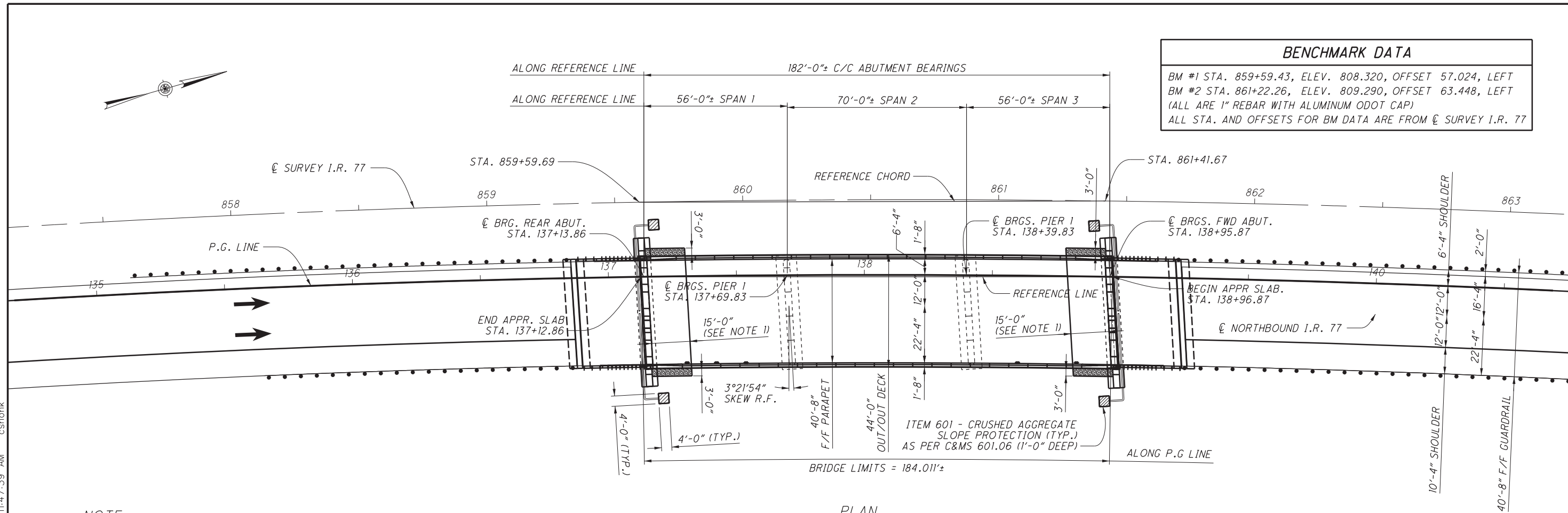


BENCHMARK DATA	
BM #1 STA. 859+59.43, ELEV. 808.320, OFFSET 57.024, LEFT	
BM #2 STA. 861+22.26, ELEV. 809.290, OFFSET 63.448, LEFT	
(ALL ARE 1" REBAR WITH ALUMINUM ODOT CAP)	
ALL STA. AND OFFSETS FOR BM DATA ARE FROM \bar{C} SURVEY I.R. 77	



PLAN

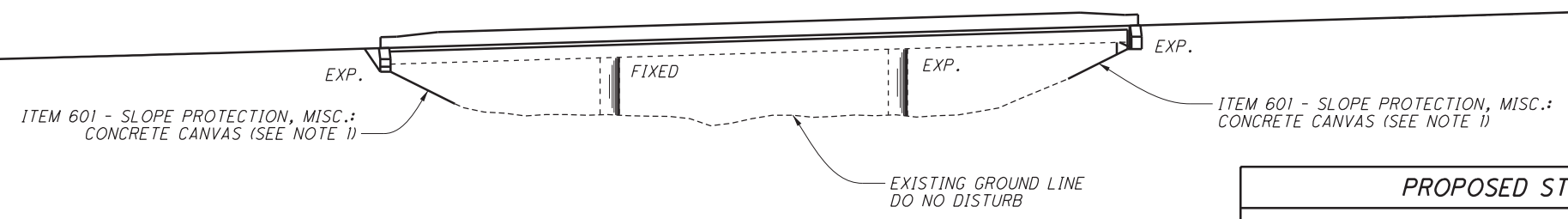
SEE SHEET 14 FOR FRAMING PLAN DETAILS

NOTE:

1. PLACE CONCRETE CANVAS AS PER NOTE ON SHEET 12/130. LIMITS OF CONCRETE CANVAS SHOWN IN THE PLANS ARE FOR ESTIMATING PURPOSES ONLY. SEE SHEET 12/130. FOR ESTIMATED QUANTITIES. CONCRETE CANVAS SHALL BE PLACED TO 3'-0" BEYOND THE DECK EDGES AND SHALL EXTEND DOWN THE SLOPE TO THE LIMITS OF THE EXISTING TYPE A ROCK CHANNEL PROTECTION, AS DIRECTED BY THE ENGINEER.

LEGEND

- ITEM 601 - SLOPE PROTECTION, MISC.: CONCRETE CANVAS
- ITEM 601 - CRUSHED AGGREGATE SLOPE PROTECTION



ELEVATION

EXISTING STRUCTURE
TYPE: CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE
SPANS: 56'-0", 70'-0", 56'-0" C/C BEARINGS
ROADWAY: 38'-0" F/F PARAPET
LOADING: CF=2000 (57)
SKEW: 3° 21' 54" RIGHT FORWARD
WEARING SURFACE: 3/4" MONOLITHIC CONCRETE
BRIDGE RAIL: SAFETY CURB WITH PARAPET
APPROACH SLABS: 25'-0" LONG (AS-1-54)
ALIGNMENT: VARIABLE CURVE RT.
SUPERELEVATION: 0.032 FT/FT (SUPERELEVATED)
SFN: 3003337
COORDINATES: LATITUDE N 40° 6' 33.4620"
LONGITUDE W 81° 33' 42.6888"

PROPOSED STRUCTURE
TYPE: CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE
SPANS: 56'-0", 70'-0", 56'-0" C/C BEARINGS
ROADWAY: 40'-8" TOE/TOE PARAPET
LOADING: HS25 CASE II AND ALTERNATE MILITARY (60 LBS./SQ. FT. F.W.S)
SKEW: 3° 21' 54" RIGHT FORWARD
WEARING SURFACE: 1" MONOLITHIC CONCRETE
BRIDGE RAIL: DEFLECTOR PARAPET TYPE (SBR-1-13)
APPROACH SLABS: 25'-0" LONG (AS-1-81)
ALIGNMENT: TANGENT
SUPERELEVATION: 0.032 FT/FT (SUPERELEVATED)
SFN: 3003337
COORDINATES: LATITUDE N 40° 6' 33.4620"
LONGITUDE W 81° 33' 42.6888"

DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5
DATE 09/13/16
REVIEWED JDR
STRUCTURE FILE NUMBER 3003337
DRAWN NEM
REVISOR REVISED
DESIGNED NEM
CHECKED TAG
BRIDGE PLAN AND ELEVATION BRIDGE NO. GUE-1548R I.R. 77 OVER SPILLWAY
GUE-77-VAR PID No. 21631
1/35
93 129

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STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

AS-1-15 DATED: 07-17-15
 AS-2-15 DATED: 07-17-15
 GSD-1-96 DATED: 07-19-02
 PCB-91 DATED: 01-18-13
 SBR-1-13 DATED: 01-17-14
 SCID-1-96 DATED: 07-18-14
 SCID-2-14 DATED: 07-18-14

AND THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

800 DATED: 10-21-16
 832 DATED: 01-17-14

REFERENCE

EXISTING BRIDGE PLANS MAY BE INSPECTED AND ARE PROVIDED WITH THIS PROJECT'S BIDDING DOCUMENTS.

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATED OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 17TH EDITION (2002), AND THE ODOT BRIDGE DESIGN MANUAL, 2004.

DESIGN SPECIFICATIONS

HS-25 CASE II AND THE ALTERNATE MILITARY LOADING, WITH FUTURE WEARING SURFACE (FWS) OF 60 LBS/SQ. FT.

DESIGN DATA

CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

STRUCTURAL STEEL - ASTM A709 GRADE 50
 - MINIMUM YIELD STRENGTH 50 KSI

REINFORCING STEEL - ASTM A615 OR A996 GRADE 60
 - MINIMUM YIELD STRENGTH 60 KSI

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 THAT HAVE BEEN VERIFIED IN THE FIELD.

DECK PROTECTION METHOD

EPOXY COATED REINFORCING STEEL
 2 1/2" CONCRETE COVER
 SEALING OF CONCRETE SURFACES
 PARAPETS AND SCUPPERS

MONOLITHIC WEARING SURFACE

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

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN, SUPERSTRUCTURE (CONCRETE)

DESCRIPTION: THIS WORK CONSISTS OF THE REMOVAL OF THE CONCRETE DECK, PARAPETS FROM STEEL SUPPORTING SYSTEMS (GIRDERS, CROSSFRAMES, ETC.), EXISTING SCUPPERS WITH ATTACHMENTS, EXISTING EXPANSION JOINTS, AND EXISTING STEEL BULB ANGLE GUTTERS. THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE EQUIPMENT IS PROHIBITED. SUBMIT CONSTRUCTION PLANS ACCORDING TO C&MS 501.05.

PROTECTION OF TRAFFIC: PRIOR TO DEMOLITION OF ANY PORTIONS OF THE EXISTING SUPERSTRUCTURE, THE CONTRACTOR SHALL SUBMIT PLANS FOR THE PROTECTIONS OF TRAFFIC (VEHICULAR, PEDESTRIAN, BOAT, ETC.) AS PER C&MS 2016 501.05.B.2.

PROTECTION OF STEEL SUPPORT SYSTEMS: BEFORE DECK AND SLAB CUTTING IS PERMITTED, DRAW THE OUTLINE OF PRIMARY STEEL MEMBERS IN CONTACT WITH THE BOTTOM OF THE DECK ON THE SURFACE OF DECK. DRILL SMALL DIAMETER PILOT HOLES 2 INCHES OUTSIDE THESE LINES TO CONFIRM THE LOCATION OF THE FLANGE EDGES. DECK CUTS OVER OR WITHIN 2 INCHES OF FLANGE EDGES SHALL NOT EXTEND LOWER THAN THE BOTTOM LAYER OF DECK SLAB REINFORCING STEEL. CUTS MADE OUTSIDE 2 INCHES OF FLANGE EDGES MAY EXTEND THE FULL DEPTH OF THE DECK. PERFORM WORK CAREFULLY DURING CUTTING OF THE DECK SLAB TO AVOID DAMAGING STEEL MEMBERS THAT ARE TO BE INCORPORATED INTO THE PROPOSED STRUCTURE. REPLACE OR REPAIR STEEL MEMBERS DAMAGED BY THE DECK SLAB CUTTING OPERATIONS AT NO ADDITIONAL COST TO THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER TO THE DIRECTOR. OBTAIN THE DIRECTOR'S APPROVAL BEFORE PERFORMING REPAIR.

REMOVAL METHODS: THE CONTRACTOR MAY REMOVE CONCRETE BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED CHISEL TYPE TOOLS. FOR REMOVALS OVER STRUCTURAL MEMBERS (STEEL GIRDERS), THE CONTRACTOR MAY USE A HAMMER HEAVIER THAN 35 POUNDS, BUT NOT EXCEED 90 POUNDS UNLESS APPROVED BY THE ENGINEER. REMOVAL METHODS OVER STRUCTURAL MEMBERS SHALL ENSURE ADEQUATE DEPTH CONTROL AND PREVENT NICKING OR GOUGING THE PRIMARY STRUCTURAL MEMBERS.

DUE TO THE POSSIBLE PRESENCE OF ATTACHMENTS (E.G., FINISHING MACHINE AND FORM SUPPORTS, ETC.) TO EXISTING STRUCTURAL MEMBERS, PERFORM WORK CAREFULLY DURING DECK REMOVAL TO AVOID DAMAGING STRUCTURAL MEMBERS THAT ARE TO REMAIN. REPLACE OR REPAIR STRUCTURAL MEMBERS DAMAGED BY THE REMOVAL OPERATIONS AT NO ADDITIONAL COST TO THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER TO THE DIRECTOR. OBTAIN THE DIRECTOR'S APPROVAL BEFORE PERFORMING REPAIR.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN, SUPERSTRUCTURE (CONCRETE) (CONTINUED)

WHEN REMOVING THE EXPANSION JOINTS, END CROSSFRAMES, AND OTHER APPURTENANCES FROM STEEL SUPPORTING SYSTEMS (BEAMS, CROSSFRAMES, ETC.) THE ITEM ALONG WITH ITS SUPPORTS SHALL BE COMPLETELY REMOVED. THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE EQUIPMENT IS PROHIBITED. SUBMIT CONSTRUCTION PLANS ACCORDING TO C&MS 501.05.

PERFORM WORK CAREFULLY DURING CUTTING OF THE WELDED ATTACHMENTS TO AVOID DAMAGING STEEL MEMBERS THAT ARE TO BE INCORPORATED INTO THE PROPOSED STRUCTURES. REPLACE OR REPAIR STEEL MEMBERS DAMAGE BY THE CUTTING OPERATIONS AT NO ADDITIONAL COST TO THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER TO THE DIRECTOR. OBTAIN THE DIRECTOR'S APPROVAL BEFORE PERFORMING REPAIR.

EXISTING WELDED ATTACHMENTS: REMOVE EXISTING WELDED ATTACHMENTS (E.G., FINISHING MACHINE, UTILITY ATTACHMENTS, AND FORM SUPPORTS) LOCATED IN THE WEB AND/OR FLANGES OF EXISTING STEEL MEMBERS. ANY GRINDING SHALL BE DONE PARALLEL TO THE SURFACE THAT THE ATTACHMENT IS LOCATED ON. CARE SHALL BE TAKEN WHEN GRINDING AS NOT TO DAMAGE THE STEEL MEMBER AND ATTACHMENTS SHALL BE GROUND DOWN UNTIL THE STEEL MEMBER IS SMOOTH.

MEASUREMENT & PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF CONCRETE REMOVALS ON A CUBIC YARD BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FROM ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN, SUPERSTRUCTURE (CONCRETE). PAYMENT FOR THE EXISTING WELDED ATTACHEMENTS SHALL BE INCLUDED WITH THEIR RESPECTIVE PAY ITEMS: ITEM 202 REMOVAL MISC.: EXISTING END CROSSFRAMES AND INTERMEDIATE CROSSFRAMES

PORTIONS OF STRUCTURE REMOVED, AS PER PLAN, SUBSTRUCTURE

THERE SHALL BE NO SAWCUTS BELOW THE TOP OF EXISTING FOOTER ELEVATIONS AT ANY LOCATION EXCEPT AS DETAILED IN THE PLAN. ALL CONCRETE REMOVED FROM THE SAWCUT DOWN TO THE BEAM SEAT SHALL BE REMOVED BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. AT ALL SAWCUTS/REMOVAL LIMITS, SHOWN ON THE ABUTMENTS, COAT THE EXISTING FLUSH TRIMMED RE-STEEL SECTIONS AS PER C&MS 509.09 AS IF THE ORIGINAL COATING IS THE SAME AS C&MS ITEM 509 - EPOXY COATED REINFORCING.

INSPECTION OF EXISTING STRUCTURAL STEEL

THE ENGINEER WILL VISUALLY INSPECT ALL EXISTING BUTT-WELDED SPLICES AND/OR TOP FLANGE COVER PLATE FILLET WELDS TO ENSURE THE WELDS, PLATES AND GIRDERS ARE FREE OF DEFECTS AND CRACKS. IF NECESSARY, REMOVE ALL DECK SLAB HAUNCH FORMS IMMEDIATELY ADJACENT TO SUCH WELDS THAT MAY INTERFERE WITH THE ENGINEERS'S INSPECTION. THE INSPECTIONS WILL NOT TAKE PLACE UNTIL THE TOP FLANGES ARE CLEANED ACCORDING TO C&MS 511.07, BUT WILL BE DONE BEFORE THE DECK SLAB REINFORCEMENT IS INSTALLED. THE DEPARTMENT WILL PAY FOR THE COST ASSOCIATED WITH THIS INSPECTION WITH ITEM 511 - CLASS QC2 CONCRETE WITH QC/OA, SUPERSTRUCTURE, AS PER PLAN. THE ENGINEER WILL REPORT ALL CRACKS FOUND TO THE OFFICE OF CONSTRUCTION ADMINISTRATION, BRIDGE CONSTRUCTION SPECIALIST, ALONG WITH SPECIFIC INFORMATION ON LOCATION OF THE CRACKS, LENGTH AND DEPTH SO AN EVALUATION AND REPAIR OR REPLACEMENT RECOMMENDATION CAN BE MADE.

CUT LINE CONSTRUCTION JOINT PREPARATION

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

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 2 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 OF THE EDGE OF EACH BEAM FLANGE IS ± 3 INCHES.

THE HAUNCH THICKNESS WAS MEASURED AT THE CENTERLINE OF THE BEAM, FROM THE SURFACE OF THE DECK TO THE BOTTOM OF THE TIP FLANGE MINUS THE DECK SLAB THICKNESS, THE AREA OF ALL EMBEDDED STEEL PLATES HAS BEEN DEDUCTED FROM THE HAUNCH QUANTITY IN ACCORDANCE WITH C&MS 511.23.

SCUPPERS - BRIDGE PAINTING

BRIDGE PAINTING WILL EXCLUDE SCUPPERS TO BE GALVANIZED.

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REVIEWED	JDR	DATE	09/13/16
STRUCTURE FILE NUMBER	3003337	DESIGN AGENCY	OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5
BRIDGE GENERAL NOTES			
BRIDGE NO. GUE-77-1548R I.R. 77 OVER SPILLWAY			
GUE-77-VAR			
PID No. 21631			
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ITEM 526 - REINFORCED CONCRETE APPROACH SLAB WITH OC/OA (T=15"), AS PER PLAN

FURNISH APPROACH SLABS CONFORMING TO C&MS 526. THE ACCEPTED QUANTITIES SHALL INCLUDE: CONCRETE, REINFORCING STEEL, JOINT FILLERS, JOINT SEALS, WATERPROOFING AND ANY OTHER INCIDENTALS SHOWN ON THE APPROACH SLAB DETAIL SHEETS. THE DEPARTMENT WILL INITIALLY PAY THE FULL BID PRICE TO THE CONTRACTOR UPON COMPLETING THE WORK. THE DEPARTMENT WILL CALCULATE THE FINAL ADJUSTED PAYMENT ACCORDING TO C&MS 455 AND INCLUDE APPROACH SLAB CONCRETE AND DECK CONCRETE IN THE SAME LOT TO DETERMINE FINAL PAY FACTORS.

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

THIS WORK CONSISTS OF RAISING OR RE-POSITIONING EXISTING STRUCTURES TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS.

SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH C&MS 501.05.

THIS ITEM SHALL BE USED TO SET THE PROPOSED BEARINGS AT EACH ABUTMENT.

ALL PLANNED JACKING OPERATIONS FOR THIS PROJECT SHALL OCCUR AFTER THE EXISTING DECK HAS BEEN REMOVED AND PRIOR TO PLACEMENT OF THE PROPOSED DECK.

IF UNFORESEEN NEED EXISTS AFTER PLACEMENT OF PROPOSED DECK, THE FOLLOW SPECIFICATION SHALL APPLY.

IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL BEAMS, OR OTHER DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, IMMEDIATELY CEASE THE JACKING OPERATION AND INSTALL SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. EPOXY INJECT ALL BEAMS THAT SEPARATE FROM THE DECK FOR THE DISTANCE OF THE SEPARATION IN ACCORDANCE WITH C&MS 512.07. THE DEPARTMENT WILL NOT PAY FOR THE COST OF THIS EPOXY INJECTION OR OTHER REQUIRED REPAIRS.

AFTER THE PROPOSED REHABILITATION OF EACH ABUTMENT FOLLOWING EACH PHASE, THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUBMIT A REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COSTS TO ENSURE FULL SEATING ON BEARINGS.

THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS.

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516. JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

ELASTOMERIC BEARINGS

THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED UNDER DIVISION I, SECTION 14.6.6 (METHOD A) OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.

ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL UP, AS PER PLAN

ALL REQUIREMENTS OF 513 APPLY TO SHOP FABRICATED MEMBERS. PREFORM WORK FOR FIELD FABRICATED MEMBERS ACCORDING TO ITEM 513, EXCEPT AS MODIFIED HEREIN. THE DEPARTMENT WILL NOT REQUIRE THE CONTRACTOR PERFORMING FIELD FABRICATION TO BE PREQUALIFIED AS SPECIFIED IN SUPPLEMENT 1078. SUBMIT A WRITTEN LETTER OF MATERIAL ACCEPTANCE, C&MS 501.06, TO THE ENGINEER. PROVIDE SHOP DRAWINGS ACCORDING TO C&MS 513.06 OR SUPPLY THE ENGINEER WITH "AS-BUILT" DRAWINGS MEETING C&MS 513.06 AFTER COMPLETION OF FIELD FABRICATION. THE ENGINEER WILL REVIEW THE SUBMITTED DRAWINGS FOR CONCURRENCE WITH THE FINAL AS-BUILT CONDITION. IF NECESSARY, THE ENGINEER MAY CONTACT THE OFFICE OF STRUCTURAL ENGINEERING FOR TECHNICAL ASSISTANCE. IF THE ENGINEER IS SATISFIED WITH THE "AS-BUILT" DRAWINGS AND THE DELIVERED MATERIALS, SUPPLY A COPY OF THE DRAWINGS, STAMPED AND DATED, ALONG WITH MICROFILM, TO THE OFFICE OF STRUCTURAL ENGINEERING FOR RECORD PURPOSES. THE FOLLOWING MEMBERS ARE INCLUDED IN THIS ITEM: STIFFENER PLATES.

WELDED ATTACHMENTS

WELD ATTACHMENTS OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE TO AREAS OF THE FASCIA STRINGER 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.

BRIDGE PAINTING - BEAM ENDS

THE BEAM ENDS ENCASED IN THE REAR AND FORWARD DIAPHRAGMS SHALL RECEIVE SURFACE PREPARATION AND PRIME COAT ONLY. THIS SHALL BE PERFORMED AFTER HOLES ARE DRILLED IN WEBS AND BEFORE THE PLACEMENT OF THE DIAPHRAGM REINFORCING STEEL AND CONCRETE.

PAINTING OF STRUCTURAL STEEL

ALL STRUCTURAL STEEL SHALL BE PAINTED IN ACCORDANCE WITH SECTION 514 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS. THE FINISH COAT COLOR SHALL BE GREEN FS-595C-14260.

FILL UNDER APPROACH SLABS

ITEM 304, AGGREGATE BASE SHALL BE USED TO BRING THE SUBBASE TO GRADE FOR THE NEW APPROACH SLAB AS DETAILED ON THE APPROACH SLAB DETAIL SHEETS AND SHALL EXTEND 1'-6" ON BOTH SIDES OF EACH APPROACH SLAB.

POROUS BACKFILL WITH FILTER FABRIC

POROUS BACKFILL WITH FILTER FABRIC, 2 FEET THICK SHALL EXTEND UP TO THE PLANS OF THE SUBGRADE TO 1 FOOT BELOW THE EMBANKMENT SURFACE, AND Laterally TO THE ENDS OF THE WINGWALLS.

ITEM 202 - REMOVAL MISC.: ABUTMENT BEARINGS

THIS ITEM SHALL INCLUDE THE REMOVAL OF ALL BEARING COMPONENTS AT THE ABUTMENTS AS WELL AS REMOVING RUST AND ANY OTHER DEBRIS FROM THE BEAMS TO PREPARE THEM FOR THE ATTACHMENT OF THE NEW BEARINGS. THE CONTRACTOR SHALL BE CAREFUL WHEN REMOVING THE BEARINGS AND WELDS FROM THE BEAMS SO NO DAMAGE IS DONE TO STEEL MEMBERS THAT ARE TO BE INCORPORATED INTO THE PROPOSED STRUCTURE. ANY DAMAGE DONE TO THE BEAMS SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.

ITEM 202 - REMOVAL MISC.: DETERIOATED END CROSSFRAMES

THIS ITEM SHALL INCLUDE THE REMOVAL OF THE END CROSS FRAMES AND WELDS FROM THE BEAMS. THE CONTRACTOR SHALL BE CAREFUL WHEN REMOVING THE END CROSSFRAMES AND WELDS FROM THE BEAMS SO NO DAMAGE IS DONE TO STEEL MEMBERS THAT ARE TO BE INCORPORATED INTO THE PROPOSED STRUCTURE. ANY DAMAGE DONE TO THE BEAMS SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.

ABUTMENT DIAPHRAGM CONCRETE

PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS AFTER THE DECK PLACEMENT IN THE ADJACENT SPAN IS COMPLETE. PROCEDURES THAT PLACE THE ABUTMENT DIAPHRAGM WITH THE DECK CONCRETE MAY BE APPROVED BY THE ENGINEER IF THE PLACEMENT SUBMITTAL CAN ASSURE THAT THE DECK CONCRETE IN THE ADJACENT SPAN WILL BE PLACED BEFORE CONCRETE IN THE DIAPHRAGM HAS REACHED ITS INITIAL SET.

BRIDGE SEAT ELEVATIONS

THE ABUTMENT BEARING ASSEMBLY H-PILE HEIGHTS HAVE BEEN ADJUSTED UPWARD 0.0595 INCHES AT THE REAR AND FORWARD ABUTMENTS TO COMPENSATE FOR THE VERTICAL DEFORMATION OF THE BEARINGS.

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 2.25 KIPS FOR A TOTAL MACHINE LOAD OF 18.0 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".

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

SURFACE SMOOTHNESS FOR BRIDGES AND APPROACHES

AT THE COMPLETION OF WORK FOR ALL PHASES OF CONSTRUCTION THE CONTRACTOR SHALL PERFORM THE FOLLOWING AS PER PROPOSAL NOTE 555:

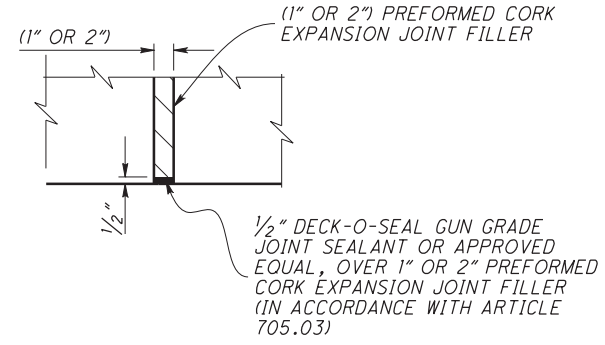
1. CLEAN, SWEEP, AND PREPARE THE FINAL DECK AND FINAL ROADWAY SURFACE.
2. MEASURE, GRIND, AND RE-MEASURE THE BRIDGE AND/OR ROADWAY AS NECESSARY.
3. PERFORM GROOVING OF THE BRIDGE DECK.

DESIGN AGENCY		OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5	
REVIEWED	DATE	STRUCTURE FILE NUMBER	
JDR	09/13/16	3003337	
DRAWN	REVISION	CHECKED	TAG
NEM			
REVISED			
BRIDGE GENERAL NOTES			
BRIDGE NO. GUE-77-1548R			
I.R. 77 OVER SPILLWAY			
GUE-77-VAR		PID No. 21631	
3 / 35		95 129	

**ITEM 516 - 1" PREFORMED EXPANSION JOINT FILLER,
AS PER PLAN**
**ITEM 516 - 2" PREFORMED EXPANSION JOINT FILLER,
AS PER PLAN**

ALL (1", & 2") P.E.J.F. CALLED FOR IN THE PLANS SHALL BE PREFORMED CORK JOINT FILLER (IN ACCORDANCE WITH ARTICLE 705.03). RECESS JOINT FILLER (1", & 2") FOR ALL JOINTS (SEE DETAIL). SEAL ALL JOINTS WITH DECK-O-SEAL GUN GRADE-JOINT SEALANT OR AN APPROVED EQUAL. THE COLOR SHALL BE STONE GRAY. APPROVED MANUFACTURER'S APPLICATION METHODS SHALL BE FOLLOWED DURING SURFACE PREPARATION AND APPLICATION FOR MAXIMUM EFFECTIVENESS.

DECK-O-SEAL
P.O. BOX 397
HAMPSHIRE, IL 60140
PHONE: 800-542-7665



PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 516 -1" PEJF, A.P.P. AND ITEM 516 - 2" PEJF, A.P.P., SQ.FT., AND SHALL INCLUDE ALL LABOR, EQUIPMENT, AND INCIDENTALS REQUIRED TO COMPLETE THE WORK DESCRIBED.

