

HAM-71-0159 ESTIMATED QUANTITIES

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SUBSTR.	SUPERSTR.
512	10100	291	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	291	
513	21600	1,235	POUND	STRUCTURAL STEEL FOR REHABILITATION, AS PER PLAN		1,235
513	95000	607	FT	STRUCTURAL STEEL, MISC.: GRINDING PER FOOT		607
513	95020		LUMP	STRUCTURAL STEEL, MISC.: ULTRASONIC IMPACT TREATMENT		
513	95020		LUMP	STRUCTURAL STEEL, MISC.: PENCIL ABRASIVE BLASTING, GRINDING, AND NON-DESTRUCTIVE TESTING, AS PER PLAN		
513	95030	112	EACH	STRUCTURAL STEEL, MISC.: KNEE BRACE RETROFIT		112
513	95030	8	EACH	STRUCTURAL STEEL, MISC.: 1/2" DRAINAGE HOLES		8
513	95030	88	EACH	STRUCTURAL STEEL, MISC.: 1 1/2" STRESS RELIEF HOLE RETROFIT		88
514	27700	5,967	SQ FT	FIELD PAINTING, MISC: SURFACE PREPARATION (EEU)		5,967
514	27700	5,967	SQ FT	FIELD PAINTING, MISC: SPOT PRIME (EPOXY)		5,967
514	27700	5,967	SQ FT	FIELD PAINTING, MISC: FULL PRIME (EPOXY)		5,967
514	27700	5,967	SQ FT	FIELD PAINTING, MISC: COMPLETE COAT FINISH (URETHANE)		5,967
519	11100	453	SQ FT	PATCHING CONCRETE STRUCTURE	453	
530	00400	52	EACH	SPECIAL - STRUCTURE, MISC: REMOVAL OF DIAPHRAGM KNEE BRACE		52
530	00400	1	EACH	SPECIAL - STRUCTURE, MISC: STEEL PIER CAP SEAL		1
530	00600	8,000	SQ FT	SPECIAL - STRUCTURE, MISC.: COMPOSITE FIBER WRAP SYSTEM	8,000	

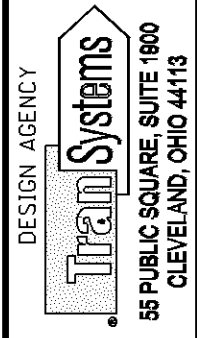
HAM-71-0160 ESTIMATED QUANTITIES

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SUBSTR.	SUPERSTR.
513	95000	358	FT	STRUCTURAL STEEL, MISC.: GRINDING PER FOOT		358
513	95020		LUMP	STRUCTURAL STEEL, MISC.: ULTRASONIC IMPACT TREATMENT		
513	95020		LUMP	STRUCTURAL STEEL, MISC.: PENCIL ABRASIVE BLASTING, GRINDING, AND NON-DESTRUCTIVE TESTING, AS PER PLAN		
513	95030	48	EACH	STRUCTURAL STEEL, MISC.: KNEE BRACE RETROFIT		48
513	95030	48	EACH	STRUCTURAL STEEL, MISC.: 1 1/2" STRESS RELIEF HOLE RETROFIT		48
514	27700	1,547	SQ FT	FIELD PAINTING, MISC: SURFACE PREPARATION (EEU)		1,547
514	27700	1,547	SQ FT	FIELD PAINTING, MISC: SPOT PRIME (EPOXY)		1,547
514	27700	1,547	SQ FT	FIELD PAINTING, MISC: FULL PRIME (EPOXY)		1,547
514	27700	1,547	SQ FT	FIELD PAINTING, MISC: COMPLETE COAT FINISH (URETHANE)		1,547

HAM-71-0197W ESTIMATED QUANTITIES

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SUBSTR.	SUPERSTR.
513	21600	60	POUND	STRUCTURAL STEEL FOR REHABILITATION, AS PER PLAN		60
513	95000	118	FT	STRUCTURAL STEEL, MISC.: GRINDING PER FOOT		118
513	95020		LUMP	STRUCTURAL STEEL, MISC.: ULTRASONIC IMPACT TREATMENT		
513	95020		LUMP	STRUCTURAL STEEL, MISC.: PENCIL ABRASIVE BLASTING, GRINDING, AND NON-DESTRUCTIVE TESTING, AS PER PLAN		
513	95030	28	EACH	STRUCTURAL STEEL, MISC.: KNEE BRACE RETROFIT		28
513	95030	24	EACH	STRUCTURAL STEEL, MISC.: 1 1/2" STRESS RELIEF HOLE RETROFIT		24
514	27700	2,177	SQ FT	FIELD PAINTING, MISC: SURFACE PREPARATION (EEU)		2,177
514	27700	2,177	SQ FT	FIELD PAINTING, MISC: SPOT PRIME (EPOXY)		2,177
514	27700	2,177	SQ FT	FIELD PAINTING, MISC: FULL PRIME (EPOXY)		2,177
514	27700	2,177	SQ FT	FIELD PAINTING, MISC: COMPLETE COAT FINISH (URETHANE)		2,177

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DESIGNED	BKC	CHECKED	NBR
DRAWN	BKC	REVISED	
REVIEWED	WRW	STRUCTURE FILE NUMBER	
DATE	12-20-07		

BRIDGE ESTIMATED QUANTITIES

HAM-BH-VAR
PID No. 25374

HAM-71-02.48L ESTIMATED QUANTITIES

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SUBSTR.	SUPERSTR.
512	10100	3,156	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	1,468	1,688
513	21600	492	POUND	STRUCTURAL STEEL FOR REHABILITATION, AS PER PLAN		492
513	95000	85	FT	STRUCTURAL STEEL, MISC.: GRINDING PER FOOT		85
513	95020		LUMP	STRUCTURAL STEEL, MISC.: ULTRASONIC IMPACT TREATMENT		
513	95020		LUMP	STRUCTURAL STEEL, MISC.: PENCIL ABRASIVE BLASTING, GRINDING, AND NON-DESTRUCTIVE TESTING, AS PER PLAN		
513	95030	2	EACH	STRUCTURAL STEEL, MISC.: 1/2" DRAINAGE HOLE		2
513	95030	24	EACH	STRUCTURAL STEEL, MISC.: 1 1/2" STRESS RELIEF HOLE RETROFIT		24
514	27700	1,967	SQ FT	FIELD PAINTING, MISC: SURFACE PREPARATION (EEU)		1,967
514	27700	1,967	SQ FT	FIELD PAINTING, MISC: SPOT PRIME (EPOXY)		1,967
514	27700	1,967	SQ FT	FIELD PAINTING, MISC: FULL PRIME (EPOXY)		1,967
514	27700	1,967	SQ FT	FIELD PAINTING, MISC: COMPLETE COAT FINISH (URETHANE)		1,967
530	00400	12	EACH	SPECIAL - STRUCTURE, MISC.: REMOVAL OF DIAPHRAGM KNEE BRACE		12
530	00400	1	EACH	SPECIAL - STRUCTURE, MISC.: STEEL PIER CAP SEAL, AS PER PLAN		1
514	00050	92,369	SQ FT	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL		92,369
514	00056	92,369	SQ FT	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT		92,369
514	00060	92,369	SQ FT	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, INTERMEDIATE COAT		92,369
514	00066	92,369	SQ FT	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, FINISH COAT		92,369
514	00504	76	MAN HOUR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL		76
514	10000	38	EACH	FINAL INSPECTION REPAIR		38

HAM-42-02.57R ESTIMATED QUANTITIES

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SUBSTR.	SUPERSTR.
512	10100	1,268	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	494	774
513	21600	24	POUND	STRUCTURAL STEEL, FOR REHABILITATION, AS PER PLAN		24
513	95000	37	FT	STRUCTURAL STEEL, MISC.: GRINDING PER FOOT		37
514	27700	110	SQ FT	FIELD PAINTING, MISC: SURFACE PREPARATION (EEU)		110
514	27700	110	SQ FT	FIELD PAINTING, MISC: SPOT PRIME (EPOXY)		110
514	27700	110	SQ FT	FIELD PAINTING, MISC: FULL PRIME (EPOXY)		110
514	27700	110	SQ FT	FIELD PAINTING, MISC: COMPLETE COAT FINISH (URETHANE)		110
514	00050	27,700	SQ FT	SURFACE PREPERATION OF EXISTING STRUCTURAL STEEL		27,700
514	00056	27,700	SQ FT	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT		27,700
514	00060	27,700	SQ FT	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, INTERMEDIATE COAT		27,700
514	00066	27,700	SQ FT	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, FINISH COAT		27,700
514	00504	23	MAN HOUR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL		23
514	10000	12	EACH	FINAL INSPECTION REPAIR		12

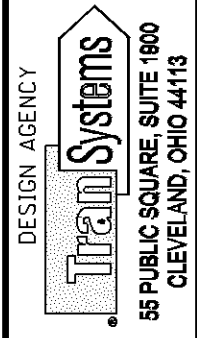
HAM-71-04.50 ESTIMATED QUANTITIES

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SUBSTR.	SUPERSTR.
512	10100	1,229	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	556	673
513	95000	2,070	FT	STRUCTURAL STEEL, MISC.: WELDING STRUCTURAL STEEL		2,070
513	95020		LUMP	STRUCTURAL STEEL, MISC.: PENCIL ABRASIVE BLASTING, GRINDING, AND NON-DESTRUCTIVE TESTING, AS PER PLAN		
513	95030	316	EACH	STRUCTURAL STEEL, MISC.: 2" STRESS RELIEF HOLE RETROFIT		316
514	00050	72,543	SQ FT	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL		72,543
514	00056	72,543	SQ FT	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT		72,543
514	00060	72,543	SQ FT	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, INTERMEDIATE COAT		72,543
514	00066	72,543	SQ FT	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, FINISH COAT		72,543
514	00504	63	MAN HOUR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL		63
514	10000	32	EACH	FINAL INSPECTION REPAIR		32

HAM-71-01.97N ESTIMATED QUANTITIES

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SUBSTR.	SUPERSTR.
516	46700	7	EACH	RESET BEARING		7
516	47001		LUMP	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN		

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REVISED BY
REVIEWED BY WRW
DATE 12-20-07
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BRIDGE ESTIMATED QUANTITIES

HAM-BH-VAR
PID No. 25374

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HAM-22-0145 ESTIMATED QUANTITIES

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SUBSTR.	SUPERSTR.
512	10100	2,492	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	1,647	845
514	00050	66,448	SQ FT	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL		66,448
514	00056	66,448	SQ FT	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT		66,448
514	00060	66,448	SQ FT	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, INTERMEDIATE COAT		66,448
514	00066	66,448	SQ FT	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, FINISH COAT		66,448
514	00504	48	MAN HOUR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL		48
514	10000	24	EACH	FINAL INSPECTION REPAIR		24

HAM-42-0232 ESTIMATED QUANTITIES

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SUBSTR.	SUPERSTR.
512	10100	1,667	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	600	1,067
514	00050	42,570	SQ FT	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL		42,570
514	00056	42,570	SQ FT	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT		42,570
514	00060	42,570	SQ FT	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, INTERMEDIATE COAT		42,570
514	00066	42,570	SQ FT	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, FINISH COAT		42,570
514	00504	30	MAN HOUR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL		30
514	10000	15	EACH	FINAL INSPECTION REPAIR		15

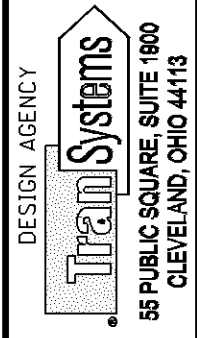
HAM-71-0233 ESTIMATED QUANTITIES

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SUBSTR.	SUPERSTR.
512	10100	1,497	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	651	846
514	00050	34,305	SQ FT	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL		34,305
514	00056	34,305	SQ FT	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT		34,305
514	00060	34,305	SQ FT	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, INTERMEDIATE COAT		34,305
514	00066	34,305	SQ FT	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, FINISH COAT		34,305
514	00504	24	MAN HOUR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL		24
514	10000	13	EACH	FINAL INSPECTION REPAIR		13

HAM-42-0264R ESTIMATED QUANTITIES

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SUBSTR.	SUPERSTR.
512	10100	2,212	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	1,022	1,190
513	21600	42	POUND	STRUCTURAL STEEL FOR REHABILITATION, AS PER PLAN		42
513	95000	75	FT	STRUCTURAL STEEL, MISC.: GRINDING PER FOOT		75
513	95020		LUMP	STRUCTURAL STEEL, MISC.: ULTRASONIC IMPACT TREATMENT		
513	95020		LUMP	STRUCTURAL STEEL, MISC.: PENCIL ABRASIVE BLASTING, GRINDING, AND NON-DESTRUCTIVE TESTING, AS PER PLAN		
513	95030	28	EACH	STRUCTURAL STEEL, MISC.: KNEE BRACE RETROFIT		28
513	95030	64	EACH	STRUCTURAL STEEL, MISC.: 1 1/2" STRESS RELIEF HOLE RETROFIT		64
514	27700	869	SQ FT	FIELD PAINTING, MISC: SURFACE PREPARATION (EEU)		869
514	27700	869	SQ FT	FIELD PAINTING, MISC: SPOT PRIME (EPOXY)		869
514	27700	869	SQ FT	FIELD PAINTING, MISC: FULL PRIME (EPOXY)		869
514	27700	869	SQ FT	FIELD PAINTING, MISC: COMPLETE COAT FINISH (URETHANE)		869
514	00050	73,699	SQ FT	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL		73,699
514	00056	73,699	SQ FT	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT		73,699
514	00060	73,699	SQ FT	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, INTERMEDIATE COAT		73,699
514	00066	73,699	SQ FT	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, FINISH COAT		73,699
514	00504	55	MAN HOUR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL		55
514	10000	27	EACH	FINAL INSPECTION REPAIR		27

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DESIGN AGENCY
DATE 12-20-07
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BRIDGE ESTIMATED QUANTITIES

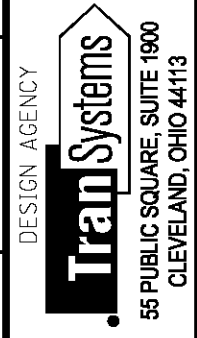
HAM-BH-VAR
PID No. 25374

SUPERSTRUCTURE BRIDGE PAINTING DATA (OZEU)

BRIDGE NO.	HAM-71-0248L	HAM-42-0257R	HAM-42-0264R	HAM-71-0233	HAM-71-0450	HAM-22-0145	HAM-42-0232
LOCATION	SB I.R. 71 OVER US 42 (READING ROAD) AND EDEN PARK DRIVE	I.R. 71 ENTRANCE RAMP OVER US 42 (READING ROAD)	SB I.R. 71 EXIT RAMP OVER NB US 42, SB I.R. 71 ENTRANCE RAMP AND EDEN PARK DRIVE	NB I.R. 71 ENTRANCE RAMP OVER I.R. 71 AND SB I.R. 71 EXIT RAMP	I.R. 71 OVER VICTORY PARKWAY	US 22 (GILBERT AVE.) OVER I.R. 71	NB US 42 (READING ROAD) OVER SB I.R. 71 AND SB I.R. 71 EXIT RAMP
STRUCTURE FILE NO.	3106780	3101215	3101223	3106756	3114562	3100812	3101207
MINIMUM VERTICAL CLEARANCE	38'± US 42 31'± EDEN PARK DRIVE	15'-0"	25'-4" SB I.R. 71 ENTRANCE RAMP 33'± READING ROAD 31'± EDEN PARK DRIVE	20'-0" SB EXIT RAMP 19'-3" SB I.R. 71 15'-2" NB I.R. 71	15'-1" SB VICTORY PARKWAY 15'-9" NB VICTORY PARKWAY	15'-3" SB I.R. 71 16'-3" NB I.R. 71	17'-0" SB I.R. 71 EXIT RAMP 15'-2" SB I.R. 71
BRIDGE LENGTH	755.00'	345.06'	530.38'	365.25'	220.92'	285.10'	442.55'
NUMBER OF SPANS	7	3	6	3	2	2	4
LONGEST SPAN	145'-0"±	127'-0"	105'-6"	142'-0"±	111'-3"	151'-8"	142'-7½"
GIRDER SIZES	WEB 66"x ⁷ / ₁₆ " FLANGE WIDTH = 14" FLANGE THICKNESS = ³ / ₄ " TO 2 ³ / ₈ "	WEB 60"x ³ / ₈ " FLANGE WIDTH = 16" FLANGE THICKNESS = 1" TO 2 ¹ / ₈ "	WEBS 62"x ³ / ₈ " FLANGE WIDTH = 14" FLANGE THICKNESS = ³ / ₄ " TO 1 ¹ / ₈ "	WEB 66"x ⁷ / ₁₆ " FLANGE WIDTH = 20" FLANGE THICKNESS = ¹ / ₈ " TO 3 ¹ / ₄ "	WEB 60"x ³ / ₈ " FLANGE WIDTH = 16" FLANGE THICKNESS = 1 ³ / ₈ " TO 2 ¹ / ₂ "	WEB 78"x ¹ / ₂ " FLANGE WIDTH = 18" FLANGE THICKNESS = 1 ¹ / ₈ " TO 3"	WEB 66" X ⁷ / ₁₆ " FLANGE WIDTH = 20" FLANGE THICKNESS = ⁷ / ₈ " TO 2 ⁷ / ₈ "
NUMBER OF STEEL PIER CAPS	3	1	3	0	0	0	0
ROADWAY WIDTH ON BRIDGE	50'-0"	26'-0"	VARIES 56'-1"± TO 36'-2 ³ / ₄ "±	29'-0"	SB VARIES 69'-1½" TO 76'-8" NB 68'-0"	33'-0" NORTHBOUND 33'-0" SOUTHBOUND	VARIES 25'-0" TO 29'-0"
NUMBER OF LANES UNDER BRIDGE	2 LANES ON US42 4 LANES ON EDEN PARK DRIVE	3 LANES	1 LANE S.B. ENT. RAMP 3 LANES READING ROAD 4 LANES EDEN PARK ENT. RD	1 LANE N.B. ENT. RAMP 4 LANES I.R. 71 S.B. 5 LANES I.R. 71 N.B.	3 LANES NORTHBOUND 3 LANES SOUTHBOUND	3 LANES SB I.R. 71 4 LANES NB I.R. 71	1 LANE SB I.R. 71 EXIT RAMP 4 LANES SB I.R. 71
UTILITIES CARRIED BY STRUCTURE	-	-	-	-	-	2 ELECTRIC CONDUIT 1 TELEPHONE CONDUIT	-
NUMBER OF GIRDERS	6	4	VARIES 5 TO 7	4	17	10	4
% MISCELLANEOUS STEEL	15%	15%	15%	15%	15%	15%	15%
TOTAL EXTERIOR STEEL SURFACE AREA	92,369 FT²	27,700 FT²	73,699 FT²	34,305 FT²	72,543 FT²	66,448 FT²	42, 570 FT²

NOTES:

- THIS SHEET IS FOR CONTRACTOR'S INFORMATION ONLY.
- THE PERCENT MISCELLANEOUS STEEL FOR EACH BRIDGE REPRESENTS CROSS FRAMES, END DAMS, BEARINGS, SCUPPERS AND OTHER MISCELLANEOUS STEEL. THE AMOUNT IS APPROXIMATE.
- FOR BRIDGES HAM-71-0248L, HAM-42-0257R, AND HAM-42-0257R, THE VALUE IN THE TABLE INCLUDES PAINTING EXTERIOR OF STEEL PIER CAPS.



DATE
03-01-07

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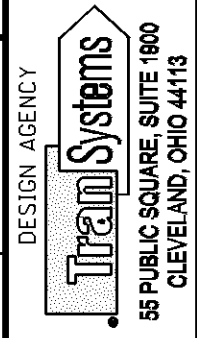
BRIDGE PAINTING DATA

HAM-BH-VAR
PID No. 25374

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PIERCAP INTERIORS AND RETROFITS PAINTING DATA (EEU)

BRIDGE NO.	HAM-71-0159 (SEE NOTE 5)	BRIDGE NO.	HAM-71-0160 (SEE NOTE 5)	HAM-71-0197W (SEE NOTE 5)	HAM-71-0248L (SEE NOTE 4)	HAM-42-0257R (SEE NOTE 4)	HAM-42-0264R (SEE NOTE 4)
LOCATION	SB I.R. 71 OVER CULVERT STREET, SENTINEL STREET, AND EGGLESTON AVENUE	LOCATION	6TH STREET OVER SENTINEL STREET, I.R. 71, EGGLESTON AVENUE, AND I-471	SB I.R. 471 RAMP OVER GILBERT AVENUE RAMP TO NB I.R. 71	SB I.R. 71 OVER US 42 (READING ROAD) AND EDEN PARK DRIVE	I.R. 71 ENTRANCE RAMP OVER US 42 (READING ROAD)	SB I.R. 71 EXIT RAMP OVER NB US 42, SB I.R. 71 ENTRANCE RAMP AND EDEN PARK DRIVE
STRUCTURE FILE NO.	3106608	STRUCTURE FILE NO.	3106616	3106659	3106780	3101215	3101223
NUMBER OF STEEL PIER CAPS	8	NUMBER OF STEEL PIER CAPS	2	1	3	1	3
PIER 1W	PIER CAP LENGTH 60'-4 ⁷ / ₈ " PIER CAP WEB HEIGHT 92" PIER CAP WIDTH 2'-2"	PIER 1	PIER CAP LENGTH 49'-0" PIER CAP WEB HEIGHT 78" PIER CAP WIDTH 2'-6"	PIER CAP LENGTH 60'-0" PIER CAP WEB HEIGHT 78" PIER CAP WIDTH 2'-6"	PIER CAP LENGTH 49'-6" PIER CAP WEB HEIGHT 65 ¹ / ₄ " PIER CAP WIDTH 2'-2"	PIER CAP LENGTH 66'-9" PIER CAP WEB HEIGHT 58" PIER CAP WIDTH 4'-0"	
PIER 2E	PIER CAP LENGTH 53'-9 ¹ / ₈ " PIER CAP WEB HEIGHT 65" PIER CAP WIDTH 2'-2"	PIER 2	PIER CAP LENGTH 55'-9" PIER CAP WEB HEIGHT 78" PIER CAP WIDTH 2'-6"		PIER CAP LENGTH 49'-6" PIER CAP WEB HEIGHT 61 ¹ / ₂ " PIER CAP WIDTH 2'-2"		PIER CAP LENGTH 59'-8" PIER CAP WEB HEIGHT 72" PIER CAP WIDTH 2'-4"
PIER 2W	PIER CAP LENGTH 55'-3 ¹ / ₄ " PIER CAP WEB HEIGHT 82" PIER CAP WIDTH 2'-2"	PIER 3			PIER CAP LENGTH 60'-1 ¹ / ₈ " PIER CAP WEB HEIGHT 84 ¹ / ₂ " PIER CAP WIDTH 2'-4"		PIER CAP LENGTH 64'-1" PIER CAP WEB HEIGHT 72" PIER CAP WIDTH 2'-4"
PIER 3W	PIER CAP LENGTH 56'-1 ¹ / ₄ " PIER CAP WEB HEIGHT 64" PIER CAP WIDTH 2'-2"	PIER 4					PIER CAP LENGTH 56'-5" PIER CAP WEB HEIGHT 72" PIER CAP WIDTH 3'-0"
PIER 4W	PIER CAP LENGTH 61'-10 ⁵ / ₈ " PIER CAP WEB HEIGHT 66" PIER CAP WIDTH 2'-2"						
PIER 7E	PIER CAP LENGTH 72'-0" PIER CAP WEB HEIGHT 92" PIER CAP WIDTH 3'-6"						
PIER 8W	PIER CAP LENGTH 66'-1" PIER CAP WEB HEIGHT 92" PIER CAP WIDTH 3'-0"						
PIER 9W	PIER CAP LENGTH 52'-1 ⁷ / ₈ " PIER CAP WEB HEIGHT 66" PIER CAP WIDTH 2'-2"						
TOTAL RETROFIT STEEL SURFACE AREA	5967 FT ²	TOTAL RETROFIT STEEL SURFACE AREA	1547 FT ²	2177 FT ²	1967 FT ²	110 FT ²	869 FT ²



DESIGN AGENCY
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CHECKED NBR
REVISIONS

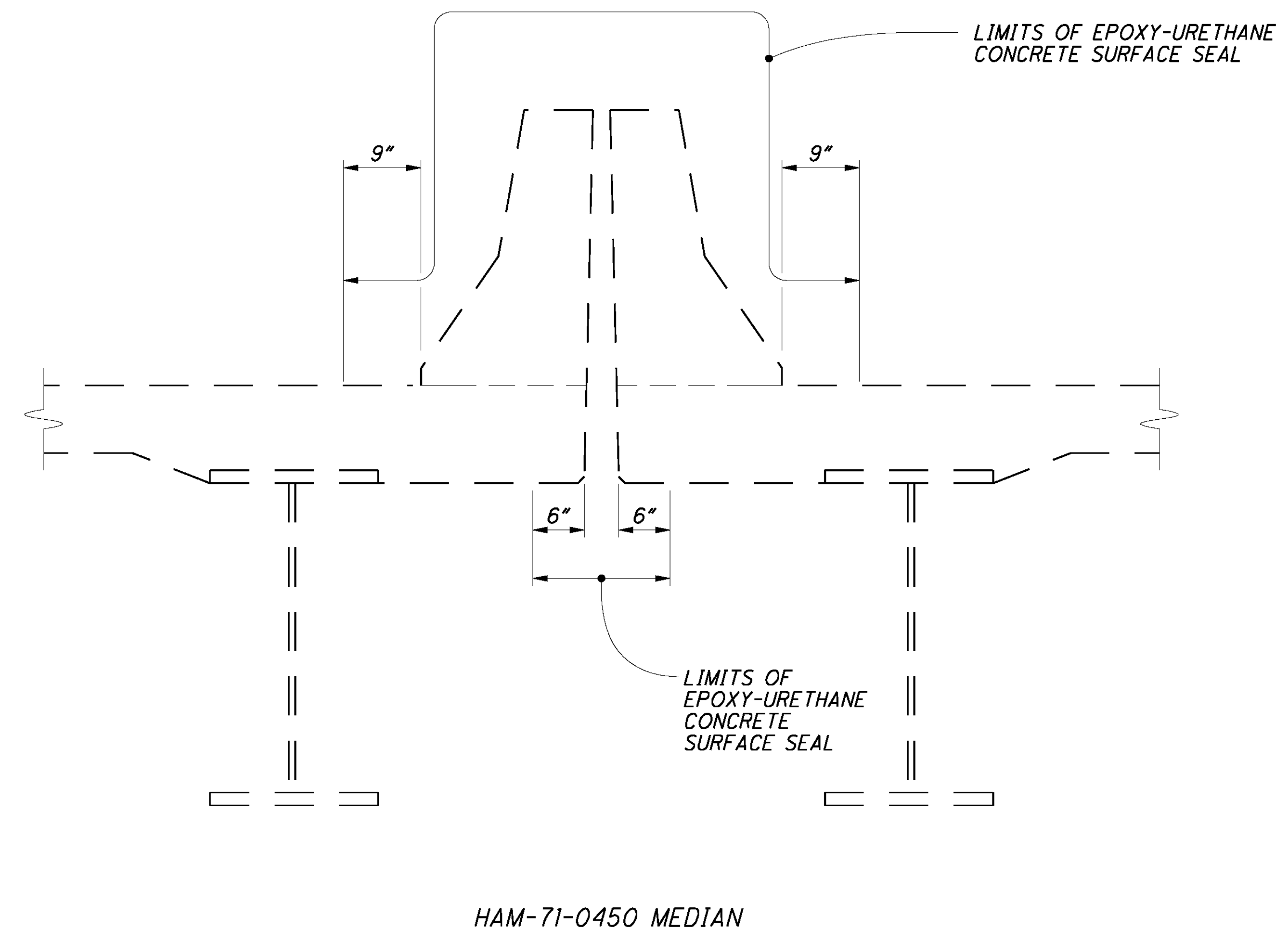
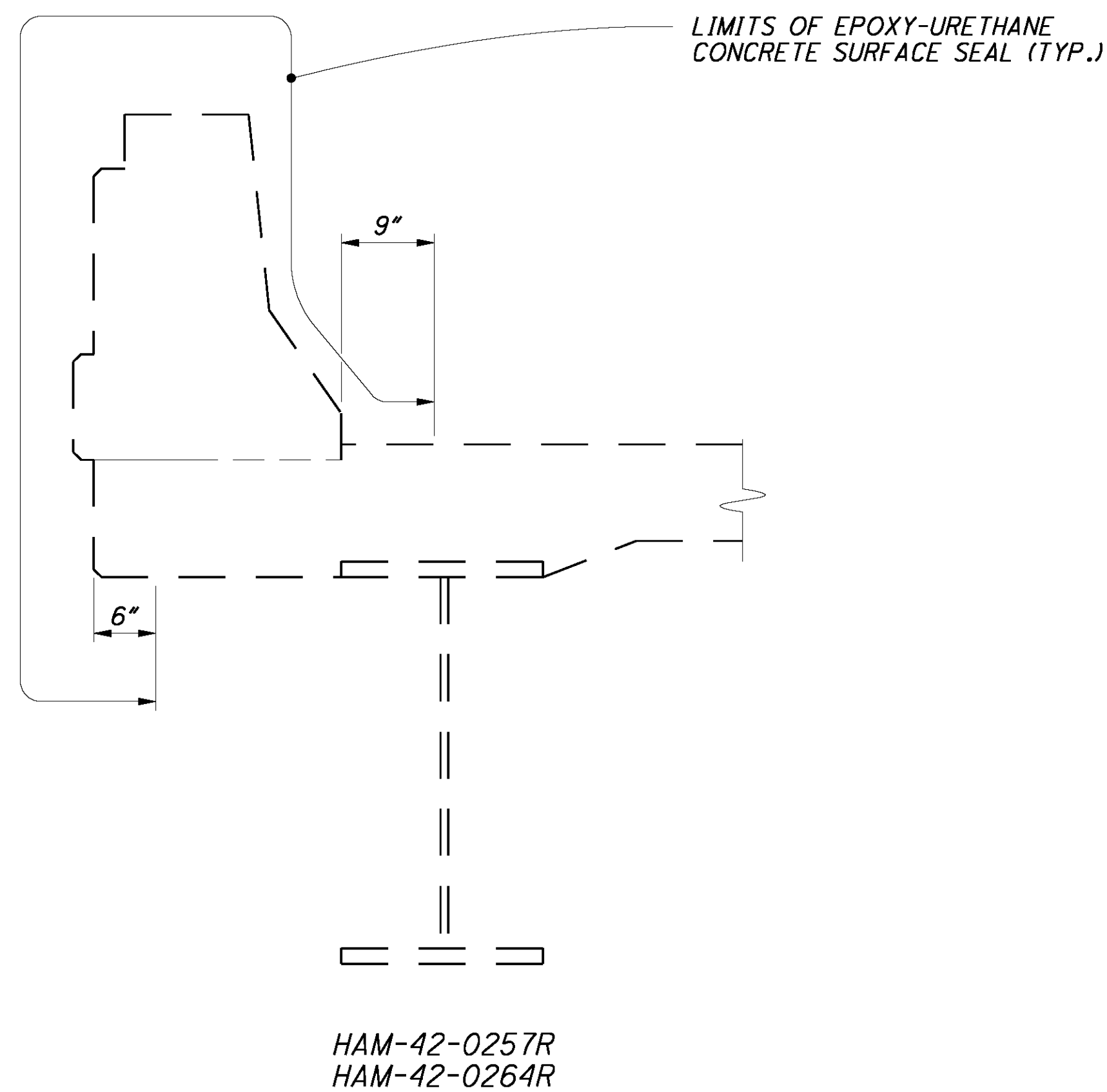
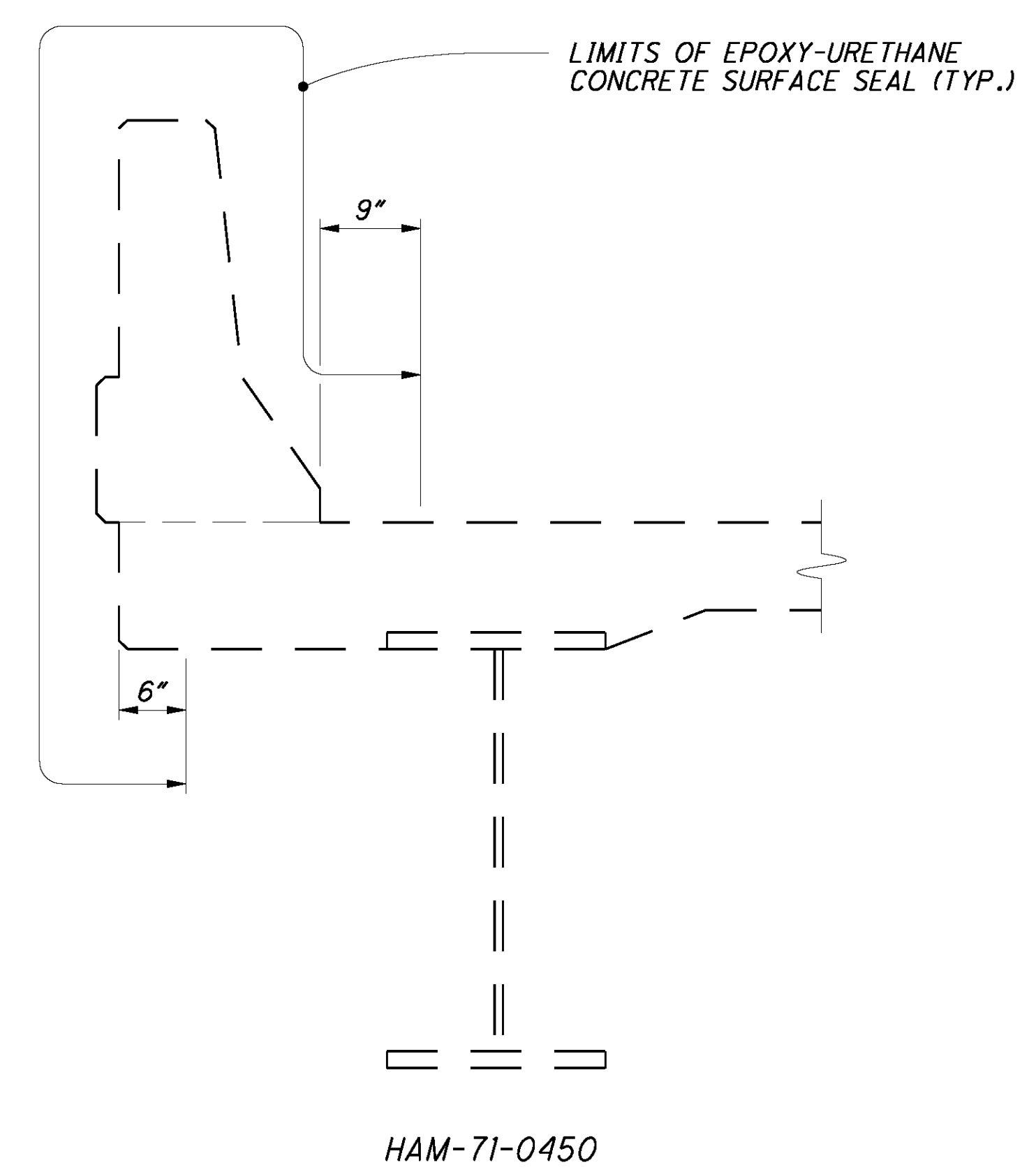
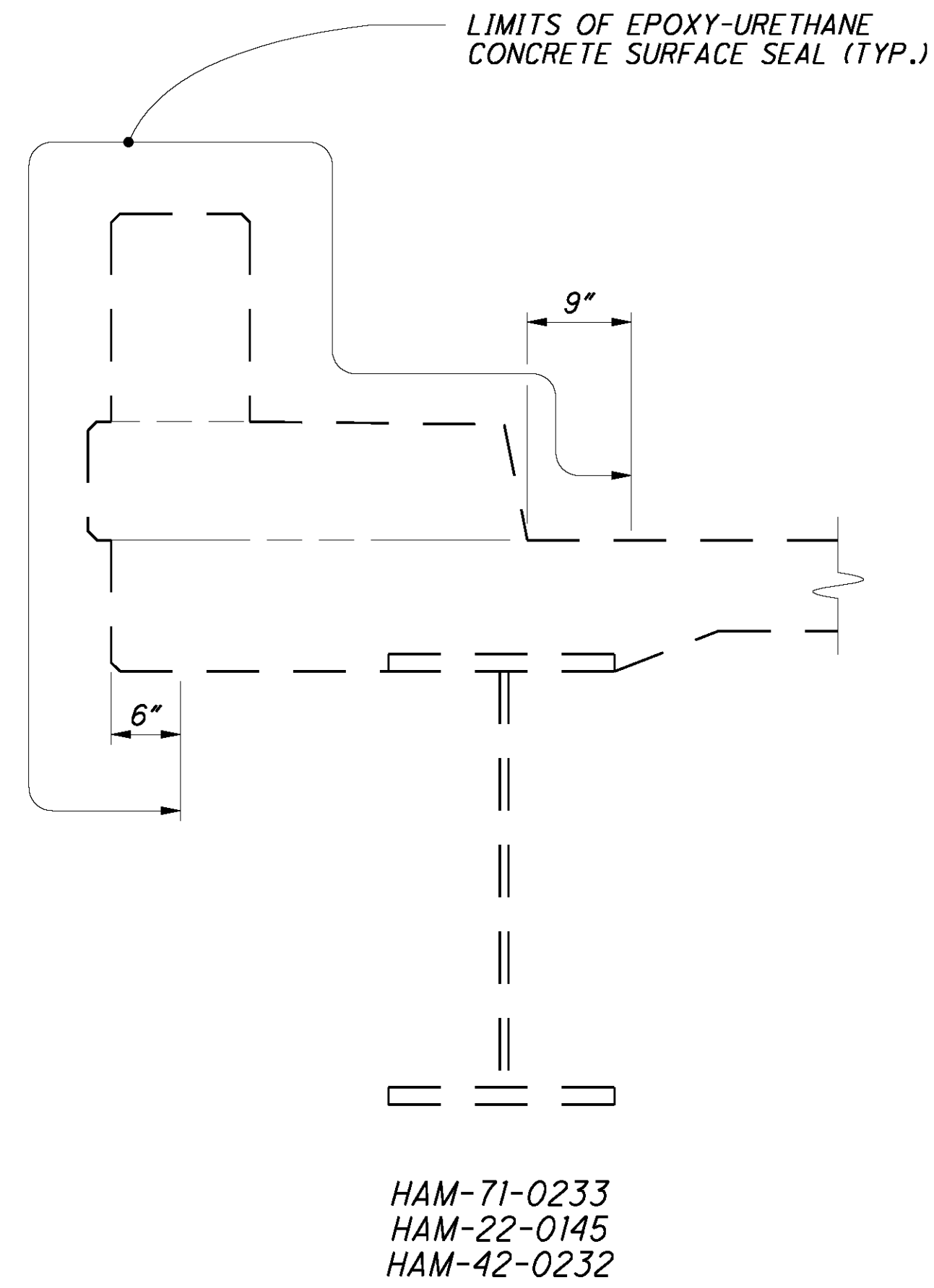
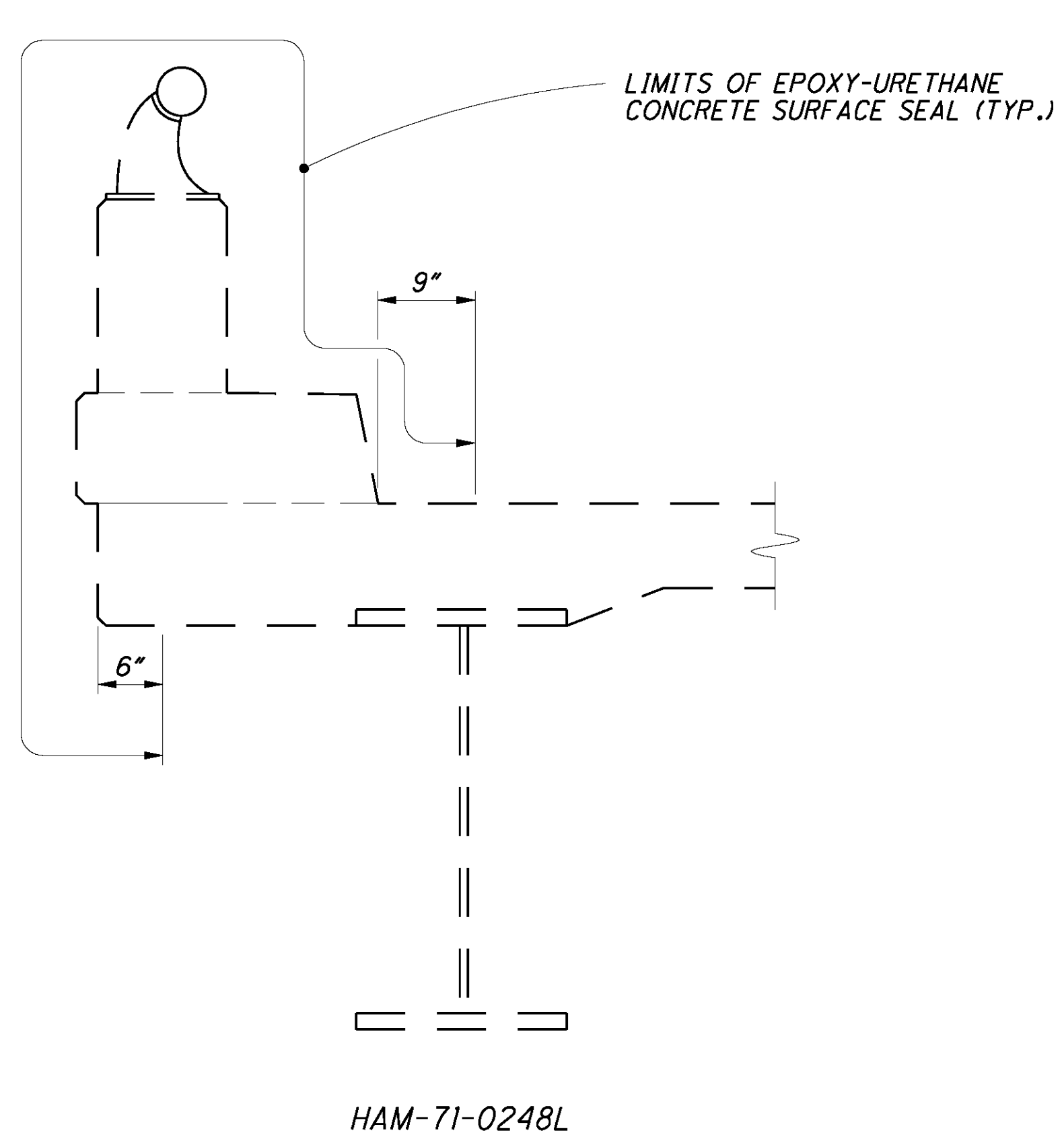
PIER CAP PAINTING DATA

HAM-BH-VAR
PID No. 25374

- NOTES:**
- THIS SHEET IS FOR CONTRACTOR'S INFORMATION ONLY.
 - INTERIOR OF PIER CAPS SHALL BE PAINTED EEU AS PER PLAN.
 - PIER CAP INTERIORS ARE TO BE PAINTED AS NOTED PER ITEM 514 - FIELD PAINTING (EEU). THESE ARE CONSIDERED CONFINED SPACES AND MAY REQUIRE EXTRA PRECAUTIONS TO ACCOMPLISH THE CONTRACT WORK. THIS MAY INCLUDE SPECIAL METHODS OF VENTILATION, PAINT REMOVAL, PAINT APPLICATION AND/OR OTHER PRECAUTIONS DEEMED NECESSARY BY THE CONTRACTOR. ANY SPECIAL EQUIPMENT OR PROCEDURES NECESSARY TO COMPLETE THIS WORK SHALL BE AT NO ADDITIONAL COST TO THE STATE AND SHALL BE INCLUDED IN THE APPROPRIATE BID ITEMS.
 - FOR BRIDGES HAM-71-0248L, HAM-42-0257R, AND HAM-42-0264R, THE VALUE IN THE TABLE DOES NOT INCLUDE PAINTING EXTERIOR OF STEEL PIER CAPS. EXTERIOR OF THE PIER CAP SHALL BE PAINTED PER ITEM 514 - FIELD PAINTING OF EXISTING STRUCTURAL STEEL. FOR EXTERIOR SUPERSTRUCTURE PAINT TOTAL SEE SHEET 12 OF 38.
 - FOR BRIDGES HAM-71-0159, HAM-71-0160, AND HAM-71-0197W, THE VALUE IN THE TABLE INCLUDES SPOT PAINTING RETROFITS ON THE EXTERIOR OF THE PIER CAP.
 - SEE RETROFIT PLAN SHEETS AND ORIGINAL PLANS FOR PIERCAP PAINTING AND RETROFIT DETAILS.

