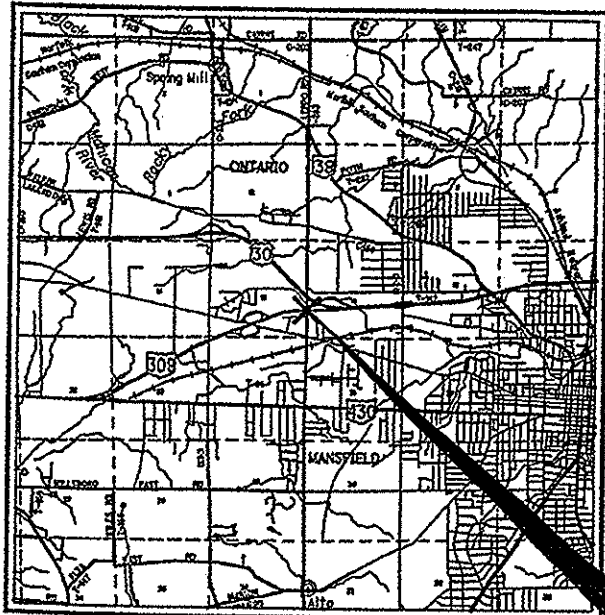


STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

**RIC-309-8.72**

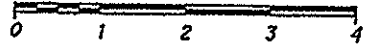
**CITY OF MANSFIELD  
CITY OF ONTARIO  
RICHLAND COUNTY**



LOCATION MAP

LATITUDE: 40°46'23" N LONGITUDE: 82°34'15" W

SCALE IN MILES



RIC-309-0872

INDEX OF SHEETS:

TITLE SHEET	1
GENERAL NOTES AND DETOUR PLAN	2-3
GENERAL SUMMARY	4
STRUCTURE RIC-309-0872 DETAILS	5-9

PROJECT DESCRIPTION

REPAIR STRUCTURE DUE TO ACCIDENT. PARTIAL BEAM REPLACEMENT BY SPLICING, HEAT STRAIGHTENING, CROSS FRAME ASSEMBLY REPLACEMENT, AND PAINTING.

EARTH DISTURBED AREAS

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

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.

2005 SPECIFICATIONS

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

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT AS NOTED ON SHEET 2-3, AND THAT DETOURS WILL BE PROVIDED AS INDICATED ON THE PLANS.

RIC-309-8.72  
085001  
DIST 03  
PID- 83800  
4/23/2008

FEDERAL PROJECT NO. NON FEDERAL  
PID NO. 83800  
CONSTRUCTION PROJECT NO.  
RAILROAD INVOLVEMENT NONE  
RIC-309-8.72

**UNDERGROUND UTILITIES**  
CONTACT BOTH SERVICES  
CALL TWO WORKING DAYS  
BEFORE YOU DIG

CALL  
1-800-362-2764  
(TOLL FREE)

OHIO UTILITIES PROTECTION SERVICE  
NON-MEMBERS  
MUST BE CALLED DIRECTLY

OIL & GAS PRODUCERS PROTECTIVE  
SERVICE CALL: 1-800-925-0986

PLAN PREPARED BY:  
ENGINEERING ASSOCIATES, INC.  
1935 EAGLE PASS - WOOSTER, OHIO  
TELEPHONE : (330) 345-6556

ENGINEERS SEAL: FOR ENTIRE PLAN EXCEPT STRUCTURES	ENGINEERS SEAL: FOR STRUCTURES
SIGNED: <i>A. Frederick Selino, Jr.</i> DATE: 03/06/08	SIGNED: <i>Benjamin D. Hootman</i> DATE: 3-6-2008

STANDARD CONSTRUCTION DRAWINGS		SUPPLEMENTAL SPECIFICATIONS
RB-F-55	02-02-59	800 01-18-08
		849 01-19-07
		832-04-25-06
MT-35.10	4-20-01	
MT-95.30	9-5-05	
MT-98.29	10-19-07	
MT-98.50	10-18-02	
MT-101.60	9-20-06	
MT-105.10	10-18-02	
MT-105.11	10-18-02	
TC-41.20	1-19-01	
TC-52.10	1-19-07	
TC-52.20	1-19-07	
		SPECIAL PROVISIONS

APPROVED *John Hart, Jr.*  
DATE 2/10/08 DISTRICT DEPUTY DIRECTOR

APPROVED *James J. Beasley, III*  
DATE 3-24-08 DIRECTOR, DEPARTMENT OF TRANSPORTATION

**ITEM 614 - MAINTAINING TRAFFIC:**

TRAFFIC SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION ON THE EXISTING LANES OR ON THE DETOUR ROUTE PROVIDED IN THE PLANS.

**HOME ROAD**

THE EXISTING TRAFFIC ON HOME RD. HAS BEEN DETOURED BY THE OHIO DEPARTMENT OF TRANSPORTATION. THIS DETOUR SHALL REMAIN IN EFFECT UNTIL ALL WORK HAS BEEN COMPLETED. THE CONTRACTOR IS NOT RESPONSIBLE FOR THE HOME ROAD DETOUR OR SIGNING.

**SR 309**

WESTBOUND TRAFFIC SHALL BE MAINTAINED AT ALL TIMES. MAINTAIN EASTBOUND TRAFFIC UNDER THE BRIDGE ACCORDING TO STANDARD DRAWING MT-95.30. CLOSE THE RIGHT OR LEFT LANES AS NEEDED OR DIRECTED BY THE ENGINEER. AT NO TIME SHALL WORK BE COMPLETED ABOVE LANES OPEN TO TRAFFIC.

SR 309 EASTBOUND SHALL BE CLOSED PER STANDARD DRAWING MT-99.50 AND RE-ROUTED PER THE DETOUR PROVIDED IN THE PLANS DURING PROPOSED WORK. THE STATE ROUTE 309 EASTBOUND ENTRANCE RAMP SHALL BE CLOSED PER STANDARD DRAWING MT-98.29 FOR EASTBOUND TRAFFIC ON 4th STREET AND PER STANDARD DRAWING MT-101.60 FOR WESTBOUND TRAFFIC ON 4th STREET.

THE DURATION OF DETOUR SHALL NOT EXCEED 28 CONSECUTIVE CALENDAR DAYS. THE DETOUR SHALL NOT BE PLACED INTO EFFECT UNTIL THE PROPOSED STEEL BEAMS ARE READY FOR SHIPMENT TO THE CONSTRUCTION SITE, UNLESS APPROVED BY THE ENGINEER. DISINCENTIVES SHALL BE ASSESSED IN ACCORDANCE WITH CMS 108.07 FOR EACH CALENDAR DAY THE DETOUR REMAINS IN EFFECT BEYOND THE SPECIFIED LIMIT.

THE CONTRACTOR SHALL NOTIFY, IN WRITING, THE FOLLOWING AGENCIES 14 DAYS PRIOR TO THE DETOUR BEING IMPLEMENTED.

CITY OF MANSFIELD  
JAMES DESANTO, CITY ENGINEER  
30 NORTH DIAMOND STREET  
MANSFIELD, OH 44902  
PHONE NUMBER: 419-755-9702

CITY OF ONTARIO  
CHARLES AU, SERVICE SAFETY DIRECTOR  
555 STUMBO ROAD P.O. BOX 166  
ONTARIO, OH 44862  
PHONE NUMBER: 419-529-2495

THE FOLLOWING QUANTITY IS INCLUDED FOR THE CONTRACTOR TO PROVIDE THE DETOUR SIGNING AS SHOWN AS PER 614.06 (B):

ITEM 614 - DETOUR SIGNING LUMP

LENGTH AND DURATION OF LANES CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

PLACE AN UNOCCUPIED PROTECTION VEHICLE, CLOSE TO THE WORK WHENEVER WORKERS ARE IN THE WORK AREA, WHENEVER MAINTAINING TRAFFIC ACCORDING TO STANDARD DRAWING MT-95.30, OR AS DIRECTED BY THE ENGINEER. REMOVE THESE VEHICLES FROM THE PAVEMENT WHENEVER WORKERS ARE NOT IN THE WORK AREA. EQUIP THE VEHICLES WITH A 360 DEGREE ROTATING OR FLASHING AMBER BEACON CLEARLY VISIBLE FROM A MINIMUM DISTANCE OF 1 QUARTER MILE.

