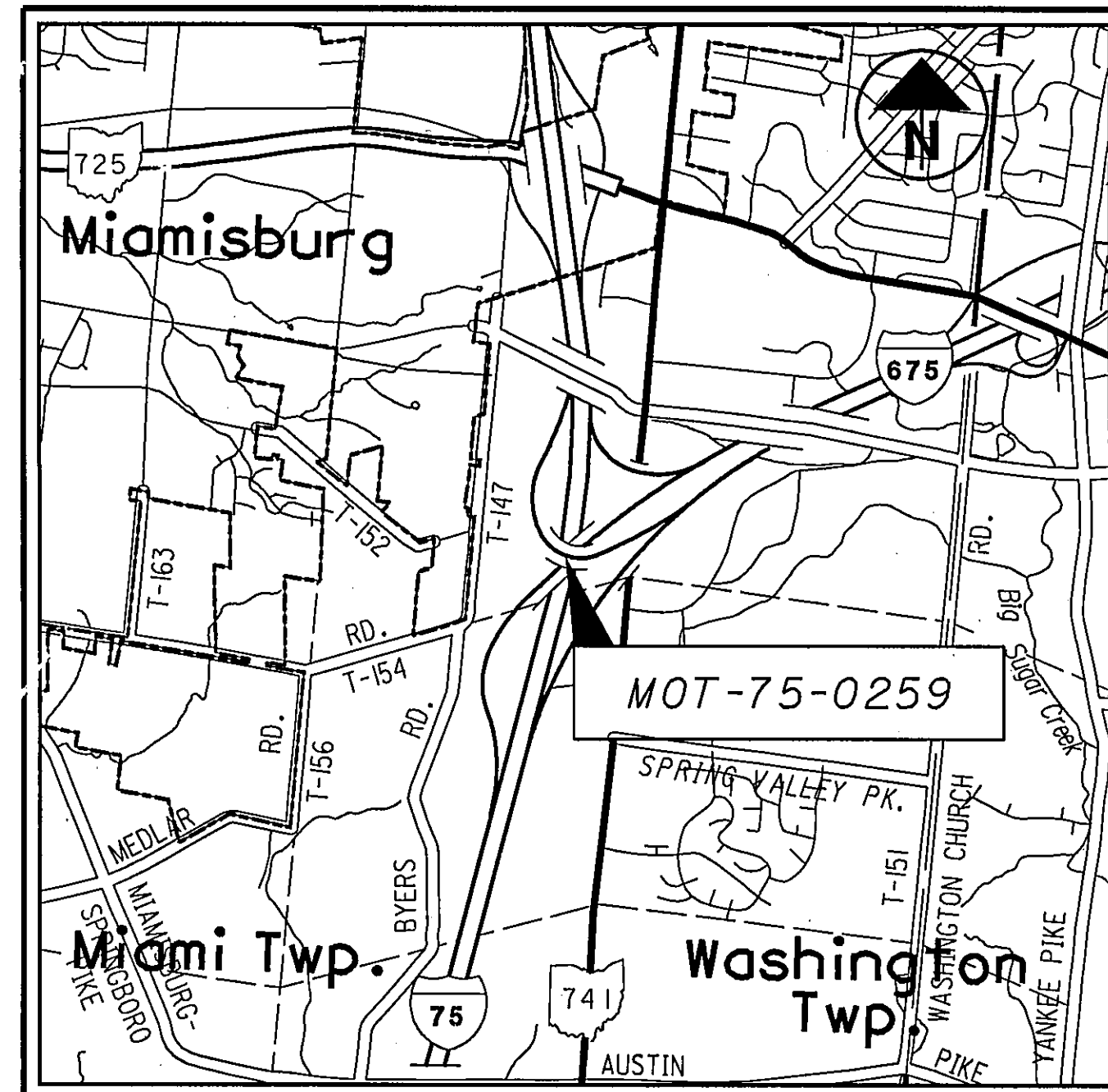


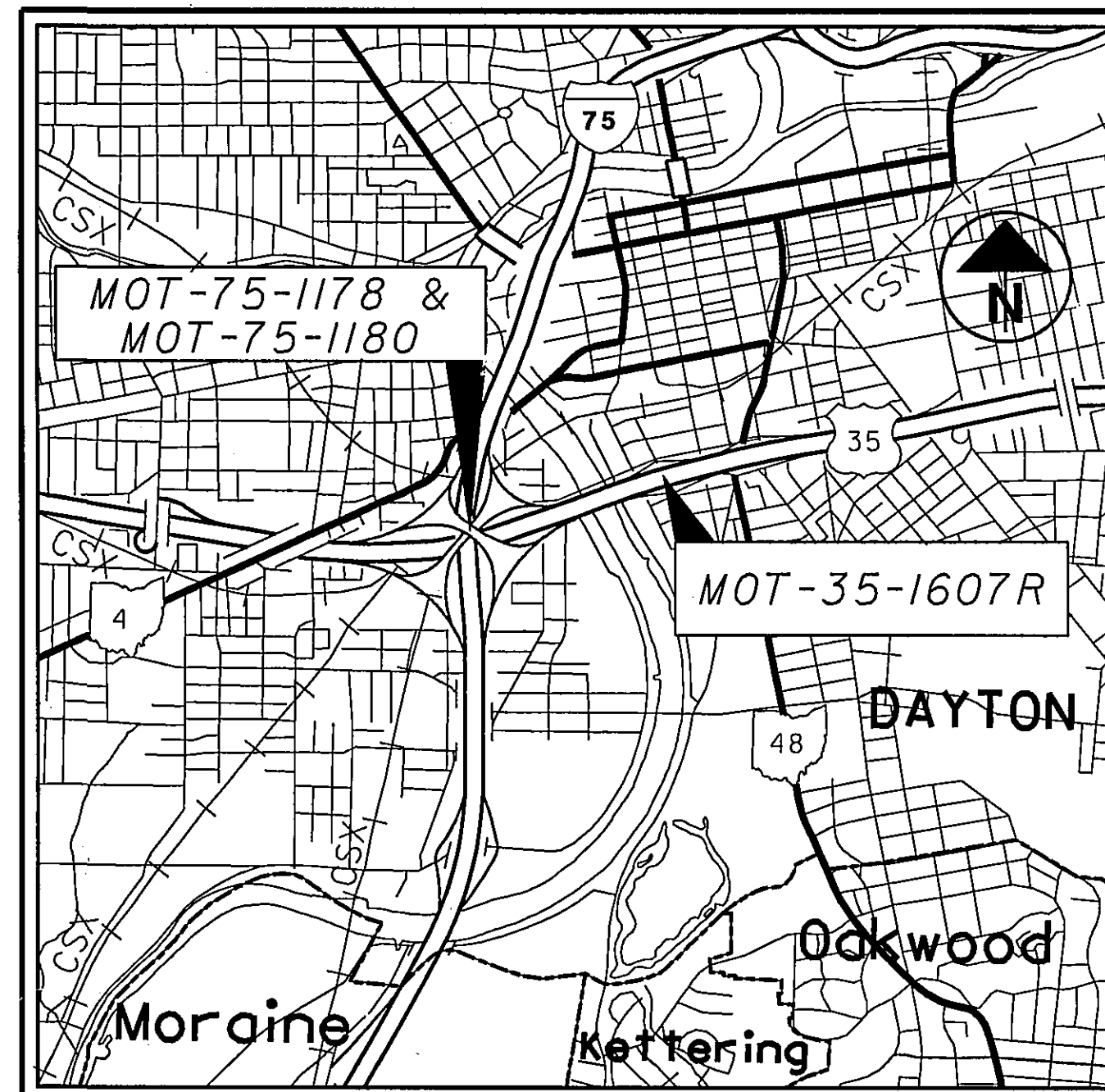
LOCATION MAP

LATITUDE: 39°54'16" LONGITUDE: 83°43'00"



LOCATION MAP

LATITUDE: 39°37'18" LONGITUDE: 84°13'51"



LOCATION MAP

MOT-75-1178 & 1180
LATITUDE: 39°44'54" LONGITUDE: 84°12'19"
MOT-35-1607R
LATITUDE: 39°45'03" LONGITUDE: 84°11'38"

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
CLA-70-18.73

BRIDGE NUMBER	SFN	LOCATION
CLA-70-1873	1204823	SPRINGFIELD TWP
MOT-35-1607 R	5701988	CITY OF DAYTON
MOT-75-0259	5706432	MIAMI TWP.
MOT-75-1178	5707560	CITY OF DAYTON
MOT-75-1180	5707595	CITY OF DAYTON

INDEX OF SHEETS:

TITLE SHEET.....	1
MAINTENANCE OF TRAFFIC	2-4
GENERAL SUMMARY.....	5
STRUCTURES GENERAL NOTES	5
STRUCTURES - CLA-70-1873	6-7
STRUCTURES - MOT-35-1607 R	8
STRUCTURES - MOT-75-0259	9
STRUCTURES - MOT-75-1178 & 1180	10



INTERSTATE & DIVIDED HIGHWAY.....
 UNDIVIDED STATE & FEDERAL ROUTES.....
 OTHER ROADS.....

PROJECT DESCRIPTION

STEEL RETROFITS ON FIVE STRUCTURES ALONG INTERSTATES 70, 75 AND US ROUTE 35

EARTH DISTURBING AREAS

PROJECT EDA = N/A (MAINTENANCE)
ESTIMATED CONTRACTOR'S EDA = N/A
(MAINTENANCE)
NOI EDA = N/A (MAINTENANCE)

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.

2002 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.

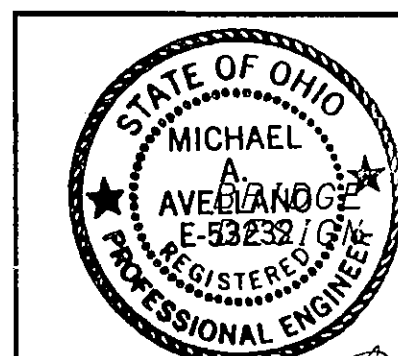
I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

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

ODOT STANDARD CONSTRUCTION DRAWINGS			SUPPLEMENTAL SPECIFICATIONS	
MT-35.10	4-20-01		832	4-17-04
MT-95.30	7-16-04		833	2-12-03
MT-98.19	10-18-02		864	7-11-00
DM-4.3	7-19-02		SPECIAL PROVISIONS	
DM-4.4	7-19-02			
			ULTRASONIC IMPACT TREATMENT - 8-23-04	
			EXISTING STRUCTURE PLANS 10-06-04	

PLAN PREPARED BY:



SIGNED: Michelle Dulla
DATE: Sept 16, 2004



SIGNED: [Signature]
DATE: Sept. 15, 2004

APPROVED William L. Harrison / PRN
DATE 9-17-04 DISTRICT DEPUTY DIRECTOR

APPROVED Gordon Proctor JR
DATE 10-06-04 DIRECTOR, DEPT. OF TRANS.

10:01:00 AM
09/14/2004
q:\tr\proj\61312_D7Bridges\CL-A-MOT-70-75-35-675\CAD\mcd01.dgn

ITEM 614 MAINTAINING TRAFFIC

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER AND IN ACCORDANCE WITH DISTRICT SEVEN'S POLICY ON PERMISSABLE LANE CLOSURES. 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.

LANE CLOSURES SHALL ONLY BE IMPLEMENTED AT THE TIMES LISTED ON THE SITE WHICH IS LOCATED AT:
OHIO DEPARTMENT OF TRANSPORTATION'S PERMITTED LANE CLOSURE WEBSITE
https://dotaw100.dot.state.oh.us/plcm/plcm_web.jsp
THE PERMITTED CLOSURE TIMES LISTED ON THE WEBSITE, 14 CALENDAR DAYS PRIOR TO THE BID LETTING DATE, SHALL BE IN EFFECT FOR THIS PROJECT.

NO WORK WITHIN ACTIVE TRAVEL LANES OR WHICH WILL SLOW TRAFFIC IS PERMITTED AT ANY OTHER TIMES EXCEPT AS SPECIFIED IN THESE PLANS.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS 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 SEPARATELY ITEMIZED IN THE PLAN.

ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR)

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND 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 TASKS:

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.

DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

LAW ENFORCEMENT OFFICERS (LEOS) SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED. THE LEOS 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 ENGINEER SHALL HAVE CONTROL OVER THEIR PLACEMENT. THE OFFICIAL PATROL CAR SHALL BE A PUBLIC SAFETY VEHICLE AS REQUIRED BY THE OHIO REVISED CODE. THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THESE SERVICES WITH:

OHIO STATE HIGHWAY PATROL	
CLARK COUNTY	MONTGOMERY COUNTY
SPRINGFIELD PATROL POST	DAYTON PATROL POST
4201 GATEWAY BLVD.	400 SMITH DR.
SPRINGFIELD, OH 45502	CLAYTON, OH 45322
(937) 323-9781	(937) 832-4794

CITY OF DAYTON POLICE
101 W. THIRD STREET
DAYTON, OH 45402
937-333-3333

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 160 HOURS

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

IF CONTRACTORS WISH TO UTILIZE LEOS FOR FLAGGING AND TRAFFIC CONTROL OTHER THAN FOR THAT REQUIRED IN THESE PLANS, THEY MAY DO SO AT THEIR OWN EXPENSE. PAYMENT FOR THE EXCESS ABOVE THE CONTRACT REQUIREMENTS WILL BE INCLUDED UNDER ITEM 614, MAINTAINING TRAFFIC.

