

GENERAL SUMMARY		
DESIGN AGENCY  PRIMER 8415 Pulsart Place Suite 300 Columbus Ohio 43240		
DESIGNER AJ		
REVIEWER SA 06/01/26		
PROJECT ID 120484		
SHEET P.7	TOTAL 41	

GENERAL NOTES:

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

AS-1-15	REVISED	1/20/23
DBR-2-73	REVISED	7/19/02
DBR-3-11	REVISED	7/15/11
DS-1-92	REVISED	7/15/22
PCB-91	REVISED	7/17/20
PSBD-1-25	DATED	7/18/25
PSBD-2-07	REVISED	7/20/18

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE 10th EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2025 AND THE ODOT BRIDGE DESIGN MANUAL, 2025.

OPERATIONAL IMPORTANCE

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

DESIGN LOADING

DESIGN LOADING INCLUDES:
VEHICULAR LIVE LOAD: HL-93
FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/SF

DESIGN DATA

CONCRETE CLASS QC2:
COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)

CONCRETE CLASS QC1:
COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

CONCRETE REINFORCEMENT:
EPOXY COATED STEEL REINFORCEMENT - MINIMUM YIELD STRENGTH 60 KSI (All)

STEEL CIP PILES - ASTM A252 GRADE 3 - YIELD STRENGTH 45 KSI

CONCRETE FOR PRESTRESSED BEAMS:
COMPRESSIVE STRENGTH (FINAL) - 7 KSI
COMPRESSIVE STRENGTH (RELEASE) - 5 KSI

PRESTRESSING STRAND:
AREA = 0.167 SQ.IN.
ULTIMATE STRENGTH = 270 KSI
INITIAL STRESS = 202.5 KSI (LOW RELAXATION STRANDS)

MONOLITHIC WEARING SURFACE

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

SCOUR ELEVATIONS:

THE DESIGN FLOOD AND CHECK FLOOD SCOUR ELEVATIONS ARE PROVIDED BELOW:

	REAR ABUTMENT	FORWARD ABUTMENT
DESIGN FLOOD (Q4%)	765.21	765.21
CHECK FLOOD (Q2%)	765.39	765.39

PILE DESIGN LOADS (ULTIMATE BEARING VALUE)

THE ULTIMATE BEARING VALUE IS 257 KIPS PER PILE FOR THE REAR AND FORWARD ABUTMENT PILES. DRIVE THE REAR ABUTMENT PILES TO UBV OR A TIP ELEVATION OF 735.70, WHICHEVER IS GREATER. DRIVE THE FORWARD ABUTMENT PILES TO UBV OR A TIP ELEVATION OF 729.50, WHICHEVER IS GREATER.

REAR ABUTMENT PILES:
18 - 12 INCH DIAMETER CIP PIPE PILES 40 FEET LONG, ORDER LENGTH 2 DYNAMIC LOAD TESTING ITEMS

FORWARD ABUTMENT PILES:
18 - 12 INCH DIAMETER CIP PIPE PILES 45 FEET LONG, ORDER LENGTH 2 DYNAMIC LOAD TESTING ITEMS

PROVIDE PLAIN CYLINDRICAL CASINGS WITH A MINIMUM PILE WALL THICKNESS OF 0.375 INCH FOR THE CAST-IN-PLACE REINFORCED CONCRETE PILES.

USE CONICAL STEEL PILE POINTS TO PROTECT THE TIPS OF THE PROPOSED STEEL CIP REINFORCED CONCRETE PIPE PILES AT REAR AND FORWARD ABUTMENTS.

EXISTING STRUCTURE VERIFICATION

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

COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN

THE DESIGN SHOWN ON THE PLANS FOR TEMPORARY SUPPORT OF EXCAVATIONS IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN ON THE PLANS OR PREPARE AN ALTERNATE DESIGN TO SUPPORT THE SIDES OF EXCAVATION. IF CONSTRUCTING AN ALTERNATE DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH C&MS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION AT THE CONTRACT LUMP SUM PRICE FOR COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN. THE DEPARTMENT WILL NOT MAKE ADDITIONAL PAYMENT FOR PROVIDING AN ALTERNATE DESIGN.

THE DESIGN SECTION MODULUS IN THE TABLE BELOW FOR TEMPORARY SUPPORT OF EXCAVATION AT THE ABUTMENTS IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN IN THE PLANS OR PREPARE AN ALTERNATE DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH C&MS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION AT THE ABUTMENTS AT A LUMP SUM PRICE FOR COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN. NO ADDITIONAL PAYMENT WILL BE MADE FOR PROVIDING AN ALTERNATIVE DESIGN.