I:\projects\08\Wide\PID25374\Consult\DGN files\25374E0005.dgn 01-DEC-2008 2:03PM plockhar

4/17/2008
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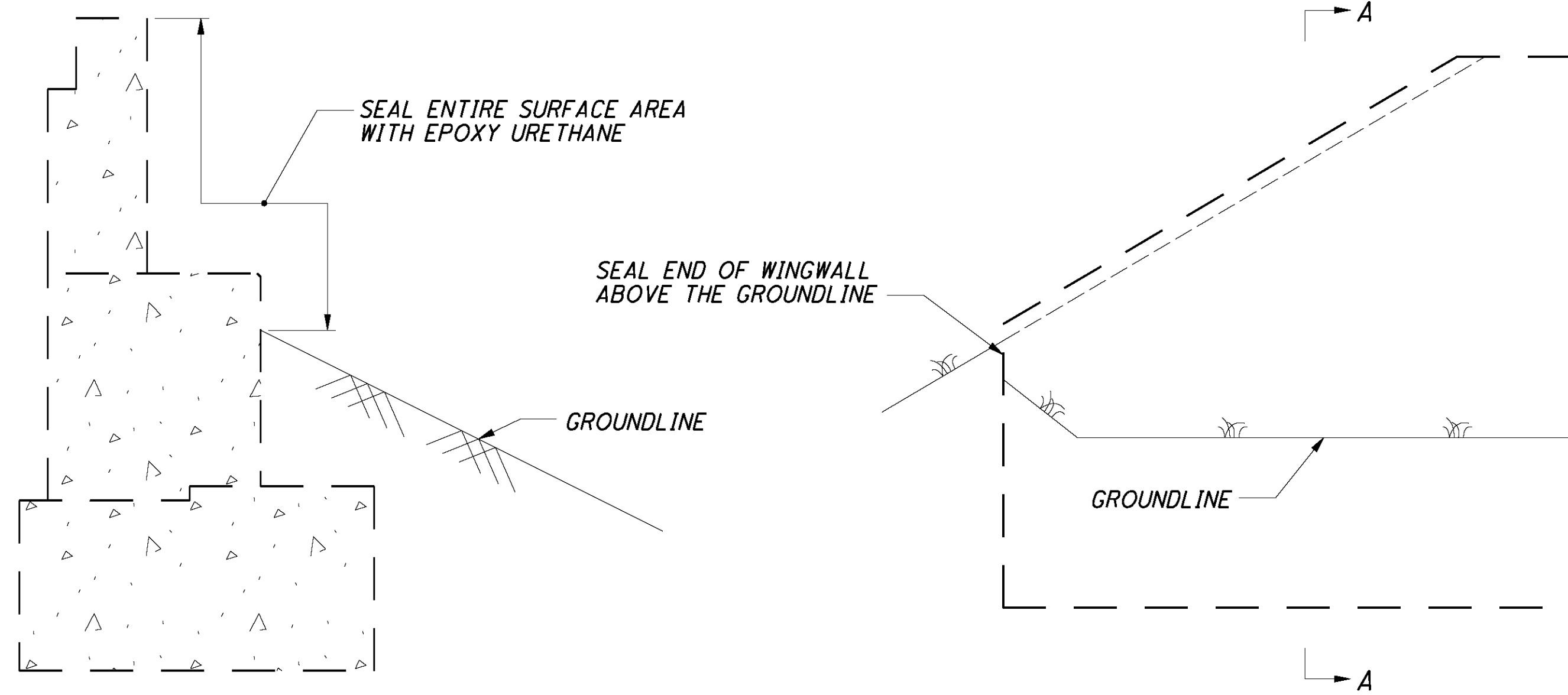


LIMITS OF SUPERSTRUCTURE CONCRETE SEALING

NOTES:

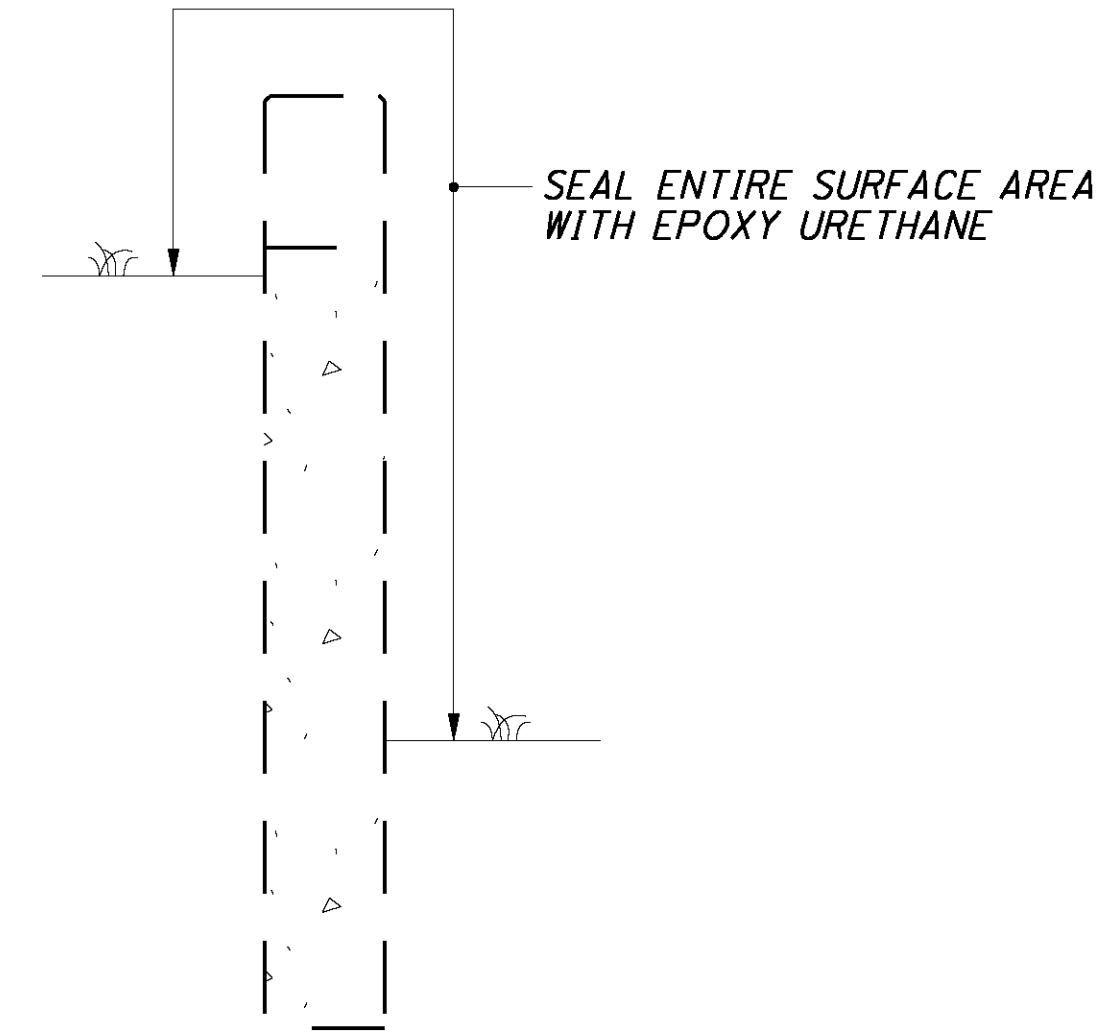
1. SEE THE ORIGINAL PLANS FOR DIMENSIONS AND DETAILS OF THE STRUCTURES LISTED ON THIS PLAN SHEET.

4/17/2008
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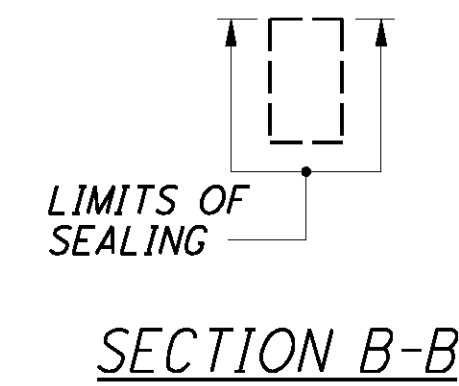


TYPICAL ABUTMENT SEALING LIMITS

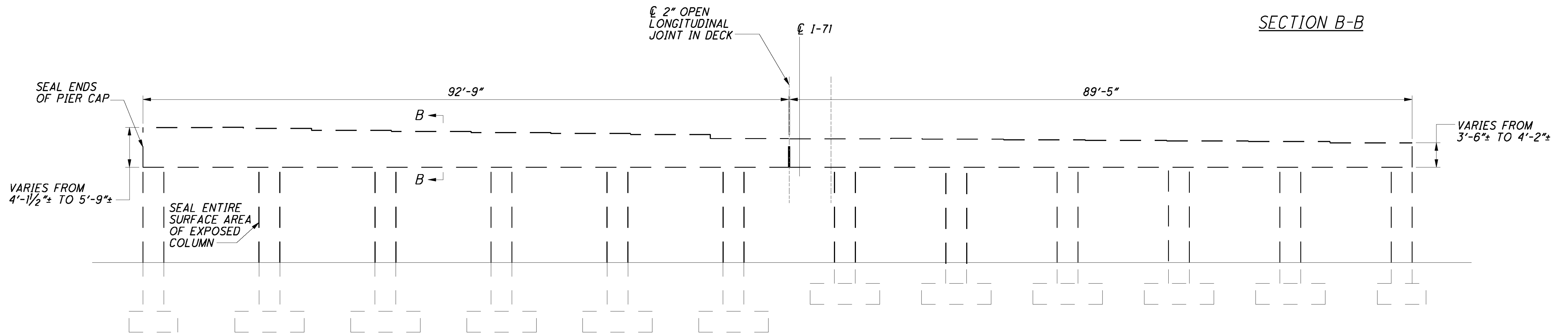
TYPICAL WINGWALL SEALING LIMITS



SECTION A-A



SECTION B-B



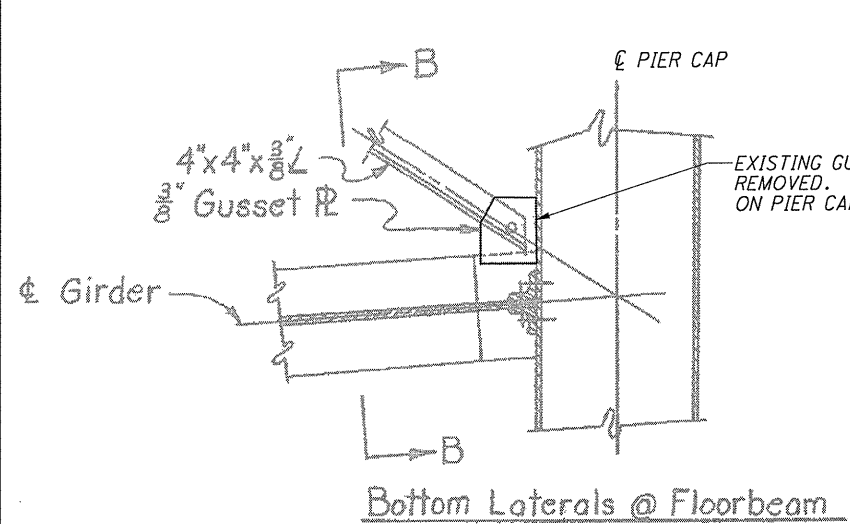
TYPICAL PIER SEALING DETAILS
 (HAM-71-0450 PIER 1 SHOWN)

SUBSTRUCTURE SEALING TABLE	
HAM-71-0248L	ENTIRE SUBSTRUCTURE
HAM-42-0257R	ENTIRE SUBSTRUCTURE
HAM-0264R	ENTIRE SUBSTRUCTURE
HAM-42-0233R	ENTIRE SUBSTRUCTURE
HAM-71-0450	PIER 1 ONLY
HAM-022-0145	ENTIRE SUBSTRUCTURE
HAM-42-0232	ENTIRE SUBSTRUCTURE

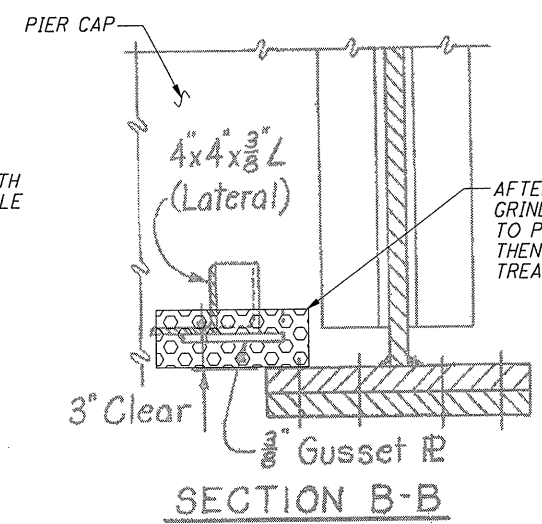
NOTES:

1. SEE THE ORIGINAL PLANS FOR DIMENSIONS AND DETAILS OF THE STRUCTURES TO BE SEALED.

4/17/2008 e:\ce_projects\2426.03-odot_8_pier_cop\2007_pid25374_drawings\(#2) HAM-71-0159\HAM-71-0159 LAT BRACE.dgn



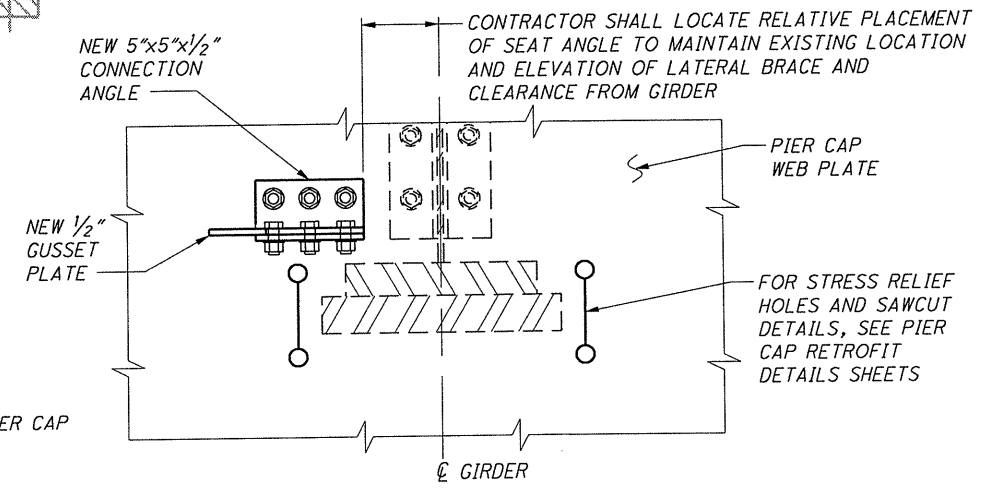
EXISTING BOTTOM LATERALS AT PIER CAP



SECTION B-B

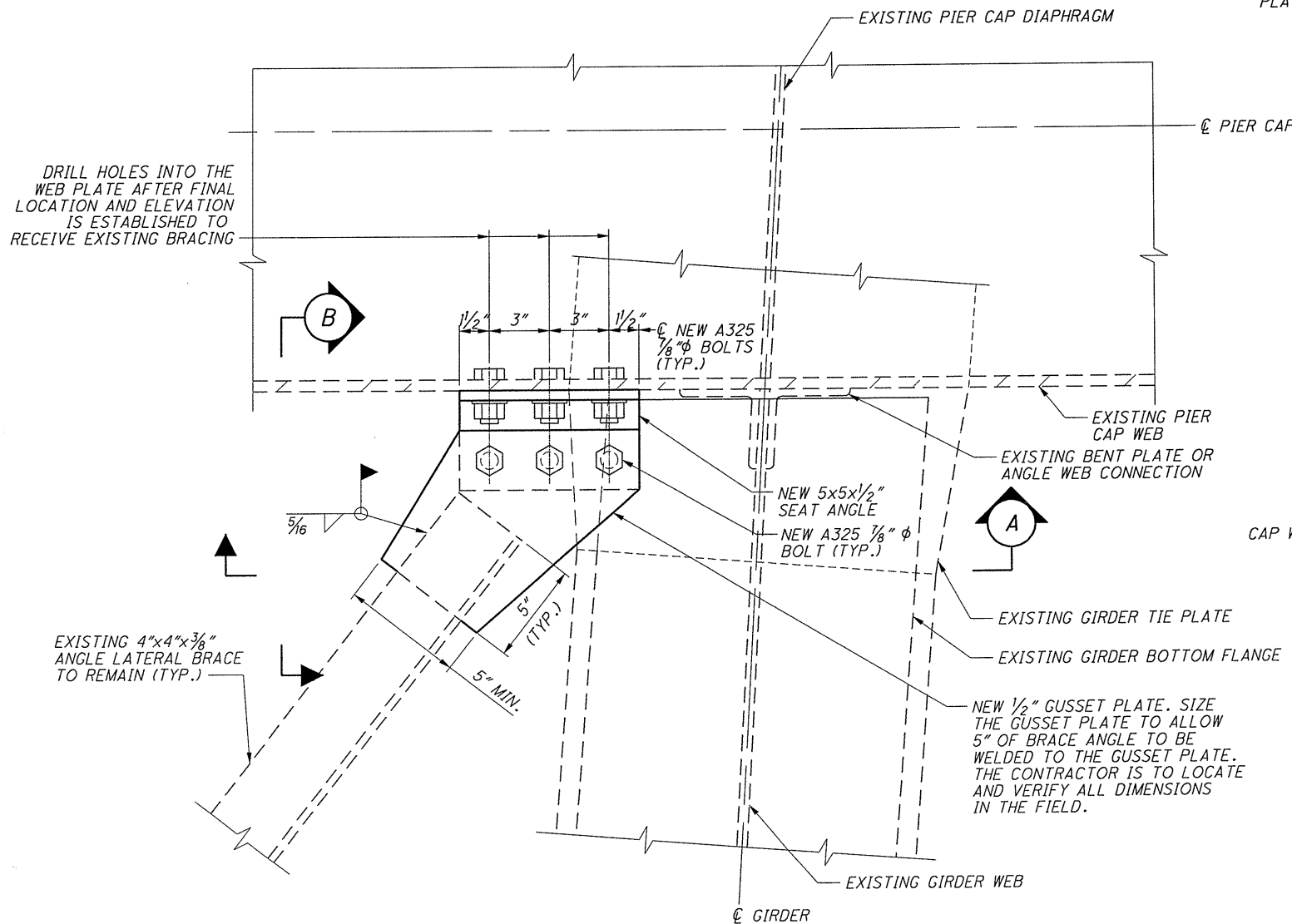
LOCATIONS OF LATERAL BRACE RETROFITS			
BRIDGE	PIER	SPAN	BAYS
HAM-71-0159	1W	2W	BETWEEN GIRDERS B - C AND E - EA
	2W	2W	BETWEEN GIRDERS B - C AND E - EA
	4W	5W	BETWEEN GIRDERS B - C AND D - E
	7E	7E AND 8E	BETWEEN GIRDERS H - J AND M - N
HAM-71-0248L	1	2	BETWEEN GIRDERS B - C AND D - E
	2	2 AND 3	BETWEEN GIRDERS B - C AND D - E
	3	3	BETWEEN GIRDERS B - C AND D - E

NOTE: FOR PIER AND SPAN LOCATIONS, SEE EXISTING PLANS

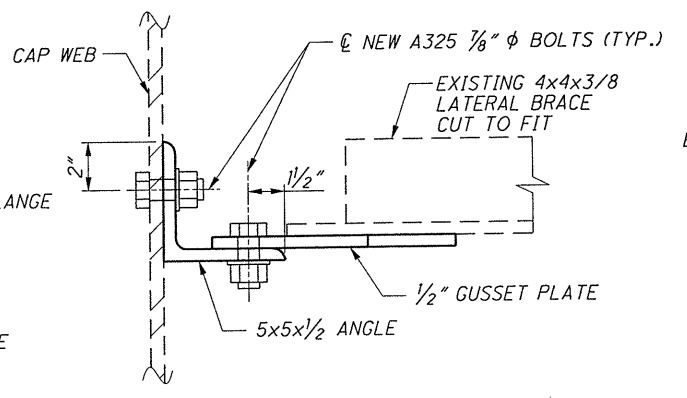
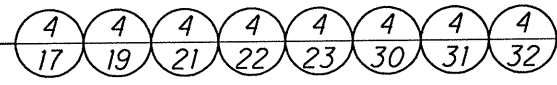


SECTION A

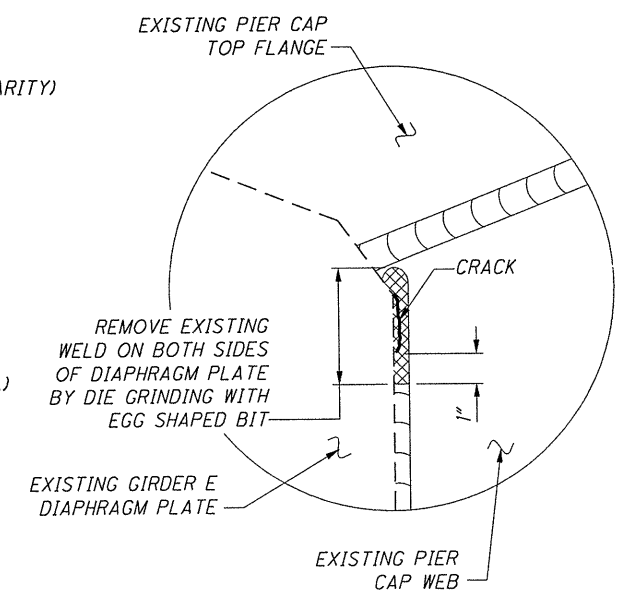
(EXISTING LATERAL BRACE NOT SHOWN FOR CLARITY)



**REPAIR DETAIL
PARTIAL PLAN OF LATERAL BRACING CONNECTION**
ITEM 513 - STRUCTURAL STEEL FOR REHABILITATION, AS PER PLAN



SECTION B



**REPAIR DETAIL - ISOMETRIC VIEW
DIAPHRAGM WELD CRACK REMOVAL**
(PIER 8W OF HAM-71-0159)

NOTES:

1. BOTTOM LATERALS SKETCH AND SECTION B-B ARE TAKEN FROM THE ORIGINAL PLANS.



DESIGN AGENCY

DATE

12-06-07

REVIEWED

WRW

DRAWN

NBR

DESIGNED

NBR

CHECKED

BKC

STRUCTURE FILE NUMBER

3106608

REVIS

3106608

BRIDGE NO.

HAM-71-0159 AND HAM-71-0248L

PID No.

25374

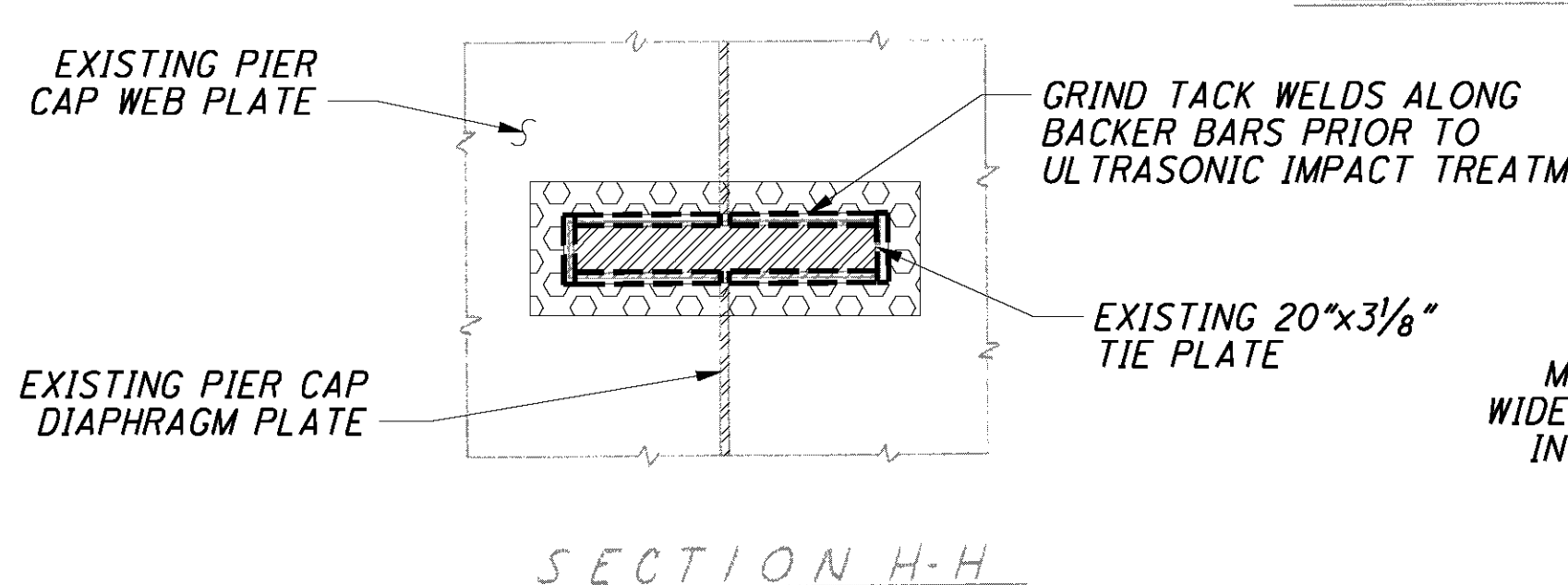
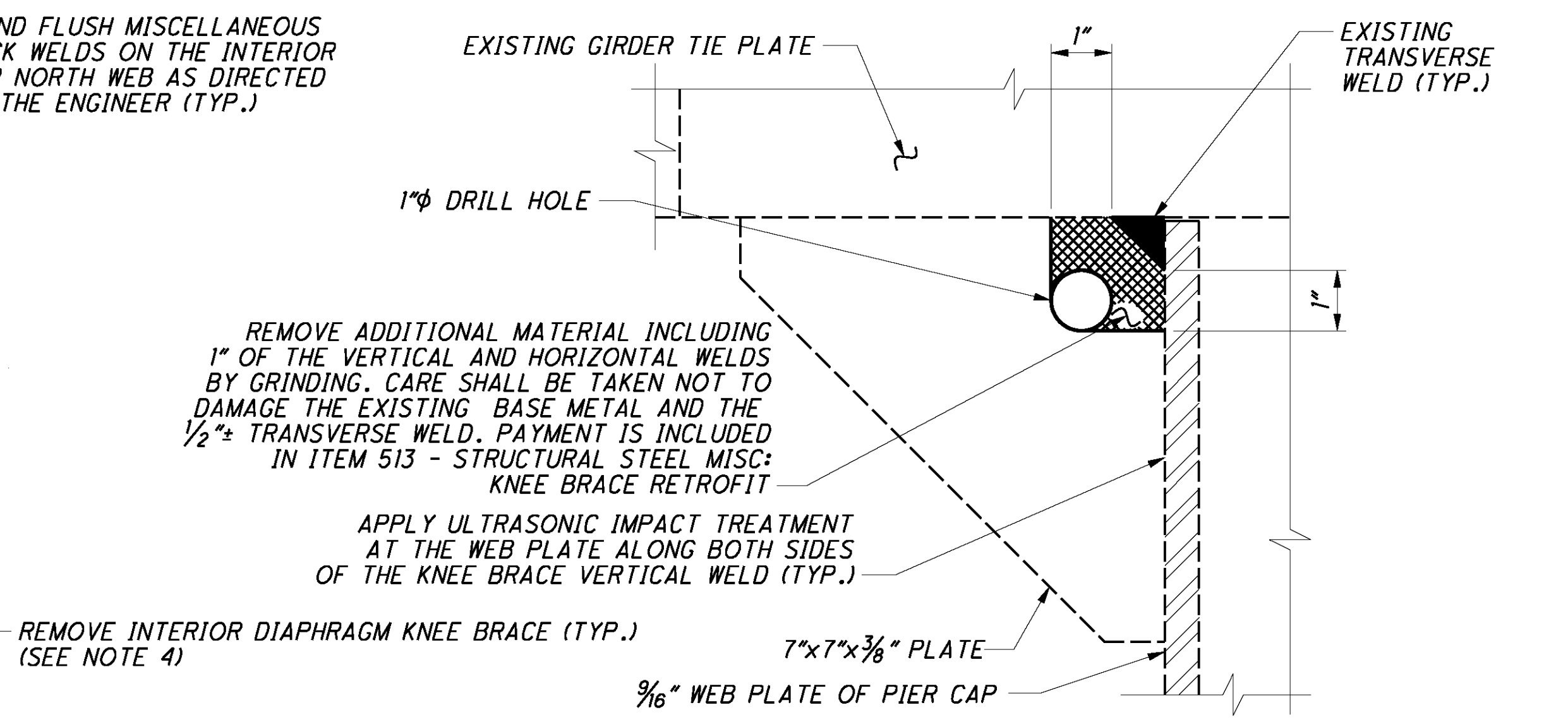
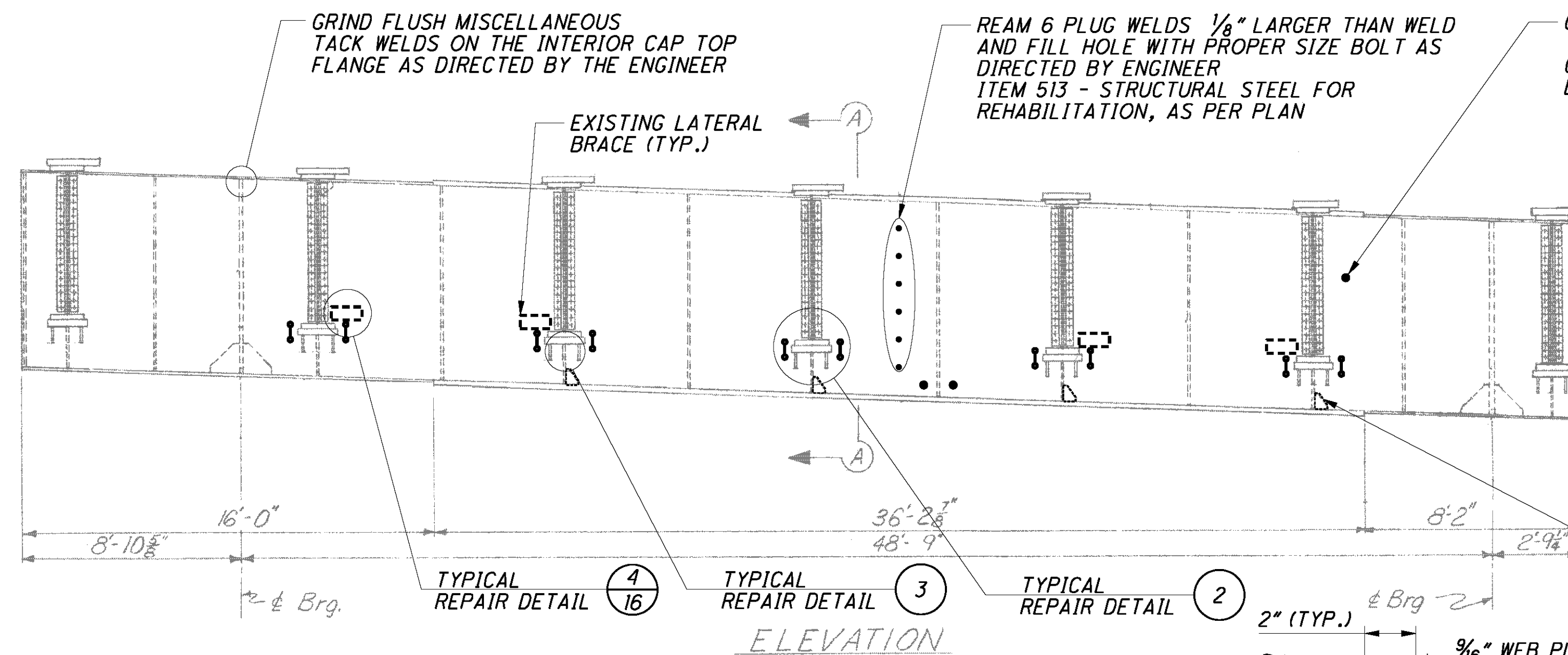
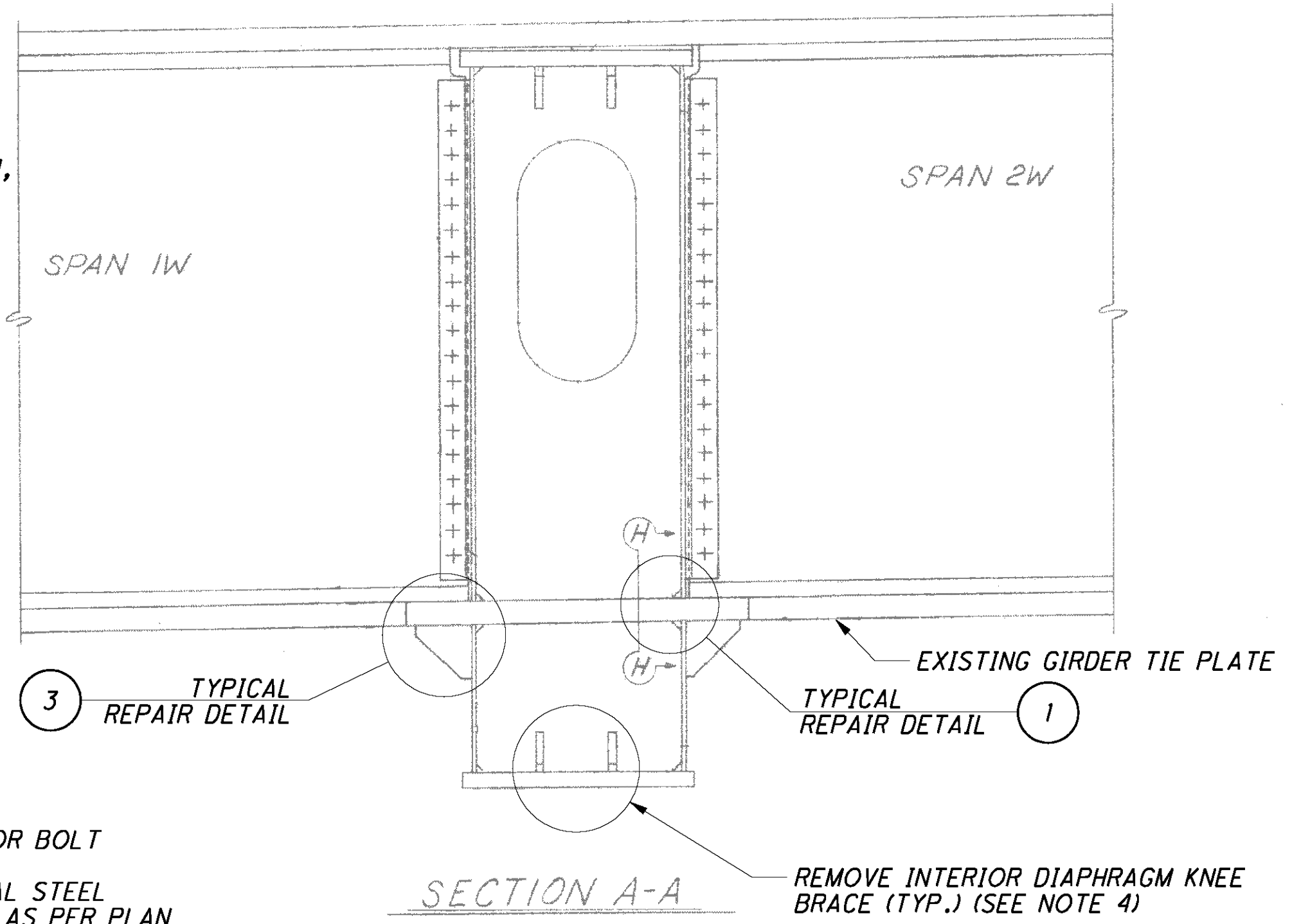
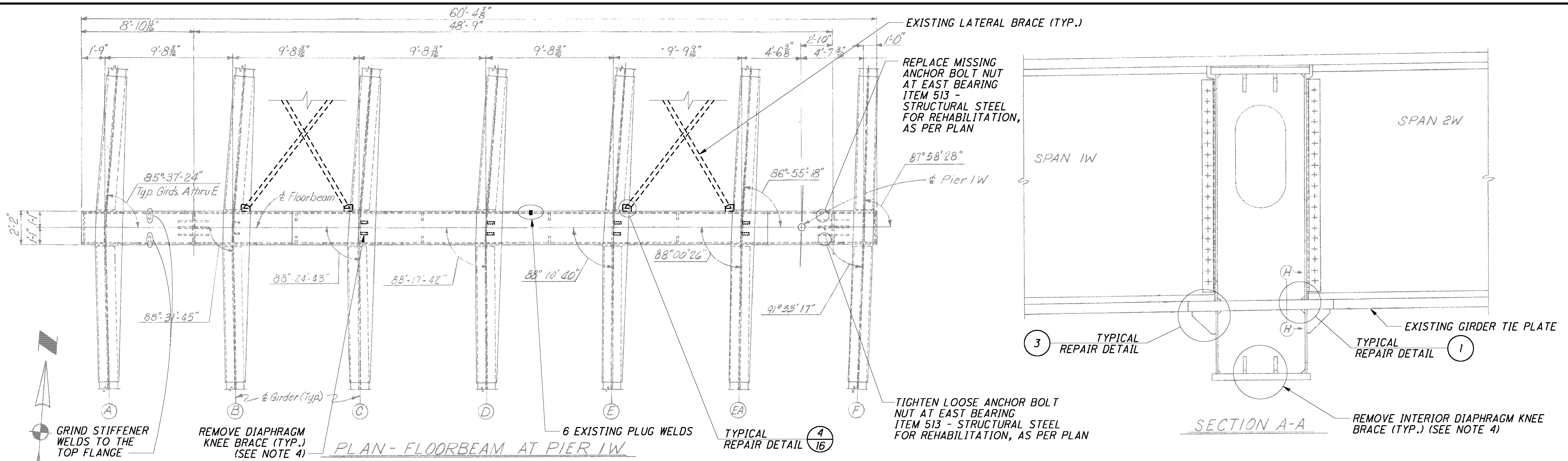
1-71 OVER CULVERT ST., SENTINEL ST. AND EGGLESTON AVE.

HAM-BH-VAR

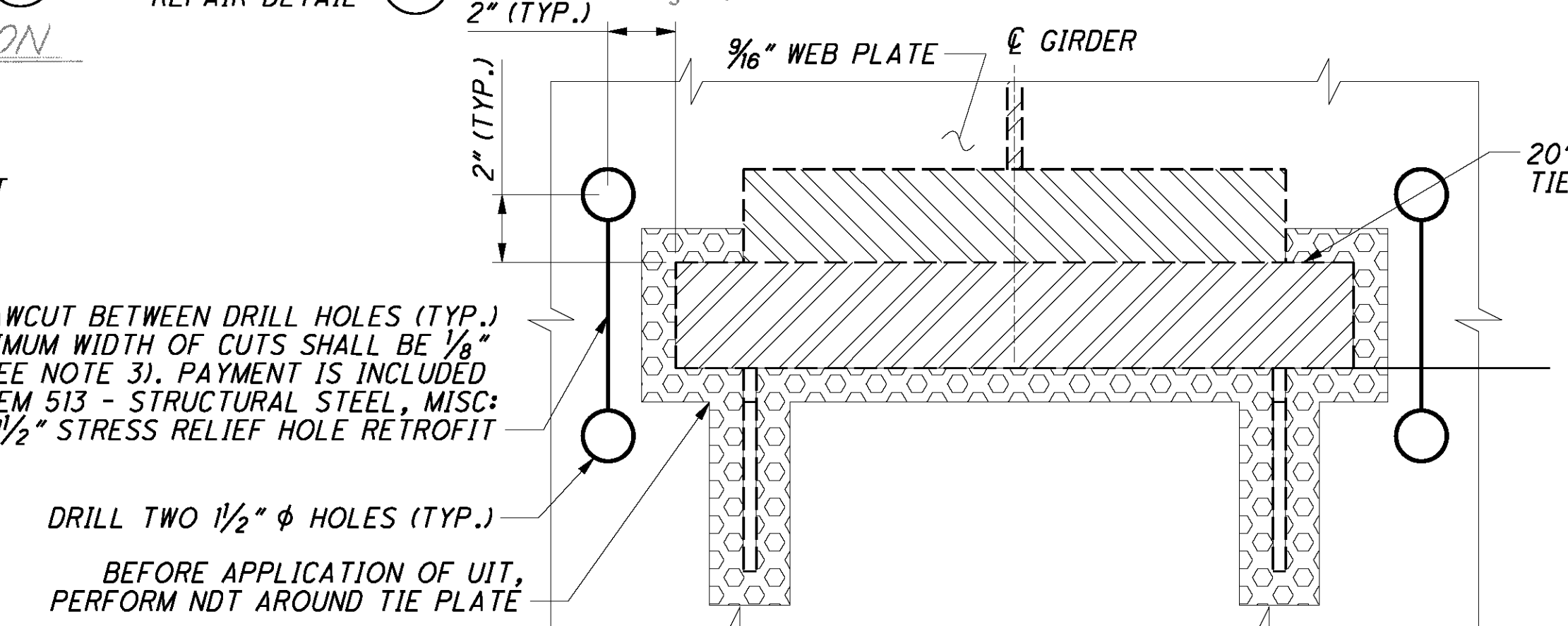
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38

4/17/2008 P:\2426.03-ODOT 8 Pier Cap\2007 PID25374 DRAWINGS\(#2) HAM-71-0159\HAM-71-0159 P1W.dgn



REPAIR DETAIL 1
INTERIOR TIE PLATE RETROFIT



REPAIR DETAIL 2
STRESS RELIEF HOLES

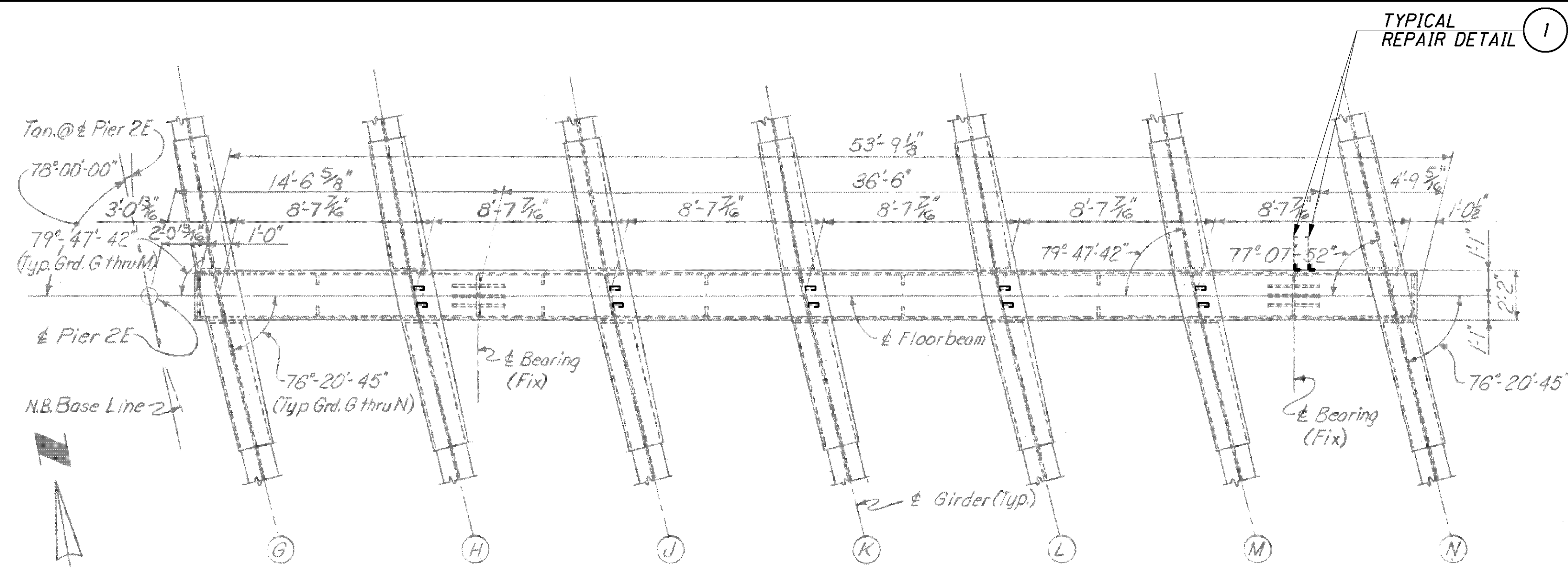
(FOR GIRDERS B, C, D, E AND EA AT NORTH AND SOUTH WEB PLATES)

- LIMITS OF 1/2" WIDE ULTRASONIC IMPACT TREATMENT (UIT)
- LIMITS OF STEEL REMOVAL ON EXTERNAL KNEE BRACES BY GRINDING

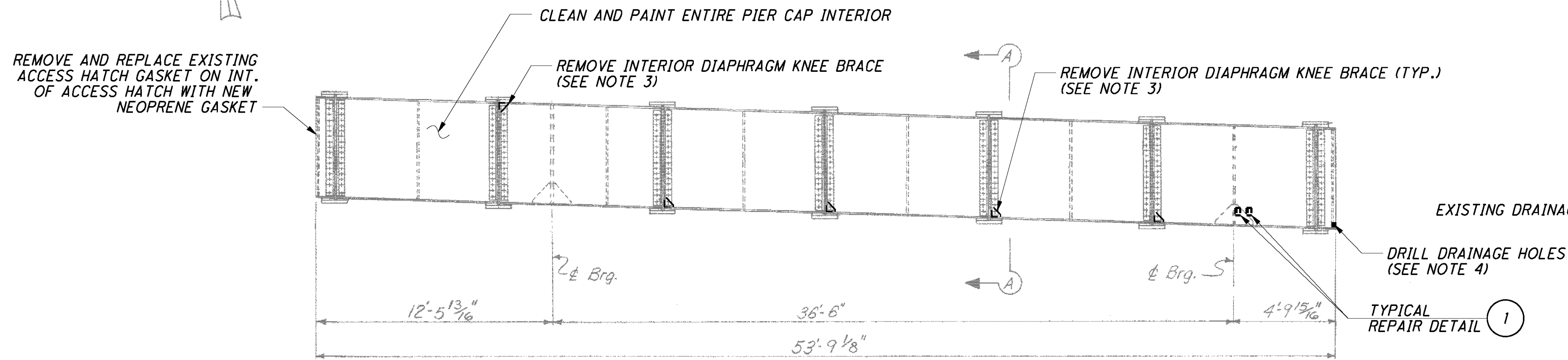
- NOTES:**
1. PIER PLAN, ELEVATION AND SECTIONS A-A AND H-H ARE TAKEN FROM THE ORIGINAL PLANS.
 2. CLEAN AND PAINT REPAIR AREAS ON INTERIOR AND EXTERIOR OF PIER CAP.
 3. CARE SHALL BE TAKEN NOT TO OVER CUT SAWCUT BEYOND DRILLED HOLES. FLAME CUTTING IS NOT PERMITTED.
 4. REMOVE INTERIOR DIAPHRAGM KNEE BRACE AND GRIND SMOOTH WELD ON BOTTOM FLANGE AT GIRDERS C, D, E AND EA. APPLY ULTRASONIC IMPACT TREATMENT TO THE BOTTOM FLANGE ALONG PREVIOUS KNEE BRACE WELDS.