ITEM 614, REPLACEMENT SIGN

FLATSHEET SIGNS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT SIGNS SHALL BE NEW. OTHER MATERIALS MAY BE IN USED, BUT GOOD, CONDITION SUBJECT TO APPROVAL BY THE ENGINEER.

PAYMENT FOR THE NEW SIGNS SHALL BE MADE AT THE CONTRACT PRICE PER SQUARE FOOT FOR ITEM 614, REPLACEMENT SIGN, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF DAMAGED SIGNS, HARDWARE AND SUPPORTS, AND PROVIDING THE NECESSARY REPLACEMENT HARDWARE, SUPPORTS, ETC.

AN ESTIMATED QUANTITY OF 60 SQUARE FEET HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

ITEM 614, REPLACEMENT DRUM

DRUMS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT DRUMS SHALL BE NEW.

PAYMENT FOR THE NEW DRUMS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM 614, REPLACEMENT DRUM, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF THE DAMAGED DRUM, AND PROVIDING AND MAINTAINING THE REPLACEMENT DRUM IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS FOR THE ORIGINAL DRUM.

AN ESTIMATED QUANTITY OF 45 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

BRIDGE 1 CLA-70-1873

NEW CONCRETE PEDESTALS WILL BE CONSTRUCTED. TEMPORARY SUPPORT WILL BE NEEDED. BEARING WILL BE INSTALLED AND CRACK ENDS DRILLED AT BEARING STIFFENERS. ALL WORK WILL BE PERFORMED FROM THE SHOULDERS.

BRIDGE 2 MOT-75-0259

FATIGUE RETROFITS WILL BE PERFORMED SUCH AS ULTRASONIC IMPACT TREATMENT AND GRINDING OF BACKER BAR. PAINT ALL AFFECTED AREAS. ALL WORK WILL BE PERFORMED IN THE MEDIAN OF INTERSTATE I-75 OR FROM THE DECK OF THE RAMP FROM I-675 (S) TO I-75 (S). LANE CLOSURES SHALL OCCUR IN ACCORDANCE WITH SCD MT-95.30.

BRIDGE 3 MOT-75-1178 & 1180

PIER WORK WILL BE PERFORMED ON PIER 2 OF BRIDGE MOT-75-1178 AND PIER 8 OF BRIDGE MOT-75-1180. FATIGUE RETROFITS WILL BE PERFORMED SUCH AS ULTRASONIC IMPACT TREATMENT AND LIP PLATE REMOVAL. ALL AFFECTED AREAS WILL BE PAINTED. BOTH PIERS ARE LOCATED IN THE MEDIAN OF I-75. THE LEFT LANES IN BOTH THE NORTHBOUND AND SOUTHBOUND DIRECTION WILL BE CLOSED FOR THIS WORK.

WORK WILL ALSO BE PERFORMED ON PIER 7 OF BRIDGE MOT-75-1180. THIS PIER IS LOCATED ON THE RIGHT SIDE OF NORTHBOUND I-75. THE RIGHT SHOULDER OF NORTHBOUND I-75 WILL BE CLOSED FOR THIS WORK.

SEE SHEET3 FOR MAINTANENCE OF TRAFFIC FOR BRIDGE MOT-75-1178 AND MOT-75-1180.

BRIDGE 4 MOT-35-1607

FATIGUE RETROFITS SUCH AS ULTRASONIC IMPACT TREATMENT, GRINDING OF BACKER BAR AND CORING OF DEFECT WILL BE PERFORMED. ALL AFFECTED AREAS WILL BE PAINTED. ALL WORK WILL BE PERFORMED BENEATH THE BRIDGE. ADVANCE WARNING SIGNS SHALL BE PLACED ON BOTH SIDES OF THE DIRECTIONAL ROADWAY. RAMP CLOSURE, AS NECESSARY, SHALL BE AT TIMES APPROVED BY THE DISTRICT AND SHALL BE IN ACCORDANCE WITH SCD MT-98.19. SEE SHEET 4 FOR A DETOUR PLAN FOR THE RAMP CLOSURE.

EXISTING SIGNING HAS NOT BEEN INCLUDED IN THIS PLAN. WORK ZONE SIGN LOCATIONS SHALL BE ADJUSTED TO AVOID CONFLICTS WITH EXISTING SIGNS IN THE FIELD. ALL ADJUSTEMENTS SHALL BE APPROVED BY THE ENGINEER.

MAINTENANCE OF TRAFFIC NOTES

CLA-70-18.73

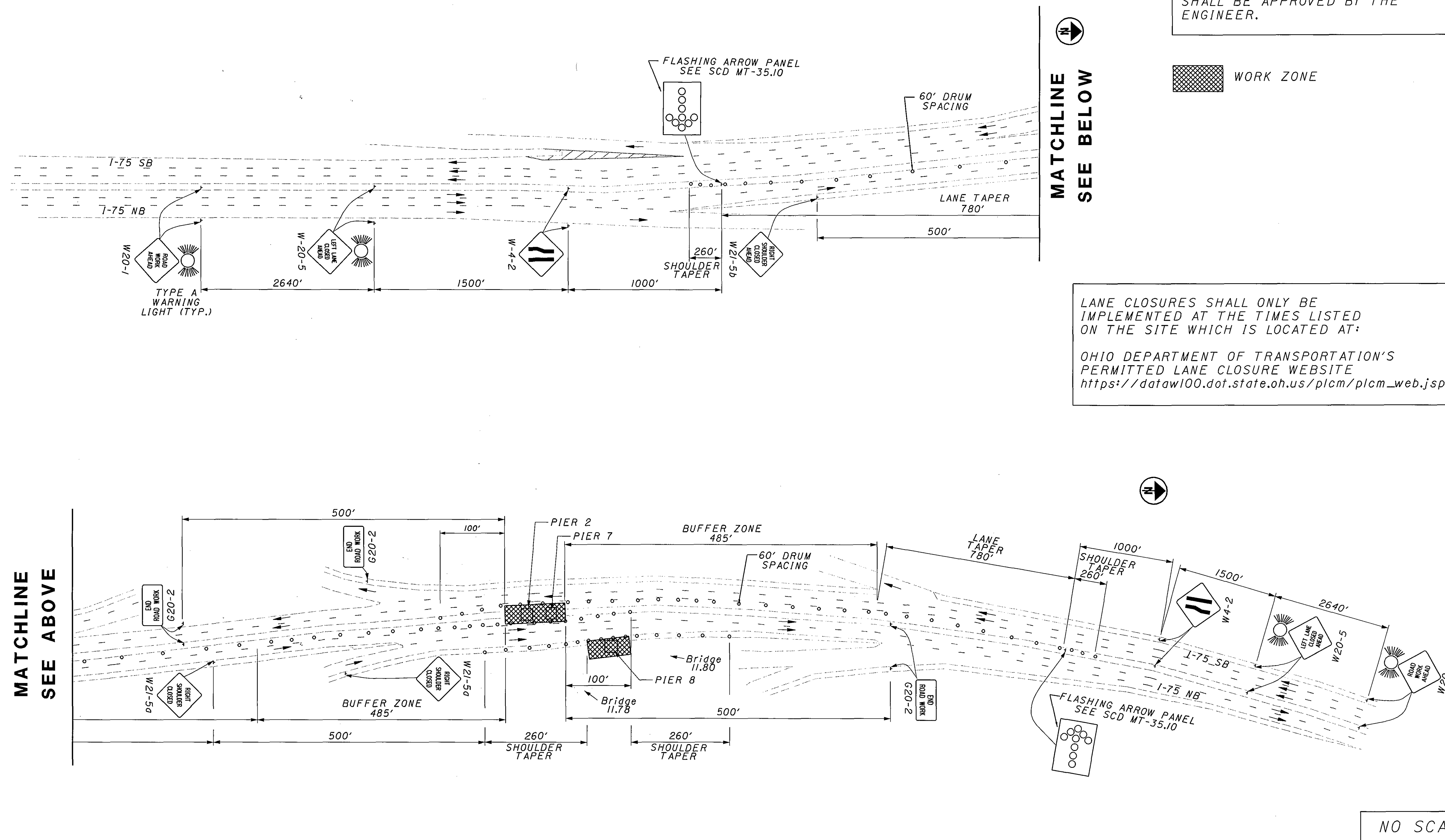
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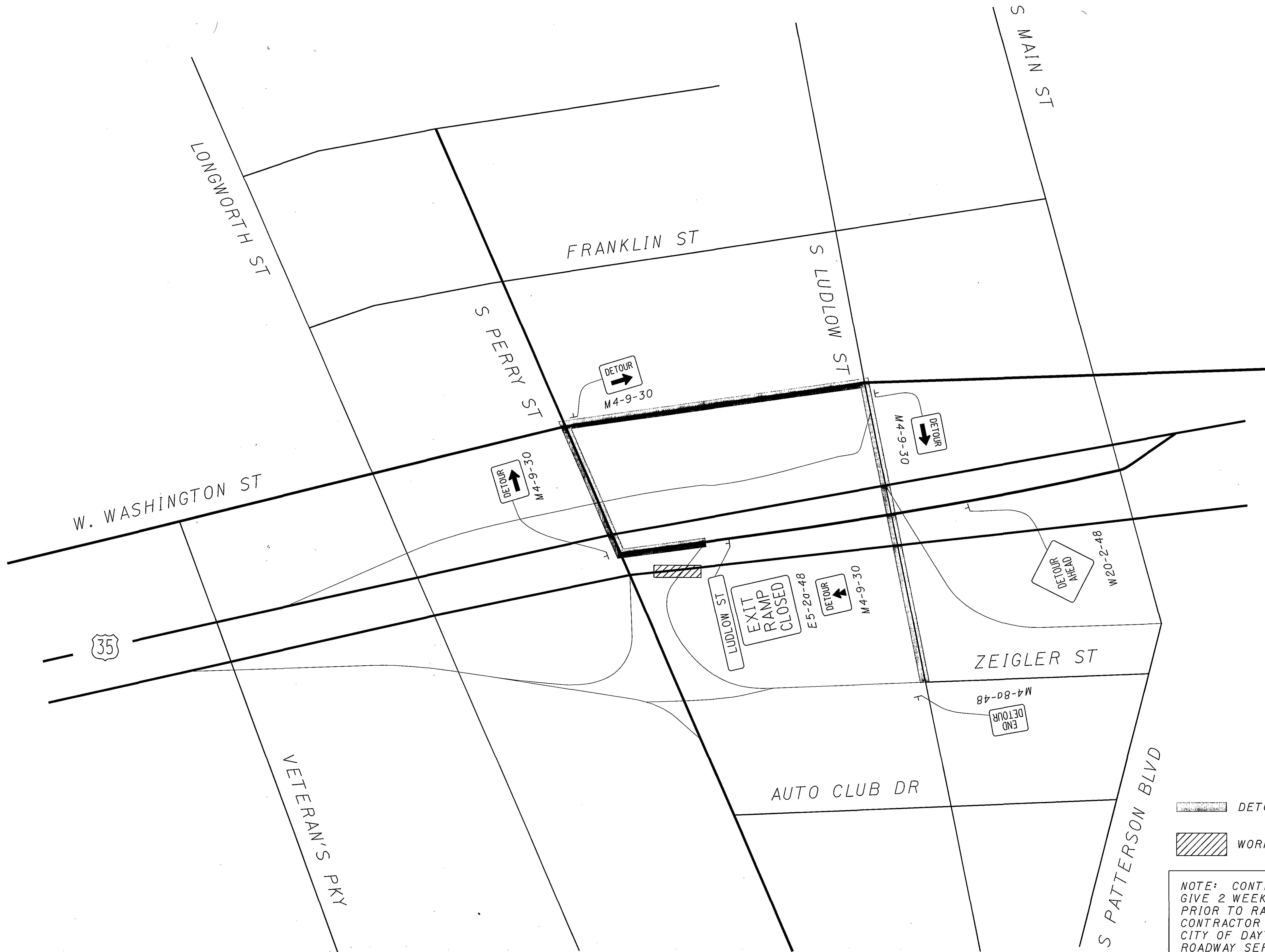
CALCULATED
A.B.
CHECKED
R.B.

WORK ON PIERS 7 AND 8 (BRIDGE 11.80)
SHALL NOT OCCUR AT THE SAME TIME.

CONTACT THE CITY OF DAYTON FOR
PERMISSION TO CLOSE THE ENTRANCE
RAMP.

NOTE: EXISTING SIGNING HAS
NOT BEEN INCLUDED IN THIS
PLAN. WORK ZONE SIGN LOCATIONS
SHALL BE ADJUSTED TO AVOID
CONFLICTS WITH EXISTING SIGNS
IN THE FIELD. ALL ADJUSTMENTS
SHALL BE APPROVED BY THE
ENGINEER.