THE STEEL PILING SHALL SHALL CONFORM TO ASTM A328 AND SHALL HAVE THE FOLLOWING:

LOCATIONS	REAR AND FORWARD ABUTMENTS
ELASTIC SECTION MODULUS REQUIRED (CU. IN / FT.) (MIN.)	33.5
MINIMUM YIELD STRESS, Fy (KSI)	36
DESIGN EXCAVATION DEPTH (FT.)	14.7
DESIGN EMBEDMENT DEPTH (FT.)	19
DESIGN TOTAL DEPTH (FT.)	33.5

ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

EXISTING PLANS ARE NOT AVAILABLE FOR THE EXISTING STRUCTURE. REMOVE ABUTMENTS TO ELEV. 764.0. SUBMIT CONSTRUCTION PLANS ACCORDING TO C&MS 501.05.

PROTECTION OF STEEL SUPPORT SYSTEMS: BEFORE DECK SLAB CUTTING BEGINS, DRAW THE OUTLINE OF PRIMARY STEEL MEMBERS IN CONTACT WITH THE BOTTOM OF THE DECK ON THE SURFACE OF DECK. DRILL SMALL DIAMETER PILOT HOLES 2 INCHES OUTSIDE THESE LINES TO CONFIRM THE LOCATION OF FLANGE EDGES. DECK CUTS OVER OR WITHIN 2 INCHES OF FLANGE EDGES SHALL NOT EXTEND LOWER THAN THE BOTTOM LAYER OF CONCRETE REINFORCEMENT IN THE DECK SLAB. 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 COST TO THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER TO THE ENGINEER. OBTAIN THE ENGINEER'S APPROVAL BEFORE PERFORMING REPAIR.

SUPERSTRUCTURE CONCRETE REMOVAL: 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, THE CONTRACTOR MAY USE A HAMMER HEAVIER THAN 35 POUNDS BUT NOT TO 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, SCUPPER AND FORM SUPPORTS, ETC.) TO EXISTING STRUCTURAL MEMBERS, PERFORM WORK CAREFULLY DURING DECK REMOVAL TO AVOID DAMAGING STRUCTURAL MEMBERS THAT ARE TO REMAIN. REPLACE OR REPAIR STRUCTURAL MEMBERS DAMAGED BY THE REMOVAL OPERATIONS AT NO COST TO THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER TO THE ENGINEER. OBTAIN THE ENGINEER'S APPROVAL BEFORE PERFORMING REPAIR.

SUBSTRUCTURE CONCRETE REMOVAL: 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-IN LIMIT, THE CONTRACTOR MAY USE HOERAM TYPE HAMMERS. PREVENT ALL DAMAGE TO THE SUPPORT OF EXISTING BEAMS USED FOR PHASE CONSTRUCTION. CEASE OPERATIONS IMMEDIATELY IF DAMAGE IS NOTED AND SUPPORT, SHORE, OR REPAIR AT NO COST TO THE DEPARTMENT.

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

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

THIS WORK CONSISTS OF TEMPORARY SUPPORT OF PORTIONS OF THE EXISTING SUPERSTRUCTURE. SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH C&MS 501.05. IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE 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 CRACKS THAT FORM IN ACCORDANCE WITH C&MS 512.07. THE DEPARTMENT WILL NOT PAY FOR THE COST OF THIS EPOXY INJECTION OR OTHER REQUIRED REPAIRS. THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS. ADDITIONAL INFORMATION DESCRIBING THIS WORK IS ON SHEET 4/16.

