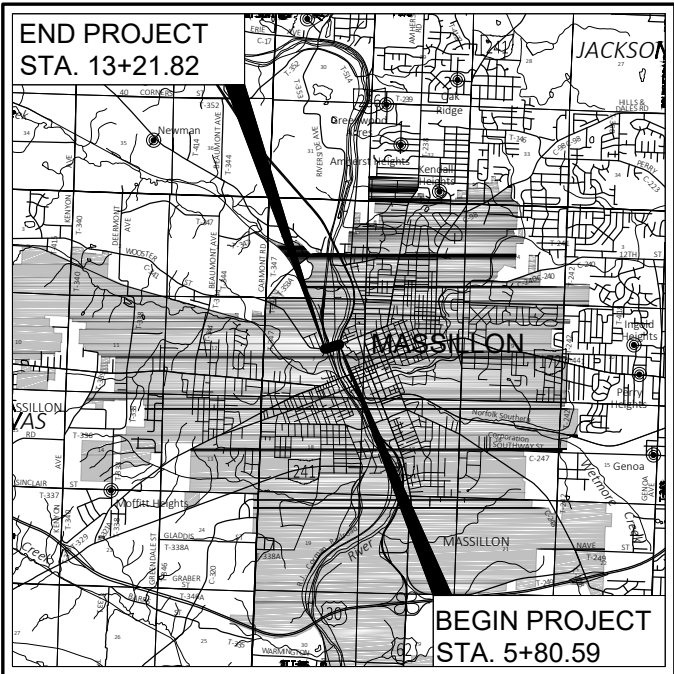


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LOCATION MAP

LATITUDE: 40°47'58" N LONGITUDE: 81°31'54" W



PORTION TO BE IMPROVED	
INTERSTATE HIGHWAY	
FEDERAL ROUTES	
STATE ROUTES	
COUNTY & TOWNSHIP ROADS	
OTHER ROADS	

DESIGN DESIGNATION

CURRENT ADT (2024)	6,100
DESIGN YEAR ADT (2044)	6,700
DESIGN HOURLY VOLUME (2044)	640
DIRECTIONAL DISTRIBUTION	52%
TRUCKS (24 HOUR B&C)	4%
DESIGN SPEED	25 MPH
LEGAL SPEED	25 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
05 MAJOR COLLECTOR (URBAN)	
NHS PROJECT	NO

DESIGN EXCEPTIONS

NONE REQUIRED

UNDERGROUND UTILITIES

Contact Two Working Days
Before You Dig


Before You Dig

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

PLAN PREPARED BY:
AECOM
564 WHITE POND DRIVE
AKRON, OHIO 44320-1100
(330) 836-9111

ENGINEERS SEAL:

SIGNED: _____
DATE: _____

ENGINEERS SEAL:

SIGNED: _____
DATE: _____

STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-1.1	7/28/00	MT-101.60	4/21/23	AS-1-15	1/20/23	800	7/19/24
BP-2.2	1/15/21	MT-101.90	7/17/20	AS-2-15	7/21/23	843	1/19/24
BP-3.1	1/19/24	MT-103.10	1/21/22			844	4/20/18
BP-5.1	7/15/22	MT-110.10	7/19/13	EXJ-4-87	1/19/24		
BP-7.1	1/19/24						
		TC-41.20	10/18/13	GSD-1-19	1/15/21		
MGS-2.1	1/19/18	TC-41.30	4/21/23				
MGS-3.1	1/19/18	TC-41.40	10/18/13	SBR-3-20	7/21/23		
MGS-3.2	1/18/13	TC-42.20	10/18/13				
MGS-4.2	7/19/13	TC-52.10	10/18/13	SICD-1-21	1/19/24		
MGS-5.3	7/15/16	TC-52.20	1/15/21	SICD-2-14	1/15/21		
		TC-61.30	7/19/13				
DM-1.1	7/17/20	TC-71.10	4/21/23				
		TC-74.10	7/21/23				
HL-20.14	4/17/20						
HL-50.21	7/15/22	RM-4.5	7/21/17				

STARK COUNTY

CHERRY ROAD NW BRIDGES PE-7-20 (SFN 7631987) & PE-7-21 (SFN 7632037) REHABILITATION

CITY OF MASSILLON
STATE OF OHIO

INDEX OF SHEETS:

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PLAN AND PROFILE (THIRD STREET)	15
CROSS SECTIONS (THIRD STREET)	16 - 17
INTERSECTION DETAILS	18 - 19
TRAFFIC CONTROL	20
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PE-7-20 - RIVER BRIDGE	21 - 60
PE-7-21 - RAILROAD BRIDGE	61 - 89
STRUCTURE FOUNDATION EXPLORATION	90 - 92

PROJECT DESCRIPTION

REHABILITATION OF BRIDGE NOS. PE-7-20 (SFN 7631987) CHERRY RD NW OVER TUSCARAWAS RIVER AND PE-7-21 (SFN 7632037) CHERRY RD NW OVER NORFOLK SOUTHERN AND RJ CORMAN RAILROADS. THE PROJECT WILL WIDEN AND RESURFACE THIRD ST AND REPLACE THE PAVEMENT WITHIN THE INTERSECTION OF THIRD ST AND CHERRY RD NW.

PROJECT EARTH DISTURBED AREA (EDA):	0.58 ACRES
ESTIMATED CONTRACTOR EDA:	0.125 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	0.71 ACRES
<1 ACRE EPA NOI NOT REQUIRED	

2023 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

MAINTENANCE OF TRAFFIC

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT DE-TOURS WILL BE PROVIDED AS INDICATED ON SHEET 7.

APPROVED _____
DATE _____ STARK COUNTY ENGINEER

FEDERAL PROJECT NO.

E240525

PID NO.

121152

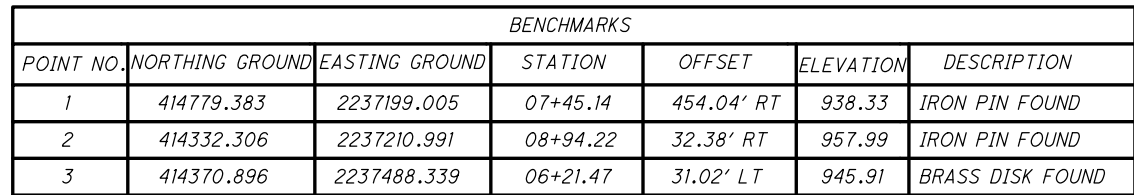
CONSTRUCTION PROJECT NO.

N/A

STA CHERRY
RD BRIDGES

CALCULATED	STO	 HORIZONTAL SCALE IN FEET	
CHECKED	JEL		

**STA CHERRY
RD BRIDGES**



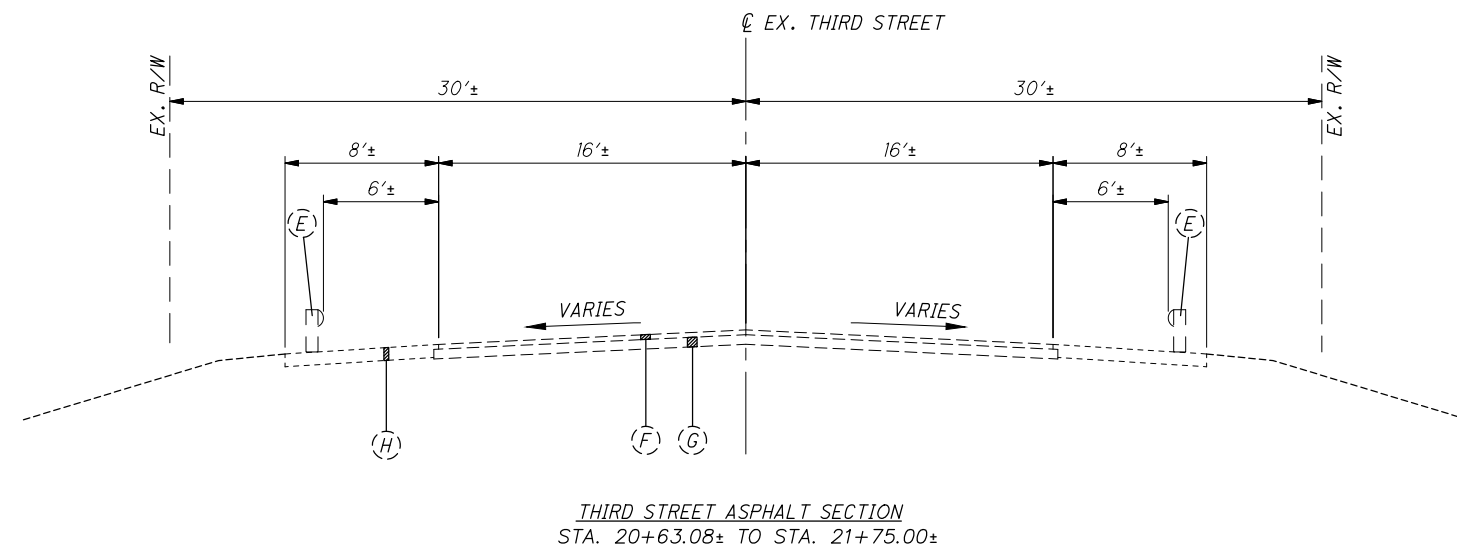
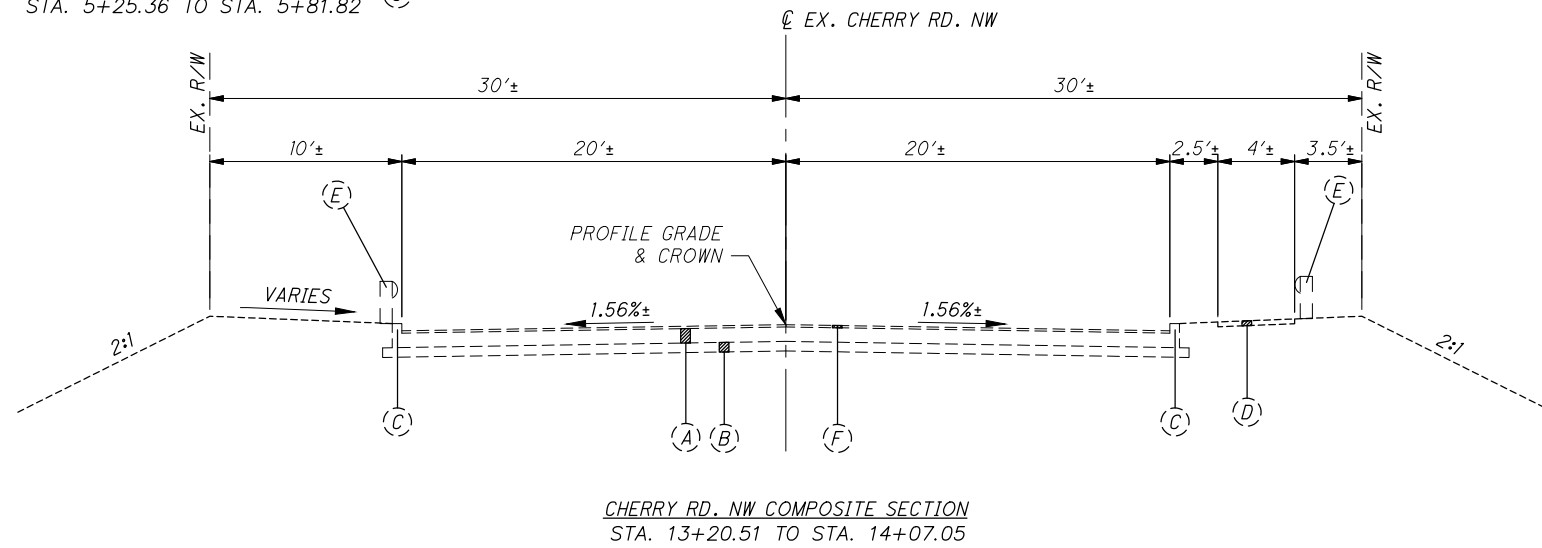
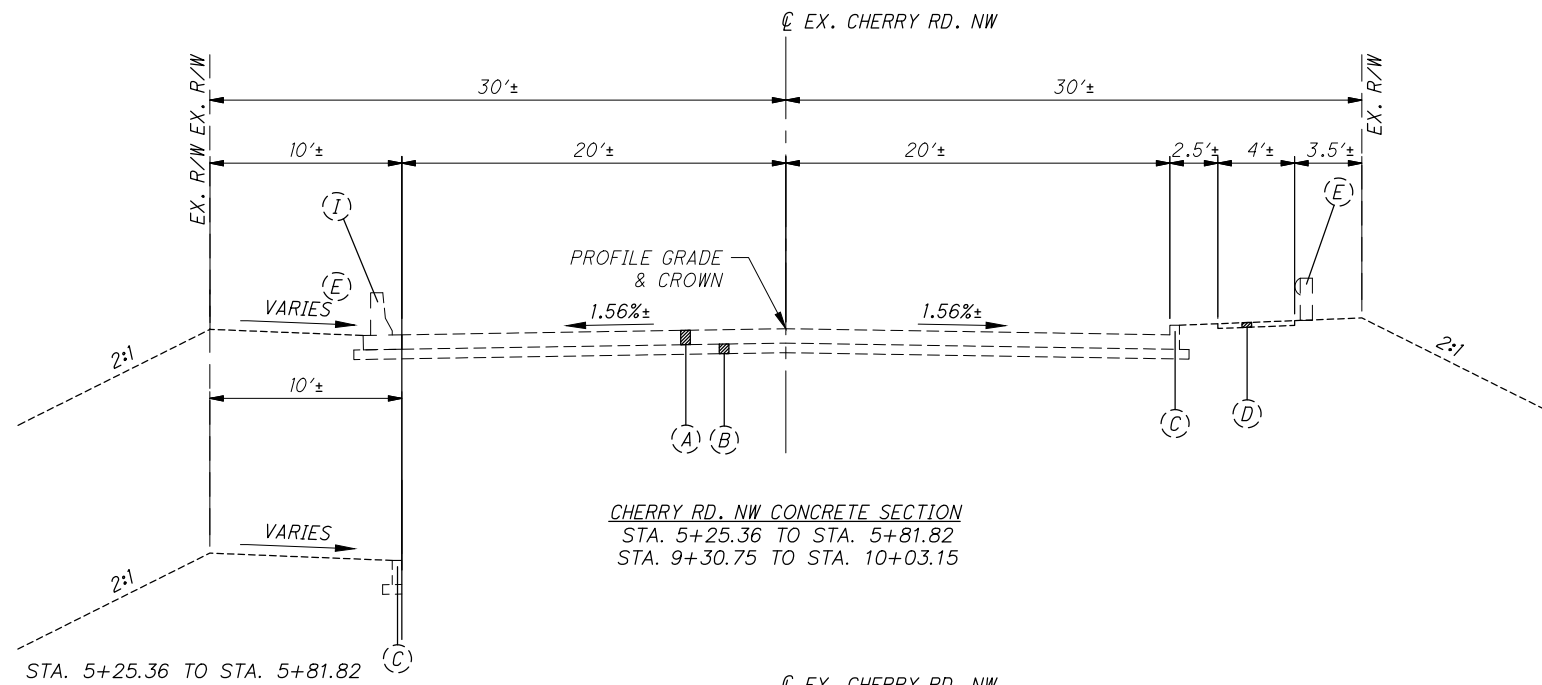
DESIGN SPEED BY STREET	
STREET NAME	DESIGN SPEED (MPH)
3RD STREET	25
CHERRY ROAD NW	25

NOTE:
THERE ARE NO EXISTING LANDSCAPED AREAS WITHIN THE WORK LIMITS

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EXISTING LEGEND

- (A) 9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT
- (B) 6" SUBBASE
- (C) CURB
- (D) 4" CONCRETE WALK
- (E) GUARDRAIL
- (F) ASPHALT CONCRETE
- (G) 6" BITUMINOUS AGGREGATE BASE
- (H) 8" AGGREGATE BASE
- (I) CONCRETE BARRIER



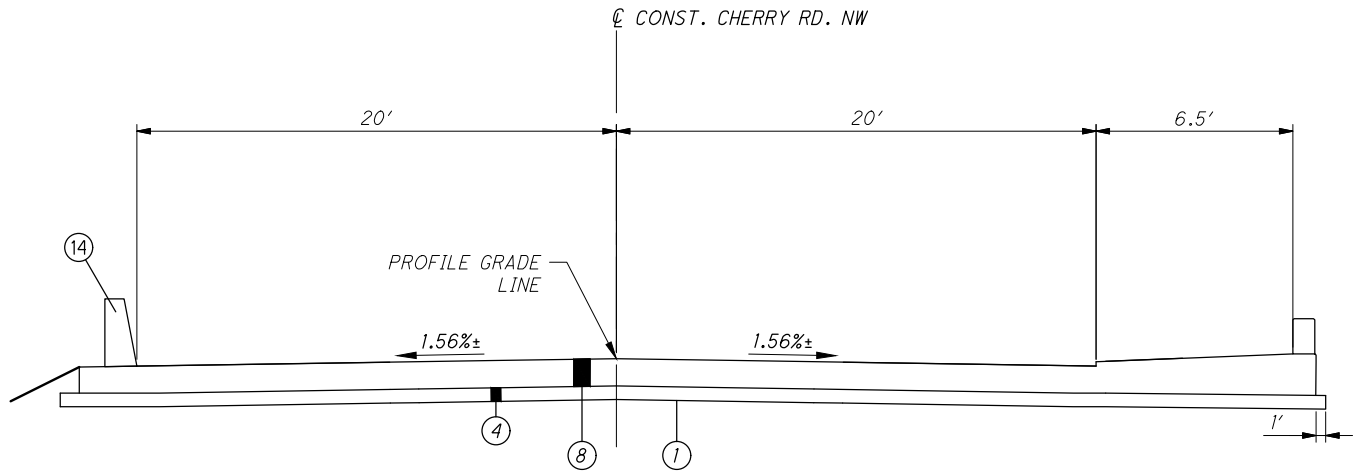
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EXISTING LEGEND

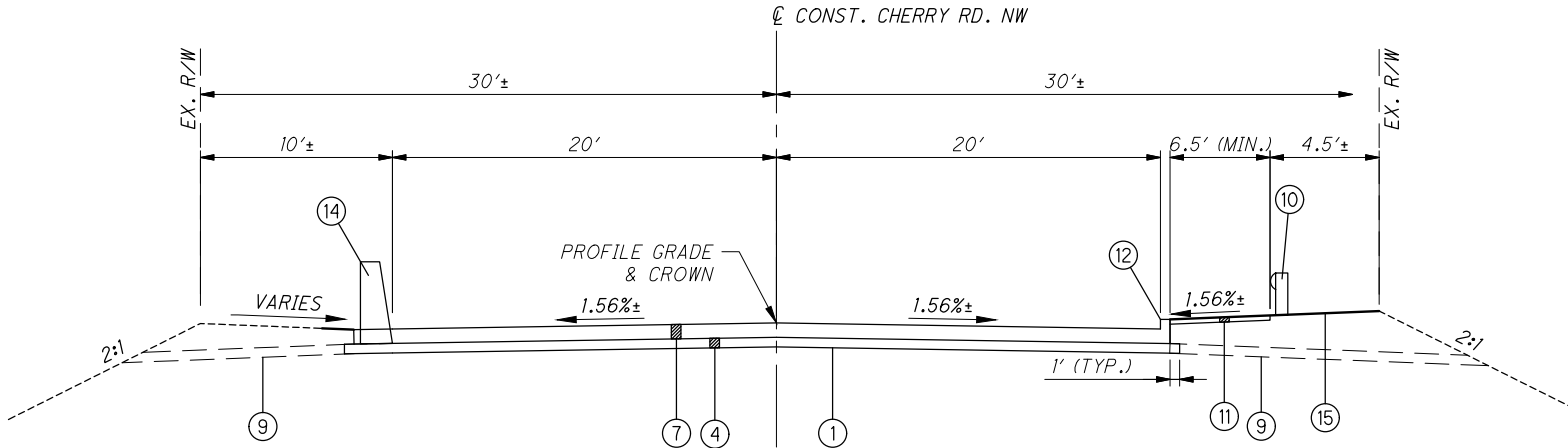
- (A) 9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT
- (B) 6" SUBBASE
- (C) CURB
- (D) 4" CONCRETE WALK
- (E) GUARDRAIL
- (F) ASPHALT CONCRETE
- (G) 6" BITUMINOUS AGGREGATE BASE
- (H) 8" AGGREGATE BASE
- (I) CONCRETE BARRIER

PROPOSED LEGEND

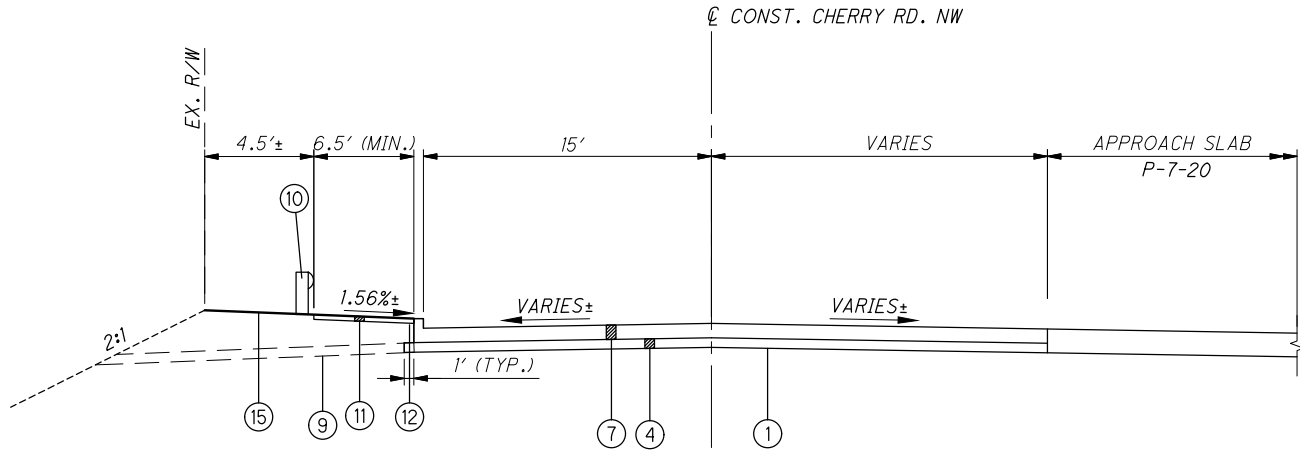
- ① ITEM 204 - SUBGRADE COMPACTION
- ② ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE [T=3"]
- ③ ITEM 301 - ASPHALT CONCRETE BASE, (449), PG64-22 [T=7"]
- ④ ITEM 304 - AGGREGATE BASE [T=6"]
- ⑤ ITEM 407 - TACK COAT
- ⑥ ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22 (3" PLACED IN TWO EQUAL LIFTS OF 1.5")
- ⑦ ITEM 452 - 9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P
- ⑧ ITEM 526 - REINFORCED CONCRETE APPROACH SLABS [T=15"]
- ⑨ ITEM 605 - AGGREGATE DRAINS
- ⑩ ITEM 606 - GUARDRAIL, TYPE MGS
- ⑪ ITEM 608 - 4" CONCRETE WALK
- ⑫ ITEM 609 - CURB, TYPE 2-A
- ⑬ ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 2, AS PER PLAN [T=10"]
- ⑭ ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D
- ⑮ ITEM 659 - SEEDING AND MULCHING



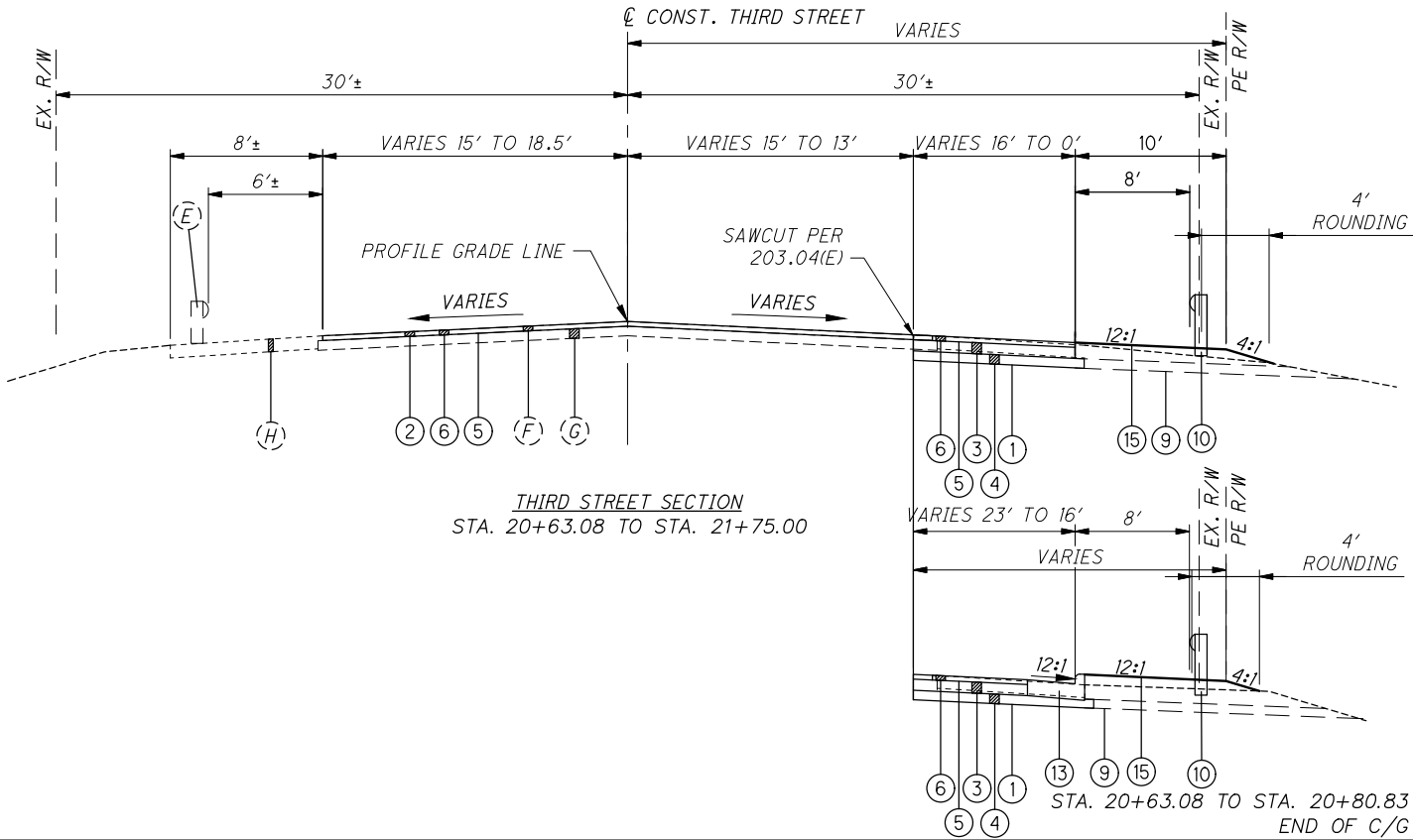
APPROACH SLAB TYPICAL SECTION
STA. 5+82.82 TO STA. 6+07.82
STA. 9+05.82 TO STA. 9+30.82
STA. 10+03.13 TO STA. 10+28.08
STA. 12+94.82 TO STA. 13+19.83



CHERRY RD. NW CONCRETE SECTION
STA. 9+33.02 TO STA. 10+01.14



THIRD STREET SECTION
STA. 19+93.17 TO STA. 20+63.08



THIRD STREET SECTION
STA. 20+63.08 TO STA. 21+75.00

PROPOSED TYPICAL SECTIONS

STA CHERRY
RD BRIDGES

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GENERAL

ROUNDING
THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLY TO ALL CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN.

UTILITIES
LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

<u>ELECTRIC</u> FIRST ENERGY 19101 WEST MARKET ST., AKRON, OHIO 44313 ATTN: BRINTON MCINTOSH 330.436.4202	<u>GAS</u> DOMINION ENERGY 320 SPRINGSIDE DR., SUITE 320 AKRON, OHIO 44333 ATTN: DOUGLAS H. RIEBEL 330.664.2409
--	--

<u>COMMUNICATIONS</u> AT&T 50 WEST BOWERY STREET, FLOOR 6 AKRON, OHIO 44308 ATTN: STEVE HYLTON 330.631.7485	<u>SANITARY</u> CITY OF MASSILLON 151 LINCOLN WAY EAST MASSILLON, OHIO 44646 ATTN: GREGORY A. MCCUE 330.830.1722
--	---

WATER
AQUA AMERICA
870 THIRD STREET NW
MASSILLON, OHIO 44647
ATTN: DONALD L. SNYDER
330.832.5764 EXT. 50666

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

THE CONTRACTOR SHALL USE THE FOLLOWING PROCEDURE AT EACH LOCATION WHERE WORK IS PERFORMED, IN ACCORDANCE WITH SECTIONS 105.07 AND 107.16 IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS.

THE CONTRACTOR SHALL NOTIFY THE OHIO811 SERVICE AND ALL NON REGISTERED UTILITY OWNERS AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION IN ALL AREAS.
OHIO811 1-800-362-2764

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, DO NOT OPERATE POWER-OPERATED CONSTRUCTION-TYPE DEVICES BETWEEN THE HOURS OF 7:00 PM AND 7:00 AM. IN ADDITION, DO NOT OPERATE AT ANY TIME ANY DEVICE IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

SURVEY PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET 2 OF THE PLANS FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

USE THE FOLLOWING PROJECT CONTROL, VERTICAL POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

PROJECT CONTROL

POSITIONING METHOD: STATIC GNSS
MONUMENT TYPE: A

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD88
GEOID: GEOID18

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD83(CORS)
ELLIPSOID: GRS80
MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: OHIO STATE PLANE - NORTH ZONE
COMBINED SCALE FACTOR: 1.00009205
ORIGIN OF COORDINATE SYSTEM: 0,0

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH CMS 623.

UNITS ARE IN U.S. SURVEY FEET.

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.

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.

PAVEMENT

CONTRACTION AND/OR EXPANSION JOINTS

ALTHOUGH SPECIFIC LOCATIONS OF CERTAIN CONTRACTION AND EXPANSION JOINTS HAVE BEEN DETAILED ON THIS PLAN, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. IN ALL CASES, THE PROVISION OF EXPANSION JOINTS AT ALL MAJOR STRUCTURES INCLUDING THE MAXIMUM SPACING BETWEEN CONTRACTION JOINTS IS IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP-2.2 AND THE SPECIFICATIONS.

ENVIRONMENTAL

ENDANGERED BAT HABITAT REMOVAL

THIS PROJECT IS LOCATED WITHIN THE KNOWN HABITAT RANGES OF THE FEDERALLY LISTED AND PROTECTED INDIANA BAT, AND NORTHERN LONG-EARED BAT. NO TREES SHALL BE REMOVED UNDER THIS PROJECT FROM APRIL 1 THROUGH SEPTEMBER 30. ALL NECESSARY TREE REMOVAL SHALL OCCUR FROM OCTOBER 1 THROUGH MARCH 31. THIS REQUIREMENT IS NECESSARY TO AVOID AND MINIMIZE IMPACTS TO THESE SPECIES AS REQUIRED BY THE ENDANGERED SPECIES ACT (ESA). FOR THE PURPOSES OF THIS NOTE, A TREE IS DEFINED AS: A LIVE, DYING, OR DEAD WOODY PLANT, WITH A TRUNK 3 INCHES OR GREATER IN DIAMETER AT A HEIGHT OF 4.5 FEET ABOVE THE GROUND SURFACE, AND WITH A MINIMUM HEIGHT OF 13 FEET.

ROADWAY

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A W-BEAM, BEAM SPLICE AS SHOWN IN AASHTO M 180-12, EXCEPT THE BEAM WASHERS ARE NOT TO BE USED. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

ITEM 606 – GUARDRAIL, TYPE MGS, AS PER PLAN

CONSTRUCT GUARDRAIL , TYPE MGS PER STANDARD CONSTRUCTION DRAWING (SCD) MGS-2.1 EXCEPT POSTS SHALL BE STEEL AND BLOCKOUTS SHALL BE PLASTIC.

ITEM 606 – ANCHOR ASSEMBLY, MGS TYPE E

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS FOR TYPE MGS GUARDRAIL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE J, ASTM D4956 TYPE XI REFLECTIVE SHEETING, PER CMS 730.193.

REFER TO THE MANUFACTURER'S INSTRUCTIONS REGARDING THE INSTALLATION OF, AND THE GRADING AROUND THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 31 INCHES FROM THE EDGE OF THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4 INCHES ABOVE THE GROUND LINE.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, MGS TYPE E, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

DRAINAGE

ITEM SPECIAL – MISCELLANEOUS METAL

EXISTING CASTINGS MAY PROVE TO BE UNSUITABLE FOR REUSE, AS DETERMINED BY THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE THE CASTINGS OF THE REQUIRED TYPE, SIZE AND STRENGTH (HEAVY OR LIGHT DUTY) FOR THE PARTICULAR STRUCTURE IN QUESTION. FURNISH MATERIALS PER 611 WITH PRIOR APPROVAL OF THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

ITEM SPECIAL, MISCELLANEOUS METAL 300 POUNDS

REPLACE EXISTING CASTINGS DAMAGED BY CONTRACTOR NEGLIGENCE, AS DETERMINED BY THE ENGINEER, AT THE EXPENSE OF THE CONTRACTOR.

ITEM 605 – AGGREGATE DRAINS

PROVIDE AGGREGATE DRAINS AT THE FOLLOWING LOCATIONS:

CHERRY ST. NW
STA. 9+39.84 LT.
STA. 9+71.14 LT.

THIRD ST.
STA. 20+77.36 RT.
STA. 21+27.36 RT.

ITEM 605, AGGREGATE DRAINS 4 EACH

TOTALS CARRIED TO GENERAL SUMMARY

EROSION CONTROL

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

ITEM 659, SOIL ANALYSIS TEST	2 EACH
ITEM 659, TOPSOIL	19 CU. YD.
ITEM 659, SEEDING AND MULCHING	200 SQ. YD.
ITEM 659, REPAIR SEEDING AND MULCHING	10 SQ. YD.
ITEM 659, INTER-SEEDING	10 SQ. YD.
ITEM 659, COMMERCIAL FERTILIZER	0.01 TONS
ITEM 659, LIME	0.05 ACRES
ITEM 659, WATER	0.01 M. GAL.

APPLY SEEDING AND MULCHING TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS

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ITEM 614. MAINTAINING TRAFFIC

THE MAKING OF THIS IMPROVEMENT REQUIRES CHERRY ROAD TO BE CLOSED TO THRU TRAFFIC. DETOUR SHALL BE PROVIDED AS SHOWN ON SHEET 7

THE CONTRACTOR SHALL MAINTAIN THE SIGNS ON THE DETOUR ROUTE, INCLUDING REPLACING MISSING, DAMAGED OR WORN SIGNS.

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.

ITEM 614. MAINTAINING TRAFFIC (TIME LIMITATION ON A DETOUR)

CHERRY ROAD NW WILL BE CLOSED FOR A PERIOD NOT TO EXCEED 240 CALENDAR DAYS, WHEN THROUGH TRAFFIC MAY BE DETOURED AS SHOWN ON SHEET 7. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF \$900 PER DAY FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

MAINTENANCE OF TRAFFIC SIGNAL/FLASHER INSTALLATION

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE TRAFFIC SIGNAL/FLASHER INSTALLATIONS WITHIN THE PROJECT UNDER THE FOLLOWING CONDITIONS:

1. EXISTING SIGNAL INSTALLATIONS WHICH THE PLANS REQUIRE THE CONTRACTOR TO ADJUST, MODIFY, ADD ONTO OR REMOVE, OR WHICH THE CONTRACTOR ACTUALLY ADJUSTS, MODIFIES OR OTHERWISE DISTURBS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ENTIRE INSTALLATION (AT AN INTERSECTION) FROM THE TIME THE OPERATIONS FIRST DISTURB THE INSTALLATION HAS BEEN SUBSEQUENTLY REMOVED OR MODIFIED AND THE WORK IS ACCEPTED.
2. NEW OR REUSED SIGNAL/FLASHER INSTALLATIONS OR DEVICES, INSTALLED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THESE FROM THE TIME OF INSTALLATION UNTIL THE WORK IS ACCEPTED.

DUE TO THE CLOSURE OF THE BRIDGE (WEST APPROACH), THE CONTRACTOR SHALL RECONFIGURE THE SIGNAL AT SR-21 AT CHERRY RD NW. ALL COST OF INSTALLING, MOVING, COVERING, AND REMOVAL OF ANY ITEM BELOW SHALL BE INCLUDED IN THE LUMP SUM PRICE FOR ITEM 614 -MAINTAINING TRAFFIC. THESE ARE THE FOLLOWING ITEMS THAT NEED TO BE RECONFIGURED:

- A. THE HEADS FOR WEST APPROACH SHALL BE COVERED AND THE LOADSWITCH THAT CONTROLS THIS APPROACH SHALL BE REMOVED IN THE CABINET.
- B. DISCONNECT LOOP DETECTORS FOR WEST APPROACH IN THE CABINET.
- C. EXISTING SIGNAL HEADS ON THE EAST APPROACH THAT ARE (R,Y,G) BALL 3 SECTION HEADS SHALL BE REPLACED WITH (R,Y,G) ARROW SECTION HEADS.
- D. THE EXISTING THROUGH LANE ON THE EAST APPROACH SHALL BE CONED OFF FROM THE STOP LINE TO THE RADIUS OF THE FREE FLOW RIGHT LANE. MAINTAIN AN AREA FOR THE RIGHT TURN FROM THE THROUGH LANE.
- E. THE HEADS FOR THE SOUTH APPROACH FOR THE LEFT TURN SHALL BE COVERED AND THE LOADSWITCH THAT CONTROLS THIS APPROACH PHASE SHALL BE REMOVED IN THE CABINET.
- F. DISCONNECT LOOP DETECTOR FOR SOUTH APPROACH LEFT TURN IN THE CABINET.
- G. ON SOUTH APPROACH, CONE OFF THE LEFT TURN LANE.
- H. ON NORTH APPROACH, ADD GROUND MOUNTED SIGN ON THE RIGHT SIDE OF APPROACH STATING NO RIGHT TURN (R3-1 36" X 36"). COORDINATE THE SIGN LOCATION WITH THE ENGINEER.
- I. THE CROSSWALK ON THE WEST APPROACH SHALL BE MAINTAINED. THE MOT CLOSURE SIGNS SHALL BE ON THE BRIDGE SIDE OF THE CROSSWALK TO MAINTAIN THE CROSSWALK.
- J. THE ORIGINAL CONFIGURATION SHALL BE RETURNED TO ORIGINAL STATE WHEN WEST APPROACH IS OPENED. THIS INCLUDES SIGNAL TIMING.
- K. THE SIGNAL TIMING SHALL BE CHANGED PER THE CHART BELOW:

MAINTENANCE OF TRAFFIC - THE LEVEE TRAIL

THE LEVEE TRAIL SHALL REMAIN OPEN THROUGHOUT THE DURATION OF THE PROJECT. THE CONTRACTOR SHALL IMPLEMENT ANY AND ALL SAFETY MEASURES REQUIRED TO KEEP PEDESTRIANS SAFE AND OUT OF THE WORK AREA INCLUDING BARRIERS, SIGNS, ETC. PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614 MAINTAINING TRAFFIC.

MAINTENANCE OF TRAFFIC SIGNAL/FLASHER INSTALLATION (CONT.)

INTERSECTION: SR 21 @ Cherry Rd NW										
MAINTAINING AGENCY: Massillon										
START UP START IN: YELLOW/RED FLASH TIME FOR: FLASH , ALL RED (SEC.): 9, 6 FIRST PHASE(S): 2, 6 COLOR DISPLAYED: GREEN	DUAL ENTRY: -		PHASES: 1,2,6,8							
	REST IN RED:		RING 1 -		RING 2 -					
	OVERLAP			A	B	C	D			
	PHASES			-	-	-	-			
INTERVAL OR FEATURE			CONTROLLER MOVEMENT NO.							
INTERSECTION MOVEMENT (PHASE)			1	2	3	4	5	6	7	8
DIRECTION			SBL	NB	-			SB	-	WB
MINIMUM GREEN (INITIAL) (SEC.)			10	30	-			30	-	10
ADDED INITIAL *(SEC./ACTUATION)			-	-	-	-	-	-	-	-
MAXIMUM INITIAL *(SEC.)			30	90	-			90	-	30
PASSAGE TIME (PRESET GAP) (SEC.)			3	3	-			3	-	3
TIME BEFORE REDUCTION *(SEC.)			-	-	-	-	-	-	-	-
MINIMUM GAP *(SEC.)			3	3	-			3	-	3
TIME TO REDUCE *(SEC.)			-	-	-	-	-	-	-	-
MAXIMUM GREEN I (SEC.)			-	-	-	-	-	-	-	-
MAXIMUM GREEN II (SEC.)			-	-	-	-	-	-	-	-
YELLOW CHANGE (SEC.)			4.3	5.2	-			5.2	-	3
ALL RED CLEARANCE (SEC.)			2.7	1	-			1	-	2.7
DELAYED GREEN (LPI) * (SEC.)			-	-	-	-	-	-	-	-
FLASHING YELLOW ARROW DELAY^ (SEC.)			-	-	-	-	-	7	-	7
WALK (SEC.)			-	-	-	-	-	18	-	18
PEDESTRIAN CLEARANCE (SEC.)			-	-	-	-	-	-	-	-
RECALL	MAXIMUM (ON/OFF)	-	-	-	-	-	-	-	-	-
	MINIMUM (ON/OFF)	-	ON	-	-	-	-	ON	-	-
	PEDESTRIAN (ON/OFF)	-	-	-	-	-	-	ON	-	-
MEMORY (ON/OFF)			-	-	-	-	-	-	-	-

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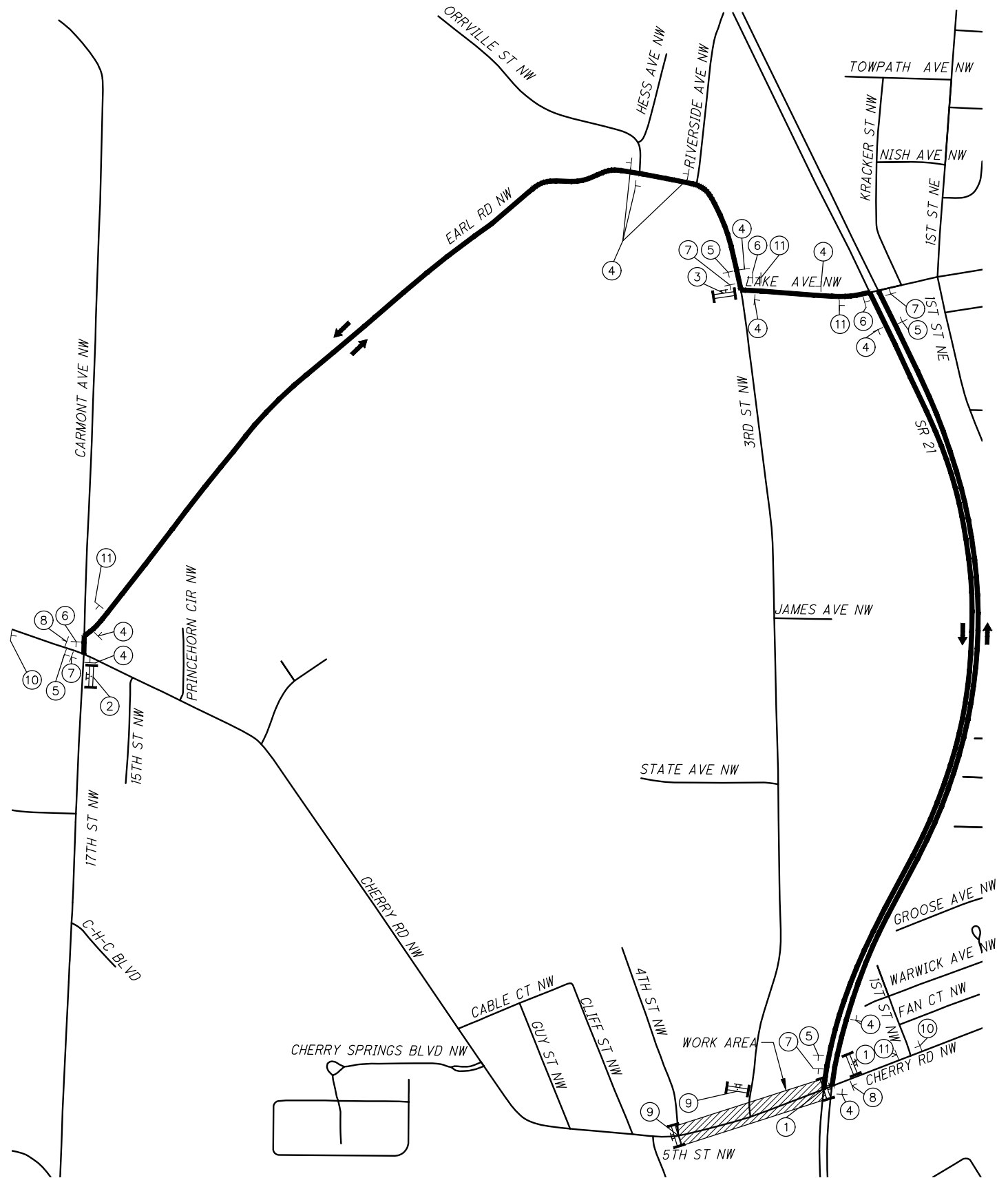
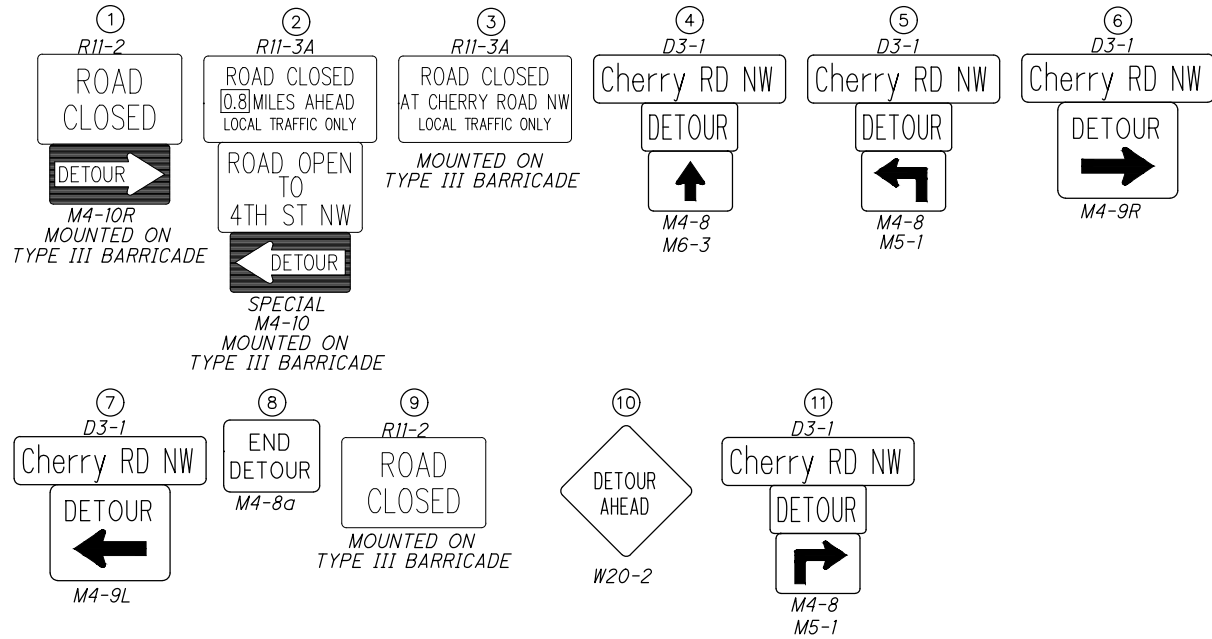
LEGEND:

WORK AREA

DETOUR ROUTE

TRAFFIC DIRECTION

TYPE III BARRICADE



CALCULATED
SIED
CHECKED
SIED

MAINTENANCE OF TRAFFIC
DETOUR MAP

STA CHERRY
RD BRIDGES

7
92

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SHEET NUM.													PART. CherryRd_ NW	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	CALCULATED JBE	CHECKED SGP
5	10	11	12																		
													LS	201	11000	LS		ROADWAY CLEARING AND GRUBBING		GENERAL SUMMARY	
		303											303	202	23000	303	SY	PAVEMENT REMOVED			
	317												317	202	30000	317	SF	WALK REMOVED			
	60												60	202	30700	60	FT	CONCRETE BARRIER REMOVED			
	200												200	202	32000	200	FT	CURB REMOVED			
	626												626	202	38000	626	FT	GUARDRAIL REMOVED			
													50	203	10000	50	CY	EXCAVATION			
													20	203	20000	20	CY	EMBANKMENT			
		656											656	204	10000	656	SY	SUBGRADE COMPACTION			
													2	204	45000	2	hour	PROOF ROLLING			
	600												600	606	15051	600	FT	GUARDRAIL, TYPE MGS, AS PER PLAN	5		
	1												1	606	26100	1	EACH	ANCHOR ASSEMBLY, TYPE E			
	4												4	606	26500	4	EACH	ANCHOR ASSEMBLY, TYPE T			
	3												3	606	35000	3	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 1			
	3												3	606	35101	3	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 2, AS PER PLAN	13-15		
		306											306	608	10000	306	SF	4" CONCRETE WALK			
		194											194	608	52000	194	SF	CURB RAMP, TYPE B1			
	60												60	622	10160	60	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D			
																		EROSION CONTROL			
	15												15	601	21060	15	SY	TIED CONCRETE BLOCK MAT WITH TYPE 2 UNDERLAYMENT			
	2												2	659	00100	2	EACH	SOIL ANALYSIS TEST			
	19												19	659	00300	19	CY	TOPSOIL			
	200												200	659	10000	200	SY	SEEDING AND MULCHING			
	10												10	659	14000	10	SY	REPAIR SEEDING AND MULCHING			
	10												10	659	15000	10	SY	INTER-SEEDING			
	0.01												0.01	659	20000	0.01	TON	COMMERCIAL FERTILIZER			
	0.05												0.05	659	31000	0.05	ACRE	LIME			
	0.01												0.01	659	35000	0.01	MGAL	WATER			
													5000	832	30000	5,000	EACH	EROSION CONTROL			
																		DRAINAGE			
	4												4	605	31100	4	FT	AGGREGATE DRAINS			
	300												300	SPECIAL	61199820	300	LB	MISCELLANEOUS METAL			
																		PAVEMENT			
		109											109	252	01500	109	FT	FULL DEPTH PAVEMENT SAWING			
		382											382	254	01000	382	SY	PAVEMENT PLANING, ASPHALT CONCRETE, [T=3"]			
		24											24	301	56000	24	CY	ASPHALT CONCRETE BASE, PG64-22, (449), [T=7"]			
		110											110	304	20000	110	CY	AGGREGATE BASE, [T=6"]			
		81											81	407	10000	81	GAL	TACK COAT			
		42											42	441	70000	42	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22, [T=3"]			
		535											535	452	13010	535	SY	9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P			
		57											57	609	12001	57	FT	COMBINATION CURB AND GUTTER, TYPE 2, AS PER PLAN	15		
		109											109	609	14000	109	FT	CURB, TYPE 2-A, [T=10"]			
																		TRAFFIC CONTROL			
			13										13	630	03100	13	FT	GROUND MOUNTED SUPPORT, NO. 3 POST			
			14										14	630	08520	14	FT	STREET NAME SIGN SUPPORT, NO. 3 POST			
			27										27	630	80100	27	SF	SIGN, FLAT SHEET			
			4										4	630	84900	4	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL			
			1										1	630	87500	1	EACH	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL			
																				8 92	



CALCULATED	
JBE	
CHECKED	
SGP	

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REF NO.	SHEET NO.	STATION TO STATION			CODE	SIZE (INCHES)	630	630	630	630	630	646	646	646	646	646	646							
							GROUND MOUNTED SUPPORT, NO. 3 POST	STREET NAME SIGN SUPPORT, NO. 3 POST	SIGN, FLAT SHEET	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL	STOP LINE, TYPE 1 (WHITE)	CENTER LINE	CHANNELIZING LINE, 8"	CROSSWALK LINE, 18"	TRANSVERSE/DIAGONAL LINE (YELLOW)	LANE ARROW	ISLAND MARKING						
							FT	FT	SF	EACH	EACH	FT	MILE	FT	FT	FT	EACH	SF						
CHERRY ROAD NW																								
SL	20	5+93.00	LT/RT									13												
CH	20	5+93.00	RT	TO	6+66.00	RT								82										
CL	20	5+93.00	LT/RT	TO	8+90.00	LT/RT							0.01											
LA	20	6+49.00	LT/RT														1							
TL	20	6+66.00	LT	TO	8+84.00	LT/RT										170								
IM	20	8+84.00	LT/RT	TO	8+90.00	LT/RT												52						
CH	20	9+83.00	LT	TO	10+92.00	LT								109										
CL	20	9+83.00	RT	TO	12+99.00	RT							0.01											
LA	20	10+42.00	LT/RT														1							
TL	20	10+92.00	LT	TO	12+99.00	RT										74								
R1	20	9+75.26	LT			R2-1	24 x 30			1														
R2	20	12+51.91	LT			R3-H8BA	30 x 30				1													
S1	20	9+75.26	LT			R2-1	24 x 30	12.5		5.0														
S2	20	12+51.91	LT			R3-H8BA	30 x 30			6.3														
THIRD STREET																								
CW	20	20+24.15	LT/RT	TO	20+32.60	LT/RT									170									
SL	20	20+37.00	LT									18												
CL	20	20+38.00	RT	TO	21+75.00	RT							0.01											
IM	20	20+38.00	RT	TO	20+43.00	RT												57						
TL	20	20+43.00	RT	TO	21+75.00	RT										87								
R3	20	20+30.03	LT			D3-1	36 x 12			1														
R4	20	20+30.03	LT			D3-1	36 x 12			1														
R5	20	20+30.03	LT			R1-1	36 x 36			1														
S3	20	20+30.03	LT			D3-1	36 x 12			3.0														
S4	20	20+30.03	LT			D3-1	36 x 12			3.0														
S5	20	20+30.03	LT			R1-1	36 x 36		13.5	9.0														
TOTALS CARRIED TO GENERAL SUMMARY							13	14	27	4	1	31	1	192	170	331	2	109						

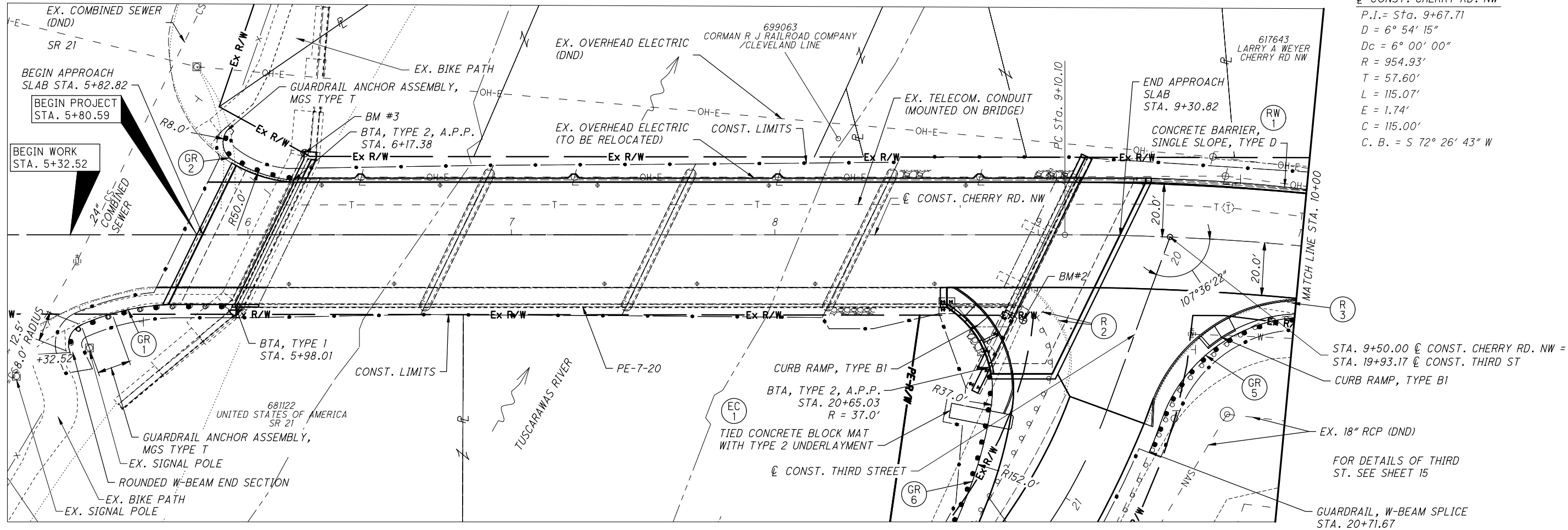
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SIGNING & PAVEMENT MARKING SUBSUMMARY

STA CHERRY
RD BRIDGES

12
92

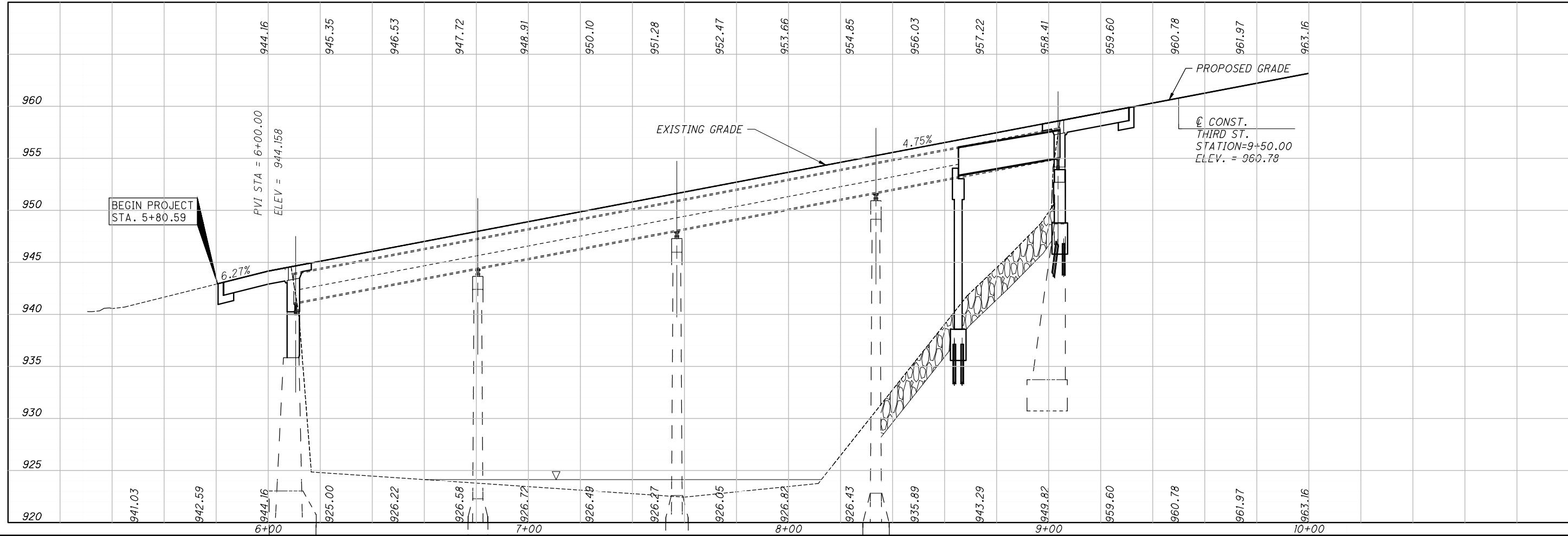
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© CONST. CHERRY RD. NW
P.I. = Sta. 9+67.71
D = 6° 54' 15"
Dc = 6° 00' 00"
R = 954.93'
T = 57.60'
L = 115.07'
E = 1.74'
C = 115.00'
C. B. = S 72° 26' 43" W

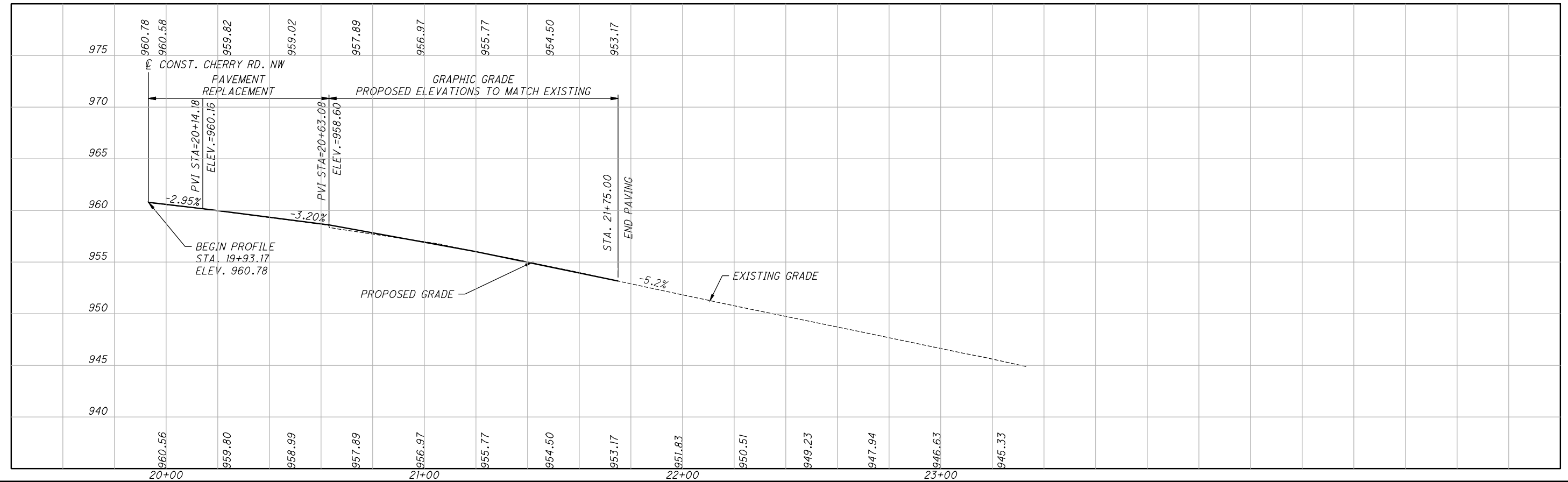
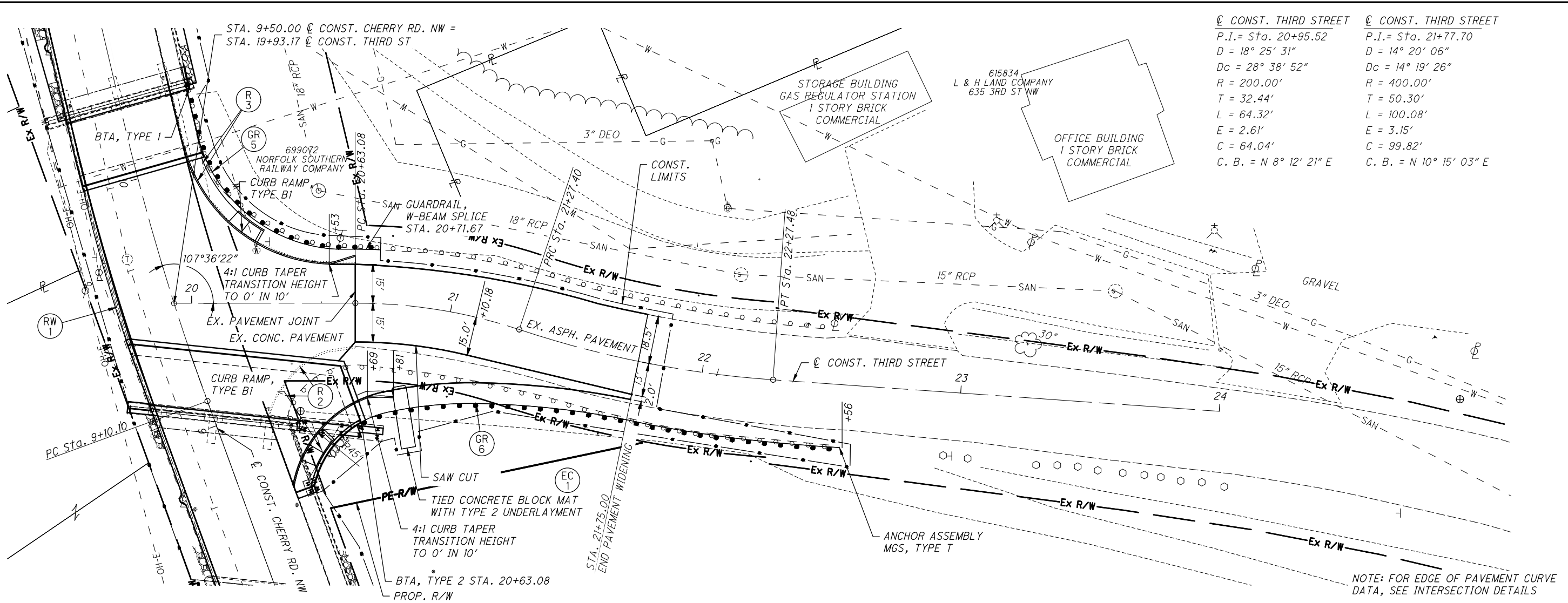


PLAN AND PROFILE - CHERRY RD. NW
BEGIN WORK TO STA. 10+00

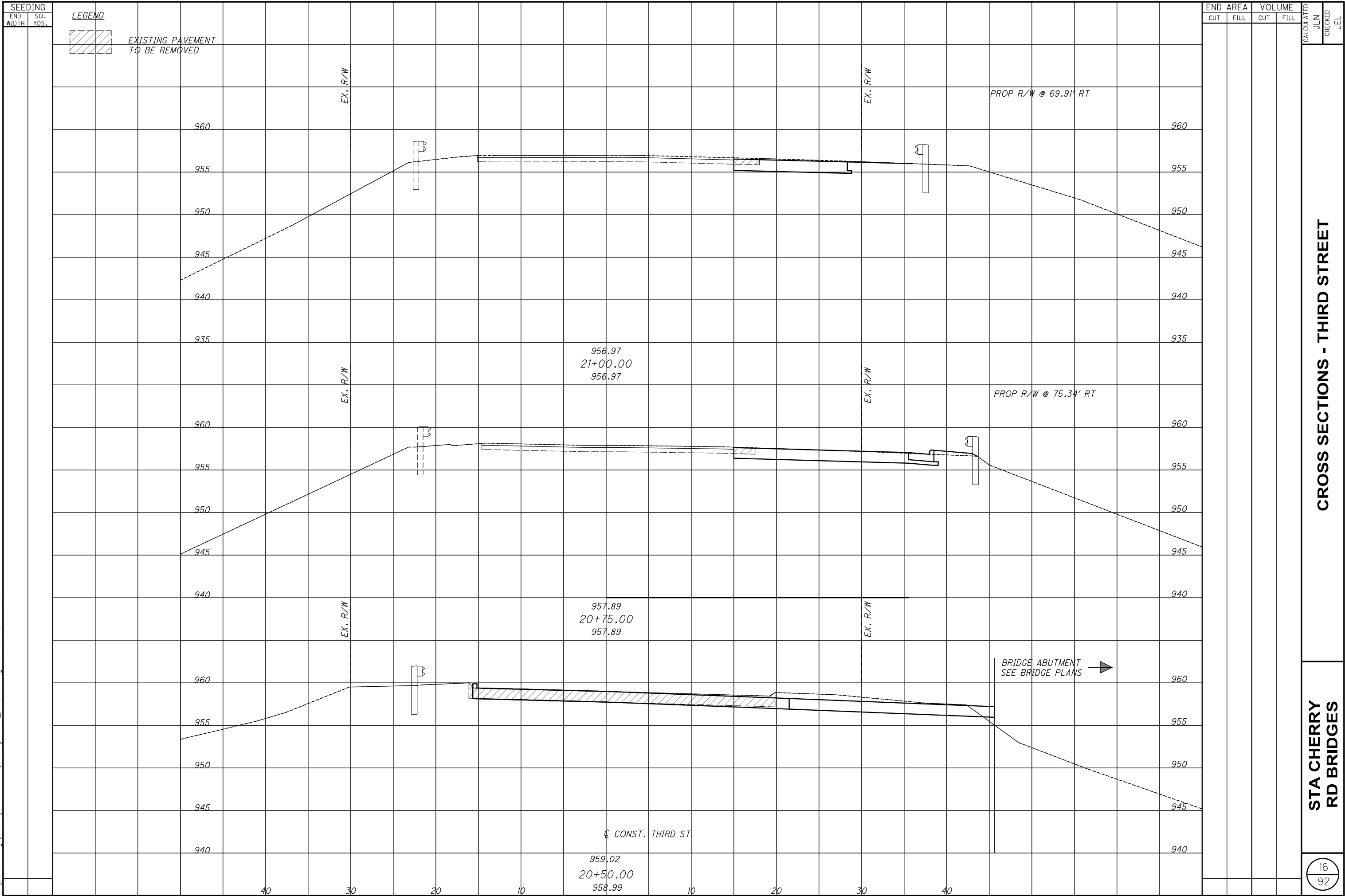


STA CHERRY
RD BRIDGES

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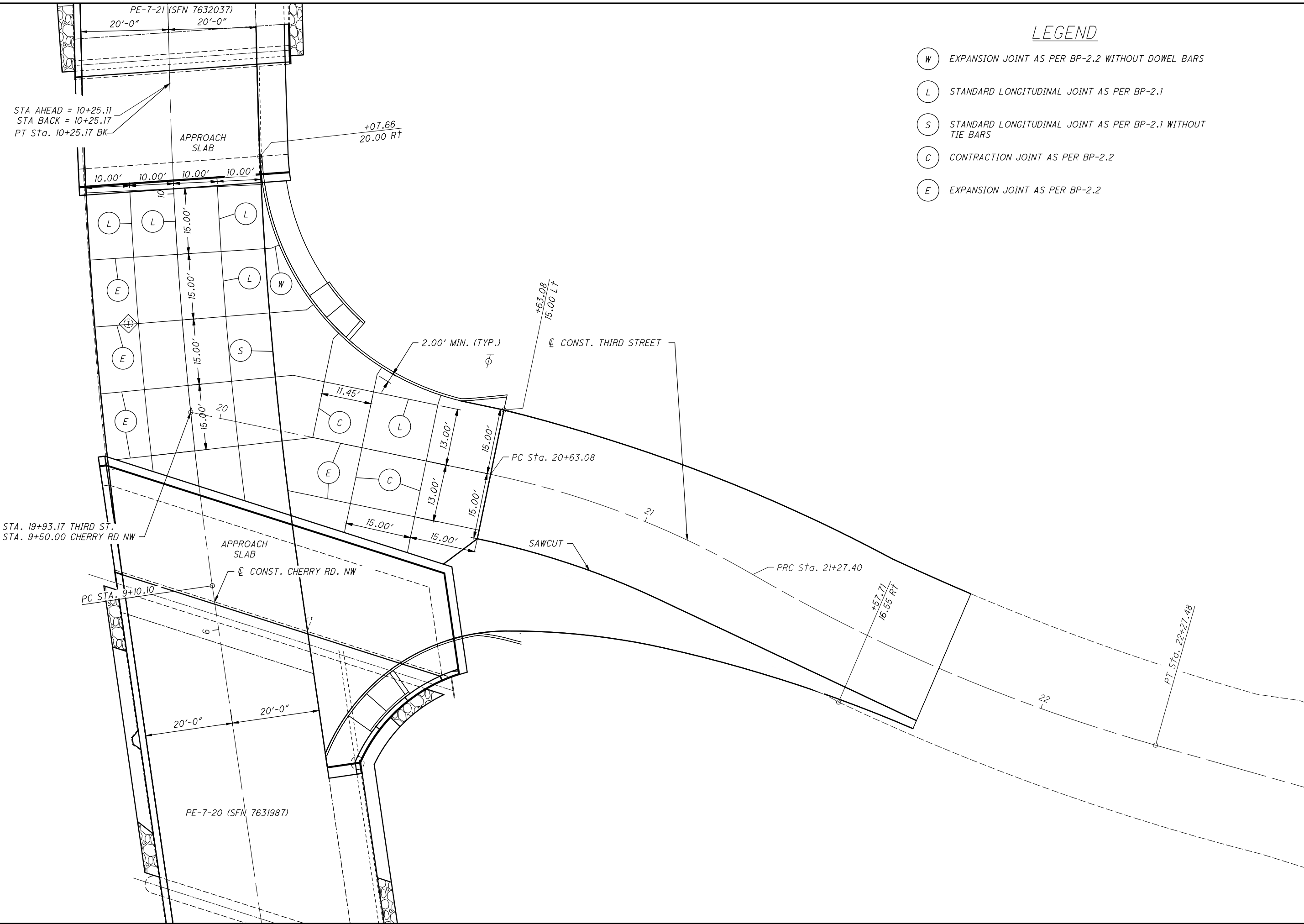
CROSS SECTIONS - THIRD STREET

STA CHERRY
RD BRIDGES





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LEGEND

- W EXPANSION JOINT AS PER BP-2.2 WITHOUT DOWEL BARS
- L STANDARD LONGITUDINAL JOINT AS PER BP-2.1
- S STANDARD LONGITUDINAL JOINT AS PER BP-2.1 WITHOUT TIE BARS
- C CONTRACTION JOINT AS PER BP-2.2
- E EXPANSION JOINT AS PER BP-2.2

N

0 10 20

HORIZONTAL SCALE IN FEET

CALCULATED

STO

CHECKED

JEL

PAVEMENT JOINT DETAILS

STA CHERRY RD BRIDGES

19
92

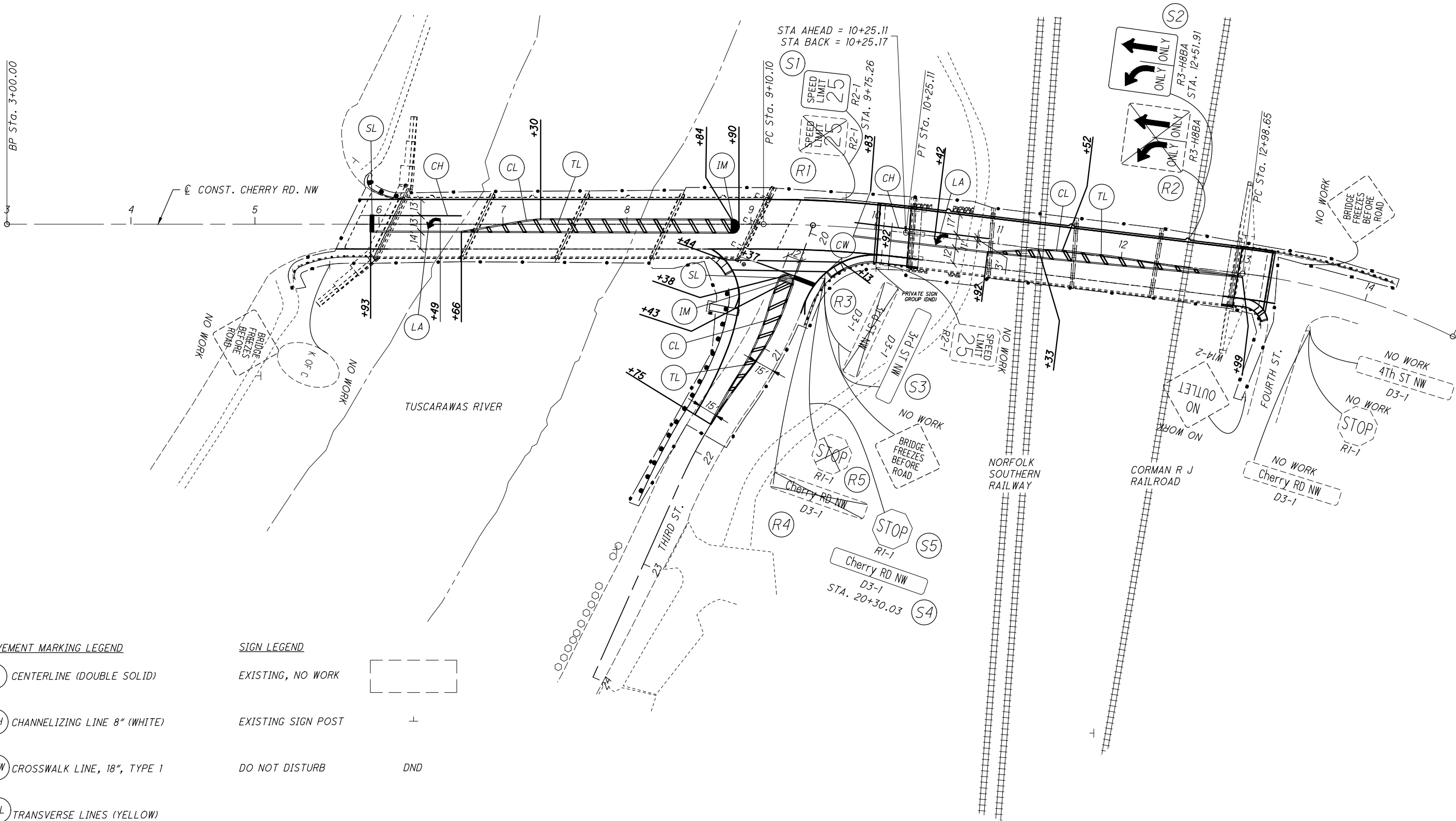
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PAVEMENT MARKING LEGEND

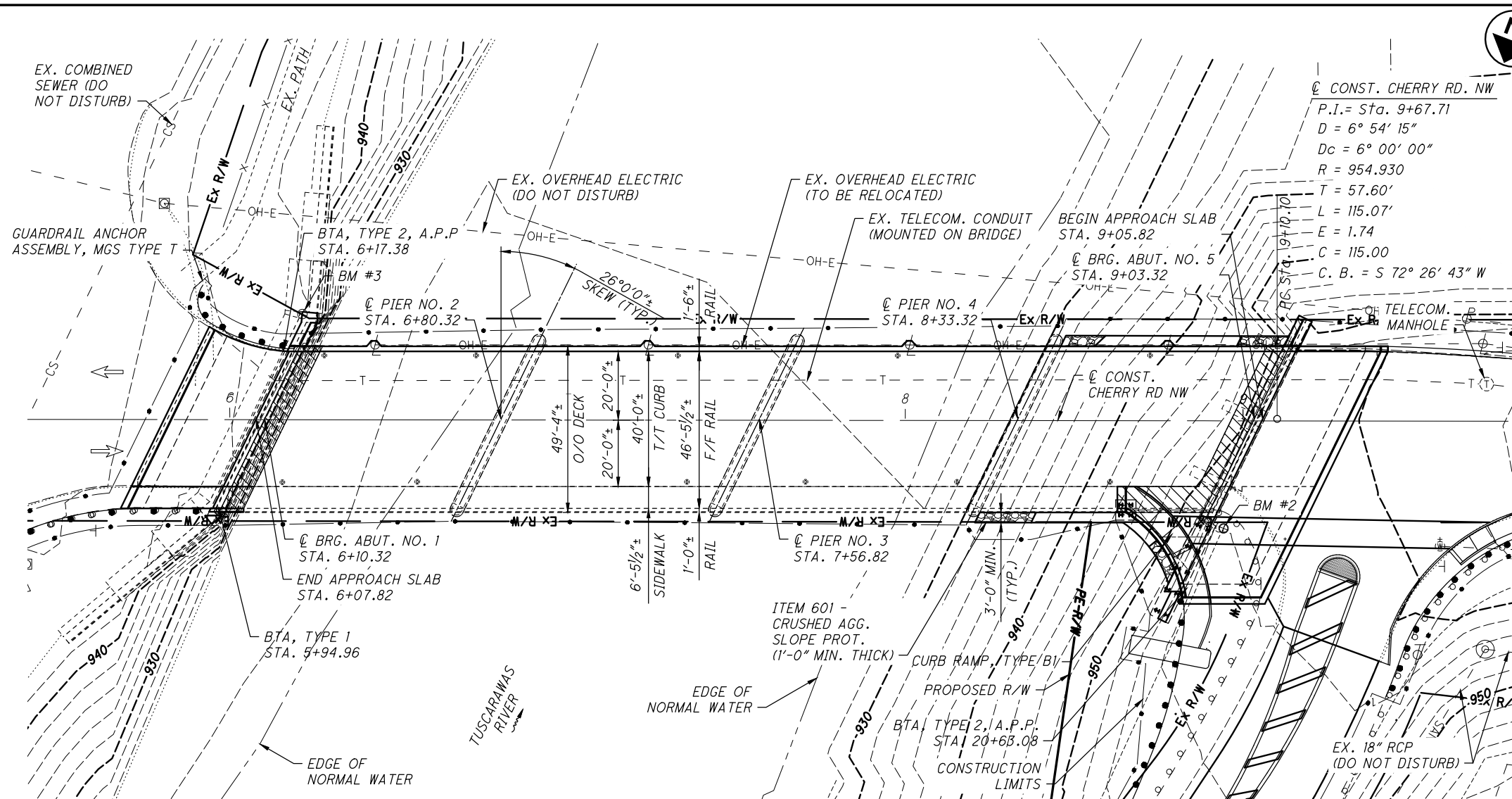
- CL CENTERLINE (DOUBLE SOLID)
- CH CHANNELIZING LINE 8" (WHITE)
- CW CROSSWALK LINE, 18", TYPE 1
- TL TRANSVERSE LINES (YELLOW)
- SL STOP LINE TYPE 1 (WHITE)

SIGN LEGEND

- EXISTING, NO WORK
- EXISTING SIGN POST
- DO NOT DISTURB DND



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BENCHMARK DATA

BM #1 STA. 7+45.14, ELEV. 938.33, OFFSET 454.04, RT
BM #2 STA. 8+94.22, ELEV. 957.99, OFFSET 32.38, RT
BM #3 STA. 6+21.47, ELEV. 945.91, OFFSET 31.02, LT

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET $\frac{2}{32}$

NOTES

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

DESIGN TRAFFIC:

2024 ADT = 6100 2024 ADTT = 244
2044 ADT = 6700 2044 ADTT = 268
DIRECTIONAL DISTRIBUTION = 52%

LEGEND

- BORING LOCATION
- ▨ - LIMITS OF FULL DEPTH DECK REMOVAL & REPLACE
- - - PROPOSED WORK ALONG $\bar{C}$ CONST. CHERRY RD NW
- ▨ - PROPOSED WORK NORTH SIDE WIDENING

HYDRAULIC DATA

DRAINAGE AREA = 478 SQ. MILES
Q (25) = 11600 CFS
Q (100) = 14400 CFS
STRUCTURE CLEARS THE 100 YEAR HW BY 7 FEET.