<p>DESIGN AGENCY Train Systems 55 PUBLIC SQUARE, SUITE 1000 CLEVELAND, OHIO 44113</p>
<p>DATE: 11-27-07 REVIEWED: WRW DRAWN: NBR DESIGNED: NBR CHECKED: BKC</p> <p>STRUCTURE FILE NUMBER: 3106608</p>
<p>PIER 1W CAP RETROFIT DETAILS</p> <p>BRIDGE NO. HAM-71-0159 I-71 OVER CULVERT ST., SENTINEL ST. AND EGLESTON AVE.</p>
<p>HAM-BH-VAR PID No. 25374</p>
<p>17 38</p>

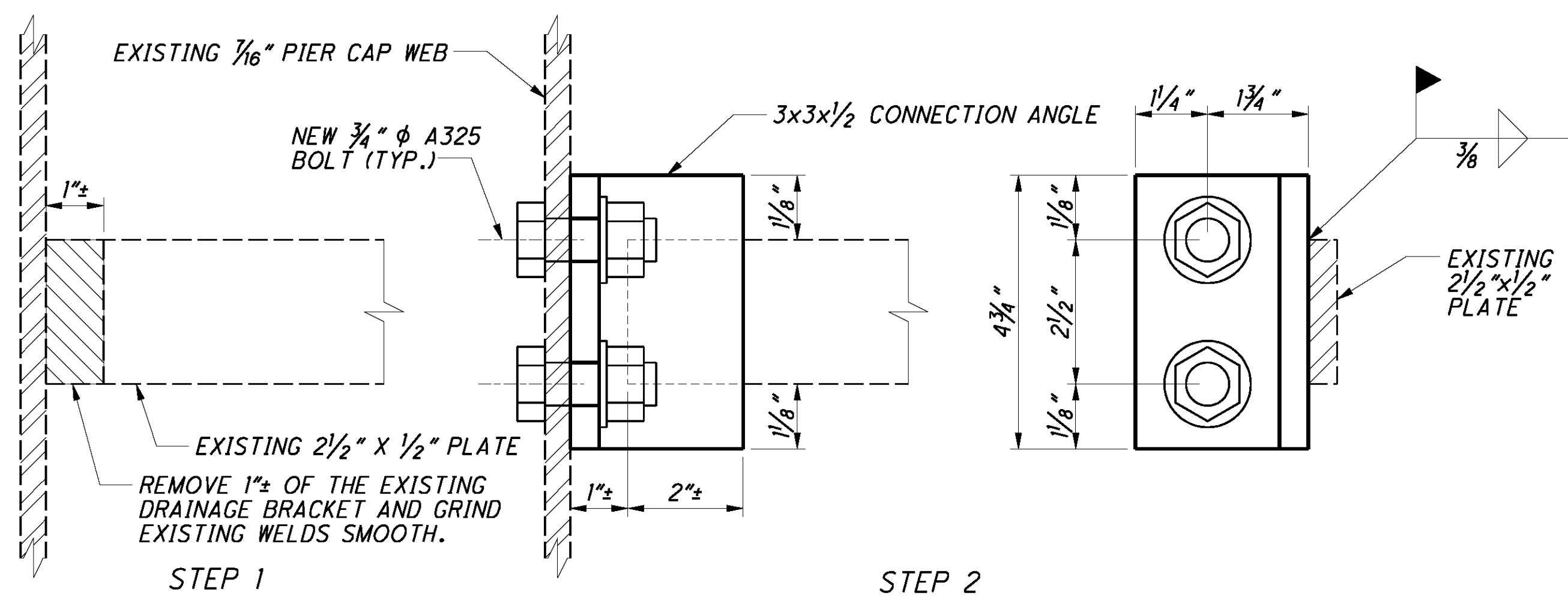
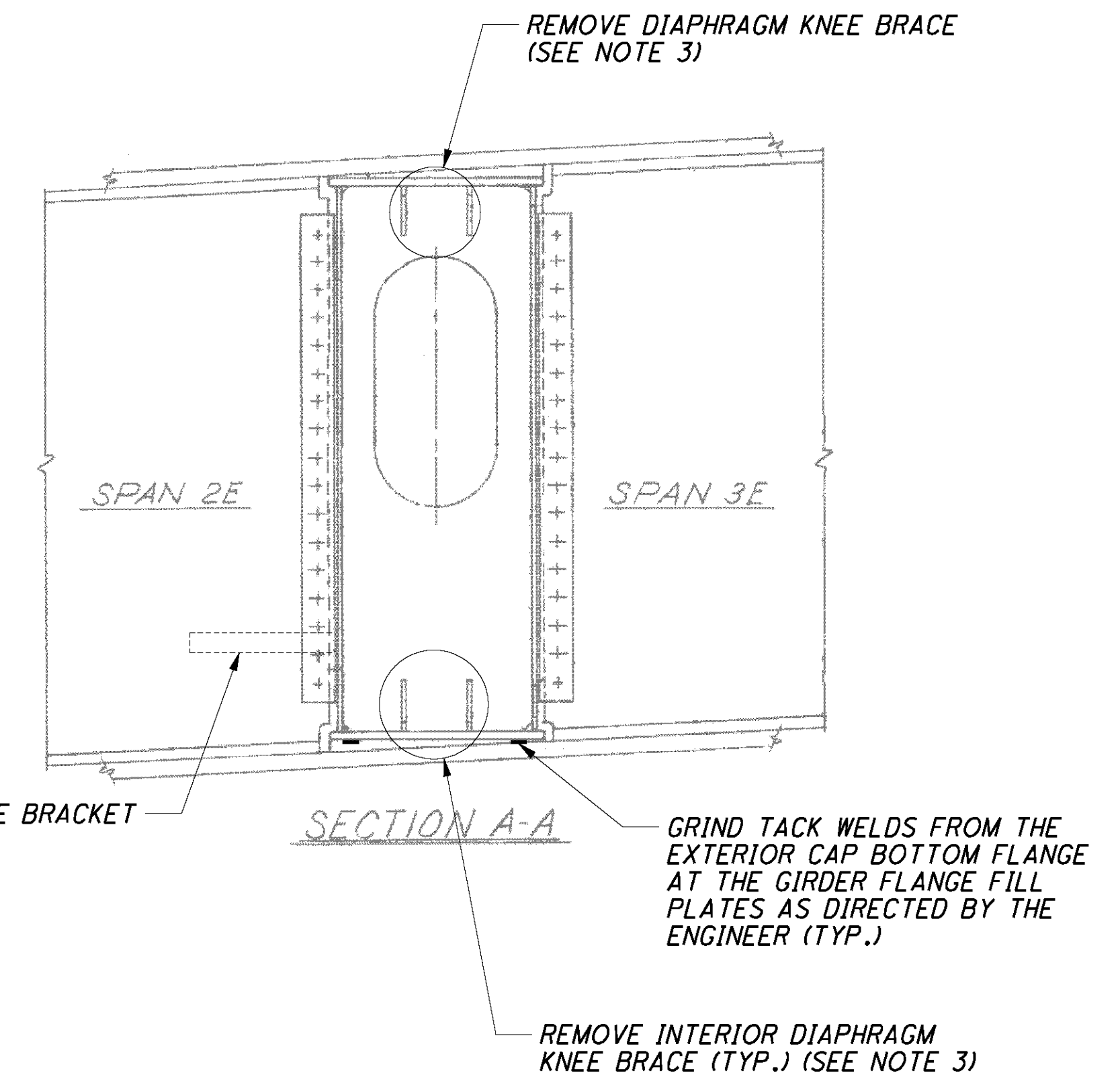
4/17/2008
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PLAN - FLOORBEAM AT PIER 2E



ELEVATION

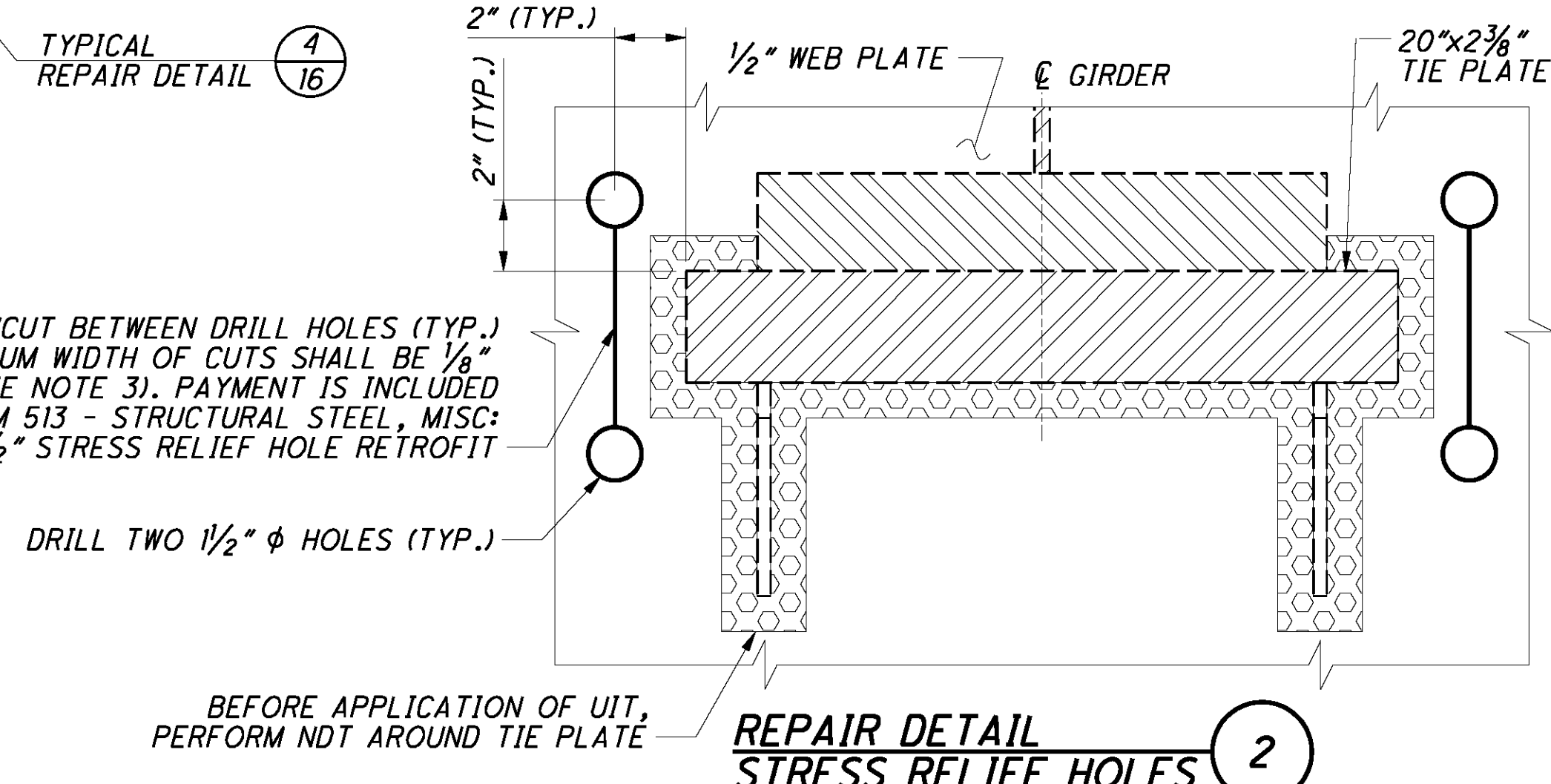
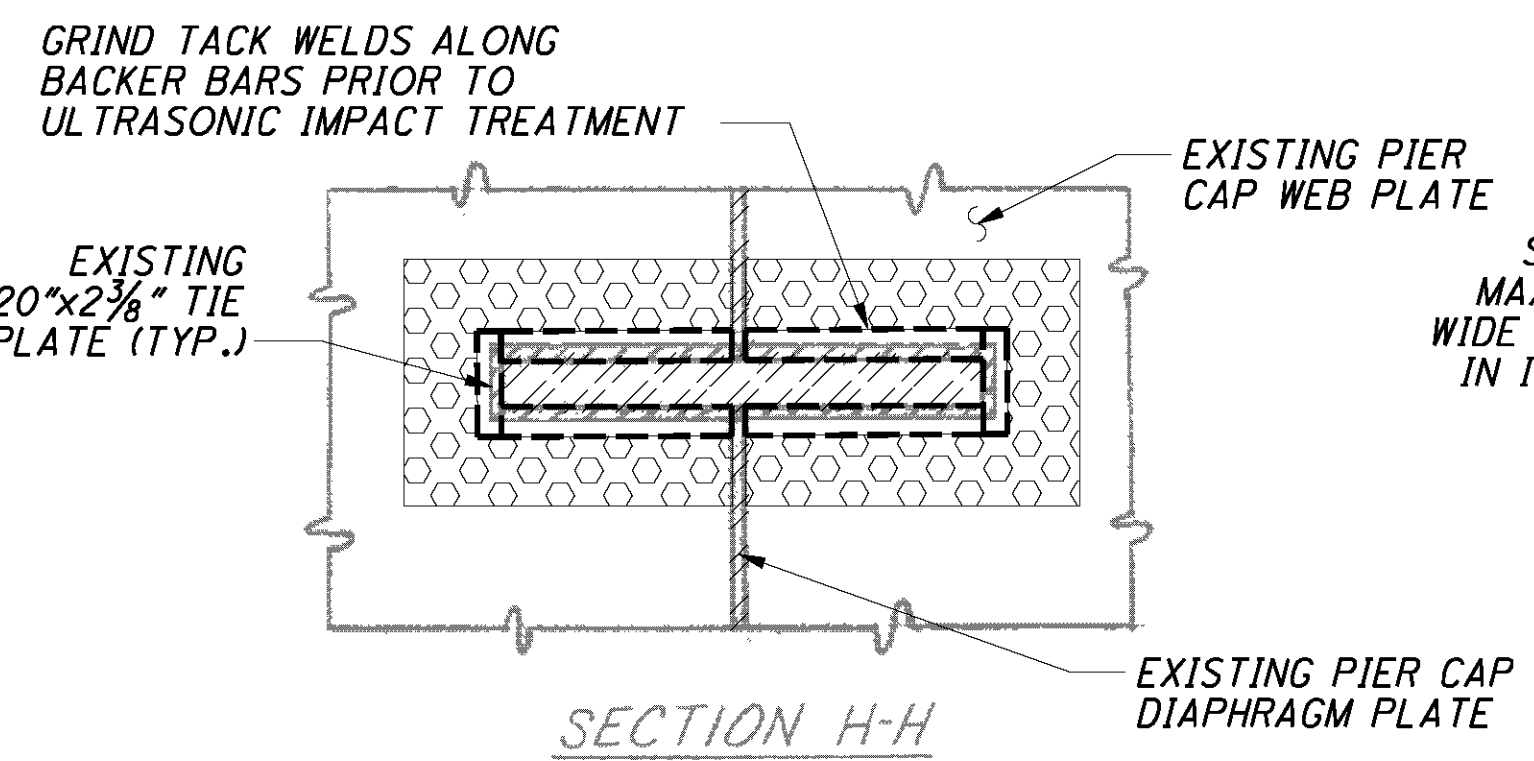
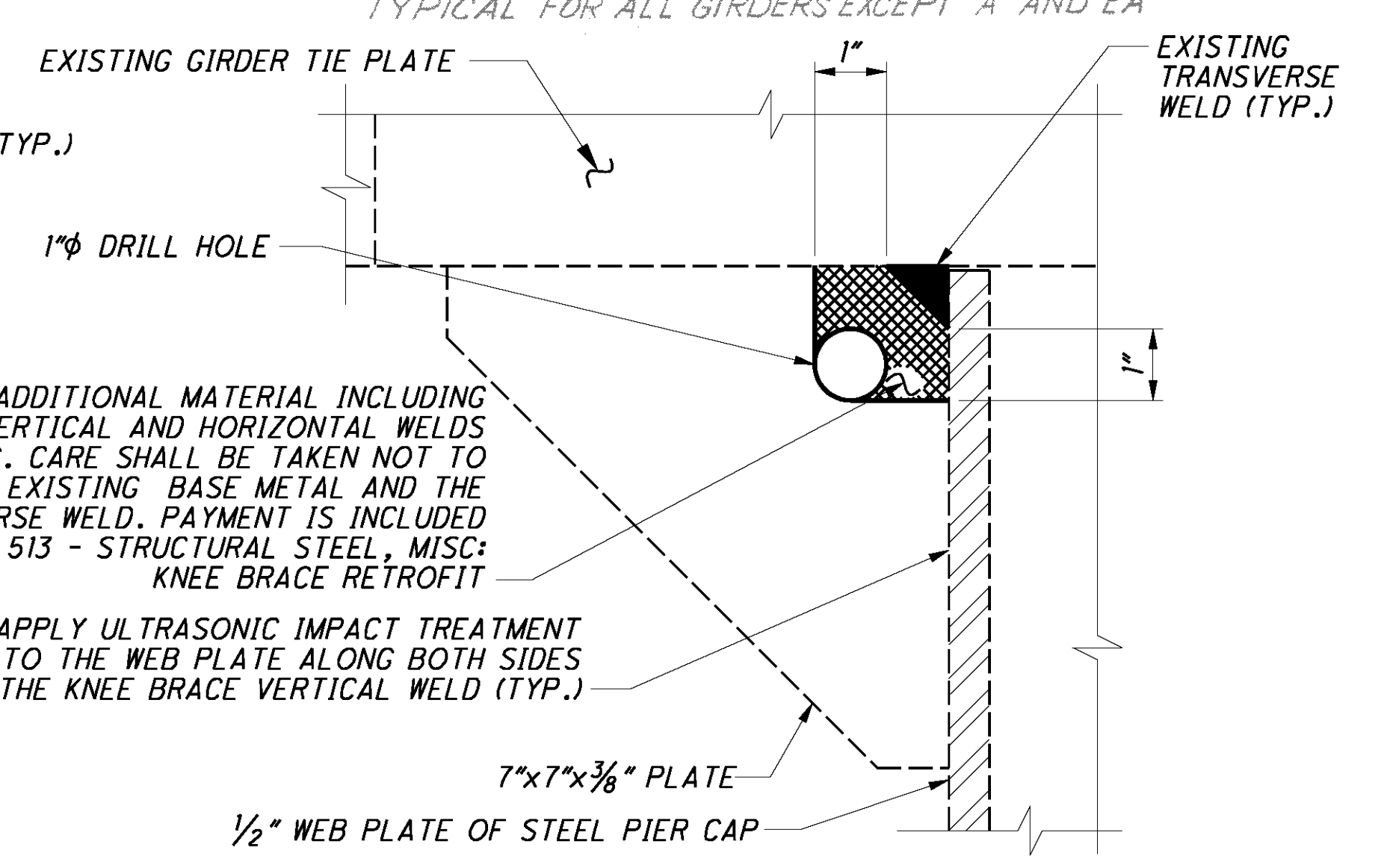
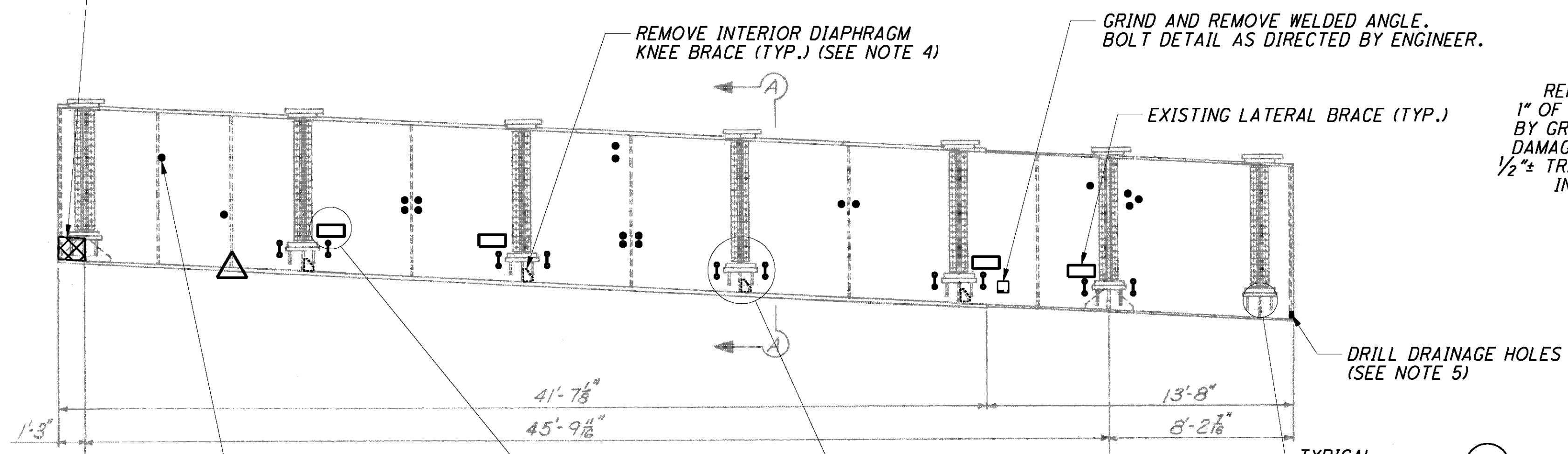
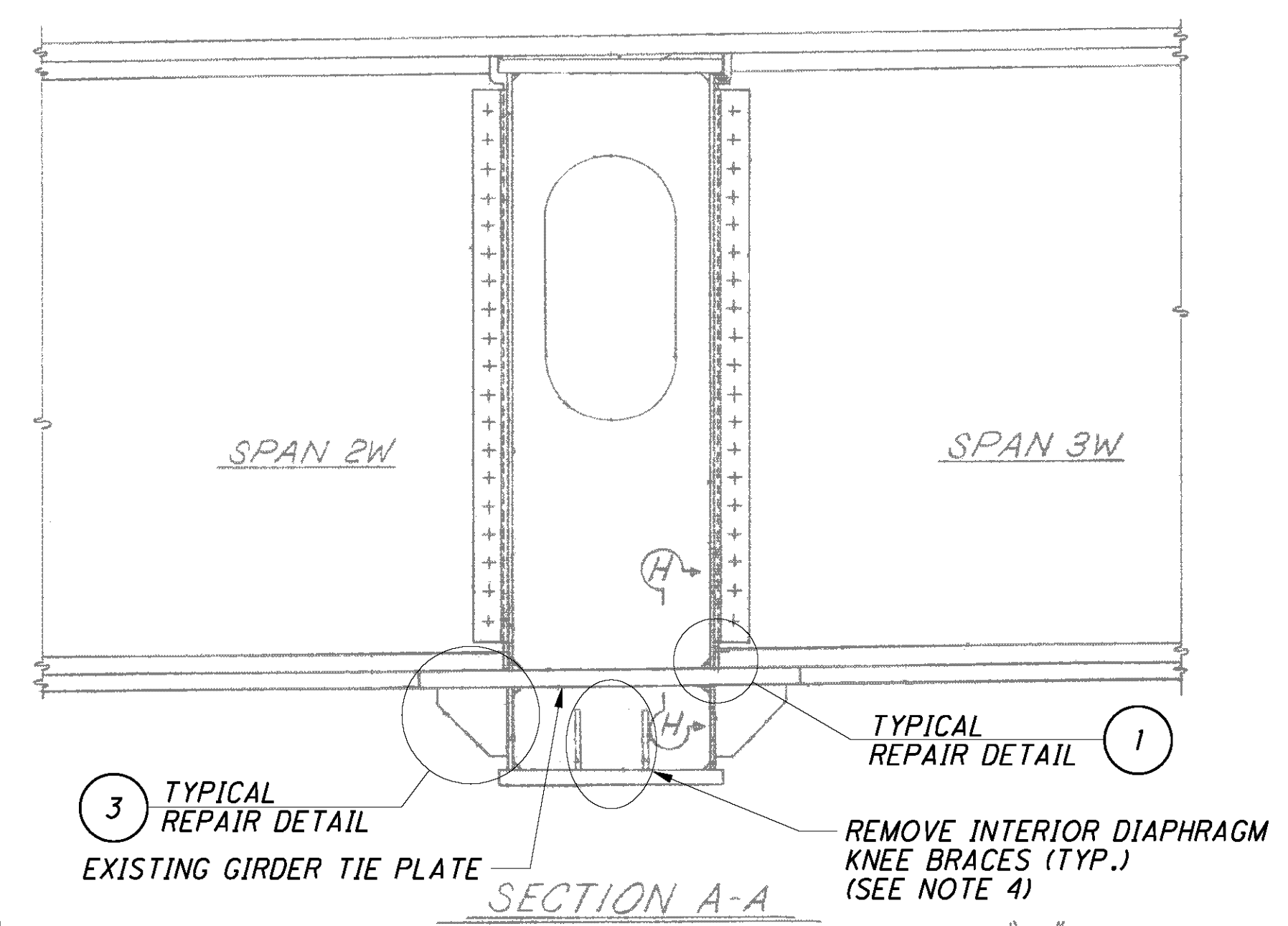
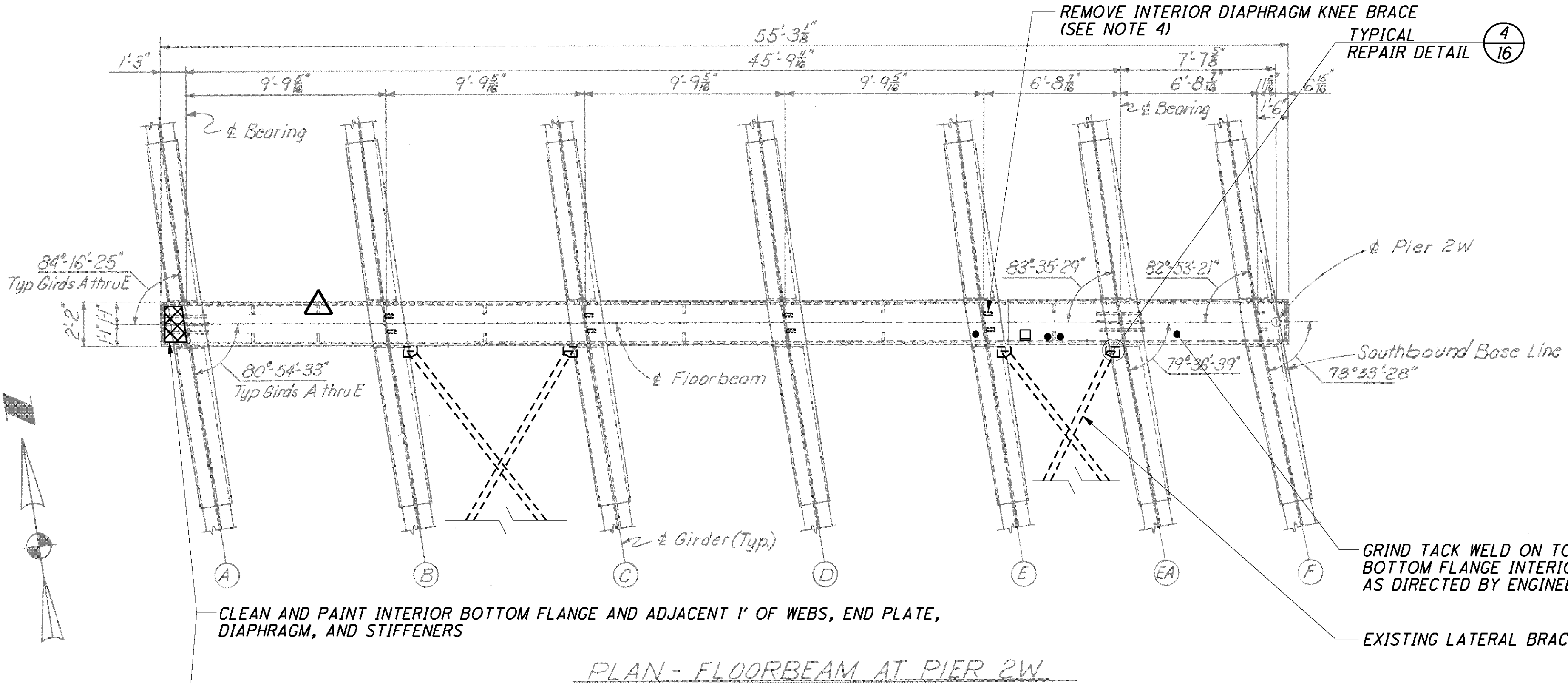


REPAIR DETAIL DRAIN BRACKET RETROFIT 1

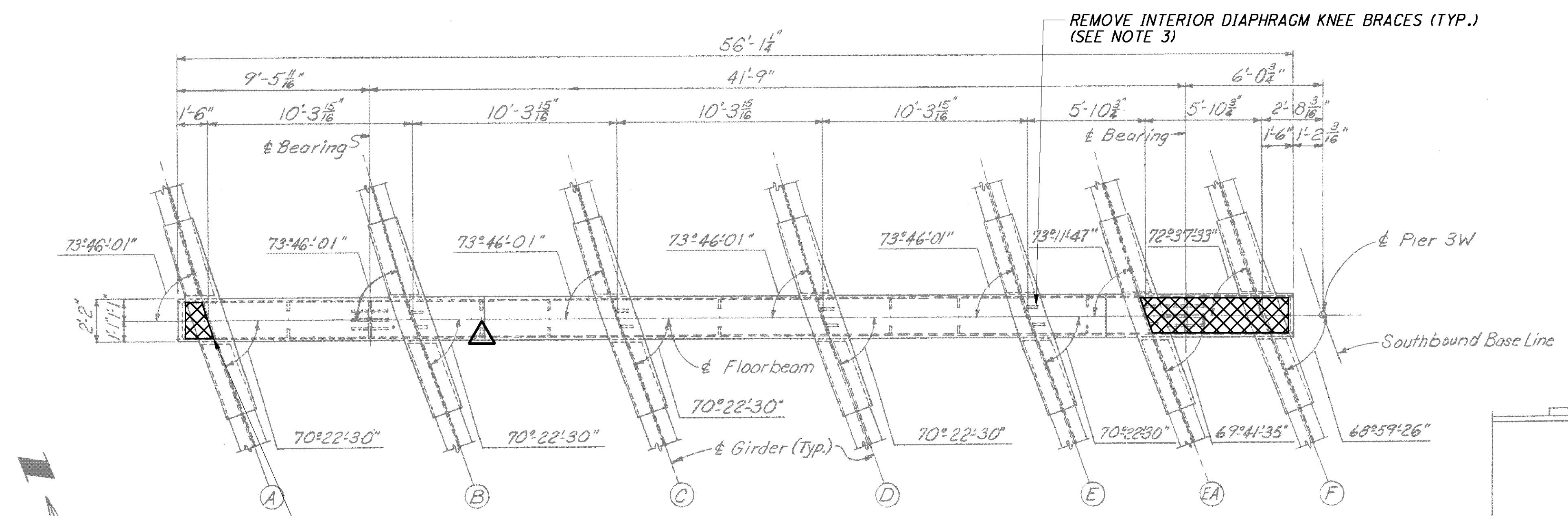
NOTES:

1. PIER PLAN, ELEVATION AND SECTION A-A ARE TAKEN FROM THE ORIGINAL PLANS.
2. CLEAN AND PAINT REPAIR AREAS ON EXTERIOR OF PIER CAP.
3. REMOVE INTERIOR DIAPHRAGM KNEE BRACE AND GRIND SMOOTH WELD ON BOTTOM FLANGE AT GIRDERS J, K, L AND M. REMOVE INTERIOR DIAPHRAGM KNEE BRACE AND GRIND SMOOTH WELD ON TOP FLANGE AT GIRDER H ONLY. APPLY ULTRASONIC IMPACT TREATMENT TO THE TOP OR BOTTOM FLANGE ALONG PREVIOUS KNEE BRACE WELDS.
4. DRILL TWO 1/2" phi HOLES THROUGH THE EAST END PLATE. THE BOTTOM OF THE HOLES SHALL BE FLUSH WITH THE PIER CAP BOTTOM FLANGE. HOLES SHALL NOT PENETRATE OR GOUGE PIER CAP WEB PLATES OR FLANGE PLATE. ALL COSTS SHALL BE INCLUDED IN ITEM 513 - STRUCTURAL STEEL, MISC.: 1/2" DRAINAGE HOLES, AS PER PLAN.

4/17/2008
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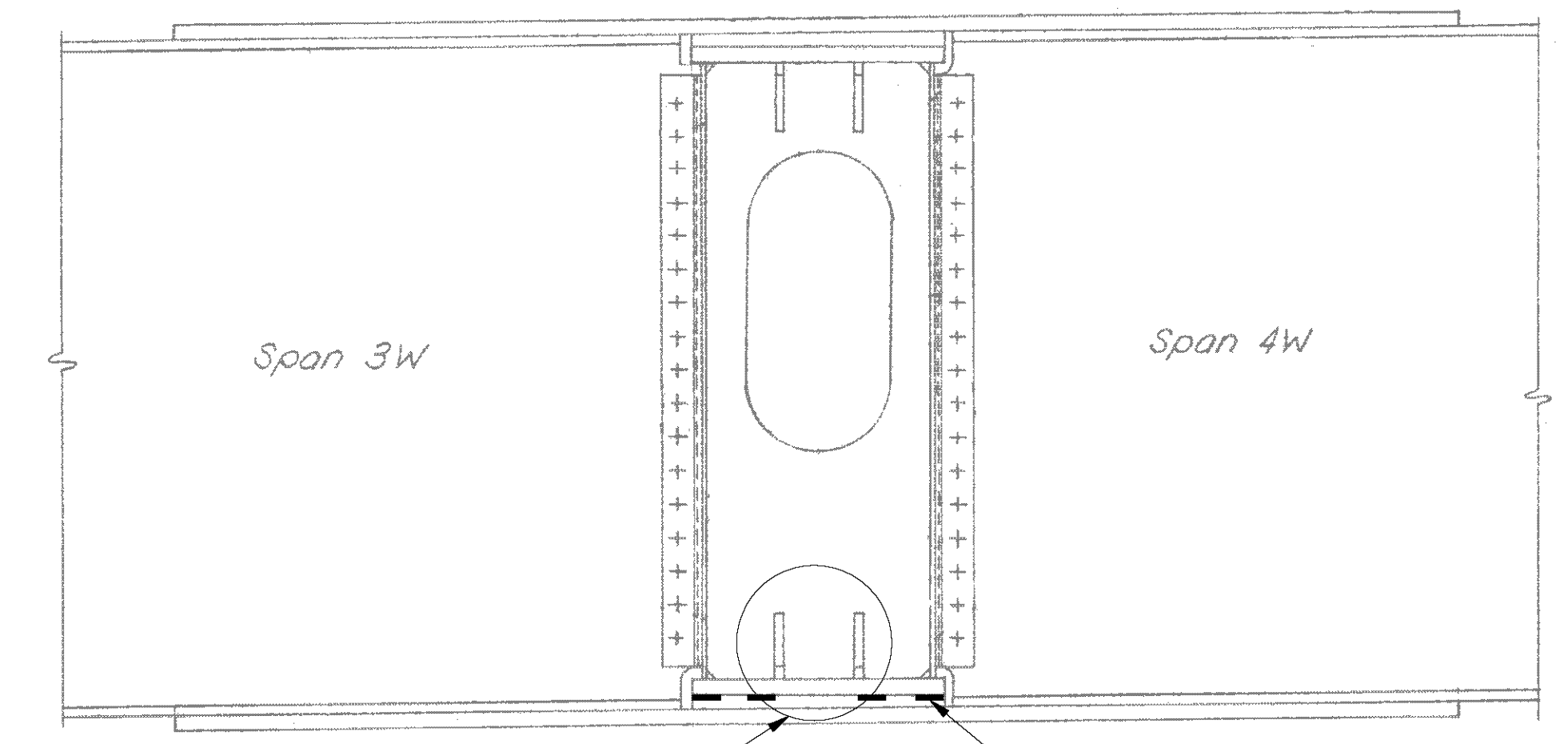


- NOTES:**
- PIER PLAN, ELEVATION AND SECTION A-A AND H-H ARE TAKEN FROM THE ORIGINAL PLANS.
 - CLEAN AND PAINT REPAIR AREAS ON INTERIOR AND EXTERIOR OF PIER CAP.
 - CARE SHALL BE TAKEN NOT TO OVERCUT SAWCUT BEYOND DRILLED HOLES. FLAME CUTTING IS NOT PERMITTED.
 - REMOVE INTERIOR DIAPHRAGM KNEE BRACE AND GRIND SMOOTH WELD ON BOTTOM FLANGE AT GIRDERS B, C, D AND E. APPLY ULTRASONIC IMPACT TREATMENT TO THE BOTTOM FLANGE ALONG PREVIOUS KNEE BRACE WELDS.
 - DRILL TWO 1/2" φ HOLES THROUGH THE EAST END PLATE. THE BOTTOM OF THE HOLES SHALL BE FLUSH WITH THE PIER CAP BOTTOM FLANGE. HOLES SHALL NOT PENETRATE OR GOUGE PIER CAP WEB PLATES, FLANGE PLATE, OR BEARING STIFFENERS. ALL COSTS SHALL BE INCLUDED IN ITEM 513 - STRUCTURAL STEEL, MISC.: 1/2" DRAINAGE HOLES, AS PER PLAN.
- LIMITS OF 1/2" WIDE ULTRASONIC IMPACT TREATMENT (UIT)
 - LIMITS OF PAINTING OF INTERIOR OF PIER CAP
 - LIMITS OF STEEL REMOVAL ON EXTERNAL KNEE BRACES BY GRINDING
 - LOCATION OF INTERSECTING WELD BETWEEN PIER CAP WEB STIFFENER WELD AND PIER CAP FLANGE WELD TO BE REMOVED BY GRINDING



PLAN- FLOORBEAM AT PIER 3W

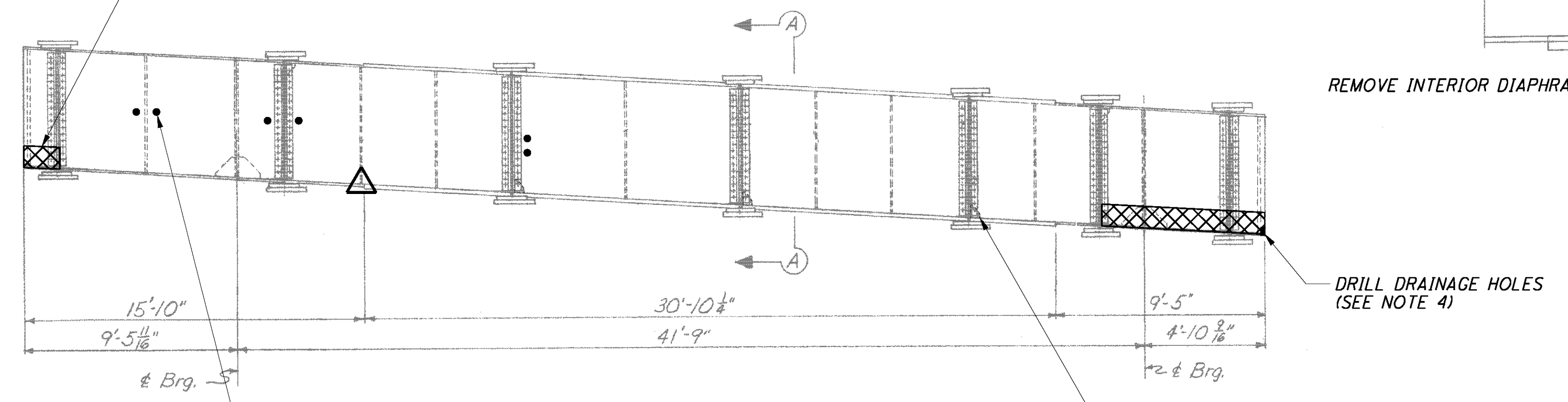
CLEAN AND PAINT INTERIOR BOTTOM FLANGE AND ADJACENT 1' OF WEBS, END PLATES, DIAPHRAGMS, AND STIFFENER PLATES



SECTION A-A

REMOVE INTERIOR DIAPHRAGM KNEE BRACE (TYP.) (SEE NOTE 3)

GRIND TACK WELDS FROM THE EXTERIOR CAP BOTTOM FLANGE AT THE GIRDER FLANGE FILL PLATES (TYP.) AS DIRECTED BY THE ENGINEER.



ELEVATION

GRIND MISCELLANEOUS TACK WELDS ON THE INTERIOR CAP WEB PLATES (TYP.) AS DIRECTED BY THE ENGINEER.

REMOVE INTERIOR DIAPHRAGM KNEE BRACES (TYP.) (SEE NOTE 3)

DRILL DRAINAGE HOLES (SEE NOTE 4)

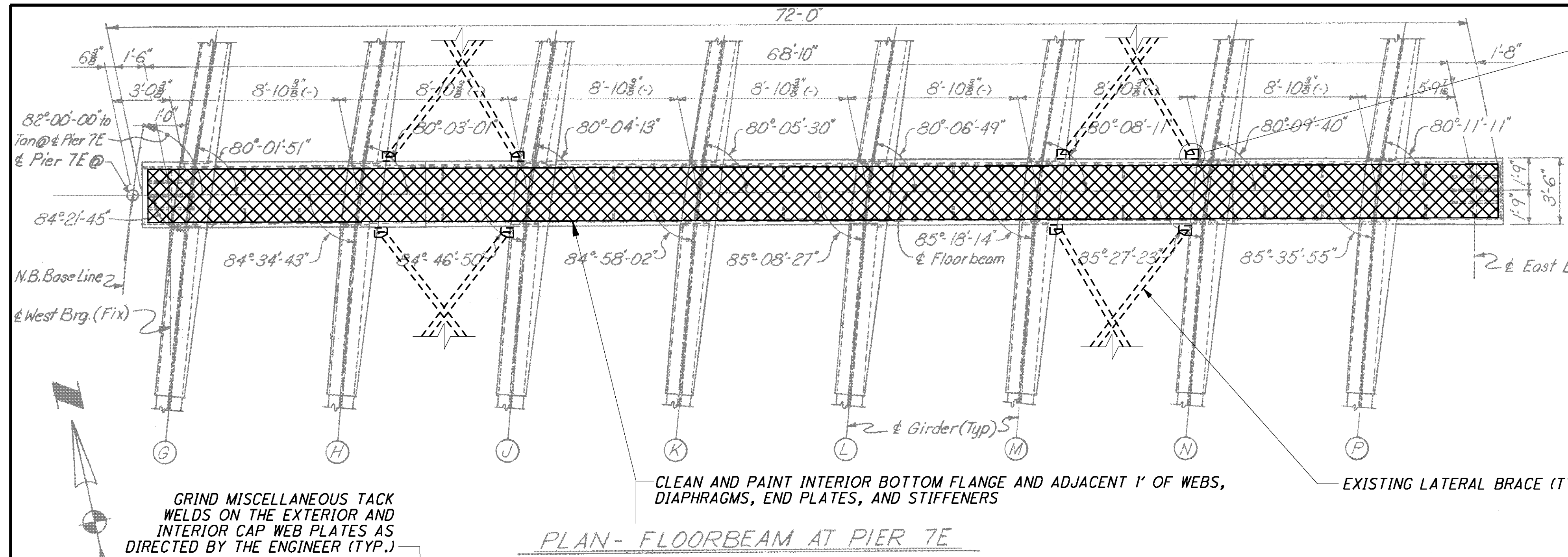
NOTES:

1. PIER PLAN, ELEVATION AND SECTION A-A ARE TAKEN FROM THE ORIGINAL PLANS.
2. CLEAN AND PAINT REPAIR AREAS ON INTERIOR AND EXTERIOR OF PIER CAP.
3. REMOVE INTERIOR DIAPHRAGM KNEE BRACE AND GRIND SMOOTH WELD ON BOTTOM FLANGE AT GIRDERS C, D, AND E. APPLY ULTRASONIC IMPACT TREATMENT TO THE BOTTOM FLANGE ALONG PREVIOUS KNEE BRACE WELDS.
4. DRILL TWO 1/2" Ø HOLES THROUGH THE EAST END PLATE. THE BOTTOM OF THE HOLES SHALL BE FLUSH WITH THE PIER CAP BOTTOM FLANGE. HOLES SHALL NOT PENETRATE OR GOUGE PIER CAP WEB PLATES OR FLANGE PLATE. ALL COSTS SHALL BE INCLUDED IN ITEM 513 - STRUCTURAL STEEL, MISC.: 1/2" DRAINAGE HOLES, AS PER PLAN.

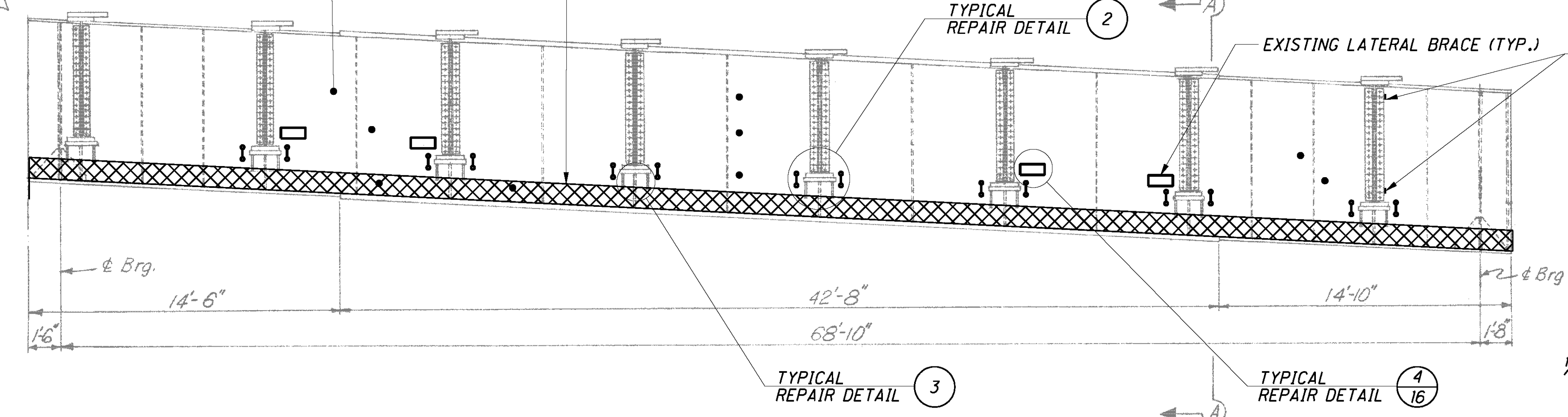
- LIMITS OF PAINTING OF INTERIOR OF PIER CAP

- LOCATION OF INTERSECTING WELD BETWEEN PIER CAP WEB STIFFENER WELD AND PIER CAP FLANGE WELD TO BE REMOVED BY GRINDING

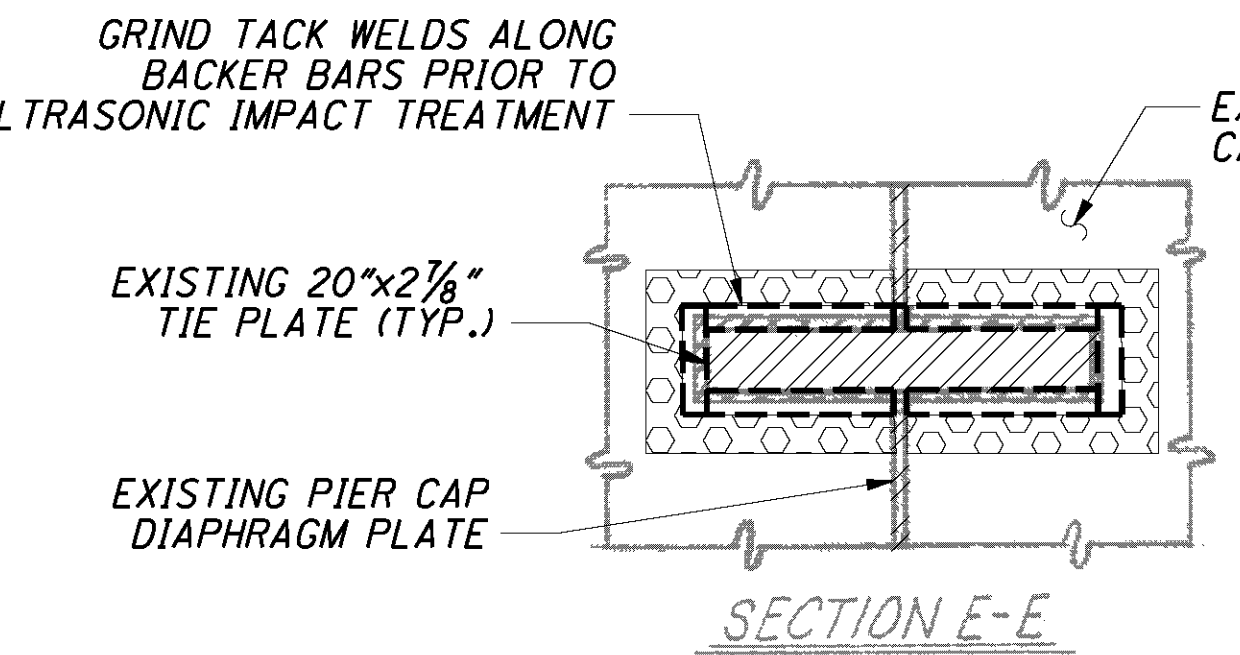
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PLAN - FLOORBEAM AT PIER 7E



ELEVATION

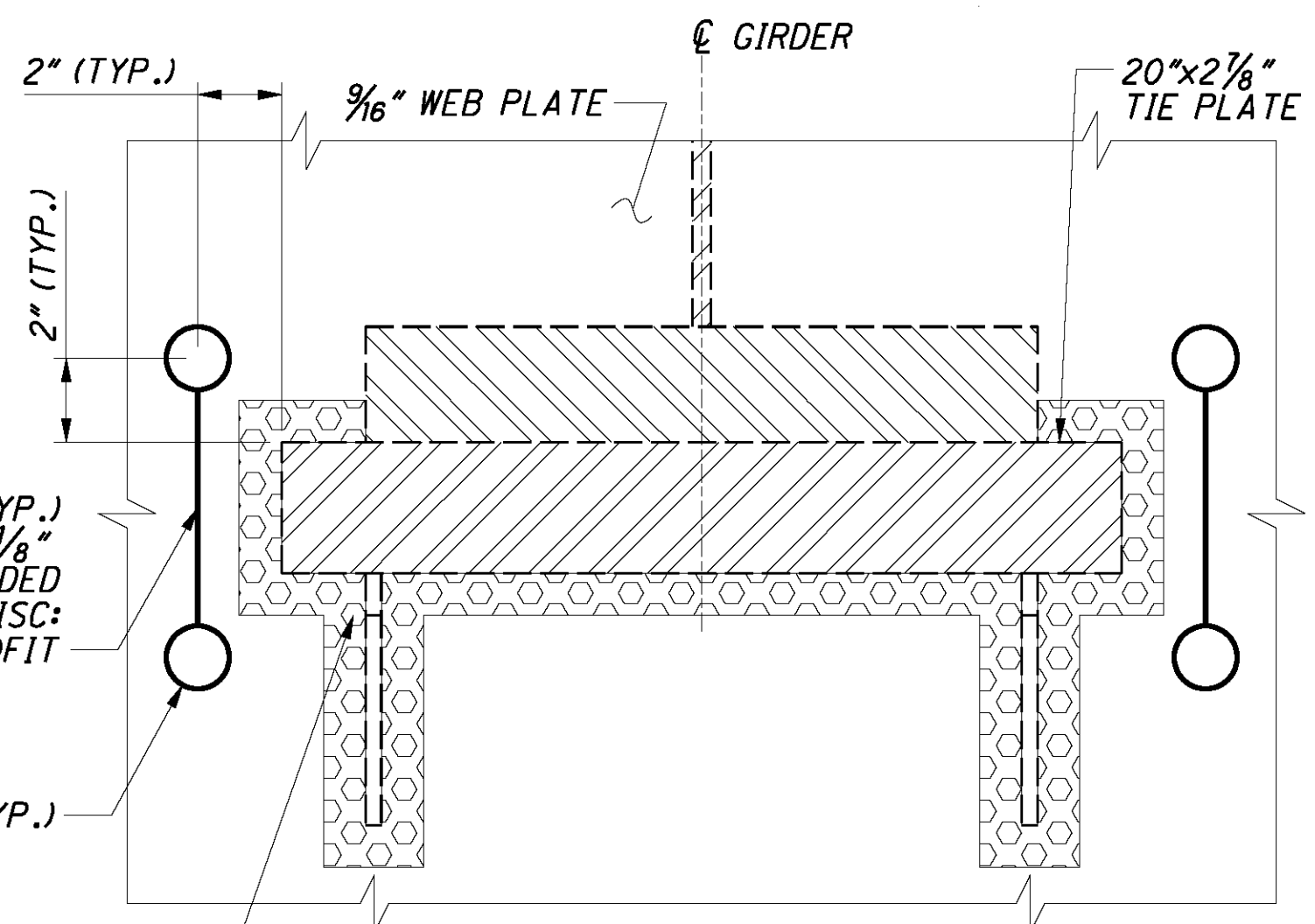


REPAIR DETAIL INTERIOR TIE PLATE RETROFIT 1

SAWCUT BETWEEN DRILL HOLES (TYP.) MAXIMUM WIDTH OF CUTS SHALL BE 1/8" WIDE (SEE NOTE 3). PAYMENT IS INCLUDED IN ITEM 513 - STRUCTURAL STEEL, MISC: 1/2" STRESS RELIEF HOLE RETROFIT

DRILL TWO 1/2" φ HOLES (TYP.)

