

04-29-2022 LETTING ITEM 186

INDEX OF SHEETS

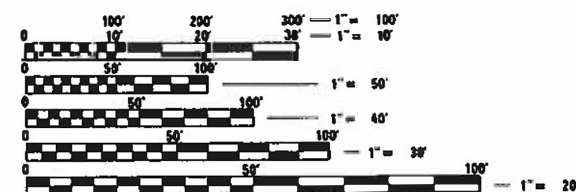
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610001-09 SHOULDER INLET WITH CURB
701311-09 LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS
1-800-892-0123
OR 811

PROJECT ENGINEER - JARED THOELE, P.E., S.E.
PROJECT MANAGER - CINDY LOOS, P.E.

PLANS FOR PROPOSED CONTRACT MAINTENANCE

ICC MULTI-MODAL BOND FUNDS (MMBF)

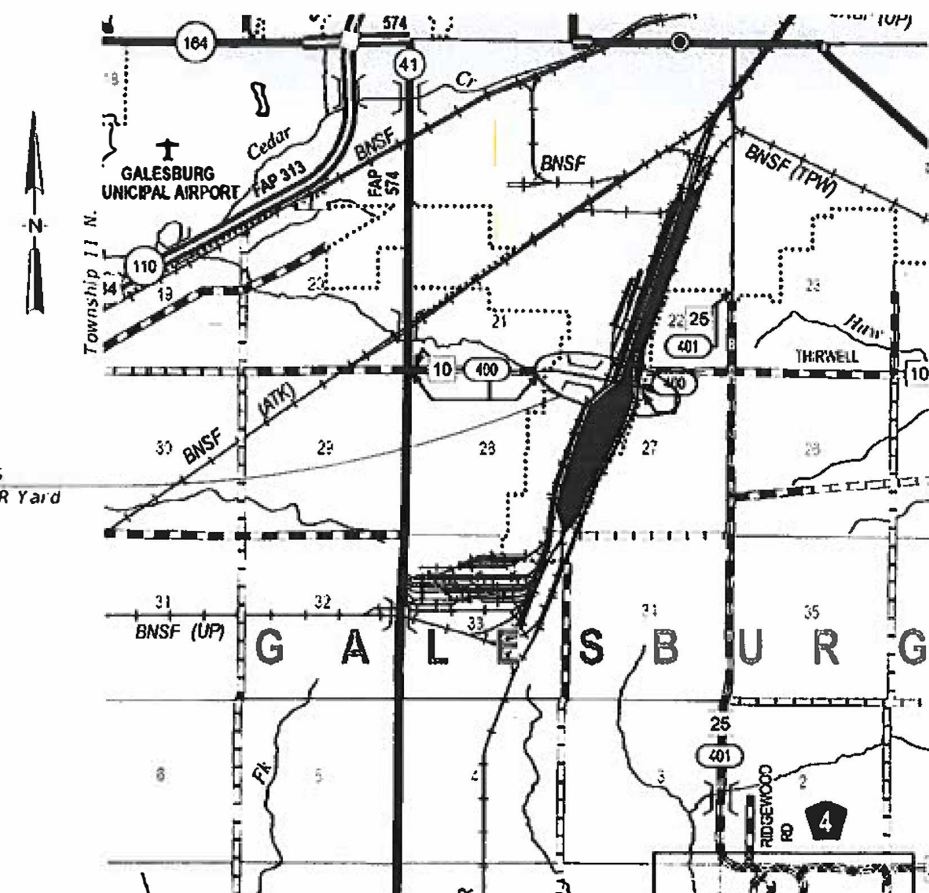
F.A.S. 400 - C.H. 10

SECTION 18-00043-01-BR

GALESBURG TOWNSHIP

KNOX COUNTY

JOB NO. C-94-013-22



Range 1 E
GROSS LENGTH = 2086.5 FT. = 0.39 MILE
NET LENGTH = 2086.5 FT. = 0.39 MILE
ADT (2013) = 3700
FUNCTIONAL CLASS - MINOR ARTERIAL
POSTED SPEED = 45 MPH



PRINTED BY THE AUTHORITY
OF KNOX COUNTY HIGHWAY DEPARTMENT

CONTRACT NO. 89819
CAT NO. 036288-00D



Jared Thoele
SIGNATURE
2/24/2022
DATE
10/3/2021
PK EXP DATE

DATE: 1/24/2022

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HANSON
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7625 N. University St., Suite 209
Peoria, Illinois 61614
Offices Nationwide

APPROVED *2/24* 20 22
Dennis R. Rasmussen
COUNTY ENGINEER

PASSED *3/2* 20 22
Tony Sassine (ARS)
DISTRICT FOUR ENGINEER OF
LOCAL ROADS & STREETS

Releasing For
Bid Based on
Limited Review *March 02* 20 22
Kenneth A. Jorda
DEPUTY DIRECTOR OF HIGHWAYS,
REGION THREE ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LAYOUT	CGP	05/06/21
DRAWN	RSJ	05/06/21
REVIEWED	JGT	01/24/2022

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GENERAL NOTES

1. THE CONSTRUCTION SHALL BE GOVERNED BY THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION IN ILLINOIS", 2022 EDITION AND "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS", 2022 EDITION.
2. ALL REFERENCES TO THE "DEPARTMENT" OR "ENGINEER" IN THE I.D.O.T. STANDARD SPECIFICATIONS SHALL BE CONSTRUED TO MEAN THE OWNER OR HIS AGENT AS APPROPRIATE.
3. WHERE SECTION, SUB-SECTION, SUBDIVISION, OR PROPERTY MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND PRESERVE ALL PROPERTY MARKERS UNTIL AN OWNER OR AUTHORIZED SURVEYOR HAS WITNESSED OR REFERENCED THEIR LOCATION.
4. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY DISCREPANCY IMMEDIATELY.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRS TO ANY UTILITY LINES AND EXISTING IMPROVEMENTS TO REMAIN THAT ARE DAMAGED AS A RESULT OF THE WORK.
6. ALL SECTIONS, DETAILS AND NOTES SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS ELSEWHERE, UNLESS OTHERWISE SHOWN.
7. ALL THE ELEVATIONS, STATIONS, AND OFFSETS SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
8. ALL PAVEMENT REMOVALS SHALL BE FULL DEPTH SAW CUT AT THE LIMITS TO BE REMOVED. THE COST OF THE SAW CUT IS INCLUDED IN PAVEMENT REMOVAL.
9. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS.
10. EXCESS MATERIAL, IF NOT USED FOR OTHER ON-SITE PURPOSES, SHALL BE HAULED OFF-SITE AT CONTRACTOR'S EXPENSE.
11. THE WORK AREA SHALL BE POSITIVELY DRAINED DURING CONSTRUCTION. FINAL GRADES SHALL BE PROTECTED AGAINST DAMAGE FROM EROSION, SEDIMENTATION, AND TRAFFIC.
12. THE CONTRACTOR SHALL USE ANY ON SITE MATERIAL DEEMED SUITABLE BY THE ENGINEER BEFORE ANY NEW FILL IS HAULED TO THE SITE.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING UNDERGROUND UTILITIES PRIOR TO EXCAVATION.
14. CONTRACTORS BIDDING THIS PROJECT SHALL VISIT THE SITE BEFORE BIDDING.
15. COMPLETE ROAD CLOSURE SHALL BE USED FOR DURATION OF CONSTRUCTION IN ACCORDANCE WITH HIGHWAY STANDARDS B.L.R. 21-9 AND B.L.R. 22-7.
16. ALL AREAS DISTURBED BY THE CONTRACTOR OUTSIDE THE PROPOSED CONSTRUCTION LIMITS SHALL BE SEEDED AS DIRECTED BY THE ENGINEER AT THE CONTRACTORS EXPENSE.
17. IN ADDITION TO THE REQUIREMENT OF ARTICLE 107.16, THE CONTRACTOR SHALL PROTECT THE SURFACE OF ALL BRIDGE DECKS AND BRIDGE APPROACH PAVEMENTS IN A MANNER SATISFACTORY TO THE ENGINEER BEFORE ANY EQUIPMENT IS ALLOWED TO CROSS THE STRUCTURE. PROTECTION SHALL BE PROVIDED FOR ALL EQUIPMENT, AS DEFINED IN ARTICLE 101.17, REGARDLESS IF TRACK MOUNTED OR WHEELED.

IDOT DISTRICT 4 GENERAL NOTES

204.00 ENVIRONMENTAL REVIEWS

PRIOR TO THE USE OF ANY PROPOSED BORROW AREAS, USE AREAS (TEMPORARY ACCESS ROADS, DETOURS, RUN-AROUNDS, ETC.) AND/OR WASTE AREAS, THE CONTRACTOR SHALL FILE THE REQUIRED ENVIRONMENTAL RESOURCE REQUEST SURVEYS ACCORDING TO SECTION 107.22 OF THE STANDARD SPECIFICATIONS. THESE SURVEYS ARE REQUIRED IN ORDER FOR THE DEPARTMENT TO CONDUCT CULTURAL AND BIOLOGICAL RESOURCE SURVEYS FOR THE PROPOSED SITE.

THE REQUIRED ENVIRONMENTAL RESOURCE DOCUMENTATION SHALL INCLUDE THE FOLLOWING:

- BDE FORM 2289 (CULTURAL AND NATURAL RESOURCES REVIEW OF BORROW AREAS)
- BDE FORM 2290 (WASTE/USE AREA REVIEW)
- A LOCATION MAP SHOWING THE SIZE LIMITS AND LOCATION OF THE USE AREA
- COLOR PHOTOGRAPHS DEPICTING THE USE AREA
- BORROW AREA ENTRY AGREEMENT FORM - D4 PI0101

PRIOR TO ANY WASTE MATERIALS BEING REMOVED FROM THE CONSTRUCTION SITE THE REQUIRED ENVIRONMENTAL RESOURCE SURVEYS SHALL BE OBTAINED AND FILED BY THE CONTRACTOR. EXCESS WASTE PRODUCTS REMOVED FROM THE CONSTRUCTION SITE SHALL BE DISPOSED OF AS REQUIRED IN SECTION 202.03 OF THE STANDARD SPECIFICATIONS.


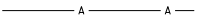







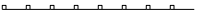



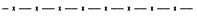


ANY PROTRUDING METAL BARS SHALL BE REMOVED PRIOR TO THE DISPOSAL OF BROKEN CONCRETE AT APPROVED DISPOSAL SITES. THE COST ASSOCIATED WITH THIS WORK SHALL BE INCLUDED IN THE VARIOUS REMOVAL PAY ITEM.

PLEASE NOTE THAT A MINIMUM OF FOUR WEEKS SHALL BE ALLOWED FOR THE DISTRICT TO OBTAIN THE REQUIRED WASTE SITE ENVIRONMENTAL CLEARANCES AND SIX WEEKS FOR THE REQUIRED BORROW SITE ENVIRONMENTAL CLEARANCES.

606.14 TRANSITION PAYMENT METHOD - NEW/OLD CONSTRUCTION

TEN FEET (10 FT.) (3 M) TRANSITIONS SHALL BE USED TO MATCH PROPOSED ITEMS OF WORK TO EXISTING ITEMS IN THE FIELD UNLESS OTHERWISE SHOWN. THE TRANSITION SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PROPOSED ITEM OF WORK SPECIFIED.

LEGEND

	CONTROL POINT		OVERHEAD ELECTRIC
	EXISTING TELEPHONE PEDESTAL		UNDERGROUND TELEPHONE
	EXISTING GUY		UNDERGROUND GAS
	EXISTING POWER POLE		EXISTING R.O.W.
	EXISTING SIGN		EXISTING GUARDRAIL
	EXISTING TREE		PROPOSED GUARDRAIL
	EXISTING R.O.W. MARKER		EXISTING FENCE
	PROPOSED SIGN		VEGETATION LINE

	USER NAME = Johns00944			DESIGNED - CGP	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	FAS 400 (C.H. 10) GENERAL NOTES			F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
				DRAWN - RSJ	REVISED -					400	18-00043-01-BR	KNOX	81	2
	PLOT SCALE = 10.0000 ' / in.			CHECKED - JGT	REVISED -					CONTRACT NO. 89819				
	PLOT DATE = 2/3/2022			DATE - 01/24/2022	REVISED -		SCALE:	SHEET	OF	SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT	

LAYOUT	CGP	05/06/21
DRAWN	RSJ	05/06/21
REVIEWED	JGT	01/24/2022

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CODE NO.	ITEM	UNIT	QUANTITY
20800150	TRENCH BACKFILL	CU YD	15.6
30300001	AGGREGATE SUBGRADE IMPROVEMENT	CU YD	76
31102100	SUBBASE GRANULAR MATERIAL, TYPE C 4"	SQ YD	170
31200100	STABILIZED SUBBASE 4"	SQ YD	174
42000501	PORTLAND CEMENT CONCRETE PAVEMENT 10" (JOINTED)	SQ YD	280
44000100	PAVEMENT REMOVAL	SQ YD	342
44000300	CURB REMOVAL	FOOT	60
50102400	CONCRETE REMOVAL	CU YD	46.8
50157300	PROTECTIVE SHIELD	SQ YD	463
50300225	CONCRETE STRUCTURES	CU YD	31.8
50300255	CONCRETE SUPERSTRUCTURE	CU YD	45.7
50300260	BRIDGE DECK GROOVING	SQ YD	567
50300300	PROTECTIVE COAT	SQ YD	13273
50301350	CONCRETE SUPERSTRUCTURE (APPROACH SLAB)	CU YD	289.2

* SPECIAL PROVISION Δ SPECIALTY ITEMS

CODE NO.	ITEM	UNIT	QUANTITY
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	114790
52000110	PREFORMED JOINT STRIP SEAL	FOOT	432
* 52200500	MECHANICALLY STABILIZED EARTH RETAINING WALL	SQ FT	3690
59000200	EPOXY CRACK INJECTION	FOOT	26
60100955	PIPE DRAINS 15"	FOOT	102
60500060	REMOVING INLETS	EACH	4
60600605	CONCRETE CURB, TYPE B	FOOT	60
Δ 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4
63200310	GUARDRAIL REMOVAL	FOOT	196
67100100	MOBILIZATION	L SUM	1
Δ 78009004	MODIFIED URETHANE PAVEMENT MARKING - LINE 4"	FOOT	8346
Δ 78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	8
* X0322215	CLEANING BRIDGE SCUPPERS AND DOWNSPOUTS	EACH	56
* X0322924	RETAINING WALL REMOVAL	SQ FT	3690

USER NAME = ThoeI01490	DESIGNED - CGP	REVISED -
DRAWN - RSJ	CHECKED - JGT	REVISED -
PLOT SCALE = 2.00 ' / in.	DATE - 01/24/2022	REVISED -
PLOT DATE = 3/7/2022		

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

FAS 400 (C.H. 10) SUMMARY OF QUANTITIES - 1			
SCALE:	SHEET	OF	SHEETS
STA.		TO STA.	

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	3
CONTRACT NO. 89819				
ILLINOIS FED. AID PROJECT				

LAYOUT	CGP	05/06/21
DRAWN	RSJ	05/06/21
REVIEWED	JGT	01/24/2022

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	CODE NO.	ITEM	UNIT	QUANTITY
*	X0323586	PIPE DRAIN REMOVAL	FOOT	122
*	X0900022	BRIDGE DRAINAGE SYSTEM REPAIR	FOOT	100
*	X6100120	TYPE E INLET BOX, STANDARD 610001 (SPECIAL)	EACH	4
*	X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1
*	XX008979	CONCRETE COLLAR	EACH	2
*	Z0001002	GUARDRAIL AGGREGATE EROSION CONTROL	TON	36
*	Z0004552	APPROACH SLAB REMOVAL	SQ YD	642
Δ *	Z0007101	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 1	L SUM	1
Δ *	Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1
*	Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	814
*	Z0016200	DECK SLAB REPAIR (PARTIAL)	SQ YD	407
*	Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1
*	Z0073200	TEMPORARY SHORING AND CRIBBING	EACH	16
#	Z0076600	TRAINEES	HOUR	1000
#	Z0076604	TRAINEES TRAINING PROGRAM GRADUATE	HOUR	1000

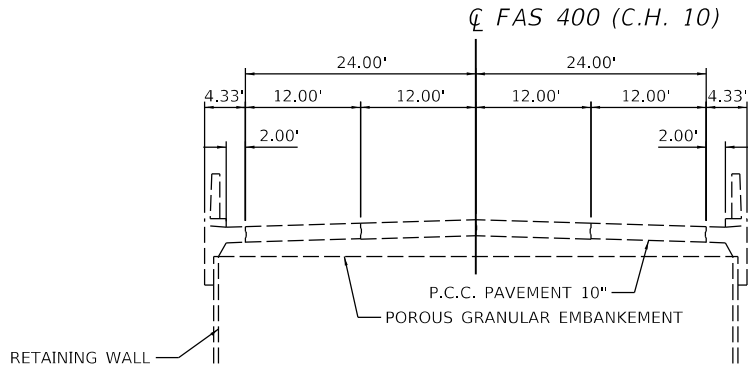
* SPECIAL PROVISION Δ SPECIALTY ITEM #0042

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PLOT DATE = 3/7/2022		

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

FAS 400 (C.H. 10) SUMMARY OF QUANTITIES - 2			
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STA.	TO STA.		

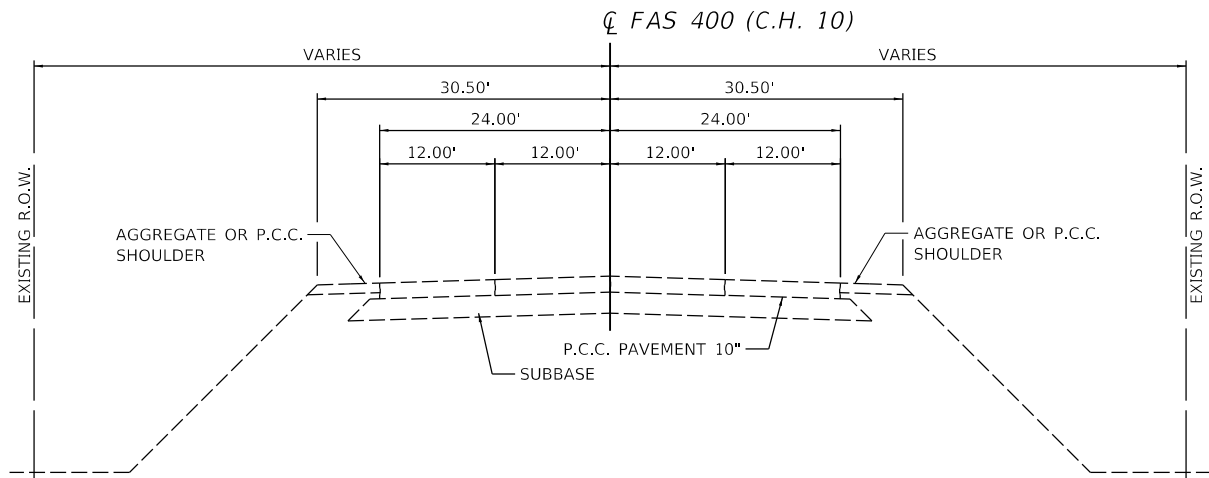
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400	18-00043-01-BR	KNOX	81	4
CONTRACT NO. 89819				
ILLINOIS FED. AID PROJECT				



EXISTING TYPICAL SECTION

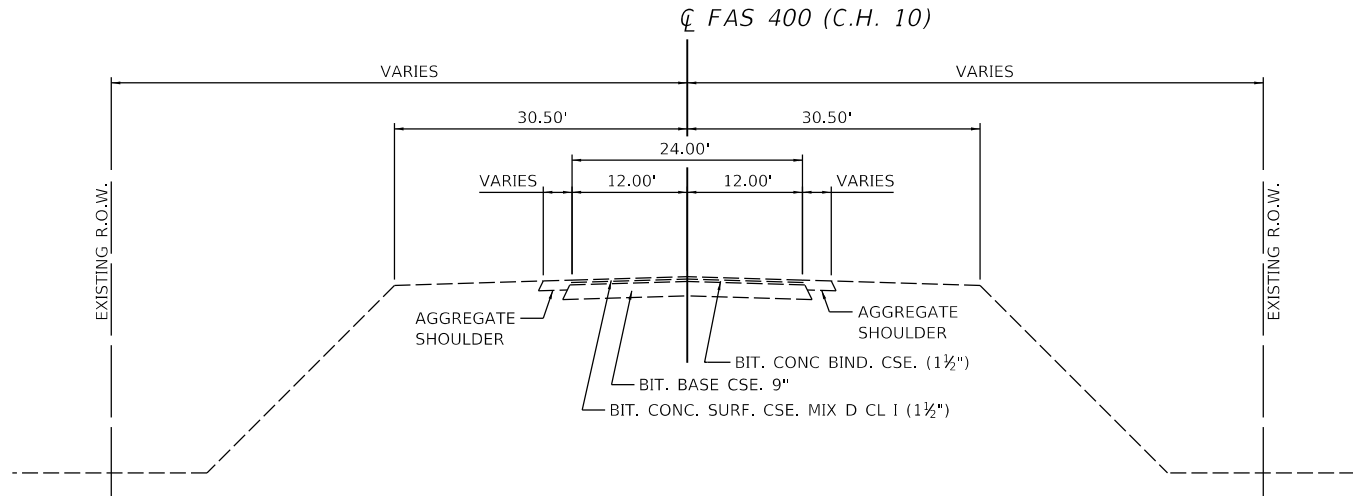
STA. 56+22.06 TO STA. 56+73.06
STA. 75+99.56 TO STA. 76+50.56

NOTE:
EXISTING PAVEMENT AND SHOULDER DEPTHS
ASSUMED BASED ON AS BUILT PLANS.



EXISTING TYPICAL SECTION

STA. 55+93.06 TO STA. 56+22.06
STA. 76+50.56 TO STA. 76+79.56



EXISTING TYPICAL SECTION

STA. 50+00.00 TO STA. 55+93.06
STA. 76+79.56 TO STA. 84+00.00

LAYOUT	CGP	05/06/21
DRAWN	RSJ	05/06/21
REVIEWED	JGT	01/24/2022

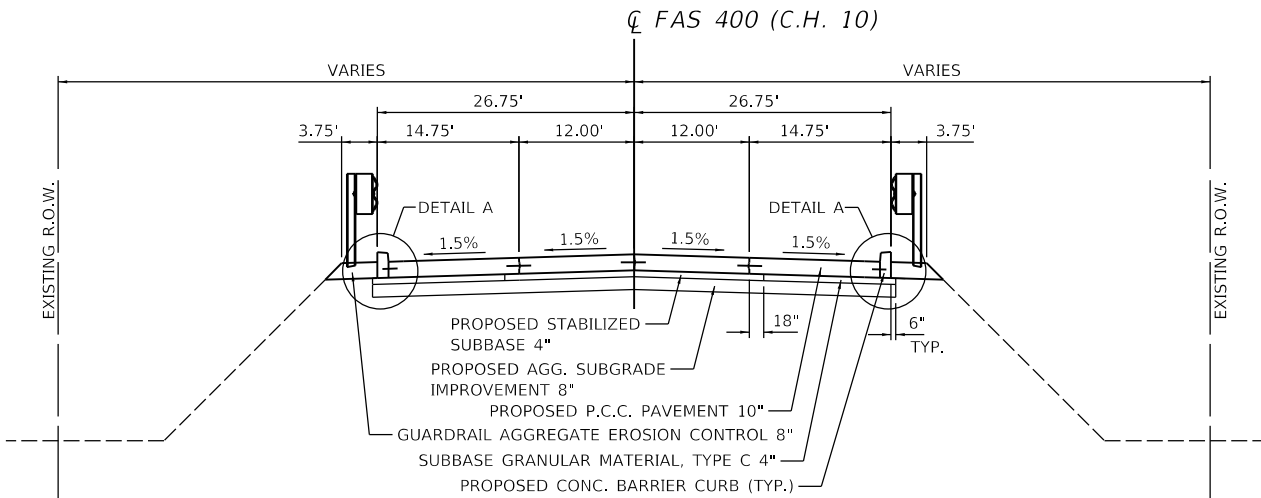
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PLOT DATE = 2/3/2022	DATE - 01/24/2022	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

FAS 400 (C.H. 10)
TYPICAL SECTIONS - 1

SCALE:	SHEET	OF	SHEETS	STA.	TO STA.
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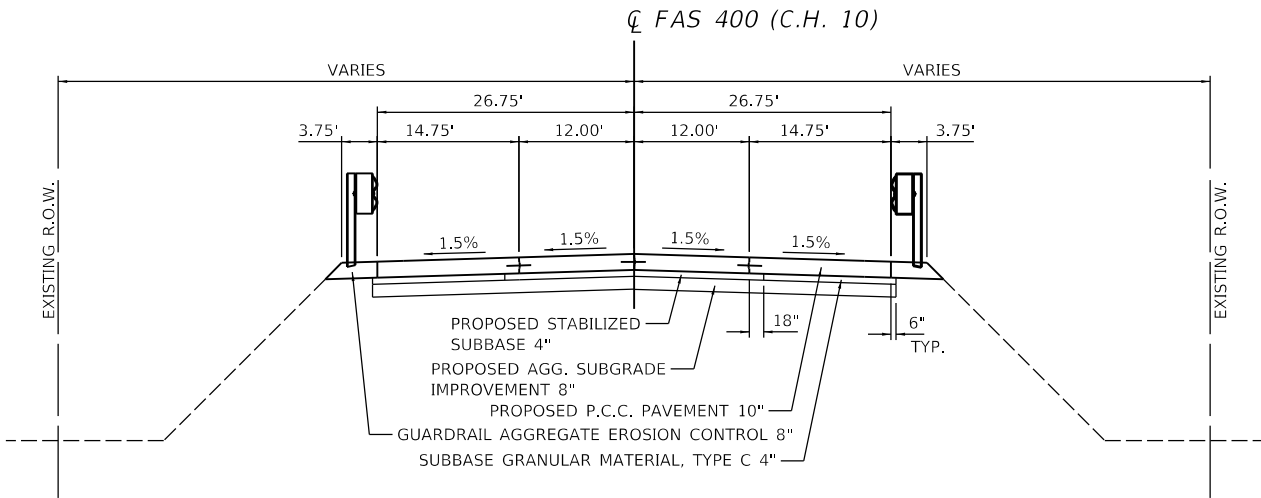
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400	18-00043-01-BR	KNOX	81	5
		CONTRACT NO. 89819		
ILLINOIS		FED. AID PROJECT		



PROPOSED TYPICAL SECTION

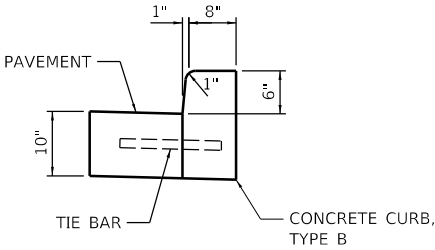
STA. 56+07.06 TO STA. 56+22.06
STA. 76+50.56 TO STA. 76+65.56

BRIDGE OMISSION
STA. 56+73.06 TO STA. 75+99.56



PROPOSED TYPICAL SECTION

STA. 55+93.06 TO STA. 56+07.06
STA. 76+65.56 TO STA. 76+79.56



DETAIL A

NOTE:
MATCH CROSS SECTION OF CURB ON
BRIDGE APPROACH SLAB.

LAYOUT	CGP	05/06/21
DRAWN	RSJ	05/06/21
REVIEWED	JGT	01/24/2022
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PLOT DATE	= 2/3/2022	DATE -	01/24/2022	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAS 400 (C.H. 10)
TYPICAL SECTIONS - 2

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	6
		CONTRACT NO. 89819		
		ILLINOIS	FED. AID PROJECT	

REMOVAL SCHEDULE				
LOCATION		44000100	44000300	63200310
		PAVEMENT REMOVAL	CURB REMOVAL	GUARDRAIL REMOVAL
BEGIN STATION	END STATION	SQ YD	FOOT	FOOT
COUNTY HIGHWAY 10				
55+93.06	56+22.06	171		
76+50.56	76+79.56	171		
56+08.75	56+22.06		30	
76+50.56	76+63.87		30	
55+85.16	56+34.06			98
76+38.56	76+87.46			98
TOTAL		342	60	196

PAVEMENT MARKING SCHEDULE		
LOCATION		78009004
		MODIFIED URETHANE PAVEMENT MARKING - LINE 4"
BEGIN STATION	END STATION	FOOT
COUNTY HIGHWAY 10		
55+93.06	76+79.56	8,346
TOTAL		8,346

DRAINAGE STRUCTURE SCHEDULE						
LOCATION						X6100120 TYPE E INLET BOX, STANDARD 610001 (SPECIAL)
						EACH
NO.	STATION	OFFSET	FRAME ELEV.	N. INVERT ELEV.	S. INVERT ELEV.	
COUNTY HIGHWAY 10						
S1	56+10.54	21.08' LT	811.91	807.71	807.88	1
S2	56+10.54	21.08' RT	811.91	808.33	-	1
S3	76+60.79	21.08' LT	817.56	813.98	-	1
S4	76+60.79	21.08' RT	817.56	813.23	813.06	1
TOTAL						
TOTAL						4

PAVEMENT AND SHOULDER SCHEDULE						
LOCATION		30300108	31102100	31200100	42000500	50300300
		AGGREGATE SUBGRADE IMPROVEMENT 8"	SUBBASE GRANULAR MATERIAL, TYPE C 4"	STABILIZED SUBBASE 4"	PORTLAND CEMENT CONCRETE PAVEMENT 10"	PROTECTIVE COAT
BEGIN STATION	END STATION	SQ YD	SQ YD	SQ YD	SQ YD	FOOT
COUNTY HIGHWAY 10						
55+93.06	56+22.06	172	85	87	140	140
76+50.56	76+79.56	172	85	87	140	140
56+07.06	56+22.06					30
76+50.56	76+65.56					30
TOTAL		344	170	174	280	280
						60

PIPE SCHEDULE						
FROM STRUCTURE		TO STRUCTURE		20800150	60100955	XX008979
				TRENCH BACKFILL	PIPE DRAINS 15"	CONCRETE COLLAR
NO.	INVERT ELEV.	NO.	INVERT ELEV.	CU YD	FOOT	EACH
COUNTY HIGHWAY 10						
S2	808.33	S1	807.88	6	44	
S1	807.71	EXIST. PIPE	807.68	1	7	1.00
S3	813.98	S4	813.23	7	44	
S4	813.06	EXIST. PIPE	813.03	1	7	1.00
TOTAL		TOTAL		16	102	2.0

GUARDRAIL SCHEDULE					
LOCATION			63100085	78200005	Z0001002
			TRAFFIC BARRIER TERMINAL, TYPE 6	GUARDRAIL REFLECTORS, TYPE A	GUARDRAIL AGGREGATE EROSION CONTROL
BEGIN STATION	END STATION	SIDE	EACH	EACH	TON
COUNTY HIGHWAY 10					
55+85.16	56+24.56	LT	1	2	
55+85.16	56+24.56	RT	1	2	
76+48.06	76+87.46	LT	1	2	
76+48.06	76+87.46	RT	1	2	
55+85.16	56+22.06	LT			9
55+85.16	56+22.06	RT			9
76+50.56	76+87.46	LT			9
76+50.56	76+87.46	RT			9
TOTAL			4	8	36

DRAINAGE REMOVAL SCHEDULE			
LOCATION		60500060	X0323586
		REMOVING INLETS	PIPE DRAIN REMOVAL
STATION	OFFSET	EACH	FOOT
COUNTY HIGHWAY 10			
56+10.54	26.00' LT	1	
56+10.54	26.00' RT	1	
76+60.79	26.00' LT	1	
76+60.79	26.00' RT	1	
56+10.54	LT/RT		61
76+60.79	LT/RT		61
TOTAL		4	122

LAYOUT	CGP	05/06/21
DRAWN	RSJ	05/06/21
REVIEWED	JGT	01/24/2022

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	DRAWN - RSJ	REVISED -
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PLOT DATE = 2/3/2022	DATE - 01/24/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAS 400 (C.H. 10)
SCHEDULE OF QUANTITIES

SCALE:	SHEET	OF	SHEETS	STA.	TO STA.
--------	-------	----	--------	------	---------

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	7
		CONTRACT NO. 89819		
		ILLINOIS	FED. AID PROJECT	

LAYOUT	CGP	05/06/21
DRAWN	RSJ	05/06/21
REVIEWED	JGT	01/24/2022

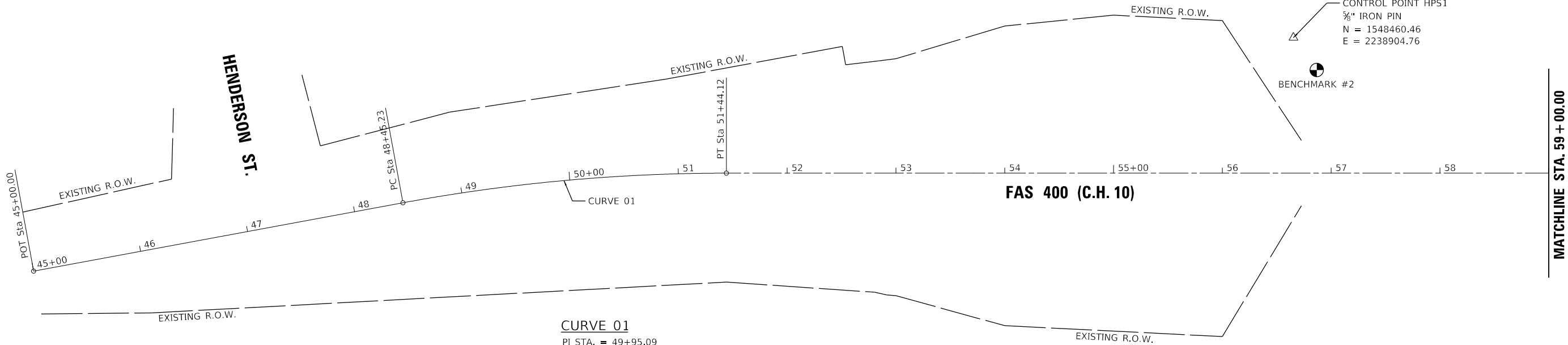
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MATCHLINE STA. 59 + 00.00

59 60+00 61 62 63 64 65+00 66 67 68 69 70+00 71 72

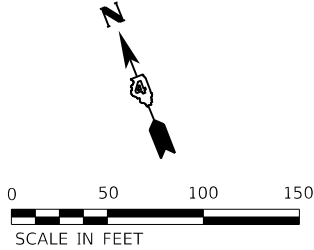
FAS 400 (C.H. 10)

MATCHLINE STA. 73 + 00.00



CURVE 01

PI STA. = 49+95.09
 Δ = 10° 27' 41" (RT)
D = 3° 30' 00"
R = 1,637.02'
T = 149.86'
L = 298.89'
E = 6.85'
e = _____
T.R. = _____
S.E. RUN = _____
P.C. STA. = 48+45.23
P.T. STA. = 51+44.12



- BENCHMARK #1 COTTON SPINDLE IN EAST FACE OF POWER POLE #381 ON WEST SIDE OF SALUDA RD. AND IN LINE WITH OLD THIRWELL RD. (± 550' NORTH OF KNOX COUNTY HIGHWAY 10 BRIDGE).
APPROX. LOCATION - N = 1548505 E = 2238897
- BENCHMARK #2 COTTON SPINDLE IN EAST FACE OF FIRST POWER POLE NORTH OF KNOX COUNTY 10 BRIDGE ON WEST SIDE OF BNSF ACCESS RD. RUNNING ALONG WEST ABUTMENT OF BRIDGE.
APPROX. LOCATION - N = 1548439 E = 2236942

USER NAME = Johns00944	DESIGNED - CGP	REVISED -
	DRAWN - RSJ	REVISED -
PLOT SCALE = 100.00 ' / in.	CHECKED - JGT	REVISED -
PLOT DATE = 2/3/2022	DATE - 01/24/2022	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**FAS 400 (C.H. 10)
ALIGNMENT, BENCHMARKS, AND TIES**

SCALE: 1"=50' SHEET OF SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	8
		CONTRACT NO. 89819		
ILLINOIS		FED. AID PROJECT		

LAYOUT	CGP	05/06/21
DRAWN	RSJ	05/06/21
REVIEWED	JGT	01/24/2022

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	DRAWN - RSJ	REVISED -
PLOT SCALE = 100.00 ' / in.	CHECKED - JGT	REVISED -
PLOT DATE = 2/3/2022	DATE - 01/24/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAS 400 (C.H. 10) ALIGNMENT, BENCHMARKS, AND TIES			
SCALE: 1"=50'	SHEET	OF	SHEETS
STA.	TO	STA.	TO

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	9
		CONTRACT NO. 89819		
ILLINOIS		FED. AID PROJECT		

MATCHLINE STA. 73 + 00.00

73

74

75+00

76

77

78

79

80+00

81

82

83

84

MATCHLINE STA. 85 + 00.00

FAS 400 (C.H. 10)

EXISTING R.O.W.

EXISTING R.O.W.

PC Sta 78+34.44

CURVE 02

CURVE 02

PI STA. = 83+34.26
Δ = 47° 07' 52" (LT)
D = 5° 00' 00"
R = 1,145.92'
T = 499.82'
L = 942.62'
E = 104.26'
e = ____
T.R. = ____
S.E. RUN = ____
P.C. STA. = 78+34.44
P.T. STA. = 87+77.06

FAS 400 (C.H. 10)

EXISTING R.O.W.

EXISTING R.O.W.

MATCHLINE STA. 85 + 00.00

85+00

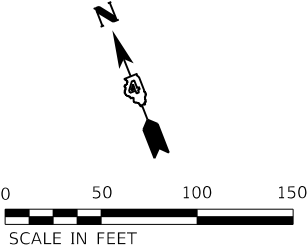
86

87

88

89

PT Sta 87+77.06



LAYOUT	CGP	05/06/21
DRAWN	RSJ	05/06/21
REVIEWED	JGT	01/24/2022
MODEL	Default	
FILE NAME:	\\118job18\0058A\CAD\Road\Sheet\sh-detour01.dgn	

① C.H. 10

② DETOUR M4-8 24"x18" ③ END DETOUR M4-8a 24"x18"

④ M6-1L 21"x15" ⑤ M6-1R 21"x15"

⑥ M5-1L 21"x15" ⑦ M5-1R 21"x15"

⑧ M6-3 21"x15" ⑨ M6-2 21"x15"

⑩ DETOUR M4-10L 48"x18"

⑪ DETOUR M4-10R 48"x18"



⑫ BRIDGE OUT 1.2 MILES AHEAD LOCAL TRAFFIC ONLY R11-3b 60"x30"

⑬ ROAD CLOSED R11-2 48"x30"

⑭ ROAD CLOSED 500 FT W20-3 36"x36"

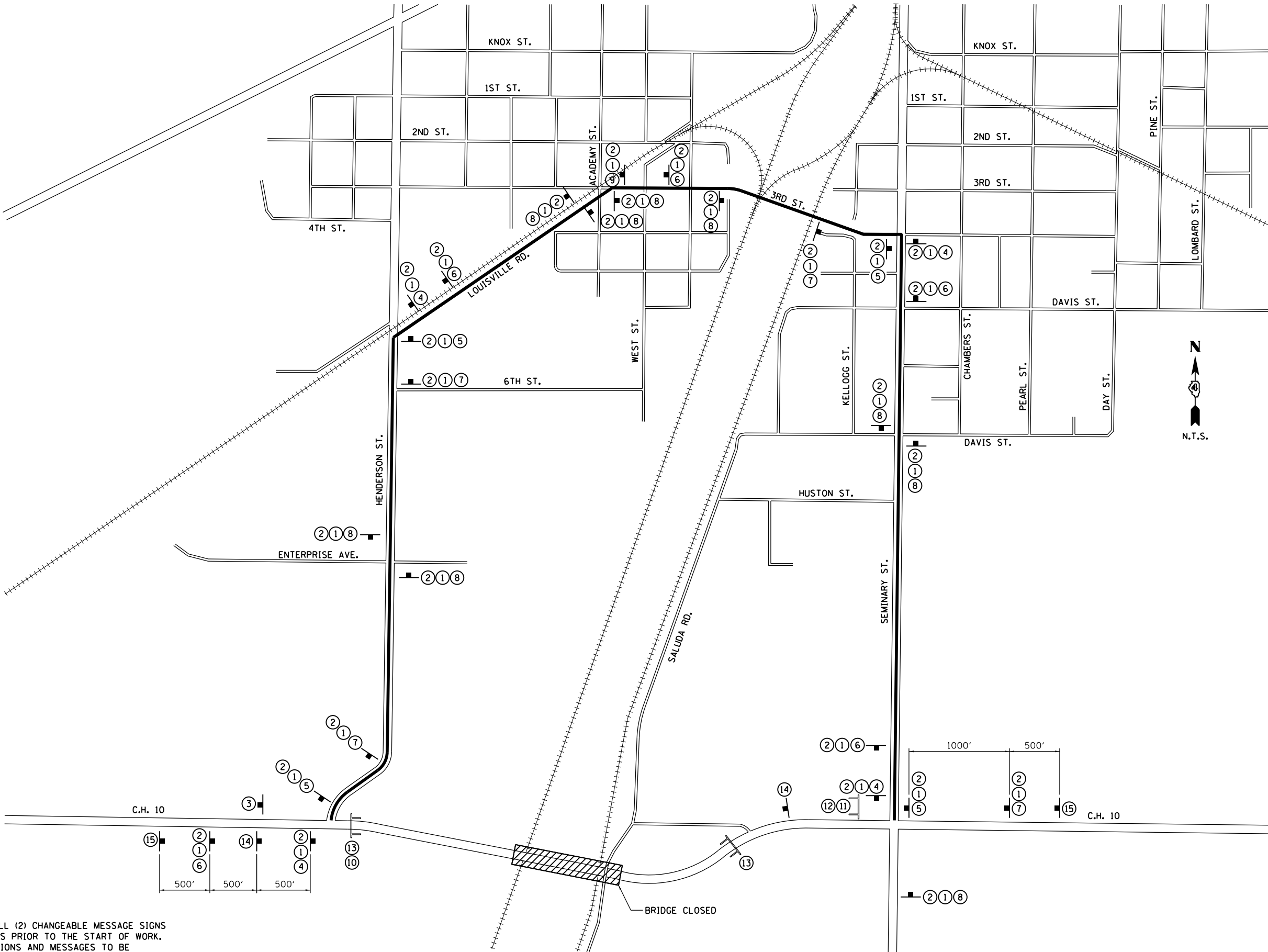
⑮ DETOUR 1500 FT W20-2 36"x36"

LEGEND

-  SIGN
-  TYPE III BARRICADE

NOTE:

INSTALL (2) CHANGEABLE MESSAGE SIGNS
7 DAYS PRIOR TO THE START OF WORK.
LOCATIONS AND MESSAGES TO BE
DETERMINED BY THE ENGINEER.

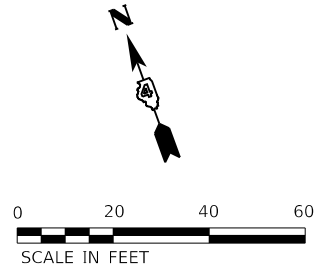
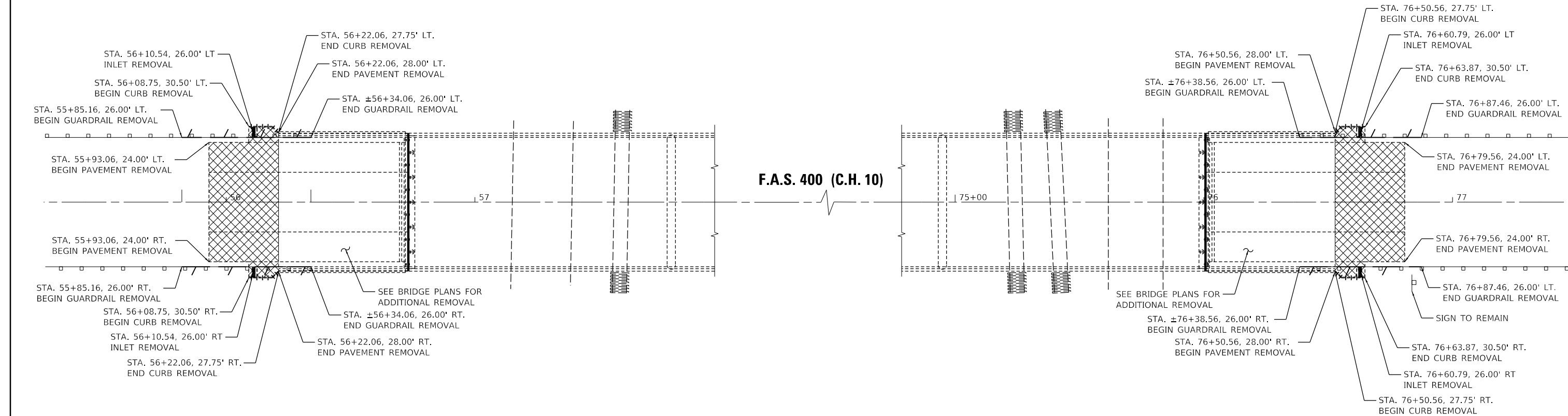


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAS 400 (C.H. 10)
DETOUR PLAN

SCALE: NTS SHEET OF SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	10
CONTRACT NO. 89819				
ILLINOIS FED. AID PROJECT				



LEGEND

- PAVEMENT REMOVAL
- GUARDRAIL REMOVAL
- CURB REMOVAL

LAYOUT	CGP	05/06/21
DRAWN	RSJ	05/06/21
REVIEWED	JGT	01/24/2022

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PLOT DATE = 2/3/2022	DATE - 01/24/2022	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**FAS 400 (C.H. 10)
REMOVAL PLAN**

SCALE: 1"=20' SHEET OF SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	11
CONTRACT NO. 89819				
ILLINOIS FED. AID PROJECT				

PLAN	NO.	NOTE BOOK	SURVEYED	PLOTTED	ALIGNMENT CHECKED	CADD FILE NAME	BY	DATE

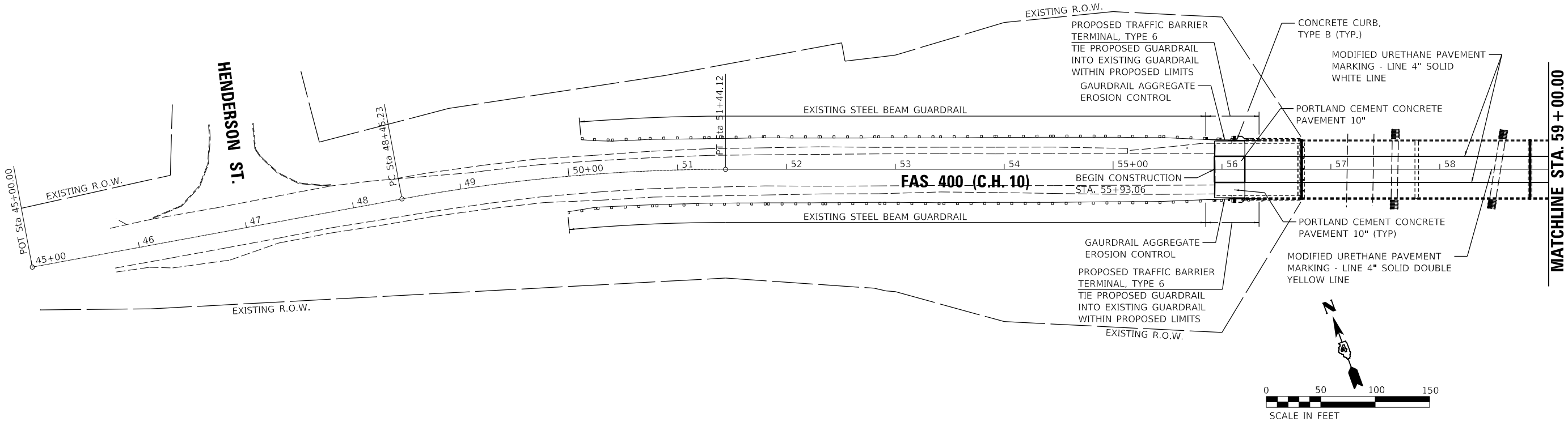
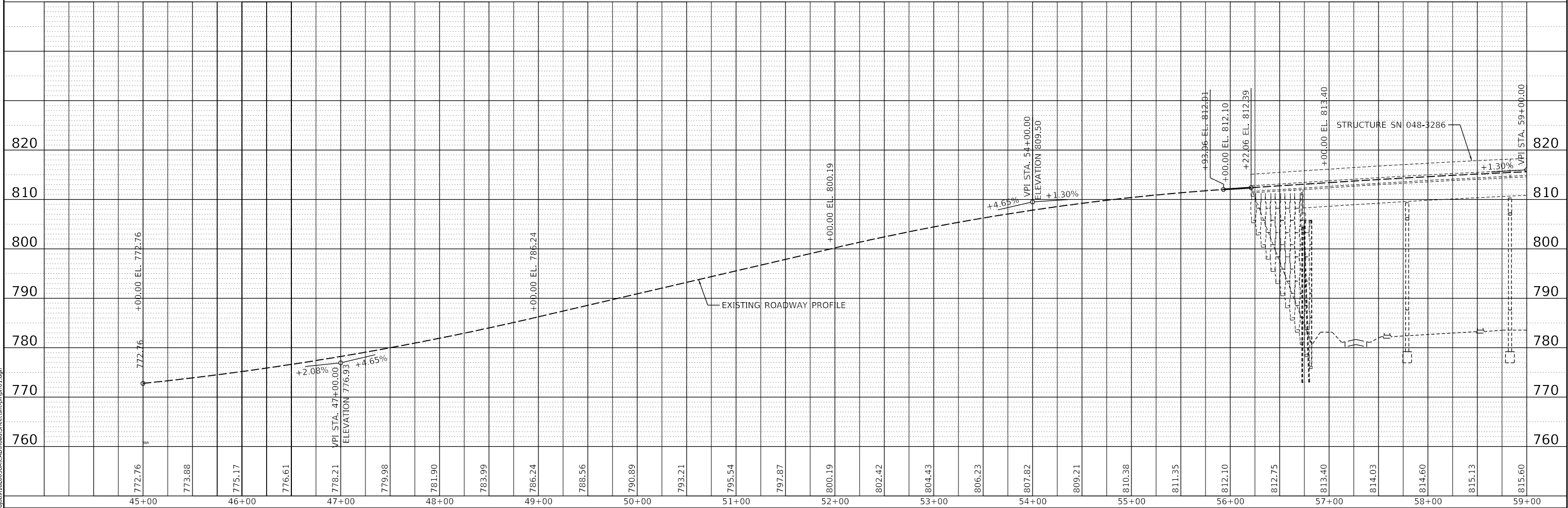
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**HANSON**
Hanson Professional Services Inc.

PROFILE	NO.	NOTE BOOK	SURVEYED	PLOTTED	GRADES CHECKED	STRUCTURE NOTATIONS CHKD	BY	DATE

LAYOUT	DCP	05/06/21
DRAWN	RSJ	05/06/21
REVIEWED	JGT	01/24/2022

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NOTE:
SEE DRAINAGE DETAILS
FOR NEW INLET LOCATIONS.

USER NAME	= Johns00944
PLOT SCALE	= 100.00 ' / in.
PLOT DATE	= 2/3/2022

DESIGNED	- CGP
DRAWN	- RSJ
CHECKED	- JGT
DATE	- 01/24/2022

REVISED	-
REVISED	-
REVISED	-
REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAS 400 (C.H. 10)
PLAN AND PROFILE

SCALE: 1"=20'	SHEET	OF	SHEETS	STA.	TO	STA.
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F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	12
CONTRACT NO.89819				
ILLINOIS FED. AID PROJECT				

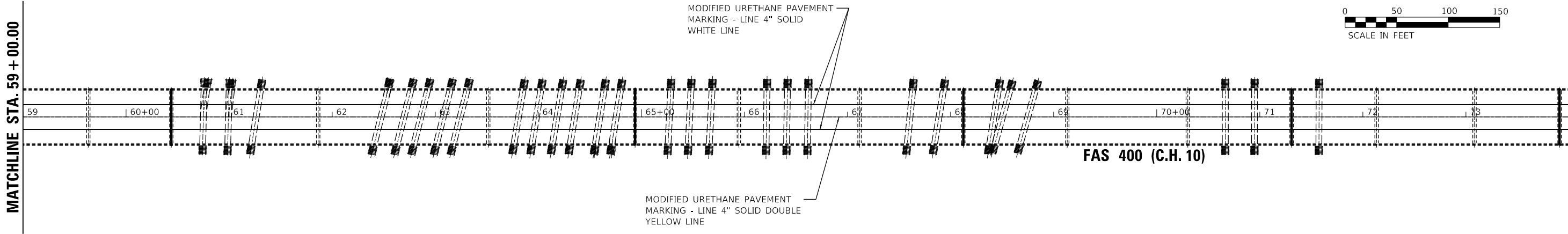
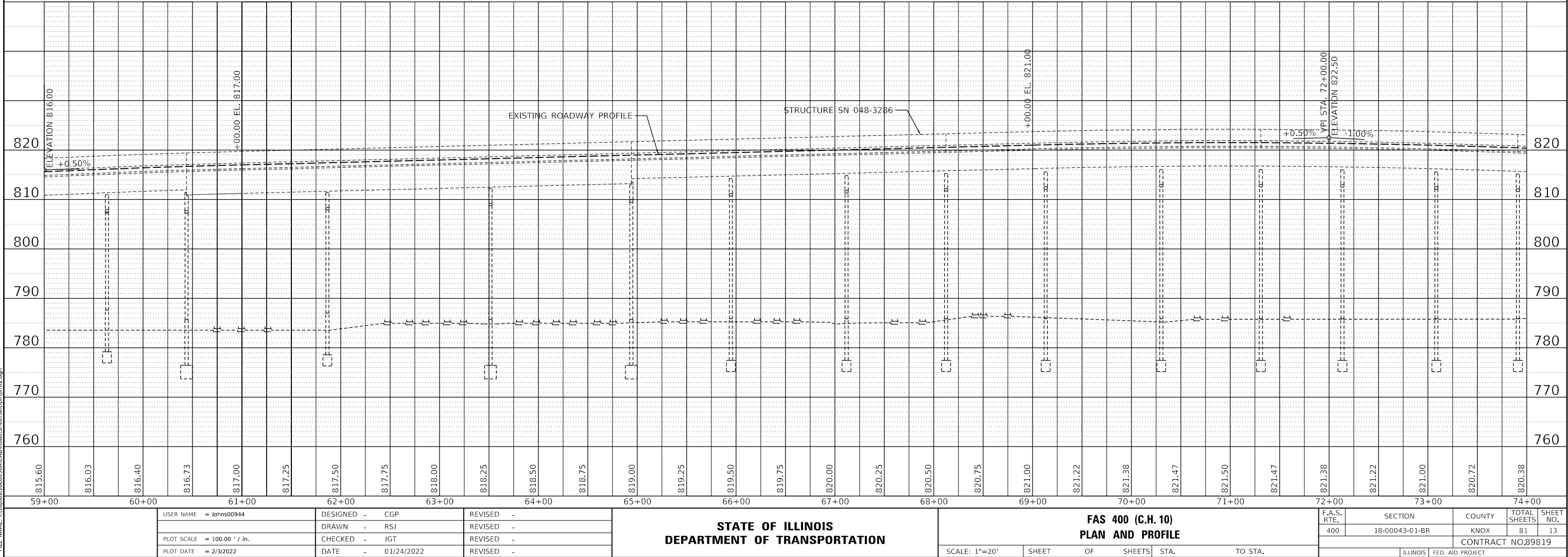
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DRAWN	RSJ	05/06/21
REVIEWED	JGT	07/24/2022

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PROFILE	SURVEYED	BY	DATE
	PLOTTED		
	GRADES CHECKED		
	NOTE BOOK		
	NO.		
	STRUCTURE NOTATION CHKD		

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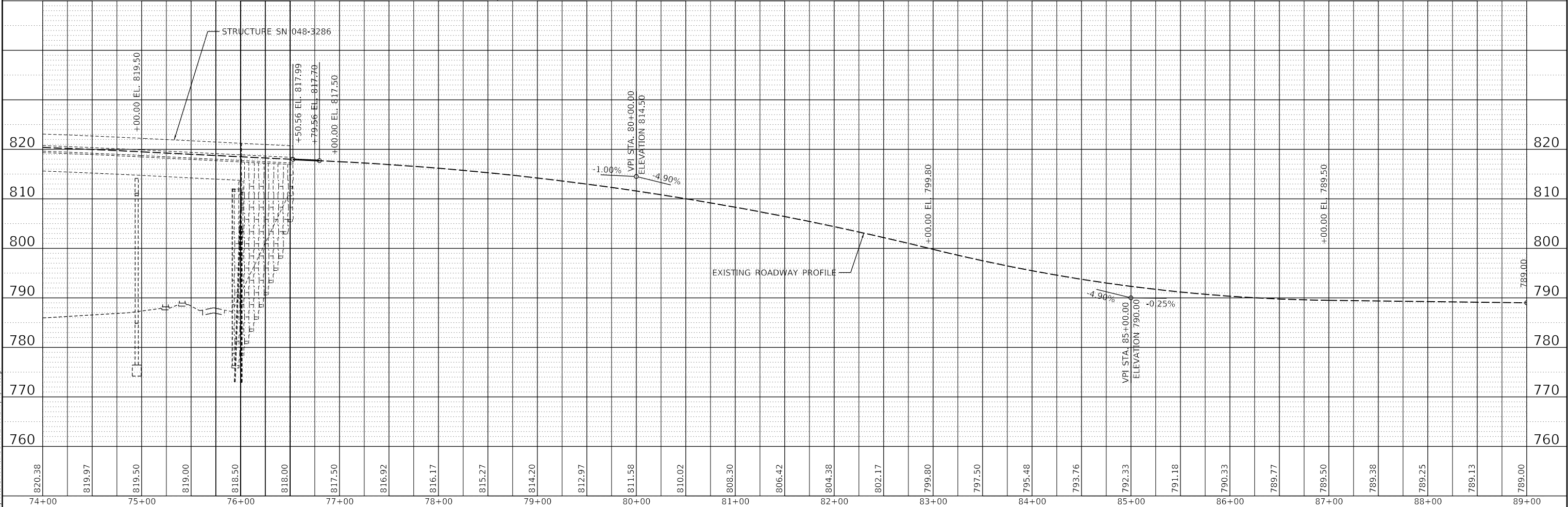
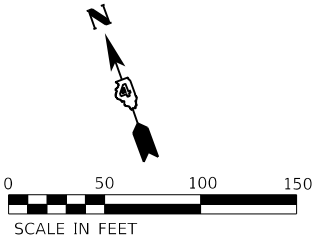
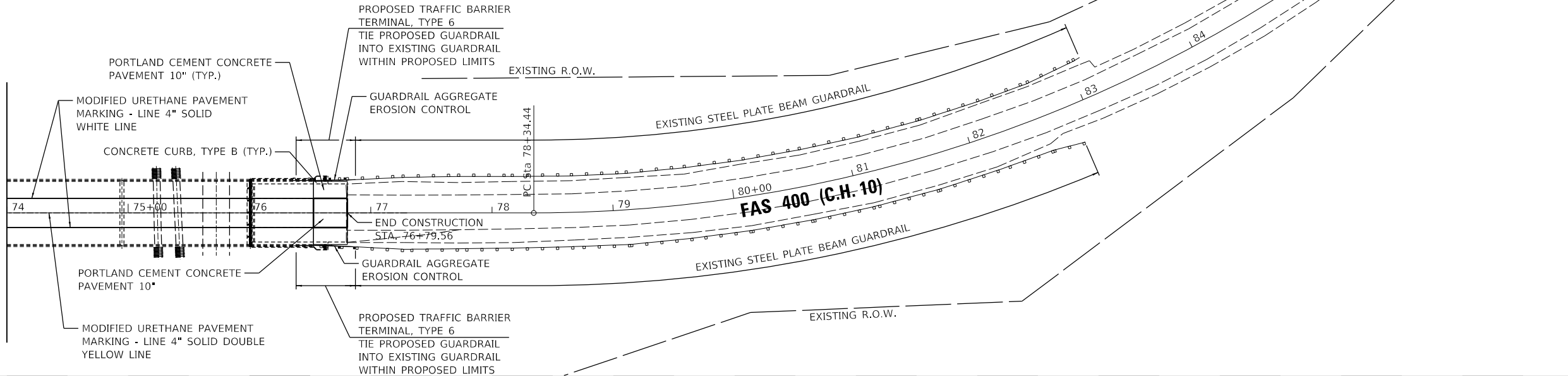
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	PLOTTED		
	ALIGNMENT CHECKED		
	NOTE BOOK		
	NO.		
	CADD FILE NAME		



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LAYOUT	CGP	05/06/21
DRAWN	RSJ	05/06/21
REVIEWED	JGT	01/24/2022

MATCHLINE STA. 74 + 00.00



USER NAME = Johns00944	DESIGNED - CGP	REVISED -
	DRAWN - RSJ	REVISED -
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PLOT DATE = 2/3/2022	DATE - 01/24/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