DETOUR ROUTE
WORK ZONE

NOTE: CONTRACTOR MUST GIVE 2 WEEKS NOTICE PRIOR TO RAMP CLOSURE. CONTRACTOR MUST CONTACT CITY OF DAYTON AND ODOT ROADWAY SERVICES MANAGER PRIOR TO CLOSURE.

\\STR\bridge\61312-000T-07-GFS\CI A-MOT-70-75-35-675\CAD\S02.dgn	09/24/2004	WOOLPERT LLP
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864 DATED 7-11-00

COPIES OF THE ORIGINAL CONSTRUCTION PLANS ATTACHED TO THESE DRAWINGS ARE GIVEN FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR IS REFERENCED TO THE NOTE "EXISTING STRUCTURE VERIFICATION" FOR BIDDING AND PAYMENT INFORMATION.

CLA-70-1873: CONSTRUCT NEW CONCRETE PEDASTALS, JACK AND TEMPORARILY SUPPORT. INSTALL BEARINGS AND DRIL CRACK ENDS AT BEARINGS STIFFENERS.
MOT-35-1607R: PERFORM FATIGUE RETROFITS SUCH AS; UIT, GRINDING OF BACKER BAR AND CORING OF DEFECT. PAINT ALL AFFECTED AREAS.
MOT-75-0259: PERFORM FATIGUE RETROFITS SUCH AS; UIT, AND GRINDING OF BACKER BAR. PAINT ALL AFFECTED AREAS.
MOT-75-1178 & 1180: PERFORM FATIGUE RETROFITS SUCH AS; UIT, AND LIP PLATE REMOVAL. PAINT ALL AFFECTED AREAS.

CONCRETE CLASS C COMPRESSIVE STRENGTH 4000 PSI
REINFORCING STEEL- ASTM A615 OR A996 GRADE 60 MINIMUM YIELD STRENGTH 60,000 PSI
STRUCTURAL STEEL- ASTM A7009 GRADE 50

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02, AND #513.04.

THE ENGINEER WILL VISUALLY INSPECT ALL AREAS TO BE REPAIRED TO VERIFY THE CORRECT LOCATION IS SELECTED BEFORE THE CONTRACTOR STARTS THE RETROFIT WORK. UPON COMPLETION OF THE RETROFIT WORK BUT PRIOR TO PAINTING, PERFORM DYE PENETRANT TESTING TO VERIFY THAT THE DEFECT WAS REMOVED AND ALLOW THE ENGINEER TO INSPECT THE AREA (SEE ITEM 630). THE NUMBER OF DEFICIENCIES REPAIRED AND THE LENGTH AND BACKER BAR QUANTITIES SHALL BE AS MEASURED AND APPROVED BY THE ENGINEER.

THIS ITEM INCLUDES THE GRINDING OF WEB DEFECTS ON THE INTERIOR OF THE BOX GIRDER AND GRINDING OF THE EXTERIOR EDGES OF THE BOTTOM FLANGE. THE GRINDING SHALL BE COMPLETED TO THE SATISFACTION OF THE ENGINEER. METHOD OF MEASUREMENT SHALL BE PER CMS 514.20.

GENERAL: THIS WORK CONSISTS OF RAISING OR RE-POSITIONING EXISTING STRUCTURES TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS.

1. THE SIGNATURE AND NUMBER, OR PROFESSIONAL SEAL, OF THE OHIO REGISTERED PROFESSIONAL ENGINEER WHO PREPARED THE SUBMITTAL.
2. CALCULATIONS AND ANALYSES OF THE STRUCTURE TO DETERMINE AND DEFINE THE ACTUAL LOADING APPLIED AT THE JACKING POINTS, ANTICIPATED DEFLECTIONS AND ANTICIPATED LOAD APPLIED TO THE BEARINGS.
3. A DRAWING SHOWING THE PHYSICAL AND DIMENSIONAL POSITION OF THE JACKS WITH RESPECT TO THE STRUCTURE INCLUDING CLEARANCES AND CENTER OF LIFT.
4. A SCHEMATIC LAYOUT OF JACKS, CHECK VALVES, PUMPS WITH 3 WAY RETRACTOR VALVE, PRESSURE GAGES, FLOW CONTROL VALVES, ETC. IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. ALL JACKS FOR EACH ABUTMENT OR PIER SHALL BE CONNECTED TOGETHER. ALL JACKS AT EACH ABUTMENT OR PIER SHALL BE THE SAME SIZE.
5. ANALYSIS AND CALCULATIONS OF THE STRESSES INDUCED OR CREATED IN THE STRUCTURE AND ANY TEMPORARY OR PERMANENT SUPPORTS. DESIGN CALCULATIONS FOR ANY TEMPORARY OR PERMANENT SUPPORTS (i.e. STIFFENERS, COVER PLATES, etc.).
6. PHYSICAL DIMENSIONS, MATERIALS, AND FABRICATION DETAILS OF ANY TEMPORARY OR PERMANENT SUPPORTS. HORIZONTAL AND VERTICAL MOVEMENT RESTRAINT SHALL BE PROVIDED.

* SEE SPECIAL PROVISION

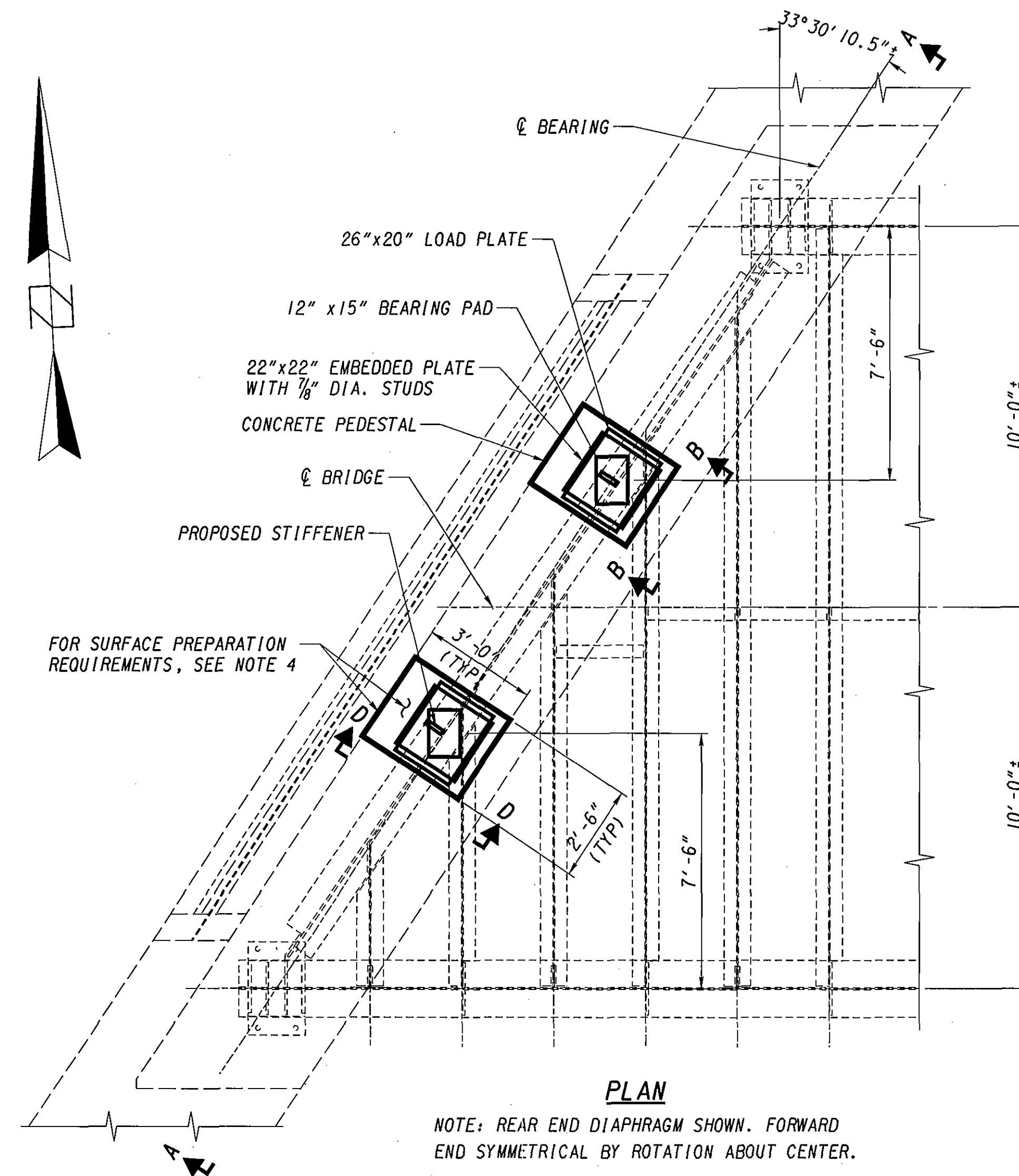
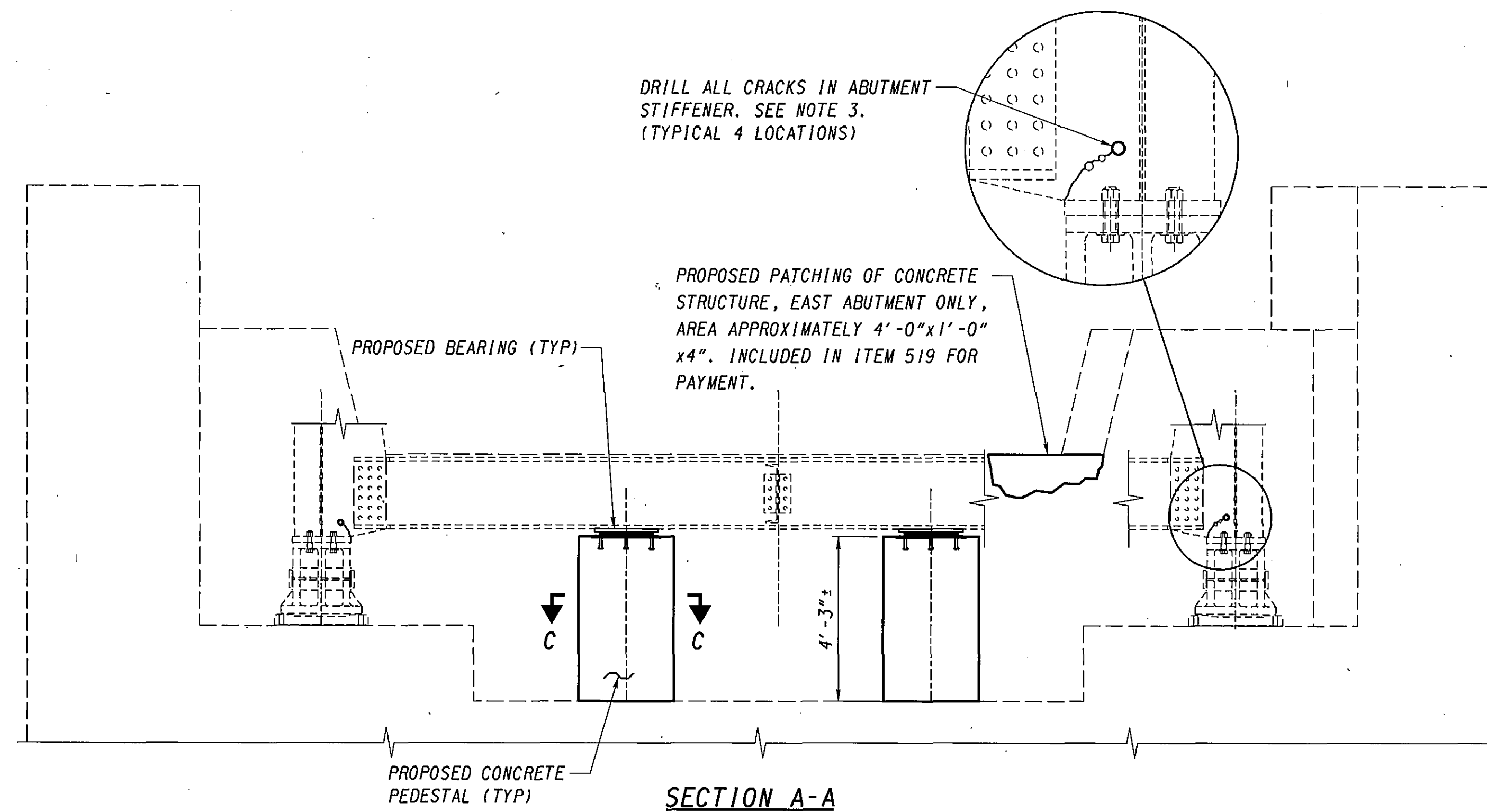
JACKING SYSTEM REQUIREMENTS: THE ENTIRE SYSTEM INCLUDING JACKS SHALL HAVE 20% MORE CAPACITY THAN REQUIRED BASED ON CALCULATED LOADS. FOR LIFTS GREATER THAN 1 INCH, JACKS SHALL HAVE LOCKING NUTS TO POSITIVELY LOCK AND SUPPORT THE STRUCTURE DURING THE LIFT. JACKS SHALL HAVE A SWIVEL LOAD CAP, A DOWMED PISTON HEAD OR SOME OTHER DEVICE TO PROTECT AGAINST THE EFFECTS OF SIDE LOAD ON THE JACK. DO NOT USE JACKS ALONE TO SUPPORT LOADS EXCEPT DURING THE ACTUAL JACKING OPERATION. USE TEMPORARY SUPPORTS, BLOCKING OR OTHER METHODS APPROVED BY THE DIRECTOR. DO NOT USE SINGLE ACTING RAMS WITH NO OVER TRAVEL PROTECTION SYSTEM. HAVE SPARE EQUIPMENT AVAILABLE ON SITE IN ORDER TO PROCEED WITH THE JACKING IN THE EVENT OF BREAKDOWN. PROVIDE A LIST OF SPARE EQUIPMENT TO THE ENGINEER.