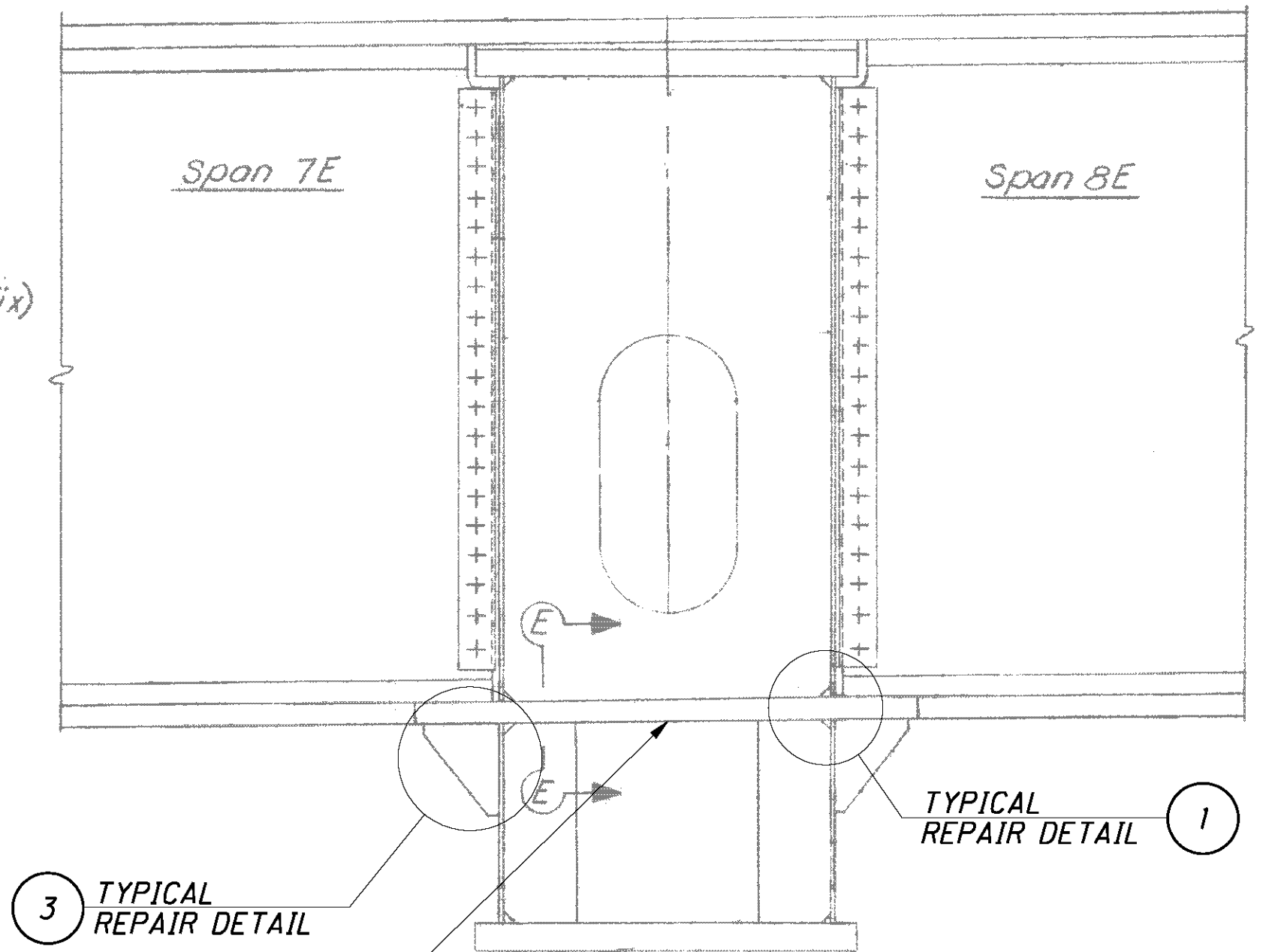
BEFORE APPLICATION OF UIT, PERFORM NDT AROUND TIE PLATE



REPAIR DETAIL STRESS RELIEF HOLES 2

(FOR GIRDERS H, J, K, L, M, N, AND P NORTH AND SOUTH WEB PLATES)

TYPICAL REPAIR DETAIL 4/16



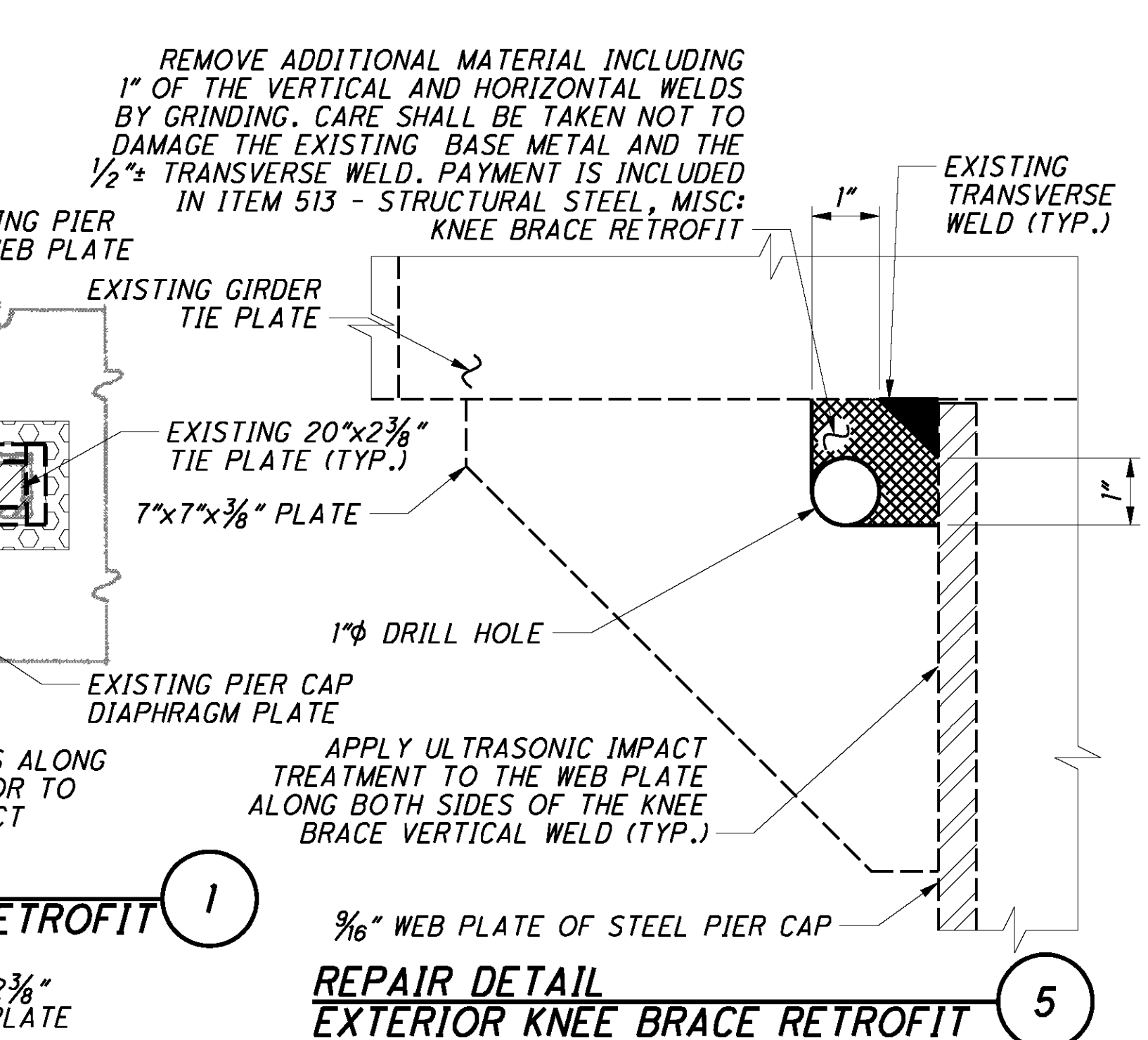
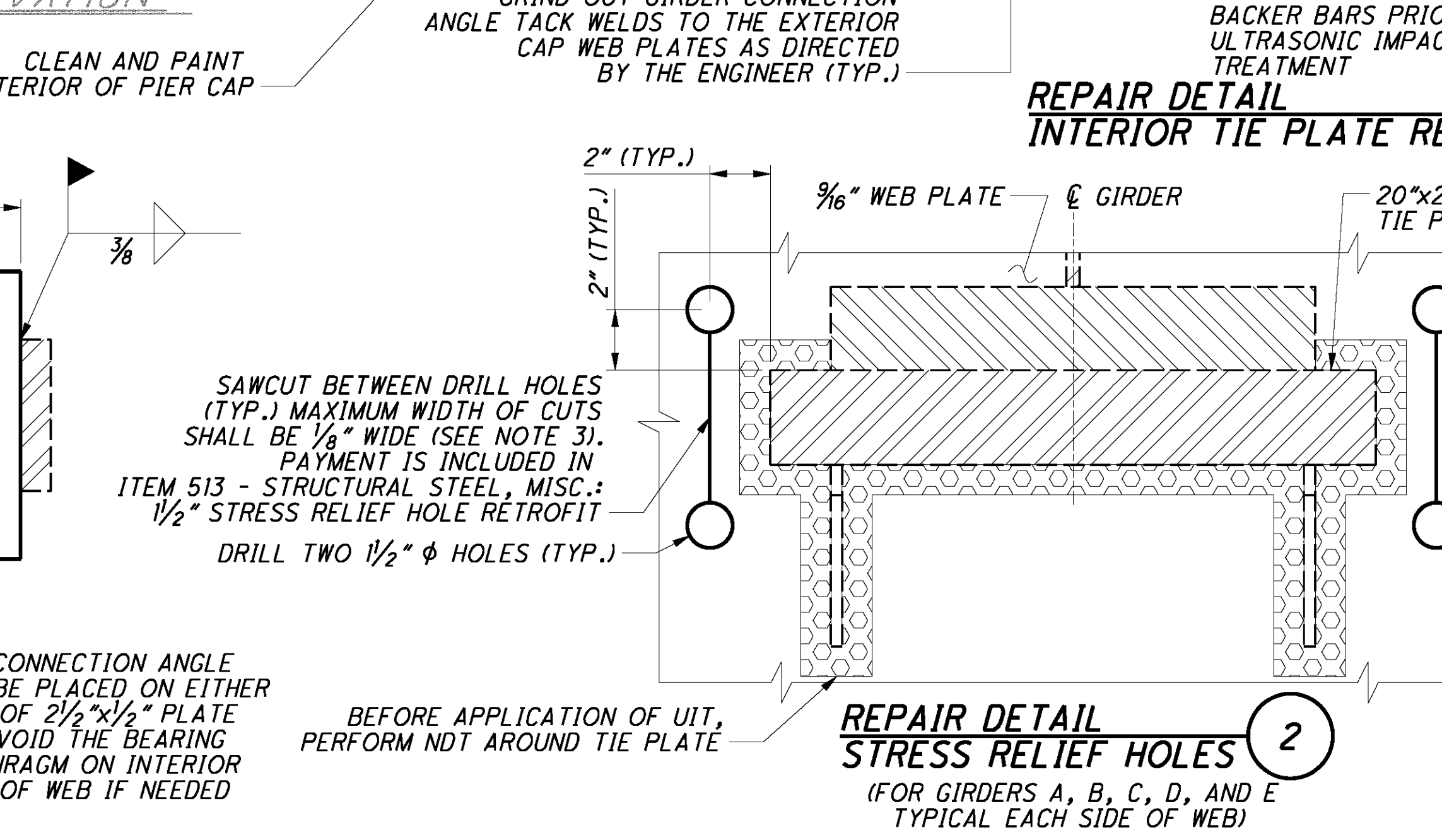
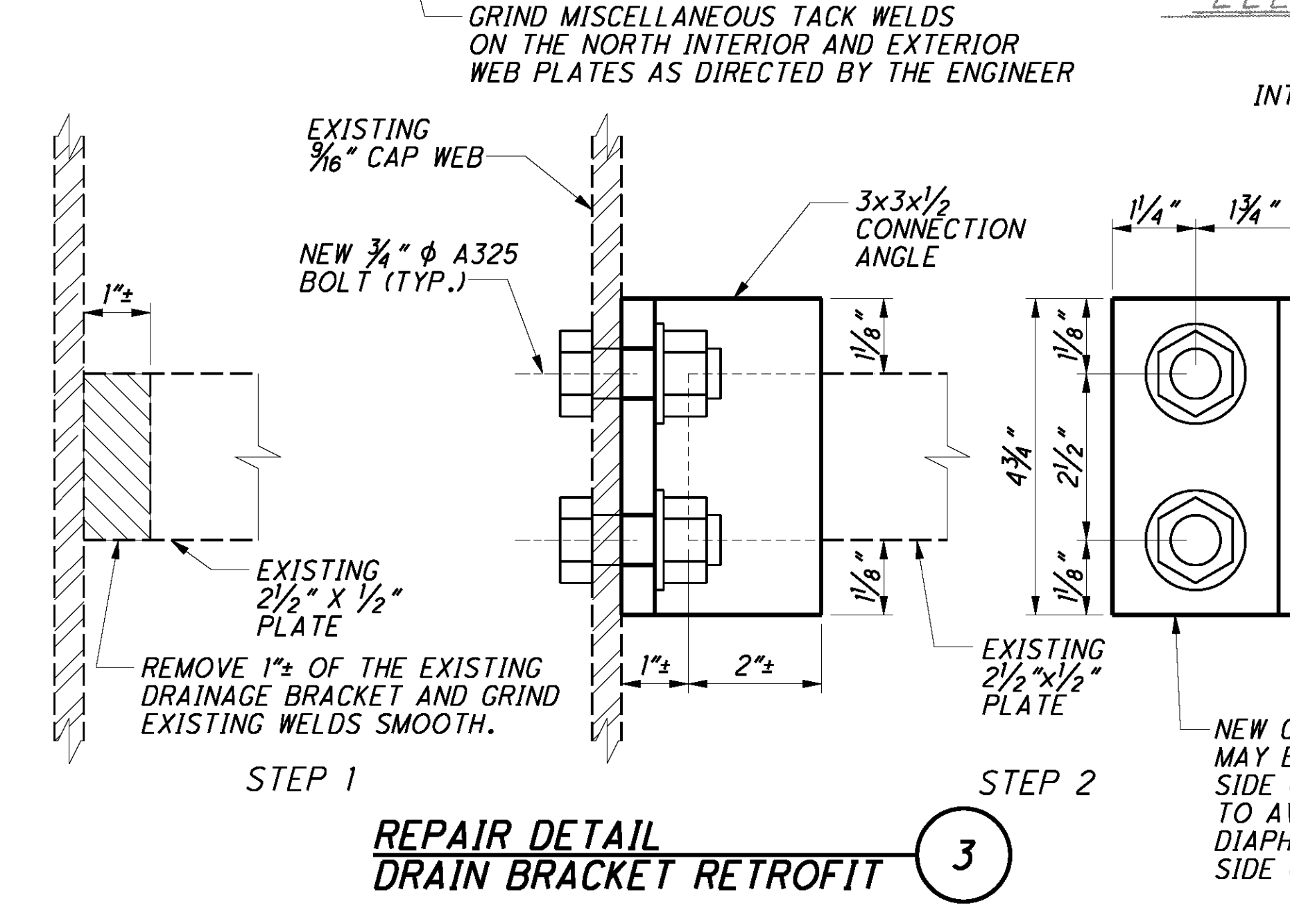
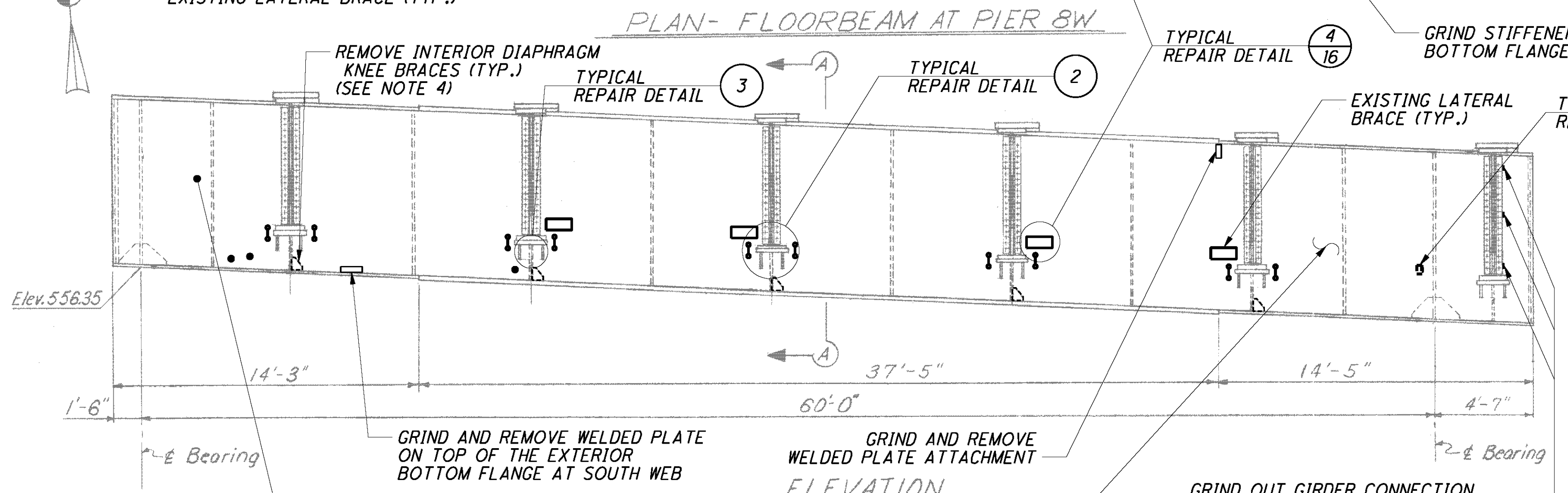
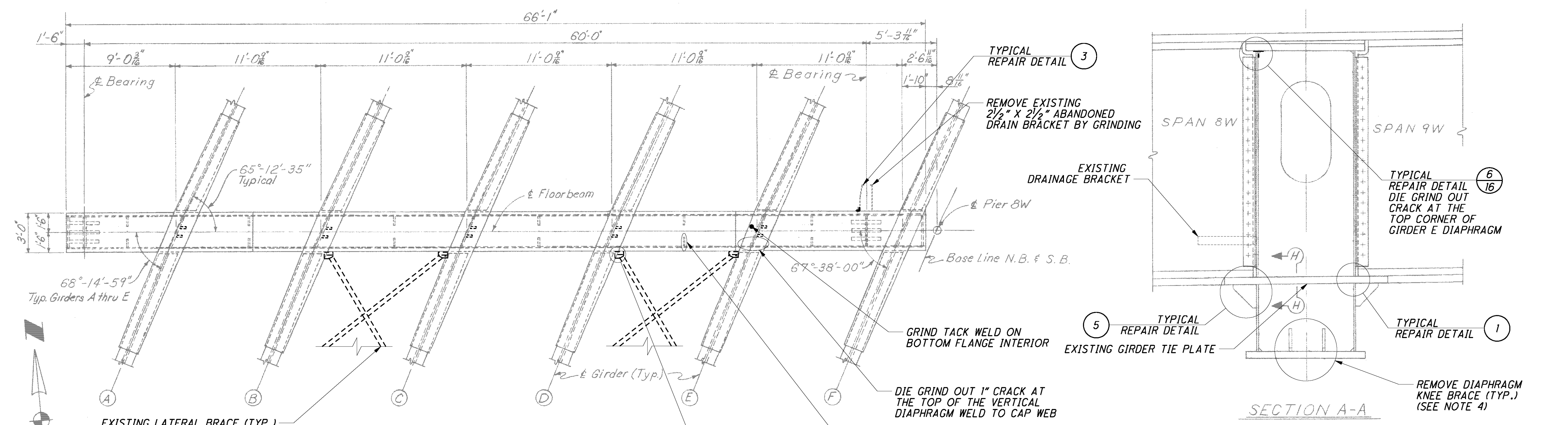
REPAIR DETAIL EXTERIOR KNEE BRACE RETROFIT 3

NOTES:

1. PIER PLAN, ELEVATION, SECTION A-A, AND SECTION E-E ARE TAKEN FROM THE ORIGINAL PLANS.
2. CLEAN AND PAINT REPAIR AREAS ON THE INTERIOR AND EXTERIOR OF THE PIER CAP.
3. CARE SHALL BE TAKEN NOT TO OVERCUT SAWCUT BEYOND DRILL HOLES. FLAME CUTTING IS NOT PERMITTED.

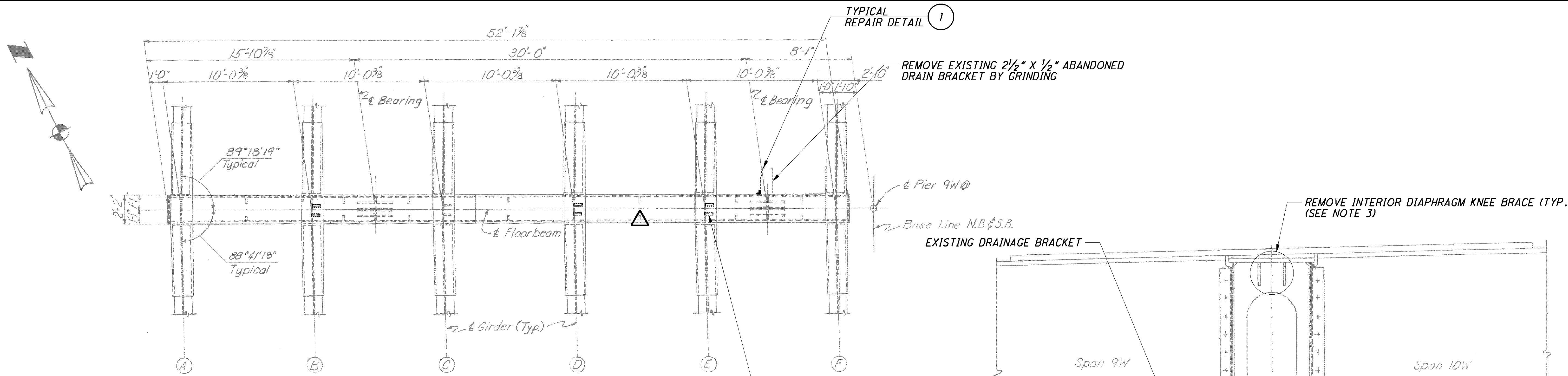
- LIMITS OF 1/2" WIDE ULTRASONIC IMPACT TREATMENT (UIT)
- LIMITS OF PAINTING OF INTERIOR OF PIER CAP
- LIMITS OF STEEL REMOVAL ON EXTERNAL KNEE BRACES BY GRINDING

4/17/2008
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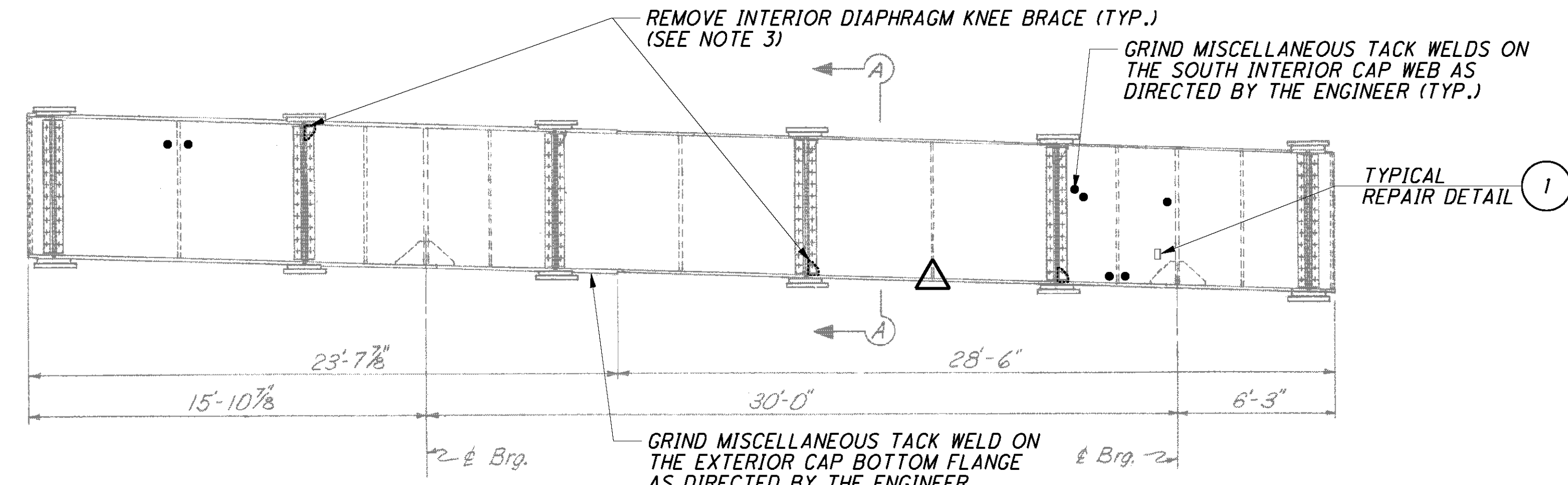


- NOTES:**
- PIER PLAN, ELEVATION, SECTION A-A, AND SECTION H-H ARE TAKEN FROM THE ORIGINAL PLANS.
 - CLEAN AND PAINT REPAIR AREAS ON EXTERIOR OF PIER CAP.
 - CARE SHALL BE TAKEN NOT TO OVERCUT SAWCUT BEYOND DRILLED HOLES. FLAME CUTTING IS NOT PERMITTED.
 - REMOVE INTERIOR DIAPHRAGM KNEE BRACE AND GRIND SMOOTH ON BOTTOM FLANGE AT GIRDERS A, B, C, D, AND E. APPLY ULTRASONIC IMPACT TREATMENT TO THE BOTTOM FLANGE ALONG PREVIOUS KNEE BRACE WELDS.
- LIMITS OF STEEL REMOVAL ON EXTERNAL KNEE BRACES BY GRINDING
 - LIMITS OF 1/2" WIDE ULTRASONIC IMPACT TREATMENT (UIT)

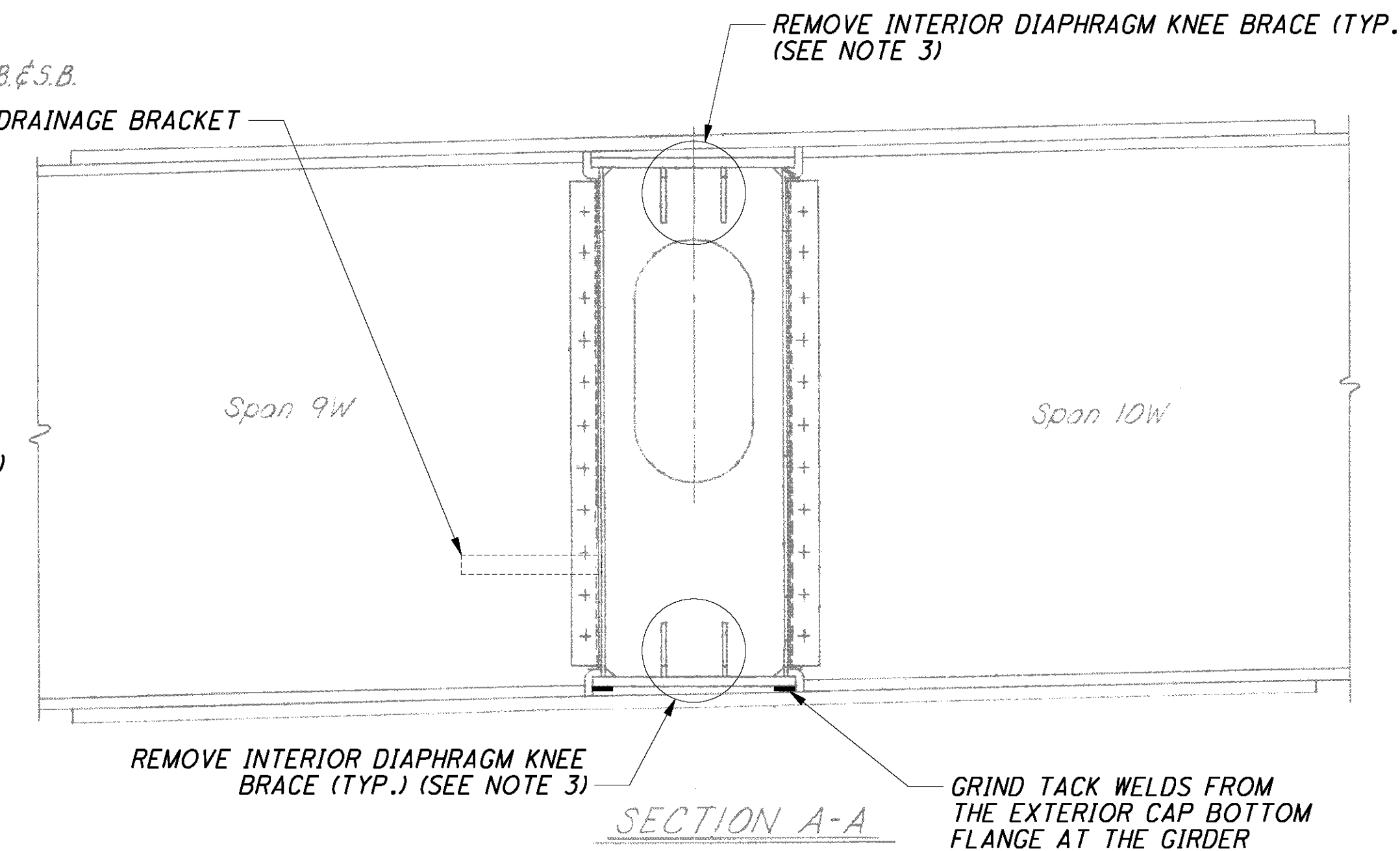
4/17/2008
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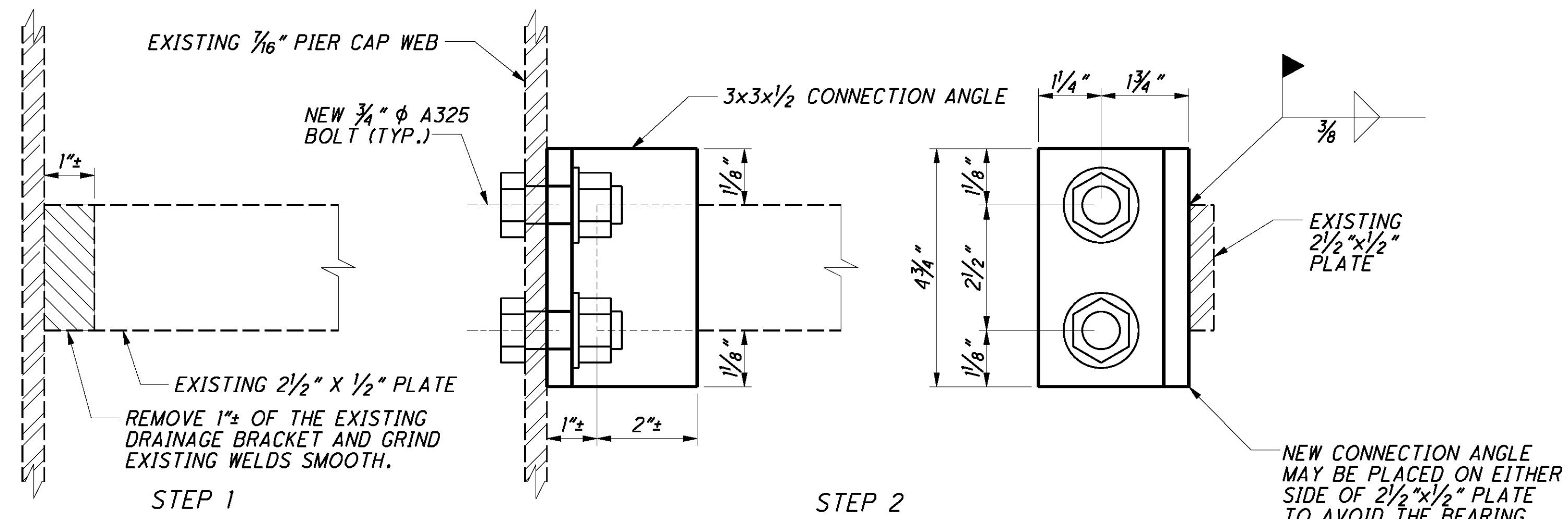
PLAN - FLOORBEAM AT PIER 9W



ELEVATION



SECTION A-A

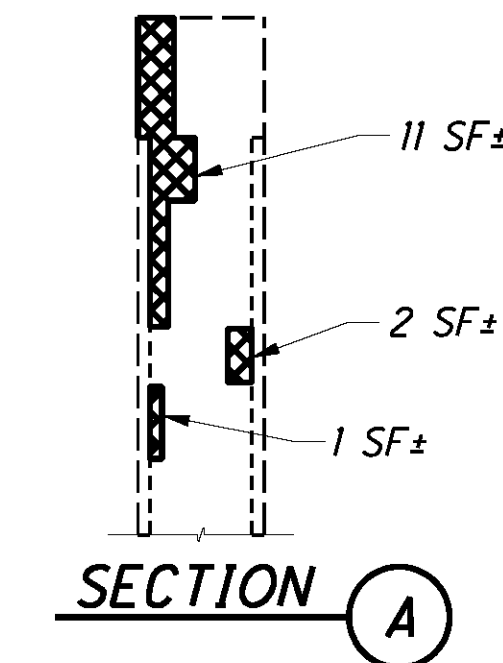
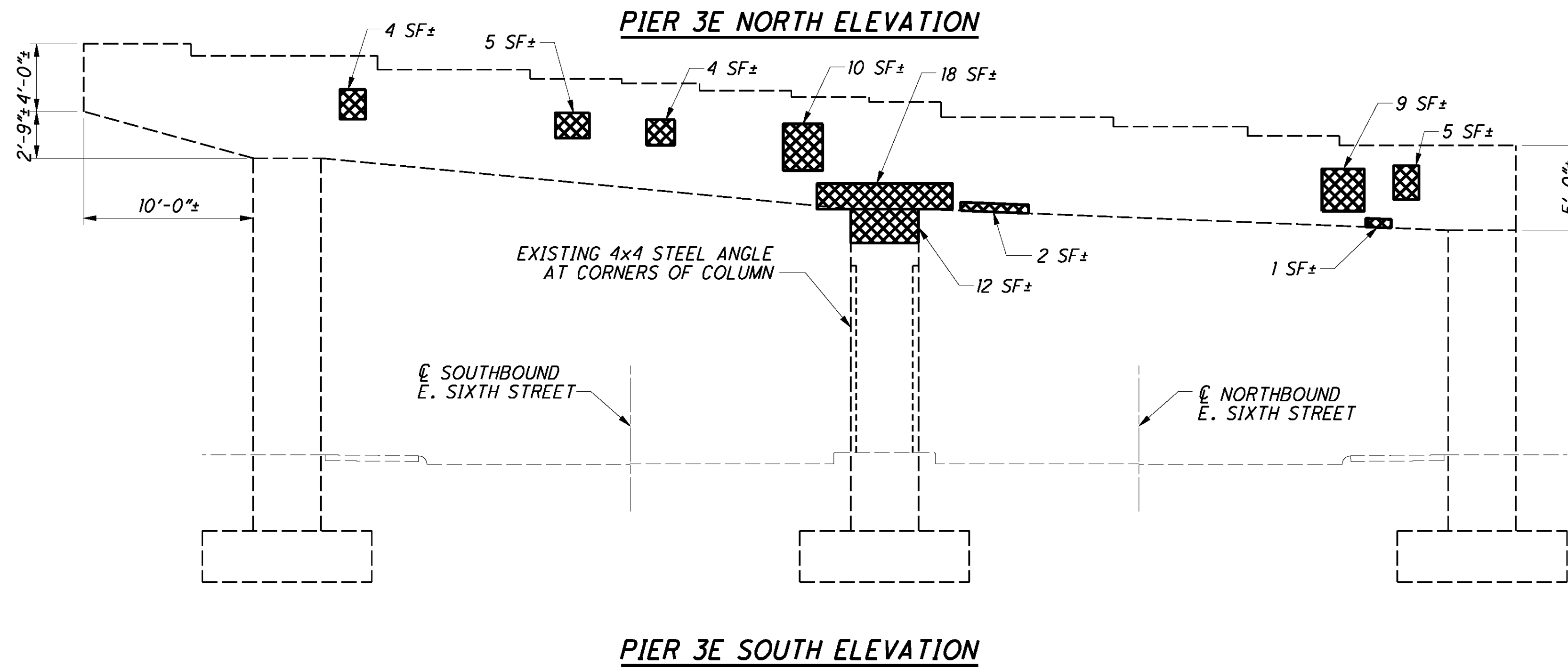
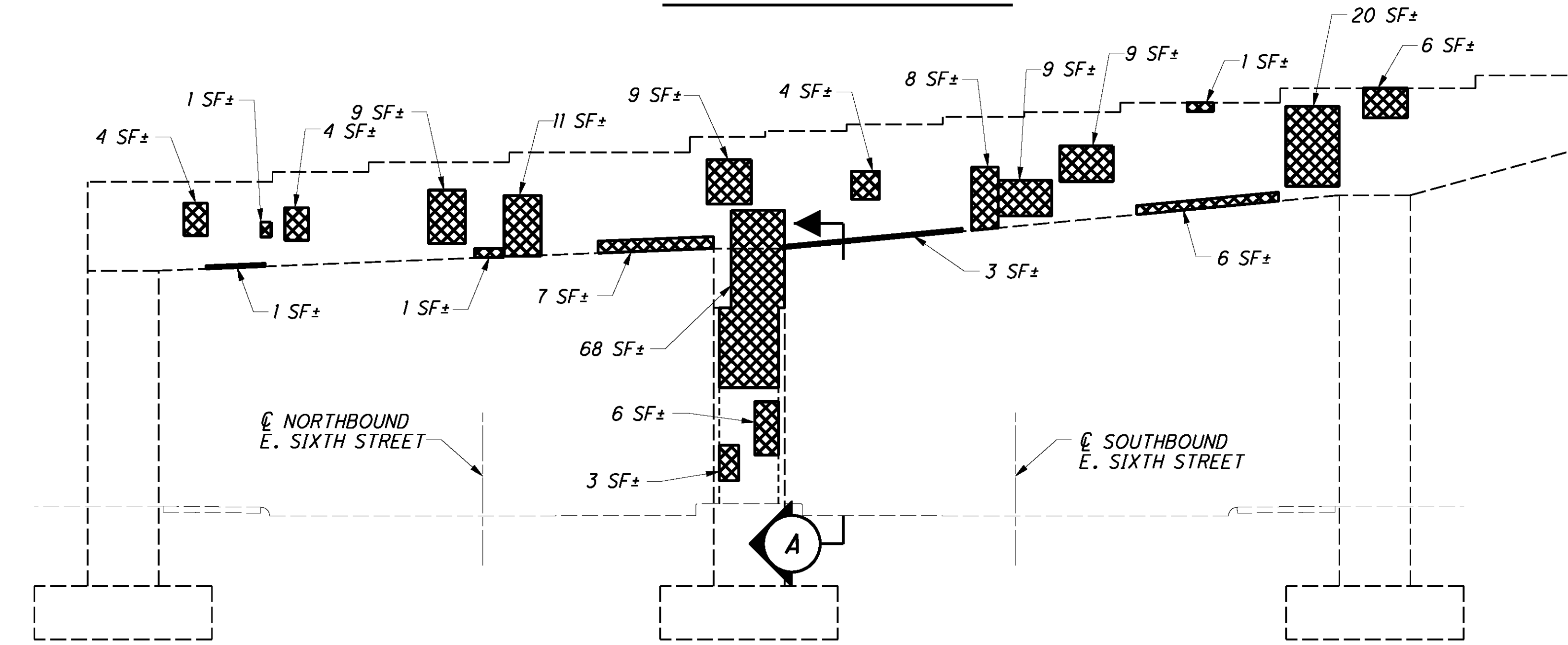
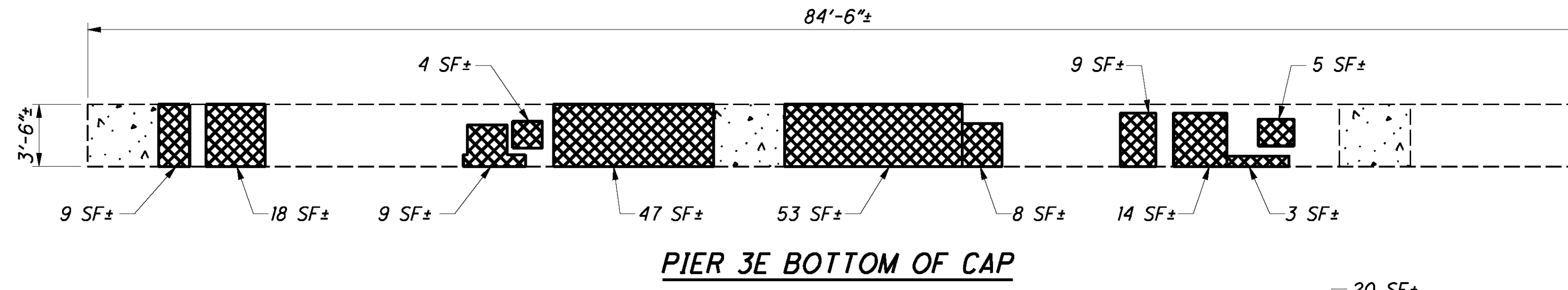
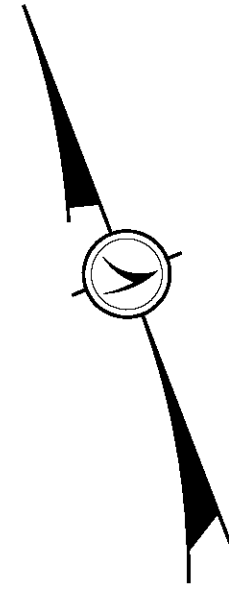


REPAIR DETAIL 1
DRAIN BRACKET RETROFIT

- NOTE:**
1. PIER PLAN, ELEVATION AND SECTION A-A ARE TAKEN FROM THE ORIGINAL PLANS.
 2. CLEAN AND PAINT REPAIR AREAS ON INTERIOR AND EXTERIOR OF PIER CAP.
 3. REMOVE INTERIOR DIAPHRAGM KNEE BRACE AND GRIND SMOOTH WELD ON BOTTOM FLANGE AT GIRDERS D AND E. REMOVE DIAPHRAGM KNEE BRACE AND GRIND SMOOTH WELD ON TOP FLANGE AT GIRDER B ONLY. APPLY ULTRASONIC IMPACT TREATMENT TO THE TOP OR BOTTOM FLANGE ALONG PREVIOUS KNEE BRACE WELDS.

△ - LOCATION OF INTERSECTING WELD BETWEEN PIER CAP WEB STIFFENER WELD AND PIER CAP FLANGE WELD TO BE REMOVED BY GRINDING

4/17/2008
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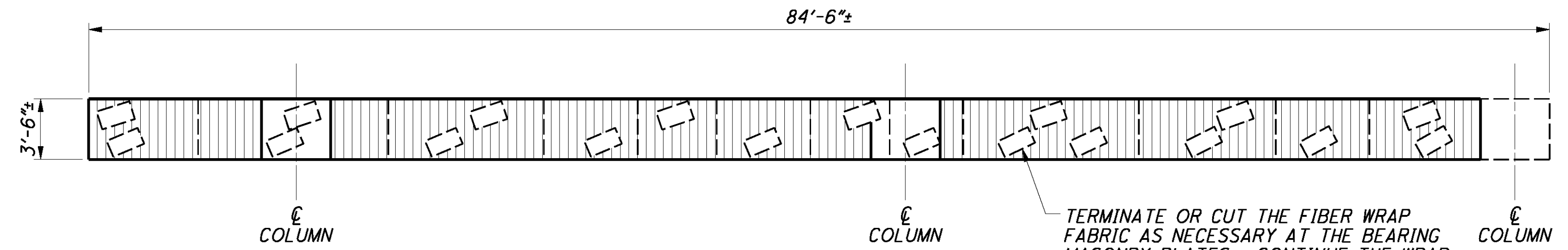
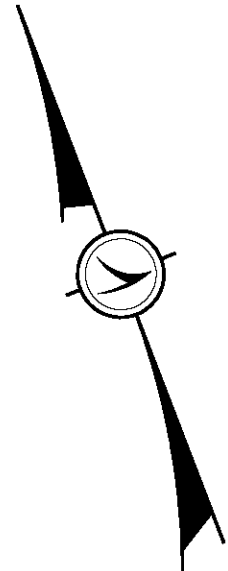
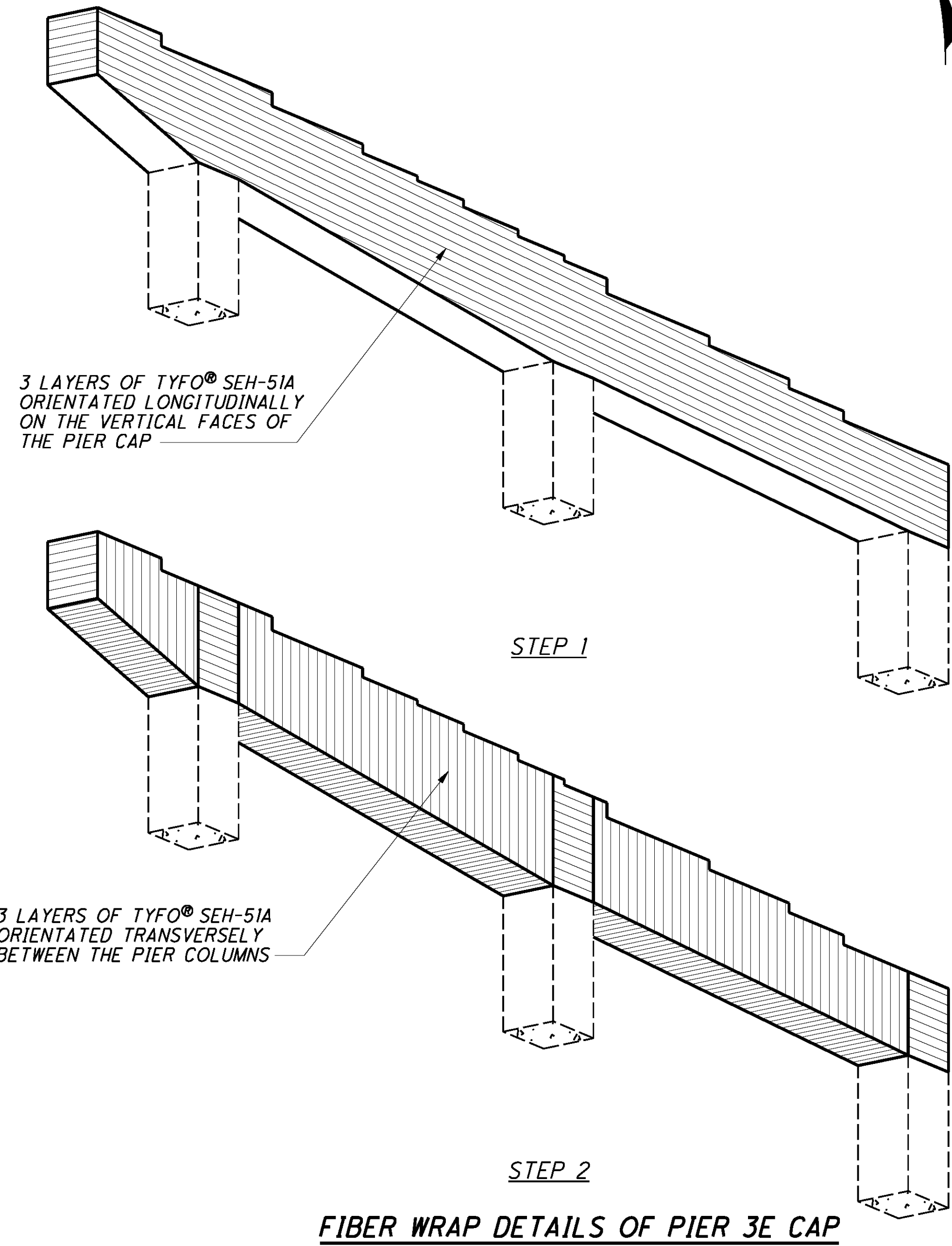


- LIMITS OF CONCRETE PATCHING PER ITEM 519

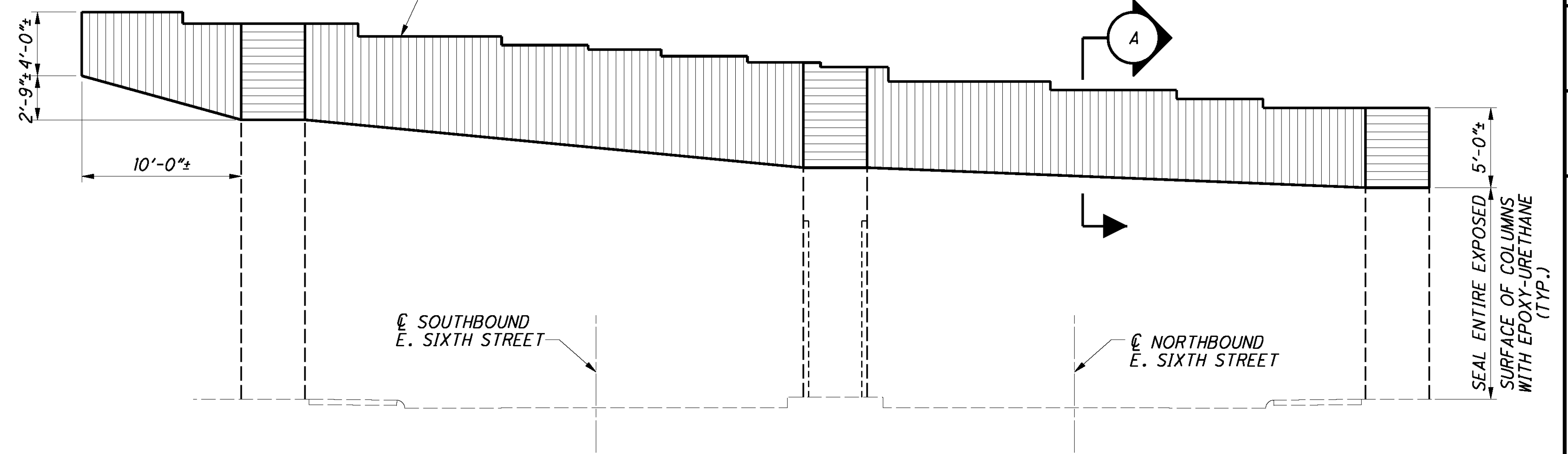
NOTES:

- FOR COMPOSITE FIBER WRAP DETAILS AND CONCRETE SEALING DETAILS, SEE SHEET 26 OF 38.

