

MAH-680-0.07R
960401
33PGS

05-22-96
DIST. 04

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
MAH-680-00.07
CITY OF YOUNGSTOWN
AUSTINTOWN TOWNSHIP
MAHONING COUNTY

PLAN NO. _____

OVERLAYING OF 4 BRIDGE DECKS AND MISC. REPAIRS
1995 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.

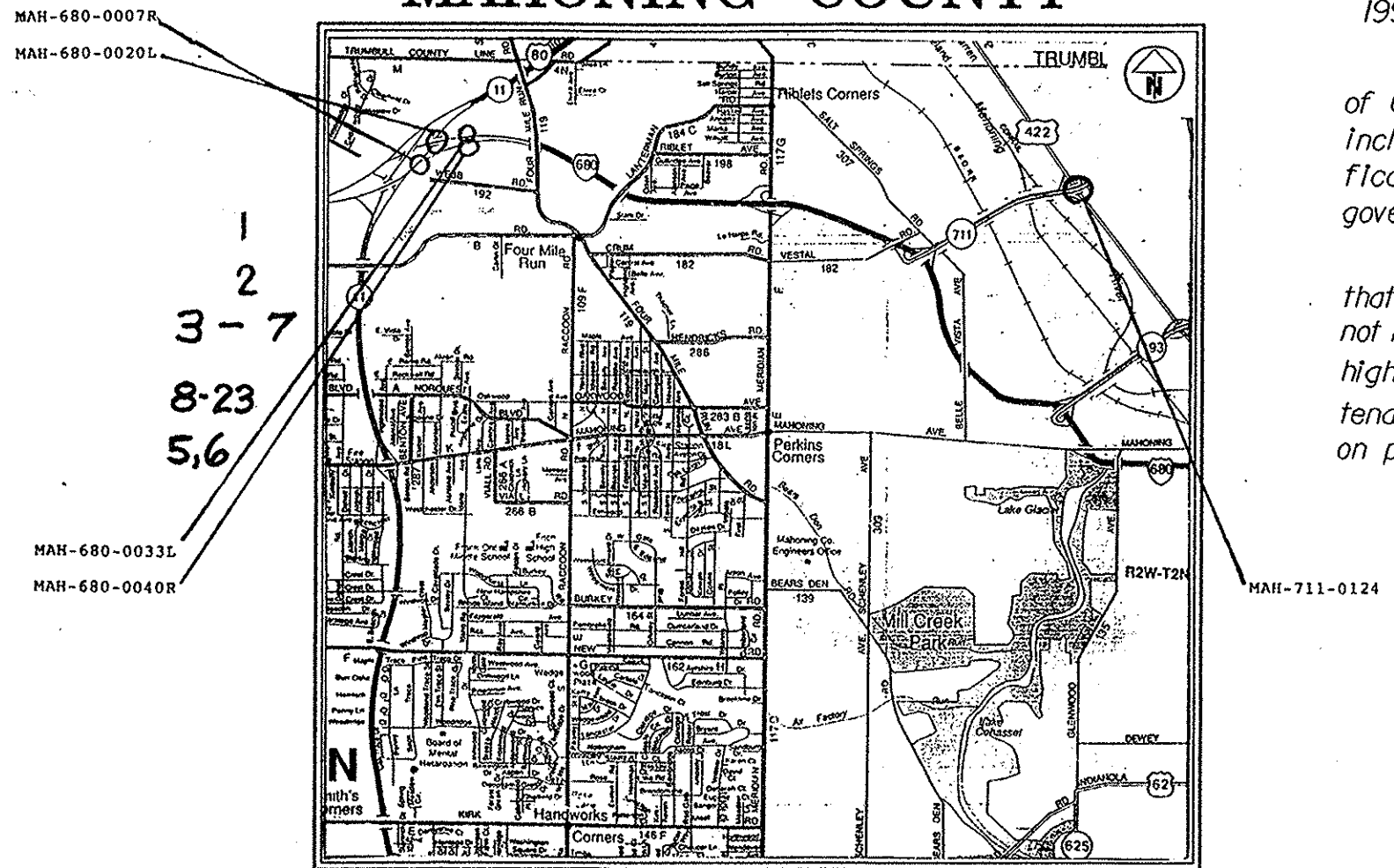
I hereby approve these plans and declare that the making of this improvement will not require the closing to traffic of the highway and that provisions for the maintenance and safety will be as set forth on plans and estimates.

Approved David R. Draper
Date 11-21-95 District Deputy Director of Transportation

Approved _____
Date _____ Engineer of Maintenance

Approved Brad Fagrell
Date 12-27-95 Engineer of Bridges

Approved [Signature]
Date 12/22/95 Director, Department of Transportation



- INDEX OF SHEETS:
- TITLE SHEET
 - GENERAL SUMMARY
 - GENERAL NOTES
 - BRIDGE REPAIRS
 - TRAFFIC CONTROL

LATITUDE: N41°7'30" LONGITUDE: W80°44'54" LOCATION MAP

UNDERGROUND UTILITIES

TWO WORKING DAYS BEFORE YOU DIG
CALL 1-800-362-2764 (TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

PLAN PREPARED BY:
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT 4

STANDARD DRAWINGS		STANDARD DRAWINGS		SUPPLEMENTAL SPECIFICATIONS		
TC-35.10	8-29-84	MC-9.2	5-6-91	PCB-DD	4-24-92	815: 7-17-95
TC-51.10	1-20-84	MT-95.30	10-10-88	RD-1-55	2-02-59	910: 7-17-95
TC-51.11	1-20-84	MT-96.15	6-24-93			850: 7-17-95
TC-65.10	2-1-90	MT-99.10	11-14-86			802: 3-23-95
TC-65.11	2-1-90	MT-105.10	7-1-92			924: 6-14-95
TC-72.20	2-26-82	MT-105.11	7-1-92			903: 7-17-95
MT-95.40	10-1-92	SD-1-69	6-12-69			
BP-3.1	2-21-92	PCB-91	4-2-92			

FEDERAL PROJECT NO.

PID NO.

14958

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT

BRIDGE NUMBER					ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
MAH-680-0007R	MAH-680-0020L	MAH-680-0033L	MAH-680-0040R	MAH-711-0124					
6	6	6	6		202	5400	24	EACH	RAISED PAVEMENT MARKERS REMOVED FOR STORAGE
LUMP	LUMP	LUMP	LUMP	LUMP	202	98000	LUMP	LUMP	REMOVAL, MISC.: ABUTMENT BEAM SEAT CLEANING
889	1,148	1,804	2,252		254	01000	6,093	SO.YD.	PAVEMENT PLANING BITUMINOUS
602	1,319	713	883		254	01011	3,517	SO.YD.	PAVEMENT PLANING, PORTLAND CEMENT CONCRETE, AS PER PLAN
49	64	47	74		404	20000	234	CU.YD.	ASPHALT CONCRETE, AC-20
10	10	10	10		404	35000	40	CU.YD.	BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC
67	86	63	99		407	13900	315	GAL.	TACK COAT, USING SS-924
			282		SPECIAL	512-67502	282	SO.YD.	SEALING OF CONCRETE SURFACES, (EPOXY)*
63	99	75	72		SPECIAL	512-73000	309	SO.YD.	TREATING CONCRETE BRIDGE DECKS WITH HMW RESIN*
260			1000		513	15900	1,260	POUND	STRUCTURAL STEEL, REPLACEMENT OF DETERIORATED END CROSSFRAMES
			2354		513	16590	2354	POUND	STRUCTURAL STEEL, MISC.: BEAM END REPLACEMENT STEEL
138	150	178	102		513	21001	8	EACH	TRIMMING OF BEAM END, AS PER PLAN
12	12		50		516	31001	568	LIN.FT.	JOINT SEALER (705.04), AS PER PLAN
		5	4	16	516	45305	74	EACH	REFURBISH BEARING DEVICE, AS PER PLAN
					516	46700	25	EACH	RESET BEARING
LUMP	LUMP	LUMP	LUMP	LUMP	516	47000	LUMP	LUMP	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE
6		9			518	12901	15	EACH	SCUPPER LENGTHENING, AS PER PLAN
6	4	9	9		518	62200	28	EACH	STRUCTURE DRAINAGE, MISC.: SCUPPER CLEANOUT
		8	10		518	62200	18	EACH	STRUCTURE DRAINAGE, MISC.: FOOTER DRAIN REPLACEMENT
20	50	20	30		519	11100	120	SO.FT.	PATCHING CONCRETE STRUCTURE
			967		SPECIAL	530-00100	967	SO.FT.	SHOTCRETING CONCRETE STRUCTURES
	5683				SPECIAL	530-00600	5683	SO.FT.	STRUCTURE, MISC.: FALSEWORK PROTECTION, UNDERDECK PROTECTION
			311		601	25000	311	CU.YD.	DUMPED ROCK FILL, TYPE A
156	46	33	80	24	614	13300	339	EACH	BARRIER REFLECTOR, TYPE B
158	48	35	82	26	614	13350	349	EACH	OBJECT MARKER *
0.07	0.09	0.08	0.08		614	20000	0.32	MILE	TEMPORARY LANE LINE, CLASS 1
0.15	0.19	0.16	0.16		614	22000	0.66	MILE	TEMPORARY EDGE LINE, CLASS 1
6	6	6	6		621	00100	24	EACH	RAISED PAVEMENT MARKER
3520	540	600	1540	600	622	40020	6800	LIN.FT.	PORTABLE CONCRETE BARRIER, 32"
390	620	480	460		622	40040	1,950	LIN.FT.	PORTABLE CONCRETE BARRIER, 32", BRIDGE MOUNTED
14	14	7	7	14	630	02100	56	LIN.FT.	GROUND MOUNTED SUPPORT, NO.2 POST
1.40	1.40	0.70	0.70	1.40	630	80100	5.60	SO.FT.	SIGN, FLAT SHEET
2	2	1	1	2	630	86002	8	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL
0.15	0.19				642	00102	0.34	MILE	EDGE LINE, TYPE 2
0.07	0.09				642	00202	0.16	MILE	LANE LINE, TYPE 2
		0.08	0.08		645	00110	0.16	MILE	EDGE LINE, TYPE A3
		0.16	0.16		645	00210	0.32	MILE	LANE LINE, TYPE A3
			1,986		815	00050	1,986	SO.FT.	SURFACE PREPARATION OF EXISTING STEEL, SYSTEM OZEU
			1,986		815	00056	1,986	SO.FT.	FIELD PAINTING OF EXISTING STEEL, PRIME COAT, SYSTEM OZEU
			1,986		815	00060	1,986	SO.FT.	FIELD PAINTING OF EXISTING STEEL, INTERMEDIATE COAT, SYSTEM OZEU
602	1,319	713	883		815	00066	1,986	SO.FT.	FIELD PAINTING OF EXISTING STEEL, FINISH COAT, SYSTEM OZEU
25	55	39	48		850	14501	3,517	SO.YD.	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (1-2"), USING HYDRODEMOLITION, AS PER PLAN
3	3	5	5		850	20500	167	CU.YD.	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), USING HYDRODEMOLITION
LUMP	LUMP	LUMP	LUMP		850	30000	16	CU.YD.	FULL DEPTH REPAIR
					850	40000	LUMP	LUMP	TEST SLAB
602	1,319	713	883		850	40500	3,517	SO.YD.	SURFACE PREPARATION USING HYDRODEMOLITION*
60	60	60	60	60	614	11100	300	HOURS	LAW ENFORCEMENT OFFICER WITH PATROL CAR
					614	11000	LUMP	LUMP	MAINTAINING TRAFFIC
					619	15000	LUMP	LUMP	FIELD OFFICE, TYPE A
					SPECIAL	619-25000	LUMP	LUMP	COMPUTER EQUIPMENT FOR TYPE A OFFICE*
					623	10001	LUMP	LUMP	CONSTRUCTION LAYOUT STAKES
					624	10000	LUMP	LUMP	MOBILIZATION
									*SEE PROPOSAL NOTE

GENERAL SUMMARY

MAH-680-00.07

GENERAL NOTES

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURES, AND/OR 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 THE C.M.S. SECTIONS 102.05, 105.02, AND 513.02. CONTRACTOR BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PRE-BID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD AND SUBSTANTIATED BY O.D.O.T. PROJECT PERSONNEL. FOR MORE INFORMATION, THE ORIGINAL CONSTRUCTION DRAWINGS MAY BE EXAMINED IN THE DISTRICT FOUR (4) OFFICE OF THE OHIO DEPARTMENT OF TRANSPORTATION, 705 OAKWOOD ST., RAVENNA, OHIO AND THE CENTRAL OFFICE, 25 S. FRONT ST., COLUMBUS, OHIO.

CONTINGENCY QUANTITIES

THE CONTRACTOR WILL NOT ORDER MATERIALS OR PERFORM WORK LISTED IN THE GENERAL SUMMARY FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE PROJECT ENGINEER/SUPERVISOR" UNLESS AUTHORIZED BY THE PROJECT ENGINEER/SUPERVISOR. (THE ACTUAL WORK LOCATIONS AND QUANTITIES USED AT THE ENGINEER'S DISCRETION SHALL BE MADE A MATTER OF RECORD BY INCORPORATION INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.)

ITEM 202 - RAISED PAVEMENT MARKERS REMOVED FOR STORAGE

ALL RAISED PAVEMENT MARKERS (RPM'S) WILL BE REMOVED IN A MANNER WHICH WILL PREVENT DAMAGE TO THE CASTINGS. REMOVED MARKERS WILL BE STORED ON THE PROJECT FOR SALVAGE BY THE STATE.

ITEM 202 - REMOVAL MISC: ABUTMENT BEAM SEAT CLEANING

AFTER ALL OTHER CONTRACT WORK HAS BEEN PERFORMED THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL ACCUMULATED DEBRIS ON THE ABUTMENT BEAM SEATS AS WELL AS ANY DEBRIS ACCUMULATED ON THE CURBS AND SIDEWALKS ON ALL STRUCTURES ON THIS PROJECT. ACCUMULATION IS DEFINED AS ANY THICKNESS CAPABLE OF RETAINING MOISTURE. ALL ACCUMULATION SHALL BE PROPERLY DISPOSED OF TO THE SATISFACTION OF THE PROJECT ENGINEER/SUPERVISOR.

ITEM 254 - PAVEMENT PLANING, PORTLAND CEMENT CONCRETE, AS PER PLAN

THE PURPOSE OF THIS ITEM IS TO GRIND OFF THE LATEX MODIFIED CONCRETE WEARING SURFACES ON STRUCTURE NOS. MAH-680-0007R, MAH-680-0040R, MAH-680-0033L, AND MAH-680-0020L. PAYMENT FOR THIS SHALL BE AT THE UNIT BID PRICE FOR ITEM 254 - PAVEMENT PLANING, PORTLAND CEMENT CONCRETE, AS PER PLAN, AS WELL AS SAWCUTTING THE EDGES OF THE AREA TO BE OVERLAID PRIOR TO THE PLACEMENT OF THE SUPERPLASTICIZED DENSE CONCRETE OVERLAY.

ITEM 254 - PAVEMENT PLANING, BITUMINOUS

THE PURPOSE OF THIS ITEM IS TO GRIND OFF THE ASPHALT 100 FEET BACK FROM EACH EXPANSION JOINT ON BRIDGE NOS. MAH-680-0007R, MAH-680-0020L, MAH-680-0033L, MAH-680-0040R, AND TO GRIND OFF THE ASPHALT WEARING SURFACE ON BRIDGE NOS. MAH-680-0033L AND MAH-680-0040R.