HYDRAULIC DATA WAS OBTAINED FROM USGS STREAM STATS

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAMS WITH NON-COMPOSITE REINFORCED CONCRETE DECK ON REINFORCED CAST-IN-PLACE CONCRETE SUBSTRUCTURE.

SPANS: 4 SPANS (70'-0"±, 76'-6"±, 76'-6"± AND 70'-0"±)

ROADWAY: 40'-0"± T/T CURB (46'-5½"± F/F RAIL)

LOADING: HS20-44 CASE II AND ALTERNATE MILITARY LOADING

SKREW: 26°0'0"± LF

APPROACH SLABS: 25'-0"± (AS-1-72)

ALIGNMENT: TANGENT

CROWN: VARIES

STRUCTURAL FILE NUMBER: 7631987

DATE BUILT: 1948 (1980 MAJOR REHABILITATION)

DISPOSITION: TO BE REHABILITATED

PROPOSED WORK

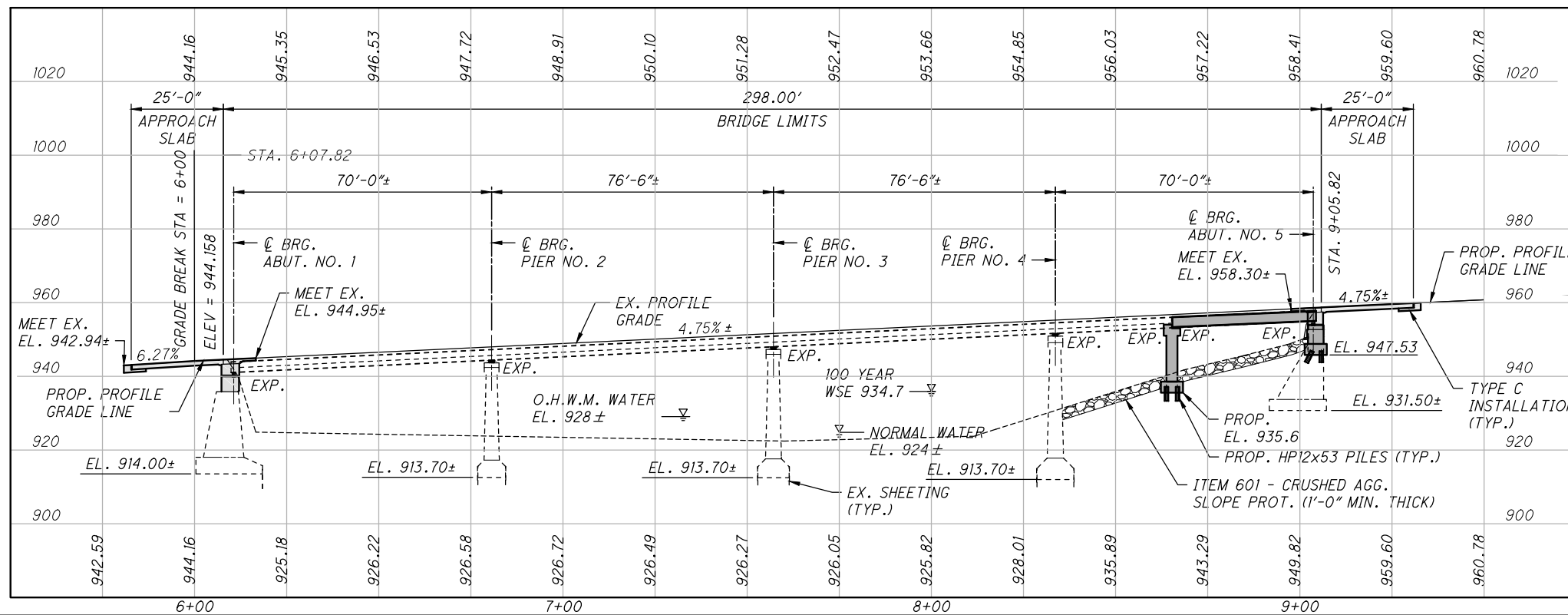
- CONVERT ABUTMENTS TO SEMI-INTEGRAL
- REMOVE AND REPLACE PORTIONS OF SPAN 4 FASCIA BEAM AND PORTIONS OF BRIDGE DECK, SIDEWALK AND RAILING
- EXTEND ABUT. NO. 5 AND INSTALL FLARED BEAMS
- WIDEN A PORTION OF THE DECK AT THE FLARED END
- REPLACE BEARINGS WITH NEW ELASTOMERIC BEARINGS
- REPLACE APPROACH SLABS
- REPLACE PARAPET AND LIGHT PILASTERS ALONG SOUTH SIDE OF BRIDGE
- PATCH AND SEAL BRIDGE DECK AND RAILINGS

LOADING: HS20 CASE II AND ALTERNATE MILITARY (EXISTING)
HL-93, 75 PSF SIDEWALK (PROPOSED WIDENED SECTION)

APPROACH SLABS: 25'-0" (AS-1-15),
TYPE C INSTALLATION (AS-2-15)

COORDINATES:

LATITUDE N 40°47'58.70"
LONGITUDE W 81°31'48.46"



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REFERENCE SHALL BE MADE TO STANDARD DRAWINGS

AS-1-15	REVISED	1-20-2023
AS-2-15	REVISED	7-21-2023
EXJ-4-87	REVISED	1-19-2024
GSD-1-19	REVISED	1-15-2021
SBR-3-20	REVISED	7-21-2023
SICD-1-21	REVISED	1-19-2024
SICD-2-14	REVISED	1-15-2021

AND TO SUPPLEMENTAL SPECIFICATIONS

800	DATED	4-21-2023
843	DATED	1-19-2024
844	DATED	4-20-2018

AND TO PROPOSAL NOTES

512	DATED	1-15-2016
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DESIGN SPECIFICATIONS

THIS STRUCTURE WIDENING CONFORMS TO THE 9TH EDITION OF THE “LRFD BRIDGE DESIGN SPECIFICATIONS” ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020 AND THE ODOT BRIDGE DESIGN MANUAL, 2023.

OPERATIONAL IMPORTANCE

A LOAD MODIFIER OF 1.00 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

DESIGN LOADING (NEW WIDENED PORTION)

VEHICULAR LIVE LOAD: HL-93
SIDEWALK LOADING OF 0.075 KIPS/SQ.FT

DESIGN DATA

CONCRETE, CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI (EPOXY COATED)

STRUCTURAL STEEL
EXISTING - ASTM A36, YIELD STRENGTH = 36 KSI
NEW - ASTM A709 GRADE 50, YIELD STRENGTH = 50 KSI (GALVANIZED)

DECK PROTECTION METHOD

EPOXY COATED REINFORCING STEEL
2 ½” CONCRETE COVER
CLASS QC2 CONCRETE

PROPOSED BRIDGE WORK

THE PROPOSED WORK CONSISTS OF REMOVING PORTIONS OF THE EXISTING STRUCTURE AS SHOWN IN THE PLANS AND REHABILITATING THE BRIDGE BY:

- CONVERT ABUTMENTS TO SEMI INTEGRAL
- REMOVE DIAPHRAGMS AT ABUTMENTS
- POUR NEW END DIAPHRAGMS AND REPLACE ADJACENT PORTIONS OF DECK, SIDEWALK AND RAILING.
- PAINT SUPERSTRUCTURE WITHIN LIMITS SHOWN ON PLANS
- REMOVE AND REPLACE PORTIONS OF SPAN 4 FASCIA BEAM AND PORTIONS OF BRIDGE DECK, SIDEWALK AND RAILING.
- REPLACE PARAPET ALONG SOUTH SIDE OF BRIDGE
- EXTEND ABUT. NO. 5 AND INSTALL FLARED BEAMS
- WIDEN A PORTION OF THE DECK AT THE FLARED END
- REPLACE BEARINGS WITH NEW ELASTOMERIC BEARINGS
- REPLACE APPROACH SLABS
- PATCH AND SEAL BRIDGE DECK AND RAILINGS

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 OPEN A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSION THAT HAVE BEEN VERIFIED IN THE FIELD.

DECK REPLACEMENT DESIGN ASSUMPTIONS

DUE TO THE SHORT LENGTH OF DECK TO BE FINISHED, THE USE OF A FINISHING MACHINE IS NOT REQUIRED. PER C&MS 511.07 CARE SHALL BE GIVEN TO PROVIDE AND USE SUFFICIENT VIBRATION EQUIPMENT TO PROPERLY COMPACT THE PLACED DECK SCREED CONCRETE. SHOULD THE CONTRACTOR ELECT TO USE A FINISHING MACHINE HE SHALL SUBMIT HIS PROPOSED METHOD OF SUPPORTING THE FINISHING MACHINE TO THE ENGINEER PER C&MS 501.05 REQUIREMENTS.

MAINTENANCE OF TRAFFIC

FOR MAINTENANCE OF TRAFFIC NOTES AND DETAILS, INCLUDING DETOUR MAP AND PAY ITEMS, SEE SHEETS 692 THRU 792

UTILITY LINES

SEE GENERAL NOTES, SHEET 592 FOR LIST OF UTILITIES IN THE PROJECT AREA.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

THIS WORK CONSISTS OF THE REMOVAL OF PORTIONS OF THE EXISTING STRUCTURE AS INDICATED IN THE PLANS AND GENERAL NOTES. CONCRETE SUPERSTRUCTURE REMOVAL INCLUDES, BUT IS NOT LIMITED TO, CONCRETE DECK, SIDEWALKS, CONCRETE BRIDGE RAILINGS, METAL RAILINGS, DECK JOINTS, AND OTHER APPURTENANCES FROM STEEL SUPPORTING SYSTEMS (CROSS-FRAMES, ETC.). THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED. SUBMIT CONSTRUCTION PLANS ACCORDING TO C&MS 501.05.

DECK SLABS AND APPROACH SLAB REMOVAL:
THE EXISTING APPROACH SLABS AND PORTIONS OF EXISTING DECK SLAB SHALL BE REMOVED AS SHOWN IN THE PLANS. THE CONTRACTOR SHALL USE EXTREME CARE TO NOT DAMAGE THE EXISTING BEAMS AND CROSS-FRAMES.

BEFORE DECK SLAB CUTTING IS PERMITTED, DRAW THE OUTLINE OF PRIMARY STEEL MEMBERS IN CONTACT WITH THE BOTTOM OF THE DECK ON THE SURFACE OF DECK. DRILL SMALL DIAMETER PILOT HOLES 2 INCHES OUTSIDE THESE LINES TO CONFIRM THE LOCATION OF FLANGE EDGES. DECK CUTS OVER OR WITHIN 2 INCHES OF FLANGE EDGES SHALL NOT EXTEND LOWER THAN THE BOTTOM LAYER OF DECK SLAB REINFORCING STEEL. CUTS MADE OUTSIDE 2 INCHES OF FLANGE EDGES MAY CAREFULLY EXTEND THE FULL DEPTH OF THE DECK. PERFORM WORK CAREFULLY DURING CUTTING OF THE DECK SLAB TO AVOID DAMAGING STEEL MEMBERS THAT ARE INCORPORATED INTO THE PROPOSED STRUCTURE.

THE CONTRACTOR MAY REMOVE CONCRETE BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED CHISEL TYPE TOOLS. FOR REMOVALS OVER STRUCTURAL MEMBERS (STEEL BEAMS), THE CONTRACTOR MAY USE A HAMMER HEAVIER THAN 35 POUNDS BUT NOT EXCEED 90 POUNDS UNLESS APPROVED BY THE ENGINEER. THE METHODS OVER STRUCTURAL MEMBERS SHALL ENSURE ADEQUATE DEPTH CONTROL AND PREVENT NICKING OR GOUGING THE PRIMARY STRUCTURAL MEMBERS. DUE TO POSSIBLE PRESENCE OF ATTACHMENTS (E.G., FINISHING MACHINE, FORM SUPPORTS, ETC.) TO EXISTING STRUCTURAL MEMBERS, PERFORM WORK CAREFULLY DURING DECK REMOVAL TO AVOID DAMAGING STRUCTURAL MEMBERS THAT ARE TO REMAIN. REPLACE OR REPAIR STEEL MEMBERS DAMAGED BY THE DECK SLAB REMOVAL OPERATIONS AT NO COST TO THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER TO THE ENGINEER. OBTAIN THE ENGINEER'S APPROVAL BEFORE PERFORMING REPAIR.

CONCRETE ABUTMENT AND END DIAPHRAGM REMOVAL:
PORTIONS OF THE EXISTING ABUTMENT SHALL BE REMOVED AS NEEDED TO CONVERT THE ABUTMENT TO SEMI-INTEGRAL TYPE. REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

THE EXISTING DIAPHRAGMS SHALL BE REMOVED AS NEEDED TO PERMIT FORMING AND POURING THE SEMI-INTEGRAL ABUTMENT. AFTER STEEL IS REMOVED, DAMAGED PAINT AREAS THAT ARE TO REMAIN WITHIN THE CONCRETE ENCASEMENT SHALL BE TOUCHED UP WITH A PRIME COAT ONLY PER 514.22.

THE EXISTING END DIAPHRAGMS SHALL BE REMOVED FROM THE EXISTING BEAMS WITHOUT GOUGING THE BEAM WEB OR FLANGES. THE WEB AND FLANGES SHALL BE GROUND SMOOTH IN THE DIRECTION OF THE LENGTH OF THE BEAM TO REMOVE ALL WELD MATERIAL.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN (CCONT.)

AT&T UTILITY CONDUITS:
EXISTING AT&T UTILITY CONDUITS (2 BANKS OF 3-4” CONDUITS ARE IN SERVICE AND WILL REMAIN). THE CONTRACTOR WILL PROTECT AND SUPPORT THESE CONDUITS WHILE REMOVING CONCRETE AT THE ABUTMENTS TO CONVERT TO SEMI-INTEGRAL. CAREFULLY SAWCUT AROUND EACH BANK OF THE UTILITIES EXTENDING THROUGH ABUTMENT BACKWALLS. REMOVE PORTIONS OF THE ABUTMENT TO THE LIMITS SHOWN IN THE PLANS WHILE RETAINING THE CONTINUITY OF THE CONDUIT BANKS. EXTEND THE EXISTING DUCT SLEEVES BY PROVIDING A SPLIT SLEEVE AROUND THE EXISTING CONDUITS.

FIRST ENERGY LIGHT POLES:
THE LIGHT POLES CONNECTED TO THE EXISTING SOUTHERN RAILING OF BOTH BRIDGES PE-7-20 AND PE-7-21 WILL REQUIRE REMOVAL PRIOR TO RAILING REMOVAL AND PROPOSED RECONSTRUCTION. COORDINATION SHALL BE PERFORMED WITH THE LIGHTING UTILITY COMPANY IN ADVANCE OF CONSTRUCTION ACTIVITIES FOR THE REMOVAL OF THE LIGHTING AND ITS MISCELLANEOUS ITEMS AS TO NOT DELAY THE PROJECT. ONCE THE NEW BARRIER AND PILASTERS HAVE BEEN CONSTRUCTED THE CONTRACTOR SHALL COORDINATE THE REINSTALLATION OF THE LIGHT POLES AND MISCELLANEOUS ITEMS WITH THE LIGHTING UTILITY COMPANY.

CUT LINE CONSTRUCTION JOINT PREPARATION:
SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL, WHERE REQUIRED IN THE PLANS, IN PLACE. INSTALL DOWEL BARS AS SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST, OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

MEASUREMENT & PAYMENT:
THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN

PLACE AND COMPACT EMBANKMENT MATERIAL IN 6-IN LIFTS FOR THE CONSTRUCTION OF THE APPROACH EMBANKMENT.

PILE DESIGN LOADS (ULTIMATE BEARING VALUE)

THE ULTIMATE BEARING VALUE IS 135 KIPS PER PILE FOR THE EXTENDED ABUTMENT PILES. THE ULTIMATE BEARING VALUE IS 142 KIPS FOR THE INTERMEDIATE SINGLE COLUMN PIER

ABUTMENT EXTENSION PILES:
10 - HP 12x53 PILES, ORDER LENGTH 45 FEET LONG
1 DYNAMIC LOAD TESTING ITEMS

PIER PILES:
4 - HP 12x53 PILES, ORDER LENGTH 45 FEET LONG
1 DYNAMIC LOAD TESTING ITEMS

PILE SPLICES

IN LIEU OF USING THE FULL PENETRATION BUTT WELDS SPECIFIED IN CMS 507.09 TO SPLICE STEEL H-PILES, THE CONTRACTOR MAY USE A MANUFACTURED H-PILE SPLICER. FURNISH SPLICERS FROM THE FOLLOWING MANUFACTURER:

ASSOCIATED PILE AND FITTING CORPORATION
8 WOOD HOLLOW RD. PLAZA 1
PARSIPPANY, NEW JERSEY 07054

INSTALL AND WELD THE SPLICER TO THE PILE SECTIONS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN ASSEMBLY PROCEDURE SUPPLIED TO THE ENGINEER BEFORE THE WELDING IS PERFORMED.

PILE DRIVING

USE A PILE DRIVING HAMMER OF A MAXIMUM RATED ENERGY OF 44,000 FOOT-POUNDS TO INSTALL THE PILES. ENSURE THAT STRESSES IN THE PILES DURING DRIVING DO NOT EXCEED 45,000 POUNDS PER SQUARE INCH.

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ITEM 513 – STRUCTURAL STEEL, MISC.: DRILLING STRUCTURAL STEEL

THIS WORK CONSISTS OF DRILLING 2” DIAMETER HOLES IN THE WEB OF EXISTING BEAMS, TO PERMIT THE PLACEMENT OF HORIZONTAL REBAR RUNNING ALONG THE NEAR FACE OF THE PROPOSED ABUTMENT DIAPHRAGM, AND DRILLING 1” DIAMETER VENT HOLES INTO EXISTING BEAM FLANGES AND PROPOSED BEARING PLATES AT NEW BEARING LOCATIONS. DRILL HOLES PER THE DIMENSIONS AS DESCRIBED IN THE PLANS. PRIOR TO PLACING REBAR, CLEAN AND TOUCH UP ANY EXPOSED STEEL OR DAMAGED PAINT AREAS WITH PRIME COAT ONLY PER 514.22. THE NUMBER OF HOLES DRILLED IN THE STRUCTURAL STEEL AS DETAILED ABOVE WILL BE PAID FOR AT THE CONTRACT PRICE PER EACH HOLE. PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIAL, LABOR, AND EQUIPMENT NECESSARY FOR DRILLING THE HOLES AND REFINISHING PAINTED AREAS.

ITEM 514 – SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL
ITEM 514 – FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT
ITEM 514 – FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT
ITEM 514 – FIELD PAINTING STRUCTURAL STEEL, FINISH COAT

THE CONTRACTOR SHALL PAINT ALL EXISTING STEEL BEAM ENDS, NOT ENCASED IN NEW CONCRETE, ACCORDING TO C&MS 514. THE COLOR OF THE FINISHED COAT SHALL MATCH EXISTING COLOR.

ITEM 514 – FIELD PAINTING MISC.: COATING BEAM ENDS

PRIOR TO ENCASING THE BEAM ENDS, PREPARE THE BEAM ENDS PER SSPC SP10 OR SSPC SP11 TO BARE METAL ACHIEVING A 1.5 TO 3.5 MIL PROFILE. PAINT THE BEAM ENDS WITH ORGANIC ZINC PRIME COAT PER C&MS 514. PROVIDE THE PRIME COAT THICKNESS AS PER C&MS 514.20.

AFTER THE DIAPHRAGM CONCRETE IS SET, SEAL THE INTERFACE BETWEEN THE BEAM AND CONCRETE WITH CAULK.

ITEM 516 – JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN

AT ALL LOCATIONS THIS WORK CONSISTS OF RAISING, RE-POSITIONING, OR TEMPORARILY SUPPORTING PORTIONS OF THE EXISTING STRUCTURES TO PERFORM THE WORK DEFINED IN THE PROJECT PLANS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF AN ADEQUATE JACKING SYSTEM AND TEMPORARY SUPPORT CAPABLE OF SUPPORTING THE BEAMS AS INDICATED. A SUFFICIENT NUMBER OF JACKS OF ADEQUATE CAPACITY SHALL BE USED TO OFFSET THE DEAD LOAD REACTIONS OF THE STRUCTURE FOR VERTICAL LIFT. LIVE LOAD WILL NOT BE PERMITTED ON THE SUPERSTRUCTURE DURING THIS OPERATION. THE ESTIMATED FINAL DEAD AND LIVE LOAD REACTIONS ARE GIVEN ON SHEET 17/40.

THE CONTRACTOR SHALL FURNISH JACKS WITH A TOTAL MINIMUM CAPACITY OF 150% OF THE ESTIMATED EXISTING DEAD LOADS LISTED IN THESE PLANS, ON 17/40 AT THE ABUTMENTS AND PIERS. THE PROVIDED LOADS ASSUMES TOTAL BEARING DEAD LOAD OF THE EXISTING SUPERSTRUCTURE. SHOULD LIVE LOAD ALLOWANCE BE REQUIRED, A MINIMUM JACK CAPACITY WITH THE COMBINED BEARING LOAD OF 130% DEAD LOAD AND 175% LIVE LOAD SHALL BE PROVIDED. ANY ADJUSTMENT TO THE MINIMUM REQUIRED CAPACITY SHALL BE DETERMINED BY THE CONTRACTOR, SUBMITTED TO AND APPROVED BY THE ENGINEER.

THE STRUCTURE SHALL NOT BE RAISED MORE THAN ¼” TO REMOVE THE BEARINGS. JACKS UNDER HYDRAULIC PRESSURE SHALL NOT BE USED TO SUPPORT LIVE LOADS. JACKS SHALL BE SHIMMED TIGHT OR OTHERWISE BLOCKED WHEN UNDER LIVE LOAD. BEAMS SHALL NOT BE SUPPORTED ON VERTICAL JACKS DURING NON-WORKING HOURS OR WHILE UNATTENDED BY CONTRACTOR PERSONNEL.

JACKS FOR LIFTING THE STRUCTURE SHALL BE HYDRAULIC RAM-TYPE WITH ELECTRIC POWER PUMPS. MULTIPLE JACKS AT A SINGLE BEARING LOCATION SHALL BE CONNECTED TO A HYDRAULIC MANIFOLD AND OPERATED BY A SINGLE PUMP TO PROVIDE EQUAL LIFTING PRESSURE. THE CONTRACTOR SHALL FURNISH PERSONNEL TO OPERATE AND/OR OBSERVE JACKS AT EACH BEARING LOCATION.

THE CONTRACTOR SHALL SUBMIT DETAILS OF THE TEMPORARY SUPPORT SYSTEM AND METHODS AND PROCEDURES FOR UNLOADING THE BEARINGS TO THE ENGINEER FOR APPROVAL PRIOR TO BEGINNING WORK. THE CONTRACTOR SHALL NOT USE SHEAR CONNECTIONS DRILLED INTO THE FACE OF THE PIER OR ABUTMENT AS AN ACCEPTABLE MEANS FOR JACKING. THE SUBMITTAL SHALL INDICATE MATERIALS, MEMBER SIZES, SPACING, JACK POINT LOCATIONS, JACKING LOADS, AND INSTALLATION AND REMOVAL PROCEDURES. DETAILED PLANS OF THE TEMPORARY SUPPORT SHALL BE PREPARED AND SUBMITTED IN ACCORDANCE WITH C&MS 501.05B. NO WORK SHALL BE PERFORMED UNTIL A METHOD IS APPROVED.

AFTER ALL ABUTMENT RECONSTRUCTION AND BEARING WORK IS COMPLETE, ALL JACKS AND TEMPORARY SUPPORT MATERIAL SHALL BE REMOVED.

IF, DURING JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL BEAMS OR OTHER DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, IMMEDIATELY CEASE THE JACKING OPERATION AND INSTALL SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. THE DEPARTMENT WILL NOT PAY FOR THE COST OF THESE REQUIRED REPAIRS. THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT ALL CONTACT AREAS.

ITEM 516 – JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN (CONT.)

IF FULL SEATING IS NOT ATTAINED SUBMIT A REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COSTS TO ENSURE A FULL SEATING ON BEARINGS.

THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS THAT INCLUDES ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED FOR JACKING INCLUDING ALL TEMPORARY SUPPORTS, AND SUBMITTALS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516 – JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

ITEM 844 – CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION

ALL SUBSTRUCTURES TO BE PATCHED SHALL BE REPAIRED IN ACCORDANCE WITH THIS SUPPLEMENTAL SPECIFICATION.

ANODES SHALL BE PLACED IN EACH PATCH GREATER THAN 15 SQ. FT., 18 TO 24 INCHES APART ON THE PERIMETER, BASED ON THE REBAR SPACING. A MINIMUM OF ONE ANODE SHALL BE PLACED IN THE MIDDLE OF THE PATCHING MATERIAL AREA IF THE SPACING REQUIREMENT CANNOT BE MET.

STRUCTURE GROUNDING:

PROVIDE STRUCTURE GROUNDING PER ODOT STD. DWG. HL-50.21.

ITEM 513 – STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN

WORK UNDER THIS ITEM INCLUDES ALL WELDING, FABRICATING AND INSTALLING THE PROPOSED BEAMS, BEAM CONNECTION PLATES, AND DIAPHRAGMS AS SHOWN IN THE PLANS AND CLEANING THE EXISTING STEEL IN AREAS TO BE CUT OR WELDED. PROVIDE A MINIMUM OF 2” CLEAR FROM ALL WELDS. THIS WORK ALSO INCLUDES BUT IS NOT LIMITED TO THE FIELD DRILLING OF BOLT HOLES, WELDING, AND THE FURNISHING AND INSTALLATION OF A325 GALVANIZED BOLTS AND INCLUDES ALL INCIDENTALS NECESSARY TO COMPLETE THIS WORK.

ALL REQUIREMENTS OF C&MS 513 APPLY TO SHOP FABRICATED MEMBERS. PERFORM WORK FOR FIELD FABRICATED MEMBERS ACCORDING TO ITEM 513.

1. DESCRIPTION:
IN ADDITION TO THE REQUIREMENTS OF CONSTRUCTION AND MATERIAL SPECIFICATION 513, THIS ITEM SHALL CONSIST OF FURNISHING ALL NECESSARY LABOR, MATERIALS AND EQUIPMENT TO CLEAN AND GALVANIZE ALL STRUCTURAL STEEL SURFACES, AS SPECIFIED HEREIN. THE GALVANIZED COATING SYSTEM MAY BE APPLIED BY A GALVANIZER NOT QUALIFIED AS A FABRICATION SHOP UNDER CONSTRUCTION AND MATERIAL SPECIFICATION 513, BUT THE APPROVED FABRICATOR OF THE STRUCTURAL STEEL SHALL BE RESPONSIBLE FOR THE QUALITY OF THE APPLIED GALVANIZED COATING SYSTEM AND ANY REPAIRS, RE-FABRICATING, ADDITIONAL LAYDOWNS REQUIRED TO ASSURE THE FABRICATED STEEL MEETS ALL REQUIREMENTS OF THIS SPECIFICATION. SECTIONS 513.27 AND 513.28 SHALL NOT APPLY.

THIS ITEM SHALL ALSO INCLUDE GALVANIZING, PER 711.02, OF ALL NUTS, WASHERS, BOLTS, ANCHOR BOLTS.

2. PRE-FABRICATION MEETING:
IN ADDITION TO THE PRE-FABRICATION MEETING REQUIREMENTS UNDER 513.07, BOTH THE FABRICATOR’S QUALITY CONTROL SPECIALIST, (QCS) AND GALVANIZER’S QCS COATING APPLICATOR SHALL BE PRESENT AND DISCUSS METHODS OF OPERATION, QUALITY CONTROL, INCLUDING REPAIRS, TRANSPORTATION, ERECTION METHODS TO ACCOMPLISH ALL PHASES OF THE PREPARATION AND COATING WORK REQUIRED BY THIS SPECIFICATION.

3. QUALITY CONTROL:
- 3.1. QUALITY CONTROL SPECIALIST
THE GALVANIZER’S QCS (QUALITY CONTROL SPECIALIST) REQUIRED UNDER 514, IS RESPONSIBLE FOR ALL QUALITY CONTROL REQUIREMENTS OF THIS SPECIFICATION. THE QCS SHALL HAVE THE TESTING EQUIPMENT SPECIFIED IN 514.05
- 3.2. QUALITY CONTROL POINTS (QCP)
QUALITY CONTROL POINTS (QCP) ARE POINTS IN TIME WHEN ONE PHASE OF THE WORK IS COMPLETE AND READY FOR INSPECTION BY THE FABRICATOR’S QCS AND THE DEPARTMENT’S QA REPRESENTATIVE. THE NEXT OPERATIONAL STEP MUST NOT PROCEED UNLESS THE QCP HAS BEEN ACCEPTED OR QA INSPECTION WAIVED BY THE DEPARTMENT’S QA REPRESENTATIVE. AT THESE POINTS THE FABRICATOR MUST AFFORD ACCESS TO INSPECT ALL AFFECTED SURFACES. IF INSPECTION INDICATES A DEFICIENCY, THAT PHASE OF THE WORK MUST BE CORRECTED IN ACCORDANCE WITH THESE SPECIFICATIONS PRIOR TO BEGINNING THE NEXT PHASE OF WORK. DISCOVERY OF DEFECTIVE WORK OR MATERIAL AFTER A QUALITY CONTROL POINT IS PAST OR FAILURE OF THE FINAL PRODUCT BEFORE FINAL ACCEPTANCE, MUST NOT IN ANY WAY PREVENT REJECTION OR OBLIGATE THE DEPARTMENT TO FINAL ACCEPTANCE.

ITEM 513 – STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN (CONT.)

QUALITY CONTROL POINTS	
QUALITY CONTROL POINTS	PURPOSE
A. SOLVENT CLEANING	REMOVE ASPHALTIC CEMENT, OIL, GREASE, SALT, DIRT, ETC.
B. GRINDING EDGES	REMOVE SHARP CORNERS PER AWS
C. ABRASIVE BLASTING	BLAST SURFACES, INCLUDING REPAIR FINS, TEARS, SLIVERS OR SHARP EDGES.
D. GALVANIZING	CHECK COATING THICKNESS.
E. FAYING SURFACE CLEANING	CHECK FAYING SURFACE ROUGHNESS. CHECK BOLT HOLE CLEARANCE. CHECK FOR OTHER FIELD CONNECTIONS UNIFORM COATING THICKNESS
F. SECOND LAY DOWN	CHECK SWEEP AND CAMBER TOLERANCES OF EACH STRUCTURAL MEMBER.
G. FIELD REPAIR OF DAMAGE AREAS	CHECK FOR DAMAGE AREAS AFTER ERECTION OF STRUCTURE. PERFORM DAMAGE REPAIR.
H. FINAL REVIEW	CLEAN STRUCTURE AS PER QCP#1. VISUALLY INSPECT SYSTEM FOR ACCEPTANCE.

- A. SOLVENT CLEANING (QCP #1)
THE STEEL MUST BE SOLVENT CLEANED WERE NECESSARY TO REMOVE ALL TRACES OF ASPHALTIC CEMENT, OIL, GREASE, DIESEL FUEL DEPOSITS, AND OTHER SOLUBLE CONTAMINANTS PER SSPC-SP 1 SOLVENT CLEANING. UNDER NO CIRCUMSTANCES MUST ANY ABRASIVE BLASTING BE DONE TO AREAS WITH ASPHALTIC CEMENT, OIL, GREASE, OR DIESEL FUEL DEPOSITS. STEEL MUST BE ALLOWED TO DRY BEFORE BLAST CLEANING BEGINS. THE GALVANIZER’S QCS SHALL INSPECT AND DOCUMENT THAT THE CLEANING CONFORMS TO SSPC-SP1 AND PROVIDE A COVER LETTER LISTING EACH MAIN MEMBER INSPECTED.
- B. GRINDING EDGES (QCP #2)
ALL CORNERS OF THERMALLY CUT OR SHEARED EDGES MUST HAVE A ⅛ INCH RADIUS OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE. THERMALLY CUT MATERIAL THICKER THAN 1 ½ INCH MUST HAVE THE SIDES GROUND TO REMOVE THE HEAT EFFECTED ZONE, AS NECESSARY TO ACHIEVE THE SPECIFIED SURFACE CLEANING. THE GALVANIZER’S QCS MUST VISUALLY INSPECT AND DOCUMENT THAT THE GRINDING CONFORMS TO THIS SPECIFICATION AND PROVIDE A COVER LETTER LISTING EACH MAIN MEMBER INSPECTED.
- C. ABRASIVE BLASTING (QCP #3)
BEAMS AND GIRDERS MUST BE PREPARED BY THE FABRICATOR TO STEEL STRUCTURES PAINTING COUNCIL (SSPC) GRADE SIX (6) COMMERCIAL BLAST CLEANING PRIOR TO GALVANIZING. ALL MATERIAL MUST BE FREE OF PAINT MARKS. SECONDARY ANGLE, PLATES, BARS AND SHAPES NEED NOT BE BLAST CLEANED. ABRASIVES MUST ALSO BE CHECKED FOR OIL CONTAMINATION BEFORE USE. A SMALL SAMPLE OF ABRASIVES MUST BE ADDED TO ORDINARY TAP WATER. ANY DETECTION OF A OIL FILM ON THE SURFACE OF THE WATER MUST BE CAUSE FOR REJECTION. THE GALVANIZER’S QCS MUST PERFORM AND RECORD THIS TEST AT THE START OF EACH SHIFT. ALL FINS, TEARS, SLIVERS AND BURRED OR SHARP EDGES THAT ARE PRESENT ON ANY STEEL MEMBER OR THAT APPEAR AFTER THE BLASTING OPERATION MUST BE CONDITIONED PER ASTM A6. WELDING REPAIRS MUST ONLY BE PERFORMED BY THE 513 FABRICATOR. THE GALVANIZER’S QCS MUST VISUALLY INSPECT AND DOCUMENT THAT THE BLAST CONFORMS TO SSPC-SP6, THAT ALL CONDITIONING IS PERFORMED PER ASTM A6, AND PROVIDE A COVER LETTER LISTING EACH MAIN MEMBER INSPECTED.
- D. GALVANIZING (QCP #4)
GALVANIZED PER 711.02 AND THIS SPECIFICATION. COATING THICKNESS MUST BE A MINIMUM OF 4 MILS [100 μm] MEASURED AS SPECIFIED. MATERIAL MUST BE FREE OF IMPERFECTIONS OR DEPRESSIONS CAUSED BY MATERIAL HANDLING. THE FABRICATOR, GALVANIZER AND ERECTOR MUST USE LIFTING CLAMPS OR SOFTENERS FOR HANDLING. PRIOR TO GALVANIZING, SURFACE IMPERFECTIONS MAY BE REPAIRED BY THE FABRICATOR IN CONFORMANCE WITH ASTM A6. IMPERFECTIONS GREATER THAN THE LIMITS ALLOWED BY ASTM A6 MUST BE DOCUMENTED. REPAIR OR REPLACEMENT OF THIS MEMBER WILL BE AT THE DISCRETION OF THE DEPARTMENT. ALL DAMAGED GALVANIZING MUST BE REPAIRED IN ACCORDANCE WITH 711.02. DOCUMENTATION OF COATING THICKNESS MUST BE PERFORMED BY THE GALVANIZER’S QCS. THE GALVANIZER’S QCS MUST RECORD THE GAGE READINGS AND PROVIDE A COVER LETTER LISTING EACH MAIN MEMBER INSPECTED.

DESIGN AGENCY



DATE
7/1/24

REVIEWED
MRW

DRAWN
HER

DESIGNED
JTH

BRIDGE NO. PE-7-20 (CHERRY ROAD) OVER
TUSCARAWAS RIVER

GENERAL NOTES - 2 OF 4

STA CHERRY
RD BRIDGES

3 / 40

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92

FILE NUMBER
7631987

REVISION

CHECKED
HER

664 WHITE POND DRIVE
AKRON, OHIO 44320-1100
838-9111

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ITEM 513 – STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN
(CONT.)

- E. FAYING SURFACE CLEANING (QCP #5)
AREAS OF FIELD CONNECTIONS MUST HAVE A UNIFORM GALVANIZED COATING THICKNESS FREE OF LOCAL EXCESSIVE ROUGHNESS WHICH WOULD PREVENT SPLICE PLATES, BEARINGS OR OTHER FIELD CONNECTIONS FROM MAKING INTIMATE CONTACT.
FAYING SURFACES OF THE BOLTED SPLICES MUST BE ROUGHENED IN THE SHOP AFTER GALVANIZING BY HAND WIRE BRUSHING. POWER WIRE BRUSHING IS NOT PERMITTED. ALL FIELD SPLICE BOLT HOLES MUST BE FREE OF ZINC BUILD UP. AFTER GALVANIZING, CLEAN EACH HOLE AS NECESSARY SO THAT A DRIFT PIN 1/16" LESS THAN THE DIAMETER OF THAT HOLE CAN BE FULLY INSERTED. CONSIDERATION WILL BE GIVEN TO OTHER METHODS OF TREATING THE FAYING SURFACES AND BOLT HOLES IF A WRITTEN REQUEST IS SUBMITTED TO THE OFFICE OF MATERIAL MANAGEMENT (OMM) IN ACCORDANCE WITH CMS 108.05. INSPECTION OF THE ROUGHENING OF THE FAYING SURFACES AND CHECKING OF HOLES WITH DRIFT PINS MUST BE PERFORMED BY THE GALVANIZER'S QCS. ACCEPTANCE OF THE FAYING SURFACES AND HOLES SHALL BE DOCUMENTED BY THE GALVANIZER'S QCS.
- F. SECOND DOWN LAY (QCP #6)
AFTER GALVANIZING, MATERIALS MUST BE PLACED IN A SECOND SHOP ASSEMBLY PER CMS SECTION 513.24 TO CHECK ALIGNMENT OF HOLES, SWEEP AND CAMBER AGAINST THE FABRICATORS ORIGINAL RECORDED LAY DOWN DIMENSIONS. THIS SHOP ASSEMBLY MAY BE PERFORMED AT THE GALVANIZER'S FACILITY, BY THE FABRICATORS PERSONNEL, IF APPROVED BY THE OFFICE OF MATERIAL MANAGEMENT (OMM). THE SECOND LAY DOWN MAY BE WAIVED BY THE OMM IF THE FABRICATOR RECORDS INDIVIDUAL BEAM CAMBERS AND SWEEPS DURING THE FIRST LAY DOWN, AND THE NEW INDIVIDUAL BEAM CAMBERS AND SWEEPS, AFTER GALVANIZING, COMPARED TO THE FIRST LAY DOWN ARE WITHIN THE FOLLOWING TOLERANCES:
BEARING POINTS AFTER GALVANIZING MUST BE WITHIN +/- 1/8 INCH [3.2 MM] OF THE APPROVED SHOP DRAWING LAY DOWN.
CAMBER POINTS AFTER GALVANIZING MUST BE + 1/4 INCH [6 MM] OR - 0 INCH FROM THE FIRST LAY DOWN.
SWEEP POINTS AFTER GALVANIZING MUST BE +/- 3/8 INCH [9 MM] FROM THE FIRST LAY DOWN.
INDIVIDUAL BEAMS THAT EXCEED THE LISTED TOLERANCES MUST BE PLACED WITH AT LEAST TWO ADJACENT BEAMS IN LAY DOWN FOR CHECKING AGAINST THE RECORDED SHOP ASSEMBLY RECORDS PER 513.24. DOCUMENTATION OF THE SECOND LAY DOWN OR INDIVIDUAL MEMBER CAMBERS MUST BE RECORDED BY THE FABRICATORS QCS OR GALVANIZER'S QCS PER 513.24.
- G. FIELD REPAIR OF DAMAGE AREAS (QCP #7)
MATERIAL MUST BE FREE OF IMPERFECTIONS OR DEPRESSIONS CAUSED BY MATERIAL HANDLING. THE CONTRACTOR MUST USE LIFTING CLAMPS OR SOFTENERS FOR HANDLING. IMPERFECTIONS MAY BE REPAIRED BY GRINDING AS ALLOWED BY ASTM A6 BY THE CONTRACTOR. IMPERFECTIONS THAT ARE GREATER THAN THE GRINDING LIMITS ALLOWED BY ASTM A6 MUST BE DOCUMENTED. REPAIR OR REPLACEMENT OF THIS MEMBER WILL BE AT THE DISCRETION OF THE OMM.
ALL DAMAGED GALVANIZING MUST BE REPAIRED IN ACCORDANCE WITH 711.02. DAMAGED GALVANIZING WHICH WILL BE INACCESSIBLE FOR REPAIR AFTER ERECTION MUST BE REPAIRED PRIOR TO ERECTION.
IN ORDER TO MINIMIZE DAMAGE TO THE GALVANIZED STEEL, CONCRETE SPLATTER AND FORM LEAKAGE MUST BE WASHED FROM THE SURFACE OF THE STEEL SHORTLY AFTER THE CONCRETE IS PLACED AND BEFORE IT IS DRY. IF THE CONCRETE DRIES, IT MUST BE REMOVED.
TEMPORARY ATTACHMENTS, SUPPORTS FOR SCAFFOLDING AND FINISHING MACHINE OR FORMS MUST NOT DAMAGE THE COATING SYSTEM. IN PARTICULAR, SUFFICIENT SIZE SUPPORT PADS MUST BE USED ON THE FASCIAS WHERE BRACING IS USED.
DOCUMENTATION OF GALVANIZING REPAIRS MUST BE PERFORMED BY THE GALVANIZER'S QCS BY A COVER LETTER LISTING EACH MAIN MEMBER INSPECTED.
- H. FINAL REVIEW (QCP #8)
AFTER THE ERECTION WORK HAS BEEN COMPLETED, INCLUDING ALL CONNECTIONS AND THE APPROVED REPAIR OF ANY DAMAGED BEAMS, GIRDERS OR OTHER STEEL MEMBERS, AND THE DECK HAS BEEN PLACED, THE CONTRACTOR AND ENGINEER MUST INSPECT THE STRUCTURE FOR DAMAGED COATING. (QCP #8). DAMAGED AREAS MUST BE REPAIRED BY QCP #7. AT THE COMPLETION OF CONSTRUCTION, THE GALVANIZING MUST BE UNDAMAGED AND THE SURFACES FREE FROM GREASE, OIL, CHALK MARKS, PAINT, CONCRETE SPLATTER OR OTHER SILAGE. SUCH SILAGE WILL BE REMOVED BY SOLVENT CLEANING PER SPC-SPI(QCP #1)
DOCUMENTATION OF FINAL REVIEW MUST BE PERFORMED BY THE GALVANIZER'S QCS BY A COVER LETTER LISTING EACH MAIN MEMBER INSPECTED.
4. TESTING EQUIPMENT
THE FABRICATOR MUST PROVIDE THE GALVANIZER'S QCS INSPECTOR THE FOLLOWING TESTING EQUIPMENT IN GOOD WORKING ORDER FOR THE DURATION OF THE PROJECT. ONE (POSITECTOR 2000 OR 6000, QUANIX 2200, OR ELCOMETER A345FBI) AND THE CALIBRATION PLATES, 38-200 MM AND 250-625 MM [1.5 -8 MILS AND 10-25 MILS] AS PER THE NBS CALIBRATION STANDARDS IN ACCORDANCE WITH ASTM D-1186.

ITEM 513 – STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN
(CONT.)

5. COATING THICKNESS
GALVANIZED THICKNESS MUST BE DETERMINED BY USE OF TYPE 2 MAGNETIC GAGE IN ACCORDANCE WITH THE FOLLOWING:
FIVE SEPARATE SPOT MEASUREMENTS MUST BE MADE, SPACED EVENLY OVER ONE (1) RANDOMLY SELECTED, 100 SQUARE FEET OF SURFACE AREA ON EACH STRUCTURAL MEMBER. THREE GAGE READINGS MUST BE MADE FOR EACH SPOT MEASUREMENT. THE PROBE MUST BE MOVED A DISTANCE OF 1 TO 3 INCHES FOR EACH NEW GAGE READING. ANY UNUSUALLY HIGH OR LOW GAGE READING THAT CANNOT BE REPEATED CONSISTENTLY MUST BE DISCARDED. THE AVERAGE (MEAN) OF THE 3 GAGE READINGS MUST BE USED AS THE SPOT MEASUREMENT. THE AVERAGE OF FIVE SPOT MEASUREMENTS FOR EACH SUCH 100 SQUARE FOOT AREA MUST NOT BE LESS THAN THE SPECIFIED THICKNESS. NO SINGLE SPOT MEASUREMENT IN ANY 100 SQUARE FOOT AREA MUST BE LESS THAN 80% OF THE SPECIFIED MINIMUM THICKNESS. ANY ONE OF 3 READINGS WHICH ARE AVERAGED TO PRODUCE EACH SPOT MEASUREMENT, MAY UNDER-RUN OR OVER-RUN BY A GREATER AMOUNT. THE 5 SPOT MEASUREMENTS MUST BE MADE FOR ONE(1) RANDOMLY SELECTED, 100 SQUARE FEET OF AREA ON EACH STRUCTURAL MEMBER. ALL SPLICE MATERIAL AND SECONDARY MEMBERS MUST HAVE AT LEAST ONE SPOT MEASURED ON EACH PIECE. THE PROBE MUST BE MOVED SO THAT ONE READING IS TAKEN AT EACH END AND MIDDLE OF THE PIECE FOR A TOTAL OF THREE READINGS.
THE GALVANIZER'S QCS MUST INSPECT AND PROVIDE DOCUMENTATION OF ACTUAL DATA, THE GALVANIZED THICKNESS CHECKS WERE PERFORMED PER SPECIFICATION, AND THE COATING THICKNESS MEETS SPECIFICATION REQUIREMENTS.
6. HANDLING AND SHIPPING
REASONABLE CARE MUST BE EXERCISED IN HANDLING THE GALVANIZED STEEL DURING SHIPPING, ERECTION, AND SUBSEQUENT CONSTRUCTION OF THE BRIDGE. THE STEEL MUST BE INSULATED FROM THE BINDING CHAINS BY SOFTENERS. HOOKS AND SLINGS USED TO HOIST STEEL MUST BE PADDED. DIAPHRAGMS AND SIMILAR PIECES MUST BE SPACED IN SUCH A WAY THAT NO RUBBING WILL OCCUR DURING SHIPMENT THAT MAY DAMAGE THE GALVANIZING. THE STEEL MUST BE STORED ON PALLETS AT THE JOB SITE, OR BY OTHER MEANS, SO THAT IT DOES NOT REST ON THE GROUND OR SO THAT COMPONENTS DO NOT FALL OR REST ON EACH OTHER.
7. SAFETY REQUIREMENTS AND PRECAUTIONS
THE CONTRACTOR MUST MEET THE SAFETY REQUIREMENTS OF THE OHIO INDUSTRIAL COMMISSION AND THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), IN ADDITION TO THE SCAFFOLDING REQUIREMENTS BELOW.
THE CONTRACTOR IS REQUIRED TO MEET THE APPLICABLE SAFETY REQUIREMENTS OF THE OHIO INDUSTRIAL COMMISSION IN ADDITION TO THE SCAFFOLDING REQUIREMENTS SPECIFIED BELOW.
8. SCAFFOLDING
RUBBER ROLLERS, OR OTHER PROTECTIVE DEVICES MEETING THE APPROVAL OF THE ENGINEER, MUST BE USED ON SCAFFOLD FASTENINGS. METAL ROLLERS OR CLAMPS AND OTHER TYPES OF FASTENINGS WHICH WILL MAR OR DAMAGE COATED SURFACES MUST NOT BE USED.
9. INSPECTION ACCESS FOR FIELD REPAIR
IN ADDITION TO THE REQUIREMENT OF 105.10, THE CONTRACTOR MUST FURNISH, ERECT, AND MOVE SCAFFOLDING AND OTHER APPROPRIATE EQUIPMENT, TO PERMIT THE INSPECTOR THE OPPORTUNITY TO INSPECT (CLOSELY OBSERVE), ALL AFFECTED SURFACES. THIS OPPORTUNITY MUST BE PROVIDED TO THE INSPECTOR DURING ALL PHASES OF THE WORK AND CONTINUE FOR A PERIOD OF AT LEAST TEN (10) WORKING DAYS AFTER THE TOUCH-UP WORK HAS BEEN COMPLETED. WHEN SCAFFOLDING IS USED, IT MUST BE PROVIDED IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS. WHEN SCAFFOLDING, OR THE HANGERS ATTACHED TO THE SCAFFOLDING ARE SUPPORTED BY HORIZONTAL WIRE ROPES, OR WHEN SCAFFOLDING IS PLACED DIRECTLY UNDER THE SURFACE TO BE PAINTED, THE FOLLOWING REQUIREMENTS MUST BE COMPLIED WITH:
WHEN SCAFFOLDING IS SUSPENDED 43" OR MORE BELOW THE COATED SURFACE TO BE REPAIRED, TWO ROWS OF GUARDRAIL MUST BE PLACED ON ALL SIDES OF THE SCAFFOLDING. ONE ROW OF GUARDRAIL MUST BE PLACED AT 42" ABOVE THE SCAFFOLDING AND THE OTHER ROW AT 20" ABOVE THE SCAFFOLDING.
WHEN THE SCAFFOLDING IS SUSPENDED AT LEAST 21", BUT LESS THAN 43" BELOW THE COATED SURFACE TO BE REPAIRED, A ROW OF GUARDRAIL MUST BE PLACED ON ALL SIDES OF THE SCAFFOLDING AT 20" ABOVE THE SCAFFOLDING.
TWO ROWS OF GUARDRAIL MUST BE PLACED ON ALL SIDES OF SCAFFOLDING NOT PREVIOUSLY MENTIONED. THE ROWS OF GUARDRAIL MUST BE PLACED AT 42" AND 20" ABOVE SCAFFOLDING, AS PREVIOUSLY MENTIONED.
ALL SCAFFOLDING MUST BE AT LEAST 24" WIDE WHEN GUARDRAIL IS USED AND 28" WIDE WHEN THE SCAFFOLDING IS SUSPENDED LESS THAN 21" BELOW THE COATED SURFACE TO BE REPAIRED AND GUARDRAIL IS NOT USED. IF TWO OR MORE SCAFFOLDING ARE LAID PARALLEL TO ACHIEVE THE PROPER WIDTH, THEY MUST BE RIGIDLY ATTACHED TO EACH OTHER TO PRECLUDE ANY DIFFERENTIAL MOVEMENT. ALL GUARDRAILS MUST BE CONSTRUCTED AS A SUBSTANTIAL BARRIER WHICH IS SECURELY FASTENED IN PLACE AND IS FREE FROM PROTRUDING OBJECTS SUCH AS NAILS, SCREWS AND BOLTS. THERE MUST BE AN OPENING IN THE GUARDRAIL, PROPERLY LOCATED, TO ALLOW THE INSPECTOR ACCESS ONTO THE SCAFFOLDING. THE RAILS AND UPRIGHTS MUST BE EITHER METAL OR WOOD. IF PIPE RAILING IS USED, THE RAILING MUST HAVE A NOMINAL DIAMETER OF NO LESS THAN 1 1/2 INCHES.

ITEM 513 – STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN
(CONT.)

- IF STRUCTURAL STEEL RAILING IS USE, THE RAILS MUST BE 2 X 2 X 3/8-INCH STEEL ANGLES OR OTHER METAL SHAPES OF EQUAL OR GREATER STRENGTH. IF WOOD RAILING IS USED, THE RAILING MUST BE 2 X 4-INCH (NOMINAL) STOCK. ALL UPRIGHTS MUST BE SPACED AT NO MORE THAN 8 FEET ON CENTER. IF WOOD UPRIGHTS ARE USED, THE UPRIGHTS MUST BE 2 X 4 INCHES (NOMINAL) STOCK. WHEN THE SURFACE TO BE INSPECTED IS MORE THAN 15 FEET ABOVE THE GROUND OR WATER, AND THE SCAFFOLDING IS SUPPORTED FROM THE STRUCTURE BEING PAINTED, THE CONTRACTOR MUST PROVIDE THE INSPECTOR WITH A SAFETY BELT AND LIFELINE. THE LIFELINE MUST NOT ALLOW A FALL GREATER THAN 6 FEET. THE CONTRACTOR MUST PROVIDE A METHOD OF ATTACHING THE LIFELINE TO THE STRUCTURE INDEPENDENT OF THE SCAFFOLDING, CABLES, OR BRACKETS SUPPORTING THE SCAFFOLDING.
WHEN SCAFFOLDING IS MORE THAN 2 1/2 FEET ABOVE THE GROUND, THE CONTRACTOR MUST PROVIDE A LADDER FOR ACCESS ONTO THE SCAFFOLDING. THE LADDER AND ANY EQUIPMENT USED TO ATTACH THE LADDER TO THE STRUCTURE MUST BE CAPABLE OF SUPPORTING 250 LBS WITH A SAFETY FACTOR OF AT LEAST FOUR (4). ALL RUNGS, STEPS, CLEATS, OR TREADS MUST HAVE UNIFORM SPACING AND MUST NOT EXCEED 12" ON CENTER. AT LEAST ONE SIDE RAIL MUST EXTEND AT LEAST 36" ABOVE THE LANDING NEAR THE TOP OF THE LADDER.
AN ADDITIONAL LANDING MUST BE REQUIRED WHEN THE DISTANCE FROM THE LADDER TO THE POINT WHERE THE SCAFFOLDING MAY BE ACCESSED, EXCEEDS 12". THE LANDING MUST BE A MINIMUM OF AT LEAST 24" WIDE AND 24" LONG. IT MUST ALSO BE OF ADEQUATE SIZE AND SHAPE SO THAT THE DISTANCE FROM THE LANDING TO THE POINT WHERE THE SCAFFOLDING IS ACCESSED DOES NOT EXCEED 12". THE LANDING MUST BE RIGID AND FIRMLY ATTACHED TO THE LADDER; HOWEVER, IT MUST NOT BE SUPPORTED BY THE LADDER. THE SCAFFOLDING MUST BE CAPABLE OF SUPPORTING A MINIMUM OF 1000 LBS.
IN ADDITION TO THE AFOREMENTIONED REQUIREMENTS, THE CONTRACTOR IS STILL RESPONSIBLE TO OBSERVE AND COMPLY WITH ALL FEDERAL, STATE AND LOCAL LAWS, ORDINANCES, REGULATIONS, ORDERS AND DECREES.
10. PROTECTION OF PERSONS AND PROPERTY
THE CONTRACTOR MUST INSTALL AND MAINTAIN SUITABLE SHIELDS OR ENCLOSURES TO PREVENT DAMAGE TO ADJACENT BUILDINGS, PARKED CARS, TRUCKS, BOATS, OR VEHICLES TRAVELING ON, OVER, OR UNDER STRUCTURES HAVING GALVANIZED REPAIRS. THEY MUST BE SUITABLY ANCHORED AND REINFORCED TO PREVENT INTERFERING WITH NORMAL TRAFFIC OPERATIONS IN THE OPEN LANES. PAYMENT FOR THE SHIELDS MUST BE INCLUDED AS INCIDENTAL TO THE APPLICABLE FIELD COATING OPERATION. WORK MUST BE SUSPENDED WHEN DAMAGE TO ADJACENT BUILDINGS, MOTOR VEHICLES, BOATS, OR OTHER PROPERTY IS OCCURRING.
WHEN OR WHERE ANY DIRECT OR INDIRECT DAMAGE OR INJURY IS DONE TO PUBLIC OR PRIVATE PROPERTY, THE CONTRACTOR MUST RESTORE, AT HIS OWN EXPENSE, SUCH PROPERTY, TO A CONDITION SIMILAR OR EQUAL TO THAT EXISTING BEFORE SUCH DAMAGE OR INJURY WAS DONE.
11. POLLUTION CONTROL
THE CONTRACTOR MUST TAKE ALL NECESSARY PRECAUTIONS TO COMPLY WITH POLLUTION CONTROL LAWS, RULES OR REGULATIONS OF FEDERAL, STATE OR LOCAL AGENCIES.
12. MEASUREMENT AND PAYMENT
THE COST OF ALL LABOR, MATERIALS, EQUIPMENT NECESSARY TO GALVANIZE AND TO FABRICATE THE STRUCTURAL STEEL IN ACCORDANCE WITH 513 AND PERFORM ANY NECESSARY FIELD REPAIR SHALL BE INCLUDED IN THIS 513, AS PER PLAN ITEM. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR THE ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN

24 92	4 / 40	STA CHERRY RD BRIDGES	GENERAL NOTES - 3 OF 4 BRIDGE NO. PE-7-20 (CHERRY ROAD) OVER TUSCARAWAS RIVER	DESIGNED	DRAWN	REVIEWED	DATE	DESIGN AGENCY AECOM 564 WHITE POND DRIVE AKRON, OHIO 44320-1100 839-9111
				GAD	HER	MRW	7/1/24	
				CHECKED	REVISED	STRUCTURE FILE NUMBER		
				HER		7631987		

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ABBREVIATIONS

THE FOLLOWING STANDARD ABBREVIATIONS ARE USED
THROUGHOUT THE PLANS:

ABUT. - ABUTMENT
AGG. - AGGREGATE
ALT. - ALTERNATE
APPR. - APPROACH
BMS. - BETWEEN BEAMS
BOTT. OR BTM. - BOTTOM
BRG. - BEARING
BTWN - BETWEEN
C/C - CENTER TO CENTER
C.I.P - CAST IN PLACE
C.J OR CONST. JT. - CONSTRUCTION JOINT
CL- CENTERLINE
CLR. CLEARANCE
CONC. - CONTINUED
CONST. - CONSTRUCTION
DIA. - DIAMETER
DWG. - DRAWING
EA. - EACH
E.B. - EASTBOUND
E.F. - EACH FACE
E.L OR ELEV. - ELEVATION
EQ. - EQUAL
E.S. - EACH SIDE
EST. - ESTIMATED
EW. - EACH WAY
EX. OR EXIT. OR EXIST. - EXISTING
EXP. - EXPANSION
F.A. - FORWARD ABUTMENT
F.F. - FAR FACE
FTG. - FOOTING
FWD. - FORWARD
G.F.R. - GRAVITY FED RESIN
JT. OR JNT. - JOINT
LT. - LEFT
MAX. - MAXIMUM
MIN. - MINIMUM
MISC. - MISCELLANEOUS
N.F. - NEAR FACE
NO. - NUMBER
O.C.J. - OPTIONAL CONSTRUCTION JOINT
O.H.W.M. - ORDINARY HIGH WATER MARK
OFF. - OFFSET
P1 - PIER 1
P2 - PIER 2
P3 - PIER 3
P.B. - PORTABLE BARRIER
PCB - PORTABLE CONCRETE BARRIER
P.C.P.P. - PERFORATED CORRUGATED PLASTIC PIPE
P.E.J.F. - PREFORMED EXPANSION JOINT FILLER
PL. PLATE
PR. OR PROP. - PROPOSED
PROT. - PROTECTION
R.A. - REAR ABUTMENT
REF. - REFERENCE
REIN. - REINFORCING OR REINFORCEMENT
REQ. OR REQ'D. - REQUIRED
RT. - RIGHT
R/W - RIGHT OF WAY
SER. - SERIES
SPA. - SPACE(D) OR SPACING
STA. - STATION
STD. DWG. OR SCD - STANDARD CONSTRUCTION
DRAWING
T/ - TOP
T/T - TOE TO TOE
TEMP. - TEMPORARY
TYP. - TYPICAL
U.N.O - UNLESS NOTED OTHERWISE
VAR. VARIES
W/ - WITH
WSE - WATER SURFACE ELEVATION

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ITEM ODOT	EXT.	PARTICIPATION	TOTAL	UNIT	DESCRIPTION	PE-7-20					REF. SHEET
		ABUTMENTS				PIERS	SUPER.	GENERAL			
		REAR							FWD.		
202	11203	LS	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN					LS	2 / 40
202	22900	306	306	SY	APPROACH SLAB REMOVED	153	153				
202	23500	404	404	SY	WEARING COURSE REMOVED					404	
503	21101	398	398	CY	UNCLASSIFIED EXCAVATION, AS PER PLAN	171	216	11			2 / 40
505	11100	LS	LS		PILE DRIVING EQUIPMENT MOBILIZATION					LS	
507	00200	640	640	FT	STEEL PILES HP12X53, FURNISHED		400	240			
507	00250	490	490	FT	STEEL PILES HP12X53, DRIVEN		350	140			
509	10000	38,525	38,525	LB	EPOXY COATED STEEL REINFORCEMENT	3726	5967	1712	19325	7795	
510	10000	876	876	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	154	152			570	
511	33500	4	4	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE	2	2				
511	34412	115	115	CY	CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE				115		
511	34448	53	53	CY	CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET)					53	
511	50212	132	132	CY	CLASS QC1 CONCRETE WITH QC/QA, SUBSTRUCTURE	55	67	10			
511	51510	12	12	CY	CLASS QC2 CONCRETE, SIDEWALK					12	
512	10050	280	280	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)					280	
512	10100	1,034	1,034	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	185	173			676	
512	33000	38	38	SY	TYPE 2 WATERPROOFING	16	22				
512	73500	1,245	1,245	SY	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN				1245		
513	10221	11,010	11,010	LB	STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN				11010		3 / 40, 4 / 40
513	95020	LS	LS		STRUCTURAL STEEL, MISC.: DRILLING STRUCTURAL STEEL				LS		3 / 40
514	00050	1,055	1,055	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL				1055		
514	00056	1,055	1,055	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT				1055		
514	00060	1,435	1,435	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT				1435		
514	00066	1,435	1,435	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT				1435		
514	10000	18	18	EACH	FINAL INSPECTION REPAIR COATING BEAM ENDS				18		
514	27702	18	18	EACH	FIELD PAINTING, MISC.: COATING BEAM ENDS				18		3 / 40
516	10010	90	90	FT	ARMORLESS PREFORMED JOINT SEAL	53	37				
516	10011	24	24	FT	ARMORLESS PREFORMED JOINT SEAL, AS PER PLAN		24				33 / 40
516	12201	7	7	FT	STRUCTURAL STEEL EXPANSION JOINT, AS PER PLAN					7	15 / 40
516	13600	52	52	SF	1" PREFORMED EXPANSION JOINT FILLER	26	26				
516	13900	90	90	SF	2" PREFORMED EXPANSION JOINT FILLER	40	50				
516	14020	212	212	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	93	119				
516	44201	20	20	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (14"x14"x4.54" WITH 15"x15"x1.5" LOAD & BEARING PLATES)	9	11				17 / 40
516	44201	27	27	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (14"x19"x2.73" WITH 15"x20"x1.5" LOAD PLATE AND 11"x13"x1.5" BEARING PLATE)			27			17 / 40
516	44201	2	2	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (12"x12"x3.52" WITH 13"x13"x1.5" BEARING PLATE AND 13"x20"x0.5" MASONRY PLATE)			2			17 / 40
516	47001	LS	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN					LS	3 / 40
518	21200	95	95	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	39	56				
518	40000	170	170	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	70	100				
518	40010	20	20	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS		20				
SPECIAL	51912510	450	450	SY	PATCHING CONCRETE BRIDGE DECK				450		SEE PN 512
523	20000	2	2	EACH	DYNAMIC LOAD TESTING		1	1			
526	25001	339	339	SY	REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN	136	203				34 / 40
526	90030	170	170	FT	TYPE C INSTALLATION	60	110				
601	20000	520	520	SY	CRUSHED AGGREGATE SLOPE PROTECTION		520				
843	50000	108	108	SF	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR				108		
844	10001	125	125	SF	CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN			125			3 / 40