ITEM 625, STRUCTURE GROUNDING SYSTEM

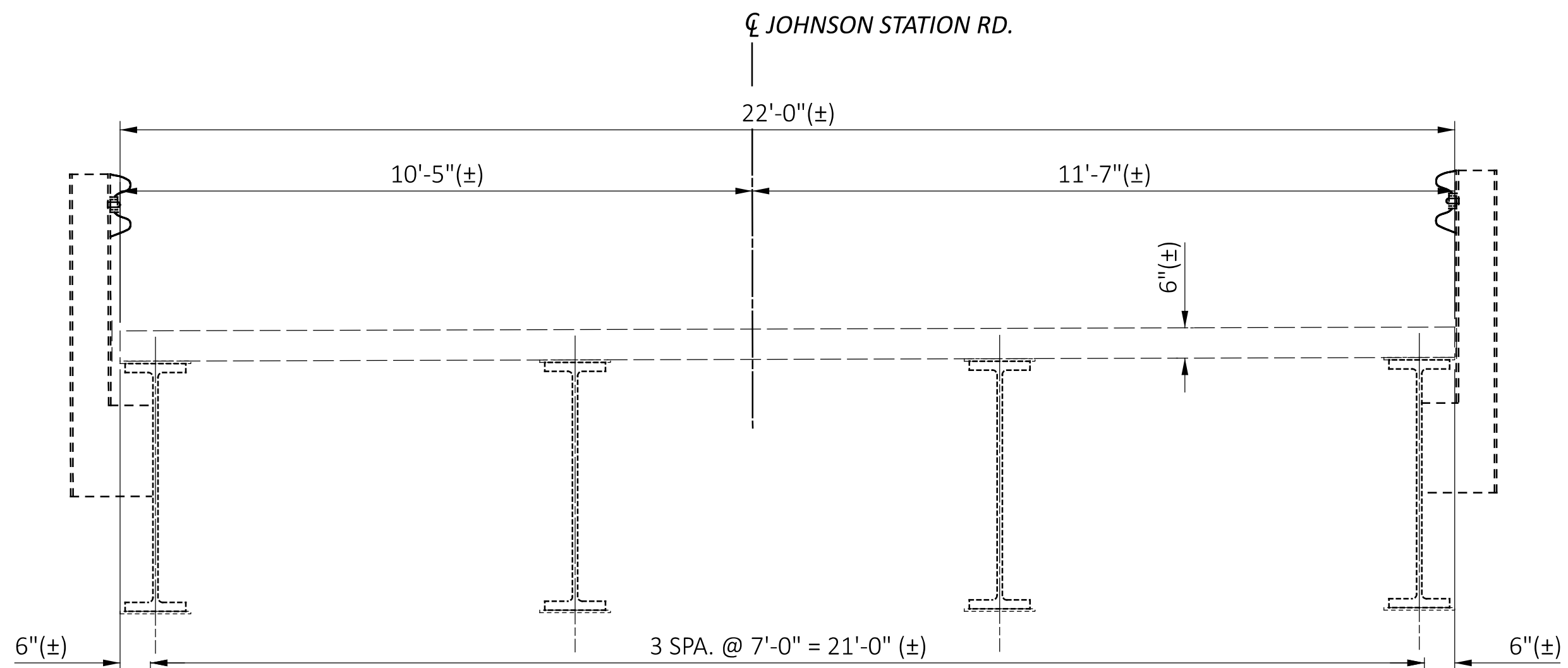
THE CONTRACTOR SHALL GROUND ALL STRUCTURES. THE GROUNDING SYSTEM SHALL GROUND ALL METAL ITEMS AND APPURTENANCES ON ALL STRUCTURES. THE GROUNDING SYSTEM SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD CONSTRUCTION DRAWING HL-50.21.

ABBREVIATIONS:

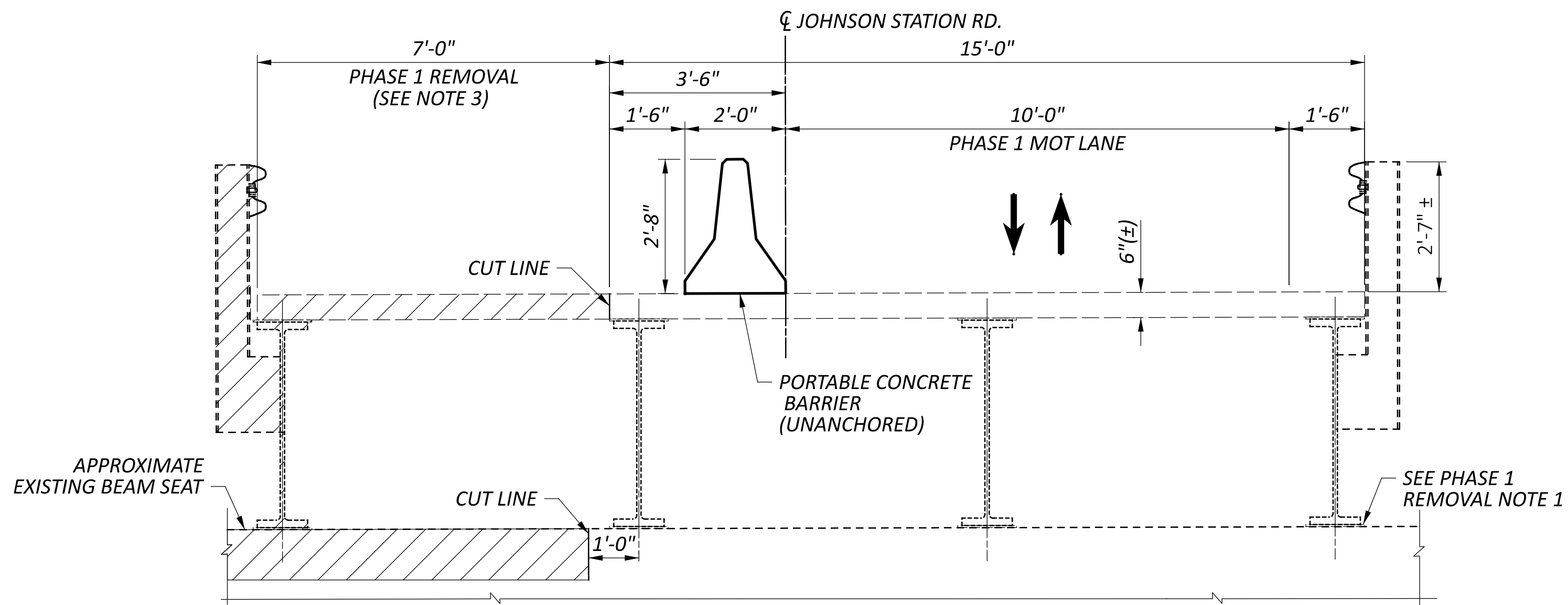
THE FOLLOWING ABBREVIATIONS HAVE BEEN USED THROUGHOUT THESE PLANS TO INDICATE THE DESIGNATIONS CONTAINED IN THE LEGEND BELOW:

