

STANDARD DRAWING AND SUPPLEMENTAL SPECIFICATION

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:
GSD-1-19 REVISED 7-19-2024

AND THE FOLLOWING SUPPLEMENTAL SPECIFICATION
800 DATED 7-18-2025
849 DATED 1-18-2013

STEEL RESTRAINT OR PRELOAD LIMITS

EXISTING STRUCTURAL STEEL - ASTM A36, GRADE 36.
DO NOT SUBJECT ANY PART OF THE STRUCTURE TO A JACKING, PULLING
OR RESTRAINING UNIT STRESS EXCEEDING 18 KSI.

DESIGN STRESSES:

STRUCTURAL STEEL (PROPOSED):
ASTM A572 - YIELD STRENGTH 50 KSI

EXISTING STRUCTURE PLANS

THE FOLLOWING PREVIOUS PLANS OF THE EXISTING BRIDGE ARE
AVAILABLE FOR REFERENCE AT THE ODOT DISTRICT ELEVEN OFFICE IN
NEW PHILADELPHIA:

ORIGINAL ROADWAY/STRUCTURE CONSTRUCTION:
BEL-470-5.90 (1977)

4-LANE UPGRADE
BEL-7-17.99 (1996)

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION DIVISION OF
HIGHWAYS
BRIDGE OVERLAY PROJECT (2024)
I-470 BR APPR
PROJECT NO. S335-470-0.13 00
IN ADDITION, THE PREVIOUS PLANS CAN BE FOUND ON ODOT'S
WEBSITE AT THE FOLLOWING ADDRESS:
<https://ftp.dot.state.oh.us/pub/Contracts/Attach>

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO
THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE
EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND
MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE
EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE
CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS
REFERRED TO C&MS, SECTIONS 102.05, 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.

UTILITIES

THERE ARE NO KNOWN UNDERGROUND, OR OVERHEAD UTILITIES,
WITHIN THE PROJECT CONSTRUCTION LIMITS.

ITEM 513, STRUCTURAL STEEL MISC.: REPAIR OF
DAMAGED MAIN MEMBERS (COMPLETE PENETRATION
WELDING)

AFTER DAMAGED AREAS HAVE BEEN INSPECTED ACCORDING TO ITEM
849, DAMAGE ASSESSMENT, PREPARE THE DAMAGED MATERIAL FOR
WELDING. PROVIDE RUNOFF TABS FOR ALL COMPLETE PENETRATION
WELDS. PERFORM COMPLETE PENETRATION WELDS ACCORDING TO
CMS 513 USING APPROVED ELECTRODES, PROCEDURES AND WELDERS.
REMOVE RUNOFF TABS AND GRIND THE COMPLETED EDGES SMOOTH.
GRIND THE COMPLETED WELDS SMOOTH AND FLUSH WITH THE
ADJACENT SURFACES TO PROVIDE A SURFACE FINISH ACCORDING TO
ANSI B46.1 OR 250 mil. DO NOT OVER-GRIND AS TO REDUCE THE
MATERIAL THICKNESS OR WIDTH OF THE NEW OR EXISTING MATERIALS.
PREPARE ALL REENTRANT CORNERS WITH A ONE INCH RADIUS.
REMOVE WELDING, START AND STOP DISCONTINUITIES. RADIOGRAPHIC
TEST THE FINISHED WELDS ACCORDING TO CMS 513.25A AND SUBMIT
COPIES OF THE REPORTS TO THE ENGINEER FOR ACCEPTANCE. THE
ENGINEER MAY OBTAIN TECHNICAL ASSISTANCE FROM THE OFFICE OF
MATERIALS MANAGEMENT. THE DEPARTMENT WILL INCLUDE ALL
MATERIALS, TOOLS, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY
TO COMPLETE THE ABOVE WORK FOR PAYMENT WITH ITEM 513,
STRUCTURAL STEEL MISC.: REPAIR OF DAMAGED MAIN MEMBERS
(COMPLETE PENETRATIONS WELDING).

ITEM 513, STRUCTURAL STEEL MEMBERS, LEVEL UF,
AS PER PLAN

ALL REQUIREMENTS OF 513 APPLY TO SHOP FABRICATED MEMBERS.
PERFORM 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
PRE-QUALIFIED AS SPECIFIED IN SUPPLEMENT 1078. SUBMIT A
WRITTEN LETTER OF MATERIAL ACCEPTANCE, 501.06, TO THE
ENGINEER. PROVIDE SHOP DRAWINGS ACCORDING TO 513.06 OR
SUPPLY THE ENGINEER WITH "AS-BUILT" DRAWINGS MEETING 513.06
AFTER COMPLETION OF FIELD FABRICATION. THE ENGINEER WILL
REVIEW THE SUBMITTED DRAWINGS FOR CONCURRENCE WITH THE
FINAL AS-BUILT CONDITION. THE ENGINEER MAY CONTACT THE OFFICE
OF STRUCTURAL ENGINEERING FOR TECHNICAL ASSISTANCE. IF THE
ENGINEER IS SATISFIED WITH THE "AS-BUILT" DRAWINGS AND THE
DELIVERED MATERIALS, SUPPLY A COPY OF THE DRAWINGS (STAMPED,
SEALED AND DATED ACCORDING TO SUPPLEMENT 1002) TO THE
STRUCTURAL, WELDING AND METALS SECTION OF THE OFFICE OF
MATERIAL MANAGEMENT FOR RECORD PURPOSES. THE MEMBERS
INCLUDED IN THIS ITEM ARE THE CROSS FRAME ANGLES AT THE
LOCATIONS INDICATED ON THE FRAMING PLAN, THE STIFFENERS
LOCATED ON EVERY BEAM AND DETAILED ON SHEET P.17, AND THE
WELDED WT AND FLANGE MEMBERS USED TO REPAIR BEAMS 1-6. THE
DEPARTMENT WILL INCLUDE ALL MATERIALS, TOOLS, LABOR,
EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE
WORK FOR PAYMENT WITH ITEM 513, STRUCTURAL STEEL MEMBERS,
LEVEL UF, AS PER PLAN.

