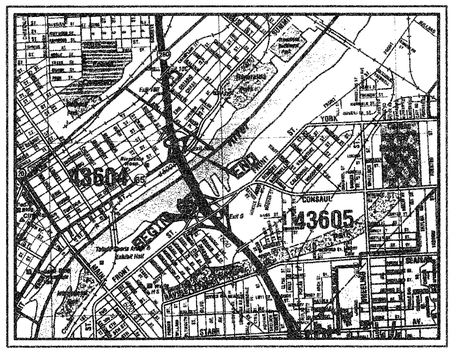
#3143 F #3203



LOCATION MAP

0 1/2 1 1/2 2

SCALE IN MILES

MICROFILMED
APR 25 1997

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
LUC - 280 - 0346
CITY OF TOLEDO
LUCAS COUNTY

PROJECT DESCRIPTION

REHABILITATION OF EXISTING CRAIG MEMORIAL BRIDGE OVER THE MAUMEE RIVER. LENGTH OF PROJECT IS 0.345 MILES.

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 REVISED CODE OF OHIO.

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 EXCEPT AS NOTED ON SHEET 113/126, AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

UNDER AUTHORITY OF SECTION 4511.21, DIVISION (I) OF THE REVISED CODE OF OHIO, THE REVISED PRIMA FACIE SPEED LIMITS AS INDICATED HEREIN ARE DETERMINED TO BE REASONABLE AND SAFE, AND ARE HEREBY ESTABLISHED FOR THE DURATION OF THIS PROJECT. THE PRIMA FACIE SPEED LIMIT OR LIMITS HEREBY ESTABLISHED SHALL BECOME EFFECTIVE WHEN APPROPRIATE SIGNS GIVING NOTICE THEREOF ARE ERECTED.

FEDERAL PROJECT NO. IM-280-2(25)

PID NO. 12265

CONSTRUCTION PROJECT NO.

LUC - 280 - 0346

1/126

INDEX OF DRAWINGS

DESIGN EXCEPTIONS

NONE REQUIRED

LINE DATA	
BEGIN PROJECT	
END PROJECT	
LENGTH OF PROJECT	
BEGIN WORK	
END WORK	
LENGTH OF WORK	

STATE OF OHIO — JAMES M. DENNY — E-50644 — REGISTERED PROFESSIONAL ENGINEER

STATE OF OHIO — DAVID RUSSELL TORRENCE — E-55932 — REGISTERED PROFESSIONAL ENGINEER

STATE OF OHIO — RICHARD T. JONES — E-52460 — REGISTERED PROFESSIONAL ENGINEER

STATE OF OHIO — THOMAS A. CROUSE — E-57794 — REGISTERED PROFESSIONAL ENGINEER

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:

BURGESS & NIPLE
ENGINEERS
ARCHITECTS

STANDARD CONSTRUCTION DRAWINGS

				SUPPLEMENTAL SPECIFICATIONS	
MT 99.10	11-14-86	MT 299.50	12-12-88	815	7-17-95
MT 95.70	2-23-90			910	7-17-95
MT 95.30	10-10-88	AS-1-81	9-15-94		
MT 95.32	8-25-89	BP-2.3	2-21-92		
PCB-91	2-24-92	EXJ-4-87	11-12-93		
TC 35.10	8-29-84	GR-3.1	5-6-91		
MT 101.60	7-1-92	GR-3.2	5-6-91		
MT 95.81	2-23-90				
MT 105.10	7-1-92				
MT 105.11	7-1-92				
MC 9.3	10-30-92				
MC 9.2	5-6-91				
MC 9.1	10-30-92				
TC 65.11	2-1-90				
TC 65.10	2-1-90				
TC 72.20	2-26-82				

APPROVED James L McCarty
DATE 4-26-96 DISTRICT DEPUTY DIRECTOR

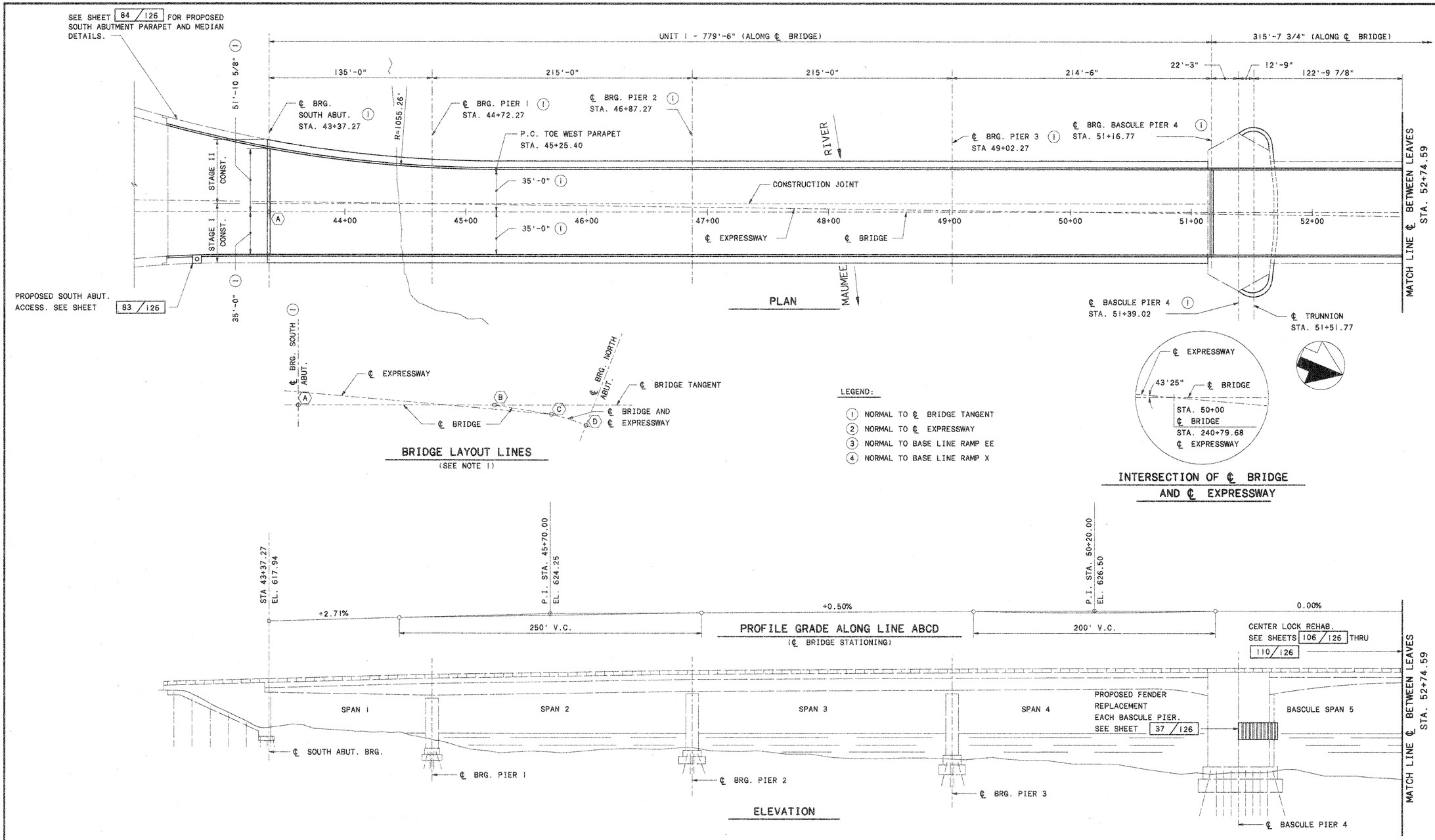
APPROVED _____
DATE _____ ADMINISTOR, OFFICE OF STRUCTURES

APPROVED _____
DATE _____ DEPUTY DIRECTOR, PROJECT MANAGMENT

APPROVED _____
DATE 7/2/96 DIRECTOR, DEPARTMENT OF TRANSPORTATION

LUC-280-3.46
968003
126PGS
12-04-96
DIST. 02

N:\PROJECTS\PR149\1\CADD\TITLE 9-7-95 2:00:00 PM



NOTES:

1. LINES AB AND CD ARE ℄ BRIDGE. THESE SEGMENTS ARE CONNECTED BY LINE BC WHICH IS CALLED ℄ BRIDGE ALTHOUGH THE STRUCTURE IS NOT SYMMETRICAL THROUGH THIS SECTION. PROFILE GRADE AND STATIONING ARE CARRIED ALONG LINE ABCD. ℄ BRIDGE AND ℄ EXPRESSWAY COINCIDE FROM POINT "C" TO POINT "D".
2. MAIN LINE STATIONING ON THIS SHEET GIVEN FOR ℄ BRIDGE AND STATIONING ON SHEET 3/126 GIVEN FOR ℄ EXPRESSWAY UNLESS OTHERWISE NOTED.
3. ℄ OF PROPOSED MEDIAN BARRIER COINCIDES WITH ℄ EXPRESSWAY FOR ENTIRE LENGTH OF MAINLINE BRIDGE. DEPICTION OF THE MEDIAN IS OMITTED IN THE GENERAL PLAN FOR CLARITY.
4. SEE SHEET 25/126 FOR RAMP EE AND RAMP X PROFILE GRADE INFORMATION.

DESIGNED JMD
DRAWN RFJ
CHECKED MAK
REVISED
DATE
REVISED
STRUCTURE FILE NUMBER 4805917

GENERAL PLAN AND ELEVATION
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

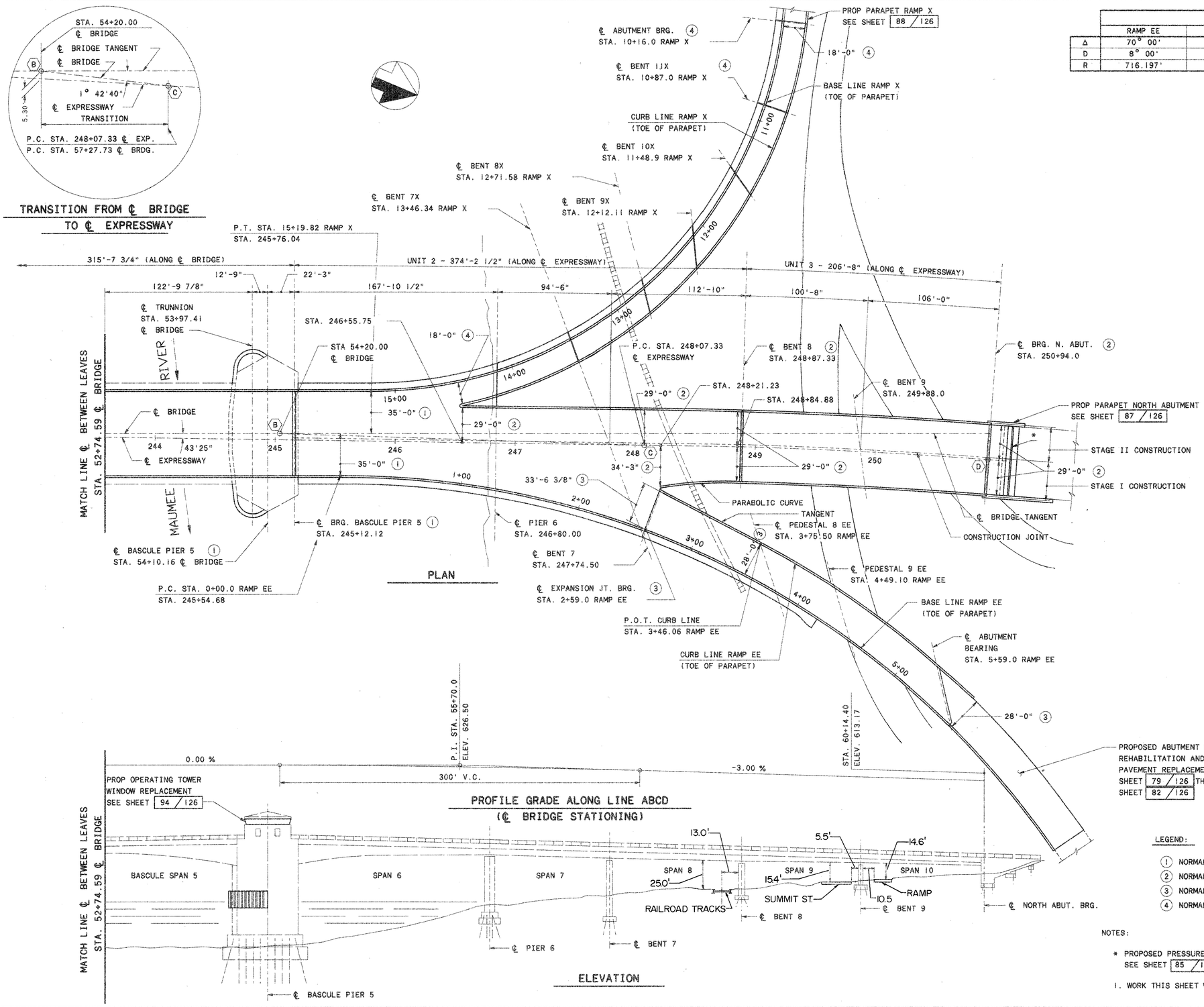
LUC-280

2/126

N:\PROJECTS\PRI4912\CADD\BRDGPLAN 8-7-95 9:59:49 am

TRANSITION FROM ℄ BRIDGE
TO ℄ EXPRESSWAY

CURVE DATA			
	RAMP EE	RAMP X	℄ EXP.
Δ	70° 00'	86° 12'54"	24° 33'01"
D	8° 00'	16° 30'	1° 15'
R	716.197'	347.247'	4583.662'



LEGEND:

(1) NORMAL TO ℄ BRIDGE TANGENT
(2) NORMAL TO ℄ EXPRESSWAY
(3) NORMAL TO BASE LINE RAMP EE
(4) NORMAL TO BASE LINE RAMP X

NOTES:

* PROPOSED PRESSURE RELIEF JOINT AND APPROACH SLAB SEE SHEET 85 / 126 AND SHEET 86 / 126.

1. WORK THIS SHEET WITH SHEET 2 / 126.

[redacted]
ENGINEERS
ARCHITECTS

DESIGNED	DRAWN	REVISED	DATE
JMD	RFJ		
CHECKED	REVISED		
MAK			

STRUCTURE FILE NUMBER
4805917

GENERAL PLAN AND ELEVATION
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

3 / 126

N:\PROJECTS\PR14912\CADD\BRDGPLN2- 9-7-95 10:32:34 am

ESTIMATED ROADWAY QUANTITIES

CALC BY MK DATE 2/15/96 | CHKD BY JMD DATE 2/15/96

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SUPER.	GENERAL
451	16001	493	SQ YD	12" REINFORCED CONCRETE PAVEMENT, AS PER PLAN		493
SPECIAL	45130000	58	LIN FT	PRESSURE RELIEF JOINT, TYPE A		58
601	27000	32	CU YD	DUMPED ROCK FILL, TYPE C		32
611	10000	97	SQ YD	REINFORCED CONCRETE APPROACH SLAB (T=12")		97

ESTIMATED QUANTITIES

CALC BY MK DATE 2/15/96 | CHKD BY JMD DATE 2/15/96

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SUPER.	GENERAL
202	11201	LUMP	SUM	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN		LUMP
202	23500	650	SQ.YD.	WEARING COURSE REMOVED, ASPHALT	650	
SPECIAL	20302000	480	CU YD	ENGINEERED FILL - CLASS IV *		480
SPECIAL	20302000	1713	CU YD	ENGINEERED FILL - CLASS II *		1713
509	15840	1113815	POUND	EPOXY COATED REINFORCING STEEL, GRADE 60	1113315	500
510	10000	722	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALIC GROUT		
511	34001	4555	CU YD	CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN	4555	
SPECIAL	51267510	6731	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) BUFF *	3980	2751
513	16800	17	EACH	STRUCTURAL STEEL, MISC.: LOWER LATERAL BRACING REPLACEMENT	17	
513	16800	9	EACH	STRUCTURAL STEEL, MISC.: GUSSET PLATE REPLACEMENT	9	
513	16800	3	EACH	STRUCTURAL STEEL, MISC.: LOWER LATERAL BRACING STRUT REPLACEMENT	3	
513	16800	2	EACH	STRUCTURAL STEEL, MISC.: STRUT GUSSET PLATE REPLACEMENT	2	
513	16800	2	EACH	STRUCTURAL STEEL, MISC.: STRINGER COPE ROUNDING DETAIL	2	
513	16800	1	EACH	STRUCTURAL STEEL, MISC.: SPLICE PLATE REPLACEMENT	1	
513	16800	3	EACH	STRUCTURAL STEEL, MISC.: GUSSET T-SECTION REPLACEMENT	3	
513	16600	LUMP	SUM	STRUCTURAL STEEL, MISC.: PINION SUPPORT REHABILITATION		LUMP
513	16800	6	EACH	STRUCTURAL STEEL, MISC.: WELDED GUSSET PLATE REPLACEMENT	6	
513	16600	LUMP	SUM	STRUCTURAL STEEL, MISC.: LIVE LOAD ANCHOR BEARING PLATE REPLACEMENT		LUMP
513	16600	LUMP	SUM	STRUCTURAL STEEL, MISC.: WIND LOCK REHABILITATION	LUMP	
513	16600	LUMP	SUM	STRUCTURAL STEEL, MISC.: INSPECTION HANDRAIL REPLACEMENT	LUMP	
513	16800	2	EACH	STRUCTURAL STEEL, MISC.: SIDEWALK HATCHES	2	
513	16800	24	EACH	STRUCTURAL STEEL, MISC.: SIDEWALK STRINGER REPAIR	24	
513	16800	3	EACH	STRUCTURAL STEEL, MISC.: SIDEWALK STRINGER REPLACEMENT	3	
SPECIAL	51425650	LUMP	SUM	SURFACE PREPARATION (EEU) *		
SPECIAL	51425656	LUMP	SUM	SPOT PRIME (EPOXY)*	LUMP	
SPECIAL	51425660	LUMP	SUM	FULL PRIME (EPOXY) *	LUMP	
SPECIAL	51425666	LUMP	SUM	COMPLETE COAT FINISH (URETHANE) *	LUMP	

* SEE PROPOSAL NOTE

SEE SHEET 111/126 FOR MAINTENCE OF TRAFFIC QUANTITIES.

DESIGNED RMM | DRAWN GTC | CHECKED JMD | REVISED | REVIEWED RMM DATE 14-Feb-96 | STRUCTURE FILE NUMBER 4805917

ESTIMATED QUANTITIES
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

ESTIMATED QUANTITIES

CALC BY MAK DATE 2-15-96 CHKD BY JMD DATE 2-15-96

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SUPER.	GENERAL
516	11210	239	LIN FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL	239	
516	12200	343	LIN FT	STRUCTURAL STEEL EXPANSION JOINT (FINGER TYPE)	343	
516	14600	963	LIN FT	STRUCTURAL JOINT OR JOINT SEALER, MISC.: SIDEWALK JOINT	963	
516	15000	355	EACH	STRUCTURAL JOINT OR JOINT SEALER, MISC.: RAILING POST	355	
516	45305	87	EACH	REFURBISH BEARING DEVICE, AS PER PLAN	87	
518	12300	48	EACH	SCUPPERS, INCLUDING SUPPORTS	48	
518	40001	225	LIN FT	6" PERFORATED CORRUGATED PLASTIC PIPE, AS PER PLAN		225
518	40011	20	LIN FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN		20
518	51100	100	LIN FT	8" PIPE DOWNSPOUT, INCLUDING SPECIALS		100
518	62400	465	SQ YD	STRUCTURE DRAINAGE, MISC.: DRAINAGE COMPOSITE WITH FILTER FABRIC		465
518	63300	LUMP	SUM	STRUCTURE DRAINAGE, MISC.: CLEAN AND TEST		LUMP
SPECIAL	51922020	650	SQ YD	MICRO-SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION (3 3/4 INCHES THICK) *	650	
SPECIAL	51922020	400	SQ YD	MICRO-SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION (1 1/4 INCHES THICK) *	400	
SPECIAL	51922130	16	CU YD	MICRO-SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS) MATERIAL ONLY *	16	
SPECIAL	51922200	30	CU YD	FULL DEPTH REPAIR MICRO-SILICA *	30	
SPECIAL	53000200	LUMP	SUM	STRUCTURE, MISC.: FENDER		LUMP
SPECIAL	53000200	LUMP	SUM	STRUCTURE, MISC.: SOUTH ABUTMENT ACCESS		LUMP
SPECIAL	53000200	LUMP	SUM	STRUCTURE, MISC.: SOUTH ABUTMENT DOOR ENCLOSURE		LUMP
SPECIAL	53000200	LUMP	SUM	STRUCTURE, MISC.: FILLED GRID DECK CONCRETE REMOVAL AND REPLACEMENT		LUMP
SPECIAL	53000200	LUMP	SUM	STRUCTURE, MISC.: GIRDER SLOT ARMOR REPAIR		LUMP
SPECIAL	53000200	LUMP	SUM	STRUCTURE, MISC.: BASCULE SPAN PARAPET		LUMP
SPECIAL	53000200	LUMP	SUM	STRUCTURE, MISC.: OPERATING TOWER WINDOW REPLACEMENT*		LUMP
SPECIAL	53000200	LUMP	SUM	STRUCTURE, MISC.: BASCULE PIERS DOOR AND WINDOW REPLACEMENT*		LUMP
SPECIAL	53000200	LUMP	SUM	STRUCTURE, MISC.: CENTER LOCK REHABILITATION		LUMP
SPECIAL	53000200	LUMP	SUM	STRUCTURE, MISC.: IMPACT ATTENUATOR REMOVAL AND REPLACEMENT		LUMP
604	98100	222	LIN FT	DRAINAGE STRUCTURE, MISC.: 6" PVC PIPE		222
604	98100	213	LIN FT	DRAINAGE STRUCTURE, MISC.: 8" PVC PIPE		213
604	98100	244	LIN FT	DRAINAGE STRUCTURE, MISC.: 10" PVC PIPE		244
605	11101	63	LIN FT	6" SHALLOW PIPE UNDERDRAIN, AS PER PLAN		63
619	15010	LUMP	SUM	FIELD OFFICE, TYPE B		LUMP
SPECIAL	61925010	LUMP	SUM	COMPUTER EQUIPMENT FOR TYPE B OFFICE		LUMP
623	10000	LUMP	SUM	CONSTRUCTION LAYOUT STAKES		LUMP
624	10000	LUMP	SUM	MOBILIZATION		LUMP
815	00100	LUMP	SUM	SURFACE PREPARATION OF EXISTING STEEL, SYSTEM OZEU	LUMP	
815	00200	LUMP	SUM	FIELD PAINTING OF EXISTING STEEL, PRIME COAT, SYSTEM OZEU	LUMP	
815	00300	LUMP	SUM	FIELD PAINTING OF EXISTING STEEL, INTERMEDIATE COAT, SYSTEM OZEU	LUMP	
815	00400	LUMP	SUM	FIELD PAINTING OF EXISTING STEEL, FINISH COAT, SYSTEM OZEU	LUMP	
815	00500	750	LIN FT	CAULKING		750
815	00504	320	MAN HOUR	GRINDING FINS, TEARS, SLIVERS		320

* SEE PROPOSAL NOTE

SEE SHEET 111/126 FOR MAINTENCE OF TRAFFIC QUANTITIES.

BURGESS & NIPLE ENGINEERS ARCHITECTS

DESIGNED RWM | DRAWN GTC | REVIEWED RWM DATE 14-Feb-96 | STRUCTURE FILE NUMBER 480917

CHECKED JMD | REVISED

ESTIMATED QUANTITIES
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

ESTIMATED QUANTITIES

ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SUPER	GENERAL
513	16800	2000	EACH	STRUCTURAL STEEL MISC. : REWELD BROKEN OPEN GRID DECK CONNECTIONS	2000	
513	16001	45000	POUND	STRUCTURAL STEEL FOR REHABILITION, AS PER PLAN		45000
SPECIAL	69098400	LUMP	SUM	SPECIAL - MISC.: WEATHER MONITORING SENSORS		
SPECIAL	62598200	LUMP	SUM	LIGHTING, MISC.: NAVIGATION LIGHTING SYSTEM		
SPECIAL	62598200	LUMP	SUM	LIGHTING, MISC.: REPAIR OF EXISTING LIGHTING SYSTEM		LUMP
SPECIAL	62598200	LUMP	SUM	LIGHTING, MISC.: MAINTAIN EXISTING NAVIGATION LIGHTS		LUMP
SPECIAL	62598200	LUMP	SUM	LIGHTING, MISC.: REPAIR OF EXISTING TRAFFIC GATES AND OVERHEAD SIGNS		
						LUMP
SPECIAL	62598200	LUMP	SUM	LIGHTING, MISC.: REPAIR OF EXISTING ELECTRICAL EQUIPMENT		
SPECIAL	62598200	LUMP	SUM	LIGHTING, MISC.: REPAIR OF EXISTING CONTROL PANELS		
SPECIAL	10000300	LUMP	SUM	PREMIUM ON RAILROAD'S PROTECTIVE PUBLIC LIABILITY AND PROPERTY DAMAGE LIABILITY INSURANCE		LUMP
						LUMP
SPECIAL	51922400	1050	SQ. YD.	SURFACE PREPARATION USING HYDRODEMOLITION *		
SPECIAL	51922134	110	SQ. YD.	HAND CHIPPING *		LUMP
SPECIAL	51922300	LUMP	SUM	TEST SLAB *		
						LUMP
						LUMP

ITEM 513 STRUCTURAL STEEL FOR REHABILITATION, AS PER PLAN

DESCRIPTION: THE WORK SHALL CONSIST OF REPLACING DETERIORATED STRUCTURAL STEEL BY FURNISHING AND PLACING STEEL MEMBERS (PLATES, BARS, AND/OR ROLLED SHAPES) AND CONNECTIONS IN ACCORDANCE WITH ITEM 513 AND AS DIRECTED BY THE ENGINEER. TYPICAL REPAIR AREAS INCLUDE, BUT ARE NOT LIMITED TO, THE GATE HOUSE STRUCTURES, THE BASCULE PIER JOINT ARMOR ADJACENT TO THE PROPOSED GIRDER SLOT ARMOR, etc...

THE PROVISIONS OF THE STRUCTURAL STEEL MISCELLANEOUS NOTE ON SHEET 6/126 APPLY TO THIS ITEM, EXCEPT THAT SHOP DRAWINGS ARE NOT REQUIRED. AISC CERTIFICATION IS NOT REQUIRED; HOWEVER, THE CONTRACTOR SHALL PROVIDE PROOF THAT THE STEEL IS FROM A DOMESTIC SOURCE.

EXISTING CONTACT STEEL SURFACES SHALL BE PREPARED AS DIRECTED BY THE ENGINEER. THE PROPOSED STEEL SHALLBE ATTACHED BY WELDING OR BOLTING AS APPROVED BY THE ENGINEER. ALL WELDING SHALL BE PREFORMED BY AN ODOT CERTIFIED WELDER IN ACCORDANCE WITH CMS ITEM 513. NON-DESTRUCTIVE TESTING OF WELDS WILL BE LIMITED TO VISUAL INSPECTION.

ALL REPAIR AND REPLACEMENT WORK SHALL BE DONE IN AN EFFORT TO MATCH ORIGINAL CONFIGURATIONS.

ALL NECESSARY REMOVALS OF EXISTING STEEL, WELDS, RIVETS, BOLTS, etc. WILL BE PAID AS INDICATED IN THE PLANS.

ALL PROPOSED STRUCTURAL STEEL SHALL BE ABRASIVELY CLEANED IN THE SHOP. SHOP PAINTING IS NOT REQUIRED. AFTER INSTALLATION OF ALL PROPOSED STRUCTURAL STEEL, THE STEEL SHALL BE CONSIDERED EXISTING STEEL AND PAINTED WITH THE SAME PAINT SYSTEM USED TO PAINT EXISTING STEEL ON THE BRIDGE. THE PAINTINGCOST SHALL BE INCLUDED WITH THE RESPECTIVE ITEM 815 OZEU PAINT ITEMS.

A QUANTITY OF 45,000 POUNDS OF STRUCTURAL STEEL FOR REHABILITATION HAS BEEN ESTIMATED FOR USE IN THIS ITEM. MATERIAL SHALL NOT BE ORDERED UNTIL DIRECTED BY THE ENGINEER.

PAYMENT FOR THIS ITEM SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THE REHABILITATION OF THE STRUCTURAL STEEL. PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE BID FORPOUNDS OF STRUCTURAL STEEL USED.

ITEM 513 REWELD BROKEN OPEN GRID DECK CONNECTIONS

DESCRIPTION: THE WORK SHALL CONSIST OF REPAIRING BROKEN WELDS ON THE EXISTING GRID DECK AS DIRECTED BY THE ENGINEER.

ALL EXISTING WELD MATERIAL AT THE CONNECTION TO BE REWELDED SHALL BE COMPLETELY REMOVED BY GRINDING. THE CONNECTION SHALL THEN BE PREPARED AND WELED AS SHOWN ON SHEET 68A/126. ALL WORK SHALL BE PERFORMED BY AN ODOT CERTIFIED WELDER IN ACCORDANCE WITH CMS ITEM 513. NON-DESTRUCTIVE TESTING OF WELDS WILL BE LIMITED TO VISUAL INSPECTION.

AN ESTIMATED NUMBER OF 2000 LOCATIONS ARE TO BE REWELDED.

PAYMENT FOR THIS ITEM SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THE REWELDING OF THE BROKEN GRID DECK CONNECTIONS. PAYMENT SHALL BE MADE FOR EACH LOCATION WHERE WORK OCCURS AT THE CONTRACT UNIT PRICE BID.

J:\PC9\DGN\280-SUMS.DGN

DESIGNED | DRAWN | REVIEWED | DATE
CHECKED | REVISED | STRUCTURE FILE NUMBER 480917

ESTIMATED QUANTITIES
BRIDGE NUMBER LUC-280-0346 OVER MAUMEE RIVER
LUC - 280
5A/126

GENERAL NOTES

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) 1992, INCLUDING THE 1993 INTERIM SPECIFICATIONS AND THE OHIO "SUPPLEMENT" TO THESE SPECIFICATIONS.

REFERENCE:

DETAILED DRAWINGS OF THE EXISTING STRUCTURE MAY BE INSPECTED IN THE DISTRICT 2 OFFICE OF THE OHIO DEPARTMENT OF TRANSPORTATION (ODOT), 317 EAST POE ROAD, BOWLING GREEN, OHIO.

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:

REFERENCE SHALL BE MADE TO THE FOLLOWING STANDARD DRAWINGS:

AS-1-81	DATED 9-15-94
BP-2.3	DATED 2-21-92
EXJ-4-87	DATED 11-12-93
GR-3.1	DATED 5-6-91
GR-3.2	DATED 5-6-91
MC-9.2	DATED 5-6-91
PCB-91	DATED 4-24-92

AND SUPPLEMENTAL SPECIFICATIONS:

815	DATED 7-17-95
910	DATED 7-17-95

DESIGN DATA:

CONCRETE:

CLASS S CONCRETE, SUPERSTRUCTURE - COMPRESSIVE STRENGTH 4,500 POUNDS PER SQUARE INCH (PSI).

CLASS C CONCRETE - COMPRESSIVE STRENGTH 4,000 PSI(SUBSTRUCTURE).

REINFORCING STEEL:

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) A615, A616, OR A617

GRADE 60 - UNIT STRESS 24,000 PSI

STRUCTURAL STEEL:

ASTM A572 - UNIT STRESS 27,000 PSI
ASTM A36 - UNIT STRESS 20,000 PSI

PROPOSED WORK:

(SHALL CONSIST OF, BUT NOT BE LIMITED TO, THE FOLLOWING)

1. REPLACE CENTER LOCKS IN BASCULE SPAN 5.
2. REPLACE ALL CONCRETE DECK SLABS.
3. REPLACE ALL APPROACH SPAN CONCRETE.
4. REMOVE TOP OF BASCULE PIERS USING HYDRODEMOLITION AND PLACE A MICRO-SILICA MODIFIED CONCRETE OVERLAY.
5. REWELD BROKEN GRID DECK CONNECTIONS IN SPAN 5.
6. REPLACE CONCRETE IN FILLED GRID DECK IN SPAN 5.
7. REPLACE THE FINGER JOINTS.
8. REPLACE EXISTING DECK JOINTS WITH STRIP SEAL TYPE JOINTS AT LOCATIONS SHOWN ON THE PLANS.
9. REPLACE STEEL SAFETY CURB WITH CONCRETE BARRIER BETWEEN ROADWAY AND SIDEWALK THE LENGTH OF THE BRIDGE.
10. REPLACE EXISTING CONCRETE MEDIAN BARRIER.
11. STRUCTURAL STEEL REHABILITATION INCLUDING:
    - A. RETROFIT SHARP REENTRANT CORNERS TO STRINGER WEB COPES.
    - B. REPLACE GUSSET PLATES.
    - C. REMOVE FATIGUE PRONE DETAILS.
    - D. REPLACE WIND LOCK.
    - E. REPLACE LOWER LATERAL BRACING MEMBERS AND STRUTS.
    - F. REHABILITATE BEARINGS.
    - G. REPLACE AND REPAIR DAMAGED INSPECTION HANDRAIL.
    - H. REHABILITATE PINION SUPPORTS.
    - I. REPLACE LIVE LOAD ANCHOR BEARING PLATES.
    - J. REPLACE ARMOR AROUND OPENINGS FOR THE BASCULE GIRDERS THROUGH THE CONCRETE DECK AT PIERS 4 AND 5.
    - K. REHABILITATE STRUCTURAL STEEL: GATE HOUSES, JOINT ARMOR, ETC...
12. PAINT ALL AREAS AS FOLLOWS:
    - A. ALL STRUCTURAL STEEL, CORRODED CONDUIT, JUNCTION BOXES, COUNTERWEIGHT BRACING, AND MACHINERY INSIDE PIERS 4 AND 5.
    - B. ALL AREAS OF PACK RUST AND CORROSION AS SHOWN ON THE PAINTING SHEETS.
    - C. RETROFITTED AREAS IN ITEM 10 ABOVE.
    - D. ALL STRINGER BEARINGS IN SPAN 5.
    - E. CORRODED CONDUIT AND DECK LIGHTING ABOVE BRIDGE DECK.
    - F. RUSTED CATWALK CONNECTIONS.
13. REPLACE OVER-THE-SIDE DRAINAGE WITH SCUPPERS, DOWNSPOUTS, AND DRAIN PIPES WHERE NEW CONCRETE BARRIERS ARE ADDED.
14. REPLACE ABOVEGROUND DRAINAGE IN SPANS 7 THROUGH 10, RAMP E-E, AND RAMP X USING VERTICAL DRAIN PIPES DISCHARGING THROUGH CATCH BASINS INTO EXISTING STORM SEWER SYSTEM.
15. REPLACE DRAINAGE SYSTEM BENEATH GIRDER OPENINGS IN SLABS AT BASCULE PIERS 4 AND 5.
16. REPLACE GIRDER SLOT ARMOR AT BASCULE PIERS 4 AND 5.
17. INSTALL STEEL SAFETY PARAPETS IN BASCULR SPAN 5.
18. REHABILITATE ABUTMENT E-E BY EXCAVATING EXISTING BACKFILL MATERIAL TO TOP OF FOOTING LEVEL, REPLACING DRAINAGE SYSTEM, BACKFILLING WITH ENGINEERED FILL, AND PLACING NEW APPROACH PAVEMENT.
19. INSTALL PRESSURE RELIEF JOINT IN NORTH ABUTMENT APPROACH PAVEMENT.
20. REMOVE DOOR AT BOTTOM OF SOUTH ABUTMENT AND CLOSE OPENING WITH REINFORCED CONCRETE. INSTALL MANHOLE IN SIDEWALK.
21. SEAL INSIDE OF BASCULE PIERS 4 AND 5 WHERE INDICATED ON PLANS.
22. FENDER RESTORATION AT PIERS 4 AND 5.
23. REPLACE WINDOW FRAMES IN OPERATING TOWER OF BASCULE PIER 5.
24. NEW ROADWAY STRIPING.

PROTECTION OF TRAFFIC:

PRIOR TO DEMOLITION OF ANY PORTIONS OF THE EXISTING SUPERSTRUCTURE, THE CONTRACTOR SHALL SUBMIT HIS PLANS FOR THE PROTECTION OF TRAFFIC (VEHICULAR, PEDESTRIAN, BOAT, ETC.) ADJACENT TO AND/OR UNDER THE STRUCTURE TO THE DIRECTOR FOR APPROVAL. THESE PLANS SHALL INCLUDE PROVISIONS FOR ANY DEVICES AND STRUCTURES THAT MAY BE NECESSARY TO ENSURE SUCH PROTECTION. TEMPORARY VERTICAL CLEARANCES SPECIFIED ON THE PLANS OR IN THE PROPOSAL SHALL BE MAINTAINED AT ALL TIMES EXCEPT AS OTHERWISE APPROVED BY THE DIRECTOR.

ALL OF THE ABOVE SHALL BE PAID FOR AT THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC.

EXISTING STRUCTURE VERIFICATION:

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK, BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02, AND 513.02.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID 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.

REPLACEMENT OF EXISTING REINFORCING STEEL:

ANY EXISTING REINFORCING BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND WHICH ARE MADE UNUSABLE BY CONCRETE REMOVAL OPERATIONS SHALL BE REPLACED WITH NEW STEEL AT NO COST TO THE STATE. ANY EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION SHALL BE REPLACED WITH NEW STEEL. AN ALLOWANCE OF 500 POUNDS IS INCLUDED IN ITEM 509 FOR THIS PURPOSE, LISTED IN THE "GENERAL" COLUMN OF THE ESTIMATED QUANTITIES TABLE.

MASTER BENCH MARK:

CITY BENCH MARK NO. 1112 AT ASH STREET BRIDGE NORTHWEST END OF BRIDGE. BRASS BENCH MARK PLATE SET IN NORTHWEST END OF NORTH RETAINING WALL, 28 FEET SOUTHEAST OF NEWEL POST ON NORTH SIDE OF

BRIDGE AT SUMMIT STREET END OF RAILING - ELEVATION 601.615 FEET ABOVE MEAN SEAL LEVEL.

TEMPORARY RAILING:

FURNISHING, INSTALLING, MAINTAINING, AND REMOVING TEMPORARY RAILING, INCLUDING THE COMPLETE OR PARTIAL OF ANCHOR REMOVAL OF ANCHOR HARDWARE AND THE FILLING OF THE ANCHOR VOIDS WITH NONSHRINKING GROUT, SHALL BE INCLUDED IN ITEM 614 (ROADWAY PLAN) FOR PAYMENT.

STRUCTURAL STEEL MISCELLANEOUS:

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. THE FABRICATOR SHALL FURNISH A 35-MILLIMETER (MM) MICROFILM COPY OF EACH SHOP DRAWING, WHICH SHALL BE MOUNTED ON AN APERTURE CARD AS SPECIFIED IN 501.05.

STEEL MEMBERS INCLUDED IN THIS ITEM:

STRUCTURAL STEEL, MISC.:	GUSSET PLATES
	WIND LOCK
	LOWER LATERAL BRACING
	LOWER LATERAL BRACING STRUTS
	STRUT GUSSETS
	INSPECTION HANDRAIL
	PINION SUPPORTS
	LIVE LOAD ANCHOR BEARING PLATES
	ARMOR AT BASCULE GIRDER OPENINGS

"STRUCTURAL STEEL, MISC.:" ITEMS NOT INCLUDED IN THIS LIST WILL REQUIRE SHOP DRAWINGS.

HIGH STRENGTH BOLTS:

SHALL BE 7/8-INCH DIAMETER A325, GALVANIZED, UNLESS OTHERWISE NOTED.

SEALING WITH HMWM RESIN:

AFTER DECK SLAB CONCRETE HAS BEEN DRY AIR CURED FOR NOT LESS THAN 7 DAYS, AND IMMEDIATELY AFTER A MINIMUM 48-HOUR PERIOD WITHOUT PRECIPITATION, VERTICAL CONSTRUCTION JOINTS IN THE DECK SLAB, HORIZONTAL JOINTS AT AND ADJACENT TO THE ROADWAY SURFACE (AT THE BASE OF SIDEWALKS, CURBS, BARRIERS, ETC.), AND CRACKS IN THE ROADWAY SURFACE THAT ARE VISIBLE TO THE UNAIDED EYE, SHALL BE SEALED WITH A HIGH MOLECULAR WEIGHT METHACRYLATE (HMWM) RESIN AS DESCRIBED IN THE HMWM PROPOSAL NOTE. SEALANT SHALL BE APPLIED BY BRUSH, SPRAY, OR OTHER SUITABLE APPLICATOR ALONG THE SURFACE OF JOINTS AND CRACKS. IF NECESSARY, MULTIPLE APPLICATIONS SHALL BE MADE UNTIL COMPLETE PENETRATION HAS BEEN ACHIEVED. AFTER SEALANT HAS BEEN CURED, IT SHALL BE SANDED AS SPECIFIED TO ROUGHEN THE SEALANT SURFACE AND RESTORE ITS SUITABILITY FOR VEHICULAR

CALCULATED | CHECKED

GENERAL NOTES - 1
BRIDGE No. LUC-280-0346 OVER MAUMEE RIVER

LUC - 280

6/126

J:\PC9\DGN\GENOTES1.DGN

TRAFFIC. FOR OVERCOATING WITH A CONCRETE SURFACE SEALANT OR AS PREPARATION FOR A CONCRETE OVERLAY, TREATED SURFACES SHALL BE ROUGHENED BY ABRASIVE BLASTING AND OTHERWISE CLEANED AS SPECIFIED FOR THE SUBSEQUENT APPLICATION. SEALING CONSTRUCTION JOINTS AND CRACKS, AS DESCRIBED ABOVE, SHALL BE INCLUDED WITH THE DECK SLAB CONCRETE FOR PAYMENT.

REMOVALS OVER WATER:

REASONABLE CARE SHALL BE USED BY THE CONTRACTOR TO PREVENT REMOVED MATERIALS FROM FALLING INTO THE WATER. ANY DROPPED MATERIALS SHALL BE IMMEDIATELY RECOVERED AND DISPOSED OF AWAY FROM THE SITE. REFER TO 104.06 OF THE ODOT CMS FOR ADDITIONAL REQUIREMENTS.

EXISTING REINFORCING STEEL:

PARTIALLY EXPOSED BY CONCRETE REMOVAL SHOULD BE LEFT IN PLACE, EXCEPT THAT IT SHALL BE BENT AS NECESSARY TO CLEAR PROPOSED CONCRETE SURFACES BY AT LEAST 2 INCHES.

PAINTING OF STRUCTURAL STEEL, MISC.:

NEW STEEL SHALL BE CLEANED AND IT SHALL BE PRIME PAINTED IN THE FIELD. AT THE CONTRACTOR'S OPTION, NEW STEEL MAY BE GIVEN A PRELIMINARY CLEANING IN THE SHOP. THE COST OF CLEANING AND PRIME PAINTING SHALL BE INCLUDED IN THE SEVERAL OZEU ITEMS.

REINFORCING BAR SPLICE LENGTHS:

SHALL CONFORM TO 509.08 UNLESS OTHERWISE SHOWN OR NOTED ON THE PLANS.

CUT LINE CONSTRUCTION JOINT PREPARATION:

SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. WHERE PRACTICABLE, THE EXISTING REINFORCING STEEL WHERE REQUIRED IN THE PLANS SHALL BE LEFT IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACE AND EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THEN, THE JOINT SURFACE AND EXPOSED REINFORCEMENT SHALL BE THOROUGHLY CLEANED OF ALL DIRT, DUST, OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. CONCRETE BONDING SURFACES SHALL BE SATURATED SURFACE DRY AS CONCRETE IS PLACED.

CONCRETE PARAPETS AND MEDIAN DEFLECTION JOINT SAWCUT:

AS SOON AS A CONCRETE SAW CAN BE OPERATED WITHOUT DAMAGING THE FRESHLY PLACED CONCRETE, 1INCH DEEP CONTROL JOINTS SHALL BE SAWED INTO THE PERIMETER OF THE CONCRETE PARAPET TO THE LIMITS DESIGNATED ON THE PLANS. THE SAWCUTS SHALL BE PLACED AT INTERVALS AS SHOWN ON THE PARAPET AND MEDIAN ELEVATION SHEETS 53 THROUGH 60. THE USE OF AN EDGE GUIDE, FENCE, OR JIG IS REQUIRED TO INSURE THAT THE CUT JOINT IS STRAIGHT, TRUE, AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL 1/4 INCH WIDTH. THE PERIMETER OF THE DEFLECTION CONTROL JOINT SHALL BE SEALED TO A MINIMUM OF 1INCH WITH A CAULKING MATERIAL CONFORMING TO FEDERAL SPECIFICATION, TT-S-00227E.

DEFLECTION JOINT SAWCUT AND CAULKING MATERIAL ARE INCLUDED WITH ITEM 511 CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN, FOR PAYMENT.

GLARE SCREEN:

GLARE SCREEN SHALL BE PROVIDED ALONG THE FULL LENGTH OF THE PROPOSED MEDIAN EXCEPT THE MEDIANS LOCATED ON EACH BASULE PIERS. THIS ITEM IS INCLUDED UNDER MAINTENANCE OF TRAFFIC PLANS SHEET 111/126.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN:

SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND SHALL BE IN ACCORDANCE WITH 202. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND NOT SPECIFICALLY INCLUDED IN OTHER ITEMS FOR PAYMENT AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. ITEMS SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING: MISCELLANEOUS CLIP ANGLES WELDED TO SUPERSTRUCTURE (SUPERSTRUCTURE MEMBERS SHALL BE GROUND SMOOTH AT THE WELDED LOCATIONS). CARE SHALL BE TAKEN DURING DECK REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. THE USE OF EXPLOSIVES, HEADACHE BALLS, AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. ALL WORK SHALL BE DONE IN A MANNER THAT WILL NOT CUT, ELONGATE, OR DAMAGE THE EXISTING REINFORCING STEEL TO BE SALVAGED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

WHERE PAYMENT FOR REMOVING MATERIAL IS INCLUDED IN OTHER ITEMS, SUCH REMOVALS SHALL CONFORM WITH THE PROVISIONS OF 202 IN ALL RESPECTS.

ITEM SPECIAL (451) - PRESSURE RELIEF JOINT

DESCRIPTION: THE WORK SHALL CONSIST OF ADDING A PRESSURE RELIEF JOINT IN THE ROADWAY PAVEMENT AT THE NORTH ABUTMENT.

MATERIALS:

CONCRETE, CLASS C	499 AND 511
REINFORCING STEEL, EPOXY, GRADE 60	509.02
ASPHALT CONCRETE	402 OR 404
UNDERDRAIN	605 AND 707.01 OR 707.21
CRUSHED AGGREGATE SLOPE PROTECTION	601.06
FORMS	515.05
DOWEL HOLES	510
REMOVAL OF STRUCTURE	202

PRESSURE RELIEF JOINT FILLER - PRESSURE RELIEF JOINT FILLER FOR THE MEDIAN BARRIER SHALL BE 8 INCHES THICK AND BE COMPOSED OF A CLOSED-CELL POLYETHYLENE FOAM. THE FILLER SHALL BE PREFABRICATED FROM APPROVED SHOP DRAWINGS. IT SHALL EXTEND FROM THE BOTTOM OF THE BARRIER UP AND LATERALLY TO WITHIN 3/4 INCHES OF THE BARRIER SURFACE. TWO THICKNESSES OF 4 INCH PLANK MAY BE SHOP BONDED TOGETHER IN LIEU OF A SINGLE 8 INCH THICKNESS. THE FILLER MAY BE CAST-IN-PLACE OR BE INSERTED INTO THE BARRIER JOINT WITH THE AID OF A LUBRICANT. HOWEVER, FILLER SHALL NOT BE INSTALLED UNTIL AFTER THE ASPHALT CONCRETE OF THE ROADWAY JOINT HAS BEEN PLACED. ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO ACHIEVE AN ACCEPTABLE RELIEF JOINT INSTALLATION SHALL BE INCLUDED WITH PRESSURE RELIEF JOINT, TYPE A FOR PAYMENT.

PROPOSED WORK:

1. REMOVE EXISTING MEDIAN BARRIER AND ROADWAY PAVEMENT TO LIMITS SHOWN ON PLANS FOR STAGE I REMOVAL.
2. EXCAVATE 2' UNDER EXISTING APPROACH SLAB TO REQUIRED DEPTH. CLEAN UNDERSIDE OF APPROACH SLAB OF FOREIGN MATERIALS AND PROVIDE A ROUGH SURFACE.
3. EXCAVATE, AS REQUIRED, TO INSTALL UNDERDRAIN.
4. INSTALL UNDERDRAIN TO SPECIFIED REQUIREMENTS ON PLANS.
5. CONSTRUCT SLEEPER SLAB.
6. CONSTRUCT ROADWAY PAVEMENT AND PRESSURE RELIEF JOINT.
7. REMOVE ROADWAY PAVEMENT TO LIMITS SHOWN ON PLANS FOR STAGE II REMOVAL.
8. REPEAT STEPS 2 THROUGH 6 FOR STAGE II.

MEASUREMENT OF THE PRESSURE RELIEF JOINT FOR PAY PURPOSES SHALL BE ALONG THE CENTERLINE OF THE JOINT, CURB TO CURB. PAYMENT SHALL BE PER LINEAR FOOT FOR ITEM SPECIAL, PRESSURE RELIEF JOINT WHICH SHALL INCLUDE ALL WORK AND MATERIALS NECESSARY TO COMPLETE THE JOINT EXCEPT FOR THE PIPE UNDERDRAIN. THE UNDERDRAIN SHALL BE PAID FOR PER LINEAR FOOT OF ITEM 605, 6" SHALLOW PIPE UNDERDRAINS, AS PER PLAN, 707.01 OR 707.21 AND SHALL INCLUDE, BUT NOT BE LIMITED TO, ALL NECESSARY LABOR, CORING AND GROUTING WINGWALL, CRUSHED AGGREGATE SLOPE PROTECTION, ANIMAL GUARD, PIPE UNDERDRAIN AND SUBBASE MATERIAL.

ITEM SPECIAL (512) - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) BUFF.

A CONCRETE EPOXY URETHANE SEALER SHALL BE APPLIED TO, BUT NOT LIMITED TO, EXPOSED MEDIAN BARRIER AND PARAPET SURFACES, THE TOP SURFACE OF THE COUNTERWEIGHTS IN PIERS 4 AND 5 AND THE REMAINDER OF THE WALLS IN PIERS 4 AND 5 NOT PREVIOUSLY SEALED, AS SHOWN ON THE PLANS. SEE PROPOSAL NOTE FOR OTHER SURFACE PREPARATIONS, REQUIREMENTS, MATERIAL REQUIREMENTS, AND APPLICATION RATES.

ITEM 513 - STRUCTURAL STEEL, MISC.: LOWER LATERAL BRACING REPLACEMENT

MATERIALS: ALL STEEL SHALL BE AASHTO M270 GRADE 50. ALL BOLTS SHALL BE GALVANIZED ASTM A325 HIGH STRENGTH.

PROCEDURE:

1. MAKE THE NECESSARY FIELD MEASUREMENTS REQUIRED BY THE FABRICATOR TO FABRICATE THE PROPOSED LOWER LATERAL BRACING REPLACEMENT PIECES.
2. TEMPORARILY SUPPORT STRUCTURAL STEEL MEMBERS ADJACENT TO LOWER LATERAL BRACING TO BE REMOVED.
3. REMOVE EXISTING LOWER LATERAL BRACING AS SHOWN ON THE PLANS. ONLY ONE MEMBER AT A TIME SHALL BE REMOVED AND REPLACED. REMOVE ANY EXISTING TACK WELD METAL.
4. FIELD DRILL PROPOSED LOWER LATERAL BRACING MEMBER TO MATCH EXISTING BOLT (OR RIVET) PATTERN.
5. INSTALL THE PROPOSED LOWER LATERAL BRACING USING 7/8-INCH-DIAMETER HIGH STRENGTH BOLTS.

PAINTING: ALL PROPOSED STRUCTURAL STEEL SHALL BE ABRASIVELY CLEANED IN THE SHOP. SHOP PAINTING IS NOT REQUIRED. AFTER INSTALLATION OF ALL PROPOSED STRUCTURAL STEEL, THE STEEL SHALL BE CONSIDERED EXISTING STEEL AND PAINTED WITH THE SAME PAINT SYSTEM USED TO PAINT EXISTING STEEL ON THE BRIDGE. THE PAINTING COST SHALL BE INCLUDED WITH THE RESPECTIVE PAINT ITEMS.

METHOD OF MEASUREMENT: MEASUREMENT FOR PAY PURPOSES SHALL BE BASED ON THE NUMBER OF LOCATIONS WHERE LOWER LATERAL BRACING MEMBERS ARE TO BE REPLACED AS INDICATED ON THE DRAWINGS. THIS PAY ITEM SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE WORK WHICH INCLUDES, BUT IS NOT LIMITED TO: REMOVAL OF LOWER LATERAL BRACING, FIELD DRILLING BOLT HOLES, INSTALLATION OF PROPOSED LOWER LATERAL BRACING, BOLTS, NUTS, AND WASHERS.

BASIS OF PAYMENT: PAYMENT SHALL BE MADE PER EACH LOCATION WHERE WORK OCCURS AT THE CONTRACT UNIT PRICE BID.

ITEM 513 - STRUCTURAL STEEL, MISC.: GUSSET PLATE REPLACEMENT

MATERIALS: ALL STEEL SHALL BE AASHTO M270 GRADE 50. ALL BOLTS SHALL BE GALVANIZED ASTM A325 HIGH STRENGTH.

PROCEDURE:

1. MAKE THE NECESSARY FIELD MEASUREMENTS REQUIRED BY THE FABRICATOR TO FABRICATE THE PROPOSED GUSSET PLATES TO MATCH THE SHAPES OF EXISTING PLATES.
2. TEMPORARILY SUPPORT STRUCTURAL STEEL MEMBERS ADJACENT TO THE GUSSET PLATE TO BE REMOVED.
3. REMOVE EXISTING GUSSET PLATES AS SHOWN ON THE PLANS. ONLY ONE PLATE SHALL BE REMOVED AND REPLACED AT A TIME. REMOVE ANY EXISTING TACK WELD METAL.
4. FIELD DRILL PROPOSED GUSSET PLATE TO MATCH EXISTING BOLT HOLE (OR RIVET) PATTERN.
5. INSTALL THE PROPOSED GUSSET PLATE USING 7/8-INCH-DIAMETER HIGH STRENGTH BOLTS.

DESIGNED RWM | DRAWN GTO | REVIEWED RKM | DATE 2-14-96
CHECKED JMD | REVISED SAA | STRUCTURE FILE NUMBER 4805917

GENERAL NOTES - 2
BRIDGE No. LUC-280-0346 OVER MAUMEE RIVER
LUC - 280
7/126

J:\PC9\DGN\GENOTES2.DGN 4-8-96 12:30 P.M. E.S.T. REVISED

PAINTING: ALL PROPOSED STRUCTURAL STEEL SHALL BE ABRASIVELY CLEANED IN THE SHOP. SHOP PAINTING IS NOT REQUIRED. AFTER INSTALLATION OF ALL PROPOSED STRUCTURAL STEEL, THE STEEL SHALL BE CONSIDERED EXISTING STEEL AND PAINTED WITH THE SAME PAINT SYSTEM USED TO PAINT EXISTING STEEL ON THE BRIDGE. THE PAINTING COST SHALL BE INCLUDED WITH THE RESPECTIVE PAINT ITEMS.

METHOD OF MEASUREMENT: MEASUREMENT FOR PAY PURPOSES SHALL BE BASED ON THE NUMBER OF LOCATIONS WHERE GUSSET PLATES ARE TO BE REPLACED AS INDICATED ON THE DRAWINGS. THIS PAY ITEM SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE WORK WHICH INCLUDES, BUT IS NOT LIMITED TO: REMOVAL OF GUSSET PLATE, FIELD DRILLING BOLT HOLES, INSTALLATION OF PROPOSED GUSSET PLATE, BOLTS, NUTS, AND WASHERS.

BASIS OF PAYMENT: PAYMENT SHALL BE MADE PER EACH LOCATION WHERE WORK OCCURS AT THE CONTRACT UNIT PRICE BID.

ITEM 513 - STRUCTURAL STEEL, MISC.: LOWER LATERAL BRACING STRUT REPLACEMENT

MATERIALS: ALL STEEL SHALL BE AASHTO M270 GRADE 50. ALL BOLTS SHALL BE GALVANIZED ASTM A325 HIGH STRENGTH.

PROCEDURE:

1. MAKE THE NECESSARY FIELD MEASUREMENTS REQUIRED BY THE FABRICATOR TO FABRICATE THE PROPOSED LOWER LATERAL BRACING STRUTS.
2. TEMPORARILY SUPPORT STRUCTURAL STEEL MEMBERS ADJACENT TO LOWER LATERAL BRACING STRUTS TO BE REMOVED.
3. REMOVE EXISTING LOWER LATERAL BRACING STRUTS AS SHOWN ON THE PLANS. ONLY ONE STRUT SHALL BE REMOVED AND REPLACED AT ANY ONE TIME. REMOVE ANY EXISTING TACK WELD METAL.
4. FIELD DRILL PROPOSED LOWER LATERAL BRACING STRUT MEMBER TO MATCH EXISTING BOLT HOLE (OR RIVET) PATTERN.
5. INSTALL THE PROPOSED LOWER LATERAL BRACING STRUT USING 7/8-INCH-DIAMETER HIGH STRENGTH BOLTS.

PAINTING: ALL PROPOSED STRUCTURAL STEEL SHALL BE ABRASIVELY CLEANED IN THE SHOP. SHOP PAINTING IS NOT REQUIRED. AFTER INSTALLATION OF ALL PROPOSED STRUCTURAL STEEL, THE STEEL SHALL BE CONSIDERED EXISTING STEEL AND PAINTED WITH THE SAME PAINT SYSTEM USED TO PAINT EXISTING STEEL ON THE BRIDGE. THE PAINTING COST SHALL BE INCLUDED WITH THE RESPECTIVE PAINT ITEMS.

METHOD OF MEASUREMENT: MEASUREMENT FOR PAY PURPOSES SHALL BE BASED ON THE NUMBER OF LOCATIONS WHERE LOWER LATERAL BRACING STRUTS ARE TO BE REPLACED AS INDICATED IN THE DRAWINGS. THIS PAY ITEM SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE WORK WHICH INCLUDES, BUT IS NOT LIMITED TO: REMOVAL OF LOWER LATERAL BRACING STRUTS, FIELD DRILLING BOLT HOLES, INSTALLATION OF PROPOSED LOWER LATERAL BRACING STRUTS, BOLTS, NUTS, AND WASHERS.

BASIS OF PAYMENT: PAYMENT SHALL BE MADE PER EACH LOCATION WHERE WORK OCCURS AT THE CONTRACT UNIT PRICE BID.

ITEM 513 - STRUCTURAL STEEL, MISC.: STRUT GUSSET PLATE REPLACEMENT

MATERIALS: ALL STEEL SHALL BE AASHTO M270 GRADE 50. ALL BOLTS SHALL BE GALVANIZED ASTM A325 HIGH STRENGTH.

PROCEDURE:

1. MAKE THE NECESSARY FIELD MEASUREMENTS REQUIRED BY THE FABRICATOR TO FABRICATE THE PROPOSED STRUT GUSSET PLATES.
2. TEMPORARILY SUPPORT STRUCTURAL STEEL MEMBERS ADJACENT TO STRUT GUSSET PLATES TO BE REMOVED.
3. REMOVE EXISTING STRUT GUSSET PLATE AS SHOWN ON THE PLANS. ONLY ONE PLATE SHALL BE REMOVED AND REPLACED AT ANY ONE TIME. REMOVE ANY EXISTING TACK WELD METAL.
4. FIELD DRILL PROPOSED STRUT GUSSET PLATE MEMBER TO MATCH EXISTING BOLT (OR RIVET) PATTERN.
5. INSTALL THE PROPOSED STRUT GUSSET PLATE USING 7/8-INCH-DIAMETER HIGH STRENGTH BOLTS.

PAINTING: ALL PROPOSED STRUCTURAL STEEL SHALL BE ABRASIVELY CLEANED IN THE SHOP. SHOP PAINTING IS NOT REQUIRED. AFTER INSTALLATION OF ALL PROPOSED STRUCTURAL STEEL, THE STEEL SHALL BE CONSIDERED EXISTING STEEL AND PAINTED WITH THE SAME PAINT SYSTEM USED TO PAINT EXISTING STEEL ON THE BRIDGE. THE PAINTING COST SHALL BE INCLUDED WITH THE RESPECTIVE PAINT ITEMS.

METHOD OF MEASUREMENT: MEASUREMENT FOR PAY PURPOSES SHALL BE BASED ON THE NUMBER OF LOCATIONS WHERE STRUT GUSSET PLATES ARE TO BE REPLACED AS INDICATED ON THE DRAWINGS. THIS PAY ITEM SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE WORK WHICH INCLUDES, BUT IS NOT LIMITED TO: REMOVAL OF STRUT GUSSET PLATES, FIELD DRILLING BOLT HOLES, INSTALLATION OF PROPOSED STRUT GUSSET PLATES, BOLTS, NUTS, AND WASHERS.

BASIS OF PAYMENT: PAYMENT SHALL BE MADE PER EACH LOCATION WHERE WORK OCCURS AT THE CONTRACT UNIT PRICE BID.

ITEM 513 - STRUCTURAL STEEL, MISC.: STRINGER COPE ROUNDING DETAIL

PROCEDURE:

1. DRILL HOLE AT SQUARE COPE.
2. TRANSITION WEB FROM TOP FLANGE TO HOLE.
3. GRIND SMOOTH ALL MODIFIED SURFACES.

METHOD OF MEASUREMENT: MEASUREMENT FOR PAYMENT PURPOSES SHALL BE BASED ON THE NUMBER OF STRINGER COPES ROUNDED. THIS PAY ITEM SHALL INCLUDE ALL LABOR AND EQUIPMENT NECESSARY TO COMPLETE THE WORK WHICH INCLUDES, BUT IS NOT LIMITED TO: DRILLING HOLE AT COPE, TRANSITIONING THE WEB FROM THE TOP FLANGE TO THE EDGE OF THE HOLE, AND GRINDING SMOOTH ALL MODIFIED SURFACES.

BASIS OF PAYMENT: PAYMENT WILL BE MADE FOR EACH COPE REPAIRED AT THE CONTRACT UNIT PRICE BID.

ITEM 513 - STRUCTURAL STEEL, MISC.: SPLICE PLATE REPLACEMENT

MATERIALS: ALL STEEL SHALL BE AASHTO M270 GRADE 50. ALL BOLTS SHALL BE GALVANIZED ASTM A325 HIGH STRENGTH.

PROCEDURE:

1. MAKE THE NECESSARY FIELD MEASUREMENTS REQUIRED BY THE FABRICATOR TO FABRICATE THE PROPOSED SPLICE PLATE REPLACEMENT PIECE.
2. TEMPORARILY SUPPORT STRUCTURAL STEEL MEMBERS ADJACENT TO THE SPLICE PLATE TO BE REMOVED.
3. REMOVE EXISTING SPLICE PLATE AS SHOWN ON THE PLANS. REMOVE ANY EXISTING TACK WELD METAL.
4. FIELD DRILL PROPOSED SPLICE PLATE TO MATCH EXISTING BOLT HOLE (OR RIVET) PATTERN.
5. INSTALL THE PROPOSED SPLICE PLATE USING 7/8-INCH-DIAMETER HIGH STRENGTH BOLTS.

PAINTING: ALL PROPOSED STRUCTURAL STEEL SHALL BE ABRASIVELY CLEANED IN THE SHOP. SHOP PAINTING IS NOT REQUIRED. AFTER INSTALLATION OF ALL PROPOSED STRUCTURAL STEEL, THE STEEL SHALL BE CONSIDERED EXISTING STEEL AND PAINTED WITH THE SAME PAINT SYSTEM USED TO PAINT EXISTING STEEL ON THE BRIDGE. THE PAINTING COST SHALL BE INCLUDED WITH THE RESPECTIVE PAINT ITEMS.

METHOD OF MEASUREMENT: MEASUREMENT FOR PAY PURPOSES SHALL BE BASED ON THE NUMBER OF LOCATIONS WHERE SPLICE PLATES ARE TO BE REPLACED AS INDICATED ON THE DRAWINGS. THIS PAY ITEM SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE WORK WHICH INCLUDES, BUT IS NOT LIMITED TO: REMOVAL OF SPLICE PLATE, FIELD DRILLING BOLT HOLES, INSTALLATION OF PROPOSED SPLICE PLATE, BOLTS, NUTS, AND WASHERS.

BASIS OF PAYMENT: PAYMENT SHALL BE MADE PER EACH LOCATION WHERE WORK OCCURS AT THE CONTRACT UNIT PRICE BID.

ITEM 513 - STRUCTURAL STEEL, MISC.: GUSSET T-SECTION REPLACEMENT

MATERIALS: ALL STEEL SHALL BE AASHTO M270 GRADE 50. ALL BOLTS SHALL BE GALVANIZED ASTM A325 HIGH STRENGTH.

PROCEDURE:

1. MAKE THE NECESSARY FIELD MEASUREMENTS REQUIRED BY THE FABRICATOR TO FABRICATE THE PROPOSED GUSSET T-SECTION REPLACEMENT PIECES.
2. TEMPORARILY SUPPORT STRUCTURAL STEEL MEMBERS ADJACENT TO GUSSET T-SECTION TO BE REMOVED.
3. REMOVE EXISTING GUSSET T-SECTION AS SHOWN ON THE PLANS. ONLY ONE MEMBER AT A TIME SHALL BE REMOVED AND REPLACED. REMOVE ANY EXISTING TACK WELD METAL.
4. FIELD DRILL PROPOSED GUSSET T-SECTION MEMBER TO MATCH EXISTING BOLT HOLE (OR RIVET) PATTERN.
5. INSTALL THE PROPOSED GUSSET T-SECTION USING 7/8-INCH-DIAMETER HIGH STRENGTH BOLTS.

PAINTING: ALL PROPOSED STRUCTURAL STEEL SHALL BE ABRASIVELY CLEANED IN THE SHOP. SHOP PAINTING IS NOT REQUIRED. AFTER INSTALLATION OF ALL PROPOSED STRUCTURAL STEEL, THE STEEL SHALL BE CONSIDERED EXISTING STEEL AND PAINTED WITH THE SAME PAINT SYSTEM USED TO PAINT EXISTING STEEL ON THE BRIDGE. THE PAINTING COST SHALL BE INCLUDED WITH THE RESPECTIVE PAINT ITEMS.

METHOD OF MEASUREMENT: MEASUREMENT FOR PAY PURPOSES SHALL BE BASED ON THE NUMBER OF LOCATIONS WHERE GUSSET T-SECTION MEMBERS ARE TO BE REPLACED AS INDICATED ON THE DRAWINGS. THIS PAY ITEM SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE WORK WHICH INCLUDES, BUT IS NOT LIMITED TO: REMOVAL OF GUSSET T-SECTIONS, FIELD DRILLING BOLT HOLES, INSTALLATION OF PROPOSED GUSSET T-SECTIONS, BOLTS, NUTS, AND WASHERS.

BASIS OF PAYMENT: PAYMENT SHALL BE MADE PER EACH LOCATION WHERE WORK OCCURS AT THE CONTRACT UNIT PRICE BID.

ITEM 513 - STRUCTURAL STEEL, MISC.: PINION SUPPORT REHABILITATION

DESCRIPTION: THE WORK SHALL CONSIST OF REHABILITATING SELECTED PINION SUPPORTS IN PIERS 4 AND 5 AS SHOWN ON THE PLANS.

MATERIALS: STEEL PLATES SHALL BE AASHTO M270, GRADE 50.

STAINLESS STEEL ADHESIVE ANCHORS SHALL BE 3/4-INCH DIAMETER AND SHALL MEET THE REQUIREMENTS AS PER ITEM 730.10.

BOLTS AND HEAVY HEX NUTS SHALL BE A325 HIGH STRENGTH AND COMPLY WITH ITEM 730.08.

CONCRETE SHALL BE CLASS C AND MEET THE REQUIREMENTS OF ITEM 511.

INSTALLATION PROCEDURE:

1. REMOVE EXISTING CONCRETE AT THE AREAS SHOWN ON THE PLANS. ALL EXISTING STEEL, ANCHOR BOLTS, AND REINFORCING STEEL SHALL REMAIN.
2. AT AREAS WHERE SECTION LOSS HAS OCCURRED, SAW CUT THE CORRODED STEEL TO LIMITS SPECIFIED ON THE PLANS. STRUCTURAL STEEL SURFACES IN THE IMMEDIATE VICINITY OF THE PROPOSED REPAIR SHALL BE ABRASIVELY CLEANED AND PRIME PAINTED IN ACCORDANCE WITH THE EEU SYSTEM.

3. ATTACH NEW 3/4-INCH PLATE TO BACK OF EXISTING ANGLES WITH BOLTS. HOLES SHALL BE FIELD DRILLED IN BOTH PLATE AND EXISTING ANGLES AND SHALL MEET THE SPACING REQUIREMENTS AS INDICATED ON THE PLANS.

4. FIELD DRILL HOLES IN EXISTING SUPPORT ANGLE WHERE NEW ANCHOR BOLTS WILL BE LOCATED.

5. PLACE NEW CONCRETE IN AREAS WHERE EXISTING CONCRETE WAS REMOVED TO MATCH EXISTING ELEVATION.

6. AFTER CONCRETE HAS CURED FOR 7 DAYS, DRILL HOLES IN BOTH THE NEW AND EXISTING CONCRETE TO THE REQUIRED DEPTHS.

7. INSTALL ADHESIVE ANCHORS (HILTI HVA OR EQUAL).

MEASUREMENT FOR PAY PURPOSES SHALL BE A LUMP SUM ITEM AND SHALL INCLUDE, BUT NOT BE LIMITED TO: REMOVAL OF CONCRETE, STEEL PLATES, CLASS C CONCRETE, ADHESIVE ANCHORS, AND ALL REQUIRED LABOR AND HARDWARE.

ITEM 513 - STRUCTURAL STEEL, MISC.: WELDED GUSSET PLATE REPLACEMENT

MATERIALS: ALL STEEL SHALL BE AASHTO M270 GRADE 50. ALL BOLTS SHALL BE GALVANIZED ASTM A325 HIGH STRENGTH.

PROCEDURE:

1. TEMPORARILY SUPPORT STRUCTURAL STEEL MEMBERS ADJACENT TO GUSSET PLATE TO BE REMOVED.

DESIGN AGENCY

DESIGNED	DRAWN	REVIEWED	DATE
CHECKED	REVISED	STRUCTURE FILE NUMBER	

GENERAL NOTES - 3A
BRIDGE No. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

8A / 26

2. REMOVE GUSSET PLATE BY GRINDING WELDS TO FLOOR BEAM. ONLY ONE GUSSET PLATE SHALL BE REMOVED AND REPLACED AT ANY ONE TIME.

3. GRIND EXISTING FLOOR BEAM FLANGE AND EXISTING WT4X17.5 MEMBERS SMOOTH AT WELDED LOCATIONS.

4. FIELD DRILL PROPOSED GUSSET PLATE AND EXISTING FLOOR BEAM FLANGE AND WT4X17.5 FOR BOLTS.

5. PRIME COAT, PER SYSTEM OZEU, EXISTING FLOOR BEAM FLANGE AND WT4X17.5 WHERE GUSSET PLATE WAS REMOVED. PRIME COAT GUSSET PLATE.

6. INSTALL PROPOSED GUSSET PLATE USING 7/8-INCH-DIAMETER HIGH STRENGTH BOLTS.

PAINTING: ALL PROPOSED STRUCTURAL STEEL SHALL BE ABRASIVELY CLEANED IN THE SHOP. SHOP PAINTING IS NOT REQUIRED. AFTER INSTALLATION OF PROPOSED STRUCTURAL STEEL, THE STEEL SHALL BE CONSIDERED EXISTING STEEL AND PAINTED WITH THE SAME PAINT SYSTEM USED TO PAINT EXISTING STEEL ON THE BRIDGE. THE PAINTING COST SHALL BE INCLUDED WITH THE RESPECTIVE PAINT ITEMS.

METHOD OF MEASUREMENT: MEASUREMENT FOR PAY PURPOSES SHALL BE BASED ON THE NUMBER OF LOCATIONS WHERE WELDED GUSSET PLATES ARE TO BE REPLACED AS INDICATED ON THE DRAWINGS. THIS PAY ITEM SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE WORK, WHICH INCLUDES, BUT IS NOT LIMITED TO: REMOVAL OF WELDED GUSSET PLATE, GRINDING EXISTING FLOOR BEAM FLANGE, FIELD DRILLING BOLT HOLES, INSTALLATION OF PROPOSED GUSSET PLATE, BOLTS, NUTS, AND WASHERS.

BASIS OF PAYMENT: PAYMENT SHALL BE MADE PER EACH LOCATION WHERE WORK OCCURS AT THE CONTRACT UNIT PRICE BID.

ITEM 513 - STRUCTURAL STEEL, MISC.: LIVE LOAD BEARING PLATE REPLACEMENT

MATERIALS: ALL BEARING PLATE STEEL SHALL BE AASHTO M270 GRADE 70W, ALL CONTACT PLATE STEEL SHALL BE AASHTO M102 CLASS D, AND ALL BOLT ASSEMBLIES SHALL BE ASTM A325 HIGH STRENGTH. ALL BEARING PLATE, CONTACT PLATE, BOLT, AND NUT STEEL SHALL BE GALVANIZED ACCORDING TO 711.02.

PROCEDURE:

1. FIELD VERIFY DIMENSION FROM TOP OF GIRDER WEB TO BOTTOM OF FORGED STEEL SCREW HEAD.

2. BOTH THE CONTACT AND BEARING PLATE SHALL BE FABRICATED AS SHOWN IN THE PLANS TO WITHIN A TOLERANCE OF +/- 1/16" AND HOLES SHALL BE PREDRILLED.

3. CLOSE THE BRIDGE TO TRAFFIC AND OPEN THE BASCULE LEAVES.

4. REMOVE EXISTING LIVE LOAD BEARING PLATES WITHOUT DAMAGING SURROUNDING STEEL, AND GRIND DOWN ANY SHARP BURRS.

5. TACK WELD BOLTS TO BOTTOM OF BEARING PLATE SO THAT THREADED PORTION PROTRUDES THE TOP OF PLATE AND POINTS UPWARD.

6. WELD THE BEARING PLATE TO THE WEB OF THE GIRDER AS SHOWN IN THE PLANS.

7. FASTEN CONTACT PLATE TO TOP OF BEARING PLATE.

8. CLOSE BASCULE LEAVES AND REOPEN THE BRIDGE.

PAINTING: SHOP PAINTING IS NOT REQUIRED. AFTER INSTALLATION OF THE PROPOSED STRUCTURAL STEEL, THE STEEL SHALL BE CONSIDERED GALVANIZED EXISTING STEEL AND PAINTED WITH THE SAME PAINT SYSTEM USED TO PAINT THE EXISTING STEEL ON THE BRIDGE. THE PAINTING COST SHALL BE INCLUDED WITH THE RESPECTIVE PAINT ITEMS.

METHOD OF MEASUREMENT: THIS PAY ITEM SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE LIVE LOAD BEARING PLATE REPLACEMENTS AS SHOWN ON THE PLANS. THIS SHALL INCLUDE BUT IS NOT LIMITED TO: REMOVAL AND REPLACEMENT OF BEARING PLATES, BOLTS, NUTS, WASHERS, GRINDING, AND WELDING.

ITEM 513 - STRUCTURAL STEEL, MISC: WIND LOCK REHABILITATION

DESCRIPTION: THE WORK SHALL CONSIST OF REPLACING THE WIND LOCK AT THE BEARING DEVICE NEAR BENT 7 AND GIRDER G-5 OF RAMP E-E AS SHOWN ON THE PLANS.

MATERIALS: STEEL PLATES SHALL BE AASHTO M270, GRADE 50.

BOLTS AND HEAVY HEX NUTS SHALL BE A325 HIGH STRENGTH AND COMPLY WITH ITEM 730.08.

PROPOSED WORK:

1. FLAME CUT EXISTING 1" PLATE AT THE BEARING DEVICE NEAR BENT 7 AND GRIDER G-5 OF RAMP E-E FLUSH WITH GIRDER EDGE AND GRIND SMOOTH.

2. FLAME CUT EXISTING 1/2" PLATE FLUSH TO LIMITS SHOWN FOR GIRDER 5 AND GRIND REMAINING EDGE SMOOTH. REMOVE RIVETS AS NECESSARY TO ALLOW REMOVAL OF 1/2" PLATE.

3. ABRASIVELY BLAST CLEAN ALL EXISTING STEEL AREAS SHOWN ON PLANS. THE AREAS BLAST CLEANED, IN ADDITION TO THE NEW STEEL, SHALL BE PRIME PAINTED IN ACCORDANCE WITH OZEU SYSTEM, PRIOR TO PLACEMENT OF THE NEW STEEL.

4. ATTACH NEW WIND LOCK BY PROVIDING NEW 1" DIAMETER A325 BOLTS AND WELDING 2" PLATE TO EXISTING 1/2" PLATE (BOTTOM FLANGE OF G-5). ALL BOLT HOLES IN NEW PLATE SHALL BE FIELD DRILLED TO MATCH EXISTING BOLT PATTERNS.

5. PROVIDE A SHIM PLATE 1/2" X 8" X 18" AND NEW 1 " PLATE WITH SLOT FOR WIND LOCK AND ATTACH BY REPLACING ALL NECESSARY 1" DIAMETER RIVETS WITH 1" DIAMETER A325 BOLTS. CONTRACTOR SHALL ENSURE THAT WIND LOCK IS CENTERED IN SLOT OF 1" PLATE.

MEASUREMENT FOR PAY PURPOSES SHALL BE A LUMP SUM ITEM AND SHALL INCLUDE, BUT NOT BE LIMITED TO: REMOVAL ITEMS, STEEL PLATES, BOLTS WITH REQUIRED HARDWARE, AND ALL REQUIRED LABOR AND ADDITIONAL HARDWARE.

ITEM 513 - STRUCTURAL STEEL, MISC.: INSPECTION HANDRAIL REPLACEMENT:

DESCRIPTION: THE WORK SHALL CONSIST OF REPLACING MISCELLANEOUS SECTIONS OF HANDRAIL AND/OR REPAIRING ANY BROKEN WELDS TO EXISTING HANDRAIL CONNECTIONS.

MATERIALS: STRUCTURAL STEEL ANGLES AND BARS SHALL BE AASHTO M270, GRADE 50 AND CONFORM TO 513.

BOLTS AND HEAVY HEX NUTS SHALL BE A325 HIGH STRENGTH AND COMPLY WITH 730.08.

PROPOSED WORK:

1. REMOVE EXISTING RIVETS AND CLIP ANGLES AS DEEMED NECESSARY ON THE PLANS. REMOVE EXISTING HANDRAIL AT LOCATIONS WHERE HANDRAIL IS BEING REPLACED.

2. ABRASIVELY BLAST CLEAN AREA WHERE CLIP ANGLE WAS REMOVED.

3. PRIME PAINT AREAS PREVIOUSLY CLEANED AND ALL NEW CLIP ANGLES IN ACCORDANCE WITH THE OZEU SYSTEM.

4. ATTACH NEW CLIP ANGLES AT SAME LOCATION WHERE EXISTING ANGLES WERE REMOVED. FIELD DRILL BOLT HOLES IN ANGLES TO MATCH EXISTING RIVET LOCATIONS.

5. WELD NEW HANDRAIL TO NEW CLIP ANGLE.

6. TACK WELD NEW HANDRAIL TO EXISTING STIFFENER ANGLES FOR REPAIRS WHERE HANDRAIL WAS MISSING OR REMOVED.

7. PRIME PAINT HANDRAIL IN ACCORDANCE WITH THE OZEU SYSTEM.

MEASUREMENT FOR PAY PURPOSES SHALL BE A LUMP SUM ITEM AND SHALL INCLUDE, BUT NOT BE LIMITED TO: REMOVAL OF EXISTING HANDRAILS, AND CLIP ANGLES, HANDRAILS, CLIP ANGLES, BOLTS, PAINTING, AND ALL REQUIRED LABOR AND HARDWARE.

ITEM 513 - STRUCTURAL STEEL, MISC.: SIDEWALK HATCHES:

DESCRIPTION: THIS WORK CONSISTS OF FURNISHING AND INSTALLING NEW STEEL SIDEWALK HATCHES AT LOCATIONS OF EXISTING HATCHES ON SPANS 4 AND 6 FOR ACCESS TO THE TRAFFIC GATE MECHANISMS. THE HATCHES SHALL BE REPLACED IN KIND, AND DETAILS ARE NOT SHOWN ON THE PLANS.

MATERIAL: ALL STEEL SHALL BE AASHTO M270 GRADE 36. ALL BOLTS SHALL BE GALVANIZED ASTM A325 HIGH STRENGTH. ALL STEEL SHALL BE GALVANIZED ACCORDING TO 711.02.

METHOD OF MEASUREMENT: MEASUREMENT FOR PAY PURPOSES SHALL BE BASED ON THE NUMBER OF SIDEWALK HATCHES REPLACED. THIS PAY ITEM SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO DO THE WORK.

ITEM 513 - STRUCTURAL STEEL, MISC.: SIDEWALK STRINGER REPAIR

MATERIALS: ALL STEEL SHALL BE AASHTO M270 GRADE 50. ALL BOLTS SHALL BE GALVANIZED ASTM A325 HIGH STRENGTH.

PROCEDURE:

1. ABRASIVELY CLEAN AND PRIME COAT EXISTING STRINGER.

2. MAKE THE NECESSARY FIELD MEASUREMENTS REQUIRED BY THE FABRICATOR TO FABRICATE THE PROPOSED PLATES.

3. FIELD DRILL PROPOSED PLATES AND EXISTING WEB OF SIDEWALK STRINGER AS SHOWN ON THE DRAWINGS.

4. PRIME COAT PROPOSED PLATES.

5. INSTALL PROPOSED PLATES USING 7/8-INCH-DIAMETER HIGH STRENGTH BOLTS.

PAINTING: ALL PROPOSED STRUCTURAL STEEL SHALL BE ABRASIVELY CLEANED IN THE SHOP. SHOP PAINTING IS NOT REQUIRED. AFTER INSTALLATION OF ALL PROPOSED STRUCTURAL STEEL, THE STEEL SHALL BE CONSIDERED EXISTING STEEL AND PAINTED WITH THE SAME PAINT SYSTEM USED TO PAINT EXISTING STEEL ON THE BRIDGE. THE PAINTING COST SHALL BE INCLUDED WITH THE RESPECTIVE PAINT ITEMS.

METHOD OF MEASUREMENT: MEASUREMENT FOR PAY PURPOSES SHALL BE BASED ON THE NUMBER OF LOCATIONS WHERE SIDEWALK STRINGER REPAIR PLATES ARE TO BE INSTALLED AS INDICATED ON THE DRAWINGS. THIS PAY ITEM SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE WORK WHICH INCLUDES, BUT IS NOT LIMITED TO: FIELD DRILLING BOLTS HOLES AND INSTALLATION OF PROPOSED PLATES, BOLTS, NUTS, AND WASHERS.

BASIS OF PAYMENT: PAYMENT SHALL BE MADE PER EACH LOCATION WHERE WORK OCCURS AT THE CONTRACT UNIT PRICE BID.

PARSONS BRINCKERHOFF
ENGINEERS
ARCHITECTS

DESIGNED RWM | DRAWN GTC | CHECKED JMD | REVISED | DATE REVISED 14-Feb-96

STRUCTURE FILE NUMBER 4805917

GENERAL NOTES - 4
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

ITEM SPECIAL (514) - FIELD PAINTING OF EXISTING STEEL, USING EPOXY AND URETHANE (EEU):

ALL OF THE STRUCTURAL STEEL INSIDE THE BASCULE PIERS AS INDICATED ON THE PAINTING SHEETS SHALL BE CLEANED AND PAINTED USING THE EEU SYSTEM. ALL EXISTING MACHINERY IN THE BASCULE PIERS SHALL BE ENCAPSULATED TO PREVENT ANY FOREIGN MATERIAL FROM COMING IN CONTACT WITH THE MACHINERY. THIS SYSTEM SHALL ACCOMMODATE ANY MOVEMENT BY THE STRUCTURE AND SHALL NOT IMPAIR THE NORMAL OPERATION OF THE MACHINERY. THIS SYSTEM SHALL BE ASSEMBLED PRIOR TO ANY SURFACE PREPARATION. NONABRASIVE METHODS SHALL BE USED TO CLEAN. CLEANING SHALL NOT BE DONE UNLESS THE METHODS OF STEEL SURFACE PREPARATION ARE APPROVED AND OBSERVED BY THE ENGINEER. PAINT SHALL NOT BE APPLIED ON ANY SURFACE THAT HAS NOT BEEN EXAMINED AND APPROVED BY THE ENGINEER.

COSTS OF CLEANING AND PAINTING STEEL WITH THE EEU PAINT SYSTEM SHALL BE INCLUDED IN THE SEVERAL EEU ITEMS.

ITEM 516 - STRUCTURAL STEEL EXPANSION JOINT (FINGER TYPE)

MATERIALS: ALL STEEL SHALL BE AASHTO M270. STEEL FOR PORTIONS OF THE DECK JOINT FULLY ENCASED IN CONCRETE MAY BE GRADE 36 OR GRADE 50. FINGER ASSEMBLIES SHALL BE GRADE 50. THE FINISHED STEEL ASSEMBLY SHALL BE METALIZED. THE THICKNESS OF THE COATING SHALL BE 6-8 MILS. THE WIRE USED FOR THE METALLIZING SHALL CONSIST OF 85 PERCENT ZINC AND 15 PERCENT ALUMINUM. SURFACE PREPARATION AND APPLICATION SHALL CONFORM TO SSPC COATING SYSTEM GUIDE NO. 23.00, "GUIDE FOR THERMAL SPRAY METALLIC COATING SYSTEMS." EXCEPT THAT SECTION 6, APPLICATIONS OF WASH PRIMERS, SEALERS, AND TOPCOATS NEED NOT BE PERFORMED.

STAINLESS STEEL BOLTS AND HEAVY HEX NUTS SHALL BE ASTM A276 TYPE 304, 1 INCH DIAMETER, EIGHT COARSE THREADS PER INCH STAINLESS STEEL. THE REMAINING BOLTS SHALL BE GALVANIZED ASTM A325 HIGH STRENGTH.

ASPHALT COATING: SURFACES DESIGNATED SHALL BE SHOP COATED WITH A BRUSH OR TROWEL APPLIED ASPHALT MASTIC, ASTM A849, NOT LESS THAN 0.05 INCHES THICK. BONDING SURFACES SHALL BE FREE OF ALL MOISTURE, DIRT, OIL, GREASE, ALKALIES, AND OTHER FOREIGN MATTER. IF NECESSARY, SURFACES SHALL BE SOLVENT WIPED WITH CLEAN DISPOSABLE CLOTHS. CORRODED STEEL SURFACES SHALL BE ABRADED TO A WHITE APPEARANCE. PRIOR TO APPLICATION, A WRITTEN STATEMENT BY THE MANUFACTURER SHALL BE PROVIDED CERTIFYING THAT THE ASPHALT MASTIC CONFORMS WITH SPECIFICATION REQUIREMENTS.

NEOPRENE TROUGH:

THIS ITEM SHALL CONSIST OF FURNISHING, FABRICATING, AND INSTALLING ELASTOMERIC SHEETING UNDER BRIDGE DECK FINGER JOINTS IN THE FORM OF TROUGHS FOR DRAINAGE PROTECTION.

MATERIALS: ELASTOMERIC TROUGHS SHALL BE SHOP FABRICATED WITH SPECIFIED SPLICES (VULCANIZED BONDED WITH HEAT AND PRESSURE) FROM NYLON REINFORCED NEOPRENE SHEET (NRNS). THE SHEET MATERIAL SHALL BE 1/8 INCH THICK, GENERAL PURPOSE, HEAVY DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT. THE NRNS SHALL BE "FAIRPRENE NUMBER NN-0003" AS MANUFACTURED BY E. I. DUPONT DE NEMOURS AND COMPANY INCORPORATED, "WINGPRENE" AS MANUFACTURED BY THE GOODYEAR TIRE AND RUBBER COMPANY, OR AN APPROVED EQUAL. THE SHEETING SHALL CONFORM TO THE FOLLOWING:

DESCRIPTION OF TEST	ASTM METHOD	REQUIREMENT
THICKNESS INCHES	D 751	0.125 +/-0.01
BREAKING STRENGTH, GRAB WXF. LBS. MIN.	D 751	700 X 700
ADHESIVE 1 INCH STRIP 2 INCH MIN., LBS. MIN.	D 751	9
BURST STRENGTH (MULLEN) PSI, MIN.	D 751	1,400
HEAT AGING 70 HOURS AT 212 DEGREES FAHRENHEIT, 180 DEGREES BEND	D 2136	NO CRACKING
LOW TEMPERATURE BRITTLENESS 1 HOUR AT -40 DEGREES FAHRENHEIT, BEND AROUND 1/4 INCH MANDREL	D 2136	NO CRACKING

CONNECTIONS FOR ELASTOMERIC TROUGHS INCLUDING ALL CLAMP BARS, SUPPORTS, BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED, EXCEPT AS INDICATED OTHERWISE ON DRAWINGS, TO CONFORM TO 711.02. ANY GALVANIZED COATING WHICH HAS BEEN CUT OR DAMAGED IN ANY WAY SUCH THAT NEW STEEL IS EXPOSED SHALL BE REPLACED WITH COLD GALVANIZING COMPOUND SUCH AS THAT MANUFACTURED BY Z.R.C. PRODUCTS CO. OF QUINCY, MASSACHUSETTS; "GALVICON" BY KENCO DIV. OF SOUTHERN COATING, INC. OF SUMTER, SOUTH CAROLINA; OR AN APPROVED EQUAL APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ALL HARDWARE FOR CONNECTING TROUGHS TO THE DECK JOINT IS INCLUDED WITH THE STRUCTURAL STEEL EXPANSION JOINT FOR PAYMENT. GALVANIZED STEEL OUTLET PIPES AND APPURTENANCES, SUPPORT HARDWARE, ANCHOR DOWELS INCLUDING INSTALLATION, AND TYPE C DUMPED ROCK SHALL BE INCLUDED WITH THE ELASTOMERIC TROUGHS FOR PAYMENT.

SHOP DRAWINGS FOR THE ELASTOMERIC TROUGHS SHALL BE PREPARED BY THE ELASTOMERIC FABRICATOR AND SUBMITTED TO THE ENGINEER FOR APPROVAL. FABRICATION SHALL NOT BEGIN BEFORE THE SHOP DRAWINGS ARE APPROVED. TROUGH OUTLETS SHALL BE FORMED AROUND A MANDREL AND BE VULCANIZED BONDED UNDER HEAT AND PRESSURE. PREFERABLY, OUTLETS FOR ALL TROUGHS SHOULD BE THE SAME.

TROUGHS FOR EACH GIRDER PANEL SHALL BE FURNISHED IN ONE FABRICATED PIECE. SHOP SPLICES SHALL BE VULCANIZED BONDED UNDER HEAT AND PRESSURE. SPLICES SHALL BE LAP SPLICES SIMILAR TO THE TYPICAL SHOP SPLICES SHOWN ON SHEET 50/126. FIELD SPLICES BETWEEN PANELS SHALL BE LAPPED AS SHOWN IN THROUGH DETAIL SHEET 4, 50/126 BUT WITHOUT BEING BONDED TOGETHER.

SAMPLING AND TESTING: EACH LOT OF NRNS SHEETING SHALL BE TESTED BY AN INDEPENDENT LABORATORY TO ENSURE COMPLIANCE WITH THESE PROVISIONS. TWO CERTIFIED COPIES OF THE QUALIFICATION TEST DATA INDICATING THAT THE TESTED MATERIALS COMPLY WITH THESE PROVISIONS SHALL BE SUBMITTED TO THE ODOT TESTING LABORATORY. SAMPLING, WHEN REQUESTED, SHALL BE IN ACCORDANCE WITH 106.03 EXCEPT THAT WHERE NRNS SHEETING IS TO BE FABRICATED ACCORDING TO PLAN REQUIREMENTS, SAMPLES SHALL BE MADE AVAILABLE PRIOR TO FABRICATION. THE SAMPLE FROM EACH LOT AND FOR EACH PROJECT SHALL BE ONE PIECE, 3 FEET LONG.

MATERIAL ACCEPTANCE WILL BE BASED UPON ODOT EVALUATION OF CERTIFIED TEST DATA, LABORATORY TEST OF SAMPLED MATERIAL, OR THE EVALUATION OF BOTH CERTIFIED TEST DATA AND TESTED SAMPLES.

HOLES IN ELASTOMERIC TROUGHS SHALL BE MADE IN THE FIELD AND SHALL BE DRILLED.

ALL SECTIONS FOR BOTH SIDES OF EACH JOINT SHALL BE SHOP ASSEMBLED WITH NOMINAL CLEARANCE OF 3/4 INCH BETWEEN ENDS AND ROOTS OF MATING PROJECTIONS. WHILE THUS ASSEMBLED, THE JOINT SHALL BE CHECKED AND CORRECTED TO PROVIDE NOT LESS THAN 1/4 INCH CLEARANCE BETWEEN SIDES OF PROJECTIONS AND NOT LESS THAN 5/8 INCH CLEARANCE BETWEEN ENDS AND ROOTS OF PROJECTIONS. ALL PARTS OF ROADWAY JOINTS SO ASSEMBLED SHALL BE MATCH MARKED.

JOINT FABRICATION SHALL BE BY AN AISC CERTIFIED CATEGORY III FABRICATOR. THE JOINT SHALL BE FABRICATED IN ACCORDANCE WITH APPROVED SHOP DRAWINGS.

AFTER JOINT SEGMENTS ARE FULLY ASSEMBLED AND APPROVED, THEY SHALL BE MATCH MARKED (THE UPPER SURFACE OF THE WELDMENTS & FINGER PLATES SHALL BE PERMANENTLY SCORED PROVIDING TWO OR MORE PARALLEL LINES) TO AID IN PROPER POSITIONING OF THE JOINT SEGMENTS DURING FIELD INSTALLATION.

CLAMP BARS SHALL BE FURNISHED ASSEMBLED TO TROUGH CONNECTION PLATES BY THE JOINT FABRICATOR.

DECK JOINT INSTALLATION AND ADJUSTMENT PROCEDURE:

1. INSTALL ABUTMENT JOINT WELDMENTS & FINGER PLATES ACCORDING TO THE SHOP MATCH MARKING AND ADJUST THEM FOR CROWN AND GRADE.

2. USING ABUTMENT JOINT WELDMENTS & FINGER PLATES AS A TEMPLATE, INSTALL SUPERSTRUCTURE FINGER PLATE SUPPORTS AFTER THE CONCRETE DECK SLAB IN THE ADJACENT SPAN HAS BEEN PLACED. MOVE MATCH MARKED FINGER PLATE SUPPORTS LONGITUDINALLY TO PROPER POSITION WITH RESPECT TO ABUTMENT JOINT WELDMENTS. USING SHIMS AS NECESSARY, ADJUST FINGER PLATE SUPPORTS TO BE PARALLEL TO THE PROPOSED ROADWAY SURFACE. WELD FILLS AND SUPPORT ANGLES TO STRINGERS AND FLOORBEAMS.

3. ADJUST FINGER PLATE SUPPORTS VERTICALLY USING CONNECTION BOLTS IN VERTICALLY SLOTTED HOLES.

4. INSTALL SUPERSTRUCTURE FINGER PLATES ON SUPPORTS AND ADJUST THEM LATERALLY AND LONGITUDINALLY TO MATCH AND MERGE WITH ABUTMENT JOINT WELDMENTS.

5. FIELD DRILL HOLES IN SUPPORTS USING FINGER PLATES AS TEMPLATES. INSTALL AND TIGHTEN FINGER PLATE ANCHOR BOLTS.

6. PLACE DECK CLOSURE PLACEMENT ALLOWING CONCRETE TO SPILL INTO INTERIOR OF SUPPORTS. PLACE ABUTMENT BACKWALL CONCRETE.

7. PUMP GROUT TO FILL SUPPORTS USING HOLES IN SUPERSTRUCTURE FINGER PLATES. START AT ONE SIDE AND GROUT FILL UNTIL GROUT IS FORCED UP THROUGH ADJACENT HOLE. MOVE TO THE NEXT AND SUBSEQUENT HOLES PUMPING GROUT INTO THE SUPPORT VOIDS UNTIL THEY ARE COMPLETELY FILLED WITH GROUT. FINISH GROUT FLUSH WITH SURFACE OF HOLES.

BASIS OF PAYMENT: MEASUREMENT FOR PAY PURPOSES SHALL BE BASED ON THE LINEAR FEET OF ACCEPTED STRUCTURAL STEEL EXPANSION JOINT, MEASURE HORIZONTALLY ALONG THE JOINT CENTERLINE AND BETWEEN THE OUTER LIMITS OF THE FABRICATED JOINT. THIS PAY ITEM SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE JOINT IN PLACE, WHICH INCLUDES, BUT IS NOT LIMITED TO: EXISTING CONCRETE DECK AND PARAPET REMOVAL, EXISTING CURB PLATE REMOVAL, EXISTING JOINT REMOVAL, EXISTING SUPPORT REMOVAL, ANCHOR BARS, ATTACHMENT ASSEMBLIES, NEOPRENE TROUGH ASSEMBLIES, TROUGH DOWNSPOUTS, WELDS, BOLTS, NUTS, WASHERS, SHIMS, METALLIZING, PARAPET PLATES, CONCRETE CLOSURE POURS, GROUT, AND HMMM RESIN. PAYMENT WILL BE MADE PER LINEAR FOOT FOR ITEM 516, "STRUCTURAL STEEL EXPANSION JOINT (FINGER TYPE)."

ITEM 516 - STRUCTURAL JOINT OR JOINT SEALER, MISC.: SIDEWALK JOINT:

DESCRIPTION: THIS WORK CONSISTS OF CONSTRUCTING AND SEALING JOINTS IN THE SIDEWALK ON THE APPROACH SPANS OF THE STRUCTURE. SIDEWALK CONTROL JOINTS SHALL BE LOCATED COINCIDENTAL WITH EACH SAW CUT PARAPET JOINT EXCEPT IN THE NEGATIVE MOMENT REGIONS OVER PIERS THE JOINT SHALL BE INITIATED AT ALTERNATE PARAPET JOINT LOCATIONS ONLY.

MATERIAL: TWO COMPONENT URETHANE SEALANT MEETING THE REQUIREMENTS OF FEDERAL SPECIFICATION TT-S-00227E TYPE II (GUN GRADE) CLASS A, SHALL BE USED TO SEAL THE SIDEWALK JOINT. ALL MATERIALS SHALL BE STORED AND INCORPORATED IN THE WORK AS SPECIFIED BY THE MANUFACTURER.

APPLICATION: 1 INCH DEEP CONTROL JOINTS SHALL BE SAWED IN THE SIDEWALK CONCRETE. THE JOINT WIDTH SHALL BE A NOMINAL WIDTH OF 1/4 INCH AND THE JOINT SHALL BE SEALED WITH THE URETHANE SEALANT TO A MINIMUM DEPTH OF 1 INCH. THE SAW CUT SHALL BE MADE THE FULL WIDTH OF THE SIDEWALK.

ITEM 516 - STRUCTURAL JOINT OR JOINT SEALER, MISC.: RAILING POST:

DESCRIPTION: THIS WORK SHALL CONSIST OF FORMING OUT AND SEALING THE JOINTS BETWEEN THE EXISTING RAIL POSTS AND THE PROPOSED SIDEWALK ON THE APPROACH SPANS OF THE STRUCTURE.

MATERIAL: TWO COMPONENT URETHANE SEALANT MEETING THE REQUIREMENTS OF FEDERAL SPECIFICATION TT-S-00227E TYPE II (GUN GRADE), CLASS A SHALL BE USED TO SEAL THE PERIMETER OF EACH POST AT THE SIDEWALK. ALL MATERIALS SHALL BE STORED AND INCORPORATED

ENGINEERS
ARCHITECTS

DESIGNED RWM
DRAWN GTC
CHECKED JMD
REVISED
REVIEWED AWM DATE: 23-OCT-96
STRUCTURE FILE NUMBER 4805917

GENERAL NOTES - 5
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

N:\PR1491\CADD\GENOTES5 1-14-96 1:20:13 pm

ITEM 516 - REFURBISH BEARING DEVICE, AS PER PLAN:

ALL EXISTING BEARING DEVICES ON MAINLINE AND RAMPS E-E AND X SHALL BE CLEANED AND PAINTED WITH AN ORGANIC ZINC PRIME COAT, EPOXY INTERMEDIATE COATED AND URETHANE FINISH COAT (SYSTEM OZEU).

BASIS OF PAYMENT: PAYMENT SHALL BE MADE PER EACH LOCATION WHERE WORK OCCURS AT THE CONTRACT UNIT PRICE BID.

ITEM SPECIAL (530) - STRUCTURE, MISC.: FENDER:

A NEW FENDER SYSTEM SHALL BE CONSTRUCTED AT PIERS 4 AND 5 TO REPLACE THE EXISTING SYSTEM AS SHOWN ON THE PLANS. REMOVAL OF THE EXISTING FENDER SYSTEM WILL BE PAID AS INDICATED IN THE PLANS. THE TIMBER SHALL BE DOUGLAS FIR, COVERED WITH CREOSOTE, ROUGH SAWN TO THE FULL DIMENSIONS SHOWN ON THE PLANS AND SHALL MEET THE REQUIREMENTS OF ITEM 521, 711.26, AND BE TREATED AS PER ITEM 712.06. STEEL PLATES SHALL BE A36 AND GALVANIZED MEETING THE REQUIREMENTS AS PER ITEM 711. ALL HARDWARE FOR THE FENDER SHALL MEET THE REQUIREMENTS OF ITEM 521 AS WELL. "STRUCTURE, MISC.: FENDER" SHALL BE A LUMP SUM PAY ITEM AND SHALL INCLUDE, BUT NOT BE LIMITED TO: TIMBER, STEEL PLATES, AND ALL REQUIRED LABOR AND HARDWARE.

ITEM SPECIAL (530) - STRUCTURE MISC.: SOUTH ABUTMENT ACCESS:

DESCRIPTION: THE WORK SHALL CONSIST OF INSTALLING A SOUTH ABUTMENT ACCESS IN AN EXISTING SIDEWALK.

MATERIALS:

CONCRETE, CLASS S	499 AND 511
REINFORCING STEEL, EPOXY, GRADE 60	509.02
DOWEL HOLES	510
REMOVAL OF STRUCTURE	202
STEEL AASHTO M270, GRADE 50	513

ADHESIVE ANCHORS SHALL BE STAINLESS STEEL HILTI HUA ADHESIVE ANCHORS OR EQUAL.

ACCESS SYSTEM SHALL BE NEENAH R-1915-E MANHOLE WITH COUNTERSUNK BOLTS OR EQUAL.

HMWN RESIN AS PER PLAN NOTE.

PROPOSED WORK:

1. WORK FOR THIS ITEM SHALL BE COMPLETED PRIOR TO ENCLOSING SOUTH ABUTMENT DOOR.
2. REMOVE AREA OF SIDEWALK TO LIMITS SHOWN ON PLANS.
3. CONSTRUCT ACCESS LADDER. LADDER SHALL BE ALL WELDED CONSTRUCTION USE 1/4" WELDS.
4. CONSTRUCT ACCESS HOLE.
5. SEAL JOINTS IN SIDEWALK WITH HMWM RESIN.

MEASUREMENT OF THE SOUTH ABUTMENT ACCESS FOR PAY PURPOSES SHALL BE A LUMP SUM ITEM AND SHALL INCLUDE, BUT NOT BE LIMITED TO: REMOVALS OF PORTIONS OF STRUCTURE, CONCRETE, ALL STRUCTURAL STEEL, DOWELLING, ADHESIVE ANCHORS, MANHOLE, HMWM RESIN AND ALL REQUIRED LABOR AND HARDWARE. THIS ITEM, HOWEVER, SHALL NOT INCLUDE REINFORCING STEEL FOR PAY PURPOSES. REINFORCING STEEL SHALL BE PAID FOR IN POUNDS UNDER ITEM 509, EPOXY COATED REINFORCING STEEL.

ITEM SPECIAL (530) - STRUCTURE MISC.: SOUTH ABUTMENT DOOR ENCLOSURE:

DESCRIPTION: THE WORK SHALL CONSIST OR REMOVING THE EXISTING SOUTH ABUTMENT DOOR AND FRAME AND PERMANENTLY SEALING THE OPENING.

MATERIALS:

CONCRETE, CLASS C	499 AND 511
REINFORCING STEEL, EPOXY, GRADE 60	509.02
DOWEL HOLES	510
REMOVAL OF STRUCTURE	202

PROPOSED WORK:

1. WORK FOR THIS ITEM SHALL NOT BEGIN UNTIL SOUTH ABUTMENT ACCESS HAS BEEN INSTALLED.
2. REMOVE EXISTING DOOR AND FRAME TO LIMITS SHOWN ON PLANS.
3. INSTALL DOOR ENCLOSURE.

MEASUREMENT OF THE SOUTH ABUTMENT DOOR ENCLOSURE FOR PAY PURPOSES SHALL BE A LUMP SUM ITEM AND SHALL INCLUDE, BUT NOT BE LIMITED TO: REMOVALS OF PORTIONS OF STRUCTURE, CONCRETE, DOWELLING, AND ALL REQUIRED LABOR AND HARDWARE. THIS ITEM, HOWEVER, SHALL NOT INCLUDE REINFORCING STEEL FOR PAY PURPOSES. REINFORCING STEEL SHALL BE PAID FOR IN POUNDS UNDER ITEM 509, EPOXY COATED REINFORCING STEEL.

ITEM SPECIAL (530) - FILLED GRID DECK CONCRETE REMOVAL AND REPLACEMENT:

DESCRIPTION: THE WORK SHALL CONSIST OF REMOVAL AND REPLACEMENT OF THE CONCRETE LOCATED IN THE BASCULE LEAFS ON THE BASCULE SPAN AS DESIGNATED ON SHEET 32/126.

REMOVAL OF THE EXISTING CONCRETE SHALL BE COMPLETED BY HYDRODEMOLITON. AREAS OF THE GRID FLOOR SURFACES WHERE CONCRETE HAS BEEN REMOVED SHALL BE FREE OF PAINT, DIRT, OIL, RUST, AND OTHER SUBSTANCES WHICH MAY PREVENT BONDING OF THE CONCRETE TO THE STEEL GRID.

THE CONCRETE SHALL BE HIGH EARLY STRENGTH CLASS C CONFORMING TO THE REQUIREMENTS OF ITEM 511 AND SHALL BE PLACED UNIFORMLY IN THE UNITS TO A HEIGHT OF AT LEAST 1 1/4 INCH ABOVE THE TOP OF THE STEEL. THE CONCRETE SHALL BE VIBRATED UNTIL THE CONCRETE IS IN CLOSE CONTACT WITH THE STEEL. VIBRATING SHALL NOT BE CARRIED TO THE POINT WHERE EXCESS FINES OR WATER ARE BROUGHT TO THE SURFACE.

AFTER VIBRATING, THERE SHALL BE AT LEAST 1/2 INCH OF CONCRETE REMAINING ABOVE THE TOP OF THE STEEL. THE CONCRETE SHALL THEN BE SCREEEDED TO A UNIFORM SURFACE, SO THE TOP SURFACE IS APPROXIMATELY 1/8 INCH ABOVE THE TOP OF THE STEEL. THE SURFACE SHALL THEN BE LIGHTLY FLOATED WITH A WOOD FLOAT OPERATED IN THE LONGITUDINAL DIRECTION WITH A STIFF BRISTLE BROOM OPERATED IN THE TRANSVERSE DIRECTION.

MEASUREMENT OF FILLED CONCRETE DECK REMOVAL AND REPLACEMENT FOR PAY PURPOSES SHALL BE A LUMP SUM ITEM AND SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE CONCRETE REPLACEMENT FOR THE BASCULE SPAN AS SHOWN ON THE PLANS. THIS SHALL INCLUDE BUT IS NOT LIMITED TO: REMOVAL AND REPLACEMENT OF THE CONCRETE AND THE CLEANING OF THE GRID DECK SURFACE.

ITEM SPECIAL (530) - STRUCTURE MISC.: GIRDER SLOT ARMOR REPAIR:

DESCRIPTION: THE WORK SHALL CONSIST OF REMOVAL AND REPLACEMENT OF THE EXISTING GIRDER SLOT ARMOR OF EACH GIRDER AT BASCULE PIERS 4 AND 5.

MATERIALS: ALL STRUCTURAL STEEL SHALL BE AASHTO M270 GRADE 36 AND SHALL BE GALVANIZED ACCORDING TO 711.02. CONCRETE SHALL BE CLASS C AND MEET THE REQUIREMENTS OF ITEM 511.

1. MAKE THE NECESSARY FIELD MEASUREMENTS REQUIRED BY THE FABRICATOR TO FABRICATE THE PROPOSED GIRDER SLOT ARMOR PLATES.
2. UPON COMPLETION OF THE HYDRO DEMOLITION OF THE SIDEWALK CONCRETE AND ROADWAY WEARING SURFACE AND PRIOR TO THE INSTALLATION OF THE PROPOSED BASCULE PARAPETS, REMOVE THE EXISTING GIRDER SLOT ARMOR AND ADJACENT CONCRETE TO THE LIMITS SHOWN ON THE PLANS.
3. INSTALL PROPOSED GIRDER SLOT ARMOR PLATES AND ANCHOR BARS.
4. PLACE NEW CONCRETE IN COORDINATION WITH PLACEMENT OF THE REINFORCING AND CONCRETE OF THE PROPOSED BASCULE PIER PARAPETS.

PAINTING: SHOP PAINTING IS NOT REQUIRED. AFTER INSTALLATION OF THE PROPOSED STRUCTURAL STEEL AND PRIOR TO CONCRETE PLACEMENT, THE STEEL SHALL BE CONSIDERED GALVANIZED EXISTING STEEL AND PAINTED WITH THE SAME PAINT SYSTEM USED TO PAINT THE EXISTING STEEL ON THE BRIDGE. THE PAINTING COST SHALL BE INCLUDED WITH THE ITEM SPECIAL (530) GIRDER SLOT ARMOR REPAIR.

MEASUREMENT OF GIRDER SLOT ARMOR FOR PAY PURPOSES SHALL BE A LUMP SUM ITEM AND SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE GIRDER SLOT ARMOR REPLACEMENT FOR BASCULE PIERS 4 AND 5 AS SHOWN ON THE PLANS. THIS SHALL INCLUDE BUT IS NOT LIMITED TO: REMOVAL, REPLACEMENT, PAINTING AND WELDING OF THE STEEL GIRDER ARMOR PLATES AND ANCHOR BARS, AND REMOVAL AND REPLACEMENT OF CONCRETE.

ITEM SPECIAL(530) - STRUCTURE MISC.: BASCULE SPAN PARAPET:

DESCRIPTION: THE WORK SHALL CONSIST OF THE REMOVAL OF THE EXISTING STEEL SAFETY CURB AND REPLACEMENT WITH PROPOSED STEEL PARAPET ALONG EACH SIDE OF THE ROADWAY OF EACH BASCULE LEAVE, PLACEMENT OF COUNTER BALANCE WEIGHTS.

MATERIALS: ALL STRUCTURAL STEEL SHALL BE AASHTO M270 GRADE 50. ALL THREADED RODS, HEAVY HEX NUTS AND WASHERS SHALL BE GALVANIZED ACCORDING TO 711.02.

PROCEDURE:

1. MAKE THE NECESSARY FIELD MEASUREMENTS REQUIRED BY THE FABRICATOR TO FABRICATE THE PROPOSED STEEL PARAPET AND PARAPET SUPPORT STRINGER.
2. REMOVE THE EXISTING STEEL SAFETY CURB AND A PORTION OF THE STEEL GRATE SIDEWALK AS SHOWN ON THE PLANS.
3. INSTALL THE PROPOSED PARAPET STRINGER BY FIELD DRILLING AND ATTACHING IT AS DETAILED AT EACH FLOORBEAM LOCATION. ALL EXISTING BOLT HOLES AT THE FLOORBEAM ATTACHMENT LOCATIONS SHALL BE PLUGGED WELDED AND GROUND SMOOTH PRIOR TO INSTALLATION OF THE PARAPET SUPPORT STRINGER.
4. ATTACH THE STEEL PARAPET SECTION TO THE PARAPET SUPPORT STRINGER AT LOCATIONS AND AS SHOWN ON THE PLANS. ADJUST NUTS AT ATTACHMENT POINTS TO LEVEL AND TRUE PARAPET SECTION AS NECESSARY.
5. PLACE COUNTER BALANCE WEIGHT TOTALING 78,500 LBS. IN THE COUNTER WEIGHT PIT OF EACH BASCULE PIER. TYPE OF COUNTER BALANCE WEIGHT SHALL BE OF LEAD CASTING AND SUBJECT TO THE APPROVAL OF THE ENGINEER.
6. TEST LIFTS OF THE BASCULE LEAFS SHALL BE CONDUCTED AFTER THE PLACEMENT OF THE COUNTER WEIGHTS TO INSURE PROPER BALANCING AND OPERATION OF THE BASCULE LEAFS. THE NUMBER OF TEST LIFTS REQUIRED TO ACHIEVE ADEQUACY BALANCING SHALL BE DETERMINED BY THE ENGINEER.

PAINTING: SHOP PAINTING IS NOT REQUIRED. AFTER INSTALLATION OF THE PROPOSED STRUCTURAL STEEL AND PRIOR TO CONCRETE PLACEMENT, THE STEEL SHALL BE CONSIDERED GALVANIZED EXISTING STEEL AND PAINTED WITH THE SAME PAINT SYSTEM USED TO PAINT THE EXISTING STEEL ON THE BRIDGE. THE PAINTING COST SHALL BE INCLUDED WITH THE ITEM SPECIAL (530) BASCULE SPAN PARAPET.

MEASUREMENT OF BASCULE SPAN PARAPET FOR PAY PURPOSES SHALL BE A LUMP SUM ITEM AND SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE BASCULE SPAN PARAPET INSTALLATION AS SHOWN ON THE PLANS. THIS SHALL INCLUDE BUT IS NOT LIMITED TO: REMOVAL OF EXISTING SAFETY CURB AND PORTION OF SIDEWALK, FABRICATION, DRILLING, WELDING, GRINDING, PAINTING, LEVELING OF ALL COMPONENTS OF THE PROPOSED BASCULE SPAN PARAPET, PLACEMENT OF COUNTER BALANCE WEIGHTS AND ALL TEST LIFTS

J:\PC9\DGN\GENOTES6.DGN 4-8-96 1:30 P.M. E.S.T. REVISED

DESIGNED RWM | DRAWN | REVIEWED GTO | DATED 2-14-96
CHECKED JMD | REVISED | STRUCTURE FILE NUMBER 480597

GENERAL NOTES - 6

BRIDGE No. LUC-280-0346 OVER MAUMEE RIVER

LUC - 280

ITEM SPECIAL (530) - STRUCTURE MISC.: OPERATING TOWER WINDOW REPLACEMENT:

DESCRIPTION: THE WORK SHALL CONSIST OF REMOVAL AND REPLACEMENT OF THE EXISTING WINDOW FRAMES AT BASCULE PIER 5.

MATERIALS: SEE PROPOSAL NOTE FOR MATERIAL REQUIREMENTS.

1. MAKE THE NECESSARY FIELD MEASUREMENTS REQUIRED TO FABRICATE THE REPLACEMENT WINDOW FRAMES.

2. REMOVE EXISTING WINDOW FRAMES OF THE OPERATING TOWER AS SHOWN ON THE PLANS.

MEASUREMENT OF OPERATING TOWER WINDOW REPLACEMENT FOR PAY PURPOSES SHALL BE A LUMP SUM ITEM AND SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE WINDOW FRAME REPLACEMENT FOR BASCULE PIER 5 AS SHOWN ON THE PLANS. THIS SHALL INCLUDE BUT IS NOT LIMITED TO: REMOVAL, GLAZING, SEALING AND REPLACEMENT OF THE PROPOSED WINDOW FRAMES.

ITEM SPECIAL (530) - STRUCTURE MISC.: BASCULE PIERS DOOR AND WINDOW REPLACEMENT:

DESCRIPTION: THE WORK SHALL CONSIST OF REMOVAL AND REPLACEMENT OF THE EXISTING DOOR AND WINDOW FRAMES AT EACH BASCULE PIER..

MATERIALS: SEE PROPOSAL NOTE FOR MATERIAL REQUIREMENTS.

MEASUREMENT OF BASCULE PIERS DOOR AND WINDOW REPLACEMENT FOR PAY PURPOSES SHALL BE A LUMP SUM ITEM AND SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE WINDOW AND DOOR FRAME REPLACEMENT FOR EACH BASCULE PIER AS SHOWN ON THE PLANS. THIS SHALL INCLUDE BUT IS NOT LIMITED TO: REMOVAL, GLAZING, SEALING AND REPLACEMENT OF THE PROPOSED DOOR AND WINDOW FRAMES

ITEM SPECIAL (530) - STRUCTURE MISC.: CENTER LOCK REHABILITATION:

THE CENTERLOCK REHABILITATION IS CONSIDERED CRITICAL TO THE INTEGRITY OF THIS STRUCTURE. THE CONTRACTOR SHALL EXERCISE ALL POSSIBLE MEANS TO EXPEDITE THIS ITEM AND COMPLETE REPLACEMENT OF THE CENTERLOCKS AT THE EARLIEST POSSIBLE DATE.

DESCRIPTION: THE WORK SHALL CONSIST OF REMOVAL AND REPLACEMENT OF THE EXISTING CENTER LOCKS IN THE BASCULE SPAN. THIS ITEM SHALL INCLUDE TEMPORARY SPAN LOCKING WHILE TRAFFIC IS MAINTAINED. THE METHODS AND EQUIPMENT USED TO FACILIATE TEMPORARY SPAN LOCKING SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER. THE TEMPORARY SPAN LOCKING PROVIDED MUST NOT INTERFERE WITH NORMAL BRIDGE OPERATION.

MATERIALS: SEE PLANS FOR ALL MATERIAL REQUIREMENTS.

1. MAKE FIELD MEASUREMENTS NECESSARY TO INSTALL CENTER LOCK REPLACEMENTS. PLANS.

2. REMOVE EXISTING CENTER LOCKS.

3. INSTALL PROPOSED REPLACEMENT CENTER LOCKS AS SHOWN ON THE

MEASUREMENT OF CENTER LOCK REHABILITATION FOR PAY PURPOSES SHALL BE A LUMP SUM ITEM AND SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE CENTER LOCK REPLACEMENT FOR THE BASCULE SPAN AS SHOWN ON THE PLANS. THIS SHALL INCLUDE BUT IS NOT LIMITED TO: REMOVAL OF THE EXISTING CENTER LOCKS, INSTALLATION, TEMPORARY SPAN LOCKING, AND PAINTING THE PROPOSED CENTER LOCKS.

ITEM SPECIAL (530) - STRUCTURE MISC.: IMPACT ATTENUATOR REMOVAL AND REPLACEMENT:

DESCRIPTION: THE EXISTING IMPACT ATTENUATOR LOCATED IN UNIT 2 AT THE NORTH BOUND EXIT RAMP TO SUMMIT STREET SHALL BE REMOVED AND REPLACED. THE PLANS FOR THE TYPE, PERFORMANCE SPECIFICATIONS, LOCATION AND ATTACHMENT OF THE PROPOSED REPLACEMENT ATTENUATOR SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO PROCEEDING WITH THE FABRICATION, ERECTION OR INSTALLATION OF THE ATTENUATOR.

MEASUREMENT OF IMPACT ATTENUATOR REMOVAL AND REPLACEMENT FOR PAY PURPOSES SHALL BE A LUMP SUM ITEM AND SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE REMOVAL AND INSTALLATION OF THE IMPACT ATTENUATOR. THIS SHALL INCLUDE BUT IS NOT LIMITED TO: REMOVAL OF THE EXISTING ATTENUATOR, PLAN AND/OR SHOPDRAWING PREPARATION, AND INSTALLATION OF THE PROPOSED ATTENUATOR.

ITEM 604 - DRAINAGE STRUCTURE, MISC.: PVC PIPE

PVC PIPE SHALL BE NONPERFORATED POLYVINYL CHLORIDE PLASTIC SMOOTH WALL PIPE CONFORMING TO ASTM F758, TYPE PS 46. BASIS OF PAYMENT SHALL BE BASED ON THE LINEAR FEET OF ACCEPTED PVC PIPE, MEASURED ALONG THE PIPE CENTERLINE, AND INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE PIPE IN PLACE, WHICH INCLUDES, BUT IS NOT LIMITED TO: EXISTING DRAINAGE PIPE REMOVAL, EXISTING PIPE SUPPORT REMOVAL, EXISTING ANCHOR BOLT REMOVAL, PATCHING OF EXISTING CONCRETE, PIPE SUPPORT ASSEMBLIES, ANCHOR BOLTS, PVC PIPE AND FITTINGS, GROUT, WELDS, BOLTS, NUTS, AND WASHERS.

ITEM 611 REINFORCED CONCRETE APPROACH SLAB (T=12"), AS PER PLAN:

THE REINFORCING STEEL FOR THE APPROACH SLABS OF THIS STRUCTURE SHALL BE EPOXY COATED IN CONFORMANCE WITH 509. MATERIALS, LABOR AND INSTALLATION SHALL BE INCLUDED WITH APPROACH SLABS FOR PAYMENT.

ITEM 614 - MAINTAINING TRAFFIC :

MAINTENANCE AND PROTECTION OF HIGHWAY TRAFFIC: EXCEPT AS NOTED ON SHEET 113, ONE LANE OF EASTBOUND AND ONE LANE OF WESTBOUND TRAFFIC SHALL BE MAINTAINED AT ALL TIMES. AT LEAST ONE SIDEWALK SHALL REMAIN OPEN AT ALL TIMES FOR PEDESTRIAN TRAFFIC. REFER TO THE ROADWAY PLANS FOR ADDITIONAL REQUIREMENTS AND FOR PAYMENT PROVISIONS. HIGHWAY TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

MAINTENANCE OF LOCATION TRAFFIC: ALL STREET AND SIDEWALK TRAFFIC UNDER THE STRUCTURE SHALL BE MAINTAINED AT ALL TIMES.

MAINTENANCE AND PROTECTION OF RIVER TRAFFIC: THE CONTRACTOR SHALL CONDUCT HIS WORK IN CONFORMITY WITH THE REQUIREMENTS OF THE CORPS OF ENGINEERS (COE), U.S. ARMY, THE UNITED STATES COAST GUARD, THE CITY OF TOLEDO, AND ALL OTHER AUTHORITIES HAVING JURISDICTION SO AS TO MAINTAIN RIVER TRAFFIC AT ALL TIMES.

THE CONTRACTOR SHALL SECURE FROM SAID AUTHORITIES ALL NECESSARY PERMITS FOR THE CONSTRUCTION OF ANY ITEMS WITHIN THE NAVIGABLE PORTION OF THE RIVER, INCLUDING ALL WHARVES, DOCKS, FALSEWORK, STAGING AND ANCHORING DEVICES, AND FOR THE OCCUPANCY OF THE RIVER DURING THE CONSTRUCTION OF THE PERMANENT WORK. HE SHALL AT ALL TIMES KEEP THESE AUTHORITIES FULLY INFORMED REGARDING THE LOCATION OF HIS EQUIPMENT AND CONSTRUCTION WORK. ALL TEMPORARY STRUCTURES IN THE RIVER SHALL BE PROMPTLY REMOVED UPON COMPLETION OF THE WORK TO THE SATISFACTION OF THE AUTHORITIES.

THE CONTRACTOR WILL BE REQUIRED TO CONDUCT HIS WORK IN SUCH MANNER AS TO OBSTRUCT NAVIGATION AS LITTLE AS POSSIBLE.
THE CONTRACTOR SHALL DISPLAY SIGNAL LIGHTS AND CONDUCT HIS OPERATIONS IN ACCORDANCE WITH THE GENERAL REGULATIONS OF THE DEPARTMENT OF THE ARMY AND OF THE COAST GUARD GOVERNING LIGHTS AND DAY SIGNALS TO BE DISPLAYED.

SHOULD THE CONTRACTOR DURING THE PROGRESS OF THE WORK LOSE ANY OBJECTS IN THE RIVER, HE SHALL FORTHWITH RECOVER OR REMOVE SUCH OBJECTS. THE CONTRACTOR SHALL GIVE IMMEDIATE NOTICE TO THE PROPER AUTHORITIES OF SUCH OBJECTS, AND IF REQUIRED, HE SHALL, UNDER THE DIRECTION OF SUCH AUTHORITIES, MARK OR BUOY SUCH OBJECTS UNTIL THEY ARE REMOVED.

THE CONTRACTOR SHALL OBTAIN FROM THE PROPER AUTHORITIES ALL PERMITS AND LICENSES NECESSARY TO CARRY ON THIS WORK AND SHALL PAY ANY FEES OR CHARGES REQUIRED.

ITEM 815 - FIELD PAINTING OF EXISTING STEEL, SYSTEM OZEU

EXCEPT FOR ALL STRUCTURAL STEEL INSIDE THE BASCULE PIERS 4 AND 5 WHICH ARE TO BE PAINTED WITH SYSTEM EEU, ALL OTHER STEEL SURFACES OF THIS STRUCTURE WHICH HAVE BEEN INDICATED TO BE PAINTED PER THE PAINTING SHEETS (INCLUDING BUT NOT LIMITED TO THE GIRDERS, FLOOR BEAMS, STRINGERS, CROSS FRAMES, DIAPHRAGMS, LATERALS, BEARINGS, ETC.) SHALL BE CLEANED AND PAINTED USING THE OZEU SYSTEM. PAINT COLOR SHALL BE FEDERAL SPECIFICATION FS-595A-14260 (GREEN).

NEW FINGER JOINT PLATES AND DOWNSPOUTS SHALL NOT BE PAINTED.

PRIOR TO THE INSTALLATION OF THE ROADWAY FINGER JOINTS AT THE SOUTH ABUTMENT, BASCULE PIERS 4 AND 5, BENT 8, AND NORTH ABUTMENT, THE JOINT SUPPORTING FLOOR BEAM FLANGES AND ALL OTHER STRUCTURAL STEEL IMMEDIATELY ADJACENT TO THE FINGER JOINTS SHALL BE CLEANED PRIOR TO THE INSTALLATION OF THE NEW METALLIZED FINGER JOINTS. IN PREPARATION TO PAINTING ADJACENT TO THE NEWLY INSTALLED FINGER JOINTS, CARE SHALL BE TAKEN TO ENSURE THAT THE NEWLY METALLIZED FINGER JOINT SURFACES ARE NOT DAMAGED BY BLASTING ABRASIVES. ANY ABRASIVE DAMAGE OF NEWLY METALLIZED SURFACES MAY REQUIRE THAT SUCH SURFACES BE REPAIRED WITH THE METALLIZING PROCESS.

GALVANIZED SURFACES WHICH ARE TO BE PAINTED SHALL BE SOLVENT CLEANED AS DIRECTED AND GIVEN A SPECIAL PRIME COAT AS SPECIFIED AND AN OZEU FINISH COAT OF PAINT. ALL OTHER STEEL SURFACES SHALL BE SOLVENT CLEANED AS DIRECTED (ALL STEEL MEMBERS LOCATED OVER EXISTING ROADWAYS OR RAILWAYS SHALL BE SOLVENT CLEANED AS REQUIRED IN THE OZEU SUPPLEMENTAL SPECIFICATION), ABRASIVELY CLEANED AND GIVEN AN OZEU PRIME, INTERMEDIATE AND FINISH COAT OF PAINT. CARE SHALL BE TAKEN DURING ABRASIVE BLASTING TO PROTECT FRESH METALLIZED OR GALVANIZED SURFACES FROM BEING DAMAGED BY CLEANING ABRASIVES.

NEW STEEL SHALL BE PROVIDED BARE FOR PREPARATION AND PAINTING IN THE FIELD. FOR PURPOSES OF FIELD PAINTING, NEWLY ERECTED STEEL SHALL BE CONSIDERED EXISTING STEEL AND SHALL BE PREPARED AND PAINTED WITH A PRIME, INTERMEDIATE, AND FINISH COAT OF PAINT IN CONFORMANCE WITH THE SUPPLEMENTAL SPECIFICATION "FIELD PAINTING OF EXISTING STEEL, SYSTEM OZEU."

COST OF CLEANING AND PAINTING OF NEW AND EXISTING STEEL WITH THE OZEU PAINT SYSTEM SHALL BE INCLUDED IN THE SEVERAL OZEU ITEMS. EXISTING STRUCTURE DRAWINGS ARE AVAILABLE AT THE DISTRICT OFFICE FOR INSPECTION.

SPOT PAINTING: AREAS TO BE SPOT PAINTED ARE INDICATED ON THE PAINTING SHEETS AND SHALL COMPLY WITH THE SUPPLEMENTAL SPECIFICATION. EXACT LOCATIONS AND LIMITS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.

ITEM SPECIAL, WEATHER MONITORING SENSORS:

THE TWO (2) EXISTING WEATHER MONITORING SENSORS WILL BE DISCONNECTED BY ODOT FORCES PRIOR TO CONSTRUCTION. THE SENSORS, WIRE AND CONDUIT SHALL BE REMOVED BY THE CONTRACTOR, AS DIRECTED BY THE ENGINEER. UPON COMPLETION OF THE STRUCTURE, NEW WEATHER MONITORING SENSORS SHALL BE INSTALLED BY:

SSI SURFACE SYSTEMS
11612 LIBURN PARK ROAD
ST. LOUIS MISSOURI 63146

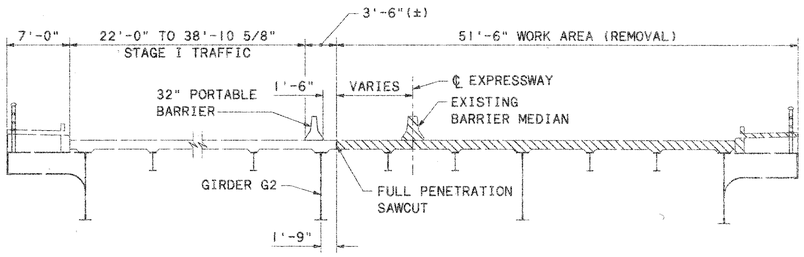
THE CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF SEVEN (7) WORKING DAYS PRIOR TO BEGINNING OF CONSTRUCTION.

PAYMENT FOR THIS ITEM SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NECCESSARY TO COMPLETE THE REMOVAL AND REPLACEMENT OF WEATHER MONITORING SENSORS. PAYMENT SHALL BE INCLUDED IN THE PRICE BID FOR:

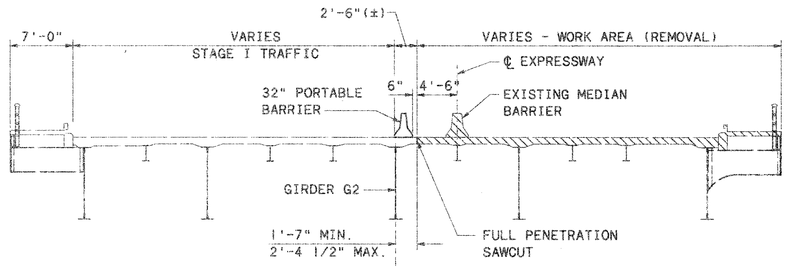
ITEM SPECIAL	WEATHER MONITORING SENSORS	LUMP SUM

DESIGNED RWM | DRAWN GTC | REVIEWED RKM | DATED 2-14-96
CHECKED JMD | REVISED | STRUCTURE FILE NUMBER 4805917

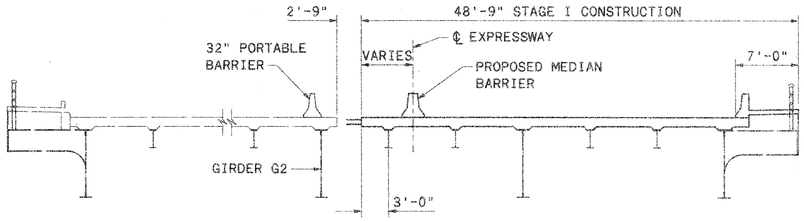
GENERAL NOTES



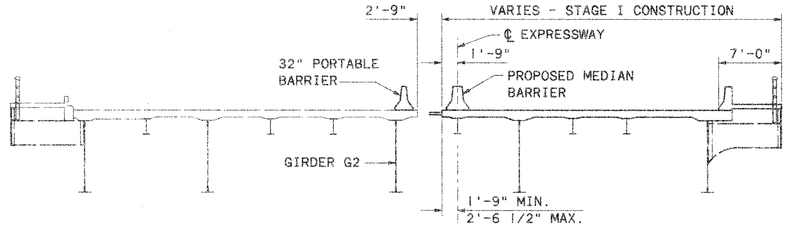
UNIT 1 - STAGE I REMOVAL



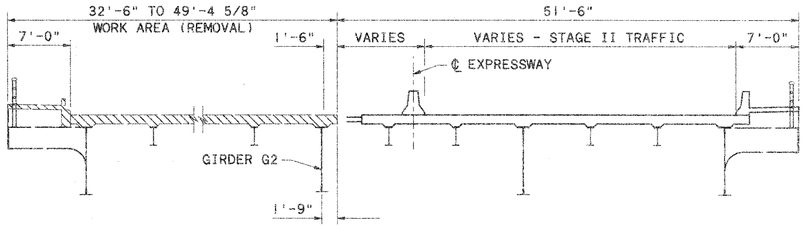
UNIT 2 - STAGE I REMOVAL



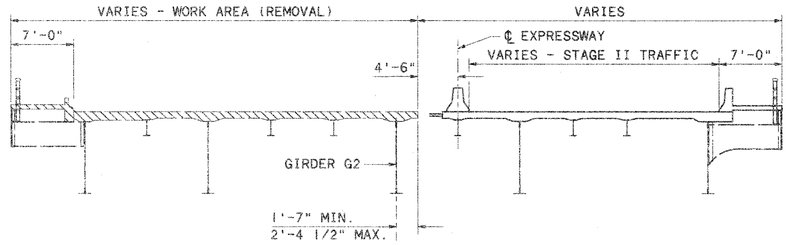
UNIT 1 - STAGE I CONSTRUCTION



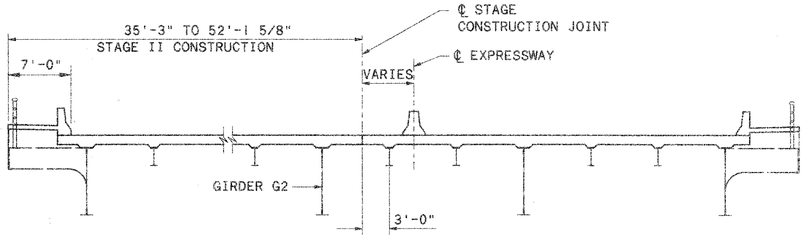
UNIT 2 - STAGE I CONSTRUCTION



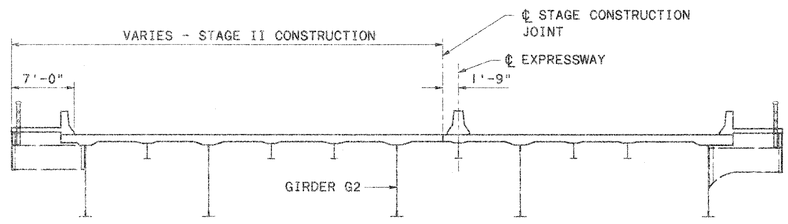
UNIT 1 - STAGE II REMOVAL



UNIT 2 - STAGE II REMOVAL



UNIT 1 - STAGE II CONSTRUCTION



UNIT 2 - STAGE II CONSTRUCTION

NOTE: WORK THIS SHEET WITH SHEET 14 /126 .

