

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

D04-BH-FY2024 (EAST)

CITY OF CONNEAUT AND ROAMING SHORES
KINGSVILLE AND HARPERSFIELD TOWNSHIP
ASHTABULA COUNTY

CITY OF YOUNGSTOWN
AUSTINTOWN AND JACKSON TOWNSHIP

MAHONING COUNTY

WINDHAM TOWNSHIP

PORTAGE COUNTY

CITY OF GIRARD AND NEWTON FALLS

HUBBARD AND LIBERTY TOWNSHIP

TRUMBULL COUNTY

INDEX OF SHEETS:

TITLE SHEET	P.1	PAVEMENT MARKINGS	P.10-12
LOCATION MAPS	P.2-4	SIGN SUBSUMMARY	P.13-15
GENERAL NOTES	P.5	STRUCTURES	P.16-34
MAINTENANCE OF TRAFFIC	P.6-7	RIGHT OF WAY	RW 1-3
GENERAL SUMMARY	P.8-9		

FEDERAL PROJECT NUMBER

E230(275)

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

BRIDGE MAINTENANCE ON STRUCTURES LOCATED ON VARIOUS ROUTES WITHIN ASHTABULA, MAHONING, AND TRUMBULL COUNTIES.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	N/A (MAINTENANCE ONLY)
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	N/A (MAINTENANCE ONLY)
NOTICE OF INTENT EARTH DISTURBED AREA:	N/A (MAINTENANCE ONLY)

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.

2023 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS, CHANGES LISTED IN THE PROPOSAL, AND THE SUPPLEMENTAL SPECIFICATION 800 VERSION INDICATED ON 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.

DISTRICT DEPUTY DIRECTOR

Arthur G. Noirot Jr.
 Arthur G. Noirot Jr., P.E.
 04

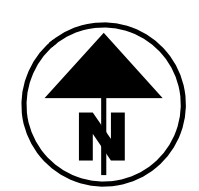
DIRECTOR, DEPARTMENT OF TRANSPORTATION

John M. ...



LOCATION MAP

LATITUDE: 41°00'57" LONGITUDE: 81°29'30"



STRUCTURE	NHS	FUNCTIONAL CLASSIFICATION
ATB-90-1902	YES	RURAL FREEWAYS AND EXPRESSWAYS
ATB-90-2457	YES	URBAN FREEWAYS AND EXPRESSWAYS
ATB-6-0969	NO	RURAL MAJOR COLLECTOR
ATB-534-1824	NO	RURAL MAJOR COLLECTOR
MAH-76-0091L	YES	RURAL FREEWAYS AND EXPRESSWAYS
MAH-76-0091R	YES	RURAL FREEWAYS AND EXPRESSWAYS
MAH-80-0076R	YES	RURAL FREEWAYS AND EXPRESSWAYS
MAH-80-0076L	YES	RURAL FREEWAYS AND EXPRESSWAYS
MAH-80-0512L	YES	URBAN FREEWAYS AND EXPRESSWAYS
MAH-80-0519R	YES	URBAN FREEWAYS AND EXPRESSWAYS
MAH-80-0565	YES	URBAN FREEWAYS AND EXPRESSWAYS
MAH-62-1825	YES	URBAN FREEWAYS AND EXPRESSWAYS
MAH-711-0127	YES	URBAN FREEWAYS AND EXPRESSWAYS
POR-303-1951	NO	RURAL MAJOR COLLECTOR
TRU-80-0155R	YES	URBAN FREEWAYS AND EXPRESSWAYS
TRU-80-0159L	YES	URBAN FREEWAYS AND EXPRESSWAYS
TRU-80-0191R	YES	URBAN FREEWAYS AND EXPRESSWAYS
TRU-80-0194L	YES	URBAN FREEWAYS AND EXPRESSWAYS
TRU-80-0219R	YES	URBAN FREEWAYS AND EXPRESSWAYS
TRU-80-0223L	YES	URBAN FREEWAYS AND EXPRESSWAYS
TRU-80-0294	YES	URBAN FREEWAYS AND EXPRESSWAYS
TRU-80-0395L	YES	URBAN FREEWAYS AND EXPRESSWAYS
TRU-80-0403R	YES	URBAN FREEWAYS AND EXPRESSWAYS
TRU-80-0416L	YES	URBAN FREEWAYS AND EXPRESSWAYS
TRU-80-0420R	YES	URBAN FREEWAYS AND EXPRESSWAYS
TRU-80-1050	YES	URBAN FREEWAYS AND EXPRESSWAYS
TRU-7-1165	NO	RURAL MINOR ARTERIAL
TRU-11-0390	YES	URBAN FREEWAYS AND EXPRESSWAYS
TRU-11-0622	YES	URBAN FREEWAYS AND EXPRESSWAYS
TRU-11-0704	YES	URBAN FREEWAYS AND EXPRESSWAYS
TRU-11-1018	YES	URBAN FREEWAYS AND EXPRESSWAYS
TRU-534-0411	NO	URBAN MAJOR COLLECTOR