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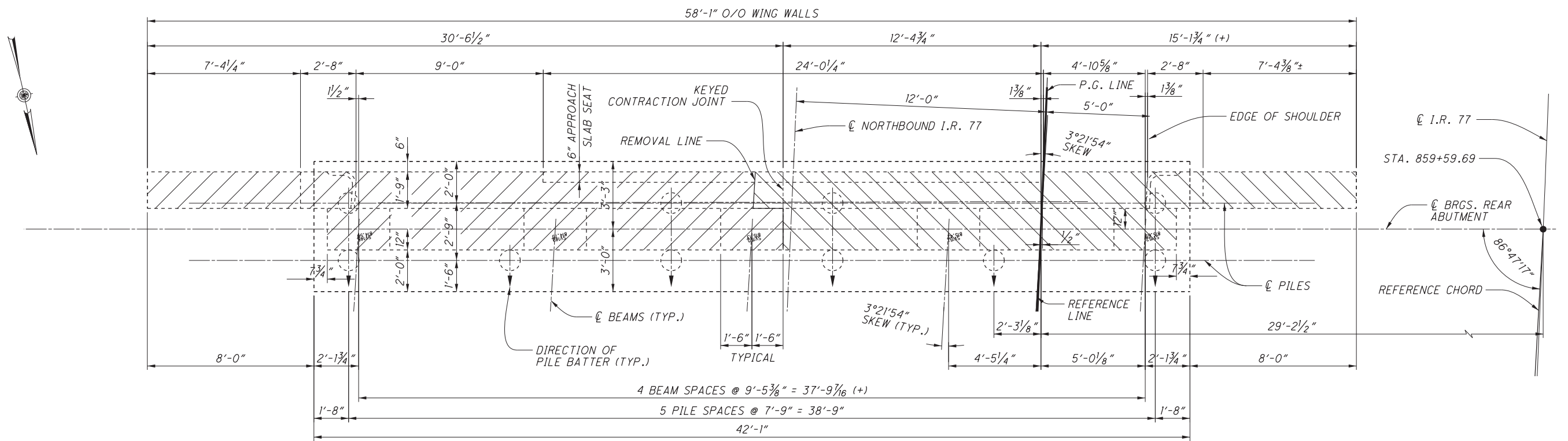
GUE-77-VAR PID No. 21631	BRIDGE GENERAL NOTES BRIDGE NO. GUE-77-1548R I.R. 77 OVER SPILLWAY		DESIGNED NEM CHECKED TAG	DRAWN NEM REVISED	REVIEWED JDR STRUCTURE FILE NUMBER 3003337	DATE 09/13/16	DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5
	4 / 35						

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ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	PART.		SUPER.	ABUT.	PIERS	GENERAL	SEE SHEET NUMBER
					02/IMS/BR						
STRUCTURE OVER 20 FOOT SPAN (GUE-77-1548R)											
202	11301	286	CY	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (SUPERSTRUCTURE)	286		286				2
202	11301	89	CY	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (SUBSTRUCTURE)	89			89			2
202	22900	133	SY	APPROACH SLAB REMOVED	133					133	
202	98000	LS		REMOVAL MISC.: END CROSSFRAMES	LS						3
202	98100	10	EACH	REMOVAL MISC.: BEARINGS	10		10				3
503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	LS						
503	21300	LS		UNCLASSIFIED EXCAVATION	LS						
509	10000	94140	LB	EPOXY COATED REINFORCING STEEL	94140		89743	4397			
510	10000	158	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	158			158			
511	33501	2	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN	2			2			20
511	34446	284	CY	CLASS QC2 CONCRETE WITH QC/OA, BRIDGE DECK	284		284				
511	34450	55	CY	CLASS QC2 CONCRETE WITH QC/OA, BRIDGE DECK (PARAPET)	55		55				
511	43510	84	CY	CLASS QC1 CONCRETE, ABUTMENT INCLUDING FOOTING	84		84				
512	10050	918	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	918		489	90	339		
513	10060	LS		STRUCTURAL STEEL MEMBERS, LEVEL 3	LS						
513	10201	1591	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN	1591		1591				3
513	20000	3150	EACH	WELDED STUD SHEAR CONNECTORS	3150		3150				
514	00050	9754	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL	9754		9754				
514	00056	9754	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT	9754		9754				
514	00060	9754	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT	9754		9754				
514	00066	9754	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT	9754		9754				
514	00504	15	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL	15		15				
514	10000	9	EACH	FINAL INSPECTION REPAIR	9		9				
516	13601	221	SF	1" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN	221		221				4
516	13901	85	SF	2" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN	85		85				4
516	14020	118	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	118		118				
516	14500	86	SF	STRUCTURAL JOINT OR JOINT SEALER, MISC.: JEENE SEAL WITH SLEEPER SLAB	86					86	35
516	44200	10	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (1'-2" x 1'-3" x 3.8479")	10		10				
516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	LS						3
518	12201	5	EACH	SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN	5		5				15
518	21200	98	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	98			98			
518	40000	116	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	116			116			
518	40010	80	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	80			80			
526	25011	237	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/OA (T=15"), AS PER PLAN	237					7	3

DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5
REVIEWED DATE JDR 09/13/16 STRUCTURE FILE NUMBER 3003337
DRAWN NEM REVISOR REVISED
DESIGNED NEM CHECKED TAG
BRIDGE SUMMARY BRIDGE NO. GUE-77-1548R I.R. 77 OVER SPILLWAY
GUE-77-VAR PID No. 21631
5 / 35
97 129

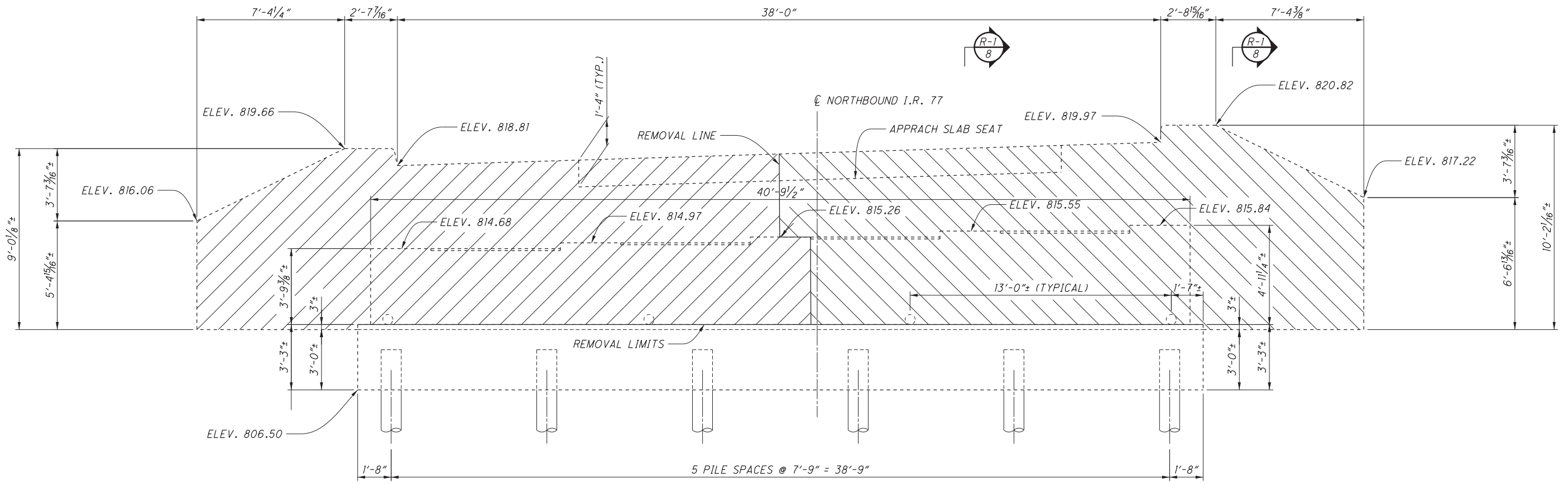
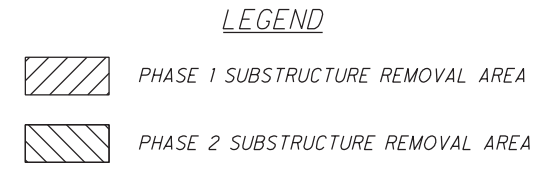
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PLAN

NOTE:

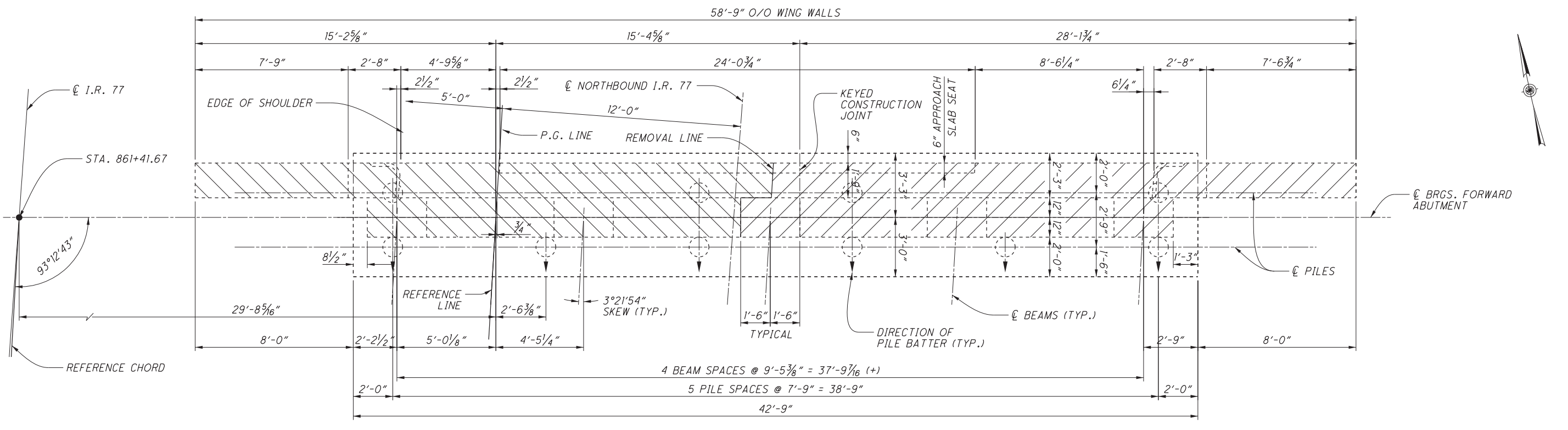
MECHANICALLY TRIM ALL RE-STEEL FLUSH TO REMOVAL LINE AND REPAIR COATING ACCORDING TO C&MS 519 AS IF EPOXY COATED RE-STEEL



ELEVATION

DESIGN AGENCY		OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5	
DATE	09/13/16	REVIEWED	JDR
STRUCTURE FILE NUMBER	3003337	DRAWN	NEM
DESIGNED	NEM	CHECKED	TAG
EXISTING REAR ABUTMENT REMOVALS			
BRIDGE NO. GUE-77-1548R I.R. 77 OVER SPILLWAY			
GUE-77-VAR		PID No. 21631	
6 / 35		98 129	

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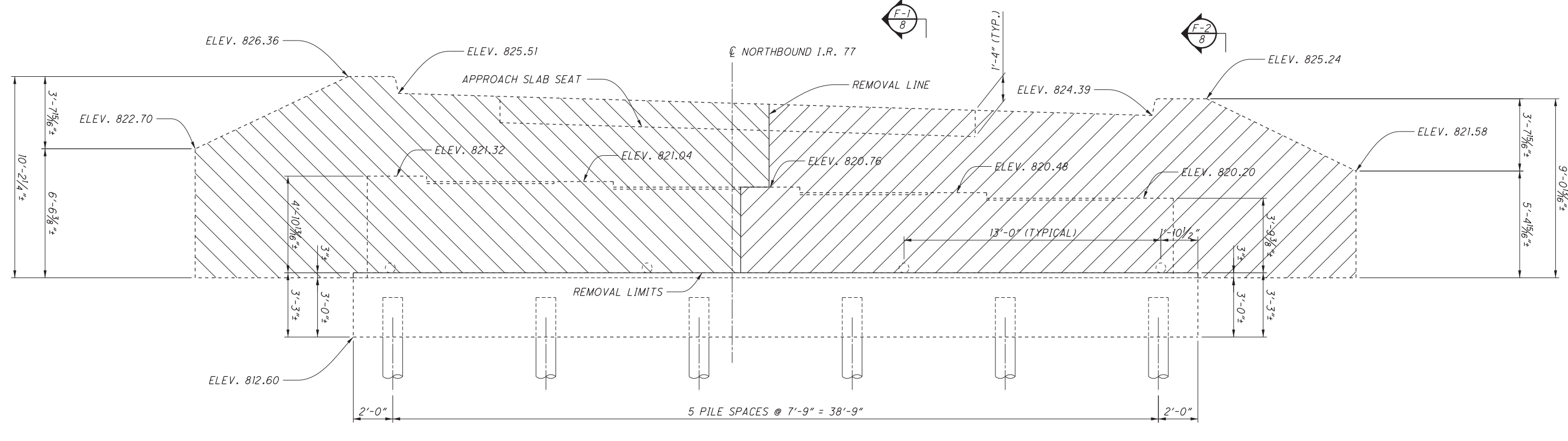


NOTE:
MECHANICALLY TRIM ALL RE-STEEL FLUSH TO REMOVAL LINE AND REPAIR COATING ACCORDING TO C&MS 519 AS IF EPOXY COATED RE-STEEL

PLAN

LEGEND

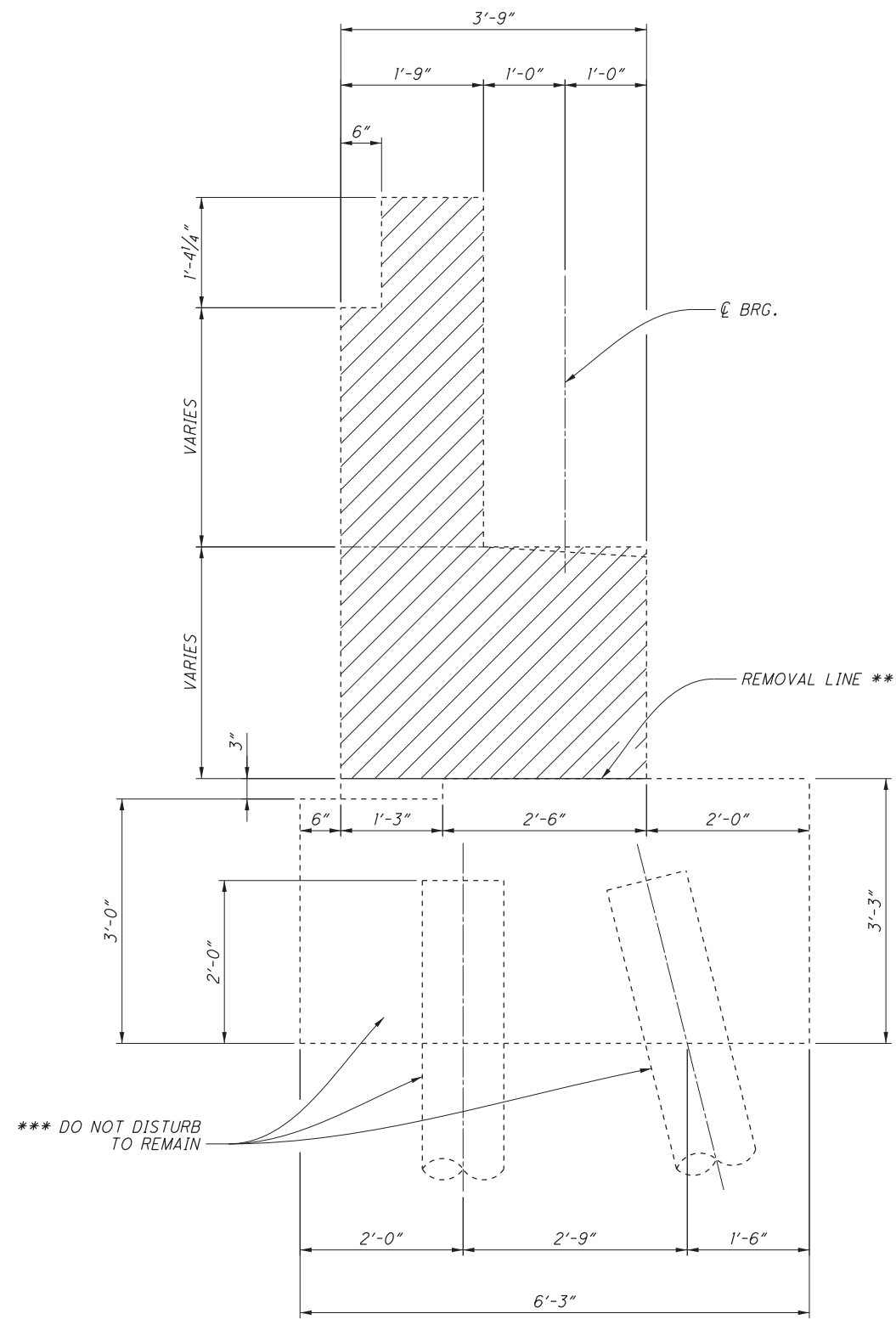
- PHASE 1 SUBSTRUCTURE REMOVAL AREA
- PHASE 2 SUBSTRUCTURE REMOVAL AREA



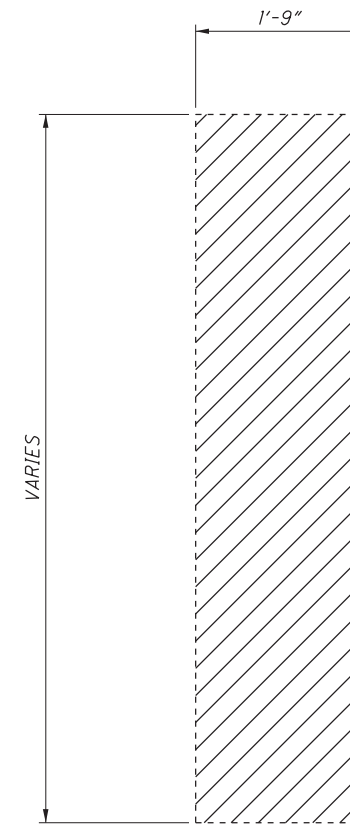
ELEVATION

DESIGN AGENCY		DATE	
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5		09/13/16	
DRAWN		REVIEWED	
NEM		JDR	
CHECKED		STRUCTURE FILE NUMBER	
TAG		3003337	
EXISTING FORWARD ABUTMENT REMOVALS			
BRIDGE NO. GUE-77-1548R I.R. 77 OVER SPILLWAY			
GUE-77-VAR		7 / 35	
PID No. 21631		99 129	

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SECTION R-1 & F-1
6 & 7



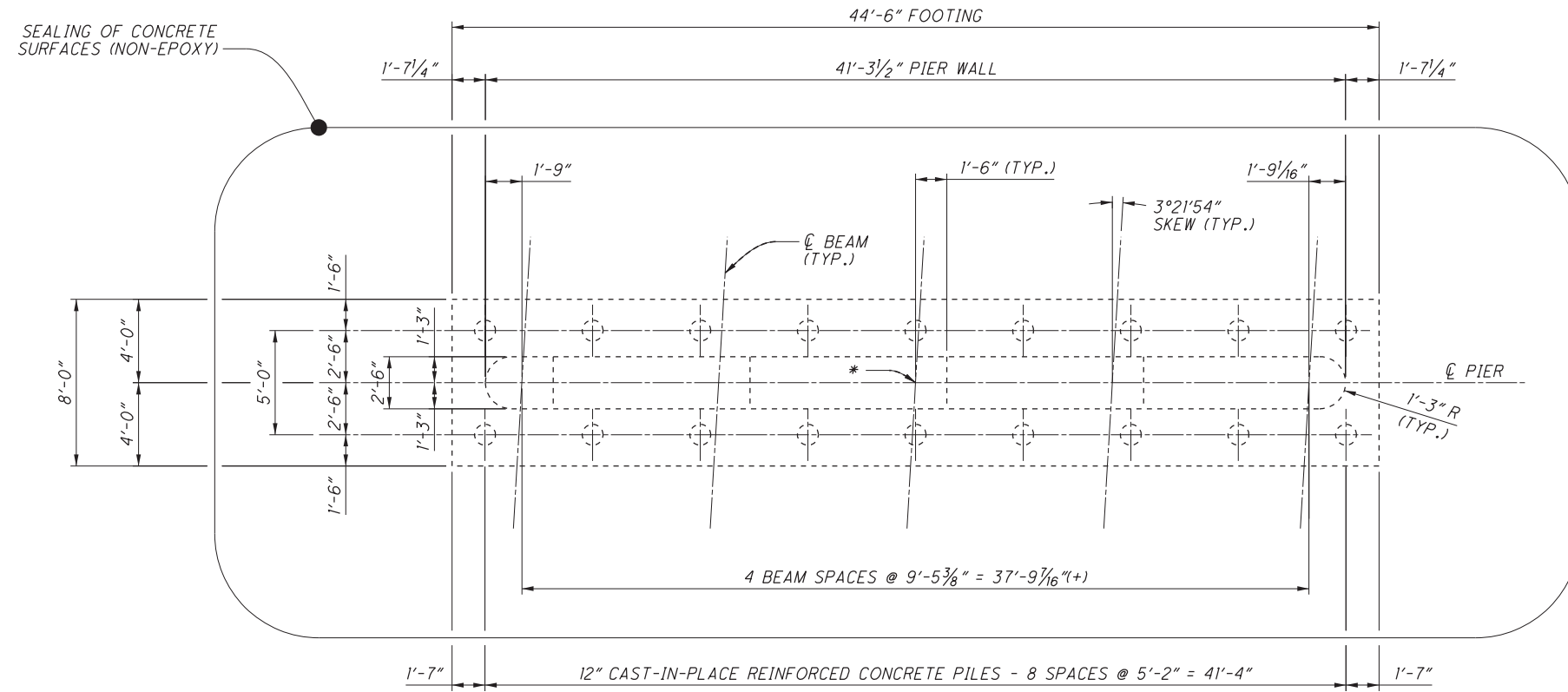
SECTION R-2 & F-2
6 & 7

** MECHANICALLY TRIM ALL EXISTING RE-STEEL FLUSH TO REMOVAL LINE, AND REPAIR COATING ACCORDING TO C&MS 519 AS IF EPOXY COATED RE-STEEL.

*** DO NOT DISTURB THE EXISTING FOOTING OR PILES UNLESS OTHERWISE SPECIFIED IN THIS PLAN. ANY DAMAGE THAT IS CAUSED TO THE EXISTING FOOTING OR PILES SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE STATE.

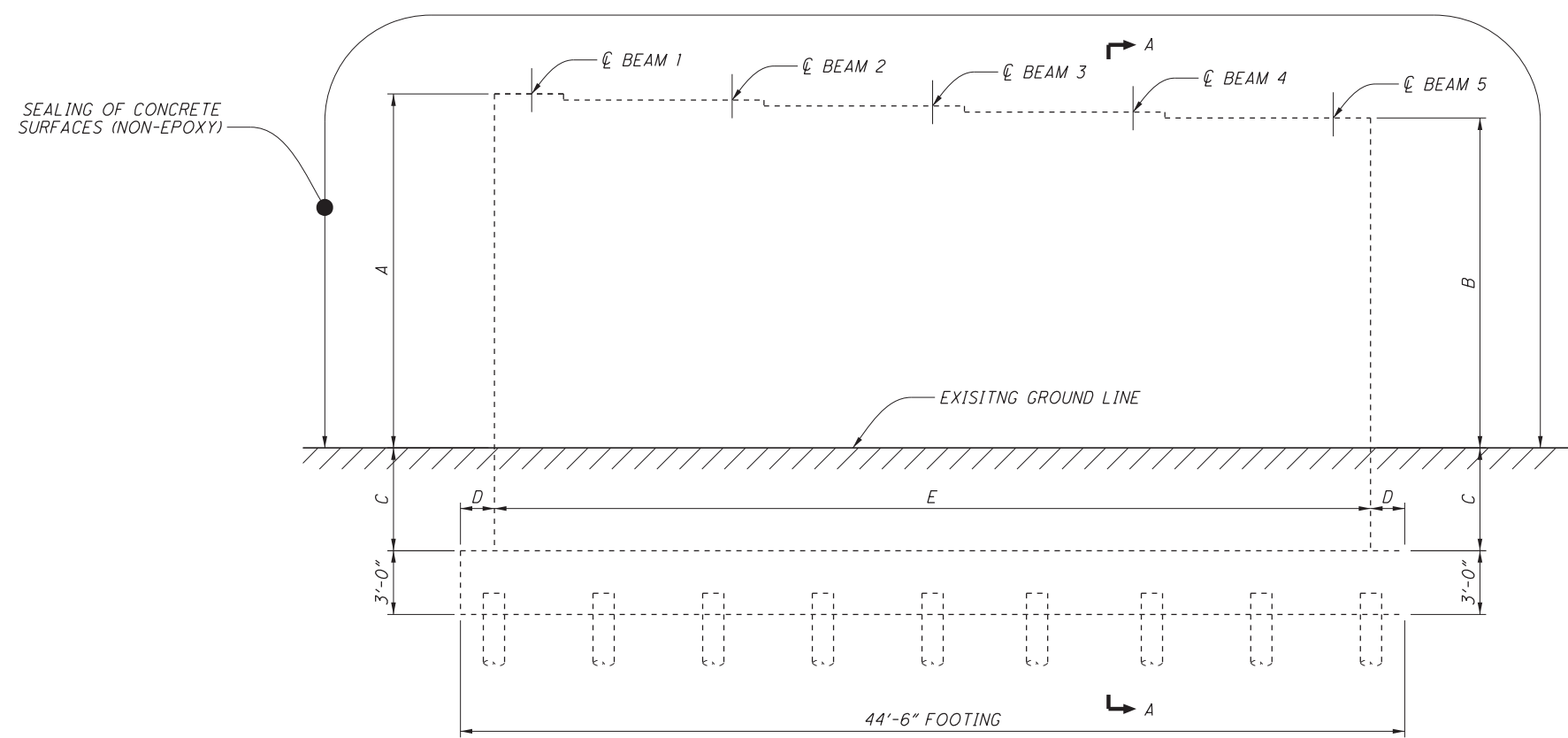
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NEM		NEM		JDR		09/13/16		OHIO DEPARTMENT OF	
CHECKED		REVISED		STRUCTURE FILE NUMBER		3003337		TRANSPORTATION, DISTRICT 5	
TAG									
EXISTING REAR AND FORWARD ABUTMENT REMOVAL DETAILS					BRIDGE NO. GUE-77-1548R				
					I.R. 77 OVER SPILLWAY				
GUE-77-VAR					PID No. 21631				
8 / 35									
100					129				

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PLAN

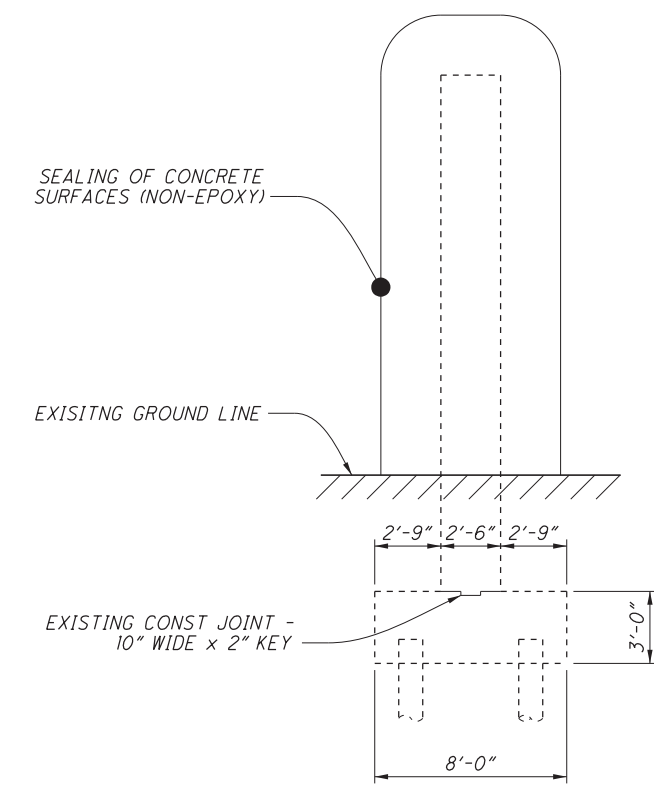
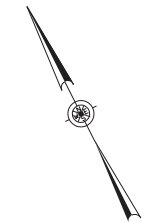
* PIER 1 = STA. 137+69.83
 PIER 2 = STA. 138+95.87



ELEVATION

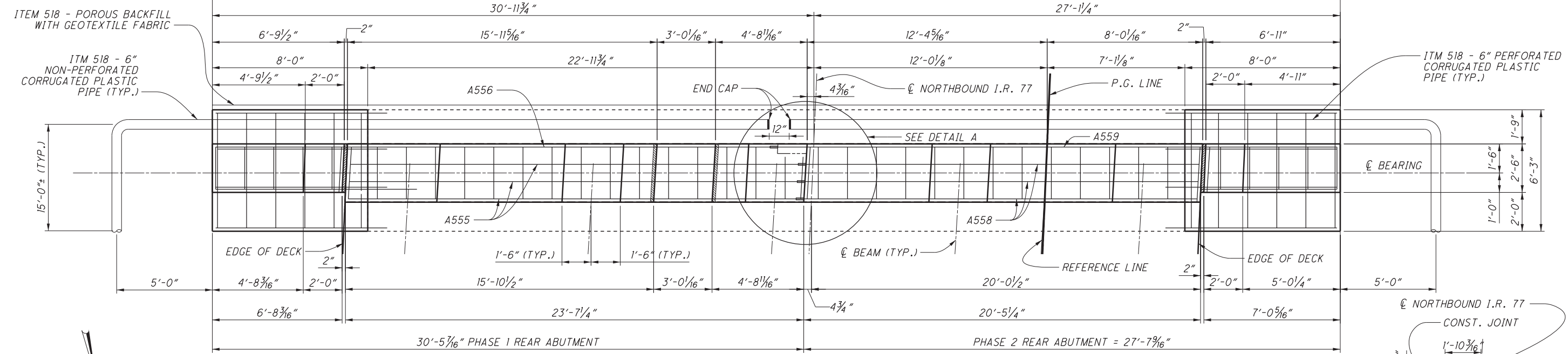
PIER	DIMENSION (FT.)						
	A	B	C	D	E	A+C	B+C
1	13.16	12.00	5.93	1.60	42.90	19.09	17.94
2	15.95	14.81	5.56	1.60	42.90	21.51	20.38

QUANTITIES SHOWN ON SHEET 5



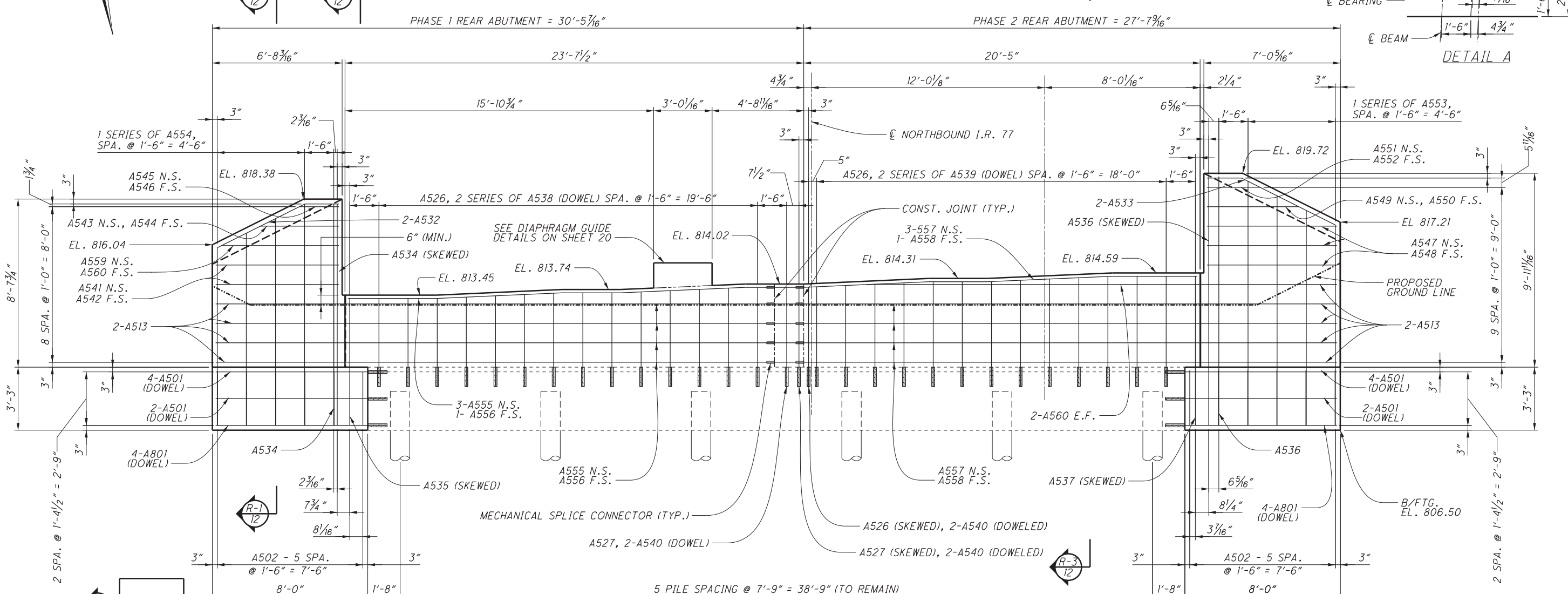
SECTION A-A

58'-1" O/O WING WALLS



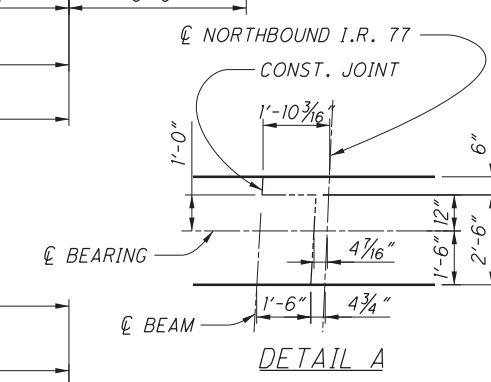
PLAN

EXISTING PILES & DIAPHRAGM NOT SHOWN FOR CLARITY



ELEVATION

DIAPHRAGM NOT SHOWN FOR CLARITY (SEE SHEET 21 FOR DETAILS)