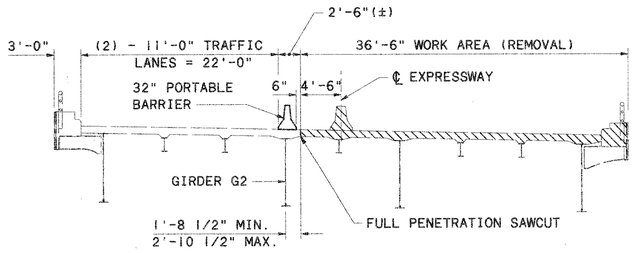
N:\PROJECTS\PR14912\CADD\STGCNST1 9-7-95 2:10:41 pm

STAGE CONSTRUCTION DIAGRAMS
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

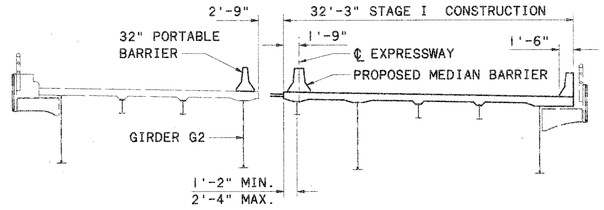
LUC-280

13 /126

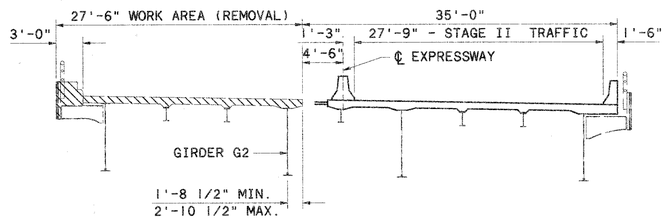
DESIGNED JMD
DRAWN RFJ
CHECKED MAK
REVISED
REVIEWED RHM
DATE 14-FEB-96
STRUCTURE FILE NUMBER 480597



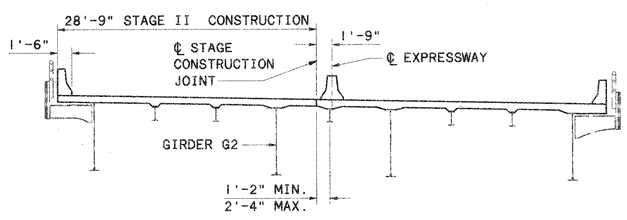
UNIT 3 - STAGE I REMOVAL



UNIT 3 - STAGE I CONSTRUCTION



UNIT 3 - STAGE II REMOVAL



UNIT 3 - STAGE II CONSTRUCTION

LEGEND

INDICATES AREAS TO BE REMOVED PER ITEM 202, PORTIONS OF STRUCTURE REMOVED.

NOTE

PORTABLE CONCRETE BARRIER SHALL CONFORM TO STANDARD DRAWING PCB-91. EACH SECTION OF BARRIER SHALL BE ANCHORED WITH TWO ANCHORS PLACED ON THE TRAFFIC SIDE OF THE BARRIER. FURNISHING, INSTALLATION, MAINTAINING AND REMOVING PORTABLE CONCRETE BARRIER, INCLUDING THE COMPLETE OR PARTIAL REMOVAL OF ANCHOR HARDWARE AND THE FILLING OF THE ANCHOR VOIDS WITH NON-SHRINK GROUT SHALL BE INCLUDED WITH ITEM 614 FOR PAYMENT.

CHANGEABLE MESSAGE SIGN CABLES RUN THROUGH AND/OR UNDER THE EXISTING CONCRETE BARRIER MEDIAN. CARE MUST BE TAKEN TO IDENTIFY THE LOCATION OF AND AVOID DAMAGE TO THESE CABLES.

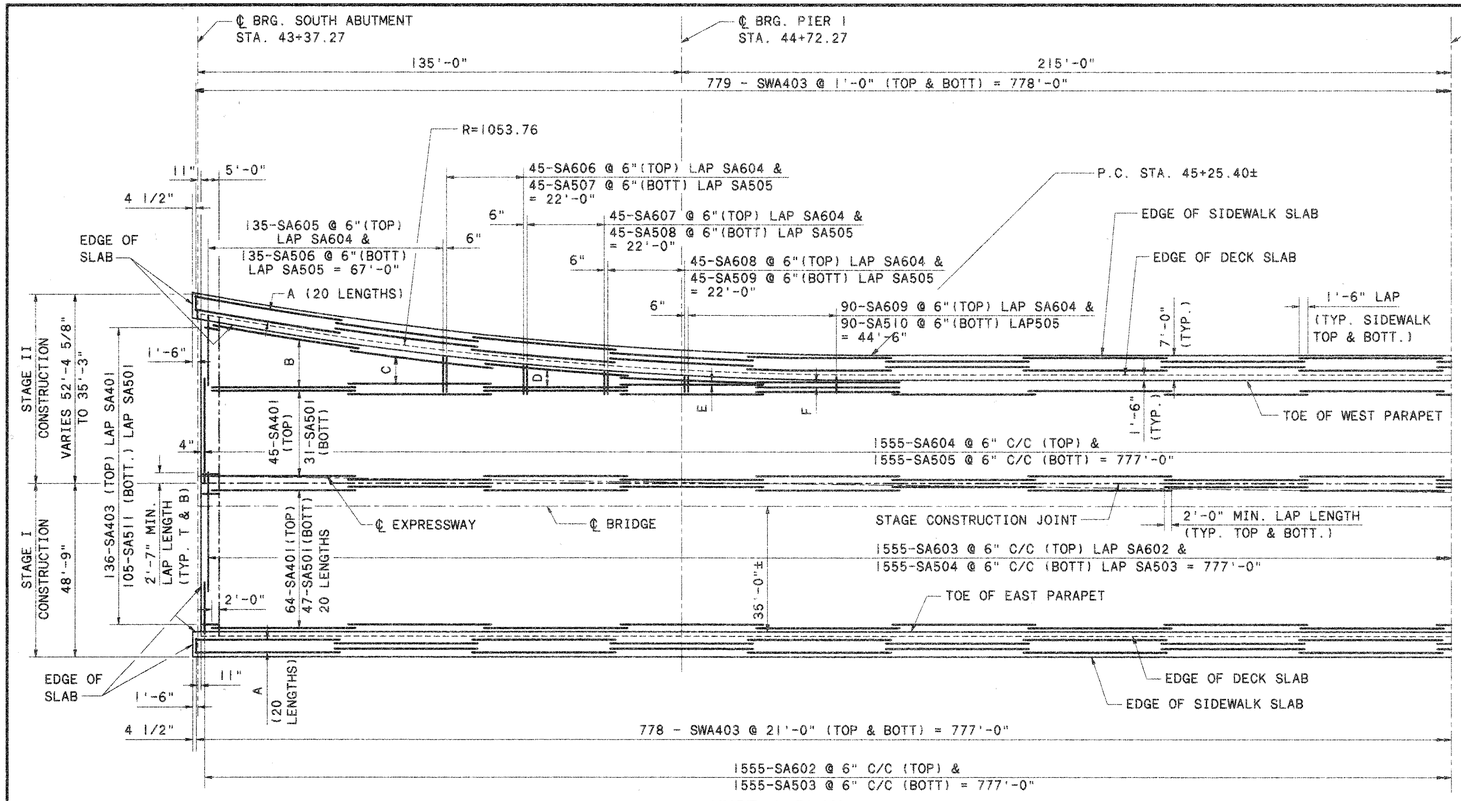
BURGESS & NIPLE ENGINEERS ARCHITECTS

DESIGNED JMD | DRAWN RFJ | REVISED RH/TT 14-Feb-96 | DATE

CHECKED MAK | REVISED | STRUCTURE FILE NUMBER 4805917

STAGE CONSTRUCTION DIAGRAMS
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280



UNIT 1 PLAN

MEDIAN BARRIER AND BACK OF
PARAPETS NOT SHOWN FOR CLARITY

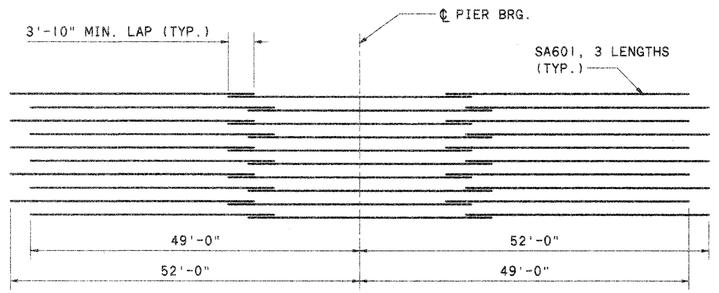
SLAB TRANSITION AND SIDEWALK BARS *		
BAR GROUP	TOP MAT	BOTTOM MAT
A	6-SWA401	6-SWA401
B	27-SA401	27-SA501
C	16-SA401	16-SA501
D	8-SA401	8-SA501
E	5-SA401	5-SA501
F	3-SA401	3-SA501
G	6-SWA402	6-SWA402
H	6-SWA404	6-SWA404

* SPACE AS SHOWN IN TYPICAL SECTION

MATCH LINE "A"

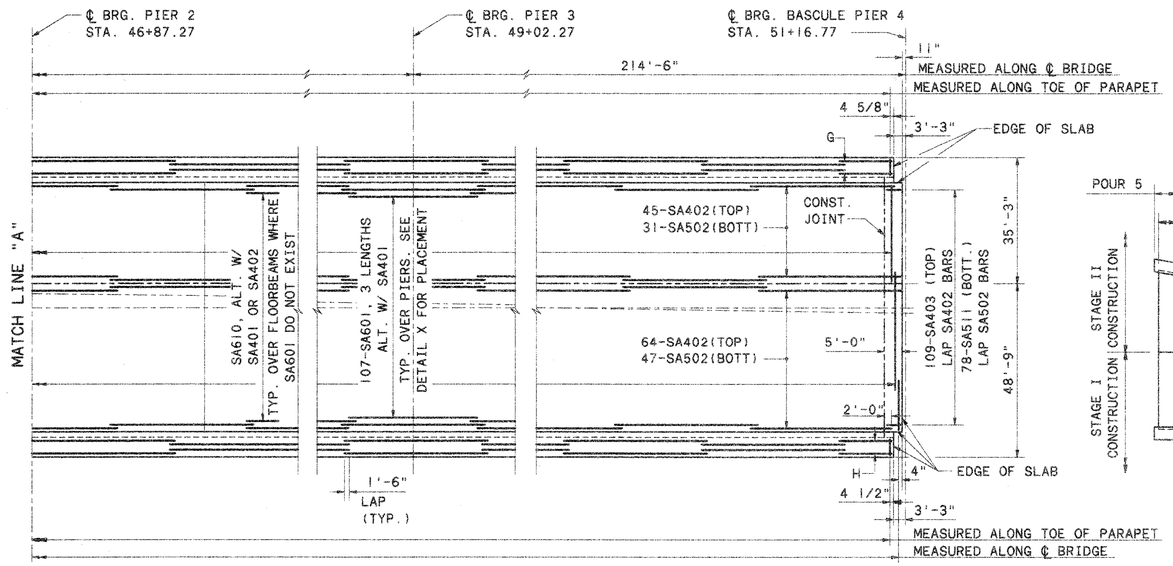
NOTES

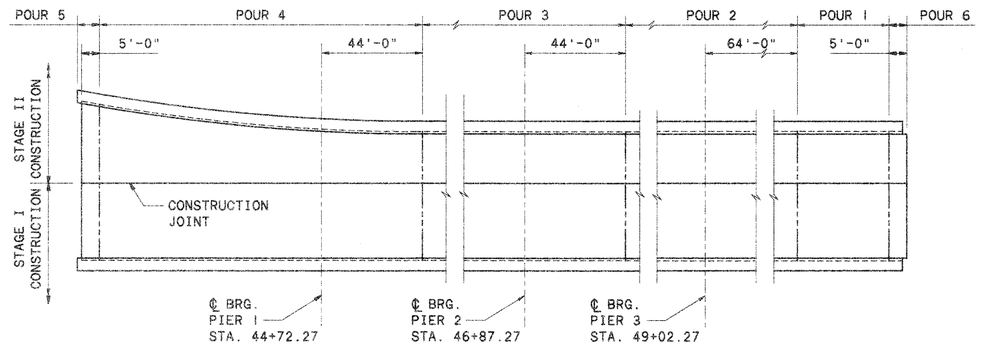
1. STATIONING ALONG ℄ BRIDGE
2. SEE SHEET 20/126 FOR TRANSVERSE SECTION
3. SEE SHEET 71/126 FOR SCUPPER LOCATIONS.
4. SEE SHEET 38/126 THRU 40/126 FOR FINGER JOINT DETAILS.
5. SEE SHEET 26/126 AND 27/126 FOR SCREED ELEVATIONS.
6. SEE SHEET 89/126 THRU 93/126 FOR REINFORCING SCHEDULE



DETAIL

STAGGER OF SA601 BARS
OVER ℄ BRG. PIERS 1 THRU 3
(ALL REINFORCING NOT SHOWN)





POUR SEQUENCE

(NOT TO SCALE)

ENGINEERS
ARCHITECTS

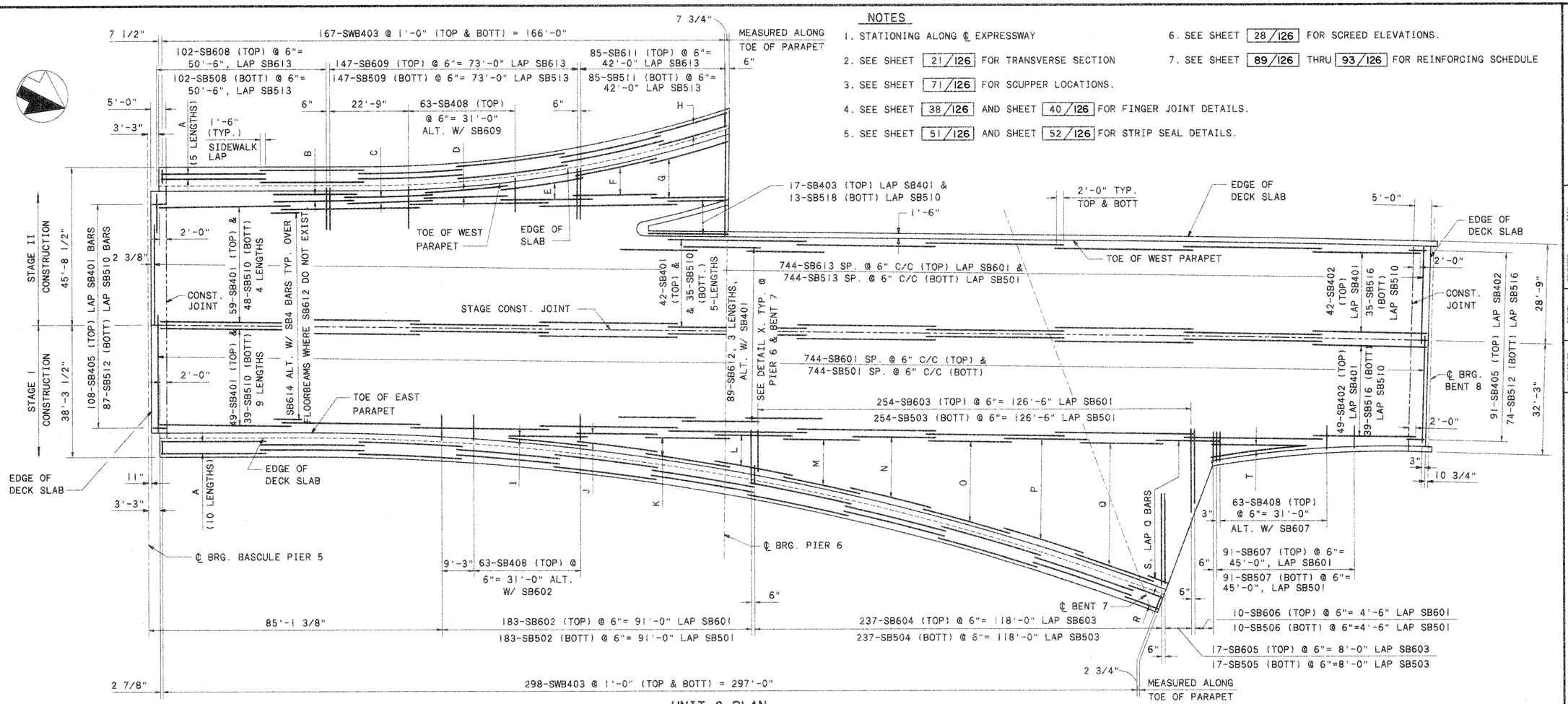
DESIGNED CJS
DRAWN RFJ
CHECKED JAP
REVISED
REVIEWED RKM
DATE 14-Feb-96
STRUCTURE FILE NUMBER 4805917

SLAB PLAN - UNIT 1
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

15/126

N:\PROJECTS\PR1491\CADD\SLAB1 8-2-95 11:19:06 am

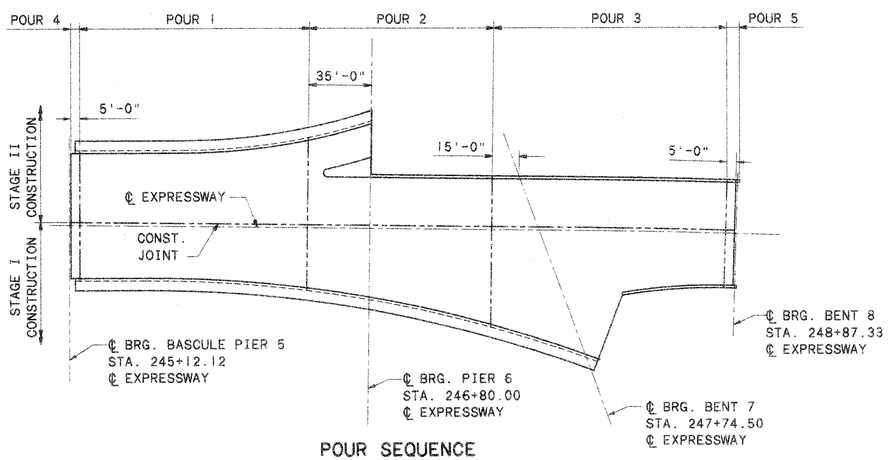


UNIT 2 PLAN

MEDIAN BARRIER, AND BACKS OF PARAPETS
IN SOME LOCATIONS NOT SHOWN FOR CLARITY

NOTES

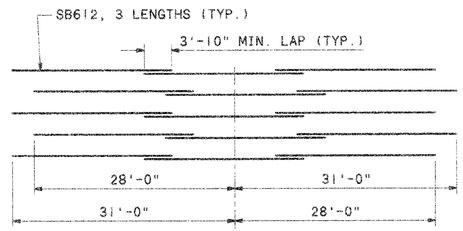
1. STATIONING ALONG ℄ EXPRESSWAY
2. SEE SHEET 21/126 FOR TRANSVERSE SECTION
3. SEE SHEET 71/126 FOR SCUPPER LOCATIONS.
4. SEE SHEET 38/126 AND SHEET 40/126 FOR FINGER JOINT DETAILS.
5. SEE SHEET 51/126 AND SHEET 52/126 FOR STRIP SEAL DETAILS.
6. SEE SHEET 28/126 FOR SCREED ELEVATIONS.
7. SEE SHEET 89/126 THRU 93/126 FOR REINFORCING SCHEDULE



POUR SEQUENCE

(NOT TO SCALE)

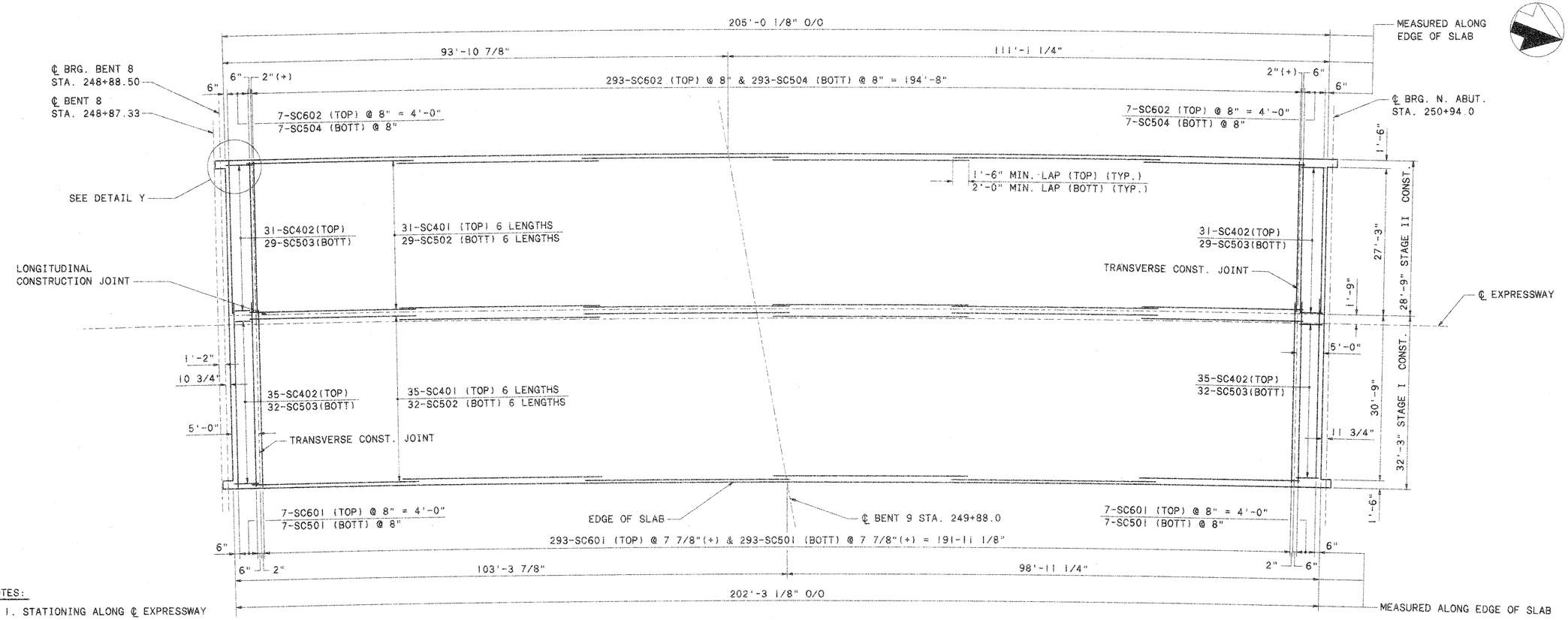
SLAB TRANSITION AND SIDEWALK BARS *		
BAR GROUP	TOP MAT	BOTTOM MAT
A	6-SWB401	6-SWB401
B	2-SB404	2-SB514
C	3-SB404	3-SB514
D	6-SB404	6-SB514
E	11-SB404	11-SB514
F	19-SB404	19-SB514
G	27-SB404	27-SB514
H	6-SWB402	6-SWB402
I	5-SB404	5-SB514
J	9-SB404	9-SB514
K	14-SB404	14-SB514
L	19-SB404	19-SB514
M	26-SB404	26-SB514
N	34-SB404	34-SB514
O	42-SB404	42-SB514
P	50-SB404	50-SB514
Q	59-SB404	59-SB514
R	6-SWB404	6-SWB404
S	59-SB406	59-SB515
T	7-SB407	7-SB417



DETAIL X

STAGGER OF SB612 BARS
OVER ℄ PIER 6 & BENT 7
(ALL REINFORCING NOT SHOWN)

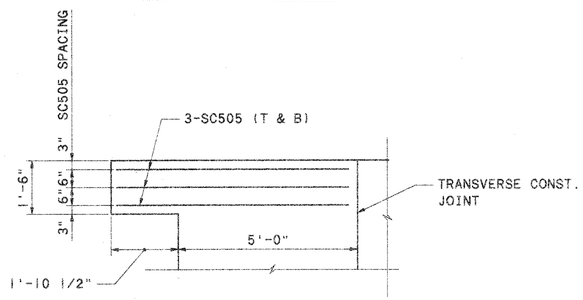
ENGINEERS ARCHITECTS
DATE 14-Feb-96
REVISED RKM
STRUCTURE FILE NUMBER 480517
DRAWN RFJ
REVISED
DESIGNED CJS
CHECKED JAP
SLAB PLAN - UNIT 2 REINFORCING
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER
LUC-280
16/126
N:\PROJECTS\PR149\2\CADD\REBAR4 8-7-95 9:27:04 am



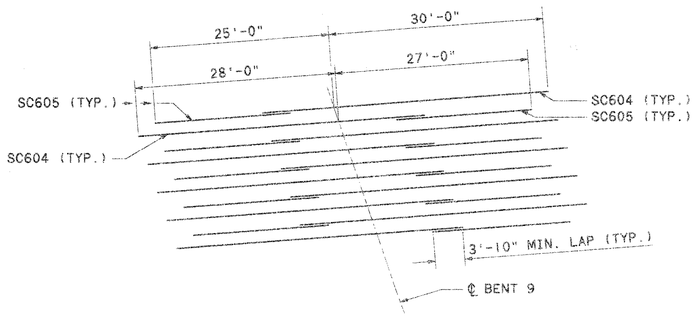
UNITS 3 PLAN

NOTES:

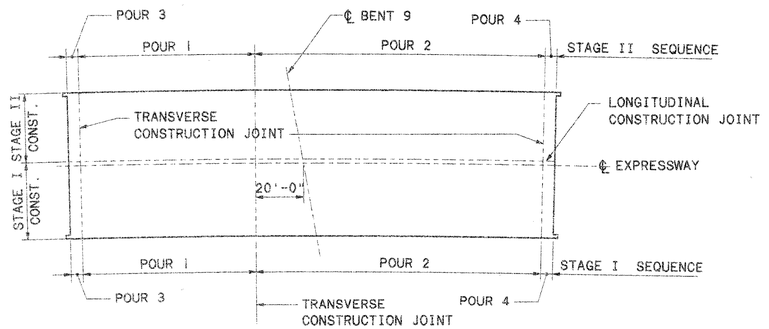
1. STATIONING ALONG ℄ EXPRESSWAY
2. TRANSVERSE AND LONGITUDINAL REINFORCING TO BE PLACED RADIALLY
3. SEE SHEET 22/126 FOR TRANSVERSE SECTION
4. SEE SHEET 40/126 AND 41/126 FOR FINGER JOINT DETAILS
5. SEE SHEET 73/126 FOR AND SCUPPER LOCATIONS
6. SEE SHEET 29/126 FOR SCREED ELEVATIONS
7. SEE SHEET 89/126 THRU 93/126 FOR REINFORCING SCHEDULE



DETAIL Y
TYPICAL SLAB REINFORCEMENT AT CORNERS
(ALL REINFORCING NOT SHOWN)



DETAIL X
STAGGER OF SC604 & SC605 BARS OVER ℄ BENT 9
(ALL REINFORCING NOT SHOWN)



SLAB POUR SEQUENCE

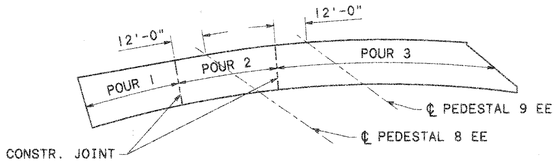
N:\PROJECTS\PR1491\2\CADD\REBARS 8-4-95

DESIGNED JMD
DRAWN RFJ
CHECKED JAP
REVISED
REVIEWED RMM
DATE 14-Feb-96
STRUCTURE FILE NUMBER 480917

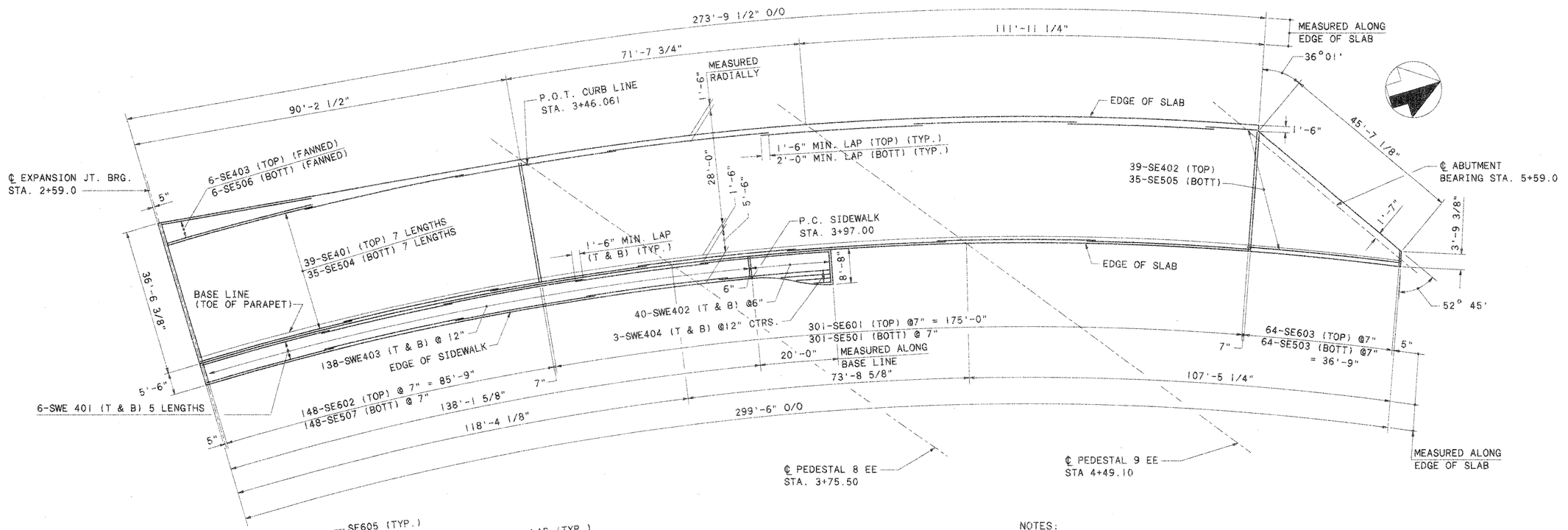
SLAB PLAN - UNIT 3 REINFORCING
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

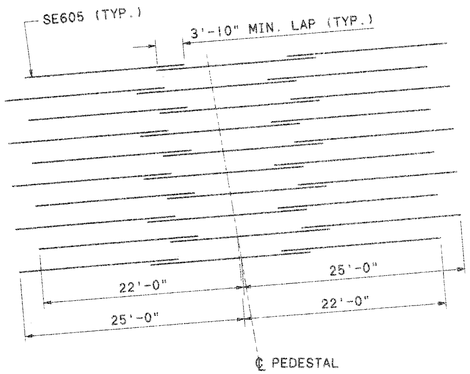
17/126



SLAB POUR SEQUENCE



RAMP E PLAN



DETAIL X

STAGGER OF SE605 BARS
OVER ℄ PEDESTALS
(ALL REINFORCING NOT SHOWN)

NOTES:

1. STATIONING GIVEN ALONG BASE LINE RAMP EE.
2. SEE SHEET 23/126 FOR TRANSVERSE SECTION.
3. WORK THIS SHEET WITH STRIP SEAL SHEETS 51/126 THRU SHEET 52/126.
4. LONGITUDINAL AND TRANSVERSE REINFORCING STEEL TO BE PLACED RADIALLY UNLESS OTHERWISE NOTED.
5. SEE SHEET 73/126 FOR SCUPPER LOCATIONS.
6. SEE SHEET 30/126 FOR SCREED ELEVATIONS
7. SEE SHEET 89/126 THRU 93/126 FOR REINFORCING SCHEDULE

[redacted]
ENGINEERS
ARCHITECTS

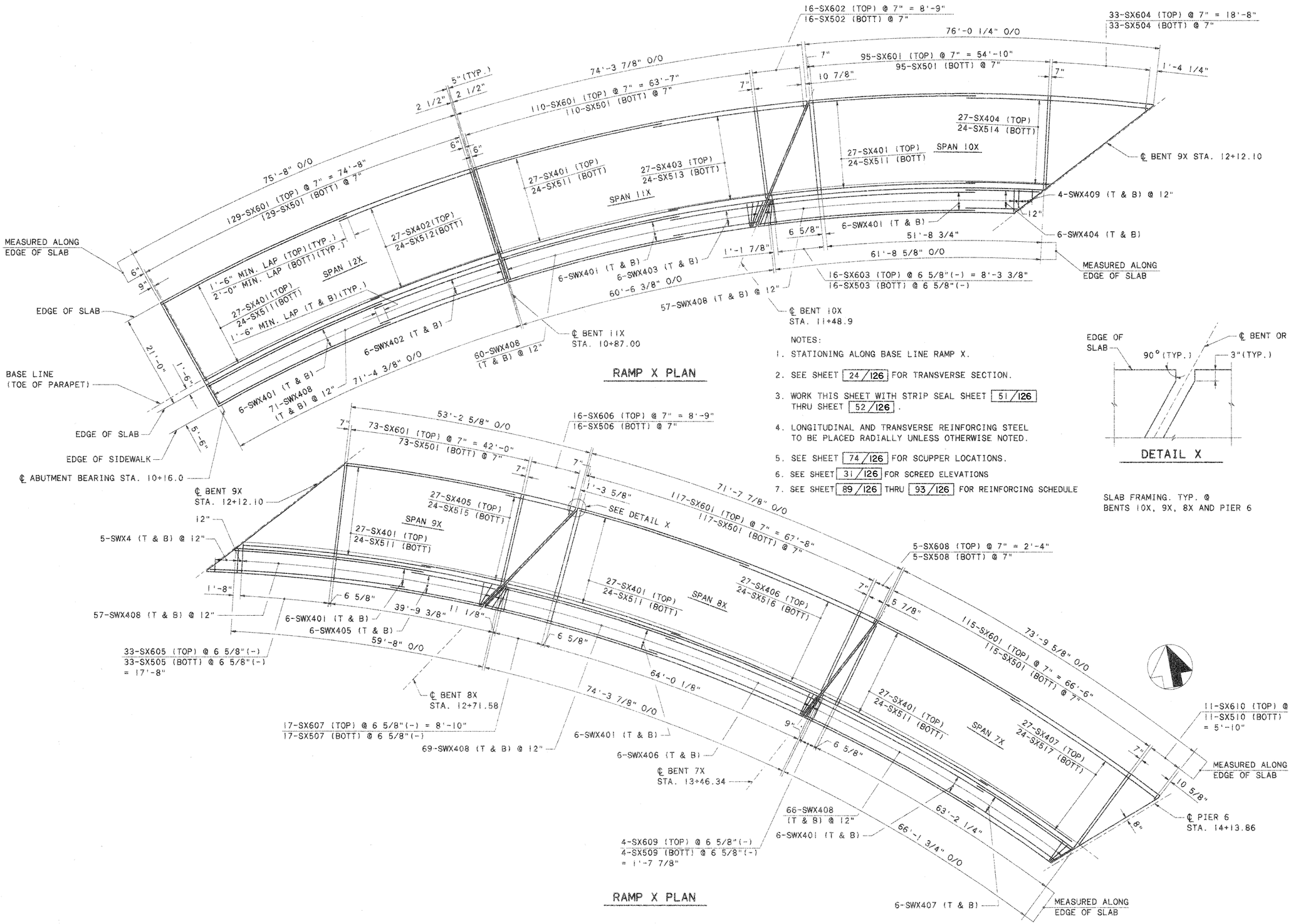
DESIGNED JMD
DRAWN RFJ
CHECKED JAP
REVISED
REVIEWED RM77
DATE 14-Feb-96
STRUCTURE FILE NUMBER 4805917

SLAB PLAN - RAMP EE REINFORCING
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

18/126

N:\PROJECTS\PR1491.2\CADD\REBAR5 8-4-95



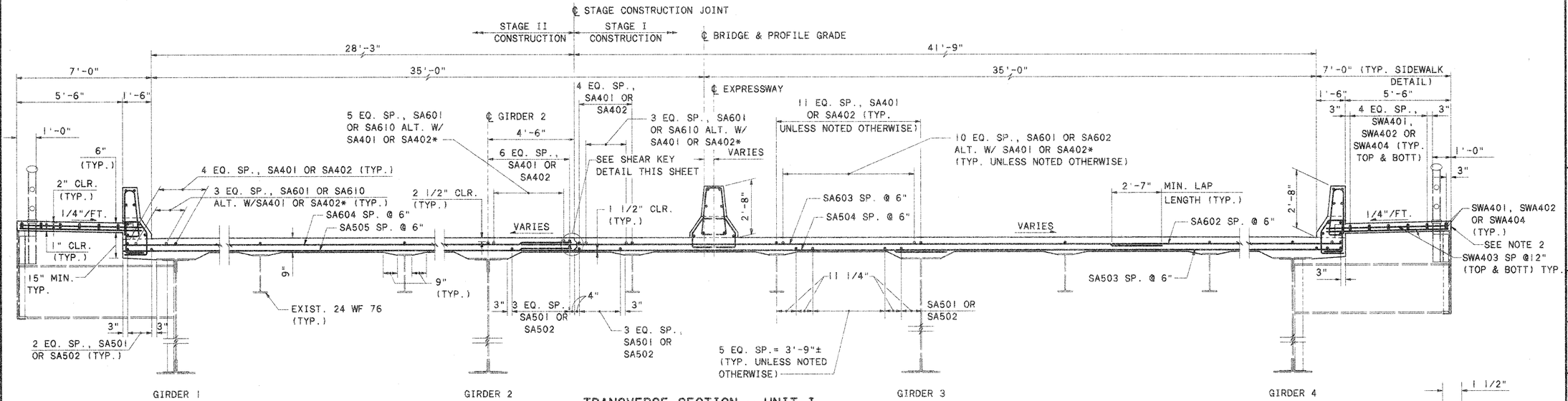
DESIGNED JMD
DRAWN RFJ
CHECKED MAK
REVISED
DATE 14-Feb-96
REVISED RKM
STRUCTURE FILE NUMBER 4805917

SLAB PLAN - RAMP X REINFORCING
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

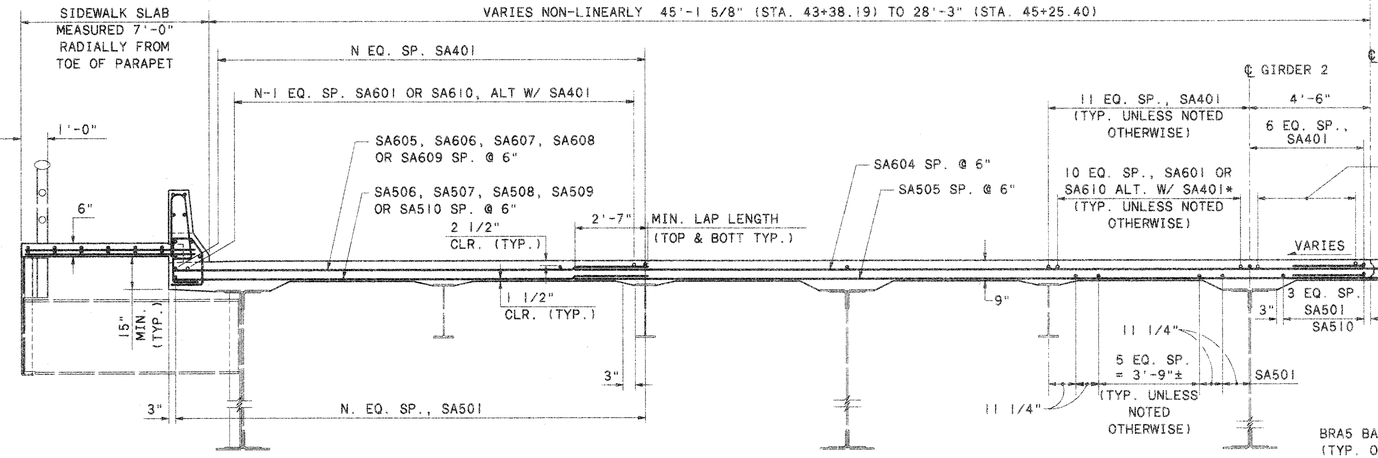
19/126

N:\PROJECTS\PR1491\2\ADD\REBAR2 8-4-95



TRANSVERSE SECTION - UNIT I

STAGE I TYPICAL FROM STA. 43+38.19 TO STA. 51+15.85
STAGE II TYPICAL FROM STA. 45+25.40 TO STA. 51+15.85
STATION 50+35 SHOWN
EXISTING CROSSFRAMES & BRACING NOT SHOWN FOR CLARITY



TRANSVERSE SECTION - UNIT I

STAGE II TYPICAL FROM STA. 43+38.19 TO STA. 45+25.40
STATION 43+40 SHOWN
EXISTING CROSSFRAMES, MEDIAN BARRIER, & BRACING NOT SHOWN FOR CLARITY

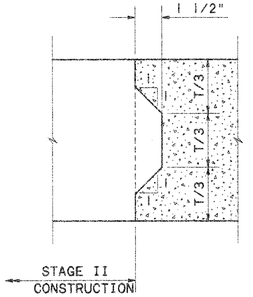
N VALUES & LOCATIONS		
N	FROM STATION	TO STATION
27	43+41.2	43+79.2
16	43+79.2	44+17.2
8	44+17.2	44+55.2
5	44+55.2	44+93.2
3	44+93.2	45+32.2

	HAUNCH THICKNESS @ BRGS.				
	GIRDER 1	GIRDER 2	GIRDER 3	GIRDER 4	GIRDER 5
℄ S. ABUT. BRG.	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"
℄ PIER 1	4 5/8"	4 1/2"	4 1/2"	4 1/2"	4 1/2"
℄ PIER 2	4 1/2"	4 1/2"	4 1/2"	4 1/2"	-
℄ PIER 3	4 1/2"	4 1/2"	4 1/2"	4 1/2"	-
℄ BRG. PIER 4	3 7/8"	4 1/8"	4 1/8"	4 1/8"	-

STAGE II CONSTRUCTION | STAGE I CONSTRUCTION

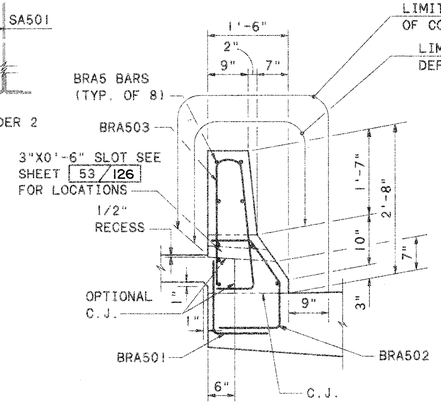
NOTES

1. FOR GIRDER AND STRINGER SPACINGS AND SLAB OVERHANG DISTANCES SEE SHEET 71/126
2. SALVAGE EXISTING BULB ANGLE ATTACHED TO FASCIA AND ENCORPORATE INTO SIDEWALK CONSTRUCTION. TYPICAL BOTH SIDEWALKS.
3. FOR ROADWAY PROFILE TRANSITION SEE SHEET 25/126

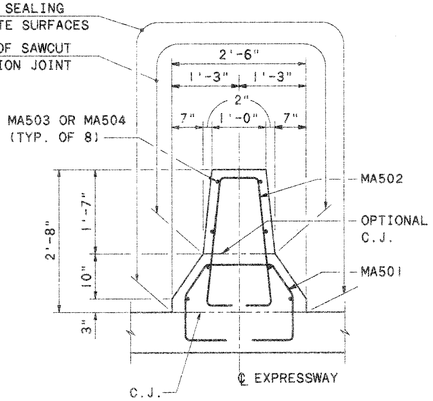


SHEAR KEY DETAIL

* SA601 TYPICAL OVER PIERS. SA610 TYPICAL OVER FLOOR BEAMS WHERE SA601 DOES NOT EXIST.

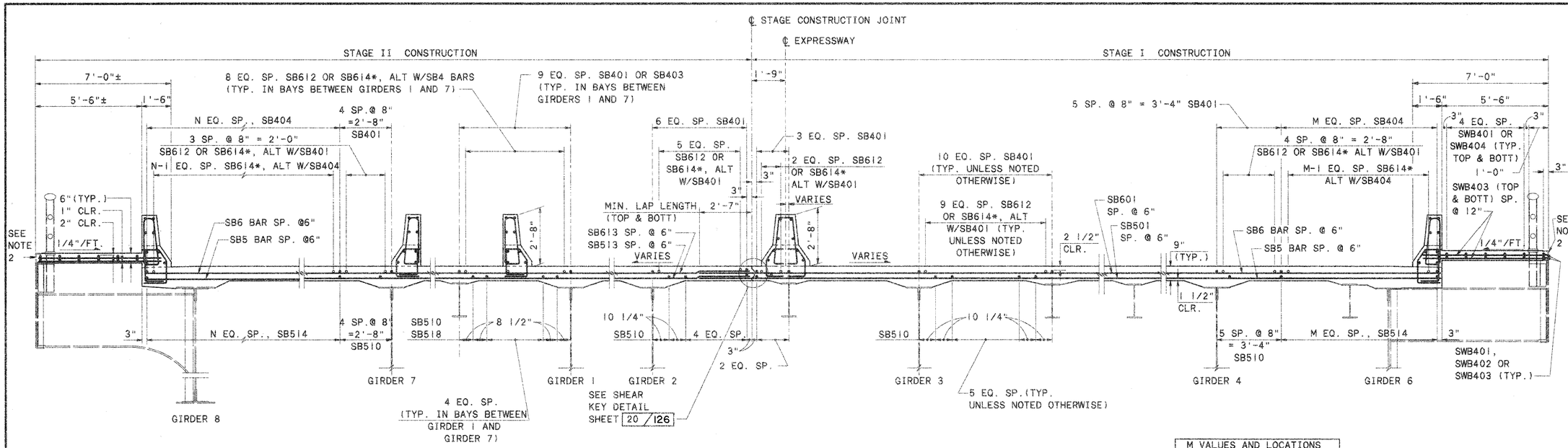


TYPICAL PARAPET DETAIL



TYPICAL MEDIAN BARRIER DETAIL

ENGINEERS ARCHITECTS
DATE: 14-Feb-96
REVISED RX177
STRUCTURE FILE NUMBER 4805917
DRAWN RFJ
REVISED
DESIGNED CJS
CHECKED JAP
TRANSVERSE SECTIONS - UNIT I
BRIDGE NO. LUC-280-0346 OVER MAUMEE RIVER
LUC-280
20/126
N:\PROJECTS\PR\491\CADD\DGN\SC1 8-4-95 9:20:47 am



NOTES:

1. FOR ROADWAY PROFILE TRANSACTION SEE SHEET 25/126
2. SALVAGE EXISTING BULB ANGLE ATTACHED TO FASCIA, AND INCORPORATE INTO SIDEWALK CONSTRUCTION
3. SEE SHEET 72/126 FOR GIRDER ANS STRINGER SPACINGS AND SLAB OVERHANG DISTANCES
4. SEE SHEET 55/126 AND 56/126 FOR MEDIAN BARRIER AND PARAPET ELEVATIONS

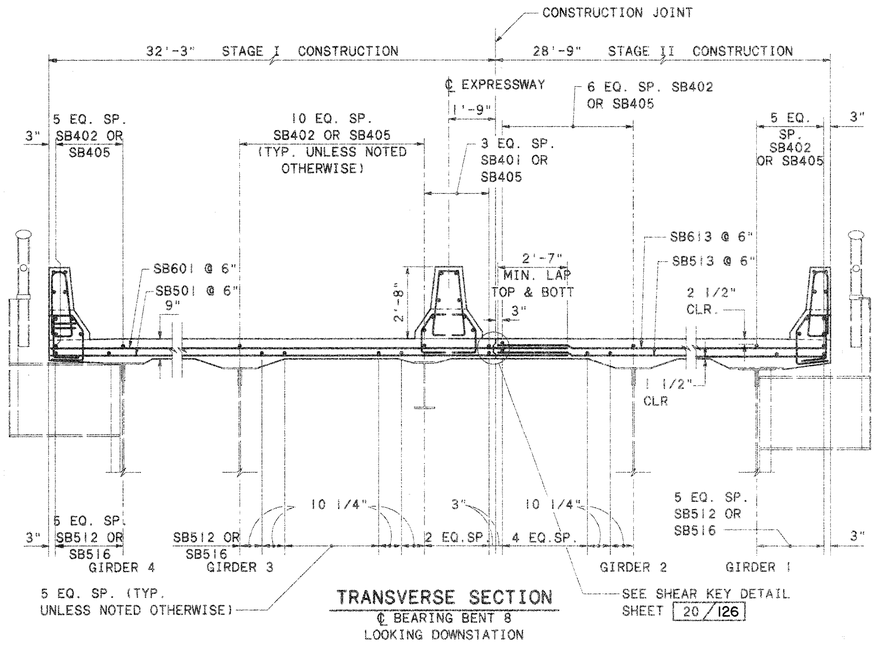
TRANSVERSE SECTION - UNIT 2

STATION 246+80 SHOWN

	HAUNCH THICKNESS @ BEARINGS						
	GIRDER 1	GIRDER 2	GIRDER 3	GIRDER 4	GIRDER 6	GIRDER 7	GIRDER 8
℄ BRG. PIER 5	3 1/8"	3"	2 3/4"	3"	-----	2 5/8"	-----
℄ BRG. PIER 6	2 7/8"	3"	3"	3 1/8"	3 1/2"	1 5/8"	5 1/4"
℄ BENT 7	2 1/4"	2 7/8"	3"	3 1/8"	4"	-----	-----
℄ BRG. BENT 8	3 1/8"	3 3/8"	2 1/2"	4"	-----	-----	-----

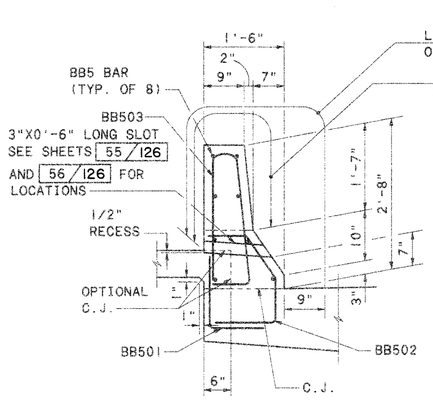
N	N VALUES AND LOCATIONS	
	FROM STATION	TO STATION
2	245+54.0	245+74.8
3	245+74.8	245+95.7
6	245+95.7	246+16.5
11	246+16.5	246+37.4
19	246+37.4	246+58.2
27	246+58.2	246+80.1

M	M VALUES AND LOCATIONS	
	FROM STATION	TO STATION
5	246+16.6	246+37.6
9	246+37.6	246+58.6
14	246+58.6	246+79.6
19	246+79.6	247+00.7
26	247+00.7	247+21.7
34	247+21.7	247+42.8
42	247+42.8	247+63.9
50	247+63.9	247+85.0
59	247+85.0	248+05.1

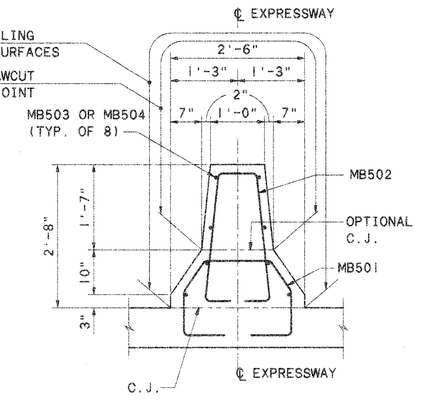


TRANSVERSE SECTION

℄ BEARING BENT 8
LOOKING DOWNSTATION



TYPICAL PARAPET DETAIL



TYPICAL MEDIAN BARRIER DETAIL

* SB612 TYPICAL OVER PIERS. SB614 TYPICAL OVER FLOORBEAMS WHERE SB612 DOES NOT EXIST.

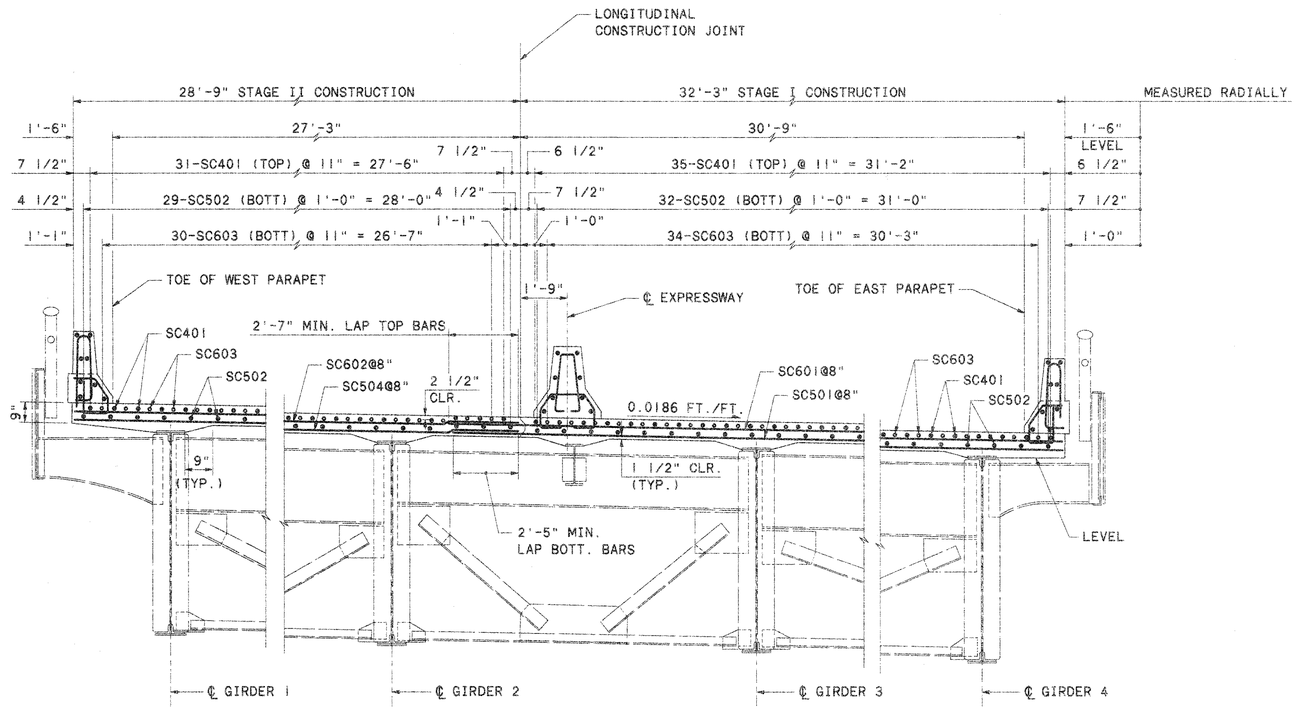
DESIGNED JAP
DRAWN RFJ
CHECKED CJS
REVISED
DATE 14-Feb-96
REVIEWED RM77
STRUCTURE FILE NUMBER 4805917

TRANSVERSE SECTION - UNIT 2
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

21/126

N:\PROJECTS\PR(491)\CADD\GRSEC4 8-8-95



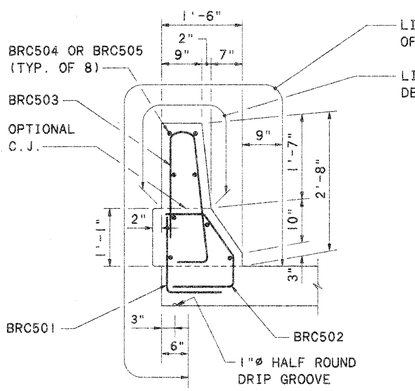
TRANSVERSE SECTION - UNIT 3

(TYPICAL SECTION BETWEEN TRANSVERSE CONSTRUCTION JOINTS SHOWN. SECTION AT SLAB ENDS SIMILAR.)
NOTE: SC603 BARS TYPICAL OVER FLOORBEAMS WHERE SC604 AND SC605 BARS ARE NOT LOCATED.

	UNIT 3 - HAUNCH THICKNESS			
LOCATION	GIRDER 1	GIRDER 2	GIRDER 3	GIRDER 4
℄ BRG. BENT 8	2 1/4"	2 1/2"	1 7/8"	2 1/4"
℄ BENT 9	3 1/8"	3 1/2"	2 3/4"	3 1/8"
℄ NORTH ABUT. BRG.	2 7/8"	3 1/4"	2 1/2"	2 7/8"

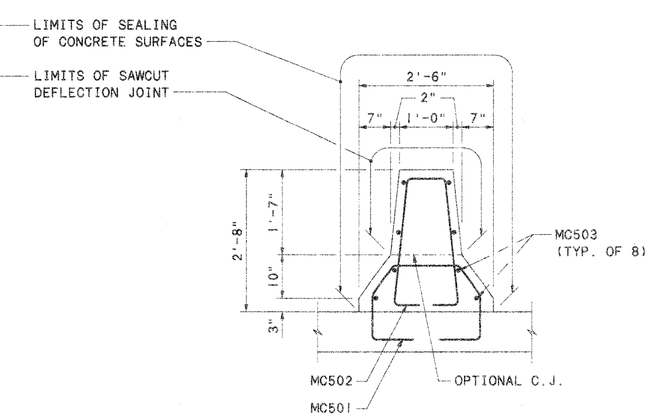
NOTES

1. SEE SHEET 58/126 FOR MEDIAN BARRIER AND PARAPET ELEVATIONS.
2. SEE SHEET 25/126 FOR SUPER ELEVATION TRANSITION
3. SEE SHEET 73/126 FOR SLAB OVERHANG DISTANCES AND GIRDER SPACING



TYPICAL PARAPET DETAIL

WEST PARAPET SHOWN.
EAST PARAPET SIMILAR.



TYPICAL MEDIAN BARRIER DETAIL

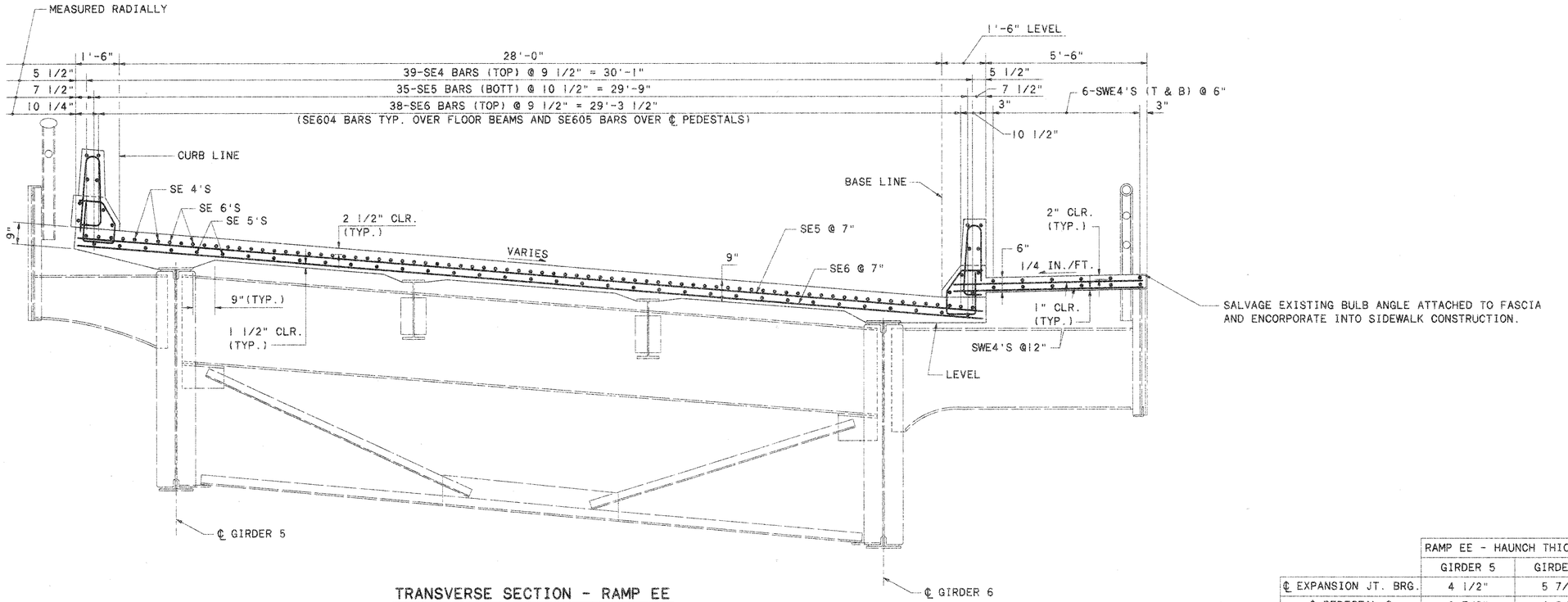
N:\PROJECTS\PR14912\CADD\CRSEC05 8-4-95

DESIGNED JMD
DRAWN GTC
CHECKED JAP
REVISED RM77 DATE 14-Feb-96
REVISED
STRUCTURE FILE NUMBER 4805917

TRANSVERSE SECTION - UNIT 3
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

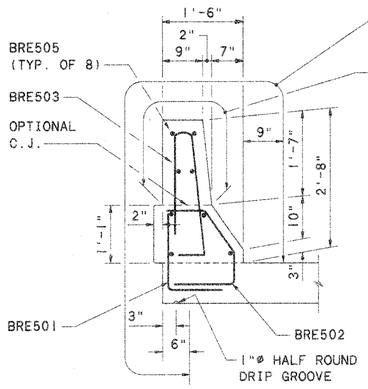
22/126



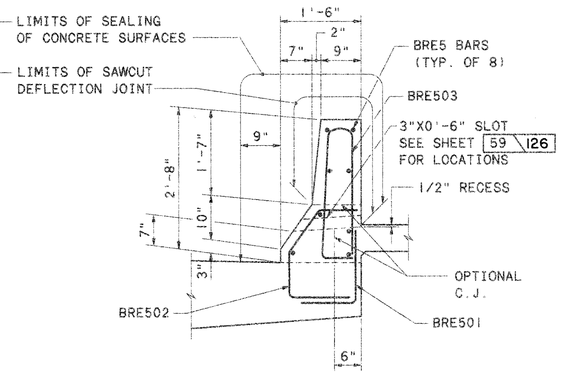
TRANSVERSE SECTION - RAMP EE

(TYPICAL FROM STA. 3+46.06
TO STA. 5+59.0)

	RAMP EE - HAUNCH THICKNESS	
	GIRDER 5	GIRDER 6
℄ EXPANSION JT. BRG.	4 1/2"	5 7/8"
℄ PEDESTAL 8	2 7/8"	4 5/8"
℄ PEDESTAL 9	3 1/4"	3 3/4"
℄ ABUT. BRG.	4"	4 7/8"



CURB LINE PARAPET DETAIL



BASE LINE PARAPET DETAIL

TYPICAL FROM STA. 2+58.58 TO 4+17.00.
FROM STA. 4+17.00 TO 5+58.07 PARAPET
SIMILAR TO CURB LINE PARAPET DETAIL.

NOTES

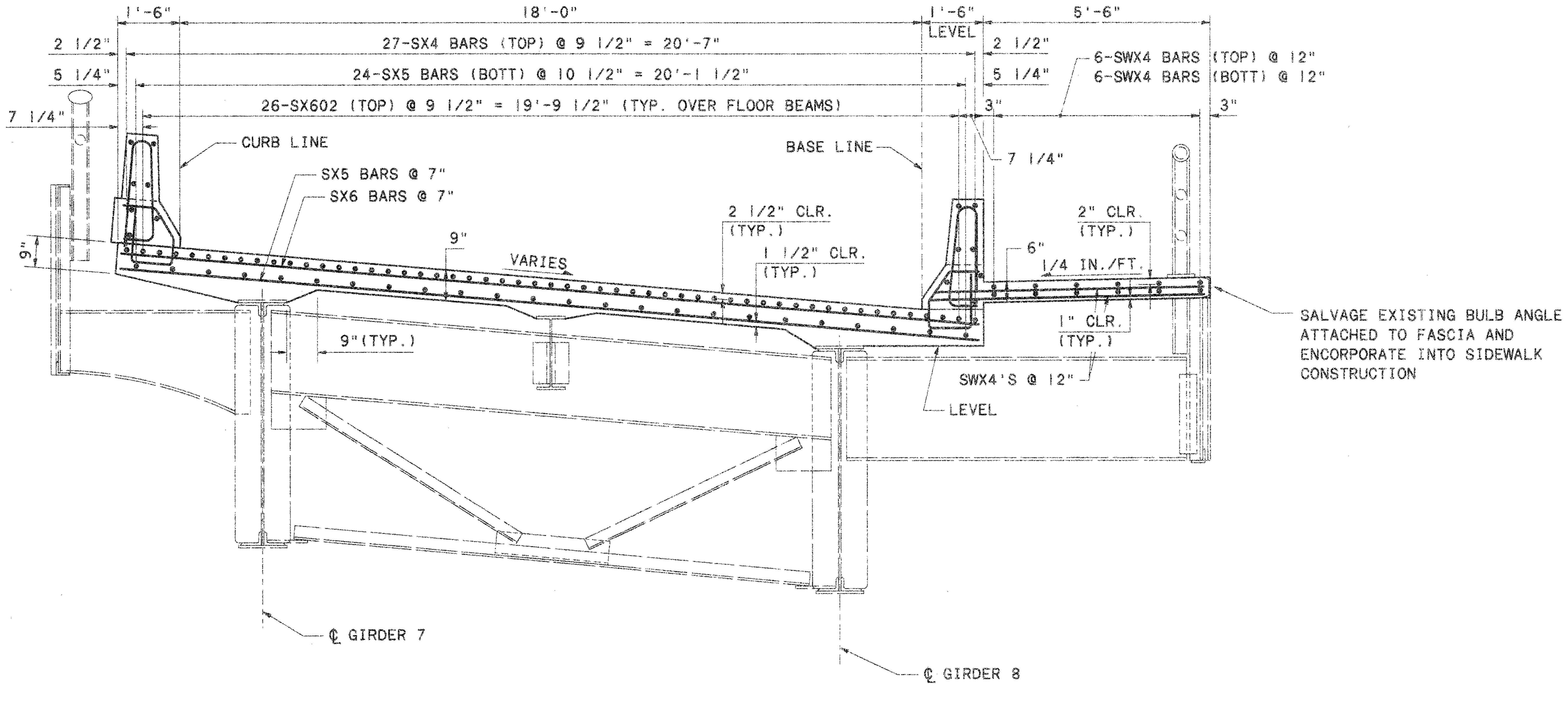
1. SEE SHEET 25/126 FOR SUPER ELEVATION TRANSITION AND BASE LINE PROFILE GRADE INFORMATION.
2. SEE SHEET 59/126 FOR PARAPET ELEVATIONS.
3. SEE SHEET 73/126 FOR SLAB OVERHANG DISTANCES AND GIRDER SPACING

ENGINEERS
ARCHITECTS

DESIGNED JMD
DRAWN RFJ
CHECKED JAP
REVISED
REVIEWED RK/TT
DATE 14-Feb-96
STRUCTURE FILE NUMBER 4805917

TRANSVERSE SECTION - RAMP EE
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280



TYPICAL TRANSVERSE SECTION - RAMP X

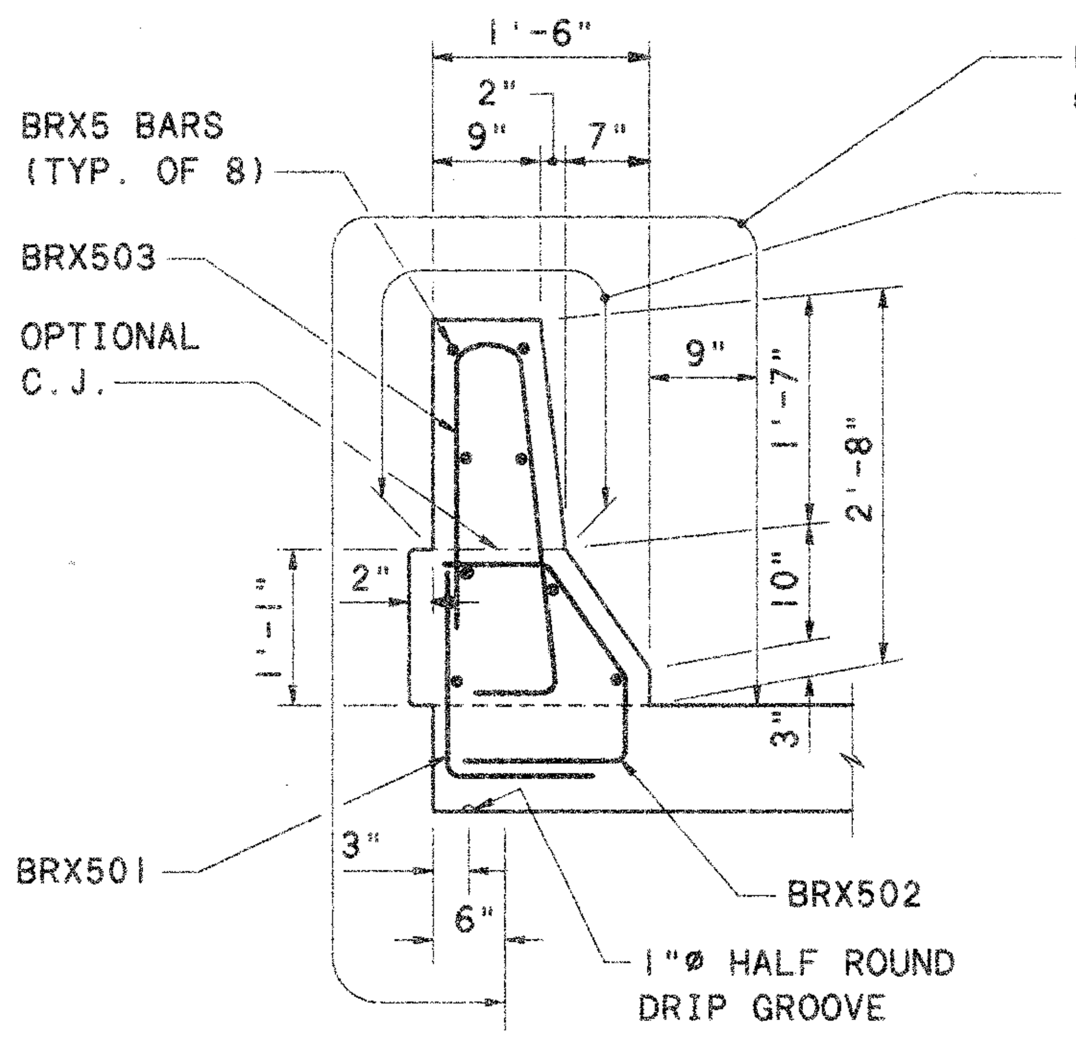
NOTES

SEE SHEET 25/126 FOR SUPER ELEVATION TRANSITION AND BASE LINE PROFILE GRADE INFORMATION.

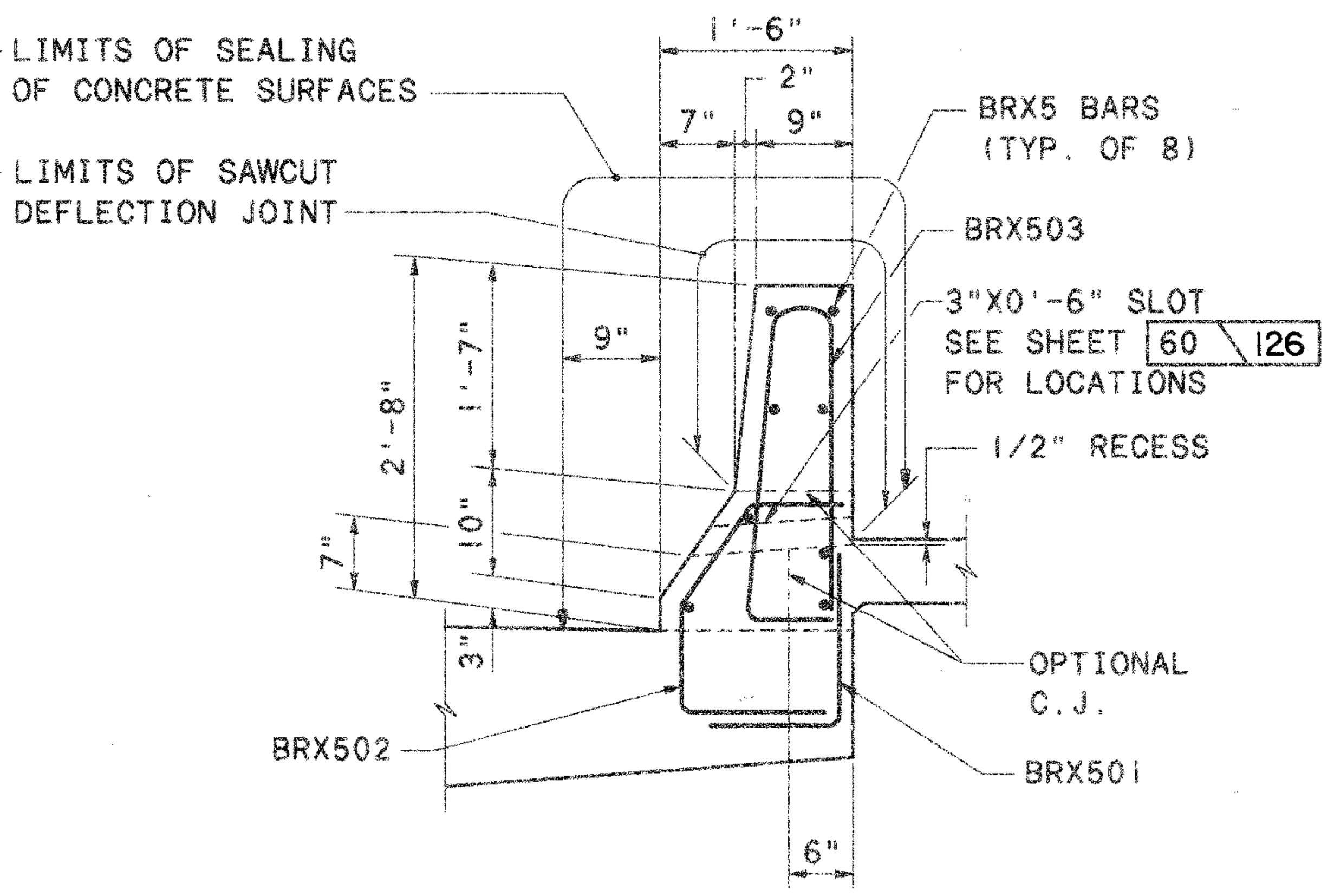
SEE SHEET 60/126 FOR PARAPET ELEVATIONS

SEE SHEET 74/126 FOR SLAB OVERHANG DISTANCES AND GIRDER SPACING.

		RAMP X - HAUNCH THICKNESS	
BEARING LINE		GIRDER 7	GIRDER 8
℄ ABUTMENT		3"	3 1/8"
11X	LEFT	2 7/8"	3 1/4"
	RIGHT	3 3/4"	4 1/4"
10X	LEFT	5 1/4"	3 3/4"
	RIGHT	4 3/4"	4 1/4"
9X	LEFT	3 1/2"	3 1/8"
	RIGHT	5"	3 3/4"
8X	LEFT	4 1/4"	5"
	RIGHT	2 1/2"	3 3/4"
7X	LEFT	3 1/4"	4 3/8"
	RIGHT	4"	4 1/4"
PIER 6		3"	3"



CURB LINE PARAPET DETAIL



BASE LINE PARAPET DETAIL

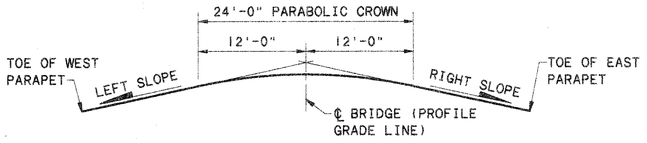
N:\PROJECTS\PR1491\CADD\CRSEC2 2-21-95

DESIGNED JMD | CHECKED JAP | DRAWN RFJ | REVISED | REVIEWED RKM | DATE 14-Feb-96 | STRUCTURE FILE NUMBER 4805917

ENGINEERS ARCHITECTS

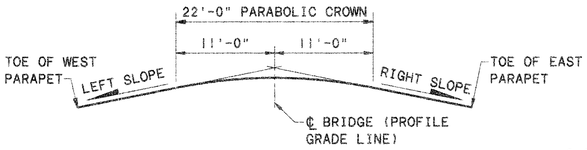
TRANSVERSE SECTION - RAMP X
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280



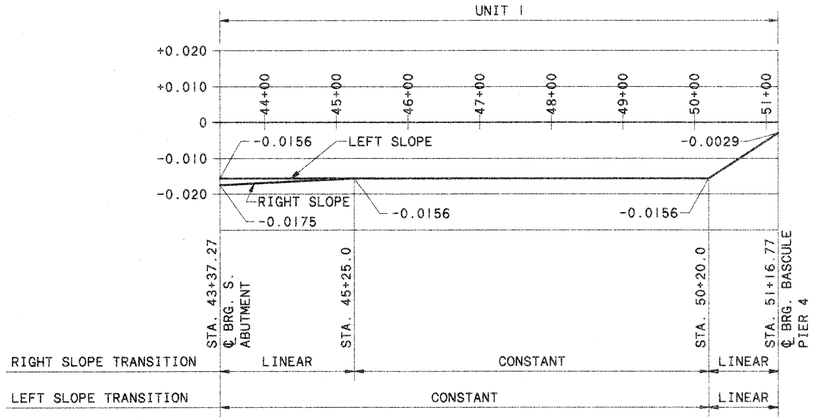
UNIT 1 - ROADWAY PROFILE

(LEFT AND RIGHT SLOPES ABOVE ARE SHOWN AS NEGATIVE)



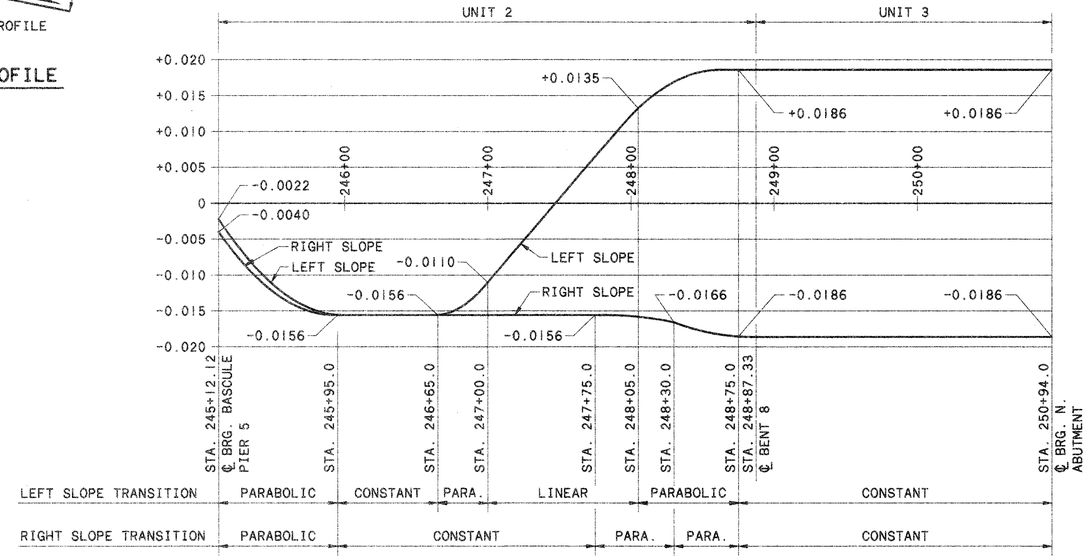
UNITS 2 AND 3 - ROADWAY PROFILE

(LEFT AND RIGHT SLOPES ABOVE ARE SHOWN AS NEGATIVE)



UNIT 1 - SUPERELEVATION TRANSITION

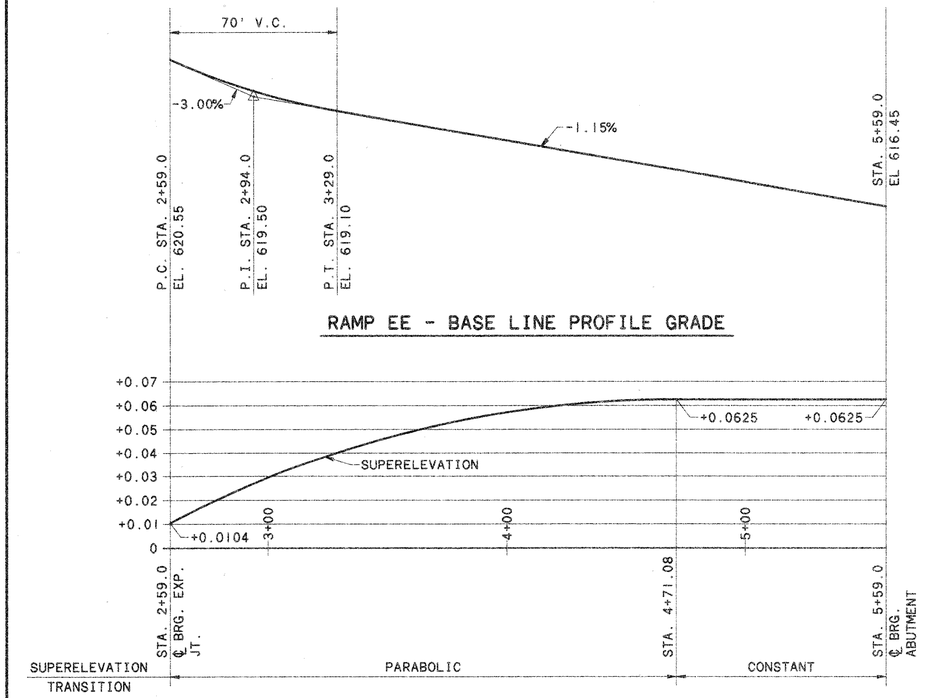
LEFT SLOPE EQUALS RIGHT SLOPE FROM STA. 45+25.0 TO STA. 51+16.77



UNITS 2 AND 3 - SUPERELEVATION TRANSITION

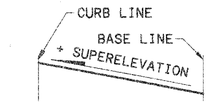
LEFT SLOPE EQUALS RIGHT SLOPE FROM STA. 245+95.0 TO TO STA. 246+65.0. ROADWAY IS FULLY SUPERELEVATED AT STA. 248+75.0.

NOTE: ALL SUPERELEVATION UNITS ARE GIVEN IN FT./FT.

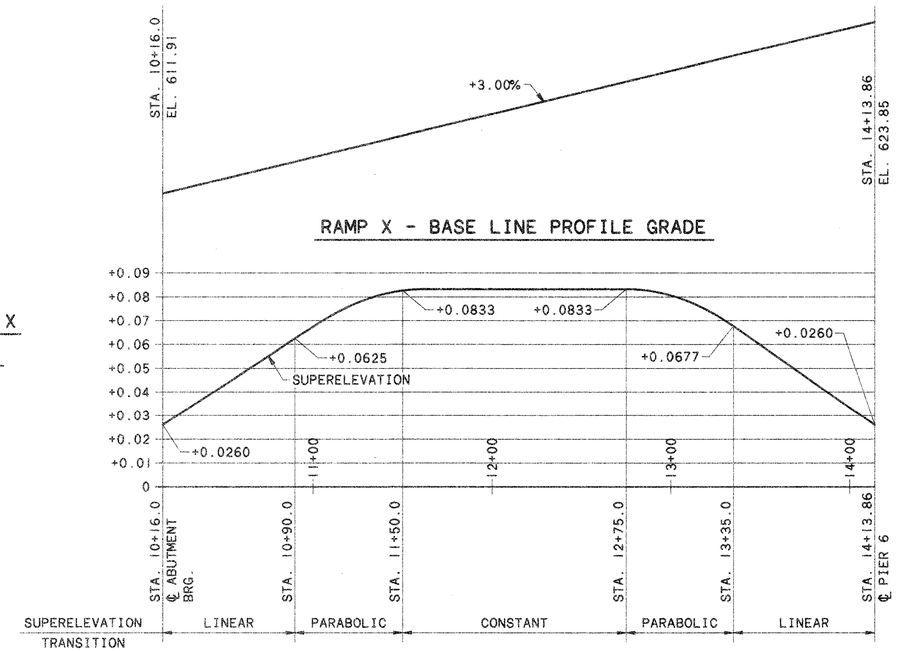


RAMP EE - BASE LINE PROFILE GRADE

RAMP EE - SUPERELEVATION TRANSITION



RAMP EE AND RAMP X ROADWAY PROFILE



RAMP X - BASE LINE PROFILE GRADE

RAMP X - SUPERELEVATION TRANSITION

SUPERELEVATION TRANSITIONS
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

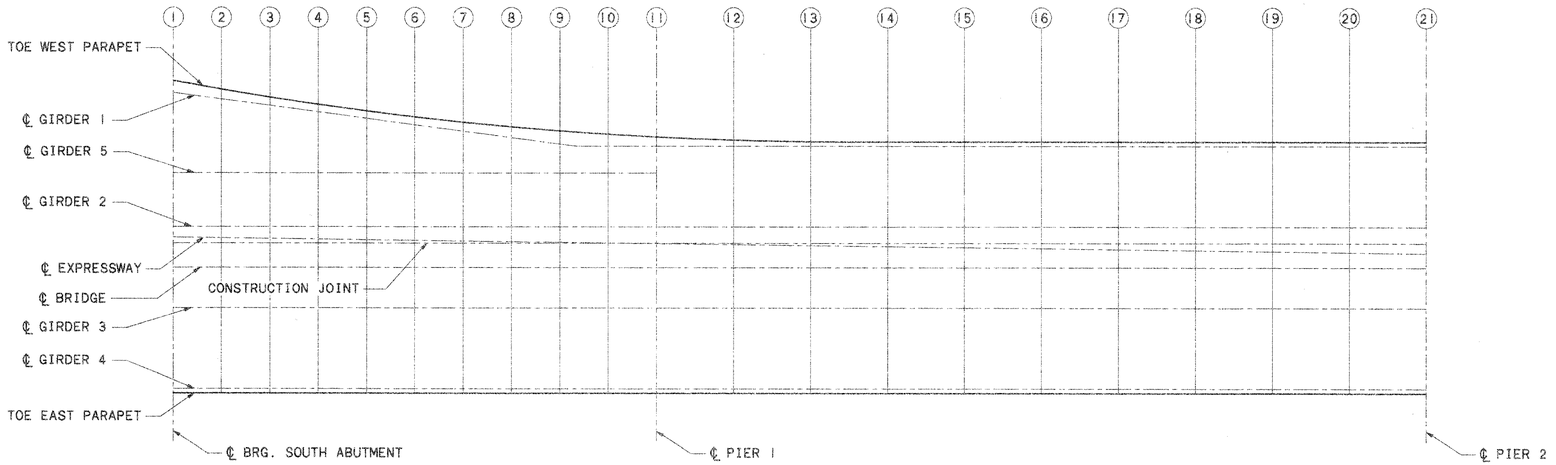
LUC-280

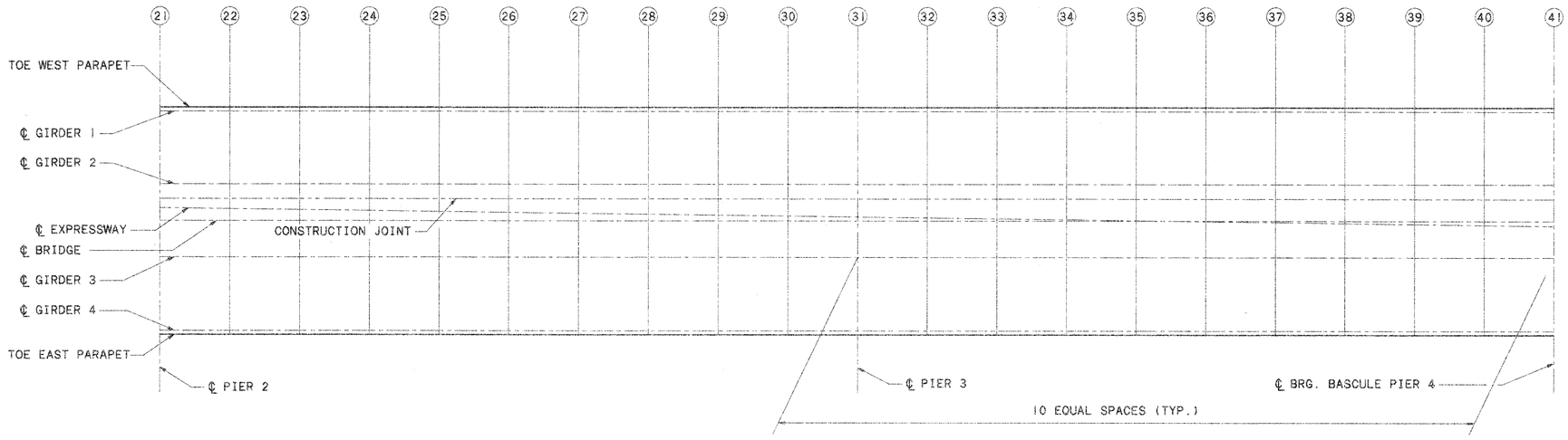
25/126

ENGINEERS
ARCHITECTS

DESIGNED JMD
DRAWN WHW
CHECKED MAK
REVISED
REVIEWED RM77
DATE 14-Feb-96
STRUCTURE FILE NUMBER 480597

Q:\SUPELEV1 2-8-95 9:22:49 am





UNIT #1

ENGINEERS
ARCHITECTS

DESIGNED JMD
DRAWN RFJ
CHECKED MAK
REVISED

REVISED RK/TT 14-Feb-96
DATE
STRUCTURE FILE NUMBER 480591.7

UNIT 1 SCREED ELEVATIONS
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

N:\PROJECTS\PR14912\CADD\SCREED5 8-2-95 10:35:04 am

UNIT 1 - SCREED ELEVATIONS

	1		2		3		4		5		6		7		8		9		10		11	
LINE	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.
GIRDER 1	43 + 37.27	617.27	43 + 50.77	617.69	43 + 64.27	618.10	43 + 77.77	618.49	43 + 91.27	618.90	44 + 04.77	619.28	44 + 18.27	619.68	44 + 31.77	620.05	44 + 45.27	620.44	44 + 58.77	620.80	44 + 72.27	621.14
GIRDER 2	43 + 37.27	617.86	43 + 50.77	618.24	43 + 64.27	618.62	43 + 77.77	619.00	43 + 91.27	619.35	44 + 04.77	619.72	44 + 18.27	620.07	44 + 31.77	620.43	44 + 45.27	620.78	44 + 58.77	621.13	44 + 72.27	621.49
GIRDER 3	43 + 37.27	617.86	43 + 50.77	618.24	43 + 64.27	618.63	43 + 77.77	619.01	43 + 91.27	619.37	44 + 04.77	619.73	44 + 18.27	620.08	44 + 31.77	620.43	44 + 45.27	620.80	44 + 58.77	621.14	44 + 72.27	621.49
GIRDER 4	43 + 37.27	617.47	43 + 50.77	617.85	43 + 64.27	618.23	43 + 77.77	618.61	43 + 91.27	618.98	44 + 04.77	619.35	44 + 18.27	619.71	44 + 31.77	620.06	44 + 45.27	620.43	44 + 58.77	620.78	44 + 72.27	621.12
GIRDER 5	43 + 37.27	617.62	43 + 50.77	618.03	43 + 64.27	618.44	43 + 77.77	618.82	43 + 91.27	619.20	44 + 04.77	619.56	44 + 18.27	619.92	44 + 31.77	620.26	44 + 45.27	620.61	44 + 58.77	620.94	44 + 72.27	621.25
W. PARAPET	43 + 37.27	617.22	43 + 50.77	617.65	43 + 64.27	618.07	43 + 77.77	618.46	43 + 91.27	618.87	44 + 04.77	619.25	44 + 18.27	619.64	44 + 31.77	620.00	44 + 45.27	620.38	44 + 58.77	620.75	44 + 72.27	621.09
E. PARAPET	43 + 37.27	617.44	43 + 50.77	617.83	43 + 64.27	618.21	43 + 77.77	618.59	43 + 91.27	618.96	44 + 04.77	619.33	44 + 18.27	619.69	44 + 31.77	620.04	44 + 45.27	620.41	44 + 58.77	620.76	44 + 72.27	621.10
CONST. JT.	43 + 37.27	617.91	43 + 50.77	618.28	43 + 64.27	618.64	43 + 77.77	619.01	43 + 91.27	619.37	44 + 04.77	619.74	44 + 18.27	620.11	44 + 31.77	620.47	44 + 45.27	620.84	44 + 58.77	621.20	44 + 72.27	621.54
	℄ ABUT. BRG.																				℄ PIER 1	

UNIT 1 - SCREED ELEVATIONS

	12		13		14		15		16		17		18		19		20		21	
LINE	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.
GIRDER 1	44 + 93.77	621.67	45 + 15.27	622.17	45 + 36.77	622.63	45 + 58.27	623.03	45 + 79.77	623.39	46 + 01.27	623.68	46 + 22.77	623.93	46 + 44.27	624.12	46 + 65.77	624.28	46 + 87.27	624.40
GIRDER 2	44 + 93.77	622.03	45 + 15.27	622.54	45 + 36.77	623.00	45 + 58.27	623.42	45 + 79.77	623.77	46 + 01.27	624.07	46 + 22.77	624.30	46 + 44.27	624.49	46 + 65.77	624.63	46 + 87.27	624.75
GIRDER 3	44 + 93.77	622.03	45 + 15.27	622.54	45 + 36.77	623.00	45 + 58.27	623.42	45 + 79.77	623.77	46 + 01.27	624.07	46 + 22.77	624.30	46 + 44.27	624.49	46 + 65.77	624.63	46 + 87.27	624.75
GIRDER 4	44 + 93.77	621.66	45 + 15.27	622.17	45 + 36.77	622.63	45 + 58.27	623.03	45 + 79.77	623.39	46 + 01.27	623.68	46 + 22.77	623.93	46 + 44.27	624.12	46 + 65.77	624.28	46 + 87.27	624.40
W. PARAPET	44 + 93.77	621.64	45 + 15.27	622.15	45 + 36.77	622.61	45 + 58.27	623.01	45 + 79.77	623.37	46 + 01.27	623.66	46 + 22.77	623.91	46 + 44.27	624.10	46 + 65.77	624.26	46 + 87.27	624.38
E. PARAPET	44 + 93.77	621.64	45 + 15.27	622.15	45 + 36.77	622.61	45 + 58.27	623.01	45 + 79.77	623.37	46 + 01.27	623.66	46 + 22.77	623.91	46 + 44.27	624.10	46 + 65.77	624.26	46 + 87.27	624.38
CONST. JT.	44 + 93.77	622.05	45 + 15.27	622.52	45 + 36.77	622.95	45 + 58.27	623.34	45 + 79.77	623.68	46 + 01.27	623.99	46 + 22.77	624.25	46 + 44.27	624.48	46 + 65.77	624.66	46 + 87.27	624.80
																			℄ PIER 2	

UNIT 1 - SCREED ELEVATIONS

	22		23		24		25		26		27		28		29		30		31	
LINE	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.
GIRDER 1	47 + 08.77	624.52	47 + 30.27	624.64	47 + 51.77	624.77	47 + 73.27	624.89	47 + 94.77	625.00	48 + 16.27	625.10	48 + 37.77	625.19	48 + 59.27	625.27	48 + 80.77	625.36	49 + 02.27	625.48
GIRDER 2	47 + 08.77	624.87	47 + 30.27	625.00	47 + 51.77	625.13	47 + 73.27	625.25	47 + 94.77	625.36	48 + 16.27	625.46	48 + 37.77	625.55	48 + 59.27	625.62	48 + 80.77	625.71	49 + 02.27	625.83
GIRDER 3	47 + 08.77	624.87	47 + 30.27	625.00	47 + 51.77	625.13	47 + 73.27	625.25	47 + 94.77	625.36	48 + 16.27	625.46	48 + 37.77	625.55	48 + 59.27	625.62	48 + 80.77	625.71	49 + 02.27	625.83
GIRDER 4	47 + 08.77	624.52	47 + 30.27	624.64	47 + 51.77	624.77	47 + 73.27	624.89	47 + 94.77	625.00	48 + 16.27	625.10	48 + 37.77	625.19	48 + 59.27	625.27	48 + 80.77	625.36	49 + 02.27	625.48
W. PARAPET	47 + 08.77	624.50	47 + 30.27	624.62	47 + 51.77	624.75	47 + 73.27	624.87	47 + 94.77	624.98	48 + 16.27	625.08	48 + 37.77	625.17	48 + 59.27	625.25	48 + 80.77	625.34	49 + 02.27	625.46
E. PARAPET	47 + 08.77	624.50	47 + 30.27	624.62	47 + 51.77	624.75	47 + 73.27	624.87	47 + 94.77	624.98	48 + 16.27	625.08	48 + 37.77	625.17	48 + 59.27	625.25	48 + 80.77	625.34	49 + 02.27	625.46
CONST. JT.	47 + 08.77	624.91	47 + 30.27	625.02	47 + 51.77	625.13	47 + 73.27	625.24	47 + 94.77	625.34	48 + 16.27	625.45	48 + 37.77	625.56	48 + 59.27	625.67	48 + 80.77	625.77	49 + 02.27	625.88
																			℄ PIER 3	

UNIT 1 - SCREED ELEVATIONS

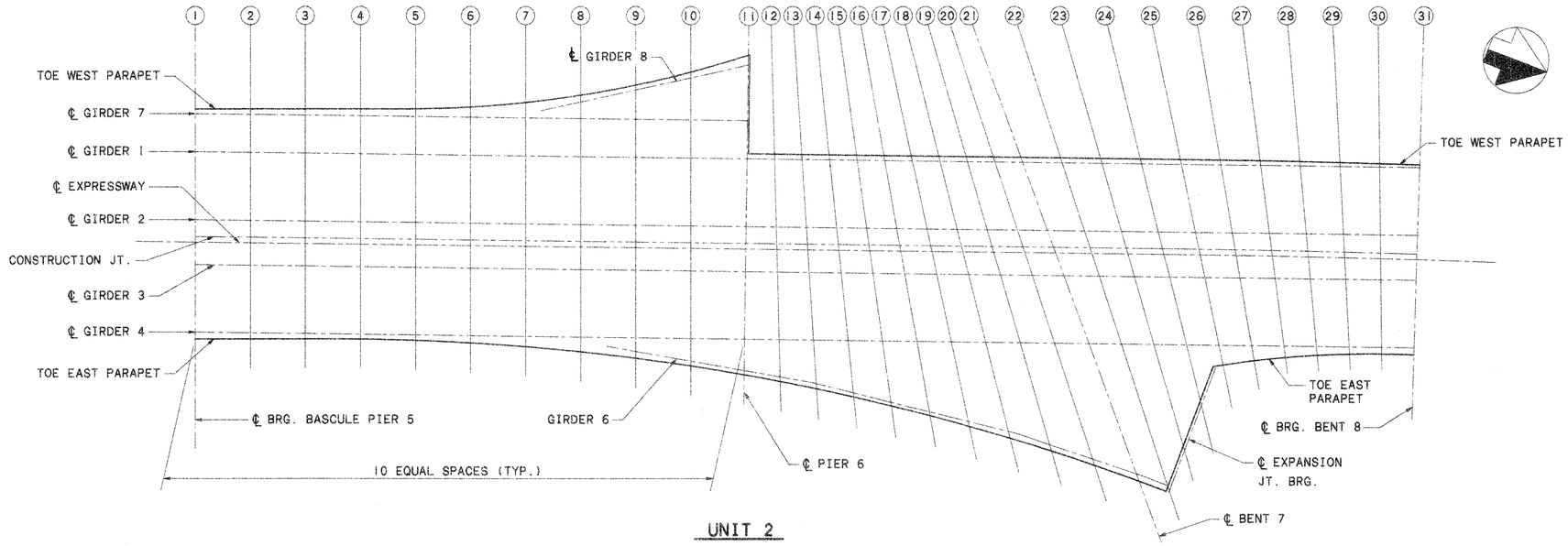
	32		33		34		35		36		37		38		39		40		41	
LINE	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.
GIRDER 1	49 + 23.72	625.61	49 + 45.17	625.75	49 + 66.62	625.88	49 + 88.07	625.98	50 + 09.52	626.06	50 + 30.97	626.16	50 + 52.42	626.27	50 + 73.87	626.34	50 + 95.32	626.39	51 + 16.77	626.42
GIRDER 2	49 + 23.72	625.97	49 + 45.17	626.13	49 + 66.62	626.25	49 + 88.07	626.37	50 + 09.52	626.46	50 + 30.97	626.58	50 + 52.42	626.55	50 + 73.87	626.56	50 + 95.32	626.53	51 + 16.77	626.48
GIRDER 3	49 + 23.72	625.97	49 + 45.17	626.13	49 + 66.62	626.25	49 + 88.07	626.37	50 + 09.52	626.46	50 + 30.97	626.58	50 + 52.42	626.55	50 + 73.87	626.56	50 + 95.32	626.53	51 + 16.77	626.48
GIRDER 4	49 + 23.72	625.61	49 + 45.17	625.75	49 + 66.62	625.88	49 + 88.07	625.98	50 + 09.52	626.06	50 + 30.97	626.16	50 + 52.42	626.27	50 + 73.87	626.34	50 + 95.32	626.39	51 + 16.77	626.42
W. PARAPET	49 + 23.72	625.60	49 + 45.17	625.73	49 + 66.62	625.86	49 + 88.07	625.96	50 + 09.52	626.04	50 + 30.97	626.14	50 + 52.42	626.25	50 + 73.87	626.33	50 + 95.32	626.39	51 + 16.77	626.42
E. PARAPET	49 + 23.72	625.60	49 + 45.17	625.73	49 + 66.62	625.86	49 + 88.07	625.96	50 + 09.52	626.04	50 + 30.97	626.14	50 + 52.42	626.25	50 + 73.87	626.33	50 + 95.32	626.39	51 + 16.77	626.42
CONST. JT.	49 + 23.72	625.99	49 + 45.17	626.09	49 + 66.62	626.18	49 + 88.07	626.25	50 + 09.52	626.32	50 + 30.97	626.37	50 + 52.42	626.42	50 + 73.87	626.46	50 + 95.32	626.48	51 + 16.77	626.49
																			℄ BEARING BASCULE PIER 4	

NOTE:
STATIONING GIVEN FOR ℄ BRIDGE

DESIGNED JMD
DRAWN GTC
CHECKED MAK
REVISED
REVISED RMM DATE 14-Feb-96
STRUCTURE FILE NUMBER 4805917

UNIT 1 SCREED ELEVATIONS
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280



UNIT 2

UNIT 2 - SCREED ELEVATIONS

	1		2		3		4		5		6		7		8		9		10		11	
LINE	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.
GIRDER 1	245 + 12.12	626.46	245 + 28.95	626.39	245 + 45.78	626.31	245 + 62.61	626.19	245 + 79.44	626.05	245 + 96.27	625.88	246 + 13.10	625.70	246 + 29.93	625.46	246 + 46.76	625.19	246 + 63.59	624.89	246 + 80.42	624.59
GIRDER 2	245 + 12.12	626.49	245 + 28.92	626.50	245 + 45.72	626.47	245 + 62.52	626.41	245 + 79.31	626.31	245 + 96.11	626.16	246 + 12.91	625.97	246 + 29.71	625.75	246 + 46.51	625.48	246 + 63.31	625.18	246 + 80.10	624.86
GIRDER 3	245 + 12.12	626.46	245 + 28.90	626.44	245 + 45.67	626.40	245 + 62.45	626.33	245 + 79.23	626.23	245 + 96.01	626.08	246 + 12.78	625.90	246 + 29.56	625.68	246 + 46.34	625.42	246 + 63.12	625.13	246 + 79.89	624.81
GIRDER 4	245 + 12.12	626.38	245 + 28.87	626.27	245 + 45.61	626.16	245 + 62.36	626.04	245 + 79.10	625.89	245 + 95.85	625.73	246 + 12.60	625.55	246 + 29.34	625.34	246 + 46.09	625.09	246 + 62.83	624.80	246 + 79.58	624.49
GIRDER 6	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	246 + 46.04	624.98	246 + 62.74	624.67	246 + 79.44	624.35
GIRDER 7	245 + 12.12	626.43	245 + 28.97	626.30	245 + 45.81	626.16	245 + 62.66	626.01	245 + 79.51	625.84	245 + 96.36	625.66	246 + 13.20	625.48	246 + 30.05	625.26	246 + 46.90	625.00	246 + 63.75	624.72	246 + 80.59	624.42
GIRDER 8	------	------	------	------	------	------	------	------	------	------	------	------	------	------	246 + 30.11	652.11	246 + 47.01	624.81	246 + 63.93	624.48	246 + 80.85	624.18
W. PARAPET	245 + 12.12	626.43	245 + 28.97	626.29	245 + 45.82	626.14	245 + 62.67	625.98	245 + 79.52	625.80	245 + 96.37	693.27	246 + 13.24	625.40	246 + 30.12	625.07	246 + 47.02	624.78	246 + 63.94	624.45	246 + 80.88	624.13
E. PARAPET	245 + 12.12	626.37	245 + 28.86	626.26	245 + 45.60	626.14	245 + 62.35	626.02	245 + 79.09	625.88	245 + 95.83	625.71	246 + 12.56	625.51	246 + 29.28	625.28	246 + 46.00	624.95	246 + 62.71	624.65	246 + 79.40	624.33
CONST. JT.	245 + 12.12	626.49	245 + 28.91	626.49	245 + 45.70	626.47	245 + 62.49	626.41	245 + 79.28	626.31	245 + 96.06	626.16	246 + 12.85	625.98	246 + 29.64	625.75	246 + 46.43	625.49	246 + 63.22	625.19	246 + 80.01	624.87
	℄ BRG. PIER 5																				℄ PIER 6	

UNIT 2 - SCREED ELEVATIONS

	12		13		14		15		16		17		18		19		20		21	
LINE	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.
GIRDER 1	246 + 88.84	624.45	246 + 97.26	624.31	247 + 05.68	624.18	247 + 14.11	624.04	247 + 22.53	623.90	247 + 30.95	623.75	247 + 39.37	623.61	247 + 47.79	623.45	247 + 56.21	623.29	247 + 64.64	623.13
GIRDER 2	246 + 89.32	624.68	246 + 98.53	624.50	247 + 07.74	624.31	247 + 16.95	624.11	247 + 26.17	623.91	247 + 35.38	623.70	247 + 44.59	623.50	247 + 53.81	623.29	247 + 63.02	623.07	247 + 72.23	622.84
GIRDER 3	246 + 89.63	624.62	246 + 99.37	624.41	247 + 09.11	624.20	247 + 18.85	623.98	247 + 28.59	623.75	247 + 38.33	623.52	247 + 48.07	623.29	247 + 57.81	623.05	247 + 67.55	622.80	247 + 77.29	622.54
GIRDER 4	246 + 90.11	624.28	247 + 00.64	624.06	247 + 11.17	623.83	247 + 21.70	623.59	247 + 32.24	623.35	247 + 42.77	623.09	247 + 53.30	622.83	247 + 63.83	622.56	247 + 74.36	622.28	247 + 84.89	622.00
GIRDER 6	246 + 90.36	624.13	247 + 01.41	623.90	247 + 12.69	623.63	247 + 24.17	623.34	247 + 35.86	623.04	247 + 47.77	622.69	247 + 59.90	622.33	247 + 72.27	621.94	247 + 85.54	621.47	247 + 98.94	620.97
W. PARAPET	246 + 88.78	624.42	246 + 97.13	624.29	247 + 05.47	624.17	247 + 13.82	624.03	247 + 22.16	623.89	247 + 30.49	623.75	247 + 38.83	623.61	247 + 47.16	623.46	247 + 55.49	623.31	247 + 63.81	623.15
E. PARAPET	246 + 90.37	624.12	247 + 01.49	623.88	247 + 12.79	623.62	247 + 24.30	623.33	247 + 36.06	623.01	247 + 48.09	622.66	247 + 60.44	622.29	247 + 73.16	621.87	247 + 86.30	621.41	247 + 99.94	620.90
CONST. JT.	246 + 89.40	624.69	246 + 98.79	624.50	247 + 08.18	624.30	247 + 17.57	624.09	247 + 26.95	623.88	247 + 36.33	623.66	247 + 45.71	623.45	247 + 55.09	623.22	247 + 64.46	622.99	247 + 73.83	622.75
																			℄ PIER 7	

UNIT 2 - SCREED ELEVATIONS

	22		23		24		25		26		27		28		29		30		31	
LINE	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.
GIRDER 1	247 + 76.89	622.88	247 + 89.14	622.62	248 + 01.39	622.35	248 + 13.27	622.06	248 + 25.45	621.73	248 + 37.64	621.40	248 + 49.82	621.05	248 + 62.00	620.68	248 + 74.18	620.30	248 + 86.35	619.90
GIRDER 2	247 + 83.66	622.55	247 + 95.09	622.25	248 + 06.52	621.93	248 + 17.86	621.62	248 + 29.28	621.28	248 + 40.69	620.94	248 + 52.11	620.61	248 + 63.52	620.25	248 + 74.94	619.89	248 + 86.35	619.52
GIRDER 3	247 + 88.18	622.25	247 + 99.06	621.94	248 + 10.04	621.62	248 + 20.95	621.31	248 + 31.85	620.97	248 + 42.75	620.64	248 + 53.65	620.31	248 + 64.55	619.96	248 + 75.45	619.62	248 + 86.34	619.26
GIRDER 4	247 + 94.95	621.71	248 + 05.01	621.41	248 + 15.48	621.11	248 + 25.61	620.81	248 + 35.73	620.48	248 + 45.85	620.16	248 + 55.97	619.83	248 + 66.10	619.51	248 + 76.22	619.20	248 + 86.34	618.88
W. PARAPET	247 + 76.14	622.91	247 + 88.48	622.66	248 + 00.81	622.39	248 + 12.75	622.10	248 + 25.01	621.78	248 + 37.28	621.45	248 + 49.55	621.10	248 + 61.82	620.72	248 + 74.07	620.34	248 + 86.32	619.94
E. PARAPET	------	------	------	------	------	------	------	------	248 + 36.24	620.41	248 + 46.06	620.12	248 + 56.01	619.82	248 + 66.06	619.51	248 + 76.17	619.20	248 + 86.31	618.88
CONST. JT.	247 + 85.08	622.46	247 + 96.32	622.16	248 + 09.07	621.79	248 + 18.91	621.52	248 + 30.10	621.18	248 + 41.34	620.85	248 + 52.58	620.51	248 + 63.83	620.16	248 + 75.07	619.80	248 + 86.30	619.43
																			℄ BRG. BENT 8	

NOTE:
STATIONING GIVEN FOR ℄ EXPRESSWAY

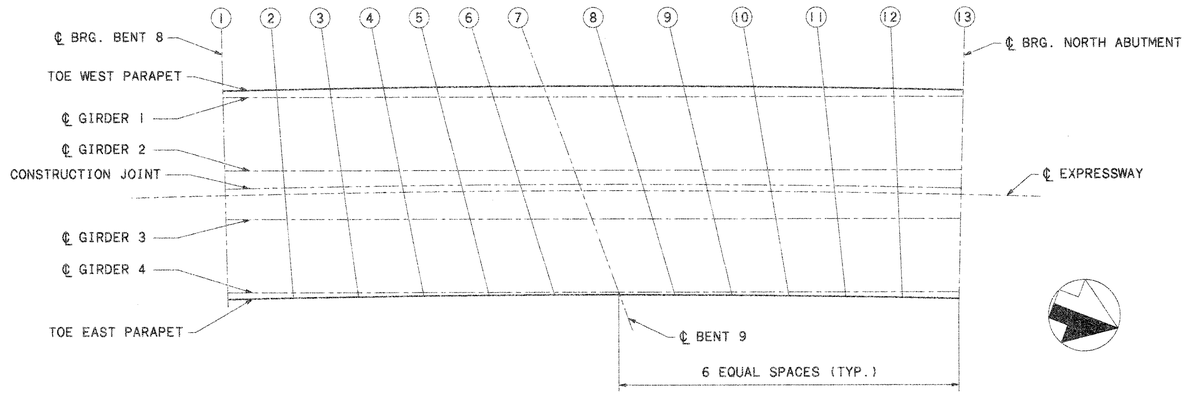
EARTH TECH
ENGINEERS
ENGINEERS
ARCHITECTS

DESIGNED JMD
DRAWN RFJ/GTC
CHECKED MAK
REVISED
DATE REVISED 14-Feb-96
STRUCTURE FILE NUMBER 4805917

UNIT 2 SCREED ELEVATIONS
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

P:\PR1491\CADD\SCREED4 8-2-95 10:53:15 am



UNIT 3

UNIT 3 - SCREED ELEVATIONS

	1		2		3		4		5		6		7	
LINE	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.
GIRDER 1	248 + 88.50	619.85	249 + 04.27	619.38	249 + 20.04	618.91	249 + 35.81	618.43	249 + 51.58	617.95	249 + 67.35	617.47	249 + 83.12	616.99
GIRDER 2	248 + 88.50	619.47	249 + 04.86	618.99	249 + 21.22	618.51	249 + 37.59	618.01	249 + 53.95	617.51	249 + 70.32	617.00	249 + 86.68	616.50
GIRDER 3	248 + 88.50	619.22	249 + 05.26	618.73	249 + 22.02	618.23	249 + 38.78	617.72	249 + 55.54	617.21	249 + 72.31	616.69	249 + 89.07	616.18
GIRDER 4	248 + 88.50	618.84	249 + 05.86	618.33	249 + 23.22	617.82	249 + 40.59	617.30	249 + 57.95	616.76	249 + 75.32	616.22	249 + 92.69	615.69
W. PARAPET	248 + 88.51	619.87	249 + 04.21	619.41	249 + 19.92	618.95	249 + 35.62	618.48	249 + 51.31	618.00	249 + 67.00	617.53	249 + 82.70	617.05
E. PARAPET	248 + 88.51	618.79	249 + 05.93	618.29	249 + 23.33	617.79	249 + 40.73	617.27	249 + 58.12	616.72	249 + 75.52	616.19	249 + 92.92	615.66
CONST. JT.	248 + 88.50	619.37	249 + 05.01	618.89	249 + 21.51	618.41	249 + 38.00	617.91	249 + 54.49	617.41	249 + 70.98	616.90	249 + 87.47	616.40
	℄ BRG. BENT 8												℄ BENT 9	

UNIT 3 - SCREED ELEVATIONS

	8		9		10		11		12		13	
LINE	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.
GIRDER 1	250 + 01.61	616.44	250 + 20.09	615.91	250 + 38.58	615.37	250 + 57.06	614.82	250 + 75.54	614.25	250 + 94.02	613.68
GIRDER 2	250 + 04.57	615.98	250 + 22.46	615.46	250 + 40.35	614.95	250 + 58.24	614.42	250 + 76.13	613.86	250 + 94.01	613.30
GIRDER 3	250 + 06.57	615.66	250 + 24.06	615.16	250 + 41.55	614.65	250 + 59.04	614.12	250 + 76.52	613.59	250 + 94.01	613.05
GIRDER 4	250 + 09.58	615.20	250 + 26.46	614.70	250 + 43.35	614.21	250 + 60.23	613.70	250 + 77.12	613.19	250 + 94.00	612.67
W. PARAPET	250 + 01.25	616.50	250 + 19.82	615.96	250 + 38.38	615.42	250 + 56.94	614.86	250 + 75.48	614.28	250 + 94.02	613.71
E. PARAPET	250 + 09.78	615.17	250 + 26.64	614.67	250 + 43.50	614.17	250 + 60.35	613.67	250 + 77.19	613.15	250 + 94.02	612.63
CONST. JT.	250 + 05.23	615.87	250 + 23.00	615.36	250 + 40.77	614.85	250 + 58.53	614.31	250 + 76.28	613.76	250 + 94.02	613.20
											℄ BRG. N. ABUT.	

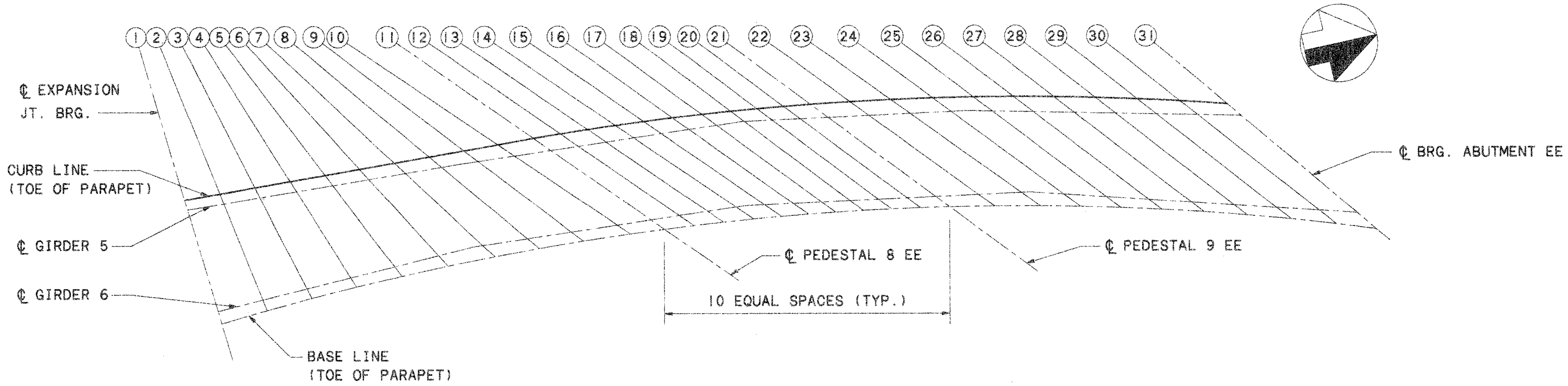
NOTE:
STATIONING GIVEN FOR ℄ EXPRESSWAY.

DESIGNED JMD
DRAWN RFJ
CHECKED MAK
REVISED
REVIEWED RKM 14-Feb-96
DATE
STRUCTURE FILE NUMBER 4805917

UNIT 3 SCREED ELEVATIONS
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

N:\PROJECTS\PR1491\CADD\SCREED2 2-14-95 11:54:20 am



RAMP EE

RAMP EE - SCREED ELEVATIONS

	1		2		3		4		5		6		7		8		9		10		11	
LINE	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.
CURB LINE	2 + 59.00	620.90	2 + 68.19	620.78	2 + 77.42	620.68	2 + 86.65	620.57	2 + 95.82	620.48	3 + 04.89	620.40	3 + 13.80	620.33	3 + 22.47	620.28	3 + 30.82	620.24	3 + 38.78	620.20	3 + 46.22	620.17
GIRDER 5	2 + 59.00	620.88	2 + 68.29	620.76	2 + 77.64	620.65	2 + 86.99	620.53	2 + 96.30	620.44	3 + 05.53	620.35	3 + 14.60	620.27	3 + 23.46	620.21	3 + 32.08	620.16	3 + 40.40	620.11	3 + 48.26	620.06
GIRDER 6	2 + 59.00	620.57	2 + 70.51	620.27	2 + 82.05	620.00	2 + 93.58	619.76	3 + 05.04	619.56	3 + 16.39	619.39	3 + 27.62	619.26	3 + 39.29	619.10	3 + 50.91	618.95	3 + 62.39	618.81	3 + 73.66	618.67
BASE LINE	2 + 59.00	620.55	2 + 70.65	620.24	2 + 82.30	619.96	2 + 93.95	619.71	3 + 05.60	619.50	3 + 17.25	619.31	3 + 28.90	619.15	3 + 40.55	619.00	3 + 52.20	618.86	3 + 63.85	618.72	3 + 75.50	618.56
	℄ EXP. JT. BRG.																				℄ PEDESTAL 8 EE	

RAMP EE - SCREED ELEVATIONS

	12		13		14		15		16		17		18		19		20		21	
LINE	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.
CURB LINE	3 + 53.16	620.13	3 + 60.08	620.10	3 + 67.00	620.07	3 + 73.92	620.04	3 + 80.83	620.00	3 + 87.73	619.96	3 + 94.62	619.91	4 + 01.51	619.87	4 + 08.39	619.82	4 + 15.26	619.77
GIRDER 5	3 + 55.32	620.02	3 + 62.30	619.99	3 + 69.21	619.95	3 + 76.04	619.92	3 + 82.78	619.89	3 + 89.45	619.86	3 + 96.04	619.83	4 + 03.13	619.77	4 + 10.35	619.70	4 + 17.48	619.64
GIRDER 6	3 + 80.81	618.59	3 + 87.88	618.52	3 + 94.86	618.46	4 + 02.35	618.37	4 + 10.02	618.27	4 + 17.60	618.17	4 + 25.08	618.08	4 + 32.47	617.99	4 + 39.77	617.91	4 + 46.97	617.84
BASE LINE	3 + 82.86	618.47	3 + 90.22	618.38	3 + 97.58	618.30	4 + 04.94	618.21	4 + 12.30	618.13	4 + 19.66	618.04	4 + 27.02	617.96	4 + 34.38	617.88	4 + 41.74	617.79	4 + 49.10	617.72
																			℄ PEDESTAL 9 EE	

RAMP EE - SCREED ELEVATIONS

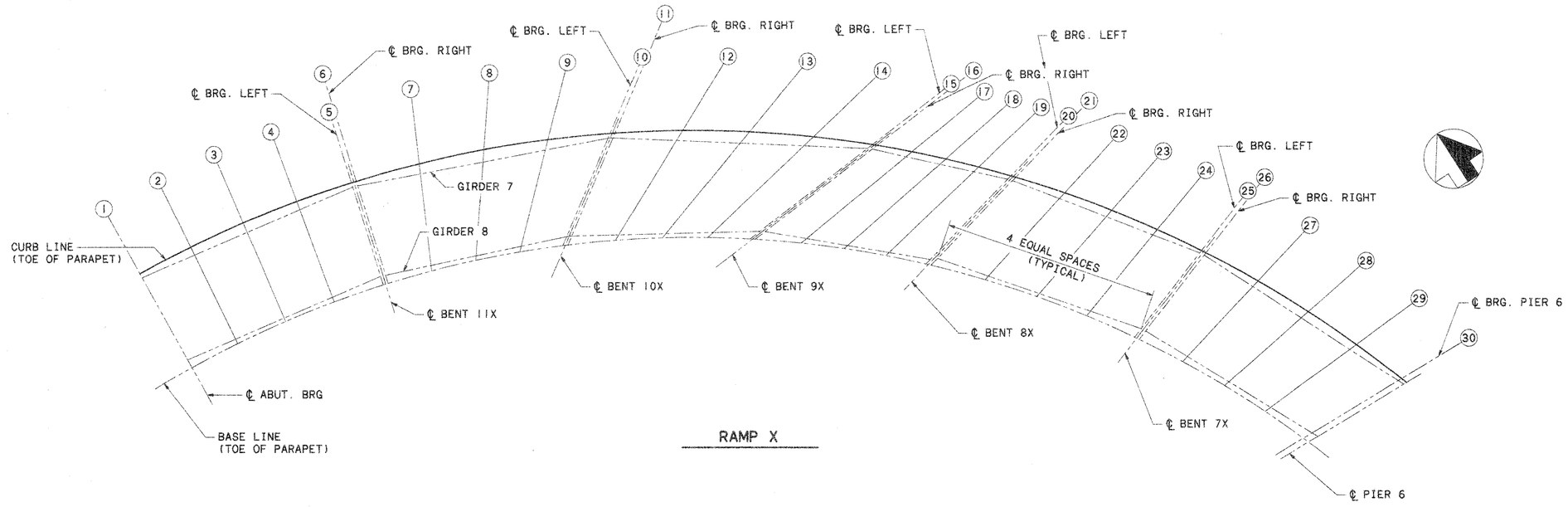
	12		13		14		15		16		17		18		19		20		21	
LINE	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.
CURB LINE	4 + 25.64	619.69	4 + 36.01	619.62	4 + 46.36	619.53	4 + 56.71	619.43	4 + 67.04	619.31	4 + 77.35	619.19	4 + 87.66	619.07	4 + 97.95	618.94	5 + 08.22	618.81	5 + 18.48	618.67
GIRDER 5	4 + 28.09	619.54	4 + 38.50	619.46	4 + 48.72	619.38	4 + 59.18	619.27	4 + 69.85	619.14	4 + 80.31	619.01	4 + 90.56	618.90	5 + 00.61	618.79	5 + 10.44	618.68	5 + 20.08	618.58
GIRDER 6	4 + 57.56	617.75	4 + 67.93	617.67	4 + 79.41	617.53	4 + 90.96	617.37	5 + 02.28	617.23	5 + 13.35	617.10	5 + 24.17	616.97	5 + 34.76	616.86	5 + 45.10	616.75	5 + 55.22	616.65
BASE LINE	4 + 60.09	617.60	4 + 71.08	617.48	4 + 82.07	617.38	4 + 93.06	617.25	5 + 04.05	617.13	5 + 15.04	617.01	5 + 26.03	616.87	5 + 37.02	616.74	5 + 48.01	616.60	5 + 59.00	616.45
																			℄ ABUT. BRG.	

NOTE:
STATIONING GIVEN FOR BASE LINE RAMP EE

DESIGNED JMD
CHECKED MAK
DRAWN RFJ
REVISED
REVIEWED RKM
DATE 14-Feb-96
STRUCTURE FILE NUMBER 4805917

RAMP EE SCREED ELEVATIONS
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280



RAMP X

RAMP X - SCREED ELEVATIONS

	1		2		3		4		5		6		7		8		9		10		11	
LINE	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.
CURB LINE	10 + 16.00	612.38	10 + 32.90	613.07	10 + 49.94	613.74	10 + 67.36	614.40	10 + 86.17	615.11	10 + 87.84	615.17	11 + 03.17	615.83	11 + 19.08	616.46	11 + 36.21	617.03	11 + 56.54	617.63	11 + 58.11	617.67
GIRDER 5	10 + 16.00	612.35	10 + 32.98	612.99	10 + 50.11	613.62	10 + 67.52	614.28	10 + 86.17	615.05	10 + 87.84	615.06	11 + 03.14	615.63	11 + 18.90	616.20	11 + 35.77	616.80	11 + 56.14	617.54	11 + 57.71	617.59
GIRDER 6	10 + 16.00	611.98	10 + 33.48	612.51	10 + 51.00	613.05	10 + 68.49	613.59	10 + 86.14	614.18	10 + 87.87	614.21	11 + 02.96	614.63	11 + 18.06	615.09	11 + 33.30	615.56	11 + 49.30	616.11	11 + 50.89	616.15
BASE LINE	10 + 16.00	611.91	10 + 33.53	612.47	10 + 51.07	613.00	10 + 68.60	613.52	10 + 86.13	614.01	10 + 87.88	614.07	11 + 02.94	614.54	11 + 18.00	615.01	11 + 33.05	615.44	11 + 48.11	615.87	11 + 49.78	615.92
	℄ LINE ABUT. BRG.								℄ BRG. LEFT		℄ BRG. RIGHT								℄ BRG. LEFT		℄ BRG. RIGHT	
									BENT 11X										BENT 10X			

RAMP X - SCREED ELEVATIONS

	12		13		14		15		16		17		18		19		20		21	
LINE	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.
CURB LINE	11 + 74.80	618.20	11 + 91.96	618.73	12 + 09.72	619.25	12 + 28.25	619.78	12 + 29.71	619.82	12 + 41.78	620.19	12 + 54.14	620.56	12 + 66.73	620.94	12 + 79.49	621.31	12 + 81.07	621.36
GIRDER 5	11 + 73.67	617.98	11 + 90.31	618.45	12 + 07.99	619.00	12 + 27.44	619.68	12 + 28.90	619.72	12 + 40.58	620.03	12 + 52.94	620.38	12 + 65.83	620.78	12 + 79.08	621.23	12 + 80.66	621.27
GIRDER 6	11 + 65.90	616.54	11 + 81.22	616.99	11 + 97.06	617.48	12 + 13.93	618.07	12 + 14.95	618.05	12 + 28.45	618.41	12 + 42.58	618.82	12 + 57.14	619.28	12 + 71.96	619.78	12 + 73.87	619.88
BASE LINE	11 + 65.16	616.40	11 + 80.55	616.89	11 + 95.93	617.33	12 + 11.31	617.77	12 + 12.91	617.82	12 + 27.38	618.27	12 + 41.85	618.72	12 + 56.32	619.14	12 + 70.79	619.55	12 + 72.47	619.60
							℄ BRG. LEFT		℄ BRG. RIGHT								℄ BRG. LEFT		℄ BRG. RIGHT	
							BENT 9X										BENT 8X			

RAMP X - SCREED ELEVATIONS

	22		23		24		25		26		27		28		29		30	
LINE	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.
CURB LINE	12 + 97.71	621.84	13 + 14.46	622.28	13 + 31.29	622.64	13 + 48.18	622.97	13 + 49.78	623.00	13 + 66.45	623.36	13 + 83.22	623.72	14 + 00.09	624.05	14 + 17.03	624.38
GIRDER 5	12 + 96.91	621.64	13 + 13.69	622.06	13 + 30.81	622.47	13 + 48.04	622.91	13 + 49.65	622.94	13 + 66.07	623.24	13 + 82.66	623.59	13 + 99.51	623.97	14 + 16.73	624.35
GIRDER 6	12 + 91.34	620.33	13 + 09.34	620.84	13 + 27.65	621.40	13 + 46.03	622.00	13 + 47.63	622.01	13 + 63.51	622.44	13 + 79.48	622.90	13 + 95.63	623.38	14 + 12.09	623.86
BASE LINE	12 + 90.75	620.19	13 + 09.03	620.75	13 + 27.30	621.29	13 + 45.58	621.80	13 + 47.27	621.85	13 + 63.26	622.36	13 + 79.25	622.85	13 + 95.23	623.32	14 + 11.22	623.77
							℄ BRG. LEFT		℄ BRG. RIGHT								℄ BRG. PIER 6	
							BENT 7X											

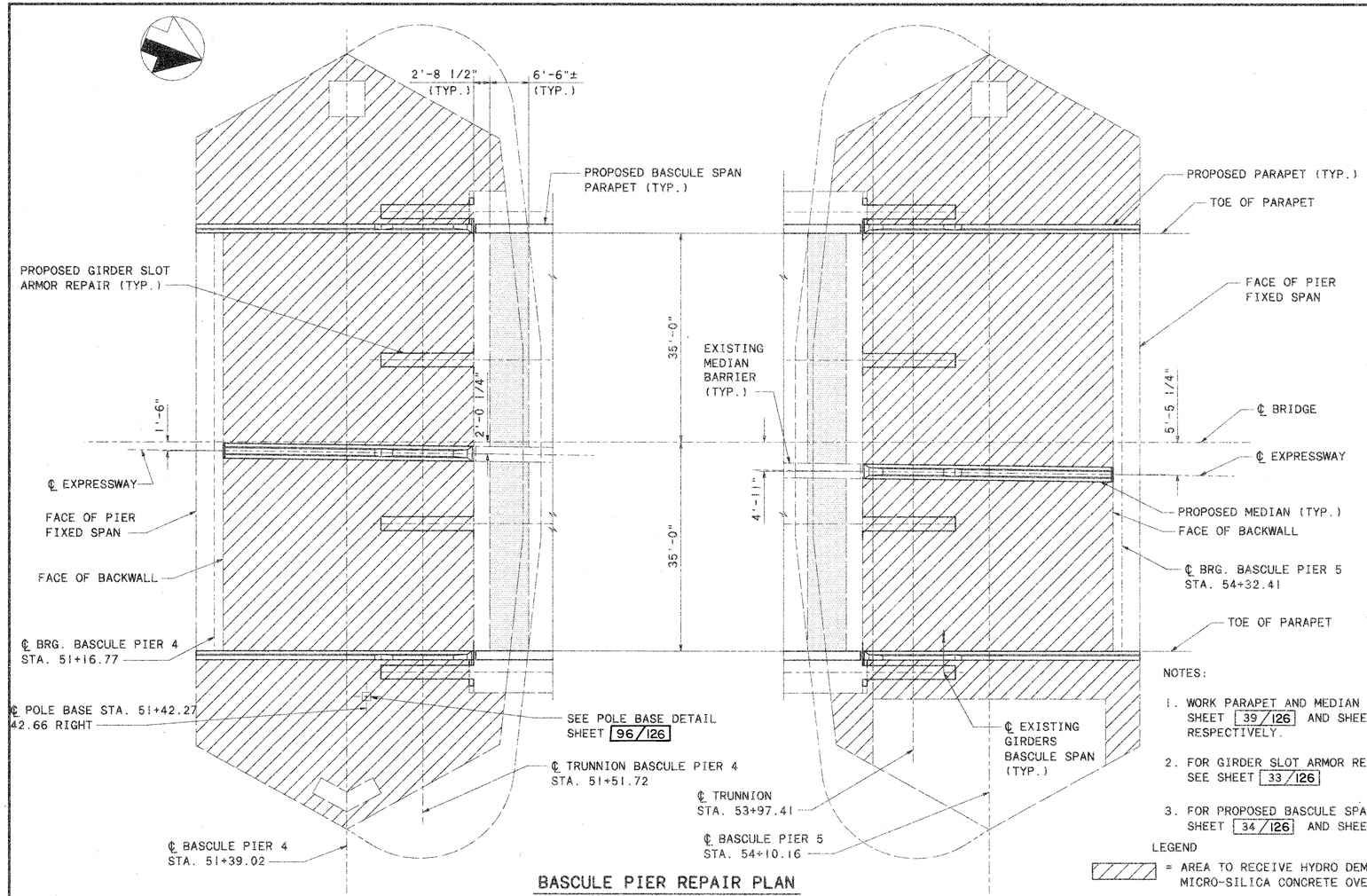
NOTE:
STATIONING GIVEN FOR BASE LINE RAMP X

DESIGNED JMD
DRAWN RFJ
CHECKED MAK
REVISED
REVISED RKM 14-Feb-96
DATE
STRUCTURE FILE NUMBER 4805917

RAMP X SCREED ELEVATIONS
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

N:\PROJECTS\PR1491\CADD\SCREED1 8-2-95 2:22:56 pm



BASCULE PIER REPAIR PLAN

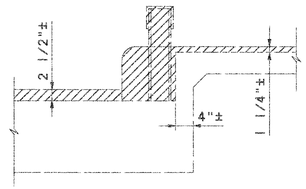
NOTES:

1. WORK PARAPET AND MEDIAN ELEVATIONS WITH SHEET 39/126 AND SHEET 40/126 RESPECTIVELY.
2. FOR GIRDER SLOT ARMOR REPAIR SEE SHEET 33/126
3. FOR PROPOSED BASCULE SPAN PARAPET DETAILS SHEET 34/126 AND SHEET 35/126

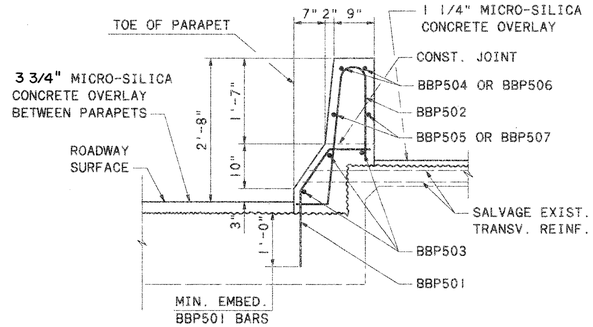
LEGEND

= AREA TO RECEIVE HYDRO DEMOLITION AND MICRO-SILICA CONCRETE OVERLAY.

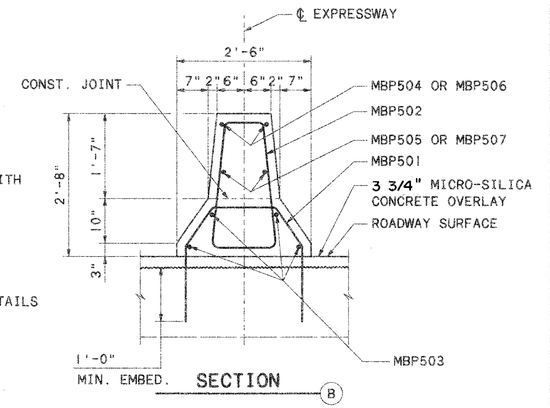
= AREA OF CONCRETE REPLACEMENT IN EXISTING FILLED GRID STEEL DECK.