**ITEM 614 - MAINTAINING TRAFFIC (CONTINUED):**

PERFORM ALL WORK AND SUPPLY ALL TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH C&MS 614 AND LATEST VERSION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS ITEMIZED SEPARATELY IN THE PLAN.

**ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR:** IN ADDITION TO THE REQUIREMENTS OF C&MS 614 AND THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), PROVIDE A UNIFORMED LAW ENFORCEMENT OFFICER AND OFFICIAL PATROL CAR WITH WORKING TOP-MOUNTED EMERGENCY FLASHING LIGHTS FOR CONTROLLING TRAFFIC FOR THE FOLLOWING TASKS:

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED. DO NOT USE LAW ENFORCEMENT OFFICERS (LEOS) WHERE THE OMUTCD INTENDS THAT FLAGGERS ARE TO BE USED.

EMPLOY AND SUPERVISE THE ACTIONS AND PLACEMENT OF THE LEOS UNLESS OTHERWISE DIRECTED BY THE ENGINEER. SUPPLY A PUBLIC SAFETY VEHICLE AS REQUIRED BY THE OHIO REVISED CODE. MAKE ARRANGEMENTS FOR THESE SERVICES WITH THE STATE HIGHWAY PATROL OR LOCAL GOVERNMENTS. ARRANGEMENTS INCLUDE MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED. CONTRACTORS MAY UTILIZE LEOS FOR FLAGGING AND TRAFFIC CONTROL OTHER THAN SPECIFIED IN THESE PLANS, AT THEIR OWN EXPENSE.

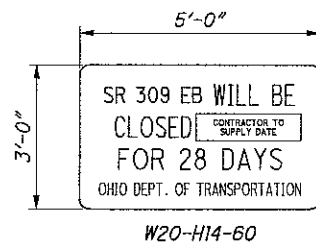
LAW ENFORCEMENT OFFICERS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR). THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR 8 HOURS

**NOTICE OF CLOSURE SIGN**

NOTICE OF CLOSURE SIGNS, AS DETAILED IN THESE PLANS, SHALL BE ERECTED BY THE CONTRACTOR AT LEAST ONE WEEK IN ADVANCE TO THE SCHEDULED ROAD OR RAMP CLOSURE. THE SIGNS SHALL BE ERECTED ON THE RIGHTHAND SIDE OF THE ROAD/RAMP FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT THE POINT OF CLOSURE.

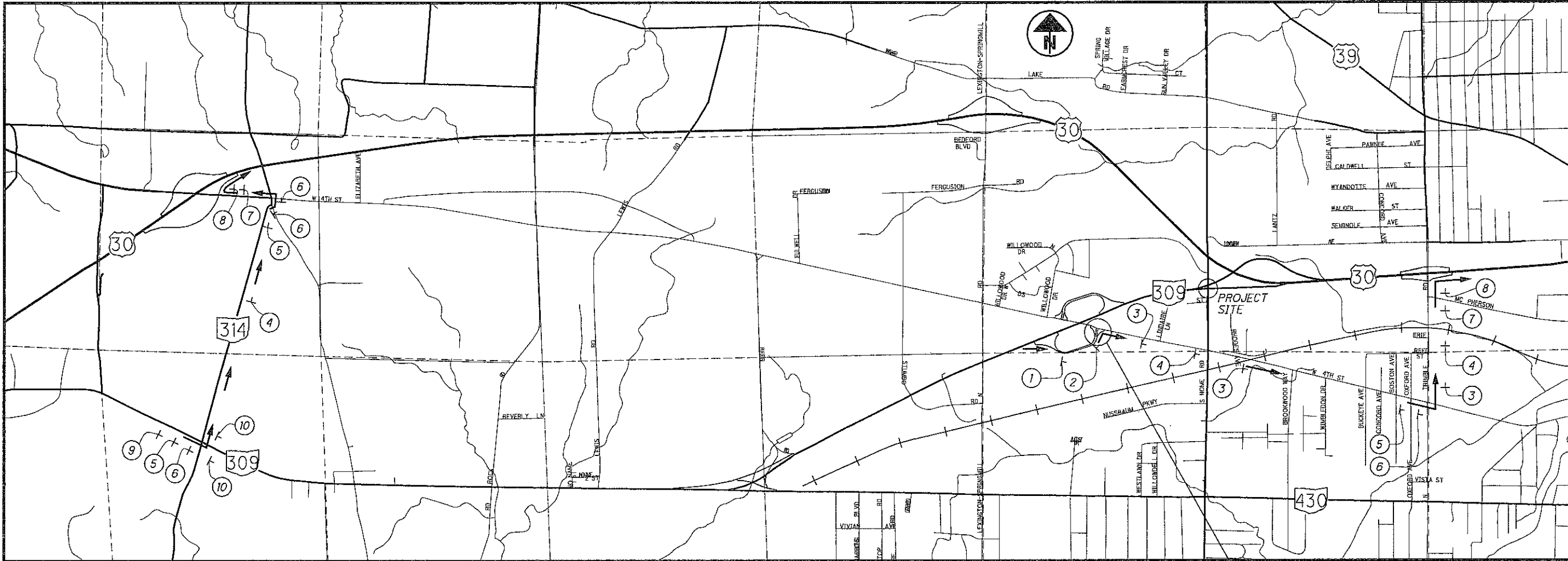
PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC.



CALCULATED  
JGL  
CHECKED  
SDS

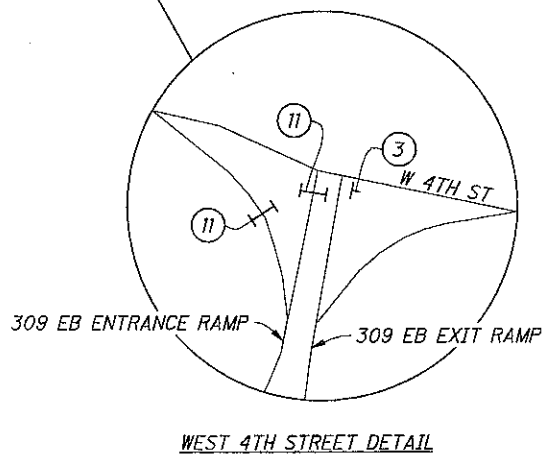
MAINTENANCE OF TRAFFIC GENERAL NOTES

RIC-309-8.7.2



DETOUR MAP  
DETOUR ROUTE

1	DETOUR M4-8-24 309 MI-5-30-3 KEEP RIGHT R4-7B-24	2	DETOUR M4-8-24 309 MI-5-30-3 M6-2R-21	3	DETOUR M4-8-24 EAST M3-2-24 309 MI-5-30-3	4	DETOUR M4-8-24 309 MI-5-30-3 M6-3-21	5	DETOUR M4-8-24 309 MI-5-30-3 M5-1L-21	6	DETOUR M4-8-24 309 MI-5-30-3 M6-1L-21	7	DETOUR M4-8-24 309 MI-5-30-3 M5-1R-21	8	DETOUR M4-8-24 309 MI-5-30-3 M6-1R-21
9	DETOUR 1500FT W20-2-48	10	ROAD CLOSED 4 MILES AHEAD LOCAL TRAFFIC ONLY R11-3A-60 M4-10L-48 MOUNTED ON TYPE III BARRICADE	11	ROAD CLOSED R11-2-48 MOUNTED ON GATES AND BARRICADES PER MT-101.60										



NOTE:  
SEE STANDARD DRAWINGS MT-98.29 AND  
MT-99.50 FOR ADDITIONAL DETAILS.



REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:

RB-1-55 REVISED 02-02-59

AND TO SUPPLEMENTAL SPECIFICATIONS:

849 DATED 01-19-07

**DESIGN SPECIFICATIONS:** THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002 AND THE ODOT BRIDGE DESIGN MANUAL.

CONSTRUCTION AND MATERIAL SPECIFICATIONS: STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, DATED JANUARY 1, 2005.

**DESIGN LOADING:** HS20-44

**DESIGN DATA:**

CONCRETE CLASS S - COMPRESSIVE STRENGTH 4500 PSI

EXISTING STRUCTURAL STEEL - ASTM A36 GRADE 36  
YIELD STRENGTH 36,000 PSI

NEW STRUCTURAL STEEL - ASTM A709 GRADE 50  
YIELD STRENGTH 50,000 PSI

**STEEL RESTRAINT OR PRELOAD LIMITS:** EXISTING ASTM A36 GRADE 36 - DO NOT SUBJECT ANY PART OF THE STRUCTURE TO A JACKING, PULLING OR RESTRAINING UNIT STRESS EXCEEDING 18,000 PSI.

**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 RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PRE-BID 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.

**EXISTING PLANS:** EXISTING PLANS CAN BE INSPECTED AT THE DISTRICT 3 OFFICE OF THE OHIO DEPARTMENT OF TRANSPORTATION, ASHLAND, OHIO.

**UTILITY LINES:** THERE ARE NO UNDERGROUND UTILITIES SHOWN ON THIS PLAN. THE NATURE OF THE WORK BY THIS PROJECT WILL NOT AFFECT ANY KNOWN UNDERGROUND UTILITIES THAT EXIST UNDER OR ADJACENT TO THE WORK AREA.

ESTIMATED QUANTITIES										CALC. BY: RLE	DATE: 03/06/08	CHKD. BY: BDH	DATE: 03/07/08
ITEM	ITEM EXTENSION	TOTAL	UNIT	DESCRIPTION	SFN: 7001940				SEE SHEET				
					ABUTS.	PIERS	SUPER.	GENERAL					
202	11201	LUMP		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (MAIN MEMBERS)			LUMP		2 OF 5				
202	11201	LUMP		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (SECONDARY MEMBERS)			LUMP		2 OF 5				
251	01001	4	SQ YD	PARTIAL DEPTH PAVEMENT REPAIR, AS PER PLAN			4		2 OF 5				
511	34401	1	CU YD	CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN			1		2 OF 5				
513	10201	2223	POUND	STRUCTURAL STEEL MEMBERS LEVEL UF, AS PER PLAN			2223		2 OF 5				
513	10241	17,656	POUND	STRUCTURAL STEEL MEMBERS LEVEL 2, AS PER PLAN			17,656		2 OF 5				
514	00051	300	SQ FT	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL, AS PER PLAN			300		2 OF 5				
514	00057	300	SQ FT	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT, AS PER PLAN			300		2 OF 5				
514	00061	1400	SQ FT	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT, AS PER PLAN			1400		2 OF 5				
514	00067	1400	SQ FT	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN			1400		2 OF 5				
516	45305	2	EACH	REFURBISH BEARING DEVICE, AS PER PLAN			2		2 OF 5				
516	47001	LUMP		JACKING & TEMPORARY SUPPORT OF STRUCTURE, AS PER PLAN			LUMP		2 OF 5				
849	10000	LUMP		DAMAGE ASSESSMENT			LUMP						
849	10500	LUMP		SURFACE PREPARATION			LUMP						
849	10600	4	HOURS	REPAIRING DAMAGED MEMBERS BY GRINDING			4						
849	10700	LUMP		STRAIGHTENING DAMAGED MEMBERS			LUMP						

**PROPOSED WORK:**

- A. CLOSE EASTBOUND LANES ON STATE ROUTE 309.
- B. REMOVE EXISTING ASPHALT WEARING SURFACE AND DECK SLAB CONCRETE OVER EXISTING BOLTED BEAM SPLICES AT BEAMS C AND D AS SHOWN IN THE PLANS.
- C. JACK THE EXISTING SUPERSTRUCTURE AT PIER 1 AND INSTALL ALL TEMPORARY SUPPORTS NECESSARY TO PERFORM THE WORK ACCORDING TO THE STRAIGHTENING WORK PLAN.
- D. REMOVE EXISTING BEARING DEVICES TO BE REFURBISHED AT BEAMS C AND D AS SHOWN IN THE PLANS.
- E. REMOVE EXISTING DAMAGED MAIN AND SECONDARY MEMBERS AS SHOWN IN THE PLANS.
- F. INSTALL NEW MAIN AND SECONDARY MEMBERS AND HEAT STRAIGHTEN EXISTING DAMAGED MEMBERS AS SHOWN IN THE PLANS.
- G. INJECT EPOXY GROUT BETWEEN THE TOP FLANGES OF THE NEW MAIN BEAM MEMBERS AND THE BOTTOM OF THE EXISTING CONCRETE DECK SLAB.
- H. INSTALL REFURBISHED BEARING DEVICES AT BEAMS C AND D.
- I. AFTER THE EPOXY GROUT HAS HARDENED SUFFICIENTLY, REMOVE ALL TEMPORARY SUPPORTS.
- J. REPAIR THE CONCRETE DECK SLAB AND ASPHALT WEARING SURFACE OVER THE BOLTED BEAM SPLICES.
- K. PAINT NEW STEEL AND FEATHERED PAINT REMOVAL AREAS OF EXISTING STEEL.
- L. OPEN EASTBOUND LANES ON STATE ROUTE 309.

DESIGN AGENCY: ENGINEERING ASSOCIATES, INC.  
 1305 EAGLE PASS, WESTON, OHIO 44891  
 TEL: 419-330-1450 FAX: 419-330-1450  
 DATE: 03/07/08  
 REVIEWED: DWS  
 DRAWN: BDH  
 DESIGNED: BDH  
 CHECKED: RLE  
 STRUCTURE FILE NUMBER: 7001940  
**STRUCTURE REPAIR GENERAL NOTES - 1**  
 BRIDGE NO. RIC-309-0872  
 UNDER HOME ROAD  
 RIC-309-8.72  
 PID 83800  
 1 / 5  
 5 / 9

**ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (MAIN MEMBERS):**  
 THIS ITEM CONSISTS OF THE REMOVAL OF THE EXISTING MAIN BEAM MEMBERS TO THE LIMITS SHOWN IN THE PLANS. THIS INCLUDES THE TEMPORARY SUPPORT OF THE EXISTING MAIN MEMBERS WHICH SHALL BE IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 849.13 - STRAIGHTENING WORK PLAN. FLAME OR SAW CUT PORTIONS OF THE EXISTING MAIN MEMBERS USING A MECHANICAL GUIDE ACCORDING TO C&MS 513.12 EXCEPT THAT ONLY SAW CUTTING WILL BE PERMITTED AT THE LOCATIONS OF THE NEW BOLTED BEAM SPLICES "AA" IN SPAN 1. PROVIDE SHIELDING AS NECESSARY TO PREVENT DAMAGE TO MAIN OR SECONDARY MATERIALS THAT REMAIN. GRIND THE REMAINING CUT SURFACES OF THE EXISTING MEMBER SMOOTH IN PREPARATION FOR THE BOLTED BEAM SPLICES. PAYMENT FOR ALL MATERIALS, TOOLS, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (MAIN MEMBERS).

**ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (SECONDARY MEMBERS):** THIS ITEM CONSISTS OF THE REMOVAL OF EXISTING SECONDARY MEMBERS (CROSSFRAMES) SHOWN TO BE REMOVED IN THE PLANS OR AS DETERMINED BY FIELD INSPECTION ACCORDING TO ITEM 849 - DAMAGE ASSESSMENT OR AS DIRECTED BY THE ENGINEER. SUPPORT THE EXISTING SECONDARY MEMBERS ACCORDING TO SUPPLEMENTAL SPECIFICATION 849.13 - 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 C&MS 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 MATERIALS). DETERMINE FINAL QUANTITIES BY FIELD MEASUREMENTS. PAYMENT FOR ALL MATERIALS, TOOLS, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (SECONDARY MEMBERS).

**ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR, AS PER PLAN:** PROVIDE ITEM 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1 PG64-22 FOR THE REPLACEMENT MATERIAL.

**ITEM 511 - CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN:**  
 THIS ITEM CONSISTS OF REMOVAL AND REPLACEMENT OF THE EXISTING CONCRETE FOR THE SIX (6) ACCESS HOLES THROUGH THE EXISTING DECK SLAB REQUIRED FOR THE INSTALLATION OF THE BOLTED BEAM SPLICES. REMOVE EXISTING CONCRETE AS SHOWN IN THE PLANS USING CHIPPING HAMMERS NO HEAVIER THAN THE NOMINAL 35 POUND CLASS AND OPERATED AT AN ANGLE OF LESS THAN 45° MEASURED FROM THE SURFACE OF THE DECK. CONCRETE SHALL BE REMOVED IN A MANNER THAT PREVENTS CUTTING, ELONGATING OR DAMAGING REINFORCING STEEL. REPLACE REINFORCING STEEL DAMAGED DURING REMOVAL OF THE CONCRETE. PRIOR TO FILLING IN THE ACCESS HOLE WITH CONCRETE, THOROUGHLY CLEAN THE SURFACE OF THE AREA TO BE PATCHED AND ALL EXPOSED REINFORCING STEEL OF ALL DIRT, DUST, OR OTHER FOREIGN MATERIALS WITH WATER, AIR UNDER PRESSURE, OR ANY OTHER METHOD THAT PRODUCES SATISFACTORY RESULTS. THOROUGHLY DRENCH THE SURFACE WITH CLEAN WATER. BEFORE PLACING THE CONCRETE ALLOW THE SURFACE TO DRY TO A DAMP CONDITION. PLACE AND FINISH CLASS S CONCRETE ACCORDING TO C&MS 499 AND 511. PROVIDE NO. 8 LIMESTONE FOR THE COARSE AGGREGATE IN THE CONCRETE. PAYMENT FOR ALL MATERIALS, TOOLS, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 511 - CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN.

**ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN:**  
 THIS ITEM CONSISTS OF PROVIDING AND INSTALLING NEW INTERMEDIATE CROSSFRAME MEMBERS AS SHOWN IN THE PLANS. 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 DRAWING 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 S1002, TO THE STRUCTURAL, WELDING AND METALS SECTION OF THE OFFICE OF MATERIAL MANAGEMENT FOR RECORD PURPOSES. THE MEMBERS INCLUDED IN THIS ITEM ARE PROVIDED IN THE PLANS. PAYMENT FOR ALL MATERIALS, TOOLS, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN.

**ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL 2, AS PER PLAN:**  
 THIS ITEM CONSISTS OF PROVIDING AND INSTALLING THE NEW MAIN BEAM MEMBERS AND BOLTED BEAM SPLICES (INCLUDING SPLICE PLATES, FIELD DRILLING OF HOLES IN THE EXISTING BEAMS, NUTS, BOLTS, WASHERS, ETC.) AS SHOWN IN THE PLANS. THIS ITEM ALSO INCLUDES THE REMOVAL OF THE BOTTOM OF THE EXISTING CONCRETE DECK SLAB TO ACCEPT THE TOP FLANGE OF THE NEW BEAM MEMBERS AND THE INSTALLATION OF EPOXY GROUT AROUND THE TOP FLANGE OF THE NEW BEAM MEMBERS AS SHOWN IN THE PLANS. PROVIDE NON-SHRINK, NON-METALLIC EPOXY GROUT IN ACCORDANCE WITH C&MS 705.20. PRIOR TO INJECTING THE GROUT, THOROUGHLY CLEAN THE BOTTOM OF THE DECK SLAB AND THE TOP FLANGE OF THE NEW BEAM MEMBER OF ALL DIRT, DUST, OR OTHER FOREIGN MATERIALS WITH WATER, AIR UNDER PRESSURE, OR ANY OTHER METHOD THAT PRODUCES SATISFACTORY RESULTS. THE EPOXY GROUT SHALL BE APPLIED UNDER PRESSURE SO THAT ALL VOIDS BETWEEN THE DECK SLAB AND THE TOP FLANGE OF THE NEW BEAM MEMBER ARE FILLED. PLACE EPOXY GROUT BY HAND IN THOSE AREAS IMMEDIATELY ADJACENT TO THE TOP FLANGE AS SHOWN IN THE PLANS. PAYMENT FOR ALL MATERIALS, TOOLS, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL 2, AS PER PLAN.

**ITEM 514 - SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL, AS PER PLAN:** THIS ITEM CONSISTS OF PREPARING THE SURFACES OF EXISTING STRUCTURAL STEEL PREVIOUSLY COATED WITH AN OLDER PAINT SYSTEM WHICH MAY CONTAIN LEAD TO CORRECT DAMAGE BY COLLISION OR CORROSION. PREPARE THE EXISTING SURFACES IN ACCORDANCE WITH C&MS 514.

**ITEM 514 - FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT, AS PER PLAN:** THIS ITEM CONSISTS OF APPLYING A PRIME COAT TO THE SURFACES OF EXISTING STRUCTURAL STEEL TO CORRECT DAMAGE BY COLLISION OR CORROSION. APPLY THE PRIME COAT TO EXISTING SURFACES IN ACCORDANCE WITH C&MS 514.

**ITEM 514 - FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT, AS PER PLAN:** THE ITEM CONSISTS OF APPLYING AN INTERMEDIATE COAT TO BOTH EXISTING AND NEW SURFACES OF STRUCTURAL STEEL TO CORRECT DAMAGE BY COLLISION OR CORROSION. APPLY INTERMEDIATE COAT TO EXISTING AND NEW SURFACES IN ACCORDANCE WITH C&MS 514.

**ITEM 514 - FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN:**  
 THIS ITEM CONSISTS OF APPLYING A FINISH COAT TO BOTH EXISTING AND NEW SURFACES OF STRUCTURAL STEEL TO CORRECT DAMAGE BY COLLISION OR CORROSION. THE FINISH COAT SHALL BE A GREY COLOR TINTED TO MATCH THE EXISTING PAINT COLOR AS NEARLY AS POSSIBLE. APPLY FINISH COAT TO EXISTING AND NEW SURFACES IN ACCORDANCE WITH C&MS 514.

