

**PROPOSED WORK**

- ALL WORK SHALL BE PERFORMED UNDER COMPLETE CLOSURE OF THE EXISTING BRIDGE.
- REMOVE PORTIONS OF THE EXISTING SUPERSTRUCTURE INCLUDING THE WEARING SURFACE, CONCRETE DECK, PARAPETS, EXPANSION JOINTS, SCUPPERS, PORTIONS OF THE NORTHERN FASCIA BEAM AND CROSS FRAMES THAT ARE TO BE REPLACED, AND THE BEARINGS.
- REMOVE PORTIONS OF EXISTING ABUTMENTS AND PIERS AS DETAILED IN THE PLANS.
- REMOVE EXISTING APPROACH SLABS.
- TEMPORARILY SUPPORT, RETROFIT, REPAIR (INCLUDING THE HEAT STRAIGHTENING WORK), AND RAISE THE EXISTING BEAMS.
- CONSTRUCT NEW ABUTMENT AND PIER CONCRETE.
- SET NEW BEARINGS AT ABUTMENTS AND PIERS, AND SET EXISTING BEAMS ON TO NEW BEARINGS.
- INSTALL NEW CROSSFRAMES AT LOCATIONS SHOWN IN THE PLANS.
- INSTALL WELDED STUD SHEAR CONNECTORS.
- CONSTRUCT NEW CONCRETE END DIAPHRAGMS AND POUR NEW DECK SLAB.
- CONSTRUCT NEW ABUTMENT DRAINAGE SYSTEM, POROUS BACKFILL AND CONSTRUCT APPROACH SLABS.
- PLACE AND GRADE NEW CRUSHED AGGREGATE SLOPE PROTECTION.
- PAINT STRUCTURAL STEEL AND SEAL CONCRETE SURFACES AS INDICATED IN THE PLANS.

WORK LISTED IS NOT INCLUSIVE, CONTRACTOR WILL SEQUENCE WORK AS NEEDED.

**DESIGN SPECIFICATIONS**

THIS STRUCTURE CONFORMS TO THE 8TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2017, AND THE ODOT BRIDGE DESIGN MANUAL, 2019.

**STANDARD DRAWINGS**

REFER TO THE FOLLOWING ODOT STANDARD BRIDGE DRAWINGS:

AS-1-15	REVISED: 7-17-15
AS-2-15	REVISED: 1-18-19
GSD-1-96	REVISED: 7-19-02
SBR-1-20	DATED: 1-17-20
STCD-1-96	REVISED: 7-18-14
VPF-1-90	REVISED: 7-20-18

**OPERATIONAL IMPORTANCE**

A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2019.

**DESIGN LOADING**

DESIGN LOADING: HL-93

FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS PER SQUARE FOOT

**DESIGN STRESSES**

CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (BRIDGE DECK & PARAPET)

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

STRUCTURAL STEEL - ASTM A709 GRADE 50, MINIMUM YIELD STRENGTH 50 KSI (NEW STRUCTURAL STEEL & BOTTOM MOMENT PLATES @ PIER 2)

**DECK PROTECTION METHOD**

GALVANIZED COATED REINFORCING STEEL  
2 1/2" CONCRETE COVER

REVISIONS		
NO.	DATE	DESCRIPTION
1	10/20/20	UPDATED NOTES
2	11/09/20	UPDATED NOTE

**MONOLITHIC WEARING SURFACE**

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

**EXISTING STRUCTURE VERIFICATION**

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 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 2.212 KIPS.

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

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

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

**POST-CONSTRUCTION BRIDGE INSPECTION**

AT LEAST TWO WEEKS PRIOR TO OPENING THE BRIDGE TO TRAFFIC, THE CONTRACTOR SHALL NOTIFY THE ODOT DISTRICT 7 BRIDGE INSPECTION ENGINEER (937-497-6884) TO ALLOW FOR THE NATIONAL BRIDGE INSPECTION STANDARDS (NBIS) REQUIRED POST-CONSTRUCTION INITIAL INSPECTION OF THE BRIDGE.

**ASBESTOS NOTIFICATION:**

AN ASBESTOS SURVEY OF BRIDGE NO. MOT-235-0022L SCHEDULED FOR REHABILITATION WAS CONDUCTED BY A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST. THE SURVEY DETERMINED THAT NO ASBESTOS IS PRESENT ON THE BRIDGE.

A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF THE DEMOLITION AND RENOVATION FORM, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER WILL BE PROVIDED TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO:

ASBESTOS PROGRAM  
OHIO EPA, DAPC  
P.O. BOX 1049  
COLUMBUS, OH 43216-1049  
PHONE: (614) 466-0061

AT LEAST TEN (10) WORKING DAYS PRIOR TO START OF THE BRIDGE DEMOLITION WORK, THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER.

INFORMATION REQUIRED ON THE FORM WILL INCLUDE: THE CONTRACTOR'S NAME AND ADDRESS, THE SCHEDULED DATES FOR RENOVATION AND A DESCRIPTION OF THE PLANNED DEMOLITION OR RENOVATION WORK AND THE METHOD(S) TO BE USED. A COPY OF THE OEPA FORM IS AVAILABLE FOR INSPECTION AT THE ODOT DISTRICT 7 OFFICE, 1001 SAINT MARYS AVENUE, SIDNEY, OHIO 45365.