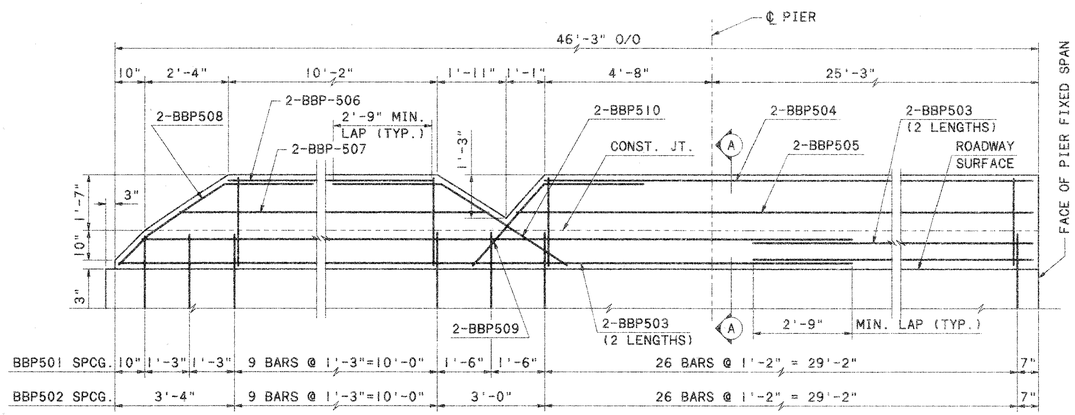
SECTION A REMOVAL



SECTION (A)

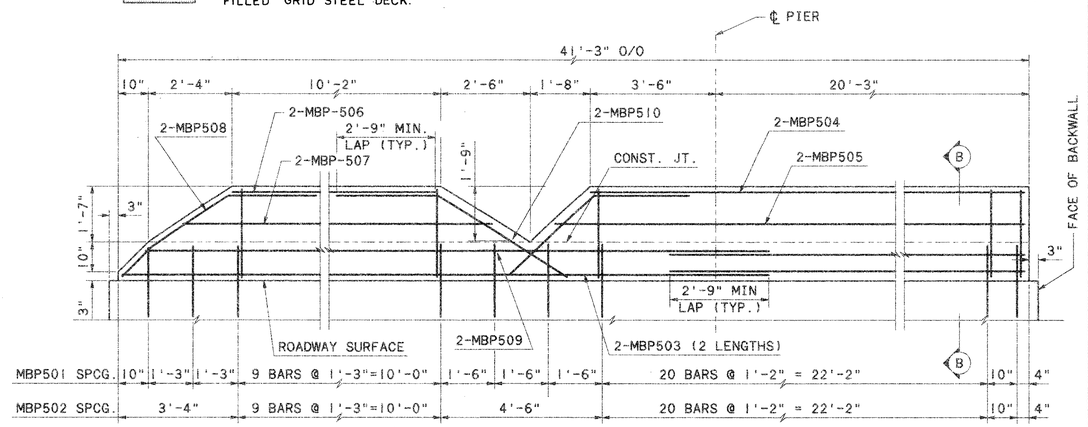


SECTION (B)



BASCULE PIER PARAPET ELEVATION

(NOT ALL REINFORCING SHOWN)



BASCULE PIER MEDIAN BARRIER ELEVATION

(NOT ALL REINFORCING SHOWN)

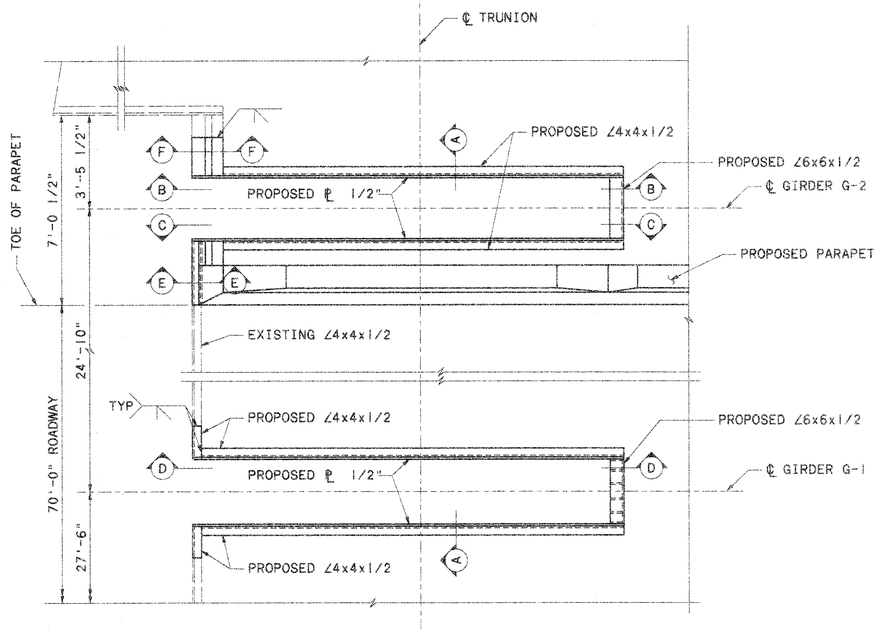
DESIGNED	JMD
DRAWN	RFJ
CHECKED	MAK
REVISED	
DATE	14-Feb-96
STRUCTURE FILE NUMBER	4805917

BASCULE PIER REPAIR
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

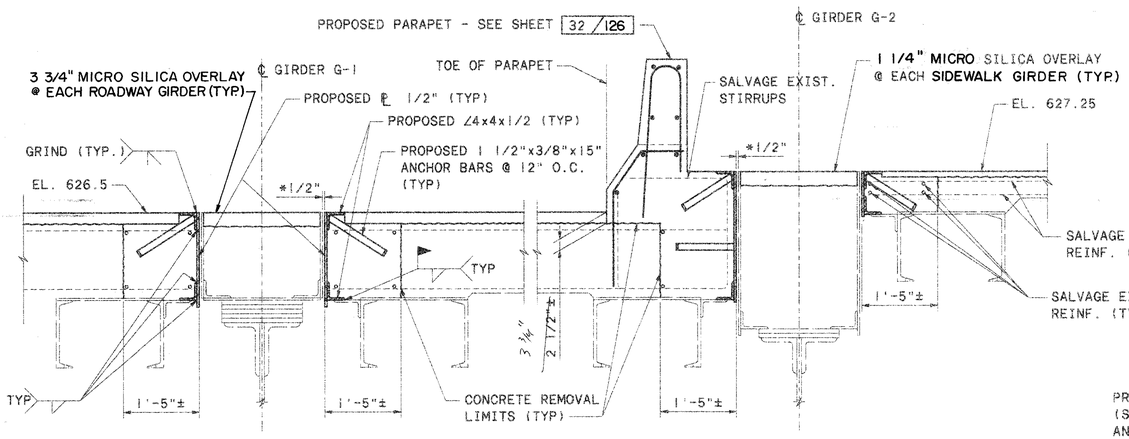
LUC-280

32/126

N:\PROJECTS\PR1491\2\CADD\BASCDEM1 8-4-95

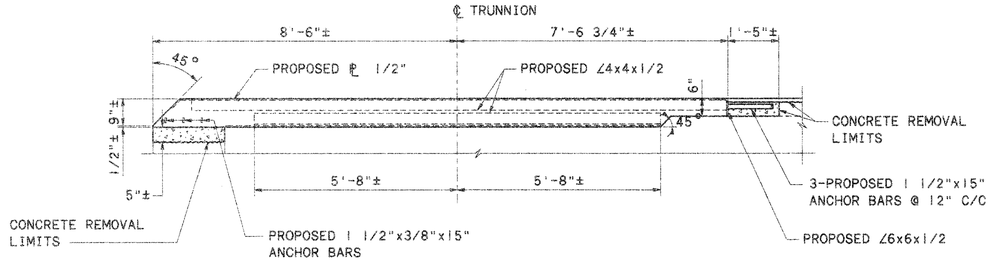


GIRDER SLOT ARMOR REPAIR PLAN

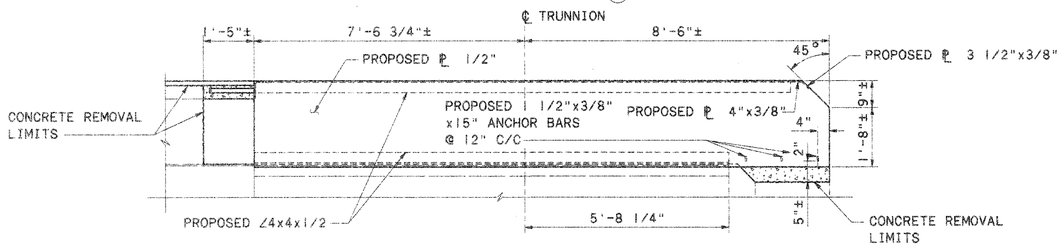


SECTION (A)

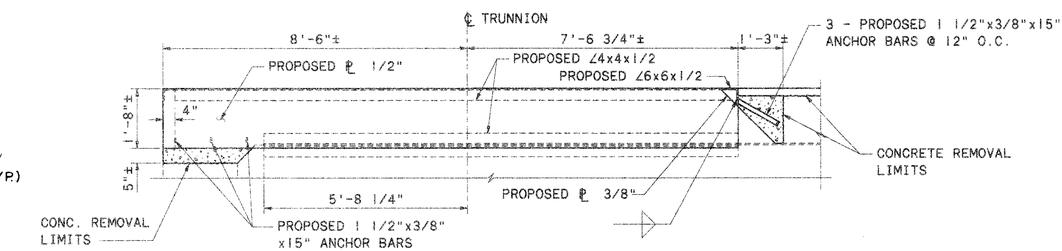
* MAINTAIN 1/2" CLEARANCE BETWEEN PROPOSED GIRDER SLOT ARMOR AND EXISTING GIRDER FOR ENTIRE PERIPHERY OF GIRDER SLOT.



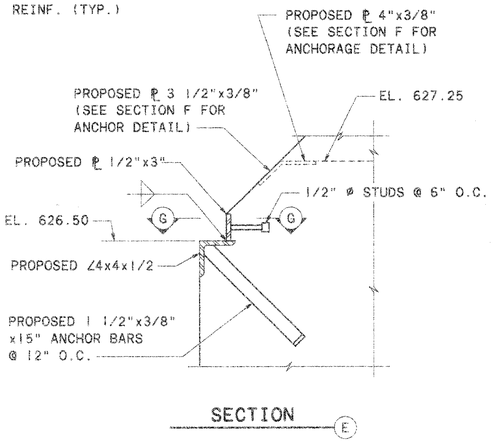
SECTION (B)



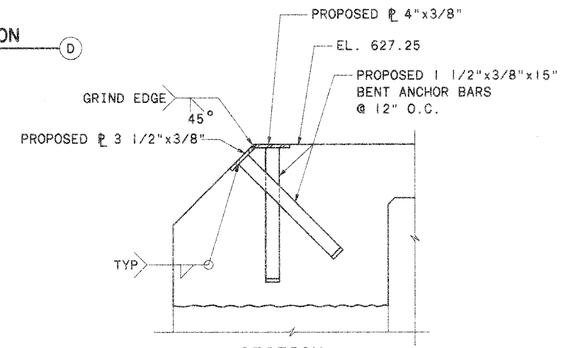
SECTION (C)
(PARAPET NOT SHOWN)



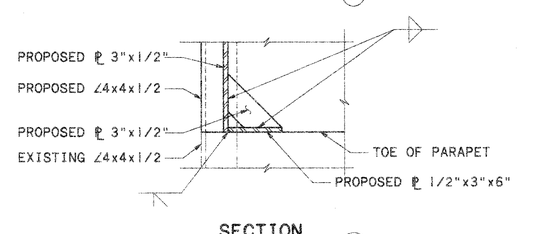
SECTION (D)



SECTION (E)



SECTION (F)



SECTION (G)

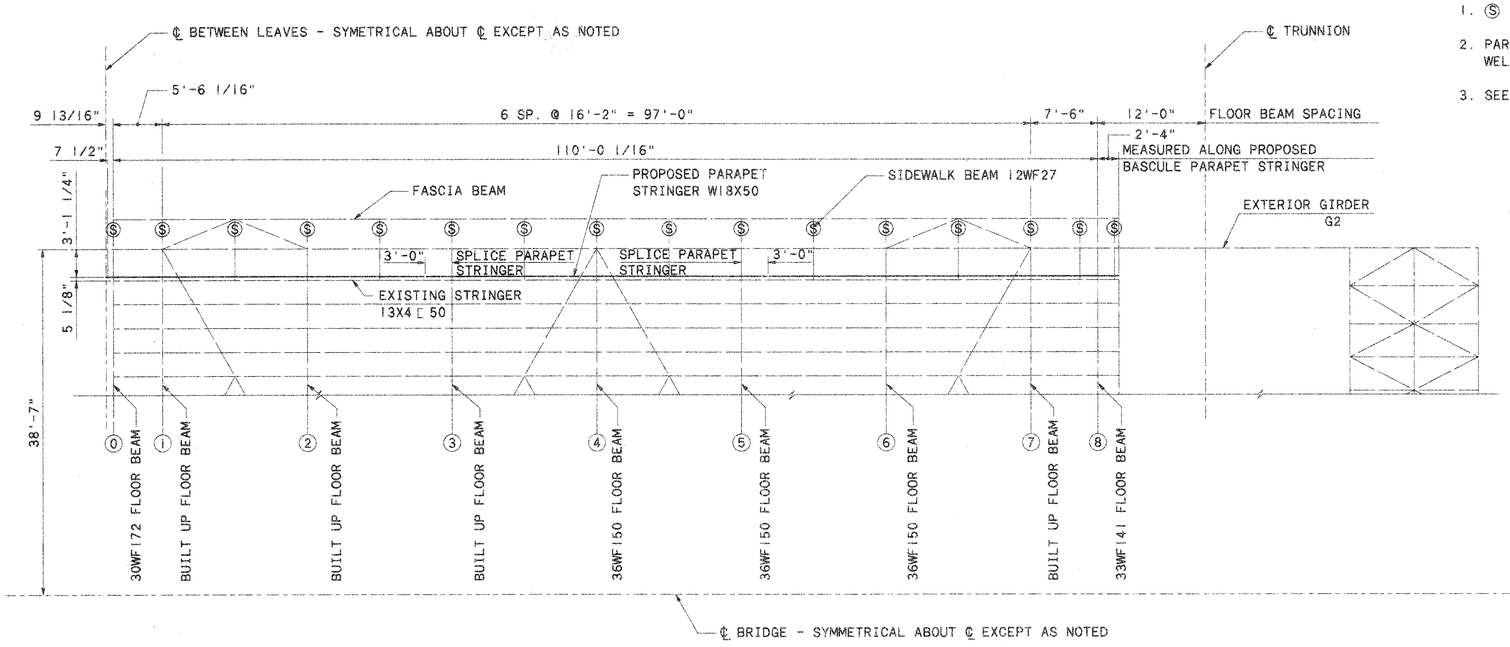
DESIGNED JMD
DRAWN RFJ
CHECKED MAK
REVISED
DATE 14-Feb-96
STRUCTURE FILE NUMBER 4805917

GIRDER SLOT ARMOR REPAIR DETAILS
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

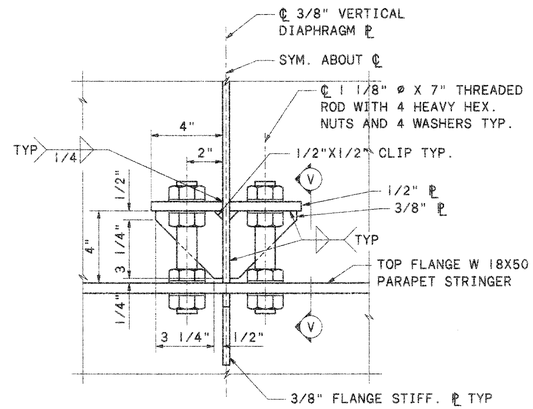
33/126

N:\PROJECTS\PRJ4912\CADD\BASCDET2 8-8-95 3:50:51 pm

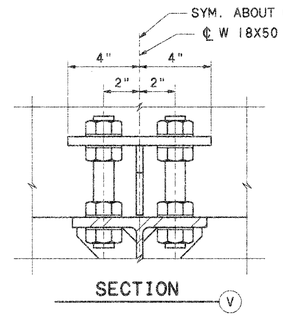


PARTIAL FRAMING PLAN BASCULE SPAN

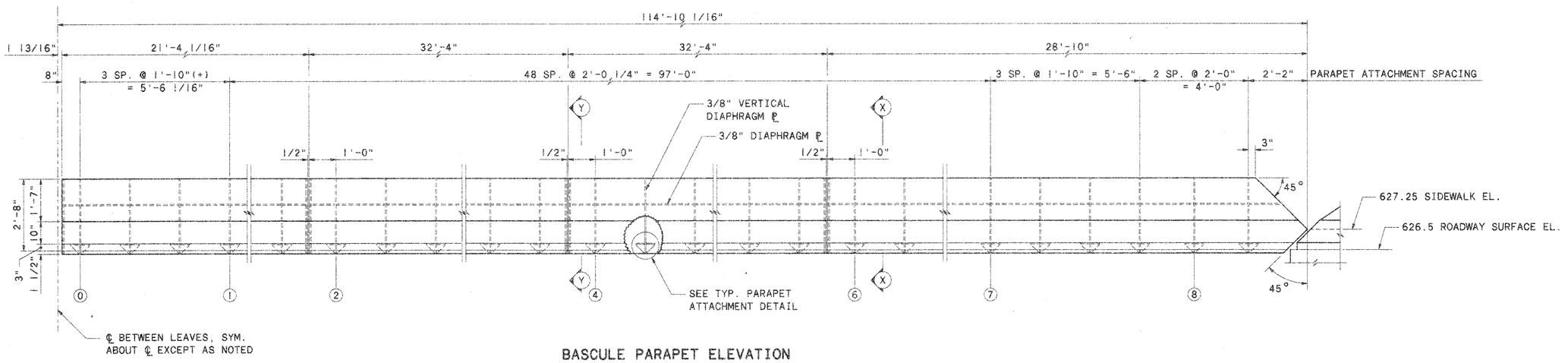
NOTES:
1. Ⓢ INDICATES LOCATION OF EXISTING SIDEWALK BEAMS 12 WF 27.
2. PARAPET STRINGER SPLICE SHALL BE A COMPLETE JOINT PENETRATION WELD.
3. SEE SHEET 35/126 FOR SECTION X AND SECTION Y.



TYPICAL PARAPET ATTACHMENT DETAIL



SECTION (V)



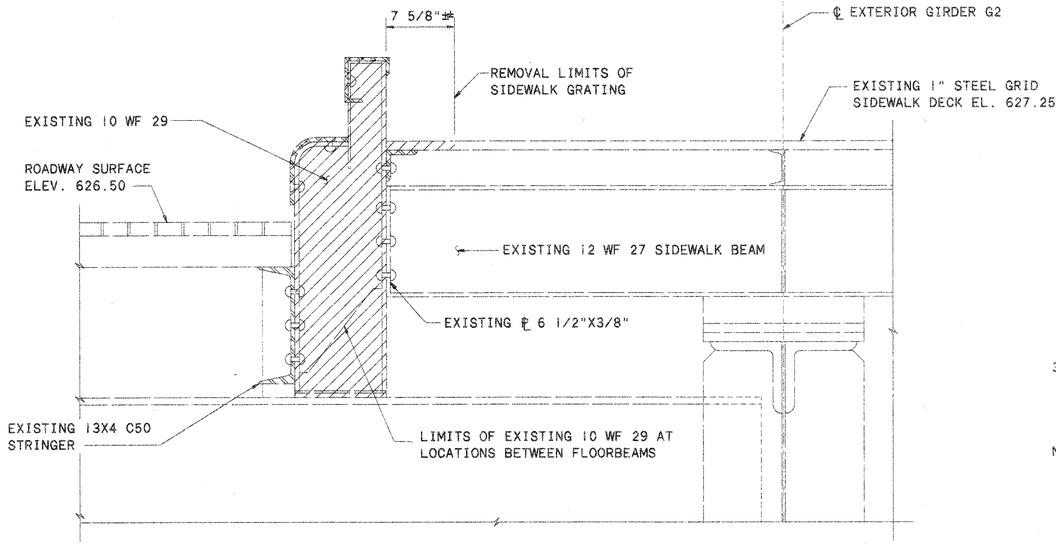
BASCULE PARAPET ELEVATION

ENGINEERS
ARCHITECTS

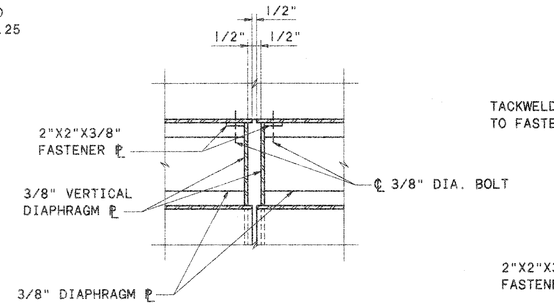
DESIGNED JMD
DRAWN RFJ
CHECKED MAK
REVISED
REVIEWED RKM
DATE 14-Feb-96
STRUCTURE FILE NUMBER 480517

BASCULE SPAN PARAPET
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

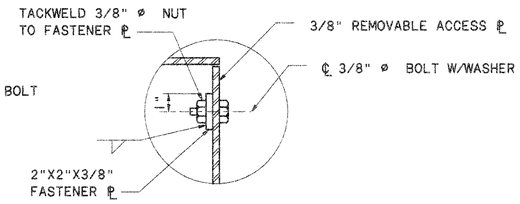


SECTION (X)
REMOVAL

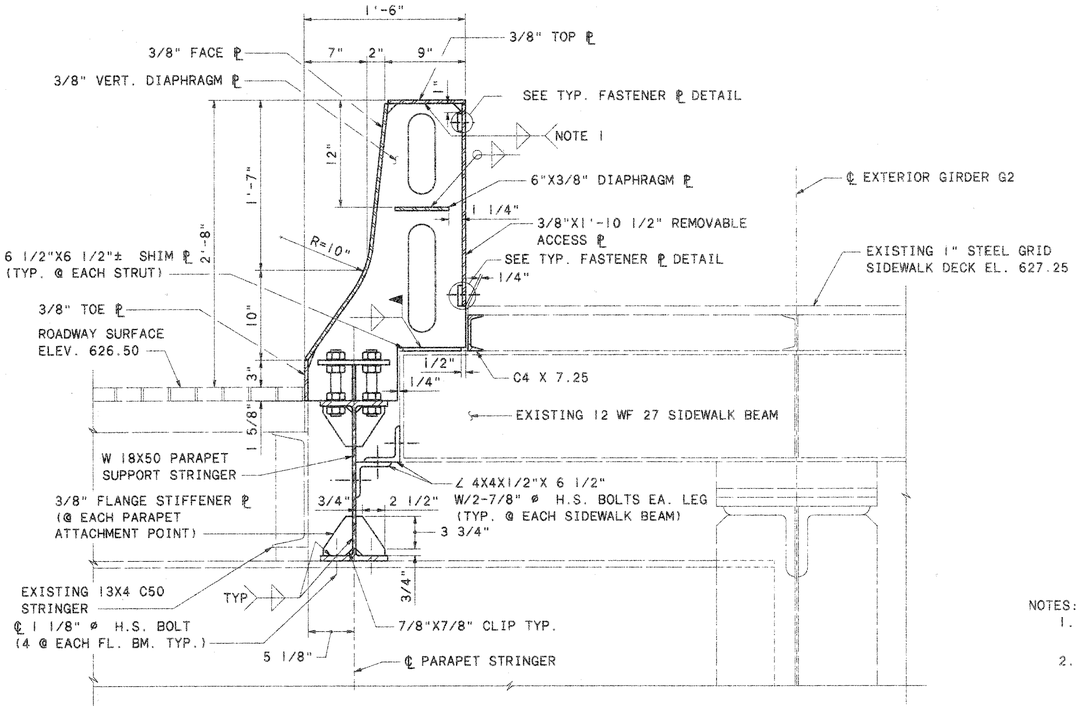


SECTION (W)

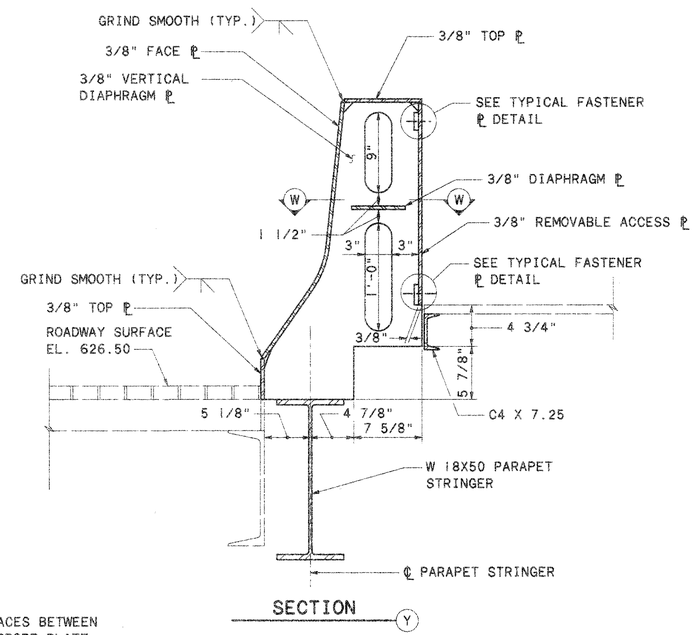
NOTE: TYPICAL BASCULE PARAPET JOINT DETAIL SHOWN. DETAIL FOR JOINT @ ℄ LEAVES SIMILAR.



TYPICAL FASTENER PLATE DETAIL



SECTION (X)



SECTION (Y)

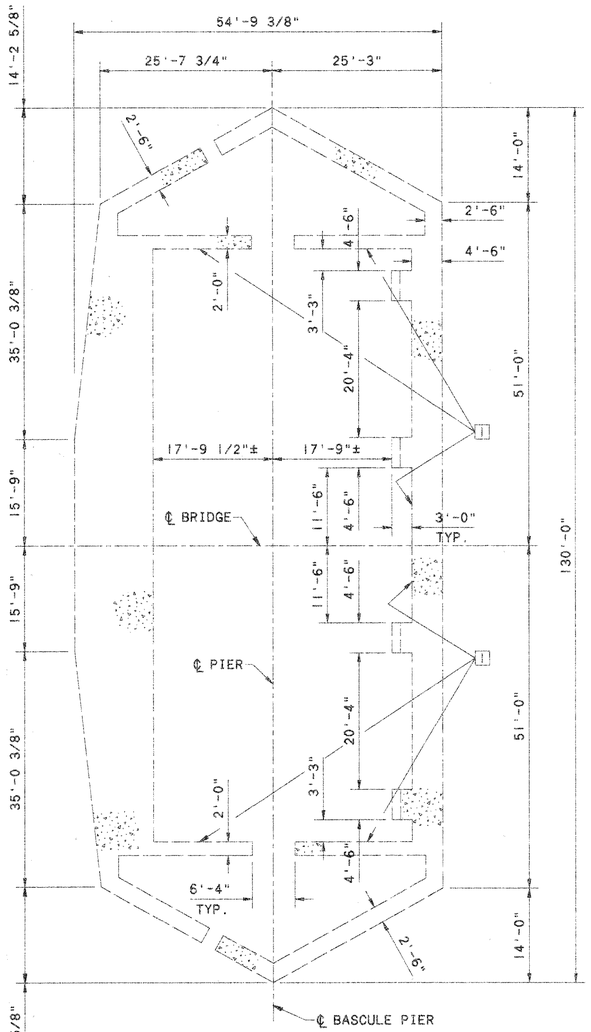
NOTES:
1. WELD FULL LENGTH OF CONTACT SURFACES BETWEEN TOP, FACE AND TOE PLATES WITH SUPPORT PLATE.
2. COUNTER BALANCE WEIGHT TOTALING 78,500 LBS. IS REQUIRED TO BE PLACED IN THE COUNTER WEIGHT PIT OF EACH BASCULE PIER.

ENGINEERS
ARCHITECTS

DESIGNED JMD
DRAWN RFJ
CHECKED MAK
REVIEWED RMM
DATE 14-Feb-96
REVISED
STRUCTURE FILE NUMBER 4805917

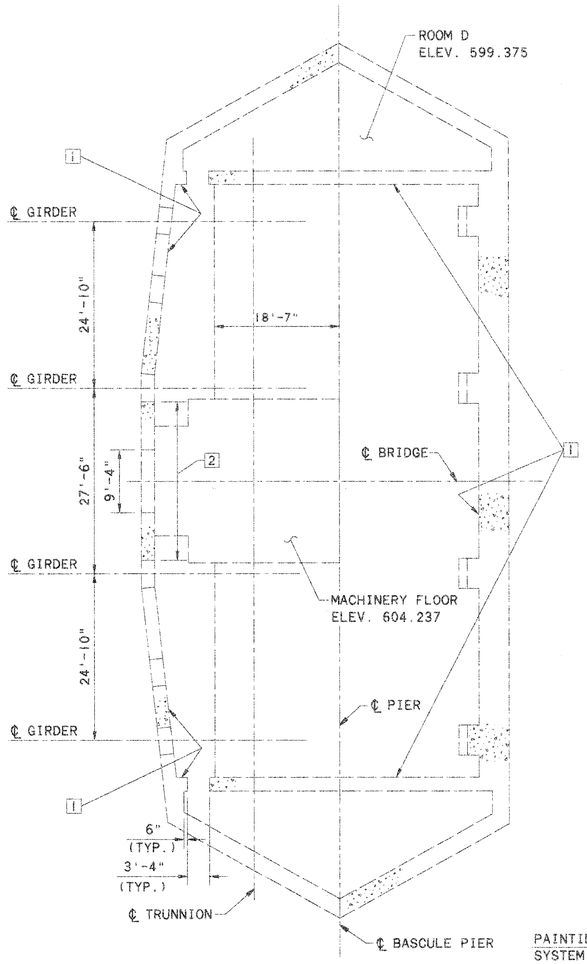
BASCULE PARAPET SECTION AND DETAILS
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280



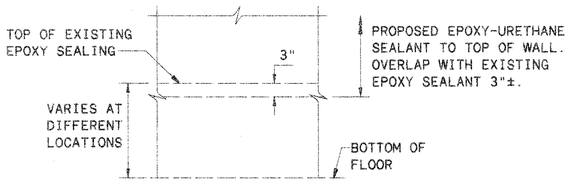
PLAN AT BOTTOM OF COUNTERWEIGHT PIT

PIER 5 SHOWN, PIER 4 SIMILAR, OPPOSITE HAND
NOTE: FENDER NOT SHOWN FOR CLARITY
ELEV. 585.5



PLAN AT MACHINERY FLOOR

TYPICAL PIER 4 AND PIER 5

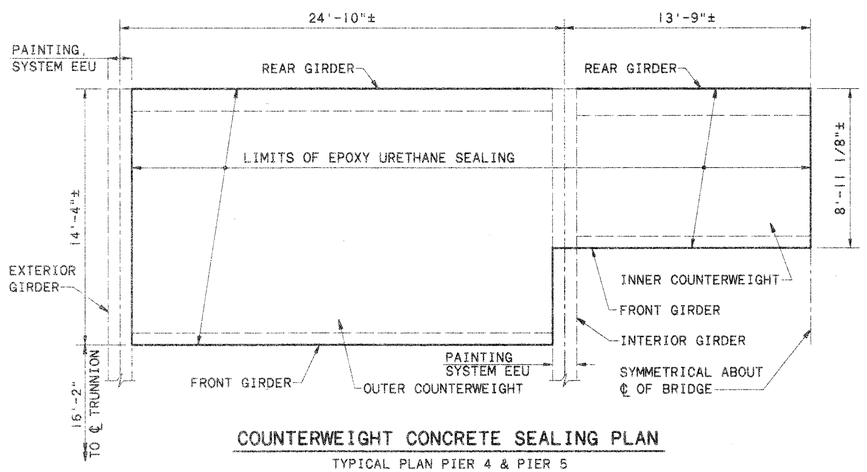


CONCRETE SEALING DETAIL

TYPICAL COUNTERWEIGHT PIT &
MACHINE FLOOR PIER 4 & PIER 5

NOTES

1. WALL PREVIOUSLY SEALED APPROXIMATELY 2' ABOVE FLOOR. APPLY EPOXY URETHANE CONCRETE SEALER TO REMAINDER OF WALL NOT PREVIOUSLY SEALED.
2. WALL PREVIOUSLY SEALED UP TO APPROXIMATELY 9'-4" ABOVE FLOOR. APPLY EPOXY URETHANE CONCRETE SEALER TO REMAINDER OF WALL NOT PREVIOUSLY SEALED.
3. PRIOR TO SEALING REMOVE ALL DELAMINATED CONCRETE. DELAMINATED CONCRETE REMOVAL SHALL BE DONE ACCORDING TO ITEM 202. 50% OF THE COUNTERWEIGHT SURFACE AREA IS ASSUMED FOR ESTIMATION PURPOSES. COST OF DELAMINATED CONCRETE REMOVAL SHALL BE INCLUDED IN ITEM SPECIAL SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) BUFF.



COUNTERWEIGHT CONCRETE SEALING PLAN

TYPICAL PLAN PIER 4 & PIER 5
ELEV. 624.50±

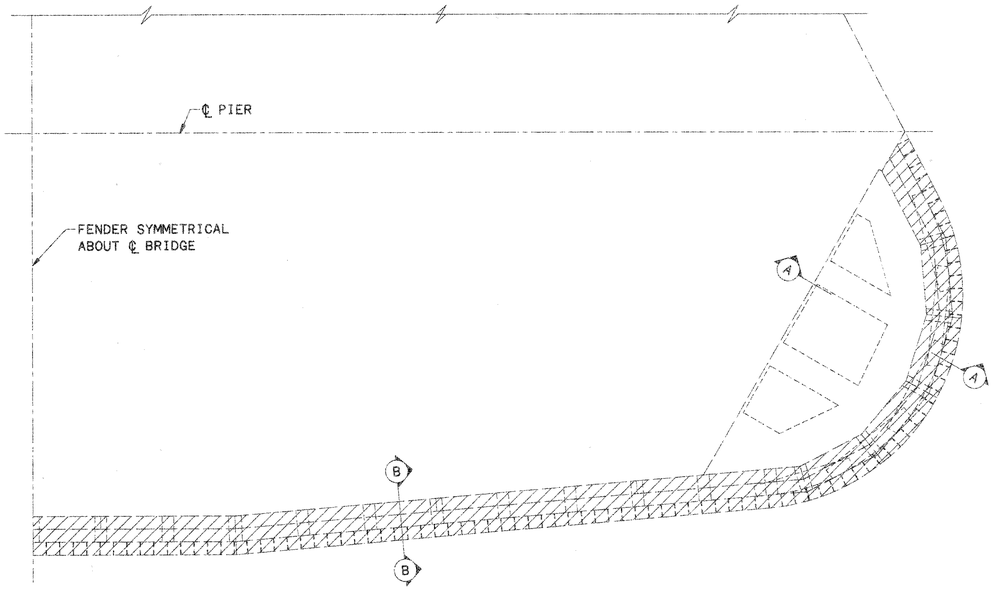
DESIGNED JAP
DRAWN WHW
CHECKED CJS
REVISED
REVIEWED RMM
DATE 14-Feb-96
STRUCTURE FILE NUMBER 4805917

SEALING DETAILS - BASCULE PIERS 4 & 5
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

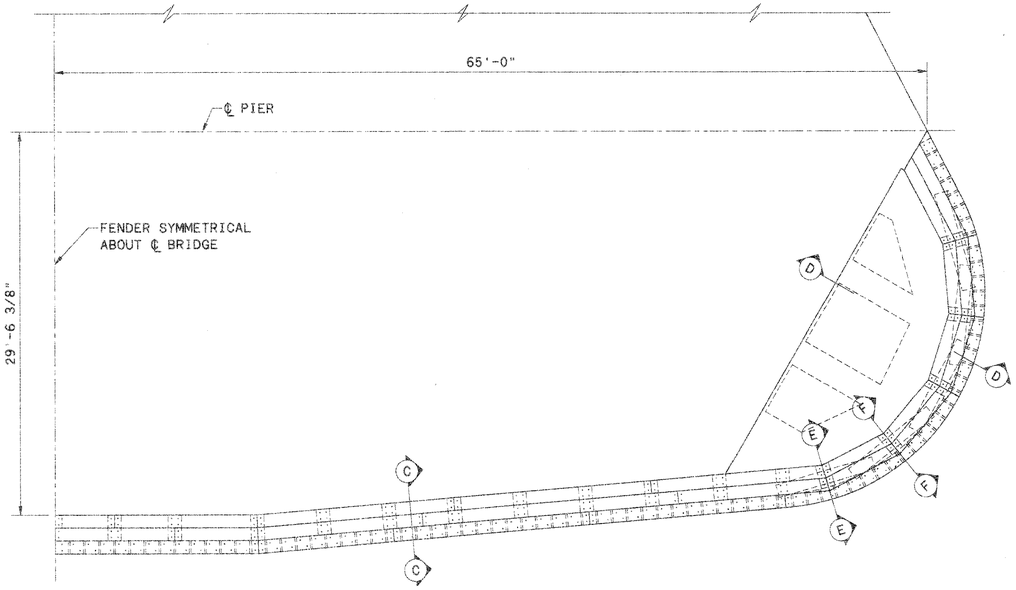
36/126

N:\PROJECTS\PR1491\2\CADD\COUNTWT1 8-8-95 8:50 am



HALF PLAN OF FENDER REMOVAL

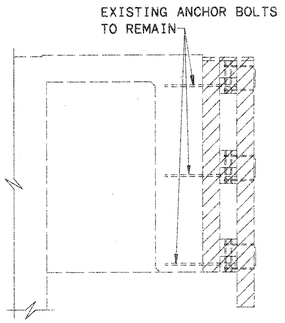
TYPICAL PIER 4 & PIER 5



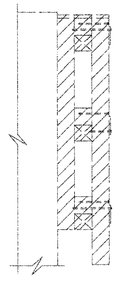
HALF PLAN OF FENDER

TYPICAL PIER 4 & PIER 5

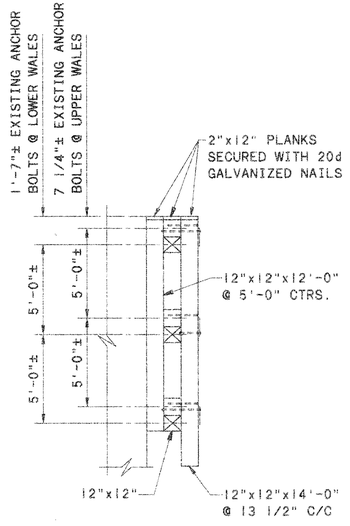
= REMOVAL LIMITS



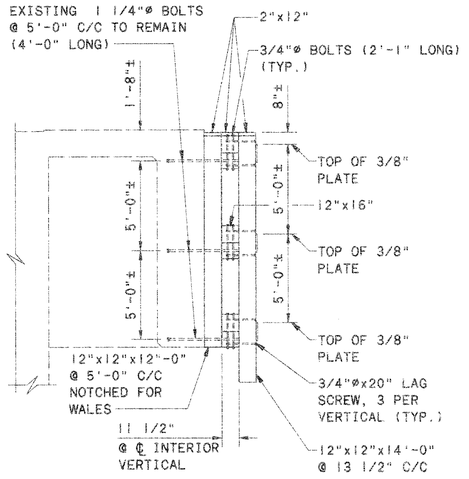
SECTION (A)



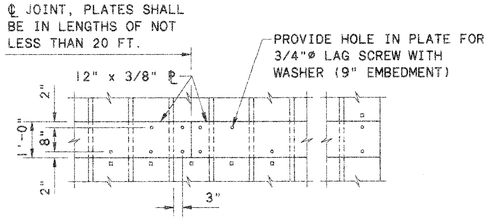
SECTION (B)



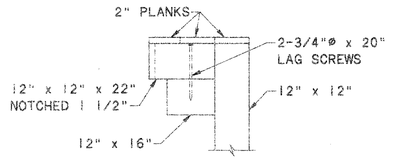
SECTION (C)



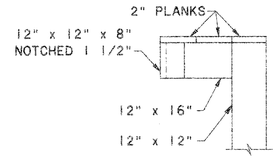
SECTION (D)



TYPICAL FENDER PLATE DETAILS



SECTION (E)



SECTION (F)

DESIGNED	JAP
DRAWN	WHW
CHECKED	CJS
REVISED	
REVIEWED	RMM
DATE	14-Feb-96
STRUCTURE FILE NUMBER	4805917

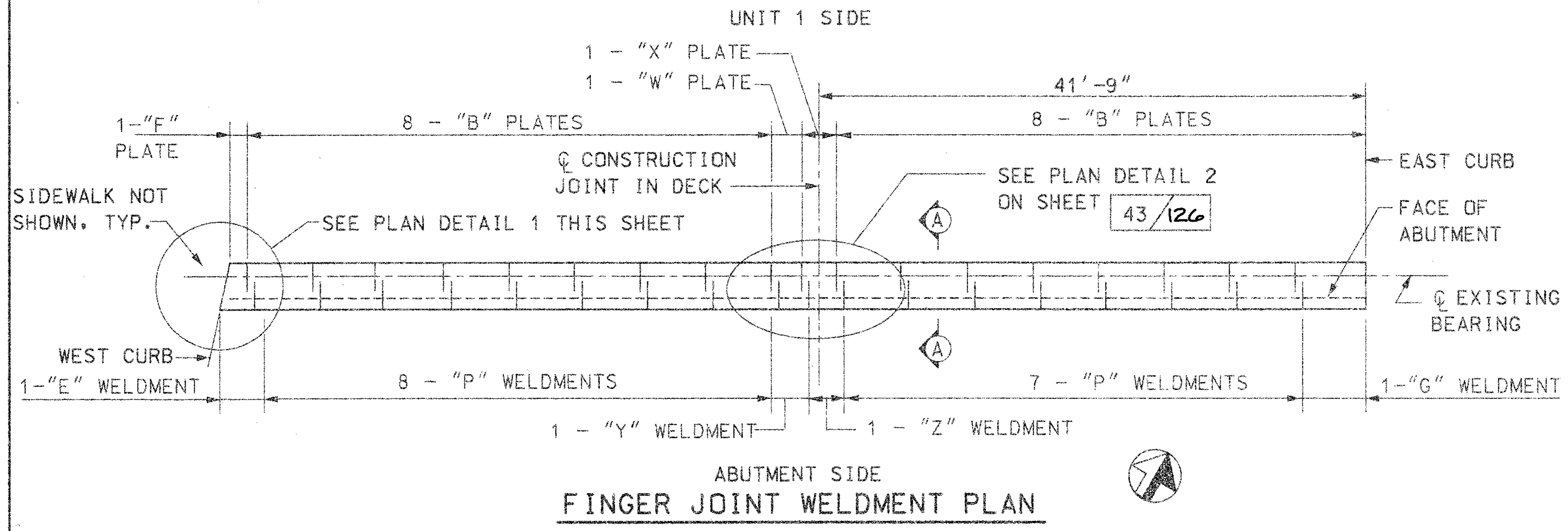
ENGINEERS & ARCHITECTS

FENDER REPLACEMENT DETAILS
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

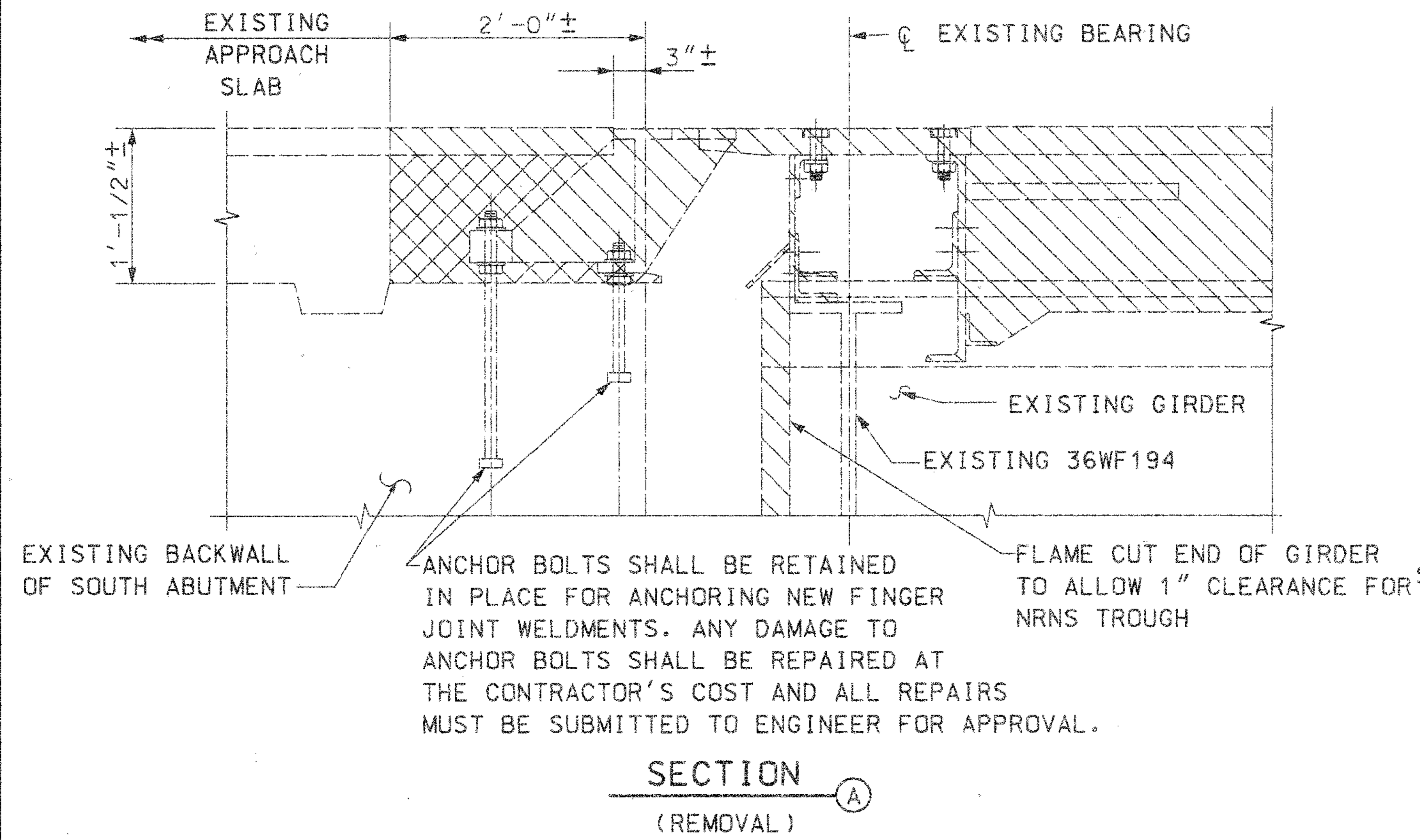
LUC-280

37/126

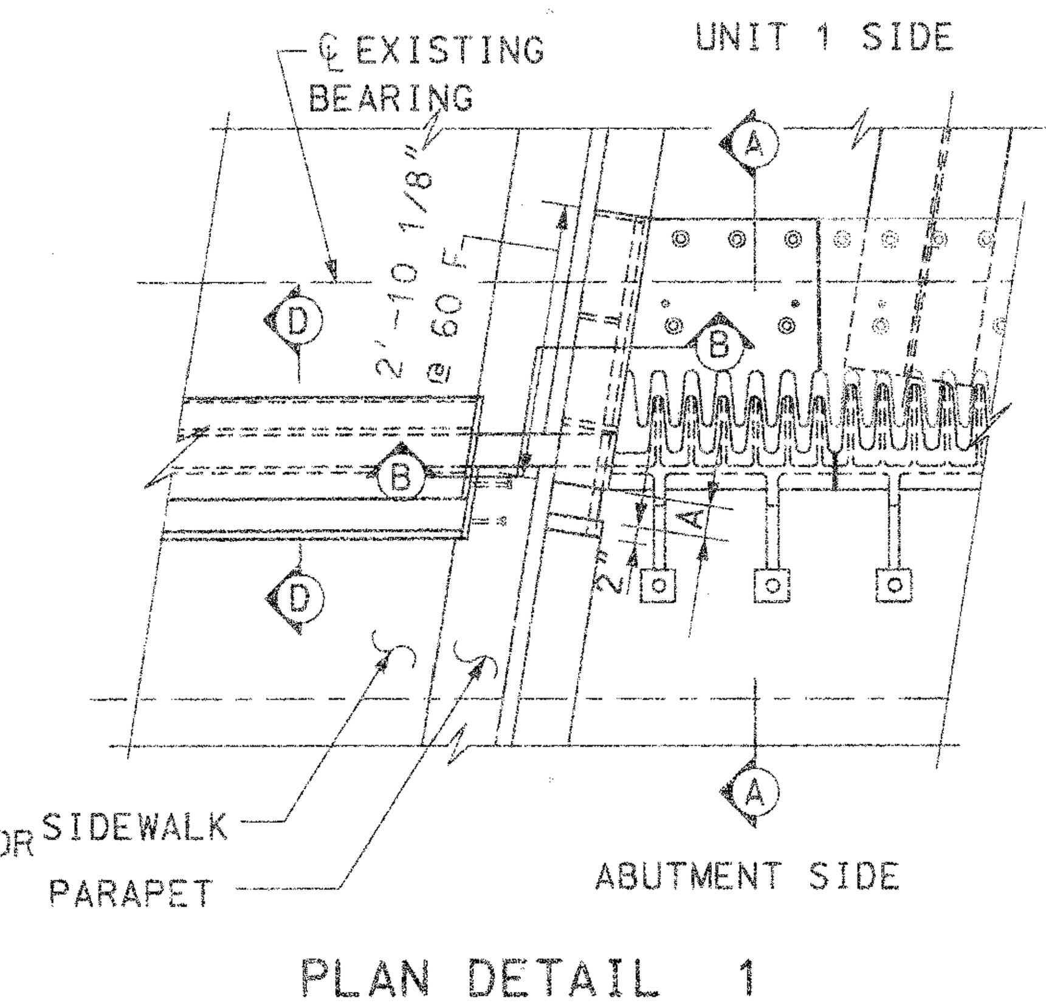
N:\PROJECTS\PR\1491\2\ABD\FENDREP1 8-4-95 11:49 am



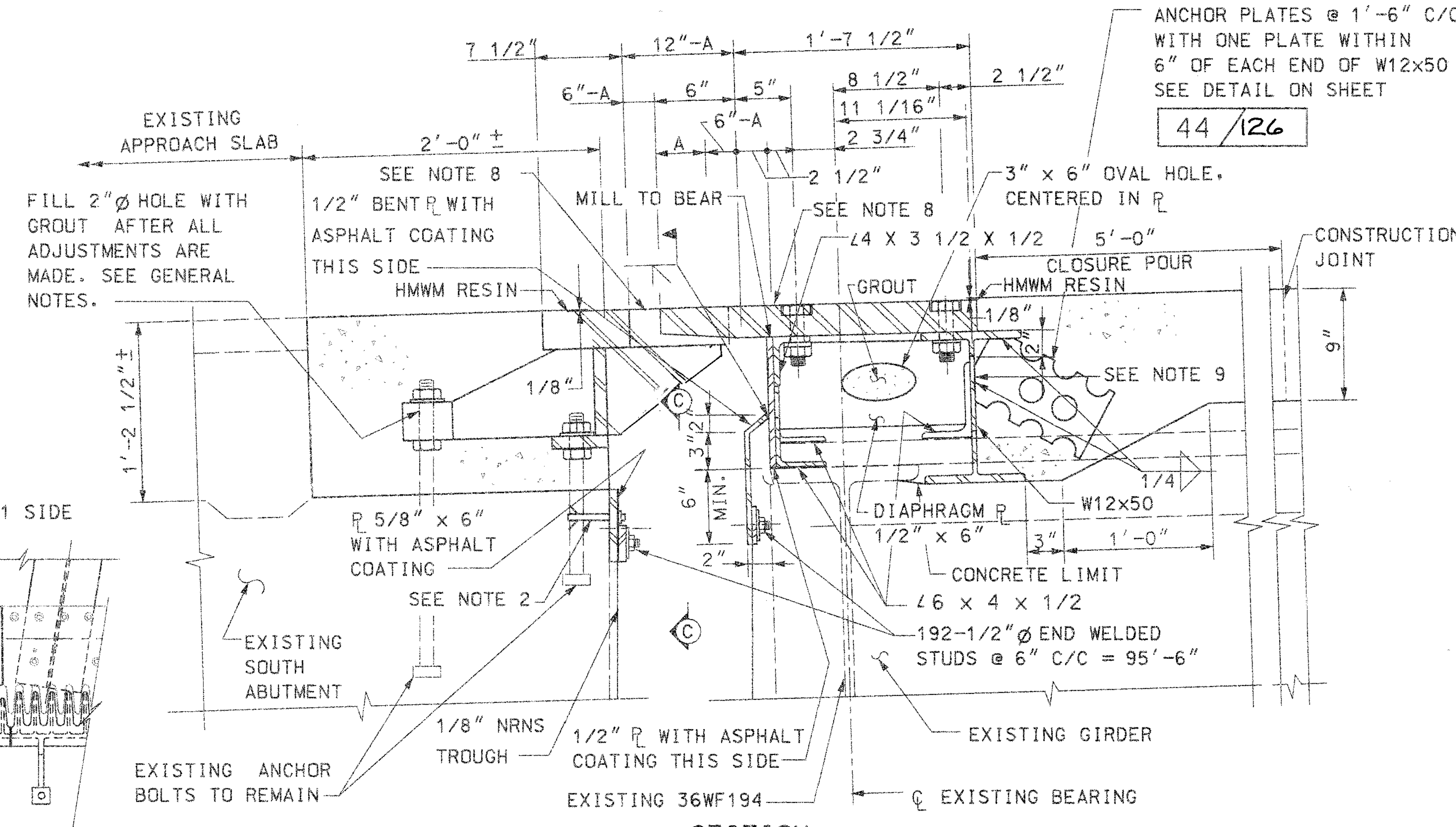
FINGER JOINT WELDMENT PLAN



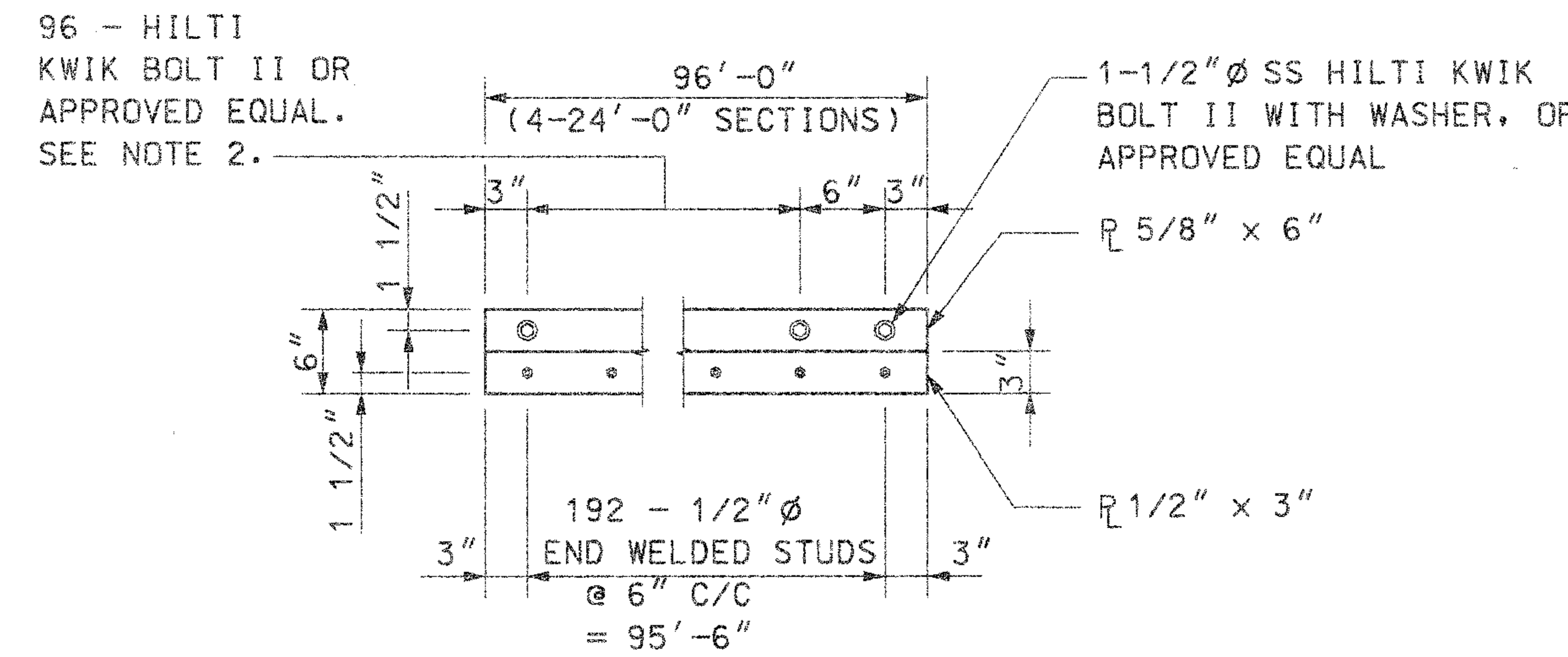
SECTION (A)
(REMOVAL)



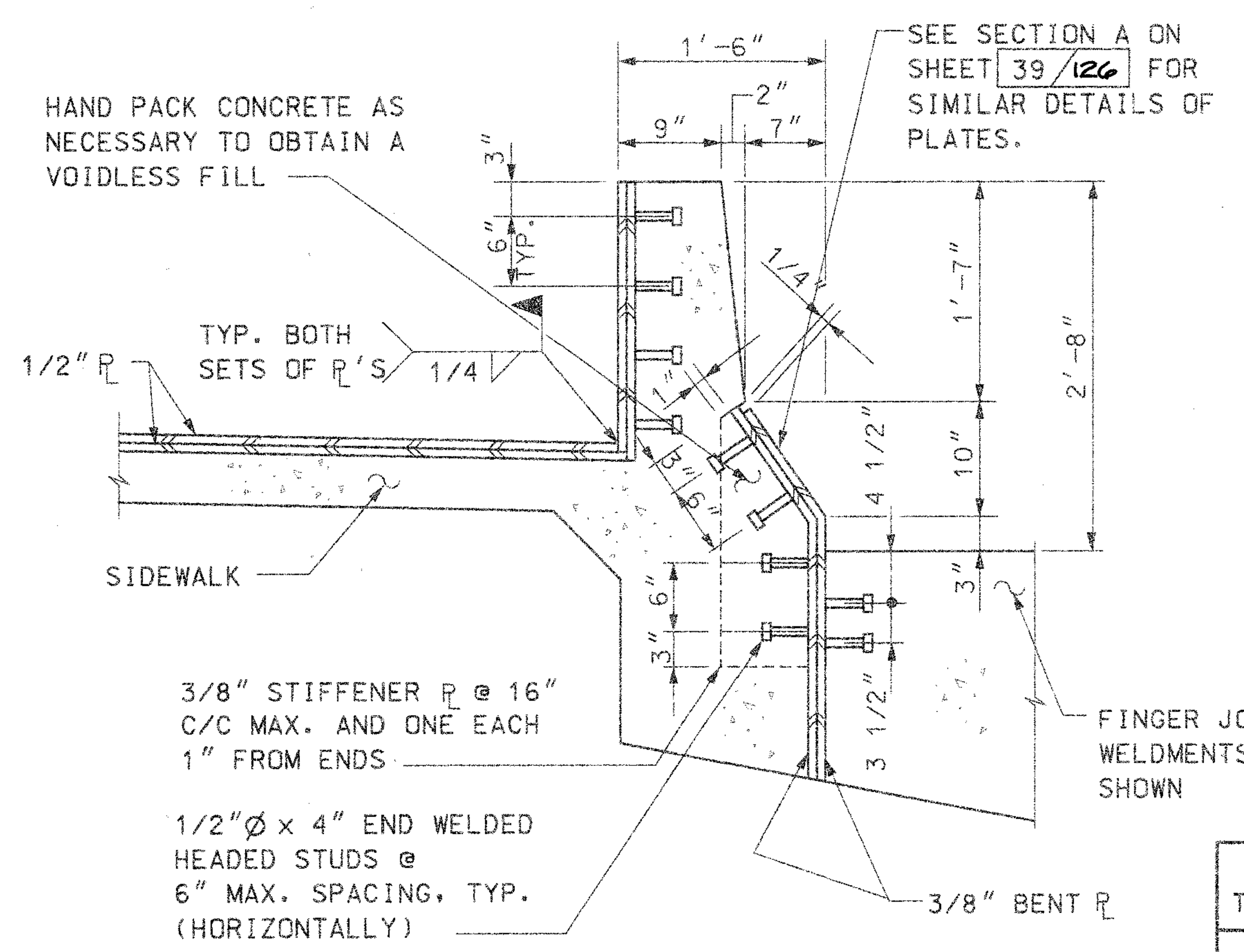
PLAN DETAIL 1
(WEST END SHOWN, EAST END SIMILAR)



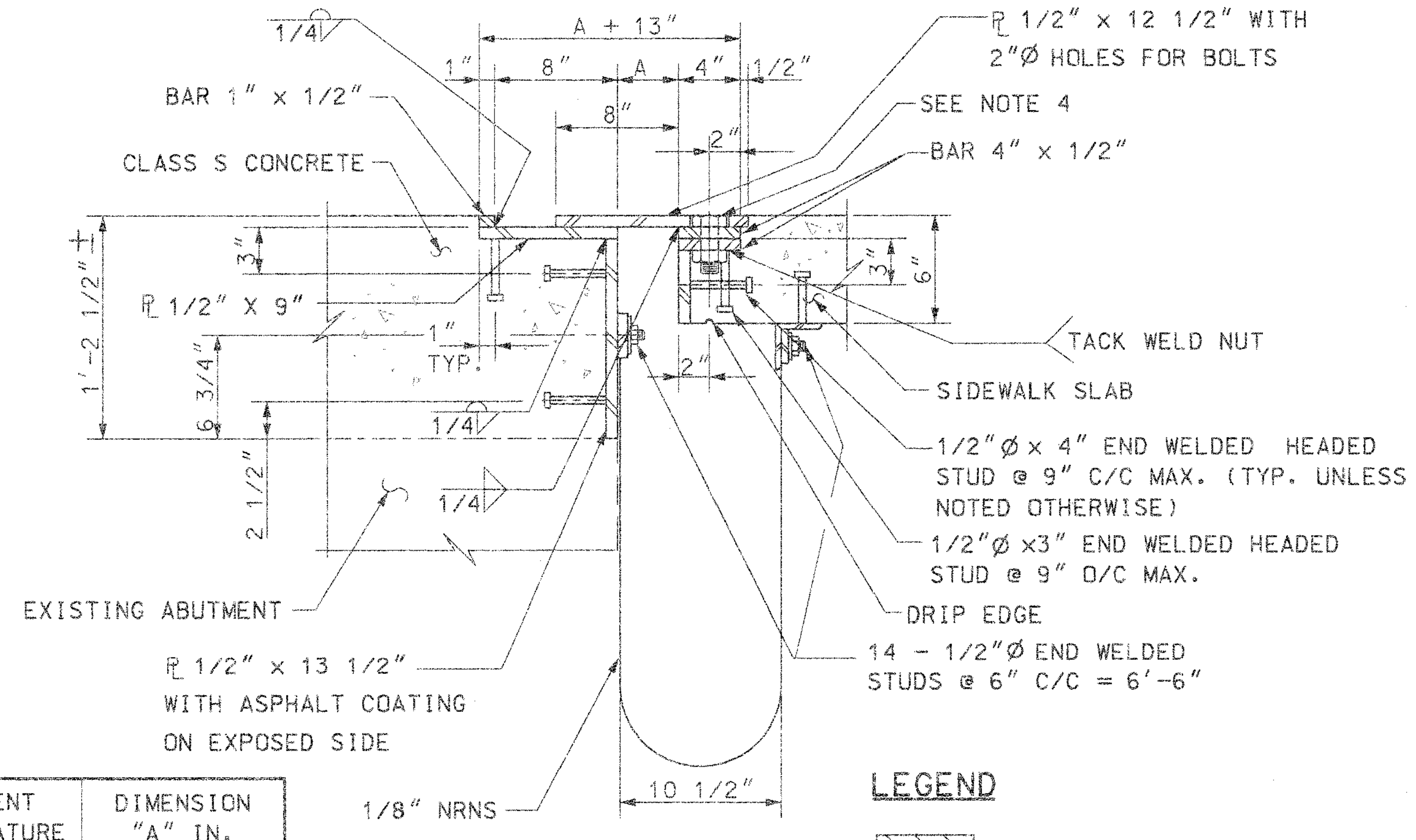
SECTION (A)



VIEW (C)
(SIMILAR AT OTHER LOCATIONS)



SECTION (B)



SECTION (D)

AMBIENT TEMPERATURE	DIMENSION "A" IN.
90°F	2
80°F	2 3/8
70°F	2 5/8
60°F	3
50°F	3 3/8
40°F	3 5/8
30°F	4

LEGEND

DENOTES REMOVAL LIMITS

DENOTES REMOVAL BY HYDRODEMOLITION

NRNS = NYLON REINFORCED NEOPRENE SHEET

* = @ 68°F

NOTES

1. SEE TABLE ON SHEET 46/126 FOR WELDMENT TYPE & DIMENSIONS.
2. 1/2"Ø SS HILTI KWIK BOLT II W/ WASHER OR APPROVED EQUAL W/ 3 1/2" MIN. EMBEDMENT @ 1'-0" C/C. ADJUST SPACING TO AVOID EXISTING ANCHOR BOLTS (IF NECESSARY).
3. 5/8" Ø x 1 3/4" HEX. HEAD BOLTS WITH HEX. NUTS AND WASHERS @ 6" MAX. C/C , STAINLESS STEEL, ASTM A276, TYPE 302 DRILL 3/4" ØHOLES IN BARS 4" x 1/2". FIELD WELD HEAD OF BOLTS TO BAR 4" x 2" WITH 3/16" FILLET.
4. SEE SHEET 10/126 FOR GENERAL NOTES.
5. SEE SHEET 44/126 FOR TYPICAL FINGER JOINT SUPPORT DETAIL.
6. SEE TABLE ON THIS SHEET FOR DIMENSION "A".
7. STEEL WELDMENTS, SEE SHEETS 44/126, 45/126 AND 46/126 FOR NOTES AND DETAILS.
8. 6"Ø HOLE IN WEB. SEE SECTION A ON SHEET 44/126.

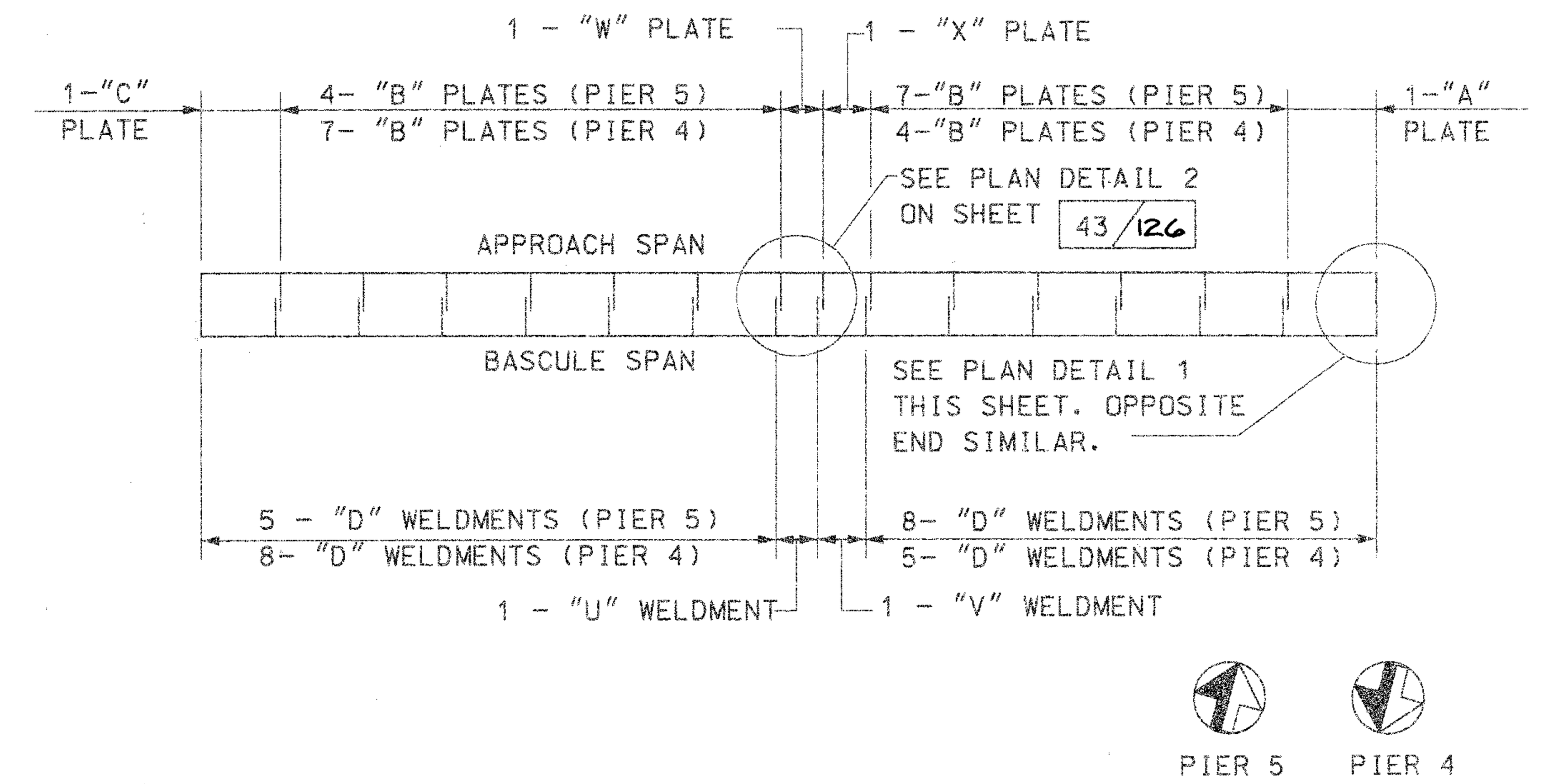
ENGINEERS ARCHITECTS

DESIGNED RWM	DRAWN KEK	REVIEWED RKTT	DATE 23-OCT-96
CHECKED KEK	REVISED	STRUCTURE FILE NUMBER 4805917	

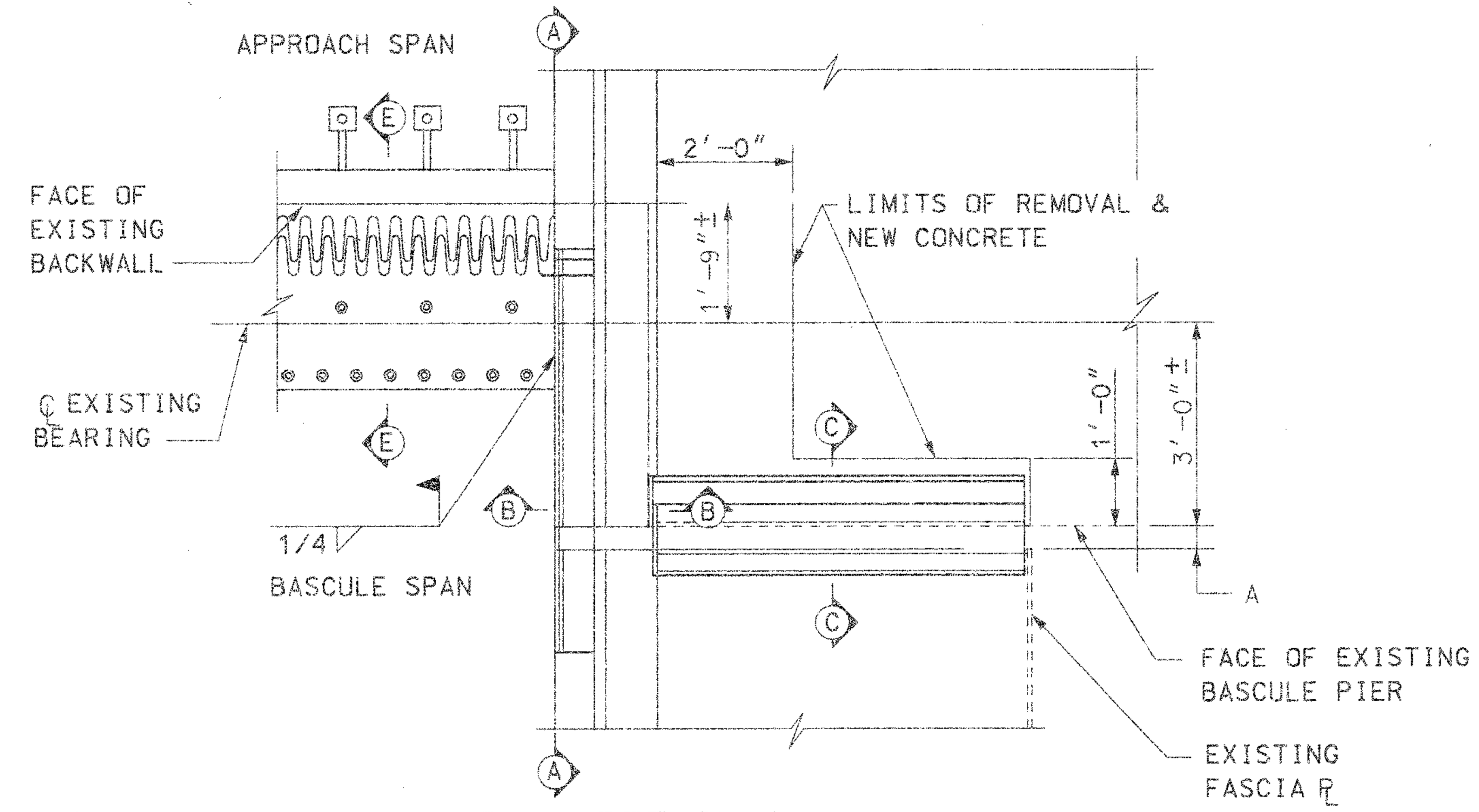
FINGER JOINT DETAILS 1 - SOUTH ABUTMENT
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

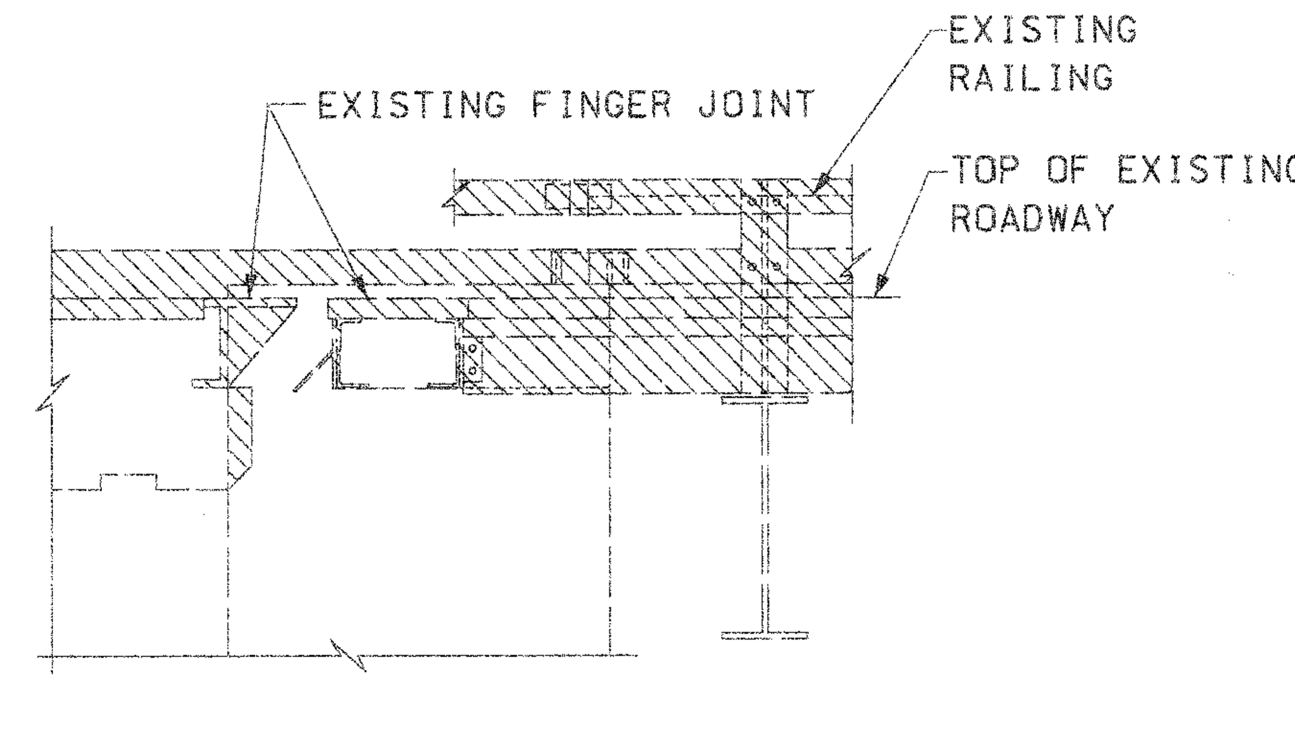
7-25-95



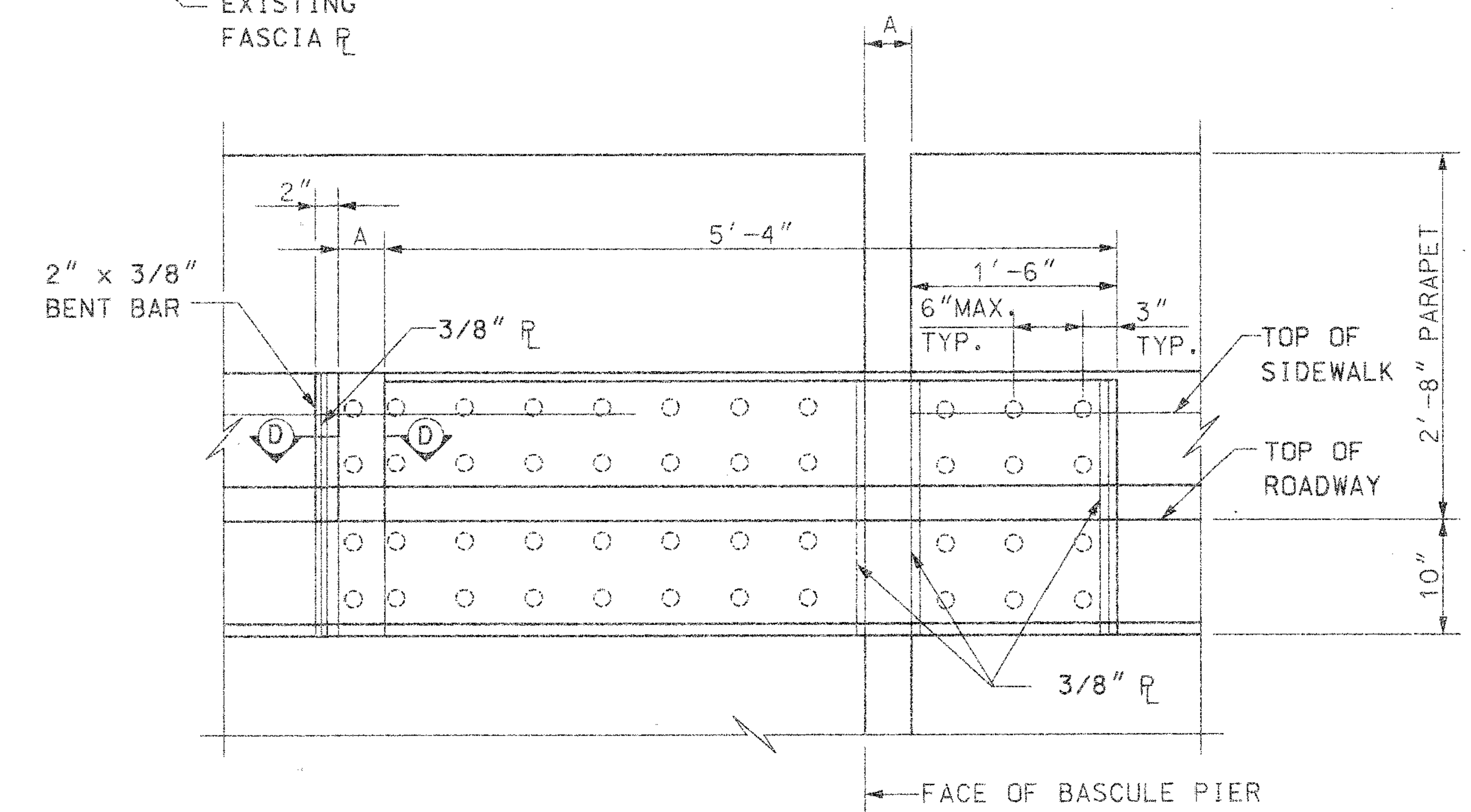
FINGER JOINT WELDMENT PLAN - BASCULE PIERS 4 & 5



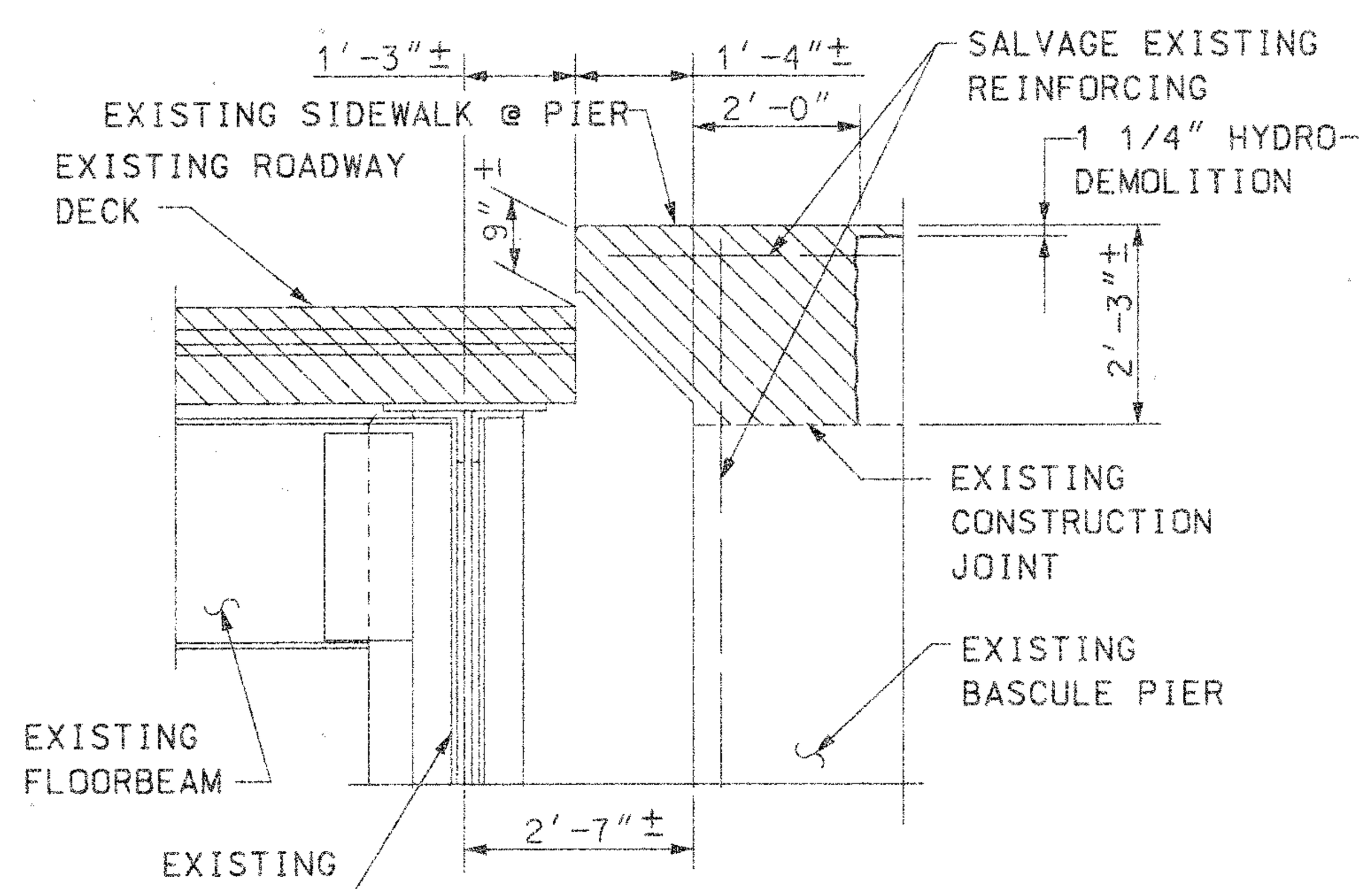
PLAN DETAIL 1



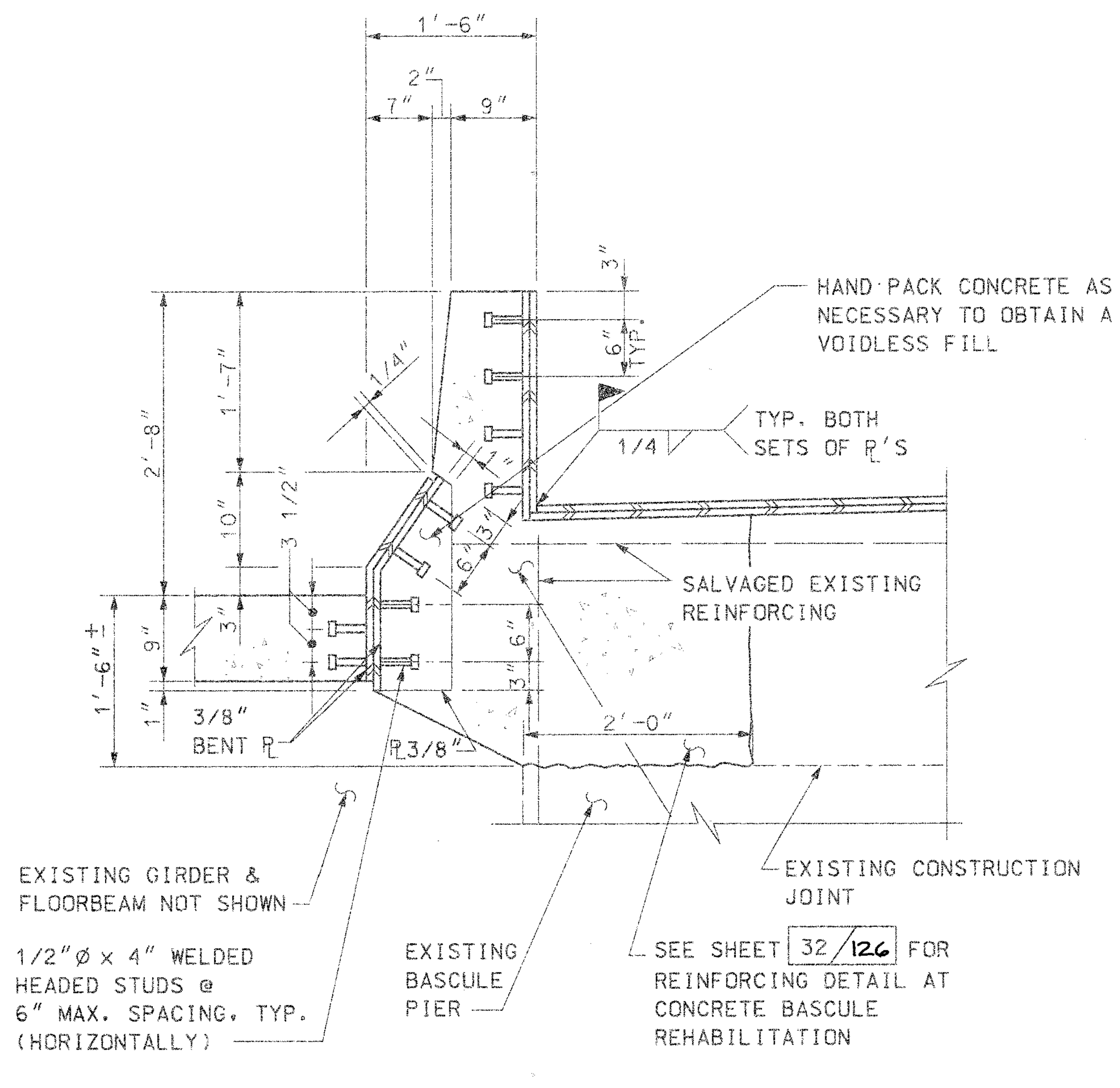
SECTION (A) (REMOVAL)



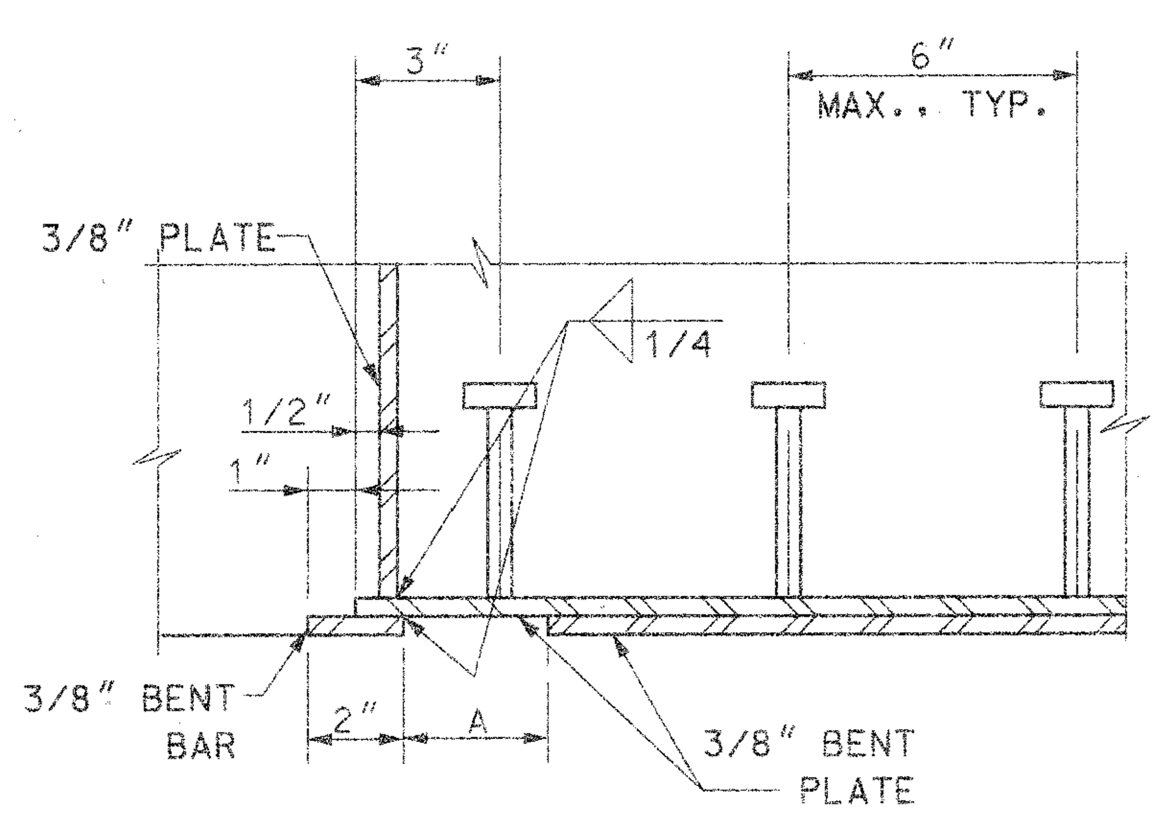
SECTION (A) (FINGER JOINT HARDWARE NOT SHOWN)



SECTION (B) (REMOVAL)



SECTION (B)



SECTION (D)

NOTES

SEE SHEET 10/126 FOR GENERAL NOTES.

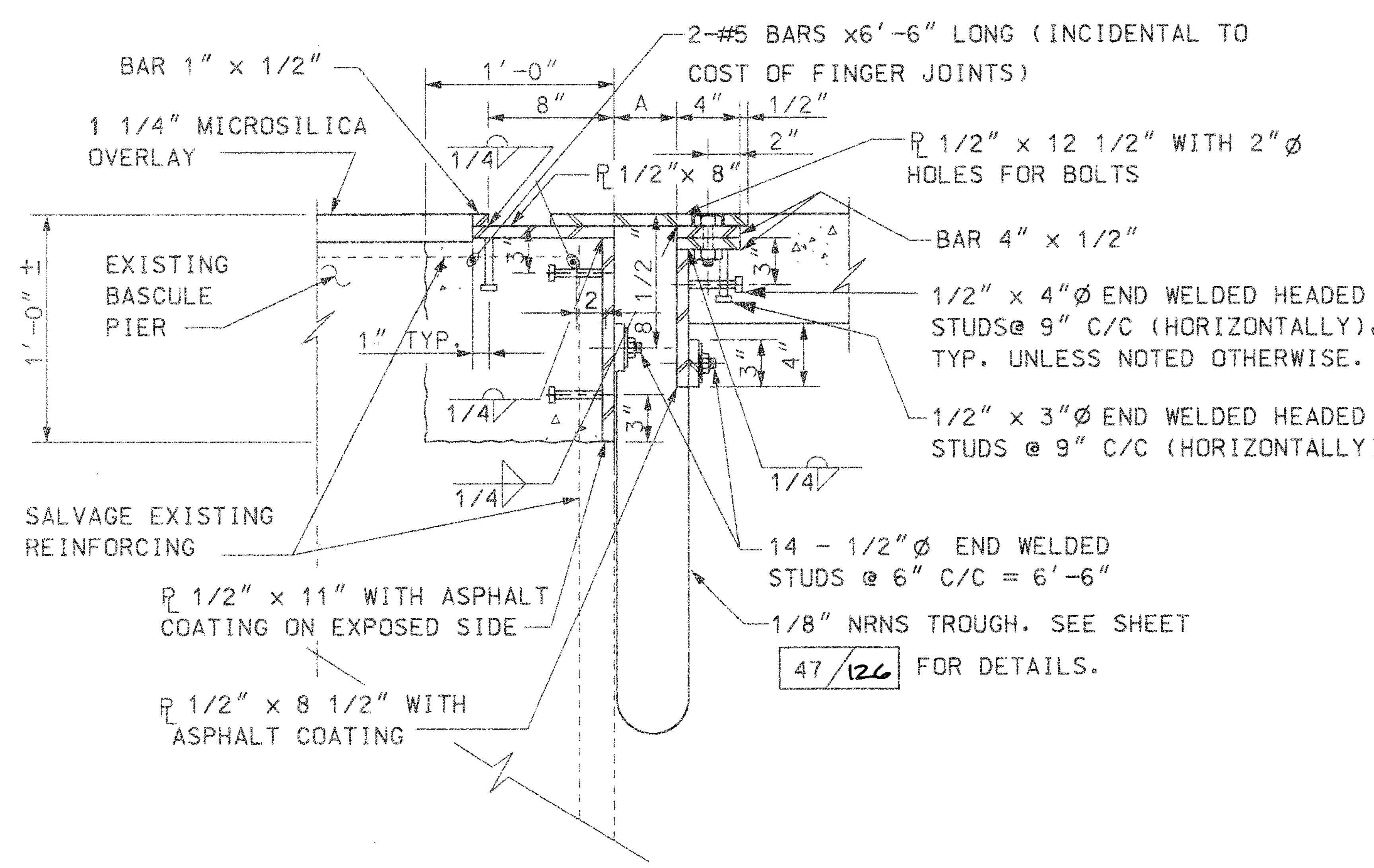
SEE SHEET 40/126 FOR SECTION E.

SEE TABLE ON SHEET 38/126 FOR DIMENSION "A".

LEGEND

Ø = DIAMETER

[hatch] = REMOVAL LIMITS

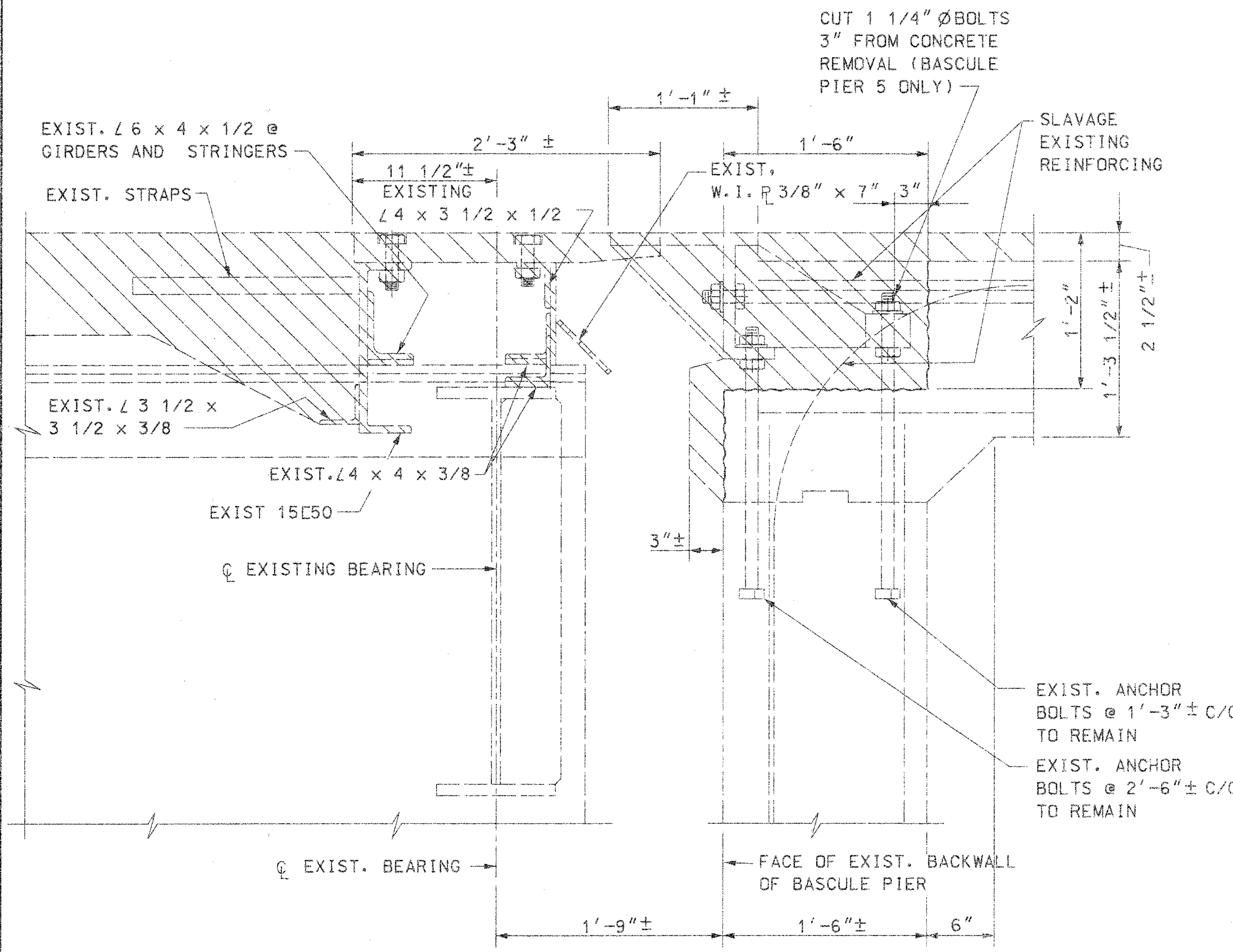


SECTION (C)

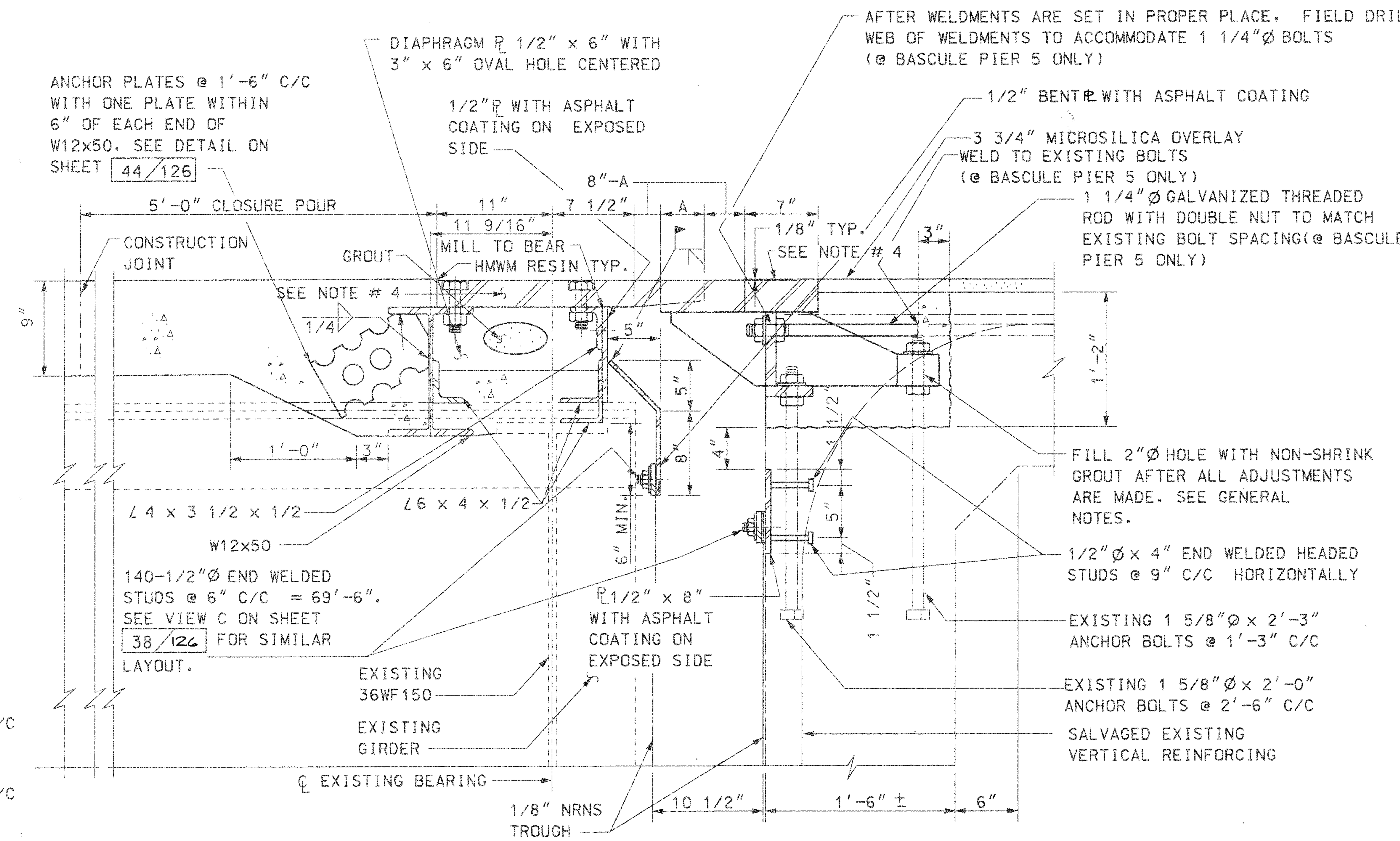
DESIGNED RWM | DRAWN KEK | REVIEWED RKM | DATE 23-OCT-96 | CHECKED MAK | REVISED | STRUCTURE FILE NUMBER 4805917

FINGER JOINT DETAILS 2 - BASCULE PIERS 4 & 5
BRIGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280



SECTION (E)
(REMOVAL)



SECTION (E)

LEGEND

▧ = REMOVAL LIMITS

NRNS = NYLON REINFORCED NEOPRENE SHEET

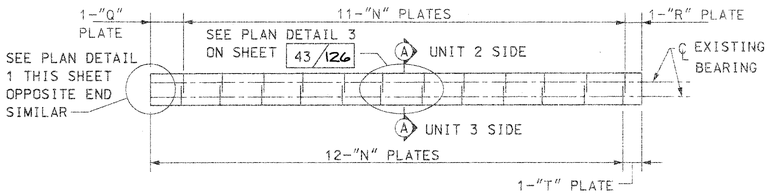
NOTES

1. SEE SHEET 10/126 FOR GENERAL NOTES.
2. SEE SHEET 44/126 FOR TYPICAL FINGER JOINT SUPPORT DETAIL.
3. SEE TABLE ON THIS SHEET FOR DIMENSION "A".
4. STEEL WELDMENTS & PLATES, SEE SHEETS 44/126, 45/126 AND 46/126, FOR NOTES AND DETAILS.
5. WORK THIS SHEET WITH SHEET 39/126.

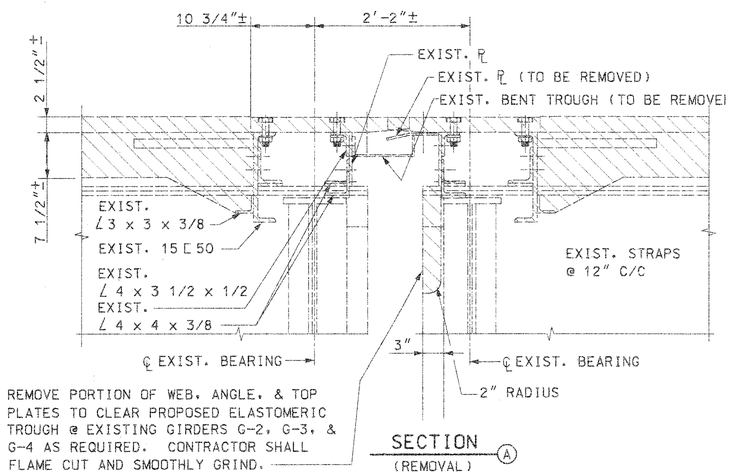
DESIGNED	DRAWN	REVIEWED	DATE
RWM	KEK	RKM	23-OCT-96
CHECKED MAK	REVISED	STRUCTURE FILE NUMBER 4805917	

FINGER JOINT DETAILS 3 - BASCULE PIERS 4 & 5
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

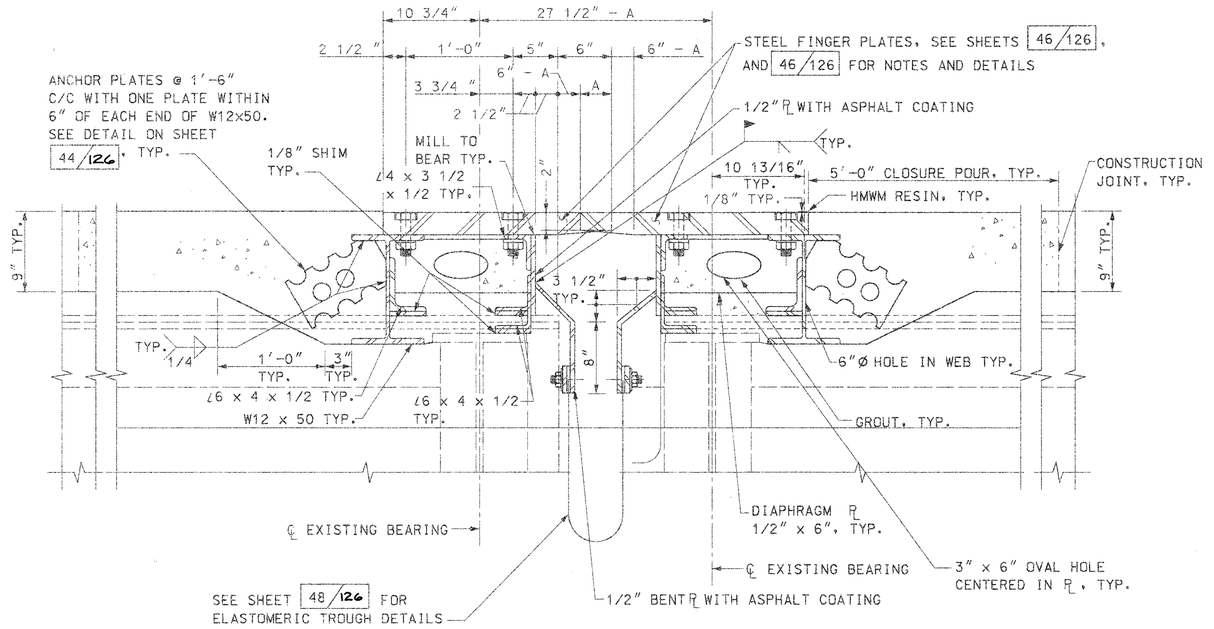


FINGER JOINT PLATE PLAN

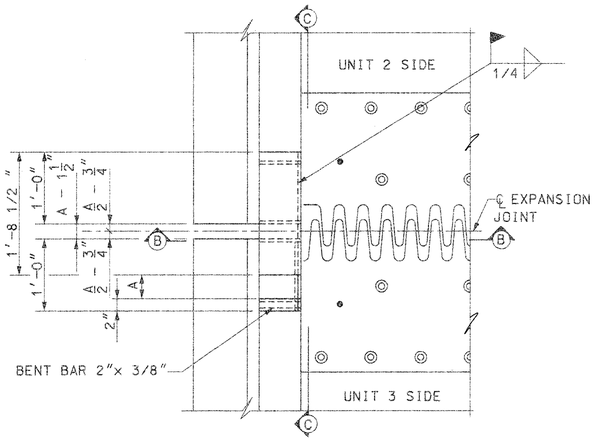


REMOVE PORTION OF WEB, ANGLE, & TOP PLATES TO CLEAR PROPOSED ELASTOMERIC TROUGH @ EXISTING GIRDERS G-2, G-3, & G-4 AS REQUIRED. CONTRACTOR SHALL FLAME CUT AND SMOOTHLY GRIND.

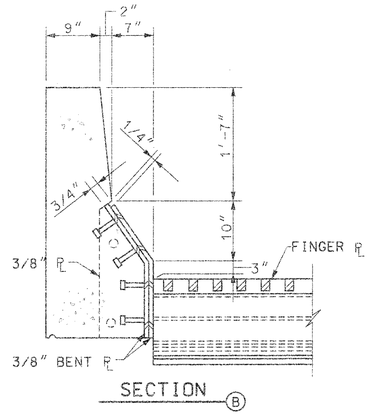
SECTION (A) (REMOVAL)



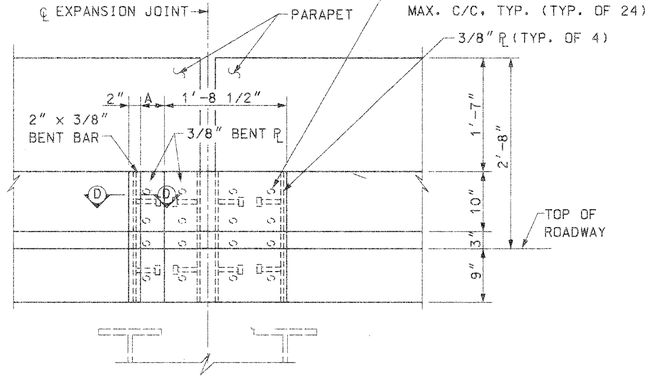
SECTION (A)



PLAN DETAIL 1



SECTION (B)



SECTION (C)

(FINGER JOINT HARDWARE NOT SHOWN FOR CLARITY)

NOTES

SEE TABLE ON SHEET 46/126 FOR FINGER PLATE TYPE & DIMENSIONS.

SEE TABLE ON SHEET 38/126 FOR DIMENSION "A".

SEE SHEET 44/126 FOR TYP. FINGER JOINT SUPPORT DETAIL.

SEE SHEET 10/126 FOR GENERAL NOTES.

SEE SHEET 39/126 FOR SECTION D.

LEGEND

▨ = REMOVAL LIMITS

ENGINEERS ARCHITECTS

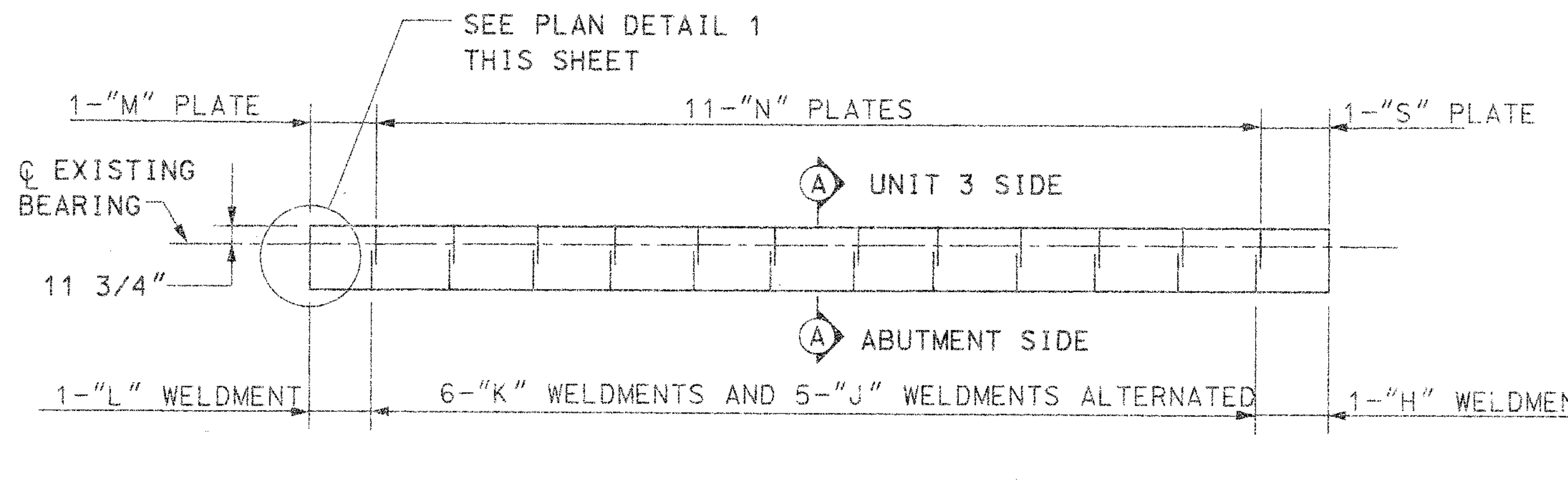
DESIGNED RWM
DRAWN KEK
CHECKED MAK
REVISED
REVIEWED RWM 23-OCT-96
DATE
STRUCTURE FILE NUMBER 4805917

FINGER JOINT DETAILS 4 - BENT 8
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

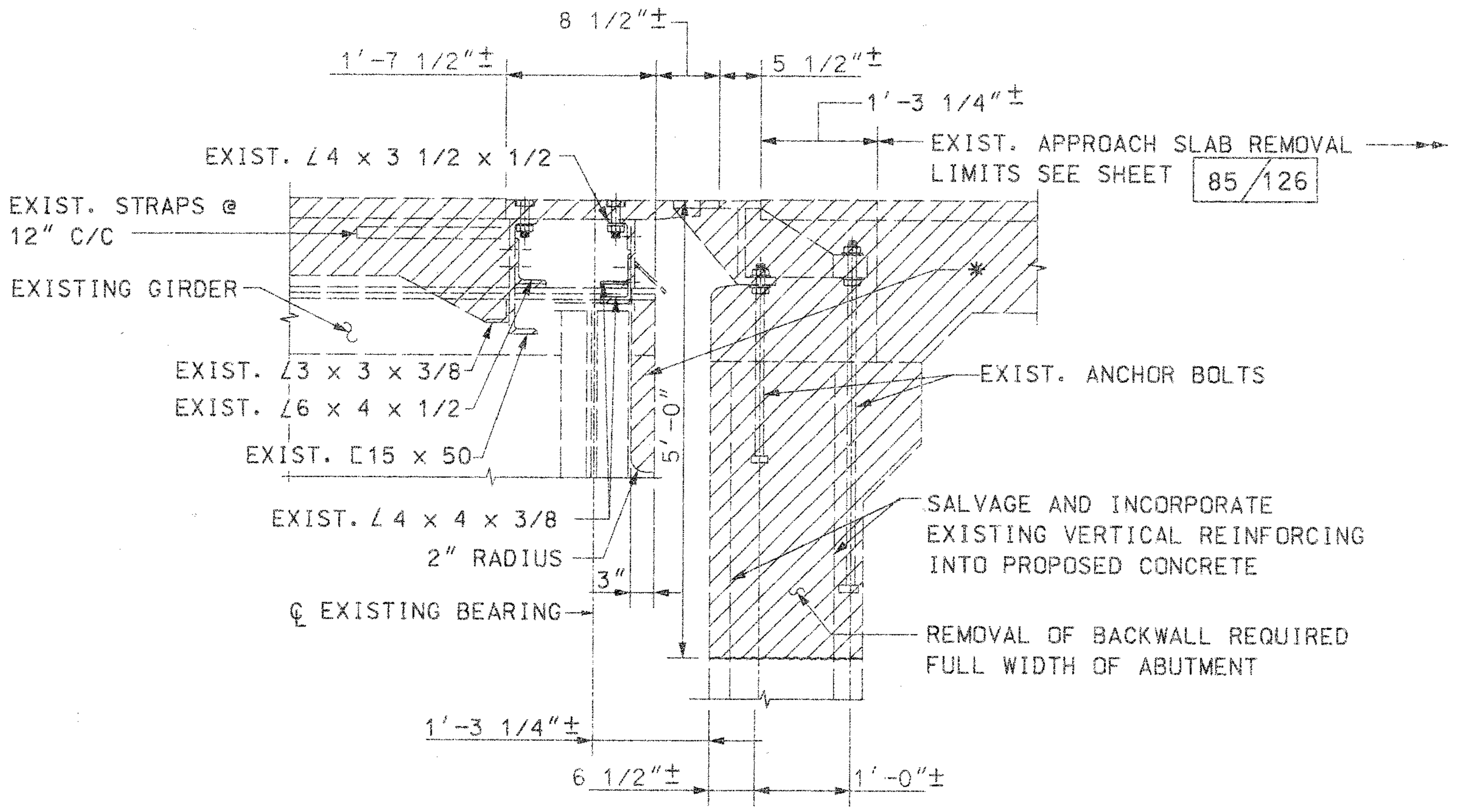
LUC-280

41/126

P:\PRMSR2\CADD\ENGLISH.DGN 7-28-95

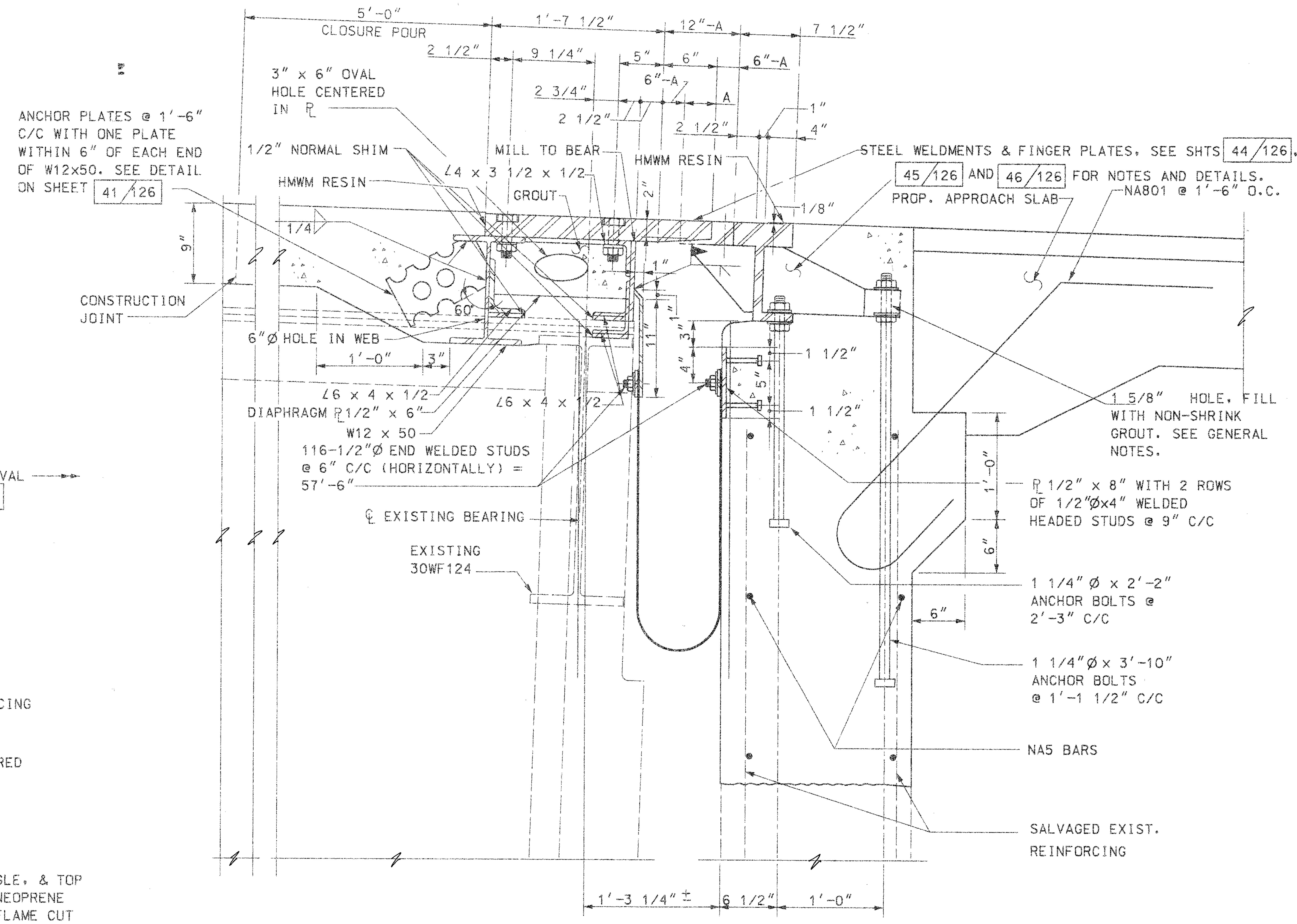


FINGER JOINT WELDMENT PLAN

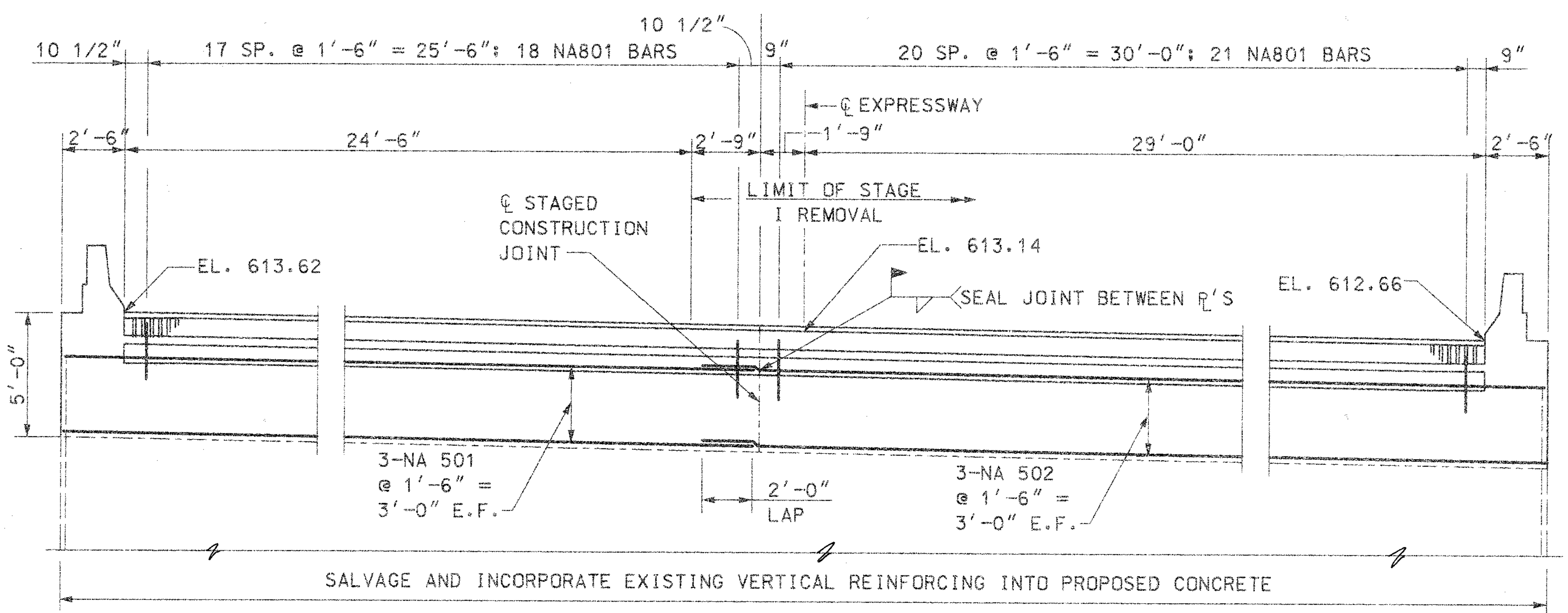


SECTION (A)
(REMOVAL)

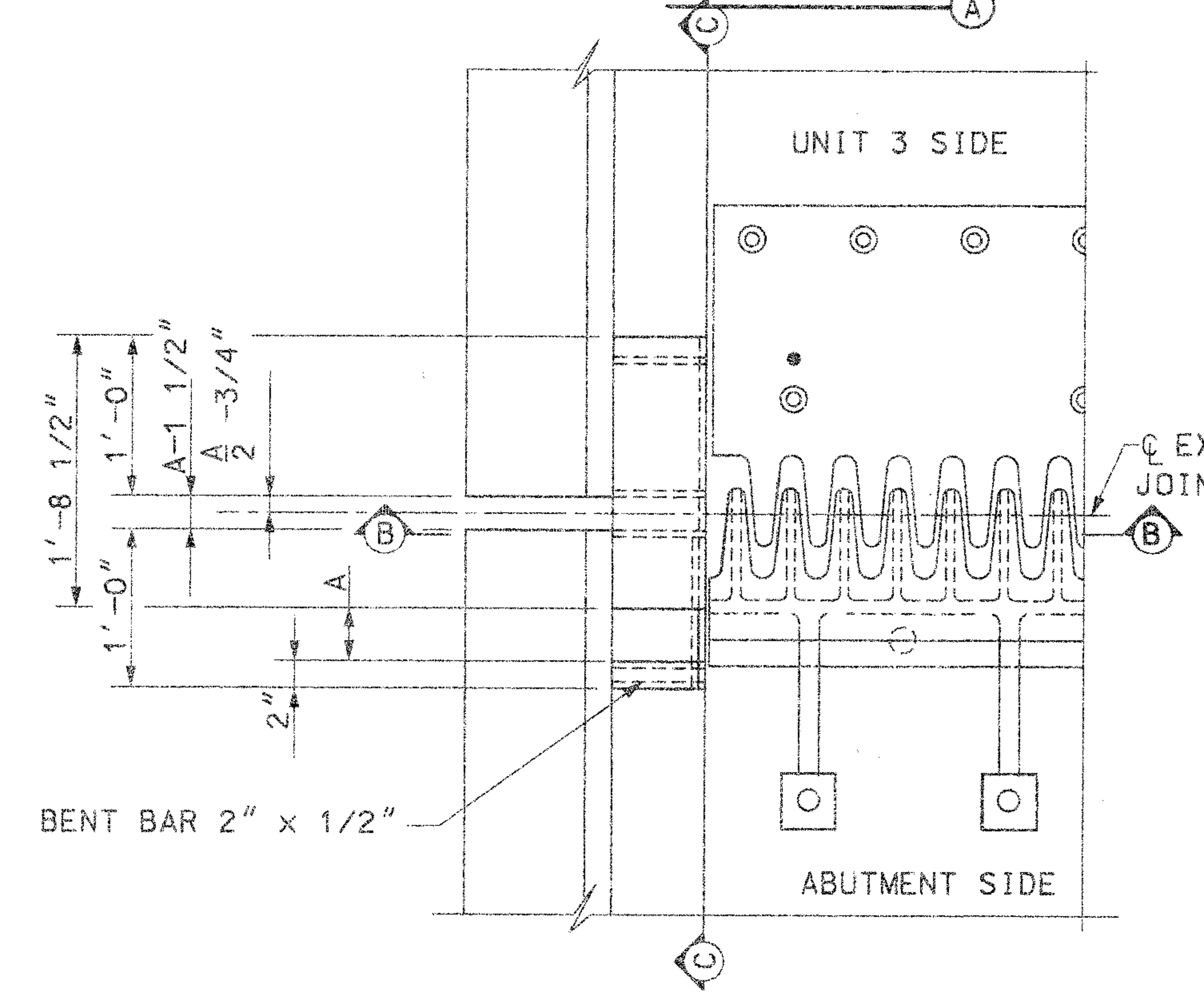
* REMOVE PORTION OF WEB, ANGLE, & TOP PLATES TO CLEAR PROPOSED NEOPRENE TROUGH. CONTRACTOR SHALL FLAME CUT AND SMOOTHLY GRIND EDGES PRIOR TO PAINTING.



SECTION (A)



NORTH ABUTMENT ELEVATION



PLAN DETAIL 1

NOTES

SEE SHEET 41/126 FOR SECTION B & C (SIMILAR).

SEE TABLE ON SHEET 46/126 FOR WELDMENT & FINGER PLATE TYPE & DIMENSIONS.

SEE SHEET 44/126 FOR TYPICAL FINGER JOINT SUPPORT DETAILS.

SEE TABLE ON SHEET 38/126 FOR DIMENSION "A".

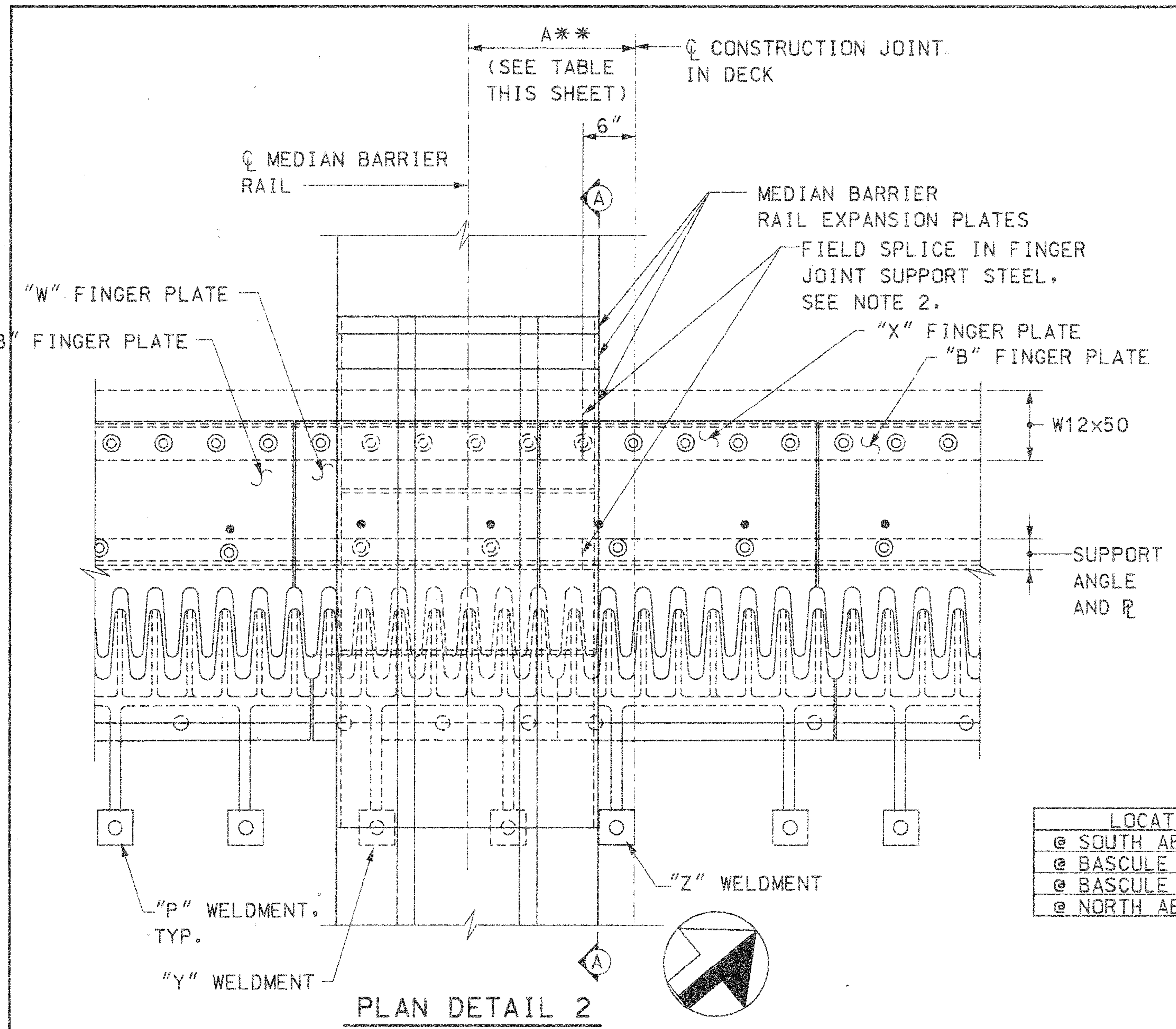
REFER TO ODOT STD. DWG AS-1-81 FOR APPROACH SLAB DETAILS.

EXISTING BACKWALL AND APPROACH SLAB TO BE REMOVED PER ITEM 202, PORTION OF STRUCTURES REMOVED.