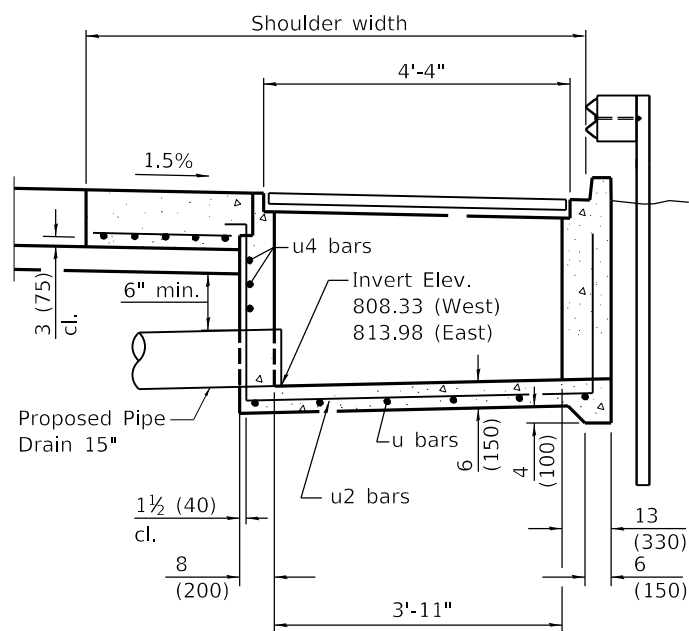
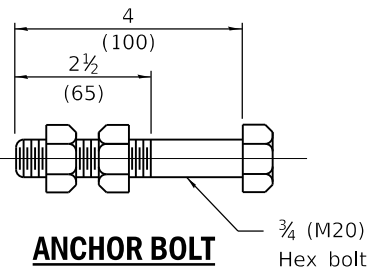
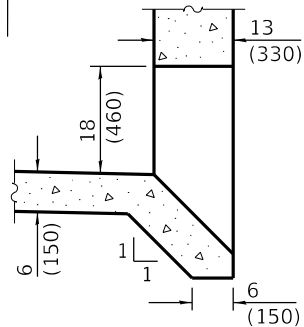
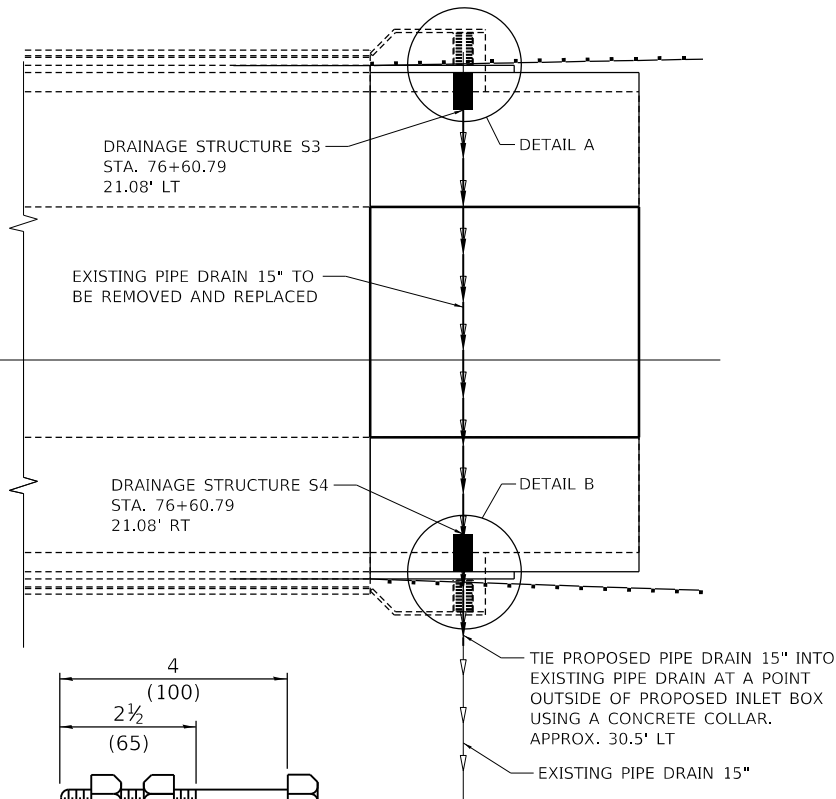
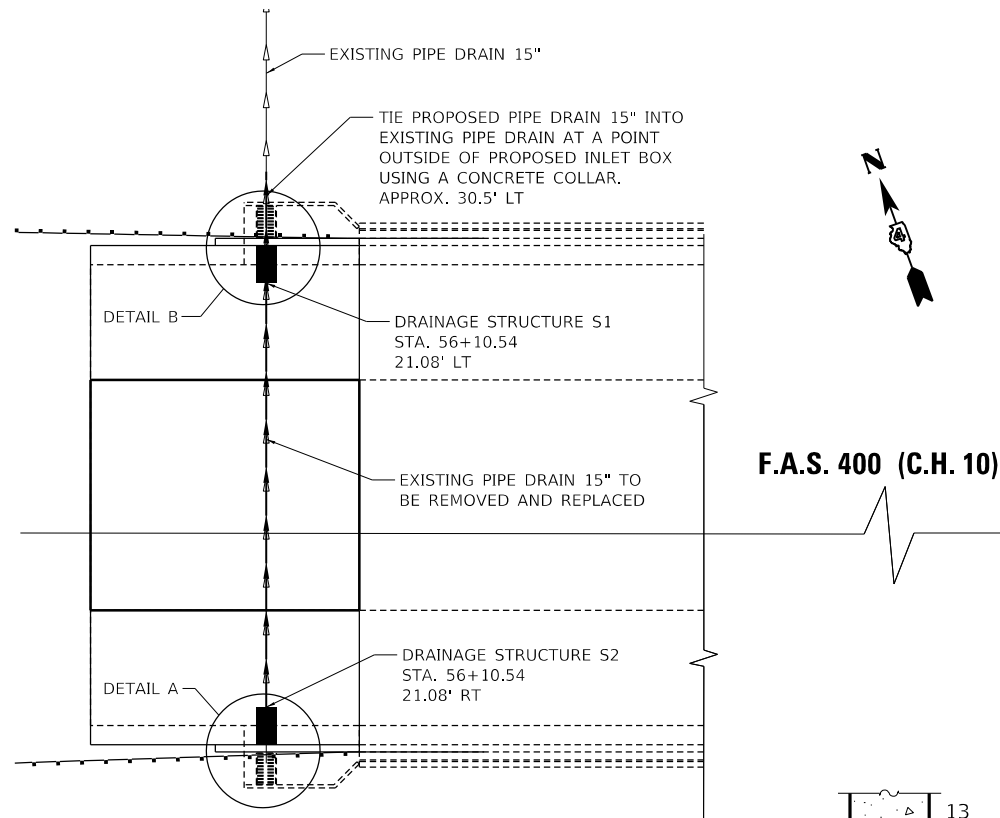
FAS 400 (C.H. 10)
PLAN AND PROFILE

SCALE: 1"=20'	SHEET	OF	SHEETS	STA.	TO STA.
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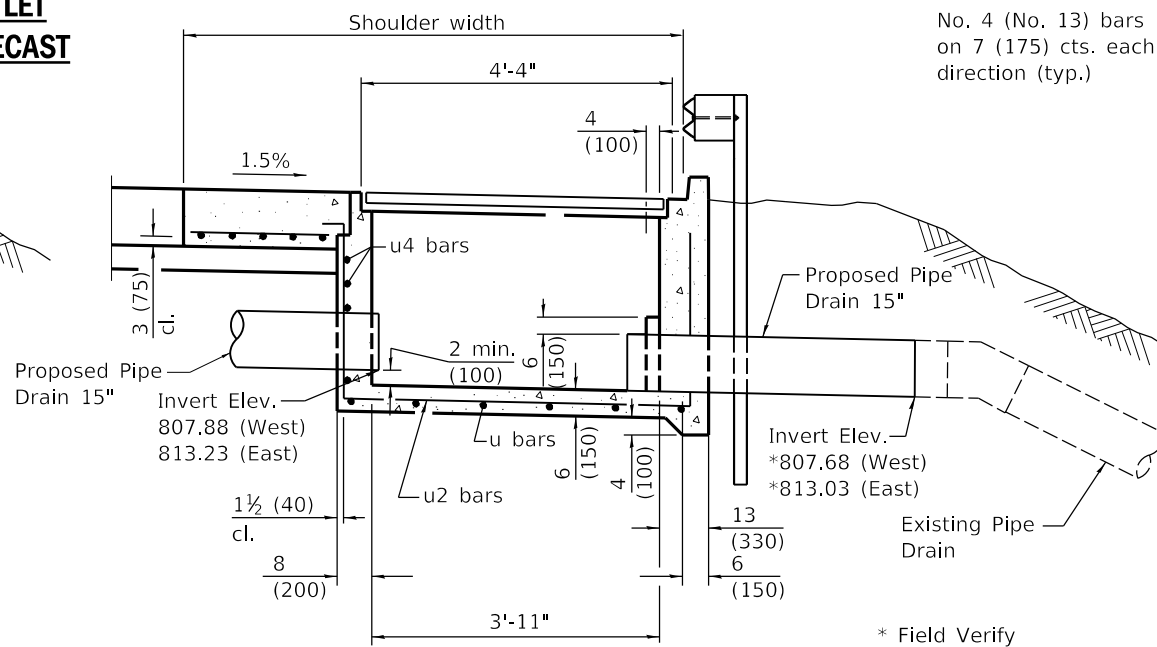
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	14
		CONTRACT NO.89819		
ILLINOIS		FED. AID PROJECT		

GENERAL NOTES

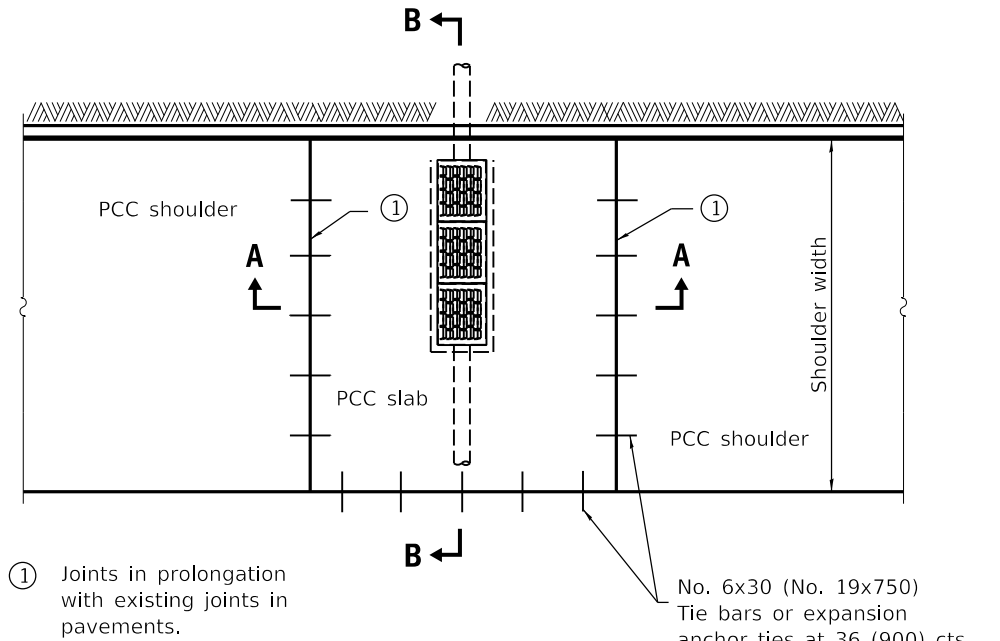
See Standard 420001 for joint details not shown.
See Standard 631031-17 for details of guardrail not shown.
All exposed edges of the inlet, except the upper perimeter, shall be beveled $\frac{3}{4}$ (20).
All dimensions are in inches (millimeters) unless otherwise shown.



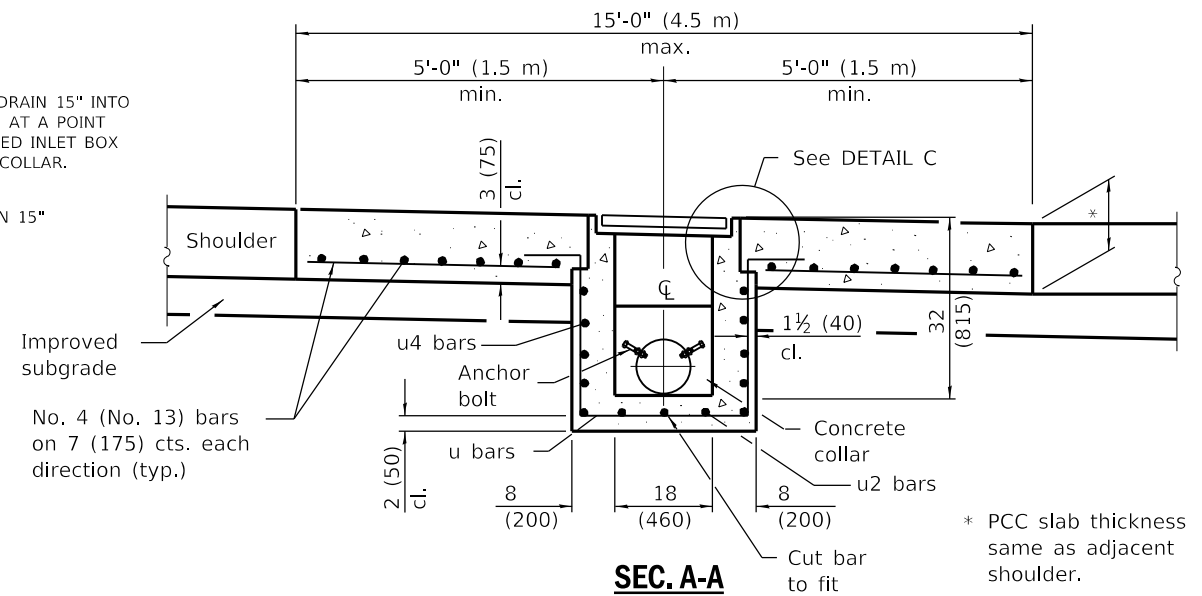
DETAIL A
SECTION B-B



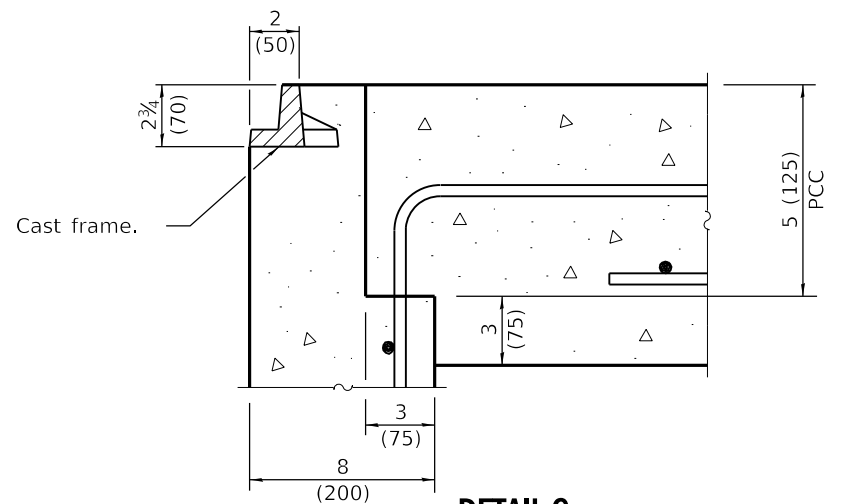
DETAIL B
SECTION B-B



PLAN



SEC. A-A



DETAIL C

LAYOUT	CGP	05/06/21
DRAWN	RSJ	05/06/21
REVIEWED	JGT	01/24/2022
MODEL SHEET		
FILE NAME	I:\1810ba181\0058A\CAD\Road\Sheet\sh-drainage\DetailA.dgn	

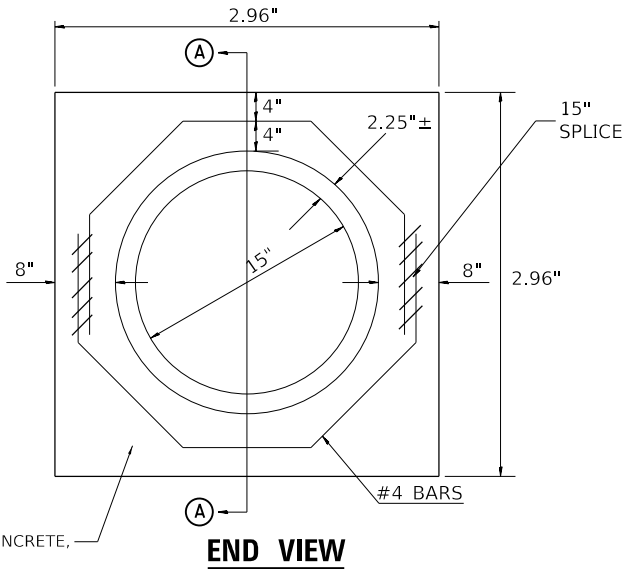
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DRAWN	- RSJ	DRAWN	- RSJ	REVISED	-
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PLOT DATE	= 2/3/2022	DATE	- 01/24/2022	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

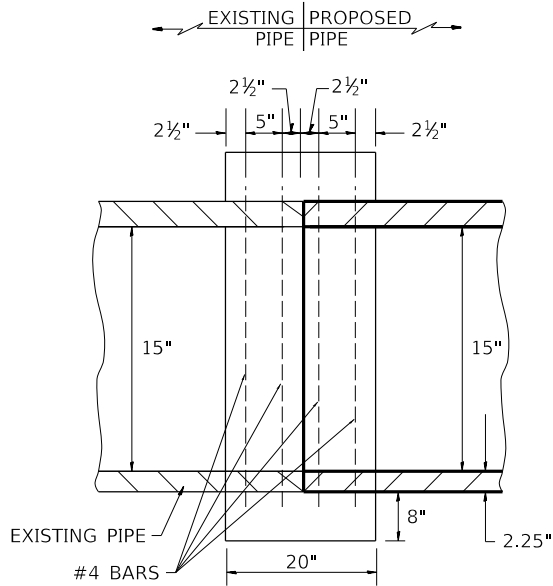
FAS 400 (C.H. 10)
DRAINAGE DETAILS - 1

SCALE: NTS SHEET OF SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	15
CONTRACT NO. 89819				
ILLINOIS FED. AID PROJECT				



END VIEW

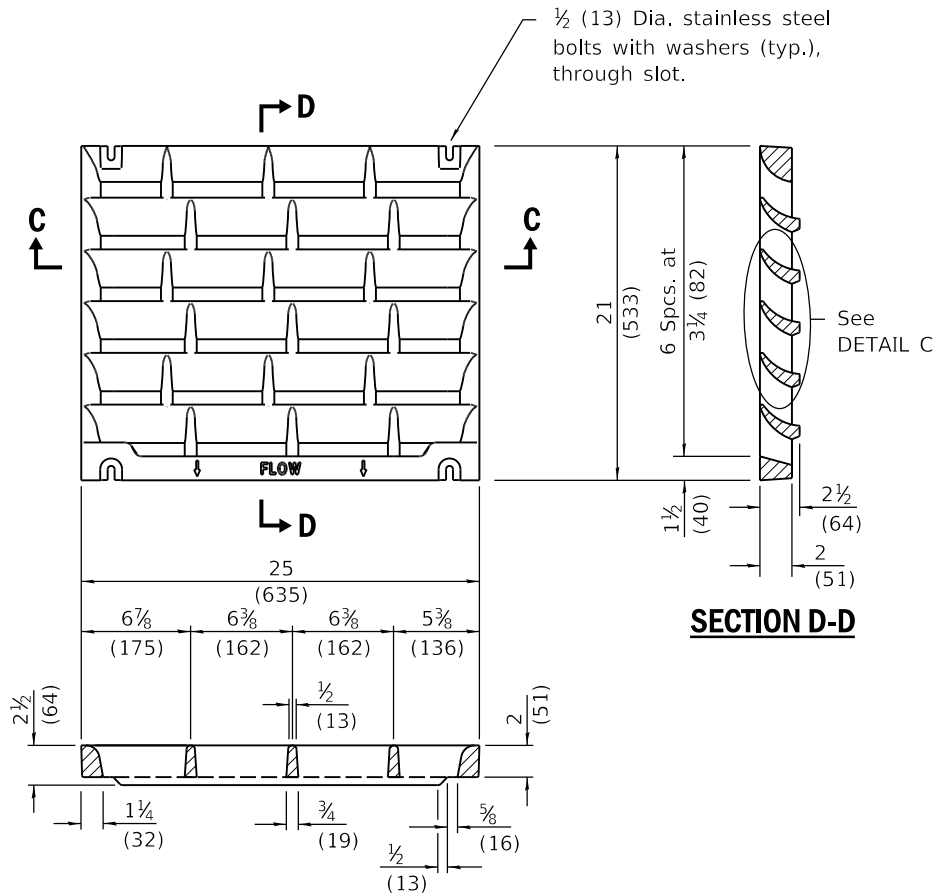


SECTION A - A

CONCRETE COLLAR DETAIL

NOTES:

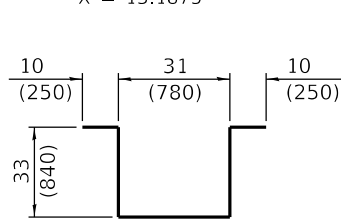
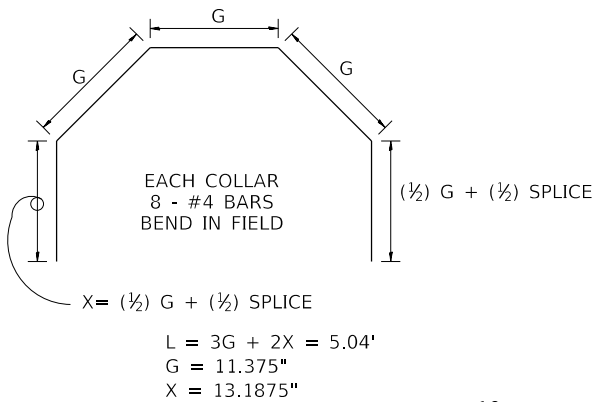
1. THE COLLAR SHALL BE CONSTRUCTED ENTIRELY OF CLASS SI CONCRETE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 503 OF THE STANDARD SPECIFICATIONS. REINFORCEMENT BARS SHALL CONFORM TO SECTION 508.
2. THIS WORK SHALL BE PAID FOR BY EACH, FOR CONCRETE COLLAR, WHICH PRICE SHALL INCLUDE ALL WORK SHOWN IN DETAIL.



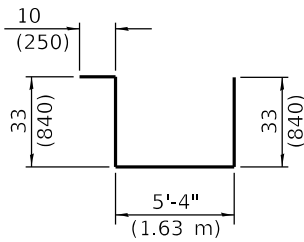
SECTION C-C

DETAIL OF CAST GRATE

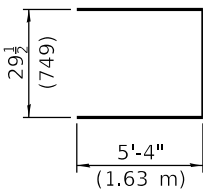
Type E requires 2 grates



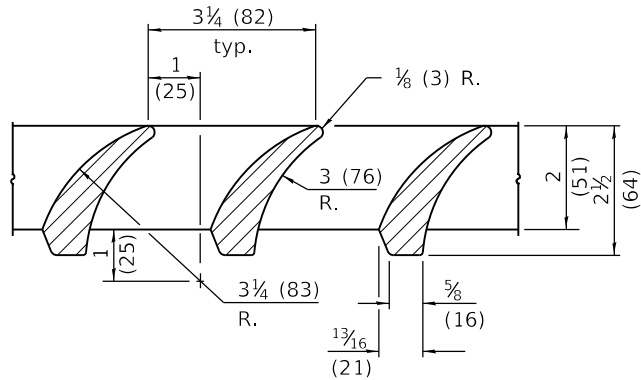
BAR u



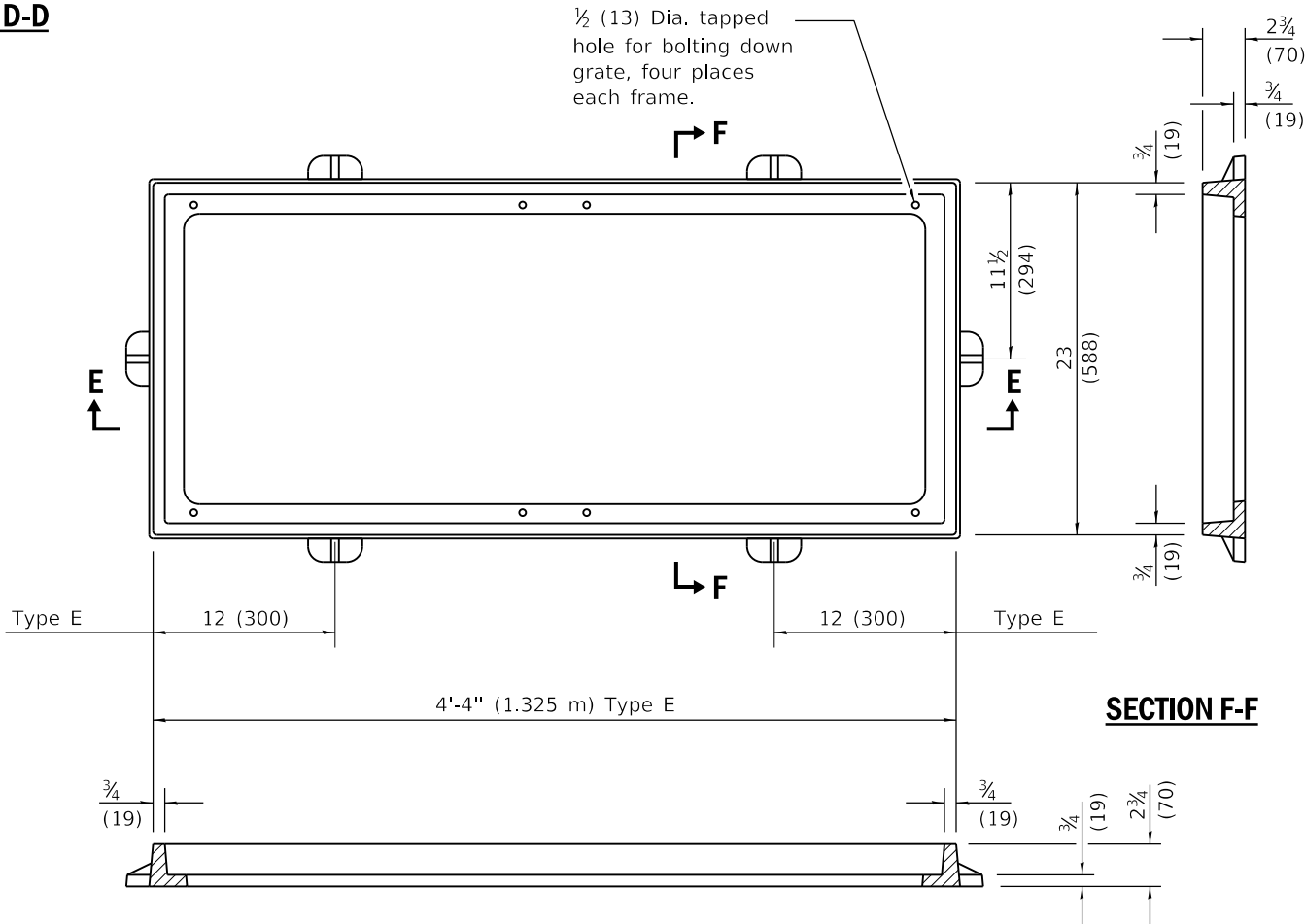
BAR u2



BAR u4



DETAIL C



SECTION E-E

DETAIL OF CAST FRAME

SECTION F-F

INLET BOX
(4 Required)

REQUIRED MATERIAL			
TYPE E			
Bar	Qty.	Size	Length
u	6	No. 4 (No.13)	9'-9" (2.96 m)
u2	3	No. 4 (No.13)	11'-8" (3.56 m)
u4	4	No. 4 (No.13)	13'-1 1/2" (4.00 m)
Concrete	cu. yds. (m³)		1.3 (1.0)
Reinf. bars	lbs. (kg)		98 (44.5)
Grating	sq. ft. (m²)		7.3 (0.68)

NOTES

Welded wire reinforcement (WWR) may be used in lieu of reinforcement bars. Only one layer of WWR is permitted to avoid congestion.

USER NAME = Johns00944	DESIGNED - CJP	REVISED -
PLOT SCALE = 20.00' / in.	DRAWN - RSJ	REVISED -
PLOT DATE = 2/3/2022	CHECKED - JGT	REVISED -
DATE - 01/24/2022	REVIEWED -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAS 400 (C.H. 10)
DRAINAGE DETAILS - 2

SCALE: NTS SHEET OF SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	16
CONTRACT NO. 89819				
ILLINOIS FED. AID PROJECT				

ELEVATION

West Abut. - Remove neoprene exp. joint and replace with 3" preformed joint strip seal

Pier 2 - Remove neoprene exp. joint and replace with 2½" preformed joint strip seal

Pier 4 - Remove neoprene exp. joint and replace with 3" preformed joint strip seal

Pier 7 - Remove neoprene exp. joint and replace with 3" preformed joint strip seal

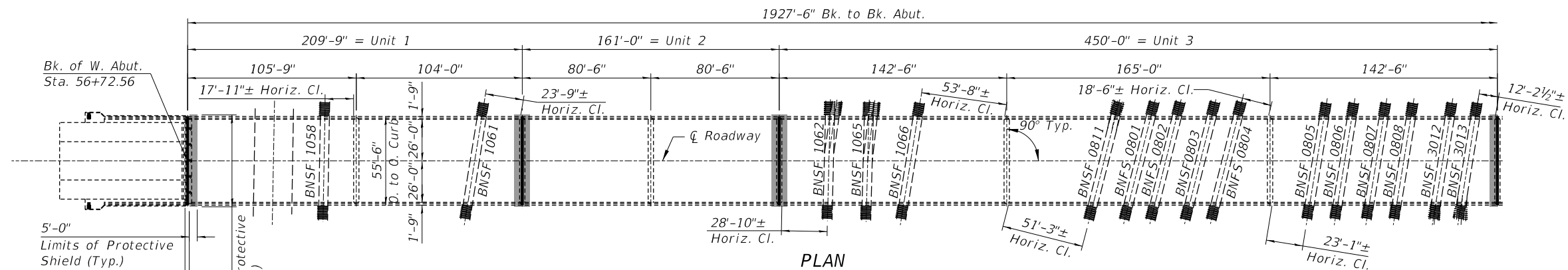
27'-4"± Vert. Cl.

24'-9"± Vert. Cl.

24'-4½"± Vert. Cl.

P1, P2, P3, P4, P5, P6, P7

E, F



2'-7 $\frac{1}{8}$ "

57'-6" Limits Shield

Œ Brg.

Pier 10 - Remove neoprene exp. joint and replace with 3" preformed joint strip seal

Pier 13 - Remove neoprene exp. joint and replace with 3" preformed joint strip seal

Pier 16 - Remove neoprene exp. joint and replace with 3" preformed joint strip seal

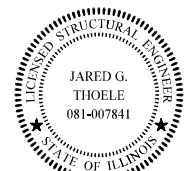
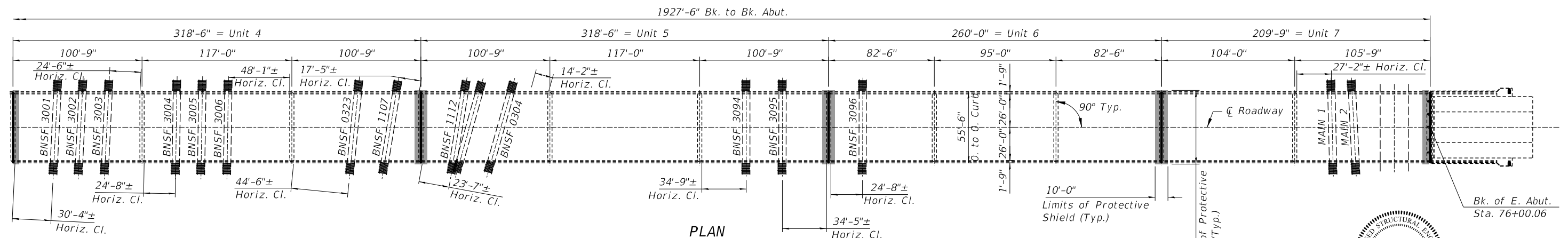
E. Abut. - Remove neoprene exp. joint and replace with 3" preformed joint strip seal

P7 P8 P9 P10 P11 P12 P13 P14 P15 P16 P17

28'-4" Vert. Cl.

ELEVATION

23'-10 $\frac{1}{2}$ " Vert. Cl.



Jared Shale
SIGNATURE
1/24/2022
DATE

LIC. EXP. DATE : 11/30/2022

DESIGNED	CGP	1/5/21
DRAWN	RSJ	05/06/21
REVIEWED	JGT	01/24/2022

I:\18_jobs\18L0058A\CAD\Struct\Sheet\Plan and Elev.dgn



USER NAME	=	.johns00944
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PLOT SCALE = 0:2.0000 ' : / in

PLOT DATE = 2/3/2022

DESIGNED	CGP
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CHECKED	-	JGT
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DRAWN - RSJ

CHECKED	-	01/24/2022
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REVISÉ

REVISÉ

REVISÉ

REVISÉ -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

BRIDGE PLAN & ELEVATION
SN 048-3286

SHEET NO. 1 OF 61 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	17
		CONTRACT NO. 89819		
ILLINOIS LEAD AND PROJECT 4				

INDEX OF SHEETS

1	General Plan and Elevation
2	General Data
3-4	Joint Replacement Details
5	Preformed Joint Strip Seal
6-11	Bridge Deck Repairs
12	Bridge Approach Slab & Backwall Removal
13-14	Bridge Approach Slab Details
15	Abutment Backwall
16-26	Pier Repairs
27-28	Plan and Elevation (MSE Wall)
29	Sections and Details (MSE Wall)
30-61	Existing Plans

GENERAL NOTES

Reinforcement bars designated (E) shall be epoxy coated.

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details effecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

The Structural Steel shall be cleaned and painted as specified in the plans and the Special Provisions.

Only Structural Steel is to be painted. All other surfaces shall be protected from being painted. All paint and overspray shall be removed at the contractor's expense.

Color of the finish coat shall be Interstate Green, Munsell No. 7.5G 4/8.

Color and painting of the existing structural steel shall be as specified in the Special Provisions for "Cleaning and Painting Existing Steel Structures". All structural steel, on all girder ends, bearings and end cross frames, within 5' (measured along the beam) of the joints shall be cleaned by SSPC-SP10 - Near White Metal Blast Cleaning to remove all rust, dirt, debris and paint and then zone painted. The existing plans indicate a basic lead silica chromate paint system was used; therefore, containment and disposal of lead paint cleaning residues will be required.

Remove and replace any parts of drainage system that are damaged or not functioning properly. Regrade locations of drainage outlets to drain away from piers as needed.

The existing name plate shall be cleaned and reinstalled at the existing location. Cost included with Concrete Removal.

Area of deck repairs shown are estimated. The Engineer shall show actual locations of deck slab repairs on as-built plans.

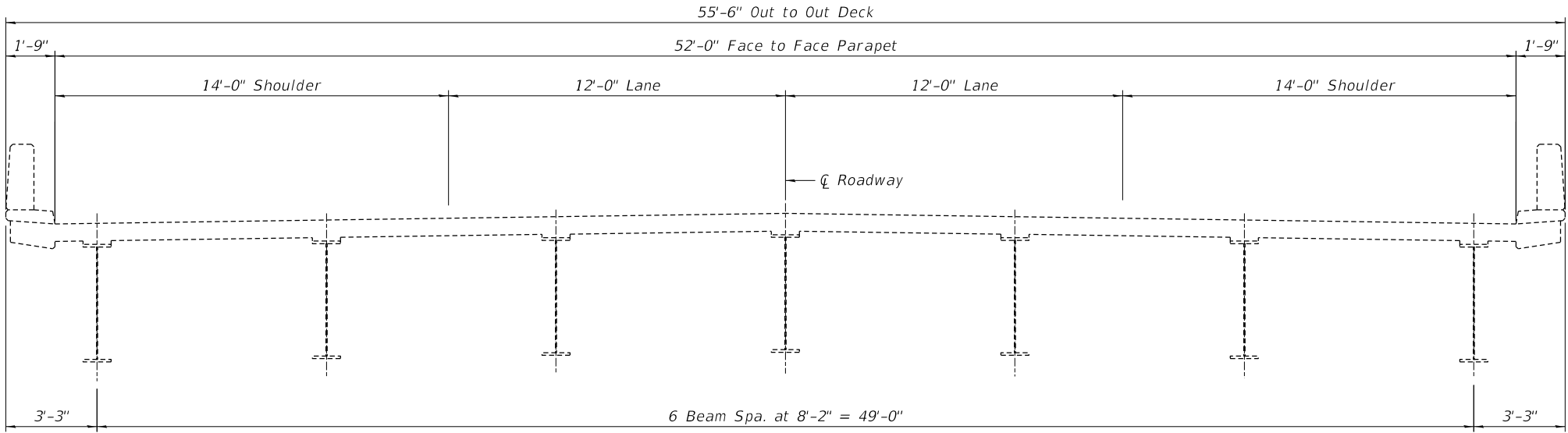
Protective coat shall be applied to the approach slab, approach slab barriers and deck repairs.

Units 1-3 have a full depth reinforced concrete deck. Units 4-7 have stay-in-place reinforced concrete deck panel forms with a concrete overlay on top.

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	46.8
Protective Shield	Sq. Yd.	463
Concrete Structures	Cu. Yd.	31.8
Concrete Superstructure	Cu. Yd.	45.7
Bridge Deck Grooving	Sq. Yd.	567
Protective Coat	Sq. Yd.	12,993
Concrete Superstructure (Approach Slab)	Cu. Yd.	289.2
Reinforcement Bars, Epoxy Coated	Pound	114,790
Preformed Joint Strip Seal	Foot	432
Mechanically Stabilized Earth Retaining Wall	Sq. Ft.	3,690
Epoxy Crack Injection	Foot	26
Cleaning Bridge Scuppers and Downspouts	Each	56
Retaining Wall Removal	Sq. Ft.	3,690
* Bridge Drainage System Repair	Foot	100
Approach Slab Removal	Sq. Yd.	642
Containment and Disposal of Lead Paint Cleaning Residues No. 1	L. Sum	1
Cleaning and Painting Steel Bridge No. 1	L. Sum	1
Structural Repair of Concrete (Depth Equal to or Less Than 5")	Sq. Ft.	814
Deck Slab Repair (Partial)	Sq. Yd.	407
Temporary Shoring and Cribbing	Each	16

* Estimated

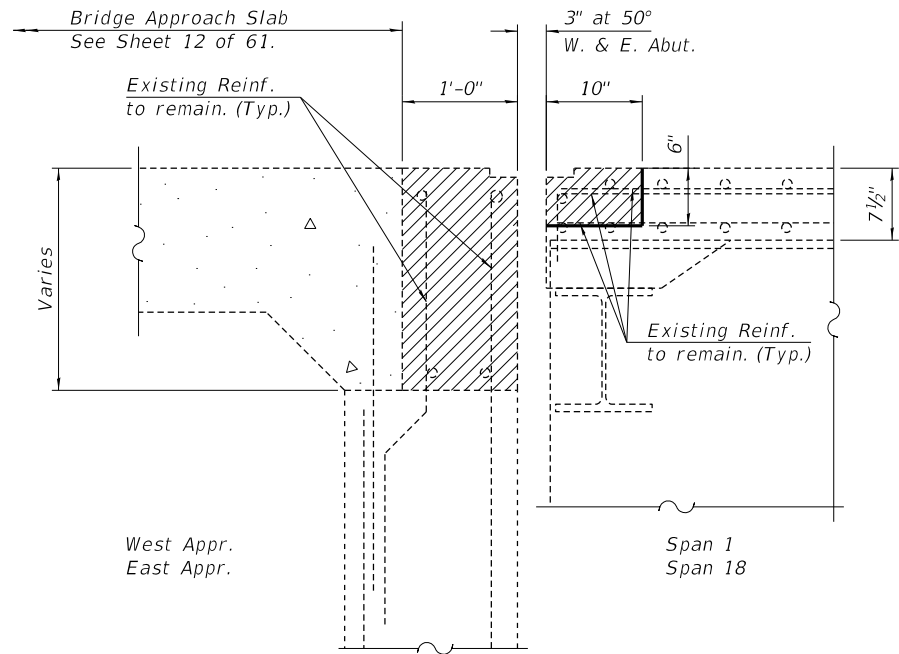


CROSS SECTION
(Looking East)

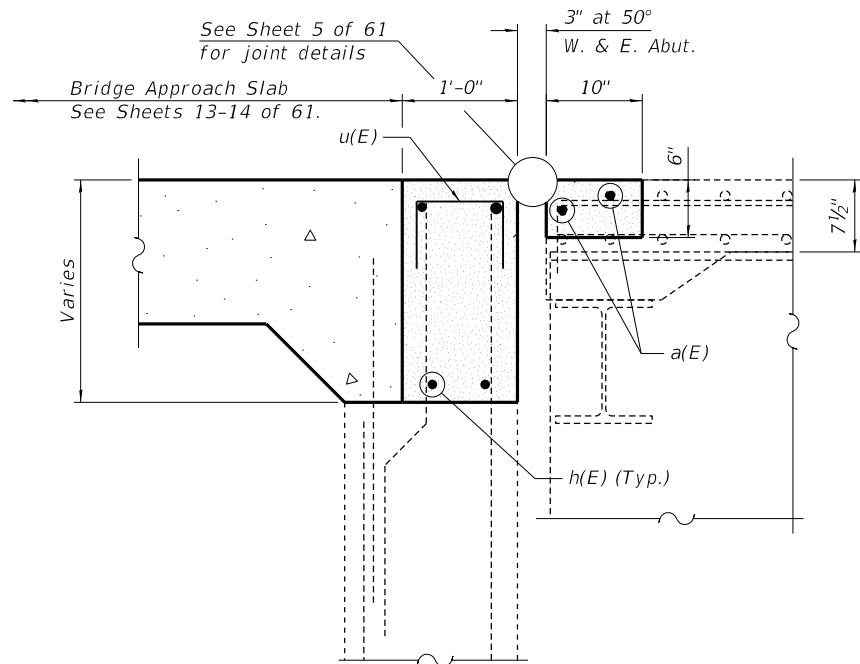
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DRAWN	RSJ	05/06/21
REVIEWED	JGT	01/24/2022

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	USER NAME = Johns00944	DESIGNED - CGP	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES, INDEX & BOM SN 048-3286	SHEET NO. 2 OF 61 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 0:2.0000 '1' / in.	CHECKED - JGT	REVISED -				400	18-00043-01-BR	KNOX	81	18
	PLOT DATE = 2/3/2022	DRAWN - RSJ	REVISED -				CONTRACT NO. 89819				
	CHECKED - 01/24/2022	REVISED -					ILLINOIS FED. AID PROJECT 4				



SECTION A-A



SECTION B-B

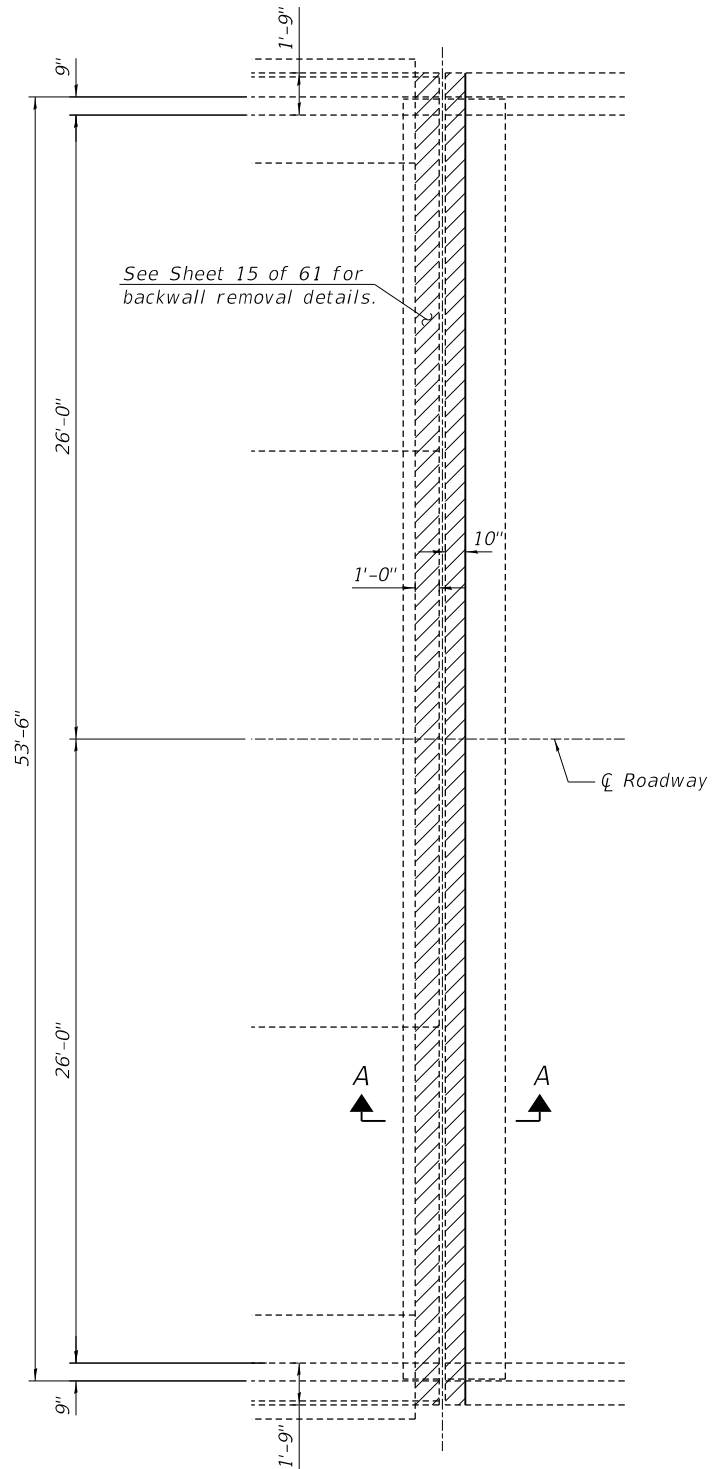
Notes:

Hatched areas indicate Concrete Removal. See Abutment Backwall Sheet for backwall Concrete Removal quantity.

Removal of existing neoprene expansion joints shall be included in the cost of Concrete Removal.

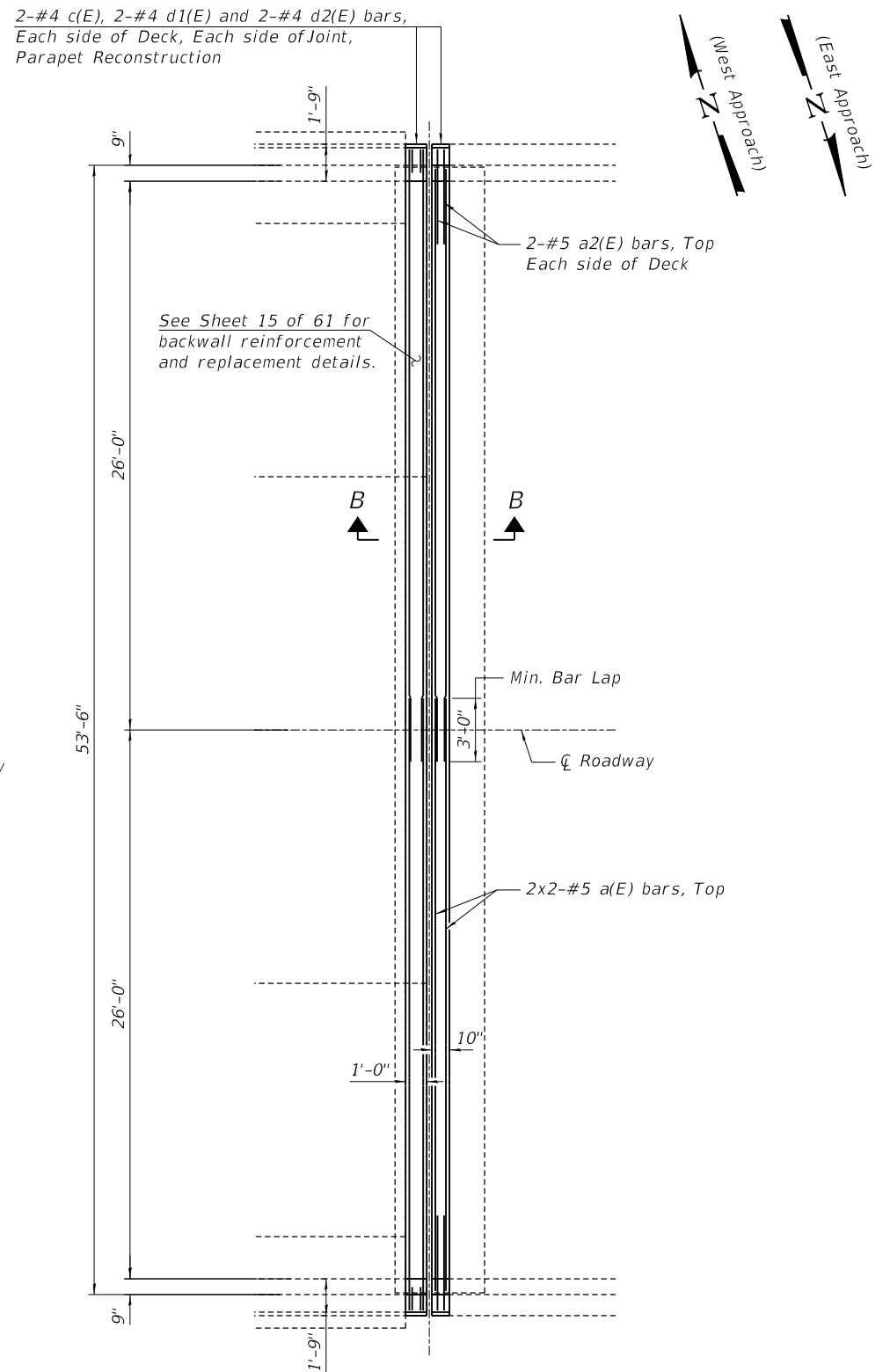
Any steel anchoring studs encountered in the neoprene joint removal area shall be cut off flush with existing concrete. Cost to be included in the bid price for Concrete Removal.

See Sheet 4 of 61 for Partial Cross Section and Bill of Material.



REMOVAL PLAN

(West Shown, East Similar after 180° Rotation)



REPLACEMENT PLAN

(West Shown, East Similar after 180° Rotation)

(Sheet 1 of 2)

DESIGNED	CGP	1/5/21
DRAWN	RSJ	05/06/21
REVIEWED	JGT	01/24/2022

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USER NAME = Johns00944
PLOT SCALE = 0:2.0000 '1' / in.
PLOT DATE = 2/3/2022

DESIGNED - CGP
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CHECKED - 01/24/2022

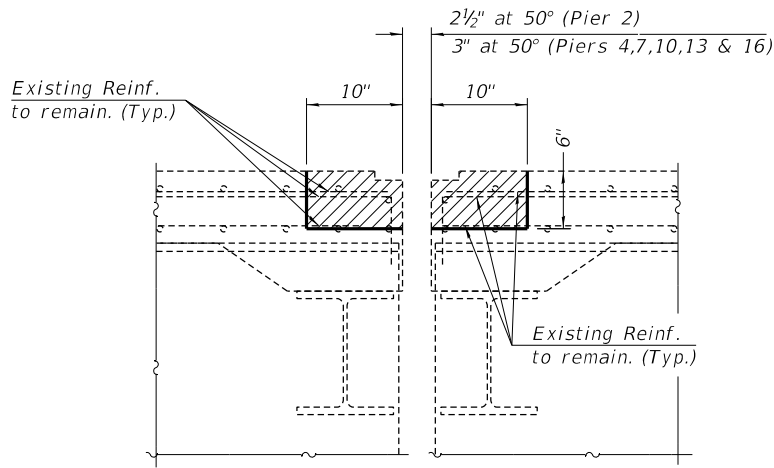
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REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

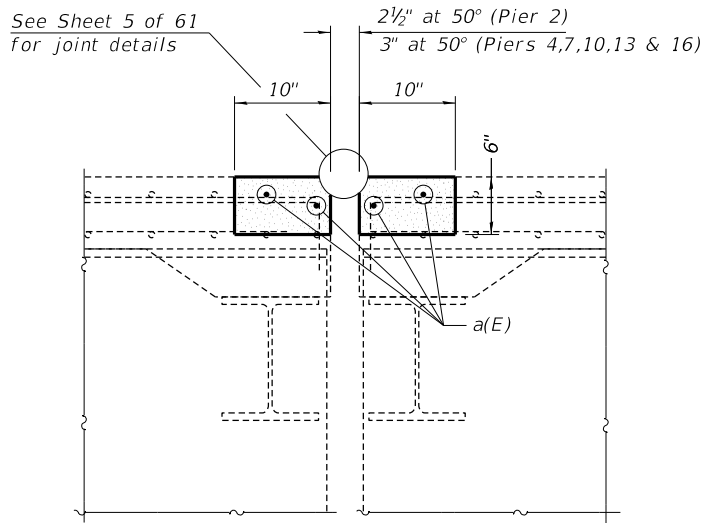
JOINT REPLACEMENT DETAILS
SN 048-3286

SHEET NO. 3 OF 61 SHEETS

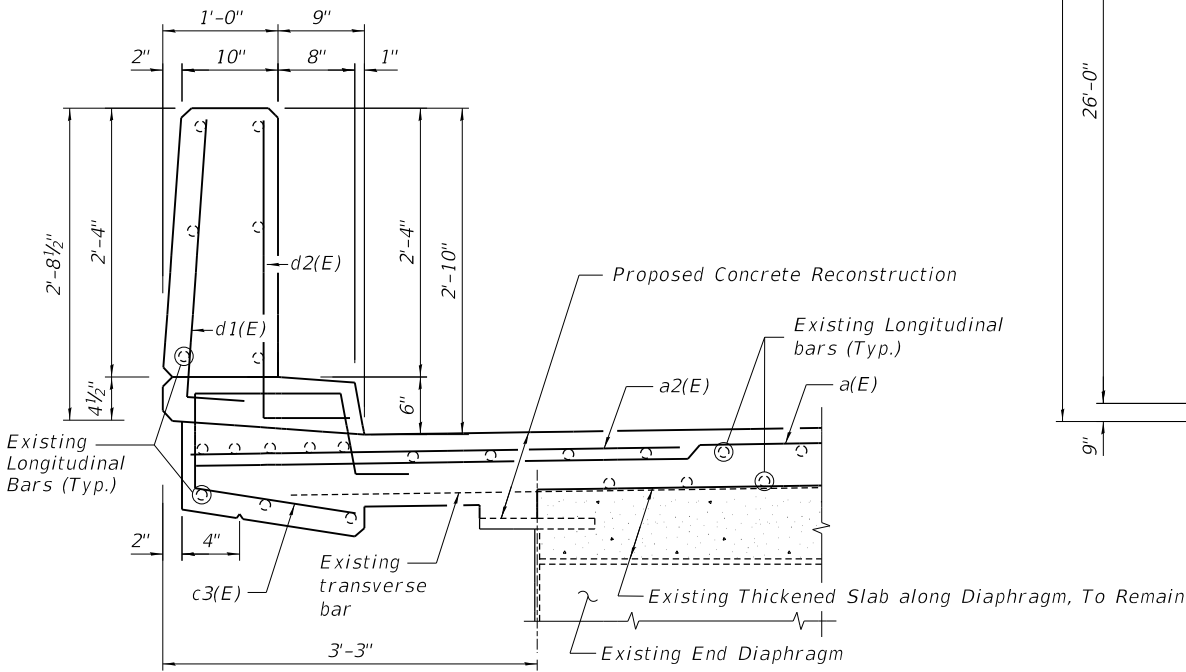
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	19
CONTRACT NO.			89819	
ILLINOIS			FED. AID PROJECT 4	



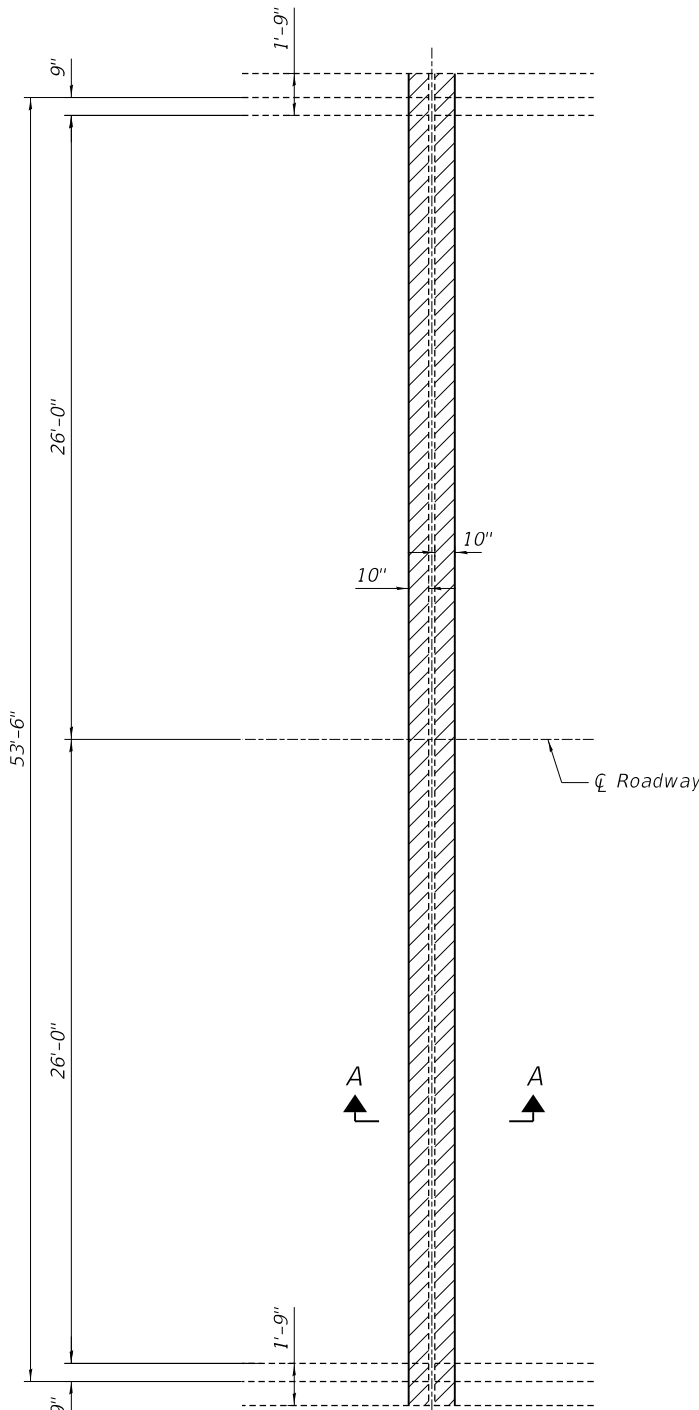
SECTION A-A



SECTION B-B



PARTIAL CROSS SECTION
(Looking East)



REMOVAL PLAN

Notes: Hatch areas indicate Concrete Removal.

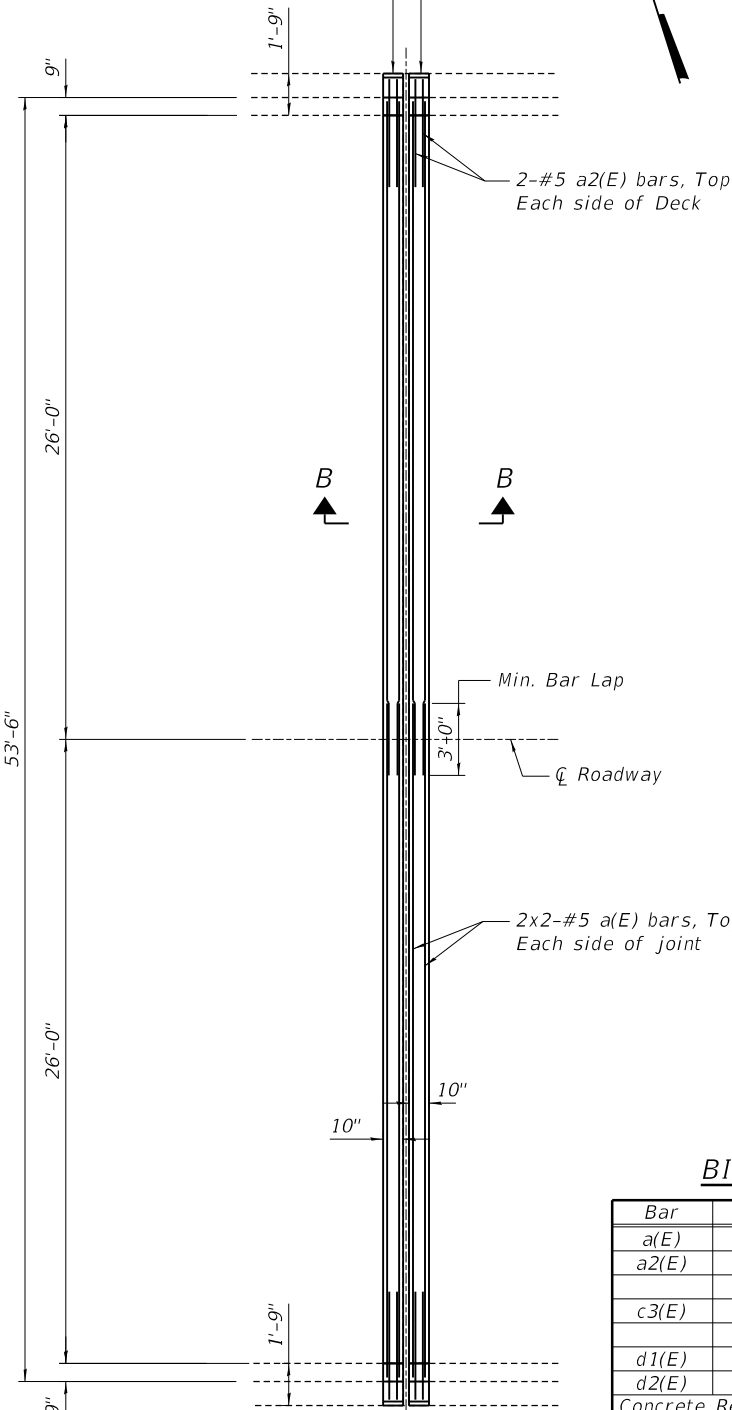
Removal of existing neoprene expansion joints shall be included in the cost of Concrete Removal.

Any steel anchoring studs encountered in the neoprene joint removal area shall be cut off flush with existing concrete. Cost to be included in the bid price for Concrete Removal.

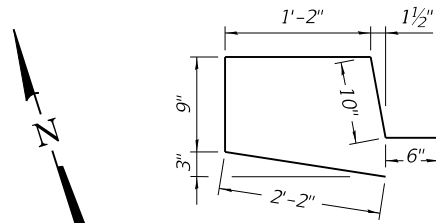
Existing longitudinal reinforcement and existing bottom transverse bar, shown in Partial Cross Section, within the removal limits shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.

Existing reinforcement extending out of the existing concrete that is damaged or not salvaged shall be replaced with either drilled or epoxy grouted bars. Bars epoxy grouted shall have an embedment sufficient to develop 1.25 times the capacity of the reinforcement bar.

2-#4 c(E), 2-#4 d1(E) and 2-#4 d2(E) bars,
Each side of Deck, Each side of Joint,
Parapet Reconstruction,
See Partial Cross Section this sht.