ITEM 404 - ASPHALT CONCRETE, AC-20

THE PURPOSE OF THIS ITEM IS TO PAVE THE BRIDGE APPROACHES WITH ASPHALT IN ORDER TO PROVIDE A SMOOTH TRANSITION TO THE BRIDGE SURFACE. BUTT JOINTS WILL BE USED AT ALL APPROACHES.

ITEM SPECIAL - TREATING CONCRETE BRIDGE DECKS WITH HMWM RESIN

THE INTENT OF THIS ITEM IS TO SEAL THE LONGITUDINAL CONSTRUCTION JOINTS OF THE NEW CONCRETE INLAYS. THE QUANTITY PROVIDED SHALL BE SUCH TO PLACE THE MATERIAL AS PER PROPOSAL NOTE IN A ONE (1) FOOT WIDE DIMENSION EVENLY PLACED OVER THE ENTIRE LENGTH OF THE CONSTRUCTION JOINT.

ITEM SPECIAL - SEALING OF CONCRETE SURFACES, (EPOXY)

A QUANTITY OF 282 SQ. YD. OF EPOXY SEALER HAS BEEN ALLOTTED FOR THE PIERS ON BRIDGE NO. MAH-711-0124. THE SEALER SHALL BE APPLIED TO THE CONCRETE SURFACES SHOWN ON SHEET NO. 15. SEE PROPOSAL NOTE FOR SURFACE PREPARATION REQUIREMENTS, APPLICATION RATES, MATERIAL REQUIREMENTS, AND APPLICATION PROCEDURES.

ITEM 513 - TRIMMING OF BEAM END, AS PER PLAN

REFER TO PLAN PAGE NO. FOR DETAILS AND NOTES.

ITEM 513 - STRUCTURAL STEEL, REPLACEMENT OF DETERIORATED END CROSSFRAMES

A QUANTITY OF 1,260 POUNDS OF NEW A36 STRUCTURAL STEEL SHALL BE USED TO REPLACE ANY EXISTING STEEL END CROSSFRAMES DEEMED BY THE PROJECT ENGINEER/SUPERVISOR TO BE UNSUITABLE BECAUSE OF CORROSION ON BRIDGE NOS. MAH-680-0007R AND MAH-711-0124. CROSSFRAMES THAT ARE DETERIORATED AT THE INTERMEDIATE JOINTS ON MAH-711-0124 MAY ALSO BE REPLACED UNDER THIS ITEM. REPLACEMENT STRUCTURAL STEEL WILL BE PAID FOR AT THE BID UNIT PRICE FOR ITEM 513 - STRUCTURAL STEEL, REPLACEMENT OF DETERIORATED END CROSSFRAMES. STEEL MEMBERS TO BE FABRICATED UNDER THIS ITEM WILL NOT REQUIRE SHOP DRAWINGS PRIOR TO FABRICATION. THE CONTRACTOR SHALL MAKE NECESSARY MEASUREMENTS AND PREPARE SKETCHES, DRAWINGS, TABLES, ETC. THE ENGINEER SHALL HAVE AUTHORITY AND RESPONSIBILITY FOR ENSURING THAT THE FABRICATED STEEL IS ACCEPTABLE. TECHNICAL ASSISTANCE WILL BE PROVIDED ON REQUEST BY THE BUREAU OF BRIDGES. MILL TEST REPORTS AND SHIPPING DOCUMENTS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO INCORPORATING STEEL ITEMS INTO THE WORK, AS REQUIRED BY 501.07. AFTER FABRICATION, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW AND APPROVAL TO ENSURE THAT THE DRAWINGS DEPICT THE STEEL AS ACTUALLY INCORPORATED INTO THE WORK. THE ENGINEER WILL THEN SEND ONE APPROVED SET TO THE BUREAU OF BRIDGES FOR INFORMATION. PAY WEIGHTS SHALL BE COMPUTED IN COMPLIANCE WITH 513 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS AND SUBMITTED TO THE ENGINEER FOR HIS/HER REVIEW AND APPROVAL. THE FABRICATOR SHALL FURNISH A 35 MILLIMETER MICROFILM COPY OF EACH SHOP DRAWING, WHICH SHALL BE MOUNTED ON AN APERTURE CARD AS SPECIFIED IN 501.05. THE CONTRACTOR WILL REUSE EXISTING GUSSET PLATES WHEREVER POSSIBLE. DAMAGED GUSSET PLATES WILL BE REPLACED AT THE DISCRETION OF THE PROJECT ENGINEER/SUPERVISOR AND PAYMENT WILL BE INCLUDED IN THE COST OF THIS ITEM. THE SIZE OF THE ANGLES TO BE REPLACED WILL BE 4" X 4" X 3/16" ON BRIDGE NO. MAH-680-0007R. ON BRIDGE NO. MAH-711-0124, INSTEAD OF CROSSFRAME ANGLES THERE ARE CHANNELS C12X20.7. THEY WILL BE REPLACED IN KIND AND PAID FOR UNDER THIS ITEM.

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR
BRIDGE SECTION

DATE
11-95

REVIEWED
7/10/01

DESIGNED
TJB

CHECKED

STRUCTURE FILE NUMBER

GENERAL NOTES

MAH-680-00.07

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GENERAL NOTES

ITEM 516 - JOINT SEALER (705.04), AS PER PLAN

THIS ITEM WILL INCLUDE PLACING THE NEW JOINT SEALER AS WELL AS REMOVING THE EXISTING JOINT SEALER AND WILL ALSO INCLUDE CLEANING OF THE JOINT PRIOR TO PLACING THE NEW JOINT SEALER. ALSO, INCLUDED IN THIS ITEM WILL BE THE REWELDING OF ANY EXPANSION JOINTS WHICH HAVE BECOME LOOSE. THIS WORK WILL BE DONE AS DIRECTED BY THE PROJECT ENGINEER/SUPERVISOR.

ITEM 516 - REFURBISH BEARING DEVICE, AS PER PLAN

THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROPERLY ALIGN BEARINGS AS WELL AS THEIR CLEANING AND PAINTING, DISASSEMBLY OF THE BEARINGS, SURFACE PREPARATION AND PAINTING AS REQUIRED BY SYSTEM OZEU, REPLACEMENT OF ANY DAMAGED SHEET LEAD (711.19), INSTALLATION OF ANY STEEL SHIMS OF THE SAME SIZE AS THE BEARINGS TO PROVIDE A SNUG FIT, LUBRICATING SLIDING SURFACES, AND REASSEMBLY OF THE BEARINGS. ALL WORK SHALL BE TO THE SATISFACTION OF THE PROJECT ENGINEER/SUPERVISOR. THE CONTRACTOR DOES HAVE THE OPTION OF REPLACING THE BEARINGS IN LIEU OF PERFORMING THE REFURBISHING AS DESCRIBED. PRIOR TO PERFORMING THE ABOVE WORK THE PROJECT ENGINEER SHALL CONDUCT A VISUAL INSPECTION OF THE BEARING DEVICES AND INDICATE TO THE CONTRACTOR WHICH ONES ARE TO BE REFURBISHED. THE EXTRA QUANTITY SHALL BE NON-PERFORMED.

ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, INSTALLATION, AND OPERATION OF AN ADEQUATE JACKING SYSTEM, INCLUDING ANY TEMPORARY OR PERMANENT SUPPORTS, TO PERFORM THE WORK DESCRIBED IN THE PROJECT PLANS. THREE (3) SETS OF JACKING AND SUPPORT PLANS, PROCEDURES AND LOADING CALCULATIONS, PERFORMED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER, SHALL BE SUBMITTED TO THE DIRECTOR FOR APPROVAL AT LEAST THIRTY (30) DAYS BEFORE ACTUAL WORK IS TO BEGIN. SUBMITTALS SHALL INCLUDE AT LEAST THE FOLLOWING:

PHYSICAL DIMENSIONS AND CAPACITY OF THE JACKING SYSTEMS ALONG WITH THE ACTUAL POSITIONS, INCLUDING DIMENSIONS, DEFINING WHERE THE JACKING SYSTEMS WILL BE PHYSICALLY LOCATED ON THE STRUCTURE

PHYSICAL DIMENSIONS, MATERIALS, FABRICATION DETAILS AND DESIGN CALCULATIONS FOR ANY TEMPORARY OR PERMANENT SUPPORTS ALONG WITH ACTUAL DETAILS OF THEIR INSTALLED LOCATIONS ON THE STRUCTURE. HORIZONTAL MOVEMENT RESTRAINTS SHALL BE DESIGNED AND DETAILED. LATERAL AND LONGITUDINAL DESIGN LOADS AND SUPPORTING DESIGN CALCULATIONS SHALL BE INCLUDED.

A JACKING PLAN SHEET LAYOUT, WITH ADEQUATE DETAILS TO SHOW ALL JACKING POINTS, CALCULATED LOADINGS AT THOSE POINTS, LOCATIONS OF JACKING EQUIPMENT AND TEMPORARY OR PERMANENT SUPPORTS SHALL BE INCLUDED IN THE SUBMITTAL. ANY PHASED CONSTRUCTION, SPECIAL TRAFFIC REQUIREMENTS, CLEARANCE REQUIREMENTS, RAILROAD DETAILS OR SPECIAL CONSTRUCTION DETAILS THAT EFFECT THE JACKING OPERATION AND ANY OTHER DETAILS THE CONTRACTOR DEEMS NECESSARY TO ADEQUATELY VISUALLY DESCRIBE THE JACKING OPERATION SHALL ALSO BE INCLUDED IN THE JACKING PLAN SHEET.

THE PLAN SHEET SHALL INCLUDE A STEP BY STEP JACKING PROCEDURE DETAILING ALL STEPS IN THE OPERATION INCLUDING THE REQUIRED WORK DESCRIBED IN THE PROJECT PLANS.

JACKING OPERATIONS ARE LIMITED TO A MAXIMUM DIFFERENTIAL JACKING HEIGHT BETWEEN ADJACENT BEARINGS OF 1/4".

AT A MINIMUM, A JACKING OPERATION SHALL LIFT ALL BEARINGS AT ANY ONE ABUTMENT SIMULTANEOUSLY. MAXIMUM DIFFERENTIAL JACKING HEIGHT BETWEEN ANY ADJACENT ABUTMENTS SHALL BE LIMITED BY THE STRESSES INDUCED IN THE AFFECTED STRUCTURAL MEMBERS. CALCULATIONS DETAILING ALL STRESSES INDUCED IN THE AFFECTED MEMBERS AND LIMITED BY ALLOWABLE STRESSES OF 136.6% OF NORMAL DESIGN STRESSES, SHALL BE INCLUDED IN THE JACKING PROCEDURE SUBMITTAL. THE ONLY EXCEPTION TO THE SIMULTANEOUS JACKING REQUIREMENT IS WHEN ACTUAL PROJECT WORK REQUIRES INDIVIDUAL BEARINGS TO BE REPLACED OR REHABILITATED, NO PERMANENT SHIMMING IS REQUIRED AND THE HEIGHT OF THE TOTAL LIFT DOES NOT EXCEED 1/4".

ALL LABOR, TOOLS, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK ARE INCLUDED UNDER ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE.

ITEM 518 - STRUCTURE DRAINAGE, MISC.: SCUPPER CLEANOUT

THE PURPOSE OF THIS ITEM IS TO CLEANOUT ALL CLOGGED SCUPPERS ON THIS PROJECT. ALL SCUPPERS THAT ARE FOUND TO BE UNCLOGGED BEFORE THE CONTRACTOR BEGINS WORK ON THIS ITEM, WILL BE NON-PERFORMED. SCUPPERS TO BE CLEANED WILL BE DETERMINED BY THE PROJECT ENGINEER/SUPERVISOR.

ITEM 519 - PATCHING CONCRETE STRUCTURES

A QUANTITY OF 120 SQ.FT. HAS BEEN ALLOTTED FOR USE ON ALL STRUCTURES AT THE DISCRETION OF THE PROJECT ENGINEER/SUPERVISOR FOR THE PURPOSE OF PATCHING PIERS, ABUTMENTS, AND BACKWALLS.

ITEM 601 - DUMPED ROCK FILL, TYPE A

THE PURPOSE OF THIS ITEM IS TO FILL IN THE ERODED AREAS AT EACH ABUTMENT OF BRIDGE NO. MAH-711-0124.

DESIGN NUMBER
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT
BRIDGE SECTION

DATE
11-95
REVIEWED
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DESIGNED
TJB
CHECKED
TJB
REVIEWED
TJB

GENERAL NOTES

MAH-680-00.07

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GENERAL NOTES

ITEM 619 - FIELD OFFICE

A FIELD OFFICE, TYPE A, SHALL BE PROVIDED BY THE CONTRACTOR. THE OFFICE WILL PROVIDED WITH POTABLE HOT AND COLD WATER. THE OFFICE SHALL ALSO HAVE NEAT, SANITARY, ENCLOSED TOILET ACCOMMODATIONS; ASSOCIATED LAVATORY AND SANITARY SUPPLIES SHALL BE FURNISHED.

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR

IN ADDITION TO THE REQUIREMENTS OF 614 AND THE LATEST EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), A UNIFORMED LAW ENFORCEMENT OFFICER (AND OFFICIAL PATROL CAR WITH WORKING TOP MOUNTED EMERGENCY FLASHING LIGHTS) SHALL BE PROVIDED FOR CONTROLLING TRAFFIC FOR THE FOLLOWING TASK:

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED.

LAW ENFORCEMENT OFFICERS (L.E.O.'S) SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED. THE L.E.O.'S ARE CONSIDERED TO BE EMPLOYED BY THE CONTRACTOR AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACTIONS. ALTHOUGH THEY ARE EMPLOYED BY THE CONTRACTOR, THE PROJECT ENGINEER/SUPERVISOR SHALL HAVE CONTROL OVER THEIR PLACEMENT. THE OFFICIAL CAR SHALL BE A PUBLIC SAFETY VEHICLE AS REQUIRED BY THE OHIO REVISED CODE.

THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THESE SERVICES WITH:

OHIO HIGHWAY PATROL
660 EAST MAIN STREET
COLUMBUS, OHIO 44215
614-466-2300

IF AFTER CONTACTING THE OHIO HIGHWAY PATROL, IT IS DETERMINED THAT THEY CANNOT SUPPLY THE L.E.O., THEN AN AUTHORIZED MUNICIPAL OR COUNTY POLICE OFFICER EQUIPPED WITH A MARKED AND FLASHER-LIGHT EQUIPPED OFFICIAL POLICE OR PATROL CAR SHALL BE PROVIDED.

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 SPECIAL - 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 300 HOURS

THE HOURS PAID SHALL INCLUDE MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

IF THE CONTRACTOR WISHES TO UTILIZE L.E.O.'S FOR FLAGGING AND TRAFFIC CONTROL OTHER THAN FOR THAT REQUIRED IN THESE PLANS, HE MAY DO SO AT HIS OWN EXPENSE. PAYMENT FOR THE EXCESS ABOVE CONTRACT REQUIREMENTS WILL BE INCLUDED UNDER ITEM 614 - MAINTAINING TRAFFIC.