BASIS FOR PAYMENT: THE CONTRACTOR SHALL FURNISH ALL FEES LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

**TEMPORARY VERTICAL CLEARANCES**

CONTRACT TEMPORARY VERTICAL CLEARANCES SHALL EQUAL THE EXISTING VERTICAL CLEARANCES BEFORE THE STRUCTURE IS RAISED.

CONTRACT TEMPORARY VERTICAL CLEARANCES SHALL EQUAL THE PROPOSED VERTICAL CLEARANCES AFTER THE STRUCTURE IS RAISED.

**ITEM 509 - REINFORCING STEEL. REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN**

REPLACE ALL EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION. THE DEPARTMENT WILL MEASURE THE REPLACEMENT REINFORCING STEEL BY THE NUMBER OF POUNDS ACCEPTED IN PLACE. A CONTINGENCY QUANTITY OF 100 LBS SHALL BE USED.

REPLACE ALL EXISTING REINFORCING STEEL BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND ARE DEEMED BY THE ENGINEER TO BE MADE UNUSABLE BY CONCRETE REMOVAL OPERATIONS WITH NEW EPOXY COATED REINFORCING STEEL OF THE SAME SIZE AT NO COST TO THE DEPARTMENT.

**ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN**

DESCRIPTION: THIS WORK CONSISTS OF THE REMOVAL OF THE CONCRETE DECK INCLUDING PARAPETS, DECK JOINTS, END CROSS FRAMES, SCUPPERS AND OTHER ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES THAT ARE NOT SEPARATELY LISTED FOR PAYMENT. THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING DECK 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 OF EQUIPMENT IS PROHIBITED. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

EXISTING WELDED ATTACHMENTS: REMOVE EXISTING WELDED ATTACHMENTS (E.G., FINISHING MACHINE AND FORM SUPPORTS) LOCATED IN THE DESIGNATED TENSION PORTIONS OF THE TOP FLANGES OF EXISTING STEEL MEMBERS AND GRIND THE FLANGE SURFACES SMOOTH. CAREFULLY GRIND PARALLEL TO FLANGES.

CUT LINE CONSTRUCTION JOINT PREPARATION: 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 ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

SUBSTRUCTURE CONCRETE REMOVAL: REMOVE CONCRETE 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.

PROTECTION OF STEEL SUPPORT SYSTEMS: BEFORE DECK SLAB CUTTING IS PERMITTED, DRAW THE OUTLINE OF PRIMARY STEEL MEMBERS IN CONTACT WITH THE BOTTOM OF THE DECK ON THE SURFACE OF THE 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 COST TO THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER. OBTAIN APPROVAL BEFORE PERFORMING REPAIR.

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 BEAMS ARE FREE OF DEFECTS AND CRACKS. IF NECESSARY, REMOVE ALL DECK SLAB HAUNCH FORMS IMMEDIATELY ADJACENT TO SUCH WELDS THAT MAY INTERFERE WITH THE ENGINEER'S INSPECTION. THE INSPECTION WILL NOT TAKE PLACE UNTIL THE TOP FLANGES ARE CLEANED ACCORDING TO 511.10, BUT IT WILL BE DONE BEFORE THE DECK SLAB REINFORCEMENT IS INSTALLED. THE DEPARTMENT WILL PAY FOR THE COST ASSOCIATED WITH THIS INSPECTION WITH ITEM 511, SUPERSTRUCTURE CONCRETE. 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.

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 BEAMS), 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, SCUPPERS 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.

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, OVER 20 FOOT SPAN, AS PER PLAN.

**REINFORCING STEEL, MISC.: GALVANIZED COATED REINFORCING STEEL**

ALL REINFORCING STEEL SHALL BE GALVANIZED STEEL CONFORMING TO ASTM A767, CLASS 1, OR ASTM A1094. THE GALVANIZED COATED REINFORCING STEEL WILL MEET ALL OTHER REQUIREMENTS OF 509. THE GALVANIZED COATING WILL BE APPLIED AFTER THE REINFORCING HAS BEEN FABRICATED. IF THE GALVANIZED SURFACE BECOMES DAMAGED DURING HANDLING IN THE FIELD, REPAIRS WILL CONFORM TO ASTM A780. USE BAR SUPPORTS AND TIE WIRES WHICH ARE PLASTIC COATED OR EPOXY COATED. ONLY SUPPLIERS CERTIFIED UNDER S1068 MAY PROVIDE THIS REINFORCING.

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 DESIGN AGENCY GPD GROUP 1801 Watermark Drive, Suite 210, Columbus, OH 43215 614.210.0751 Copyright © GPD Group, Inc. All Rights Reserved.	DATE 3-13-20	REVIEWED DGN	FILE NUMBER 5709660	DRAWN RFV	REVISIONS REVISIONS	DESIGNED RFV	CHECKED DJC
<b>GENERAL NOTES</b> BRIDGE NO. MOT-235-0022L S.R. 235 (CHAMBERSBURG ROAD) OVER S.R. 4							
MOT - 235 - 0.22L PID No. 99860							
2 / 24							
104 141							