UNDERGROUND UTILITIES
 Contact Two Working Days Before You Dig

OHIO811.org
 Before You Dig

OHIO811, 8-1-1, or 1-800-362-2764
 (Non members must be called directly)

PLAN PREPARED BY:
 ODOT DISTRICT 4, CAPITAL PLANNING
 2088 S. ARLINGTON ROAD
 AKRON, OHIO 44306

STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
DM-4.3	1/15/16	TC-21.11	7/16/21	800-2023	7/21/23 ASBESTOS REPORT, 6/23/23
DM-4.4	1/15/16	TC-21.21	1/20/23	821	4/20/12 WPC 1/19/24
		TC-41.10	7/19/13	832	7/21/23
MT-95.30	7/19/19	TC-41.20	10/18/13	843	10/18/19
MT-95.31	7/19/19	TC-42.10	10/18/13	844	4/20/18
MT-95.32	4/19/19	TC-42.20	10/18/13	848	1/15/21
MT-95.50	7/21/17	TC-52.10	10/18/13	921	4/20/12
MT-97.10	4/19/19	TC-52.20	1/15/21		
MT-98.10	1/17/20	TC-71.10	4/21/23		
MT-98.11	1/17/20				
MT-98.20	4/19/19				
MT-99.30	1/17/20				
MT-102.20	4/19/19				
MT-105.10	1/17/20				

ENGINEER'S SEAL

BRIDGE

DESIGN AGENCY	
DESIGNER	JRF
REVIEWER	MJA 12-06-23
PROJECT ID	107246
SHEET	P.1
TOTAL	P.34

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.

STEEL RESTRAINT OR PRELOAD LIMITS: EXISTING ASTM A709 GRADE 50W OR A709 GRADE 50 - DO NOT SUBJECT ANY PART OF THE STRUCTURE TO A JACKING, PULLING OR RESTRAINING UNIT STRESS EXCEEDING 25,000 PSI (172.4 MPA)*

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (MAIN MEMBERS): AN ESTIMATED QUANTITY FOR EACH LOCATION IS PROVIDED IN TABLE 3, FOR REMOVAL OF PORTIONS OF MAIN MEMBERS AS DETERMINED BY FIELD INSPECTION ACCORDING TO ITEM 849, DAMAGE ASSESSMENT OR AS DIRECTED BY THE ENGINEER. SUPPORT THE EXISTING MAIN MEMBERS ACCORDING TO ITEM 849, STRAIGHTENING WORK PLAN. FLAME OR SAW CUT PORTIONS OF THE EXISTING MEMBERS 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 REMAINING CUT SURFACES OF THE EXISTING 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 MAIN MEMBERS REMOVED, AS PER PLAN: POUND.

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 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 TABLE 2 AND 3. 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: POUND.

ITEM 513 - STRUCTURAL STEEL MISC., REPAIR OF DAMAGED MEMBERS, COPE HOLES: AN ESTIMATED QUANTITY FOR EACH LOCATION IS PROVIDED IN TABLE 3, FOR COPING MAIN MEMBERS AS DETERMINED BY FIELD INSPECTION ACCORDING TO ITEM 849, DAMAGE ASSESSMENT OR AS DIRECTED BY THE ENGINEER. PROVIDE A, 2 INCH DIAMETER X 4 INCH LONG COPE ACCORDING TO PLAN DETAILS OR AS DIRECTED BY THE ENGINEER. GRIND THE HOLES SMOOTH ACCORDING TO C&MS 513.19. 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 MEMBERS, COPE HOLES: EACH.

