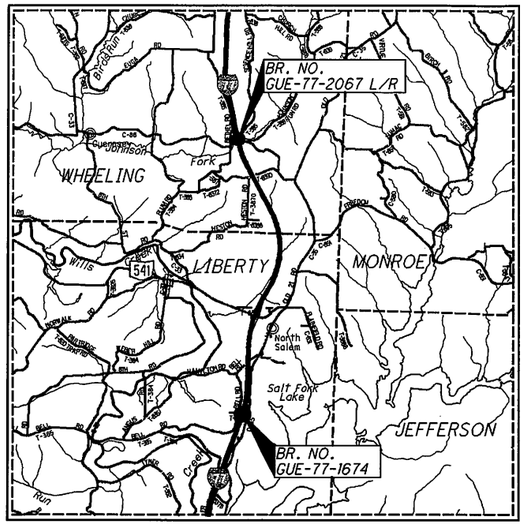

LOCATION MAP

LATITUDE: 40°10'49" LONGITUDE: -81°33'15"
LATITUDE: 40°7'35" LONGITUDE: -81°33'14"

SCALE IN MILES
0 1 2 3 4

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

DESIGN DESIGNATION

	IR 77
OPENING ADT (2018)	18,200
DESIGN YEAR ADT (2038)	21,800
DESIGN HOURLY VOLUME (2038)	1,962
DIRECTIONAL DISTRIBUTION	55%
TRUCKS (24 HOUR B&C)	18%
DESIGN SPEED	70 MPH
LEGAL SPEED	70 MPH
DESIGN FUNCTIONAL CLASSIFICATION: INTERSTATE	
NHS PROJECT	YES

DESIGN EXCEPTIONS

NONE

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES TWO WORKING DAYS BEFORE YOU DIG.

OHIO Utilities Protection SERVICE — *Call Before You Dig* 1-800-362-2764
(Non-members must be called directly)

OIL & GAS PRODUCERS UNDERGROUND PROTECTION SERVICE
1-800-925-0988

PLAN PREPARED BY:
OHIO DEPARTMENT
OF TRANSPORTATION,
DISTRICT 5

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

GUE-77-VAR
PART 2

LIBERTY AND WHEELING TOWNSHIPS
GUERNSEY COUNTY

(FOR PART 1, SEE GUE-77-17.70

INDEX OF SHEETS:

PROJECT DESCRIPTION

GUE-77-2067 L/R:
BRIDGE DECK REPLACEMENT ON EXISTING BEAMS, ABUTMENT REHABILITATION, APPROACH SLABS, PARAPETS, PAINT STRUCTURE AND RESURFACING

GUE-77-1674:
PAINT STRUCTURE

PROJECT EARTH DISTURBED AREA:	N/A ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	N/A ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	N/A 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.

2016 SPECIFICATIONS

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

I HEREBY APPROVE 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.

ENGINEER'S SEAL:
STATE OF OHIO
JUSTIN DEAN REED 71763 REGISTERED
PROFESSIONAL ENGINEER
SIGNED:
DATE: 8-22-2017

STANDARD CONSTRUCTION DRAWINGS	SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
SEE PART 1		

APPROVED
DATE 9/15/17 DISTRICT DEPUTY DIRECTOR

APPROVED
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. E140 (871)
PID NO. 93017
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NONE
GUE-77-VAR.
1 / 69

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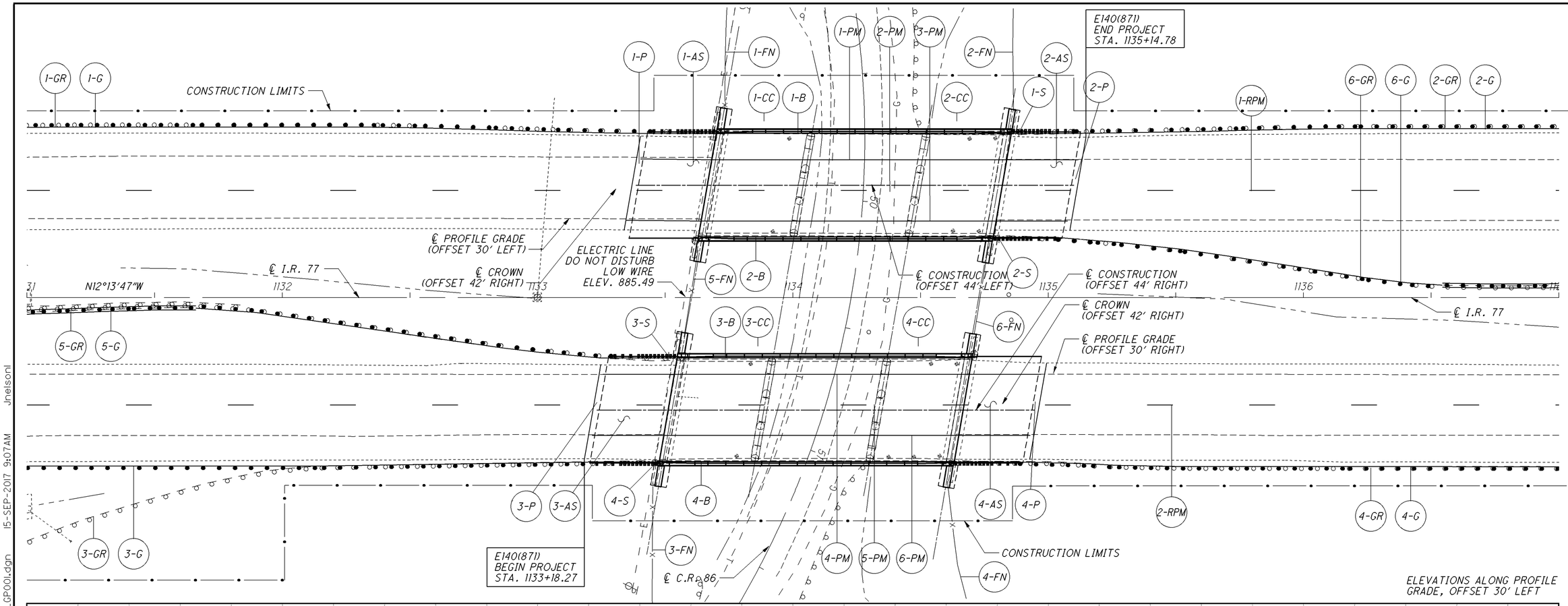
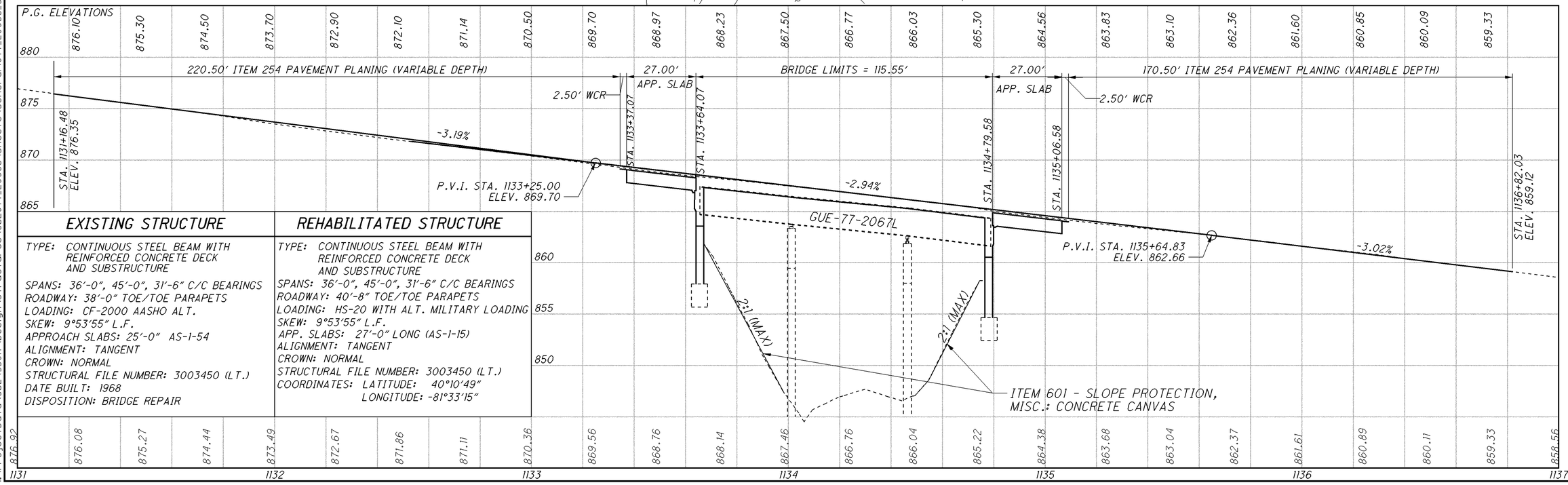


ELEVATIONS ALONG PROFILE GRADE, OFFSET 30' LEFT



EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE
SPANS: 36'-0", 45'-0", 31'-6" C/C BEARINGS
ROADWAY: 38'-0" TOE/TOE PARAPETS
LOADING: CF-2000 AASHO ALT.
SKEW: 9°53'55" L.F.
APPROACH SLABS: 25'-0" AS-1-54
ALIGNMENT: TANGENT
CROWN: NORMAL
STRUCTURAL FILE NUMBER: 3003450 (LT.)
DATE BUILT: 1968
DISPOSITION: BRIDGE REPAIR

REHABILITATED STRUCTURE

TYPE: CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE
SPANS: 36'-0", 45'-0", 31'-6" C/C BEARINGS
ROADWAY: 40'-8" TOE/TOE PARAPETS
LOADING: HS-20 WITH ALT. MILITARY LOADING
SKEW: 9°53'55" L.F.
APP. SLABS: 27'-0" LONG (AS-1-15)
ALIGNMENT: TANGENT
CROWN: NORMAL
STRUCTURAL FILE NUMBER: 3003450 (LT.)
COORDINATES: LATITUDE: 40°10'49"
LONGITUDE: -81°33'15"

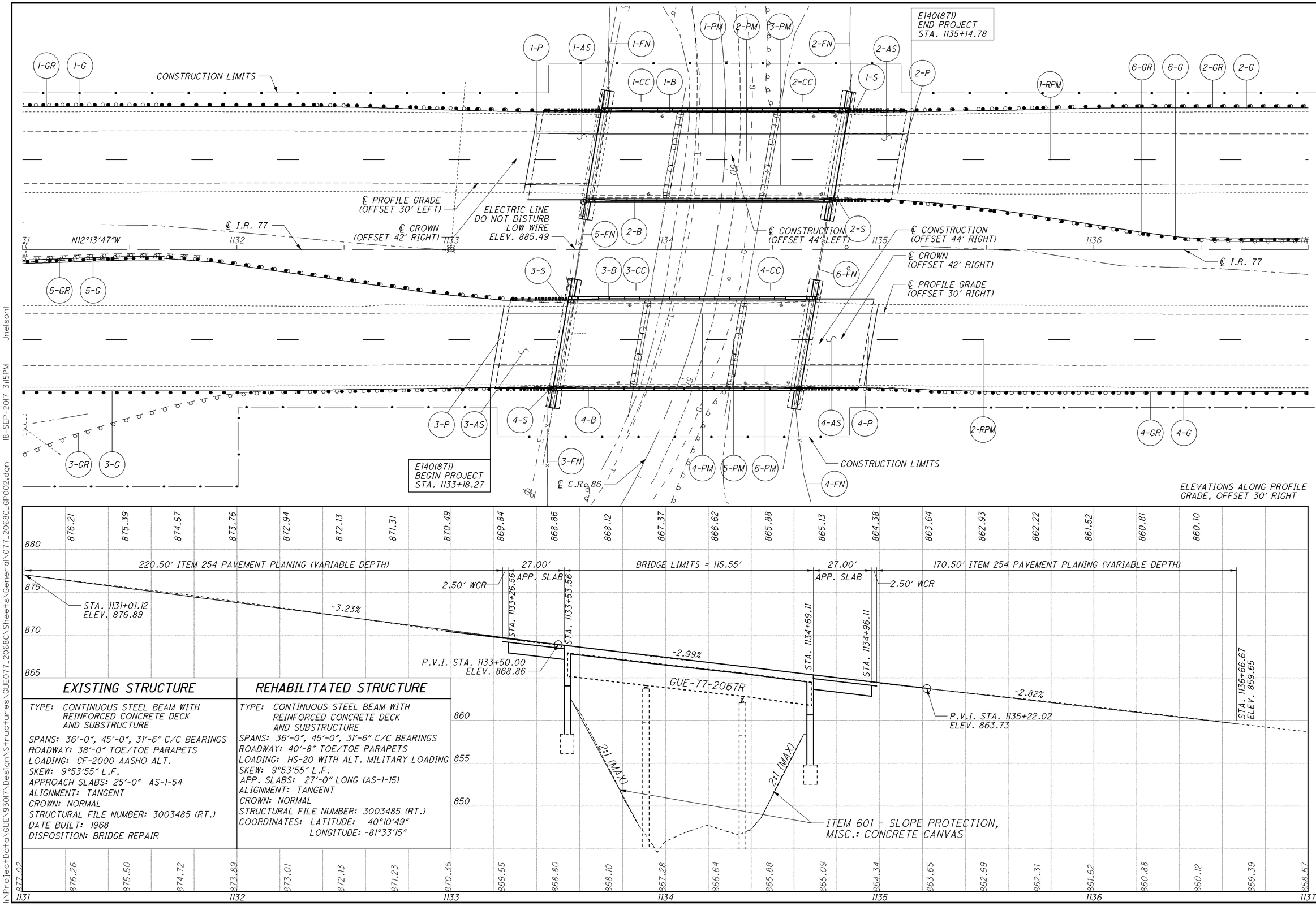
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JKS
CHECKED XXX

PLAN AND PROFILE

STA. 1131+00.00 TO STA. 1137+00.00

GUE-77-VAR



EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE
SPANS: 36'-0", 45'-0", 31'-6" C/C BEARINGS
ROADWAY: 38'-0" TOE/TOE PARAPETS
LOADING: CF-2000 AASHO ALT.
SKEW: 9°53'55" L.F.
APPROACH SLABS: 25'-0" AS-1-54
ALIGNMENT: TANGENT
CROWN: NORMAL
STRUCTURAL FILE NUMBER: 3003485 (RT.)
DATE BUILT: 1968
DISPOSITION: BRIDGE REPAIR

REHABILITATED STRUCTURE

TYPE: CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE
SPANS: 36'-0", 45'-0", 31'-6" C/C BEARINGS
ROADWAY: 40'-8" TOE/TOE PARAPETS
LOADING: HS-20 WITH ALT. MILITARY LOADING
SKEW: 9°53'55" L.F.
APP. SLABS: 27'-0" LONG (AS-1-15)
ALIGNMENT: TANGENT
CROWN: NORMAL
STRUCTURAL FILE NUMBER: 3003485 (RT.)
COORDINATES: LATITUDE: 40°10'49"
LONGITUDE: -81°33'15"

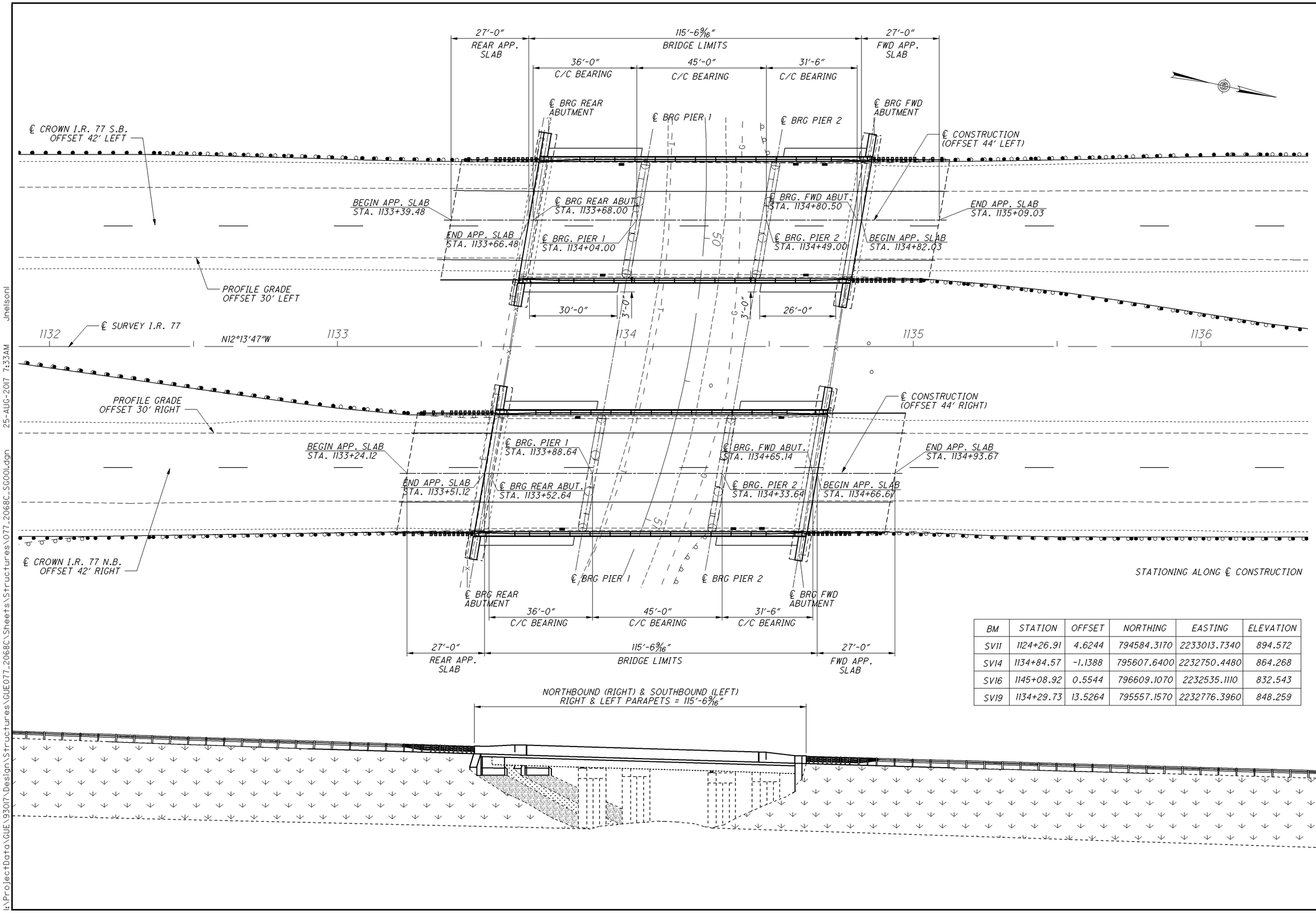
HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED JKS
CHECKED JDR

PLAN AND PROFILE

STA. 1131+00.00 TO STA. 1137+00.00

GUE-77-VAR

28
69



BM	STATION	OFFSET	NORTHING	EASTING	ELEVATION
SV11	1124+26.91	4.6244	794584.3170	2233013.7340	894.572
SV14	1134+84.57	-1.1388	795607.6400	2232750.4480	864.268
SV16	1145+08.92	0.5544	796609.1070	2232535.1110	832.543
SV19	1134+29.73	13.5264	795557.1570	2232776.3960	848.259

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
JKS	JKS	JDR	08/22/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		3003450/3003485	

GENERAL PLAN AND ELEVATION
BRIDGE NO GUE-77-2067 (LEFT AND RIGHT BRIDGES)
OVER C.R. 86

GUE-77-VAR.
PID No. 93017

1 / 38

29 / 69

25-AUG-2017 7:33AM Jnelsonl
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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-20 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
2½" 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, SUPERSTURCTURE (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, PREFORM 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, SUPERSTURCTURE (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. PREFORM 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 BEAM ℄. 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/QA, 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 VARIED HAUNCH THICKNESS AS SHOWN IN THE BRIDGE TRANSVERSE SECTION 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.

BRIDGE SEAT ELEVATIONS
THE ABUTMENT BEARING ASSEMBLY HEIGHTS HAVE BEEN ADJUSTED UPWARD 0.0595" AT THE REAR AND FORWARD ABUTMENTS TO COMPENSATE FOR THE VERTICAL DEFORMATION OF THE BEARINGS.

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
JKS	JKS	JDR	08/22/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		3003450/3003485	

BRIDGE NOTES
BRIDGE NO GUE-77-2067 (LEFT AND RIGHT BRIDGES)
OVER C.R. 86

GUE-77-VAR.
PID No. 93017

ITEM 526 - REINFORCED CONCRETE APPROACH SLAB WITH QC/QA (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 REPOSITIONING 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 UF, 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 COTACT 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.

DECK END DIAPHRAGM CONCRETE, PHASED CONSTRUCTION

PHASE 1 AND 2:
PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS OF AN INDIVIDUAL PHASE WITH THE DECK CONCRETE AND ALONG THE SAME PHASE CONSTRUCTION JOINT LINE, AS SHOWN IN THE PLAN. THERE WILL BE NO CLOSURE POUR CONCRETE IN THE DECK AND/OR DECK END DIAPHRAGM.

THE CONTRACTOR SHALL PROVIDE A CONCRETE PLACEMENT SUBMITTAL THAT WILL ASSURE THAT THE DECK CONCRETE IN THE ADJACENT SPAN WILL BE PLACED BEFORE CONCRETE IN THE DIAPHRAGM HAS REACHED ITS INITIAL SET. THIS SUBMITTAL SHALL BE SUPPLIED TO THE ENGINEER IN SUFFICIENT TIME FOR HIS REVIEW FOR APPROVAL.

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".

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.

ITEM 202 - REMOVAL MISC.: EXISTING 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 FORM 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.: EXISTING END CROSSFRAMES AND INTERMEDIATE CROSSFRAMES

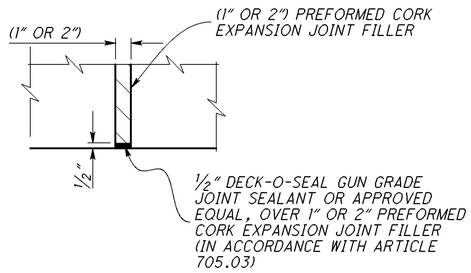
THIS ITEM SHALL INCLUDE THE REMOVAL OF THE END CROSS FRAMES, INTERMEDIATE CROSSFRAMES, AND WELDS FROM THE BEAMS. THE CONTRACTOR SHALL BE CAREFUL WHEN REMOVING THE END/INTERMEDIATE CROSSFRAMES AND WELDS FROM THE BEAMS SO NO DAMAGE IS DONE TO STEEL MEMBERS THAT ARE TO BE INCORPORATED INTO THE PROPOSED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

THIS ITEM SHALL ALSO INCLUDE THE CREATION OF 2" DIAMETER HOLES IN THE BEAM WEBS AS SHOWN ON SHEET 28/38. HOLES SHALL BE CREATED USING MECHANICAL MEANS ONLY, AT ALL BEAM ENDS.

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.

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 GEOTEXTILE 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.

SURFACE SMOOTHNESS FOR BRIDGES AND APPROACHES

AT THE COMPLETION OF WORK FOR ALL PHASES OF CONSTRUCTION AND PART 1 FINAL PAVING 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.

ITEM 202 - REMOVAL MISC.: EXPANSION JOINTS

THIS ITEM SHALL INCLUDE THE REMOVAL OF THE EXPANSION JOINTS. THE CONTRACTOR SHALL BE CAREFUL WHEN REMOVING THE EXPANSION JOINTS FROM THE BEAMS SO NO DAMAGE IS DONE TO THE BEAMS. ANY DAMAGE DONE TO THE BEAMS SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.

ITEM 202 - REMOVAL MISC.: SCUPPER WITH ATTACHMENTS

THIS ITEM SHALL INCLUDE THE REMOVAL OF THE SCUPPERS, ATTACHMENTS, AND WELDS. THE CONTRACTOR SHALL BE CAREFUL WHEN REMOVING SCUPPERS, ATTACHMENTS, AND WELDS FROM THE BEAMS SO NO DAMAGE IS DONE TO THE BEAMS. ANY DAMAGE DONE TO THE BEAMS SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.

ITEM 202 - REMOVAL MISC.: STEEL BULB ANGLE GUTTER

THIS ITEM SHALL INCLUDE THE REMOVAL OF THE STEEL BULB ANGLE GUTTERS AND SUPPORTS. THE CONTRACTOR SHALL BE CAREFUL WHEN REMOVING THE STEEL BULB ANGLE GUTTERS AND STEEL SUPPORTS FROM THE BEAMS SO NO DAMAGE IS DONE TO THE BEAMS. ANY DAMAGE DONE TO THE BEAMS SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.

STEEL NOTCH TOUGHNESS REQUIREMENT (CHARPY V-NOTCH)

CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.

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DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
JKS	JKS	JDR	08/22/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		3003450/3003485	

BRIDGE NOTES
BRIDGE NO GUE-77-2067 (LEFT AND RIGHT BRIDGES) OVER C.R. 86

GUE-77-VAR.
PID No. 93017

SHEET NUM.	PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
	04/IMS/BR						
						STRUCTURE OVER 20 FOOT SPAN (GUE-77-2067L)	
	222	202	11301	222	CY	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (SUPERSTRUCTURE)	2
	112	202	11301	112	CY	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (SUBSTRUCTURE)	2
	134	202	22900	134	SY	APPROACH SLAB REMOVED	
	LS	202	98000	LS		REMOVAL MISC.: EXISTING END CROSSFRAMES AND INTERMEDIATE CROSSFRAMES	3
	10	202	98100	10	EACH	REMOVAL MISC.: EXISTING BEARINGS	3
	7	202	98100	7	EACH	REMOVAL MISC.: SCUPPERS INCLUDING ATTACHMENTS	3
	77	202	98200	77	FT	REMOVAL MISC.: EXPANSION JOINTS	3
	255	202	98200	255	FT	REMOVAL MISC.: STEEL BULB ANGLE GUTTER	3
	LS	503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	
	69	503	21100	69	CY	UNCLASSIFIED EXCAVATION	
	58,883	509	10000	58,883	LB	EPOXY COATED REINFORCING STEEL	
	154	510	10000	154	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	
	2	511	33501	2	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN	23
	202	511	34446	202	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK	
	34	511	34450	34	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)	
	102	511	43510	102	CY	CLASS QC1 CONCRETE, ABUTMENT INCLUDING FOOTING	
	589	512	10050	589	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	
	1,335	513	10201	1,335	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN	3
	2,630	513	20000	2,630	EACH	WELDED STUD SHEAR CONNECTORS	
	5,841	514	00050	5,841	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL	
	5,841	514	00056	5,841	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT	
	5,841	514	00060	5,841	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT	
	5,841	514	00066	5,841	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT	
	10	514	00504	10	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL	
	7	514	10000	7	EACH	FINAL INSPECTION REPAIR	
	229	516	13601	229	SF	1" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN	3
	78	516	13901	78	SF	2" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN	3
	109	516	14020	109	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	
	10	516	44100	10	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (4.1479" x 1'-3" x 1'-1")	
	LS	516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	3
	5	518	12201	5	EACH	SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN	19
	77	518	21200	77	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
	122	518	40000	122	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	
	64	518	40010	64	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	
	250	526	25011	250	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15"), AS PER PLAN	3

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED JKS | DRAWN JKS | REVIEWED JDR | DATE 08/22/17
CHECKED JDR | REVISED | STRUCTURE FILE NUMBER 3003450/3003485

BRIDGE SUMMARY
BRIDGE NO GUE-77-2067 (LEFT AND RIGHT BRIDGES)
OVER C.R. 86

GUE-77-VAR.
PID No. 93017

SHEET NUM.	PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
	04/IMS/BR						
						STRUCTURE OVER 20 FOOT SPAN (GUE-77-2067R)	
	222	202	11301	222	CY	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (SUPERSTRUCTURE)	2
	110	202	11301	110	CY	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (SUBSTRUCTURE)	2
	134	202	22900	134	SY	APPROACH SLAB REMOVED	
	LS	202	98000	LS		REMOVAL MISC.: EXISTING END CROSSFRAMES AND INTERMEDIATE CROSSFRAMES	3
	10	202	98100	10	EACH	REMOVAL MISC.: EXISTING BEARINGS	3
	7	202	98100	7	EACH	REMOVAL MISC.: SCUPPERS INCLUDING ATTACHMENTS	3
	77	202	98200	77	FT	REMOVAL MISC.: EXPANSION JOINTS	3
	255	202	98200	255	FT	REMOVAL MISC.: STEEL BULB ANGLE GUTTER	3
	LS	503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	
	69	503	21100	69	CY	UNCLASSIFIED EXCAVATION	
	58,883	509	10000	58,883	LB	EPOXY COATED REINFORCING STEEL	
	154	510	10000	154	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	
	2	511	33501	2	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN	23
	198	511	34446	198	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK	
	34	511	34450	34	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)	
	101	511	43510	101	CY	CLASS QC1 CONCRETE, ABUTMENT INCLUDING FOOTING	
	587	512	10050	587	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	
	1,335	513	10201	1,335	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN	3
	2,630	513	20000	2,630	EACH	WELDED STUD SHEAR CONNECTORS	
	5,841	514	00050	5,841	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL	
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	5,841	514	00060	5,841	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT	
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	7	514	10000	7	EACH	FINAL INSPECTION REPAIR	
	229	516	13601	229	SF	1" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN	3
	78	516	13901	78	SF	2" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN	3
	109	516	14020	109	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	
	10	516	44100	10	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (4.1479" x 1'-3" x 1'-1")	
	LS	516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	3
	5	518	12201	5	EACH	SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN	19
	77	518	21200	77	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
	122	518	40000	122	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	
	64	518	40010	64	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	
	250	526	25011	250	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15"), AS PER PLAN	3

