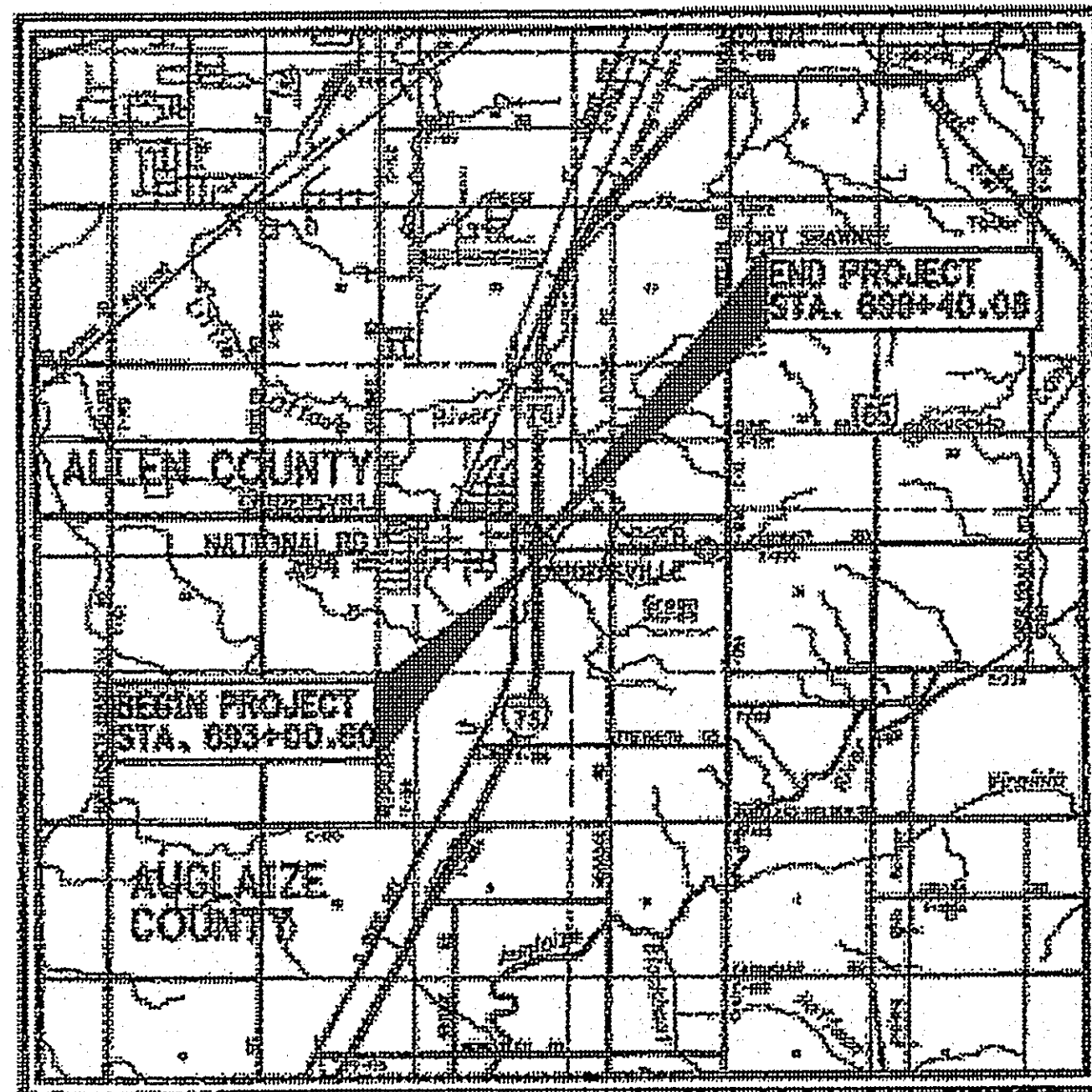


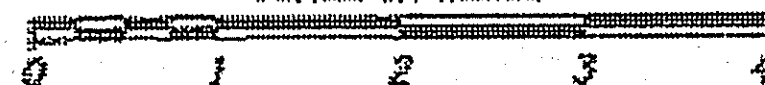
AUG - IR-75-12.34
130031 PID-87369
Dist 7 1/17/2013
Contract Proposal Available
@www.contracts.dot.
state.oh.us/home
18" X 11" 60628 IN 05-05-11 2102/12/15 14445 up10010103826



LOCATION MAP

LATITUDE: 40°35'15" LONGITUDE: 84°07'54"

SCALE IN MILES



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

DESIGN DESIGNATION - NATIONAL ROAD (CR 208)

CURRENT ADT (2014) 5720
DESIGN YEAR ADT (2034) 6220
DESIGN HOURLY VOLUME (2034) 560
DIRECTIONAL DISTRIBUTION 56%
TRUCKS (24 HOUR DAC) 8%
Td 8%
DESIGN SPEED 45
LEGAL SPEED 45

DESIGN FUNCTIONAL CLASSIFICATION:

URBAN MINOR ARTERIAL
NHS PROJECT NO

DESIGN EXCEPTIONS NONE

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG

CALL
1-800-362-2764
(TOLL FREE)

OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

OIL & GAS PRODUCERS PROTECTIVE
SERVICE CALL: 1-800-925-0908

PLAN PREPARED BY:

CHENILL

FIFTH THIRD CENTRE, SUITE 1100
ONE SOUTH MAIN STREET
DAYTON, OHIO 45402-1028
TEL: 937.228.4285
FAX: 937.228.7672

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
AUG-75-12.34
VILLAGE OF CRIDERSVILLE
DUCHOUQUET TOWNSHIP
AUGLAIZE COUNTY

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ENGINEERS SEAL:
ROADWAY
STATE OF OHIO
JAMNARAYAN
MUNDA
5-59928
PROFESSIONAL ENGINEER
SIGNED: [Signature]
DATE: 9/21/12
ENGINEERS SEAL:
STRUCTURE
STATE OF OHIO
JASON
T. CHENERS
71889
PROFESSIONAL ENGINEER
SIGNED: [Signature]
DATE: 9/21/12

STANDARD CONSTRUCTION DRAWINGS

NO.	DESCRIPTION	DATE	NO.	DESCRIPTION	DATE
BP-2.1	7-18-08CR-1.1	7-20-12AS-1-01	7-18-02TC-41.20	1-19-01	
BP-2.2	7-18-08CR-2.1	7-20-12ASD-1-06	7-18-02TC-41.30	1-19-01	
BP-2.5	7-18-08CR-3.1	7-20-12PCB-91	7-18-02TC-41.50	1-19-01	
BP-3.1	4-20-12CR-5.1	4-16-10SBR-1-99	7-18-02TC-42.20	1-21-11	
BP-5.1	7-28-00CR-5.2	4-16-10SBR-1-96	7-18-02TC-61.30	4-20-12	
BP-8.1	4-15-05CR-6.2	4-16-10VPE-1-90	4-15-11TC-65.10	4-20-12	
DM-1.1	7-20-12RM-4.2	10-15-10MT-97.10	7-20-12TC-72.20	7-20-12	
DM-1.2	7-20-12RM-4.3	10-21-10MT-101.00	7-20-12		
DM-4.1	7-20-12RM-4.4	10-15-09MT-101.70	4-15-11		
DM-4.3	7-20-12RM-4.5	10-16-09MT-101.00	10-21-11		
DM-4.4	7-20-12RM-4.6	4-15-10MT-102.10	7-20-12		
		MT-105.10	7-20-12		

SUPPLEMENTAL SPECIFICATIONS
800 10-19-12
821 4-20-12
832 5-5-09
898 10-21-11
921 4-20-12
SPECIAL PROVISIONS
CEPA
NOTIFICATION OF DEMOLITION

PROJECT DESCRIPTION

THE PROJECT CONSISTS OF REPLACING THE EXISTING STRUCTURALLY DEFICIENT, NATIONAL ROAD (CR 208) BRIDGE (AUG-75-1234) OVER INTERSTATE ROUTE 75 (IR-75).

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 3.3 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.1 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: 4.9 ACRES

LIMITED ACCESS

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

2010 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.

I HEREBY APPROVED THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED [Signature] P.E., 12/1/12
DATE 10-2-12 DISTRICT DEPUTY DIRECTOR

APPROVED [Signature]
DATE 10-2-12 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. E091(256)
PID NO. 87369
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NONE
AUG-75-12.34
1/71

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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:

AEP OHIO
825 TECH CENTER DRIVE
GAHANNA, OHIO 43230-6605

THERE ARE NO KNOWN UNDERGROUND UTILITIES ON THIS PROJECT.

SURVEYING PARAMETERS

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

VERTICAL POSITIONING
ORTHOMETRIC HEIGHT DATUM: NAVD 88
GEOID: GEOID03

HORIZONTAL POSITIONING
REFERENCE FRAME: NAD 83 (NSRS 2007)
ELLIPSOID: GRS80
MAP PROJECTION: LAMBERT CONFORMAL
COORDINATE SYSTEM: OHIO STATE PLANE NORTH ZONE
COMBINED SCALE FACTOR: 0.99992148

UNITS ARE IN U.S. SURVEY FEET. USE THE FOLLOWING CONVERSION FACTOR: 1 METER=3.280833333 U.S. SURVEY FEET.

PROTECTION OF RIGHT-OF-WAY LANDSCAPING

PRIOR TO BEGINNING WORK, THE CONTRACTOR, THE PROJECT ENGINEER, AND A REPRESENTATIVE OF THE MAINTAINING AGENCY WILL REVIEW AND RECORD ALL LANDSCAPING ITEMS WITHIN THE RIGHT OF WAY (BOTH WITHIN AND OUTSIDE THE CONSTRUCTION LIMITS). A RECORD OF THIS REVIEW WILL BE KEPT IN THE PROJECT ENGINEER'S FILES. PRIOR TO FINAL ACCEPTANCE, A FINAL REVIEW OF LANDSCAPING ITEMS WILL BE MADE.

CONSTRICT ALL ACTIVITIES, EQUIPMENT STORAGE, AND STAGING TO WITHIN THE CONSTRUCTION LIMITS. UNLESS OTHERWISE IDENTIFIED IN THE PLANS OR PROPOSAL, THE CONSTRUCTION LIMITS ARE IDENTIFIED AS 30 FEET FROM THE EDGE OF PAVEMENT.

SUBMIT A WRITTEN REQUEST TO THE PROJECT ENGINEER TO USE ANY AREA OUTSIDE THESE LIMITS. THE DOCUMENT SUBMITTED MUST CLEARLY IDENTIFY THE AREA AND EXPLAIN THE PROPOSED USE AND RESTORATION OF THE AREA. USE OF THESE AREAS FOR DISPOSAL OF WASTE MATERIAL AND CONSTRUCTION DEBRIS, EXCAVATION OF BORROW MATERIAL AND PLACEMENT OF PORTABLE PLANTS IS PROHIBITED. THE REQUEST MUST BE APPROVED, IN WRITING, BEFORE THE CONTRACTOR HAS PERMISSION TO USE THE AREA.

ANY ITEMS DAMAGED BEYOND THE CONSTRUCTION LIMITS AS DEFINED ABOVE WILL BE REPLACED IN KIND OR AS APPROVED BY THE PROJECT ENGINEER.

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.

BENCHING OF FOUNDATION SLOPES

ALTHOUGH CROSS-SECTIONS INDICATE SPECIFIC DIMENSIONS FOR PROPOSED BENCHING OF THE EMBANKMENT FOUNDATIONS IN CERTAIN AREAS, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. BENCH ALL OTHER SLOPED EMBANKMENT AREAS AS SET FORTH IN 203.05. NO ADDITIONAL PAYMENT WILL BE MADE FOR BENCHING REQUIRED UNDER THE PROVISIONS OF 203.05.

203, EXCAVATION	175 CU YD
203, EMBANKMENT	175 CU YD

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 RAIL SPLICE" AS SHOWN IN AASHTO M 180. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

ITEM 202 - GUARDRAIL REMOVED FOR STORAGE, AS PER PLAN/ITEM 202 - GUARDRAIL REMOVED FOR STORAGE, BARRIER DESIGN, AS PER PLAN

THIS ITEM OF WORK CONSISTS OF REMOVING THE ENTIRE LINEAR FEET OF GUARDRAIL SPECIFIED IN THE PLANS INCLUDING ALL HARDWARE, POSTS BLOCKOUTS AND CONCRETE FOUNDATIONS. THE GUARDRAIL PANELS ONLY SHALL BE REMOVED WITH CARE AND DELIVERED TO THE CLOSEST FULL TIME ODOT COUNTY FACILITY. THE CONTRACTOR SHALL CONTACT THE DISTRICT ROADWAY SERVICES MANAGER AT 937-497-6834 TO COORDINATE GUARDRAIL PANEL DELIVERY.

PAYMENT SHALL INCLUDE COMPLETE REMOVAL AND GUARDRAIL PANEL DELIVERY IN THE UNIT PRICE FOR ITEM 202, GUARDRAIL REMOVAL FOR STORAGE, AS PER PLAN AND SHALL INCLUDE ALL LABOR, MATERIAL AND EQUIPMENT NECESSARY.

SPILL CONTAINMENT KIT

BEST CONSTRUCTION PRACTICES ARE TO BE IMPLEMENTED TO MINIMIZE WATER QUALITY IMPACTS. A SPILL CONTAINMENT KIT IS TO BE MAINTAINED ON-SITE THROUGHOUT CONSTRUCTION ACTIVITIES. SPILLS OF FUELS, OILS, CHEMICALS, OR OTHER MATERIALS WHICH COULD POSE A THREAT TO GROUNDWATER SHALL BE CLEANED UP IMMEDIATELY. IF THE SPILL IS A REPORTABLE AMOUNT, THE LOCAL FIRE DEPARTMENT IS TO BE CONTACTED.

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.

ITEM 606 - ANCHOR ASSEMBLY, TYPE B

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS 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.

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 27.75 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.

THE FACE OF THE TYPE B IMPACT HEAD SHALL BE COVERED WITH TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

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

ITEM 606 - IMPACT ATTENUATOR, TYPE 1 (UNIDIRECTIONAL OR BIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY ONE OF THE TYPE 1 IMPACT ATTENUATORS AS LISTED ON THE OFFICE OF ROADWAY ENGINEERING'S WEB PAGE. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE FACE OF THE TYPE 1 IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19. PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, IMPACT ATTENUATOR, TYPE 1 [(UNIDIRECTIONAL OR BIDIRECTIONAL)], EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED TRANSITIONS, HARDWARE, REFLECTIVE SHEETING AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

CONTRACTION AND/OR EXPANSION JOINTS

ALTHOUGH SPECIFIC LOCATIONS OF CERTAIN CONTRACTION AND EXPANSION JOINTS HAVE NOT 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.

EXISTING PLANS

EXISTING PLANS MAY BE INSPECTED IN THE ODOT DISTRICT 7 OFFICE IN SIDNEY, OHIO.

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEMS.

SEEDING AND MULCHING

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

659, SOIL ANALYSIS TEST	2 EACH
659, TOPSOIL	255 CU. YD.
659, REPAIR SEEDING AND MULCHING	115 SQ. YD.
659, INTER-SEEDING	115 SQ. YD.
659, COMMERCIAL FERTILIZER	0.31 TON
659, LIME	0.47 ACRES
659, WATER	6 M. GAL.

SEEDING AND MULCHING SHALL BE APPLIED 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.

CONTRACTION JOINTS IN CONCRETE PAVEMENT OR BASE WIDENING

WHERE NEW CONCRETE IS PLACED ADJACENT TO EXISTING CONCRETE, PROVIDE CONTRACTION JOINTS IN THE NEW CONCRETE TO FORM CONTINUOUS JOINTS WITH THOSE IN THE EXISTING CONCRETE.

THE MAXIMUM DISTANCE BETWEEN THE JOINTS IN THE NEW CONCRETE ARE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP-2.2, IF NECESSARY, ADDITIONAL JOINTS MAY BE PROVIDED IN THE NEW CONCRETE AT APPROXIMATELY EQUAL INTERVALS BETWEEN EXISTING JOINTS THAT EXCEED THE MAXIMUM SPACING.

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ITEM 605 - AGGREGATE DRAINS

NATIONAL ROAD (CR 208)		
STATION	SIDE	LENGTH
8+75	LT.	15 FT.
9+00	RT.	20 FT.
9+25	LT.	10 FT.
9+50	RT.	15 FT.
9+75	LT.	10 FT.
10+00	RT.	10 FT.
13+25	LT.	10 FT.
13+50	RT.	10 FT.
13+75	LT.	10 FT.
14+00	RT.	10 FT.
14+25	LT.	10 FT.
14+50	RT.	15 FT.

A TOTAL OF 145 FT. OF ITEM 605 - AGGREGATE DRAINS HAS BEEN CARRIED TO THE GENERAL SUMMARY.

PART-WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND TO CONSTRUCT THE FULL PAVEMENT WIDTH IN STAGES, EXERCISE CARE TO PREVENT THE CONSTRUCTION OF A BUTT JOINT IN THE BASE COURSES. LAP LONGITUDINAL JOINTS AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1.

EXISTING UNDERDRAINS

PROVIDE UNOBSTRUCTED OUTLETS FOR ALL EXISTING UNDERDRAINS ENCOUNTERED DURING CONSTRUCTION.

PROVIDE AN OUTLET PER STANDARD CONSTRUCTION DRAWING DM-1.1 FOR ALL UNDERDRAINS THAT OUTLET TO A SLOPE.

UNDERDRAINS THAT CAN BE CONNECTED TO THE NEW OR EXISTING UNDERDRAINS AT THE END OF THE PROJECT LIMITS AS WELL AS ALL NECESSARY BENDS OR BRANCHES REQUIRED FOR CONNECTION ARE INCLUDED IN THE BASIS OF PAYMENT FOR UNCLASSIFIED PIPE UNDERDRAINS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

DM-1.1 FOR ALL UNDERDRAINS THAT OUTLET TO A SLOPE.
PROVIDE AN OUTLET PER STANDARD CONSTRUCTION DRAWING

601, TIED CONCRETE BLOCK MAT, TYPE I	4 SQ. YD.
603, 6" CONDUIT, TYPE F	100 FT.
604, PRECAST REINFORCED CONCRETE OUTLET	9 EACH
605 6" UNCLASSIFIED PIPE UNDERDRAINS, 707.31	50 FT.

ITEM 606 - GUARDRAIL, MISC.: TENSIONED CABLE WITH CONCRETE FOUNDATION LINE POST (SOCKETED)

ITEM 606 - GUARDRAIL, MISC.: TENSIONED CABLE ANCHOR TERMINAL

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A TENSIONED CABLE GUARDRAIL SYSTEM MEETING NCHRP REPORT 350 TEST LEVEL-3 REQUIREMENTS BY USING THE FOLLOWING PRODUCT:

NUCOR CABLE RAIL SYSTEM
912 CHENEY AVE., MARION, OHIO, 43302
PHONE - 800-333-4011

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS AND IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. SYSTEMS WILL BE INSTALLED IN A MEDIAN APPLICATION (BIDIRECTIONAL TRAFFIC).

THE SYSTEM SHALL HAVE A MAXIMUM DEFLECTION OF 8 FEET AND THE MAXIMUM LONGITUDINAL DISTANCE BETWEEN POSTS SHALL BE 16 FOOT.

INSTALLATION WILL BE A THREE OR FOUR STRAND TENSION CABLE INSTALLED IN SOCKETED POSTS.

PAYMENT FOR THE ABOVE WORK SHALL BE AT THE UNIT BID PRICE FOR:

ITEM 606 - GUARDRAIL, MISC.: TENSIONED CABLE WITH CONCRETE FOUNDATION LINE POST (SOCKETED)

ITEM 606 - GUARDRAIL, MISC.: TENSIONED CABLE ANCHOR TERMINAL

THE BID PRICE SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT, AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL CABLE GUARDRAIL SYSTEM, INCLUDING ALL RELATED HARDWARE, GRADING, EMBANKMENT, AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER AND ODOT PROJECT ENGINEER.

POSTS ARE SET IN SOCKETED CONCRETE FOUNDATIONS AND SHALL NOT BE PERMANENTLY INSTALLED UNTIL THEIR RESPECTIVE RUNS OF TENSIONED CABLE GUARDRAIL ARE READY FOR FINAL CONNECTION TO THE END TERMINAL ASSEMBLY.

THE CONTRACTOR SHALL REPLACE ANY POST DAMAGED DURING INSTALLATION AS DETERMINED BY THE ENGINEER AT NO ADDITIONAL COST TO THE STATE.

ITEM SPECIAL - MISC.: MOW STRIP

4 INCH DEPTH MOW STRIP WITH MATERIALS CONFORMING TO ITEM 608 - CONCRETE WALK IN LIEU OF THE MOW STRIP, EXCEPT THAT EXCAVATION SHALL BE PAID FOR SEPARATELY. THE WIDTH OF THE MOW STRIP IS TO BE 4 FEET WIDE.

THE MOW STRIP SHALL BE PLACED ON COMPACTED EARTH AND CONSTRUCTED USING CLASS C CONCRETE WITH A CURING COMPOUND MEETING THE SPECIFICATIONS OF 705.07 OF THE CMS. THE MOW STRIP SHALL BE INTEGRAL TO THE SOCKETED CONCRETE FOUNDATION.

THE MOW STRIP SHALL HAVE A TRANSVERSE JOINT EVERY EIGHT FEET AND AN EXPANSION JOINT EVERY 100 FEET. THE JOINTS AND MATERIALS TO CONSTRUCT THE JOINTS SHALL CONFORM TO 608.03 (C) OF THE CMS.

IF MATERIAL FROM THE EXCAVATION OF THE MOW STRIP AND SOCKETED CONCRETE FOUNDATION IS WASTED ADJACENT TO THE MOW STRIP, THE AREA SHALL BE SEEDED AND MULCHED TO THE SPECIFICATIONS OF ITEM 659 IN THE CMS. PAYMENT FOR THIS WORK IS INCLUDED WITH THE UNIT BID PRICE FOR ITEM 690 SPECIAL-MISC.: MOW STRIP.

ALL MATERIAL, LABOR AND EQUIPMENT TO CONSTRUCT THE CONCRETE MOW STRIP SHALL BE PAID FOR UNDER ITEM 690 SPECIAL - MISC.: MOW STRIP.

SAFETY EDGE

IN ADDITION TO THE REQUIREMENTS OF 401.12, ATTACH A DEVICE TO THE SCREED OF THE PAYER THAT CONFINES THE MATERIAL AT THE END GATE AND EXTRUDES THE ASPHALT MATERIAL IN SUCH A WAY THAT RESULTS IN A COMPACTED WEDGE SHAPE PAVEMENT EDGE OF APPROXIMATELY 30 DEGREES (NOT STEEPER THAN 40 DEGREES). ENSURE THE DEVICE MAINTAINS CONTACT WITH THE EXISTING SURFACE, AND ALLOW FOR AUTOMATIC TRANSITION TO CROSS ROADS, DRIVEWAYS AND OBSTRUCTIONS. DO NOT USE CONVENTIONAL SINGLE PLATE STRIKE OFF.

CONSTRUCTION OF SAFETY EDGE CAN BE OMITTED AT LOCATIONS WHERE EXISTING WIDTH OF GRADED SHOULDER OR BERM IS LESS THAN 12". PROJECTS WITH VARYING CONDITIONS SHOULD USE SAFETY EDGE WHERE POSSIBLE. PLAN PREPARATION HAS MADE EVERY REASONABLE ATTEMPT TO IDENTIFY POSSIBLE SAFETY EDGE LOCATIONS.

USE THE TRANSTECH SHOULDER WEDGE MAKER, THE CARLSON SAFETY EDGE GATE, THE ADVANT-EDGER, THE TROXLER SAFET Slope OR A SIMILAR APPROVED-EQUAL DEVICE THAT PRODUCES THE SAME WEDGE CONSOLIDATION RESULTS. CONTACT INFORMATION FOR THESE WEDGE SHAPE COMPACTION DEVICES IS THE FOLLOWING:

TRANSTECH SYSTEMS, INC.
1594 STATE STREET
SCHENECTADY, NY 12304
1-800-724-6306
WWW.TRANSTECHSYS.COM

CARLSON SAFETY EDGE END GATE
18425 50TH AVENUE EAST
TACOMA, WA 98446
253-875-8000

SAFETY EDGE (CONTINUED)

ADVANT-EDGE PAVING EQUIPMENT LLC
P.O. BOX 9163
NISKAYUNA, NY 12309-0163
518-280-6090
WWW.ADVANTEDGEPAVING.COM

TROXLER ELECTRIC LABORATORIES, INC.
3008 E. CORNWALLIS RD.
RESEARCH TRIANGLE PARK, NC 27709
1-877-TROXLER
WWW.TROXLERLABS.COM

IF ELECTING TO USE A SIMILAR DEVICE, PROVIDE PROOF THAT THE DEVICE HAS BEEN USED ON PREVIOUS PROJECTS WITH ACCEPTABLE RESULTS OR CONSTRUCT A TEST SECTION PRIOR TO THE BEGINNING OF WORK AND DEMONSTRATE WEDGE COMPACTION TO THE SATISFACTION OF THE ENGINEER. SHORT SECTIONS OF HANDWORK WILL BE ALLOWED WHEN NECESSARY FOR TRANSITIONS AND TURNOUTS OR OTHERWISE AUTHORIZED BY THE ENGINEER.

IN ADDITION TO THE REQUIRMENTS OF 401.16, MAKE THE FIRST ROLLER PASS 8 TO 12 INCHES AWAY FROM TAPERED EDGE. DO NOT ROLL THE TAPER.

ITEM 209 - PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN

PREPARE THE SHOULDER FOR PAVING A CONSISTENT SAFETY EDGE IN BOTH THICKNESS AND WIDTH.

PRIOR TO PAVING THE SAFETY EDGE, GRADE AN AREA 10 INCHES WIDE, BEGINNING AT THE EDGE OF THE PAVED ROADWAY, TO PROVIDE A LEVEL SURFACE FREE OF VEGETATION FOR CONSTRUCTION OF THE SAFETY EDGE. IF NECESSARY, EXCAVATE GRADED END AREA TO THE DEPTH NECESSARY TO CONSTRUCT THE SAFETY EDGE. COMPACT THE GRADED SHOULDER ACCORDING TO 617.05, OR AS DIRECTED BY THE ENGINEER.

A QUANTITY OF 6.39 STATION HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN.

POST CONSTRUCTION STORM WATER TREATMENT

THIS PLAN UTILIZES STRUCTURAL BEST MANAGEMENT PRACTICES (BMP'S) FOR POST CONSTRUCTION STORM WATER TREATMENT.