DESIGN AGENCY
AECOM
564 WHITE POND DRIVE
AKRON, OHIO 44320-1100
838-9111

DATE
7/1/24
REVIEWED
MRW
STRUCTURE FILE NUMBER
7631987

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CHECKED
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DESIGNED
GAD

ESTIMATED QUANTITIES

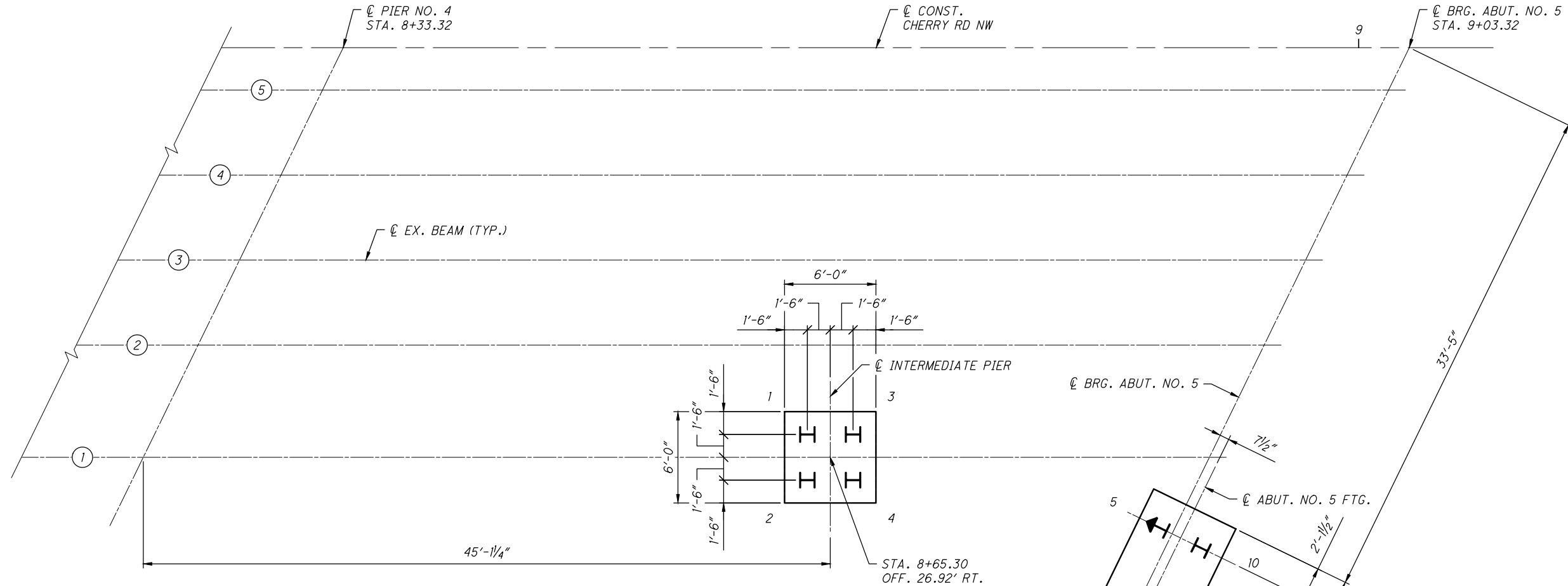
BRIDGE NO. PE-7-20 (CHERRY ROAD) OVER
TUSCARAWAS RIVER

STA CHERRY
RD BRIDGES

6 / 40

26
92

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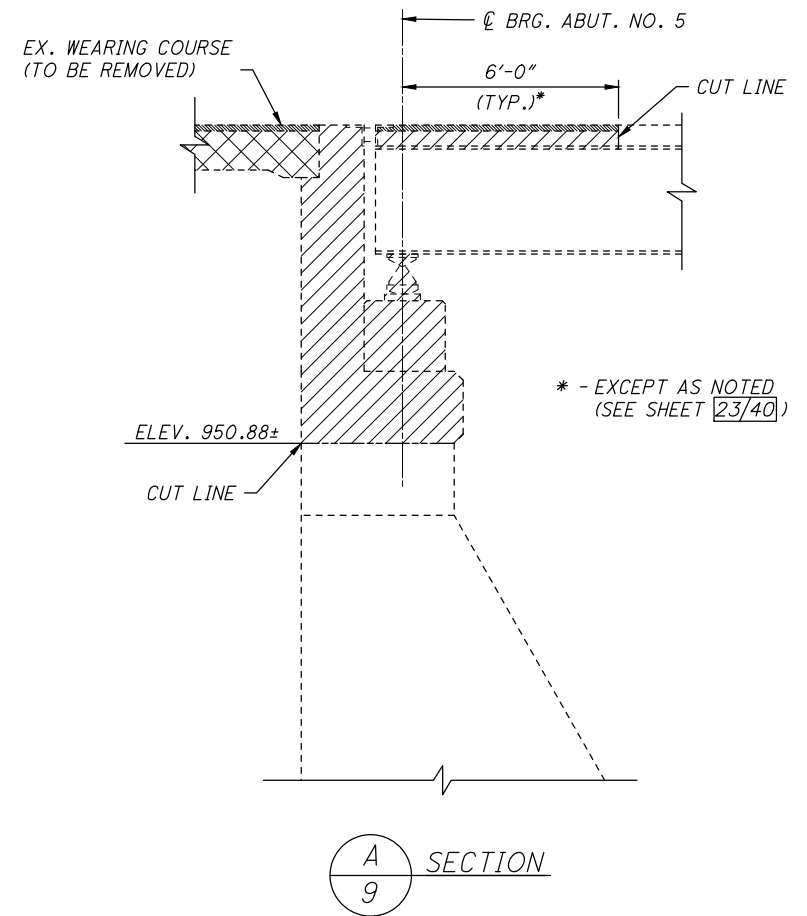
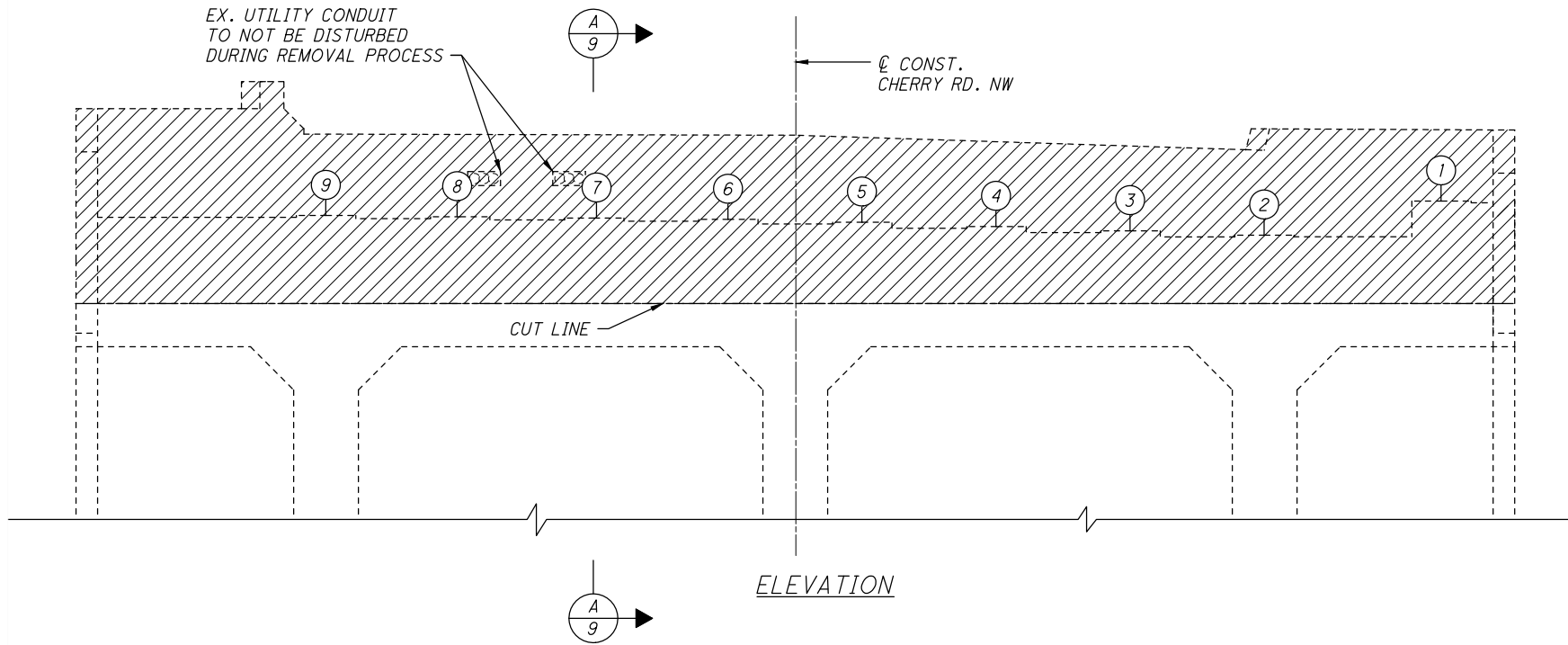
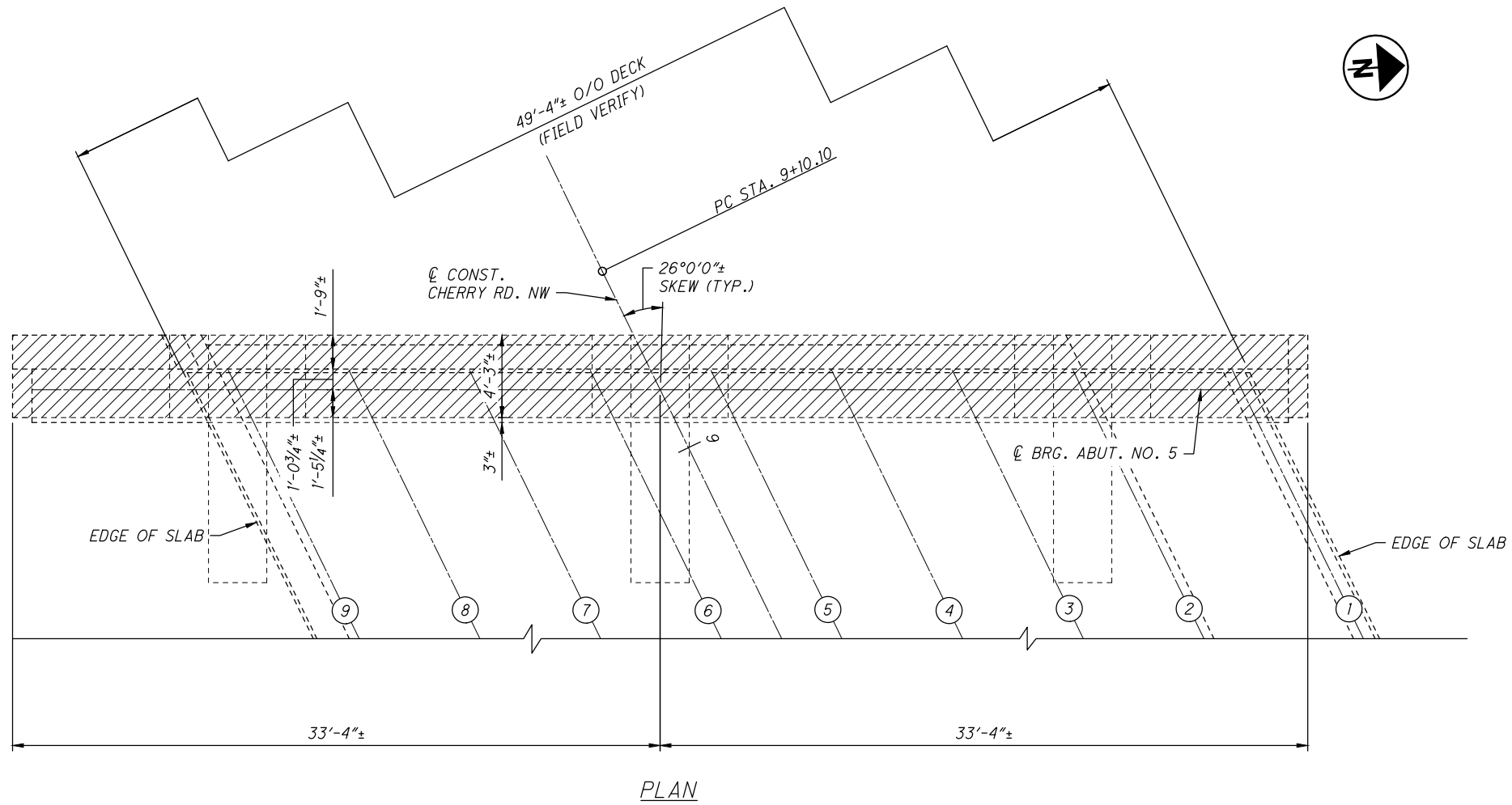


FOUNDATION PLAN

PILING TABLE							
PILE NO.	LOCATION	PILE SIZE	PILE CUTOFF EL.	EST. DRIVEN LENGTH	TOTAL EST. FURNISHED LENGTH	STATION	OFFSET
1	INTERMEDIATE PIER	HP12x53	937.1	35'	60	8+63.80	25.42'
2	INTERMEDIATE PIER	HP12x53	937.1	35'	60	8+63.80	28.42'
3	INTERMEDIATE PIER	HP12x53	937.1	35'	60	8+66.80	25.42'
4	INTERMEDIATE PIER	HP12x53	937.1	35'	60	8+66.80	28.42'
5	ABUT. NO. 5	HP12x53	948.53	35'	40	8+86.95	31.56'
6	ABUT. NO. 5	HP12x53	948.53	35'	40	8+83.88	37.85'
7	ABUT. NO. 5	HP12x53	948.53	35'	40	8+80.82	44.14'
8	ABUT. NO. 5	HP12x53	948.53	35'	40	8+77.75	50.44'
9	ABUT. NO. 5	HP12x53	948.53	35'	40	8+74.68	56.73'
10	ABUT. NO. 5	HP12x53	948.53	35'	40	8+89.65	32.88'
11	ABUT. NO. 5	HP12x53	948.53	35'	40	8+86.58	39.17'
12	ABUT. NO. 5	HP12x53	948.53	35'	40	8+83.51	45.46'
13	ABUT. NO. 5	HP12x53	948.53	35'	40	8+80.51	51.75'
14	ABUT. NO. 5	HP12x53	948.53	35'	40	8+77.38	58.04'

NOTES:

- FOR GENERAL NOTES REGARDING PILE DESIGN LOADS, SEE SHEET 2/40 THRU 5/40.
- FOR ABUTMENT DETAILS, SEE SHEETS 11/40 AND 13/40.
- PILE CUT OFF ELEVATION EQUALS BOTTOM OF FOOTING PLUS 1'-0" EMBEDMENT AT THE ABUTMENT, AND 1'-6" EMBEDMENT AT THE INTERMEDIATE PIER.
- FOR INTERMEDIATE PIER DETAILS SEE SHEET 15/40.
- INTERMEDIATE PIER PILES ARE ANTICIPATED TO BE INSTALLED FROM DECK LEVEL. THIS WILL REQUIRE ADDITIONAL LENGTH OF PILE FROM DECK LEVEL TO THE REQUIRED PILE CUT OFF ELEVATION. THE TOTAL PILE LENGTH HAS BEEN INCLUDED IN THE TABLE. THE ADDITIONAL CUT OFF PILES SHALL BE DISPOSED PER C&MS 202.02.



LEGEND:

-  ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

 ITEM 202 - APPROACH SLAB REMOVAL

 ITEM 202 - WEARING COURSE REMOVED

NOTES:

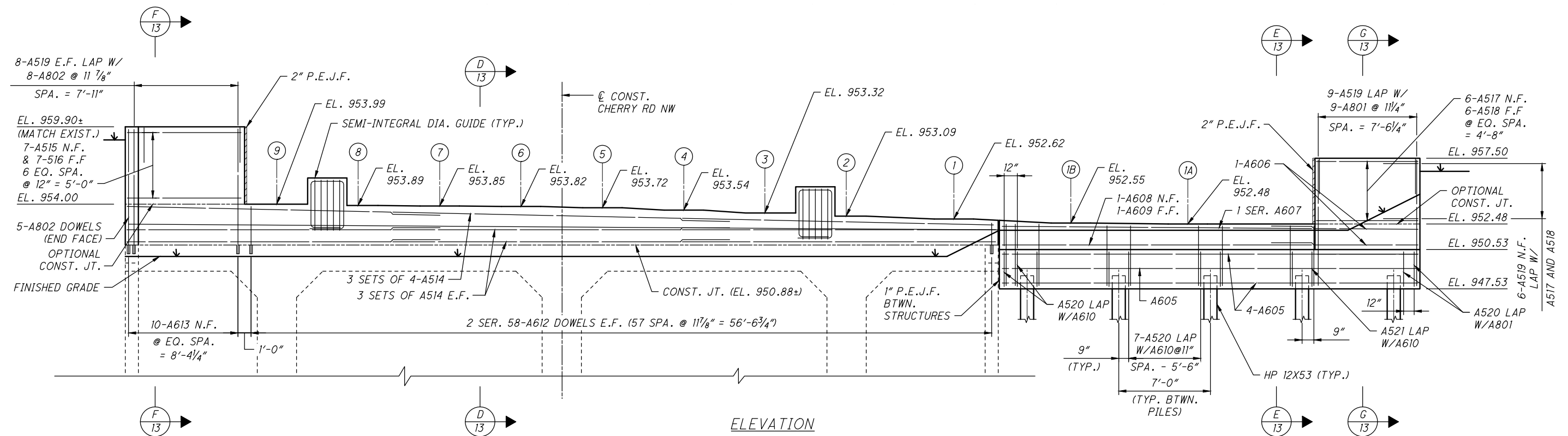
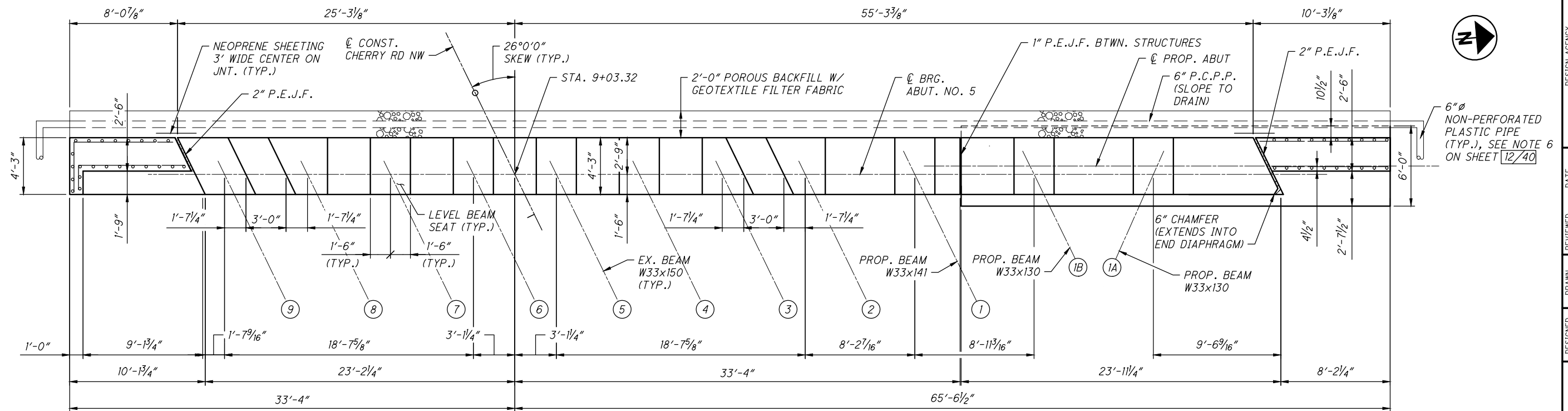
1. FOR ADDITIONAL REMOVAL INFORMATION SEE STRUCTURAL GENERAL NOTES, SHEET 2/40.
2. REFER TO STRUCTURAL GENERAL NOTES ON SHEET 3/40 FOR JACKING FORCES.
3. DETAILS FROM THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY. PERFORM ONLY PROPOSED WORK LISTED IN LEGEND.
4. AN ESTIMATE QUANTITY OF 216 CUBIC YARDS OF UNCLASSIFIED EXCAVATION HAS BEEN INCLUDED FOR THE EXCAVATION REQUIRED TO ACCESS AND CONVERT ABUTMENTS TO SEMI-INTEGRAL AND TO REINSTALL POROUS BACKFILL.



A circle containing the letter B above the number 12 . An arrow points to the right from the right side of the circle.

NOTES:

1. FOR ADDITIONAL NOTES AND DETAILS, SEE SHEET 12/40.

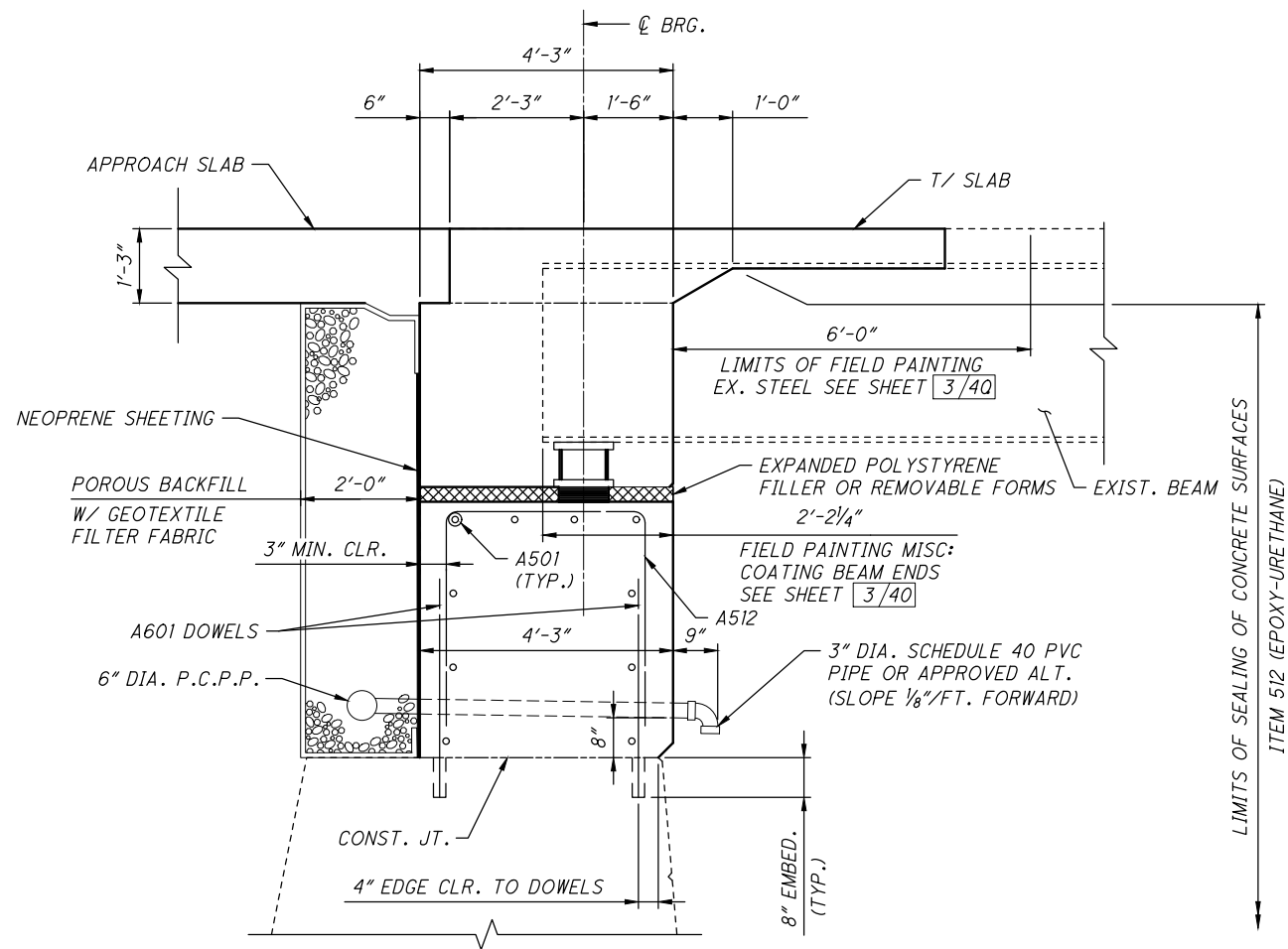


TENSION LAP SPLICE LENGTHS:	
#5	3'-1"
#6	3'-7"

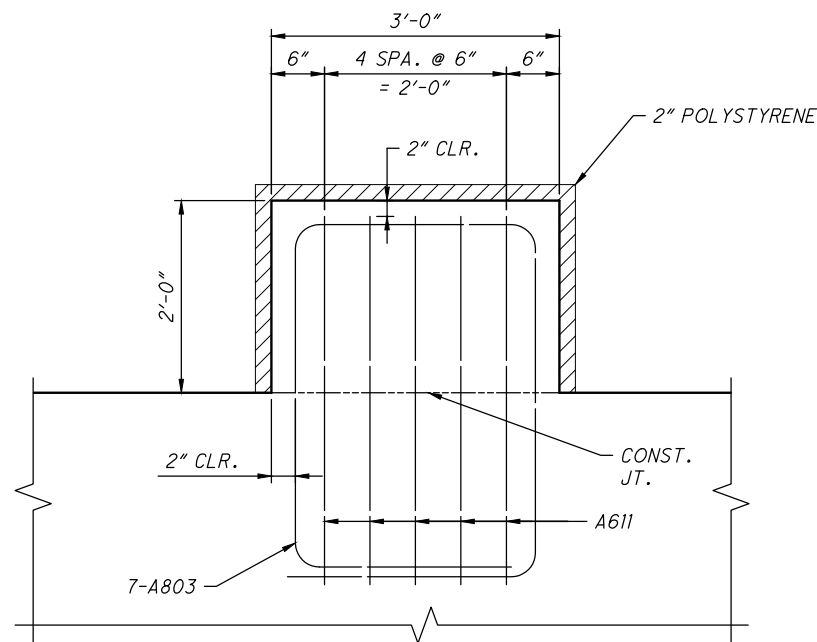
NOTES:

1. FOR ADDITIONAL NOTES AND DETAILS,
SEE SHEET 13/40.

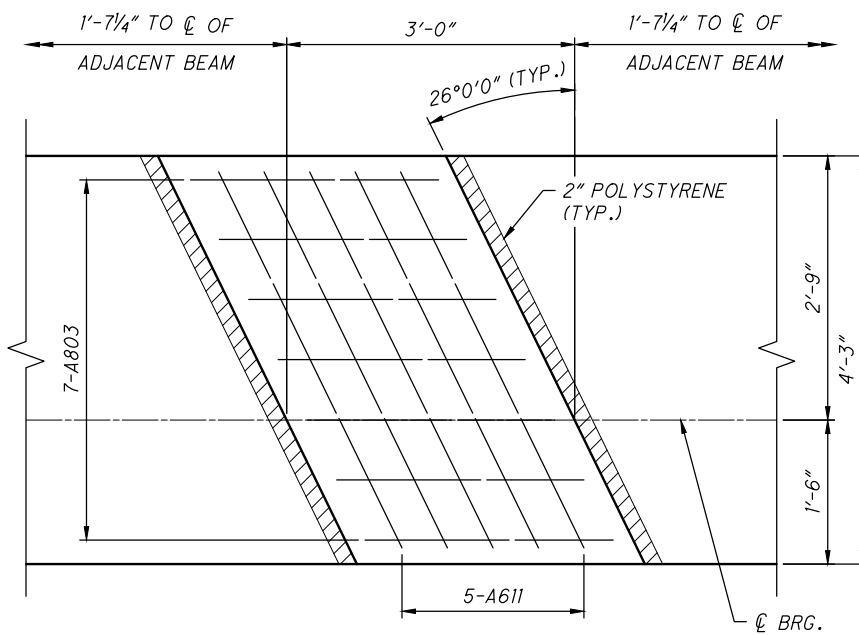
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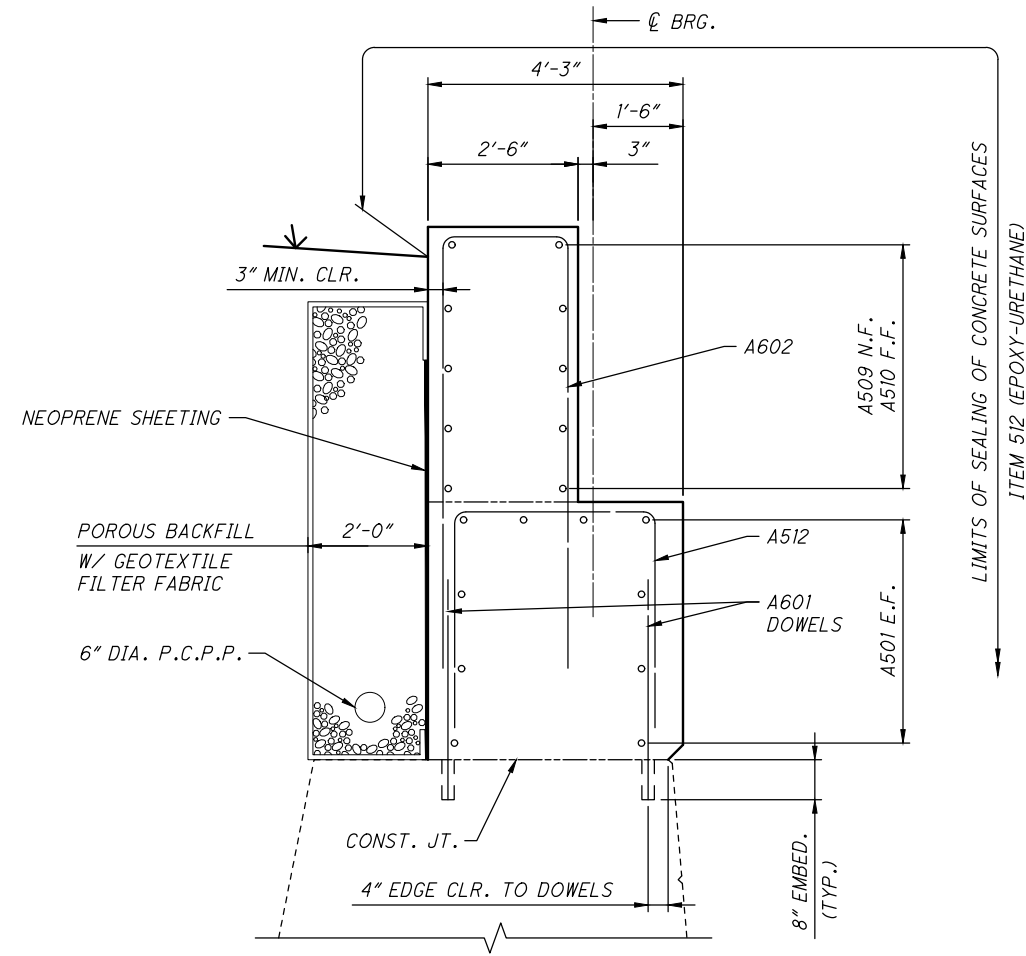
B
10 SECTION



ELEVATION



PARTIAL PLAN

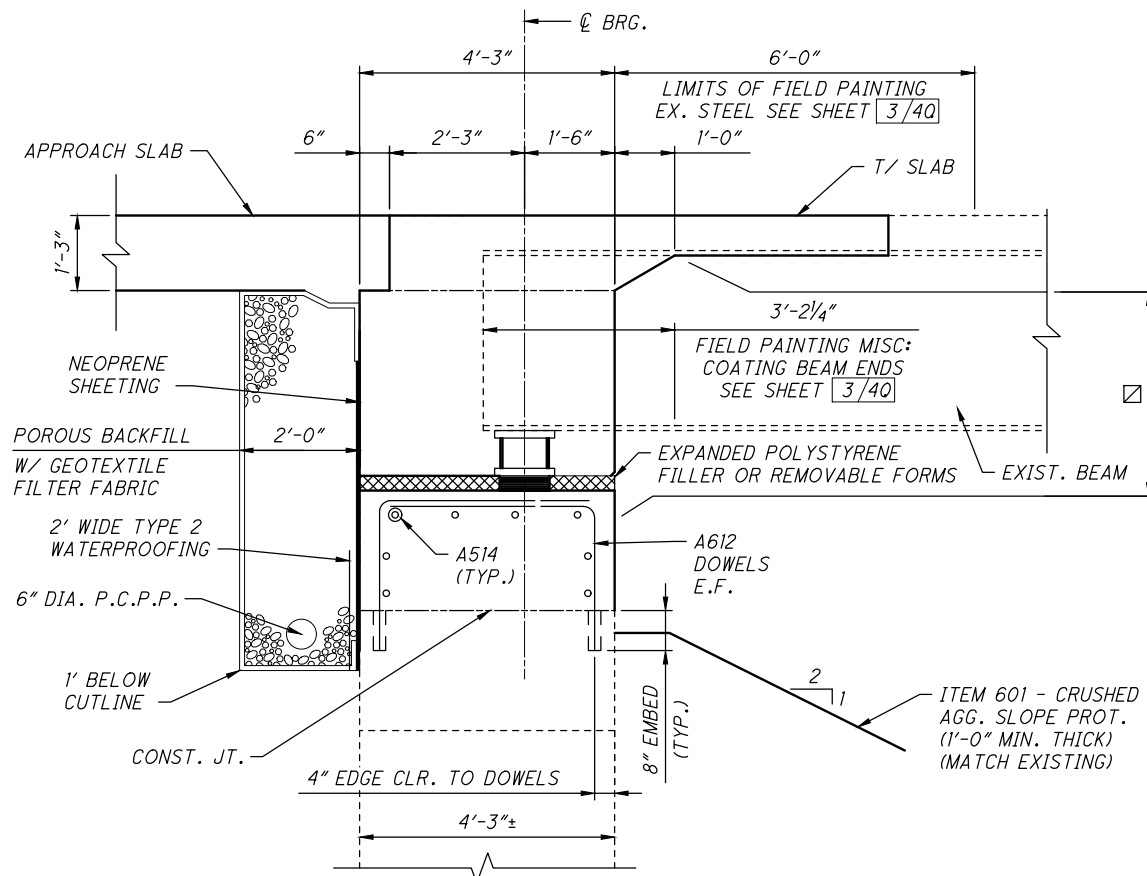


C
10 SECTION

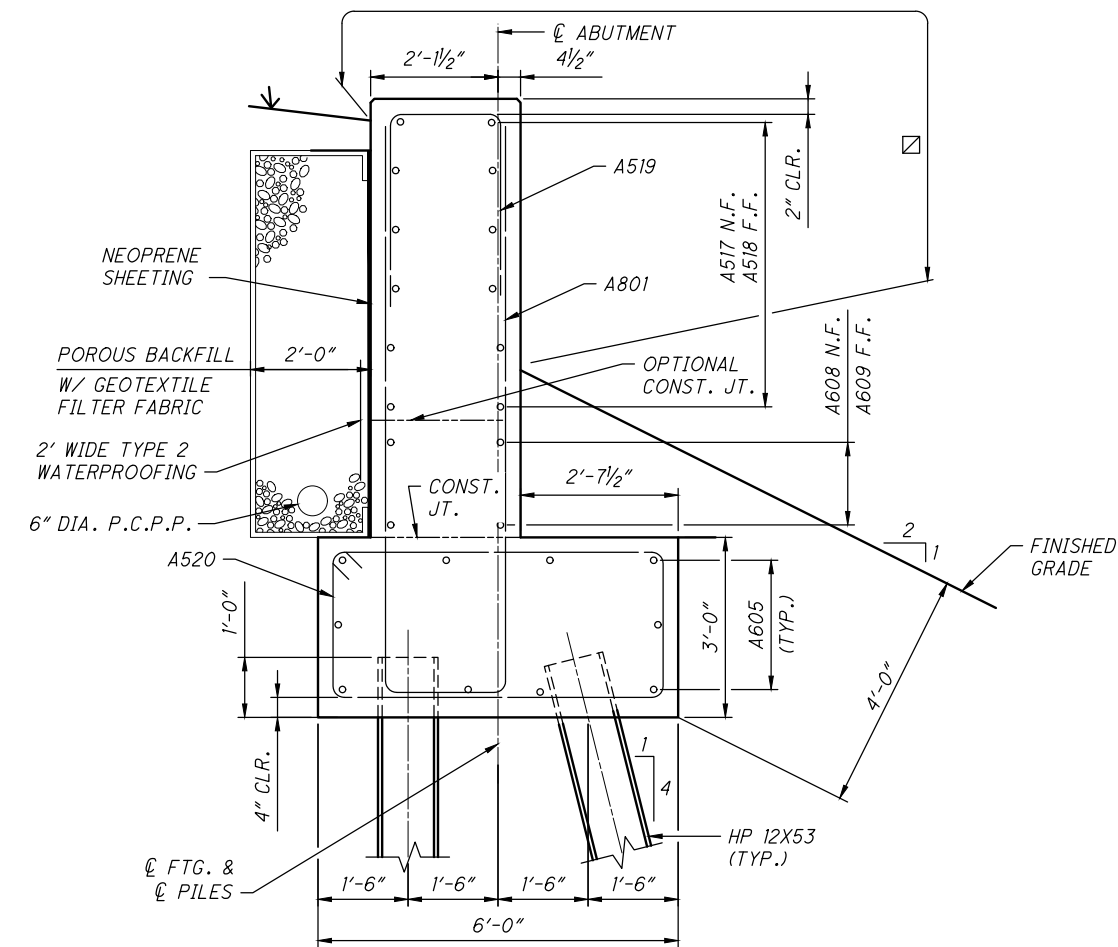
NOTES:

1. DRILL DOWEL HOLES WHERE SHOWN IN PLANS. INSTALL REINFORCING STEEL ACCORDING TO ITEM 510 USING NONSHRINK, NONMETALLIC GROUT, 705.20. PRIOR TO DRILLING DOWEL HOLES, LOCATED ALL EXISTING REINFORCING STEEL BARS IN THE AREA OF THE HOLE WITH THE AID OF REINFORCING STEEL BAR LOCATOR (PACHOMETER). IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATIONS AS A PROPOSED DOWEL HOLE, MOVE THE DOWEL HOLE TO EITHER SIDE OF THE EXISTING BAR.
2. ALL REINFORCING BAR CLEARANCES SHALL BE 3" MINIMUM UNLESS NOTED OTHERWISE. EXISTING REINFORCING NOT SHOWN FOR CLARITY.
3. PROPOSED SEAT ELEVATIONS AND HORIZONTAL CUTLINES/CONSTRUCTION JOINTS ARE BASED ON FIELD SURVEY AND SHALL BE VERIFIED BY THE CONTRACTOR.
4. ABUTMENT ELEVATIONS ARE GIVEN ALONG THE CENTERLINE OF BEARING AND WINGWALL ELEVATIONS ARE GIVEN ALONG THE FACE OF WINGWALL.
5. FOR REINFORCING STEEL LIST, SEE SHEET 36/40.
6. FOR DRAINAGE TERMINATION DETAILS SEE STANDARD DRAWING DM-1.1. ANIMAL GUARD AND CRUSHED AGGREGATE SLOPE PROTECTION SHALL BE INCLUDED IN ITEM 518 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN.
7. INCLUDE ALL WORK AND MATERIALS PERTAINING TO WEEP HOLE CONDUIT INCLUDING TEE FITTINGS FOR PAYMENT WITH ITEM 518 - 6" PERFORATED CORRUGATED PLASTIC PIPE.
8. FOR ADDITIONAL DETAILS AND NOTES NOT SHOWN, REFER TO ODOT STANDARD DRAWINGS SICD-2-14 AND SICD-1-21.

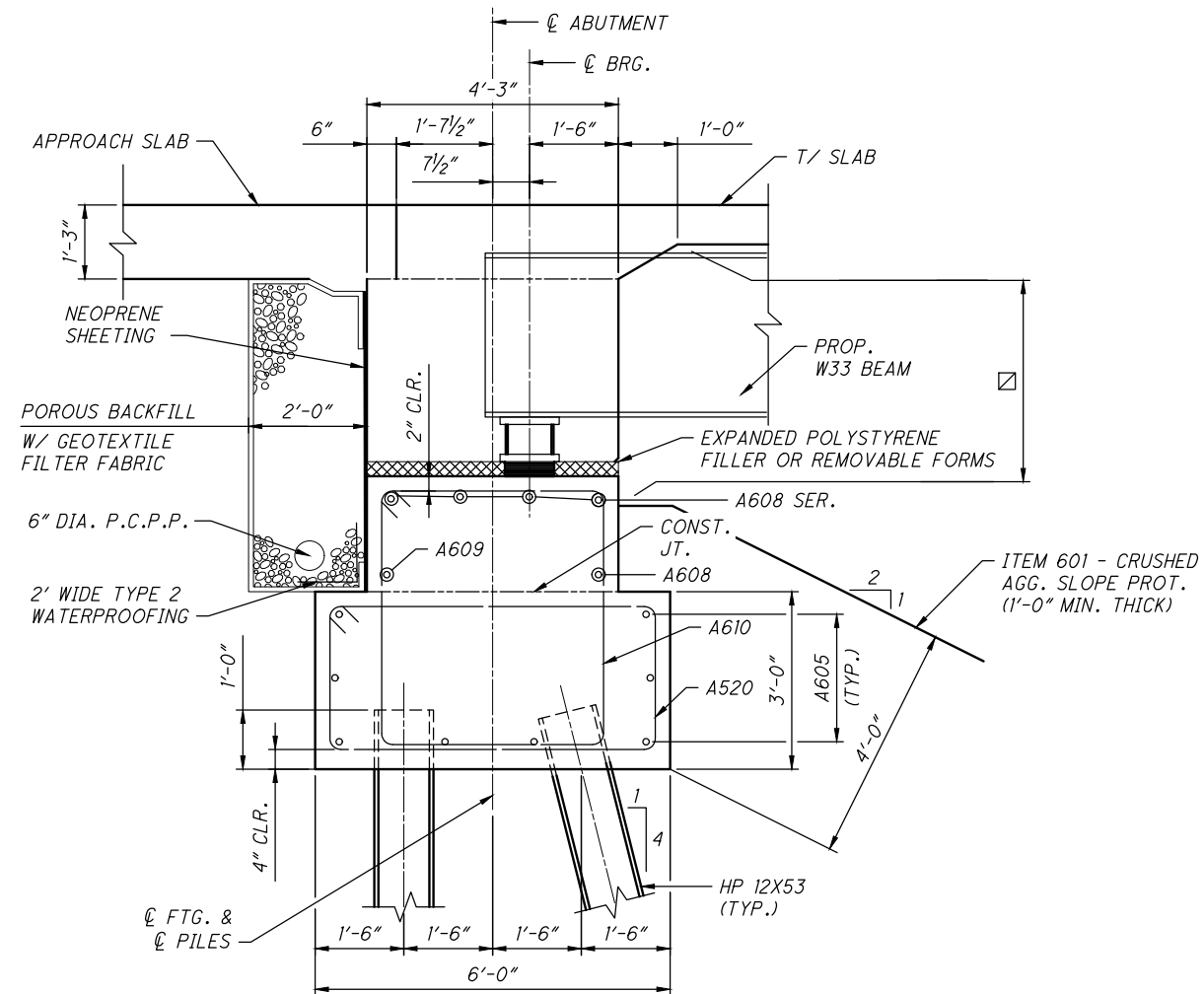
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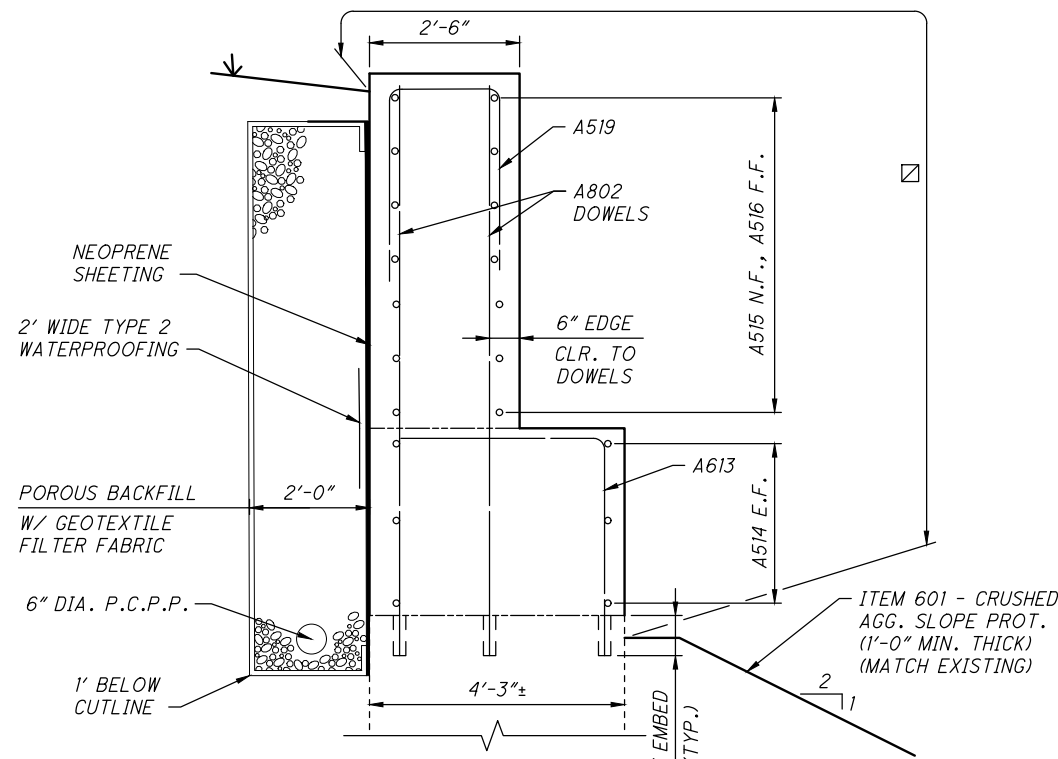
D
11
SECTION



G
11
SECTION



E
11
SECTION



F
11
SECTION

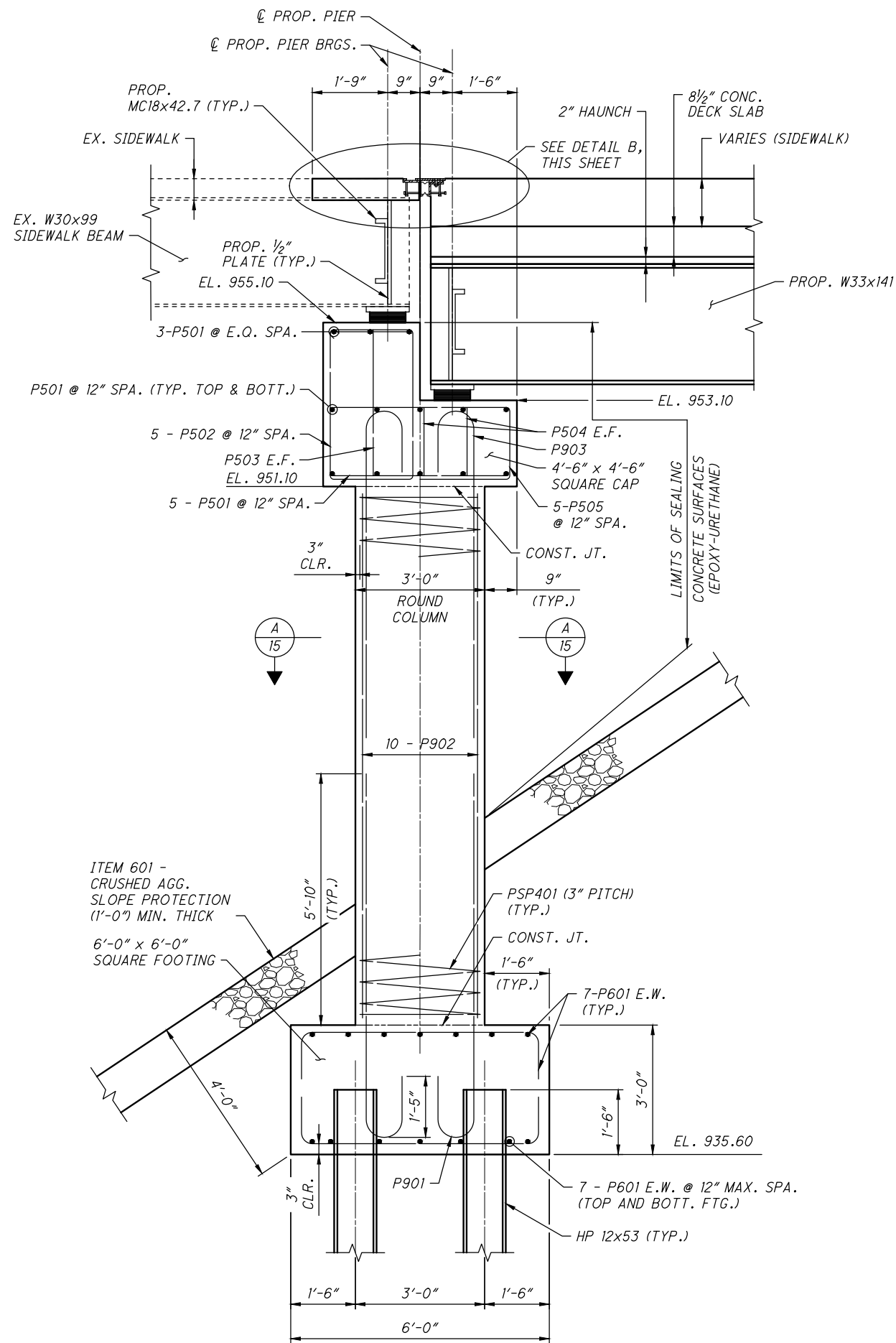
LEGEND:

☐ - LIMITS OF SEALING OF CONCRETE SURFACES ITEM 512 (EPOXY-URETHANE)

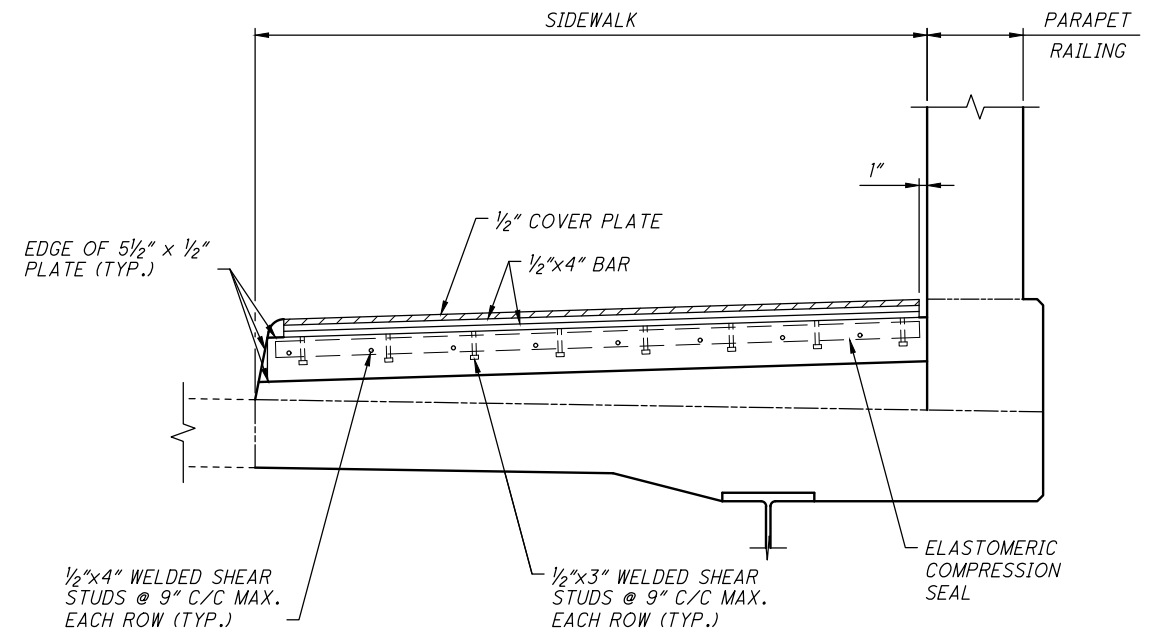
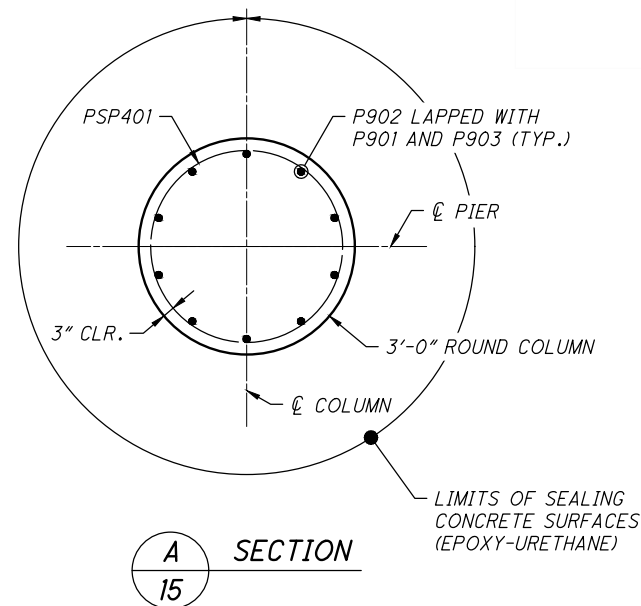
NOTES:

1. FOR ADDITIONAL NOTES AND DETAILS, SEE SHEET 12/40.
2. ALL REINFORCING BAR CLEARANCES ON THIS SHEET SHALL BE 3" MINIMUM UNLESS NOTED OTHERWISE. EXISTING REINFORCING NOT SHOWN FOR CLARITY.

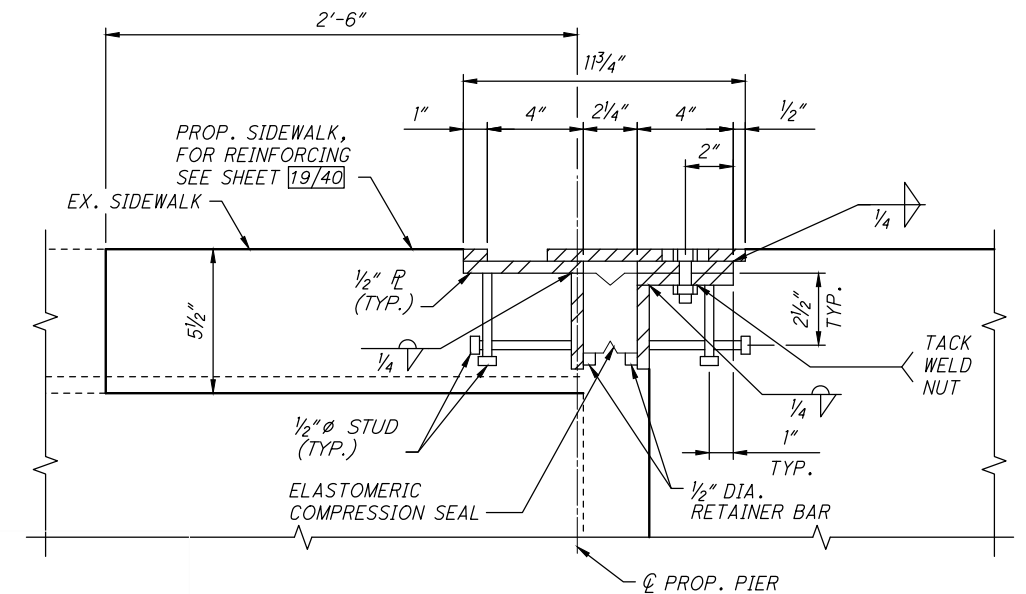
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PROPOSED INTERMEDIATE PIER SECTION



DETAIL B - ELEVATION

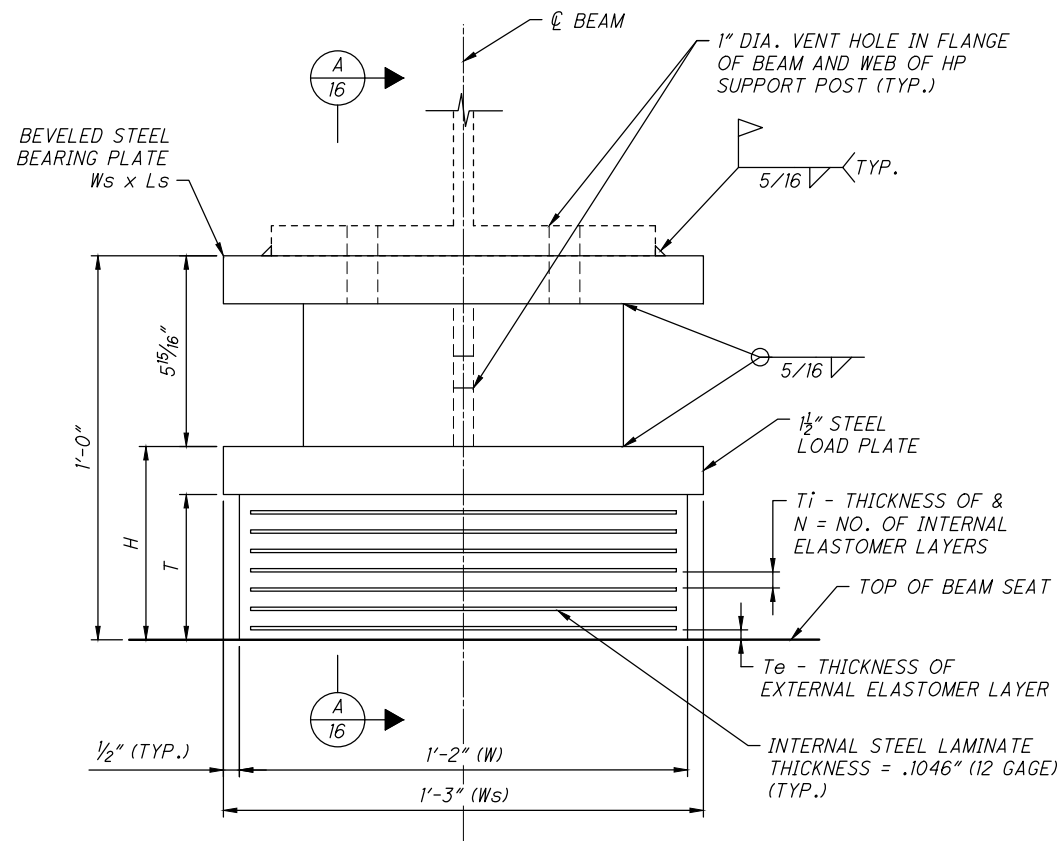


DETAIL B - SECTION

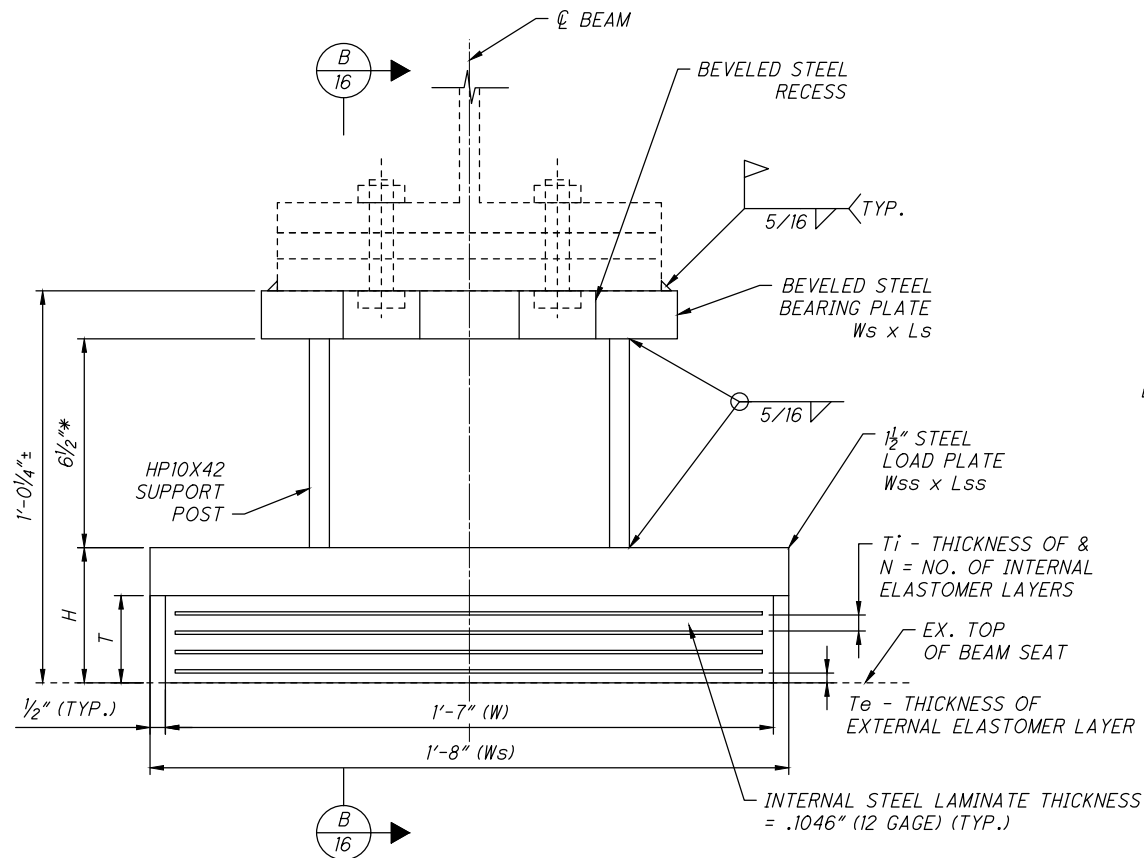
NOTES:

1. FOR ADDITIONAL INFORMATION AND DETAILS NOT SHOWN IN DETAIL A, REFER TO STANDARD DRAWING EXJ-2-81. THE JOINT WILL BE PAID FOR UNDER ITEM 516 - STRUCTURAL STEEL EXPANSION JOINT, AS PER PLAN.
2. 3" MIN. CLEAR COVER IN BOTTOM OF FOOTING, 2" FOR ALL OTHER SURFACES UNLESS NOTED.
3. FOR FOUNDATION PLAN, SEE SHEET 7/40.
4. FOR BEARING DETAILS, SEE SHEET 17/40.
5. FOR REINFORCING STEEL LIST, SEE SHEET 37/40.

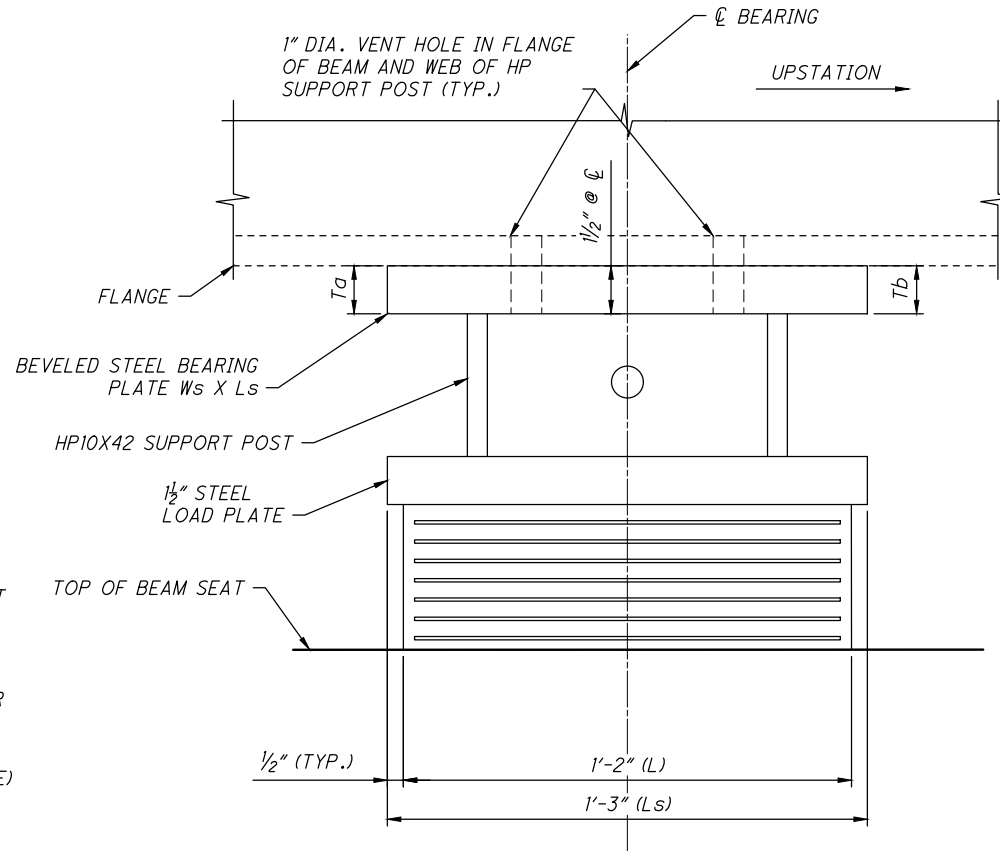
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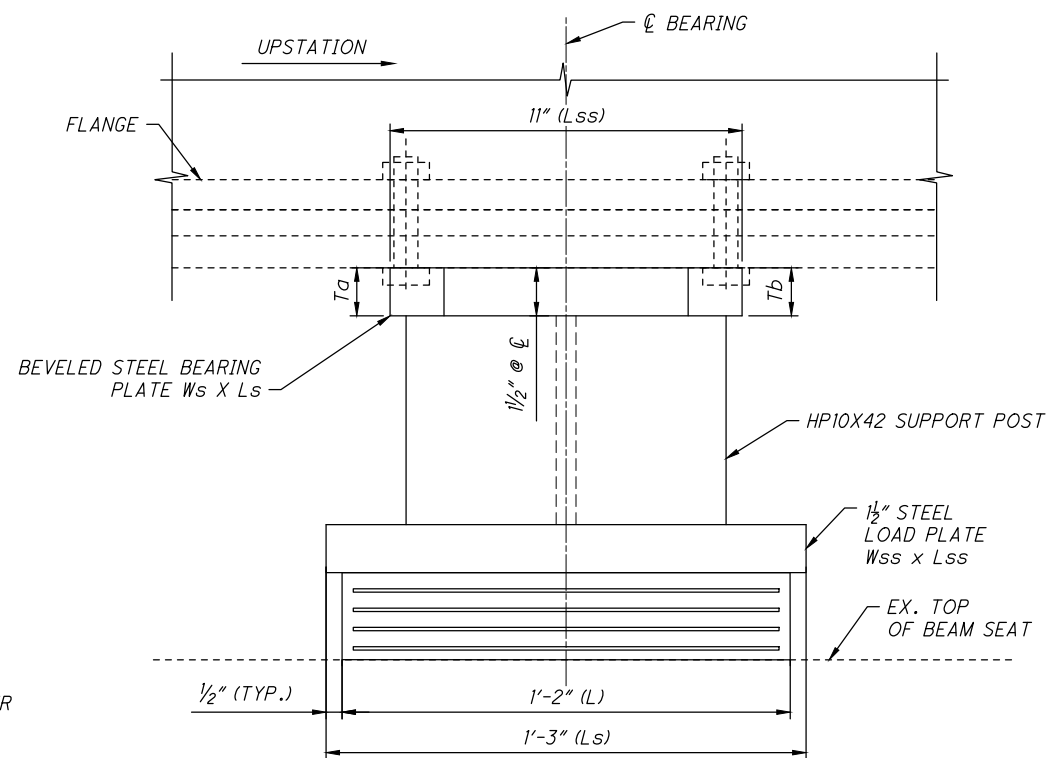
LAMINATED ELASTOMERIC EXPANSION BEARINGS AT ABUTMENTS



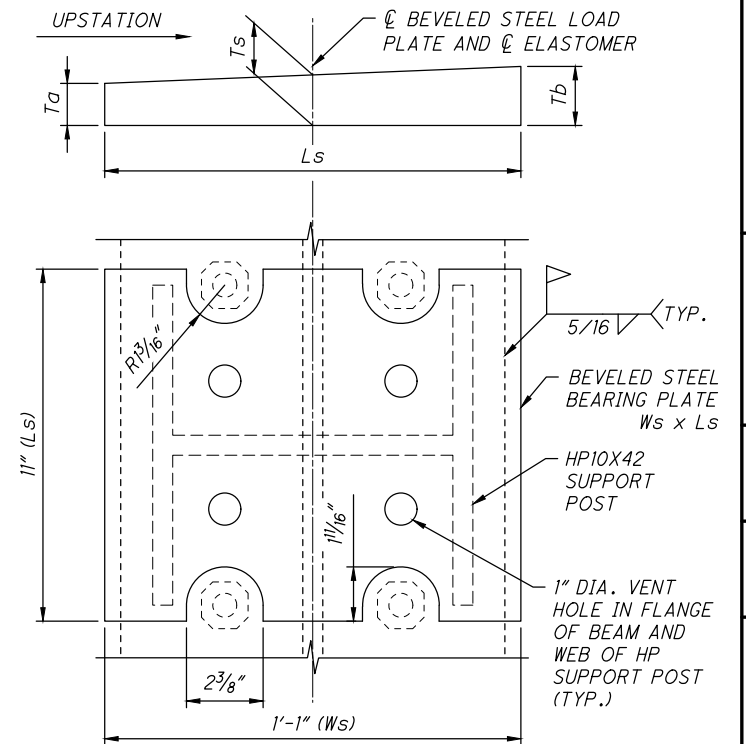
LAMINATED ELASTOMERIC EXPANSION BEARINGS AT PIERS 2, 3, & 4



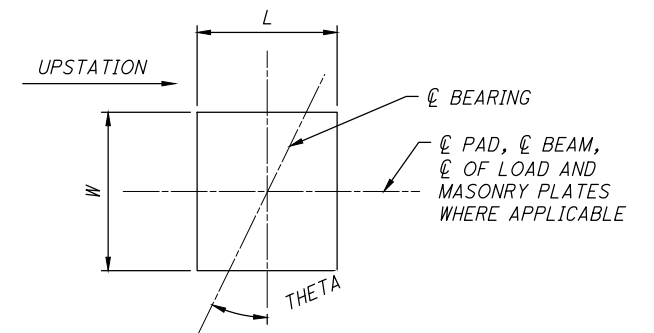
A SECTION



B SECTION



BEVELED STEEL BEARING PLATE DETAIL



BEARING ORIENTATION PLAN

LOCATION	THETA
REAR ABUT.	
PIERS 2, 3, & 4	26°00'00"
FORWARD ABUT. BEAMS 1-9 & 1B	
FORWARD ABUT. BEAM 1A	24°00'00"

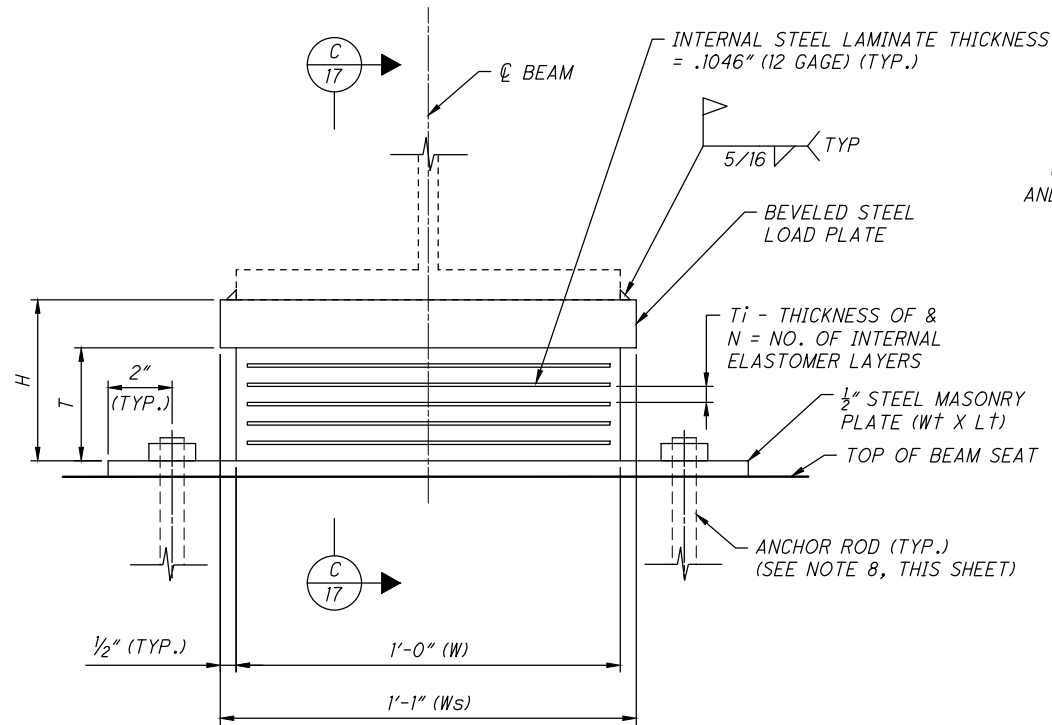
LEGEND:

* - DIMENSION OF HP10X42 POST HEIGHT CALCULATED BASED OFF EXISTING BEARINGS STD. DWG. RB-1-55 BUT MAY VARY DUE TO SHIMS AND AS CONSTRUCTED CONDITION. CONTRACTOR SHALL VERIFY HEIGHT IN FIELD AND TRIM POST AS REQUIRED FOR FIT UP. INCLUDE ALL COSTS ASSOCIATED WITH FIELD VERIFYING AND GRINDING WITH ITEM 516 FOR PAYMENT.