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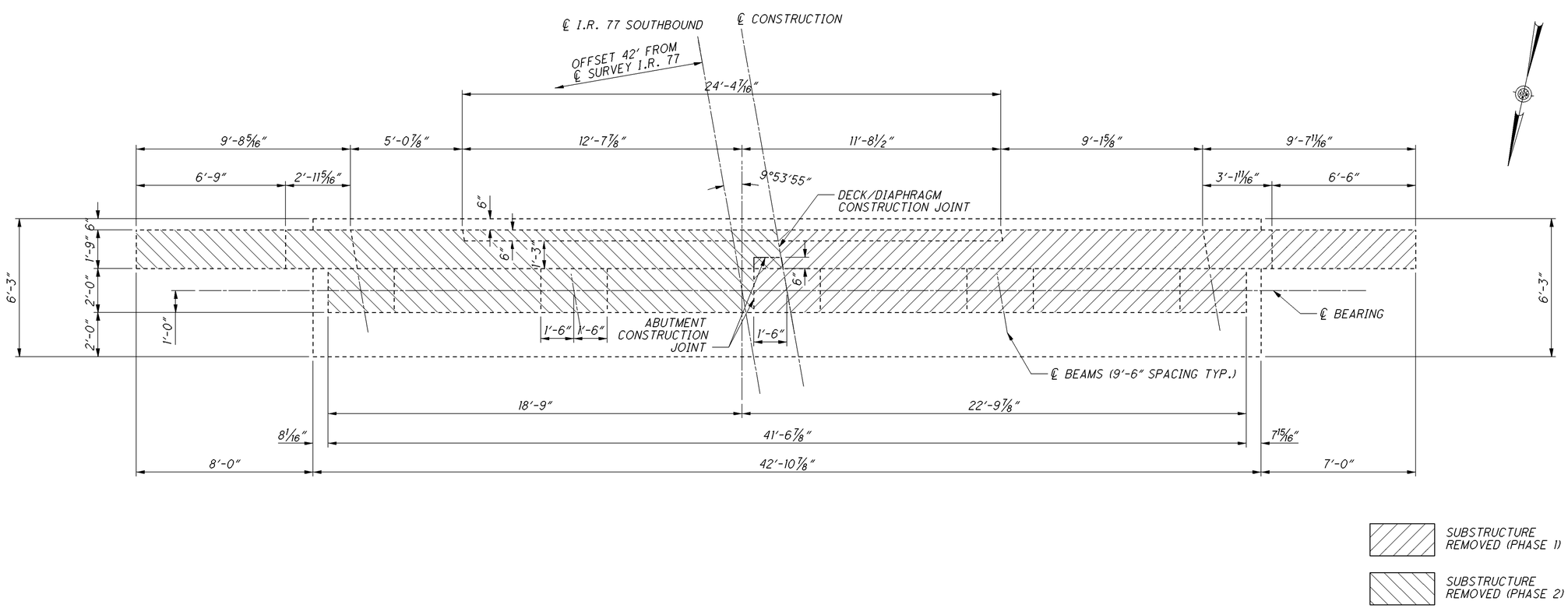
BRIDGE SUMMARY
BRIDGE NO GUE-77-2067 (LEFT AND RIGHT BRIDGES)
OVER C.R. 86

GUE-77-VAR.
PID No. 93017



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JKS	JKS	JDR	08/22/17
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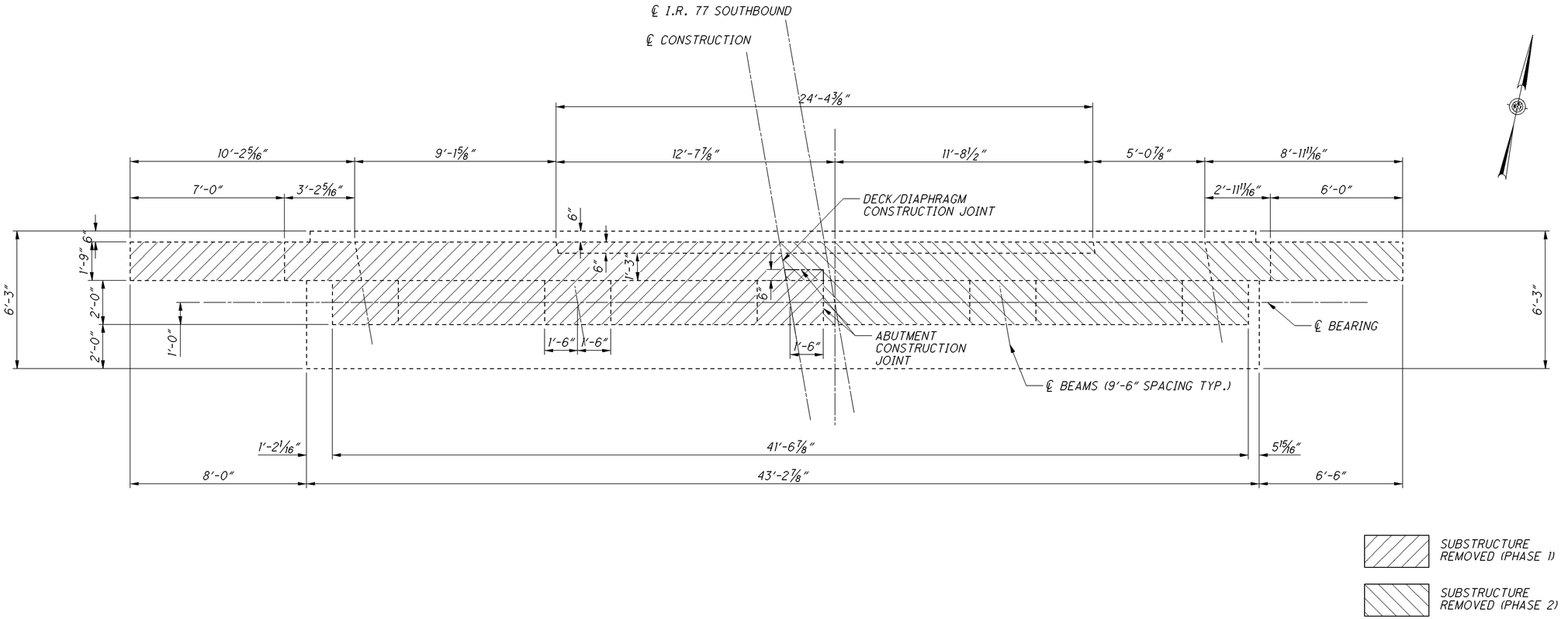
EXISTING ABUTMENT (LEFT BRIDGE REAR ABUTMENT)
BRIDGE NO GUE-77-2067 (LEFT AND RIGHT BRIDGES)
OVER C.R. 86

GUE-77-VAR.
PID No. 93017

6 / 38

34 / 69



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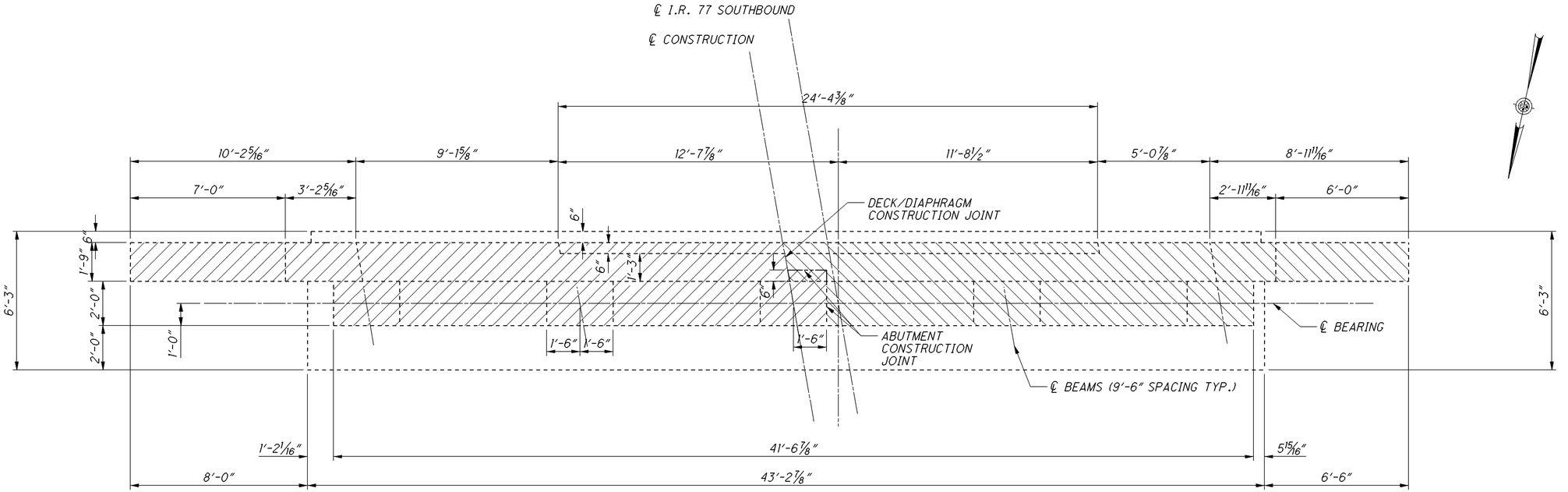
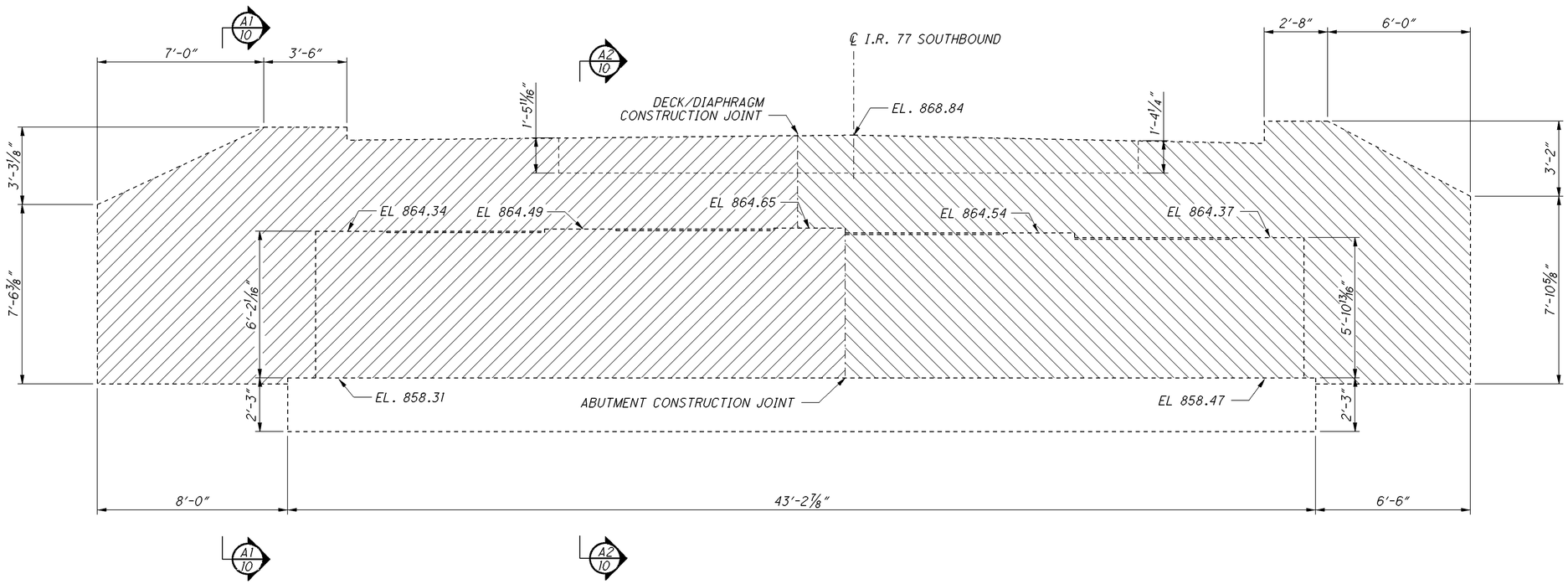
EXISTING ABUTMENT (LEFT BRIDGE FORWARD ABUTMENT)
BRIDGE NO GUE-77-2067 (LEFT AND RIGHT BRIDGES)
OVER C.R. 86

GUE-77-VAR.
PID No. 93017

7 / 38

35 / 69





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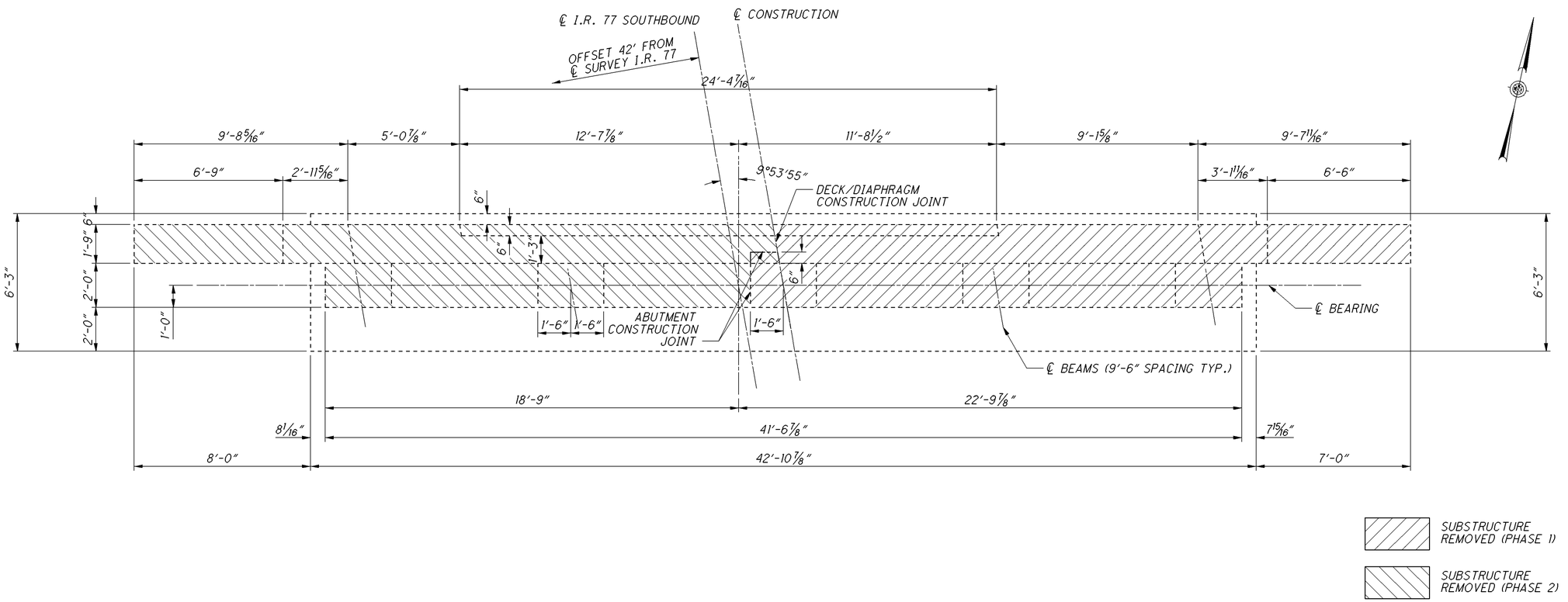
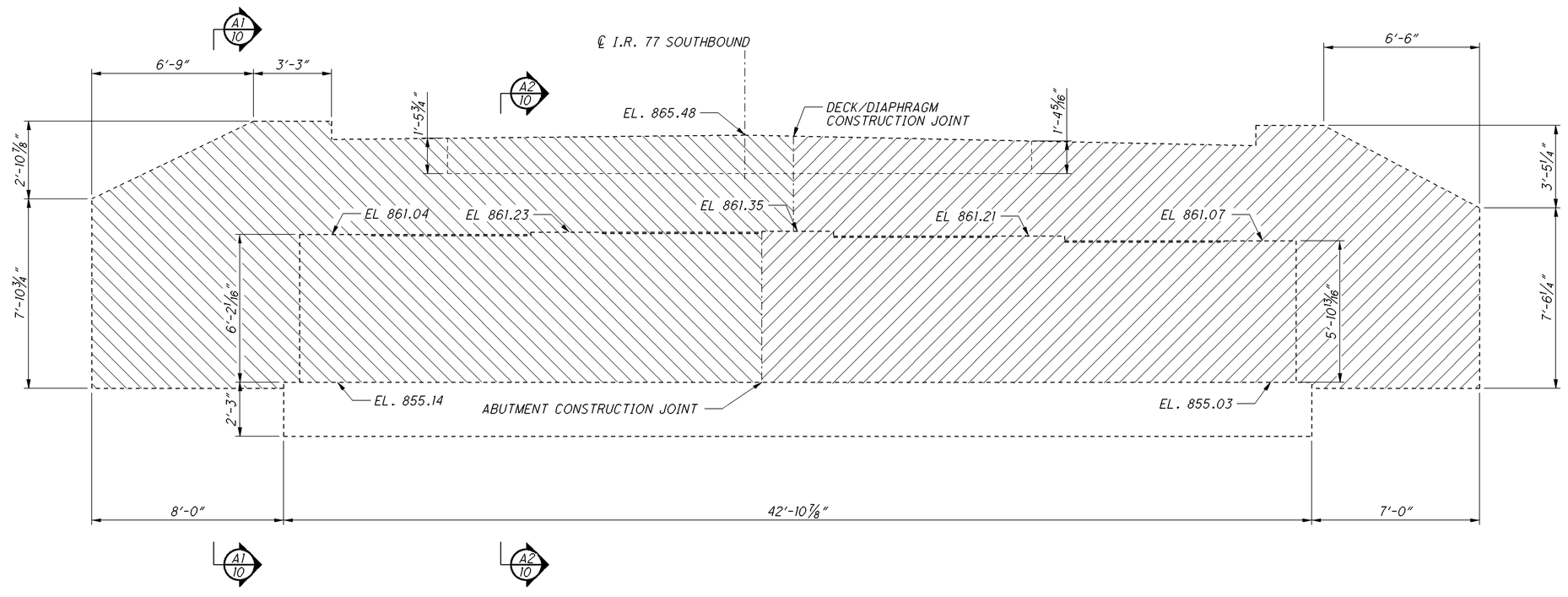
EXISTING ABUTMENT (RIGHT BRIDGE REAR ABUTMENT)
BRIDGE NO GUE-77-2067 (LEFT AND RIGHT BRIDGES)
OVER C.R. 86

GUE-77-VAR.
PID No. 93017

8 / 38

36 / 69





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DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

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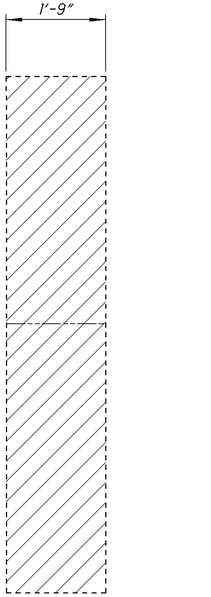
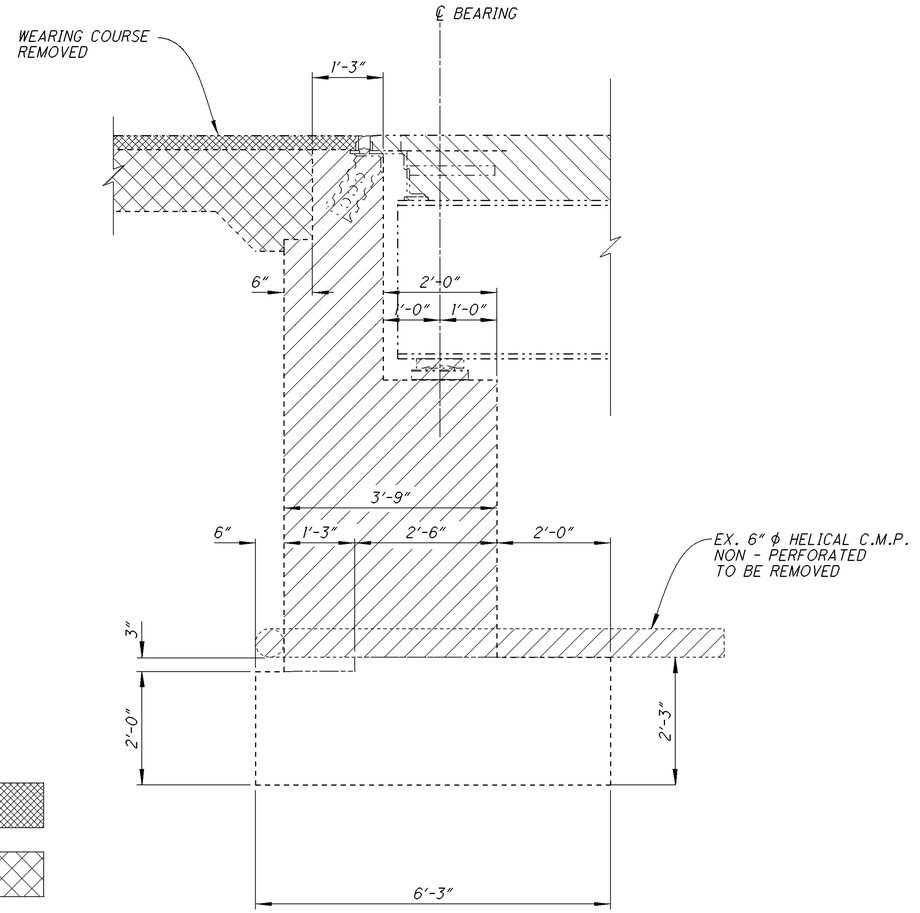
EXISTING ABUTMENT (RIGHT BRIDGE FORWARD ABUTMENT)

BRIDGE NO GUE-77-2067 (LEFT AND RIGHT BRIDGES)
OVER C.R. 86

GUE-77-VAR.
PID No. 93017



SECTION A-1 6 A-1 7 A-1 8 A-1 9



WEARING COURSE - REMOVED

APPROACH SLAB - REMOVED

SUPERSTRUCTURE - TO BE REMOVED

SUBSTRUCTURE - TO BE REMOVED

SECTION A-2 6 A-2 7 A-2 8 A-2 9

EXISTING ABUTMENT SECTIONS (ALL ABUTMENTS)

BRIDGE NO GUE-77-2067 (LEFT AND RIGHT BRIDGES)
OVER C.R. 86

DESIGN AGENCY
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GUE-77-VAR.
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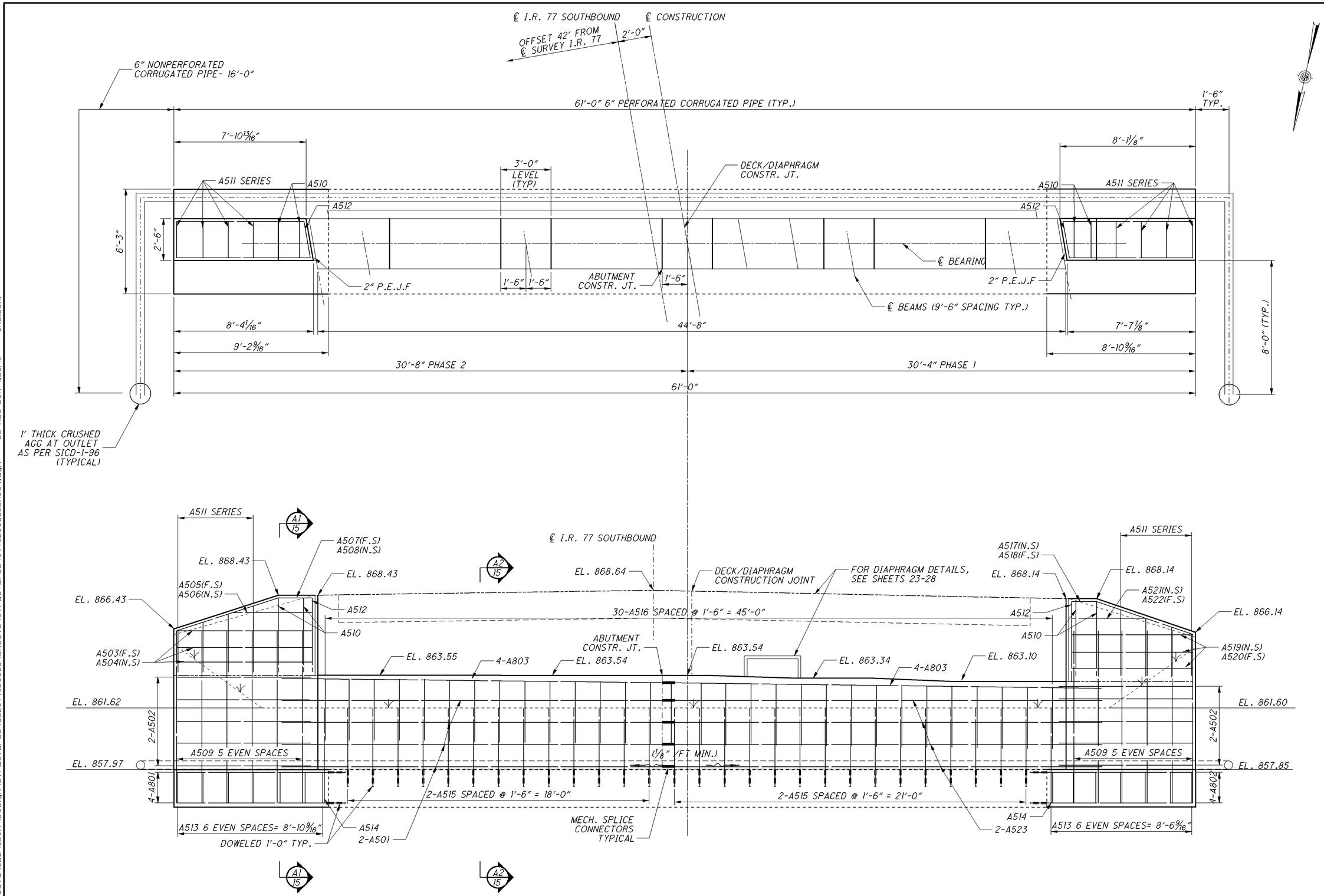

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PROPOSED ABUTMENT (LEFT BRIDGE REAR ABUTMENT)
BRIDGE NO GUE-77-2067 (LEFT AND RIGHT BRIDGES)
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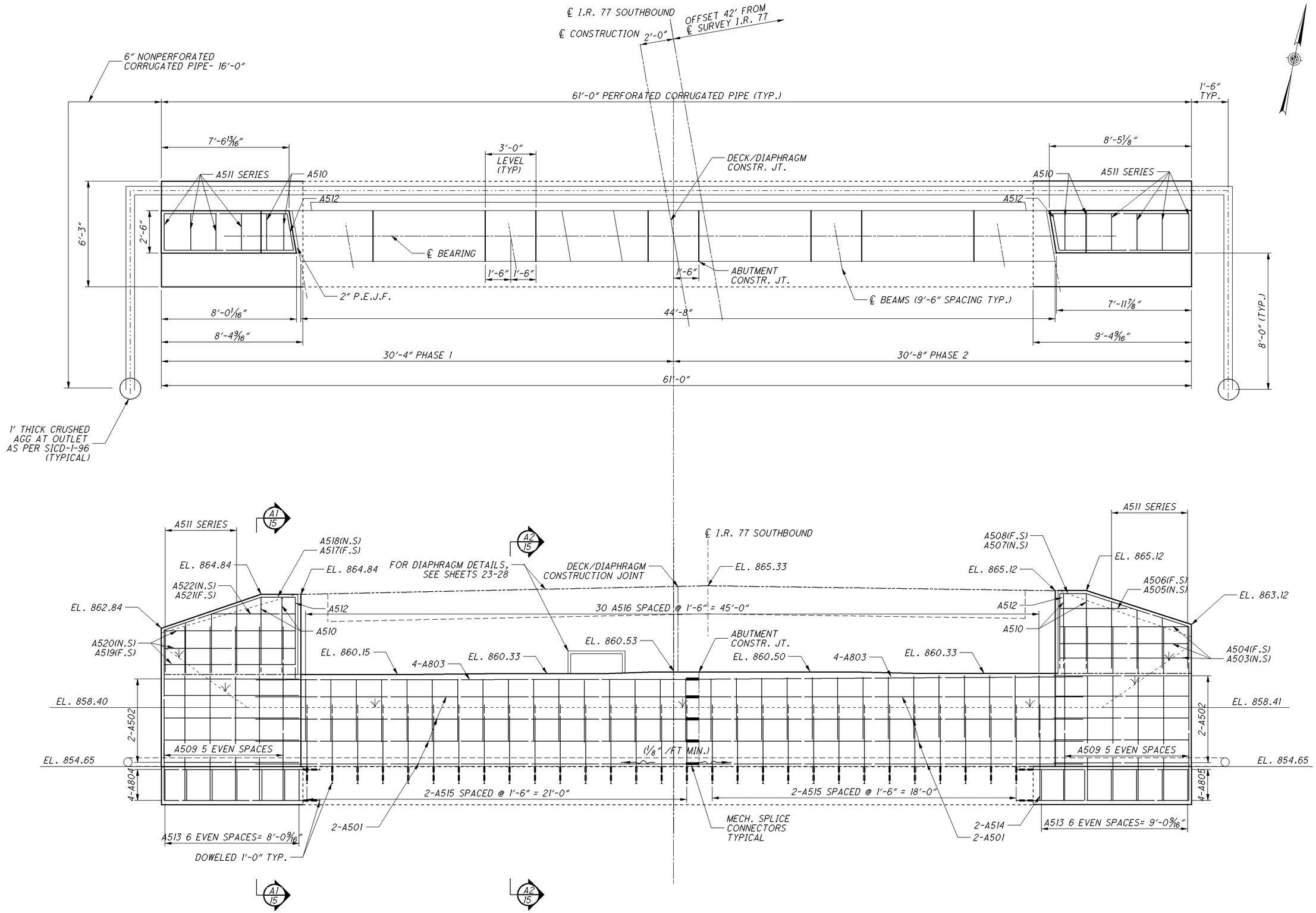