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SHEET NUMBER												PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	CALCULATED	CMK	CHECKED	RAM
7	8	9	10	11	20	23	35	40	41	47	CALCS												
																		ROADWAY		GENERAL SUMMARY			
LUMP														201	11000	LUMP		CLEARING AND GRUBBING					
						2618								202	23000	2618	SO YD	PAVEMENT REMOVED					
						133								202	30700	133	FT	CONCRETE BARRIER REMOVED					
						1110								202	38101	1110	FT	GUARDRAIL REMOVED FOR STORAGE, AS PER PLAN	7				
						428								202	38401	428	FT	GUARDRAIL REMOVED FOR STORAGE, BARRIER DESIGN, AS PER PLAN	7				
						2								202	98100	2	EACH	REMOVAL MISC.: TENSIONED CABLE ANCHOR TERMINAL REMOVED					
						285								202	98200	285	FT	REMOVAL MISC.: TENSIONED CABLE REMOVED					
175				500		14	120	269						203	10000	1078	CU YD	EXCAVATION					
175				50			631	430						203	20000	1286	CU YD	EMBANKMENT					
											3661			204	10000	3661	SO YD	SUBGRADE COMPACTION					
	6.39													209	72001	6.39	STATION	PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN	8				
						1012.50								606	13000	1012.50	FT	GUARDRAIL, TYPE 5					
						250.00								606	15500	250.00	FT	GUARDRAIL, BARRIER DESIGN, TYPE 5					
						5								606	26000	5	EACH	ANCHOR ASSEMBLY, TYPE B					
						2								606	26500	2	EACH	ANCHOR ASSEMBLY, TYPE T					
						6								606	35000	6	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE I					
						2								606	60012	2	EACH	IMPACT ATTENUATOR, TYPE 1 (BIDIRECTIONAL)					
						300								606	98000	300	FT	GUARDRAIL, MISC.: TENSIONED CABLE WITH CONCRETE FOUNDATION					
																		LINE POST (SOCKETED)					
						2								606	98100	2	EACH	GUARDRAIL, MISC.: TENSIONED CABLE ANCHOR TERMINAL					
						86								622	10160	86	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D					
						2								622	25000	2	EACH	CONCRETE BARRIER END SECTION, TYPE D					
						2								622	25050	2	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D					
						134								SPECIAL	69098300	134	SO YD	MISC.: MOW STRIP	8				
																		EROSION CONTROL					
2														659	00100	2	EACH	SOIL ANALYSIS TEST					
255														659	00300	255	CU YD	TOP SOIL					
							1248	1028						659	10000	2276	SO YD	SEEDING AND MULCHING					
115														659	14000	115	SO YD	REPAIR SEEDING AND MULCHING					
115														659	15000	115	SO YD	INTER-SEEDING					
0.31														659	20000	0.31	TON	COMMERCIAL FERTILIZER					
0.47														659	31000	0.47	ACRE	LIME					
6														659	35000	6	M. GAL.	WATER					
														832	15000	LUMP		STORM WATER POLLUTION PREVENTION PLAN					
														832	30000	25000		EROSION CONTROL					
																		DRAINAGE					
										643				601	20000	643	SO YD	CRUSHED AGGREGATE SLOPE PROTECTION					
	4													601	21050	4	SO YD	TIED CONCRETE BLOCK MAT, TYPE 1					
						239								601	21060	239	SO YD	TIED CONCRETE BLOCK MAT, TYPE 2					
	100													603	01500	100	FT	6" CONDUIT, TYPE F					
	9													604	36600	9	EACH	PRECAST REINFORCED CONCRETE OUTLET					
						1207								605	11100	1207	FT	6" SHALLOW PIPE UNDERDRAINS, 707.31					
	50													605	13300	50	FT	6" UNCLASSIFIED PIPE UNDERDRAINS, 707.31					
	145													605	31100	145	FT	AGGREGATE DRAINS					
																		PAVEMENT					
												288		301	46000	288	CU YD	ASPHALT CONCRETE BASE, PG64-22					
												590		304	20000	590	CU YD	AGGREGATE BASE					
												1048		305	14000	1048	SO YD	10" CONCRETE BASE					
												79		407	13900	79	GALLON	TACK COAT, 702.13					
												123		407	14000	123	GALLON	TACK COAT FOR INTERMEDIATE COURSE					
												43		442	20000	43	CU YD	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (448)					
												85		442	20200	85	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (448)					

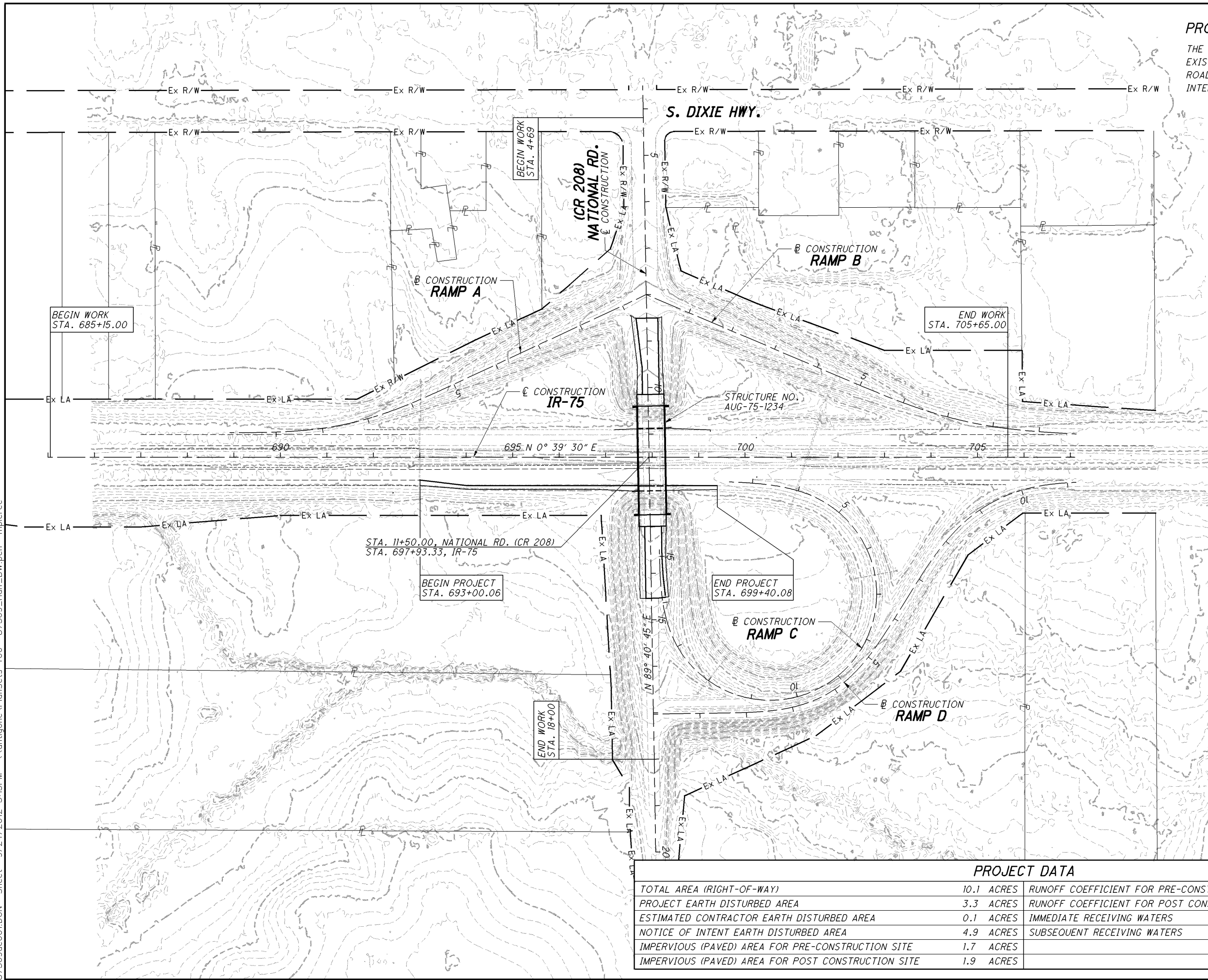
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SHEET NUMBER												PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	CALCULATED	CMK	CHECKED	RAM
7	8	9	10	11	20	23	35	40	41	47	CALCS												
																		PAVEMENT CONTINUED					
											100			448	46050	100	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22					
											79			448	47020	79	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22					
						100								609	24000	100	FT	CURB, TYPE 4-A					
						40								609	24510	40	FT	CURB, TYPE 4-C					
		1400												618	40101	1400	FT	RUMBLE STRIPS, (ASPHALT CONCRETE), AS PER PLAN	9				
																		TRAFFIC CONTROL					
									26					621	00100	26	EACH	RPM					
									26					621	54000	26	EACH	RAISED PAVEMENT MARKER REMOVED					
						49								626	00100	49	EACH	BARRIER REFLECTOR					
									47					630	03100	47	FT	GROUND MOUNTED SUPPORT, NO. 3 SUPPORT					
									14					630	08004	14	FT	ONE WAY SUPPORT, NO. 3 SUPPORT					
									2					630	08600	2	EACH	SIGN POST REFLECTOR					
									11					630	85100	11	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION					
									0.77					644	00104	0.77	MILE	EDGE LINE, 6"					
									0.39					644	00204	0.39	MILE	LANE LINE, 6"					
									206					644	00404	206	FT	CHANNELIZING LINE, 12"					
									725					644	01510	725	FT	DOTTED LINE, 6"					
									0.49					646	10000	0.49	MILE	EDGE LINE, 4"					
									0.31					646	10100	0.31	MILE	LANE LINE, 4"					
									0.23					646	10200	0.23	MILE	CENTER LINE					
									128					646	10300	128	FT	CHANNELIZING LINE, 8"					
									49					646	10400	49	FT	STOP LINE					
									2					646	20400	2	EACH	WORD ON PAVEMENT, 72"					
																		MAINTENANCE OF TRAFFIC					
				150										614	11110	150	HOURL	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE					
			4330											614	11620	4330	FT	LINEAR DELINEATION					
					10									614	12336	10	EACH	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)					
			6											614	12484	6	EACH	WORK ZONE INCREASED PENALTIES SIGN					
		5												614	12500	5	EACH	REPLACEMENT SIGN					
														614	12600	100	EACH	REPLACEMENT DRUM					
		100												614	13000	7	CU YD	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC					
		144												614	13300	144	EACH	BARRIER REFLECTOR, TYPE B					
		104												614	13350	104	EACH	OBJECT MARKER, ONE WAY					
		40												614	13360	40	EACH	OBJECT MARKER, TWO WAY					
				12										614	18601	12	SIGN MONTH	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	10				
		0.10			0.33									614	20000	0.43	MILE	WORK ZONE LANE LINE, CLASS I					
		0.10			0.49									614	21000	0.59	MILE	WORK ZONE CENTER LINE, CLASS I					
		1.00			2.21									614	22200	3.21	MILE	WORK ZONE EDGE LINE, CLASS I, 740.06, TYPE I					
		2000			3931									614	23000	5931	FT	WORK ZONE CHANNELIZING LINE, CLASS I					
														614	24000	1249	FT	WORK ZONE DOTTED LINE, CLASS I					
		25			58									614	26000	83	FT	WORK ZONE STOP LINE, CLASS I					
					1123									615	20001	1123	SQ YD	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	11				
		6												616	10000	6	M. GAL.	WATER					
					6340									622	40020	6340	FT	PORTABLE CONCRETE BARRIER, 32"					
					480									622	40041	480	FT	PORTABLE CONCRETE BARRIER, 32", BRIDGE MOUNTED, AS PER PLAN	11				
																		STRUCTURES OVER 20 FEET					
																		FOR STRUCTURE NO. AUG-75-1234 GENERAL SUMMARY	47				
														SPECIAL	10830000	LUMP		CPM PROGRESS SCHEDULE SHORT DURATION PROJECTS					
														614	11000	LUMP		MAINTAINING TRAFFIC					
														619	16010	8	MONTH	FIELD OFFICE, TYPE B					
														623	10000	LUMP		CONSTRUCTION LAYOUT STAKES					
														624	10000	LUMP		MOBILIZATION					

GENERAL SUMMARY

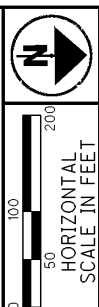
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PROJECT DESCRIPTION

THE PROJECT CONSISTS OF REPLACING THE EXISTING STRUCTURALLY DEFICIENT, NATIONAL ROAD (CR 208) BRIDGE (AUG-75-1234) OVER INTERSTATE ROUTE 75 (IR-75).



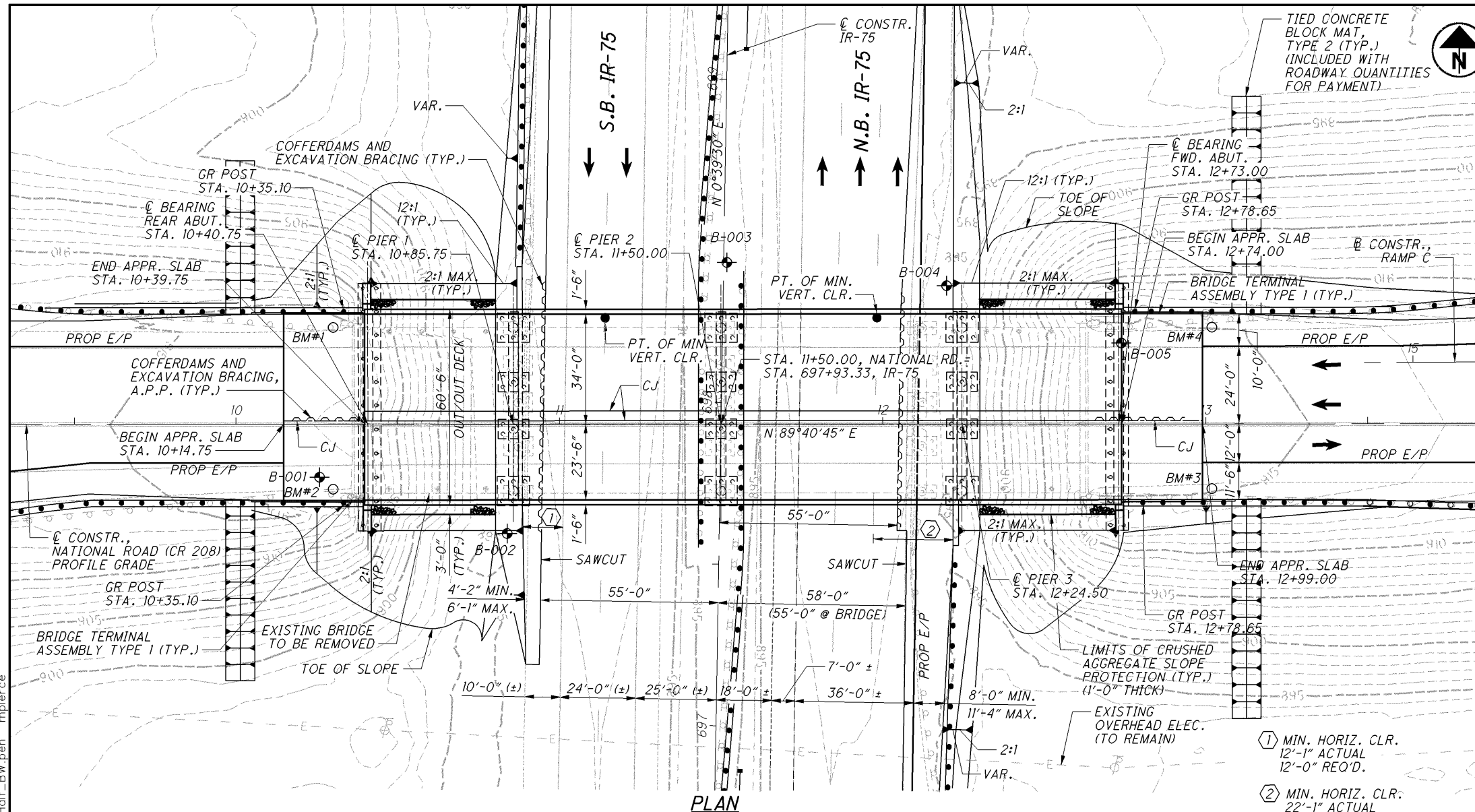
PROJECT SITE PLAN

AUG-75-12.34

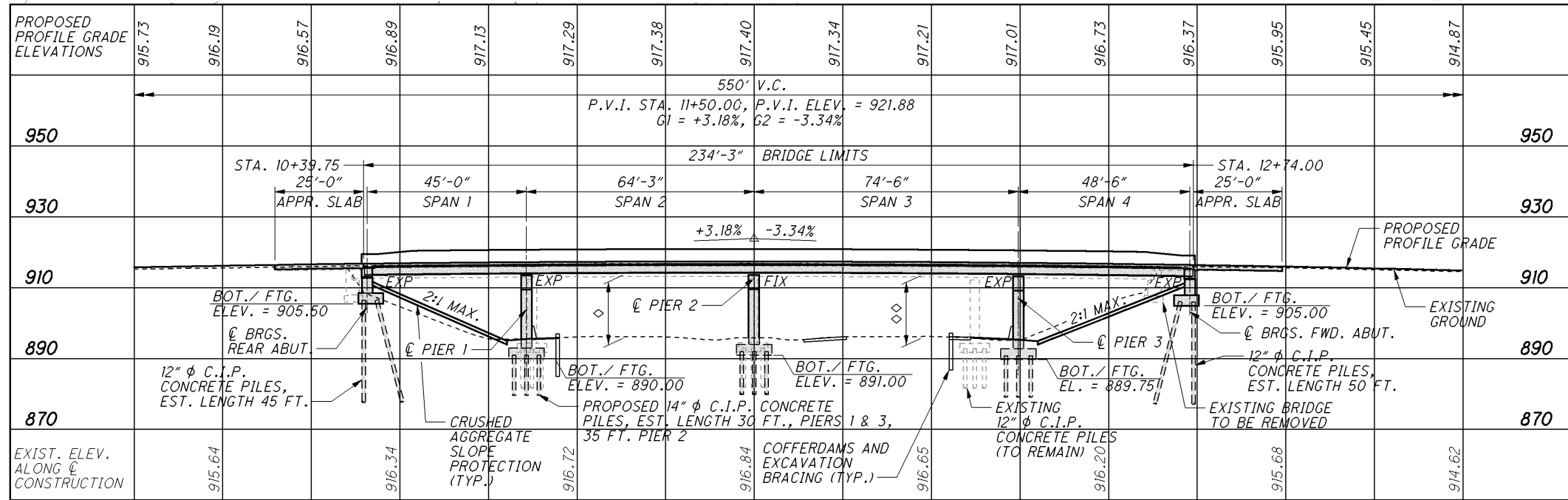
PROJECT DATA

TOTAL AREA (RIGHT-OF-WAY)	10.1 ACRES	RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE	0.6
PROJECT EARTH DISTURBED AREA	3.3 ACRES	RUNOFF COEFFICIENT FOR POST CONSTRUCTION SITE	0.6
ESTIMATED CONTRACTOR EARTH DISTURBED AREA	0.1 ACRES	IMMEDIATE RECEIVING WATERS	UNNAMED TRIBUTARY
NOTICE OF INTENT EARTH DISTURBED AREA	4.9 ACRES	SUBSEQUENT RECEIVING WATERS	LITTLE OTTAWA RIVER
IMPERVIOUS (PAVED) AREA FOR PRE-CONSTRUCTION SITE	1.7 ACRES		
IMPERVIOUS (PAVED) AREA FOR POST CONSTRUCTION SITE	1.9 ACRES		

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PLAN



PROFILE

MIN. VERT. CLR.
◇ 17'-1" ACTUAL, 16'-6" REQUIRED
◇◇ 17'-1" ACTUAL, 16'-6" REQUIRED

BENCHMARK DATA			
BM #1	STA. 10+30.68,	ELEV. 915.551,	OFFSET 32.42', LEFT
BM #2	STA. 10+30.97,	ELEV. 915.195,	OFFSET 24.11', RIGHT
BM #3	STA. 12+99.76,	ELEV. 914.171,	OFFSET 24.47', RIGHT
BM #4	STA. 12+99.89,	ELEV. 914.584,	OFFSET 33.88', LEFT

FOR ADDITIONAL BENCHMARK INFORMATION, SEE ROADWAY PLAN SHEET ②

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

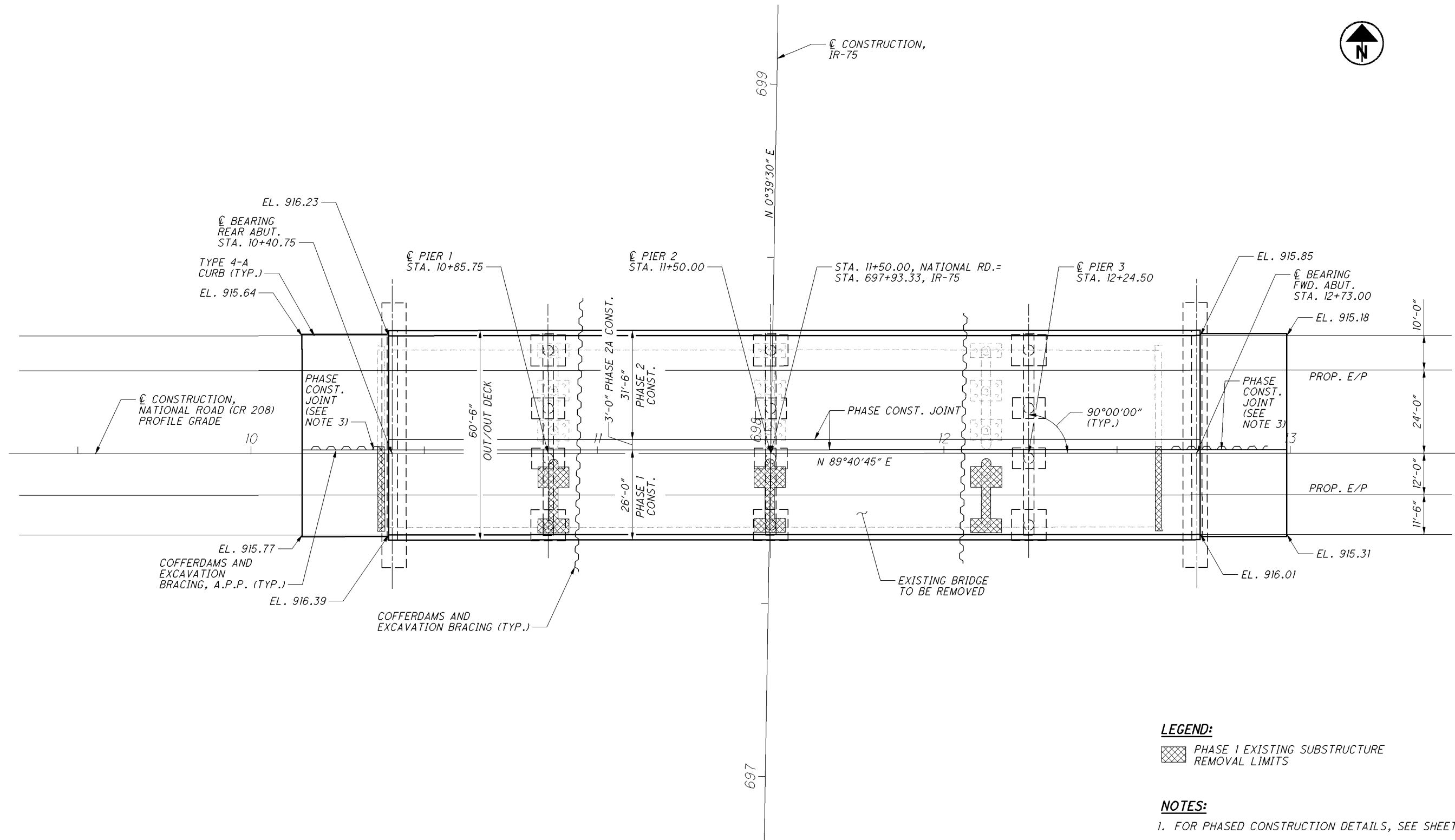
DESIGN TRAFFIC:
2014 ADT = 5720 2014 ADTT = 458
2034 ADT = 6220 2034 ADTT = 498
DIRECTIONAL DISTRIBUTION = 0.56

LEGEND
◆ BORING LOCATION (FOR BORING INFORMATION, SEE STRUCTURE EXPLORATION DRAWINGS)
○ BENCHMARK LOCATION

EXISTING STRUCTURE
TYPE: 4-SPAN CONTINUOUS ROLLED BEAMS WITH 8 1/4" (±) REINFORCED CONCRETE DECK AND SUBSTRUCTURES ON PILES
SPANS: 50'-0" (±) - 62'-6" (±) - 62'-6" (±) - 50'-0" (±) C/C BRGS.
ROADWAY: 51'-6" TOE/TOE PARAPET
LOADING: CF 400 (51)
WEARING SURFACE: 1 1/4" (±) LATEX MODIFIED CONCRETE OVERLAY
SKEW: NONE
APPROACH SLABS: AS-1-54 (20' LONG)
ALIGNMENT: TANGENT
CROWN: 0.016
STRUCTURAL FILE NUMBER: 0602434
DATE BUILT: 1958
DISPOSITION: TO BE REMOVED

PROPOSED STRUCTURE
TYPE: 4-SPAN CONTINUOUS COMPOSITE STEEL ROLLED BEAMS (ASTM A709, GRADE 50, PAINTED) WITH REINFORCED CONC. DECK, PIERS, AND SEMI-INTEGRAL ABUTMENTS ON PILES
SPANS: 45'-0" - 64'-3" - 74'-6" - 48'-6" C/C BRGS.
ROADWAY: 57'-6" TOE/TOE PARAPET
LOADING: HL-93, FWS=60 PSF
SKEW: NONE
APPROACH SLABS: 25'-0" LONG (AS-1-81)
ALIGNMENT: TANGENT
CROWN: 0.016
COORDINATES: LATITUDE N 40°39'16"
LONGITUDE W 84°07'54"

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GENERAL PLAN

LEGEND:

 PHASE 1 EXISTING SUBSTRUCTURE
REMOVAL LIMITS

NOTES:

1. FOR PHASED CONSTRUCTION DETAILS, SEE SHEETS 5 AND 6.
2. APPROACH SLAB ELEVATIONS ARE PROVIDED AT THE TOE OF CURB.
3. MECHANICAL CONNECTORS ARE REQUIRED FOR THE TOP AND BOTTOM TRANSVERSE BARS (B501) IN THE PHASE 1 APPROACH SLAB. FOR MECHANICAL CONNECTOR INFORMATION, SEE NOTE 6 ON SHEET 8. FOR ADDITIONAL APPROACH SLAB DETAILS, SEE STD. DWG. AS-1-81



STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

AS-1-81	REVISED	07-19-02
GSD-1-96	REVISED	07-19-02
PCB-91	REVISED	07-19-02
SBR-1-99	REVISED	07-19-02
SICD-1-96	REVISED	07-19-02
VPF-1-90	REVISED	04-15-11

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):

800	DATED	10-19-12
898	DATED	10-21-11

DESIGN SPECIFICATIONS

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 5th EDITION, INCLUDING THE 2010 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

LOAD MODIFIER FOR OPERATIONAL IMPORTANCE

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, 2007.

DESIGN LOADING

DESIGN LOADING: HL-93
FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/SQ.FT.

DESIGN DATA

CONCRETE CLASS OSC2 - COMPRESSIVE STRENGTH
4.5 KSI (SUPERSTRUCTURE)
CONCRETE CLASS OSC1 - COMPRESSIVE STRENGTH
4.0 KSI (SUBSTRUCTURE)
REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI
STRUCTURAL STEEL - ASTM A709 GRADE 50
- YIELD STRENGTH 50 KSI

DECK PROTECTION METHOD

EPOXY COATED REINFORCING STEEL
2.5" CONCRETE COVER

MONOLITHIC WEARING SURFACE

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

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 CMS SECTIONS 102.05, 105.02 AND 513.04.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED IN THE FIELD.

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

THIS WORK CONSISTS OF THE PHASED REMOVAL OF THE EXISTING STRUCTURE WHEN IT IS NO LONGER NEEDED TO MAINTAIN TRAFFIC. ALL REMOVAL WORK SHALL BE IN ACCORDANCE WITH CMS 202 UNLESS NOTED OTHERWISE. THE FOOTINGS FOR EXISTING PIERS 1 AND 2 INTERFERE WITH THE CONSTRUCTION OF THE PROPOSED FOOTINGS FOR PIERS 1 AND 2 AND SHALL BE COMPLETELY REMOVED. THE EXISTING 12" ϕ C.I.P. PILES AT PIERS 1 AND 2 THAT ARE IN

CONFLICT WITH THE PROPOSED FOOTING, SHALL BE CUT OFF 2 FEET BELOW THE PROPOSED BOTTOM OF THE FOOTING ELEVATION. BACKFILL THE CAVITY CREATED BY THE PIER FOOTING AND PILE REMOVAL UP TO THE PROPOSED BOTTOM OF FOOTING ELEVATION, ACCORDING TO CMS SECTION 202.02. REMOVE EXISTING SUBSTRUCTURE NOT IN CONFLICT WITH THE PROPOSED STRUCTURE TO 1 FOOT BELOW THE PROPOSED GROUND SURFACE.