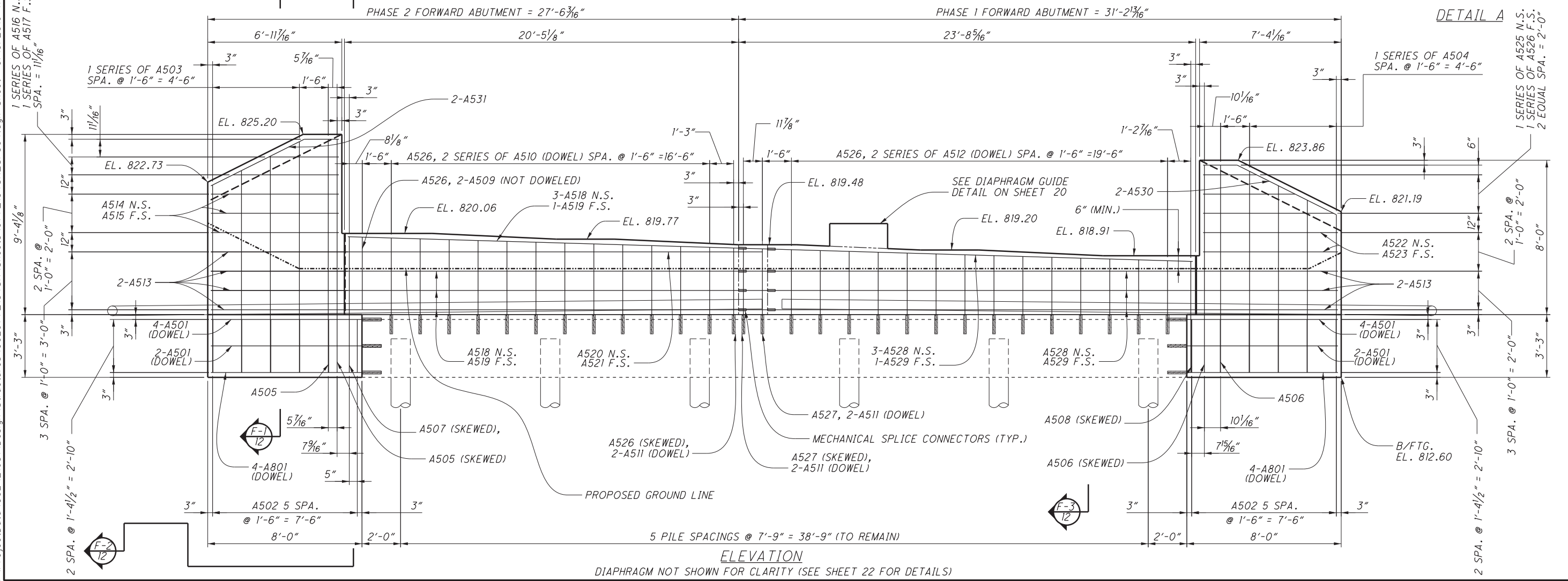
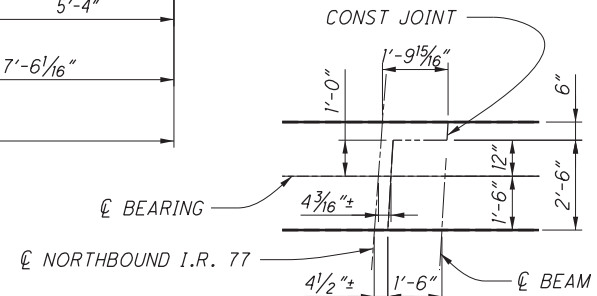
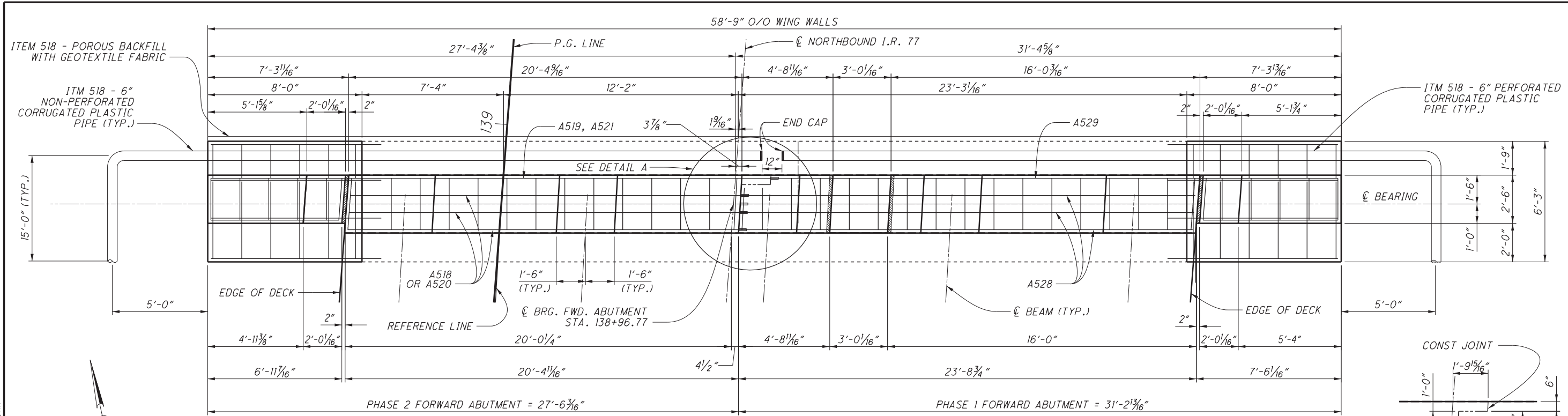


DETAIL A

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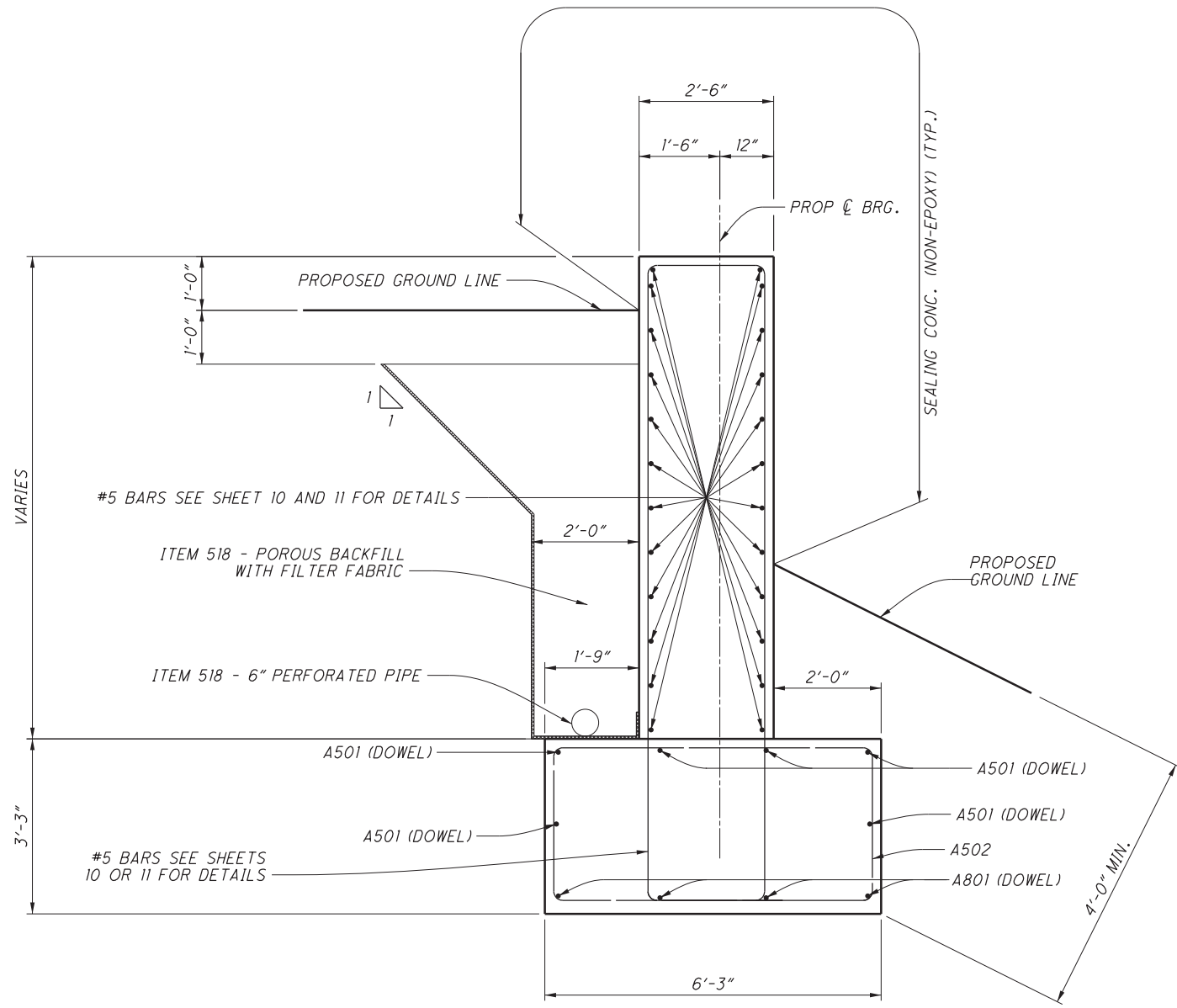
DESIGNED	DATE	DESIGN AGENCY
NEM	09/13/16	OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5
CHECKED	STRUCTURE FILE NUMBER	
TAG	3003337	
DRAWN	REVIEWED	
NEM	JDR	
REVISED		
REAR ABUTMENT		
BRIDGE NO. GUE-77-1548R		
I.R. 77 OVER SPILLWAY		
GUE-77-VAR		
PID No. 21631		
10/35		
102		
129		

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DESIGN AGENCY	OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5
	DATE 09/13/16
REVIEWED	JDR
	STRUCTURE FILE NUMBER 3003337
DRAWN	NEM
	REVISED ---
DESIGNED	NEM
	CHECKED TAG
FORWARD ABUTMENT	
BRIDGE NO. GUE-77-1548R I.R. 77 OVER SPILLWAY	
11 / 35	GUE-77-VAR PID No. 21631
103	129

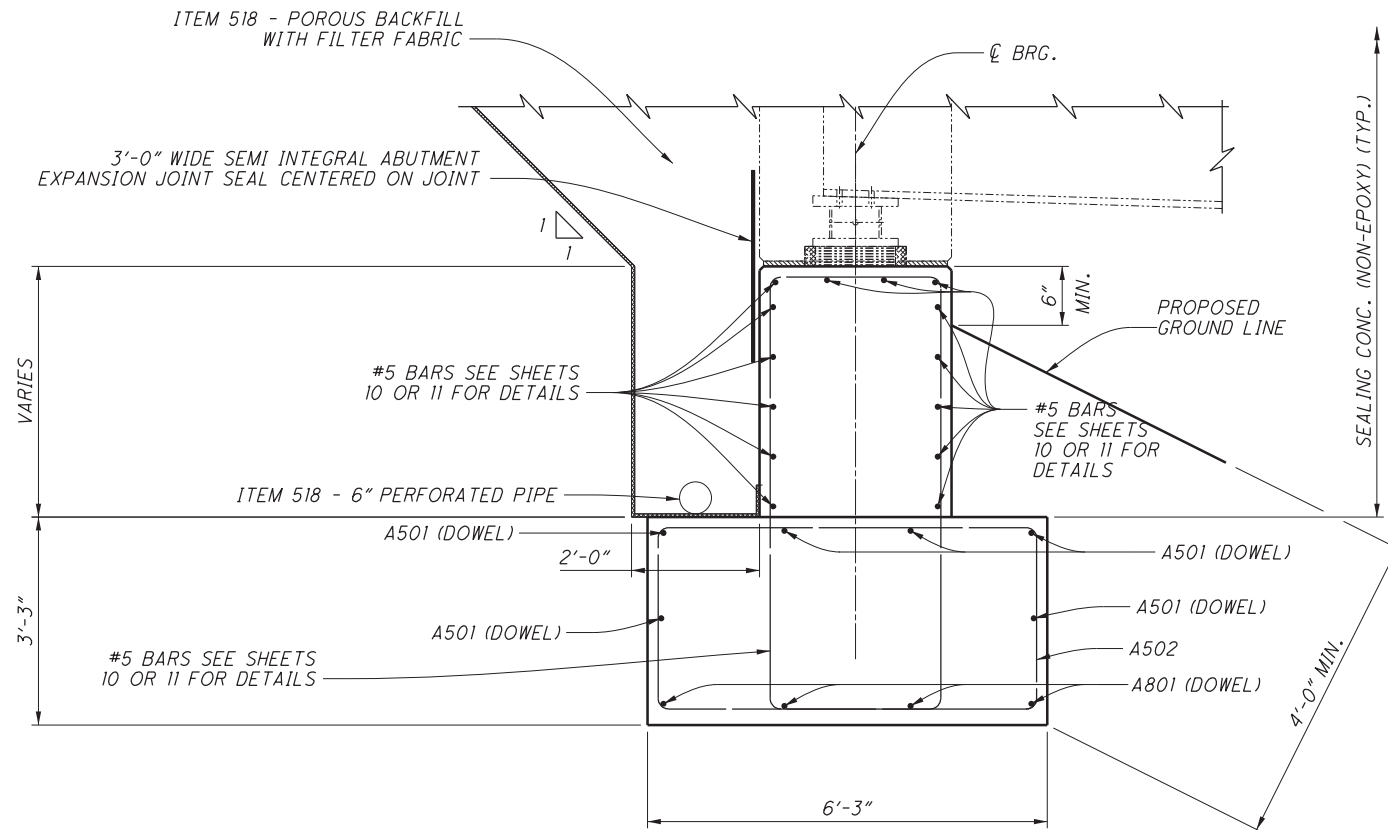
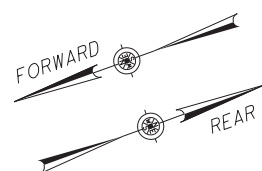
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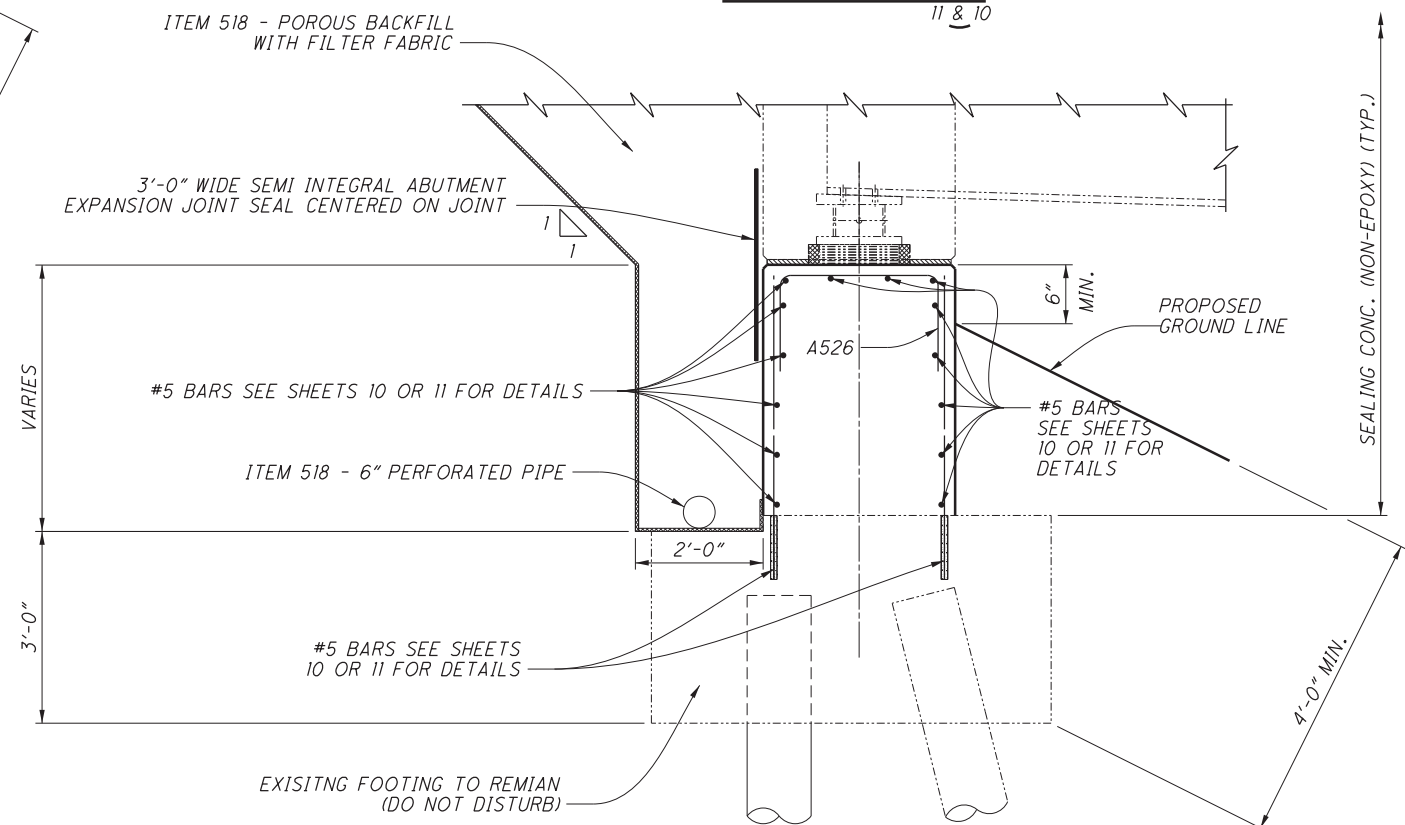
SECTION F-1 & R-1
11 & 10

LEGEND:

- EXPANDED POLYSTYRENE FILLER
- 1" PREFORMED EXPANSION JOINT FILLER (P.E.J.F.) AS PER PLAN



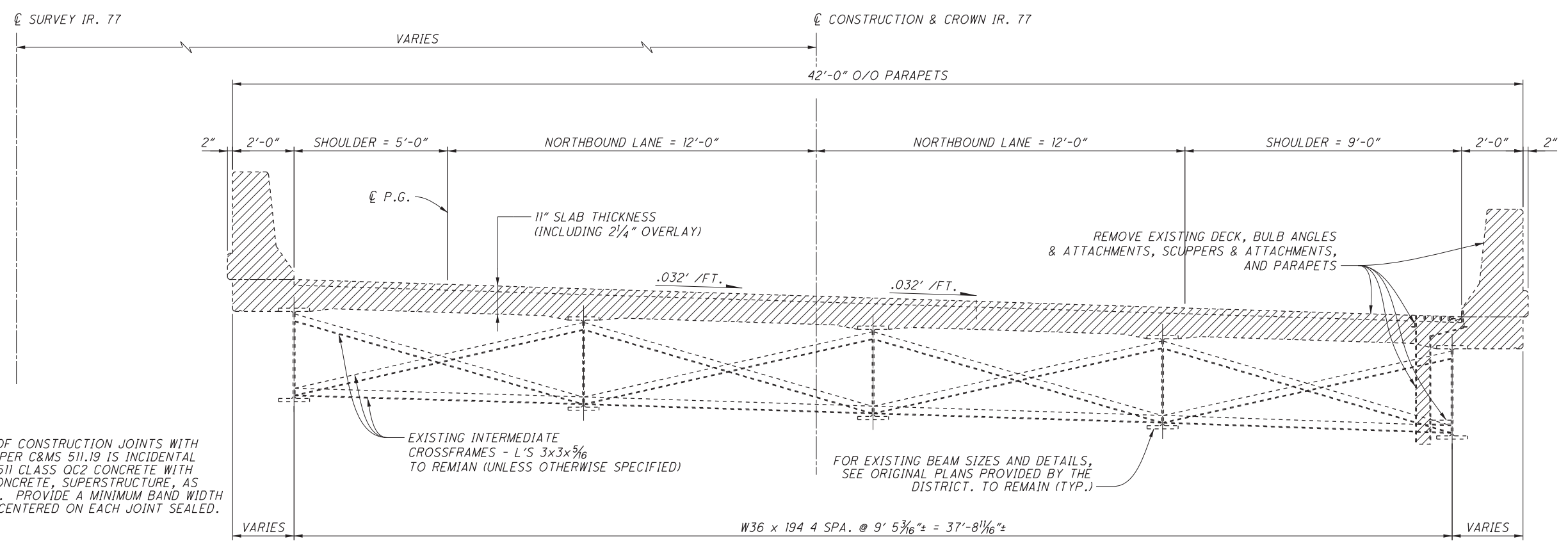
SECTION F-2 & R-2
11 & 10



SECTION F-3 & R-3
11 & 10

DESIGN AGENCY	DATE	REVIEWED	DESIGNED
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5	09/13/16	JDR	NEM
STRUCTURE FILE NUMBER	3003337	REVISED	TAG
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ABUTMENT DETAILS			
BRIDGE NO. GUE-77-1548R			
I.R. 77 OVER SPILLWAY			
GUE-77-VAR			
PID No. 21631			
12 / 35			
104			
129			

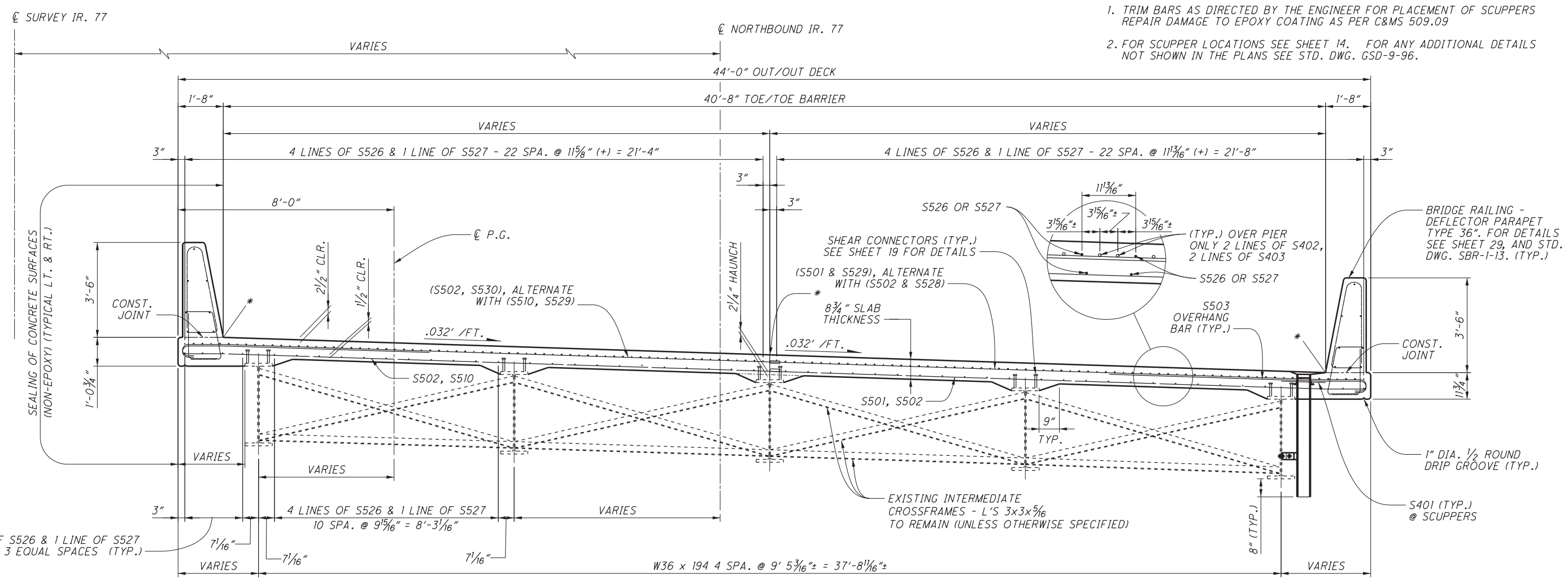
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EXISTING TRANSVERSE SECTION GUE-77-1548R

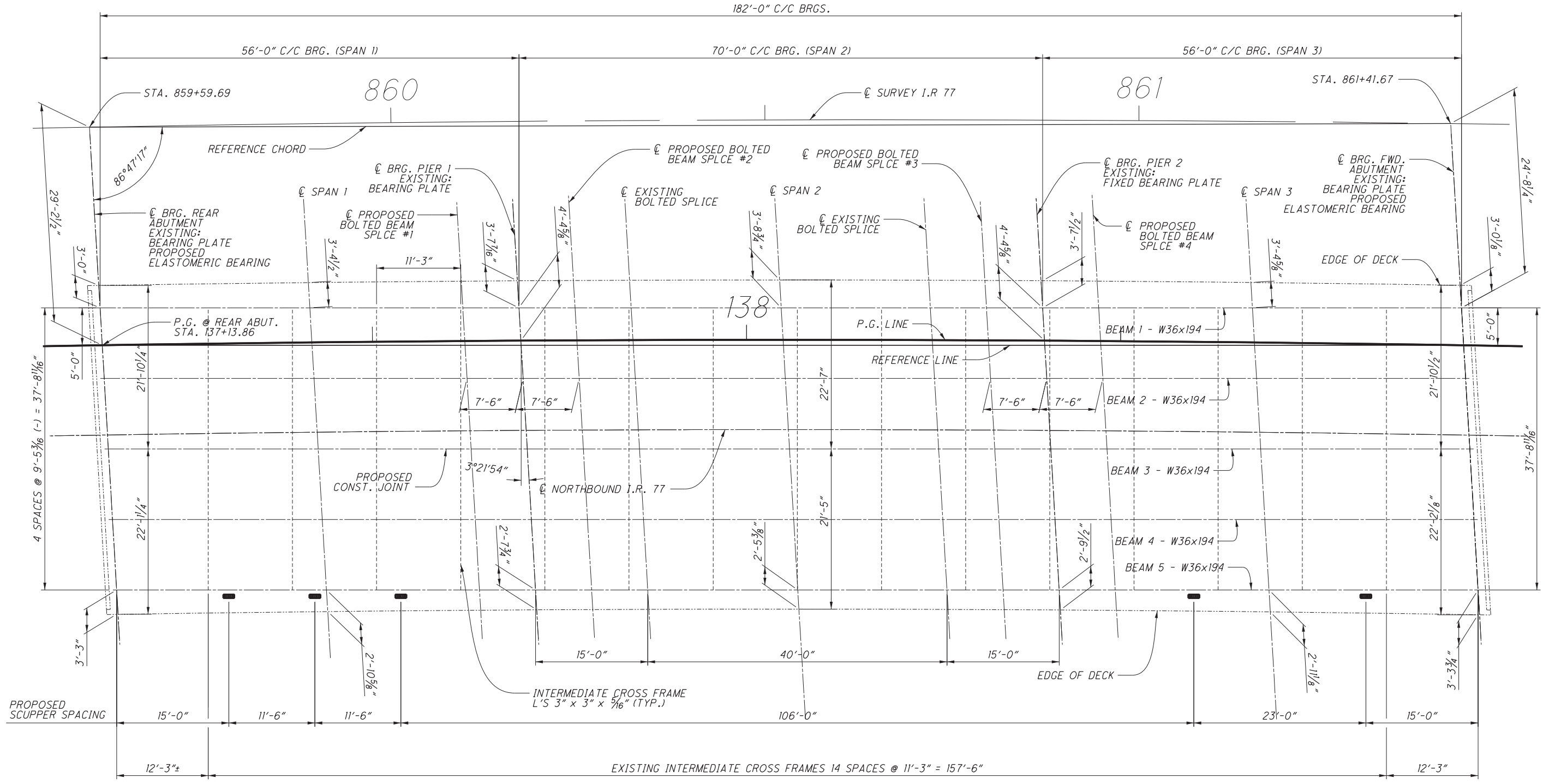
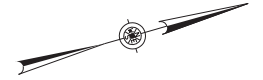
NOTE:

1. TRIM BARS AS DIRECTED BY THE ENGINEER FOR PLACEMENT OF SCUPPERS REPAIR DAMAGE TO EPOXY COATING AS PER C&MS 509.09
2. FOR SCUPPER LOCATIONS SEE SHEET 14. FOR ANY ADDITIONAL DETAILS NOT SHOWN IN THE PLANS SEE STD. DWG. GSD-9-96.