ITEM 513 - STRUCTURAL STEEL MISC., REPAIR OF DAMAGED MAIN MEMBER, 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. PERFORMING COMPLETE PENETRATION WELDS ACCORDING TO C&MS 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 OF 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 C&MS 513.25A AND SUBMIT COPIES OF THE REPORTS TO THE ENGINEER. 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 PENETRATION WELDING. FOOT.

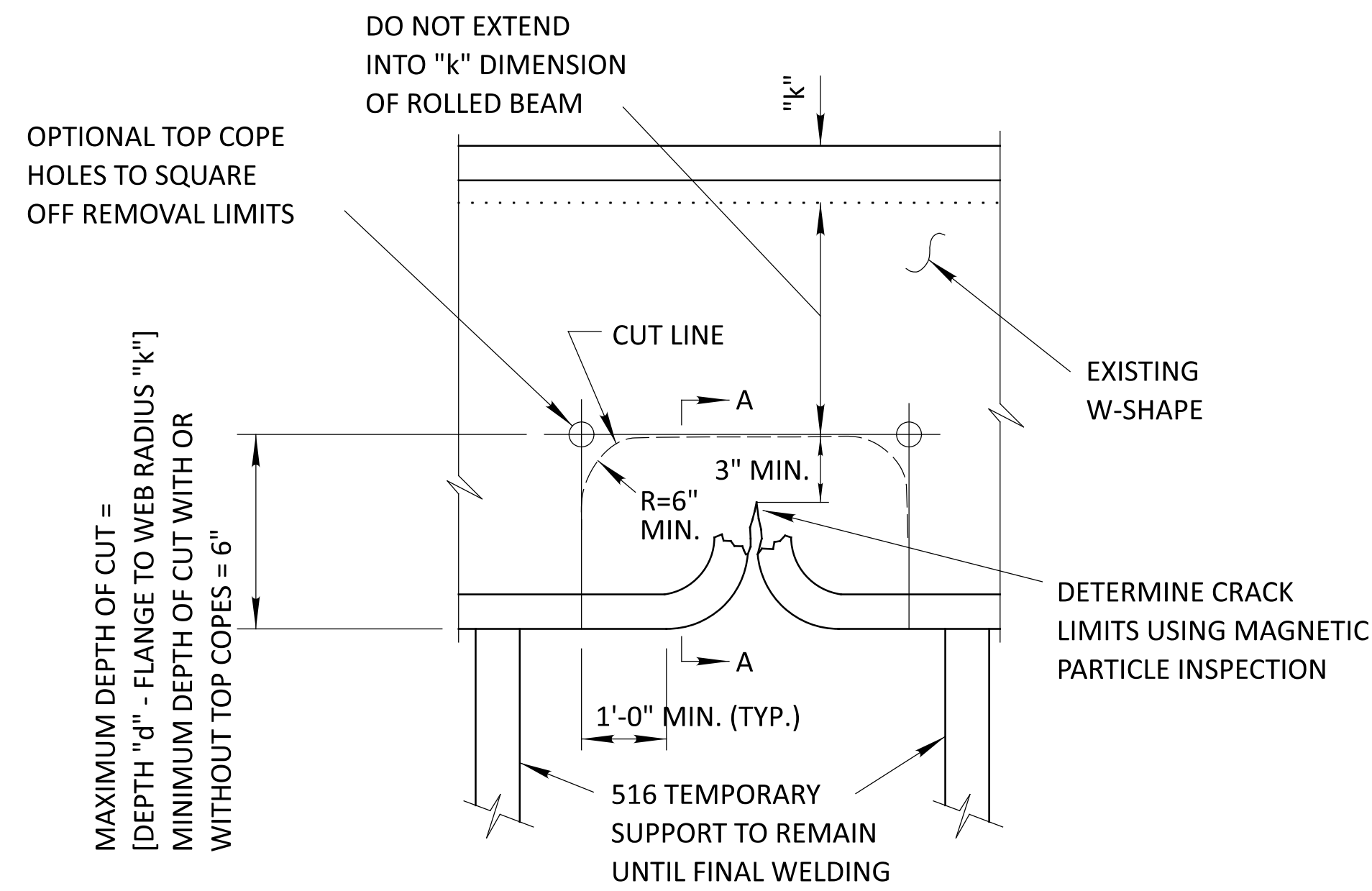
ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN: THIS WORK CONSISTS OF RAISING OR RE-POSITIONING EXISTING STRUCTURES TO THE PERFORM REPAIRS DEFINED IN TABLE 3, TABLE 5 OR THE HEAT STRAIGHTENING PLAN.

SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH C&MS 501.05.

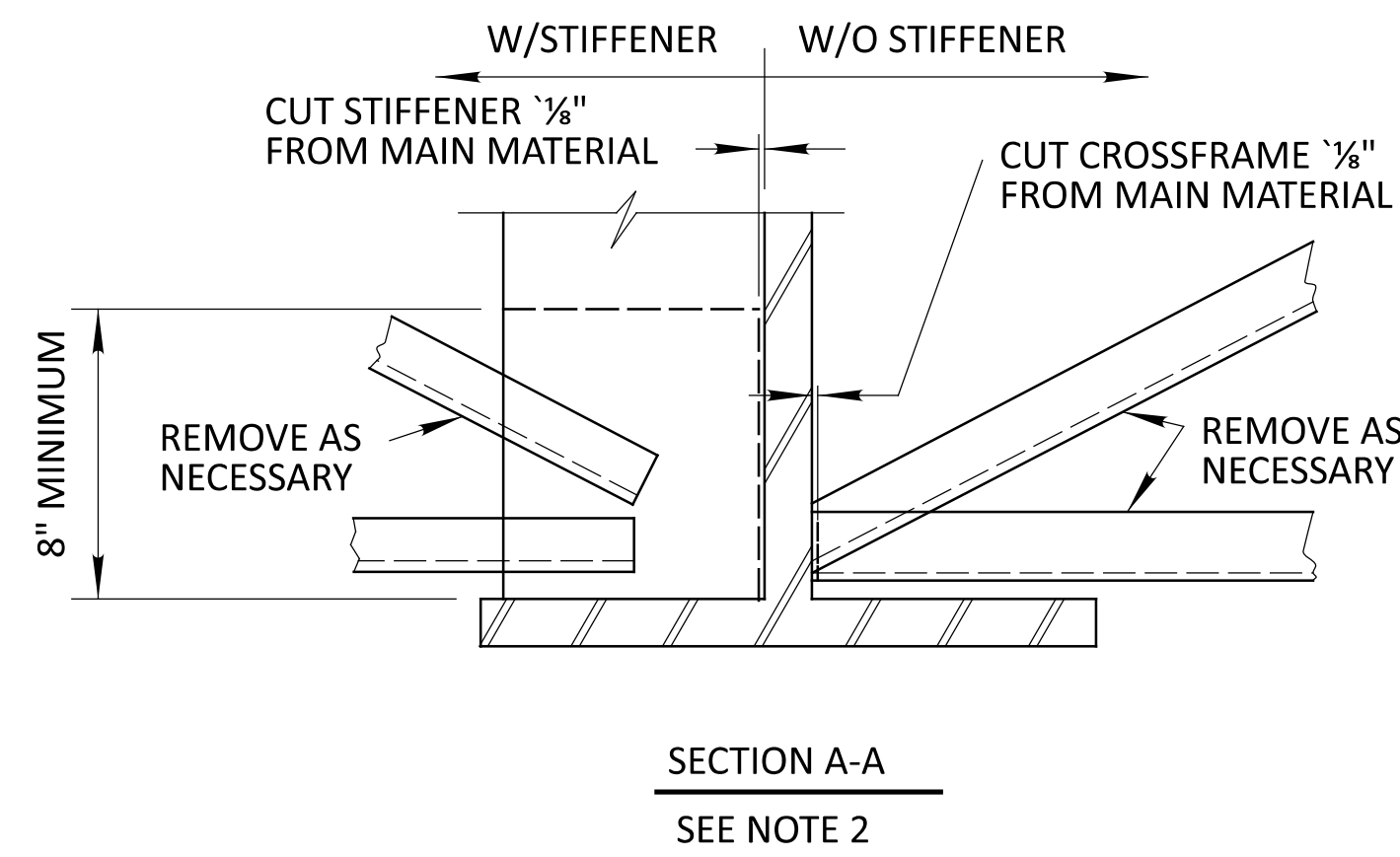
IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS, OR OTHER DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, IMMEDIATELY CEASE THE JACKING OPERATION AND INSTALL SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE DAMAGE 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.