PRIOR TO DEMOLITION OF ANY PORTIONS OF THE EXISTING STRUCTURE THE CONTRACTOR SHALL SUBMIT PLANS FOR THE PROTECTION OF VEHICULAR TRAFFIC ON OR UNDER THE STRUCTURE AND PEDESTRIAN TRAFFIC ADJACENT TO AND/OR UNDER THE STRUCTURE TO THE DIRECTOR FOR APPROVAL. THESE PLANS SHALL INCLUDE PROVISIONS FOR ANY DEVICES AND STRUCTURES THAT MAY BE NECESSARY TO ENSURE SUCH PROTECTION. TRAFFIC ON THE STRUCTURE AND UNDER THE STRUCTURE SHALL BE MAINTAINED AT ALL TIMES IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC PLANS. THE EXISTING VERTICAL CLEARANCE SHALL BE MAINTAINED AT ALL TIMES EXCEPT AS APPROVED BY THE DIRECTOR. ALL COSTS ASSOCIATED WITH THIS WORK SHALL BE INCLUDED WITH ITEM 202 FOR PAYMENT.

PILE DESIGN LOADS (ULTIMATE BEARING VALUE)

ABUTMENTS:

ULTIMATE BEARING VALUE IS 300 KIPS PER PILE
1 DYNAMIC LOAD TESTING ITEM
REAR ABUTMENT:
18 - 12 INCH ϕ C.I.P. PILES, 50 FEET LONG, ORDER LENGTH
FORWARD ABUTMENT:
18 - 12 INCH ϕ C.I.P. PILES, 55 FEET LONG, ORDER LENGTH
PIERS:

ULTIMATE BEARING VALUE IS 360 KIPS PER PILE
1 DYNAMIC LOAD TESTING ITEM
PIER 1:
22 - 14 INCH ϕ C.I.P. PILES, 35 FEET LONG, ORDER LENGTH
PIER 2:
22 - 14 INCH ϕ C.I.P. PILES, 40 FEET LONG, ORDER LENGTH
PIER 3:
22 - 14 INCH ϕ C.I.P. PILES, 35 FEET LONG, ORDER LENGTH

BATTERED PILES

THE BLOW COUNT FOR BATTERED PILES SHALL BE THE BLOW COUNT DETERMINED FOR VERTICAL PILES OF THE SAME ULTIMATE BEARING VALUE DIVIDED BY AN EFFICIENCY FACTOR (D). COMPUTE THE EFFICIENCY FACTOR (D) AS FOLLOWS:

$$D = \frac{1-UG}{\sqrt{(1+G^2)}}$$

U = COEFFICIENT OF FRICTION, WHICH IS ESTIMATED AT 0.05 FOR DOUBLE-ACTING AIR OPERATED OR DIESEL HAMMERS;
0.1 FOR SINGLE-ACTING AIR OPERATED OR DIESEL HAMMERS;
AND 0.2 FOR DROP HAMMERS.
G = RATE OF BATTER (1/4)

ITEM 503, COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN

THIS WORK SHALL CONSIST OF TEMPORARY SHEET PILING ALONG NATIONAL RD. AT BOTH REAR AND FWD. ABUTMENT PHASE 1 CONSTRUCTION JOINTS. THE WORK SHALL BE IN ACCORDANCE WITH ITEM 503, EXCEPT THAT STEEL SHEET PILING SHALL SATISFY THE MINIMUM SECTION AND MATERIAL PROPERTIES BELOW.

MINIMUM SECTION MODULUS:	48.4 IN3/FT
MINIMUM MOMENT OF INERTIA:	406.5 IN4/FT
STRUCTURAL STEEL:	A709
MINIMUM YIELD STRENGTH:	50 KSI
MINIMUM REQUIRED SHEET PILE EMBEDMENT	
LENGTH BELOW THE BOTTOM OF EXCAVATION:	14 FT
MAXIMUM HEIGHT OF RETAINED FILL:	12 FT
MAX. BOT. OF SHEET PILE ELEVATION	
(MINIMUM EMBEDMENT):	891.00'
MIN. TOP OF SHEET PILE ELEVATION:	917.50'

GENERAL NOTES

ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, CONTINUED

THE DESIGN SHOWN ON THE PLANS FOR TEMPORARY SUPPORT OF EXCAVATION IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN ON THE PLANS OR PREPARE AN ALTERNATE DESIGN TO SUPPORT THE SIDES OF EXCAVATIONS. IF CONSTRUCTING AN ALTERNATE DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH CMS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION AT THE CONTRACT LUMP SUM PRICE FOR COFFERDAMS AND EXCAVATION BRACING. NO ADDITIONAL PAYMENT WILL BE MADE FOR PROVIDING AN ALTERNATE DESIGN.

ITEM 512 - SEALING OF CONCRETE BRIDGE DECKS WITH HMWM RESIN

FOR HMWM RESIN SEALING LIMITS, SEE SHEET 21.

ITEM 514 - FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN

THE FINISH COAT COLOR SHALL BE LIGHT GREEN, FEDERAL COLOR NUMBER 14277.

ITEM 516 - ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN

FOR BEARING REQUIREMENTS, SEE SHEETS 14 AND 15.

DECK PLACEMENT DESIGN ASSUMPTIONS:

THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 0.95 KIPS FOR A TOTAL MACHINE LOAD OF 7.6 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

INTERIM COMPLETION DATE

THE INTENT OF THIS PLAN IS TO COMPLETE ALL WORK WITHIN THE 2013 CALENDAR YEAR. WORK THAT DISRUPTS IR-75 TRAFFIC IS CRITICAL TO BE COMPLETED AS A MAJOR REHAB PROJECT IS CURRENTLY SCHEDULED TO START IN EARLY 2014 JUST NORTH OF THIS PROJECT ON IR-75. ALL PAVEMENT AND STRUCTURE WORK, INCLUDING FINAL PAVEMENT MARKING AND BRIDGE BEAM PAINTING, WHICH MAY DISRUPT IR-75 TRAFFIC SHALL BE COMPLETED BY THE INTERIM COMPLETION DATE OF 9/7/13. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF \$5000 PER DAY FOR EACH CALENDAR DAY ANY LANE RESTRICTION REMAINS IN EFFECT ON IR-75 BEYOND THIS DATE.

GENERAL NOTES

BRIDGE NO. AUG-075-1234
NATIONAL ROAD (CR208) OVER IR-75

AUG-075-12.34
PID No. 87369

3 / 28

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DESIGN AGENCY
CH2MHILL
DAYTON CENTRE, SUITE 1100
ONE SOUTH MAIN STREET
DAYTON, OHIO 45402

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ABBREVIATIONS

THE FOLLOWING ABBREVIATIONS HAVE BEEN USED THROUGHOUT THESE PLANS:

- & = AND
@ = AT
AASHTO = AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
ABUT. = ABUTMENT
ADT = AVERAGE DAILY TRAFFIC
ADTT = AVERAGE DAILY TRUCK TRAFFIC
A.P.P. = AS PER PLAN
APPR. = APPROACH
ASTM = AMERICAN SOCIETY OF TESTING AND MATERIALS

BOT. = BOTTOM
BOT./FTG. = BOTTOM OF FOOTING
BRGS. = BEARINGS
B/W /BTWN. = BETWEEN

CL = CENTERLINE
CB = CATCH BASIN
C/C = CENTER TO CENTER
CIP = CAST-IN-PLACE
CJ = CONSTRUCTION JOINT
CLR. = CLEAR
CMS = CONSTRUCTION AND MATERIAL SPECIFICATIONS
CONC. = CONCRETE
CONSTR. = CONSTRUCTION
CPP = CORRUGATED PLASTIC PIPE
CU = CUBIC

DEFL. = DEFLECTION
DIA. = DIAMETER
DL = DEAD LOAD
DWG. = DRAWING

E = EAST
EB = EASTBOUND
EF = EACH FACE
EL./ELEV. = ELEVATION
E/P = EDGE OF PAVEMENT
EO. = EQUAL
EXIST. = EXISTING
EXP. = EXPANSION

F = FARENHEIT
FF = FAR FACE
F/F = FACE TO FACE
FT. = FEET
FTG. = FOOTING
FWD. = FORWARD
FWS = FUTURE WEARING SURFACE

GEN. = GENERAL
GR = GUARDRAIL

HORIZ. = HORIZONTAL
HR = HOUR

' = FEET
" = INCHES
INC. = INCREMENT

KSI = KIPS PER SQUARE INCH

LBS = POUNDS
LL = LIVE LOAD
LONG. = LONGITUDINAL
LT. = LEFT

MAX. = MAXIMUM
MIN. = MINIMUM
MISC. = MISCELLANEOUS
MSE = MECHANICALLY STABILIZED EMBANKMENT

N = NORTH
NB = NORTHBOUND
#/NO. = NUMBER
NF = NEAR FACE

O/O = OUT TO OUT
O.H. = OVERHEAD

PL = PLATE
PEJF = PREFORMED EXPANSION JOINT FILLER

P.G. = PROFILE GRADE
PSI = POUND PER SQUARE INCH
PT. = POINT

P.V.I. = POINT OF VERTICAL INTERSECTION
R = RADIUS
RDWY. = ROADWAY
RF = RIGHT FORWARD
REQ'D = REQUIRED
RT. = RIGHT
R/W = RIGHT OF WAY

S = SOUTH
SB = SOUTHBOUND
SHLDR = SHOULDER
SPA. = SPACING

SQ = SQUARE
STA. = STATION
STD. = STANDARD
STR. = STRAIGHT
SUPER. = SUPERSTRUCTURE

T = THICKNESS
TRANS. = TRANSVERSE
T/S = TOP OF SLOPE
TYP. = TYPICAL

U.G. = UNDERGROUND
U.N.O = UNLESS NOTED OTHERWISE

VAR. = VARIES
V.C. = VERTICAL CURVE
VERT. = VERTICAL

W = WEST
W/O = WITHOUT
WT. = WEIGHT

ESTIMATED QUANTITIES										
ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT.	PIER	SUPER.	GEN.	SHEET #	
202	11003	LUMP		STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LUMP	3 / 28	
202	22900	200	SQ YD	APPROACH SLAB REMOVED				200		
503	11100	LUMP		COFFERDAMS AND EXCAVATION BRACING		LUMP				
503	11101	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	LUMP				3 / 28	
503	21100	623	CU YD	UNCLASSIFIED EXCAVATION	351	272				
505	11100	LUMP		PILE DRIVING EQUIPMENT MOBILIZATION	LUMP	LUMP				
507	00500	1710	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	1710					
507	00550	1890	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	1890					
507	00600	2090	FT	14" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN		2090				
507	00650	2420	FT	14" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED		2420				
509	10000	215241	POUND	EPOXY COATED REINFORCING STEEL	12336	55926	146979			
512	10100	1106	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	70	628	408		3 / 28	
512	10300	144	SQ YD	SEALING OF CONCRETE BRIDGE DECKS WITH HMWM RESIN			144		3 / 28	
512	33000	58	SQ YD	TYPE 2 WATERPROOFING	58					
513	10240	318991	POUND	STRUCTURAL STEEL MEMBERS, LEVEL 2			318991			
513	20000	8736	EACH	WELDED STUD SHEAR CONNECTORS			8736			
514	00060	16261	SQ FT	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			16261			
514	00067	16261	SQ FT	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN			16261		3 / 28	
516	13900	38	SQ FT	2" PREFORMED EXPANSION JOINT FILLER	38					
516	14020	150	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	150					
516	44101	14	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN	14				3 / 28	
				(11" x 2 ³ / ₈ " x 1'-1" PAD WITH 1'-1" x 2" X 1'-2" STEEL LOAD PLATE)						
516	44200	14	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE)		14				
				(11 ¹ / ₂ " x 3 ³ / ₁₆ " x 1'-7" PAD WITH 1'-0 ¹ / ₂ " x 2 ¹ / ₄ " X 1'-8" STEEL LOAD PLATE)						
516	44200	7	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE)		7				
				(11 ¹ / ₂ " x 3 ³ / ₁₆ " x 1'-7" PAD WITH 1'-0 ¹ / ₂ " x 2 ¹ / ₄ " X 2'-3" STEEL LOAD PLATE)						
518	21200	74	CU YD	POROUS BACKFILL WITH FILTER FABRIC	74					
518	40000	153	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	153					
518	40010	34	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	34					
523	20000	2	EACH	DYNAMIC LOAD TESTING	1	1				
607	39900	410	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC			410			
898	10200	436	CU YD	QC/OA CONCRETE, CLASS OSC2, SUPERSTRUCTURE (DECK)			436			
898	10704	325	SQ YD	QC/OA CONCRETE, CLASS OSC2, SUPERSTRUCTURE (APPROACH SLAB), (T=15')				325		
898	11000	73	CU YD	QC/OA CONCRETE, CLASS OSC2, SUPERSTRUCTURE (PARAPET)			73			
898	11100	30	CU YD	QC/OA CONCRETE, CLASS OSC2, SUPERSTRUCTURE			30			
898	20100	133	CU YD	QC/OA CONCRETE, CLASS OSC1, SUBSTRUCTURE (PIER ABOVE FOOTING)		133				
898	20160	194	CU YD	QC/OA CONCRETE, CLASS OSC1, SUBSTRUCTURE (ABUTMENT INCLUDING FOOTING)	194					
898	20300	96	CU YD	QC/OA CONCRETE, CLASS OSC1, SUBSTRUCTURE (FOOTING)		96				

DRAINAGE QUANTITIES	
BRIDGE PLAN SHEET NO.	601
	CRUSHED AGGREGATE SLOPE PROTECTION
	SQ YD
1/28	637
8/28	6
TOTALS CARRIED TO THE SUB-SUMMARY ON SHEET 21/71	643

ESTIMATED QUANTITIES

BRIDGE NO. AUG-075-1234
NATIONAL ROAD (CR208) OVER IR-75

AUG-075-12.34
PID No. 87369

4 / 28

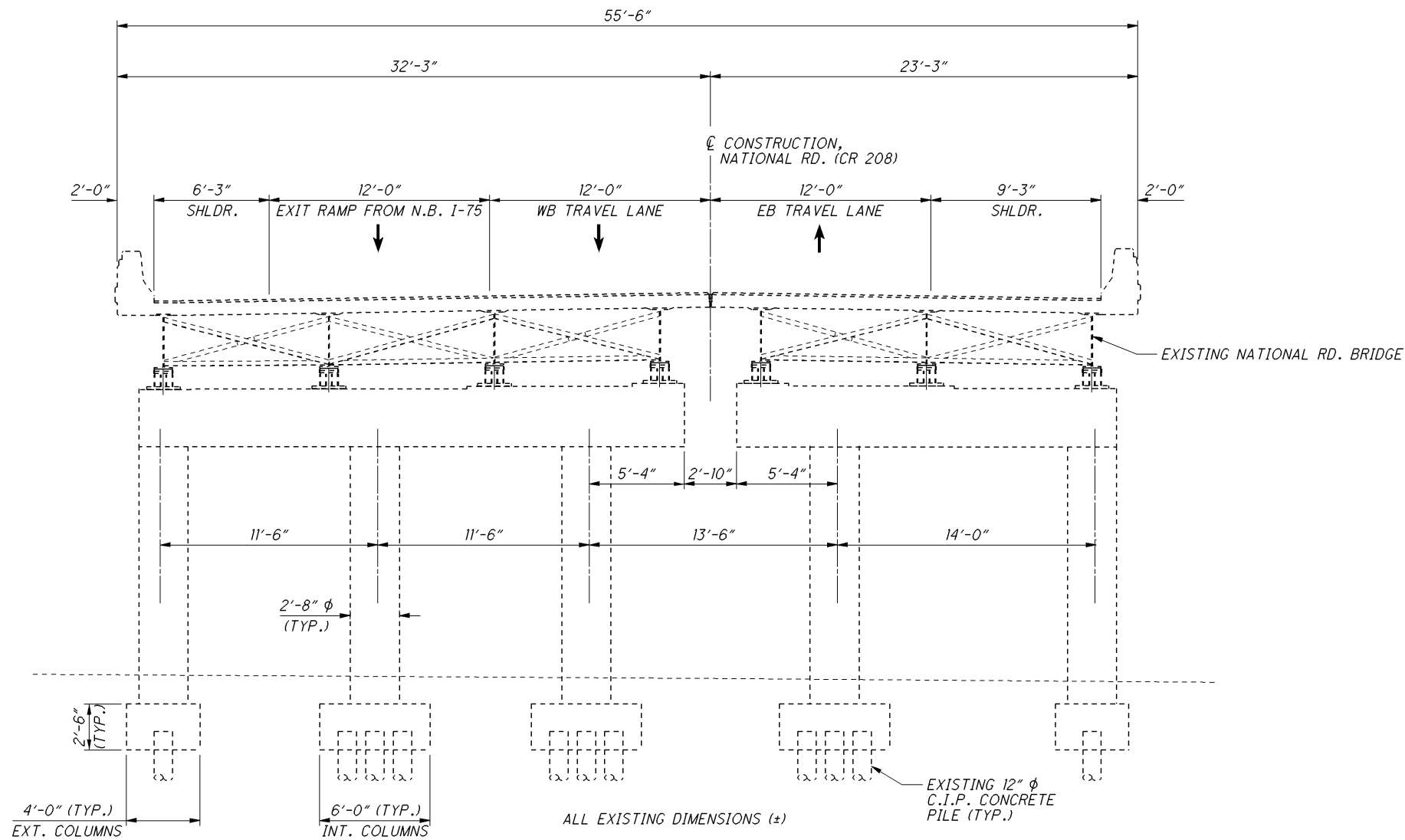
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DESIGN AGENCY
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EXISTING CONDITION

PROPOSED WORK:

IN GENERAL, THE PROPOSED WORK SHALL CONSIST OF THE REMOVAL OF THE EXISTING NATIONAL ROAD BRIDGE OVER IR-75 AND THE CONSTRUCTION OF THE REPLACEMENT BRIDGE IN PHASES. REMOVAL AND CONSTRUCTION OPERATIONS ARE TO BE PERFORMED WHILE MAINTAINING ONE LANE OF TRAFFIC IN EACH DIRECTION ON NATIONAL ROAD. THE MAJOR ITEMS OF WORK REQUIRING PHASED CONSTRUCTION ARE DESCRIBED BELOW. SOME PROJECT WORK ITEMS, SUCH AS SEALING OF CONCRETE SURFACES, MAY BE PERFORMED AT THE CONTRACTOR'S DISCRETION DURING THE CONTRACT SCHEDULE PERIOD; HOWEVER, THE PERFORMANCE OF ALL WORK MUST BE COORDINATED TO SATISFY MAINTENANCE OF TRAFFIC AND SAFETY REQUIREMENTS. SEE M.O.T. PLANS FOR ADDITIONAL MAINTENANCE OF TRAFFIC REQUIREMENTS.

A. PHASE 1 CONSTRUCTION: MOT PHASE 2, STEP 1

1. INSTALL PORTABLE CONCRETE BARRIER ON THE EXISTING NATIONAL ROAD NORTH BRIDGE AND APPROACHES. ROUTE TRAFFIC ACROSS THE BRIDGE ACCORDING TO MAINTENANCE OF TRAFFIC PLANS.
2. ROUTE TRAFFIC ON IR-75 ACCORDING TO MAINTENANCE OF TRAFFIC PLANS.
3. REMOVE SOUTHERN HALF OF EXISTING BRIDGE SUPERSTRUCTURE AND THE RIGHT OVERHANG OF THE NORTH BRIDGE IN ACCORDANCE WITH 202.03 AND PLAN REQUIREMENTS.
4. CONSTRUCT TEMPORARY SHORING ALONG THE OUTSIDE SHOULDERS OF IR-75, AS SHOWN IN THE PLANS, UP TO THE REMAINING PORTION OF THE EXISTING BRIDGE SUPERSTRUCTURE. CONSTRUCT TEMPORARY SHORING ALONG THE CENTERLINE OF NATIONAL ROAD AT THE REAR AND FORWARD ABUTMENTS.
5. EXCAVATE DOWN TO FOOTING ELEVATIONS. REMOVE EXISTING SUBSTRUCTURE. DRIVE NEW ABUTMENT AND PIER PILES.
6. CONSTRUCT RIGHT SEMI-INTEGRAL ABUTMENTS TO THE BRIDGE SEAT ELEVATIONS, INCLUDING WINGWALLS. CONSTRUCT RIGHT CAP AND COLUMN PIERS.
7. REMOVE TEMPORARY SHORING.
8. ERECT BEAMS 5,6, & 7. INSTALL INTERMEDIATE CROSSFRAMES BETWEEN THE BEAMS. CONSTRUCT THE RIGHT SEMI-INTEGRAL DIAPHRAGMS, DECK, PARAPET, AND APPROACH SLABS. INSTALL VANDAL PROTECTION FENCE.

B. PHASE 2 CONSTRUCTION: MOT PHASE 2, STEP 2

1. INSTALL PORTABLE CONCRETE BARRIER ON COMPLETED PHASE 1 PORTION OF THE BRIDGE AS SHOWN ON BRIDGE AND MAINTENANCE OF TRAFFIC PLANS. ROUTE TRAFFIC ONTO COMPLETED PHASE 1 PORTION OF THE BRIDGE.
2. REMOVE REMAINING PORTION OF EXISTING BRIDGE SUPERSTRUCTURE IN ACCORDANCE WITH 202.03 AND PLAN REQUIREMENTS. CONSTRUCT TEMPORARY SHORING ALONG THE OUTSIDE SHOULDERS OF IR-75 AS SHOWN IN PLANS, UP TO THE COMPLETED PHASE 1 PORTION OF THE BRIDGE.
3. EXCAVATE DOWN TO FOOTING ELEVATIONS. REMOVE EXISTING SUBSTRUCTURE. DRIVE NEW ABUTMENT AND PIER PILES.
4. CONSTRUCT LEFT SEMI-INTEGRAL ABUTMENTS TO THE BRIDGE SEAT ELEVATIONS, INCLUDING WINGWALLS. CONSTRUCT LEFT CAP AND COLUMN PIERS.
5. REMOVE TEMPORARY SHORING.
6. ERECT BEAMS 1,2,3, & 4. INSTALL INTERMEDIATE CROSS FRAMES BETWEEN BEAMS (EXCEPT AT CLOSURE POUR). CONSTRUCT LEFT REINFORCED CONCRETE SEMI-INTEGRAL DIAPHRAGM, DECK, PARAPET, AND APPROACH SLABS.

C. PHASE 2A CONSTRUCTION: MOT PHASE 2, STEP 2

1. INSTALL REMAINING INTERMEDIATE CROSSFRAMES BETWEEN BEAMS AT CLOSURE POUR.
2. CONSTRUCT THE REINFORCED CONCRETE DECK CLOSURE POUR.
3. INSTALL VANDAL PROTECTION FENCE ON NORTH SIDE OF BRIDGE.
4. REMOVE PORTABLE CONCRETE BARRIER AND PATCH ANCHOR BOLT HOLES IN BRIDGE DECK. ROUTE TRAFFIC ONTO COMPLETED BRIDGE ACCORDING TO MAINTENANCE OF TRAFFIC PLANS.

NOTE:

FOR ADDITIONAL PHASE CONSTRUCTION DETAILS, SEE SHEET 6.

PHASE CONSTRUCTION DETAILS I

BRIDGE NO. AUG-075-1234
NATIONAL ROAD (CR208) OVER IR-75

AUG-075-12.34
PID No. 87369

5 / 28

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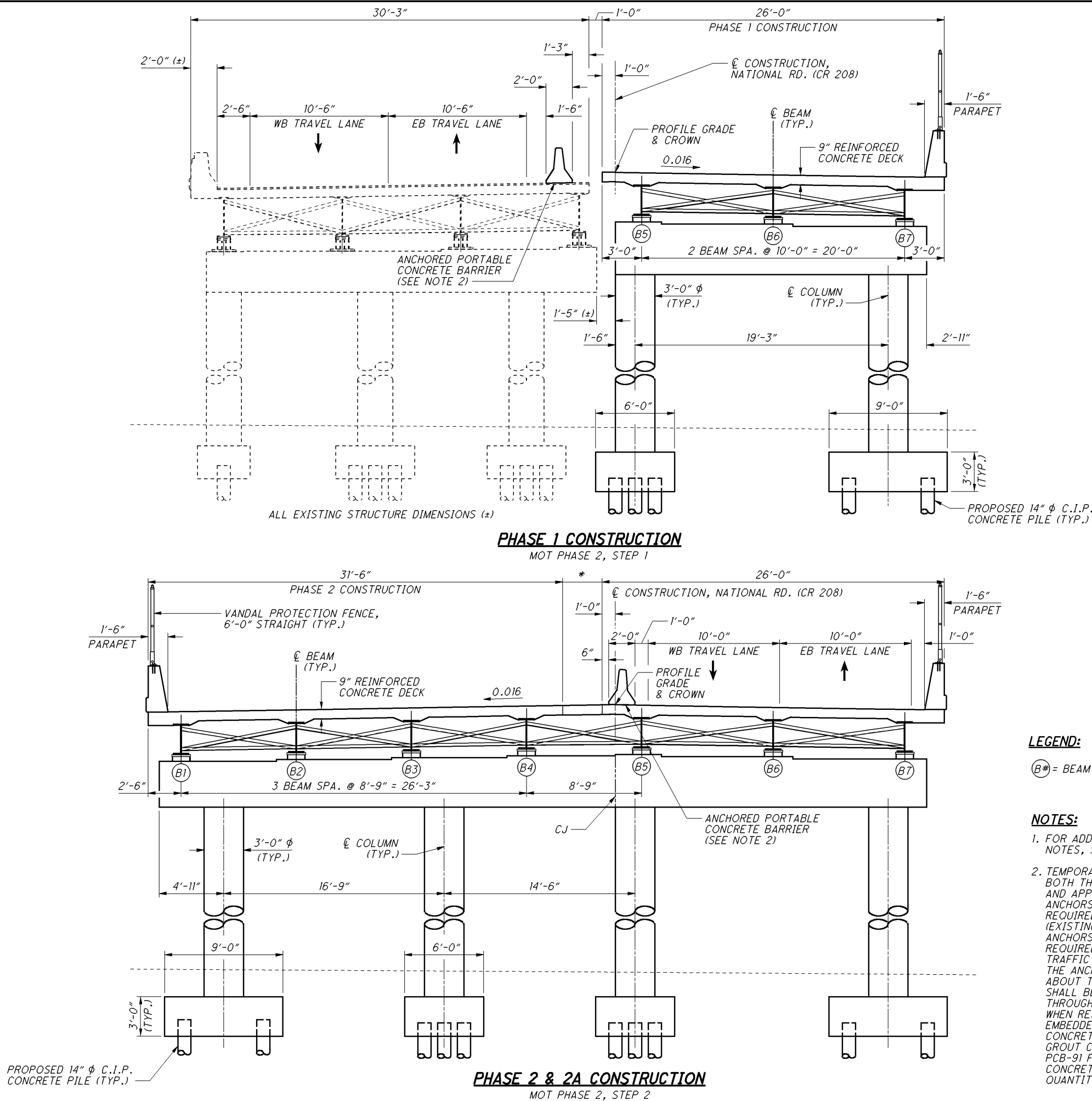
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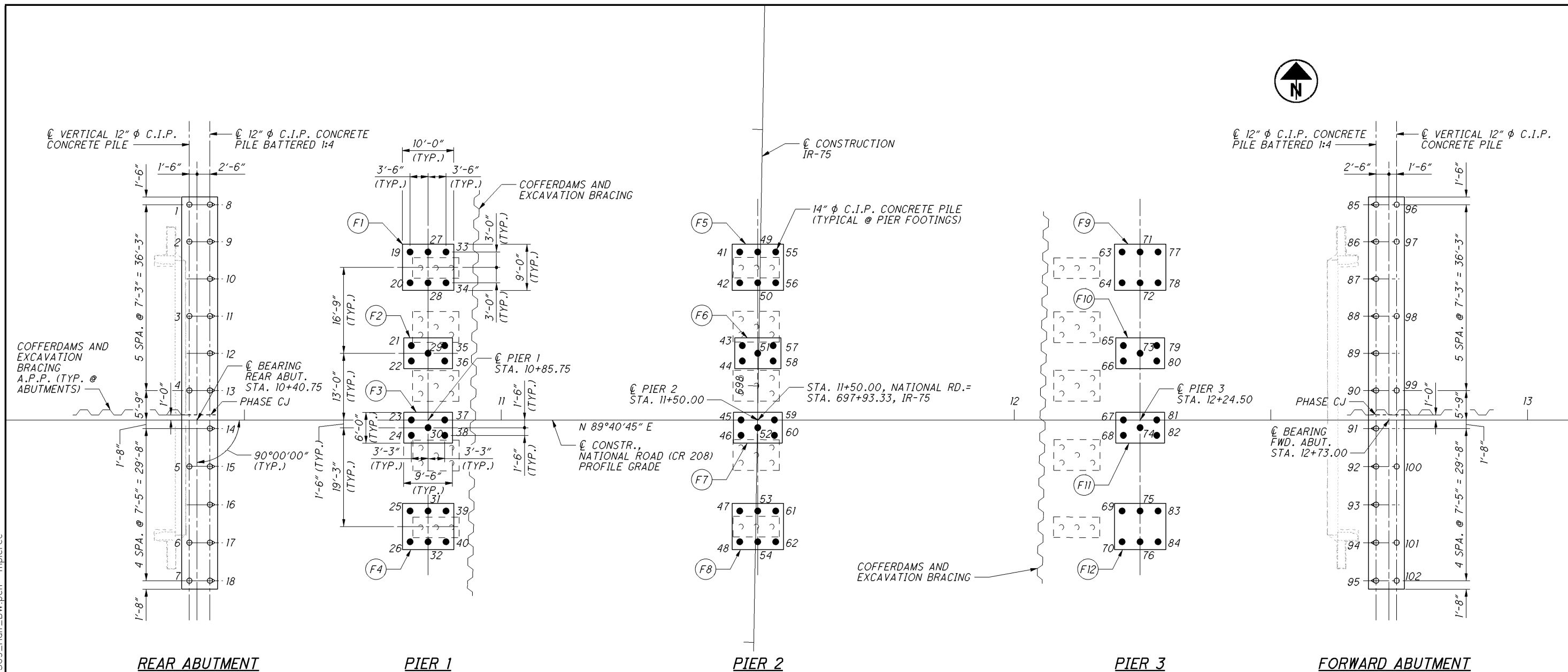
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PHASE CONSTRUCTION NOTES:

PHASE 1: AFTER THE REMOVAL OF THE SOUTHERN HALF OF THE EXISTING BRIDGE SUBSTRUCTURES, INSTALL THE REAR AND FORWARD ABUTMENT PILES RIGHT (LOOKING UPSTATION) OF THE PHASE CONSTRUCTION JOINT. INSTALL PILES FOR PIER FOOTINGS F3, F4, F7, F8, F11, AND F12.