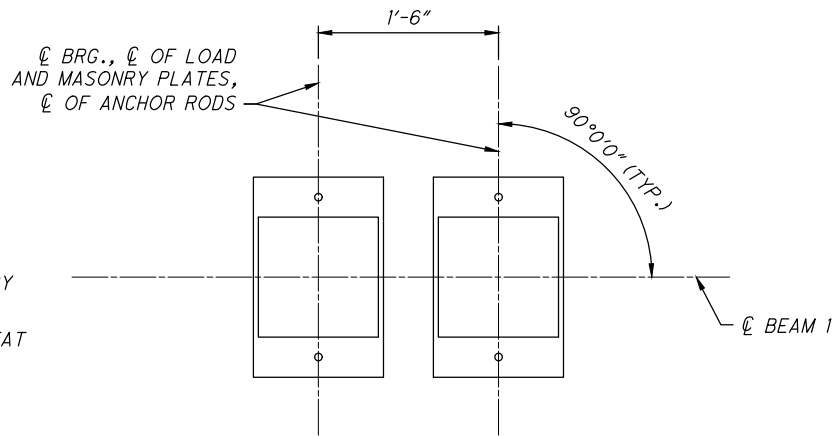
NOTES:

- FOR ADDITIONAL NOTES AND DETAILS, SEE SHEET 17/40.

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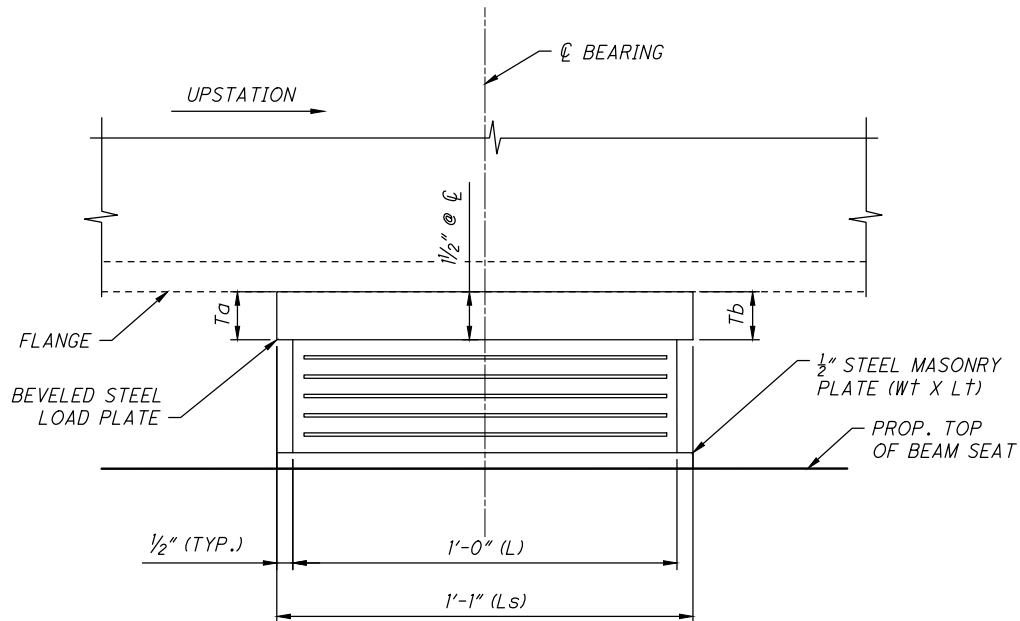
LAMINATED ELASTOMERIC
EXPANSION BEARINGS AT
INTERMEDIATE PIER COLUMN



BEARING ORIENTATION PLAN
(INTERMEDIATE PIER COLUMN ONLY)

NOTES:

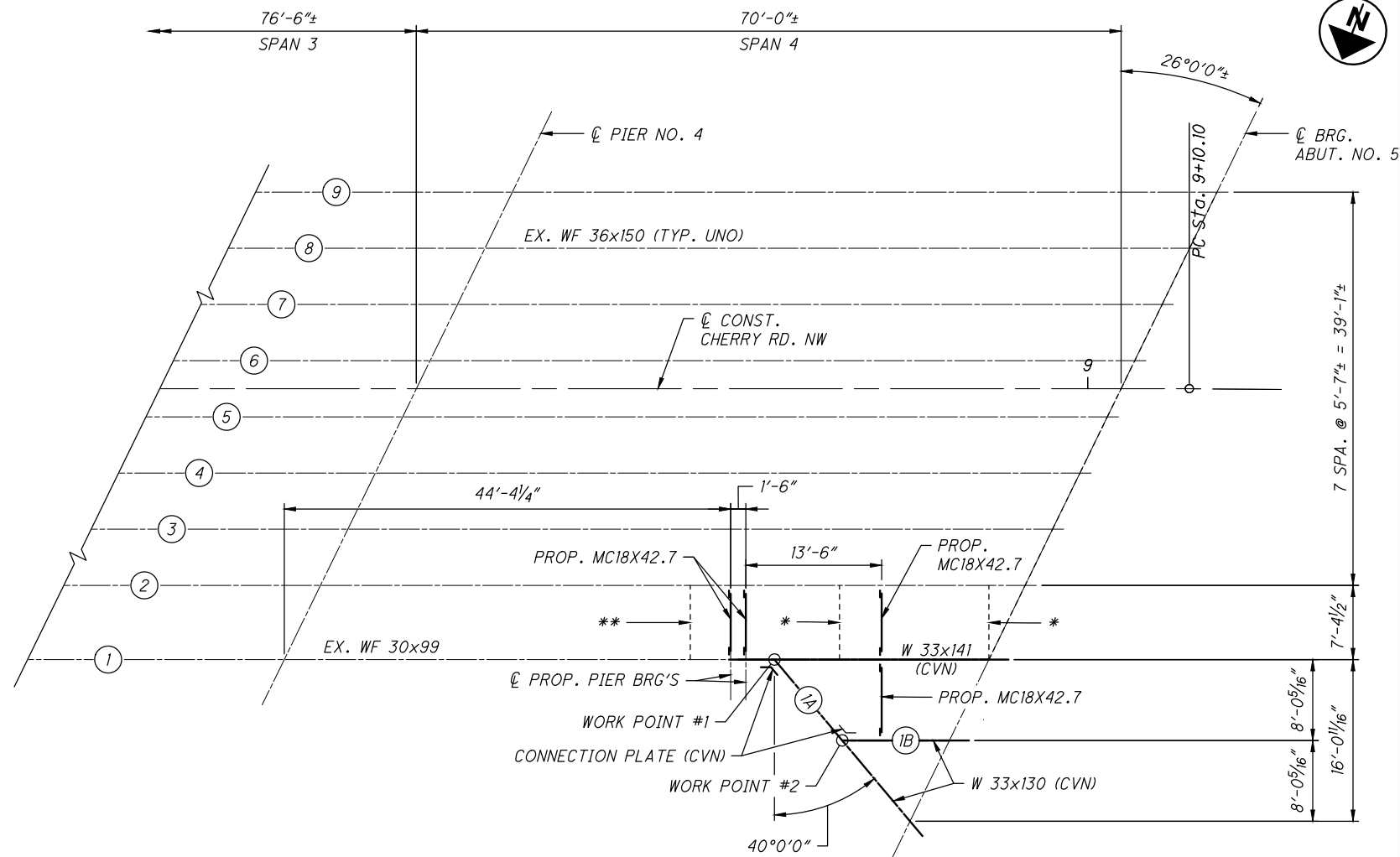
- ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED IN ACCORDANCE WITH SECTION 14.7.6 (METHOD A) OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. THE LONG-TERM COMPRESSION PROOF LEAD TEST (AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DIVISION II, SECTION 18.7.2.6) IS NOT REQUIRED.
- THE STEEL LOAD PLATE, BEARING PLATE AND MASONRY PLATE SHALL BE ASTM A709 GRADE 50 STEEL. GALVANIZE EXPOSED SURFACES OF THE PLATES.
- THE STEEL LOAD PLATE AND MASONRY PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS. CONTROL WELDING SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 300 DEGREES F AS DETERMINED BY THE USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.
- ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE THE BEARING LOCATION ON THE BRIDGE, AND A DIRECTION ARROW THAT POINTS UP-STATION. ALL MARKS SHALL BE PERMANENT AND BE VISIBLE AFTER THE BEARING IS INSTALLED.
- TOTAL DESIGN LOAD FOR THE BEARINGS EQUALS THE DEAD LOADS AND LIVE LOAD AS TABULATED IN THE BEARING TABLE.
- LOADS SHOWN ARE SERVICE LOADS WITH NO LOAD FACTORS OR IMPACT FACTORS INCLUDED.
- THE UNIT PRICE FOR BEARINGS SHALL INCLUDE ALL MATERIALS, LABOR, TESTING, HP SHAPES, AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC EXPANSION BEARINGS. PAYMENT SHALL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE, AS PER PLAN.
- 1/4" DIA. HOLE IN STEEL MASONRY PLATE FOR 3/4" DIA. X 1'-6", F1554, GRADE 55 ANCHOR ROD, GALVANIZED ACCORDING TO 711.02. ANCHOR ROD THREADS PER 1/2-7 UNC 2A, NUTS PER ASTM A563A HEAVY HEX AND WASHERS PER ASTM F436. ANCHOR RODS SHALL BE SET PRIOR TO POURING BEAM SEAT. NO FIELD DRILLING OF MASONRY PLATES PERMITTED. BEARING ANCHORS SHALL BE PLACED TO ENSURE FIT-UP WITH ALL BEARING COMPONENTS, TIGHTEN NUT TO ENGAGE MASONRY PLATE. ADJUST CAP REINFORCEMENT SPACING SLIGHTLY AS NEEDED TO ELIMINATE ANY CLASHES WITH ANCHOR RODS. INCLUDE ALL LABOR AND MATERIALS TO INSTALL ANCHOR RODS, NUTS, WASHERS, MASONRY AND LOAD PLATES WITH ITEM 516 FOR PAYMENT.



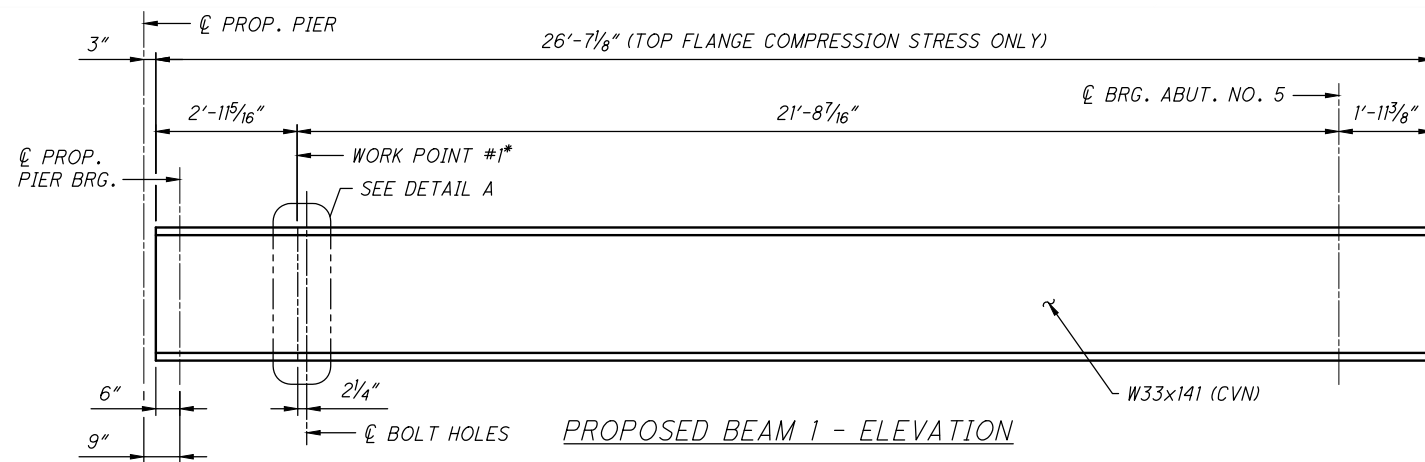
SECTION
C
17

SUBSTRUCTURE UNIT	BEARING DETAIL TABLE																						
	BEARING								BEVELED BEARING PLATE					LOAD PLATE			STEEL MASONRY PLATE			H (IN)	SERVICE REACTIONS		
	TYPE	No.	L (IN)	W (IN)	Te (IN)	Ti (IN)	N	T (IN)	Ts (IN)	Ta (IN)	Tb (IN)	Ls (IN)	Ws (IN)	Tss (IN)	Lss (IN)	Wss (IN)	L† (IN)	W† (IN)	† (IN)		RDL (KIPS)	RLL (KIPS)	RTOTAL (KIPS)
REAR ABUTMENT	EXP.	9	14	14	0.3125	0.5	7	4.54	1.5	1.296	1.704	15	15	1.5	15	15	-	-	-	6.04	75.6	76.3	152.0
PIER 2	EXP.	9	14	19	0.3125	0.5	4	2.73	1.5	1.350	1.650	11	13	1.5	15	20	-	-	-	4.23	106.9	142.6	249.5
PIER 3	EXP.	9	14	19	0.3125	0.5	4	2.73	1.5	1.350	1.650	11	13	1.5	15	20	-	-	-	4.23	106.9	142.6	249.5
PIER 4	EXP.	9	14	19	0.3125	0.5	4	2.73	1.5	1.350	1.650	11	13	1.5	15	20	-	-	-	4.23	106.9	142.6	249.5
FORWARD ABUTMENT	EXP.	11	14	14	0.3125	0.5	7	4.54	1.5	1.296	1.704	15	15	1.5	15	15	-	-	-	6.04	75.6	76.3	152.0
INT. PIER COLUMN	EXP.	2	12	12	-	0.5	6	3.52	1.5	1.323	1.677	13	13	-	-	-	13	20	0.5	5.02	15.8	50.8	66.7

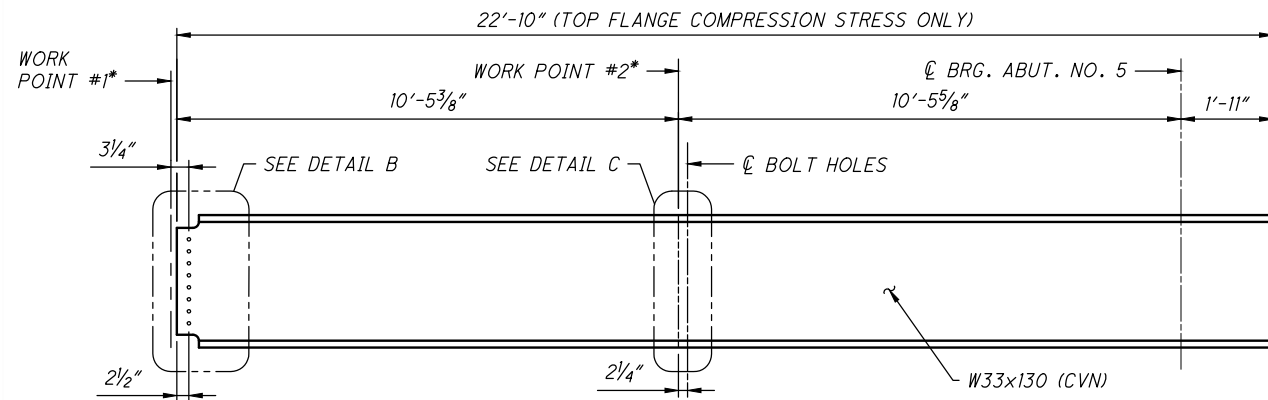
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PARTIAL FRAMING PLAN

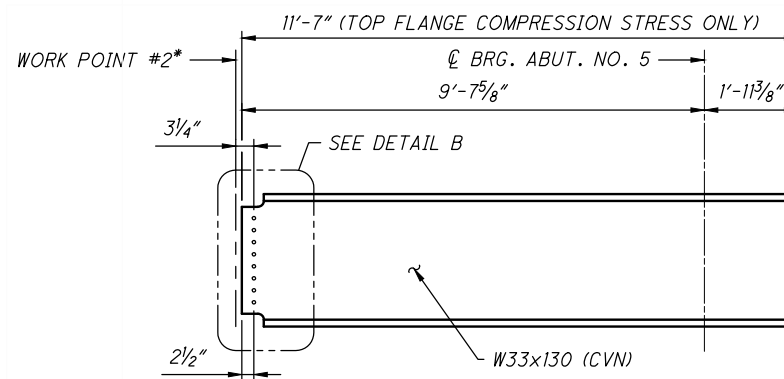


PROPOSED BEAM 1 - ELEVATION

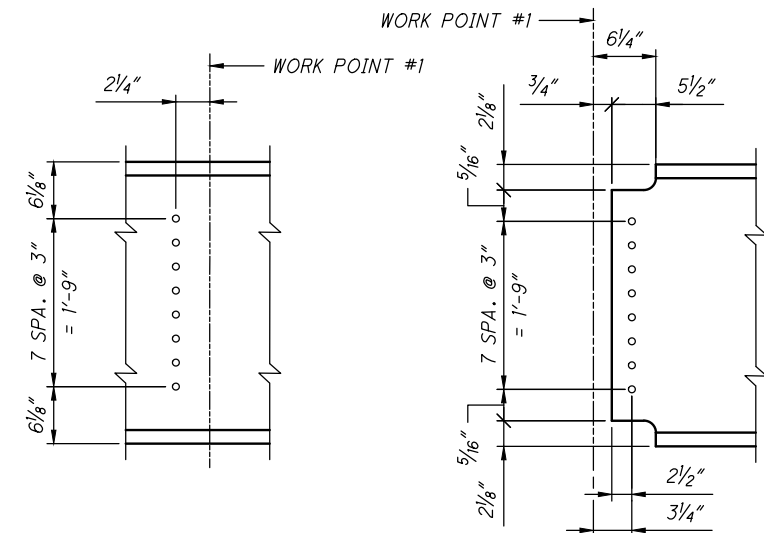


PROPOSED BEAM 1A - ELEVATION

* - INTERSECTION OF BEAM CL'S

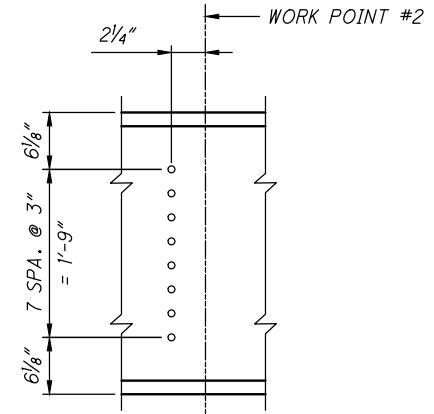


PROPOSED BEAM 1B - ELEVATION



DETAIL A
(BEAM 1 SHOWN)

DETAIL B
(BEAM 1A SHOWN,
BEAM 1B SIMILAR)



DETAIL C
(BEAM 1A SHOWN)

LEGEND

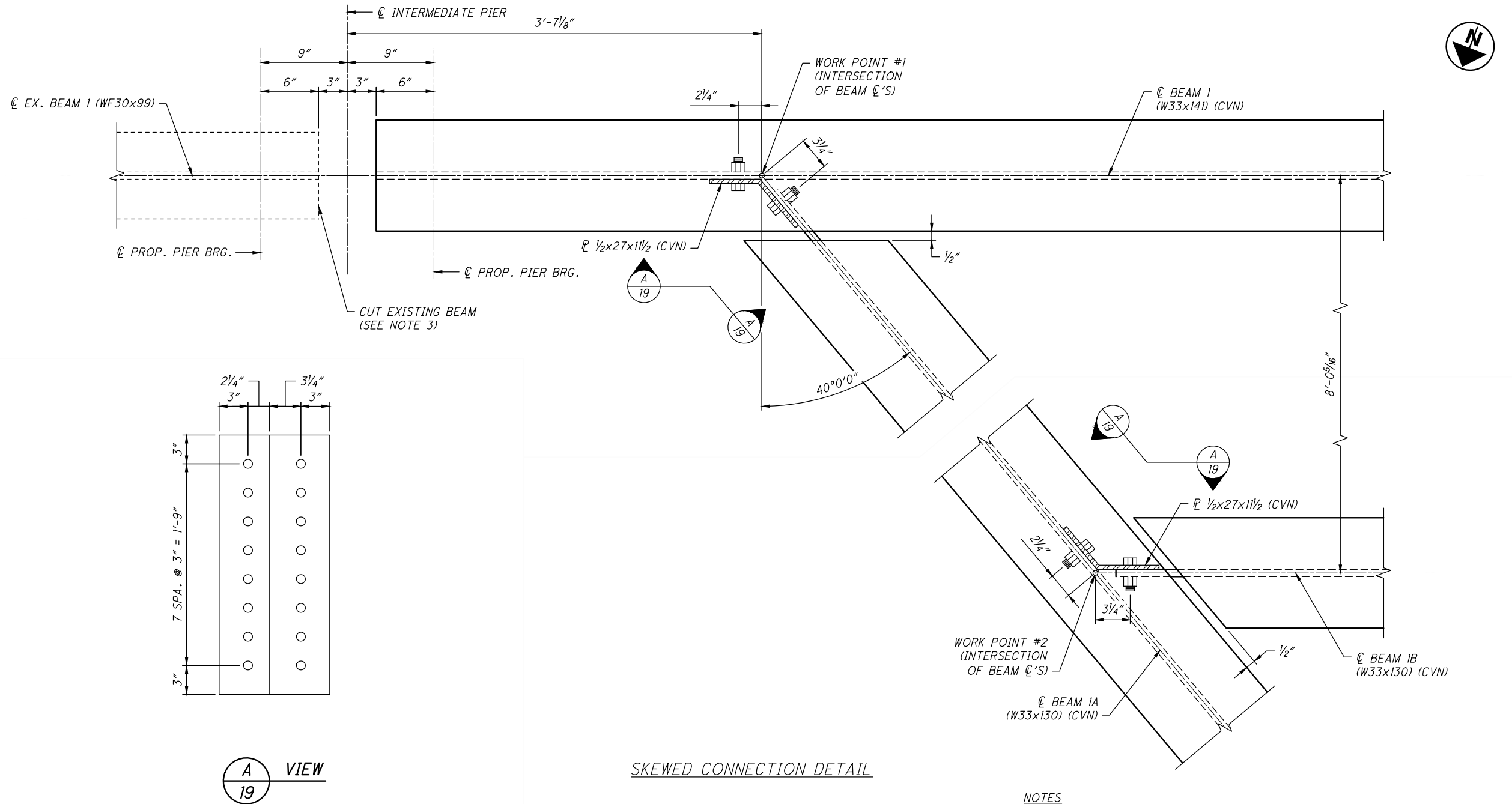
* EXISTING CROSSFRAME TO BE REMOVED. SEE NOTE 4 AND 5 ON SHEET 19/40 FOR MORE INFORMATION.

** EXISTING CROSSFRAME TO REMAIN

NOTES

- FOR PROPOSED DIAPHRAGM DETAILS AND NOTES, SEE STD. DWG. GSD-1-19
- FOR ADDITIONAL NOTES AND DETAILS, REFER TO SHEET 19/40.
- CVN: WHERE A SHAPE OR PLATE IS DESIGNATED CVN, FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIRED AS SPECIFIED IN CMS 711.01.
- ALL NEW STEEL SHALL BE GALVANIZED. ONLY THE FASCIA BEAM, IN ADDITION TO THE BEAM ENDS, SHALL BE PAINTED.

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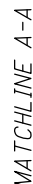
NOTES

1. ALL BOLTS IN CONNECTION PLATE SHALL BE $\frac{7}{8}$ " DIAMETER HIGH STRENGTH BOLTS PER ASTM A325 TYPE III WITH THREADS EXCLUDED FROM THE SHEAR PLANE. EACH FASTENER SHALL INCLUDE A BOLT, NUT AND WASHER. PLACE WASHER UNDER TURNED ELEMENT (EITHER HEAD OR BOLT). WHEN TURN OF NUT METHOD IS USED WASHER MAY BE OMITTED. TIGHTEN ACCORDING TO CMS 513. ALL BOLT HOLES SHALL BE $\frac{15}{16}$ " DIAMETER. MINIMUM EDGE DISTANCE FOR BOLTS SHALL BE $\frac{1}{2}$ "
2. ALL STRUCTURAL STEEL MATERIAL SHALL BE A709 GRADE 50W. FABRICATE BEAMS SO THAT NATURAL CAMBER IS IN AN UPWARD DIRECTION.
3. TEMPORARILY SUPPORT THE EXISTING BEAM TO REMAIN AND THE PORTION TO BE REMOVED UNTIL IT IS READY TO BE PICKED. MAINTAIN TEMPORARY SUPPORT OF EXISTING BEAM TO REMAIN UNTIL BEARING IS IN PLACE ON NEW PIER. CUT THE BEAM TO REMAIN VERTICAL 6 INCHES BEYOND THE CENTERLINE OF BEARING OF ITS NEW SUPPORT AS SHOWN ON THIS SHEET. SEE STRUCTURAL GENERAL NOTES ON SHEET 3/40.
4. EXISTING CONNECTION PLATE, CROSSFRAMES AND END DIAPHRAGMS TO BE INCLUDED FOR PAYMENT WITH ITEM 513 - STRUCTURAL STEEL MEMBER, LEVEL 1, AS PER PLAN.
5. PENCIL ABRASIVE BLAST OR GRIND EXISTING WELD SMOOTH A MINIMUM OF 2" EACH SIDE OF THE PROPOSED WELDS AND PROVIDE A SURFACE FINISH ACCORDING TO ANSI B46.1 OF 250 MIL (6.4 MICROMETERS). TO BE PAID FOR UNDER ITEM 513 - STRUCTURAL MEMBERS, LEVEL UF, AS PER PLAN.
6. CVN: WHERE A SHAPE OR PLATE IS DESIGNATED CVN, FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIRED AS SPECIFIED IN CMS 711.01.

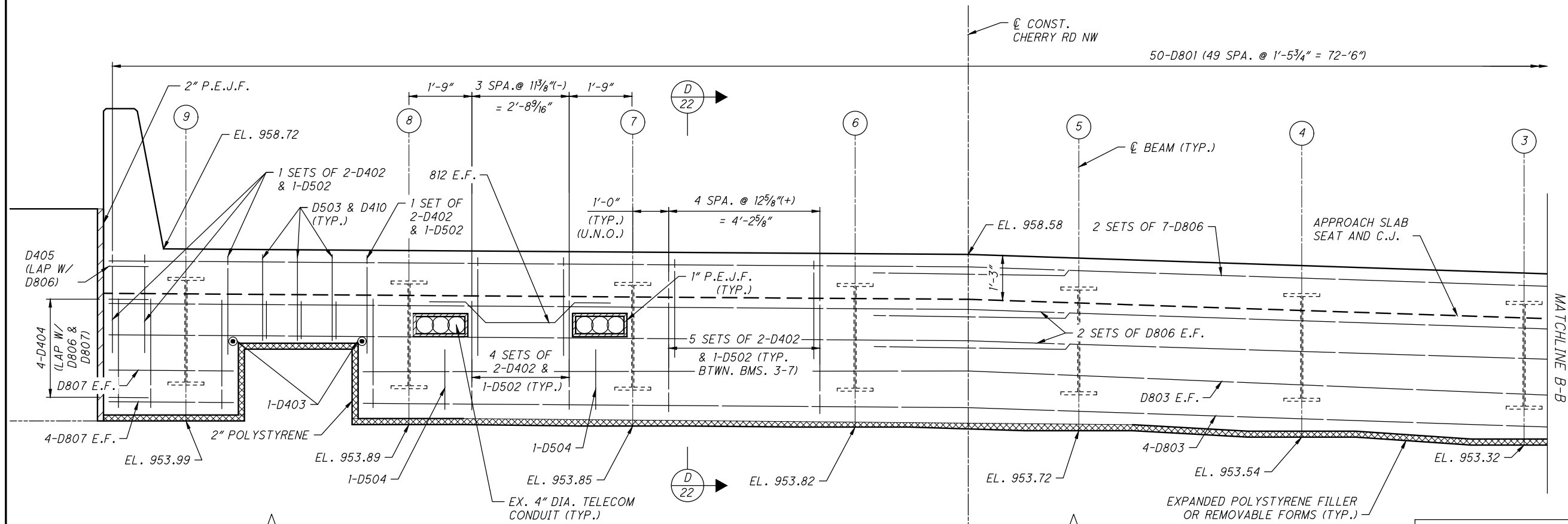


NOTES:

1. FOR END DIAPHRAGM REINFORCING LIST, SEE SHEET 36/40.
2. ALL REBAR CLEARANCE MEASURED TO THE FACE OF CONCRETE SHALL BE 3" UNLESS NOTED OTHERWISE.
3. PLACE VERTICAL BARS IN END DIAPHRAGM PARALLEL TO BEAMS UNLESS NOTED OTHERWISE. DIMENSIONS GIVEN IN THIS PLAN SHALL BE MEASURED ALONG THE CENTERLINE OF BEARING.
4. PER BDM 702.4.2-1, PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS OF AN INDIVIDUAL PHASE WITH THE DECK CONCRETE OR AT LEAST 48 HOURS BEFORE PLACEMENT OF THE DECK CONCRETE. IF PLACED SEPARATELY, LOCATE A HORIZONTAL CONSTRUCTION JOINT IN THE DIAPHRAGM AS SHOWN ON SICD-1-21, SHEET 3 OF 7 AND PLACE REMAINING DIAPHRAGM CONCRETE WITH THE DECK.
5. FOR ADDITIONAL DETAILS AND NOTES NOT SHOWN, REFER TO STANDARD DRAWINGS AS-1-15, SICD-1-21 AND SICD-2-14.
6. THE CONTRACTOR SHALL EXERCISE CAUTION IN MAINTAINING THE EXISTING 4" I.D. TELECOM UTILITIES RUNNING THRU THE ABUTMENT BACKWALL. EXTEND THE EXISTING UTILITY SLEEVES TO THE FACE OF THE PROPOSED DIAPHRAGM BY PROVIDING NEW SPLIT SLEEVES, TAPE SPLIT SLEEVE PRIOR TO PLACING DIAPHRAGM CONCRETE. THE INTENT OF THE REHABILITATION IS TO ISOLATE THE UTILITY SLEEVES FROM LONGITUDINAL DIAPHRAGM MOVEMENT.

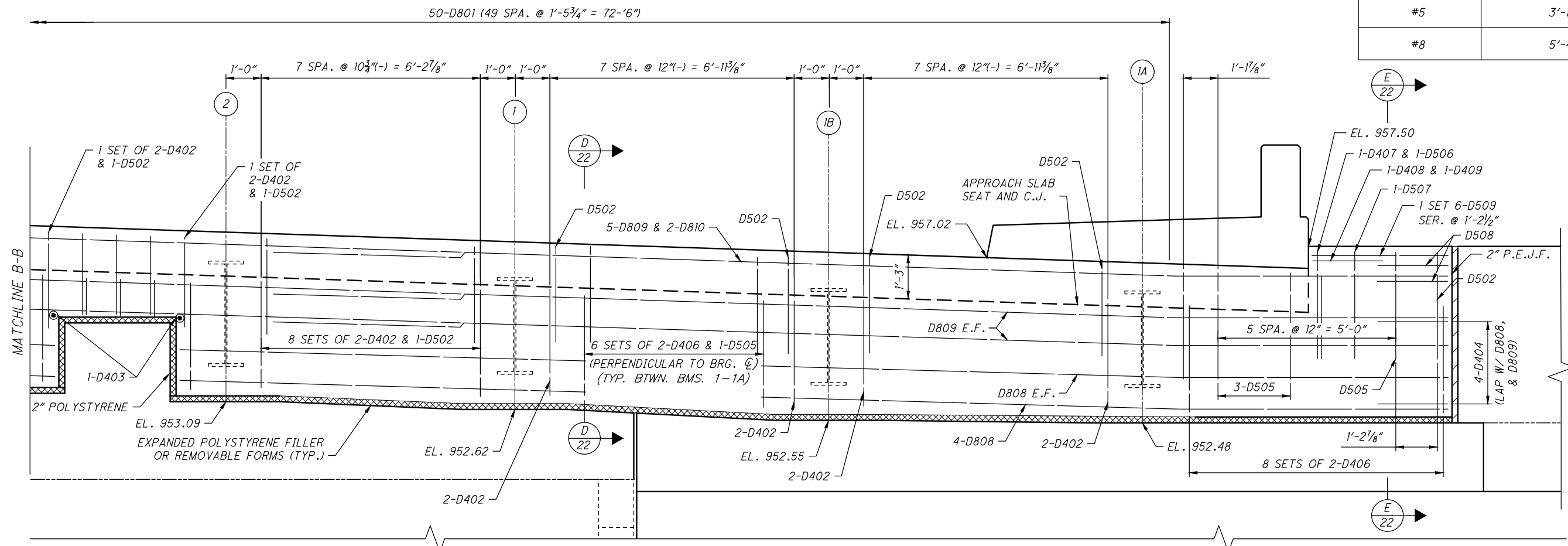


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ELEVATION

TENSION LAP SPLICE LENGTHS:	
#4	1'-11"
#5	3'-1"
#8	5'-4"

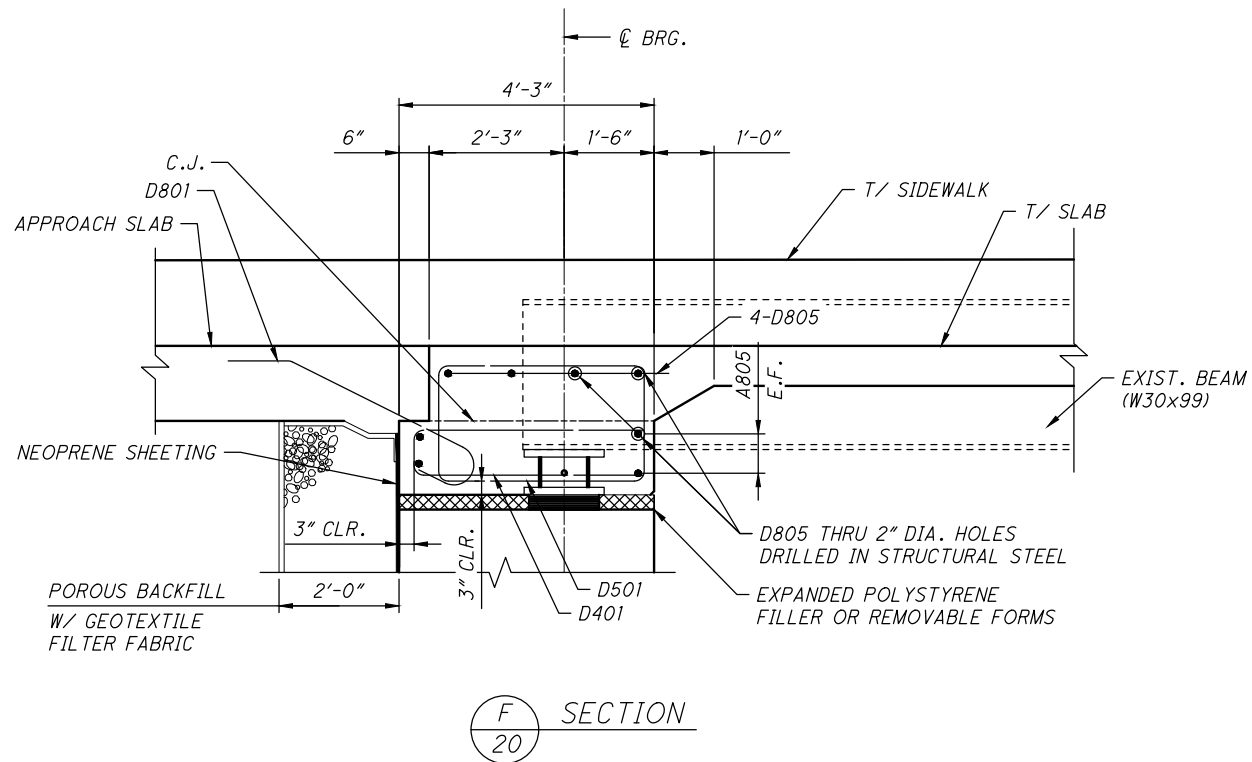
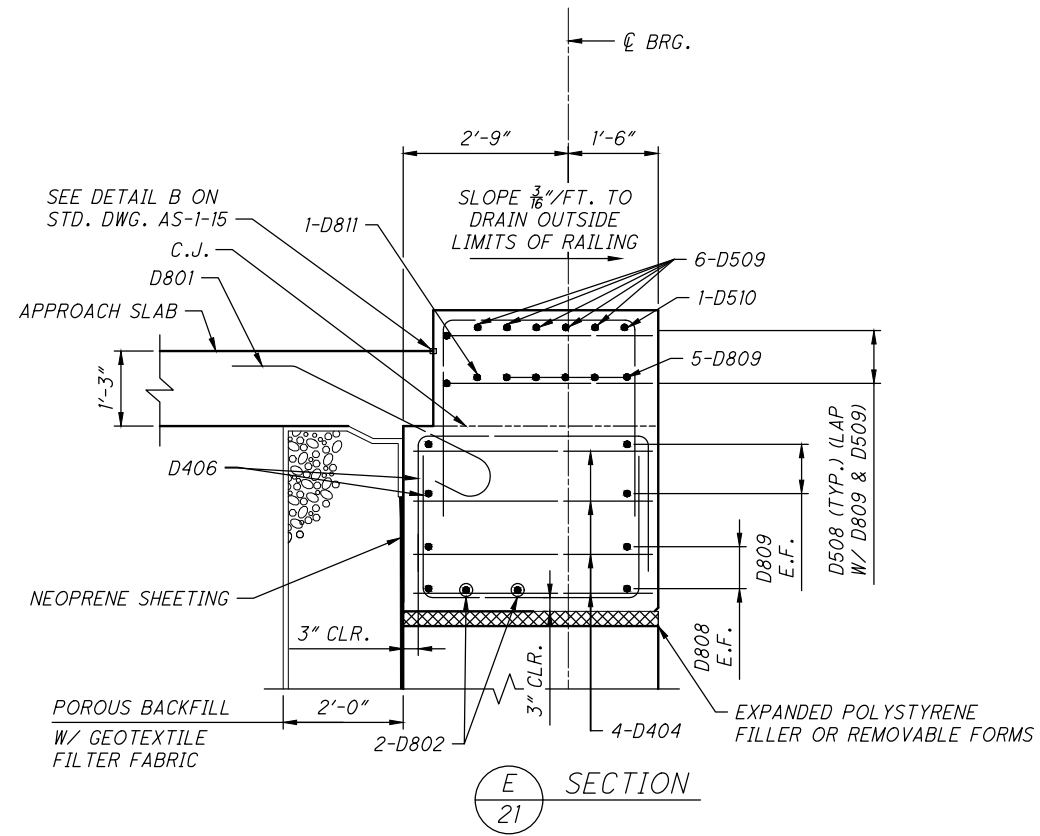
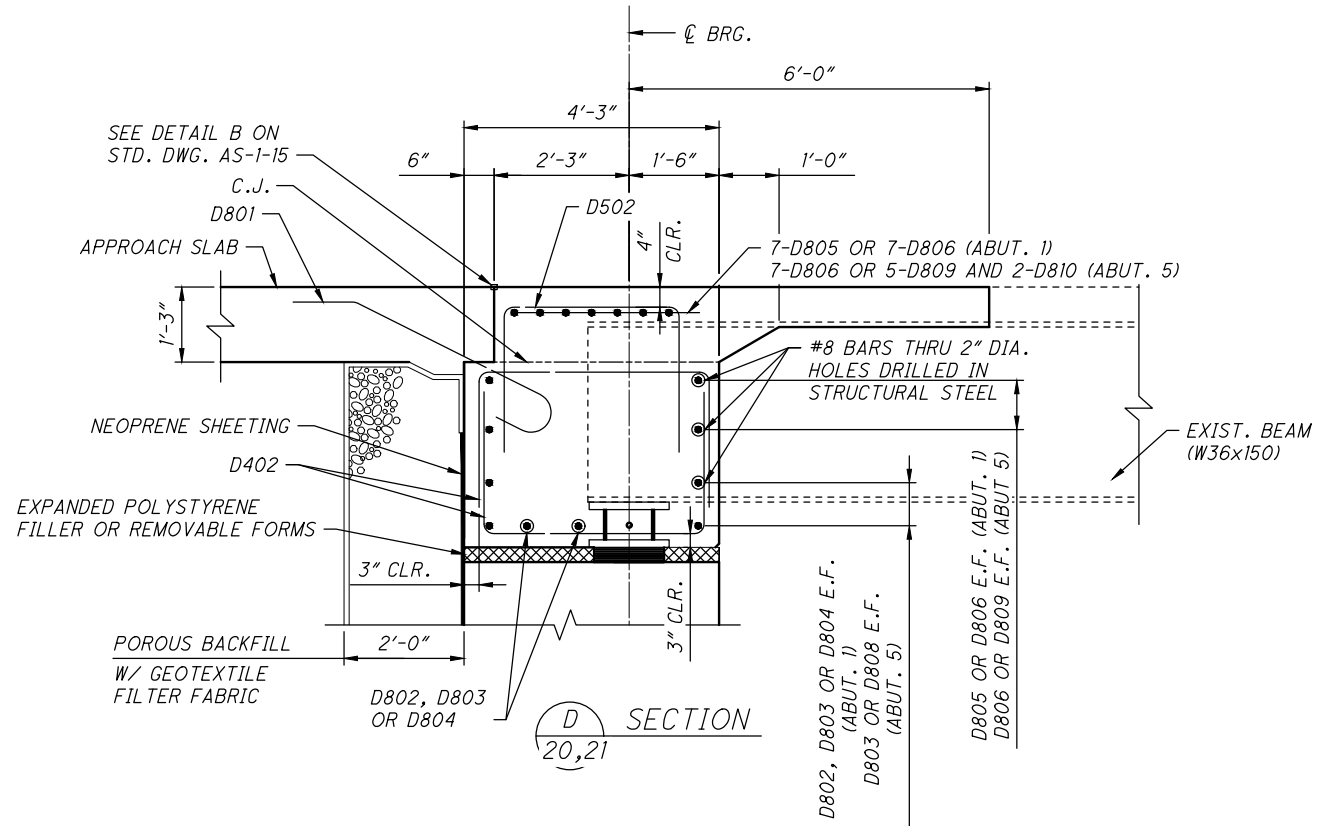


ELEVATION

NOTES:

1. FOR NOTES, SEE SHEET 20/40.

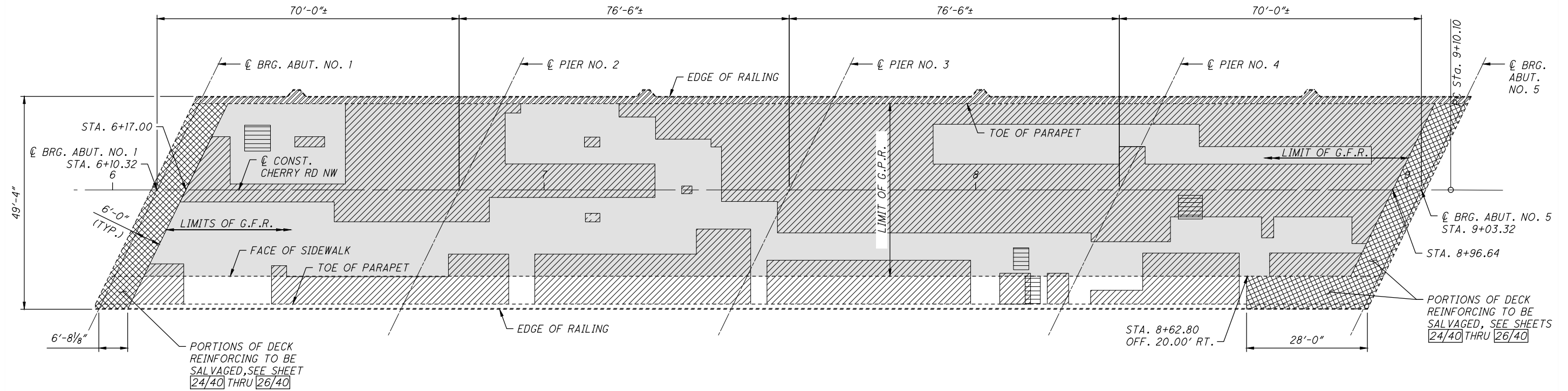
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NOTES:

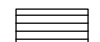
1. FOR ADDITIONAL NOTES AND DETAILS, SEE SHEET 20/40.

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DECK AND PARAPET REMOVAL AND DECK PATCHING PLAN

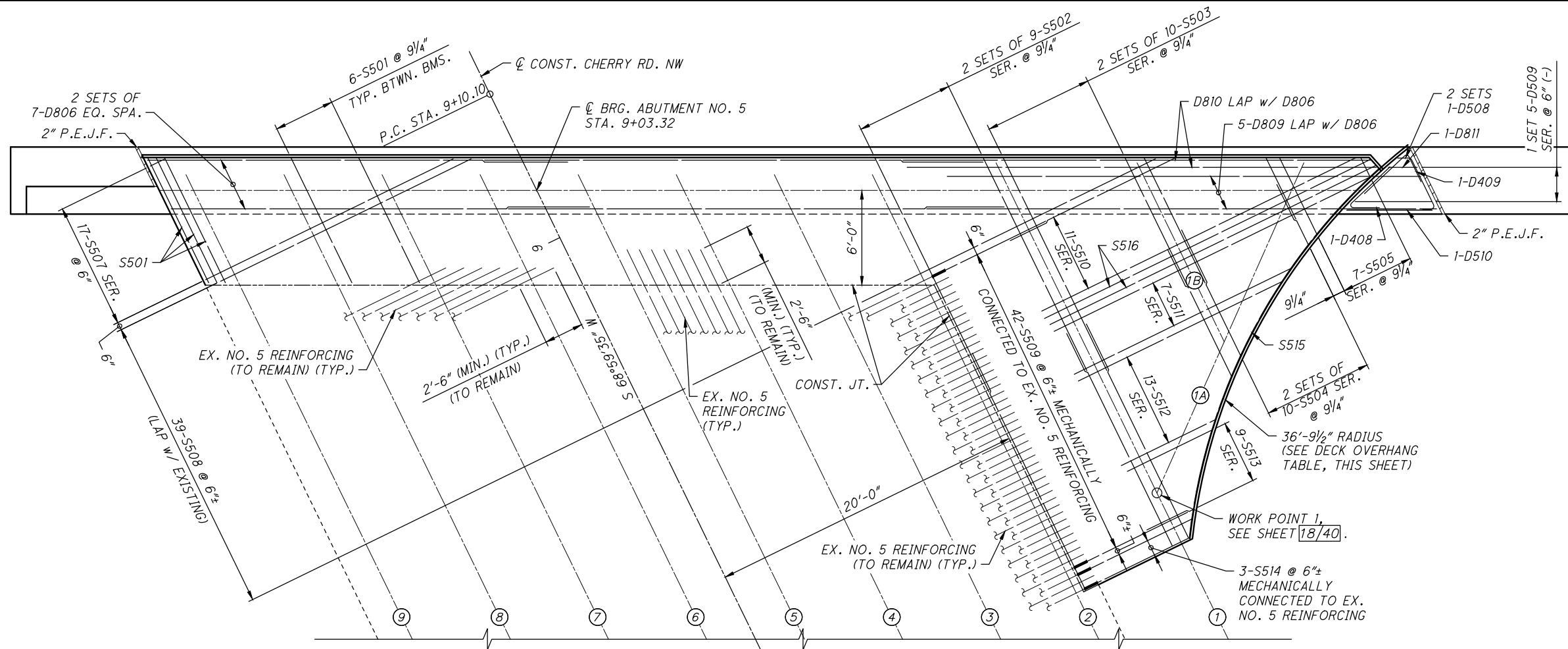
LEGEND:

-  - BOTTOM OF DECK REGION CONTAINING UNSOUND CONCRETE TO BE PARTIAL DEPTH PATCHED PER CMS ITEM 843 - PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR. SEE NOTE 1.
-  - TOP OF DECK REGION CONTAINING UNSOUND CONCRETE TO BE PARTIAL DEPTH PATCHED PER ITEM SPECIAL - PATCHING CONCRETE BRIDGE DECKS, TYPE A. SEE NOTE 1.
-  - LIMITS OF DECK AND JOINT REMOVAL. REMOVAL SHALL BE PER CMS ITEM 202 - PORTIONS OF STRUCTURE REMOVED OVER 20 FOOT SPAN.
-  - LIMITS OF GRAVITY FED RESIN .
-  - LIMITS OF PARAPET REMOVAL. REMOVAL SHALL BE PER CMS ITEM 202 - PORTIONS OF STRUCTURE REMOVED OVER 20 FOOT SPAN.

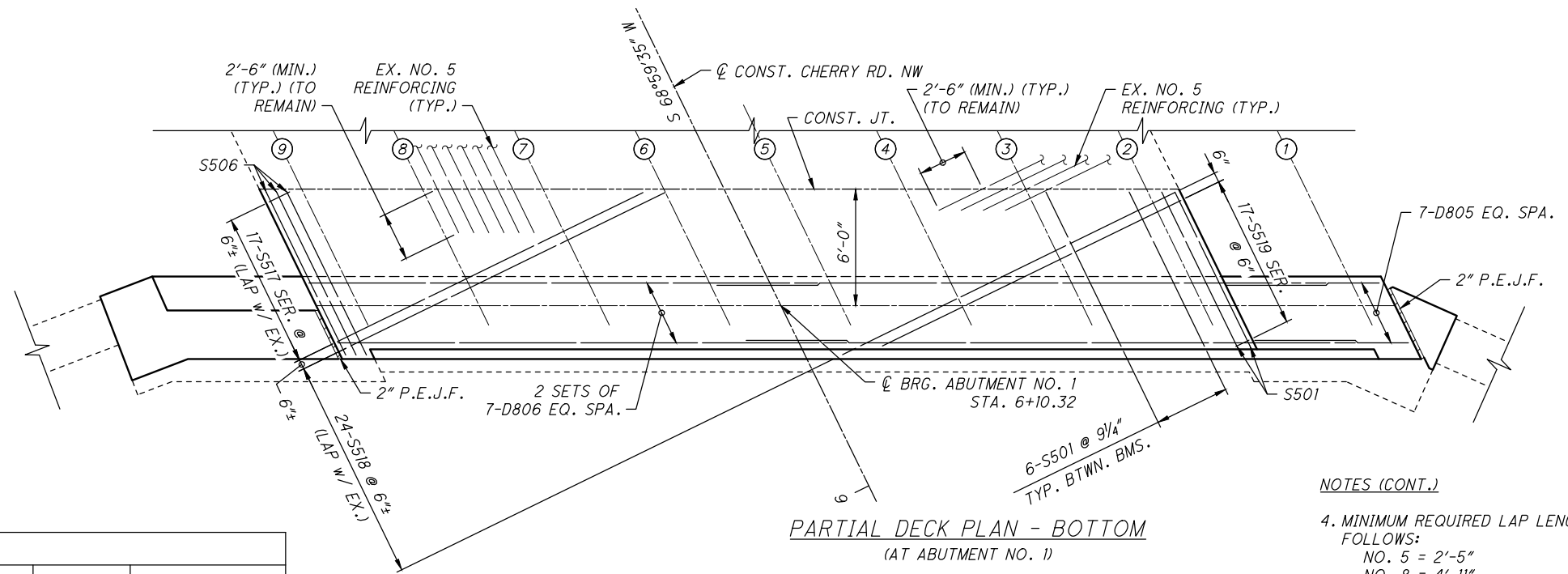
NOTES:

- HATCHED REGIONS DEPICTING UNSOUND CONCRETE ARE SHOWN FOR INFORMATIONAL PURPOSES. DECK TOP PATCHING AREAS SHALL BE DETERMINED USING CONCRETE SOUNDING DURING CONSTRUCTION. SOUND LOCATE, AND MARK OFF ANY DISINTEGRATED CONCRETE TO THE SATISFACTION OF THE FIELD ENGINEER. SOUND DECK TOP CONCRETE PER ODOT PROPOSAL NOTE 512. APPROXIMATE TOTAL DECK TOP PATCHING PER ITEM SPECIAL - PATCHING CONCRETE BRIDGE DECKS, TYPE A, TOTALS 450 SY. APPROXIMATE TOTAL DECK BOTTOM PATCHING PER ITEM 843 - PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR TOTALS 108 SF. THESE QUANTITIES HAVE BEEN CARRIED THROUGH TO THE ESTIMATED QUANTITIES SHEET FOR BIDDING PURPOSES. PAYMENT SHALL BE MADE PER THE ACTUAL APPROVED AND INSTALLED QUANTITIES. NO FULL DEPTH DECK PATCHING HAS BEEN IDENTIFIED/QUANTIFIED HEREIN. NOTIFY THE ENGINEER FOR FURTHER DIRECTION IF THE NEED FOR FULL DEPTH PATCHING IS IDENTIFIED.
- THE PARAPET SHALL BE REMOVED USING FULL DEPTH HORIZONTAL CUTS FOR THE REMOVAL LENGTH. NO REINFORCING WILL BE SALVAGED EXCEPT AT LIGHT PILASTERS. AT THE LIGHT PILASTERS, THE SAW CUT SHALL BE 6 INCH MINIMUM ABOVE THE DECK AND VERTICAL REINFORCING BELOW THE CUT LINE WILL BE PRESERVED. REFER TO THE PILASTER SHEET 32/40 FOR MORE INFORMATION.

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PARTIAL DECK PLAN - BOTTOM
(AT ABUTMENT NO. 5)



PARTIAL DECK PLAN - BOTTOM
(AT ABUTMENT NO. 1)

NOTES

1. APPROACH SLABS, SIDEWALKS AND RAILINGS NOT SHOWN FOR CLARITY.
2. FOR DECK REINFORCING, SEE SHEET 38/40.

NOTES (CONT.)

3. NEW DECK SHALL MEET THE EXISTING DECK AT THE SAWCUT AND PROVIDED END DIAPHRAGM ELEVATIONS.

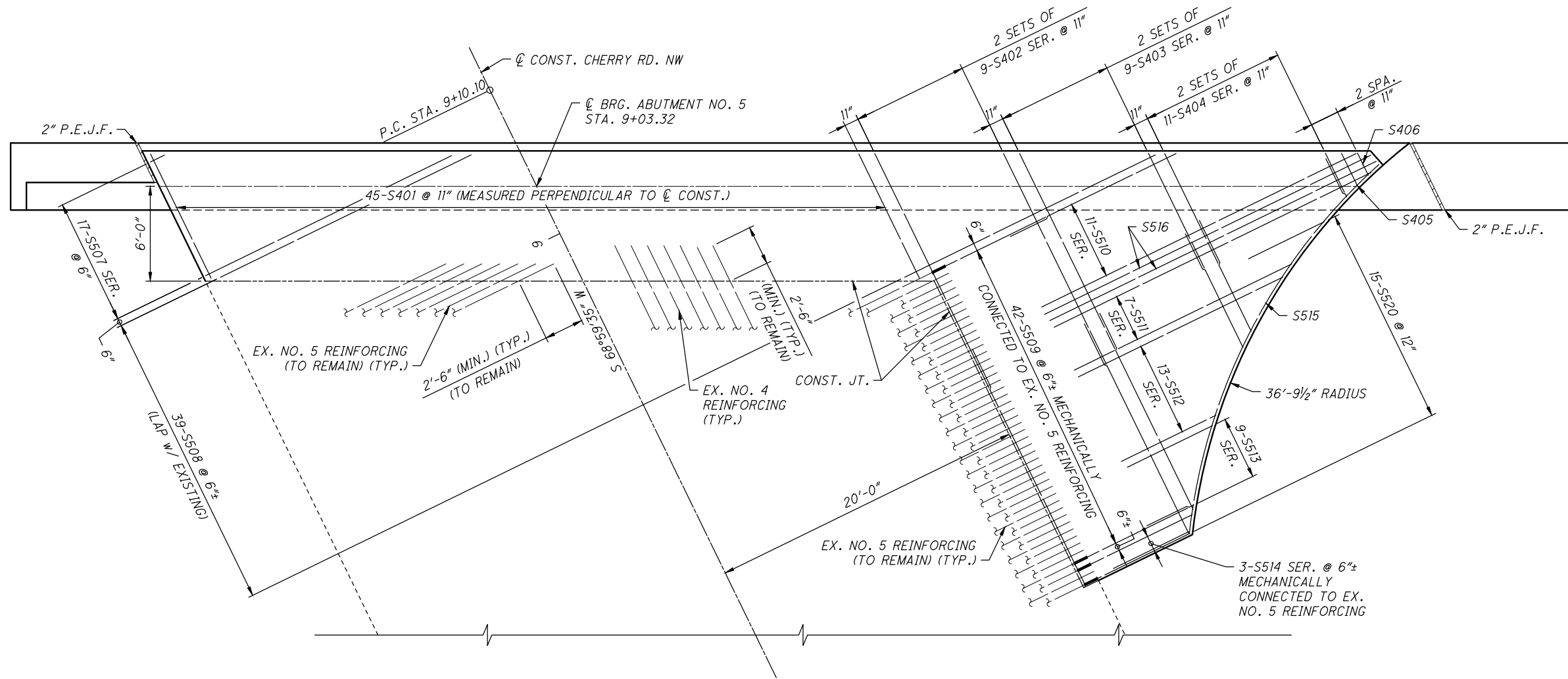
NOTES (CONT.)

4. MINIMUM REQUIRED LAP LENGTHS ARE AS FOLLOWS:
NO. 5 = 2'-5"
NO. 8 = 4'-11"
5. MECHANICAL CONNECTORS SHALL DEVELOP A MINIMUM ULTIMATE STRENGTH OF 125% OF THE REQUIRED YIELD STRENGTH OF THE REINFORCEMENT THEY CONNECT. MECHANICAL CONNECTORS SHALL MEET THE REQUIREMENTS OF C&MS 509.

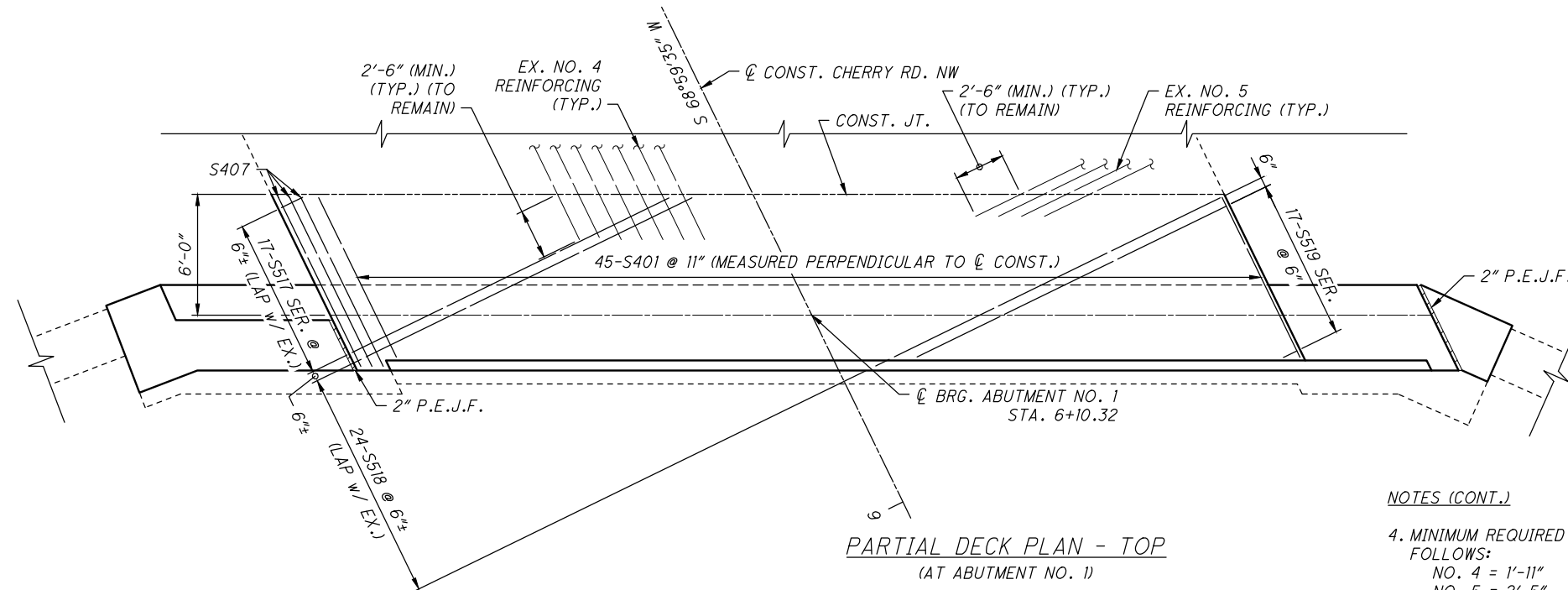
DECK OVERHANG TABLE						
DISTANCE ALONG CL BEAM 1A FROM WORK POINT 1	@ WORK POINT 1 (BM. 1 TO BM. 1A CONNECTION)	5'-0"	10'-0"	15'-0"	20'-0"	CL BRG. ABUT. NO. 5
OFFSET FROM CL BEAM 1A TO RIGHT EDGE OF DECK	2'-8 ³ / ₄ "	1'-9 ³ / ₁₆ "	1'-6 ¹ / ₁₆ "	1'-11 ¹ / ₈ "	3'-0 ⁵ / ₈ "	4'-0 ⁹ / ₁₆ "



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PARTIAL DECK PLAN - TOP
(AT ABUTMENT NO. 5)



PARTIAL DECK PLAN - TOP
(AT ABUTMENT NO. 1)

NOTES

1. APPROACH SLABS, SIDEWALKS AND RAILINGS NOT SHOWN FOR CLARITY.
2. FOR DECK REINFORCING, SEE SHEET 38/40.

NOTES (CONT.)

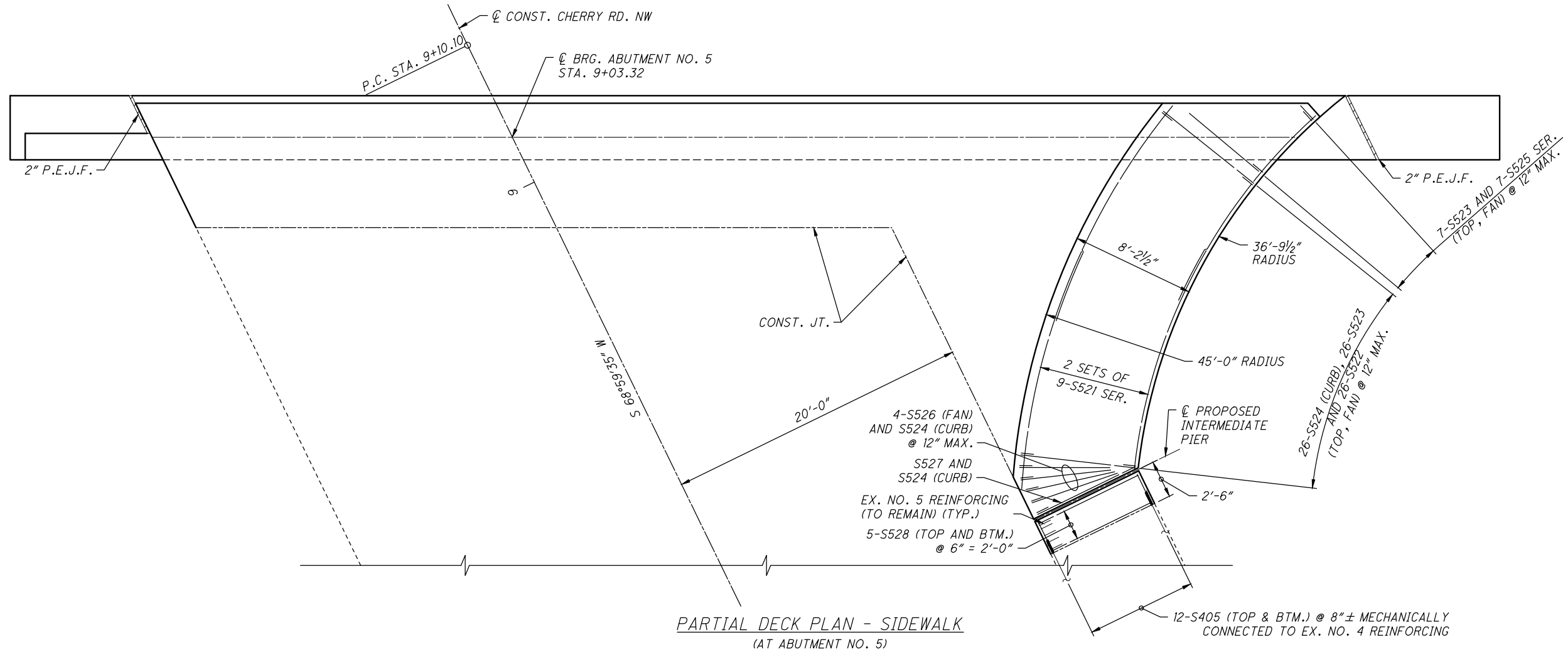
3. NEW DECK SHALL MEET THE EXISTING DECK AT THE SAWCUT AND PROVIDED END DIAPHRAGM ELEVATIONS.

NOTES (CONT.)

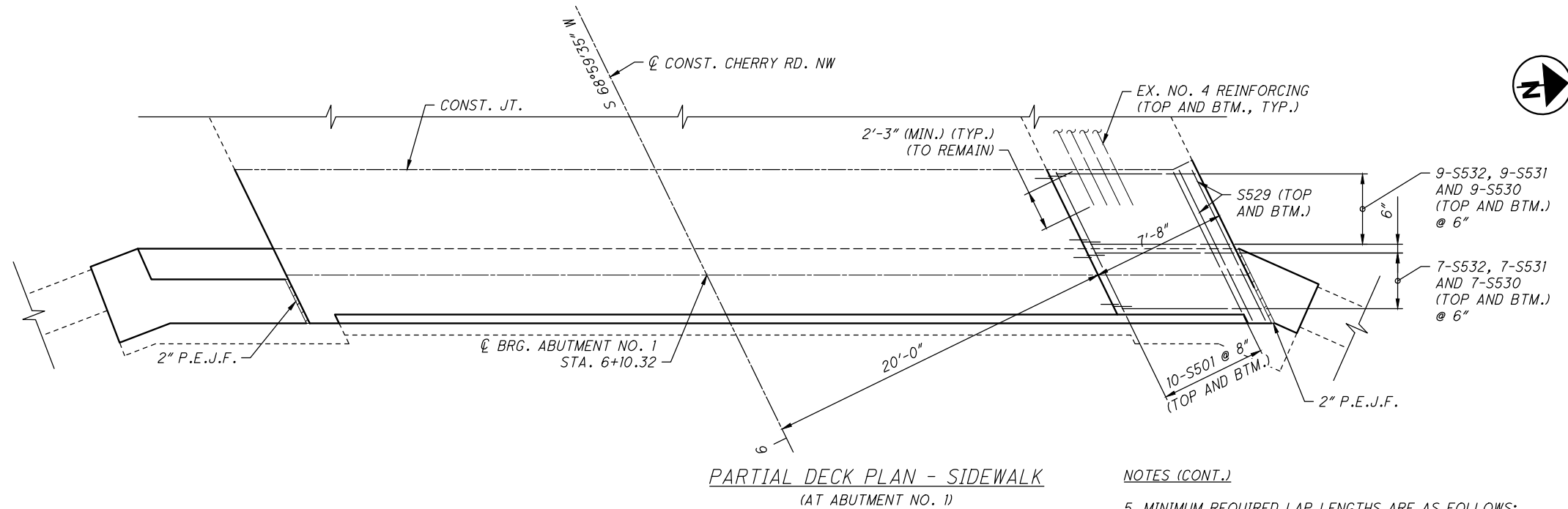
4. MINIMUM REQUIRED LAP LENGTHS ARE AS FOLLOWS:
NO. 4 = 1'-11"
NO. 5 = 2'-5"
5. MECHANICAL CONNECTORS SHALL DEVELOP A MINIMUM ULTIMATE STRENGTH OF 125% OF THE REQUIRED YIELD STRENGTH OF THE REINFORCEMENT THEY CONNECT. MECHANICAL CONNECTORS SHALL MEET THE REQUIREMENTS OF C&MS 509.



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PARTIAL DECK PLAN - SIDEWALK
(AT ABUTMENT NO. 5)



PARTIAL DECK PLAN - SIDEWALK
(AT ABUTMENT NO. 1)

NOTES

1. APPROACH SLABS AND RAILINGS NOT SHOWN FOR CLARITY.
2. FOR DECK REINFORCING, SEE SHEET 38/40.

NOTES (CONT.)