ABUT.	-	ABUTMENT
APP.	-	APPROACH
BRG.	-	BEARING
BOT.	-	BOTTOM
C/C	-	CENTER TO CENTER
CL	-	CENTERLINE
C.I.P.	-	CAST-IN-PLACE
C.J.	-	CONSTRUCTION JOINT
CLOS.	-	CLOSURE
CLR.	-	CLEAR
C&MS	-	CONSTRUCTION AND MATERIAL SPECIFICATIONS
DIA.	-	DIAMETER
E.F.	-	EACH FACE
EL.	-	ELEVATION
EQ.	-	EQUAL
EXP.	-	EXPANSION
F.A.	-	FORWARD ABUTMENT
F/F	-	FACE TO FACE
F.F.	-	FAR FACE
FWD.	-	FORWARD
MAX.	-	MAXIMUM
MIN.	-	MINIMUM
N.F.	-	NEAR FACE
PEJF	-	PREFORMED EXPANSION JOINT FILLER
R.A.	-	REAR ABUTMENT
SER.	-	SERIES
SPA.	-	SPACING/SPACES
STA.	-	STATION
TYP.	-	TYPICAL

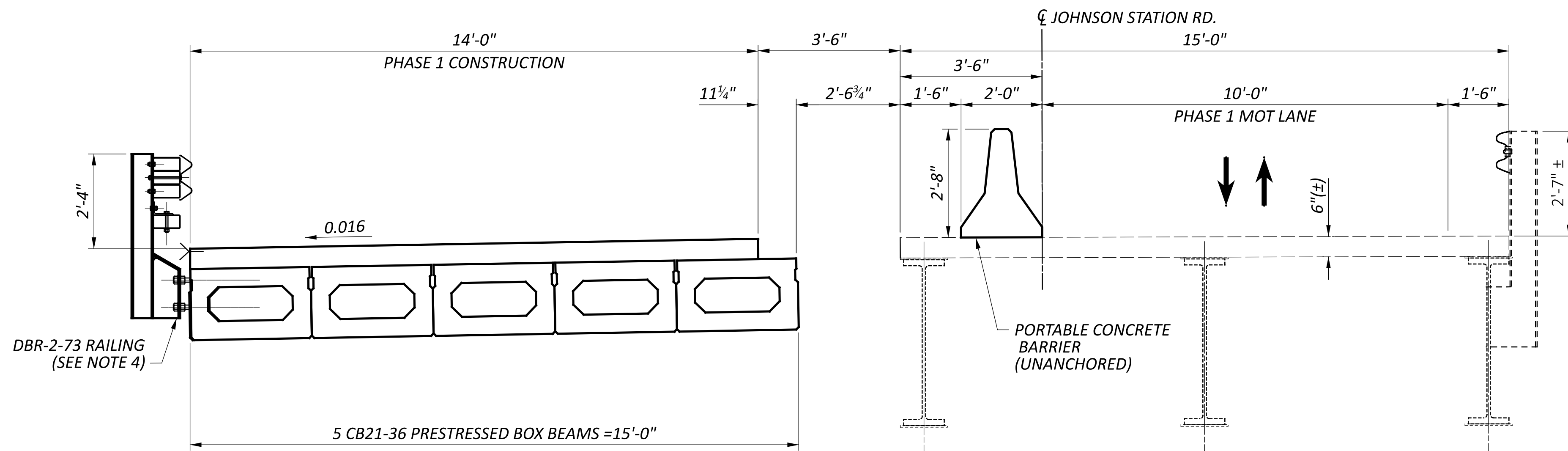
SFN 5765146	
DESIGN AGENCY  8415 Pleasant Place Suite 300 Columbus Ohio 43240	
DESIGNER PSV	CHECKER EEB
REVIEWER IMF 07-29-25	
PROJECT ID 120484	
SUBSET 2	TOTAL 16
SHEET P.17	TOTAL 41