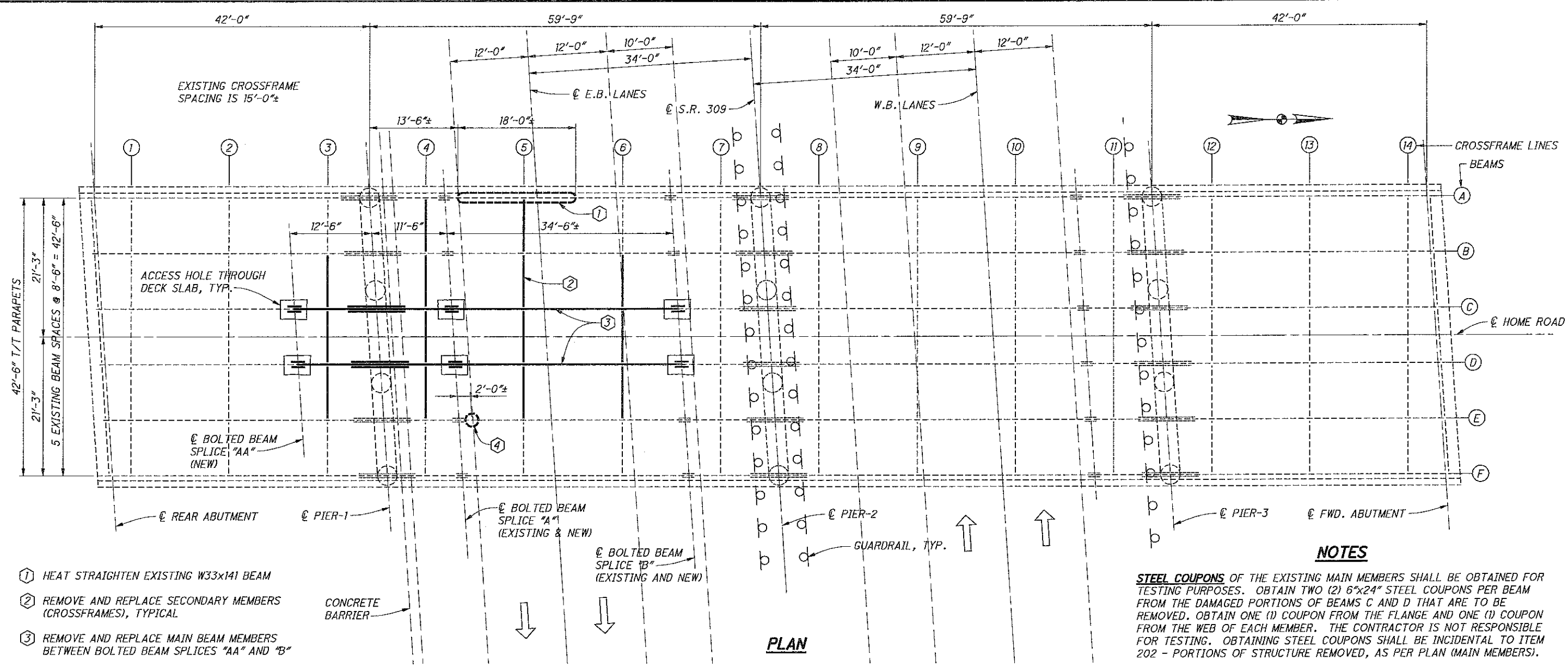
**ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN:** THIS WORK CONSISTS OF RAISING OR RE-POSITIONING EXISTING STRUCTURES TO PERFORM THE REPAIRS DEFINED IN THE PROJECT PLANS OR THE HEAT STRAIGHTENING PLAN.

SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH C&MS 501.05.

IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION 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 C&MS 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.

**ITEM 516 - REFURBISH BEARING DEVICE, AS PER PLAN:** THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROPERLY ALIGN BRIDGE BEARINGS AS WELL AS THEIR CLEANING AND PAINTING. INCLUDED SHALL BE THE DISASSEMBLY OF THE BEARINGS, HAND TOOL CLEANING (GRINDING IF NECESSARY), PAINTING ACCORDING TO ITEM 514, REPLACEMENT OF ANY DAMAGED SHEET LEAD WITH PREFORMED BEARING PADS (711.21), INSTALLATION OF ANY NECESSARY STEEL SHIMS OF THE SAME SIZE AS THE BEARINGS TO PROVIDE A SNUG FIT, REALIGNMENT OF THE UPPER BEARING PLATE BY REMOVING EXISTING WELDS AND RE-WELDING SO THAT THE BEARINGS ARE VERTICALLY ALIGNED A 60° F, LUBRICATING SLIDING SURFACES, AND RE-ASSEMBLY OF THE BEARINGS. ASSURE ALL BEARINGS ARE SHIMMED ADEQUATELY AND THAT NO BEAMS AND/OR BEARING DEVICES ARE "FLOATING". AT NO ADDITIONAL COST TO THE DEPARTMENT, THE CONTRACTOR MAY INSTALL NEW BEARINGS OF THE SAME TYPE AS THE EXISTING IN PLACE OF REFURBISHING THE BEARINGS. ALL WORK SHALL BE TO THE SATISFACTION OF THE ENGINEER. PAYMENT FOR ALL OF THE ABOVE DESCRIBED LABOR AND MATERIALS WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 516 - REFURBISH BEARING DEVICE, AS PER PLAN.

DESIGN AGENCY <b>ENGINEERING ASSOCIATES, INC.</b> 825 EAGLE PASS - HOOSTER, OHIO 44661 TEL: 419-938-1100 FAX: 419-445-9677	DATE 03/07/08	REVISIONS DWS	STRUCTURE FILE NUMBER 7001940
	DRAWN BDH	CHECKED RLE	DESIGNED BDH
<b>STRUCTURE REPAIR GENERAL NOTES-2</b>			
BRIDGE NO. RIC-309-0872 UNDER HOME ROAD			
RIC-309-8.72	PID 83800		
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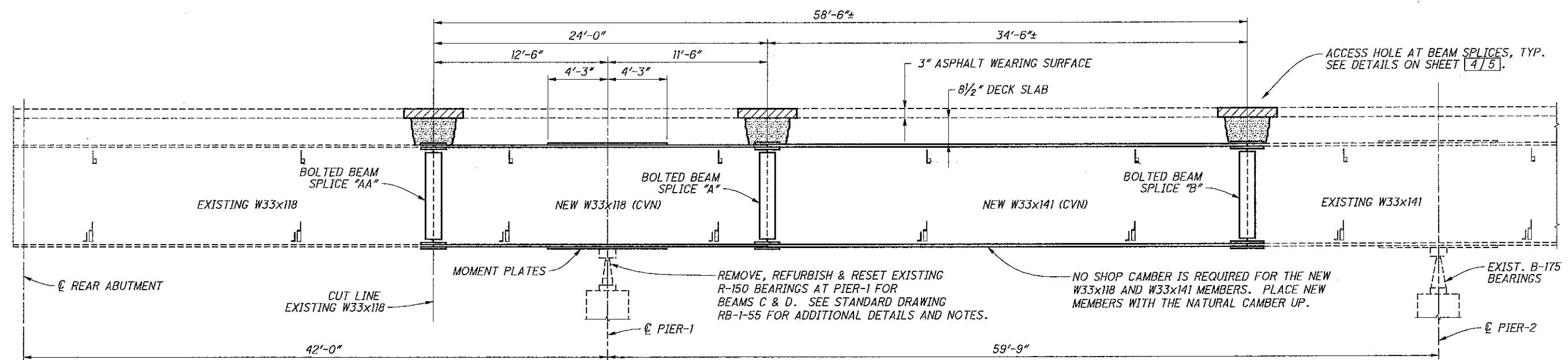