REPLACEMENT PLAN



BAR c3(E)

BAR d2(E)

BAR d1(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	56	#5	28'-3"	
a2(E)	56	#6	4'-6"	
c3(E)	56	#4	5'-5"	
d1(E)	56	#4	2'-11"	
d2(E)	56	#4	3'-4"	
Concrete Removal			Cu. Yd.	15.2
Concrete Superstructure			Cu. Yd.	15.2
Reinforcement Bars, Epoxy Coated			Pound	2460

(Sheet 2 of 2)

DESIGNED	CGP	1/5/21
DRAWN	RSJ	05/06/21
REVIEWED	JGT	01/24/2022

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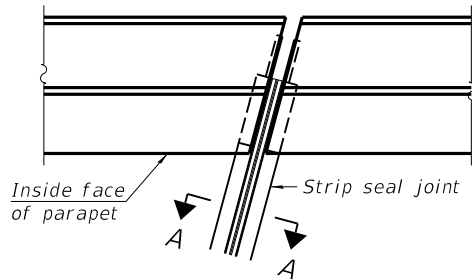
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

JOINT REPLACEMENT DETAILS
SN 048-3286

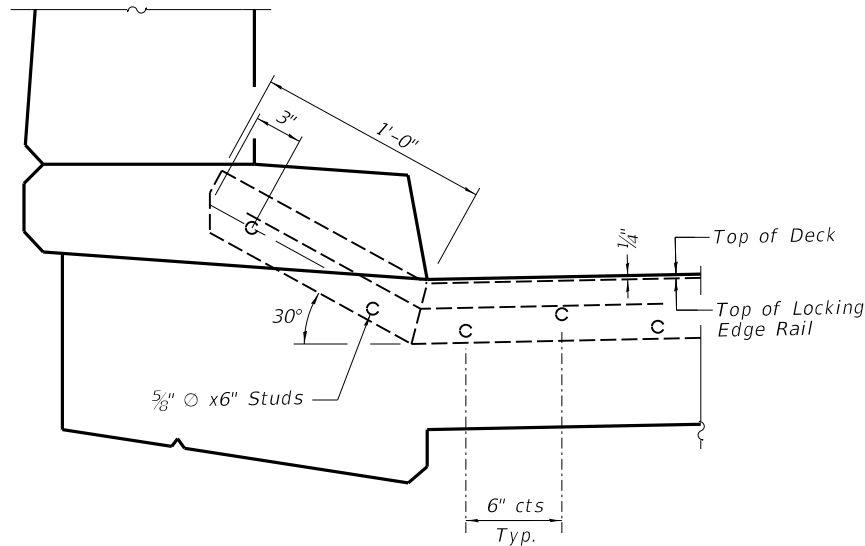
SHEET NO. 4 OF 61 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	20
			CONTRACT NO.	89819

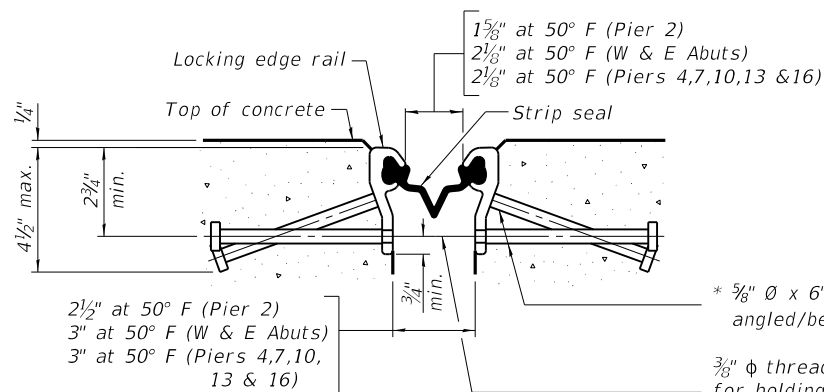
ILLINOIS FED. AID PROJECT 4



FOR SKEWS $\leq 30^\circ$
PLAN AT PARAPET



DETAIL A



SHOWING ROLLED RAIL JOINT

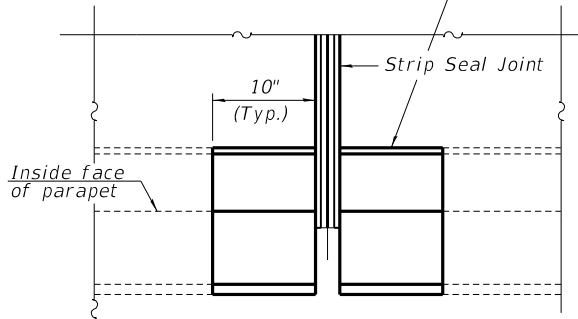
* $\frac{5}{8}$ " \varnothing x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs)

$\frac{3}{8}$ " \varnothing threaded rods in $\frac{7}{16}$ " \varnothing holes at ± 4 '-0" cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.

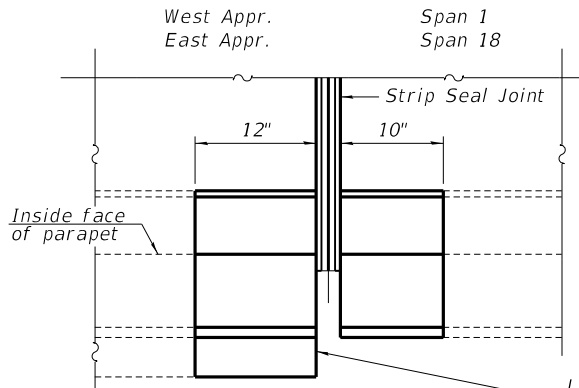
SECTION A-A

* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

Limit of parapet and slab concrete removal and repair. Existing reinforcement to remain, clean and incorporate into repair. Bend reinforcement as required to facilitate installation at the joint. Cost included with Preformed Joint Strip Seal. (Typ).



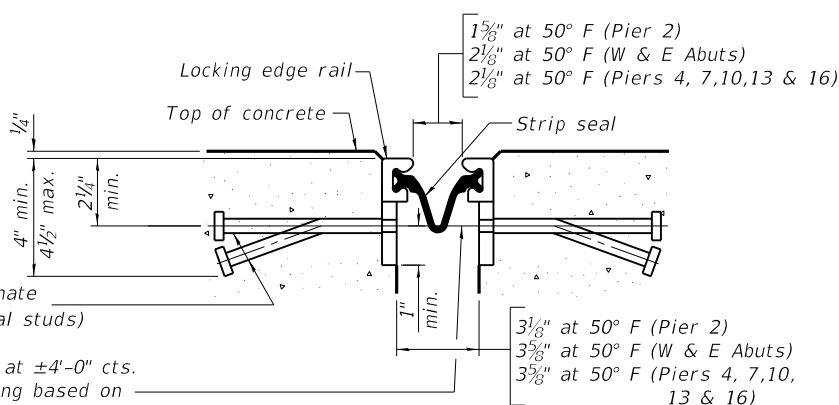
PIER EXPANSION JOINT



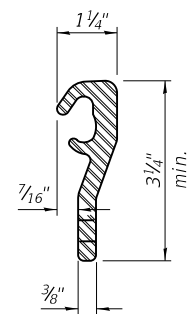
ABUTMENT EXPANSION JOINT

Limit of parapet and slab concrete removal and repair at abutment backwall. See Sheet 15 of 61 for details.

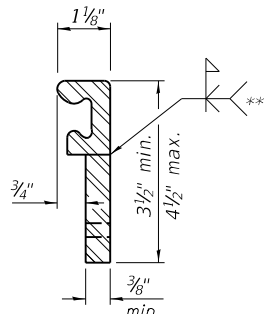
PLAN AT PARAPET



SHOWING WELDED RAIL JOINT



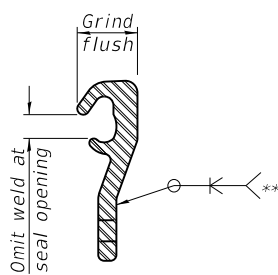
ROLLED (EXTRUDED) RAIL



WELDED RAIL

LOCKING EDGE RAILS

** Back gouge not required if complete joint penetration is verified by mock-up.



LOCKING EDGE RAIL SPLICE


The inside of the locking edge rail groove shall be free of weld residue. Rolled rail shown, welded rail similar.

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	432

DESIGNED	CGP	1/5/21
DRAWN	RSJ	05/06/21
REVIEWED	JGT	01/24/2022

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		CHECKED - 01/24/2022	REVISED -

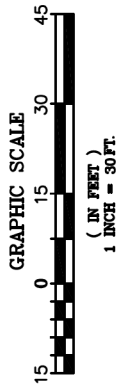
STATE OF ILLINOIS
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PREFORMED JOINT STRIP SEAL
SN 048-3286

SHEET NO. 5 OF 61 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	21
			CONTRACT NO.	89819
			ILLINOIS FED. AID PROJECT	4

REPAIR QUANTITIES MAP
COUNTY HIGHWAY 10
OVER BNSF RAIL YARD
KNOX COUNTY
STATE OF ILLINOIS

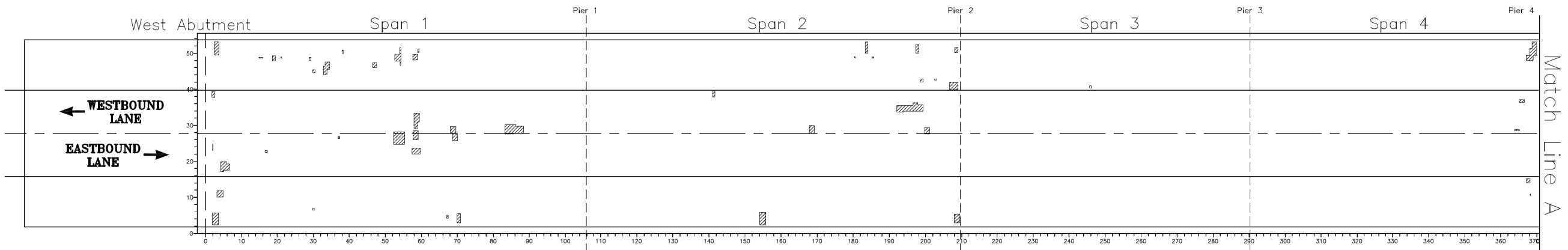


REPAIR QUANTITIES MAP
COUNTY HIGHWAY 10
OVER BNSF RAIL YARD
KNOX COUNTY
STATE OF ILLINOIS

RESOURCE INTERNATIONAL, INC.
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JOB NO.:	W-18-091	SHEET:	1 OF 6



REPAIR QUANTITIES SPANS 1-4 - BRIDGE DECK

	Percent	Area (S.F.)	Area (S.Y.)
PATCHING	0.7	132.6	15
FULL DEPTH PATCHING	-	-	

REPAIR QUANTITIES TOTAL - BRIDGE DECK

	Percent	Area (S.F.)	Area (S.Y.)
PATCHING	3.8	3,662.6	407
FULL DEPTH PATCHING	-	-	

Figure 19

DESIGNED	MNM	1/11/21
DRAWN	EJM	05/06/21
REVIEWED	MNM	01/24/2022

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CHECKED	-	01/24/2022

REVISED	-
REVISED	-
REVISED	-
REVISED	-

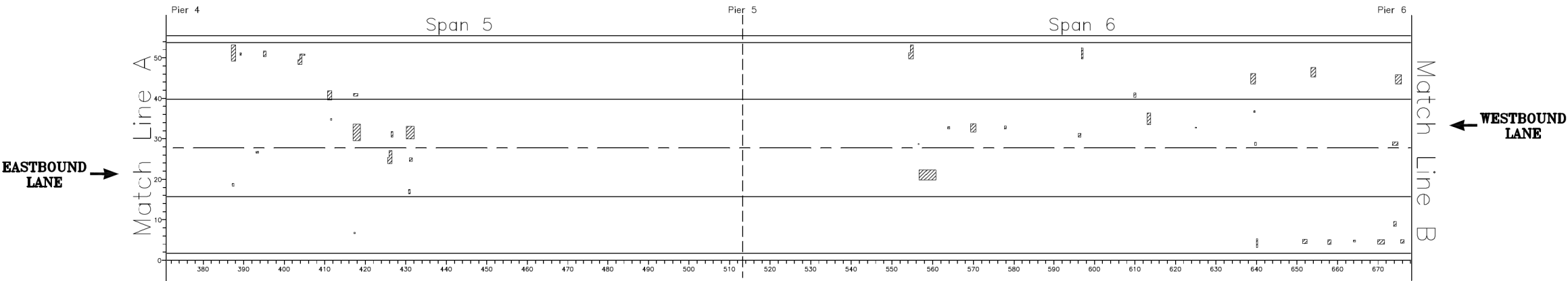
STATE OF ILLINOIS
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DECK REPAIRS
SN 048-3286

SHEET NO. 6 OF 61 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	22
				CONTRACT NO. 89819
		ILLINOIS	FED. AID PROJECT	4

REPAIR QUANTITIES MAP
COUNTY HIGHWAY 10
OVER BNSF RAIL YARD
KNOX COUNTY
STATE OF ILLINOIS



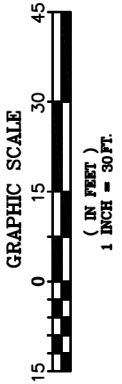
REPAIR QUANTITIES SPANS 5-6 - BRIDGE DECK

	Percent	Area (S.F.)	Area (S.Y.)
<div></div> PATCHING	0.4	67.0	7
<div></div> FULL DEPTH PATCHING	-	-	

REPAIR QUANTITIES TOTAL - BRIDGE DECK

	Percent	Area (S.F.)	Area (S.Y.)
<div></div> PATCHING	3.8	3,662.6	407
<div></div> FULL DEPTH PATCHING	-	-	

Figure 20



REPAIR QUANTITIES MAP
COUNTY HIGHWAY 10
OVER BNSF RAIL YARD
KNOX COUNTY
STATE OF ILLINOIS

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JOB NO.:	W-18-091	SHEET:	2 OF 6

DESIGNED	MNM	1/11/21
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REVIEWED	MNM	01/24/2022

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PLOT DATE	= 2/3/2022

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CHECKED	-	MNM
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CHECKED	-	01/24/2022

REVISED	-
REVISED	-
REVISED	-
REVISED	-

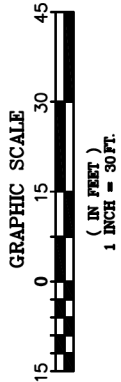
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK REPAIRS
SN 048-3286

SHEET NO. 7 OF 61 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	23
			CONTRACT NO.	89819
ILLINOIS		FED. AID PROJECT	4	

REPAIR QUANTITIES MAP
COUNTY HIGHWAY 10
OVER BNSF RAIL YARD
KNOX COUNTY
STATE OF ILLINOIS

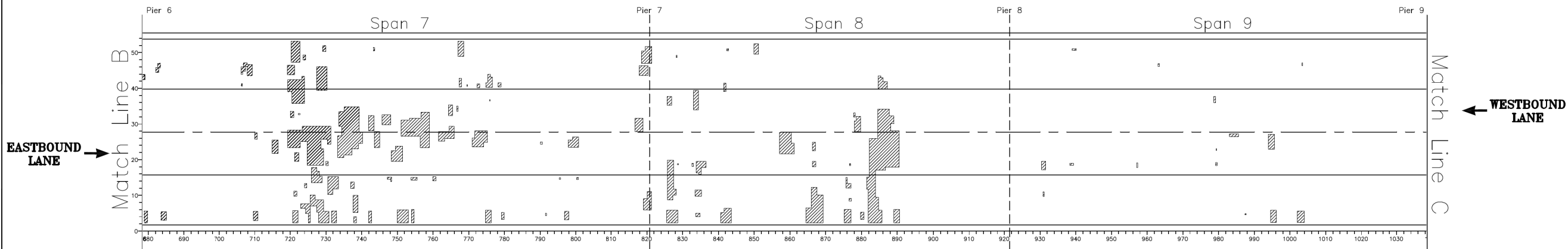


REPAIR QUANTITIES MAP
COUNTY HIGHWAY 10
OVER BNSF RAIL YARD
KNOX COUNTY
STATE OF ILLINOIS

RESOURCE INTERNATIONAL INC.
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JOB NO.:	W-18-091	SHEET:	3 OF 6



REPAIR QUANTITIES SPANS 7-9 - BRIDGE DECK

	Percent	Area (S.F.)	Area (S.Y.)
PATCHING	4.8	873.0	97
FULL DEPTH PATCHING	-	-	

REPAIR QUANTITIES TOTAL - BRIDGE DECK

	Percent	Area (S.F.)	Area (S.Y.)
PATCHING	3.8	3,662.6	407
FULL DEPTH PATCHING	-	-	

Figure 21

DESIGNED	MNM	1/11/21
DRAWN	EJM	05/06/21
REVIEWED	MNM	01/24/2022

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PLOT DATE	= 2/3/2022

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CHECKED	-	01/24/2022

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REVISED	-
REVISED	-

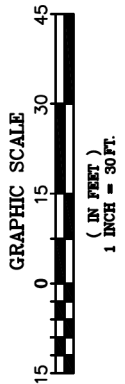
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK REPAIRS
SN 048-3286

SHEET NO. 8 OF 61 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	24
			CONTRACT NO.	89819
ILLINOIS		FED. AID PROJECT	4	

REPAIR QUANTITIES MAP
COUNTY HIGHWAY 10
OVER BNSF RAIL YARD
KNOX COUNTY
STATE OF ILLINOIS

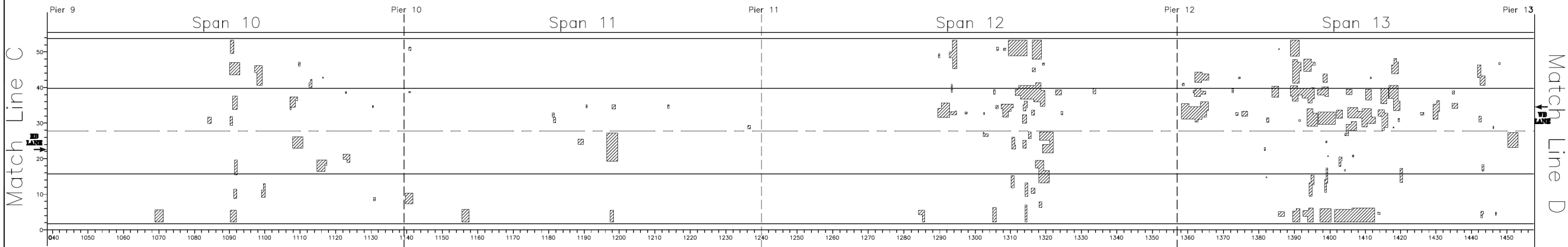


REPAIR QUANTITIES MAP
COUNTY HIGHWAY 10
OVER BNSF RAIL YARD
KNOX COUNTY
STATE OF ILLINOIS

RESOURCE INTERNATIONAL, INC.
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CHECKED BY:	CAY	DRAWING NO.:	00-0
JOB NO.:	W-18-091	SHEET:	4 OF 6



REPAIR QUANTITIES SPANS 10-13 - BRIDGE DECK

	Percent	Area (S.F.)	Area (S.Y.)
PATCHING	3.2	666.0	74
FULL DEPTH PATCHING	-	-	

REPAIR QUANTITIES TOTAL - BRIDGE DECK

	Percent	Area (S.F.)	Area (S.Y.)
PATCHING	3.8	3,662.6	407
FULL DEPTH PATCHING	-	-	

Figure 22

DESIGNED	MNM	1/11/21
DRAWN	EJM	05/06/21
REVIEWED	MNM	01/24/2022

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PLOT SCALE	= 0:2.0000 " = 1" / in.
PLOT DATE	= 2/3/2022

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CHECKED	-	MNM
DRAWN	-	EJM
CHECKED	-	01/24/2022

REVISED	-
REVISED	-
REVISED	-
REVISED	-

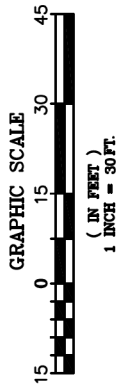
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK REPAIRS
SN 048-3286

SHEET NO. 9 OF 61 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	25
			CONTRACT NO.	89819
ILLINOIS		FED. AID PROJECT	4	

REPAIR QUANTITIES MAP
COUNTY HIGHWAY 10
OVER BNSF RAIL YARD
KNOX COUNTY
STATE OF ILLINOIS

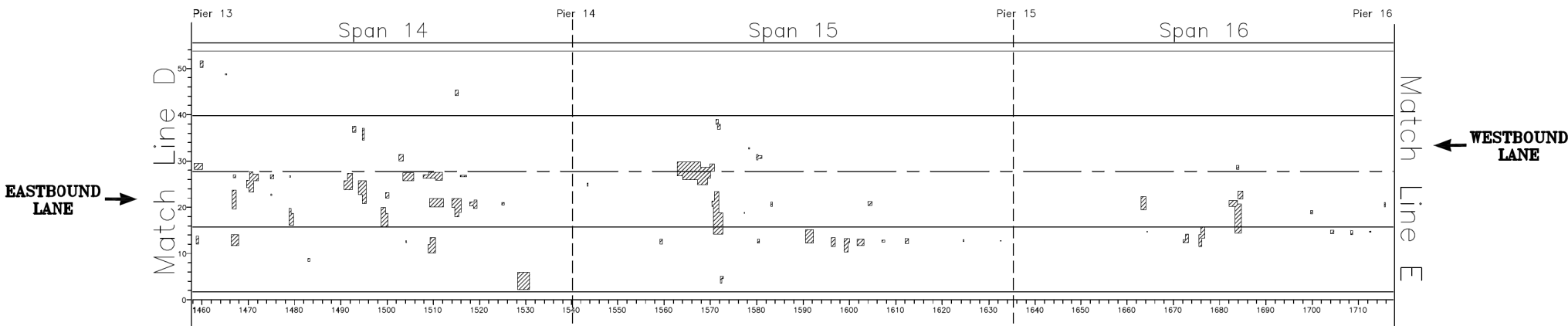


REPAIR QUANTITIES MAP
COUNTY HIGHWAY 10
OVER BNSF RAIL YARD
KNOX COUNTY
STATE OF ILLINOIS

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(614) 823-4949



DRAWN BY:	DTF	DATE:	1-07-2019
CHECKED BY:	CAY	DRAWING NO.:	00-0
JOB NO.:	W-18-091	SHEET:	5 OF 6



REPAIR QUANTITIES SPANS 14-16 - BRIDGE DECK

	Percent	Area (S.F.)	Area (S.Y.)
PATCHING	1.3	165.2	18
FULL DEPTH PATCHING	-	-	

REPAIR QUANTITIES TOTAL - BRIDGE DECK

	Percent	Area (S.F.)	Area (S.Y.)
PATCHING	3.8	3,662.6	407
FULL DEPTH PATCHING	-	-	

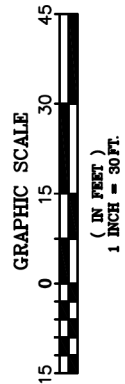
Figure 23

DESIGNED	MNM	1/11/21
DRAWN	EJM	05/06/21
REVIEWED	MNM	01/24/2022

It:\18_jobs\18L0058A\CAD\Struct\Sheet\Bridge Deck Repairs.05.dgn

 © Copyright Hanson Professional Services Inc. 2022	USER NAME = Johns00944	DESIGNED - MNM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DECK REPAIRS SN 048-3286	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - MNM	REVISED -			400	18-00043-01-BR	KNOX	81	26
	PLOT SCALE = 0:2.0000 '1' = 1 in.	DRAWN - EJM	REVISED -					CONTRACT NO.		89819
	PLOT DATE = 2/3/2022	CHECKED - 01/24/2022	REVISED -			SHEET NO. 10 OF 61 SHEETS				

REPAIR QUANTITIES MAP
COUNTY HIGHWAY 10
OVER BNSF RAIL YARD
KNOX COUNTY
STATE OF ILLINOIS

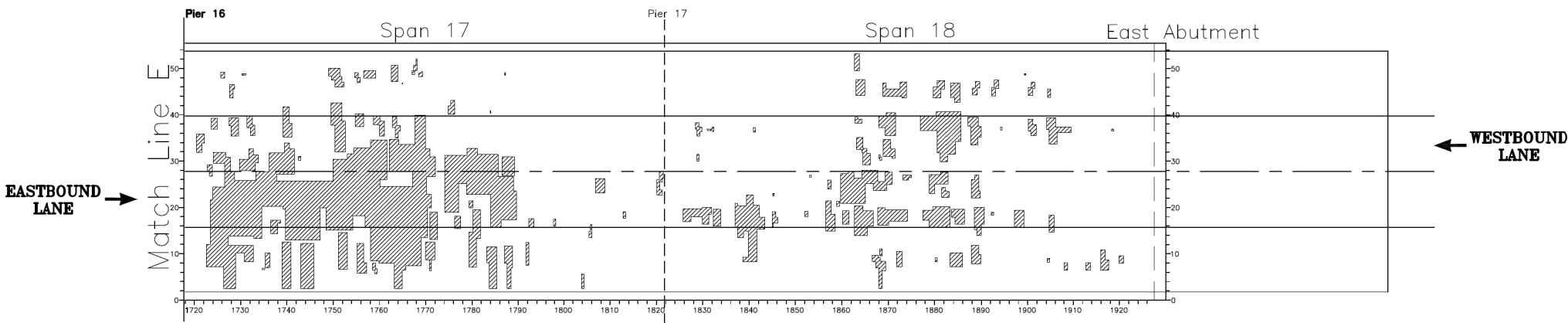


REPAIR QUANTITIES MAP
COUNTY HIGHWAY 10
OVER BNSF RAIL YARD
KNOX COUNTY
STATE OF ILLINOIS

RESOURCE INTERNATIONAL, INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949



DRAWN BY:	DTF	DATE:	1-07-2019
CHECKED BY:	CAY	DRAWING NO.:	00-0
JOB NO.:	W-18-091	SHEET:	6 OF 6



REPAIR QUANTITIES SPANS 17-18 - BRIDGE DECK

	Percent	Area (S.F.)	Area (S.Y.)
PATCHING	16.8	1,758.7	196
FULL DEPTH PATCHING	-	-	

REPAIR QUANTITIES TOTAL - BRIDGE DECK

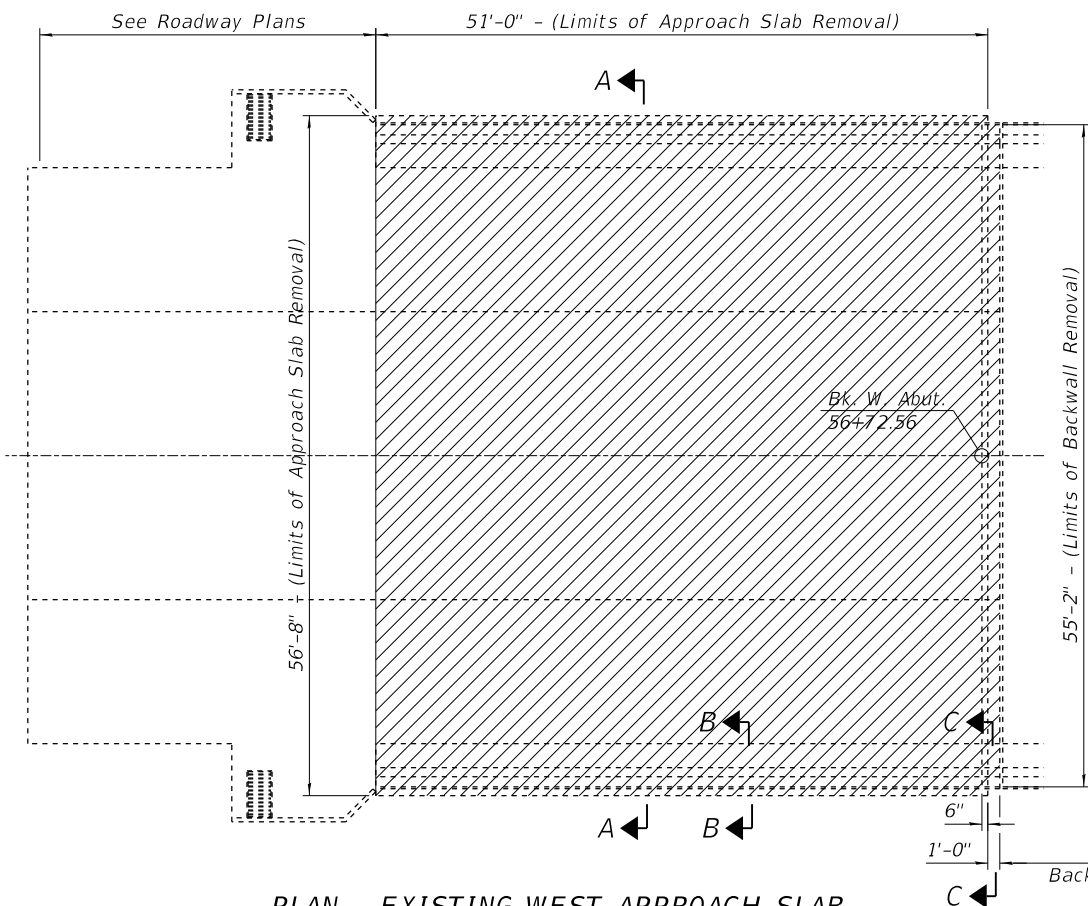
	Percent	Area (S.F.)	Area (S.Y.)
PATCHING	3.8	3,662.6	407
FULL DEPTH PATCHING	-	-	

Figure 24

DESIGNED	MNM	1/11/21
DRAWN	EJM	05/06/21
REVIEWED	MNM	01/24/2022

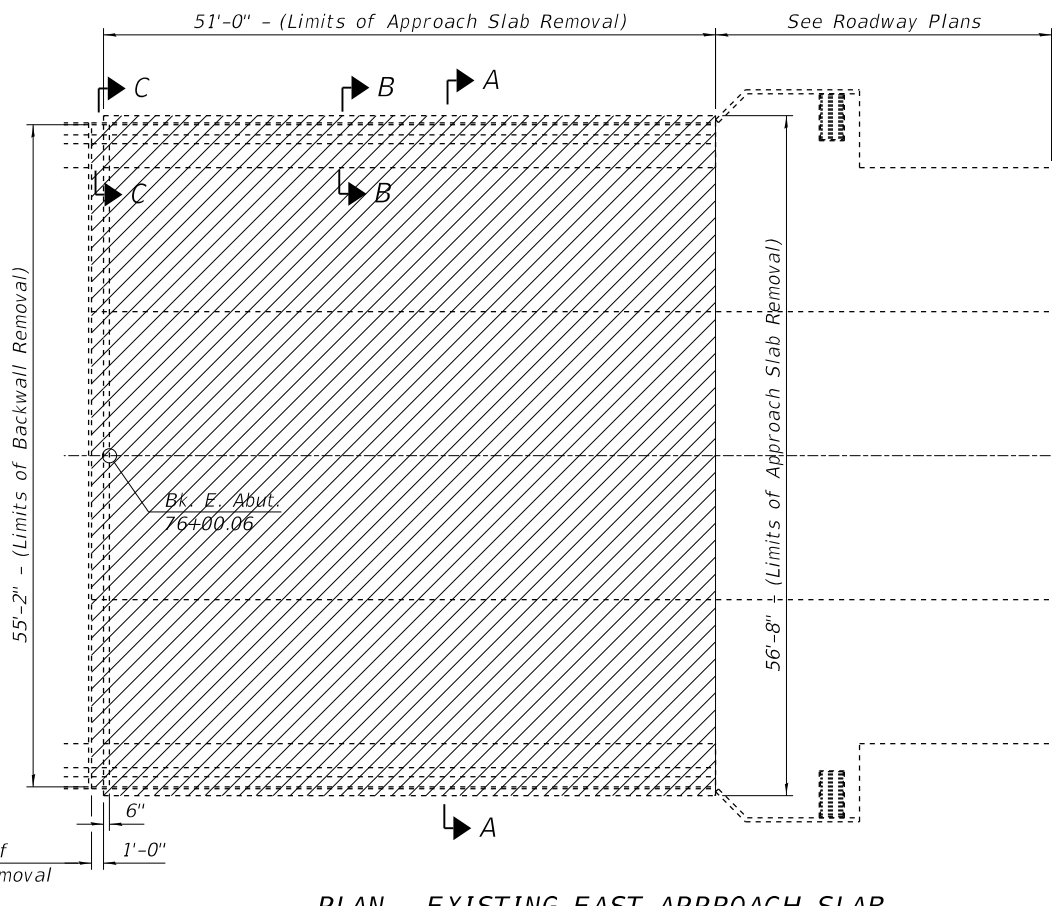
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	PLOT DATE = 2/3/2022	CHECKED - 01/24/2022	REVISED -								
							ILLINOIS FED. AID PROJECT 4				



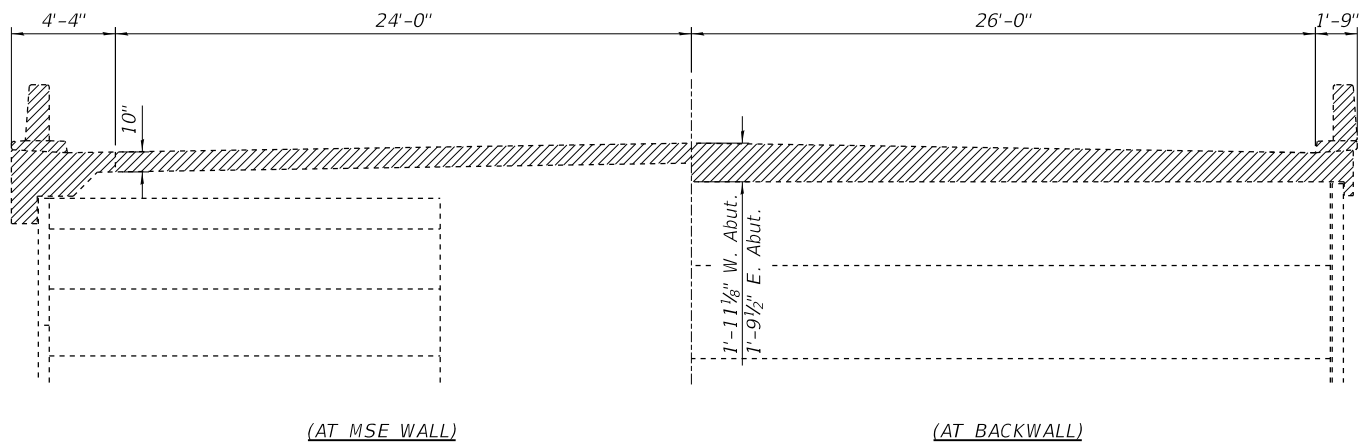
PLAN - EXISTING WEST APPROACH SLAB

Note: Hatched area indicates Concrete Removal



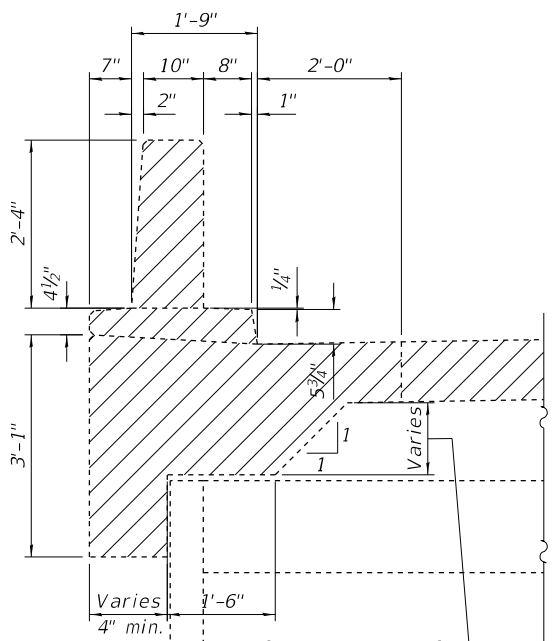
PLAN - EXISTING EAST APPROACH SLAB

Note: Hatched area indicates Concrete Removal



SECTION A-A

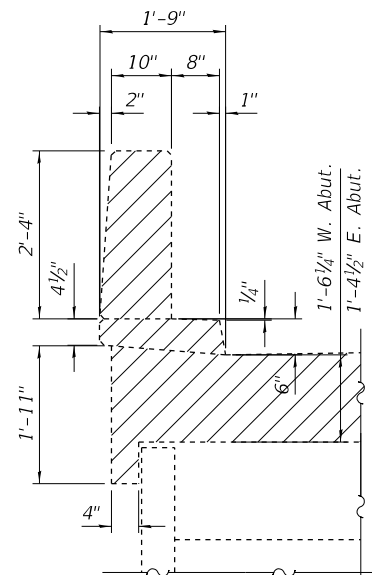
Note: Hatched area indicates Concrete Removal



SECTION B-B

1'-0" to 1'-7 3/4" E. Approach
9" to 1'-0 1/2" W. Approach

Note: Hatched area indicates Concrete Removal

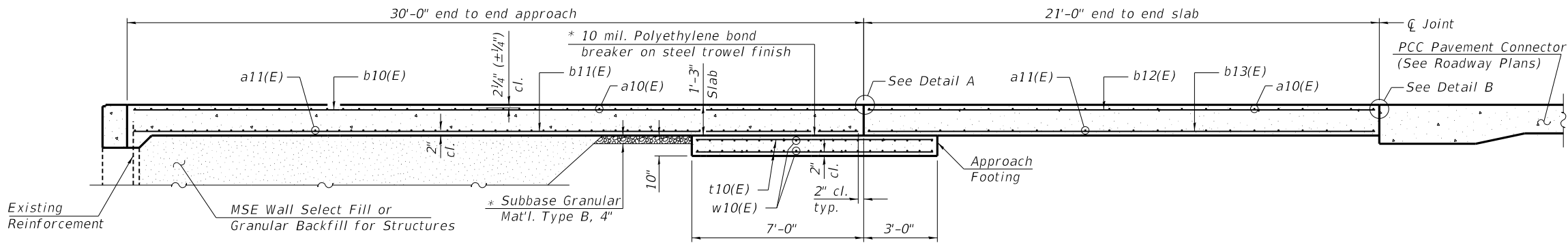


SECTION C-C

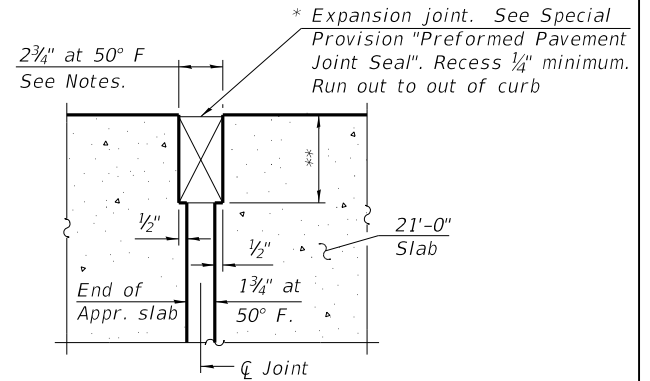
DESIGNED	MNM	1/19/21
DRAWN	EJM	05/06/21
REVIEWED	MNM	01/24/2022

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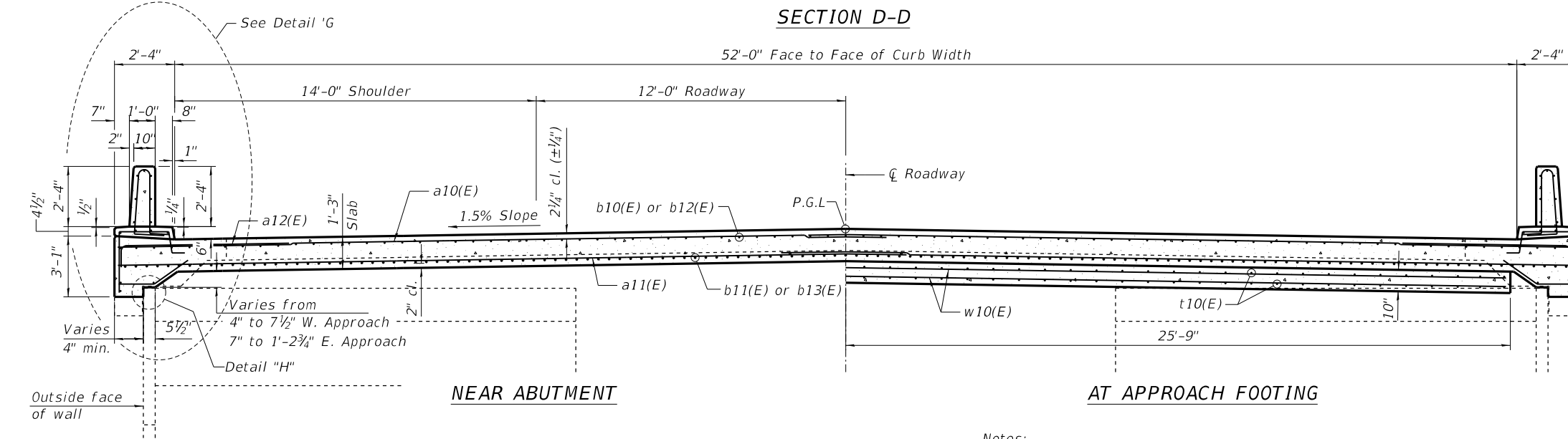
<div><div>HANSON</div></div> <div>© Copyright Hanson Professional Services Inc. 2022</div>	USER NAME = Johns00944	DESIGNED - MNM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE APPROACH SLAB & BACKWALL REMOVAL SN 048-3286	SHEET NO. 12 OF 61 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - MNM	REVISED -				400	18-00043-01-BR	KNOX	81	28
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	PLOT DATE = 2/3/2022	CHECKED - 01/24/2022	REVISED -				ILLINOIS FED. AID PROJECT 4				



SECTION D-D

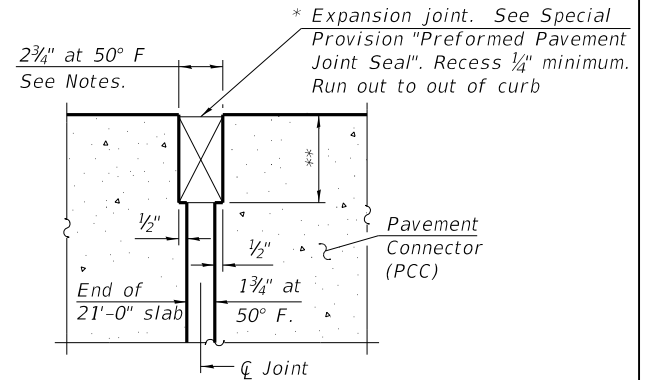


DETAIL A



NEAR ABUTMENT

AT APPROACH FOOTING



DETAIL B

MIN. BAR LAP

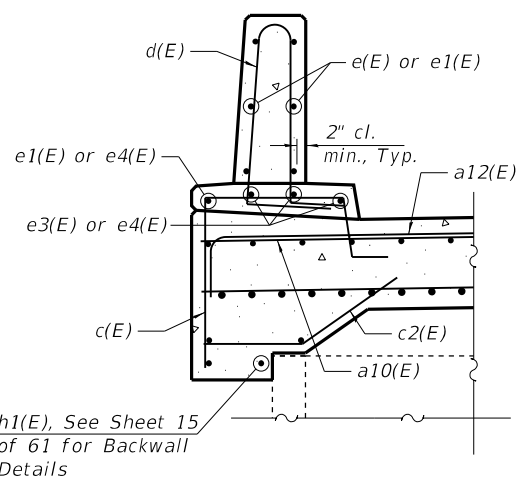
#5 Bar = 3'-4"
#8 Bar = 4'-9"

Notes:
Approach slab shall be paid for as Concrete Superstructure (Approach Slab).
Approach footing concrete shall be paid for as Concrete Structures.
The Approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
Cost of excavation for approach footing included with Concrete Structures.

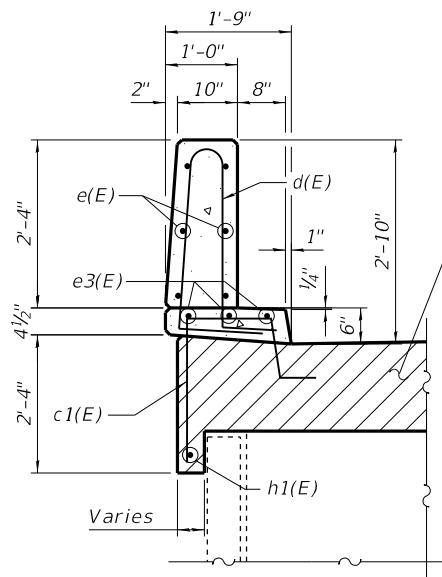
* Cost included with Concrete Superstructure (Approach Slab)
** Per manufacturer recommendations

TWO APPROACHES
BILL OF MATERIAL

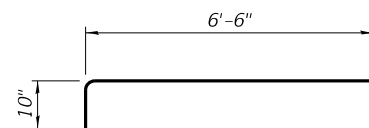
Bar	No.	Size	Length	Shape
a10(E)	312	#5	29'-10"	
a11(E)	412	#8	30'-7"	
a12(E)	312	#5	7'-4"	
b10(E)	170	#5	29'-8"	
b11(E)	272	#9	29'-8"	
b12(E)	170	#5	20'-8"	
b13(E)	272	#9	20'-8"	
c(E)	228	#4	6'-4"	
c2(E)	212	#4	3'-0"	
d(E)	320	#4	7'-2"	
e(E)	48	#4	15'-1"	
e1(E)	48	#4	10'-1"	
e2(E)	4	#4	29'-7"	
e3(E)	12	#4	30'-7"	
e4(E)	16	#4	20'-7"	
t10(E)	208	#4	9'-8"	
w10(E)	160	#5	27'-3"	
Concrete Removal			Cu. Yd.	24.9
Concrete Superstructure			Cu. Yd.	23.8
Concrete Superstructure (Approach Slab)			Cu. Yd.	289.2
Concrete Structures			Cu. Yd.	31.8
Reinforcement Bars, Epoxy Coated			Pound	111,370



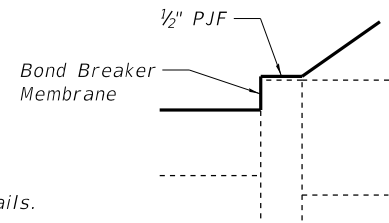
DETAIL "G"



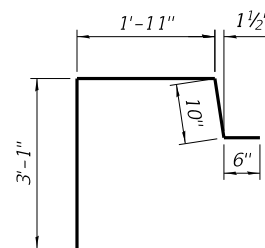
SECTION F-F



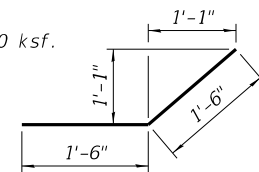
BAR a12(E)



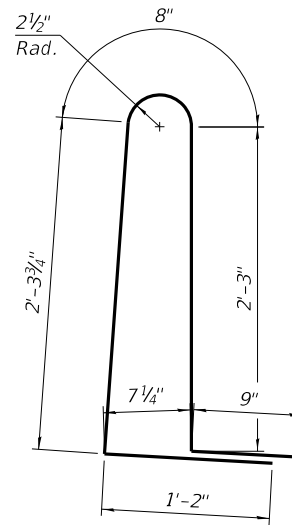
DETAIL 'H'



BAR c(E)



BAR c2(E)



BAR d(E)

(Sheet 2 of 2)

DESIGNED	1/19/21
DRAWN	05/06/21
REVIEWED	01/24/2022

\\h18\jobs\18L0058A\CAD\Struct\Sheet\Approach Slab Details.dgn



USER NAME = Johns00944

PLOT SCALE = 0.2:0000 '1' = 1"

PLOT DATE = 2/3/2022

DESIGNED - MNM

CHECKED - MNM

DRAWN - EJM

CHECKED - 01/24/2022

REVISED -

REVISED -

REVISED -

REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS
SN 048-3286

SHEET NO. 14 OF 61 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	30
			CONTRACT NO.	89819
			ILLINOIS FED. AID PROJECT	4



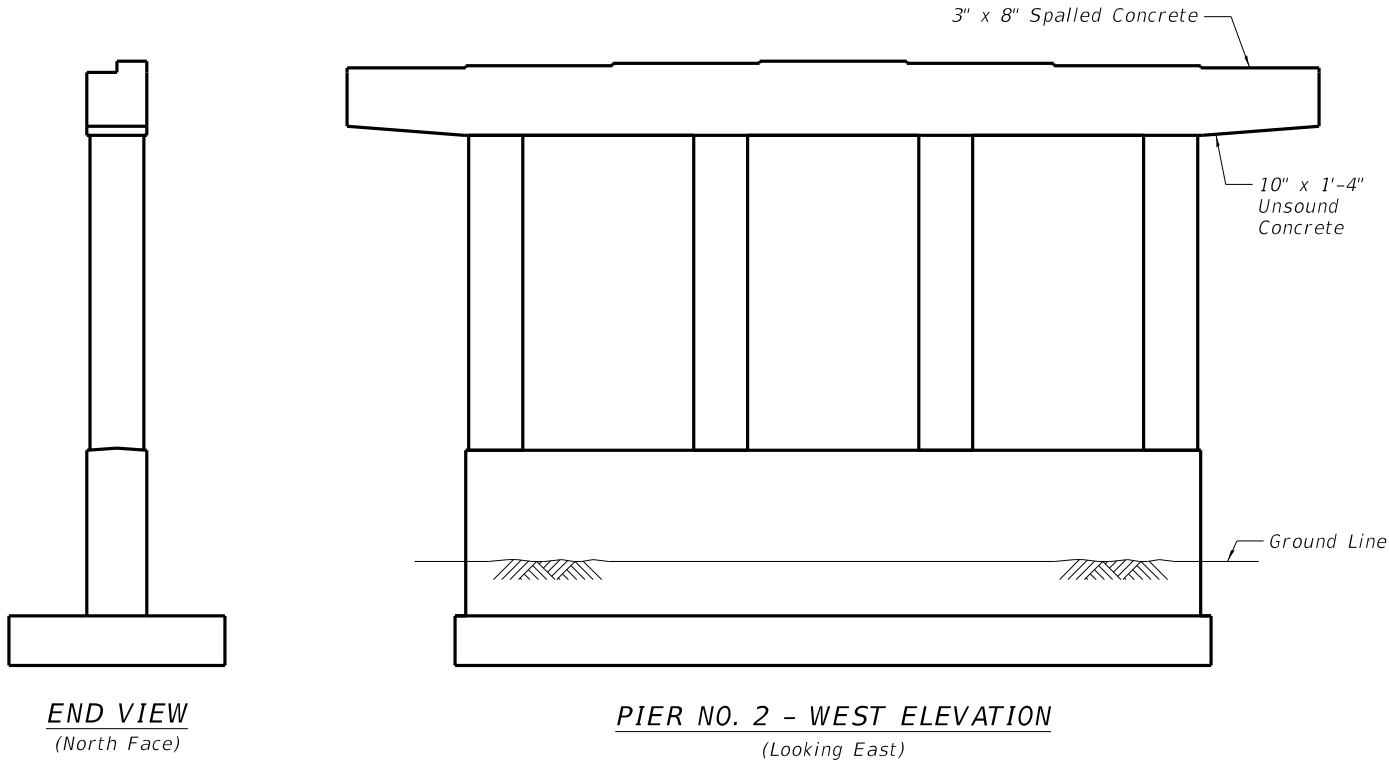
—Z—



Figure 1 shows two cross-sectional diagrams of reinforced concrete beams. The left diagram, labeled BAR u(E), shows a rectangular cross-section with a width of 9" and a height of 7". The right diagram, labeled BAR c1(E), shows a T-shaped cross-section with a total height of 2'-5", a top flange width of 1'-2", a top flange thickness of 1 1/2", a web width of 10", and a bottom flange width of 6".

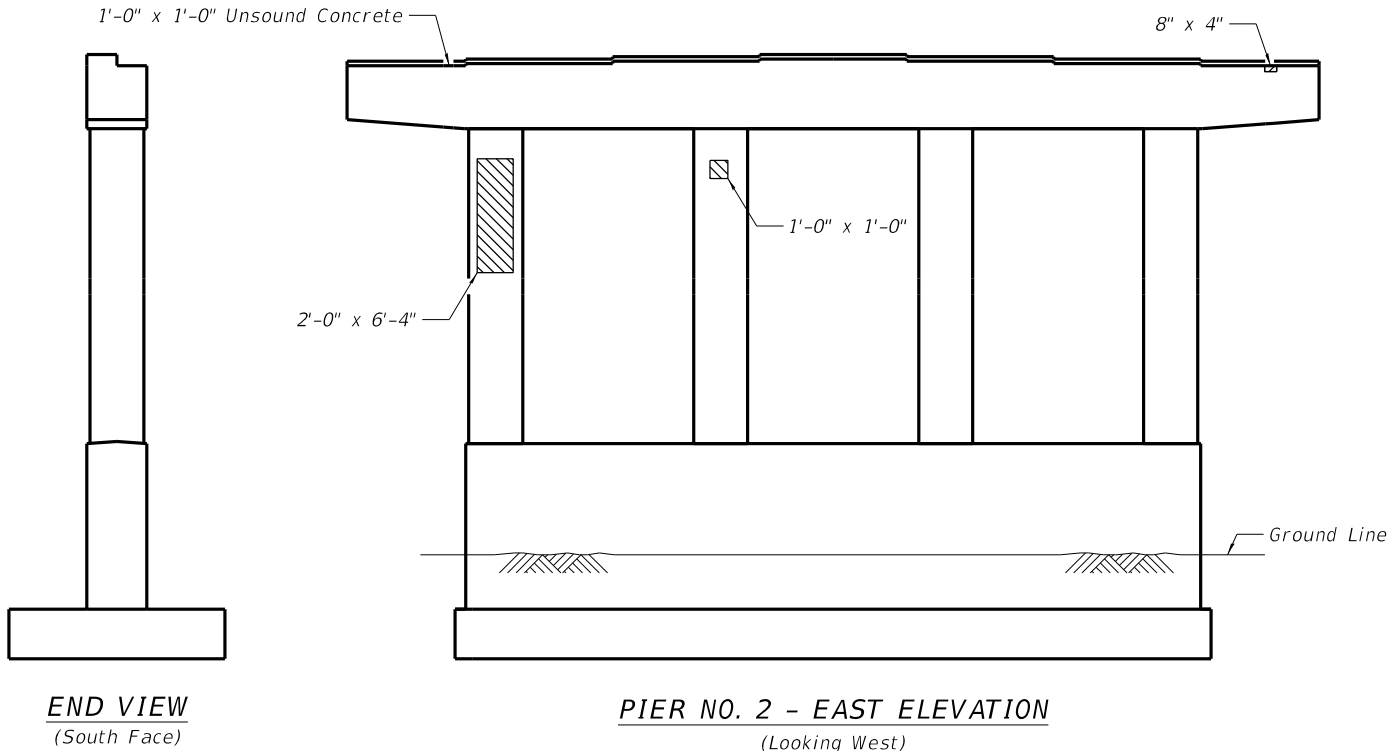
Bar	No.	Size	Length	Shape
c1(E)	8	#4	4'-11"	┐
h(E)	16	#6	29'-6"	=====
h1(E)	4	#5	2'-9"	=====
u(E)	108	#5	1'-11"	┌
Concrete Removal			Cu. Yd.	6.7
Concrete Superstructure			Cu. Yd.	6.7
Reinforcement Bars, Epoxy Coated			Pound	960

DESIGNED	MNM	1/19/21
DRAWN	EJM	05/06/21
REVIEWED	MNM	01/24/2022



END VIEW
(North Face)

PIER NO. 2 - WEST ELEVATION
(Looking East)



END VIEW
(South Face)

PIER NO. 2 - EAST ELEVATION
(Looking West)

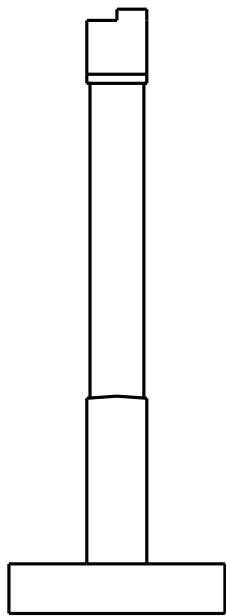
LEGEND

- Hollow or Unsound Conc., WxH
- Spalled Conc., WxH
- Spalled Conc. with Exposed Rebars, WxH
- Crack

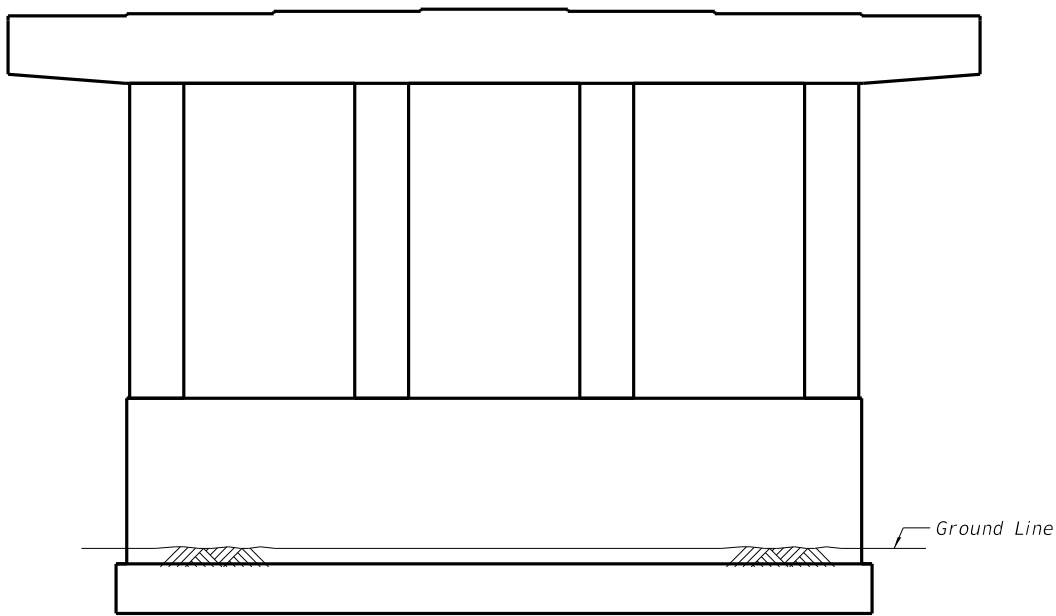
BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth Equal to or Less than 5 Inches)	Sq Ft	16

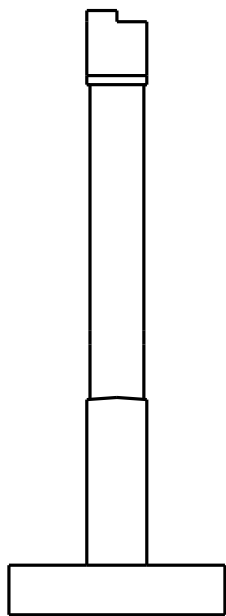
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DRAWN	EJM	05/06/21
REVIEWED	MNM	07/24/2022



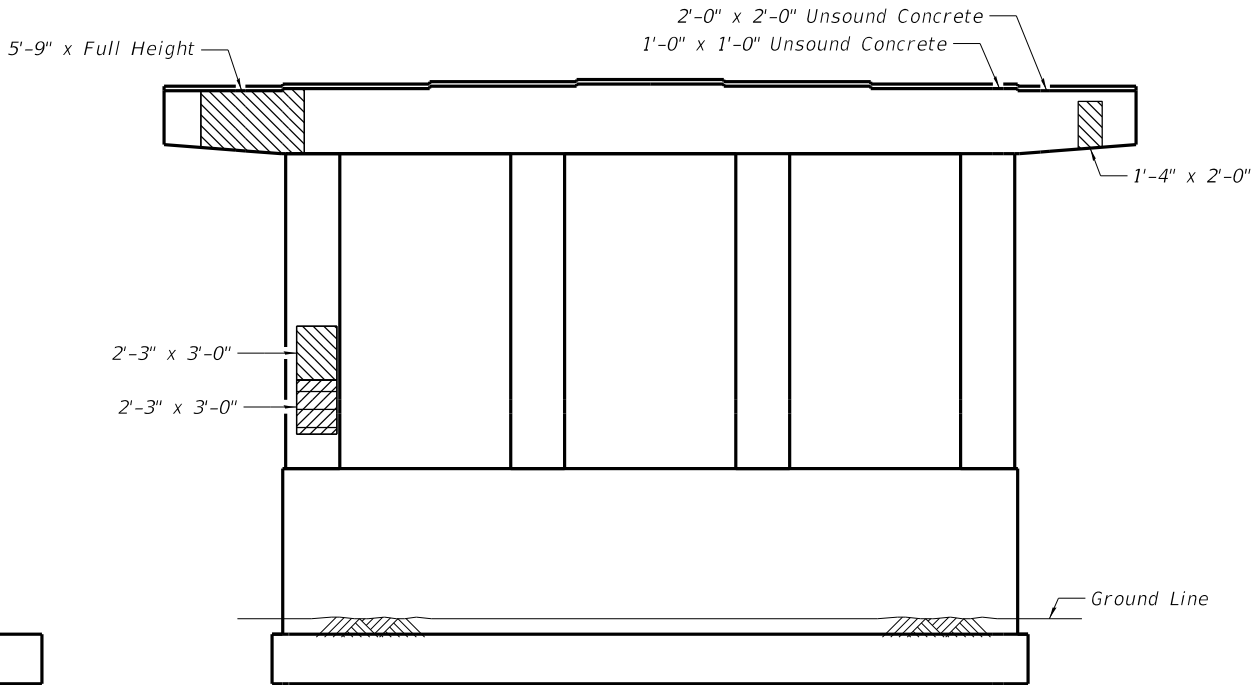
END VIEW
(North Face)



PIER NO. 4 - WEST ELEVATION
(Looking East)







END VIEW
(South Face)



PIER NO. 4 - EAST ELEVATION
(Looking West)

LEGEND

-  Hollow or Unsound Conc., WxH
 Spalled Conc., WxH
 Spalled Conc. with Exposed Rebars, WxH
 Crack

BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth Equal to or Less than 5 Inches)	Sq Ft	41





DESIGNED	MNM	1/12/21
DRAWN	EJM	05/06/21
REVIEWED	MNM	07/24/2022

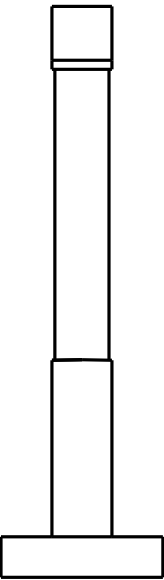
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		CHECKED - 01/24/2022	REVISED -			ILLINOIS FED. AID PROJECT 4				
SHEET NO. 17 OF 61 SHEETS										

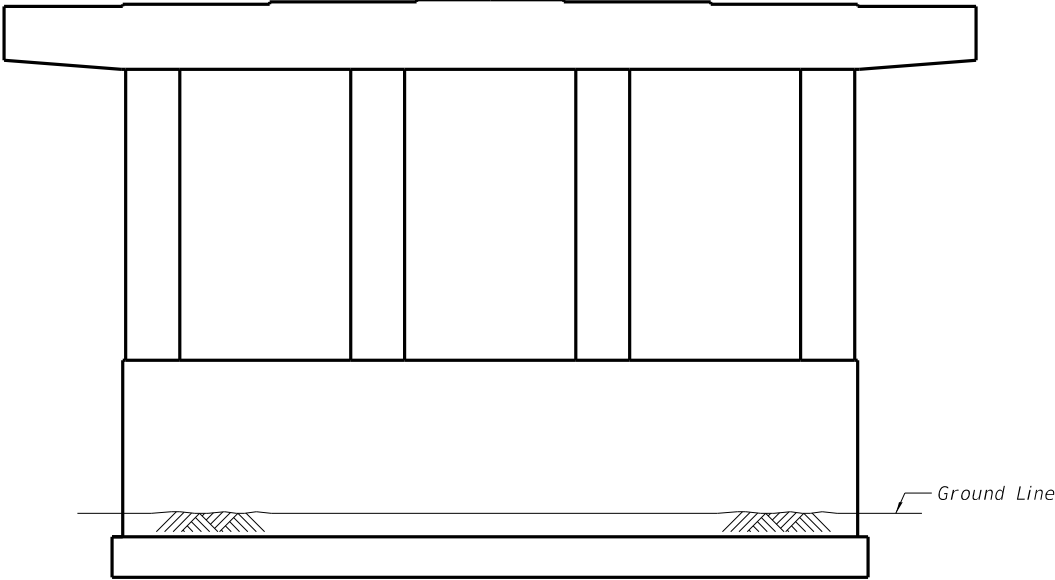
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DRAWN	EJM	05/06/21
REVIEWED	MNM	01/24/2022

LEGEND

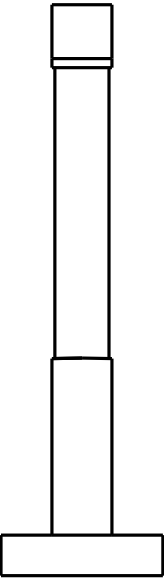
-  Hollow or Unsound Conc., WxH
-  Spalled Conc., WxH
-  Spalled Conc. with Exposed Rebars, WxH
-  Crack