PROPOSED TRANSVERSE SECTION GUE-77-1548R

DESIGNED	DRAWN	REVIEWED	DATE	DESIGN AGENCY
NEM	NEM	JDR	09/13/16	OHIO DEPARTMENT OF
CHECKED	REVIS	STRUCTURE FILE NUMBER		TRANSPORTATION, DISTRICT 5
TAG		3003337		
TRANSVERSE SECTION				
BRIDGE NO. GUE-77-1548R				
I.R. 77 OVER SPILLWAY				
GUE-77-VAR				
PID No. 21631				
13 / 35				
105				
129				



FRAMING PLAN

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DESIGN AGENCY
OHIO DEPARTMENT OF
TRANSPORTATION, DISTRICT 5

REVIEWED
JDR

DRAWN
NEM

DESIGNED
NEM

FRAMING PLAN

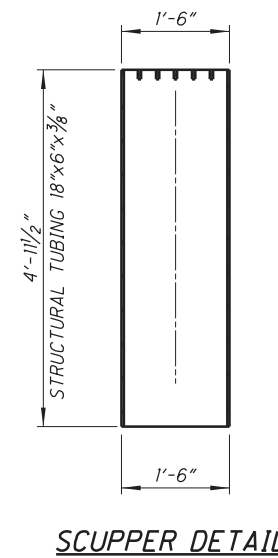
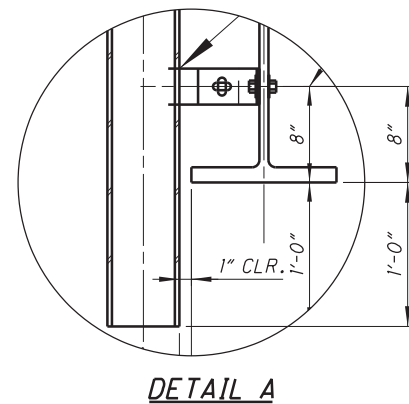
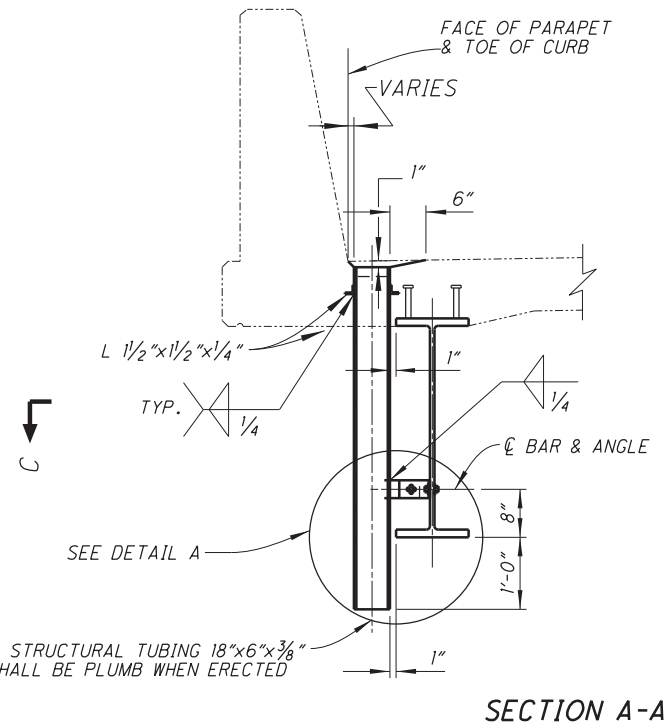
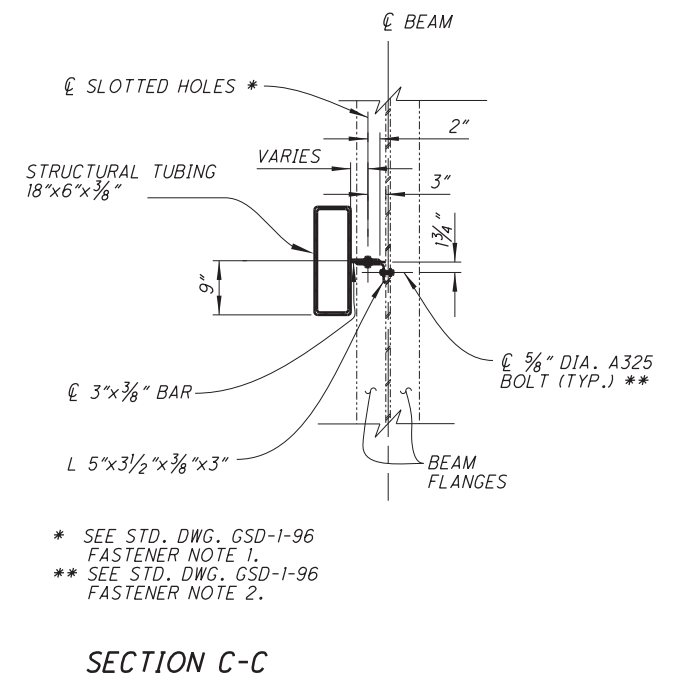
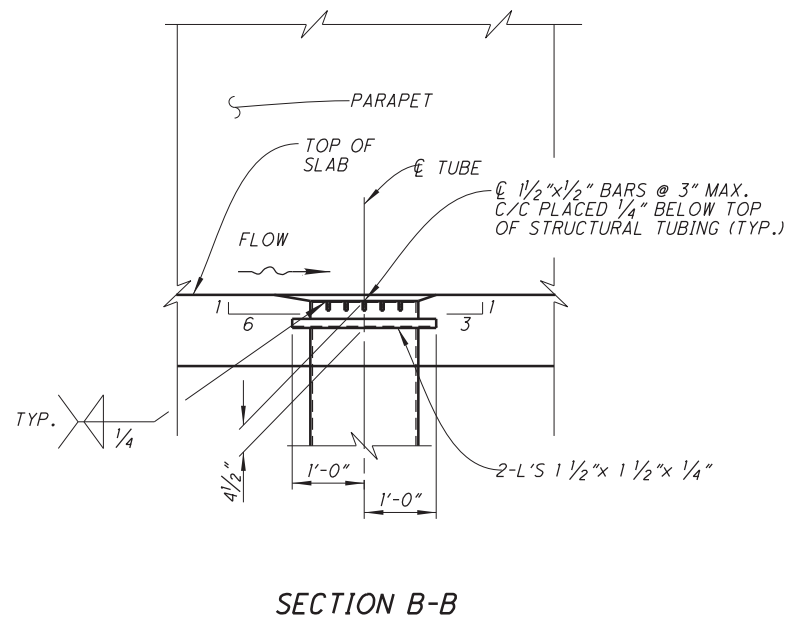
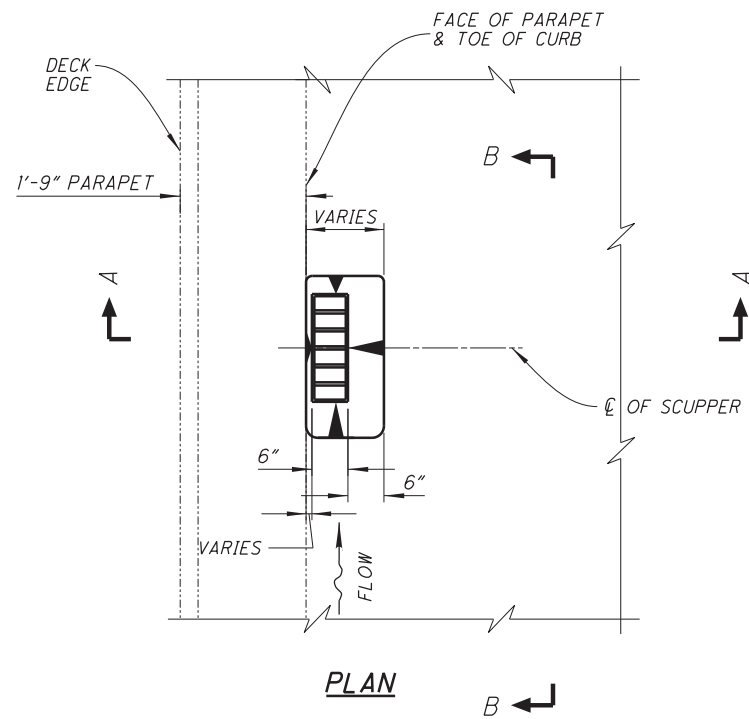
BRIDGE NO. GUE-77-1548R
I.R. 77 OVER SPILLWAY

GUE-77-VAR
PID No. 21631

14 / 35

106
129

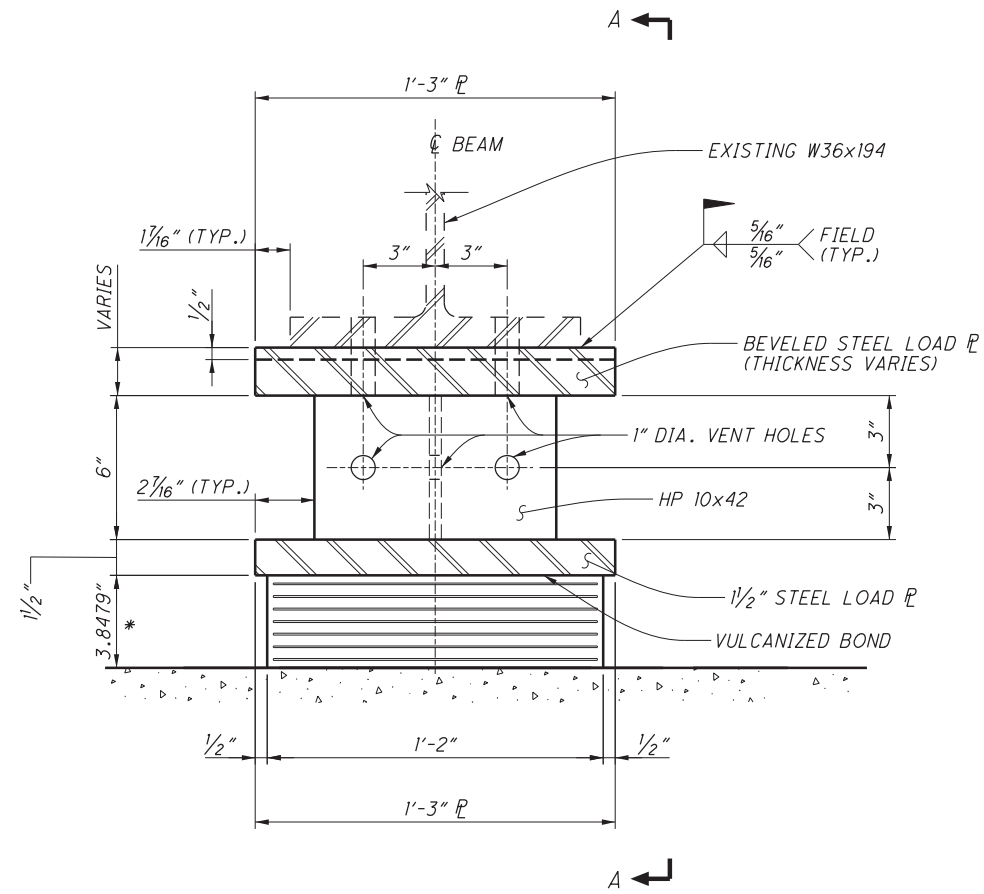
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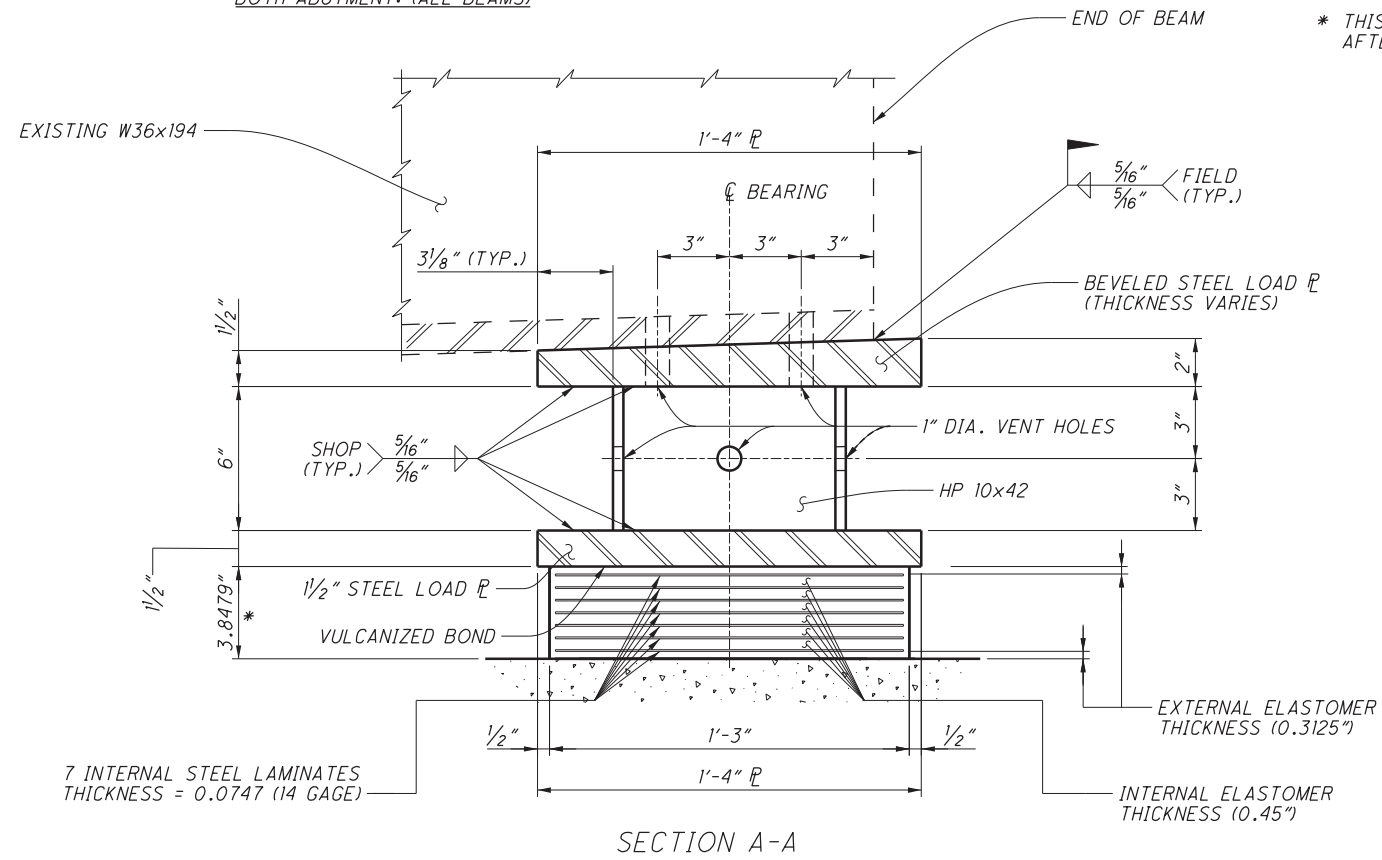
NOTE:
SEE STD. DWG. GSD-1-96
FOR ANY REQUIRED DETAILS
NOT SHOWN HEREIN.

DESIGNED		DRAWN		REVIEWED		DATE		DESIGN AGENCY	
NEM		NEM		JDR		09/13/16		OHIO DEPARTMENT OF	
CHECKED		REVISED		STRUCTURE FILE NUMBER		3003337		TRANSPORTATION, DISTRICT 5	
TAG									
SCUPPER DETAILS									
BRIDGE NO. GUE-77-1548R I.R. 77 OVER SPILLWAY									
GUE-77-VAR									
PID No. 21631									
15/35									
107									
129									

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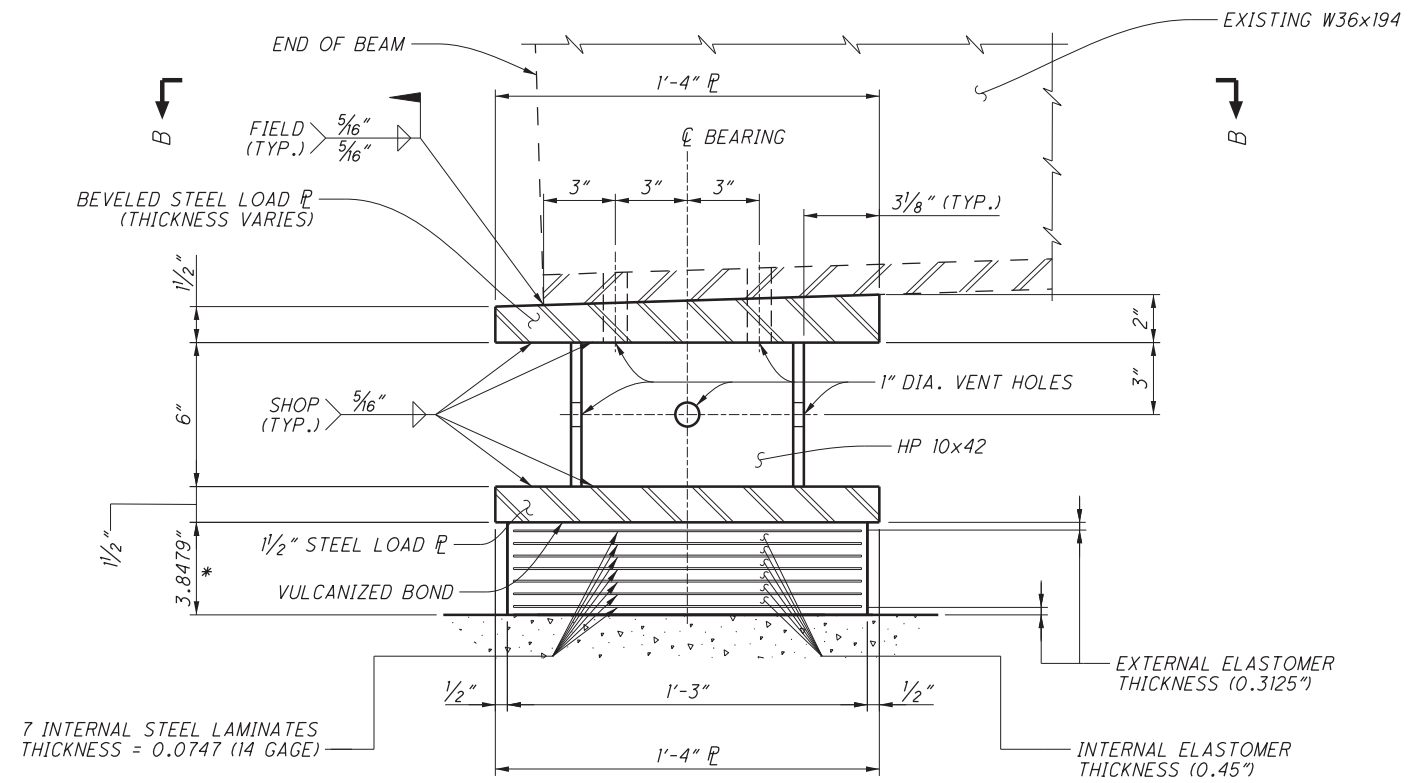
LAMINATED ELASTOMERIC EXPANSION BEARINGS - BOTH ABUTMENT: (ALL BEAMS)



SECTION A-A

FORWARD ABUTMENT: (ALL BEAMS)

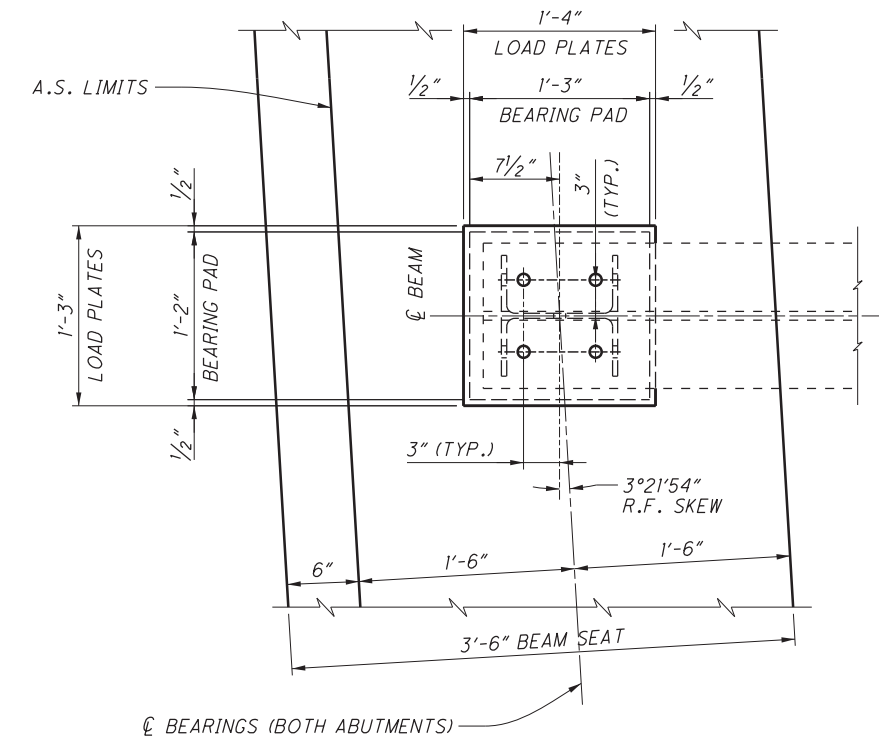
* THIS DIMENSION IS THE RAW HEIGHT OF THE BEARING PAD AFTER APPLYING DEAD LOADS, THE ELASTOMERIC DEFLECTION = 0.0595"



SECTION A-A

REAR ABUTMENT: (ALL BEAMS)

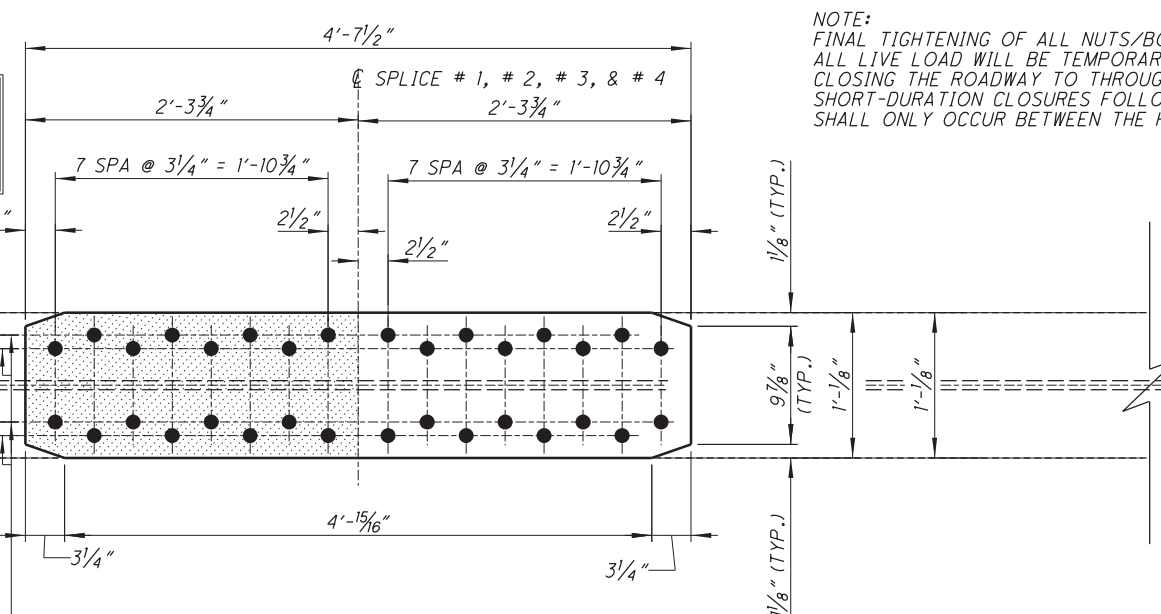
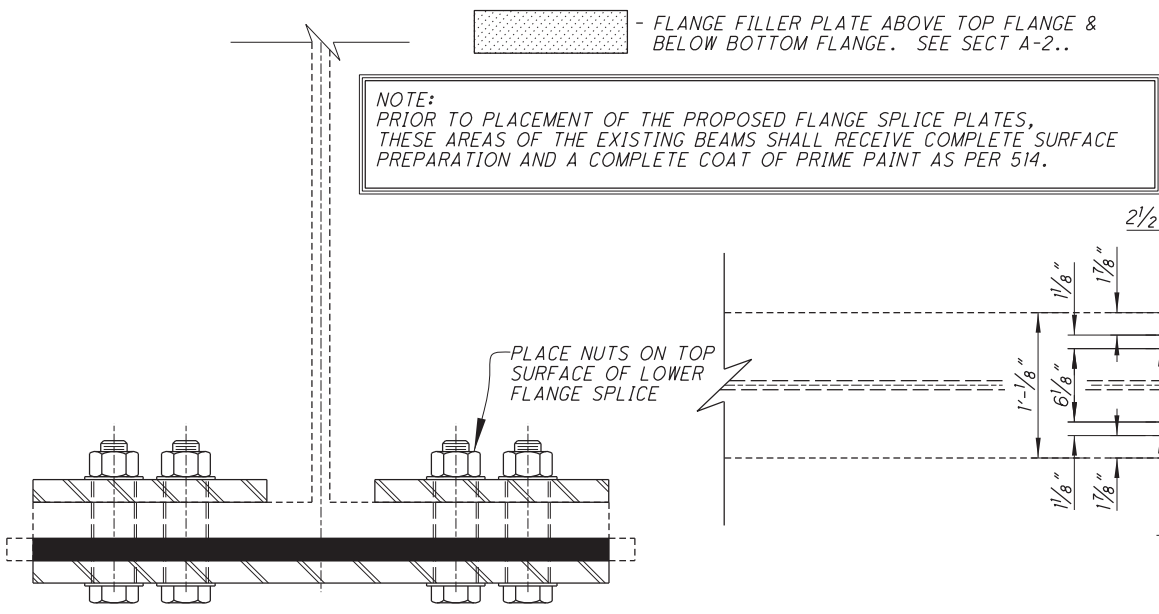
* THIS DIMENSION IS THE RAW HEIGHT OF THE BEARING PAD AFTER APPLYING DEAD LOADS, THE ELASTOMERIC DEFLECTION = 0.0595"



SECTION B-B

BEARINGS (BOTH ABUTMENTS)

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NOTE: EXCLUDE THE BOLT THREADS FROM THE SHEAR PLANES. (THE BOLT SHEAR STRENGTH FOR THE FLANGE AND WEB SPLICES HAS BEEN DESIGNED ASSUMING THAT THE THREADS ARE EXCLUDED FROM THE SHEAR PLANES.)

ALL BOLTS USED SHALL BE 1/8" DIAMETER.

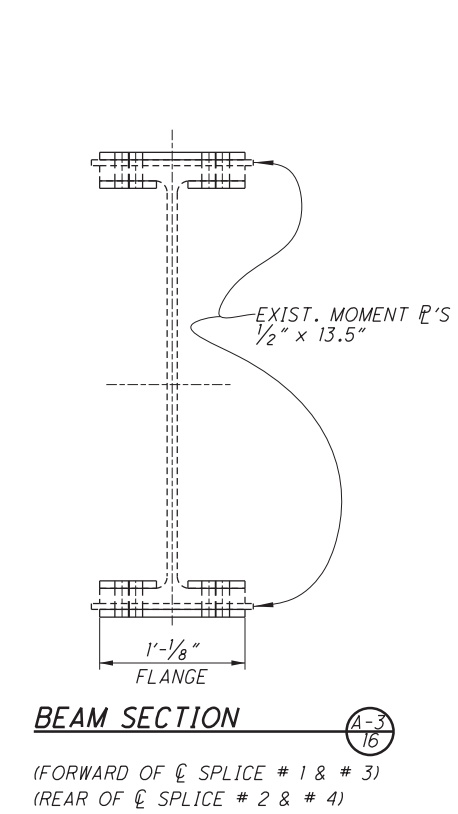
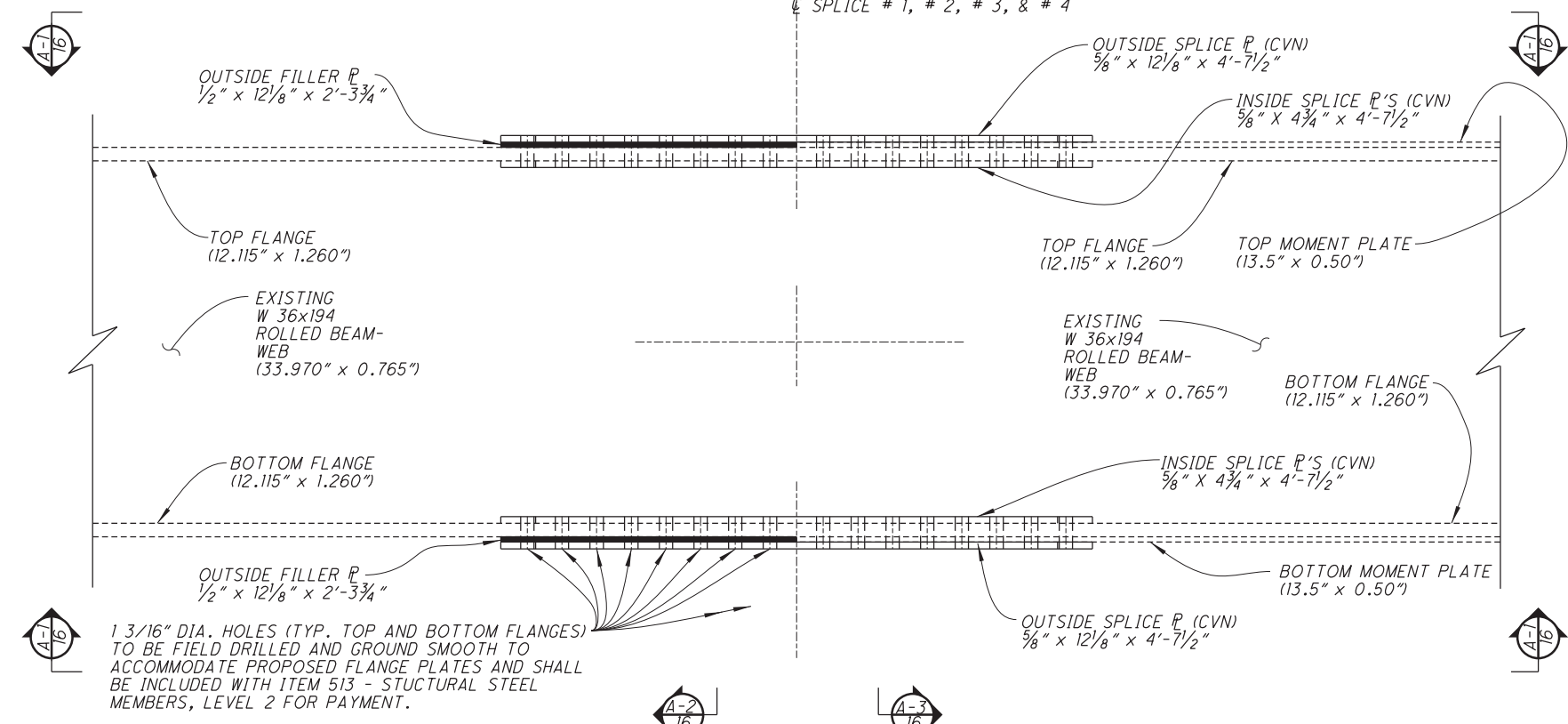
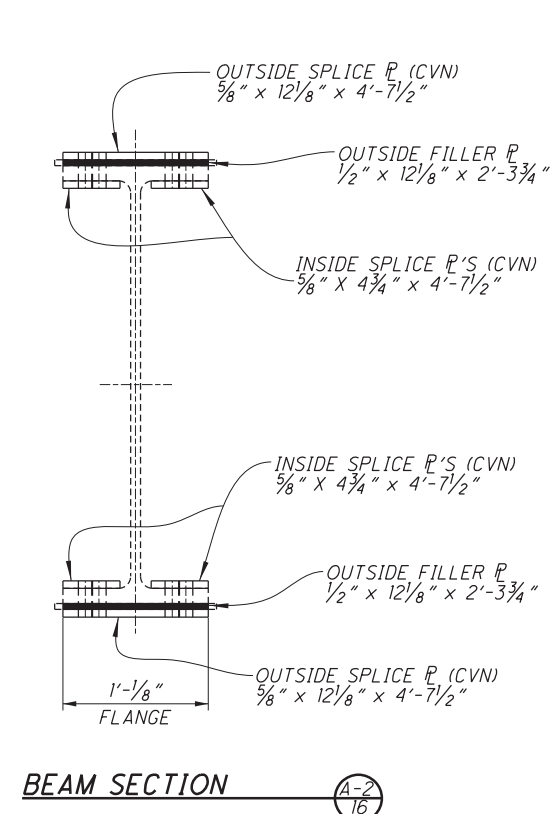
ALL BOLT HOLES SHALL BE 13/16" DIAMETER.