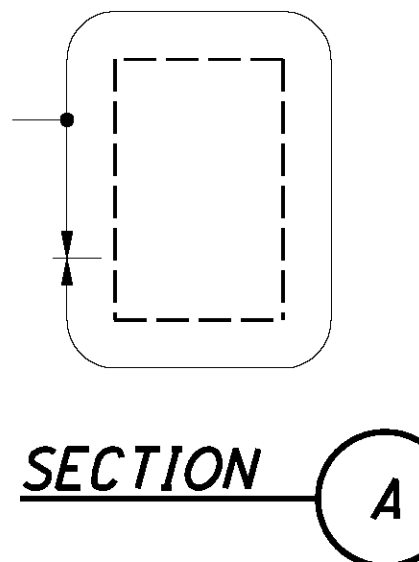
4/17/2008
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FOR DETAILS AND SPECIFICATIONS OF THE FIBER WRAP, SEE THE GFRC GENERAL NOTES, SHEET 6 OF 38



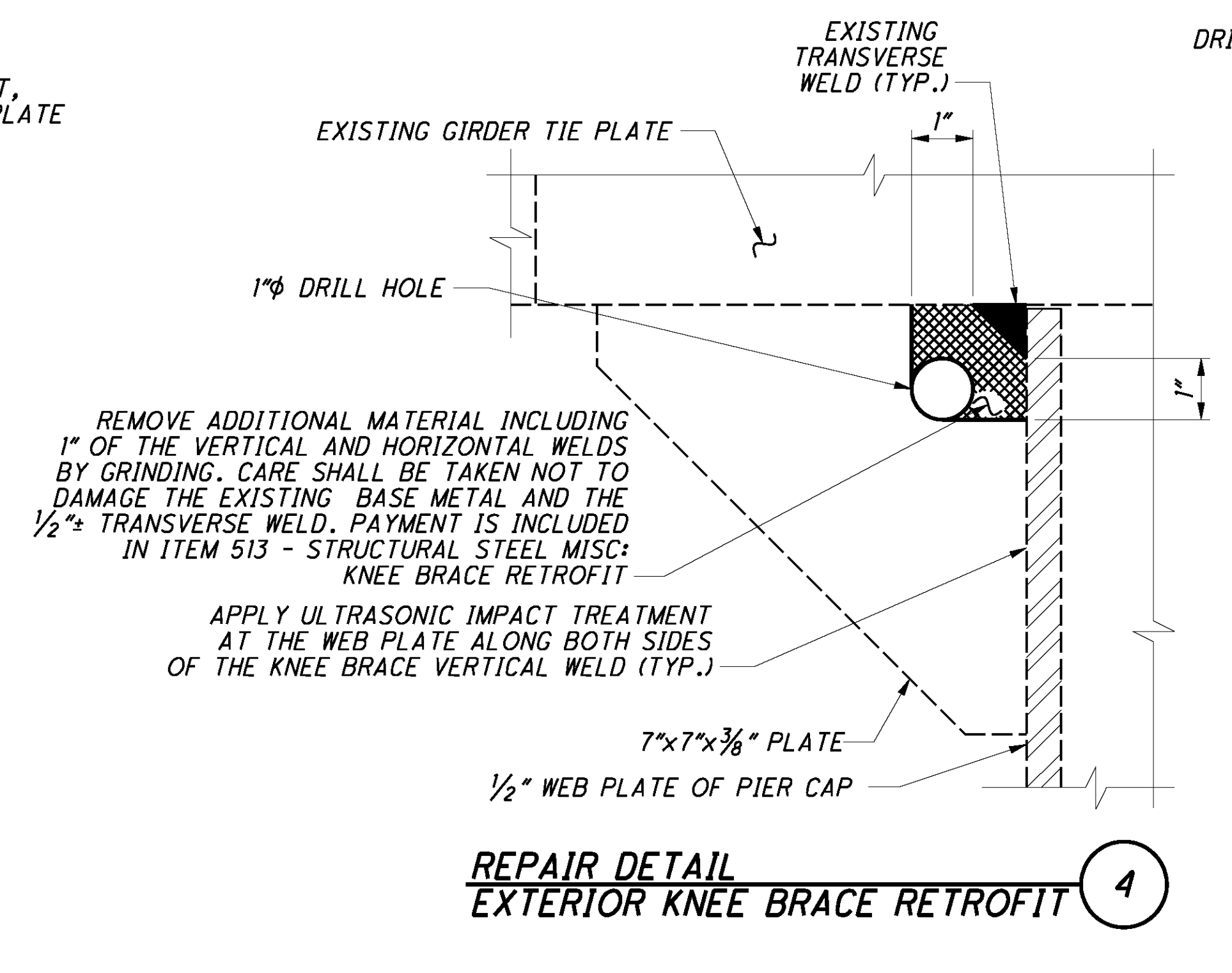
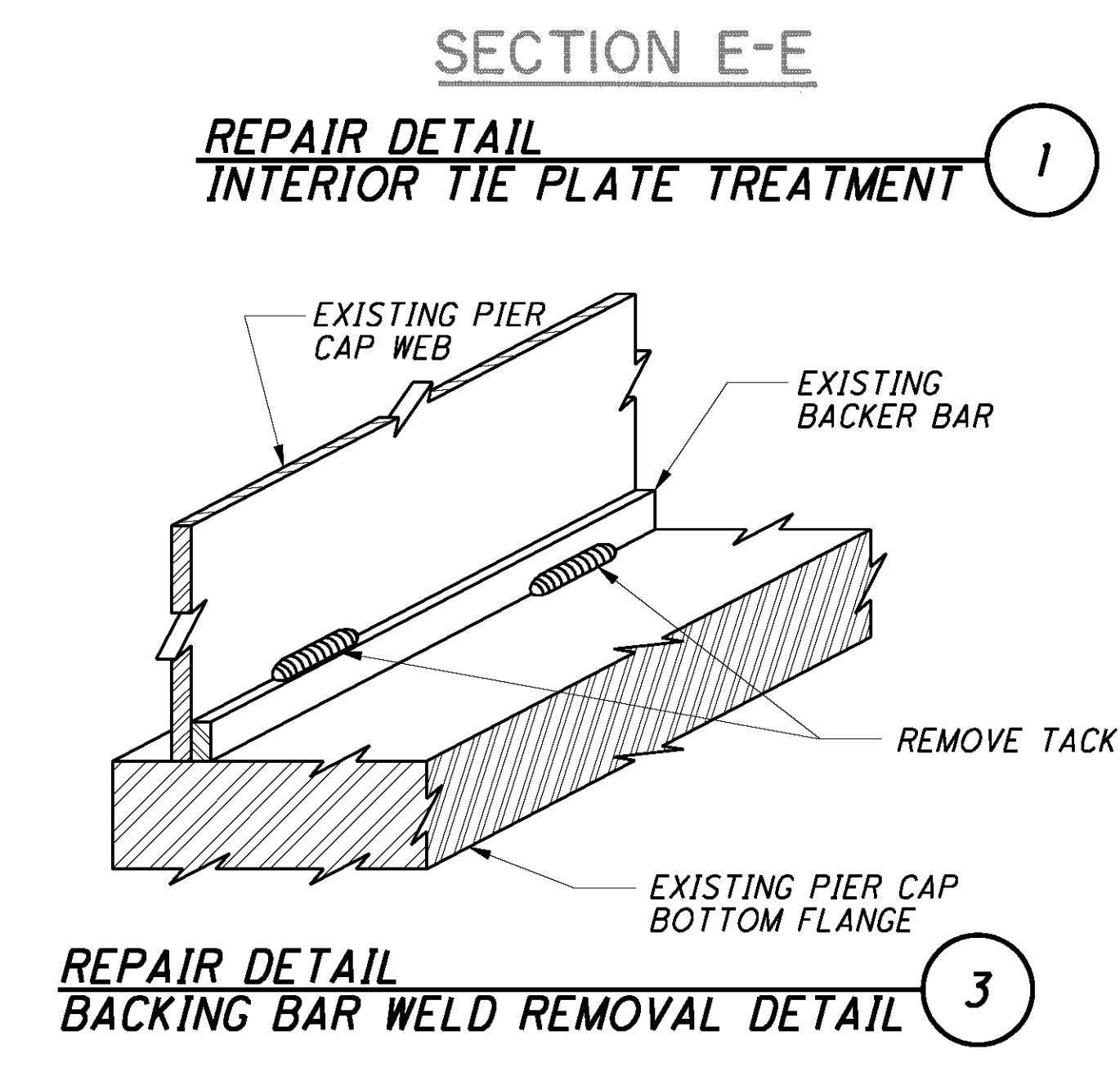
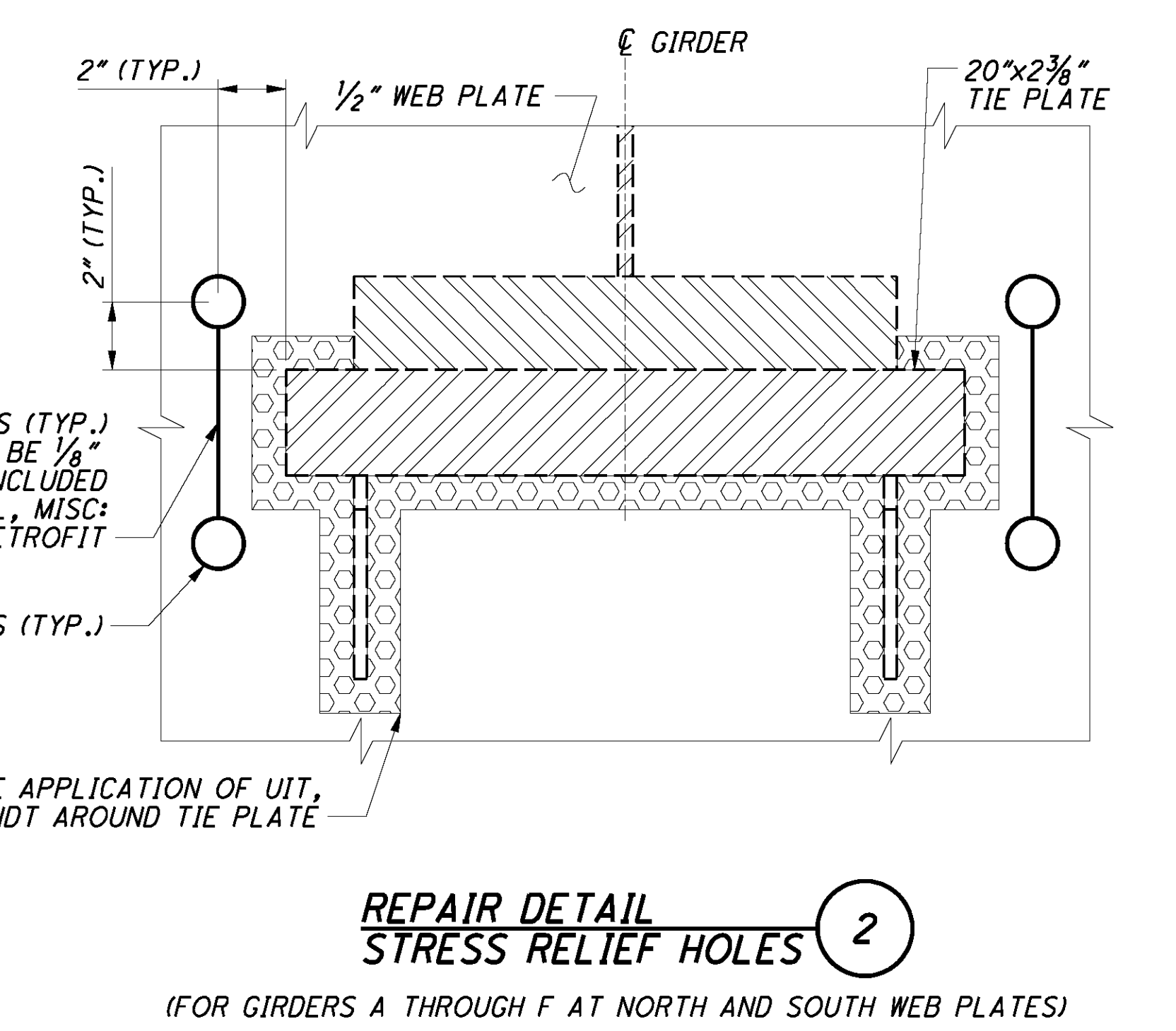
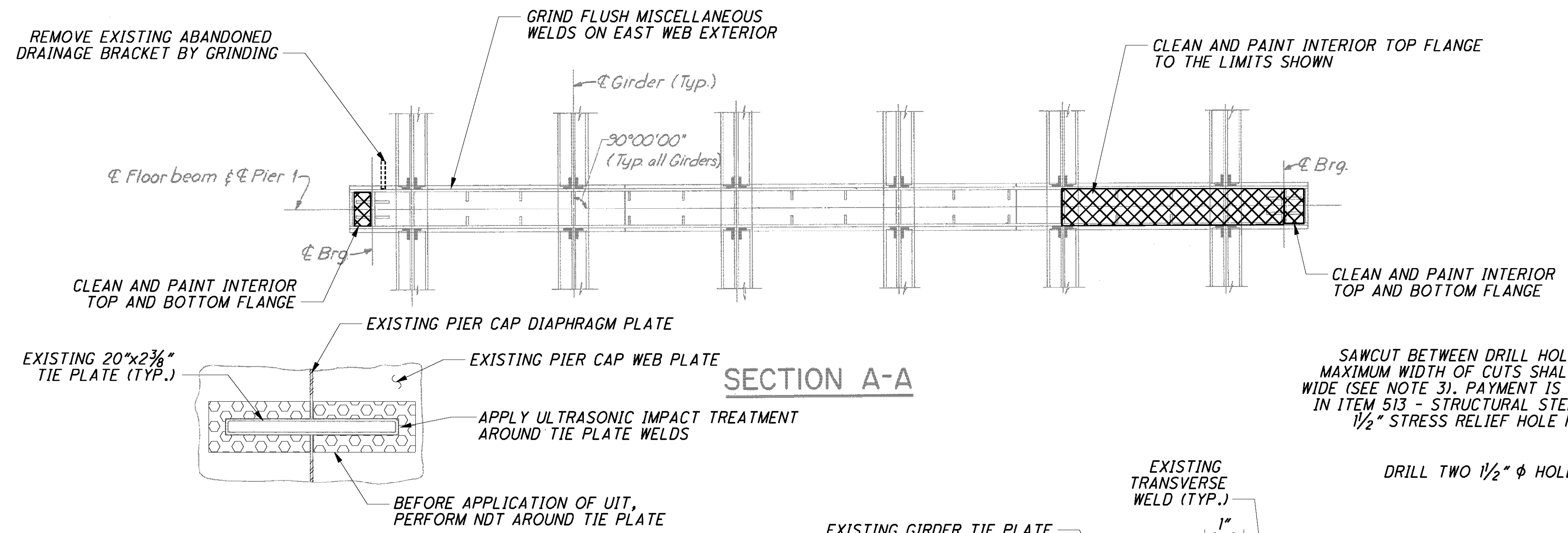
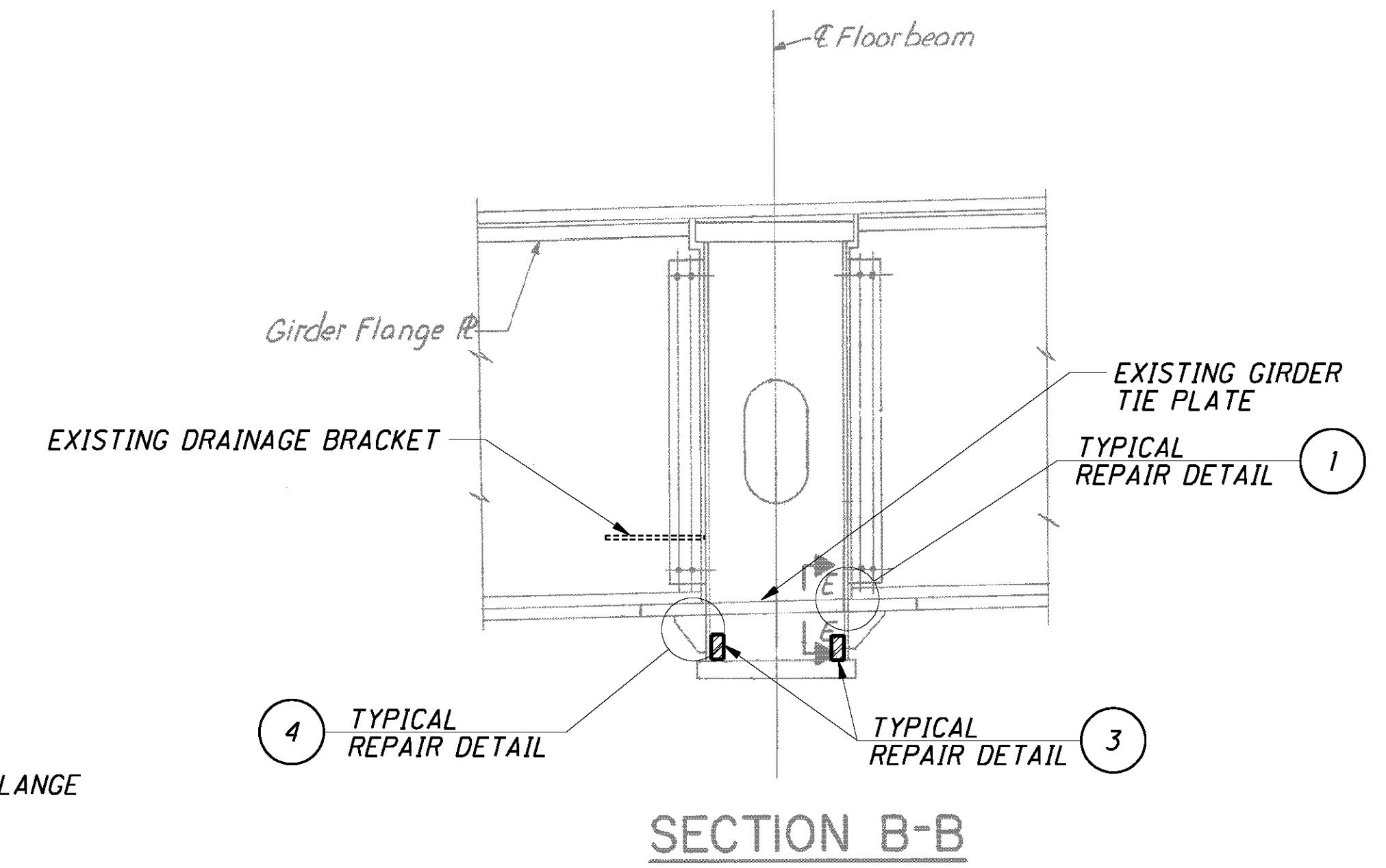
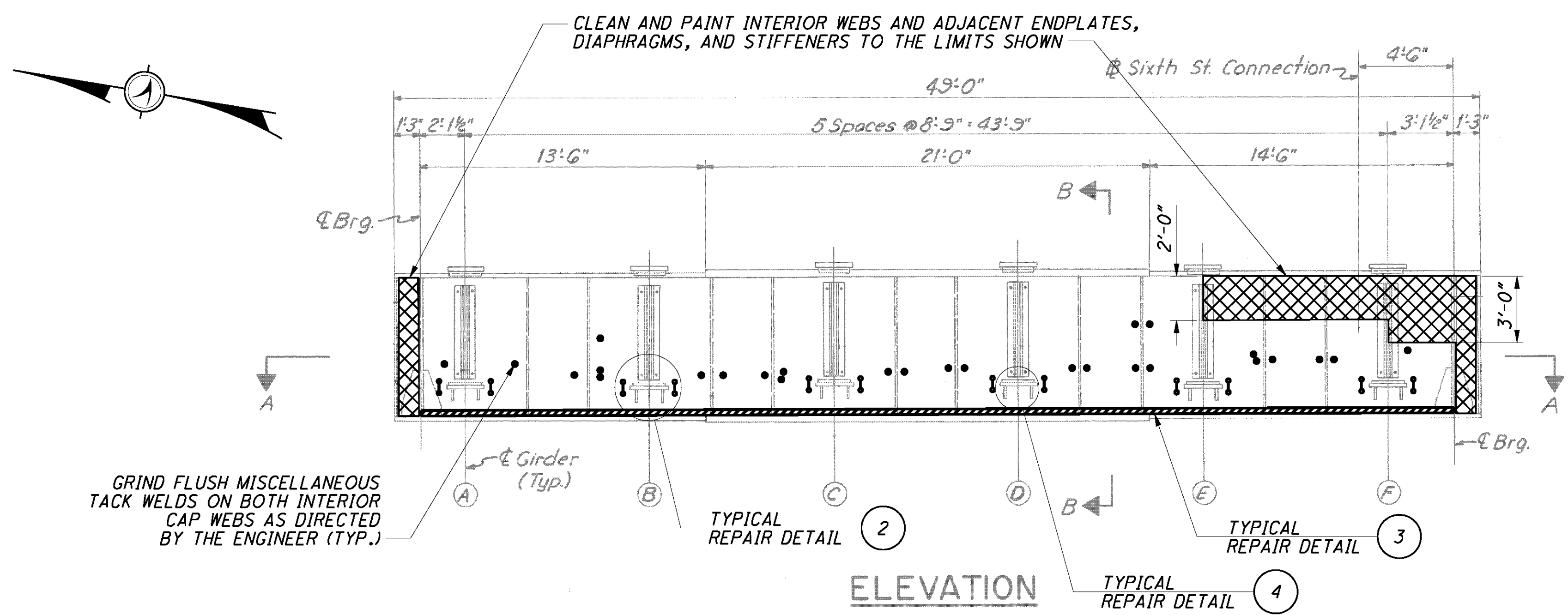
SEAL ENTIRE SURFACE PERIMETER OF CAP WITH EPOXY-URETHANE SEALER AFTER THE FIBER WRAP IS COMPLETED (SEE NOTE 3)



NOTES:

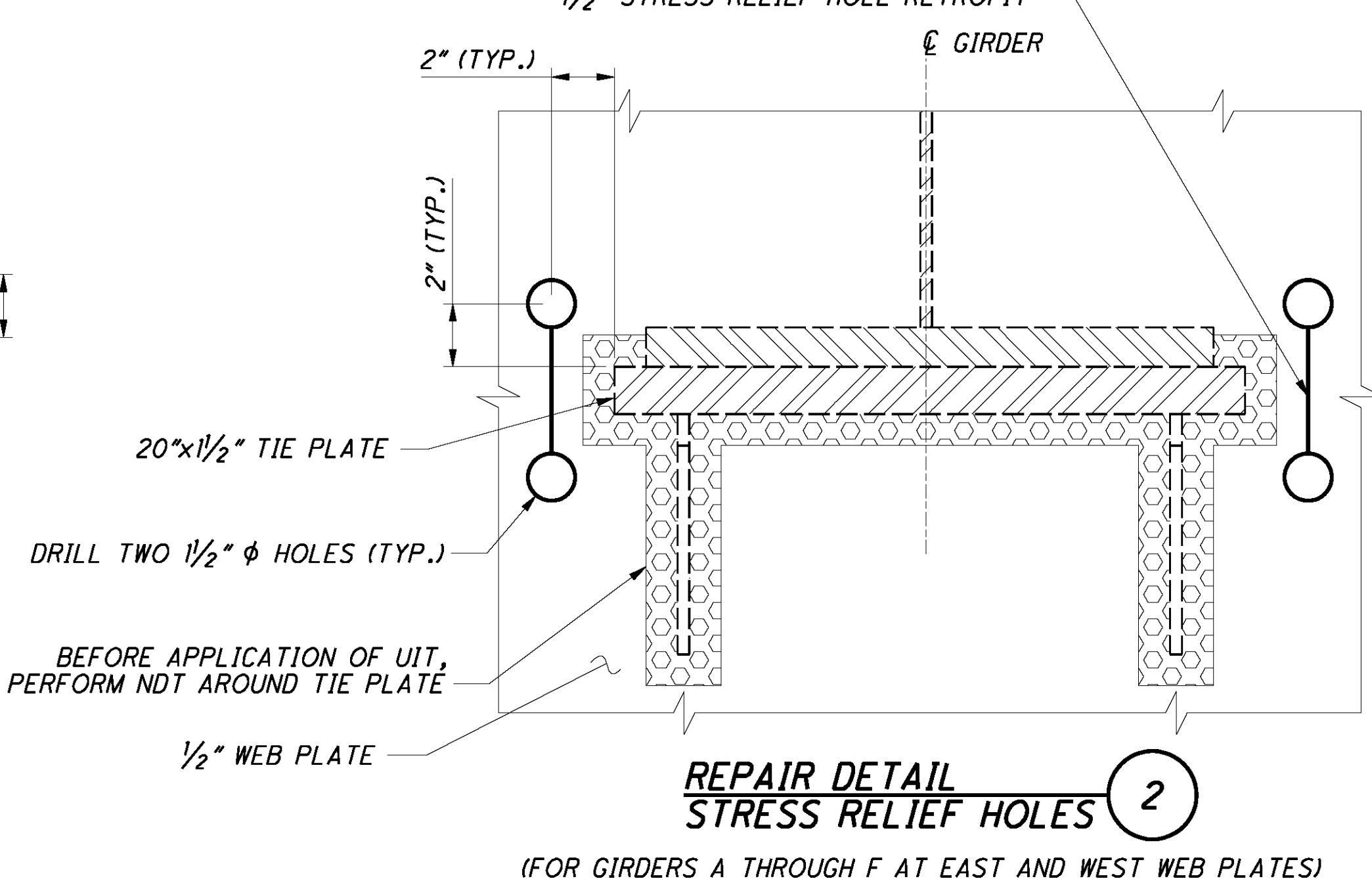
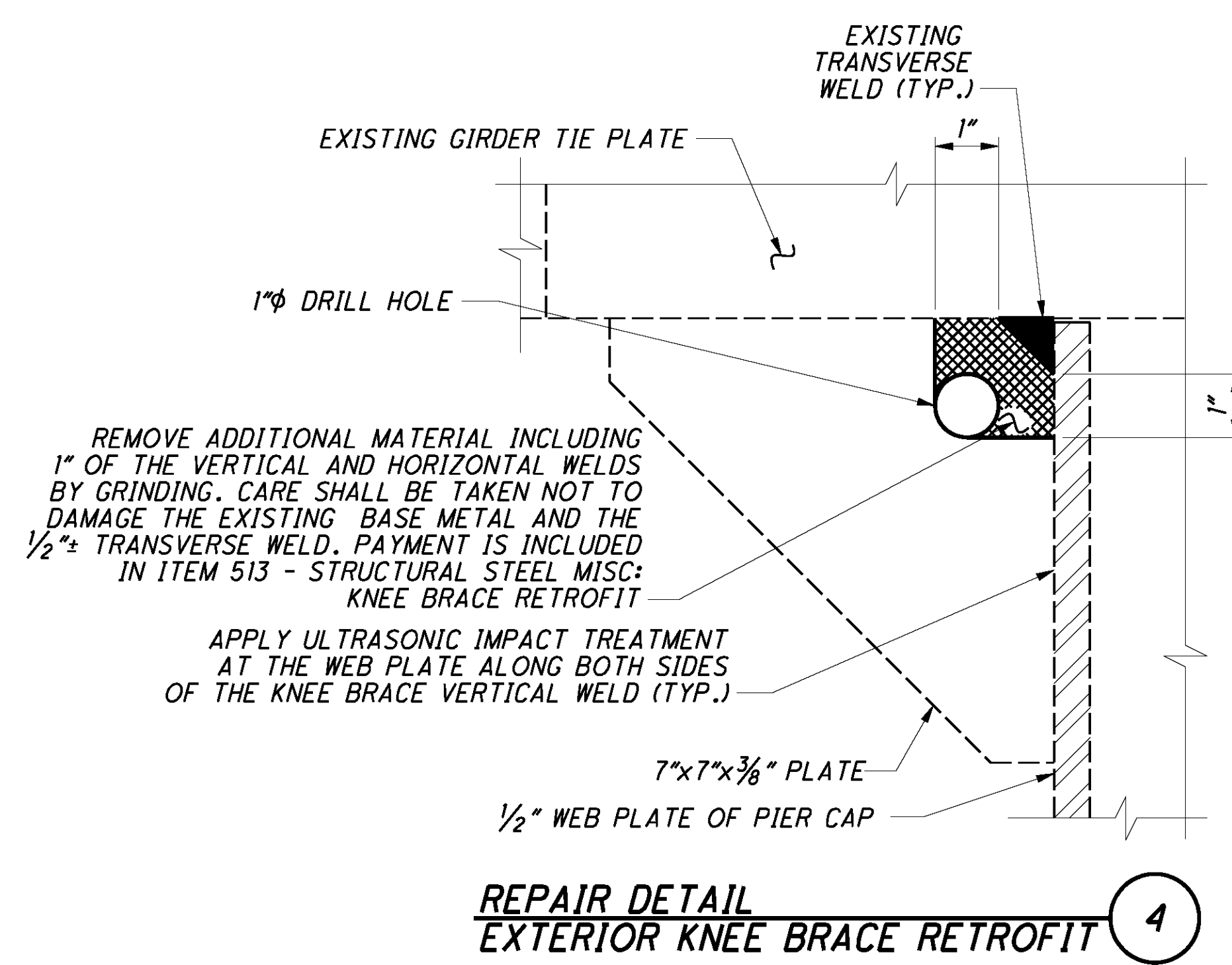
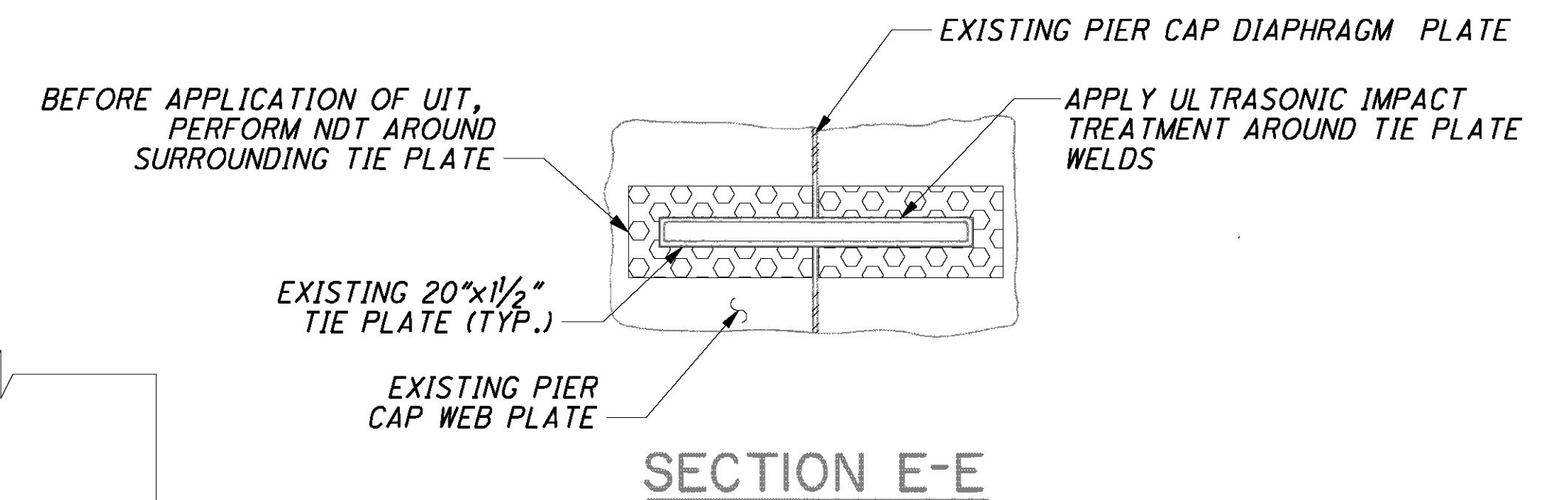
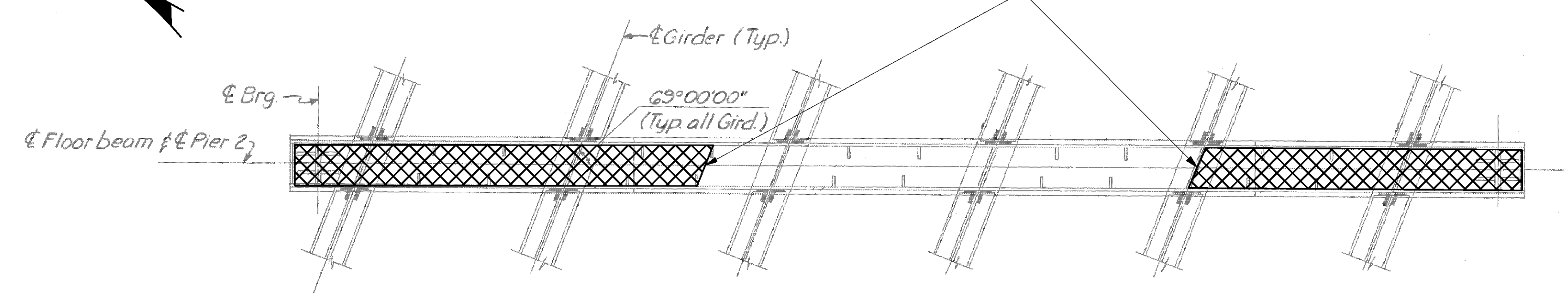
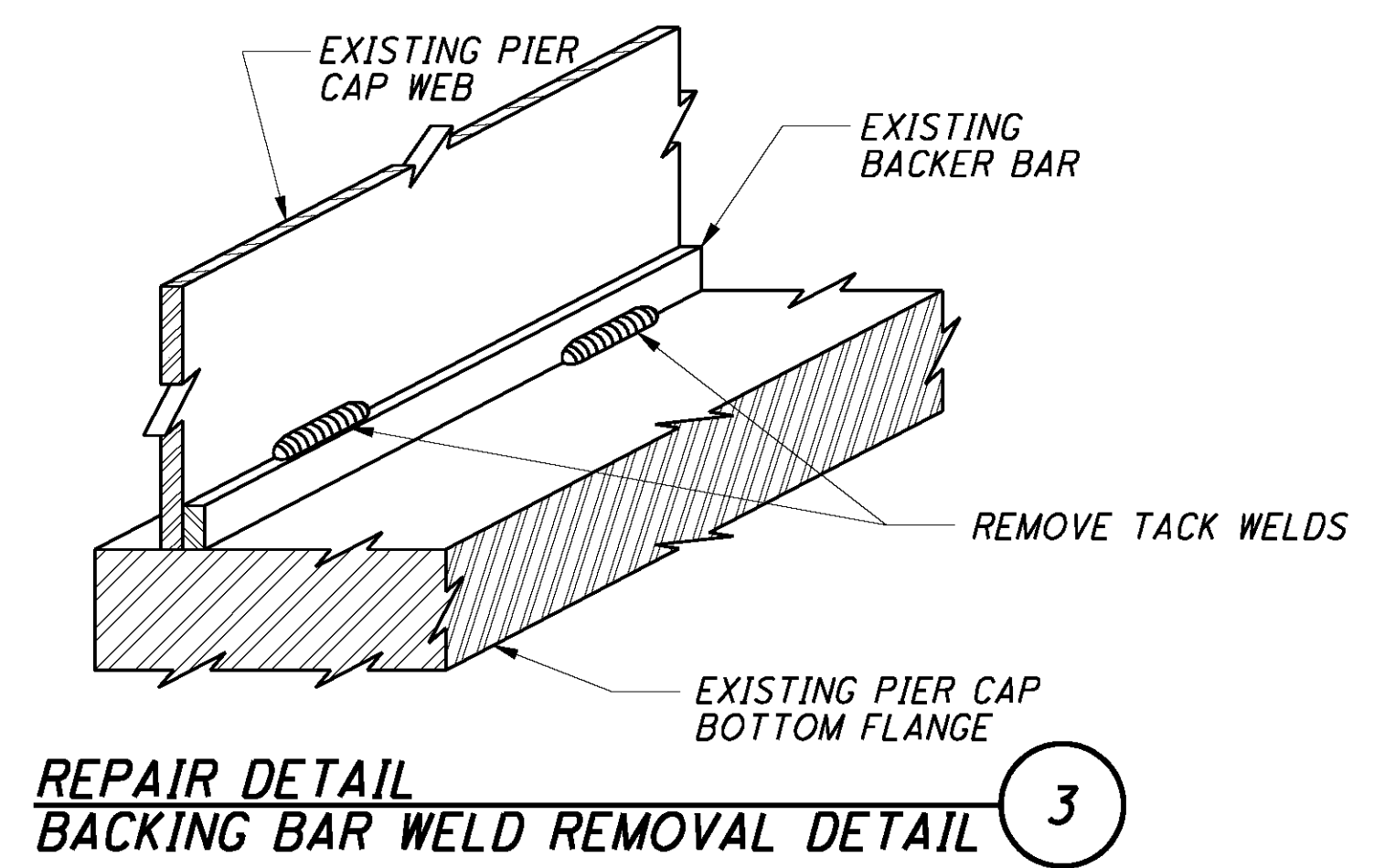
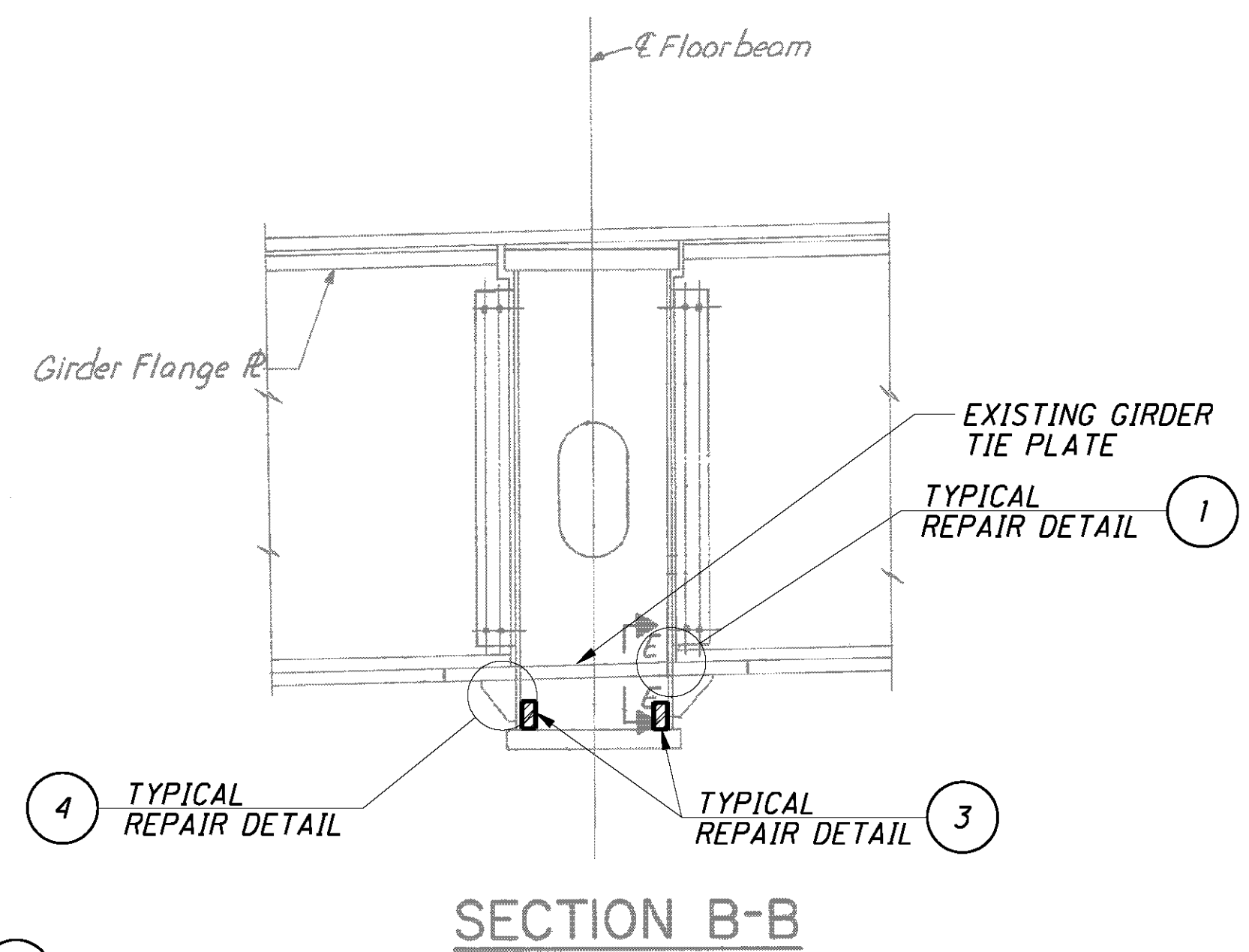
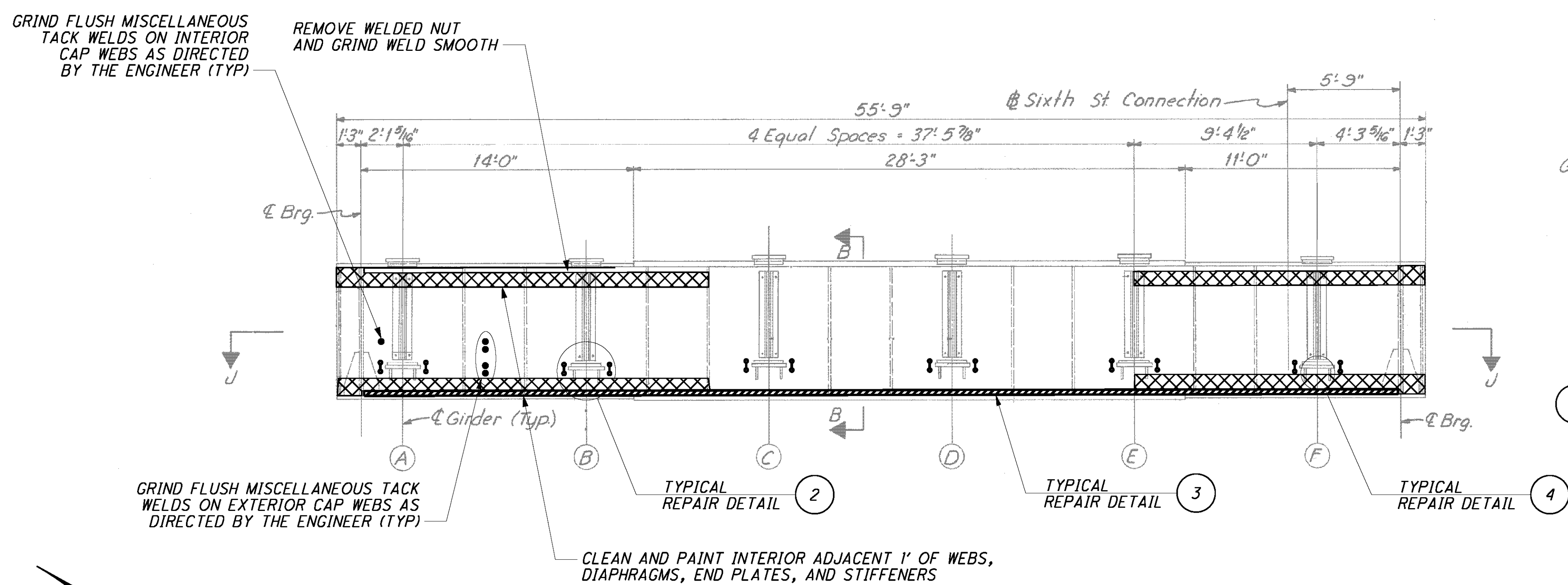
1. FOR GENERAL NOTES, SEE SHEET 6 OF 38.
2. PAYMENT FOR SEALING THE EXPOSED SURFACES OF PIER 3E IS INCLUDED IN ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY URETHANE).
3. 24 TO 72 HOURS AFTER THE FIBER WRAP HAS BEEN PLACED, SEAL THE ENTIRE PIER CAP AND COLUMNS WITH AN EPOXY-URETHANE SEALER TO MATCH EXISTING SUBSTRUCTURE.