ITEM SPECIAL - STRUCTURE MISC: DYE PENETRANT TEST:
PERFORM LIQUID DYE PENETRANT TESTING, ACCORDING TO ASTM E 165, AT LOCATIONS IDENTIFIED IN THE PLANS AND ON COMPLETION OF EACH REPAIR PRIOR TO PAINTING, ALLOW THE ENGINEER TO INSPECT THE RESULTS OF THE TEST.

UPON COMPLETION OF THE WORK ON RAILROAD PROPERTY, THE CONTRACTOR SHALL REQUEST THE ENGINEER TO ARRANGE A FINAL INSPECTION OF THE PROJECT WITH THE RAILWAY'S DIVISION ENGINEER OR HIS AUTHORIZED REPRESENTATIVE.

ABUT. = ABUTMENT	EQ. SPA. = EQUALLY SPACED	PEJF = PREFORMED EXPANSION
APPROX. = APPROXIMATE	EX. / EXIST. = EXISTING	PF = JOINT FILLER
ASTM = AMERICAN SOCIETY FOR TESTING AND MATERIALS	EXP. = EXPANSION	P = PLATE
		PROP. = PROPOSED
B/FTG = BOTTOM OF FOOTING	FF = FAR FACE	PSI = POUNDS PER SQUARE INCH
BOT. / BOTT. = BOTTOM	F/F = FACE TO FACE	PT. = POINT
BRG. = BEARINGS	FT. = FOOT	
	FTG. = FOOTING	REQ'D = REQUIRED
	FWD. = FORWARD	RT. = RIGHT
C/C = CENTERLINE TO CENTERLINE		
CL = CENTERLINE	JT. = JOINT	
CY / CU. YD. = CUBIC YARD		SIM. = SIMILAR
CJ = CONSTRUCTION JOINT	KSI = KIPS PER SQUARE INCH	SPA. = SPACES
CMS = CONSTRUCTION AND MATERIAL SPECIFICATIONS		S.R. = STATE ROUTE
C.I.P. = CAST-IN-PLACE	LSM = LOW STRENGTH MORTAR BACKFILL	STA = STATION
		STD. = STANDARD
DIA. = DIAMETER	LT. = LEFT	
DWG. = DRAWING		TBM = TEMPORARY BENCH MARK
	MIN. = MINIMUM	TYP. = TYPICAL
EF = EACH FACE		
EL. / ELEV. = ELEVATION	# / NO. = NUMBER	U.N.O. = UNLESS NOTED OTHERWISE
EMB. = EMBEDMENT	NF = NEAR FACE	UIT = ULTRASONIC IMPACT TREATMENT
	OPP. = OPPOSITE	

1 / 6
<div style="border: 1px solid black; border-radius: 50%; width: 100px; height: 100px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> <div style="display: flex; flex-direction: column; align-items: center; justify-content: center;"> <div style="margin-bottom: 5px;">5</div> <hr style="width: 100%;"/> <div style="margin-top: 5px;">10</div> </div> </div>

**NOTES:**

1. FOR GENERAL NOTES SEE SHEET **1 / 6**
2. DETAILS SHOWN AT REAR BEARINGS. SIMILAR REPAIRS TO BE MADE AT THE FORWARD ABUTMENT.
3. AFTER PROPOSED BEARINGS ARE INSTALLED, LOCATE ENDS OF CRACKS IN ABUTMENT STIFFENERS WITH DYE PENETRANT. DRILL 1 1/2" DIAMETER HOLE AT CRACK END. POSITION THE CENTER OF THE HOLE AHEAD OF THE CRACK TIP SUCH THAT THE CRACK TIP IS JUST INSIDE OF THE CORE BIT DIAMETER. INSPECT HOLE WITH DYE PENETRANT TO VERIFY END OF CRACK WAS OBTAINED. REDRILL OR PENCIL GRIND IF NECESSARY. PAINT AFTER ACCEPTED BY THE ENGINEER. PAYMENT FOR THE DYE PENETRANT TESTS WILL BE ON A LUMP SUM BASIS FOR FOR ITEM 630 - SPECIAL - STRUCTURE MISC. : DYE PENETRANT TEST
4. REMOVE SEALER AND THOROUGHLY CLEAN THE CONCRETE SURFACE IN CONTACT WITH THE PROPOSED CONCRETE WITH DETERGENT TO REMOVE SURFACE CONTAMINANTS. AFTER DETERGENT CLEANING AND WITHIN 24 HOURS OF PLACING CONCRETE, BLAST CLEAN AND AIR BROOM OR POWER SWEEP ALL SURFACES IN CONTACT WITH THE PROPOSED CONCRETE TO REMOVE ALL SPALLS, LAITANCE, SEALER AND OTHER CONTAMINANTS DETRIMENTAL TO ACHIEVEMENT OF AN ADEQUATE BOND. ACCEPTABLE BLAST CLEANING METHODS ARE HIGH-PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN WATER, ABRASIVE BLASTING WITH CONTAINMENT, VACUUM ABRASIVE BLASTING OR HAND TOOLS. SURFACE PREPARATION SHALL BE INCIDENTAL TO ITEM 511.
5. FOR SECTION C-C, ELEVATION B-B AND ELEVATION D-D, SEE SHEET **3 / 6**
6. FOR BEARING DETAILS, SEE SHEET **3 / 6**
7. CONTRACTOR IS NOT TO AFFECT THE BALLAST DURING ANY CONSTRUCTION OPERATIONS.

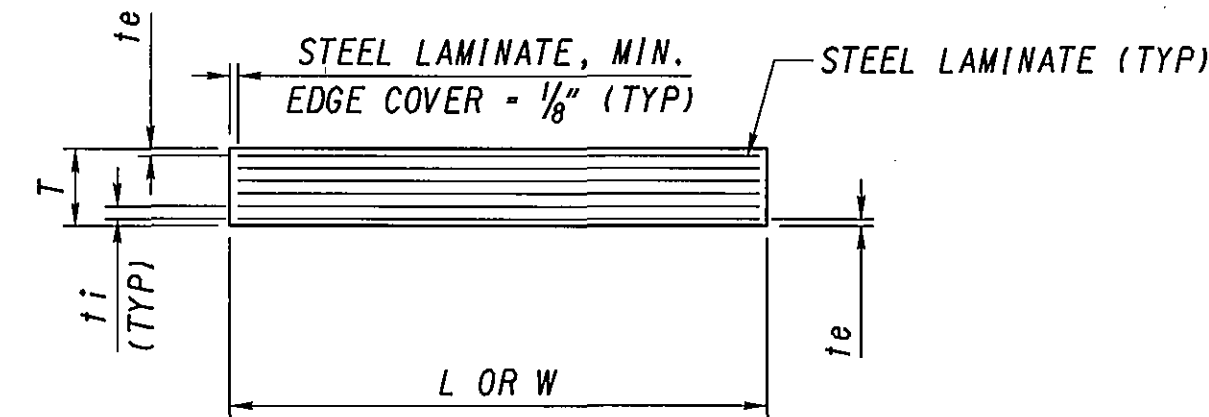
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ELASTOMERIC BEARING PAD DATA									
LOCATION	BRG. TYPE	L	W	T	N	ti	te	DESIGN LOAD (KIPS)	
ABUTMENTS	EXPANSION	12"	15"	2 3/8"	5	0.375"	0.25"	DL	LL
								95*	60
									155

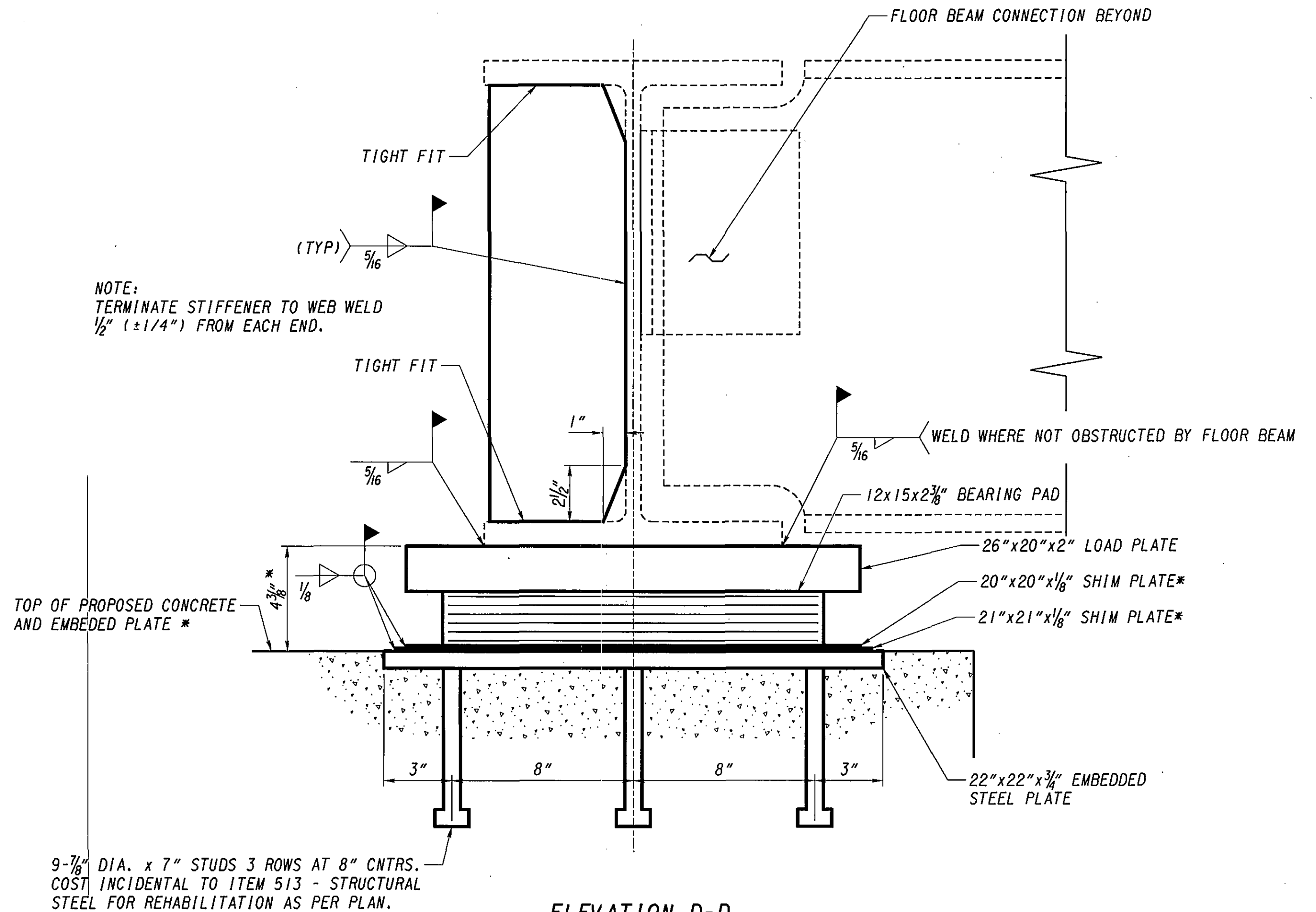
ti = THICKNESS OF INTERNAL LAYER
te = THICKNESS OF EXTERNAL LAYER
t = TOTAL THICKNESS OF ELASTOMERIC BEARING
N = NUMBER OF STEEL LAMINATES
INTERNAL STEEL LAMINATE THICKNESS = 0.0747"
* INCLUDES ESTIMATED JACKING LOAD PLUS 25% INCREASE

BEARING NOTES:

1. THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED UNDER DIVISION I, SECTION 14.6.6 (METHOD A) OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.
2. THE STEEL LOAD PLATES, SHIMS, STIFFENERS AND EMBEDDED PLATES SHALL MEET THE REQUIREMENTS OF STRUCTURAL STEEL ASTM A709. THE LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS. WELDING OF THE LOAD PLATE TO THE SUPERSTRUCTURE SHALL BE CONTROLLED SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE SHALL NOT EXCEED 300°F AS DETERMINED BY THE USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES. THE UNIT PRICE BID FOR STRUCTURAL STEEL REHABILITATION, AS PER PLAN SHALL INCLUDE ALL MATERIALS, WELDING, LABOR AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL THE SHIMS, STIFFENERS AND EMBEDDED PLATES. THE STEEL LOAD PLATE IS INCLUDED IN THE COST OF THE ELASTOMERIC BEARING.
3. BEARING REPOSITIONING: IF THE BEARING IS INITIALLY PLACED AT AN AMBIENT TEMPERATURE HIGHER THAN 80°F OR LOWER THAN 40°F AND THE BEARING SHEAR DEFLECTION EXCEEDS 1/6 OF THE BEARING HEIGHT AT 60°F (±) 10°F, THE DIAPHRAGM SHALL BE JACKED TO ALLOW THE BEARINGS TO RETURN TO THEIR UNDEFORMED SHAPE AT 60°F (±) 10°F.
4. BASIS OF PAYMENT: THE UNIT PRICE BID SHALL INCLUDE ALL MATERIALS, LABOR AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL THE LAMINATED ELASTOMERIC BEARINGS AND LOAD PLATE AS DETAILED. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, ELASTOMERIC BEARING WITH INTERNAL LAMINATES (NEOPRENE AND LOAD PLATE).
5. FOR JACKING REQUIREMENTS, SEE GENERAL NOTES.