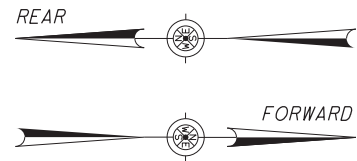
BOLT SPECIFICATIONS SHALL CONFORM TO A325, TYPE 1.

NOTE: ALL WORK SHOWN ON THIS SHEET SHALL BE INCLUDED FOR PAYMENT PER LUMP SUM IN ITEM 513 STRUCTURAL STEEL MEMBERS, LEVEL 3.

ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL 3.			
DESCRIPTION	QUANTITY	SIZE	WEIGHT
INSIDE FLANGE PLATES (CVN)	80	5/8" X 4 3/4" X 4'-7 1/2"	3,738
OUTSIDE FLANGE PLATES (CVN)	40	5/8" X 12 1/8" X 4'-7 1/2"	4,771
OUTSIDE FLANGE FILLER PLATES	40	1/2" X 12 1/8" X 2'-3 3/4"	1,908
SPLICE MATERIAL (BOLTS, WASHERS, NUTS)			INCIDENTAL
TOTAL =			10,417 LBS

NOTE: THE ABOVE LENGTHS & WEIGHTS ARE FOR ESTIMATING PURPOSES ONLY. FINAL QUANTITIES FOR STRUCTURAL STEEL SHALL BE DETERMINED BY SHOP DRAWINGS. THE ABOVE QUANTITIES SHALL BE INCLUDED FOR PAYMENT PER LUMP SUM IN ITEM 513 STRUCTURAL STEEL MEMBERS, LEVEL 3.





BEARING STIFFENERS
 P 5.50" x 0.50" x 33.98" (CVN) (ABUTMENTS - 1 EACH)
 P 5.50" x 0.50" x 33.98" (CVN) (PIERS - 2 EACH)

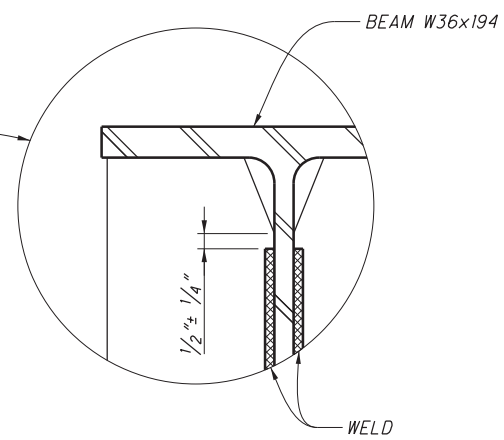
MILL TO BEAR - NO WELD (TYP.)

EXISTING W36x194 (TYP.)

TIGHT FIT
NO WELD (TYP.)

5/16 (TYP.)
5/16 (TYP.)

BEARING STIFFENER DETAILS
(REAR & FWD. ABUTMENTS AND PIERS)



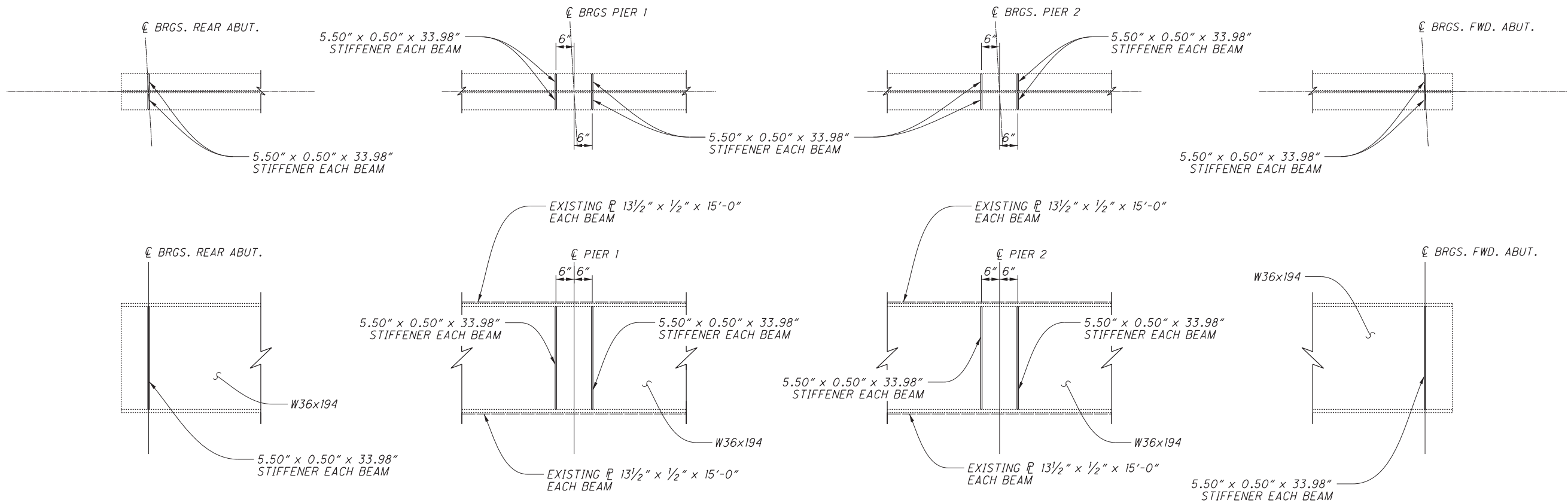
WELDING DETAILS

ITEM 513 STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN		
STIFFENER	NUMBER	POUNDS
5.50" x 0.50" x 33.98"	60	1,591
TOTAL		1,591

FINAL QUANTITIES FOR ITEM 513 STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN SHALL BE DETERMINED IN THE FIELD

NOTE

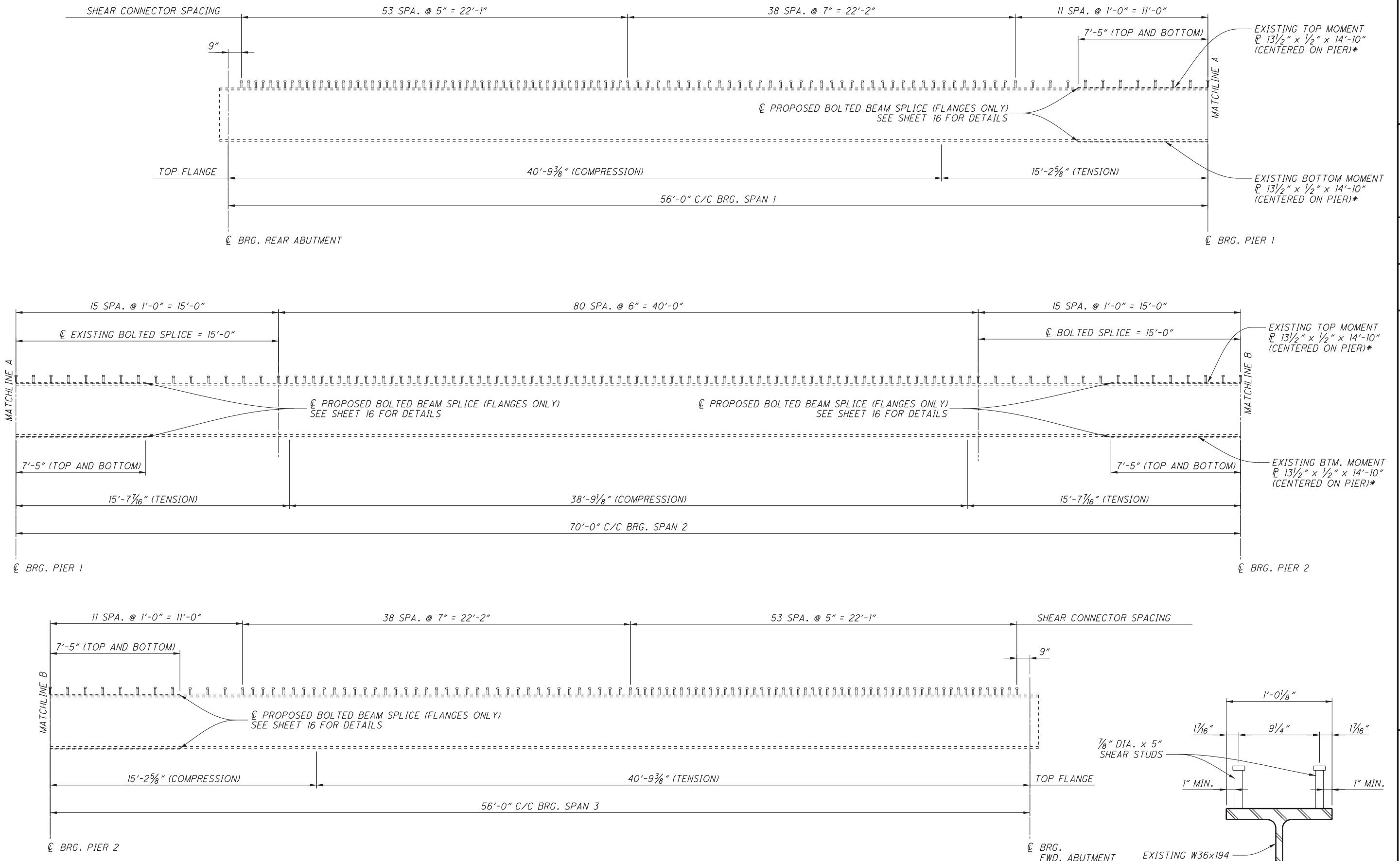
FOR NOTES AND ADDITIONAL DETAILS INCLUDING WELDING DETAILS SEE STD. DWG. GSD-1-96.



PROPOSED BEARING STIFFENERS LOCATIONS
DRAWING (N.T.S.)

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BEAM ELEVATION & SHEAR CONNECTOR PLACEMENT
(CAMBER NOT SHOWN)

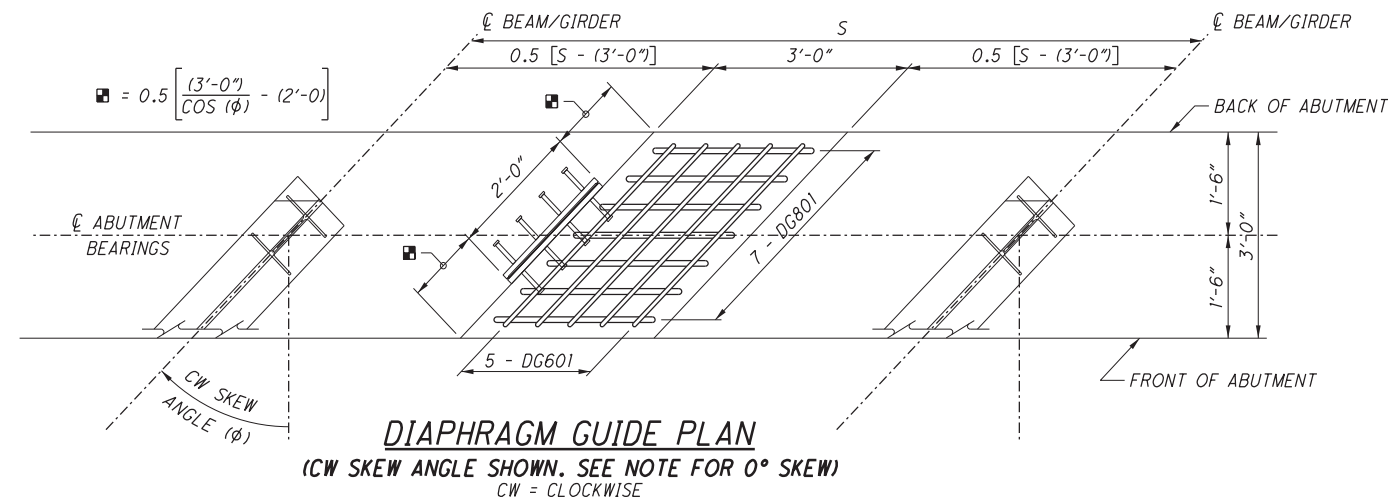
NOTE: * = TO REMAIN, DO NOT DISTURB

DESIGN AGENCY		OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5	
DESIGNED	NEM	CHECKED	TAG
DRAWN	NEM	REVISED	---
REVIEWED	JDR	STRUCTURE FILE NUMBER	3003337
DATE	09/13/16		

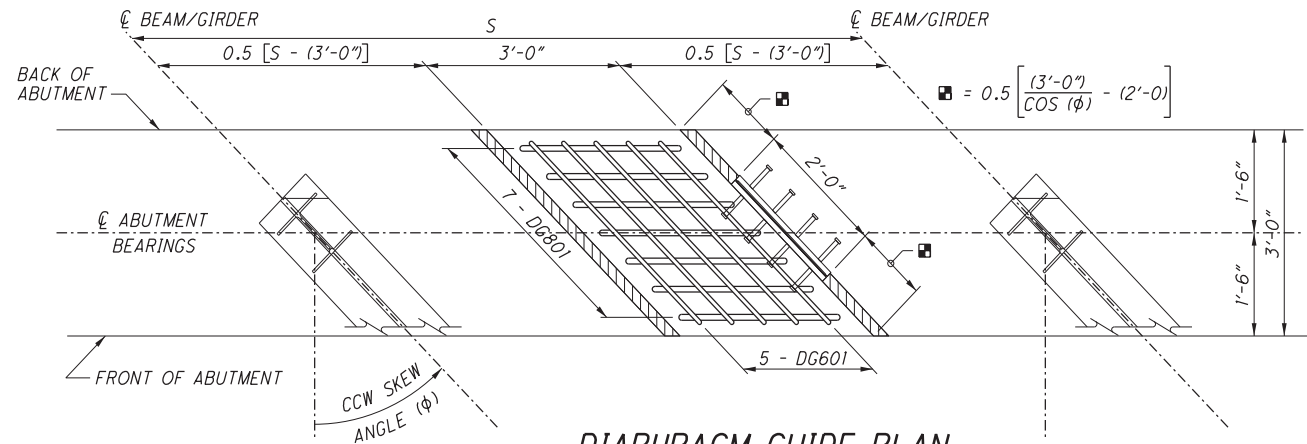
SHEAR CONNECTOR DETAILS
BRIDGE NO. GUE-77-1548R
I.R. 77 OVER SPILLWAY

GUE-77-VAR
PID No. 21631

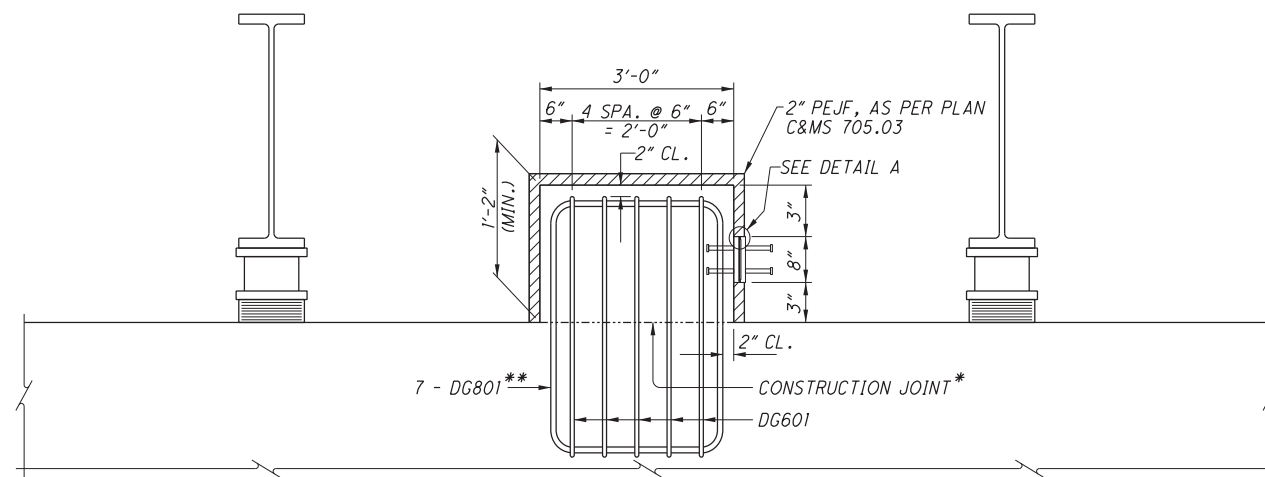
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DIAPHRAGM GUIDE PLAN
(CW SKEW ANGLE SHOWN. SEE NOTE FOR 0° SKEW)
CW = CLOCKWISE

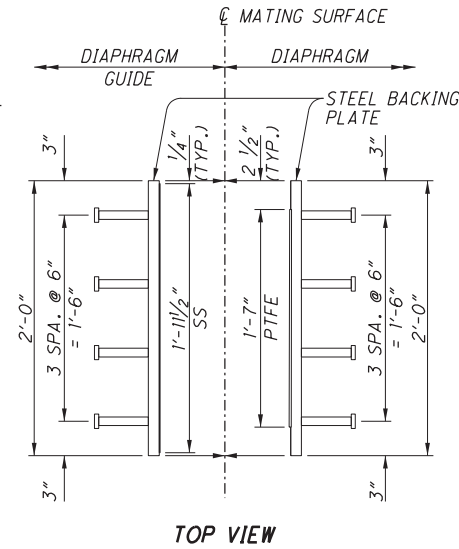


DIAPHRAGM GUIDE PLAN
(CCW SKEW ANGLE SHOWN. SEE NOTE FOR 0° SKEW)
CCW = COUNTERCLOCKWISE

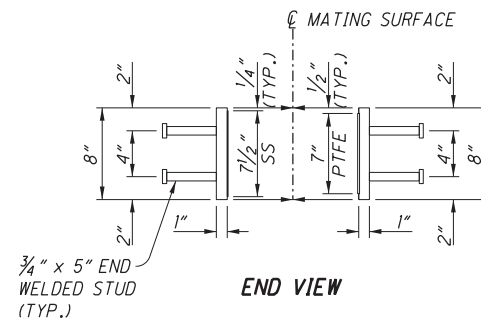


DIAPHRAGM GUIDE ELEVATION
(CCW SKEW ANGLE SHOWN, CW SIMILAR)

- * - FINISH THE SURFACE OF THE CONSTRUCTION JOINT WITH A SERRATED TROWEL. THE SERRATIONS SHALL BE 1/4" DEEP MINIMUM
- ** - PLACE TO AVOID INFERENCE WITH LONGITUDINAL REINFORCEMENT IN THE BEAM SEAT.



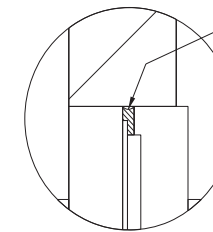
TOP VIEW



END VIEW

RUB PLATE DETAILS

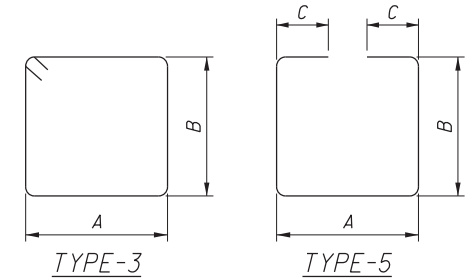
SS = STAINLESS STEEL
PTFE = POLYTETRAFLUORETHYLENE



DETAIL A

MARK	NUMBER	TYPE	DIMENSIONS		
			A	B	C
DG601	5	3	$\frac{(2'-8'')}{\cos(\phi)}$	2'-10 1/2"	
DG801	7	5	2'-8"	2'-9"	2'-4"

BENDING DIAGRAMS



GENERAL NOTES

DESCRIPTION: THIS DRAWING PROVIDES THE COMPLETE PLAN DETAILS FOR SEMI-INTEGRAL DIAPHRAGM GUIDES.

DESIGNER NOTES: EACH DIAPHRAGM GUIDE HAS BEEN DESIGNED TO A FACTORED CAPACITY NORMAL TO THE RUB PLATES OF 302 KIP AND PARALLEL TO THE RUB PLATES OF 60 KIP. FOR IMPOSED FACTORED LOADING EXCEEDING THESE CAPACITIES, ADDITIONAL GUIDES SHALL BE SPECIFIED.

THE PROJECT PLANS SHALL DETAIL THE LOCATION OF EACH DIAPHRAGM GUIDE. THE VOLUME OF CONCRETE AND REINFORCING STEEL FOR THE DIAPHRAGM GUIDES SHALL NOT BE INCLUDED IN THE PLAN QUANTITIES.

SKEW: FOR BRIDGES WITH SKEW ANGLE EQUAL TO 0°, RUB PLATES SHALL BE INSTALLED ON BOTH SIDES OF THE DIAPHRAGM GUIDE.

CONCRETE: PERFORM WORK ACCORDING TO C&MS 511. USE THE SAME CLASS OF CONCRETE USED IN THE ABUTMENT. F'C = 4.0 KSI.

REINFORCING STEEL: PROVIDE REINFORCEMENT ACCORDING TO C&MS 509. MIN. YIELD STRENGTH = 60 KSI

STAINLESS STEEL: 13 GAGE STAINLESS STEEL, TYPE 304, ASTM A167 OR A240 WITH A SURFACE FINISH OF 8.0 μ-IN OR BETTER WELDED AROUND THE ENTIRE PERIMETER TO THE 1" BACKING PLATE PER 869.12.

PTFE: PROVIDE PTFE SHEET OR FABRIC PER SUPPLEMENTAL SPECIFICATION 869.10 AND ATTACH PER 869.11.

STEEL BACKING PLATE: PROVIDE ASTM A709 GRADE 50 STEEL BACKING PLATES ACCORDING TO C&MS 711.01.

END WELDED STUDS: PROVIDE END WELDED STUDS IN ACCORDANCE WITH C&MS 513.22.

RUB PLATES: FABRICATE RUB PLATES ACCORDING TO SUPPLEMENTAL SPECIFICATION 869. SHIP AND PACKAGE FABRICATED UNITS ACCORDING TO 869.18. LEAVE WRAPPING, STRAPS OR RETAINING CLAMPS IN PLACE UNTIL BOTH SIDES OF THE UNIT ARE SECURED IN THEIR FINAL POSITION. ADDITIONAL REINFORCEMENT MAY BE INCLUDED IN THE GUIDE FOR THIS PURPOSE.

CORROSION PROTECTION: SHOP METALLIZE AND SEAL ALL STEEL SURFACES, EXCEPT PTFE-STAINLESS STEEL SLIDING SURFACES PER 869.13.

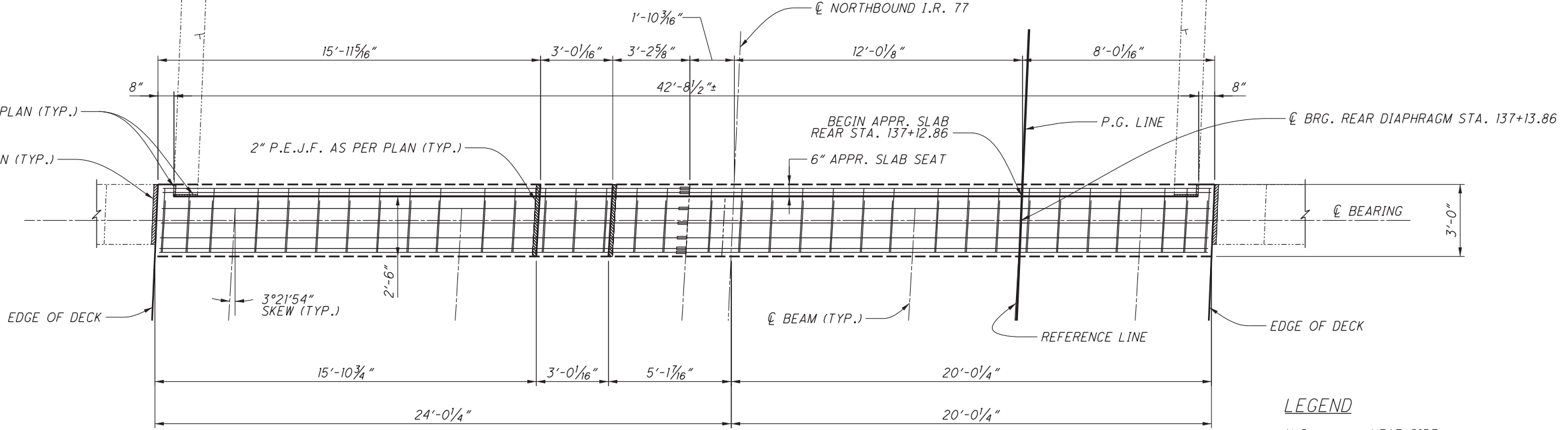
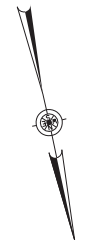
BASIS OF PAYMENT: THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES OF CAULK, PEJF, CONCRETE, REINFORCEMENT AND RUB PLATES AS FOLLOWS:

ITEM	UNIT	DESCRIPTION
511	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN

DESIGN AGENCY: OFFICE OF STRUCTURAL ENGINEERING
STATE OF OHIO DEPARTMENT OF TRANSPORTATION
DATE: 07-18-14
ADMINISTRATOR: [Signature]
REVISIONS: SICD-2-14
STANDARD BRIDGE DRAWING
SEMI-INTEGRAL ABUTMENT DIAPHRAGM GUIDE

DESIGN AGENCY: OHIO DEPARTMENT OF TRANSPORTATION
DATE: 09/13/16
REVIEWED: JDR
STRUCTURE FILE NUMBER: 3003337
DRAWN: NEM
CHECKED: TAG
DESIGNED: NEM
TAG
BRIDGE NO.: GUE-77-1458R
I.R. 77 OVER SPILLWAY
SEM- INTEGRAL ABUTMENT DIAPHRAGM GUIDE, AS PER PLAN
GUE-77-VAR
PID No. 21631
20/35
112
129

1" P.E.J.F. AS PER PLAN (TYP.)
 2" P.E.J.F. AS PER PLAN (TYP.)



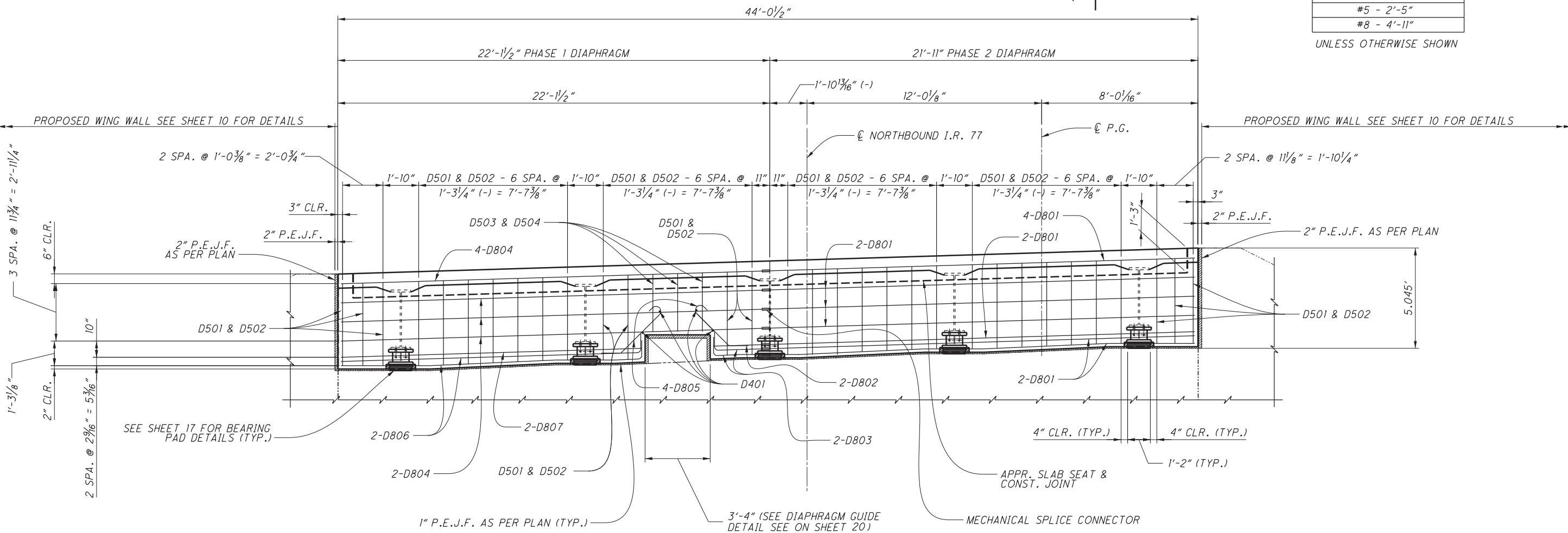
PLAN

EXISTING PILES & DIAPHRAGM NOT SHOWN FOR CLARITY

LEGEND
 N.S. - NEAR SIDE
 F.S. - FAR SIDE
 P.E.J.F. - PREFORMED EXPANSION JOINT FILLER

RE-STEEL SPLICE LENGTH	
#5	2'-5"
#8	4'-11"