4/17/2008
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- NOTES:**
- PIER ELEVATION AND SECTIONS A-A, B-B, AND E-E ARE TAKEN FROM THE ORIGINAL PLANS.
 - CLEAN AND PAINT REPAIR AREAS ON INTERIOR AND EXTERIOR OF PIER CAP.
 - CARE SHALL BE TAKEN NOT TO OVERCUT SAWCUT BEYOND DRILLED HOLES. FLAME CUTTING IS NOT PERMITTED.
- LIMITS OF 1/2" WIDE ULTRASONIC IMPACT TREATMENT (UIT)
 - LIMITS OF PAINTING OF INTERIOR OF PIER CAP

4/17/2008
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- NOTES:**
1. PIER ELEVATION AND SECTIONS B-B, E-E AND J-J ARE TAKEN FROM THE ORIGINAL PLANS.
 2. CLEAN AND PAINT REPAIR AREAS ON INTERIOR AND EXTERIOR OF PIER CAP.
 3. CARE SHALL BE TAKEN NOT TO OVERCUT SAWCUT BEYOND DRILLED HOLES. FLAME CUTTING IS NOT PERMITTED.
- LIMITS OF PAINTING INTERIOR OF PIER CAP
 - LIMITS OF 1/2" WIDE ULTRASONIC IMPACT TREATMENT

DESIGN AGENCY: **Trail Systems**
 65 PUBLIC SQUARE, SUITE 1000
 CLEVELAND, OHIO 44113

DATE: 12-04-07
 REVISION: WRW
 DRAWN: NBR
 CHECKED: BKC

STRUCTURE FILE NUMBER: 3106616

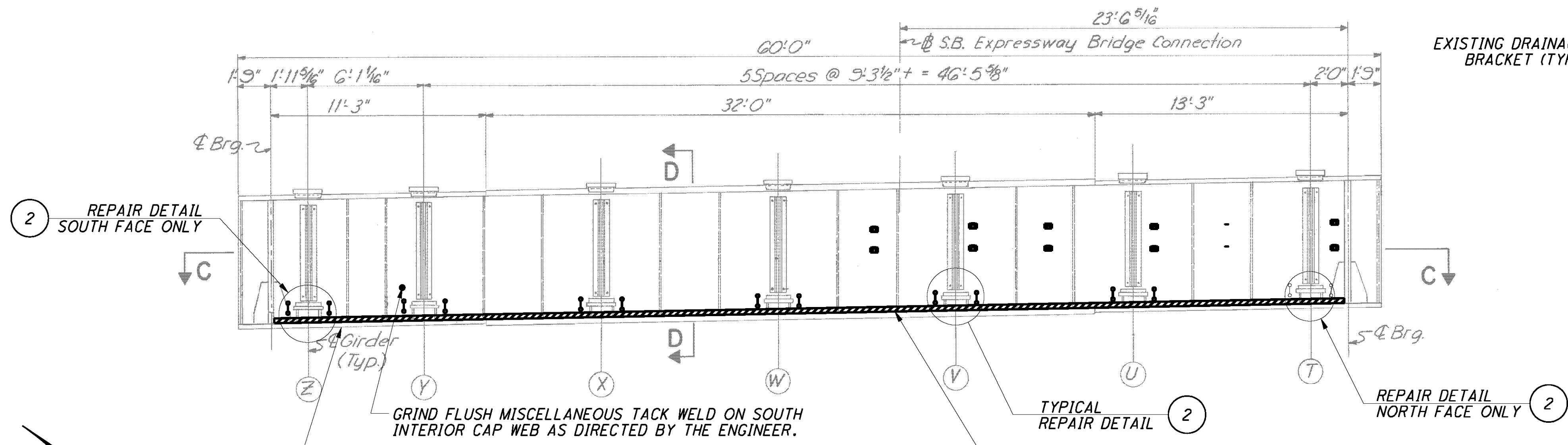
DESIGNED: NBR

PIER 2 CAP RETROFIT DETAILS
 BRIDGE NO. HAM-71-0160
 SIXTH STREET OVER I-71, I-471, SENTINEL STREET AND EGGLESTON STREET

HAM-BH-VAR
 PID No. 25374

28
 38

4/17/2008 P:\2426.03-ODOT 8 Pier Cap\2007 PID25374 DRAWINGS\HAM-71-0197W HAM-71-0197W P1.dgn



ELEVATION OF FLOORBEAM AT PIER I (SOUTH ELEVATION SHOWN)

REPAIR DETAIL SOUTH FACE ONLY

GRIND FLUSH MISCELLANEOUS TACK WELD ON SOUTH INTERIOR CAP WEB AS DIRECTED BY THE ENGINEER.

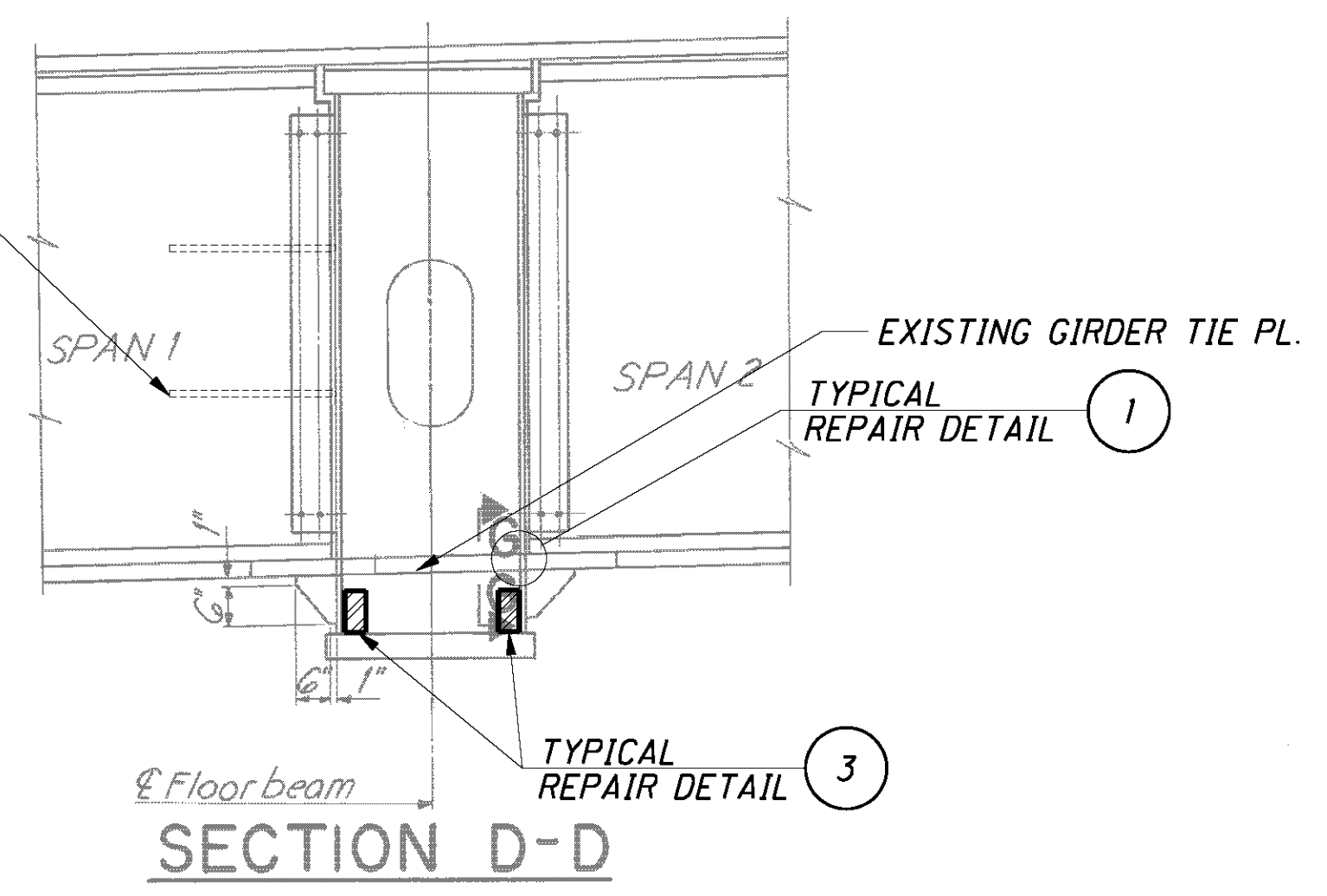
GRIND FLUSH MISCELLANEOUS TACK WELD ON THE EXTERIOR BOTTOM FLANGE AS DIRECTED BY THE ENGINEER.

TYPICAL REPAIR DETAIL

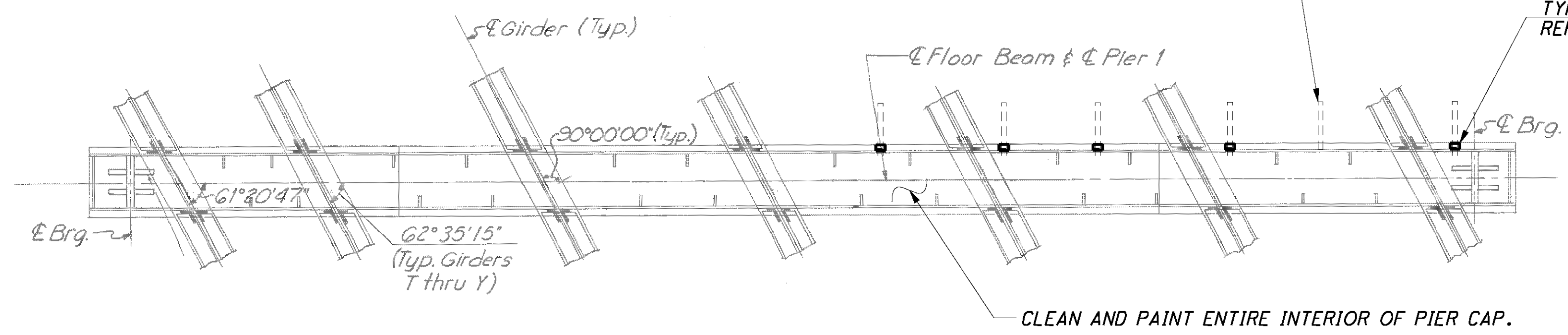
TYPICAL REPAIR DETAIL

REMOVE 2 1/2" x 1/2" ABANDONED DRAIN BRACKET BY GRINDING

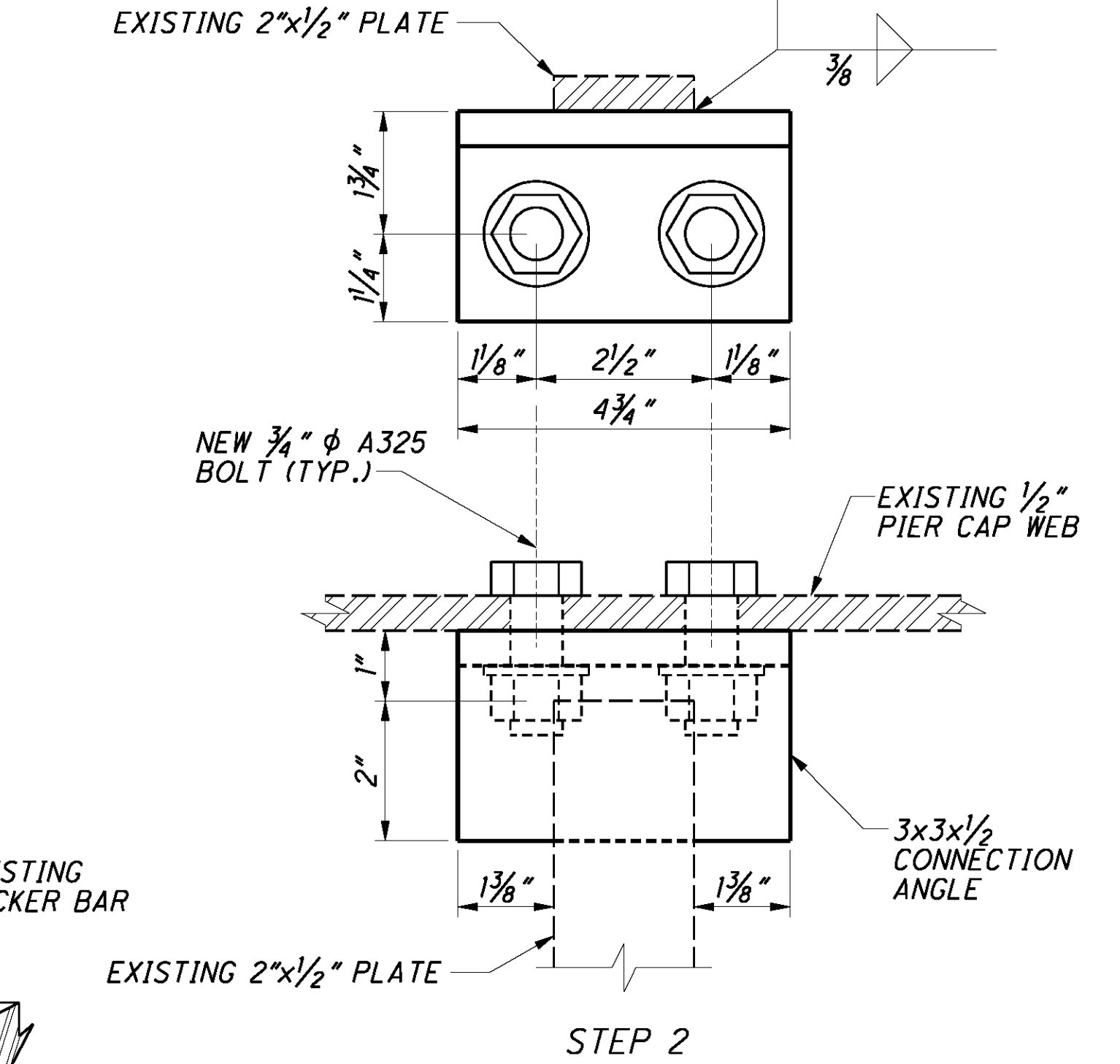
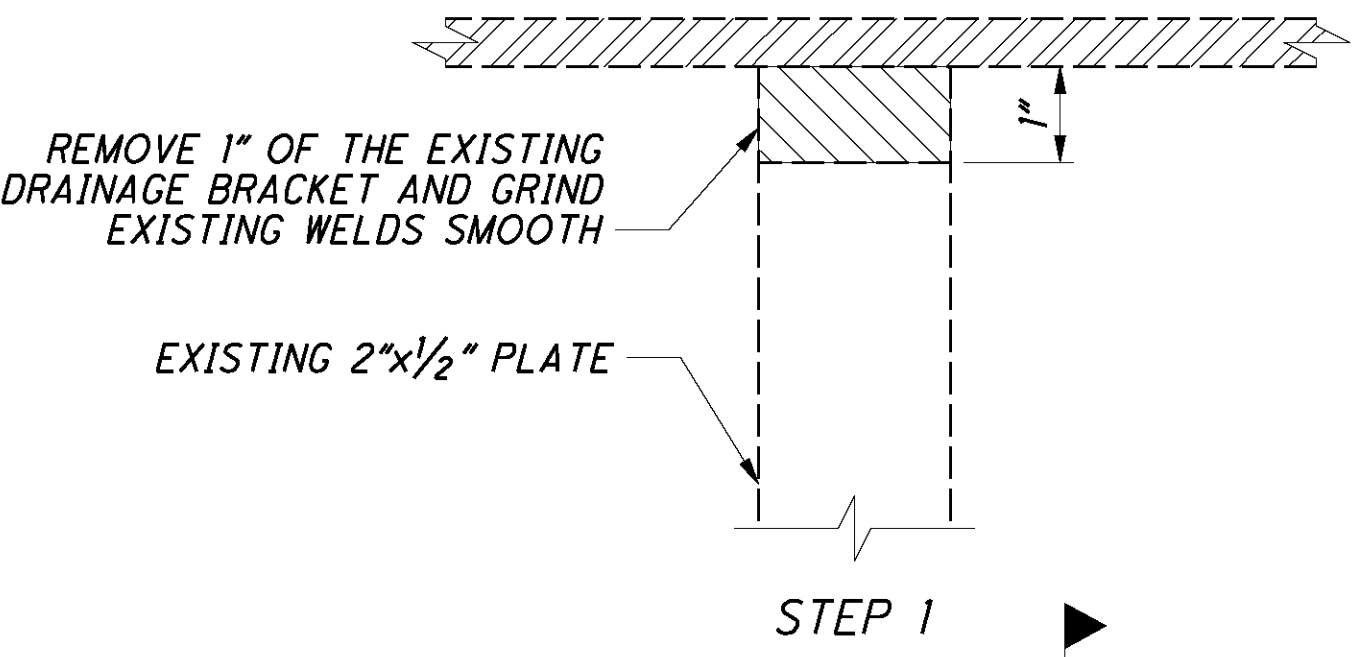
REPAIR DETAIL NORTH FACE ONLY



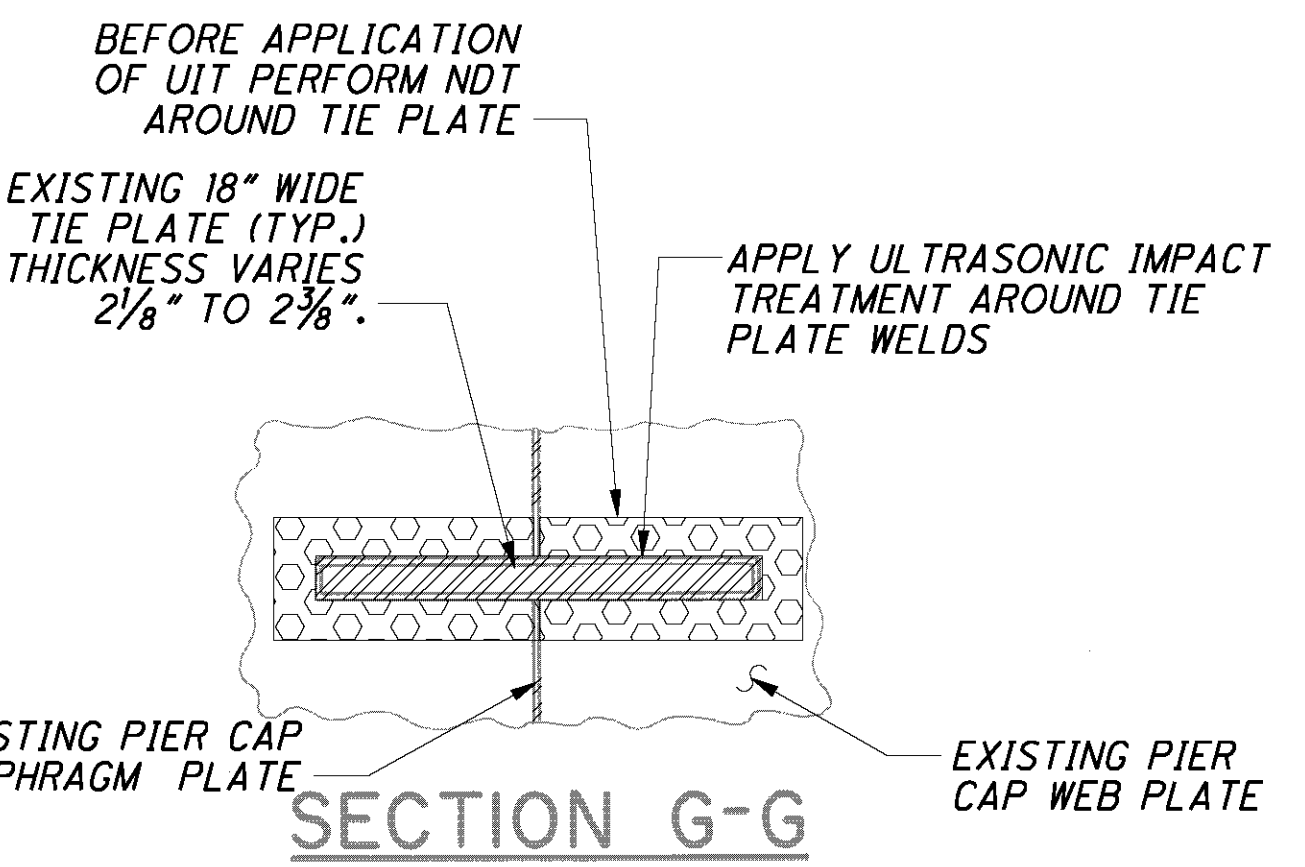
SECTION D-D



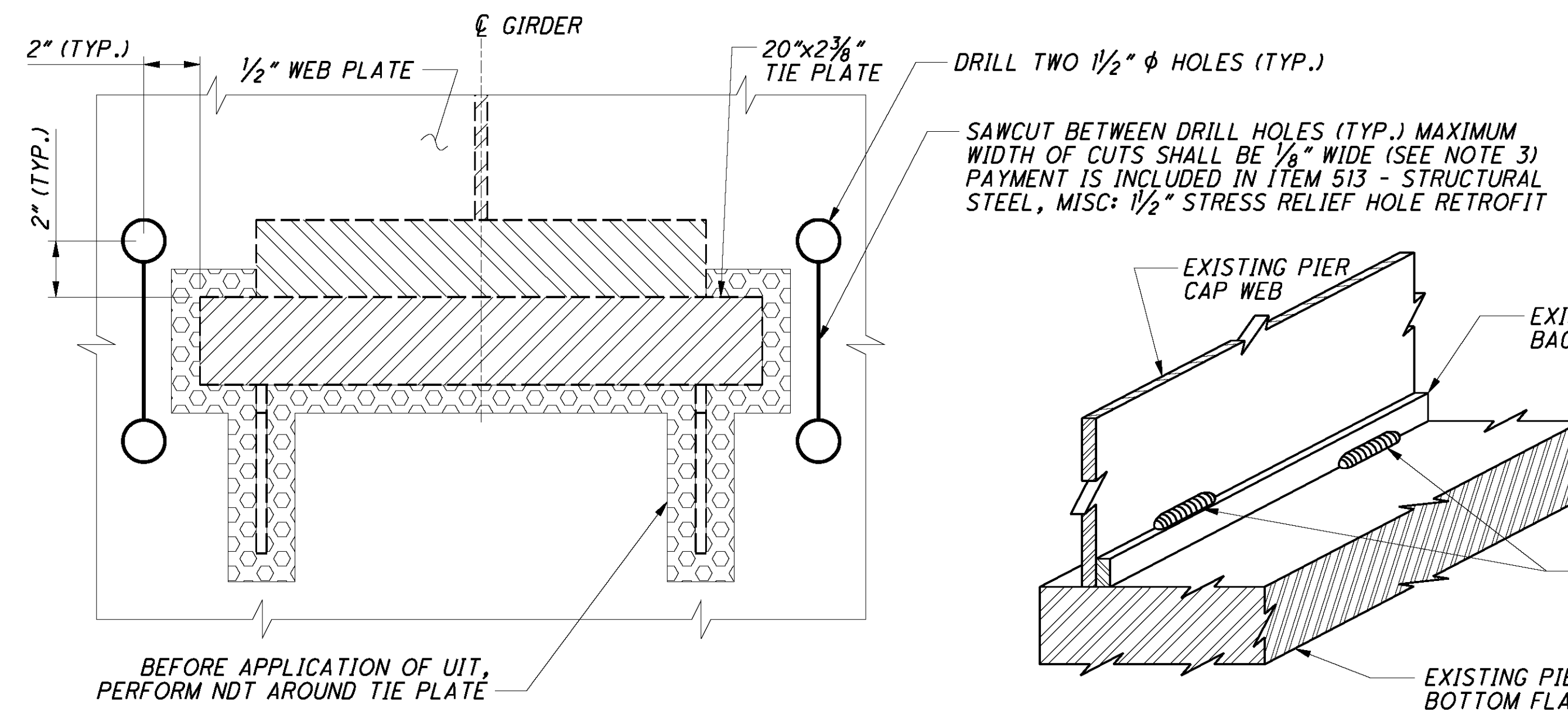
SECTION C-C



REPAIR DETAIL DRAIN BRACKET RETROFIT

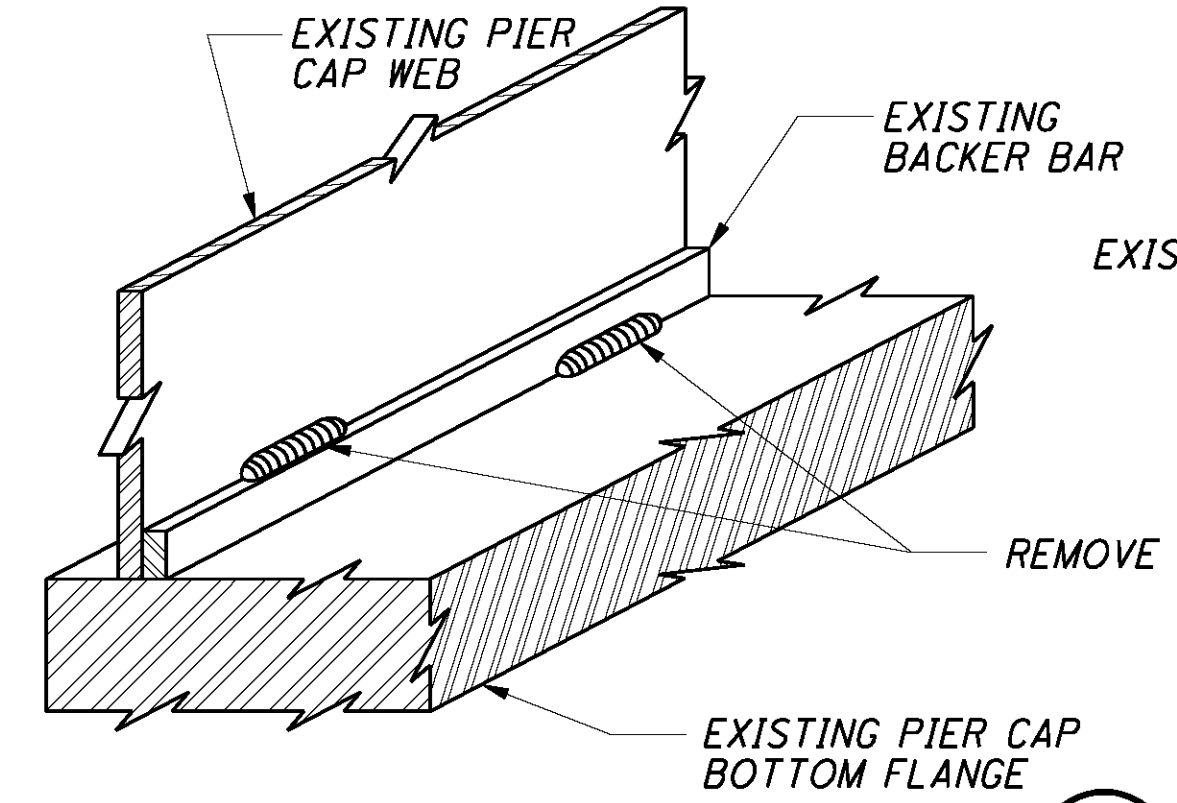


REPAIR DETAIL INTERIOR TIE PLATE TREATMENT



REPAIR DETAIL STRESS RELIEF HOLES

(FOR GIRDERS U, V, W, X, Y AT NORTH WEB PLATES, Z AT SOUTH WEB PLATE, AND T AT NORTH WEB PLATE)



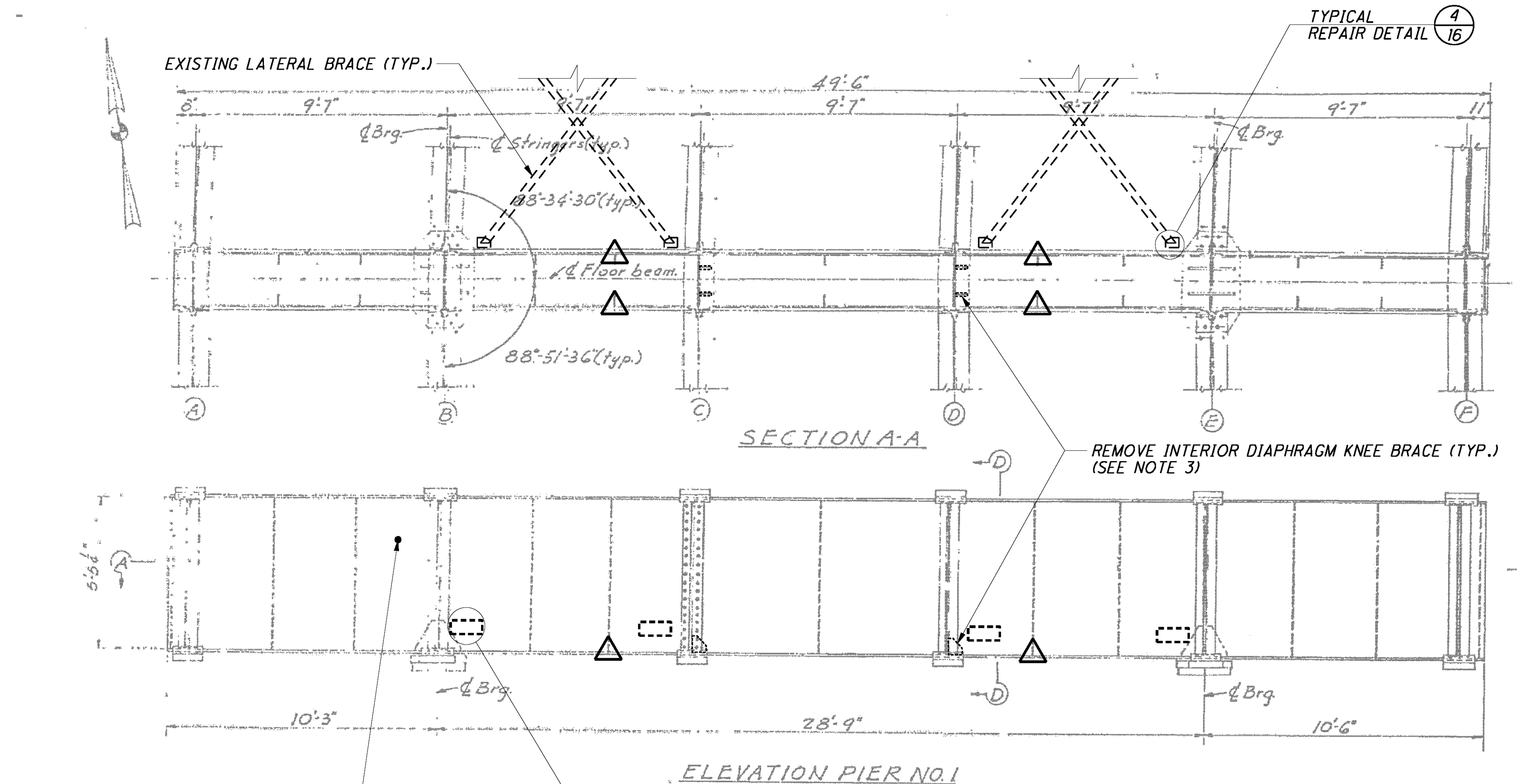
REPAIR DETAIL BACKING BAR WELD REMOVAL DETAIL

NOTES:

1. PIER ELEVATION AND SECTIONS C-C, D-D, AND G-G ARE TAKEN FROM THE ORIGINAL PLANS.
2. CLEAN AND PAINT REPAIR AREAS ON THE EXTERIOR OF THE PIER CAP.
3. CARE SHALL BE TAKEN NOT TO OVERCUT SAWCUT BEYOND DRILLED HOLES. FLAME CUTTING IS NOT PERMITTED.

LIMITS OF 1/2" WIDE ULTRASONIC IMPACT TREATMENT (UIT)

4/17/2008
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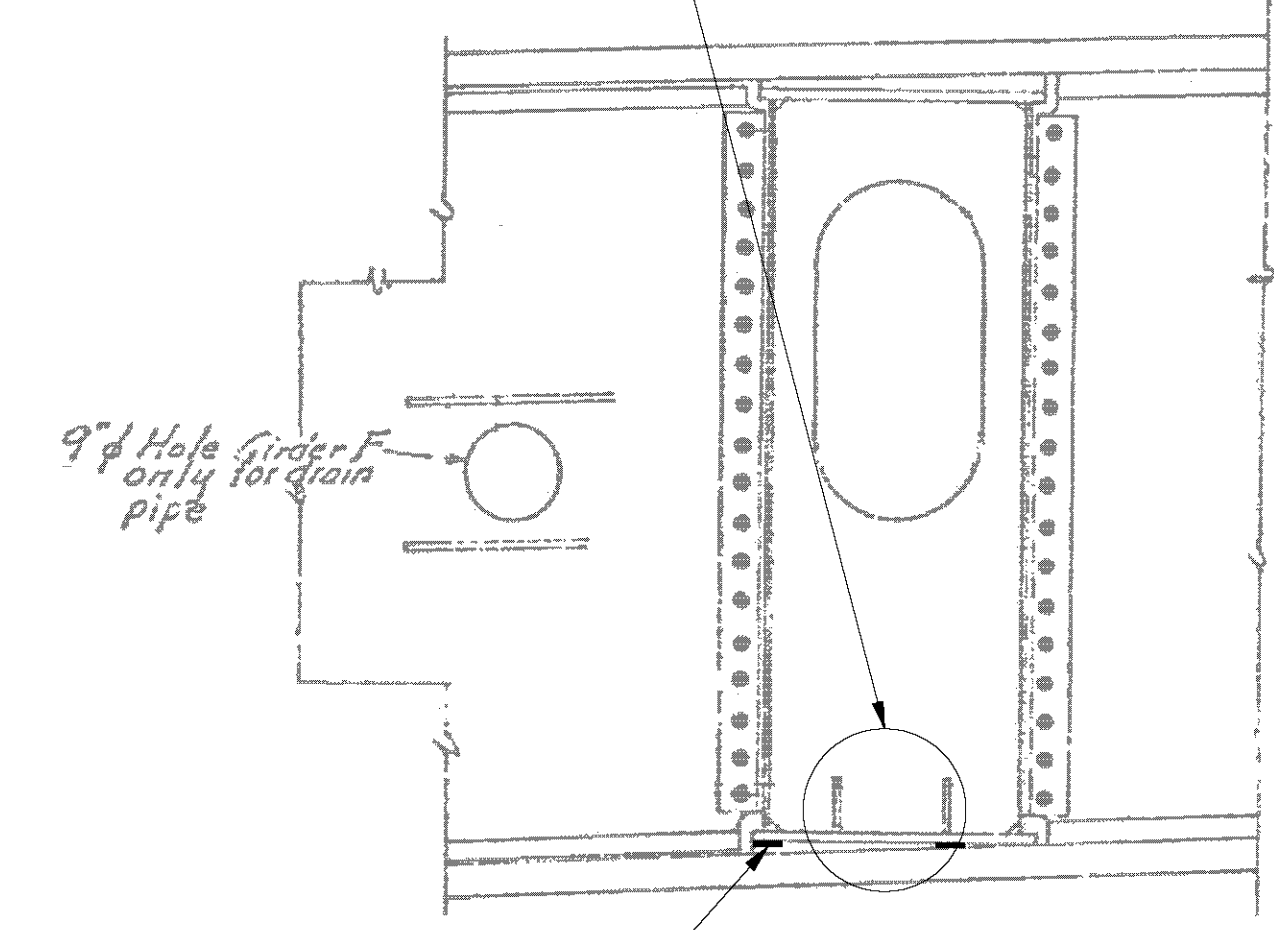


GRIND MISCELLANEOUS TACK WELD ON THE NORTH INTERIOR CAP WEB PLATE, AS DIRECTED BY THE ENGINEER

TYPICAL REPAIR DETAIL 4/16

REMOVE INTERIOR DIAPHRAGM KNEE BRACE (TYP.) (SEE NOTE 3)

GRIND TACK WELDS FROM THE PIER CAP EXTERIOR BOTTOM FLANGE AT THE GIRDER FLANGE FILL PLATES (TYP.) AS DIRECTED BY THE ENGINEER



SECTION D-D (@ Girders A, C, D, & F)

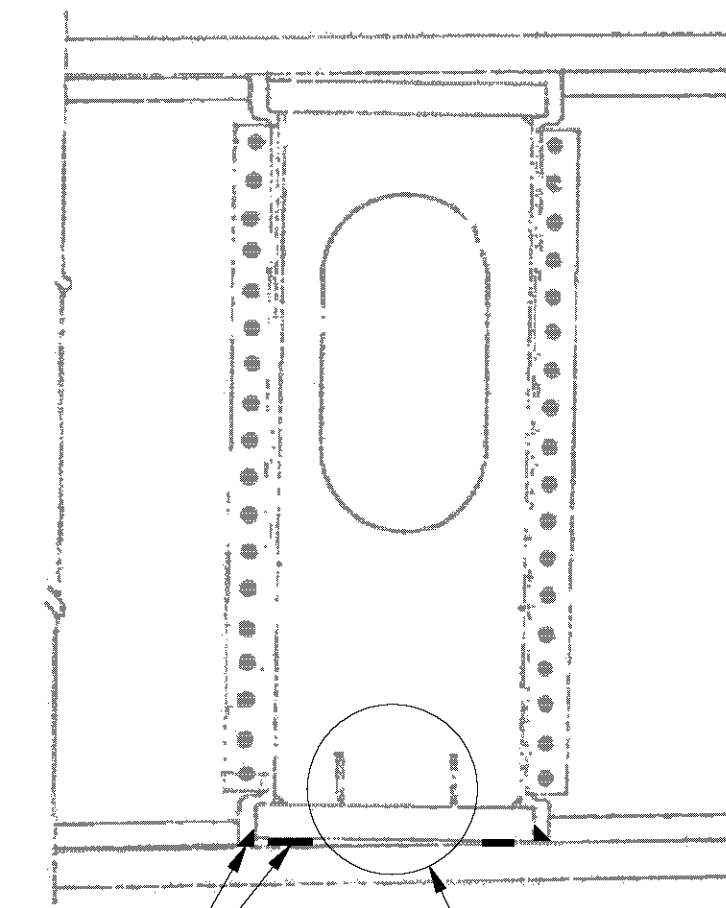
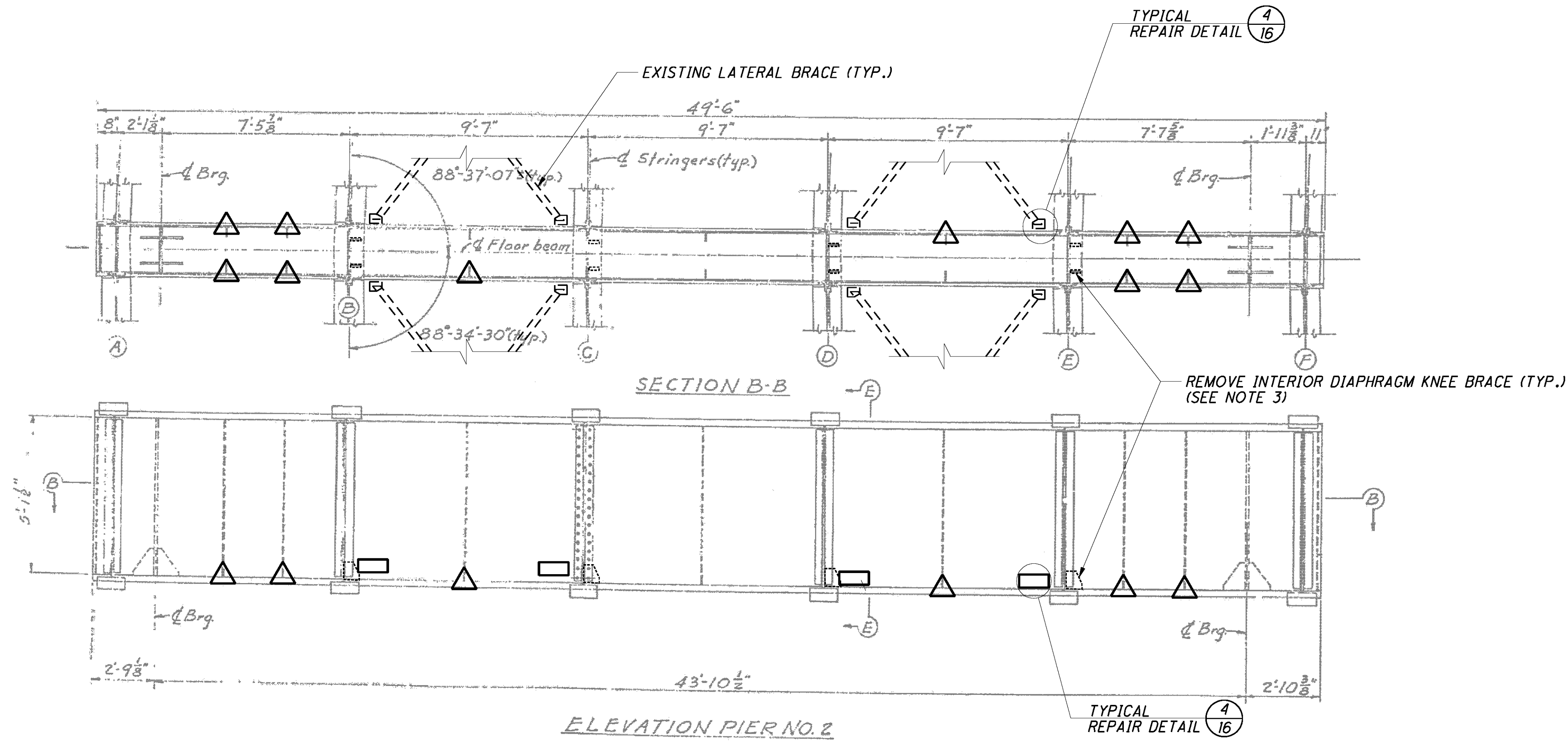
NOTES:

1. PIER ELEVATION, SECTIONS A-A AND D-D ARE TAKEN FROM THE ORIGINAL PLANS.
2. CLEAN AND PAINT REPAIR AREAS ON INTERIOR OF THE PIER CAP.
3. REMOVE INTERIOR DIAPHRAGM KNEE BRACE AND GRIND SMOOTH WELD ON BOTTOM FLANGE AT GIRDERS C AND D. APPLY ULTRASONIC IMPACT TREATMENT TO THE BOTTOM FLANGE ALONG PREVIOUS KNEE BRACE WELDS.

△ - LOCATION OF INTERSECTING WELD BETWEEN PIER CAP WEB STIFFENER WELD AND PIER CAP FLANGE WELD TO BE REMOVED BY GRINDING

 <small>DESIGN AGENCY</small> <small>55 PUBLIC SQUARE, SUITE 1900</small> <small>CLEVELAND, OHIO 44113</small>	<small>DATE</small> 12-04-07	<small>REVIEWED</small> WRW	<small>STRUCTURE FILE NUMBER</small> 3106780
<small>DESIGNED</small> NBR	<small>CHECKED</small> BKC	<small>DRAWN</small> NBR	<small>REVISED</small>
PIER 1 CAP RETROFIT DETAILS BRIDGE NO. HAM-71-0248L SOUTHBOUND I-71 OVER US 42 AND EDEN PARK DRIVE			
HAM-BH-VAR PID No. 25374			
<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> 30 38 </div>			

4/17/2008
P:\2426.03-ODOT 8 Pier Cap\2007 PID25374 DRAWINGS\(#5) HAM-71-0248L\HAM-71-0248L_P2.dgn



GRIND TACK WELDS FROM THE EXTERIOR CAP BOTTOM FLANGE AT THE GIRDER FLANGE FILL PLATES AS DIRECTED BY THE ENGINEER (TYP.)