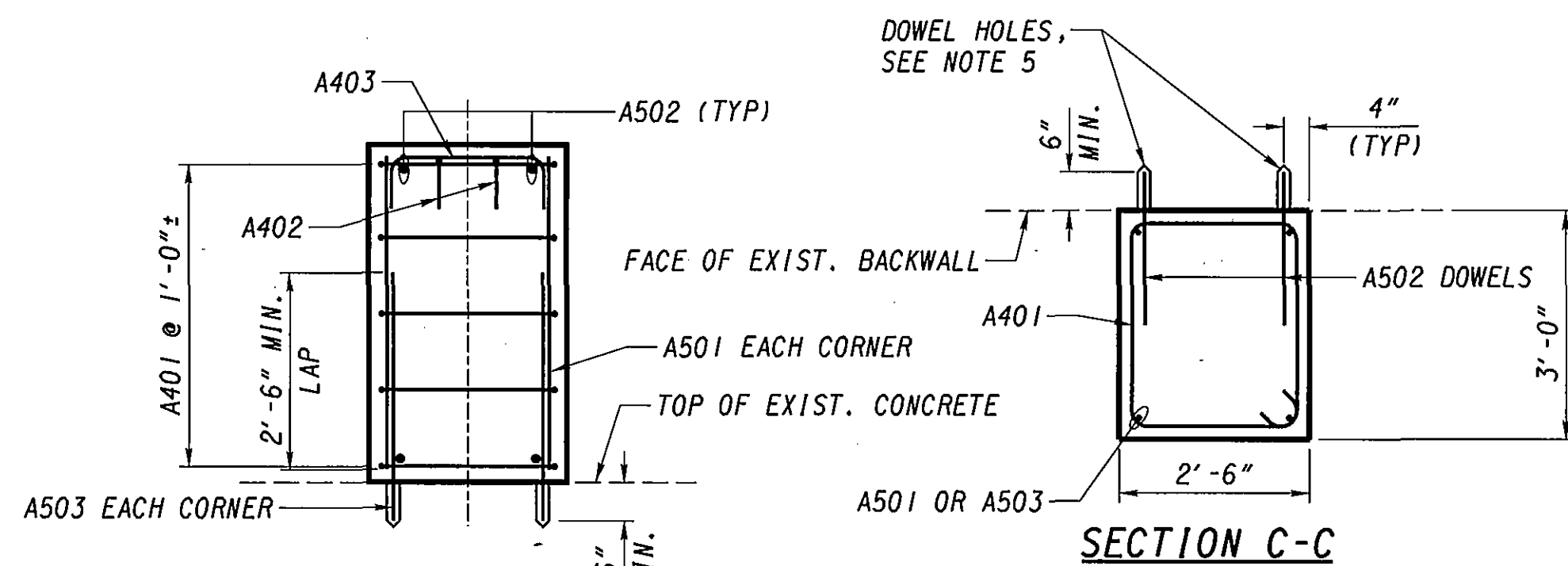


LAMINATED ELASTOMERIC BEARING
50 DUROMETER

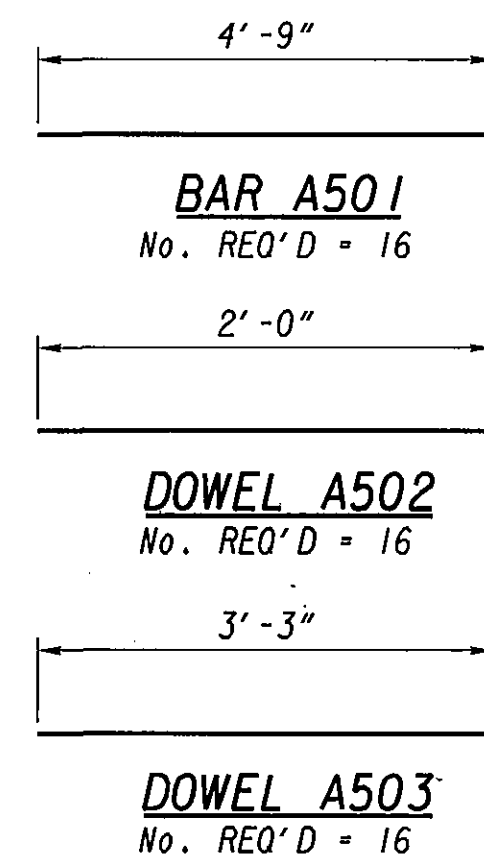
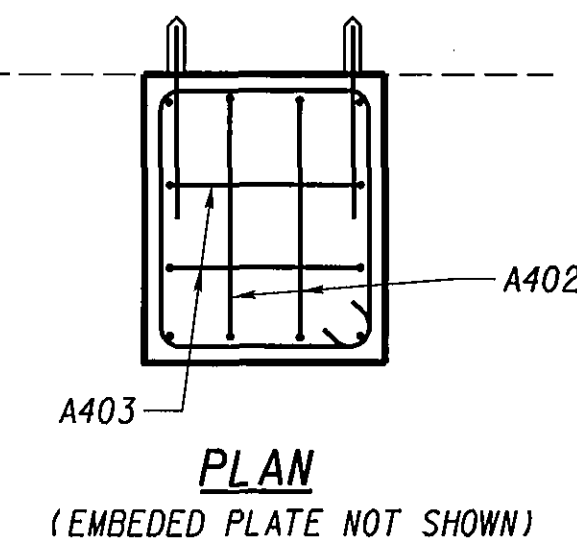
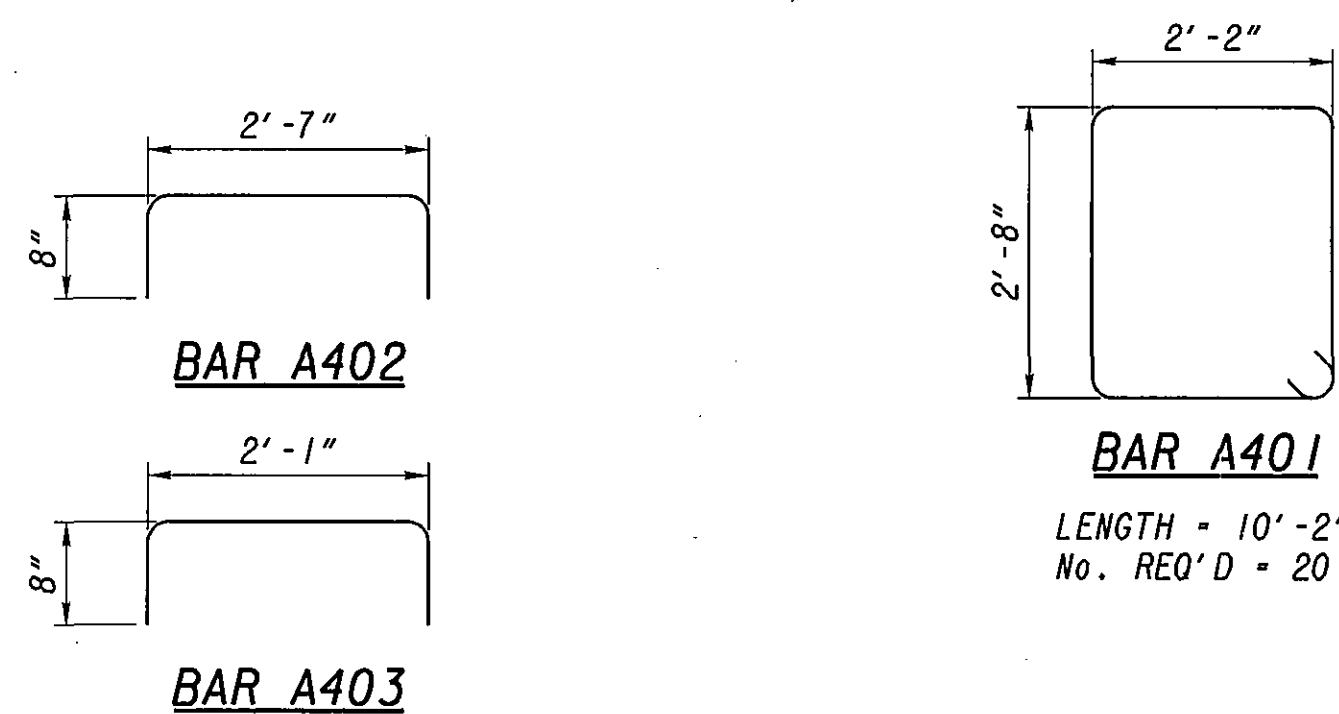


ELEVATION D-D

* THE SHIM PLATES SHOWN SHALL BE SHIPPED WITH BEARING AND LOAD PLATE. HOWEVER, INSTALLATION OF SHIM PLATES ARE ONLY REQUIRED IF FIELD ADJUSTMENTS ARE NECESSARY TO ACHIEVE A SNUG FIT DURING JACKING OPERATIONS. SEE BEARING NOTES, THIS SHEET, FOR PAYMENT



ELEVATION B-B



REINFORCING STEEL LIST				
MARK	NUMBER		LENGTH	WEIGHT
	REAR ABUT.	FORWARD ABUT.		
A401	10	10	10'-2"	136
A402	4	4	3'-9"	20
A403	4	4	3'-3"	18
A501	8	8	3'-11"	65
A502	8	8	2'-0"	33
A503	8	8	3'-3"	54
	TOTAL WEIGHT			326

NOTES:

1. FOR GENERAL NOTES, SEE SHEET 1 / 6
2. DRILL HOLES WHERE SHOWN IN THE PLANS. INSTALL REINFORCING STEEL ACCORDING TO ITEM 510 USING EPOXY GROUT, 705.20. PRIOR TO DRILLING DOWEL HOLES, LOCATE ALL EXISTING REINFORCING STEEL BARS IN THE AREA OF THE HOLE WITH THE AID OF A REINFORCING STEEL BAR LOCATOR (PACHOMETER). IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATION AS A PROPOSED DOWEL HOLE, MOVE THE DOWEL HOLE TO EITHER SIDE OF THE EXISTING BAR. THE DEPARTMENT WILL PAY FOR ALL DOWEL HOLES AND GROUTING WITH ITEM 510.
3. FOR LOCATION OF SECTIONS B-B, C-C AND ELEVATION D-D SEE SHEET 2 / 6

BEARING AND PEDASTAL DETAILS
BRIDGE NO. CL-180T-1873
NORFOLK SOUTHERN RAILROAD OVER I-70

CL-180T-18.73
PID 25315

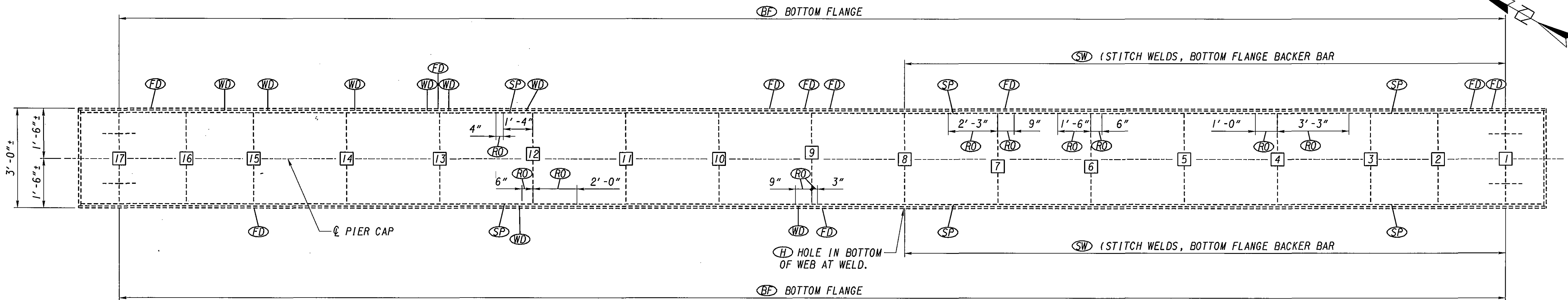
3 / 6

7
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DESIGN AGENCY
WOOLPERT LLP
409 EAST MONUMENT AVE.
DAYTON, OHIO 45402-1261