PHASE 2: AFTER THE REMOVAL OF THE REMAINING PORTION OF THE EXISTING BRIDGE SUBSTRUCTURES, INSTALL THE REAR AND FORWARD ABUTMENT PILES LEFT (LOOKING UPSTATION) OF THE PHASE CONSTRUCTION JOINT. INSTALL PILES FOR PIER FOOTINGS F1, F2, F5, F6, F9, AND F10.

REFER TO SHEETS 5 & 6 FOR ADDITIONAL PHASE CONSTRUCTION INFORMATION.

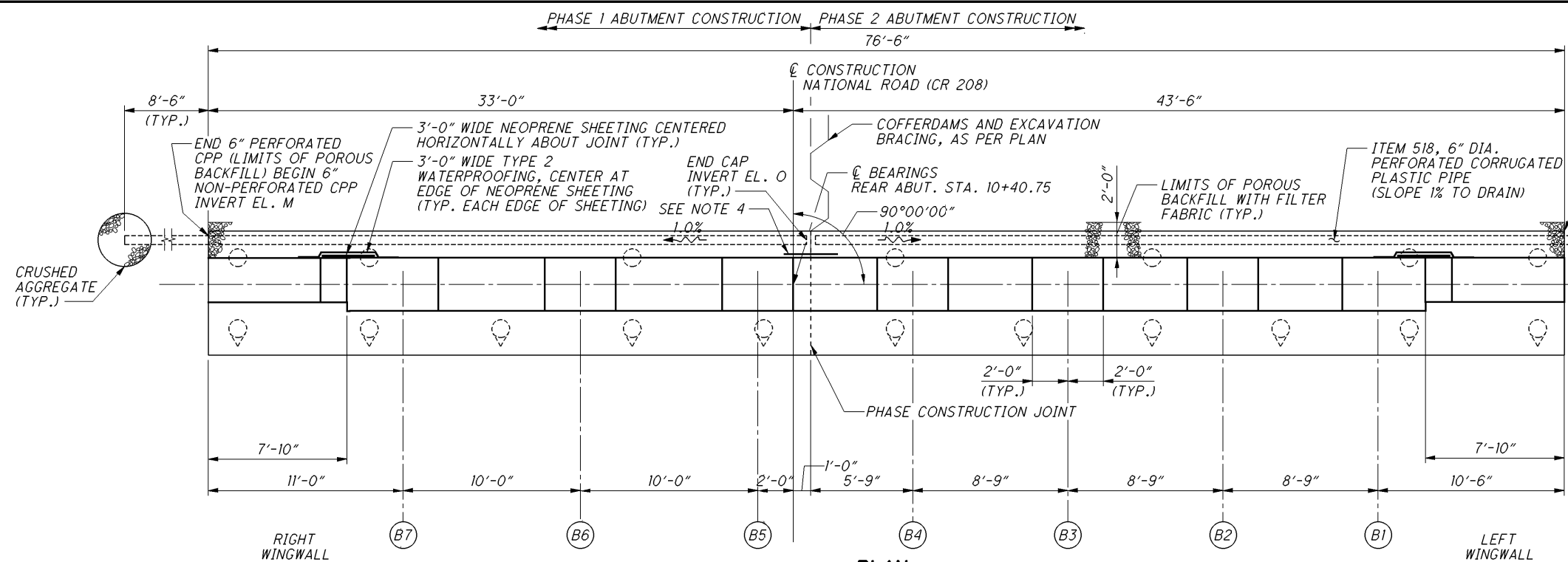
NOTES:

1. FOR FORWARD & REAR ABUTMENT PLANS AND DETAILS, SEE SHEETS 8 THROUGH 10.
2. FOR PIER PLANS AND DETAILS, SEE SHEETS 11 THROUGH 13.

LEGEND:

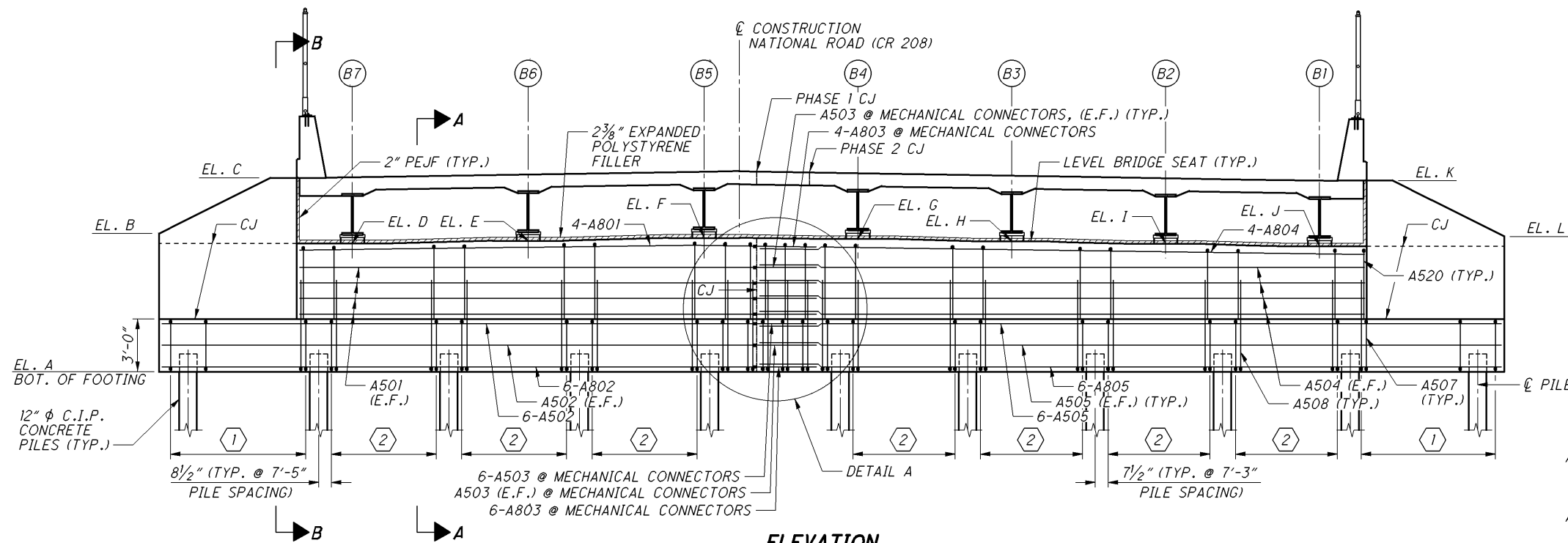
- DENOTES VERTICAL 12" ϕ C.I.P. CONCRETE PILE
- ◐ DENOTES 12" ϕ C.I.P. CONCRETE PILE BATTERED 1:4
- DENOTES VERTICAL 14" ϕ C.I.P. CONCRETE PILE
- ⊙ F# FOOTING DESIGNATION

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PLAN

REAR ABUTMENT SHOWN, FORWARD ABUTMENT SIMILAR BUT OPPOSITE HAND



ELEVATION

REAR ABUTMENT SHOWN, FORWARD ABUTMENT SIMILAR BUT OPPOSITE HAND

- 1 - REFER TO THE APPROPRIATE WINGWALL ELEVATION, SEE SHEET 10.
- 2 - 5-A507, 5-A508 & 5-A520 @ 1'-6"

ABUTMENT ELEVATION TABLE

LOCATION	EL. A	EL. B	EL. C	EL. D	EL. E	EL. F	EL. G	EL. H	EL. I	EL. J	EL. K	EL. L	EL. M	EL. N	EL. O
REAR ABUT.	905.50	913.23	916.40	912.49	912.65	912.81	912.73	912.59	912.45	912.31	916.23	913.06	908.59	908.50	908.93
FORWARD ABUT.	905.00	912.86	916.03	912.11	912.27	912.43	912.35	912.21	912.07	911.93	915.86	912.69	908.09	908.00	908.43

LEGEND:

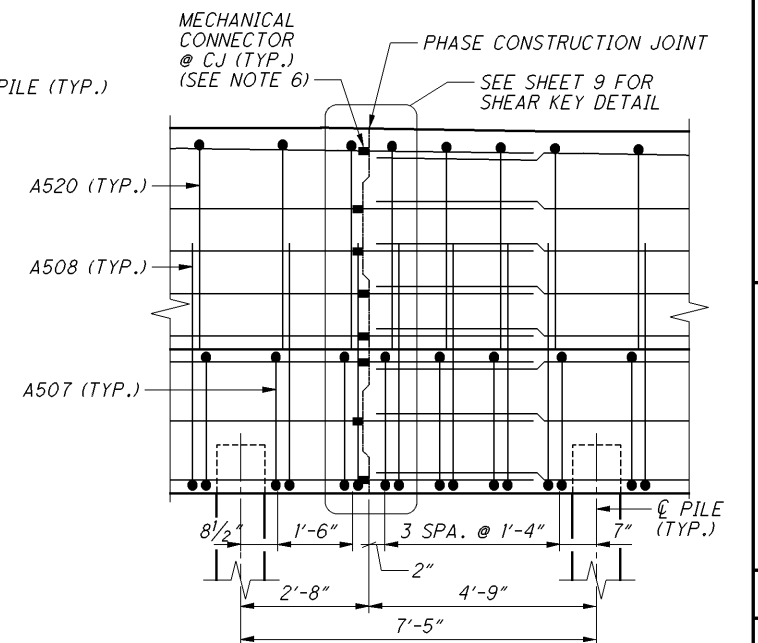
- B# BEAM DESIGNATION
- DENOTES VERTICAL 12"φ C.I.P. CONCRETE PILE
- DENOTES 12"φ C.I.P. CONCRETE PILE BATTERED 1:4

NOTES:

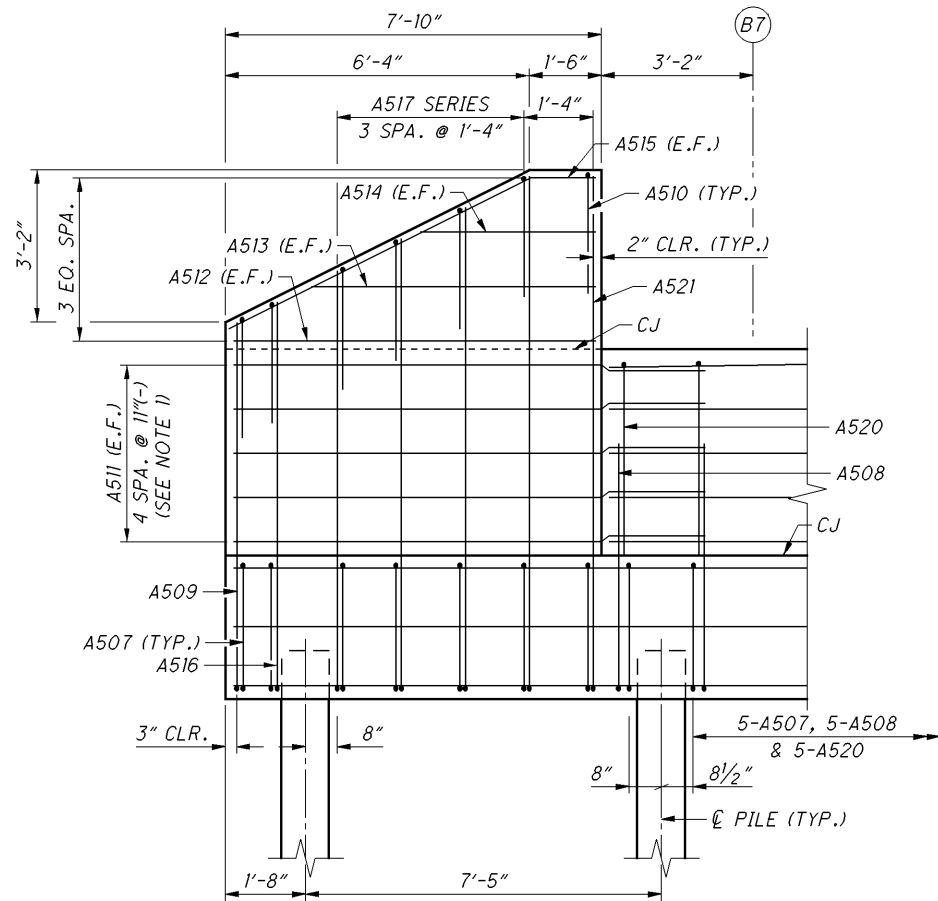
- FOR ABUTMENT AND FOOTING DETAILS, INCLUDING SECTIONS A-A AND B-B, SEE SHEETS 9 & 10.
- FOR ADDITIONAL ABUTMENT NOTES, SEE SHEETS 9 AND 10.
- FOR PILE LAYOUT PLAN, SEE SHEET 7.
- SEAL VERTICAL PHASE CONSTRUCTION JOINT ON BACKSIDE OF ABUTMENT BACKWALL FROM THE BOTTOM OF THE FOOTING TO THE APPROACH SLAB SEAT WITH ITEM 512, TYPE 2 WATERPROOFING, 3'-0" WIDE CENTERED ON THE JOINT.
- REINFORCING STEEL LAP LENGTHS: UNLESS OTHERWISE NOTED, LAPS SHALL BE AS FOLLOWS:
NO. 5 BARS = 3'-5"
NO. 8 BARS = 6'-10"
FOR REINFORCING STEEL LIST, SEE SHEET 27.
- AN APPROVED TYPE OF MECHANICAL CONNECTOR FOR REINFORCING BARS SHALL BE PROVIDED. INSTALLATION OF CONNECTORS SHALL CONFORM WITH MANUFACTURER'S RECOMMENDED PROCEDURES.

MECHANICAL CONNECTORS USED WITH EPOXY COATED BARS SHALL BE EPOXY COATED. COATING FOR BOTH CONNECTORS AND BARS SHALL CONFORM TO THE SAME SPECIFICATIONS. COATINGS WHICH HAVE BEEN DAMAGED OR WHICH OTHERWISE DO NOT MEET SPECIFICATIONS WITH RESPECT TO COLOR, CONTINUITY, AND UNIFORMITY MAY BE REPAIRED AS DIRECTED BY THE ENGINEER OR THEY SHALL BE REPLACED WITH MATERIAL THAT MEETS THE SPECIFICATIONS.

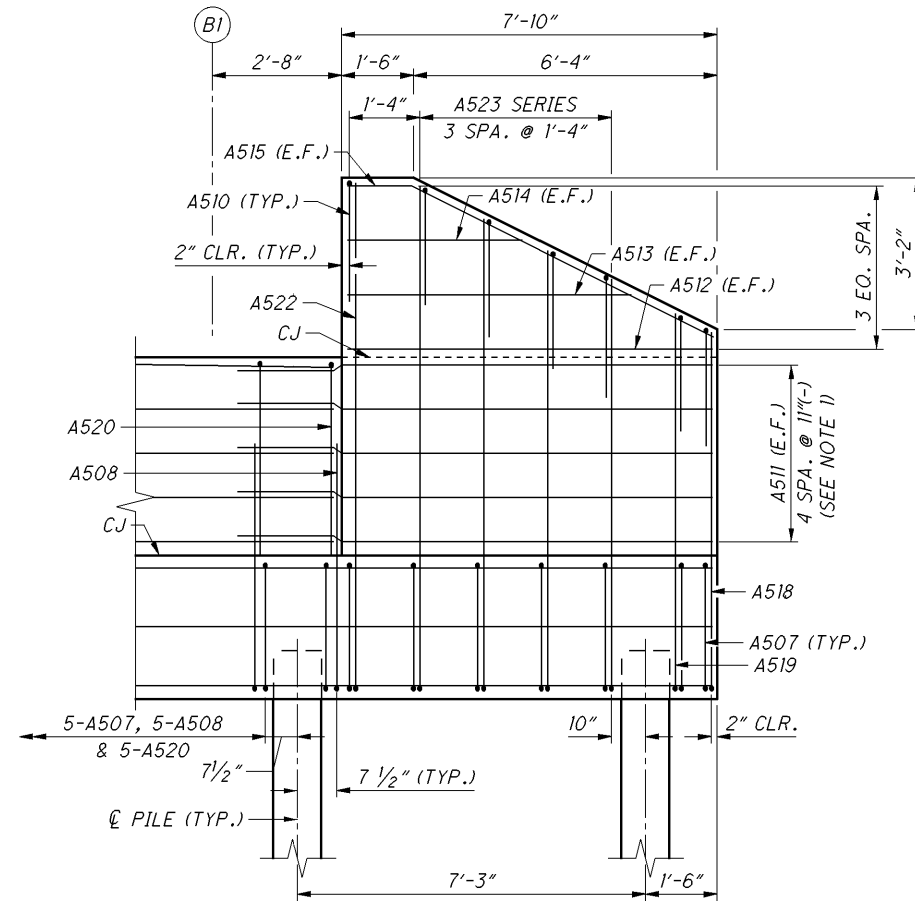
MECHANICAL CONNECTORS SHALL CONFORM WITH 509 AND BE INCLUDED IN THE BID PRICE FOR THIS ITEM 509, EPOXY COATED REINFORCING STEEL.



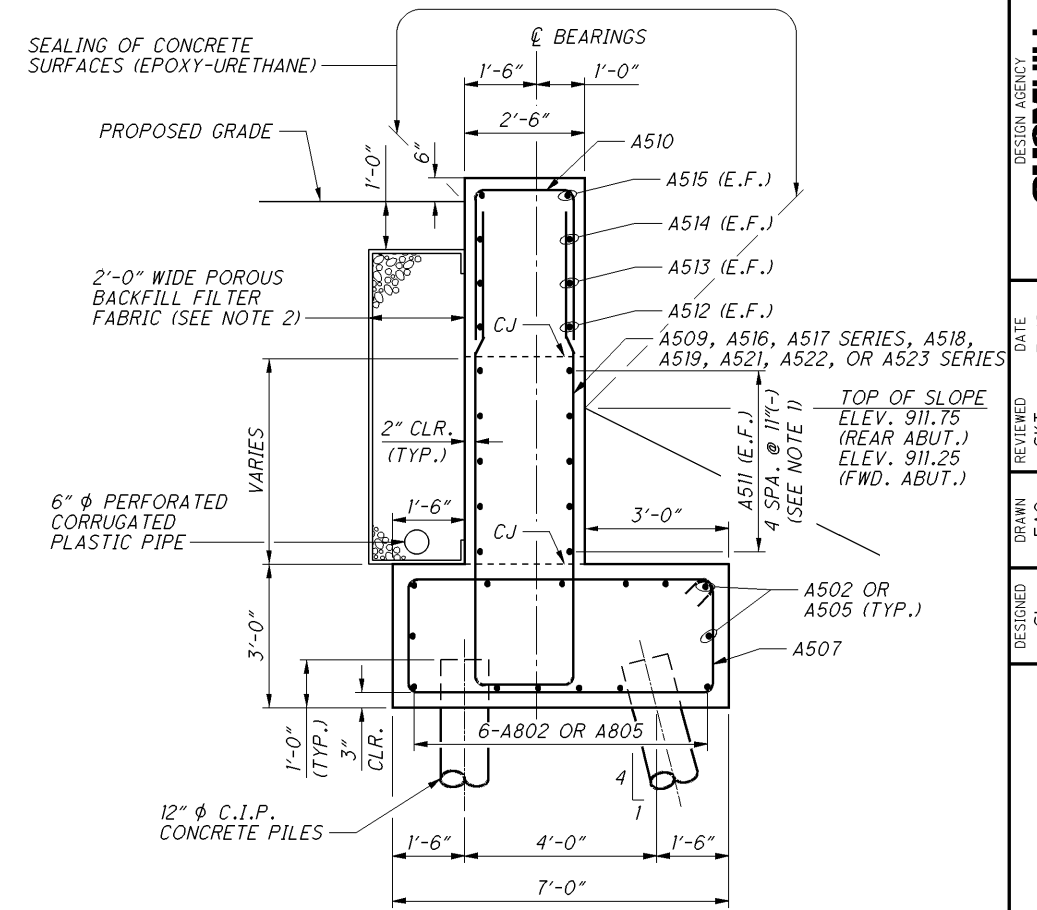
DETAIL A



RIGHT WINGWALL ELEVATION
(REAR ABUTMENT SHOWN, FORWARD
ABUTMENT SIMILAR BUT OPPOSITE HAND)



LEFT WINGWALL ELEVATION
(REAR ABUTMENT SHOWN, FORWARD
ABUTMENT SIMILAR BUT OPPOSITE HAND)

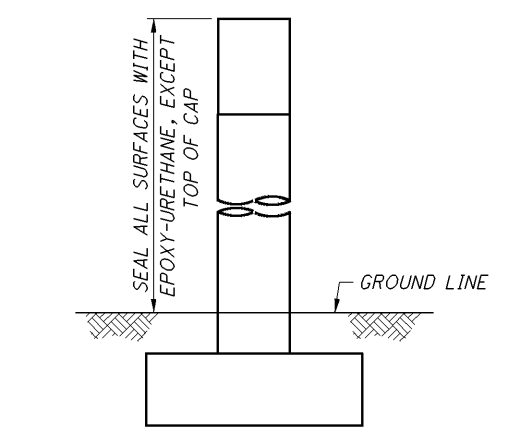
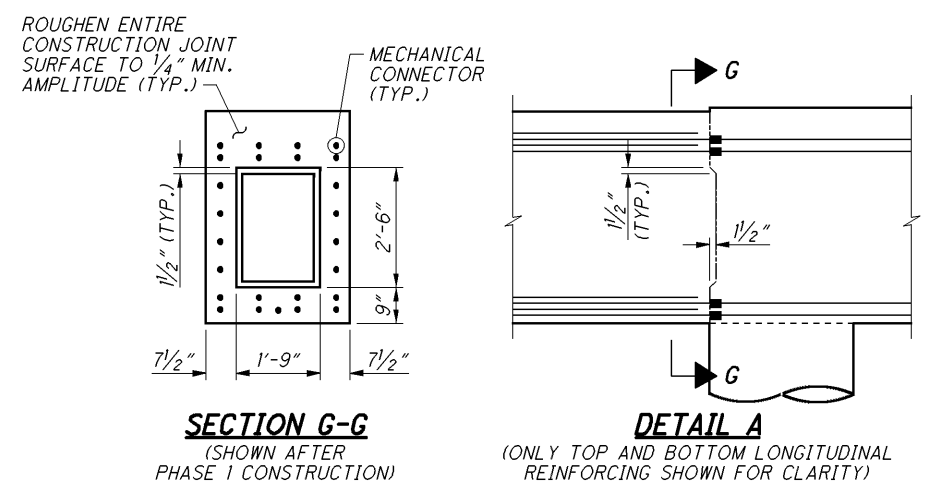
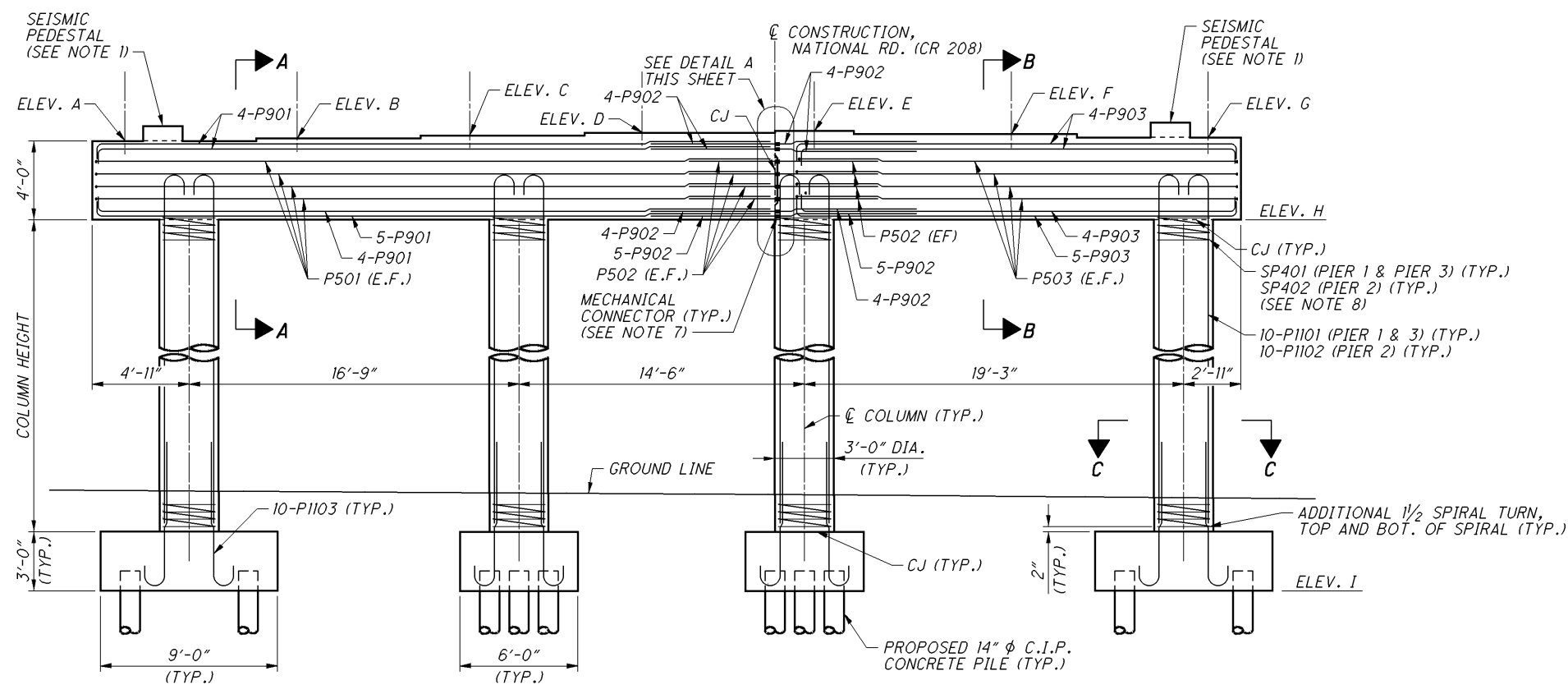
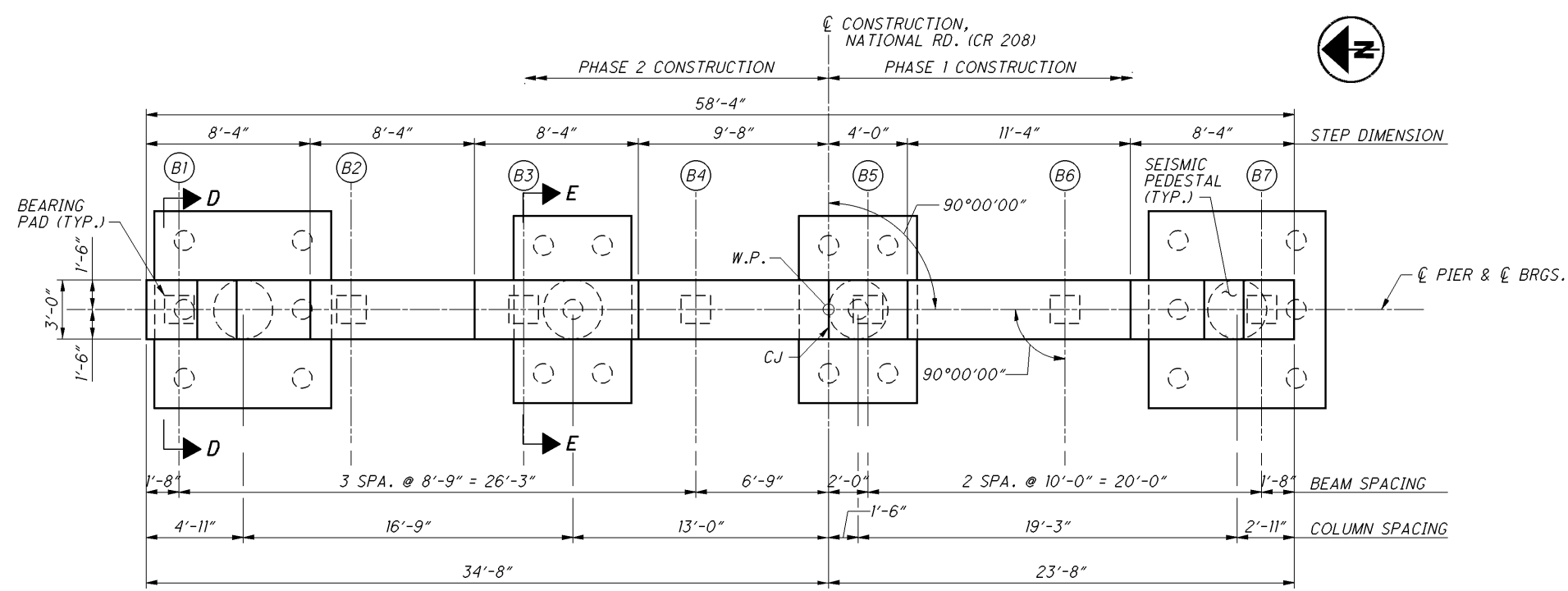


SECTION B-B
(REAR ABUTMENT SHOWN, FORWARD
ABUTMENT SIMILAR BUT OPPOSITE HAND)

NOTES:

1. SPLICE A511 BARS IN THE BACK FACE WITH THE ABUTMENT BARS. EXTEND A511 BARS IN THE FRONT FACE 3'-7" INTO THE ABUTMENT.
2. POROUS BACKFILL WITH FILTER FABRIC, 2'-0" THICK, SHALL EXTEND UP TO 1-FOOT BELOW THE EMBANKMENT SURFACE AND Laterally TO THE ENDS OF THE WINGWALL. COST TO BE INCLUDED WITH ITEM 518, POROUS BACKFILL WITH FILTER FABRIC, FOR PAYMENT. TURN UP FILTER FABRIC 6" AGAINST ABUTMENT OR WINGWALL STEM.
3. FOR ABUTMENT PLAN, ELEVATION AND LOCATION OF SECTION B-B, SEE SHEET 8.