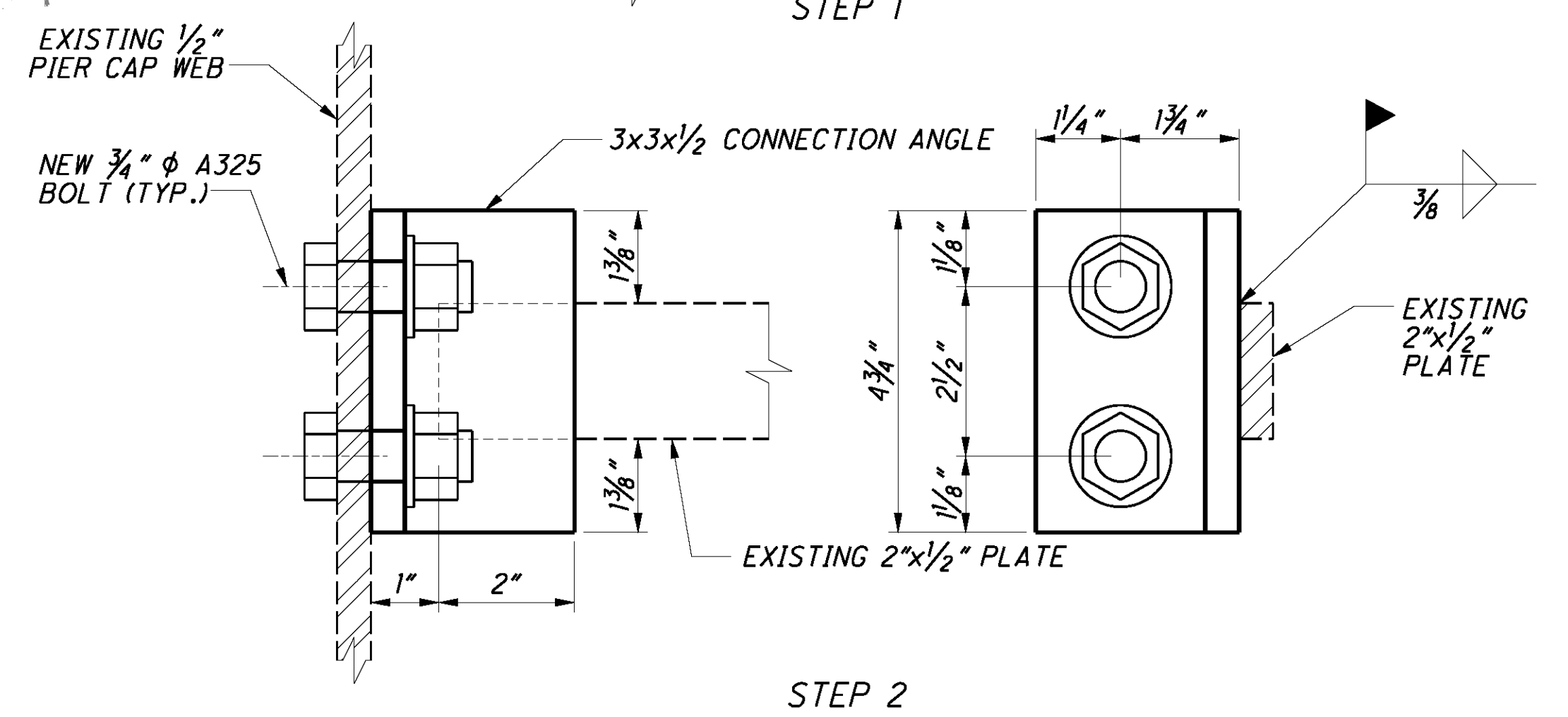
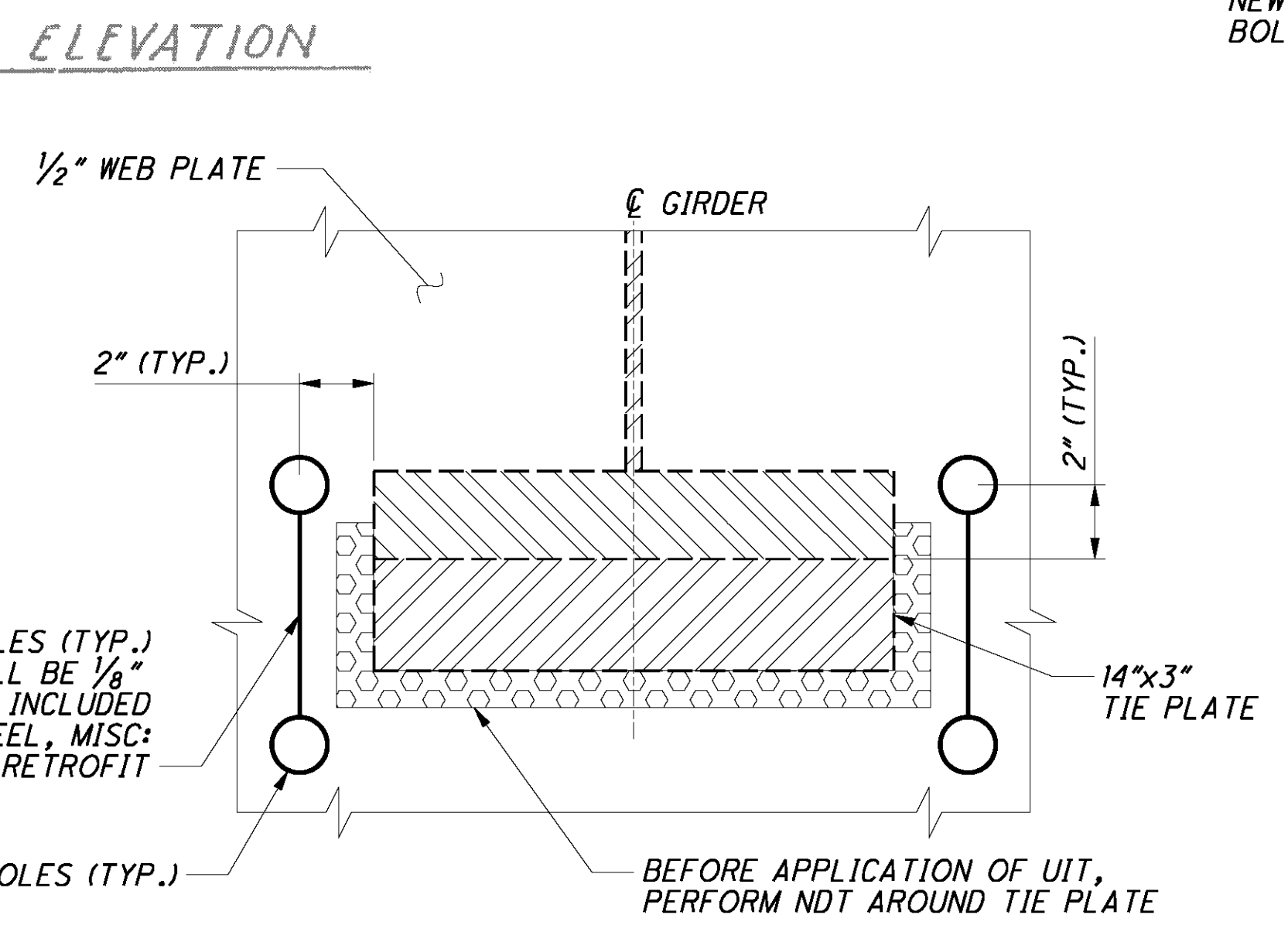
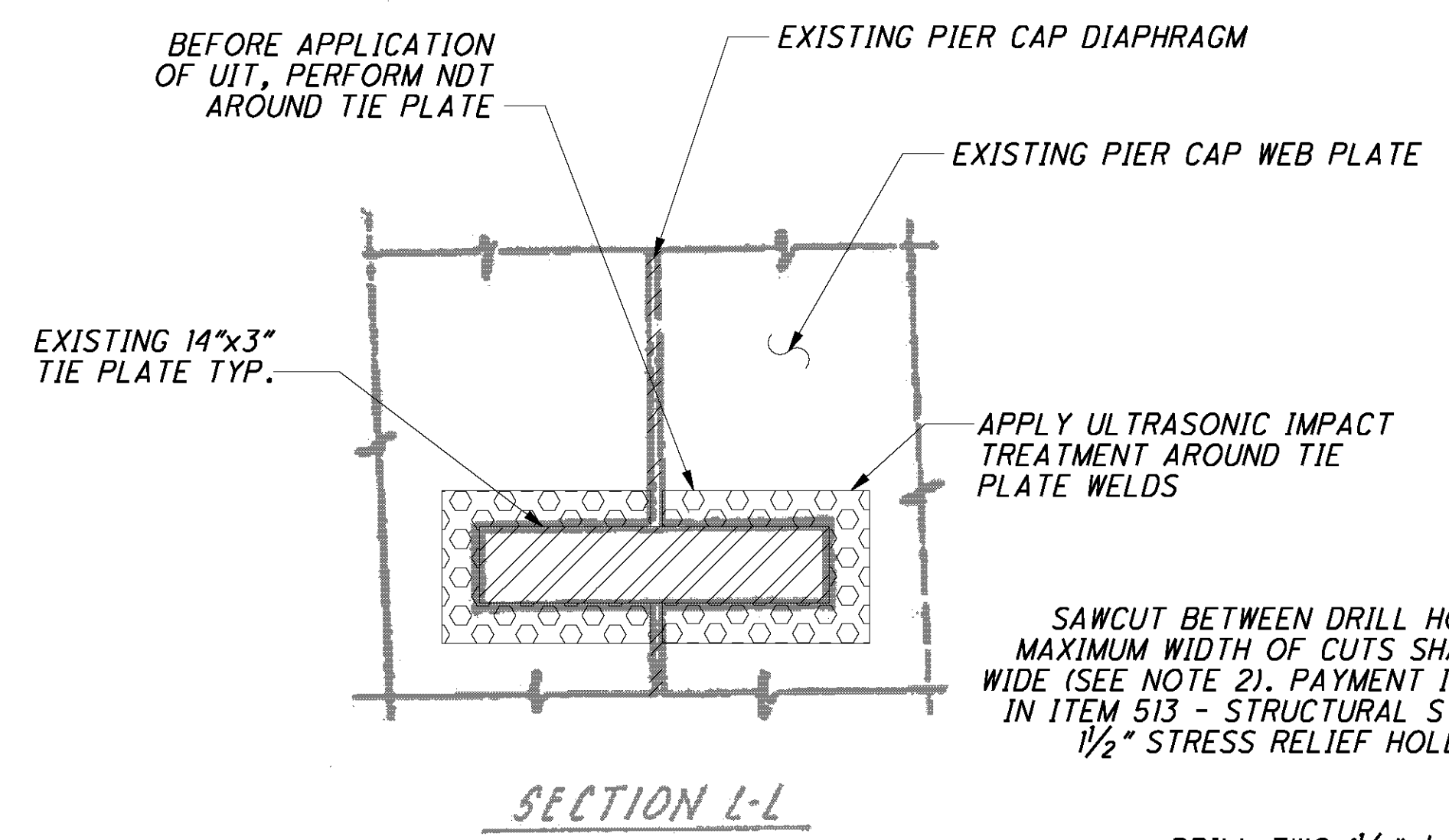
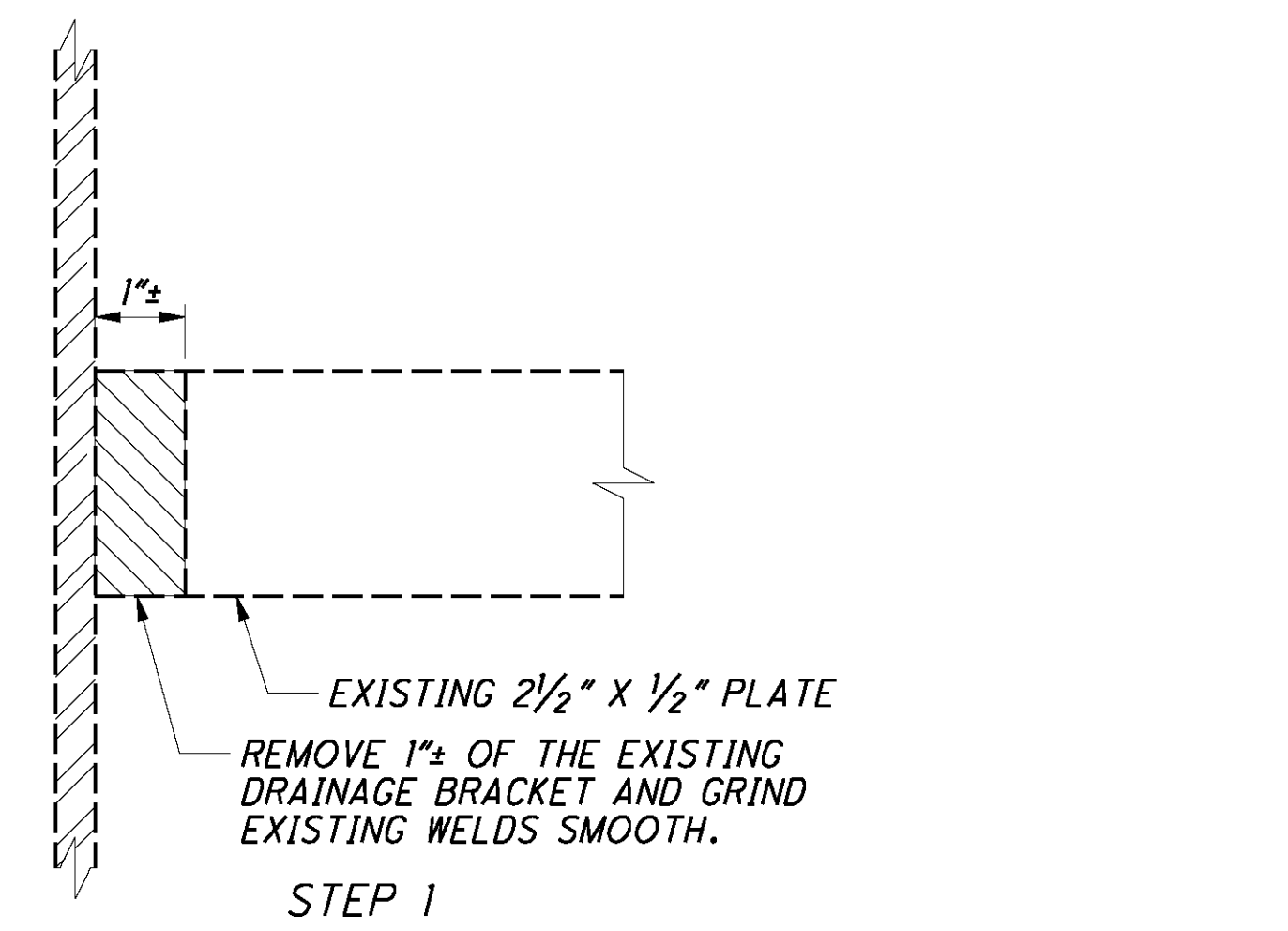
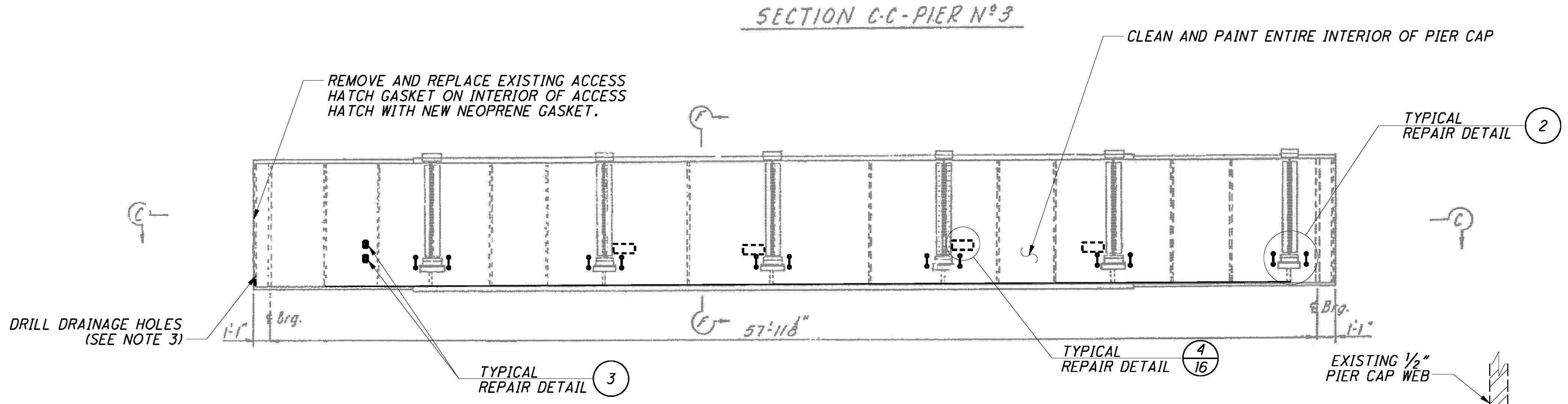
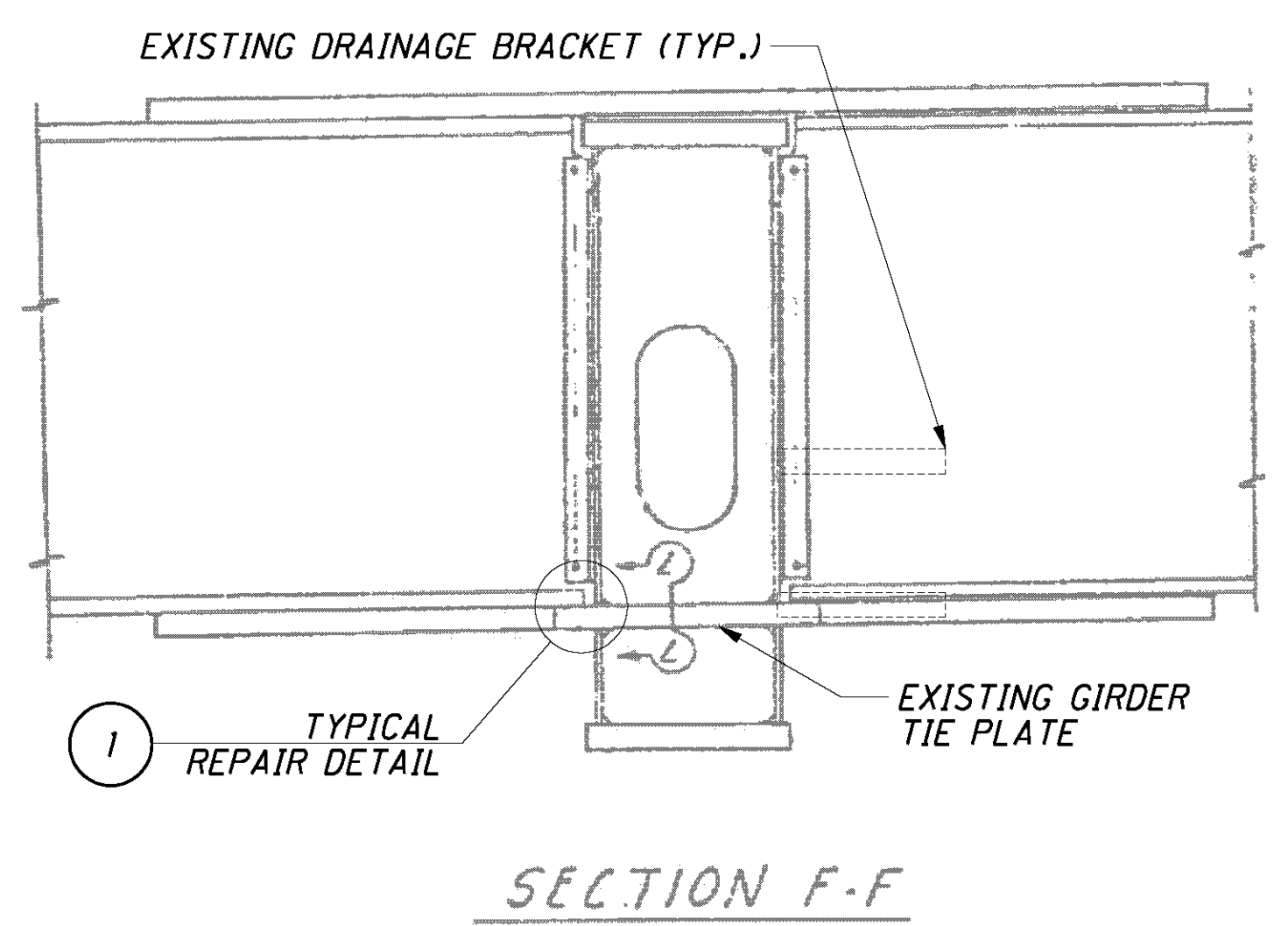
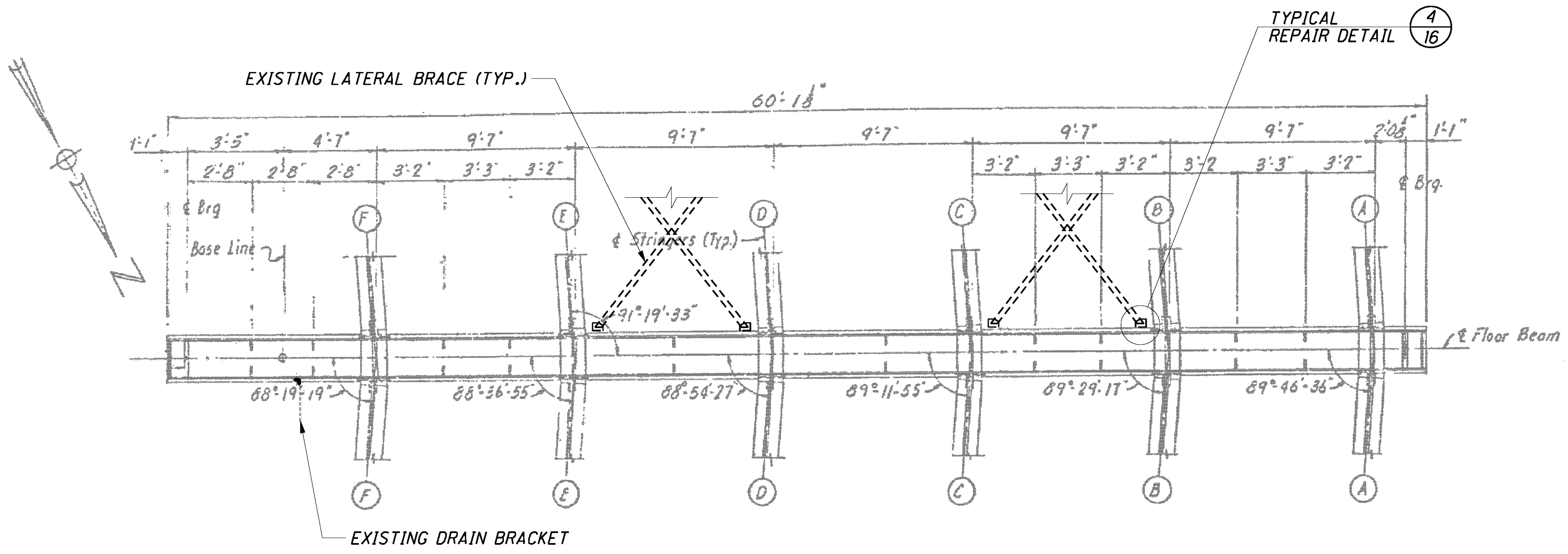
SECTION E-E

NOTES:

1. PIER ELEVATION AND SECTIONS B-B AND E-E ARE TAKEN FROM THE ORIGINAL PLANS.
2. CLEAN AND PAINT REPAIR AREAS ON THE INTERIOR OF THE PIER CAP.
3. REMOVE INTERIOR DIAPHRAGM KNEE BRACE AND GRIND SMOOTH WELD ON BOTTOM FLANGE AT GIRDERS B, C, D, AND E. APPLY ULTRASONIC IMPACT TREATMENT TO THE BOTTOM FLANGE ALONG PREVIOUS KNEE BRACE WELDS.

△ - LOCATION OF INTERSECTING WELD BETWEEN PIER CAP WEB STIFFENER WELD AND PIER CAP FLANGE WELD TO BE REMOVED BY GRINDING

4/17/2008
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REPAIR DETAIL 1
 INTERIOR TIE PLATE TREATMENT

REPAIR DETAIL 2
 STRESS RELIEF HOLES

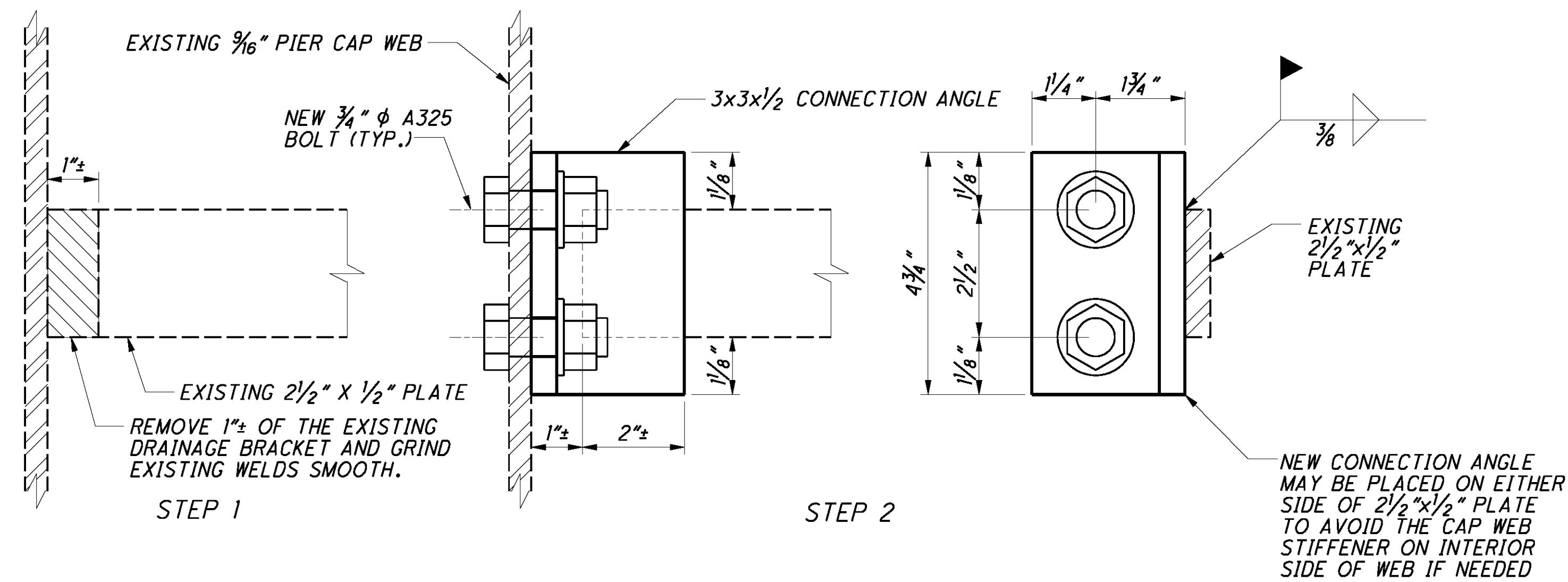
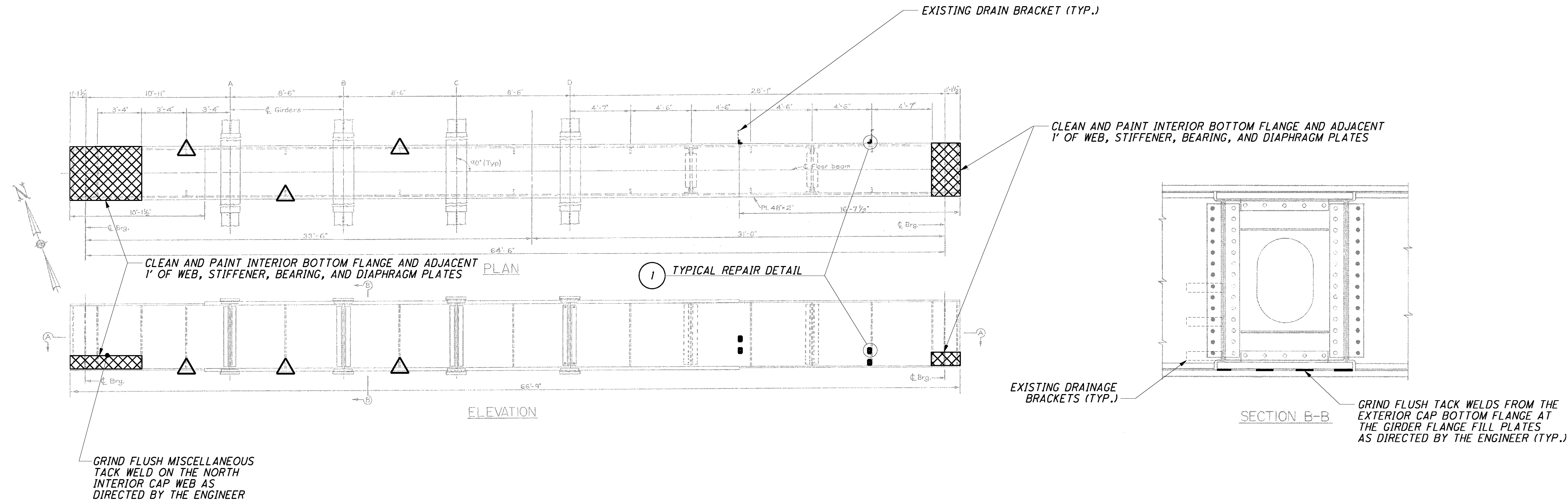
REPAIR DETAIL 3
 DRAIN BRACKET RETROFIT

LIMITS OF 1/2" WIDE ULTRASONIC IMPACT TREATMENT (UIT)

(FOR GIRDERS A THROUGH F AT NORTH AND SOUTH WEB PLATES)

- NOTES:**
1. PIER ELEVATION AND SECTIONS C-C, F-F, AND L-L ARE TAKEN FROM THE ORIGINAL PLANS.
 2. CARE SHALL BE TAKEN NOT TO OVERCUT SAWCUT BEYOND DRILLED HOLES. FLAME CUTTING IS NOT PERMITTED.
 3. DRILL TWO 1/2" φ HOLES THROUGH THE EAST END PLATE. THE BOTTOM OF THE HOLES SHALL BE FLUSH WITH THE PIER CAP BOTTOM FLANGE. HOLES SHALL NOT PENETRATE OR GOUGE PIER CAP WEB PLATES OR FLANGE PLATE.

4/17/2008
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REPAIR DETAIL
 DRAIN BRACKET RETROFIT 1

NOTES:

1. PIER PLAN, ELEVATION AND SECTION B-B ARE TAKEN FROM THE ORIGINAL PLANS.
2. CLEAN AND PAINT REPAIR AREAS ON INTERIOR OF PIER CAP.

- LIMITS OF PAINTING OF INTERIOR OF PIER CAP

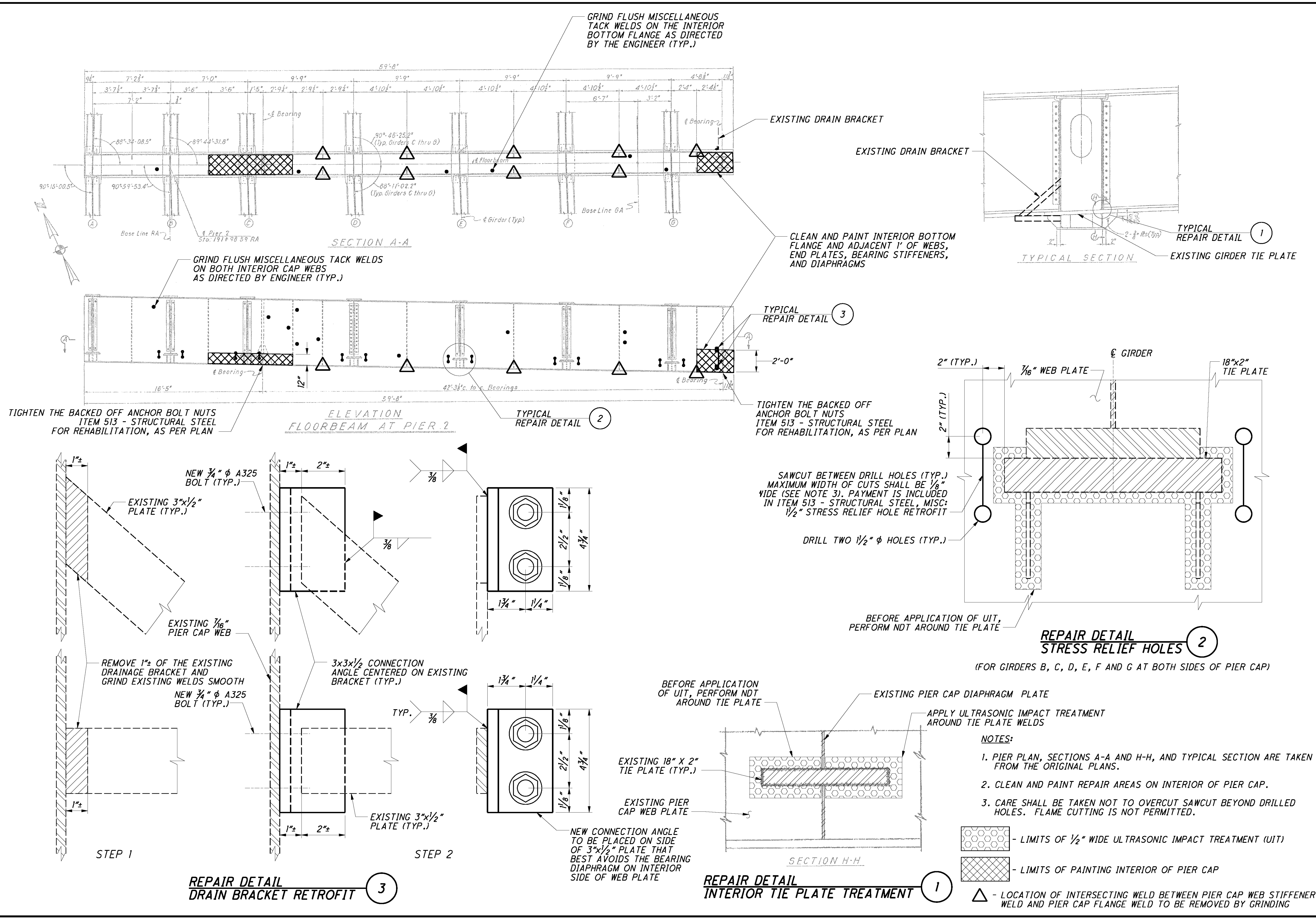
- LOCATION OF INTERSECTING WELD BETWEEN PIER CAP WEB STIFFENER WELD AND PIER CAP FLANGE WELD TO BE REMOVED BY GRINDING

DESIGNED	NBR	CHECKED	BKC
DRAWN	NBR	REVISED	
REVIEWED	WRW	STRUCTURE FILE NUMBER	3101215
DATE	12-20-07		

PIER 1 CAP RETROFIT DETAILS
 BRIDGE NO. HAM-42-0257R
 I-71 RAMP OVER US 42 (READING ROAD)

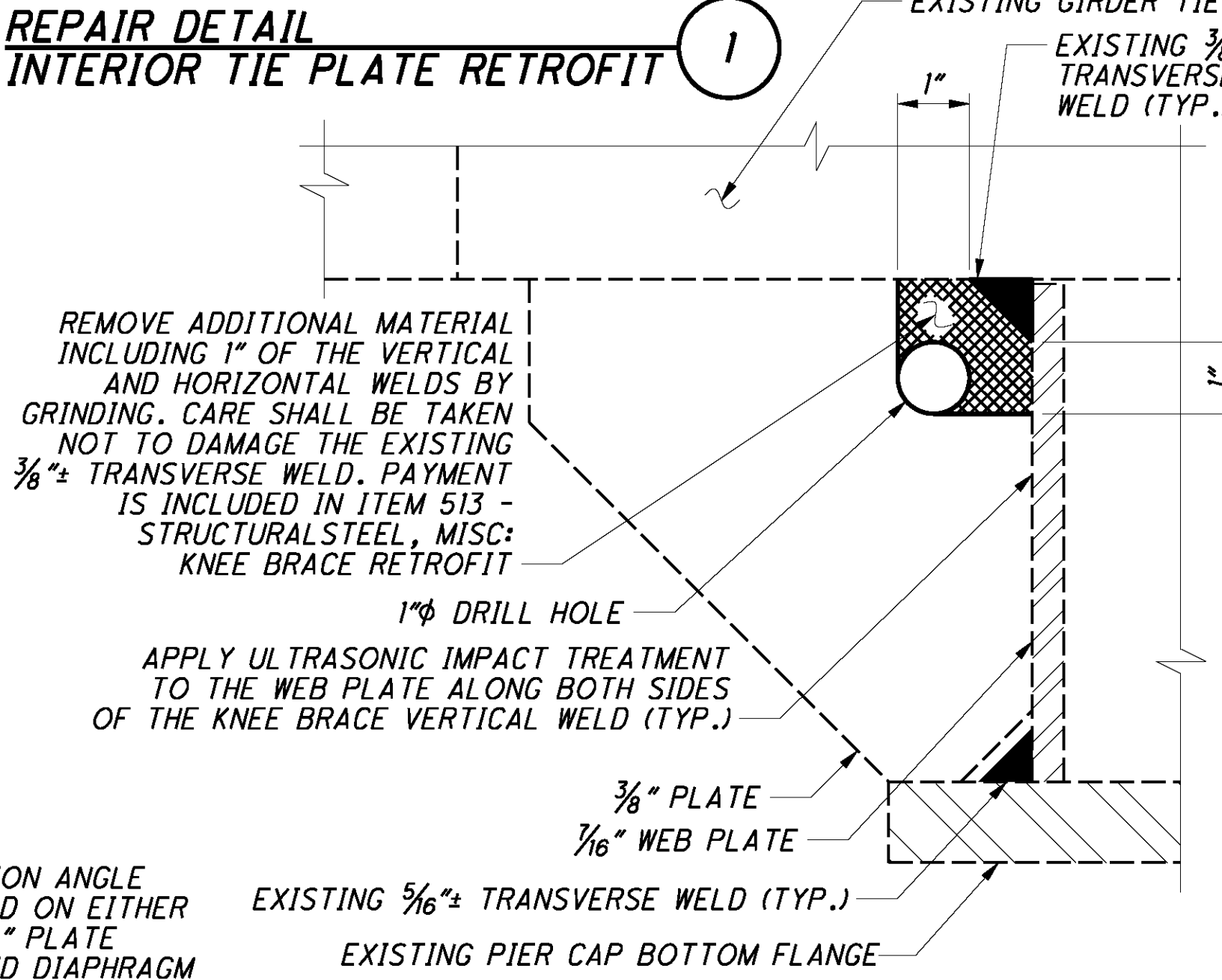
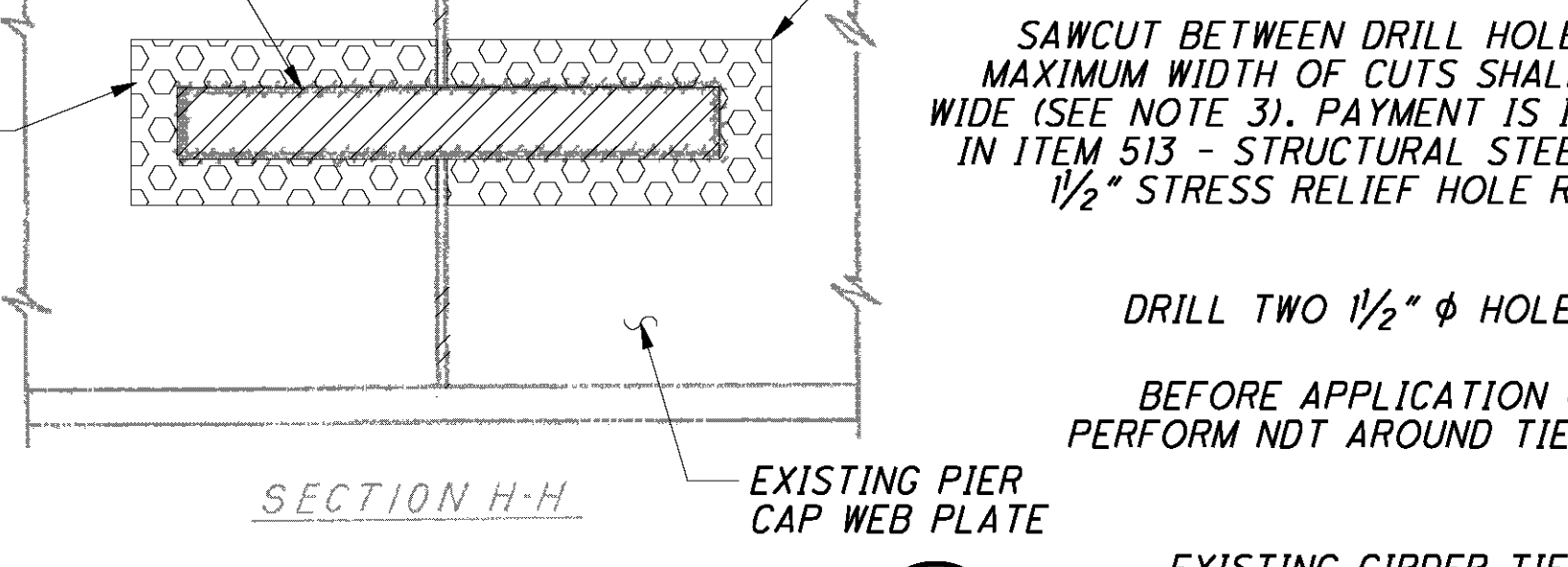
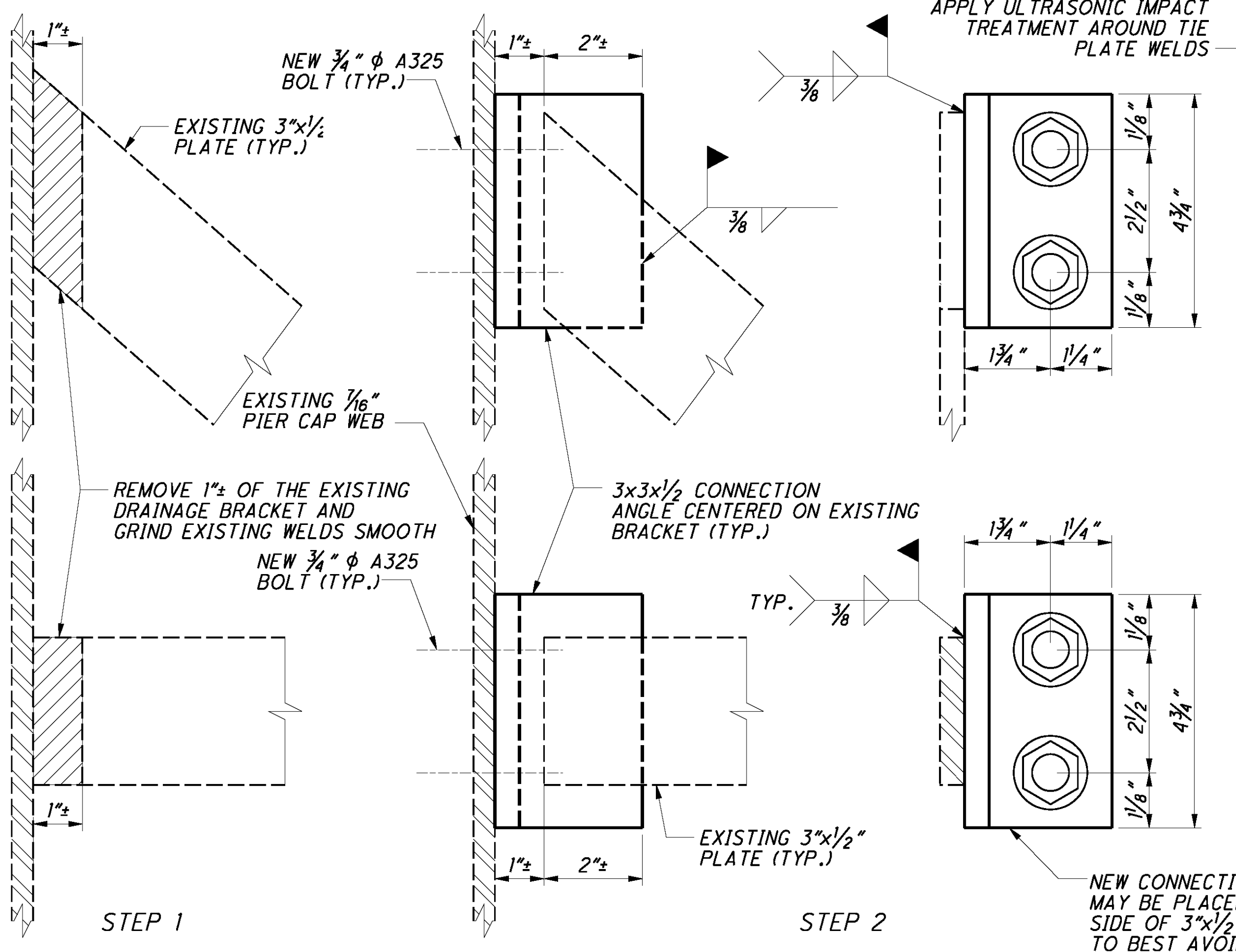
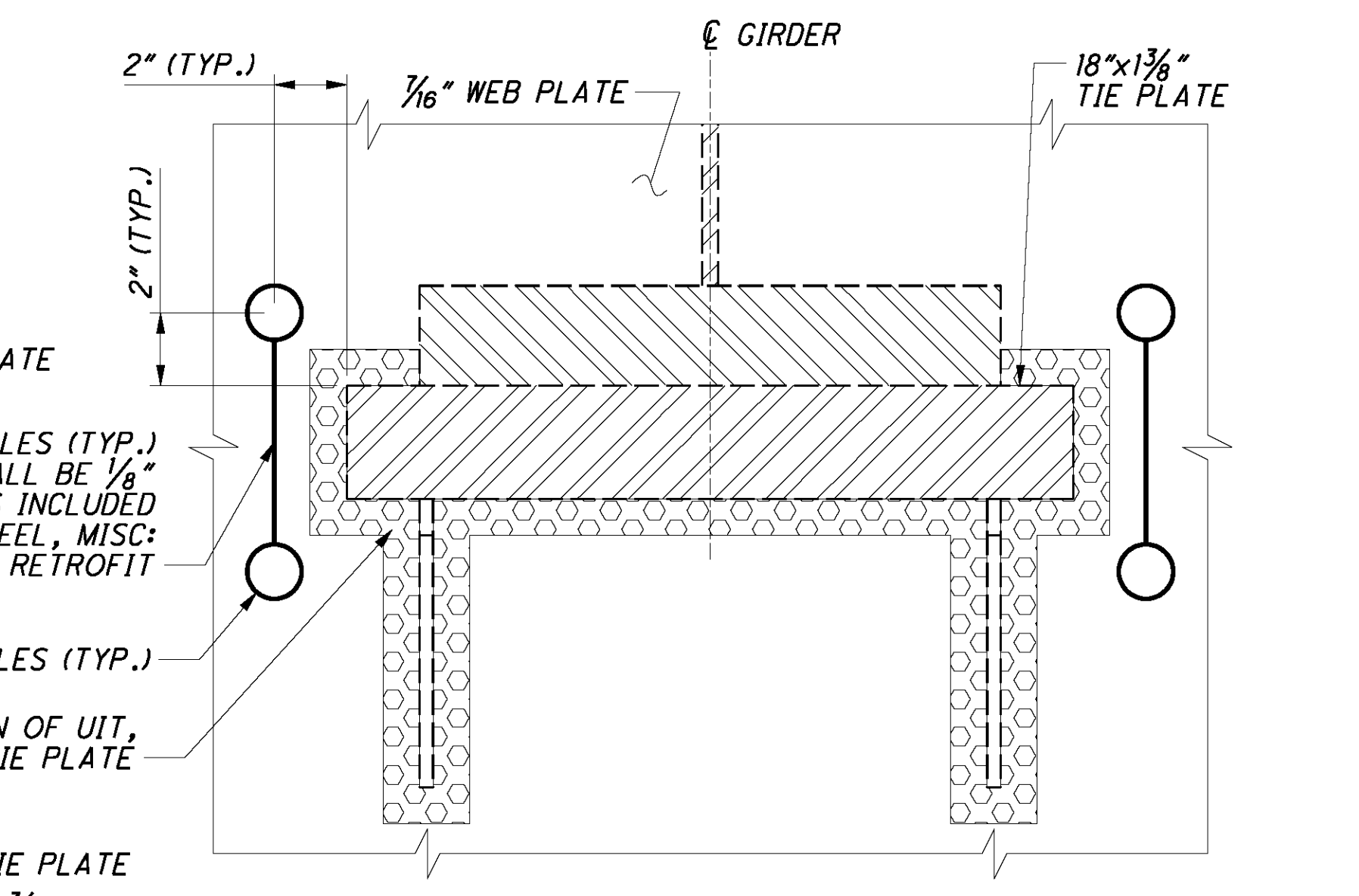
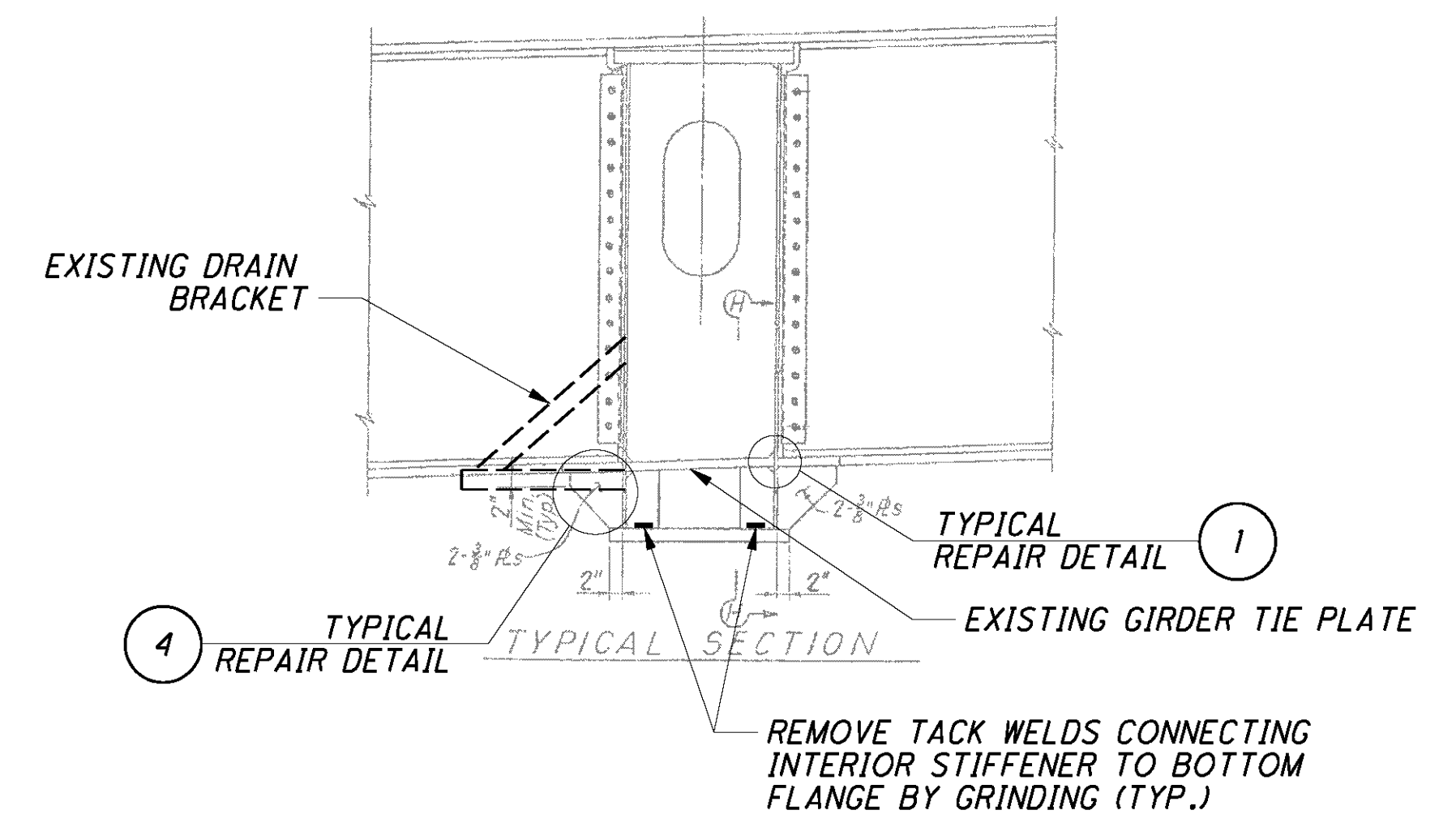
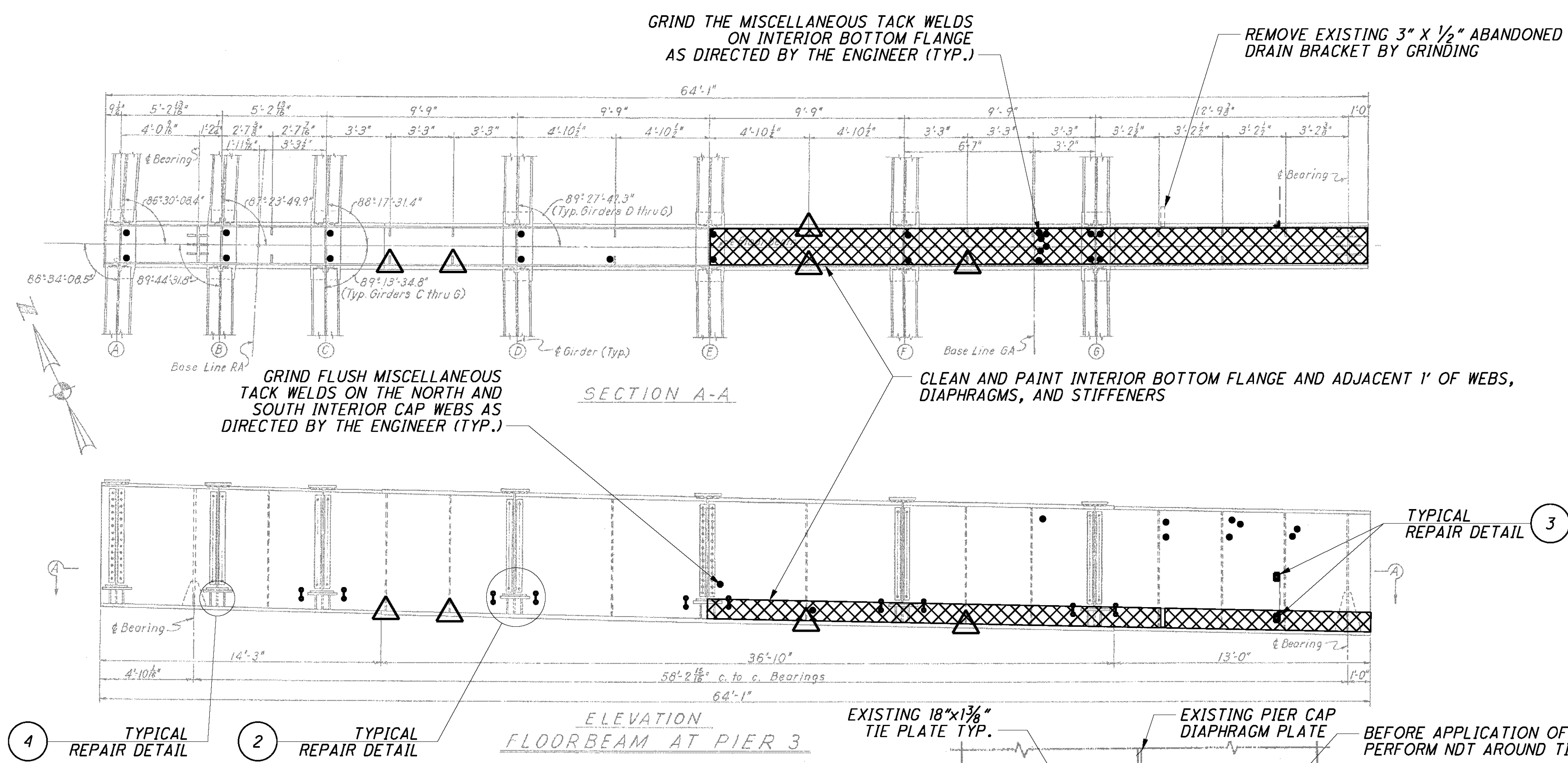
HAM-BH-VAR
 PID No. 25374