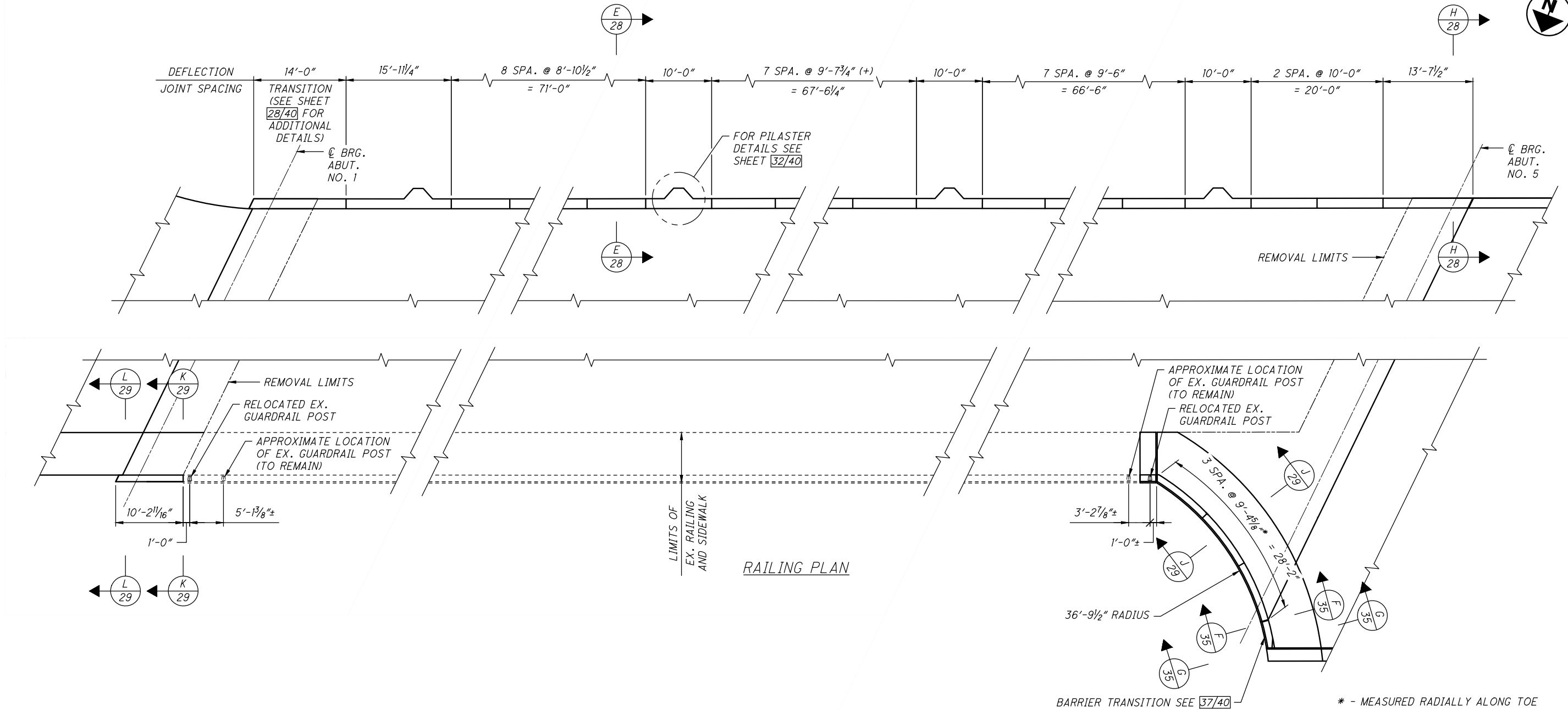
3. FOR SIDEWALK JOINT ARMOR, SEE SHEET 15/40.
4. NEW DECK SHALL MEET THE EXISTING DECK AT THE SAWCUT AND PROVIDED END DIAPHRAGM ELEVATIONS.

NOTES (CONT.)

5. MINIMUM REQUIRED LAP LENGTHS ARE AS FOLLOWS:
NO. 5 = 2'-5"
6. MECHANICAL CONNECTORS SHALL DEVELOP A MINIMUM ULTIMATE STRENGTH OF 125% OF THE REQUIRED YIELD STRENGTH OF THE REINFORCEMENT THEY CONNECT. MECHANICAL CONNECTORS SHALL MEET THE REQUIREMENTS OF C&MS 509.



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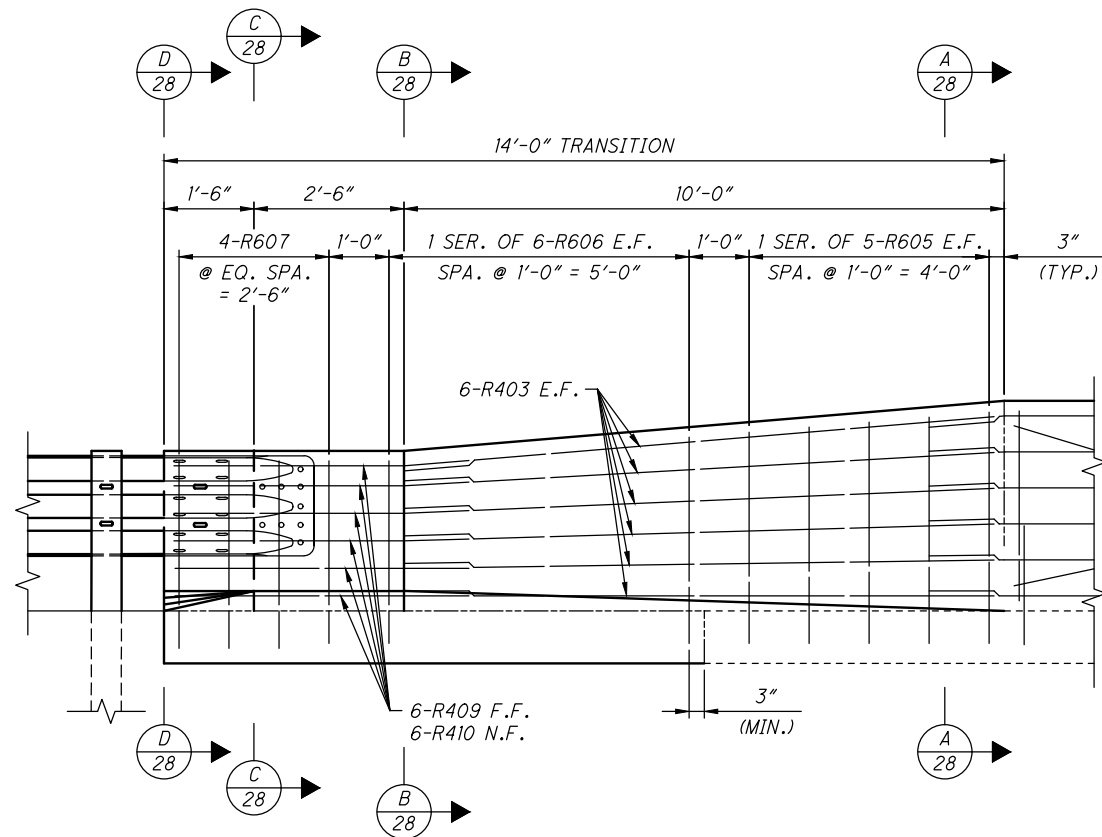


RAILING PLAN

NOTES:

- FOR ADDITIONAL INFORMATION AND DETAILS NOT SHOWN, REFER TO STANDARD DRAWINGS BR-2-15 AND SBR-1-20.
- FOR DECK PLAN, SEE SHEET 24/40 THRU 26/40.
- FOR TRANSVERSE SECTION, SEE SHEET 30/40 AND 31/40.
- FOR REINFORCING STEEL LIST, SEE SHEET 37/40.
- USE GLASS FIBER REINFORCED POLYMER (GFRP) FOR ALL HORIZONTAL R401, R402 BARS AND STIFFENING BARS (R403, R404, R405, R406, R407 AND R408).
- SLIPFORMING OF PARAPET WALLS WILL NOT BE ALLOWED.
- MECHANICAL CONNECTORS SHALL DEVELOP A MINIMUM ULTIMATE STRENGTH OF 125% OF THE REQUIRED YIELD STRENGTH OF THE REINFORCEMENT THEY CONNECT. MECHANICAL CONNECTORS SHALL MEET THE REQUIREMENTS OF C&MS 509.

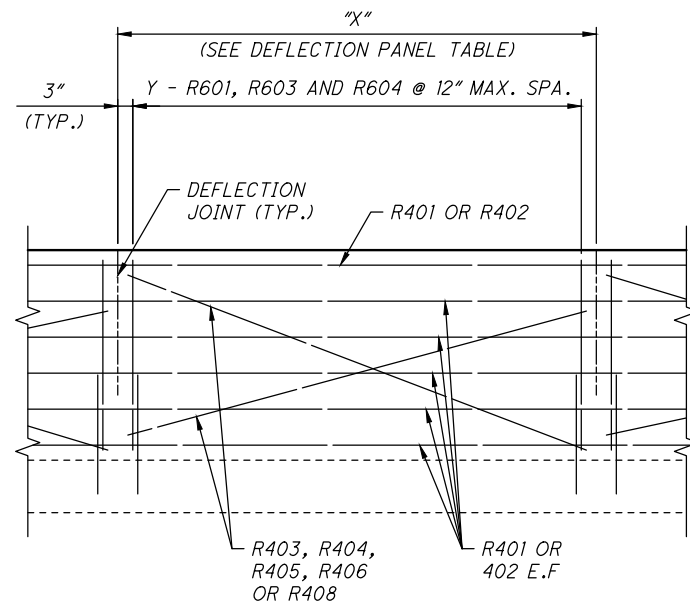
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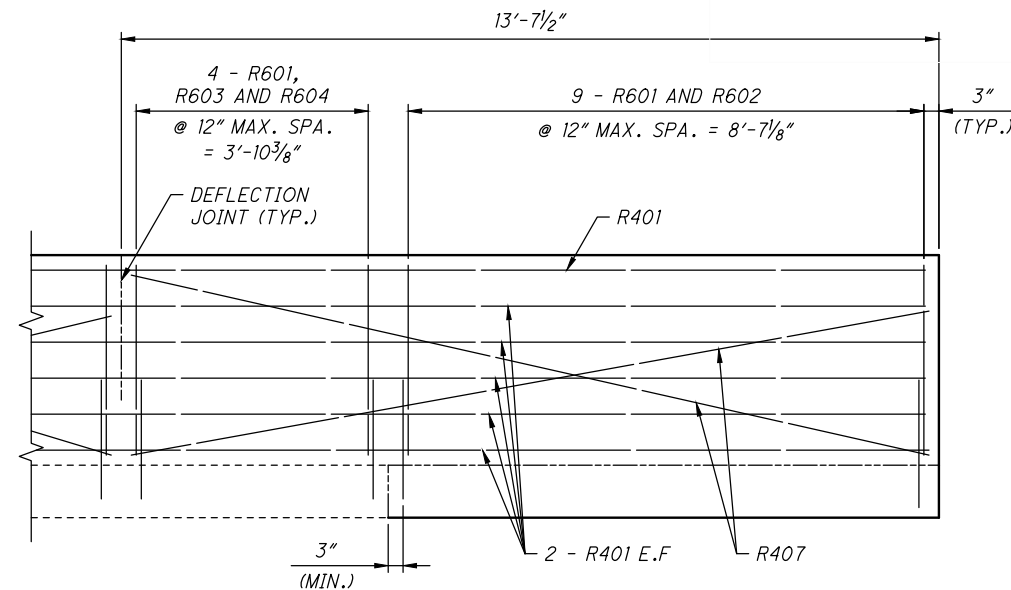
PARTIAL RAILING ELEVATION
(LEFT RAIL AT ABUTMENT NO. 1)

DEFLECTION PANEL TABLE			
No. OF PANELS	LENGTH "X"	No. OF BARS IN EA. PANEL "Y"	DIAGONAL STIFFENER BARS
5	10'-0"	11	R403
8	8'-10 1/2"	10	R406
7	9'-7 3/4"	11	R405
7	9'-6"	10	R404
1	15'-11 1/4"	17	R408

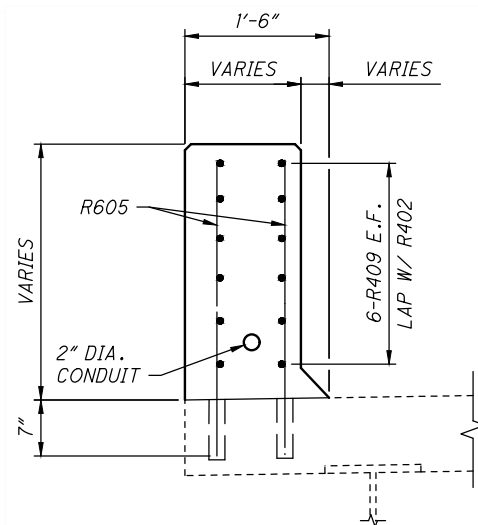
TENSION LAP SPLICE LENGTHS:	
#4	1'-11"
#5	2'-4"



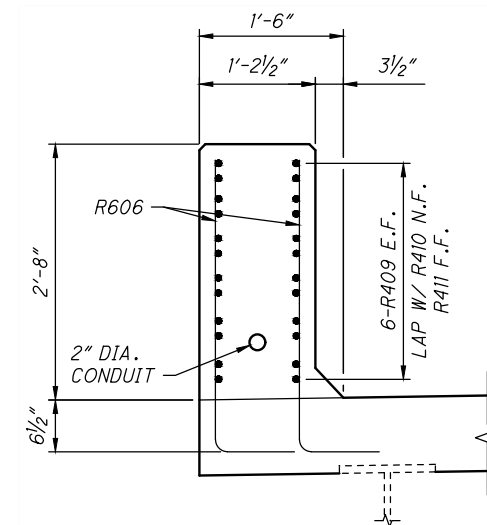
PARTIAL RAILING ELEVATION
(TYPICAL LEFT RAIL U.N.O.)



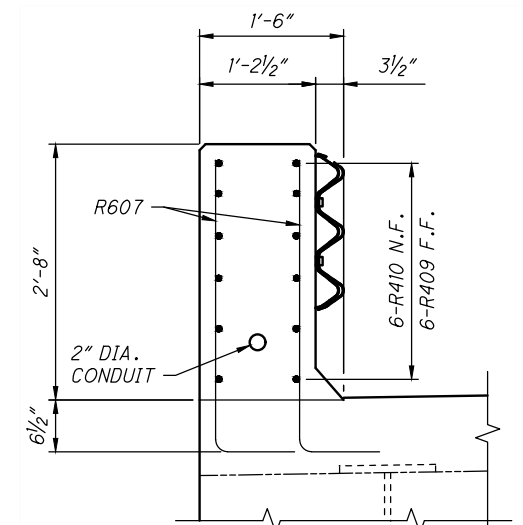
PARTIAL RAILING ELEVATION
(LEFT RAIL AT ABUTMENT NO. 5)



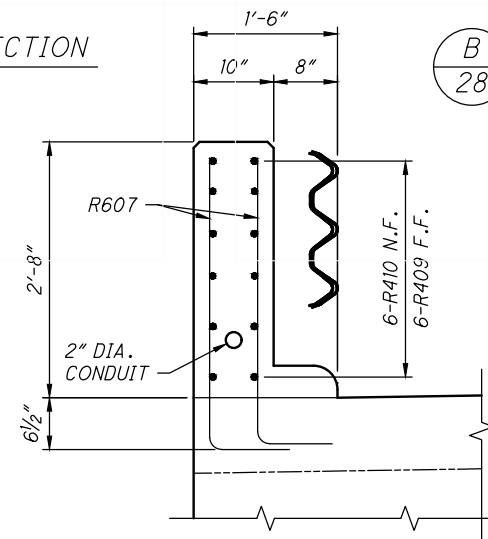
A
28
SECTION



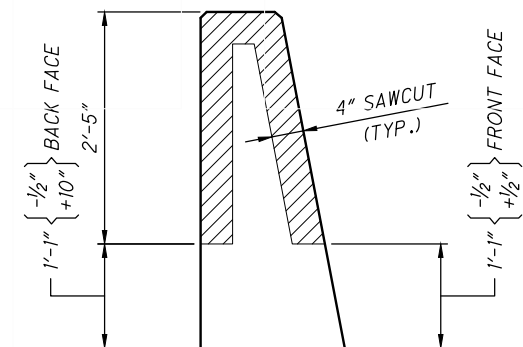
B
28
SECTION



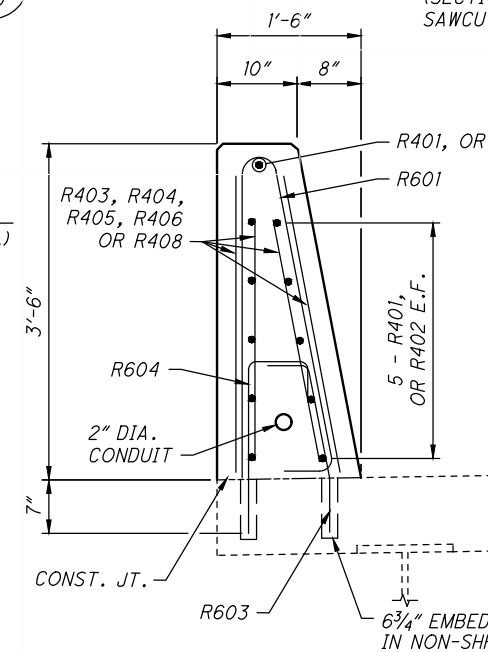
C
28
SECTION



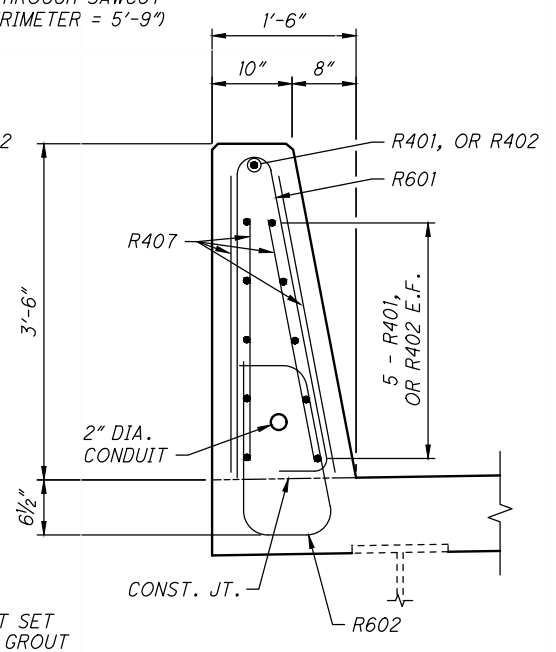
D
28
SECTION



DEFLECTION JOINT
DETAIL - LEFT RAILING
(SECTION THROUGH SAWCUT
SAWCUT PERIMETER = 5'-9")



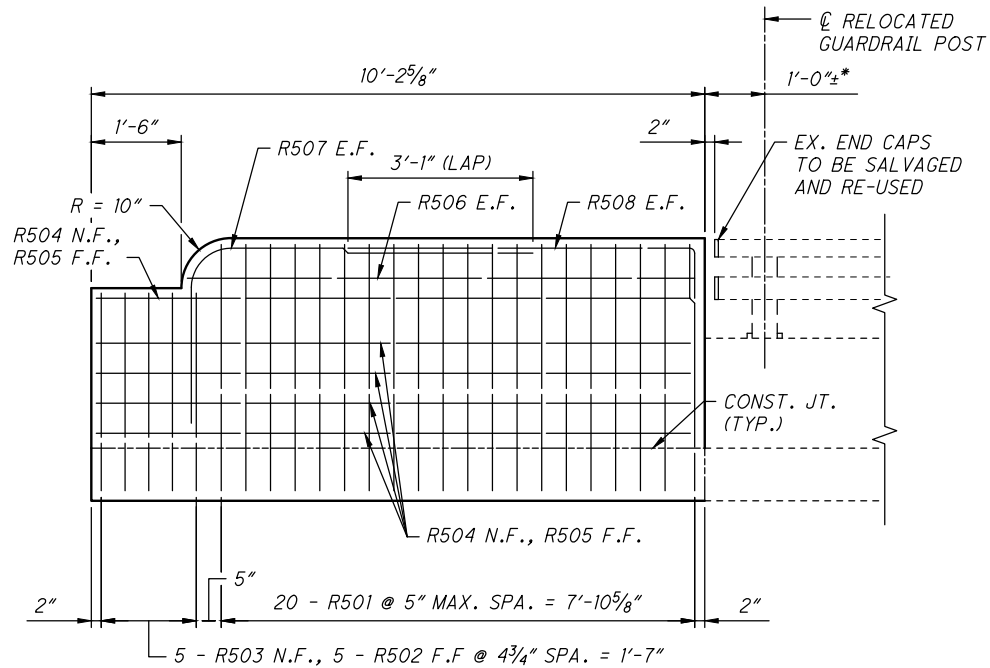
E
27
SECTION



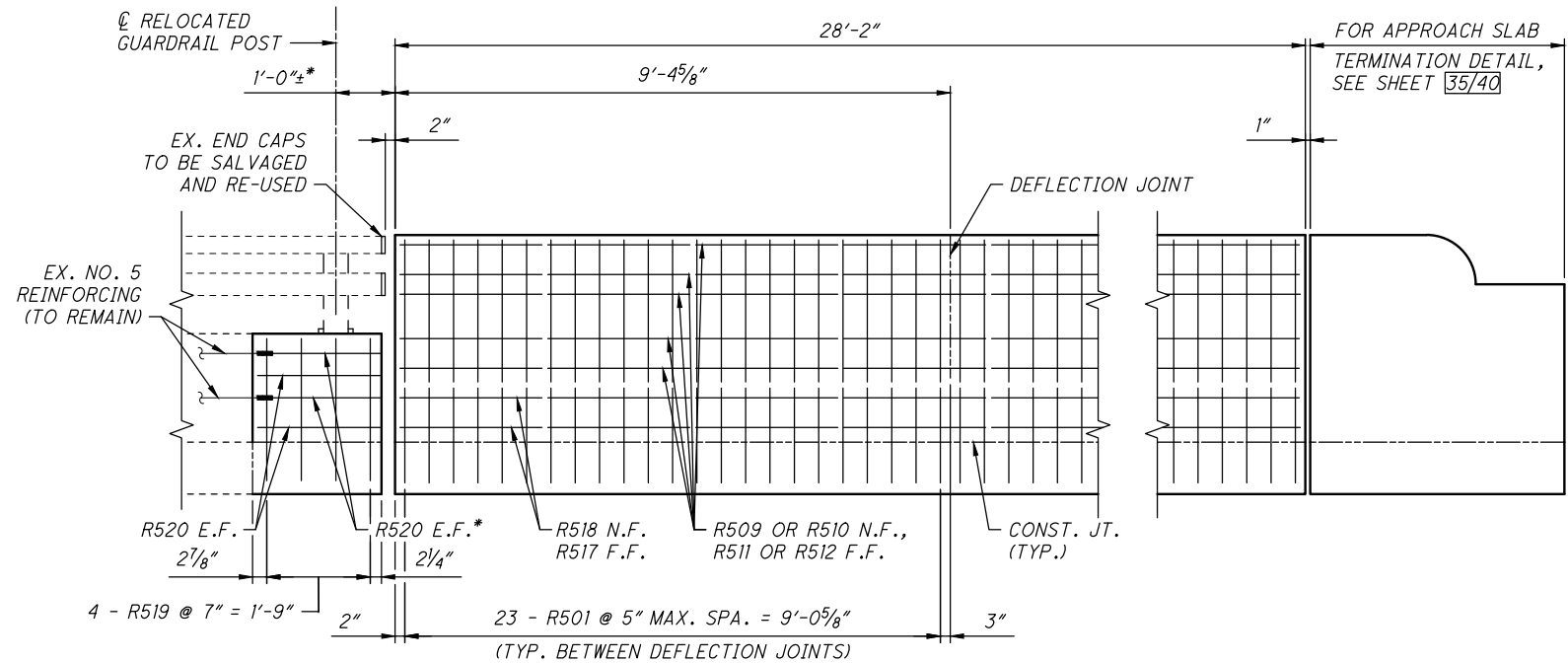
H
27
SECTION

NOTES:
1. FOR ADDITIONAL NOTES, SEE SHEET 27/40.

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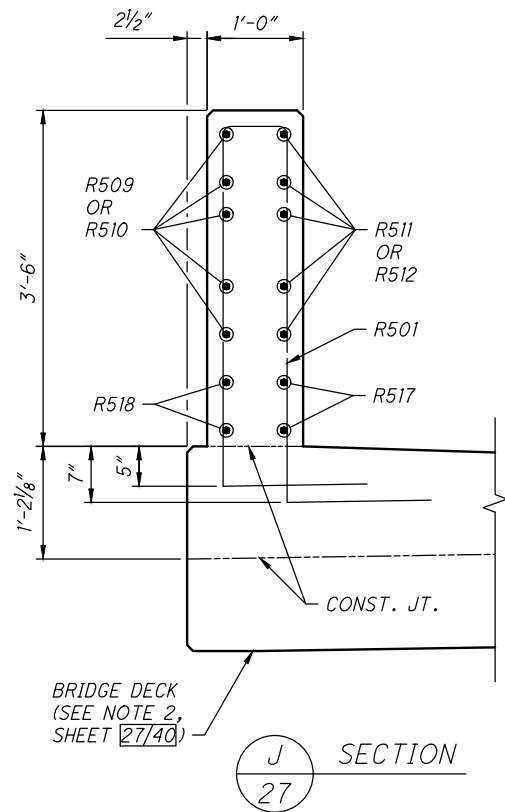


PARTIAL RAILING ELEVATION
(RIGHT RAIL AT ABUTMENT NO. 1)

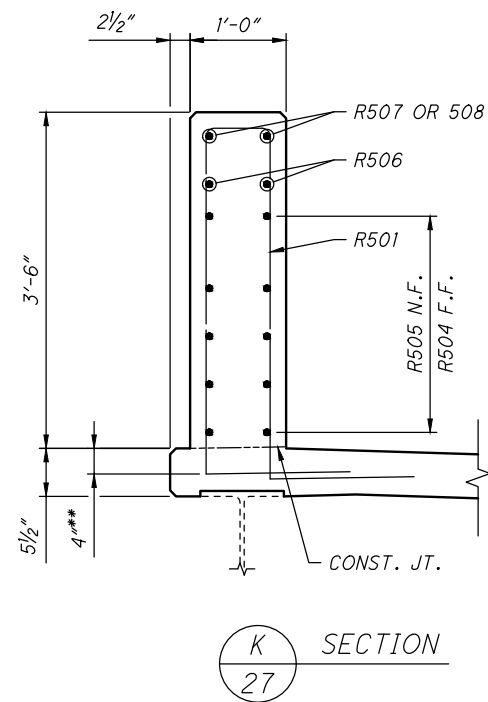


* - MECHANICALLY CONNECTED TO
EX. NO. 5 REINFORCING

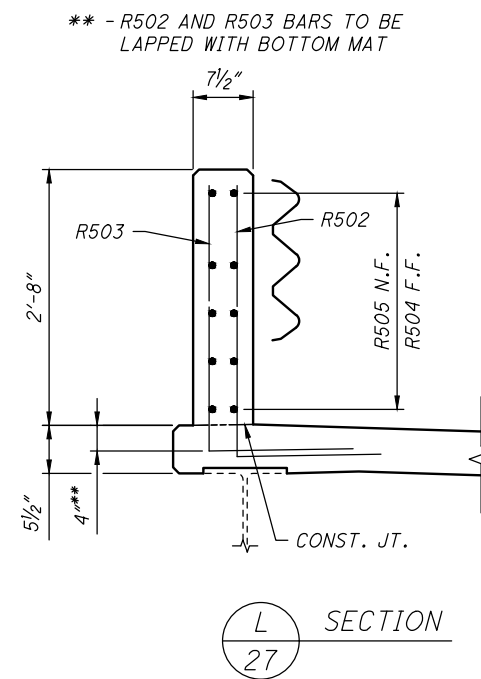
PARTIAL RAILING ELEVATION
(RIGHT RAIL AT ABUTMENT NO. 5)



J
27 SECTION

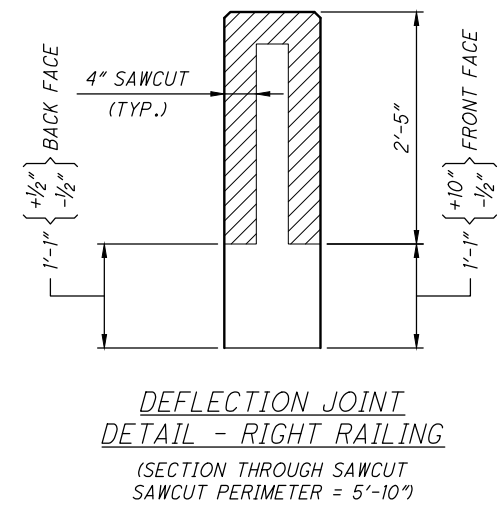


K
27 SECTION



L
27 SECTION

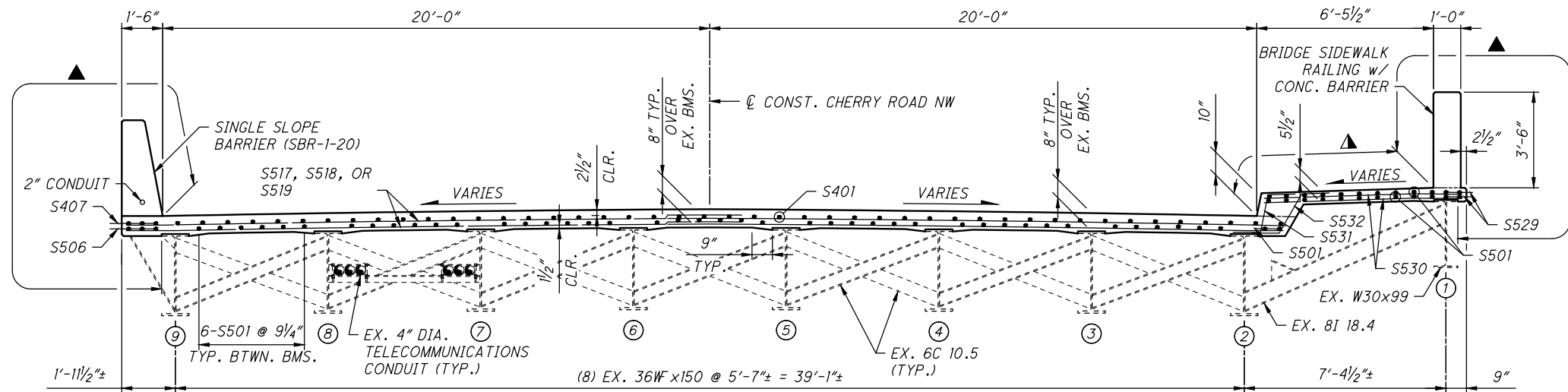
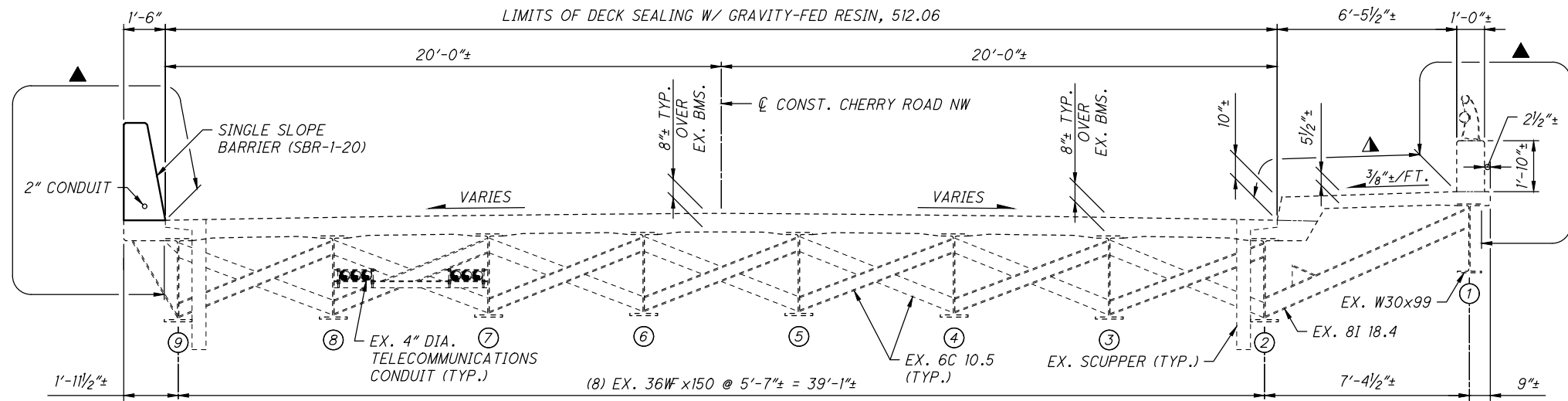
TENSION LAP SPLICE LENGTHS:	
#4	1'-11"
#5	2'-4"



DEFLECTION JOINT
DETAIL - RIGHT RAILING
(SECTION THROUGH SAWCUT
SAWCUT PERIMETER = 5'-10")

NOTES:
1. FOR ADDITIONAL NOTES, SEE SHEET 27/40.

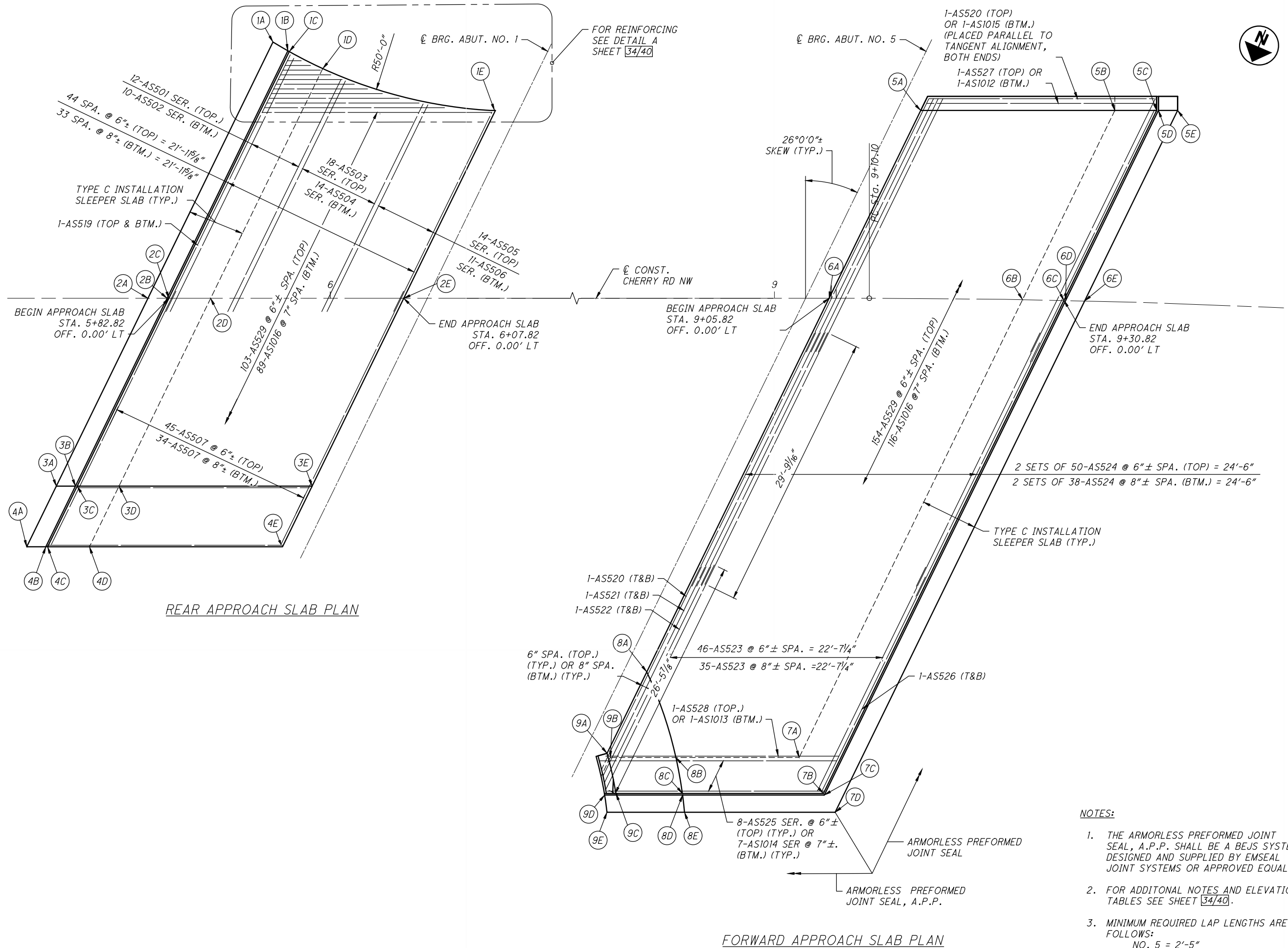
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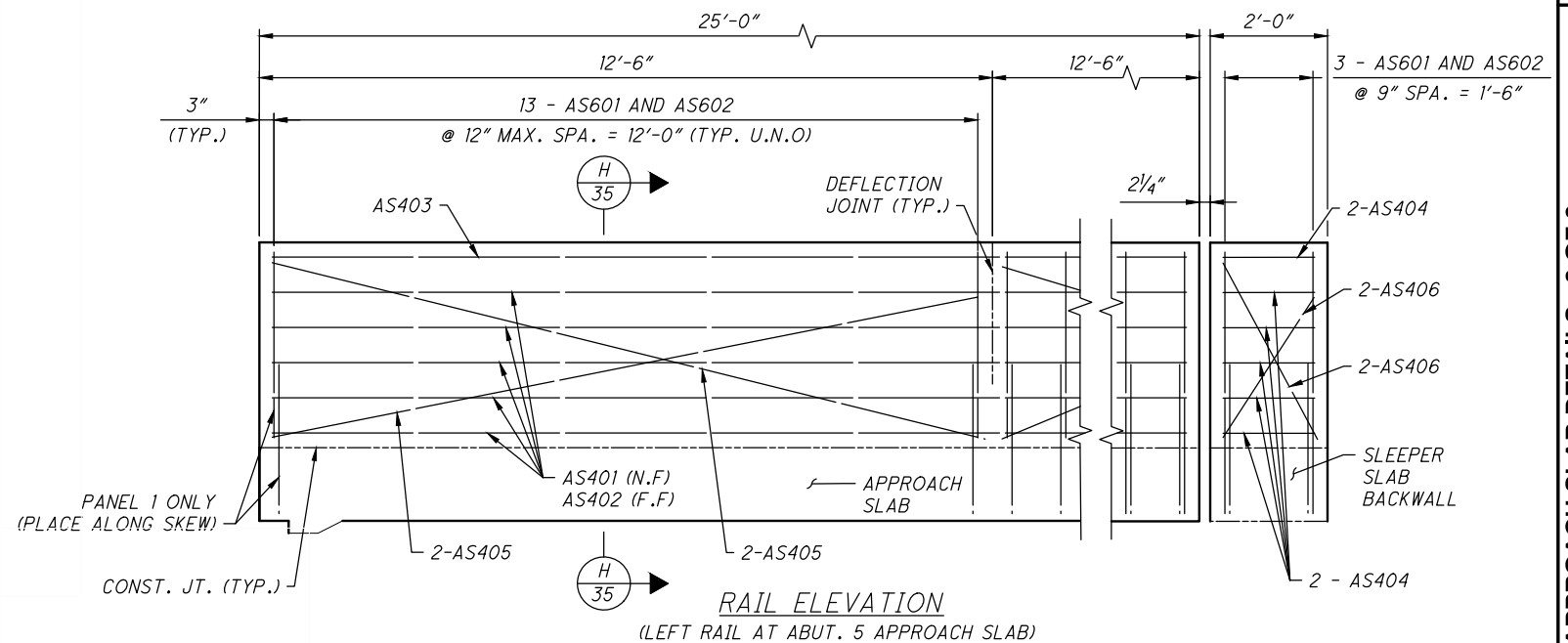
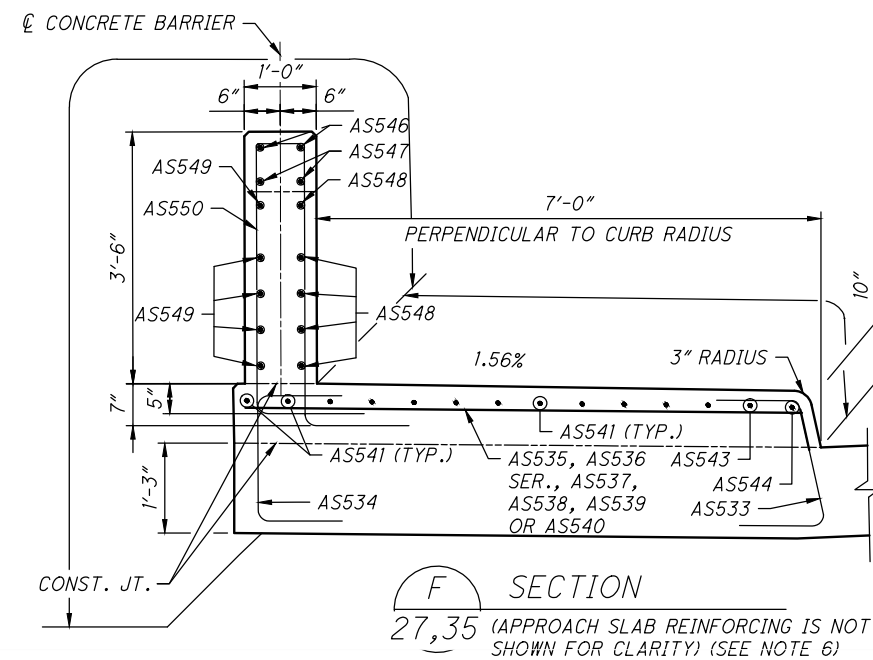
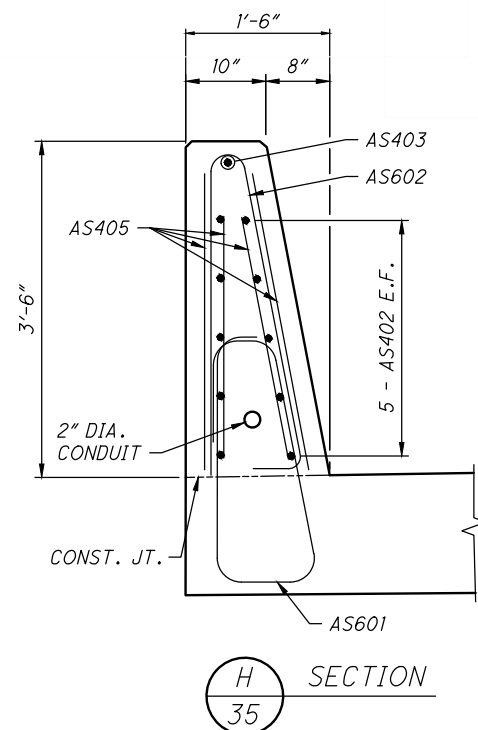
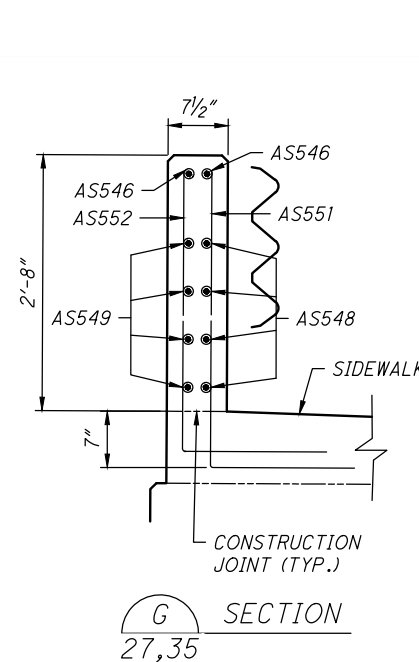
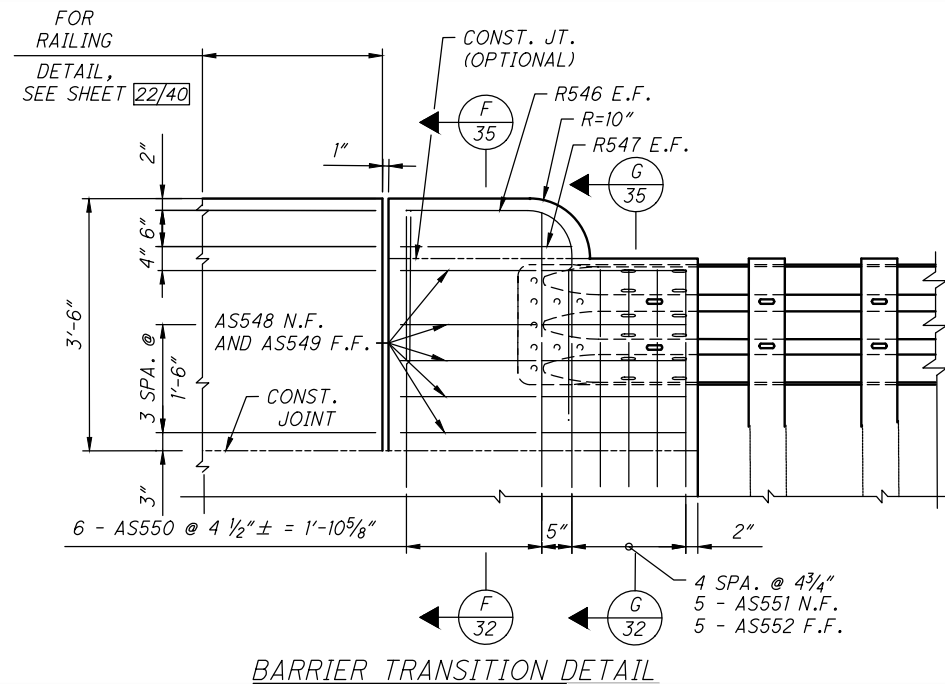
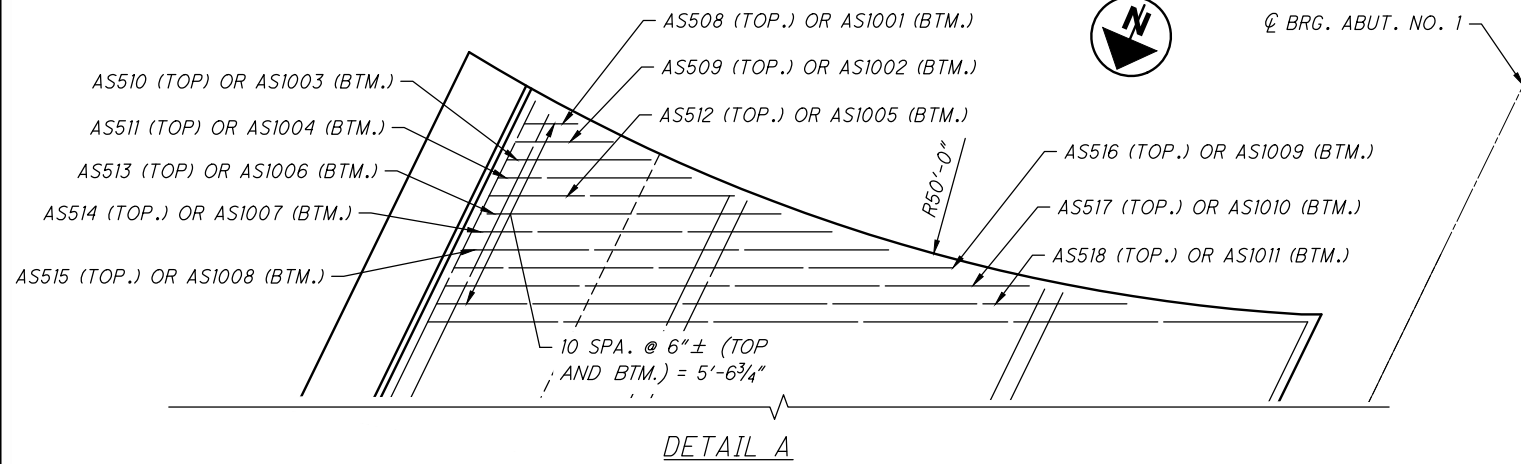
LEGEND:

- ▲ LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES (NON-EPOXY)
- ▲ LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

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LEGEND:

- ▲ LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
- ▲ LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES (NON-EPOXY)

NOTES:

- FOR ADDITIONAL BARRIER DETAILS, SEE STD. DWG. BR-2-15.
- FOR ADDITIONAL APPROACH SLAB DETAILS AND NOTES, SEE STD DWG. AS-1-15.
- FOR APPROACH SLAB PLAN, SEE SHEET 33/40.
- FOR SUPERSTRUCTURE DETAILS, SEE SHEET 24/40 TO 35/40.
- FOR BRIDGE BARRIER, SEE SHEET 27/40 TO 29/40.
- CONTRACTOR SHALL EXTEND SIDEWALK REINFORCING OVER THE SLEEPER SLAB BACKWALL.
- SIDEWALK REINFORCING ON THE APPROACH SLAB IS INCLUDED FOR PAYMENT WITH THE APPROACH SLAB.

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MARK	NUMBER			LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS						
	ABUTMENT		TOTAL				A	B	C	D	E	F	INC
	NO. 1	NO. 5											
ABUTMENTS													
A501	20		20	33'-1"	691	STR							
A502	8		8	5'-9"	48	19	3'-1"	2'-6"	0'-11"				
A503	6		6	9'-4"	59	19	4'-9"	4'-2"	1'-10"				
A504	6		6	4'-0"	25	STR							
A505	2		2	6'-7"	14	STR							
A506	5		5	2'-10"	15	STR							
A507	5		5	3'-4"	18	STR							
A508	4		4	8'-4"	35	1	6'-7"	1'-10"					
A509	5		5	9'-4"	49	19	7'-7"	0'-9"	1'-8"				
A510	5		5	7'-9"	41	STR							
A511	5		5	14'-5"	75	43	3'-1"	2'-9"	1'-0"	4'-4"	2'-6"	1'-10"	
A512	56		56	10'-4"	604	2	3'-4"	3'-10"	3'-4"				
A513	7		7	8'-6"	62	2	2'-5"	3'-11"	2'-5"				
A514		16	16	28'-4"	473	STR							
A515		7	7	9'-8"	71	1	1'-10"	8'-0"					
A516		7	7	11'-2"	82	1	3'-9"	7'-7"					
A517		6	6	8'-6"	54	STR							
A518		6	6	9'-8"	61	STR							
A519		23	23	8'-1"	194	2	3'-1"	2'-2"	3'-1"				
A520		32	32	16'-6"	551	3	5'-6"	2'-5"					
A601*	112		56	4'-2"	702	STR							
A602*	20		20	10'-8"	320	STR							
A603*	14		14	6'-0"	127	STR							
A604*	8		8	9'-8"	117	STR							
A605		10	10	31'-8"	476	STR							
A606		2	2	27'-5"	83	STR							
A607		1 SER. OF 4	1 SER. OF 4	21'-7" TO 22'-8"	133	STR							0'-3/8"
A608		1	1	22'-8"	34	STR							
A609		1	1	21'-7"	33	STR							
A610		24	24	17'-2"	619	3	3'-9"	4'-5"					
A611	10	10	20	14'-2"	426	3	2'-11"	3'-8"					
A612*		2 SER. OF 58	2 SER. OF 58	5'-10" TO 7'-0"	1118	1	3'-7"	2'-5" TO 3'-7"					0'-1"
A613*		10	10	7'-0"	106	1	3'-7"	3'-7"					
A801		9	9	20'-7"	495	2	9'-6"	2'-0"	9'-6"				
A802*		26	26	9'-6"	660	STR							
A803	14	14	28	13'-8"	1,022	5	2'-8"	3'-7"	2'-4"				
SUB-TOTAL				9,693									

* - DOWELED BARS INCLUDED IN BENDING SCHEDULE AND SHALL BE PAID FOR UNDER ITEM 509 - EPOXY COATED REINFORCING STEEL.
- INSTALLATION OF DOWELS SHALL BE PAID FOR UNDER ITEM 510 - DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT.

MARK	NUMBER			LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS						
	AT ABUTMENT		TOTAL				A	B	C	D	E	R	INC
	NO. 1	NO. 5											
END DIAPHRAGMS													
D401	7		7	8'-0"	38	2	3'-9"	0'-8"	3'-9"				
D402	66	80	146	9'-0"	878	2	2'-6"	4'-2"	2'-6"				
D403	4	4	8	4'-2"	22	STR							
D404	6	8	14	6'-7"	61	41	4'-2"	1'-0"	1'-0"	1'-10"			
D405	2	1	3	6'-0"	12	41	3'-7"	1'-0"	1'-0"	1'-10"			
D406		40	40	8'-6"	227	2	2'-6"	3'-9"	2'-6"				
D407		1	1	6'-1"	4	2	2'-6"	1'-4"	2'-6"				
D408		1	1	5'-3"	4	11	2'-9"	2'-7"	2'-0"				
D409		1	1	5'-7"	4	11	1'-1"	3'-7"	2'-0"				
D410	6	6	12	10'-5"	84	3	4'-2"	0'-10"					
D501	7		7	11'-8"	85	3	3'-5"	2'-1"					
D502	40	40	80	9'-8"	807	2	3'-2"	3'-7"	3'-2"				
D503	6	6	12	12'-10"	161	3	3'-7"	2'-3"					
D504	2	2	4	12'-4"	52	3	4'-2"	1'-8"					
D505		16	16	9'-4"	156	2	3'-2"	3'-3"	3'-2"				
D506	1		1	9'-0"	10	2	3'-2"	2'-11"	3'-2"				
D507	1		1	8'-5"	9	2	3'-2"	2'-4"	3'-2"				
D508	2		2	5'-8"	12	41	3'-7"	0'-10"	0'-10"	1'-5"			
D509	1 SER. OF 6		1 SER. OF 6	1'-7" TO 5'-9"	23	STR							0'-10"
D510	6		6	5'-5"	34	STR							
D801	38	50	88	6'-0"	1,390	18	3'-9"	1'-0"	1'-0"				
D802	6		6	4'-0"	64	STR							
D803	6	6	12	33'-9"	1,081	STR							
D804	6		6	3'-8"	59	STR							
D805	11		11	8'-0"	235	STR							
D806	22	16	38	26'-6"	2,689	STR							
D807	6		6	3'-5"	55	STR							
D808	6		6	36'-0"	577	STR							
D809		9	9	34'-4"	825	STR							
D810	2		2	29'-9"	159	STR							
D811	1		1	1'-6"	4	STR							
D812	2	2	4	5'-1"	54	41	1'-11"	0'-6"	1'-0"	0'-6"			
SUB-TOTAL				9,875									

NOTE

FOR NOTES AND BENDING DIAGRAM, SEE SHEET 40/40.

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NUMBER		LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS						
MARK	TOTAL				A	B	C	D	E	R	INC
PIERS											
PSP401	1	34'-2"	23	27	0'-3"	2'-6"	12'-6"				
P501	18	4'-2"	78	STR							
P502	5	11'-11"	62	3	1'-11"	3'-8"					
P503	2	8'-2"	17	2	2'-5"	3'-7"	2'-5"				
P504	4	6'-2"	37	2	2'-5"	1'-7"	2'-5"				
P505	5	8'-0"	82	2	4'-2"	1'-8"	2'-5"				
P601	28	7'-4"	308	2	1'-0"	5'-8"	1'-0"				
P901	10	10'-6"	357	42	8'-7"	1'-6"					
P902	10	12'-6"	425	STR							
P903	10	9'-6"	323	42	7'-7"	1'-6"					
SUB-TOTAL											
			1,712								

MARK	NUMBER	LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
RAILINGS											
R401	99	30'-0"	█	STR							
R402	11	34'-6"	█	STR							
R403	32	10'-0"	█	STR							
R404	28	9'-6"	█	STR							
R405	28	9'-8"	█	STR							
R406	32	8'-11"	█	STR							
R407	4	13'-8"	█	STR							
R408	4	15'-11"	█	STR							
R409	6	5'-1"	█	STR							
R410	6	6'-4"	█	25	2'-6"	2'-5"	1'-4¼"	0'-1½"	0'-5"		
R501	89	10'-10"	1,006	30	1'-6"	0'-8"	3'-11"	3'-9"			
R502	5	4'-5½"	24	1	1'-6"	3'-1"					
R503	5	4'-3½"	23	1	1'-6"	2'-11"					
R504	5	9'-11"	52	STR							
R505	5	10'-0"	53	19	8'-6½"	1'-4½"	0'-5"				
R506	2	8'-5"	18	STR							
R507	2	8'-6"	18	45	5'-9"	2'-11"					
R508	2	6'-6"	14	1	5'-10"	0'-10"					
R509	5	8'-6"	45	40	8'-6"					37'-2"	
R510	10	8'-9"	92	40	8'-9"					37'-2"	
R511	10	8'-11"	93	40	8'-11"					37'-10"	
R512	5	9'-1"	48	40	9'-1"					37'-10"	
R513	16	2'-9"	46	2	0'-7"	1'-10"	0'-7"				
R514	16	3'-4"	56	STR							
R515	16	7'-5	124	21	1'-4"	1'-10"	0'-6"	1'-10"			
R516#	32	3'-4"	111	STR							
R517	2	27'-11"	59	40	27'-11"					37'-10"	
R518	2	27'-0"	57	40	27'-0"					37'-2"	
R519	4	7'-6"	32	30	1'-6"	0'-8"	2'-3"	2'-1"			
R520	8	2'-1"	18	STR							
RMC5#	32										
R601	312	6'-6½"	3,066	23	0'-6"	3'-3"	3'-3"			0'-2"	
R602	9	7'-1"	96	37	0'-6½"	0'-9½"	1'-5"	1'-0"	0'-7"		
R603*	303	2'-7"	1,176	13	0'-6½"	1'-5"	0'-3½"	0'-9"			
R604*	303	3'-6"	1,593	2	1'-11½"	0'-11"	1'-0"				
R605	2 SER. OF 5	3'-7" TO 3'-11"	56	STR							0'-1"
R606	2 SER. OF 6	3'-11" TO 4'-4"	74	1	1'-0"	3'-0½" TO 3'-5½"					0'-1"
R607	8	3'-10½"	47	1	1'-0"	3'-0½"					
SUB-TOTAL			8,097								

- # - BARS INDICATED THAT REQUIRED MECHANICAL CONNECTORS.
- TOTAL NUMBER OF MECHANICAL CONNECTORS (SMC5) ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY.
- * - DOWELED BARS INCLUDED IN BENDING SCHEDULE AND SHALL BE PAID FOR UNDER ITEM 509 - EPOXY COATED REINFORCING STEEL.
- INSTALLATION OF DOWELS SHALL BE PAID FOR UNDER ITEM 510 - DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT.

NOTE

1. FOR NOTES AND BENDING DIAGRAMs, SEE SHEET 40/40.

STA CHERRY
RD BRIDGES

CONCRETE REINFORCEMENT BAR LIST - 2 OF 5

DESIGN AGENCY
DATE
7/1/24
REVIEWED
MRW
STRUCTURE FILE NUMBER
7631987

DESIGNED
HER
CHECKED
JTH

DRAWN
HBC
REVISED

BRIDGE NO. PE-7-20 (CHERRY ROAD) OVER
TUSCARAWAS RIVER

57
92

37/40

AECOM
664 WHITE POND DRIVE
AKRON, OHIO 44320-1100
838-9111

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MARK	NUMBER	LENGTH	WEIGHT (LBS)	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
DECK											
S401	90	8'-10"	531	STR							
S402	2 SER. OF 9	14'-10" TO 16'-6"	188	STR							2½"
S403	2 SER. OF 9	8'-1" TO 13'-9"	131	STR							8½"
S404	2 SER. OF 11	2'-9" TO 7'-9"	77	STR							6"
S405	25	2'-3"	38	STR							
S406	1	1'-6"	1	STR							
S407	3	9'-4"	19	STR							
S501	109	8'-10"	1,004	STR							
S502	2 SER. OF 9	15'-0" TO 16'-6"	296	STR							2¼"
S503	2 SER. OF 10	9'-0" TO 15'-0"	250	STR							8"
S504	2 SER. OF 10	8'-10" TO 4'-4"	137	STR							6"
S505	1 SER. OF 7	1'-4" TO 5'-4"	25	STR							8"
S506	6	9'-4"	58	STR							
S507	2 SER. OF 17	1'-0" TO 17'-4"	325	STR							12¼"
S508	78	17'-8"	1437	STR							
S509#	84	8'-0"	701	STR							
S510	2 SER. OF 11	11'-9" TO 22'-2"	389	STR							12½"
S511	2 SER. OF 7	15'-4" TO 22'-4"	275	STR							14"
S512	2 SER. OF 13	6'-8" TO 14'-5"	286	STR							7¾"
S513	2 SER. OF 9	3'-3" TO 6'-3"	89	STR							4½"
S514#	2 SER. OF 3	7'-5" TO 8'-1"	49	STR							4"
S515	2	26'-10"	56	40	26'-10"					37'-0"	
S516	4	23'-0"	58	STR							
S517	2 SER. OF 17	1'-2" TO 17'-6"	331	STR							12¼"
S518	48	18'-0"	901	STR							
S519	2 SER. OF 17	0'-9" TO 17'-1"	316	STR							12¼"
S520	15	5'-11"	93	16							
S521	2 SER. OF 9	15'-4" TO 16'-4"	298	40	15'-4" TO 16'-4"					37'-½" TO 44'-4½"	A= 1½" R= 11"
S522	26	7'-8"	208	STR							
S523	33	3'-3"	112	2	1'-0"	1'-6"	1'-0"				
S524	31	3'-1"	100	28	1'-4"	1'-0"	1'-0"				
S525	1 SER. OF 7	1'-3" TO 6'-3"	27	STR							10"
S526	4	6'-0"	25	STR							
S527	1	7'-2"	8	STR							
S528	10	7'-4"	77	STR							

MARK	NUMBER	LENGTH	WEIGHT (LBS)	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
DECK (CONT.)											
S529	4	9'-6"	40	STR							
S530	32	7'-11"	264	STR							
S531	32	3'-3"	108	38							
S532	32	3'-8"	122	39							
SMC5#	114										
SUB-TOTAL			9,450								

- # - BARS INDICATED THAT REQUIRED MECHANICAL CONNECTORS.
- TOTAL NUMBER OF MECHANICAL CONNECTORS (SMC5) ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY.

* - TOTAL NUMBER OF MECHANICAL CONNECTORS (SMC5) ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY

NOTE

1. FOR NOTES AND BENDING DIAGRAMs, SEE SHEET 40/40.

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MARK	NUMBER			LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS						
	APPROACH SLAB		TOTAL				A	B	C	D	E	R	INC
	REAR	FWD.											
APPROACH SLABS (FOR INFORMATION ONLY)													
AS401		5	5	24'-6"	■	STR							
AS402		5	5	24'-0"	■	STR							
AS403		1	1	24'-3"	17	STR							
AS404		11	11	1'-7"	12	STR							
AS405		4	4	12'-6"	34	STR							
AS406		4	4	2'-0"	6	STR							
AS501	1 SER. OF 12		1 SER. OF 12	27'-6" TO 30'-0"	360	STR							0'-2¾"
AS502	1 SER. OF 10		1 SER. OF 10	27'-6" TO 30'-0"	300	STR							0'-3¼"
AS503	1 SER. OF 18		1 SER. OF 18	24'-7" TO 27'-4"	487	STR							0'-2"
AS504	1 SER. OF 14		1 SER. OF 14	24'-7" TO 27'-4"	379	STR							0'-2½"
AS505	1 SER. OF 14		1 SER. OF 14	23'-7" TO 24'-6"	351	STR							0'-7⁄8"
AS506	1 SER. OF 11		1 SER. OF 11	23'-7" TO 24'-6"	276	STR							0'-1"
AS507	79		79	30'-0"	2,472	STR							
AS508	1	14	15	1'-6"	23	STR							
AS509	1		1	2'-9"	3	STR							
AS510	1		1	4'-0"	5	STR							
AS511	1		1	5'-4"	6	STR							
AS512	1		1	6'-10"	8	STR							
AS513	1		1	8'-4"	9	STR							
AS514	1		1	10'-0"	11	STR							
AS515	1		1	11'-10"	13	STR							
AS516	1		1	13'-10"	15	STR							
AS517	1		1	16'-3"	17	STR							
AS518	1		1	19'-2"	20	STR							
AS519	2		2	30'-4"	63	STR							
AS520		3	3	24'-0"	76	STR							
AS521		2	2	24'-9"	52	STR							
AS522		2	2	25'-6"	54	STR							
AS523		81	81	26'-5"	2,239	STR							
AS524		176	176	30'-0"	5,508	STR							
AS525		1 SER. OF 8	1 SER. OF 8	23'-3" TO 25'-3"	405	STR							0'-3"
AS526		2	2	23'-0"	48	STR							
AS527		1	1	24'-3"	26	STR							
AS528		1	1	24'-10"	6,664	STR							
AS529	103	154	257	24'-6"	6,568	STR							
AS530	54		54	6'-8"	376	STR							
AS531	11		11	1'-8"	19	STR							
AS532	11		11	24'-8"	283	STR							
AS533	54	25	79	3'-6"	289	28	1'-9"	1'-0"	1'-0"				
AS534	54	25	79	3'-6"	288	2	1'-0"	1'-9"	1'-0"				
AS535		9	9	7'-9"	73	STR							
AS536		1 SER. OF 12	1 SER. OF 12	2'-6 TO 7'-2"	61	STR							0'-5"
AS537		1	1	8'-1"	9	3	2'-0"	1'-8"					
AS538		1	1	7'-1"	8	3	1'-6"	1'-8"					
AS539		1	1	6'-1"	7	3	1'-0"	1'-8"					
AS540		1	1	5'-3"	6	3	0'-7"	1'-8"					
AS541		1 SER. OF 10	1 SER. OF 10	4-2" TO 11'-10"	84	STR							0'-10¼"
AS542		2	2	3'-10"	8	STR							
AS543		1	1	9'-5"	10	STR							
AS544		1	1	12'-7"	14	41	12'-7"					44'- 7½"	
AS545		4	4	7'-8"	32	STR							
AS546		2	2	7'-4"	16	44	2'-3"	2'-2"	2'-11"				
AS547		2	2	2'-5"	6	STR							
AS548		5	5	4'-0"	21	46	2'-8"	1'-4"					
AS549		5	5	3'-10"	21	40	3'-10"					37'-4"	

MARK	NUMBER			LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS						
	APPROACH SLAB		TOTAL				A	B	C	D	E	R	INC
	REAR	FWD.											
APPROACH SLABS (FOR INFORMATION ONLY)													
AS550		6	6	10'-10"	68	30	1'-6"	0'-8"	3'-11"	2'-9"			
AS551		5	5	24'-0"	126	1	1'-6"	3'-1"					
AS552		5	5	24'-3"	127	1	1'-6"	2'-11"					
AS601		29	29	7'-1"	309	37	0'-6½"	0'-9½"	1'-5"	1'-0"	0'-7"		
AS602		29	29	6'-7"	287	23	0'-6"	3'-3"	3'-3"			0'-2"	
ASI001		1	1	2'-11"	13	16	1'-6"						
ASI002		1	1	4'-2"	18	16	2'-9"						
ASI003		1	1	5'-5"	24	16	4'-0"						
ASI004		1	1	6'-9"	30	16	5'-4"						
ASI005		1	1	8'-3"	35	16	6'-10"						
ASI006		1	1	9'-9"	42	16	8'-4"						
ASI007		1	1	11'-5"	50	16	10'-0"						
ASI008		1	1	13'-3"	58	16	11'-10"						
ASI009		1	1	15'-3"	66	16	13'-10"						
ASI010		1	1	17'-8"	77	16	16'-3"						
ASI011		1	1	20'-7"	89	16	19'-2"						
ASI012	1		1	25'-8"	111	16	24'-3"						
ASI013	1		1	26'-3"	113	16	24'-10"						
ASI014	1 SER. OF 7		1 SER. OF 7	24'-8" TO 26'-8"	773	16	23'-3" TO 25'-3"						0'-3"
ASI015	1		1	25'-5"	110	16	24'-0"						
ASI016	89	116	205	25'-11"	22,865	16	24'-6"						
SUB-TOTAL					53,549								

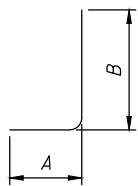
- APPROACH SLAB CONCRETE REINFORCEMENT IS FOR INFORMATION ONLY AND TO BE PAID FOR UNDER ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN.
- REINFORCING FOR APPROACH SLAB ONLY INCLUDED IN REBAR LIST. SLEEPER SLAB REINFORCING AS PER SCD AS-2-15.

NOTE

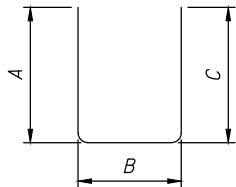
FOR NOTES AND BENDING DIAGRAMs, SEE SHEET 40/40.

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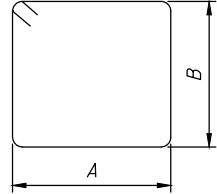
BAR DIAGRAMS



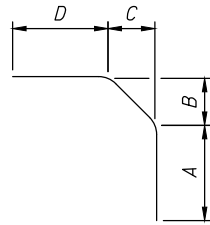
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TYPE-2



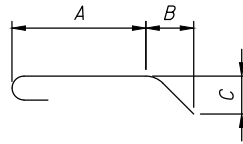
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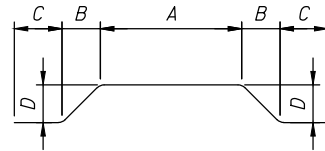
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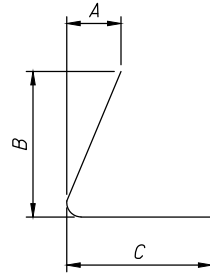
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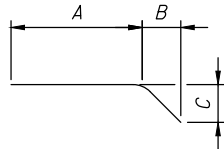
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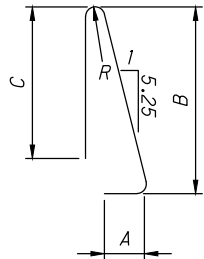
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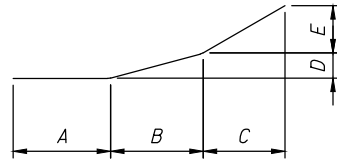
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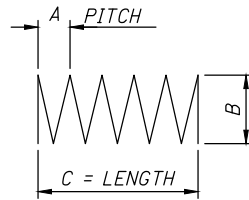
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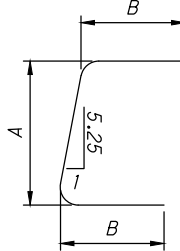
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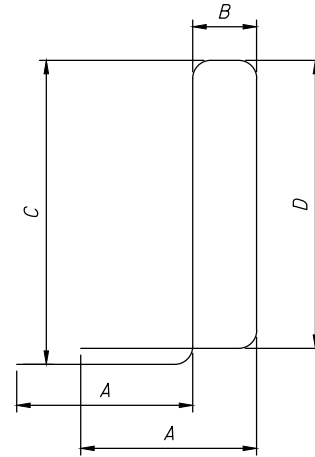
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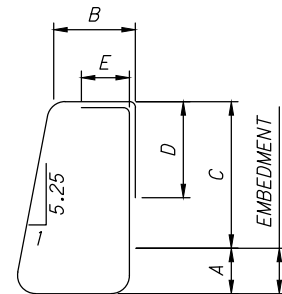
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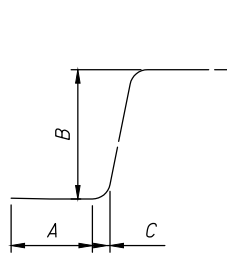
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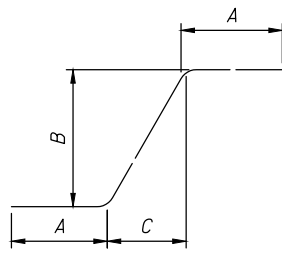
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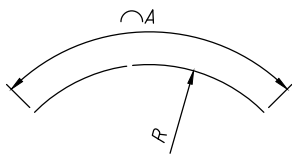
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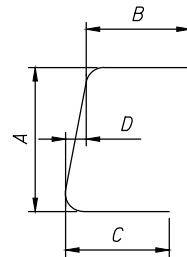
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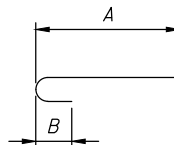
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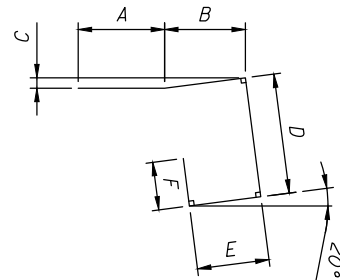
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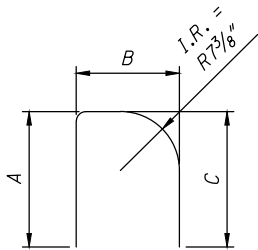
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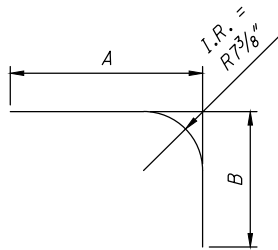
TYPE-42



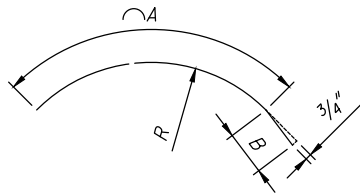
TYPE-43



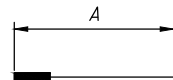
TYPE-44



TYPE-45



TYPE-46



MECHANICAL CONNECTORS

NOTES

1. BAR DIMENSIONS ARE OUT TO OUT UNLESS NOTED OTHERWISE.
2. ALL BARS ARE EPOXY COATED.
3. BAR SIZE AND LOCATION ARE INDICATED IN THE BAR MARK. THE ALPHABETICAL LETTER(S) INDICATES LOCATION. THE NEXT DIGIT INDICATES THE BAR SIZE NUMBER.