**NOTES**

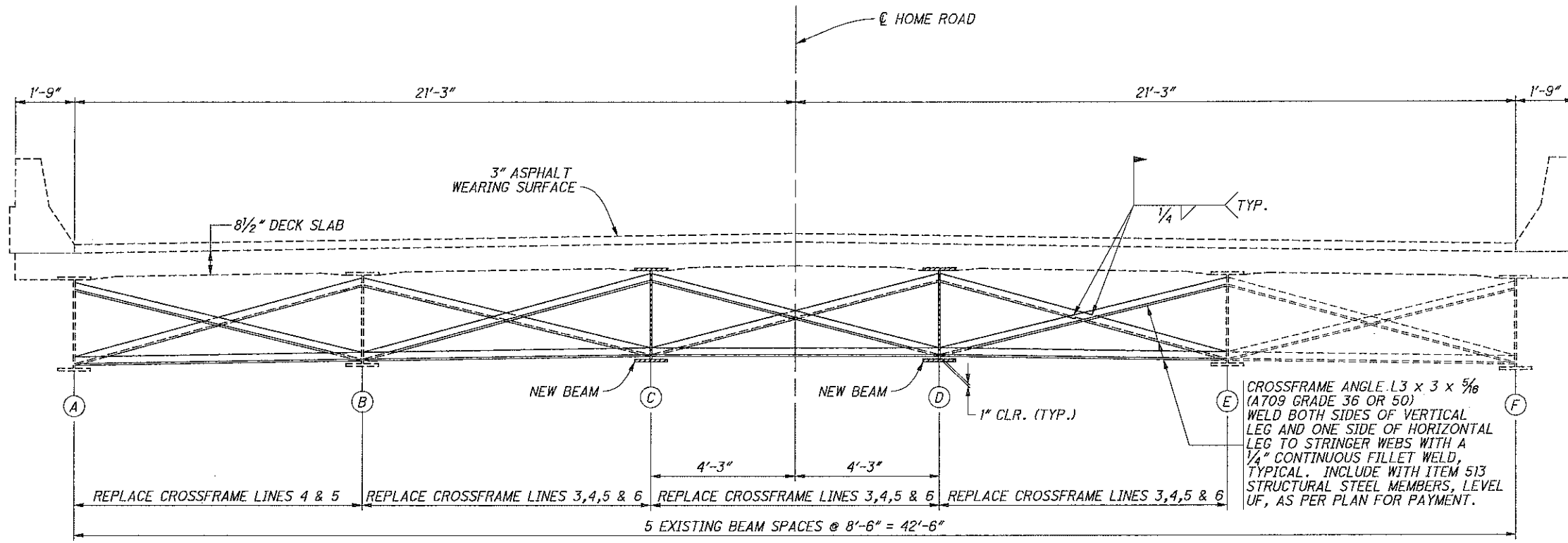
**STEEL COUPONS** OF THE EXISTING MAIN MEMBERS SHALL BE OBTAINED FOR TESTING PURPOSES. OBTAIN TWO (2) 6"x24" STEEL COUPONS PER BEAM FROM THE DAMAGED PORTIONS OF BEAMS C AND D THAT ARE TO BE REMOVED. OBTAIN ONE (1) COUPON FROM THE FLANGE AND ONE (1) COUPON FROM THE WEB OF EACH MEMBER. THE CONTRACTOR IS NOT RESPONSIBLE FOR TESTING. OBTAINING STEEL COUPONS SHALL BE INCIDENTAL TO ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (MAIN MEMBERS).

**TRANSVERSE SECTION:** SEE SHEET [4/5].

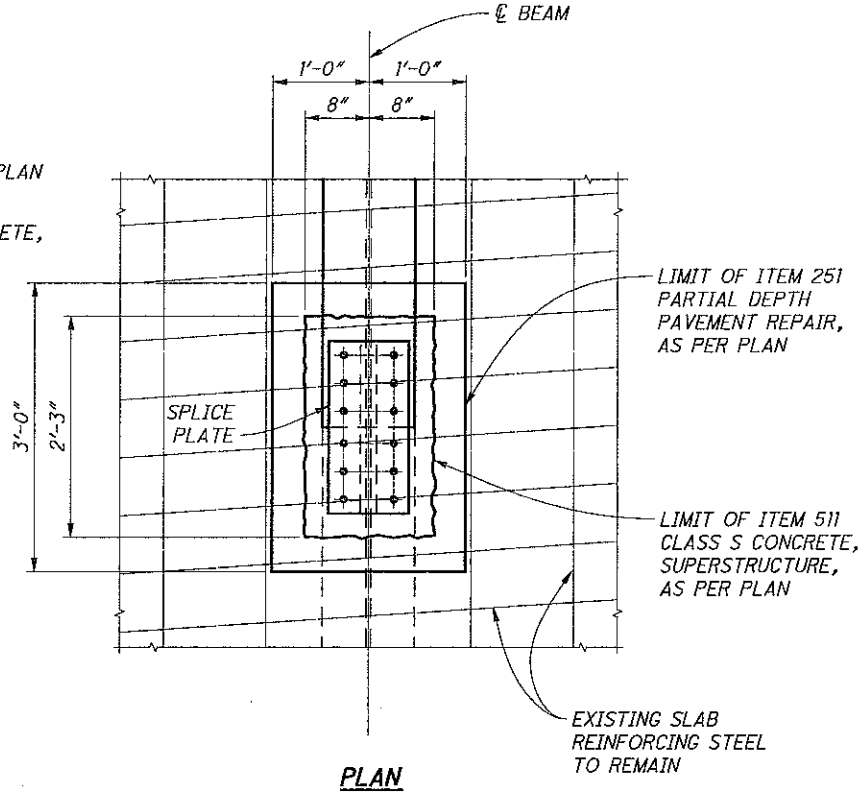
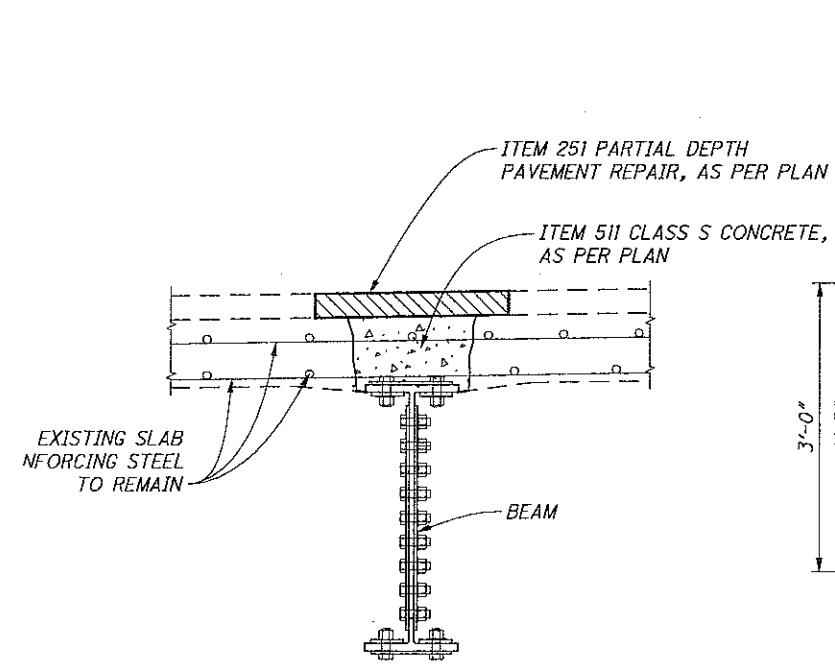
**BOLTED BEAM SPLICE AND MOMENT PLATE DETAILS:** SEE SHEET [5/5].