ITEM 614 - MAINTAINING TRAFFIC

REFER TO STANDARD DRAWINGS. MINOR VARIATIONS OF THESE DETAILS MAY BE NECESSARY TO ACCOMODATE VARIOUS ROADWAY GEOMETRICS AND TRAFFIC DISRUPTIONS. ALL VARIATIONS OF

THESE TRAFFIC DETAILS SHALL BE APPROVED BY THE PROJECT ENGINEER /SUPERVISOR. IMPROPER TRAFFIC CONTROL SHALL NOT BE PERMITTED AND THE WORK MAY BE HALTED UNTIL THE SITUATION IS CORRECTED. THE SAFETY OF THE TRAVELING PUBLIC, WORKERS, AND INSPECTORS SHALL NOT BE JEOPARDIZED. THE CONTRACTOR SHALL FURNISH AND MAINTAIN ALL FLAGS, FLAGGERS, WATCHERS, DRUMS, CONES, BARRICADES, SIGNS, SIGN SUPPORTS, AND INCIDENTALS RELATED THERETO. THE ABOVE ITEMS SHALL BE UTILIZED IN CONFORMANCE TO THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION, LATEST REVISION. ALL BARRICADES AND SIGNS SHALL BE NEW OR LIKE NEW AT THE BEGINNING OF THE PROJECT, SUBJECT TO THE APPROVAL OF THE PROJECT ENGINEER /SUPERVISOR. ANY REPAIRS TO THE TRAFFIC CONTROL DEVICES SHALL BE PERFORMED WITHIN 24 HOURS OF NOTIFICATION.

ITEM 614 - BARRIER REFLECTOR, TYPE B

ITEM 614 - OBJECT MARKER

BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE CONCRETE BARRIER USED FOR TRAFFIC CONTROL. BARRIER REFLECTORS AND OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO SS 802 AND TO PROPOSAL NOTE, 622-92 "DELINEATION OF PORTABLE CONCRETE BARRIER", AND SHALL BE SPACED AT 25 FEET. BASIS OF PAYMENT SHALL BE AT THE UNIT PRICE BID FOR THE APPROPRIATE 614 ITEMS AND SHALL INCLUDE ALL LABOR, EQUIPMENT, HARDWARE AND INCIDENTALS REQUIRED TO PERFORM THE WORK.

LANE WIDTH RESTRICTION NOTIFICATION

THE CONTRACTOR SHALL NOTIFY THE DISTRICT TRAFFIC ENGINEER 18 DAYS PRIOR TO THE RESTRICTION. (216) 297-0801 EXT. 331

CONES SHALL NOT BE ACCEPTABLE TRAFFIC CONTROL DEVICES FOR LANE RESTRICTIONS THAT ARE IN OPERATION ONE-HALF HOUR AFTER SUNSET OR ONE-HALF HOUR BEFORE SUNRISE. ALL NIGHT TIME LANE RESTRICTIONS SHALL REQUIRE DRUMS OR BARRICADES AT A MAXIMUM NUMBER OF FIFTY (50) FEET.

A FLASHING ARROW BOARD SHALL BE USED FOR TRAFFIC CONTROL WHENEVER THERE IS A LANE RESTRICTION, LANE REDUCTION OR LANE SHIFT OF ALL THROUGH TRAFFIC.

NO WORK SHALL BE PERFORMED OVER AN OPEN LANE OF TRAFFIC.

THE CONTRACTOR SHALL DESIGNATE AN INDIVIDUAL, OTHER THAN THE SUPERINTENDENT AND SUBJECT TO THE APPROVAL OF THE PROJECT ENGINEER/SUPERVISOR, TO CONTINUOUSLY INSPECT TRAFFIC CONTROL DEVICES WHENEVER CONSTRUCTION WORK IS BEING PERFORMED WITHIN THE WORK LIMITS OF THE PROJECT. THE DESIGNATED INDIVIDUAL SHALL ALSO INSPECT ALL TRAFFIC CONTROL DEVICES AT THE BEGINNING AND AT THE END OF EACH WORK DAY. THE DESIGNATED INDIVIDUAL OR A QUALIFIED REPRESENTATIVE, SHALL ALSO BE AVAILABLE ON AN AROUND THE CLOCK BASIS TO REPAIR AND/OR REPLACE DAMAGED OR MISSING TRAFFIC CONTROL DEVICES. THESE INDIVIDUALS NAMES AND PHONE NUMBERS SHALL BE GIVEN TO THE PROJECT ENGINEER/SUPERVISOR AT THE PRECONSTRUCTION MEETING. THE DESIGNATED INDIVIDUALS SHALL HAVE NO OTHER CONSTRUCTION RELATED DUTIES. THE TRAFFIC CONTROL INSPECTOR SHALL BE INCLUDED IN THE LUMP SUM PRICE FOR ITEM 614 - MAINTAINING TRAFFIC.

TRAFFIC SHALL NOT CROSS OVER THE MEDIAN AT ANY TIME.

GENERAL NOTES

THE MAINTENANCE OF TRAFFIC PLAN FOR EACH LOCATION SHALL BE SUBMITTED TO THE PROJECT ENGINEER/SUPERVISOR FOR APPROVAL 7 DAYS PRIOR TO IMPLEMENTING.

CONTRACTOR'S EQUIPMENT OPERATION AND STORAGE: THE CONTRACTOR'S EQUIPMENT SHALL BE OPERATED IN THE DIRECTION OF TRAFFIC, WHERE PRACTICAL. A QUALIFIED FLAGGER SHALL BE EMPLOYED WHERE THE CONTRACTOR'S EQUIPMENT MUST MERGE WITH THE TRAFFIC STREAM. THE CONTRACTOR'S EQUIPMENT SHALL BE EQUIPPED WITH AT LEAST ONE (1) AMBER LIGHT. PAINTING EQUIPMENT MAY BE PARKED IN AREAS ALONG THE HIGHWAY WHEN OPERATIONS ARE IN PROGRESS. THE LOCATIONS OF WHICH SHALL HAVE PRIOR APPROVAL OF THE PROJECT ENGINEER/SUPERVISOR. ALL OTHER EQUIPMENT, INCLUDING PRIVATE VEHICLES, SHALL BE STORED AT THE APPROVED CONTRACTOR'S STORAGE AREA. WHEN PARKING EQUIPMENT OVERNIGHT TO BE USED THE FOLLOWING DAY, SUCH EQUIPMENT SHALL BE PARKED EITHER FIFTY (50) FEET FROM THE EDGE OF THE PAVEMENT OR SIX (6) FEET BEHIND THE GUARDRAIL WITH A MINIMUM OF 125 FEET OF GUARDRAIL PRECEDING THE EQUIPMENT. ADEQUATE BARRICADES AND LIGHTS SHALL BE PLACED ON THE PAVEMENT SIDE OF THE EQUIPMENT TO IDENTIFY THE LIMITS OF THE EQUIPMENT.

METHOD OF PAYMENT

PAYMENT FOR THE MAINTENANCE OF TRAFFIC ITEMS, UNLESS SPECIFIED SEPARATELY, SHALL BE AT THE LUMP SUM PRICE FOR ITEM 614 - MAINTAINING TRAFFIC, WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, AND INCIDENTALS TO COMPLETE THE WORK AS DETAILED IN THE PLANS.

ITEM 622 - PORTABLE CONCRETE BARRIER, 32"

ITEM 622 - PORTABLE CONCRETE BARRIER, 32", BRIDGE MOUNTED

DURING ALL PHASES OF CONSTRUCTION, PORTABLE CONCRETE BARRIERS SHALL BE PLACED ON ALL BRIDGE DECKS FOR THE PURPOSE OF TRAFFIC CONTROL. PLACEMENT OF BARRIERS MAY BE ADJUSTED AT THE DISCRETION OF THE PROJECT ENGINEER/SUPERVISOR. BARRIERS SHALL NOT BE PINNED TO BRIDGE DECKS.

UTILITIES

ON BRIDGE NO. MAH-711-0124, THERE ARE TWO (2) UTILITIES WHICH ARE ATTACHED TO THE SUPERSTRUCTURE.

1.) ELECTRICAL CONDUIT

OWNER: OHIO DEPARTMENT OF TRANSPORTATION
705 OAKWOOD STREET
RAVENNA, OHIO 44266

CONTACT: CHRIS LOUIS, P.E.
(216) 297-0801 EXT. 339

2.) 16 INCH GAS LINE (ABANDONED)

OWNER: THE EAST OHIO GAS COMPANY
1165 W. RAYEN AVENUE
YOUNGSTOWN, OHIO 44502
CONTACT: GENE MONAGO
(216) 742-8149

THE ABOVE TWO UTILITIES SHALL BE NOTIFIED TEN (10) DAYS IN ADVANCE WHEN ANY PROPOSED WORK TO THIS STRUCTURE IS SCHEDULED. THE CONTRACTOR'S ATTENTION IS DIRECTED TO SECTIONS 105.06 AND 107.17 OF THE CMS. THESE LINES SHALL NOT BE PAINTED.

ITEM 614 - TEMPORARY CHANNELIZING LINE, CLASS 1

ITEM 614 - TEMPORARY TRANSVERSE LINE, CLASS 1

ITEM 614 - TEMPORARY EDGE LINE, CLASS 1

ITEM 614 - TEMPORARY LANE LINE, CLASS 1

ITEM 642 - CHANNELIZING LINE, TYPE 2

ITEM 642 - TRANSVERSE LINE, TYPE 2

ITEM 642 - EDGE LINE, TYPE 2

ITEM 642 - LANE LINE, TYPE 2

THE INTENT OF THESE ITEMS IS TO REMOVE THE EXISTING PAVEMENT MARKINGS AS NEEDED AND REPLACE THEM WITH TEMPORARY MARKINGS DURING THE CONSTRUCTION PHASES. AFTER ALL CONSTRUCTION PHASES ARE COMPLETED, ALL TEMPORARY PAVEMENT MARKINGS SHALL BE REMOVED, AND THE PERMANENT PAVEMENT MARKINGS SHALL BE REPLACED IN THEIR ORIGINAL POSITIONS.

ITEM 815 - SURFACE PREPARATION OF EXISTING STEEL, SYSTEM OZEU

ITEM 815 - FIELD PAINTING OF EXISTING STEEL, PRIME COAT, SYSTEM OZEU

ITEM 815 - FIELD PAINTING OF EXISTING STEEL, INTERMEDIATE COAT, SYSTEM OZEU

ITEM 815 - FIELD PAINTING OF EXISTING STEEL, FINISH COAT, SYSTEM OZEU

THE PURPOSE OF THESE ITEMS IS TO PAINT THE EXISTING STEEL BEAMS OF STRUCTURE NO. MAH-711-0124 AT ALL EXPANSION JOINTS AT THE ABUTMENTS AND THE PIERS. THE BEAMS WILL BE PAINTED FOR A LENGTH OF 5 FEET FROM THE BACKWALLS TOWARD THE PIERS AND FOR A LENGTH OF 5 FEET ON EACH SIDE OF THE PIER CAPS.* THE INTERMEDIATE COAT COLOR SHALL BE TAN AS PER FEDERAL STANDARD 595A-10219. FINISH COAT COLOR SHALL BE DARK BROWN AS PER FEDERAL STANDARD 595A-10080.

ITEM 850 - SURFACE PREPARATION USING HYDRODEMOLITION

THE INTENT OF THIS ITEM IS TO REMOVE A ONE INCH DEEP LAYER OF EXISTING CONCRETE BRIDGE DECK AFTER ITEM 254 - PAVEMENT PLANING, PORTLAND CEMENT CONCRETE, AS PER PLAN, IS PERFORMED.

ITEM 850 - SUPERPLASTICIZED DENSE CONCRETE OVERLAY (T-2 1/4"), USING HYDRODEMOLITION, AS PER PLAN

THE INTENT OF THIS ITEM IS TO INLAY BRIDGE NOS. MAH-680-0007R, MAH-680-0020L, MAH-680-0033L, AND MAH-680-0040R FROM TWO FEET FROM OUTSIDE OF ONE EDGE LINE TO TWO FEET FROM THE OUTSIDE OF THE OTHER EDGE LINE. THE FINISHED SURFACE OF THIS ITEM SHALL BE FLUSH WITH THE EXISTING SHOULDERS. SEE DETAIL ON SHEET 8.

ITEM 621 - RAISED PAVEMENT MARKERS

ALL RAISED PAVEMENT MARKERS (RPM'S) REMOVED UNDER ITEM 202 SHALL BE REPLACED IN KIND IN THE SAME GENERAL LOCATION FROM WHERE THEY WERE REMOVED.

* THIS WILL ALSO INCLUDE ALL STIFFENERS, DIAPHRAGMS, AND GUSSET PLATES IN THE 5 FEET AREA IN WHICH THE BEAMS ARE TO BE PAINTED.

GENERAL NOTES

MAH-680-00.07

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 7 - OPERATIONS
BRIDGE SECTION

DATE
11-95
REVIEWED
RJM
STRUCTURE FILE NUMBER

DESIGNED
TJB
CHECKED

DRAWN
TJB
REVISED
2-1-96

GENERAL NOTES

ITEM SPECIAL - SHOTCRETING CONCRETE STRUCTURES

ALL OF THE PROVISIONS OF ITEM 520 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS SHALL APPLY, EXCEPT AS MODIFIED HEREIN. THIS ITEM SHALL INCLUDE ANY TEMPORARY SHORING REQUIRED DURING THE PATCHING OPERATIONS TO ENSURE STRUCTURAL INTEGRITY OF THE MEMBER BEING PATCHED.

DESCRIPTION:

THIS ITEM APPLIES TO THE SURFACE REPAIR OF CONCRETE STRUCTURES USING SHOTCRETE APPLIED (PNEUMATICALLY PLACED) MORTAR AND INCLUDES THE REMOVAL OF CONCRETE, CONCRETE SURFACE PREPARATION, THE FURNISHING AND PLACING OF REINFORCING STEEL INCLUDING WIRE FABRIC, DOWELS, AND/OR EXPANSION ANCHOR BOLTS WHEN REQUIRED, AND THE PREPARING AND APPLYING OF THE MORTAR IN THE AREAS SHOWN OR NOTED ON THE PLANS OR WHEN DIRECTED BY THE ENGINEER. THE THICKNESS OF THE MORTAR SHALL NOT BE LESS THAN 1/2 INCH.

SURFACE PREPARATION:

ALL SURFACES TO WHICH THE MORTAR IS TO BOND, INCLUDING EXPOSED REINFORCING STEEL AND THE WORK FACE OF ANY PREVIOUSLY PLACED MORTAR, SHALL BE CLEANED BY ABRASIVE BLASTING OR ULTRA HIGH PRESSURE WATER BLASTING NOT MORE THAN 24 HOURS PRIOR TO THE PLACEMENT OF THE MORTAR. STEEL SURFACES SHALL BE CLEANED TO THE NEAR WHITE (SO 2-1/2/SSPC-SP10) PREPARATION GRADE. BLASTING ABRASIVES CONTAINING MORE THAN 1% FREE SILICA WILL NOT BE ALLOWED. THESE SURFACES SHALL BE MADE FREE OF SPALLS, LAITANCE, AND ALL CONTAMINANTS DETRIMENTAL TO THE ACHIEVEMENT OF AN ADEQUATE BOND. ULTRA HIGH HYDRODEMOLITION OF 20,000 PSI OR MORE IS AN ACCEPTABLE METHOD OF TOTAL SURFACE PREPARATION.

