER DWG GR-3.1)
 - R = 8'
 - FIELD DRIVE
 - 1 - BTA, TYPE 1 A.P.P.# (18.75' TANGENT & 12.5' ON 8' RADIUS)
 - 1 - ITEM 606 ANCHOR ASSEMBLY TYPE T, A.P.P.
 - GENERAL UTILITIES (TO REMAIN)
 - ITEM 202

DETAILS SHOWN ARE TAKEN FROM EXISTING PLANS AND ARE FOR REFERENCE ONLY.

ALL DIMENSIONS CONSIDERED APPROXIMATE.

- PROPOSED WORK**
- 1.) REMOVE 1.25"± ASPHALT CONCRETE HYDRODEM. 1"
 - 2.) OVERLAY THE DECK AND APPROACH SLABS WITH 2.25" OF LATEX MODIFIED CONCRETE
 - 3.) MINOR PATCH AND SEAL SAFETY CURB
 - 4.) PATCH UNSOUND AREA OF ABUT. AND BACKWALL
 - 5.) EPOXY INJECT THE CRACKS
 - 6.) SEAL EXP. JOINTS - DOW CORNING
 - 7.) REMOVE AND REPLACE RAILING WITH CONCRETE PARAPET

- EXISTING STRUCTURE**
- TYPE: CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE
- SPANS: 60'-0"± 75'-0"± 60'-0"
- ROADWAY: 24'-0" F/F; 2'-3" CURBS
- SKEW: NONE
- WEARING SURFACE: 1.25"± ASPHALT CONCRETE
- APPROACH SLABS: 25'-0" LONG (SPECIAL)
- ALIGNMENT: Tangent
- STRUCTURAL FILE NUMBER: 2002280
- DATE BUILT: 1961
- DISPOSITION: TO BE REHABILITATED

SFN		2002280
DESIGN AGENCY		
		
DESIGNER	CHECKER	
KRH		
REVIEWER		XXX
PROJECT ID		119043
SUBSET	TOTAL	
7	9	
SHEET	TOTAL	
17	19	