DESIGNED RWM	CHECKED MAK
DRAWN KEK	REVISED
REVIEWED RKT	DATE 23-OCT-96
STRUCTURE FILE NUMBER 4805917	

FINGER JOINT DETAILS 5 - NORTH ABUTMENT
BRIDGE NO. LUC-280
OVER MAUMEE RIVER

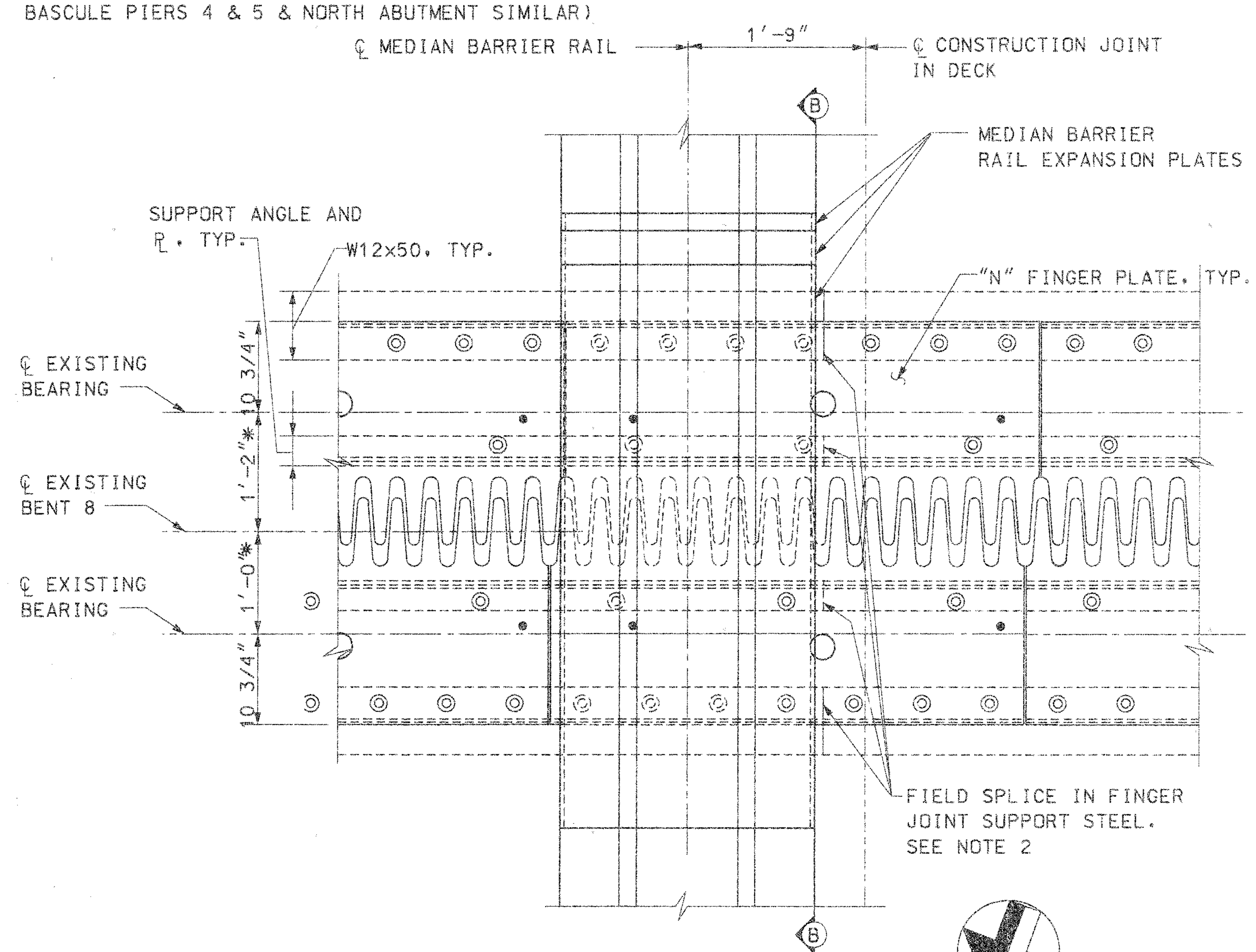
LUC-280



PLAN DETAIL 2

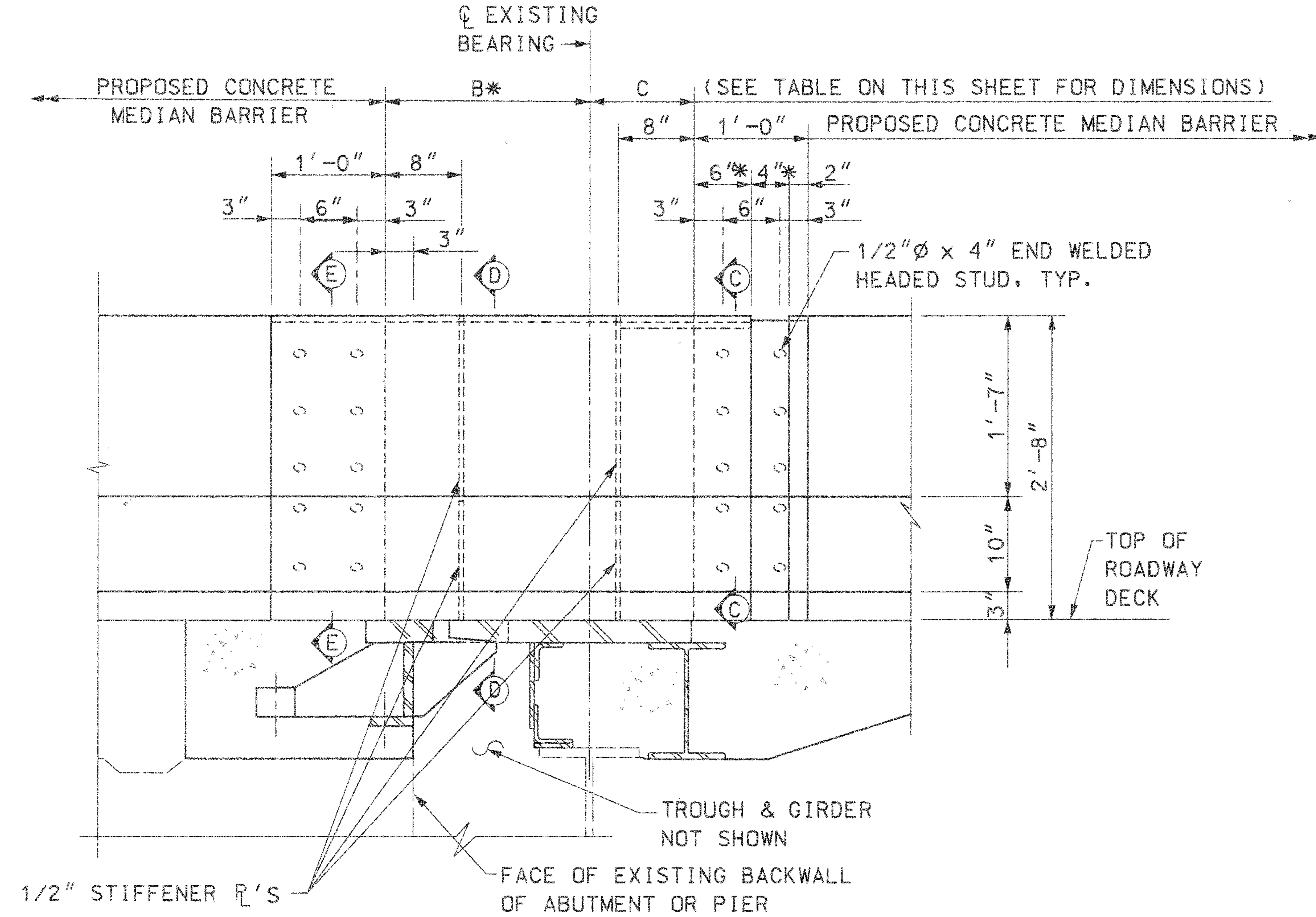
(EXPANSION JOINT @ SOUTH ABUTMENT SHOWN, BASCULE PIERS 4 & 5 & NORTH ABUTMENT SIMILAR)

LOCATION	A**	B	C
@ SOUTH ABUTMENT	1'-7 3/8"	1'-9 1/2"	11"
@ BASCULE PIER 4	8'-2 3/4"	2'-0"	11 1/2"
@ BASCULE PIER 5	1'-9"	2'-0"	11 1/2"
@ NORTH ABUTMENT	1'-9"	1'-9 3/4"	11 3/4"

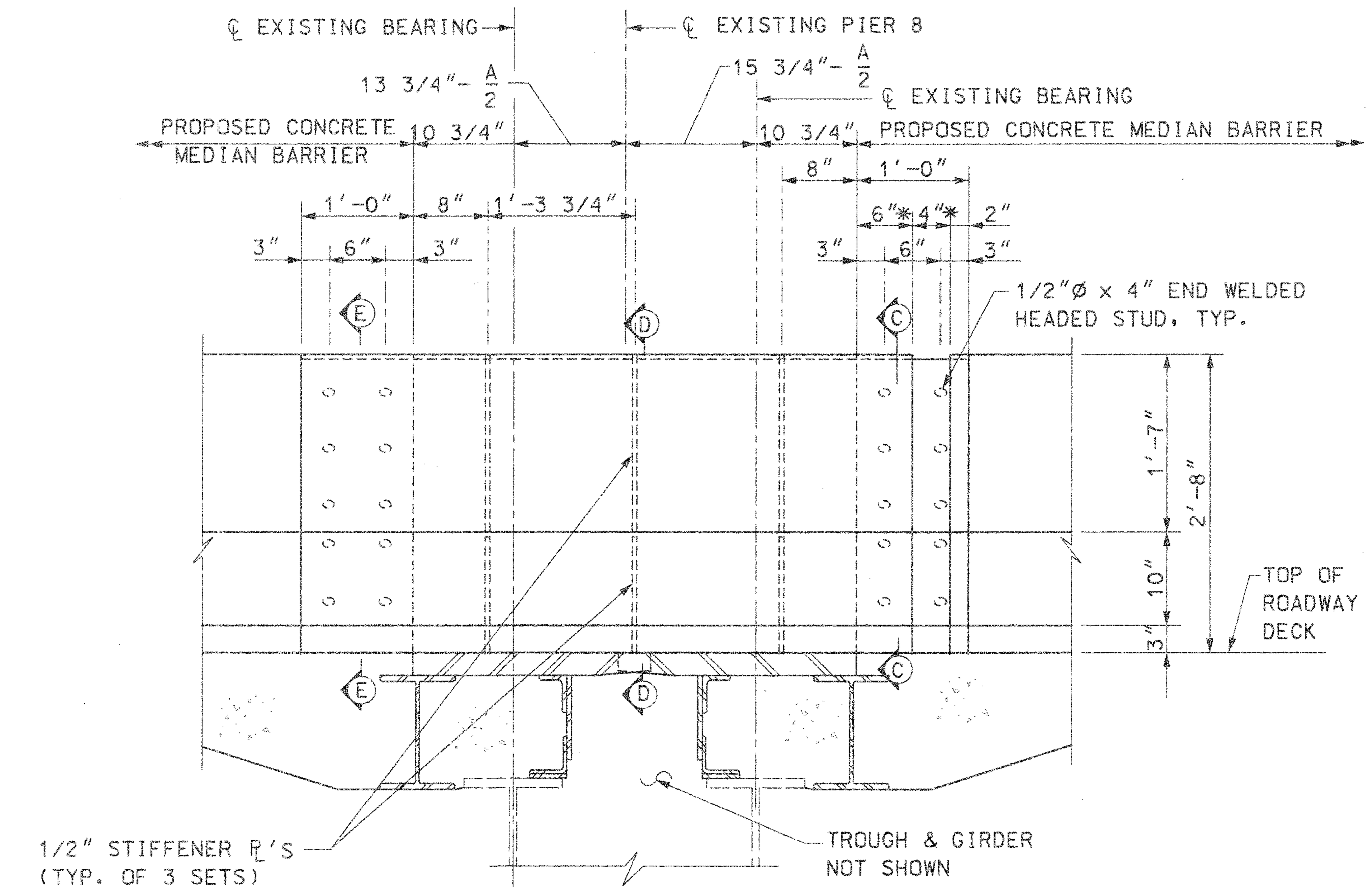


PLAN DETAIL 3

(BENT 8)



SECTION (A)



SECTION (B)

NOTES

1. SEE SHEET 10/126 FOR GENERAL NOTES.
2. PLACE SPLICE 6" WEST OF ℄ CONSTRUCTION JOINT AND PROVIDE COMPLETE JOINT PENETRATION WELD.

LEGEND

* @ 68 F

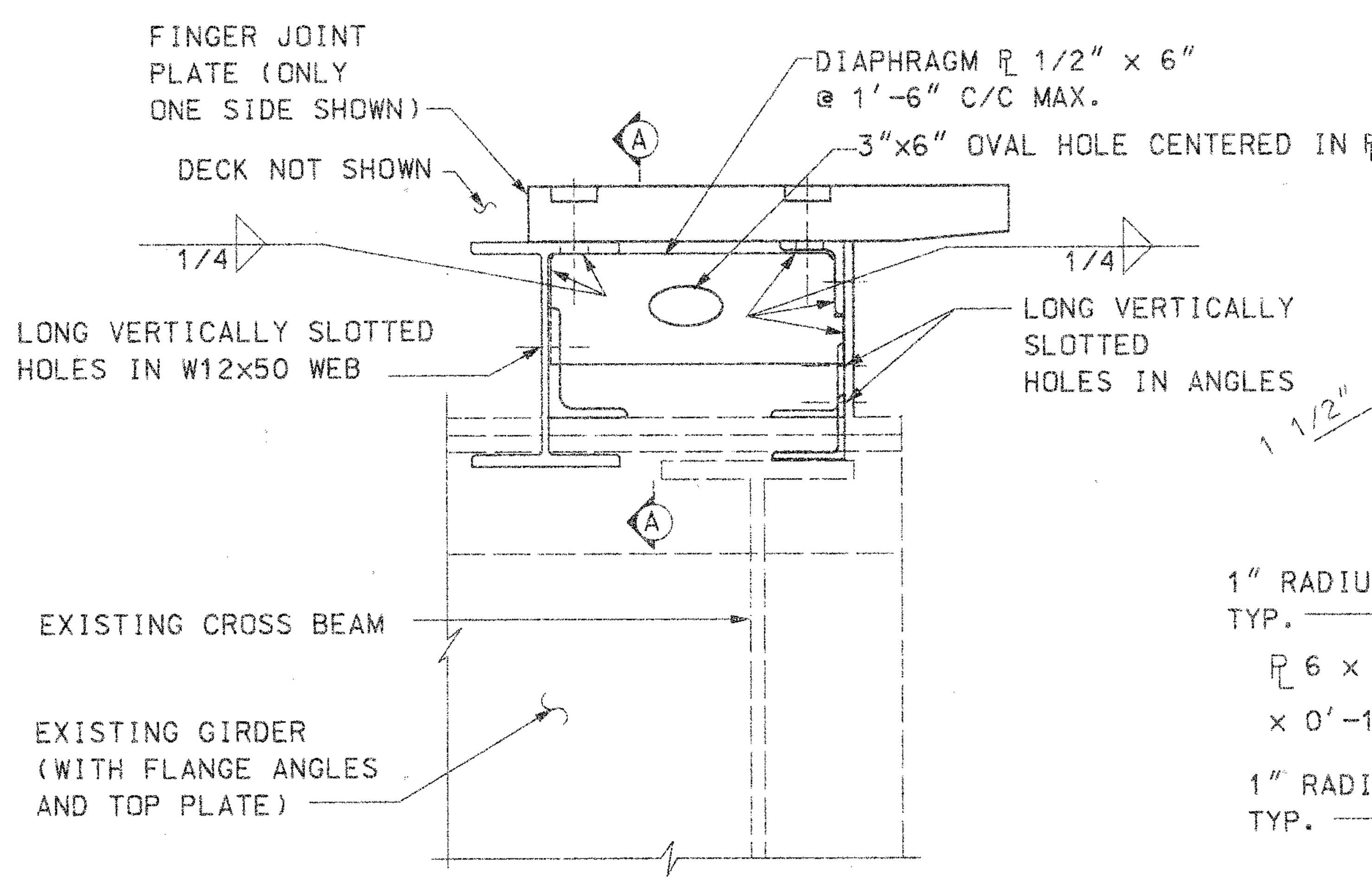
** DIMENSION "A" IS MEASURED EAST FROM THE MEDIAN BARRIER TO THE CONSTRUCTION JOINT IN THE DECK AT THE SOUTH ABUTMENT (WEST AT BASCULE PIERS 4 & 5 AND NORTH ABUTMENT).

BURGESS & NIPLE ENGINEERS ARCHITECTS

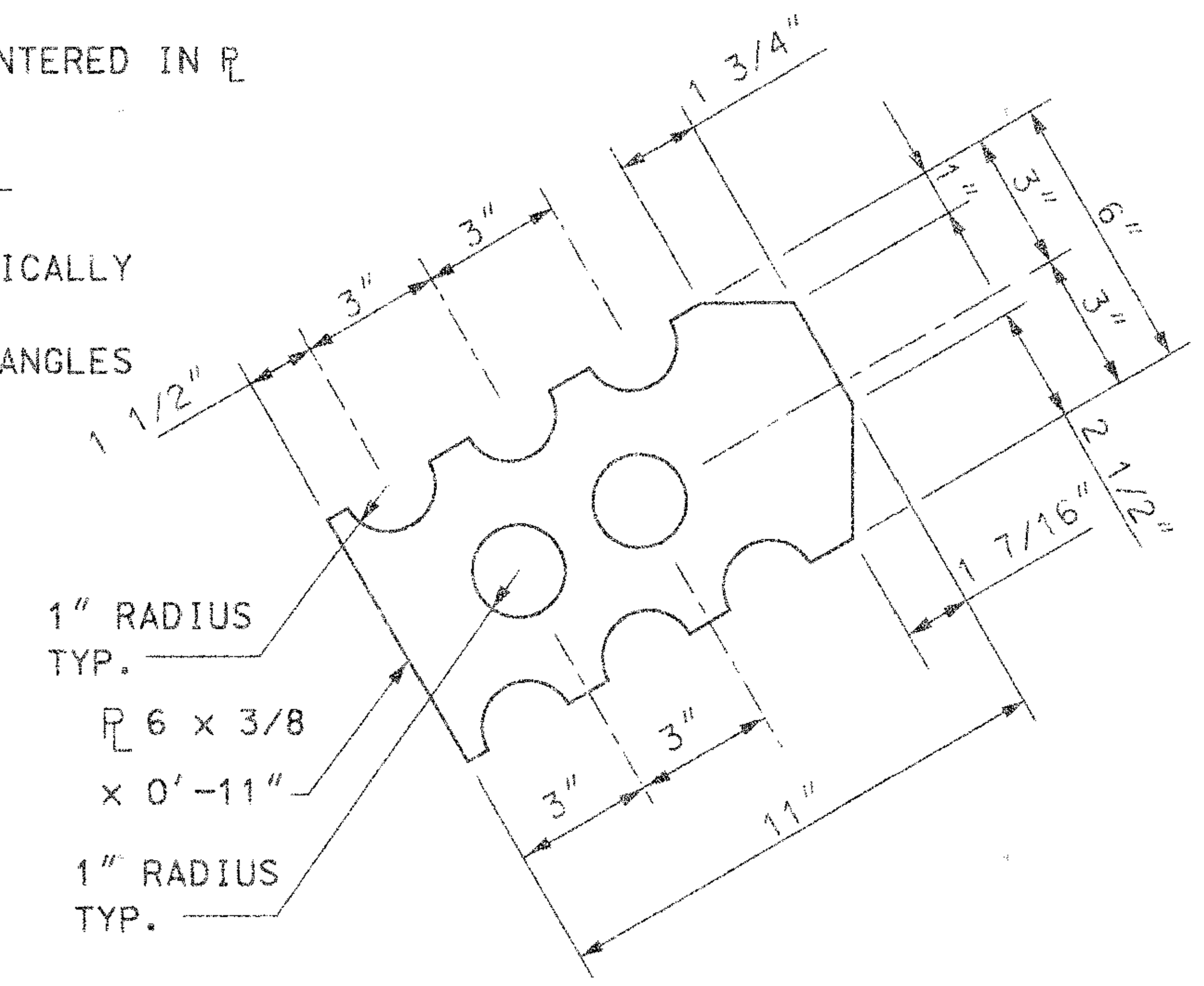
DESIGNED	DRAWN	REVIEWED	DATE
RWM	KEK	RKM	23-OCT-96
CHECKED MAK	REVISED	STRUCTURE FILE NUMBER 4805917	

FINGER JOINT DETAILS 6 - TYPICAL SECTIONS & DETAILS
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

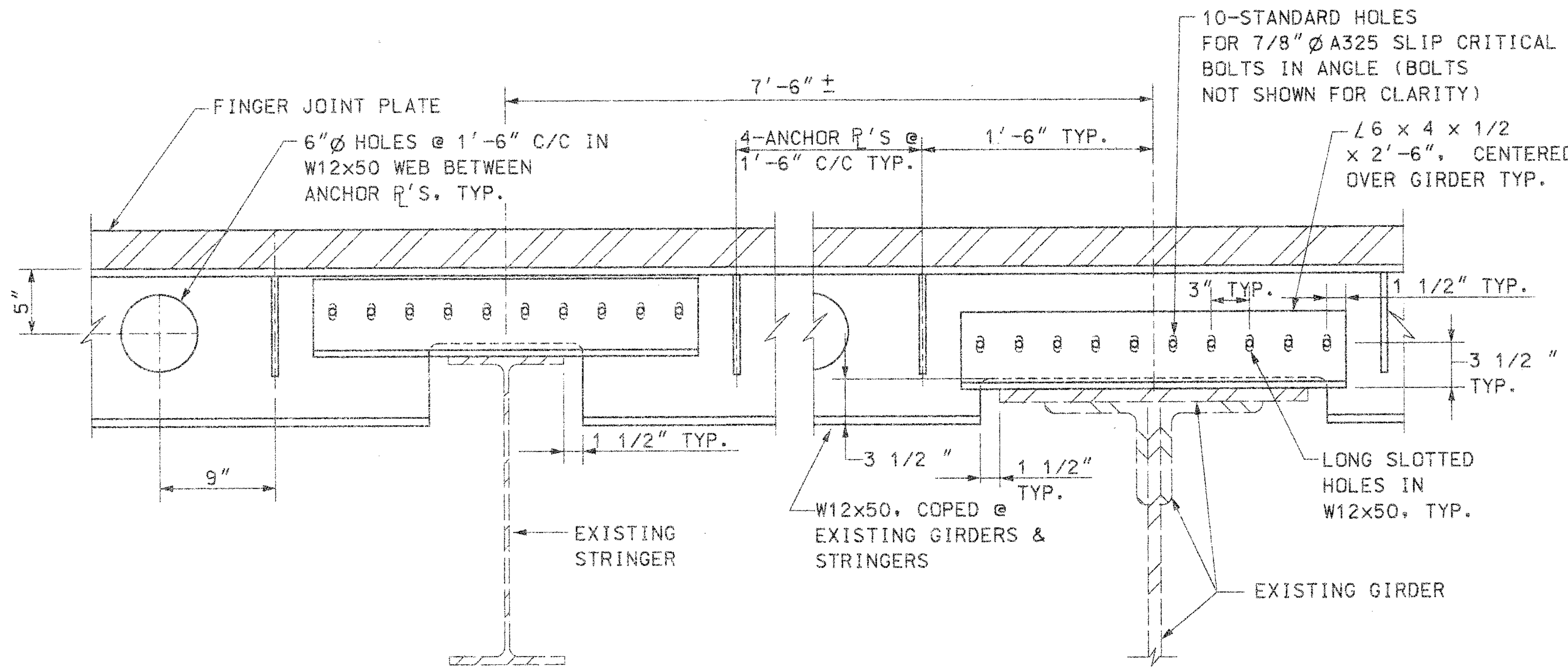
LUC-280



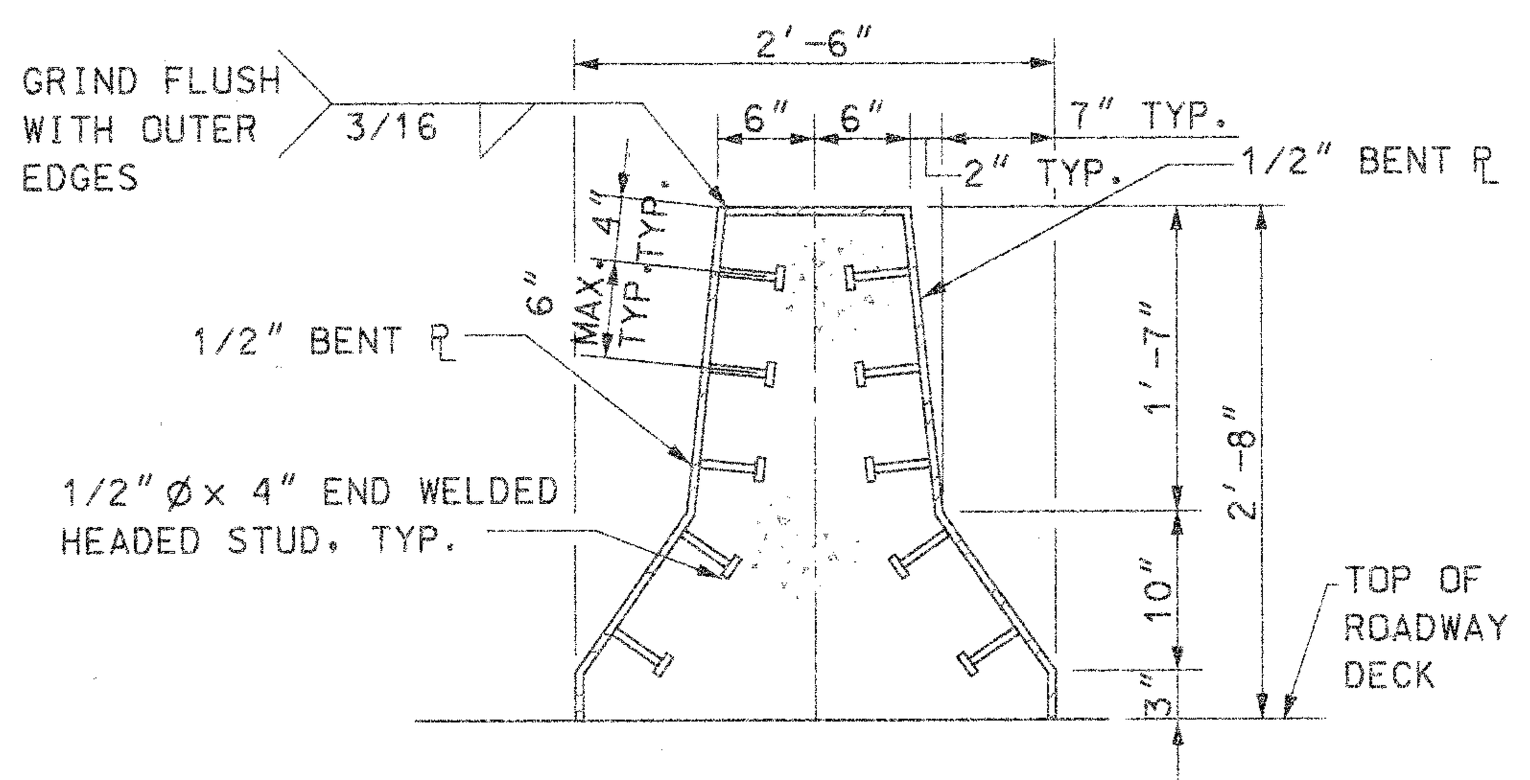
TYPICAL FINGER JOINT SUPPORT DETAIL



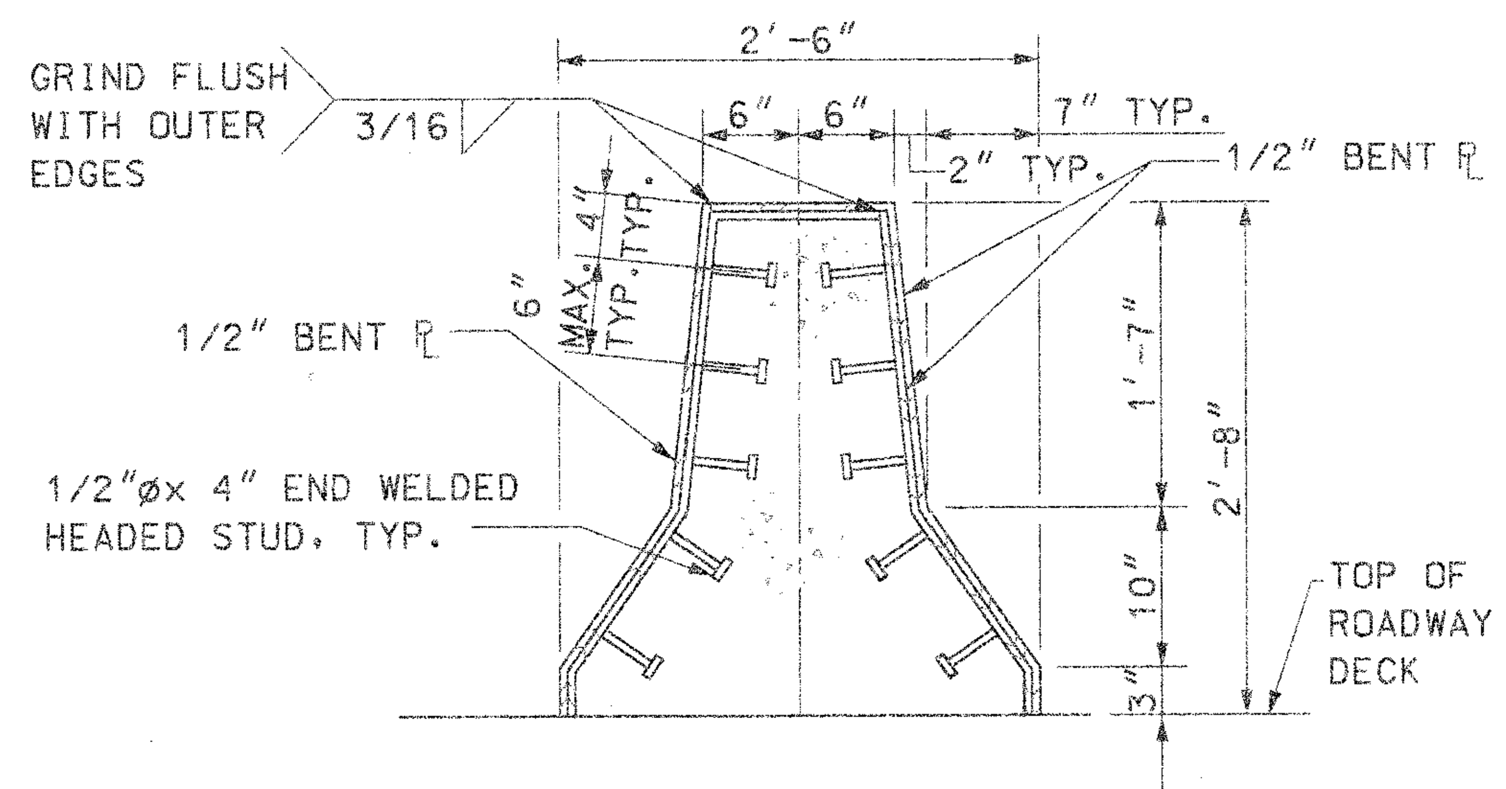
ANCHOR PLATE DETAIL



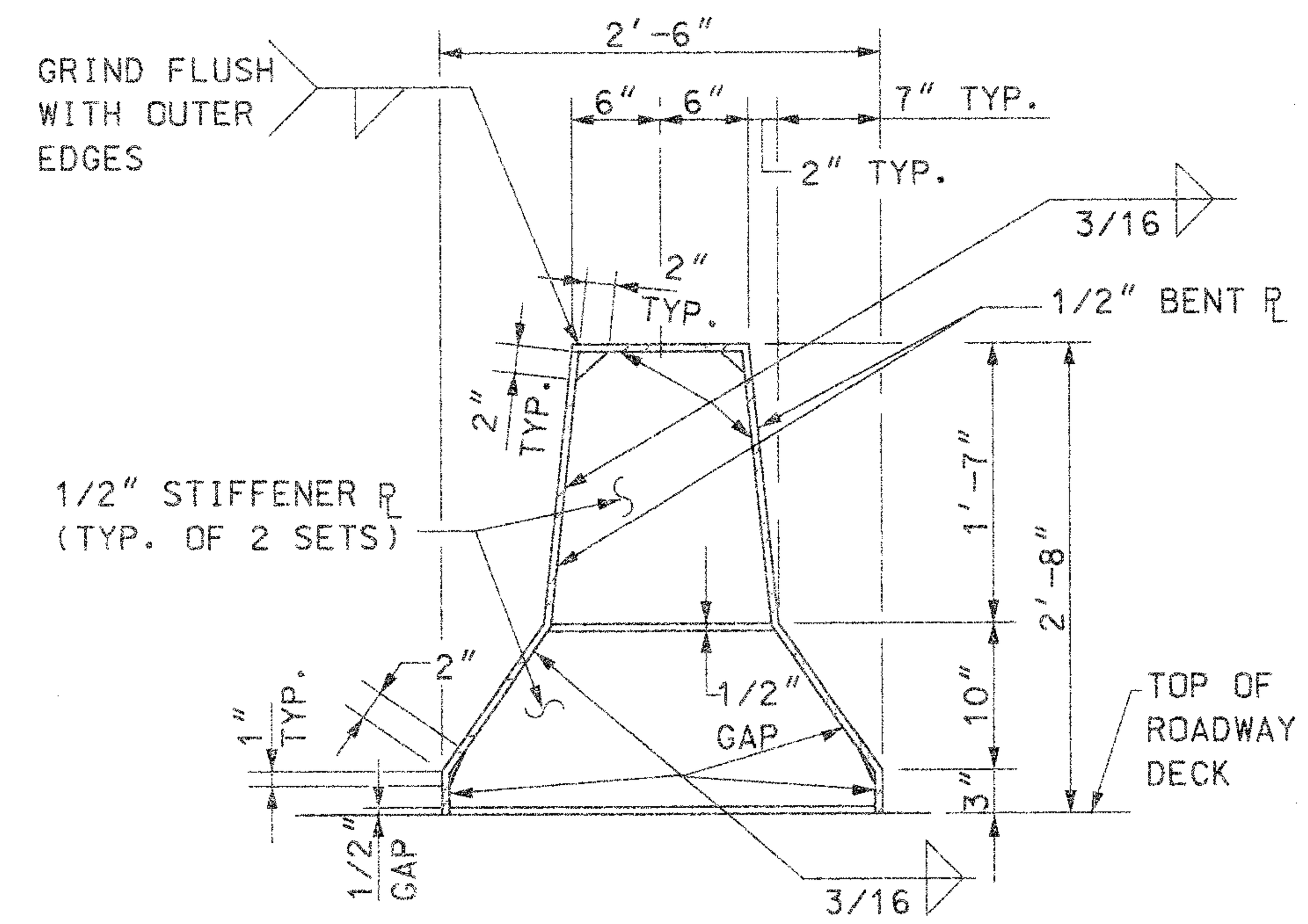
SECTION (A)



SECTION (E)



SECTION (C)



SECTION (D)

[redacted]
ENGINEERS ARCHITECTS

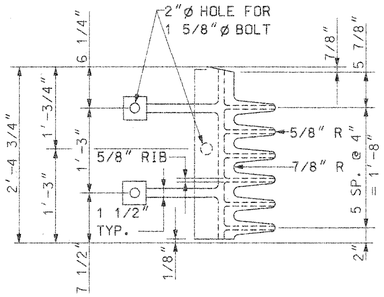
DESIGNED RWM	DRAWN KEK	REVIEWED RKM DATE 23-OCT-96
CHECKED MAK	REVISED	STRUCTURE FILE NUMBER 4805917

FINGER JOINT DETAILS 7 - TYPICAL SECTIONS & DETAILS
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

44/126

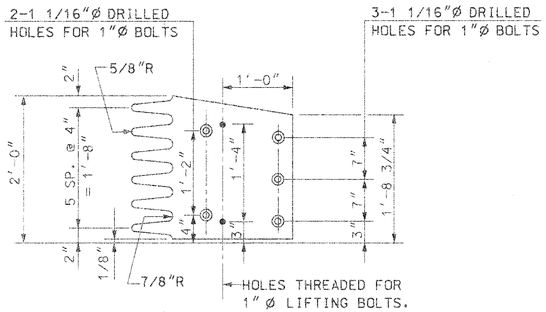
8-0-95
P:\P964R2\CADD\FINGJT6.DGN



PLAN

(ELEVATION SIMILAR TO WELDMENT TYPE VI)

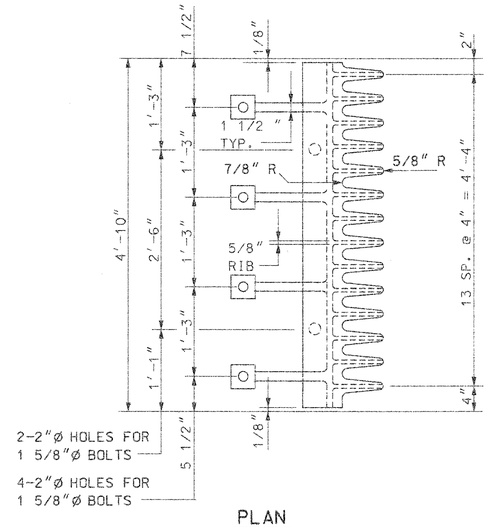
WELDMENT TYPE I



PLAN

(ELEVATION SIMILAR TO FINGER PLATE TYPE IV)

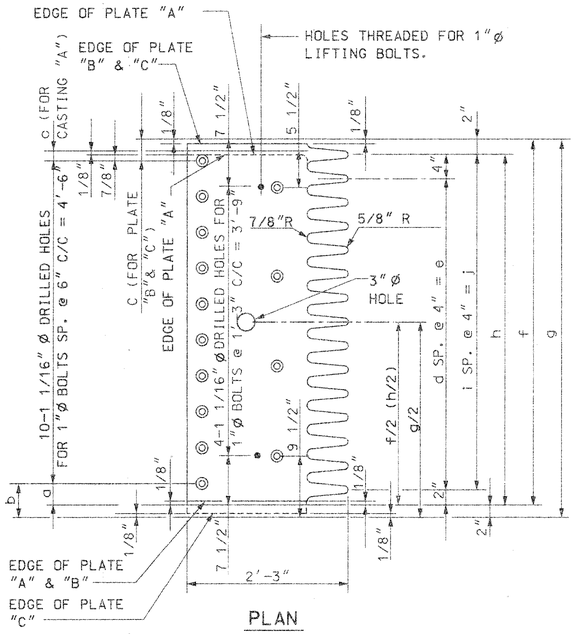
FINGER PLATE TYPE II



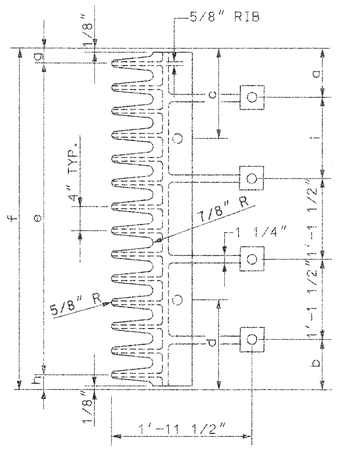
PLAN

(ELEVATION SIMILAR TO WELDMENT TYPE VI)

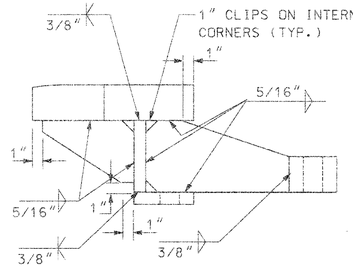
WELDMENT TYPE III



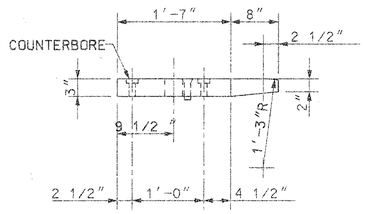
PLAN



PLAN

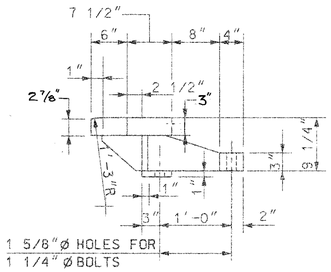


WELDMENT WELDING DETAIL



ELEVATION

FINGER PLATE TYPE IV



ELEVATION

WELDMENT TYPE V

NOTES

SEE TABLE ON SHEET 46/126 FOR DIMENSIONS NOT SHOWN.

SEE SHEET 10/126 FOR GENERAL NOTES.

SEE SHEET 46/126 FOR WELDMENT & FINGER PLATES TYPES **VI** THROUGH **X**

BOLTS IN WELDMENTS & FINGER PLATES SHALL BE ASTM A276 TYPE 304 STAINLESS STEEL.

WORK THE WELDMENT WELDING DETAIL W/ ALL WELDMENT TYPES

LEGEND

R = RADIUS

ENGINEERS
ARCHITECTS

DESIGNED RWM
DRAWN KEK
CHECKED MAK
REVISED
DATE REVISED RWM 23-OCT-96
STRUCTURE FILE NUMBER 4805917

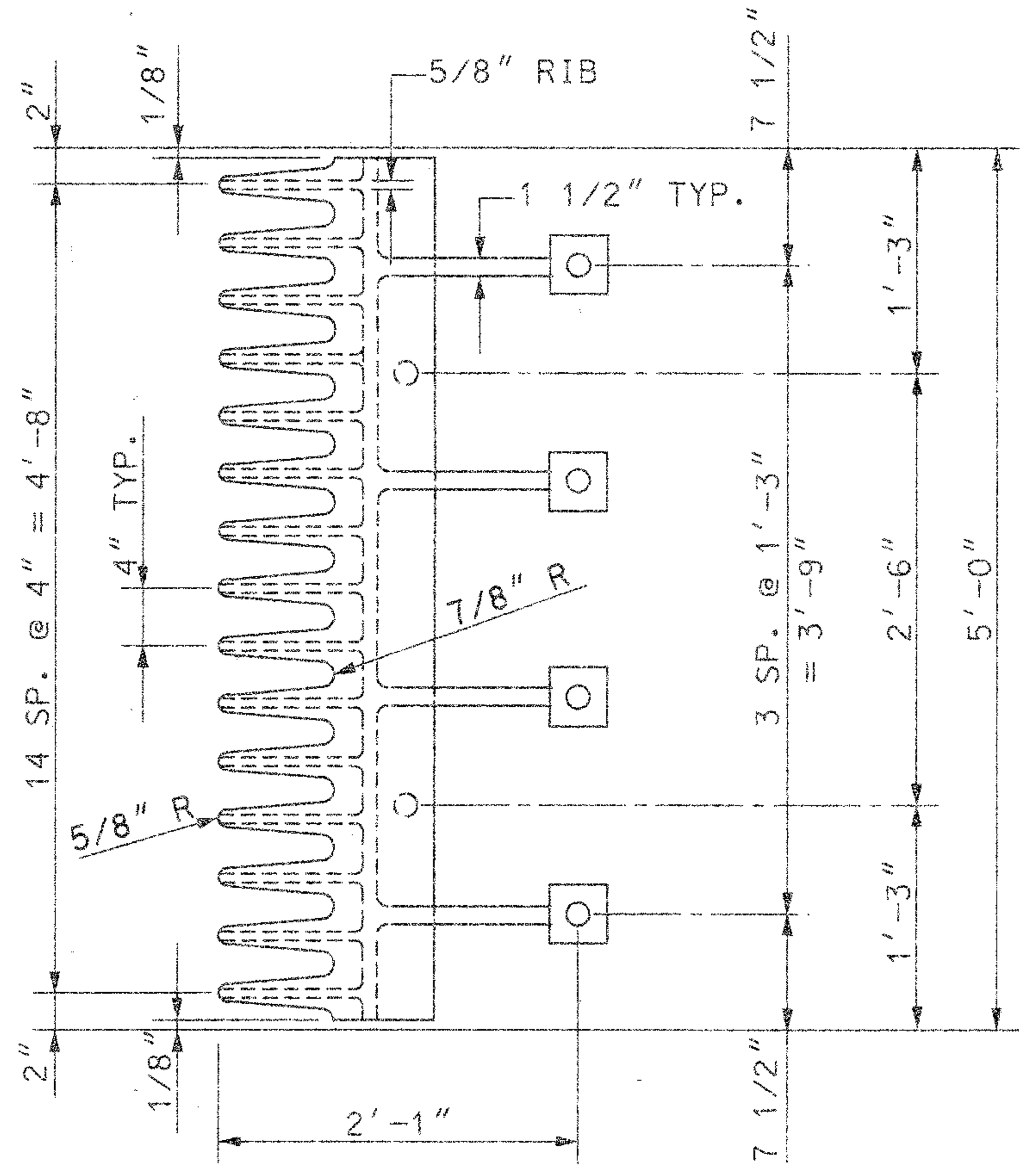
PLATE DETAILS

FINGER JOINT DETAILS 8- WELDMENT & FINGER PLATE
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

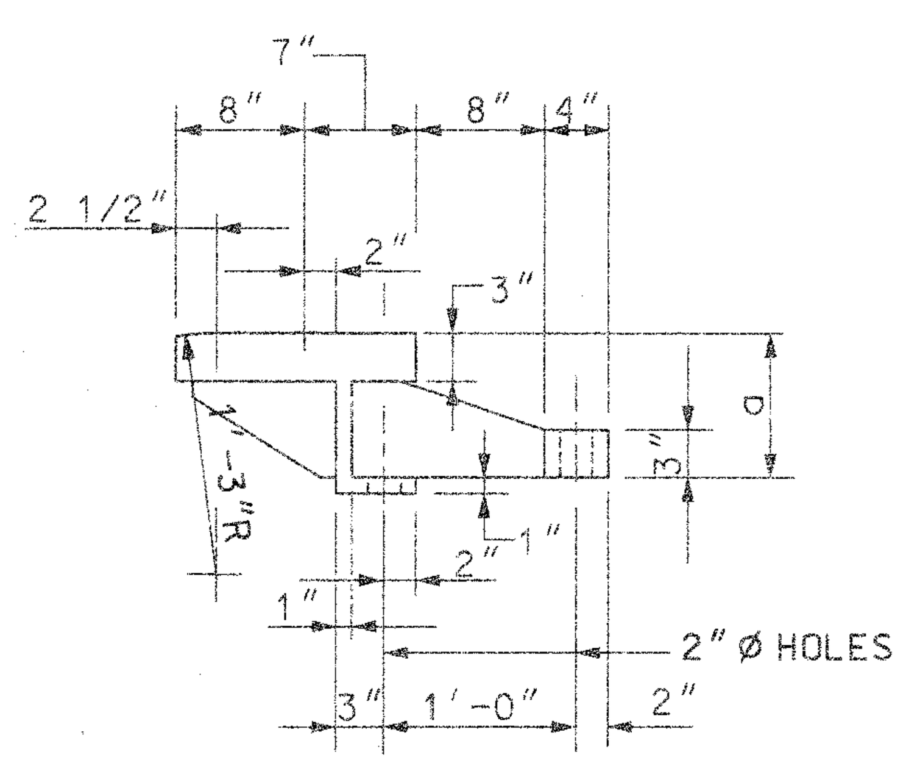
LUC-280

8-40-95

P:\PROPOSAL\CADD\ENGIT2.DGN

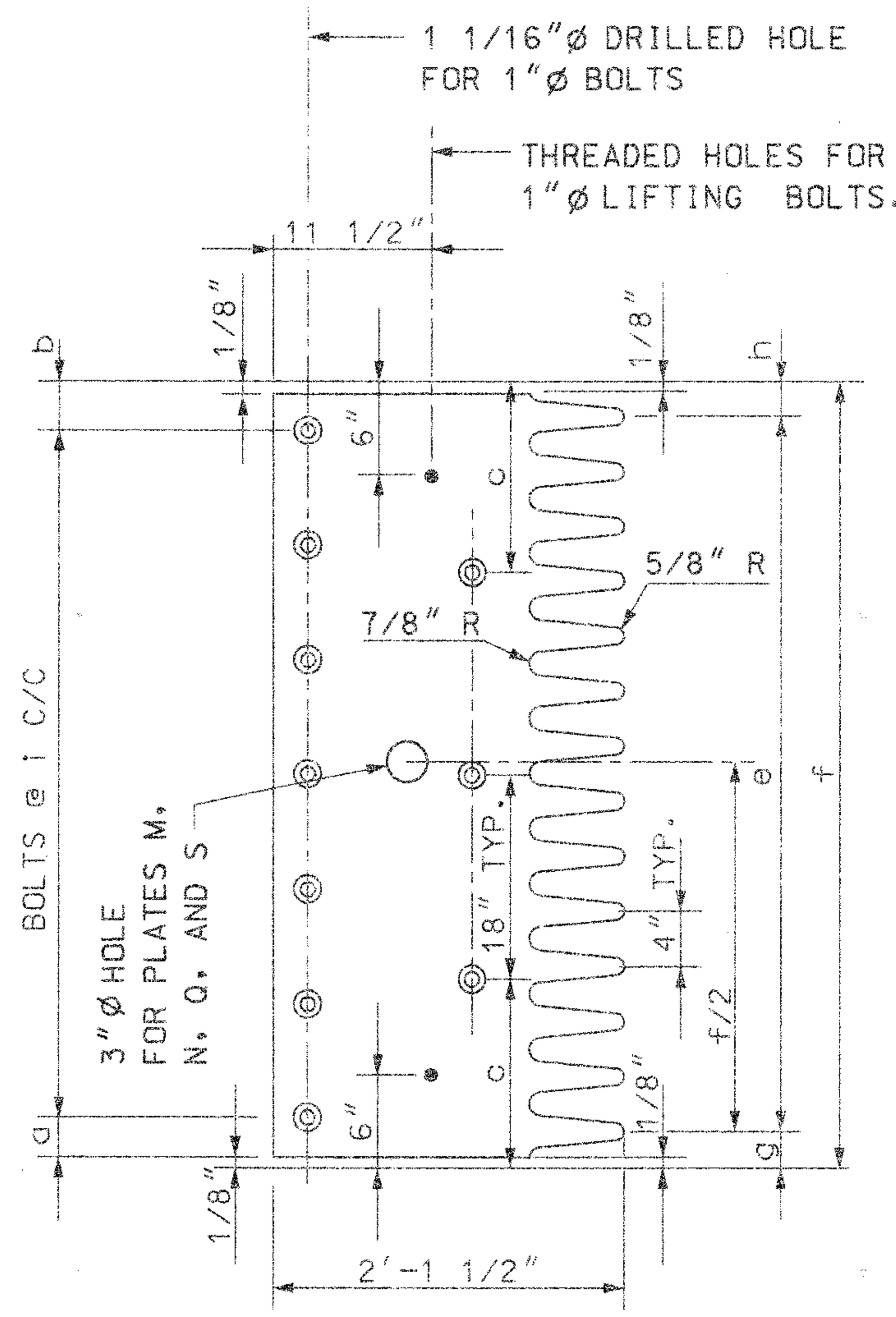


PLAN

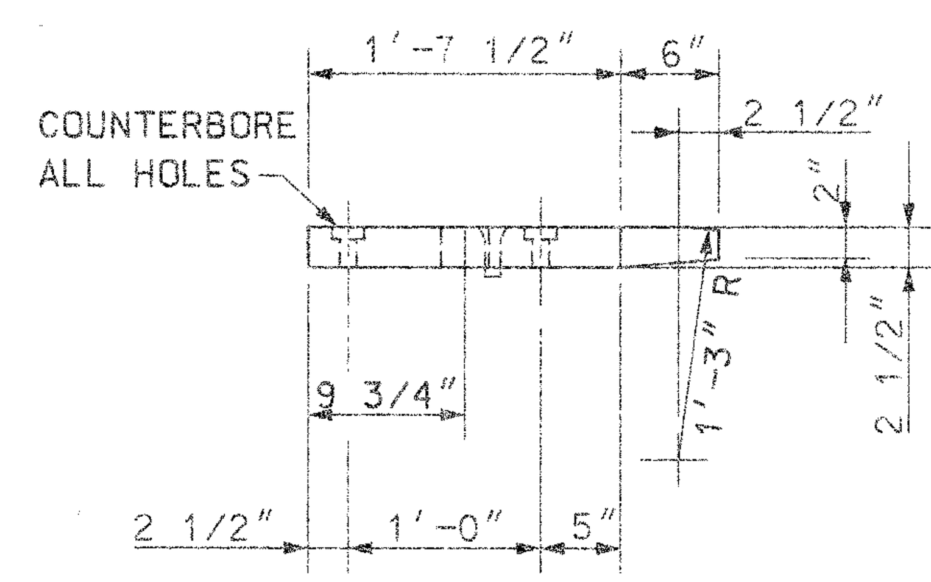


ELEVATION

WELDMENT TYPE VI

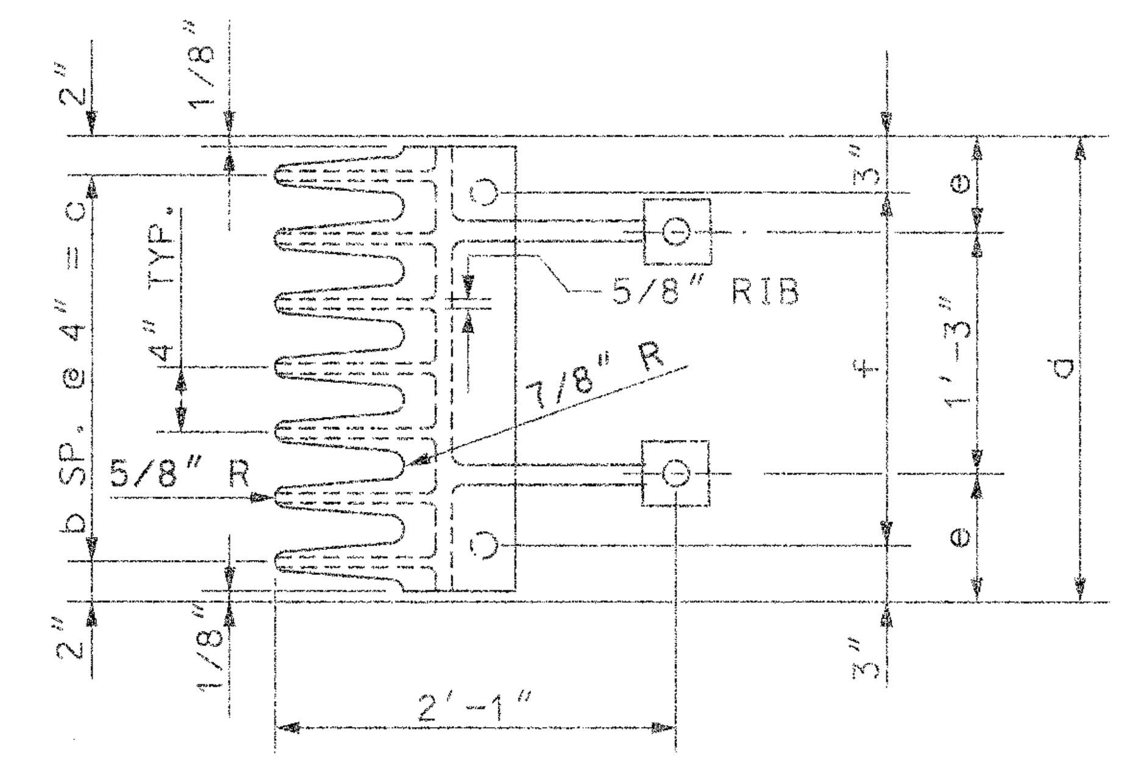


PLAN



ELEVATION

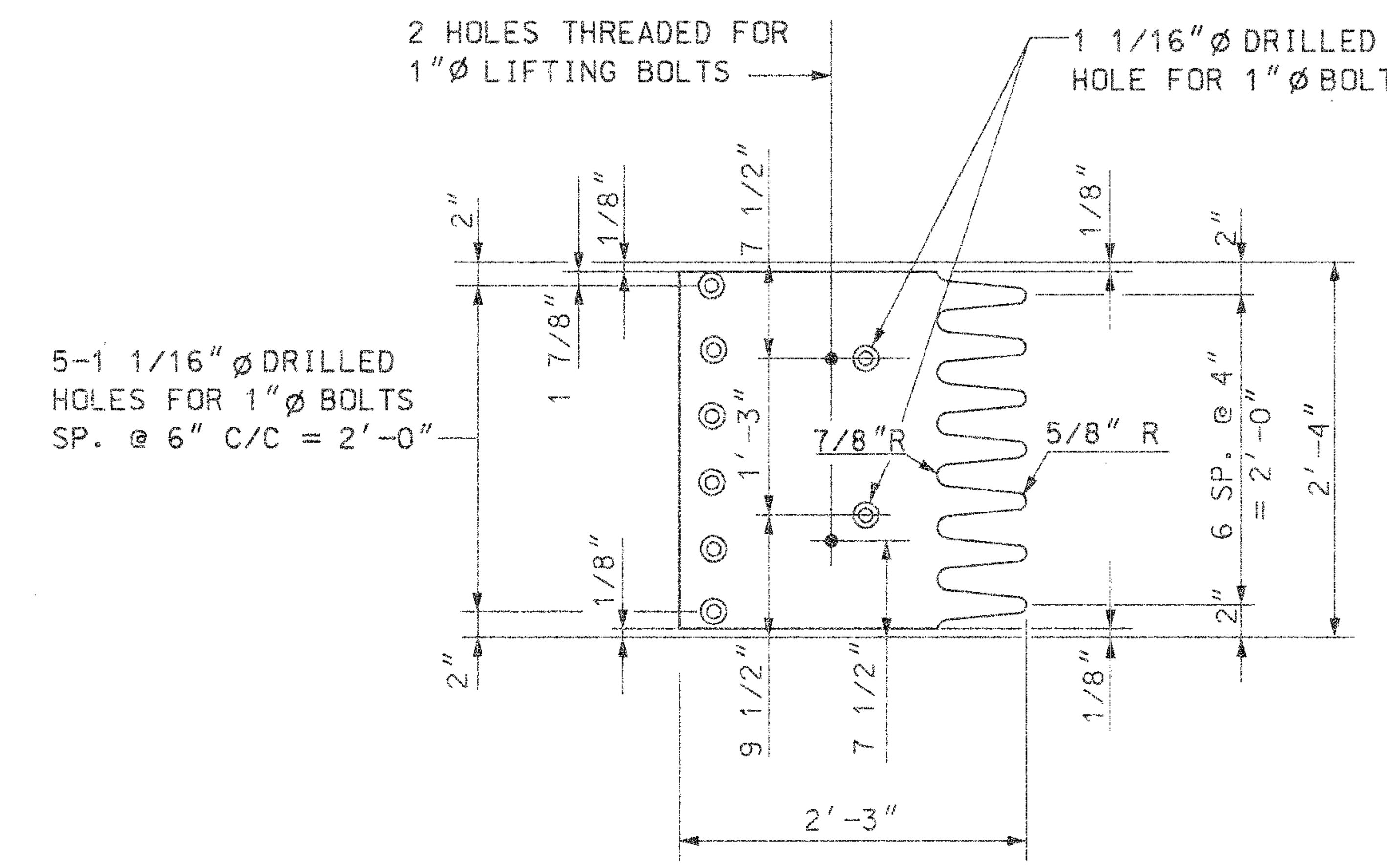
FINGER PLATE TYPE VII



PLAN

(ELEVATION SIMILAR TO WELDMENT TYPE VI)

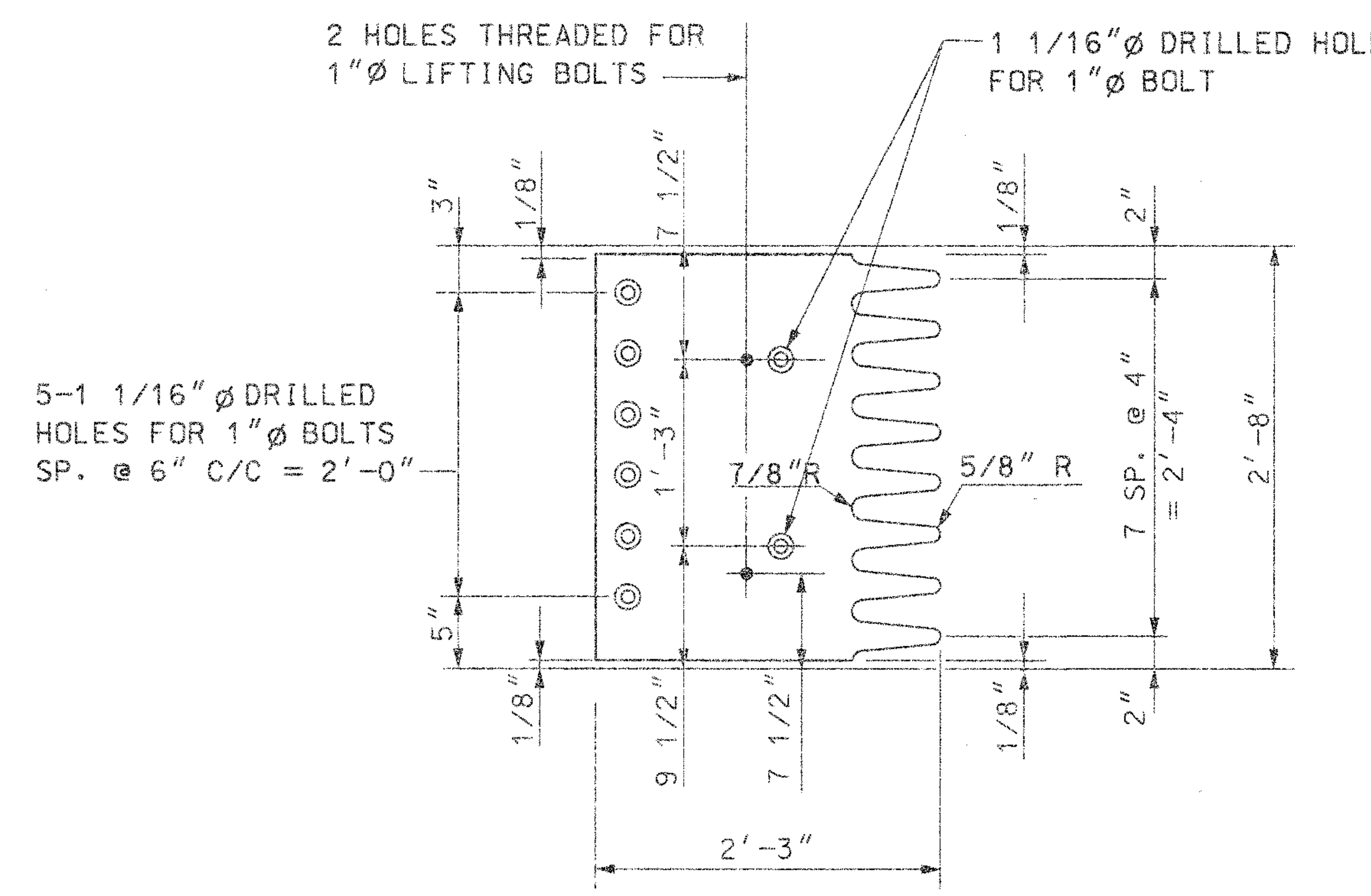
WELDMENT TYPE VIII



PLAN

(ELEVATION SIMILAR TO FINGER PLATE TYPE IV)

FINGER PLATE TYPE IX



PLAN

(ELEVATION SIMILAR TO FINGER PLATE TYPE IV)

FINGER PLATE TYPE X

WELDMENT / FINGER PLATE	WELDMENT & FINGER PLATE DIMENSION TABLE											
	TYPE	NUMBER	a	b	c	d	e	f	g	h	i	J
A	IV	2	2"	N/A	2"	13	4'-4"	N/A	N/A	4'-10"	N/A	N/A
B	IV	38	3"	N/A	3"	N/A	N/A	5'-0"	N/A	N/A	14	4'-8"
C	IV	2	N/A	5"	3"	N/A	N/A	N/A	5'-2"	N/A	14	4'-8"
D	VI	27	10"	–	–	–	–	–	–	–	–	–
E	I	1	11 1/2"	–	–	–	–	–	–	–	–	–
F	II	1	–	–	–	–	–	–	–	–	–	–
G	III	1	11 1/2"	–	–	–	–	–	–	–	–	–
H	V	1	6 3/4"	7 3/4"	10 1/2"	1'-2 1/2"	3'-8"	4'-1"	3"	2"	7 1/2"	–
J	V	5	7 3/4"	7 3/4"	1'-2 1/2"	1'-2 1/2"	4'-4"	4'-8"	2"	2"	1'-1 1/2"	–
K	V	6	5 3/4"	5 3/4"	1'-0 1/2"	1'-0 1/2"	4'-0"	4'-4"	2"	2"	1'-1 1/2"	–
L	V	1	7 3/4"	6 3/4"	1'-2 1/2"	1'-1 1/2"	4'-4"	4'-7"	2"	5"	1'-1 1/2"	–
M	VII	1	5"	4"	1'-1"	8"	3'-0"	3'-5"	3"	2"	8"	–
N	VII	34	4"	4"	8"	8"	4'-4"	4'-8"	2"	2"	8"	–
P	VI	15	11 1/2"	–	–	–	–	–	–	–	–	–
Q	VII	1	6"	4"	10"	8"	4'-4"	4'-10"	4"	2"	8"	–
R	VII	1	4"	4"	11"	11"	1'-4"	1'-10"	2"	4"	7"	–
S	VII	1	4"	3"	8"	11"	2'-8"	3'-3"	2"	5"	8"	–
T	VII	1	4"	4"	1'-0"	1'-0"	1'-8"	2'-0"	2"	2"	8"	–
U	VIII	2	10"	6	2'-0"	2'-4"	6 1/2"	1'-10"	–	–	–	–
V	VIII	2	10"	7	2'-4"	2'-8"	8 1/2"	2'-2"	–	–	–	–
W	IX	3	–	–	–	–	–	–	–	–	–	–
X	X	3	–	–	–	–	–	–	–	–	–	–
Y	VIII	1	11 1/2"	6	2'-0"	2'-4"	6 1/2"	1'-10"	–	–	–	–
Z	VIII	1	11 1/2"	7	2'-4"	2'-8"	8 1/2"	2'-2"	–	–	–	–

NOTES

SEE SHEET 10/126 FOR GENERAL NOTES.

SEE SHEET 45/126 FOR WELDMENT & PLATE TYPES I THROUGH V.

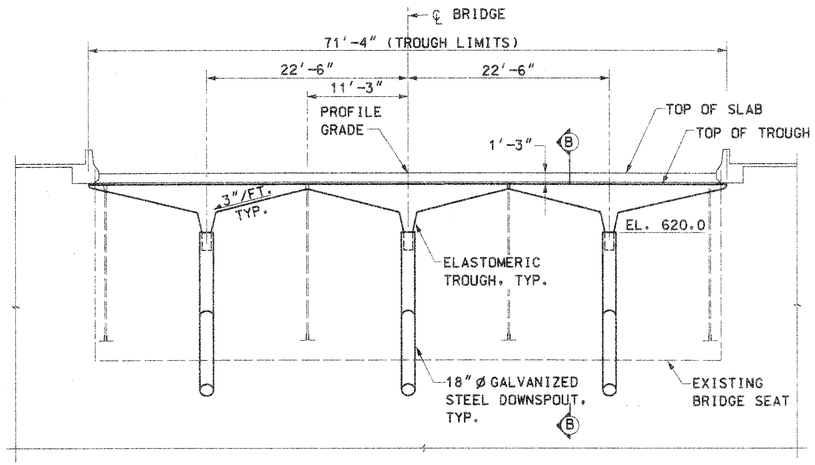
LEGEND

R = RADIUS

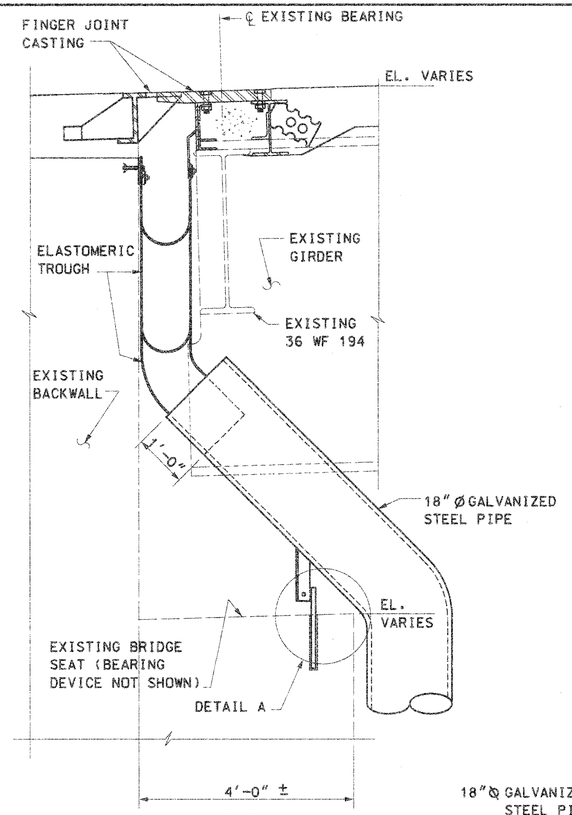
DESIGNED RWM | DRAWN KEK | REVIEWED RMM | DATE 23-OCT-96 | STRUCTURE FILE NUMBER 4805917 | CHECKED MAK | REVISED

FINGER JOINT DETAILS 9 – WELDMENT & PLATE DETAILS & TABLE
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

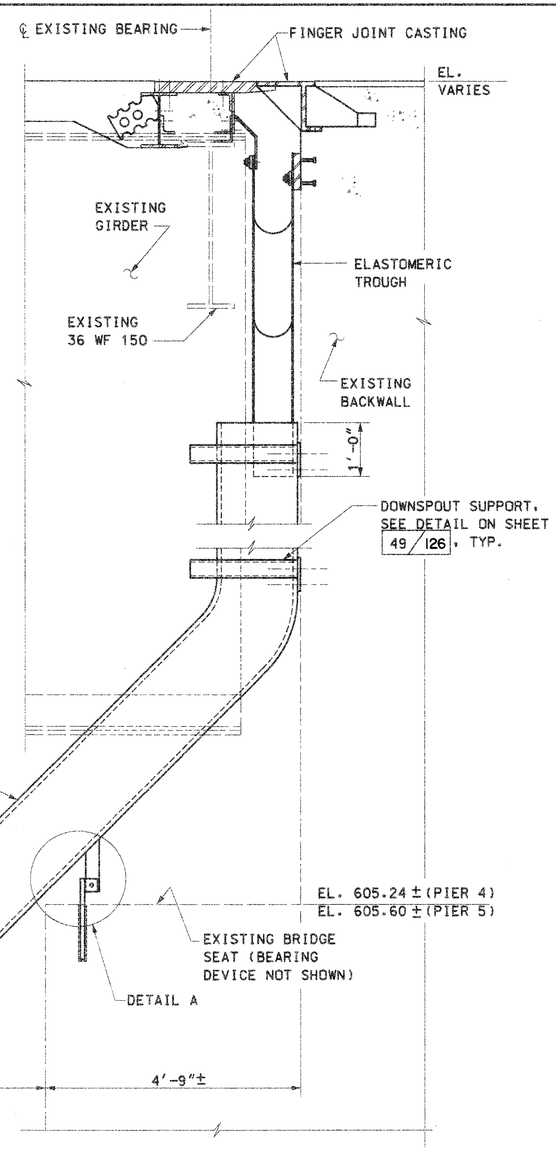
LUC-280



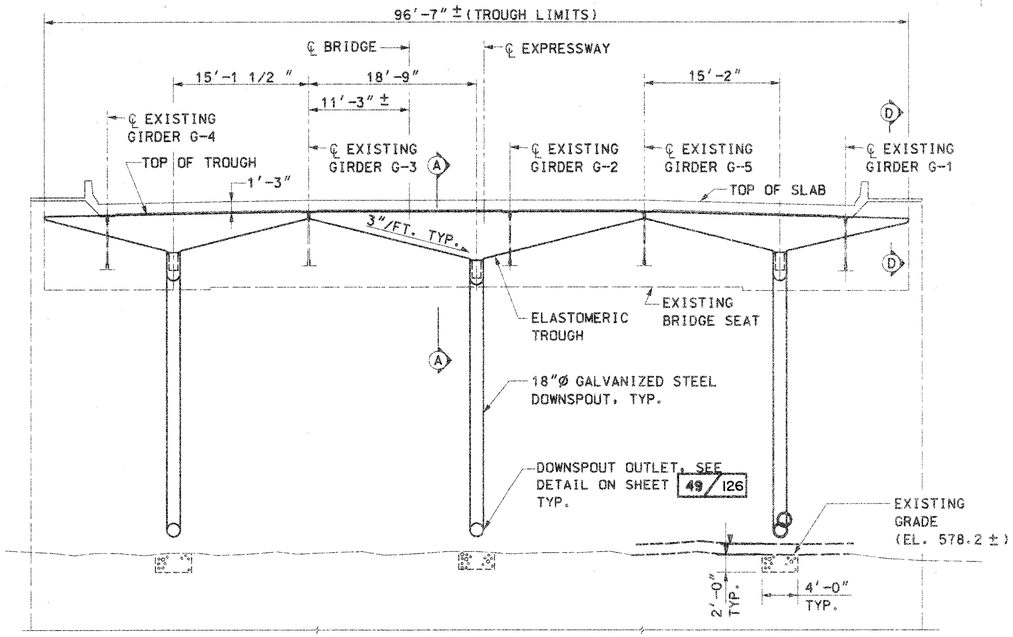
TROUGH ELEVATION @ BASCULE PIERS 4 & 5
(SHORE SIDE)



SECTION (A)



SECTION (B)



TROUGH ELEVATION @ SOUTH ABUTMENT

NOTES

SEE SHEET 10/126 FOR GENERAL NOTES.
SEE SHEET 50/126 FOR TYPICAL ELASTOMERIC TROUGH DETAILS.
SEE SHEET 49/126 FOR DETAIL A.
SEE SHEET 38/126 FOR SECTION D.

BRIDGE ENGINEERS ARCHITECTS

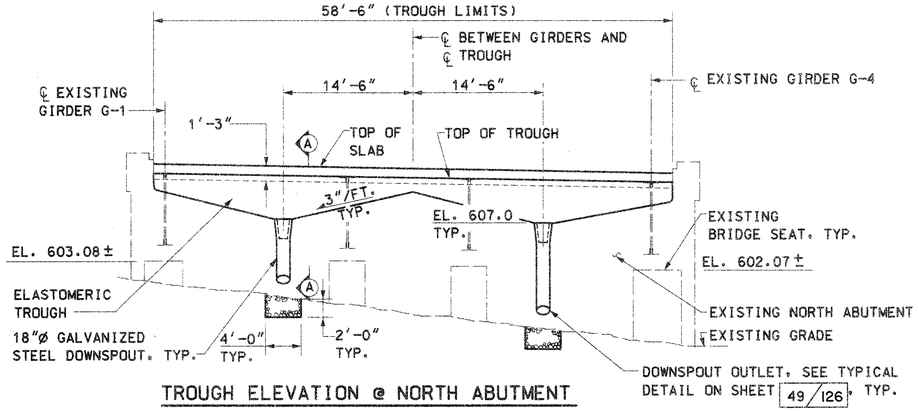
DESIGNED RWM
DRAWN KEK
CHECKED MAK
REVISED
REVIEWED RKM 14-Feb-96
DATE
STRUCTURE FILE NUMBER 4805917

FINGER JOINT TROUGH DETAILS 1
SOUTH ABUTMENT & BASCULE PIERS 4 & 5
BRIDGE NO. LUC-280-0346

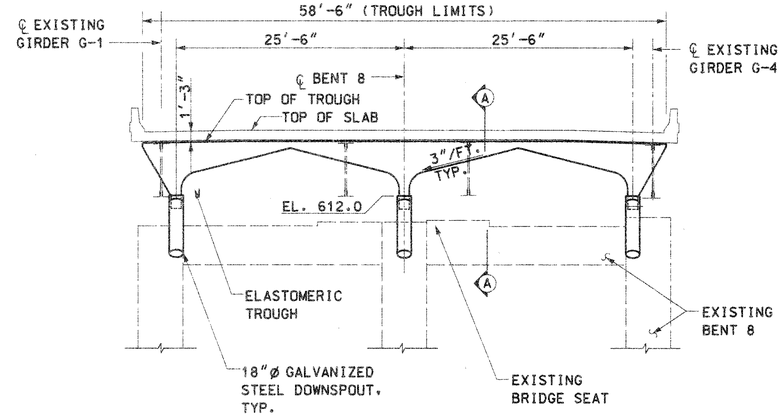
LUC-280

47/126

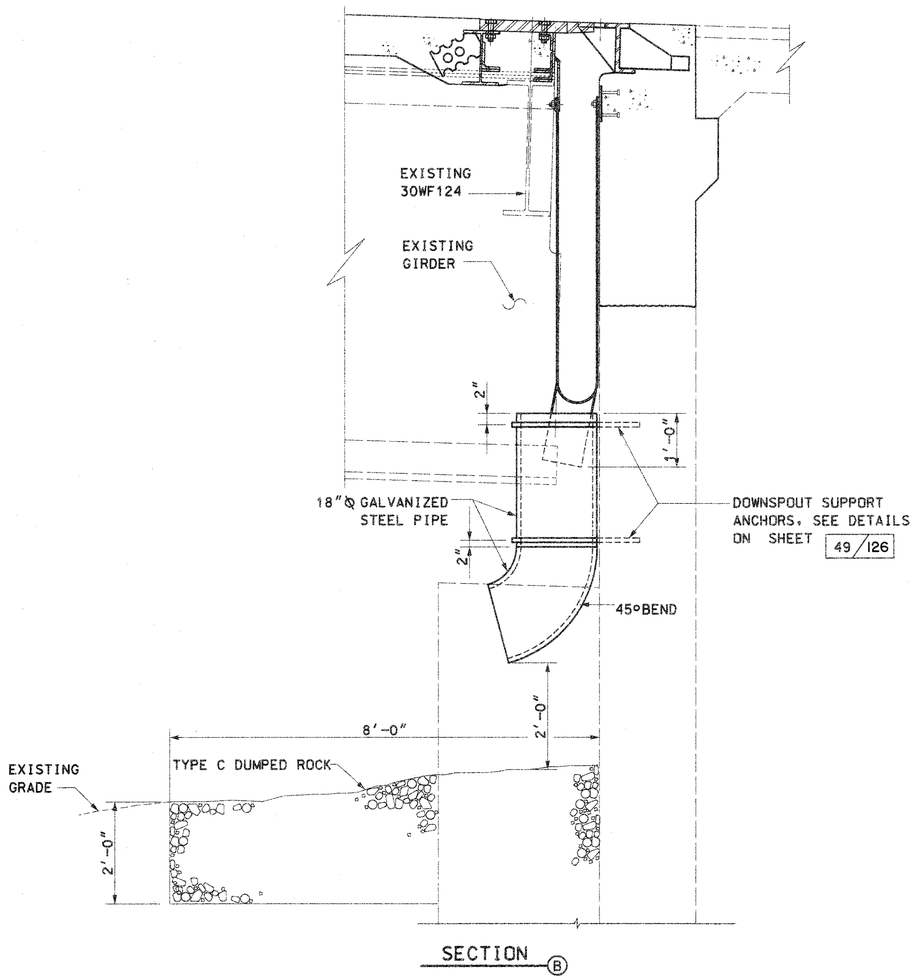
8-10-95
PW\98092\CADD\TROUGH2.DGN



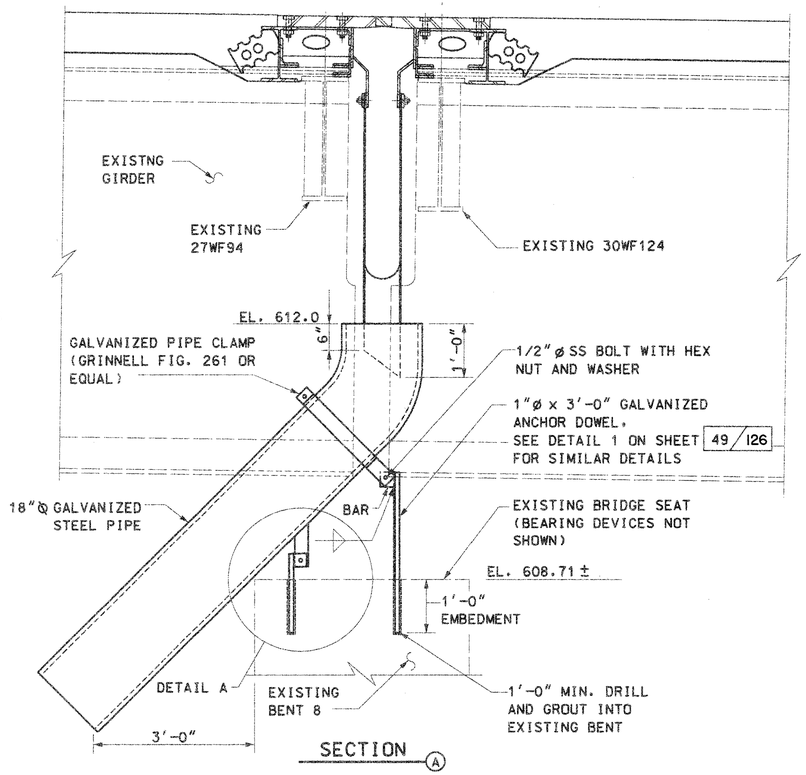
TROUGH ELEVATION @ NORTH ABUTMENT



TROUGH ELEVATION @ BENT 8
(LOOKING NORTH)



SECTION (B)



SECTION (A)

NOTES

SEE SHEET 10/126 FOR GENERAL NOTES.
SEE SHEET 49/126 FOR DETAIL A.
SEE SHEET 50/126 FOR TYPICAL ELASTOMERIC TROUGH DETAILS.

FINGER JOINT TROUGH DETAILS 2-BENT 8 & NORTH ABUTMENT
BRIDGE NO. LUC-280-0346

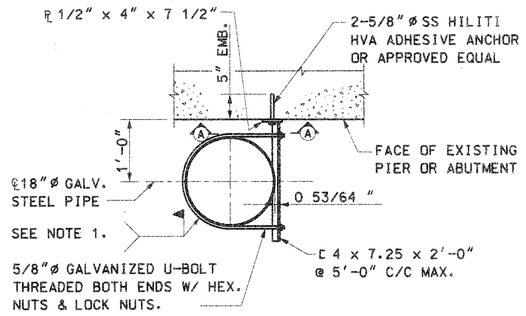
LUC-280

48/126

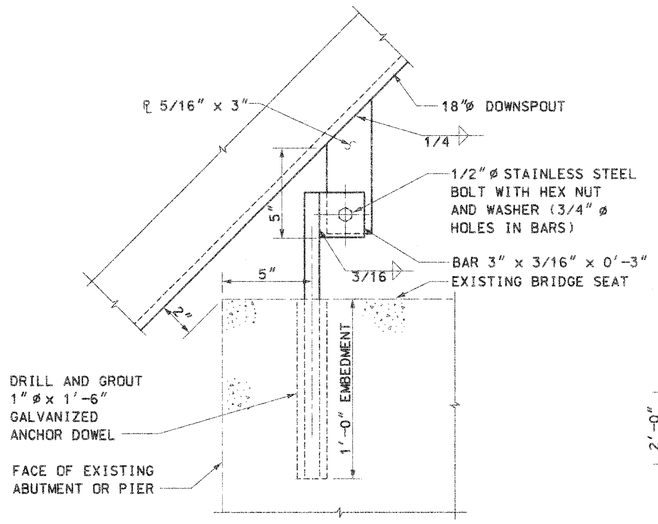
DESIGNED RWM
DRAWN KEK
CHECKED MAK
REVISED
REVIEWED RMM 14-Feb-96
STRUCTURE FILE NUMBER 4805917

EUSTIS ENGINEERING
ENGINEERS
ARCHITECTS

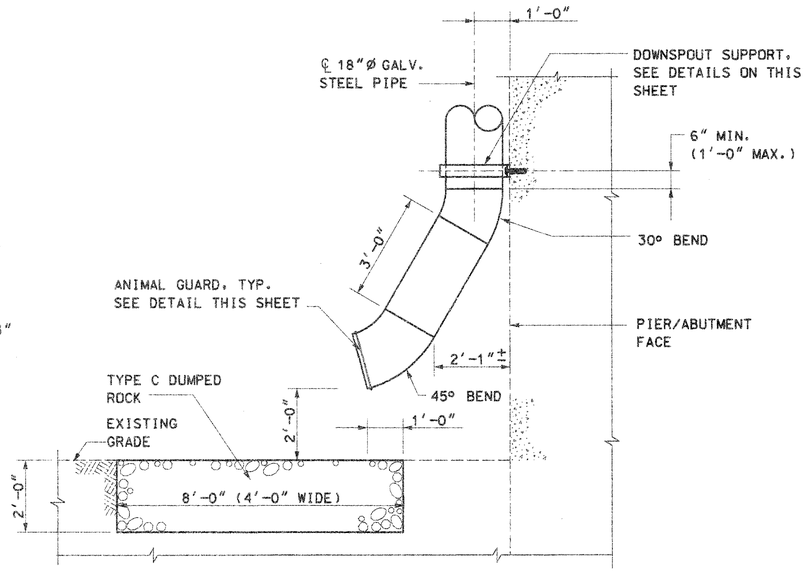
P:\PR1492\CADD\TROUGH4.DGN 8-10-95



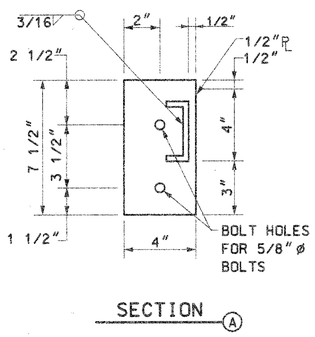
DOWNSPOUT SUPPORT DETAIL



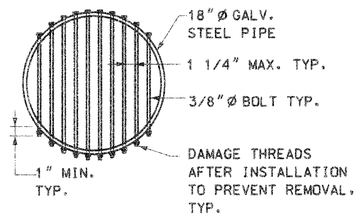
DETAIL A



TYPICAL DOWNSPOUT OUTLET DETAIL



SECTION Ⓐ



ANIMAL GUARD DETAIL

NOTES

1. SEE SHEET 10/126 FOR GENERAL NOTES.
2. TACK WELD U-BOLT AFTER DOWNSPOUT INSTALLATION (TYP.)

LEGEND

GALV. = GALVANIZED

ENGINEERS ARCHITECTS

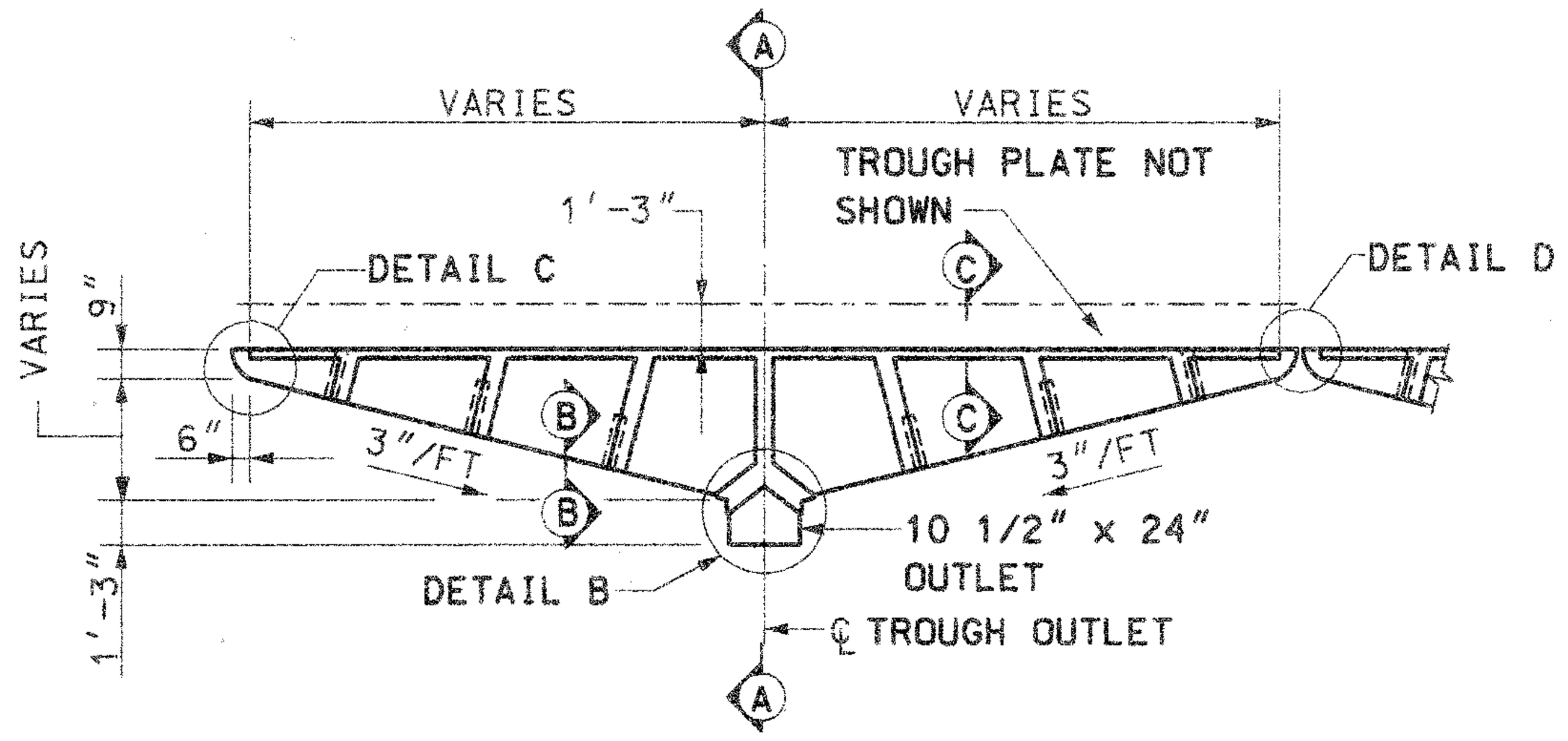
DESIGNED RWM
DRAWN KEK
CHECKED MAK
REVIEWED RKM 14-Feb-96
REVISED
STRUCTURE FILE NUMBER 4805917

FINGER JOINT TROUGH DETAILS 3 - TYPICAL DETAILS
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

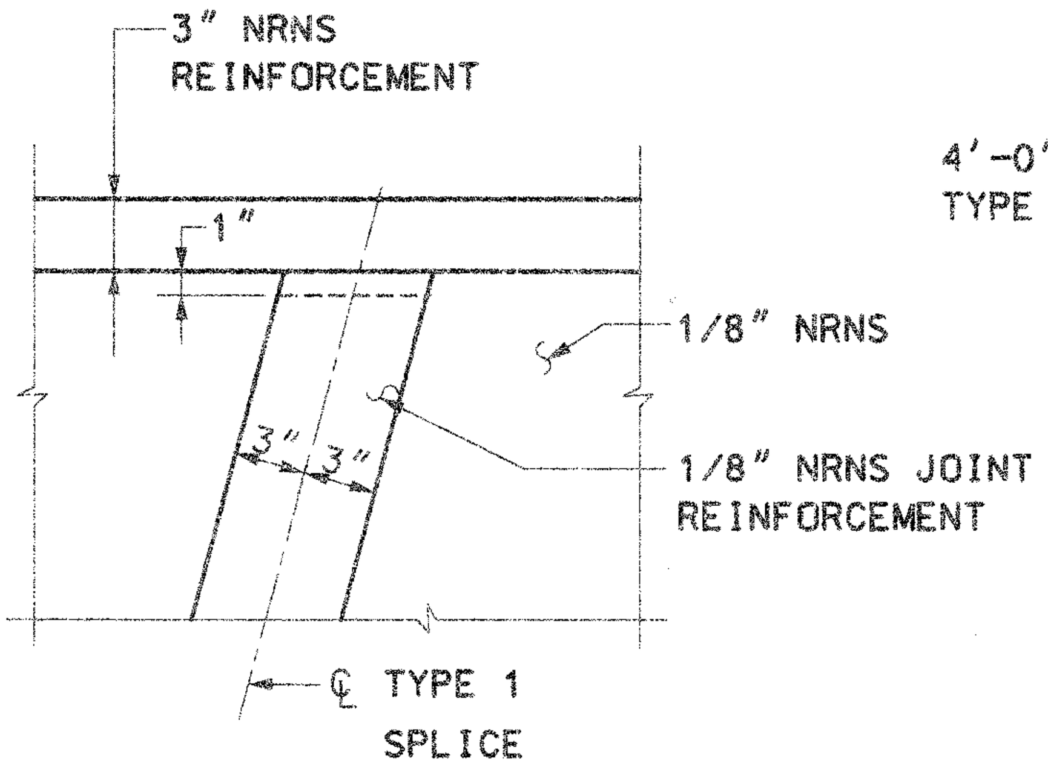
LUC-280

49/126

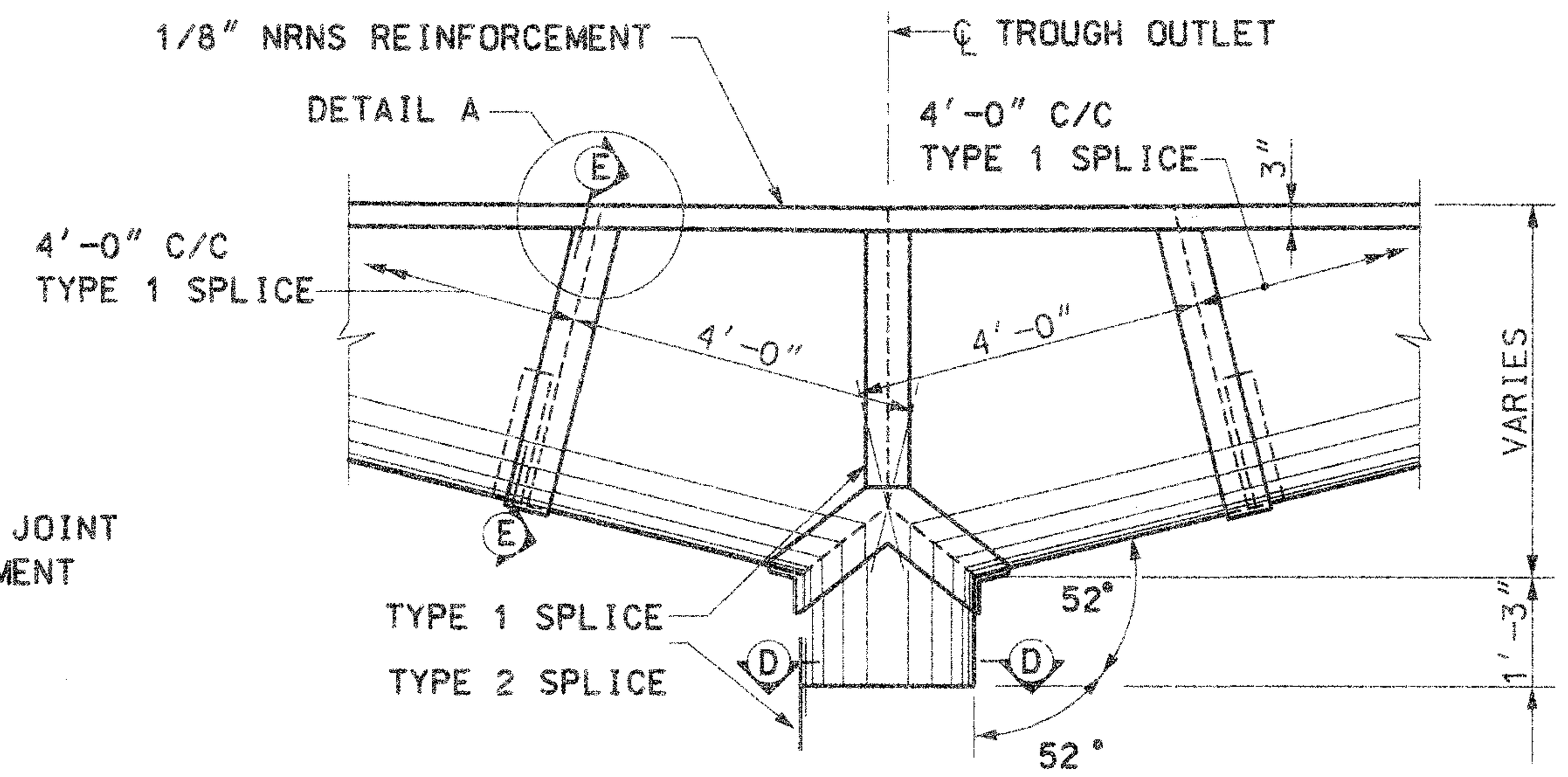
P:\PW492\CADD\TROUGHS.DGN 8-10-95



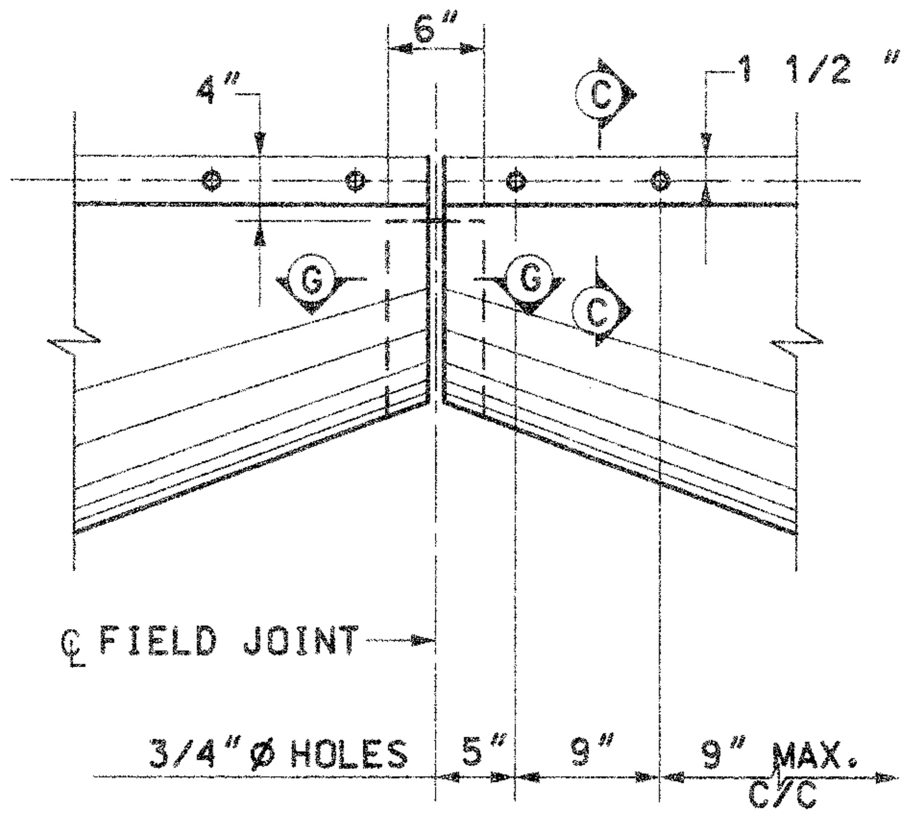
TYPICAL ELEVATION
ELASTOMERIC TROUGH



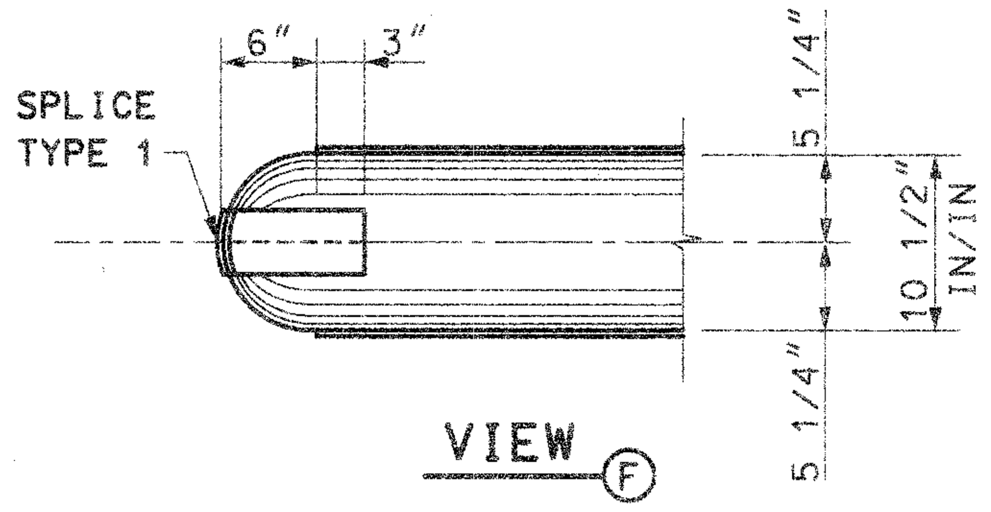
DETAIL A



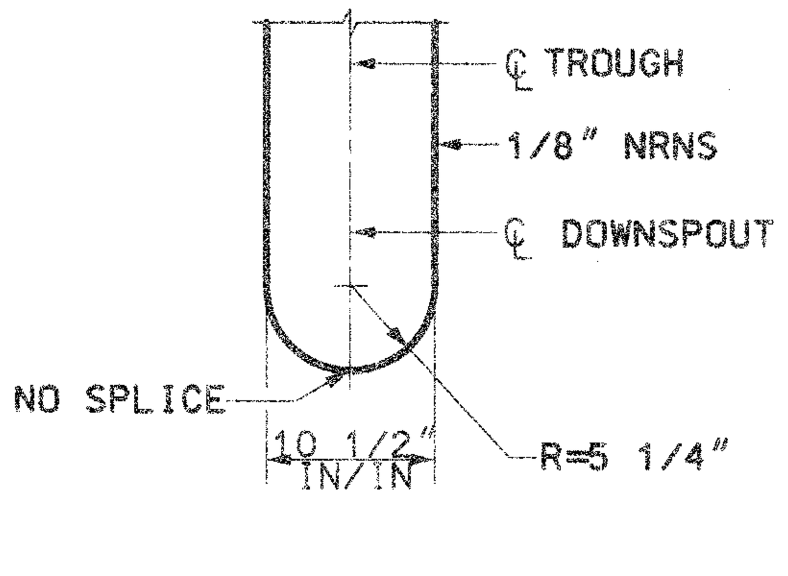
DETAIL B



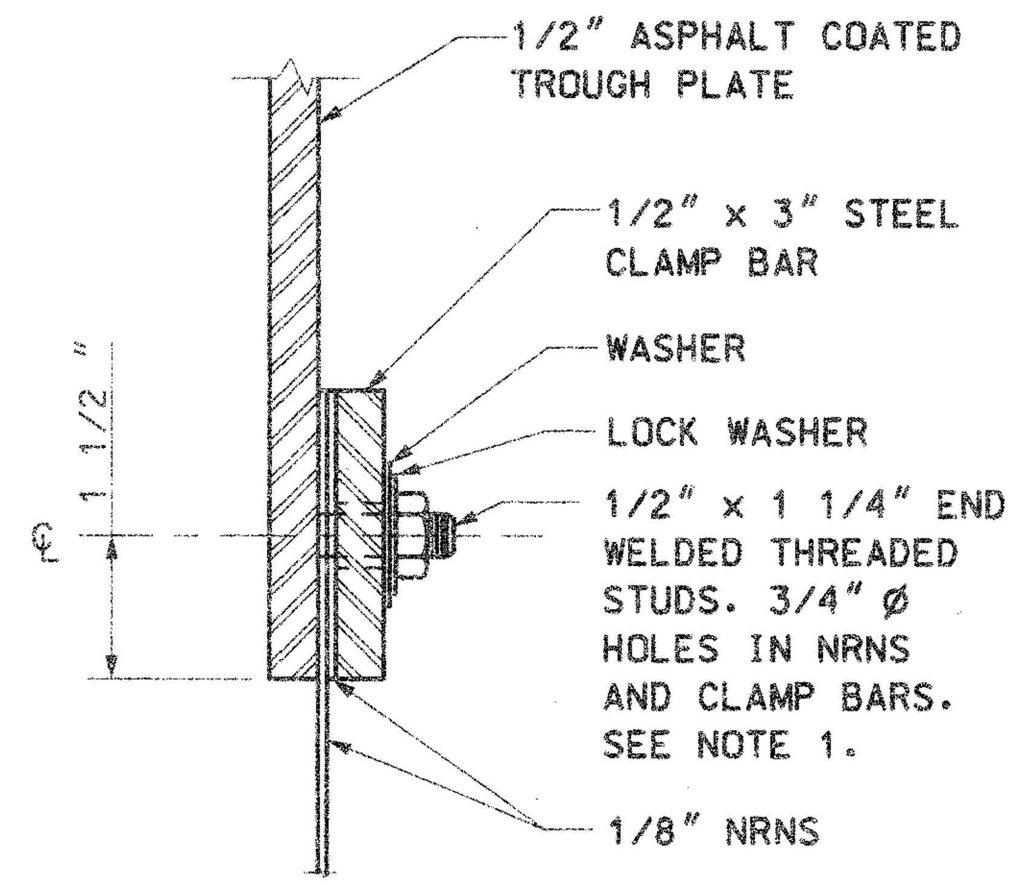
DETAIL D
(TROUGH JOINTS)



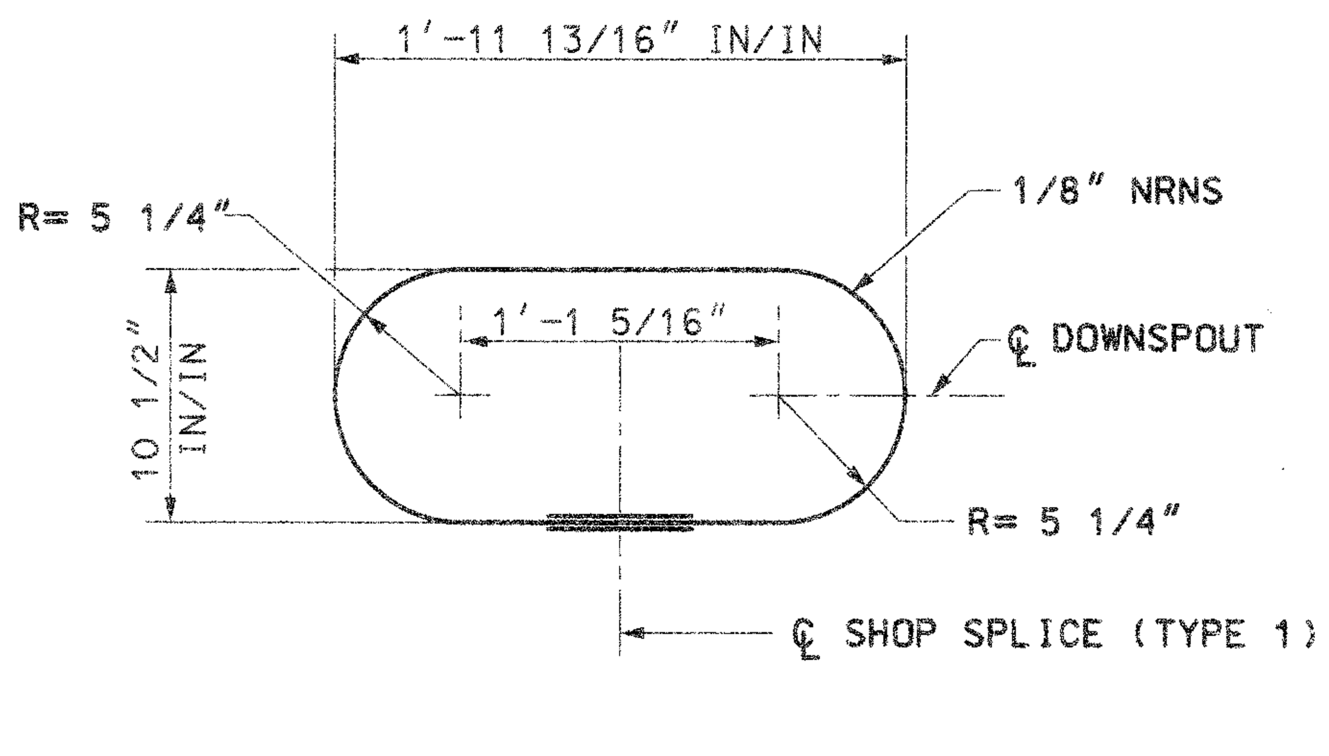
VIEW (F)



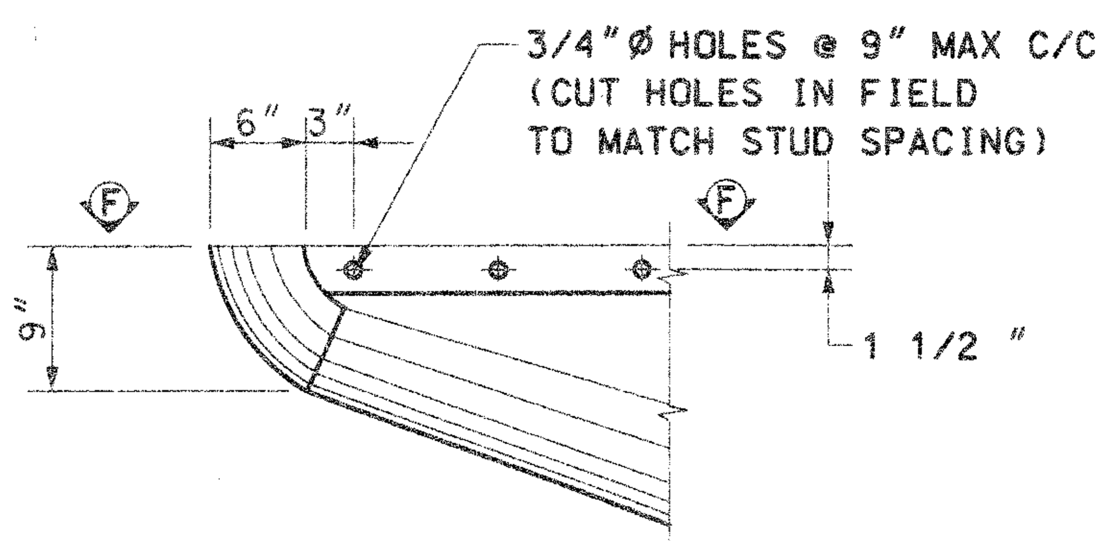
SECTION (B)



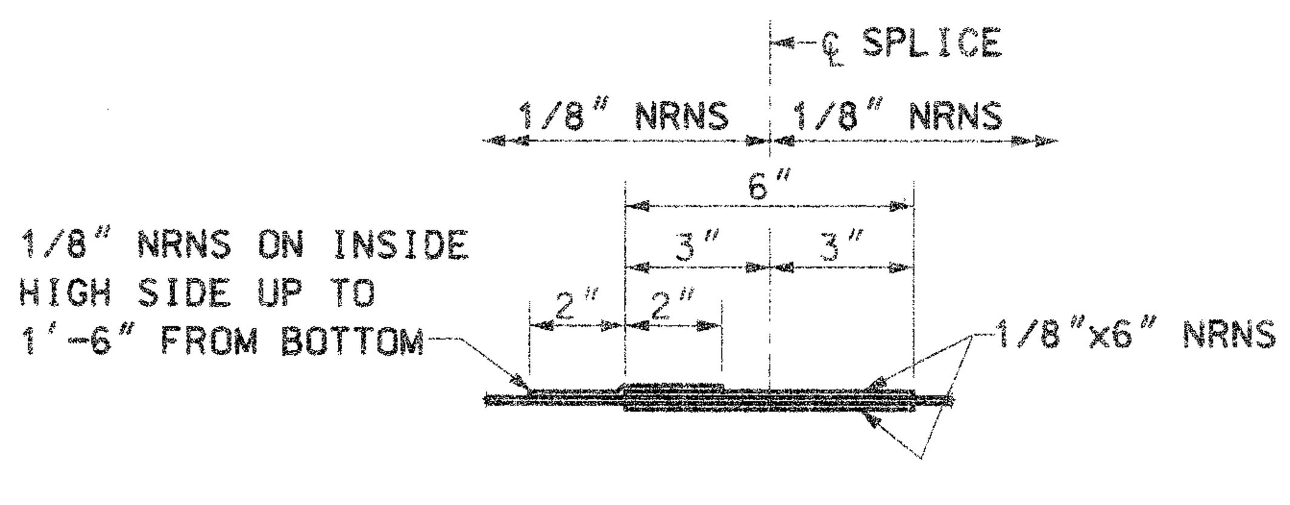
SECTION (C)



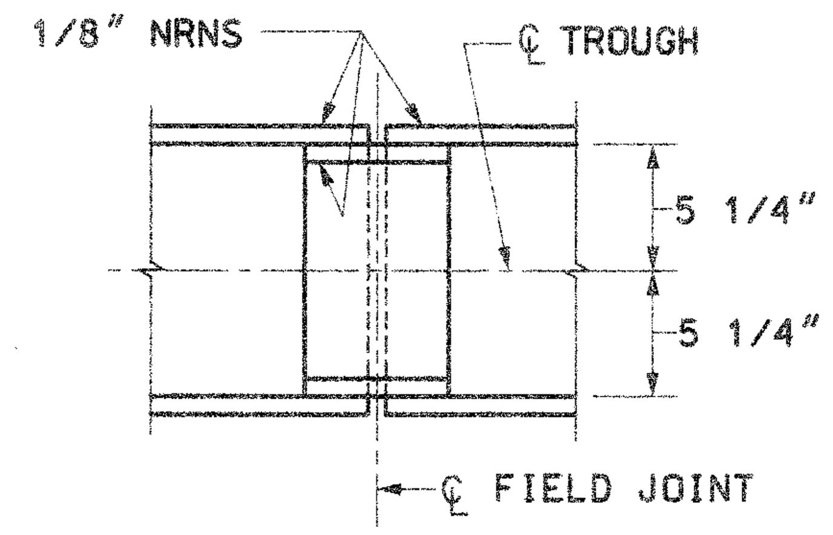
SECTION (D)



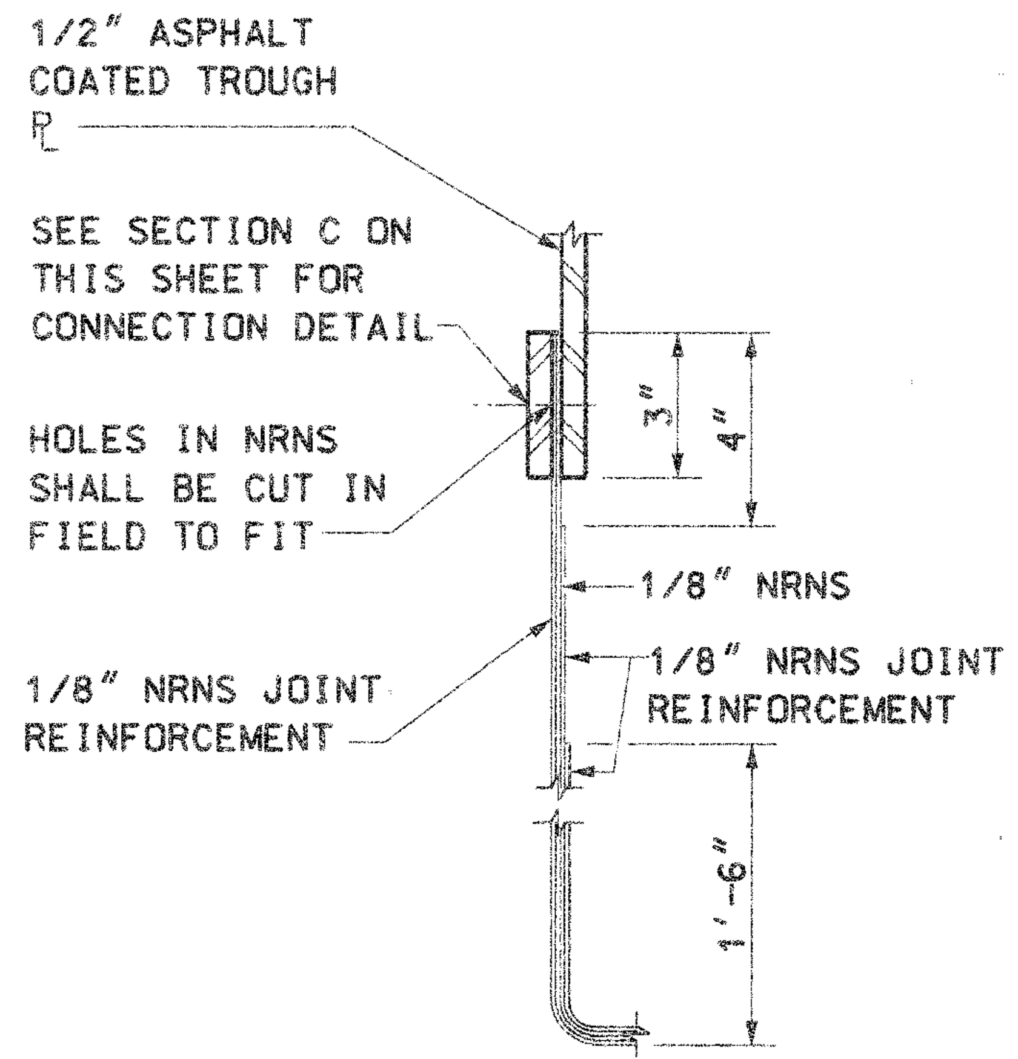
DETAIL C



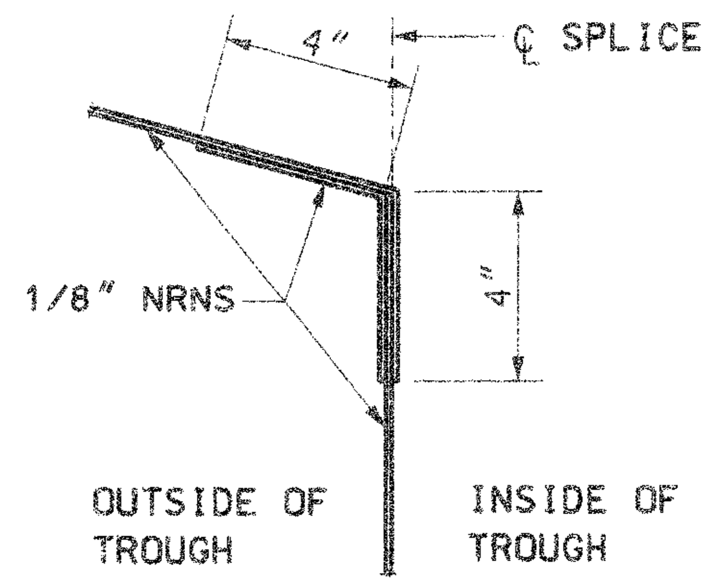
TYPICAL SHOP SPLICE (TYPE 1)



SECTION (G)



SECTION (E)



TYPICAL SHOP SPLICE (TYPE 2)

NOTES

1. 1/2" x 1 1/4" GALVANIZED STEEL END WELDED THREADED STUDS WITH HEX NUTS, FLAT WASHERS, AND LOCK WASHERS. PROVIDE 3/4"Ø HOLES IN CLAMP BARS AND 5/8"Ø HOLES IN WASHERS. ALL METAL FASTENER ITEMS SHALL BE FURNISHED BY THE DECK JOINT FABRICATOR. SEE ELASTOMERIC TROUGH NOTE IN GENERAL NOTES FOR OTHER REQUIREMENTS.
2. SEE SHEETS 47/126 & 48/126, FOR SECTION A.
3. WORK THIS SHEET WITH SHEETS 47/126, 48/126, & 49/126.

LEGEND

R = RADIUS
NRNS = NYLON REINFORCED NEOPRENE SHEET
IN/IN = INSIDE FACE TO INSIDE FACE DIMENSION

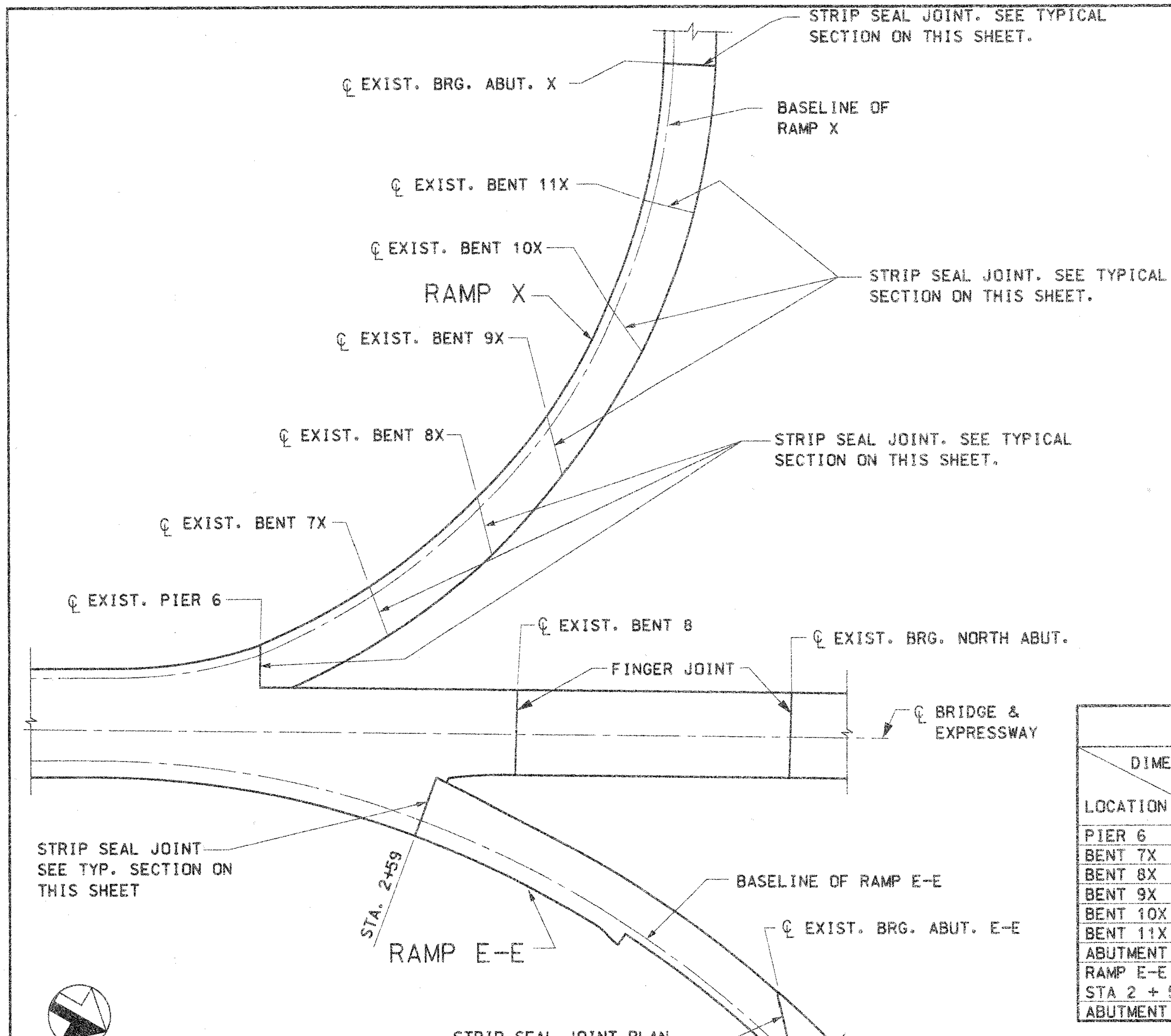
ENGINEERS ARCHITECTS

DESIGNED RMW | DRAWN KEK | REVIEWED RKM | DATE 14-Feb-96
CHECKED MAK | REVISED | STRUCTURE FILE NUMBER 4805917

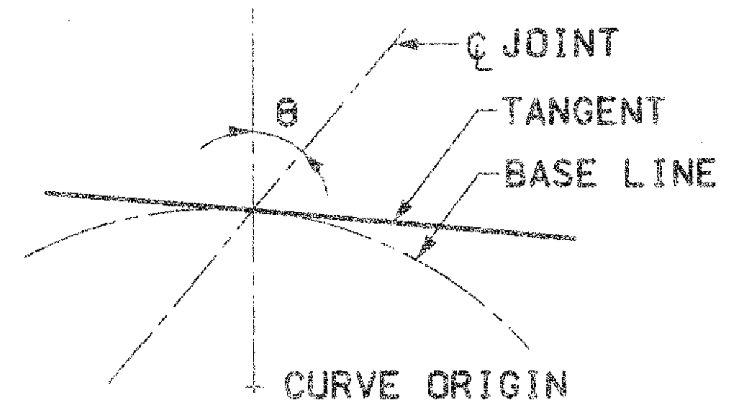
FINGER JOINT TROUGH DETAILS 4 - TYPICAL DETAILS
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

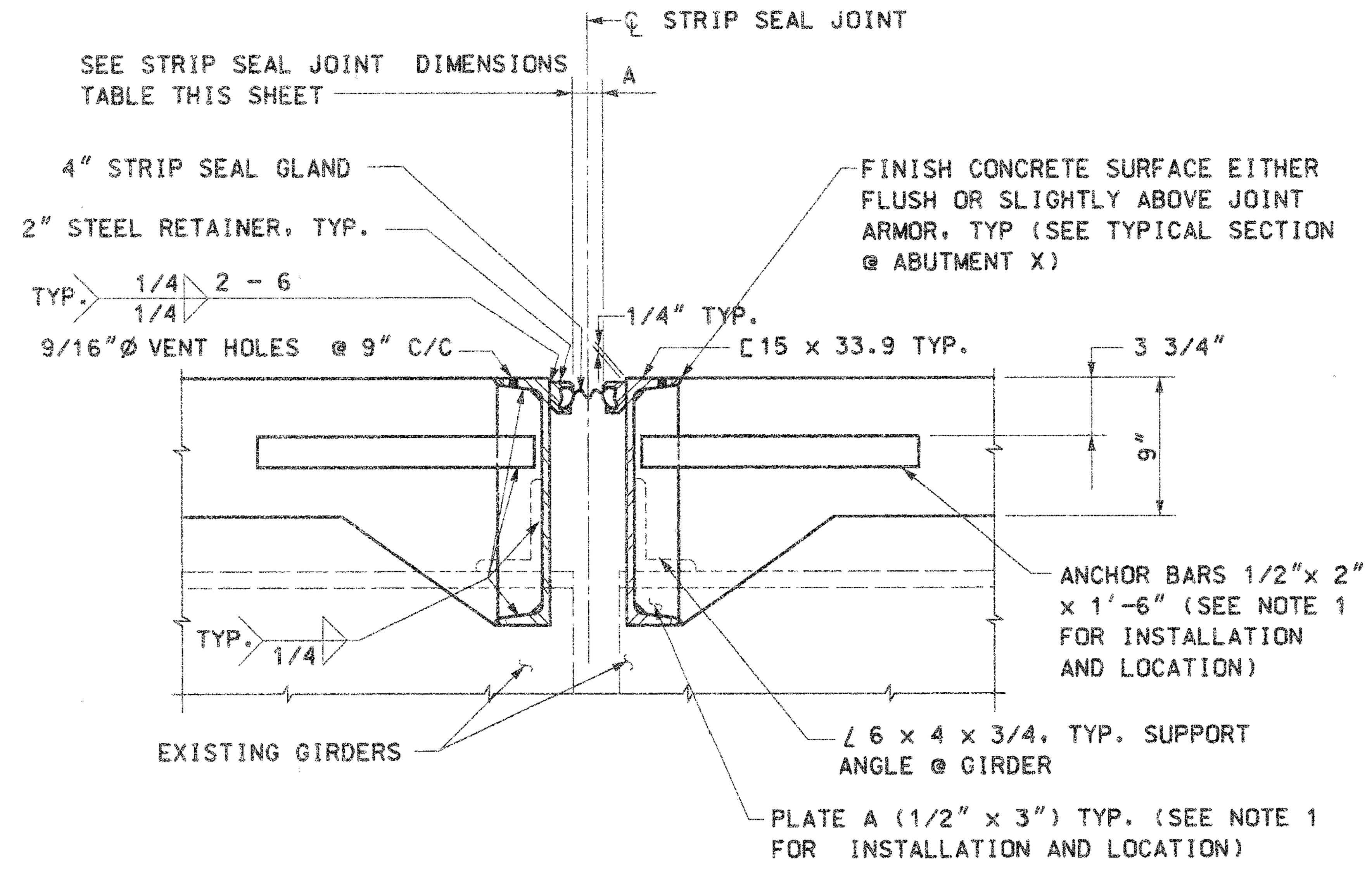
P:\PR\492\CADD\TROUGH.DGN 2-26-95



LOCATION PLAN



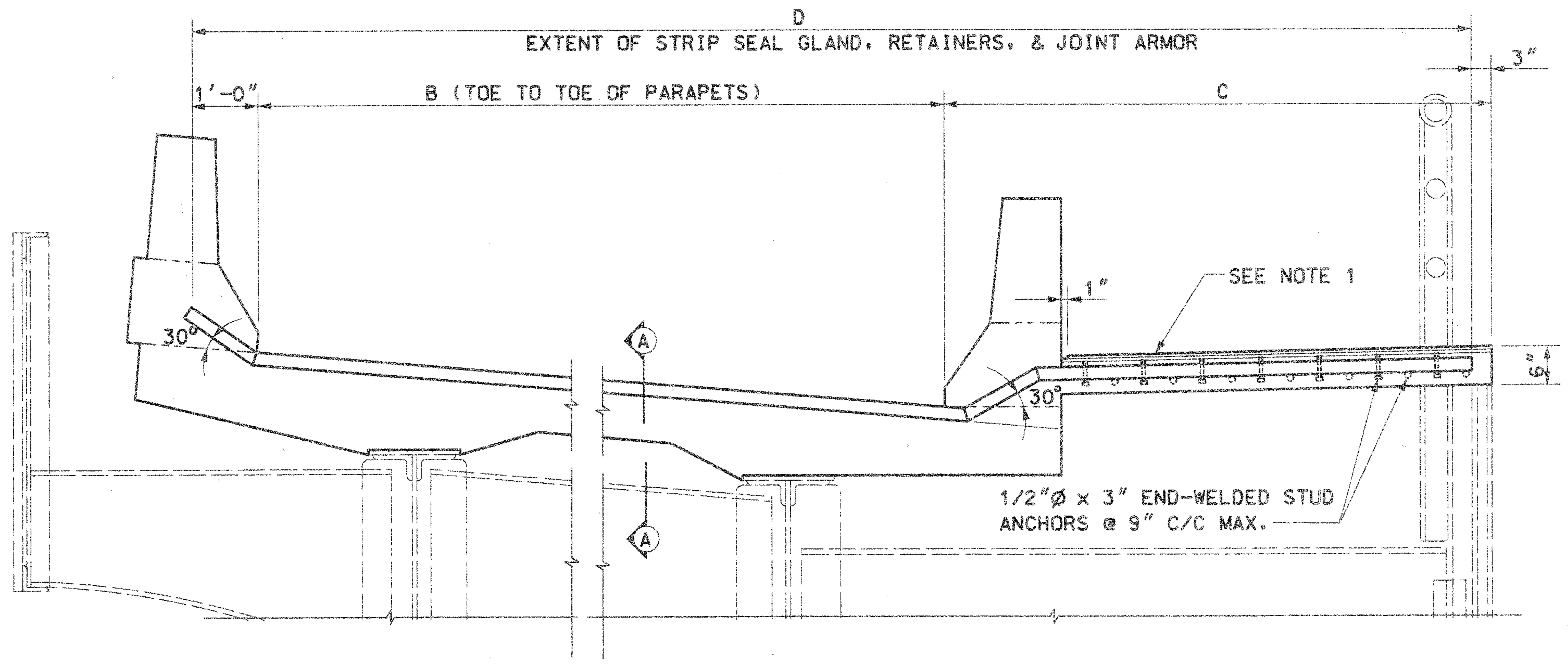
SKEW ANGLE DETAIL



SECTION (EXCEPT AT ABUTMENTS X & E-E) (A)

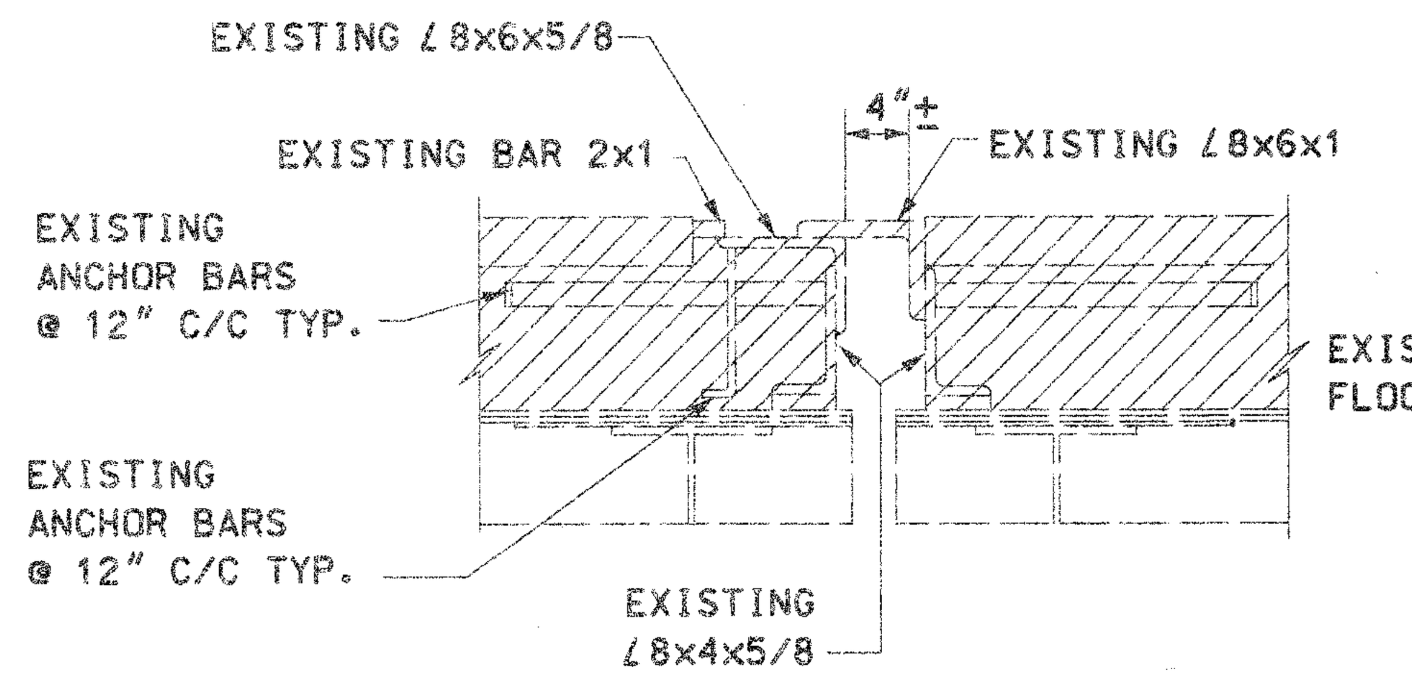
STRIP SEAL JOINT DIMENSIONS TABLE											
DIMENSION / LOCATION	A* 30°F	40°F	50°F	60°F	70°F	80°F	90°F	B	C	D	θ
PIER 6	1 7/8"	1 15/16"	1 15/16"	2"	2"	2 1/16"	2 1/16"	18'-11"	7'-4 5/8"	27'-0 5/8"	18°21'27"
BENT 7X	1 13/16"	1 7/8"	1 7/8"	1 15/16"	2"	2 1/16"	2 1/8"	18'-2 1/4"	7'-1"	26'-0 1/4"	8°30'54"
BENT 8X	1 13/16"	1 7/8"	1 15/16"	1 15/16"	2"	2 1/16"	2 1/8"	20'-0 3/4"	7'-10 1/2"	28'-8 1/4"	26°57'35"
BENT 9X	1 13/16"	1 7/8"	1 15/16"	1 15/16"	2"	2 1/16"	2 1/8"	24'-11 5/8"	10'-0 5/8"	35'-9 1/4"	45°16'22"
BENT 10X	1 13/16"	1 7/8"	1 7/8"	1 15/16"	2"	2 1/16"	2 1/8"	19'-11 3/8"	7'-9 7/8"	28'-6 1/4"	26°14'15"
BENT 11X	1 13/16"	1 7/8"	1 7/8"	1 15/16"	2"	2 1/16"	2 1/8"	18'-0"	7'-0"	25'-9"	0
ABUTMENT X	1 7/8"	1 15/16"	1 15/16"	2"	2"	2 1/16"	2 1/16"	18'-0"	7'-0"	25'-9"	0°
RAMP E-E STA 2 + 59	1 1/4"	1 7/16"	1 5/8"	1 7/8"	2 1/16"	2 1/4"	2 3/8"	33'-6 3/8"	7'-0"	41'-3 3/8"	0°
ABUTMENT E-E	1 5/8"	1 11/16"	1 13/16"	1 15/16"	2"	2 1/8"	2 1/4"	N/A	N/A	N/A	32°30'±

* DIMENSIONS SHOWN ARE CALCULATED BASED ON A RETAINER WIDTH OF 1 1/2" AND MAY VARY ACCORDING TO RETAINER WIDTH SET BY MANUFACTURER.
θ - SKEW ANGLE. SEE SKEW ANGLE DETAIL ON THIS SHEET.