MATERIALS:

THE REQUIREMENTS FOR 520.06 AND 520.08 SHALL BE VOID. MORTAR UTILIZED MUST MEET THE FOLLOWING CRITERIA:

- IF THE MORTAR IS A PRE-PACKAGED, BRANDED ENTITY, PREPARATION IN EITHER THE WET OR DRY PROCESS SHALL CONFORM TO MANUFACTURERS RECOMMENDATIONS.
- IF THE MIX USED EMPLOYS MATERIALS BATCHED AT THE JOBSITE, BATCHED BY THE SHOTCRETING CONTRACTOR HIMSELF PRIOR TO USE ON THE JOBSITE, OR SUPPLIED IN A READY MIX TRUCK, THE INGREDIENTS OF THESE MIXES MUST BE READILY DOCUMENTABLE, IN BOTH QUALITY AND QUANTITY. THIS APPLIES TO BOTH QUALIFICATION TESTING PRIOR TO JOBSITE APPLICATION AND FOR JOBSITE APPLICATION.

SHOTCRETE MORTAR WILL MEET THE FOLLOWING TEST REQUIREMENTS:

COMPRESSIVE STRENGTH: (ASTM C-109, 3 - INCH CUBES)

1 DAY.....1800 PSI
7 DAY.....5500 PSI
28 DAY.....7000 PSI

FLEXURAL STRENGTH: (ASTM C-78)

7 DAY.....1100 PSI
28 DAY.....1500 PSI

TENSILE STRENGTH: (ASTM C-496)

7 DAY.....550 PSI
28 DAY.....750 PSI

MODULUS OF ELASTICITY.....3,400,000 PSI

BOND STRENGTH (ASTM C882 MODIFIED*).....1700 PSI

* - MORTAR SCRUBBED IN SUBSTRATE

CHLORIDE ION PERMEABILITY (AASHTO T-277).....500 COULOMBS OR LESS

THE MORTAR MAY CONTAIN MICROSILICA, POLYMERS, WATER REDUCING AGENTS OR OTHER ADDITIVES IN ANY COMBINATION THAT WILL PRODUCE THE REQUIRED PERFORMANCE.

REINFORCEMENT:

REINFORCEMENT FOR AREAS TO BE REPAIRED BY SHOTCRETING SHALL CONFORM WITH THE REQUIREMENTS OF 520.04, EXCEPT AS MODIFIED HEREIN. WELDED WIRE FABRIC SHALL BE 4-INCH BY 4-INCH, 8 GAGE. ALL REINFORCEMENT SHALL BE HELD SECURELY IN CORRECT POSITION BY MEANS OF APPROVED METAL SUPPORTS, SPACERS AND/OR TIE WIRES TO POSITIVELY PREVENT DISPLACEMENT DURING SHOTCRETING OPERATIONS. CARE SHALL BE EXERCISED TO MAINTAIN PROPER CLEARANCE BETWEEN THE REINFORCEMENT AND THE FINISHED SURFACE OF THE SHOTCRETE.

PLACING:

THE MORTAR SHALL BE PNEUMATICALLY PLACED.

WHEN WET MIX SHOTCRETING IS EMPLOYED, THE NOZZLE OPERATOR MUST BE ABLE TO DEMONSTRATE EXPERIENCE AND CAPABILITY IN THE SHOTCRETE APPLICATION PROCESS.

WHEN DRY MIX SHOTCRETING IS EMPLOYED, THE NOZZLE OPERATOR MUST BE QUALIFIED ACCORDING TO THE GUIDELINES PRESENTED IN ACI 506 R 85.

IF THE FLOW OF MATERIAL AT THE NOZZLE IS NOT UNIFORM, RESULTING IN SLUGS, POCKETS, OR SLOUGHING OF THE SHOTCRETE, THE NOZZLE OPERATOR SHALL DIRECT THE NOZZLE AWAY FROM THE REPAIR AREA UNTIL THE FAULTY CONDITIONS ARE CORRECTED. SUCH DEFECTS SHALL BE RE-PLACED AS THE WORK PROGRESSES.

SHOTCRETING SHALL BE TEMPORARILY SUSPENDED IF RAIN OCCURS WHICH MAY CAUSE WASHOUTS OR SLOUGHING OF THE REPAIR SURFACE. MORTAR SHALL BE PLACED ONLY WHEN THE AMBIENT TEMPERATURE IS AT LEAST 40 DEGREES AND RISING AND THE TEMPERATURE OF THE STRUCTURE TO BE REPAIRED IS AT LEAST 50 DEGREES.

THE CONTRACTOR SHALL COOL THE INGREDIENTS OR TAKE OTHER APPROPRIATE MEASURES WHEN PREMATURE STIFFENING OF THE MORTAR OCCURS IN WARM WEATHER.

THE MORTAR SHALL BE PNEUMATICALLY PLACED CONTINUOUSLY ON VERTICAL AND OVER HEAD SURFACES UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

PRECONSTRUCTION TESTING:

AN INVESTIGATION SHALL BE MADE PRIOR TO THE START OF THE WORK TO CHECK THE OPERATION OF THE EQUIPMENT, THE QUALIFICATIONS OF THE APPLICATION CREWS, AND TO ENSURE THAT A SATISFACTORY QUALITY OF PNEUMATICALLY PLACED MORTAR CAN BE PRODUCED.

TEST PANELS SHALL BE FABRICATED BY SHOOTING MORTAR ONTO THE PLY-WOOD BOTTOM OF AN OPEN BOX 18 INCHES SQUARE AND 4 INCHES DEEP. REINFORCEMENT IN THE LARGER SIZES AND TIGHTER SPACING FOUND IN A BRIDGE SHALL BE INCORPORATED IN TEST PANELS WHICH ARE 24 INCHES SQUARE. THE BOXES SHALL BE MOUNTED VERTICALLY OR HORIZONTALLY TO SIMULATE THE ACTUAL JOB CONDITION. THE MORTAR SHALL BE APPLIED USING THE PERSONNEL, EQUIPMENT, AND PROCEDURES PROPOSED FOR THE JOB UNTIL THE BOX IS FULL. THE MIXING WATER SHALL BE ADJUSTED TO PROVIDE MORTAR OF THE PROPER CONSISTENCY AS RECOMMENDED BY THE MANUFACTURER. THE QUANTITY OF MIXING WATER INTRODUCED INTO THE MIX SHALL BE MEASURABLE AND SHALL BE DOCUMENTED DURING ANY SHOTCRETE APPLICATION PROCEDURE.

THREE CORES SHALL BE TAKEN FROM EACH PANEL AND TESTED ACCORDING TO ASTM C 42 BY AN INDEPENDENT TESTING LABORATORY APPROVED BY THE STATE. A COMPRESSIVE STRENGTH OF AT LEAST 7000 PSI AT 28 DAYS WILL BE REQUIRED. IN ORDER TO PRECLUDE A POSSIBLE DELAY IN STARTING THE WORK, 5500 PSI AT 7 DAYS WILL BE ACCEPTED.

THE PANELS SHALL ALSO BE BROKEN SO THAT THE INTERIOR PORTIONS CAN BE CAREFULLY EXAMINED. THEY SHALL BE SUBSTANTIALLY FREE OF HOLLOW AREAS AND SAND POCKETS AND THE MORTAR SHALL BE WELL BONDED TO THE REINFORCEMENT.

EACH CREW MUST FABRICATE SATISFACTORY PANELS SIMULATING THE ACTUAL ON SITE CONDITIONS (e.g. VERTICAL OR OVERHEAD APPLICATION) BEFORE APPLYING THE MORTAR TO THE STRUCTURE.

INSPECTION AND TESTING:

ALL PATCHED AREAS SHALL BE SOUNDED AFTER CURING AND BEFORE FINAL ACCEPTANCE. ALL UNSOUND AREAS AND AREAS EXHIBITING CRACKING SHALL BE REMOVED AND REPATCHED.

THE ACCEPTANCE OF THE PNEUMATICALLY PLACED MORTAR WILL ALSO BE BASED ON CORES TAKEN FROM PATCHED AREAS AND TESTED ACCORDING TO ASTM C 42 IN ADDITION TO THE REQUIRED SOUNDING OF ALL PATCHES. THE LOCATION OF THE CORES WILL BE DETERMINED BY THE ENGINEER. ONE CORE WILL BE TAKEN FOR EACH 500 SQ. FT. OF PNEUMATICALLY PLACED MORTAR. THE CORES SHALL EXTEND COMPLETELY THROUGH THE PATCHED AREA AND INTO THE UNDERLYING SOUND CONCRETE AT LEAST TWO INCHES. THE CORES WILL BE VISUALLY INSPECTED AT THE SITE BY THE ENGINEER FOR HOLLOW AREAS, SAND POCKETS, VOIDS AROUND THE REINFORCING STEEL AND LACK OF BOND TO THE UNDERLYING CONCRETE.

THE AVERAGE 28-DAY COMPRESSIVE STRENGTH OF THE CORES AS DETERMINED BY AN INDEPENDENT LABORATORY SHALL BE NOT LESS THAN 6000 PSI AND NO CORE SHALL TEST LOWER THAN 5000 PSI.

ALL PATCHES DETERMINED TO BE DEFECTIVE BY SOUNDING, VISIBLE CRACKS OR UNACCEPTABLE CORES SHALL BE REMOVED, REPLACED, AND CURED. PATCH REPLACEMENT WILL CONTINUE UNTIL ONLY ACCEPTABLE PATCHES REMAIN. CORE HOLES SHALL BE SURFACE PREPPED AS DESCRIBED ABOVE AND FILLED BY HAND PACKING WITH A MORTAR EQUIVALENT IN INGREDIENTS TO THAT EMPLOYED IN THE ORIGINAL PROCESS.

ALL TEST PANEL, CORING, REPAIR OF CORE HOLES, INDEPENDENT LABORATORY TESTING OF THE CORES, AND REPLACEMENT OF THE REJECTED AREAS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND INCLUDED IN THE UNIT BID PRICE FOR THIS ITEM.

BASIS FOR PAYMENT:

PAYMENT SHALL BE MADE AT THE CONTRACT UNIT BID PRICE FOR:

ITEM	UNIT	DESCRIPTION
SPECIAL	SO. FT.	SHOTCRETING CONCRETE STRUCTURES

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 4 - OPERATIONS
BRIDGE SECTION

DATE
11-95
REVISION
7/27/95
DRAWN
TJB
CHECKED
TJB

GENERAL NOTES

MAH-680-00.07

BRIDGE DECK TREATMENT

DESIGN AGENCY
STATE OF MICHIGAN
DEPARTMENT OF TRANSPORTATION
DISTRICT OPERATIONS
BRIDGE SECTION

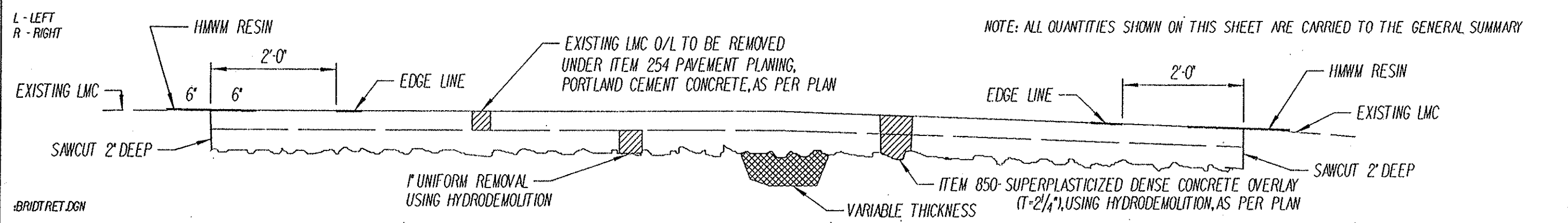
DATE
11-95
STRUCTURE FILE NUMBER

DRAWN
TJB
CHECKED
TJB
2-1-96

BRIDGE DECK DATA

COUNTY, ROUTE AND BRIDGE NO.	LENGTH (BRIDGE UNITS) LN.FT.	WIDTH LN.FT.	BRIDGE DECK AREA SQ.YDS.	BRIDGE DECK OVERLAYS AND REPAIRS			254 PAVEMENT PLANING BITUMINOUS SQ.YDS.	254 PAVEMENT PLANING, PORTLAND CEMENT CONCRETE, AS PER PLAN SQ.YD.	404 ASPHALT CONCRETE, AC-20 CUYDS.	407 TACK COAT, USING SS-924 0.075 GAL/SY. GALLONS	SPECIAL TREATING CONCRETE BRIDGE DECKS WITH HMW RESIN SQ.YD.	513 STRUCTURAL STEEL REPLACEMENT OF DETERIORATED END CROSSFRAMES POUND	513 TRIMMING OF BEAM END, AS PER PLAN EACH	56 JOINT SEALER (70SD4), AS PER PLAN LN.FT.	56 REFURBISH BEARING DEVICE, AS PER PLAN EACH	56 JACKING AND TEMPORARY SUPPORT OF SUPER-STRUCTURE LUMP	56 RESET BEARINGS EACH	58 SCUPPER LENGTHENING AS PER PLAN EACH	58 STRUCTURE DRAINAGE, MISC.; SCUPPER CLEANOUT EACH	58 STRUCTURE DRAINAGE, MISC.; FOOTER DRAIN REPLACEMENT EACH	59 PATCHING CONCRETE STRUCTURE SOFT.	SPECIAL SHOTCRETING CONCRETE STRUCTURES SOFT.	601 DUMPED ROCK FILL TYPE A CUYD.	622 PORTABLE CONCRETE BARRIER, 32" LN.FT.	622 PORTABLE CONCRETE BARRIER, 32" BRIDGE MOUNTED LN.FT.	
				2 1/4" THICK OVERLAY SQ.YDS.	VARIABLE THICKNESS OVERLAY (MATERIAL ONLY) CUYDS.	FULL DEPTH REPAIR CUYDS.																				
				ITEM 51 CLASS 5 CONCRETE ITEM 850 - SUPERPLASTICIZED DENSE CONCRETE OVERLAY (T=2 1/4") AS PER PLAN (SEE DETAILS BELOW)																						
MAH-680-0007R	193.35	39.67	852	602	25	3	889	602	49	67	63	260		138	12	LUMP		6	6		20			3,520	390	
MAH-680-0020L	296.84	51.67	1,704	1,319	55	3	1,148	1,319	64	86	99			150	12	LUMP			4		50				540	620
MAH-680-0033L	229.14	38.00	967	713	39	5	1,804	713	47	63	75		4	178		LUMP	5	9	9	8	20			600	480	
MAH-680-0040R	217.70	47.17	1,141	883	48	5	2,252	883	74	99	72		4	102		LUMP	4		9	10	30			1,540	460	
MAH-711-0124												1000			50	LUMP	16				967	311	600			
TOTAL				3,517	167	16	6,093	3,517	234	315	309	1,260	8	568	74	LUMP	25	15	28	18	120	967	311	6,800	1,950	