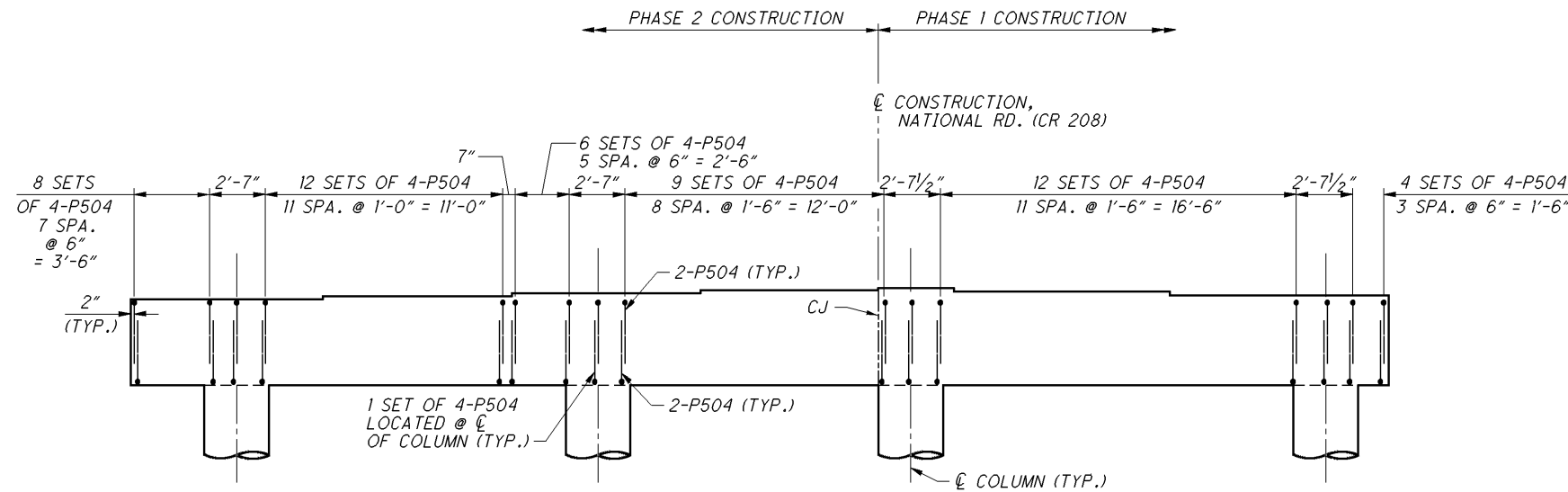
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LOCATION	PIER 1	PIER 2	PIER 3
ELEV. A	912.99	913.18	912.79
ELEV. B	913.13	913.32	912.93
ELEV. C	913.27	913.46	913.07
ELEV. D	913.41	913.60	913.21
ELEV. E	913.49	913.68	913.29
ELEV. F	913.33	913.52	913.13
ELEV. G	913.17	913.36	912.97
ELEV. H	908.99	909.18	908.79
ELEV. I	890.00	891.00	889.75
W.P.	10+85.75	11+50.00	12+24.50
COLUMN HEIGHT	15'-11 7/8"	15'-2 3/16"	16'-0 1/2"

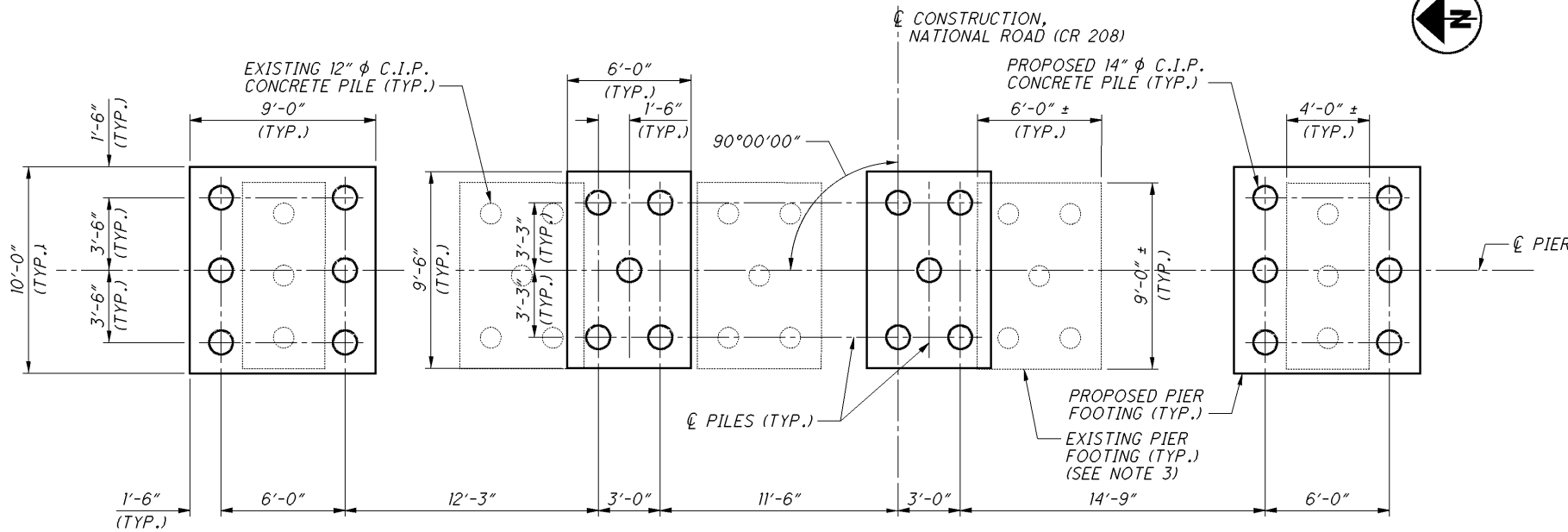
- LEGEND:**
- (B#) BEAM DESIGNATION
- NOTES:**
1. FOR SEISMIC PEDESTAL DETAILS, SEE SHEET 12.
 2. FOR PIER CAP SHEAR REINFORCEMENT, SEE SHEET 12.
 3. FOR PIER FOOTING REINFORCEMENT, SEE SHEET 13.
 4. FOR SECTIONS A-A, B-B & C-C, SEE SHEET 12.
 5. FOR SECTIONS D-D & E-E, SEE SHEET 13.
 6. FOR REINFORCING STEEL LIST, SEE SHEET 27.
 7. SEE MECHANICAL CONNECTOR NOTE, SHEET 8.
 8. SPIRALS SHALL EXTEND 2" ABOVE THE TOP OF COLUMN INTO THE PIER CAP.

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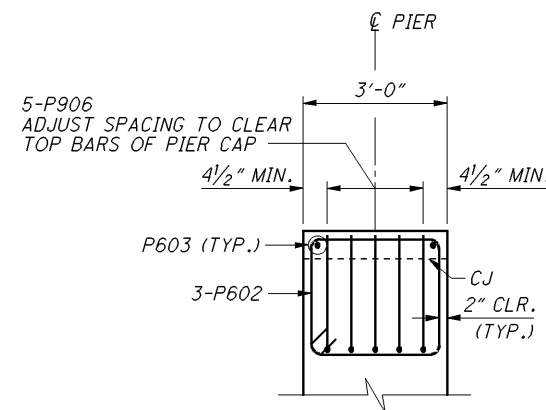
TYPICAL SHEAR REINFORCING DETAIL

PIER 1 SHOWN, PIER 2 & 3 SIMILAR

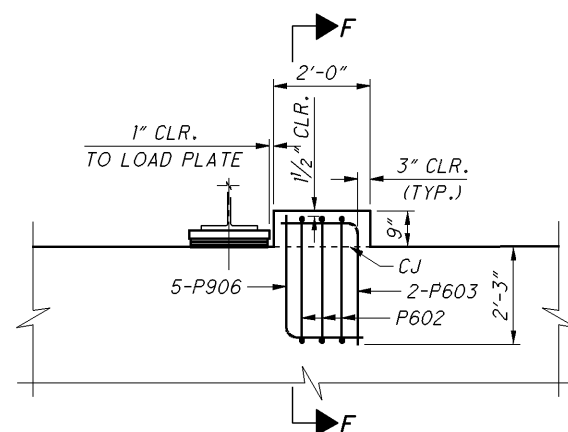


PIER PILE LAYOUT PLAN

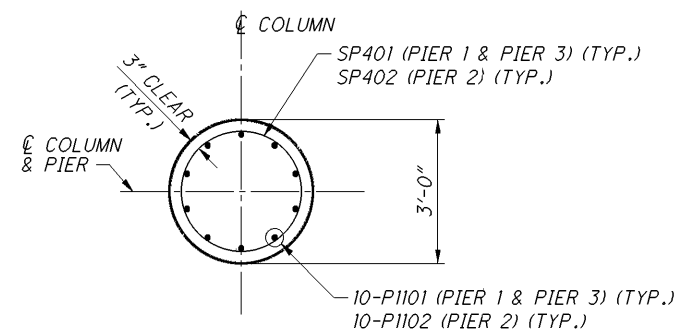
(PIER 2 SHOWN, PIERS 1 & 3 SIMILAR)



SECTION F-F
SEISMIC PEDESTAL

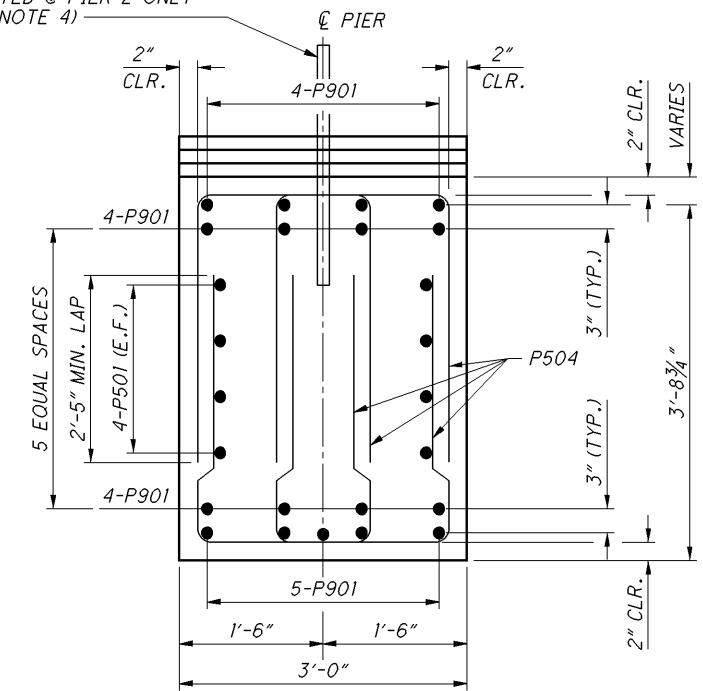


ELEVATION
SEISMIC PEDESTAL



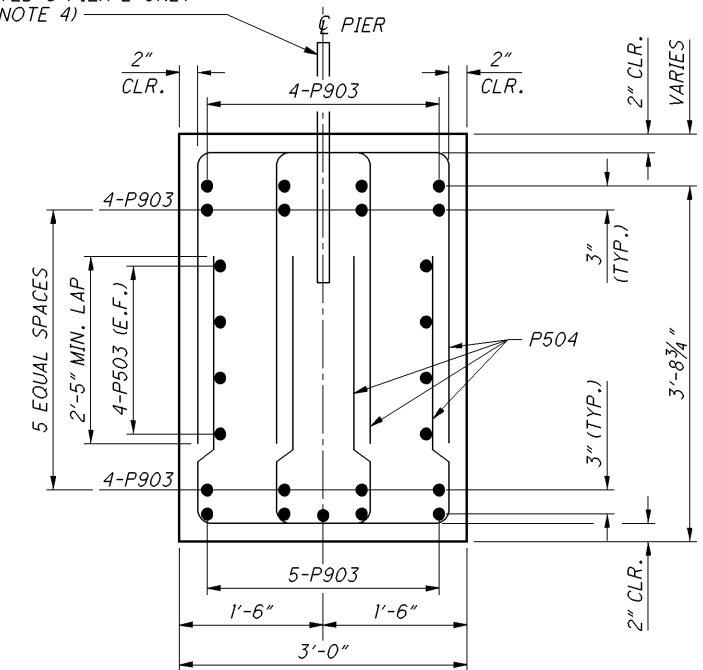
SECTION C-C

1 1/2" DIA. x2'-6 1/2"
A709 ANCHOR ROD,
LOCATED @ PIER 2 ONLY
(SEE NOTE 4)



SECTION A-A

1 1/2" DIA. x2'-6 1/2"
A709 ANCHOR ROD,
LOCATED @ PIER 2 ONLY
(SEE NOTE 4)

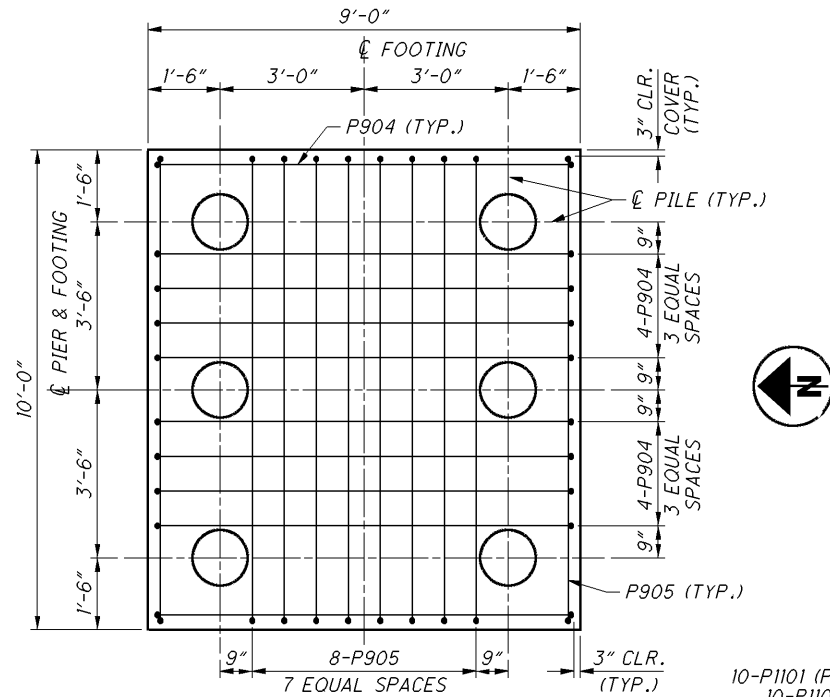


SECTION B-B

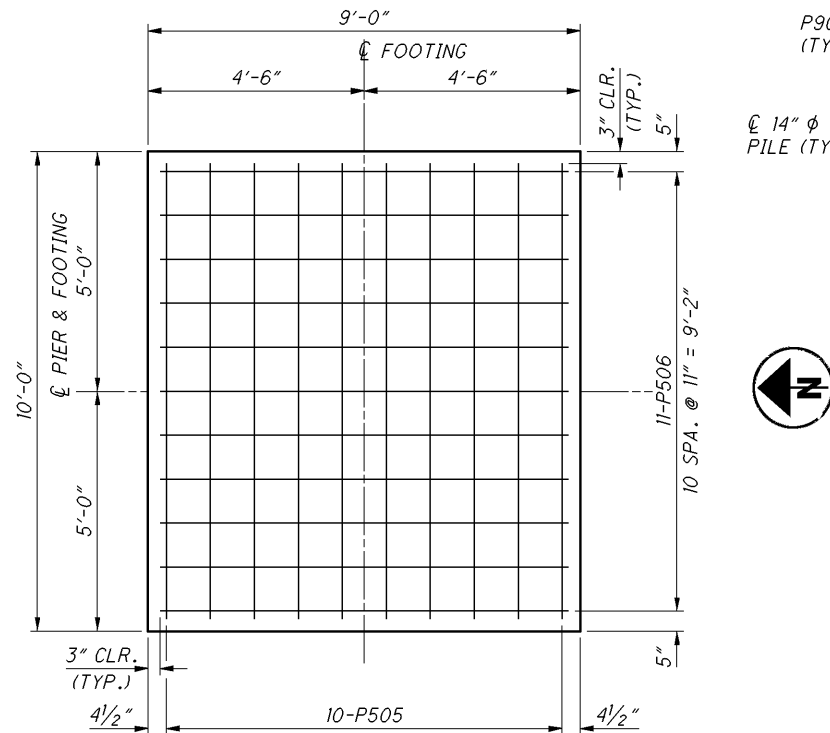
NOTES:

1. FOR LOCATIONS OF SECTIONS A-A, B-B & C-C, SEE SHEET 11.
2. FOR REINFORCING STEEL LIST, SEE SHEET 27.
3. THE EXISTING FOOTINGS SHOWN ONLY APPLY AT PIERS 1 & 2.
4. ACCURATELY PLACE REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT TO AVOID INTERFERENCE WITH THE DRILLING OF BEARING ANCHOR HOLES OR THE PRESETTING OF BEARING ANCHORS.

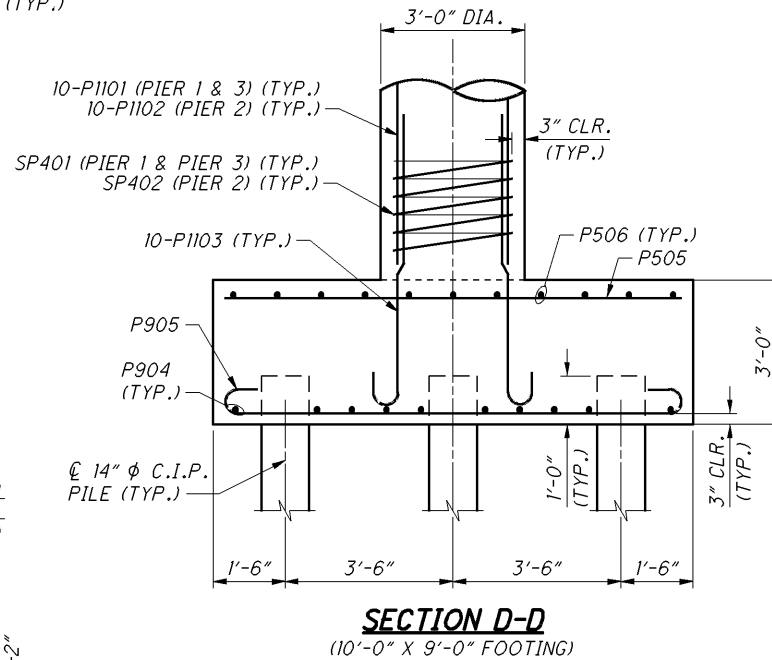
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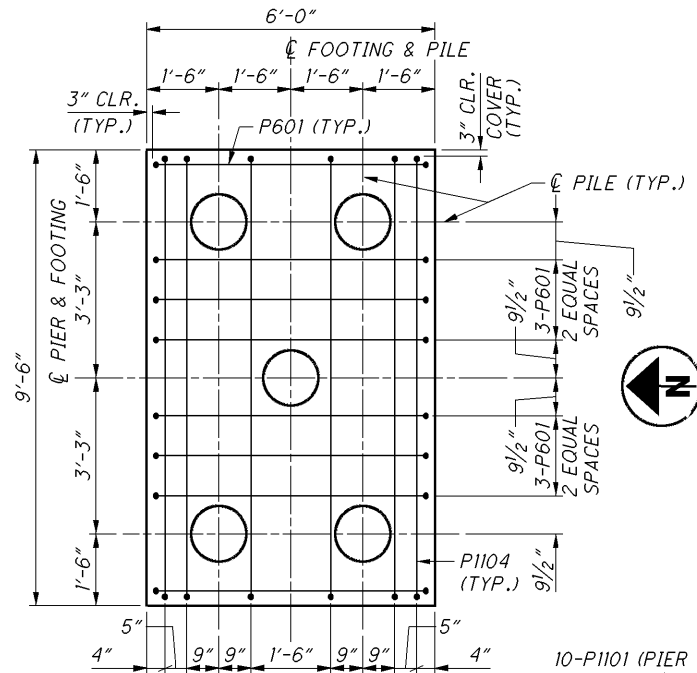
FOOTING PLAN (BOTTOM MAT)
(10'-0" X 9'-0" FOOTING)



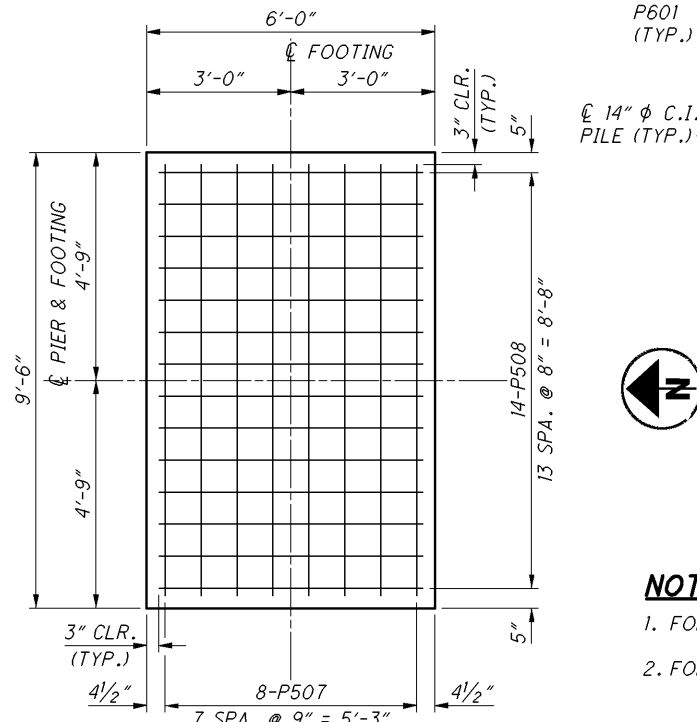
FOOTING PLAN (TOP MAT)
(10'-0" X 9'-0" FOOTING)



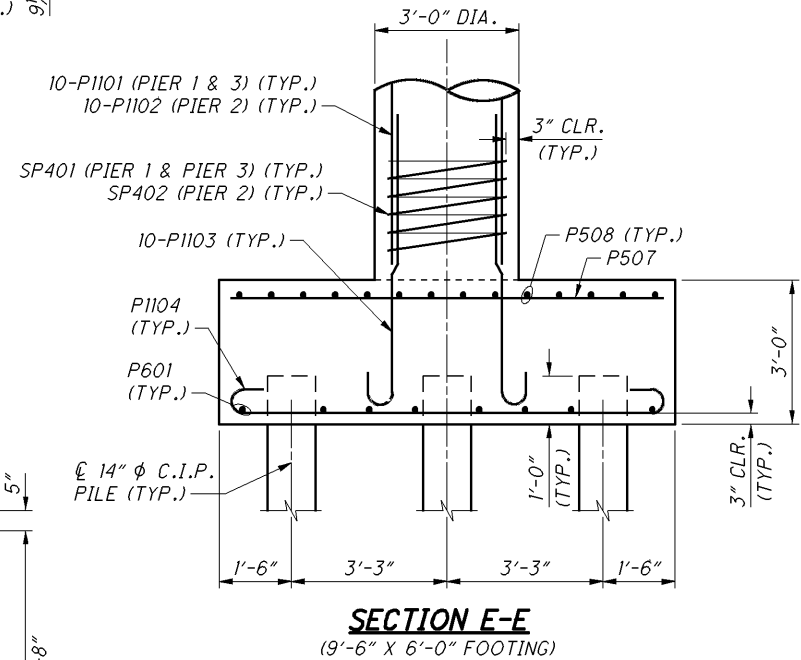
SECTION D-D
(10'-0" X 9'-0" FOOTING)



FOOTING PLAN (BOTTOM MAT)
(9'-6" X 6'-0" FOOTING)



FOOTING PLAN (TOP MAT)
(9'-6" X 6'-0" FOOTING)



SECTION E-E
(9'-6" X 6'-0" FOOTING)