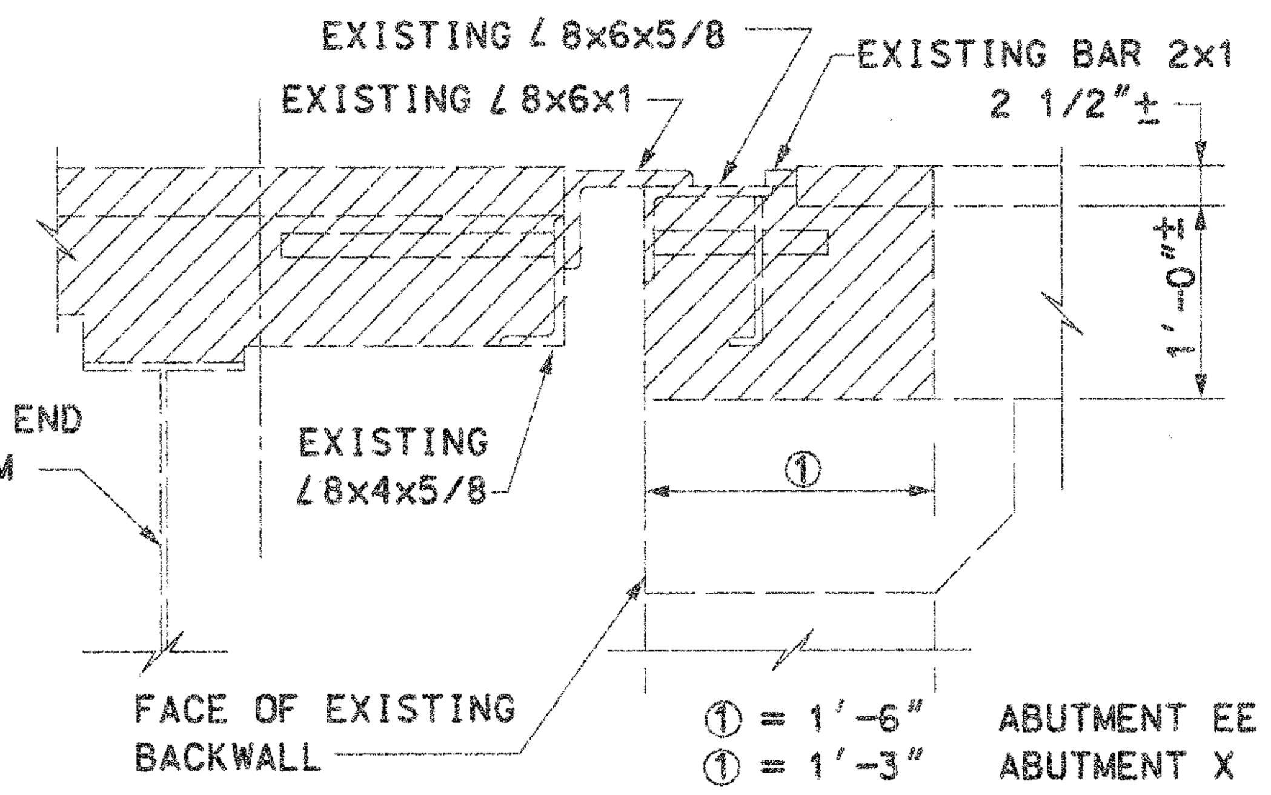
TYPICAL SECTION ALONG ℄ STRIP SEAL JOINTS

(SEE LOCATION PLAN ABOVE)



TYPICAL REMOVAL @ EXISTING EXPANSION JOINT

(EXCEPT @ ABUTMENT X & E-E)



TYPICAL REMOVAL @ EXISTING EXPANSION JOINT @ ABUTMENTS X & E-E

LEGEND

▨ = REMOVAL LIMITS

NOTES

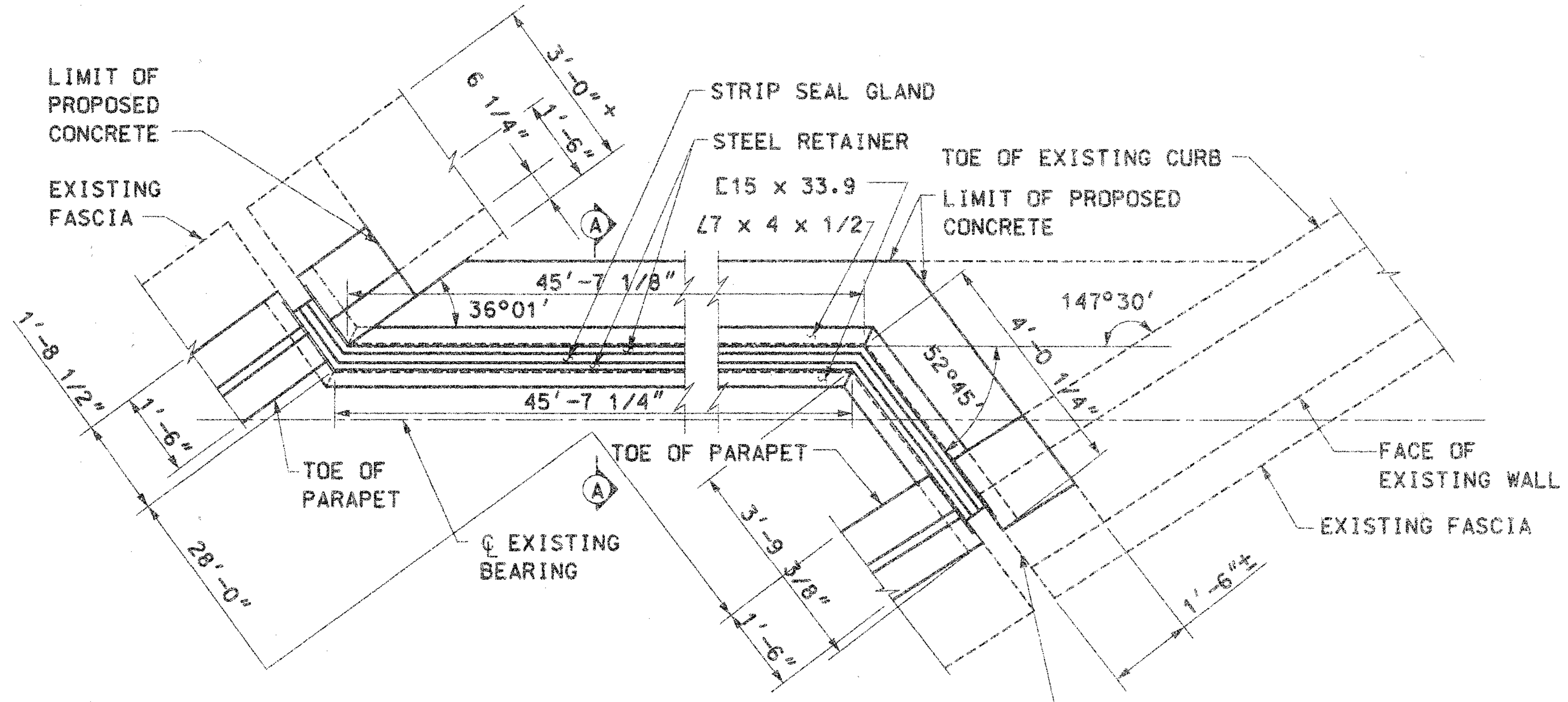
1. REFER TO STANDARD DRAWING EXJ-4-87 FOR ADDITIONAL STRIP SEAL EXPANSION JOINT DETAILS. EXISTING END CROSSFRAMES SHALL NOT BE CONNECTED TO JOINT ARMOR.

2. SEE STRIP SEAL JOINT DIMENSIONS TABLE ABOVE FOR DIMENSIONS SHOWN IN TYPICAL SECTION ON THIS SHEET (B, C, & D) AND IN STANDARD DRAWING EXJ-4-87 (A), AND ALSO FOR SKEW ANGLES.

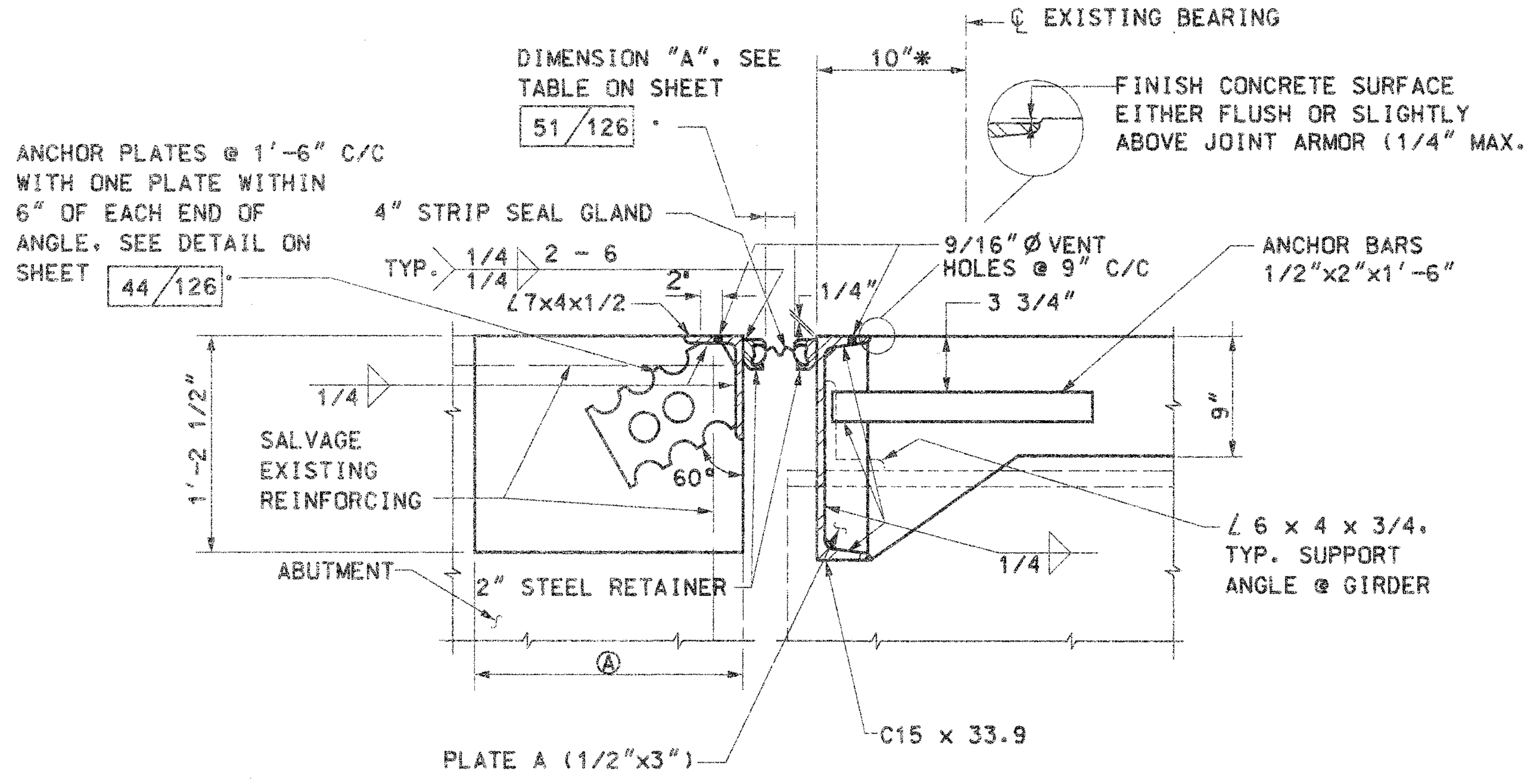
DESIGNED RWM CHECKED MAK DRAWN KEK REVISED RK/77 DATE 14-Feb-96 STRUCTURE FILE NUMBER 4805917

STRIP SEAL JOINT DETAILS 1
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC - 280



STRIP SEAL JOINT PLAN
(@ ABUTMENT E-E)



SECTION (@ ABUTMENTS X & E-E) Ⓐ

Ⓐ = 1'-6" ABUTMENT EE
Ⓐ = 1'-3" ABUTMENT X

NOTES

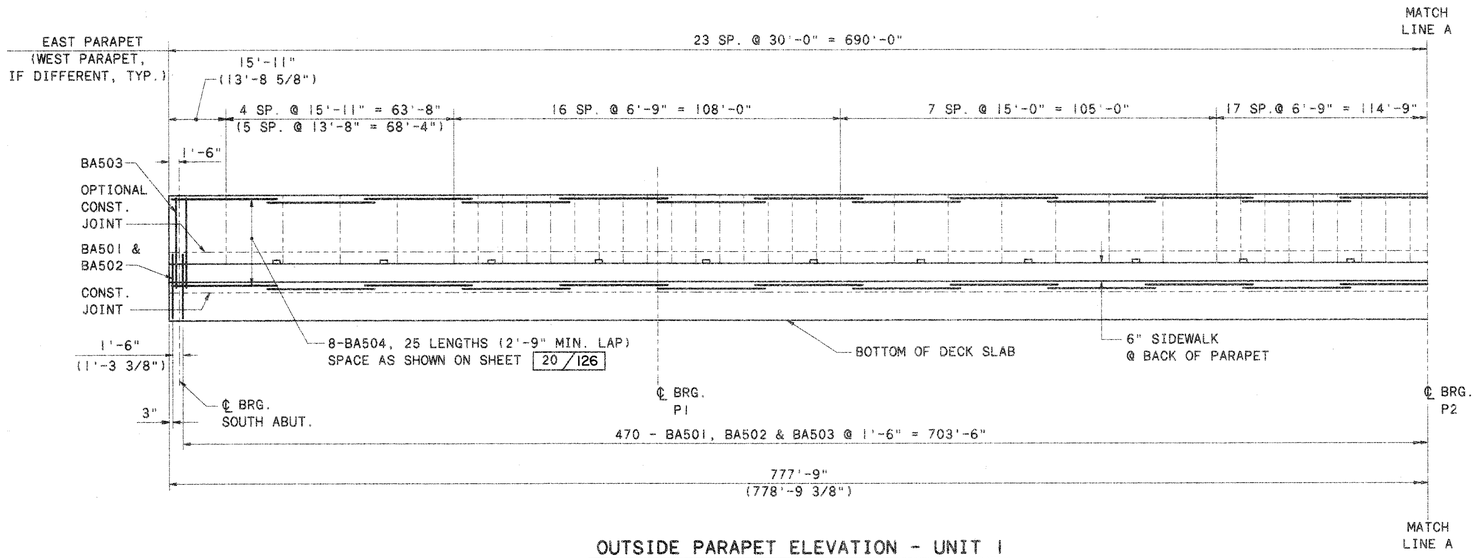
1. REFER TO STANDARD DRAWING EXJ-4-87 FOR ADDITIONAL STRIP SEAL EXPANSION JOINT DETAILS NOT SHOWN. EXISTING END CROSSFRAMES SHALL NOT BE CONNECTED TO JOINT ARMOR.
2. SEE SHEET 51/126 FOR SECTION A.

ENGINEERS ARCHITECTS

DESIGNED RWM | DRAWN KEK | REVIEWED RKM | DATE 14-Feb-96
CHECKED MAK | REVISED | STRUCTURE FILE NUMBER 4805917

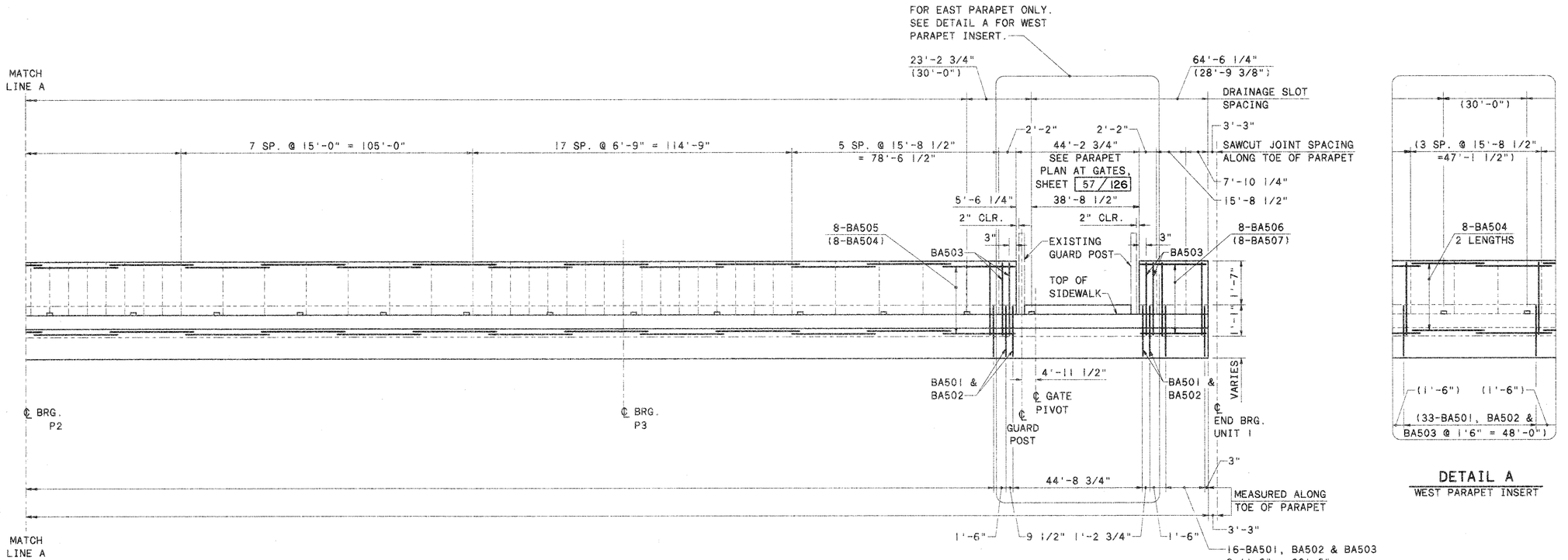
STRIP SEAL JOINT DETAILS 2
BRIDGE NO. LUC - 280 - 0346
OVER MAUMEE RIVER

LUC - 280



OUTSIDE PARAPET ELEVATION - UNIT 1

EAST PARAPET SHOWN
WEST PARAPET SIMILAR
SLAB AND SIDEWALK REINFORCEMENT NOT SHOWN FOR CLARITY



DETAIL A
WEST PARAPET INSERT

WORK THIS SHEET WITH SHEETS 38/126 ,& 39/126 .

ENGINEERS ARCHITECTS

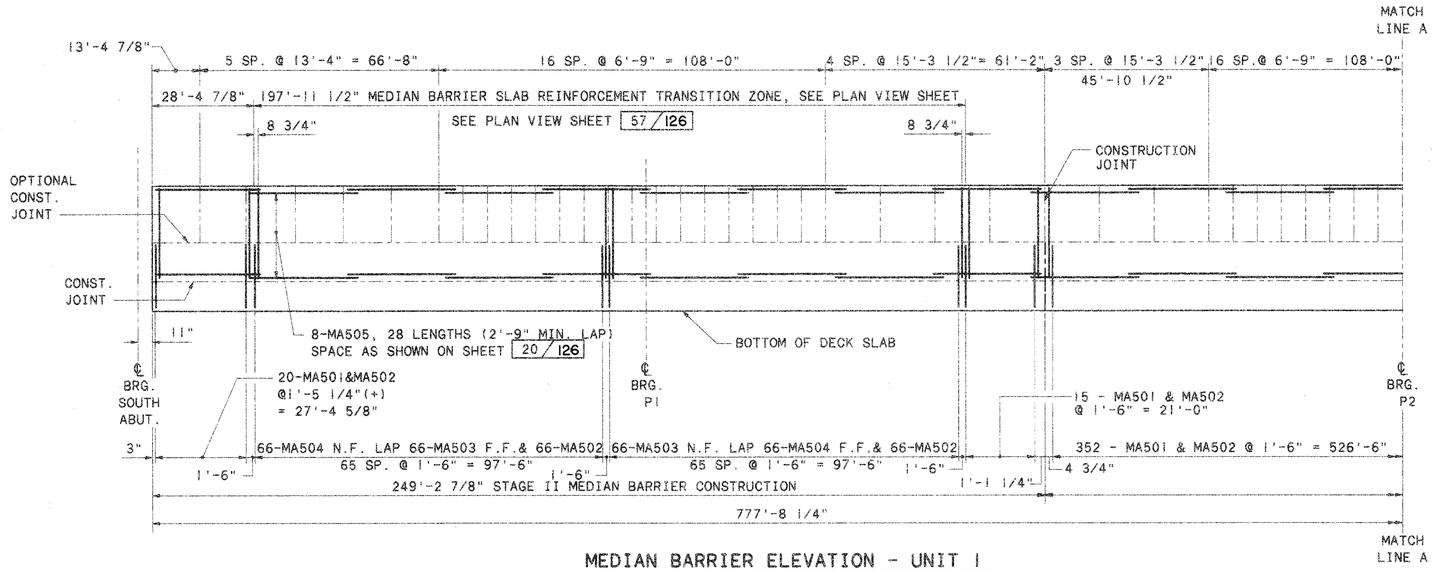
DESIGNED	DRAWN	REVISED	DATE
CJS	RFJ	RK77	14-Feb-96
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MAK		4805917	

PARAPET ELEVATIONS - UNIT 1
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

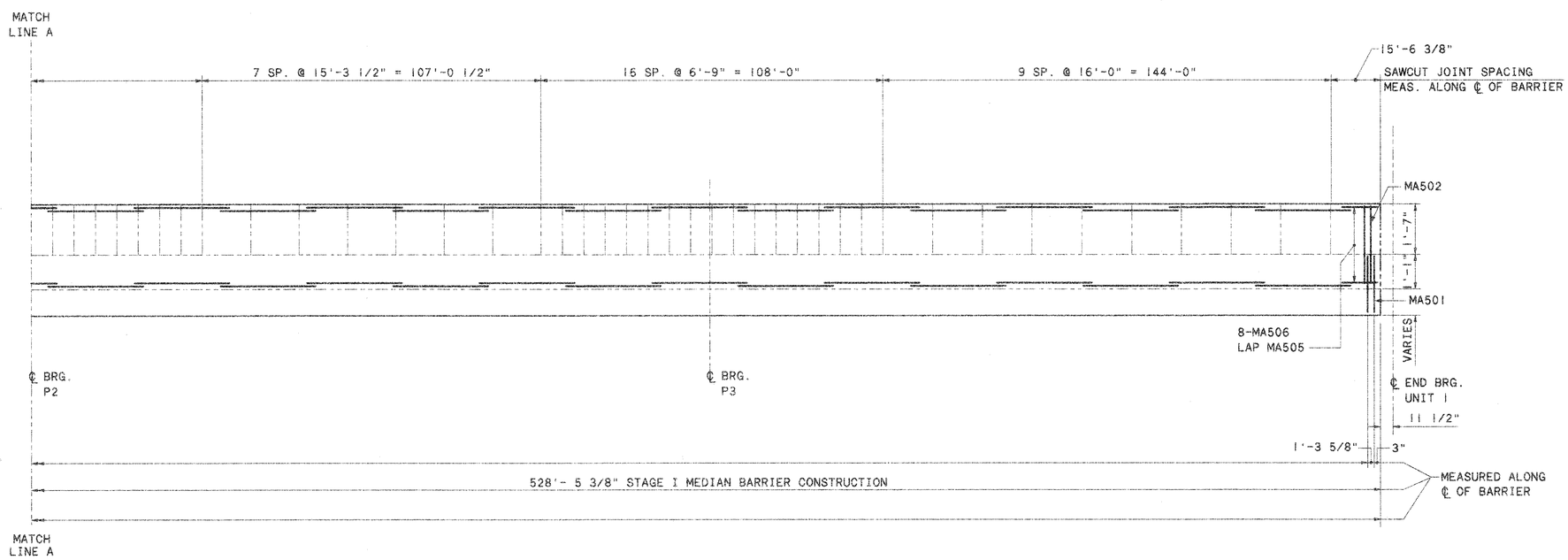
53/126

N:\PROJECTS\PR1491\CADD\PARAPET3 8-2-95 9:37:29 am



MEDIAN BARRIER ELEVATION - UNIT 1

SLAB REINFORCEMENT NOT SHOWN FOR CLARITY



N:\PROJECTS\PR14912\CADD\PARAFE14 8-9-95

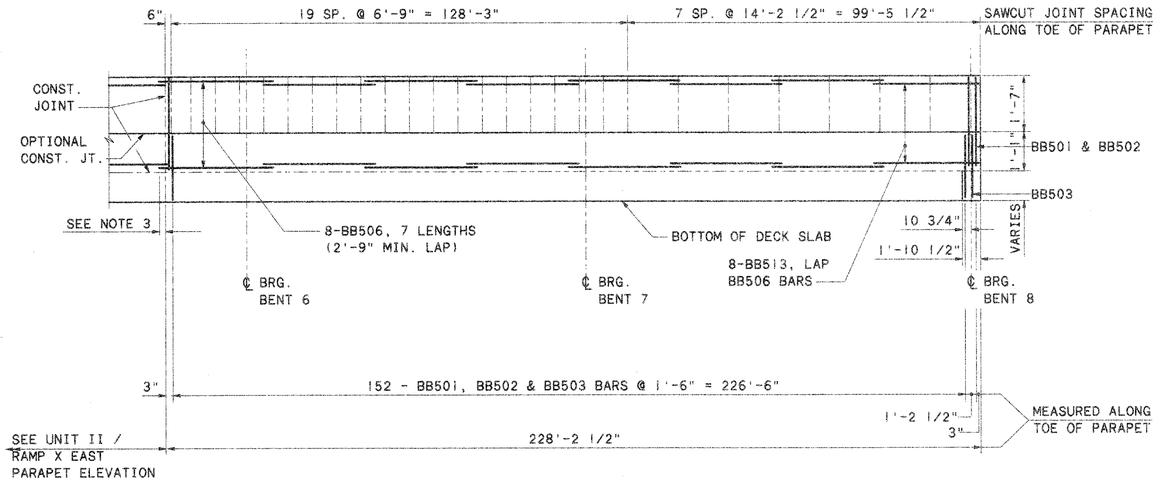
ENGINEERS ARCHITECTS

DESIGNED CJS | DRAWN RFJ | REVIEWED RMM | DATE 14-Feb-96
CHECKED MAK | REVISED | STRUCTURE FILE NUMBER 4805917

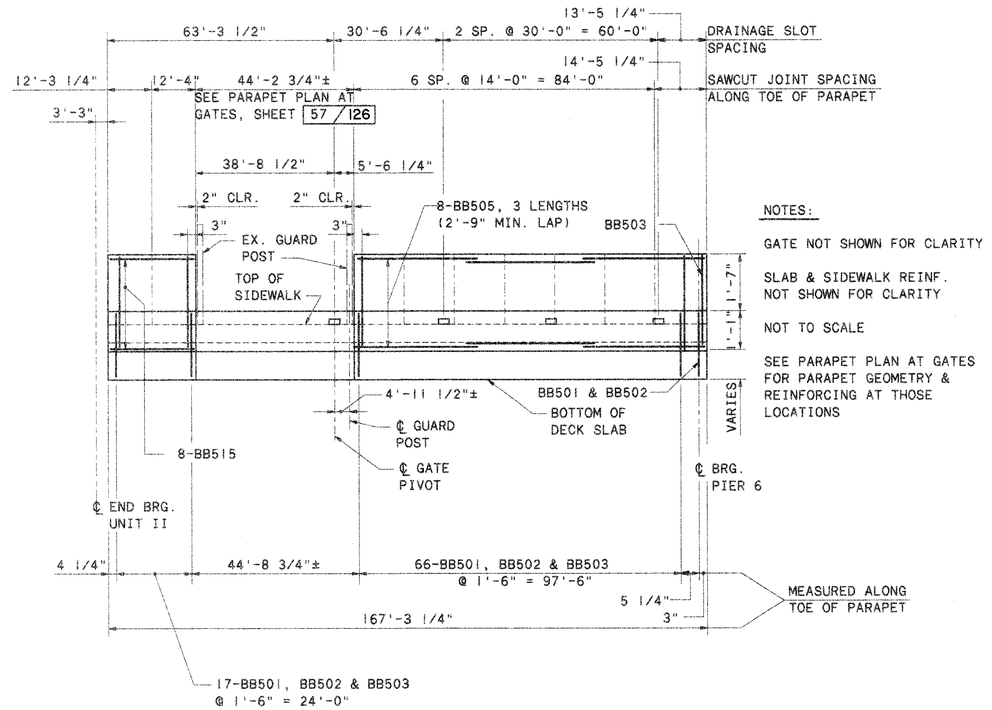
MEDIAN BARRIER ELEVATION - UNIT 1
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

54/126



WEST PARAPET ELEVATION - UNIT 2



NOTES:

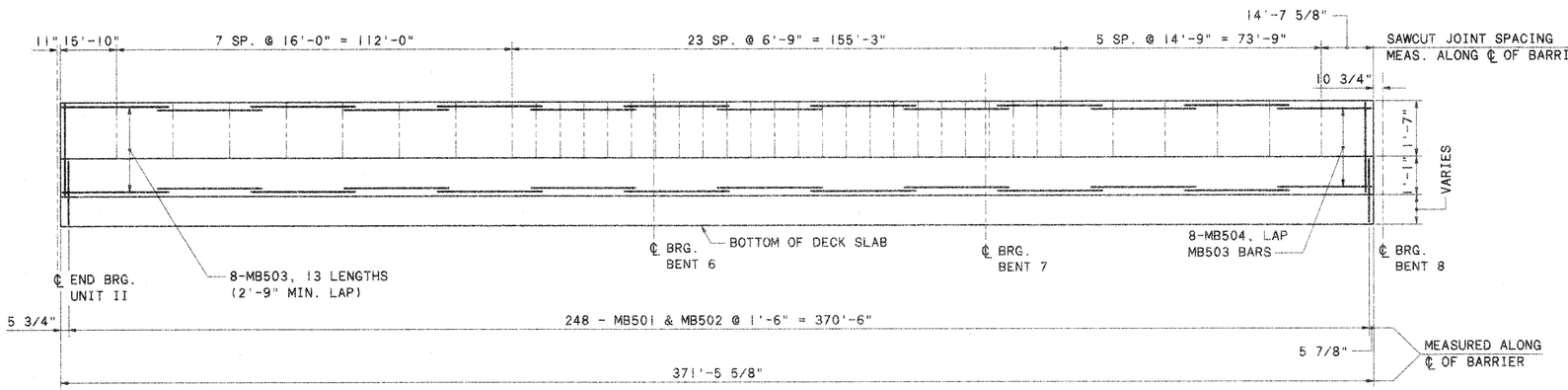
GATE NOT SHOWN FOR CLARITY

SLAB & SIDEWALK REINF. NOT SHOWN FOR CLARITY

NOT TO SCALE

SEE PARAPET PLAN AT GATES FOR PARAPET GEOMETRY & REINFORCING AT THOSE LOCATIONS

WEST OUTSIDE PARAPET ELEVATION - UNIT 2



MEDIAN BARRIER ELEVATION - UNIT 2

NOTES

1. WORK THIS SHEET WITH 40/126 & 41/126
2. ONLY PARAPET REINFORCING SHOWN
3. BB506 TO EXTEND 2'-0" BEYOND CONSTRUCTION JOINT

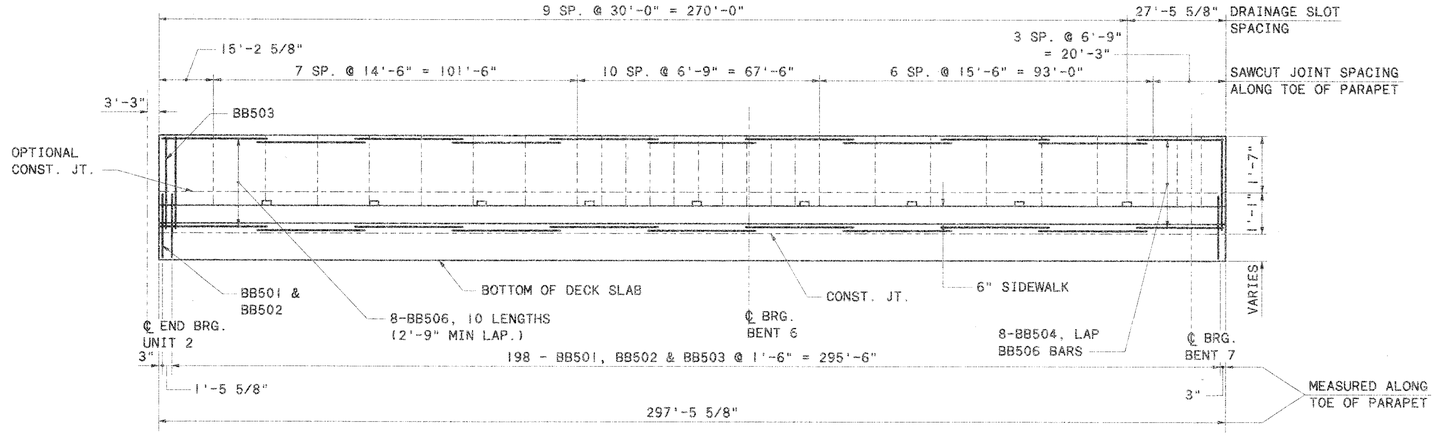
DESIGNED CJS
DRAWN RFJ
CHECKED
REVISED
DATE REVIEWED 11-26-96 RMTT
STRUCTURE FILE NUMBER 480517

WEST PARAPET & MEDIAN BARRIER ELEVATIONS - UNIT 2
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

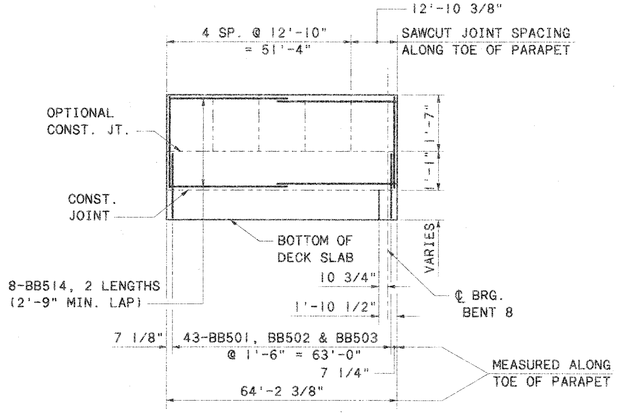
LUC-280

55/126

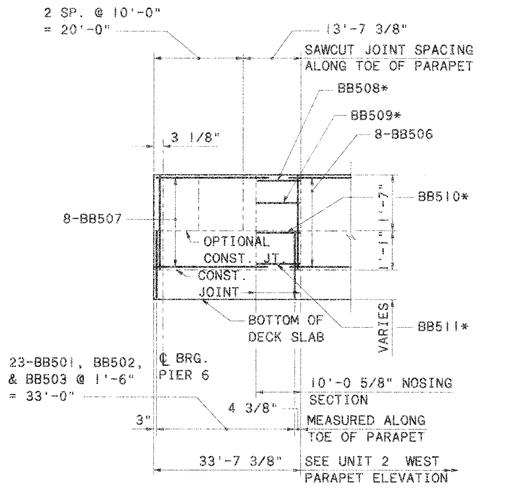
N:\PROJECTS\PR1491.2\CADD\PARAPET7



EAST PARAPET ELEVATION - UNIT 2

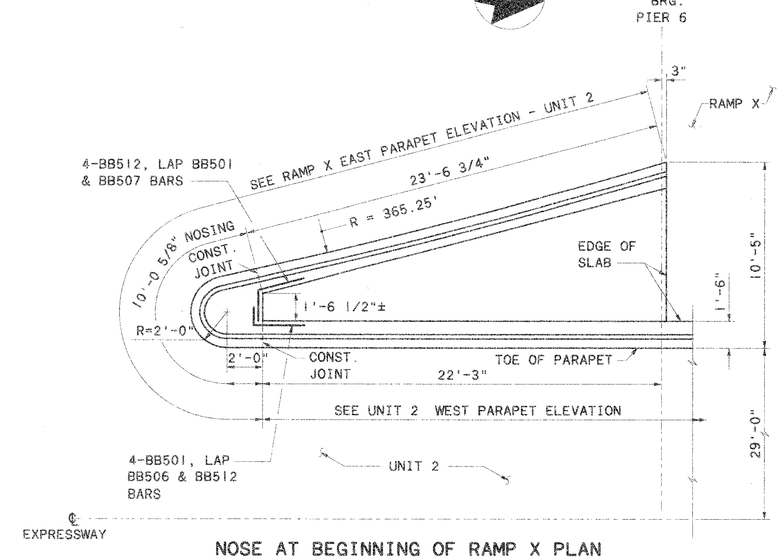


EAST PARAPET ELEVATION - UNIT 2



RAMP X EAST PARAPET ELEVATION - UNIT 2

(SEE NOSE AT BEGINNING OF RAMP X PLAN)
*LAP BB506 & BB507 BARS



NOSE AT BEGINNING OF RAMP X PLAN

NOTES:

1. WORK THIS SHEET WITH SHEETS 40/126, & 41/126.
2. ONLY PARAPET REINFORCING SHOWN.

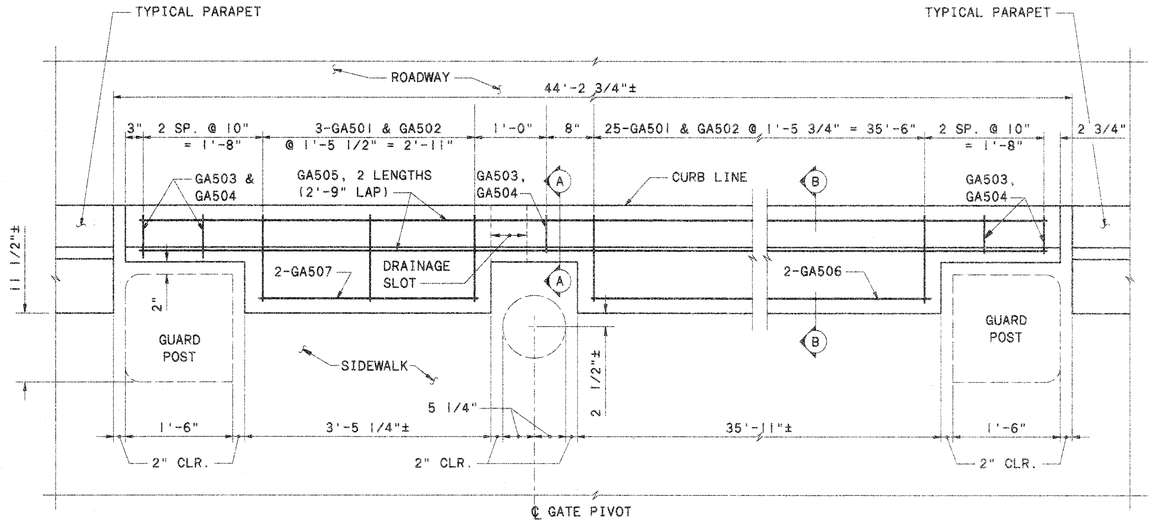
DESIGNED CJS
DRAWN RFJ
CHECKED MAK
REVISED
DATE REVISED 14-Feb-96
STRUCTURE FILE NUMBER 4805917

EAST PARAPET ELEVATION - UNIT 2
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

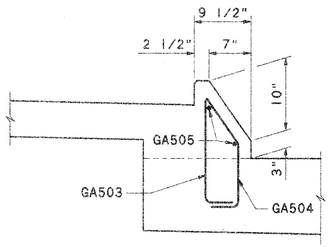
56/126

N:\PROJECTS\PR1491\CADD\PARAPET6 8-2-95



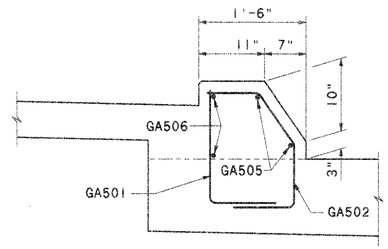
PARAPET PLAN AT GATES

UNIT 1 SHOWN, UNIT 2 ROTATE 180°



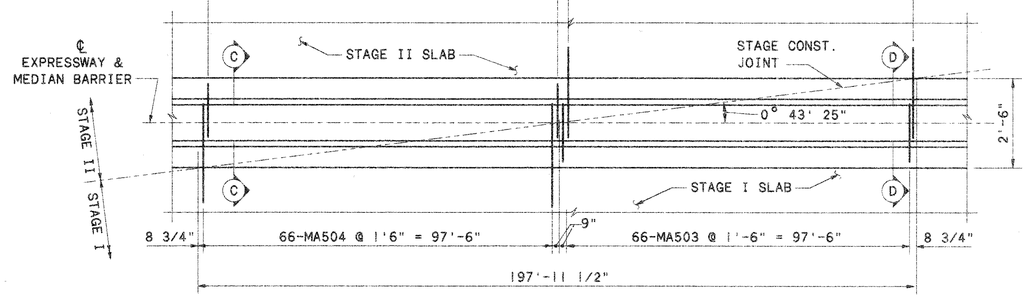
SECTION (A)

ONLY PARAPET REINFORCING SHOWN.
SECTION AT GUARD POSTS SAME



SECTION (B)

ONLY PARAPET REINFORCING SHOWN.

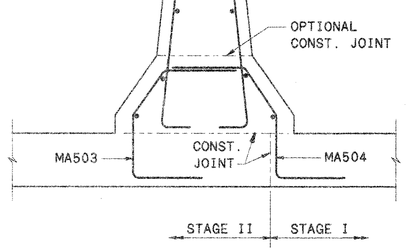


MEDIAN BARRIER SLAB REINFORCEMENT TRANSITION ZONE PLAN

MA502 BARS NOT SHOWN FOR CLARITY

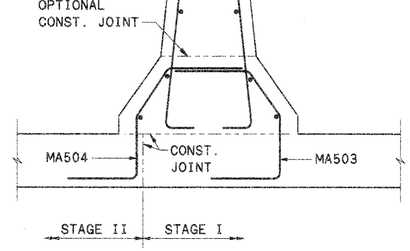
VERTICAL REBAR PLACEMENT SEQUENCE				
	MA501	MA502	MA503	MA504
BARS REAR OF STAGE CONSTRUCTION TRANSITION ZONE	B	C	—	—
BARS WITHIN STAGE CONSTRUCTION TRANSITION ZONE	—	C	A(N.F.)	A(N.F.)
			B(F.F.)	B(F.F.)
BARS FORWARD OF STAGE CONSTRUCTION TRANSITION ZONE	A	D	—	—

A: PLACE WITH STAGE I SLAB REBAR
B: PLACE WITH STAGE II SLAB REBAR
C: PLACE AFTER STAGE II SLAB HAS BEEN POURED
D: PLACE ANYTIME AFTER STAGE I SLAB HAS BEEN POURED



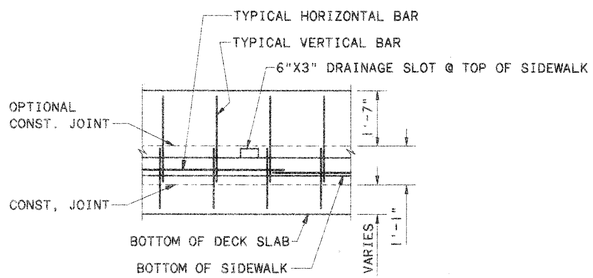
SECTION (C)

SLAB REINFORCING NOT SHOWN FOR CLARITY



SECTION (D)

SLAB REINFORCING NOT SHOWN FOR CLARITY

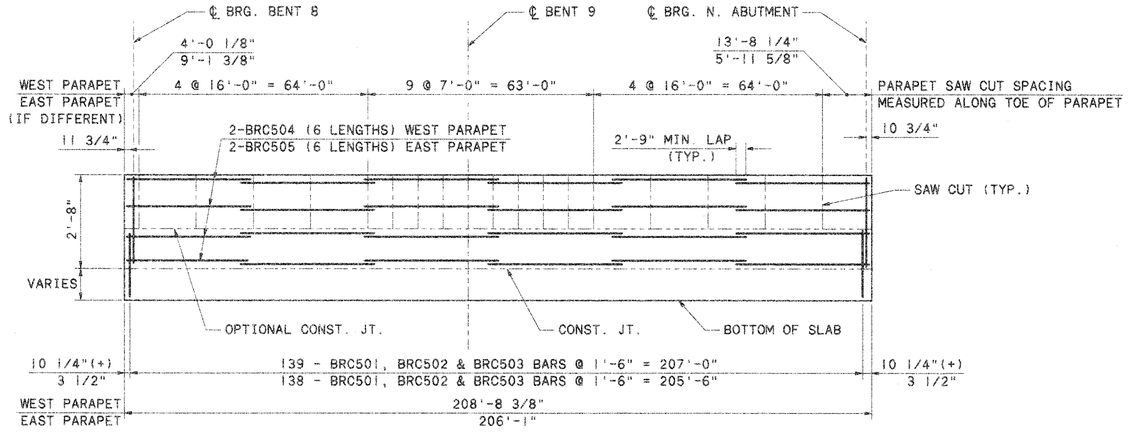


DRAINAGE SLOT DETAIL

EAST PARAPET ELEVATION SHOWN
WEST PARAPET ELEVATION SIMILAR

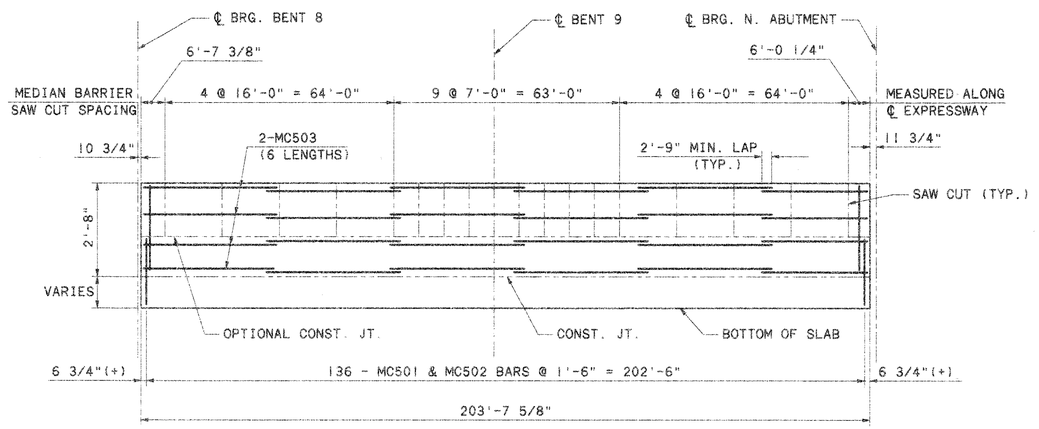
NOTE: WHERE NECESSARY, SHIFT VERTICAL AND/OR HORIZONTAL REBAR TO PROVIDE 2" CLEAR COVER FROM PERIMETER OF SLOT.

ENGINEERS ARCHITECTS
DESIGNED CJS
DRAWN RFJ
CHECKED MAK
REVISED RKM
DATE 14-Feb-96
STRUCTURE FILE NUMBER 4805917
REVISED
PARAPET & MEDIAN BARRIER DETAILS- UNITS 1 AND 2
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER
LUC-280
57 / 126
N:\PROJECTS\PR1491\2\CADD\PARADET1 8-2-95



PARAPET ELEVATIONS - UNIT 3

(NOT ALL REINFORCING SHOWN)



MEDIAN BARRIER ELEVATION - UNIT 3

(NOT ALL REINFORCING SHOWN)

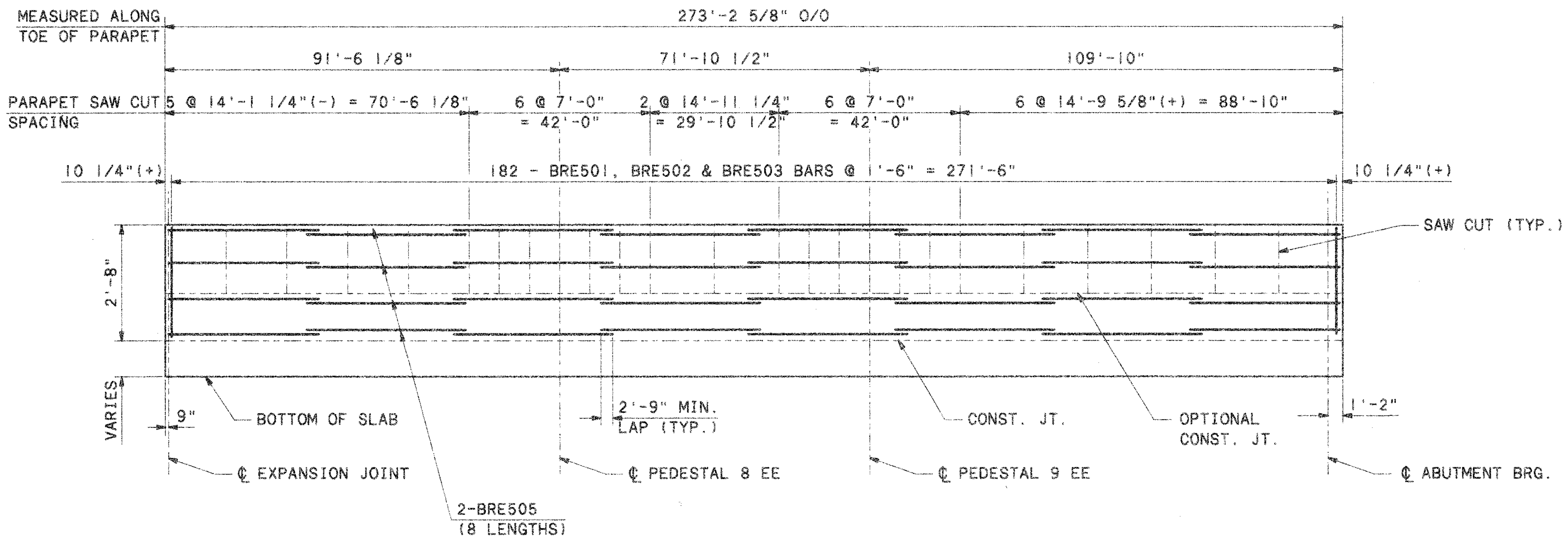
ENGINEERS
ARCHITECTS

DESIGNED	DRAWN	REVIEWED	DATE
JMD	RFJ	RKM	14-Feb-96
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JAP		4805917	

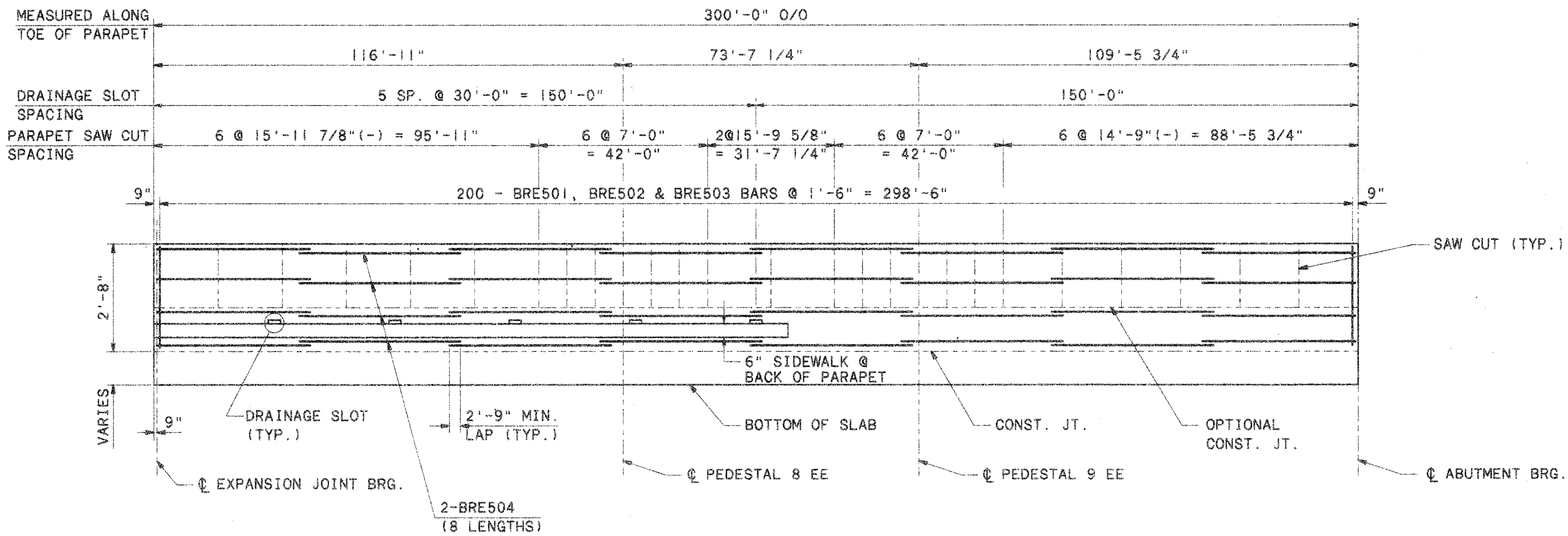
PARAPETS AND MEDIAN BARRIER ELEVATION - UNIT 3
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

N:\PROJECTS\PR1491\CADD\PARAPETS 8-2-95



CURB LINE PARAPET ELEVATION
(NOT ALL REINFORCING SHOWN)



BASE LINE PARAPET ELEVATION
(NOT ALL REINFORCING SHOWN)

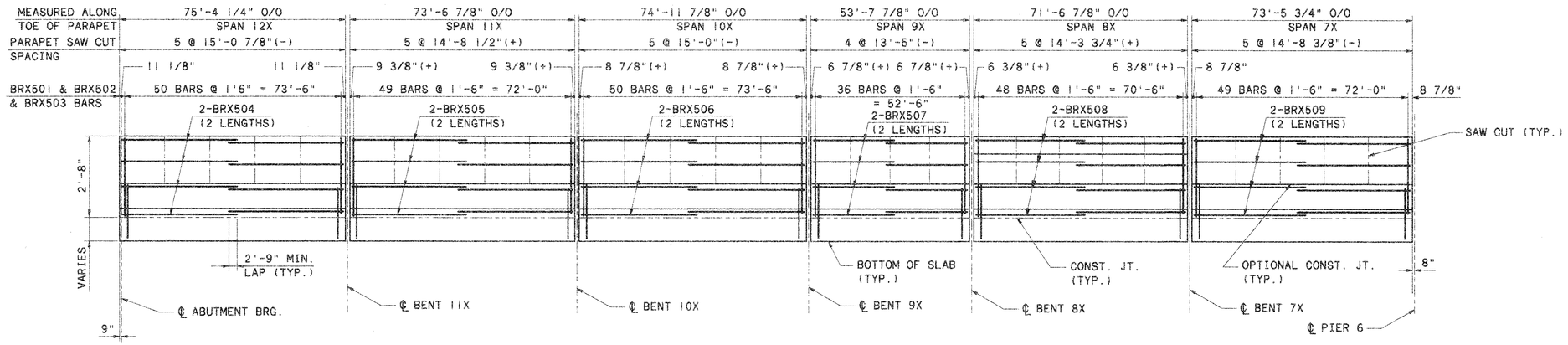
[redacted] ENGINEERS ARCHITECTS

DESIGNED JMD | DRAWN RFJ | REVIEWED RKM | DATE 14-Feb-96
CHECKED JAP | REVISED | STRUCTURE FILE NUMBER 4805917

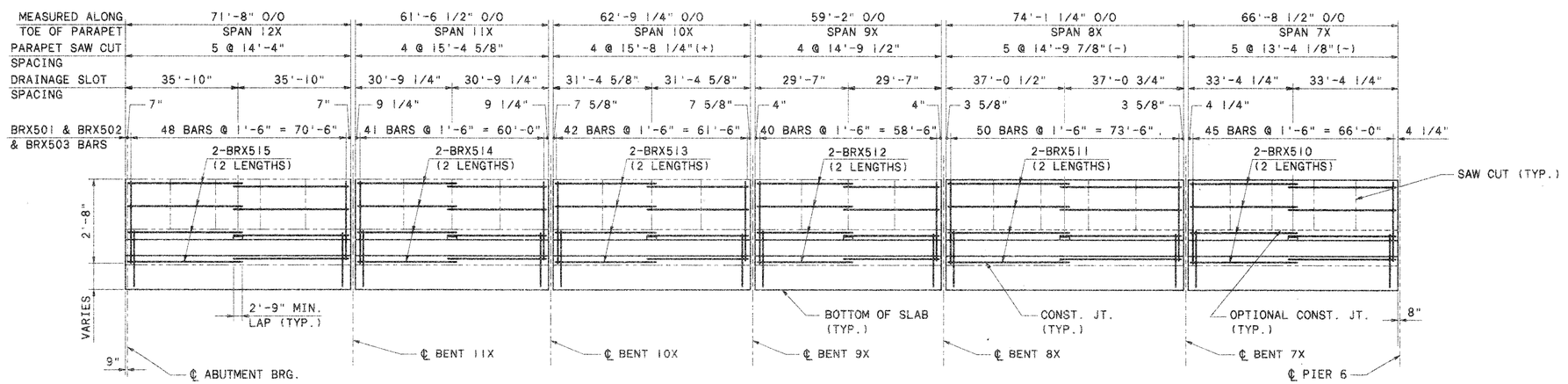
PARAPET ELEVATIONS RAMP EE
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

P:\PR14912\CADD\PARAPET2 2-23-95



CURB LINE PARAPET ELEVATION
(NOT ALL REINFORCING SHOWN)



BASE LINE PARAPET ELEVATION
(NOT ALL REINFORCING SHOWN)

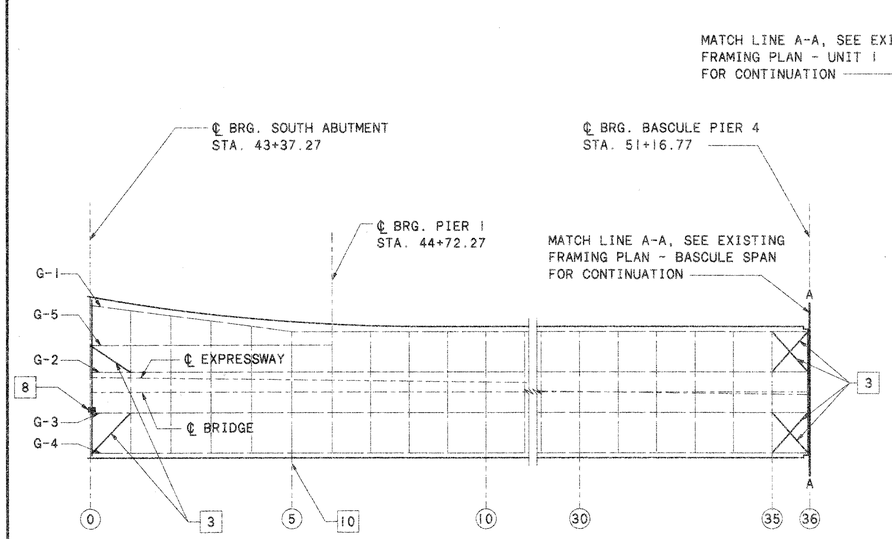
P:\PR1491\2\CADD\PARAPET1

[redacted]
ENGINEERS
ARCHITECTS

DESIGNED JMD
DRAWN RFJ
CHECKED JAP
REVISED
REVIEWED RKM 14-Feb-96
DATE
STRUCTURE FILE NUMBER 4805917

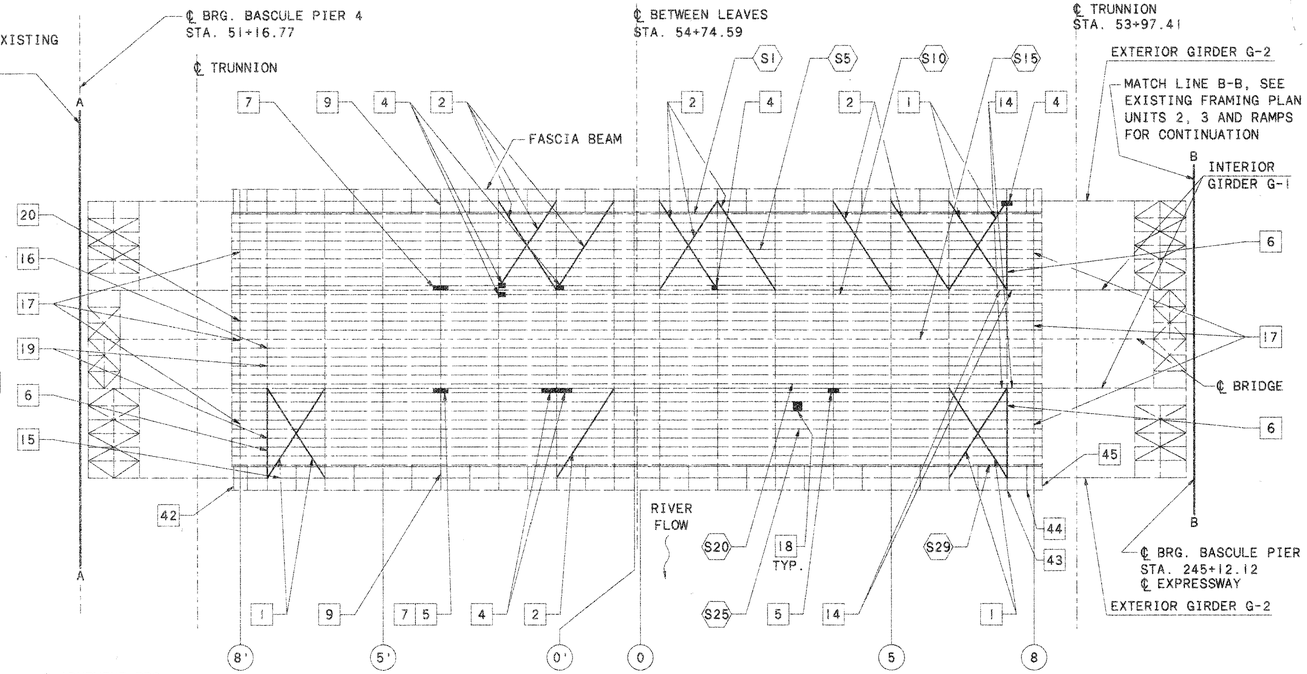
PARAPET ELEVATIONS - RAMP X
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280



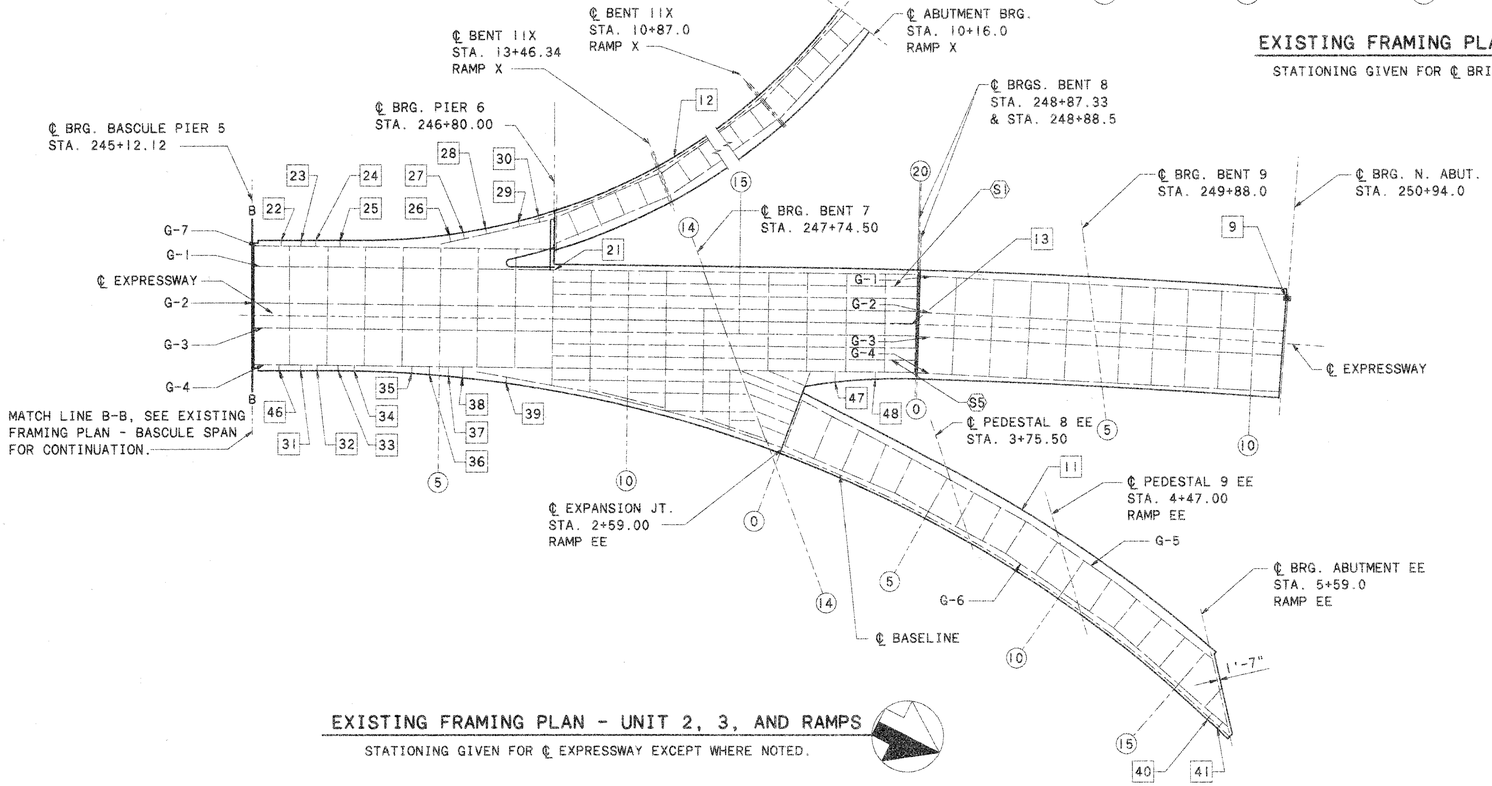
EXISTING FRAMING PLAN - UNIT 1

STATIONING GIVEN FOR ℄ BRIDGE



EXISTING FRAMING PLAN - BASCULE PLAN

STATIONING GIVEN FOR ℄ BRIDGE EXCEPT WHERE NOTED.



EXISTING FRAMING PLAN - UNIT 2, 3, AND RAMPS

STATIONING GIVEN FOR ℄ EXPRESSWAY EXCEPT WHERE NOTED.

NOTES

SEE SHEET 6/126 FOR GENERAL NOTES.

NOT ALL FRAMING MEMBERS ARE SHOWN.

LEGEND

(#) - FLOORBEAM NUMBER (NUMBERED CONSECUTIVELY BETWEEN LIMITS SHOWN)

⬡ # ⬡ - STRINGER NUMBER (NUMBERED CONSECUTIVELY BETWEEN LIMITS SHOWN)

[#] - CODED NOTE. SEE SHEET 62/126 FOR DESCRIPTION OF PROPOSED REHABILITATION.

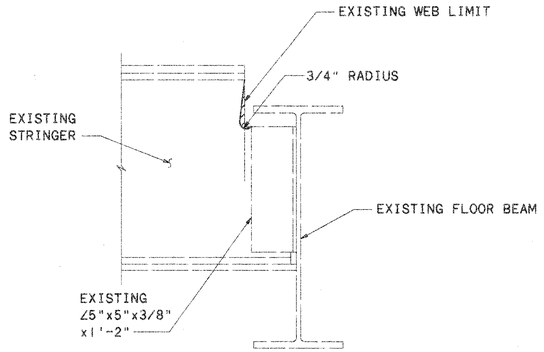
[redacted]
ENGINEERS
ARCHITECTS

DATE 14-Feb-96
REVIEWED RKM
STRUCTURE FILE NUMBER 480517
DRAWN RFJ
REVISED
DESIGNED RWM
CHECKED MAK

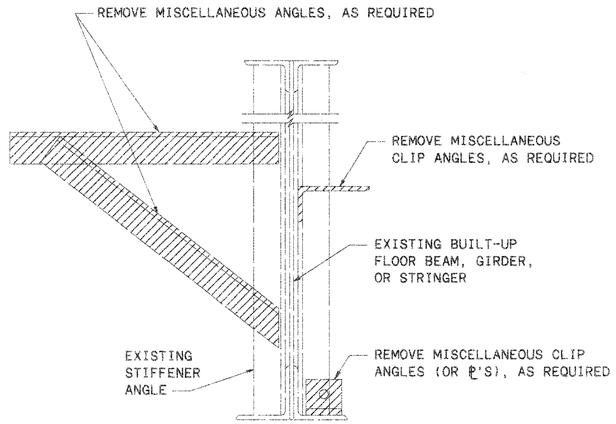
STRUCTURAL STEEL REHABILITATION DETAILS 1 - FRAMING PLAN
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

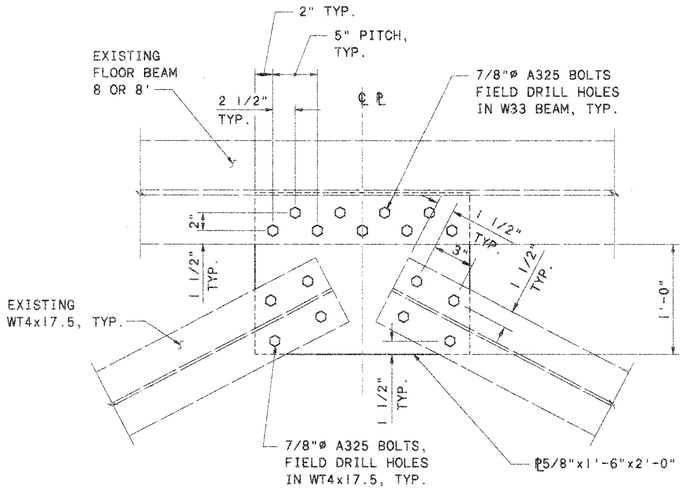
N:\PROJECTS\PR1491\CADD\FRMREHAB 2-23-95



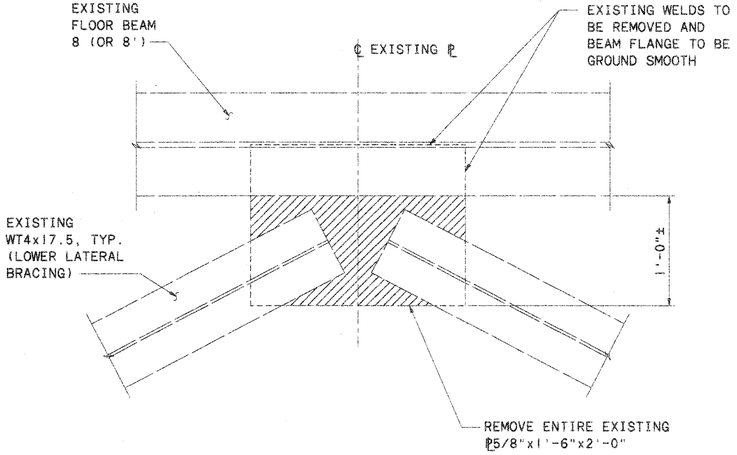
STRINGER COPE ROUNDING DETAIL [13]



MISCELLANEOUS ANGLE REMOVAL DETAIL



GUSSET PLATE PLAN DETAIL [17]
(PROPOSED)



WELDED GUSSET PLATE DETAIL [17]
(REMOVAL)

NOTES

SEE SHEET 6/126 FOR GENERAL NOTES.

SEE SHEET 61/126 FOR LOCATIONS OF REHABILITATION DETAILS AS INDICATED IN LEGEND BELOW.

LEGEND

▨ – REMOVAL

[1] – REPLACE LOWER LATERAL BRACING ST7WF21.5 WITH WT7X21.5. SEE DETAIL ON SHEET 63/126.

[2] – REPLACE LOWER LATERAL BRACING ST7WF19 WITH WT7X19. SEE DETAIL ON SHEET 63/126.

[3] – REPLACE LOWER LATERAL BRACING ST7WF15 WITH WT7X15. SEE DETAIL ON SHEET 63/126.

[4] – REPLACE LOWER GUSSET PLATE. SEE DETAIL ON SHEET 63/126.

[5] – REPLACE UPPER GUSSET PLATE. SEE DETAIL ON SHEET 63/126.

[6] – REPLACE LOWER LATERAL BRACING STRUTS. SEE DETAIL ON SHEET 63/126.

[7] – REPLACE PC18WF64 WITH PARTIALLY CLIPPED W24X76. SEE DETAIL ON SHEET 63/126.

[8] – REPLACE SPLICE PLATE AS SHOWN ON DETAIL ON SHEET 63/126.

[9] – REPLACE PC16WF58 (OR PC18WF64) WITH PARTIALLY CLIPPED W24X76. SEE DETAIL ON SHEET 63/126.

[10] – REMOVE MISCELLANEOUS CLIP ANGLE WELDED TO FLOOR BEAM 5. SEE DETAIL ON THIS SHEET.

[11] – REMOVE MISCELLANEOUS ANGLE WELDED TO BOTTOM OF WEB OF FASCIA. SEE DETAIL ON THIS SHEET.

[12] – REMOVE MISCELLANEOUS ANGLE WELDED TO BOTTOM FLANGE OF FASCIA. SEE DETAIL ON THIS SHEET.

[13] – COPE EXISTING STRINGER. SEE DETAIL ON THIS SHEET.

[14] – REMOVE MISCELLANEOUS ANGLE WELDED TO FACE OF GIRDER G-1. SEE DETAIL ON THIS SHEET.

[15] – REMOVE MISCELLANEOUS ANGLE WELDED TO GIRDER G-2. SEE DETAIL ON THIS SHEET.

[16] – REMOVE MISCELLANEOUS CLIP ANGLES WELDED TO FLOOR BEAM 7', TYPICAL AT 8 LOCATIONS ALONG BEAM. SEE DETAIL ON THIS SHEET.

[17] – REPLACE GUSSET PLATE PER ITEM 513 - STRUCT. STL., MISC. - WELDED GUSSET PLATE REPLACEMENT. SEE DETAILS ON THIS SHEET.

[18] – REMOVE MISCELLANEOUS CLIP ANGLES WELDED TO LOWER FLANGES OF STRINGERS S22 AND S23, TYPICAL BETWEEN EACH FLOOR BEAM OF ENTIRE BASCULE SPAN BETWEEN PIERS 4 AND 5. SEE DETAIL ON THIS SHEET.

[19] – REMOVE MISCELLANEOUS ANGLES WELDED TO FLOOR BEAM 7' VERTICAL STIFFENERS, 4 LOCATIONS BETWEEN INTERIOR GIRDERS G-1 AND ALSO 4 LOCATIONS BETWEEN EXTERIOR GIRDER G-2 AND INTERIOR GIRDER G-1. SEE DETAIL ON THIS SHEET.

[20] – REMOVE MISCELLANEOUS PLATE WELDED TO LOWER FLANGE OF FLOOR BEAM 8'. SEE DETAIL ON THIS SHEET.

[21] – REPLACE LOWER GUSSET PLATE. SEE DETAIL ON SHEET 63/126.

[22] THROUGH [45] ADD WEB PLATES TO SIDEWALK STRINGERS. SEE SIDEWALK STRINGER REPAIR DETAILS AND ACCOMPANYING TABLE ON SHEET 64/126.

[46] THROUGH [48] REPLACE SIDEWALK STRINGERS AS PER DETAILS ON SHEET 64/126.

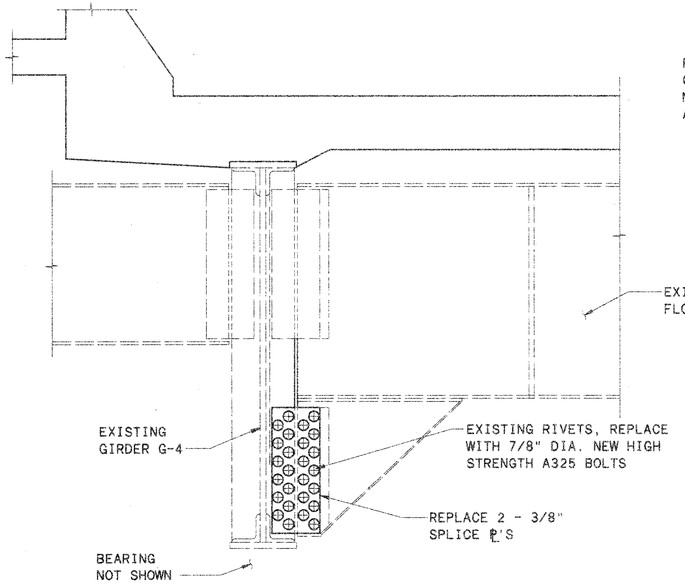
ENGINEERS ARCHITECTS

DESIGNED RWM | DRAWN RFJ | CHECKED MAK | REVISED RWM 14-Feb-96 | DATE | STRUCTURE FILE NUMBER 4805917

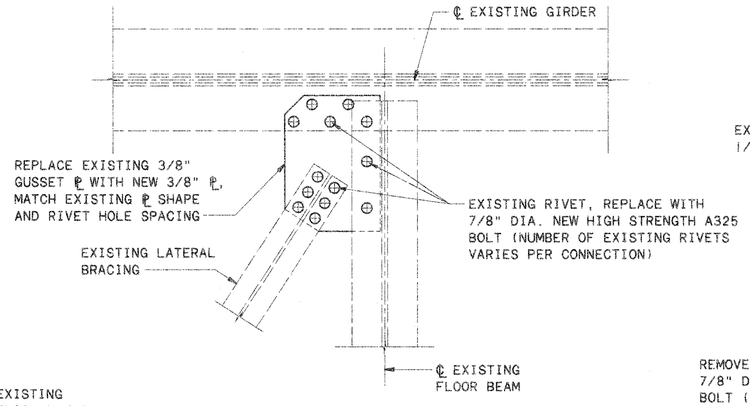
STRUCTURAL STEEL REHABILITATION DETAILS 2 - FATIGUE PRONE DETAILS
BRIDGE NO. LUC-280-0346 OVER MAUMEE RIVER

LUC-280

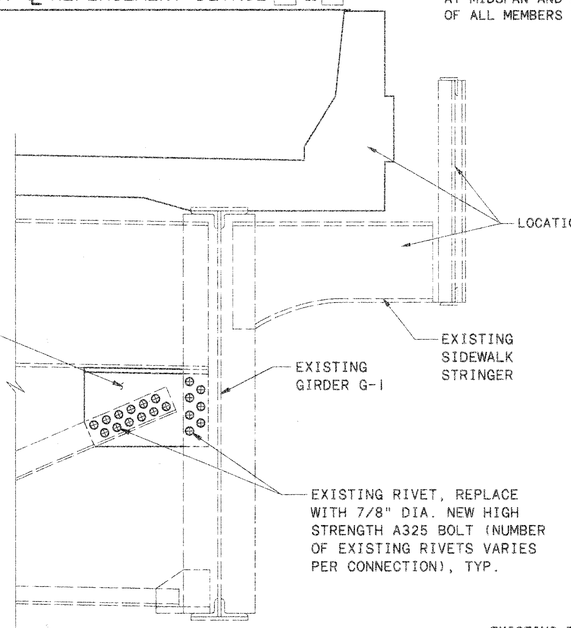
N:\PROJECTS\PR1491.2\CAD\DETAILS1 8-7-95



SPLICE PLATE DETAIL [8]

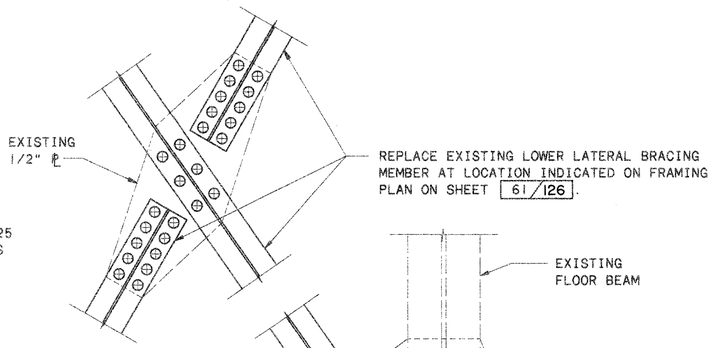


GUSSET ℄ REPLACEMENT DETAIL [4] & [5]

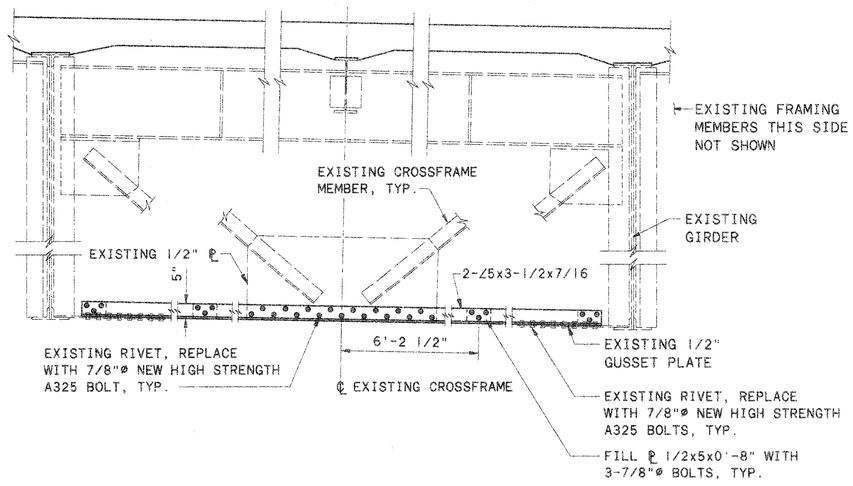


STRUT GUSSET DETAIL [9] & [7]

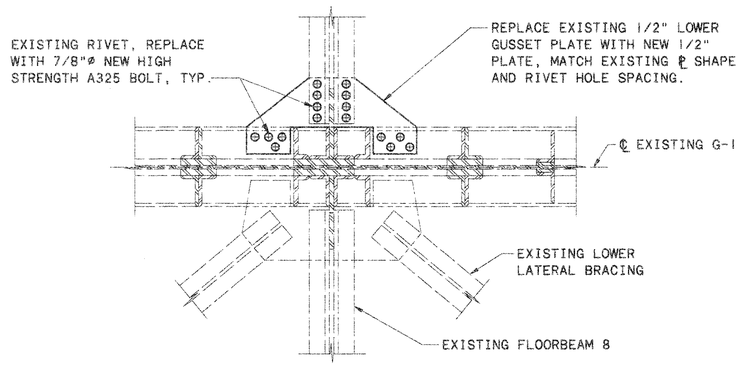
([9] SHOWN, [7] SIMILAR)



LOWER LATERAL BRACING DETAIL [1] [2] [3]



LOWER LATERAL BRACING STRUT DETAIL [6]



GUSSET ℄ REPLACEMENT DETAIL [22]

LEGEND

[#] - DETAIL NUMBER, WORK THIS SHEET WITH SHEETS [61/126] AND [62/126].

ENGINEERS
ARCHITECTS

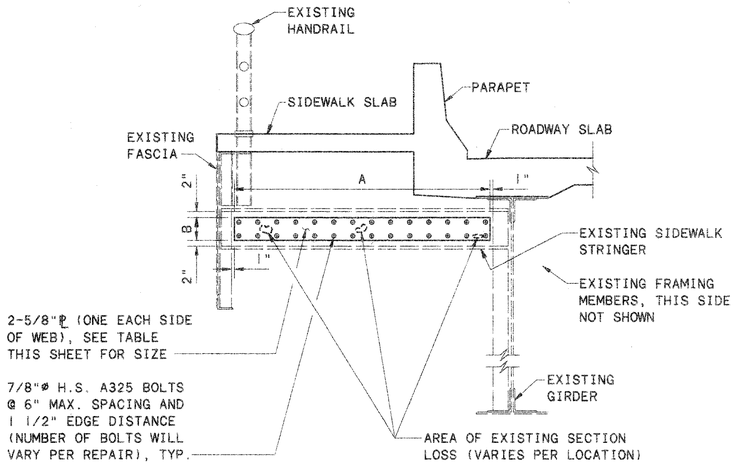
DESIGNED RWM
DRAWN GTC
CHECKED MAK
REVIEWED RKM
DATE 14-Feb-96
REVISED
STRUCTURE FILE NUMBER 480517

STRUCTURAL STEEL REHAB. DETAILS 3 - LOWER LATERAL BRACING
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

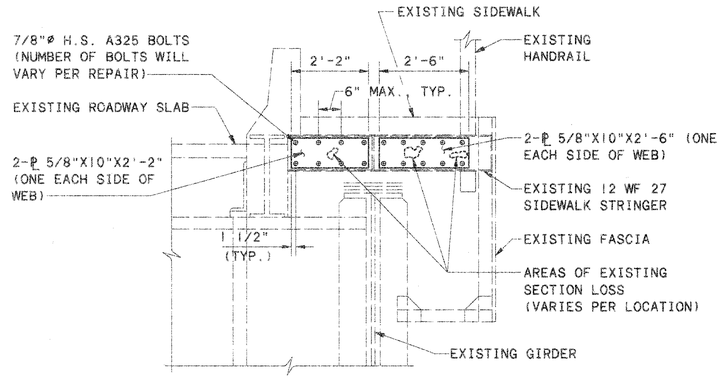
LUC-280

63/126

N:\PROJECTS\PR149\2\CADD\STL\REH 8-7-95 12:51:42 pm

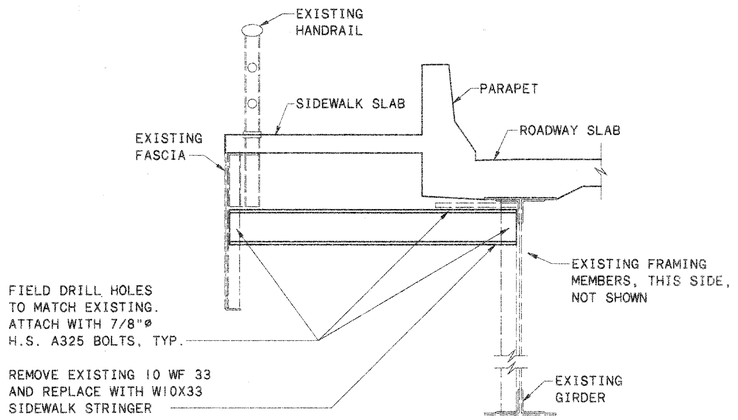


SIDEWALK STRINGER REPAIR
DETAIL 22 THROUGH 41
(UNIT 2 AND RAMP E-E)

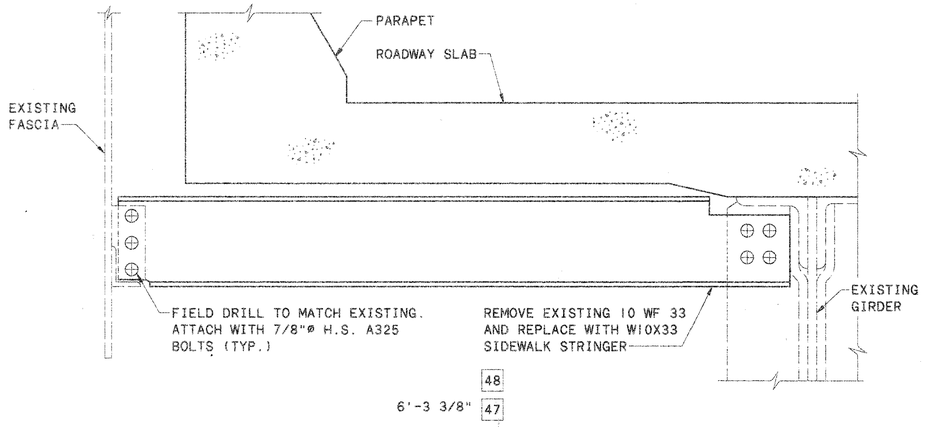


SIDEWALK STRINGER REPAIR
DETAIL 42 THROUGH 45
(BASCULE SPAN)

TABLE FOR DETAILS 22 THROUGH 41		
DETAIL NUMBER	PLATE DIMENSIONS A	B
22	6'-8"	7 5/8"
23	7'-0"	7 5/8"
24	7'-0"	7 5/8"
25	7'-2"	7 5/8"
26	7'-4"	7 5/8"
27	7'-0"	7 5/8"
28	7'-0"	7 5/8"
29	7'-0"	7 5/8"
30	7'-0"	7 5/8"
31	5'-8"	7 5/8"
32	5'-8"	7 5/8"
33	6'-6"	7 5/8"
34	6'-6"	7 5/8"
35	7'-4"	7 5/8"
36	7'-6"	7 5/8"
37	8'-6"	7 5/8"
38	9'-2"	7 5/8"
39	7'-2"	7 5/8"
40	3'-2"	6"
41	2'-8"	1'-2"



SIDEWALK STRINGER REPAIR
DETAIL 46
(UNITS 2)



SIDEWALK STRINGER REPLACEMENT DETAIL 47 AND 48
(UNITS 2)

NOTES

SEE SHEET 6 / 126 FOR GENERAL NOTES.

SEE SHEET 61 / 126 FOR LOCATIONS OF REPAIRS AND REPLACEMENT OF SIDEWALK STRINGERS.

LEGEND

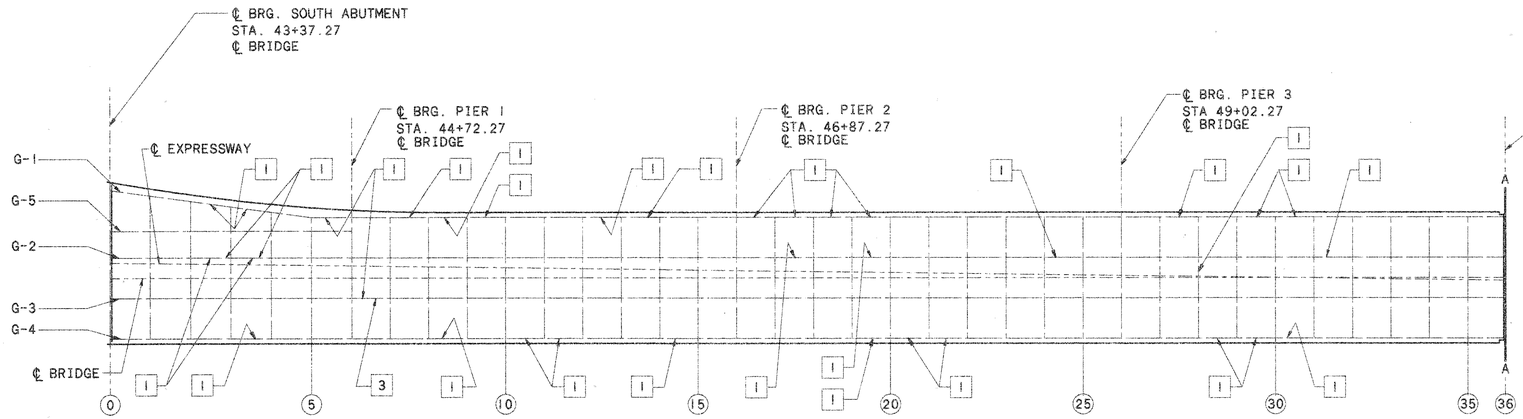
- REHABILITATION NUMBER, SEE SHEET 62 / 126 .

BURGESS & NIPLE ENGINEERS ARCHITECTS

DESIGNED RWM | DRAWN WHW | REVIEWED RKM | DATE 14-Feb-96 | CHECKED MAK | REVISED | STRUCTURE FILE NUMBER 480517

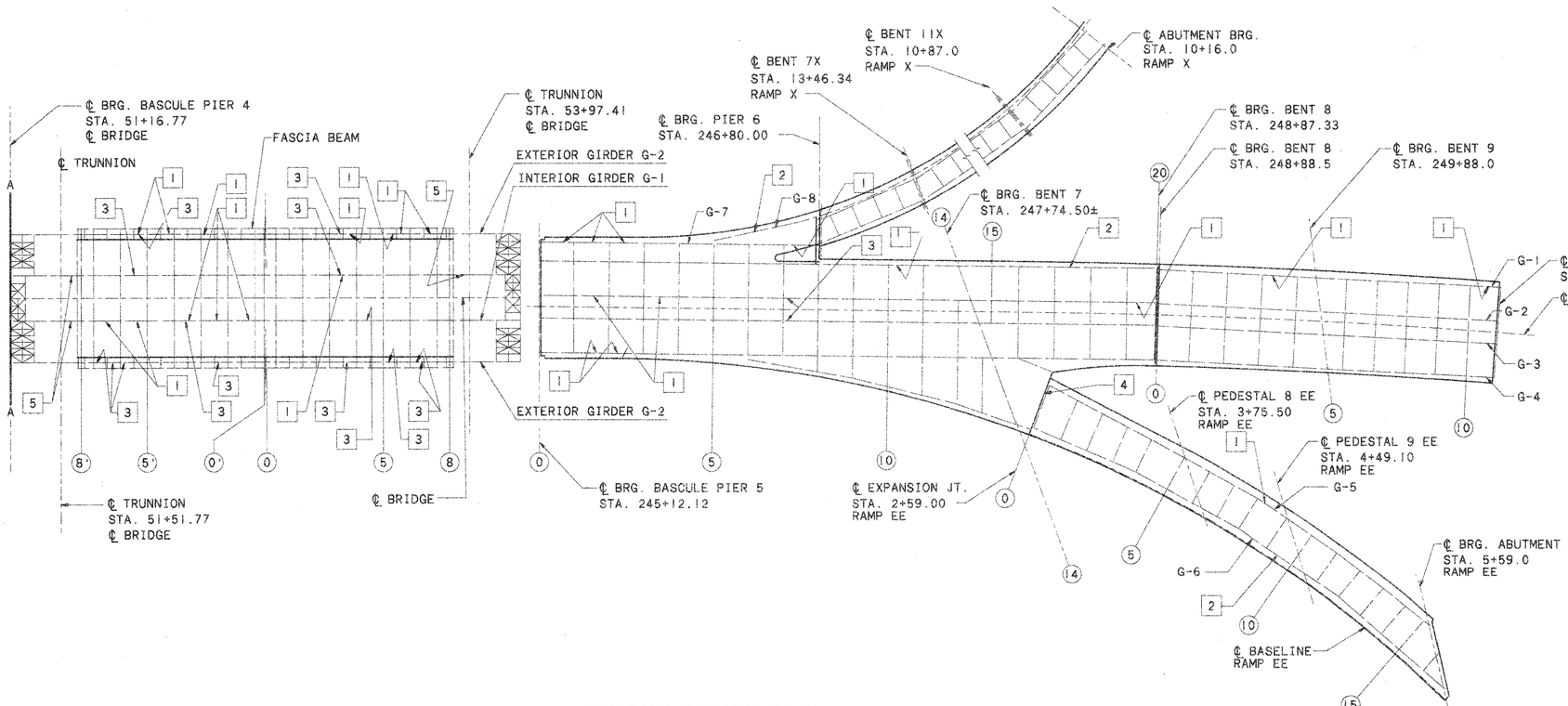
STRUCTURAL STEEL REHAB. DETAILS 4 - SIDEWALK STRINGER DETAILS
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280



NOTES:

- NOT ALL FRAMING MEMBERS SHOWN FOR CLARITY.
- CONTRACTOR SHALL VERIFY LOCATIONS OF REPAIRS.
- REPAIR AREAS ARE LOCATED ON ARROWHEAD SIDE.



EXISTING FRAMING PLAN

LEGEND

(0) - FLOOR BEAM NUMBER (NUMBERED CONSECUTIVELY BETWEEN LIMITS SHOWN)

[1] - REPAIR SHALL CONSIST OF REPLACING BENT 3/4"ø BAR, CLIP ANGLES AND RIVETS ASSOCIATED WITH THE CONNECTION ON THE CLIP ANGLE TO GIRDER AND WELDING BAR TO NEW ANGLE AND EXISTING STIFFENERS.

[2] - REPAIR SHALL CONSIST OF ADDING 3/4"ø BAR WHERE A BAR IS MISSING AND REPLACING CLIP ANGLES AND RIVETS ASSOCIATED WITH THE CONNECTION OF THE CLIP ANGLE TO GIRDER AND WELDING BAR TO NEW ANGLE AND EXISTING STIFFENERS.

[3] - REPAIR SHALL CONSIST OF REPLACING CLIP ANGLES AND RIVETS ASSOCIATED WITH THE CONNECTION OF THE CLIP ANGLE TO GIRDER WHERE THE EXISTING WELD IS BROKEN. WELD EXISTING BAR TO NEW ANGLE AND REPAIR ANY BROKEN TACK WELDS BETWEEN EXISTING BAR AND EXISTING STIFFENERS.

[4] - WINDLOCK REPAIR

[5] - PINION SUPPORT REHABILITATION

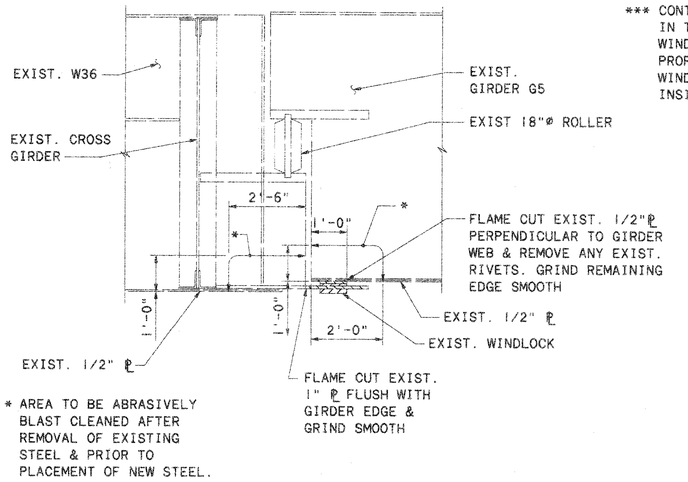
WORK THIS SHEET WITH SHEET [66/126].

ENGINEERS
ARCHITECTS

DESIGNED RWM
DRAWN WHW
CHECKED MAK
REVISED
REVIEWED RKM 14-Feb-96
STRUCTURE FILE NUMBER 480517

STRUCTURAL STEEL REHABILITATION DETAILS 5 LOCATION PLAN
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

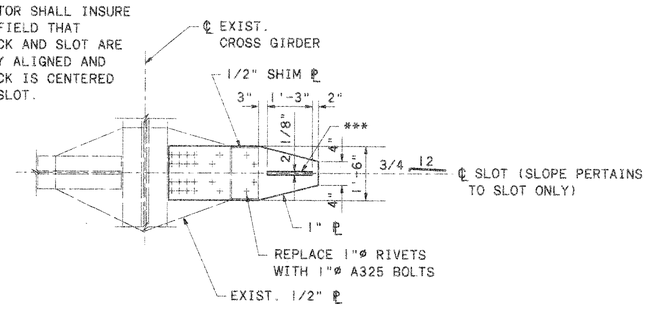
LUC-280



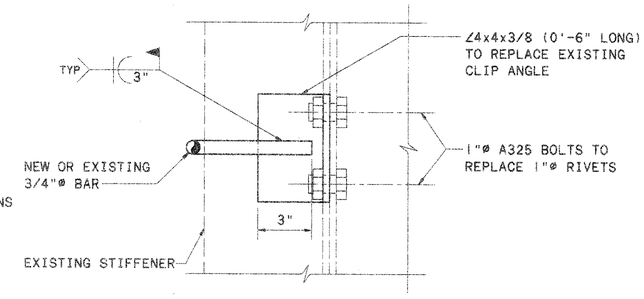
* AREA TO BE ABRASIVELY BLAST CLEANED AFTER REMOVAL OF EXISTING STEEL & PRIOR TO PLACEMENT OF NEW STEEL.

WIND LOCK REMOVAL

*** CONTRACTOR SHALL INSURE IN THE FIELD THAT WIND LOCK AND SLOT ARE PROPERLY ALIGNED AND WIND LOCK IS CENTERED INSIDE SLOT.

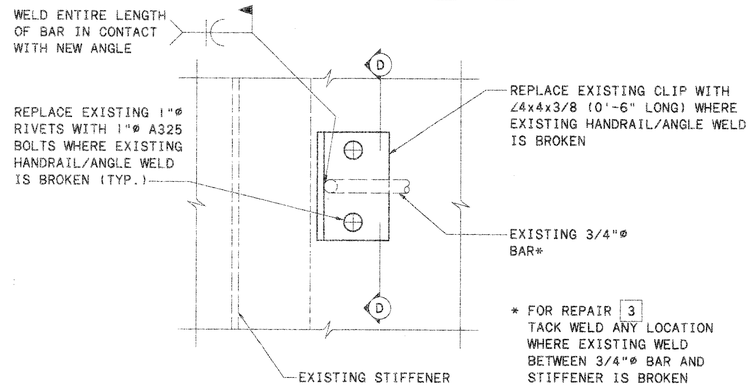


VIEW (A)



SECTION (D)

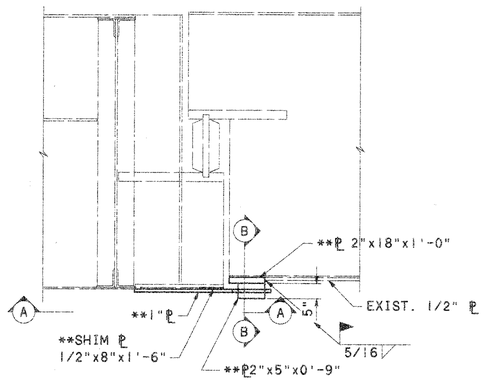
TYPICAL FOR REPAIR 1, 2 AND 3



* FOR REPAIR 3 TACK WELD ANY LOCATION WHERE EXISTING WELD BETWEEN 3/4"ø BAR AND STIFFENER IS BROKEN

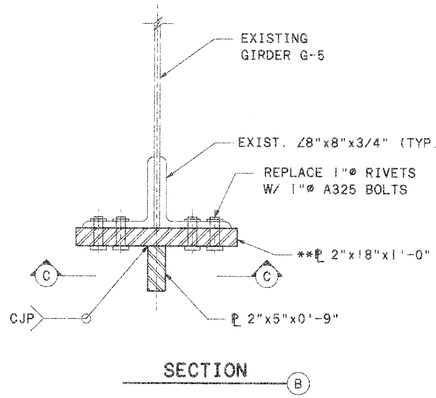
HANDRAIL REPLACEMENT DETAIL

TYPICAL FOR REPAIR 3

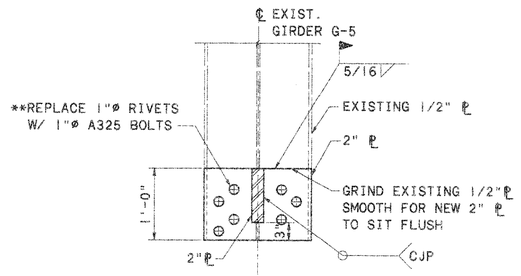


WIND LOCK DETAIL

**BOLT HOLES IN PROPOSED STEEL SHALL BE FIELD DRILLED TO MATCH EXIST. BOLT PATTERNS

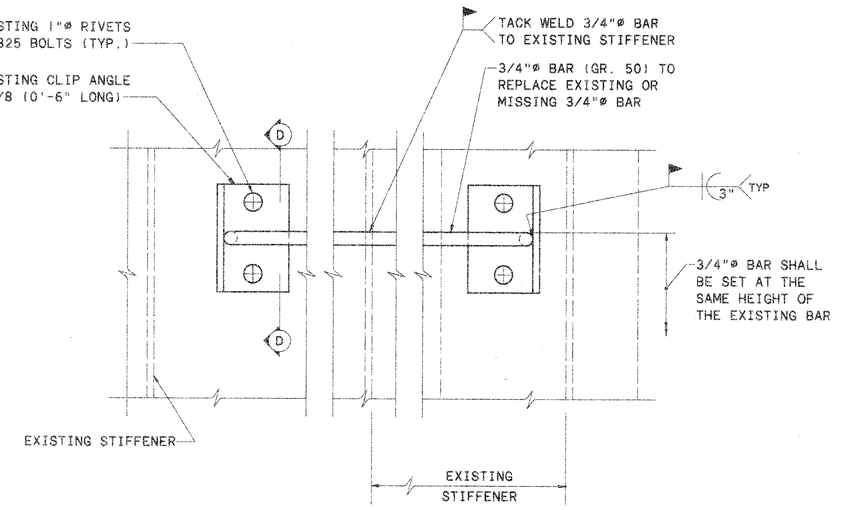


SECTION (B)



SECTION (C)

WORK THIS SHEET WITH SHEET 65/126 FOR LOCATIONS OF REPAIRS.



HANDRAIL REPLACEMENT DETAIL

TYPICAL FOR REPAIR 1 AND 2

ENGINEERS ARCHITECTS

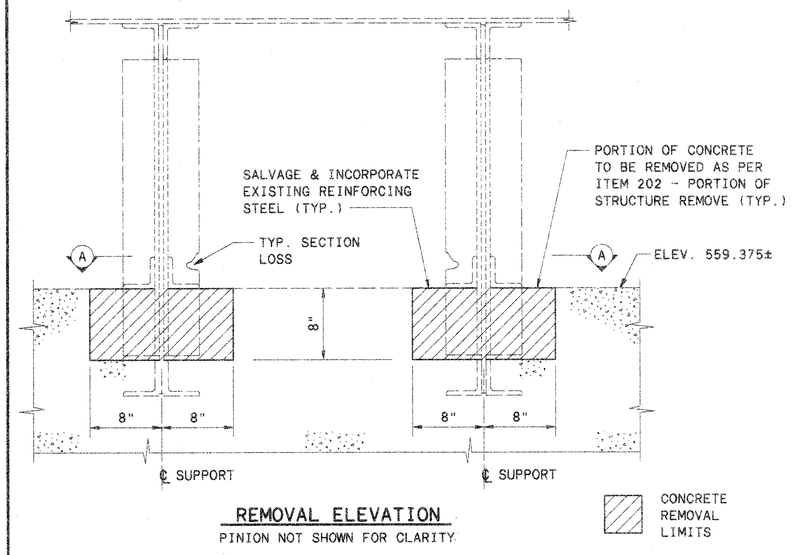
DESIGNED JAP | DRAWN RFJ | REVISED RKM | DATE 14-Feb-16
CHECKED RWM | REVISED | STRUCTURE FILE NUMBER 480591.7

STRUCTURAL STEEL REHAB. DETAILS 6 - WIND LOCK AND HANRAIL
BRIDGE NO. LUC-280-0346 OVER MAUMEE RIVER

LUC-280

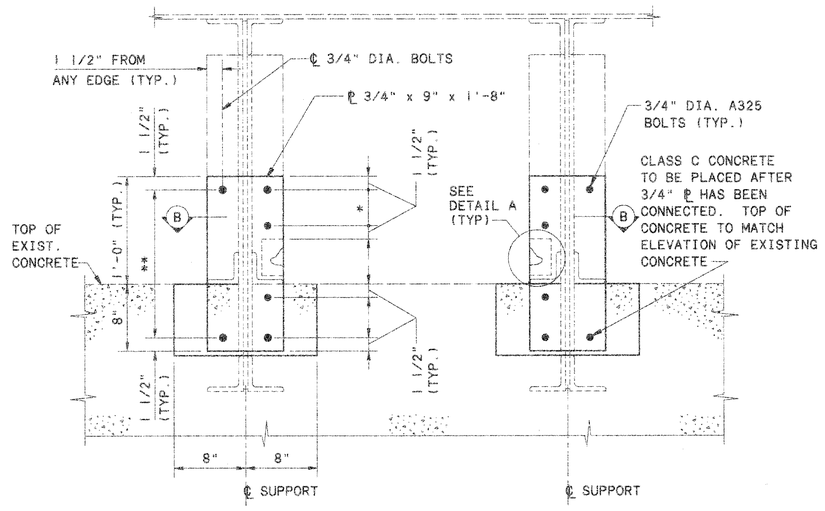
66/126

N:\PROJECTS\PR1491.2\CADD\DETAILS2 8-7-95 9:21:04 am



REMOVAL ELEVATION

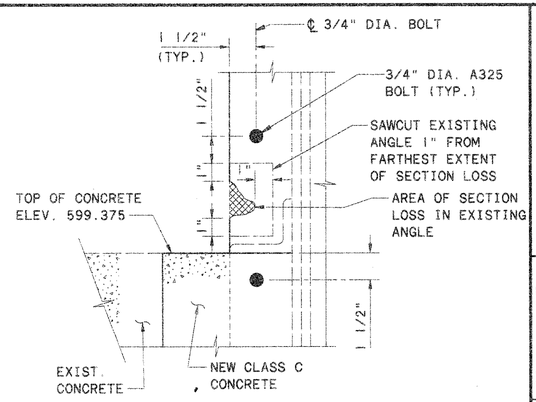
PINION NOT SHOWN FOR CLARITY



REPAIR ELEVATION

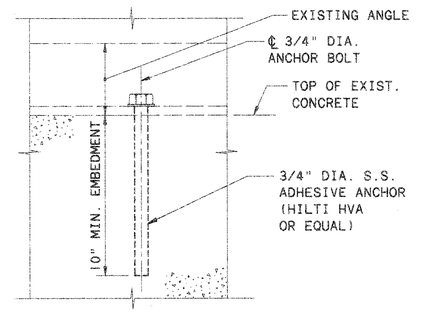
* BASED ON THE EXTENT OF SAW CUTTING, CONTRACTOR SHALL DETERMINE SPACING OF 3/4" DIA. BOLTS (2 1/2" MIN., 4" MAX.)(TYP.)

** 6 3/4" DIA. BOLTS SHALL BE SPACED @ 5 EQUAL SPACES (TYP.)



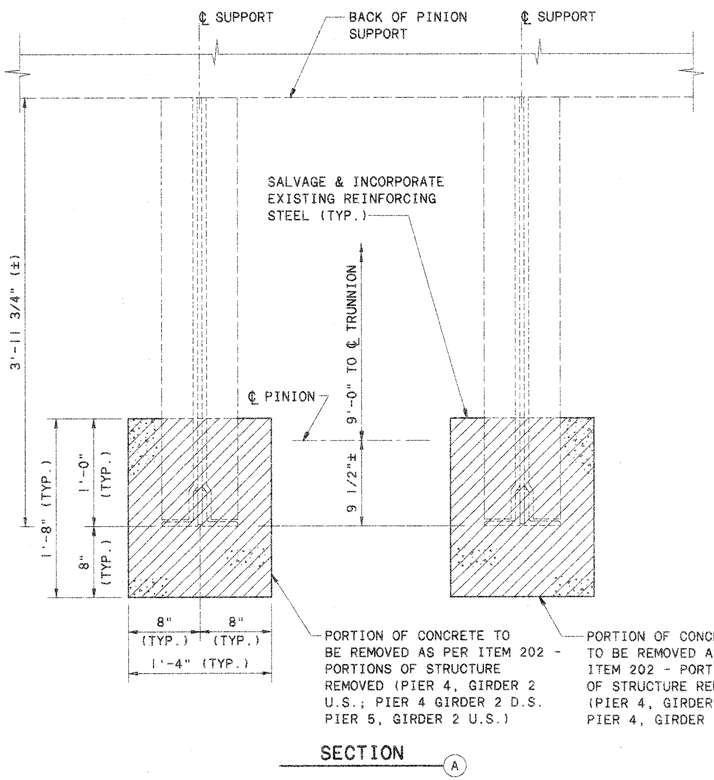
DETAIL A

3/4" ℄ NOT SHOWN FOR CLARITY

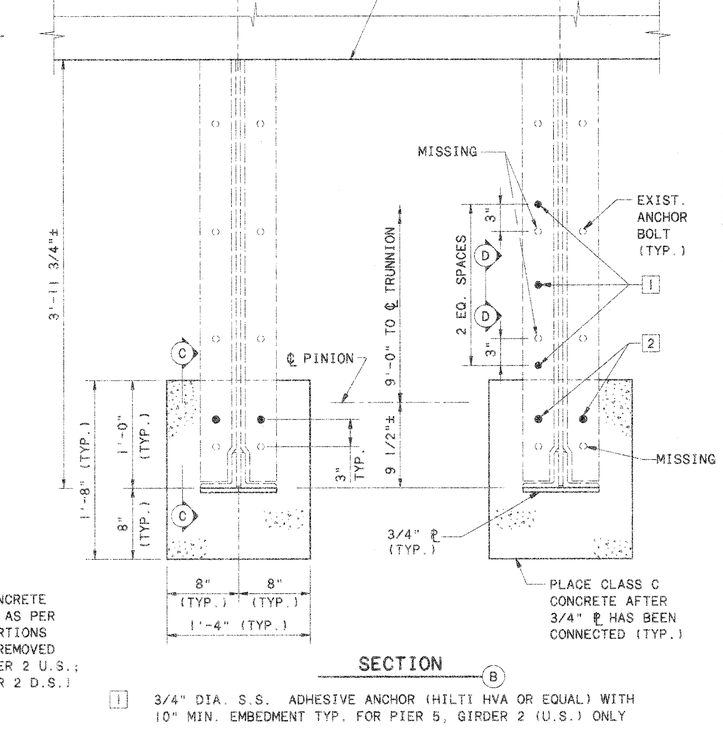


SECTION D

TYP. FOR ANCHOR BOLTS PLACED IN EXIST. CONCRETE



SECTION A



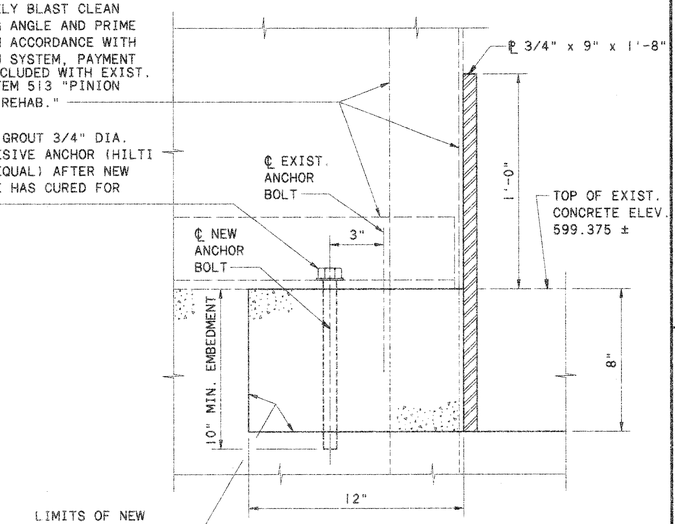
SECTION B

1 3/4" DIA. S.S. ADHESIVE ANCHOR (HILTI HVA OR EQUAL) WITH 10" MIN. EMBEDMENT TYP. FOR PIER 5, GIRDER 2 (U.S.) ONLY

2 3/4" DIA. S.S. ADHESIVE ANCHOR (HILTI HVA OR EQUAL) WITH 10" MIN. EMBEDMENT TYP. FOR AREAS WHERE NEW CONCRETE HAS BEEN PLACED.

AFTER SAW CUTTING AREA OF SECTION LOSS, ABRASIVELY BLAST CLEAN EXISTING ANGLE AND PRIME PAINT IN ACCORDANCE WITH THE OZEU SYSTEM, PAYMENT TO BE INCLUDED WITH EXIST. ANGLE ITEM 513 "PINION SUPPORT REHAB."

DRILL & GROUT 3/4" DIA. S.S ADHESIVE ANCHOR (HILTI HVA OR EQUAL) AFTER NEW CONCRETE HAS CURED FOR 7 DAYS.



SECTION C

CONNECTION BETWEEN 3/4" ℄ & EXIST. ANGLE NOT SHOWN FOR CLARITY

WORK SHEET WITH SHEET 65/126 FOR LOCATION OF REPAIRS.

STRUCTURAL STEEL REHABILITATION DETAILS 5-PINION SUPPORTS

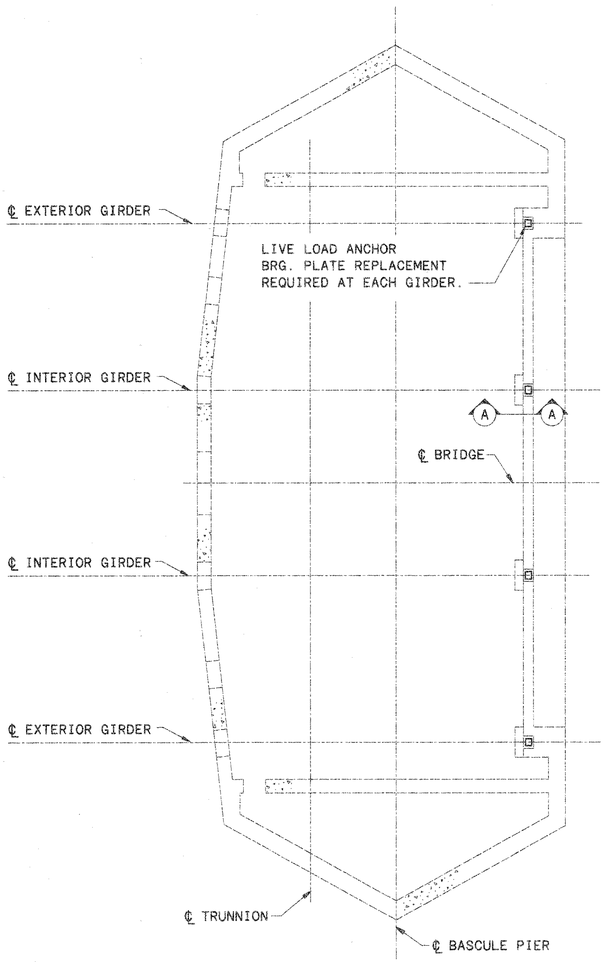
BRIDGE NO. LUC-280-0346 OVER MAUMEE RIVER

LUC-280

67/126

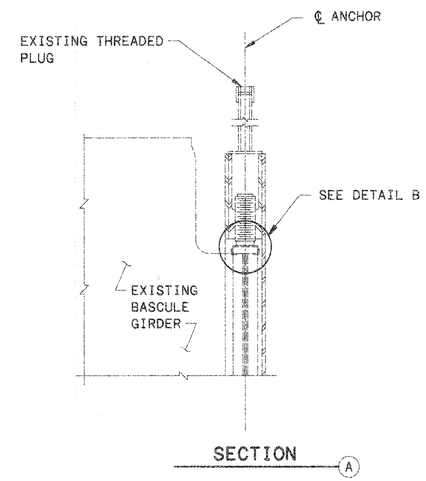
DESIGNED JAP | DRAWN GTC | CHECKED MAK | REVISED | DETAILED RM77 | DATE 14-Feb-96 | STRUCTURE FILE NUMBER 480517

N:\PROJECTS\PR1493\CADD\SSREH015 8-4-95 9:43:42 am

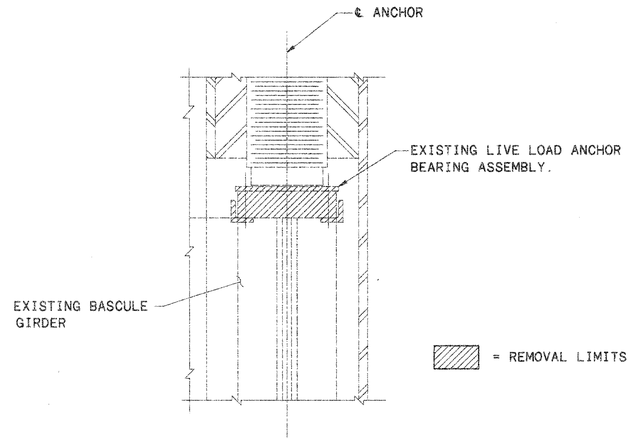


BASCULE PLAN AT ELEV. 620.5

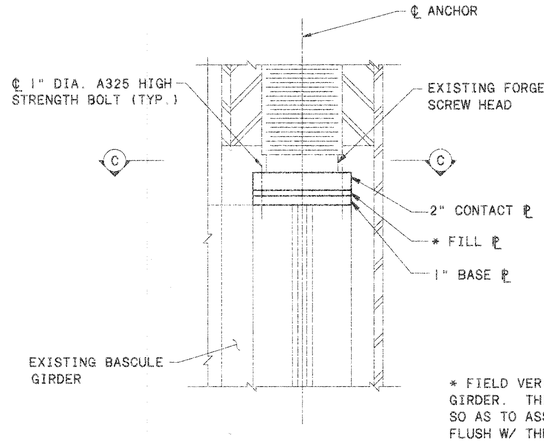
(PIER 5 SHOWN, PIER 4 SIMILAR)



SECTION A

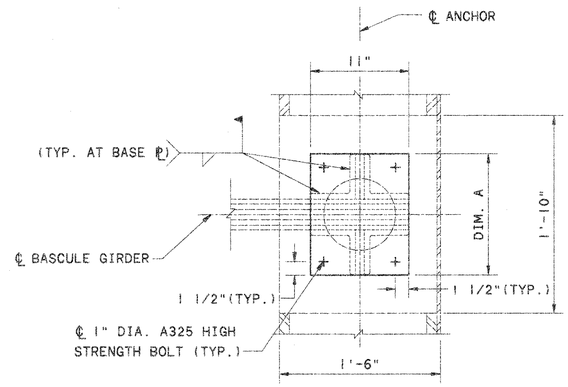


DETAIL (REMOVAL) B



DETAIL (REPAIR) B

* FIELD VERIFY FILL ℄ THICKNESS AT EACH GIRDER. THICKNESS SHALL BE DETERMINED SO AS TO ASSURE THE CONTACT ℄ BEARS FLUSH W/ THE EXISITING FORGED STEEL SCREW HEAD.



SECTION B

GIRDER	DIM. A
INTERIOR	13 1/2"
EXTERIOR	12"

NOTE:

1. BASCULE PARAPET CONSTRUCTION AND THE PLACEMENT OF COUNTER WEIGHTS SHALL BE COMPLETED PRIOR TO BEGINNING LIVE LOAD ANCHOR BEARING REPLACEMENT.

[redacted]
ENGINEERS
ARCHITECTS

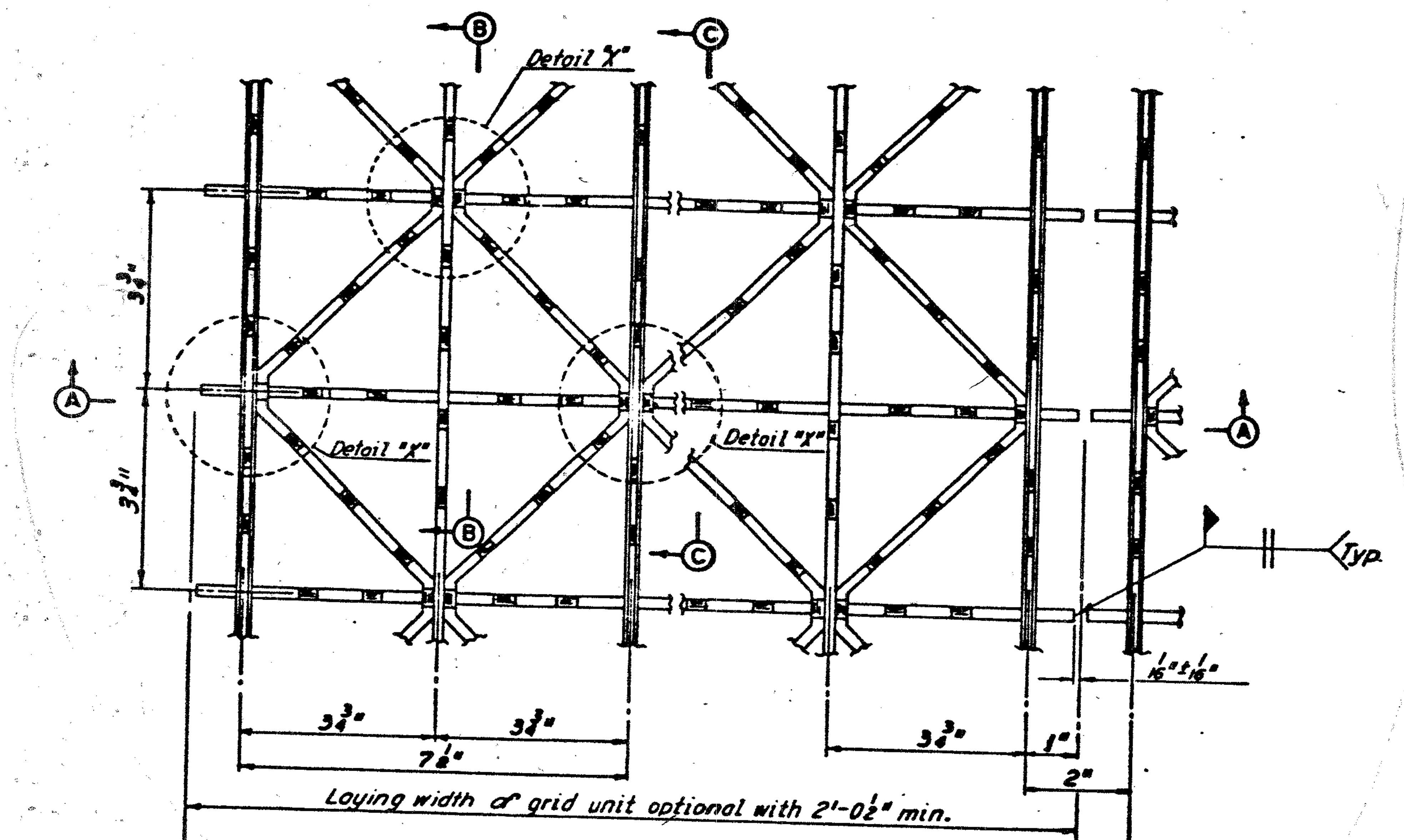
DESIGNED MAK
DRAWN JMD
CHECKED JMD
REVIEWED RHM
DATE 14-Feb-96
REVISED
STRUCTURE FILE NUMBER 4805917

STRUCTURAL STEEL REHAB. DETAILS 8 - LIVE LOAD ANCHOR REPAIRS
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

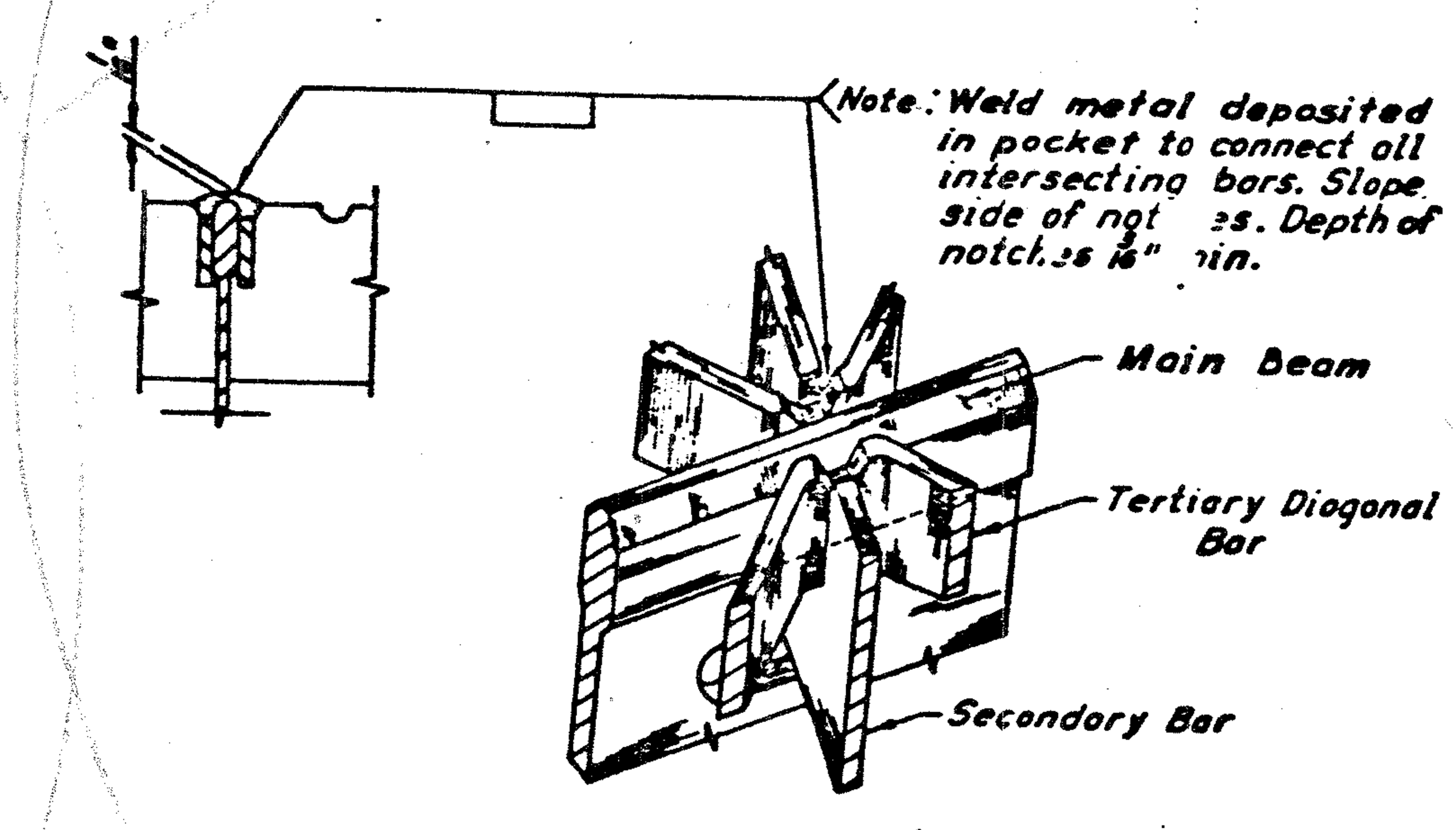
LUC-280

68/126

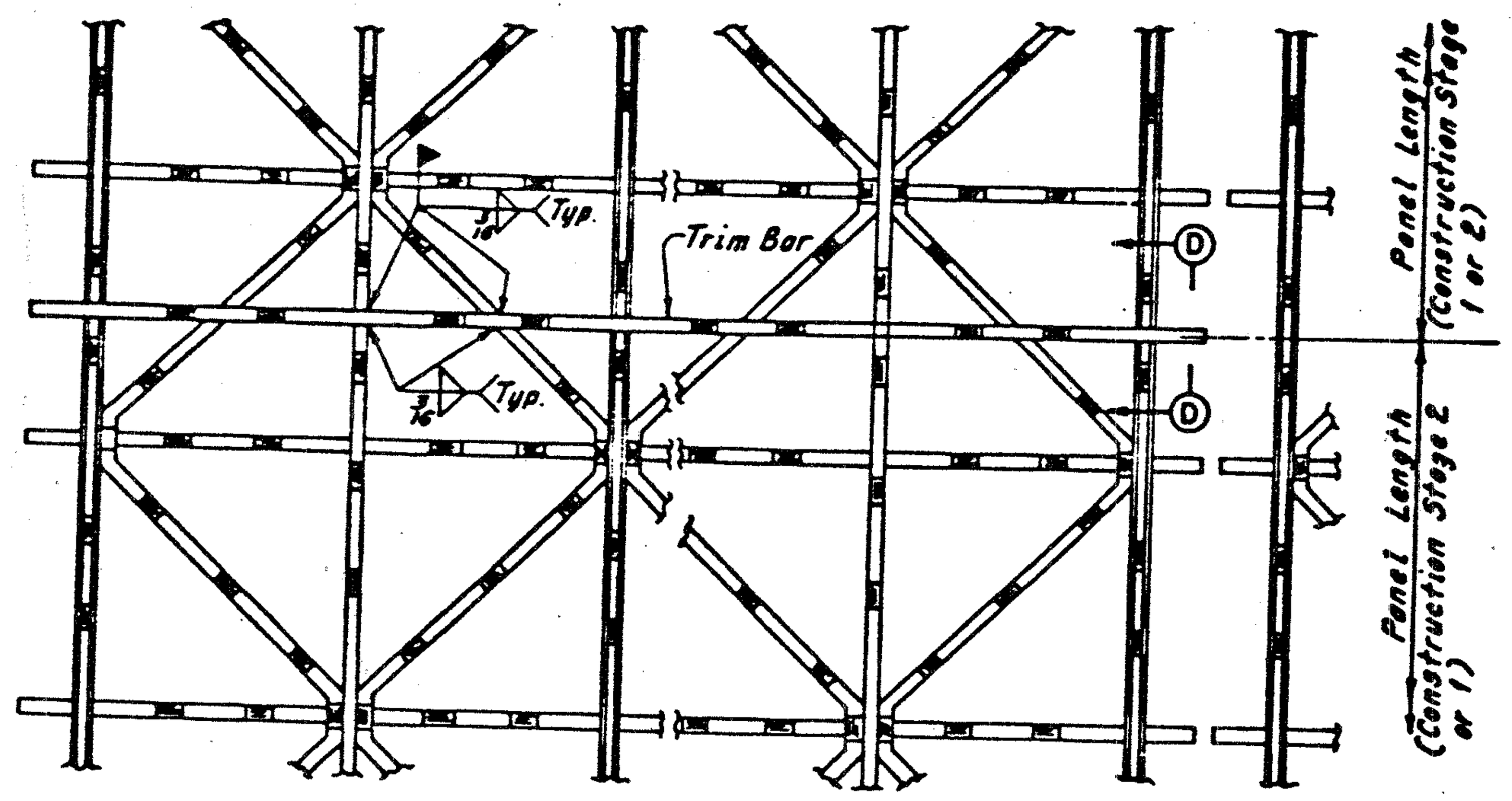
LIVELOAD 8-14-95 2:04.04 pm



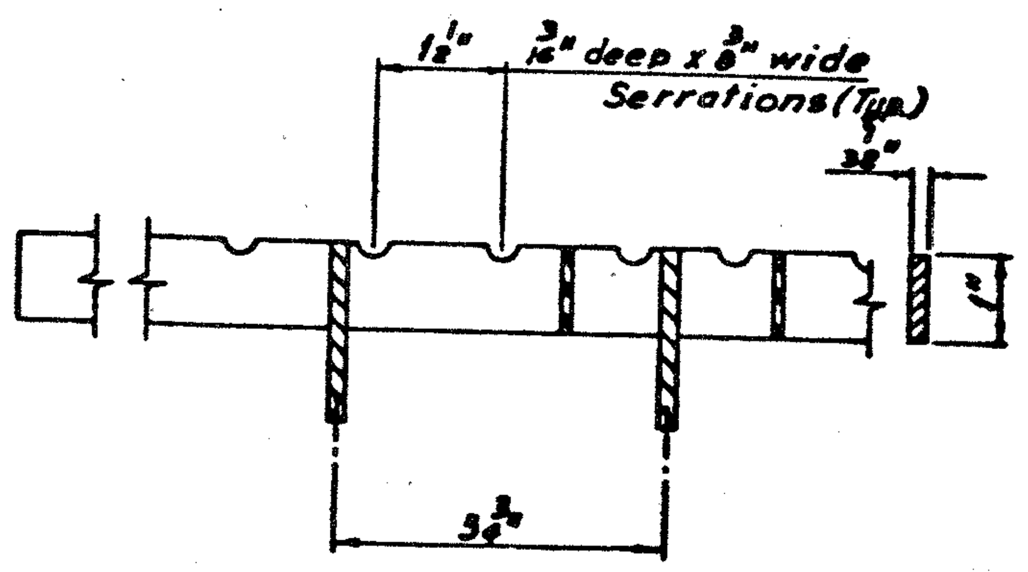
PLAN



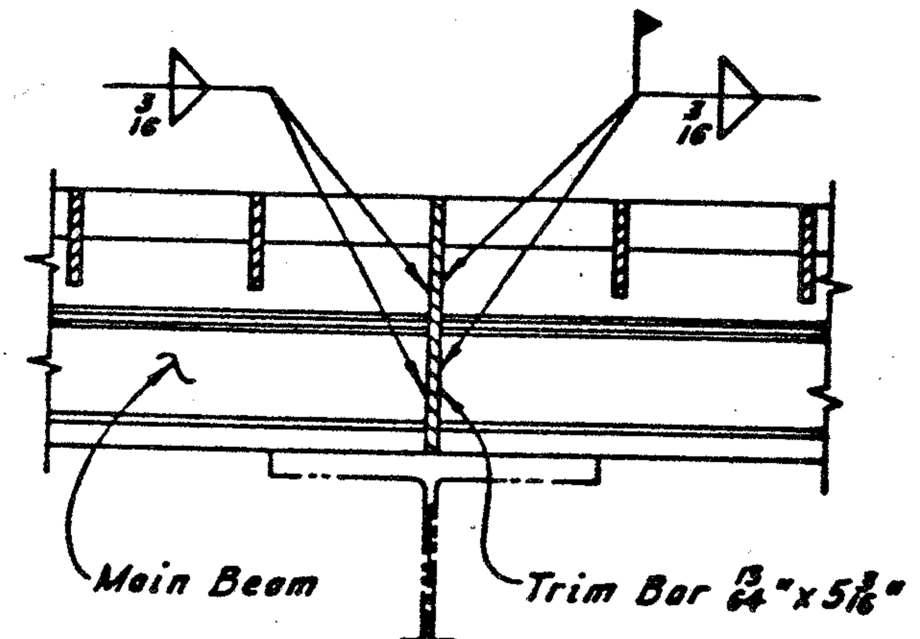
DETAIL "X"



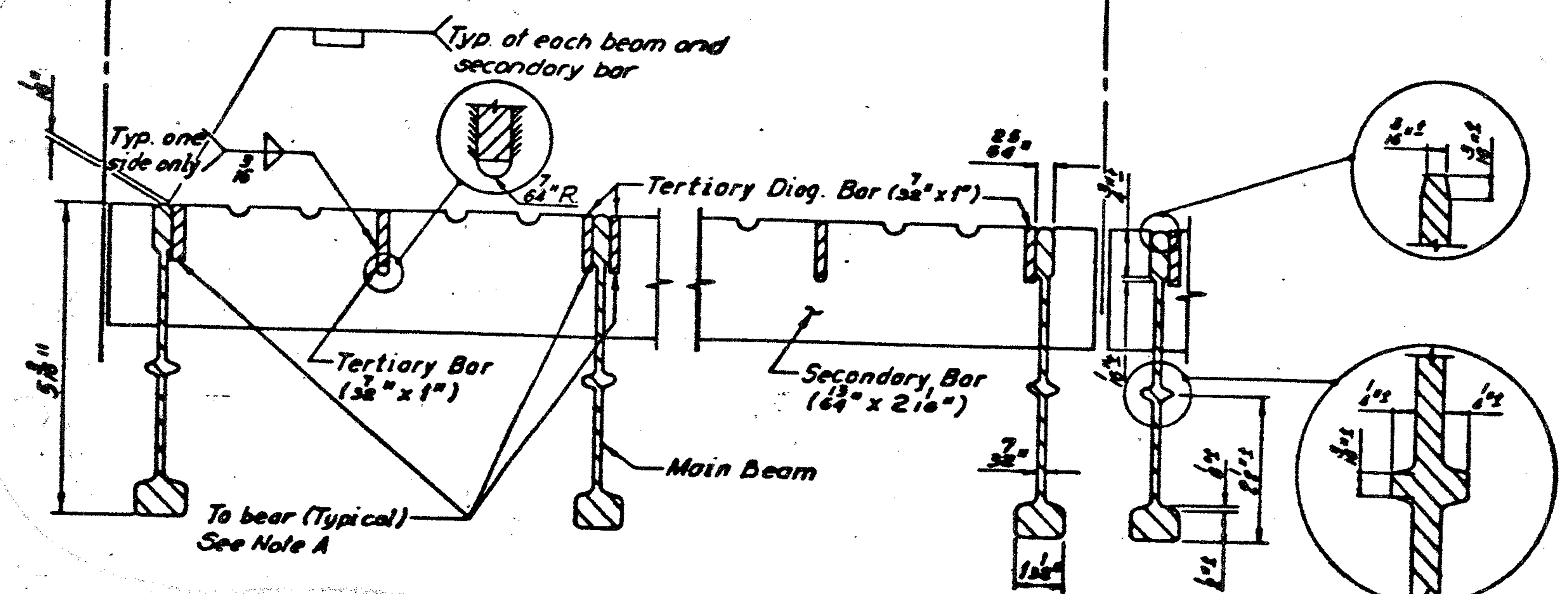
PLAN AT TRIM BAR



SECTION B-B

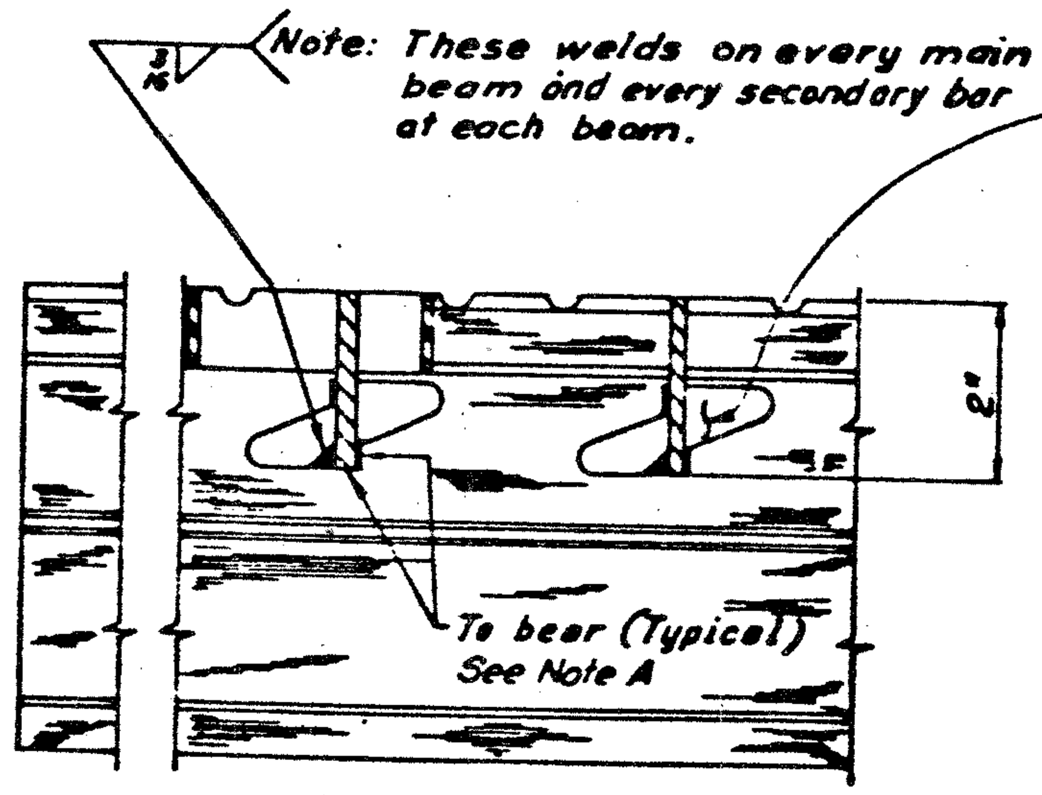


SECTION D-D
(Typical at Main Beam)



SECTION A-A

Final dimensions including all fillet dimensions shall be submitted to the Director for approval. Calculations shall be included with this submittal showing that the minimum specified section moduli are provided.