BRIDGE DECK TREATMENT



MAH-680-00.07

BRIDGE DECK TREATMENT

DESIGN AGENCY
 STATE OF OHIO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF BRIDGES AND STRUCTURES

DATE
 11-95
 STRUCTURE FILE NUMBER

DESIGNED
 TJB
 CHECKED
 TJB
 REVISED
 2-1-96

BRIDGE DECK TREATMENT

MAH-680-00.07

BRIDGE DECK DATA

COUNTY, ROUTE AND BRIDGE NO.	LENGTH (BRIDGE UNITS) LN.FT.	WIDTH LN.FT.	BRIDGE DECK AREA SQYDS.	SPECIAL	513	815	815	815	815	850
				SEALING OF CONCRETE STRUCTURES (EPOXY) SQYDS.	STRUCTURAL STEEL, MISC. BEAM END REPLACEMENT STEEL POUND	SURFACE PREPARATION OF EXISTING STEEL SYSTEM OZEU SQ.FT.	FIELD PAINTING OF EXISTING STEEL PRIME COAT. SYSTEM OZEU SQ.FT.	FIELD PAINTING OF EXISTING STEEL INTERMEDIATE COAT. SYSTEM OZEU SQ.FT.	FIELD PAINTING OF EXISTING STEEL FINISH COAT. SYSTEM OZEU SQ.FT.	SURFACE PREPARATION USING HYDRODEMOLITION (SEE DETAILS ON SHEET B1) SQYD.
MAH-680-0007R	193.35	39.67	852							602
MAH-680-0020L	296.84	51.67	1,704							1,319
MAH-680-0033L	229.14	38.00	967							713
MAH-680-0040R	217.70	47.17	1,141							883
MAH-711-0124				282	2,354	1,986	1,986	1,986	1,986	
TOTAL				282	2,354	1,986	1,986	1,986	1,986	3,517

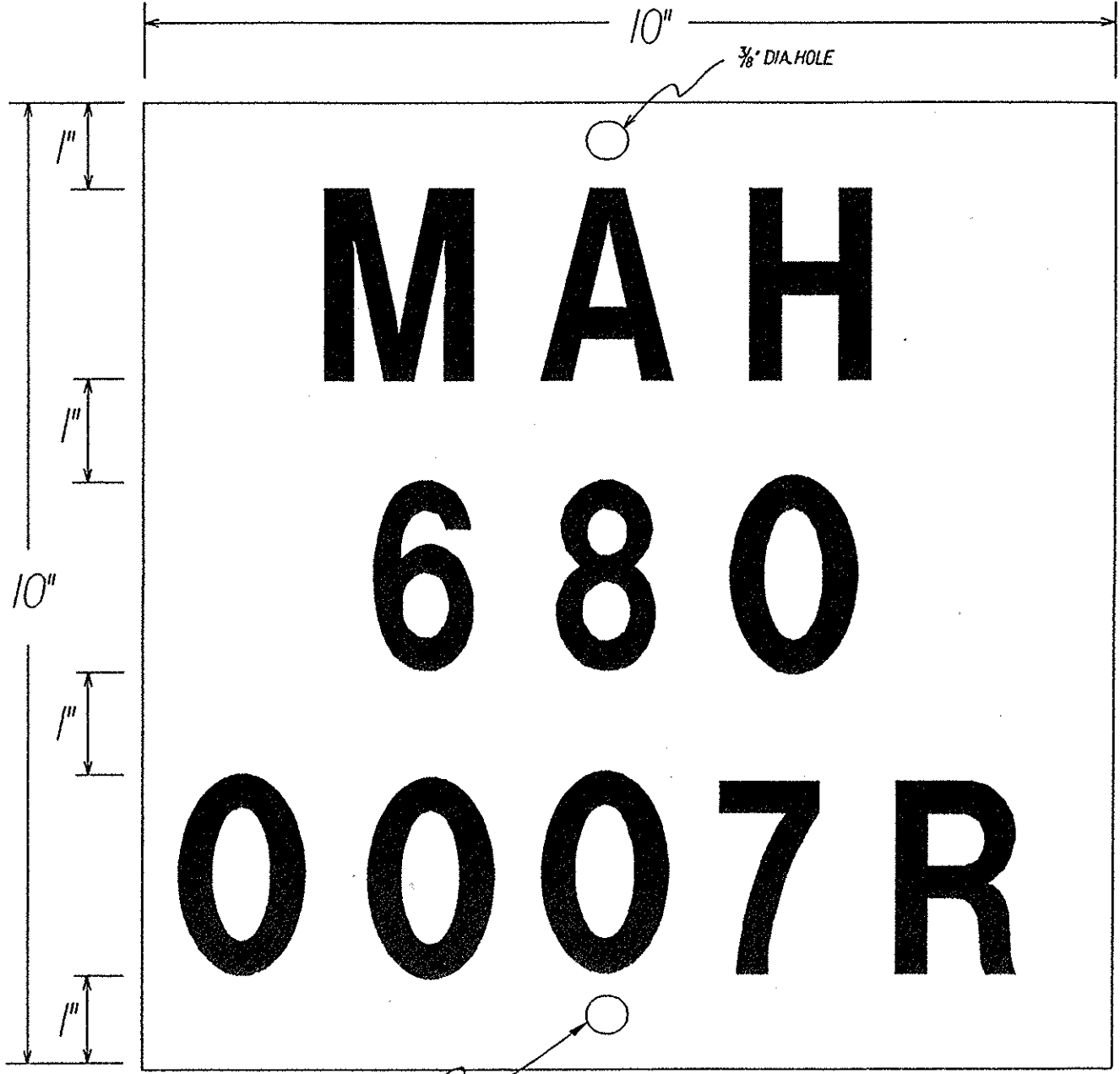
L - LEFT
R - RIGHT

NOTE: ALL QUANTITIES SHOWN ON THIS SHEET ARE CARRIED TO THE GENERAL SUMMARY

STRUCTURE SIGN UPGRADE

THESE ITEMS SHALL BE USED TO PLACE NEW STRUCTURE IDENTIFICATION SIGNS AT THE FOLLOWING LOCATIONS. SIGNS SHALL BE DIMENSIONED AS PER THE EXAMPLE. THEY WILL BE PLACED ON I.R.680, AS WELL AS S.R.II.I.R.80, AND U.S.422, OFF THE RIGHT SHOULDER, FACING TRAFFIC, AND BEHIND THE GUARDRAIL IF APPLICABLE. SIGNS SHALL BE ALUMINUM AND HAVE A NON-REFLECTIVE WHITE SHEETING BACKGROUND. LETTERS SHALL BE BLACK 2" HEIGHT, SERIES C STROKE WIDTH, AND SILK SCREENED AS PER 730.22. SIGNS SHALL BE BOLTED USING 2-5/16" ALUMINUM BOLTS AND NUTS 2-1/2" IN LENGTH. NEW NO.2 POSTS SHALL BE INSTALLED AS PER STANDARD CONSTRUCTION DRAWING TC-41.20 MOST CURRENT REVISION. EACH POST WILL BE 7 FEET LONG. THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO PERFORM THIS WORK.

STRUCTURE NUMBER	ITEM 630 GROUND MOUNTED SUPPORT, NO.2 POST	ITEM 630 SIGN,FLAT SHEET	ITEM 630 REMOVAL OF GROUND MOUNTED POST AND DISPOSAL
	LIN.FT.	SQ.FT.	EACH
MAH-680-0007R	7	0.70	1
MAH-680-0020L	7	0.70	1
MAH-680-0033L	7	0.70	1
MAH-680-0040R	7	0.70	1
MAH-II-160I	7	0.70	1
MAH-80-0505	7	0.70	1
MAH-711-0124	14	1.40	2
TOTALS	56	5.60	8



EXAMPLE

NOTE :THE QUANTITY FOR BRIDGE NO.MAH-II-160I,AND MAH-80-0505 ARE INCLUDED IN THE QUANTITIES FOR BRIDGE NOS.MAH-680-0007 AND MAH-680-0020 RESPECTIVELY,ON THE GENERAL SUMMARY.

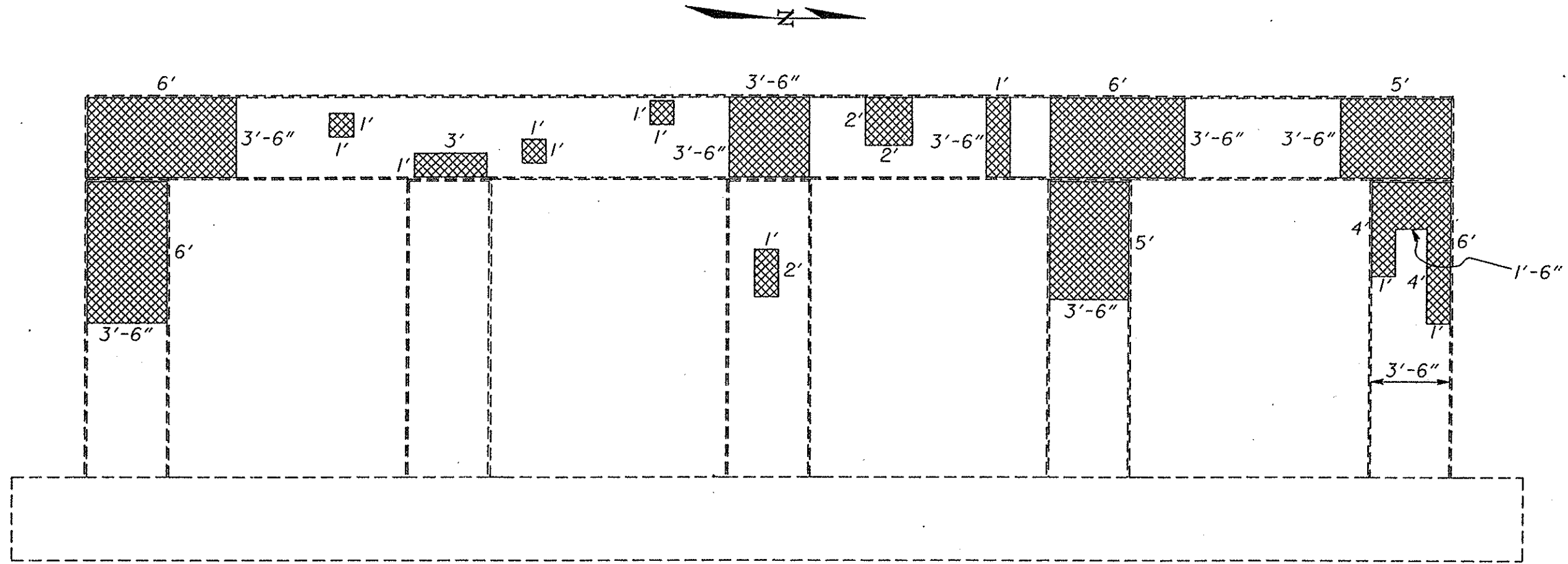
DESIGN NEWBY
 STATE OF OHIO
 DEPARTMENT OF TRANSPORTATION
 DISTRICT # 1 - OPERATIONS
 BRIDGE SECTION

DATE
 11-95
 REVIEWED
 12/11
 DRAWN
 TJB
 CHECKED
 TJB
 STRUCTURE FILE NUMBER

EXISTING ABUTMENT REMOVAL
 BRIDGE NO.

7
 10
 23

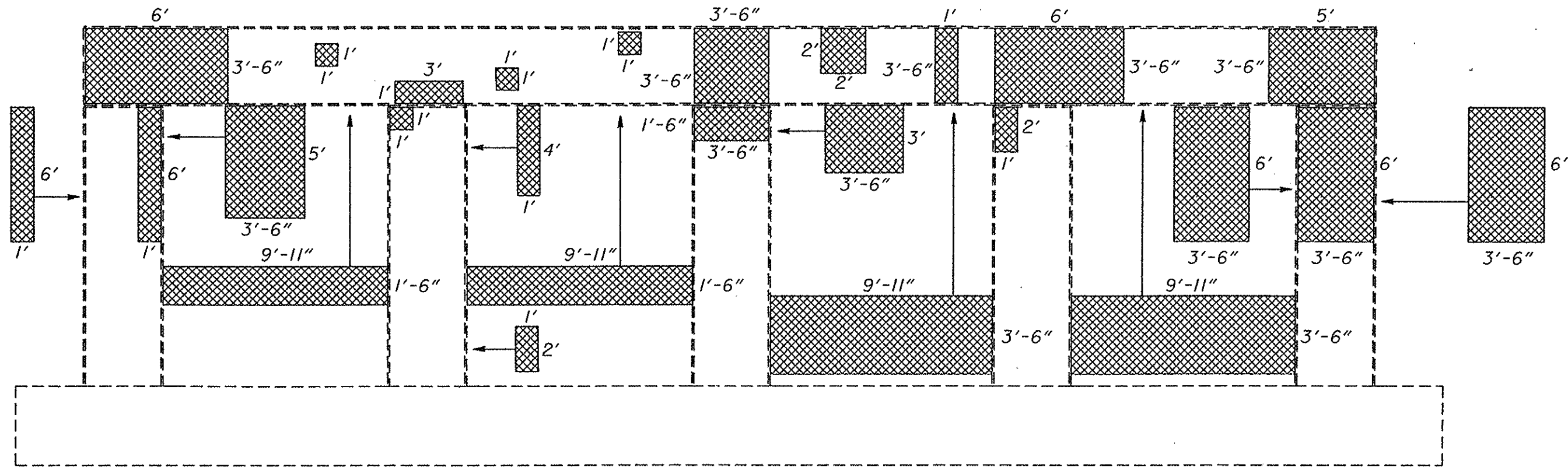
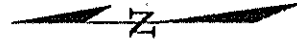
PIER REPAIR DETAILS