EXAMPLES:

AS566 NO. 5 SIZE BAR
APPROACH SLAB BAR

D832 NO. 8 SIZE BAR
DIAPHRAGM BAR

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REFERENCE SHALL BE MADE TO STANDARD DRAWINGS

AS-1-15	REVISED	1-20-2023
AS-2-15	REVISED	1-18-2019
GSD-1-19	REVISED	1-15-2021
SBR-3-20	REVISED	1-20-2023
SICD-1-21	REVISED	1-19-2024
SICD-2-14	REVISED	1-15-2021

AND TO SUPPLEMENTAL SPECIFICATIONS

800	DATED	7-15-2022
843	DATED	1-19-2024
844	DATED	4-20-2018

AND TO PROPOSAL NOTES

512	DATED	1-15-2016
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DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020 AND THE ODOT BRIDGE DESIGN MANUAL, 2023.

OPERATIONAL IMPORTANCE

A LOAD MODIFIER OF 1.00 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

DESIGN LOADING (EXISTING)

VEHICULAR LIVE LOAD: HS20, CASE I AND ALTERNATE MILITARY LOADING
FUTURE WEARING SURFACE (FWS) OR 0.06 KIPS/FT²

DESIGN DATA

CONCRETE, CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI (EPOXY COATED)

STRUCTURAL STEEL
EXISTING - ASTM A36, YIELD STRENGTH = 36 KSI

DECK PROTECTION METHOD

EPOXY COATED REINFORCING STEEL
2 ½" CONCRETE COVER
CLASS QC2 CONCRETE

PROPOSED BRIDGE WORK

THE PROPOSED WORK CONSISTS OF REMOVING PORTIONS OF THE EXISTING STRUCTURE AS SHOWN IN THE PLANS AND REHABILITATING THE BRIDGE BY:

- CONVERT ABUTMENTS TO SEMI INTEGRAL
- REMOVE END DIAPHRAGMS AT ABUTMENTS
- POUR NEW END DIAPHRAGMS AND REPLACE ADJACENT PORTIONS OF SIDEWALK AND RAILING.
- PAINT SUPERSTRUCTURE STEEL WITHIN LIMITS SHOWN ON PLANS
- REPLACE PARAPET ALONG SOUTH SIDE OF BRIDGE
- REPLACE BEARINGS WITH NEW ELASTOMERIC BEARINGS
- REPLACE APPROACH SLABS
- PATCH AND SEAL BRIDGE DECK AND RAILINGS
- ADD VANDAL PROTECTION FENCING

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 OPEN A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSION THAT HAVE BEEN VERIFIED IN THE FIELD.

DECK REPLACEMENT DESIGN ASSUMPTIONS

DUE TO THE SHORT LENGTH OF DECK TO BE FINISHED, THE USE OF A FINISHING MACHINE IS NOT REQUIRED. PER C&MS 511.07 CARE SHALL BE GIVEN TO PROVIDE AND USE SUFFICIENT VIBRATION EQUIPMENT TO PROPERLY COMPACT THE PLACED DECK SCREED CONCRETE. SHOULD THE CONTRACTOR ELECT TO USE A FINISHING MACHINE HE SHALL SUBMIT HIS PROPOSED METHOD OF SUPPORTING THE FINISHING MACHINE TO THE ENGINEER PER C&MS 501.05 REQUIREMENTS.

MAINTENANCE OF TRAFFIC

FOR MAINTENANCE OF TRAFFIC NOTES AND DETAILS, INCLUDING TEMPORARY BARRIER DETAILS AND PAY ITEMS, SEE SHEETS 6/92 AND 7/92

UTILITY LINES

SEE GENERAL NOTES, SHEET 5/92 FOR LIST OF UTILITIES IN THE PROJECT AREA.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED. OVER 20 FOOT SPAN. AS PER PLAN

THIS WORK CONSISTS OF THE REMOVAL OF PORTIONS OF THE EXISTING STRUCTURE AS INDICATED IN THE PLANS AND GENERAL NOTES. CONCRETE SUPERSTRUCTURE REMOVAL INCLUDES, BUT IS NOT LIMITED TO, CONCRETE DECK, SIDEWALKS, CONCRETE BRIDGE RAILINGS, METAL RAILINGS, DECK JOINTS, AND OTHER APPURTENANCES FROM STEEL SUPPORTING SYSTEMS (CROSS-FRAMES, ETC.). THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED. SUBMIT CONSTRUCTION PLANS ACCORDING TO C&MS 501.05.

DECK SLABS AND APPROACH SLAB REMOVAL:
THE EXISTING APPROACH SLABS AND PORTIONS OF EXISTING DECK SLAB SHALL BE REMOVED AS SHOWN IN THE PLANS. THE CONTRACTOR SHALL USE EXTREME CARE TO NOT DAMAGE THE EXISTING BEAMS AND CROSS-FRAMES.

BEFORE DECK SLAB CUTTING IS PERMITTED, DRAW THE OUTLINE OF PRIMARY STEEL MEMBERS IN CONTACT WITH THE BOTTOM OF THE DECK ON THE SURFACE OF DECK. DRILL SMALL DIAMETER PILOT HOLES 2 INCHES OUTSIDE THESE LINES TO CONFIRM THE LOCATION OF FLANGE EDGES. DECK CUTS OVER OR WITHIN 2 INCHES OF FLANGE EDGES SHALL NOT EXTEND LOWER THAN THE BOTTOM LAYER OF DECK SLAB REINFORCING STEEL. CUTS MADE OUTSIDE 2 INCHES OF FLANGE EDGES MAY CAREFULLY EXTEND THE FULL DEPTH OF THE DECK. PERFORM WORK CAREFULLY DURING CUTTING OF THE DECK SLAB TO AVOID DAMAGING STEEL MEMBERS THAT ARE INCORPORATED INTO THE PROPOSED STRUCTURE.

THE CONTRACTOR MAY REMOVE CONCRETE BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED CHISEL TYPE TOOLS. FOR REMOVALS OVER STRUCTURAL MEMBERS (STEEL BEAMS), THE CONTRACTOR MAY USE A HAMMER HEAVIER THAN 35 POUNDS BUT NOT EXCEED 90 POUNDS UNLESS APPROVED BY THE ENGINEER. THE METHODS OVER STRUCTURAL MEMBERS SHALL ENSURE ADEQUATE DEPTH CONTROL AND PREVENT NICKING OR GOUGING THE PRIMARY STRUCTURAL MEMBERS. DUE TO POSSIBLE PRESENCE OF ATTACHMENTS (E.G., FINISHING MACHINE, FORM SUPPORTS, ETC.) TO EXISTING STRUCTURAL MEMBERS, PERFORM WORK CAREFULLY DURING DECK REMOVAL TO AVOID DAMAGING STRUCTURAL MEMBERS THAT ARE TO REMAIN. REPLACE OR REPAIR STEEL MEMBERS DAMAGED BY THE DECK SLAB REMOVAL OPERATIONS AT NO COST TO THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER TO THE ENGINEER. OBTAIN THE ENGINEER'S APPROVAL BEFORE PERFORMING REPAIR.

CONCRETE ABUTMENT AND END DIAPHRAGM REMOVAL:
PORTIONS OF THE EXISTING ABUTMENT SHALL BE REMOVED AS NEEDED TO CONVERT THE ABUTMENT TO SEMI-INTEGRAL TYPE. REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

THE EXISTING DIAPHRAGMS SHALL BE REMOVED AS NEEDED TO PERMIT FORMING AND POURING THE SEMI-INTEGRAL ABUTMENT. AFTER STEEL IS REMOVED, DAMAGED PAINT AREAS THAT ARE TO REMAIN THE CONCRETE ENCASEMENT SHALL BE TOUCHED UP WITH A PRIME COAT ONLY PER 514.22.

THE EXISTING END DIAPHRAGMS SHALL BE REMOVED FROM THE EXISTING BEAMS WITHOUT GOUGING THE BEAM WEB OR FLANGES. THE WEB AND FLANGES SHALL BE GROUND SMOOTH IN THE DIRECTION OF THE LENGTH OF THE BEAM TO REMOVE ALL WELD MATERIAL.

AT&T UTILITY CONDUITS:
EXISTING AT&T UTILITY CONDUITS (2 BANKS OF 3-4" CONDUITS ARE IN SERVICE AND WILL REMAIN). THE CONTRACTOR WILL PROTECT AND SUPPORT THESE CONDUITS WHILE REMOVING CONCRETE AT THE ABUTMENTS TO CONVERT TO SEMI-INTEGRAL. CAREFULLY SAWCUT AROUND EACH BANK OF THE UTILITIES EXTENDING THROUGH ABUTMENT BACKWALLS. REMOVE PORTIONS OF THE ABUTMENT TO THE LIMITS SHOWN IN THE PLANS WHILE RETAINING THE CONTINUITY OF THE CONDUIT BANKS. EXTEND THE EXISTING DUCT SLEEVES BY PROVIDING A SPLIT SLEEVE AROUND THE EXISTING CONDUITS.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED. OVER 20 FOOT SPAN. AS PER PLAN (CONT.)

FIRST ENERGY LIGHT POLES:
THE LIGHT POLES CONNECTED TO THE EXISTING SOUTHERN RAILING OF BOTH BRIDGES PE-7-20 AND PE-7-21 WILL REQUIRE REMOVAL PRIOR TO RAILING REMOVAL AND PROPOSED RECONSTRUCTION. COORDINATION SHALL BE PERFORMED WITH THE LIGHTING UTILITY COMPANY IN ADVANCE OF CONSTRUCTION ACTIVITIES FOR THE REMOVAL OF THE LIGHTING AND ITS MISCELLANEOUS ITEMS AS TO NOT DELAY THE PROJECT. ONCE THE NEW BARRIER AND PILASTERS HAVE BEEN CONSTRUCTED THE CONTRACTOR SHALL COORDINATE THE REINSTALLATION OF THE LIGHT POLES AND MISSELANEOUS ITEMS WITH THE LIGHTING UTILITY COMPANY.

CUT LINE CONSTRUCTION JOINT PREPARATION:
SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL, WHERE REQUIRED IN THE PLANS, IN PLACE. INSTALL DOWEL BARS AS SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST, OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

MEASUREMENT & PAYMENT:
THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN. **UNCLASSIFIED EXCAVATION. AS PER PLAN**

PLACE AND COMPACT EMBANKMENT MATERIAL IN 6-IN LIFTS FOR THE CONSTRUCTION OF THE APPROACH EMBANKMENT.
ITEM 513 - STRUCTURAL STEEL. MISC.: DRILLING STRUCTURAL STEEL

THIS WORK CONSISTS OF DRILLING 2" DIAMETER HOLES IN THE WEB OF EXISTING BEAMS, TO PERMIT THE PLACEMENT OF HORIZONTAL REBAR RUNNING ALONG THE NEAR FACE OF THE PROPOSED ABUTMENT DIAPHRAGM, AND DRILLING 1" DIAMETER VENT HOLES INTO EXISTING BEAM FLANGES AND PROPOSED BEARING PLATES AT NEW BEARING LOCATIONS. DRILL HOLES PER THE DIMENSIONS AS DESCRIBED IN THE PLANS. PRIOR TO PLACING REBAR, CLEAN AND TOUCH UP ANY EXPOSED STEEL OR DAMAGED PAINT AREAS WITH PRIME COAT ONLY PER 514.22. THE NUMBER OF HOLES DRILLED IN THE STRUCTURAL STEEL AS DETAILED ABOVE WILL BE PAID FOR AT THE CONTRACT PRICE PER EACH HOLE. PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIAL, LABOR, AND EQUIPMENT NECESSARY FOR DRILLING THE HOLES AND REFINISHING PAINTED AREAS.

ITEM 514 - SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL
ITEM 514 - FIELD PAINTING OF EXISTING STRUCTURAL STEEL. PRIME COAT
ITEM 514 - FIELD PAINTING STRUCTURAL STEEL. INTERMEDIATE COAT
ITEM 514 - FIELD PAINTING STRUCTURAL STEEL. FINISH COAT

THE CONTRACTOR SHALL PAINT EXISTING STEEL BEAM ENDS, NOT ENCASED IN NEW CONCRETE, ACCORDING TO C&MS 514. THE COLOR OF THE FINISHED COAT SHALL MATCH EXISTING COLOR.

ITEM 514 - FIELD PAINTING MISC.: COATING BEAM ENDS

PRIOR TO ENCASING THE BEAM ENDS, PREPARE THE BEAM ENDS PER SSPC SP10 OR SSPC SP11 TO BARE METAL ACHIEVING A 1.5 TO 3.5 MIL PROFILE. PAINT THE BEAM ENDS WITH ORGANIC ZINC PRIME COAT PER CMS 514. PROVIDE THE PRIME COAT THICKNESS AS PER C7MS 514.20.

AFTER THE DIAPHRAGM CONCRETE IS SET, SEAL THE INTERFACE BETWEEN THE BEAM AND CONCRETE WITH CAULK.

STRUCTURE GROUNDING:

PROVIDE STRUCTURE GROUNDING PER ODOT STD. DWG. HL-50.21.

DESIGN AGENCY



664 WHITE POND DRIVE
AKRON, OHIO 44320-1100
838-9111

GENERAL NOTES - 1 OF 2

BRIDGE NO. PE-7-21 (CHERRY ROAD) OVER
R.J. CORMAN AND NORFOLK SOUTHERN RAILWAYS

STA CHERRY
RD BRIDGES

2 / 29

62

92

DATE

7/1/24

REVIEWED

MRW

DRAWN

HER

DESIGNED

JTH

CHECKED

HER

STRUCTURE FILE NUMBER

7632037

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ITEM 516 – JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

AT ALL LOCATIONS THIS WORK CONSISTS OF RAISING, RE-POSITIONING, OR TEMPORARILY SUPPORTING PORTIONS OF THE EXISTING STRUCTURES TO PERFORM THE WORK DEFINED IN THE PROJECT PLANS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF AN ADEQUATE JACKING SYSTEM AND TEMPORARY SUPPORT CAPABLE OF SUPPORTING THE BEAMS AS INDICATED. A SUFFICIENT NUMBER OF JACKS OF ADEQUATE CAPACITY SHALL BE USED TO OFFSET THE DEAD LOAD REACTIONS OF THE STRUCTURE FOR VERTICAL LIFT. LIVE LOAD WILL NOT BE PERMITTED ON THE SUPERSTRUCTURE DURING THIS OPERATION. THE ESTIMATED FINAL DEAD AND LIVE LOAD REACTIONS ARE GIVEN ON SHEET 13/29.

THE CONTRACTOR SHALL FURNISH JACKS WITH A TOTAL MINIMUM CAPACITY OF 150% OF THE ESTIMATED EXISTING DEAD LOADS LISTED IN THESE PLANS, ON 11/29 AT THE ABUTMENTS AND PIERS. THE PROVIDED LOADS ASSUMES TOTAL BEARING DEAD LOAD OF THE EXISTING SUPERSTRUCTURE. SHOULD LIVE LOAD ALLOWANCE BE REQUIRED, A MINIMUM JACK CAPACITY WITH THE COMBINED BEARING LOAD OF 130% DEAD LOAD AND 175% LIVE LOAD SHALL BE PROVIDED. ANY ADJUSTMENT TO THE MINIMUM REQUIRED CAPACITY SHALL BE DETERMINED BY THE CONTRACTOR, SUBMITTED TO AND APPROVED BY THE ENGINEER.

THE STRUCTURE SHALL NOT BE RAISED MORE THAN ¼” TO REMOVE THE BEARINGS. JACKS UNDER HYDRAULIC PRESSURE SHALL NOT BE USED TO SUPPORT LIVE LOADS. JACKS SHALL BE SHIMMED TIGHT OR OTHERWISE BLOCKED WHEN UNDER LIVE LOAD. BEAMS SHALL NOT BE SUPPORTED ON VERTICAL JACKS DURING NON-WORKING HOURS OR WHILE UNATTENDED BY CONTRACTOR PERSONNEL.

JACKS FOR LIFTING THE STRUCTURE SHALL BE HYDRAULIC RAM-TYPE WITH ELECTRIC POWER PUMPS. MULTIPLE JACKS AT A SINGLE BEARING LOCATION SHALL BE CONNECTED TO A HYDRAULIC MANIFOLD AND OPERATED BY A SINGLE PUMP TO PROVIDE EQUAL LIFTING PRESSURE. THE CONTRACTOR SHALL FURNISH PERSONNEL TO OPERATE AND/OR OBSERVE JACKS AT EACH BEARING LOCATION.

THE CONTRACTOR SHALL SUBMIT DETAILS OF THE TEMPORARY SUPPORT SYSTEM AND METHODS AND PROCEDURES FOR UNLOADING THE BEARINGS TO THE ENGINEER AND RAILROADS FOR APPROVAL PRIOR TO BEGINNING WORK. THE CONTRACTOR SHALL NOT USE SHEAR CONNECTIONS DRILLED INTO THE FACE OF THE PIER OR ABUTMENT AS AN ACCEPTABLE MEANS FOR JACKING. THE SUBMITTAL SHALL INDICATE MATERIALS, MEMBER SIZES, SPACING, JACK POINT LOCATIONS, JACKING LOADS, AND INSTALLATION AND REMOVAL PROCEDURES. DETAILED PLANS OF THE TEMPORARY SUPPORT SHALL BE PREPARED AND SUBMITTED IN ACCORDANCE WITH C&MS 501.05. NO WORK SHALL BE PERFORMED UNTIL A METHOD IS APPROVED.

AFTER ALL BEARING WORK IS COMPLETE, ALL JACKS AND TEMPORARY SUPPORT MATERIAL SHALL BE REMOVED.

IF, DURING JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL BEAMS OR OTHER DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, IMMEDIATELY CEASE THE JACKING OPERATION AND INSTALL SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. THE DEPARTMENT WILL NOT PAY FOR THE COST OF THESE REQUIRED REPAIRS. THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT ALL CONTACT AREAS. IF FULL SETTING IS NOT ATTAINED SUBMIT A REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COSTS TO ENSURE A FULL SEATING ON BEARINGS.

THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS THAT INCLUDES ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED FOR JACKING INCLUDING ALL TEMPORARY SUPPORTS, AND SUBMITTALS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516 – JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

ITEM 844 – CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION

ALL SUBSTRUCTURES TO BE PATCHED SHALL BE REPAIRED IN ACCORDANCE WITH THIS SUPPLEMENTAL SPECIFICATION.

ANODES SHALL BE PLACED IN EACH PATCH, 18 TO 24 INCHES APART ON THE PERIMETER, BASED ON THE REBAR SPACING. A MINIMUM OF ONE ANODE SHALL BE PLACED IN THE MIDDLE OF THE PATCHING MATERIAL AREA IF THE SPACING REQUIREMENT CANNOT BE MET.

ABBREVIATIONS

THE FOLLOWING STANDARD ABBREVIATIONS ARE USED THROUGHOUT THE PLANS:

- ABUT. – ABUTMENT
- AGG. – AGGREGATE
- ALT. – ALTERNATE
- APPR. – APPROACH
- BMS. – BETWEEN BEAMS
- BOTT. OR BTM. – BOTTOM
- BRG. – BEARING
- BTWN – BETWEEN
- C/C – CENTER TO CENTER
- C.I.P – CAST IN PLACE
- C.J OR CONST. JT. – CONSTRUCTION JOINT
- CL – CENTERLINE
- CLR. CLEARANCE
- CONC. – CONTINUED
- CONST. – CONSTRUCTION
- DIA. – DIAMETER
- DWG. – DRAWING
- EA. – EACH
- E.B. – EASTBOUND
- E.F. – EACH FACE
- E.L OR ELEV. – ELEVATION
- EQ. – EQUAL
- E.S. – EACH SIDE
- EST. – ESTIMATED
- EX. OR EXIT. OR EXIST. – EXISTING
- EXP. – EXPANSION
- F.A. – FORWARD ABUTMENT
- F.F. – FAR FACE
- FTG. – FOOTING
- FWD. – FORWARD
- G.F.R. – GRAVITY FED RESIN
- JT. OR JNT. – JOINT
- LT. – LEFT
- MAX. – MAXIMUM
- MIN. – MINIMUM
- MISC. – MISCELLANEOUS
- N.F. – NEAR FACE
- NO. – NUMBER
- O.C.J. – OPTIONAL CONSTRUCTION JOINT
- O.H.W.M. – ORDINARY HIGH WATER MARK
- OFF. – OFFSET
- P1 – PIER 1
- P2 – PIER 2
- P3 – PIER 3
- P.B. – PORTABLE BARRIER
- PCB – PORTABLE CONCRETE BARRIER
- P.C.P.P. – PERFORATED CORRUGATED PLASTIC PIPE
- P.E.J.F. – PREFORMED EXPANSION JOINT FILLER
- PERP. – PERPENDICULAR
- PL. PLATE
- PR. OR PROP. – PROPOSED
- PROT. – PROTECTION
- R.A. – REAR ABUTMENT
- REF. – REFERENCE
- REIN. – REINFORCING OR REINFORCEMENT
- REQ. OR REQ'D. – REQUIRED
- RT. – RIGHT
- R/W – RIGHT OF WAY
- SER. – SERIES
- SPA. – SPACE(D) OR SPACING
- STA. – STATION
- STD. DWG. OR SCD – STANDARD CONSTRUCTION DRAWING
- T/ – TOP
- T/T – TOE TO TOE
- TEMP. – TEMPORARY
- TYP. – TYPICAL
- U.N.O – UNLESS NOTED OTHERWISE
- VAR. VARIES
- W/ – WITH
- WSE – WATER SURFACE ELEVATION

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ITEM ODOT	EXT.	PARTICIPATION	TOTAL	UNIT	DESCRIPTION	PE-7-21					REF. SHEET
		ABUTMENTS				PIERS	SUPER.	GENERAL			
		REAR							FWD.		
202	11203	LS	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN					LS	2 /29
202	22900	278	278	SY	APPROACH SLAB REMOVED	139	139				
202	23500	354	354	SY	WEARING COURSE REMOVED					354	
503	21101	201	201	CY	UNCLASSIFIED EXCAVATION, AS PER PLAN	103	98				1 /29
509	10000	25,756	25,756	LB	EPOXY COATED STEEL REINFORCEMENT	3003	3259		12902	6592	
510	10000	822	822	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	128	142			552	
511	33500	4	4	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE	2	2				
511	34412	73	73	CY	CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE				73		
511	34448	45	45	CY	CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET)					45	
511	50212	67	67	CY	CLASS QC1 CONCRETE WITH QC/QA, SUBSTRUCTURE	35	32				
511	51510	5	5	CY	CLASS QC2 CONCRETE, SIDEWALK					5	
512	10050	285	285	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)					285	
512	10100	994	994	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	38	264			692	
512	10600	18	18	FT	CONCRETE REPAIR BY EPOXY INJECTION			18			
512	33000	27	27	SY	TYPE 2 WATERPROOFING	13	14				
512	73500	1,120	1,120	SY	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN				1120		
513	95020	LS	LS		STRUCTURAL STEEL, MISC.: DRILLING STRUCTURAL STEEL				LS		2 /29
514	00050	989	989	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL				989		
514	00056	989	989	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT				989		
514	00060	989	989	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT				989		
514	00066	989	989	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT				989		
514	10000	18	18	EACH	FINAL INSPECTION REPAIR COATING BEAM ENDS				18		
514	27702	18	18	EACH	FIELD PAINTING, MISC.: COATING BEAM ENDS				18		2 /29
516	10010	104	104	FT	ARMORLESS PREFORMED JOINT SEAL	48	56				
516	13600	52	52	SF	1" PREFORMED EXPANSION JOINT FILLER	26	26				
516	13900	53	53	SF	2" PREFORMED EXPANSION JOINT FILLER	30	23				
516	14020	162	162	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	80	82				
516	44200	18	18	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (14"x14"x4.54" WITH 15"x15"x1.5" LOAD & BEARING PLATES)	9	9				12/29
516	44200	27	27	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (14"x19"x2.73" WITH 15"x20"x1.5" LOAD PLATE AND 11"x13"x1.5" BEARING PLATE)			27			12/29
516	47001	LS	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN					LS	3 /29
518	21200	63	63	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	31	32				
518	40000	122	122	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	60	62				
518	40010	10	10	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	10					
SPECIAL	51912510	140	140	SY	PATCHING CONCRETE BRIDGE DECK				140		SEE PN 512
526	25001	277	277	SY	REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN	141	136				24/29
526	90030	104	104	FT	TYPE C INSTALLATION	48	56				
601	20000	335	335	SY	CRUSHED AGGREGATE SLOPE PROTECTION					335	
607	39900	269	269	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC					269	
607	39930	269	269	FT	VANDAL PROTECTION FENCE, 12' CURVED, COATED FABRIC					269	
843	50001	168	168	SF	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR, AS PER PLAN				168		3 /29
844	10001	55	55	SF	CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN			55			16/29

DESIGN AGENCY
AECOM
564 WHITE POND DRIVE
AKRON, OHIO 44320-1100
838-9111

DATE
7/1/24
REVIEWED
MRW
STRUCTURE FILE NUMBER
7632037

DRAWN
HER
REVISED

DESIGNED
GAD
CHECKED
HER

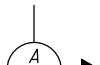
ESTIMATED QUANTITIES

BRIDGE NO. PE-7-21 (CHERRY ROAD) OVER
R.J. CORMAN AND NORFOLK SOUTHERN RAILWAYS

STA CHERRY
RD BRIDGES

4 / 29

64
92



WING COURSE (REMOVED)

6'-0"

CUT LINE

ELEV. 957.48±

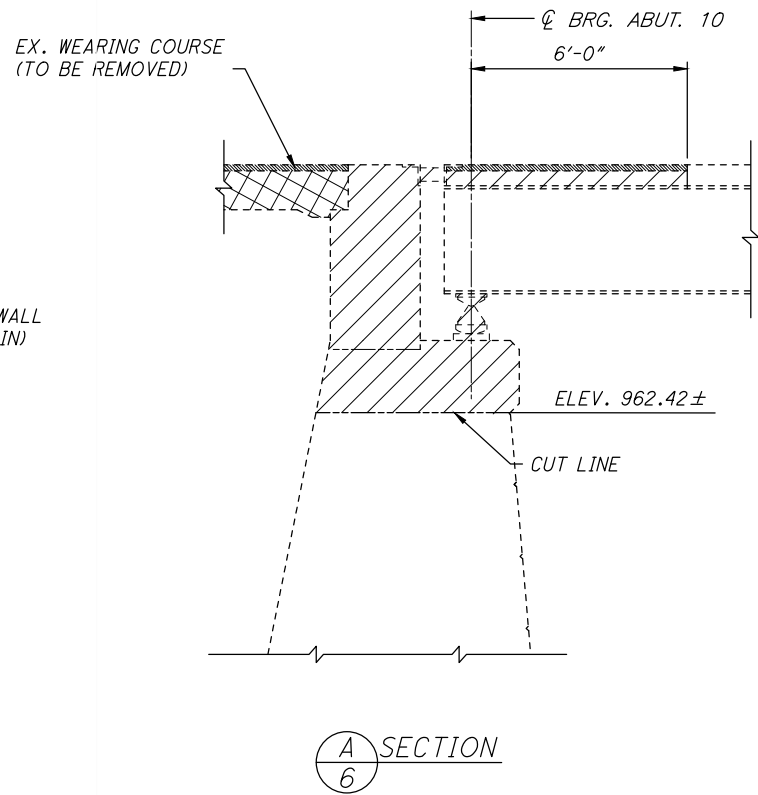
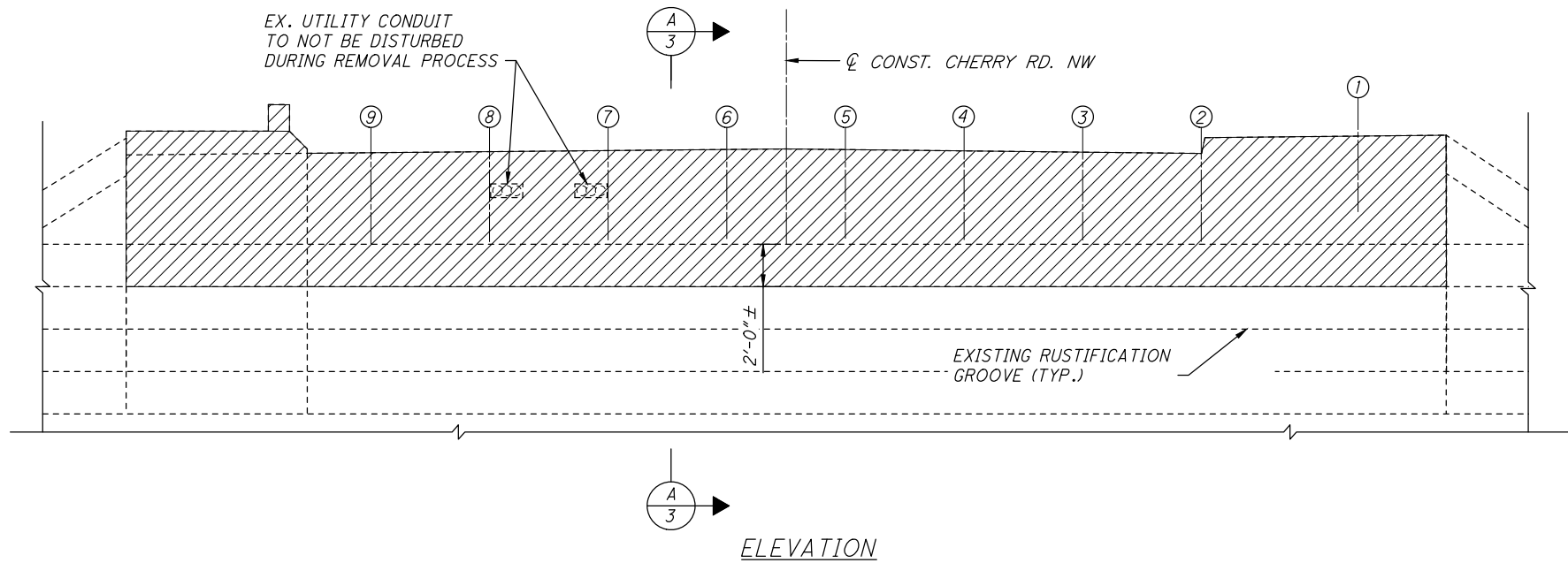
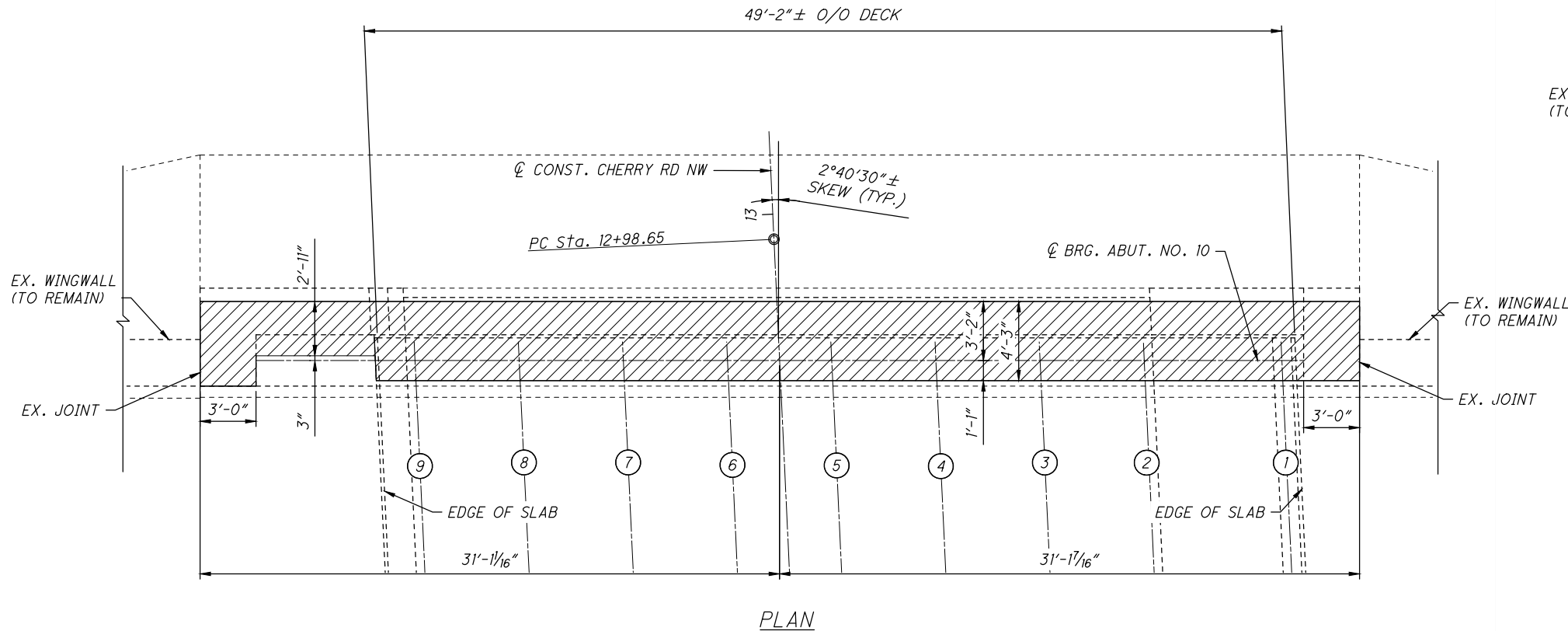
CUT LINE

$\frac{A}{5}$ SECTION



NOTES:

1. FOR ADDITIONAL REMOVAL INFORMATION SEE STRUCTURAL GENERAL NOTES, SHEET 2/29.
2. REFER TO STRUCTURAL GENERAL NOTES ON SHEET 3/29 FOR JACKING FORCES.
3. DETAILS FROM THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY. PERFORM ONLY PROPOSED WORK LISTED IN LEGEND.
4. AN ESTIMATE QUANTITY OF 103 CUBIC YARDS OF UNCLASSIFIED EXCAVATION HAS BEEN INCLUDED FOR THE EXCAVATION REQUIRED TO ACCESS AND CONVERT ABUTMENTS TO SEMI-INTEGRAL AND TO REINSTALL POROUS BACKFILL.



LEGEND:

-  ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

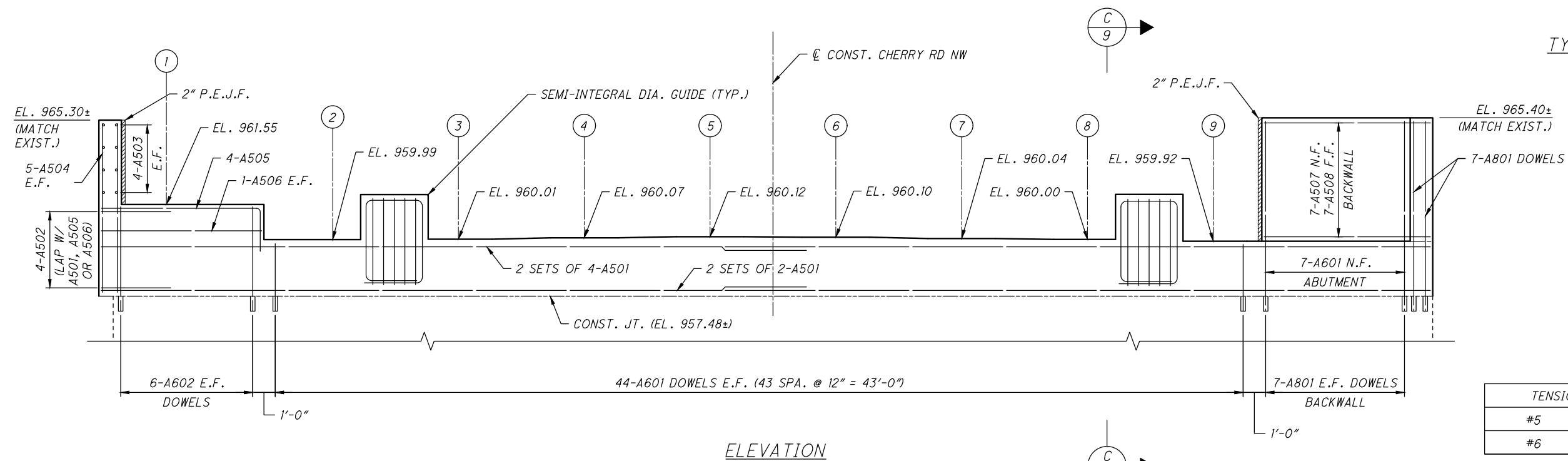
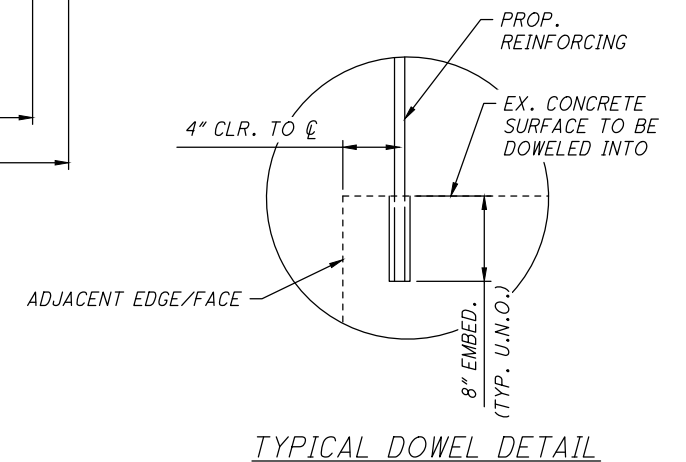
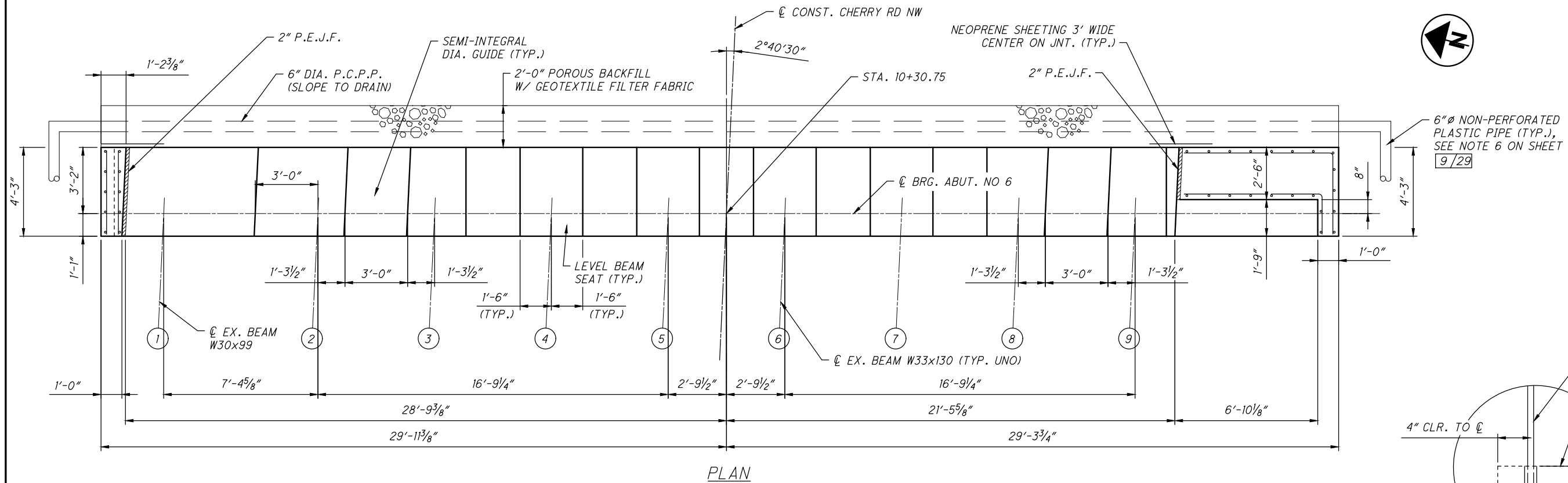
 ITEM 202 - APPROACH SLAB REMOVAL

 ITEM 202 - WEARING COURSE REMOVED

NOTES:

1. FOR ADDITIONAL REMOVAL INFORMATION SEE STRUCTURAL GENERAL NOTES, SHEET 2/29
2. REFER TO STRUCTURAL GENERAL NOTES ON SHEET 3/29 FOR JACKING FORCES.
3. DETAILS FROM THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY. PERFORM ONLY PROPOSED WORK LISTED IN LEGEND.
4. AN ESTIMATE QUANTITY OF 98 CUBIC YARDS OF UNCLASSIFIED EXCAVATION HAS BEEN INCLUDED FOR THE EXCAVATION REQUIRED TO ACCESS AND CONVERT ABUTMENTS TO SEMI-INTEGRAL AND TO REINSTALL POROUS BACKFILL.

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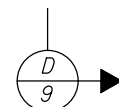
TENSION LAP SPLICE LENGTHS:	
#5	3'-1"
#6	3'-7"

NOTES:

- FOR ADDITIONAL NOTES AND DETAILS, SEE SHEET 9/29.



TENSION LAP SPLICE LENGTHS:	
#5	3'-1"
#6	3'-7"



NOTES:

- AECOM**
DESIGN AGENCY
564 WHITE POND DRIVE
AKRON, OHIO 44320-1100
836-9111

DESIGNED	DRAWN	REVIEWED	DATE
JTH	HER	MRW	7/1/24
CHECKED	REVISED	STRUCTURE FILE NUMBER 7070037	

ABUTMENT NO. 10 PLAN AND ELEVATION

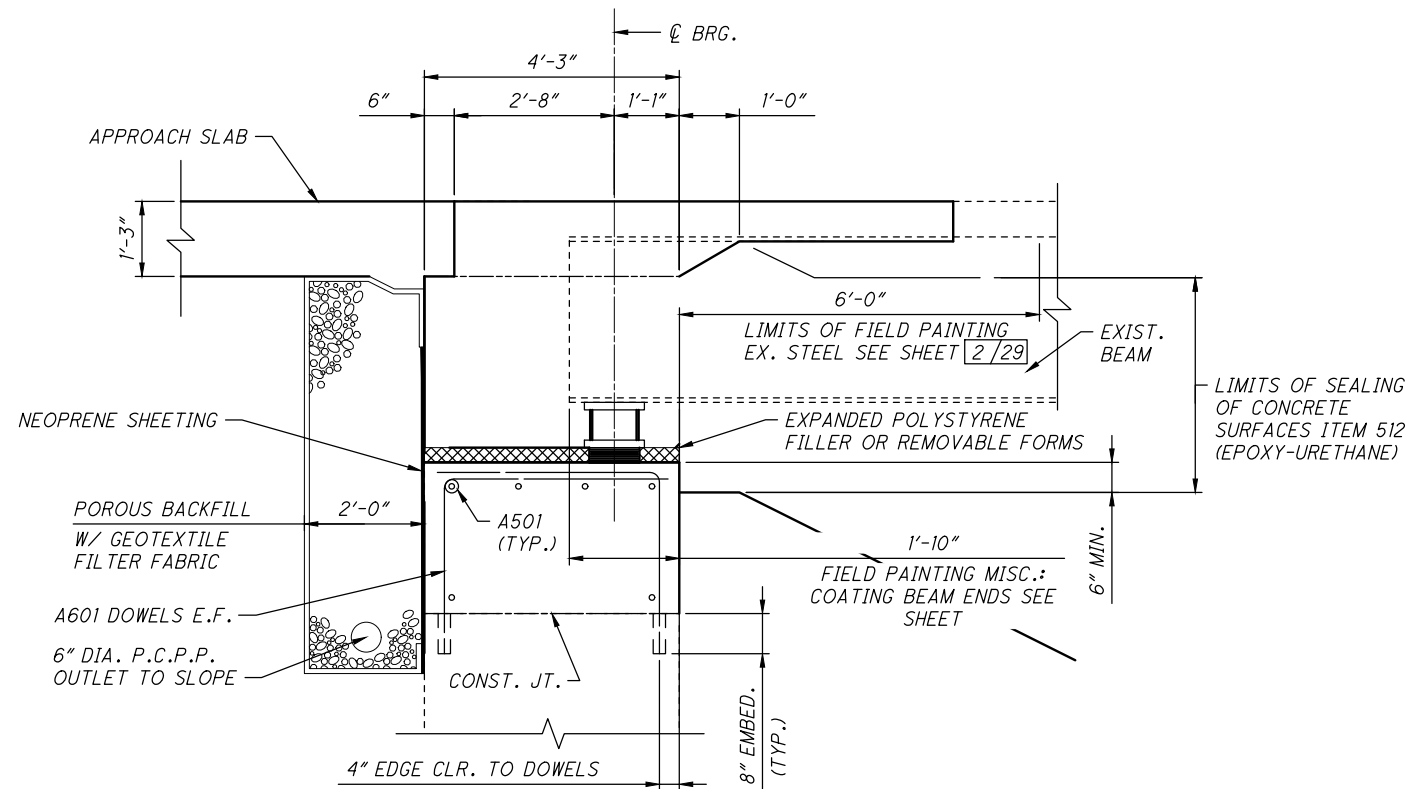
BRIDGE NO. PE-7-21 (CHERRY ROAD) OVER
R.J. CORMAN AND NORFOLK SOUTHERN RAILWAYS

**STA CHERRY
RD BRIDGES**

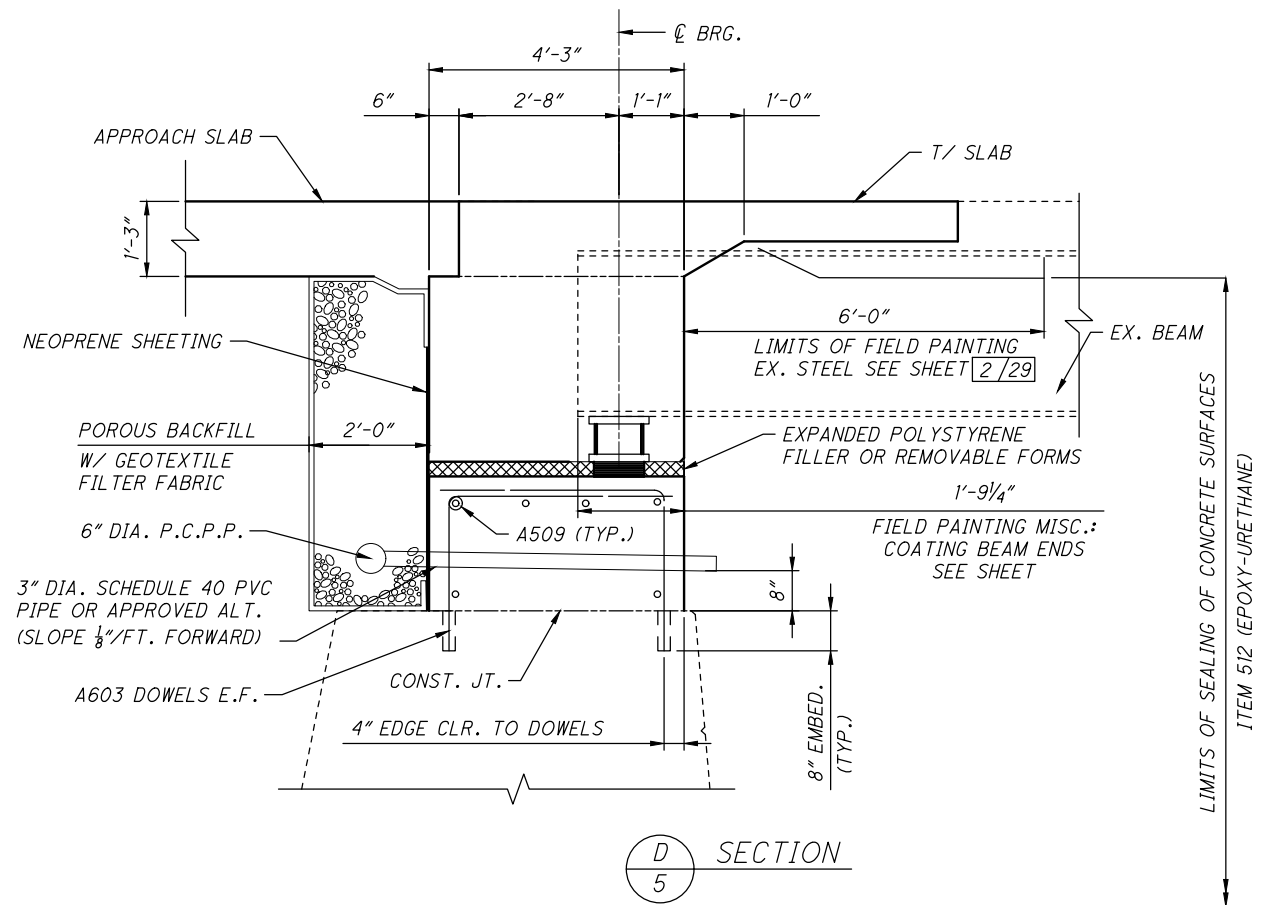
8 / 29

68
92

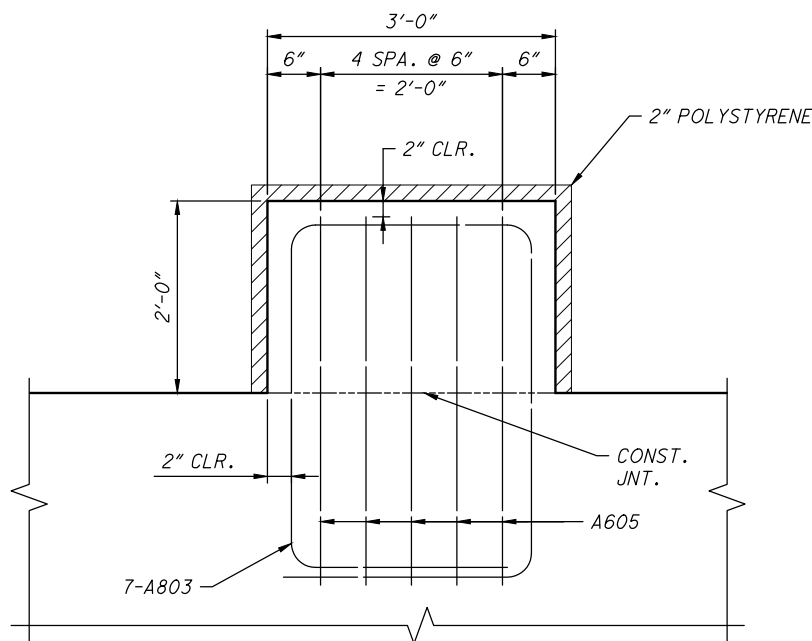
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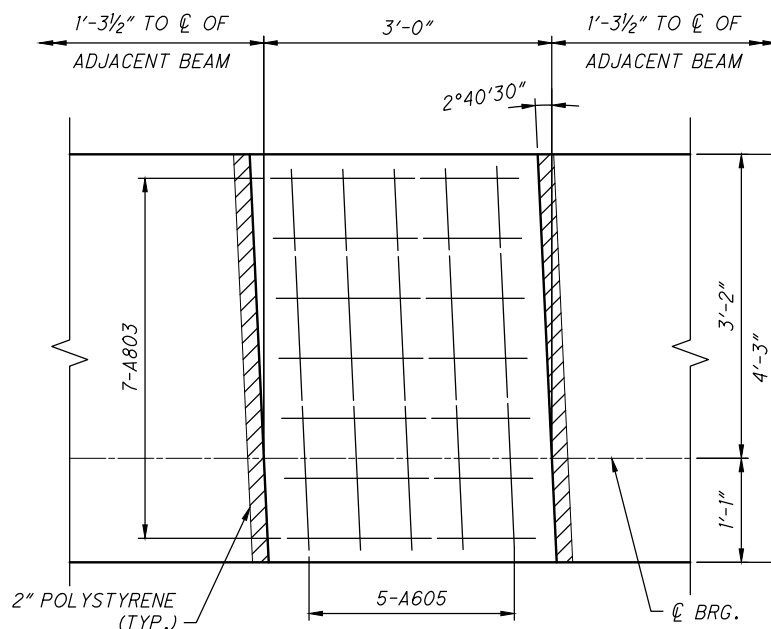
C
7 SECTION



D
5 SECTION



ELEVATION



PARTIAL PLAN

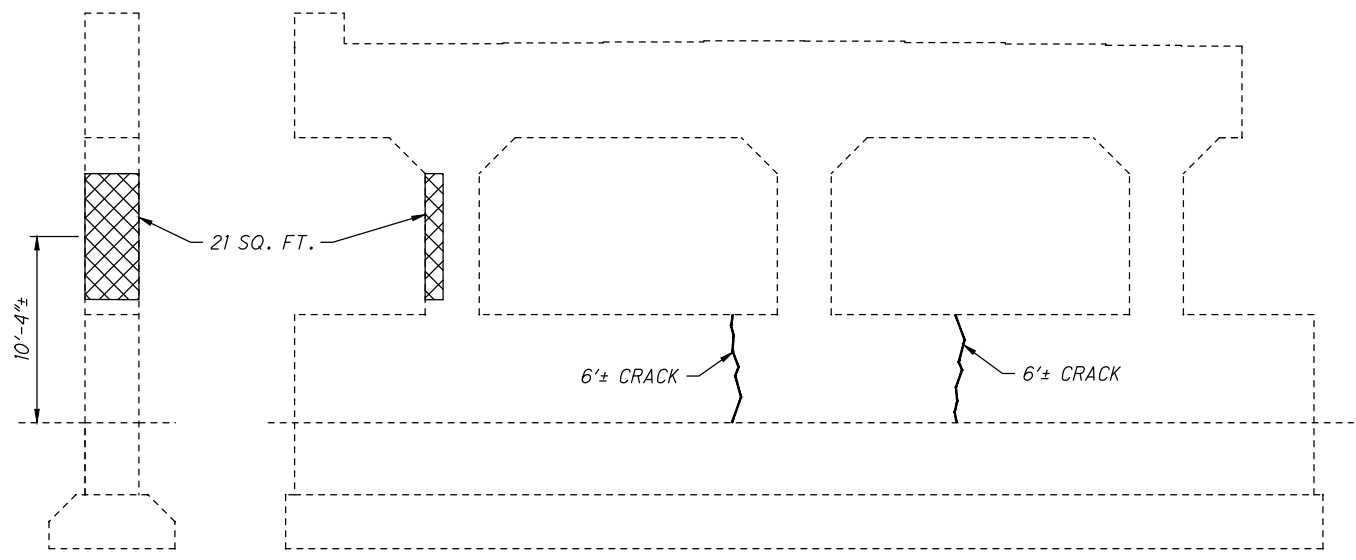
TYPICAL SEMI-INTEGRAL DIAPHRAGM GUIDE

(2 REQ'D. AT EACH ABUTMENT, SEE STD. DWG.
SICD-2-14 FOR MORE DETAILS)
(RUB PLATE NOT SHOWN FOR CLARITY)

NOTES:

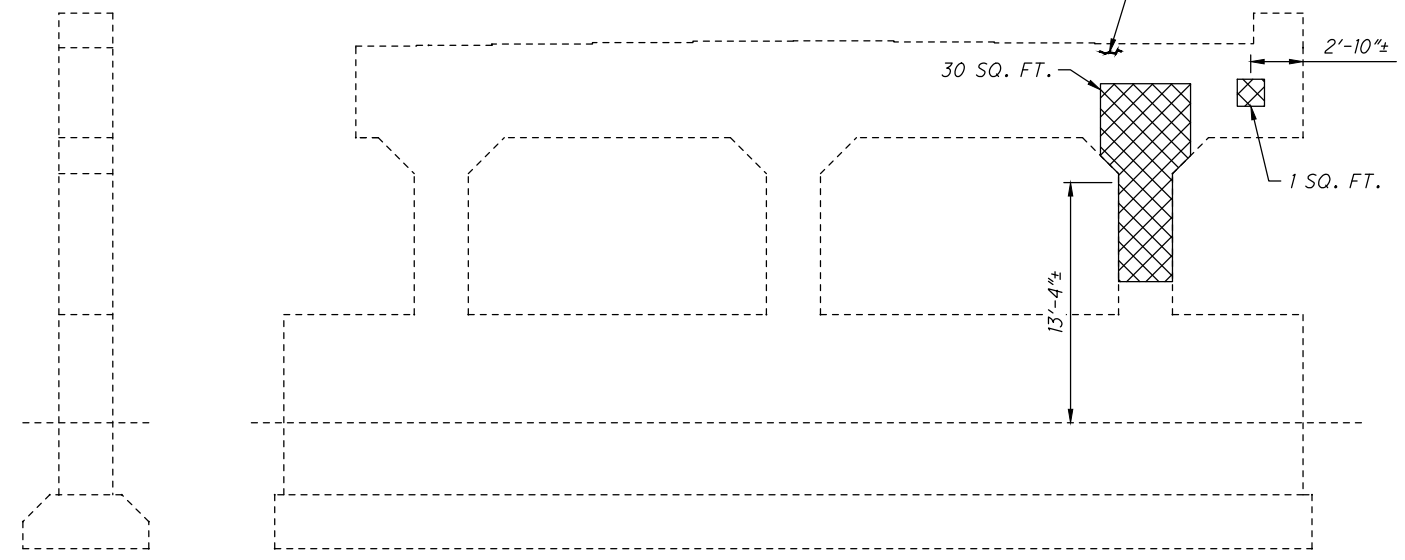
1. DRILL DOWEL HOLES WHERE SHOWN IN PLANS. INSTALL REINFORCING STEEL ACCORDING TO ITEM 510 USING NONSHRINK, NONMETALLIC GROUT, 705.20. PRIOR TO DRILLING DOWEL HOLES, LOCATED ALL EXISTING REINFORCING STEEL BARS IN THE AREA OF THE HOLE WITH THE AID OF REINFORCING STEEL BAR LOCATOR (PACHOMETER). IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATIONS AS A PROPOSED DOWEL HOLE, MOVE THE DOWEL HOLE TO EITHER SIDE OF THE EXISTING BAR.
2. ALL REINFORCING BAR CLEARANCES SHALL BE 2" MINIMUM UNLESS NOTED OTHERWISE. EXISTING REINFORCING NOT SHOWN FOR CLARITY.
3. PROPOSED SEAT ELEVATIONS AND HORIZONTAL CUTLINES/CONSTRUCTION JOINTS ARE BASED ON FIELD SURVEY AND SHALL BE VERIFIED BY THE CONTRACTOR.
4. ABUTMENT ELEVATIONS ARE GIVEN ALONG THE CENTERLINE OF BEARING AND WINGWALL ELEVATIONS ARE GIVEN ALONG THE FACE OF WINGWALL.
5. FOR REINFORCING STEEL LISTS, SEE SHEETS 27/29 AND 28/29.
6. FOR DRAINAGE TERMINATION DETAILS SEE STANDARD DRAWING DM-1.1. ANIMAL GUARD AND CRUSHED AGGREGATE SLOPE PROTECTION SHALL BE INCLUDED IN ITEM 518 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN.
7. INCLUDE ALL WORK AND MATERIALS PERTAINING TO WEEP HOLE CONDUIT INCLUDING TEE FITTINGS FOR PAYMENT WITH ITEM 518 - 6" PERFORATED CORRUGATED PLASTIC PIPE.
8. FOR ADDITIONAL DETAILS AND NOTES NOT SHOWN, REFER TO ODOT STANDARD DRAWINGS SICD-2-14 AND SICD-1-21.

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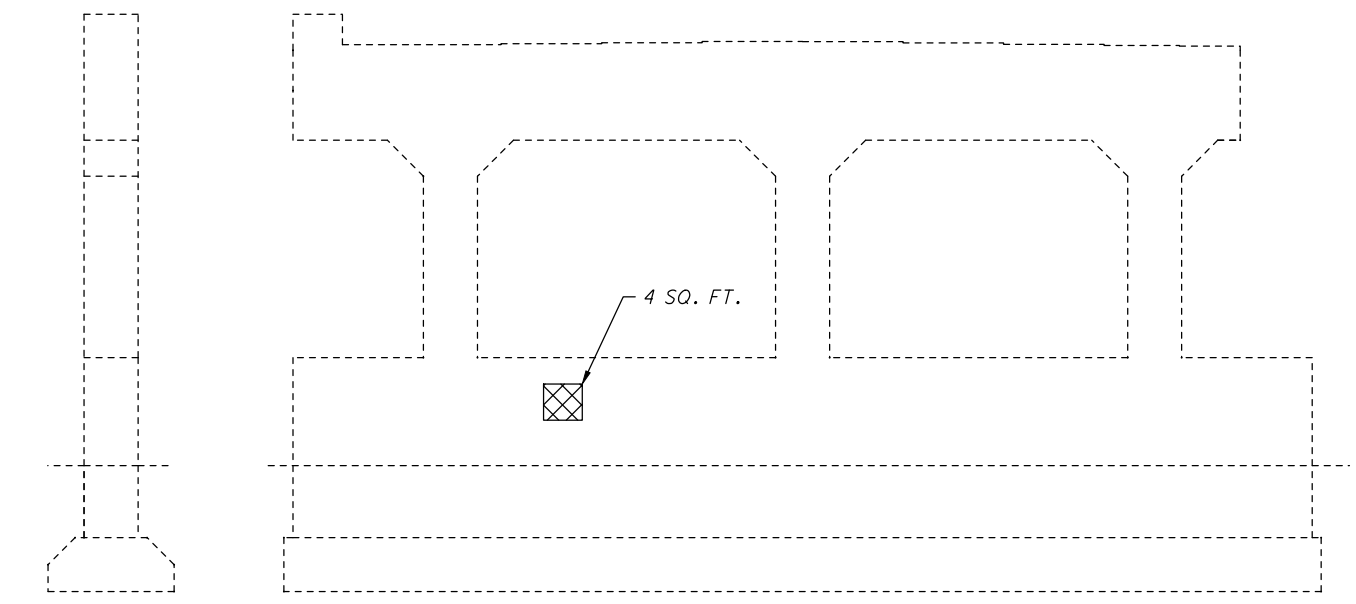
PIER 7 - SOUTH FACE

PIER 7 - EAST FACE



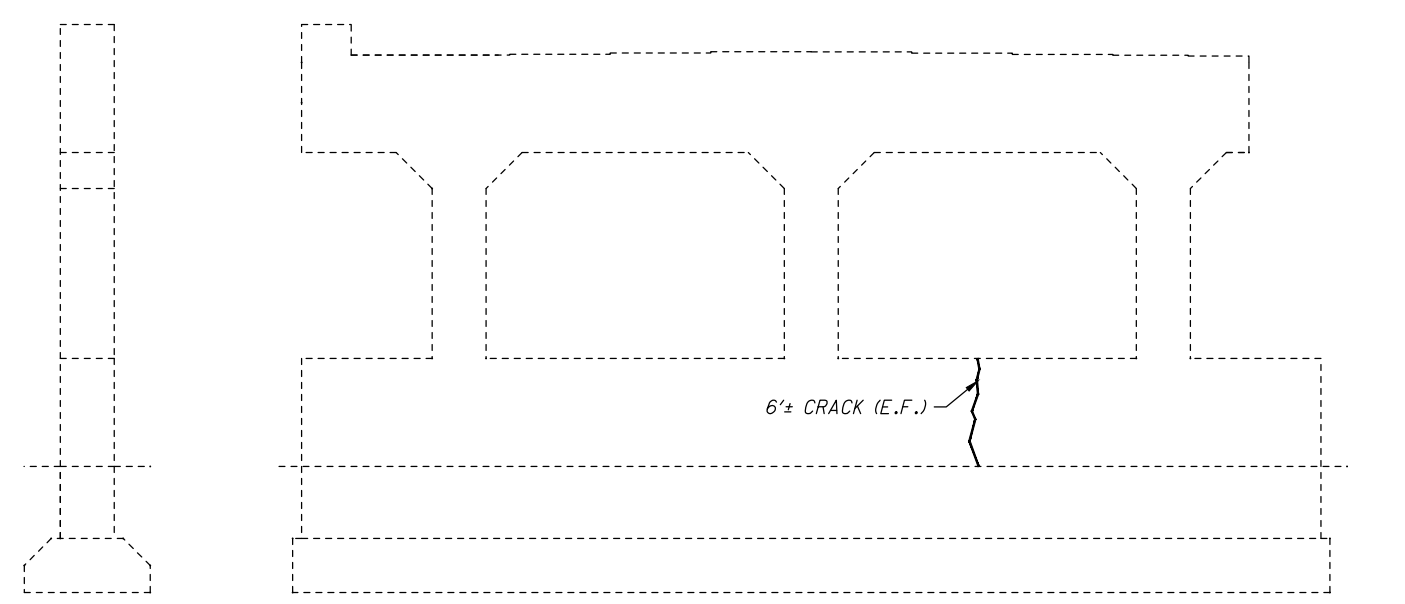
PIER 7 - NORTH FACE

PIER 7 - WEST FACE



PIER 8 - SOUTH FACE

PIER 8 - EAST FACE



PIER 9 - SOUTH FACE

PIER 9 - EAST FACE

LEGEND:

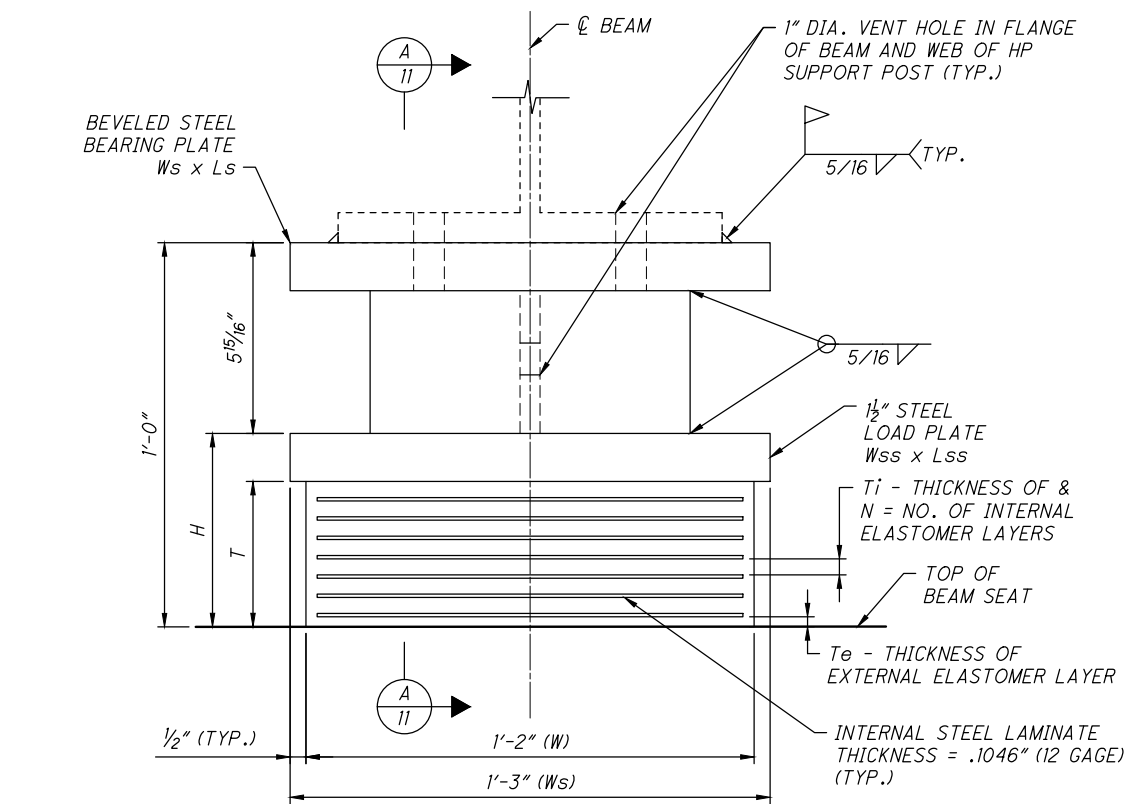
- ITEM 512 - CONCRETE REPAIR BY EPOXY INJECTION
- ITEM 844 - CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION

NOTES:

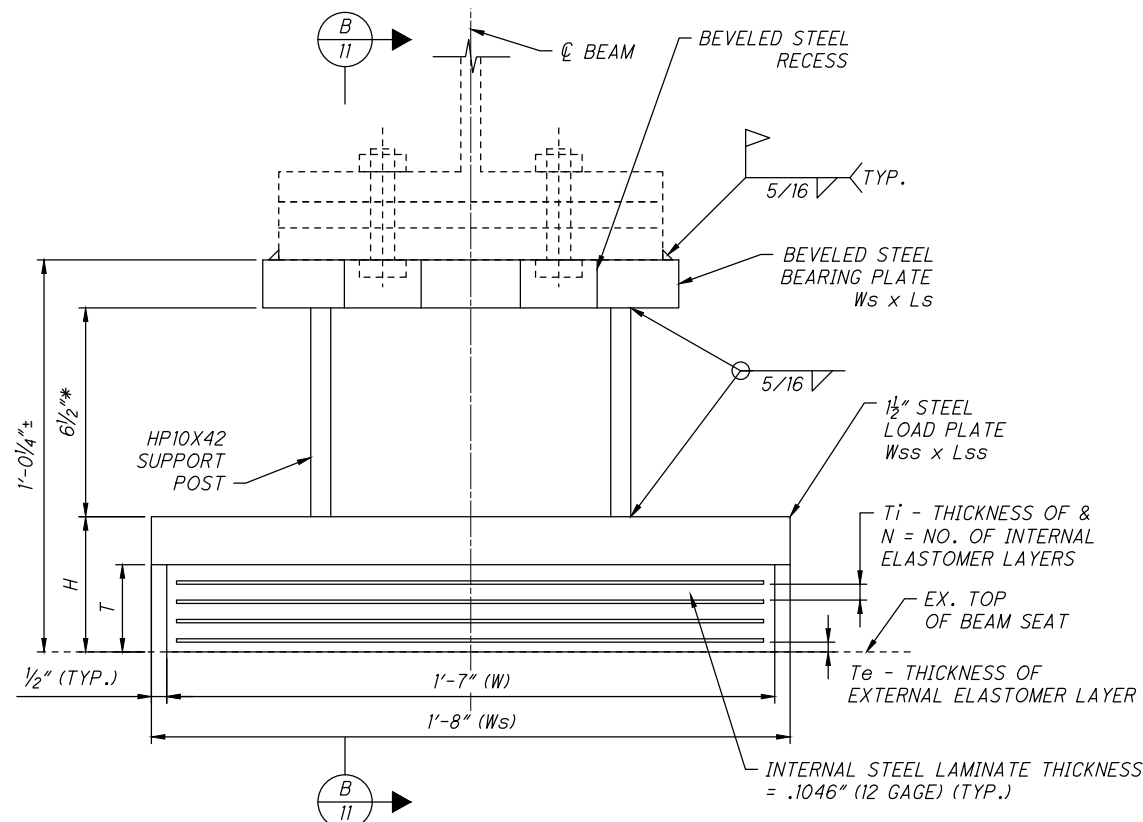
- FOR ADDITIONAL PATCHING INFORMATION, SEE STRUCTURE GENERAL NOTES, SHEETS 2/29 AND 3/29.