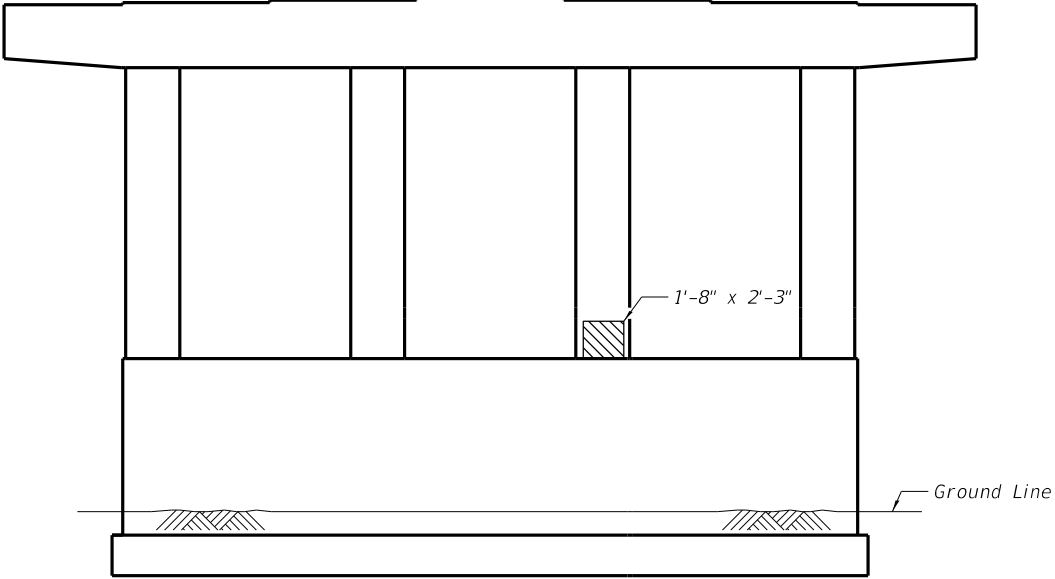
END VIEW
(North Face)



PIER NO. 5 - WEST ELEVATION
(Looking East)



END VIEW
(South Face)



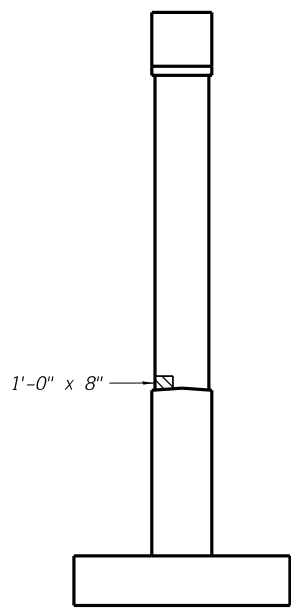
PIER NO. 5 - EAST ELEVATION
(Looking West)

BILL OF MATERIAL

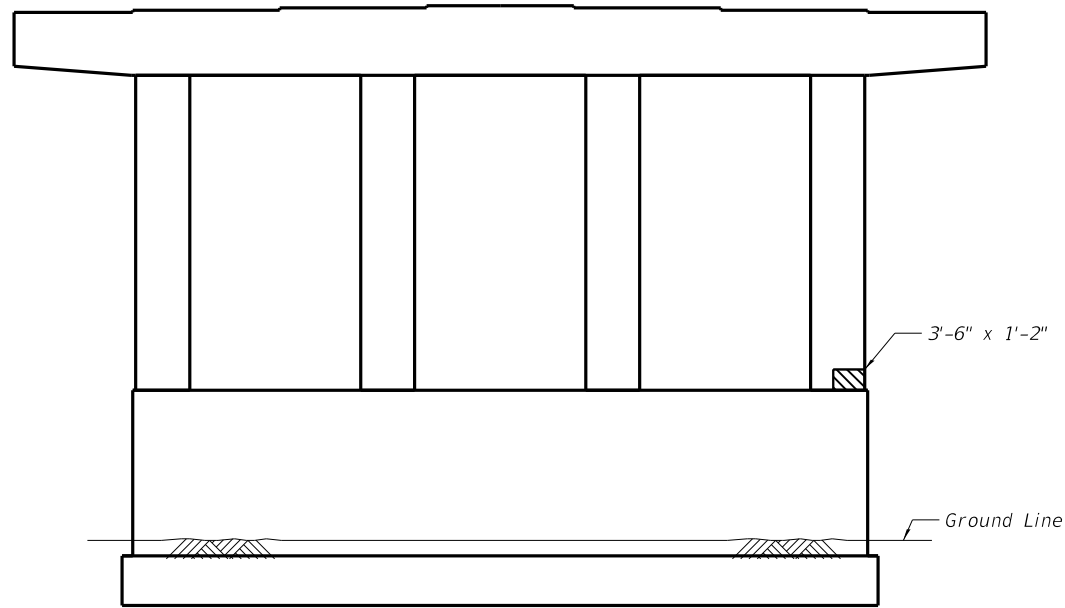
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(Sheet 3 of 11)

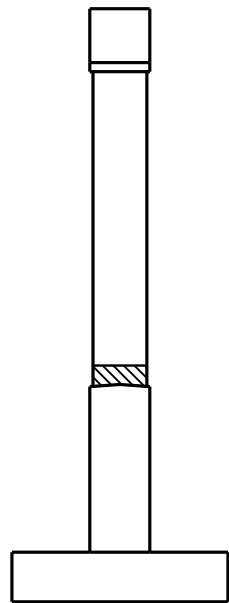
 © Copyright Hanson Professional Services Inc. 2022	USER NAME = Johns00944			DESIGNED - MNM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PIER REPAIRS SN 048-3286 SHEET NO. 18 OF 61 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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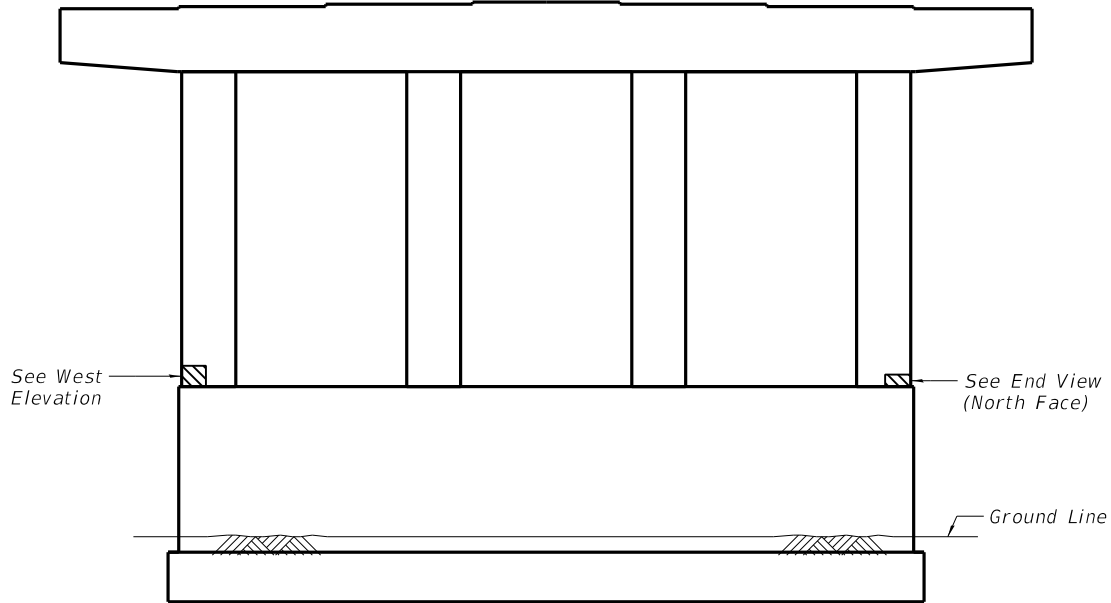
END VIEW
(North Face)



PIER NO. 6 - WEST ELEVATION
(Looking East)



END VIEW
(South Face)



PIER NO. 6 - EAST ELEVATION
(Looking West)

LEGEND

- Hollow or Unsound Conc., WxH
- Spalled Conc., WxH
- Spalled Conc. with Exposed Rebars, WxH
- Crack

BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth Equal to or Less than 5 Inches)	Sq Ft	5

(Sheet 4 of 11)





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DRAWN	EJM	05/06/21
REVIEWED	MNM	07/24/2022

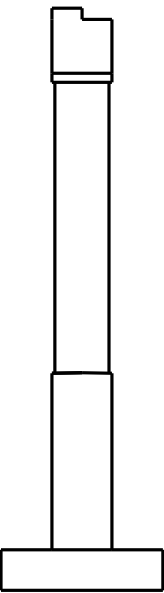
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		CHECKED - MNM	REVISED -			400	18-00043-01-BR	KNOX	81	35
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SHEET NO. 19 OF 61 SHEETS										

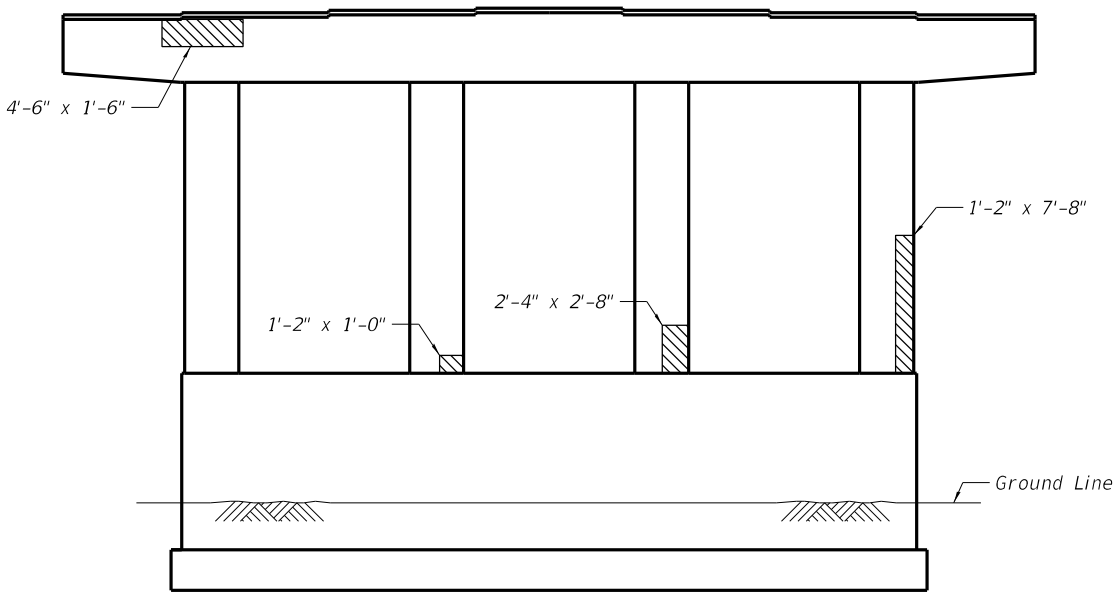
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DRAWN	EJM	05/06/21
REVIEWED	MNM	01/24/2022

LEGEND

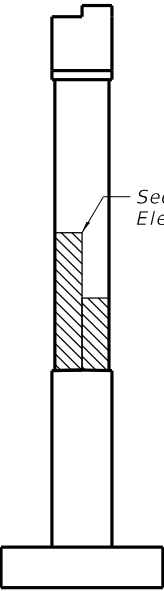
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-  Spalled Conc., WxH
-  Spalled Conc. with Exposed Rebars, WxH
-  Crack



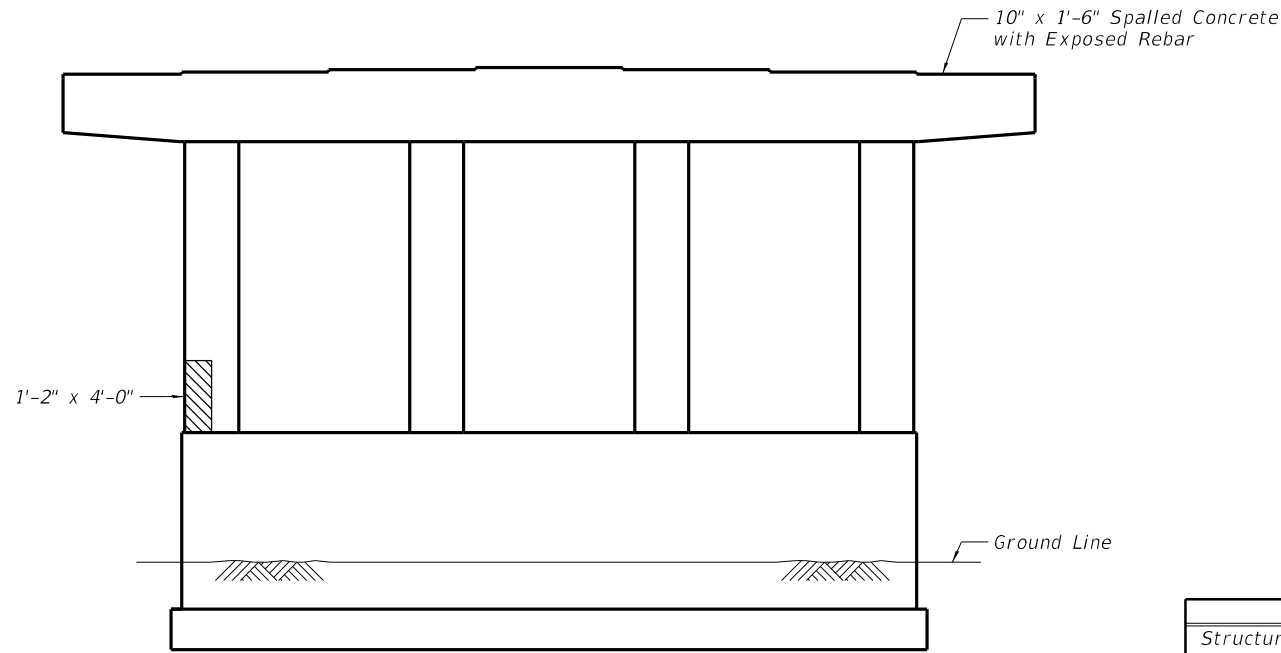
END VIEW
(North Face)



PIER NO. 7 - WEST ELEVATION
(Looking East)



END VIEW
(South Face)



PIER NO. 7 - EAST ELEVATION
(Looking West)

BILL OF MATERIAL

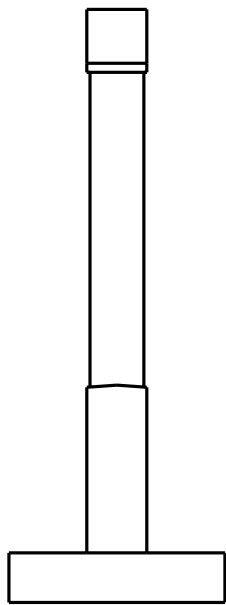
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Structural Repair of Concrete (Depth Equal to or Less than 5 Inches)	Sq Ft	29

(Sheet 5 of 11)

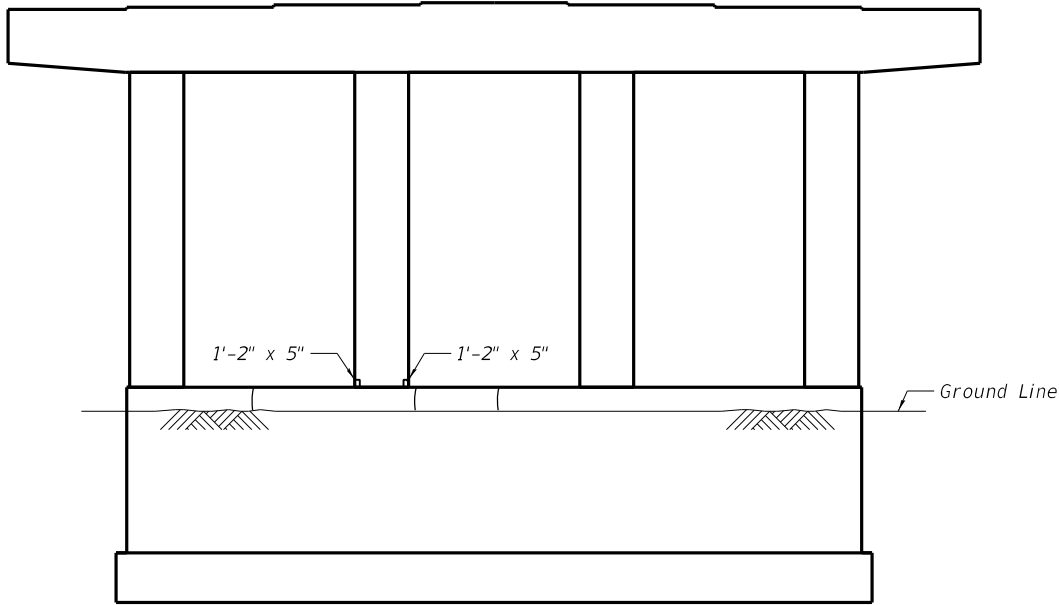
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PLOT DATE = 2/3/2022				DRAWN - EJM								ILLINOIS FED. AID PROJECT 4				
CHECKED - 01/24/2022				REVISED -								SHEET NO. 20 OF 61 SHEETS				
				REVISED -												



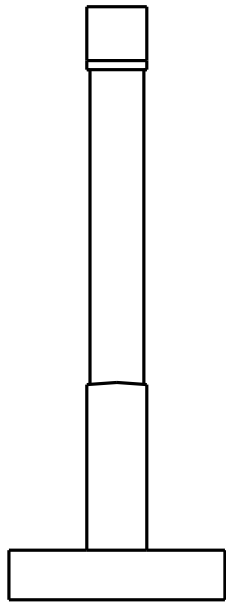
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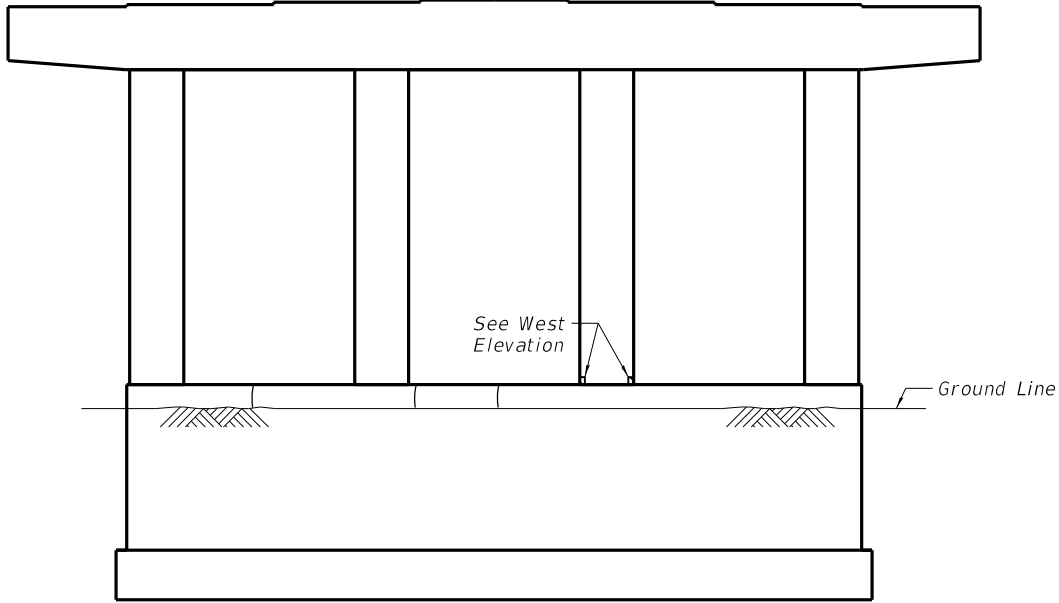
END VIEW
(North Face)



PIER NO. 8 - WEST ELEVATION
(Looking East)



END VIEW
(South Face)



PIER NO. 8 - EAST ELEVATION
(Looking West)

LEGEND

- Hollow or Unsound Conc., WxH
- Spalled Conc., WxH
- Spalled Conc. with Exposed Rebars, WxH
- Crack

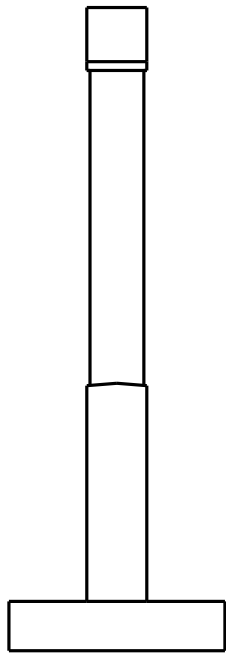
BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth Equal to or Less than 5 Inches)	Sq Ft	1

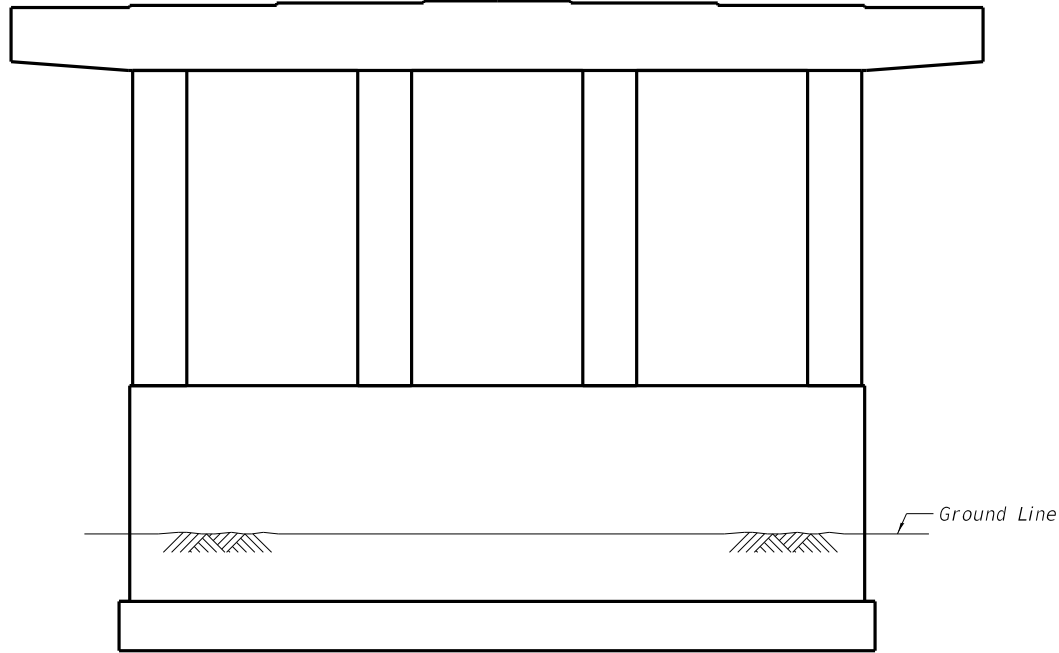
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DRAWN	EJM	05/06/21
REVIEWED	MNM	07/24/2022

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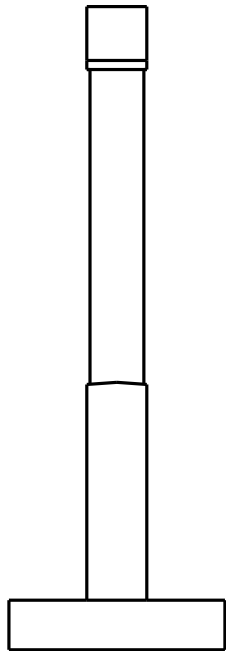
 © Copyright Hanson Professional Services Inc. 2022	USER NAME = Johns00944	DESIGNED - MNM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PIER REPAIRS SN 048-3286	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 0:2.0000 '1" / in.	CHECKED - MNM	REVISED -			400	18-00043-01-BR	KNOX	81	37
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		CHECKED - 01/24/2022	REVISED -			ILLINOIS FED. AID PROJECT 4				
SHEET NO. 21 OF 61 SHEETS										



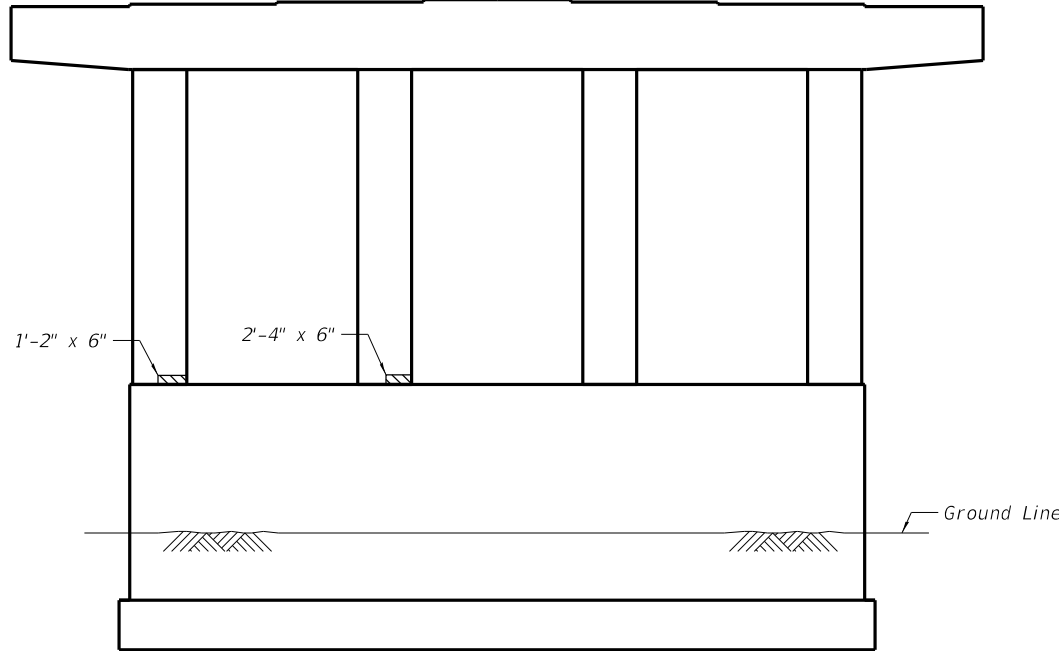
END VIEW
(North Face)



PIER NO. 9 - WEST ELEVATION
(Looking East)







END VIEW
(South Face)



PIER NO. 9 - EAST ELEVATION
(Looking West)

LEGEND

-  Hollow or Unsound Conc., WxH
-  Spalled Conc., WxH
-  Spalled Conc. with Exposed Rebars, WxH
-  Crack

BILL OF MATERIAL

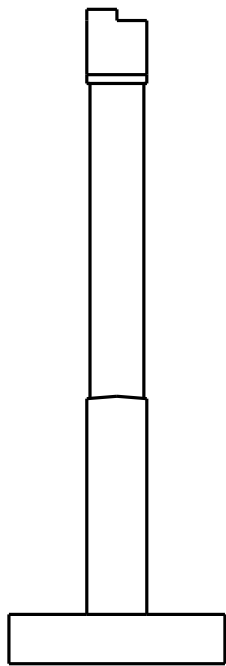
Item	Unit	Total
Structural Repair of Concrete (Depth Equal to or Less than 5 Inches)	Sq Ft	2

(Sheet 7 of 11)

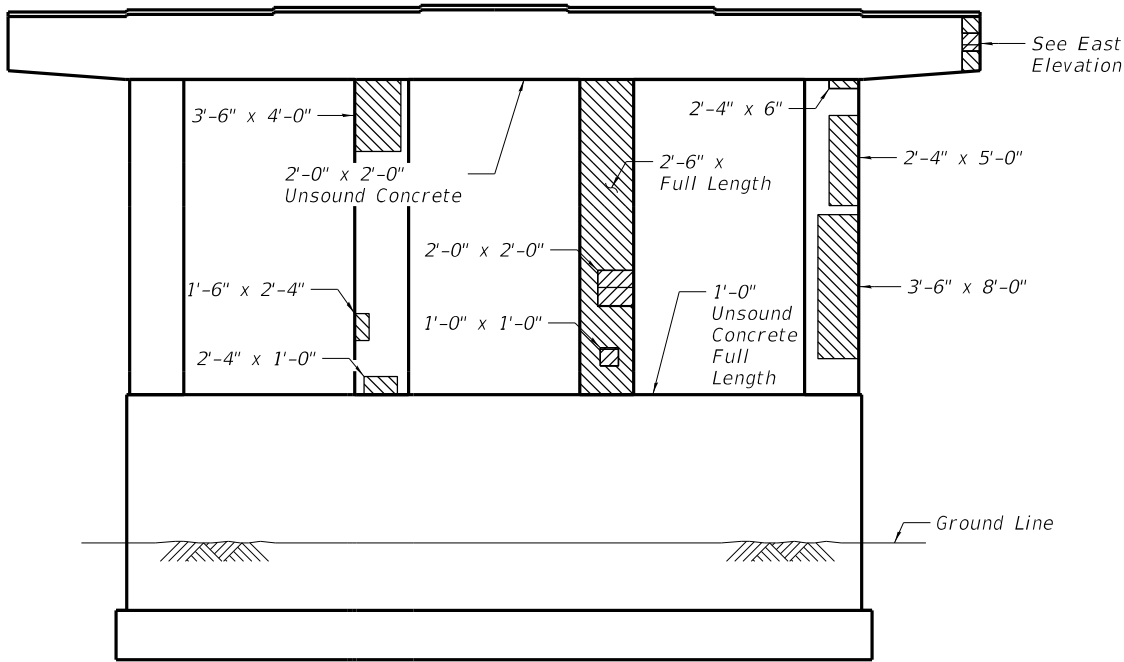
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DRAWN	EJM	05/06/21
REVIEWED	MNM	07/24/2022

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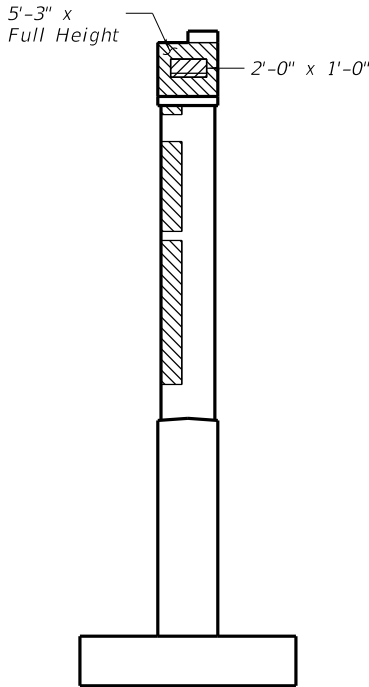
 <small>© Copyright Hanson Professional Services Inc. 2022</small>	USER NAME = Johns00944	DESIGNED - MNM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PIER REPAIRS SN 048-3286	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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						ILLINOIS FED. AID PROJECT 4				



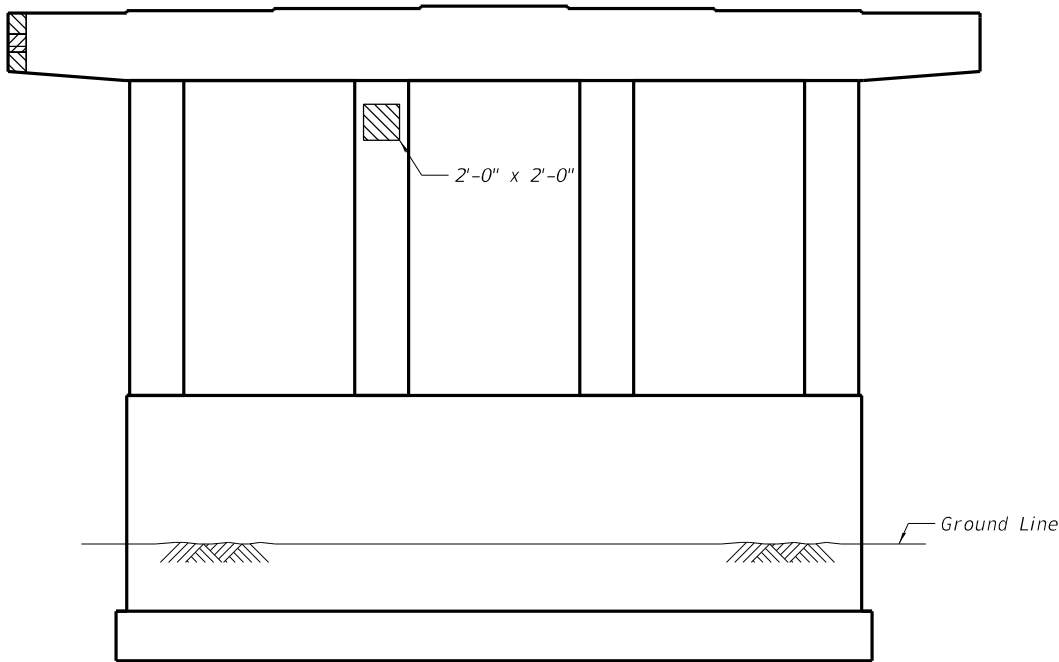
END VIEW
(North Face)



PIER NO. 10 - WEST ELEVATION
(Looking East)



END VIEW
(South Face)



PIER NO. 10 - EAST ELEVATION
(Looking West)

LEGEND

- Hollow or Unsound Conc., WxH
- Spalled Conc., WxH
- Spalled Conc. with Exposed Rebars, WxH
- Crack

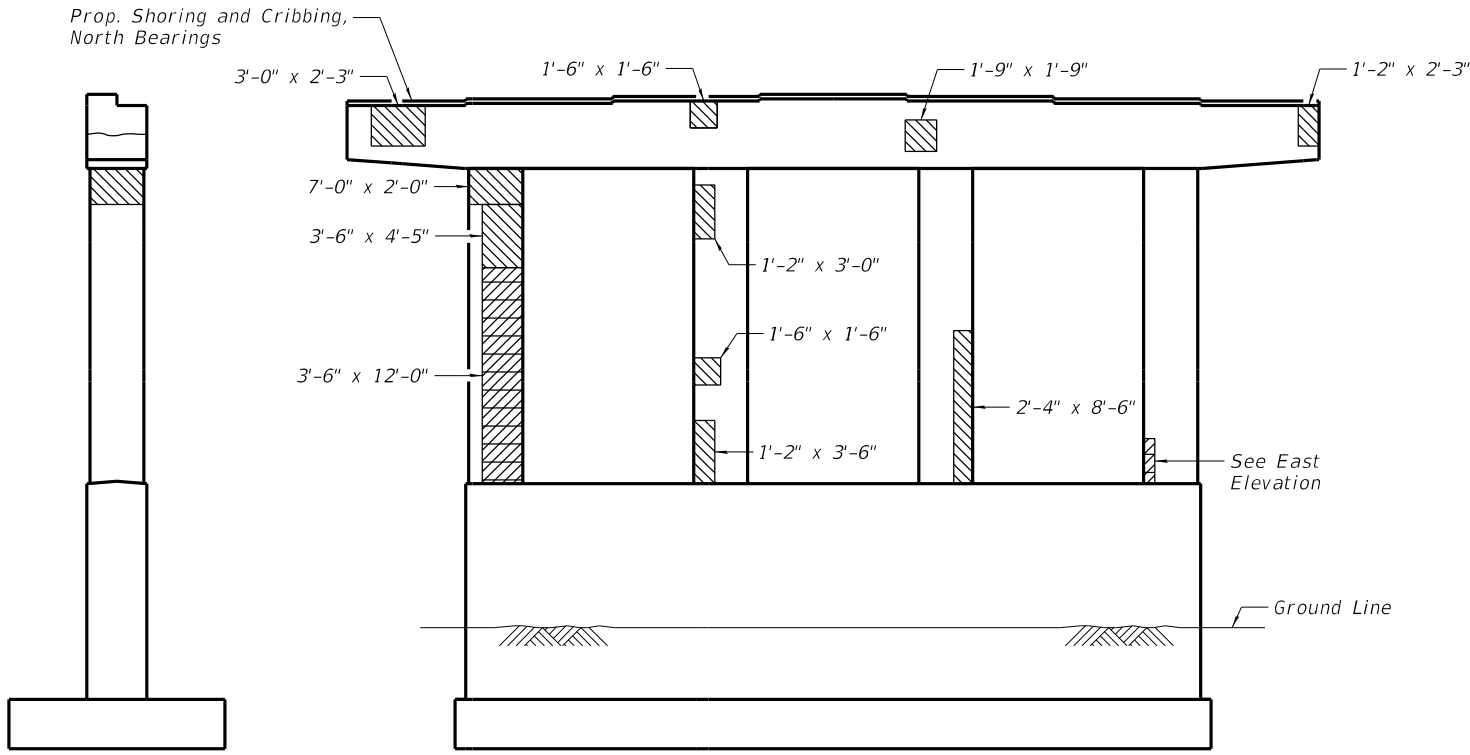
BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth Equal to or Less than 5 Inches)	Sq Ft	127

DESIGNED	MNM	1/12/21
DRAWN	EJM	05/06/21
REVIEWED	MNM	01/24/2022

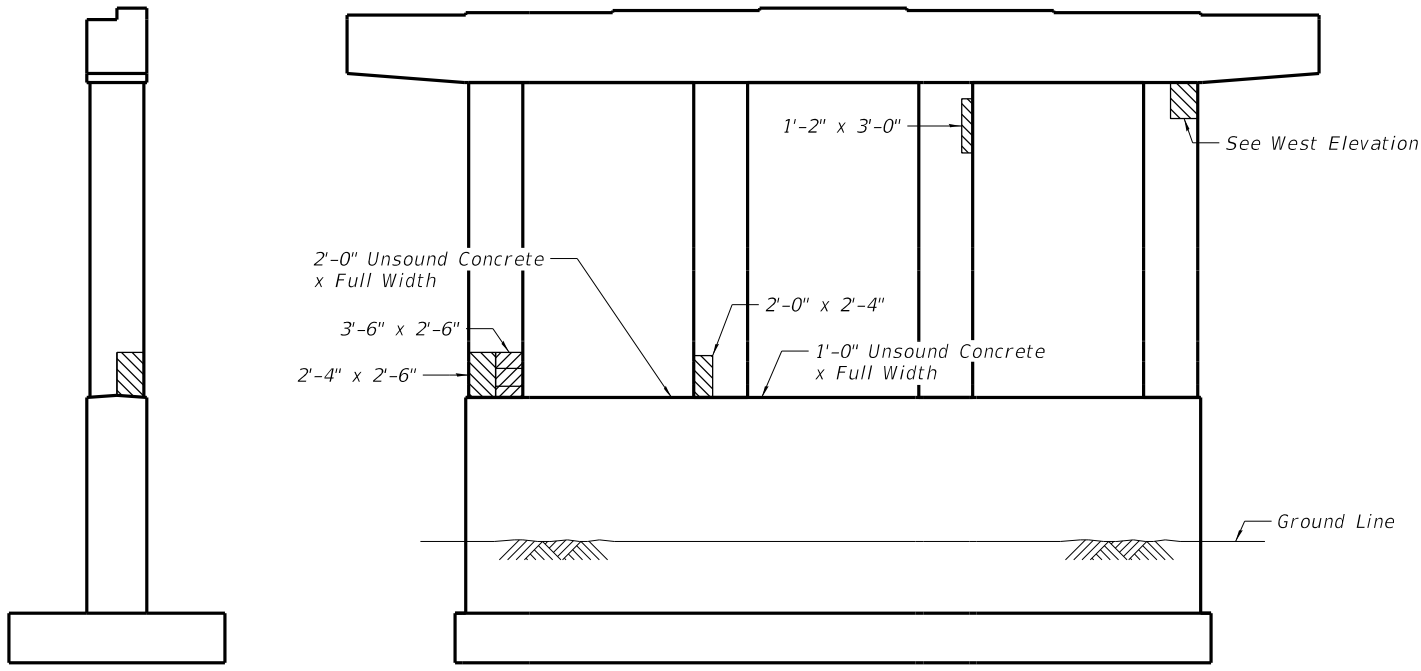
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	CHECKED - 01/24/2022	REVISED -	SHEET NO. 23 OF 61 SHEETS							
						ILLINOIS		FED. AID PROJECT	4	



END VIEW
(North Face)

PIER NO. 13 - WEST ELEVATION
(Looking East)



END VIEW
(South Face)

PIER NO. 13 - EAST ELEVATION
(Looking West)

LEGEND

- Hollow or Unsound Conc., WxH
- Spalled Conc., WxH
- Spalled Conc. with Exposed Rebars, WxH
- Crack

BILL OF MATERIAL

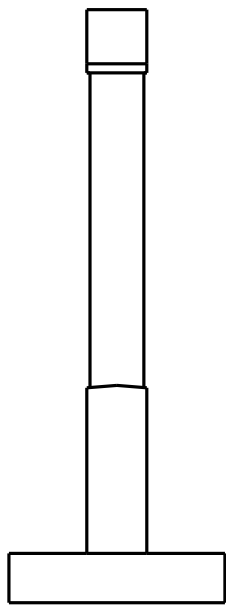
Item	Unit	Total
Structural Repair of Concrete (Depth Equal to or Less than 5 Inches)	Sq Ft	149
Temporary Shoring and Cribbing	Each	2

(Sheet 9 of 11)

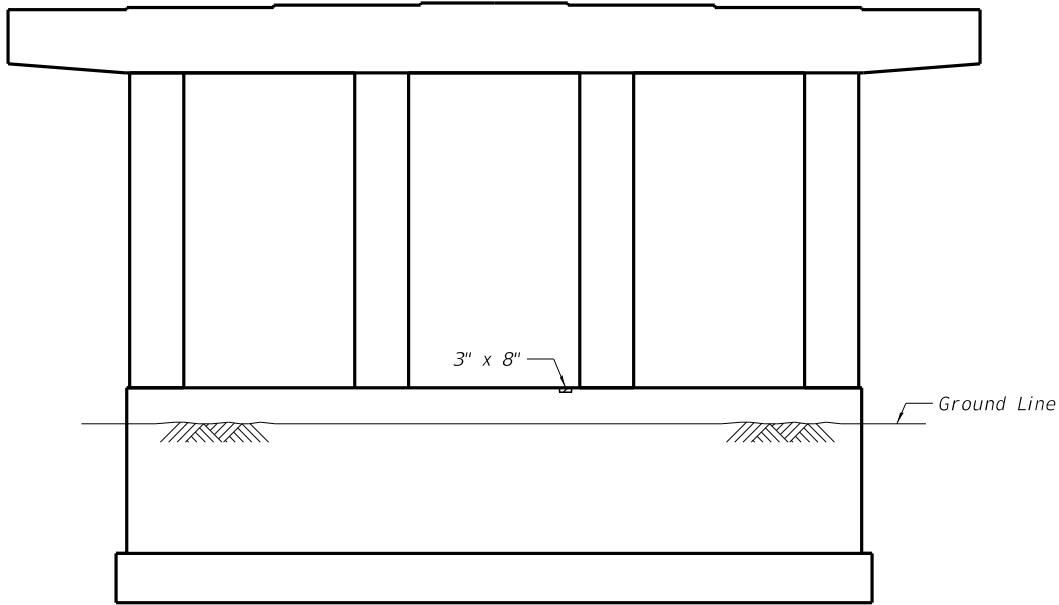
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DRAWN	EJM	05/06/21
REVIEWED	MNM	07/24/2022

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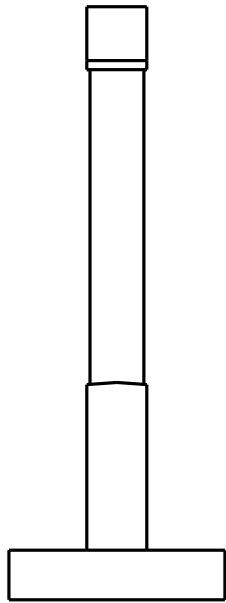
 © Copyright Hanson Professional Services Inc. 2022	USER NAME = Johns00944	DESIGNED - MNM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PIER REPAIRS SN 048-3286	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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	CHECKED - 01/24/2022	REVISED -	SHEET NO. 24 OF 61 SHEETS							
						ILLINOIS FED. AID PROJECT 4				



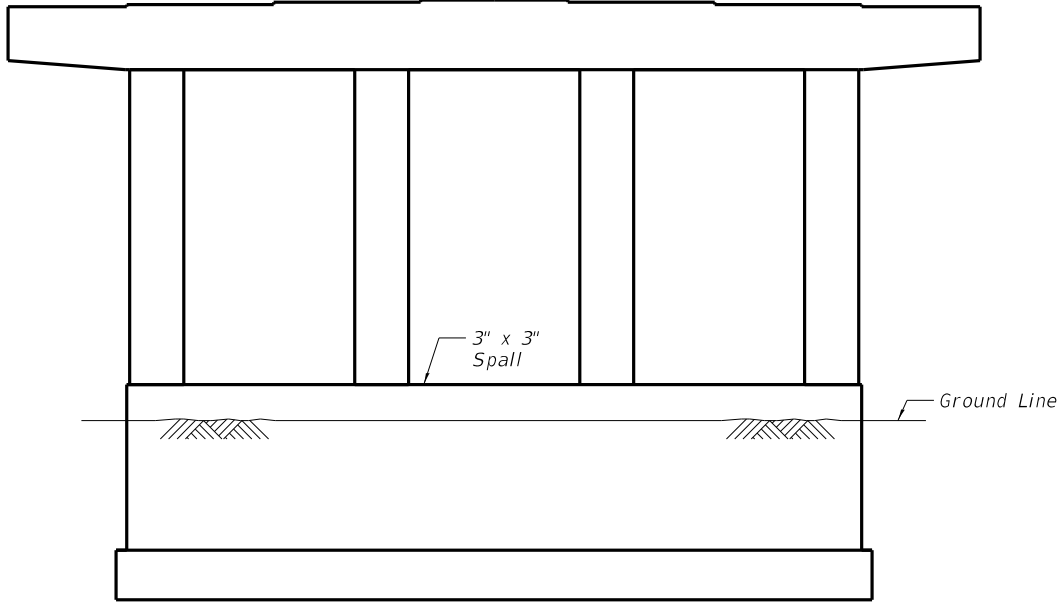
END VIEW
(North Face)



PIER NO. 14 - WEST ELEVATION
(Looking East)



END VIEW
(South Face)



PIER NO. 14 - EAST ELEVATION
(Looking West)

LEGEND

- Hollow or Unsound Conc., WxH
- Spalled Conc., WxH
- Spalled Conc. with Exposed Rebars, WxH
- Crack

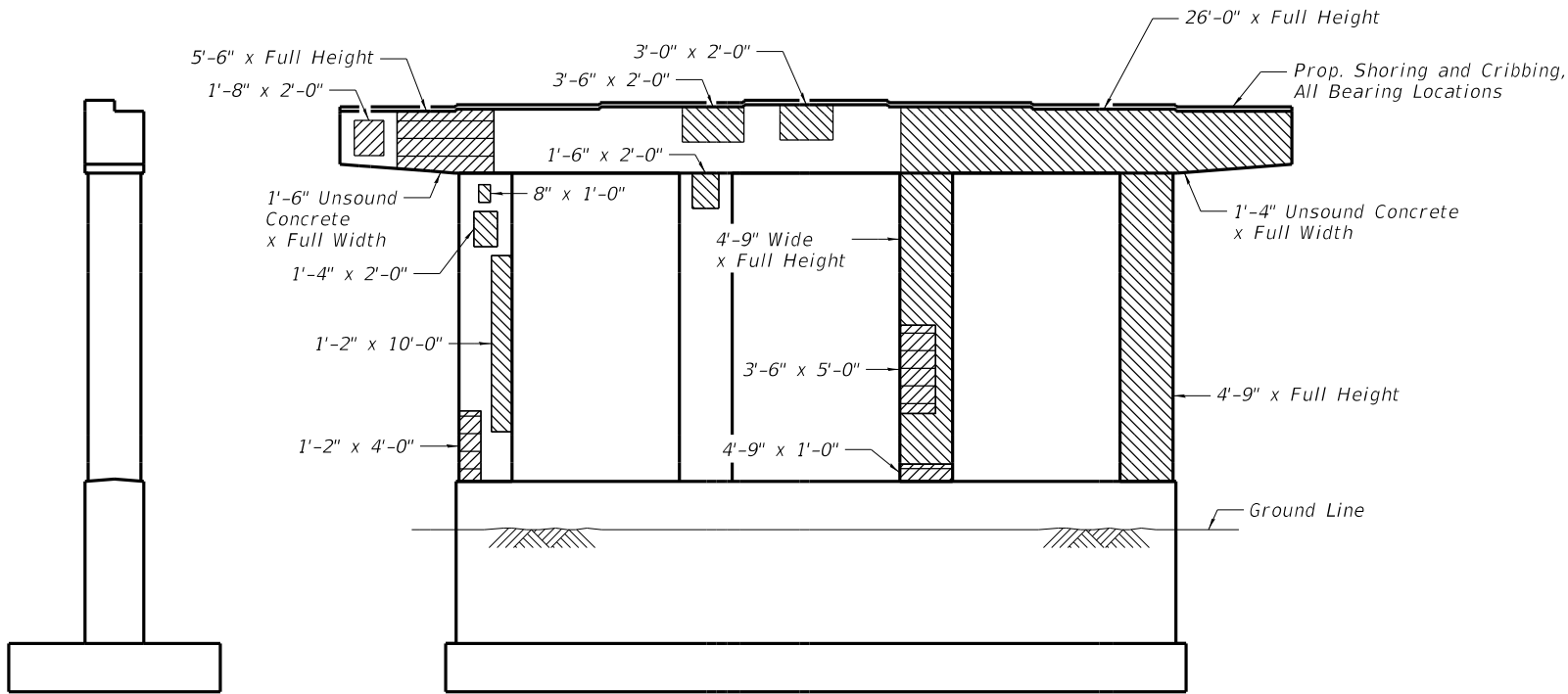
BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth Equal to or Less than 5 Inches)	Sq Ft	1

DESIGNED	MNM	1/12/21
DRAWN	EJM	05/06/21
REVIEWED	MNM	01/24/2022

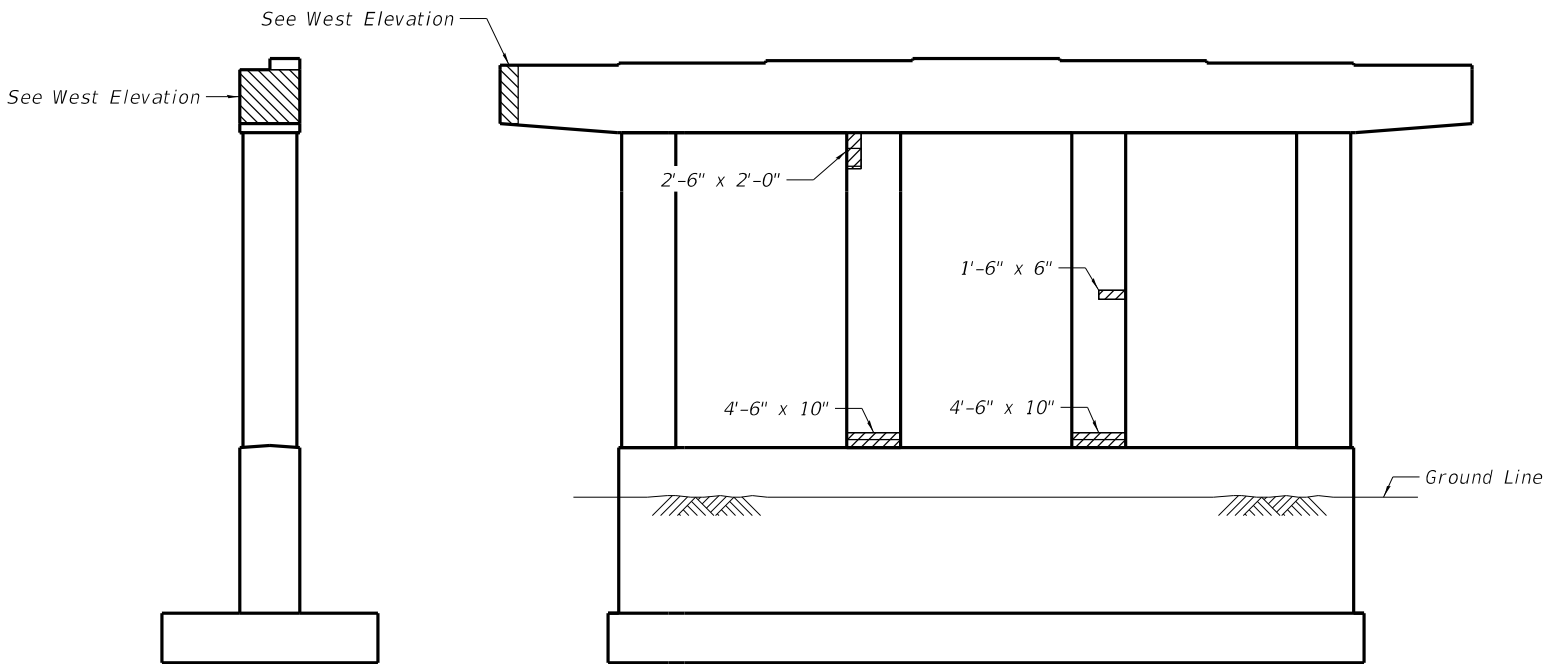
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		CHECKED - 01/24/2022	REVISED -			SHEET NO. 25 OF 61 SHEETS				
							ILLINOIS	FED. AID PROJECT	4	



END VIEW
(North Face)

PIER NO. 16 - WEST ELEVATION
(Looking East)



END VIEW
(South Face)

PIER NO. 16 - EAST ELEVATION
(Looking West)

LEGEND

- Hollow or Unsound Conc., WxH
- Spalled Conc., WxH
- Spalled Conc. with Exposed Rebars, WxH
- Crack

BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth Equal to or Less than 5 Inches)	Sq Ft	417
Temporary Shoring and Cribbing	Each	14

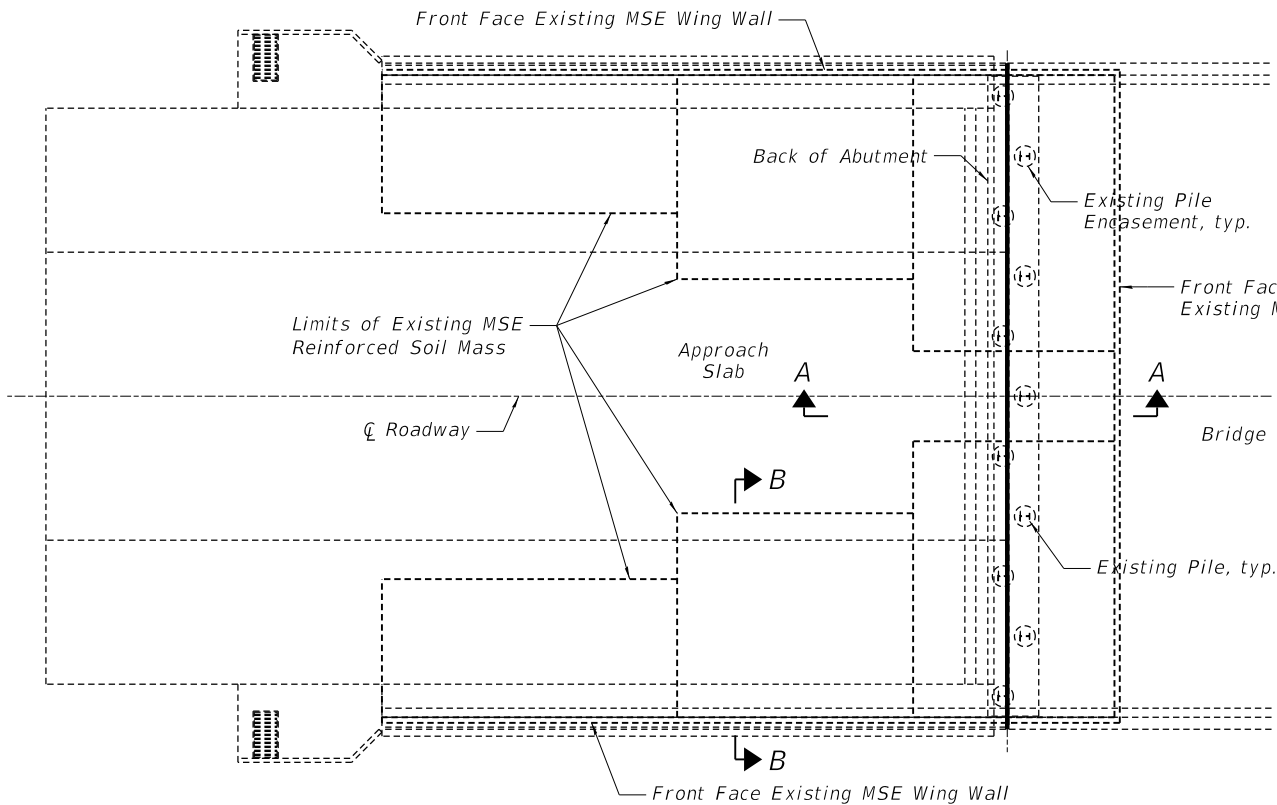
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DRAWN	EJM	05/06/21
REVIEWED	MNM	07/24/2022

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		CHECKED - 01/24/2022	REVISED -			ILLINOIS FED. AID PROJECT 4				

BILL OF MATERIAL

Item	Unit	Total
Epoxy Crack Injection	Foot	14
Structural Repair of Concrete (Depth Equal to or Less than 5 Inches)	Sq Ft	1



Notes:

After the approach pavement is removed, the MSE Panels, Reinforced Soil Mass, and Reinforcement Straps within the hatched regions shall be removed. The Engineer will assess the condition of the existing MSE Panels, Reinforced Soil Mass, and Backfill. The depth of the removal may increase after the Engineer's inspection.

Existing MSE Panels may be reused if in good condition based on the Engineer's inspection; otherwise, new MSE Panels will need to be fabricated.

Existing Leveling Pad that is exposed after removal of MSE Panels shall be inspected by the Engineer. The existing Leveling Pad may be reused if in good condition based on the Engineer's inspection; otherwise, new Leveling Pads will need to be constructed.

The existing Reinforced Soil Mass to be removed will be replaced with new Select Fill and Reinforcements Straps. Limits of Reinforcement Straps and Select Fill to be determined by the supplier of the wall system selected by the Contractor.

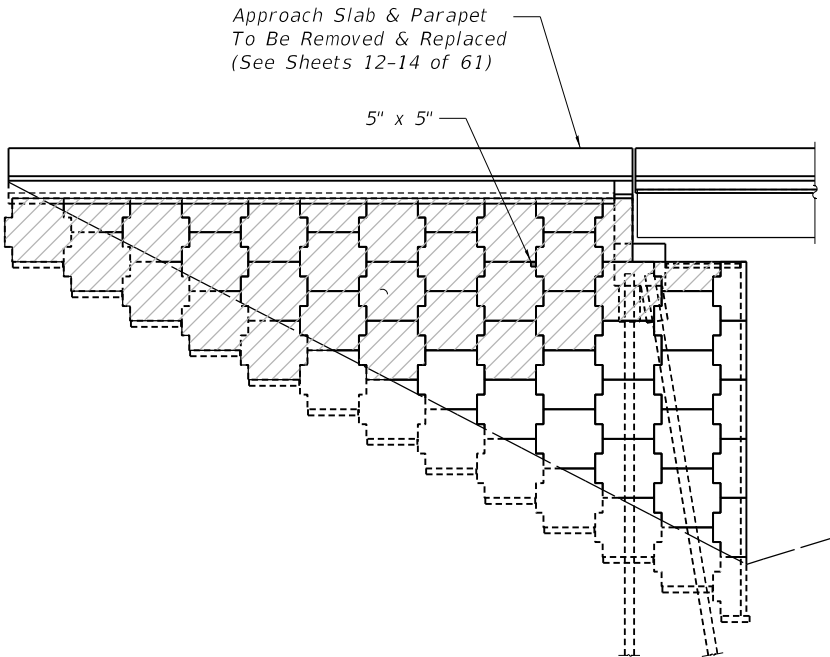
Existing and new MSE Panels shall be set back plumb along with the length of the wing walls.

Any voids observed in the existing Backfill between the East and West Reinforced Soil Masses shall be filled and compacted with Granular Backfill for Structures. Granular Backfill for Structures is included in cost of Retaining Wall Removal.