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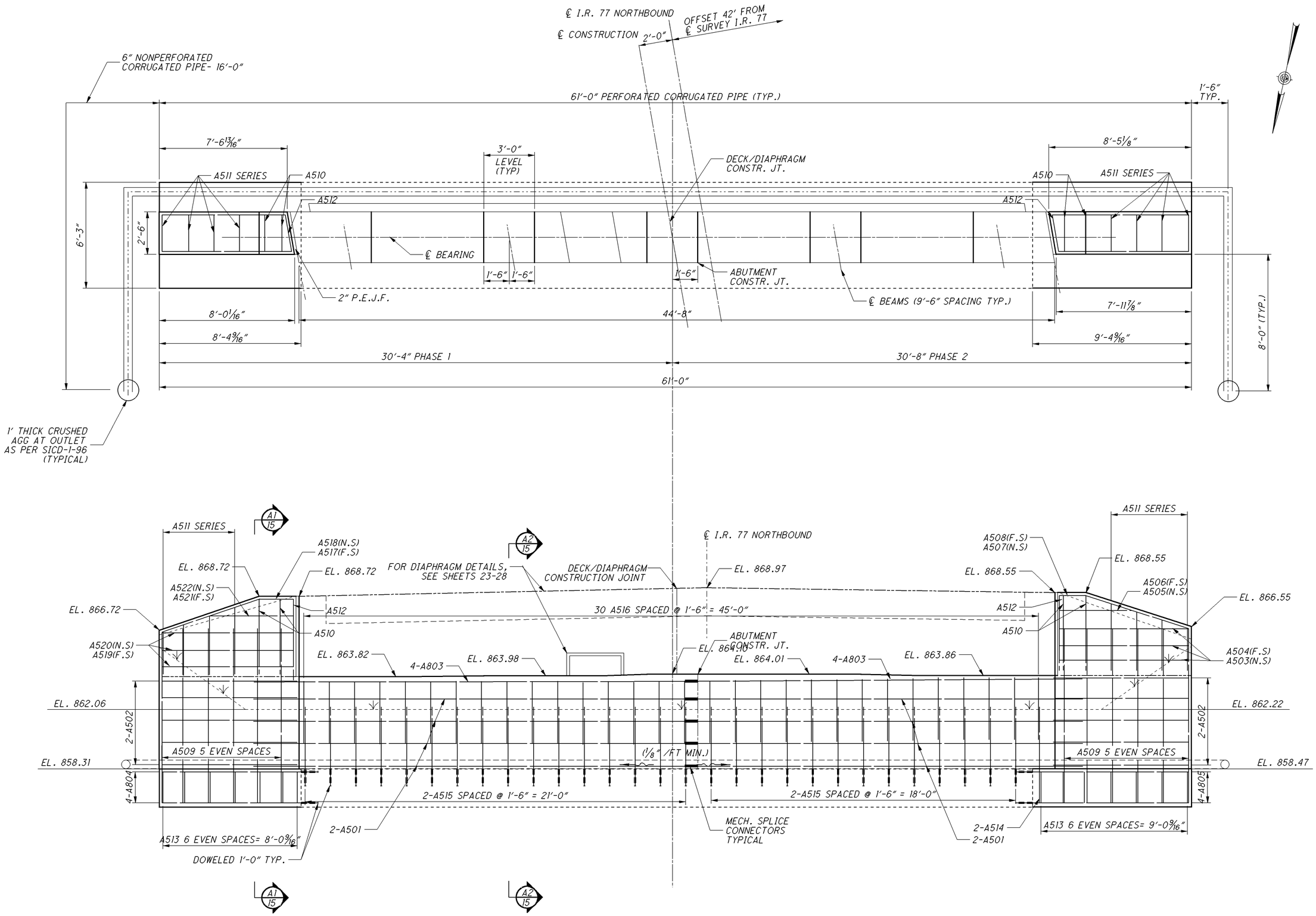
PROPOSED ABUTMENT (LEFT BRIDGE FORWARD ABUTMENT)
BRIDGE NO GUE-77-2067 (LEFT AND RIGHT BRIDGES)
OVER C.R. 86

GUE-77-VAR.
PID No. 93017

12 / 38

40 / 69



DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

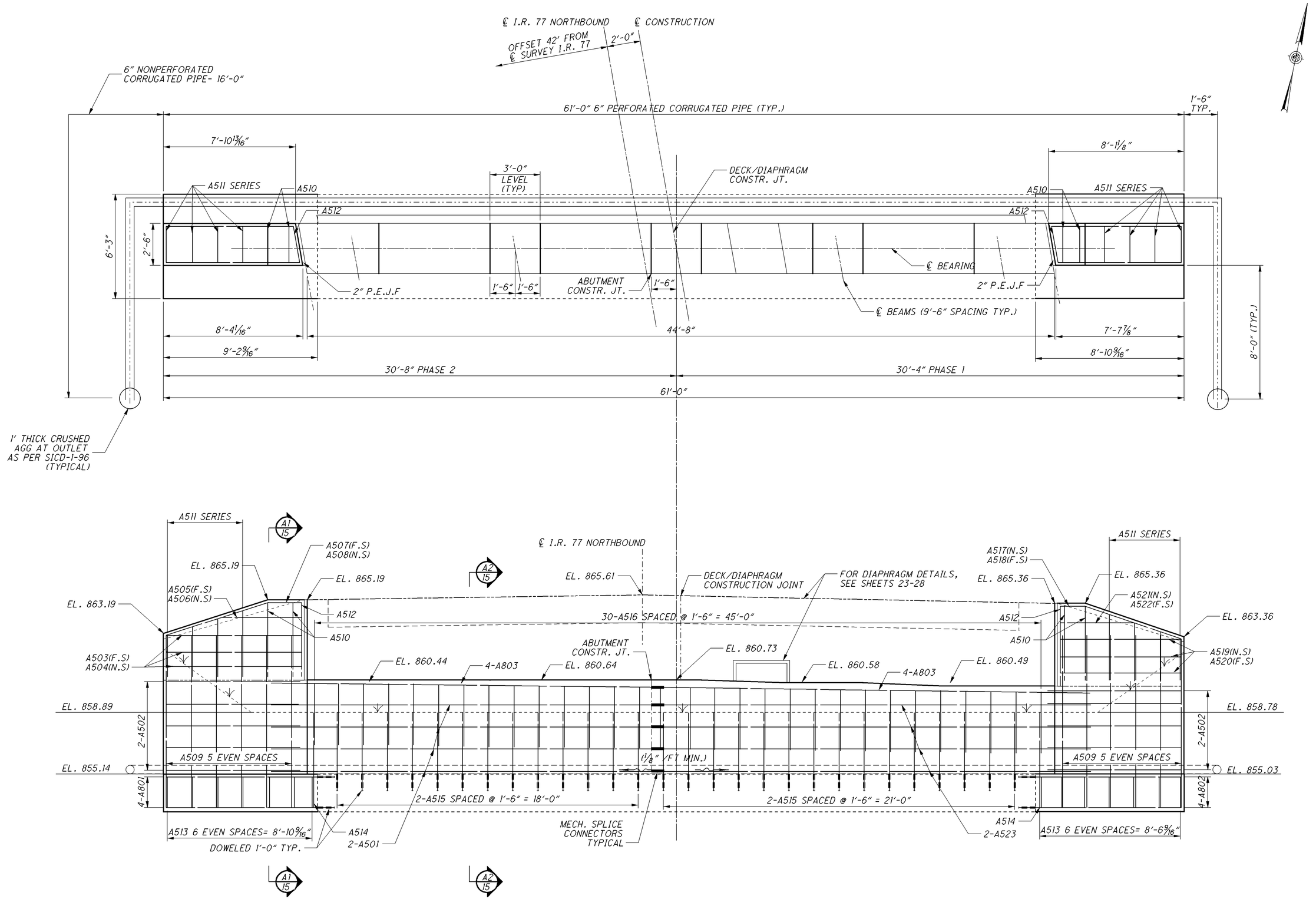
DESIGNED	DRAWN	REVIEWED	DATE
JKS	JKS	JDR	08/22/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		3003450/3003485	

PROPOSED ABUTMENT (RIGHT BRIDGE REAR ABUTMENT)
BRIDGE NO GUE-77-2067 (LEFT AND RIGHT BRIDGES)
OVER C.R. 86

GUE-77-VAR.
PID No. 93017

13 / 38

41 / 69



DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
JKS	JKS	JDR	08/22/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		3003450/3003485	

PROPOSED ABUTMENT (RIGHT BRIDGE FORWARD ABUTMENT)
BRIDGE NO GUE-77-2067 (LEFT AND RIGHT BRIDGES)
OVER C.R. 86

GUE-77-VAR.
PID No. 93017

14 / 38

42 / 69

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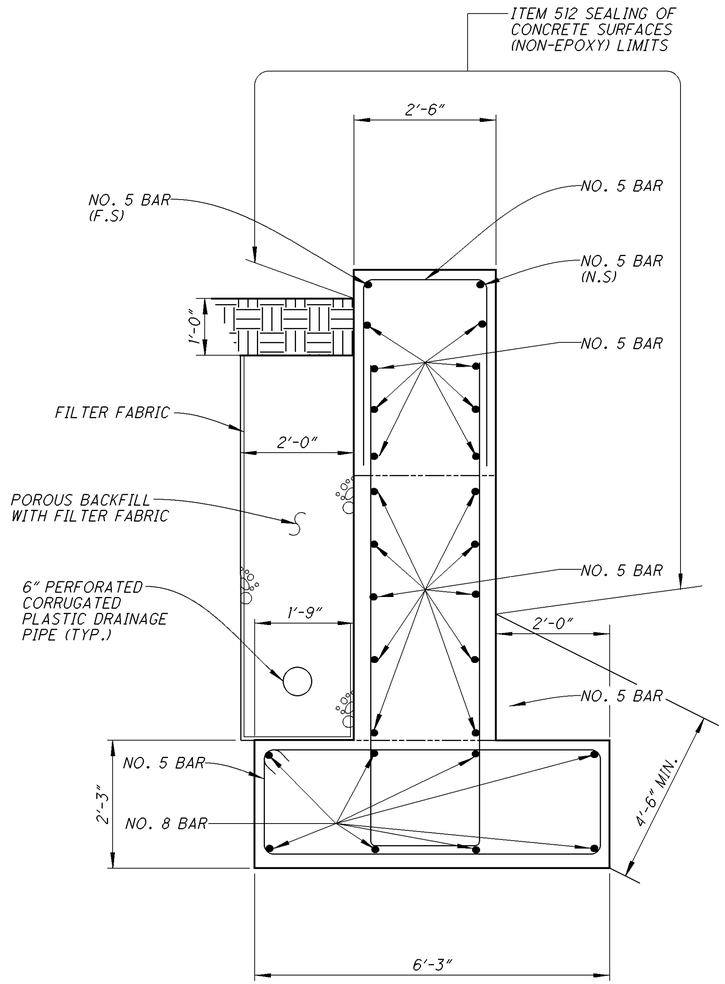
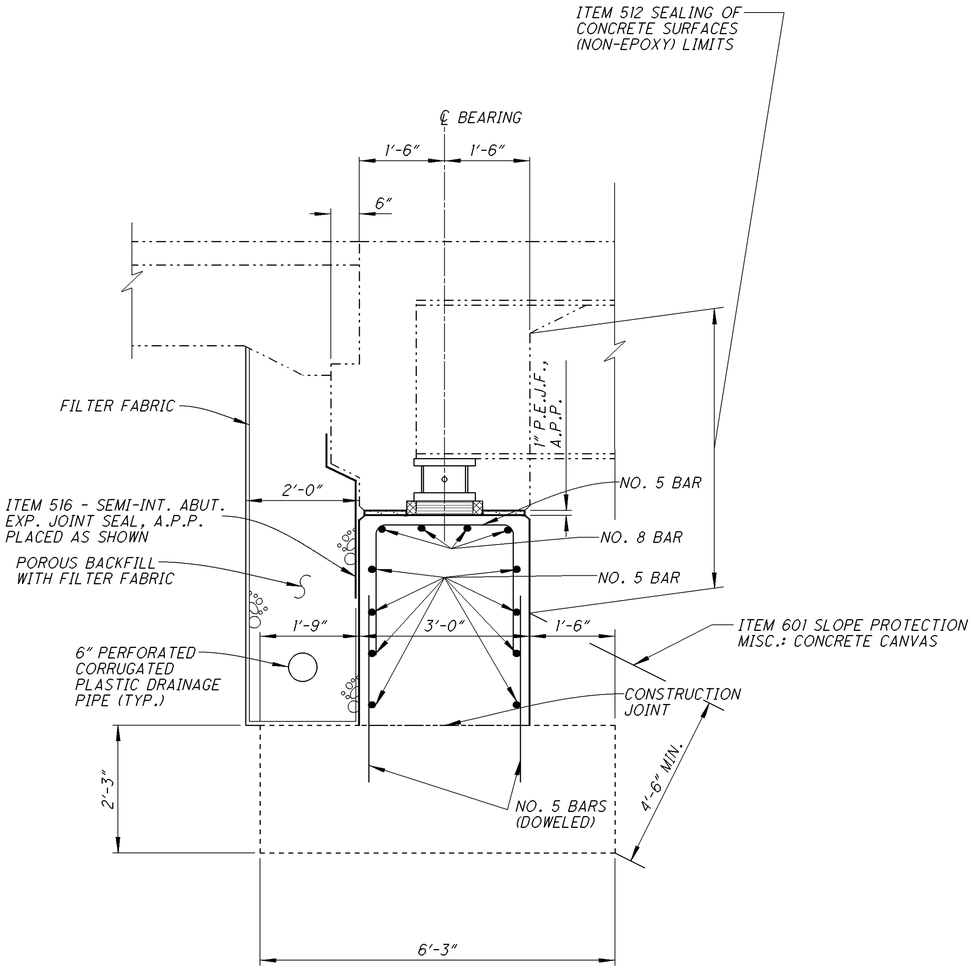


SECTION A-1 11 | A-1 12 | A-1 13 | A-1 14



SECTION A-2 11 | A-2 12 | A-2 13 | A-2 14

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

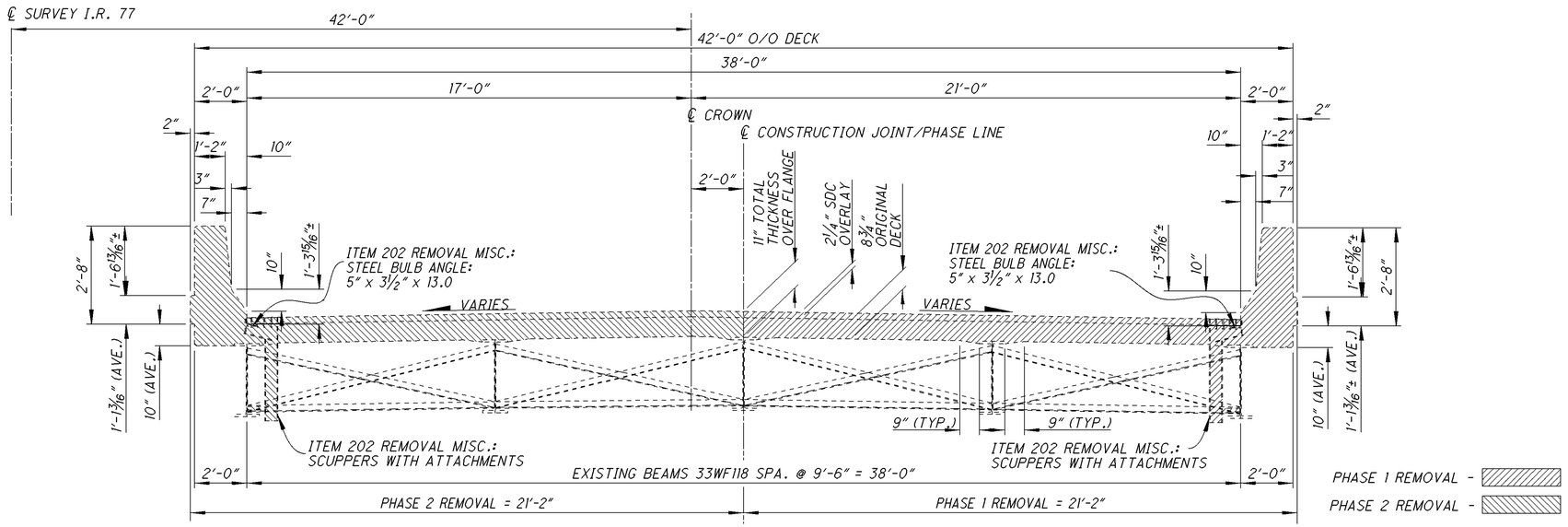
DESIGNED	DRAWN	REVIEWED	DATE
JKS	JKS	JDR	08/22/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		3003450/3003485	

PROPOSED ABUTMENT SECTIONS (ALL ABUTMENTS)
BRIDGE NO GUE-77-2067 (LEFT AND RIGHT BRIDGES)
OVER C.R. 86

GUE-77-VAR.
PID No. 93017

15 / 38

43
69

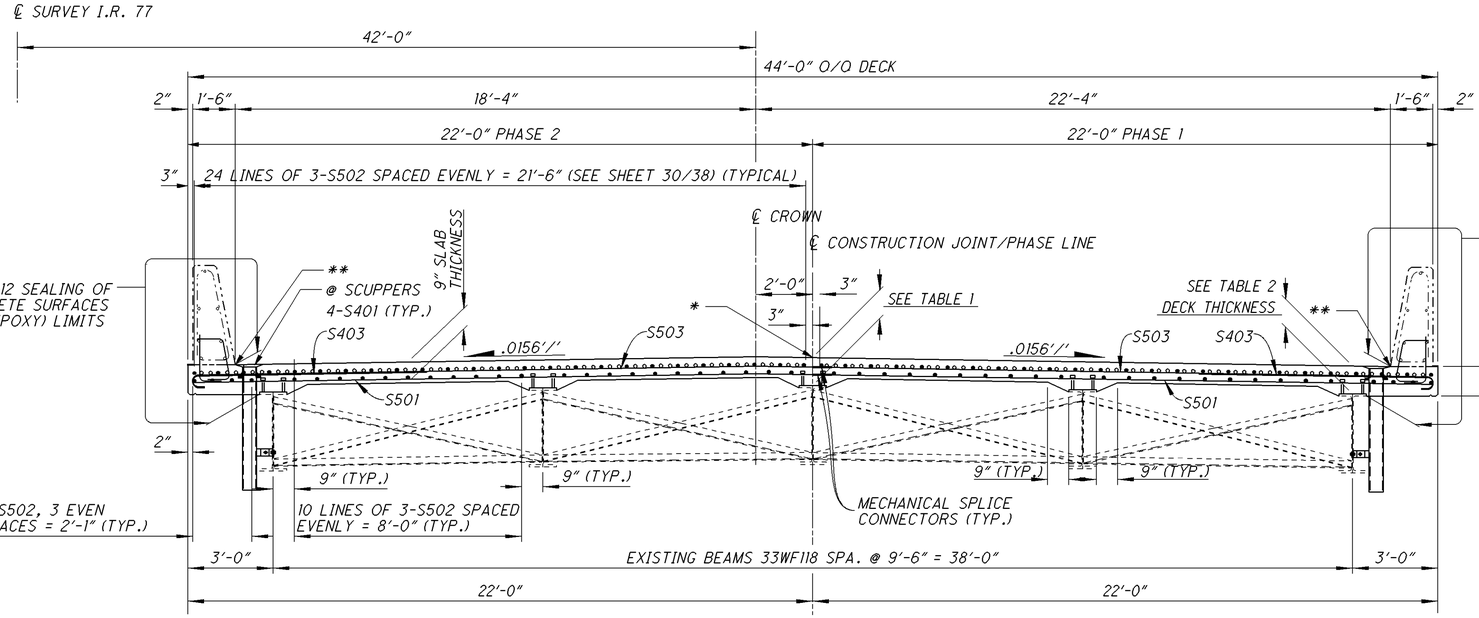


EXISTING TRANSVERSE SECTION

(RIGHT BRIDGE SHOWN, LEFT BRIDGE MIRRORED.)

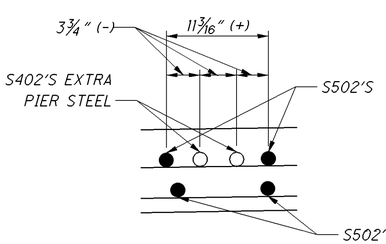
TABLE 1
DECK THICKNESS

BRIDGE	SPAN	BEAM	THICKNESS (AVG)
LEFT	1	2	1'-11 1/16"
		3	1'-1 9/16"
		4	1'-1 5/16"
	2	2	1'-0 9/16"
		3	1'-0 7/16"
		4	1'-0 3/8"
	3	2	11 1/2"
		3	11 1/2"
		4	11 3/8"
RIGHT	1	2	11 5/16"
		3	11 3/4"
		4	1'-0 3/16"
	2	2	11 9/16"
		3	1'-0"
		4	1'-0 5/8"
	3	2	11 5/8"
		3	1'-0 3/16"
		4	1'-1"



PROPOSED TRANSVERSE SECTION

(RIGHT BRIDGE SHOWN, LEFT BRIDGE MIRRORED.)



DETAIL TYPICAL BETWEEN ALL NO. 5 BARS OVER PIERS

TABLE 2
OUTER BEAM THICKNESS

BRIDGE	SPAN	BEAM	DECK THICKNESS (AVG)	OVERHANG THICKNESS (AVG)
LEFT	1	1	1'-2 7/8"	1'-2 7/8"
		5	1'-0 3/16"	1'-0 15/16"
	2	1	1'-0 7/16"	1'-1 3/16"
		5	11 13/16"	1'-0 9/16"
	3	1	11 3/16"	11 15/16"
		5	11 3/4"	1'-0 1/2"
RIGHT	1	1	10 11/16"	11 7/16"
		5	1'-0 9/16"	1'-1 5/16"
	2	1	11 1/16"	11 13/16"
		5	1'-1"	1'-1 3/4"
	3	1	11 1/2"	1'-0 1/4"
		5	1'-1 3/8"	1'-2 1/8"

NOTE:
* - SEALING OF CONSTRUCTION JOINT WITH HMWM AS PER CMS 511.19, 2'-0" WIDTH
** - SEALING OF CONSTRUCTION JOINT WITH HMWM AS PER CMS 511.19, 1'-0" WIDTH

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED JKS | DRAWN JKS | REVIEWED JDR | DATE 08/22/17
CHECKED JDR | REVISED | STRUCTURE FILE NUMBER 3003450/3003485

TRANSVERSE SECTION
BRIDGE NO GUE-77-2067 (LEFT AND RIGHT BRIDGE OVER C.R. 86

GUE-77-VAR.
PID No. 93017

16/38
44/69

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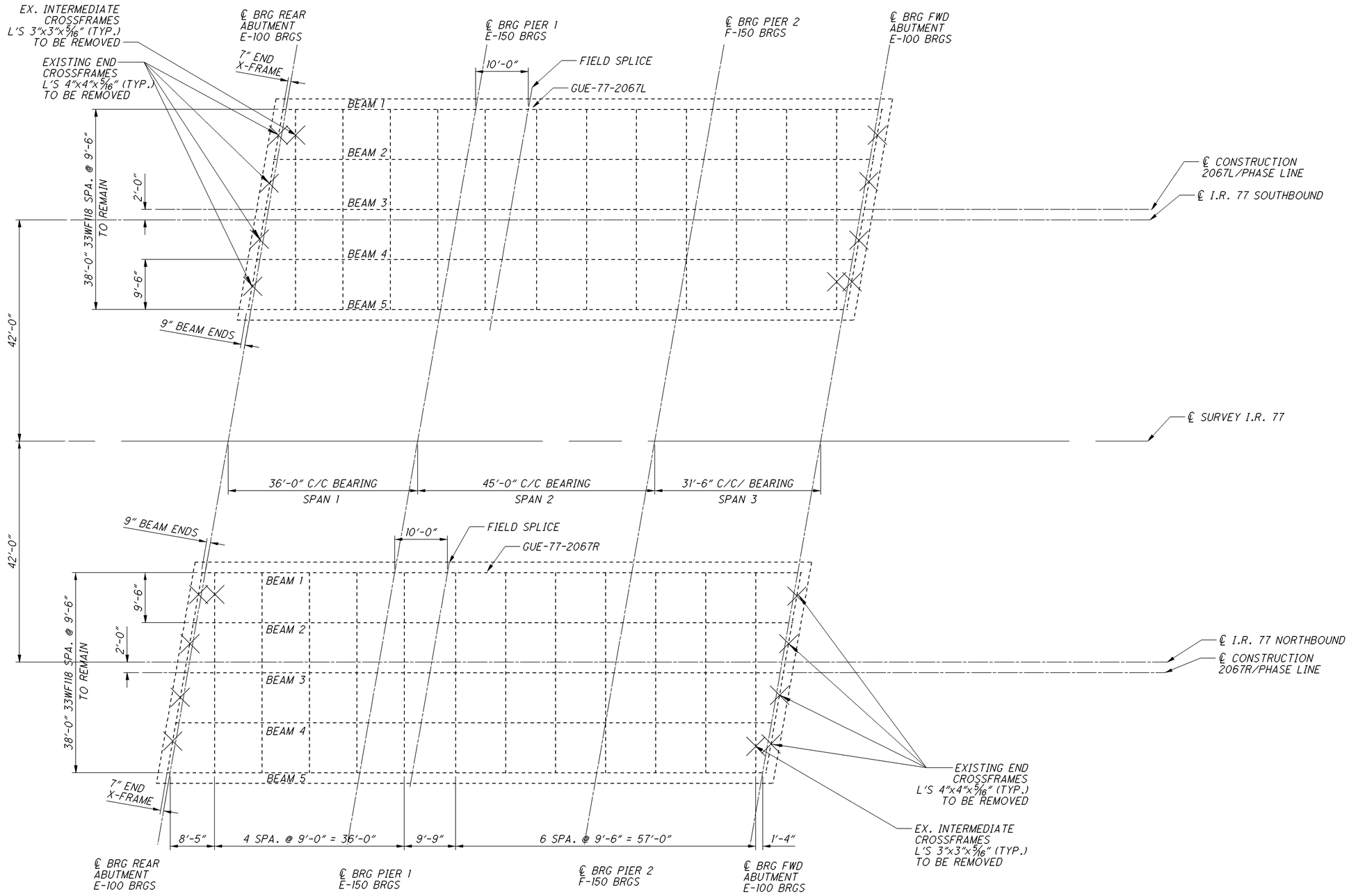


LEGEND

X - TO BE REMOVED

NOTE:
REMOVE MARKED EXISITNG END & INTERMEDIATE CROSSFRAMES AS PER ITEM 202 REMOVAL MISC.: EXISTING END CROSSFRAMES & INTERMEDIATE CROSSFRAMES