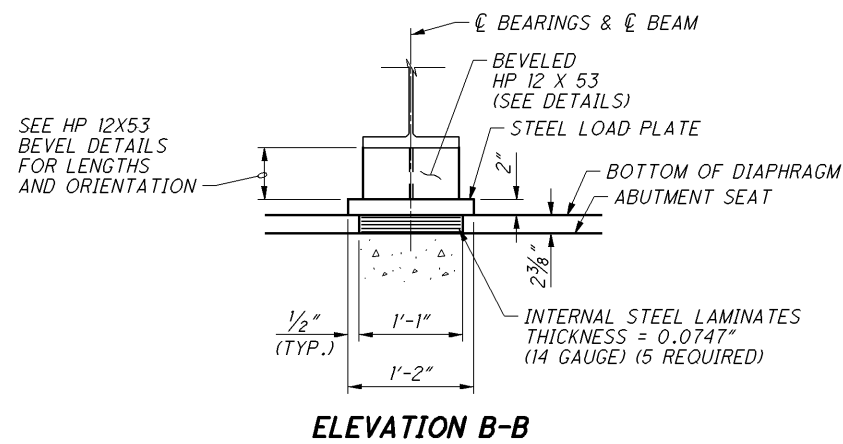
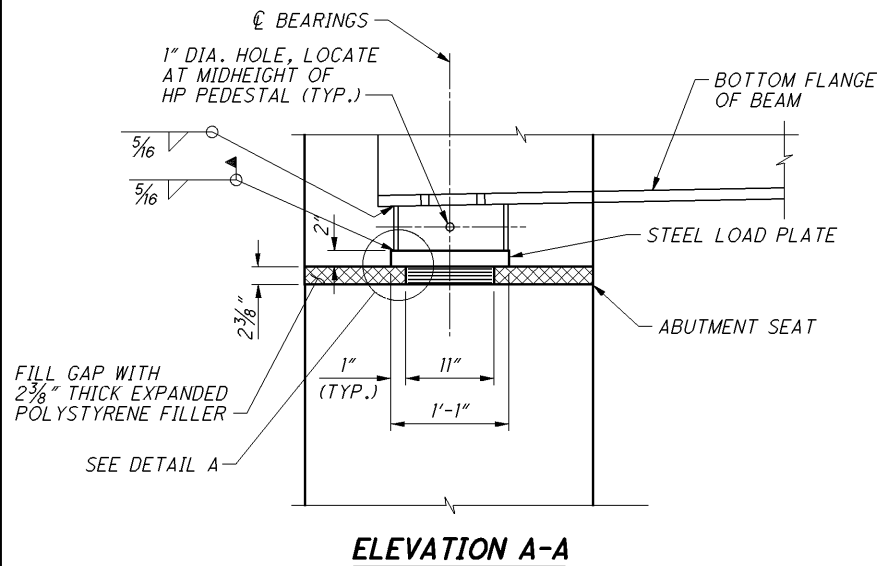
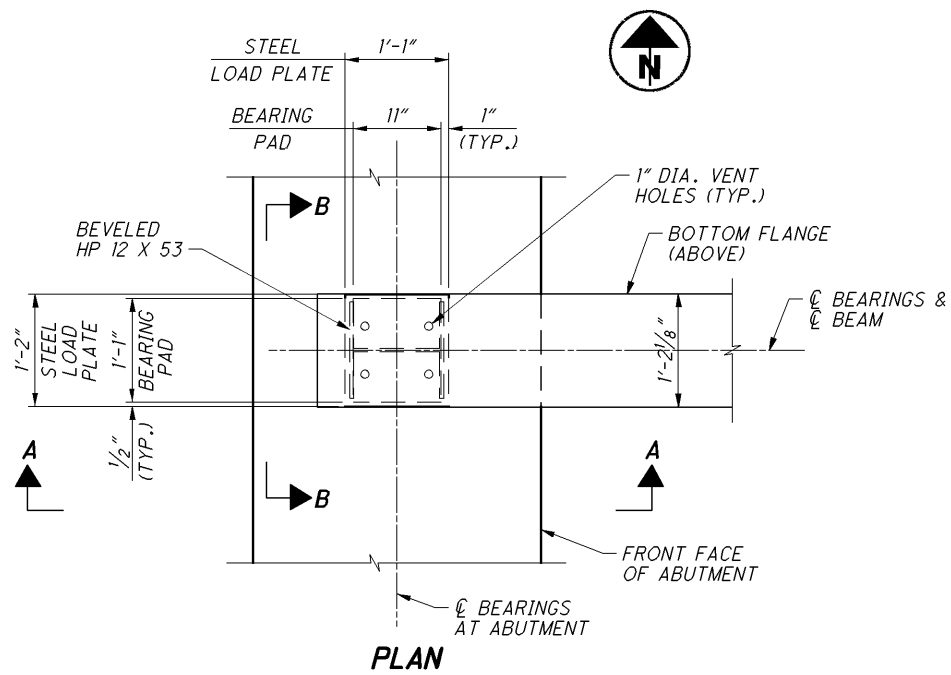
NOTES:

1. FOR LOCATIONS OF SECTION D-D & E-E, SEE SHEET 11.
2. FOR REINFORCING STEEL LIST, SEE SHEET 27.

PHASE CONSTRUCTION NOTES:

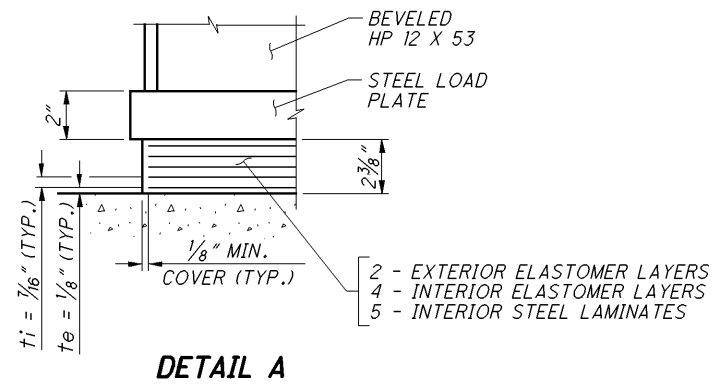
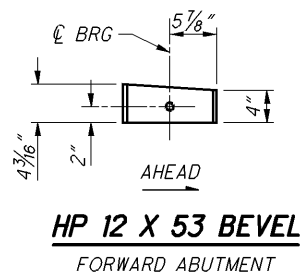
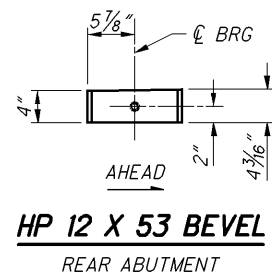
PHASE 1: CONSTRUCT FOOTINGS F3, F4, F7, F8, F11, AND F12.
PHASE 2: CONSTRUCT FOOTINGS F1, F2, F5, F6, F9 AND F10.
REFER TO SHEETS 5, 6 AND 7 FOR ADDITIONAL PHASE
CONSTRUCTION INFORMATION AND FOOTING DESIGNATIONS.

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LAMINATED ELASTOMERIC EXPANSION BEARING DETAILS

REAR ABUTMENT SHOWN, FORWARD ABUTMENT SIMILAR BUT OPPOSITE HAND



NOTES:

- ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 60 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 LOAD TEST (AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DIVISION II, SECTION 18.7.2.6) IS NOT REQUIRED.
 - LOAD PLATES: THE STEEL LOAD PLATE SHALL MEET THE GRADE 50 REQUIREMENTS OF STRUCTURAL STEEL ASTM A709. STEEL LOAD PLATES SHALL BE CLEANED AND SHOP PRIMED ACCORDING TO CMS 514.
 - THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.
 - BASIS OF PAYMENT: THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS AS DETAILED. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN.

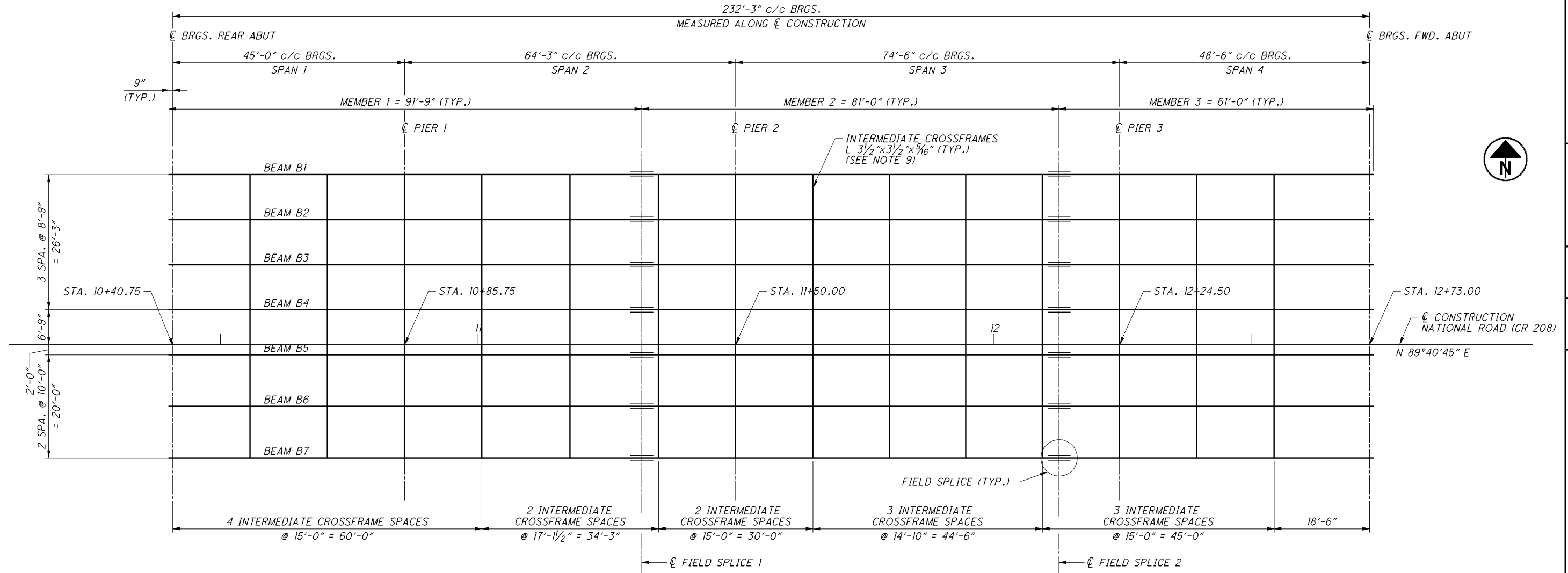
REAR & FWD. ABUTMENTS (BEAMS B1 THROUGH B7):
BEARING PAD: 11" x 2 3/8" x 1'-1"
LOAD PLATE: 1'-1" x 2" x 1'-2"
 - BASIS OF PAYMENT: THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS AS DETAILED. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE).

PIERS 1 & 3 (BEAMS B1 THROUGH B7):
BEARING PAD: 11 1/2" x 3 3/16" x 1'-7"
LOAD PLATE: 1'-0 1/2" x 2 1/4" x 1'-8"
PIER 2 (BEAMS B1 THROUGH B7):
BEARING PAD: 11 1/2" x 3 3/16" x 1'-7"
LOAD PLATE: 1'-0 1/2" x 2 1/4" x 2'-3"
 - THE HP 12 x 53 BEARING PEDESTALS SHALL MEET THE REQUIREMENTS OF STRUCTURAL STEEL ASTM A709 GRADE 50. PAYMENT FOR THE HP 12 x 53 BEARING PEDESTAL SHALL BE INCLUDED IN THE CONTRACT BID PRICE FOR ITEM 516, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN.
 - ALL BEARING SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE BEARING LOCATION AND DIRECTION ARROW POINTING UPSTATION. ALL MARKS SHALL BE PERMANENT AND BE VISIBLE AFTER THE BEARING IS INSTALLED.
 - BEARINGS SHALL BE DESIGNED FOR THE FOLLOWING SERVICE LOADS:
- | | ABUTMENTS | PIERS |
|------------------------------|-----------|----------|
| MAX. DEAD LOAD = | 76 KIPS | 151 KIPS |
| MAX. LIVE LOAD (NO IMPACT) = | 65 KIPS | 105 KIPS |
| TOTAL DESIGN LOAD = | 141 KIPS | 256 KIPS |
9. FOR PIER BEARING DETAILS, SEE SHEET 15.

LEGEND:

te = THICKNESS OF EXTERNAL ELASTOMER LAYER
ti = THICKNESS OF INTERNAL ELASTOMER LAYER

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FRAMING PLAN

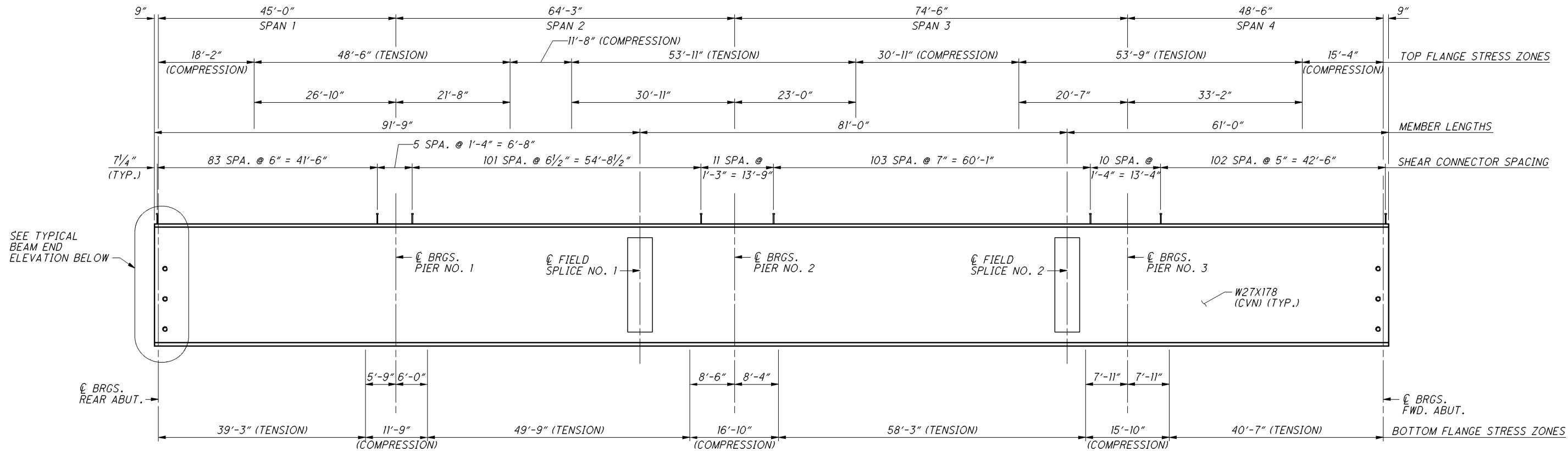
PHASE CONSTRUCTION NOTES:

- PHASE 1: ERECT BEAMS 5, 6, AND 7. INSTALL INTERMEDIATE CROSSFRAMES BETWEEN BEAMS 5, 6, AND 7.
- PHASE 2: ERECT BEAMS 1, 2, 3, AND 4. INSTALL INTERMEDIATE CROSSFRAMES BETWEEN BEAMS 1, 2, 3, AND 4.
- PHASE 2A: INSTALL INTERMEDIATE CROSSFRAMES BETWEEN BEAMS 4 AND 5.
- REFER TO SHEETS 5 & 6 FOR ADDITIONAL PHASE CONSTRUCTION INFORMATION.

STRUCTURAL STEEL NOTES:

- FOR GENERAL NOTES, SEE SHEET 3.
- ALL STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 50 PAINTED, YIELD STRENGTH 50,000 PSI, UNLESS NOTED OTHERWISE.
- WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN CMS 711.01.
- STUD SHEAR CONNECTORS COINCIDING WITH FIELD SPLICE BOLTS SHALL BE REPOSITIONED TO A LOCATION MIDWAY BETWEEN SPLICE BOLTS.
- HIGH STRENGTH BOLTS SHALL BE 1" DIAMETER A325 UNLESS NOTED OTHERWISE.
- AT ALL FIELD SPLICES, BOLT HEADS SHALL BE PLACED ON THE OUTSIDE FACE OF THE EXTERIOR BEAMS, ON THE BOTTOM OF THE BOTTOM FLANGE SPLICE PLATES, AND ON THE TOP OF THE TOP FLANGE SPLICE PLATES.
- WELD ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE TO AREAS OF THE FASCIA STRINGER TOP FLANGES DESIGNATED "COMPRESSION". DO NOT WELD ATTACHMENTS TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE AT LEAST 1" FROM EDGE OF FLANGE, BE NO MORE THAN 2" LONG, AND BE AT LEAST 1/4" FOR THICKNESSES UP TO 3/4" OR 5/16" FOR GREATER THAN 3/4" THICK.
- STRUCTURAL STEEL DETAIL CROSS REFERENCES:
ELASTOMERIC BEARING DETAILS SHTS. 14 & 15
BEAM ELEVATION & DETAILS SHT. 17
BEAM CAMBER SHT. 18
FIELD SPLICE DETAILS SHT. 19
- FOR ADDITIONAL INTERMEDIATE CROSSFRAME DETAILS, SEE STANDARD DRAWING GSD-1-96.

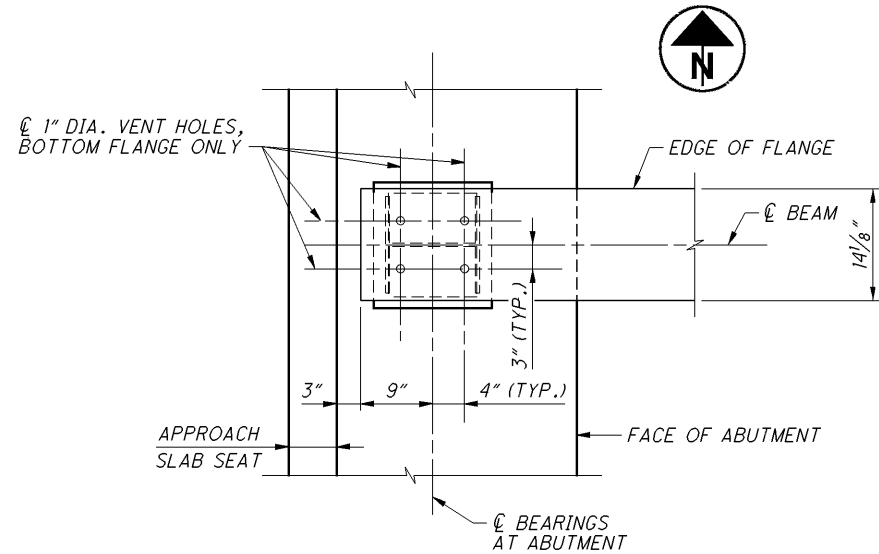
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BEAM ELEVATION

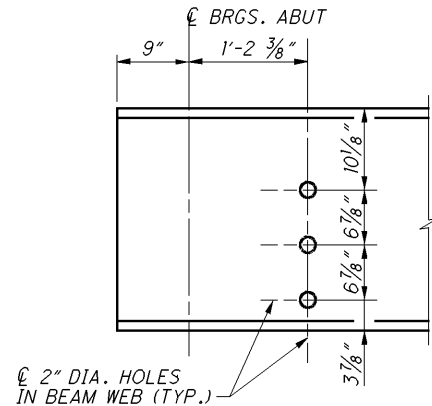
NOTES:

1. FOR STRUCTURAL STEEL NOTES, SEE SHEET 16.

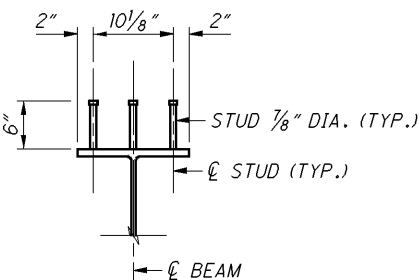


TYPICAL BEAM END DETAIL

REAR ABUTMENT SHOWN, FORWARD ABUTMENT
SIMILAR BUT OPPOSITE HAND

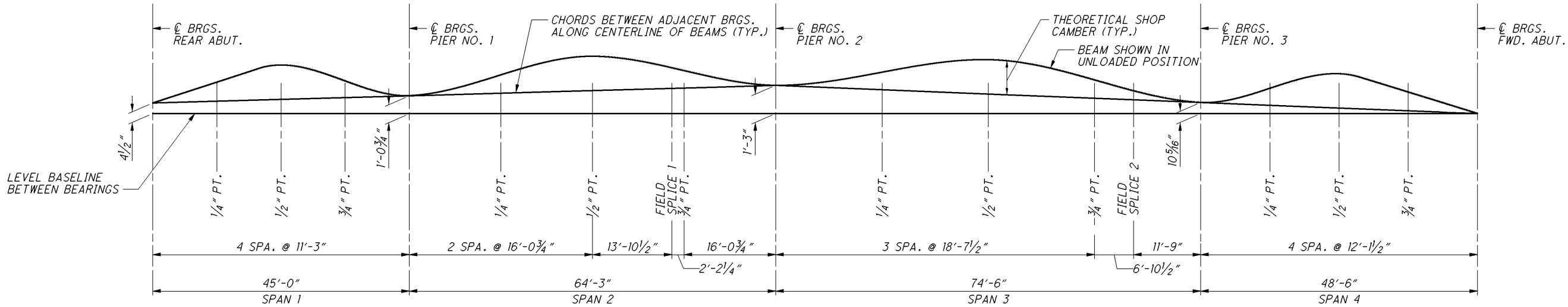


TYPICAL BEAM END ELEVATION



TYPICAL SHEAR CONNECTOR DETAIL

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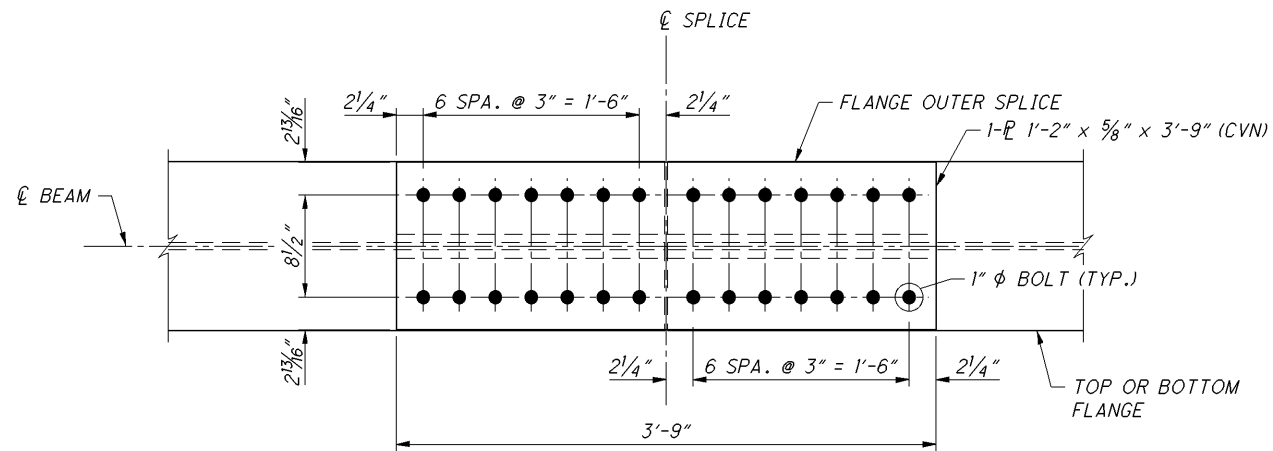
CAMBER DIAGRAM

		SPAN 1					SPAN 2					SPAN 3					SPAN 4				
		℄ BRGS. REAR ABUT.	1/4 POINT SPAN 1	1/2 POINT SPAN 1	3/4 POINT SPAN 1	℄ BRGS. PIER 1	1/4 POINT SPAN 2	1/2 POINT SPAN 2	FIELD SPLICE 1	3/4 POINT SPAN 2	℄ BRGS. PIER 2	1/4 POINT SPAN 3	1/2 POINT SPAN 3	3/4 POINT SPAN 3	FIELD SPLICE 2	℄ BRGS. PIER 3	1/4 POINT SPAN 4	1/2 POINT SPAN 4	3/4 POINT SPAN 4	℄ BRGS. FWD. ABUT.	
EXTERIOR BEAM B1	DEFL. DUE TO WT. OF STEEL	0"	0"	1/16"	0"	0"	1/16"	1/16"	1/16"	0"	0"	1/16"	3/16"	1/8"	1/16"	0"	0"	0	0"	0"	
	DEFL. DUE TO REMAINING DL	0"	3/16"	1/8"	1/8"	0"	3/16"	5/16"	1/8"	1/8"	0"	9/16"	15/16"	5/8"	3/8"	0"	0"	1/16"	1/8"	0"	
	ADJUSTMENT REQ'D FOR VERTICAL CURVE	0"	1/4"	3/8"	1/4"	0"	9/16"	3/4"	5/8"	9/16"	0"	3/4"	1"	3/4"	9/16"	0"	5/16"	7/16"	5/16"	0"	
	SUM EQUALS REQ'D SHOP CAMBER	0"	7/16"	9/16"	3/8"	0"	13/16"	1 1/8"	13/16"	11/16"	0"	1 3/8"	2 1/8"	1 1/2"	1"	0"	5/16"	1/2"	7/16"	0"	
BEAMS B2-B4	DEFL. DUE TO WT. OF STEEL	0"	0"	1/16"	0"	0"	1/16"	1/16"	1/16"	0"	0"	1/8"	3/16"	1/8"	1/16"	0"	0"	0	0"	0"	
	DEFL. DUE TO REMAINING DL	0"	3/16"	1/8"	1/8"	0"	3/16"	5/16"	1/8"	3/16"	0"	5/8"	1 1/16"	11/16"	7/16"	0"	0"	1/8"	3/16"	0"	
	ADJUSTMENT REQ'D FOR VERTICAL CURVE	0"	1/4"	3/8"	1/4"	0"	9/16"	3/4"	5/8"	9/16"	0"	3/4"	1"	3/4"	9/16"	0"	5/16"	7/16"	5/16"	0"	
	SUM EQUALS REQ'D SHOP CAMBER	0"	7/16"	9/16"	3/8"	0"	13/16"	1 1/8"	13/16"	3/4"	0"	1 1/2"	2 1/4"	1 9/16"	1 1/16"	0"	5/16"	9/16"	1/2"	0"	
BEAMS B5-B6	DEFL. DUE TO WT. OF STEEL	0"	0"	1/16"	0"	0"	1/16"	1/16"	1/16"	0"	0"	1/8"	3/16"	1/8"	1/16"	0"	0"	0	0"	0"	
	DEFL. DUE TO REMAINING DL	0"	1/4"	1/8"	1/8"	0"	3/16"	3/8"	3/16"	3/16"	0"	5/8"	1 1/8"	3/4"	7/16"	0"	0"	1/8"	3/16"	0"	
	ADJUSTMENT REQ'D FOR VERTICAL CURVE	0"	1/4"	3/8"	1/4"	0"	9/16"	3/4"	5/8"	9/16"	0"	3/4"	1"	3/4"	5/8"	0"	5/16"	7/16"	5/16"	0"	
	SUM EQUALS REQ'D SHOP CAMBER	0"	1/2"	9/16"	3/8"	0"	13/16"	1 3/16"	3/4"	3/4"	0"	1 1/2"	2 5/16"	1 5/8"	1 1/8"	0"	5/16"	9/16"	1/2"	0"	
EXTERIOR BEAM B7	DEFL. DUE TO WT. OF STEEL	0"	0"	1/16"	0"	0"	1/16"	1/16"	1/16"	0"	0"	1/8"	1/8"	1/8"	1/16"	0"	0"	0	0"	0"	
	DEFL. DUE TO REMAINING DL	0"	3/16"	1/8"	1/8"	0"	3/16"	5/16"	1/8"	3/16"	0"	5/8"	1 1/8"	11/16"	7/16"	0"	0"	1/16"	3/16"	0"	
	ADJUSTMENT REQ'D FOR VERTICAL CURVE	0"	1/4"	3/8"	1/4"	0"	9/16"	3/4"	5/8"	9/16"	0"	3/4"	1"	3/4"	9/16"	0"	5/16"	7/16"	5/16"	0"	
	SUM EQUALS REQ'D SHOP CAMBER	0"	7/16"	9/16"	3/8"	0"	13/16"	1 1/8"	13/16"	3/4"	0"	1 1/2"	2 1/4"	1 9/16"	1 1/16"	0"	5/16"	1/2"	1/2"	0"	

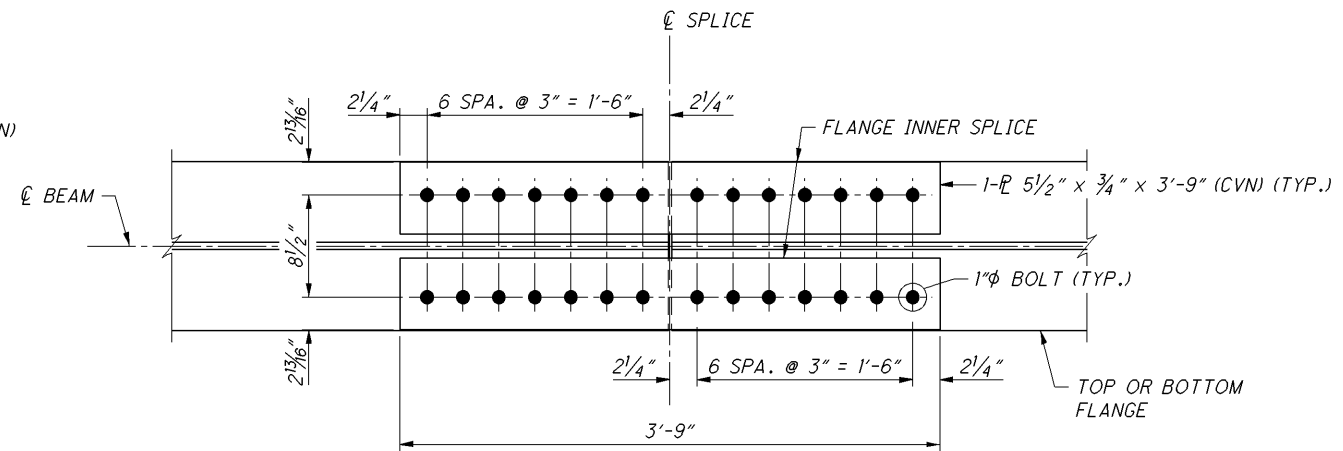
NOTES:

1. A POSITIVE CAMBER VALUE INDICATES THAT THE TOP OF THE BEAM IS ABOVE THE CHORD BETWEEN ADJACENT BEARINGS IN THAT SPAN.
2. FOR STRUCTURAL STEEL NOTES, SEE SHEET 16.