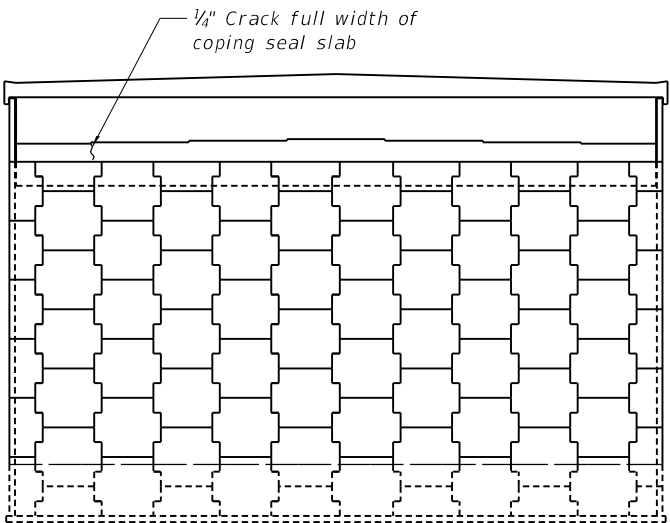
PLAN

LEGEND

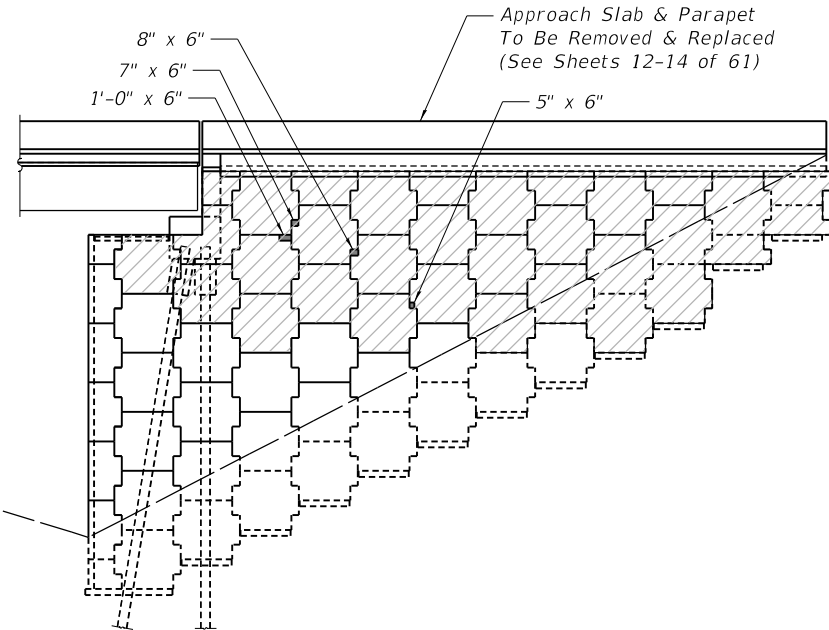
- Spalled Concrete, W x H
- Crack



SOUTH WING



EAST WALL
MSE WALL ELEVATIONS - WEST ABUTMENT



NORTH WING

(Sheet 1 of 2)

DESIGNED	RGC	1/6/21
DRAWN	EJM	05/06/21
REVIEWED	RGC	01/24/2022

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	PLOT DATE = 2/3/2022	CHECKED - 01/24/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

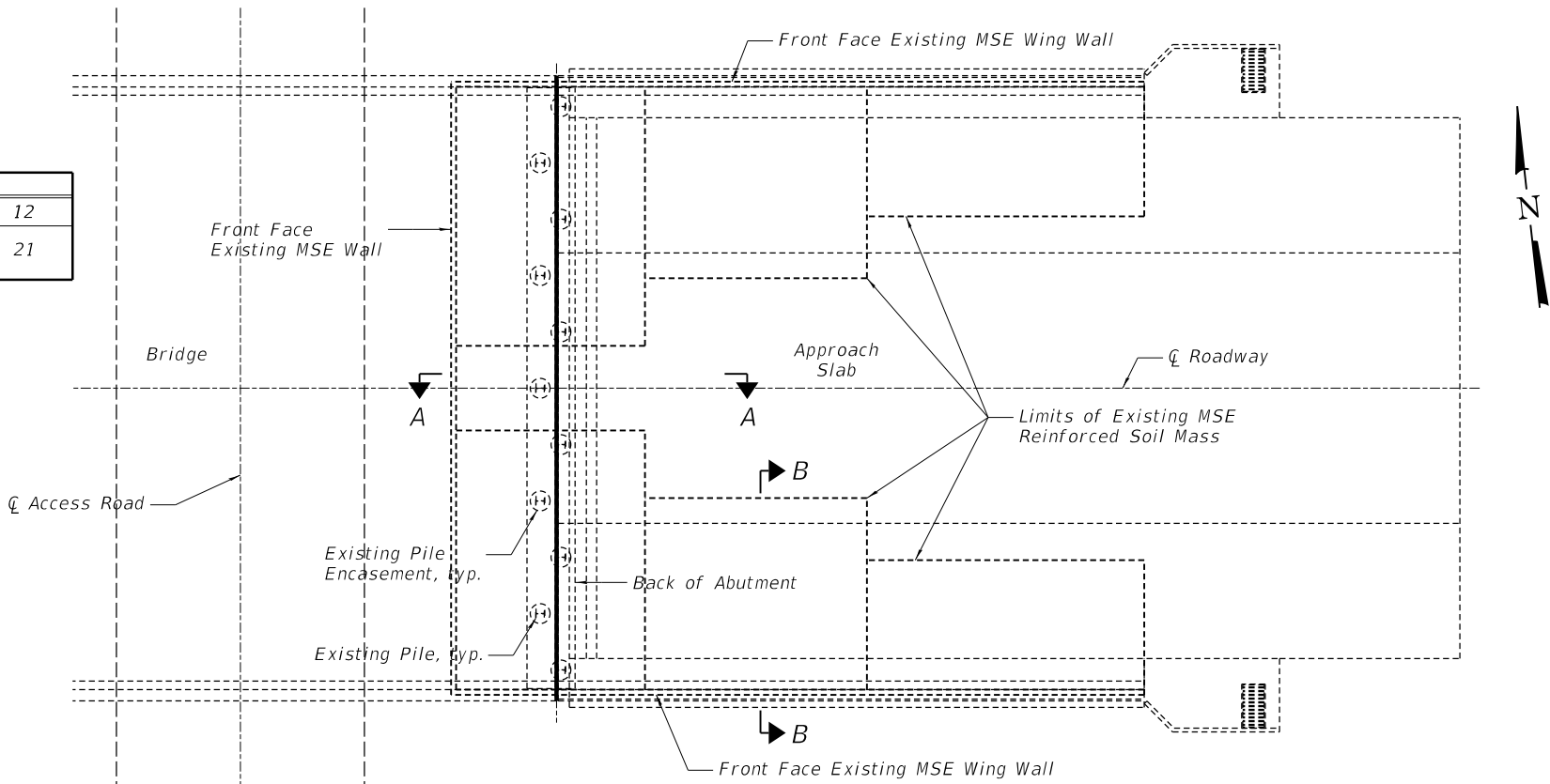
PLAN & ELEVATION (MSE WALL)
MSE WALLS

SHEET NO. 27 OF 61 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	43
			CONTRACT NO.	89819
		ILLINOIS	FED. AID PROJECT	4

BILL OF MATERIAL

Item	Unit	
Epoxy Crack Injection	Foot	12
Structural Repair of Concrete (Depth Equal to or Less than 5 Inches)	Sq Ft	21



PLAN

Notes:

After the approach pavement is removed, the MSE Panels, Reinforced Soil Mass, and Reinforcement Straps within the hatched regions shall be removed. The Engineer will assess the condition of the existing MSE Panels, Reinforced Soil Mass, and Backfill. The depth of the removal may increase after the Engineer's inspection.

Existing MSE Panels may be reused if in good condition based on the Engineer's inspection; otherwise, new MSE Panels will need to be fabricated.

Existing Leveling Pad that is exposed after removal of MSE Panels shall be inspected by the Engineer. The existing Leveling Pad may be reused if in good condition based on the Engineer's inspection; otherwise, new Leveling Pads will need to be constructed.

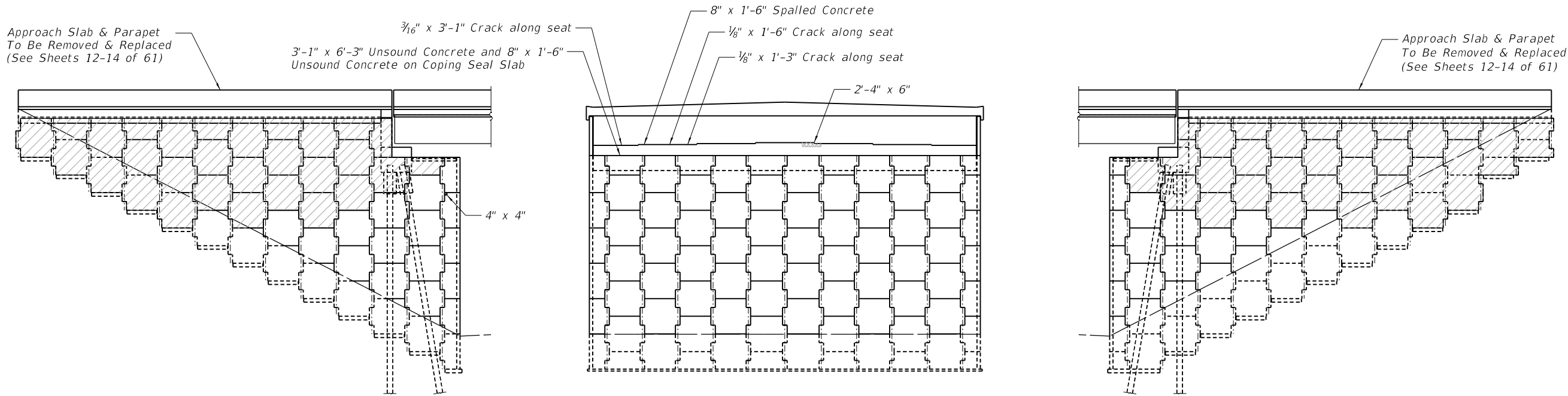
The existing Reinforced Soil Mass to be removed will be replaced with new Select Fill and Reinforcements Straps. Limits of Reinforcement Straps and Select Fill to be determined by the supplier of the wall system selected by the Contractor.

Existing and new MSE Panels shall be set back plumb along with the length of the wing walls.

Any voids observed in the existing Backfill between the East and West Reinforced Soil Masses shall be filled and compacted with Granular Backfill for Structures. Granular Backfill for Structures is included in cost of Retaining Wall Removal.

LEGEND

- Hollow or Unsound Concrete, WxH
- Spalled Concrete, W x H
- Crack



NORTH WING

WEST WALL
MSE WALL ELEVATIONS - EAST ABUTMENT

SOUTH WING

(Sheet 2 of 2)

DESIGNED	1/6/21
DRAWN	05/06/21
REVIEWED	01/24/2022

\\h18\jobs\18L0058A\CAD\Struct\Sheet\MSE Wall Sheets.dgn

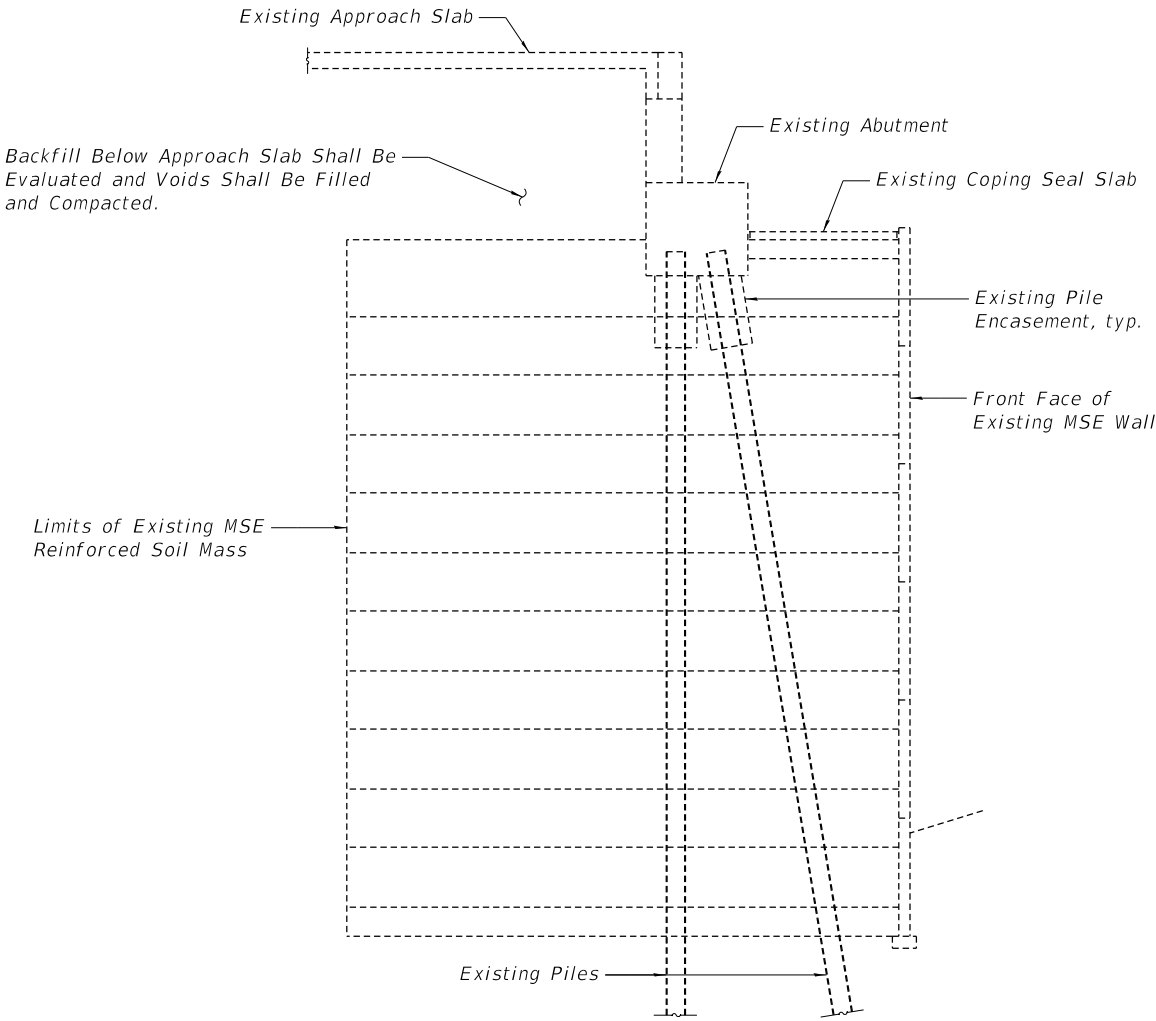
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	PLOT DATE = 2/3/2022	CHECKED - 01/24/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

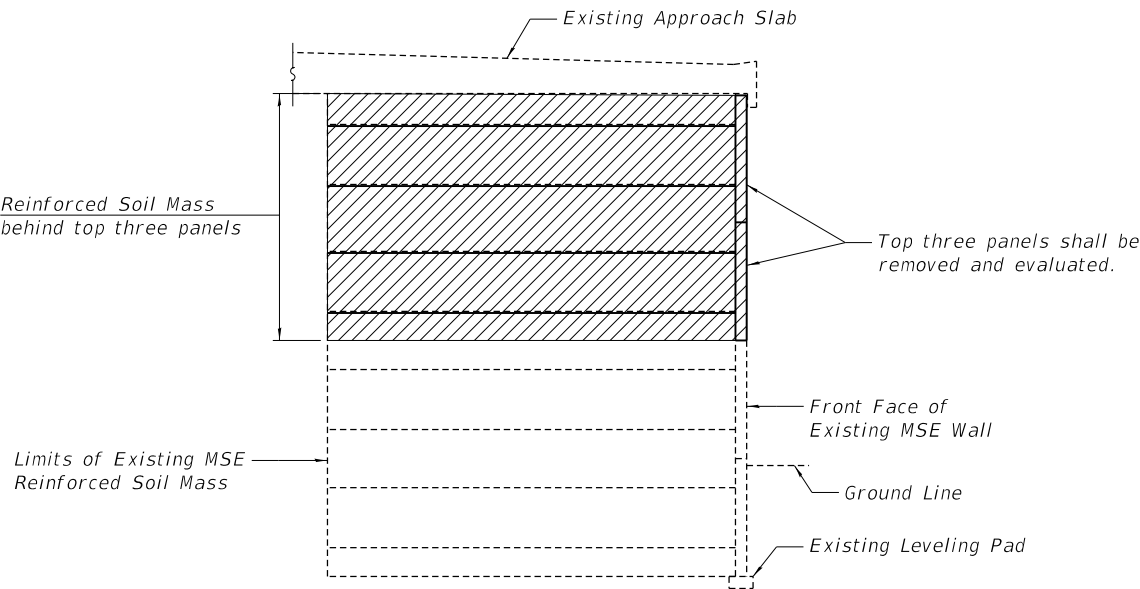
PLAN & ELEVATION (MSE WALL)
MSE WALLS

SHEET NO. 28 OF 61 SHEETS

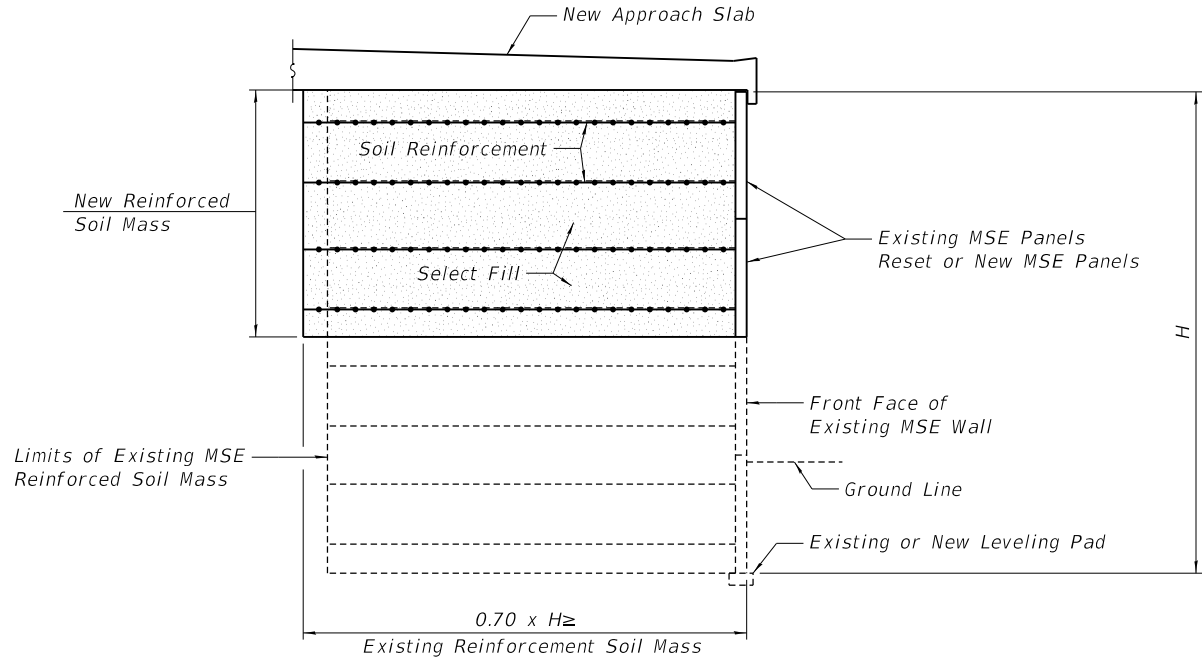
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400	18-00043-01-BR	KNOX	81	44
			CONTRACT NO.	89819
			ILLINOIS	FED. AID PROJECT 4



SECTION A-A




REMOVAL ELEVATION
SECTION B-B



REPLACEMENT ELEVATION
SECTION B-B

DESIGNED	RGC	1/6/21
DRAWN	EJM	05/06/21
REVIEWED	RGC	01/24/2022

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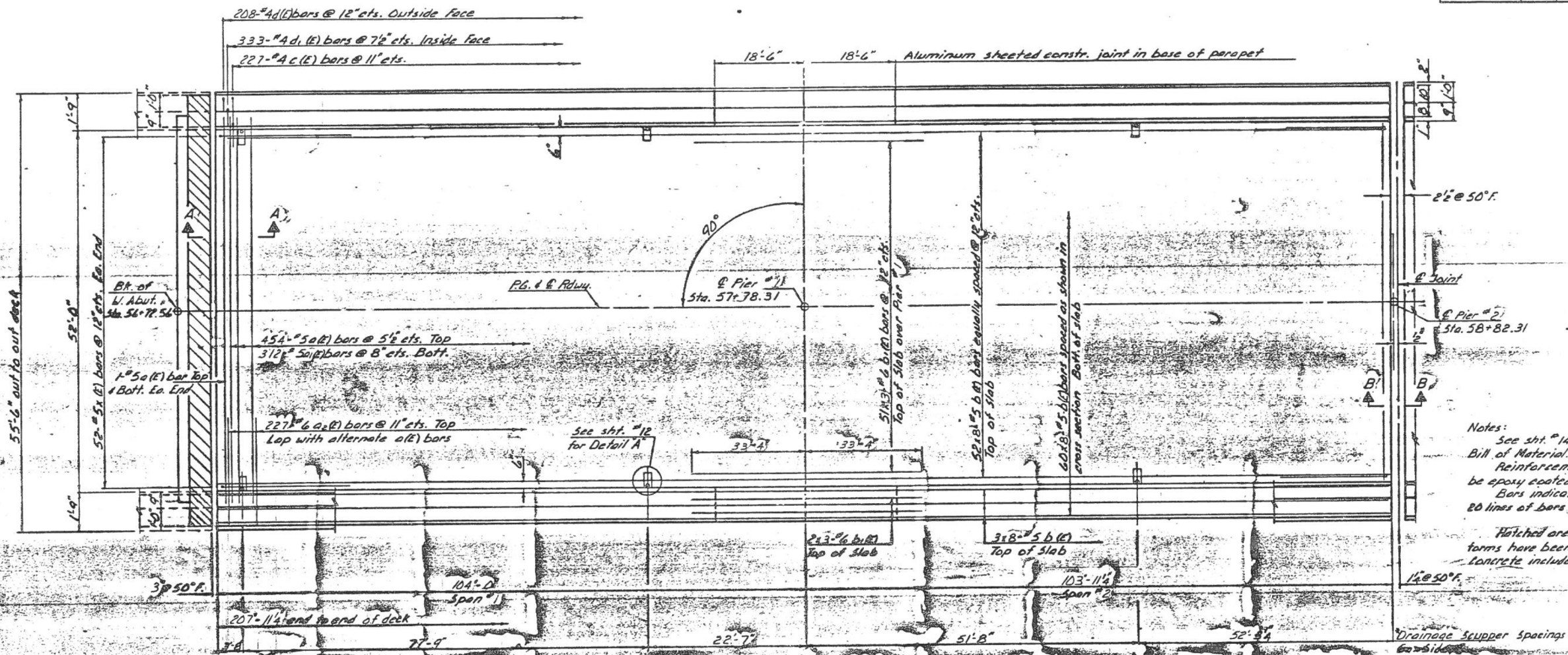
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	PLOT DATE = 2/3/2022	DRAWN - EJM	REVISED -
		CHECKED - 01/24/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SECTIONS & DETAILS (MSE WALL)
MSE WALLS

SHEET NO. 29 OF 61 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	45
			CONTRACT NO.	89819
		ILLINOIS	FED. AID PROJECT	4

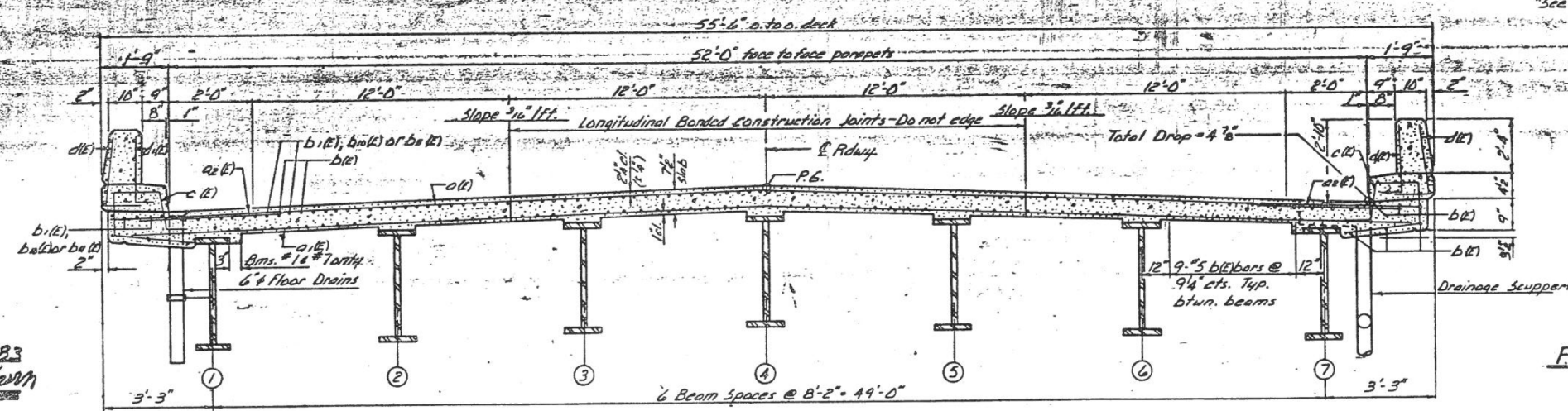


MIN. BAR LAPS
#5 bars — 1'-9"
#6 bars — 2'-6"

Notes:
See sht. #1A for superstructure detail.
Bill of Material.
Reinforcement bars designated (E) sh.
be epoxy coated. See Special Provisions.
Bars indicated thus 20x3-#5 etc. ind.
20 lines of bars with 3 lengths per line.

Notched area to be poured after superstr.
forms have been removed. Quantity of C.I.
concrete included with superstructure.

PLAN-UNIT #1
(Spans #1 & #2)



*See sht. #15 for Closed Drainage System D.

SUPERSTRUCTURE - UNIT
F.A.S. RTE. 400 SEC. 43 V.
KNOX COUNTY
STA. 75+40.97
STAGE I

EXISTING PLANS
FOR INFORMATION ONLY

DESIGNED David Burdick
CHECKED Thomas J. Santner
DRAWN R. Santner
CHECKED D.B. TJD

EXAMINED James J. Santner
PASSED
APPROVED
DIRECTOR OF HIGHWAYS

Sept. 26 1983

CROSS SECTION
UNITS #1, #2 & #3
(Looking East)

DESIGNED MM 1/12/21
DRAWN RSJ 05/06/21
REVIEWED MM 07/24/2022

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USER NAME	Jahns00944
DESIGNED	MM
CHECKED	MM
DRAWN	RSJ
CHECKED	01/24/2022

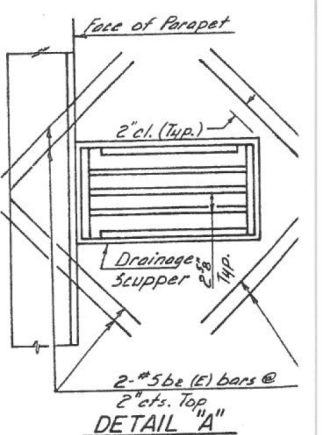
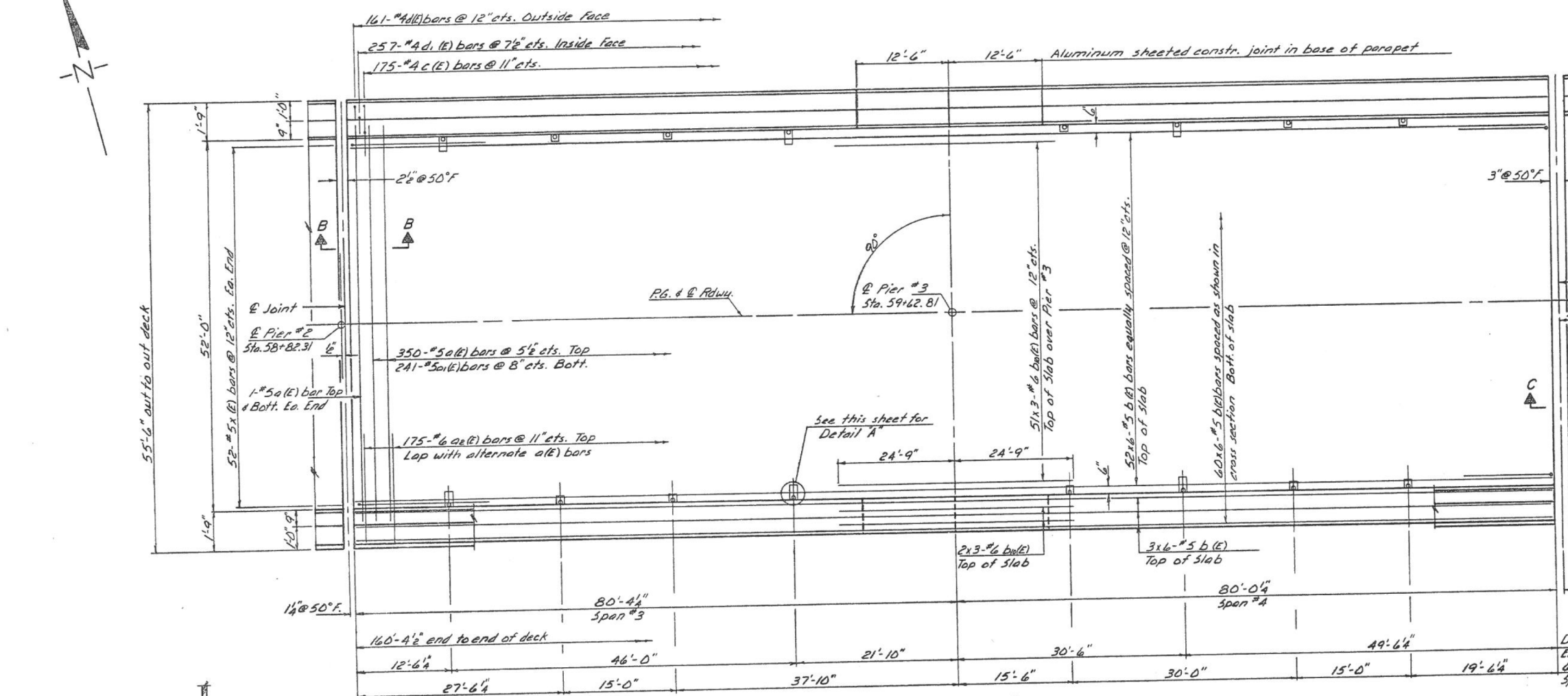
REVISED	-
REVISED	-
REVISED	-
REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
SN 048-3286

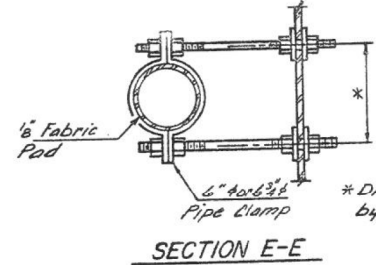
SHEET NO. 30 OF 61 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	46
		CONTRACT NO. 89819		
ILLINOIS		FED. AID PROJECT 4		



MIN. BAR LAPS
#5 bars - 1'-9"
#6 bars - 2'-6"

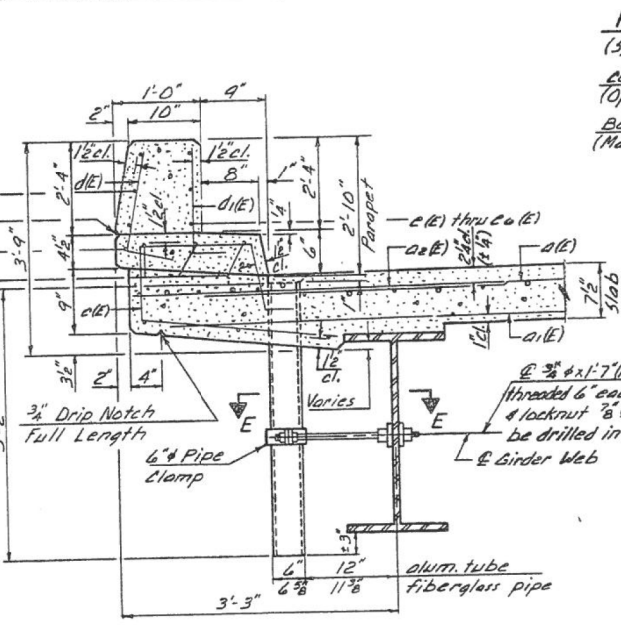
Notes:
All cast iron parts shall be gray iron con to the requirements of A.A.S.H.T.O. M105, Class 30.
Bolts, washers and nuts for Drainage Sca shall conform to the requirements of ASTM A-3 Reinforcement bars designated (E) sh be epoxy coated. See Special Provisions.
Bars indicated thus 20x3 - 3 sets. ino 20 lines of bars with 3 lengths per line.
See sht. #11 for cross section.
See sht. #14 for superstructure details.
Bill of Material.
Cost of the Main Grate, Frame, Bolts, Washers including complete installation of Scupper shall for at the unit bid price for "Frames and Grates Type I".



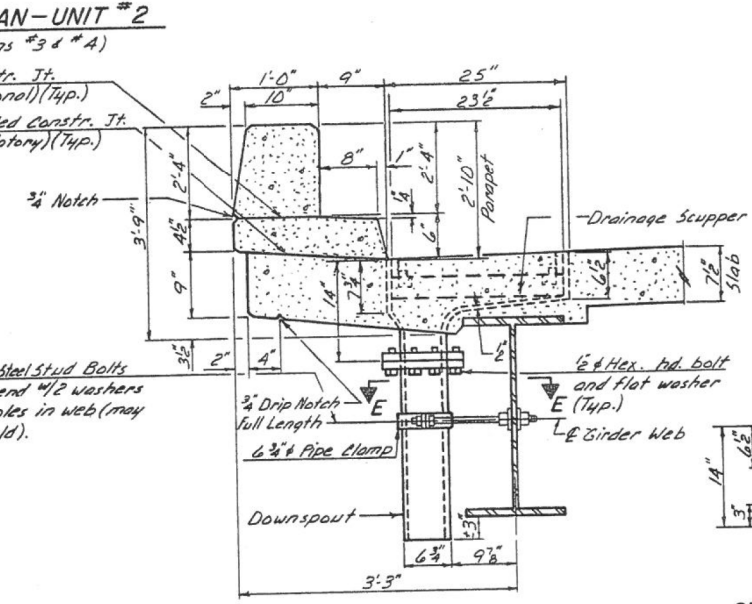
Notes:
Fiberglass pipe shall conform to ASTM: D2996, with short-time rupture strength hoop tensile stress of 30,000 psi. minimum.
The exterior surfaces of the Floor Drain Scupper & Downspout shall be painted with the Basic Lead Silico Chromate painting specified for Structural Steel. The exterior surfaces of the Aluminum tube shall be cleaned and given a washcoat pretreatment in accordance with Steel Structures Painting Council's Spec. SSPC-SP1 & SSPC-PT3 prior to painting.

DESIGNED	David Burdick
CHECKED	Thomas Domagala
DRAWN	R. Sommer
CHECKED	D.B. TSD

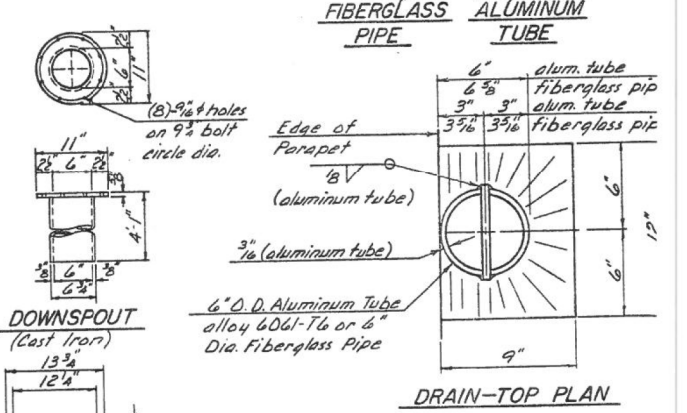
Sept. 26 1983
APPROVED
DIRECTOR OF HIGHWAYS



SECTION AT PARAPET SHOWING FLOOR DRAIN
The surface of the Fiberglass pipe shall be free of bond inhibiting agents.



SECTION AT PARAPET SHOWING SCUPPER



SECTION THRU DRAINAGE SCUPPER (Cast Iron)

EXISTING PLANS
FOR INFORMATION ONLY

DESIGNED	1/12/21
DRAWN	05/06/21
REVIEWED	01/24/2022

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USER NAME	= Johns00944
DESIGNED	- MNM
CHECKED	- MNM
DRAWN	- RSJ
CHECKED	- 01/24/2022

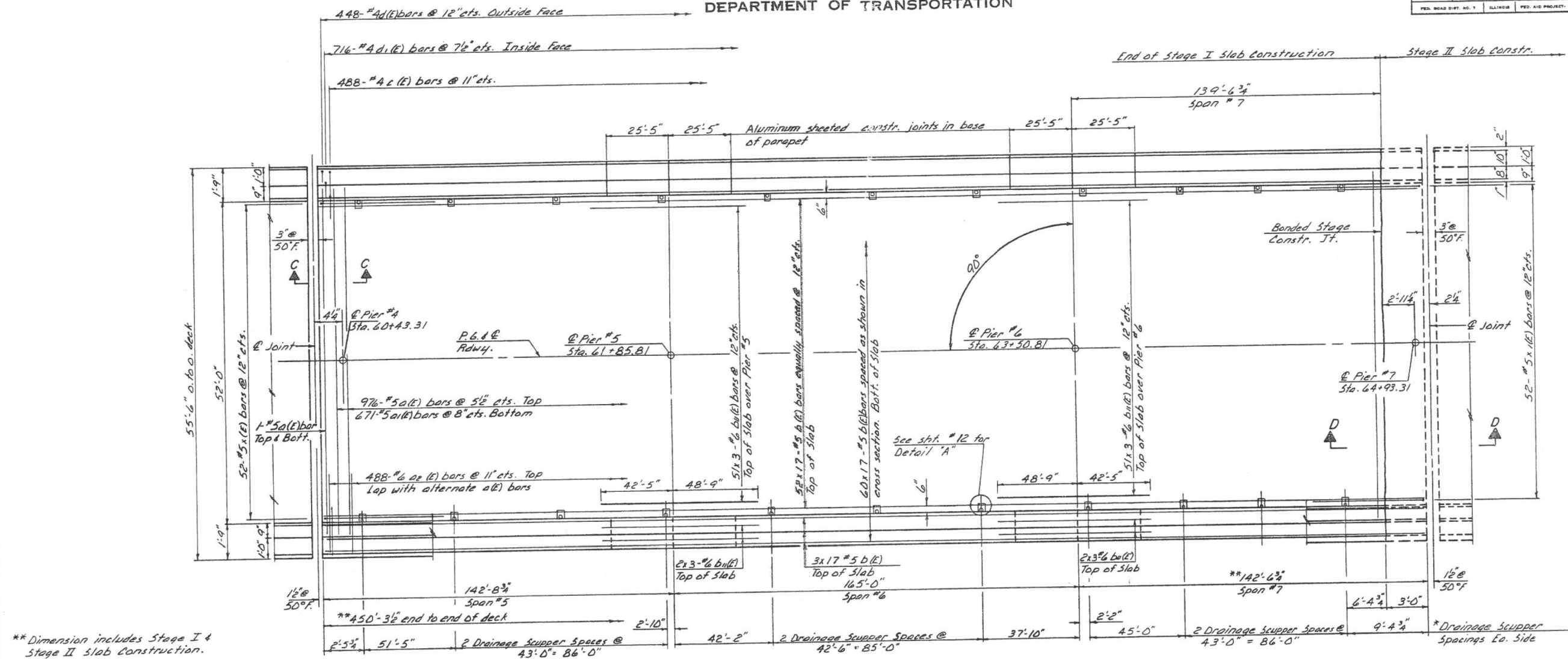
REVISED	-
REVISED	-
REVISED	-
REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
SN 048-3286

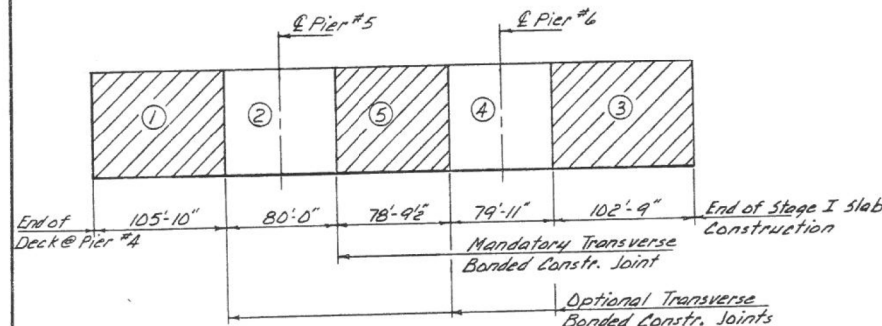
SHEET NO. 31 OF 61 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	47
CONTRACT NO.			89819	
ILLINOIS FED. AID PROJECT 4				



** Dimension includes Stage I & Stage II Slab Construction.

PLAN-UNIT #3
(Spans #5 thru #7)



DECK SLAB POURING SEQUENCE
The concrete deck slab segments shall be poured in the numerical order shown above.

DESIGNED	David Burdick
CHECKED	Thomas Danegalecki
DRAWN	R. Sommer
CHECKED	D.B. TSD

EXAMINED	James I. Rayburn
PASSED	[Signature]
APPROVED	[Signature]

Notes:
See sht. #14 for superstructure details and Bill of Material.
Reinforcement bars designated (E) shall be epoxy coated.
See Special Provisions.
Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
See sht. #11 for cross section.

* See sht. #16 for the Closed Drainage System Details.

MIN. BAR LAPS
#5 bars - 1'-9"
#6 bars - 2'-6"

EXISTING PLANS
FOR INFORMATION ONLY

SUPERSTRUCTURE-UNIT #
F.A.S. RTE. 400 SEC. 43 VE
KNOX COUNTY
STA. 75+40.97
STAGE I

DESIGNED	1/12/21
DRAWN	05/06/21
REVIEWED	07/24/2022

\\n18\jobs\18L0058A\CAD\Struct\Sheet\Existing Plans.3.dgn



USER NAME = Johns00944
PLOT SCALE = 0.2:0000 ' = 1"
PLOT DATE = 2/3/2022

DESIGNED - MNM
CHECKED - MNM
DRAWN - RSJ
CHECKED - 01/24/2022

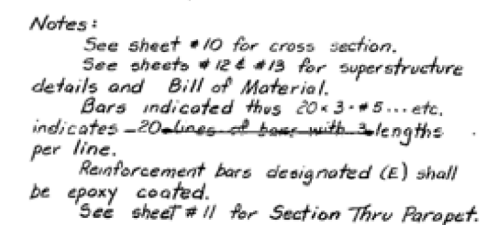
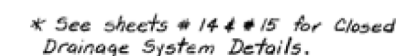
REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
SN 048-3286

SHEET NO. 32 OF 61 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	48
			CONTRACT NO.	89819
ILLINOIS FED. AID PROJECT 4				



SUPERSTRUCTURE UNITS #4 & #5
F.A.S. RTE. 400 SEC. 43 VB
KNOX COUNTY
STA. 75+40.97
STAGE II

*EXISTING PLANS
FOR INFORMATION ONLY*

DESIGNED *Thomas J. Demagale*
CHECKED *Gholam R. Abanahi*
DRAWN *R. Sommer*
CHECKED *TJD* GRA

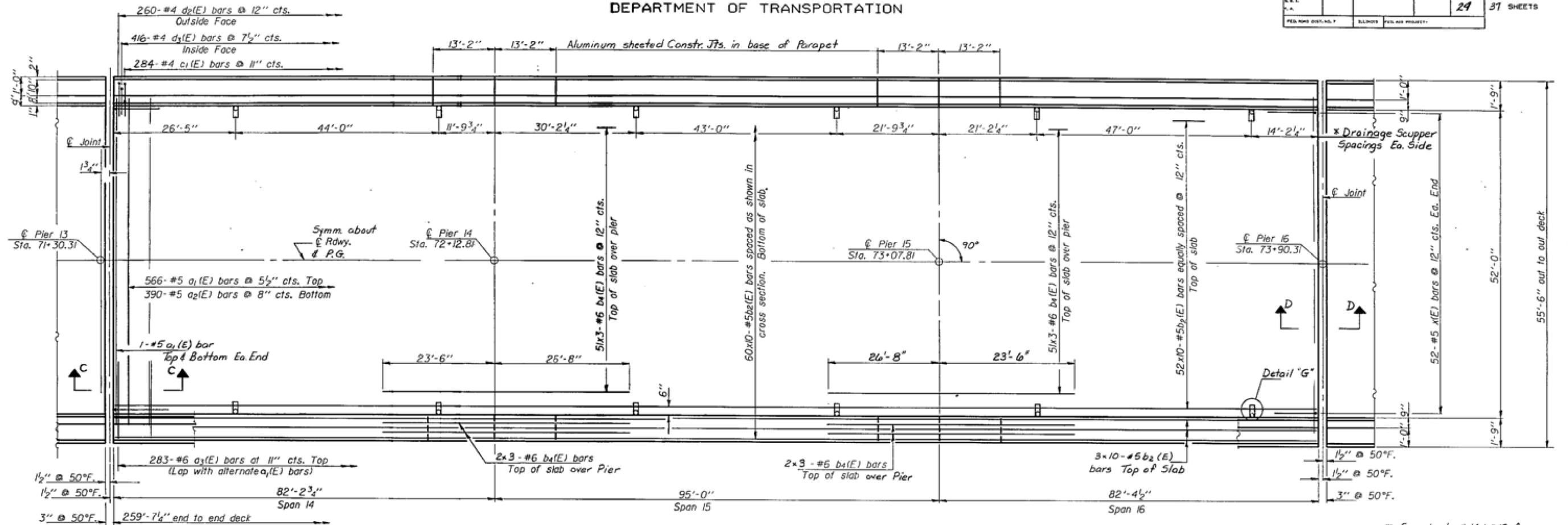
July 25, 1994
EXAMINED *James J. Kunkel*
PASSED *CE* ENGINEER OF ASSE DESIGN
APPROVED *CE* ENGINEER OF BRIDGES AND STRUCTURES

MIN. BAR LAPS
#5 bars - 1'-9"
#6 bars - 2'-6"

PLAN UNIT #5
(Spans # 11 thru # 13)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

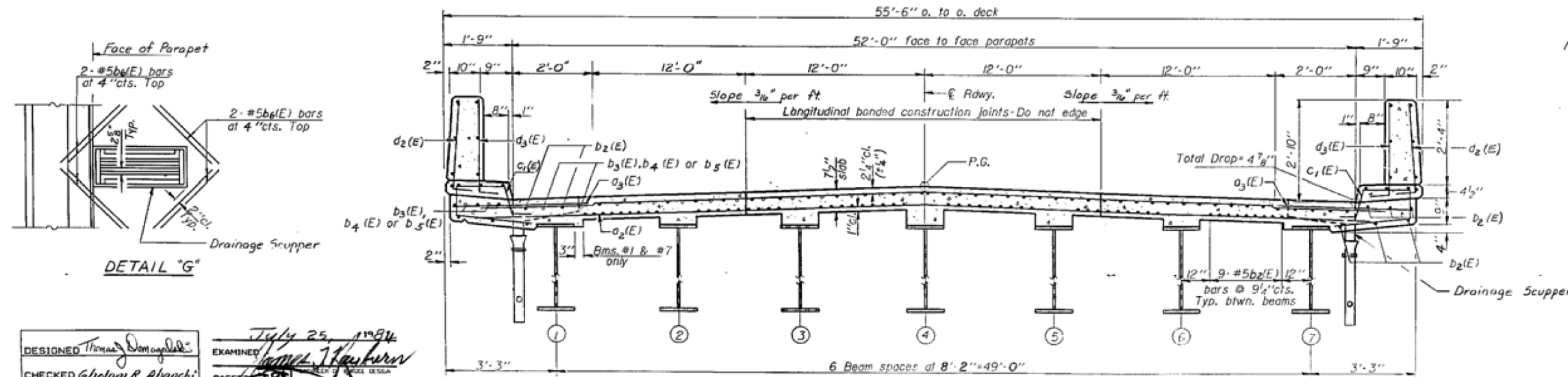
ROUTE NO.	SECTION	COUNTY	DATE	SHEET NO.
400	18-00043-01-BR	KNOX	05/06/21	37
SHEET NO. 10				37 SHEETS



PLAN-UNIT #6
(Spans #14 thru #16)

MIN. BAR LAPS
#5 bars - 1'-9"
#6 bars - 2'-6"

* See sheets #14 & #15 for
Closed Drainage System Details.



CROSS SECTION
(Looking East)

Notes:
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
See sheets #12 & #13 for superstructure details and Bill of Material.
See sheet #11 for Section Thru Parapet.

SUPERSTRUCTURE-UNIT #6
F.A.S. RTE. 400 SEC. 43 VB
KNOX COUNTY
STA. 75+40.97
STAGE II

EXISTING PLANS
FOR INFORMATION ONLY

DESIGNED: Thomas J. Deming
CHECKED: Ghahar R. Alanchi
DRAWN: R. Sommer
CHECKED: TSD GRA
EXAMINED: [Signature]
APPROVED: [Signature]
DATE: July 25, 1994

DESIGNED	MM	1/12/21
DRAWN	RSJ	05/06/21
CHECKED	MM	07/24/2022

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USER NAME	= Johns00944
DESIGNED	- MNM
CHECKED	- MNM
PLOT SCALE	= 0.2:0000 ' = 1"
PLOT DATE	= 2/3/2022
CHECKED	- 01/24/2022
REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

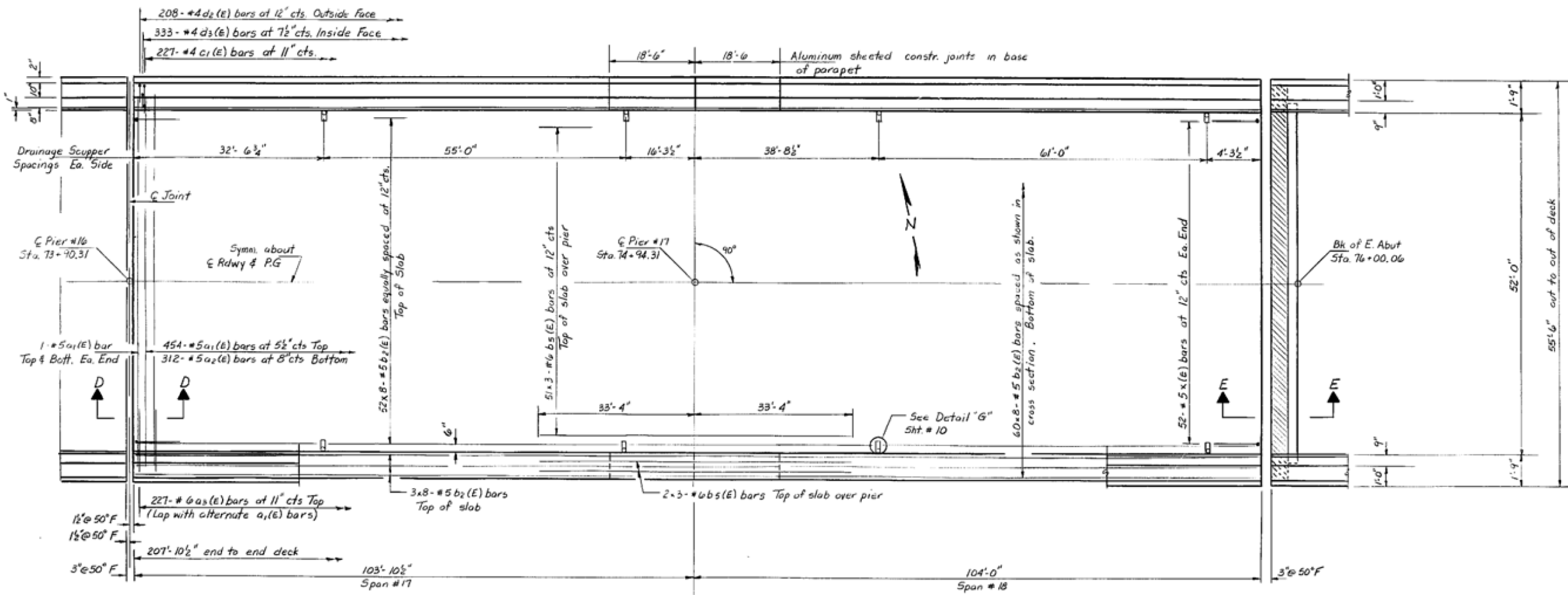
EXISTING STRUCTURE PLANS
SN 048-3286

SHEET NO. 34 OF 61 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	50
CONTRACT NO.				89819
ILLINOIS FED. AID PROJECT 4				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO. //
400	18-00043-01-BR	KNOX	81	51
CONTRACT NO. 89819				

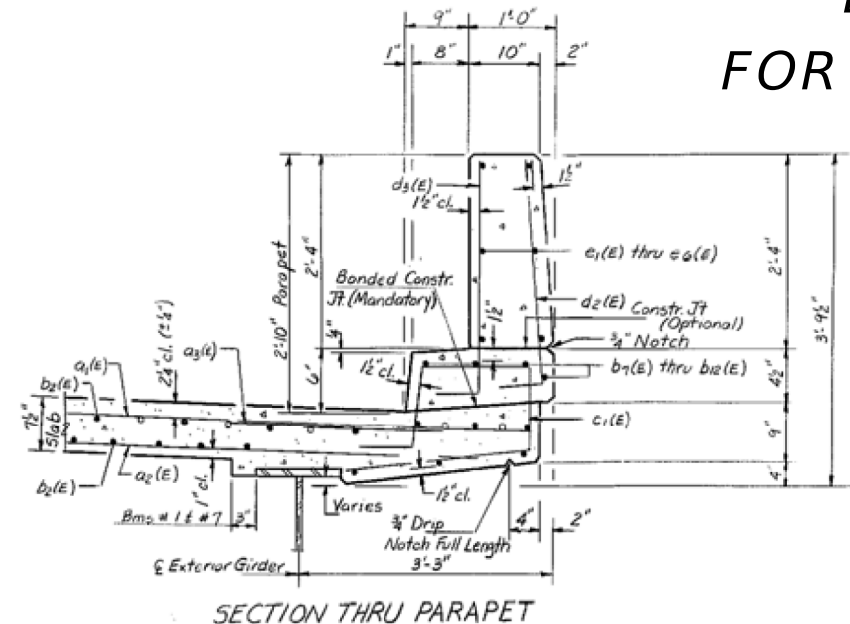


Notes:
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 20x3-#5... etc. indicates 20 lines of bars with 3 lengths per line.
See sheets #14 & #15 for Closed Drainage System details.
See sheet #10 for cross section.
See sheets #12 & #13 for superstructure details & Bill of Material.
Hatched area to be poured after superstructure formwork has been removed. Quantity of Class X Concrete billed with superstructure on sheet #13.

PLAN - UNIT #7
(Spans #17 & #18)

Min. Bar Laps
#5 bars - 1'-9"
#6 bars - 2'-6"

EXISTING PLANS
FOR INFORMATION ONLY



SECTION THRU PARAPET

SUPERSTRUCTURE-UNIT #7
F.A.S. RTE. 400 SEC. 43 VB
KNOX COUNTY
STA. 75+40.97
STAGE II

DESIGNED	Theresa Domagalski
CHECKED	Chelam R. Chacko
DRAWN	Domagalski
CHECKED	TJD

DESIGNED	1/12/21
DRAWN	05/06/21
REVIEWED	07/24/2022

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USER NAME	Johns00944
DESIGNED	MNM
CHECKED	MNM
DRAWN	RSJ
CHECKED	01/24/2022

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
SN 048-3286

SHEET NO. 35 OF 61 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	51
CONTRACT NO. 89819				

ILLINOIS FED. AID PROJECT 4

EXISTING PLANS FOR INFORMATION ONLY

SUPERSTRUCTURE DETAILS
F.A.S. RTE. 400 SEC. 43 VB
KNOX COUNTY
STA. 75+40.97
STAGE I

DESIGNED David Burdick
CHECKED Thomas J. Domagala
DRAWN R. Sommer
CHECKED D.B. TJD

EXAMINED James J. Kautzman
PASSED [Signature]
APPROVED [Signature]
DIRECTOR OF HIGHWAYS

SECTION A-A
SECTION B-B
SECTION C-C
SECTION D-D

INSIDE ELEVATION OF PARAPET
(Looking North)

SUPERSTRUCTURE BILL OF MATERIAL

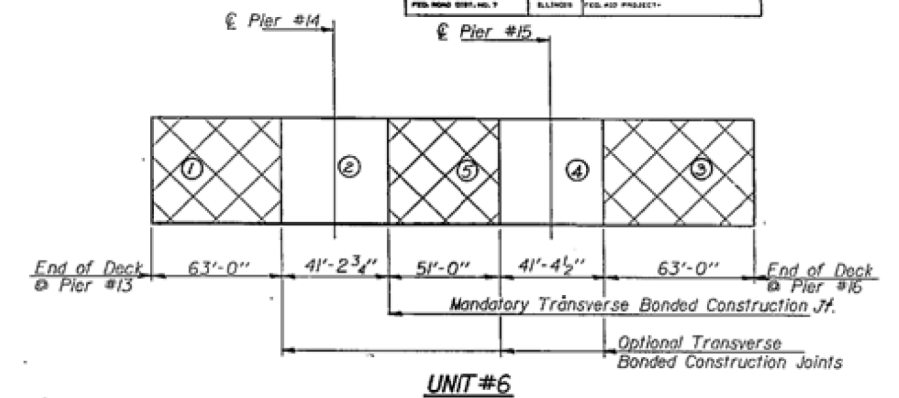
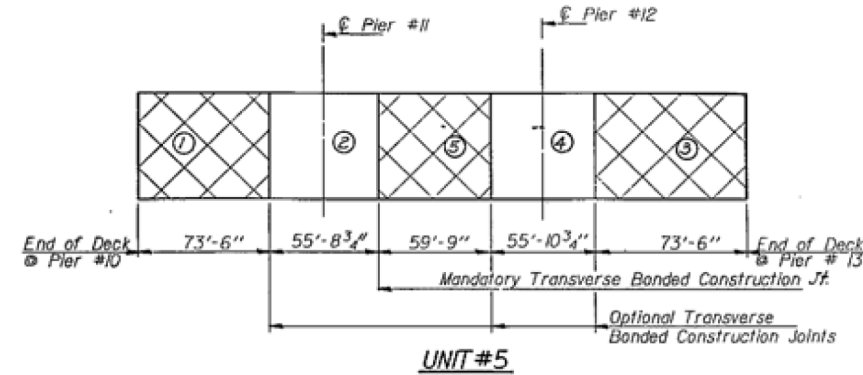
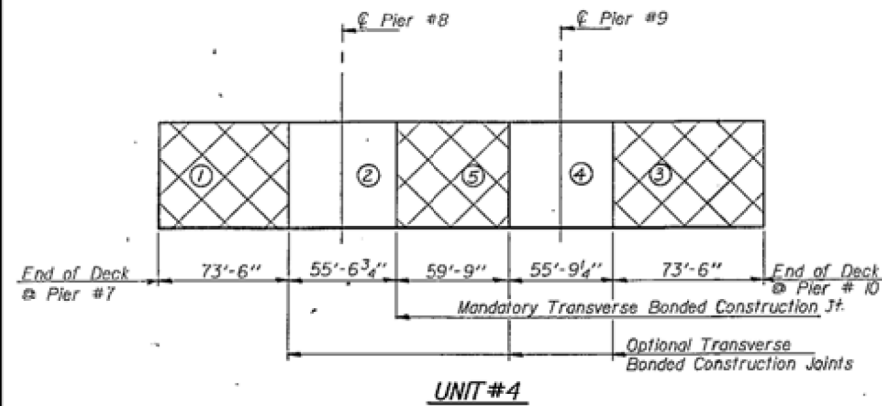
BAR	NO.	SIZE	LENGTH	SHAPE
a(E)	1790	# 5	53'-6"	
a1(E)	1224	# 5	53'-10"	
a2(E)	1780	# 6	4'-6"	
b1(E)	3658	# 5	28'-2"	
b1(E)	165	# 6	23'-11"	
b2(E)	272	# 5	2'-0"	
b3(E)	48	# 5	29'-7"	
b4(E)	176	# 5	18'-3"	
b5(E)	48	# 5	23'-9"	
b6(E)	16	# 5	12'-3"	
b7(E)	24	# 5	30'-7"	
b8(E)	32	# 5	25'-2"	
b9(E)	32	# 5	29'-10"	
b10(E)	165	# 6	18'-2"	
b11(E)	330	# 6	32'-1"	
c(E)	1780	# 4	5'-5"	
d(E)	1634	# 4	2'-11"	
d1(E)	2612	# 4	3'-4"	
Class X Concrete				Cu. Yds. 1282.1
Reinf. Bars (Epoxy Coated)				Lbs. 345,360

Bars designated (E) shall be epoxy coated, per Special Provisions.
Bars indicated thus 3x4-#5 bars etc. indicates 3 lines of bars with 4 lengths per line.
The anchor bolts for the concrete expansion joints shall be tied to the a(E) bars and the bars

SUPERSTRUCTURE DETAILS
F.A.S. RTE. 400 SEC. 43 VB
KNOX COUNTY
STA. 75+40.97
STAGE I

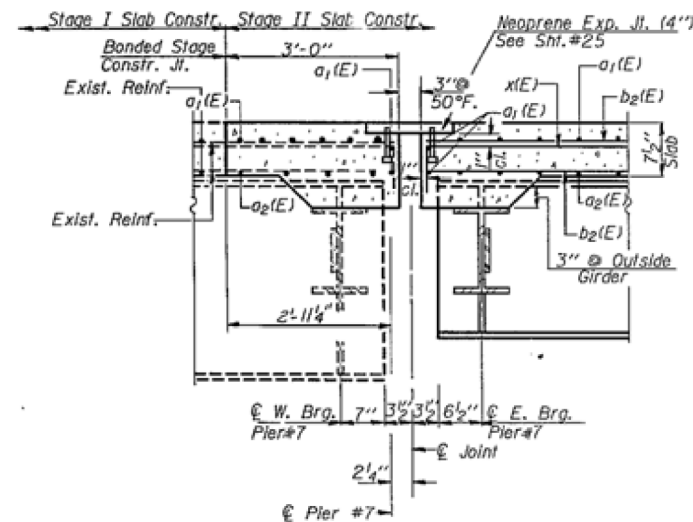
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
26			37	12
F.A.S. RTE. 400	18-00043-01-BR	KNOX	81	53
FED. AID PROJECT NO.	ILLINOIS	FED. AID PROJECT		

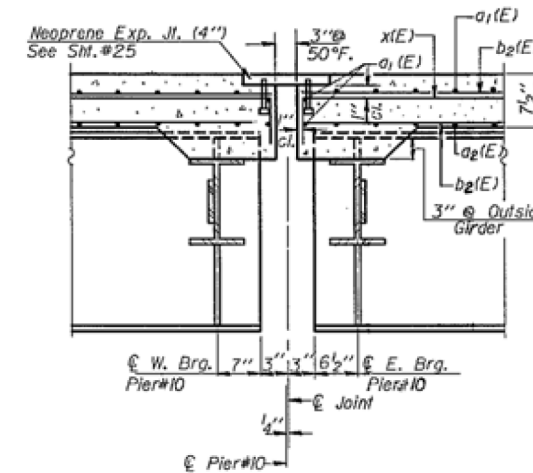


DECK SLAB POURING SEQUENCE
The concrete deck slab segments shall be poured in the numerical order shown above. No pouring sequence required for Unit #7.

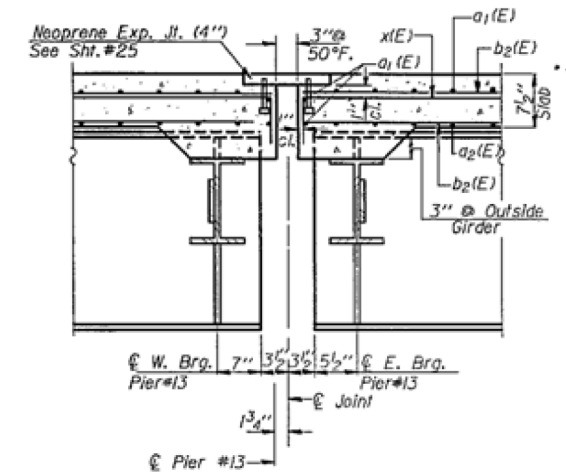
**EXISTING PLANS
FOR INFORMATION ONLY**



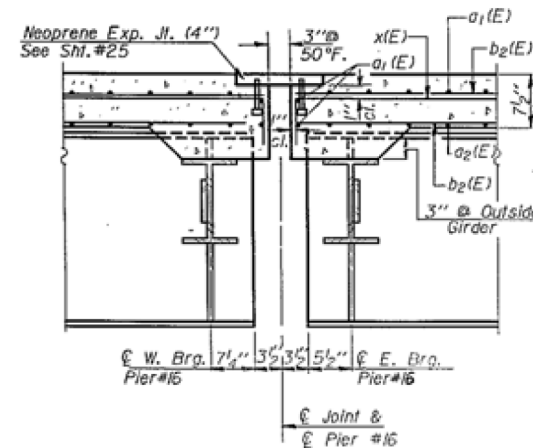
SECTION A-A



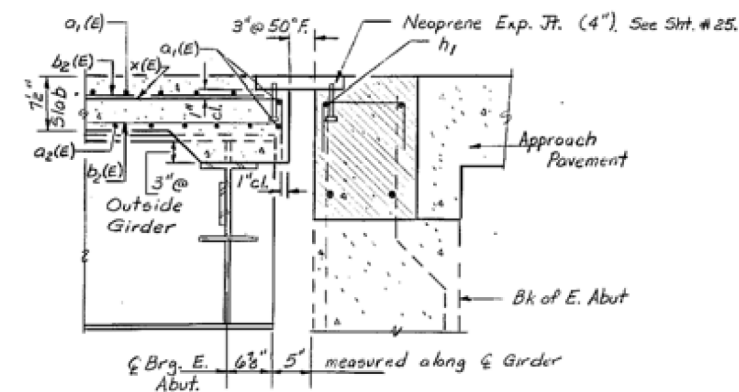
SECTION B-B



SECTION C-C



SECTION D-D



SECTION E-E

Notes:
Hatched area to be poured after superstructure forms have been removed. Quantity of Class X Concrete included with superstructure on sheet #13.
The anchor bolts for the neoprene expansion joints shall be tied to the a1(E) and h1 bars.