DATE
8/23/04
REVIEWED
MAA
DRAWN
Rach
DESIGNED
BWB
CHECKED
BSC

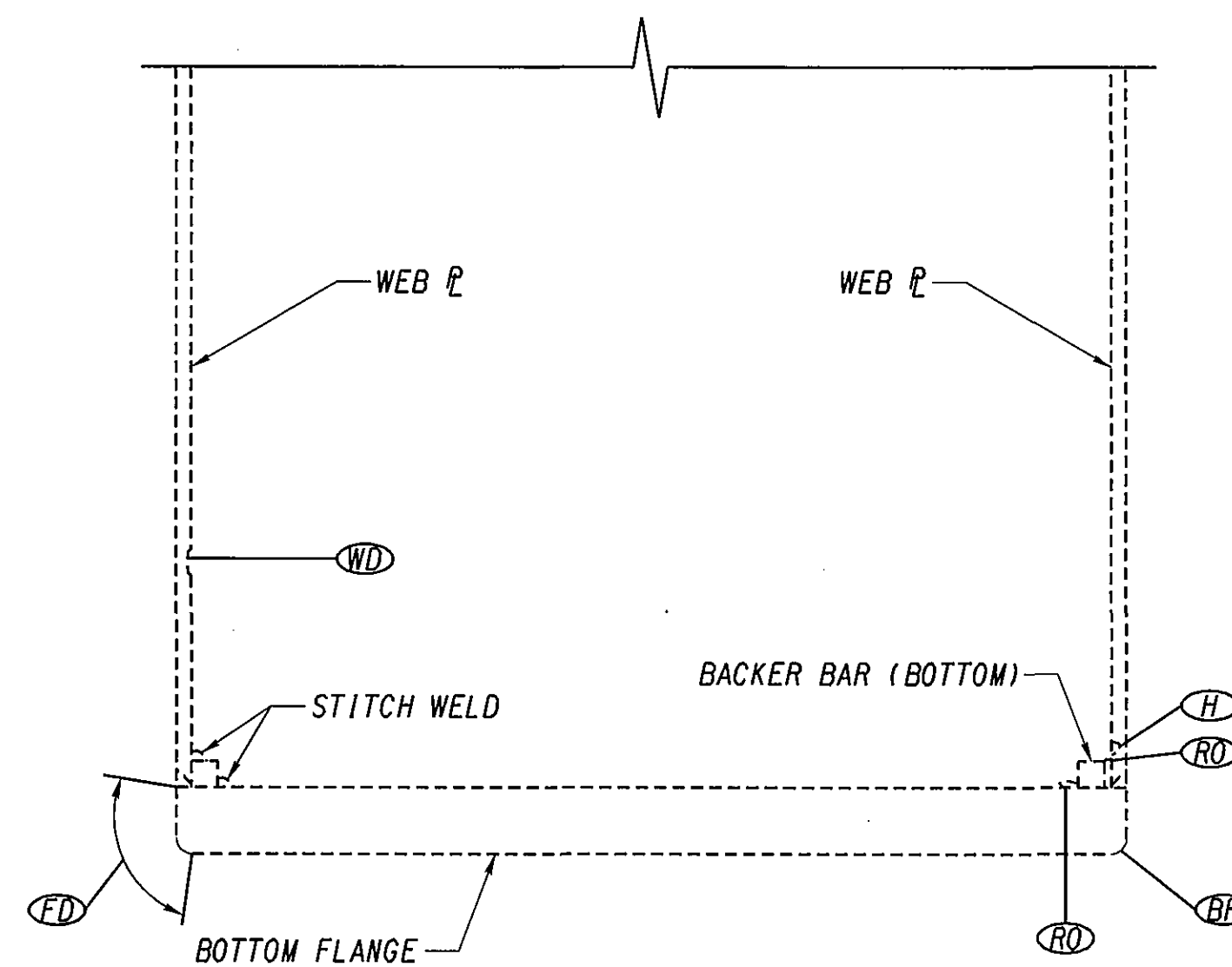
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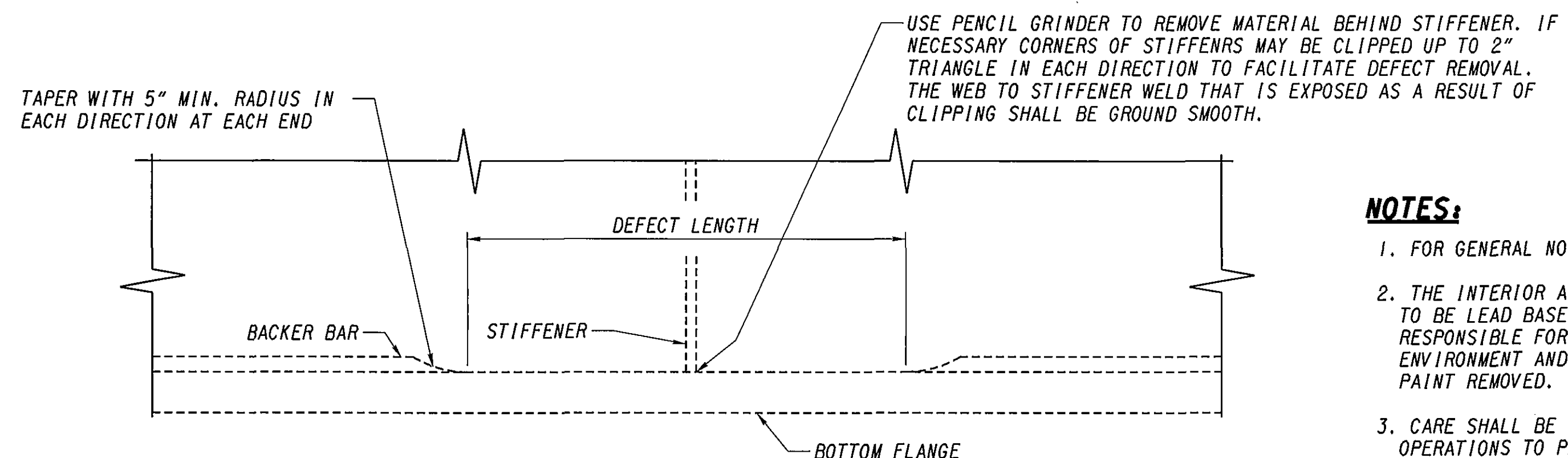
PLAN

LEGEND:

- (SW) STITCH WELDS BETWEEN THE BOTTOM BACKER BAR AND BOTH THE WEB AND FLANGE SHALL BE TREATED WITH ULTRASONIC IMPACT TREATMENT (UIT). UIT SHALL BE APPLIED TO THE WELD TOE ALL AROUND THE INDIVIDUAL STITCH WELDS. SEE SPECIAL PROVISIONS FOR UIT REQUIREMENTS.
 - (RD) IN AREAS OF WELD RUNOUT THE RUNOUT AND BACKER BAR SHALL BE GROUND DOWN UNTIL CONSISTENT BASE METAL OR WELD MATERIAL IS REACHED. THE LENGTH SHOWN IN THE PLANS IS THAT OF THE VISIBLE RUNOUT WITH THE BACKER BAR IN PLACE. THE ACTUAL REMOVAL LENGTH SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER. CARE SHALL BE TAKEN DURING THE GRINDING OPERATIONS TO PREVENT EXCESSIVE REMOVAL AND TO ATTAIN SMOOTH SURFACES FREE OF ABRUPT CHANGES IN THICKNESS. MAXIMUM GRINDING DEPTH INTO BASE MATERIAL SHALL BE $\frac{1}{16}$ ".
 - (SP) AT LOCATIONS OF BACKER BAR SPLICES (BOTTOM ONLY), THE BACKER BAR SHALL BE GROUND DOWN UNTIL CONSISTENT BASE METAL OR WELD MATERIAL IS REACHED. THE STITCH WELDS IMMEDIATELY ADJACENT TO THE SPLICE (IF ANY) SHALL ALSO BE GROUND SMOOTH FOR A DEFECT LENGTH OF 4" AT EACH LOCATION NOT INCLUDING THE TRANSITION/TAPER AS SHOWN IN THE DEFECT REMOVAL DETAIL. CARE SHALL BE TAKEN DURING THE GRINDING OPERATIONS TO PREVENT EXCESSIVE REMOVAL AND TO ATTAIN SMOOTH SURFACES FREE OF ABRUPT CHANGES IN THICKNESS. MAXIMUM GRINDING DEPTH INTO BASE MATERIAL SHALL BE $\frac{1}{16}$ ".
 - (WD) AT LOCATIONS OF WEB DEFECTS, GRIND THE DEFECT SMOOTH TO THE SATISFACTION OF THE ENGINEER.
 - (H) THE HOLE IN THE WEB AT THE WELD INTERFACE SHALL BE ACCURATELY LOCATED AND CORED USING A 2" DIAMETER CORE DRILL CENTERED ON THE DEFECT. A SECONDARY HOLE MAY BE REQUIRED IN THE STIFFENER TO FACILITATE REMOVAL OF THE PIECE. THE CORE WILL BE GIVEN TO THE FIELD ENGINEER FOR FURTHER INSPECTION. AFTER COMPLETION OF THE CORING CHECK THE AREA USING DYE PENETRANT TO ENSURE THAT THE ENTIRE DEFECT WAS REMOVED. ENLARGE THE HOLE AS NECESSARY TO CAPTURE THE ENDS OF ANY DEFECT. SEAL THE HOLE FROM THE INSIDE WITH A $\frac{1}{16}$ " PRIMED STEEL PLATE HELD IN PLACE WITH SEALING COMPOUND MEETING FEDERAL SPECIFICATION TT-S-00230C.
 - (BF) ROUND THE EDGES OF THE BOTTOM FLANGE TO TO A MINIMUM $\frac{1}{8}$ " RADIUS OR TO THE DEPTH OF THE DEFECT AS DIRECTED BY ENGINEER.
 - (FD) AT THE LOCATIONS NOTED IN THE PLANS LARGE DEFECTS IN THE BOTTOM FLANGE SHALL BE REMOVED WITH ADDITIONAL GRINDING. VERTICAL DEFECTS ON THE EDGES OF THE BEAMS SHALL BE GROUND SMOOTH.
- ALL REPAIRED AREAS SHALL BE PAINTED. SEE GENERAL NOTES SHEET
- (SW) STITCH WELDS ON BOTTOM BACKER BAR (APPROX. 1" LG. AT 6" SPACING) TYPICAL BETWEEN STIFFENERS WHERE SHOWN
 - (RD) WELD RUNOUT BEHIND OR BELOW BOTTOM BACKER BAR
 - (SP) BOTTOM BACKER BAR SPLICE
 - (WD) DEFECT ON INTERIOR SIDE OF WEB SUCH AS FIN OR GOUGE
 - (FD) DEFECT IN FLANGE
 - (H) HOLE IN WEB AT INTERFACE WITH BOTTOM WELD
 - (BF) BOTTOM FLANGE IRREGULAR EDGES (MINOR FINS, DENTS, etc.)
 - [] DESIGNATES THE STIFFENER NUMBER



PARTIAL SECTION

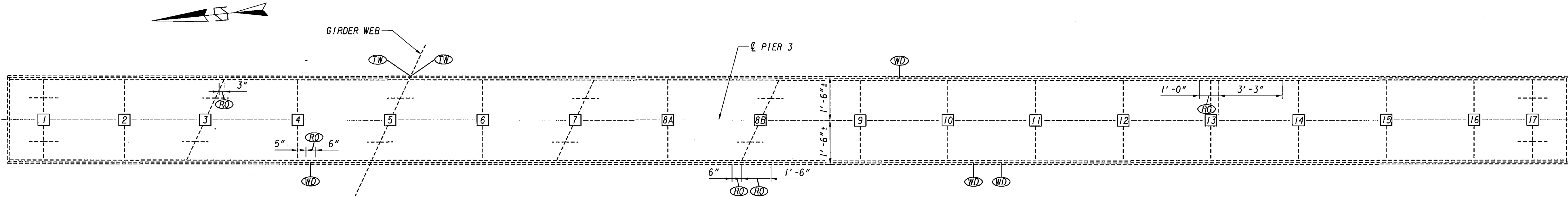


DEFECT REMOVAL DETAIL

NOTES:

1. FOR GENERAL NOTES SEE SHEET 1 / 6
2. THE INTERIOR AND EXTERIOR PAINT IS BELIEVED TO BE LEAD BASED PAINT. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AS SAFE WORK ENVIRONMENT AND PROPER DISPOSAL OF THE PAINT REMOVED.
3. CARE SHALL BE TAKEN DURING THE GRINDING OPERATIONS TO PREVENT EXCESSIVE REMOVAL OF MATERIAL AND TO OBTAIN SMOOTH SURFACES FREE FROM ABRUPT CHANGES OF THICKNESS.