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

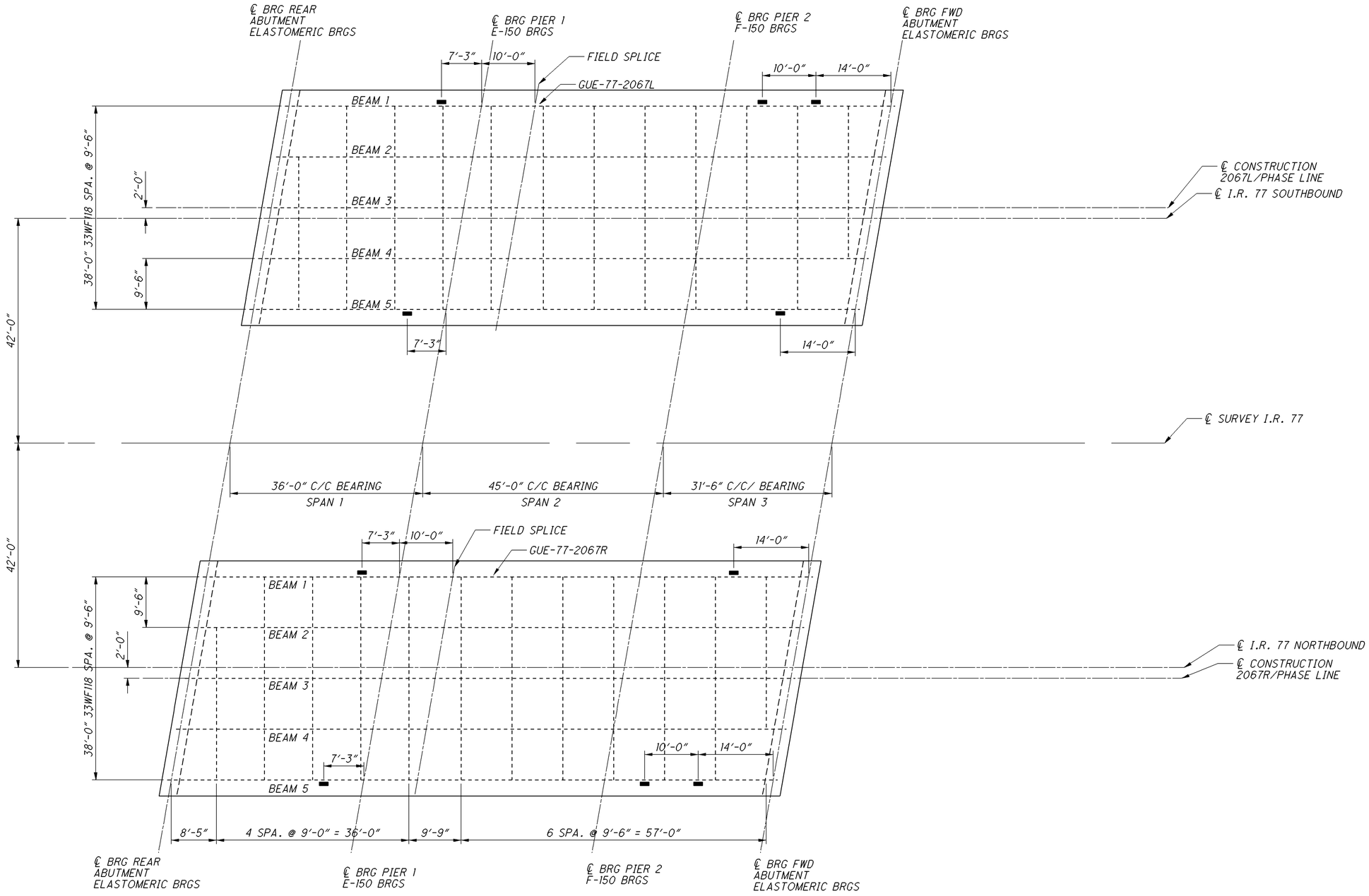
DESIGNED	DRAWN	REVIEWED	DATE
JKS	JKS	JDR	08/22/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		3003450/3003485	

EXISTING FRAMING PLAN
BRIDGE NO GUE-77-2067 (LEFT AND RIGHT BRIDGES)
OVER C.R. 86

GUE-77-VAR.
PID No. 93017

17/38

45/69



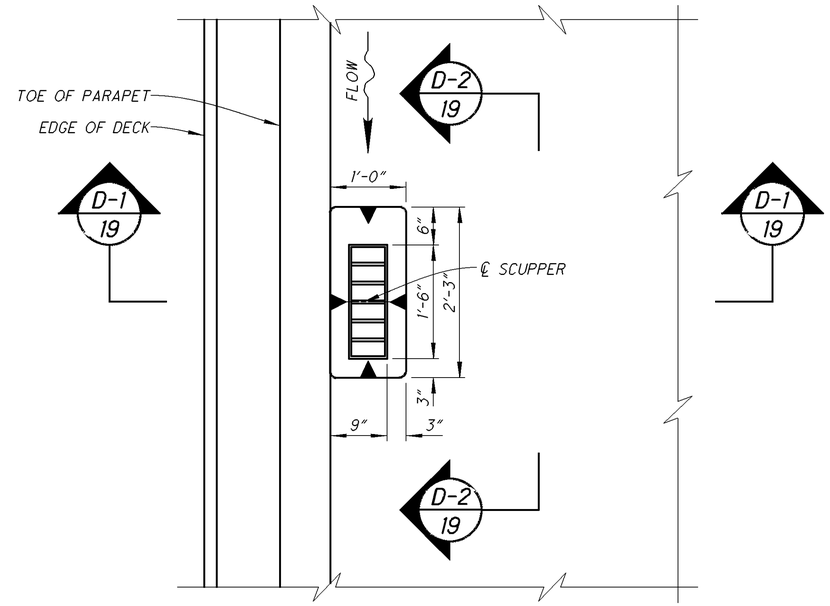
DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
JKS	JKS	JDR	08/22/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		3003450/3003485	

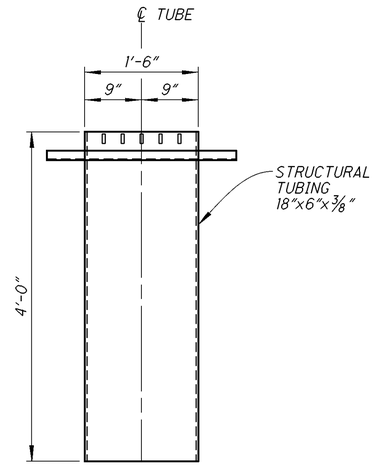
PROPOSED FRAMING PLAN

BRIDGE NO GUE-77-2067 (LEFT AND RIGHT BRIDGES)
OVER C.R. 86

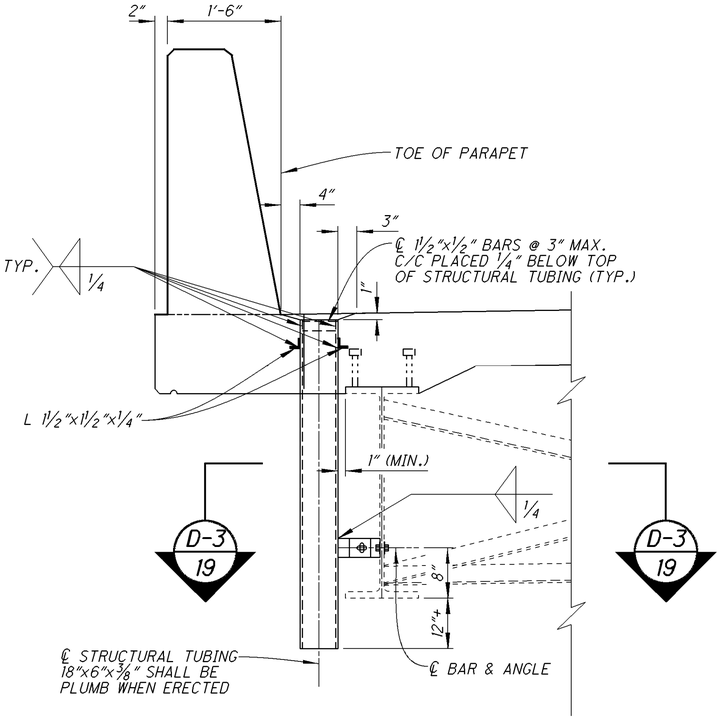
GUE-77-VAR.
PID No. 93017



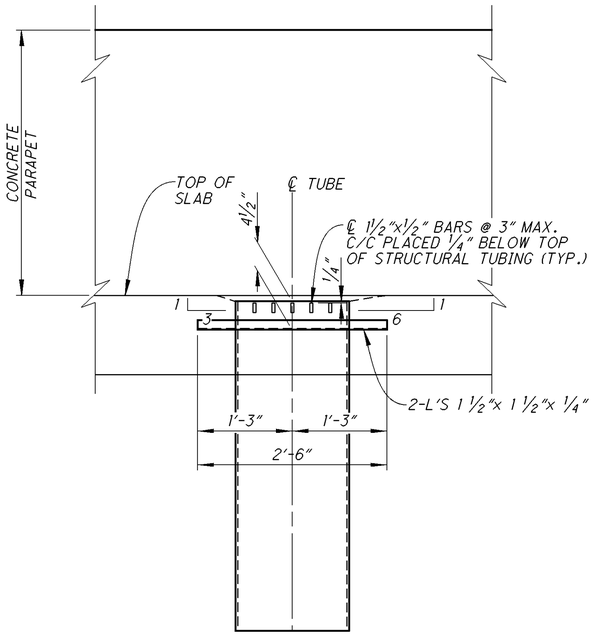
PLAN VIEW



SCUPPER DETAIL



SECTION D-1 19



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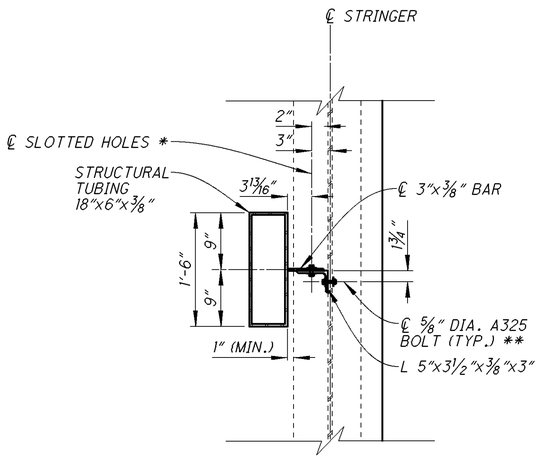


* SEE STD. DWG. GSD-1-96 FASTENER NOTE 1.
** SEE STD. DWG. GSD-1-96 FASTENER NOTE 2.

SECTION D-3 19

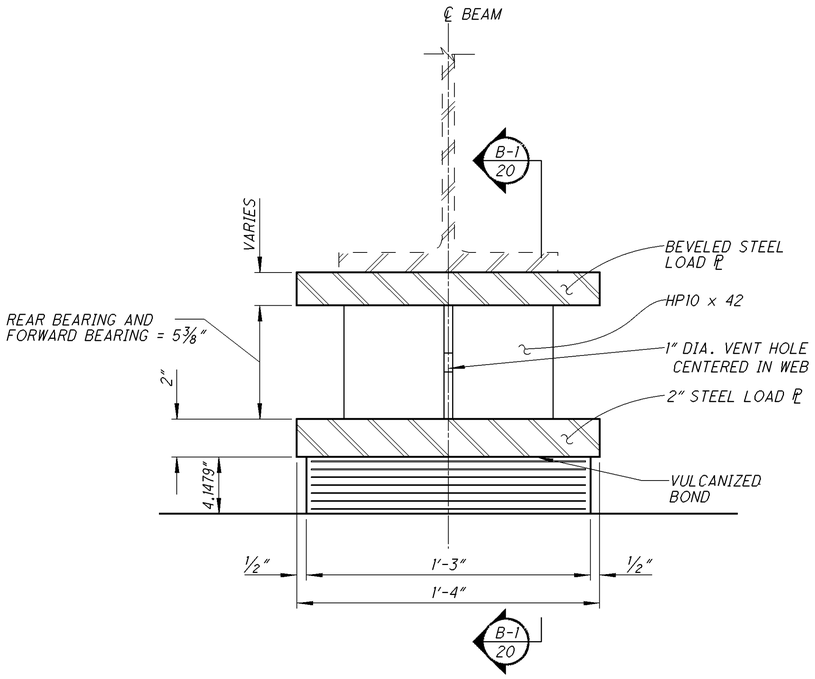
DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

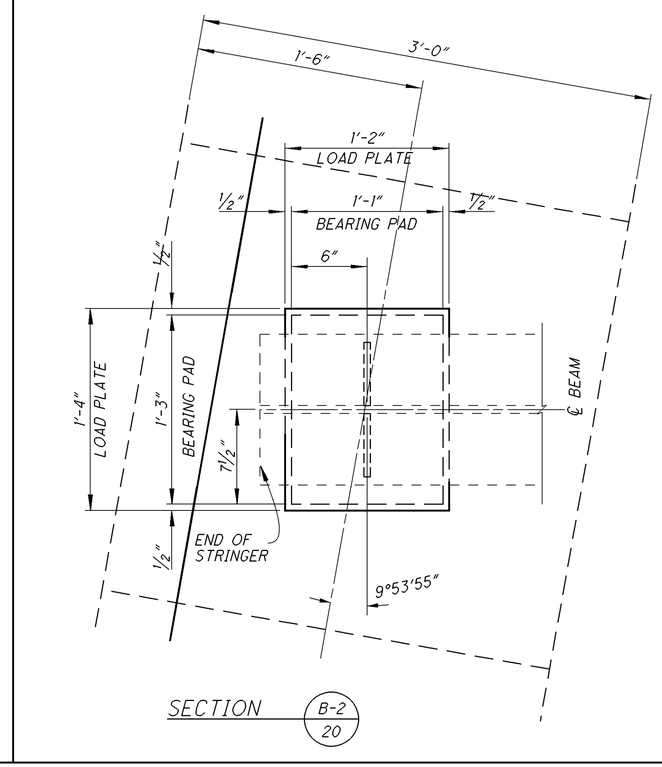
DESIGNED	DRAWN	REVIEWED	DATE
JKS	JKS	JDR	08/22/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		3003450/3003485	

SCUPPER DETAILS
BRIDGE NO GUE-77-2067 (LEFT AND RIGHT BRIDGES)
OVER C.R. 86

GUE-77-VAR.
PID No. 93017

LAMINATED ELASTOMERIC EXPANSION BEARINGS





BASIS OF PAYMENT:
THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, TESTING AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS, EITHER FIXED OR EXPANSION. PAYMENT WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 516, EACH, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE).

REAR ABUTMENT BEARING PAD: 1'-3" x 1'-1" x 4.1479" (50 DUROMETER)
BEVELED STEEL LOAD PLATE: 1'-4" x 1'-2" x (1.625" & 2.00")
STEEL LOAD PLATE: 1'-4" x 1'-2" x 2.0"

FWD. ABUTMENT BEARING PAD: 1'-3" x 1'-1" x 4.1479" (50 DUROMETER)
BEVELED STEEL LOAD PLATE: 1'-4" x 1'-2" x (1.625" & 2.00")
STEEL LOAD PLATE: 1'-4" x 1'-2" x 2.0"

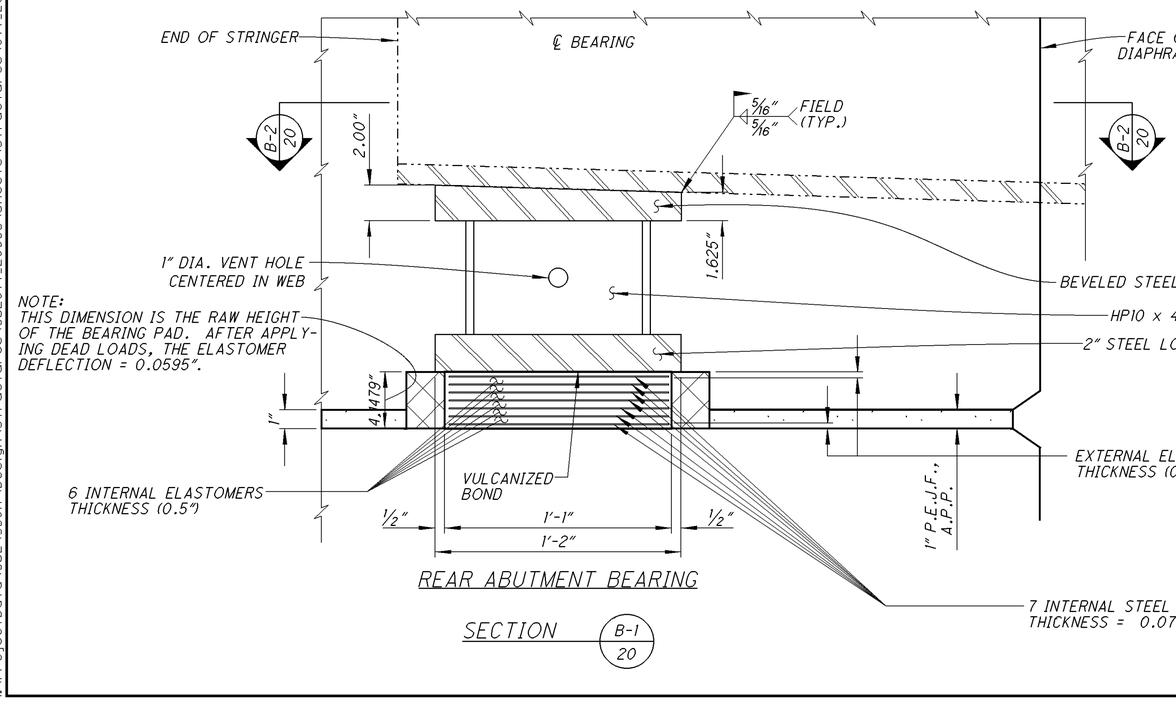
ELASTOMERIC BEARING PAD DESIGN DATA			
LOCATION	DL (K)	LL (K)	DL & LL (K)
REAR ABUTMENT	58	59	117
FWD. ABUTMENT	53	56	109

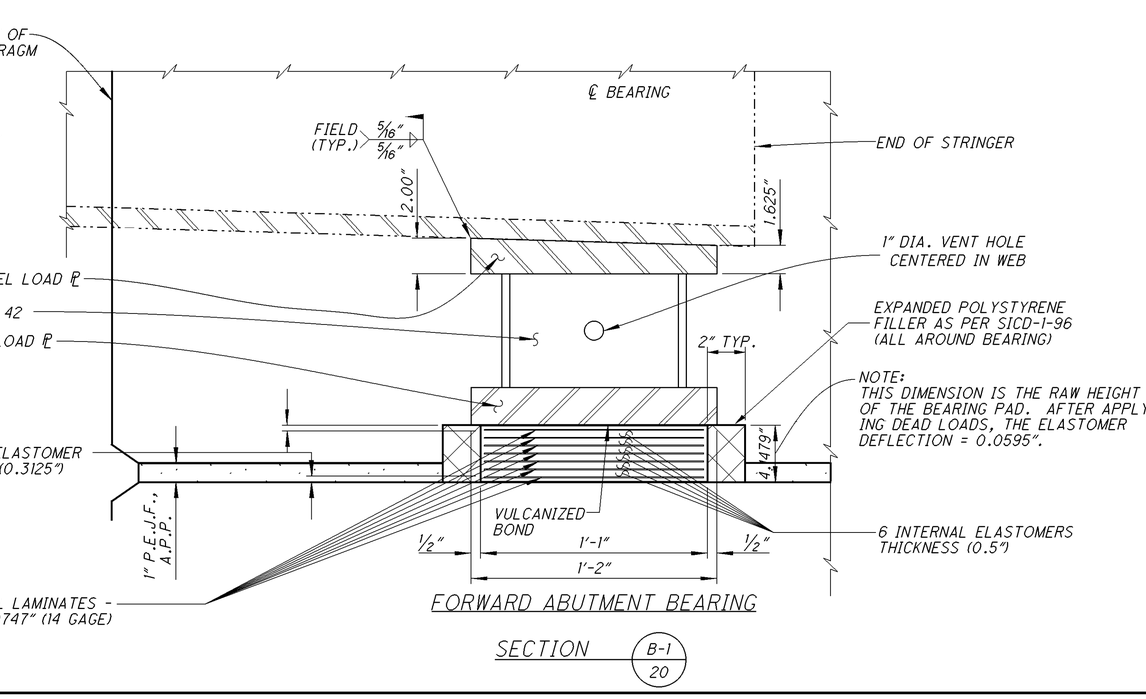
LOAD PLATE:
THE STEEL LOAD PLATES SHALL BE MADE OF A709 STEEL. THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.

WELDING
WELDING: CONTROL WELDING SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 300 DEGREES F AS DETERMINED BY USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.

BEARING REPOSITIONING
BEARING REPOSITIONING: IF THE GIRDERS ARE ERECTED AT AN AMBIENT TEMPERATURE HIGHER THAN 80 DEGREES F OR LOWER THAN 40 DEGREES F AND THE BEARING SHEAR DEFLECTION EXCEEDS 1/6 OF THE BEARING HEIGHT AT 60 DEGREES F (+/-) 10 DEGREES F, RAISE THE BEAMS OR GIRDERS TO ALLOW THE BEARINGS TO RETURN TO THEIR UNDEFORMED SHAPE AT 60 DEGREES F (+/-) 10 DEGREES F.

ELASTOMERIC BEARINGS
ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED IN ACCORDANCE WITH SECTION 14.7.5 (METHOD A) OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. PERFORM THE LONG-TERM COMPRESSION PROOF LOAD TEST IN ACCORDANCE WITH THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DIVISION II, SECTION 18.7.2.6 AND 18.7.4.5.





DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
JKS	JKS	JDR	08/22/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		3003450/3003485	

BEARING DETAILS
BRIDGE NO GUE-77-2067 (LEFT AND RIGHT BRIDGES)
OVER C.R. 86

GUE-77-VAR.
PID No. 93017

20/38
48/69

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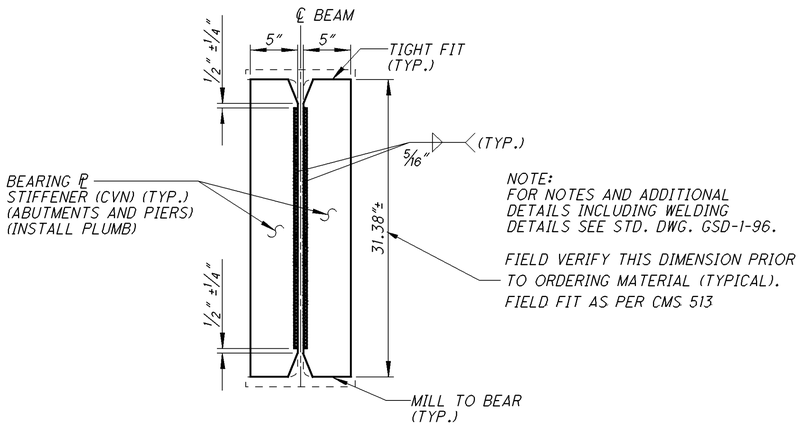


NOTE:
FOR NOTES AND ADDITIONAL DETAILS INCLUDING WELDING DETAILS SEE STD. DWG. GSD-1-96.

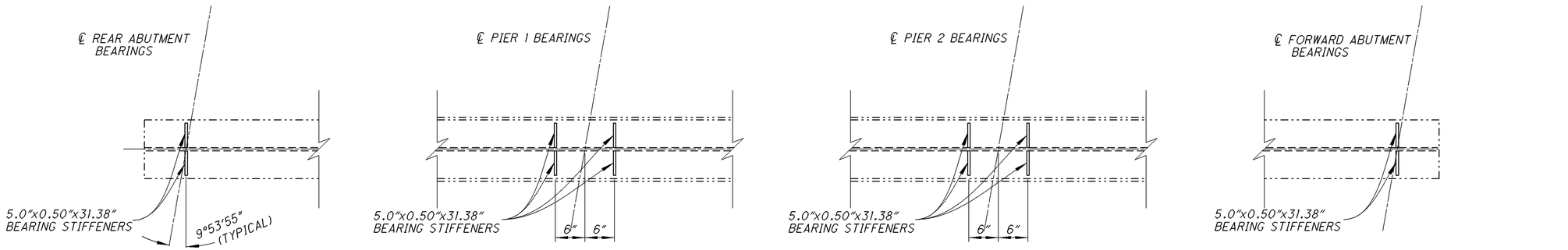
FIELD VERIFY THIS DIMENSION PRIOR TO ORDERING MATERIAL (TYPICAL).
FIELD FIT AS PER CMS 513

BEARING STIFFENERS DETAILS

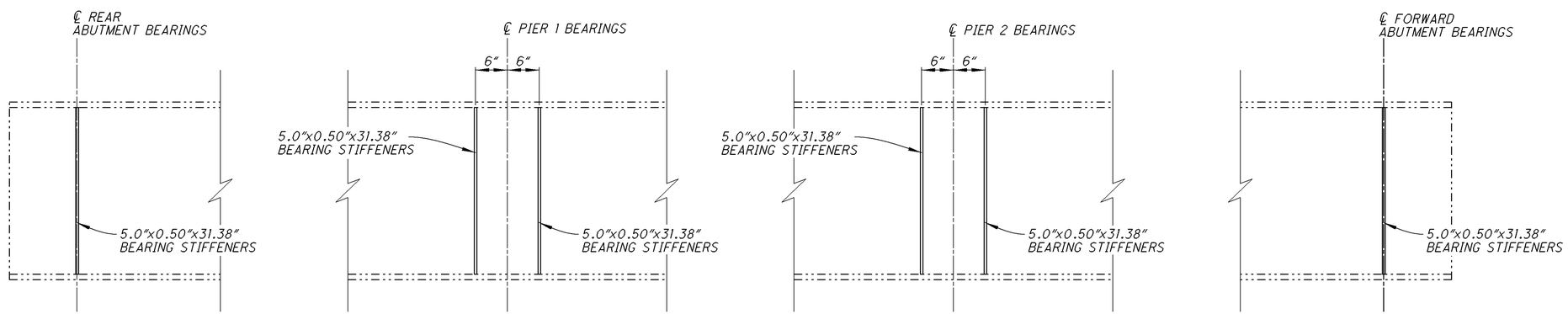
ITEM 513 STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN		
STIFFENER ℄	NUMBER	POUNDS
5.0″x0.50″x31.38″	120	2,670
TOTAL		2,670

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

PROPOSED BEARING STIFFENERS LOCATIONS BEAMS 1 - 5 LEFT AND RIGHT BRIDGES



PLAN VIEW



ELEVATION VIEW

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DATE 08/22/17
REVIEWED JDR
STRUCTURE FILE NUMBER 3003450/3003485

DRAWN JKS
REVISED

DESIGNED JKS
CHECKED JDR

BEARING STIFFENER DETAILS
BRIDGE NO GUE-77-2067 (LEFT AND RIGHT BRIDGES) OVER C.R. 86

GUE-77-VAR.
PID No. 93017

21 / 38

49 / 69

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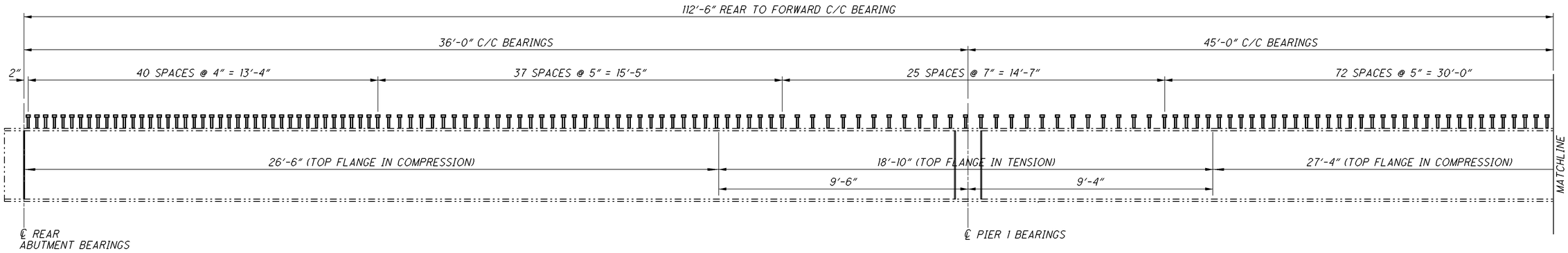
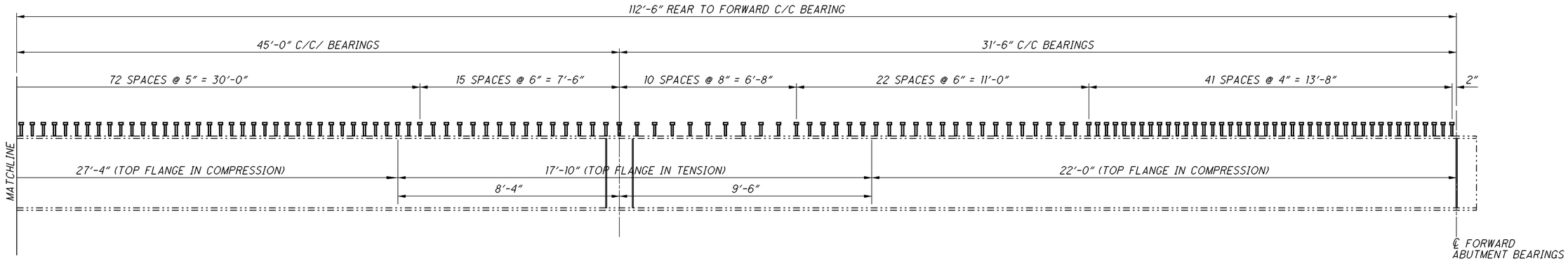
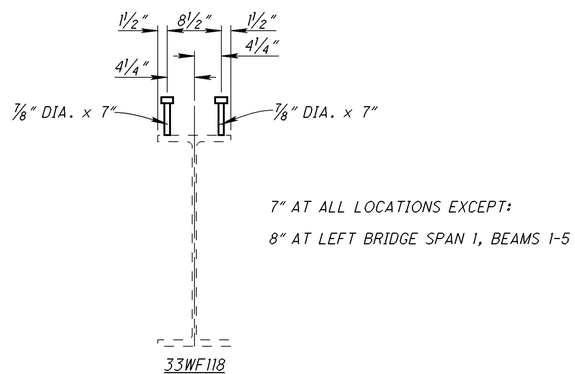




LONGITIDINAL SHEAR CONNECTOR SPACING

NOTES:
WELDED ATTACHMENT 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.