SECTION C-C

Slot in main beam as required for installation of slotted secondary bar. Configuration of slot in main beam shall be subject to the approval of the Director.

METAL FORM STRIPS

Metal form strips, where required, shall be No 20 gauge or thicker, of such width and fit as to make reasonable mortar tight joints. The metal form strips shall be A-366 steel.

is defined as a ere is physical ne-half of the e and there is this surface in ch.

Note:

5" Open Steel Grid Floor shall be A-588 steel, except as noted for the metal form strips, and shall weigh not more than 20 lbs per square foot and not less than 18 lbs per square foot with main beams placed transverse to traffic. The minimum gross section modulis of the main beams shall be as follows:

1.221 inches cubed (Top)
2.114 inches cubed (Bottom)

NOTE:
This sheet is from the original set of plans, and is for information only.

68A / 126

HOWARD NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND — HNTB

5" OPEN STEEL GRID FLOOR DETAILS

MAUMEE RIVER BRIDGE — BASCULE SPAN
BR. NO. LUC.-280-0346

LUCAS COUNTY — OHIO

DRAWN D.L.R.	TRACED D.L.R.	CHECKED R.H.W.	REVIEWED A.J.	REVISED	SHEET 13/17

PAINT THE FOLLOWING PER SYSTEM EEU:

ALL STRUCTURAL STEEL INSIDE THE BASCULE PIERS INCLUDING, BUT NOT LIMITED TO:

1. COUNTERWEIGHT EXTERIOR STRUCTURAL STEEL EXCLUDING A PORTION OF THE TOP (THE TOP WILL BE EPOXY URETHANE SEALED)
2. INTERIOR OF POCKETS FOR BALANCE BLOCKS AT COUNTERWEIGHT SHALL NOT BE PAINTED
3. TRUNNION SUPPORT COLUMNS
4. MISCELLANEOUS LADDERS
5. STEEL STAIRS
6. HANDRAILING
7. STEEL DOORS AND THEIR FRAMES
8. CATWALKS (WALKWAYS AT ELEV. 615.00±)
9. MONORAIL AND STEEL BEAM SUPPORTS
10. GIRDER WEBS, STIFFENERS, AND BOTTOM FLANGES
11. TRUNNIONS
12. ELECTRICAL DEVICES, BOXES, ETC. AS INDICATED ON SHEET 102/126
13. MACHINERY AS INDICATED ON SHEET 103/126.
14. WINDOW SASHES
15. MISCELLANEOUS STEEL AROUND GIRDER OPENINGS IN WALLS
16. ALL STRUCTURAL STEEL THAT IS BEING REPLACED AND/OR REHABILITATED AS PER ITEM 513. SOME PORTIONS REQUIRE PRIME PAINTING PRIOR TO INSTALLATION.

PAINT THE FOLLOWING PER SYSTEM OZEU:

STEEL PARTITION WALLS IN THE RESTROOM AREA OF THE OPERATOR'S HOUSE.

ALL STRINGER BEARINGS IN THE BASCULE SPAN 5.

ALL LOCATIONS ON CATWALK OF SPAN 5 WHERE THE EXISTING VERTICAL ANGLES CONNECT TO EXISTING 10 [15.3 STRINGERS AND RAILING.

ALL STRUCTURAL STEEL THAT IS BEING REPLACED AND/OR REHABILITATED AS PER ITEM 513 EXCEPT FOR AREAS LOCATED INSIDE BASCULE PIERS 4 & 5. SOME PORTIONS REQUIRE PRIME PAINTING PRIOR TO INSTALLATION.

ALL CORRODED AND/OR PACK RUSTED AREAS AS INDICATED BELOW SHALL BE SPOT PAINTED:

[1] BOLTS OF STRINGERS 1 TO 9 TO FLOORBEAMS 7 AND 8 IN THE NORTH BASCULE BETWEEN U.S. EXT. G-2 AND INT. G-1.

[2] ALL STEEL BELOW ACCESS LADDERS AT PIER BETWEEN G-2 AND G-3.

[3] WEST SIDE OF UPSTREAM INT. G-1 APPROX. 3 FEET NORTH OF FLOORBEAM 6 TO SOUTH BASCULE PIER.

[4] DIAGONAL BRACING UNDER FLOORBEAM 16 BETWEEN G-3 AND G-4 IN SPAN 8.

[5] WEST SIDE OF UPSTREAM INT. G-1 APPROX. 4 FEET UP FROM THE BOTTOM OF GIRDER IN SPAN 5.

[6] THE SIDEWALK CANTILEVER FOR FLOORBEAMS 4' TO 7' IN THE SOUTH BASCULE ON THE UPSTREAM SIDE.

[7] ADJACENT STRINGERS OVER FLOORBEAM 8' IN THE SOUTH BASCULE BETWEEN U.S. EXT. G-2 AND INT. G-1.

[8] FLOORBEAM 11 BETWEEN G-2 AND G-3 AT THE NORTH ABUTMENT IN SPAN 10.

[9] THE AREA BOUNDED BY G-3 AND G-4 AND FLOORBEAMS 19 AND 20 IN SPAN 8.

[10] LOWER LATERAL BRACING CONNECTION OF G-3 AND FLOORBEAM 33 IN SPAN 4.

[11] LOWER FLANGE ON THE NORTH FACE ON BOTH SIDES OF FLOORBEAM 33 IN SPAN 4.

[12] AREA UNDER THE GUSSET PLATE BETWEEN THE LOWER FLANGE OF ALL GIRDERS IN SPANS 2, 3, AND 4 (TYP.).

[13] LOWER LATERAL BRACING AT FLOORBEAM 25 AT G-3 IN SPAN 3.

[14] G-3 AT THE NORTH SIDE OF FLOORBEAM 24 IN SPAN 3.

[15] ALL LOWER LATERAL BRACING ADJACENT TO FLOORBEAM 24 IN SPAN 3.

[16] ON G-3 AT THE SOUTH SIDE OF FLOORBEAM 23 IN SPAN 3.

[17] UNDERSIDE OF THE LOWER LATERAL BRACING IN SPANS 2, 3, AND 4 BETWEEN G-2 AND G-3.

[18] BACKSIDE OF ALL INSPECTION HANDRAILS (NOT SHOWN).

[19] UNDERSIDE OF CANTILEVER FLOORBEAMS ON THE DOWNSTREAM AND UPSTREAM SIDE OF RAMP X.

[20] CANTILEVER FLOORBEAMS AT THE PIERS IN RAMP X.

[21] GIRDERS AT UNDERSIDE OF LOWER LATERAL BRACING GUSSET PLATES IN SPANS 2, 3, & 4.

[22] RAILING SUPPORT POSTS BELOW SIDEWALK GRATING ON WEST SIDE BETWEEN FLOORBEAMS 3 AND 5 IN THE BASCULE SPAN.

[23] CONDUIT PIPE BETWEEN G-3 AND G-4 AND BETWEEN FLOORBEAMS 32 AND 33 IN SPAN 4.

[24] BOTTOM OF LOWER LATERAL BRACING BETWEEN G-3 AND G-4 AND BETWEEN FLOORBEAMS 25 AND 26 IN SPAN 3.

[25] LOWER LATERAL BRACING BETWEEN G-3 AND G-4 AT FLOORBEAM 25 AND G-4.

[26] UPPER LATERAL BRACING AT G-4 AND FLOORBEAM 8 IN SPAN 2.

[27] LOWER LATERAL BRACING AT G-4 AND FLOORBEAM 8 IN SPAN 2.

[28] GUSSET PLATE AT BOTTOM OF FLOORBEAM 8 AND G-4 IN SPAN 2.

[29] THE LOWER FLANGE OF CURB SUPPORT AT FIRST SIDEWALK STRINGER SOUTH OF FLOORBEAM 3 IN SPAN 1 ON UPSTREAM SIDE.

[30] UNDERSIDE OF LOWER LATERAL BRACING BETWEEN G-1 AND G-2 AND BETWEEN FLOORBEAMS 32 AND 33 IN SPAN 4.

[31] STRINGER 2 AT THE SOUTH FACE OF FLOORBEAM 28 IN SPAN 4 BETWEEN G-1 AND G-2.

[32] BOTTOM OF LOWER LATERAL BRACING BETWEEN G-1 AND G-2 AND BETWEEN FLOORBEAMS 24 AND 26 IN SPAN 3.

[33] LOWER LATERAL BRACING BETWEEN G-1 AND G-2 BETWEEN FLOORBEAMS 17 AND 18 IN SPAN 3.

[34] UPPER LATERAL BRACING BETWEEN G-1 AND G-2 BETWEEN FLOORBEAMS 17 AND 18 IN SPAN 3.

[35] LOWER LATERAL BRACING BETWEEN G-1 AND G-2 AND BETWEEN FLOORBEAMS 13 TO 15 IN SPAN 2.

[36] LOWER LATERAL BRACING BETWEEN G-1 AND G-2 AND BETWEEN FLOORBEAMS 6 AND 7 IN SPAN 2.

[37] LOWER FLANGE OF G-2 BETWEEN FLOORBEAMS 6 AND 7 IN SPAN 2.

[38] LOWER LATERAL BRACING BETWEEN G-1 AND G-2 AND FLOORBEAMS 26 AND 27 IN SPAN 4.

[39] BOTTOM FLANGE OF STRINGER 1 AT FLOORBEAM 18 BETWEEN G-1 AND G-2 AND FLOORBEAMS 18 AND 19 IN SPAN 3.

[40] UPPER LATERAL BRACING BETWEEN G-1 AND G-2 AND BETWEEN FLOORBEAMS 18 AND 19 IN SPAN 3.

[41] LOWER LATERAL BRACING BETWEEN G-1 AND G-2 AND BETWEEN FLOORBEAMS 18 AND 19 IN SPAN 3.

[42] ALL RIVET HEADS ON THE BOTTOM FLANGE OF G-1 BETWEEN FLOORBEAMS 19 THROUGH 23.

[43] SIDEWALK STRINGERS AND FASCIA BEAMS BETWEEN DOWNSTREAM CANTILEVER FLOORBEAMS 9 TO 21 IN SPAN 2.

[44] SIX STIFFENERS AT DOWNSTREAM SIDE OF G-3 AND PIER 8.

[45] TWO LOWER LATERAL CROSSFRAMES BETWEEN G-3 AND G-4 FROM FLOORBEAM 18 TO PIER 7.

[46] LOWER CHORD OF BRACING BELOW FLOORBEAMS BETWEEN G-3 AND G-4 FROM FLOORBEAM 18 TO PIER 7.

[47] UPSTREAM FACE OF G-1 BETWEEN PIER 8 AND MIDSPAN OF SPAN 9.

[48] G-1 AND G-4 IN THE SOUTH BASCULE SPAN ON THE OUTSIDE FACES.

[49] ALL DIAGONAL BRACING UNDER PROPOSED FINGER AND STRIP SEAL JOINTS.

CAULK THE FOLLOWING AREAS AS INDICATED IN PROPOSAL NOTE, "FIELD PAINTING OF EXISTING STEEL, SYSTEM OZEU":

ALL CRIMPED STIFFENERS OF ALL GIRDERS ON THE BRIDGE.

BOLTED/RIVETED SPLICE CONNECTIONS OF ALL GIRDERS ON THE BRIDGE.

NOTES

WORK THIS SHEET WITH SHEET 70/126. SEE SHEET 10/126 FOR GENERAL NOTES.

DETAILED DRAWINGS OF THE EXISTING STRUCTURE MAY BE INSPECTED AT THE ODOT DISTRICT OFFICE.

LEGEND

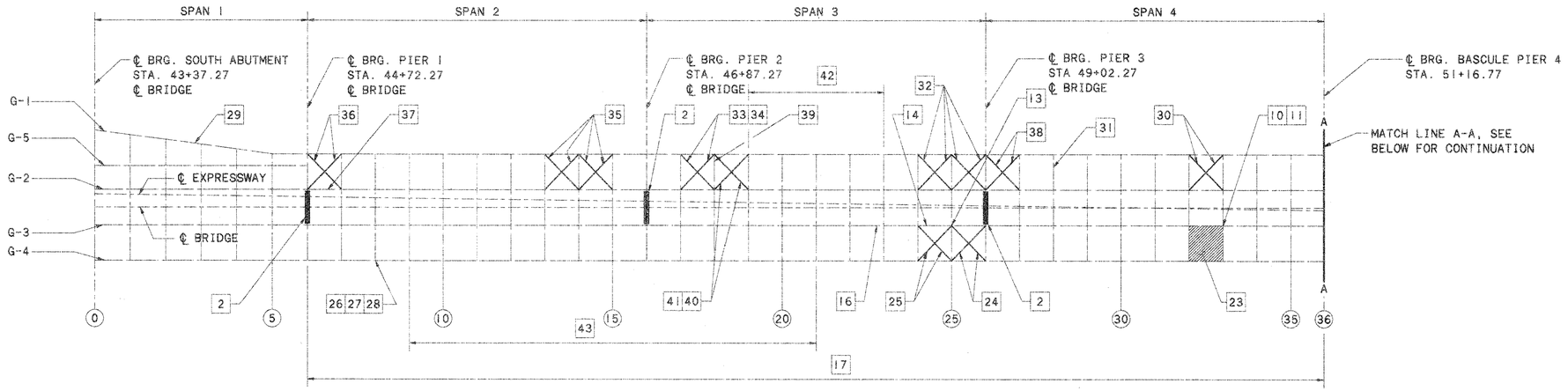
INT.	-	INTERIOR
EXT.	-	EXTERIOR
U.S.	-	UPSTREAM SIDE
G	-	GIRDER
APPROX.	-	APPROXIMATELY
[#]	-	PAINTING LOCATION NUMBER. SEE SHEET 70/126 FOR LOCATION PLAN.

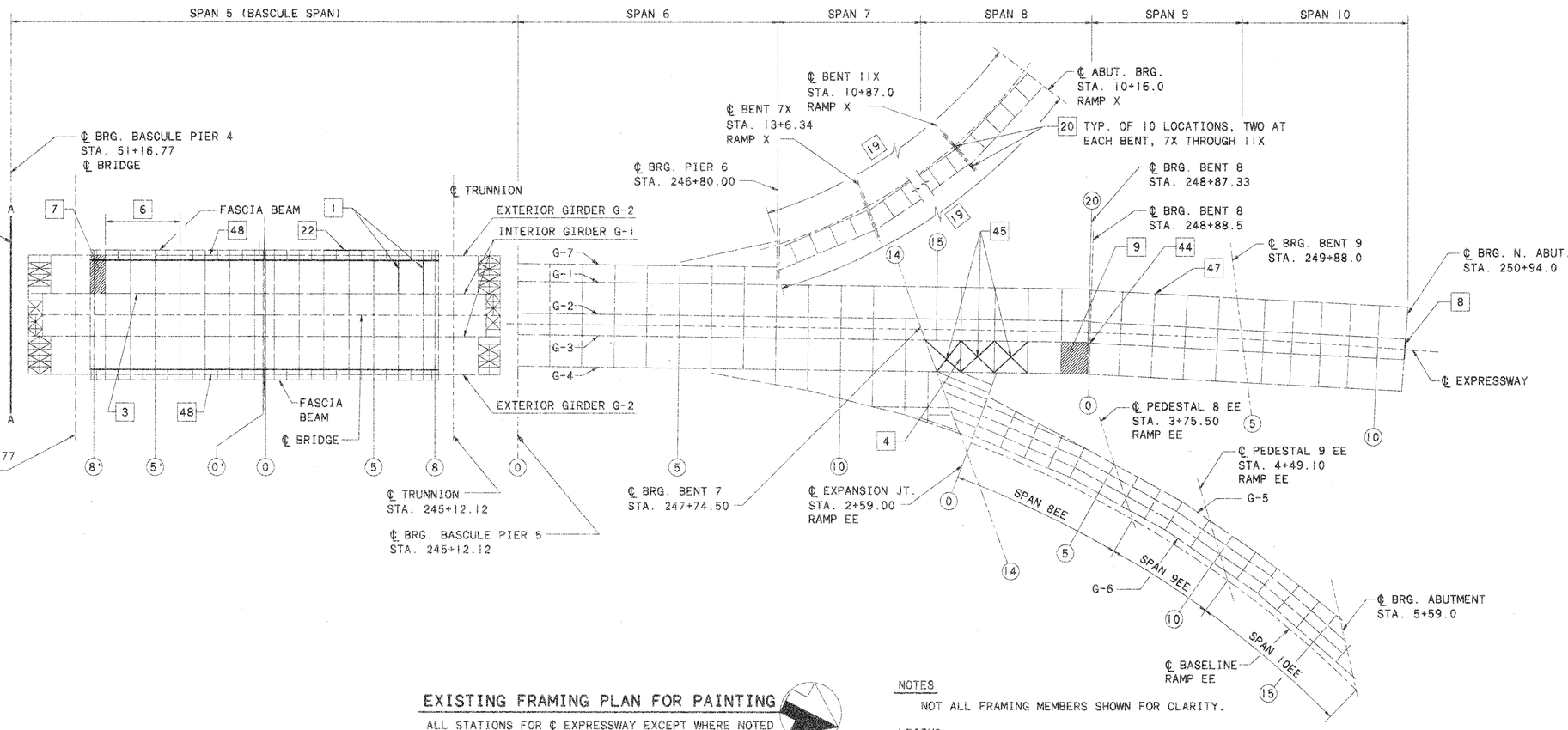
[redacted] ENGINEERS ARCHITECTS

REVIEWED RKT77	DATE 14-Feb-96
STRUCTURE FILE NUMBER 4805917	
DRAWN WHW	REVISED
DESIGNED RWM	CHECKED MAK

PAINTING DETAILS I
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280





EXISTING FRAMING PLAN FOR PAINTING

ALL STATIONS FOR ℄ EXPRESSWAY EXCEPT WHERE NOTED

NOTES

NOT ALL FRAMING MEMBERS SHOWN FOR CLARITY.

LEGEND

(*) - FLOOR BEAM NUMBER (NUMBERED CONSECUTIVELY BETWEEN LIMITS SHOWN)

[*] - SPOT PAINTING DESCRIPTION NUMBER. SEE SHEET 69/126 FOR LIST.

ENGINEERS
ARCHITECTS

DESIGNED RWM
DRAWN WHW
CHECKED MAK
REVISED
REVIEWED RWM DATE 14-Feb-96
STRUCTURE FILE NUMBER 4805917

PAINTING DETAILS 2
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

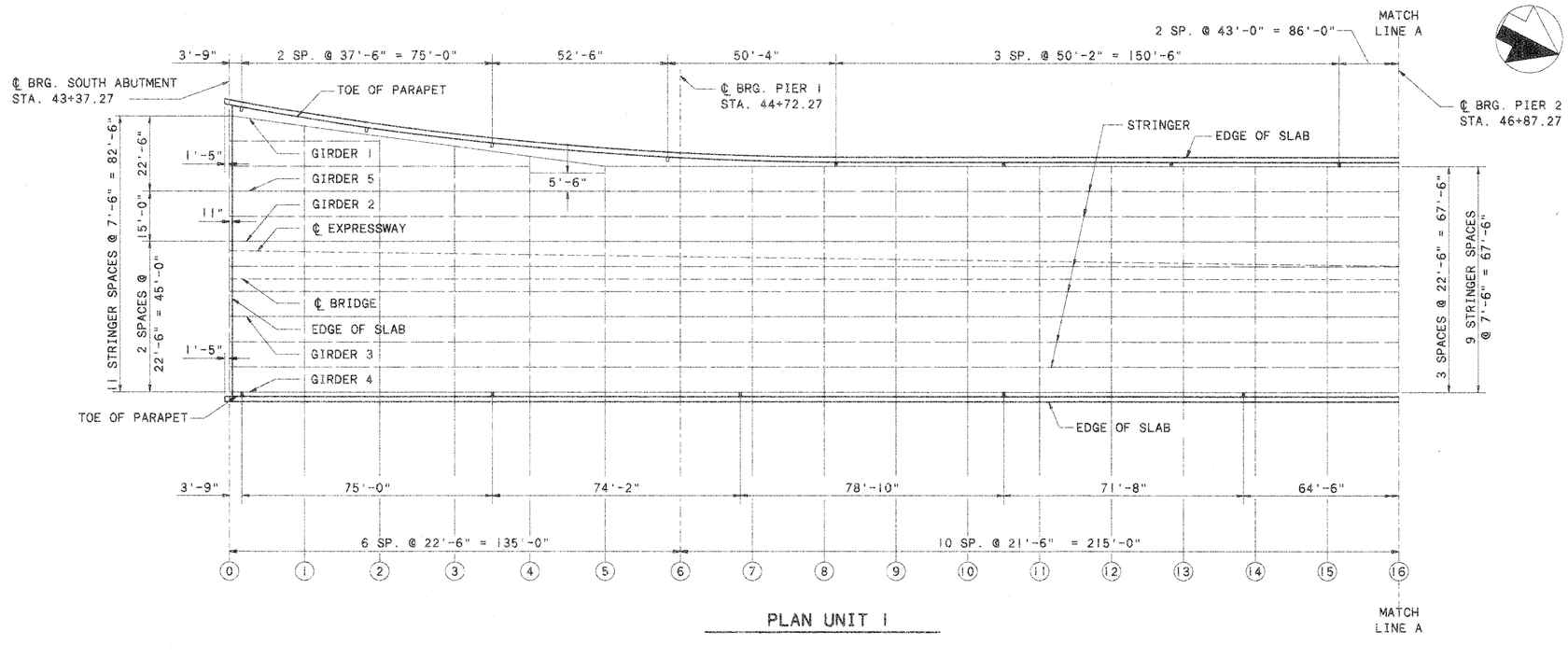
70/126

N:\PROJECTS\PR14912\CADD\FRMPAINT 8-8-95 11:13:46 am

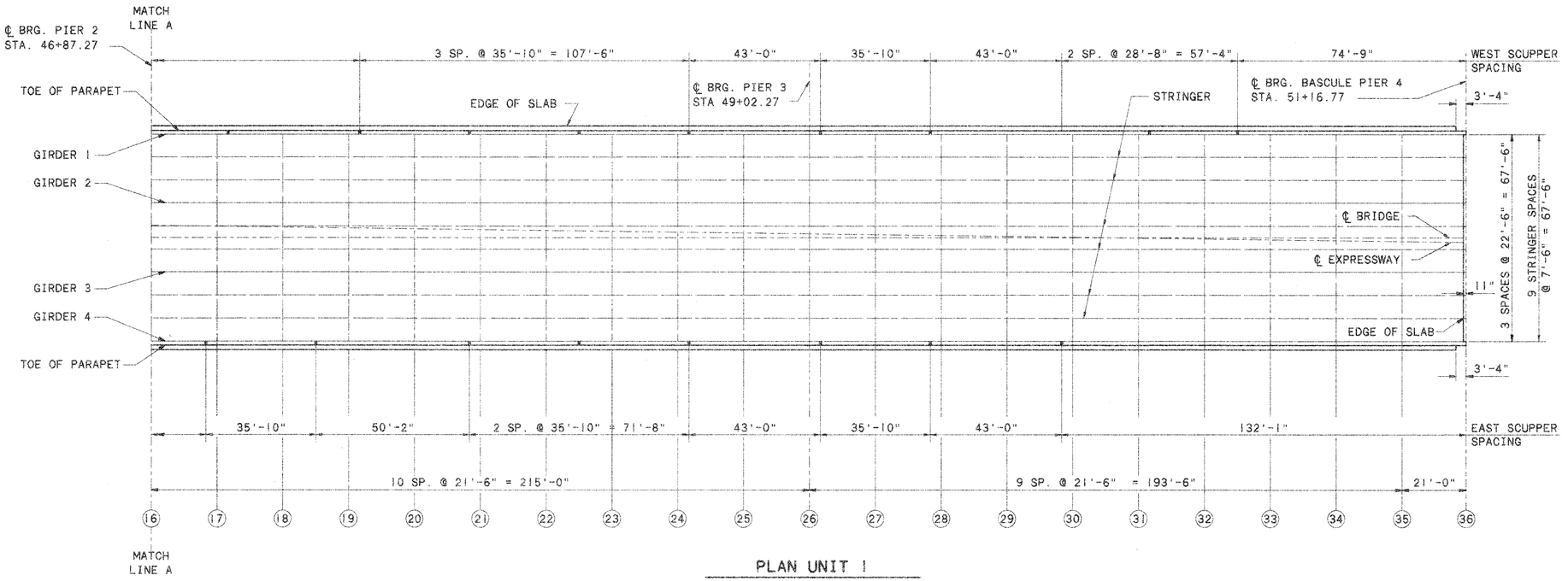
UNIT 1 - SLAB OVERHANG DISTANCES		
PANEL PT.	GIRDER 1	GIRDER 4
0	4'-7 5/8"	2'-9"
1	3'-9 3/4"	2'-9"
2	3'-5"	2'-9"
3	3'-7 3/4"	2'-9"
4	4'-3 1/4"	2'-9"
5	5'-5 1/2"	2'-9"
6	4'-0 3/4"	2'-9"
7	3'-2 3/4"	2'-9"
8	2'-9 1/2"	2'-9"
9 THRU 36	2'-9"	2'-9"

NOTE:
1. SEE SHEET 75/126 FOR SCUPPER DETAILS.
2. SLAB OVERHANG DISTANCES ARE MEASURED FROM ℄ GIRDER TO EDGE OF SLAB AND ARE NORMAL TO ℄ GIRDER.
3. NOT ALL FRAMING MEMBERS SHOWN FOR CLARITY.
4. SIDEWALKS NOT SHOWN.
5. STATIONING ALONG ℄ BRIDGE.

▪ SCUPPER TYPE A
▫ SCUPPER TYPE B



PLAN UNIT 1



PLAN UNIT 1

PARTIAL FRAMING PLAN - UNIT 1
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

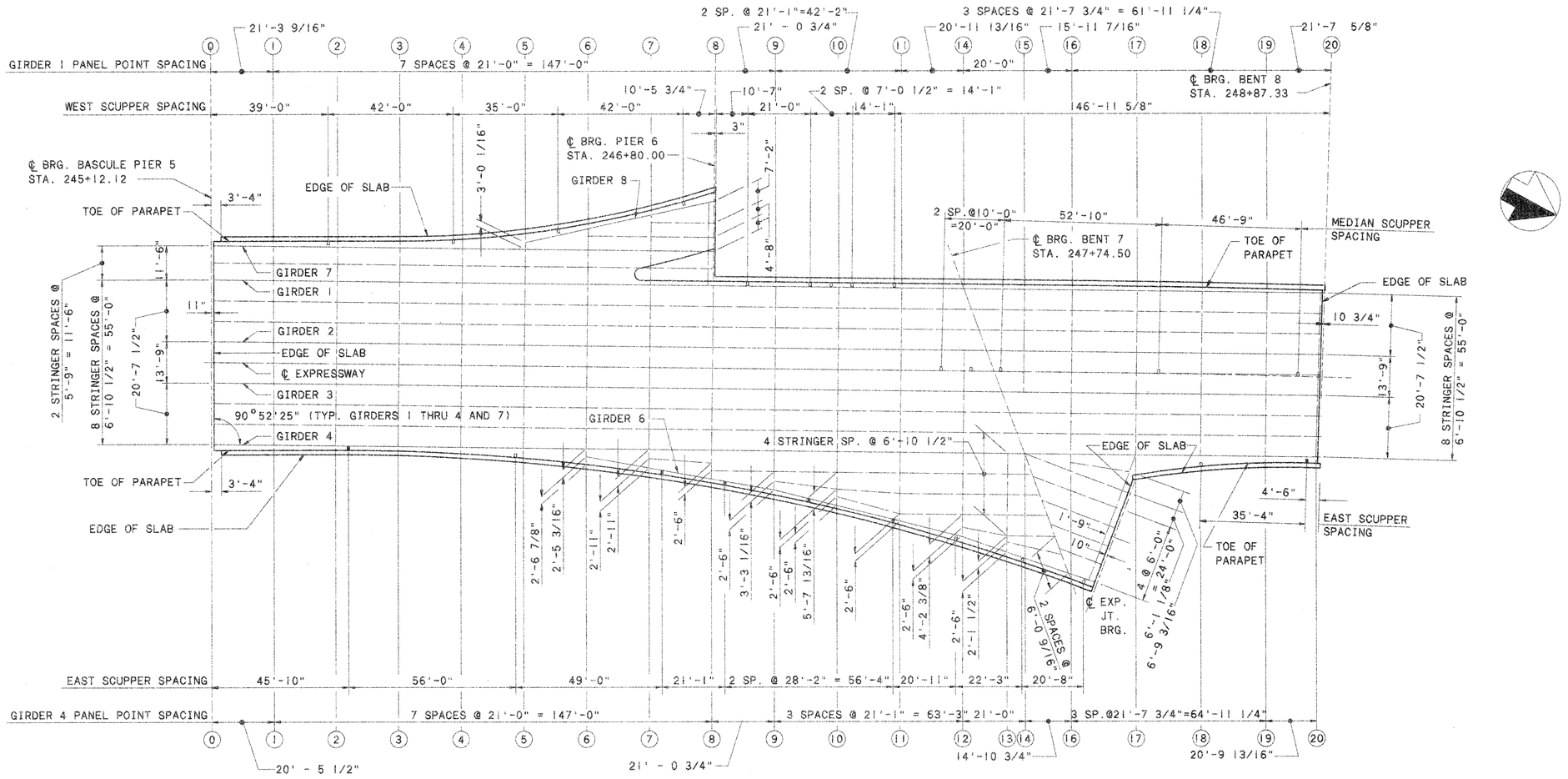
LUC-280

71/126

DESIGNED JAP
DRAWN RF J
CHECKED JMD
REVISED
REVIEWED RKM
DATE 14-Feb-96
STRUCTURE FILE NUMBER 4805917

ENGINEERS ARCHITECTS

N:\PROJECTS\PR14912\CADD\FRAME1N3 8-7-95



PLAN UNIT 2

STATIONING ALONG ℄ EXPRESSWAY
(SIDEWALKS NOT SHOWN)

* SCUPPER TYPE A
□ SCUPPER TYPE B

NOTE:

1. SEE SHEET 75/126 FOR SCUPPER DETAILS.
2. SLAB OVERHANG DISTANCES ARE MEASURED FROM ℄ GIRDER TO EDGE OF SLAB AND ARE NORMAL TO ℄ GIRDER.
3. NOT ALL FRAMING MEMBERS ARE SHOWN FOR CLARITY.
4. ALL SCUPPER SPACINGS ARE MEASURED HORIZONTAL.

UNIT 2 - SLAB OVERHANG DISTANCES

PANEL PT.	GIRDER 1	GIRDER 4	GIRDER 6	GIRDER 7	GIRDER 8
1	——	3'-2 1/2"	——	3'-3 3/8"	——
2	——	2'-10 3/4"	——	3'-7 1/4"	——
3	——	3'-3 1/2"	——	3'-11"	——
4	——	3'-5 3/8"	——	4'-9 7/8"	——
5	——	4'-7 3/4"	——	——	4'-6"
6	——	——	4'-0 1/2"	——	3'-4"
7	——	——	3'-1"	——	3'-6"
8	3'-5 1/8"	——	2'-9 1/4"	——	4'-5 7/8"
9	3'-6"	——	3'-1"	——	——
10	3'-6 1/2"	——	2'-7"	——	——
11	3'-7 1/4"	——	2'-8 7/8"	——	——
12	——	——	3'-7"	——	——
13	——	——	3'-3 1/2"	——	——
14	3'-7 3/8"	——	3'-5 3/4"	——	——
15	3'-8 1/2"	——	——	——	——
16	3'-9"	——	——	——	——
17	3'-9 3/8"	——	——	——	——
18	3'-8 5/8"	4'-6 1/8"	——	——	——
19	3'-6 3/4"	2'-11 1/2"	——	——	——
20	3'-3 1/2"	2'-8 1/2"	——	——	——

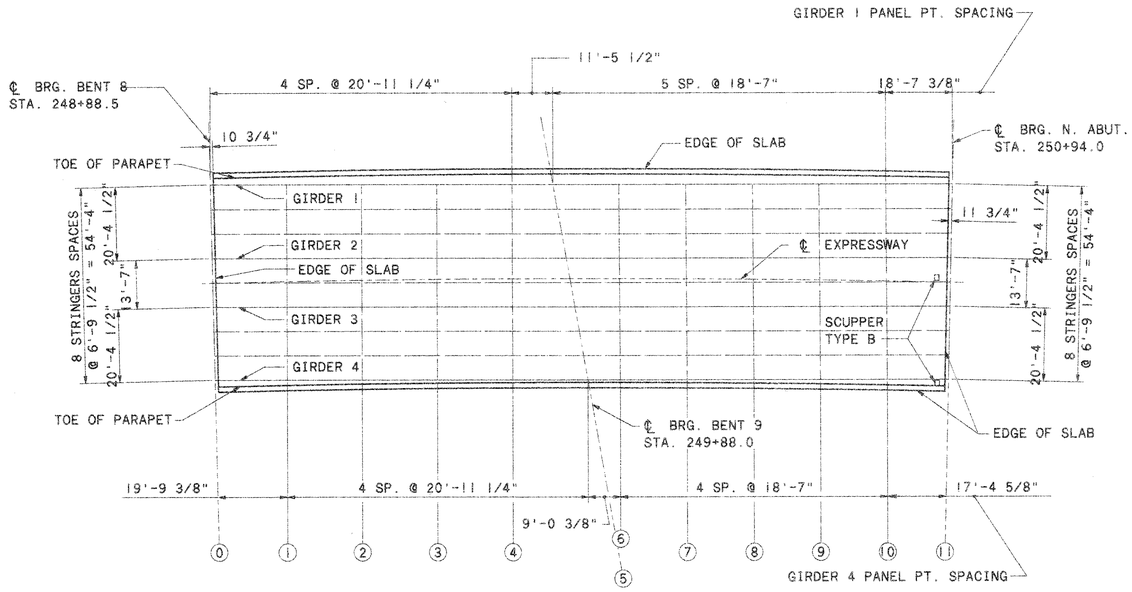
ENGINEERS
ARCHITECTS

DESIGNED JAP
DRAWN RFJ
CHECKED JMD
REVISED
REVISED RKM
DATE 11-Feb-16
STRUCTURE FILE NUMBER 480591?

PARTIAL FRAMING PLAN - UNIT 2
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

N:\PROJECTS\PR(491)2\CADD\FRAMPLN2 8-7-95



UNIT 3 PLAN

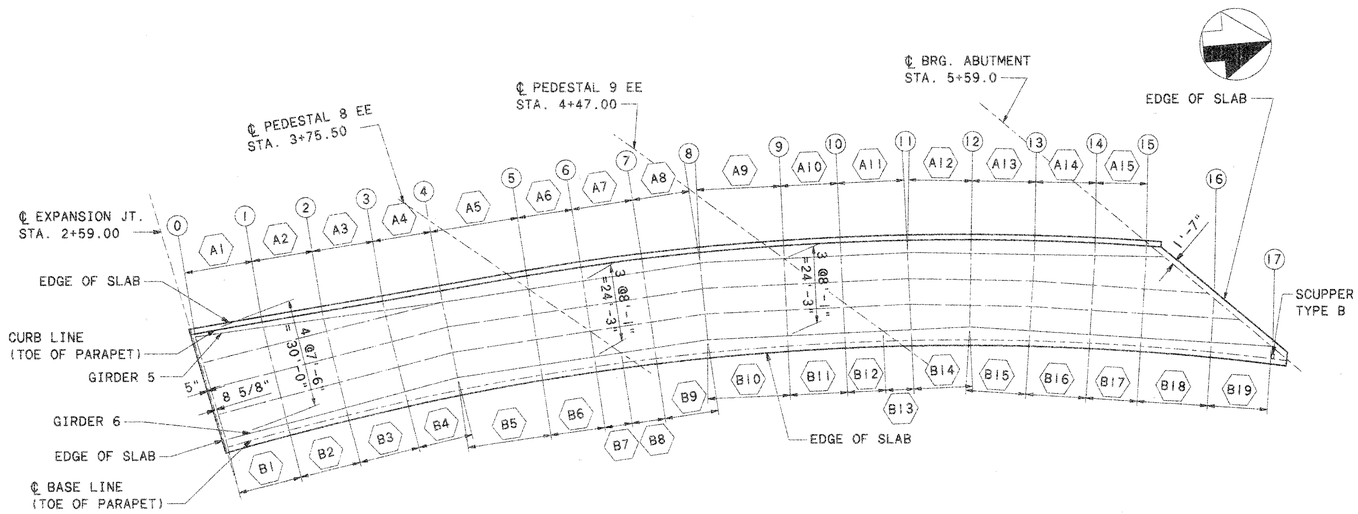
STATIONING ALONG ℄ EXPRESSWAY

UNIT 3 - SLAB OVERHANG DISTANCES		
PANEL PT.	GIRDER 1	GIRDER 4
0	2'-9"	3'-11"
1	3'-2"	3'-6 1/4"
2	3'-6"	3'-2 1/4"
3	3'-8 3/4"	2'-11 1/2"
4	3'-10 1/4"	2'-9 7/8"
5	3'-10 3/4"	2'-9 3/8"
6	3'-10 5/8"	2'-9 1/2"
7	3'-9 7/8"	2'-10 1/2"
8	3'-7 3/4"	3'-0 1/2"
9	3'-5"	3'-3 1/4"
10	3'-1 1/4"	3'-7"
11	2'-8 5/8"	3'-11 1/4"

NOTES

1. NOT ALL FRAMING MEMBERS ARE SHOWN FOR CLARITY.
2. SLAB OVERHANG DISTANCES ARE MEASURED FROM ℄ GIRDER TO EDGE OF SLAB AND ARE NORMAL TO ℄ GIRDER.
3. SEE DRAINAGE DETAILS 2 - ABUTMENTS, SHEET 76/126 FOR SCUPPER PLACEMENT.

RAMP EE - PANEL POINT SPACING			
℄ GIRDER 5		℄ GIRDER 6	
A1	19'-1 1/2"	B1	17'-9"
A2	17'-0 11/16"	B2	17'-0"
A3	17'-0 11/16"	B3	17'-0"
A4	17'-2 11/16"	B4	15'-11 5/16"
A5	22'-7 1/16"	B5	21'-5"
A6	17'-3 7/16'	B6	17'-3 7/16"
A7	17'-0 1/16"	B7	8'-7"
A8	16'-2 5/8"	B8	8'-5 1/16"
A9	21'-4 1/8"	B9	15'-0"
A10	18'-2"	B10	20'-1 5/16"
A11	18'-6 1/2"	B11	18'-2"
A12	17'-11 5/16"	B12	11'-10"
A13	17'-10 1/2"	B13	6'-8 1/2"
A14	16'-10 3/16"	B14	16'-4 13/16"
A15	14'-4 5/16"	B15	16'-9 9/16"
——	——	B16	16'-10"
——	——	B17	14'-4 1/8"
——	——	B18	19'-7"
——	——	B19	17'-10 7/8"



RAMP EE PLAN

STATIONING ALONG ℄ BASE LINE

(SIDEWALK NOT SHOWN)

RAMP E-E - SLAB OVERHANG DISTANCES		
PANEL PT.	GIRDER 5	GIRDER 6
0	2'-10 1/4"	3'-8"
1	2'-11"	3'-1 3/8"
2	2'-11 3/4"	2'-11 7/8"
3	3'-0 1/2"	3'-3 1/4"
4	3'-1 1/4"	3'-10 3/4"
5	3'-6 7/8"	3'-2 1/2"
6	3'-8 1/8"	3'-0 3/4"
7	3'-4 3/4"	3'-4"
8	2'-9 1/8"	3'-11 5/8"
9	3'-6 1/2"	3'-2 5/8"
10	3'-8 1/2"	3'-0 3/8"
11	3'-5 1/2"	3'-3 3/4"
12	3'-11"	3'-11 5/8"
13	3'-11 1/4"	3'-1 3/4"
14	3'-6 7/8"	2'-8 3/4"
15	2'-11 5/8"	2'-8 5/8"
16	——	3'-1 1/8"
17	——	3'-11 1/8"

BMOI ENGINEERS ARCHITECTS

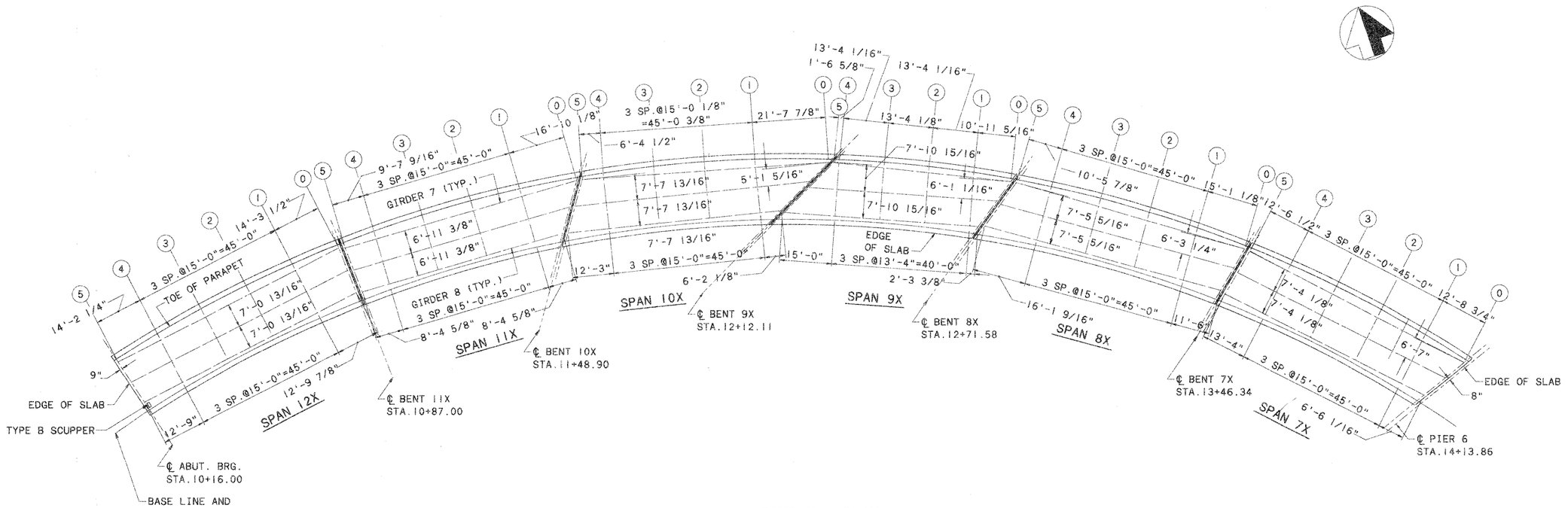
DESIGNED JAP | DRAWN RFJ | REVISED RHM 14-Feb-96 | DATE | STRUCTURE FILE NUMBER 4805917

CHECKED JMD | REVISED

PARTIAL FRAMING PLAN - UNIT 3 & RAMP EE

BRIDGE NO. LUC-280-0346 OVER MAUMEE RIVER

LUC-280



RAMP X - PLAN

STATIONING ALONG ℄ BASE LINE
(SIDEWALK NOT SHOWN)

NOTES

1. NOT ALL FRAMING MEMBERS ARE SHOWN FOR CLARITY.
2. SLAB OVERHANG DISTANCES ARE FOR PANEL POINTS 1 THROUGH 4 MEASURED FROM ℄ GIRDER TO EDGE OF SLAB AND ARE NORMAL TO ℄ GIRDER. SLAB OVERHANG DISTANCES FOR PANEL POINTS 0 AND 5 ARE MEASURED FROM ℄ GIRDER TO EDGE OF SLAB ALONG THE ℄ BEARING.
3. SEE DRAINAGE DETAILS 2-ABUTMENTS, SHEET 76/126, FOR SCUPPER PLACEMENT.

RAMP X - SLAB OVERHANG DISTANCES

SPAN	GIRDER 7 PANEL POINTS						GIRDER 8 PANEL POINTS					
	0	1	2	3	4	5	0	1	2	3	4	5
7X	2'-6"	3'-6"	4'-1 1/8"	4'-1"	3'-5 1/2"	2'-5 1/2"	4'-3 1/2"	3'-6 1/8"	2'-8 3/8"	2'-6 1/8"	2'-11 7/8"	3'-11 7/8"
8X	2'-6"	3'-7 1/2"	4'-1 1/2"	4'-0 1'8"	3'-3 1/2"	2'-4 7/8"	4'-6 1/2"	3'-5 1/2"	2'-8"	2'-6 3/8"	3'-0 1/2"	4'-9 3/4"
9X	2'-5"	3'-0 1/2"	3'-4 1/4"	3'-2 1/4"	----	2'-5 1/8"	4'-3 1/8"	----	2'-9 3/4"	2'-6"	2'-8 1/2"	5'-0"
10X	2'-5 1/8"	3'-11 1/2"	4'-3"	3'-11 1/4"	3'-0"	2'-5"	5'-10"	3'-7"	2'-8 5/8"	2'-6 1/8"	2'-11 3/8"	4'-2 1/2"
11X	2'-5"	3'-10 1/2"	4'-6 1/8"	4'-6 1/2"	3'-11 1/4"	3'-2 7/8"	4'-4 1/2"	3'-3 3/8"	2'-7 1/8"	2'-6 3/4"	3'-2 1/8"	3'-9 3/4"
12X	2'-6"	3'-8"	4'-3 3/8"	4'-3 1/4"	3'-7 7/8"	2'-6"	4'-3 1/2"	3'-2 3/4"	2'-7"	2'-7"	3'-2 3/4"	4'-3 3/8"

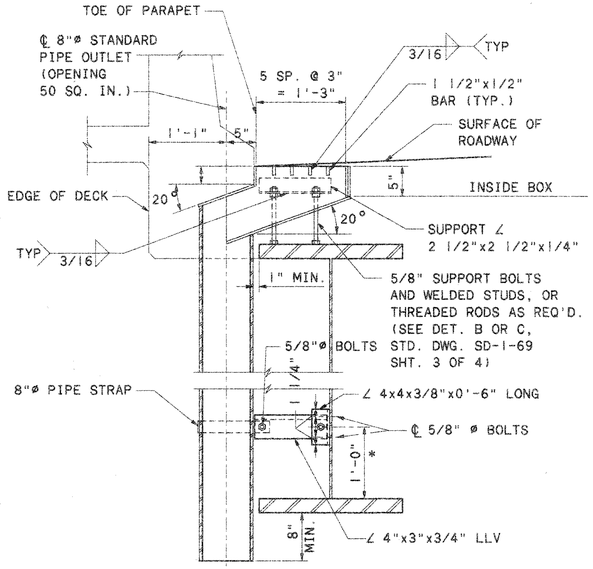
DESIGNED JAP
DRAWN RFJ
CHECKED JMD
REVISED
REVISED 14-Feb-96
STRUCTURE FILE NUMBER 4805917

PARTIAL FRAMING PLAN - RAMP X
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

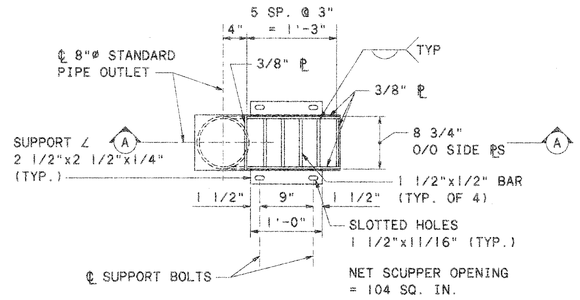
74/126

N:\PROJECTS\PR1491\2\CADD\FRAMPLN4 8-7-95

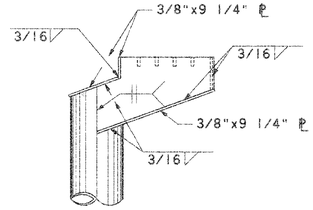


SECTION (A)

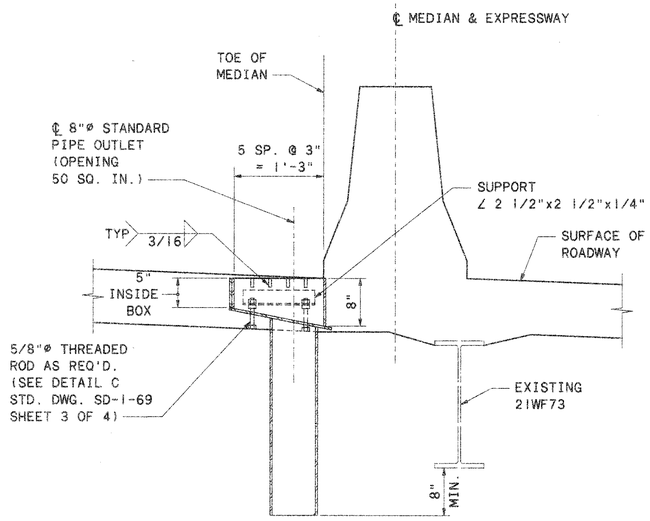
* IF GIRDER EXCEEDS DEPTH OF 6'-0", PLACE ADDITIONAL PIPE STRAP 1'-0" FROM BOTTOM OF TOP FLANGE.



PLAN

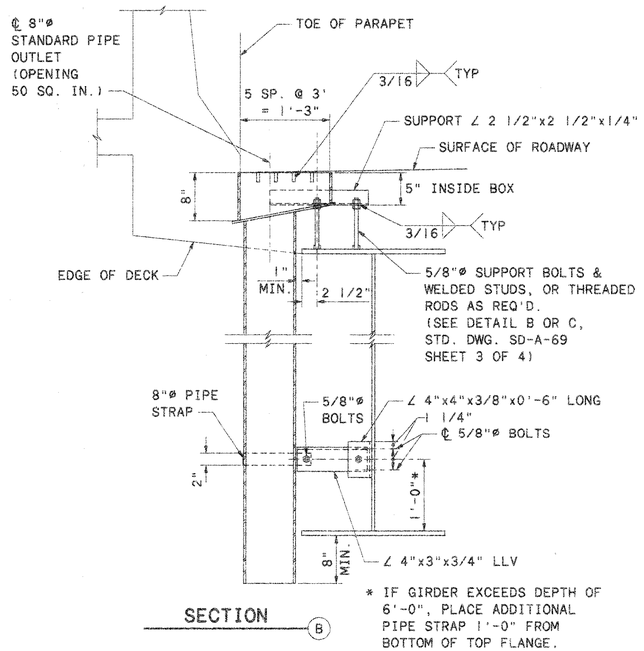


ELEVATION
SUPPORT ANGLE NOT SHOWN



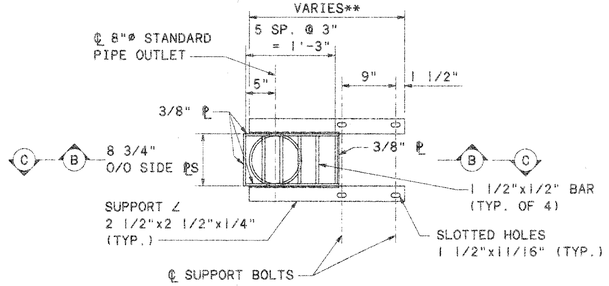
SECTION (C)
@ MEDIAN UNIT 2 ONLY

SCUPPER TYPE A



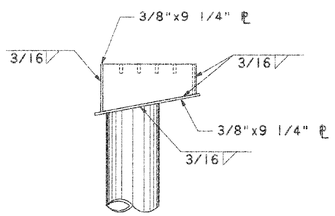
SECTION (B)

* IF GIRDER EXCEEDS DEPTH OF 6'-0", PLACE ADDITIONAL PIPE STRAP 1'-0" FROM BOTTOM OF TOP FLANGE.



PLAN

** CONTRACTOR TO FIELD VERIFY REQUIRED LENGTH DEPENDANT ON WHICH SUPPORT BOLT DETAIL IS CHOSEN. CONTRACTOR HAS OPTION OF DETAIL B OR C, STD. DWG. SD-1-69, SHEET 3 OF 4. (USE 1'-0" (MIN.) TO 2'-0" (MAX.)).

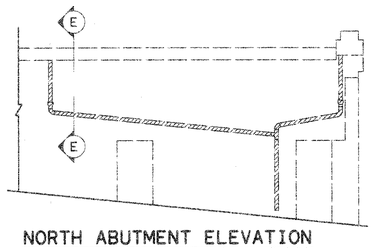


ELEVATION
SUPPORT ANGLE NOT SHOWN

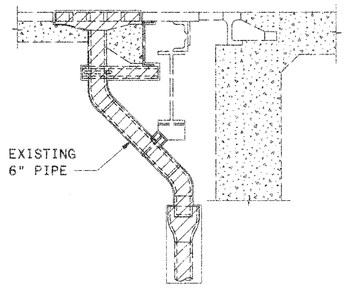
SCUPPER TYPE B

P:\PR1491\2\CADD\SCUPDET1 8-9-95 2:41:16 pm

ENGINEERS ARCHITECTS
DESIGNED JAP
DRAWN RFJ
CHECKED CJS
REVISED
REVISED RKM 14-Feb-96
STRUCTURE FILE NUMBER 4805917
DRAINAGE DETAILS 1 - SCUPPER DETAILS
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER
LUC-280
75/126



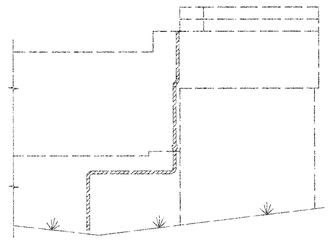
NORTH ABUTMENT ELEVATION



SECTION (E)

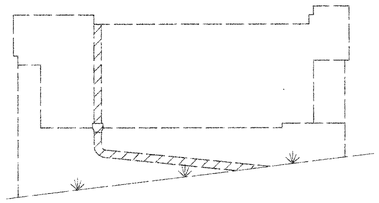
NORTH ABUTMENT DRAINAGE

REMOVE ALL EXISTING DRAINAGE
EXCEPT AS NOTED



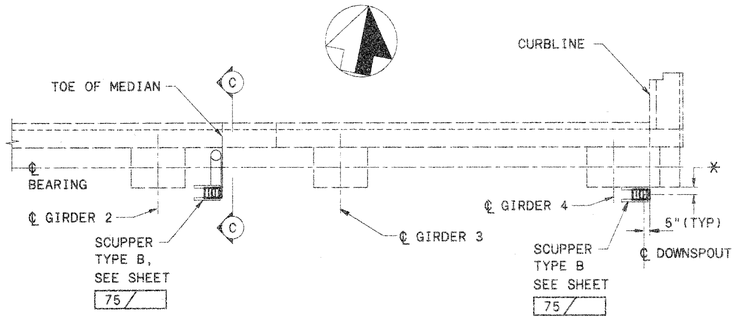
ABUTMENT E-E DRAINAGE REMOVAL

REMOVE ALL EXISTING DRAINAGE HARDWARE
EXCEPT AS NOTED
(SEE TYPICAL REMOVAL SECTION)



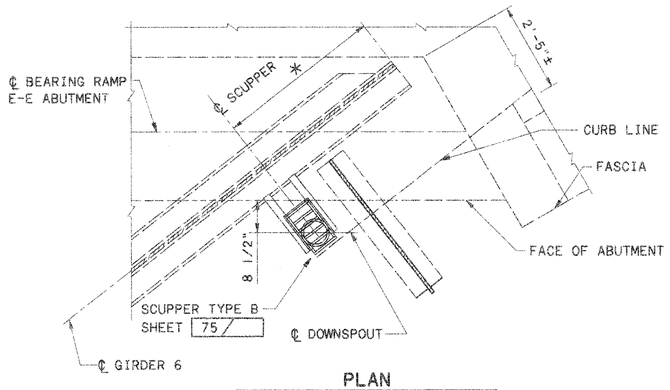
ABUTMENT X DRAINAGE REMOVAL

REMOVE ALL EXISTING DRAINAGE HARDWARE
EXCEPT AS NOTED
(SEE TYPICAL REMOVAL SECTION)



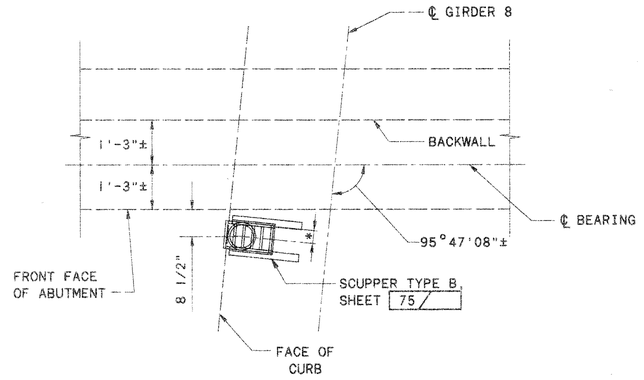
PLAN

PROPOSED NORTH ABUTMENT DRAINAGE



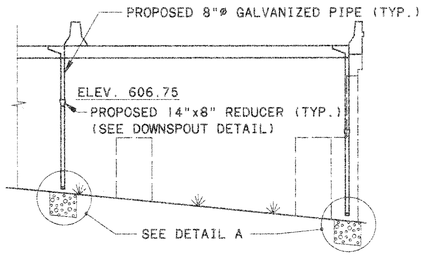
PLAN

PROPOSED ABUTMENT E-E DRAINAGE



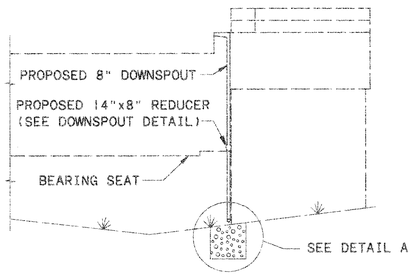
PLAN

PROPOSED ABUTMENT X DRAINAGE



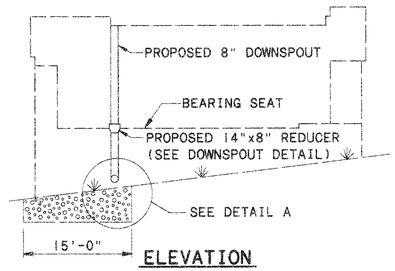
ELEVATION

NORTH ABUTMENT



ELEVATION

RAMP E-E



ELEVATION

ABUTMENT X

▨ = AREA TO BE REMOVED AS PER ITEM 202
- REMOVAL OF STRUCTURES

* SCUPPER SHALL BE FIELD POSITIONED SO THAT SCUPPER INLET IS FLUSH AGAINST CURB LINE & ℄ DOWNSPOUT IS 8 1/2" FROM FACE OF ABUTMENT BREAST WALL TO ACCOMMODATE VERTICAL ATTACHMENT (SECTION A).

WORK THIS SHEET WITH 77/126

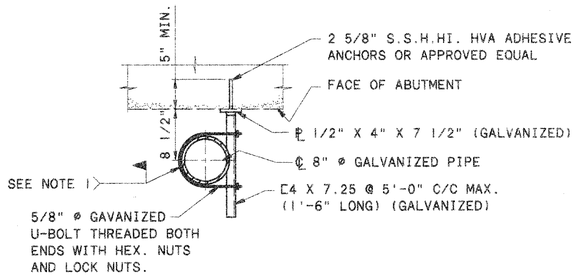
DESIGNED JAP
DRAWN AFP
CHECKED CJS
REVISED
REVIEWED RKM
DATE 14-Feb-96
STRUCTURE FILE NUMBER 480591.7

DRAINAGE DETAILS 2 - ABUTMENTS
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

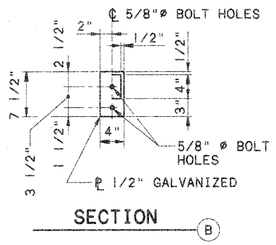
LUC-280

76/126

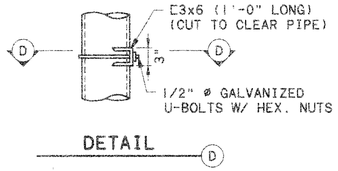
P:\PP1491\CADD\DRAIN2 8-8-95 8:58:06 am



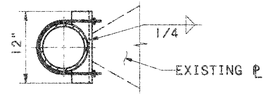
SECTION (A)



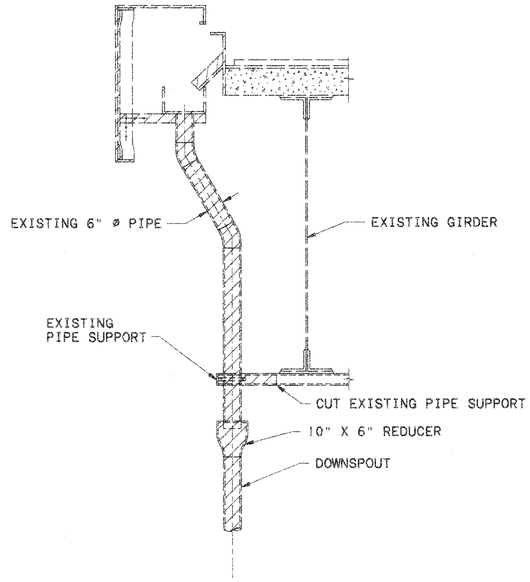
SECTION (B)



DETAIL (D)

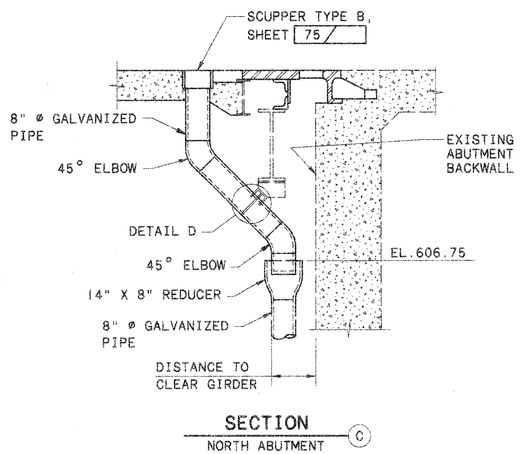


SECTION (D)

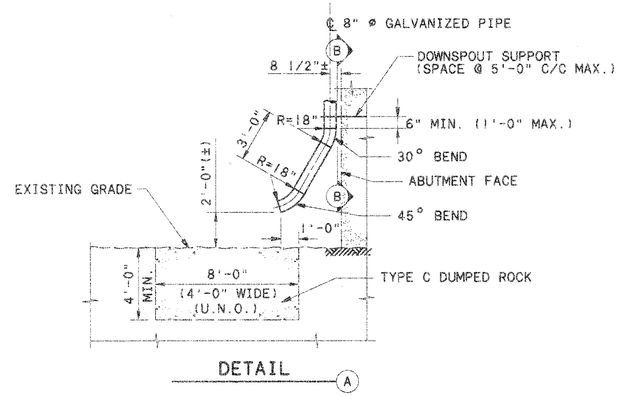


TYPICAL REMOVAL SECTION

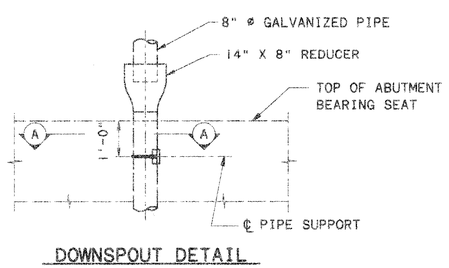
(RAMP E-E ABUTMENT SHOWN, ABUTMENT X DRAINAGE HARDWARE SIMILAR, SAFETY-WALK MAY DIFFER)



SECTION
NORTH ABUTMENT (C)



DETAIL (A)



DOWNSPOUT DETAIL

NOTE

1. TACK WELD U-BOLT AFTER DOWNSPOUT INSTALLATION (TYP.)

LEGEND:

C/C	= CENTER TO CENTER
ø	= DIAMETER
EL	= ELEVATION
TYP.	= TYPICAL
U.N.O.	= UNLESS NOTED OTHERWISE

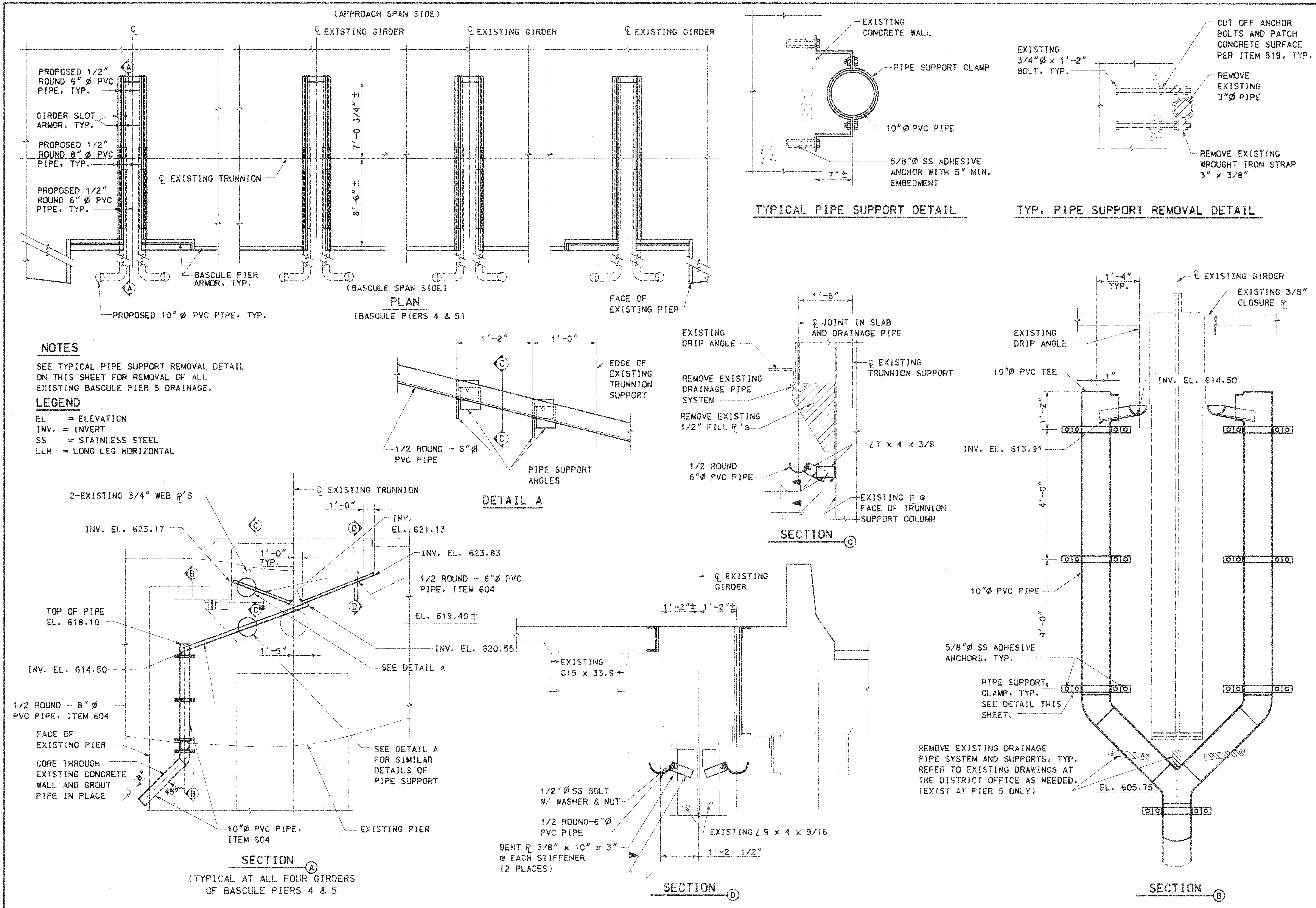
WORK THIS SHEET WITH SHEET 76/126

ENGINEERS
SURVEYORS
PLANNERS
ENVIRONMENTAL SCIENTISTS
ARCHITECTS

DESIGNED	JAP	
CHECKED	MAK	
DRAWN	AFP	
REVISED		
REVISED	RWM	DATE 14-Feb-96
STRUCTURE FILE NUMBER	4805917	

DRAINAGE DETAILS 3 - ABUTMENTS
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280


(APPROACH SPAN SIDE)
℄ EXISTING GIRDER
℄ EXISTING GIRDER
℄ EXISTING GIRDER
PROPOSED 1/2" ROUND 6" Ø PVC PIPE, TYP.
GIRDER SLOT ARMOR, TYP.
PROPOSED 1/2" ROUND 8" Ø PVC PIPE, TYP.
℄ EXISTING TRUNNION
PROPOSED 1/2" ROUND 6" Ø PVC PIPE, TYP.
7'-0 3/4" ±
8'-6" ±
BASCULE PIER ARMOR, TYP.
(BASCULE SPAN SIDE)
PROPOSED 10" Ø PVC PIPE, TYP.
PLAN
(BASCULE PIERS 4 & 5)
FACE OF EXISTING PIER
NOTES
SEE TYPICAL PIPE SUPPORT REMOVAL DETAIL ON THIS SHEET FOR REMOVAL OF ALL EXISTING BASCULE PIER 5 DRAINAGE.
LEGEND
EL = ELEVATION
INV. = INVERT
SS = STAINLESS STEEL
LLH = LONG LEG HORIZONTAL
1'-2"
1'-0"
EDGE OF EXISTING TRUNNION SUPPORT
1/2 ROUND - 6"Ø PVC PIPE
PIPE SUPPORT ANGLES
DETAIL A
2-EXISTING 3/4" WEB ℞'S
℄ EXISTING TRUNNION
1'-0"
INV. EL. 621.13
INV. EL. 623.17
INV. EL. 623.83
1'-0" TYP.
1/2 ROUND - 6"Ø PVC PIPE, ITEM 604
EL. 619.40 ±
TOP OF PIPE EL. 618.10
1'-5"
INV. EL. 620.55
INV. EL. 614.50
SEE DETAIL A
1/2 ROUND - 8" Ø PVC PIPE, ITEM 604
FACE OF EXISTING PIER
SEE DETAIL A FOR SIMILAR DETAILS OF PIPE SUPPORT
CORE THROUGH EXISTING CONCRETE WALL AND GROUT PIPE IN PLACE
8"
45°
10"Ø PVC PIPE, ITEM 604
EXISTING PIER
SECTION A
(TYPICAL AT ALL FOUR GIRDERS OF BASCULE PIERS 4 & 5
EXISTING CONCRETE WALL
PIPE SUPPORT CLAMP
10"Ø PVC PIPE
5/8"Ø SS ADHESIVE ANCHOR WITH 5" MIN. EMBEDMENT
7" ±
TYPICAL PIPE SUPPORT DETAIL
EXISTING 3/4"Ø x 1'-2" BOLT, TYP.
CUT OFF ANCHOR BOLTS AND PATCH CONCRETE SURFACE PER ITEM 519, TYP.
REMOVE EXISTING 3"Ø PIPE
REMOVE EXISTING WROUGHT IRON STRAP 3" x 3/8"
TYP. PIPE SUPPORT REMOVAL DETAIL
1'-8"
℄ JOINT IN SLAB AND DRAINAGE PIPE
EXISTING DRIP ANGLE
℄ EXISTING TRUNNION SUPPORT
REMOVE EXISTING DRAINAGE PIPE SYSTEM
REMOVE EXISTING 1/2" FILL ℞'s
∠7 x 4 x 3/8
1/2 ROUND 6"Ø PVC PIPE
EXISTING ℞ @ FACE OF TRUNNION SUPPORT COLUMN
SECTION C
℄ EXISTING GIRDER
1'-2"± 1'-2"±
EXISTING C15 x 33.9
1/2"Ø SS BOLT W/ WASHER & NUT
1/2 ROUND-6"Ø PVC PIPE
BENT ℞ 3/8" x 10" x 3" @ EACH STIFFENER (2 PLACES)
EXISTING ∠ 9 x 4 x 9/16
1'-2 1/2"
SECTION D
1'-4" TYP.
℄ EXISTING GIRDER
EXISTING 3/8" CLOSURE ℞
EXISTING DRIP ANGLE
10"Ø PVC TEE
1"
INV. EL. 614.50
1'-2"
INV. EL. 613.91
4'-0"
10"Ø PVC PIPE
4'-0"
5/8"Ø SS ADHESIVE ANCHORS, TYP.
PIPE SUPPORT CLAMP, TYP. SEE DETAIL THIS SHEET.
REMOVE EXISTING DRAINAGE PIPE SYSTEM AND SUPPORTS, TYP. REFER TO EXISTING DRAWINGS AT THE DISTRICT OFFICE AS NEEDED. (EXIST AT PIER 5 ONLY)
EL. 605.75
SECTION B

ENGINEERS ARCHITECTS

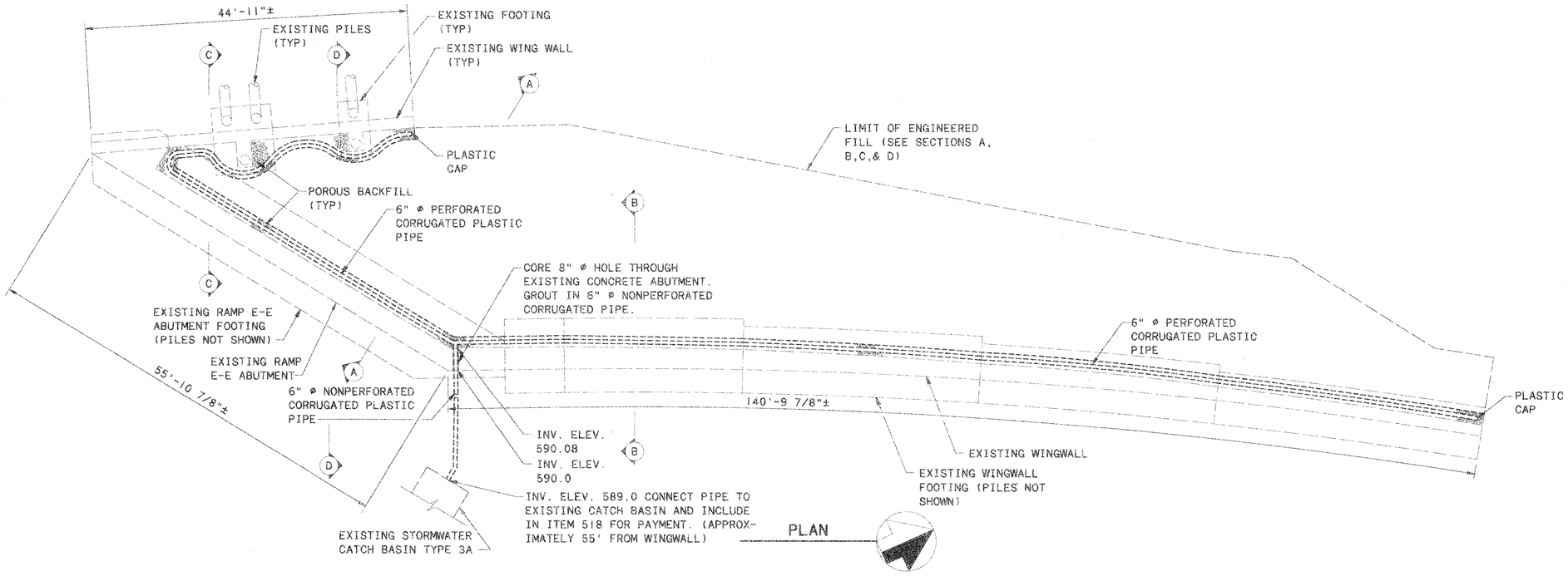
DESIGNED	CHECKED	DRAWN	REVISED	REVIEWED	DATE	STRUCTURE FILE NUMBER
RWM	JAP	KEK		RKM	14-Feb-96	4805917

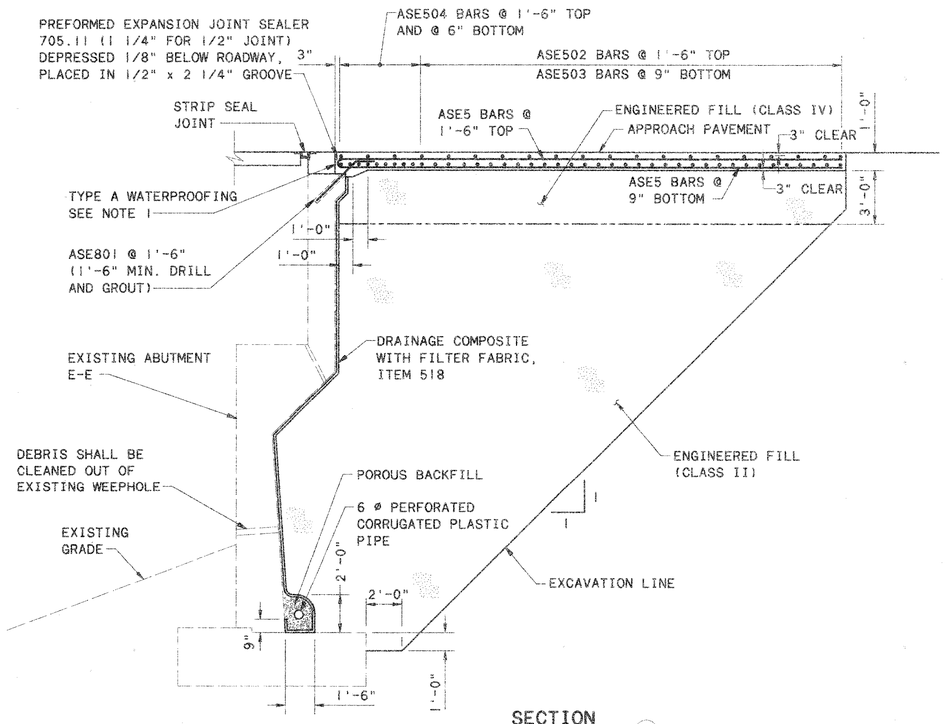
DRAINAGE DETAILS 4 - BASCULE PIERS

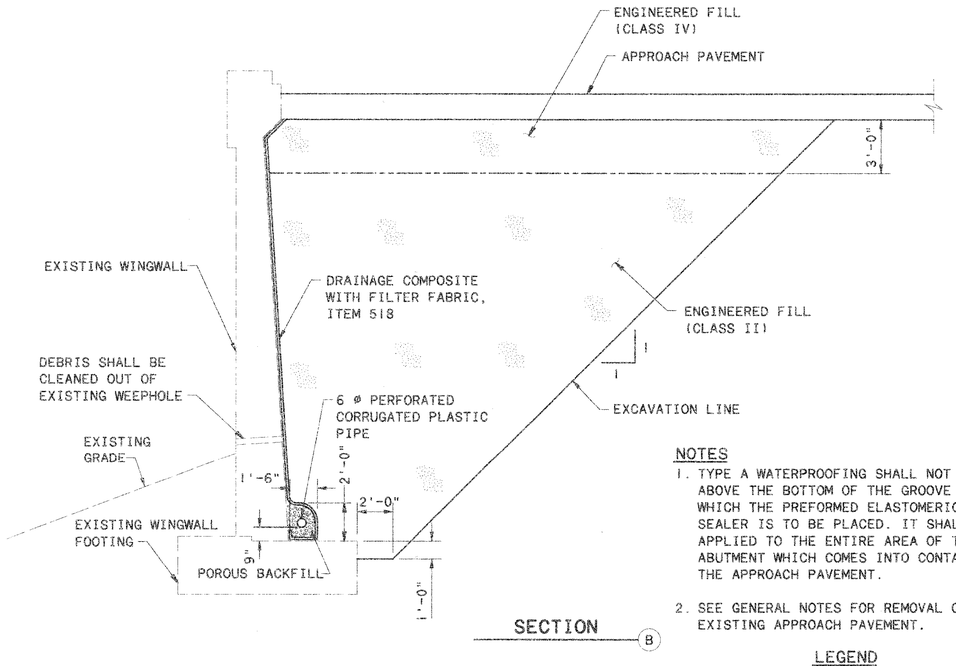
BRIDGE NO. LUC-280-0346

LUC-280

78/126







NOTES

1. TYPE A WATERPROOFING SHALL NOT EXTEND ABOVE THE BOTTOM OF THE GROOVE INTO WHICH THE PREFORMED ELASTOMERIC JOINT SEALER IS TO BE PLACED. IT SHALL BE APPLIED TO THE ENTIRE AREA OF THE ABUTMENT WHICH COMES INTO CONTACT WITH THE APPROACH PAVEMENT.
2. SEE GENERAL NOTES FOR REMOVAL OF EXISTING APPROACH PAVEMENT.

LEGEND

INV. = INVERT
ELEV. = ELEVATION

ENGINEERS & ARCHITECTS

DESIGNED RWM | DRAWN AFP | CHECKED JAP | REVISED

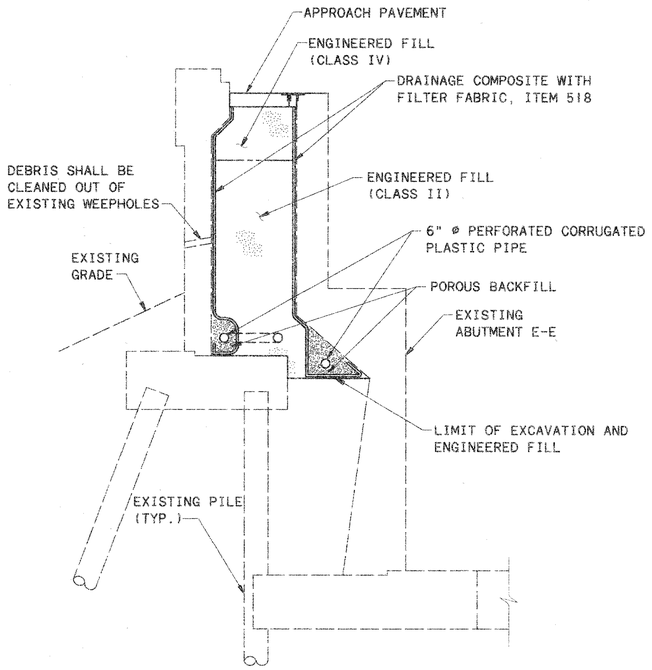
REVIEWED RKM 14-Feb-96 | STRUCTURE FILE NUMBER 480517

ABUTMENT REHABILITATION 1 - ABUTMENT EE
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

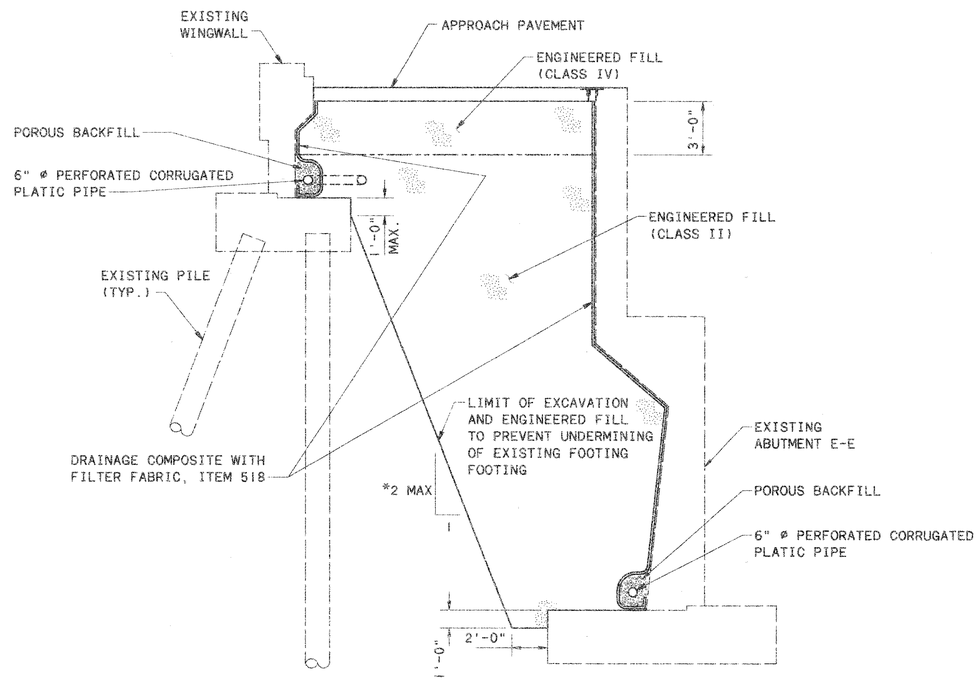
LUC-280

79/126

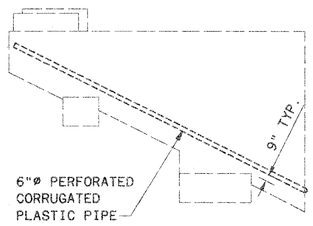
N:\PROJECTS\PR1491\CADD\ABUTE-E1 8-7-95



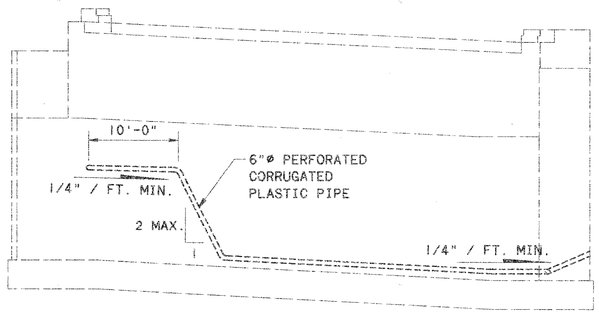
SECTION (C)



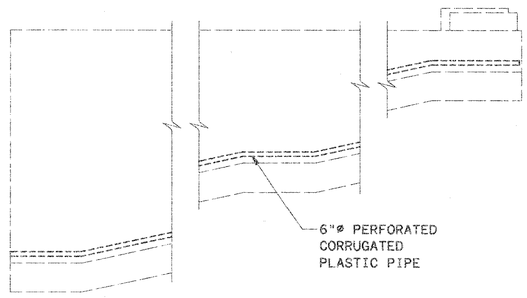
SECTION (D)



LEFT WINGWALL



ABUTMENT E-E



RIGHT WINGWALL

ELEVATION

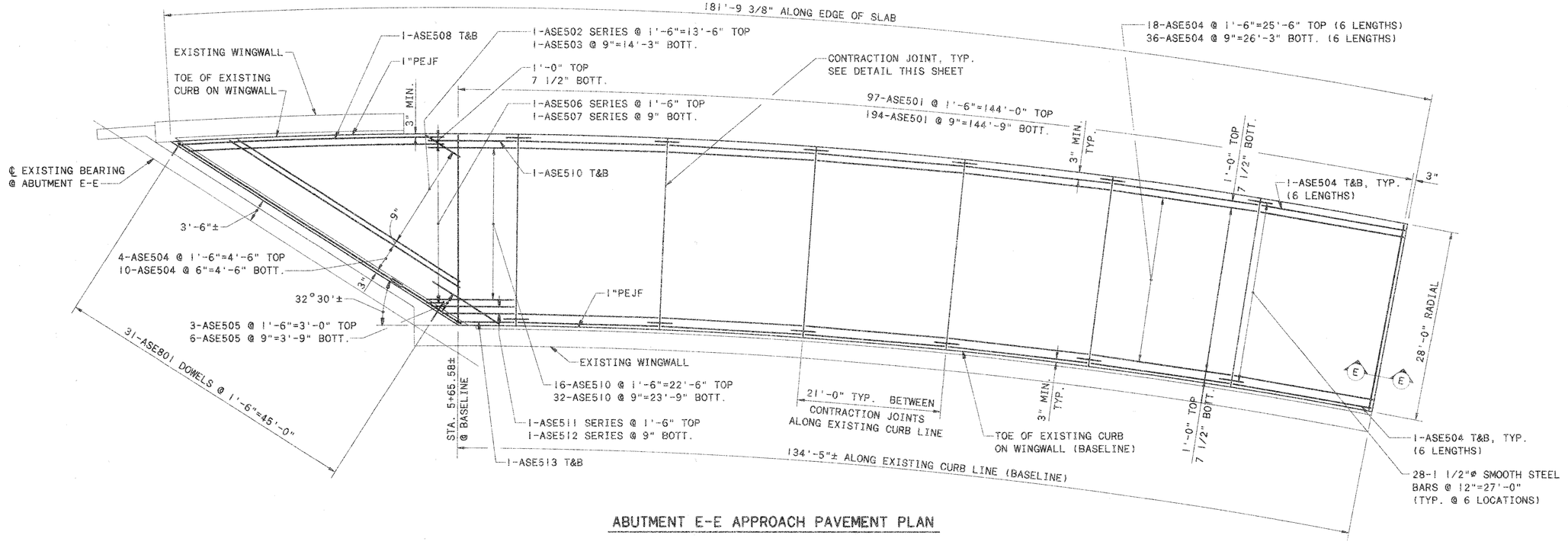
LEGEND

* WHERE SLOPE EXCEEDS 2:1, TRANSITION LIMITS OF EXCAVATION AND ENGINEERED FILL FROM SECTION C TO SECTION D.

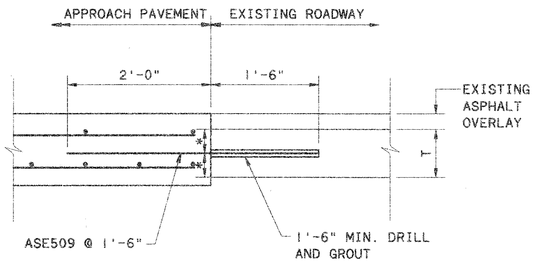
DESIGNED RWM
DRAWN AFP
CHECKED JAP
REVISED
DATE 14-Feb-96
STRUCTURE FILE NUMBER 480591?

ABUTMENT REHABILITATION 2 - ABUTMENT EE
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

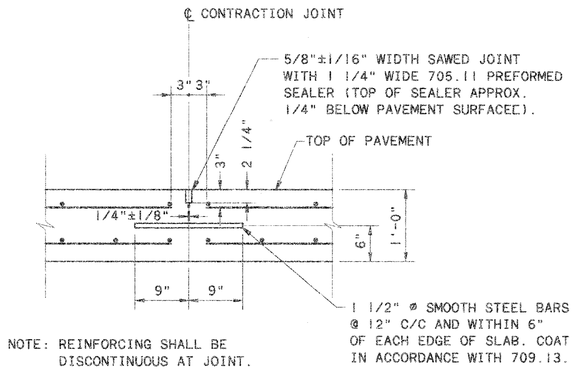


ABUTMENT E-E APPROACH PAVEMENT PLAN



SECTION (E)

*=T/2



NOTE: REINFORCING SHALL BE DISCONTINUOUS AT JOINT.

TYPICAL CONTRACTION JOINT DETAIL

LEGEND

PEJF = PREFORMED EXPANSION JOINT FILLER
C/C = CENTER TO CENTER
BOTT. = BOTTOM
MAX. = MAXIMUM
S.O. = SERIES OF
T&B = TOP & BOTTOM
T = THICKNESS

NOTES

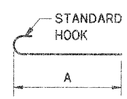
1. TYPE A WATERPROOFING SHALL NOT EXTEND ABOVE THE BOTTOM OF THE GROOVE INTO WHICH THE PREFORMED ELASTOMERIC JOINT SEALER IS TO BE PLACED. IT SHALL BE APPLIED TO THE ENTIRE AREA OF THE ABUTMENT WHICH COMES INTO CONTACT WITH THE APPROACH SLAB.

2. SEE GENERAL NOTES FOR REMOVAL OF EXISTING APPROACH SLAB.

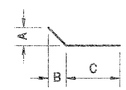
REINFORCING BAR SCHEDULE

MARK	NO.	LENGTH	TYPE	DIM. A	DIM. B	DIM. C	INCR.
ASE801	31	4'-4"	2	1'-0"	1'-0"	2'-11"	
ASE501	291	27'-6"	ST				
ASE502	1 S.O. 10	8'-4" TO 38'-4"	ST				3'-4"
ASE503	1 S.O. 20	6'-8" TO 38'-4"	ST				1'-8"
ASE504	348	20'-8"	ST				
ASE505	9	12'-2"	ST				
ASE506	1 S.O. 16	3'-10" TO 33'-10"	ST				2'-0"
ASE507	1 S.O. 32	3'-5" TO 34'-5"	1	2'-10" TO 33'-10"			1'-0"
ASE508	2	36'-5"	1	35'-10"			
ASE509		3'-6"	1				
ASE510	50	15'-0"	ST				
ASE511	1 S.O. 2	10'-3" TO 12'-8"	ST				
ASE512	1 S.O. 4	9'-3" TO 13'-7"	ST				
ASE513	2	7'-10"	ST				

NOTE: ALL REINFORCING STEEL TO BE EPOXY COATED



TYPE 1

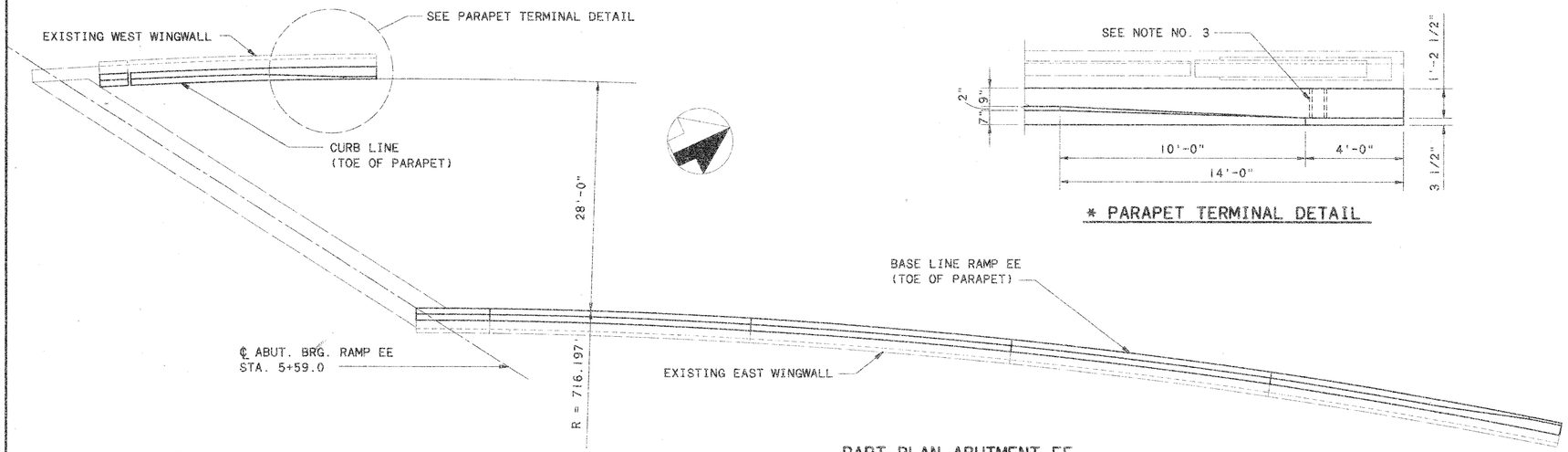


TYPE 2

DESIGNED RWM
DRAWN WHW
CHECKED JAP
REVISED
DATE 14-Feb-96
STRUCTURE FILE NUMBER 4805917

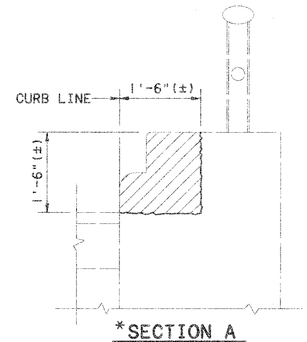
ABUTMENT REHABILITATION 3 - ABUTMENT EE APPROACH PAVEMENT
BRIDGE NO. LUC-280-0346 OVER MAUMEE RIVER

LUC-280

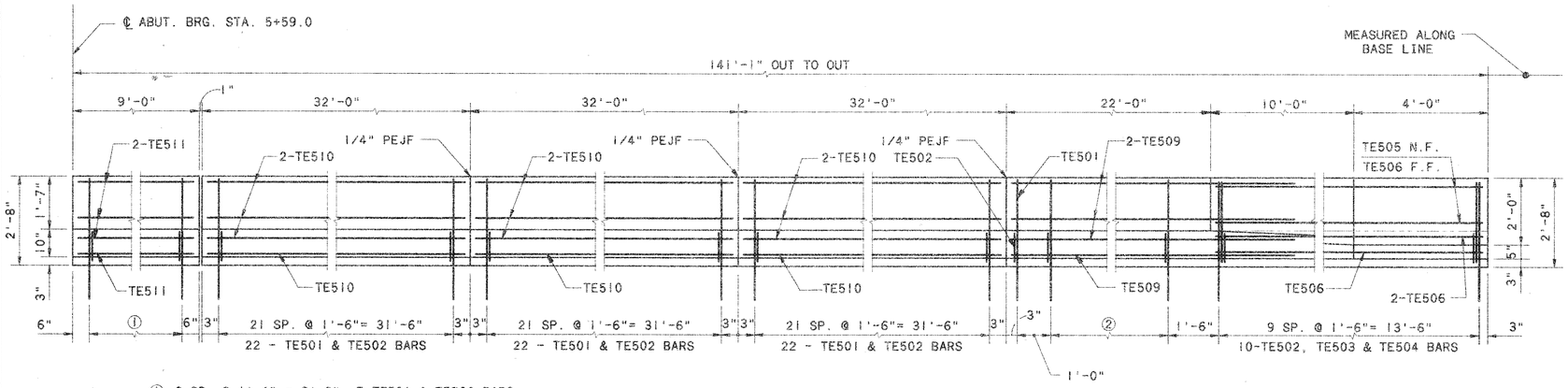


PART PLAN ABUTMENT EE

* PARAPET TERMINAL DETAIL

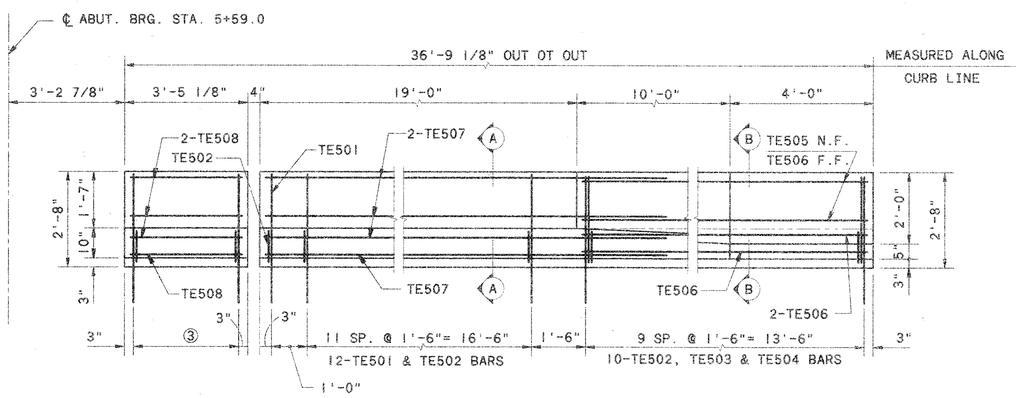


*SECTION A
(REMOVAL - CURB LINE)



① 6 SP. @ 1'-4" = 8'-0", 7-TE501 & TE502 BARS
② 13 SP. @ 1'-6" = 19'-6", 14-TE501 & TE502 BARS

BASE LINE PARAPET ELEVATION

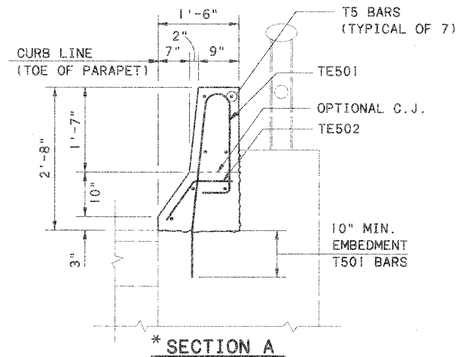


③ 2 EQ. SP., 3 - TE501 & TE502 BARS

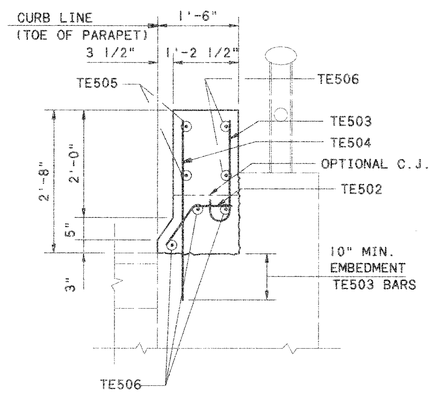
CURB LINE PARAPET ELEVATION

NOTES:

1. WORK THIS SHEET WITH STRIP SEAL DETAIL SHEET 51/126 AND ABUTMENT EE REHAB. DETAILS SHEET 79/126 THROUGH 82/126
2. PREFORMED EXPANSION JOINT FILLER IN THE PARAPET JOINTS MAY BE EITHER 1/4" GRAY SPONGE RUBBER OR 1/4" GRAY CELLULAR POLYVINYL CHLORIDE (PVC) SPONGE. IF RUBBER IS USED IT SHALL MEET THE REQUIREMENTS OF AASHTO M-153
3. CONCRETE INSERT ASSEMBLY, AS SHOWN ON STD. DWGS. GR-3.1 AND GR-3.2, SHALL BE PROVIDED FOR THE ATTACHMENT OF GUARDRAIL TERMINAL CONNECTORS (BY OTHERS)
4. ALL EXPOSED CONCRETE SURFACES OF THE PROPOSED PARAPETS SHALL BE SEALED ACCORDING TO ITEM SPECIAL SEALING OF CONCRETE SURFACES



*SECTION A
(PROPOSED PARAPET - CURB LINE)



*SECTION B
(TERMINAL - CURB LINE)

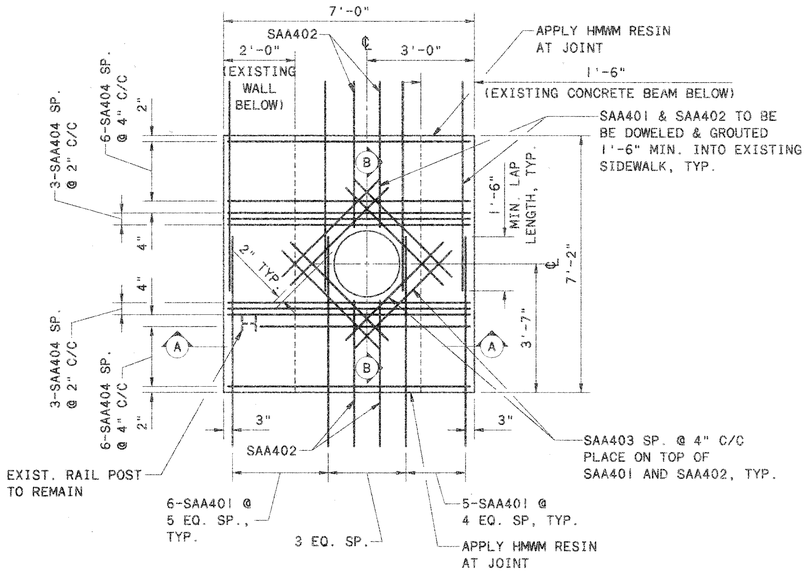
* CURB LINE PARAPET SHOWN.
BASE LINE PARAPET OPPOSITE HAND.

ABUTMENT REHAB. 4 - ABUTMENT EE PARAPETS
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

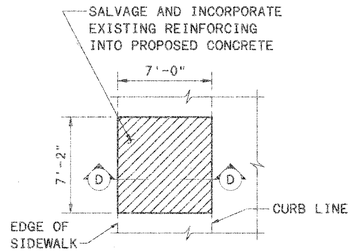
LUC-280

82/126

DESIGNED	DRAWN	REVIEWED	DATE
JMD	JMD	RKM	14-Feb-96
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MAK		4805917	

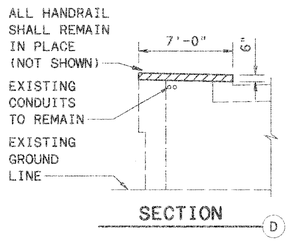


ACCESS HOLE DETAIL

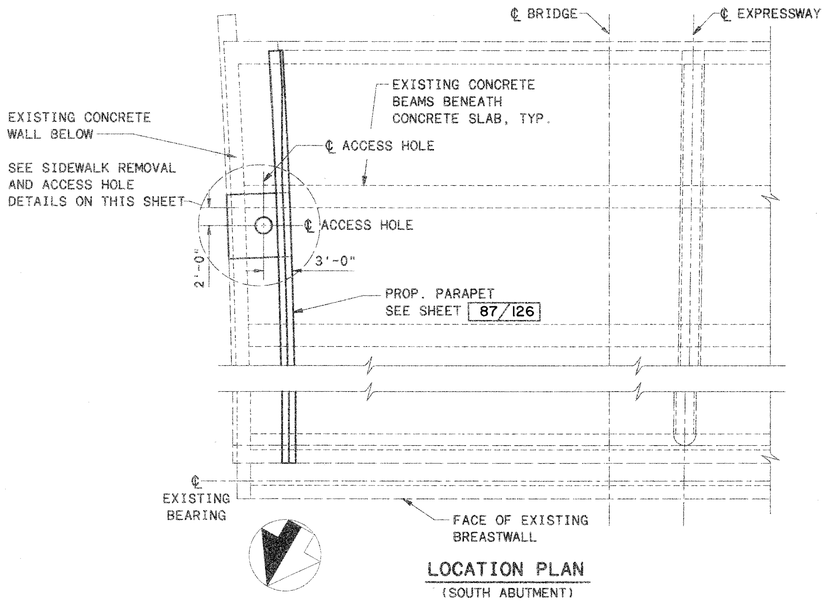


SIDEWALK REMOVAL DETAIL

SEE LOCATION PLAN FOR LOCATION

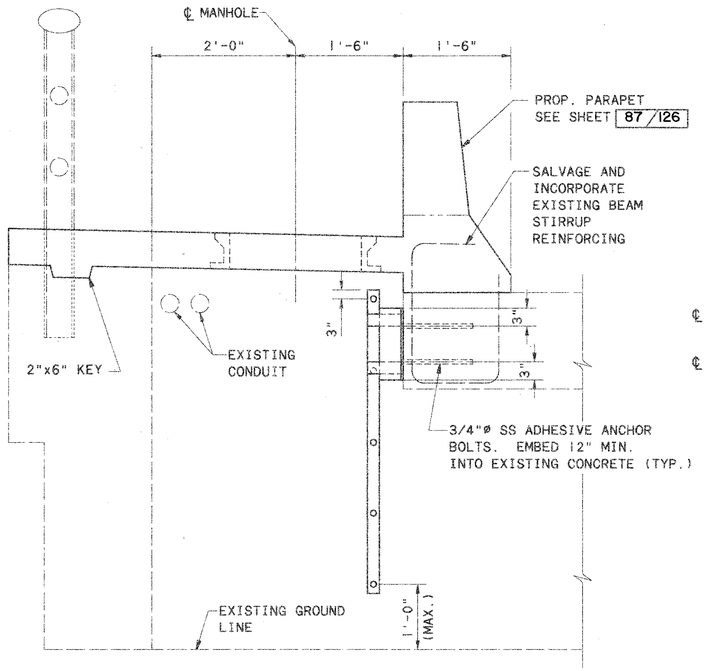


SECTION



LOCATION PLAN

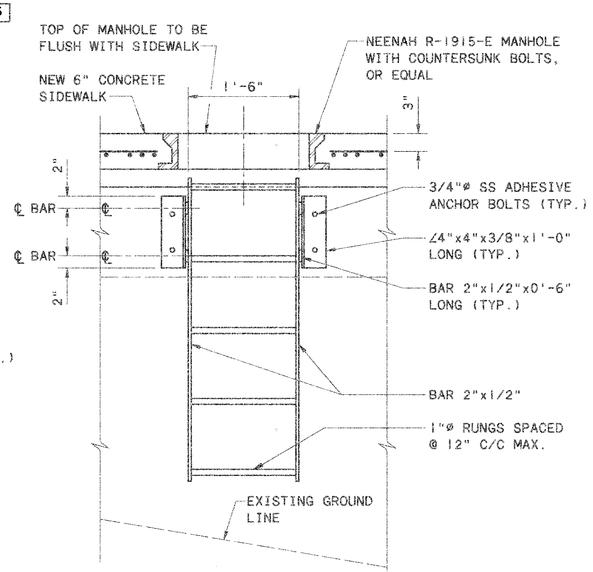
(SOUTH ABUTMENT)



SECTION

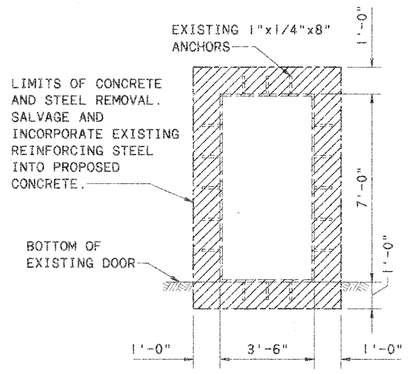
A

REINFORCING NOT SHOWN FOR CLARITY

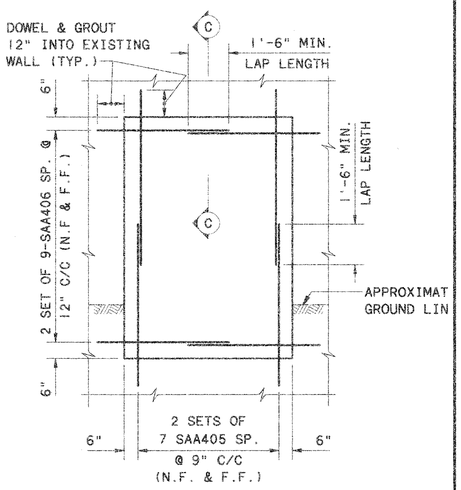


SECTION

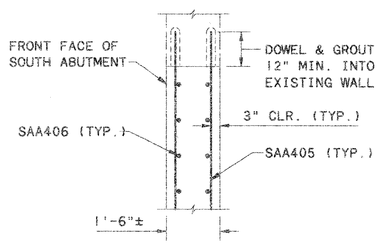
B



SOUTH ABUTMENT DOOR REMOVAL DETAIL



SOUTH ABUTMENT DOOR ENCLOSURE DETAIL



SECTION

C

LEGEND

SP. - SPACED
N.F. - NEAR FACE
F.F - FAR FACE

AREA TO BE REMOVED AS PER ITEM 202- PORTIONS OF STRUCTURE REMOVED

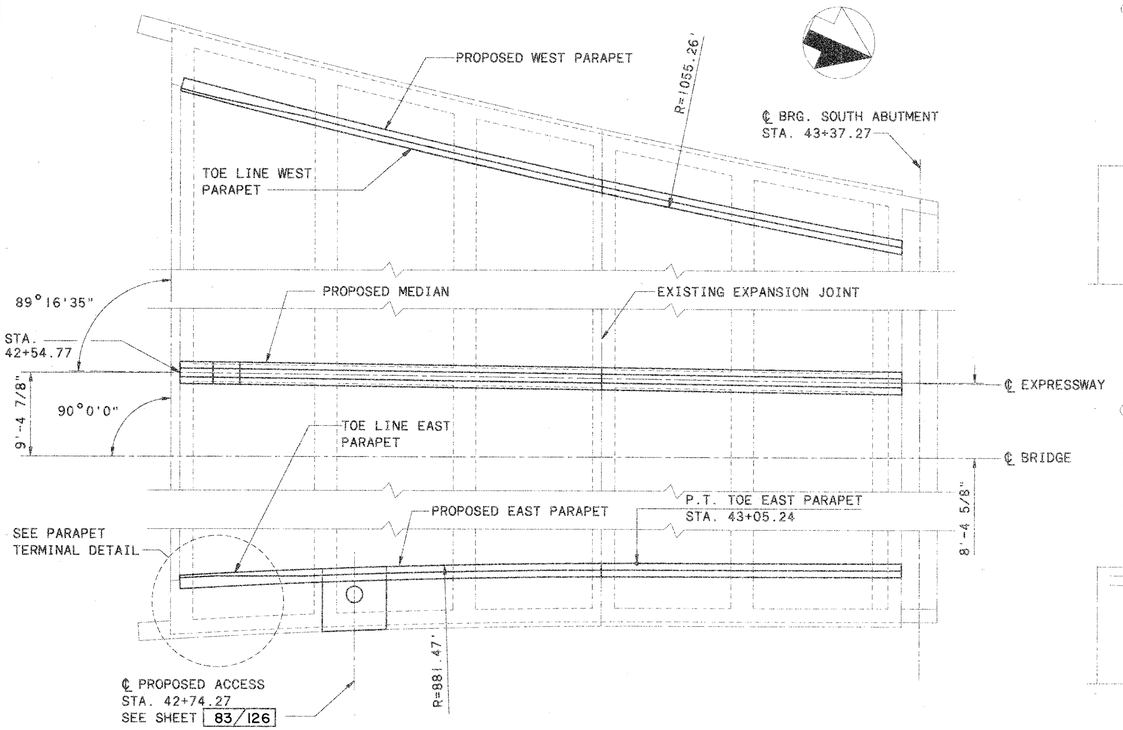
DESIGNED JWB
DRAWN WHW
CHECKED JAP
REVISED
DETAILED RHM
DATE 14-Feb-96
STRUCTURE FILE NUMBER 4805917

ABUTMENT REHAB. 5 - SOUTH ABUTMENT ACCESS DETAILS
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

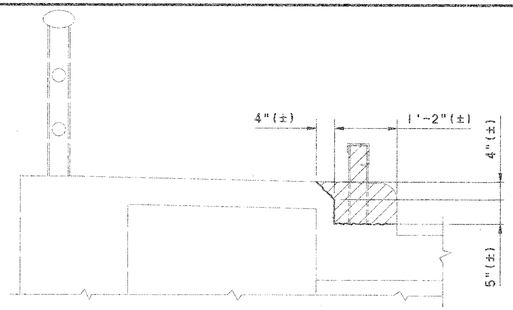
LUC-280

83/126

N:\PROJECTS\PR1491\2\CADD\ABUTACC 8-74-95 11:36 am

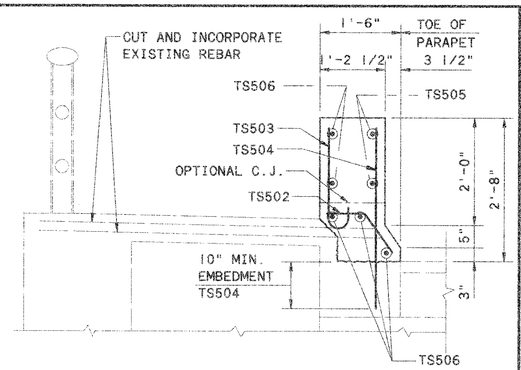


PART PLAN SOUTH ABUTMENT

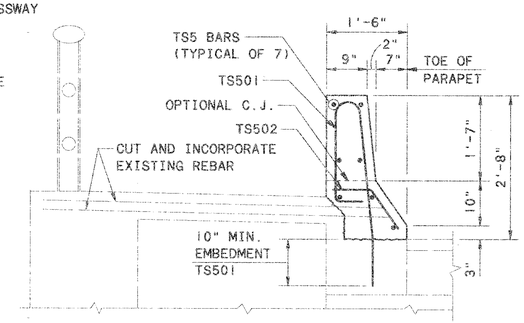


* SECTION A
(REMOVAL)

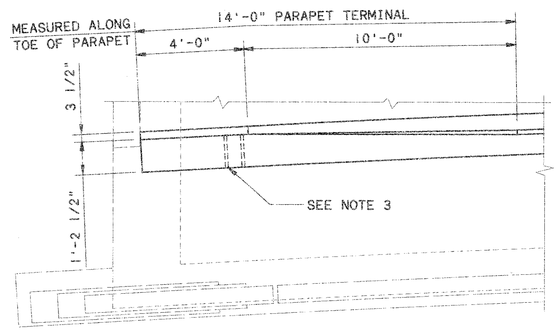
* EAST PARAPET SHOWN
WEST PARAPET OPPOSITE

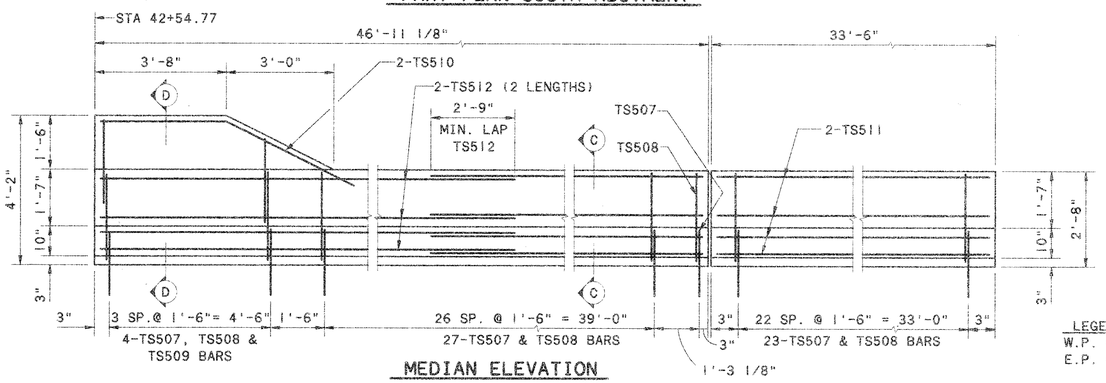


* SECTION B



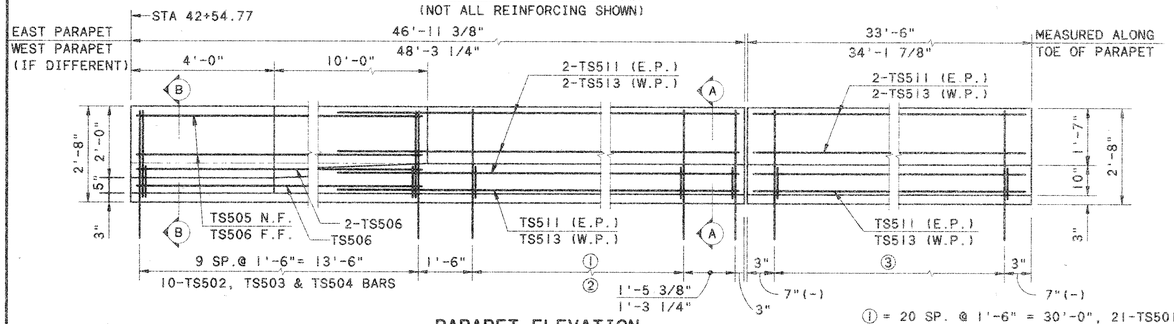
* SECTION A





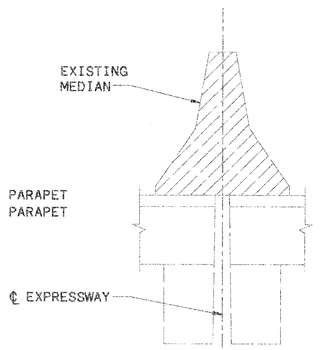
MEDIAN ELEVATION
(NOT ALL REINFORCING SHOWN)

LEGEND
W.P. = WEST PARAPET
E.P. = EAST PARAPET



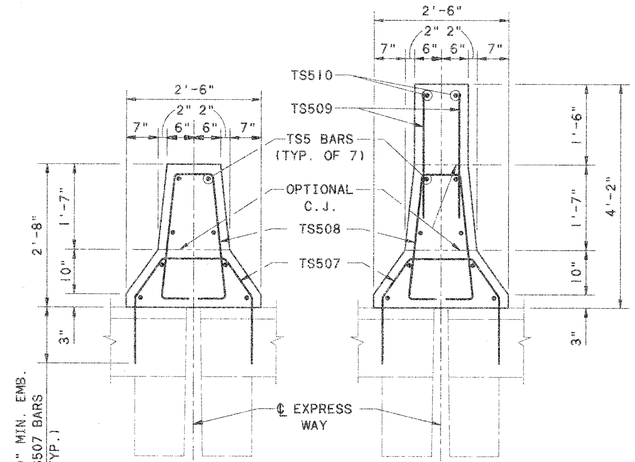
PARAPET ELEVATION
(NOT ALL REINFORCING SHOWN)

① = 20 SP. @ 1'-6" = 30'-0", 21-TS501 & TS502 BARS
② = 21 SP. @ 1'-6" = 31'-6", 22-TS501 & TS502 BARS
③ = 22 SP. @ 1'-6" = 33'-0", 23-TS501 & TS502 BARS



SECTION C
(REMOVAL)

* PARAPET TERMINAL DETAIL



SECTION C

SECTION D

NOTES

1. ALL STATIONING GIVEN FOR ℄ BRIDGE
2. EAST PARAPET TO BE CONSTRUCTED DURING STAGE I CONSTRUCTION. WEST PARAPET AND MEDIAN TO BE CONSTRUCTED DURING STAGE II CONSTRUCTION.
3. CONCRETE INSERT ANCHOR ASSEMBLY, AS SHOWN ON STD. DWGS. GR-3.1 AND 3.2, SHALL BE PROVIDED FOR THE ATTACHMENT OF GUARDRAIL TERMINAL CONNECTORS (BY OTHERS).
4. WORK THIS SHEET WITH FINGER JOINT DETAIL SHEET 42/126.
5. ALL EXPOSED CONCRETE SURFACES OF THE PROPOSED PARAPETS AND MEDIAN SHALL BE SEALED ACCORDING TO ITEM SPECIAL SEALING OF CONCRETE SURFACES.

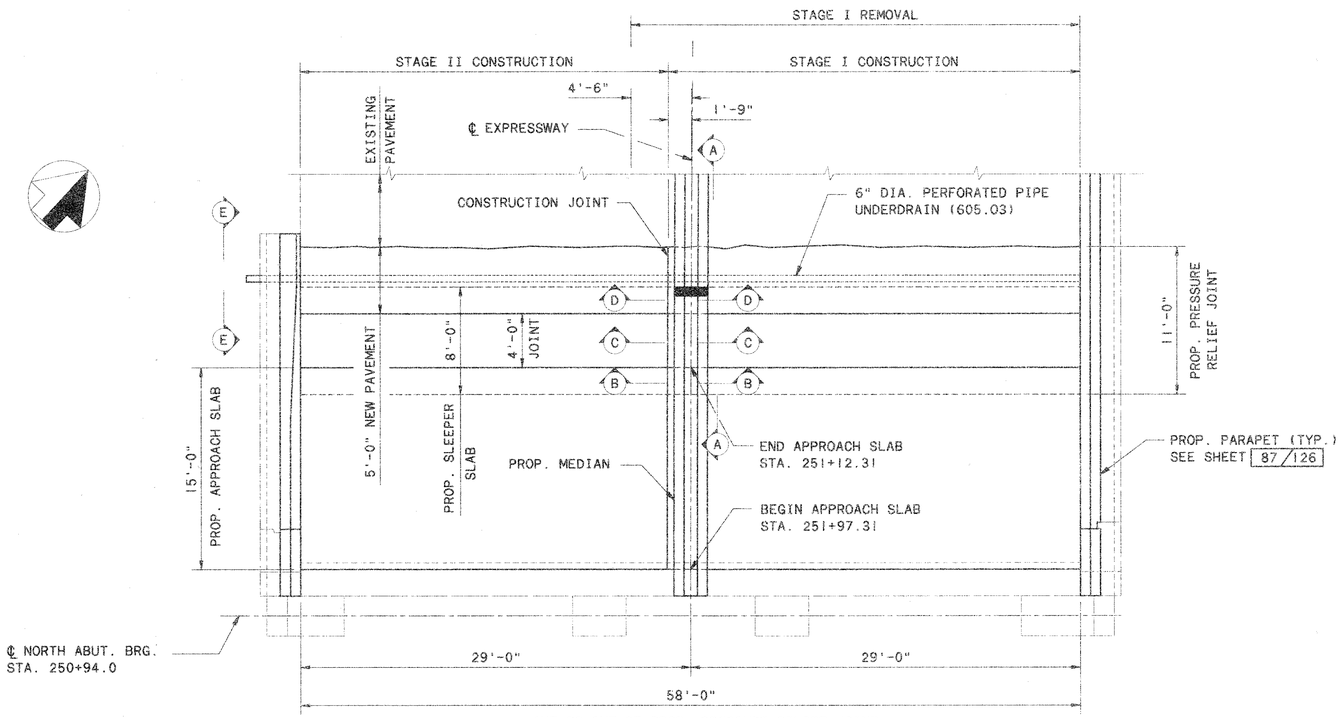
DESIGNED JMD
DRAWN JMD
CHECKED MAK
REVISED
REVISED RKM
DATE 14-Feb-96
STRUCTURE FILE NUMBER 480591 7

ABUTMENT REHAB. 6 - S. ABUTMENT PARAPETS AND MEDIAN
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

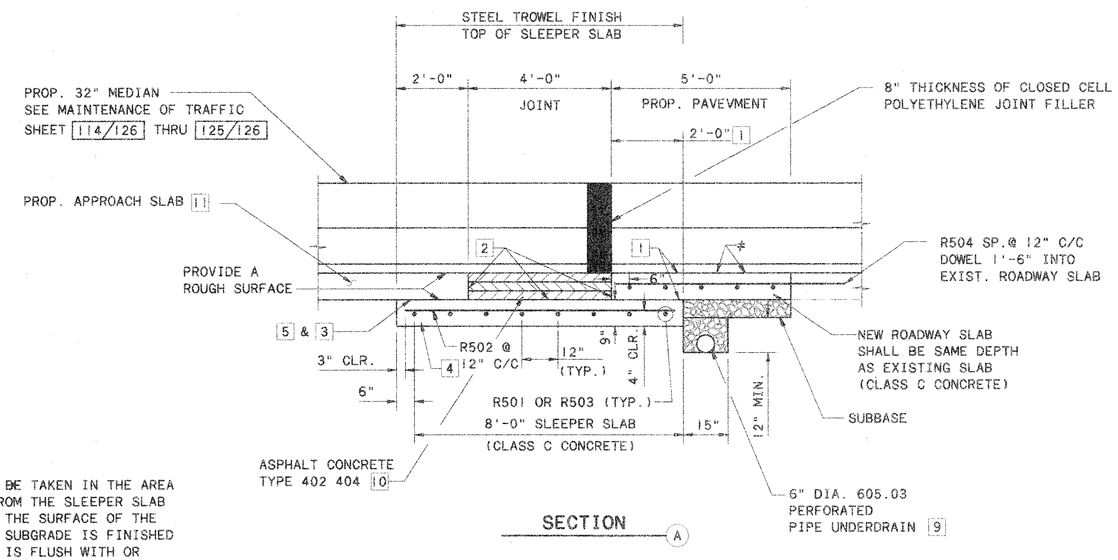
84/126

N:\PR1492\CADD\XPARA_SA 1-26-96 2:53:37 pm



PART PLAN NORTH ABUTMENT

(SEE SHEET 86/126 FOR SECTIONS B THRU D AND VIEW E)



SECTION (A)

CARE SHALL BE TAKEN IN THE AREA 0' TO 4' FROM THE SLEEPER SLAB TO BE SURE THE SURFACE OF THE SUBBASE OR SUBGRADE IS FINISHED SMOOTH AND IS FLUSH WITH OR SLIGHTLY HIGHER THAN THE SURFACE OF THE SLEEPER SLAB.

MARK	NO.	LENGTH	SHAPE
R501	13	33'-1"	ST.
R502	59	7'-6"	ST.
R503	13	26'-10"	ST.
R504	67	6'-3"	ST.