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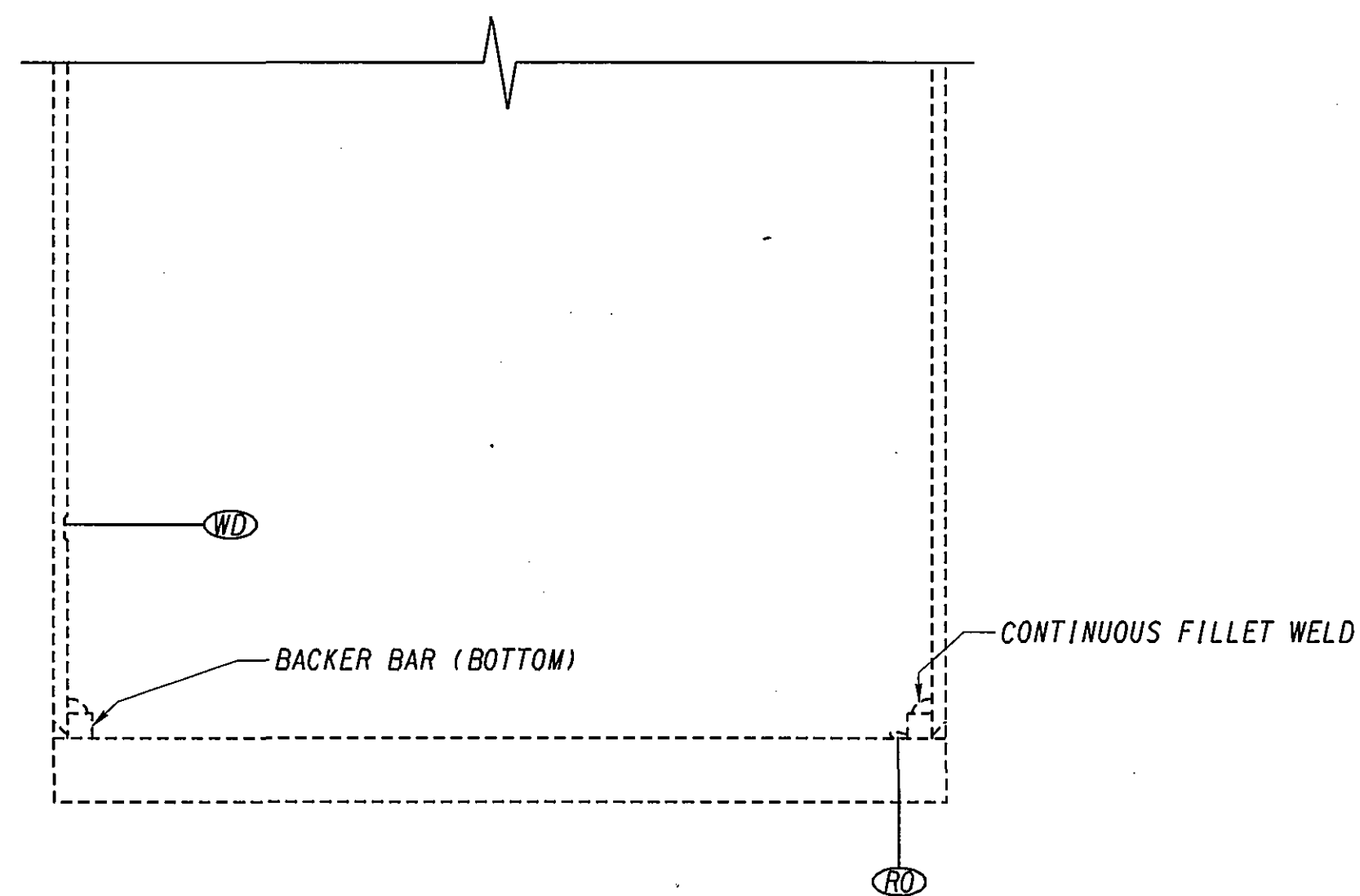
PLAN

RETROFIT NOTES:

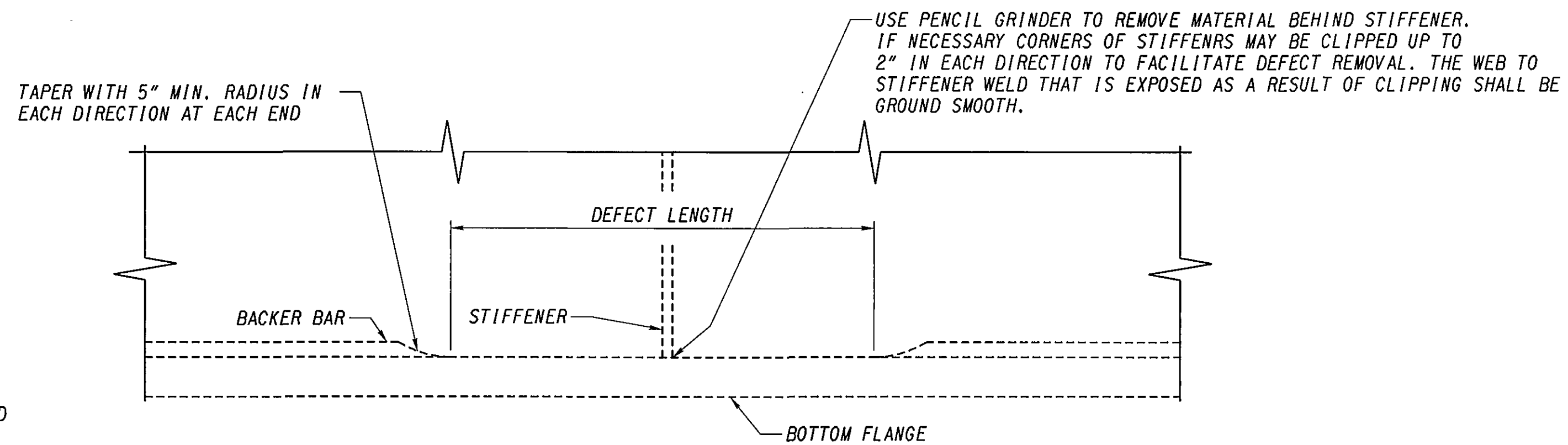
- (RO) IN AREAS OF WELD RUNOUT THE RUNOUT AND BACKER BAR SHALL BE GROUND DOWN UNTIL CONSISTENT BASE METAL OR WELD MATERIAL IS REACHED. THE LENGTH SHOWN IN THE PLANS IS THAT OF THE VISIBLE RUNOUT WITH THE BACKER BAR IN PLACE. THE ACTUAL REMOVAL LENGTH SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER. CARE SHALL BE TAKEN DURING THE GRINDING OPERATIONS TO PREVENT EXCESSIVE REMOVAL AND ATTAIN SMOOTH SURFACES FREE OF ABRUPT CHANGES IN THICKNESS. MAXIMUM GRINDING DEPTH INTO BASE MATERIAL SHALL BE $\frac{1}{16}$ ".
 - (WD) AT LOCATIONS OF WEB DEFECTS GRIND THE DEFECT SMOOTH TO THE SATISFACTION OF THE ENGINEER.
 - (TW) USE ULTRASONIC IMPACT TREATMENTS ON THIN WEB TO WEB WELDS.
- ALL REPAIRED AREAS SHALL BE PAINTED. SEE GENERAL NOTES SHEET

LEGEND:

- (RO) WELD RUNOUT BELOW BOTTOM BACKER BAR
- (WD) DEFECT ON INTERIOR SIDE OF WEB SUCH AS FIN OR GOUGE
- (TW) THIN WELD BETWEEN GIRDER WEB AND BOX GIRDER WEB
- [1] DESIGNATES THE STIFFENER NUMBER



PARTIAL SECTION



DEFECT REMOVAL DETAIL

NOTES:

1. FOR GENERAL NOTES SEE SHEET 1 / 6
2. CARE SHALL BE TAKEN DURING THE GRINDING OPERATIONS TO PREVENT EXCESSIVE REMOVAL OF MATERIAL AND TO OBTAIN SMOOTH SURFACES FREE FROM ABRUPT CHANGES OF THICKNESS.

CLA-70-18.73
PID 25315

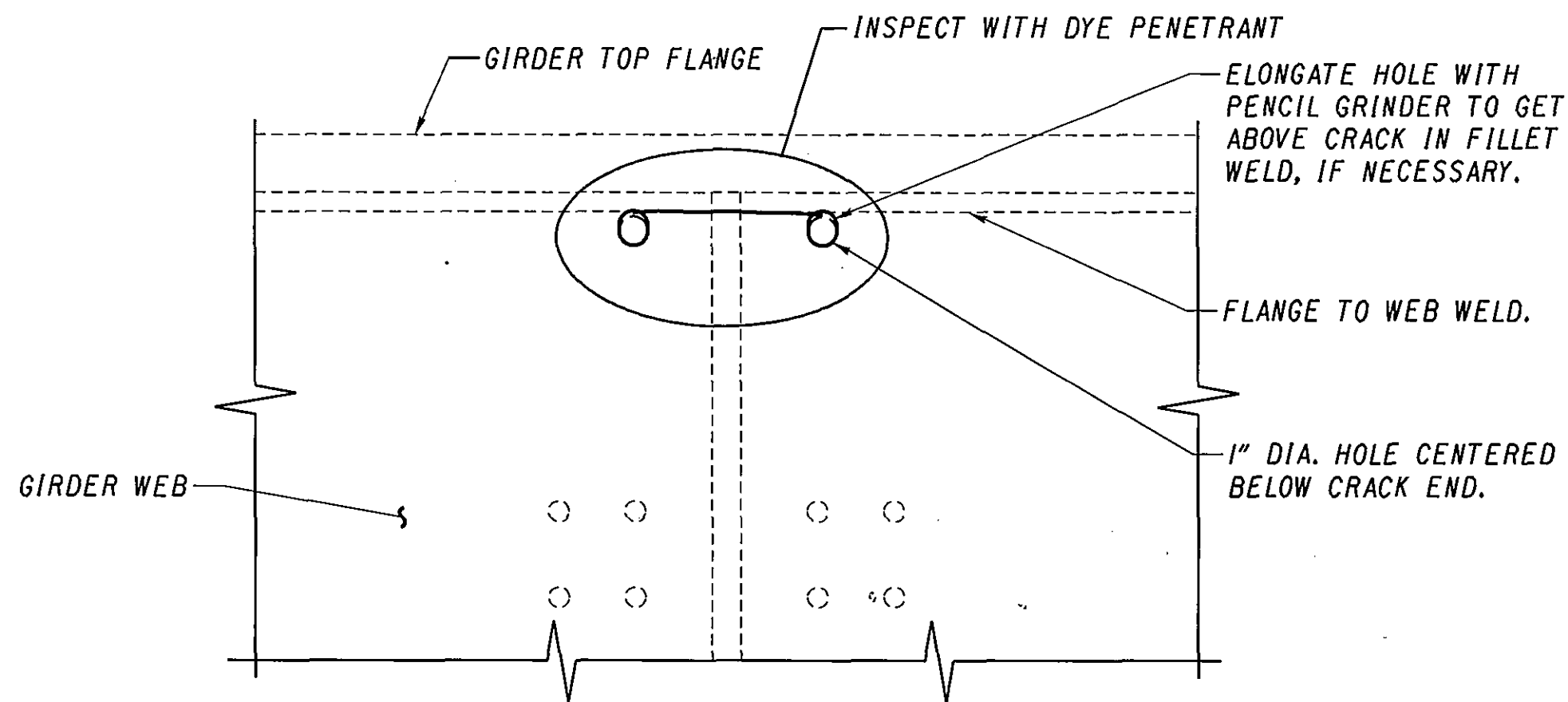
RETROFIT PLAN
BRIDGE NO. MOT-75-0259
I-75 SB TO I-675 NB OVER I-75 AND RAMP I-675 SB TO I-75 NB