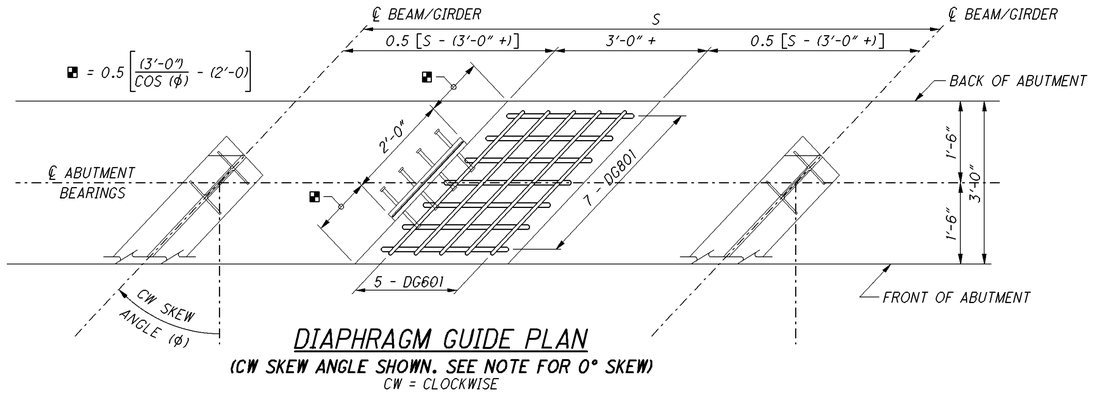
LONGITIDINAL SHEAR CONNECTOR DETAIL

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE	STRUCTURE FILE NUMBER
JKS	JKS	JDR	08/22/17	3003450/3003485
CHECKED	REVISED			
JDR				

SHEAR CONNECTOR DETAILS
BRIDGE NO GUE-77-2067 (LEFT AND RIGHT BRIDGES)
OVER C.R. 86

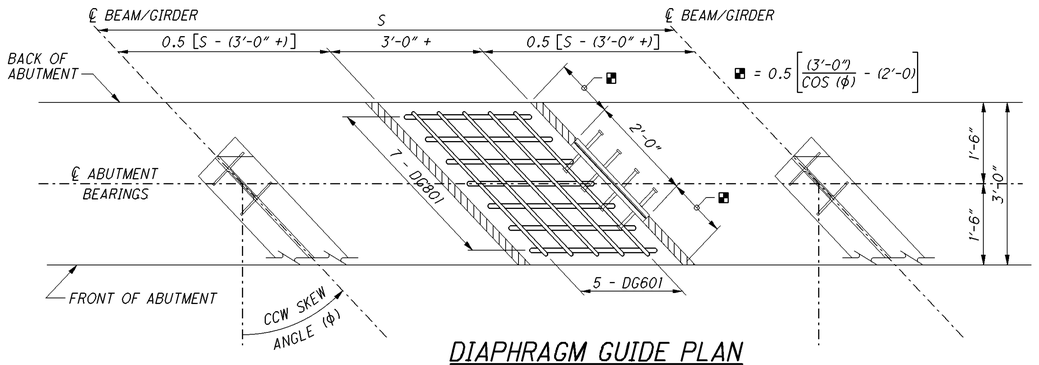
GUE-77-VAR.
PID No. 93017



DIAPHRAGM GUIDE PLAN

(CW SKEW ANGLE SHOWN. SEE NOTE FOR 0° SKEW)

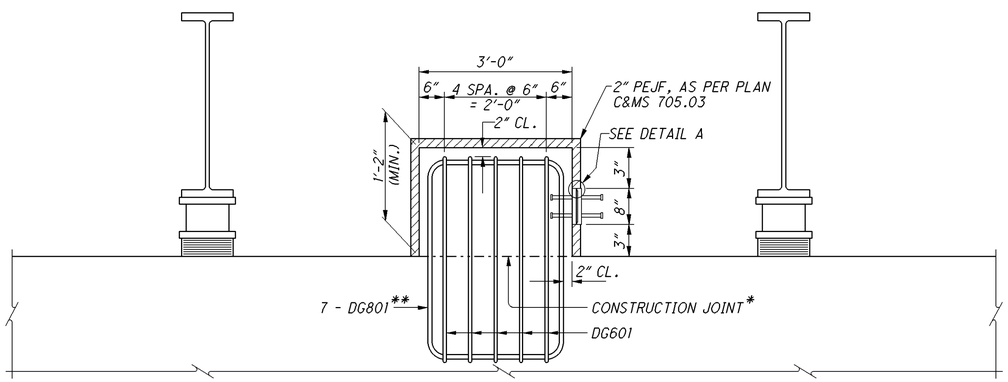
CW = CLOCKWISE



DIAPHRAGM GUIDE PLAN

(CCW SKEW ANGLE SHOWN. SEE NOTE FOR 0° SKEW)

CCW = COUNTERCLOCKWISE

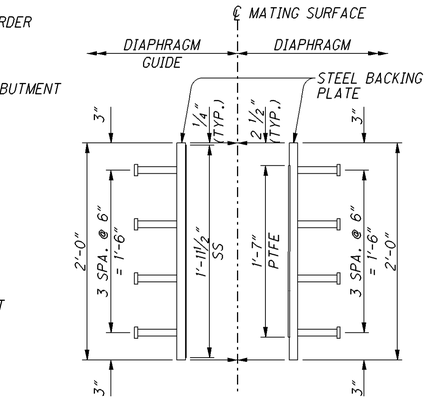


DIAPHRAGM GUIDE ELEVATION

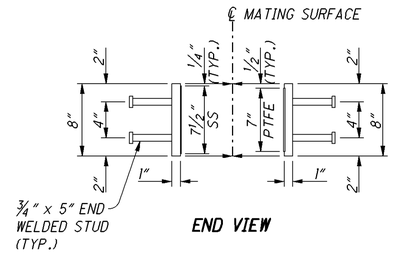
(CCW SKEW ANGLE SHOWN, CW SIMILAR)

* - 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



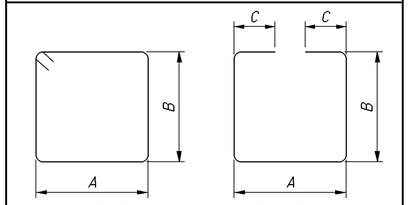
END VIEW

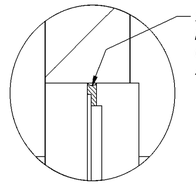
RUB PLATE DETAILS

SS = STAINLESS STEEL
PTFE = POLYTETRAFLUORETHYLENE

MARK	NUMBER TOTAL	TYPE	DIMENSIONS A	B	C
DG601	5	3	(2'-8") / COS (ϕ)	2'-10 1/2"	
DG801	7	5	2'-8"	2'-9"	2'-4"

BENDING DIAGRAMS





SEAL THE PERIMETER OF THE RUB PLATE MATING SURFACE WITH A POLYURETHANE OR POLYMERIC MATERIAL CONFORMING TO ASTM C920, TYPE S.

DETAIL A

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 THIER 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 SERVICES
OFFICE OF STRUCTURAL ENGINEERING

STATE OF OHIO DEPARTMENT OF TRANSPORTATION
Tim Keen
ADMINISTRATOR
07-18-14
DATE

REVISIONS

SICD-2-14

STANDARD BRIDGE DRAWING
SEMI-INTEGRAL ABUTMENT DIAPHRAGM GUIDE

1 / 1

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
JKS	JKS	JDR	08/22/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		3003450/3003485	

SEMI-INTEGRAL ABUTMENT DIAPHRAGM GUIDE, AS PER PLAN
BRIDGE NO GUE-77-2067 (LEFT AND RIGHT BRIDGES)
OVER C.R. 86

GUE-77-VAR.
PID No. 93017

23 / 38

51 / 69

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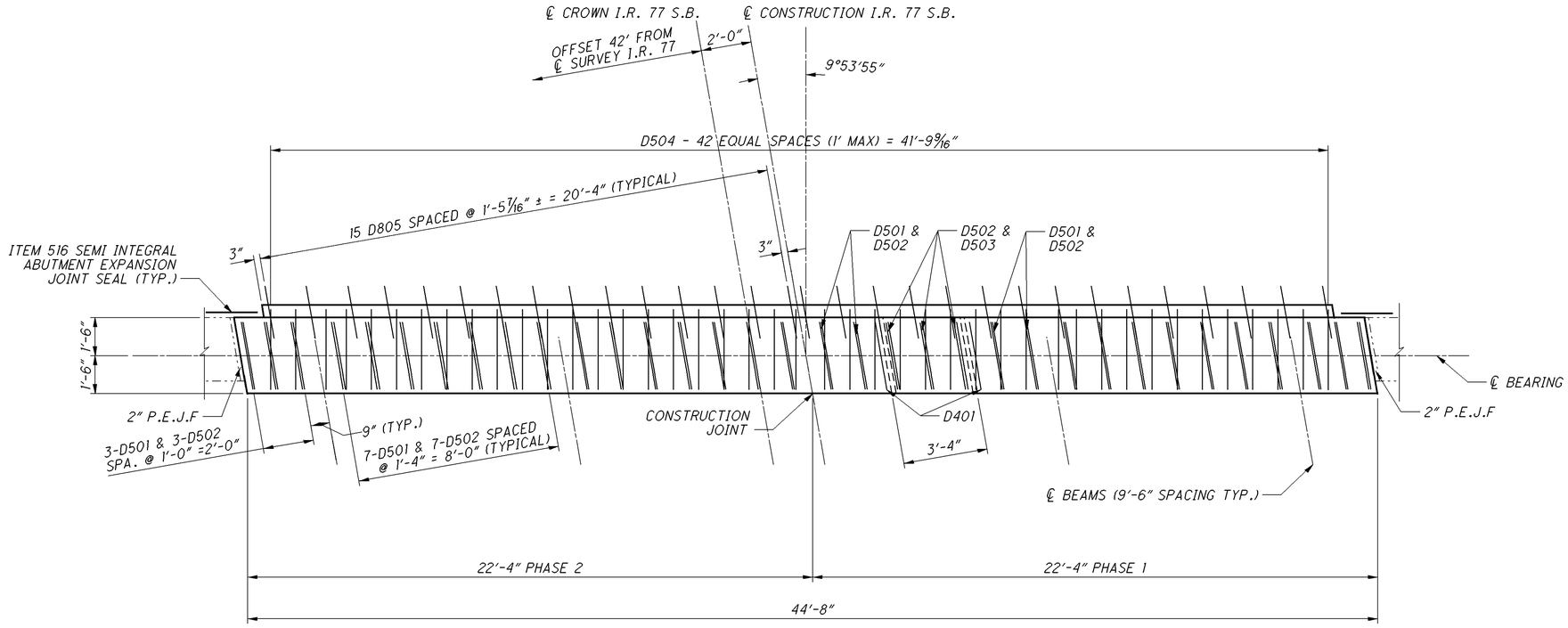
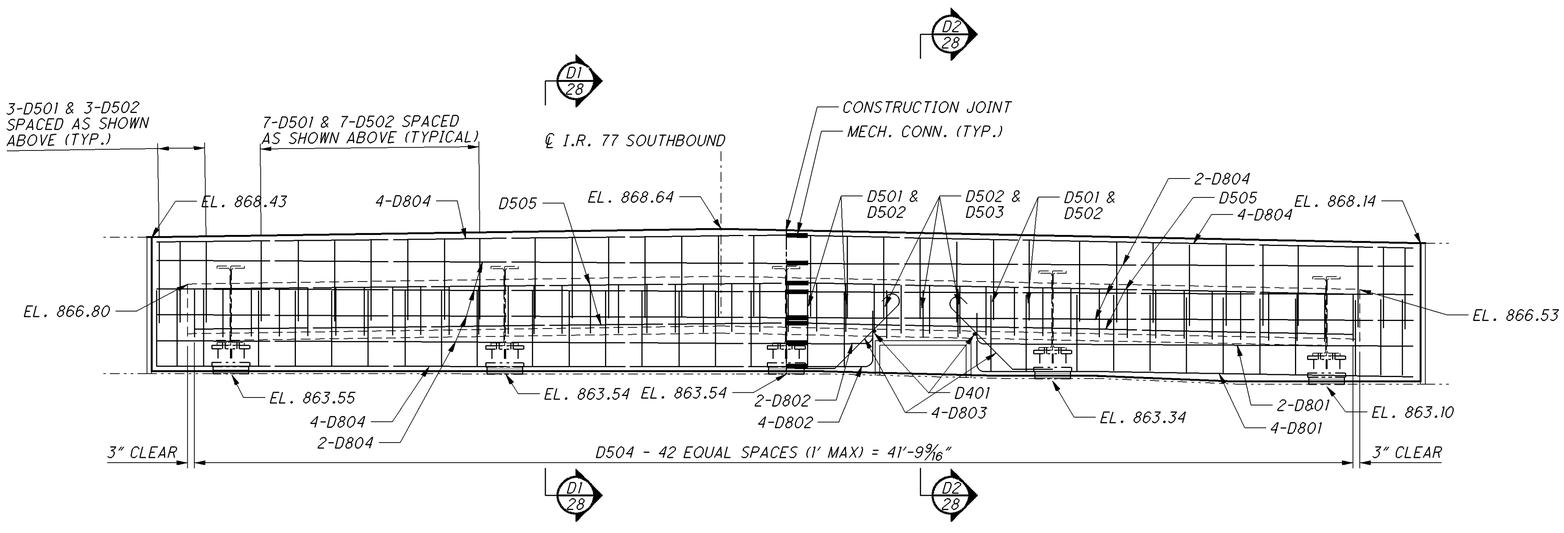


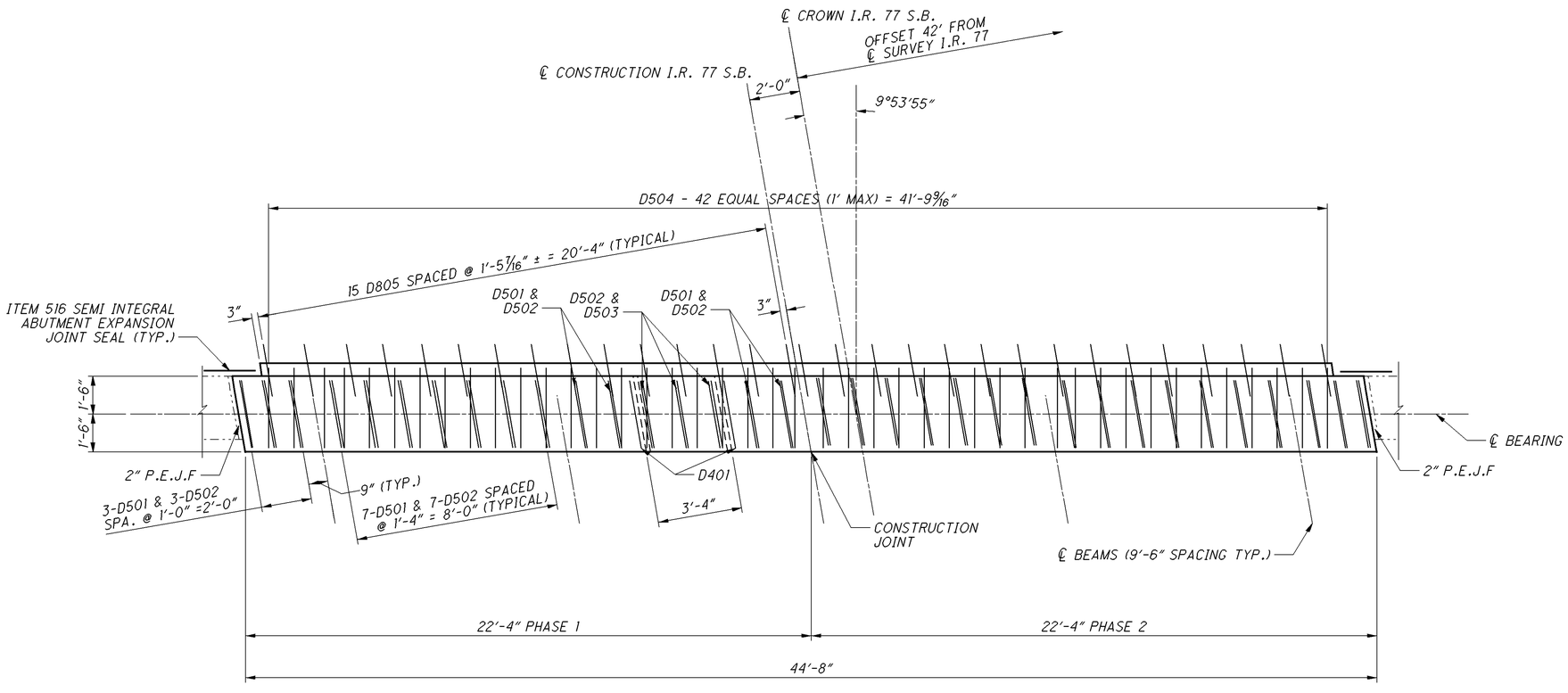


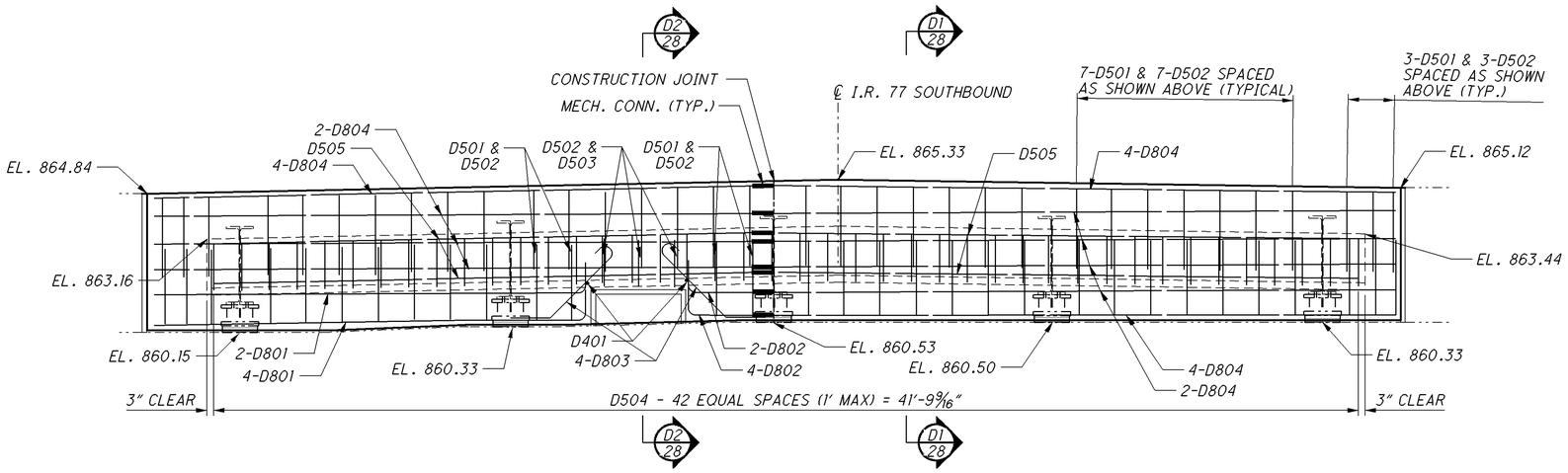
DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
JKS	JKS	JDR	08/22/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		3003450/3003485	

PROPOSED DIAPHRAGM (LEFT BRIDGE REAR ABUTMENT)
BRIDGE NO GUE-77-2067 (LEFT AND RIGHT BRIDGES)
OVER C.R. 86

GUE-77-VAR.
PID No. 93017





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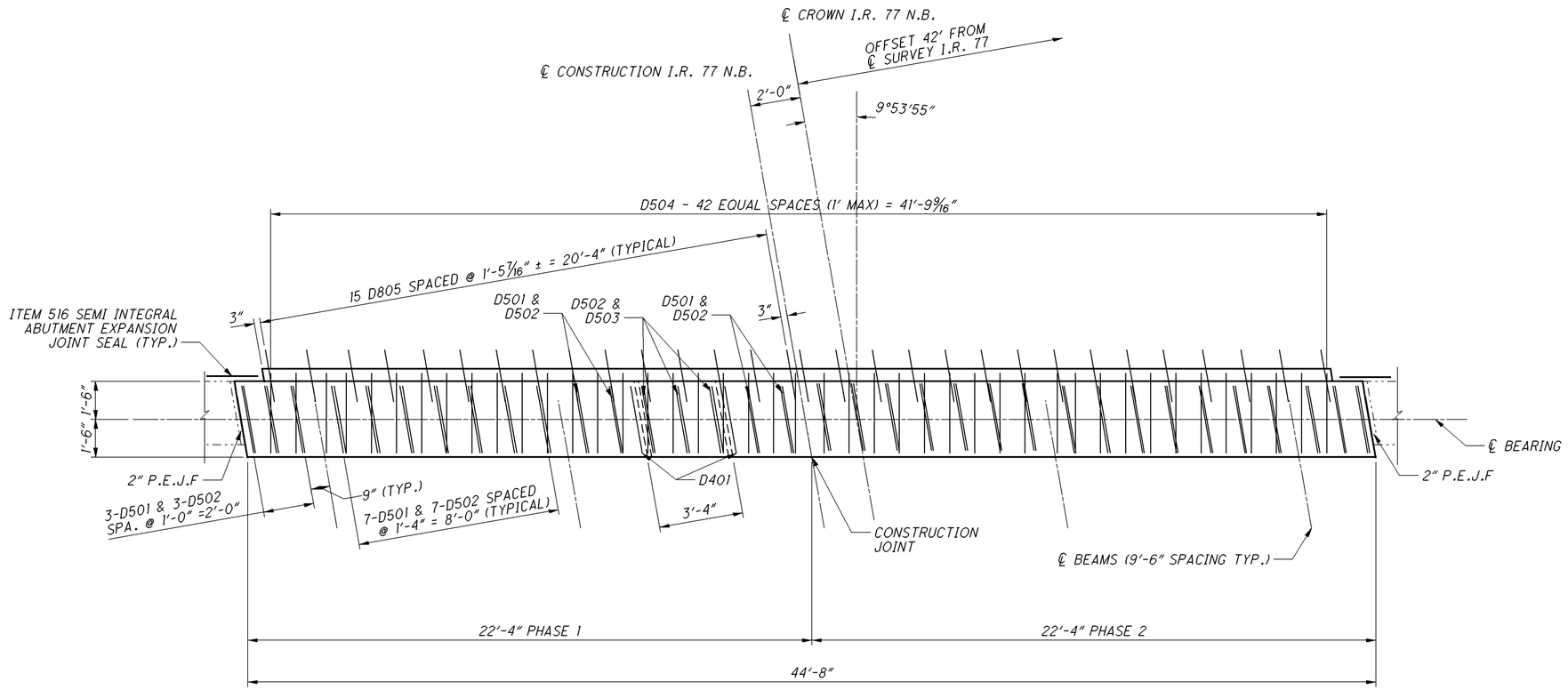
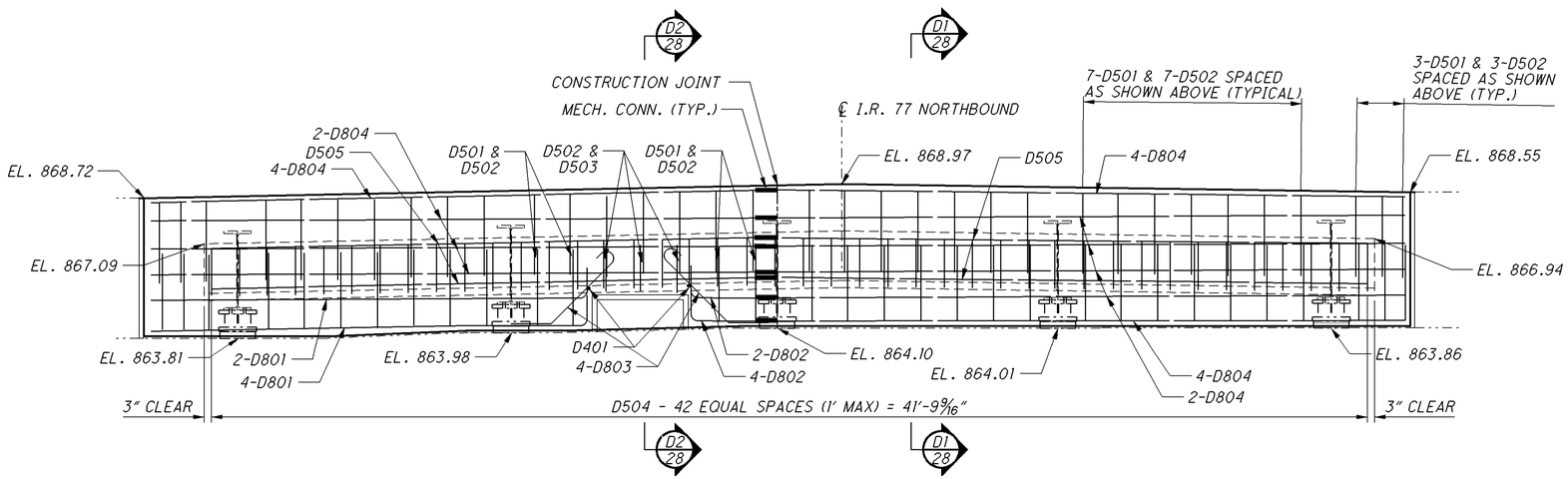
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
JKS	JKS	JDR	08/22/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		3003450/3003485	

PROPOSED DIAPHRAGM (LEFT BRIDGE FORWARD ABUTMENT)
BRIDGE NO GUE-77-2067 (LEFT AND RIGHT BRIDGES)
OVER C.R. 86

GUE-77-VAR.
PID No. 93017



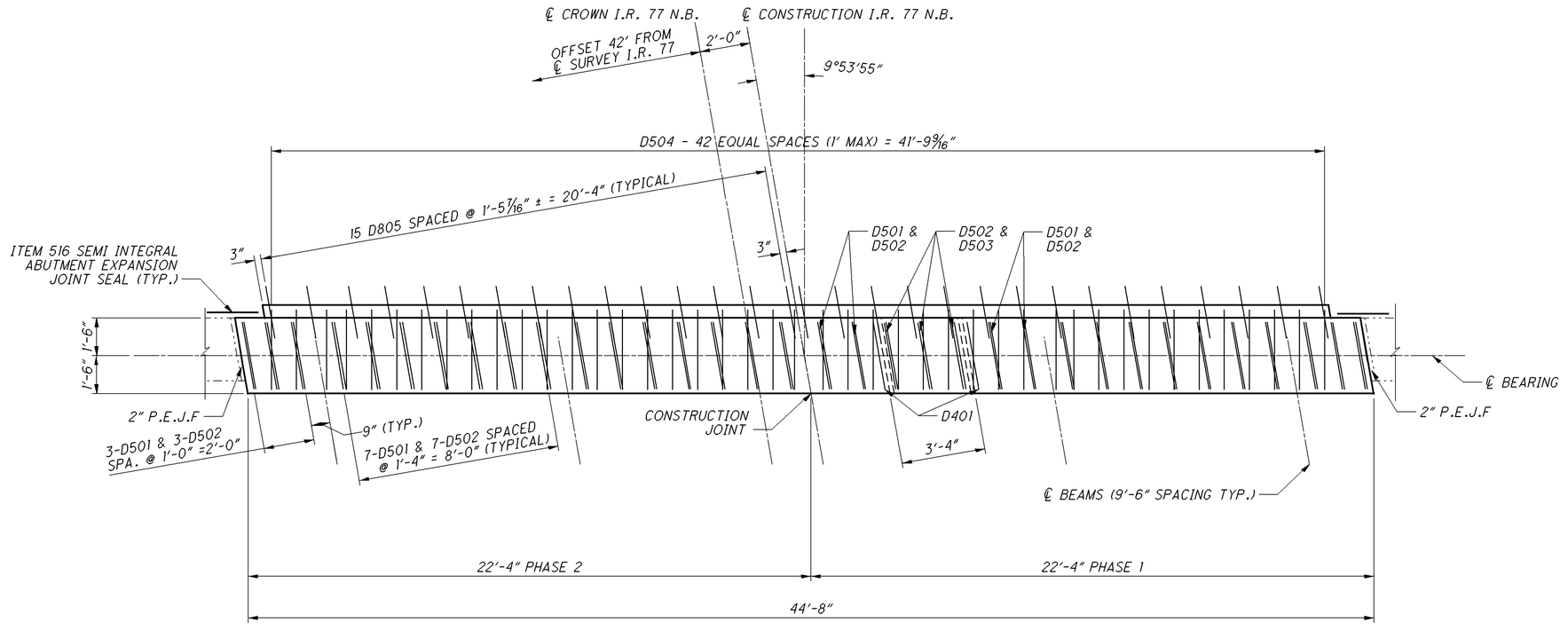


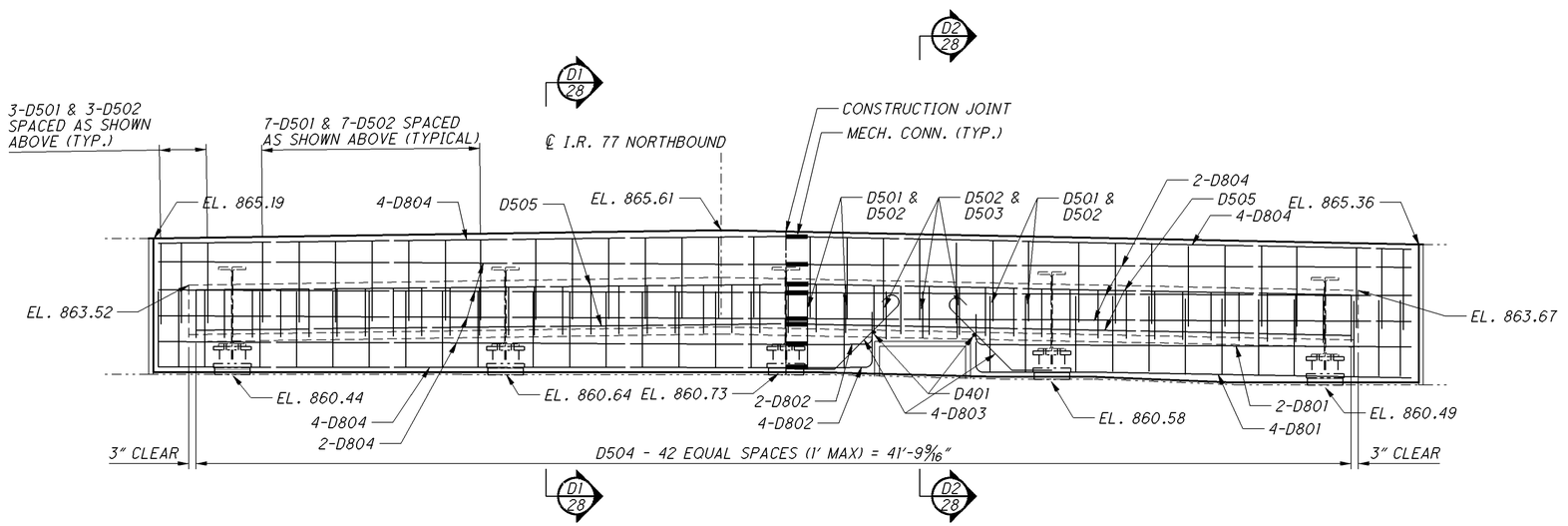
DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
JKS	JKS	JDR	08/22/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		3003450/3003485	