UNLESS OTHERWISE SHOWN



ELEVATION

PARAPET AND SUPERSTRUCTURE STEEL NOT SHOWN FOR CLARITY

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DESIGN AGENCY
 OHIO DEPARTMENT OF
 TRANSPORTATION, DISTRICT 5

REVIEWED
 JDR 09/13/16
 STRUCTURE FILE NUMBER
 3003337

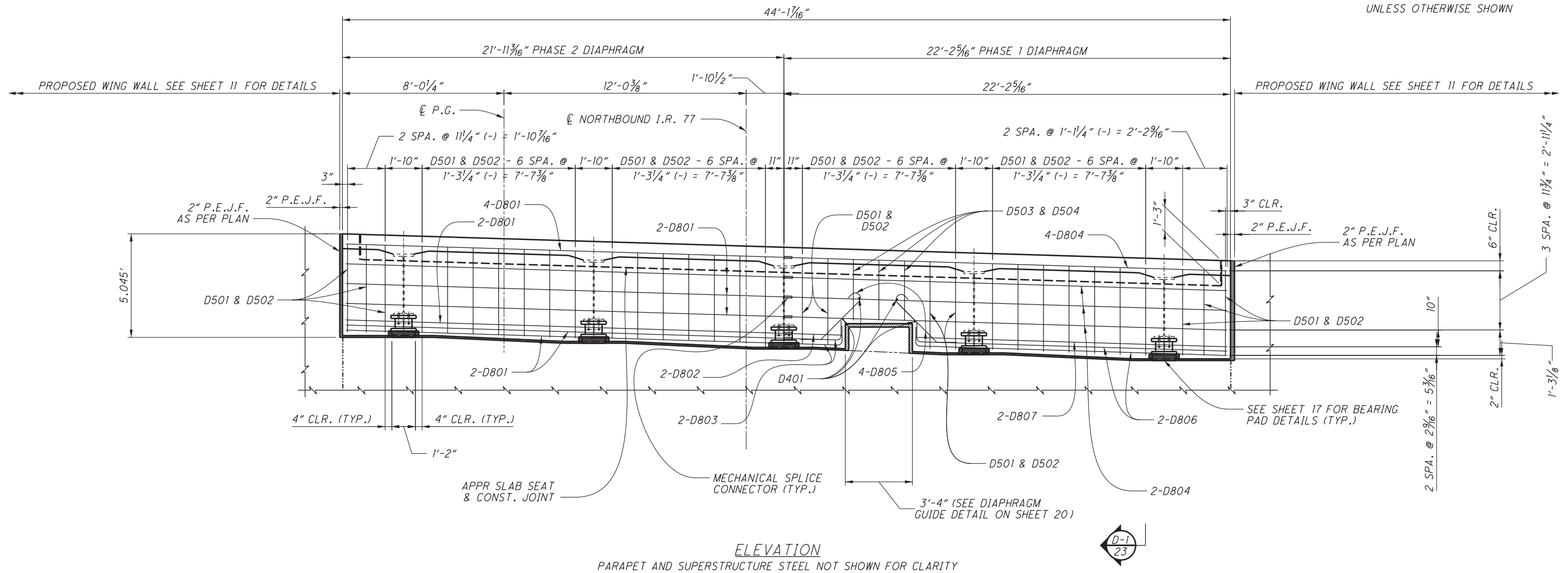
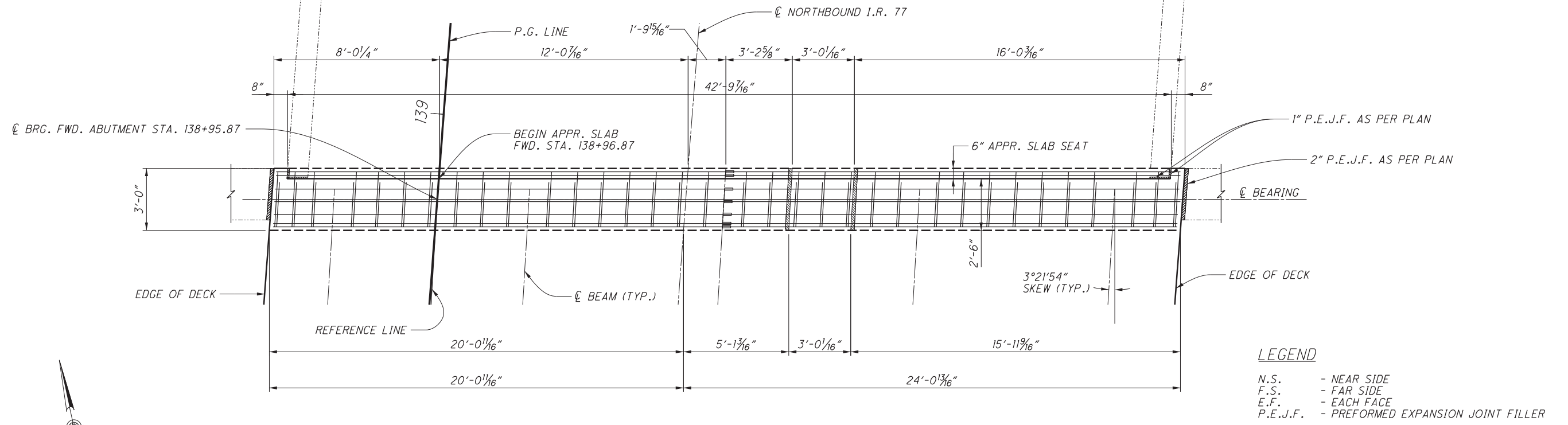
DRAWN
 NEM
 CHECKED
 TAG

REAR DIAPHRAGM
 BRIDGE NO. GUE-77-1548R
 I.R. 77 OVER SPILLWAY

GUE-77-VAR
 PID No. 21631

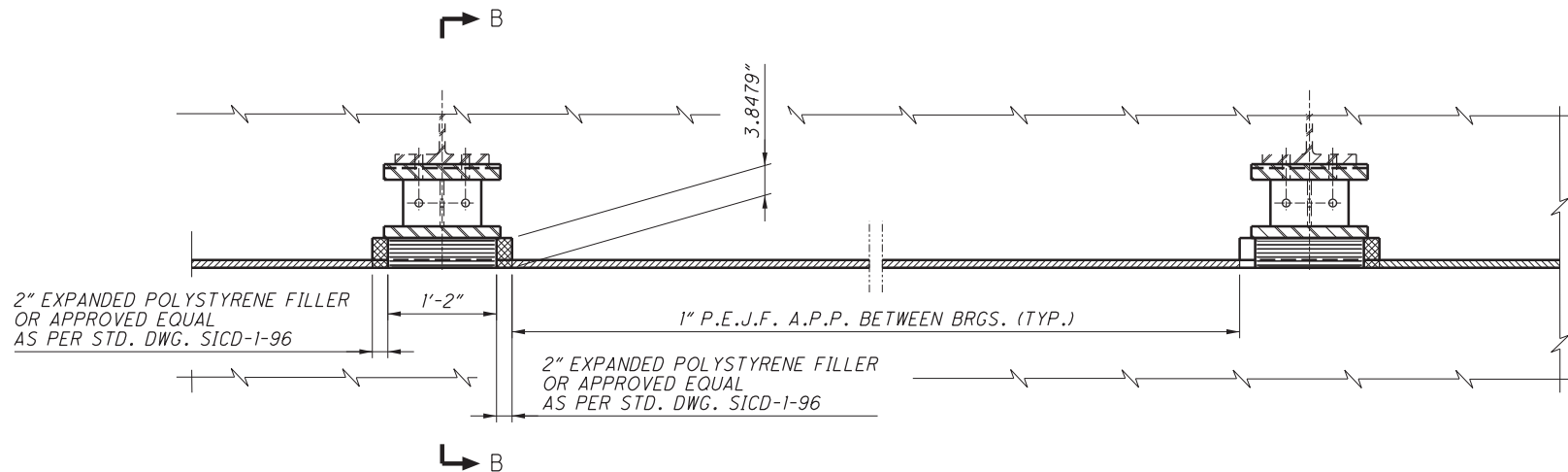
21 / 35

113
 129

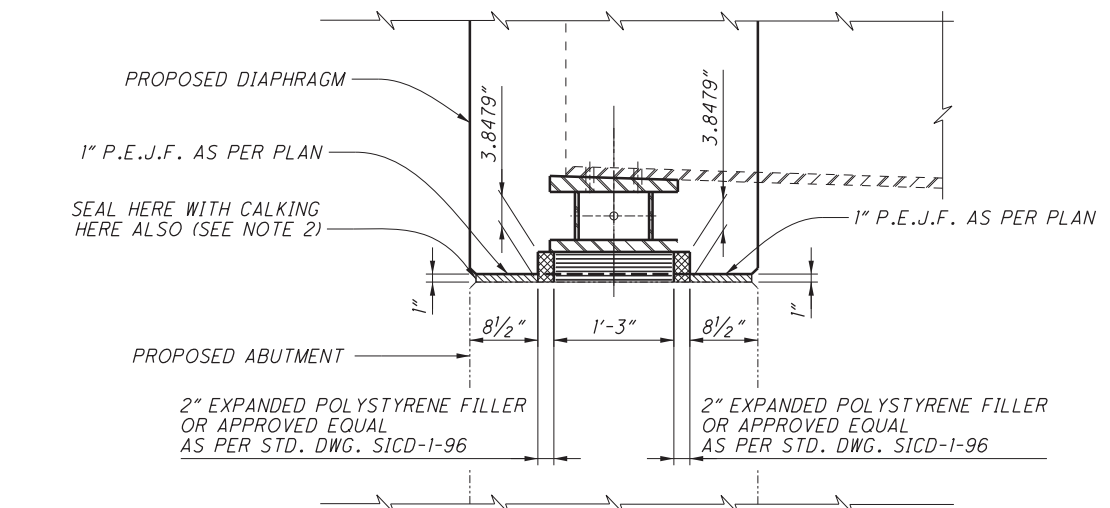


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SECTION A-A



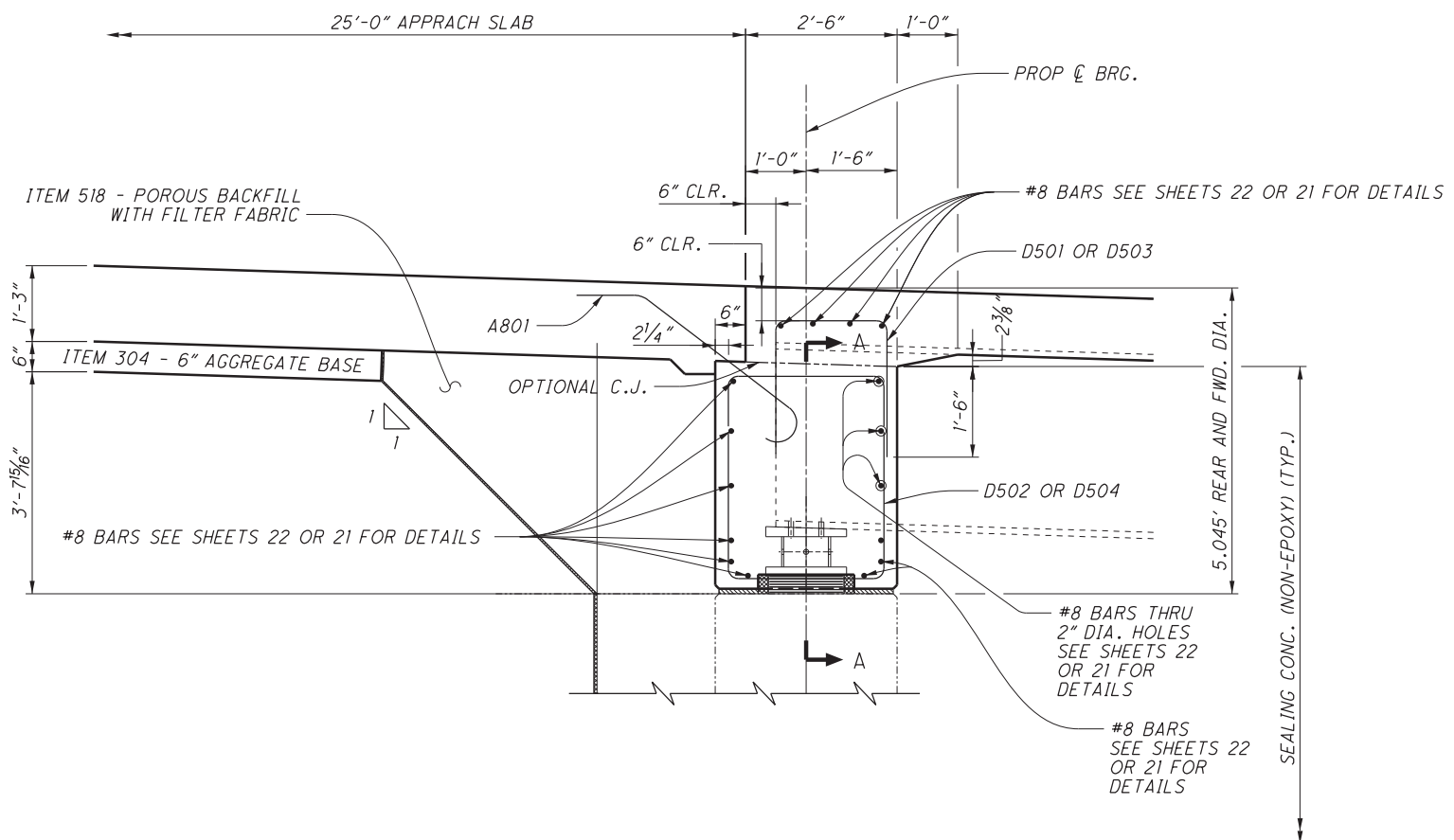
SECTION B-B

NOTES

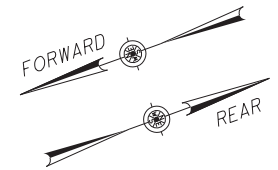
1. FOR ADDITIONAL DETAILS SEE STANDARD DRAWING SICD-1-96
2. APPLY 1/2" DECK-O-SEAL GUN GRADE JOINT SEALANT OR APPROVED EQUAL, OVER 1" PREFORMED CORK EXPANSION JOINT FILLER (IN ACCORDANCE WITH ARTICLE 705.03 AND NOTE ON SHEET 4)

LEGEND

- [Cross-hatched pattern] - EXPANDED POLYSTYRENE FILLER
- [Diagonal hatched pattern] - 1" PREFORMED EXPANSION JOINT FILLER (P.E.J.F.) AS PER PLAN

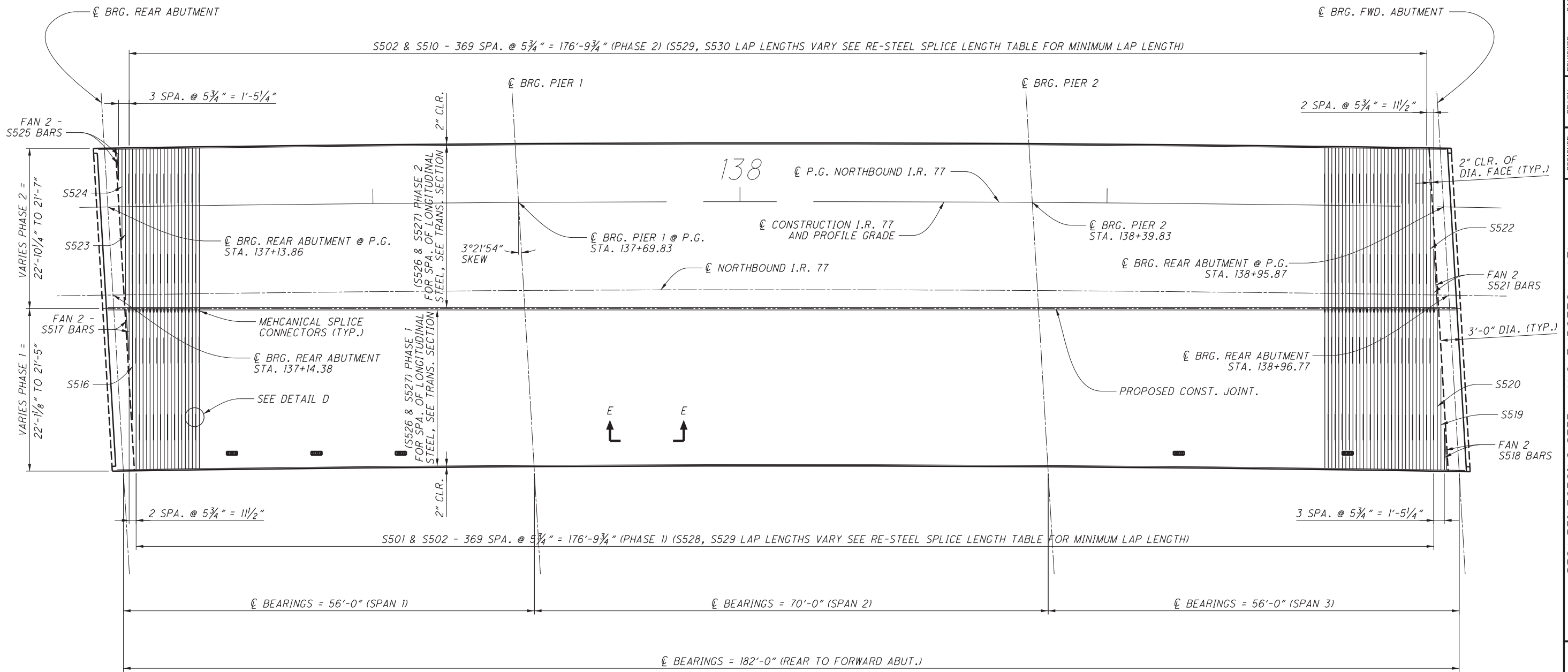
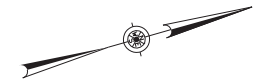
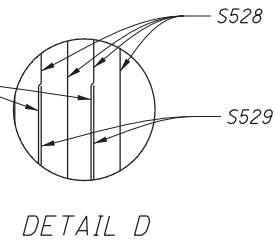


SECTION D-1
22 & 21



DESIGNED NEM	CHECKED TAG	DRAWN NEM	REVIEWED JDR	DATE 09/13/16	DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5
				STRUCTURE FILE NUMBER 3003337	
DIAPHRAGM DETAILS					
BRIDGE NO. GUE-77-1548R I.R. 77 OVER SPILLWAY					
GUE-77-VAR PID No. 21631					
23/35					
115 129					

SEE RE-STEEL SPLICE LENGTH TABLE FOR MINIMUM LAP LENGTH



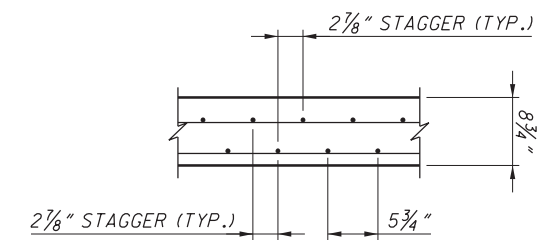
DECK REINFORCING PLAN (BOTTOM MAT)

RE-STEEL SPLICE LENGTH
#4 - 2'-9"
#5 - 3'-5"
#6 - 4'-1"

UNLESS OTHERWISE SHOWN

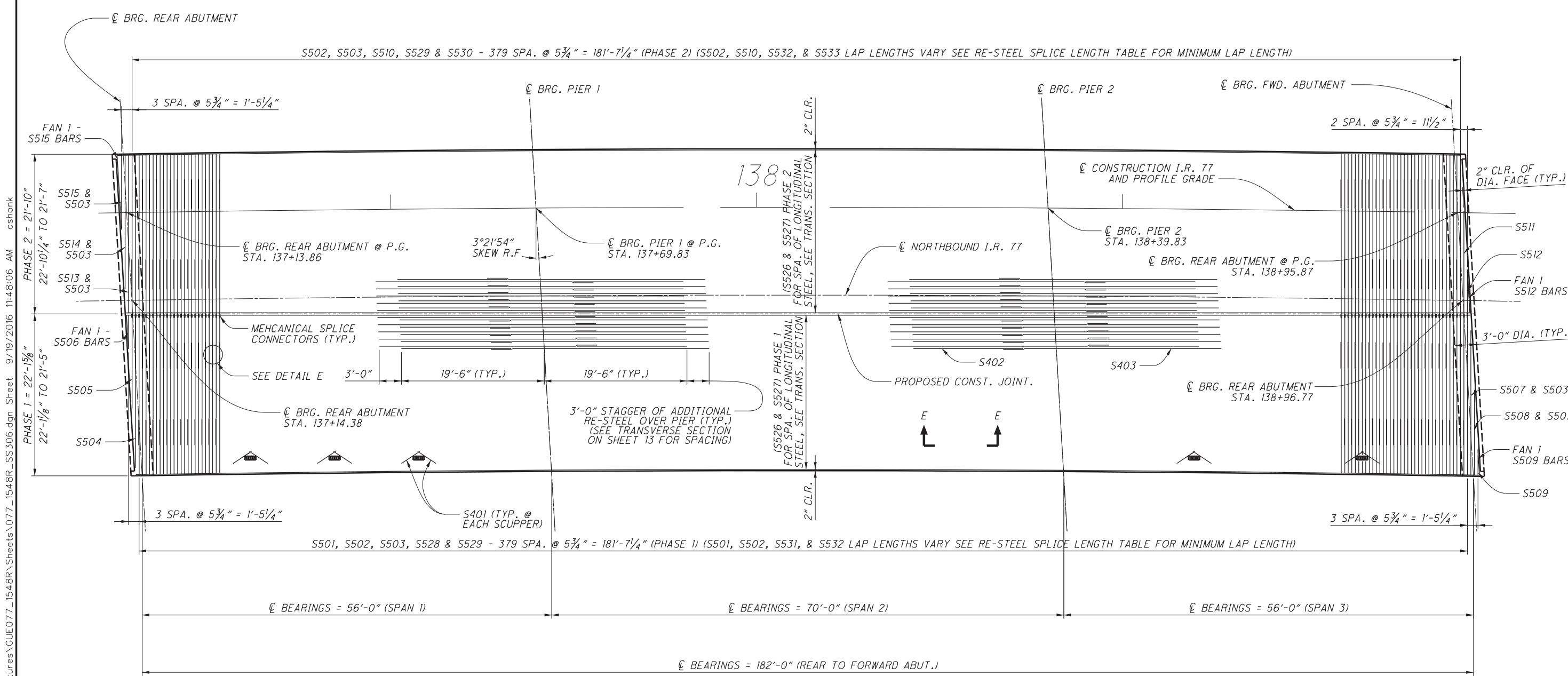
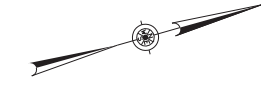
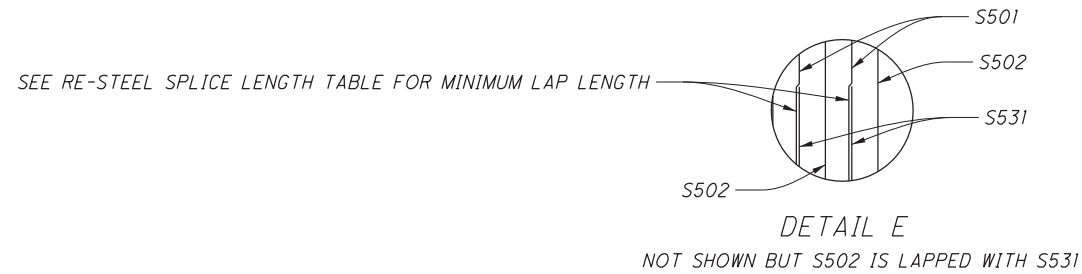
NOTES:

- ALTERNATE BAR PLACEMENT IN ADJACENT LONGITUDINAL AND TRANSVERSE ROWS IN ORDER TO STAGGER LAPS.
- TRIM OR BEND BARS AS NECESSARY TO ALLOW FOR 2" CLEARANCE AROUND SCUPPERS.



SECTION E-E

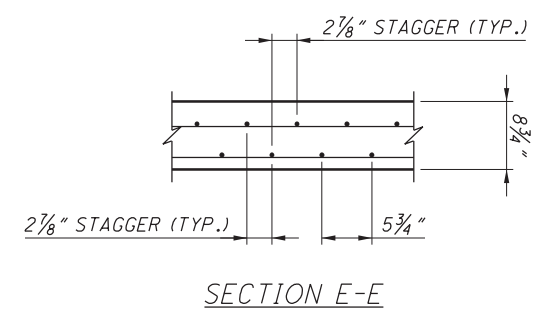
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RE-STEEL SPLICE LENGTH
#4 - 2'-9"
#5 - 3'-5"
#6 - 4'-1"

UNLESS OTHERWISE SHOWN

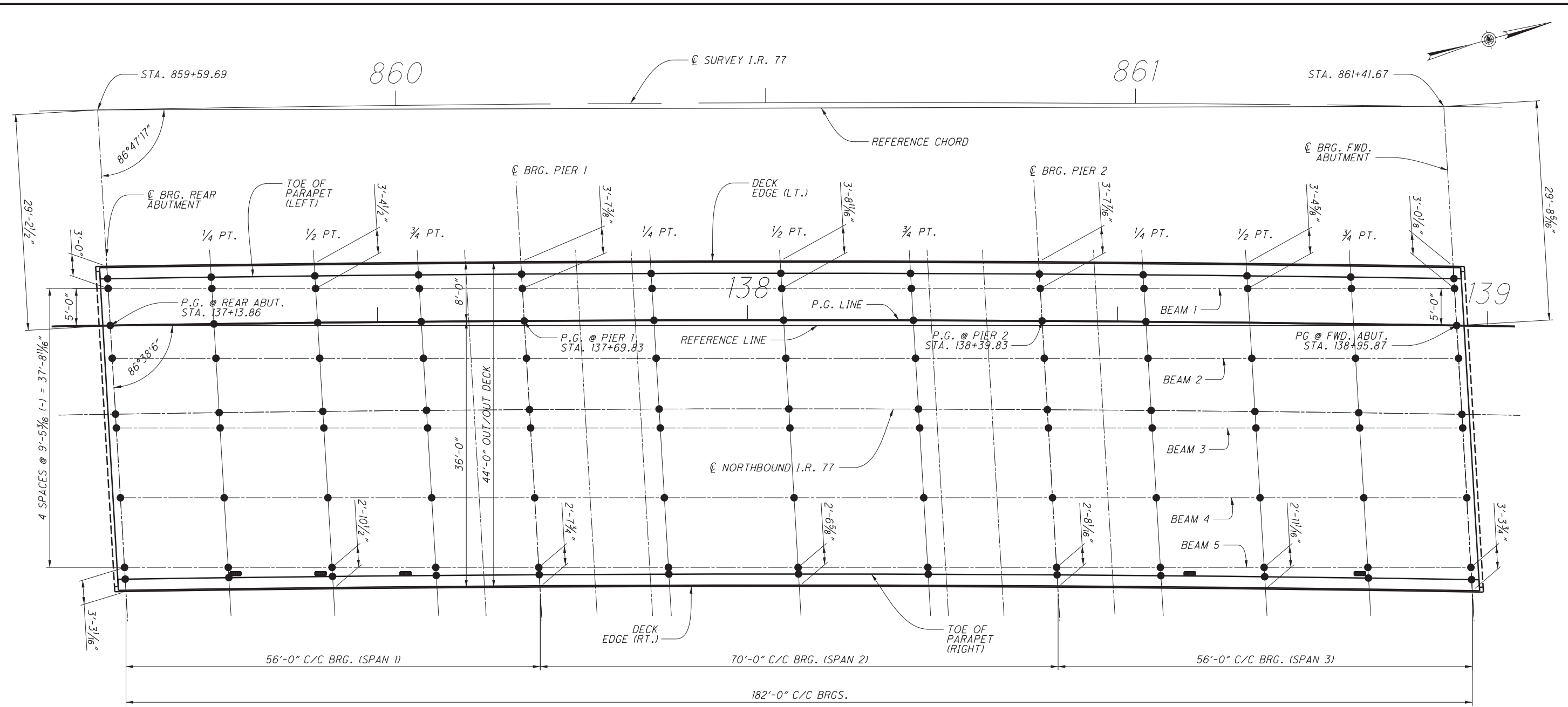
- NOTES:
1. ALTERNATE BAR PLACEMENT IN ADJACENT LONGITUDINAL AND TRANSVERSE ROWS IN ORDER TO STAGGER LAPS.
 2. TRIM OR BEND BARS AS NECESSARY TO ALLOW FOR 2" CLEARANCE AROUND SCUPPERS.



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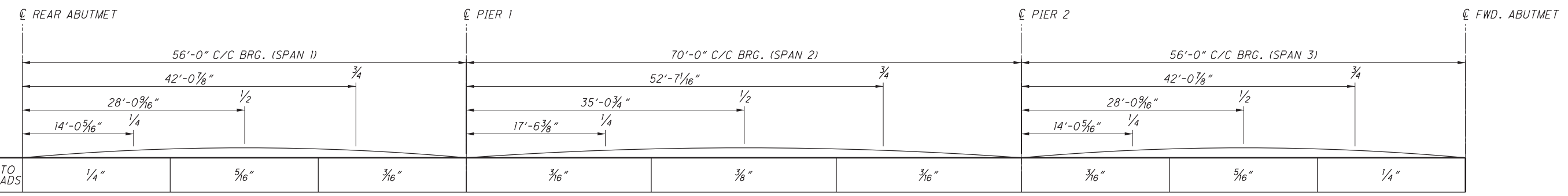
DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5
REVIEWED DATE JDR 09/13/16 STRUCTURE FILE NUMBER 3003337
DRAWN NEM REVISIONS ---
DESIGNED NEM CHECKED TAG
DECK REINFORCING STEEL LAYOUT (TOP MAT) BRIDGE NO. GUE-77-1548R I.R. 77 OVER SPILLWAY
GUE-77-VAR PID No. 21631
25 / 35
117 129

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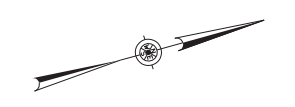