SUPERSTRUCTURE DETAILS
F.A.S. RTE. 400 SEC. 43 VB
KNOX COUNTY
STA. 75+40.97
STAGE II

DESIGNED: Thomas Domagala
CHECKED: Ghelam R. Abanishi
DRAWN: R. Sommer
CHECKED: TJD

EXAMINED: [Signature]
PASSED: [Signature]
APPROVED: [Signature]

DESIGNED: MNM 1/12/21
DRAWN: RSJ 05/06/21
REVIEWED: MNM 07/24/2022



USER NAME: Johns00944
PLOT SCALE: 0.2:0000 '1' = 1"
PLOT DATE: 2/3/2022

DESIGNED: MNM
CHECKED: MNM
DRAWN: RSJ
CHECKED: 01/24/2022

REVISED: -
REVISED: -
REVISED: -
REVISED: -

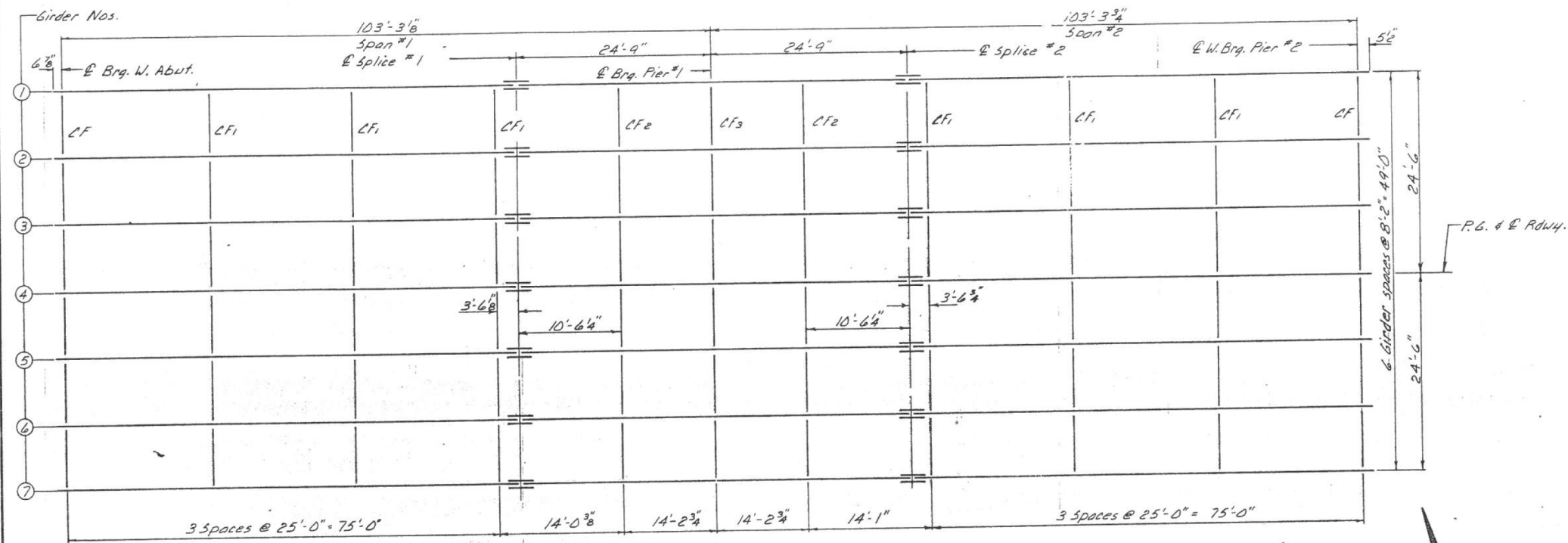
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
SN 048-3286

SHEET NO. 37 OF 61 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	53
			CONTRACT NO.	89819

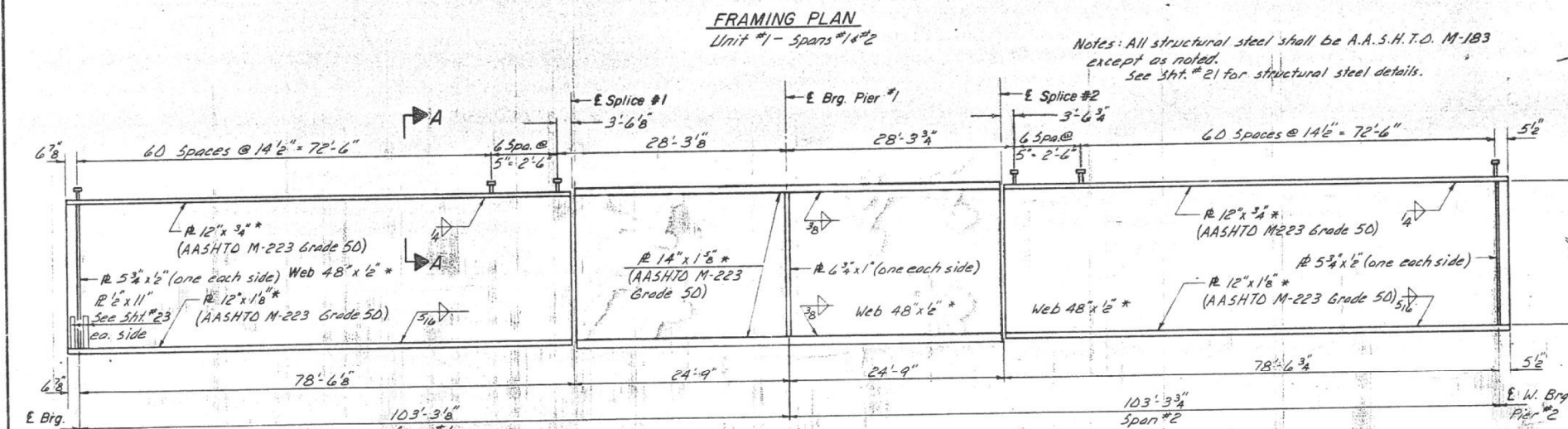
ILLINOIS FED. AID PROJECT 4



INTERIOR GIRDER MOMENT TABLE

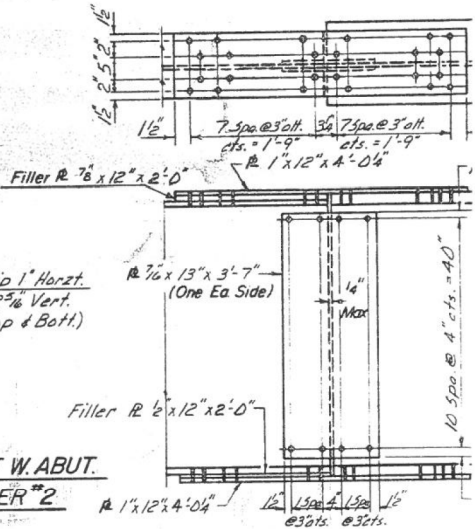
	Span #1	Span #2
I_s (in. ⁴)	17,831.1	32,630.
I_c (in. ⁴)	46,550.0	
S_s (in. ³)	785.2	1273.4
S_c (in. ³)	1104.5	
$M @ (K/I)$	0.985	0.985
$M @ (K/I)$	0.33	0.33
$M_s @ (K)$	263.3	396.6
$M @ (K)$	974.9	804.4
$M_{imp} (K)$	213.5	177.4
$M_s (M @ + I) (K)$	1980.7	1645.2
$M @ (K)$	3743.3	4685.
$f_s @ (comp) (K.s.i.)$	9.71	14.72
$f_s @ (comp) (K.s.i.)$	2.86	3.74
$f_s @ (T + I) (K.s.i.)$	21.52	15.51
$f_s @ (Overload) (K.s.i.)$	34.09	33.97
$f_s @ (Total) (K.s.i.)$	44.32	44.16
$VR (K)$	63.6	

I_s and S_s are the moment of inertia and section modulus of steel section used in computing f_s (Total & Overload).
 I_c and S_c are the moment of inertia and section modulus of the composite section used in computing f_s (Total & Overload).
 VR is the maximum & impact shear range in span.
 $M @$ (Applied Moment) = $1.3 [M @ + M_s @ + S_s (M @ + I)]$
 f_s (Overload) is the sum of the stresses due to $M @ + M_s @ + S_s (M @ + I)$
 f_s (Total) is the sum of the stresses due to $1.3 [M @ + M_s @ + S_s (M @ + I)]$
 **Values given in tables are for service loads.



SECTION AT PIER #1

SECTION AT W. ABUT. & W. BRG. PIER #2



SPlice #1 & #2 DETAILS

All splice plate material shall be A.A.S.H.T.O. M-223 Grade 50. Notch Toughness Requirements are required on all splice plates except filler plates. Filler plates shall be placed on west side of splice #1 and on east side of splice #2. Use 3/4\"/>

*****TOP OF WEB ELEVATIONS**

	Girders #1 & 7	Girders #2 & 6	Girders #3 & 5	Girder #4
Brig. W. Abut.	811.94	812.07	812.19	812.32
Splice #1	812.74	812.87	812.99	813.12
Pier #1	813.02	813.15	813.27	813.40
Splice #2	813.31	813.43	813.56	813.69
W. Brg. Pier #2	814.26	814.39	814.51	814.64

****INTERIOR GIRDER REACTION TABLE**

	W. Abut. & W. Brg. Pier #2	Pier #1
$R @ (K)$	48.9	173.7
$R @ (K)$	47.6	79.4
$Imp (K)$	10.4	17.4
$R Total (K)$	106.9	270.5

STRUCTURAL STEEL - UNIT #1
F.A.S. RTE. 400 SEC. 43 VB

KNOX COUNTY

STA. 75+40.97

STAGE I

EXISTING PLANS
FOR INFORMATION ONLY

DESIGNED 1/12/21
DRAWN 05/06/21
REVIEWED 07/24/2022

\\18\jobs\18L0058A\CAD\Struct\Sheet\Existing Plans.5.dgn



USER NAME	DESIGNED	CHECKED	DRAWN	CHECKED
Johns0944	MNM	MNM	RSJ	DB
				TSD

REVISION	DATE	BY	DESCRIPTION
1	01/24/2022	DB	Initial Design

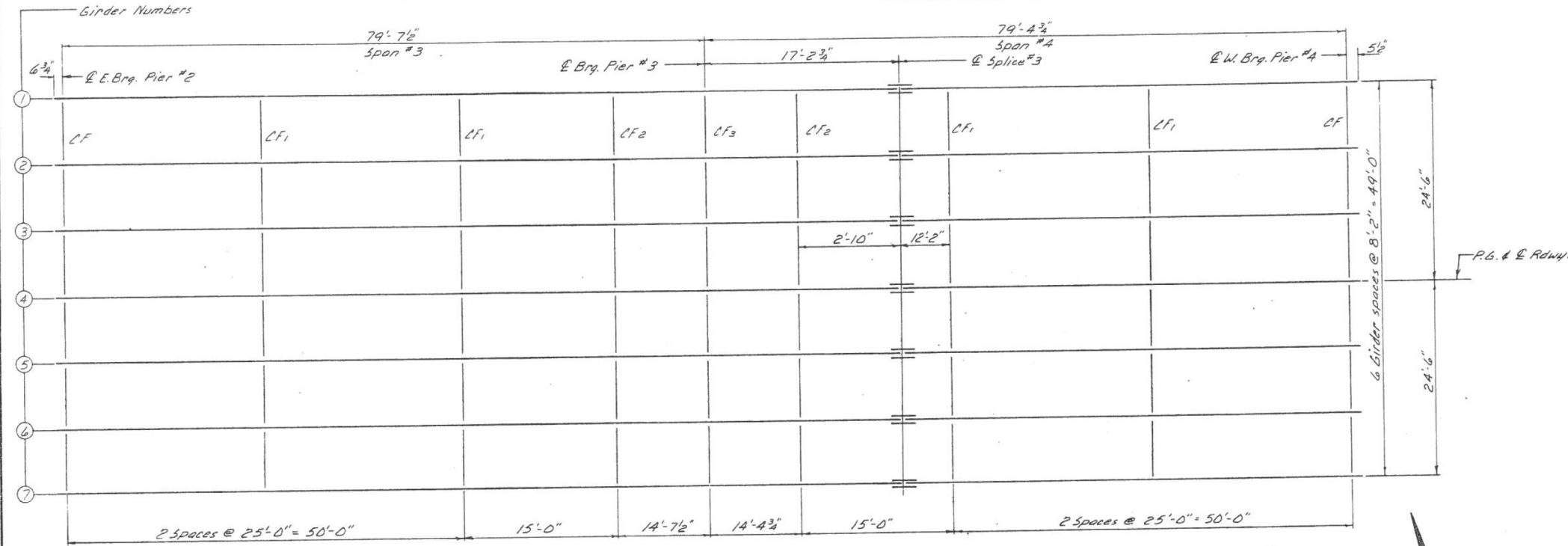
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
SN 048-3286

SHEET NO. 38 OF 61 SHEETS

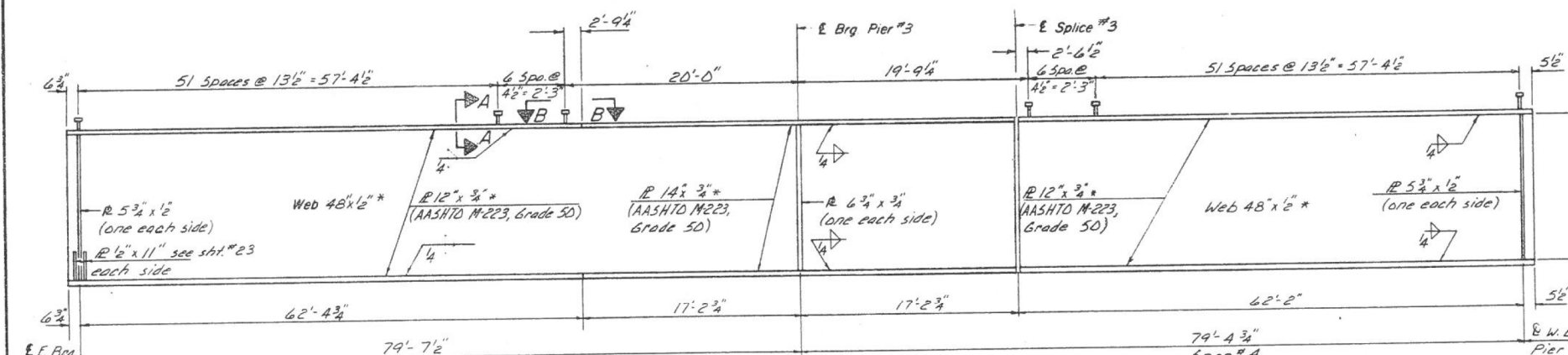
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	54
CONTRACT NO.			89819	

ILLINOIS FED. AID PROJECT 4



FRAMING PLAN
Unit #2 - Spans #3 & #4

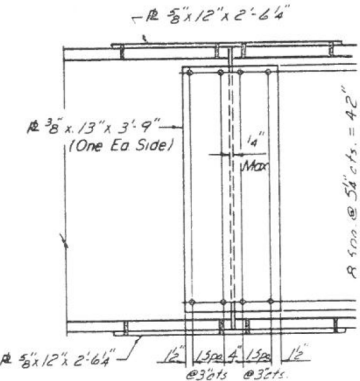
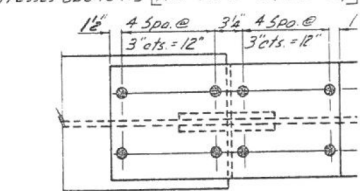
Notes:
All structural steel shall be A.A.S.H.T.O. M-183
except as noted.
See sht. #21 for structural steel details.



GIRDER ELEVATION
(Spans #3 & #4)

SECTION
AT PIER #3

SECTION AT E. BRG.
PIER #2 & W. BRG.
PIER #4



SPLICE #3 DETAIL

All splice plate material shall be A.A.S.H.T.O. 1
Grade 50. Notch Toughness Requirements are
for all splice plates. Use 7/8" H.S. Bolts with 1/2"
for splices.

*** INTERIOR GIRDER REACTION TABLE

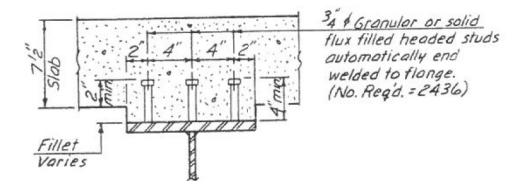
	E. Brg. Pier #2	W. Brg. Pier #4
A @ (K)	38.6	126.5
R @ (K)	46.1	64.5
Imp (K)	11.2	15.7
R Total (K)	95.9	206.7

*** Values given in tables are for service loads.

*** TOP OF WEB ELEVATIONS

	Girders #1 & #7	Girders #2 & #6	Girders #3 & #5	Girder #4
E. Brg. Pier #2	814.29	814.41	814.54	814.66
Pier #3	814.91	815.03	815.16	815.28
Splice #3	815.04	815.16	815.29	815.41
W. Brg. Pier #4	815.52	815.65	815.77	815.90

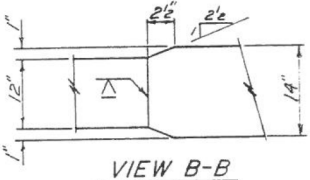
*** For Fabrication Only



SECTION A-A

DESIGNED David Burdick
CHECKED Thomas J. Doughty
DRAWN R. Sommer
CHECKED D.B. TJD

EXAMINED
PASSED
APPROVED



VIEW B-B

STRUCTURAL STEEL - UNIT #
F.A.S. RTE. 400 SEC. 43 VB
KNOX COUNTY
STA. 75+40.97
STAGE I

EXISTING PLANS
FOR INFORMATION ONLY

DESIGNED 1/12/21
DRAWN RSJ 05/06/21
REVIEWED MM 01/24/2022

\\n18\jobs\18L0058A\CAD\Struct\Sheet\Existing Plans.6.dgn

USER NAME = Johns00944	DESIGNED - MNM	REVISED -
PLOT SCALE = 0.2:0000 ' = 1"	CHECKED - MNM	REVISED -
PLOT DATE = 2/3/2022	DRAWN - RSJ	REVISED -
	CHECKED - 01/24/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
SN 048-3286

SHEET NO. 39 OF 61 SHEETS

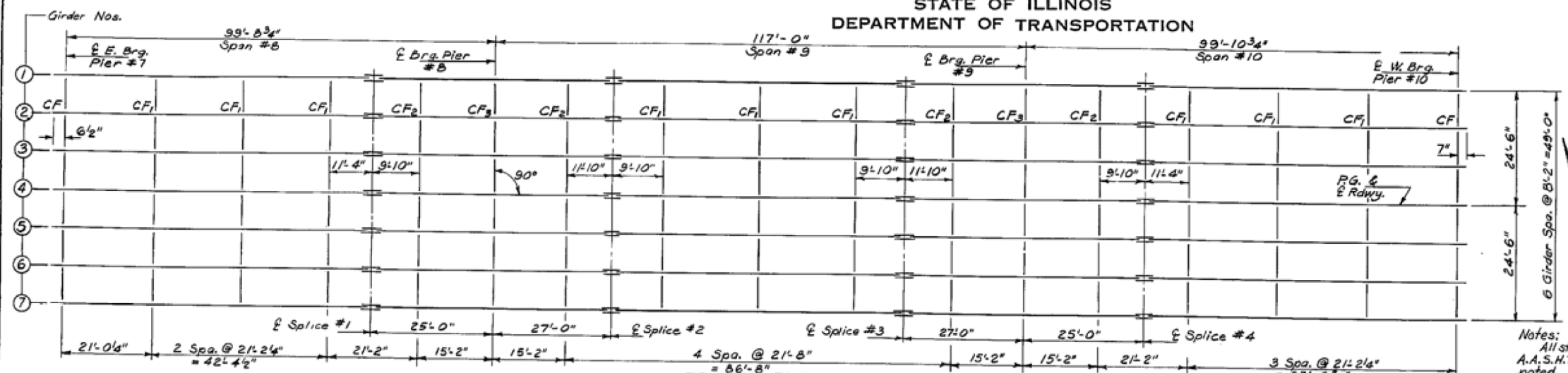
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	55
			CONTRACT NO.	89819
			ILLINOIS FED. AID PROJECT	4



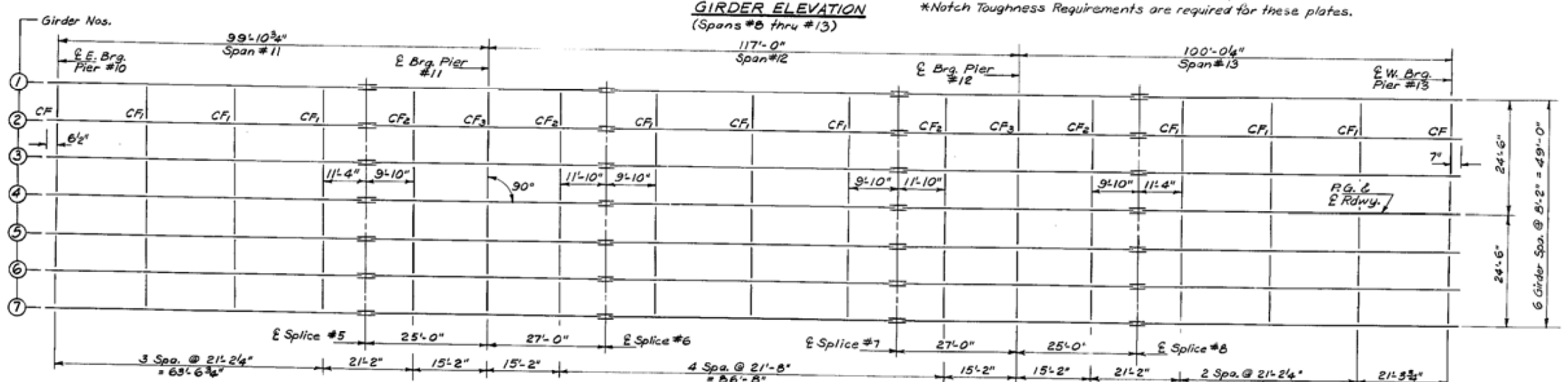
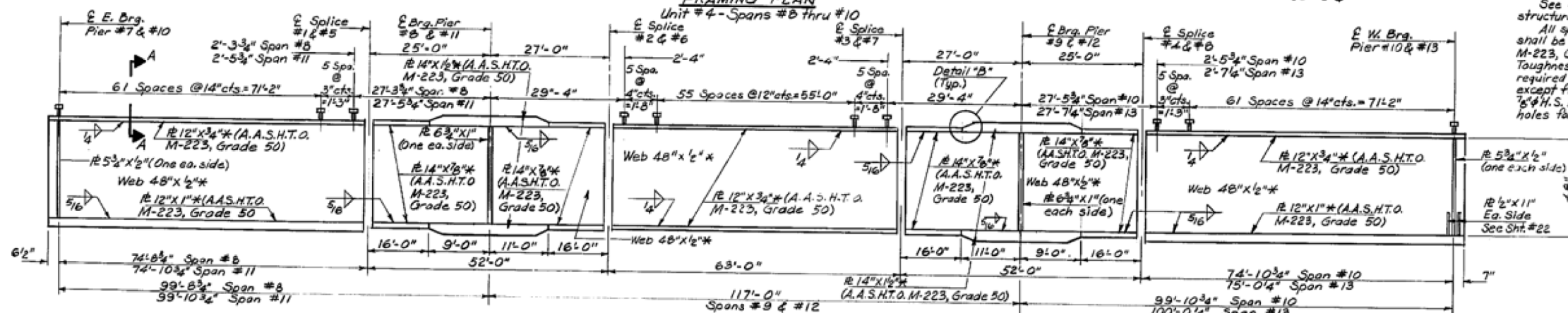
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	56
CONTRACT NO.			89819	
ILLINOIS		FED. AID PROJECT	4	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	SHEET NO.	TOTAL SHEETS	SHEET NO.
18	400	30	37	16
18	400	30	37	16

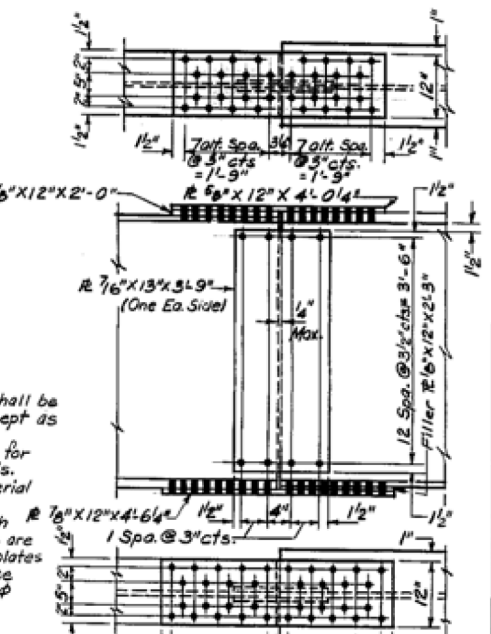
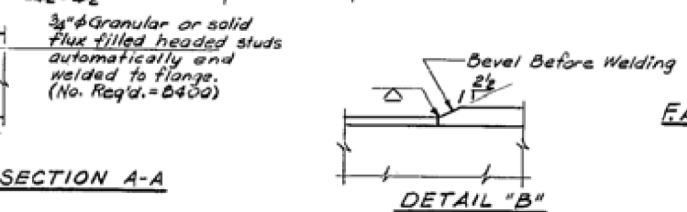
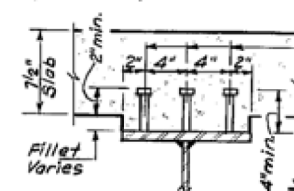


Notes:
All structural steel shall be A.A.S.H.T.O. M-183 except as noted.
See sheets #17 & #20 for structural steel details.
All splice plate material shall be A.A.S.H.T.O. M-223, Grade 50. Notch Toughness Requirements are required for all splice plates except filler plates. Use 5/16\"/>

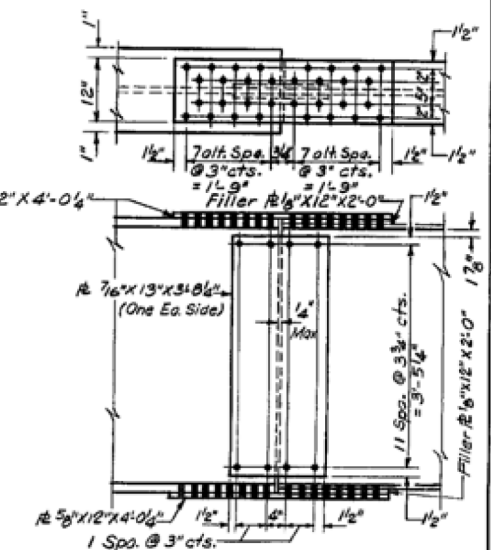


DESIGNED: *Theresa J. Dowling*
CHECKED: *Shelton R. Abauchi*
DRAWN: *E.V. Taylor*
CHECKED: *TJD*
DATE: *July 25, 1994*
APPROVED: *James H. Hinkle*
DIRECTOR OF HIGHWAYS

EXISTING PLANS
FOR INFORMATION ONLY



SPlice #1, #4, #5 & #8
DETAILS
Splices #1 & #5 are shown above. Rotate 180° for Splices #4 & #8.



SPlice #2, #3, #6 & #7
DETAILS
Splices #2 & #6 are shown above. Rotate 180° for Splices #3 & #7.

STRUCTURAL STEEL
UNITS #4 & #5
F.A.S. RTE. 400 SECTION 43VB
KNOX COUNTY
STA. 75+40.97
STAGE II

DESIGNED: 1/12/21
DRAWN: 05/06/21
REVIEWED: 07/24/2022



USER NAME	- Johns0944	DESIGNED	- MNM	REVISED	-
PLOT SCALE	- 0.2:0000 ' = 1"	CHECKED	- MNM	REVISED	-
PLOT DATE	- 2/3/2022	DRAWN	- RSJ	REVISED	-
		CHECKED	- 01/24/2022	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
SN 048-3286

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	57
			CONTRACT NO.	89819

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET
18	400	KNOX	31	37 SHEETS
FED. AID PROJ. NO.	ILLINOIS	FED. AID PROJECT		

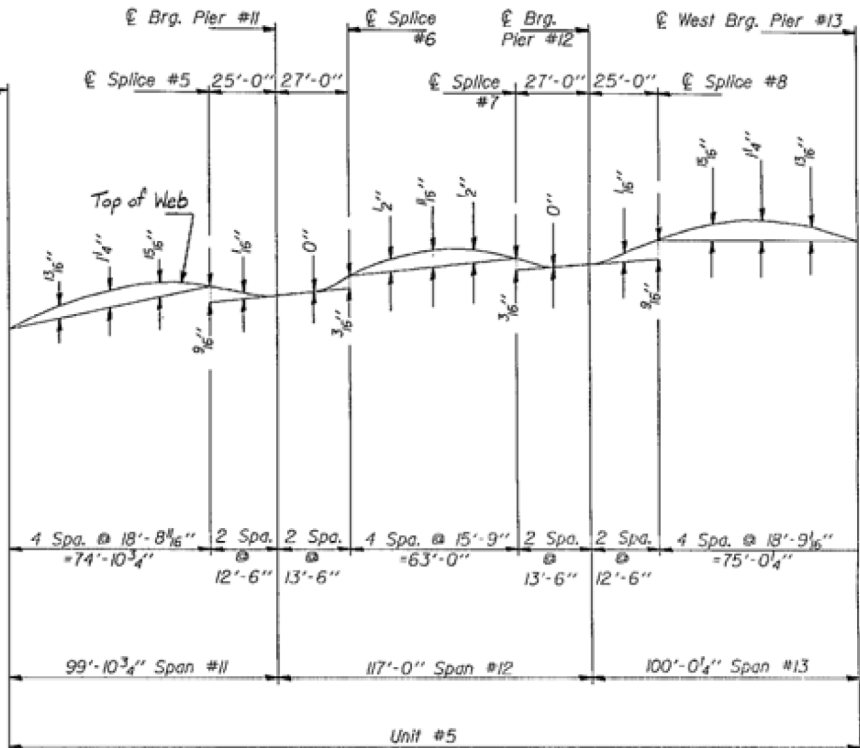
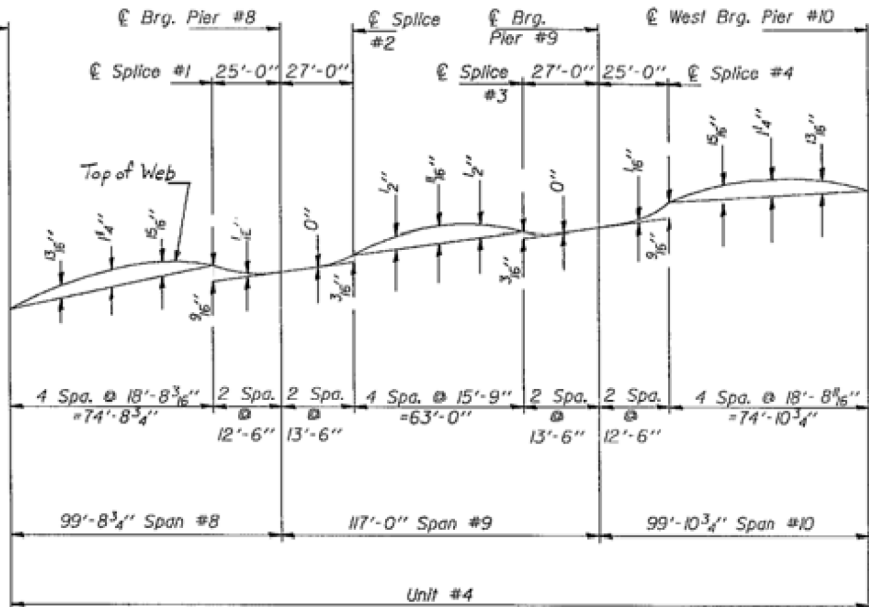
INTERIOR GIRDER MOMENT TABLE			
	0.4 Sp.#8, 0.6 Sp.#10, 0.4 Sp.#11 & 0.6 Sp.#13	Piers #8, #9 #11 & #12	0.5 Sp.#9 & 0.5 Sp.#12
Is (in ⁴)	17036	30343	15303
Ic (in ⁴)	43860		38324
Ss (in ³)	729.9	1189.9	618.3
Sc (in ³)	1030.9		883.5
Q (K/ft.)	0.967	0.969	0.971
M _L (K)	654.0	1256.1	404.6
s _L (K/ft.)	0.331	0.331	0.331
Ms _L (K)	254.2	354.1	212.3
M _T (K)	954.4	797.3	912.8
M (Imp)	212.2	171.0	188.6
S ₅ (M _L + I)	1944.3	1613.8	1835.7
Ma (K)	3708.3	4191.2	3188.3
fs _L non-comp (k.s.i.)	10.75	16.24	7.85
fs _L (comp) (k.s.i.)	2.96		2.88
fs ₅ (k.s.i.)	22.63	16.27	24.93
fs (Overload) (k.s.i.)	36.34	32.51	35.66
fs (Total) (k.s.i.)	47.24	42.26	46.36
VR (K)	64.3		55.4

**INTERIOR GIRDER REACTION TABLE		
	E. Brg. Pier #7, W. Brg. Pier #10, E. Brg. Pier #10 & W. Brg. Pier #13	Piers #8, #9, #11 & #12
RP (K)	48.7	157.1
R _L (K)	38.9	65.1
Imp. (K)	8.6	14.0
R (Total) (K)	96.2	236.2

** Values given in tables are for service loads.

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).
Ic and Sc are the moment of inertia and section modulus of the composite section used in computing fs (Total & Overload).
VR is the maximum Live Load + Impact shear range in span.
Ma (Applied Moment) = $1.3(M_L + M_sL + \frac{1}{2}M_T + I)$.
fs (Overload) is the sum of the stresses due to $M_L + M_sL + \frac{1}{2}M_T + I$.
fs (Total) is the sum of the stresses due to $1.3M_L + M_sL + \frac{1}{2}M_T + I$.

E. Brg. Pier #7



CAMBER DIAGRAM

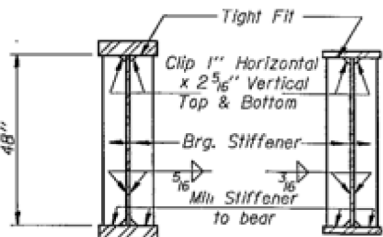
* TOP OF WEB ELEVATIONS				
	Grds. #18 & #7	Grds. #2 & #6	Grds. #3 & #5	Grd. #4
E. Brg. Pier #7	817.73	817.86	817.99	818.12
E. Splice #1	818.16	818.29	818.41	818.54
E. Brg. Pier #8	818.23	818.36	818.49	818.62
E. Splice #2	818.39	818.52	818.64	818.77
E. Splice #3	818.70	818.83	818.96	819.09
E. Brg. Pier #9	818.82	818.95	819.07	819.20
E. Splice #4	818.99	819.12	819.25	819.38
E. West Brg. Pier #10	819.32	819.45	819.57	819.70
E. Brg. Pier #10	819.36	819.49	819.61	819.74
E. Splice #5	819.75	819.88	820.01	820.13
E. Brg. Pier #11	819.81	819.94	820.07	820.20
E. Splice #6	819.96	820.09	820.22	820.34
E. Splice #7	820.16	820.29	820.42	820.55
E. Brg. Pier #12	820.19	820.32	820.45	820.57
E. Splice #8	820.29	820.41	820.54	820.67
E. West Brg. Pier #13	820.34	820.46	820.59	820.72

* For Fabrication Only

Top of web elevations at splices have been adjusted for camber.

DESIGNED Thomas J. Donaghy
CHECKED E. V. Taylor
DRAWN E. V. Taylor
CHECKED TSD

EXAMINED
PASSED
APPROVED
DIRECTOR OF HIGHWAYS



SECTION AT
PIERS #8, #9,
#11 & #12

SECTION AT
E. BRG.- PIER #7,
W. BRG.- PIER #10,
E. BRG.- PIER #10 &
W. BRG.- PIER #13

EXISTING PLANS
FOR INFORMATION ONLY

STRUCTURAL STEEL DETAILS
UNITS #4 & #5
F.A.S. RTE. 400 SECTION 43VB
KNOX COUNTY
STA. 75+40.97
STAGE II

DESIGNED 1/12/21
DRAWN 05/06/21
REVIEWED 01/24/2022

HANSON

USER NAME - Johns00944
PLOT SCALE - 0.2:0000 ' = 1"
PLOT DATE - 2/3/2022

DESIGNED - MNM
CHECKED - MNM
DRAWN - RSJ
CHECKED - 01/24/2022

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
SN 048-3286

SHEET NO. 42 OF 61 SHEETS

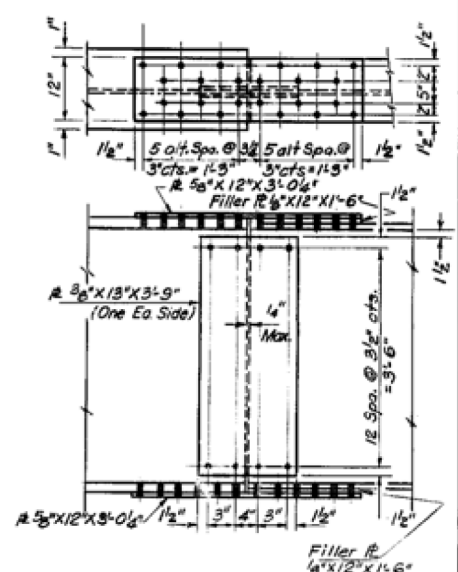
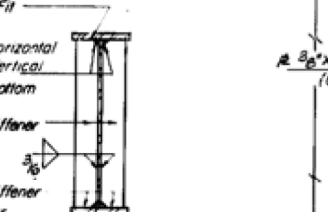
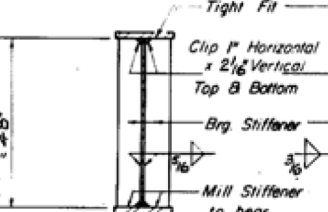
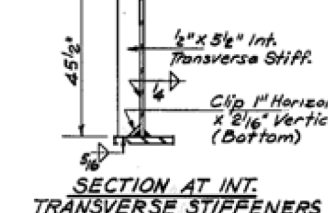
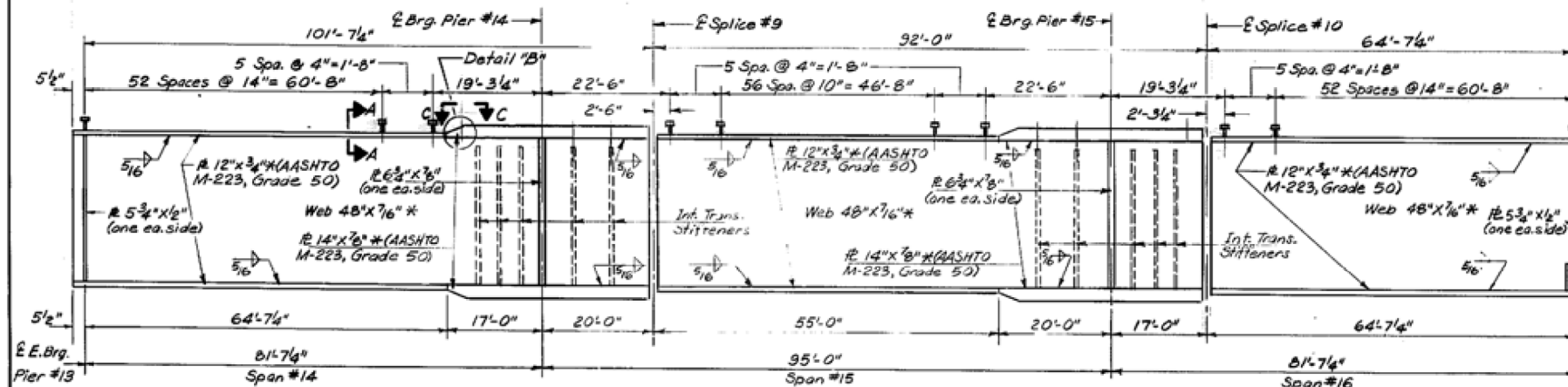
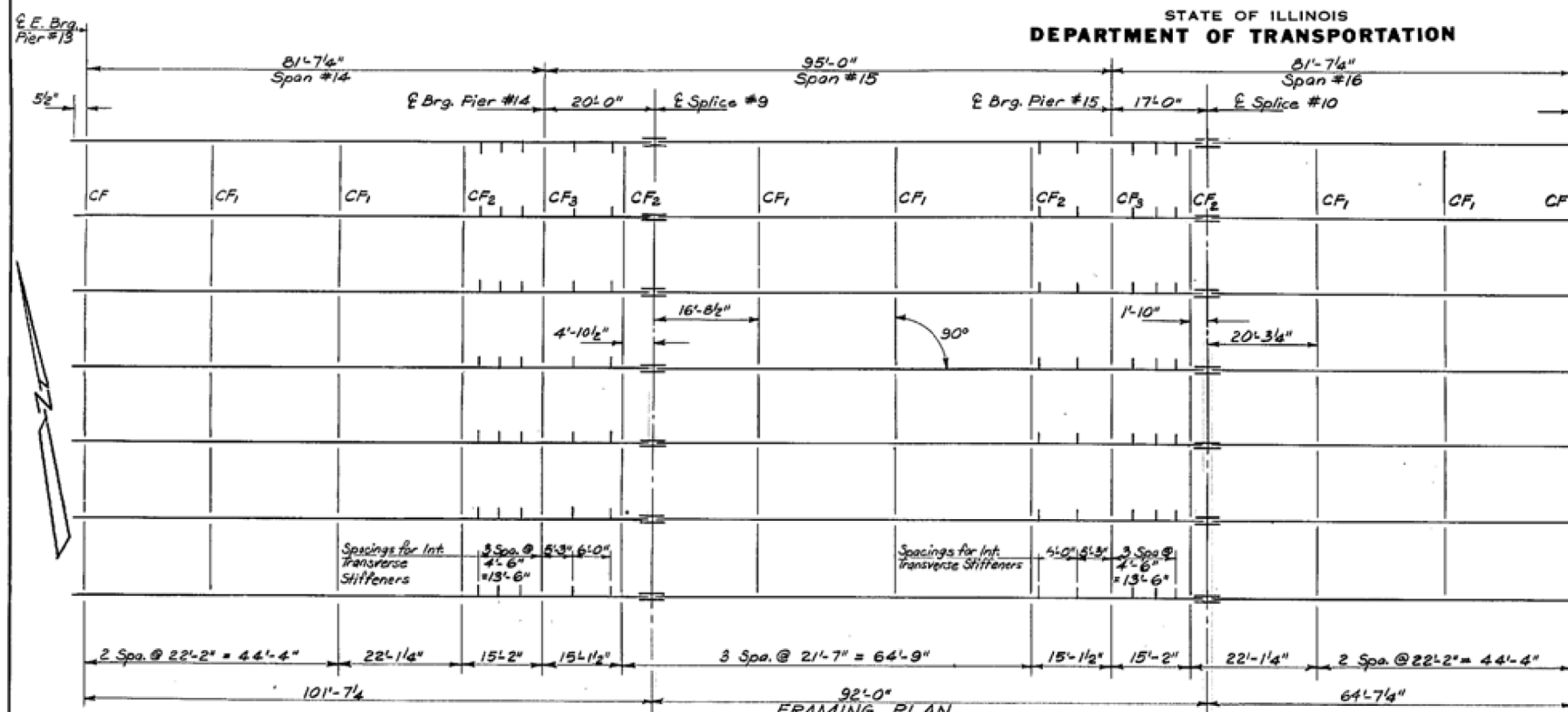
F.A.S. RTE. 400 SECTION 43VB
KNOX COUNTY
CONTRACT NO. 89819
ILLINOIS FED. AID PROJECT 4

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
18	32	ILLINOIS	37	18

INTERIOR GIRDER MOMENT TABLE			
	0.4 Span #14 & 0.6 Span #16	Pier #14 & Pier #15	0.5 Span #15
I _s (in ⁴)	14722.8	18660.1	14722.8
I _c (in ⁴)	36667.1	—	36667.1
S _s (in ³)	594.9	750.2	594.9
S _c (in ³)	635.9	—	635.9
Q (k/ft)	0.938	0.941	0.944
M _E (K)	444.0	777.9	286.6
S _E (K/ft)	0.331	0.331	0.331
M _s E (K/ft)	177.7	220.1	152.2
M _L (K)	754.0	523.2	744.1
M _{Imp} (K)	182.5	123.0	168.9
S _s (M _L + I) (K)	1560.8	1077.0	1521.7
M _a (K)	2837.3	2697.5	2548.6
f _s E non-comp (k.s.i.)	8.96	15.96	5.78
f _s E (comp) (k.s.i.)	2.55	—	2.18
f _s E _s (E + I) (k.s.i.)	22.41	17.23	21.85
f _s (Overload) (k.s.i.)	33.92	33.19	29.81
f _s (Total) (k.s.i.)	44.10	43.15	36.75
VR (K)	62.7	—	54.2

I_s and S_s are the moment of inertia and section modulus of the steel section used in computing f_s (Total & Overload).
I_c and S_c are the moment of inertia and section modulus of the composite section used in computing f_s (Total & Overload).
VR is the maximum V + Impact shear stress in span.
M_a (Applied Moment) = 1.3 [M_E + M_s E + S_s (M_L + I)].
f_s (Overload) is the sum of the stresses due to M_E, M_s E + S_s (M_L + I).
f_s (Total) is the sum of the stresses due to 1.3 [M_E + M_s E + S_s (M_L + I)].
**Values given in tables are for service loads.



*** TOP OF WEB ELEVATIONS				
	Girders #1 & #7	Girders #2 & #6	Girders #3 & #5	Girder #4
E. Brg. Pier #13	820.34	820.46	820.59	820.72
E. Brg. Pier #14	820.10	820.23	820.35	820.48
E. Splice #9	820.05	820.17	820.30	820.43
E. Brg. Pier #15	819.70	819.83	819.96	820.09
E. Splice #10	819.63	819.76	819.88	820.01
E. W. Brg. Pier #16	819.30	819.43	819.55	819.68

** INTERIOR GIRDER REACTION TABLE		
	E. Brg. Pier #13 & W. Brg. Pier #16	Pier #14 & Pier #15
RE (K)	39.7	124.6
R _E (K)	46.3	67.6
IMP (K)	11.2	15.9
R _{TOTAL} (K)	97.2	208.1

STRUCTURAL STEEL - UNIT #6
F.A.S.R.T.E. 400 SECTION 43VB
KNOX COUNTY
STA. 75+40.97
STAGE II

Notes:
All structural steel shall be A.A.S.H.T.O M-103 except as noted.
See Sheet #20 for structural steel details.
The girders for Unit #6 shall not be cambered.

EXISTING PLANS
FOR INFORMATION ONLY

DESIGNED 1/12/21
DRAWN 05/06/21
REVIEWED 07/24/2022

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USER NAME	Johns00944
DESIGNED	MNM
CHECKED	MNM
DRAWN	RSJ
CHECKED	01/24/2022

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
SN 048-3286

F.A.S.R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	59

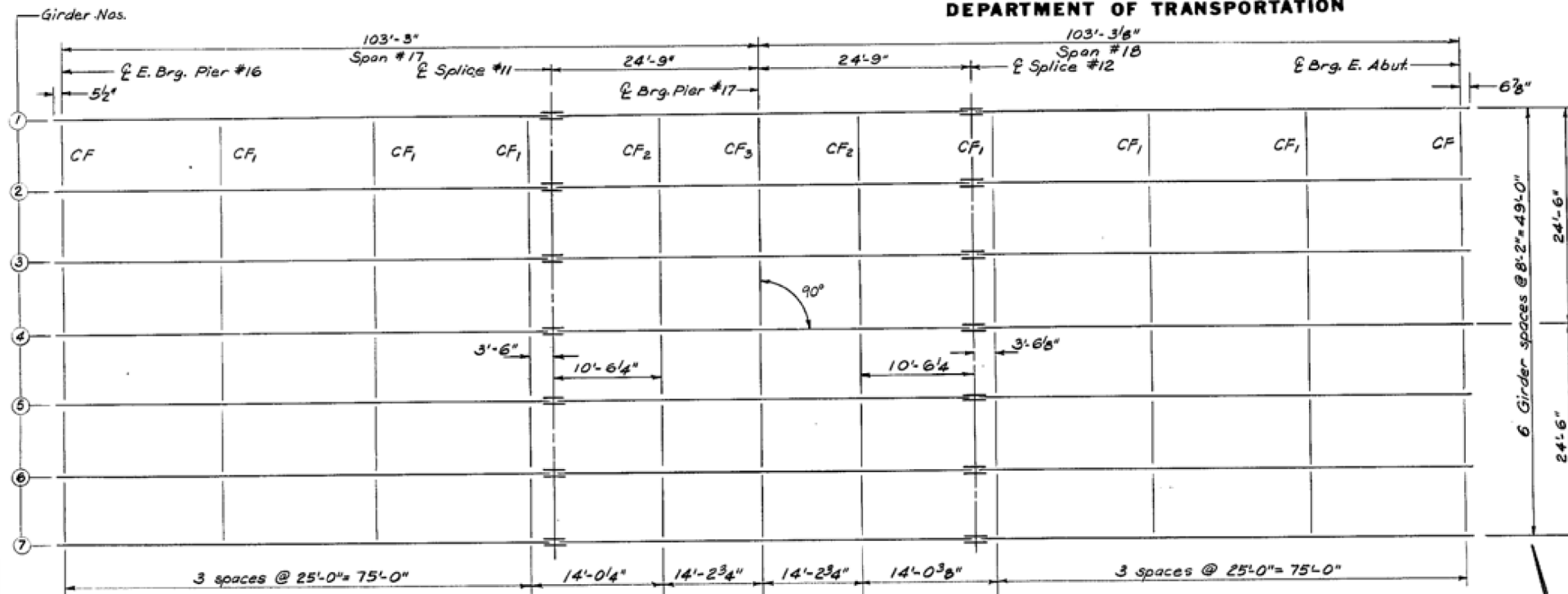
SHEET NO. 43 OF 61 SHEETS

ILLINOIS FED. AID PROJECT 4

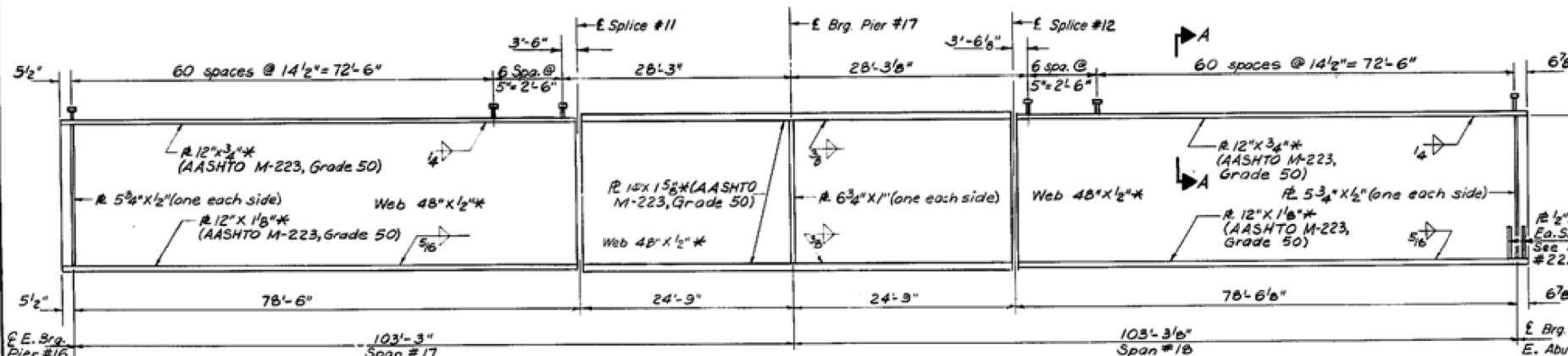
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

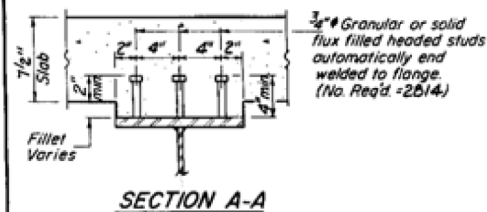
SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
33	37	19	19



Notes: All structural steel shall be A.A.S.H.T.O. M-183 except as noted.
See Sht. #20 for structural steel details.

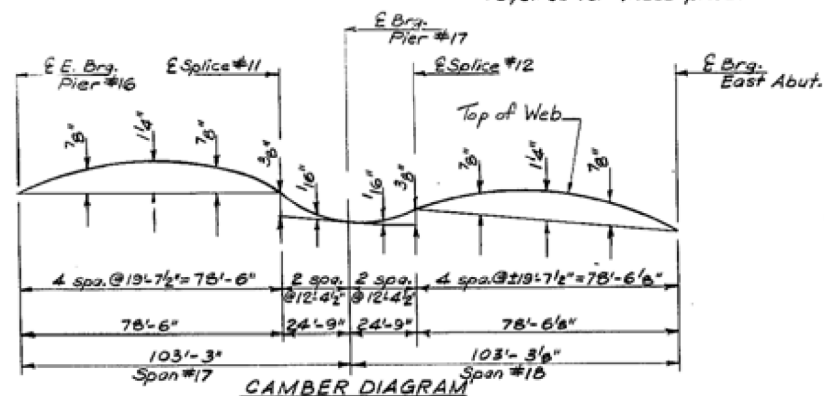


* Notch Toughness Requirements are required for these plates.



DESIGNED: Thomas J. Domagala
CHECKED: Chelam R. Almuski
DRAWN: E. V. Taylor
CHECKED: TSD
GMA

July 25, 1984
EXAMINED: [Signature]
PASSED: [Signature]
APPROVED: [Signature]
DIRECTOR OF HIGHWAYS



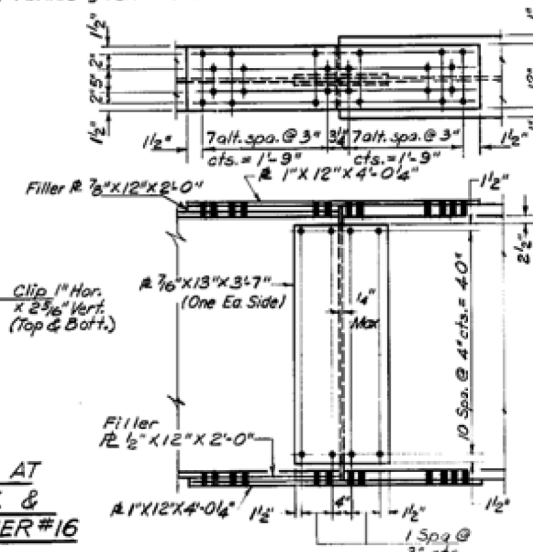
*** TOP OF WEB ELEVATIONS				
	Girders #14 & #17	Girders #2 & #6	Girders #3 & #5	Girder #4
E. Brg. Pier #16	819.23	819.36	819.48	819.61
E. Splice #11	818.49	818.62	818.75	818.88
E. Brg. Pier #17	818.22	818.35	818.47	818.60
E. Splice #12	818.01	818.14	818.26	818.39
E. Brg. E. Abut.	817.29	817.42	817.55	817.67

*** For Fabrication Only
Top of web elevations at splices have been adjusted for camber.

** INTERIOR GIRDER REACTION TABLE		
	E. Abut. & E. Brg. Pier #16	Pier #17
R (K)	48.9	173.7
R (K)	47.6	79.4
Imp (K)	10.4	17.4
R Total (K)	106.9	270.5

INTERIOR GIRDER MOMENT TABLE		
	E. Abut. & E. Brg. Pier #16	Pier #17
Is (in. 4)	17,831.1	32,630.6
Ic (in. 4)	46,550.0	
Ss (in. 3)	785.2	1273.4
Sc (in. 3)	1104.5	
E (K/ft)	0.985	0.985
M (K)	635.5	1561.6
s (K/ft)	0.33	0.33
Ms (K)	263.3	396.8
M (K)	974.9	809.9
M imp (K)	213.5	177.4
Ms (M + I) (K)	1980.7	1645.5
Ma (K)	3743.3	4685.1
fs (Non-comp. ksi)	9.71	18.46
fs (Comp. ksi)	2.86	
fs (fs + I) (ksi)	21.52	15.51
fs (Overload) (ksi)	34.09	33.97
fs (Total) (ksi)	44.32	44.16
VR (K)	63.6	

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).
Ic and Sc are the moment of inertia and section modulus of the composite section used in computing fs (Total & Overload).
VR is the maximum 4+ impact shear range in span.
Ma (Applied Moment) = 1.3 [MR + Ms + 1/3 (M + I)]
fs (Overload) is the sum of the stresses due to MR + Ms + 1/3 (M + I).
fs (Total) is the sum of the stresses due to 1.3 [MR + Ms + 1/3 (M + I)].
** Values given in tables are for service loads.



All splice plate material shall be A.A.S.H.T.O. M-223 Grade 50. Notch Toughness Requirements are required for all splice plates except filler plates. Filler plates shall be placed on west side of splice #11 and on east side of splice #12. Use 7/8" H.S. Bolts with 15/16" holes for splices.

EXISTING PLANS
FOR INFORMATION ONLY

STRUCTURAL STEEL-UNIT #7
F.A.S. RTE. 400 SECTION 43VB
KNOX COUNTY
STA. 75+40.97
STAGE II

DESIGNED: 1/12/21
DRAWN: RSJ 05/06/21
REVIEWED: MM 07/24/2022

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HANSON

USER NAME: Johns00944
DESIGNED: MNM
CHECKED: MNM
PLOT SCALE: 0.2:0000 '"/in.
DRAWN: RSJ
PLOT DATE: 2/3/2022
CHECKED: 01/24/2022
REVISED:

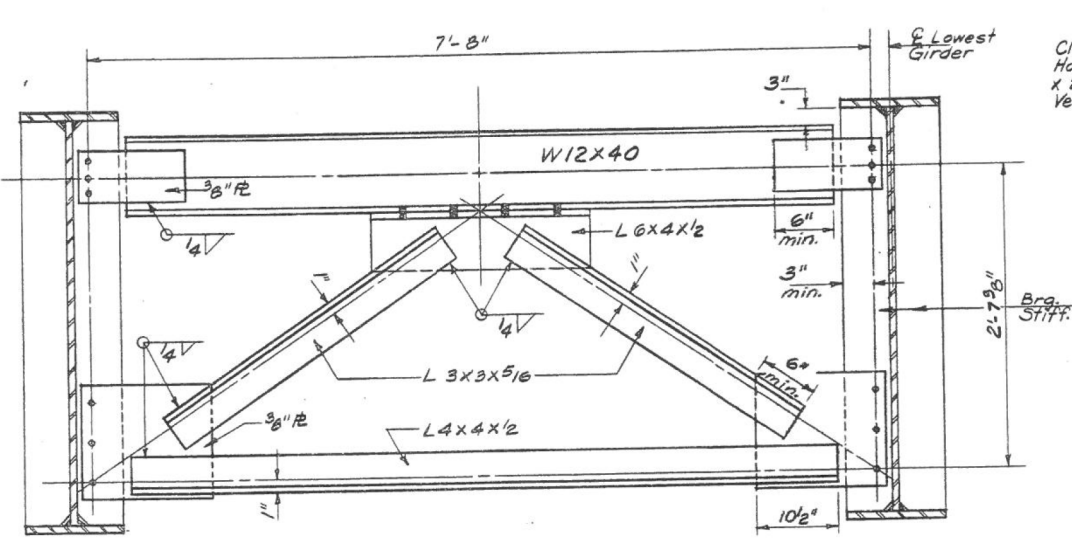
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
SN 048-3286

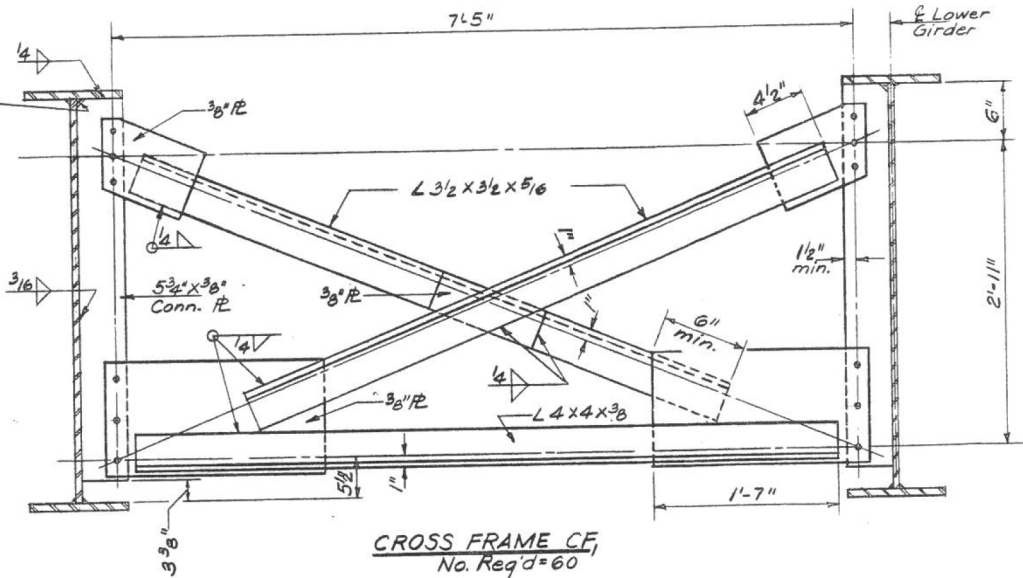
SHEET NO. 44 OF 61 SHEETS

F.A.S. RTE. 400
SECTION 18-00043-01-BR
COUNTY KNOX
TOTAL SHEETS 81
SHEET NO. 60
CONTRACT NO. 89819
ILLINOIS FED. AID PROJECT 4

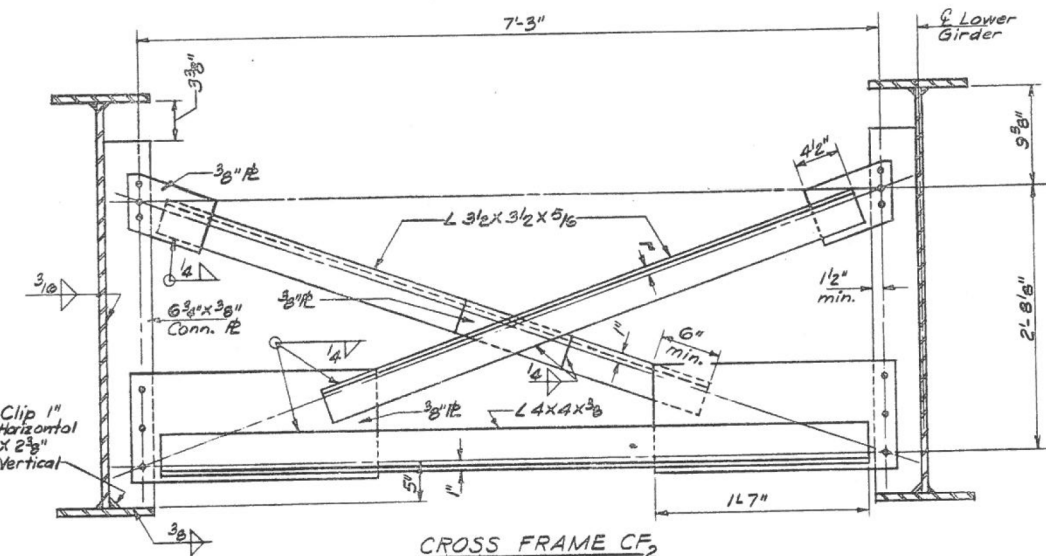
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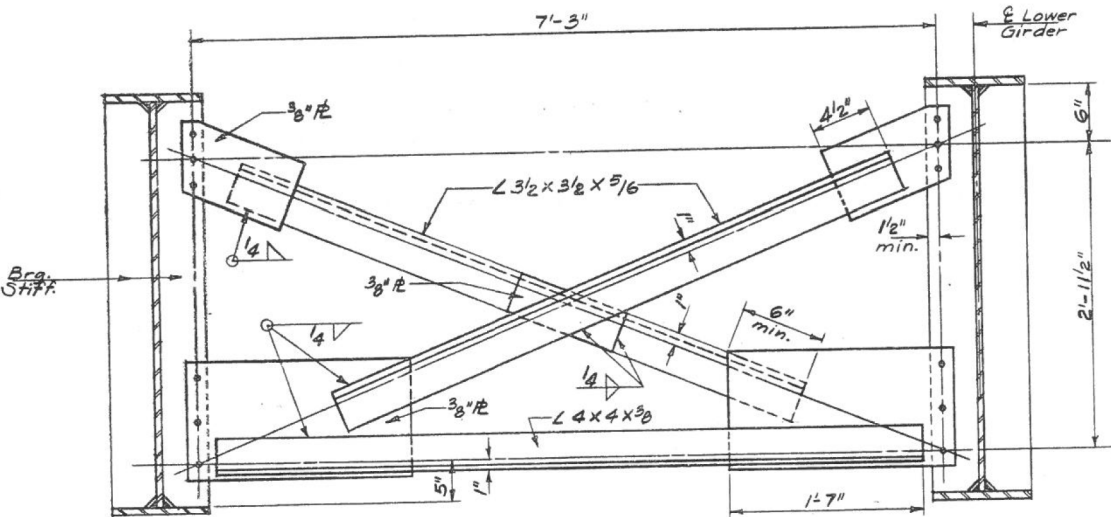
CROSS FRAME CF
No. Req'd = 24



CROSS FRAME CF
No. Req'd = 60



CROSS FRAME CF₂
No. Req'd = 24



CROSS FRAME CF₃
No. Req'd = 12

Notes:
All structural steel for cross frames shall be A.A.S.H.T.O. M-183.
All contact surfaces of joints the crossframes shall be free of rust or lacquer.
Use 3/4" H.S. Bolts with 15/16" holes in crossframes.
Two hardened washers shall be required over all holes in crossframes.