EAST PIER
MAH-711-0124

 — ITEM SPECIAL - SHOTCRETING CONCRETE STRUCTURES

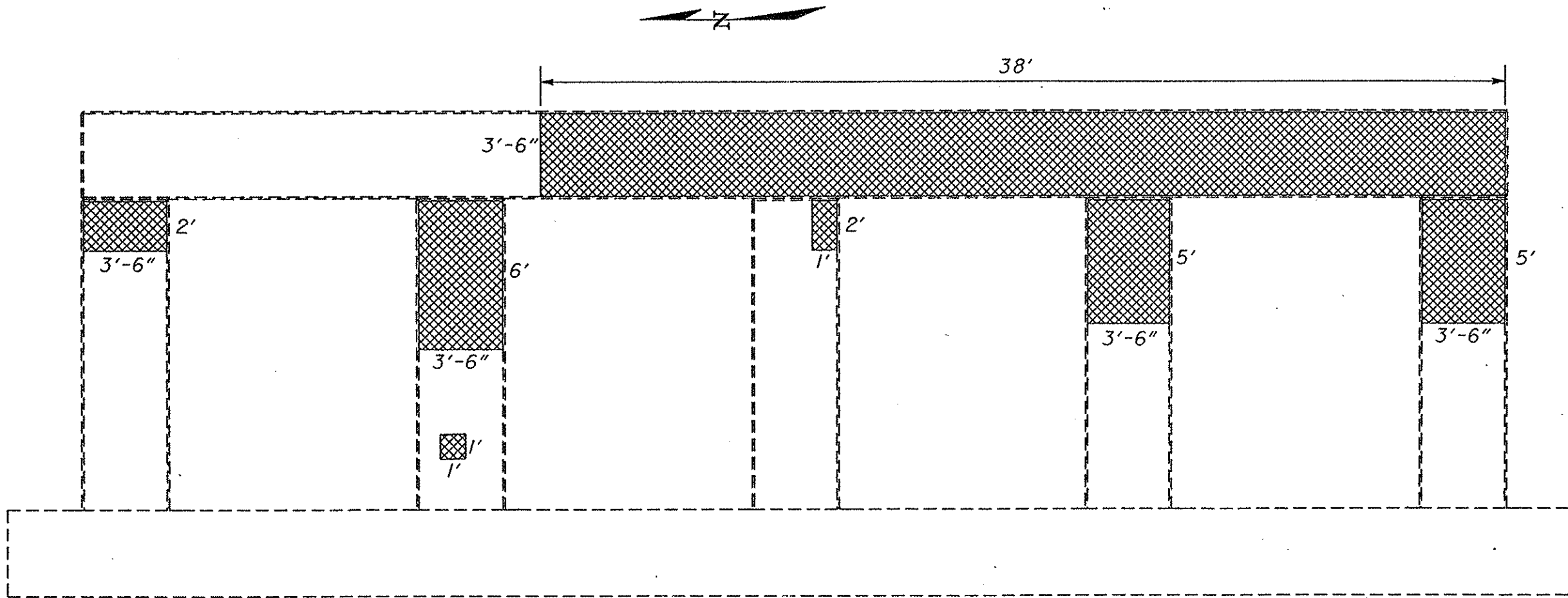
PIER REPAIR DETAILS



EAST PIER
MAH-711-0124

 — ITEM SPECIAL - SHOTCRETING CONCRETE STRUCTURES

PIER REPAIR DETAILS

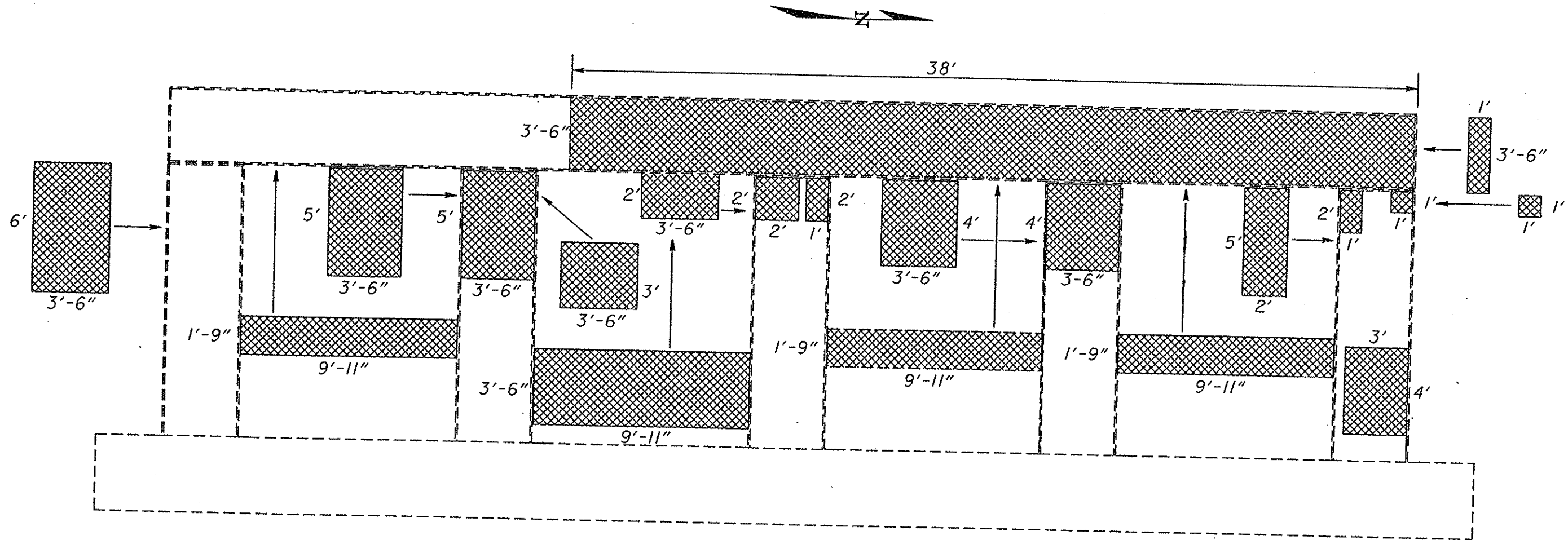


WEST PIER
MAH-711-0124



— ITEM SPECIAL - SHOTCRETING CONCRETE STRUCTURES

PIER REPAIR DETAILS



WEST PIER
MAH-711-0124

 — ITEM SPECIAL - SHOTCRETING CONCRETE STRUCTURES

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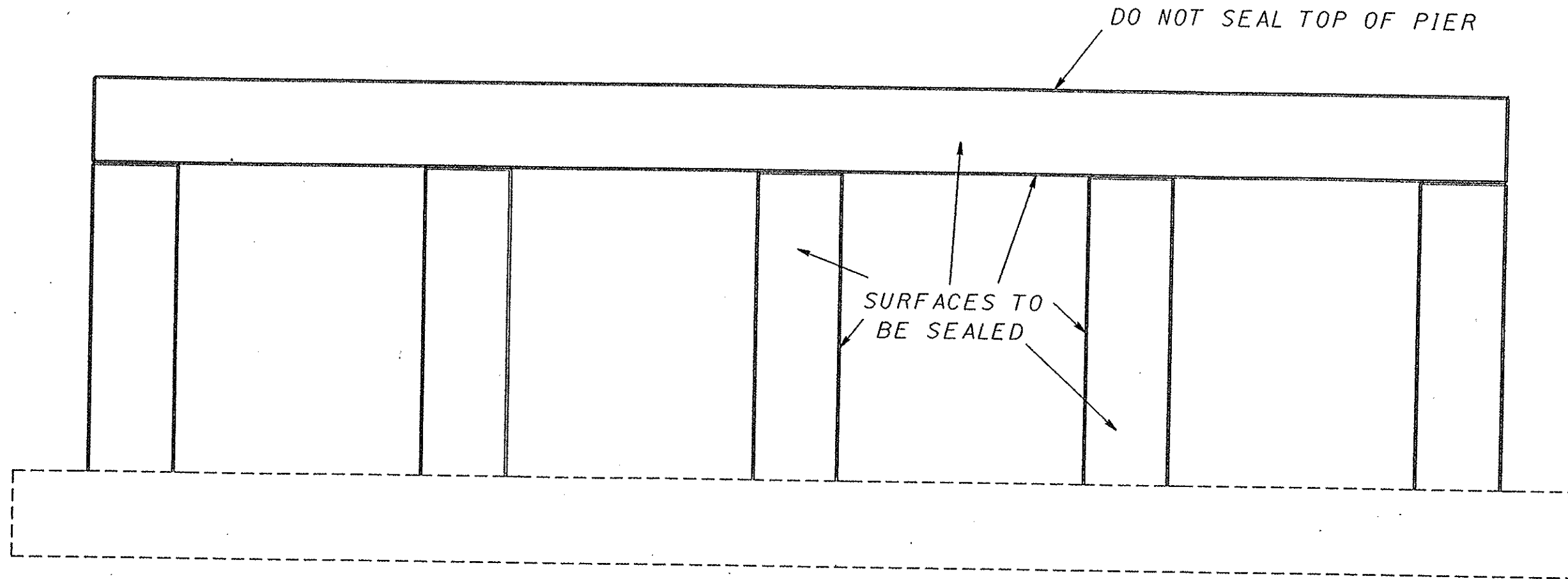
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STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT OF OPERATIONS
BRIDGE SECTION

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PIER REPAIR DETAILS
BRIDGE NO. MAH-711-0124

MAH-680-00.07

PIER SEALING DETAILS



MAH-711-0124

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DISTRICT 4 - OPERATIONS
BRIDGE SECTION

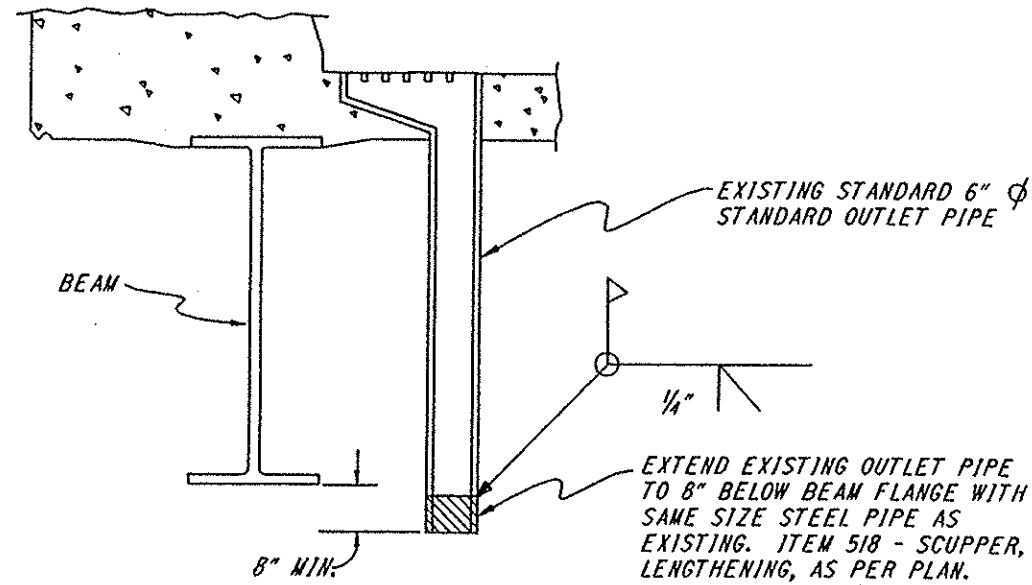
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PIER SEALING DETAILS
BRIDGE NO. MAH-711-0124

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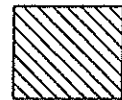
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SCUPPER EXTENSION DETAIL



SCUPPER DETAIL AS PER ITEM 518-SCUPPER, LENGTHENING, AS PER PLAN

SEE STD. DWG. SD-1-69
FOR ADDITIONAL DETAILS



SCUPPER AREA TO BE EXTENDED

NOTE: THE PIPE EXTENSIONS SHALL BE WELDED IN PLACE
AFTER THE EXISTING SURFACES HAVE BEEN ABRASIVE
BLASTED TO A SA-1.

NOTE: ADDITIONAL LENGTH OF SCUPPER PIPE TO BE REPLACED IS TO BE
DETERMINED BY THE PROJECT ENGINEER/SUPERVISOR.

NOTE: DRAWING NOT TO SCALE

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SCUPPER EXTENSION DETAIL

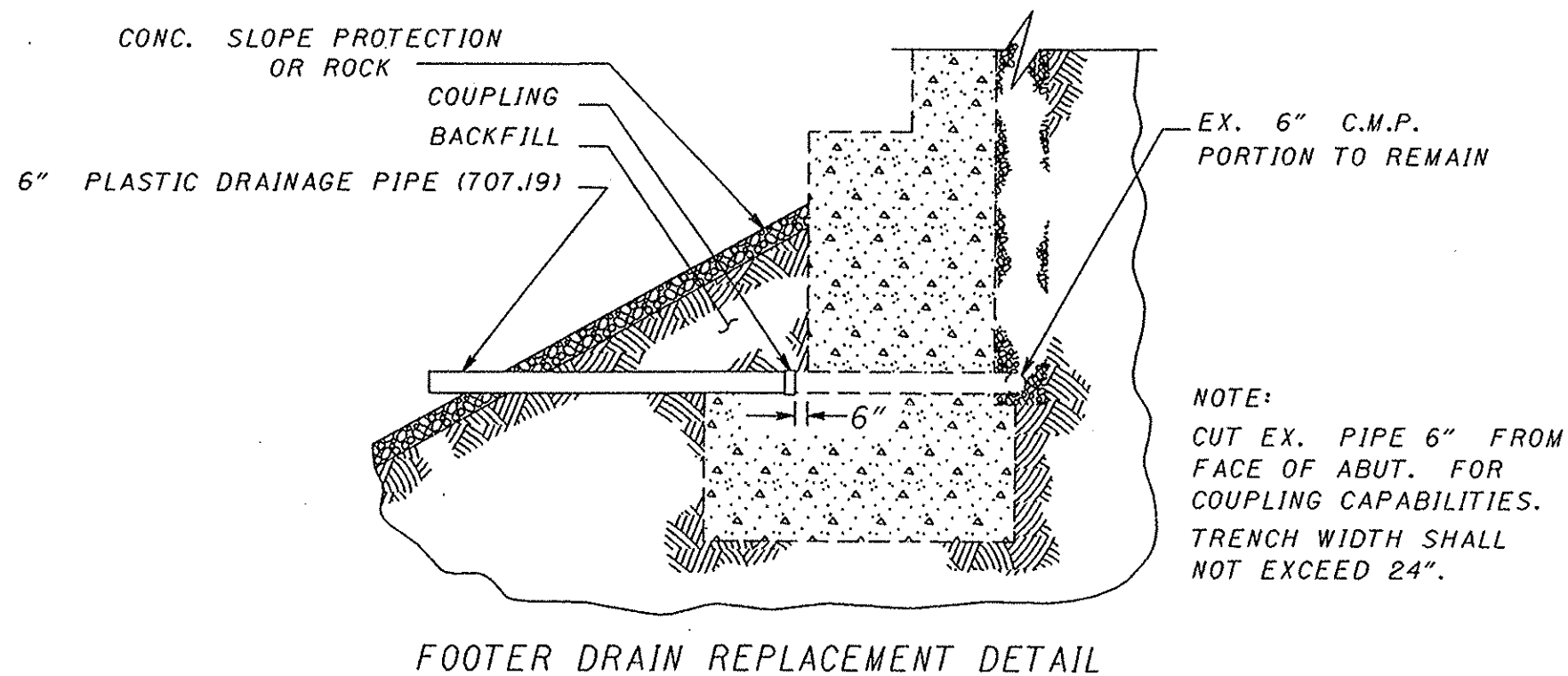
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FOOTER DRAIN REPLACEMENT DETAILS

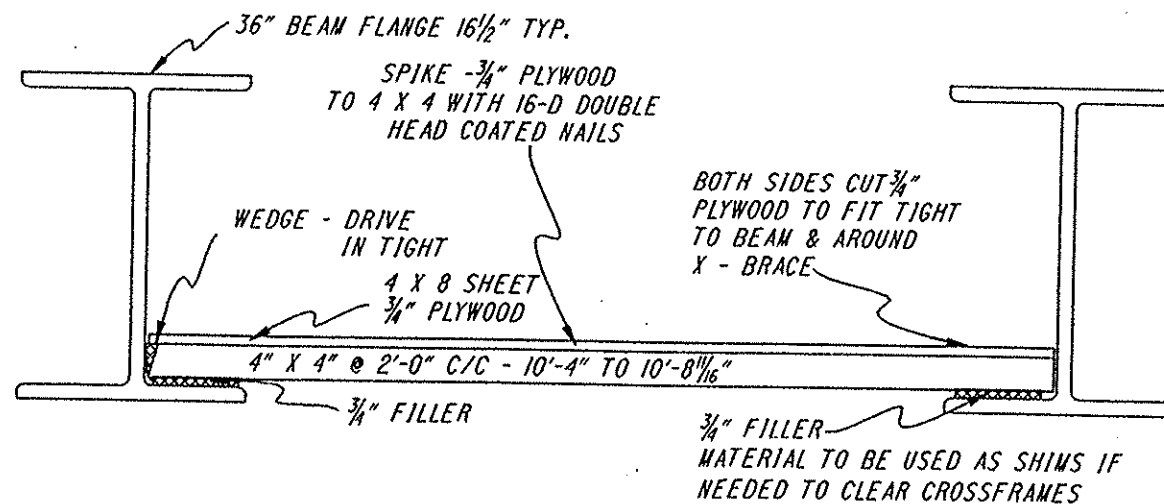
ITEM 518 - STRUCTURE DRAINAGE, MISC.: FOOTER DRAIN REPLACEMENT

THIS ITEM SHALL BE PERFORMED AT THE ABUTMENTS OF STRUCTURE NOS. MAH-680-0033L AND MAH-680-0040R. THIS ITEM SHALL INCLUDE THE REMOVAL OF THE EXISTING PIPE, PLACEMENT OF A NEW 6" PLASTIC DRAINAGE PIPE (707.19), COUPLING, BACKFILL AND ALL EQUIPMENT, MATERIALS AND LABOR TO COMPLETE THIS ITEM AS DETAILED. PAYMENT SHALL BE MADE UNDER ITEM 518 - STRUCTURE DRAINAGE, MISC.: FOOTER DRAIN REPLACEMENT, EACH. REMOVAL AND REPLACEMENT OF CRUSHED AGGREGATE SLOPE PROTECTION NECESSARY TO COMPLETE THE PIPE REPLACEMENT OPERATION WILL BE PAID FOR UNDER THIS ITEM.