ITEM 513, STRUCTURAL STEEL MISC.: REPAIR OF
DAMAGED SECONDARY MEMBERS (FILLET WELDING)

AFTER DAMAGED AREAS HAVE BEEN INSPECTED ACCORDING TO ITEM
849, DAMAGE ASSESSMENT, PREPARE THE DAMAGED MATERIAL FOR
WELDING. PERFORM 3/16 INCH FILLET WELDS ACCORDING TO ITEM 513
USING APPROVED ELECTRODES, PROCEDURES AND WELDERS. WELD
EACH SECONDARY MEMBER ACCORDING TO PLAN DETAILS. MAGNETIC
PARTICLE INSPECT ALL FILLET WELDS ACCORDING TO CMS 513.25B. THE
ENGINEER MAY OBTAIN TECHNICAL ASSISTANCE FROM THE OFFICE OF
MATERIALS MANAGEMENT. THE DEPARTMENT WILL INCLUDE ALL
MATERIALS, TOOLS, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY
TO COMPLETE THE ABOVE WORK FOR PAYMENT WITH ITEM 513,
STRUCTURAL STEEL MISC.: REPAIR OF DAMAGED SECONDARY
MEMBERS (FILLET WELDING)

ITEM 202, PORTIONS OF STRUCTURE REMOVED,
AS PER PLAN (MAIN MEMBERS)

AN ESTIMATED QUANTITY IS PROVIDED FOR PARTIAL REMOVAL OF
BEAM 1, AS DETERMINED BY FIELD INSPECTION AND ACCORDING TO
ITEM 849, DAMAGE ASSESSMENT OR AS DIRECTED BY THE ENGINEER.
SUPPORT THE EXISTING MAIN MEMBERS ACCORDING TO ITEM 849,
STRAIGHTENING WORK PLAN. SAW CUT THE EXISTING MEMBERS USING
A MECHANICAL GUIDE ACCORDING TO CMS 513.12. PROVIDE
SHIELDING AS NECESSARY TO PREVENT DAMAGE TO MAIN OR
SECONDARY MATERIALS THAT REMAIN. GRIND THE REMAINING CUT
SURFACES OF THE EXISTING MAIN MEMBER SMOOTH IN PREPARATION
FOR COMPLETE PENETRATION WELDING. PROVIDE A SURFACE FINISH
ACCORDING TO ANSI B46.1 OF 250 mil (TO ACCOMMODATE THE
PROPOSED REPLACEMENT MATERIAL). DETERMINE FINAL QUANTITIES
BY FIELD MEASUREMENTS. THE DEPARTMENT WILL INCLUDE ALL
MATERIALS, TOOLS, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY
TO COMPLETE THE ABOVE WORK FOR PAYMENT WITH ITEM 202,
PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (MAIN MEMBERS).

ITEM 202, PORTIONS OF STRUCTURE REMOVED,
AS PER PLAN (SECONDARY MEMBERS)

AN ESTIMATED QUANTITY IS PROVIDED FOR REMOVAL OF SECONDARY
MEMBERS AS DETERMINED BY FIELD INSPECTION ACCORDING TO ITEM
849, DAMAGE ASSESSMENT OR AS DIRECTED BY THE ENGINEER.
SUPPORT THE EXISTING SECONDARY MEMBERS ACCORDING TO ITEM
849, STRAIGHTENING WORK PLAN. FLAME OR SAW CUT THE EXISTING
MEMBERS TO WITHIN 1/8 INCH OF THE EXISTING MAIN MATERIAL USING
A MECHANICAL GUIDE ACCORDING TO CMS 513.12. PROVIDE
SHIELDING AS NECESSARY TO PREVENT DAMAGE TO MAIN OR
SECONDARY MATERIALS THAT REMAIN. GRIND THE EXISTING MAIN OR
SECONDARY MEMBER SMOOTH IN PREPARATION FOR COMPLETE
PENETRATION OR FILLET WELDING. PROVIDE A SURFACE FINISH
ACCORDING TO ANSI B46.1 OF 250 mil (TO ACCOMMODATE THE
PROPOSED REPLACEMENT MATERIAL). DETERMINE FINAL QUANTITIES
BY FIELD MEASUREMENTS. THE DEPARTMENT WILL INCLUDE ALL
MATERIALS, TOOLS, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY
TO COMPLETE THE ABOVE WORK FOR PAYMENT WITH ITEM 202,
PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (SECONDARY
MEMBERS)

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 CMS 501.05.

IF, DURING JACKING OPERATIONS, CRACKING OF THE CONCRETE
SUPERSTRUCTURE, SEPARATIONS OF THE CONCRETE DECK FROM THE
STEEL STRINGERS, 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 CMS 512.07. THE
DEPARTMENT WILL NOT PAY FOR THE COST OF THIS EPOXY INJECTION
OR OTHER REQUIRED REPAIRS NECESSITATED BY THE JACKING
OPERATION. 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.

SFN	
0700479	
DESIGN AGENCY	
	
DESIGNER	CHECKER
MJH	MVC
REVIEWER	
RPT 11-21-24	
PROJECT ID	
120772	
SUBSET	TOTAL
2	10
SHEET	TOTAL
P.11	19