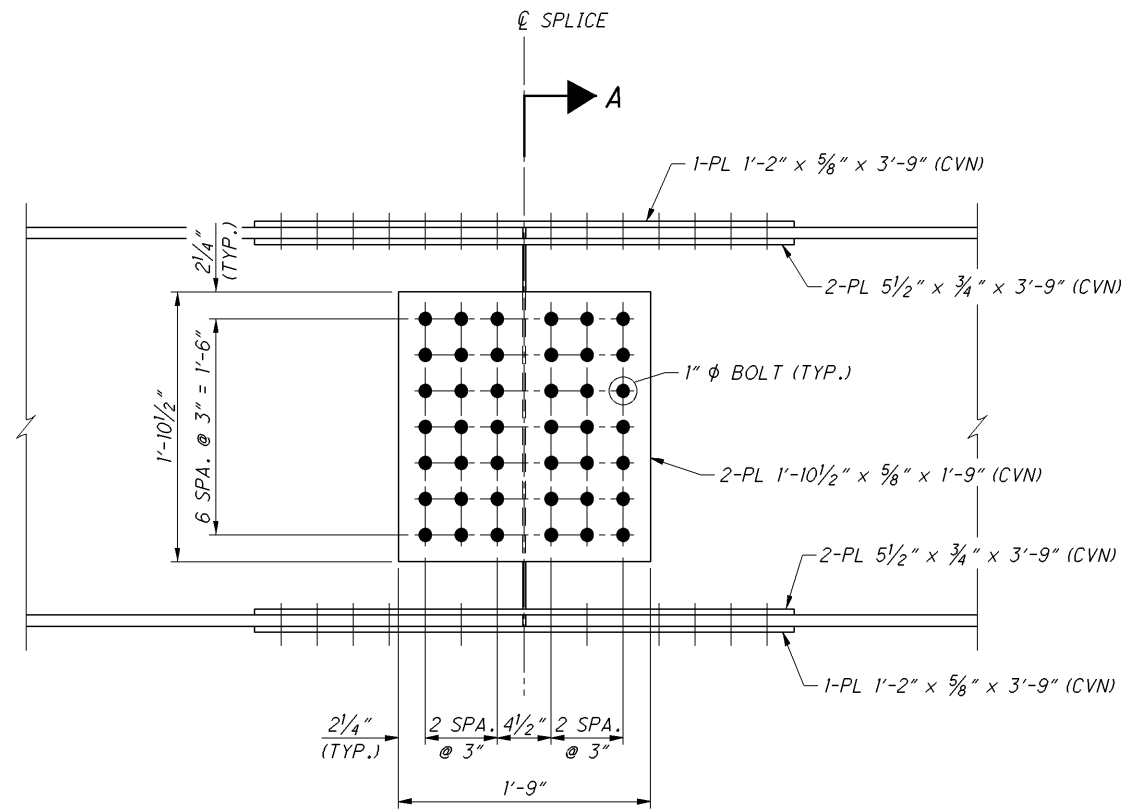
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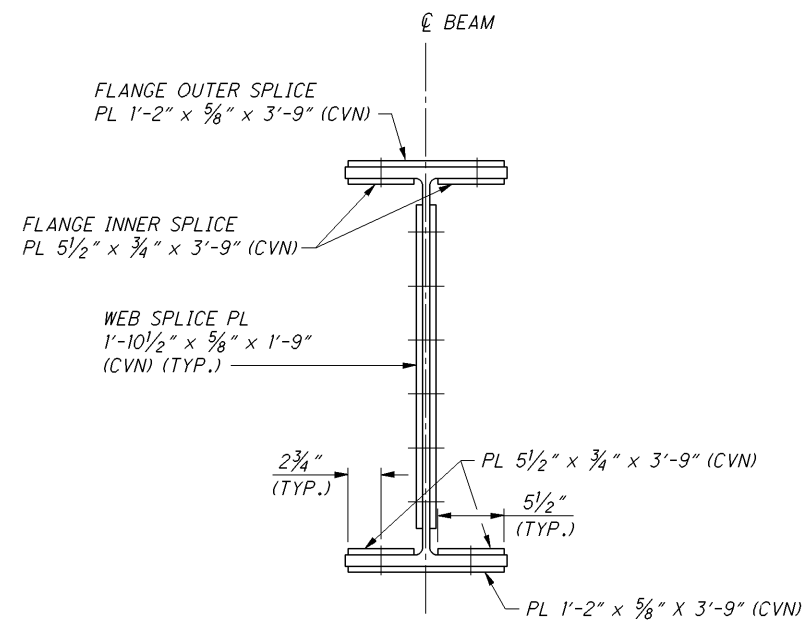
PLAN OF FLANGE OUTER SPLICE PLATE



PLAN OF FLANGE INNER SPLICE PLATE



ELEVATION

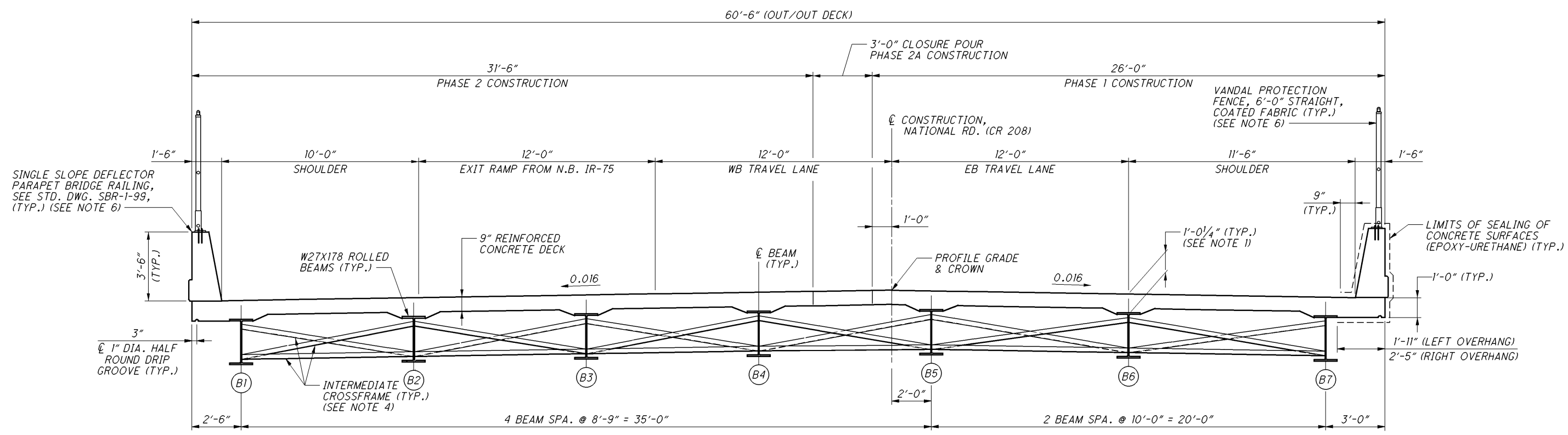


SECTION A-A

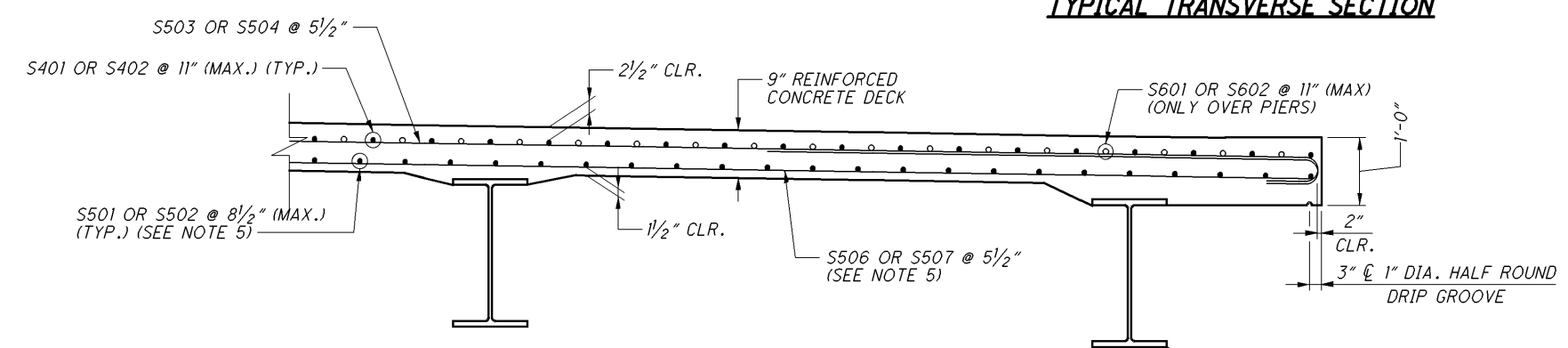
NOTES:

1. FOR STRUCTURAL STEEL NOTES, SEE SHEET 16.
2. ALL FASTENERS IN FIELD SPLICES SHALL BE 1 INCH DIAMETER ASTM A325 HIGH STRENGTH BOLTS.
3. FIELD SPLICE DETAILS SHOWN APPLY TO BOTH FIELD SPLICE 1 AND FIELD SPLICE 2.

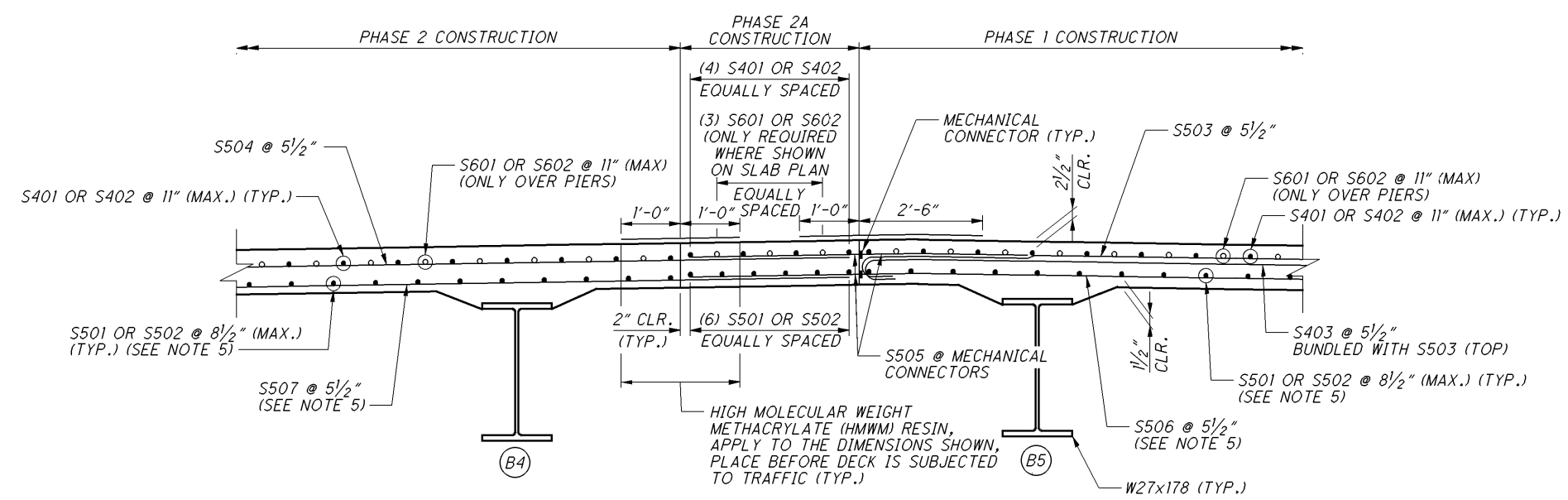
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TYPICAL TRANSVERSE SECTION



TYPICAL TRANSVERSE DECK SECTION
(RAILING, SHEAR CONNECTORS AND CROSSFRAMES NOT SHOWN FOR CLARITY)



CLOSURE POUR DETAIL
(CROSSFRAMES AND SHEAR CONNECTORS NOT SHOWN FOR CLARITY)

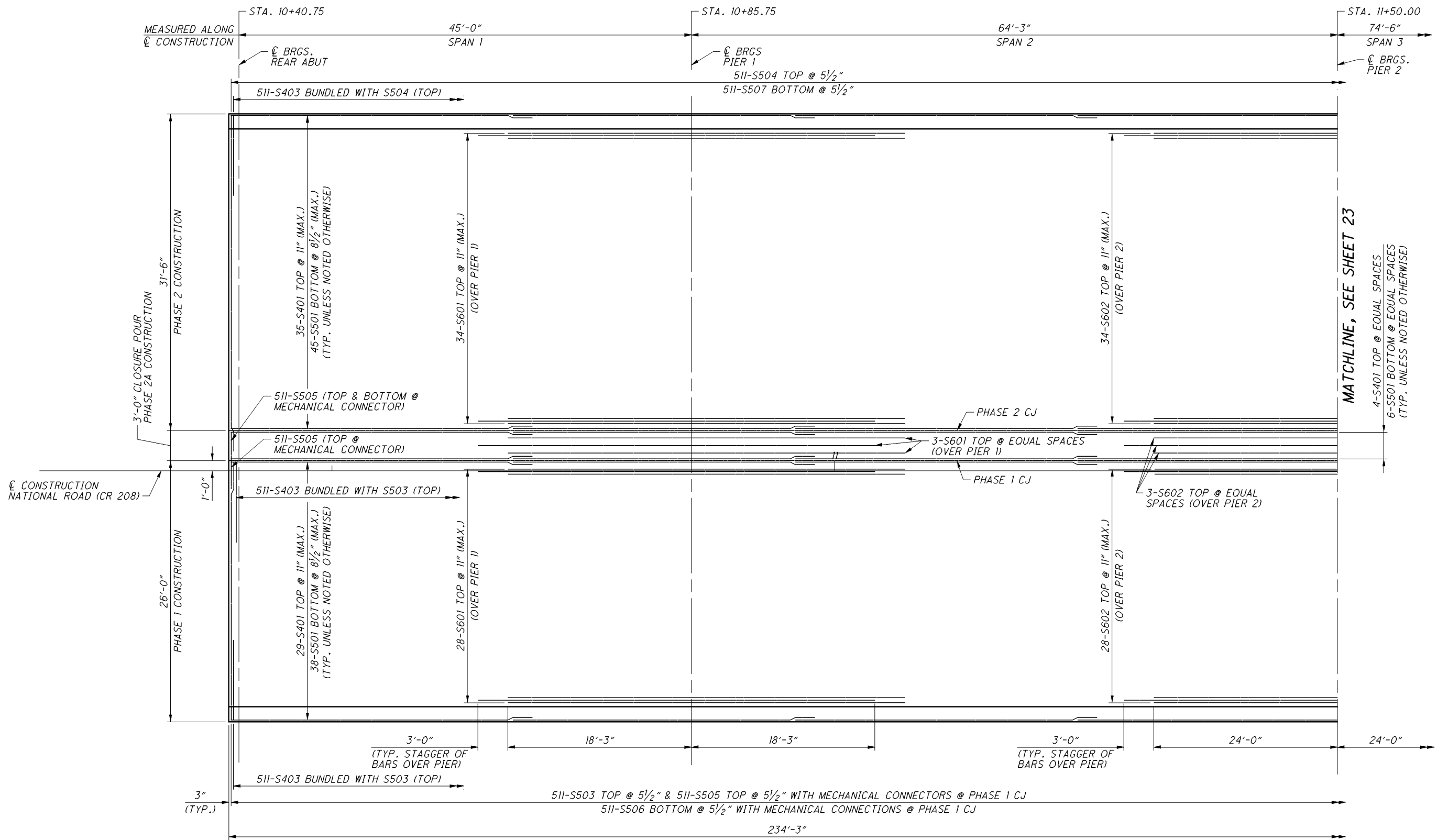
LEGEND:

(B#) = BEAM DESIGNATION

NOTES:

1. DECK SLAB CONCRETE QUANTITY: THE ESTIMATED QUANTITY OF DECK SLAB CONCRETE IS BASED ON THE CONSTANT DECK SLAB THICKNESS, AS SHOWN, PLUS THE QUANTITY OF CONCRETE THAT FORMS EACH BEAM HAUNCH. THE ESTIMATE ASSUMES A CONSTANT HAUNCH THICKNESS OF 3 1/4 INCHES AND A CONSTANT HAUNCH WIDTH OUTSIDE THE EDGE OF EACH BEAM FLANGE OF 9 INCHES. DEVIATE FROM THIS HAUNCH THICKNESS AS NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE. THE ALLOWABLE TOLERANCE FOR THE HAUNCH WIDTH OUTSIDE THE EDGE OF EACH BEAM FLANGE IS ± 3 INCHES.
 2. FOR SLAB PLAN, SEE SHEETS 22 & 23.
 3. FOR PHASE CONSTRUCTION DETAILS, SEE SHEETS 5 & 6.
 4. FOR INTERMEDIATE CROSSFRAME DETAILS, SEE STANDARD DRAWING GSD-I-96.
 5. PLACE THE BOTTOM LAYER OF LONGITUDINAL AND TRANSVERSE REINFORCEMENT IN THE VICINITY OF THE BEAMS TO AVOID THE SHEAR CONNECTORS.
 6. FOR PARAPET AND VANDAL PROTECTION FENCE DETAILS, SEE SHEETS 25 & 26.
- THE HAUNCH THICKNESS WAS MEASURED AT THE CENTERLINE OF THE BEAM, FROM THE SURFACE OF THE DECK TO THE BOTTOM OF THE TOP FLANGE MINUS THE DECK SLAB THICKNESS. THE AREA OF ALL EMBEDDED STEEL PLATES HAS BEEN DEDUCTED FROM THE HAUNCH QUANTITY IN ACCORDANCE WITH 511.24.

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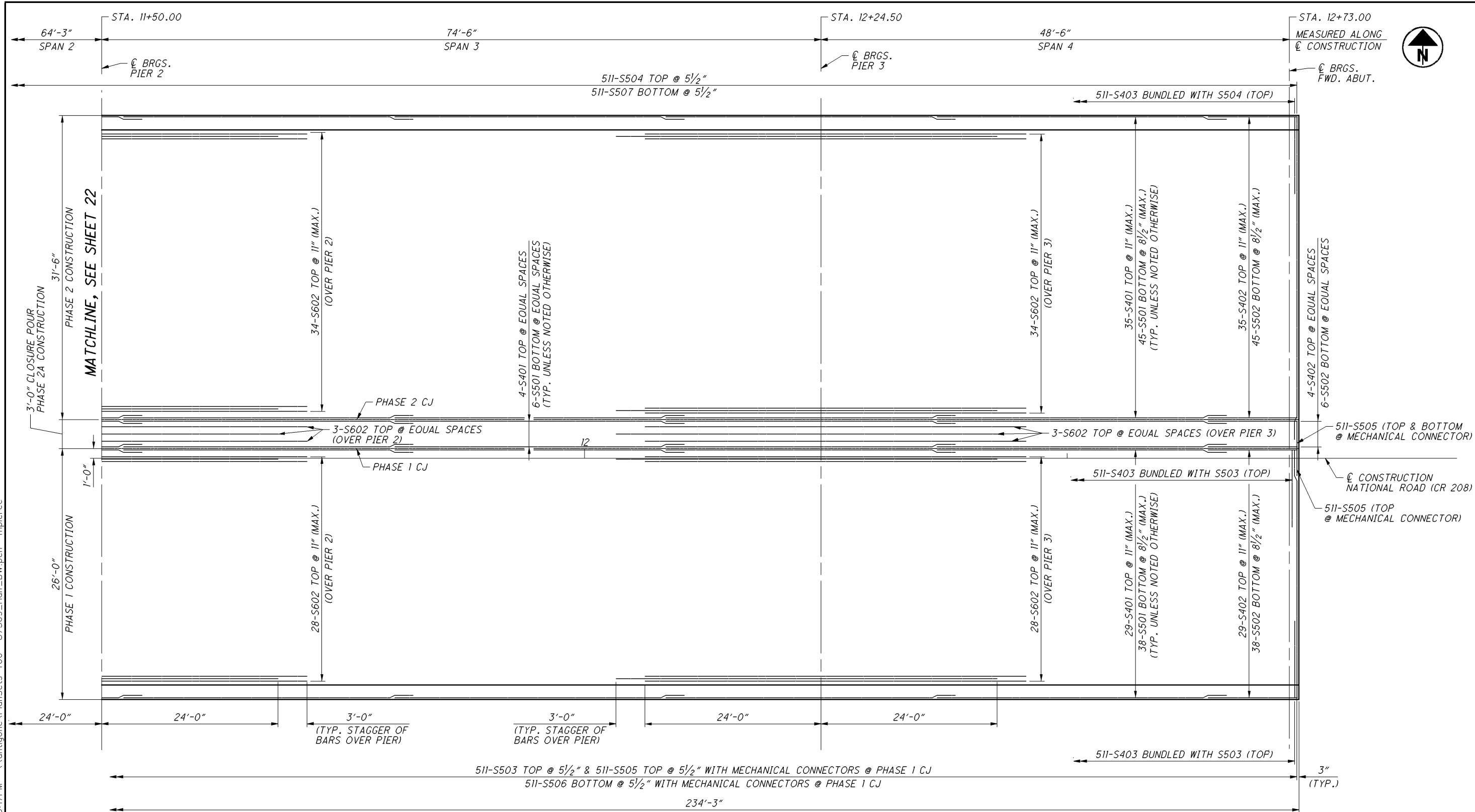


SLAB PLAN

- NOTES:**
1. MINIMUM REINFORCING STEEL SPLICE LENGTHS:
NO. 4 BARS = 1'-11"
NO. 5 BARS = 2'-5"
 2. FOR PARAPET DETAILS, SEE SHEETS 25 & 26.
 3. FOR TYPICAL TRANSVERSE SECTION, SEE SHEET 21.
 4. ALL REINFORCING SHALL BE EPOXY COATED CONFORMING TO ITEM 509.
 5. FOR REINFORCING STEEL LIST, SEE SHEET 28.



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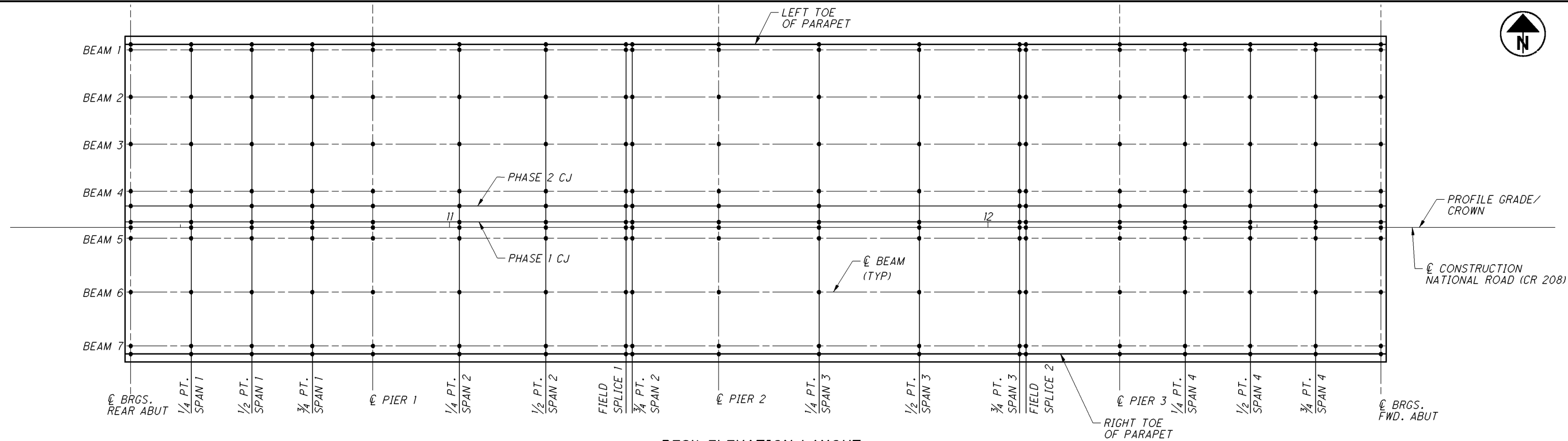
SLAB PLAN

NOTES:

1. MINIMUM REINFORCING STEEL SPLICE LENGTHS:
NO. 4 BARS = 1'-11"
NO. 5 BARS = 2'-5"
2. FOR PARAPET DETAILS, SEE SHEETS 25 & 26.
3. FOR TYPICAL TRANSVERSE SECTION, SEE SHEET 21.
4. ALL REINFORCING SHALL BE EPOXY COATED CONFORMING TO ITEM 509.
5. FOR REINFORCING STEEL LIST, SEE SHEET 28.