INTERMITTENT COMPLETION: BEAM REPAIRS AT TRU-80-01905R MUST BE COMPLETED BY 6/15/2024.





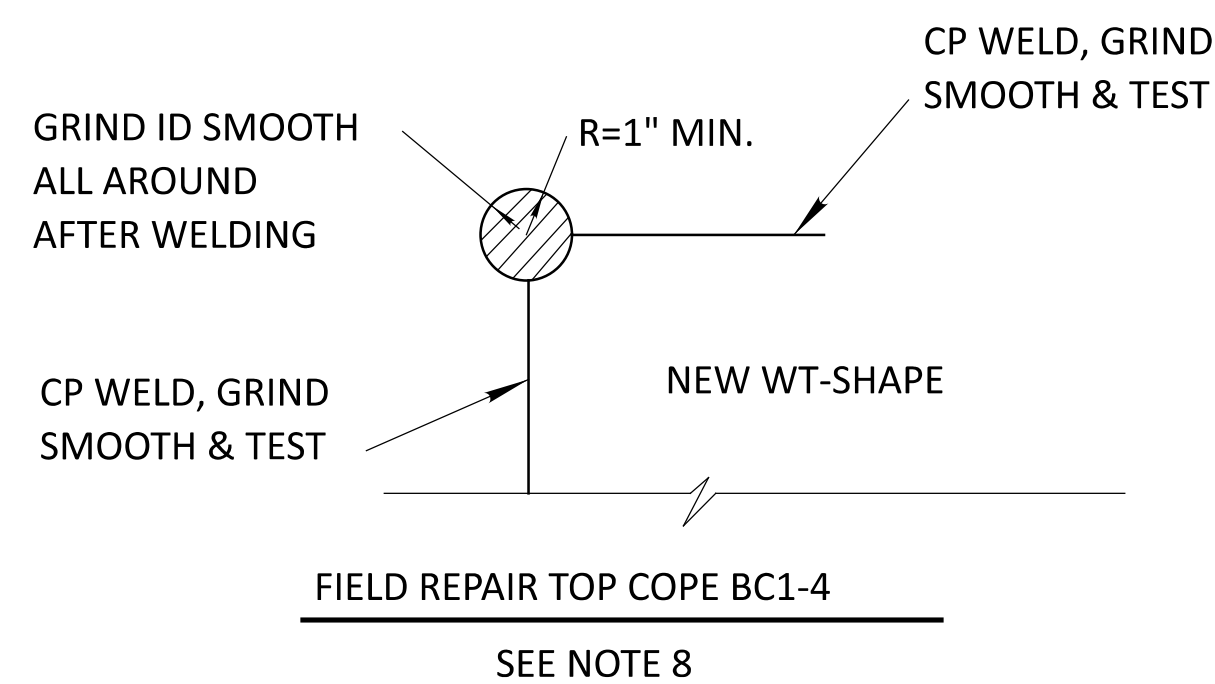