DESIGNED BWB
CHECKED BSC
DRAWN RACH
REVISED
REVIEWED MAA
DATE 8/23/04
STRUCTURE FILE NUMBER 5706432

DESIGN AGENCY
WOOLPERT LLP
409 EAST MONUMENT AVE.
DAYTON, OHIO
WOOLPERT 45402-1261

5 / 6

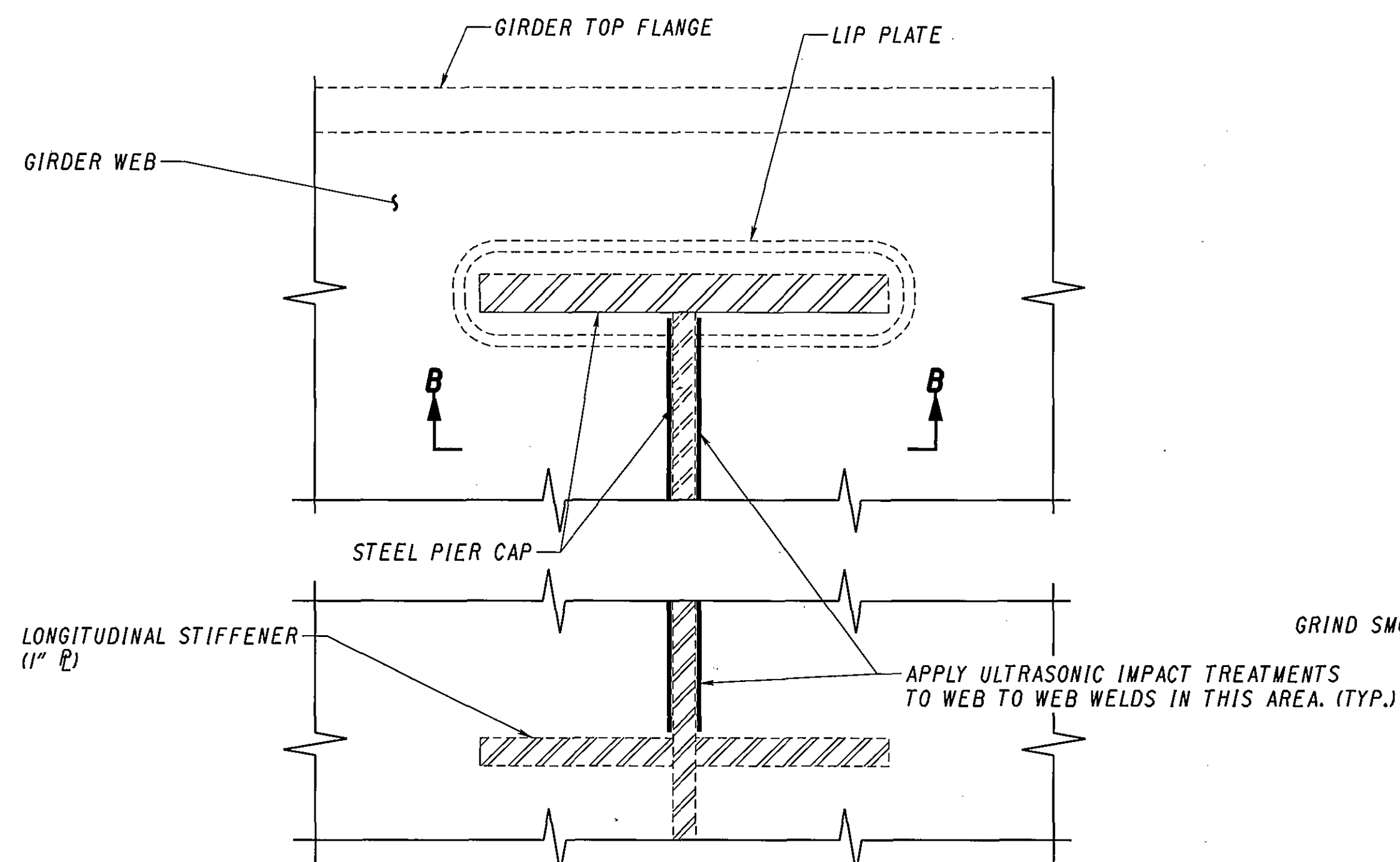
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RETROFIT AT PIER BEARING STIFFENER

RETROFIT AT PIER BEARING STIFFENER

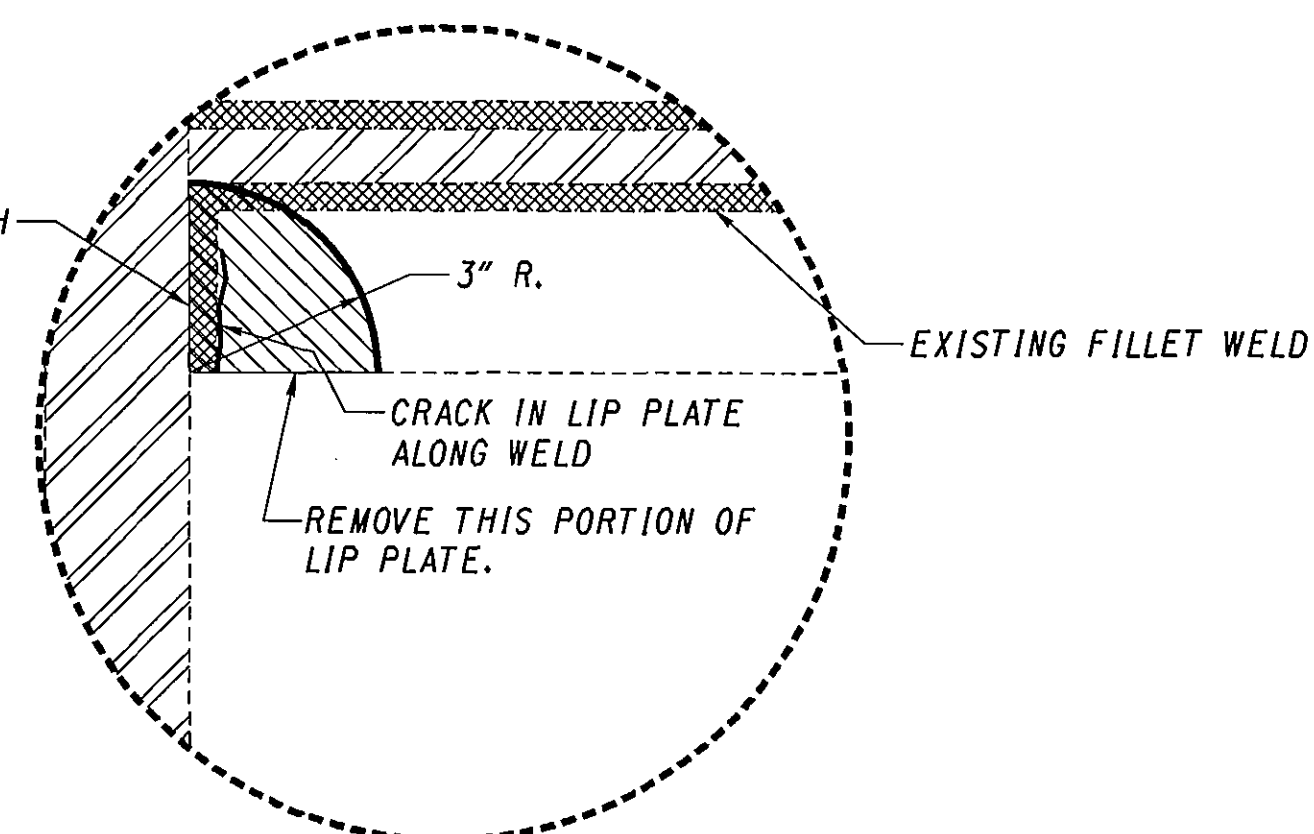
1. PERFORM DYE PENETRANT TESTING AT ALL INTERSECTIONS OF EXTERIOR BEARING STIFFENER & TOP FLANGE ON THE STEEL PIER CAPS AT PIER 2, BRIDGE MOT-75-1178 AND PIERS 7 & 8, BRIDGE 1180. ALLOW THE ENGINEER TO INSPECT THE AREA. IF THE ENGINEER DETERMINES THAT THE WEB HAS CRACKED PROCEED WITH STEPS 2-7.
2. POSITION THE CENTER OF 1½" DIAMETER HOLE AHEAD OF THE CRACK TIP SUCH THAT THE CRACK TIP IS JUST INSIDE THE BIT DIAMETER.
3. DRILL OUT CRACK ENDS.
4. HOLES ON HORIZONTAL CRACKS AT TOP FLANGE-TO-WEB WELD MAY HAVE TO BE ELONGATED UP INTO WELD WITH A PENCIL GRINDER IN ORDER TO FULLY ISOLATE CRACK ENDS.
5. CHECK ALL AREAS (AND INSIDE OF CORE HOLES) AGAIN WITH DYE PENETRANT. ADDITIONAL HOLES MAY HAVE TO BE CUT OR EXISTING HOLES ELONGATED WITH PENCIL GRINDERS IN ORDER TO CAPTURE CRACK ENDS.
6. REPEAT ABOVE STEPS UNTIL ALL CRACK ENDS ARE REMOVED.
7. CLEAN AND PAINT ALL DISTURBED AREAS.
8. PAYMENT FOR DRILLING OF THE HOLES, SHALL BE MADE AT THE UNIT PRICE BID FOR STRUCTURAL STEEL MISC. : FATIGUE, RETROFIT, CORING OR DRILLING OF DEFECT, AT THE QUANTITY AUTHORIZED BY THE ENGINEER. NO ADDITIONAL COMPENSATION SHALL BE MADE FOR PAINTING THESE AREAS.



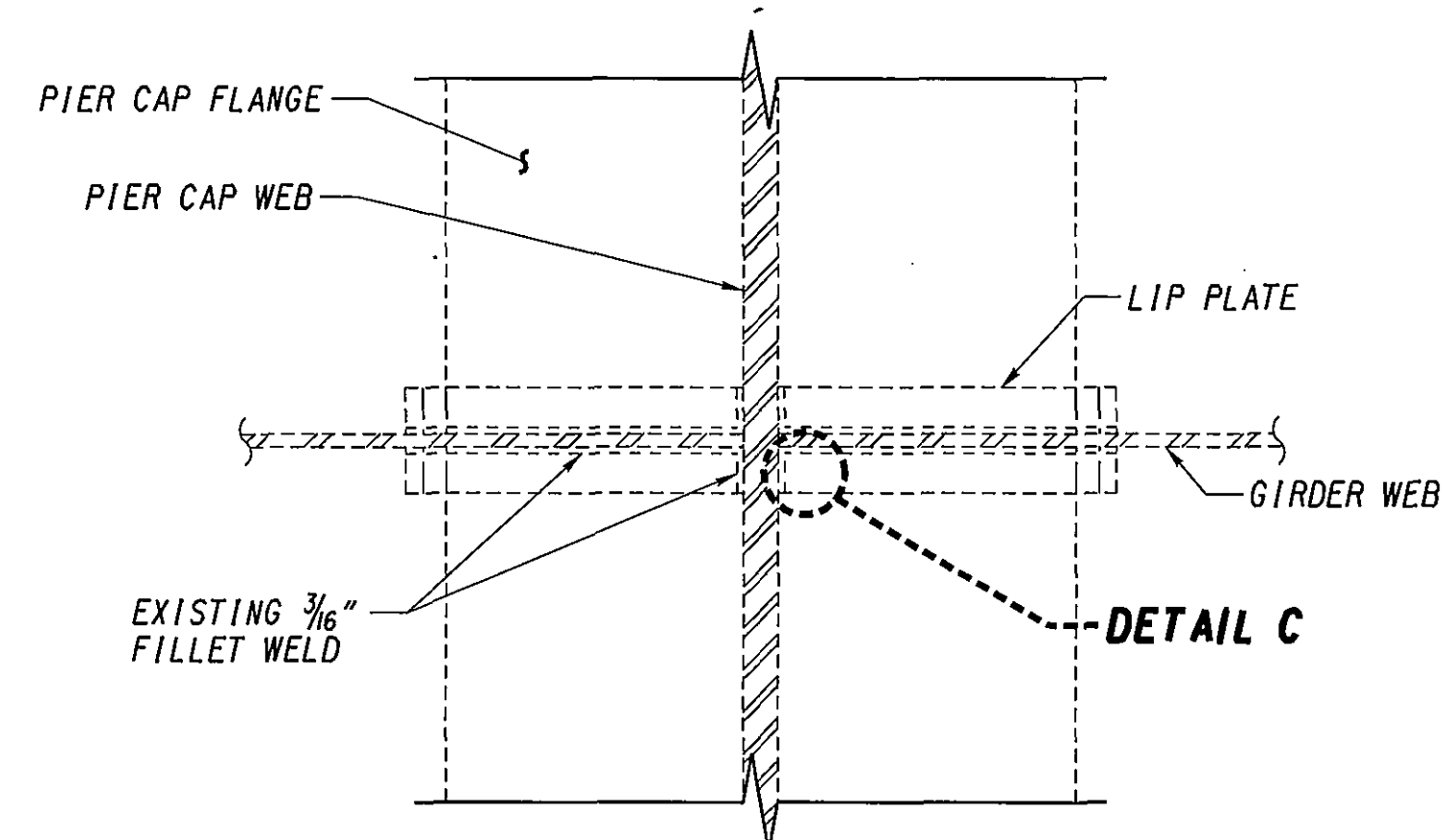
RETROFIT AT STEEL PIER CAP

RETROFIT AT STEEL PIER CAP

- REGARDLESS OF WHETHER OR NOT CRACKS IN THE LIP PLATE EXIST, THE FOLLOWING RETROFIT SHALL BE COMPLETED IN ALL CASES ON PIER 2, BRIDGE MOT-75-1178 AND PIERS 7 & 8, BRIDGE MOT-75-1180
1. REMOVE PORTION OF THE LIP PLATE AND GRIND THE EXPOSED WELD SMOOTH.
 2. CHECK ALL AREAS WITH DYE PENETRANT. ADDITIONAL HOLES MAY HAVE TO BE CUT OR EXISTING HOLES ELONGATED WITH PENCIL GRINDERS IN ORDER TO CAPTURE CRACK ENDS.
 3. REPEAT ABOVE STEPS UNTIL ALL CRACK ENDS ARE REMOVED.
 4. USE ULTRASONIC IMPACT TREATMENTS ON WEB TO WEB WELDS.
 5. CLEAN AND PAINT ALL DISTURBED AREAS.



DETAIL C



SECTION B-B

NOTES:

1. FOR GENERAL NOTES SEE SHEET 1/6