NOTES:

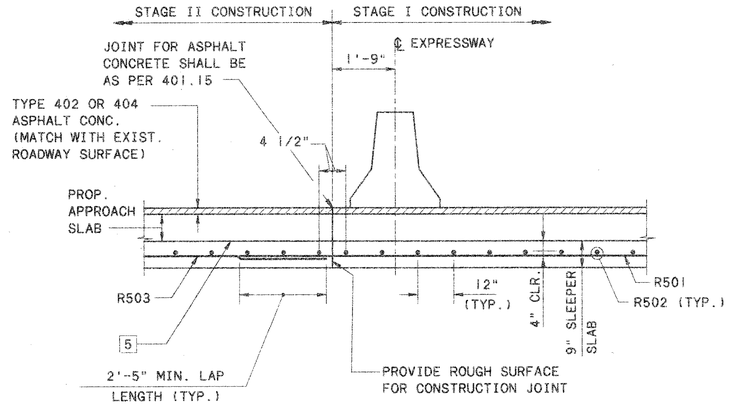
1. POLYETHYLENE BOND BREAKER OR EQUAL
2. COAT SURFACE PER 401.12
3. EXCAVATE UNDER EXISTING APPROACH SLAB TO ALLOW. PLACEMENT OF SLEEPER SLAB
4. HAND PACK CONCRETE, IF NECESSARY, TO ENSURE SOLID FITTING
5. CLEAN UNDERSIDE SURFACE OF APPROACH SLAB TO REMOVE ANY FOREIGN MATERIALS
6. CORE DRILL AT WINGWALL 8" DIA. HOLE. DRILLING TO BEGIN ON WEST FACE OF WINGWALL. REMOVE ALL CHIPPED AND FISSURED CONCRETE AND GROUT OPENINGS WITH NON - SHRINK GROUT (AS PER 705.20) AFTER INSTALLATION OF 6" DIA. 605.03.
7. CONTRACTOR SHALL LOCATE TOP OF CORE 1'-6" (MIN.) FROM EXISTING GROUNDLINE AND MAINTAIN A 1% (MIN.) SLOPE IN 6" DIA. - 605.03 SO AS TO KEEP EXCAVATION AT A MINIMUM.
8. PROVIDE AN ANIMAL GUARD AT END OF PIPE AS PER STD. DWG MC-4.
9. A PERFORATED METAL PIPE UNDERDRAIN, 707.01 OR 707.21 SHALL BE PLACED ALONG THE SLEEPER SLAB. IT SHALL EXTEND FROM EDGE TO EDGE OF THE SLEEPER SLAB AND SHALL BE OUTLETTED AS SHOWN ON THE PLAN. THESE DRAINS SHALL BE PAID FOR PER LINEAR FOOT OF ITEM 605 6" SHALLOW PIPE UNDERDRAINS. 707.01 OR 707.21.
10. ASPHALT CONCRETE, 402 OR 404, SHALL BE COMPACTED IN THREE EQUAL COURSES WITH COMPACTION EQUIPMENT AS APPROVED BY THE ENGINEER. SURFACE OF THE ASPHALT CONCRETE SHALL BE FLUSH TO 1/4" ABOVE THE CONCRETE PAVEMENT SURFACE.
11. REFER TO ODOT STD. DRAWING AS-1-81 FOR PROPOSED APPROACH SLAB DETAILS

DESIGNED JAP
DRAWN GTC
CHECKED MAK
REVISED
DATE 14-Feb-96
STRUCTURE FILE NUMBER 4805917

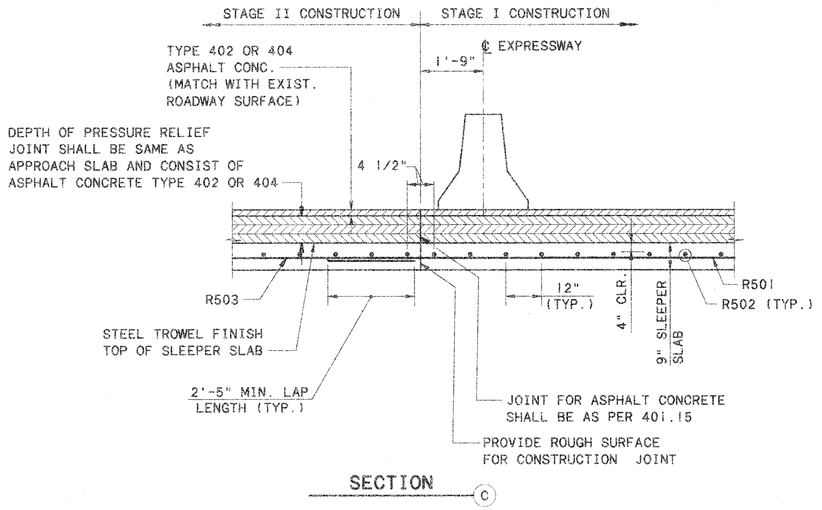
ABUTMENT REHAB. 7 - N. ABUT. PRESSURE RELIEF JOINT

BRIDGE NO. LUC-280-0346 OVER MAUMEE RIVER

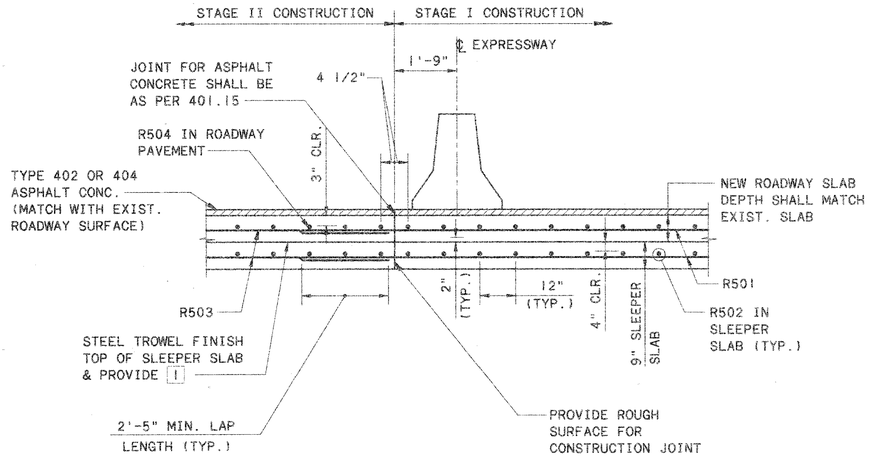
LUC-280



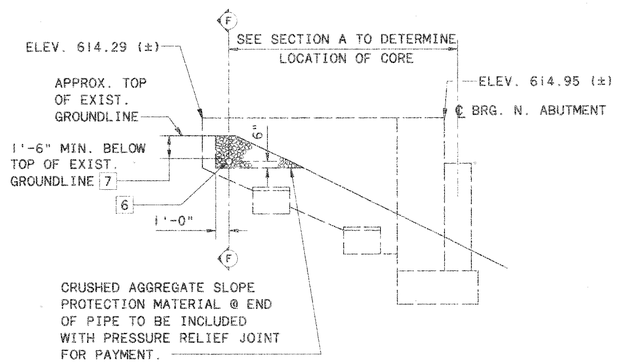
SECTION (B)



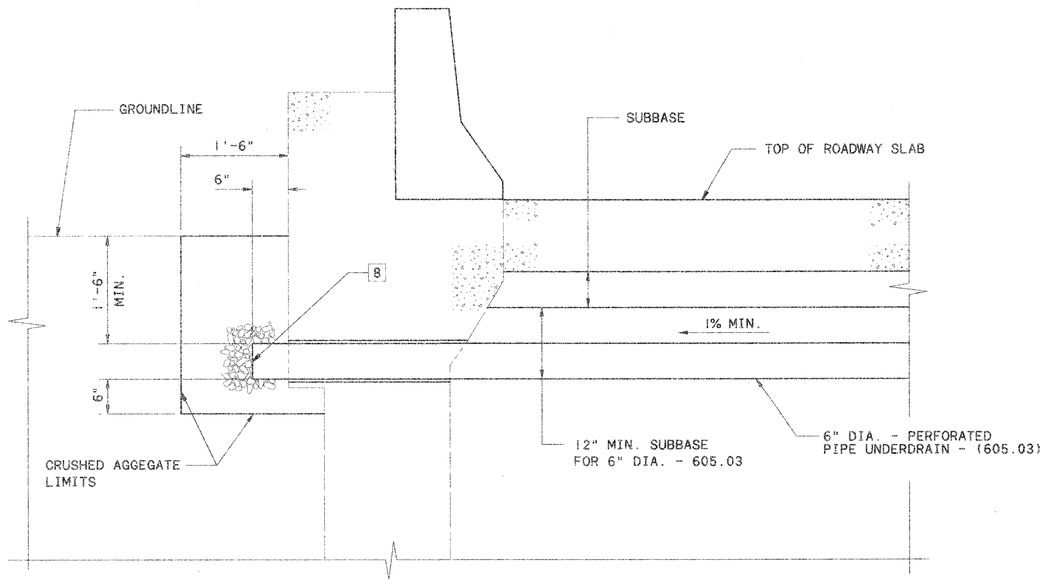
SECTION (C)



SECTION (D)



VIEW (E)
WEST WINGWALL

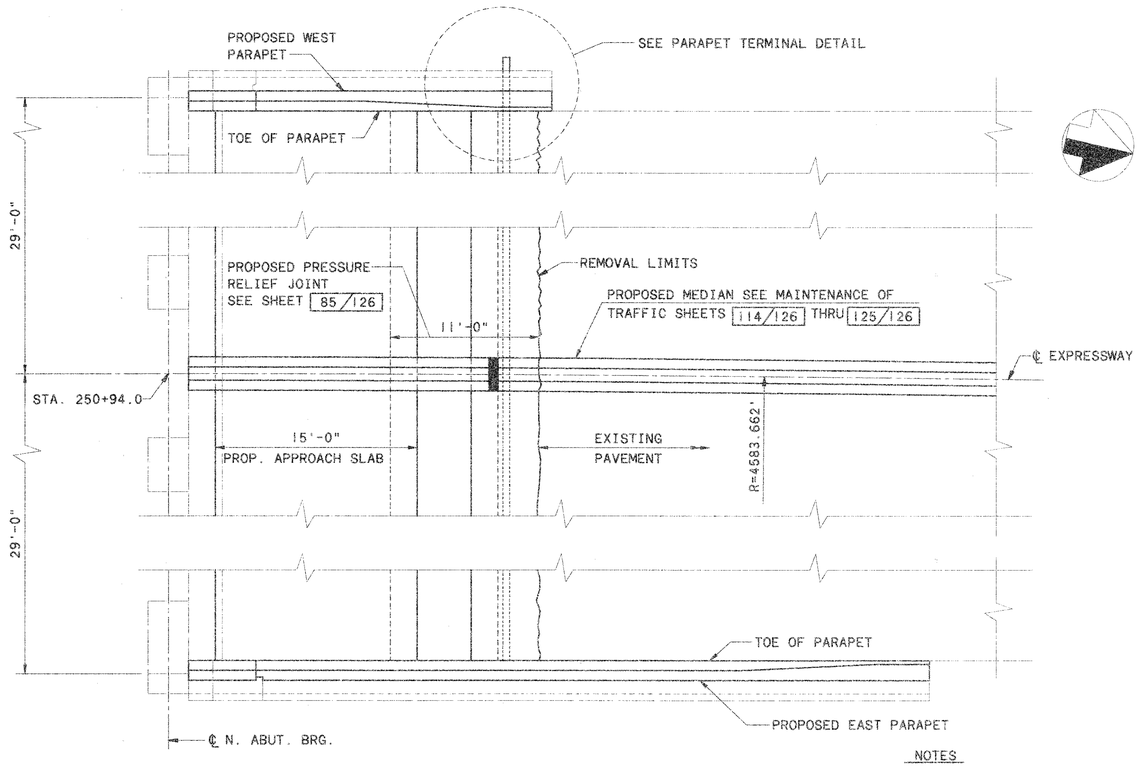


SECTION (F)

ABUTMENT REHAB. 8 N. ABUT PRESSURE RELIEF JOINT
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

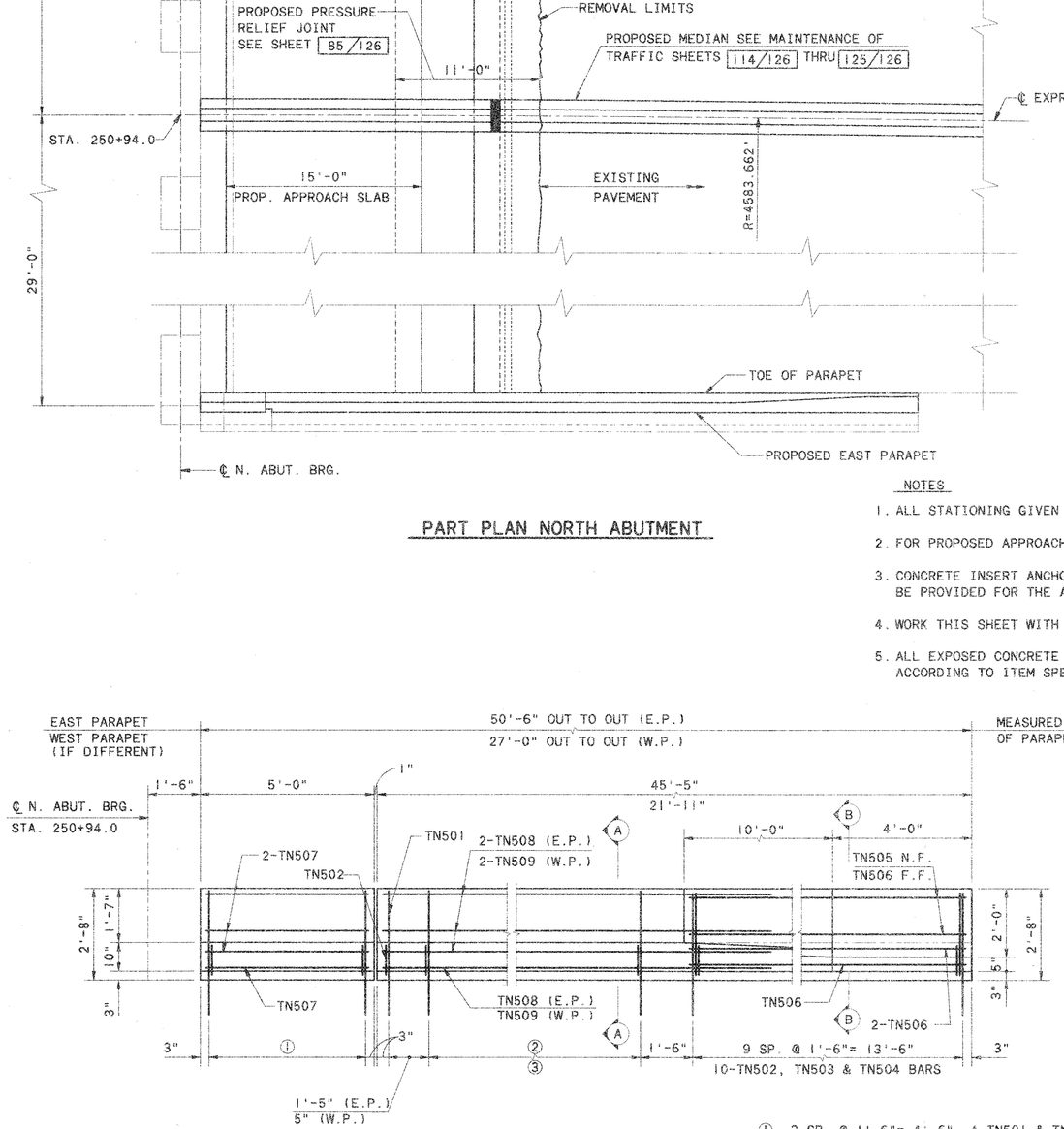
DESIGNED JAP
DRAWN GTC
CHECKED MAK
REVISED
DATE 14-Feb-96
STRUCTURE FILE NUMBER 4805917



PART PLAN NORTH ABUTMENT

NOTES

1. ALL STATIONING GIVEN FOR ℄ EXPRESSWAY
2. FOR PROPOSED APPROACH SLAB REFER TO ODOT STD. DWG. AS-1-81.
3. CONCRETE INSERT ANCHOR ASSEMBLY, AS SHOWN ON STD. DWGS. GR-3.1 AND 3.2, SHALL BE PROVIDED FOR THE ATTACHMENT OF GUARDRAIL TERMINAL CONNECTORS (BY OTHERS).
4. WORK THIS SHEET WITH FINGER JOINT DETAIL SHEET 48/126.
5. ALL EXPOSED CONCRETE SURFACES OF THE PROPOSED PARAPETS SHALL BE SEALED ACCORDING TO ITEM SPECIAL SEALING OF CONCRETE SURFACES.

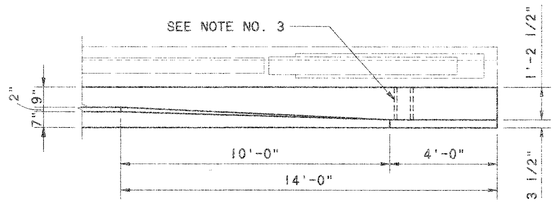


PARAPET ELEVATION

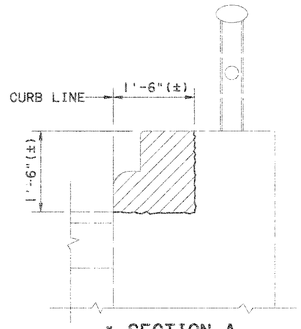
(NOT ALL REINFORCING SHOWN)

① 3 SP. @ 1'-6"= 4'-6", 4-TN501 & TN502 BARS
② 19 SP. @ 1'-6"= 28'-6", 20-TN501 & TN502 BARS (E.P.)
③ 4 SP. @ 1'-6" = 6'-0", 5-TN501 & TN502 BARS (W.P.)

* WEST PARAPET SHOWN
EAST PARPARET OPPOSITE HAND.

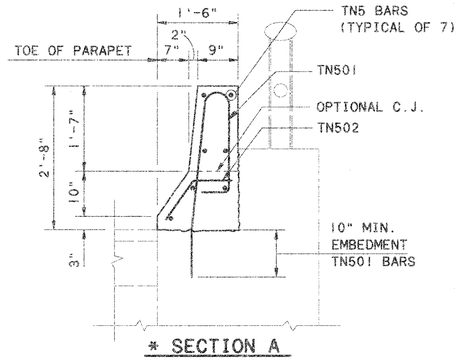


* PARAPET TERMINAL DETAIL



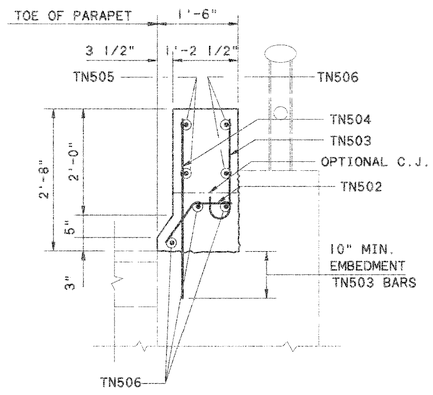
* SECTION A

(REMOVAL)



* SECTION A

(PROPOSED)



* SECTION B

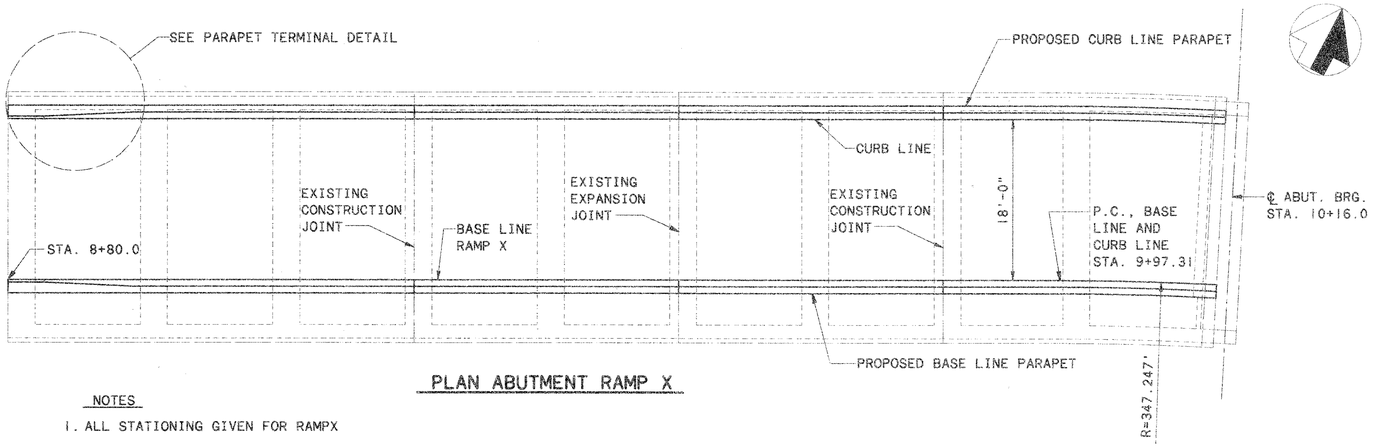
ABUTMENT REHAB. 9 - N. ABUTMENT PARAPETS
BRIDGE NO. LUC-280-0346 OVER MAUMEE RIVER

LUC-280

87/126

DESIGNED	DRAWN	REVIEWED	DATE
JMD	JMD	RMM	14-Feb-96
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MAK		4805917	

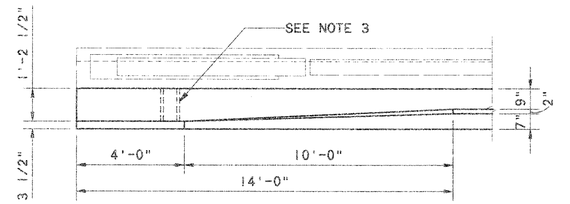
N:\PR\4912\CADD\PARA_NA 1-26-96 3:04:41 pm



PLAN ABUTMENT RAMP X

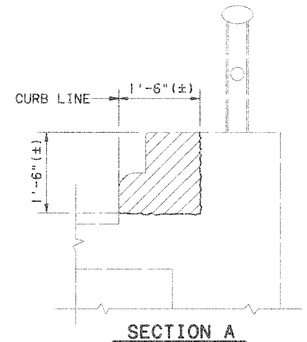
NOTES

1. ALL STATIONING GIVEN FOR RAMPX
2. PREFORMED EXPANSION JOINT FILLER IN THE PARAPET JOINTS MAY BE EITHER 1/4" GRAY SPONGE RUBBER OR 1/4" GRAY CELLULAR POLYVINYL CHLORIDE (PVC) SPONGE. IF RUBBER IS USED IT SHALL MEET THE REQUIREMENTS OF AASHTO M-153.
3. CONCRETE INSERT ANCHOR ASSEMBLY, AS SHOWN ON STD. DWGS. GR-3.1 AND 3.2, SHALL BE PROVIDED FOR THE ATTACHMENT OF GUARDRAIL TERMINAL CONNECTORS (BY OTHERS).
4. WORK THIS SHEET WITH STRIP SEAL DETAIL SHEET 51/126.
5. ALL EXPOSED SURFACES OF THE PROPOSED PARAPETS SHALL BE SEALED ACCORDING TO ITEM SPECIAL SEALING OF CONCRETE SURFACES.



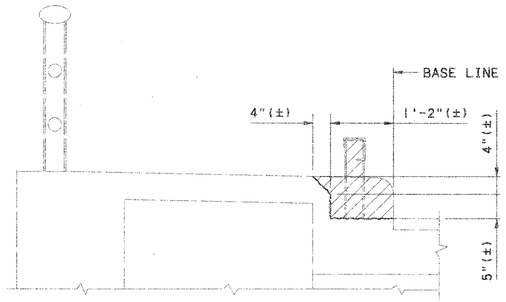
PARAPET TERMINAL DETAIL

(CURB LINE TERMINAL SHOWN. BASE LINE TERMINAL SIMILAR)



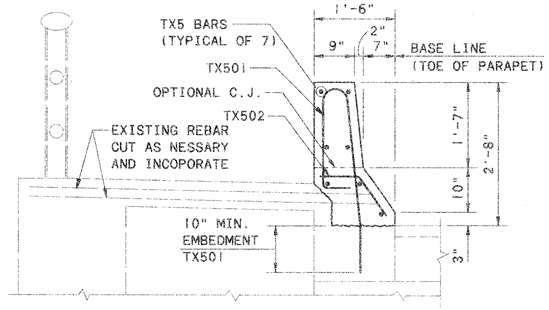
SECTION A

(REMOVAL - CURB LINE)



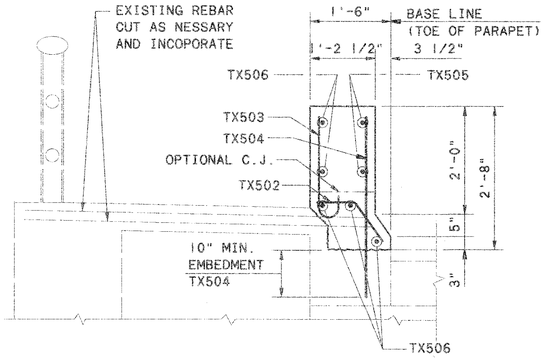
SECTION A

(REMOVAL-BASE LINE)



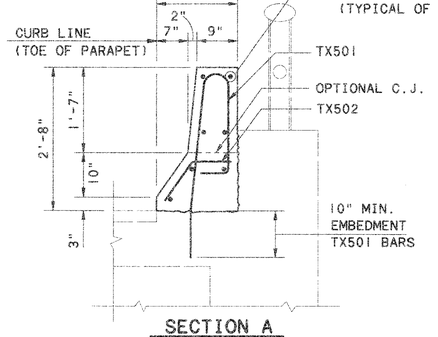
SECTION A

(PROPOSED PARAPET - BASE LINE)



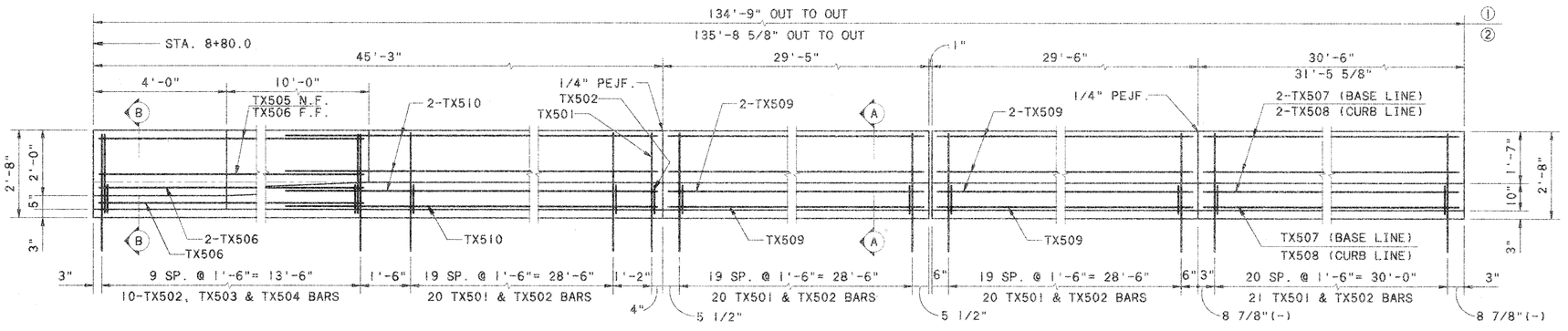
SECTION B

(TERMINAL - BASE LINE)



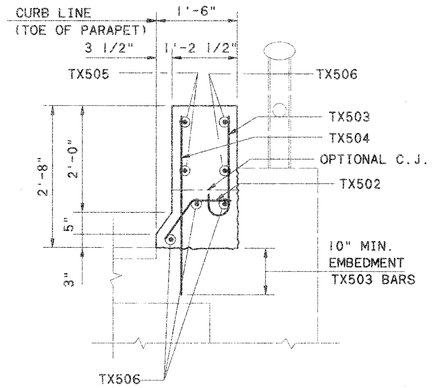
SECTION A

(PROPOSED PARAPET - CURB LINE)



PARAPET ELEVATION

① MEASURED ALONG BASE LINE
② MEASURED ALONG CURB LINE (IF DIFFERENT)



SECTION B

(TERMINAL - CURB LINE)

DESIGNED JMD
DRAWN JMD
CHECKED MAK
REVISED
DATE 14-Feb-96
STRUCTURE FILE NUMBER 4805917

ABUTMENT REHAB. 10 - ABUTMENT X PARAPETS
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

88/126

MARK	NO.	LENGTH	WT.	TYPE	DIM. A	DIM. B	DIM. C	INCR.
			UNIT 1					
SA401	2239	40'-0"	59826	STR				
SA402	109	12'-0"	874	STR				
SA403	245	4'-10"	791	STR				
SA501	1619	40'-0"	67545	STR				
SA502	109	12'-0"	1364	STR				
SA503	1555	26'-5"	42844	STR				
SA504	1555	21'-10"	35411	STR				
SA505	1555	29'-6"	47845	STR				
SA506	1 S.O. 135	9'-8" TO 20'-10"	2147	STR				1"
SA507	45	9'-8"	454	STR				
SA508	45	7'-3"	340	STR				
SA509	45	5'-4"	250	STR				
SA510	90	4'-0"	375	STR				
SA511	183	4'-10"	922	STR				
SA601	81	36'-0"	4380	STR				
SA602	1555	15'-2"	35423	STR				
SA603	1555	33'-1"	77270	STR				
SA604	1555	29'-6"	68900	STR				
SA605	1 S.O. 135	9'-8" TO 20'-10"	3092	STR				1"
SA606	45	9'-8"	653	STR				
SA607	45	7'-3"	490	STR				
SA608	45	5'-4"	360	STR				
SA609	90	4'-0"	541	STR				
SA610	2219	9'-0"	29996	STR				
SWA401	480	40'-0"	12826	STR				
SWA402	12	9'-8"	77	STR				
SWA403	3114	6'-3"	13001	STR				
SWA404	12	7'-3"	60	STR				
BA501	1011	2'-5"	2548	1	11 1/2"	1'-7"		
BA502	1011	3'-0"	3163	2				
BA503	1011	5'-3"	5536	3	2'-2"			
BA504	424	30'-0"	13267	STR				
BA505	8	26'-0"	217	STR				
BA506	8	25'-1"	209	STR				
BA507	8	15'-2"	127	STR				
MA501	388	5'-10"	2361	5				
MA502	520	5'-11"	3209	6				
MA503	132	3'-6"	482	7	10 1/2"	0		
MA504	132	3'-6"	482	7	0	10 1/2"		
MA505	224	30'-0"	7009	STR				
MA506	8	14'-6"	121	STR				

MARK	NO.	LENGTH	WT.	TYPE	DIM. A	DIM. B	DIM. C	INCR.
NA801	39	5'-6"	224	16				
GA501	56	2'-5"	141	1	11 1/2"	1'-7"		
GA502	56	3'-1"	180	2				
GA503	10	1'-9"	18	1	4 1/2"	1'-6"		
GA504	10	1'-10"	19	4				
GA505	8	23'-2"	193	STR				
GA506	4	35'-7"	148	STR				
GA507	4	3'-1"	13	STR				
SAA401	22	5'-10"	86	STR				
SAA402	4	3'-9"	10	STR				
SAA403	8	5'-6"	29	STR				
SAA404	18	6'-8"	80	STR				
SAA405	28	6'-3"	117	STR				
SAA406	36	4'-6"	108	STR				
TS501	90	6'-5"	602	16				
TS502	110	1'-4"	153	13	1'-2"	6 1/4"	8 1/2"	
TS503	20	2'-8"	56	12				
TS504	20	3'-4"	70	STR				
TS505	4	13'-10"	58	14				
TS506	10	13'-8"	143	STR				
TS507	55	5'-8"	325	8				
TS508	55	5'-11"	339	6				
TS509	4	2'-2"	9	STR				
TS510	2	7'-6"	16	13	3'-4"	3'-9"	1'-10 1/2"	
TS511	12	33'-2"	415	STR				
TS512	16	24'-8"	412	STR				
TS513	4	33'-10"	141	STR				
		UNIT 1 SUBTOTAL:	550893					
			UNIT 2					
SB401	887	40'-0"	23701	STR				
SB402	91	23'-6"	1429	STR				
SB403	17	13'-0"	148	STR				
SB404	326	24'-0"	5226	STR				
SB405	199	4'-10"	643	STR				

ENGINEERS
ARCHITECTS

DESIGNED MAK
DRAWN GTC
CHECKED JMD
REVISED
REVIEWED RKM 14-Feb-96
DATE
STRUCTURE FILE NUMBER 480591.7

REINFORCEMENT SCHEDULE - 1
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

MARK	NO.	LENGTH	WT.	TYPE	DIM. A	DIM. B	DIM. C	INCR.
SB406	1 S.O. 59	5'-6" TO 20'-0"	503	STR				3"
SB407	7	18'-0"	84	STR				
SB408	189	8'-7"	1084	STR				
SB501	744	35'-3"	27354	STR				
SB502	1 S.O. 183	3'-0" TO 22'-0"	2386	STR				1 1/4"
SB503	254	20'-0"	5298	STR				
SB504	1 S.O. 237	4'-7" TO 29'-2"	4171	STR				1 1/4"
SB505	1 S.O. 17	4'-5" TO 26'-3"	272	STR				1'-4 3/8"
		8'-2"						
SB506	1 S.O. 10	TO	149	STR				1'-4 3/8"
		20'-5"						
		5'-0"						
SB507	1 S.O. 91	TO	653	STR				1/2"
		8'-9"						
SB508	102	14'-2"	1507	STR				
SB509	1 S.O. 147	15'-5" TO 21'-6"	2830	STR				1/2"
SB510	781	40'-0"	32583	STR				
SB511	1 S.O. 85	21'-11" TO 34'-2"	2486	STR				1 3/4"
SB512	161	4'-10"	812	STR				
SB513	NOT	USED						
SB514	326	24'-0"	8160	STR				
SB515	1 S.O. 59	5'-6" TO 20'-0"	785	STR				3"
SB516	91	23'-6"	2230	STR				
SB517	7	18'-0"	131	STR				
SB518	13	13'-0"	176	STR				
SB601	744	35'-3"	39391	STR				
SB602	1 S.O. 183	3'-0" TO 22'-0"	3436	STR				1 1/4"
SB603	254	20'-0"	7630	STR				
SB604	1 S.O. 237	4'-7" TO 29'-2"	6007	STR				1 1/4"
SB605	1 S.O. 17	4'-5" TO 26'-3"	392	STR				1'-4 3/8"

MARK	NO.	LENGTH	WT.	TYPE	DIM. A	DIM. B	DIM. C	INCR.
SB606	1 S.O. 10	8'-2" TO 20'-5"	215	STR				1'-4 3/8"
SB607	1 S.O. 91	5'-0" TO 8'-9"	940	STR				1/2"
SB608	102	14'-2"	2170	STR				
SB609	1 S.O. 147	15'-5" TO 21'-6"	4075	STR				1/2"
SB610	63	40'-0"	3785	STR				
SB611	1 S.O. 85	21'-11" TO 34'-2"	3580	STR				1 3/4"
SB612	534	22'-3"	17846	STR				
SB613	744	28'-6"	31848	STR				
SB614	1291	9'-0"	17452	STR				
SWB401	180	30'-0"	3607	STR				
SWB402	12	24'-6"	196	STR				
SWB403	465	6'-3"	1941	STR				
SWB404	12	12'-2"	98	STR				
BB501	506	2'-5"	1275	1	11 1/2"	1'-7"		
BB502	502	3'-0"	1571	2				
BB503	502	5'-3"	2749	3	2'-2"			
BB504	8	24'-8"	206	STR				
BB505	24	34'-7"	866	STR				
BB506	136	30'-0"	4255	STR				
BB507	8	25'-8"	214	STR				
BB508	1	7'-10"	8	15	1'-1"			
BB509	1	8'-1"	8	15	1'-2"			
BB510	1	8'-4"	9	15	1'-3"			
BB511	1	8'-7"	9	15	1'-4"			
BB512	4	3'-2"	13	13	1'-10"	5 5/8"	1'-5 1/8"	
BB513	8	38'-6"	321	STR				
BB514	16	33'-4"	556	STR				
BB515	8	24'-3"	202	STR				
MB501	248	5'-10"	1509	5				
MB502	248	5'-11"	1531	6				
MB503	104	30'-0"	3254	STR				
MB504	8	17'-0"	142	STR				
TN501	35	6'-5"	234	16				
TN502	55	1'-4"	77	13	1'-2"	6 1/4"	8 1/2"	
TN503	20	2'-8"	56	12				
TN504	20	3'-4"	70	STR				
TN505	4	13'-10"	58	14				
TN506	10	13'-8"	143	STR				

ENGINEERS
ARCHITECTS

DESIGNED MAK
DRAWN GTC
CHECKED JMD
REVIEWED RKM 14-Feb-96
DATE
REVISED
STRUCTURE FILE NUMBER 4805917

REINFORCEMENT SCHEDULE - 2
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

MARK	NO.	LENGTH	WT.	TYPE	DIM. A	DIM. B	DIM. C	INCR.
TN507	14	4'-8"	68	STR				
TN508	7	33'-7"	245	STR				
TN509	7	10'-1"	74	STR				
	UNIT 2 SUBTOTAL:		289133					
			UNIT 3					
SC401	396	35'-11"	9501	STR				
SC402	132	4'-8"	412	STR				
				STR				
SC501	307	34'-6"	11047	STR				
SC502	366	36'-6"	13933	STR				
SC503	122	4'-8"	594	STR				
SC504	307	28'-7"	9152	STR				
SC505	24	6'-9"	169	STR				
SC601	307	34'-8"	15985	STR				
SC602	307	28'-7"	13180	STR				
SC603	448	9'-6"	6393	STR				
SC604	64	40'-0"	3845	STR				
SC605	64	18'-10"	1205	STR				
BRC501	277	2'-5"	698	1	11 1/2"	1'-7"		
BRC502	277	3'-0"	867	2				
BRC503	277	5'-3"	1517	3	2'-2"			
BRC504	48	37'-1"	1857	STR				
BRC505	48	36'-8"	1836	STR				
MC501	136	5'-10"	827	5				
MC502	48	5'-11"	839	6				
MC503	48	36'-3"	1815	STR				
NAC501	6	29'-5"		STR				
NAC502	6	35'-3"		STR				
	UNIT 3 SUBTOTAL:		95672					
			BASCULE PIERS					
BBP501	152	2'-11 1/4"	466	9				
BBP502	140	5'-0"	730	10				
BBP503	32	24'-3"	810	STR				
BBP504	8	29'-8"	248	STR				
BBP505	8	30'-8"	256	STR				
BBP506	8	10'-2"	85	STR				
BBP507	8	13'-4"	112	STR				
BBP508	8	6'-7 7/8"	56	11	2'-4"	1'-5"	0'-10"	
BBP509	8	5'-11 1/4"	50	13	2'-1"	2'-5"	8 1/2"	
BBP510	8	7'-2 1/2"	60	13	3'-9"	2'-5"	8 1/2"	
MBP501	66	5'-8 3/8"	392	8				
MBP502	60	5'-11"	370	6				
MBP503	16	22'-0"	367	STR				
MBP504	4	23'-5"	98	STR				

MARK	NO.	LENGTH	WT.	TYPE	DIM. A	DIM. B	DIM. C	INCR.
MBP505	4	24'-3"	101	STR				
MBP506	4	10'-2"	43	STR				
MBP507	4	12'-3"	51	STR				
MBP508	4	6'-7 7/8"	28	11	2'-4"	1'-5"	0'-10"	
MBP509	4	5'-11 1/4"	25	11	2'-1"	2'-5"	0	
MBP510	4	7'-2 1/2"	30	11	3'-9"	2'-5"	0	
	BASCULE PIERS SUBTOTAL:		4378					
			RAMP EE					
SE401	273	38'-7"	7036	STR				
SE402	1 S.O. 39	13'-5" TO 40'-0"	696	STR				8 3/8"
SE403	6	40	160	STR				
SE501	301	30'-8"	9628	STR				
SE502	1 S.O. 148	30'-8" TO 36'-9"	5203	STR				1/2"
SE503	1 S.O. 64	3'-7" TO 29'-2"	1093	STR				4 7/8"
SE504	273	39'-1"	11128	STR				
SE505	1 S.O. 39	13'-5" TO 40'-0"	1086	STR				8 3/8"
SE506	6	40	250	STR				
SE601	301	30'-8"	13865	STR				
SE602	1 S.O. 148	30'-8" TO 36'-9"	7493	STR				1/2"
SE603	1 S.O. 64	3'-7" TO 29'-2"	1574	STR				4 7/8"
SE604	399	9'-6"	5693	STR				
SE605	228	18'-3"	6250	STR				
SWE401	60	32'-9"	1313	STR				
SWE402	2 S.O. 40	6'-6" TO 9'-9"	434	STR				1"
SWE403	276	6'-6"	1198	STR				
SWE404	2 S.O. 3	5'-0" TO 12'-2"	34	STR				3'-7"
BRE501	382	2'-5"	963	1				
BRE502	382	3'-0"	1195	2				
BRE503	382	5'-3"	2092	3	2'-2"			
BRE504	64	39'-10"	2659	STR				
BRE505	64	36'-6"	2436	STR				
TE501	103	6'-5"	689	16				
TE502	123	1'-4"	171	13	1'-2"	6 1/4"	8 1/2"	

BURGESS & NIPLE
ENGINEERS
ARCHITECTS

DESIGNED	DRAWN	REVIEWED	DATE
MAK	GTC	RKM	14-Feb-96
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JMD		4805917	

REINFORCEMENT SCHEDULE - 3
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

MARK	NO.	LENGTH	WT.	TYPE	DIM. A	DIM. B	DIM. C	INCR.
TE503	20	2'-8"	56	12				
TE504	20	3'-4"	70	STR				
TE505	4	13'-10"	58	14				
TE506	10	13'-8"	143	STR				
TE507	7	21'-6"	157	STR				
TE508	7	3'-3"	24	STR				
TE509	7	24'-6"	179	STR				
TE510	21	31'-8"	694	STR				
TE511	7	8'-8"	63	STR				
		RAMP EE SUBTOTAL:	85783					
			RAMP X					
SX401	162	40'-0"	4329	STR				
SX402	1 S.O. 27	32'-7" TO 36'-11"	627	STR				2"
SX403	1 S.O. 27	21'-9" TO 35'-10"	519	STR				6 1/2"
SX404	1 S.O. 27	22'-11" TO 38'-1"	550	STR				7"
SX405	1 S.O. 27	14'-5" TO 20'-11"	319	STR				3"
SX406	1 S.O. 27	32'-10" TO 36'-1"	621	STR				1 1/2"
SX407	1 S.O. 27	27'-4" TO 34'-11"	561	STR				3 1/2"
SX501	639	20'-8"	13774	STR				
SX502	1 S.O. 16	1'-7" TO 19'-9"	178	STR				1'-2 1/2"
SX503	1 S.O. 16	2'-4" TO 20'-5"	190	STR				1'-2 1/2"
SX504	1 S.O. 33	1'-5" TO 20'-1"	370	STR				7"
SX505	1 S.O. 33	1'-9" TO 20'-5"	381	STR				7"
SX506	1 S.O. 16	2'-0" TO 19'-6"	186	STR				1'-2"
SX507	1 S.O. 17	1'-9" TO 20'-5"	197	STR				1'-2"

MARK	NO.	LENGTH	WT.	TYPE	DIM. A	DIM. B	DIM. C	INCR.
SX508	1 S.O. 5	2'-8" TO 17'-0"	51	STR				3'-7"
SX509	1 S.O. 4	5'-0" TO 16'-9"	45	STR				3'-11"
SX510	1 S.O. 11	2'-3" TO 18'-11"	121	STR				1'-8"
SX511	144	40'-0"	6008	STR				
SX512	1 S.O. 24	33'-1" TO 37'-11"	889	STR				2 1/2"
SX513	1 S.O. 24	22'-3" TO 36'-8"	737	STR				7 1/2"
SX514	1 S.O. 24	23'-5" TO 37'-10"	767	STR				7 1/2"
SX515	1 S.O. 24	14'-11" TO 21'-8"	458	STR				3 1/2"
SX516	1 S.O. 24	33'-4" TO 36'-3"	871	STR				1 1/2"
SX517	1 S.O. 24	27'-10" TO 35'-6"	793	STR				4"
SX601	639	20'-8"	19836	STR				
SX602	1 S.O. 16	1'-7" TO 19'-9"	256	STR				1'-2 1/2"
SX603	1 S.O. 16	2'-4" TO 20'-5"	273	STR				1'-2 1/2"
SX604	1 S.O. 33	1'-5" TO 20'-1"	533	STR				7"
SX605	1 S.O. 33	1'-9" TO 20'-5"	549	STR				7"
SX606	1 S.O. 16	2'-0" TO 19-6"	258	STR				1'-2"
SX607	1 S.O. 17	1'-9" TO 20'-5"	283	STR				1'-2"
SX608	1 S.O. 5	2'-8" TO 17'-0"	74	STR				3'-7"

ENGINEERS ARCHITECTS

REVIEWED RKM DATE 14-Feb-96
STRUCTURE FILE NUMBER 4805917
DRAWN GTC REVISED
DESIGNED MAK CHECKED JMD

REINFORCEMENT SCHELDULE - 4
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

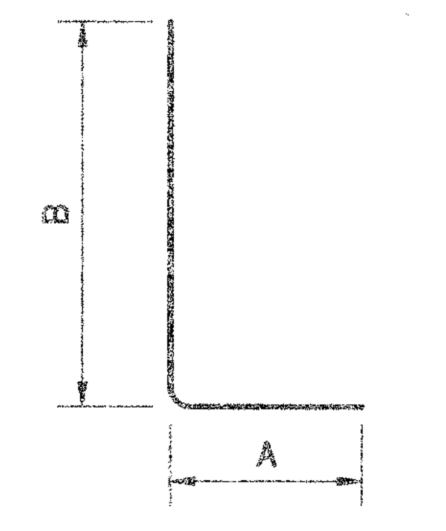
LUC-280

92/126

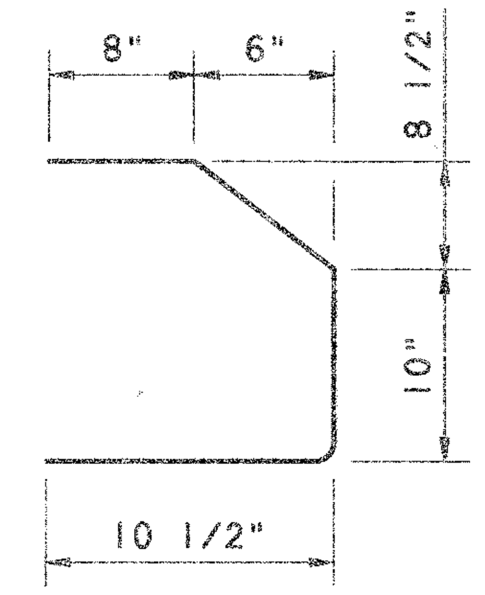
N:\PROJECTS\PR14912\CADD\RESTEEL4 9-7-95 1:35:48 pm

MARK	NO.	LENGTH	WT.	TYPE	DIM. A	DIM. B	DIM. C	INCR.
		5'-0"						
SX609	1 S.O. 4	TO	65	STR				3'-11"
		16'-9"						
		2'-3"						
SX610	1 S.O. 11	TO	175	STR				1'-8"
		18'-11"						
SX611	624	9'-0"	8435	STR				
SWX401	72	40'-0"	1924	STR				
		31'-5"						
SWX402	2 S.O. 6	TO	257	STR				3"
		32'-8"						
		18'-0"						
SWX403	2 S.O. 6	TO	159	STR				9"
		21'-9"						
		19'-0"						
SWX404	2 S.O. 6	TO	169	STR				10"
		23'-2"						
		20'-10"						
SWX405	2 S.O. 6	TO	195	STR				4 1/2"
		27'-9"						
		35'-6"						
SWX406	2 S.O. 6	TO	288	STR				2"
		36'-4"						
		25'-3"						
SWX407	2 S.O. 6	TO	211	STR				5"
		27'-4"						
SWX408	760	6'-6"	3300	STR				
		1'-6"						
SWX409	2 S.O. 5	TO	23	STR				1'-0"
		5'-6"						
TX501	164	6'-5"	1098	16				
TX502	184	1'-4"	256	13	1'-2"	6 1/4"	8 1/2"	
TX503	20	2'-8"	56	12				
TX504	20	3'-4"	70	STR				
TX505	4	13'-10"	58	14				
TX506	10	13'-8"	143	STR				
TX507	7	30'-2"	220	STR				
TX508	7	31'-2"	228	STR				
TX509	28	29'-1"	849	STR				
TX510	14	33'-9"	493	STR				
BRX501	548	2'-5"	1381	STR				
BRX502	548	3'-0"	1715	STR				
BRX503	548	5'-3"	3001	STR				
BRX504	16	38'-11"	649	STR				

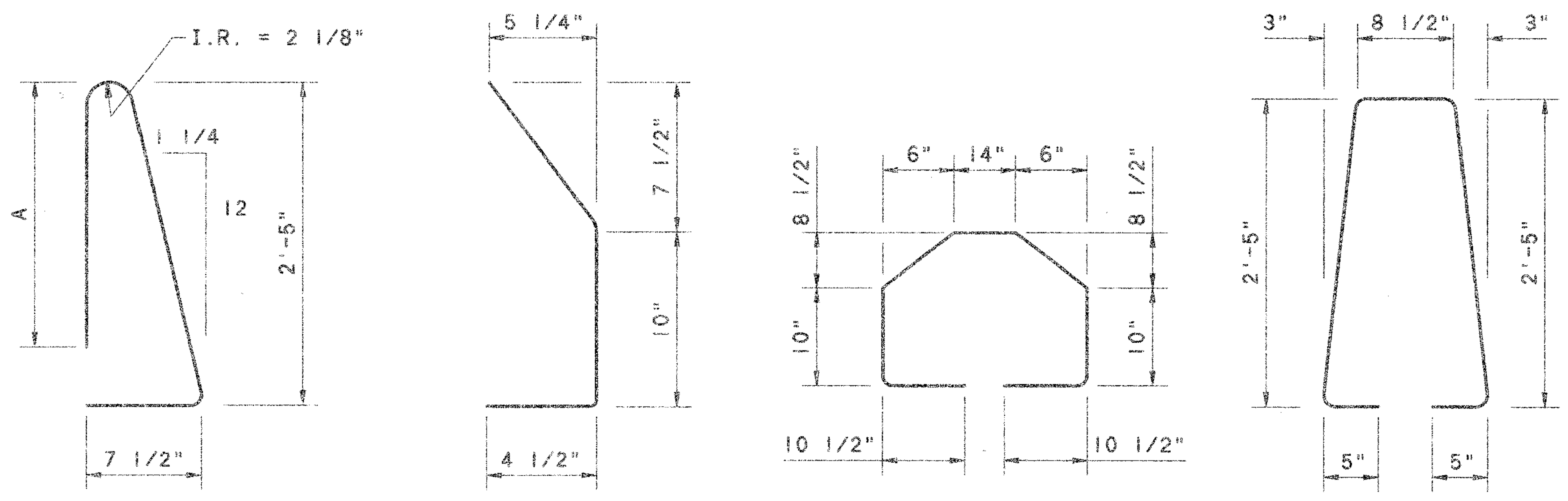
MARK	NO.	LENGTH	WT.	TYPE	DIM. A	DIM. B	DIM. C	INCR.
BRX505	16	38'-0"	634	STR				
BRX506	16	38'-9"	647	STR				
BRX507	16	28'-1"	469	STR				
BRX508	16	37'-0"	617	STR				
BRX509	16	38'-2"	637	STR				
BRX510	16	34'-7"	577	STR				
BRX511	16	38'-4"	640	STR				
BRX512	16	30'-10"	515	STR				
BRX513	16	32'-7"	544	STR				
BRX514	16	32'-0"	534	STR				
BRX515	16	37'-1	619	STR				
	RAMP	X SUBTOTAL:	87455					



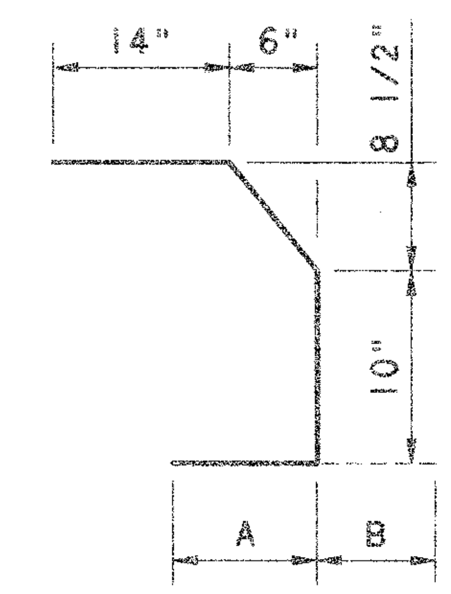
TYPE 1



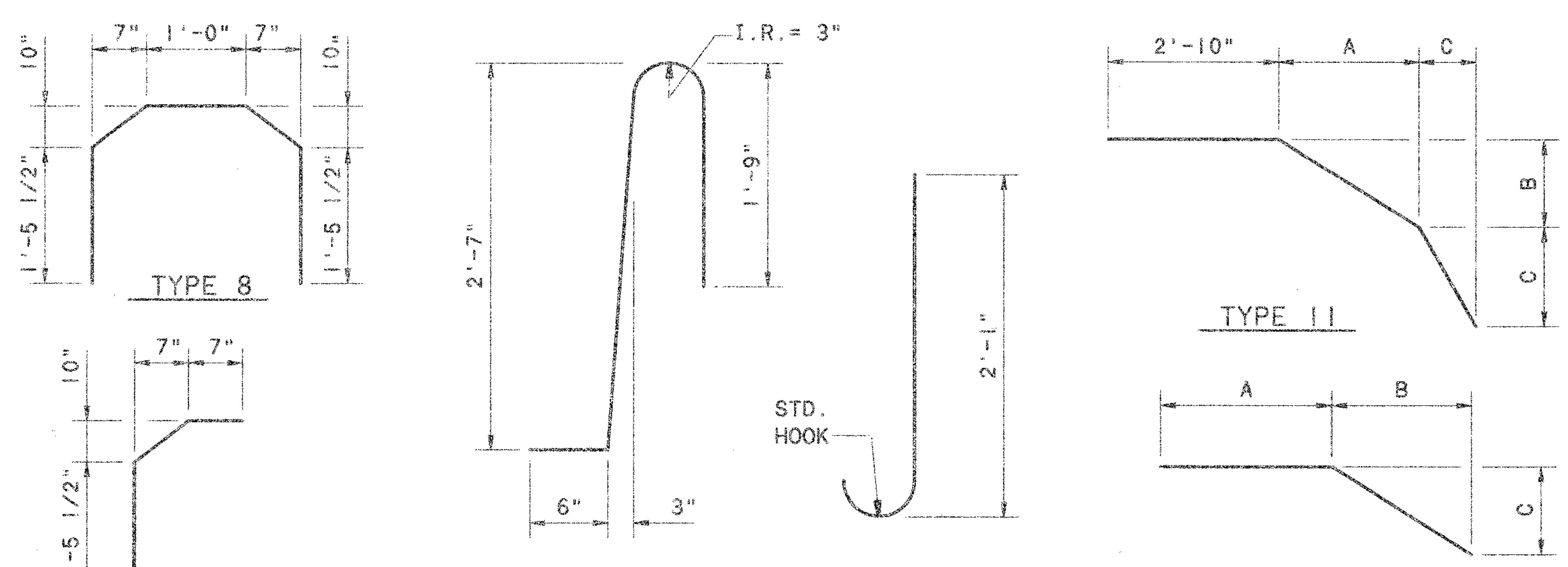
TYPE 2



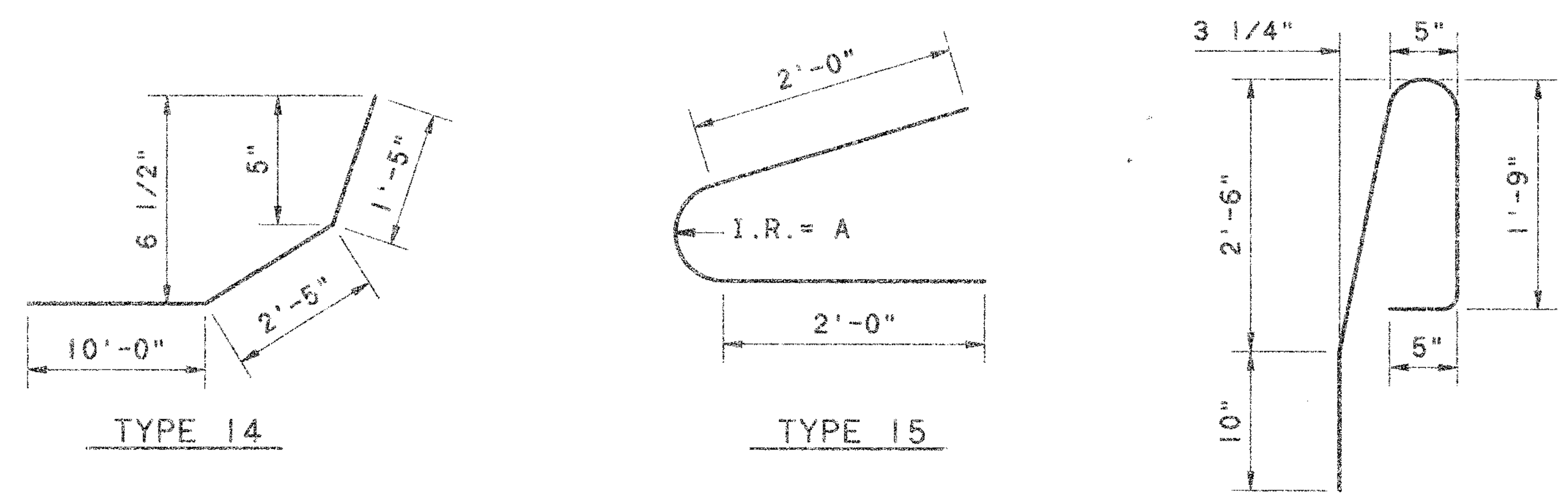
TYPE 3 TYPE 4 TYPE 5 TYPE 6



TYPE 7



TYPE 8 TYPE 9 TYPE 10 TYPE 12 TYPE 11 TYPE 13



TYPE 14 TYPE 15 TYPE 16

ENGINEERS ARCHITECTS

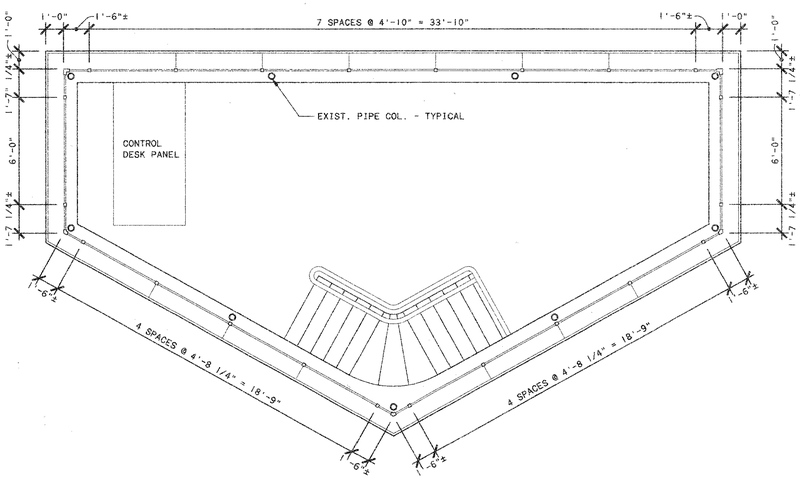
DESIGNED MAK | DRAWN GTC | REVIEWED RKM | DATE 14-Feb-96
CHECKED JMD | REVISED | STRUCTURE FILE NUMBER 4805917

REINFORCEMENT SCHEDULE - 5
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

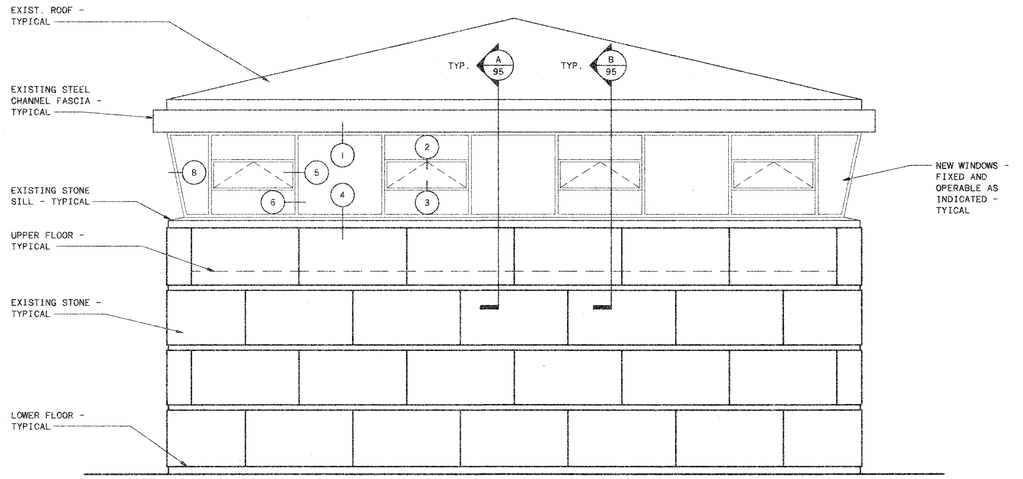
LUC-280

93/126

N:\PR\4912\CADD\RESTEELS 9-7-95 1:52:02 pm



UPPER FLOOR PLAN
SCALE: 1/4"=1'-0"

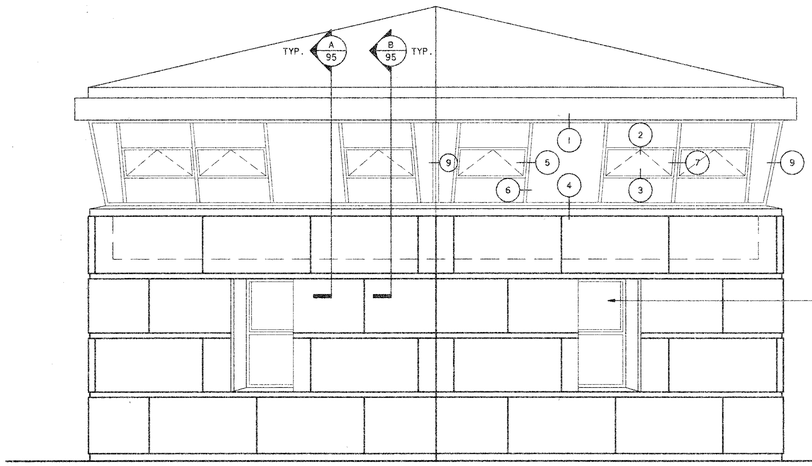


WEST ELEVATION
SCALE: 1/4"=1'-0"

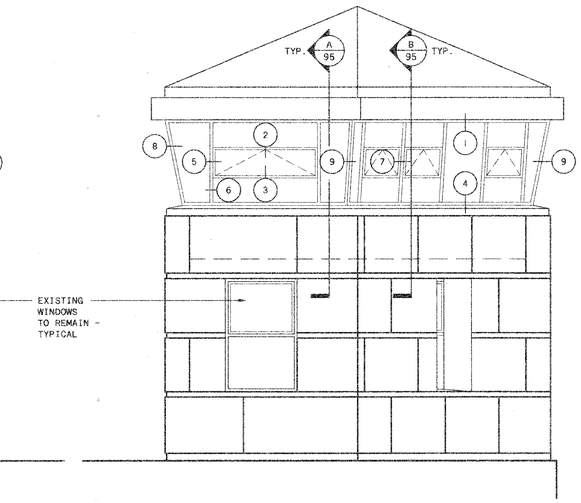
NOTE -
REMOVE ALL EXISTING GLAZING, FIXED AND OPERABLE WINDOWS, AND APPURTENANCES FROM THE UPPER FLOOR LEVEL

NOTE -
SEE SHEET 95 FOR TYPICAL WALL SECTIONS AND DETAILS OF THE NEW REPLACEMENT WINDOWS

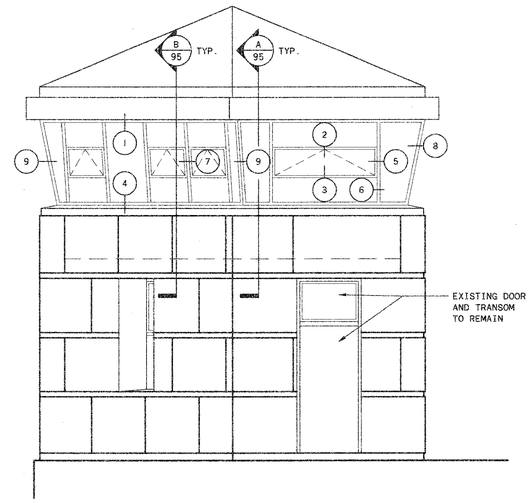
NOTE -
FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS



EAST ELEVATION
SCALE: 1/4"=1'-0"



SOUTH ELEVATION
SCALE: 1/4"=1'-0"



NORTH ELEVATION
SCALE: 1/4"=1'-0"

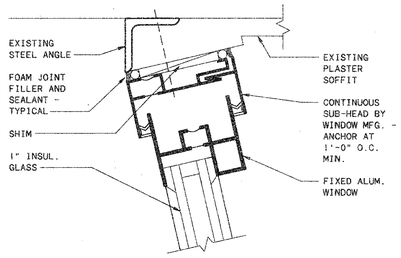
DESIGNED RKH
DRAWN BWK
CHECKED RKH
REVISED XXX
REVISED 00/00/94
STRUCTURE FILE NUMBER 4805917

FLOOR PLAN AND EXTERIOR ELEVATIONS
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

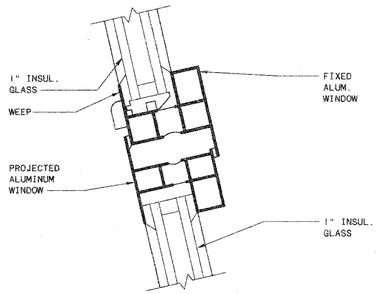
LUC-280

94/126

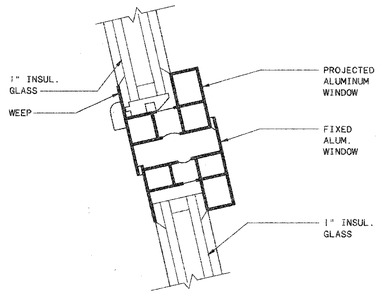
N:\PR\491\2\CADD\SHT91 8-18-95 4:44:15 pm EST



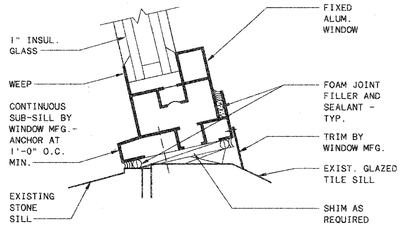
1 / 95 HEAD DETAIL
SCALE: 6"=1'-0"



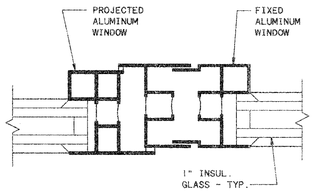
2 / 95 MEETING RAIL DETAIL
SCALE: 6"=1'-0"



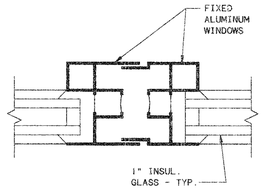
3 / 95 MEETING RAIL DETAIL
SCALE: 6"=1'-0"



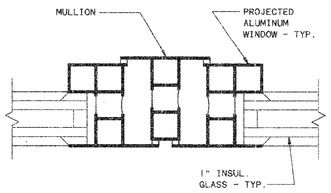
4 / 95 SILL DETAIL
SCALE: 6"=1'-0"



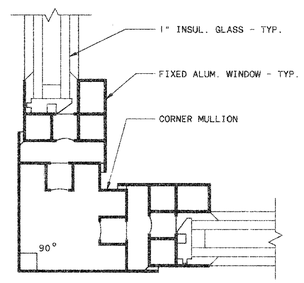
5 / 95 MULLION DETAIL
SCALE: 6"=1'-0"



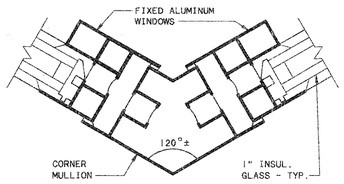
6 / 95 MULLION DETAIL
SCALE: 6"=1'-0"



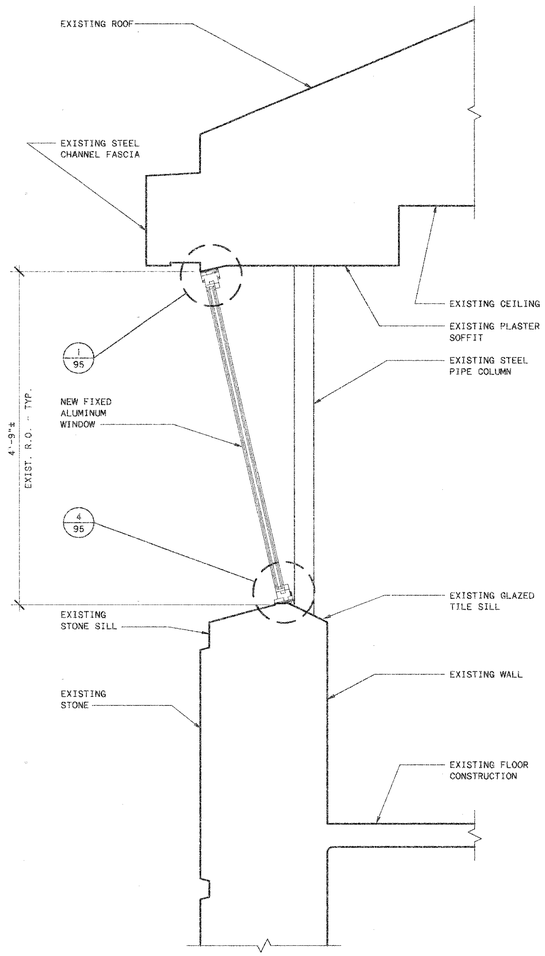
7 / 95 MULLION DETAIL
SCALE: 6"=1'-0"



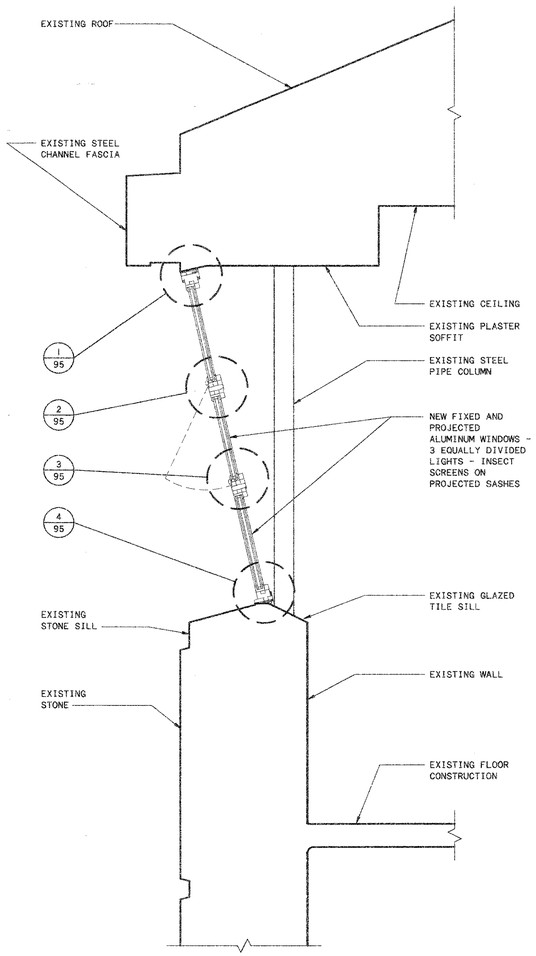
8 / 95 MULLION DETAIL
SCALE: 6"=1'-0"



9 / 95 MULLION DETAIL
SCALE: 6"=1'-0"



A / 95 WALL SECTION
SCALE: 1"=1'-0"



B / 95 WALL SECTION
SCALE: 1"=1'-0"

BURGESS & NIPLE, INC.
ENGINEERS
ARCHITECTS

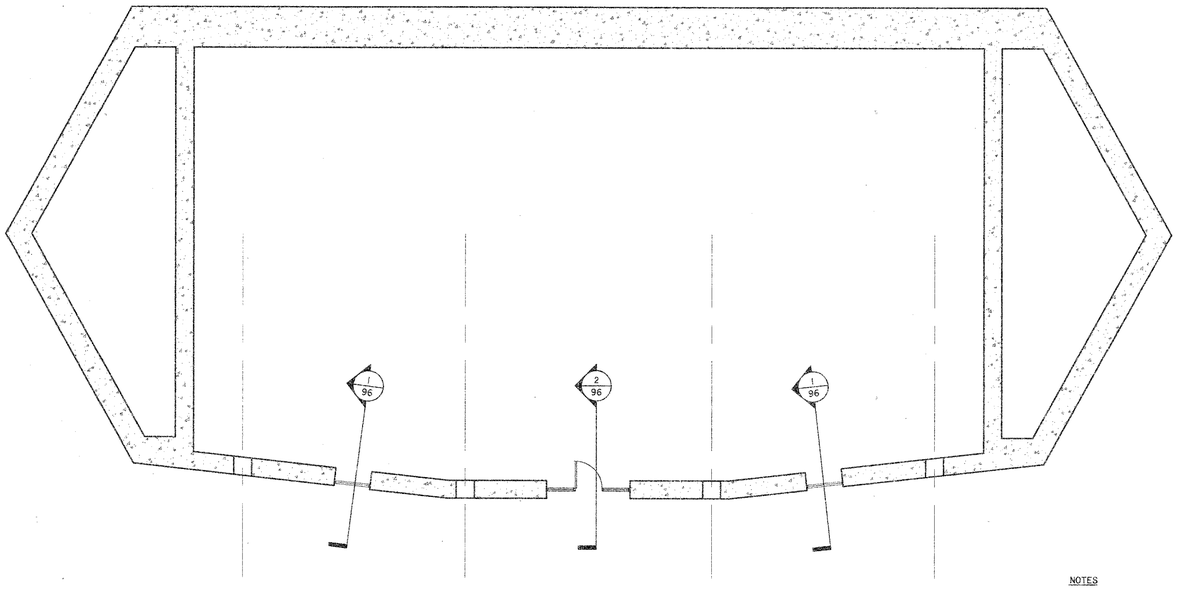
DESIGNED	DRAWN	REVISED	DATE
RKH	BWK	XXX	00/00/94
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RKH	XXX	4805917	

TYP. WALL SECTIONS & WINDOW DETAILS

BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

95/126



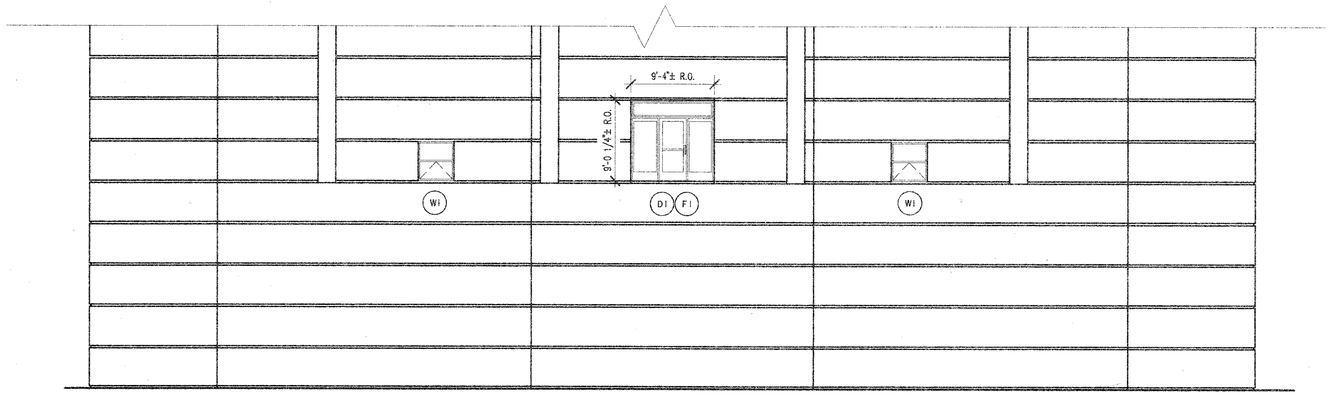
PARTIAL PLAN AT MACHINERY FLOOR (TYP. FOR PIERS 4 & 5)
SCALE: 1/8"=1'-0"

NOTES

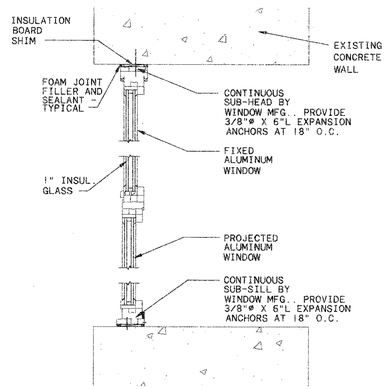
FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS

REMOVE ALL EXISTING WINDOW AND DOOR FRAMES AND ALL PLYWOOD BLOCKING OPENINGS

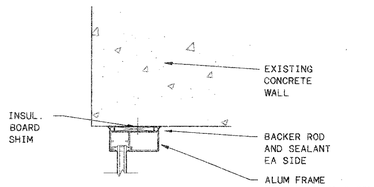
REFER TO SPECIFICATION FOR DOOR HARDWARE



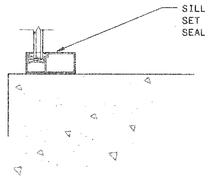
CHANNEL ELEVATION (TYP. FOR PIERS 4 & 5)
SCALE: 1/8"=1'-0"



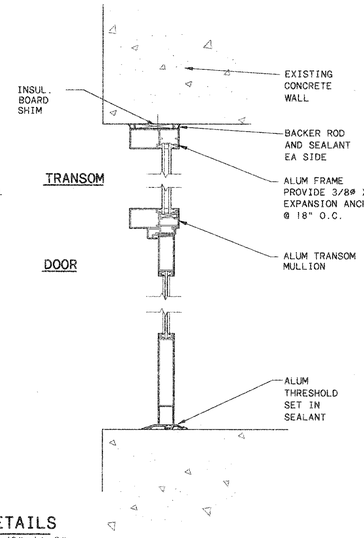
1/96 WINDOW DETAIL
SCALE: 1 1/2"=1'-0"



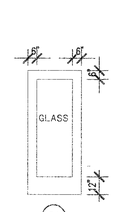
JAMB @ SIDELITE



SILL @ SIDELITE

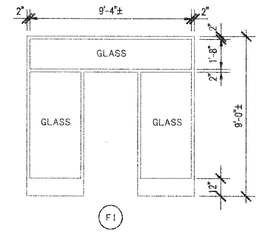


2/96 DOOR DETAILS
SCALE: 1 1/2"=1'-0"



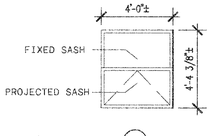
D1

DOOR W/ 1" INSUL. TEMPERED GLAZING
3'-0" x 7'-0" x 1 3/4" THK.
(TYP. OF 2)



F1

FRAME WITH TRANSOM AND SIDELITES
1" INSUL. TEMPERED GLASS (TYP OF 2)



W1

WINDOW (TYP. OF 4)

DOOR & WINDOW ELEVATIONS
SCALE: 1/4"=1'-0"

DESIGNED	KEM
DRAWN	KEM
CHECKED	KEM
REVISED	XXX
REVISED	XXX
DATE	00/00/94
STRUCTURE FILE NUMBER	4805917

MODJESKI & MASTERS ENGINEERS ARCHITECTS

WINDOW AND DOOR DETAILS @ BASCULE PIERS 4 & 5
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

96/126

1

625.03 - POWER SERVICE

THE POWER SUPPLYING AGENCY FOR THIS PROJECT IS:

TOLEDO EDISON COMPANY
300 MADISON AVENUE
TOLEDO, OHIO 43652

THE EXISTING LIGHTING SERVICE IS 480 VOLTS, 2-WIRE, GROUNDED NEUTRAL. FOR ROADWAY LIGHTING AND, FOR NAVIGATION LIGHTING, 120 VOLTS, 2-WIRE, GROUNDED NEUTRAL.

625.07 - 713.11 LUMINAIRES

STYLE C LUMINAIRES SHALL HAVE SINGLE RATED 480 VOLT, 400 WATT, INTEGRAL REGULATOR BALLASTS FOR USE WITH HIGH PRESURE SODIUM LAMPS AND SHALL BE GENERAL ELECTRIC M400, CROUSE-HINDS OVM, ITT AMERICAN 400, OR EQUAL APPROVED BY THE ENGINEER.

713.14 LAMPS

HIGH PRESSURE SODIUM LAMPS SHALL BE GENERAL ELECTRIC "LUCALUX", PHILIPS "CERAMALUX", SYLVANIA/OSRAM. "LUMALUX", OR EQUAL APPROVED BY THE ENGINEER.

GENERAL

SEE SHEET 6/126 "GENERAL NOTES - 1" FOR ADDITIONAL INFORMATION AND REQUIREMENTS INCLUDING "REFERENCES" AND "EXISTING STRUCTURE VERIFICATION".

NAVIGATION LIGHTING SYSTEM, AS PER PLAN

THE CONTRACTOR SHALL FURNISH AND INSTALL NEW NAVIGATION LIGHTS TO REPLACE AND UPDATE THE EXISTING LIGHTS AS SHOWN AND SCHEDULED ON THE PLANS.

WORK SHALL INCLUDE REMOVAL OF FOUR EXISTING PIER LIGHTS AND TWO EXISTING AXIS LIGHTS AT LOCATIONS SCHEDULED ON THE PLANS. THE WORK SHALL INCLUDE DEMOUNTING THE FIXTURE AND SUPPORTING EQUIPMENT AND DELIVERING THEM TO THE OWNER'S SPECIFIED STORAGE SITE OR DISPOSING OF THEM AS DIRECTED BY THE OWNER.

LIGHT HOUSINGS SHALL BE CAST ALUMINUM WITH ALL JOINTS SEALED WITH WEATHERPROOF GASKETS. HOUSINGS SHALL BE RAIN TIGHT AND SHALL INCLUDE ACCESS DOORS FOR SERVICING AND 1-1/2" THREADED HUBS FOR SUPPORT STEMS. STEMS SHALL BE 1-1/2" ALUMINUM CONDUIT.

LENSES SHALL BE HEAT RESISTANT GLASS, 8-3/4" O.D., STANDARD MARINE FRESNEL OF RED OR GREEN COLOR AS SCHEDULED. LAMP RECEPTACLES SHALL BE 250 VOLT, 660 WATT, SPRING LOADED PORCELAIN, DESIGNED TO RESIST LAMP LOOSENING DUE TO VIBRATION, AND LAMP FREEZING DUE TO CORROSION. RECEPTACLE BRACKET SHALL BE MOUNTED ON SHOCK ABSORBERS TO PROLONG LAMP LIFE. PIER AND AXIS LIGHTS (TYPES B AND C, RESPECTIVELY) SHALL BE EQUIPPED WITH SINGLE LAMPS.

LAMPS SHALL BE 100 WATT, 120 VOLT, MEDIUM BASE, 1104 INITIAL LUMENS, WITH A RATED LIFE OF 20,000 HOURS, AND BRASS SHELL.

EXISTING BASCULE SPAN LIGHTS SHALL BE REFURBISHED AS FOLLOWS: RELAMP ALL LIGHTS AND REPLACE ANY CORRODED HARDWARE; LUBRICATE ALL OPERATING MECHANISMS WITH APPROVED LUBRICANT; VERIFY PROPER OPERATION OF LAMP OUT RELAY AND INDICATOR; VERIFY PROPER OPERATION OF EACH LAMP (RED, WHITE, AND GREEN) ON EACH LIGHT AND CORRECT ANY DEFICIENCIES FOUND. THERE ARE FOUR BASCULE SPAN LIGHTS LOCATED AT BRIDGE ℄ STATIONS 52+72.59 36' L, 52+72.59 36' R, 52+76.59 36' L, AND 52+72.59 36' R.

LIGHTS SHALL BE EQUIVALENT TO THE FOLLOWING LISTED LIGHTS AS MANUFACTURED BY B&B ELECTROMATIC CORPORATION OF NORWOOD, LOUISIANA:

TYPE "B" PIER LIGHT:
CC7301-PM-A-R180
TYPE "C" AXIS LIGHT:
CC7301-BM-JB-A-R180

MODIFY EXISTING AXIS LIGHTS CONDUITS AS REQUIRED TO TERMINATE IN THE NEW JUNCTION BOXES. REINSTALL PIER LIGHTS IN A MANNER SIMILAR TO THE WAY IN WHICH THE EXISTING PIER LIGHTS ARE INSTALLED. REPLACE EXISTING WIRE FROM EACH LIGHT BACK TO THE LAST JUNCTION BOX IN THE CIRCUIT BEFORE THE JUNCTION BOX AT THE LIGHT WITH 2-#10, 1-#12 GROUND 600 VOLT TYPE XHHW IN THE EXISTING CONDUIT SYSTEM. REFER TO EXISTING PLANS FOR NAVIGATION LIGHT CIRCUITING.

THE NAVIGATION LIGHTING SYSTEM IS SUPPLIED FROM PANELBOARD B AND CONTROLLED BY HAND-OFF-AUTOMATIC SWITCH AT THE OPERATORS CONSOLE AND A TIMER LOCATED IN CONTROL PANEL B IN PIER NO.5. SEE SHEET 12/126 FOR NAVIGATION LIGHTING AND TRAFFIC MAINTENANCE REQUIREMENTS.

NAVIGATION LIGHTING SYSTEM REPLACEMENT AND REHABILITATION SHALL BE MEASURED AND PAID FOR AS A LUMP SUM UNIT WHICH PRICE SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIAL NECESSARY TO COMPLETE THE WORK AS OUTLINED HEREIN AND IN COMPLIANCE WITH THE PLANS.

ITEM SPECIAL - REPAIR OF EXISTING LIGHTING SYSTEM

THE CONTRACTOR SHALL FURNISH AND INSTALL A NEW LUMINAIRE, POLE AND BASE AT LOCATION AS SCHEDULED ON THE PLANS AND CONNECT TO THE EXISTING LIGHTING CIRCUIT WITH NEW NO. 4 AWG 5KV CABLE IN NEW 1 1/2" PVC COATED RIGID CONDUIT TO THE EXTENT INDICATED IN THE PLANS. REPLACE EXISTING WIRE FROM LIGHT POLE BACK TO THE FIRST JUNCTION BOX IN CIRCUIT BEFORE POLE. REMOVE EXISTING LIGHT POLE ANCHOR BOLTS AND CONDUIT AND INSTALL ANCHOR BOLTS AND GROUND POLE AS INDICATED ON PLAN.

EXISTING ROADWAY LIGHTING SYSTEM SHALL BE REPAIRED AND MODIFIED TO THE EXTENT AS INDICATED AND SCHEDULED ON THE PLANS. COORDINATE TESTING AND POWER OUTAGE REQUIREMENTS FOR THE ROADWAY LIGHTING WITH TOLEDO EDISON. POLE HANDHOLE COVERS TO REPLACE MISSING OR DAMAGED COVERS SHALL BE INSTALLED WITH STAINLESS STEEL FASTENERS.

MEASUREMENT AND PAYMENT FOR WORK TO REPAIR THE EXISTING LIGHTING SYSTEM SHALL BE MADE AT THE LUMP SUM PRICE BID FOR "REPAIR OF EXISTING LIGHTING SYSTEM AS PER PLAN", WHICH PRICE SHALL INCLUDE ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO COMPLETE THE WORK.

ITEM SPECIAL - REPAIR OF EXISTING TRAFFIC GATES AND OVERHEAD SIGNS

THE CONTRACTOR SHALL FURNISH AND INSTALL THE CONDUIT, WIRE AND RELATED EQUIPMENT NECESSARY TO REPAIR THE FOUR EXISTING TRAFFIC GATES AS INDICATED ON PLAN. WORK SHALL ALSO INCLUDE REMOVAL OF EXISTING CONDUIT AND WIRE, REPLACEMENT AND THE CLEANING OF ELECTRICAL BOXES LOCATED WITHIN THE DESIGNATED GATEHOUSE.

CIRCUITING TO THE EXISTING OVERHEAD SIGN LUMINAIRES SHALL BE REPLACED INCLUDING ALL CONDUIT, FITTINGS, WIRE, AND RELATED EQUIPMENT TO THE EXTENT AS INDICATED ON THE PLANS. REPLACE STRIP HEATER AND THERMOSTAT IN EXISTING OVERHEAD SIGN CONTROL PANEL AS INDICATED ON THE PLANS. WORK SHALL ALSO INCLUDE REMOVAL OF EXISTING CONDUIT AND WIRE.

MEASUREMENT AND PAYMENT FOR WORK TO REPAIR THE EXISTING TRAFFIC GATES AND OVERHEAD SIGNS SHALL BE MADE AT THE LUMP SUM PRICE FOR "REPAIR OF EXISTING TRAFFIC GATES AND OVERHEAD SIGNS PER PLAN," WHICH PRICE SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIAL NECESSARY TO COMPLETE THE WORK.

ITEM SPECIAL - REPAIR OF EXISTING ELECTRICAL EQUIPMENT

THE CONTRACTOR SHALL FURNISH THE LABOR AND EQUIPMENT NECESSARY TO CLEAN, REPAIR, REPLACE OR MODIFY THE EXISTING ELECTRICAL EQUIPMENT, CONDUIT AND ASSOCIATED ITEMS AS INDICATED ON THE PLANS. WORK SHALL INCLUDE, BUT NOT BE LIMITED TO MOUNTING EXISTING POWER FACTOR CORRECTION CAPACITORS TO BRACKETS, CLEANING EXISTING MOTORS, REMOVAL AND REPLACEMENT OF DAMAGED CONDUIT, AND CLEANING AND REPAIR OF ELECTRICAL BOXES AND ENCLOSURES.

MEASUREMENT AND PAYMENT FOR WORK TO REPAIR THE EXISTING ELECTRICAL EQUIPMENT SHALL BE MADE AT THE LUMP SUM PRICE FOR "REPAIR OF EXISTING ELECTRICAL EQUIPMENT PER PLAN," WHICH PRICE SHALL INCLUDE ALL LABOR, EQUIPMENT AND MATERIAL TO COMPLETE THE WORK.

ITEM SPECIAL - REPAIR OF EXISTING CONTROL PANELS

THIS ITEM SHALL INCLUDE REHABILITATION OF THE EXISTING CONTROL PANELS TO THE EXTENT AS INDICATED ON THE PLANS. WORK SHALL INCLUDE REPLACING CONTROL RELAYS, TIMERS, POWER CONTACTS AND MODIFYING EXISTING EQUIPMENT AS INDICATED FOR THE EXISTING MAIN CONTROL PANELS LOCATED IN ROOMS C AND D IN BOTH PIERS 4 AND 5. FOR ACTUAL LOCATION OF THE MAIN CONTROL PANELS AND ADDITIONAL DETAILS FOR THE CONTROL PANELS, EXISTING PLANS SHALL BE MADE AVAILABLE FOR ACCESS BY THE CONTRACTOR.

MEASUREMENT AND PAYMENT FOR WORK TO REPAIR THE EXISTING CONTROL PANELS SHALL BE MADE AT THE LUMP SUM PRICE FOR "REPAIR OF EXISTING CONTROL PANELS PER PLAN," WHICH PRICE SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIAL NECESSARY TO COMPLETE THE WORK.

ITEM SPECIAL - MAINTAIN EXISTING NAVIGATION LIGHTING

EXISTING SHIPPING CHANNELS ARE TO REMAIN OPEN TO TRAFFIC DURING CONSTRUCTION OF THIS PROJECT AND SHALL HAVE THE NAVIGATION LIGHTING MAINTAINED AS DESCRIBED HEREIN.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATE TEMPORARY NAVIGATION LIGHTING FOR THE SHIPPING CHANNEL AS SHOWN ON THE PLANS. SHOULD THE CONTRACTOR DESIRE REMOVAL OF THE EXISTING NAVIGATION LIGHTING BEFORE THE NEW NAVIGATION LIGHTING IS OPERATIONAL, THE CONTRACTOR SHALL THEN BE RESPONSIBLE FOR ADEQUATE TEMPORARY LIGHTING OF THAT PORTION OF THE SHIPPING CHANNEL AFFECTED BY THE REMOVAL OF THE EXISTING LIGHTING.

PRIOR TO INSTALLING SUCH LIGHTING, THE CONTRACTOR SHALL PREPARE AND SUBMIT FOUR SETS OF THE PROPOSED TEMPORARY NAVIGATION LIGHTING PLAN TO THE DIRECTOR FOR REVIEW AND APPROVAL.

THIS PLAN SHALL SHOW LOCATION OF NAVIGATION LIGHTS, LENGTH OF BRACKET ARMS, STYLE OF LUMINARIES, MOUNTING HEIGHT, WIRING METHODS, AND OTHER PERTINENT INFORMATION. TEMPORARY LIGHTING SHALL MEET FEDERAL, STATE, AND COAST GUARD SAFETY CRITERIA. RECONDITIONED OR USED MATERIALS MAY BE FURNISHED FOR TEMPORARY LIGHTING.

ALL MATERIALS NECESSARY TO COMPLETE THE TEMPORARY LIGHTING SHALL BE FURNISHED AND INSTALLED BY THE CONTRACCTOR. WHEN NO LONGER NEEDED, THE TEMPORARY LIGHTING INSTALLATION SHALL BE REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR.

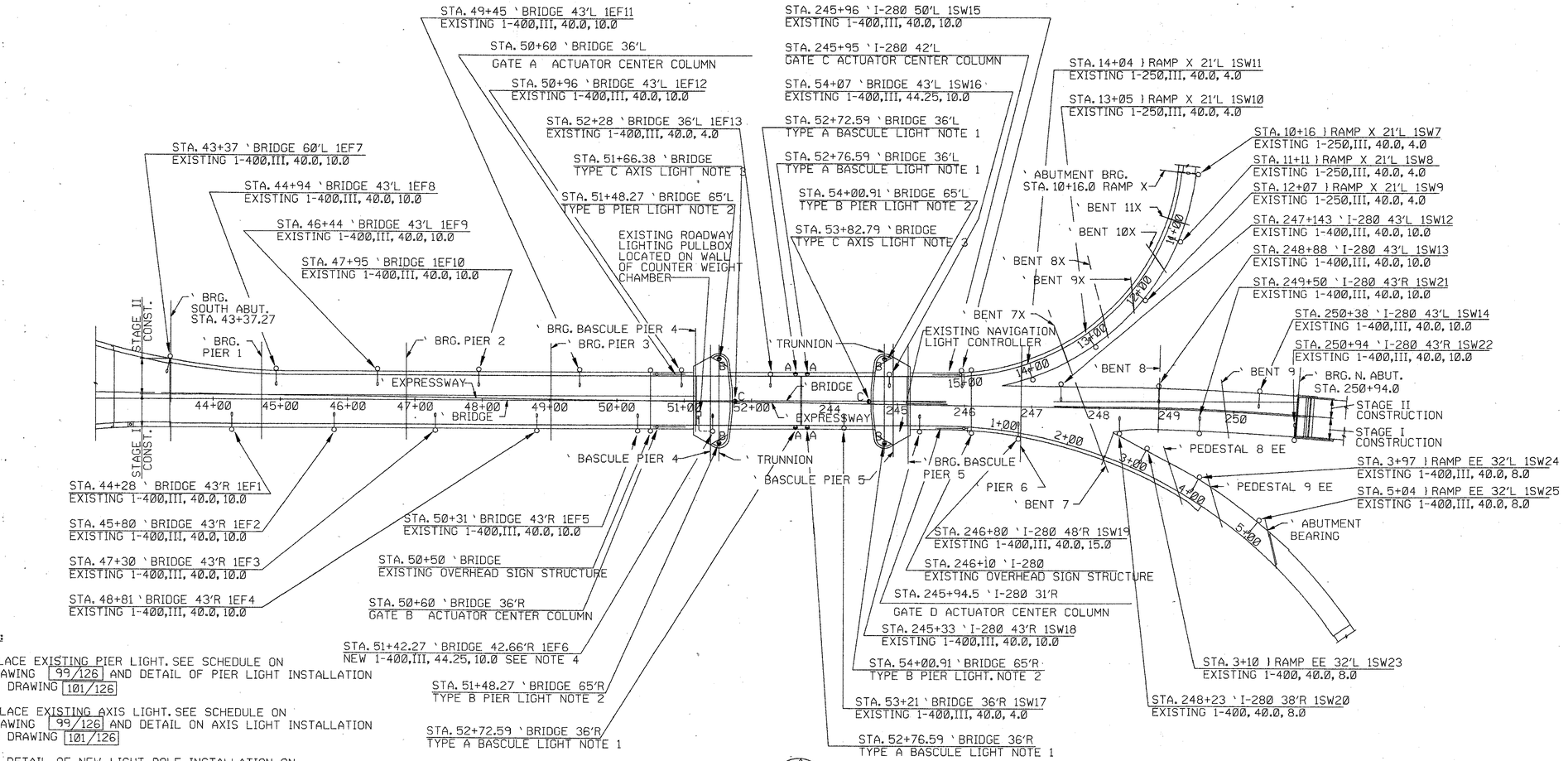
THE MAINTAINING AGENCY WILL PAY FOR ELECTRICAL ENERGY CONSUMED BY EXISTING POWER SERVICES. THE CONTRACTOR WILL PAY FOR ELECTRICAL ENERGY, INSTALLATION, REMOVAL, AND MAINTENANCE OF ANY TEMPORARY POWER SERVICES.

THE CONTRACT LUMP SUM PRICE FOR "ITEM SPECIAL - MAINTAIN EXISTING NAVIGATION LIGHTING" SHALL INCLUDE PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS, AND INCIDENTALS NECESSARY TO MAINTAIN THE EXISTING LIGHTING AS SPECIFIED HEREIN.

DESIGNED TRC
DRAWN JSG/TRF
CHECKED TRC
REVISED
REVISED RAT
DATE 08/21/95
STRUCTURE FILE NUMBER 4805917

NOTES
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

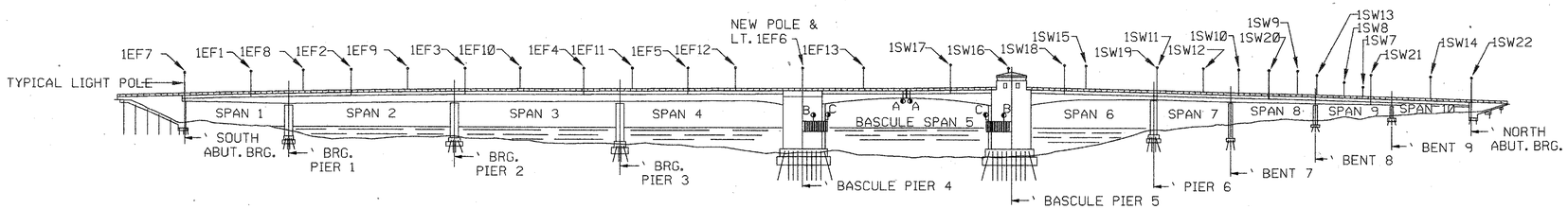
LUC-280



NOTES:

1. REPLACE EXISTING PIER LIGHT. SEE SCHEDULE ON DRAWING 99/126 AND DETAIL OF PIER LIGHT INSTALLATION ON DRAWING 101/126
2. REPLACE EXISTING AXIS LIGHT. SEE SCHEDULE ON DRAWING 99/126 AND DETAIL ON AXIS LIGHT INSTALLATION ON DRAWING 101/126
3. SEE DETAIL OF NEW LIGHT POLE INSTALLATION ON DRAWING 99/126
4. SEE QUANTITIES ON SHEET 99/126

PLAN
SCALE: 1"=80'-0"



ELEVATION
SCALE: 1"=80'-0"

DESIGNED JGA | DRAWN TES | REVIEWED RAT | DATE 8-21-95
CHECKED TRC | REVISED | STRUCTURE FILE NUMBER 4805917

TES RAT 08/21/95
TRC

GENERAL PLAN AND ELEVATION

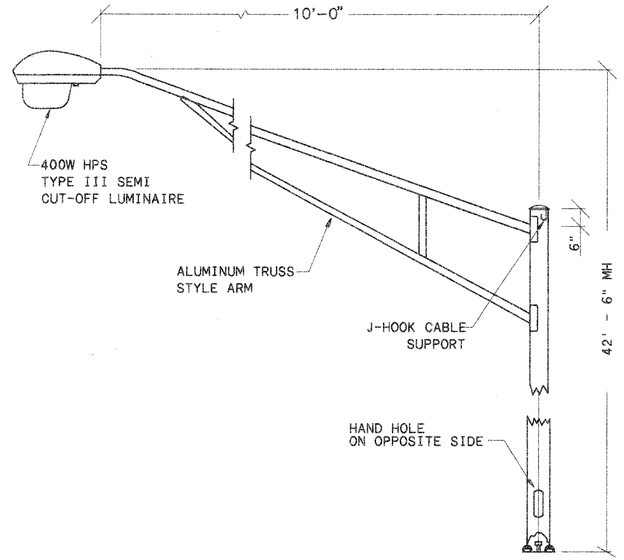
LUC - 280

98/126

C:\USS\OUT\DGN\E-BRDG1.DGN 4-4-96 10:30 A.M. EST

ROADWAY LIGHTING EQUIPMENT REPAIR/REPLACEMENT SCHEDULE

POLE NUMBER	STATION ℄ BRIDGE	OFF SET	SIDE	POLE HEIGHT	POLE ARM	POLE BASE	POLE HAND HOLE	LUMINAIRE ODOT TYPE	LUMINAIRE IES DISTRIBUTION	LUMINAIRE LAMP WATTS	REMARKS
IEF7	43+37	60'	L								NO WORK REQUIRED
IEF1	44+28	43'	R				REPLACE COVER				NO WORK REQUIRED
IEF8	44+94	43'	L								NO WORK REQUIRED
IEF2	45+80	43'	R				REPLACE COVER				NO WORK REQUIRED
IEF9	46+44	43'	L								NO WORK REQUIRED
IEF3	47+30	43'	R				REPLACE COVER				NO WORK REQUIRED
IEF10	47+95	43'	L								REPLACE MISSING COVER & COVER GASKET ON CONDUIT FITTING
IEF4	48+81	43'	R				REPLACE COVER				NO WORK REQUIRED
IEF11	49+45	43'	L								NO WORK REQUIRED
IEF5	50+31	43'	R				REPLACE COVER				NO WORK REQUIRED
IEF12	50+96	43'	L								NO WORK REQUIRED
IEF6	51+42	43'	R	42'-6" 10 FT		ST-A	NEW COVER	STYLE C	TYPE III SEMI-CUT-OFF	400 HPS	NEW INSTALLATION TO REPLACE EXISTING (PREVIOUSLY REMOVED)
IEF13	52+28	36'	L				REPLACE COVER				NO WORK REQUIRED
ISWI7	53+21	36'	R				REPLACE COVER				NO WORK REQUIRED
ISWI6	54+07	43'	L				REPLACE COVER				NO WORK REQUIRED
	℄ I-280										NO WORK REQUIRED
ISWI8	245+33	44'	R				REPLACE COVER				REPLACE EXISTING LIQUIDTIGHT FLEXIBLE CONDUIT
ISWI5	245+96	50'	L				REPLACE COVER				RE-ATTACH LIQUIDTIGHT FLEXIBLE CONDUIT
ISWI9	246+80	48'	R				REPLACE COVER				REPLACE LOWER HAND HOLE COVER (ADJACENT FLEXIBLE CONDUIT ENTRANCE)
ISWI2	247+43	43'	L								NO WORK REQUIRED
ISW20	248+23	38'	R				REPLACE COVER				NO WORK REQUIRED
ISWI3	248+88	33'	L								REPLACE EXISTING LIQUIDTIGHT FLEXIBLE CONDUIT
ISW21	249+50	33'	R								NO WORK REQUIRED
ISWI4	250+38	33'	L								NO WORK REQUIRED
ISW22	250+94	33'	R								NO WORK REQUIRED
	℄ RAMP/EE										NO WORK REQUIRED
ISW23	3+10	32'	L				REPLACE COVER				REPLACE EXISTING LIQUIDTIGHT FLEXIBLE CONDUIT
ISW24	3+97	32'	L				REPLACE COVER				NO WORK REQUIRED
ISW25	5+04	32'	L				REPLACE COVER				REPLACE EXISTING LIQUIDTIGHT FLEXIBLE CONDUIT
	℄ RAMP X										NO WORK REQUIRED
ISW7	10+16	21'	L								REMOVE EXISTING OVERHEAD SECONDARY SUPPORTED FROM POLE- COORDINATE WITH TOLEDO EDISON. REPLACE EXISTING LIQUIDTIGHT FLEXIBLE CONDUIT.
ISW8	11+11	21'	L								NO WORK REQUIRED
ISW9	12+07	21'	L								NO WORK REQUIRED
ISWI0	13+05	21'	L				REPLACE COVER				RE-ATTACH FLEXIBLE CONDUIT. REPLACE CONDUIT AND FITTINGS AS NECESSARY.
ISWI1	14+04	21'	L								NO WORK REQUIRED



TYPICAL LIGHT POLE DETAIL

NAVIGATION LIGHT REPLACEMENT SCHEDULE

LOCATION BRIDGE ℄ STATION (EXISTING)	OFF SET	SIDE	TYPE LIGHT	200MM LENS COLOR	200MM LENS ARC OF VISIBILITY	FIXTURE BEAM ℄ ORIENTATION PARALLEL TO BRIDGE ℄	FIXTURE BEAM ℄ ORIENTATION PERPENDICULAR TO BRIDGE ℄	MOUNTING ARRANGEMENT STEM DIA.	STEM STRAIGHT LENGTH	STEM 90° ANGLE	BASE BRACKET	BASE PLATE BOLT CIR. DIA	BASE JUNCT. BOX
51+48.27	65'	L	B	RED	180°		X	1 1/2"	12"			5.75"	
51+48.27	65'	R	B	RED	180°		X	1 1/2"	12"			5.75"	
51+66.38		℄	C	RED	180°	X				X		5.75"	X
53+82.79		℄	C	RED	180°	X				X		5.75"	X
54+00.91	65'	L	B	RED	180°		X	1 1/2"	12"			5.75"	
54+00.91	65'	R	B	RED	180°		X	1 1/2"	12"			5.75"	

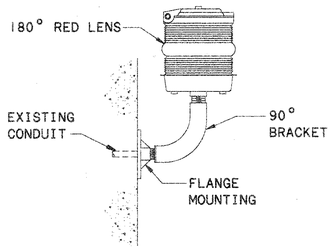
QUANTITY SUBSUMMARY

ITEM	QUANTITY
NAVIGATION LIGHTING SYSTEM AS PER PLAN	1 LUMP
ITEM SPECIAL - REPAIR OF EXISTING LIGHTING SYSTEM	1 LUMP
ITEM SPECIAL - MAINTAIN EXISTING NAVIGATION LIGHTS	1 LUMP

ENGINEERS ARCHITECTS
DESIGNED JGA
DRAWN JSG
CHECKED TRC
REVISED RAT
DATE 08/21/95
STRUCTURE FILE NUMBER 4805917
REVISED

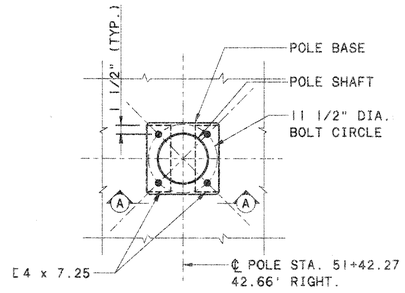
LIGHTING SCHEDULES
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280



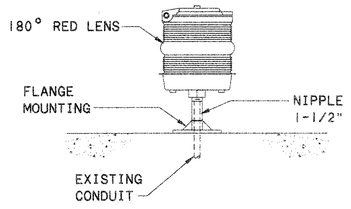
TYPICAL AXIS LIGHTS

SCALE: NONE



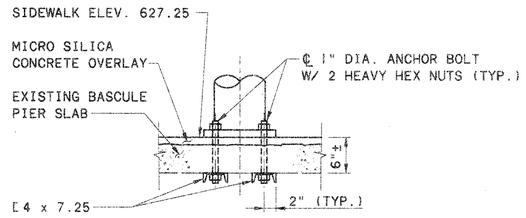
POLE BASE DETAIL

SCALE: NONE



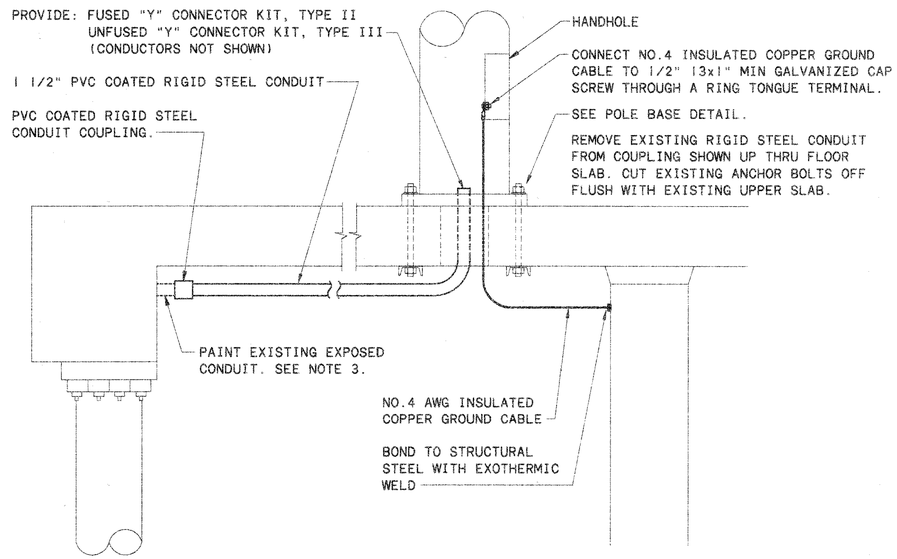
TYPICAL PIER LIGHTS

SCALE: NONE



SECTION A-A

SCALE: NONE



LIGHT POLE REPLACEMENT DETAIL

SCALE: NONE

NOTES:

1. ANCHOR BOLTS ARE TO BE SET IN OVERSIZED HOLES FILLED WITH NON-SHRINK GROUT.
2. COST OF ANCHOR BOLTS, CHANNELS AND ALL LABOR AND MATERIALS ASSOCIATED WITH THE INSTALLATION OF THE LIGHT POLE BASE SHALL BE INCLUDED IN ITEM "REPAIR OF EXISTING LIGHTING SYSTEM AS PER PLAN".
3. ITEMS TO BE PAINTED BY EEU SYSTEM PER NOTE 12 ON SHEET 69/126.
4. SEE QUANTITIES ON SHEET 99/126.

PARSONS BRINCKERHOFF ENGINEERS ARCHITECTS

DESIGNED MMH | DRAWN TRF | REVIEWED RAT | DATE 08/21/95

CHECKED TRC | REVISED | STRUCTURE FILE NUMBER 4805917

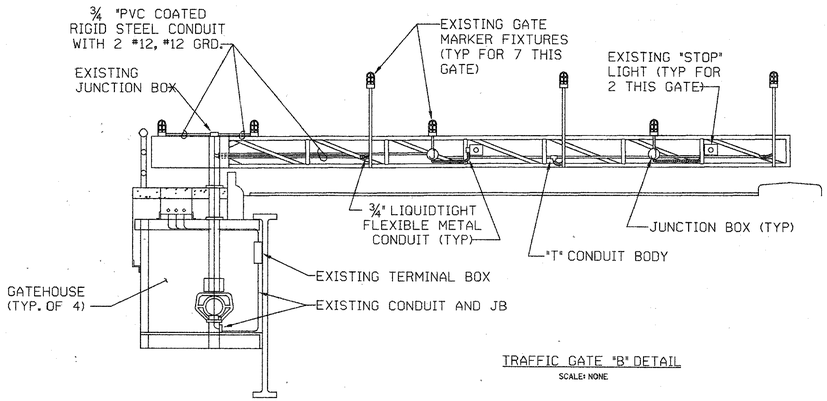
ROADWAY AND NAVIGATION LIGHT DETAILS

BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

100/126

N:\PRI49\2\CADD\E-LIGHTS 8-22-95 8:21:31 am EST



TRAFFIC GATE "B" DETAIL

SCALE: NONE

(TYPICAL FOR TRAFFIC GATES "B" AND "C" SEE GENERAL PLAN AND ELEVATION SHEET 98/126 FOR LOCATIONS)

TRAFFIC GATE REPAIR NOTES:

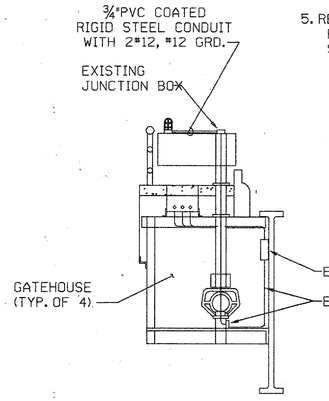
1. REPLACE ALL WIRING TO GATE MOUNTED LIGHTS COMPLETE FROM EXISTING TERMINAL BOX IN GATEHOUSE. CONDUCTORS SHALL BE 600 VOLT RATED, XHHW INSULATED COPPER.

2. REPLACE ALL CONDUITS, JUNCTION BOXES AND FITTINGS LOCATED ON TRAFFIC GATES WITH THE EXCEPTION OF THE EXISTING JUNCTION BOX LOCATED AT TOP OF ACTUATOR COLUMN. ALL CONDUIT SHALL BE PVC COATED RIGID STEEL CONDUIT EQUAL TO ROBROY INDUSTRIES PLASTIBOND RED. CONDUIT SIZE SHALL BE MINIMUM ¾". ROUTE LIQUIDTIGHT FLEXIBLE METAL CONDUIT FROM APPROPRIATE FITTINGS TO "STOP" LIGHTS AND POST MOUNTED MARKER FIXTURES AS SHOWN. FLEXIBLE CONDUIT LENGTHS SHALL NOT EXCEED 6' FOR ANY SINGLE RUN.

3. CLEAN ALL FOREIGN MATERIAL FROM EXISTING TERMINAL BOX AND EXISTING RELAY BOXES (NOT SHOWN - LOCATED ADJACENT TERMINAL BOX ON SAME WALL) INCLUDING GRIT LOCATED IN THE BOTTOM OF EACH BOX.

4. REPLACE DAMAGED ¾" LIQUIDTIGHT FLEXIBLE METAL CONDUIT TO MOTOR IN GATEHOUSE "D" WITH NEW.

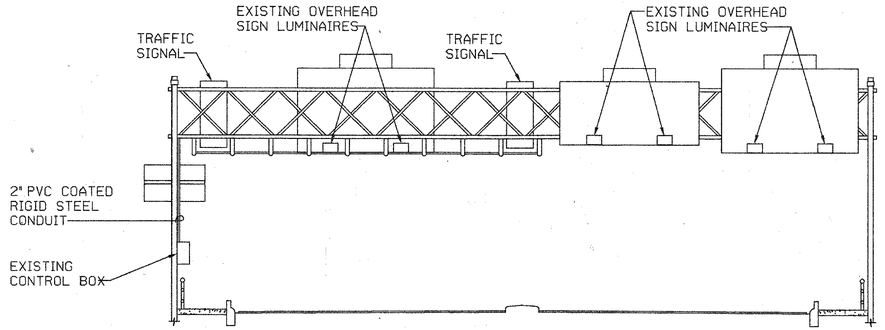
5. REPAIR ANY DAMAGED OR MISSING LIGHT FIXTURE COMPONENTS. RELAMP LIGHTS AS REQUIRED TO ENSURE A COMPLETE FUNCTIONING SYSTEM UPON FINALIZATION OF WORK.



TRAFFIC GATE "A" DETAIL

SCALE: NONE

(TYPICAL FOR TRAFFIC GATES "A" AND "D" SEE GENERAL PLAN AND ELEVATION SHEET 98/126 FOR LOCATIONS)



STA. 246+10 I-280 OVERHEAD SIGN DETAIL

SCALE: NONE

(TYPICAL FOR STA. 50+50 `BRIDGE OVERHEAD SIGN)

OVERHEAD SIGN REPAIR NOTES:

1. REPLACE ALL WIRING TO OVERHEAD SIGN LIGHTS AND TO EXISTING TRAFFIC SIGNALS COMPLETE FROM EXISTING CONTROL BOX. CONDUCTORS SHALL BE 600 VOLT RATED, XHHW INSULATED COPPER.

2. REPLACE ALL CONDUITS, JUNCTION BOXES, AND FITTINGS LOCATED ON OVERHEAD SIGN STRUCTURE INCLUDING THOSE FOR THE TRAFFIC SIGNALS. ALL CONDUIT SHALL BE 1" PVC COATED RIGID STEEL CONDUIT EXCEPT FOR THE 2" PVC COATED RIGID STEEL CONDUIT AS NOTED ON DETAIL FOR CONTROL BOX RISER. ¾" LIQUIDTIGHT FLEXIBLE METAL CONDUIT SHALL BE USED FROM APPROPRIATE FITTINGS TO SIGN LUMINAIRES AND TRAFFIC SIGNALS. FLEXIBLE CONDUIT LENGTHS SHALL NOT EXCEED 6' FOR ANY SINGLE RUN.

3. CLEAN ALL DEBRIS FROM EXISTING CONTROL BOX.

4. REPLACE THERMOSTAT AND STRIP HEATER IN CONTROL BOX AT STA. 50+50 43' R `BRIDGE.

5. REPAIR ANY DAMAGED OR MISSING LIGHT FIXTURE COMPONENTS. RELAMP LIGHTS AS REQUIRED TO ENSURE A COMPLETE FUNCTIONING SYSTEM UPON FINALIZATION OF WORK.

QUANTITY SUBSUMMARY	
ITEM	QUANTITY
ITEM SPECIAL - REPAIR OF EXISTING TRAFFIC GATES AND OVERHEAD SIGNS	1 LUMP

DESIGNED TRC/MMH | DRAWN TES | REVIEWED RAT | DATED 8-21-95
CHECKED TRC | REVISED | STRUCTURE FILE NUMBER 4805917

TRAFFIC GATE AND OVERHEAD SIGN REPAIRS
BRIDGE No. LUC-280-0346 OVER MAUMEE RIVER

LUC - 280

101/126

C:\US5\OUT\DGN\E-GATE.DGN 4-3-96 10:50 A.M. EST

ITEM NO.	EQUIPMENT	LOCATION	REHABILITATION/REPAIR/PAINTING NOTES
1A 1B	MAIN UTILITY METERING CABINET	PIERS 4 & 5 - ROOM D	PAINT ENCLOSURE
2A 2B	600A MAIN SAFETY SWITCH ENCLOSURE	PIERS 4 & 5 - ROOM E	PAINT ENCLOSURE
3A 3B	CT CABINET	PIERS 4 & 5 - ROOM E, NEXT TO 600A MAIN SAFETY SWITCH ENCLOSURE	PAINT ENCLOSURE
4	WIREWAY	PIERS 4 & 5 - ROOM E, BELOW 600A MAIN SAFETY SWITCH ENCLOSURE AND CT CABINET	PAINT WIREWAY ENCLOSURE
5	AUTOMATIC THROWOVER	PIER 5 - ROOM E, NEXT TO PHASE REVERSAL RELAY CABINET	PAINT ENCLOSURE
6A 6B	NEARSIDE FEEDER BREAKER FARSIDE FEEDER BREAKER	PIER 5 - ROOM E PIER 4 - ROOM E	PAINT ENCLOSURE
7A 7B	100A DPDT SAFETY SWITCH	PIERS 4 & 5 - ROOM E, NEXT TO FEEDER BREAKER	PAINT ENCLOSURE
8A 8B	PHASE REVERSAL RELAY CABINET	PIER 4 - ROOM E NEXT TO SAFETY SWITCH PIER 5 - ROOM E NEXT TO AUTOMATIC THROWOVER SWITCH	PAINT ENCLOSURE
9	WIREWAY	PIERS 4 & 5 - ROOM E, BELOW FEEDER BREAKER AND SAFETY SWITCH	PAINT WIREWAY ENCLOSURE
10A 10B	SUBMARINE CABLE JUNCTION BOX	PIERS 4 & 5 - ROOM D	PAINT ENCLOSURE
11A 11B	JUNCTION BOX	PIER 4 - ROOM E PIER 5 - ROOM E	PAINT ENCLOSURE & REGASKET PAINT ENCLOSURE, REGASKET, & INSTALL COVER
12	AIR COMPRESSOR DISCONNECT SWITCH	PIER 5 - MACHINERY FLOOR	PAINT ENCLOSURE

GENERAL PAINTING NOTES: (SEE SHEET 69 FOR PAINTING REQUIREMENTS)

1. ITEMS TO BE PAINTED BY EEU SYSTEM PER NOTE 12 ON REFERENCED SHEET.
2. REMOVE EXISTING PAINT FROM NAMEPLATES, HANDLE, PUSHBUTTONS AND LIGHTS.
3. NAMEPLATES, PUSHBUTTONS, LIGHTS AND HANDLES SHOULD NOT BE PAINTED.
4. IN ADDITION TO THE ITEMS SPECIFICALLY REQUIRED TO BE PAINTED ON SHEETS 102/126 TO 103/126, ALL EXPOSED CONDUIT AND JUNCTION/PULL/TERMINAL BOXES LOCATED WITHIN PIERS 4 AND 5 (WITH THE EXCEPTION OF ROOMS A & B IN PIER 5) SHALL BE PAINTED.

NOTES:

1. SEE SHEET 103/126 FOR EQUIPMENT REPAIR QUANTITIES.

ENGINEERS ARCHITECTS

DESIGNED MMH | DRAWN TRF | REVIEWED RAT | DATE 08/21/95
CHECKED TRC | REVISED | STRUCTURE FILE NUMBER 4805917

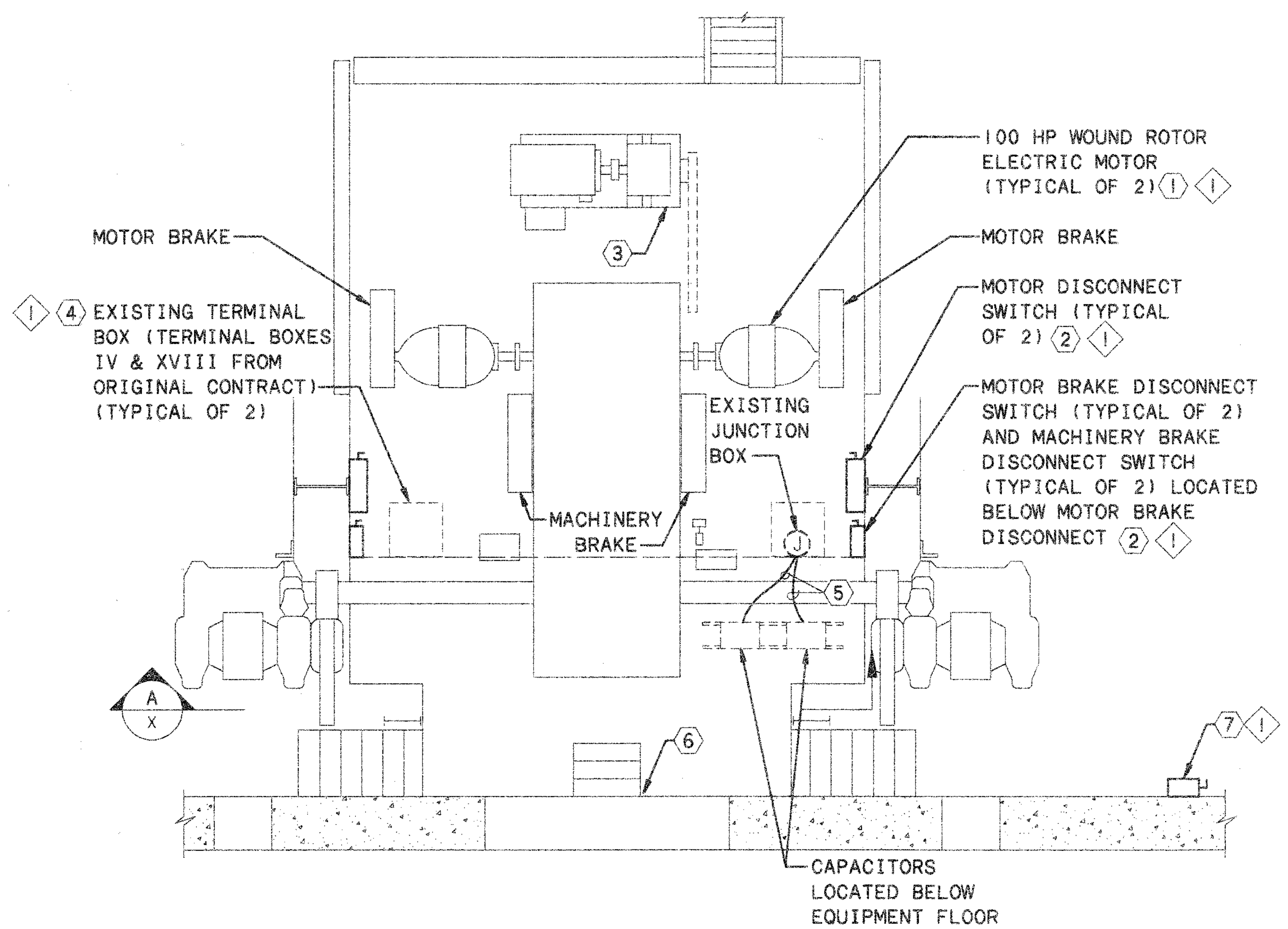
ELECTRICAL EQUIPMENT ENCLOSURE MODIFICATION SCHEDULE

BRIDGE NO. LUC-280-0346 OVER MAUMEE RIVER

LUC-280

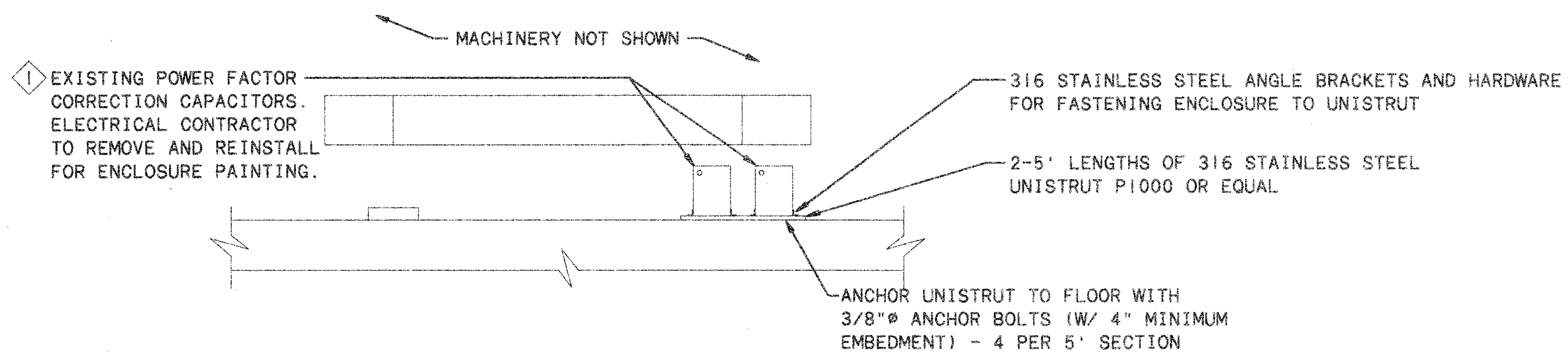
102/126

N:\PR14912\CADD\EQUIPSCH 8-22-95 9:14:05 am EST



MACHINERY ROOM FLOOR PLAN (ELEV. 604.23)
SCALE: 1/4"=1'-0"

NOTE: FLOOR PLAN TYPICAL FOR PIER 4 AND PIER 5



A/X SECTION
1/4"=1'-0"

ELECTRICAL EQUIPMENT REPAIR NOTES:

1. REMOVE GREASE FROM MOTOR BRUSH COMPARTMENT WITH PROPER SOLVENT. CLEAN COMPARTMENT INTERIOR INCLUDING MOTOR SHAFT, BRUSH HOLDERS, BRUSHES AND COMMUTATOR.
2. REMOVE EXISTING GASKETING MATERIAL AND CORROSION FROM ENCLOSURE AND ENCLOSURE DOOR. INSTALL NEW NEOPRENE GASKETS ON ENCLOSURE DOOR AND CLEAN MATING SURFACE OF ENCLOSURE TO BARE METAL AND TREAT WITH CORROSION INHIBITING COMPOUND. REPAIR ANY NONFUNCTIONING DOOR SAFETY INTERLOCKS - DOOR SHOULD NOT OPEN UNLESS SWITCH IS IN "OPEN" POSITION.
3. REPLACE DAMAGED 3/4" LIQUIDTIGHT FLEXIBLE METAL CONDUIT BETWEEN CONDUIT BODY AND "RAISED POSITION" LIMIT SWITCH FOR AUXILIARY ENGINE (PIER 5 ONLY).
4. REMOVE EXISTING GASKETING MATERIAL AND CORROSION FROM TERMINAL BOX AND COVER. INSTALL NEW NEOPRENE GASKET. REPLACE FASTENERS FOR SECURING COVER TO BOX WITH NEW FLAT HEAD STAINLESS STEEL FASTENERS WITH THREADS TO MATCH EXISTING.
5. PROVIDE NEW 3/4" LIQUIDTIGHT FLEXIBLE CONDUIT AND NEW CONDUCTORS (AS REQUIRED) BETWEEN REINSTALLED CAPACITORS AND EXISTING JUNCTION BOX.
6. REMOVE ABANDONED 1" CONDUIT LOCATED ON UNDERSIDE OF EQUIPMENT PAD BETWEEN WALL AND AUXILIARY MOTOR. (PIER 5 ONLY)
7. EXISTING AIR COMPRESSOR DISCONNECT SWITCH. CLEAN PAINT FROM NAMEPLATE PRIOR TO REPAINTING. **(PIER 5 ONLY)**

PAINTING NOTES: (SEE SHEET 69/126 FOR PAINTING REQUIREMENTS)

1. ITEMS TO BE PAINTED BY EEU SYSTEM PER NOTE 13 ON REFERENCED SHEET.

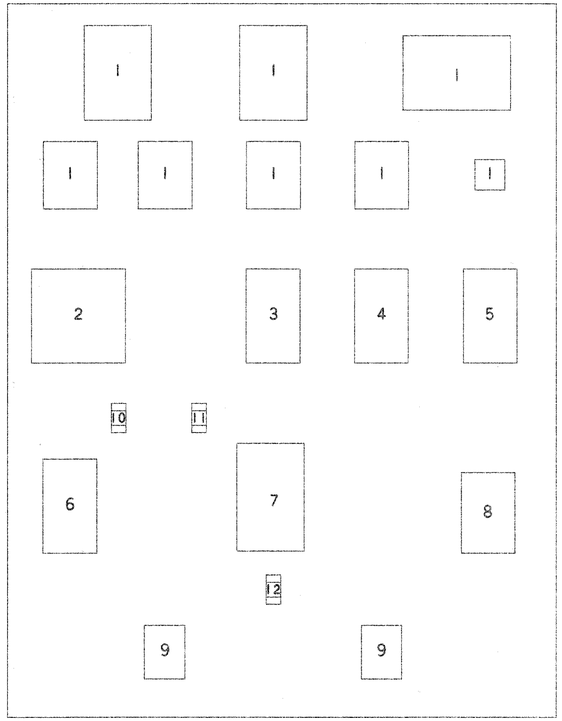
QUANTITY SUBSUMMARY	
ITEM	QUANTITY
ITEM SPECIAL - REPAIR OF EXISTING ELECTRICAL EQUIPMENT	1 LUMP

[redacted] ENGINEERS ARCHITECTS

DESIGNED	DRAWN	REVIEWED	DATE
TRC	TES	RAT	08/21/95
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TRC		4805917	

ELECTRICAL EQUIPMENT REPAIR
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

N:\PR1491 2\CADD\E-FLRPLN 8-22-95 11:12:52 am EST



CONTROL PANEL B
SCALE: NONE

FRONT VIEW

COMPONENTS

1. RELAY.
2. DISCONNECT SWITCH.
3. AIR CIRCUIT BREAKER; 2P, 50A, 600VAC (ITEM #5 FROM PLANS).
4. 50A AIR CIRCUIT BREAKER.
5. LIGHTING & CONTROL CIRCUIT BREAKER; 2P, 600VAC, 70A (ITEM #2 FROM PLANS).
6. 15A CIRCUIT BREAKER.
7. TIME SWITCH.
8. TIMING RELAY.
9. FL SIGN BREAKERS; 2P, 600VAC, 30A (NO ITEM # FROM PLANS).
10. PANEL B LIGHTS FUSE, 20A (ITEM FU FROM PLANS).
11. PANEL C LIGHTS FUSE, 20A (ITEM FU FROM PLANS).
12. TIME CLOCK FUSE (ITEM #127 FROM PLANS).

MODIFICATIONS

1. COMPONENT 3: REPLACE EXISTING 2P, 50A, 600VAC AIR CIRCUIT BREAKER WITH CUTLER-HAMMER FD; 25,000 AIC; 100A FRAME WITH 50A TRIP.
2. COMPONENT 5: REPLACE 2P, 70A, 600VAC LIGHTING AND CONTROL CIRCUIT BREAKER WITH CUTLER-HAMMER FD; 25,000 AIC; 100A FRAME WITH A 70A TRIP.
3. COMPONENT 9: REPLACE 2P, 30A, 600VAC FL SIGN BREAKERS WITH CUTLER-HAMMER FD; 25,000 AIC; 100A FRAME WITH 30A TRIP.
4. MODIFY BACK PANEL AS NECESSARY TO ACCOMODATE ROUTING CONDUCTORS FROM BACKSIDE OF PANEL TO LINE AND LOAD SIDES OF CIRCUIT BREAKERS. REUSE EXISTING CIRCUIT BREAKER MOUNTING HOLES (AS PRACTICAL) TO LIMIT NUMBER OF HOLES REQUIRED THRU BACK PANEL.
5. REPLACE COMPONENTS 10,11,12 IN KIND.

QUANTITY SUBSUMMARY	
ITEM	QUANTITY
ITEM SPECIAL - REPAIR OF EXISTING CONTROL PANELS	1 LUMP

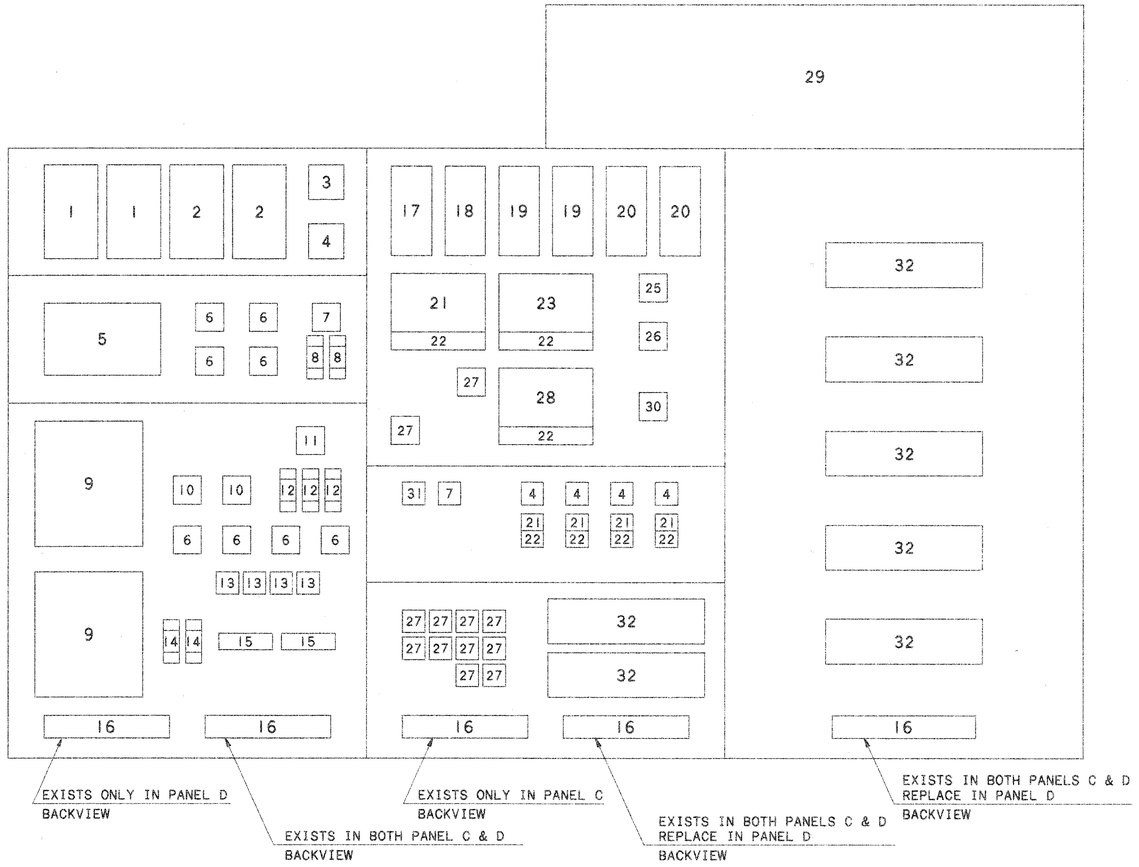
ENGINEERS
ARCHITECTS

DESIGNED MMH
DRAWN JSG
CHECKED TRC
REVISED
REVISED RAT
DATE 08/21/95
STRUCTURE FILE NUMBER 4805917

CONTROL PANEL MODIFICATIONS (PANEL B)
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

N:\PR1491\CADD\PANEL-B 8-22-95 9:18:11 am EST



CONTROL PANEL C (TYPICAL FOR CONTROL PANEL D EXCEPT WHERE NOTED)

SCALE: NONE

FRONT VIEW

MODIFICATIONS

1. COMPONENT 8 (PANELS C AND D): REPLACE 20A, 600V FUSE WITH CLASS R FUSE.
2. COMPONENTS 9 AND 32 (PANELS C AND D): REMOVE EXISTING CONTRACTOR ARC CHUTES AND CLEAN ANY CORROSION OR RESIDUE DUE TO ARCING FROM CONTACTS. CHECK CONTACT ALIGNMENT AND CORRECT AS NECESSARY. REASSEMBLE CONTACTOR AND NOTIFY OWNER (IN WRITING) OF ANY EXCESSIVELY WARN OR DAMAGED CONTACTS. IDENTIFY PANEL AND CONTACTOR UNIT USING DESIGNATION FROM PANEL NAMEPLATE.
3. COMPONENT 10 (PANEL C ONLY): REPLACE 2P, 600V, 15A SEATING POWER REMOVAL RELAYS WITH ALLEN BRADLEY CATALOG #AB849-Z0A33. WIRE THE CONTACTS THE SAME AS EXISTING. SET THE TIME DELAY THE SAME AS EXISTING.
4. COMPONENT 12 (PANEL C ONLY): REPLACE 20A, 600V FUSE WITH CLASS R FUSE.
5. COMPONENT 14 (PANEL C AND D): REPLACE 10A, 250V FUSE IN KIND.
6. COMPONENT 16: REPLACE 230V, 250W STRIP HEATERS; ONLY REPLACE ITEM #79-3 AND #79-8 FROM ORIGINAL PLANS.
7. COMPONENT 20 (PANEL C ONLY): PROVIDE NAMEPLATE WHICH READS "SPARE 20A, 3P, 600 VOLT CIRCUIT BREAKER".
8. COMPONENT 31 (PANELS C AND D): REPLACE 5P, 600V, 50A ROOM HEATER CONTACTOR WITH 5P, SIZE 2 CONTACTOR, 120V COIL, SQUARE D #SD04V02S.