EXISTING TRANSVERSE SECTION



PHASE 1 REMOVAL



PHASE 1 CONSTRUCTION

PHASE 1 REMOVAL:

1. DUE TO DEGRADATION OF THE EXISTING BEAM SEAT BOTH ENDS OF EXISTING BEAM 4 MUST BE SUPPORTED PRIOR TO THE TRAFFIC SHIFT FOR PHASE 1 REMOVAL AND FOR THE DURATION OF PHASE CONSTRUCTION UNTIL BEAM 4 IS REMOVED. SUPPLY A VERTICAL TEMPORARY SUPPORT CENTERED ON THE BOTTOM FLANGE OF BEAM 4, NO MORE THAN 24" FROM EACH END OF THE BEAM. THE CONTRACTOR'S DESIGNER SHALL DECIDE A SUITABLE ANCHORAGE METHOD FOR THE TEMPORARY SUPPORT, TO BE MOUNTED TO THE ABUTMENT WALL, ABUTMENT FOOTING, OR SUITABLE ALTERNATIVE. THE TEMPORARY SUPPORT SHALL BE ABLE TO BEAR A FACTORED LOAD OF 138.9 KIPS. THE TEMPORARY SUPPORT OF THE BEAM SHALL BE ATTACHED TO THE EXISTING BEAM BY MEANS OF WELDING OR FASTENERS AT THE FIXED END. PAYMENT FOR ALL DESIGN, MATERIALS, LABOR AND INCIDENTALS SHALL BE INCLUDED FOR PAYMENT UNDER THE LUMP SUM BID ITEM 516 JACKING AND TEMPORARY SUPPORT, AS PER PLAN.
2. INSTALL PORTABLE CONCRETE BARRIER ON EXISTING STRUCTURE AT THE LOCATION SHOWN.
3. SHIFT TRAFFIC TO THE EAST SIDE OF THE EXISTING STRUCTURE AND MAINTAIN ONE-LANE, TWO-WAY TRAFFIC.
4. REMOVE THE WEST PORTION OF THE SUPERSTRUCTURE TO THE LIMITS SHOWN.
5. PLACE TEMPORARY SHEET PILING AT REAR AND FORWARD ABUTMENTS.
6. REMOVE THE WEST PORTION OF THE EXISTING SUBSTRUCTURES TO THE LIMITS SHOWN IN THE PLANS.

PHASE 1 CONSTRUCTION

1. MAINTAIN ONE-LANE, TWO-WAY TRAFFIC ON THE EAST SIDE OF THE EXISTING STRUCTURE AS SHOWN.
2. CONSTRUCT THE WEST PORTION OF THE SUBSTRUCTURES AS SHOWN IN THE PLANS.
3. CONSTRUCT THE WEST PORTION OF THE SUPERSTRUCTURE AND APPROACH SLABS AND SLEEPER SLAB TO THE LIMITS SHOWN.

LEGEND:

 = LIMITS OF STRUCTURE REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED

NOTES:

1. PAYMENT FOR PORTABLE CONCRETE BARRIER (PB) IS INCLUDED IN ROADWAY GENERAL SUMMARY.
2. FOR ADDITIONAL PORTABLE CONCRETE BARRIER DETAILS, SEE STANDARD DRAWING PCB-91 OR RM-4.2.
3. THE CONTRACTOR SHALL SAW CUT THE EXISTING BRIDGE DECK TO THE EXTERIOR EDGE OF THE RIVETED STEEL PLATE GIRDER. SEE EXISTING STRUCTURE VERIFICATION NOTE.
4. CONTRACTOR SHALL INSTALL PROPOSED DBR-2-73 RAILING ONLY DURING PHASED CONSTRUCTION. INSTALL DBR-3-11 AFTER COMPLETE WIDTH IS CONSTRUCTED.