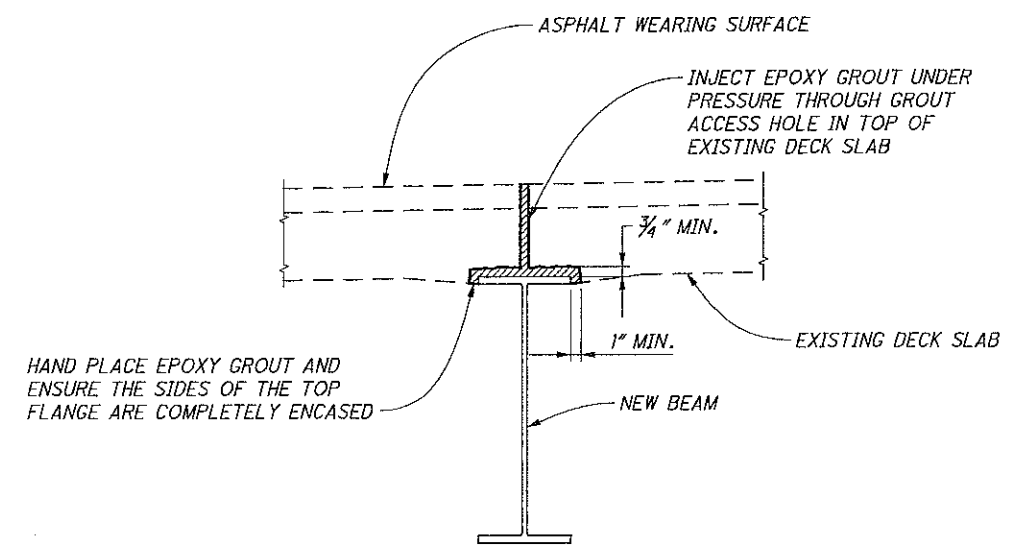
**PART ELEVATION - BEAMS B & C**



**TRANSVERSE SECTION**



**ACCESS HOLE AT BOLTED SPLICES**  
BEAMS C AND D

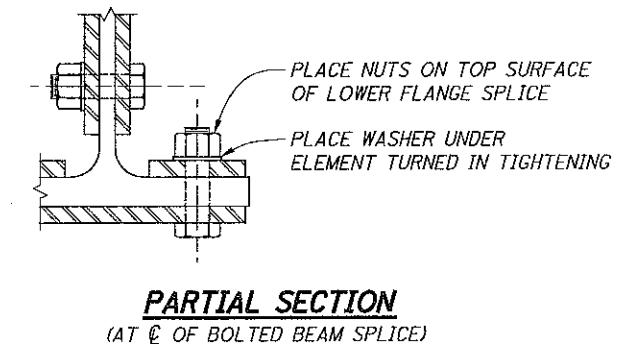
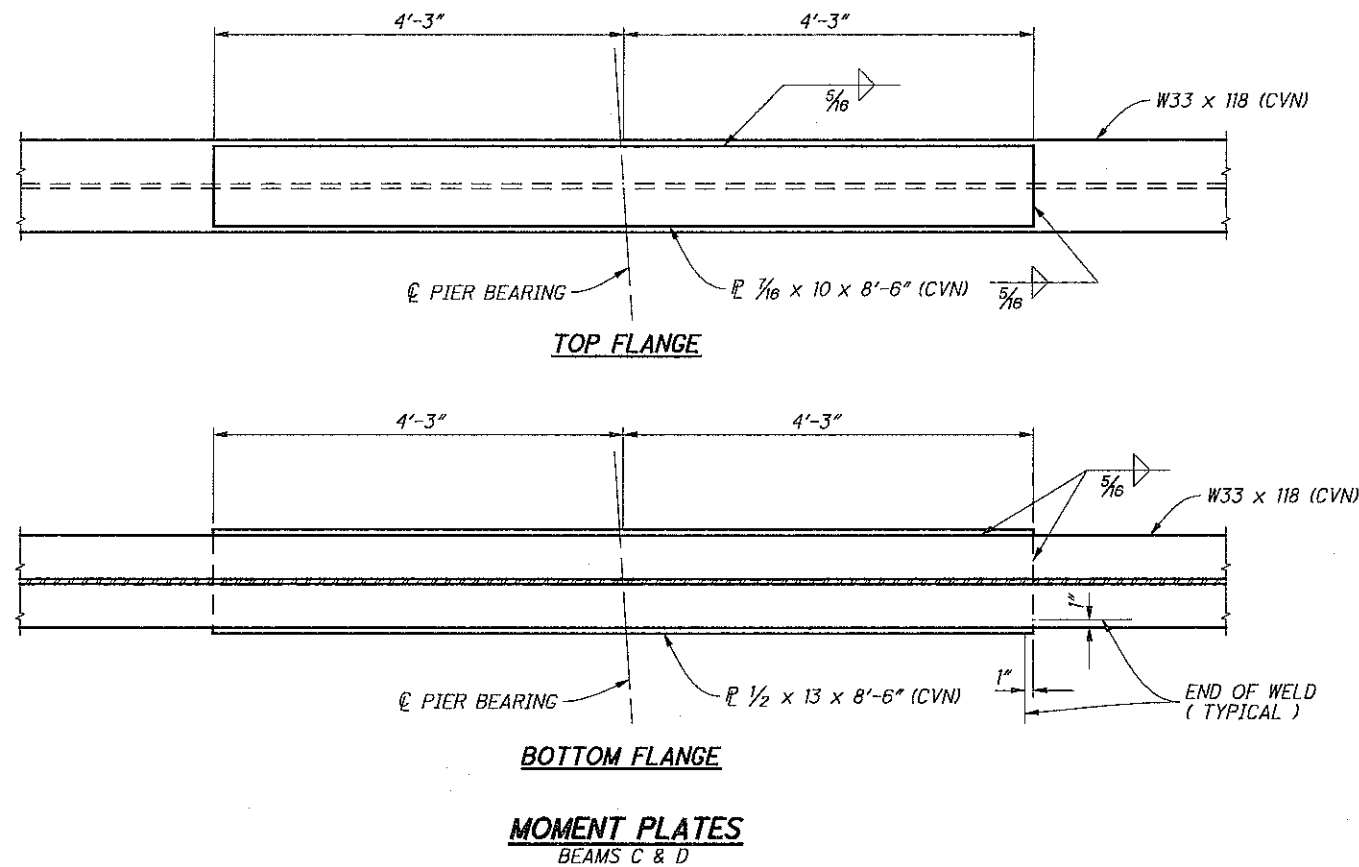
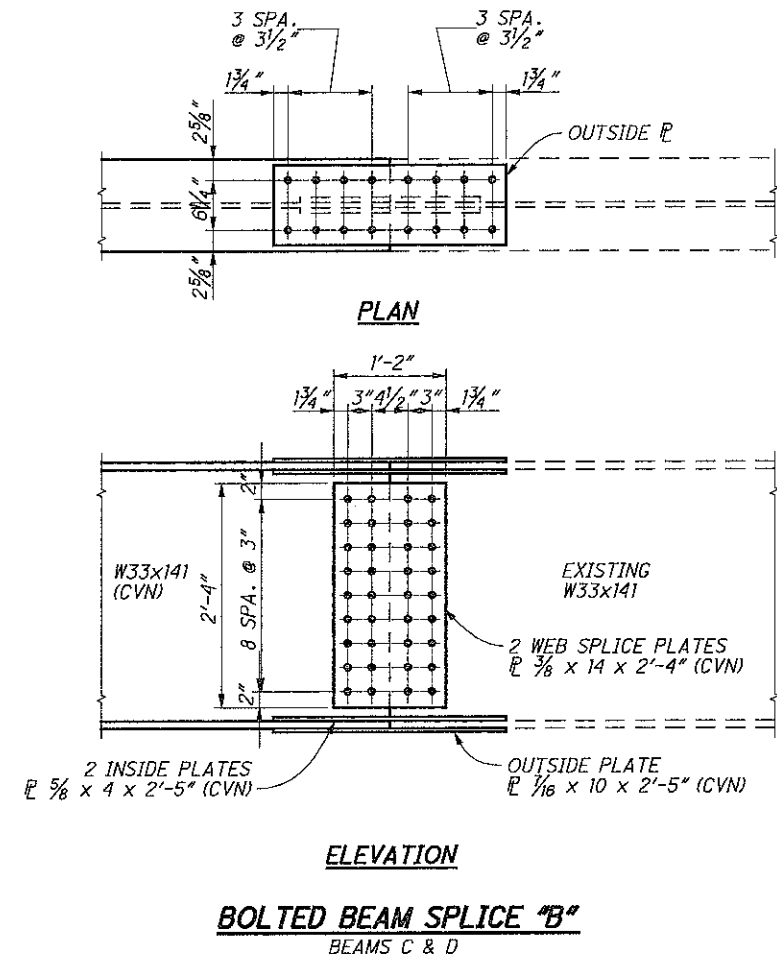
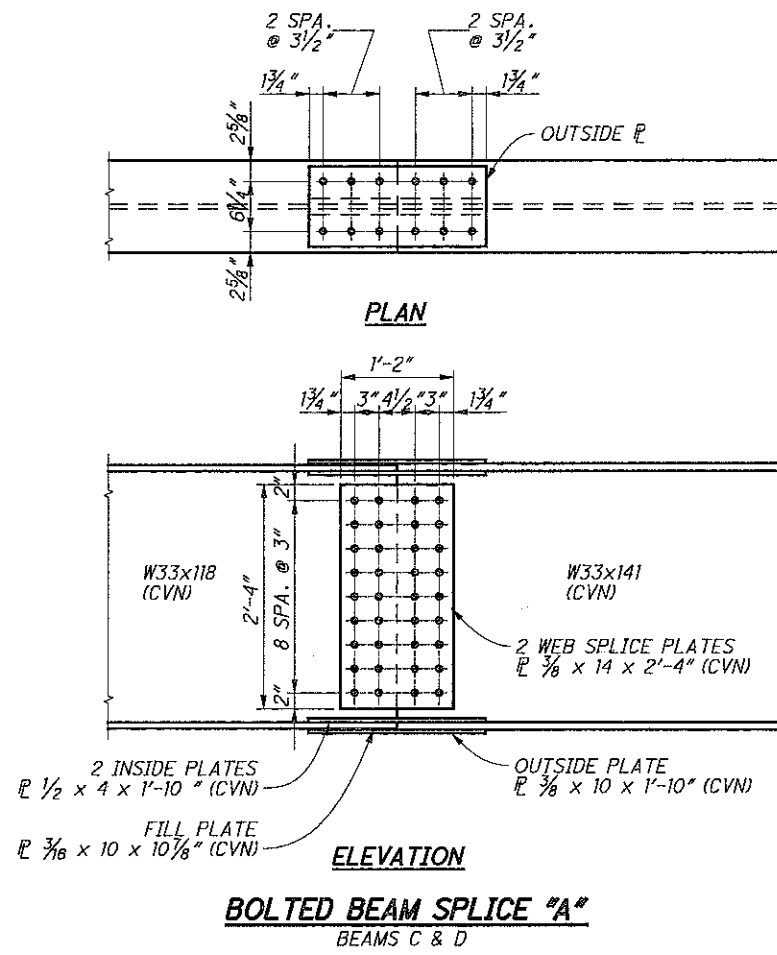
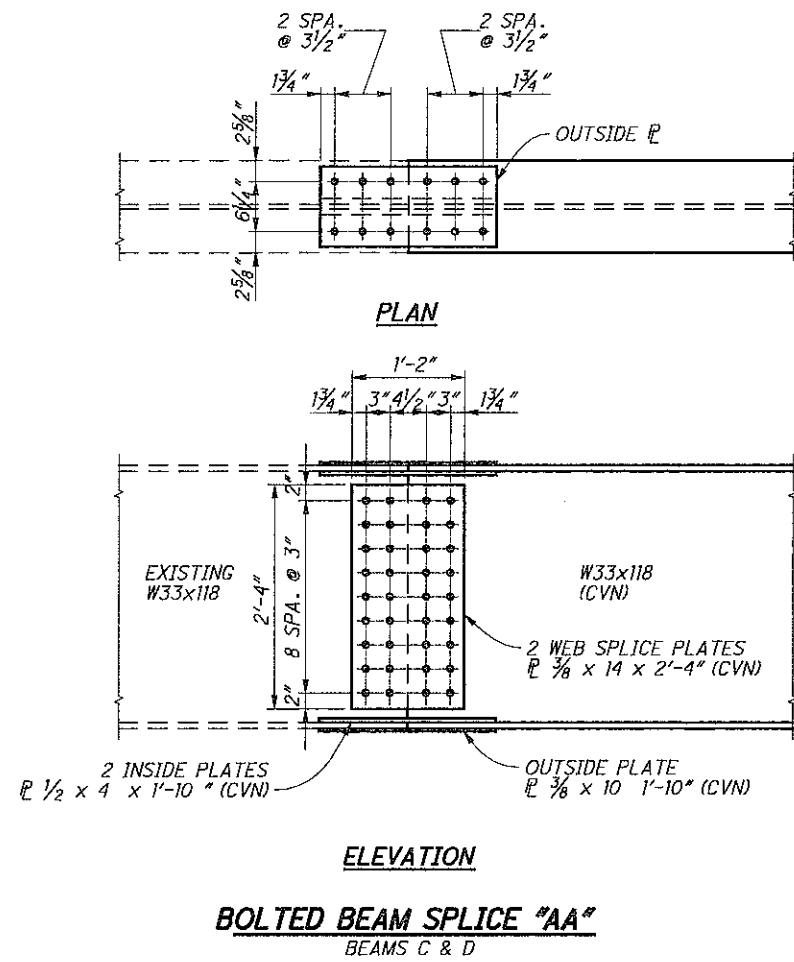