EXISTING PLANS
FOR INFORMATION ONLY

DESIGNED David Burdick	EXAMINED James J. Kayser
CHECKED Thomas J. Dwyer	PASSED
DRAWN E.V. Taylor	APPROVED
CHECKED D.B. TJD	DIRECTOR OF HIGHWAYS

Sept 26 1983

STRUCTURAL STEEL DETAILS
UNIT #1 & UNIT #2
F.A.S. RTE. 400 SECTION 43
KNOX COUNTY
STA. 75 + 40.97
STAGE I

DESIGNED	1/12/21
DRAWN	05/06/21
REVIEWED	07/24/2022

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USER NAME = Johns00944
PLOT SCALE = 0.2:0000 ' = 1" / in.
PLOT DATE = 2/3/2022

DESIGNED - MNM
CHECKED - MNM
DRAWN - RSJ
CHECKED - 01/24/2022

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
SN 048-3286

SHEET NO. 45 OF 61 SHEETS

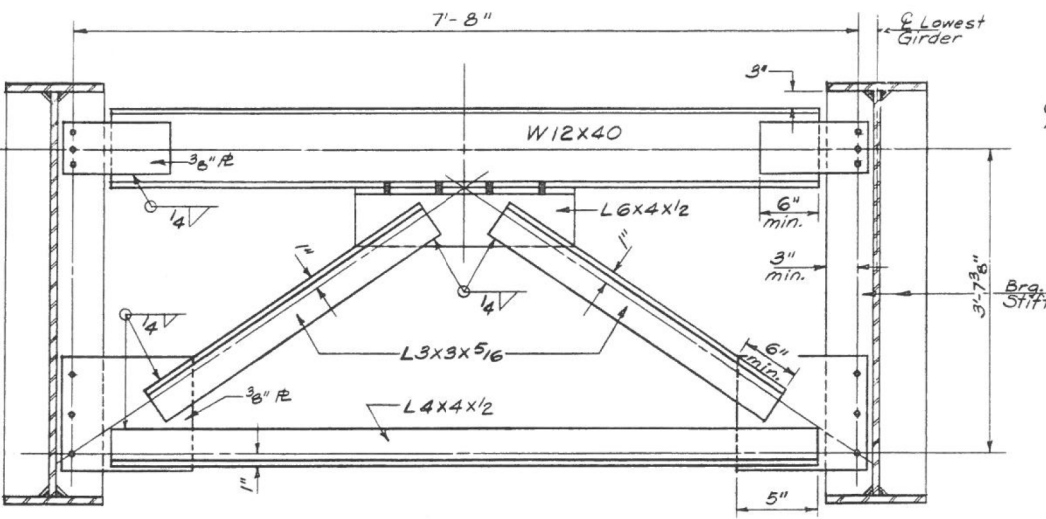
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	61
CONTRACT NO.			89819	
ILLINOIS FED. AID PROJECT 4				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

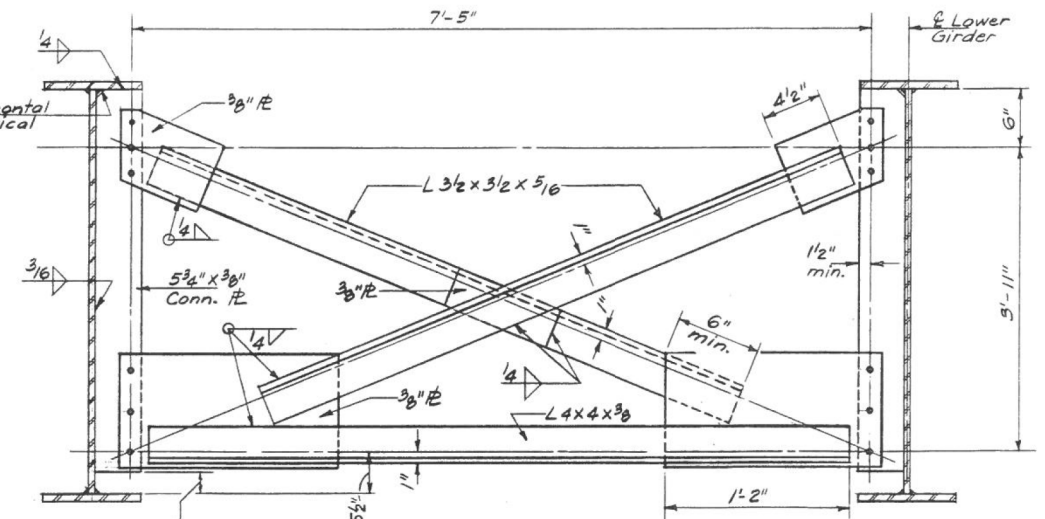
NO.	71	35	36 SHEETS
PED. ROAD DIST. NO. 7	ILLINOIS	PED. AID PROJECT	

INTERIOR GIRDER MOMENT TABLE			
	0.4 Span #5 & 0.6 Span #7	Pier #5 & Pier #6	0.5 Span #6
I _s (in ⁴)	32,951.0	72,775.3	28,300.0
I _c (in ⁴)	85,015.6		69,877.2
S _s (in ³)	1239.4	2274.2	969.7
S _c (in ³)	1723.4		1366.0
Q (K/ft)	1.035	1.049	1.035
M _E (K)	1358.8	2822.7	744.9
S _E (K/ft)	0.33	0.33	0.33
M _S (K)	494.3	746.5	376.0
M _L (K)	1412.6	1565.7	1306.5
M _{imp} (K)	265.6	281.8	224.7
S ₃ (M _L +I) (K)	2797.0	3079.2	2552.0
M _a (K)	6045.1	8642.9	4774.8
f _s P non-comp (ksi)	13.16	14.89	9.22
f _s P (comp) (ksi)	3.44	3.94	3.30
f _s S ₃ (t+I) (ksi)	19.48	16.25	22.42
f _s (Overload) (ksi)	36.08	35.08	34.94
f _s (Total) (ksi)	46.90	45.60	45.42
VR (K)	64.8		57.4

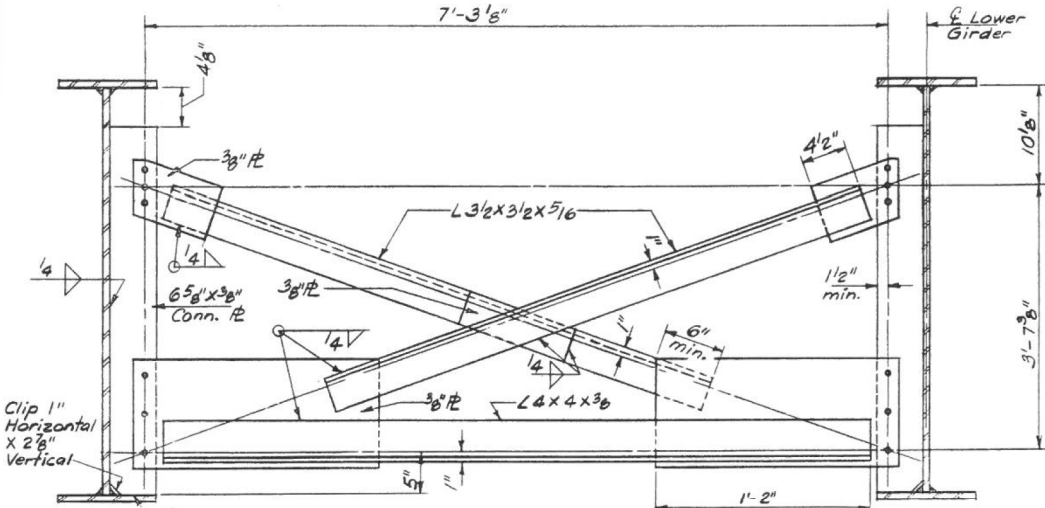
I_s and S_s are the moment of inertia and section modulus of the steel section used in computing f_s(Total & Overload).
I_c and S_c are the moment of inertia and section modulus of the composite section used in computing f_s(Total & Overload).
VR is the maximum t+Impact shear range in span.
M_a (Applied Moment) = 1.3[M_E+M_S+₃(M_L+I)].
f_s (Overload) is the sum of the stresses due to M_E+M_S+₃(M_L+I).
f_s (Total) is the sum of the stresses due to 1.3[M_E+M_S+₃(M_L+I)].



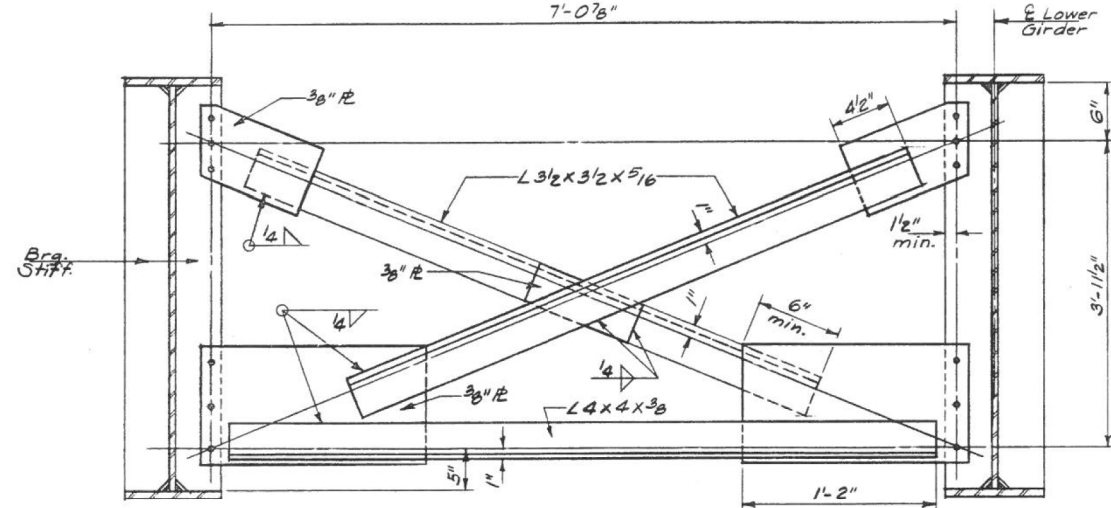
CROSS FRAME CF₄
No. Req'd = 12



CROSS FRAME CF₅
No. Req'd = 72



CROSS FRAME CF₆
No. Req'd = 48



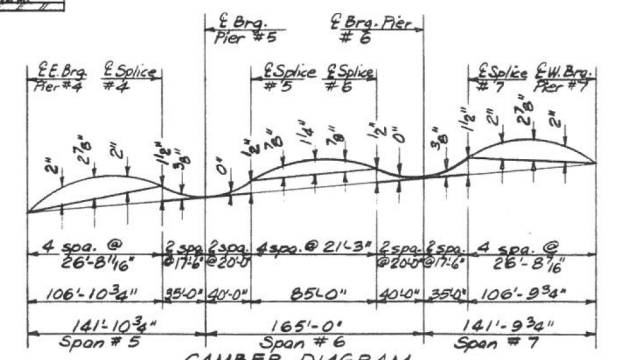
CROSS FRAME CF₇
No. Req'd = 12

Notes:
Two hardened washers shall be required over all holes in crossframes.
All structural steel for crossframes shall be A.A.S.H.T.O. M-103.
All contact surfaces of joints for the crossframes shall be free of paint or lacquer.
Use 3/4" H.S. Bolts with 15/16" holes in crossframes.

*TOP OF WEB ELEVATIONS				
	Girders #1 & #7	Girders #2 & #6	Girders #3 & #5	Girder #4
E.E. Brg. Pier #4	815.47	815.59	815.72	815.84
Splice #4	816.00	816.13	816.25	816.38
Pier #5	816.18	816.30	816.43	816.55
Splice #5	816.38	816.50	816.63	816.75
Splice #6	816.80	816.93	817.05	817.18
Pier #6	817.00	817.13	817.25	817.38
Splice #7	817.18	817.30	817.43	817.55
E.W. Brg. Pier #7	817.71	817.84	817.96	818.09

* For fabrication only.

** INTERIOR GIRDER REACTION TABLE		
	E. Brg. Pier #4 & W. Brg. Pier #7	Pier #5 & Pier #6
R _E (K)	71.4	235.5
R _L (K)	50.3	104.7
Imp. (K)	9.4	18.8
R _{TOTAL} (K)	131.1	359.0



CAMBER DIAGRAM
STRUCTURAL STEEL DETAILS
UNIT #3
F.A.S. RTE. 400 SECTION 43VB
KNOX COUNTY
STA. 75 + 40.97
STAGE I

DESIGNED David Burdick
CHECKED [Signature]
DRAWN E. K. Taylor
CHECKED D. B. TSD
EXAMINED [Signature]
PASSED [Signature]
APPROVED [Signature]
DIRECTOR OF HIGHWAYS

** Values given in tables are for service load.

EXISTING PLANS
FOR INFORMATION ONLY

DESIGNED 1/12/21
DRAWN 05/06/21
REVIEWED 07/24/2022

\\18\jobs\18L0058A\CAD\Struct\Sheet\Existing Plans_9.dgn



USER NAME = Johns00944	DESIGNED - MNM	REVISED -
PLOT SCALE = 0.2:0000 '1' = 1"	CHECKED - MNM	REVISED -
PLOT DATE = 2/3/2022	DRAWN - RSJ	REVISED -
	CHECKED - 01/24/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

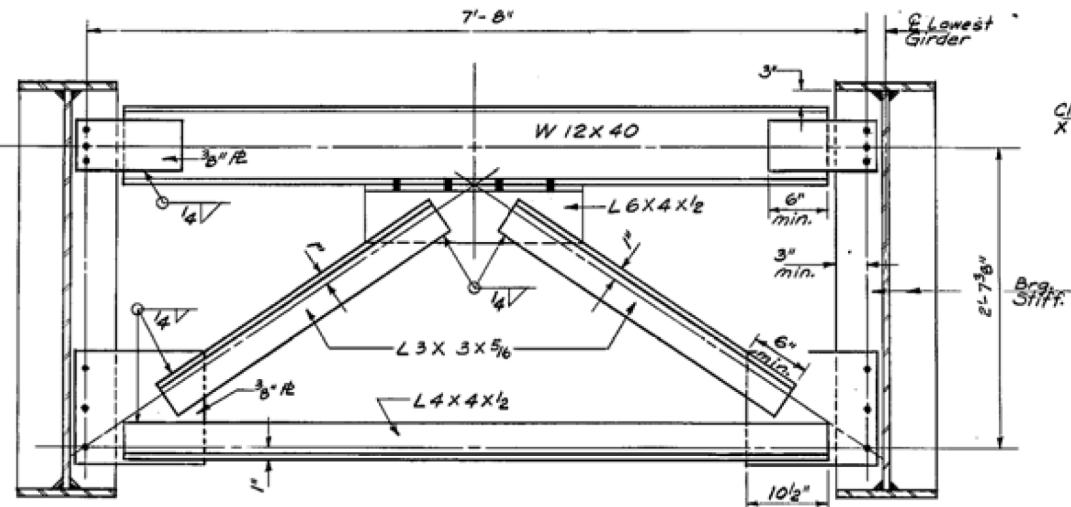
EXISTING STRUCTURE PLANS
SN 048-3286

SHEET NO. 46 OF 61 SHEETS

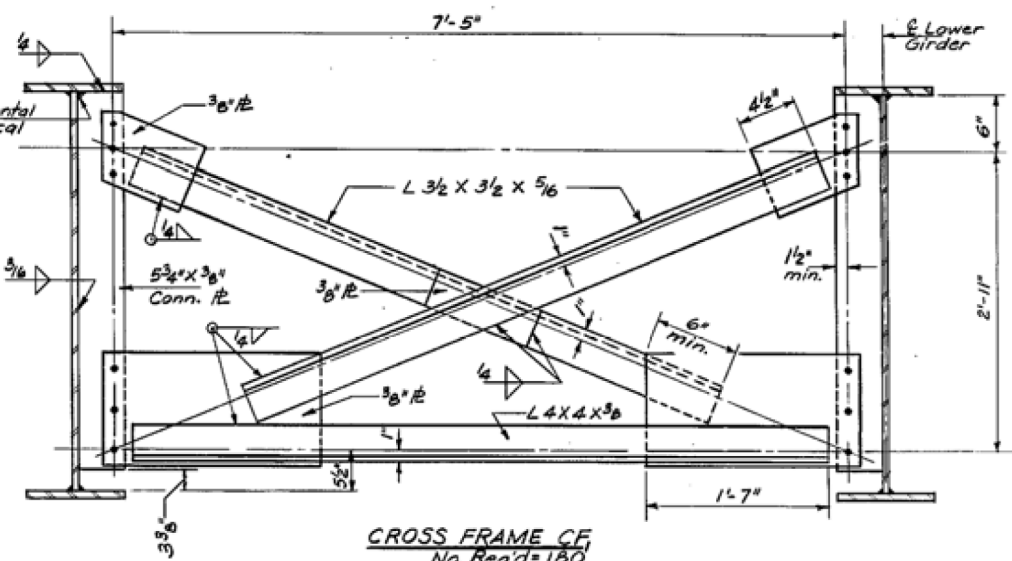
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	62
			CONTRACT NO.	89819
ILLINOIS FED. AID PROJECT 4				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

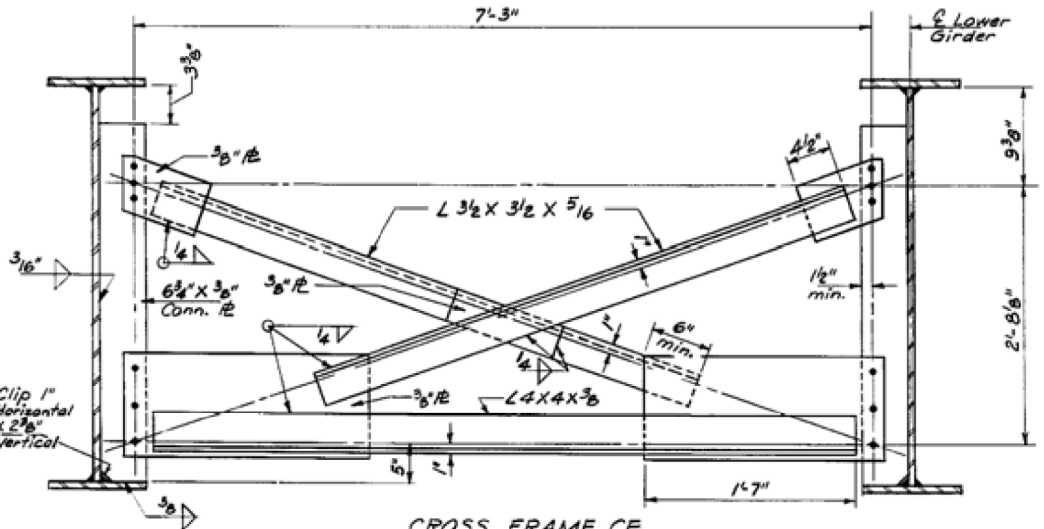
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
18	400	KNOX	63	34
SHEET NO. 20				
37 SHEETS				



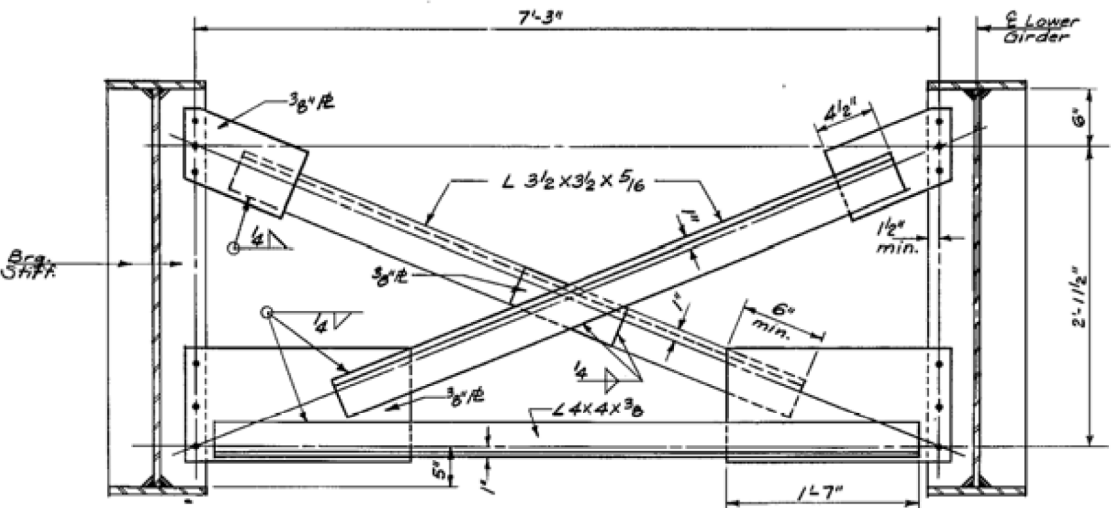
CROSS FRAME CF
No. Req'd = 48



CROSS FRAME CF
No. Req'd = 180



CROSS FRAME CF₂
No. Req'd = 84



CROSS FRAME CF₃
No. Req'd = 42

Notes:
All structural steel for crossframes shall be A.A.S.H.T.O. M-103.
All contact surfaces of joints for the crossframes shall be free of paint or lacquer.
Use 3/4" H.S. Bolts with 15/16" holes in crossframes.
Two hardened washers shall be required over all holes in crossframes.

EXISTING PLANS
FOR INFORMATION ONLY

DESIGNED	Thomas J. Taylor
CHECKED	Thomas J. Taylor
DRAWN	E. V. Taylor
CHECKED	TSD
EXAMINED	Thomas J. Taylor
PASSED	Thomas J. Taylor
APPROVED	Thomas J. Taylor

STRUCTURAL STEEL DETAILS
UNITS #4 #5 #6 & #7
F.A.S. RTE. 400 SECTION 43VB
KNOX COUNTY
STA. 75 + 40.97
STAGE II

DESIGNED 1/12/21
DRAWN 05/06/21
REVIEWED 07/24/2022



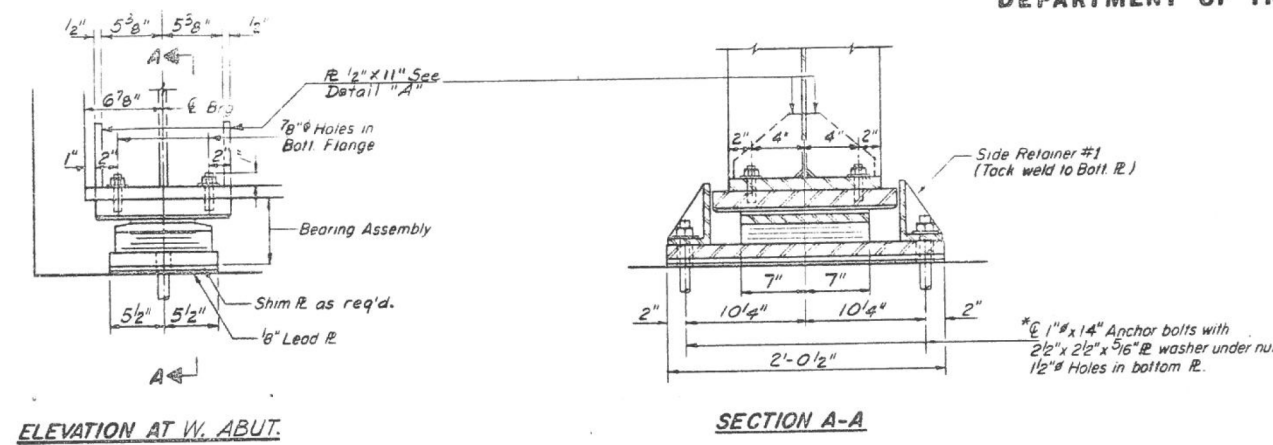
USER NAME	= Johns00944
DESIGNED	- MNM
CHECKED	- MNM
DRAWN	- RSJ
CHECKED	- 01/24/2022
REVIS	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
SN 048-3286

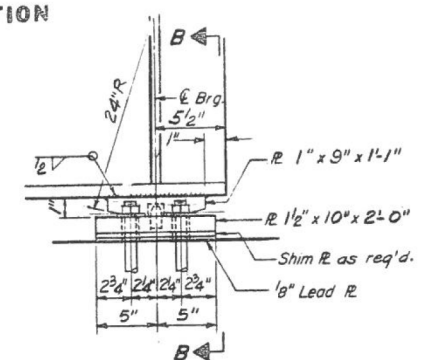
SHEET NO. 47 OF 61 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	63
CONTRACT NO.				89819
ILLINOIS FED. AID PROJECT 4				



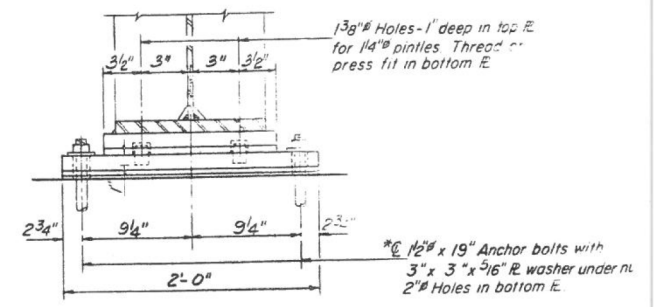
ELEVATION AT W. ABUT.

SECTION A-A

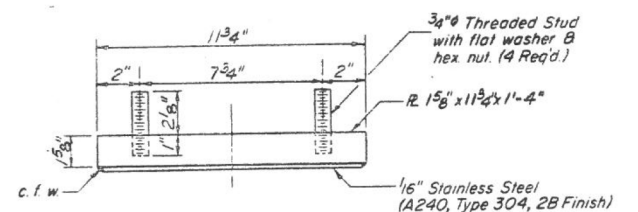


ELEVATION AT WEST BRG.-PIER #2
& WEST BRG.-PIER #4
(14 Required)

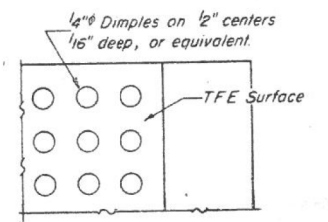
FIXED BEARING



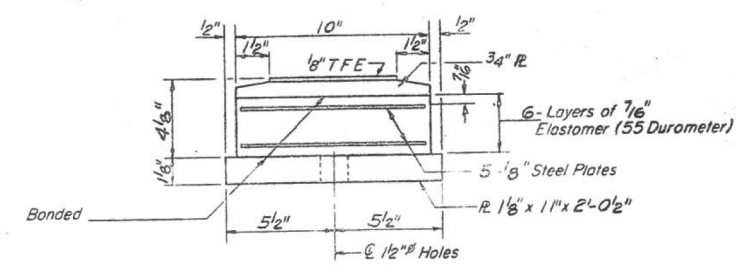
SECTION B-B



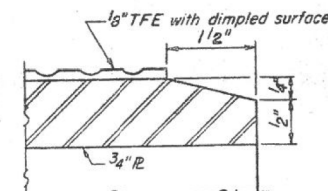
TOP BEARING ASSEMBLY



PLAN-TFE SURFACE

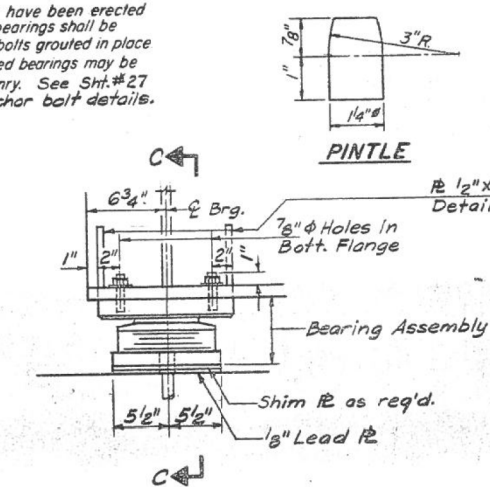


BOTTOM BEARING ASSEMBLY
(7 Required)



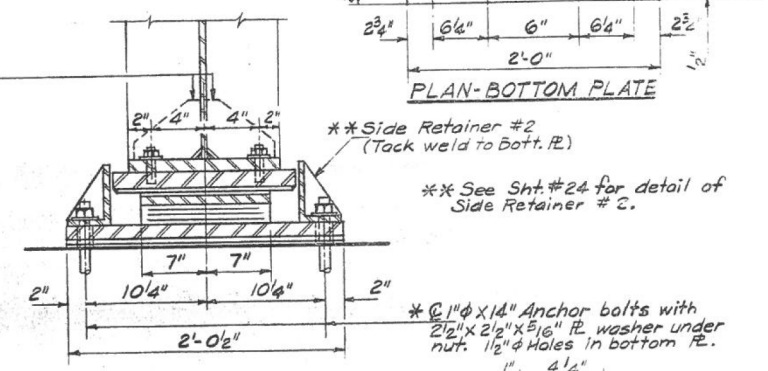
SECTION THRU TFE

* Note: After girders have been erected holes at expansion bearings shall be drilled and anchor bolts grouted in place. Anchor bolts at fixed bearings may be built into the masonry. See Sht.#27 for drilled anchor bolt details.

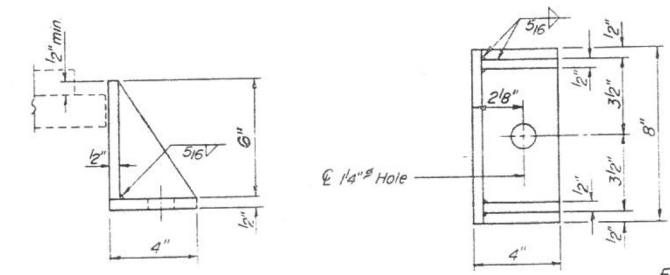


ELEVATION AT E. BRG.-PIER #2

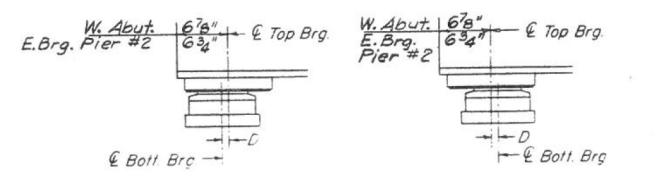
TYPE II TFE ELASTOMERIC EXP. BRG.



SECTION C-C



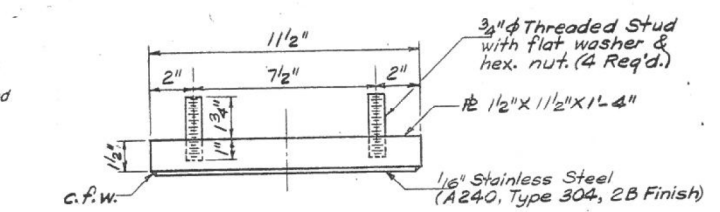
SIDE RETAINER #1
(16 Required)



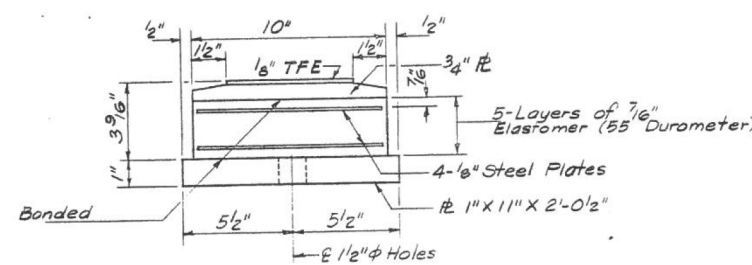
<u>BELOW 50°F</u>	<u>ABOVE 50°F</u>
(Move bott. brg. away from fixed brg.)	(Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT EXP BRG

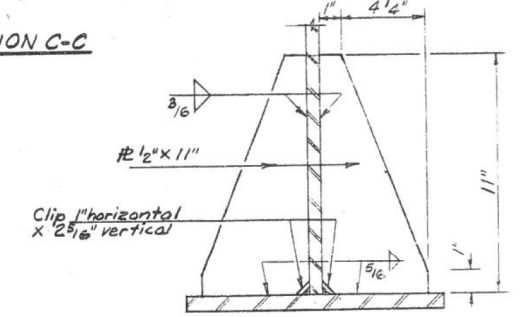
$D = 1/8"$ per each 100' of expansion for every 15° temp change from the normal temp. of 50°F



TOP BEARING ASSEMBLY



BOTTOM BEARING ASSEMBLY
(7 Required)



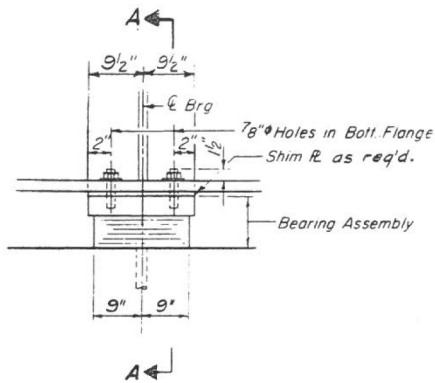
DETAIL "A"

<u>BILL OF MATERIAL</u>		
<u>Item</u>	<u>Unit</u>	<u>Quantity</u>
<u>Elastomeric Bearing Assembly Type II</u>	<u>Each</u>	<u>14</u>

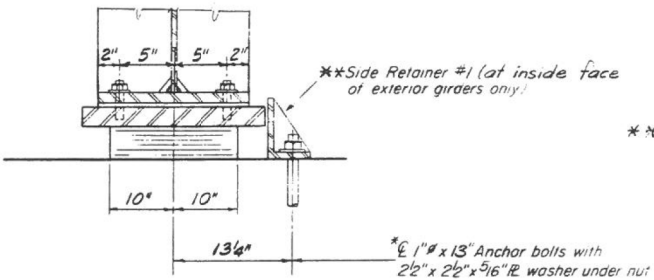
W. ABUT., E. AND W. BRG.-PIER #2
AND W. BRG.-PIER #4
BEARING DETAILS
F.A.S. RTE. 400 SECTION 43V
KNOX COUNTY
STA. 75+40.97
STAGE I

*EXISTING PLANS
FOR INFORMATION ONLY*

DESIGNED	MNM	1/12/21
DRAWN	RSJ	05/06/21
REVIEWED	MNM	01/24/2022



ELEVATION AT PIER #1

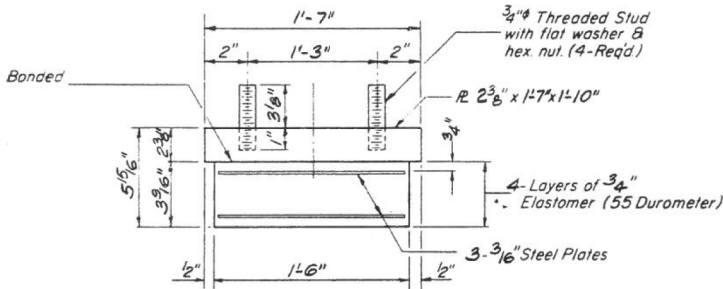


SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

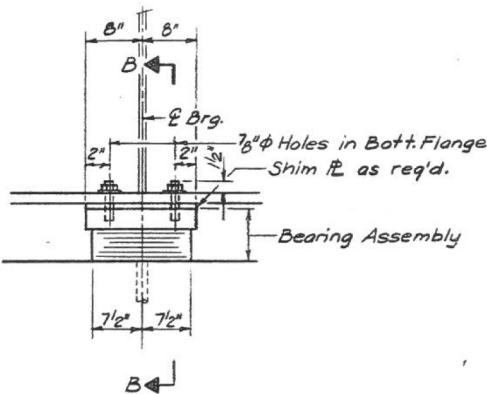
** See Sht. #23 for detail of Side Retainer #1.

*Note: After girders have been erected holes at expansion bearings shall be drilled and anchor bolts grouted in place. Anchor bolts at fixed bearings may be built into the masonry. See Sht. #27 for drilled anchor bolt details.

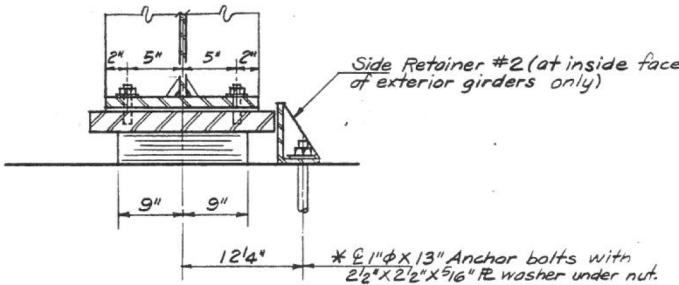


BEARING ASSEMBLY
(7-Required)

Note: Shim plates shall not be placed under Bearing Assembly.

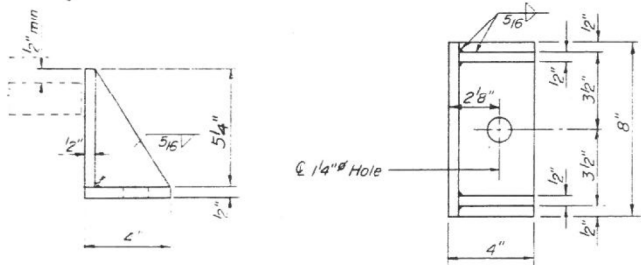


ELEVATION AT PIER #3

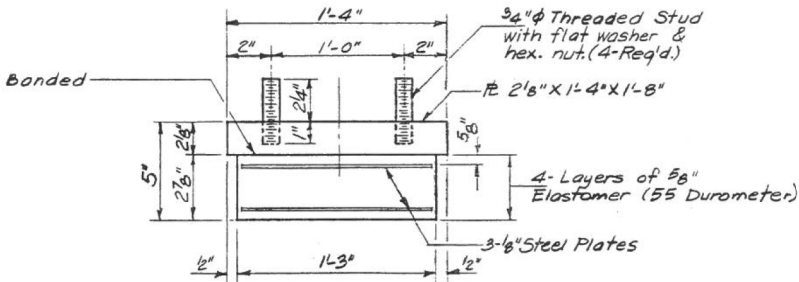


SECTION B-B

TYPE I ELASTOMERIC EXP. BRG.



SIDE RETAINER #2
(44 Required)



BEARING ASSEMBLY
(7 Required)

Note: Shim plates shall not be placed under Bearing Assembly.

BILL OF MATERIAL

Item	Unit	Quantity
Elastomeric Bearing Assembly, Type I	Each	14

PIER #1 AND PIER #3
BEARING DETAILS
F.A.S. RTE. 400 SECTION 43VB
KNOX COUNTY
STA. 75+40.97
STAGE I

EXISTING PLANS

FOR INFORMATION ONLY

DESIGNED	1/12/21
DRAWN	05/06/21
CHECKED	07/24/2022
REVIEWED	

I:\18jobs\18L0058A\CAD\Struct\Sheet\Existing Plans_9b.dgn



USER NAME = Johns00944
PLOT SCALE = 0.2:0000 ' = 1" = 1'
PLOT DATE = 2/3/2022

DESIGNED - MNM
CHECKED - MNM
DRAWN - RSJ
CHECKED - 01/24/2022

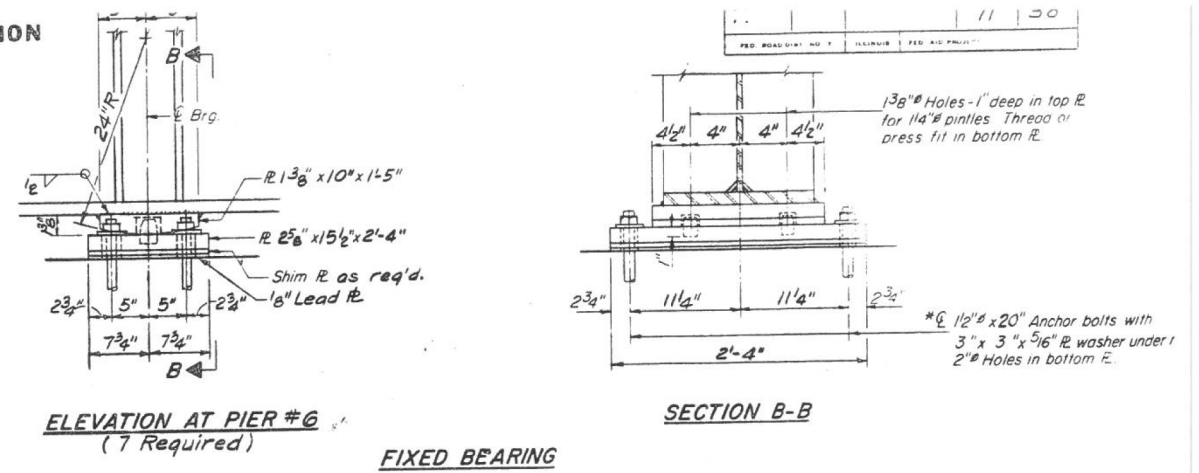
REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
SN 048-3286

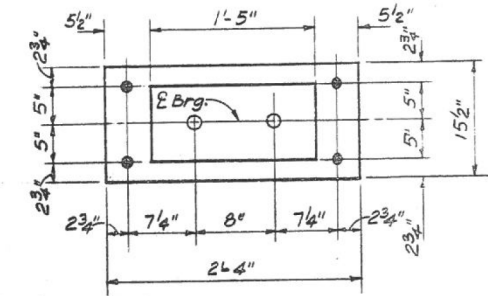
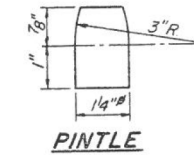
SHEET NO. 49 OF 61 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	65
			CONTRACT NO.	89819
			ILLINOIS FED. AID PROJECT	4

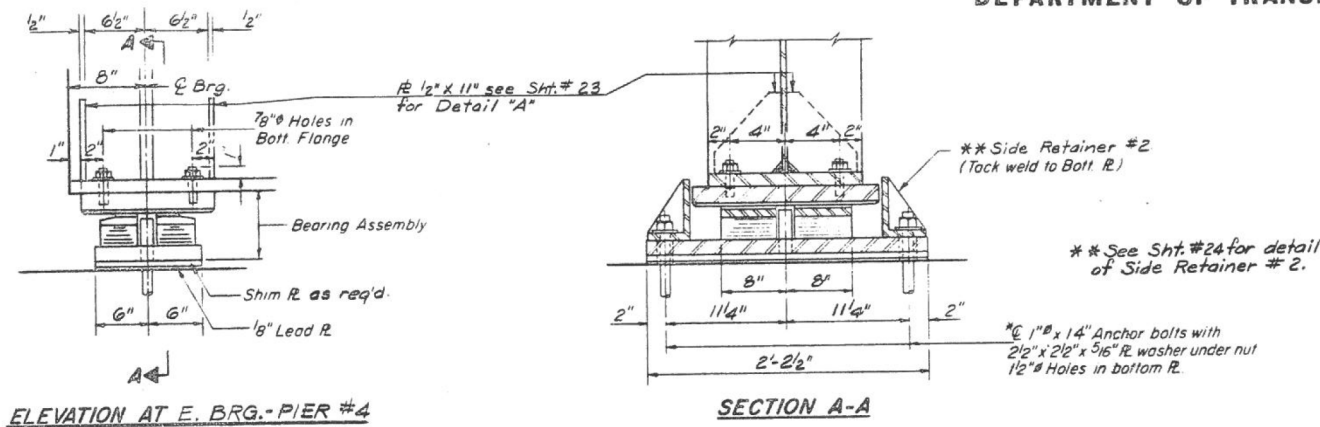


ELEVATION AT PIER #6
(7 Required)

FIXED BEARING



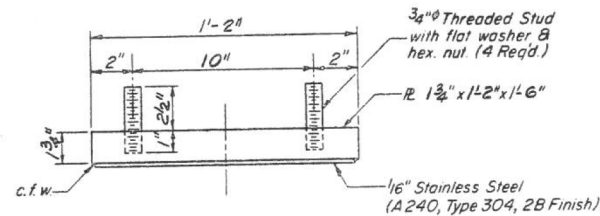
PLAN - BOTTOM PLATE



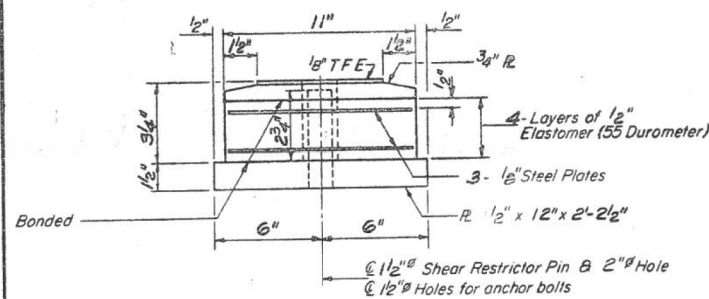
ELEVATION AT E. BRG.-PIER #4

SECTION A-A

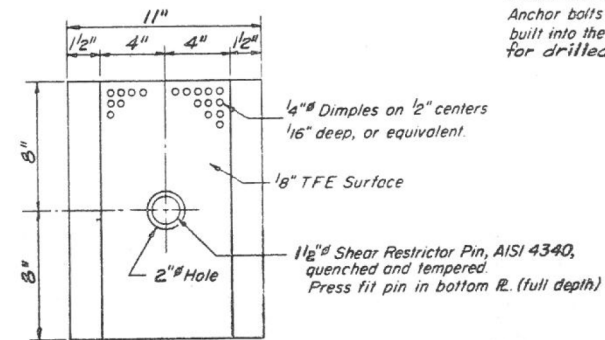
TYPE III ELASTOMERIC EXP. BRG.



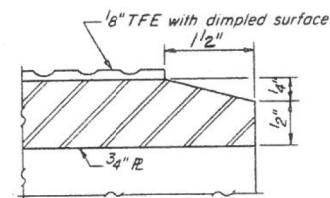
TOP BEARING ASSEMBLY



BOTTOM BEARING ASSEMBLY
(7 Required)



PLAN-TFE ELASTOMERIC BRG.



SECTION THRU TFE

**Note: After girders have been erected holes at expansion bearings shall be drilled and anchor bolts grouted in place. Anchor bolts at fixed bearings may be built into the masonry. See Sht.#27 for drilled anchor bolt details.*

Note: The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces

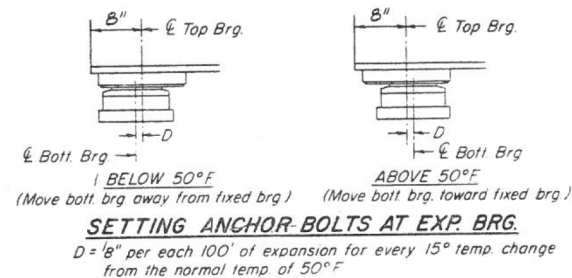
Bonding of 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

<u>BILL OF MATERIAL</u>		
Item	Unit	Quantity
Elastomeric Bearing Assembly, Type III	Each	7

E. BRG-PIER #4 AND PIER #6
BEARING DETAILS
F.A.S. RTE. 400 SECTION 43 V
KNOX COUNTY
STA. 75+40.97
STAGE I

*EXISTING PLANS
FOR INFORMATION ONLY*

DESIGNED <i>David Burdick</i>	EXAMINED <i>James T. Rayburn</i>
CHECKED <i>Thomas J. Domagala</i>	PASSED <i>[Signature]</i>
DRAWN <i>E. V. Taylor</i>	APPROVED <i>[Signature]</i>
CHECKED <i>D.B. TSD</i>	

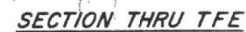


SETTING ANCHOR-BOLTS AT EXP. BRG.

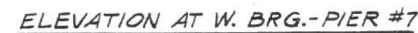
$D = 1/8"$ per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F



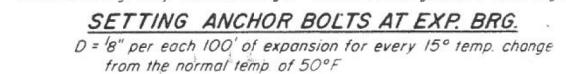
TYPE II TFE ELASTOMERIC EXP. BRG.



**Note: After girders have been erected holes at expansion bearings shall be drilled and anchor bolts grouted in place. Anchor bolts at fixed bearings may be built into the masonry. See Sht. #27 for drilled anchor bolt details.*



TYPE II TFE ELASTOMERIC EXP. BRG.



BOTTOM BEARING ASSEMBLY
(7 - Required)

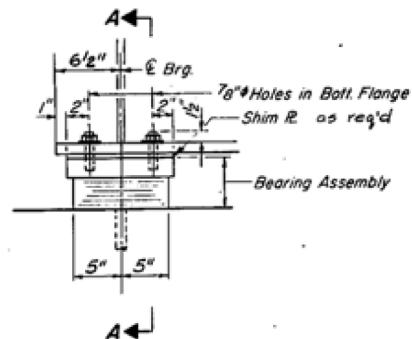
PIER #5 AND W. BRG. - PIER #7
BEARING DETAILS
F.A.S. RTE. 400 SECTION 43VB
KNOX COUNTY
STA. 75 + 40.97
STAGE IV

~~EXISTING PLANS~~
~~FOR INFORMATION ONLY~~

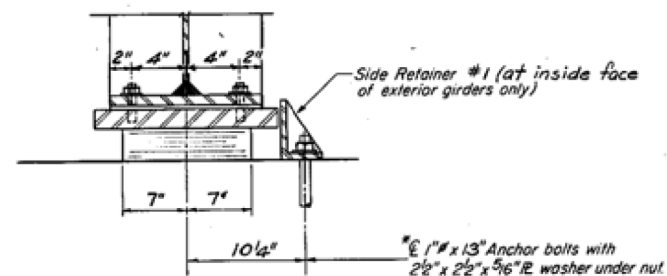
DESIGNED	MNM	1/12/21
DRAWN	RSJ	05/06/21
REVIEWED	MNM	01/24/2022

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

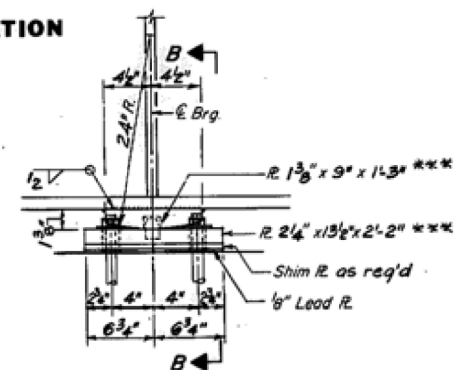
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
18	400	BR	35	21
FED. AID DIST. NO. 1	ILLINOIS	FED. AID PROJECT		37 SHEETS



ELEVATION AT EAST BRG. - PIER #7
& EAST BRG. - PIER #10
TYPE I ELASTOMERIC EXP. BRG.

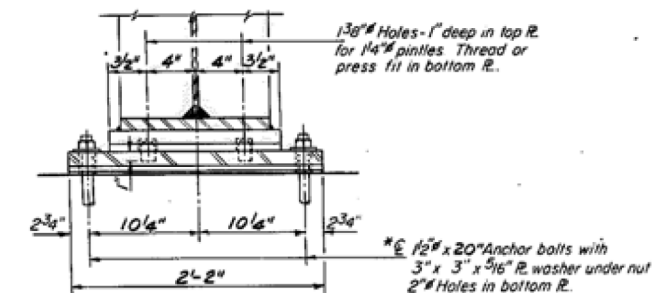


SECTION A-A

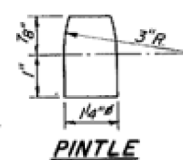


ELEVATION AT PIER #8
& PIER #11

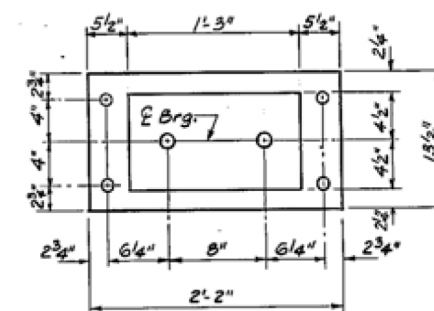
FIXED BEARING



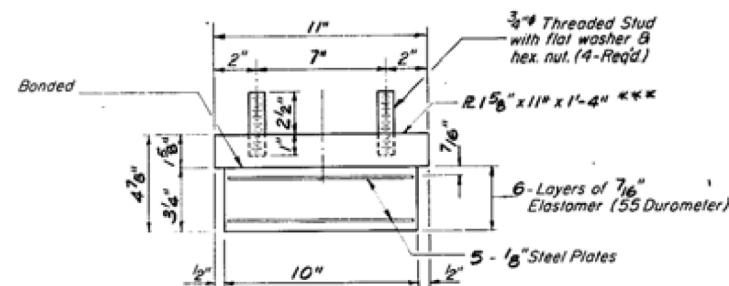
SECTION B-B



PINTLE

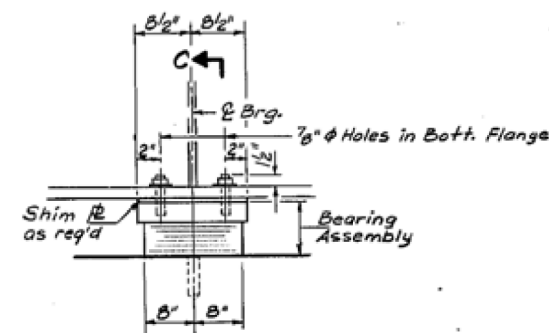


PLAN - BOTTOM PLATE



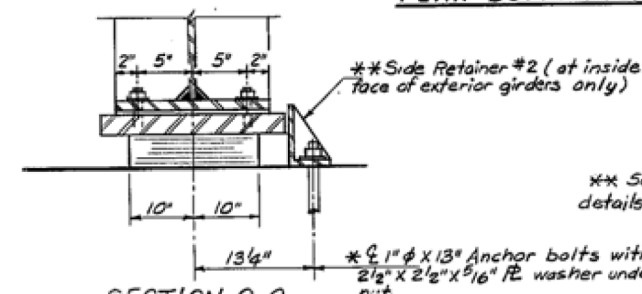
BEARING ASSEMBLY
(14 Required)

Note: Shim plates shall not be placed under Bearing Assembly.



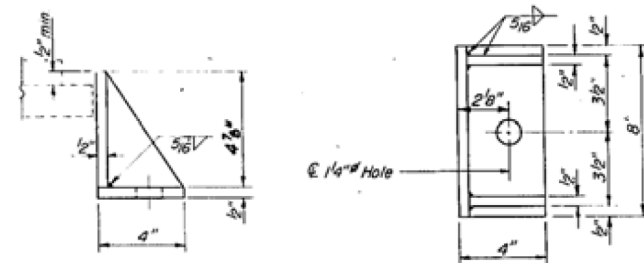
ELEVATION AT PIER #9
& PIER #12

TYPE I ELASTOMERIC EXP. BRG.



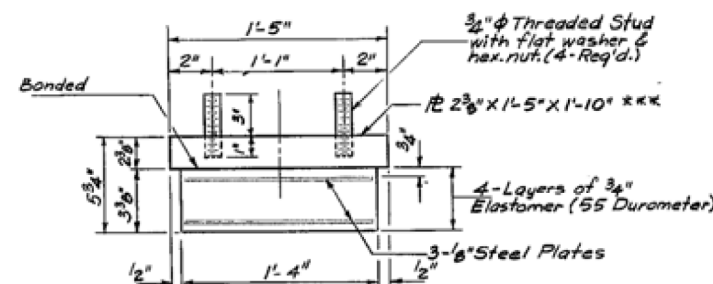
SECTION C-C

** See sheet #22 for details of Side Retainer #2.



SIDE RETAINER #1
(6 Required)

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



BEARING ASSEMBLY
(14 Required)

Note: Shim plates shall not be placed under Bearing Assembly.

BILL OF MATERIAL

Item	Unit	Quantity
Elastomeric Bearing Assembly, Type I	Eq.	20

*** Plates shall be AASHTO M-222.

EAST BEARINGS - PIER #7,
EAST BEARINGS - PIER #10,
PIER #8, PIER #9, PIER #11
AND PIER #12
BEARING DETAILS
F.A.S. RTE. 400 SECTION 43VB
KNOX COUNTY
STA. 75+40.97
STAGE II

DESIGNED	Thomas J. Demagala	July 25, 1984
CHECKED	John R. Abancho	
DRAWN	E. V. Taylor	
CHECKED	TJD	GRN
APPROVED		

I-2-EI 6-1-82

EXISTING PLANS
FOR INFORMATION ONLY

DESIGNED	1/12/21
DRAWN	05/06/21
REVIEWED	07/24/2022

I:\18\job\18L0058A\CAD\Struct\Sheet\Existing Plans\18L0058A.dgn



USER NAME	= Johns00944
DESIGNED	- MNM
CHECKED	- MNM
DRAWN	- RSJ
CHECKED	- 01/24/2022
REVIS	-

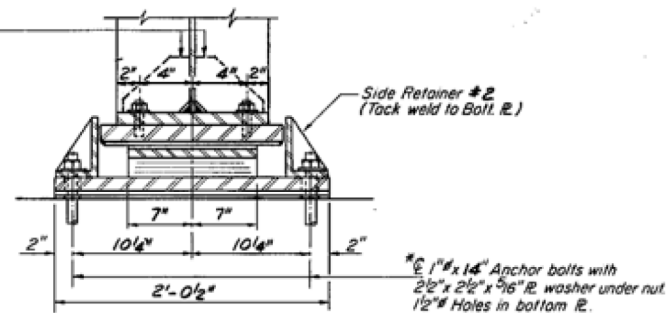
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
SN 048-3286

SHEET NO. 52 OF 61 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	68
			CONTRACT NO.	89819

ILLINOIS FED. AID PROJECT 4



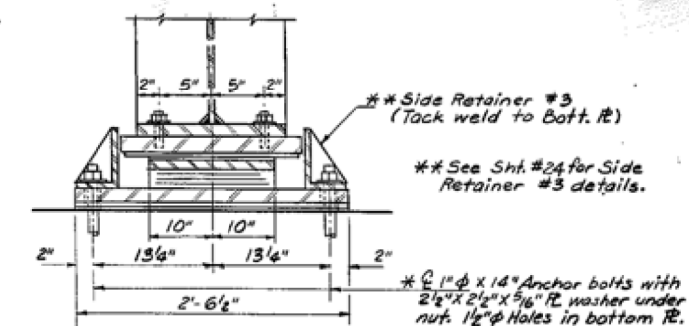
SECTION A-A

Diagram illustrating the bearing assembly with dimensions and labels:

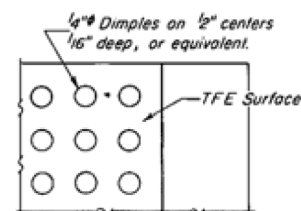
- Top Flange:** Dimensions of $7\frac{1}{2}"$ and $7\frac{1}{2}"$ are shown for the top flange sections.
- Force B:** A horizontal force B is applied to the top flange.
- Brg.:** The bearing is labeled "Brg.".
- Holes in Bottom Flange:** Dimensions of $2"$ and $2"$ are shown for the holes in the bottom flange.
- Bearing Assembly:** The bearing assembly is shown with a vertical dimension of $2"$.
- Shim R:** The shim is labeled "Shim R as req'd.".
- Lead R:** The lead is labeled " $\frac{1}{8}"$ Lead R".
- Force A:** A horizontal force A is applied to the bottom flange.

ELEVATION AT PIER #15

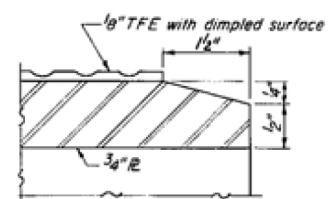
TYPE II TFE ELASTOMERIC EXP. BRG.