PROPOSED DIAPHRAGM (RIGHT BRIDGE REAR ABUTMENT)
BRIDGE NO GUE-77-2067 (LEFT AND RIGHT BRIDGES)
OVER C.R. 86

GUE-77-VAR.
PID No. 93017





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OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

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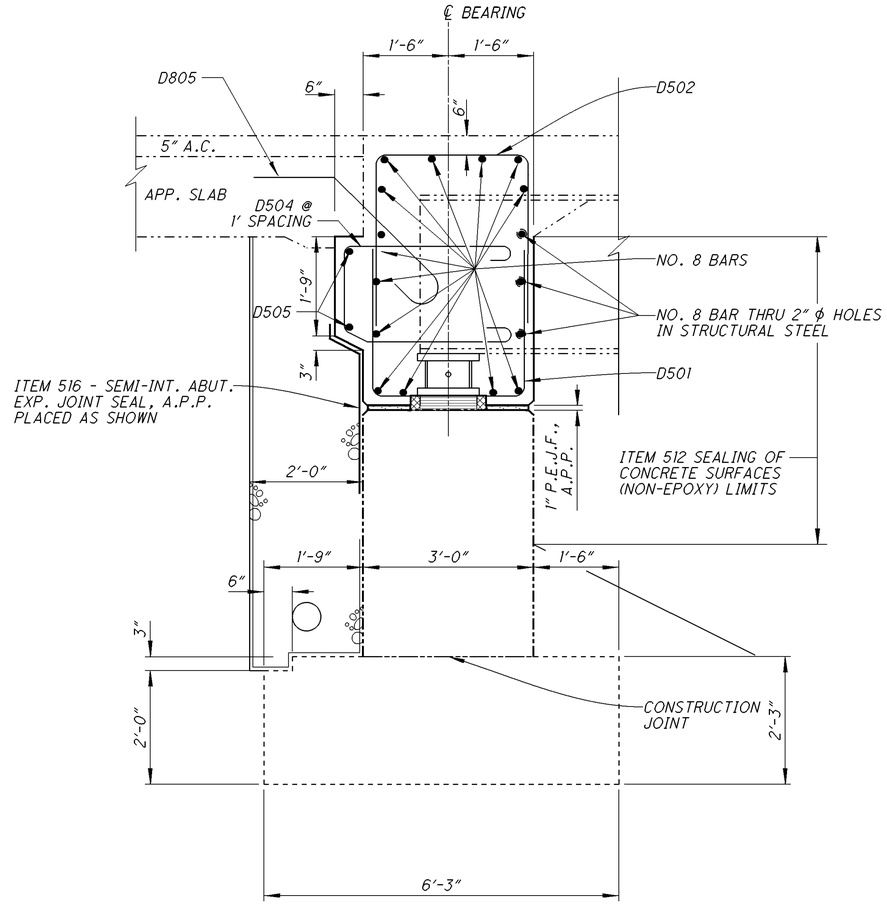
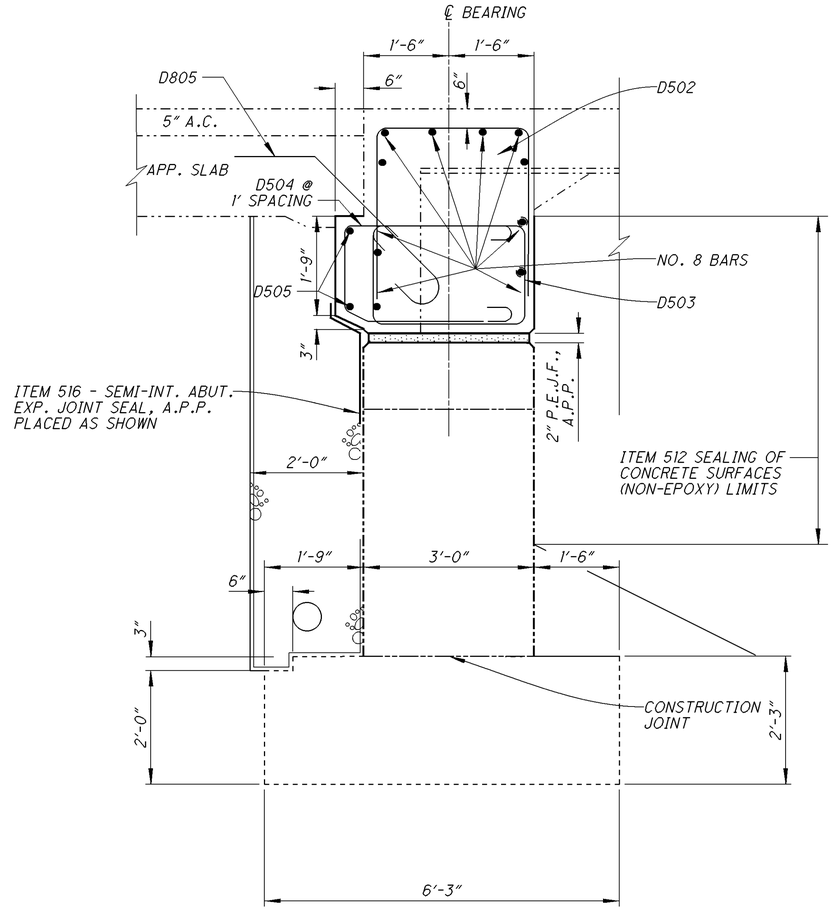
JKS	JKS	JDR	08/22/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		3003450/3003485	

PROPOSED DIAPHRAGM (RIGHT BRIDGE FORWARD ABUTMENT)
BRIDGE NO GUE-77-2067 (LEFT AND RIGHT BRIDGES)
OVER C.R. 86

GUE-77-VAR.
PID No. 93017



SECTION D-1 24 D-1 25 D-1 26 D-1 27



SECTION D-2 24 D-2 25 D-2 26 D-2 27

DESIGN AGENCY
OHIO DEPARTMENT OF
TRANSPORTATION, DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
JKS	JKS	JDR	08/22/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		3003450/3003485	

PROPOSED DIAPHRAGM DETAILS

BRIDGE NO GUE-77-2067 (LEFT AND RIGHT BRIDGES)
OVER C.R. 86

GUE-77-VAR.
PID No. 93017

28/38

56
69

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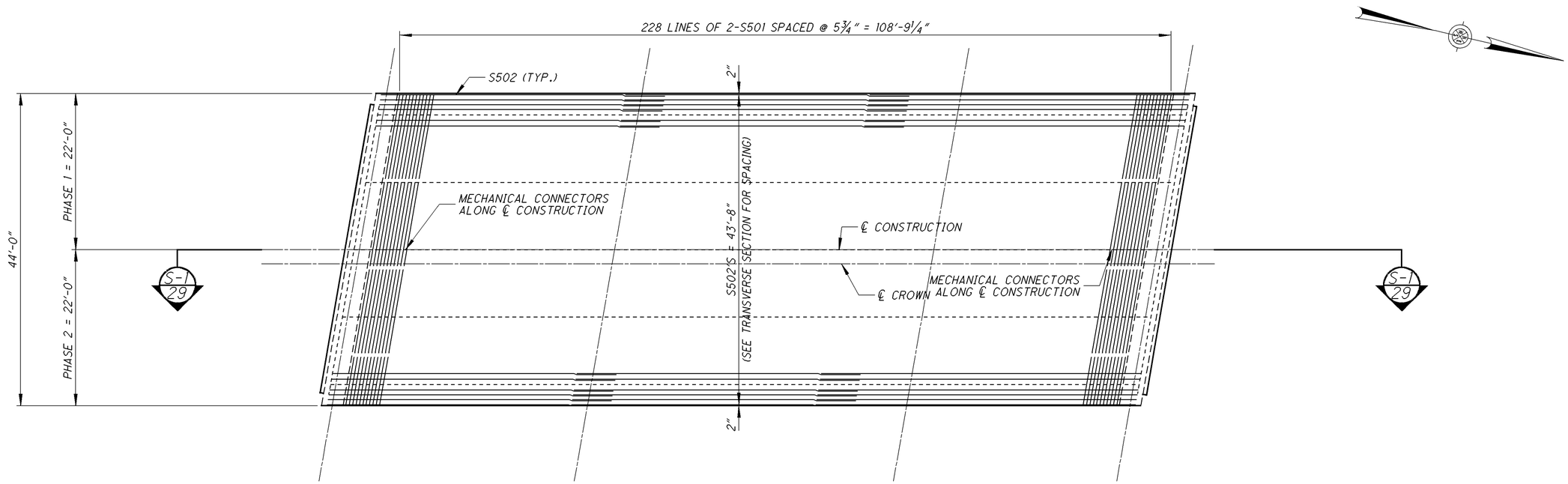
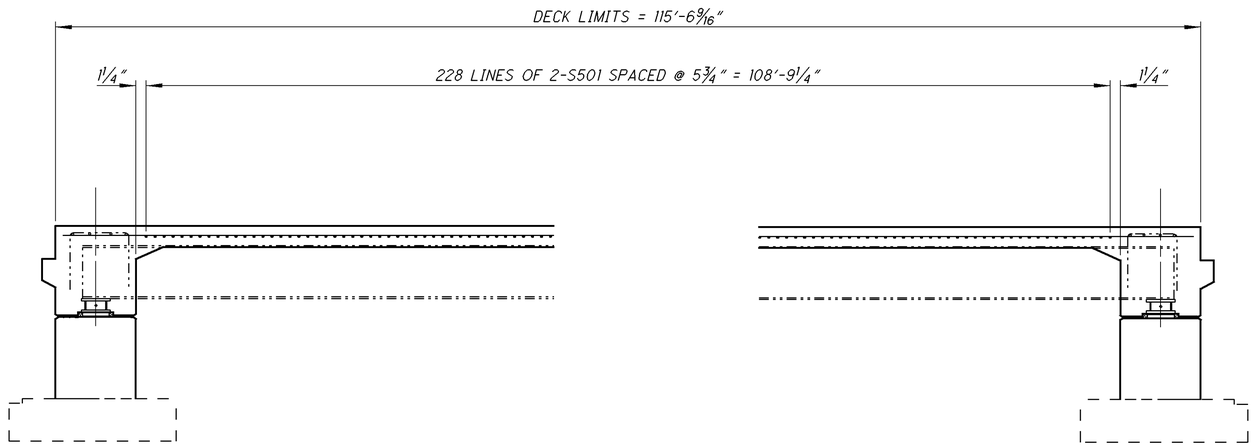
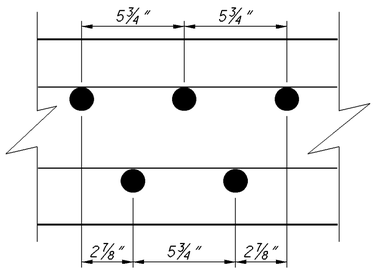






STAGGER TOP AND BOTTOM TRANSVERSE STEEL AS SHOWN

SECTION S-1 29

SUPERSTRUCTURE LAP LENGTH
NO. 5 = 3'-7" (MIN.)
NO. 4 = 2'-11" (MIN.)

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

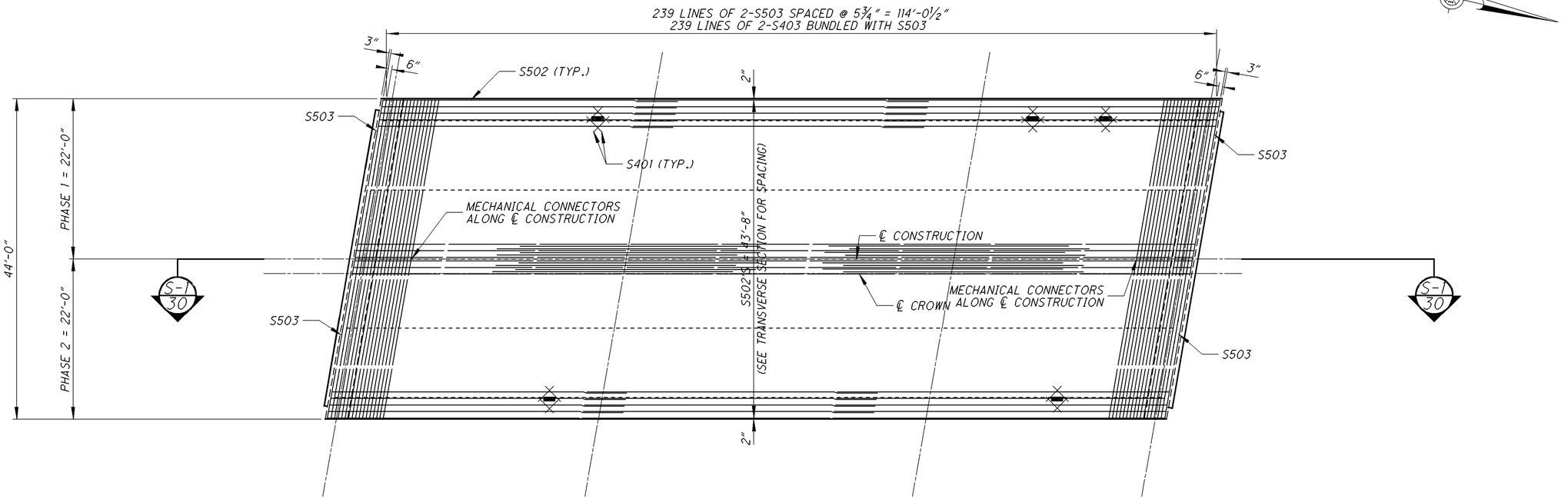
DESIGNED	DRAWN	REVIEWED	DATE
JKS	JKS	JDR	08/22/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		3003450/3003485	

SUPERSTRUCTURE REINFORCING STEEL (BOTTOM MAT)
BRIDGE NO GUE-77-2067 (LEFT AND RIGHT BRIDGES)
OVER C.R. 86

GUE-77-VAR.
PID No. 93017

29 / 38

57
69



TOP MAT REINFORCEMENT (PLAN VIEW)

* LEFT BRIDGE SHOWN RIGHT BRIDGE MIRRORED *

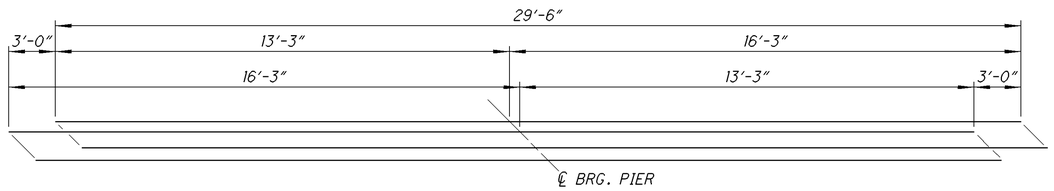
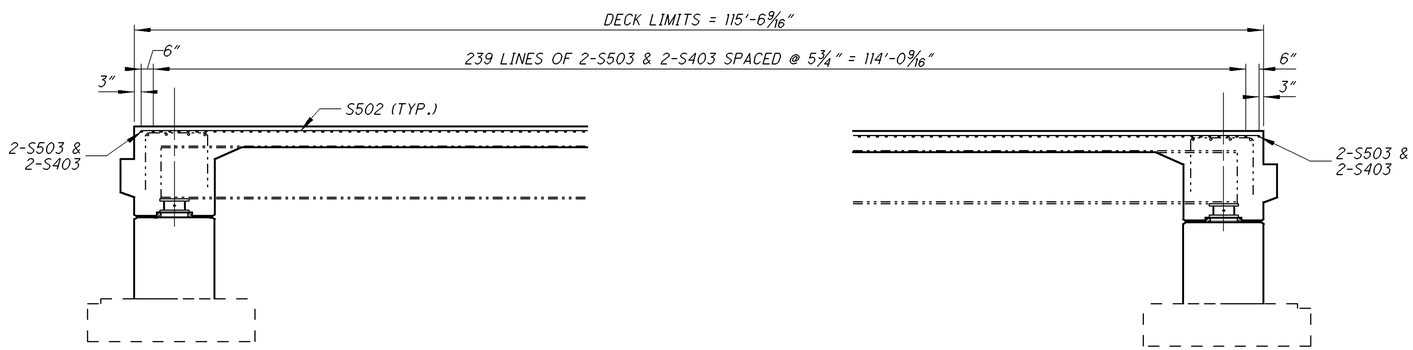


DIAGRAM SHOWING STAGGER OF S402 OVER PIERS 1 & 2



SUPERSTRUCTURE LAP LENGTH
NO. 5 = 3'-7" (MIN.)
NO. 4 = 2'-11" (MIN.)

SECTION S-1 30

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
JKS	JKS	JDR	08/22/17
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JDR		3003450/3003485	

SUPERSTRUCTURE REINFORCING STEEL (TOP MAT)
BRIDGE NO GUE-77-2067 (LEFT AND RIGHT BRIDGES)
OVER C.R. 86

GUE-77-VAR.
PID No. 93017

30/38

58/69

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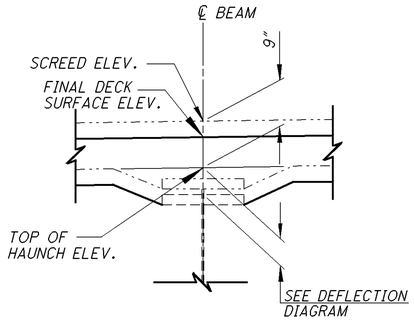


TOP OF DECK SCREED ELEVATIONS

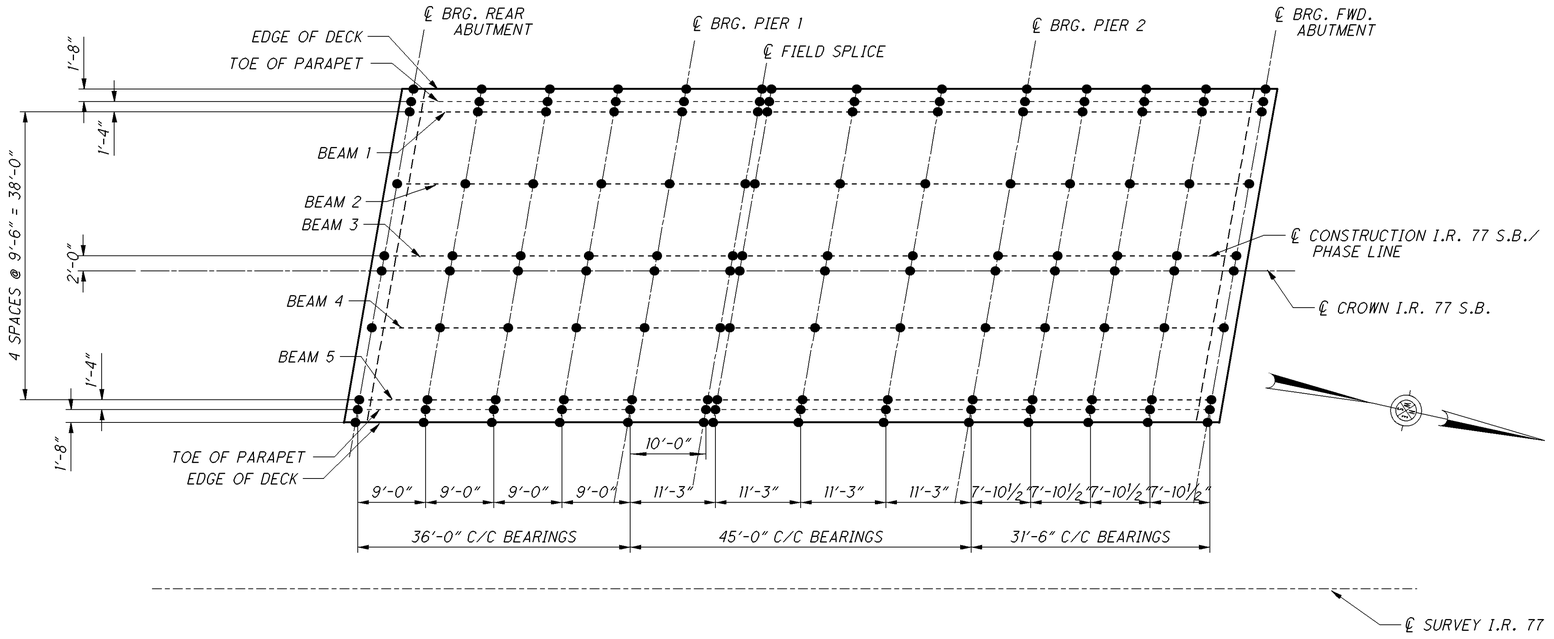
SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.

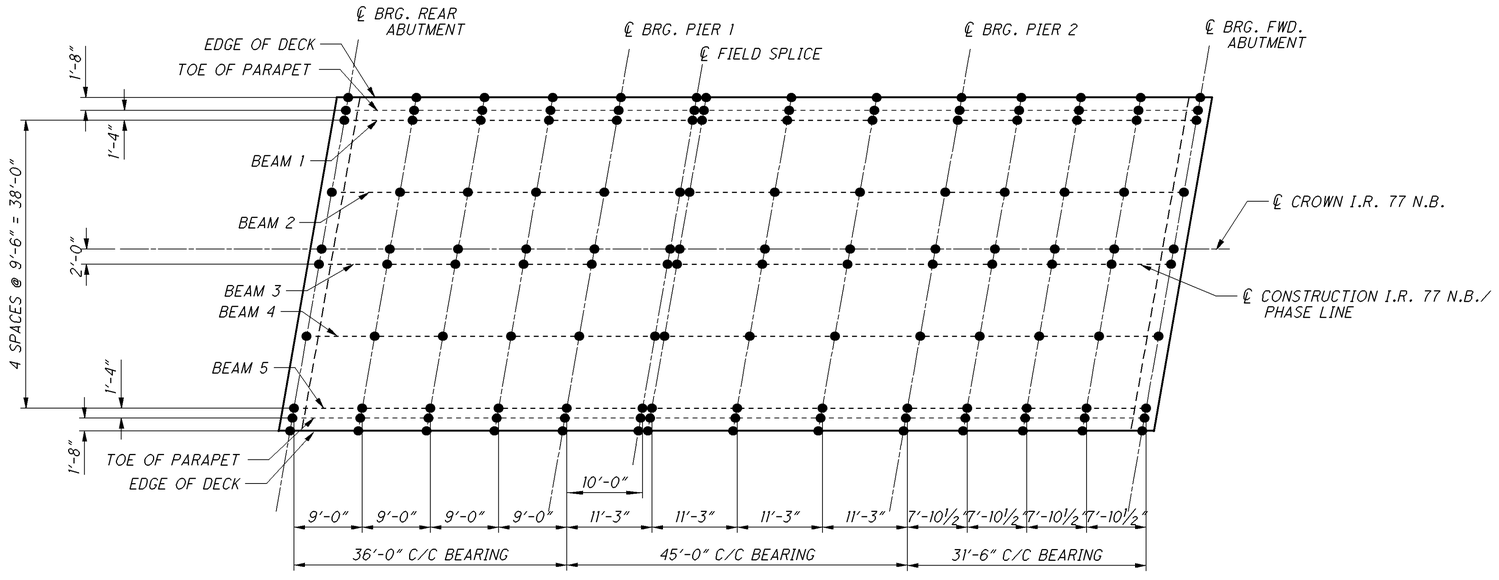
TOP OF HAUNCH SCREED ELEVATIONS

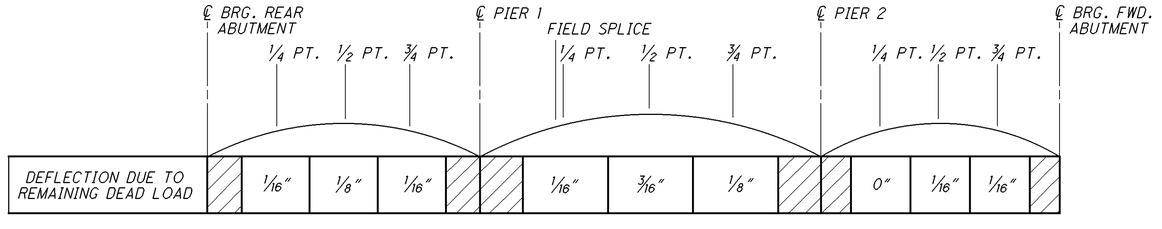
TOP OF HAUNCH ELEVATIONS SHOWN REPRESENT THE THEORETICAL LOCATION OF THE BOTTOM OF THE DECK ABOVE THE GIRDER HAUNCH PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.

FINISHED DECK ELEVATIONS

FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED.







DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
JKS	JKS	JDR	08/22/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		3003450/3003485	

SCREED LAYOUT
BRIDGE NO GUE-77-2067 (LEFT AND RIGHT BRIDGES)
OVER C.R. 86

GUE-77-VAR.
PID No. 93017

DECK ELEVATIONS (SPAN 1)

LOCATION	CL BRG. REAR ABUT. STATION	CL BRG. REAR ABUT. FINISHED DECK ELEV.	CL BRG. REAR ABUT. TOP OF DECK SCREED ELEV.	CL BRG. REAR ABUT. TOP OF HAUNCH SCREED ELEV.	1/4 PT. STATION	1/4 PT. FINISHED DECK ELEV.	1/4 PT. TOP OF DECK SCREED ELEV.	1/4 PT. TOP OF HAUNCH SCREED ELEV.	1/2 PT. STATION	1/2 PT. FINISHED DECK ELEV.	1/2 PT. TOP OF DECK SCREED ELEV.	1/2 PT. TOP OF HAUNCH SCREED ELEV.
Edge of Deck (24' LT)	1133+71.84	868.14	868.14	867.39	1133+80.84	867.88	867.88	867.13	1133+89.84	867.61	867.62	866.87
Toe of Parapet (22.33' LT)	1133+71.55	868.18	868.18	867.43	1133+80.55	867.91	867.92	867.17	1133+89.55	867.65	867.66	866.91
Stringer 1 (21' LT)	1133+71.31	868.20	868.20	867.45	1133+80.31	867.94	867.95	867.20	1133+89.31	867.67	867.68	866.93
Stringer 2 (11.5' LT)	1133+69.66	868.40	868.40	867.65	1133+78.66	868.14	868.14	867.39	1133+87.66	867.87	867.88	867.13
Stringer 3 /CL Constr. (2' LT)	1133+68.00	868.60	868.60	867.85	1133+77.00	868.33	868.34	867.59	1133+86.00	868.07	868.08	867.33
Crown	1133+67.65	868.64	868.64	867.89	1133+76.65	868.37	868.38	867.63	1133+85.65	868.11	868.12	867.37
Stringer 4 (7.5' RT)	1133+66.34	868.56	868.56	867.81	1133+75.34	868.30	868.30	867.55	1133+84.34	868.03	868.04	867.29
Stringer 5 (17' RT)	1133+64.68	868.46	868.46	867.71	1133+73.68	868.20	868.20	867.45	1133+82.68	867.93	867.94	867.19
Toe of Parapet (18.33' RT)	1133+64.45	868.45	868.45	867.70	1133+73.45	868.18	868.19	867.44	1133+82.45	867.92	867.93	867.18
Edge of Deck (20' RT)	1133+64.16	868.43	868.43	867.68	1133+73.16	868.16	868.17	867.42	1133+82.16	867.90	867.91	867.16

LOCATION	3/4 PT. STATION	3/4 PT. FINISHED DECK ELEV.	3/4 PT. TOP OF DECK SCREED ELEV.	3/4 PT. TOP OF HAUNCH SCREED ELEV.	CL PIER 1 STATION	CL PIER 1 FINISHED DECK ELEV.	CL PIER 1 TOP OF DECK SCREED ELEV.	CL PIER 1 TOP OF HAUNCH SCREED ELEV.
Edge of Deck (24' LT)	1133+98.84	867.35	867.35	866.60	1134+07.84	867.08	867.08	866.33
Toe of Parapet (22.33' LT)	1133+98.55	867.38	867.39	866.64	1134+07.55	867.12	867.12	866.37
Stringer 1 (21' LT)	1133+98.31	867.41	867.41	866.66	1134+07.31	867.15	867.15	866.40
Stringer 2 (11.5' LT)	1133+96.66	867.61	867.61	866.86	1134+05.66	867.34	867.34	866.59
Stringer 3 /CL Constr. (2' LT)	1133+95.00	867.80	867.81	867.06	1134+04.00	867.54	867.54	866.79
Crown	1133+94.65	867.85	867.85	867.10	1134+03.65	867.58	867.58	866.83
Stringer 4 (7.5' RT)	1133+93.34	867.77	867.77	867.02	1134+02.34	867.50	867.50	866.75
Stringer 5 (17' RT)	1133+91.68	867.67	867.67	866.92	1134+00.68	867.40	867.40	866.65
Toe of Parapet (18.33' RT)	1133+91.45	867.65	867.66	866.91	1134+00.45	867.39	867.39	866.64
Edge of Deck (20' RT)	1133+91.16	867.64	867.64	866.89	1134+00.16	867.37	867.37	866.62

DECK ELEVATIONS (SPAN 2)

LOCATION	FIELD SPLICE STATION	FIELD SPLICE FINISHED DECK ELEV.	FIELD SPLICE TOP OF DECK SCREED ELEV.	FIELD SPLICE TOP OF HAUNCH SCREED ELEV.	1/4 PT. STATION	1/4 PT. FINISHED DECK ELEV.	1/4 PT. TOP OF DECK SCREED ELEV.	1/4 PT. TOP OF HAUNCH SCREED ELEV.
Edge of Deck (24' LT)	1134+17.84	866.79	866.80	866.05	1134+19.09	866.75	866.76	866.01
Toe of Parapet (22.33' LT)	1134+17.55	866.82	866.83	866.08	1134+18.80	866.79	866.80	866.05
Stringer 1 (21' LT)	1134+17.31	866.85	866.86	866.11	1134+18.56	866.82	866.82	866.07
Stringer 2 (11.5' LT)	1134+15.66	867.05	867.06	866.31	1134+16.91	867.01	867.02	866.27
Stringer 3 /CL Constr. (2' LT)	1134+14.00	867.25	867.25	866.50	1134+15.25	867.21	867.22	866.47
Crown	1134+13.65	867.29	867.30	866.55	1134+14.90	867.25	867.26	866.51
Stringer 4 (7.5' RT)	1134+12.34	867.21	867.22	866.47	1134+13.59	867.17	867.18	866.43
Stringer 5 (17' RT)	1134+10.68	867.11	867.12	866.37	1134+11.93	867.07	867.08	866.33
Toe of Parapet (18.33' RT)	1134+10.45	867.10	867.10	866.35	1134+11.70	867.06	867.07	866.32
Edge of Deck (20' RT)	1134+10.16	867.08	867.09	866.34	1134+11.41	867.04	867.05	866.30

DECK ELEVATIONS (SPAN 2)

LOCATION	1/2 PT. STATION	1/2 PT. FINISHED DECK ELEV.	1/2 PT. TOP OF DECK SCREED ELEV.	1/2 PT. TOP OF HAUNCH SCREED ELEV.	3/4 PT STATION	3/4 PT FINISHED DECK ELEV.	3/4 PT TOP OF DECK SCREED ELEV.	3/4 PT TOP OF HAUNCH SCREED ELEV.	CL PIER 2 STATION	CL PIER 2 FINISHED DECK ELEV.	CL PIER 2 TOP OF DECK SCREED ELEV.	CL PIER 2 TOP OF HAUNCH SCREED ELEV.
Edge of Deck (24' LT)	1134+30.34	866.42	866.44	865.69	1134+41.59	866.09	866.10	865.35	1134+52.84	865.76	865.76	865.01
Toe of Parapet (22.33' LT)	1134+30.05	866.46	866.47	865.72	1134+41.30	866.13	866.14	865.39	1134+52.55	865.80	865.80	865.05
Stringer 1 (21' LT)	1134+29.81	866.49	866.50	865.75	1134+41.06	866.15	866.16	865.41	1134+52.31	865.82	865.82	865.07
Stringer 2 (11.5' LT)	1134+28.16	866.68	866.70	865.95	1134+39.41	866.35	866.36	865.61	1134+50.66	866.02	866.02	865.27
Stringer 3 /CL Constr. (2' LT)	1134+26.50	866.88	866.89	866.14	1134+37.75	866.55	866.56	865.81	1134+49.00	866.22	866.22	865.47
Crown	1134+26.15	866.92	866.93	866.18	1134+37.40	866.59	866.60	865.85	1134+48.65	866.26	866.26	865.51
Stringer 4 (7.5' RT)	1134+24.84	866.84	866.86	866.11	1134+36.09	866.51	866.52	865.77	1134+47.34	866.18	866.18	865.43
Stringer 5 (17' RT)	1134+23.18	866.74	866.76	866.01	1134+34.43	866.41	866.42	865.67	1134+45.68	866.08	866.08	865.33
Toe of Parapet (18.33' RT)	1134+22.95	866.73	866.74	865.99	1134+34.20	866.40	866.41	865.66	1134+45.45	866.07	866.07	865.32
Edge of Deck (20' RT)	1134+22.66	866.71	866.72	865.97	1134+33.91	866.38	866.39	865.64	1134+45.16	866.05	866.05	865.30

DECK ELEVATIONS (SPAN 3)

LOCATION	1/4 PT. STATION	1/4 PT. FINISHED DECK ELEV.	1/4 PT. TOP OF DECK SCREED ELEV.	1/4 PT. TOP OF HAUNCH SCREED ELEV.	1/2 PT. STATION	1/2 PT. FINISHED DECK ELEV.	1/2 PT. TOP OF DECK SCREED ELEV.	1/2 PT. TOP OF HAUNCH SCREED ELEV.
Edge of Deck (24' LT)	1134+60.71	865.53	865.53	864.78	1134+68.59	865.30	865.30	864.55
Toe of Parapet (22.33' LT)	1134+60.42	865.57	865.57	864.82	1134+68.30	865.33	865.34	864.59
Stringer 1 (21' LT)	1134+60.19	865.59	865.59	864.84	1134+68.06	865.36	865.37	864.62
Stringer 2 (11.5' LT)	1134+58.53	865.79	865.79	865.04	1134+66.41	865.56	865.56	864.81
Stringer 3 /CL Constr. (2' LT)	1134+56.87	865.99	865.99	865.24	1134+64.75	865.76	865.76	865.01
Crown	1134+56.53	866.03	866.03	865.28	1134+64.40	865.80	865.80	865.05
Stringer 4 (7.5' RT)	1134+55.22	865.95	865.95	865.20	1134+63.09	865.72	865.72	864.97
Stringer 5 (17' RT)	1134+53.56	865.85	865.85	865.10	1134+61.43	865.62	865.62	864.87
Toe of Parapet (18.33' RT)	1134+53.33	865.84	865.84	865.09	1134+61.20	865.61	865.61	864.86
Edge of Deck (20' RT)	1134+53.03	865.82	865.82	865.07	1134+60.91	865.59	865.59	864.84

LOCATION	3/4 PT. STATION	3/4 PT. FINISHED DECK ELEV.	3/4 PT. TOP OF DECK SCREED ELEV.	3/4 PT. TOP OF HAUNCH SCREED ELEV.	CL BRG. FWD. ABUT. STATION	CL BRG. FWD. ABUT. FINISHED DECK ELEV.	CL BRG. FWD. ABUT. TOP OF DECK SCREED ELEV.	CL BRG. FWD. ABUT. TOP OF HAUNCH SCREED ELEV.
Edge of Deck (24' LT)	1134+76.46	865.07	865.07	864.32	1134+84.34	864.84	864.84	864.09
Toe of Parapet (22.33' LT)	1134+76.17	865.10	865.11	864.36	1134+84.05	864.87	864.87	864.12
Stringer 1 (21' LT)	1134+75.94	865.13	865.13	864.38	1134+83.81	864.90	864.90	864.15
Stringer 2 (11.5' LT)	1134+74.28	865.33	865.33	864.58	1134+82.16	865.10	865.10	864.35
Stringer 3 /CL Constr. (2' LT)	1134+72.62	865.52	865.53	864.78	1134+80.50	865.29	865.29	864.54
Crown	1134+72.28	865.57	865.57	864.82	1134+80.15	865.33	865.33	864.58
Stringer 4 (7.5' RT)	1134+70.97	865.49	865.49	864.74	1134+78.84	865.26	865.26	864.51
Stringer 5 (17' RT)	1134+69.31	865.39	865.39	864.64	1134+77.18	865.16	865.16	864.41
Toe of Parapet (18.33' RT)	1134+69.08	865.37	865.38	864.63	1134+76.95	865.14	865.14	864.39
Edge of Deck (20' RT)	1134+68.78	865.36	865.36	864.61	1134+76.66	865.12	865.12	864.37

REAR APPROACH SLAB FINISH ELEVATIONS

LOCATION	BEGIN APPR. SLAB STATION	BEGIN APPR. SLAB ELEV.	1/2 PT. STATION	1/2 PT. ELEV.	END APPR. SLAB STATION	END APPR. SLAB ELEV.
Edge of Slab (22.83' LT)	1133+43.46	868.58	1133+56.96	868.18	1133+70.46	867.78
Toe of Curb (22.33' LT)	1133+43.38	868.59	1133+56.88	868.19	1133+70.38	867.79
CL Construction (2' LT)	1133+39.83	869.01	1133+53.33	868.61	1133+66.83	868.21
Crown	1133+39.48	869.05	1133+52.98	868.65	1133+66.48	868.26
Toe of Curb (18.33' RT)	1133+36.28	868.86	1133+49.78	868.46	1133+63.28	868.06
Edge of Slab (18.83' RT)	1133+36.19	868.85	1133+49.69	868.46	1133+63.19	868.06

FORWARD APPROACH SLAB FINISH ELEVATIONS

LOCATION	BEGIN APPR. SLAB STATION	BEGIN APPR. SLAB ELEV.	1/2 PT. STATION	1/2 PT. ELEV.	END APPR. SLAB STATION	END APPR. SLAB ELEV.
Edge of Slab (22.83' LT)	1134+86.01	864.39	1134+99.51	863.99	1135+13.01	863.60
Toe of Curb (22.33' LT)	1134+85.93	864.40	1134+99.43	864.00	1135+12.93	863.61
CL Construction (2' LT)	1134+82.38	864.82	1134+95.88	864.42	1135+09.38	864.03
Crown	1134+82.03	864.86	1134+95.53	864.47	1135+09.03	864.07
Toe of Curb (18.33' RT)	1134+78.83	864.67	1134+92.33	864.27	1135+05.83	863.88
Edge of Slab (18.83' RT)	1134+78.74	864.67	1134+92.24	864.27	1135+05.74	863.87

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED JKS | CHECKED JDR | DRAWN JKS | REVISED | REVIEWED JDR | DATE 08/22/17 | STRUCTURE FILE NUMBER 3003450/3003485

SCREED TABLE (LEFT BRIDGE)
BRIDGE NO GUE-77-2067 (LEFT AND RIGHT BRIDGES)
OVER C.R. 86

GUE-77-VAR.
PID No. 93017

DECK ELEVATIONS (SPAN 1)

LOCATION	CL BRG. REAR ABUT.				1/4 PT.				1/2 PT.				3/4 PT.			
	STATION	FINISHED DECK ELEV.	TOP OF DECK SCREED ELEV.	TOP OF HAUNCH SCREED ELEV.	STATION	FINISHED DECK ELEV.	TOP OF DECK SCREED ELEV.	TOP OF HAUNCH SCREED ELEV.	STATION	FINISHED DECK ELEV.	TOP OF DECK SCREED ELEV.	TOP OF HAUNCH SCREED ELEV.	STATION	FINISHED DECK ELEV.	TOP OF DECK SCREED ELEV.	TOP OF HAUNCH SCREED ELEV.
Edge of Deck (20' LT)	1133+56.48	868.55	868.55	867.80	1133+65.48	868.28	868.29	867.54	1133+74.48	868.01	868.02	867.27	1133+83.48	867.75	867.75	867.00
Toe of Curb (18.33' LT)	1133+56.19	868.59	868.59	867.84	1133+65.19	868.32	868.32	867.57	1133+74.19	868.05	868.06	867.31	1133+83.19	867.78	867.78	867.03
Stringer 1 (17' LT)	1133+55.96	868.61	868.61	867.86	1133+64.96	868.35	868.35	867.60	1133+73.96	868.08	868.08	867.33	1133+82.96	867.81	867.81	867.06
Stringer 2 (7.5' LT)	1133+54.30	868.81	868.81	868.06	1133+63.30	868.54	868.55	867.80	1133+72.30	868.27	868.28	867.53	1133+81.30	868.01	868.01	867.26
Crown	1133+52.99	868.97	868.97	868.22	1133+61.99	868.70	868.71	867.96	1133+70.99	868.43	868.44	867.69	1133+79.99	868.16	868.17	867.42
Stringer 3 /CL Constr. (2' RT)	1133+52.64	868.95	868.95	868.20	1133+61.64	868.68	868.69	867.94	1133+70.64	868.41	868.42	867.67	1133+79.64	868.14	868.14	867.39
Stringer 4 (9.5' RT)	1133+51.33	868.87	868.87	868.12	1133+60.33	868.60	868.61	867.86	1133+69.33	868.33	868.34	867.59	1133+78.33	868.06	868.07	867.32
Stringer 5 (19' RT)	1133+49.67	868.77	868.77	868.02	1133+58.67	868.50	868.51	867.76	1133+67.67	868.23	868.24	867.49	1133+76.67	867.96	867.97	867.22
Toe of Curb (22.33' RT)	1133+49.09	868.74	868.74	867.99	1133+58.09	868.47	868.47	867.72	1133+67.09	868.20	868.21	867.46	1133+76.09	867.93	867.93	867.18
Edge of Deck (24' RT)	1133+48.80	868.72	868.72	867.97	1133+57.80	868.45	868.46	867.71	1133+66.80	868.18	868.19	867.44	1133+75.80	867.91	867.92	867.17

DECK ELEVATIONS (SPAN 2)

LOCATION	CL PIER 1				FIELD SPLICE				1/4 PT.			
	STATION	FINISHED DECK ELEV.	TOP OF DECK SCREED ELEV.	TOP OF HAUNCH SCREED ELEV.	STATION	FINISHED DECK ELEV.	TOP OF DECK SCREED ELEV.	TOP OF HAUNCH SCREED ELEV.	STATION	FINISHED DECK ELEV.	TOP OF DECK SCREED ELEV.	TOP OF HAUNCH SCREED ELEV.
Edge of Deck (20' LT)	1133+92.48	867.48	867.48	866.73	1134+02.48	867.18	867.19	866.44	1134+03.73	867.14	867.15	866.40
Toe of Curb (18.33' LT)	1133+92.19	867.51	867.51	866.76	1134+02.19	867.21	867.22	866.47	1134+03.44	867.18	867.18	866.43
Stringer 1 (17' LT)	1133+91.96	867.54	867.54	866.79	1134+01.96	867.24	867.25	866.50	1134+03.21	867.20	867.21	866.46
Stringer 2 (7.5' LT)	1133+90.30	867.74	867.74	866.99	1134+00.30	867.44	867.45	866.70	1134+01.55	867.40	867.41	866.66
Crown	1133+88.99	867.89	867.89	867.14	1133+98.99	867.59	867.60	866.85	1134+00.24	867.56	867.56	866.81
Stringer 3 /CL Constr. (2' RT)	1133+88.64	867.87	867.87	867.12	1133+98.64	867.57	867.58	866.83	1133+99.89	867.54	867.54	866.79
Stringer 4 (9.5' RT)	1133+87.33	867.79	867.79	867.04	1133+97.33	867.50	867.50	866.75	1133+98.58	867.46	867.47	866.72
Stringer 5 (19' RT)	1133+85.67	867.70	867.70	866.95	1133+95.67	867.40	867.40	866.65	1133+96.92	867.36	867.37	866.62
Toe of Curb (22.33' RT)	1133+85.09	867.66	867.66	866.91	1133+95.09	867.36	867.37	866.62	1133+96.34	867.32	867.33	866.58
Edge of Deck (24' RT)	1133+84.80	867.64	867.64	866.89	1133+94.80	867.35	867.35	866.60	1133+96.05	867.31	867.32	866.57

DECK ELEVATIONS (SPAN 2)

LOCATION	1/2 PT.				3/4 PT.				CL PIER 2			
	STATION	FINISHED DECK ELEV.	TOP OF DECK SCREED ELEV.	TOP OF HAUNCH SCREED ELEV.	STATION	FINISHED DECK ELEV.	TOP OF DECK SCREED ELEV.	TOP OF HAUNCH SCREED ELEV.	STATION	FINISHED DECK ELEV.	TOP OF DECK SCREED ELEV.	TOP OF HAUNCH SCREED ELEV.
Edge of Deck (20' LT)	1134+14.98	866.80	866.82	866.07	1134+26.23	866.47	866.48	865.73	1134+37.48	866.13	866.13	865.38
Toe of Curb (18.33' LT)	1134+14.69	866.84	866.85	866.10	1134+25.94	866.50	866.51	865.76	1134+37.19	866.17	866.17	865.42
Stringer 1 (17' LT)	1134+14.46	866.87	866.88	866.13	1134+25.71	866.53	866.54	865.79	1134+36.96	866.20	866.20	865.45
Stringer 2 (7.5' LT)	1134+12.80	867.06	867.08	866.33	1134+24.05	866.73	866.74	865.99	1134+35.30	866.39	866.39	865.64
Crown	1134+11.49	867.22	867.23	866.48	1134+22.74	866.89	866.89	866.14	1134+33.99	866.55	866.55	865.80
Stringer 3 /CL Constr. (2' RT)	1134+11.14	867.20	867.21	866.46	1134+22.39	866.86	866.87	866.12	1134+33.64	866.53	866.53	865.78
Stringer 4 (9.5' RT)	1134+09.83	867.12	867.14	866.39	1134+21.08	866.79	866.79	866.04	1134+32.33	866.45	866.45	865.70
Stringer 5 (19' RT)	1134+08.17	867.02	867.04	866.29	1134+19.42	866.69	866.70	865.95	1134+30.67	866.35	866.35	865.60
Toe of Curb (22.33' RT)	1134+07.59	866.99	867.00	866.25	1134+18.84	866.65	866.66	865.91	1134+30.09	866.32	866.32	865.57
Edge of Deck (24' RT)	1134+07.30	866.97	866.98	866.23	1134+18.55	866.64	866.64	865.89	1134+29.80	866.30	866.30	865.55

DECK ELEVATIONS (SPAN 3)

LOCATION	1/4 PT.				1/2 PT.				3/4 PT.				CL BRG. FWD. ABUT.			
	STATION	FINISHED DECK ELEV.	TOP OF DECK SCREED ELEV.	TOP OF HAUNCH SCREED ELEV.	STATION	FINISHED DECK ELEV.	TOP OF DECK SCREED ELEV.	TOP OF HAUNCH SCREED ELEV.	STATION	FINISHED DECK ELEV.	TOP OF DECK SCREED ELEV.	TOP OF HAUNCH SCREED ELEV.	STATION	FINISHED DECK ELEV.	TOP OF DECK SCREED ELEV.	TOP OF HAUNCH SCREED ELEV.
Edge of Deck (20' LT)	1134+45.36	865.90	865.90	865.15	1134+53.23	865.66	865.67	864.92	1134+61.11	865.43	865.43	864.68	1134+68.98	865.19	865.19	864.44
Toe of Curb (18.33' LT)	1134+45.06	865.93	865.93	865.18	1134+52.94	865.70	865.70	864.95	1134+60.81	865.46	865.47	864.72	1134+68.69	865.23	865.23	864.48
Stringer 1 (17' LT)	1134+44.83	865.96	865.96	865.21	1134+52.71	865.72	865.73	864.98	1134+60.58	865.49	865.49	864.74	1134+68.46	865.25	865.25	864.50
Stringer 2 (7.5' LT)	1134+43.17	866.16	866.16	865.41	1134+51.05	865.92	865.93	865.18	1134+58.92	865.69	865.69	864.94	1134+66.80	865.45	865.45	864.70
Crown	1134+41.87	866.31	866.31	865.56	1134+49.74	866.08	866.08	865.33	1134+57.62	865.84	865.85	865.10	1134+65.49	865.61	865.61	864.86
Stringer 3 /CL Constr. (2' RT)	1134+41.52	866.29	866.29	865.54	1134+49.39	866.06	866.06	865.31	1134+57.27	865.82	865.83	865.08	1134+65.14	865.59	865.59	864.84
Stringer 4 (9.5' RT)	1134+40.21	866.22	866.22	865.47	1134+48.08	865.98	865.98	865.23	1134+55.96	865.74	865.75	865.00	1134+63.83	865.51	865.51	864.76
Stringer 5 (19' RT)	1134+38.55	866.12	866.12	865.37	1134+46.42	865.88	865.88	865.13	1134+54.30	865.65	865.65	864.90	1134+62.17	865.41	865.41	864.66
Toe of Curb (22.33' RT)	1134+37.97	866.08	866.08	865.33	1134+45.84	865.85	865.85	865.10	1134+53.72	865.61	865.61	864.86	1134+61.59	865.38	865.38	864.63
Edge of Deck (24' RT)	1134+37.68	866.06	866.07	865.32	1134+45.55	865.83	865.83	865.08	1134+53.43	865.59	865.60	864.85	1134+61.30	865.36	865.36	864.61

REAR APPROACH SLAB FINISH ELEVATIONS

LOCATION	BEGIN APPR. SLAB		1/2 PT.		END APPR. SLAB	
	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.
Edge of Slab (18.83' LT)	1133+27.41	869.02	1133+40.91	868.62	1133+54.41	868.22
Toe of Curb (18.33' LT)	1133+27.32	869.03	1133+40.82	868.63	1133+54.32	868.23
CL Construction (2' LT)	1133+24.12	869.41	1133+37.62	869.01	1133+51.12	868.61
Crown	1133+23.77	869.39	1133+37.27	868.99	1133+50.77	868.59
Toe of Curb (22.33' RT)	1133+20.22	869.18	1133+33.72	868.78	1133+47.22	868.38
Edge of Slab (22.83' RT)	1133+20.14	869.18	1133+33.64	868.77	1133+47.14	868.37

FORWARD APPROACH SLAB FINISH ELEVATIONS

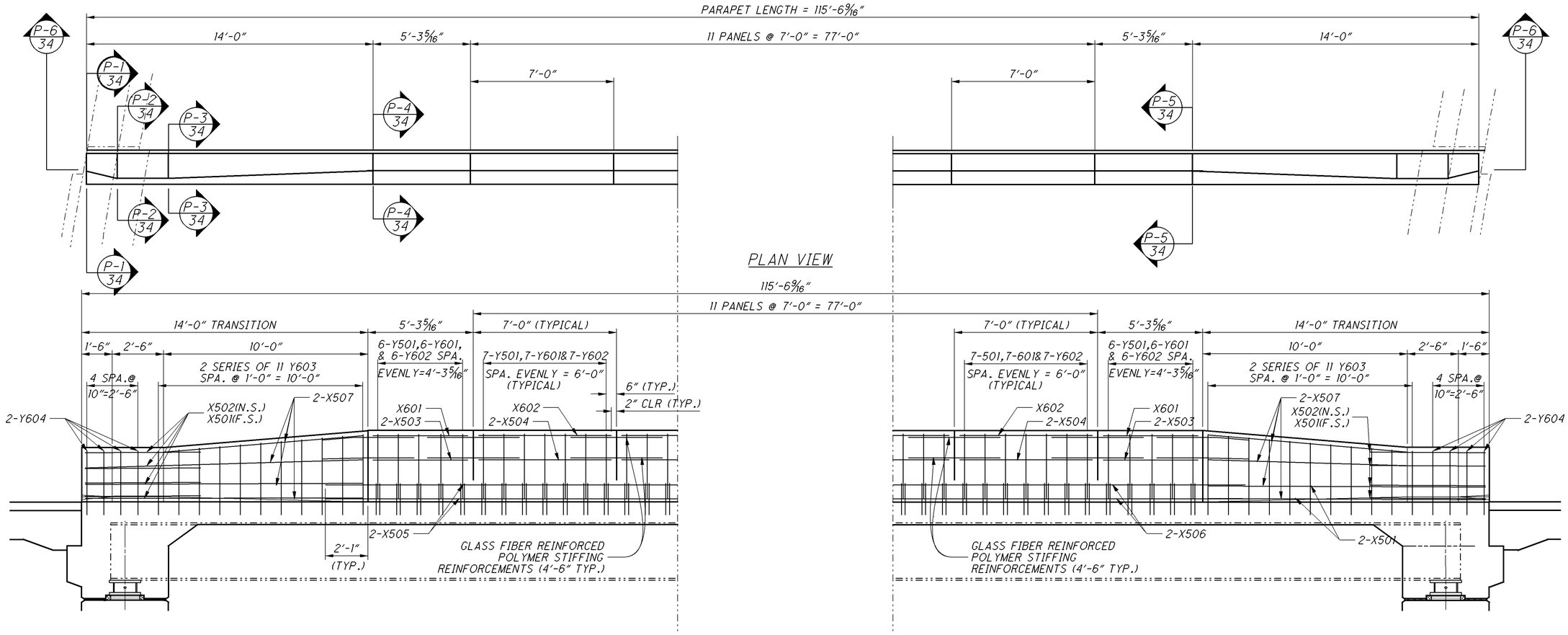
LOCATION	BEGIN APPR. SLAB		1/2 PT.		END APPR. SLAB	
	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.
Edge of Slab (18.83' LT)	1134+69.96	864.76	1134+83.46	864.36	1134+96.87	863.96
Toe of Curb (18.33' LT)	1134+69.87	864.77	1134+83.37	864.37	1134+96.64	863.97
CL Construction (2' LT)	1134+66.67	865.16	1134+80.17	864.75	1134+93.67	864.35
Crown	1134+66.32	865.14	1134+79.82	864.73	1134+93.32	864.33
Toe of Curb (22.33' RT)	1134+62.77	864.92	1134+76.27	864.52	1134+89.77	864.12
Edge of Slab (22.83' RT)	1134+62.69	864.92	1134+76.19	864.52	1134+89.69	864.11

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DATE 08/22/17
REVIEWED JDR
STRUCTURE FILE NUMBER 3003450/3003485
DRAWN JKS
REVISED
DESIGNED JKS
CHECKED JDR

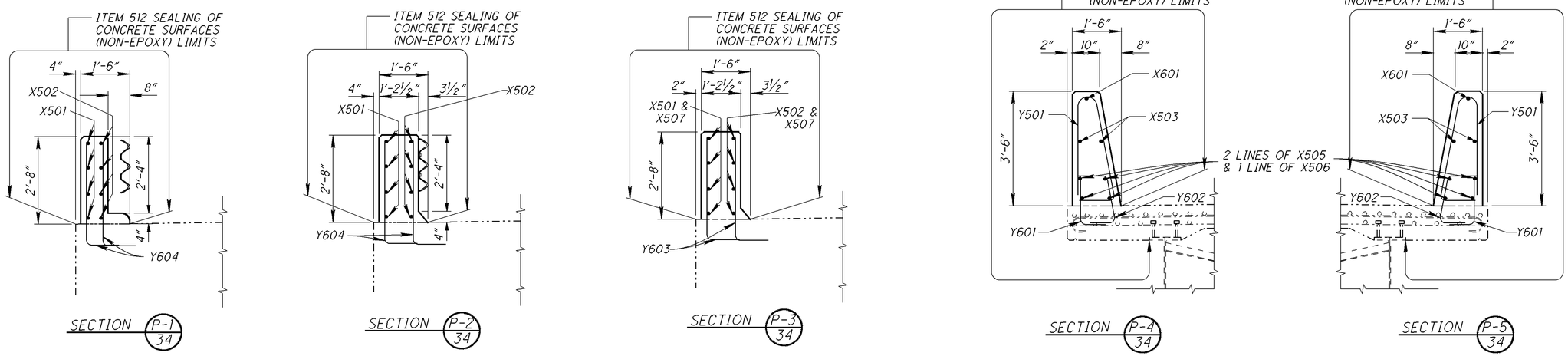
SCREED TABLE (RIGHT BRIDGE)
BRIDGE NO GUE-77-2067 (LEFT AND RIGHT BRIDGES)
OVER C.R. 86

GUE-77-VAR.
PID No. 93017



SECTION P-6 34

MIN. LAP LENGTH	
#5	3'-5"
#6	4'-1"



SECTION P-1 34

SECTION P-2 34

SECTION P-3 34

SECTION P-4 34

SECTION P-5 34

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
JKS	JKS	JDR	08/22/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		3003450/3003485	