STA CHERRY RD BRIDGES	PIER PATCHING DETAILS				DESIGN AGENCY
	BRIDGE NO. PE-7-21 (CHERRY ROAD) OVER R.J. CORMAN AND NORFOLK SOUTHERN RAILWAYS				564 WHITE POND DRIVE AKRON, OHIO 44320-1100 838-9111
10/29	DATE	REVIEWED	DRAWN	DESIGNED	AECOM
7/1/24	MRW	AEK	HER	JTH	
70/92	STRUCTURE FILE NUMBER 7632037				

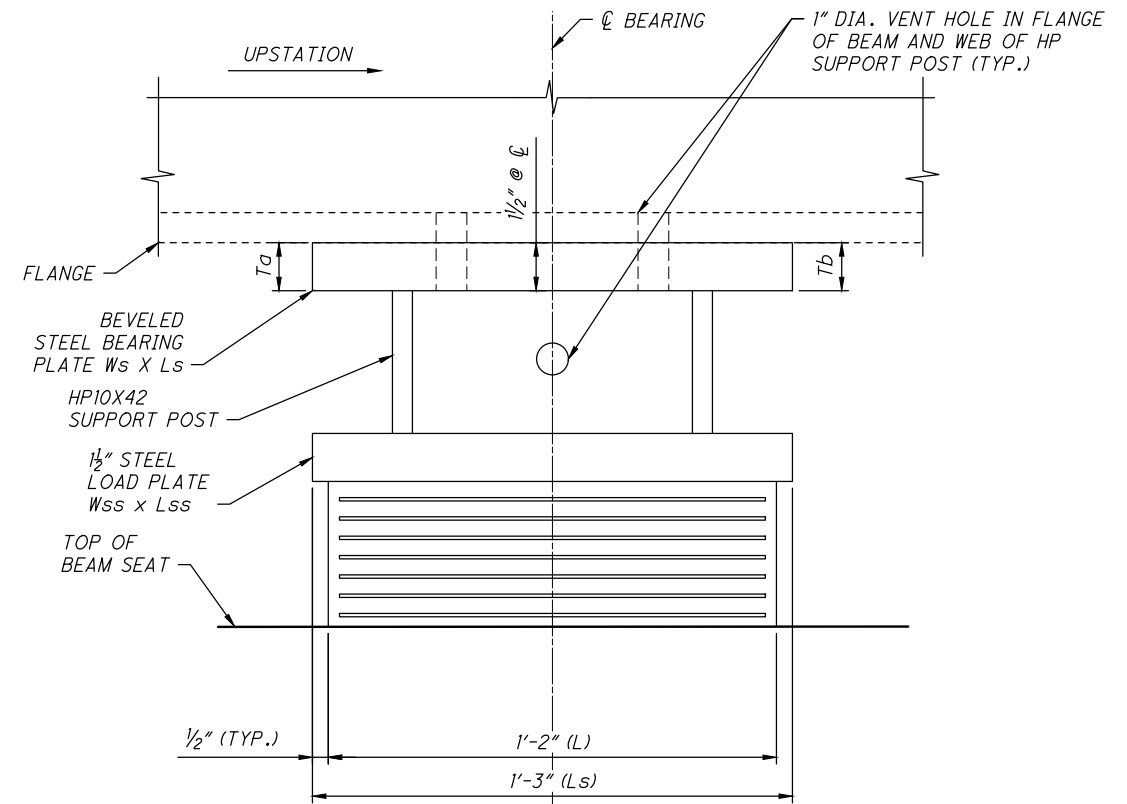
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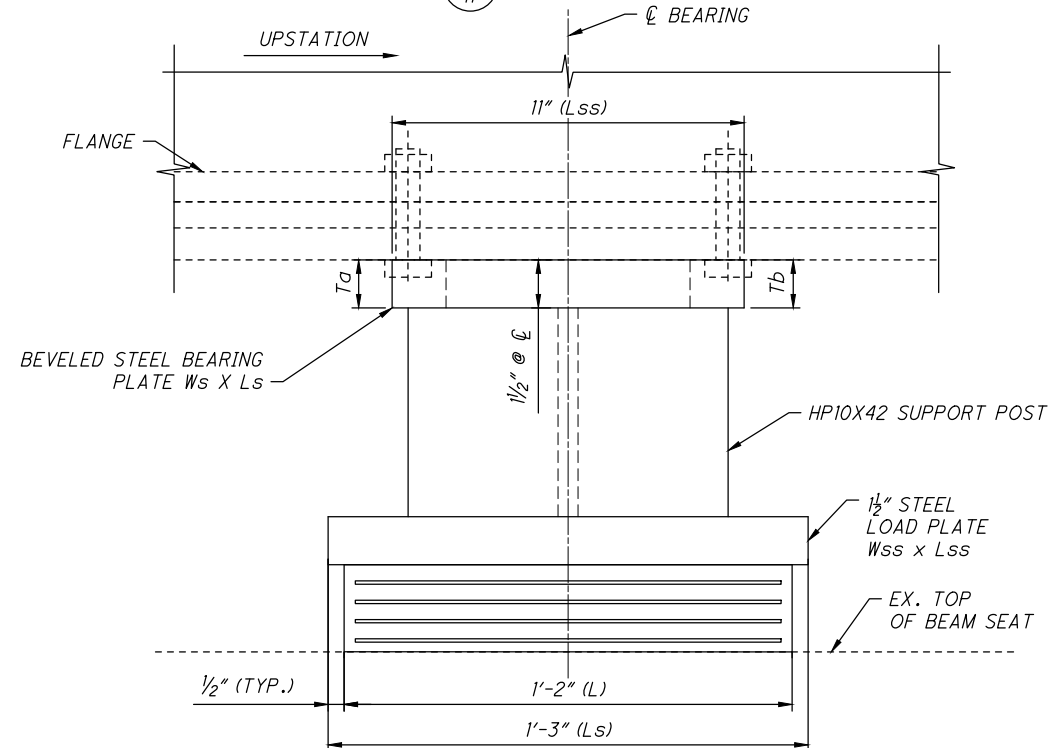
LAMINATED ELASTOMERIC EXPANSION
BEARINGS AT ABUTMENTS



LAMINATED ELASTOMERIC EXPANSION
BEARINGS AT PIERS 7, 8, & 9



SECTION
A
11



SECTION
B
11

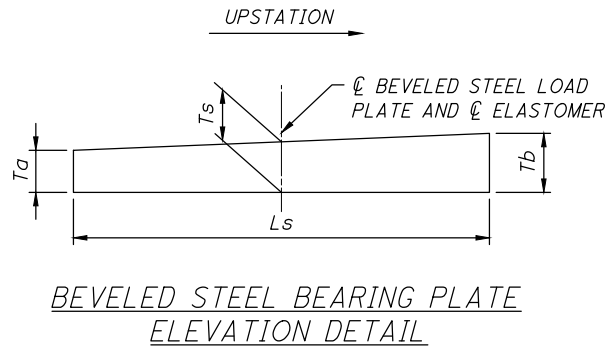
LEGEND:

* - DIMENSION OF HP10X42 POST HEIGHT CALCULATED BASED OFF EXISTING BEARINGS STD. DWG. RB-1-55 BUT MAY VARY DUE TO SHIMS AND AS CONSTRUCTED CONDITION. CONTRACTOR SHALL VERIFY HEIGHT IN FIELD AND TRIM POST AS REQUIRED FOR FIT UP. INCLUDE ALL COSTS ASSOCIATED WITH FIELD VERIFYING AND GRINDING WITH ITEM 516 FOR PAYMENT.

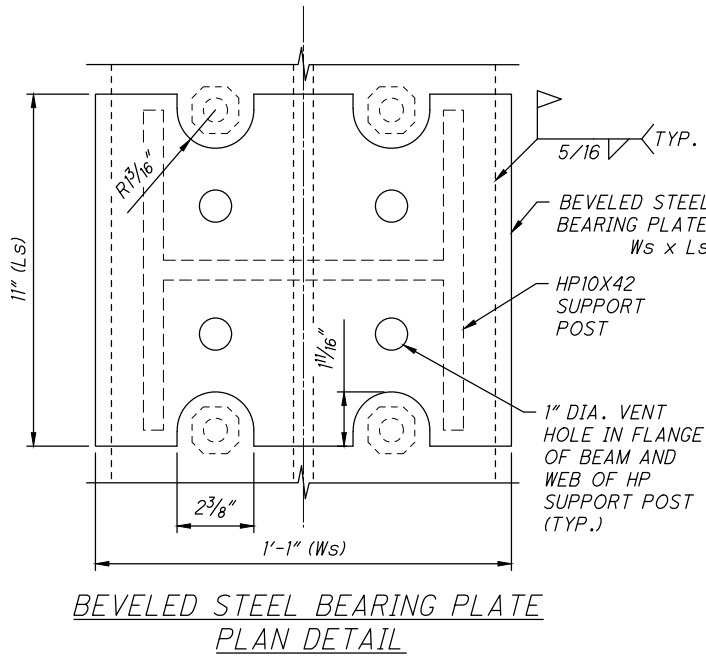
NOTES:

1. FOR ADDITIONAL NOTES AND DETAILS, SEE SHEET 12/29.

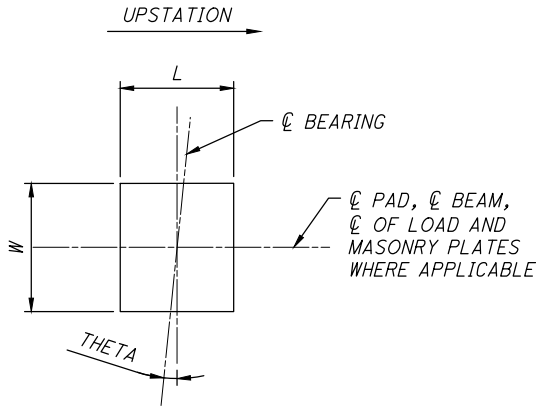
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BEVELED STEEL BEARING PLATE
ELEVATION DETAIL



BEVELED STEEL BEARING PLATE
PLAN DETAIL



BEARING ORIENTATION PLAN

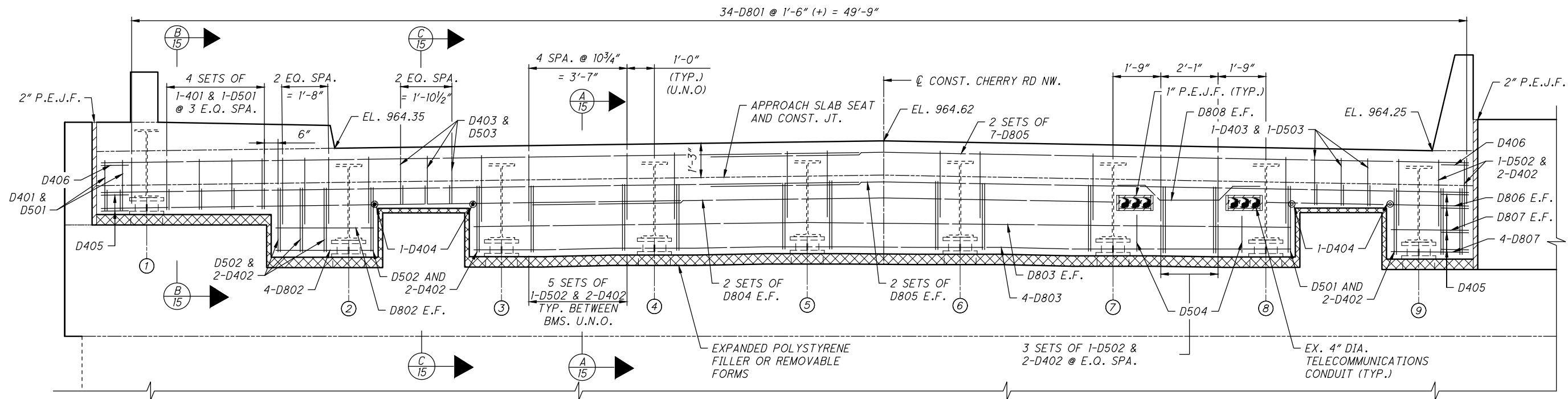
LOCATION	THETA
REAR ABUT. PIERS 7 & 8	2°40'30" LT.
PIER 9 FORWARD ABUT.	2°40'30" RT.

NOTES:

- ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED IN ACCORDANCE WITH SECTION 14.7.6 (METHOD A) OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. THE LONG-TERM COMPRESSION PROOF LEAD TEST (AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DIVISION II, SECTION 18.7.2.6) IS NOT REQUIRED.
- THE STEEL LOAD PLATE AND BEARING PLATE SHALL BE ASTM A709 GRADE 50 STEEL. GALVANIZE EXPOSED SURFACES OF THE PLATES.
- THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS. CONTROL WELDING SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 300 DEGREES F AS DETERMINED BY THE USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.
- ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE THE BEARING LOCATION ON THE BRIDGE, AND A DIRECTION ARROW THAT POINTS UP-STATION. ALL MARKS SHALL BE PERMANENT AND BE VISIBLE AFTER THE BEARING IS INSTALLED.
- TOTAL DESIGN LOAD FOR THE BEARINGS EQUALS THE DEAD LOADS AND LIVE LOAD AS TABULATED IN THE BEARING TABLE.
- LOADS SHOWN ARE SERVICE LOADS WITH NO LOAD FACTORS OR IMPACT FACTORS INCLUDED.
- THE UNIT PRICE FOR BEARINGS SHALL INCLUDE ALL MATERIALS, LABOR, TESTING, HP SHAPES, AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC EXPANSION BEARINGS. PAYMENT SHALL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE, AS PER PLAN.

BEARING DETAIL TABLE																				
SUBSTRUCTURE UNIT	BEARING								BEVELED BEARING PLATE					LOAD PLATE			H (IN)	SERVICE REACTIONS		
	TYPE	No.	L (IN)	W (IN)	Te (IN)	Ti (IN)	N	T (IN)	Ts (IN)	Ta (IN)	Tb (IN)	Ls (IN)	Ws (IN)	Tss (IN)	Lss (IN)	Wss (IN)		RDL (KIPS)	RLL (KIPS)	RTOTAL (KIPS)
REAR ABUTMENT	EXP.	9	14	14	0.3125	0.5	7	4.54	1.5	1.296	1.704	15	15	1.5	15	15	6.04	75.6	76.3	152.0
PIER 7	EXP.	9	14	19	0.3125	0.5	4	2.73	1.5	1.350	1.650	11	13	1.5	15	20	4.23	106.9	142.6	249.5
PIER 8	EXP.	9	14	19	0.3125	0.5	4	2.73	1.5	1.441	1.559	11	13	1.5	15	20	4.23	106.9	142.6	249.5
PIER 9	EXP.	9	14	19	0.3125	0.5	4	2.73	1.5	1.500	1.500	11	13	1.5	15	20	4.23	106.9	142.6	249.5
FORWARD ABUTMENT	EXP.	9	14	14	0.3125	0.5	7	4.54	1.5	1.658	1.342	15	15	1.5	15	15	6.04	75.6	76.3	152.0

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ELEVATION

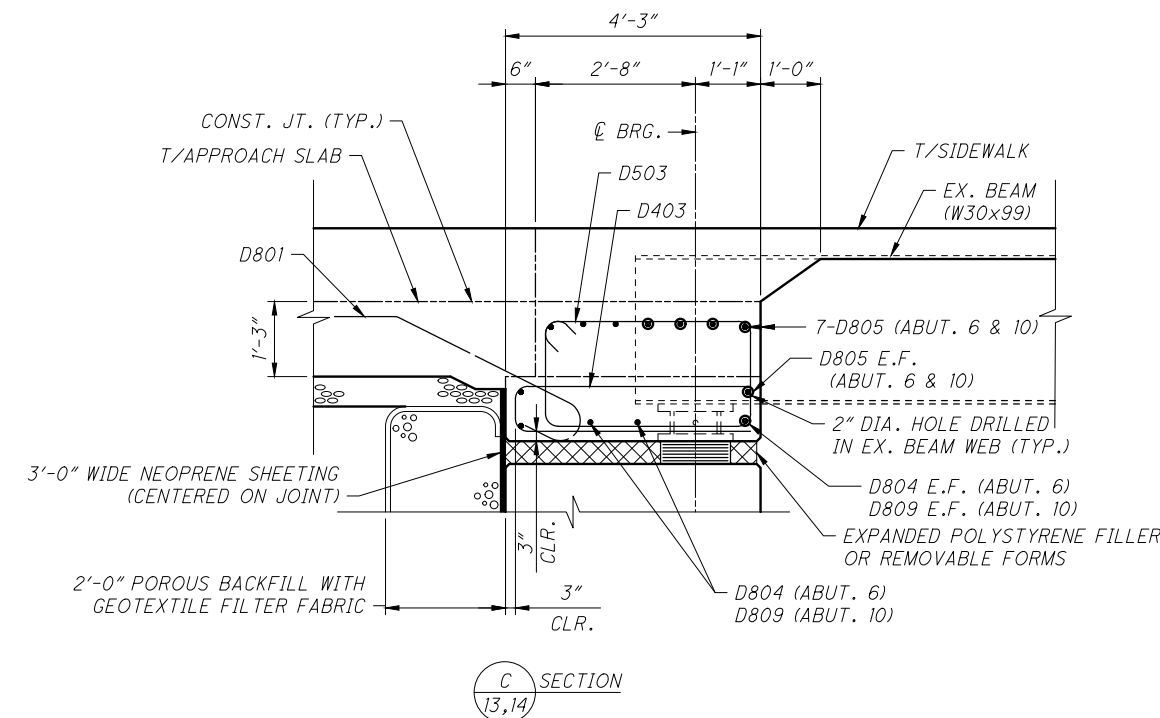
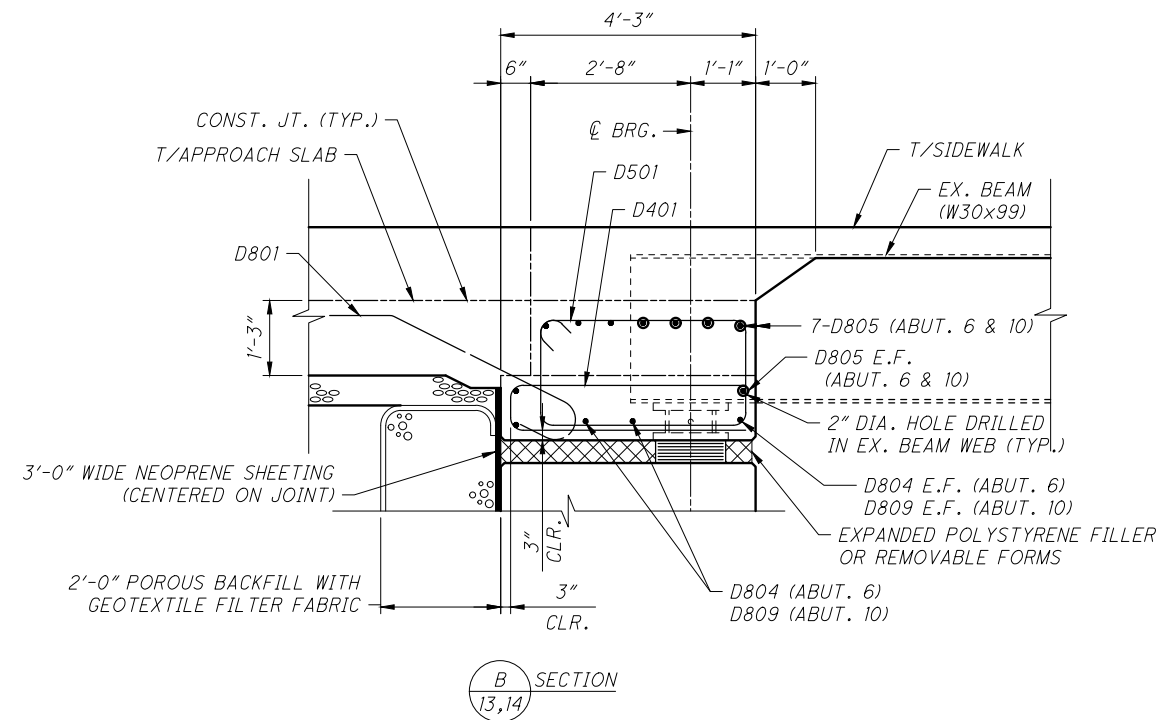
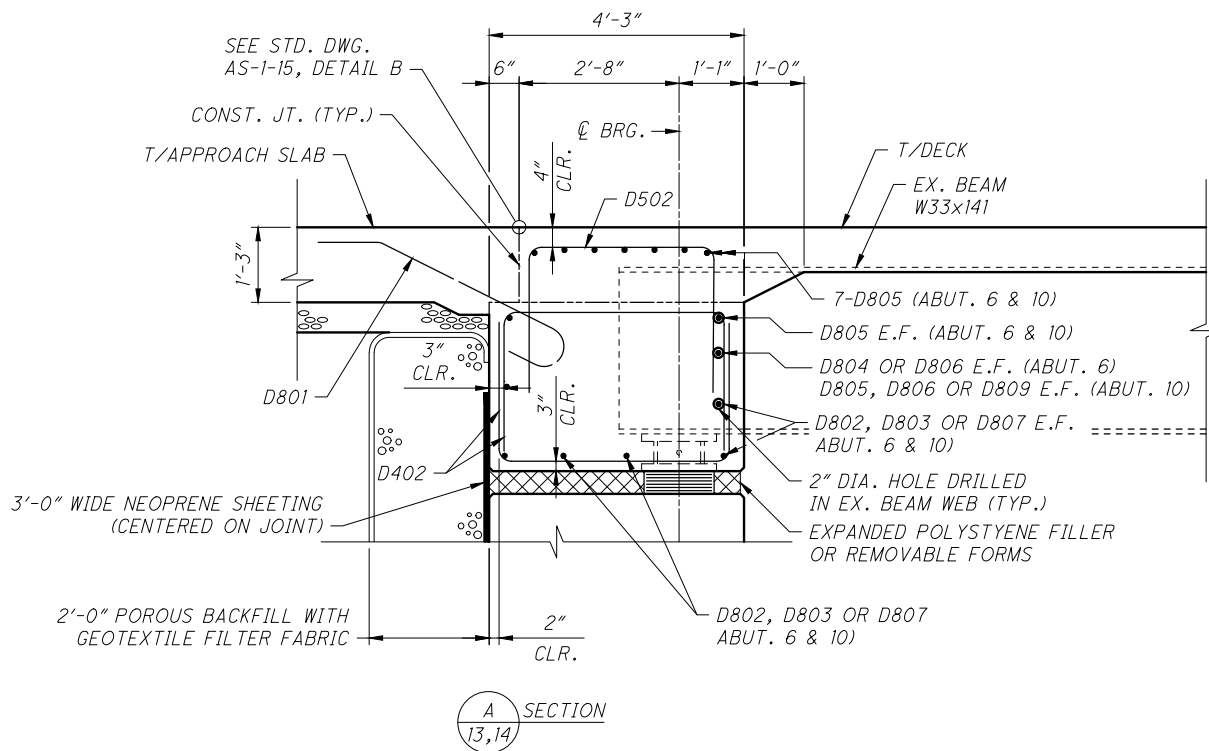
NOTES:

- FOR END DIAPHRAGM REINFORCING LIST, SEE SHEET 27/29.
- ALL REBAR CLEARANCE MEASURED TO THE FACE OF CONCRETE SHALL BE 3" UNLESS NOTED OTHERWISE.
- PLACE VERTICAL BARS IN END DIAPHRAGM PARALLEL TO BEAMS UNLESS NOTED OTHERWISE. DIMENSIONS GIVEN IN THIS PLAN SHALL BE MEASURED ALONG THE CENTERLINE OF BEARING.
- PER BDM 702.4.2-1, PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS OF AN INDIVIDUAL PHASE WITH THE DECK CONCRETE OR AT LEAST 48 HOURS BEFORE PLACEMENT OF THE DECK CONCRETE. IF PLACED SEPARATELY, LOCATE A HORIZONTAL CONSTRUCTION JOINT IN THE DIAPHRAGM AS SHOWN ON SICD-1-21, SHEET 3 OF 7 AND PLACE REMAINING DIAPHRAGM CONCRETE WITH THE DECK.
- FOR ADDITIONAL DETAILS AND NOTES NOT SHOWN, REFER TO STANDARD DRAWINGS AS-1-15, SICD-1-21 AND SICD-2-14.
- THE CONTRACTOR SHALL EXERCISE CAUTION IN MAINTAINING THE EXISTING 4" I.D. TELECOM UTILITIES RUNNING THRU THE END DIAPHRAGM. EXTEND THE EXISTING UTILITY SLEEVES TO THE FACE OF THE PROPOSED DIAPHRAGM BY PROVIDING NEW SPLIT SLEEVES, TAPE SPLIT SLEEVE PRIOR TO PLACING DIAPHRAGM CONCRETE. THE INTENT OF THE REHABILITATION IS TO ISOLATE THE UTILITY SLEEVES FROM LONGITUDINAL DIAPHRAGM MOVEMENT.
- MINIMUM REQUIRED LAP LENGTHS ARE AS FOLLOWS:
NO. 4 = 1'-11"
NO. 5 = 2'-5"
NO. 8 = 5'-4"
- ELEVATIONS ARE GIVEN AT CENTERLINE OF BEARING.



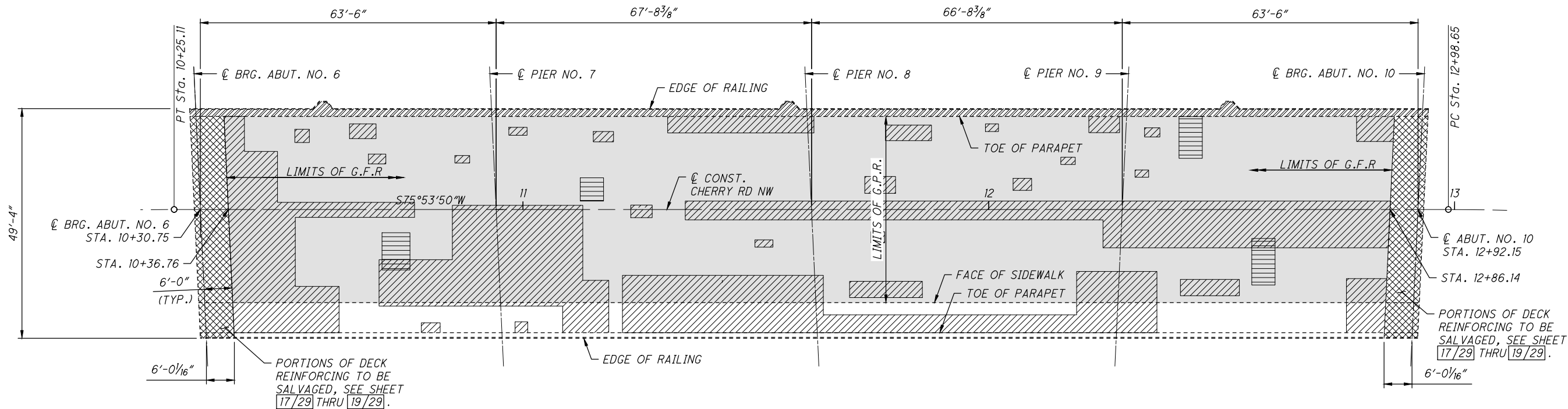
1. FOR NOTES, SEE SHEET 13/29.

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NOTE
1. FOR NOTES, SEE SHEET 13/29.

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DECK AND PARAPET REMOVAL AND DECK PATCHING PLAN

LEGEND:



- BOTTOM OF DECK REGION CONTAINING UNSOUND CONCRETE TO BE PARTIAL DEPTH PATCHED PER CMS ITEM 843 - PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR, AS PER PLAN. SEE NOTE 1. SEAL THE PATCH MATERIAL WITH FRP WRAP/COVER IN ACCORDANCE WITH PN 519 - COMPOSITE FIBER WRAP SYSTEM.



- TOP OF DECK REGION CONTAINING UNSOUND CONCRETE TO BE PARTIAL DEPTH PATCHED PER ITEM SPECIAL - PATCHING CONCRETE BRIDGE DECKS, TYPE A. SEE NOTE 1.



- LIMITS OF DECK AND JOINT REMOVAL. REMOVAL SHALL BE PER CMS ITEM 202 - PORTIONS OF STRUCTURE REMOVED OVER 20 FOOT SPAN.



- LIMITS OF GRAVITY FED RESIN.



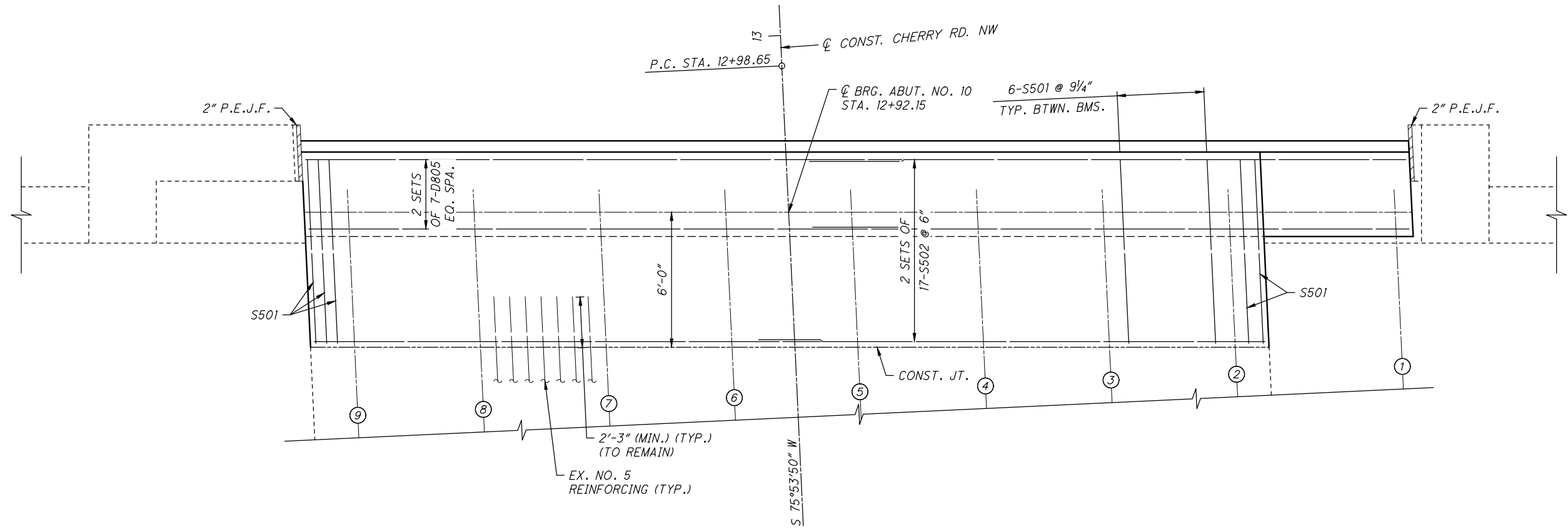
- LIMITS OF PARAPET REMOVAL. REMOVAL SHALL BE CMS ITEM 202 - PORTIONS OF STRUCTURE REMOVED OVER 20 FOOT SPAN.

NOTES:

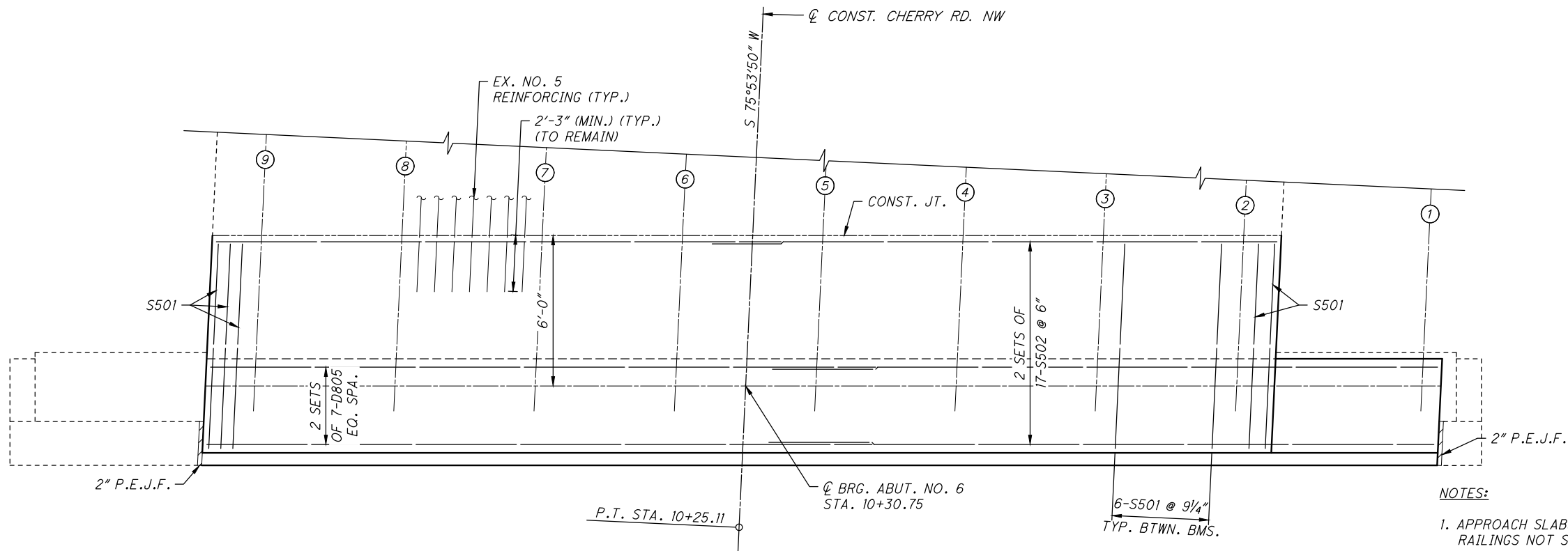
- HATCHED REGIONS DEPICTING UNSOUND CONCRETE ARE SHOWN FOR INFORMATIONAL PURPOSES. DECK TOP PATCHING AREAS SHALL BE DETERMINED USING CONCRETE SOUNDING DURING CONSTRUCTION. SOUND LOCATE, AND MARK OFF ANY DISINTEGRATED CONCRETE TO THE SATISFACTION OF THE FIELD ENGINEER. SOUND DECK TOP CONCRETE PER ODOT PROPOSAL NOTE 512. APPROXIMATE TOTAL DECK TOP PATCHING PER ITEM SPECIAL - PATCHING CONCRETE BRIDGE DECKS, TYPE A, TOTALS 140 SY. APPROXIMATE TOTAL DECK BOTTOM PATCHING PER ITEM 843 - PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR, AS PER PLAN TOTALS 168 SF. THESE QUANTITIES HAVE BEEN CARRIED THROUGH TO THE ESTIMATED QUANTITIES SHEET FOR BIDDING PURPOSES. PAYMENT SHALL BE MADE PER THE ACTUAL APPROVED AND INSTALLED QUANTITIES. NO FULL DEPTH DECK PATCHING HAS BEEN IDENTIFIED/QUANTIFIED HEREIN. NOTIFY THE ENGINEER FOR FURTHER DIRECTION IF THE NEED FOR FULL DEPTH PATCHING IS IDENTIFIED.
- THE PARAPET SHALL BE REMOVED USING FULL DEPTH HORIZONTAL CUTS FOR THE REMOVAL LENGTH. NO REINFORCING WILL BE SALVAGED EXCEPT AT LIGHT PILASTERS. AT THE LIGHT PILASTERS, THE SAW CUT SHALL BE 6 INCH MINIMUM ABOVE THE DECK AND VERTICAL REINFORCING BELOW THE CUT LINE WILL BE PRESERVED. REFER TO THE PILASTER SHEET 22/29 FOR MORE INFORMATION.



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PARTIAL DECK PLAN - BOTTOM
(AT ABUTMENT NO. 10)



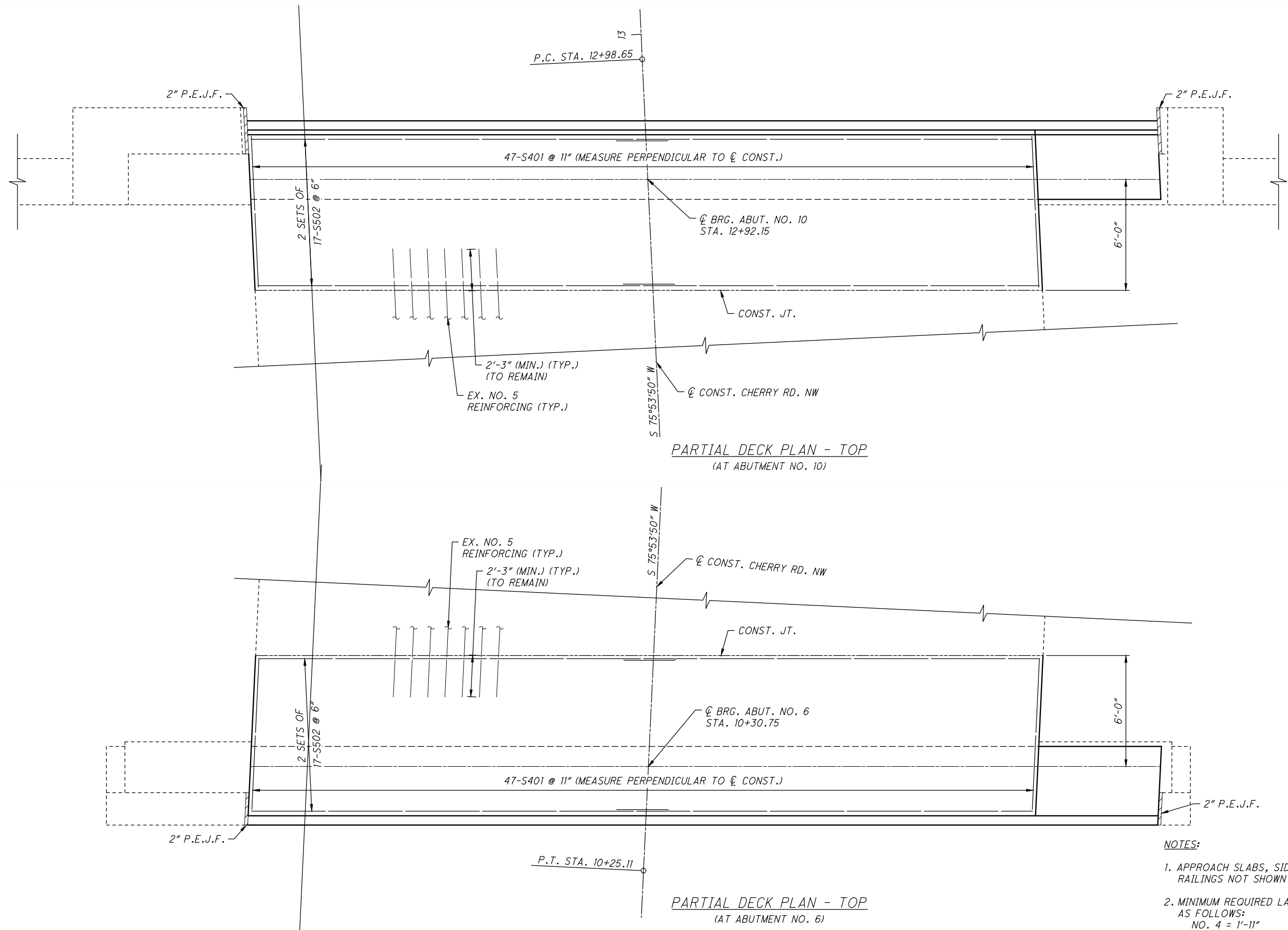
PARTIAL DECK PLAN - BOTTOM
(AT ABUTMENT NO. 6)

NOTES:

1. APPROACH SLABS, SIDEWALKS AND RAILINGS NOT SHOWN FOR CLARITY.
2. MINIMUM REQUIRED LAP LENGTHS ARE AS FOLLOWS:
NO. 5 = 2'-5"
NO. 8 = 4'-11"
3. FOR DECK REINFORCING, SEE SHEET 27/29.
4. NEW DECK SHALL MEET EXISTING DECK AT SAWCUT AND PROVIDED END DIAPHRAGM ELEVATIONS ON SHEET 13/29 AND 14/29.



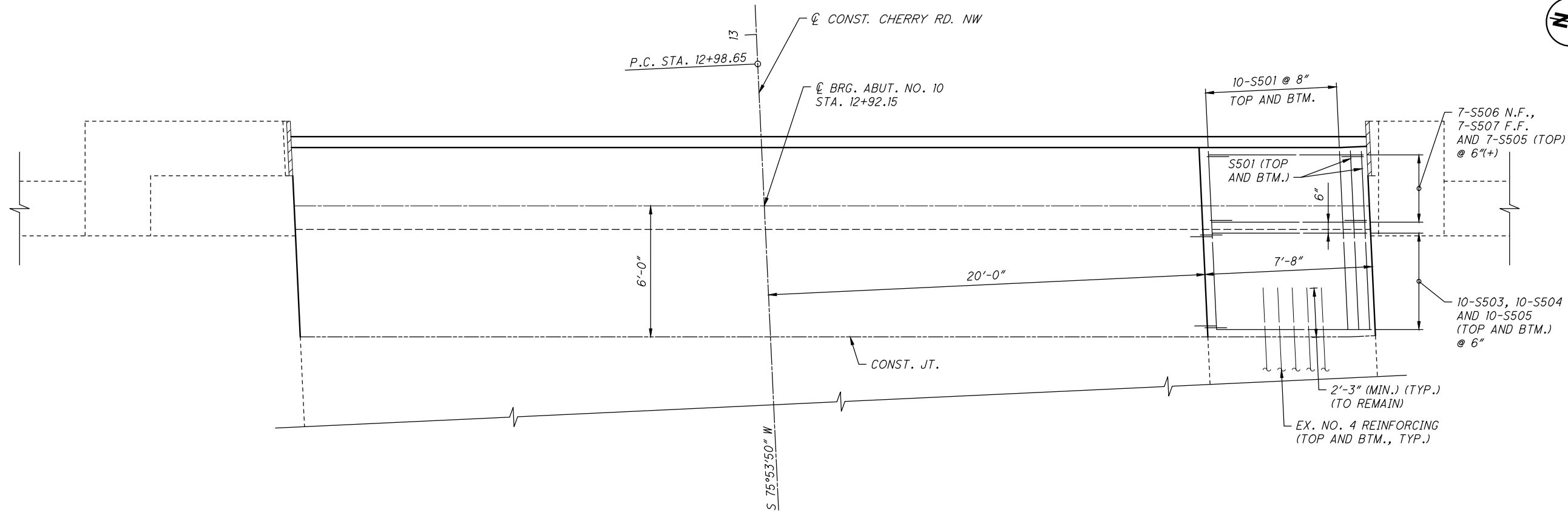
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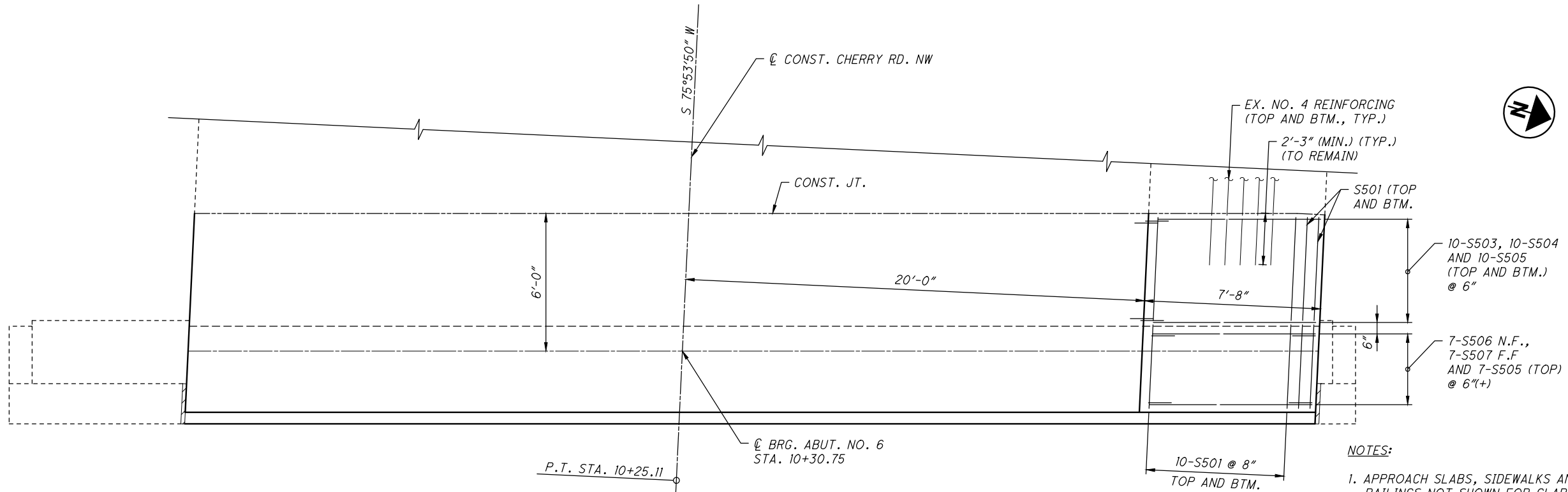
- NOTES:
1. APPROACH SLABS, SIDEWALKS AND RAILINGS NOT SHOWN FOR CLARITY.
 2. MINIMUM REQUIRED LAP LENGTHS ARE AS FOLLOWS:
NO. 4 = 1'-11"
NO. 5 = 2'-5"
 3. FOR DECK REINFORCING, SEE SHEET 27/29.
 4. NEW DECK SHALL MEET EXISTING DECK AT SAWCUT AND PROVIDED END DIAPHRAGM ELEVATIONS ON SHEET 13/29 AND 14/29.



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PARTIAL DECK PLAN - SIDEWALK
(AT ABUTMENT NO. 10)



PARTIAL DECK PLAN - SIDEWALK
(AT ABUTMENT NO. 6)

- NOTES:
1. APPROACH SLABS, SIDEWALKS AND RAILINGS NOT SHOWN FOR CLARITY.
 2. MINIMUM REQUIRED LAP LENGTHS ARE AS FOLLOWS:
NO. 4 = 1'-11"
NO. 5 = 2'-5"
 3. FOR DECK REINFORCING, SEE SHEET 27/29
 4. NEW DECK SHALL MEET EXISTING DECK AT SAWCUT AND PROVIDED END DIAPHRAGM ELEVATIONS ON SHEET 13/29 AND 14/29.



RAILING PLAN

A SECTION
20

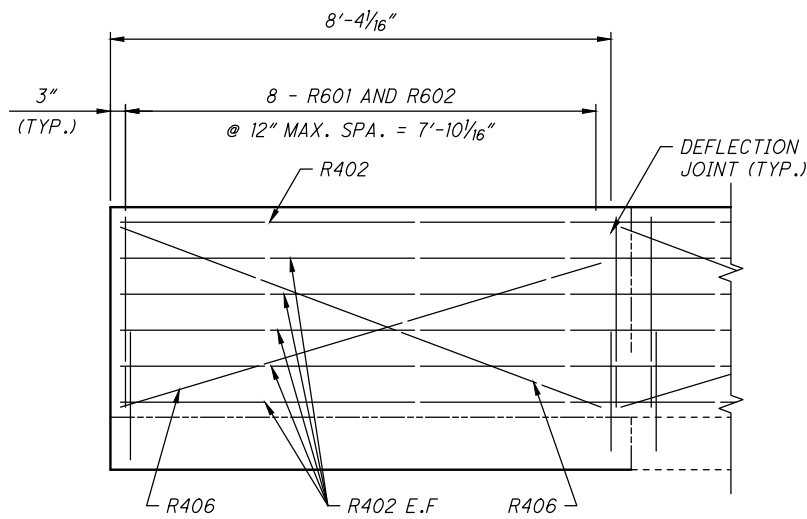
B SECTION
20

C SECTION

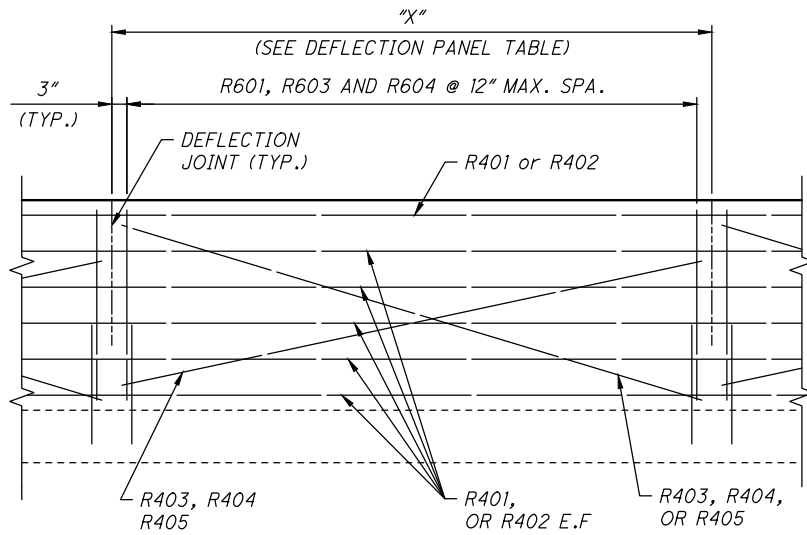
$\frac{D}{20}$ SECTION

1. FOR ADDITIONAL NOTES
AND DETAILS, SEE
SHEET 21/29.

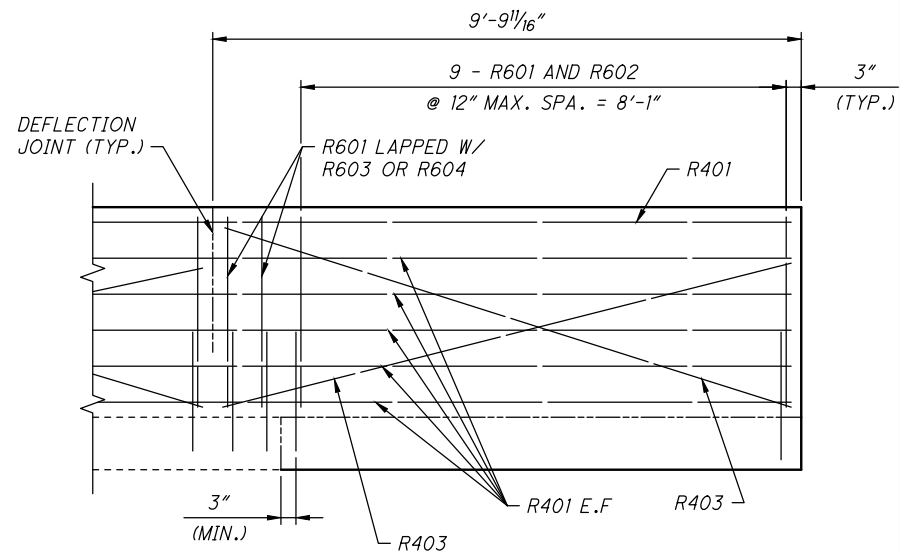
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PARTIAL RAILING ELEVATION
(LEFT RAIL ABUTMENT NO. 6)

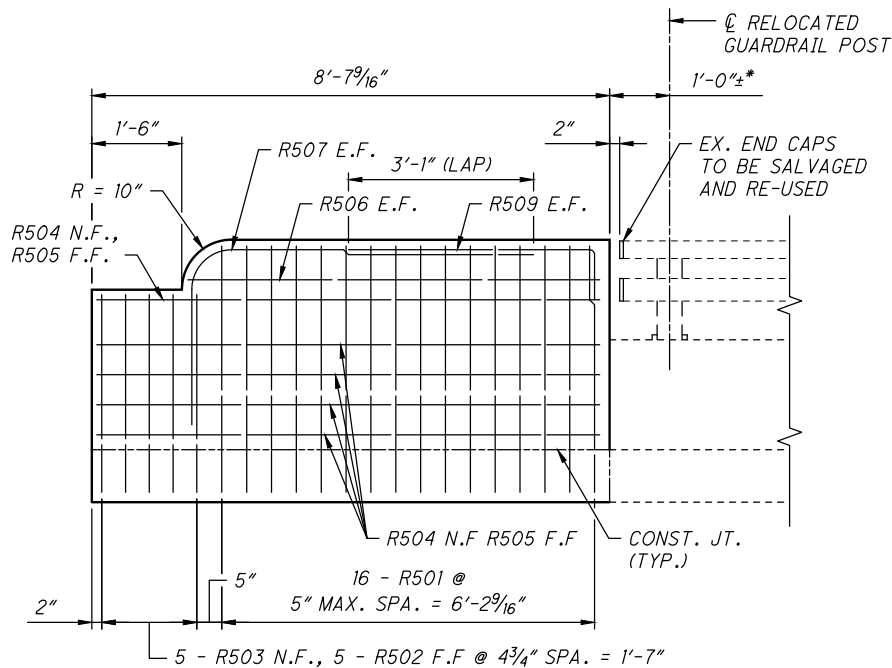


PARTIAL RAILING ELEVATION
(TYPICAL LEFT RAIL U.N.O.)

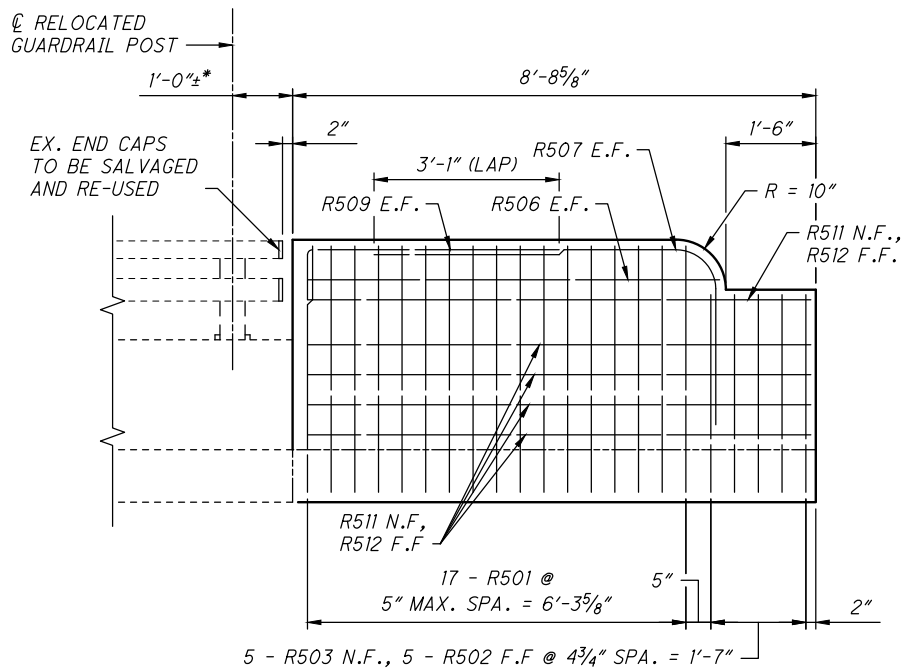


PARTIAL RAILING ELEVATION
(LEFT RAIL AT ABUTMENT NO. 10)

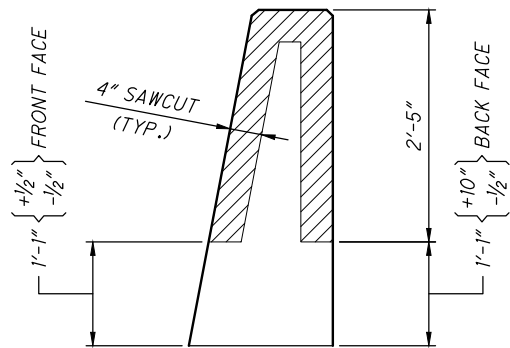
TENSION LAP SPLICE LENGTHS:	
#4	1'-11"
#5	2'-5"



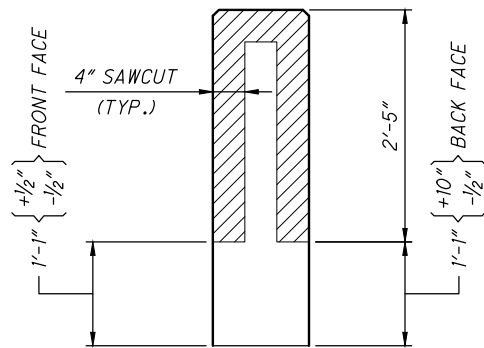
PARTIAL RAILING ELEVATION
(RIGHT RAIL ABUTMENT NO. 6)



PARTIAL RAILING ELEVATION
(RIGHT RAIL ABUTMENT NO. 10)



DEFLECTION JOINT
DETAIL - LEFT RAILING
(SECTION THROUGH SAWCUT
SAWCUT PERIMETER = 5'-9")

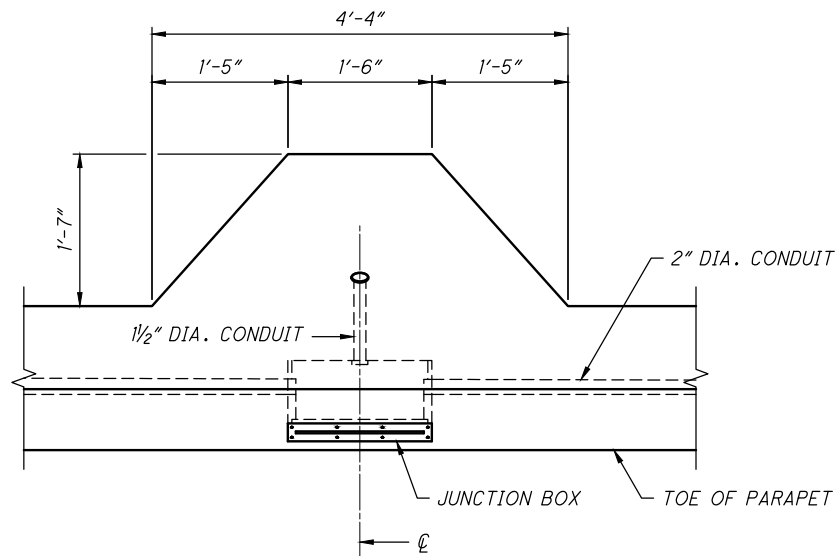


DEFLECTION JOINT
DETAIL - RIGHT RAILING
(SECTION THROUGH SAWCUT
SAWCUT PERIMETER = --)

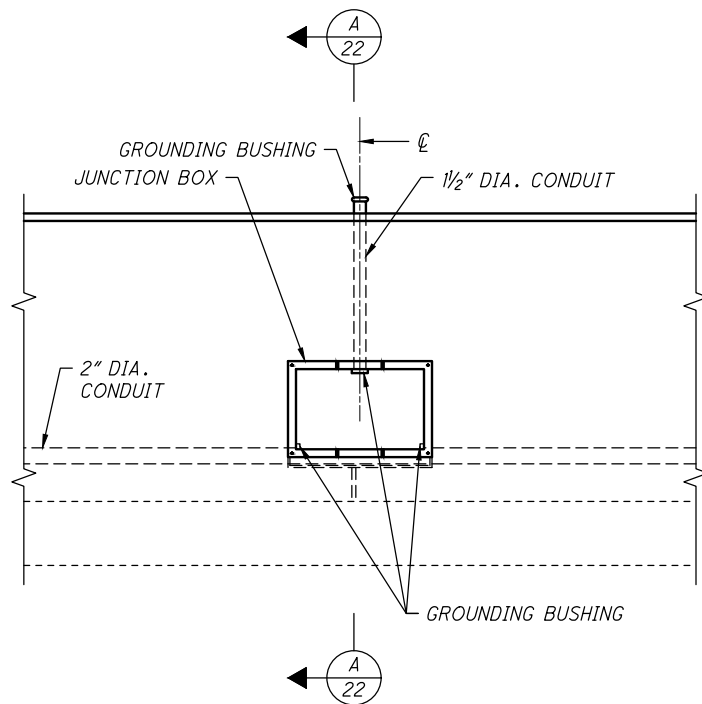
DEFLECTION PANEL TABLE			
No. OF PANELS	LENGTH "X"	No. OF BARS IN EA. PANEL "Y"	DIAGONAL STIFFENER BARS
12	10'-0"	11	R403
3	8'-4 1/16"	9	R406
9	9'-4 11/16"	10	R405
4	9'-9 11/16"	11	R404

NOTES:

- FOR ADDITIONAL INFORMATION AND DETAILS NOT SHOWN, REFER TO STANDARD DRAWINGS BR-2-15 AND SBR-1-20
- FOR DECK PLAN, SEE SHEET 17/29 TO 19/29.
- FOR TRANSVERSE SECTION, SEE SHEET 23/29.
- FOR REINFORCING STEEL LIST, SEE SHEET 28/29.
- USE GLASS FIBER REINFORCED POLYMER (GFRP) FOR ALL HORIZONTAL R401 AND R402 BARS AND STIFFENING BARS (R403, R404, R405, AND R406).
- SLIPFORMING OF PARAPET WALLS WILL NOT BE ALLOWED.

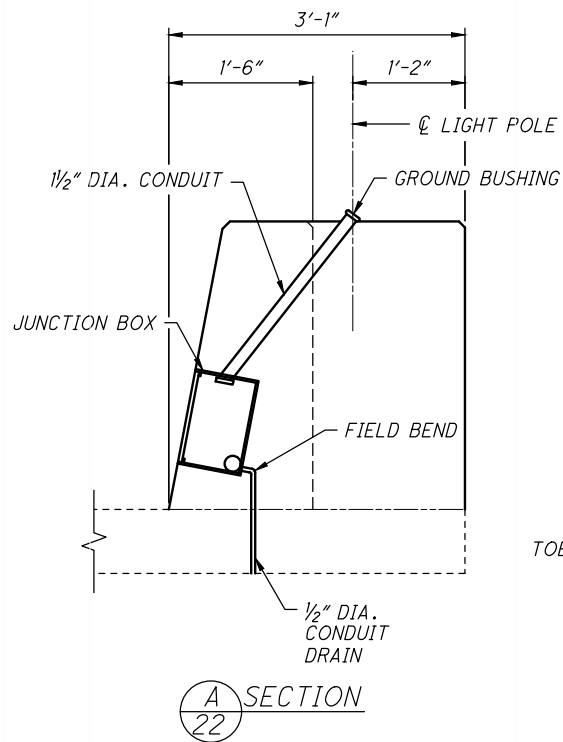


PLAN

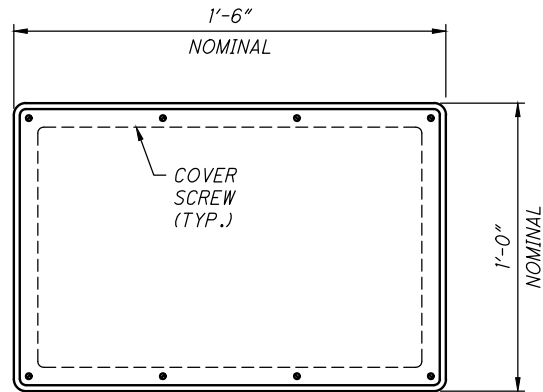


ELEVATION

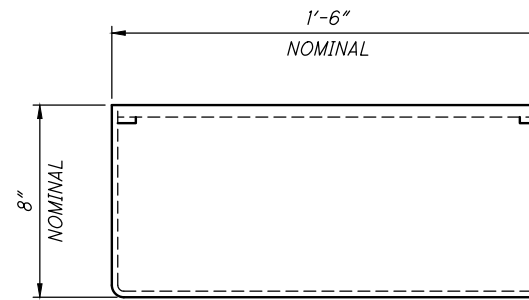
LIGHT POLE PILASTER DETAILS



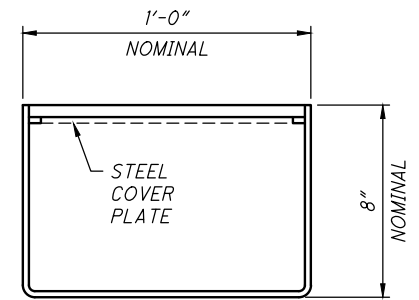
SECTION
A
22



PLAN

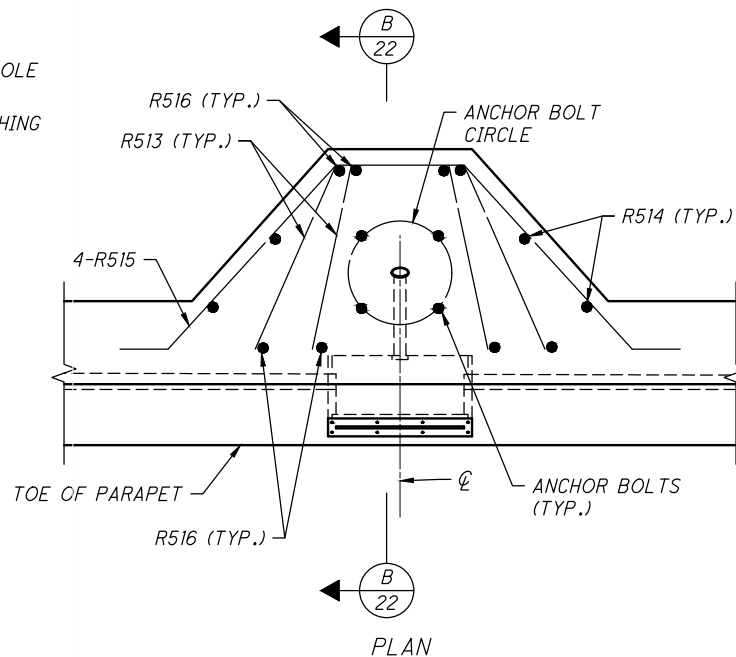


ELEVATION



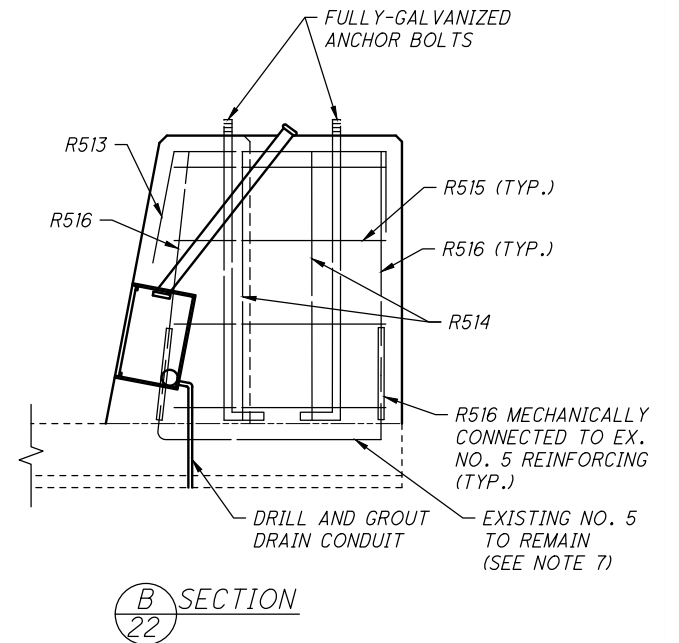
SECTION

JUNCTION BOX WITH STEEL COVER PLATE
(CONDUIT OPENINGS NOT SHOWN)



PLAN
B
22

LIGHT POLE PILASTER REINFORCEMENT DETAILS

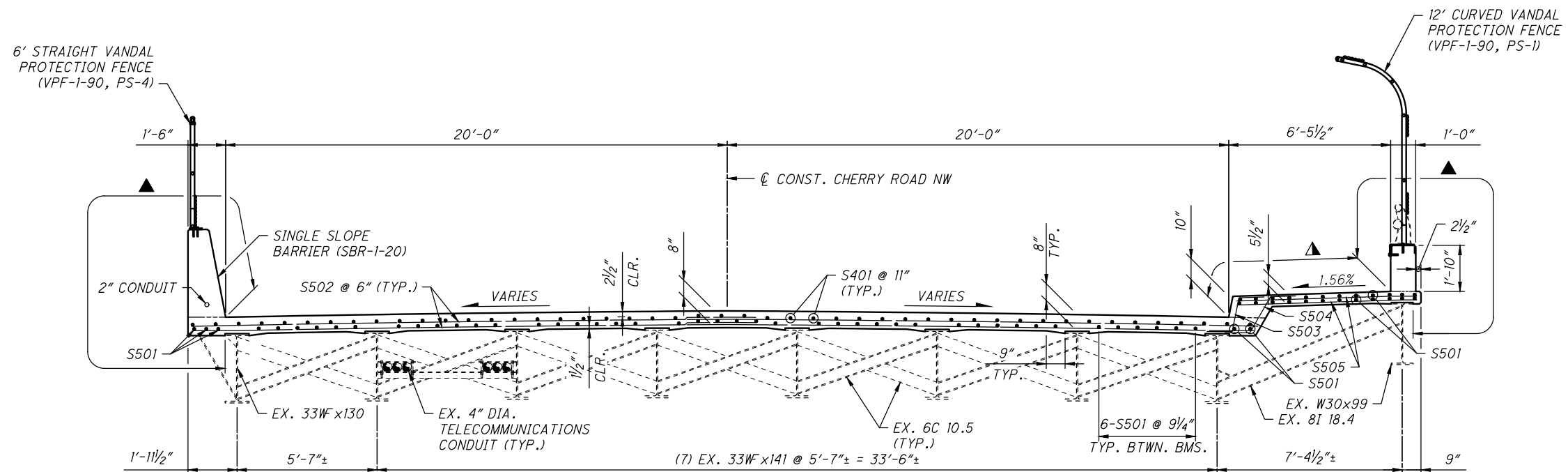
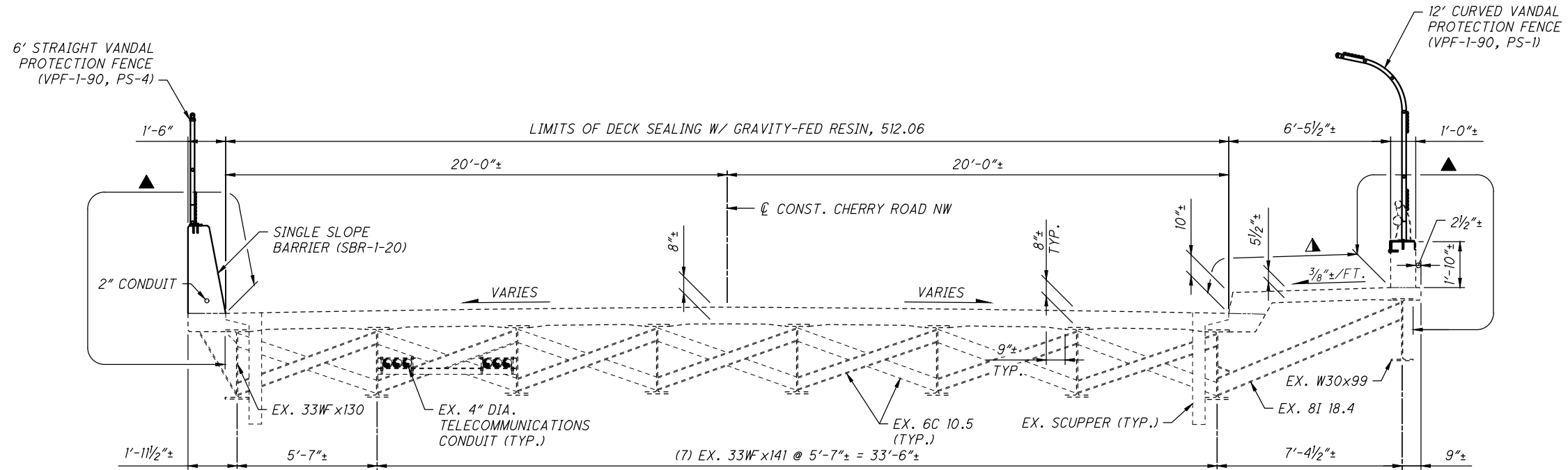


SECTION
B
22

NOTES:

- ALL CONDUITS SHALL CONFORM TO CMS 725.04.
- FOR ANCHOR BOLT DETAILS, SEE STANDARD CONSTRUCTION DRAWING HL-20.14.
- JUNCTION BOXES SHALL CONFORM TO CMS 725.10.
- LUBRICATE COVER SCREWS WITH ANTI-SEIZE COMPOUND OR GREASE.
- FOR LIGHT POLE PILASTER LOCATIONS, SEE RAILING PLAN SHEET 20/29
- FOR REINFORCING STEEL LIST, SEE SHEET 28/29
- EXISTING PILASTERS SHALL BE REMOVED USING A FULL DEPTH HORIZONTAL SAW CUT 6" MINIMUM ABOVE THE DECK. HAND CHIP CONCRETE BELOW THE SAW CUT TO EXPOSE EXISTING REINFORCEMENT. VERTICAL REINFORCING BELOW THE CUT LINE WILL BE PRESERVED. USE MECHANICAL CONNECTORS TO SPLICE EXISTING REINFORCING TO PROPOSED REINFORCING AS SHOWN HEREIN.