● - ELEVATION LOCATION

LOCATION OF SCREED ELEVATION POINTS
SEE FRAMING PLAN ON SHEET 14 FOR CROSSFRAMES AND SCUPPER LOCATIONS

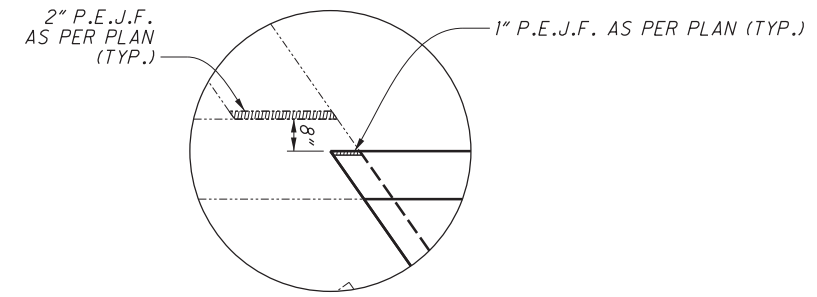
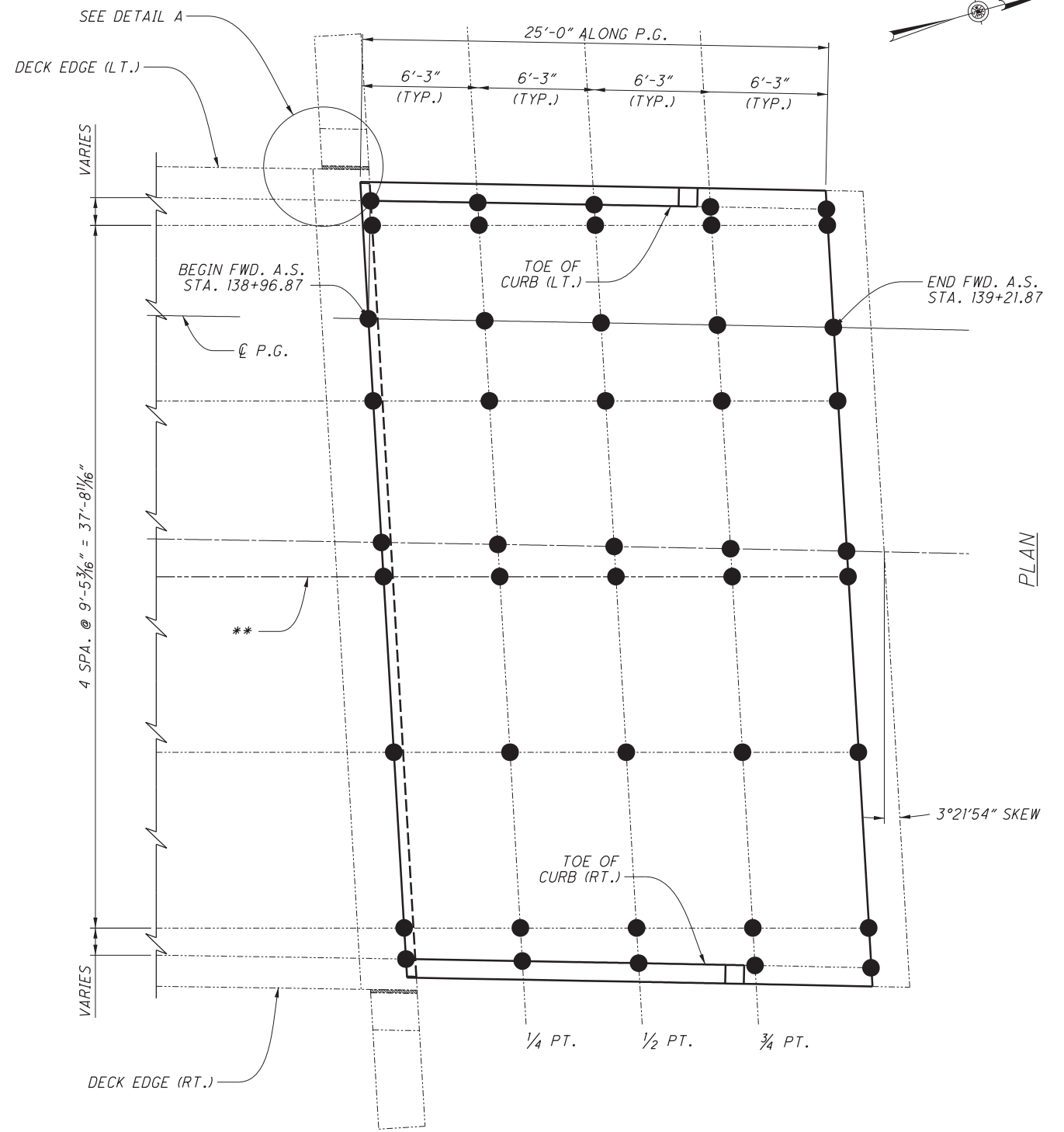
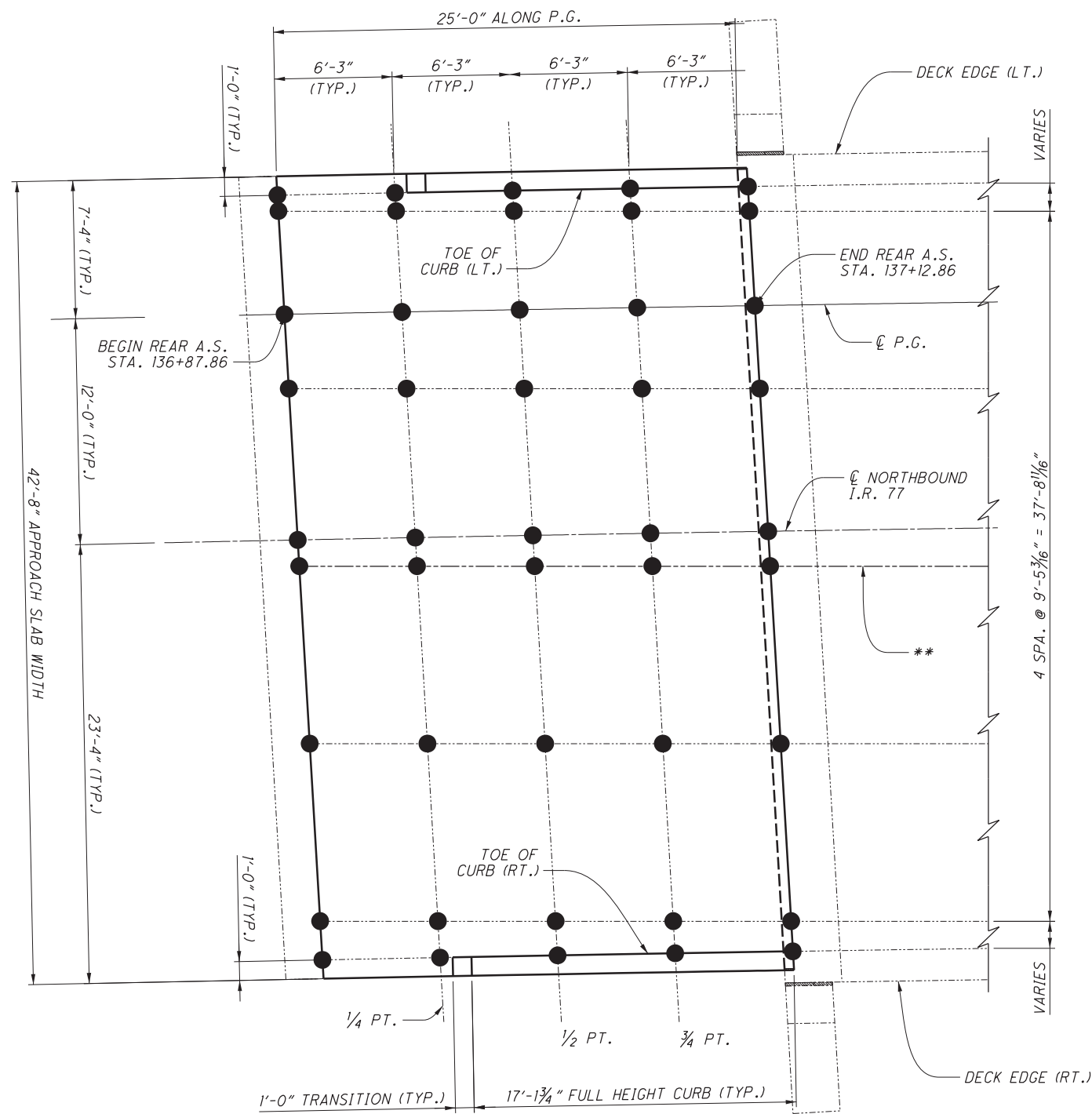


BEAM DEFLECTION DIAGRAM



DESIGN AGENCY		OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5	
DATE	09/13/16	REVIEWED	JDR
STRUCTURE FILE NUMBER	3003337	DRAWN	NEM
CHECKED	TAG	DESIGNED	NEM
DECK SCREED ELEVATIONS			
BRIDGE NO. GUE-77-1548R			
I.R. 77 OVER SPILLWAY			
GUE-77-VAR		PID No. 21631	
26/35		118	
		129	

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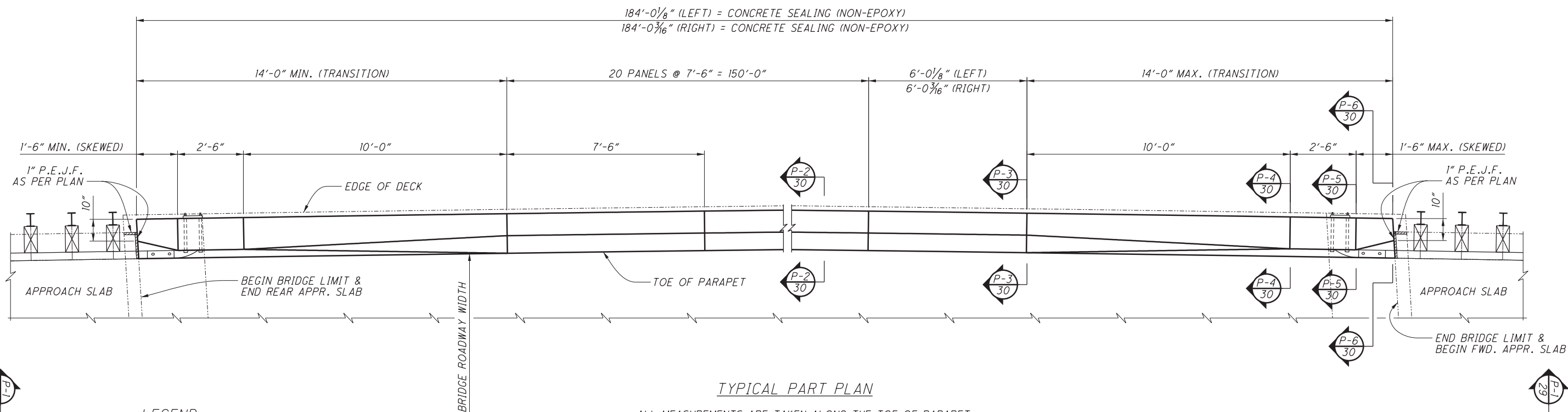


● - ELEVATION LOCATION
 ** PHASE CONSTRUCTION JOINT IS ALONG THE CONTINUATION OF \bar{C} OF BEAM 3

PLAN

DESIGN AGENCY		OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5	
REVIEWED	DATE	DESIGNED	BRIDGE NO. GUE-77-1548R
JDR	09/13/16	NEM	I.R. 77 OVER SPILLWAY
STRUCTURE FILE NUMBER	3003337	CHECKED	
DRAWN		TAG	
NEM			
REVISED			
APPROACH SLAB ELEVATION LOCATIONS			
GUE-77-VAR			
PID No. 21631			
27/35		119 129	

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TYPICAL PART PLAN

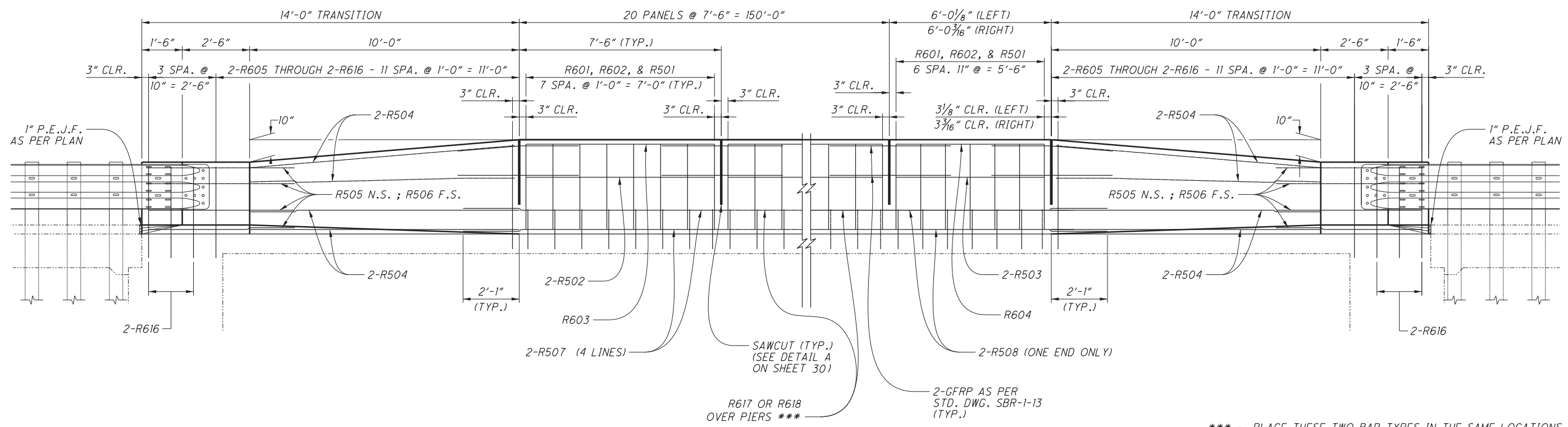
ALL MEASUREMENTS ARE TAKEN ALONG THE TOE OF PARAPET
LEFT SHOWN, RIGHT SIMILAR WITH ANY DIFFERENCES DETAILED

LEGEND

N.S. = NEAR SIDE
F.S. = FAR SIDE
P.E.J.F. = PREFORMED EXPANSION JOINT FILLER
GFRP = GLASS FIBER REINFORCED POLYMER

LAP LENGTHS	
#5 BAR	3'-5"
#6 BAR	4'-1"

FIELD BEND BARS
WHEN NECESSARY.

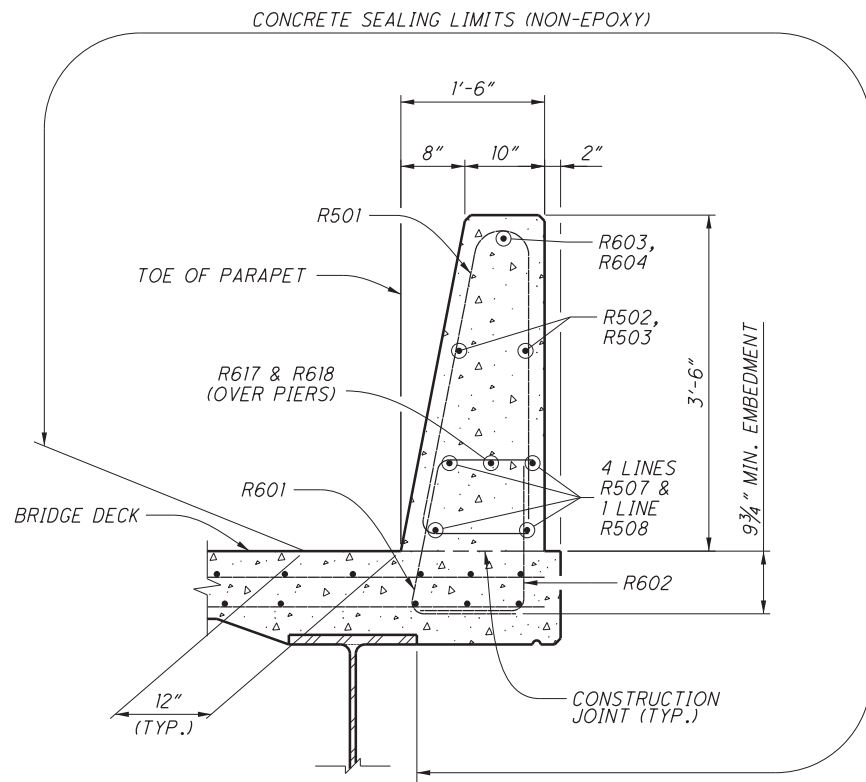


SECTION P-1/29

*** - PLACE THESE TWO BAR TYPES IN THE SAME LOCATIONS,
WITH RESPECT TO THE PIERS, AS BARS S402, & S403
ARE SHOWN IN THE DECK REINFORCING STEEL DETAILS.

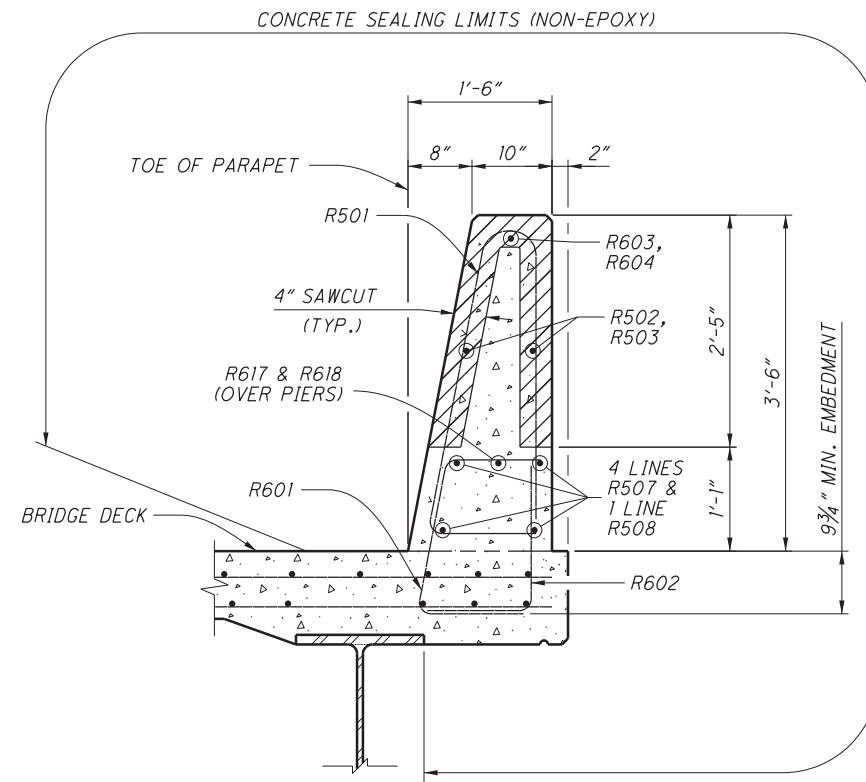
DESIGN AGENCY: OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5
 DATE: 09/13/16
 REVIEWED: JDR
 DRAWN: NEM
 DESIGNED: NEM
 CHECKED: TAG
 STRUCTURE FILE NUMBER: 3003337
 BRIDGE NO.: GUE-77-1548R
 I.R. 77 OVER SPILLWAY
 PARAPET DETAILS (LEFT & RIGHT)
 GUE-77-VAR
 PID No. 21631
 29/35
 121
 129

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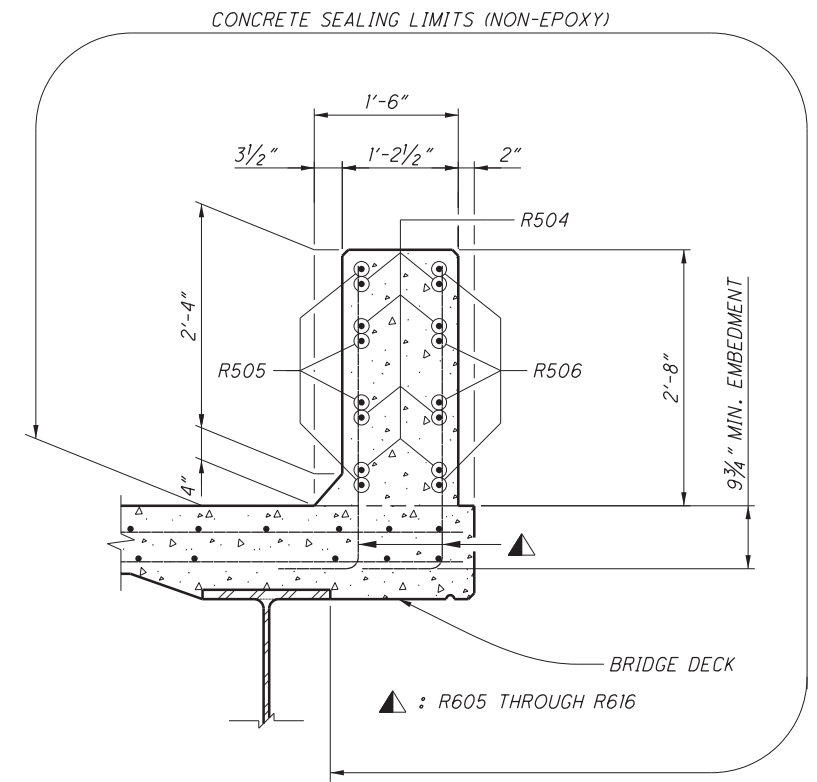
SECTION P-2
29

(GFRP BARS NOT SHOWN)

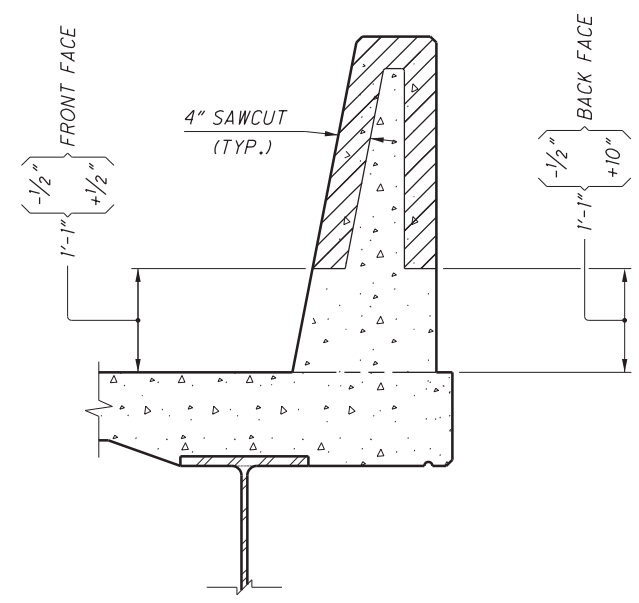


SECTION P-3
29

(GFRP BARS NOT SHOWN)

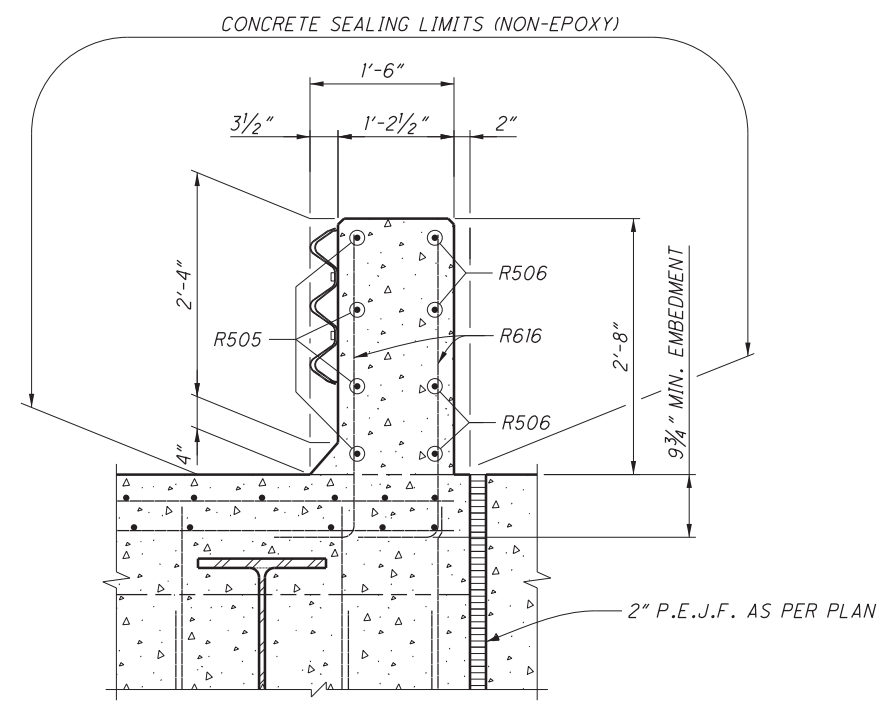


SECTION P-4
29

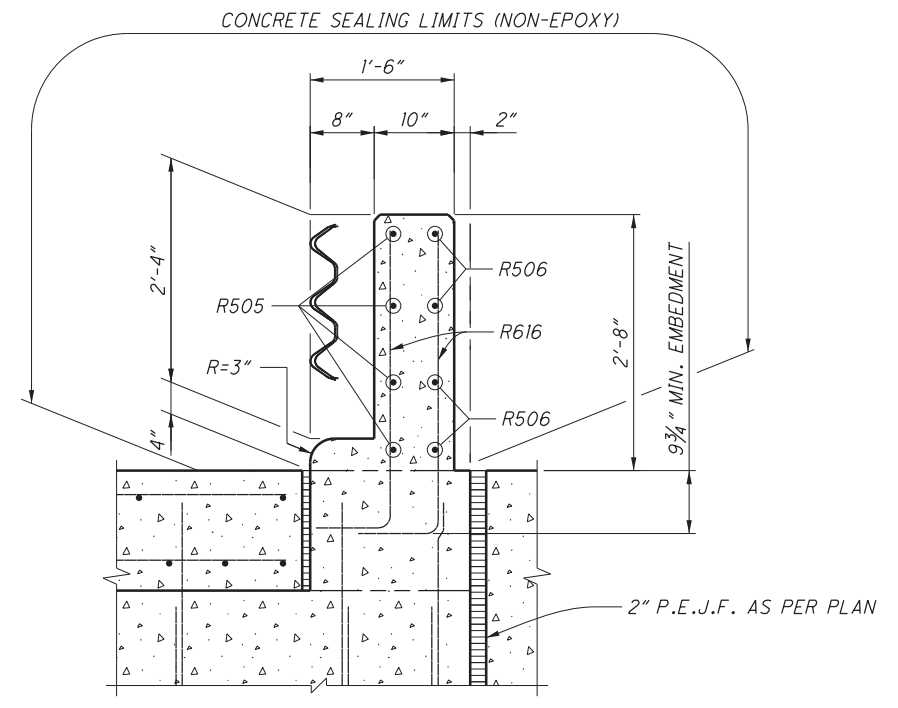


DETAIL A

SAWCUT PERIMETER = 4'-7"



SECTION P-5
29



SECTION P-6
29

DESIGNED NEM	DRAWN NEM	REVIEWED JDR	DATE 09/13/16	DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5
CHECKED TAG	REVISED	STRUCTURE FILE NUMBER 3003337		
PARAPET DETAILS BRIDGE NO. GUE-77-1548R I.R. 77 OVER SPILLWAY				
GUE-77-VAR PID No. 21631				
30 / 35				
122 129				

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MARK	NUMBER		LENGTH	WEIGHT	TYPE	DIMENSIONS				
	REAR	FORWARD				A	B	C	R	INC
REAR AND FORWARD ABUTMENT STEEL										
A501	12	12	8'-9"	220	STR.	8'-9"				
A502	12	12	17'-7"	440	3	5'-9"	2'-9"			
A503		SERIES OF 1	23'-11"	109	3	2'-0"	9'-8"			0'-9"
		4	28'-5"		3	2'-0"	11'-11"			
		1	20'-11"		3	2'-0"	8'-2"			
A504		SERIES OF 4	25'-5"	97	3	2'-0"	10'-5"			0'-9"
A505		2	28'-9"	60	3	2'-0"	12'-1"			
A506		2	26'-1"	54	3	2'-0"	10'-9"			
A507		1	19'-7"	20	3	2'-6"	7'-0"			
A508		1	17'-1"	18	3	2'-6"	5'-9"			
A509		2	3'-9"	8	STR.	3'-9"				
		2	4'-11"		STR.	4'-11"				
A510		SERIES OF 12	4'-5"	117	STR.	4'-5"				0'-0 9/16"
A511		6	4'-5"	28	STR.	4'-5"				
		2	3'-9"		STR.	3'-9"				
A512		SERIES OF 14	4'-4"	118	STR.	4'-4"				0'-0 9/16"
A513	18	14	8'-10"	295	STR.	8'-10"				
A514		3	6'-5"	20	STR.	6'-5"				
A515		3	6'-7"	21	STR.	6'-7"				
		1	5'-4"		STR.	5'-4"				
A516		SERIES OF 2	3'-6"	9	STR.	3'-6"				1'-10"
		1	5'-6"		STR.	5'-6"				
A517		SERIES OF 2	3'-8"	10	STR.	3'-8"				1'-10"
A518		6	20'-2"	126	STR.	20'-2"				
A519		4	21'-8"	90	STR.	21'-8"				
A520		1	19'-11"	21	STR.	19'-11"				
A521		1	21'-5"	22	STR.	21'-5"				
A522		2	6'-9"	14	STR.	6'-9"				
A523		2	6'-8"	14	STR.	6'-8"				
		1	1'-8"		STR.	1'-8"				
A524		SERIES OF 3	6'-8"	13	STR.	6'-8"				2'-6"
		1	1'-6"		STR.	1'-6"				
A525		SERIES OF 3	6'-6"	13	STR.	6'-6"				2'-6"
A526	28	28	6'-7"	384	2	2'-6"	2'-2"	2'-2"		
A527	2	2	6'-1"	26	2	2'-0"	2'-2"	2'-2"		
A528		6	23'-5"	147	STR.	23'-5"				
A529		4	21'-11"	91	STR.	21'-11"				
A530		2	7'-3"	15	19	1'-6"	5'-2"	2'-7"		
A531		2	6'-9"	14	19	1'-6"	4'-9"	2'-4"		
A532	2		6'-6"	14	19	1'-6"	4'-6"	2'-3"		
A533	2		6'-11"	14	19	1'-6"	4'-10"	2'-5"		
A534	2		27'-3"	57	3	2'-0"	11'-4"			
A535	1		18'-7"	19	3	2'-6"	6'-6"			
A536	2		29'-11"	62	3	2'-0"	12'-8"			
A537	1		20'-11"	22	3	2'-6"	7'-8"			
		2	4'-6"		STR.	4'-6"				
A538		SERIES OF 14	5'-1"	140	STR.	5'-1"				0'-0 9/16"
		2	5'-1"		STR.	5'-1"				
A539		SERIES OF 14	5'-8"	157	STR.	5'-8"				0'-0 9/16"

SEE SHEET 32 FOR BENDING DIAGRAMS

MARK	NUMBER		LENGTH	WEIGHT	TYPE	DIMENSIONS				
	REAR	FORWARD				A	B	C	R	INC
REAR AND FORWARD ABUTMENT STEEL CONTINUED										
A540	6		5'-1"	32	STR.	5'-1"				
A541	2		6'-2"	13	STR.	6'-2"				
A542	2		6'-4"	13	STR.	6'-4"				
A543	1		4'-0"	4	STR.	4'-0"				
A544	1		4'-1"	4	STR.	4'-1"				
A545	1		2'-0"	2	STR.	2'-0"				
A546	1		2'-1"	2	STR.	2'-1"				
A547	3		6'-7"	21	STR.	6'-7"				
A548	3		6'-5"	20	STR.	6'-5"				
A549	1		4'-7"	5	STR.	4'-7"				
A550	1		4'-6"	5	STR.	4'-6"				
A551	1		2'-7"	3	STR.	2'-7"				
A552	1		2'-6"	3	STR.	2'-6"				
		1	25'-1"		3	2'-0"	10'-3"			
A553		SERIES OF 4	29'-7"	114	3	2'-0"	12'-6"			0'-9"
		1	22'-9"		3	2'-0"	9'-1"			
A554		SERIES OF 4	27'-3"	104	3	2'-0"	11'-4"			0'-9"
A555	7		23'-4"	170	STR.	23'-4"				
A556	5		21'-10"	114	STR.	21'-10"				
A557	7		21'-8"	158	STR.	21'-8"				
A558	5		20'-2"	105	STR.	20'-2"				
A559	1		6'-0"	6	STR.	6'-0"				
A560	1		6'-1"	6	STR.	6'-1"				
A801	8	8	8'-9"	374	STR.	8'-9"				
				SUB-TOTAL	4397					

MARK	NUMBER		LENGTH	WEIGHT	TYPE	DIMENSIONS				
	REAR	FORWARD				A	B	C	R	INC
REAR AND FORWARD DIAPHRAGM STEEL										
D401	4	4	2'-8"	14	STR.	2'-8"				
D501	31	31	6'-4"	410	2	2'-3"	2'-2"	2'-3"		
D502	31	31	12'-7"	814	3	2'-8"	3'-4"			
D503	3	3	7'-8"	48	2	2'-11"	2'-2"	2'-11"		
D504	3	3	9'-11"	62	3	2'-8"	2'-0"			
D801	16	16	21.75	1858	STR.	21'-9"				
D802	2	2	2'-10"	30	STR.	2'-10"				
D803	4	4	3'-8"	78	1	1'-0"	2'-10"			
D804	10	10	22'-0"	1174	STR.	22'-0"				
D805	8	8	5'-1"	218	18	2'-11"	1'-0"	1'-0"		
D806	4	4	16'-3"	348	1	1'-0"	15'-5"			
D807	2	2	15'-5"	164	STR.	15'-5"				
				SUB-TOTAL	5218					