COMPONENTS

1. 500A CIRCUIT BREAKER.
2. 250A CIRCUIT BREAKER.
3. SUMP PUMP MOTOR CIRCUIT BREAKER.
4. 20A CIRCUIT BREAKER.
5. 3PDT, 600V, 600A DISCONNECT SWITCH. (REMOVEABLE BUS LINKS)
6. RELAYS.
7. CONTACTOR; NOT IN PANEL D.
8. 20A, 600V FUSE (ITEM #57N IN PANEL C, ITEM #57F IN PANEL D FROM ORIGINAL PLANS).
9. MAIN MOTOR REVERSE CONTACTORS; 3P, 600V, 300A, (ITEM #22NL, #22NR IN PANEL C, ITEM #22FL, #22FR IN PANEL D FROM ORIGINAL PLANS).
10. SEATING POWER REMOVAL RELAYS; 2P, 600V, 15A; NOT IN PANEL D (ITEM #55FT, #55NT FROM ORIGINAL PLANS)
11. PHASE REVERSAL RELAY, NOT IN PANEL D.
12. 600V, 20A FUSES; NOT IN PANEL D (ITEM #90-N FROM ORIGINAL PLANS).
13. DIGI-SETS.
14. 10A, 250V FUSE (ITEM #126 IN PANEL C, ITEM #126F IN PANEL D FROM ORIGINAL PLANS).
15. RECTIFIER - SEATING POWER REMOVAL RELAY.
16. STRIP HEATERS - CONDENSATION, 230V, 250W, (ITEM #79 FROM ORIGINAL PLANS).
17. 50A CIRCUIT BREAKER, NOT IN PANEL D.
18. 30A CIRCUIT BREAKER, NOT IN PANEL D.
19. AIR CIRCUIT BREAKER FOR ROADWAY GATE MOTORS; 3P, 600V, 30A.
20. 3P, 20A, 600V, CIRCUIT BREAKER.
21. CONTACTOR.
22. OVERLOAD RELAY.
23. ROADWAY GATE MOTOR, 3-3P, 600V, 25A.
24. NOT USED.
25. 24V DC POWER SUPPLY.
26. FAR SIDE TAIL LOCK MOTOR BREAKER.
27. CONTROL RELAYS, NOT IN PANEL D.
28. ROADWAY GATE MOTOR CONTACTOR/REVERSING CONTACTOR FOR OFFGOING; 3-3P, 600V, 25A.
29. SECONDARY RESISTORS.
30. SWITCH ROOM HEATER CONTACTOR; NOT IN PANEL D.
31. 5P, 600V, 50A ROOM HEATER CONTACTOR; NOT IN PANEL D (ITEM #78-A FROM ORIGINAL PLANS).
32. ACCELERATING CONTACTORS FOR MAIN MOTOR; 4P, 600V, 200A.

NOTES

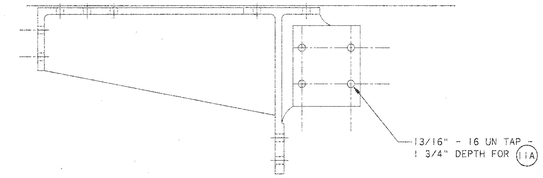
1. SEE SHEET 104/126 FOR QUANTITIES.

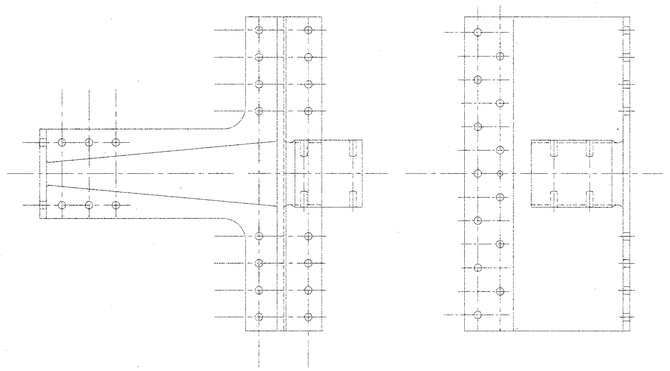
PARSONS BRINCKERHOFF QUADE & DOUGLAS, INC.
ENGINEERS
ARCHITECTS

DESIGNED	DRAWN	REVIEWED	DATE
MMH	TRF	RAT	08/21/95
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TRC		4805917	

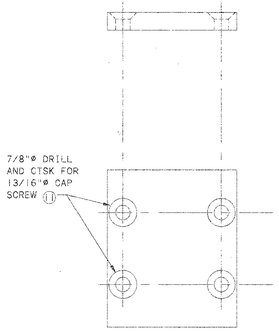
CONTROL PANEL MODIFICATIONS (PANELS C AND D)
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280



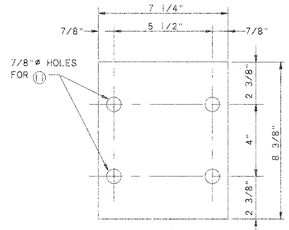


3 SCALE: 1 1/2"=1'-0"

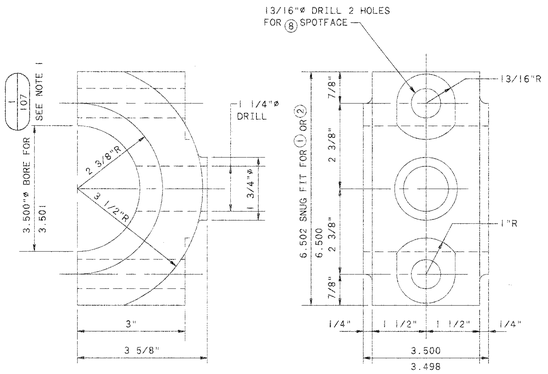


5 SCALE: 3"=1'-0"

SHIM SET 7 1/4"x0'-8 3/4"
BUILT UP TO 1/2" THICK
1 @ 1/4"
1 @ 1/8"
1 @ 1/16"
2 @ 1/32"

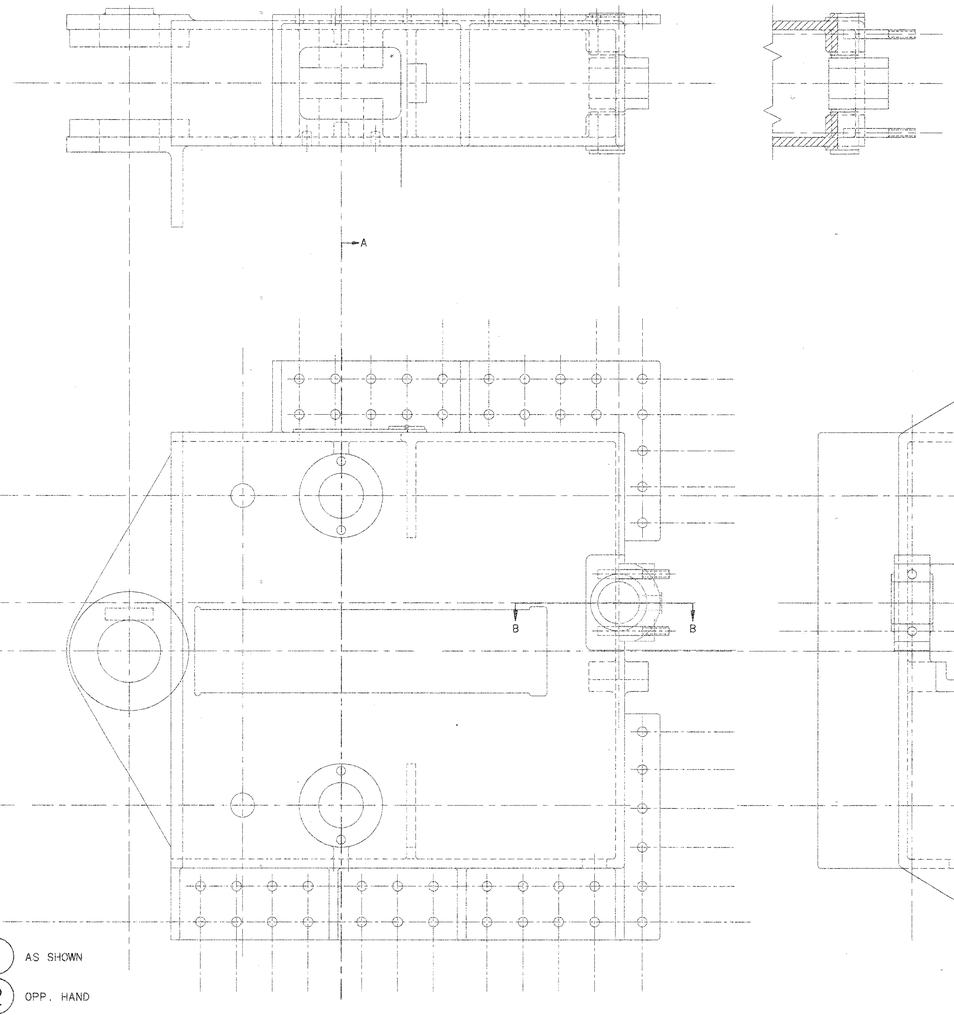


6 SCALE: 3"=1'-0"

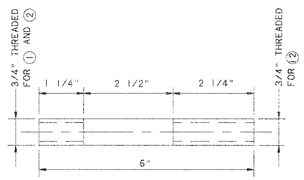


NOTE 1:
BOLT CAPS TO BRACKET (1) OR (2) BEFORE BORING

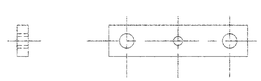
4 SCALE: 6"=1'-0"



1 AS SHOWN
2 OPP. HAND
SCALE: 2"=1'-0"



8 SCALE: 6"=1'-0"



7 SCALE: 3"=1'-0"

ENGINEERS
ARCHITECTS

DESIGNED	RTJ	DATE	00/00/94
DRAWN	RER	REVISED	XXX
CHECKED	RTJ	STRUCTURE FILE NUMBER	4805917
		REVISED	XXX

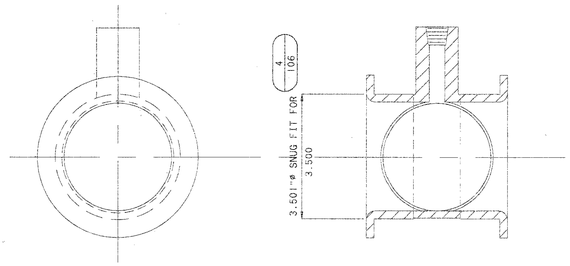
CENTER LOCK DETAILS
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

106/126

-

P:\PR\4912\CADD\LOC-DTL1 2-9-96 1:14:41 pm EST

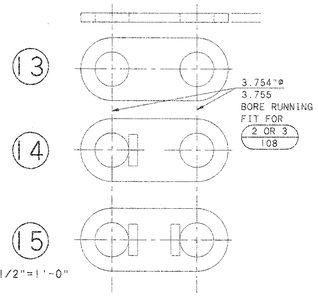


1 TOP HALF
2 BOTTOM HALF

SCALE: 6"=1'-0"

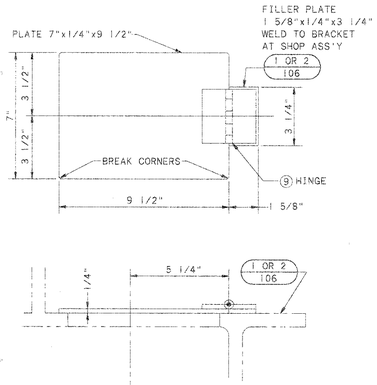
3 SCALE: 6"=1'-0"

31 SCALE: 4"=1'-0"

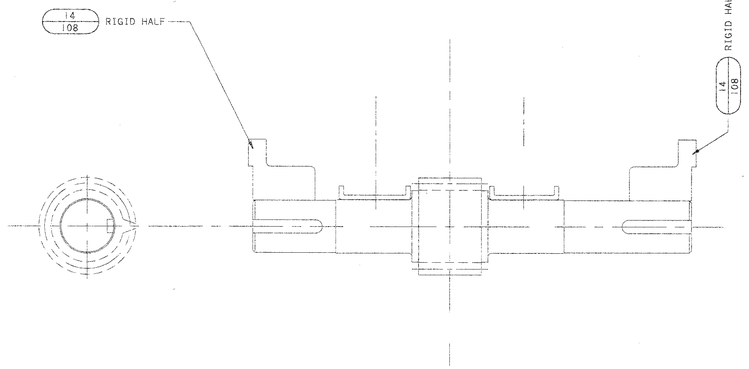


13
14
15

SCALE: 1 1/2"=1'-0"

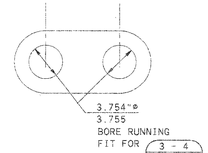


8 SCALE: 3"=1'-0"



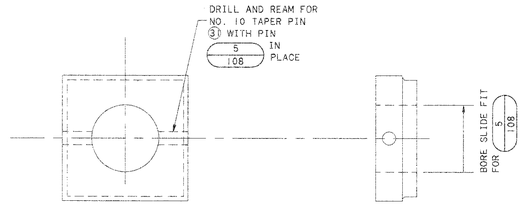
5 SCALE: 3"=1'-0"

6 SCALE: 3"=1'-0"

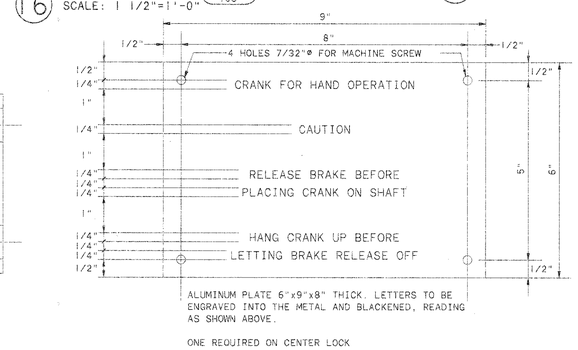


16 SCALE: 1 1/2"=1'-0"

12 SCALE: 1 1/2"=1'-0"



4 SCALE: 3"=1'-0"



ALUMINUM PLATE 6"x9"x8" THICK. LETTERS TO BE ENGRAVED INTO THE METAL AND BLACKENED, READING AS SHOWN ABOVE.

ONE REQUIRED ON CENTER LOCK

33 SCALE: 4"=1'-0"

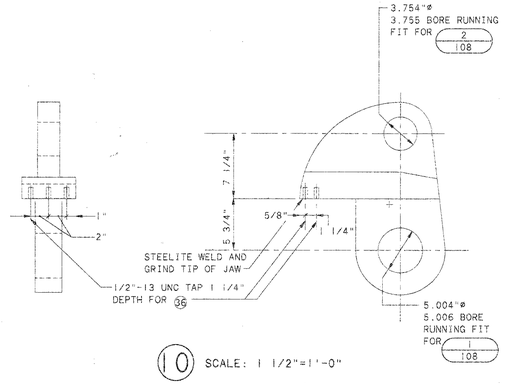
FIN. BOLT LIST

ITEM NO.	NO. REQ'D	GRIP	DIA.	LENGTH	HEX. "A"	HEX. "B"	THREAD "C"	THREAD "D"	LOCATION
20	56	1 3/16	.907/.906	2 9/16	1 7/16	23/32	7/8	1 5/8	3/96176
21	68	1 3/4	.907/.906	3 1/8	1 7/16	23/32	7/8	1 5/8	3/96176
22	32	2 3/8	.907/.906	3 3/4	1 7/16	23/32	7/8	1 5/8	3/96176
23	52	1 3/4	.938/.937	3 1/8	1 7/16	23/32	7/8	1 5/8	1-2/96176
24	48	1 15/16	.938/.937	3 5/16	1 7/16	23/32	7/8	1 5/8	1-2/96176
25	60	2 3/8	.938/.937	3 3/4	1 7/16	23/32	7/8	1 5/8	1-2/96176
26	96	2 11/16	1.063/1.062	4 3/16	1 5/8	13/16	1"	1 3/4	1-2/96176

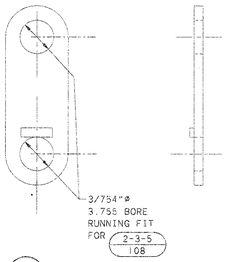
NOTE "A"
BUSHINGS AND WASHERS SHALL BE OF ALLOY - C-BRONZE - CONFORMING TO A.S.T.M. SPEC.-B-22-51. COMPLETE ANALYSIS FROM EACH MELT FROM COMPRESSION TEST COUPON, WITH NOT LESS THAN ONE COMPRESSION TEST SHOWING LOAD WHICH PRODUCES 0.001" PERMANENT SET. ALL BUSHING CASTINGS WILL BE SOUND, CLEAN AND FREE FROM BLOW HOLES, POROUS PLACES, CRACKS AND OTHER DEFECTS.

NOTE "B"
FORGED STEEL PINIONS, SHAFTS AND KEYS WILL CONFORM TO A.S.T.M. SPEC.-A-235-52-T-CLASS-F-NORMALIZED AND TEMPERED.

NOTE "C"
BOLTS, NUTS, WASHERS AND SET SCREWS SHALL CONFORM TO A.S.T.M. SPEC-A-307-52T-GR-B.

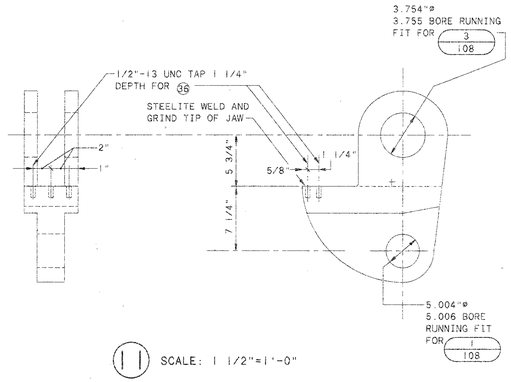


10 SCALE: 1 1/2"=1'-0"

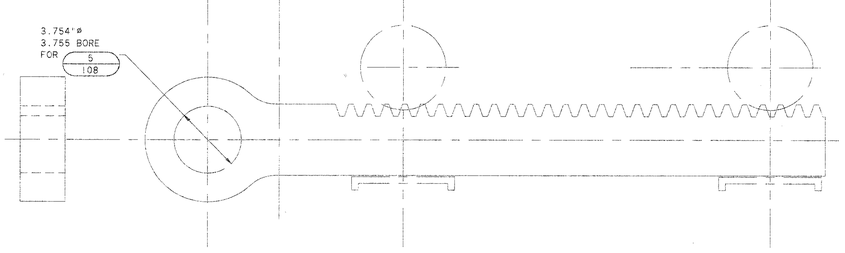


17 SCALE: 1 1/2"=1'-0"

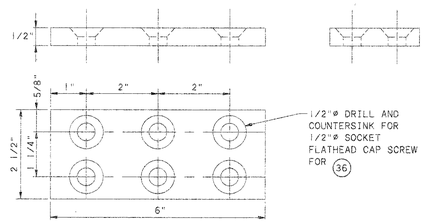
18 SCALE: 1 1/2"=1'-0"



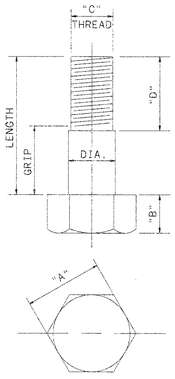
11 SCALE: 1 1/2"=1'-0"



19 SCALE: 3"=1'-0"



35 SCALE: 6"=1'-0"



DESIGNED	DRAWN	REVISED	DATE
RTJ	RER	XXX	00/00/94
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RTJ	XXX	4805917	

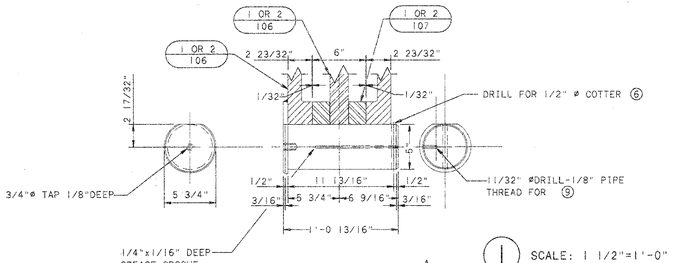
ENGINEERS
ARCHITECTS

CENTER LOCK DETAILS
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

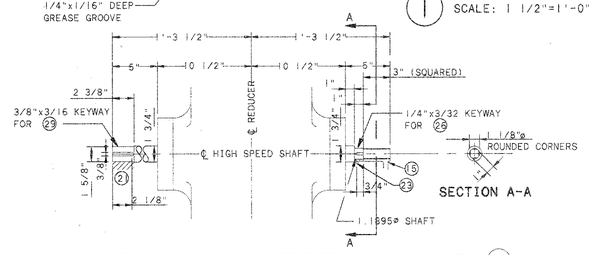
LUC-280

107/126

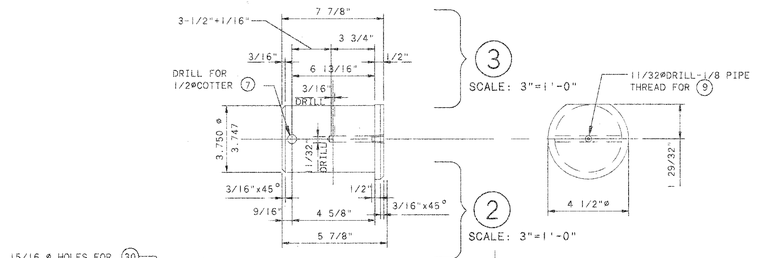
-

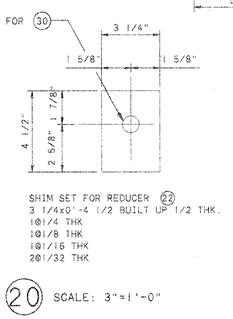


1 SCALE: 1 1/2"=1'-0"



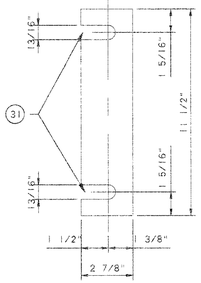
HALF SIZE DETAIL OF SPECIAL SHAFT EXTENSION ON REDUCER (22)





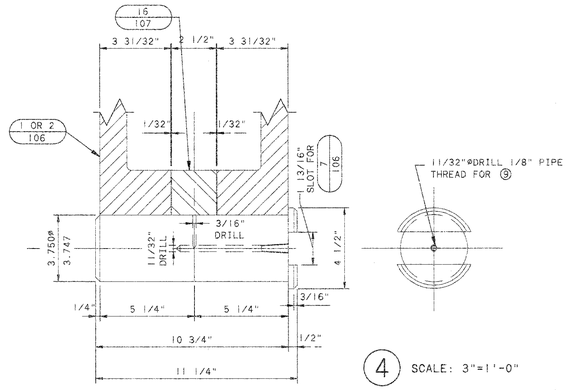
SHIM SET FOR REDUCER (22)
3 1/4x0'-4 1/2 BUILT UP 1/2 THK.
1@1/4 THK
1@1/8 THK
1@1/16 THK
2@1/32 THK

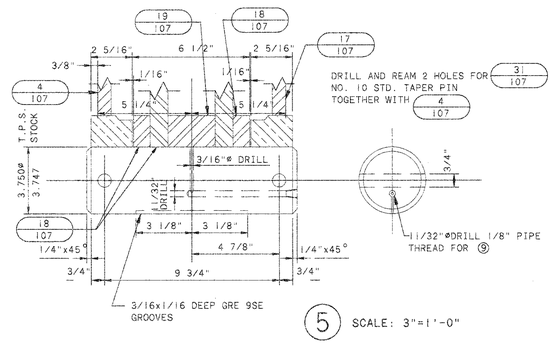
20 SCALE: 3"=1'-0"

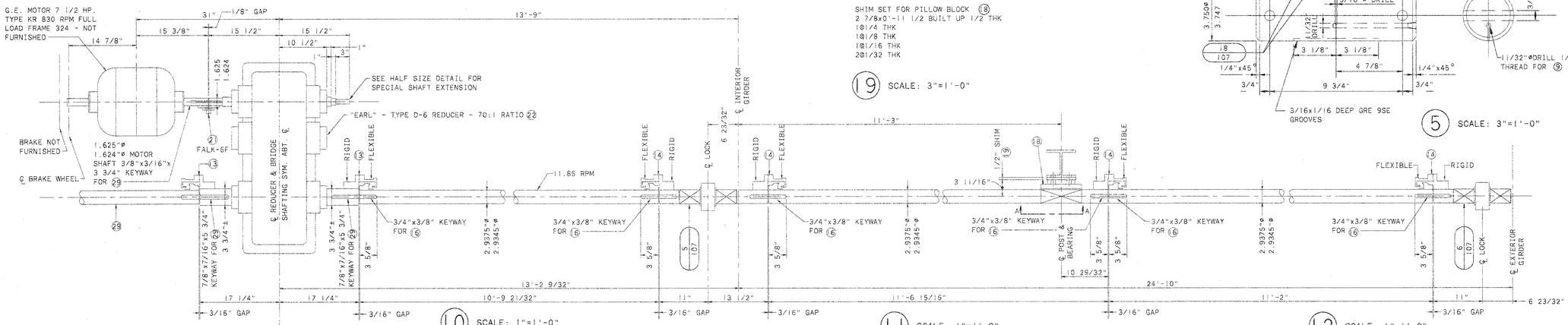


SHIM SET FOR PILLOW BLOCK (18)
2 7/8x0'-11 1/2 BUILT UP 1/2 THK
1@1/4 THK
1@1/8 THK
1@1/16 THK
2@1/32 THK

19 SCALE: 3"=1'-0"





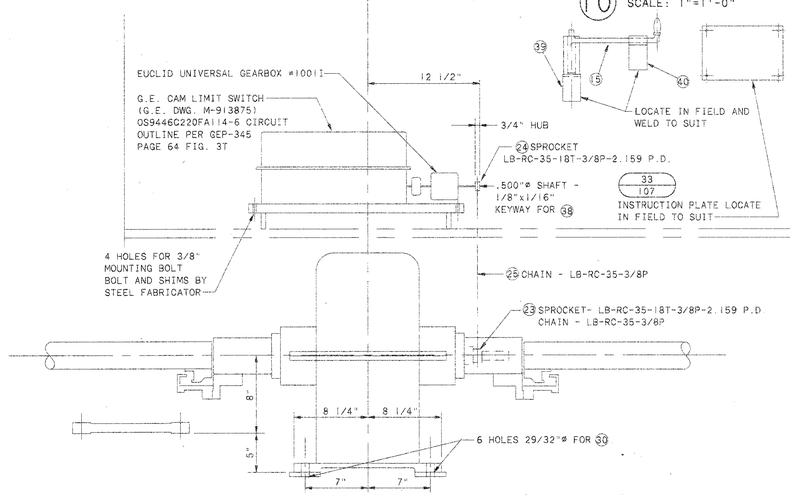


10 SCALE: 1"=1'-0"

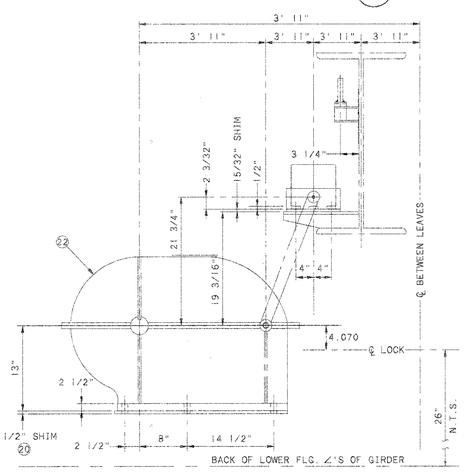
11 SCALE: 1"=1'-0"

ASSEMBLY SHAFTING WITH KEYWAYS IN LINE

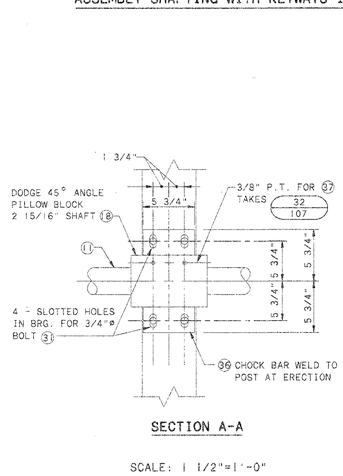
12 SCALE: 1"=1'-0"



SCALE: 1 1/2"=1'-0"

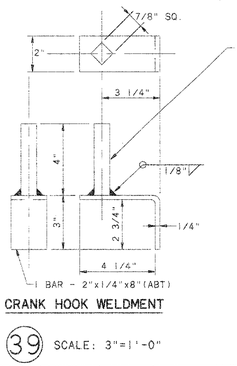


SCALE: 1"=1'-0"



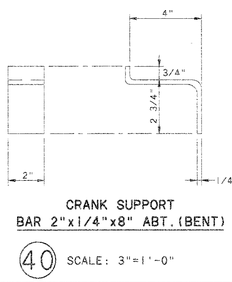
SECTION A-A

SCALE: 1 1/2"=1'-0"



CRANK HOOK WELDMENT

39 SCALE: 3"=1'-0"



CRANK SUPPORT BAR 2"x1/4"x8" ABT.(BENT)

40 SCALE: 3"=1'-0"

DESIGNED	DRAWN	REVIEWED	DATE
RTJ	RER	XXX	00/00/94
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RTJ	XXX	480517	

HNTB CORPORATION ENGINEERS ARCHITECTS

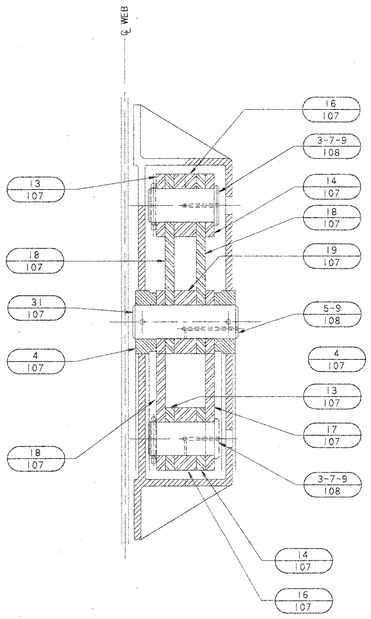
CENTER LOCK DETAILS
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

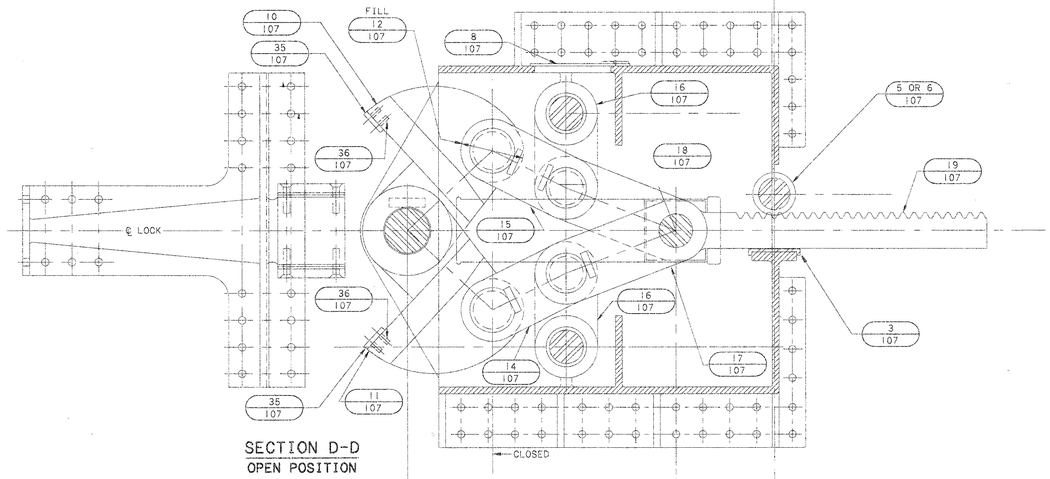
108/126

1

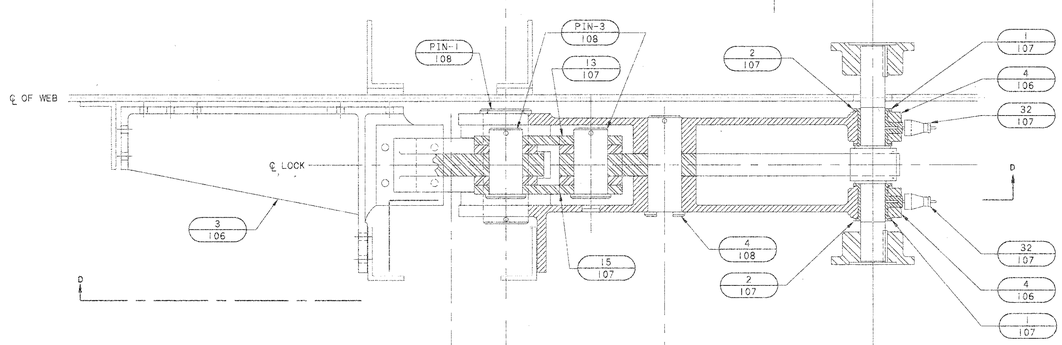
N:\PR14912\CADD\LOC-DTL3 2-9-96 10:50:49 am EST

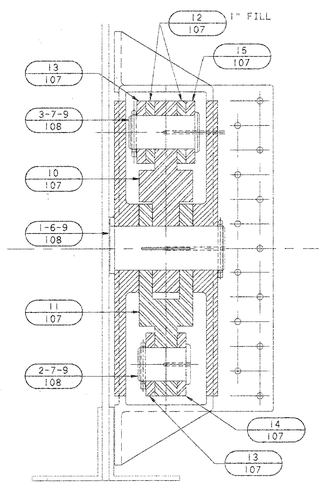


SECTION B-B

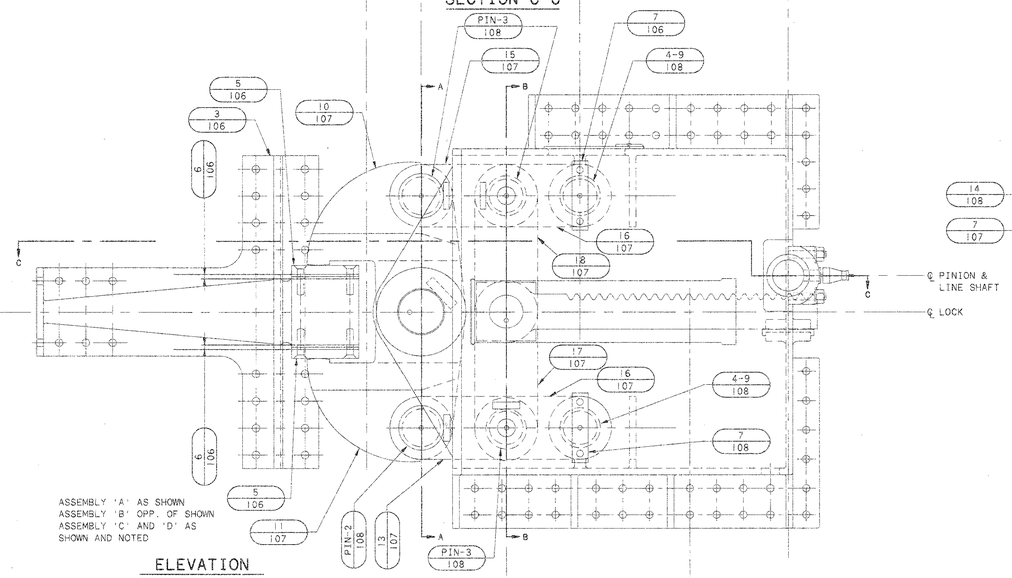


SECTION D-D
OPEN POSITION

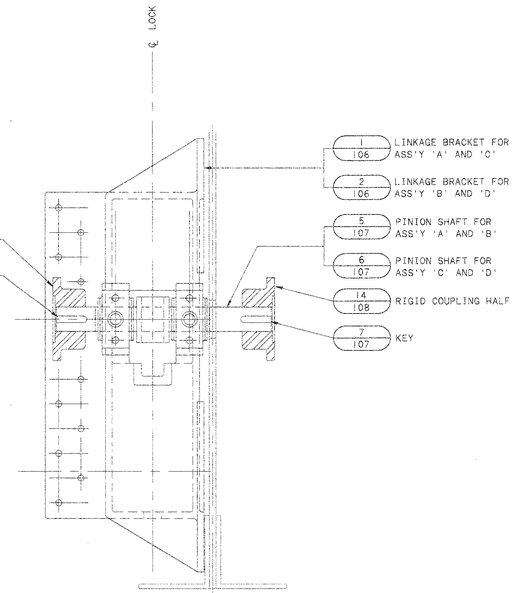




SECTION A-A



ELEVATION
CLOSED POSITION



REVOLUTION OF PINION FOR FULL OPENING = $\frac{20.5}{4.775 \times PI}$ 1.36 REV.

TIME OF OPERATION FOR FULL OPENING = $\frac{1.36 \text{ REV}}{11.85 \text{ RPM}}$ * 0.115 MIN. = 7 SEC.

HAND CRANK REVOLUTION FOR FULL OPENING 1.36 x 70 = 95 REV.

ENGINEERS
ARCHITECTS

DESIGNED	DRAWN	REVIEWED	DATE
RTJ	RER	XXX	00/00/94
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RTJ	XXX	4805917	

CENTER LOCK DETAILS
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

109/126

1

NEW	REWORK	REPLACE	REUSE	NO.	PARTS REQUIRED FROM SHT. 106	ITEM NO.	MATERIAL	MATERIAL NOTES	WEIGHT LBS.
			X	2	LINKAGE BRACKETS AS SHOWN	1	STEEL	NOTE A	1275
			X	2	LINKAGE BRACKETS OPPOSITE HAND	2	STEEL	NOTE A	1275
	X			4	LOCK BRACKETS	3	STEEL	NOTE A	742
		X		8	BEARING CAP	4	STEEL	NOTE A	36
		X		8	CASE HARDENED PLATES	5	STEEL	.15-.20 CARBON	
		X		8	SHIM SET	6	STEEL		
			X	8	LOCK BAR	7	STEEL		
		X		16	STUDS 3/4"x6" LENGTH	8	STEEL	NOTE B	
		X		16	3/4"x1-3/4" CAP SCREW	9	STEEL	NOTE B	
		X		16	3/4" LOCKWASHER FOR ITEM 9 SHEET 106	10	STEEL	NOTE B	
X				32	13/16"x2 1/2" - 16 UN SOCKET FLAT HEAD CAP SCREW	11A	STEEL	NOTE B	
		X		32	3/4" C.P. HEX NUT FOR ITEM 8 SHEET 106	12	STEEL	NOTE B	

NEW	REWORK	REPLACE	REUSE	NO.	PARTS REQUIRED FROM SHEET 107	ITEM NO.	MATERIAL	MATERIAL NOTES	WEIGHT LBS.
		X		8	FLANGED BUSHING - TOP HALF	1	BRONZE	NOTE C	5
		X		8	FLANGED BUSHING - BOTTOM HALF	2	BRONZE	NOTE C	4.5
		X		4	BACKUP BEARING	3	BRONZE	OILITE-BRONZE	
		X		8	BEARING SHOES - SEE DETAIL 1 SHEET 107	4	BRONZE	NOTE C	28
		X		2	PINION INTEGRAL WITH SHAFT	5	STEEL	NOTE D	
		X		2	PINION INTEGRAL WITH SHAFT	6	STEEL	NOTE D	
		X		6	3/4x3/4x3-1/2 SQUARE KEY	7	STEEL	NOTE D	
		X		4	INSPECTION COVER	8	STEEL	WELDED	
		X		4	BINGHAM NO. 808 BROAD BUTT HINGE WITH FAST PIN (3x3)	9	STEEL	WROUGHT	
		X		4	JAW - UPPER HALF	10	STEEL	NOTE D	
		X		4	JAW -LOWER HALF	11	STEEL	NOTE D	
		X		8	FILL PLATE - 7" DIA. x 1" THICK	12	STEEL		
		X		16	LINK 9-1/2" CENTERLINE TO CENTERLINE	13	STEEL		
		X		8	LINK 9-1/2" CENTERLINE TO CENTERLINE	14	STEEL		
		X		16	LINK 9-1/2" CENTERLINE TO CENTERLINE	15	STEEL		
		X		8	LINK 8-1/4" CENTERLINE TO CENTERLINE	16	STEEL		
		X		4	LINK 13" CENTERLINE TO CENTERLINE	17	STEEL		
		X		12	LINK 13" CENTERLINE TO CENTERLINE	18	STEEL		
		X		4	RACK 27 TEETH, 1" PITCH, 2 1/2" FLAT, 20° STD. INVOLUTE	19	STEEL	NOTE D	
		X		56	29/32" FIN. BOLT 1-3/16" GRIP 2-9/16" LENGTH	20	STEEL	NOTE B	
		X		68	29/32" FIN. BOLT 1-3/4" GRIP 3-1/8" LENGTH	21	STEEL	NOTE B	
		X		32	29/32" FIN. BOLT 2-3/8" GRIP 3-3/4" LENGTH	22	STEEL	NOTE B	
		X		52	15/16" FIN. BOLT 1-3/4" GRIP 3-1/8" LENGTH	23	STEEL	NOTE B	
		X		48	15/16" FIN. BOLT 1-15/16" GRIP 3-5/16" LENGTH	24	STEEL	NOTE B	
		X		60	15/16" FIN. BOLT 2-3/8" GRIP 3-3/4" LENGTH	25	STEEL	NOTE B	
		X		96	1-1/16" FIN. BOLT 2-11/16" GRIP 4-3/16" LENGTH	26	STEEL	NOTE B	
		X		316	7/8" C.P. HEX NUT	27	STEEL	NOTE B	
		X		316	7/8" LOCK WASHER	28	STEEL	NOTE B	
		X		96	1" C.P. HEX NUT	29	STEEL	NOTE B	
		X		96	1" LOCK WASHER	30	STEEL	NOTE B	
		X		8	NO.10 AM. STANDARD TAPER PIN 6" LENGTH SEE DETAIL SHEET 107	31	STEEL		
		X		12	ALEMITE AUTOMATIC PRESSURE GREASE CUP NO. 43530, 1 OZ. - 1/4 P. THR	32			
		X		1	INSTRUCTION PLATE SEE DETAIL SHEET 107	33	ALUMINUM		
		X		12	NO.10-24, 3/8" LENGTH ROUND HEAD MACHINE SCREW	34	STEEL		
X				8	JAW STRIKE PLATE	35	STEEL	SHOCK RESISTANT TOOL STEEL S5 OIL QUENCH	
X				32	1/2"x1 1/2" - 16 UNC SOCKET FLATHEAD SCREW	36	STEEL	NOTE B	

NEW	REWORK	REPLACE	REUSE	NO.	PARTS REQUIRED FROM SHEET 108	ITEM NO.	MATERIAL	MATERIAL NOTES	WEIGHT LBS.
				4	HEAD PIN	1	FORGED STEEL	NOTE E	
				4	HEAD PIN	2	FORGED STEEL	NOTE E	
				12	HEAD PIN	3	FORGED STEEL	NOTE E	
				8	HEAD PIN	4	FORGED STEEL	NOTE E	
				4	STRAIGHT PIN	5	T.P. STEEL	GR.1040	
		X		4	COTTER PIN 1/2" DIA.x 6 1/2" LENGTH FOR ITEM 1, SHEET 108	6	T.P. STEEL		
		X		16	COTTER PIN 1/2" DIA. x 5" LENGTH FOR ITEMS 2 AND 3, SHEET 108	7	T.P. STEEL		
					NOT USED	8			
		X		32	1/8" P.T. ALEMITE FLUSH TYPE GREASE FITTING FOR ITEM 1-5, SHEET 108	9			
			X	2	LINE SHAFT 2-15/16" DIA. x 10'-9 21/32" LENGTH	10	T.P. STEEL	NOTE F	
			X	2	LINE SHAFT 2-15/16" DIA. x 11'-6 15/16" LENGTH	11	T.P. STEEL	NOTE F	
			X	2	LINE SHAFT 2-15/16" DIA. x 11'-2" LENGTH	12	T.P. STEEL	NOTE F	
			X	2	NO. 3 FAST FLOATING SHAFT COUPLING RIGID HALF: 3.75"+/- BORE, 7/8" x 7/16" KWY FLEXIBLE HALF: 2.933/2.934" BORE, 3/4" x 3/8" KWY	13		NOTE A	
			X	8	NO.3 FAST FLOATING SHAFT COUPLING BOTH HALVES: 2.933/2.934" BORE, 3/4"x3/8" KEYWAY	14		NOTE A	
			X	1	WILLIAMS DROP FORGED CRANK HANDLE NO. 16 BROACHED HUB, 1" SQUARE 10" ARM LENGTH	15			
		X		12	3/4"x3/4"x3-5/8" STR. KEY	16	FORGED STEEL	NOTE E	
		X		12	7/8"x7/8"x3-1/2" STR. KEY	17	FORGED STEEL	NOTE E	
		X		2	DODGE 45 DEG ANGLE PILLOW BLOCK, BABITTED BEARING TO FIT SHAFT 2.9345/2.9375" DIA.	18			
		X		4	SHIM SET FOR ITEM 18 SHEET 108	19	STEEL		
		X		6	SHIM SET FOR ITEM 22 SHEET 108	20	STEEL		
			X	1	FALK STANDARD COUPLING SIZE 6F BOTH HALVES BORE 1.623/1.6235" DIA. 3/8"x3/16" KEYWAY	21			
			X	1	EARLE GEAR AND MACHINE CO. REDUCER, TYPE D-6, 70:1 RATIO, TO OPERATE IN EITHER DIRECTION, SPECIAL HIGH SPEED SHAFT SEE SHEET 108	22			
		X		1	LINK BELT RC35 TYPE B SPROCKET 18 TEETH, 3/8 PITCH, 2.159 P.D. HUB, 1.1875"/1.1885" BORE 1 3/4" LENGTH. 1/4"x3/32" KEYWAY-SET SCREW	23	STEEL		
		X		1	LINK BELT RC35 TYPE B SPROCKET 18 TEETH, 3/8 PITCH, 2.159 P.D. HUB, 0.622/0.623" BORE, 1 3/4" LENGTH. 3/16"x3/32" KEYWAY-SET SCREW	24	STEEL		
		X		1	LINK BELT CLASS RC35 ROLLER CHAIN, 3/8" PITCH, 142 PITCHES WITH ONE CONNECTING LINK	25			
		X		1	1/4"x3/16"x7/8" STRAIGHT KEY	26	STEEL	NOTE E	
					NOT USED	27			
					NOT USED	28			
		X		2	3/8"x3/8"x2-1/8" STRAIGHT KEY	29	STEEL	NOTE E	
		X		6	7/8"x3-3/4" SQUARE HEAD BOLT	30	FORGED STEEL	NOTE B	
		X		8	3/4"x3-1/4" SQUARE HEAD BOLT	31	FORGED STEEL	NOTE B	
		X		6	7/8" C.P. HEX NUT FOR ITEM 30 SHEET 108	32	STEEL	NOTE B	
		X		8	3/4" C.P. HEX NUT FOR ITEM 31 SHEET 108	33	STEEL	NOTE B	
		X		6	7/8" LOCKWASHER FOR ITEM 30 SHEET 108	34	STEEL	NOTE B	
		X		8	3/4" LOCKWASHER FOR ITEM 31 SHEET 108	35	STEEL		
			X	2	1-1/2"X1"X5-3/4" CHOCK BAR FOR ITEM 18 SHEET 108	36	STEEL		
			X	4	ALEMITE ADAPTOR BUSHING NO. 40996 MALE 3/8" PT, FEMALE 1/4" PT FOR ITEM 18 SHEET 108	37			
		X		1	3/16"x3/16"x3/4" STRAIGHT KEY	38	STEEL		
			X	1	CRANK HOOK	39	STEEL	WELDED	
			X	1	CRANK SUPPORT	40	STEEL		

NOTE A: STEEL CASTINGS SHALL CONFORM TO ASTM SPECIFICATION A27-52, GRADE 65-35 FULLY ANNEALED AND PHYSICALLY TESTED.

NOTE B BOLTS, NUTS, WASHERS, AND SCREWS SHALL CONFORM TO ASTM SPEC A307-52T, GRADE B.

NOTE C: BUSHINGS AND WASHERS SHALL BE OF ALLOY C BRONZE CONFORMING TO ASTM SPEC B-22-51. COMPLETE ANALYSIS FROM EACH MELT FROM COMPRESSION TEST COUPON, WITH NOT LESS THAN ONE COMPRESSION TEST SHOWING LOAD WHICH PRODUCES 0.001" PERMANENT SET. ALL BUSHING CASTINGS WILL BE SOUND, CLEAN, AND FREE FROM BLOW HOLES, POROUS AREAS, CRACKS, OR OTHER DEFECTS.

NOTE D FORGED STEEL PINIONS, SHAFTS, AND KEYS WILL CONFORM TO ASTM SPEC A235-52-T, CLASS F, NORMALIZED AND TEMPERED.

NOTE E: FORGED STEEL PINION SHAFTS AND KEYS SHALL CONFORM TO ASTM SPECIFICATION A235-52T, CLASS F, NORMALIZED AND TEMPERED.

NOTE F SHAFTING SHALL CONFORM TO ASTM SPEC A108-52T, SHALL BE OPEN HEARTH CARBON STEEL GRADE 1040, AND SHALL BE HEAT TREATED TO PROVIDE A YIELD POINT OF NOT MORE THAN 65,000 LBS.

NOTE G COUPLINGS 13 AND 14 (SHEET 108) TO HAVE SHROUDED JOINT BOLTS AND KEYWAYS IN SOME LOCATION, RELATIVE TO BOLT HOLES.

ENGINEERS
ARCHITECTS

DESIGNED RTJ
DRAWN RER
CHECKED RTJ
REVISED XXX
REVIEWED XXX
DATE 00/00/94
STRUCTURE FILE NUMBER 4805917

CENTER LOCK DETAILS
BRIDGE NO. LUC-280-0346
OVER MAUMEE RIVER

LUC-280

CALCULATED PH
CHECKED TJM

MAINTENANCE OF TRAFFIC & TRAFFIC CONTROL SUMMARY

SHEET NUMBER 112	113	114	115	116	117	118	119	120	121	122	124	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
																MAINTENANCE OF TRAFFIC
					370	232						202	30700	602	Lin. Ft.	Concrete Barrier Removed
20					18	9						404	35000	47	Cu. Yd.	Bituminous Concrete For Maintaining Traffic
lump												614	11000	lump		Maintaining Traffic
200												614	11100	200	Hour	Law Enforcement Officer with Patrol Car (See Sheet 112)
						4						614	12350	4	Each	Temporary Impact Attenuator G.R.E.A.T. Type, Model No. 200200NF6GCZ, Bidirectional
2												614	12360	2	Each	Temporary Impact Attenuator (Replacement) G.R.E.A.T. Type, Model No 200200NF6GCZ, Bidirectional
									1	3		SPEC	61412370	4	Each	Remove and Replace Impact Attenuator (See Sheet 112)
	13											614	12470	13	Each	Work Zone Speed Limit Sign
200												SPEC	61412500	200	Sq. Ft.	Replacement Sign (See Sheet 112)
200												SPEC	61412600	200	Each	Replacement Drum (See Sheet 112)
					102	112		10	79	30		614	13300	333	Each	Barrier Reflector, Type B
					102	109		10	77	28		614	13350	326	Each	Object Marker
	2											614	18501	2	Each	Portable Changeable Message Sign as per Plan (See Sheet 112)
					0.6	0.71						614	22100	1.31	Mile	Temporary Edge Line, Class I, 642 Paint
		0.16	0.45	0.37	0.31	0.16			0.72	0.77		614	22300	2.94	Mile	Temporary Edge Line, Class I, 740.05, Type C
						232						622	23401	232	Lin. Ft.	Concrete Barrier, Type B, as per Plan (See Sht 118)
					370							622	23405	370	Lin. Ft.	Concrete Barrier, Type B-50, as per Plan (See Sht 117)
					463	250		240	400	110		622	40020	1463	Lin. Ft.	Portable Concrete Barrier, 32"
					333	300	210		454	310		622	40030	1607	Lin. Ft.	Portable Concrete Barrier, 50"
					1670	1234			1226	630		622	40040	4760	Lin. Ft.	Portable Concrete Barrier, 32", Bridge Mounted
					84							622	40046	84	Lin. Ft.	Portable Concrete Barrier, 50", Bridge Mounted
					793	1102			793	630	1453	622	80000	4771	Lin. Ft.	Glare Screen
		860	660	1950	1505	1470						642	30000	6445	Lin. Ft.	Removal of Pavement Marking
																TRAFFIC CONTROL
											119	202	54000	119	Each	Raised Pavement Marker Removed
											119	621	00100	119	Each	Raised Pavement Marker
											1.87	642	00090	1.87	Mile	Edge Line
											1.63	644	00200	1.63	Mile	Lane Line
											570	644	00400	570	Lin. Ft.	Channelizing Line
											80	644	00500	80	Lin. Ft.	Stop Line
											170	644	00700	170	Lin. Ft.	Transverse Line

LUC 280-0346

N:\PROJECTS\PR14912\CADD\GSUMMT01

MAINTENANCE OF TRAFFIC

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED 4 NIGHTS (9:00 P.M. - 6:00 A.M.), WHEN THROUGH TRAFFIC WILL BE DETOURED. LIQUIDATED DAMAGES SHALL BE ASSESSED FOR THE AMOUNT OF $5,000/DAY IN ACCORDANCE WITH 108.07 FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

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

THE FOLLOWING WORK SHALL BE INCLUDED IN ITEM 614, MAINTAINING TRAFFIC. THERE SHALL BE NO ADDITIONAL COST TO THE PROJECT FOR THESE ITEMS:

- ANY ADDITIONAL SIGNS AND/OR BARRICADES REQUIRED TO PROVIDE CLARITY TO THE TRAFFIC MAINTENANCE SCHEMES AS SET FORTH IN THE PLANS, STANDARD DRAWINGS, OR OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD).

- ANY SIGN AND/OR BARRICADE RELOCATIONS REQUIRED FOR CLARITY.

- ANY SIGNAL TIMING ADJUSTMENT DIRECTED BY THE ENGINEER.

- FLAGGERS WILL BE PROVIDED TO STOP TRAFFIC DURING ANY OPENINGS AT THE BASCULE SPAN IN LANES THAT CANNOT BE CLOSED BY THE EXISTING GATES.

- SIGNING CONSISTING OF THE "ROAD CONSTRUCTION AHEAD" (OW-128-48) SIGN AND THE "WATCH FOR STOPPED TRAFFIC" (OW-166-48) SIGN MAY BE ADDED WITH THE APPROVAL OF THE ENGINEER. THESE SIGNS SHALL BE PLACED TO THE NORTH AND TO THE SOUTH OF THE PROJECT IN ACCORDANCE WITH THE OMUTCD IN ORDER TO PROVIDE ADDITIONAL ADVANCE WARNING TO THE TRAVELING PUBLIC. THESE SIGNS ARE IN ADDITION TO THE SIGNS CONTAINED IN THE MAINTENANCE OF TRAFFIC PLAN.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE MAINTENANCE OF TRAFFIC.

404	BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC	20 CU. YD.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OMUTCD. PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC BETWEEN NOVEMBER 15 AND APRIL 1ST. NOVEMBER 15 SHALL BE CONSIDERED TO CONSTITUTE AN INTERIM COMPLETION DATE AND LIQUIDATED DAMAGES SHALL BE ASSESSED IN ACCORDANCE WITH 108.07 FOR EACH CALENDAR DAY THAT ALL LANES ARE NOT OPEN AND AVAILABLE TO TRAFFIC.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR

IN ADDITION TO THE REQUIREMENTS OF 614 AND THE LATEST EDITION OF THE 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 PROJECT 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:

CITY OF TOLEDO DIVISION OF POLICE
SAFETY BUILDING
525 N. ERIE STREET
TOLEDO, OH 43624-1325
(419) 245-3340

LEOS 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		200 HOURS

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

IF THE CONTRACTOR WISHES TO UTILIZE LEOS 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 THE CONTRACT REQUIREMENTS WILL BE INCLUDED UNDER ITEM 614, MAINTAINING TRAFFIC.

ITEM 622, PORTABLE CONCRETE BARRIER

IT IS ANTICIPATED THAT THE SAME BARRIER WILL BE USED IN VARIOUS PHASES OF CONSTRUCTION. MOVEMENT OF THE CONCRETE BARRIER BETWEEN PHASES SHALL BE ACCOMPLISHED IN 1 WORKING DAY. FLAGGERS SHALL BE UTILIZED FOR PROTECTION OF VEHICULAR TRAFFIC UNTIL MOVEMENT OF THE BARRIER IS COMPLETE.

ALL COSTS INVOLVED IN REMOVING AND REINSTALLING THE CONCRETE BARRIER WILL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 622, PORTABLE CONCRETE BARRIER.

ITEM SPECIAL, REPLACEMENT SIGN

FLAT SHEET 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 SPECIAL, 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 200 SQUARE FEET HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

ITEM SPECIAL, 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 SPECIAL, 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 200 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

COVERING OF SIGNS

WHERE THE PLANS CALL FOR A PERMANENT SIGN TO BE COVERED, THE CONTRACTOR SHALL DO SO IN SUCH A MANNER AS TO AVOID DAMAGING THE PERMANENT SIGN WHEN THE COVER IS REMOVED. THE COVER SHALL BE TOTALLY OPAQUE. THE USE OF ADHESIVE TAPE APPLIED DIRECTLY TO A SIGN FACE IS STRICTLY PROHIBITED.

ITEM 614, BARRIER REFLECTORS

REFLECTORS AND THEIR MOUNTING SHALL CONFORM TO SUPPLEMENTAL SPECIFICATION 802 EXCEPT THAT SPACING SHALL BE AS SHOWN ON THE PLAN.

ITEM 614, TEMPORARY IMPACT ATTENUATOR (G.R.E.A.T. TYPE)

THIS WORK SHALL CONSIST OF FURNISHING IMPACT ATTENUATORS AS REQUIRED IN THE PLANS. THIS ITEM SHALL INCLUDE ALL RELATED HARDWARE, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER TO CONSTRUCT COMPLETE AND FUNCTIONAL G.R.E.A.T. IMPACT ATTENUATOR SYSTEMS. THE ATTENUATORS SHALL BE PLACED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND AT THE LOCATIONS SHOWN ON THE PLANS. THE IMPACT ATTENUATOR SHALL BE MANUFACTURED BY THE ENERGY ABSORPTION SYSTEMS, INC., ONE EAST WACKER DRIVE, CHICAGO, ILLINOIS 60601; TELEPHONE (312) 467-6750.

THE NOSE COVER OF THE ATTENUATOR SHALL MEET THE REQUIREMENTS OF STANDARD DRAWING MT-95.81.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSPECTING, REPAIRING, AND OTHERWISE RESTORING THE IMPACT ATTENUATOR IN ACCORDANCE WITH THE MANUFACTURER'S MAINTENANCE INSTRUCTIONS WHILE IT IS IN USE ON THE PROJECT. SUCH REPAIRS SHALL BE PERFORMED WITHIN 24 HOURS OF THE INCIDENT WHICH CAUSED DAMAGE TO THE PROJECT. IN ADDITION TO ANY EXTRA UNITS SUPPLIED FOR THIS PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING ALL NECESSARY MATERIALS, LABOR, AND EQUIPMENT REQUIRED TO PERFORM THE ABOVE DESCRIBED RESTORATION OF THE ATTENUATOR.

AN ESTIMATED QUANTITY AS LISTED BELOW SHALL BE USED AS DIRECTED BY THE ENGINEER FOR USE IN THE ABOVE MENTIONED RESTORATION ONLY WHEN IT IS DECIDED THAT MINOR OR MAJOR REPAIRS CANNOT BE PERFORMED IN A SAFE AND TIMELY MANNER:

ITEM 614	TEMPORARY IMPACT ATTENUATOR, G.R.E.A.T. TYPE (REPLACEMENT), MODEL NO. 200200NF6GCZ, BIDIRECTIONAL	2 EACH

FOR LOCATIONS OF THE ATTENUATORS SEE THE PLAN SHEETS. THESE PERMANENTLY LOCATED ATTENUATORS SHALL BE BID PER EACH PER THE FOLLOWING PAY ITEM DESCRIPTION:

ITEM 614	TEMPORARY IMPACT ATTENUATOR (G.R.E.A.T. TYPE), MODEL NO. 200200NF6GCZ, BIDIRECTIONAL

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR EACH, ITEM 614, IMPACT ATTENUATOR, AND SHALL BE CONSIDERED FULL PAYMENT FOR FURNISHING, INSTALLING AT THE SPECIFIED LOCATIONS, RESTORATION AFTER EACH VEHICLE IMPACT, INCLUDING ALL LABOR, TOOLS, EQUIPMENT, AND MISCELLANEOUS HARDWARE AND MATERIALS NECESSARY TO COMPLETE THESE ITEMS OF WORK.

ITEM 614, REMOVE AND REPLACE IMPACT ATTENUATOR, (G.R.E.A.T. TYPE)

THIS PAY ITEM IS FOR EACH MOVEMENT OF AN IMPACT ATTENUATOR WHEN THE IMPACT ATTENUATOR COULD BE USED FOR MORE THAN ONE PHASE. THIS INCLUDES THE COST OF DISMANTLING THE IMPACT ATTENUATOR, TRANSPORTING TO A NEW LOCATION, AND REASSEMBLY FOR A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM. THE FINAL REMOVAL COSTS OF THE IMPACT ATTENUATORS FROM A PROJECT ARE INCLUDED IN THE ORIGINAL COST OF THE IMPACT ATTENUATORS.

DRUMS AND BARRICADES

DRUMS AND BARRICADES SHALL BE USED AS CHANNELIZING DEVICES FOR TRAFFIC AND PLACED ADJACENT TO A LANE IN USE BY TRAFFIC IN ACCORDANCE WITH THE OMUTCD. THE MINIMUM LANE WIDTH SHALL BE 10 FEET, FACE TO FACE OF DEVICE, OR AS SHOWN IN THESE PLANS, WHICHEVER IS GREATER.

SHOULDERS

THE TRAFFIC MAINTENANCE OPERATIONS FOR CLOSING CERTAIN LANES REQUIRE THE PARTIAL UTILIZATION OF THE SHOULDERS AS TRAFFIC LANES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ASSURE THAT THE SHOULDERS ARE MAINTAINED IN ACCEPTABLE CONDITION TO ASSURE THEIR SAFE USE AS A TRAFFIC LANE. AFTER THE TRAFFIC MAINTENANCE OPERATIONS HAVE BEEN COMPLETED, THE CONTRACTOR SHALL REPAIR ANY SHOULDER AREAS THAT HAVE DETERIORATED AS A RESULT OF THEIR USE AS A DRIVING LANE AT THE DIRECTION OF THE ENGINEER.

OVERHEAD BRIDGES

THE CONTRACTOR SHALL SAFEGUARD THE TRAVELLING PUBLIC BY PROVIDING PLATFORMS, NETS, OR OTHER SUITABLE PROTECTION ABOVE THE TRAVELLED LANES. THE EXISTING CLEARANCE MUST BE MAINTAINED AT ALL TIMES ABOVE THE TRAVELLED LANES.

PAYMENT FOR THIS PROTECTION SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

CALCULATED TJM
CHECKED DRT

MAINTENANCE OF TRAFFIC GENERAL NOTES

LUC-280-0346

112/126

P:\PR\1491\2\CADD\MOTNOTE 4-19-96 9:18:56 am

ITEM 614, PORTABLE, CHANGEABLE MESSAGE SIGN (PCMS)

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, AND REMOVE WHEN NO LONGER NEEDED, DIESEL POWERED CHANGEABLE MESSAGE SIGNS, ON SITE, FOR THE DURATION OF THE PROJECT. EACH SIGN SHALL BE A WINK-O-MATIC GENERATION III, A WINK-O-MATIC GENERATION IV, AN ADDCO DIGI-DOT, A TELE-SPOT DOT SIGN, OR AN APPROVED EQUAL.

EACH SIGN SHALL BE TRAILER MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM TO DIM THE SIGN DURING DARKNESS AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATING INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. EACH SIGN SHALL ALSO BE EQUIPPED WITH A CELLULAR TELEPHONE HOOKUP FOR REMOTE ENGINE "ON-OFF" AND PREPROGRAMMED MESSAGE ACTIVATION.

THE PLACEMENT, MOVEMENT, OPERATION, MAINTENANCE, AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT AND REVISE SIGN MESSAGES, IF NECESSARY.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE TWO DIFFERENT MEMORIES (PROM AND RAM) AND CAPACITY TO STORE UP TO 90 MESSAGES IN EACH MEMORY. SIGN MESSAGES SHALL BE LEGIBLE FROM 650 FEET MINIMUM. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. IN ORDER TO CONVEY A MAXIMUM OF INFORMATION AT A SINGLE GLANCE, ONLY THREE LINE PRESENTATION FORMATS WITH A MAXIMUM OF SIX MESSAGE PHASES ARE ALLOWED. NORMALLY, ONLY A MAXIMUM OF THREE MESSAGE PHASES SHOULD BE EMPLOYED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT ONCE.

THE PCMS SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF 614.03(C).

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24 HOURS PER DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASE OR PROJECT.

THE REQUIREMENT TO FURNISH, INSTALL, MAINTAIN, AND REMOVE A PCMS UNIT ON THIS PROJECT SHALL NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES AS OUTLINED IN 104.04.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE BID FOR EACH ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AND SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE, AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

ITEM 614	PORTABLE CHANGEABLE MESSAGE SIGN	2 EACH

ALTERNATE METHODS

IF THE CONTRACTOR SO ELECTS, HE MAY SUBMIT ALTERNATE METHODS FOR MAINTAINING TRAFFIC PROVIDED THE INTENT OF THE ABOVE PROVISIONS IS FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS THEREFROM. NO ALTERNATE PLAN SHALL BE PLACED INTO EFFECT UNTIL APPROVAL HAS BEEN GRANTED, IN WRITING, BY THE DIRECTOR OF TRANSPORTATION.

NOTIFICATIONS

THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF TRANSPORTATION DISTRICT 2 HIGHWAY MANAGEMENT ADMINISTRATOR AND THE CITY OF TOLEDO DIVISION OF TRANSPORTAION ENGINEERING 15 WORKING DAYS IN ADVANCE OF BEGINNING THE TRAFFIC MAINTENANCE OPERATIONS TO ALLOW FOR SIGN SETUP BY STATE FORCES AND FOR THE PUBLIC TO BE NOTIFIED.

WORK LIMIT SIGNS

THE WORK LIMITS SHOWN ON THE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL TRAFFIC CONTROL DEVICES REQUIRED BY THE OMUTCD FOR STREETS AND HIGHWAYS, LATEST EDITION, OR BY THE TRAFFIC MAINTENANCE DETAILS APPEARING IN THESE PLANS SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THE WORK LIMITS.

COVERING OF SIGNS

DURING THE PERIODS WHEN THE MAINLINE IS FULLY OPEN TO TRAFFIC ALL MAINTENANCE OF TRAFFIC SIGNS SHALL BE COVERED, THE CONTRACTOR SHALL DO SO IN SUCH A MANNER AS TO AVOID DAMAGING THE SIGN WHEN THE COVER IS REMOVED. THE COVER SHALL BE TOTALLY OPAQUE. THE USE OF ADHESIVE APPLIED DIRECTLY TO A SIGN FACE STRICTLY PROHIBITED.

ITEM 614, WORK ZONE SPEED LIMIT SIGN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, COVER DURING SUSPENSION OF WORK, AND SUBSEQUENTLY REMOVE WORK ZONE SPEED LIMIT SIGNS AND SUPPORTS (R-10-48) (45 MPH) WITHIN THE WORK LIMITS IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS.

THE CONTRACTOR SHALL COVER OR REMOVE EXISTING SPEED LIMIT OR MINIMUM SPEED SIGNS WITHIN THE REDUCED SPEED ZONE. THESE SIGNS SHALL BE RESTORED DURING SUSPENSION OR TERMINATION OF THE REDUCED SPEED LIMIT. THE EXPENSE OF COVERING OR REMOVAL AND RESTORATION OF EXISTING SPEED LIMIT OR MINIMUM SPEED SIGNS SHALL BE INCLUDED IN THE PAY ITEM FOR THE WORK ZONE SPEED LIMIT SIGNS.

THE WORK ZONE SPEED LIMIT SIGNS MAY BE ERECTED OR UNCOVERED NO MORE THAN 4 HOURS BEFORE THE ACTUAL START OF WORK. THE SIGNS SHALL BE REMOVED OR COVERED NO LATER THAN 4 HOURS FOLLOWING RESTORATION OF ALL LANES TO TRAFFIC WITH NO RESTRICTIONS, OR SOONER AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL ERECT A WORK ZONE SPEED LIMIT SIGN IN ADVANCE OF ANY LANE RESTRICTION EXPECTED TO LAST AT LEAST 30 DAYS, OR AS DIRECTED BY THE ENGINEER. THE SIGN SHALL BE MOUNTED ON BOTH SIDES OF DIVIDED HIGHWAYS, 500 FEET IN ADVANCE OF THE LANE REDUCTION TAPER. THE SIGN SHALL BE MOUNTED ON THE RIGHT SIDE, 250 FEET IN ADVANCE OF THE LANE REDUCTION TAPER ON UNDIVIDED HIGHWAYS. THE SIGN SHALL BE REPEATED, ON THE SIDE NEAREST TRAFFIC, EVERY 1 MILE FOR 55 MPH ZONES AND EVERY ½ MILE FOR 45 MPH ZONES. THESE SIGNS SHALL ALSO BE ERECTED IMMEDIATELY AFTER EACH OPEN ENTRANCE RAMP WITHIN THE ZONE. A SIGN TO INDICATE THE RESUMPTION OF THE STATUTORY SPEED LIMIT SHALL BE ERECTED AT THE END OF ANY REDUCED SPEED ZONE. THIS SIGN SHALL BE AN R-8A.

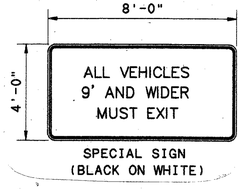
THE CONTRACTOR MAY USE SIGNS AND SUPPORTS IN USED BUT GOOD CONDITION PROVIDED THE SIGNS MEET CURRENT ODOT SPECIFICATIONS. SIGN FACES SHALL BE REFLECTORIZED WITH TYPE G SHEETING COMPLYING WITH THE REQUIREMENTS OF 730.19 AND U.S. DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATION FOR TYPE III-C SHEETING, FP-85. WORK ZONE SPEED LIMIT SIGNS SHALL BE MOUNTED ON TWO (2) ITEM 630 GROUND MOUNTED SUPPORTS, NO. 4 POSTS.

WORK ZONE SPEED LIMIT SIGNS AND SUPPORTS WILL BE MEASURED AS THE NUMBER OF SIGN INSTALLATIONS, INCLUDING THE SIGNS AND NECESSARY SUPPORTS. IF A SIGN AND SUPPORT COMBINATION IS REMOVED AND REERECTED AT ANOTHER LOCATION WITHIN THE PROJECT DUE TO CHANGES IN THE SPEED ZONE DIRECTED BY THE ENGINEER, IT SHALL BE CONSIDERED ANOTHER UNIT.

PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE IN PLACE, WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR FURNISHING, ERECTING, MAONTAINING, COVERING DURING SUSPENSION OF WORK, AND REMOVING THE SIGNS AND SUPPORTS.

ITEM 614	WORK ZONE SPEED LIMIT SIGN	13 EACH

ITEM 614, MAINTAINING TRAFFIC - SPECIAL SIGN



SPECIAL SIGN
(BLACK ON WHITE)

A QUANTITY OF TWO OF THE SIGNS SHOWN ABOVE WILL BE PROVIDED AND ERECTED, AS SHOWN IN THE PLANS, FOR USE DURING STAGES 1 AND 2. PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

SEQUENCE OF OPERATIONS

IT IS INTENDED THAT THE FULL CLOSURE STAGE SHOULD BE ACCOMPLISHED AT ANY TIME DURING STAGE 1 OR STAGE 2, AS LONG AS ALL NOTICES AND PROVISIONS CONTAINED IN THIS PLAN HAVE BEEN ADHERED TO.

STAGE	OPERATION	WORK
PRELIMINARY		CLOSE INSIDE LANES PER MT-95.30
		ERECT PORTABLE BARRIERS, REMOVE PERMANENT BARRIER (CLOSE ADJACENT RAMPS AS NOTED), PLACE TEMPORARY WEARING COURSE
1	CROSSOVER NORTHBOUND TRAFFIC ONTO SOUTHBOUND ROADWAY	INSTALL SIGNS AND MARKINGS FOR STAGE 2 PATTERN AND OBLITERATE CONFLICTING MARKINGS. REMOVE CONFLICTING RAISED PAVEMENT MARKINGS.
		INSTALL PORTABLE BARRIERS
		REMOVE AND REPLACE NORTHBOUND BRIDGE UNITS 1, 2 AND 3 TO CONSTRUCTION JOINT
		RAMP EE WILL BE CLOSED
2	CROSSOVER SOUTHBOUND TRAFFIC ONTO NORTHBOUND ROADWAY	INSTALL SIGNS AND MARKINGS FOR STAGE 1 PATTERN AND OBLITERATE CONFLICTING MARKINGS. REMOVE CONFLICTING RAISED PAVEMENT MARKINGS.
		RELOCATE PORTABLE BARRIERS
		REMOVE AND REPLACE REMAINING PORTIONS OF UNITS 1, 2 AND 3
FULL CLOSURE		NOTIFY DISTRICT 2 HIGHWAY MANAGEMENT ADMINSTRATOR, CONSTRUCTION ADMINISTRATION AND CITY OF TOLEDO A MINIMUM OF TWO WEEKS PRIOR TO FULL CLOSURE
		COMPLETE WORK ON BASCULE SPAN AND LIVE LOAD ANCHORS. ALLOW A TOTAL OF FOUR (4) NIGHTS. ONE LANE OF TRAFFIC IN EACH DIRECTION MUST BE OPEN UNTIL 9:00 PM AT NIGHT, AND MUST RE-OPEN BY 6:00 AM THE FOLLOWING MORNING.
FINAL		CLOSE INSIDE LANES PER MT-95.30
		REMOVE TEMPORARY PAVEMENT
		RESTORE PERMANENT MEDIAN BARRIER
		RESTORE RAISED PAVEMENT MARKERS AND PERMANENT PAVEMENT MARKINGS
		REMOVE TEMPORARY TRAFFIC CONTROL DEVICES
		RESTORE PERMANENT SPEED LIMIT SIGNS

AT ALL TIMES DURING STAGE 1 AND STAGE 2, THE FOLLOWING RAMPS WILL REMAIN CLOSED:

EASTBOUND FRONT ST. TO NORTHBOUND I-280
WESTBOUND FRONT ST. TO NORTHBOUND I-280
EASTBOUND SUMMIT ST. TO SOUTHBOUND I-280
WESTBOUND SUMMIT ST. TO SOUTHBOUND I-280

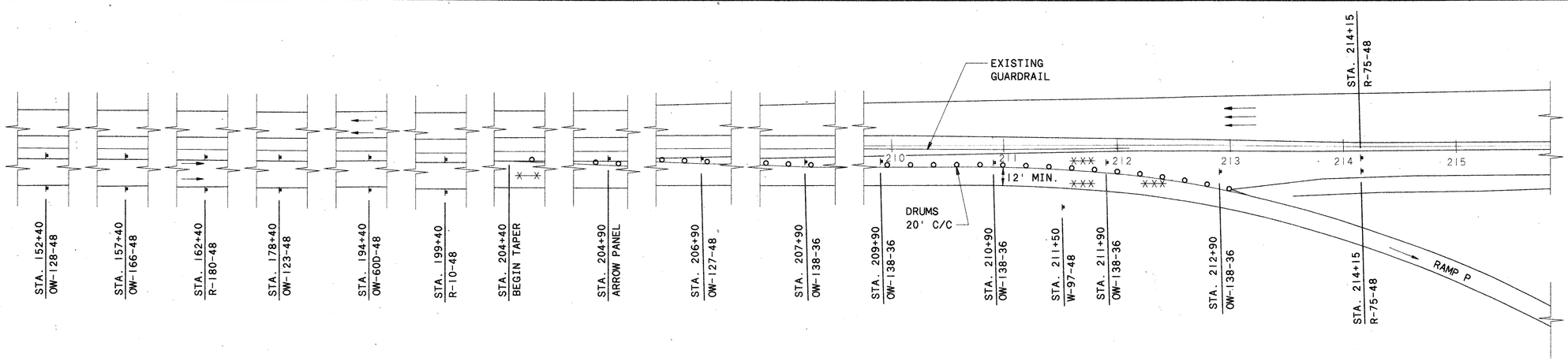
N

HORIZONTAL SCALE IN FEET

CALCULATED T.J.M.
CHECKED D.R.T.

MAINTENANCE OF TRAFFIC GENERAL NOTES

LUC - 280 - 0346



CLOSE RAMPS AS SHOWN ON STAGE I.

OW-127-48

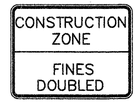
OW-128-48


OW-138-36

R-10-48


OW-60D-48

OW-123-48



R-180-48

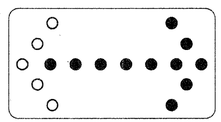
XXX - PAVEMENT STRIPING REMOVED

OW-166-48

W-97-48

R-75-48 ON TYPE III BARRICADE

DRUM


TYPE C FLASHING ARROW PANEL

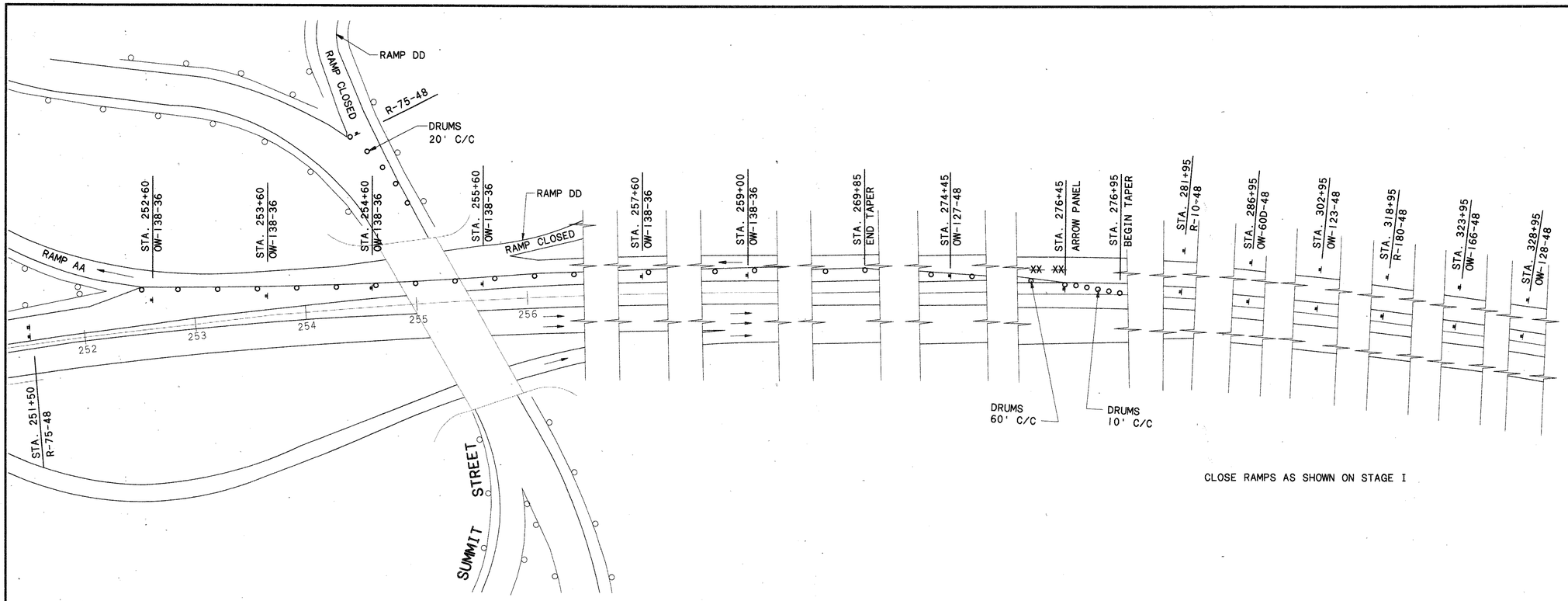
MAINTAINING TRAFFIC

STATION			614	642
FROM	TO OR AT	LENGTH	TEMPORAY EDGE LINE CLASS I 740.05, TYPE C (YELLOW)	REMOVAL OF PAVEMENT MARKING
			MILE	LIN. FT.
204+40	213+00	860	0.16	860
TOTAL			0.16	860

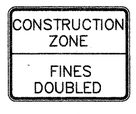
CALCULATED TJM
CHECKED DRT

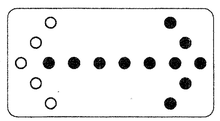
MAINTENANCE OF TRAFFIC - FULL CLOSURE

LUC-280-0346



CLOSE RAMPS AS SHOWN ON STAGE I




TYPE C FLASHING
ARROW PANEL

DRUM

R-75-48
ON TYPE III
BARRICADE

MAINTAINING TRAFFIC

	STATION			614	642
	FROM	TO OR AT	LENGTH	TEMPORARY EDGE LINE CLASS I 740.05 TYPE C (YELLOW)	REMOVAL OF PAVEMENT MARKINGG
				MILE	LIN. FT.
	252+50	276+45	2395	0.45	
	269+85	276+45			660
				0.45	660

0 50 100
HORIZONTAL
SCALE IN FEET

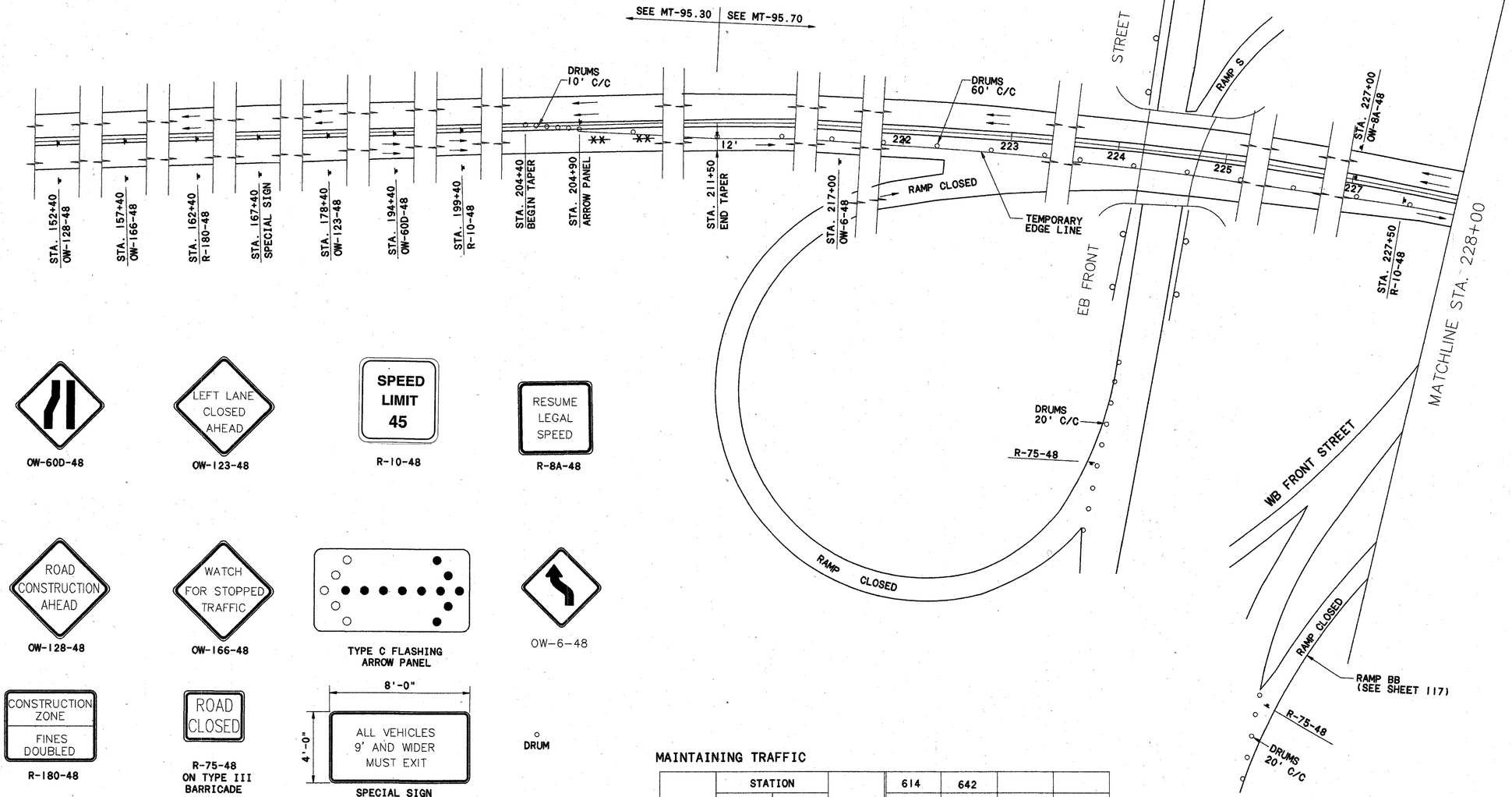
CALCULATED TJM
CHECKED DRT

MAINTENANCE OF TRAFFIC - FULL CLOSURE

LUC-280-0346

115/126

N:\PROJECTS\PR1491\2\CADD\MOTSI3C 8-15-95 3:37:17 pm

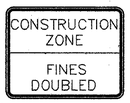


OW-128-48

OW-166-48

TYPE C FLASHING ARROW PANEL

OW-6-48



R-180-48

R-75-48 ON TYPE III BARRICADE

SPECIAL SIGN (BLACK ON WHITE)

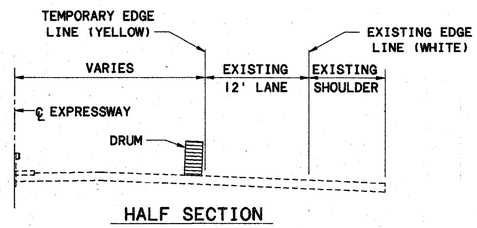
DRUM

OW-60D-48

OW-123-48

R-10-48

R-8A-48



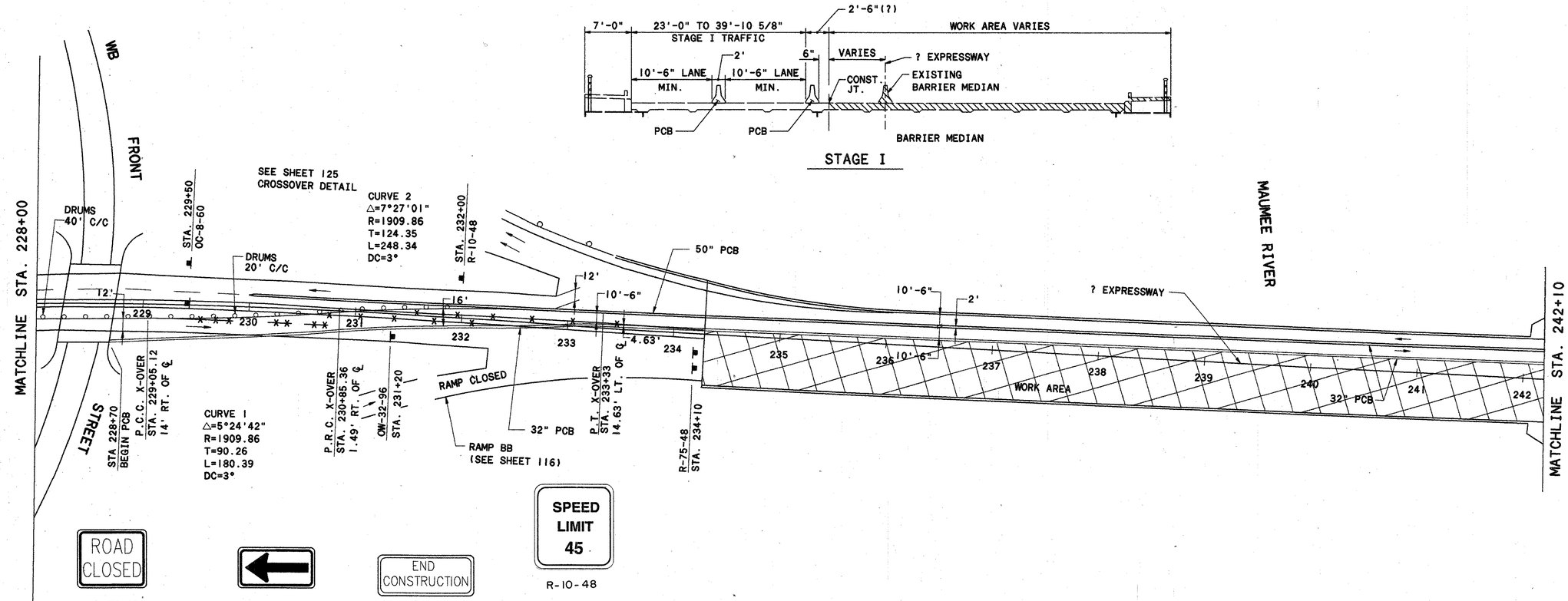
HALF SECTION

MAINTAINING TRAFFIC

	STATION			614	642		
	FROM	TO OR AT	LENGTH	TEMPORARY, EDGE LINE CLASS I, 740.05 TYPE C (YELLOW)	REMOVAL OF PAVEMENT MARKINGS		
				MILE	LIN. FT.		
	208+50	228+00	1950	0.37	1950		
TOTAL THIS SHEET				0.37	1950		

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED T.JM
CHECKED DRT

MAINTENANCE OF TRAFFIC - STAGE I

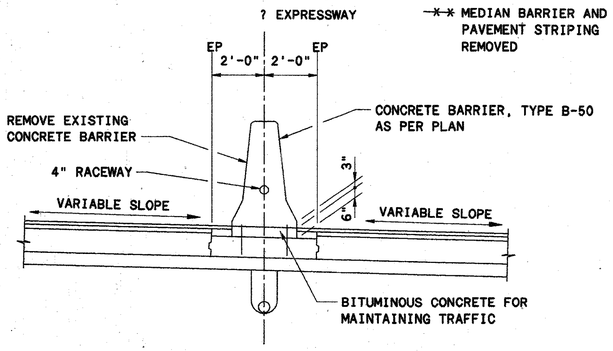


R-75-48
ON TYPE III BARRIER

OW-32-96

OC-8-60

R-10-48



CONCRETE BARRIER TYPE B-50 AS PER PLAN
STA. 229+63.19 TO STA. 233+33

MAINTAINING TRAFFIC

	STATION			202	404	614	614	614	614	614	614	622	622	622	622	622	622	622
	FROM	TO OR AT	LENGTH	CONCRETE BARRIER REMOVED	BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC	BARRIER REFLECTOR TYPE B	OBJECT MARKER	TEMPORARY EDGE LINE CLASS I 740.05 TYPE C TYPE C (YELLOW)	TEMPORAY EDGE LINE CLASS I, 740.05 TYPE C (WHITE)	TEMPORARY EDGE LINE CLASS I 642 PAINT (YELLOW)	TEMPORAY EDGE LINE CLASS I 642 PAINT (WHITE)	PORTABLE CONCRETE BARRIER 50"	PORTABLE CONCRETE BARRIER 32" BRIDGE MOUNTED	PORTABLE CONCRETE BARRIER 32"	PORTABLE CONCRETE BARRIER 50" BRIDGE MOUNTED	CONCRETE BARRIERS TYPE B-50, AS PER PLAN	REMOVAL OF PAVEMENT MARKING	GLARE SCREEN
				LIN. FT.	CU. YD	EACH	EACH	MILE	MILE	MILE	MILE	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.
NB	228+00	228+70	70					.01										
NB	228+70	233+33	463			19	18	.09	.09					463				
NB & SB	233+33	234+17	84			6	6	.02	.02				84		84			
SB	230+00	233+33	333			13	14	.06				333						
NB & SB	234+17	242+10	793			64	64	.02	.02	.30	.30		1586					793
?	229+63.19	233+33	370	370	18											370		
NB	229+05	232+00															295	
NB	230+50	232+50															200	
SB	231+00	242+10															1010	
TOTAL THIS SHEET				370	18	102	102	.18	.113	.30	.30	333	1670	463	84	370	1505	793

CALCULATED T.JM
CHECKED DRT

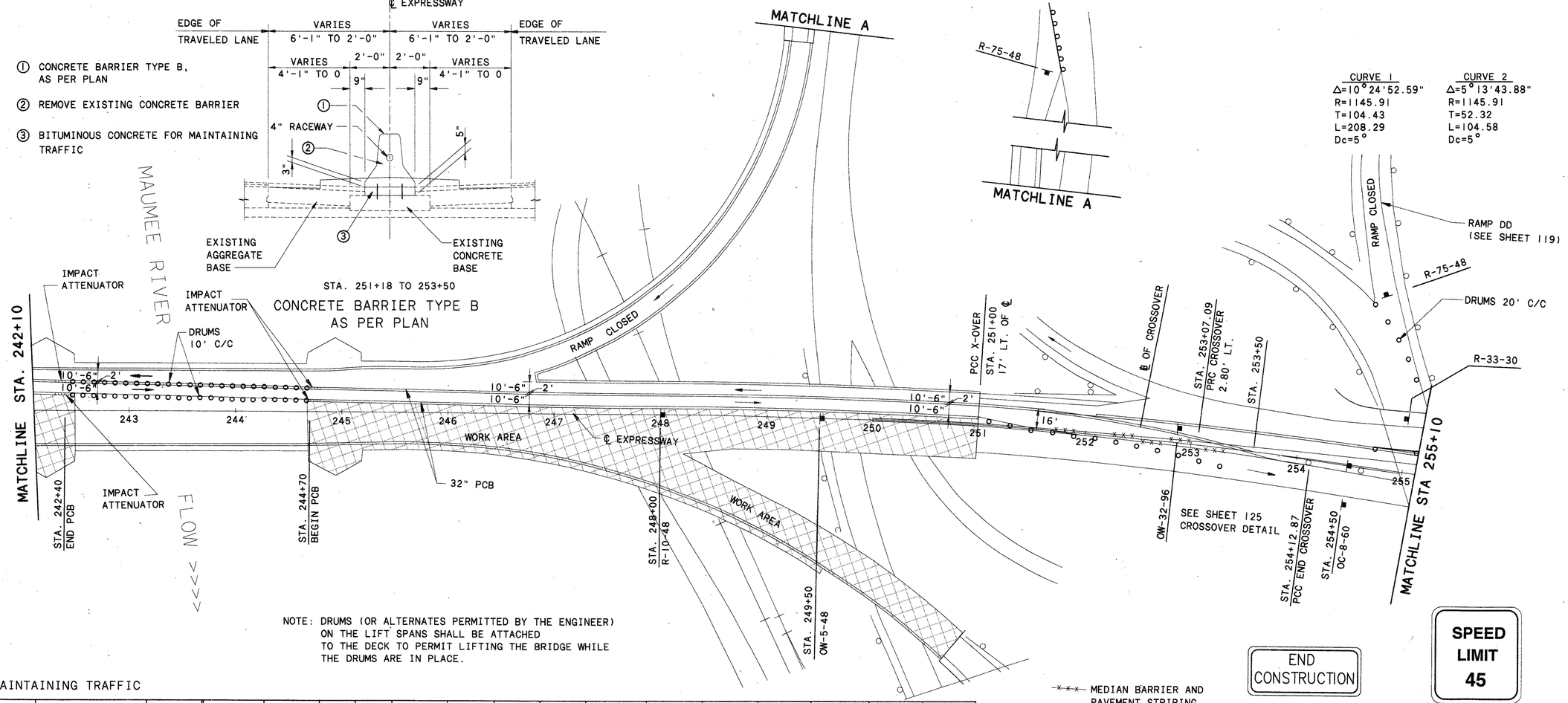
HORIZONTAL SCALE IN FEET
0 25 50 100

MAINTENANCE OF TRAFFIC - STAGE I

LUC-280-0346

STA. 251+18 TO 253+50

CONCRETE BARRIER TYPE B AS PER PLAN

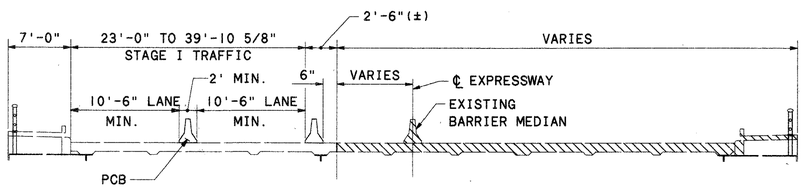


NOTE: DRUMS (OR ALTERNATES PERMITTED BY THE ENGINEER) ON THE LIFT SPANS SHALL BE ATTACHED TO THE DECK TO PERMIT LIFTING THE BRIDGE WHILE THE DRUMS ARE IN PLACE.

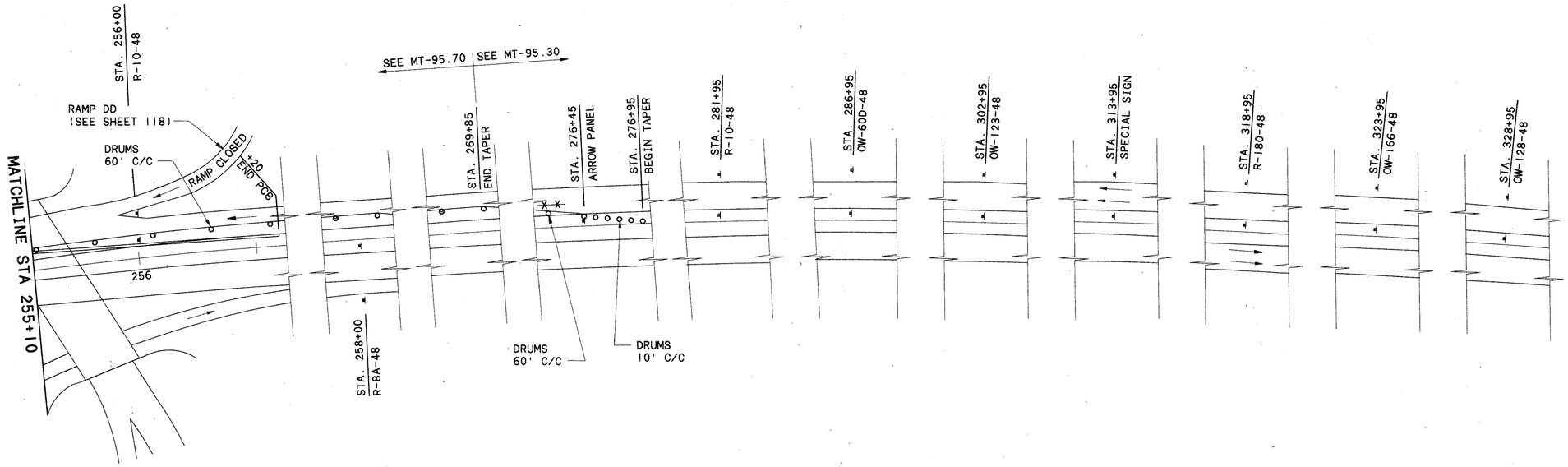
MAINTAINING TRAFFIC

STATION FROM	STATION TO OR AT	LENGTH	202 CONCRETE BARRIER REMOVED	404 BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC	614 BARRIER REFLECTOR TYPE B	614 OBJECT MARKER	614 TEMPORARY EDGE LINE CLASS I 240.05 PAINT TYPE C (YELLOW)	614 TEMPORAY EDGE LINE CLASS I 642 PAINT (YELLOW)	614 TEMPORAY EDGE LINE CLASS I 642 PAINT (WHITE)	614 TEMPORAY EDGE LINE CLASS I 740.05 TYPE C (WHITE)	614 TEMPORARY IMPACT ATTENUATOR (GREAT TYPE1), MODEL NO. 20020ONF6GCZ, BIDIRECTIONAL	622 PORTABLE CONCRETE, BARRIER 32" BRIDGE MOUNTED	622 PORTABLE CONCRETE BARRIER 32"	622 CONCRETE BARRIER TYPE B, AS PER PLAN	622 PORTABLE CONCRETE BARRIER 50"	622 GLARE SCREEN	642 REMOVAL OF PAVEMENT MARKING
			LIN. FT.	CU. YD.	EACH	EACH	MILE	MILE	MILE	MILE	EACH	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.
NB & SB	242+10	242+40	30			1	1		.01	.01	2	17				10	
NB & SB	242+40	244+70	230						.09	.09							
NB & SB	244+70	251+00	630			98	96		.24	.24	2	1217				610	
NB	251+00	254+13	313	232	9	13	12	0.06			.02		250	232		482	
SB	251+00	255+10	410					0.08		.03					300		
SB	242+10	252+30	1020														1020
SB	251+00	253+20	220														220
NB	251+00	253+30	230														230
TOTAL THIS SHEET				232	9	112	109	0.14	.34	.37	.02	4	1234	250	232	300	1102	1470

MEDIAN BARRIER AND PAVEMENT STRIPING REMOVED

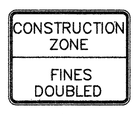


STAGE I



OW-123-48

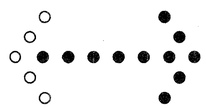
R-10-48



R-180-48

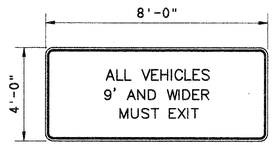
OW-128-48

OW-166-48

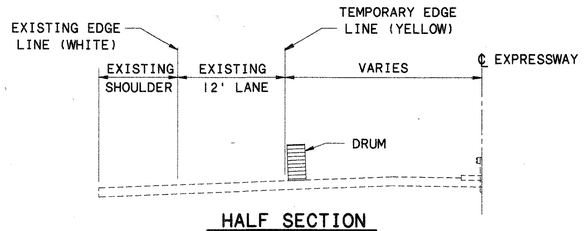

TYPE C FLASHING
ARROW PANEL

R-8A-48

DRUM



SPECIAL SIGN
(BLACK ON WHITE)



HALF SECTION

	STATION			622
	FROM	TO OR AT	LENGTH	PORTABLE CONCRETE BARRIER, 50"
			MILE	LIN FT
SB	255+10	257+20		210
TOTAL THIS SHEET				210

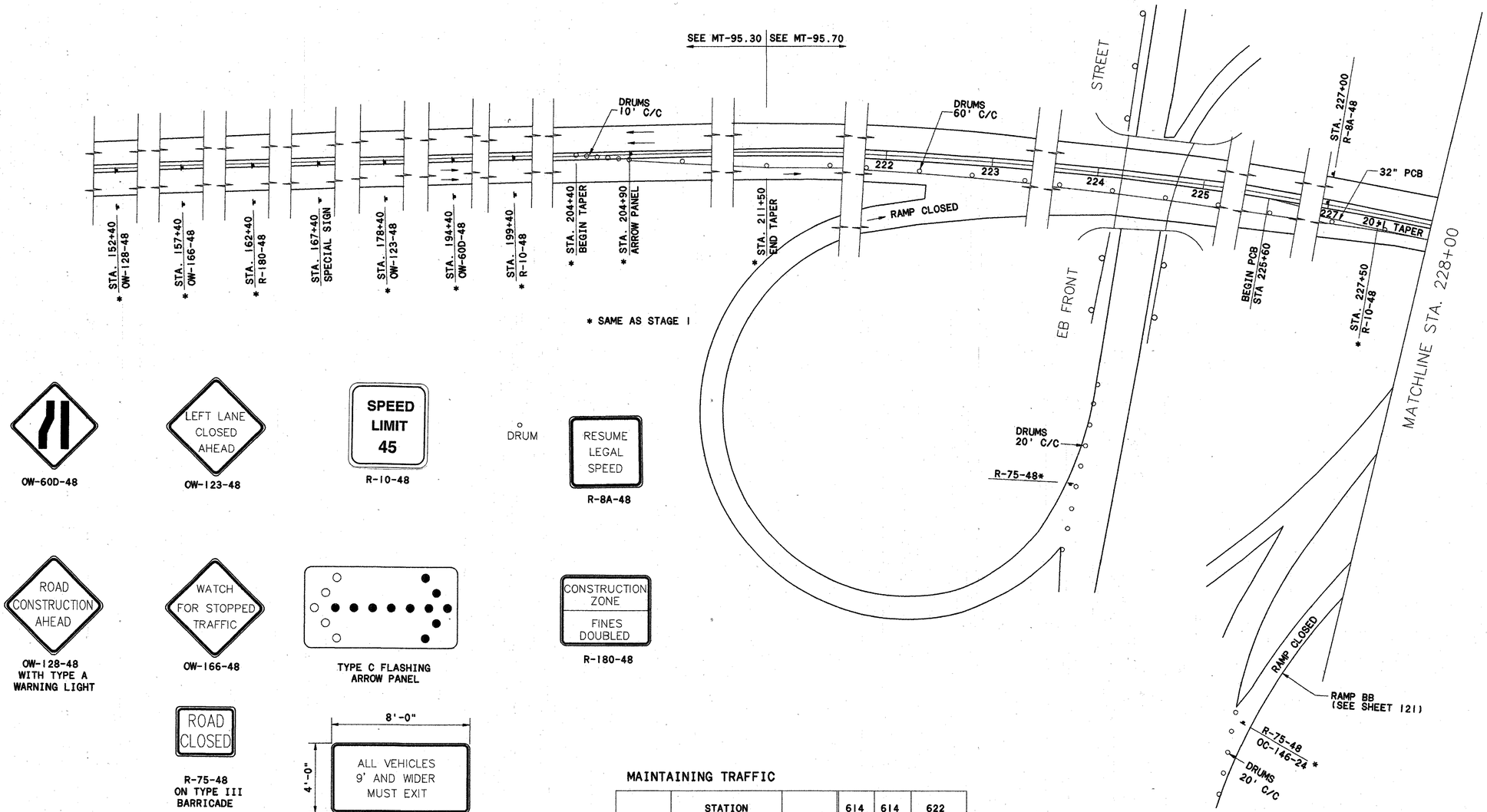
0 25 50 100
HORIZONTAL
SCALE IN FEET

CALCULATED T.JM
CHECKED DRT

MAINTENANCE OF TRAFFIC - STAGE I

LUC-280-0346

119/126



OW-60D-48

LEFT LANE CLOSED AHEAD

OW-123-48

SPEED LIMIT 45

R-10-48

DRUM

RESUME LEGAL SPEED

R-8A-48

ROAD CONSTRUCTION AHEAD

OW-128-48
WITH TYPE A
WARNING LIGHT

WATCH FOR STOPPED TRAFFIC

OW-166-48

TYPE C FLASHING
ARROW PANEL

CONSTRUCTION ZONE
FINES DOUBLED

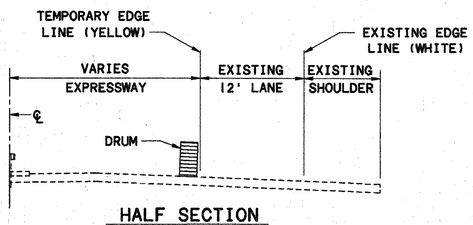
R-180-48

ROAD CLOSED

R-75-48
ON TYPE III
BARRICADE

8'-0"
4'-0"
ALL VEHICLES
9' AND WIDER
MUST EXIT

SPECIAL SIGN
(BLACK ON WHITE)



HALF SECTION

MAINTAINING TRAFFIC

	STATION			614	614	622
	FROM	TO OR AT	LENGTH	BARRIER REFLECTOR TYPE B	OBJECT MARKER	PORTABLE CONCRETE BARRIER 32"
				EACH	EACH	LIN. FT.
NB	225+60	228+00	240	10	10	240
TOTAL THIS SHEET				10	10	240

CALCULATED TJM
CHECKED DRT

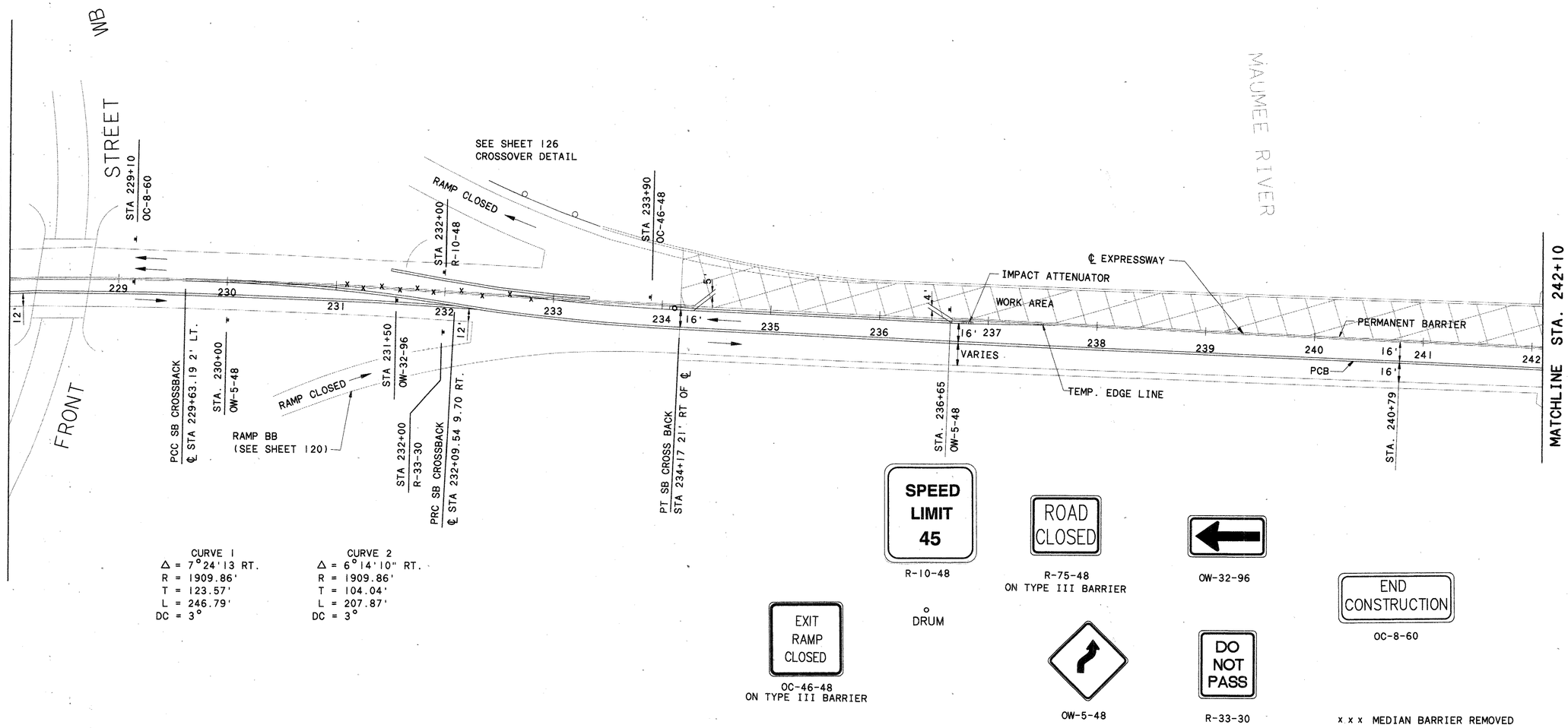
HORIZONTAL SCALE IN FEET
0 25 50 100

MAINTENANCE OF TRAFFIC - STAGE 2

LUC-280-0346

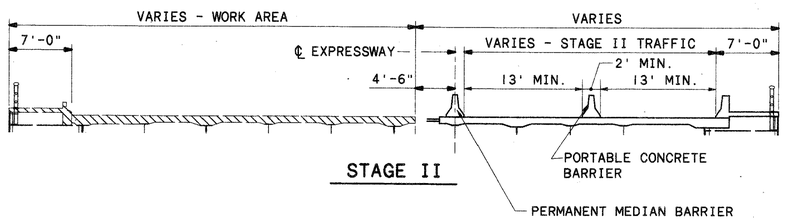
120/126

N:\PROJECTS\FTR4921\CADD\MOTST2A 4-19-96 9:39 am



CURVE 1
Δ = 7°24'13 RT.
R = 1909.86'
T = 123.57'
L = 246.79'
DC = 3°

CURVE 2
Δ = 6°14'10" RT.
R = 1909.86'
T = 104.04'
L = 207.87'
DC = 3°



STAGE II

MAINTAINING TRAFFIC

	STATION			614	614	614	614	622	622	614	622	622
	FROM	TO OR AT	LENGTH	BARRIER REFLECTOR TYPE B	OBJECT MARKER	TEMPORARY EDGE LINE CLASS I 740.05 TYPE C (YELLOW)	TEMPORAY EDGE LINE CLASS I 740.05 TYPE C (WHITE)	PORTABLE CONCRETE BARRIER 50"	PORTABLE CONCRETE, BARRIER 32" BRIDGE MOUNTED	REMOVE AND REPLACE IMPACT ATTENUATOR	PORTABLE CONCRETE BARRIER 32"	GLARE SCREEN
				EACH	EACH	MILE	MILE	LIN. FT.	LIN. FT.	EACH	LIN. FT.	LIN. FT.
NB	228+00	234+17	617	16	16	0.12					400	
SB	229+63	234+17	454	19	18	0.09	0.03	454				
NB & SB	234+17	242+10	793	42	41	0.30	0.15		1043	1		793
SB	231+50	233+33	183	2	2	0.03			183			
TOTAL THIS SHEET				79	77	0.54	0.18	454	1226	1	400	793

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED TJM
CHECKED DRT

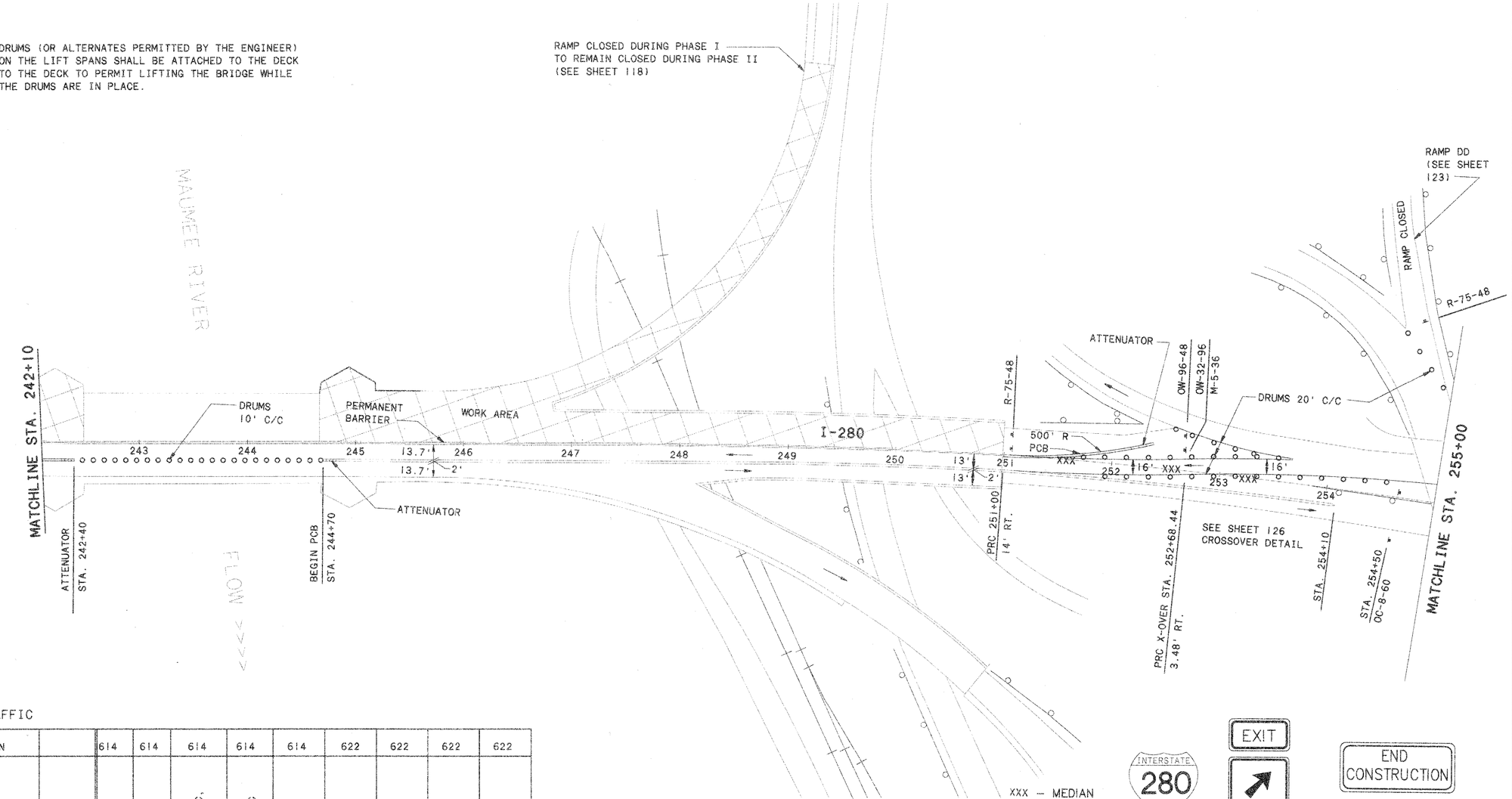
MAINTENANCE OF TRAFFIC - STAGE 2

LUC-280-0346

121/126

N:\PR1491\CADD\MOTST2B 4-19-96 9:30:57 am EST

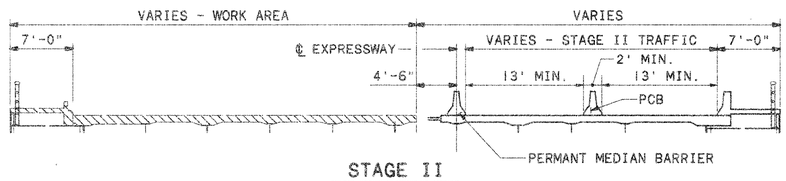
NOTE: DRUMS (OR ALTERNATES PERMITTED BY THE ENGINEER) ON THE LIFT SPANS SHALL BE ATTACHED TO THE DECK TO THE DECK TO PERMIT LIFTING THE BRIDGE WHILE THE DRUMS ARE IN PLACE.



MAINTAINING TRAFFIC

	STATION			614	614	614	614	614	622	622	622	622
	FROM	TO OR AT	LENGTH	BARRIER REFLECTOR TYPE B	OBJECT MARKER	TEMPORARY EDGE LINE CLASS I 740.05 TYPE C, TYPE C (YELLOW)	TEMPORAY EDGE LINE CLASS I 740.05 TYPE C TYPE C (WHITE)	REMOVE & REPLACE ATTENUATOR	PORTABLE CONCRETE BARRIER 50"	PORTABLE CONCRETE, BARRIER 32" BRIDGE MOUNTED	GLARE SCREEN	PORTABLE CONCRETE BARRIER 32"
				EACH	EACH	MILE	MILE	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.
NB&SB	242+10	251+00	890	25	24	0.34	0.17	2		630	630	
NB	251+00	254+10	310			0.06	0.06		310			
SB	251+00	255+00	400	5	4	0.09	0.05	1				110
TOTAL THIS SHEET				30	28	0.49	0.28	3	310	630	630	110

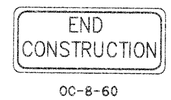
XXX – MEDIAN BARRIER REMOVED



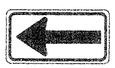
STAGE II

M-5-36

OW-96-48



OC-8-60



OW-32-96

R-75-48
ON TYPE III BARRIER

CURVE 1
Δ=5°3'17"LT.
R=1909.86
T=84.30
L=168.49
DC=3°

CURVE 2
Δ=11°59'17"RT.
R=1909.86
T=200.53
L=399.60
DC=3°

HORIZONTAL SCALE IN FEET
0 25 50 100

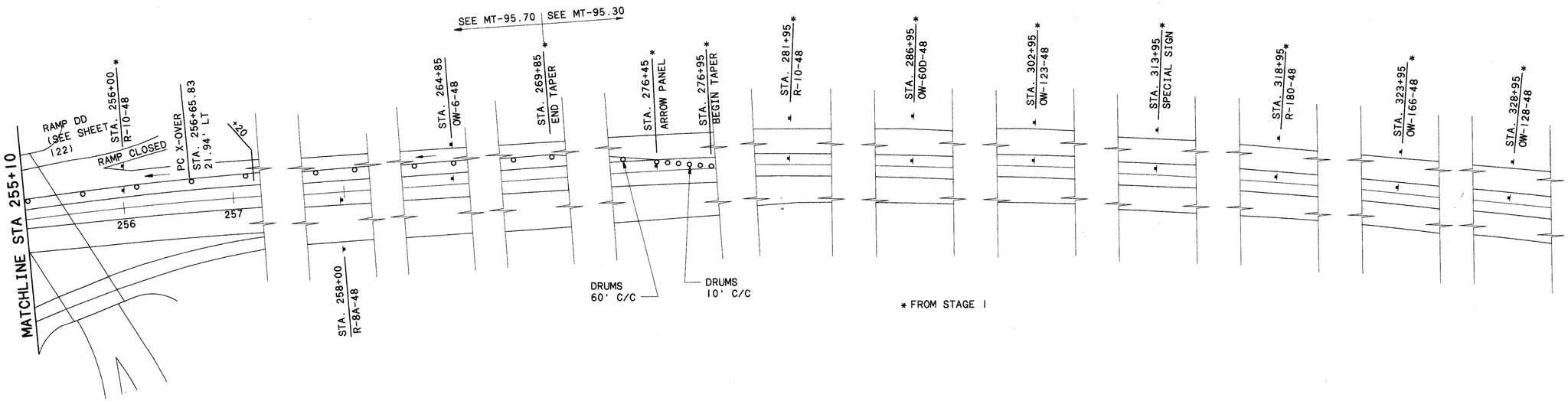
CALCULATED TJM
CHECKED DRT

MAINTENANCE OF TRAFFIC - STAGE 2

LUC-280-0346

122/126

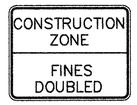
P:\PR1491\CADD\MOTS12C 4-19-96 9:45:19 am




OW-60D-48

OW-123-48

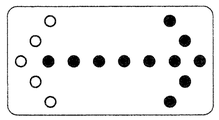
R-10-48



R-180-48

OW-128-48

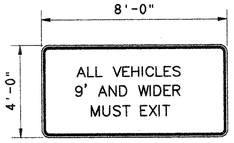
OW-166-48


TYPE C FLASHING ARROW PANEL

DRUM

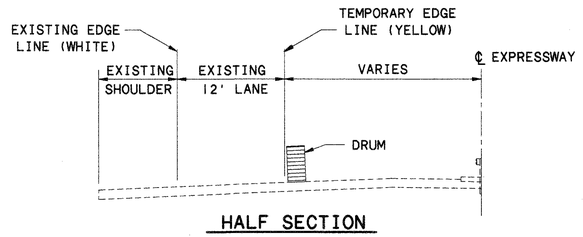
R-8A-48


OW-6-48



SPECIAL SIGN (BLACK ON WHITE)

TEMPORARY EDGE LINE (YELLOW)

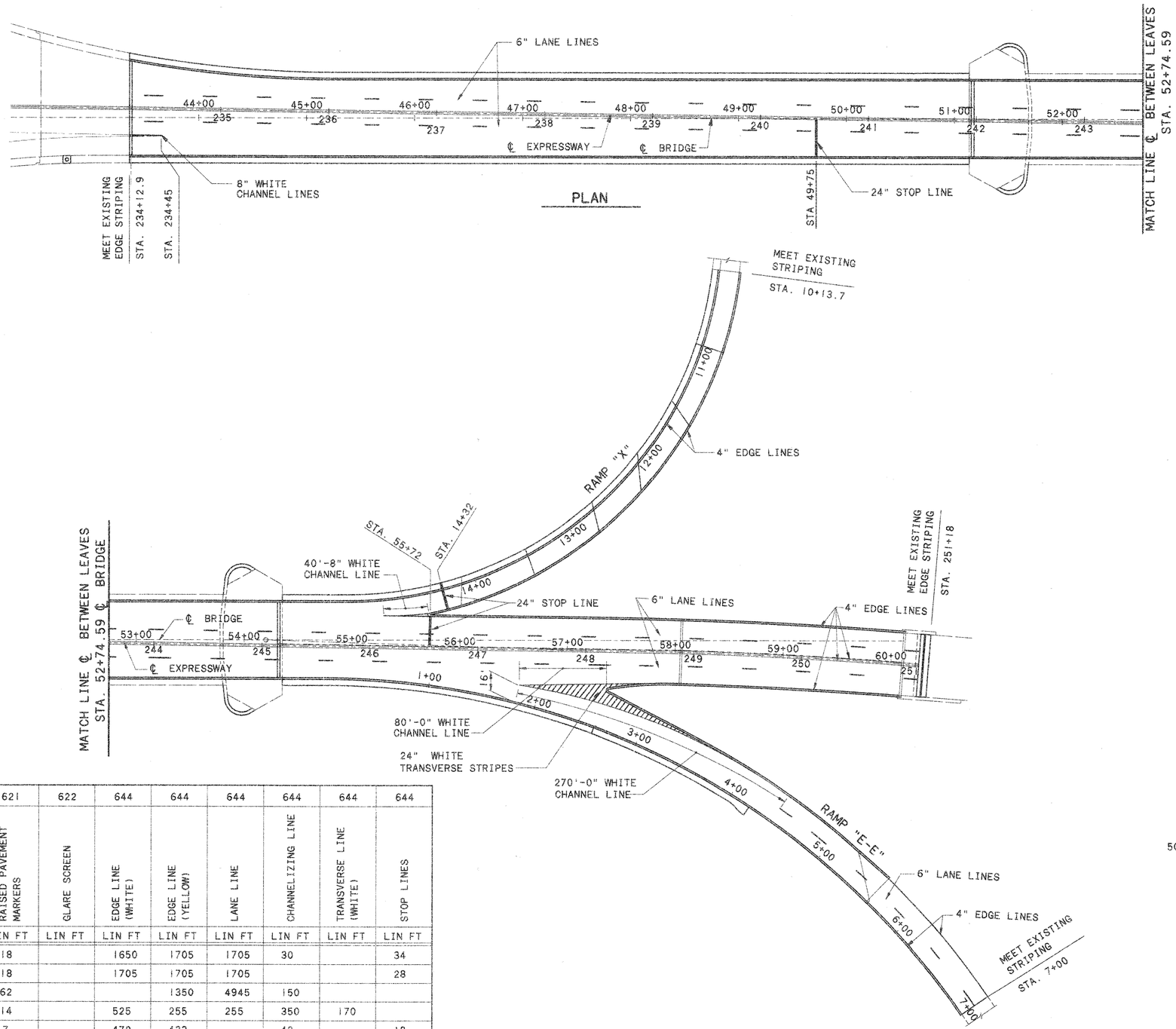


HALF SECTION

TRAFFIC - STAGE 2

MAINTENANCE OF TRAFFIC

LUC-280-0346



STATION			202	621	622	644	644	644	644	644	644
FROM	TO OR AT	LOCATION	RAISED PAVEMENT MARKER REMOVED FOR STORAGE	RAISED PAVEMENT MARKERS	GLARE SCREEN	EDGE LINE (WHITE)	EDGE LINE (YELLOW)	LANE LINE	CHANNELIZING LINE	TRANSVERSE LINE (WHITE)	STOP LINES
			LIN FT	LIN FT	LIN FT	LIN FT	LIN FT	LIN FT	LIN FT	LIN FT	LIN FT
234+13	251+18	NB ML	18	18		1650	1705	1705	30		34
234+13	251+18	SB ML	18	18		1705	1705	1705			28
204+40	276+45	ML*	62	62			1350	4945	150		
1+75	7+00	EE	14	14		525	255	255	350	170	
10+13	14+85	X	7	7		472	433		40		18
234+17	251+00	℄			1453						
TOTAL (FEET)			119	119	1453	4352	5448	8610	570	170	80
TOTAL (MILE)						0.83	1.04	1.63			

* REPLACEMENT STRIPING @ MAINTENACE OF TRAFFIC CROSSOVERS & TAPERS.
SEE MAINTENANCE OF TRAFFIC SHEETS FOR LOCATION

STATION
50+00 = ℄ BRIDGE
250 = ℄ EXPRESSWAY

0 50 100
HORIZONTAL SCALE IN FEET

CALCULATED TJM
CHECKED DRT

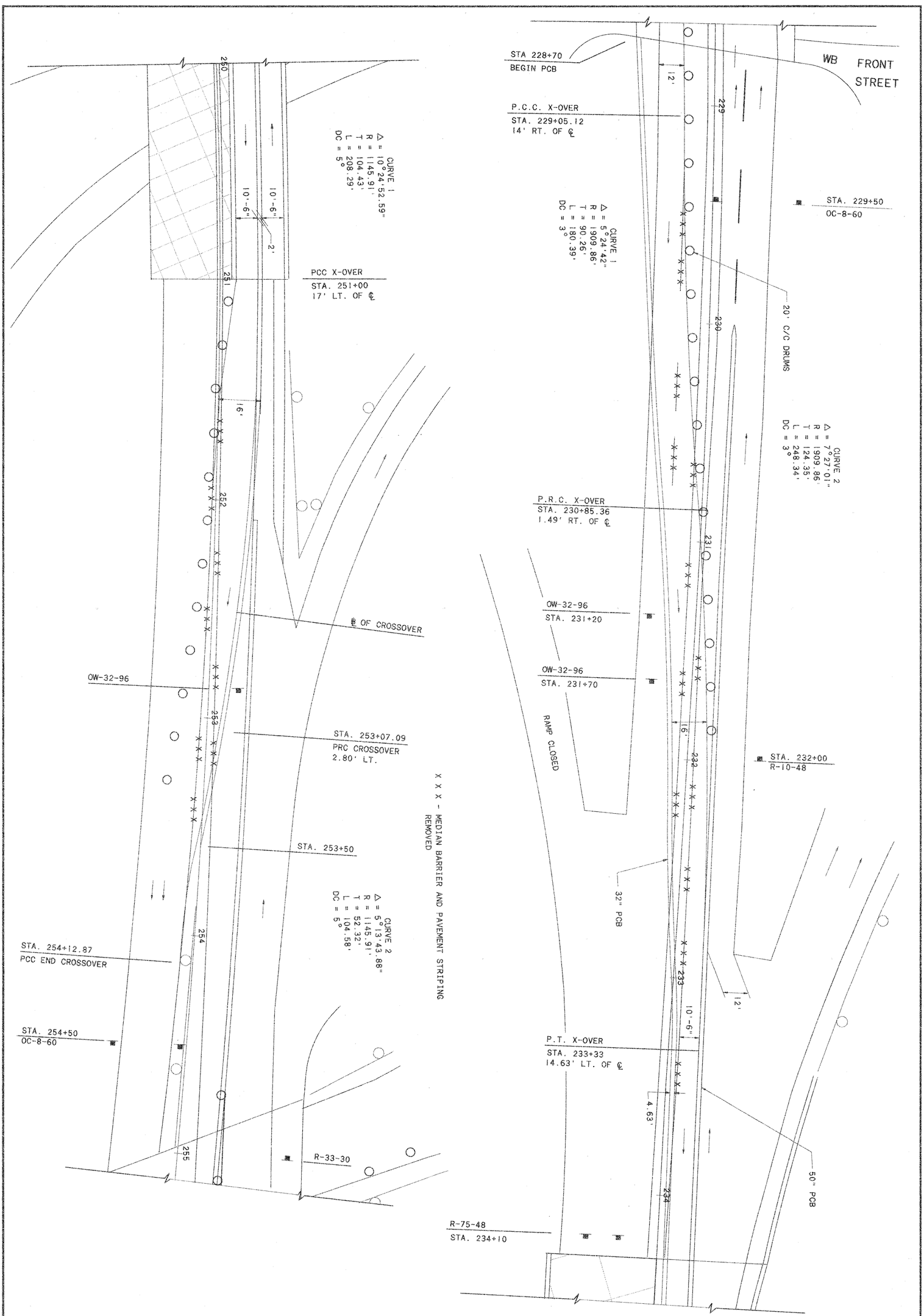
PAVEMENT MARKING PLAN

LUC-280-0346

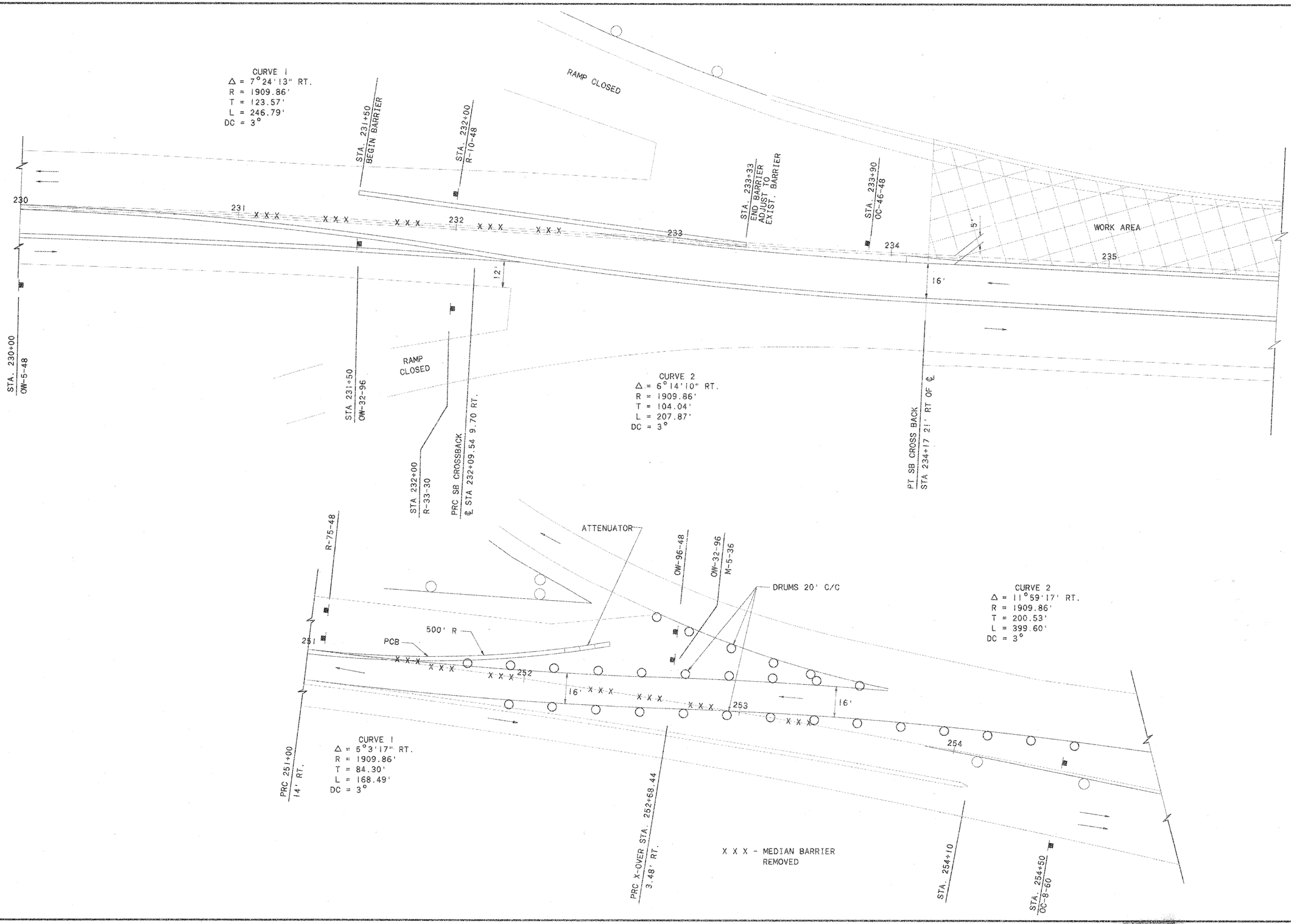
124/126

N:\PROJECTS\PR1491\2\CADD\PAVEMRK 4-18-96 2:50:00 pm

P:\PR14912\CADD\CROSS1 4-19-96 9:50am



125/126	LUC-280-0346	CROSSOVER DETAIL- STAGE 1	CALCULATED DRT CHECKED JMD	0 20 10 40 HORIZONTAL SCALE IN FEET



HORIZONTAL SCALE IN FEET

CALCULATED DRT
CHECKED JMD

CROSSOVER DETAILS - STAGE 2

LUC-280-0346

126/126

N:\PR1491\2\CADD\CROSS2 4-19-96 9:55:57 am EST