PROPOSED PARAPET DETAILS
BRIDGE NO GUE-77-2067 (LEFT AND RIGHT BRIDGES)
OVER C.R. 86

GUE-77-VAR.
PID No. 93017

34/38

62/69

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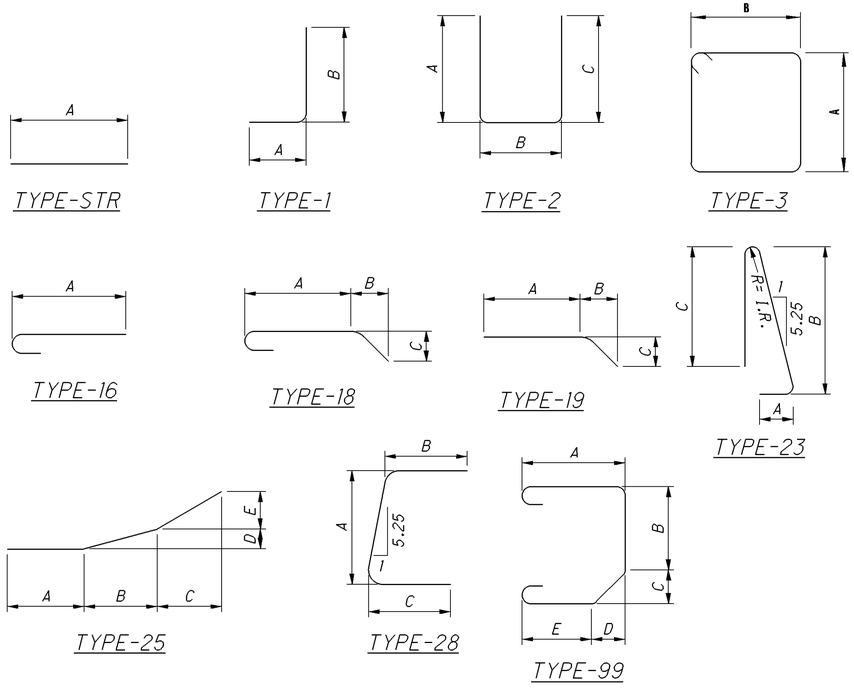
MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
REAR AND FORWARD ABUTMENTS (LEFT BRIDGE)											
A501	16	23'-0"	384	STR.	23'-0"						
A502	40	8'-0"	334	STR.	8'-0"						
A503	6	7'-7"	47	STR.	7'-7"						
A504	6	8'-0½"	50	STR.	8'-0½"						
A505	2	4'-3"	9	STR.	4'-3"						
A506	2	4'-8½"	10	STR.	4'-8½"						
A507	2	7'-10"	16	19	1'-7"	6'-0"	1'-11"				
A508	2	8'-3"	17	19	2'-0"	6'-0"	1'-11"				
A509	24	22'-3"	557	2	10'-2"	2'-2"	10'-2"				
A510	8	10'-9"	90	2	4'-5"	2'-2"	4'-5"				
A511	4	6'-11"			2'-6"		2'-6"				
	SERIES OF 4	TO 9'-11"	140	2	TO 4'-0"	2'-2"	TO 4'-0"				0'-6"
A512	4	10'-10"	45	2	4'-5"	2'-2"	4'-5"				
A513	28	16'-1"	470	3	1'-10"	5'-11"					
A514	3	13'-9"	43	2	5'-8"	2'-8"	5'-8"				
A515	114	4'-8"	555	STR.	4'-8"						
A516	60	9'-9"	610	2	3'-8"	2'-8"	3'-8"				
A517	2	7'-8"	16	19	1'-7"	5'-9"	2'-0"				
A518	2	8'-1"	17	19	2'-0"	5'-9"	2'-0"				
A519	6	7'-3"	45	STR.	7'-3"						
A520	6	7'-9"	48	STR.	7'-9"						
A521	2	4'-4½"	9	STR.	4'-4½"						
A522	2	4'-10½"	10	STR.	4'-10½"						
A523	16	26'-0"	434	STR.	26'-0"						
A801	8	9'-11"	212	STR.	9'-11"						
A802	8	9'-8"	206	STR.	9'-8"						
A803	16	24'-6"	1,047	STR.	24'-6"						
A804	8	9'-2"	196	STR.	9'-2"						
A805	8	10'-2"	217	STR.	10'-2"						
ABUTMENTS SUB-TOTAL			5,834								
REAR AND FORWARD DIAPHRAGMS (LEFT BRIDGE)											
D401	4	2'-8½"	7	STR.	2'-8½"						
D501	62	8'-6"	550	2	3'-0"	2'-8½"	3'-0"				
D502	68	8'-10"	626	2	3'-2"	2'-8½"	3'-2"				
D503	6	5'-10"	37	2	1'-8"	2'-8½"	1'-8"				
D504	86	8'-9"	785	99	3'-2"	1'-5"	3"	6"	2'-8"		
D505	8	20'-10"	174	STR.	20'-10"						
D801	12	16'-8"	534	1	1'-4"	15'-6"					
D802	12	3'-11"	125	1	1'-4"	2'-9½"					
D803	16	5'-7"	249	18	3'-3"	1'-0"	1'-0"				
D804	52	22'-1"	3,066	STR.	22'-1"						
D805	60	4'-11"	788	18	2'-8"	1'-0"	1'-0"				
DIAPHRAGMS SUB-TOTAL			6,941								
BRIDGE DECK (LEFT BRIDGE)											
S401	20	3'-0"	40	STR.	3'-0"						
S402	184	29'-6"	3,626	STR.	29'-6"						
S403	482	8'-9"	2,817	16	8'-3"						
S501	456	22'-1"	10,503	STR.	22'-1"						
S502	288	40'-8"	12,216	STR.	40'-8"						
S503	482	22'-8"	11,395	16	22'-1"						
DECK SUB-TOTAL			40,597								

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
PARAPETS (LEFT BRIDGE)											
X501	16	5'-8"	95	STR.	5'-8"						
X502	16	5'-8"	95	25	1'-10"	2'-5"	1'-4½"	0'-1½"	0'-5"		
X503	8	4'-11"	41	STR.	4'-11"						
X504	44	6'-8"	306	STR.	6'-8"						
X505	16	40'-0"	668	STR.	40'-0"						
X506	8	18'-7"	155	STR.	18'-7"						
X507	32	10'-0"	334	STR.	10'-0"						
X601	4	4'-11"	30	STR.	4'-11"						
X602	22	6'-8"	220	STR.	6'-8"						
Y501	174	7'-4"	1,331	23	0'-11"	3'-3"	3'-0"			2¾"	
Y601	174	2'-5"	632	1	1'-0"	1'-7"					
Y602	174	3'-2"	828	28	1'-7"	0'-11"	1'-0"				
Y603	8	4'-0"				3'-2"					
	SERIES OF 11	TO 4'-10"	584	1	1'-0"	TO 4'-0"					0'-1"
Y604	32	4'-0"	192	1	1'-0"	3'-2"					
PARAPETS SUB-TOTAL			5,511								
ABUTMENTS SUB-TOTAL			5,834								
DIAPHRAGMS SUB-TOTAL			6,941								
DECKS SUB-TOTAL			40,591								
PARAPET SUB-TOTAL			5,511								
LEFT BRIDGE GRAND TOTAL			58,883								



DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

REVIEWED JDR DATE 08/22/17
STRUCTURE FILE NUMBER 3003450/3003485

DRAWN JKS REVISED

DESIGNED JKS CHECKED JDR

REINFORCING STEEL SCHEDULE (LEFT BRIDGE)

BRIDGE NO GUE-77-2067 (LEFT AND RIGHT BRIDGES)
OVER C.R. 86

GUE-77-VAR.
PID No. 93017

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
REAR AND FORWARD ABUTMENTS (RIGHT BRIDGE)											
A501	16	23'-0"	384	STR.	23'-0"						
A502	40	8'-0"	334	STR.	8'-0"						
A503	6	7'-7"	47	STR.	7'-7"						
A504	6	8'-0½"	50	STR.	8'-0½"						
A505	2	4'-3"	9	STR.	4'-3"						
A506	2	4'-8½"	10	STR.	4'-8½"						
A507	2	7'-10"	16	19	1'-7"	6'-0"	1'-11"				
A508	2	8'-3"	17	19	2'-0"	6'-0"	1'-11"				
A509	24	22'-3"	557	2	10'-2"	2'-2"	10'-2"				
A510	8	10'-9"	90	2	4'-5"	2'-2"	4'-5"				
A511	4	6'-11"			2'-6"		2'-6"				
	SERIES OF 4	TO 9'-11"	140	2	TO 4'-0"	2'-2"	TO 4'-0"				0'-6"
A512	4	10'-10"	45	2	4'-5"	2'-2"	4'-5"				
A513	28	16'-1"	470	3	1'-10"	5'-11"					
A514	3	13'-9"	43	2	5'-8"	2'-8"	5'-8"				
A515	114	4'-8"	555	STR.	4'-8"						
A516	60	9'-9"	610	2	3'-8"	2'-8"	3'-8"				
A517	2	7'-8"	16	19	1'-7"	5'-9"	2'-0"				
A518	2	8'-1"	17	19	2'-0"	5'-9"	2'-0"				
A519	6	7'-3"	45	STR.	7'-3"						
A520	6	7'-9"	48	STR.	7'-9"						
A521	2	4'-4½"	9	STR.	4'-4½"						
A522	2	4'-10½"	10	STR.	4'-10½"						
A523	16	26'-0"	434	STR.	26'-0"						
A801	8	9'-11"	212	STR.	9'-11"						
A802	8	9'-8"	206	STR.	9'-8"						
A803	16	24'-6"	1,047	STR.	24'-6"						
A804	8	9'-2"	196	STR.	9'-2"						
A805	8	10'-2"	217	STR.	10'-2"						
ABUTMENTS SUB-TOTAL			5,834								
REAR AND FORWARD DIAPHRAGMS (RIGHT BRIDGE)											
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D501	62	8'-6"	550	2	3'-0"	2'-8½"	3'-0"				
D502	68	8'-10"	626	2	3'-2"	2'-8½"	3'-2"				
D503	6	5'-10"	37	2	1'-8"	2'-8½"	1'-8"				
D504	86	8'-9"	785	99	3'-2"	1'-5"	3"	6"	2'-8"		
D505	8	20'-10"	174	STR.	20'-10"						
D801	12	16'-8"	534	1	1'-4"	15'-6"					
D802	12	3'-11"	125	1	1'-4"	2'-9½"					
D803	16	5'-7"	249	18	3'-3"	1'-0"	1'-0"				
D804	52	22'-1"	3,066	STR.	22'-1"						
D805	60	4'-11"	788	18	2'-8"	1'-0"	1'-0"				
DIAPHRAGMS SUB-TOTAL			6,941								
BRIDGE DECK (RIGHT BRIDGE)											
S401	20	3'-0"	40	STR.	3'-0"						
S402	184	29'-6"	3,626	STR.	29'-6"						
S403	482	8'-9"	2,817	16	8'-3"						
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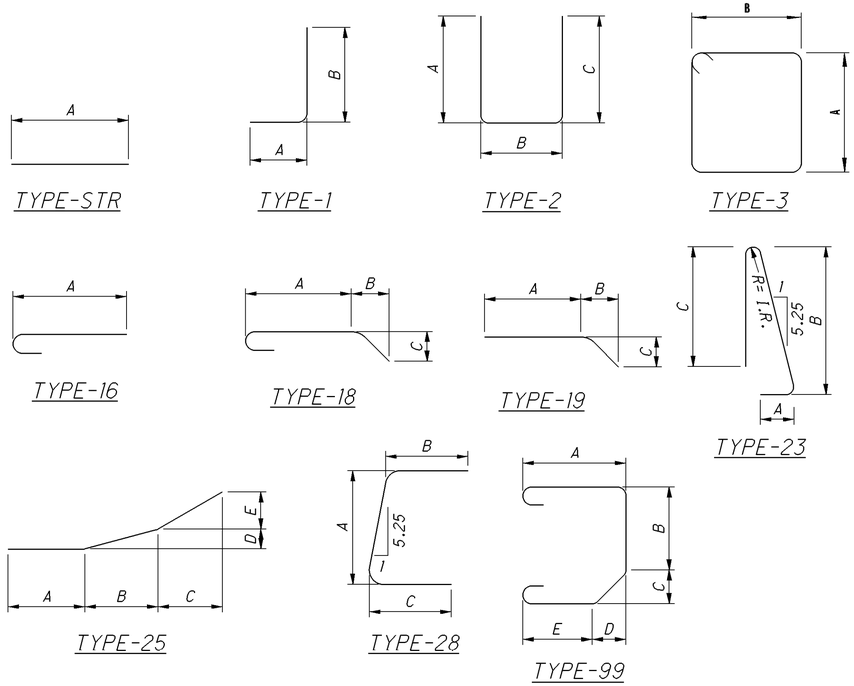
S502	288	40'-8"	12,216	STR.	40'-8"						
S503	482	22'-8"	11,395	16	22'-1"						
DECK SUB-TOTAL			40,597								

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
PARAPETS (RIGHT BRIDGE)											
X501	16	5'-8"	95	STR.	5'-8"						
X502	16	5'-8"	95	25	1'-10"	2'-5"	1'-4½"	0'-1½"	0'-5"		
X503	8	4'-11"	41	STR.	4'-11"						
X504	44	6'-8"	306	STR.	6'-8"						
X505	16	40'-0"	668	STR.	40'-0"						
X506	8	18'-7"	155	STR.	18'-7"						
X507	32	10'-0"	334	STR.	10'-0"						
X601	4	4'-11"	30	STR.	4'-11"						
X602	22	6'-8"	220	STR.	6'-8"						
Y501	174	7'-4"	1,331	23	0'-11"	3'-3"	3'-0"			2¾"	
Y601	174	2'-5"	632	1	1'-0"	1'-7"					
Y602	174	3'-2"	828	28	1'-7"	0'-11"	1'-0"				
Y603	8	4'-0"				3'-2"					
	SERIES OF 11	TO 4'-10"	584	1	1'-0"	TO 4'-0"					0'-1"
Y604	32	4'-0"	192	1	1'-0"	3'-2"					
PARAPETS SUB-TOTAL			5,511								
ABUTMENTS SUB-TOTAL			5,834								
DIAPHRAGMS SUB-TOTAL			6,941								
DECKS SUB-TOTAL			40,591								
PARAPET SUB-TOTAL			5,511								
RIGHT BRIDGE GRAND TOTAL			58,883								

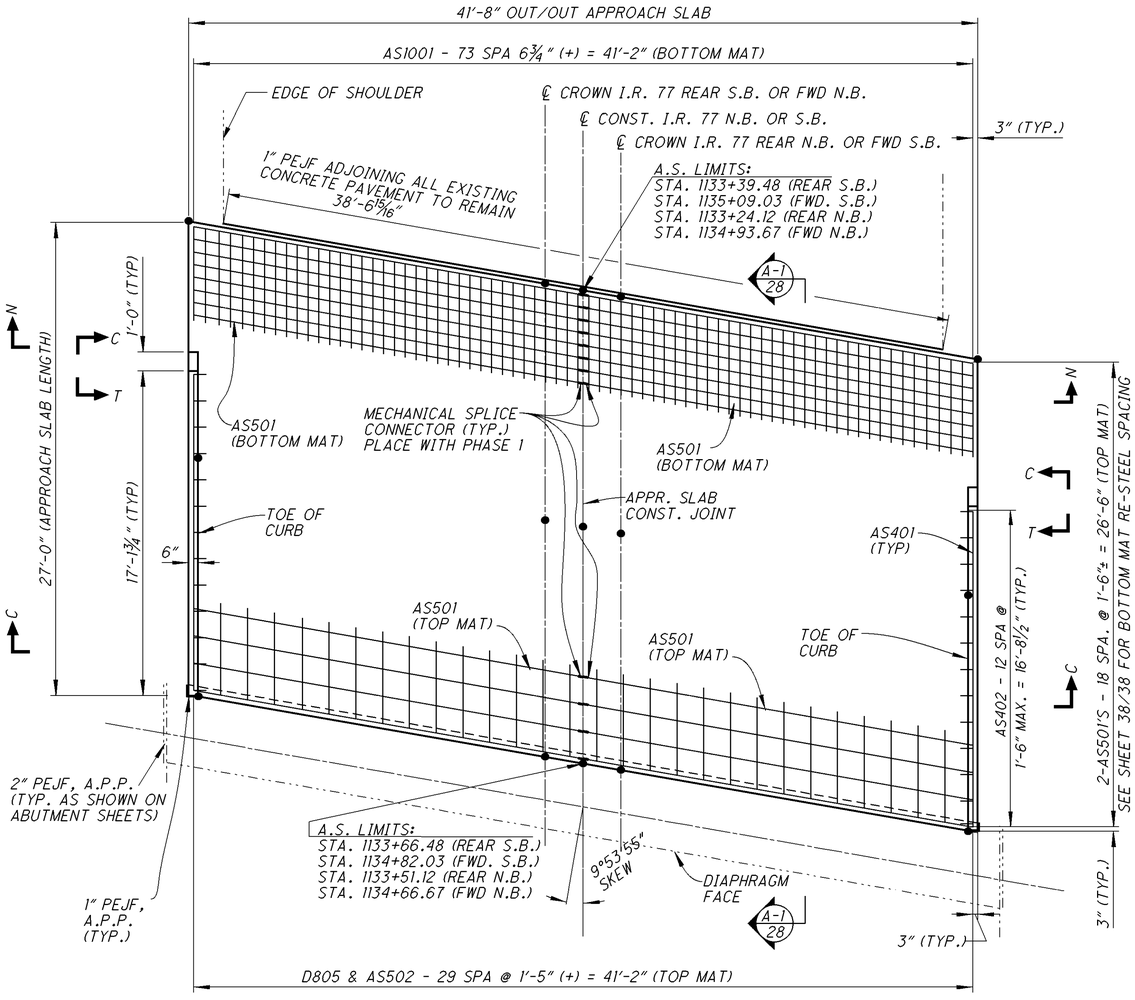


DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
JKS	JKS	JDR	08/22/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		3003450/3003485	

REINFORCING STEEL SCHEDULE (RIGHT BRIDGE)
BRIDGE NO GUE-77-2067 (LEFT AND RIGHT BRIDGES)
OVER C.R. 86

GUE-77-VAR.
PID No. 93017

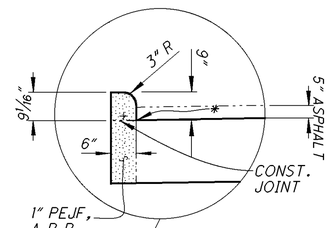


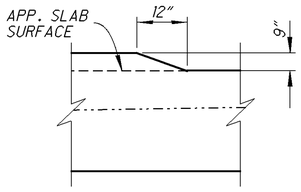
REAR & FWD. PLAN

* SEALING OF CONSTRUCTION JOINTS WITH HMWM AS PER C.M.S. 511.19. PROVIDE A MINIMUM BAND WIDTH OF 2'-0" CENTERED ON EACH JOINT SEALED.
** SEALING OF CONSTRUCTION JOINTS WITH HMWM AS PER C.M.S. 511.19. PROVIDE A MINIMUM BAND WIDTH OF 1'-0" CENTERED ON EACH JOINT SEALED.

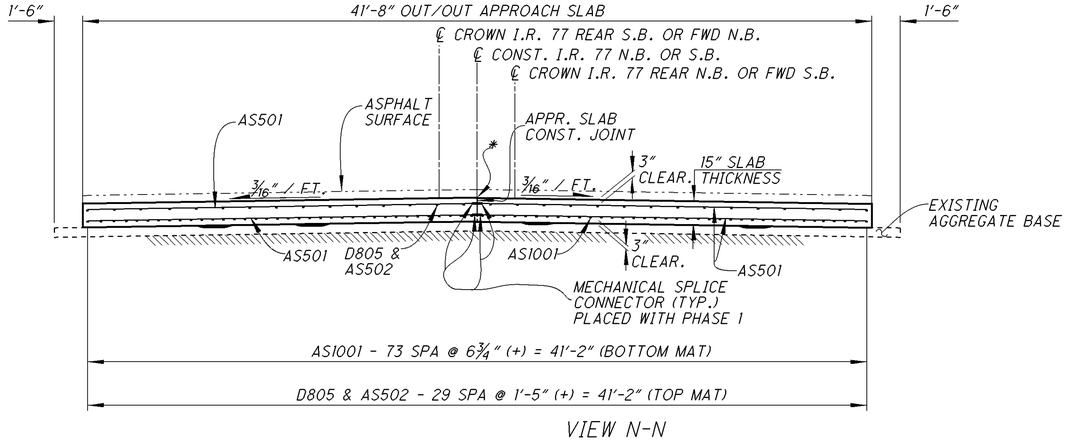
NOTES: - FOR ADDITIONAL DETAILS SEE STANDARD DRAWING AS-1-81.
- FOR APPROACH SLAB FINISH ELEVATIONS, SEE SCREED TABLES.

● - LOCATION OF SCREED ELEVATIONS SEE SCREED TABLES FOR ELEVATIONS

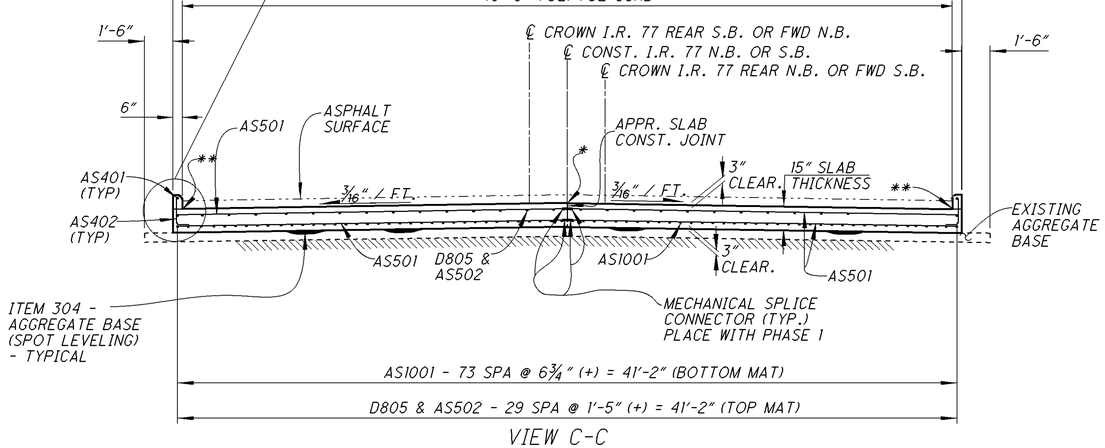




VIEW C-T
CURB TRANSITION



VIEW N-N



VIEW C-C

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
JKS	JKS	JDR	08/22/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		3003450/3003485	

APPROACH SLAB DETAILS
BRIDGE NO GUE-77-2067 (LEFT AND RIGHT BRIDGES)
OVER C.R. 86

GUE-77-VAR.
PID No. 93017

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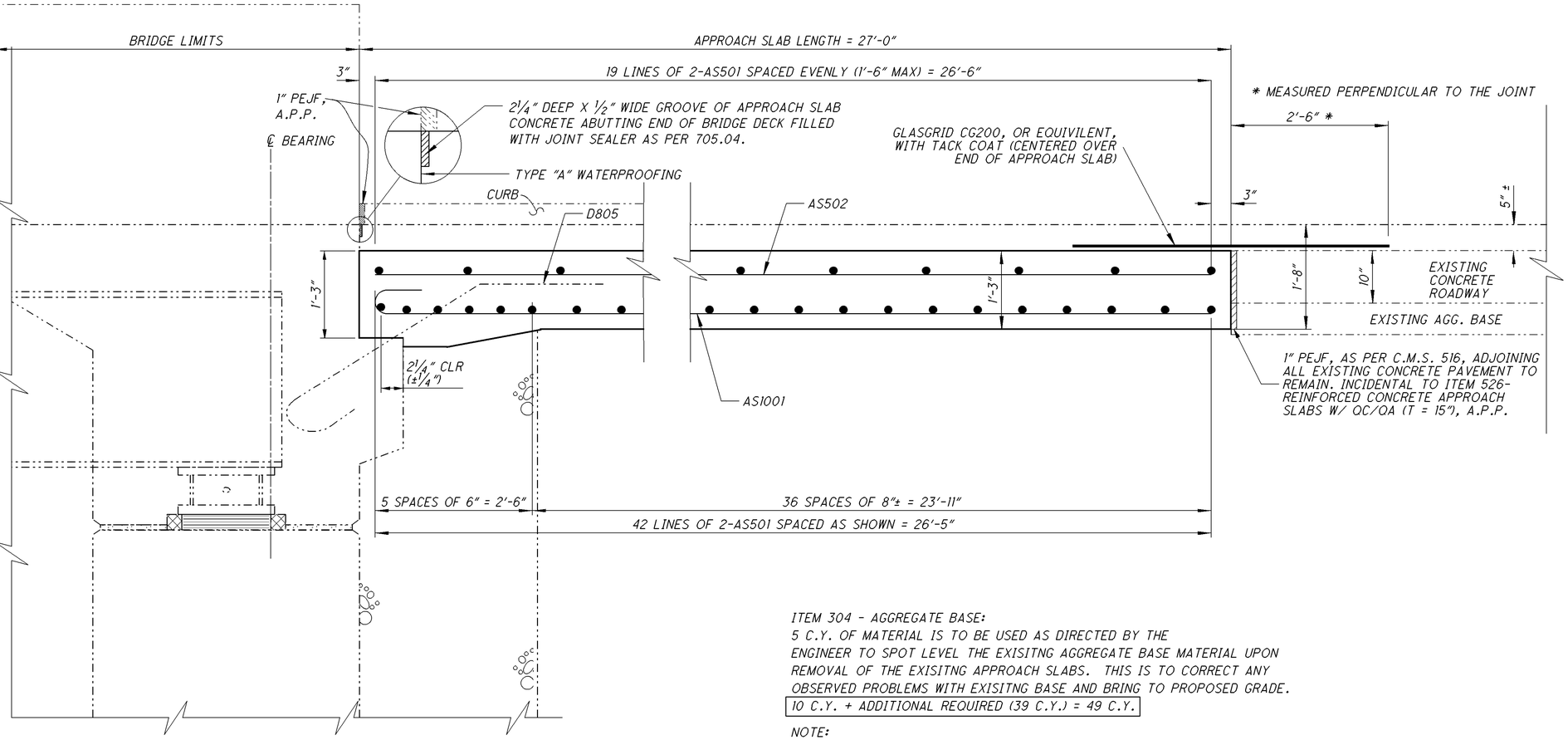


SECTION AS-1 37

ITEM 304 - AGGREGATE BASE:
5 C.Y. OF MATERIAL IS TO BE USED AS DIRECTED BY THE ENGINEER TO SPOT LEVEL THE EXISITNG AGGREGATE BASE MATERIAL UPON REMOVAL OF THE EXISITNG APPROACH SLABS. THIS IS TO CORRECT ANY OBSERVED PROBLEMS WITH EXISITNG BASE AND BRING TO PROPOSED GRADE.
10 C.Y. + ADDITIONAL REQUIRED (39 C.Y.) = 49 C.Y.

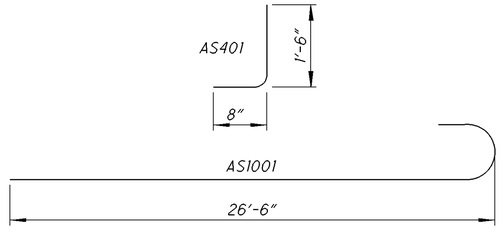
NOTE:
TYPE "A" WATERPROOFING SHALL NOT EXTEND ABOVE THE BOTTOM OF THE CUT GROOVE IN WHICH THE HOT APPLIED JOINT SEALER IS TO BE PLACED. IT SHALL BE APPLIED TO THE ENTIRE AREA OF THE ABUTMENT OR SUPERSTRUCTURE WHICH COMES INTO CONTACT WITH THE APPROACH SLAB.

NOTE:
FOR ADDITIONAL DETAILS SEE STANDARD DRAWING AS-1-15.

ITEM	DESCRIPTION	QUANT'Y	UNIT
203	** EXCAVATION	131	CU YD
204	SUBGRADE COMPACTION	236	SQ YD
304	** AGGREGATE BASE	49	CU YD
516	2" DEEP JOINT SEALER, AS PER PLAN	SEE PART 1	FT
526	* REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15"), AS PER PLAN	500	SQ YD
690	** SPECIAL- REINFORCED MESH FOR TRANSVERSE AND/OR LONGITUDINAL JOINTS AND CRACKS	86	SQ YD

CARRIED TO (*) BRIDGE SUMMARY or (**) GENERAL SUMMARY

NOTE: ALL QUANTITIES SHOWN ARE FOR 4 APPROACH SLABS .



BENDING DIAGRAM

MARK	NUMBER REQ'D.	LENGTH	TYPE	DIMENSIONS A	B	C	R	INC.
APPROACH SLABS								
AS401	8	16'-8"	STR.					
AS402	104	2'-1"	BENT					
AS501	488	20'-7"	STR.					
AS502	120	26'-6"	STR.					
AS1001	296	27'-11"	BENT					

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

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
JKS	JKS	JDR	08/22/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		3003450/3003485	

APPROACH SLAB DETAILS
BRIDGE NO GUE-77-2067 (LEFT AND RIGHT BRIDGES)
OVER C.R. 86

GUE-77-VAR.
PID No. 93017

38 / 38

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69

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