**NOTES**

- PLAN AND BEAM ELEVATION: SEE SHEET [3/5].
- BOLTED BEAM SPLICE AND MOMENT PLATE DETAILS: SEE SHEET [5/5].
- LOCATIONS OF ACCESS HOLES: SEE SHEET [3/5].

DESIGN AGENCY: ENGINEERING ASSOCIATES, INC.  
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 DRAWN: RLE  
 CHECKED: BDH  
 STRUCTURE FILE NUMBER: 7001940  
 BRIDGE NO. RIC-309-0872  
 UNDER HOME ROAD  
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**NOTES**

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

**HIGH STRENGTH BOLTS** FOR BOLTED BEAM SPLICES SHALL BE 1 INCH DIAMETER GALVANIZED A325 TYPE 1 BOLTS UNLESS OTHERWISE NOTED.

**FABRICATION AND ASSEMBLY:** THE OPENING BETWEEN THE ENDS OF THE BEAM SECTIONS AT THE SPLICES MAY BE INCREASED FOR FIT-UP PURPOSES BUT SHALL NOT EXCEED 1/2" AFTER ASSEMBLY. THE EDGE DISTANCE FROM THE END OF THE BEAM SECTION TO THE FIRST ROW OF BOLTS IN EITHER THE FLANGE OR THE WEB SHALL NOT BE LESS THAN 1 1/4".

**LOCATIONS OF BOLTED BEAM SPLICES AND MOMENT PLATES:** SEE SHEET 3/5.

DESIGN AGENCY: **ENGINEERING ASSOCIATES, INC.**  
 233 EAGLE PASS - INDUSTRY, OHIO 44801  
 FAX: (330) 445-9977

DATE: 03/07/08  
 REVIEWED: DWS  
 DRAWN: RLE  
 CHECKED: BDH

STRUCTURE FILE NUMBER: 7001940

**STRUCTURE REPAIR DETAILS-3**  
 BRIDGE NO. RIC-309-0872  
 UNDER HOME ROAD

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