FOOTER DRAIN REPLACEMENT DETAIL

FALSEWORK NOTES AND DETAILS



ITEM SPECIAL - STRUCTURE, MISC.: FALSEWORK PROTECTION UNDER DECK PROTECTION

THE INTENT OF THIS ITEM IS TO PROTECT S.R. II FROM ANY FALLING DEBRIS FROM THE UNDERSIDE OF THE MAH-680-0020L BRIDGE DECK. TO PREVENT PIECES OF LOOSE CONCRETE FROM FALLING ONTO TRAFFIC BELOW, UNDERSIDE DECK FALSEWORK PROTECTION (I.E. SUFFICIENTLY SUPPORTED PLYWOOD SHEETING) SHALL BE ERECTED, IN ACCORDANCE WITH THE DETAILS ON THIS PAGE AND AS DIRECTED BY THE PROJECT ENGINEER/SUPERVISOR.

THIS ITEM OF WORK SHALL INCLUDE PLACING 3/4" THICK OUTDOOR PLYWOOD 4' X 8' SHEETING, END TO END, SUPPORTED BY TREATED 4" X 4" WOODEN STRUT SPACED EVERY 2 FEET CENTER TO CENTER. THE PLYWOOD SHEETING SHALL BE FIELD CUT TO FIT TIGHT AGAINST THE WEB OF THE ADJACENT BEAM, AS WELL AS SNUG AROUND THE EXISTING INTERMEDIATE CROSSFRAME MEMBERS. THE FALSEWORK SHALL BE CONSTRUCTED OVER THE TRAVELED LANES ON S.R. II N.B.

THE UNDER DECKING SHALL CONSIST OF ALL NEW MARINE (OR EXTERIOR RATED) WOODEN MATERIALS AND SHALL REMAIN SECURED IN PLACE AFTER THE PROJECT WORK HAS BEEN COMPLETED. TRAFFIC CONTROL ON S.R. II WILL BE REQUIRED DURING THIS OPERATION AND WILL BE PAID FOR UNDER ITEM 614 - MAINTAINING TRAFFIC.

THE NECESSARY LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS ASSOCIATED WITH THE REQUIRED FALSEWORK ERECTION OPERATIONS SHALL BE INCLUDED IN THE CONTRACT UNIT BID PRICE FOR ITEM SPECIAL - FALSEWORK PROTECTION UNDER DECK PROTECTION.

DESIGN AGENCY
STATE OF OHIO
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FALSEWORK NOTES AND DETAILS

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TRIMMING OF BEAM ENDS

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DEPARTMENT OF TRANSPORTATION
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BRIDGE SECTION

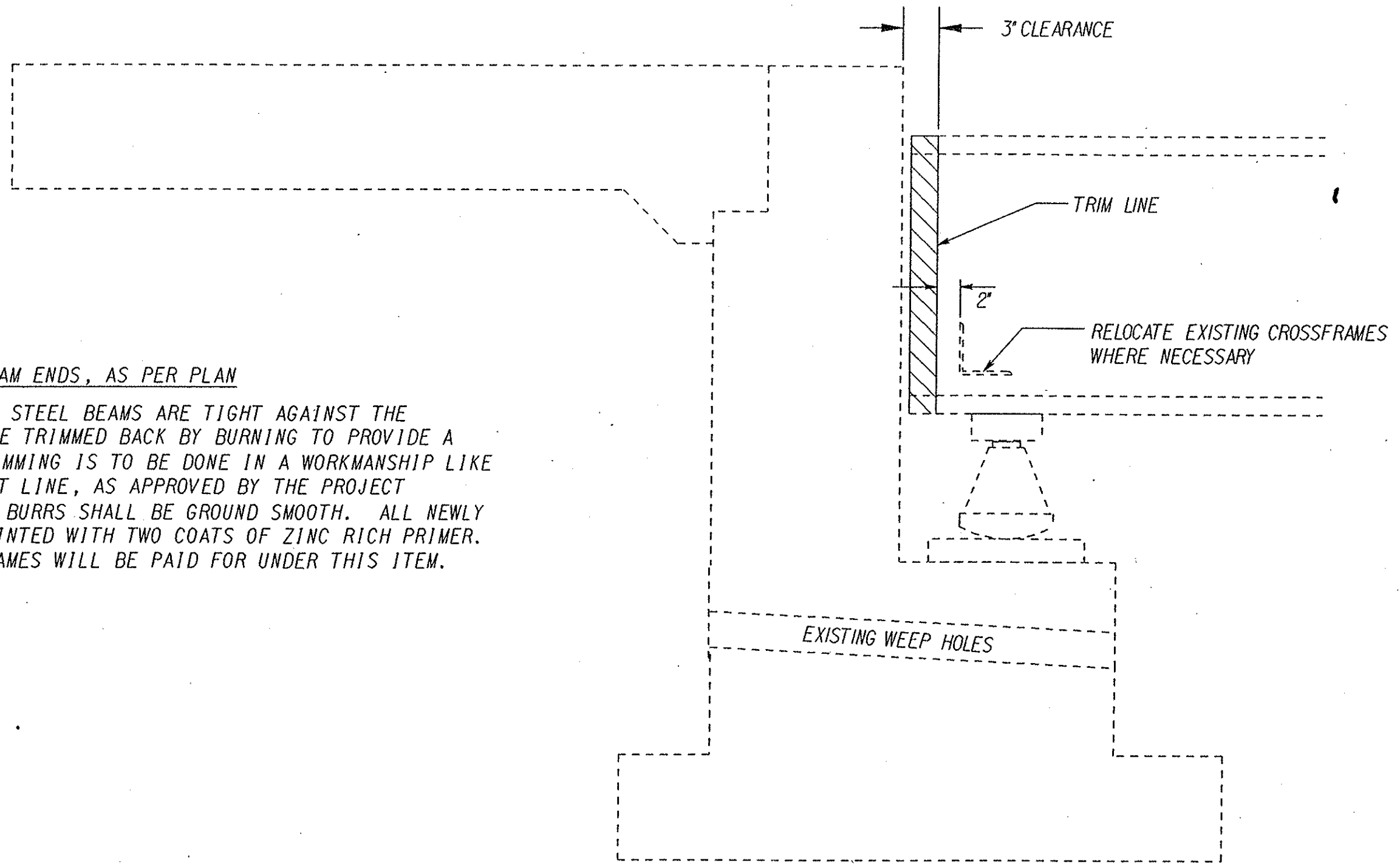
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TRIMMING OF BEAM ENDS

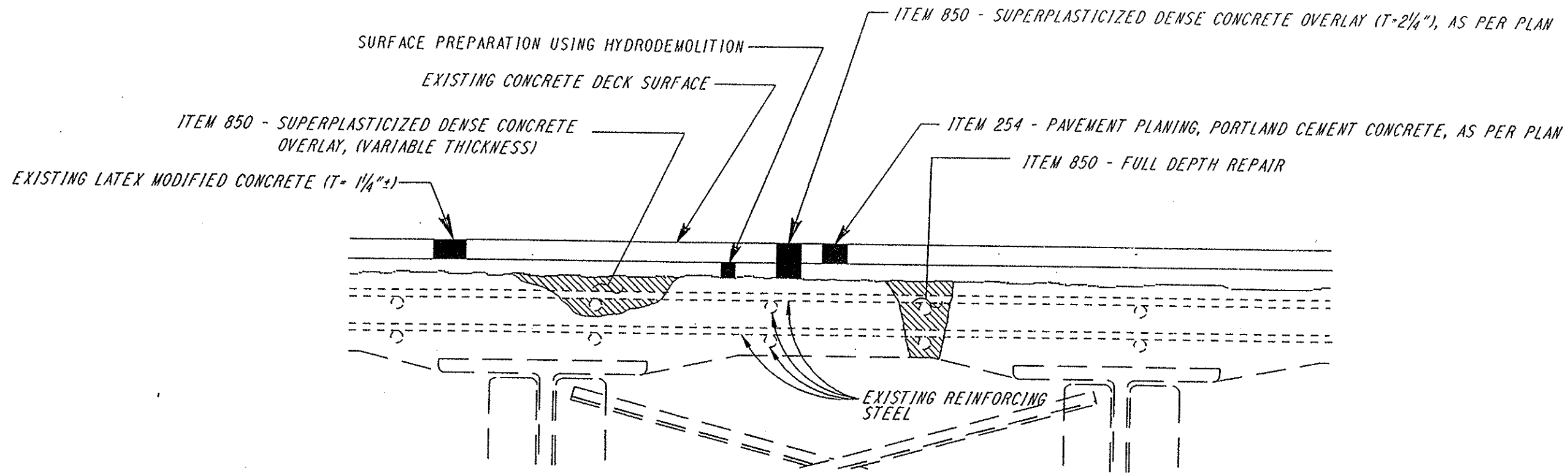
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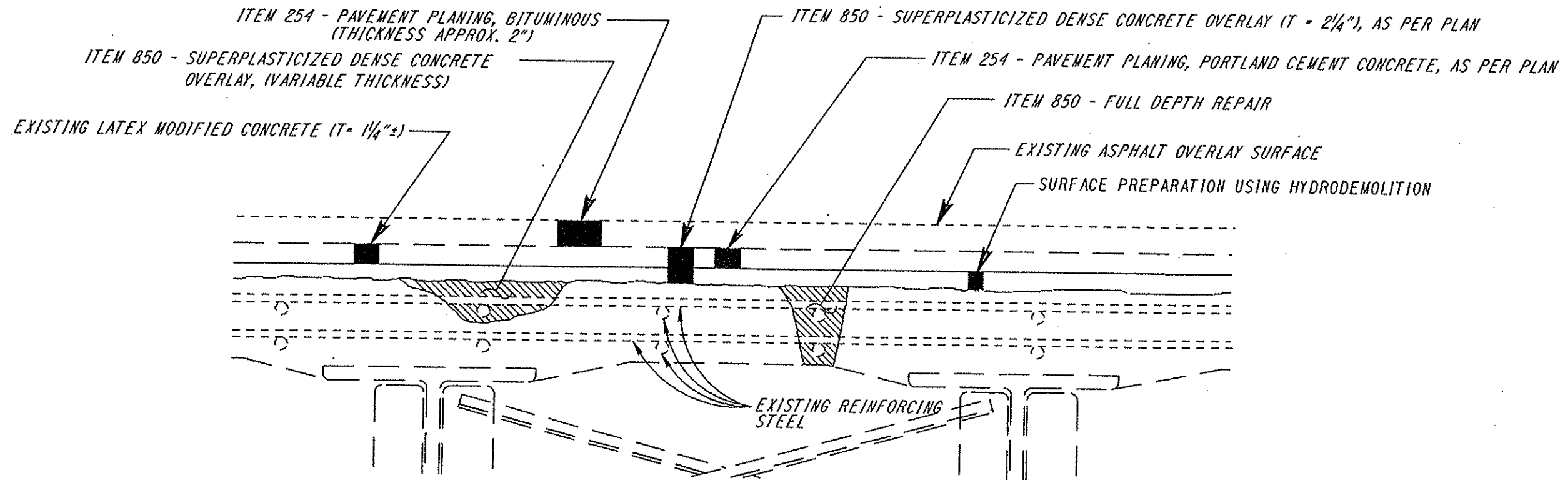


ITEM 513 - TRIMMING OF BEAM ENDS, AS PER PLAN

WHERE EXISTING STRUCTURAL STEEL BEAMS ARE TIGHT AGAINST THE BACKWALL, THE BEAMS MAY BE TRIMMED BACK BY BURNING TO PROVIDE A 3-INCH CLEARANCE AT 60°F. TRIMMING IS TO BE DONE IN A WORKMANSHIP LIKE MANNER RESULTING IN A NEAT LINE, AS APPROVED BY THE PROJECT ENGINEER-SUPERVISOR. ALL BURRS SHALL BE GROUND SMOOTH. ALL NEWLY EXPOSED STEEL SHALL BE PAINTED WITH TWO COATS OF ZINC RICH PRIMER. ANY RELOCATION OF CROSSFRAMES WILL BE PAID FOR UNDER THIS ITEM.

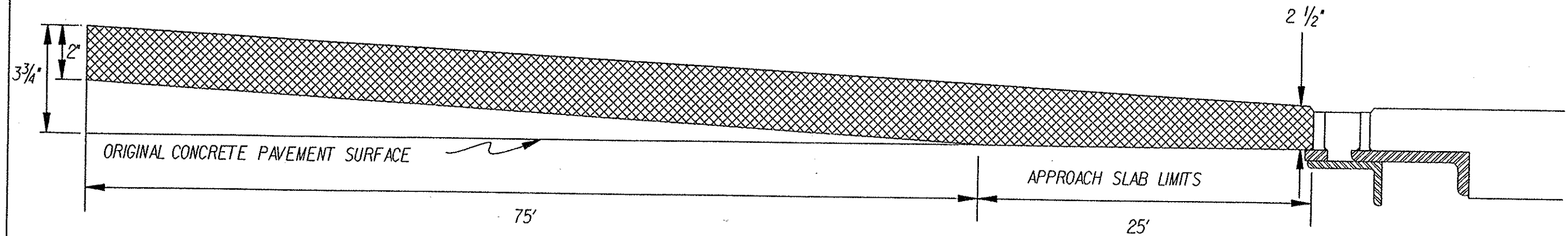


TYPICAL OVERLAY DETAIL
BRIDGE NOS. MAH-680-0007R AND MAH-680-0020L

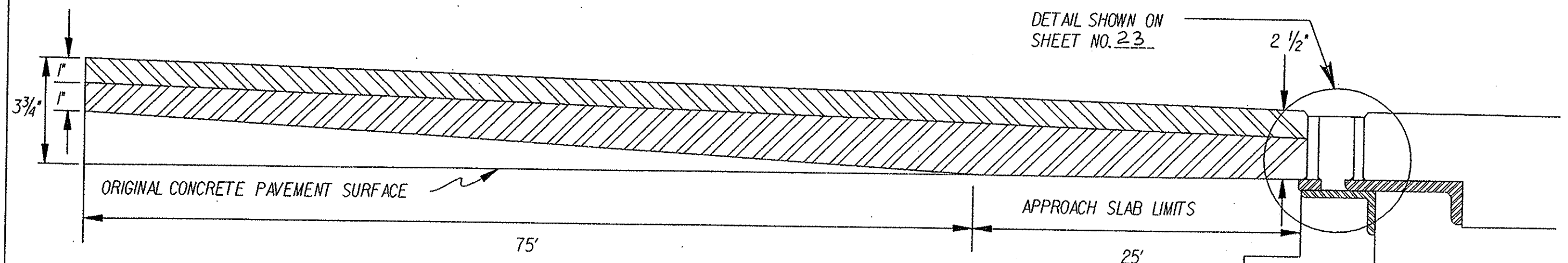



TYPICAL OVERLAY DETAIL
BRIDGE NOS. MAH-680-0040R AND MAH-680-0033L

PLANING AND PAVING DETAILS



 — ITEM 254 - PAVEMENT PLANING BITUMINOUS, (EXISTING ASPHALT TO BE PLANED OFF)