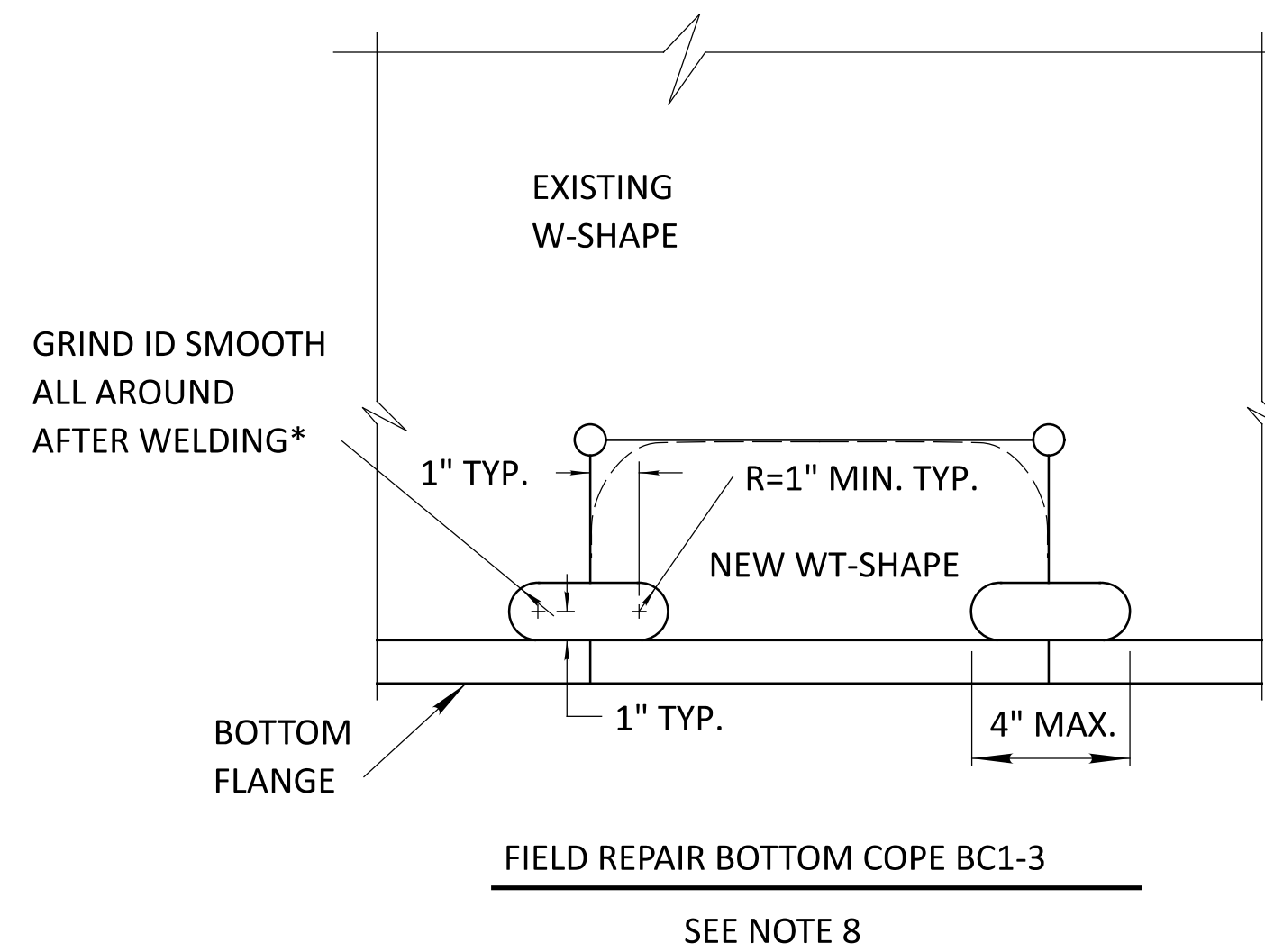
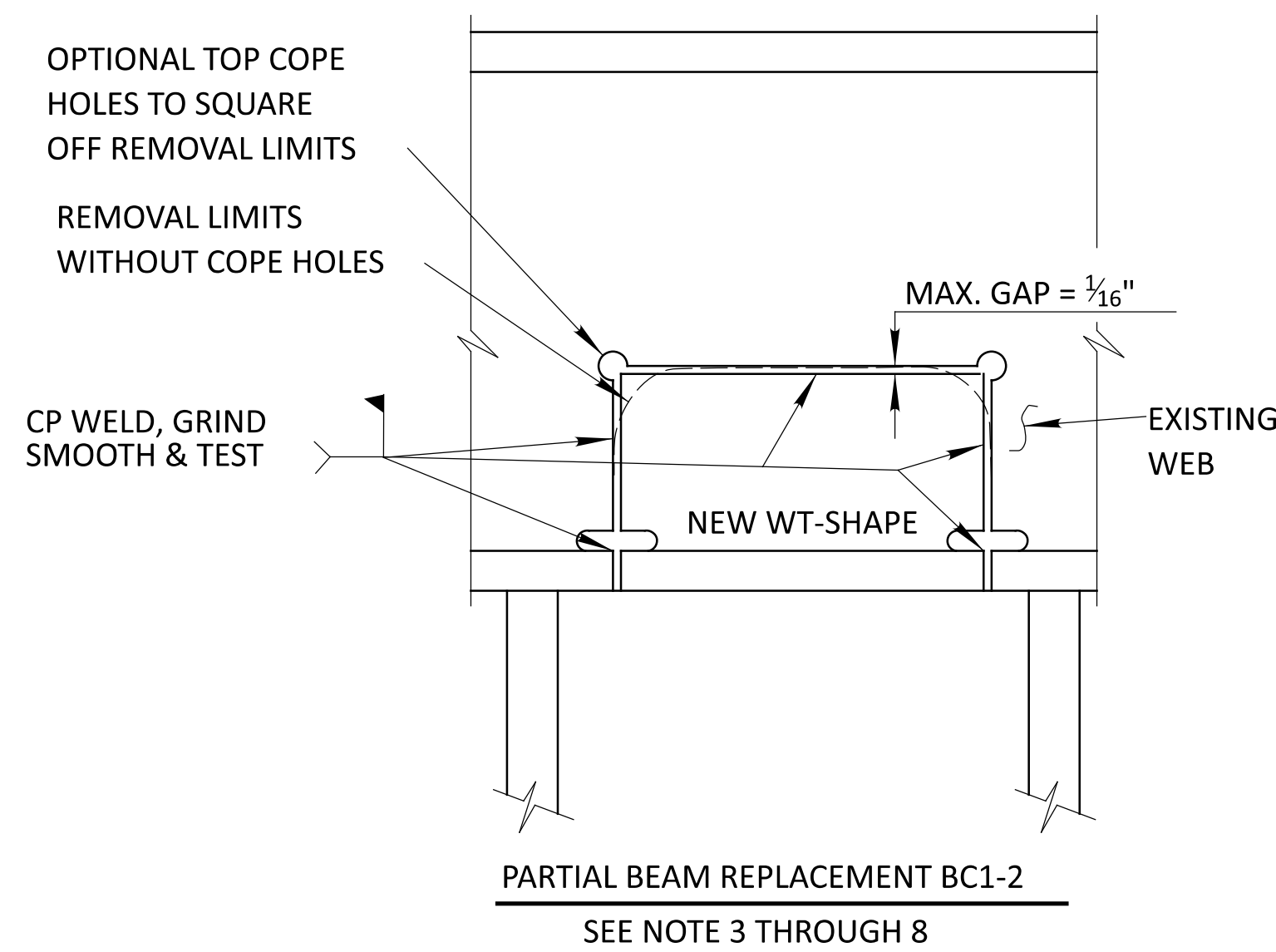
PARTIAL BEAM REPLACEMENT BC1-1
SEE NOTE 1 THROUGH 3