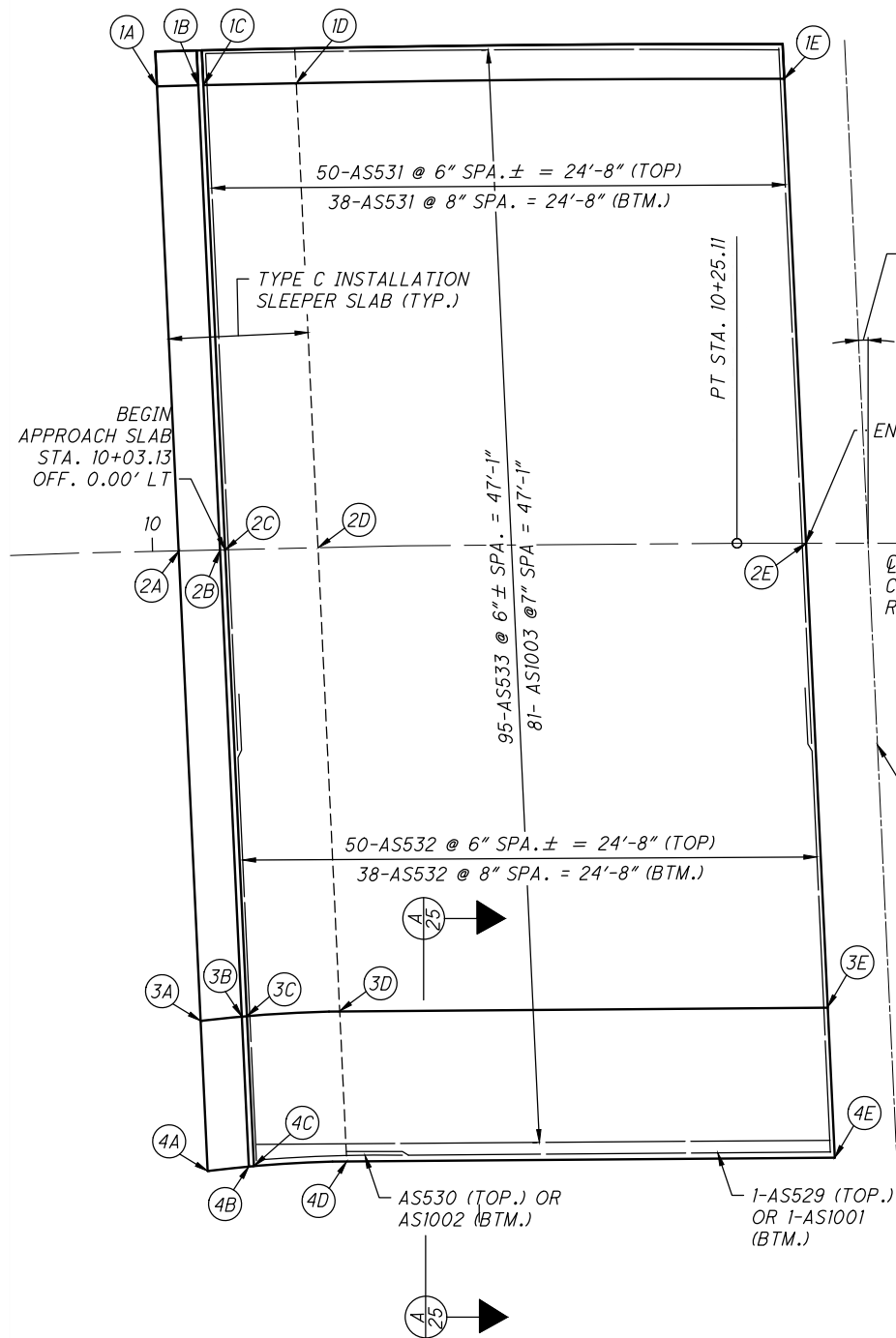
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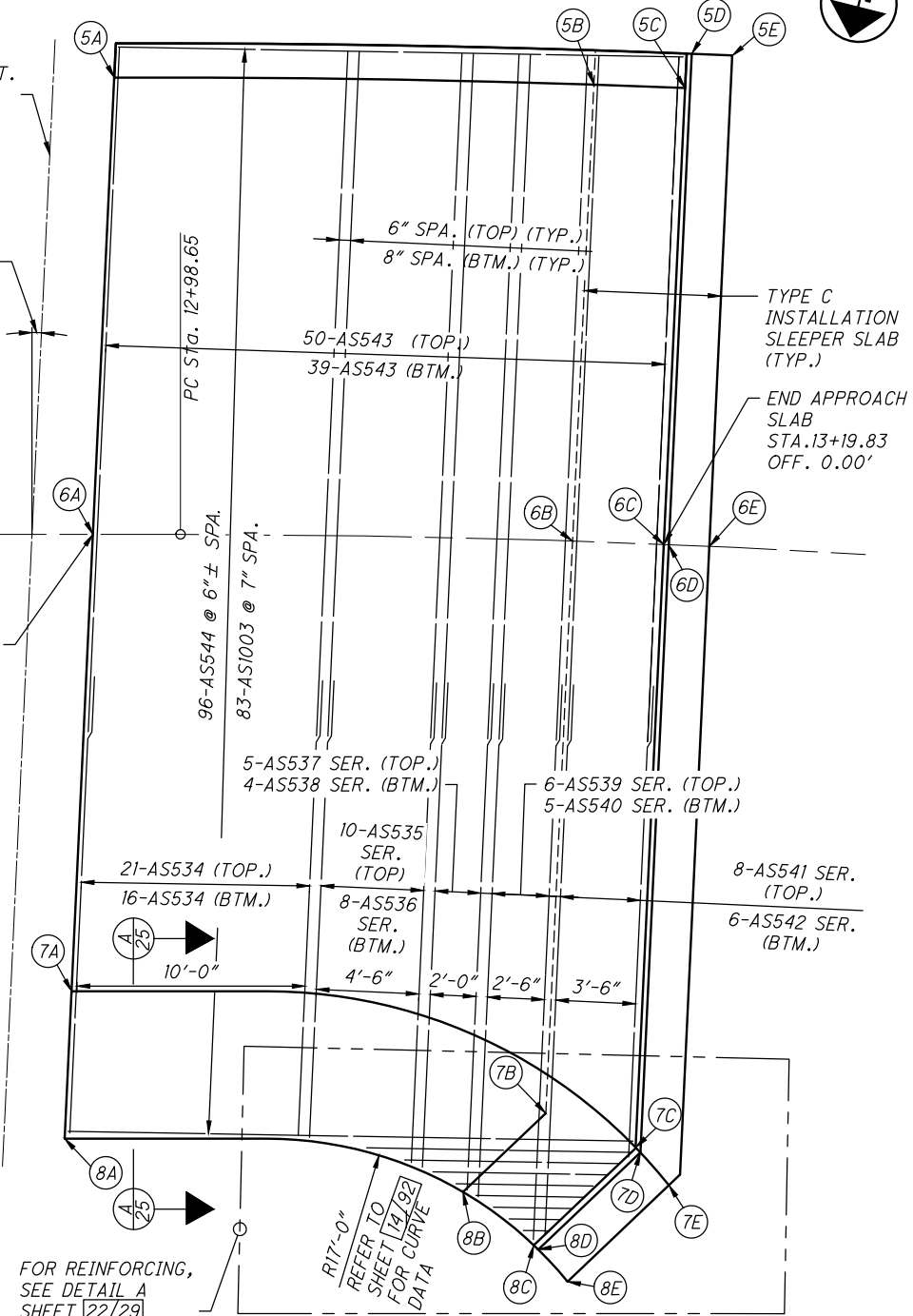
LEGEND:

- ▲ - LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES (NON-EPOXY)
- ▲ - LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

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REAR APPROACH SLAB PLAN



FORWARD APPROACH SLAB PLAN
(FOR SIDEWALK REINFORCING, REFER TO SHEET 25/29).

NOTES:

- FOR PARTIAL DECK SLAB PLAN AND PARTIAL SIDEWALK PLAN, SEE SHEET 17/29 THRU 19/29.
- ALL ELEVATIONS SHOWN ARE FINISHED GRADE ELEVATIONS ON APPROACH SLAB AND NOT SIDEWALK UNLESS OTHERWISE NOTED.
- FOR REINFORCING SCHEDULE, SEE SHEET 28/29.
- FOR ADDITIONAL APPROACH SLAB DETAILS NOT SHOWN, SLEEPER SLAB INSTALLATION, SEE STANDARD DRAWINGS AS-1-15 AND AS-2-15.
- THE COST OF SIDEWALK AND SIDEWALK REINFORCING ON THE APPROACH SLABS AND ALL REINFORCING FOR THE APPROACH SLABS IS TO BE INCLUDED FOR PAYMENT WITH ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN.

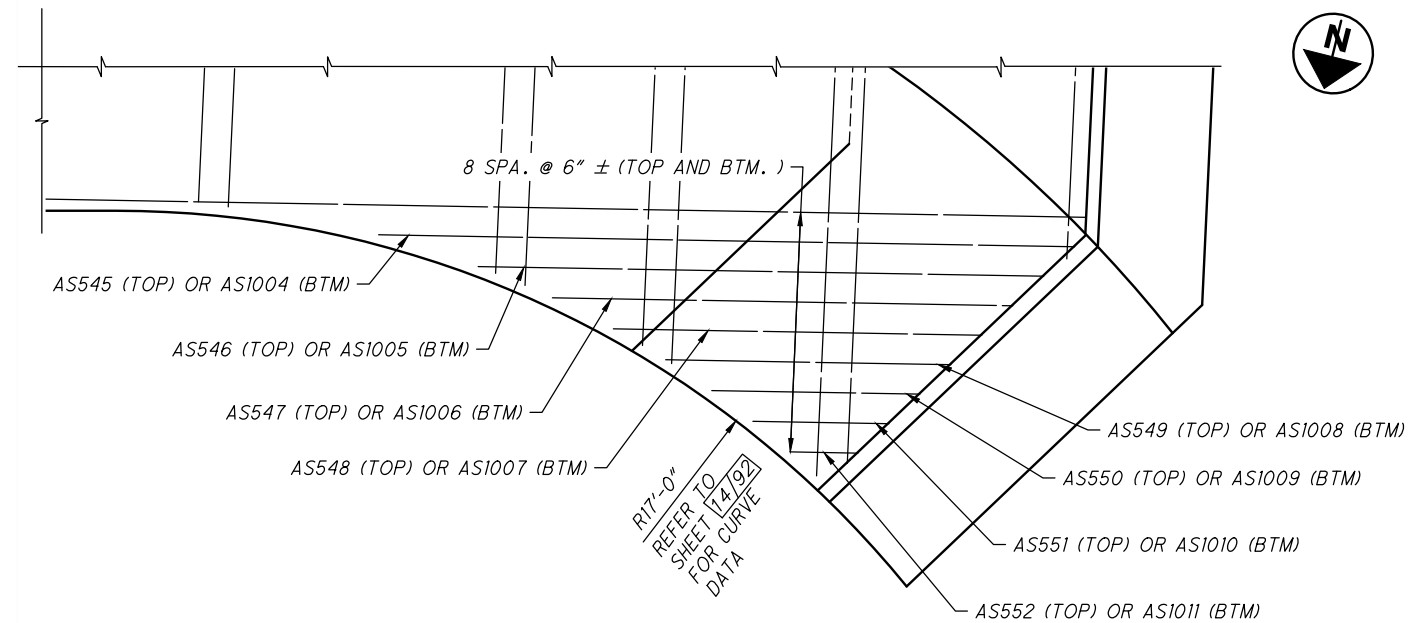
NOTES:

- ALL STATIONS AND ELEVATIONS LISTED ALONG THE SIDEWALK ARE AT THE TOE OF THE SIDEWALK CURB.
- ALL OFFSETS ARE GIVEN FROM @ CONST. CHERRY RD NW.
- CONTRACTOR SHALL EXTEND SIDEWALK REINFORCING OVER THE SLEEPER SLAB BACKWALL.
- MINIMUM REQUIRED LAP LENGTHS ARE AS FOLLOWS:
NO. 5 = 2'-5"
NO. 10 = 8'-11"

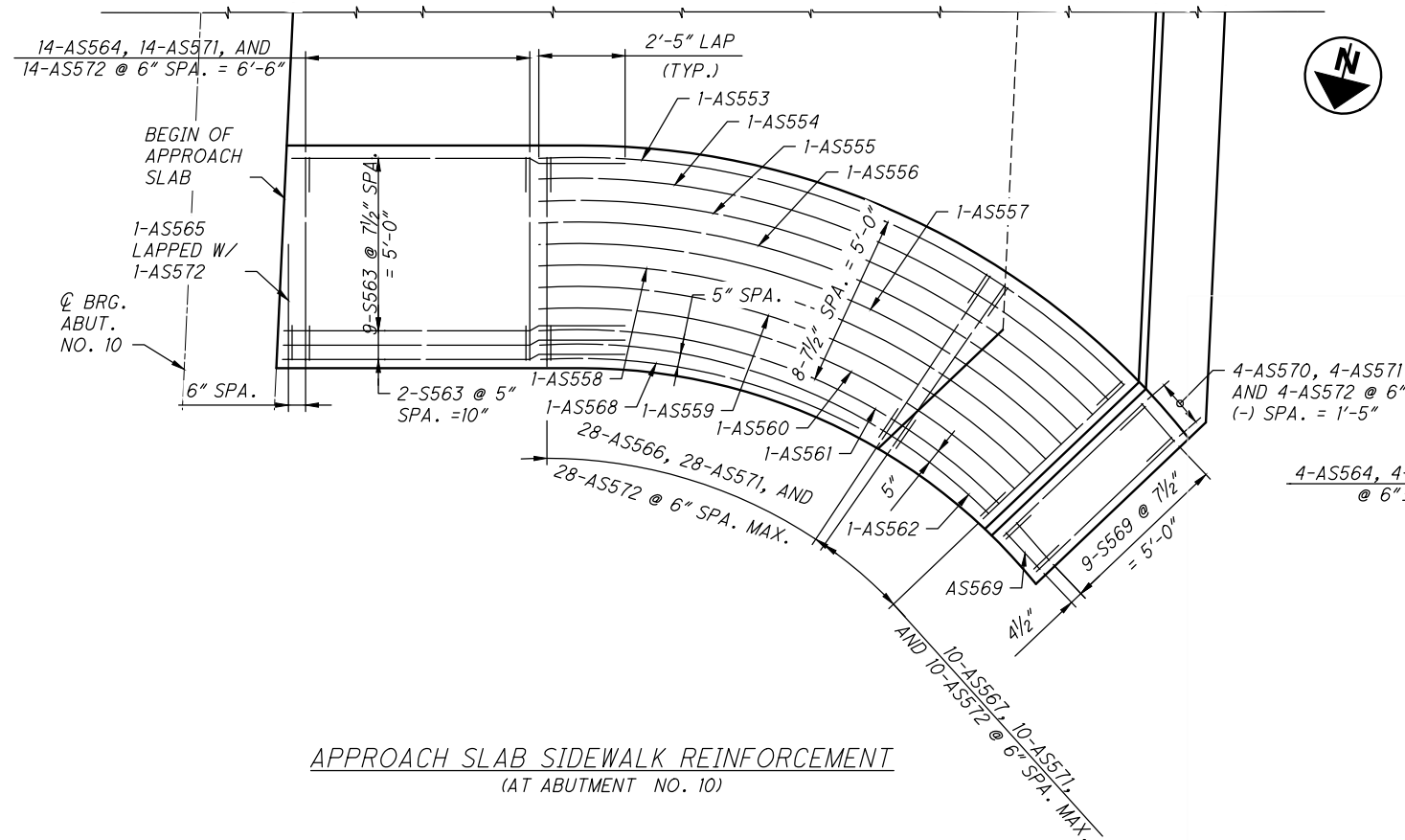
REAR APPROACH SLAB			
LOCATION	STATION	OFFSET	ELEVATION
1A	10+00.70	20.00	962.88
1B (TOP)	10+02.45	20.00	962.96
1B (BOTTOM)	10+02.45	20.00	961.71*
1C	10+02.66	20.00	962.97
1D	10+06.58	20.00	961.91*
1E	10+27.15	20.00	964.14
2A	10+01.12	0.00	963.21
2B (TOP)	10+02.91	0.00	963.30
2B (BOTTOM)	10+02.91	0.00	962.05*
2C	10+03.13	0.00	963.31
2D	10+07.13	0.00	962.25*
2E	10+28.08	0.00	964.49
3A	10+01.57	20.28	962.92
3B (TOP)	10+03.39	20.14	963.01
3B (BOTTOM)	10+03.39	20.14	961.76*
3C	10+03.61	20.12	963.02
3D	10+07.70	20.00	961.96*
3E	10+29.02	20.00	964.23
4A	10+01.72	26.75	962.82
4B (TOP)	10+02.97	26.60	962.89
4B (BOTTOM)	10+02.97	26.60	961.64*
4C	10+03.55	26.59	962.91
4D	10+07.88	26.44	961.87*
4E	10+29.32	26.46	964.14

FORWARD APPROACH SLAB			
LOCATION	STATION	OFFSET	ELEVATION
5A	12+95.75	20.00	968.76
5B	13+16.09	20.00	966.75*
5C	13+19.95	20.00	967.85
5D (TOP)	13+20.16	21.50	967.82
5D (BOTTOM)	13+20.16	21.50	966.57*
5E	13+21.87	21.50	967.76
6A	12+94.82	0.00	969.11
6B	13+15.83	0.00	967.07*
6C	13+19.83	0.00	968.17
6D (TOP)	13+20.05	0.00	968.16
6D (BOTTOM)	13+20.05	0.00	966.91*
6E	13+21.83	0.00	968.10
7A	12+93.88	20.00	968.83
7B	13+15.47	23.39	966.61*
7C	13+19.66	26.47	967.58
7D (TOP)	13+19.89	26.65	967.56
7D (BOTTOM)	13+19.89	26.65	966.31*
7E	13+21.77	27.54	967.44
8A	12+93.58	26.46	968.74
8B	13+11.75	28.64	967.22*
8C	13+15.11	30.88	968.18
8D (TOP)	13+15.32	31.06	968.16
8D (BOTTOM)	13+15.32	31.06	966.91*
8E	13+16.74	32.42	967.99

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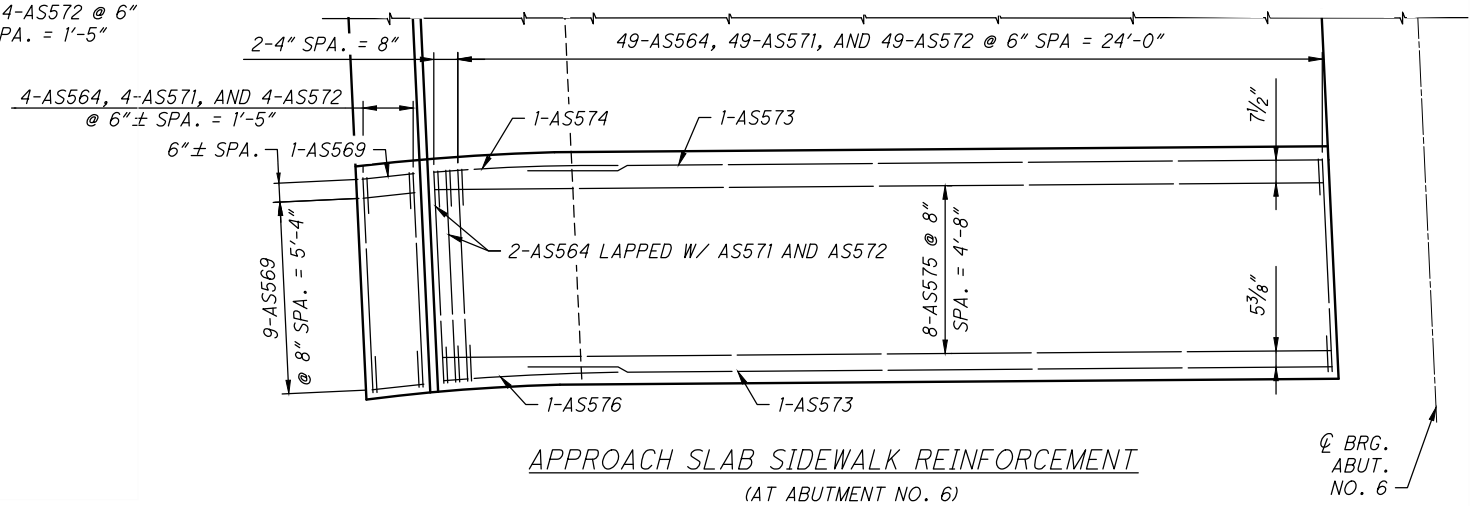
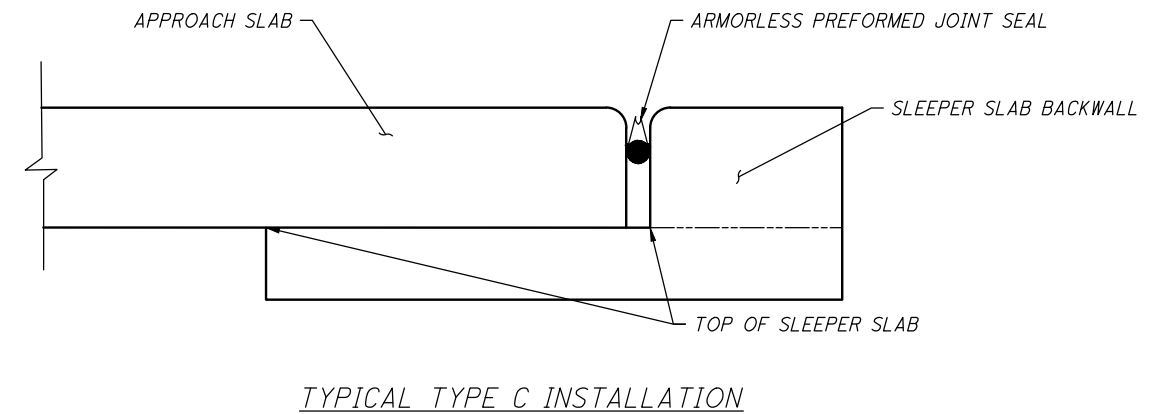
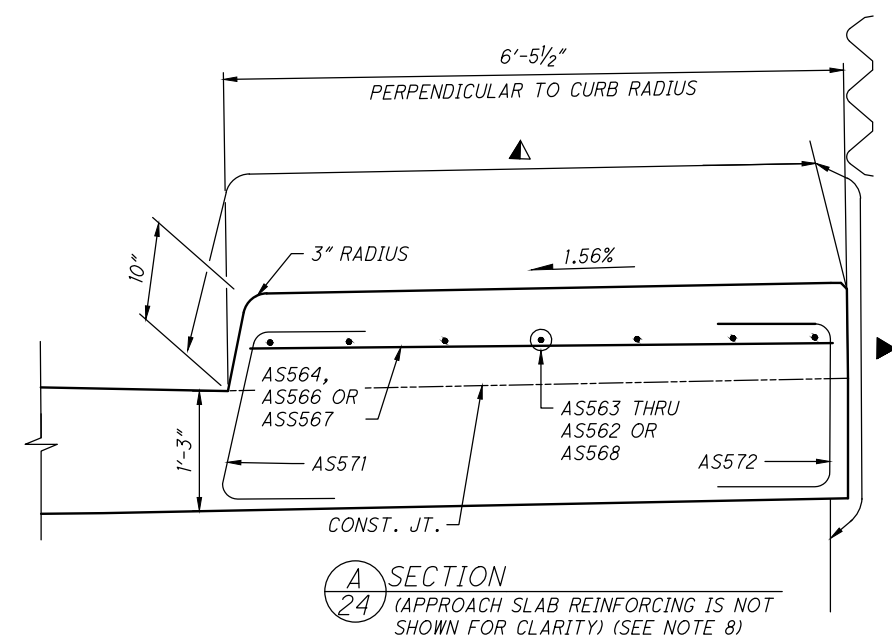
DETAIL A



APPROACH SLAB SIDEWALK REINFORCEMENT
(AT ABUTMENT NO. 10)

LEGEND:

- ▲ LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
- ▲ LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES (NON-EPOXY)
- * ELEVATIONS MEASURED AT TOP OF THE SLEEPER SLAB

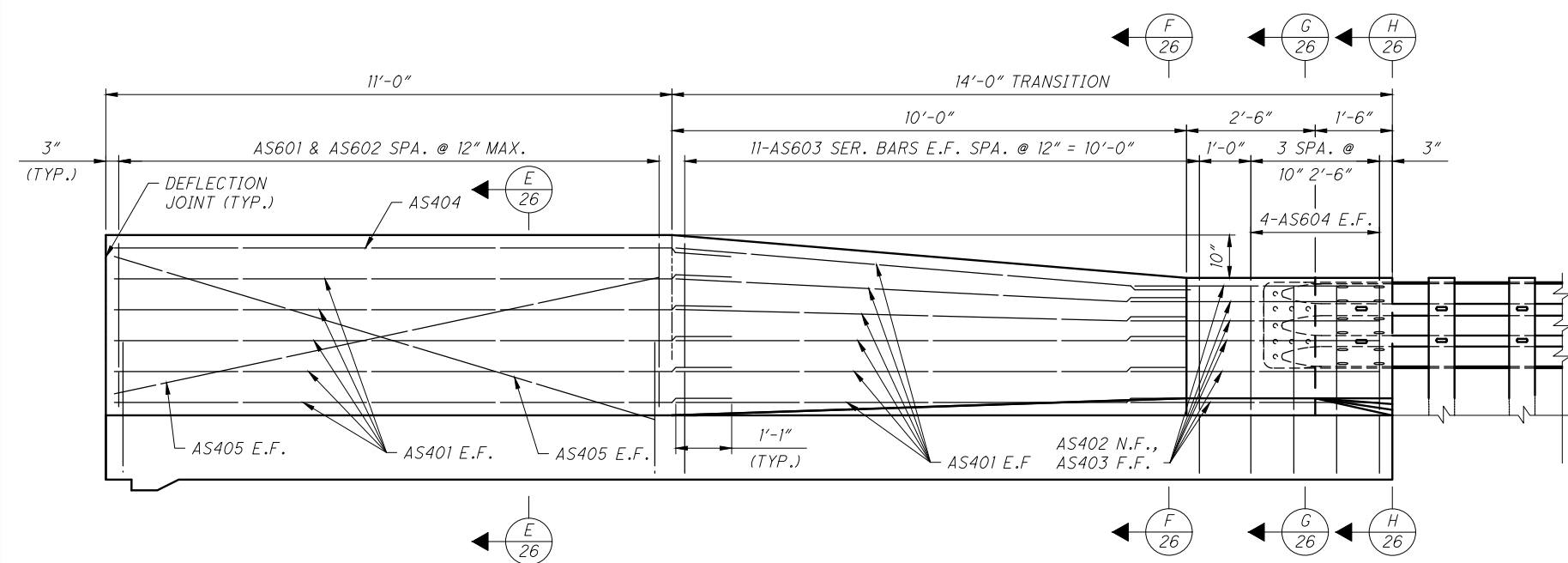


APPROACH SLAB SIDEWALK REINFORCEMENT
(AT ABUTMENT NO. 6)

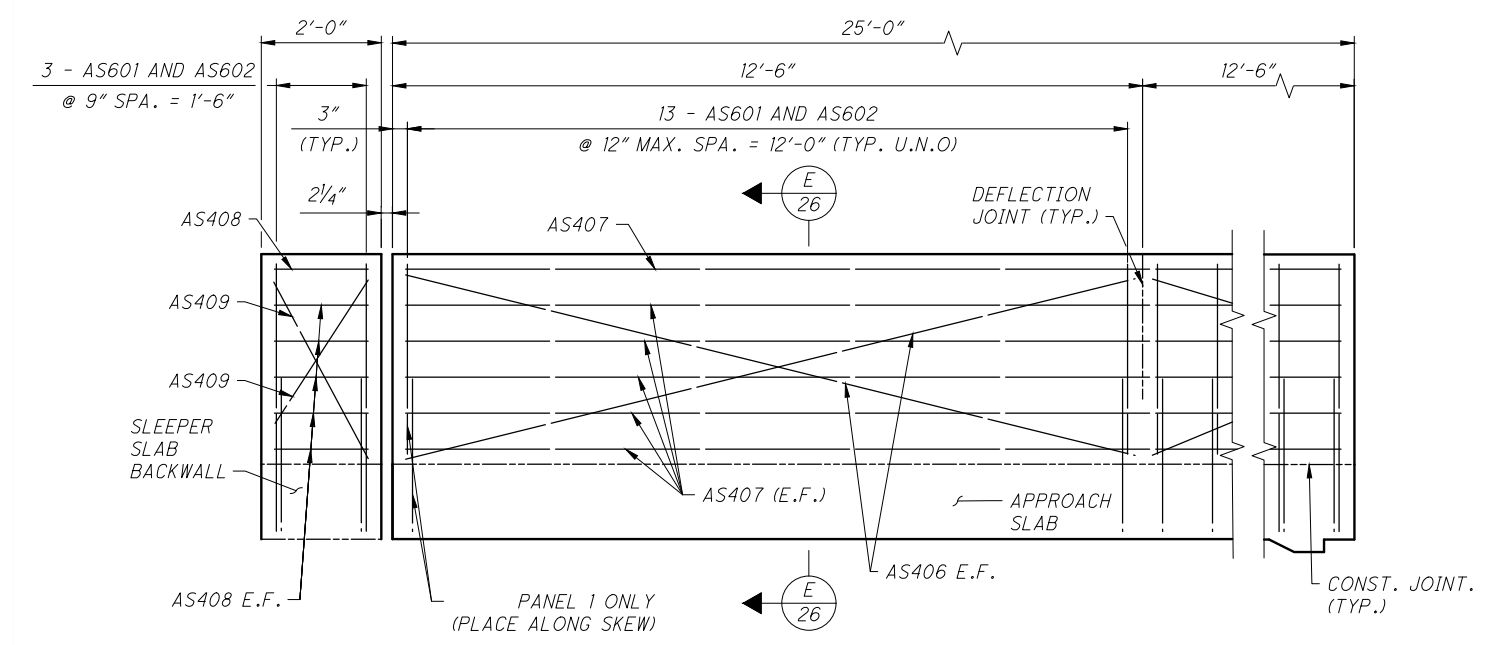
NOTES:

1. FOR ADDITIONAL NOTES AND ELEVATION TABLES, SEE SHEET 24/29.

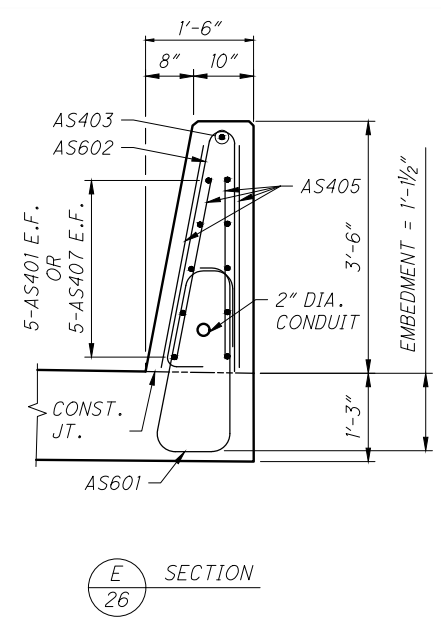
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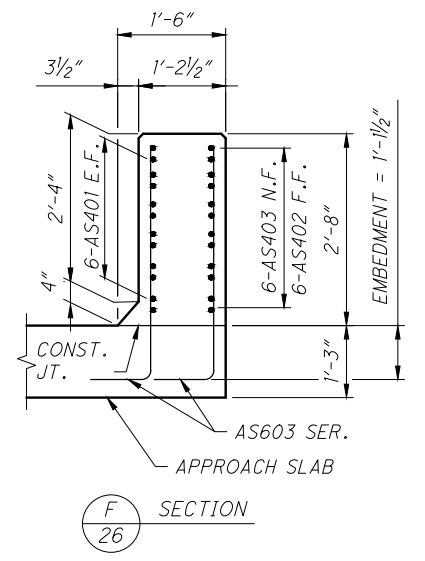
APPROACH SLAB BARRIER ELEVATION
(LEFT RAIL ABUTMENT NO. 10)



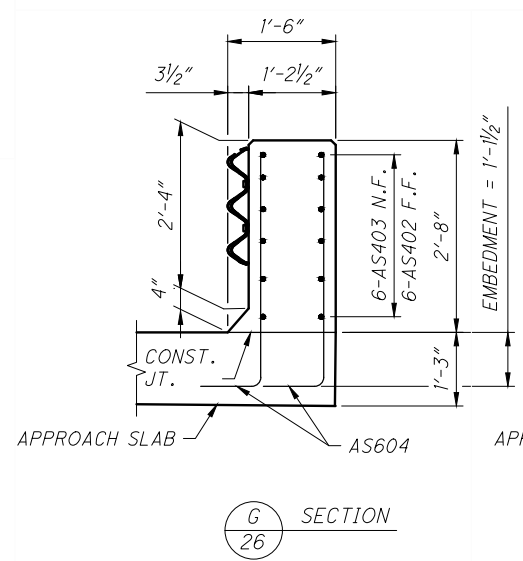
APPROACH SLAB BARRIER ELEVATION
(LEFT RAIL ABUTMENT NO. 6)



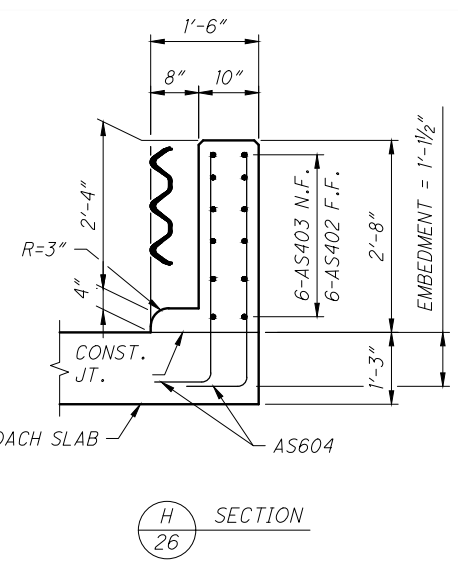
SECTION
E
26



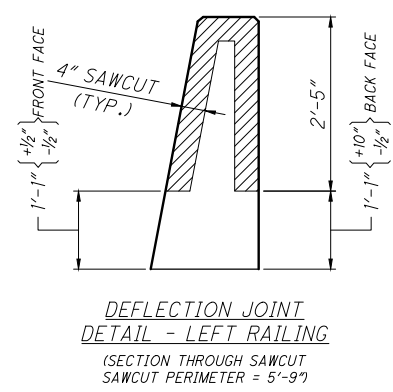
SECTION
F
26



SECTION
G
26



SECTION
H
26



DEFLECTION JOINT
DETAIL - LEFT RAILING
(SECTION THROUGH SAWCUT
SAWCUT PERIMETER = 5'-9")

NOTES:

1. FOR ADDITIONAL NOTES AND ELEVATION TABLES, SEE SHEET 24/29.

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MARK	NUMBER			LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS						
	ABUTMENT		TOTAL				A	B	C	D	E	R	INC
	NO. 6	NO. 10											
ABUTMENTS													
A501	12		12	31'-0"	388	STR							
A502	4	4	8	5'-8"	47	2	1'-0"	3'-11"	1'-0"				
A503	8		8	3'-11"	33	STR							
A504	10		10	7'-5"	78	STR							
A505	4		4	8'-9"	37	1							
A506	2		2	7'-0"	15	STR							
A507	7		7	8'-2"	60	1	6'-7"	1'-9"					
A508	7		7	10'-11"	80	1	7'-2"	3'-11"					
A509		12	12	32'-6"	407	STR							
A510		6	6	10'-11"	69	2	4'-3"	2'-8"	4'-3"				
A511		6	6	10'-0"	63	1	9'-3"	0'-10"					
A512		6	6	9'-10"	62	1	9'-1"	0-10"					
A513		10	10	7'-5"	90	STR							
A514		4	4	9'-11"	42	1	8'-2"	1'-10"					
A515		2	2	8'-2"	18	STR							
A516		12	12	3'-11"	50	STR							
A601*	95		95	6'-8"	950	1	3'-11"	2'-11"					
A602*	12		2	8'-4"	151	1	3'-11"	4'-7"					
A603*		104	104	6'-5"	1,003	1	3'-11"	2'-8"					
A604*		18	18	7'-10"	212	1	3'-11"	4'-11"					
A605	10	10	20	13'-7"	408	3	2'-8"	3'-8"					
A801*	21		21	8'-5"	473	STR							
A802*		20	20	9'-5"	504	STR							
A803	14	14	28	13'-8"	1,022	5	2'-8"	3'-7"	2'-4"				
SUB-TOTAL					6,262								

* - DOWELED BARS INCLUDED IN BENDING SCHEDULE AND SHALL BE PAID FOR UNDER ITEM 509 - EPOXY COATED REINFORCING STEEL.
-INSTALLATION OF DOWELS SHALL BE PAID FOR UNDER ITEM 510 - DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT.

MARK	NUMBER			LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS						
	AT ABUTMENT		TOTAL				A	B	C	D	E	R	INC
	NO. 6	NO. 10											
END DIAPHRAGMS													
D401	6	7	13	8'-0"	70	2	3'-9"	0'-8"	3'-9"				
D402	64	64	128	8'-6"	727	2	2'-6"	3'-9"	2'-6"				
D403	6	6	12	8'-0"	64	2	3'-9"	0'-9"	3'-9"				
D404	4	4	8	3'-9"	20	STR							
D405	6	6	12	5'-9"	46	41	3'-9"	1'-0"	1'-0"	0'-2 $\frac{1}{8}$ "			
D406	2	2	4	5'-3"	14	41	3'-3"	1'-0"	1'-0"	0'-1 $\frac{1}{8}$ "			
D501	6	7	13	11'-2"	152	3	3'-5"	1'-10"					
D502	32	32	64	7'-9"	517	2	2'-5"	3'-2"	2'-5"				
D503	6	6	12	11'-0"	138	3	3'-5"	1'-9"					
D504	2	2	4	10'-2"	43	3	3'-5"	1'-4"					
D801	34	34	68	6'-0"	1,074	18	3'-9"	1'-0"	1'-0"				
D802	6	6	12	3'-6"	112	STR							
D803	6	6	12	29'-10"	956	STR							
D804	4		4	21'-2"	226	STR							
D805	18	20	38	27'-8"	2,807	STR							
D806	2	2	4	7'-5"	79	STR							
D807	6	6	12	2'-10"	91	STR							
D808	2	2	4	12'-2"	54	21	1'-11"	0'-6"	1'-0"	0'-6"			
D809	2	2	4	11'-1"	118	STR							
SUB-TOTAL					7,308								

MARK	NUMBER	LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
DECK											
S401	94	8'-4"	523	STR							
S501	142	8'-4"	1,234	STR							
S502	136	22'-6"	3,193	STR							
S503	20	3'-3"	68	38	1'-0"	1'-4"	0'-3"				
S504	20	3'-7"	75	39	1'-0"	1'-5"	0'-10"				
S505	54	7'-1"	399	STR							
S506	14	3'-6"	51	2	1'-0"	1'-9"	1'-0"				
S507	14	3'-6"	51	28	1'-9"	1'-0"	1'-0"				
SUB-TOTAL			5,594								

NOTE

FOR NOTES AND BENDING DIAGRAMs, SEE SHEET 29/29.

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MARK	NUMBER			LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS						
	AT ABUTMENT		TOTAL				A	B	C	D	E	R	INC
	NO. 6	NO. 10											
APPROACH SLABS (FOR INFORMATION ONLY)													
AS401		22	22	10'-0"	■	STR							
AS402		6	6	6'-4"	■	25	2'-6"	2'-5"	1'-4¼"	0'-1½"	0'-5"		
AS403		6	6	5'-1"	■	STR							
AS404		1	1	11'-10"	■	STR							
AS405		4	4	11'-0"	■	STR							
AS406		8	8	12'-6"	■	STR							
AS407		11	11	24'-6"	■	STR							
AS408		11	11	1'-7"	■	STR							
AS409		4	4	2'-0"	■	STR							
AS529	1		1	18'-8"	21	STR							
AS530	1		1	6'-3"	7	40	6'-3"					68'-4"	
AS531	88		88	30'-0"	2,754	STR							
AS532	88		88	19'-10"	1,821	STR							
AS533	95		95	24'-6"	2,428	STR							
AS534		37	37	19'-8"	759	STR							
AS535		1 SER OF 10	1 SER OF 10	19'-9" TO 20'-9"	212	STR							0'-1¾"
AS536		1 SER OF 8	1 SER OF 8	19'-9" TO 20'-9"	169	STR							0'-1¾"
AS537		1 SER OF 5	1 SER OF 5	21'-0" TO 22'-00"	112	STR							0'-3"
AS538		1 SER OF 4	1 SER OF 4	21'-0" TO 22'-0"	325	STR							0'-4"
AS539		1 SER OF 6	1 SER OF 6	22'-3" TO 24'-0"	145	STR							0'-4¼"
AS540		1 SER OF 5	1 SER OF 5	22'-3" TO 24'-0"	121	STR							0'-5¼"
AS541		1 SER OF 8	1 SER OF 8	20'-5" TO 23'-11"	370	STR							0'-6"
AS542		1 SER OF 6	1 SER OF 6	20'-6" TO 23'-10"	277	STR							0'-8"
AS543		89	89	30'-0"	2,785	STR							
AS544		96	96	24'-6"	2,454	STR							
AS545		1	1	11'-7"	13	STR							
AS546		1	1	9'-5"	10	STR							
AS547		1	1	7'-8"	8	STR							
AS548		1	1	6'-2"	7	STR							
AS549		1	1	4'-9"	5	STR							
AS550		1	1	3'-6"	4	STR							
AS551		1	1	2'-3"	3	STR							
AS552		1	1	1'-2"	2	STR							
AS553		1	1	18'-9"	20	40	18'-9"					22'-3"	
AS554		1	1	18'-3"	20	40	18'-3"					21'-10"	
AS555		1	1	17'-9"	19	40	17'-9"					21'-1"	
AS556		1	1	17'-3"	18	40	17'-3"					20'-5"	
AS557		1	1	16'-10"	18	40	16'-10"					19'-10"	
AS558		1	1	16'-3"	17	40	16'-3"					19'-3"	
AS559		1	1	15'-9"	17	40	15'-9"					18'-7"	
AS560		1	1	15'-3"	16	40	15'-3"					18'-0"	
AS561		1	1	14'-9"	16	40	14'-9"					17'-4"	
AS562		1	1	14'-4"	15	40	14'-4"					16'-11"	
AS563		11	11	9'-11"	114	STR							
AS564	55	14	69	5'-11"	427	STR							
AS565		1	1	3'-2"	4	STR							
AS566		28	28	5'-8"	35	STR							
AS567		10	10	5'-6"	57	STR							
AS568		1	1	9'-7"	10	41	9'-7"					17'-7"	
AS569	10	10	20	1'-6"	32	STR							
AS570		4	4	6'-0"	26	STR							
AS571	55	56	111	3'-6"	405	28	1'-9"	1'-0"	1'-0"				
AS572	55	57	112	3'-6"	409	2	1'-0"	1'-9"	1'-0"				
AS573	2		2	22'-1"	47	STR							
AS574	1		1	5'-2"	6	41	5'-2"					5'-2"	
AS575	8		8	24'-8"	206	STR							

MARK	NUMBER			LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS						
	AT ABUTMENT		TOTAL				A	B	C	D	E	R	INC
	NO. 6	NO. 10											
APPROACH SLABS (FOR INFORMATION ONLY)													
AS601	29	12	41	22'-10"	1,407	37	1'-1½"	0'-9½"	1'-5"	1'-0"	0'-7"		
AS602	29	12	41	7'-0"	404	23	0'-6"	3'-3"	3'-3"			0'-2"	
AS603		2 SER. OF 11	2 SER. OF 11	3'-4" TO 4'-2"	124	1	1'-0"	2'-6" TO 3'-4"					1"
AS604		4	4	4'-6"	27	1	1'-0"	3'-7½"					
ASI001	1		1	19'-3"	83	STR							
ASI002	1		1	6'-10"	30	41	6'-10"					68'-4"	
ASI003	82	83	165	25'-11"	18,401	16	24'-6"						
ASI004		1	1	13'-0"	56	16	11'-7"						
ASI005		1	1	10'-10"	48	16	9'-5"						
ASI006		1	1	6'-10"	30	16	5'-5"						
ASI007		1	1	7'-7"	33	16	6'-2"						
ASI008		1	1	6'-2"	27	16	4'-9"						
ASI009		1	1	4'-11"	22	16	3'-6"						
ASI010		1	1	3'-11"	17	16	2'-6"						
ASI011		1	1	2'-7"	12	16	1'-2"						
SUB-TOTAL					37,487								

- APPROACH SLAB CONCRETE REINFORCEMENT IS FOR INFORMATION ONLY AND TO BE PAID FOR UNDER ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN.
- REINFORCING FOR APPROACH SLAB ONLY INCLUDED IN REBAR LIST. SLEEPER SLAB REINFORCING AS PER SCD AS-2-15.

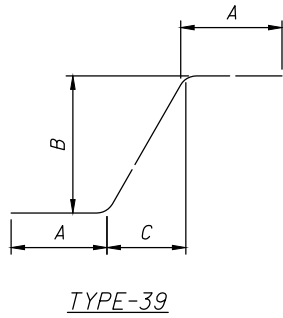
MARK	NUMBER	LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
RAILINGS											
R401	99	30'-0"	■	STR							
R402	11	15'-7"	■	STR							
R403	48	10'-0"	■	STR							
R404	16	9'-10"	■	STR							
R405	36	9'-5"	■	STR							
R406	12	8'-4"	■	STR							
R501	33	10'-10"	373	30	1'-6"	0'-8"	3'-11"	3'-9"			
R502	10	4'-5"	48	1	1'-6"	3'-1"					
R503	10	4'-3½"	46	1	1'-6"	2'-11					
R504	5	8'-4"	45	STR							
R505	5	8'-6"	46	19	6'-11½"	1'-4½"	0'-5"				
R506	2	6'-10"	15	STR							
R507	4	8'-6"	37	45	5'-9"	2'-11"					
R509	4	4'-11"	22	1	4'-3"	0'-10"					
R510	2	6'-11"	15	STR							
R511	5	8'-5"	45	STR							
R512	5	8'-6"	46	19	7'-0½"	1'-4½"	0'-5"				
R513	12	2'-9"	35	2	0'-7"	1'-10"	0'-7"				
R514	12	3'-4"	42	STR							
R515	12	7'-5	93	21	1'-4"	1'-10"	0'-6"	1'-10"			
R516#	24	3'-4"	84	STR							
RMC5#	24										
R601	293	6'-7"	2,897	23	0'-6"	3'-3"	3'-3"				
R602	17	7'-1"	181	37	0'-6½"	0'-9½"	1'-5"	1'-0"	0'-7"		
R603*	276	2'-7"	1,071	13	0'-6½"	1'-5"	0'-3½"	0'-9"			
R604*	276	3'-6"	1,451	2	1'-11½"	0'-11"	1'-0"				
SUB-TOTAL			6,592								

- # - BARS INDICATED THAT REQUIRED MECHANICAL CONNECTORS.
- TOTAL NUMBER OF MECHANICAL CONNECTORS (SMC5) ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY.
- * - DOWELED BARS INCLUDED IN BENDING SCHEDULE AND SHALL BE PAID FOR UNDER ITEM 509 - EPOXY COATED REINFORCING STEEL.
- INSTALLATION OF DOWELS SHALL BE PAID FOR UNDER ITEM 510 - DOWELS HOLES WITH NONSHRINK NONMETALLIC GROUT.

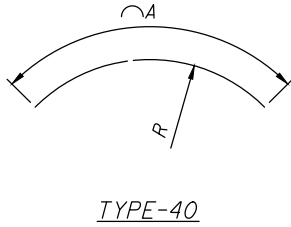
NOTE

FOR NOTES AND BENDING DIAGRAMS, SEE SHEET 29/29.

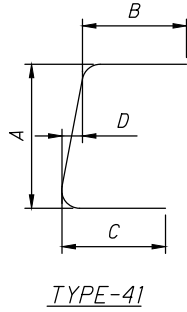
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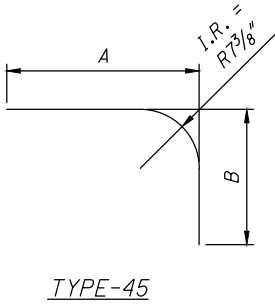
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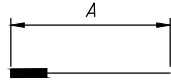
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TYPE-41



TYPE-45

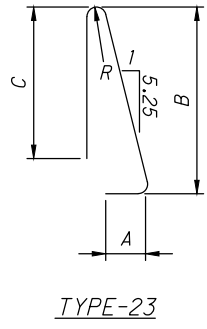
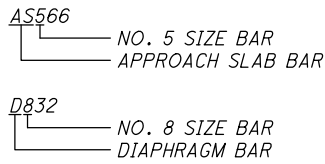


MECHANICAL CONNECTORS

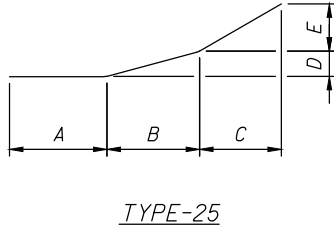
NOTES

1. BAR DIMENSIONS ARE OUT TO OUT UNLESS NOTED OTHERWISE.
2. ALL BARS ARE EPOXY COATED.
3. BAR SIZE AND LOCATION ARE INDICATED IN THE BAR MARK. THE ALPHABETICAL LETTER(S) INDICATES LOCATION. THE NEXT DIGIT INDICATES THE BAR SIZE NUMBER.

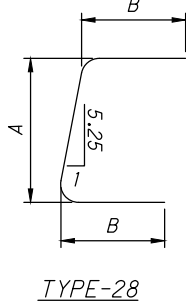
EXAMPLES:



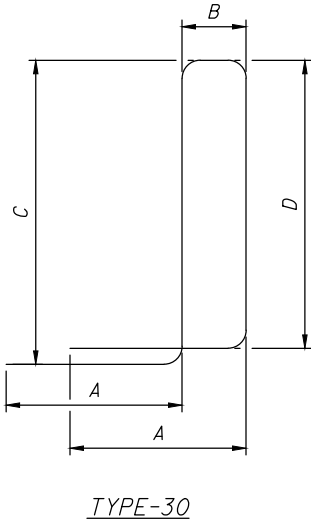
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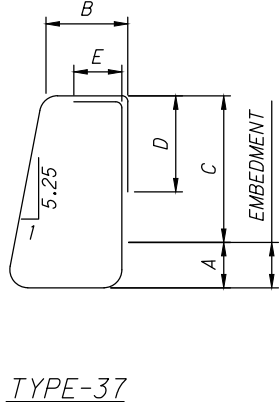
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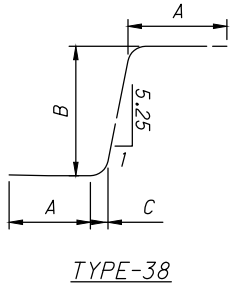
TYPE-28



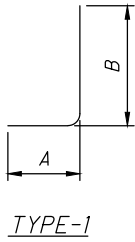
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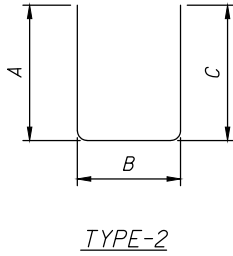
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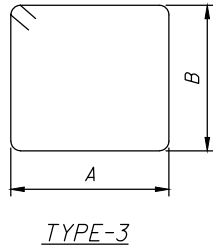
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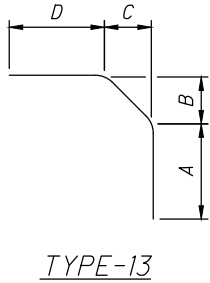
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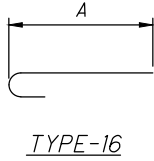
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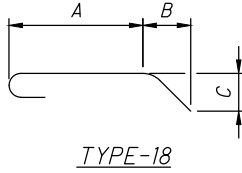
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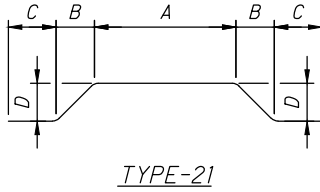
TYPE-13



TYPE-16



TYPE-18



TYPE-21

BAR DIAGRAMS

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PROJECT DESCRIPTION

THE PROJECT INCLUDES MODIFICATIONS TO THE WESTERN END OF THE EXISTING BRIDGE CARRYING CHERRY ROAD NW OVER THE TUSCARAWAS RIVER. SPECIFICALLY, THE WEST ABUTMENT WILL BE WIDENED APPROXIMATELY 20' TO THE NORTH AND A NEW INTERMEDIATE COLUMN PIER WILL BE INSTALLED BETWEEN THE ABUTMENT AND THE NEXT PIER TO THE EAST (PIER NUMBER 3). NEW FRAMING AND DECK REPLACEMENT IN CONJUNCTION WITH THESE NEW SUBSTRUCTURES WILL ALSO BE CONSTRUCTED. THE EXISTING SUBSTRUCTURES AND THEIR FOUNDATIONS WILL NOT BE ALTERED AS PART OF THIS PROJECT.

HISTORICAL INFORMATION

HISTORICAL GEOTECHNICAL EXPLORATIONS WERE PERFORMED IN SUPPORT OF THE ORIGINAL CONSTRUCTION OF THE TUSCARAWAS RIVER LEVEE IN THE LATE 1940S. TWO BORINGS FROM THIS EXPLORATION (A-8 AND A-8-A) WERE DRILLED NEAR THE INTERSECTION OF CHERRY ROAD NW AND 3RD STREET NW WHERE THE CURRENT PROJECT IS LOCATED. ANOTHER MORE RECENT INVESTIGATION WAS PERFORMED ALONG THE MASSILLON LEVEE IN 2009 AND 2010 AS PART OF AN UNRELATED PROJECT. THE BORING DESIGNATED AS PT-11 FROM THIS WORK IS THE CLOSEST BORING ON THE SAME SIDE OF THE RIVER AS THE CURRENT PROJECT. HOWEVER, IT WAS LOCATED APPROXIMATELY 500 FT NORTH OF THE PROJECT SITE.

GEOLOGY

THE PROJECT IS LOCATED WITHIN THE APPALACHIAN PLATEAUS PROVINCE, GLACIATED ALLEGHENY PLATEAUS SECTION, AKRON-CANTON INTERLOBATE PLATEAU REGION. THIS REGION IS CHARACTERIZED AS A HUMMOCKY AREA BETWEEN TWO CONVERGING GLACIAL LOBES DOMINATED BY KAMES, KAME TERRACES, ESKERS, KETTLES, KETTLE LAKES, AND BOGS/FENS WITH DERANGED DRAINAGE. THE GEOLOGY AT THE SITE CONSISTS OF INTERBEDDED WISCONSINAN-AGE (24,000 TO 14,000 YEARS AGO IN OHIO) OR OLDER SAND AND GRAVEL COMMONLY CONTAINING THIN, DISCONTINUOUS LAYERS OF SILT AND CLAY. IT GRADES WELL TO MODERATELY SORTED AND IS MODERATELY TO WELL ROUNDED. NATIVE GRANULAR SOIL UNITS OF UNDIFFERENTIATED SAND AND GRAVEL ARE ALSO PRESENT. FURTHERMORE, A GLACIAL BURIED VALLEY IS PRESENT IN THE AREA AND IS ESTIMATED TO DROP SHARPLY FROM OVER 1,000 FT-MSL TO THE WEST OF THE SITE AND LEVELING OUT BELOW 650 FT-MSL NEAR EAST BANK OF THE TUSCARAWAS RIVER. THE SOIL DEPOSITS OVERLIE MISSISSIPPIAN-AGE (360 TO 325 MILLION YEARS AGO) BEDROCK CONSISTING OF SHALE, SILTSTONE OR SANDSTONE OF THE CUYAHOGA FORMATION AND THE ALLEGHENY AND POTTSVILLE GROUPS.

RECONNAISSANCE

FIELD RECONNAISSANCE WAS PERFORMED ON MAY 10, 2023 BY AN AECOM GEOTECHNICAL ENGINEER. THE BRIDGE'S WESTERN ABUTMENT IS SITUATED AT THE CREST OF THE U.S. ARMY CORPS OF ENGINEERS' FLOOD LEVEE, WHICH IS AN EARTHEN EMBANKMENT SLOPING FROM CHERRY ROAD/3RD STREET NW DOWN TO THE RIVER. THE SLOPES OF THE LEVEE WERE IN GOOD CONDITION WITHIN THE PROJECT AREA, WITH NO INDICATIONS OF SLOPE INSTABILITIES AND WITH A MAINTAINED GRASS COVER AND CLEAR OF ANY WOODY VEGETATION. CHERRY ROAD PAVEMENT IS CONCRETE AND EXHIBITS MODERATE CRACKING. PAVEMENT AT 3RD STREET NW NEAR ITS INTERSECTION WITH CHERRY ROAD IS ASPHALT, WHICH IS IN RELATIVELY POOR CONDITION. THE AREA SURROUNDING THE PROJECT LOCATION IS OF PRIMARILY COMMERCIAL/INDUSTRIAL USAGE.

SUBSURFACE EXPLORATION

SUBSURFACE CONDITIONS WERE EVALUATED BY DRILLING ONE EXPLORATORY BORING MARKED B-01, LOCATED ADJACENT TO THE EXISTING BRIDGE'S WEST ABUTMENT. THE BORING WAS LOCATED WITHIN THE PAVEMENT AT THE NORTHEAST CORNER OF THE INTERSECTION WITH 3RD STREET NW AND WAS DRILLED ON MAY 10-11, 2023. THE BORINGS WAS DRILLED, USING A MOBILE B-57 TRUCK-MOUNTED DRILL RIG AND 3.25-INCH INNER-DIAMETER HOLLOW-STEM AUGERS. AT A DEPTH OF 55 FEET BELOW THE GROUND SURFACE (BGS), DRILLING WAS SWITCHED TO MUD ROTARY WITH A TRICONE BIT. A GEOTECHNICAL ENGINEER WAS ON-SITE DURING ALL DRILLING OPERATIONS TO MONITOR AND DIRECT THE DRILLING OPERATION AND TO VISUALLY CLASSIFY AND LOG SOIL AND FORMATIONS ENCOUNTERED DURING THE INVESTIGATION. SOIL SAMPLES WERE COLLECTED FROM THE BORINGS FOR VISUAL CLASSIFICATION AND TESTING. SAMPLES WERE OBTAINED BY STANDARD PENETRATION TESTING (SPT) WITH A SPLIT-SPOON SAMPLER AT 2.5 FT INTERVALS IN THE UPPER 20 FT AND AT 5.0 FT INTERVALS THEREAFTER, IN GENERAL ACCORDANCE WITH ASTM D 1586. INDICATIONS OF WATER IN THE SOIL SAMPLES WERE MONITORED CONTINUOUSLY THROUGH THE COURSE OF THE DRILLING OPERATIONS AND WATER LEVEL IN THE AUGERS WAS MEASURED PRIOR TO STARTING MUD ROTARY DRILLING OPERATIONS.

EXPLORATION FINDINGS

SUBSURFACE CONDITIONS REVEALED AT BORING B-01 INCLUDED THE FOLLOWING UNITS IN ORDER FROM SHALLOWEST TO DEEPEST: 1) SURFICIAL MATERIALS; 2) LEVEE FILL MATERIALS; 3) ALLUVIUM; 4) NATIVE CLAY; AND 5) NATIVE GRANULAR SOILS. SURFICIAL MATERIALS CONSISTED OF CONCRETE PAVEMENT (12-INCHES THICK) AND GRANULAR BASE (6-INCHES THICK). A STEEL MESH WAS NOTED AT A DEPTH OF APPROXIMATELY 7-INCHES BELOW THE SURFACE WITHIN THE CONCRETE. THE LEVEE FILL WAS APPROXIMATELY 33 FT THICK (FROM 1.5 FT TO ABOUT 34 FT BELOW SURFACE) AT THE BORING LOCATION AND CONSISTED OF STIFF TO VERY STIFF, BROWN WITH GRAY MOTTLING LEAN CLAY (CL) TO SILTY CLAY (CL-ML) TO A DEPTH OF 22 FT, FOLLOWED BY MEDIUM DENSE COARSE-GRAINED AND/OR NON-PLASTIC FILL INCLUDING CLAYEY GRAVEL (GC)

EXPLORATION FINDINGS (CONT.)

AND POORLY GRADED SAND (SP) TO A DEPTH OF 34 FT BELOW GROUND SURFACE. ALLUVIUM CONSISTING OF INTERBEDDED LAYERS OF LOOSE OR SOFT SILT (ML), CLAYEY SAND (SC), AND SILTY SAND (SM) WERE ENCOUNTERED UNDERLYING THE LEVEE FILL AND EXTENDING FROM A DEPTH OF 34 FT TO A DEPTH OF 42 FT. A NATURAL DEPOSIT OF VERY STIFF TO HARD SILTY CLAY (CL-ML) WAS ENCOUNTERED BELOW THE ALLUVIUM BETWEEN 42 AND 62 FT BELOW GROUND SURFACE, AND WAS UNDERLAIN BY A NATURAL GRANULAR SOIL DEPOSIT CONSISTING OF MEDIUM DENSE, WET, GRAVEL (GP) AND SILT SAND (SM) FROM 62 FT TO THE TERMINATION OF THE BORING.

THE GROUNDWATER LEVEL WITHIN THE BORING AT THE TIME OF DRILLING WAS MEASURED AT A DEPTH OF 34 FT BELOW THE GROUND SURFACE. DUE TO THE SHORT TIME THE BORING WAS LEFT OPEN AND THE SEASON OF DRILLING, GROUNDWATER LEVELS DURING THE SUBSURFACE EXPLORATION MOST LIKELY DID NOT REACH EQUILIBRIUM. GROUNDWATER LEVELS ARE LIKELY TO VARY WITH FLUCTUATIONS IN THE CLIMATE AND ARE LIKELY TO BE INFLUENCED BY THE LEVEL OF THE TUSCARAWAS RIVER.

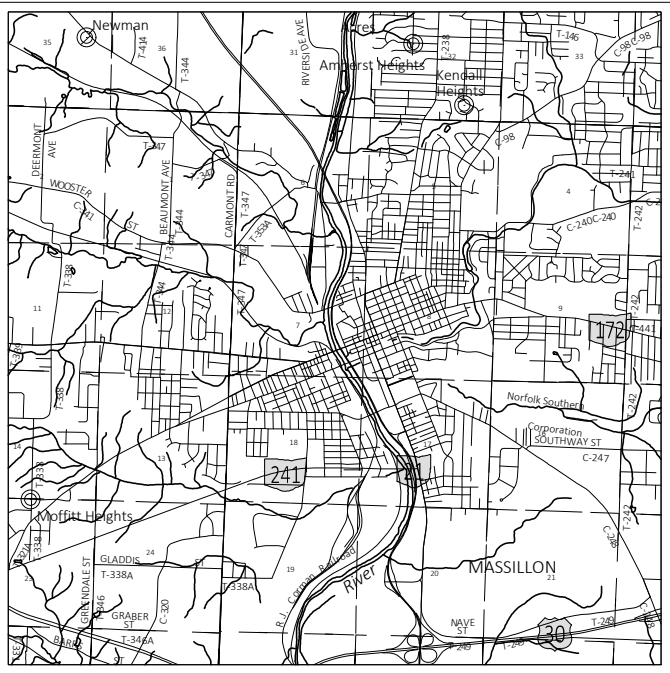
SPECIFICATIONS

THIS EXPLORATION WAS PERFORMED IN GENERAL ACCORDANCE WITH THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS (SGE) AND THE PROJECT-SPECIFIC DRILLING PROGRAM PLAN (DPP) APPROVED BY THE U.S. ARMY CORPS OF ENGINEERS.

AVAILABLE INFORMATION

THE SOIL AND GROUNDWATER INFORMATION COLLECTED FOR THIS SUBSURFACE EXPLORATION THAT CAN BE CONVENIENTLY DISPLAYED ON THE GEOTECHNICAL PROFILE SHEETS HAS BEEN PRESENTED. THE GEOTECHNICAL REPORT FOR THE PROJECT IS AVAILABLE FOR REVIEW FROM THE STARK COUNTY ENGINEER'S OFFICE.

LEGEND			
	DESCRIPTION	AASHTO CLASS	CLASSIFIED MECH./VISUAL
	GRAVEL	A-1a	0 1
	GRAVEL WITH SAND	A-1b	1 3
	GRAVEL WITH SAND, SILT, AND CLAY	A-2-6	0 2
	COARSE AND FINE SAND	A-3a	0 1
	SANDY SILT	A-4a	2 8
	SILT AND CLAY	A-6a	1 3
		TOTAL	4 17
	PAVEMENT OR BASE = X = APPROXIMATE THICKNESS		VISUAL
	SOD AND TOPSOIL = X = APPROXIMATE THICKNESS		VISUAL
	EXPLORATION LOCATION - PLAN VIEW		
	HISTORIC BORING LOCATION - PLAN VIEW - TER-102-7.86, 1965		
	DRIVE SAMPLE AND/OR ROCK CORE BORING PLOTTED TO VERTICAL SCALE ONLY. HORIZONTAL BAR INDICATES A CHANGE IN STRATIGRAPHY.		
	AUGER BORING PLOTTED TO VERTICAL SCALE ONLY. HORIZONTAL BAR INDICATES A CHANGE IN STRATIGRAPHY.		
WC	INDICATES WATER CONTENT IN PERCENT.		
W	INDICATES FREE WATER ELEVATION.		
N ₆₀	INDICATES STANDARD PENETRATION RESISTANCE NORMALIZED TO 60% DRILL ROD ENERGY RATIO.		
●	INDICATES A PLASTIC MATERIAL WITH A MOISTURE CONTENT EQUAL TO OR GREATER THAN THE LIQUID LIMIT MINUS 3.		
⊕	INDICATES A NON-PLASTIC MATERIAL WITH A MOISTURE CONTENT GREATER THAN 25% OR GREATER THAN 19% WITH A WET APPEARANCE.		
SS	INDICATES A SPLIT-SPOON SAMPLE.		
ST	INDICATES A SHELBY TUBE SAMPLE.		
HA	INDICATES A HAND AUGER SAMPLE.		
NP	INDICATES A NON-PLASTIC SAMPLE.		
TR	INDICATES THE TOP OF ROCK.		

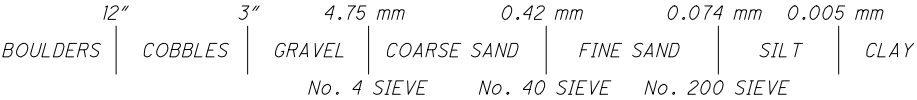


LOCATION MAP

SCALE IN MILES



PARTICLE SIZE DEFINITIONS



RECON. - 5/10/2023
DRILLING - 5/10-11/2023
DRAWN - 9/29/2023
REVIEWED - 10/2/2023

PROJECT: STA-CHERRY RD	DRILLING FIRM / OPERATOR: OHIO TESTBOR / CS	DRILL RIG: MOBILE B-57 2014-017	STATION / OFFSET:	EXPLORATION ID
TYPE: BRIDGE	SAMPLING FIRM / LOGGER: AECOM / EJB	HAMMER: AUTOMATIC HAMMER	ALIGNMENT:	TB-1
PID: SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 1/6/23	ELEVATION: 960.0 (NAVDS8) EOB: 80.0 ft.	PAGE 1 OF 2
START: 5/10/23	END: 5/11/23	SAMPLING METHOD: SPT	ENERGY RATIO (%): 90°	LAT / LONG: 40.799730, -81.530210
MATERIAL DESCRIPTION AND NOTES				
12" CONCRETE @ 7" - 58" DIAMETER REBAR MESH	ELEV. 959.0	DEPTHS	SPT/ ROD	N ₆₀
6" BASE: GRAVEL WITH SAND AND SILT	958.5	1	6	12
DENSE, BROWN, COARSE AND FINE SAND, FILL, MOIST	957.0	2	12	33
HARD, BROWN WITH GRAY MOTTLING, SANDY SILT, FILL, MOIST		3		83
		4	3	15
		5	4	6
		6		
@ 6.4'-6.7' - MEDIUM STIFF, WET, SEAM (HP = 0.75 TSP)	952.0	7	2	3
@ 6.7'-6.8' - BROWN SHALE FRAGMENTS		8	3	7
VERY STIFF, BROWN WITH TRACE ORANGE MOTTLING, SANDY SILT, SOME GRAVEL, TRACE SHALE FRAGMENTS, FILL, MOIST		9	2	3
		10	3	5
HARD, BROWN, SILT AND CLAY, SOME SAND, FILL, MOIST	949.5	11	2	2
		12	2	3
STIFF, BROWN WITH GRAY MOTTLING, SILT AND CLAY, SOME GRAVEL, FILL, MOIST TO WET	947.0	13		
		14	2	1
		15	1	2
HARD, BROWN AND GRAY, SILT AND CLAY, SOME SAND, LITTLE GRAVEL, MOIST	944.5	16		
		17	2	4
		18	4	12
@ 18.5' - BECOMES VERY STIFF, GRAYISH BROWN		19	2	2
@ 19.5'-19.8' - STIFF, MOIST TO WET, DARK GRAY SANDY SILT SEAM		20	2	3
@ 19.8' - BECOMES DARK GRAY AND BROWN		21		
MEDIUM DENSE, BROWN AND DARK GRAY, GRAVEL WITH SAND, SILT, AND CLAY, FILL, MOIST	938.0	22		
		23		
		24	5	9
		25	9	10
MEDIUM DENSE, DARK GRAY AND BLACK, GRAVEL WITH SAND, LITTLE COAL FRAGMENTS, TRACE BRICK FRAGMENTS, TRACE SILT, FILL, DAMP	933.0	26		
		27		
		28		
@ 31.5'-32.3' - ENCOUNTERED OBSTRUCTION - POSSIBLE SLAB, BRICKS, OR FOUNDATION		29	11	6
STIFF, GRAY, SANDY SILT, LITTLE GRAVEL, FILL, MOIST	927.7	30	6	18
		31		
LOOSE, ORANGISH BROWN, GRAVEL WITH SAND, SILT, AND CLAY, MOIST	925.9	32		
		33	1	2
		34	2	6
		35		
		36		
VERY LOOSE, DARK GRAY, SANDY SILT, TRACE COARSE SAND, TRACE ORGANICS, WET	923.0	37		
		38		
		39	1	2
		40	2	1
		41		
HARD, GRAY, SANDY SILT, SOME SAND, LITTLE GRAVEL, MOIST	918.0	42		
		43		
		44	4	6
		45	6	21
		46		
		47		
		48		
@ 49.2'49.4' - WET SANDY SILT SEAM		49	7	0
		50	0	8
		51		
		52		
@ 53.5' - BECOMES VERY STIFF		53		
@ 54.0' - SAND LAMINA, WET		54	3	5
		55	5	6
		56		
		57		
		58		
@ 58.5' - BECOMES HARD		59	3	6
		60	6	21

PID:		SFN:	PROJECT:		STA-CHERRY RD		STATION / OFFSET:					START: 5/10/23				END: 5/11/23				PG 2 OF 2		TB-1			
MATERIAL DESCRIPTION AND NOTES					ELEV.	DEPTHS	SPT/ ROD	N ₆₀	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)				ATTERBERG				COOT CLASS (G)	SO4 ppm	ABANDONED			
					900.0							GR	CS	FS	SI	CL	LL	PL	PI	WC					
HARD, GRAY, SANDY SILT, SOME SAND, LITTLE GRAVEL, MOIST (continued)						61																			
MEDIUM DENSE, GRAY, GRAVEL, TRACE SAND, WET					898.0	62																			
					63																				
					64	6	7	20	11	SS-17	-	-	-	-	-	-	-	-	-	-	-	-	-	A-1-a (V)	-
					65																				
					66																				
MEDIUM DENSE, GRAY, GRAVEL WITH SAND, LITTLE SILT, TRACE CLAY, WET @ 68.7' - 1" SANDY SILT SEAM @ 69.1' - 1" SANDY SILT SEAM					893.0	67																			
					68																				
					69	6	9	30	50	SS-18	-	44	24	13	14	5	NP	NP	NP	10				A-1-b (I)	-
					70																				
					71																				
					72																				
					73																				
					74	8	7	20	33	SS-19	-	-	-	-	-	-	-	-	-	-	-	-	-	A-1-b (V)	-
					75																				
					76																				
					77																				
					78																				
					79	5	4	14	0	SS-20	-	-	-	-	-	-	-	-	-	-	-	-	-	A-1-b (V)	-
					80																				
										880.0	EOB														
NOTES: NONE																									
ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED																									

STRUCTURE FOUNDATION EXPLORATION BORING LOG TB-01

STA CHERRY RD BRIDGES

CALCULATED EJB
CHECKED VKG