DESIGN AGENCY CH2MHILL ONE DAYTON CENTRE, SUITE 1100 ONE SOUTH MAIN STREET DAYTON, OHIO 45402	DATE 7/12	REVIEWED SKT	DRAWN EAG	DESIGNED SL
	STRUCTURE FILE NUMBER 0602442	REVISED	CHECKED PAW	
SLAB PLAN II BRIDGE NO. AUG-075-1234 NATIONAL ROAD (CR208) OVER I-75				
AUG-075-12.34 PID No. 87369				
23 / 28				
66 71				

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DECK ELEVATION LAYOUT

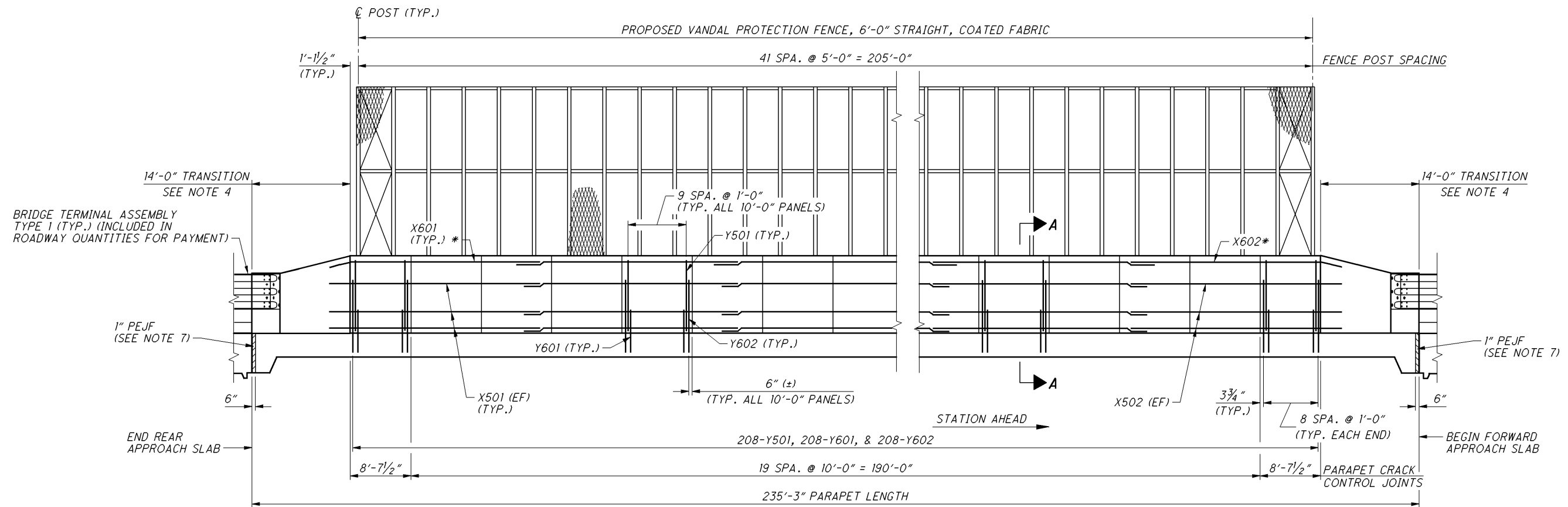
DECK ELEVATIONS																				
		BRGS. REAR ABUT.	1/4 POINT SPAN 1	1/2 POINT SPAN 1	3/4 POINT SPAN 1	BRGS. PIER 1	1/4 POINT SPAN 2	1/2 POINT SPAN 2	FIELD SPLICE 1	3/4 POINT SPAN 2	BRGS. PIER 2	1/4 POINT SPAN 3	1/2 POINT SPAN 3	3/4 POINT SPAN 3	FIELD SPLICE 2	BRGS. PIER 3	1/4 POINT SPAN 4	1/2 POINT SPAN 4	3/4 POINT SPAN 4	BRGS. FWD. ABUT.
STATION		10+40.75	10+52.00	10+63.25	10+74.50	10+85.75	11+01.81	11+17.88	11+31.75	11+33.94	11+50.00	11+68.63	11+87.25	12+05.88	12+12.75	12+24.50	12+36.63	12+48.75	12+60.88	12+73.00
LEFT TOE OF PARAPET	FINAL DECK ELEV.	916.23	916.36	916.48	916.58	916.66	916.75	916.82	916.85	916.85	916.85	916.82	916.74	916.62	916.57	916.46	916.34	916.20	916.04	915.86
	SCREED ELEV.	916.23	916.38	916.49	916.58	916.66	916.77	916.85	916.87	916.86	916.85	916.87	916.84	916.69	916.61	916.46	916.34	916.20	916.05	915.86
BEAM 1	FINAL DECK ELEV.	916.25	916.38	916.49	916.59	916.68	916.77	916.83	916.86	916.87	916.87	916.83	916.76	916.64	916.59	916.48	916.36	916.21	916.05	915.87
	TOP OF HAUNCH ELEV.	915.50	915.64	915.76	915.85	915.93	916.04	916.11	916.13	916.13	916.12	916.14	916.10	915.95	915.88	915.73	915.60	915.47	915.31	915.12
BEAM 2	FINAL DECK ELEV.	916.39	916.52	916.63	916.73	916.82	916.91	916.97	917.00	917.01	917.01	916.97	916.90	916.78	916.73	916.62	916.50	916.35	916.19	916.01
	TOP OF HAUNCH ELEV.	915.64	915.78	915.90	915.99	916.07	916.18	916.26	916.27	916.27	916.26	916.28	916.25	916.10	916.02	915.87	915.74	915.61	915.46	915.26
BEAM 3	FINAL DECK ELEV.	916.53	916.66	916.77	916.87	916.96	917.05	917.11	917.14	917.15	917.15	917.11	917.04	916.92	916.87	916.76	916.64	916.49	916.33	916.15
	TOP OF HAUNCH ELEV.	915.78	915.92	916.04	916.13	916.21	916.32	916.40	916.41	916.41	916.40	916.42	916.39	916.24	916.16	916.01	915.88	915.75	915.60	915.40
BEAM 4	FINAL DECK ELEV.	916.67	916.80	916.91	917.01	917.10	917.19	917.25	917.28	917.29	917.29	917.25	917.18	917.06	917.01	916.90	916.78	916.63	916.47	916.29
	TOP OF HAUNCH ELEV.	915.92	916.06	916.18	916.27	916.35	916.46	916.54	916.55	916.55	916.54	916.56	916.53	916.38	916.30	916.15	916.02	915.89	915.74	915.54
PHASE 2 CJ	FINAL DECK ELEV.	916.71	916.84	916.96	917.06	917.14	917.23	917.30	917.33	917.33	917.33	917.30	917.22	917.10	917.05	916.94	916.82	916.68	916.52	916.34
	SCREED ELEV.	916.71	916.87	916.99	917.07	917.14	917.28	917.36	917.36	917.36	917.33	917.41	917.42	917.23	917.13	916.94	916.82	916.69	916.54	916.34
PHASE 1 CJ	FINAL DECK ELEV.	916.76	916.89	917.00	917.10	917.19	917.28	917.35	917.38	917.38	917.38	917.35	917.27	917.15	917.10	916.99	916.87	916.72	916.56	916.39
	SCREED ELEV.	916.76	916.91	917.02	917.11	917.19	917.31	917.38	917.40	917.39	917.38	917.41	917.38	917.22	917.14	916.99	916.87	916.73	916.58	916.39
PROFILE GRADE/ CROWN	FINAL DECK ELEV.	916.78	916.91	917.02	917.12	917.20	917.30	917.36	917.39	917.40	917.40	917.36	917.29	917.17	917.12	917.01	916.88	916.74	916.58	916.40
	SCREED ELEV.	916.78	916.92	917.04	917.13	917.20	917.32	917.40	917.41	917.41	917.40	917.42	917.40	917.24	917.16	917.01	916.88	916.75	916.59	916.40
BEAM 5	FINAL DECK ELEV.	916.75	916.87	916.99	917.09	917.17	917.27	917.33	917.36	917.36	917.37	917.33	917.25	917.14	917.09	916.98	916.85	916.71	916.55	916.37
	TOP OF HAUNCH ELEV.	916.00	916.14	916.26	916.35	916.42	916.54	916.62	916.63	916.63	916.62	916.64	916.61	916.46	916.38	916.23	916.10	915.97	915.81	915.62
BEAM 6	FINAL DECK ELEV.	916.59	916.71	916.83	916.93	917.01	917.11	917.17	917.20	917.20	917.21	917.17	917.09	916.98	916.93	916.82	916.69	916.55	916.39	916.21
	TOP OF HAUNCH ELEV.	915.84	915.98	916.10	916.19	916.26	916.38	916.46	916.47	916.47	916.46	916.48	916.46	916.30	916.22	916.07	915.94	915.81	915.65	915.46
BEAM 7	FINAL DECK ELEV.	916.43	916.55	916.67	916.77	916.85	916.95	917.01	917.04	917.04	917.05	917.01	916.93	916.82	916.77	916.66	916.53	916.39	916.23	916.05
	TOP OF HAUNCH ELEV.	915.68	915.82	915.94	916.03	916.10	916.22	916.29	916.31	916.31	916.30	916.32	916.29	916.14	916.06	915.91	915.78	915.65	915.49	915.30
RIGHT TOE OF PARAPET	FINAL DECK ELEV.	916.40	916.53	916.64	916.74	916.83	916.92	916.99	917.02	917.02	917.02	916.99	916.91	916.79	916.74	916.63	916.51	916.36	916.20	916.03
	SCREED ELEV.	916.40	916.55	916.66	916.75	916.83	916.94	917.02	917.04	917.03	917.02	917.05	917.02	916.86	916.78	916.63	916.51	916.37	916.22	916.03

NOTES:

1. SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
2. TOP OF HAUNCH ELEVATIONS SHOWN REPRESENT THE THEORETICAL LOCATION OF THE BOTTOM OF THE DECK ABOVE THE BEAM HAUNCH PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
3. FINAL DECK ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED.

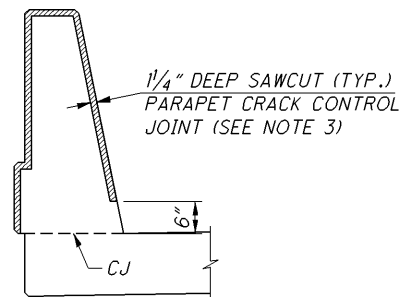


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PARAPET ELEVATION

LEFT PARAPET SHOWN, RIGHT PARAPET SIMILAR BUT OPPOSITE HAND



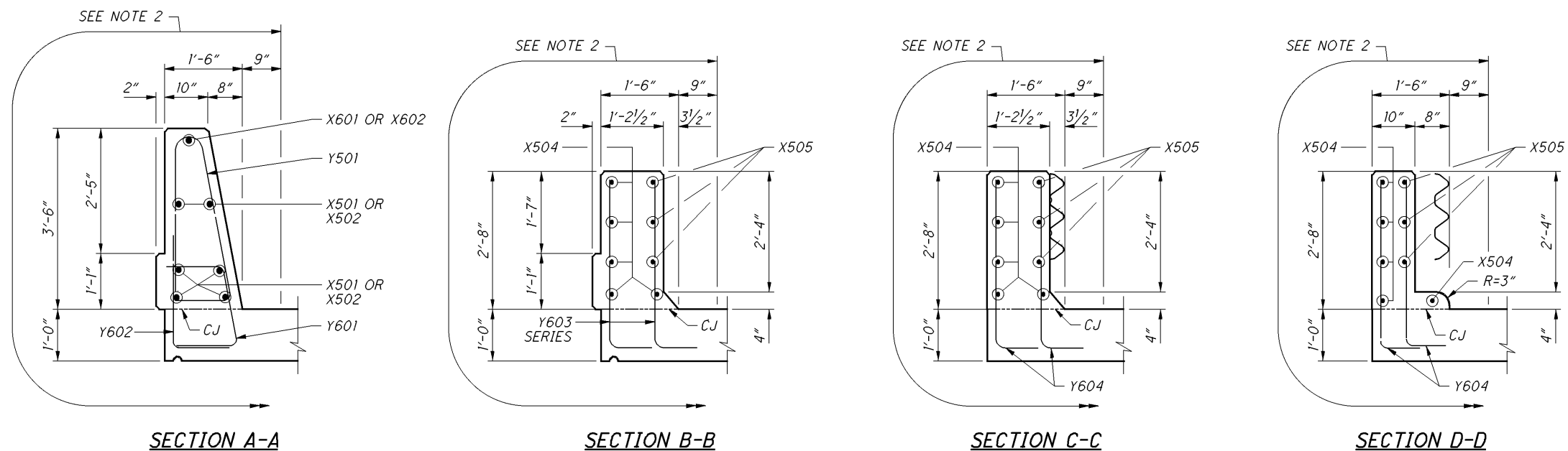
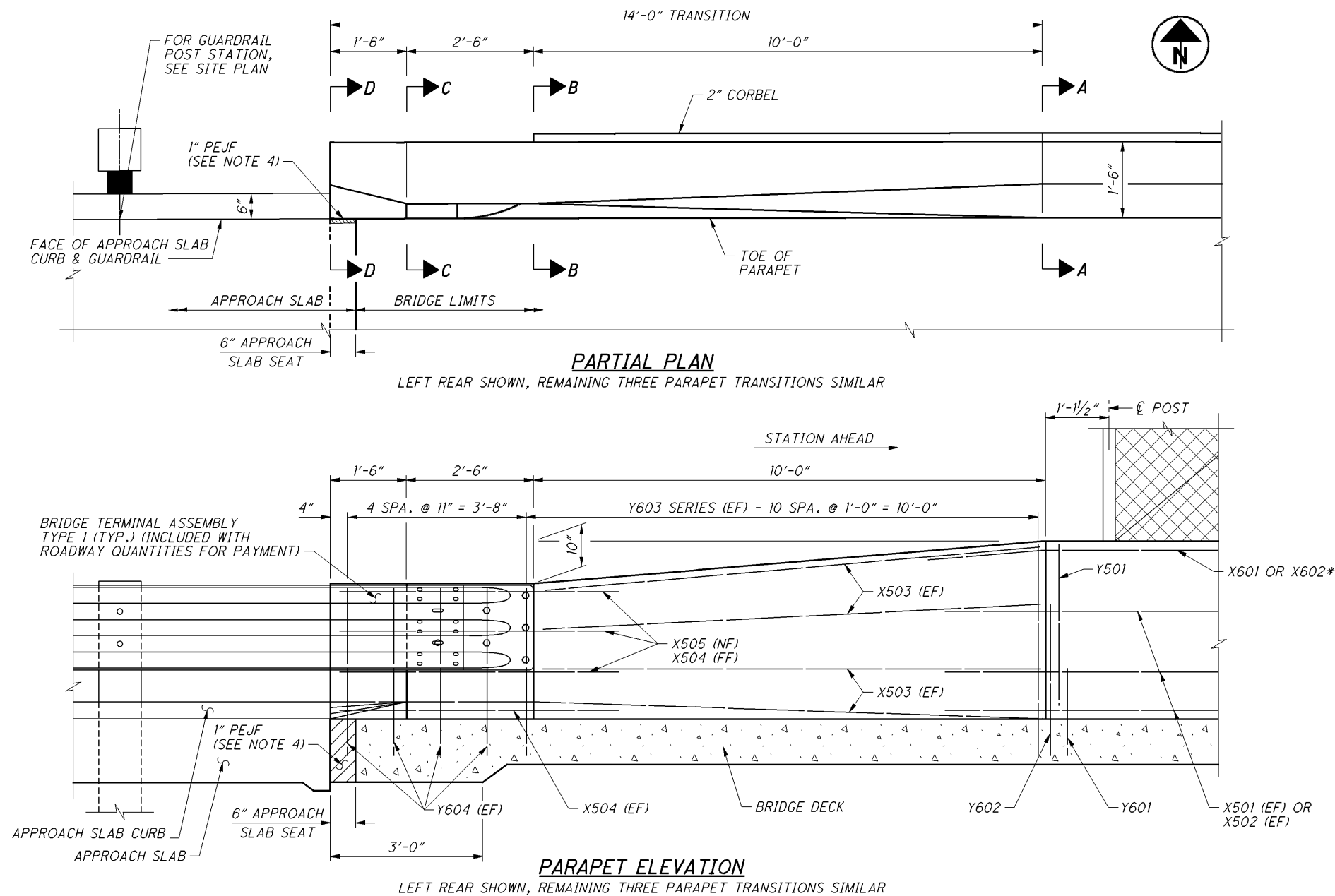
TYPICAL PARAPET CRACK CONTROL JOINT DETAIL

NOTES:

1. REINFORCING STEEL LAP LENGTHS:
UNLESS NOTED OTHERWISE, LAP LENGTHS SHALL BE AS FOLLOWS:
NO. 5 BARS = 3'-5"
NO. 6 BARS = 4'-1"
FOR REINFORCING STEEL LIST, SEE SHEET 28.
2. ALL REINFORCING STEEL SHALL BE EPOXY COATED CONFORMING TO ITEM 509.
3. CONCRETE PARAPETS: AS SOON AS A CONCRETE SAW CAN BE OPERATED WITHOUT DAMAGING THE FRESHLY PLACED CONCRETE, SAWCUT 1/4" DEEP CONTROL JOINTS INTO THE PERIMETER OF THE CONCRETE PARAPET STARTING AND ENDING AT THE ELEVATION OF THE CONCRETE DECK. USE AN EDGE GUIDE, FENCE, OR JIG TO ENSURE THAT THE CUT JOINT IS STRAIGHT, TRUE, AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL WIDTH OF 1/4 INCH. SEAL THE PERIMETER OF THE DEFLECTION CONTROL JOINT TO A MINIMUM DEPTH OF 1 INCH WITH A POLYURETHANE OR POLYMERIC MATERIAL CONFORMING TO ASTM C920, TYPE S. LEAVE THE BOTTOM 1/2 INCH OF BOTH THE INSIDE AND OUTSIDE FACES UNSEALED TO ALLOW WATER TO ESCAPE. PAYMENT AND LABOR SHALL BE INCLUDED IN THE CONTRACT BID PRICE FOR ITEM 898 QC/OA CONCRETE, CLASS OSC2, SUPERSTRUCTURE (PARAPET).
4. FOR PARAPET TRANSITION DETAILS AND SECTION A-A, SEE SHEET 26.
5. FOR FENCE DETAILS, SEE STD. DRAWING VPF-I-90.
6. SEALING OF CONCRETE SURFACES OF PARAPETS IS INCLUDED WITH ITEM 512 FOR PAYMENT.
7. 1" PEJF IS INCLUDED WITH ITEM 898 SUPERSTRUCTURE (APPROACH SLAB) FOR PAYMENT.

* FIELD BEND IF NECESSARY

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NOTES:

1. FOR ADDITIONAL PARAPET TRANSITION DETAILS, SEE STD. DWG. SBR-1-99.
2. FOR LIMITS OF SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), SEE SHEET 21. SEALING OF CONCRETE SURFACES OF PARAPET TRANSITIONS ARE INCLUDED WITH ITEM 512 FOR PAYMENT.
3. ALL REINFORCING STEEL SHALL BE EPOXY COATED, GRADE 60.
4. 1" PEJF INCLUDED WITH ITEM 898 SUPERSTRUCTURE (APPROACH SLAB) FOR PAYMENT.

* FIELD BEND IF NECESSARY

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MARK	REAR ABUT.	FWD. ABUT.	TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS						
							A	B	C	D	E	R	INC
SUBSTRUCTURE - ABUTMENTS													
* A501	8	8	16	26'-0"	434	STR							
* A502	8	8	16	33'-10"	565	STR							
* A503	16	16	32	3'-7"	120	STR							
A504	8	8	16	34'-4"	573	STR							
A505	8	8	16	42'-2"	704	STR							
A506	NOT USED												
A507	57	57	114	19'-0"	2260	3	6'-8"	2'-7"					
A508	43	43	86	14'-1"	1264	2	5'-10"	2'-8"	5'-10"				
A509	1	1	2	16'-9"	35	2	7'-5"	2'-2"	7'-5"				
A510	14	14	28	7'-1"	207	2	2'-7"	2'-2"	2'-7"				
A511	20	20	40	11'-3"	470	STR							
A512	4	4	8	7'-6"	63	STR							
A513	4	4	8	5'-10"	49	STR							
A514	4	4	8	3'-7"	30	STR							
A515	4	4	8	8'-2"	69	19	6'-11"	1'-1"	7"				
A516	1	1	2	17'-5"	37	2	7'-9"	2'-2"	7'-9"				
A517	1 SERIES	1 SERIES	2 SERIES	18'-9"	174	37	4	8'-5"	10'-5"	2'-2"			8"
	OF	OF	OF	TO									
	4	4	4	22'-9"									
A518	1	1	2	16'-3"	34	2	7'-2"	2'-2"	7'-2"				
A519	1	1	2	16'-11"	36	2	7'-6"	2'-2"	7'-6"				
A520	43	43	86	9'-5"	845	2	3'-6"	2'-8"	3'-6"				
A521	1	1	2	22'-9"	48	2	10'-5"	2'-2"	10'-5"				
A522	1	1	2	22'-5"	47	2	10'-3"	2'-2"	10'-3"				
A523	1 SERIES	1 SERIES	2 SERIES	18'-5"	171	37	4	8'-3"	10'-3"	2'-2"			8"
	OF	OF	OF	TO									
	4	4	4	22'-5"									
* A801	4	4	8	26'-0"	556	STR							
* A802	6	6	12	33'-10"	1085	STR							
* A803	10	10	20	7'-0"	374	STR							
A804	4	4	8	34'-4"	734	STR							
A805	6	6	12	42'-2"	1352	STR							
SUB-TOTAL					12336								

MARK	REAR ABUT.	FWD. ABUT.	TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS						
							A	B	C	D	E	R	INC
SUPERSTRUCTURE - ABUTMENT DIAPHRAGMS													
D501	45	45	90	7'-3"	681	2	2'-8"	2'-2"	2'-8"				
D502	45	45	90	9'-8"	908	3	2'-8"	1'-11"					
D801	39	39	78	5'-2"	1077	18	2'-11"	1'-0"	1'-0"				
* D802	14	14	28	25'-10"	1932	STR							
* D803	14	14	28	12'-10"	960	STR							
D804	14	14	28	28'-4"	2119	STR							
SUB-TOTAL					7677								

MARK	PIER 1	PIER 2	PIER 3	TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS						
								A	B	C	D	E	R	INC
SUBSTRUCTURE - PIERS														
SP401	4		4	8	16'-0"	1885	27	4½"	2'-6"	16'-0"				
SP402		4		4	15'-2"	897	27	4½"	2'-6"	15'-2"				
P501	8	8	8	24	35'-1"	879	1	10"	34'-4"					
* P502	16	16	16	48	3'-7"	180	STR							
P503	8	8	8	24	24'-9"	620	2	10"	23'-4"	10"				
P504	220	220	220	660	9'-3"	6368	2	3'-7"	2'-4"	3'-7"				
P505	20	20	20	60	9'-6"	595	STR							
P506	22	22	22	66	8'-6"	586	STR							
P507	16	16	16	48	9'-0"	451	STR							
P508	28	28	28	84	5'-6"	482	STR							
P601	16	16	16	48	6'-10"	493	17	5'-6"						
P602	6	6	6	18	12'-4"	334	33	2'-8"	2'-11"					
P603	4	4	4	12	4'-4"	79	1	1'-7"	2'-11"					
P901	17	17	17	51	35'-8"	6185	1	1'-7"	34'-4"					
* P902	34	34	34	102	9'-4"	3237	STR							
P903	17	17	17	51	25'-11"	4494	2	1'-7"	23'-4"	1'-7"				
P904	20	20	20	60	11'-0"	2244	17	8'-6"						
P905	20	20	20	60	12'-0"	2448	17	9'-6"						
P906	10	10	10	30	4'-2"	426	1	1'-7"	2'-10"					
P1101	40		40	80	19'-6"	8289	16	17'-11"						
P1102		40		40	18'-8"	3968	16	17'-1"						
P1103	40	40	40	120	16'-11"	10786	16	15'-4"						
SUB-TOTAL						55926								

* REINFORCING BAR UTILIZES A MECHANICAL CONNECTOR.
BAR LENGTH IS MEASURED TO THE CONSTRUCTION JOINT.
BAR END PREPARATION MAY BE NECESSARY DEPENDING
UPON THE TYPE OF MECHANICAL CONNECTOR FURNISHED.

NOTES:

1. FOR REINFORCING STEEL NOTES AND BAR BENDING
DIAGRAM, SEE SHEET 28.

DESIGN AGENCY
CH2MHILL
ONE DAYTON CENTRE, SUITE 1100
ONE SOUTH MAIN STREET
DAYTON, OHIO 45402

DATE
7/12

REVIEWED
SKT

DRAWN
EAG

DESIGNED
SL

CHECKED
PAW

STRUCTURE FILE NUMBER
0602442

REINFORCING STEEL LIST 1
BRIDGE NO. AUG-075-1234
NATIONAL ROAD (CR208) OVER IR-75

AUG-075-12.34
PID No. 87369

27 / 28

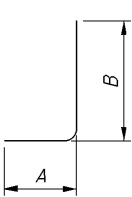
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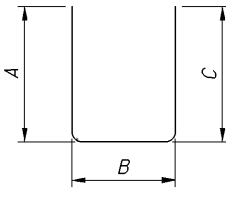
MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
SUPERSTRUCTURE - DECK											
S401	544	30'-0"	10902	STR							
S402	68	9'-3"	421	STR							
S403	1533	9'-2"	9388	16	8'-8"						
S501	712	30'-0"	22279	STR							
S502	89	13'-3"	1230	STR							
S503	511	26'-10"	14302	17	25'-8"						
S504	511	34'-9"	18521	16	34'-2"						
* S505	1533	2'-7"	4131	STR							
* S506	511	25'-10"	13769	STR							
S507	511	34'-2"	18210	STR							
S601	65	39'-6"	3857	STR							
S602	130	51'-0"	9959	STR							
SUB-TOTAL			126969								

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
SUPERSTRUCTURE - PARAPET											
X501	84	30'-0"	2629	STR							
X502	12	28'-0"	351	STR							
X503	32	10'-0"	334	STR							
X504	20	5'-6"	115	STR							
X505	12	5'-6"	69	25	1'-8"	2'-5"	1'-4"	1 1/2"	5"		
Y501	416	7'-5"	3219	23	1'-1"	3'-2"	3'-0"			3 3/8"	
X601	16	30'-0"	721	STR							
X602	2	8'-1"	25	STR							
Y601	416	3'-9"	2344	28	1'-9"	1'-1"					
Y602	416	2'-9"	1719	1	1'-1"	1'-10"					
Y603	8 SERIES	4'-2"	606	44	11	1'-0"	3'-4"	4'-2"			1"
	OF	TO									
	11	5'-0"									
Y604	32	4'-2"	201	1	1'-0"	3'-4"					
SUB-TOTAL			12333								

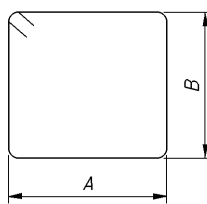
* REINFORCING BAR UTILIZES A MECHANICAL CONNECTOR.
BAR LENGTH IS MEASURED TO THE CONSTRUCTION JOINT.
BAR END PREPARATION MAY BE NECESSARY DEPENDING
UPON THE TYPE OF MECHANICAL CONNECTOR FURNISHED.



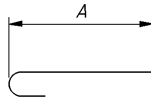
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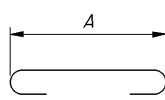
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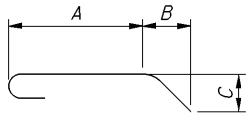
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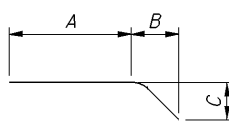
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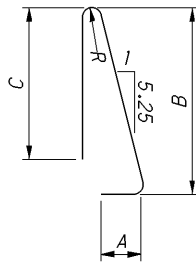
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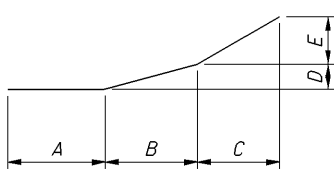
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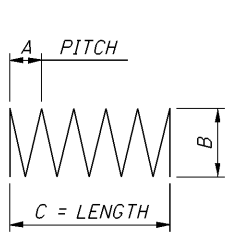
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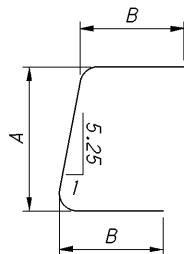
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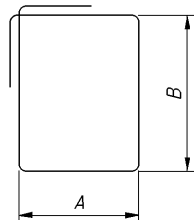
TYPE-25



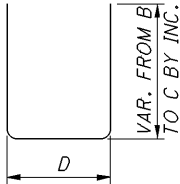
TYPE - 27



TYPE-28

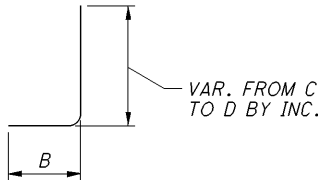


TYPE-33



TYPE-37

A = NO. OF BAR IN SERIES



A = NO. OF BAR IN SERIES

TYPE-44

NOTES:

1. THE BAR SIZE IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST NUMBER INDICATES THE BAR SIZE NUMBER.
2. ALL DIMENSIONS ARE MEASURED OUT-TO-OUT OF BAR UNLESS NOTED OTHERWISE.
3. RADIUS DIMENSION "R" IS TO THE OUTSIDE OF BAR. RADIUS DIMENSION "I.R." IS TO THE INSIDE OF BAR.
4. FOR STANDARD HOOK DIMENSIONS, SEE SECTION 509.05 OF THE SPECIFICATIONS.
5. ALL REINFORCING STEEL SHALL BE EPOXY COATED, GRADE 60.