DESIGN AGENCY
OHIO DEPARTMENT OF
TRANSPORTATION, DISTRICT 5

DATE
09/13/16
REVIEWED
JDR
STRUCTURE FILE NUMBER
3003337

DRAWN
NEM
REVISIONS

DESIGNED
NEM
CHECKED
TAG

REINFORCING STEEL SCHEDULE
BRIDGE NO. GUE-77-1548R
I.R. 77 OVER SPILLWAY

GUE-77-VAR
PID No. 21631

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123
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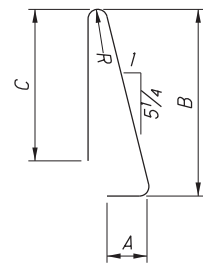
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MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS			
	TOTAL				A	B	R	INC
SUPERSTRUCTURE STEEL								
S401	10	3'-0"	20	STR.	3'-0"			
S402	176	29'-9"	3498	STR.	29'-9"			
S403	176	15'-0"	1764	STR.	15'-0"			
S501	560	18'-0"	10513	STR.	18'-0"			
S502	1120	7'-6"	8761	STR.	7'-6"			
S503	765	10'-3"	8178	16	9'-8"			
S504	1	21'-0"	22	STR.	21'-0"			
S505	1	12'-11"	13	STR.	12'-11"			
S506	2	4'-7"	10	STR.	4'-7"			
S507	1	19'-9"	21	STR.	19'-9"			
S508	1	11'-8"	12	STR.	11'-8"			
S509	2	3'-6"	7	STR.	3'-6"			
S510	560	18'-5"	10757	STR.	18'-5"			
S511	1	14'-0"	15	STR.	14'-0"			
S512	2	5'-11"	12	STR.	5'-11"			
S513	1	21'-6"	22	STR.	21'-6"			
S514	1	18'-3"	19	STR.	18'-3"			
S515	2	10'-1"	21	STR.	10'-1"			
S516	1	15'-1"	16	STR.	15'-1"			
S517	2	7'-0"	15	STR.	7'-0"			
S518	2	5'-8"	12	STR.	5'-8"			
S519	1	13'-10"	14	STR.	13'-10"			
S520	1	21'-9"	23	STR.	21'-9"			
S521	2	8'-2"	17	STR.	8'-2"			
S522	1	16'-3"	17	STR.	16'-3"			
S523	1	20'-7"	21	STR.	20'-7"			
S524	1	12'-5"	13	STR.	12'-5"			
S525	2	4'-3"	9	STR.	4'-3"			
S526	392	40'-0"	16354	STR.	40'-0"			
S527	98	37'-4"	3816	STR.	37'-4"			
S528	190	18'-7"	3683	16	18'-0"			
S529	380	8'-1"	3204	16	7'-6"			
S530	190	19'-0"	3765	16	18'-5"			
SUB-TOTAL			74644					

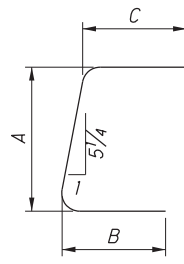
MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS					
	TOTAL				A	B	C	D	E	R
PARAPET STEEL										
R501	334	7'-4"	2555	23	0'-11"	3'-3"	3'-0"			0'-2.8"
R502	80	7'-0"	584	STR.	7'-0"					
R503	4	5'-6"	23	STR.	5'-6"					
R504	32	10'-0"	334	STR.	10'-0"					
R505	16	5'-8"	95	25	1'-10"	2'-5"	1'-5"	0'-1.5"	0'-5"	
R506	16	5'-8"	95	STR.	5'-8"					
R507	32	40'-0"	1335	STR.	40'-0"					
R508	8	13'-11"	116	STR.	13'-11"					
R601	334	3'-4"	1672	28	1'-9"	1'-0"	0'-11"			
R602	334	2'-7"	1296	1	1'-0"	1'-9"				
R603	40	7'-0"	421	STR.	7'-0"					
R604	2	5'-6"	17	STR.	5'-6"					
R605	8	5'-0"	60	1	1'-0"	4'-2"				
R606	8	4'-11"	59	1	1'-0"	4'-1"				
R607	8	4'-10"	58	1	1'-0"	4'-0"				
R608	8	4'-9"	57	1	1'-0"	3'-11"				
R609	8	4'-8"	56	1	1'-0"	3'-10"				
R610	8	4'-7"	55	1	1'-0"	3'-9"				
R611	8	4'-6"	54	1	1'-0"	3'-8"				
R612	8	4'-5"	53	1	1'-0"	3'-7"				
R613	8	4'-4"	52	1	1'-0"	3'-6"				
R614	8	4'-3"	51	1	1'-0"	3'-5"				
R615	8	4'-2"	50	1	1'-0"	3'-4"				
R616	32	4'-1"	196	1	1'-0"	3'-3"				
R617	8	29'-9"	357	STR.	29'-9"					
R618	8	15'-0"	180	STR.	15'-0"					
SUB-TOTAL			9881							
SUPER. (DECK) SUB-TOTAL			74644							
DIAPHRAGM SUB-TOTAL			5218							
ABUTMENT SUB-TOTAL			4397							
THIS SHEET TOTAL			9881							
GRAND TOTAL			94140							

QUANTITY CARRIED TO BRIDGE SUMMARY

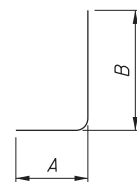
BENDING DIAGRAMS



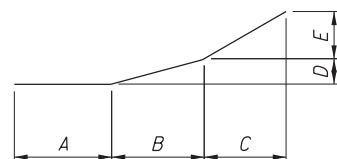
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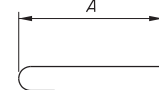
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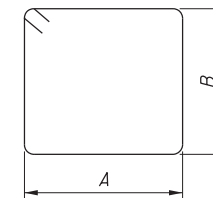
TYPE-1



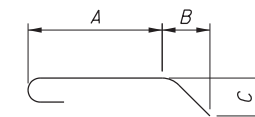
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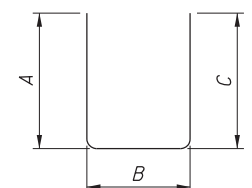
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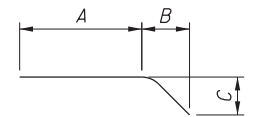
TYPE-3



TYPE-18



TYPE-2



TYPE-19

REINFORCING STEEL SCHEDULE

BRIDGE NO. GUE-77-1548R
I.R. 77 OVER SPILLWAY

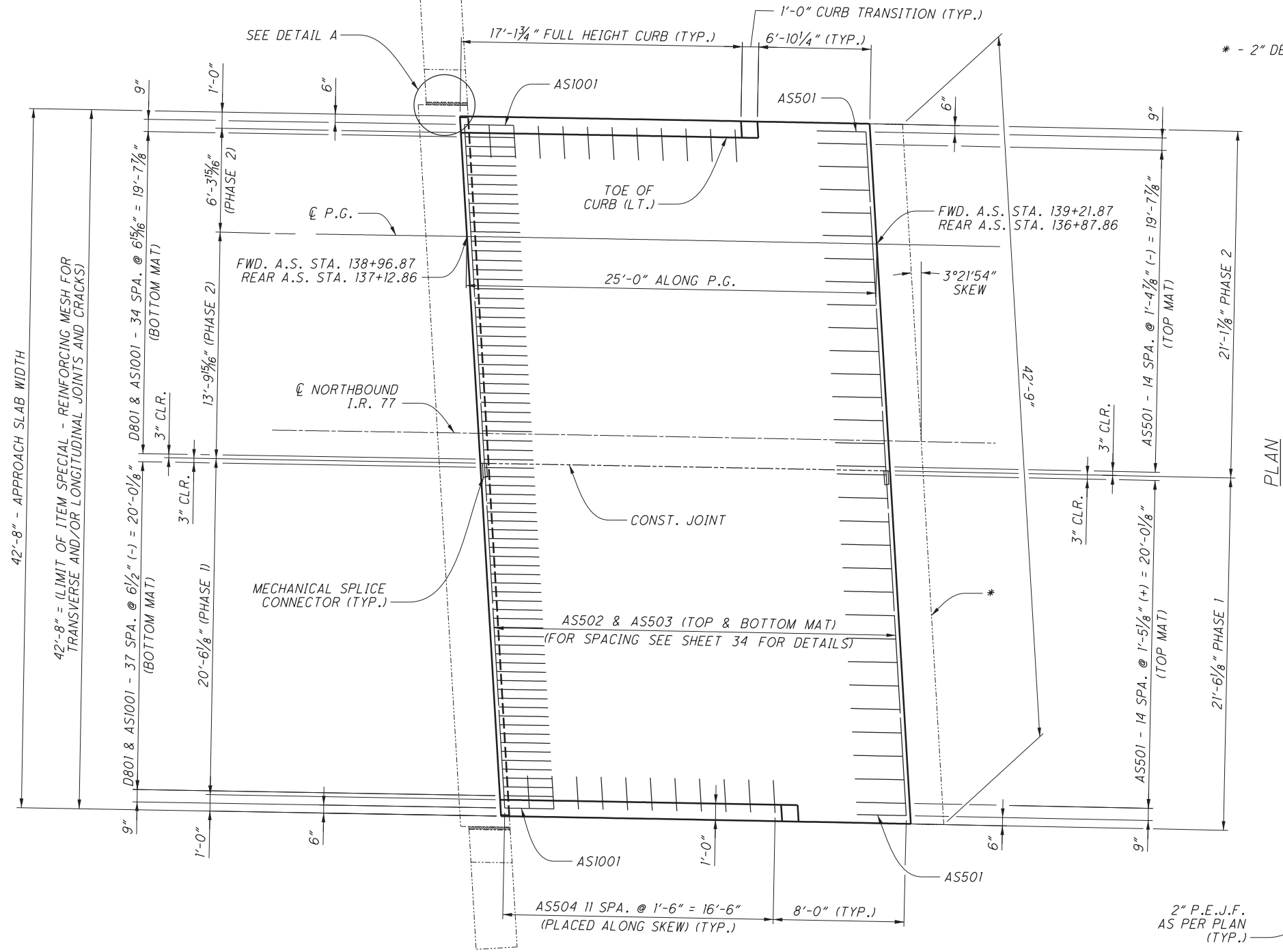
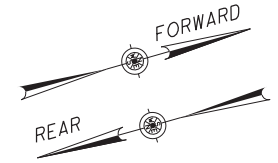
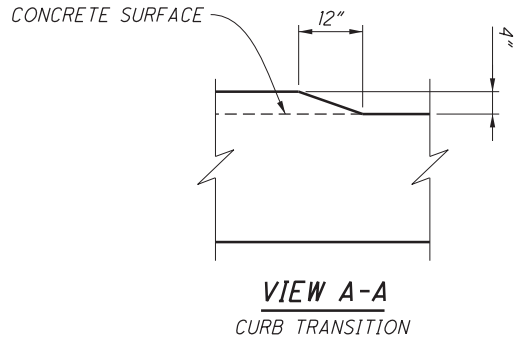
GUE-77-VAR
PID No. 21631

DESIGN AGENCY: OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5
DATE: 09/13/16
REVIEWED: JDR
DRAWN: NEM
DESIGNED: NEM
CHECKED: TAG
STRUCTURE FILE NUMBER: 3003337

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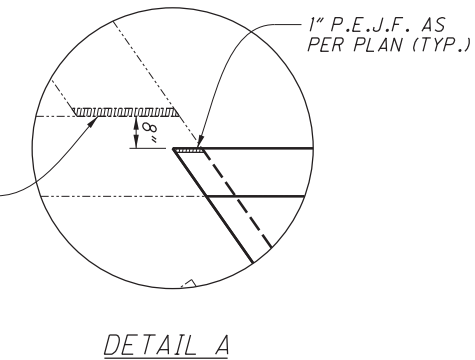
124
129

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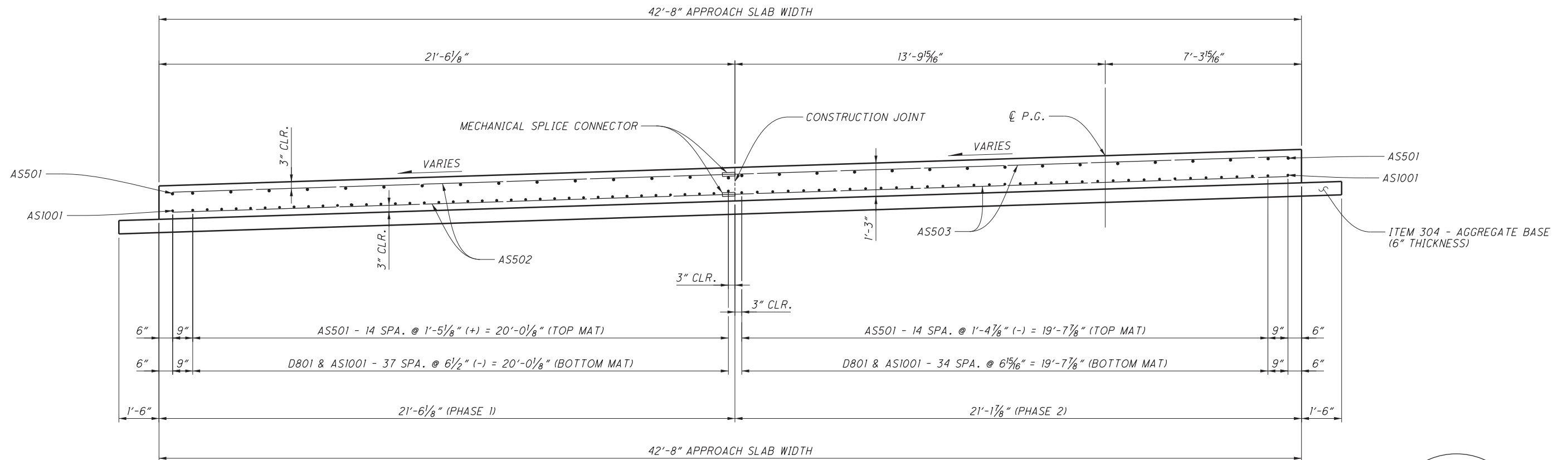
* - 2" DEEP JOINT SEALER, AS PER PLAN

MINIMUM LAP
NO. 5 BAR = 3'-5"

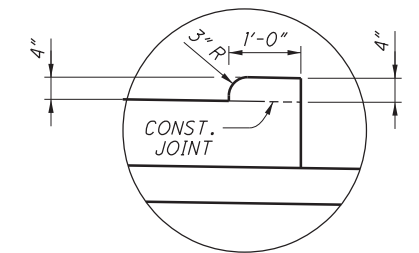


REAR AND FORWARD APPROACH SLAB DETAILS		DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5
DESIGNED NEM	CHECKED TAG	DATE 09/13/16
DRAWN NEM	REVISED	STRUCTURE FILE NUMBER 3003337
BRIDGE NO. GUE-77-1548R I.R. 77 OVER SPILLWAY		PID No. 21631
33 / 35		125 / 129

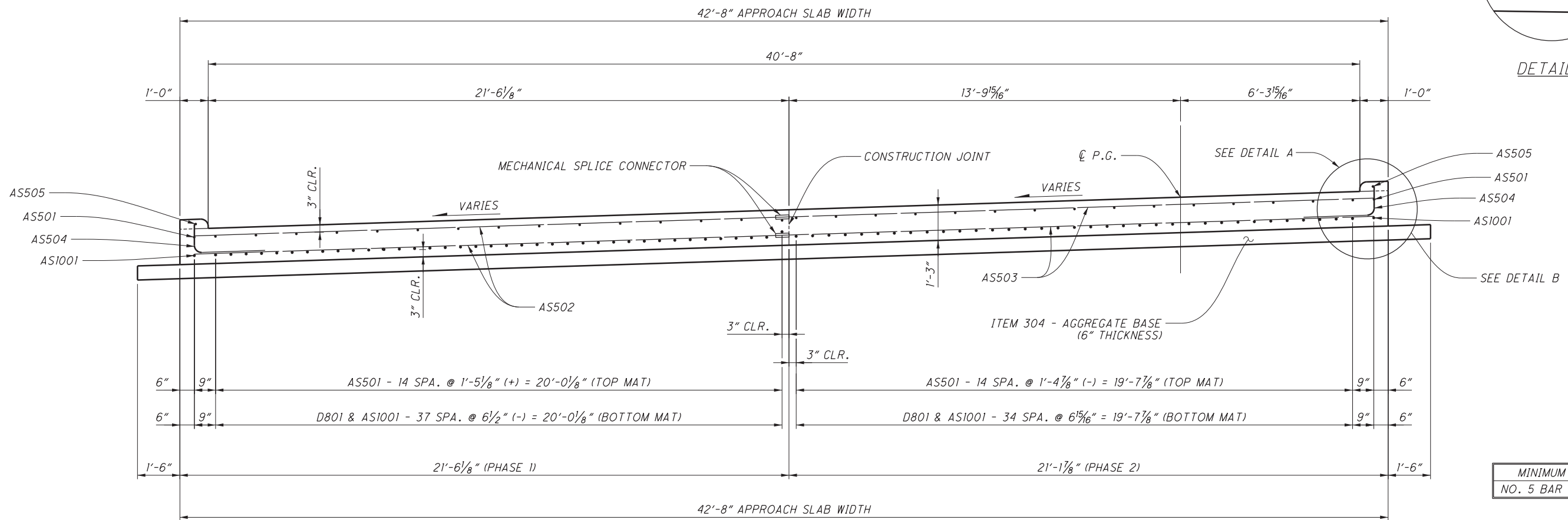
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SECTION AS-3
33



DETAIL B

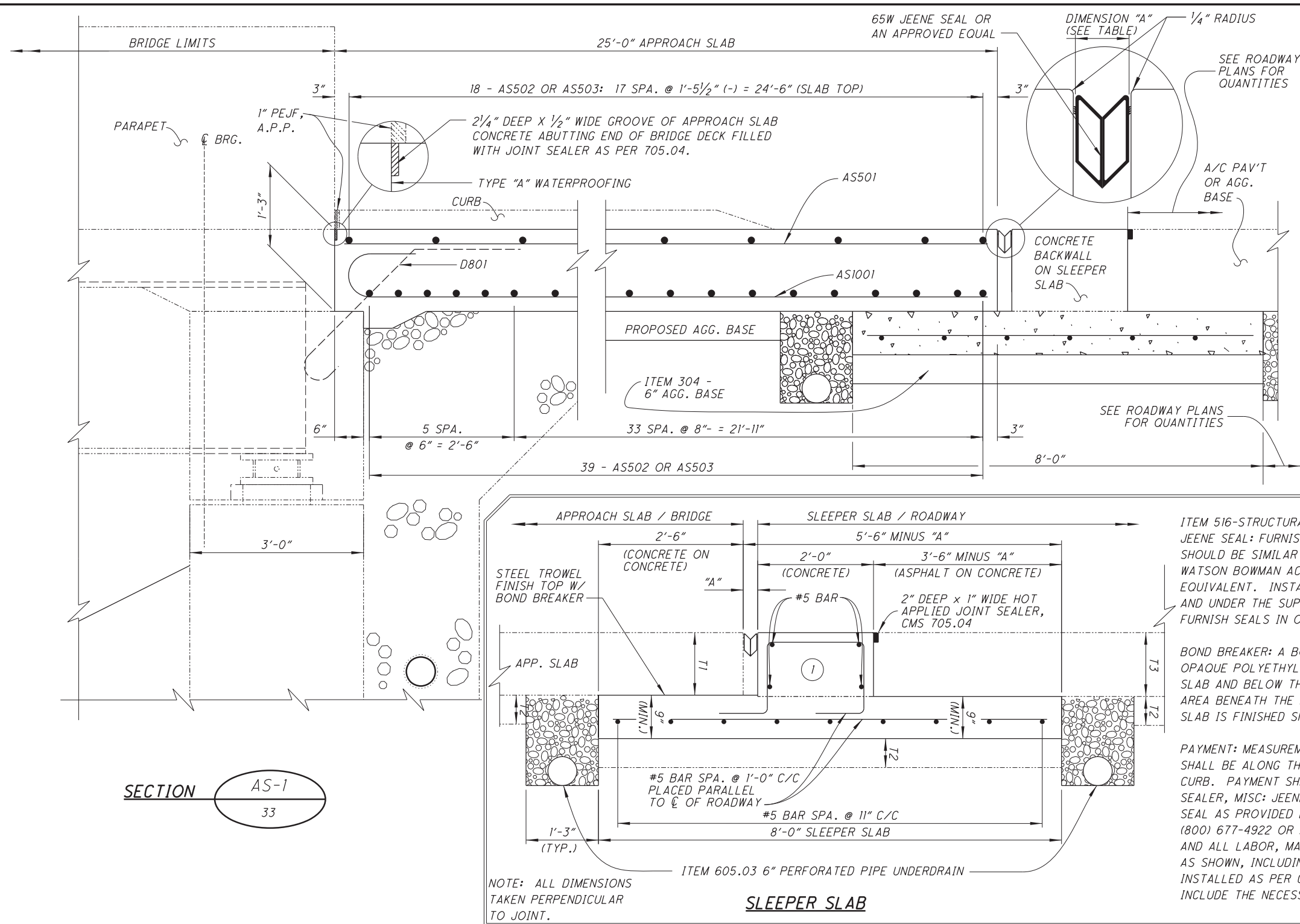


SECTION AS-2
33

MINIMUM LAP
NO. 5 BAR = 3'-5"

DESIGN AGENCY		OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5	
DATE	09/13/16	REVIEWED	JDR
STRUCTURE FILE NUMBER	3003337	DRAWN	NEM
DESIGNED	NEM	CHECKED	TAG
APPROACH SLAB ELEVATION LOCATIONS			
BRIDGE NO. GUE-77-1548R			
I.R. 77 OVER SPILLWAY			
GUE-77-VAR		PID No. 21631	
34/35		126	
		129	

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ITEM	DESCRIPTION	QUANT'Y	UNIT
203	** EXCAVATION	70	CU YD
203	** EMBANKMENT	15	CU YD
204	** SUBGRADE COMPACTION	223	SO YD
304	** AGGREGATE BASE	37	CU YD
516	* 2" DEEP JOINT SEALER, AS PER PLAN	78	FT
516	* STRUCTURAL JOINT OR JOINT SEALER, MISC: JEENE SEAL WITH SLEEPER SLAB	86	FT
526	* REINFORCED CONCRETE APPROACH SLABS WITH OC/OA (T=15"), AS PER PLAN	237	SO YD
690	** SPECIAL - REINFORCED MESH FOR TRANSVERSE AND/OR LONGITUDINAL JOINTS AND CRACKS	49	SO YD

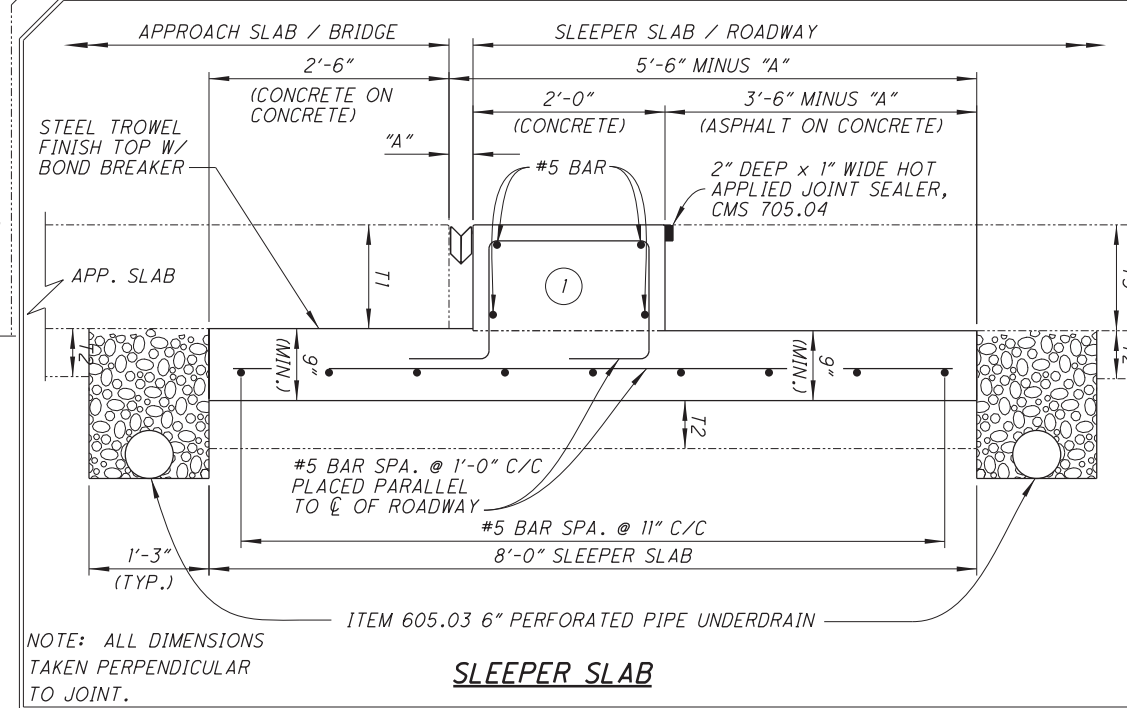
T1: THICKNESS OF PROPOSED REINFORCED CONCRETE APPROACH SLAB.
 T2: THICKNESS OF PROPOSED AGGREGATE BASE
 T3: THICKNESS OF PROPOSED A/C PAV'T OR AGG. BASE
 NOTE: IF T1 > T3, T3 SHALL BE INCREASED TO THE THICKNESS OF T1.
 ① THIS SECTION OF THE SLEEPER SLAB SHALL NOT BE POURED UNTIL AFTER THE APPROACH SLAB HAS BEEN CONSTRUCTED.

ITEM 516-STRUCTURAL JOINT OR JOINT SEALER, MISC: JEENE SEAL WITH SLEEPER SLAB JEENE SEAL: FURNISH MATERIAL CONFORMING TO 705.11. THE SEAL CONFIGURATION SHOULD BE SIMILAR TO THE DETAILS SHOWN HERIN. ACCEPTED MANUFACTURES ARE: WATSON BOWMAN ACME CORP. (MODEL JEENE W PROFILE 65W) OR AN APPROVED EQUIVALENT. INSTALL THE SEAL ACCORDING TO THE MANUFACTURE'S SPECIFICATIONS AND UNDER THE SUPERVISION OF THE MANUFACTURER'S DESIGNATED REPRESENTATIVE. FURNISH SEALS IN ONE CONTIUOUS PIECE UNLESS APPROVED BY THE ENGINEER.

BOND BREAKER: A BOND BREAKER CONSISTING OF TWO 4 FOOT SHEETS OF CLEAR OR OPAQUE POLYETHYLENE FILM, ITEM 705.06, SHALL BE CENTERED ON THE SLEEPER SLAB AND BELOW THE APPROACH SLAB, WHERE NOTED. CARE SHALL BE TAKEN IN THE AREA BENEATH THE POLYETHYLENE FILM TO ENSURE THE SURFACE OF THE SLEEPER SLAB IS FINISHED SMOOTH. THE FILM SHALL HAVE A NOMINAL THICKNESS OF 4 MILS.

PAYMENT: MEASUREMENT OF THE EXPANSION JOINT FOR PAYMENT PURPOSES SHALL BE ALONG THE CENTERLINE OF THE SLEEPER SLAB AND BETWEEN THE BACKS OF CURB. PAYMENT SHALL BE PER FOOT OF ITEM 516 - STRUCTURAL JOINT OR JOINT SEALER, MISC: JEENE SEAL WITH SLEEPER SLAB AND SHALL INCLUDE 65W JEENE SEAL AS PROVIDED BY WATSON BOWMAN ACME CORPORATION, AMHERST, NEW YORK (800) 677-4922 OR AN APPROVED EQUAL, CONCRETE SLEEPER SLAB, RESTEEL AND ALL LABOR, MATERIALS AND INCIDENTALS NEEDED TO CONSTRUCT THE JOINT AS SHOWN, INCLUDING THE PIPE UNDERDRAINS. THE UNDERDRAINS SHALL BE INSTALLED AS PER C&S ITEM 605.03 - 6" PIPE UNDERDRAIN (707.31) AND WILL INCLUDE THE NECESSARY GRANULAR MATERIAL.

SECTION AS-1
33



NOTE: ALL DIMENSIONS TAKEN PERPENDICULAR TO JOINT.

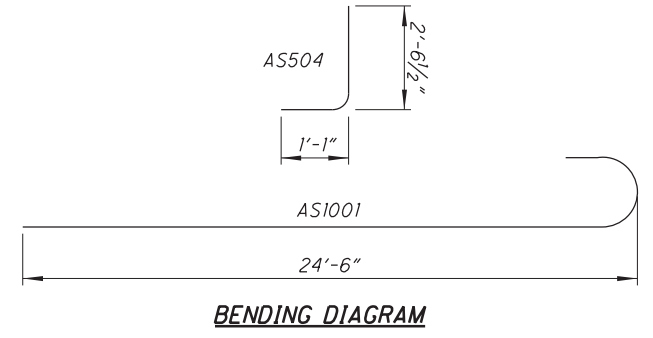
SLEEPER SLAB

ITEM 304 - AGGREGATE BASE:
 ((8'-0" UNDER SLEEPER SLAB X 0.50' X 42'-9") / 27) X 2 APPR. SLABS = 12.67 C.Y.
 ((15.455' UNDER APPR. SLAB X 0.50 X 42'-8") / 27) X 2 APPR. SLABS = 24.42 C.Y.
TOTAL = 37.00 C.Y.

** NOTE: ALL QUANTITIES SHOWN ARE FOR 2 APPROACH SLABS.
 CARRIED TO (*) BRIDGE SUMMARY or (**) GENERAL SUMMARY

NOTE:
 TYPE "A" WATERPROOFING SHALL NOT EXTEND ABOVE THE BOTTOM OF THE CUT GROOVE IN WHICH THE HOT APPLIED JOINT SEALER IS TO BE PLACED. IT SHALL BE APPLIED TO THE ENTIRE AREA OF THE ABUTMENT OR SUPERSTRUCTURE WHICH COMES INTO CONTACT WITH THE APPROACH SLAB.
 NOTE:
 FOR ADDITIONAL DETAILS SEE STANDARD DRAWING AS-1-81.
 NOTE:
 FOR APPROACH SLAB FINISH ELEVATIONS, SEE SHEET 28.

AMBIENT TEMP. (°F)	DIMENSION "A"
	REAR & FWD. APPR. SLABS (65W SEAL)
90°	1 3/4"
80°	1 7/8"
70°	2"
60°	2 3/16"
50°	2 5/16"
40°	2 7/16"



BENDING DIAGRAM

MARK	NUMBER REQ'D.	LENGTH	TYPE	DIMENSIONS				
				A	B	C	R	INC.
APPROACH SLABS								
AS501	64	24'-6"	STR.					
AS502	114	19'-10"	STR.					
AS503	114	20'-5"	STR.					
AS504	48	3'-6"	BENT					
AS505	4	16'-6"	STR.					
AS1001	150	25'-11"	BENT					

CURB AND RE-STEEL IS INCLUDED FOR PAYMENT WITH ITEM 526 REINFORCED CONCRETE APPROACH SLABS WITH OC/OA (T=15"), AS PER PLAN

DESIGN AGENCY: OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5
 DATE: 09/13/16
 REVIEWED: JDR
 DRAWN: NEM
 CHECKED: TAG
 STRUCTURE FILE NUMBER: 3003337
REAR AND FORWARD APPROACH SLAB DETAILS
 BRIDGE NO. GUE-77-1548R
 I.R. 77 OVER SPILLWAY
GUE-77-VAR
 PID No. 21631
 35/35
 127
 129