SECTION A-A
SEE NOTE 2

1. INSTALL TEMPORARY SUPPORT
2. REMOVE SECONDARY MEMBERS AS NECESSARY IF APPLICABLE
3. SAW OR FLAME CUT TO REMOVE DAMAGED BEAM USING A MECHANICAL GUIDE
4. PREPARE EXISTING BEAM FOR COMPLETE PENETRATION WELD BY EDGE BEVELING AND CREATING UNDERSIZED WEB COPE.
5. PREPARE NEW BEAM FOR COMPLETE PENETRATION WELD BY EDGE BEVELING AND CREATING UNDERSIZED WEB COPE.
6. ERECT NEW BEAM AND CHECK FIT UP, NO GAP EXCEEDING 1/16", TACK WELD BEAM INTO PLACE
7. PERFORM THE COMPLETE PENETRATION FLANGE WELDING ACCORDING TO CMS 513.21 BY ATTACHING RUN OFF TABS, PERFORM WELDS, REMOVING TABS AND GRINDING ALL WELD SURFACES SMOOTH ACCORDING TO ANSI B46.1 OF 250 MIL. COMPLETE NDT TESTING ACCORDING TO C&MS 513.25A
8. PERFORM COMPLETE PENETRATION WEB WELDS ACCORDING TO 513.21 BY PERFORMING WELDS, GRINDING COPE AND ALL WELDS SMOOTH ACCORDING TO ANSI B46.1 OF 250 mil. COMPLETE NDT TESTING ACCORDING TO C&MS 513.25A.
9. REPAIR SECONDARY MEMBERS IF APPLICABLE

TABLE #3 513 REPAIRS					
BEAM NUMBER	LOCATION	REPAIR DETAIL TYPE	COPE HOLES (EACH)	STEEL MEMBER LEVEL UP (POUNDS)	CP WELD (FEET)
14	MID-SPAN BETWEEN PIERS 2 AND 3	BC1	2	631	11



PLAN INSERT SHEET - TRU-80-01905R
COLLISION REPAIR OF BEAM BC1