 — ITEM 404 - ASPHALT CONCRETE, AC-20 TO BE PLACED IN TWO LAYERS AS SHOWN

BRIDGE NOS. MAH-680-0007R AND MAH-680-0020L

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DISTRICT OFFICE
BRIDGE SECTION

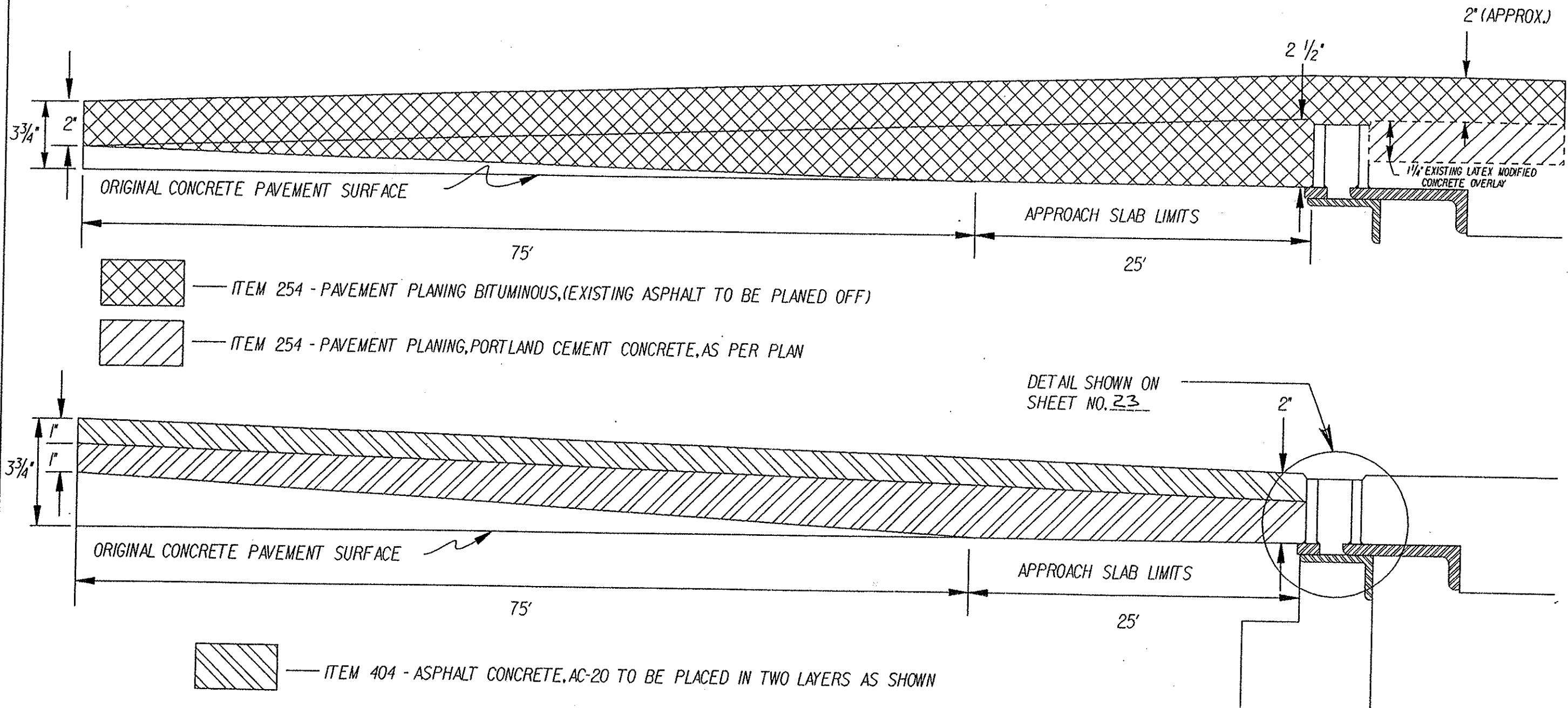
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PLANING AND PAVING DETAILS
BRIDGE NOS. MAH-680-0007R & MAH-680-0020L

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PLANING AND PAVING DETAILS



DESIGN AGENCY
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BRIDGE NOS. MAH-680-0033L & MAH-680-0040R

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BRIDGE NOS. MAH-680-0033L AND MAH-680-0040R

BACKWALL REPAIR DETAIL

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STATE OF MISSISSIPPI
DEPARTMENT OF TRANSPORTATION
DISTRICT 4 - OPERATIONS
BRIDGE SECTION

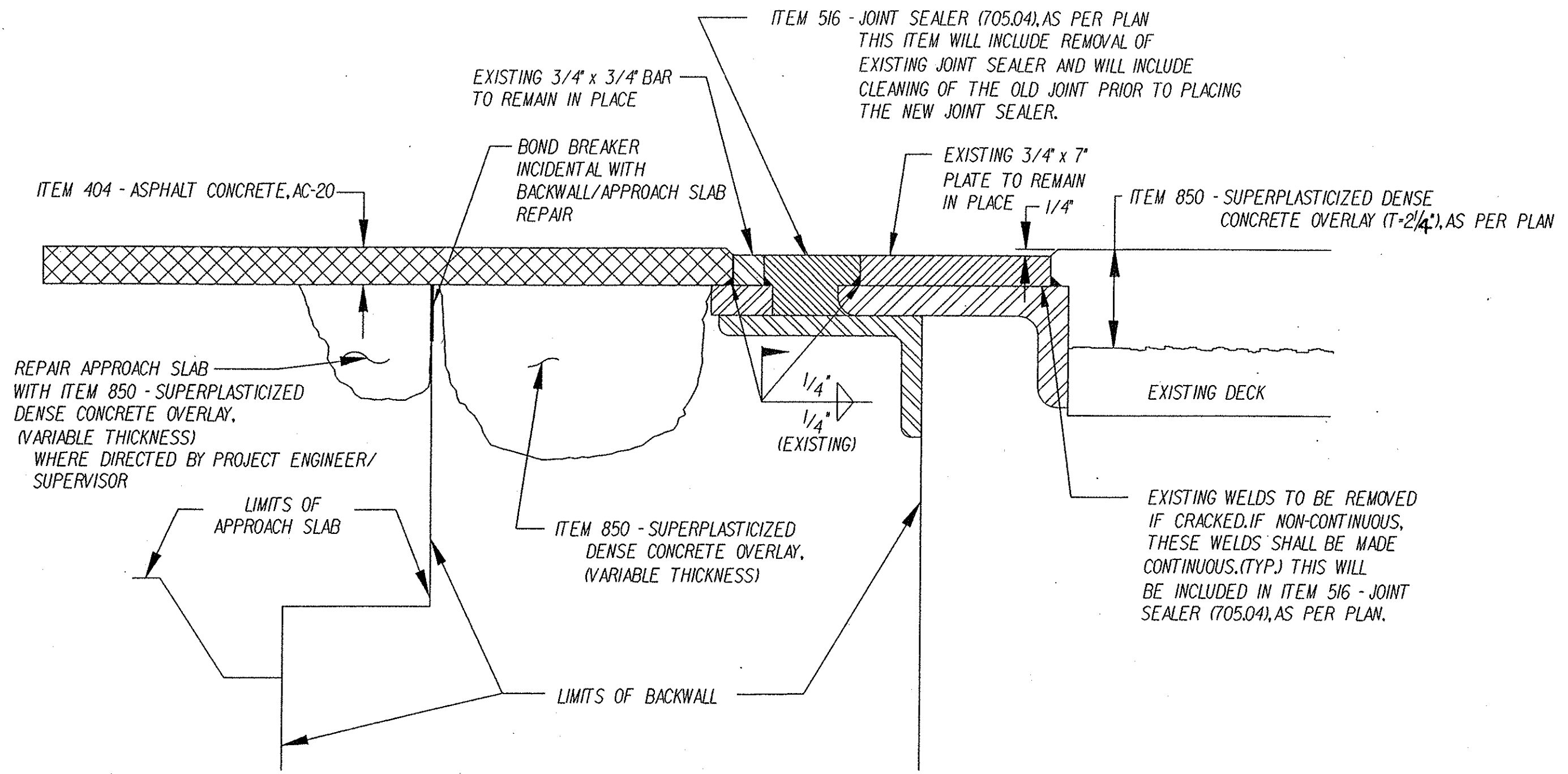
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BACKWALL REPAIR DETAIL

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BEAM END DETAILS

ITEM 513 - STRUCTURAL STEEL, MISC.; BEAM END REPLACEMENT

A QUANTITY OF 2354 POUNDS OF NEW A36 STRUCTURAL STEEL HAS BEEN ALLOTTED FOR USE BY THE CONTRACTOR TO REPAIR DETERIORATED BEAM ENDS OR STIFFENERS OR GUSSET PLATES ON MAH-711-0124. THIS ITEM SHALL BE USED AT THE ABUTMENTS AND AT THE OPEN JOINTS OVER THE PIERS.

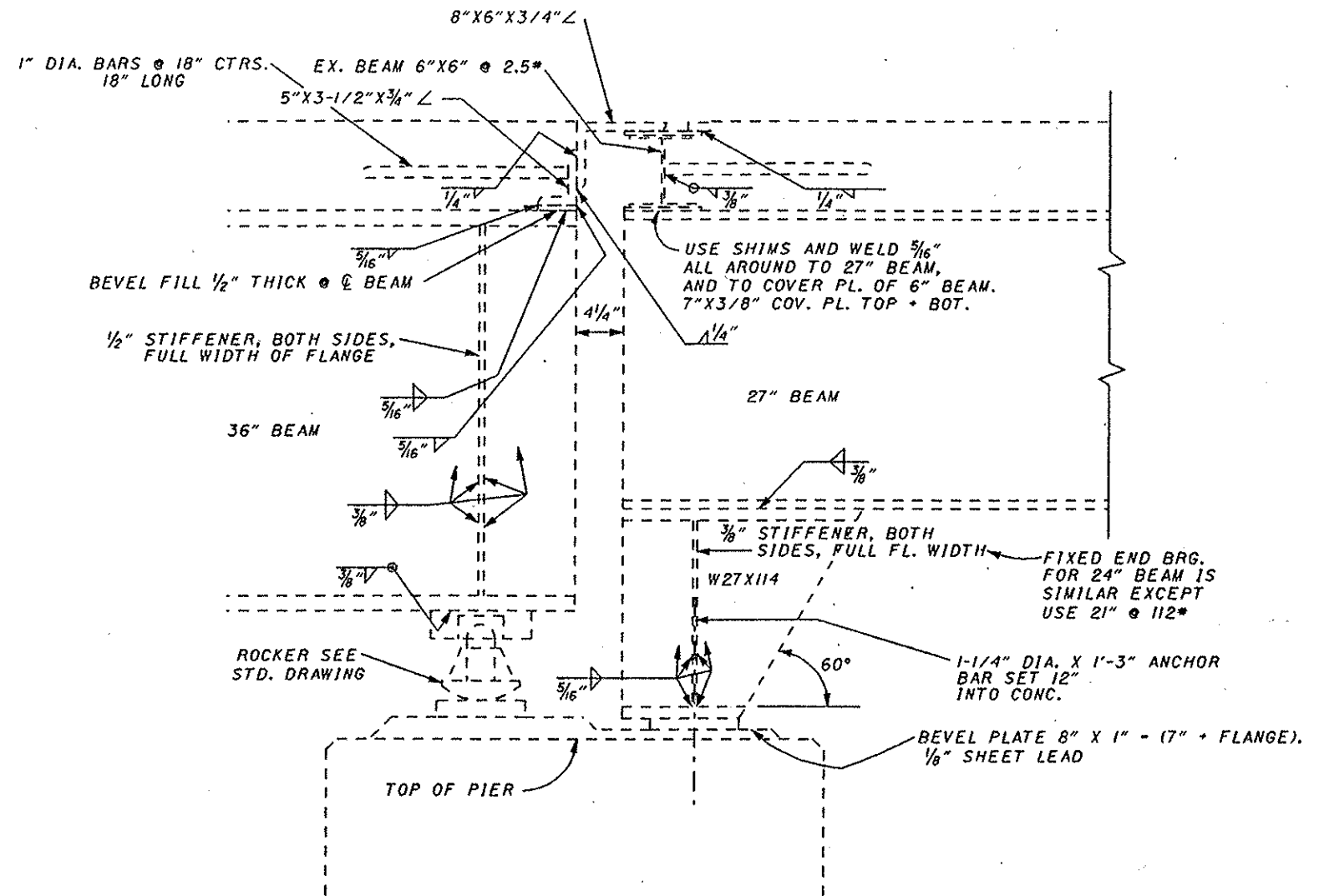
THE FOLLOWING PROCEDURE SHOULD BE UTILIZED TO DETERMINE THE EXTENT OF THE REPAIRS:

- 1.) FOR A DISTANCE OF THREE FEET FROM THE BEAM ENDS, THE SURFACE PREPARATION SHALL BE BY POWER TOOL CLEANING SSPC 11-87T AND SHALL CORRESPOND TO PICTORIAL STANDARDS B S13, C S13, OR D S13.
- 2.) THE PROJECT ENGINEER/SUPERVISOR SHALL THOROUGHLY INSPECT THE AREAS AND DETERMINE WHICH AREAS ARE TO BE REPLACED. ANY PORTIONS OF THE BEAMS WITH PERFORATIONS OR SECTION LOSS GREATER THAN 25% SHALL BE REPLACED.

THE FOLLOWING PROCEDURE COULD BE UTILIZED TO MAKE THE REPAIRS. THE CONTRACTOR SHALL SUBMIT A DETAILED PROCEDURE ALONG WITH SKETCHES TO THE DISTRICT CONSTRUCTION DEPARTMENT:

- 1.) AFTER THE TEMPORARY SUPPORTS ARE IN PLACE, THE DETERIORATED SECTIONS SHALL BE REMOVED. VERY THOROUGH FIELD MEASUREMENTS SHALL BE MADE FOR THE INSERT PLATES.
- 2.) ALL MEMBERS REMOVED SHALL BE REPLACED IN KIND WITH SIMILAR SIZE MEMBERS OR PLATES. INSERT PLATES WITH ROUNDED CORNERS SHALL BE UTILIZED WHEREVER PRACTICAL. THE SECTIONS SHALL BE WELDED WITH DOUBLE BEVEL GROOVE WELDS.
- 3.) THE WELDS SHALL BE TESTED WITH MAGNETIC PARTICLE TESTING. FINAL ACCEPTANCE WILL BE BASED ON ULTRASONIC TESTING.

PAYMENT FOR THE ABOVE WILL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT AND ANY INCIDENTALS TO CLEAN THE DETERIORATED AREAS FOR INSPECTION, REMOVAL AND REPLACEMENT OF THE DETERIORATED MEMBERS AND ALL TESTING OF THE NEW WELDS. THIS WILL ALSO INCLUDE PREPARATION OF A DETAILED WORK PROCEDURE WITH SKETCHES AND FOR PROVIDING SAFE WORK AND INSPECTION ACCESS. THE JACKING AND TEMPORARY SUPPORTS WILL BE PAID UNDER ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE.



BRIDGE NO. MAH-711-0124
REFERENCE ONLY

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DEPARTMENT OF TRANSPORTATION
DISTRICT 4 - OPERATIONS
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BEAM END DETAILS
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