4/17/2008
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DESIGNED	NBR	CHECKED	BKC
DRAWN	NBR	REVISED	
REVIEWED	NRW	STRUCTURE FILE NUMBER	3101223
DATE	12-05-07		
DESIGN AGENCY	 55 PUBLIC SQUARE, SUITE 1800 CLEVELAND, OHIO 44113		
PIER 2 CAP RETROFIT DETAILS BRIDGE NO. HAM-42-0264R RAMP TO US 42 OVER NORTHBOUND US 42, RAMP TO SB I-71 AND EDEN PARK DRIVE			
HAM-BH-VAR PID No. 25374		34 38	

4/17/2008
 P:\2426.03-ODOT 8 Pier Cap\2007 PID25374 DRAWINGS\(#10) HAM-42-0264R HAM-42-0264R P3.dgn



- NOTES:**
- PIER ELEVATION, SECTIONS A-A AND H-H AND TYPICAL SECTION ARE TAKEN FROM THE ORIGINAL PLANS.
 - CLEAN AND PAINT REPAIR AREAS ON INTERIOR OF PIER CAP.
 - CARE SHALL BE TAKEN NOT TO OVERCUT SAWCUT BEYOND DRILLED HOLES. FLAME CUTTING IS NOT PERMITTED.
- [Pattern] LIMITS OF 1/2" WIDE ULTRASONIC IMPACT TREATMENT (UIT)
 - [Pattern] LIMITS OF PAINTING ON PIER CAP INTERIOR
 - [Pattern] LIMITS OF STEEL REMOVAL ON EXTERNAL KNEE BRACES BY GRINDING
 - [Symbol] LOCATION OF INTERSECTING WELD BETWEEN PIER CAP WEB STIFFENER WELD AND PIER CAP FLANGE WELD TO BE REMOVED BY GRINDING

DESIGN AGENCY: **Trail Systems**
 65 PUBLIC SQUARE, SUITE 1800
 CLEVELAND, OHIO 44113

DATE: 12-05-07
 REVISION: WRW
 DRAWN: NBR
 DESIGNED: NBR
 CHECKED: BKC

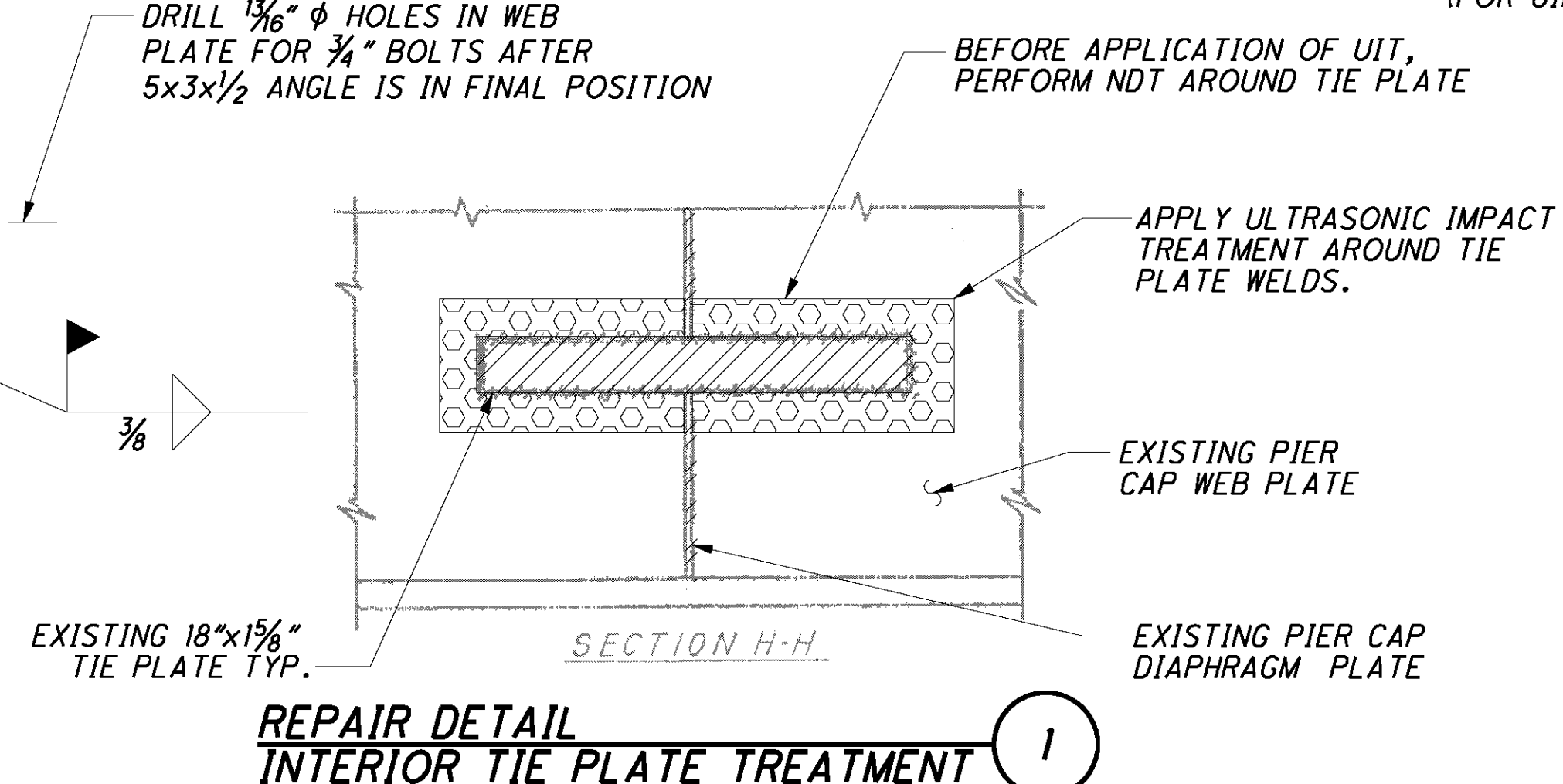
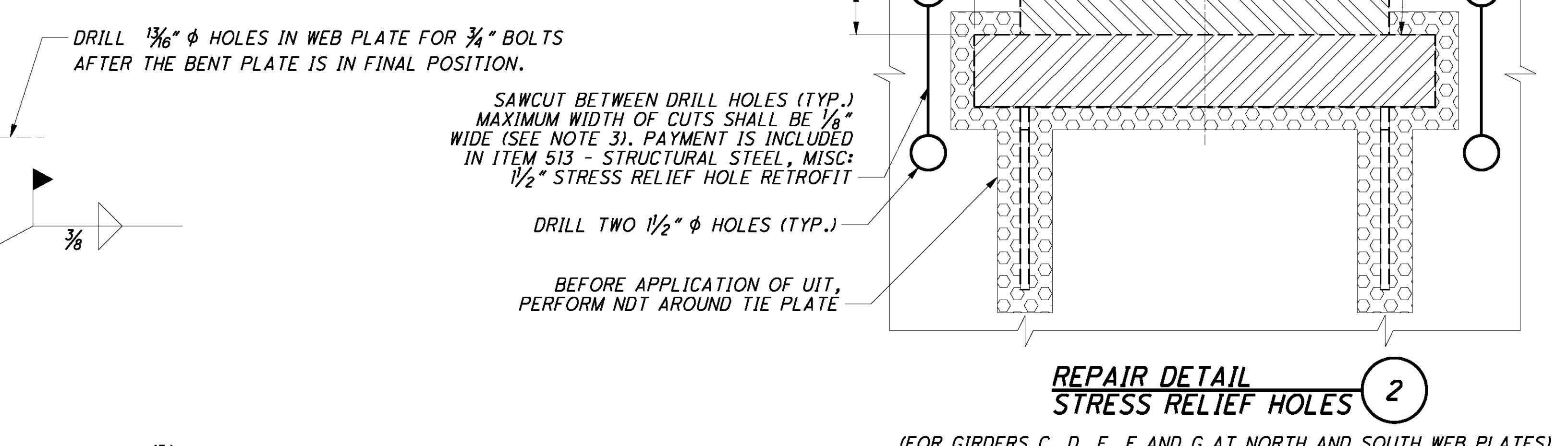
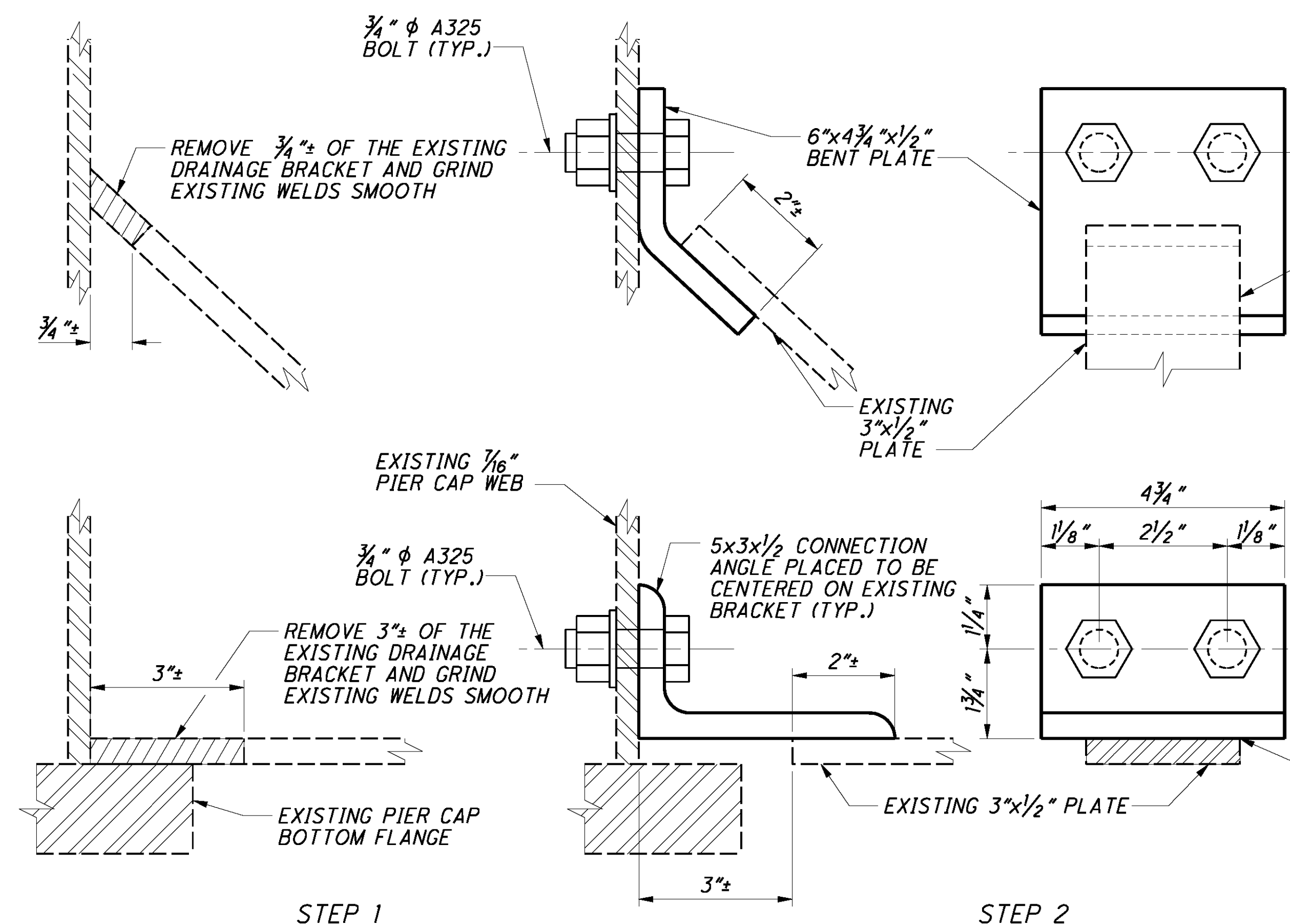
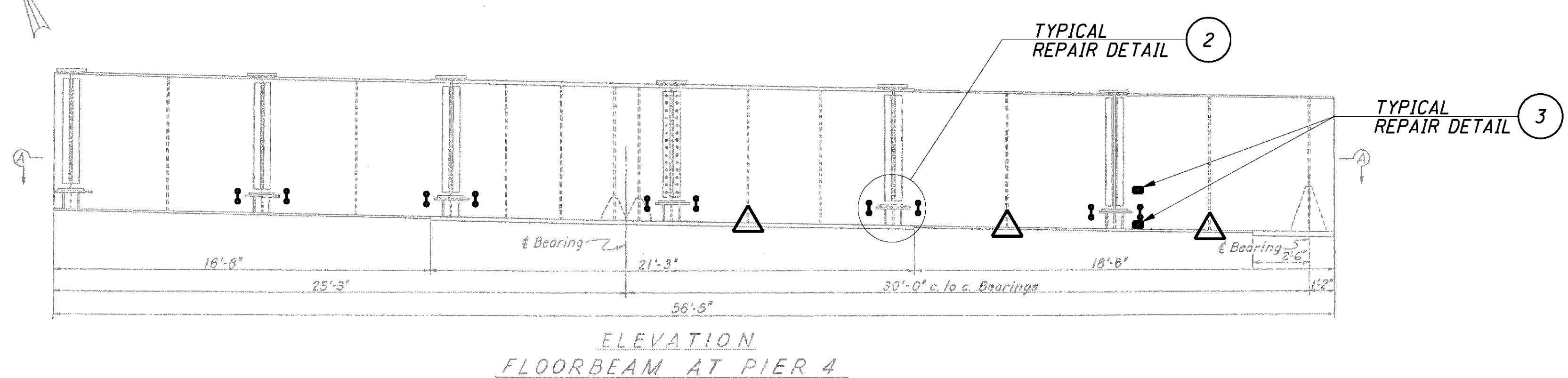
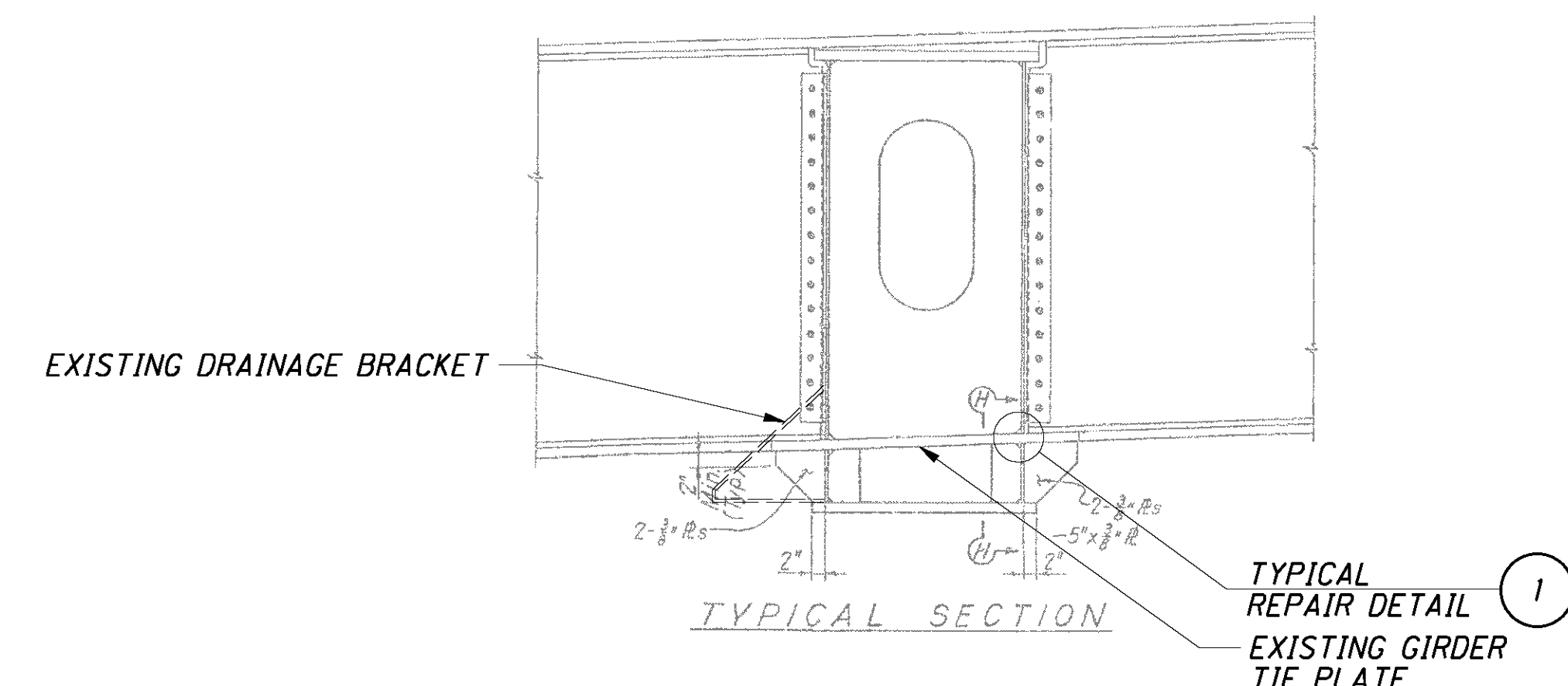
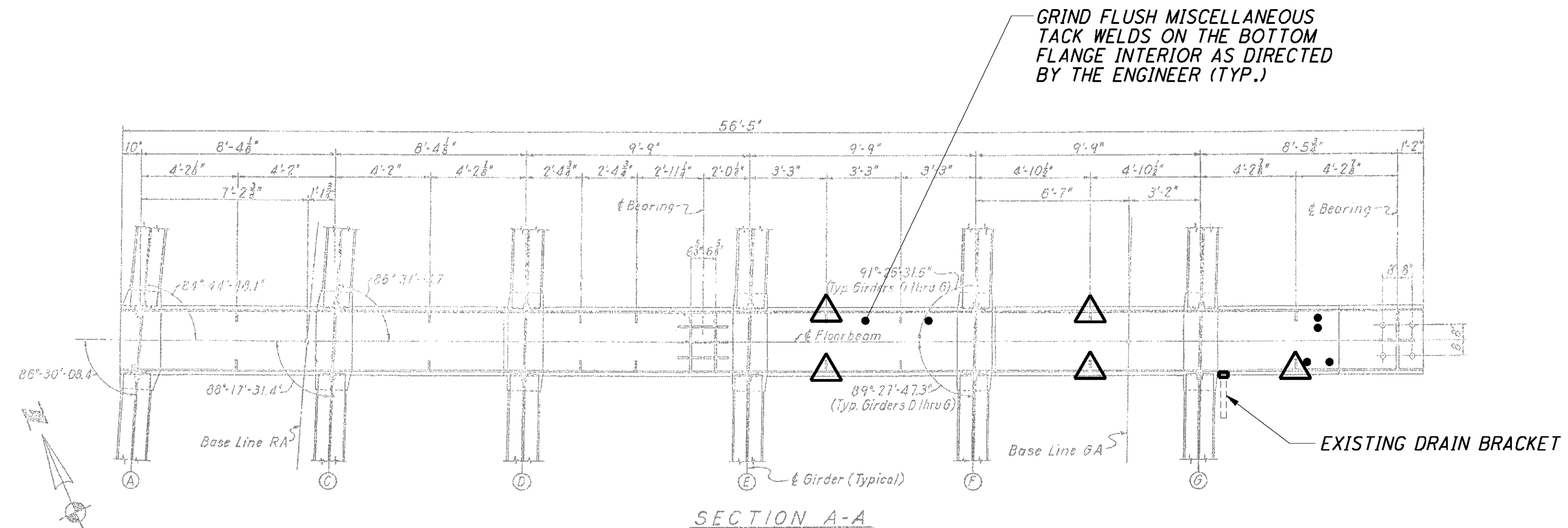
STRUCTURE FILE NUMBER: 3101223

PIER 3 CAP RETROFIT DETAILS
 BRIDGE NO. HAM-42-0264R
 RAMP TO US 42 OVER NORTHBOUND US 42, RAMP TO SB I-71 AND EDEN PARK DRIVE

HAM-BH-VAR
 PID No. 25374

35
 38

4/17/2008
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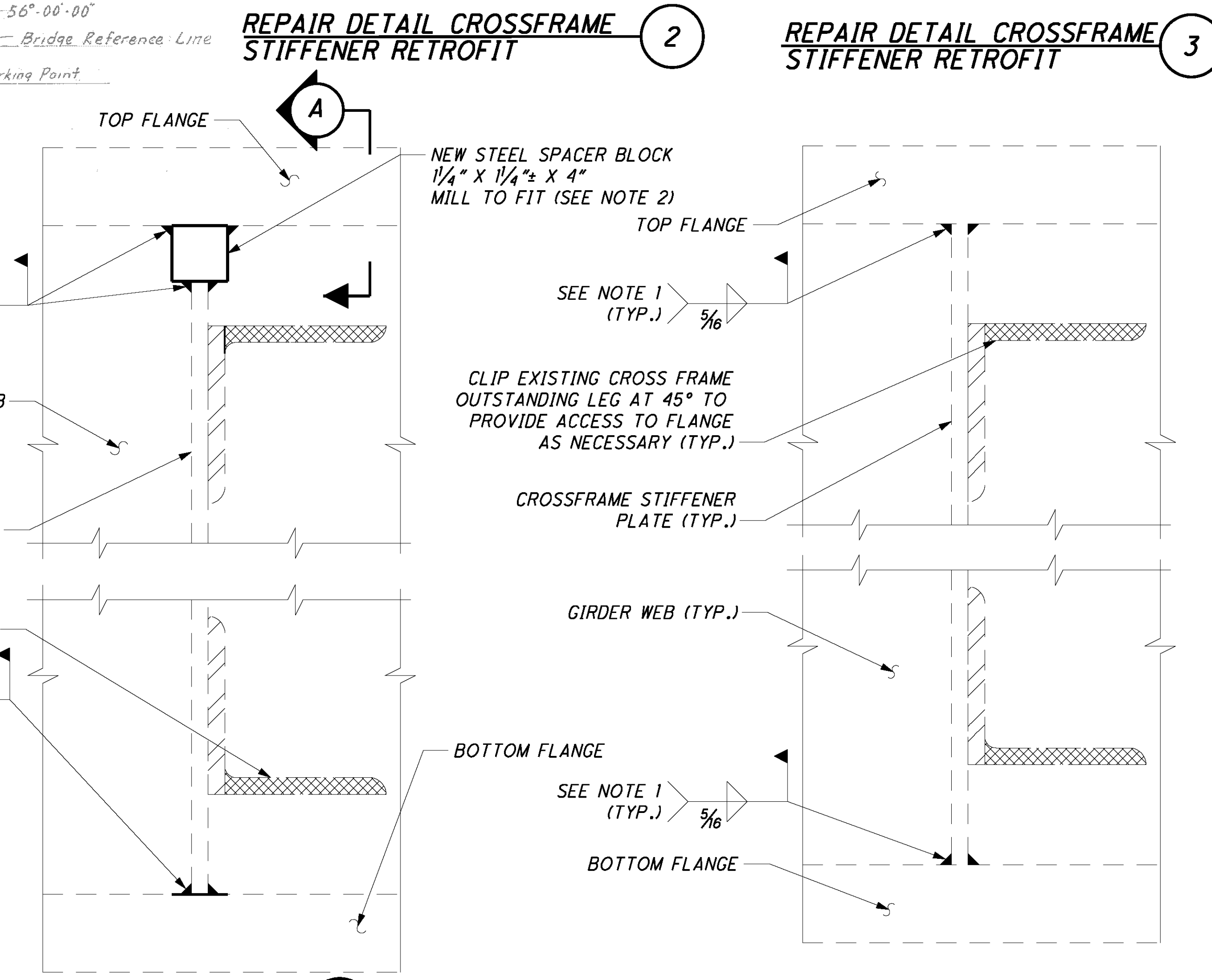
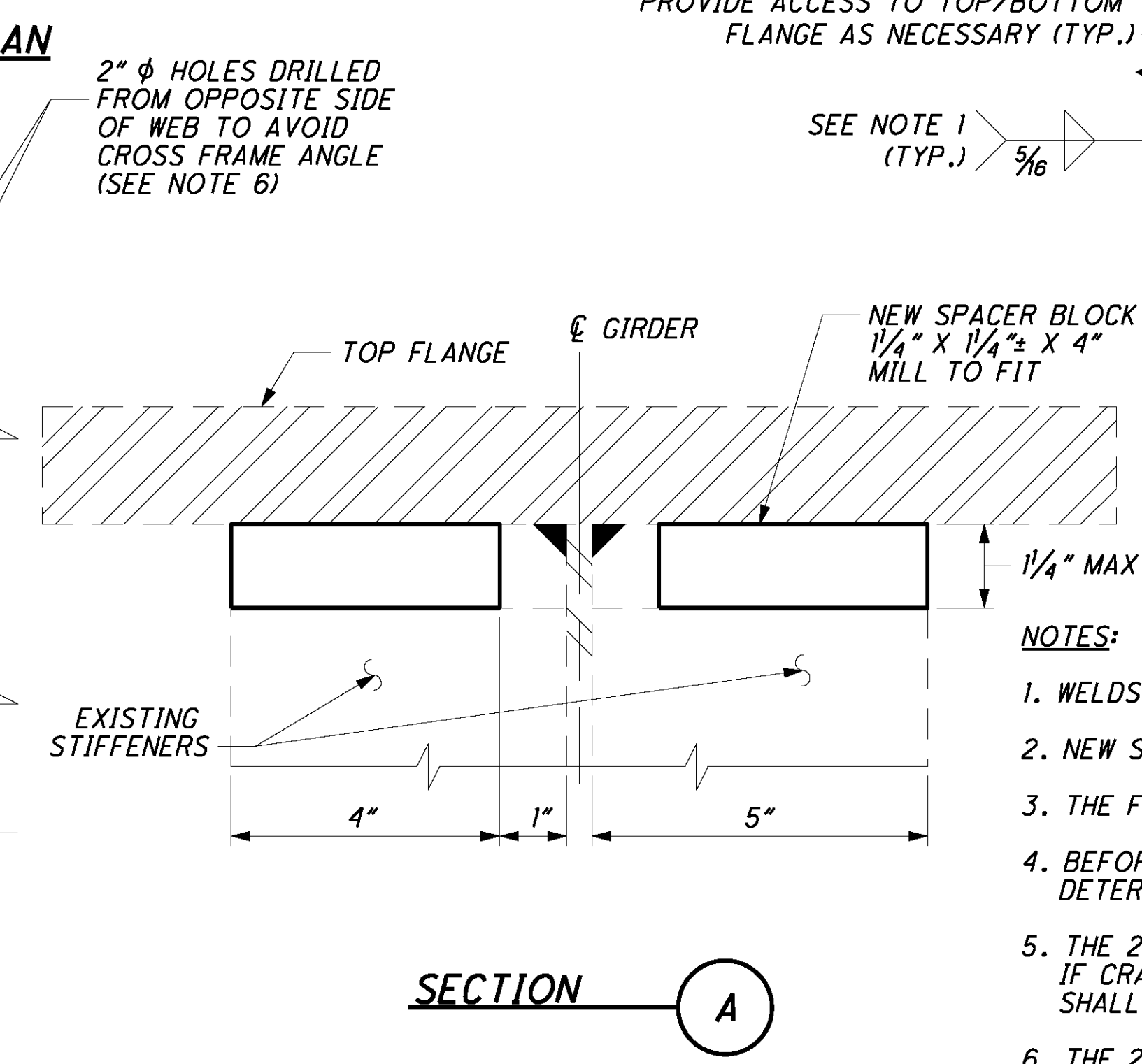
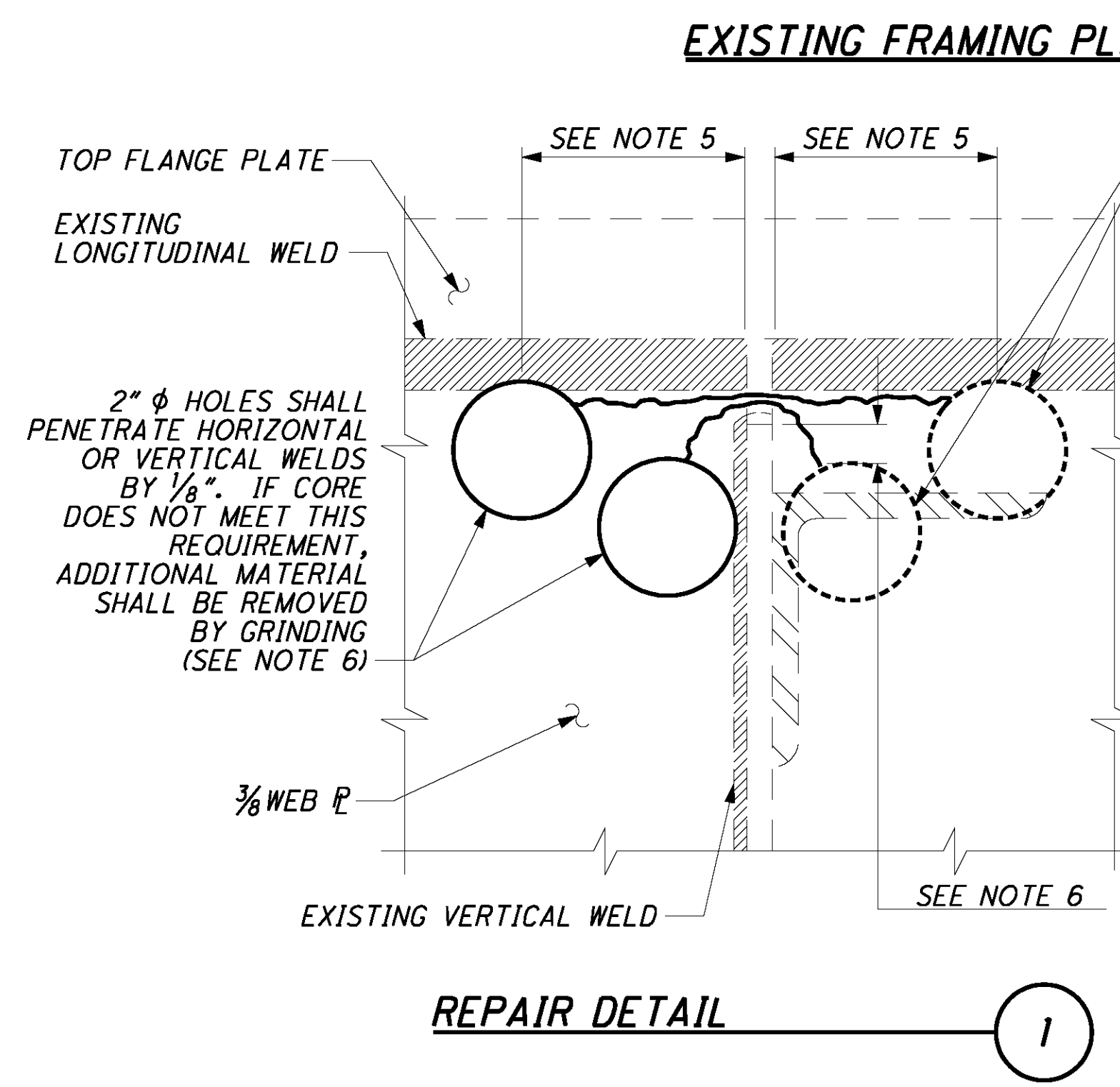
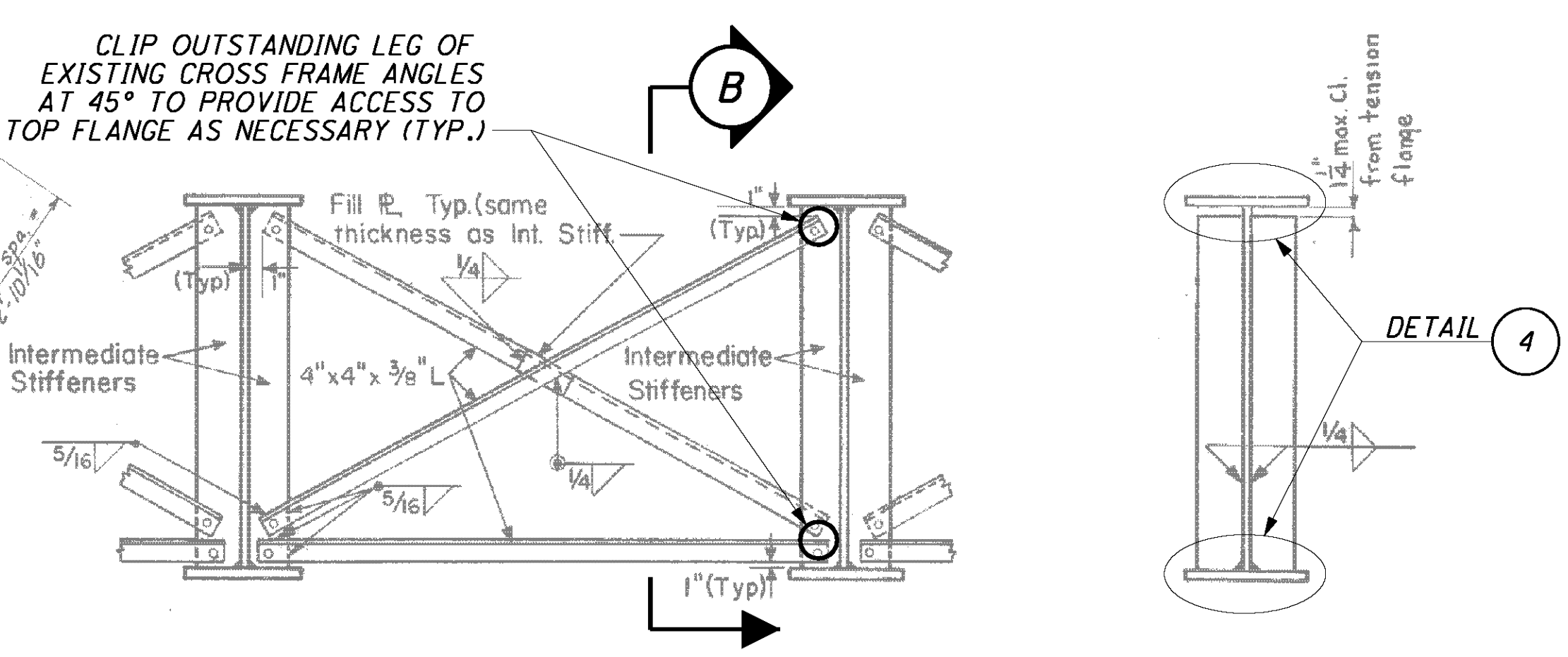
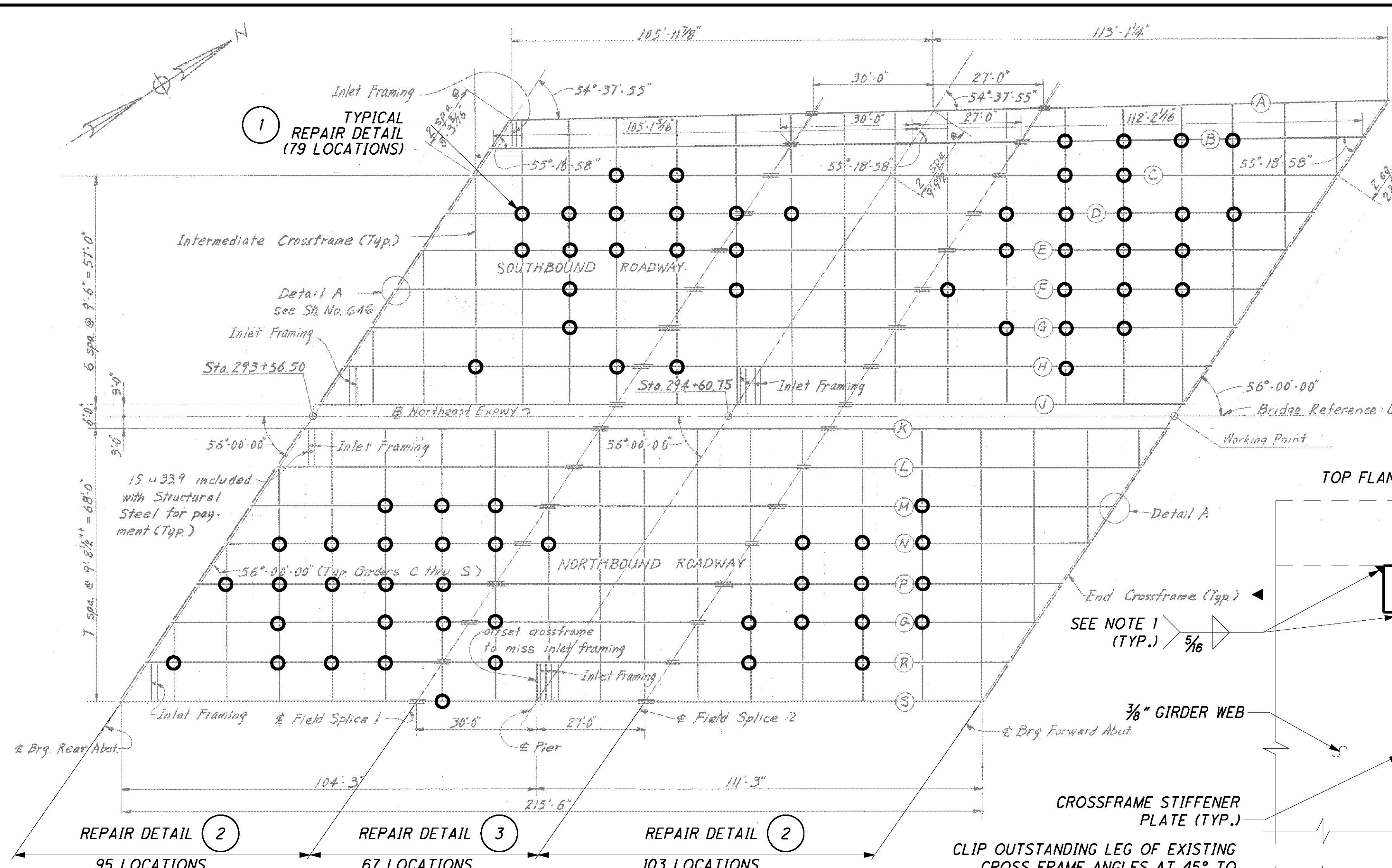
REPAIR DETAIL DRAIN BRACKET RETROFIT 3

REPAIR DETAIL INTERIOR TIE PLATE TREATMENT 1

- NOTES:**
1. PIER ELEVATION, SECTIONS A-A AND H-H, AND TYPICAL SECTION ARE TAKEN FROM THE ORIGINAL PLANS.
 2. CLEAN AND PAINT REPAIR AREAS ON INTERIOR OF PIER CAP.
 3. CARE SHALL BE TAKEN NOT TO OVERCUT SAWCUT BEYOND DRILLED HOLES. FLAME CUTTING IS NOT PERMITTED.
- LIMITS OF ULTRASONIC IMPACT TREATMENT
 - LOCATION OF INTERSECTING WELD BETWEEN PIER CAP WEB STIFFENER WELD AND PIER CAP FLANGE WELD TO BE REMOVED BY GRINDING

DESIGNED		CHECKED		BKC	
DRAWN		NBR		REVISED	
REVIEWED		WRW		STRUCTURE FILE NUMBER	
DATE		12-20-07		3101223	
DESIGN AGENCY 55 PUBLIC SQUARE, SUITE 1000 CLEVELAND, OHIO 44113					
PIER 4 CAP RETROFIT DETAILS BRIDGE NO. HAM-42-0264R RAMP TO US 42 OVER NORTHBOND US 42, RAMP TO SB I-71 AND EDEN PARK DRIVE					
HAM-BH-VAR PID No. 25374					

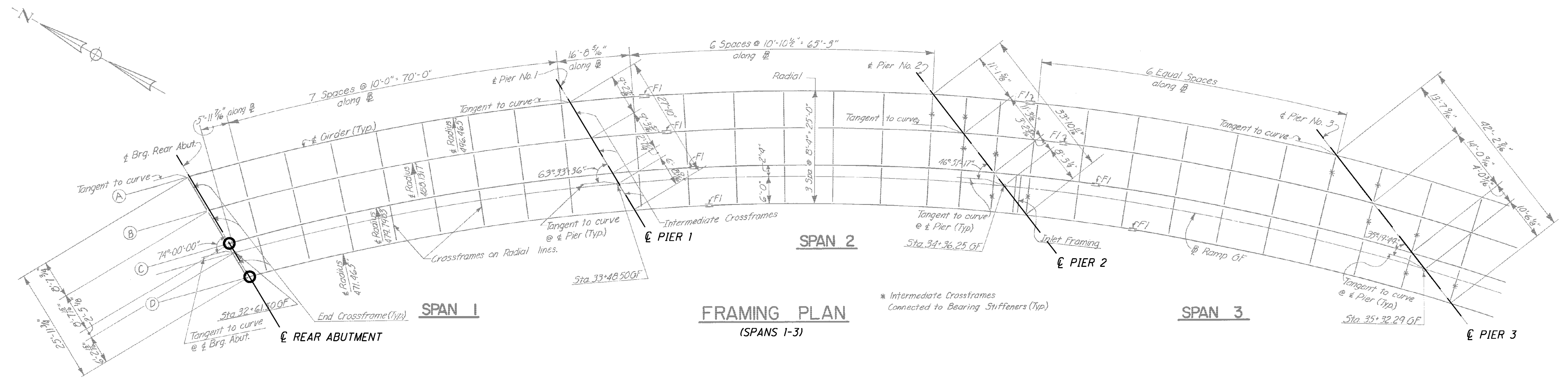
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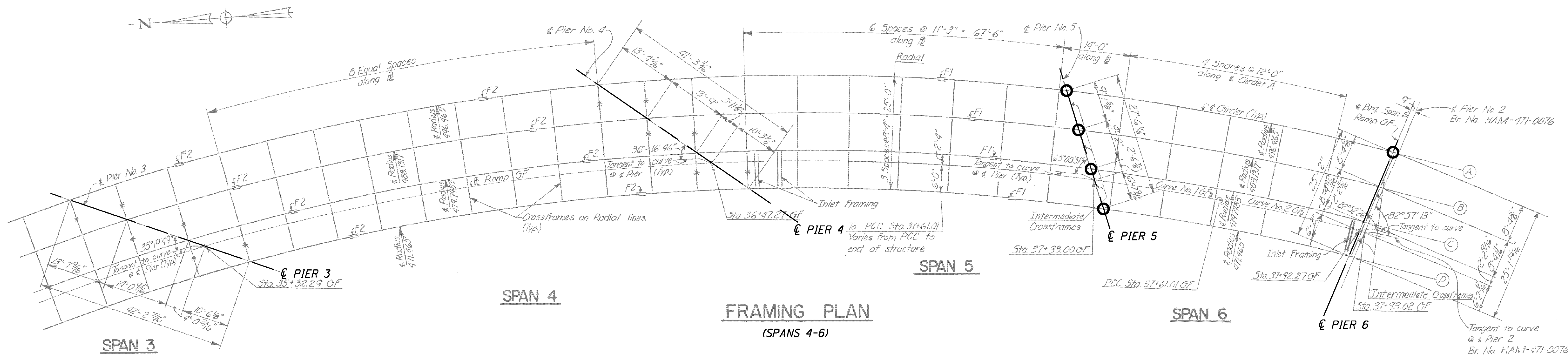
- NOTES:**
1. WELDS SHALL BE IN ACCORDANCE WITH 513.13, 513.21 AND 513.25 OF THE CMS.
 2. NEW SPACER BLOCK AND ANY INCIDENTAL WORK DURING INSTALLATION SHALL BE INCLUDED WITH ITEM 513.95001.
 3. THE FRAMING PLAN AND CROSS FRAME ELEVATION ARE TAKEN FROM THE ORIGINAL PLANS.
 4. BEFORE DRILLING HOLES, PERFORM ITEM SPECIAL - PENCIL ABRASIVE BLASTING, GRINDING, AND NON-DESTRUCTIVE TESTING TO DETERMINE LOCATION OF CRACK TIP TO THE SATISFACTION OF THE ENGINEER.
 5. THE 2" HOLE SHALL BE CENTERED SUCH THAT THE HOLE SHALL PENETRATE 1/8" OF THE CRACK TIP, AS DETERMINED BY THE ENGINEER. IF CRACK LENGTH IS NOT SUFFICIENT TO PENETRATE 1/8", AS DETERMINED BY THE ENGINEER, THEN THE CENTER OF THE DRILL HOLE SHALL BE 3/2" FROM THE FACE OF THE STIFFENER.
 6. THE 2" HOLE SHALL BE CENTERED SUCH THAT THE HOLE SHALL PENETRATE 1/8" OF THE CRACK TIP, AS DETERMINED BY THE ENGINEER. IF CRACK LENGTH IS NOT SUFFICIENT TO PENETRATE 1/8", AS DETERMINED BY THE ENGINEER, THEN THE CENTER OF THE DRILL HOLE SHALL BE 2" FROM THE CHAMFER OF THE STIFFENER.
 7. A MINIMUM OF 1/4" OF STEEL SHALL REMAIN BETWEEN ALL 2" φ HOLES.

DESIGNED BY	DATE	REVIEWED	DRAWN	DESIGNED	FRAMING PLAN	HAM-BH-VAR
Trail Systems	12-07-07	WRW	BKC	BKC	BRIDGE NO. HAM-71-0450	PID No. 25374
55 PUBLIC SQUARE, SUITE 1000 CLEVELAND, OHIO 44113	STRUCTURE FILE NUMBER	3114562	REVISION	CHECKED	I-71 OVER VICTORY PARKWAY	
				NBR		

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FRAMING PLAN
(SPANS 1-3)



FRAMING PLAN
(SPANS 4-6)

○ - LOCATION OF BEARINGS TO BE RESET.

NOTES:

1. FRAMING PLAN IS TAKEN FROM THE ORIGINAL 1972 DRAWINGS, SHEETS 11 AND 12 OF 23, STRUCTURAL STEEL DETAILS, RAMP GF OVER PENN-CENTRAL RAILROAD AND GILBERT AVENUE. BR. No. HAM-471-0076 IN THIS DRAWING REFERS TO BRIDGE No. HAM-71-0197W.
2. FOR NOTES ON RESETTING THE BEARINGS AND THE TEMPORARY SUPPORT OF THE SUPERSTRUCTURE, SEE THE GENERAL NOTES, SHEET 5 OF 38.

DESIGN AGENCY 65 PUBLIC SQUARE, SUITE 1900 CLEVELAND, OHIO 44113	DATE 12-20-07
	REVIEWED WRW
DRAWN NBR	STRUCTURE FILE NUMBER 3114562
DESIGNED NBR	CHECKED BKC
BEARING REALIGNMENT DETAILS BRIDGE NO. HAM-71-0197N RAMP TO SOUTHBOUND I-71 OVER GILBERT AVENUE AND ABANDONED RAILROAD	
HAM-BH-VAR PID No. 25374	
<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> 38 </div>	