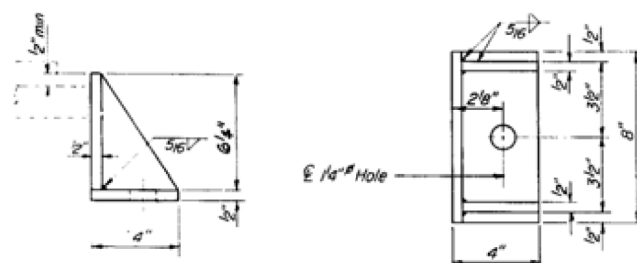
SECTION B-B



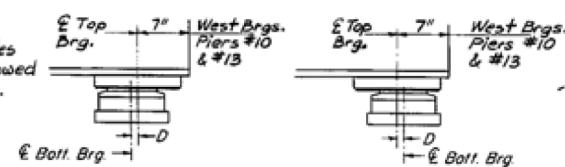
PLAN-TFE SURFACE



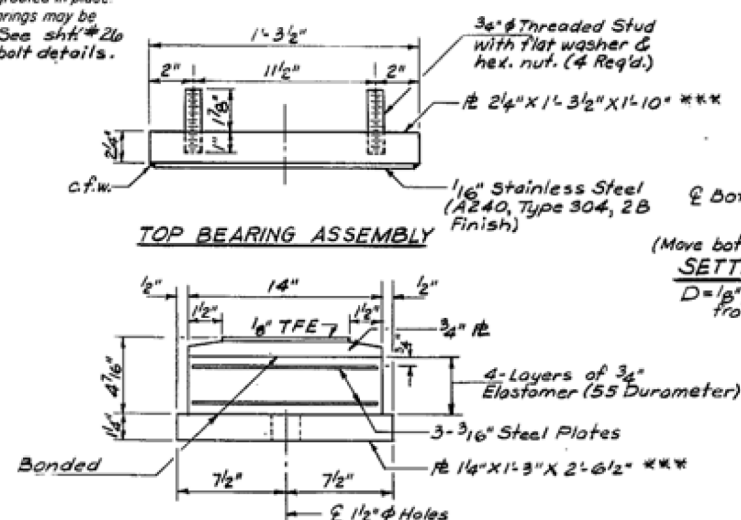
SECTION THRU TFE



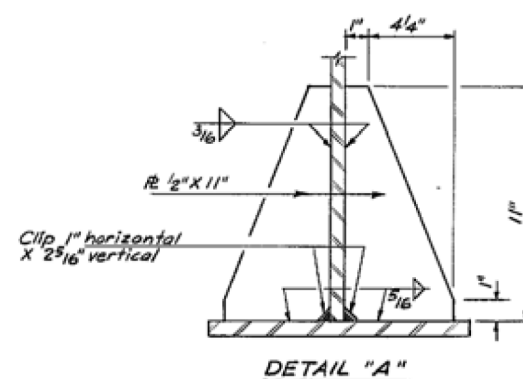
Equivalent rolled angles with stiffeners will be allowed in lieu of welded plates.



ABOVE 50°F BELOW 50°F
(Move bolt, brg. toward fixed brg.) (Move bolt, brg. away from fixed brg.)
SETTING ANCHOR BOLTS AT WEST EXP. BRG. AT PIERS #10 & #13
 $D = \frac{1}{8}"$ per each 100' of expansion for every 15° temp. change
from the normal temp. of 50°F



BOTTOM BEARING ASSEMBLY
(7 Required)



DETAIL "A"

<u>BILL OF MATERIAL</u>		
<u>Item</u>	<u>Unit</u>	<u>Quantity</u>
Elastomeric Bearing Assembly, Type II	Ea.	21

*** Plates shall be AASHTO M-222.

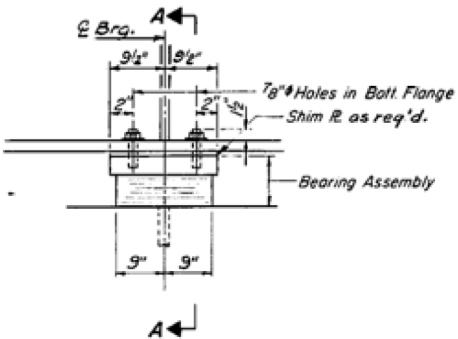
WEST BEARING-PIER #10,
WEST BEARING-PIER #13
AND PIER #15
BEARING DETAILS
F.A.S. RTE. 400 SECTION 43VB
KNOX COUNTY
STA. 75+40.97
STAGE II

~~EXISTING PLANS
FOR INFORMATION ONLY~~

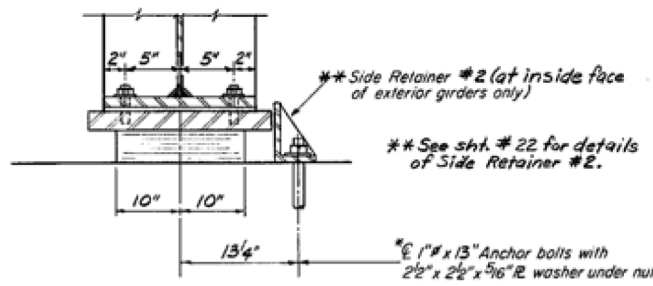
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	69
		CONTRACT NO. 89819		
ILLINOIS		FED. AID PROJECT 4		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

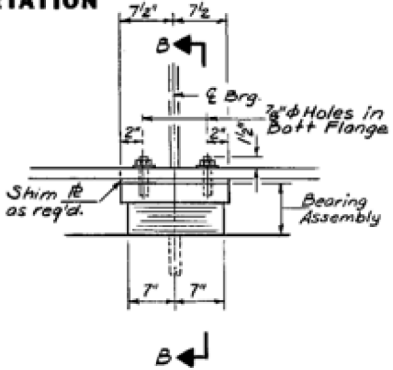
PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
18-00043-01-BR	400	KNOX	81	70
F.A.S. RTE.	400	18-00043-01-BR	KNOX	81
STA 75+40.97	STAGE II			



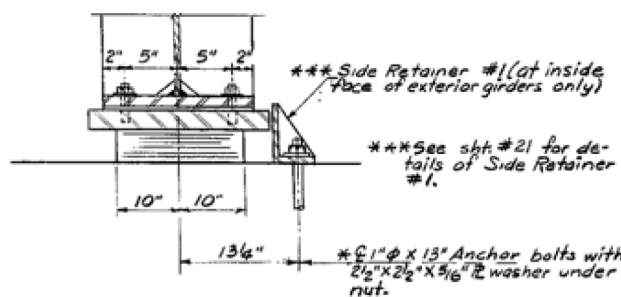
ELEVATION AT PIER #17



SECTION A-A



ELEVATION AT PIER #14

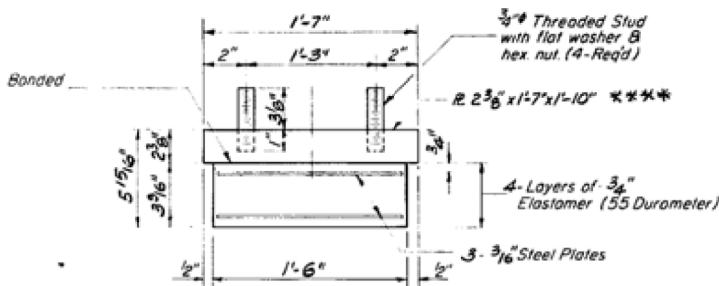


SECTION B-B

TYPE I ELASTOMERIC EXP. BRG.

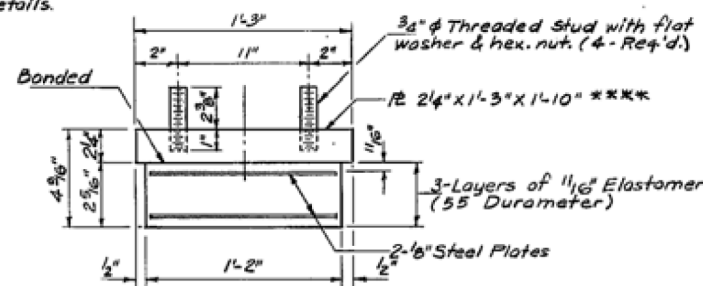
TYPE I ELASTOMERIC EXP. BRG.

*Note: After girders have been erected holes at expansion bearings shall be drilled and anchor bolts grouted in place. Anchor bolts at fixed bearings may be built into the masonry. See Sht. #26 for drilled anchor bolt details.



BEARING ASSEMBLY
(7 Required)

Note: Shim plates shall not be placed under Bearing Assembly.



BEARING ASSEMBLY
(7 Required)

Note: Shim plates shall not be placed under Bearing Assembly.

BILL OF MATERIAL

Item	Unit	Quantity
Elastomeric Bearing Assembly, Type I	Each	14

**** Plates shall be AASHTO M-222.

DESIGNED	Thomas J. Donaghy
CHECKED	Shelam R. Alvarchi
DRAWN	E. V. Taylor
CHECKED	TJD

July 25, 1984

EXAMINED

PASSED

APPROVED

DIRECTOR OF HIGHWAYS

I-2-EI 6-1-B2

EXISTING PLANS
FOR INFORMATION ONLY

PIER #14 & PIER #17
BEARING DETAILS
F.A.S. RTE. 400 SECTION 43VB
KNOX COUNTY
STA 75+40.97
STAGE II

DESIGNED	1/12/21
DRAWN	05/06/21
REVIEWED	07/24/2022

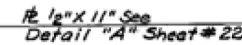
18-00043-01-BR	400	KNOX	81	70
F.A.S. RTE.	400	18-00043-01-BR	KNOX	81
STA 75+40.97	STAGE II			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
SN 048-3286

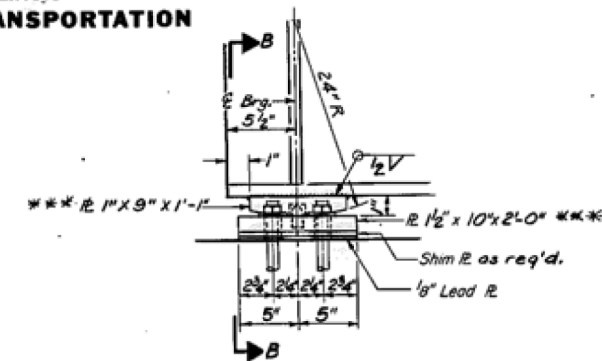
SHEET NO. 54 OF 61 SHEETS

ILLINOIS FED. AID PROJECT 4

[illegible]

*** See Sht. #22 for detail
of Side Retainer #2.*

* $\frac{1}{2}$ " x 14" Anchor bolts with
2 1/2" x 2 1/2" x 5/16" R. washer under nut.
1 1/2" Holes in bottom R.



13g# Holes-1" deep in top E
for 14g# pintles. Thread or
press fit in bottom E.

23g#

9 1/4"

2'-0"

9 1/4"

23g#

3"

3"

3"

3"

13g#

1"

2"

13g# x 13g# Anchor bolts with
3" x 3" x 5/16" E washer under nut
2" Holes in bottom E.

Technical drawing of a rectangular plate with dimensions and a central hole. The overall dimensions are 23 1/2" by 10". The central hole is 6" by 6". The distance from the center of the hole to the nearest corner is 5 1/2" horizontally and 4 1/2" vertically. The distance from the center of the hole to the nearest edge is 6 1/4" horizontally and 2 3/4" vertically. The distance from the center of the hole to the nearest corner is 5 1/2" horizontally and 4 1/2" vertically. The distance from the center of the hole to the nearest edge is 6 1/4" horizontally and 2 3/4" vertically. The distance from the center of the hole to the nearest corner is 5 1/2" horizontally and 4 1/2" vertically. The distance from the center of the hole to the nearest edge is 6 1/4" horizontally and 2 3/4" vertically.

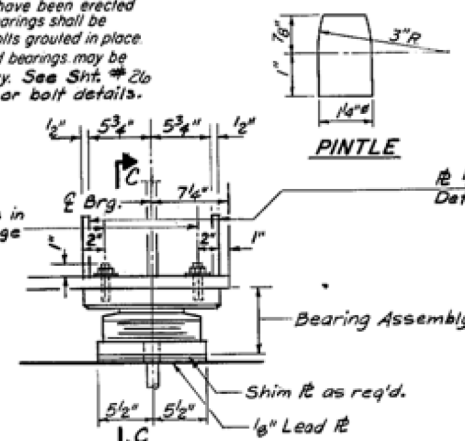
Technical drawing of a stainless steel bracket. The drawing shows a side view of the bracket with the following dimensions and callouts:

- Overall length: $11\frac{3}{4}"$
- Distance from left end to first hole: $2"$
- Distance between holes: $7\frac{3}{4}"$
- Distance from second hole to right end: $2"$
- Height of the bracket: $1\frac{5}{8}"$
- Width of the bracket: $1\frac{1}{2}"$
- Material: $\frac{1}{8}"$ Stainless Steel (A240, Type 304, 2B Finish)
- Fasteners: $\frac{3}{8}"$ Threaded Stud with flat washer & hex nut (4 Req'd)
- Mounting holes: $R\ 1\frac{1}{8}" \times 1\frac{3}{4}" \times 1\frac{1}{4}"$
- Label: c.f.w.

Diagram illustrating a TFE surface with dimples. The surface is divided into two regions. The left region contains a 3x3 grid of circles representing dimples. A label points to one of these circles: $\frac{1}{4}$ " Dimples on $\frac{1}{2}$ " centers $\frac{1}{16}$ " deep, or equivalent. The right region is labeled "TFE Surface".

[illegible]

*Note: After girders have been erected holes at expansion bearings shall be drilled and anchor bolts grouted in place. Anchor bolts at fixed bearings may be built into the masonry. See Sht. #26 for drilled anchor bolt details.



See
Detail "A" Sheet # 22

[illegible]

* 4 1" ϕ x 14" Anchor bolts with
2 1/2" x 2 1/2" x 5/16" fl. washer under
nut. 1 1/2" ϕ Holes in bott. fl.

Technical drawing of a stainless steel plate. The plate has a total width of 12 1/2" and a total length of 16". It is made of 1/8" thick stainless steel (A240, Type 304, 2B Finish). The plate features two vertical slots, each 2" wide and 8 1/2" long, with a 1/8" gap between them. The plate is secured with 3/4" diameter threaded studs with flat washers and hex. nuts (4 Req'd.). The plate is labeled "a.f.w." on the left side.

Technical drawing of a repair patch for a concrete slab. The patch is 10 inches wide and 5 1/2 inches high. It consists of a 1/8 inch TFE layer on top of 8 layers of 7/16 inch elastomer (55 Durometer). The patch is bonded to a 7/16 inch steel plate. The steel plate is 1 inch wide and 11 inches long, with 2 0 1/2 inch holes. The patch is 5 1/2 inches wide and 5 1/2 inches high. The drawing shows the patch being applied to a concrete slab, with the steel plate and elastomer layers visible.

BOTTOM BEARING ASSEMBLY
(7 Required)

Item	Unit	Quantity
Elastomeric Bearing Assembly, Type II	Each	14

*美版 Plates shall be AASHTO M-222.

EAST BEARINGS-PIER #13,
WEST & EAST BEARINGS-PIER #16
AND EAST ABUTMENT
BEARING DETAILS
F.A.S. RTE. 400 SECTION 43VB
KNOX COUNTY
STA. 75+40.97
STAGE II

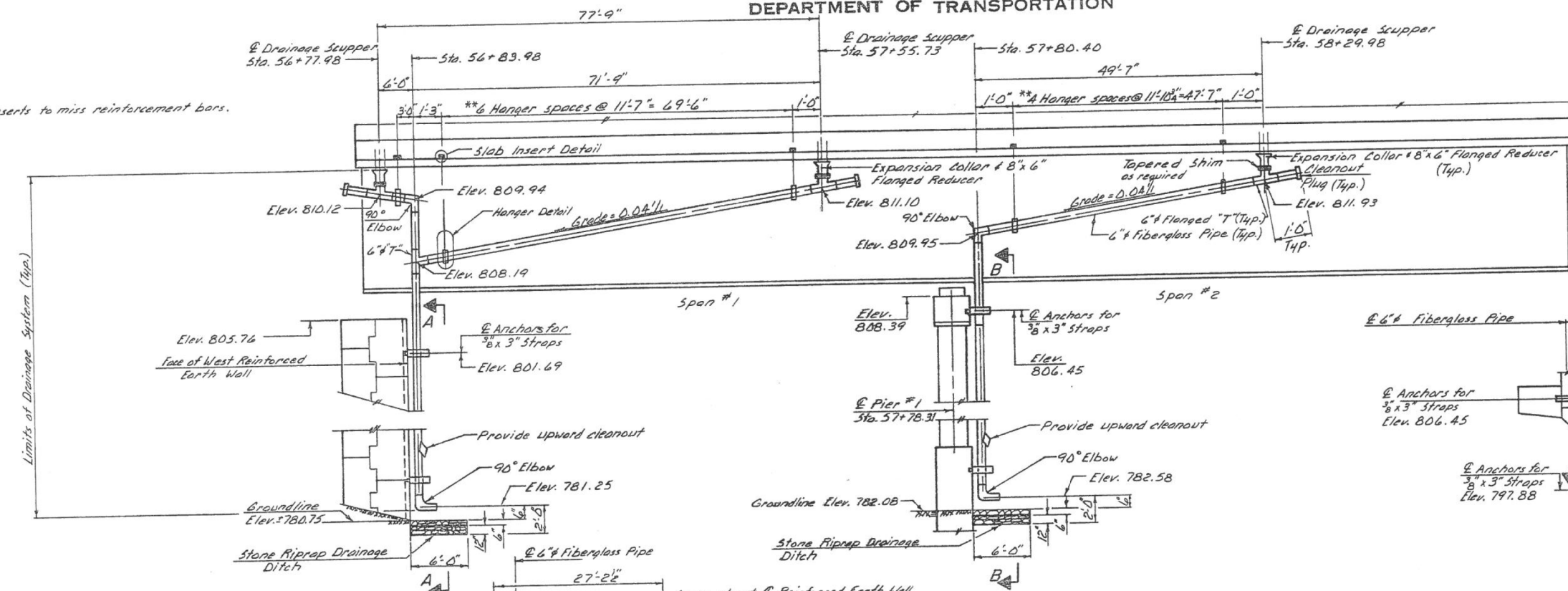
~~EXISTING PLANS~~
~~FOR INFORMATION ONLY~~

DESIGNED	Thomas J. Domagala
CHECKED	Shelley R. Ahnlich
DRAWN	E. V. Taylor
CHECKED	TJD

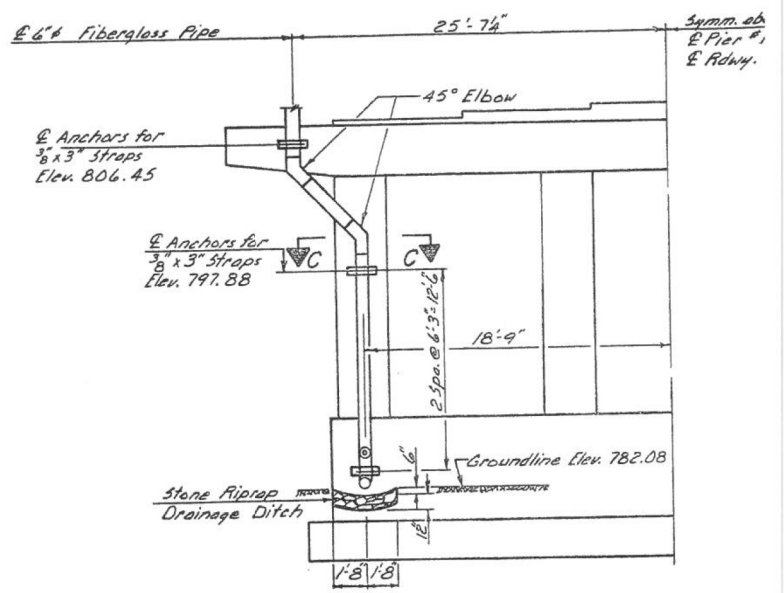
EXAMINED *James T. Kauter*
PASSED *RTV*
APPROVED

Two diagrams illustrating the setting of anchor bolts for expansion joints. The left diagram is labeled 'ABOVE 50°F' and the right diagram is labeled 'BELOW 50°F'. Both diagrams show a cross-section of a wall with an expansion joint. In the 'ABOVE 50°F' diagram, the anchor bolt is set 'F. Abut. W. Brg. Pier #16' and the joint is 'E. Top Brg. 6 3/8" 7/8"'. In the 'BELOW 50°F' diagram, the anchor bolt is set 'F. Abut. W. Brg. Pier #16' and the joint is 'E. Top Brg. 6 3/8" 7/8"'. The diagrams also show the 'E. Bolt. Brg.' and the 'D' dimension.

** Space inserts to miss reinforcement bars.



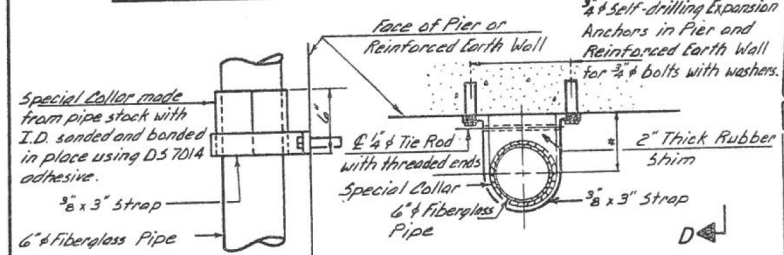
ELEVATION - UNIT #1
(Looking North)



VIEW B-B

Notes:
All cast iron parts shall be grey iron conforming to the requirements of AASHTO M105, Class 30.
Bolts, washers and nuts for Drainage Scupper "Drainage System" shall conform to the requirements of ASTM A-307.
Fiberglass pipe shall conform to ASTM: D2996, with short-time rupture strength has tensile stress of 30,000 psi. minimum.
The surface of the fiberglass pipe shall be free bond inhibiting agents.
Pay item "Drainage System" shall include providing & installing 6" pipe, 6" T's, elbows, expansion collar & reducers, cleanouts, inserts, hangers, straps, all other necessary items to complete the under drainage. See Special Provisions.
Stone Riprap Drainage Ditches shall be as shown or as directed by the Engineer.
The "Drainage System" & Scuppers shall be painted with Lead Silico Chromate painting system specified for steel.
Cost of the Main Grate, Frame, Bolts, Washers and Nuts including complete installation of Scupper shall be paid for at the unit bid price "Frames and Grates - Special Type II".

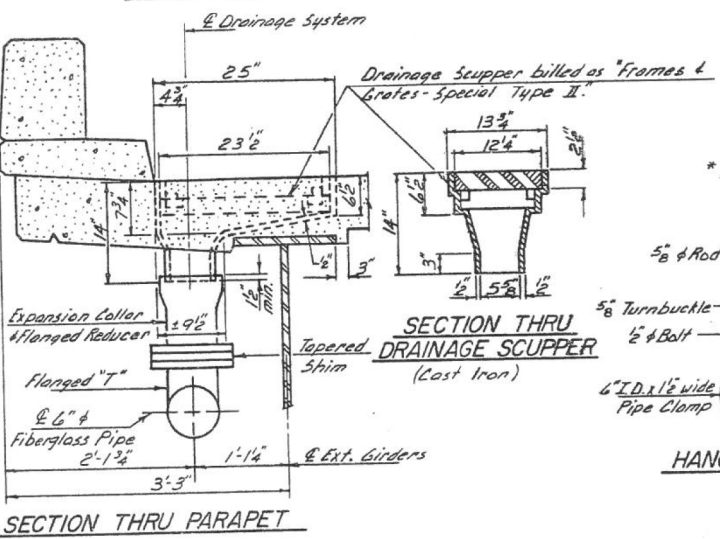
SLAB INSERT DETAIL



VIEW D-D

SECTION C-C

VIEW A-A

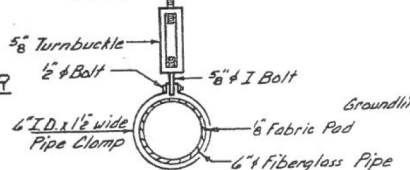


RUBBER SHIM DETAIL

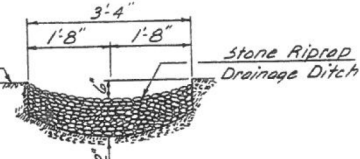


3/8" x 3" STRAP DETAIL (40 Required)

HANGER DETAIL



SECTION THRU DRAINAGE DITCH (Cost is incidental to Drainage System)



DESIGNED	David Burdick
CHECKED	Thomas Donaghy
DRAWN	R. Samner
CHECKED	D.B. TJD

EXAMINED	James H. Hurn
PASSED	
APPROVED	

EXISTING PLANS FOR INFORMATION ONLY

DESIGNED	1/12/21
DRAWN	05/06/21
REVIEWED	01/24/2022

\\18\jobs\18L0058A\CAD\Struct\Sheet\Existing Plans_9a.dgn



USER NAME	= Johns00944
DESIGNED	- MNM
CHECKED	- MNM
DRAWN	- RSJ
CHECKED	- 01/24/2022
REVIS	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
SN 048-3286

SHEET NO. 56 OF 61 SHEETS

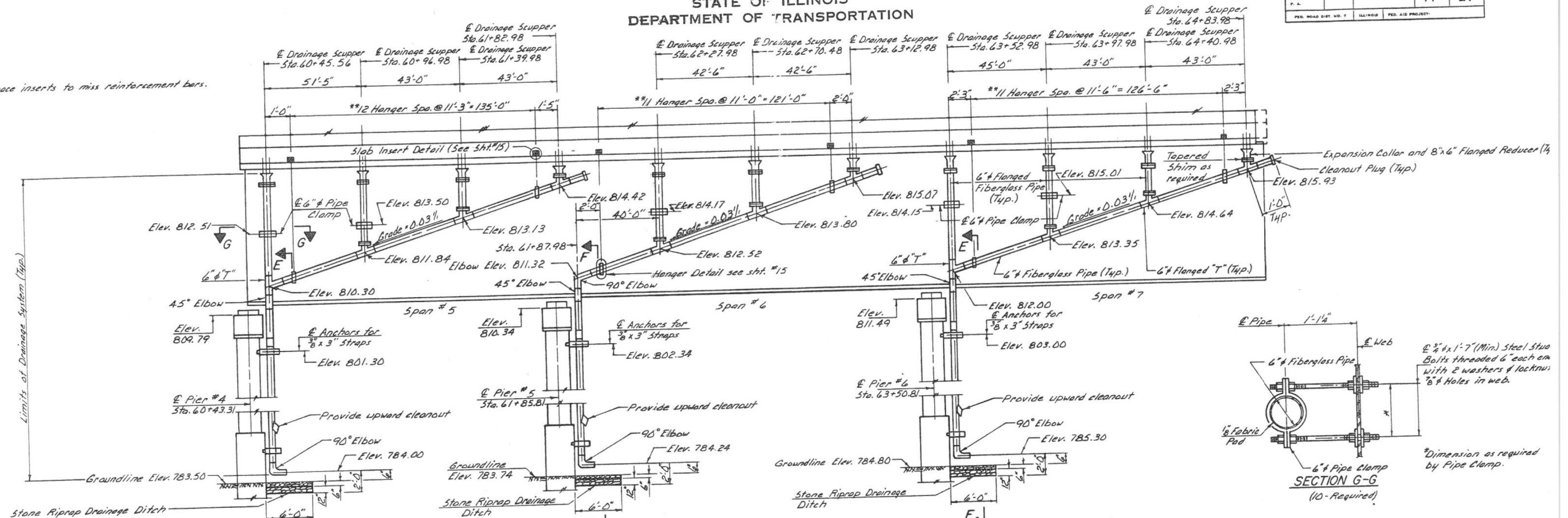
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	72
CONTRACT NO.			89819	

ILLINOIS FED. AID PROJECT 4

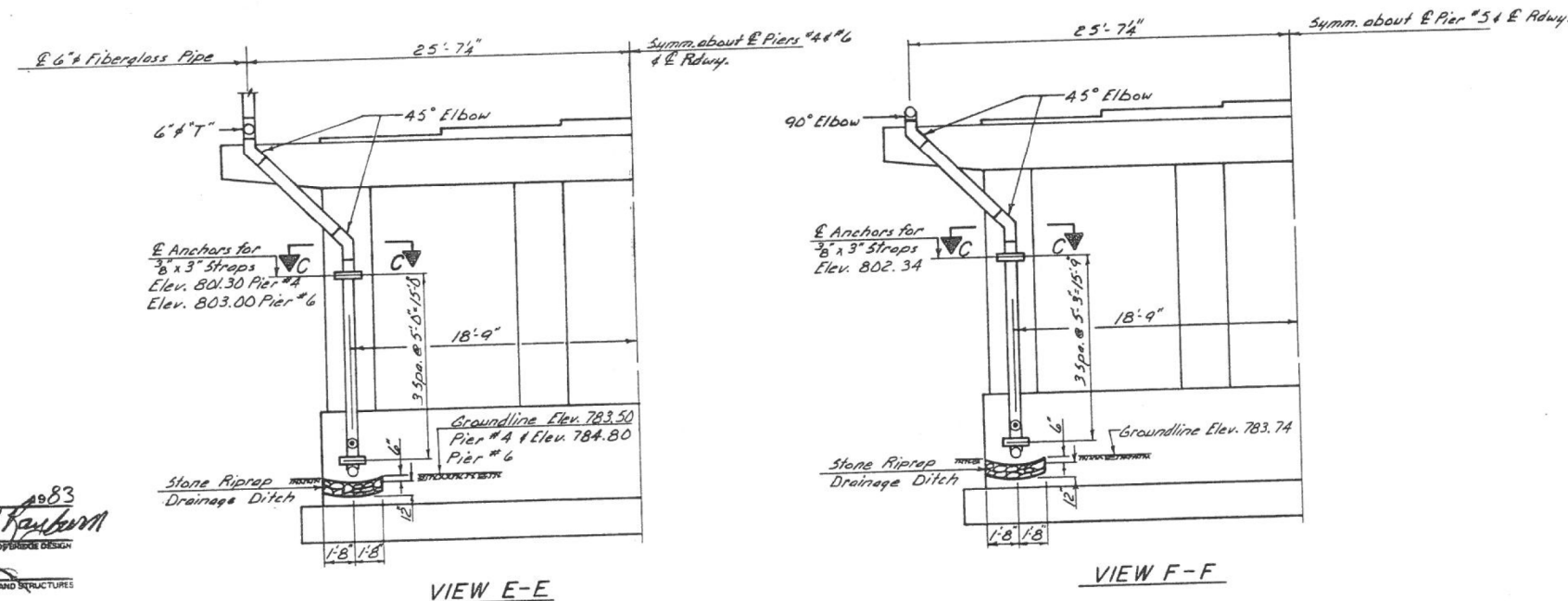
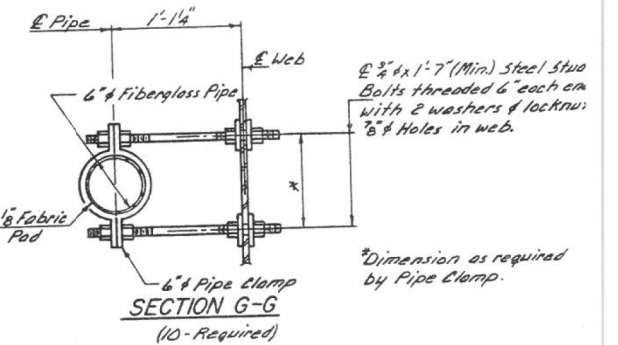
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

71 29
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT

**space inserts to miss reinforcement bars.



ELEVATION UNIT #3
(Looking North)



For Drainage System Details, Notes and Sec. C-C see sht. #15.

DRAINAGE SYSTEM-UNIT #3
F.A.S. RTE. 400 SEC. 43 VB
KNOX COUNTY
STA. 75+40.97
STAGE I

DESIGNED David Burdick
CHECKED Thomas Donagale
DRAWN R. Sommer
CHECKED D.B. TSD

Sept 26 2023
EXAMINED James J. Kaufman
PASSED
APPROVED
DIRECTOR OF HIGHWAYS

EXISTING PLANS
FOR INFORMATION ONLY

DESIGNED 1/12/21
DRAWN 05/06/21
REVIEWED 07/24/2022

\\18\jobs\18L0058A\CAD\Struct\Sheet\Existing Plans_9f.dgn



USER NAME = Johns00944
PLOT SCALE = 0.2:0000 ' = 1" = 1'
PLOT DATE = 2/3/2022

DESIGNED - MNM
CHECKED - MNM
DRAWN - RSJ
CHECKED - 01/24/2022

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
SN 048-3286

SHEET NO. 57 OF 61 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	73
CONTRACT NO.			89819	
ILLINOIS FED. AID PROJECT 4				

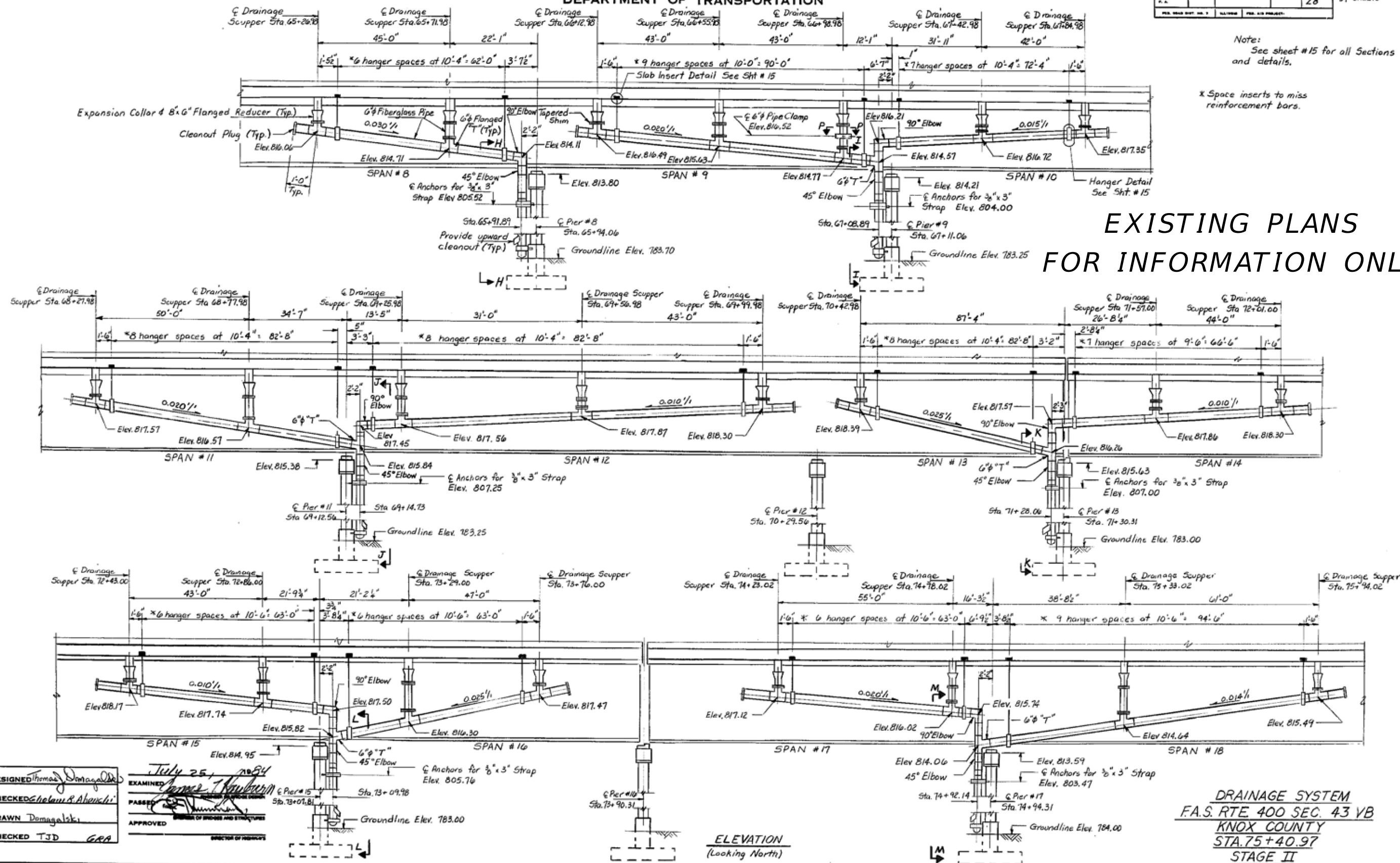
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	SHEET NO.	TOTAL SHEETS
400	18-00043-01-BR	28	37

Note:
See sheet #15 for all Sections
and details.

* Space inserts to miss
reinforcement bars.

EXISTING PLANS
FOR INFORMATION ONLY



DRAINAGE SYSTEM
F.A.S. RTE. 400 SEC. 43 VB
KNOX COUNTY
STA. 75+40.97
STAGE II

DESIGNED: Thomas Domagala
CHECKED: Chelam R. Aboukhi
DRAWN: Domagalski
CHECKED: TJD

EXAMINED: [Signature]
PASSED: [Signature]
APPROVED: [Signature]
DIRECTOR OF HIGHWAYS

ELEVATION
(Looking North)

DESIGNED: 1/12/21
DRAWN: 05/06/21
REVIEWED: 07/24/2022

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USER NAME: Johns00944
PLOT SCALE: 0.2:0000 '1' = 1'
PLOT DATE: 2/3/2022

DESIGNED: MNM
CHECKED: MNM
DRAWN: RSJ
CHECKED: 01/24/2022

REVISED: -
REVISED: -
REVISED: -
REVISED: -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
SN 048-3286

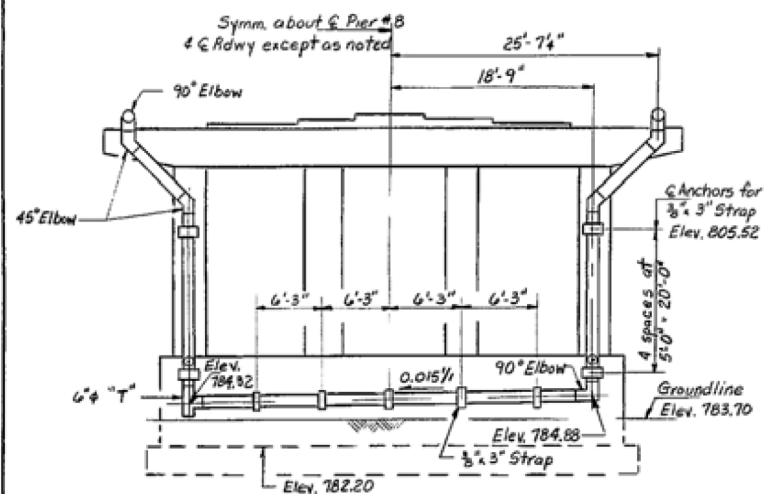
SHEET NO. 58 OF 61 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	74
				CONTRACT NO. 89819

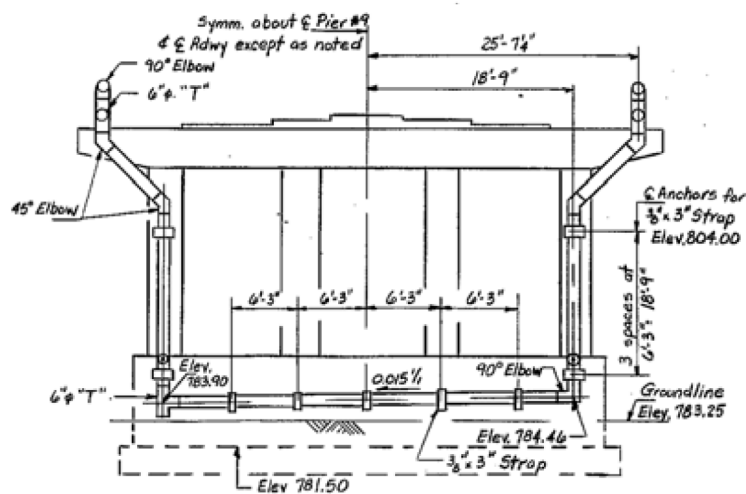
ILLINOIS FED. AID PROJECT 4

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

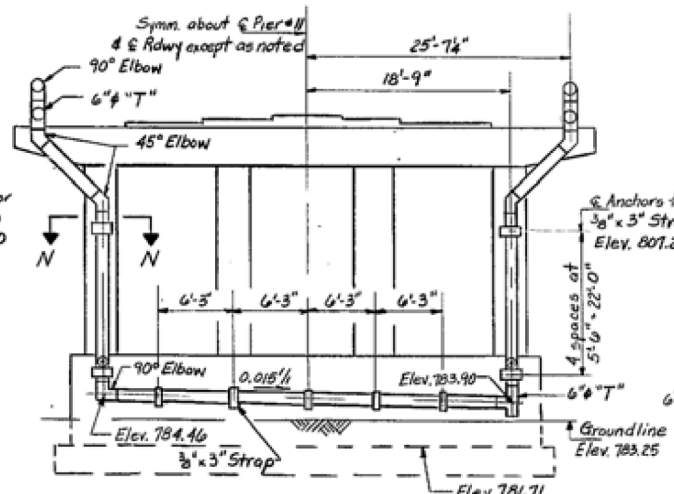
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400	18-00043-01-BR	KNOX	81	75
CONTRACT NO. 89819				



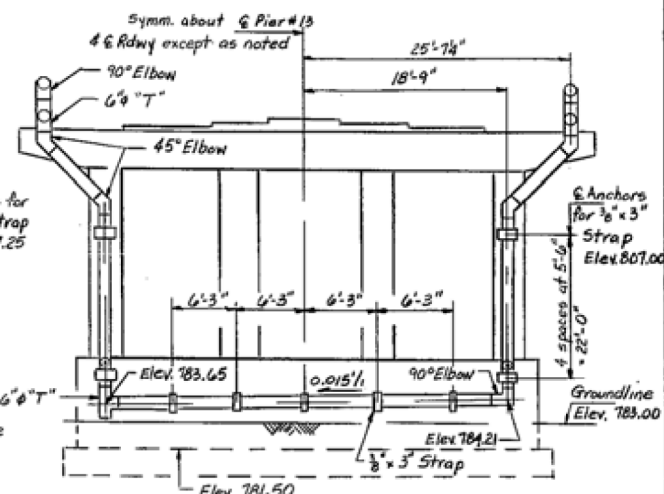
VIEW H-H
(Looking East)



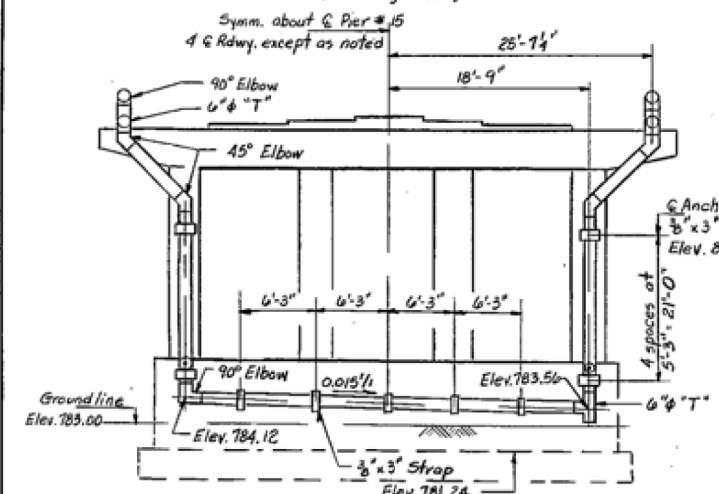
VIEW I-I
(Looking East)



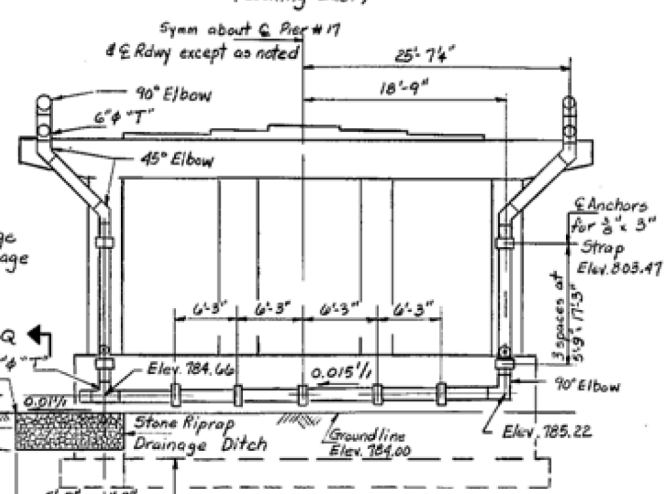
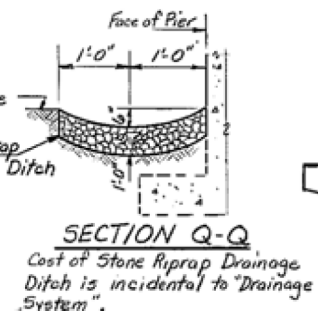
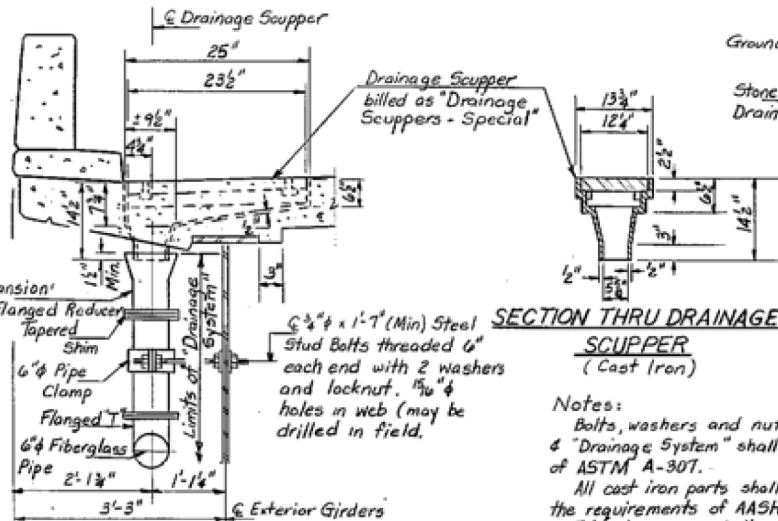
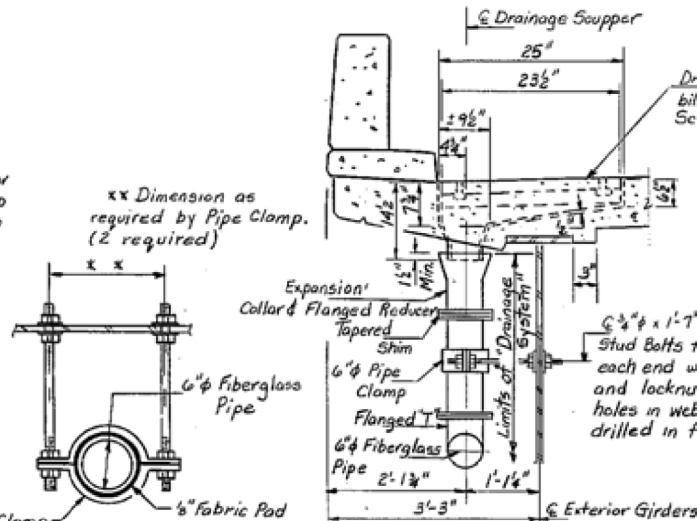
VIEW J-J
(Looking West)



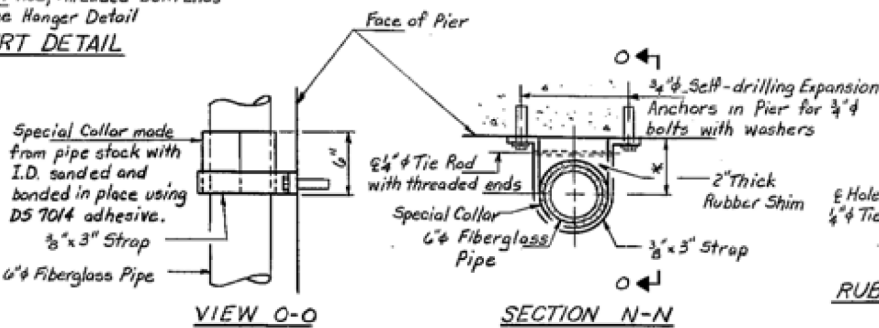
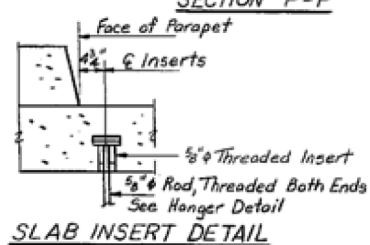
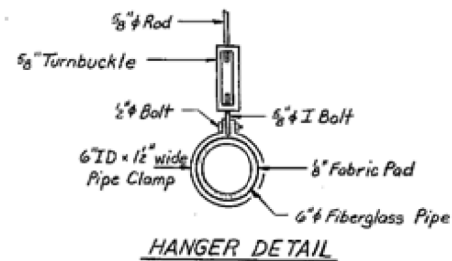
VIEW K-K
(Looking East)



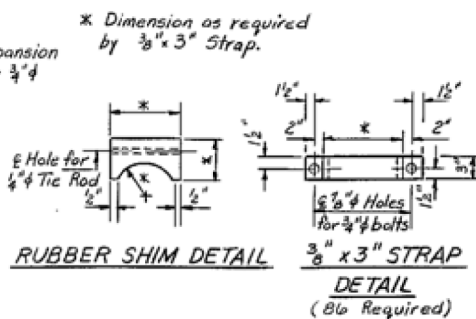
VIEW L-L
(Looking West)



VIEW M-M
(Looking East)



SECTION N-N



EXISTING PLANS
FOR INFORMATION ONLY

DRAINAGE SYSTEM DETAILS
F.A.S. RTE. 400 SEC. 43 VB
KNOX COUNTY
STA. 75 + 40.97
STAGE II

DESIGNED	Thomas J. Domagala
CHECKED	Robert A. Alanchi
DRAWN	Domagalski
CHECKED	TJD

EXAMINED	James J. Kuhn
PASSED	James J. Kuhn
APPROVED	James J. Kuhn

Special Collar made from pipe stock with I.D. sanded and bonded in place using D5 7014 adhesive.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
SN 048-3286

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	75
CONTRACT NO. 89819				

DESIGNED	1/12/21
DRAWN	05/06/21
REVIEWED	07/24/2022

I:\18jobs\18L0058A\CAD\Struct\Sheet\Existing Plans_015.dgn

USER NAME	Johns00944
DESIGNED	MNM
CHECKED	MNM
DRAWN	RSJ
CHECKED	01/24/2022

REVISION	
REVISION	
REVISION	
REVISION	

SHEET NO. 59 OF 61 SHEETS

ILLINOIS FED. AID PROJECT 4

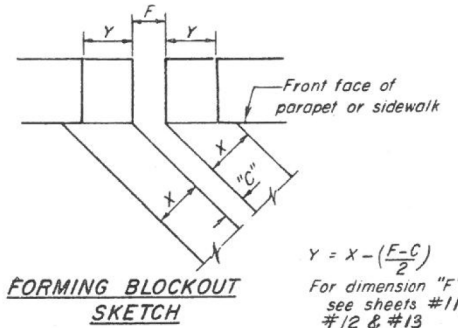
Joint Size	"C" at 50°F	"D" at 50°F
2	2"	1 1/2" min
2 1/2	2 1/2"	1 3/4" min
4	3"	2 1/2" min

INSTALLATION NOTES

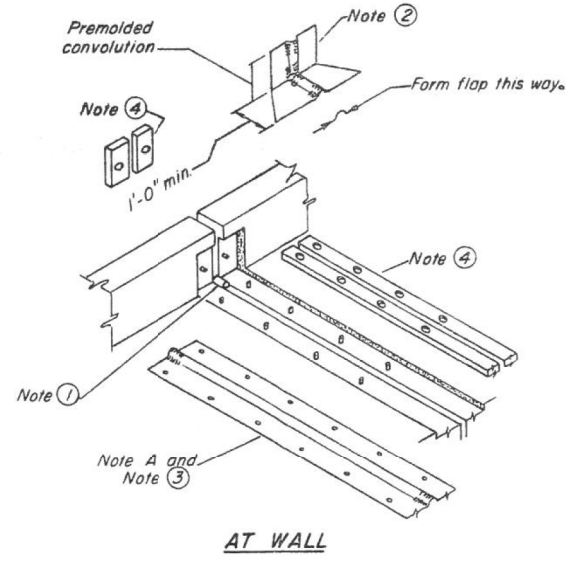
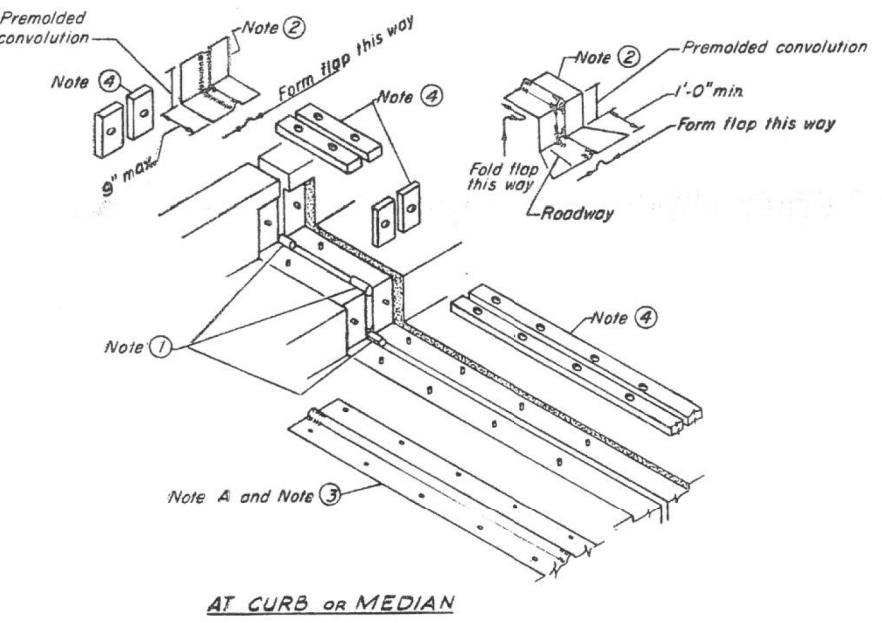
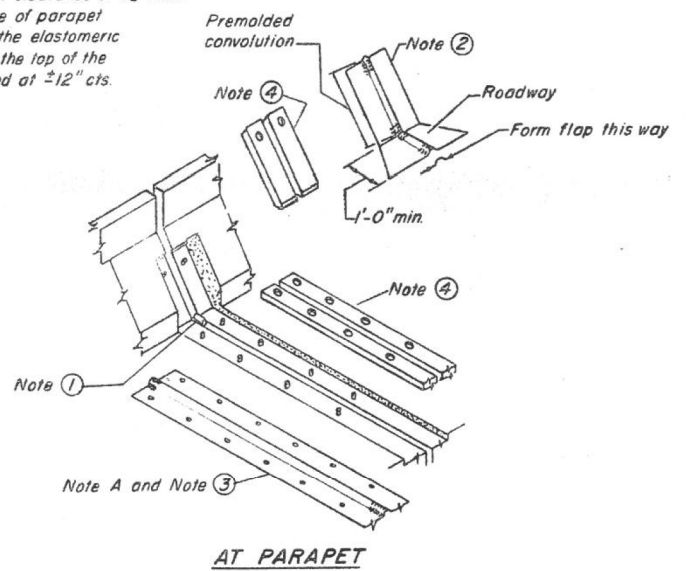
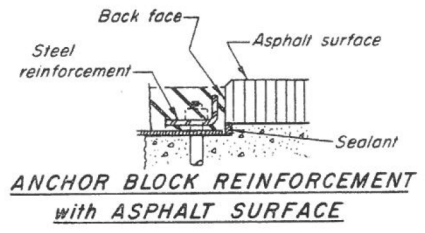
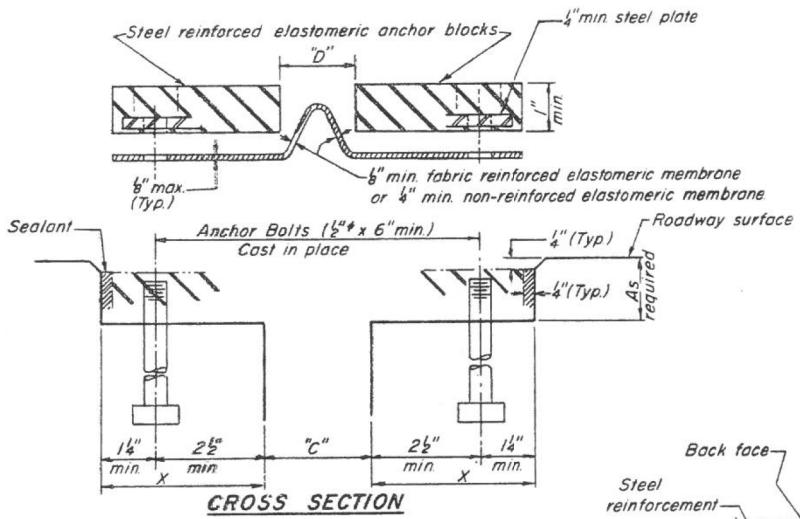
1. Install sponge mandrels into positions shown to form flap convolution.
2. Install parapet or sidewalk piece (trim roadway flap to fit before applying epoxy).
3. Install continuous seal in roadway.
4. Install anchor blocks as indicated.

NOTE A - Maximum spacing of anchor bolts shall be 12" centers

SKREW LIMITATIONS
The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews.
For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed in accordance with dimension "D", might require modifications to insure a minimum clearance of 1 1/2" from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also be installed to the top of the parapet with the anchor studs spaced at ±12" cts.

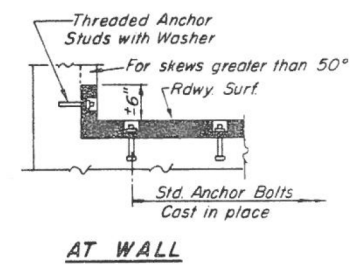
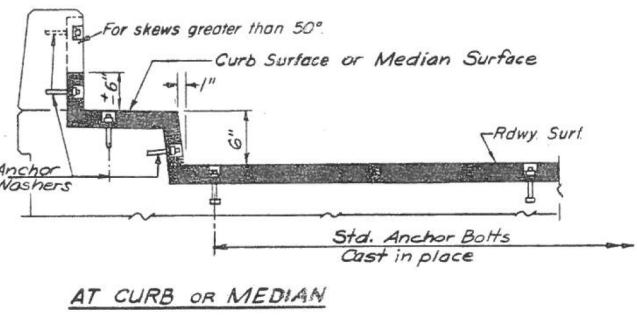
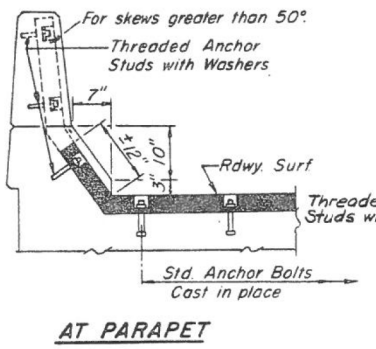


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



DESIGNED	David Burdick
CHECKED	Thomas J. Macgillivray
DRAWN	E.V. Taylor
CHECKED	D.B. TSD

SEPT 26 1983
EXAMINED
PASSED
APPROVED
DIRECTOR OF HIGHWAYS



TYPICAL END TREATMENTS

CONTINUOUS SEAL TYPE
NEOPRENE EXPANSION JOINT
For 2", 2 1/2" and 4" Movement

F.A.S. RTE. 400 SECTION 4
KNOX COUNTY
STA. 75+40.97
STAGE I

EXISTING PLANS
FOR INFORMATION ONLY

DESIGNED	1/12/21
DRAWN	05/06/21
REVIEWED	07/24/2022

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PLOT DATE	= 2/3/2022	DRAWN	- RSJ	REVISED	-
		CHECKED	- 01/24/2022	REVISED	-

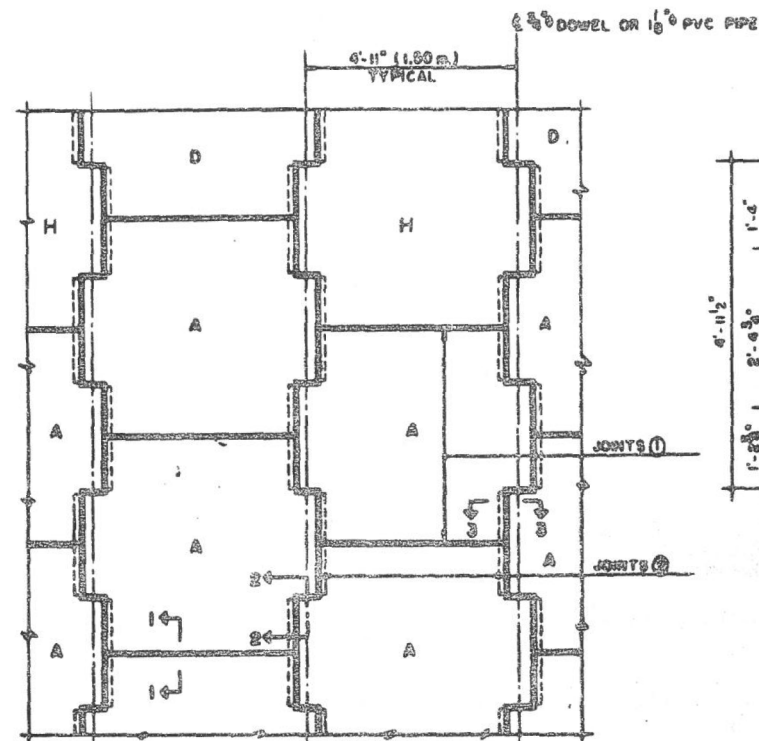
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
SN 048-3286

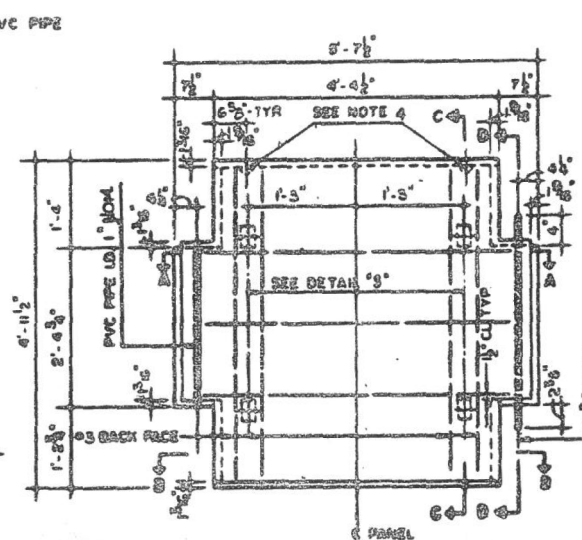
SHEET NO. 60 OF 61 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	76
CONTRACT NO.			89819	
ILLINOIS			FED. AID PROJECT 4	

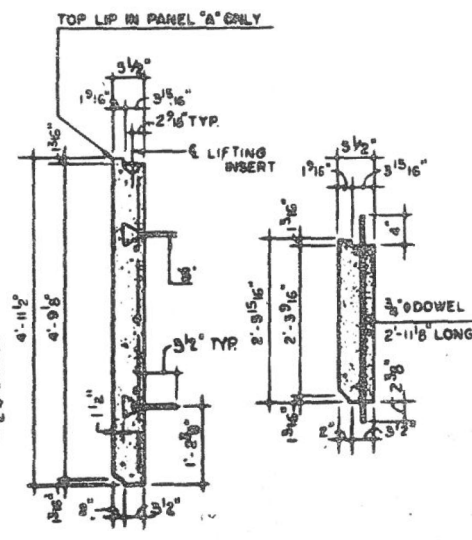
EXISTING PLANS FOR INFORMATION ONLY



TYPICAL PANEL LAYOUT
SCALE 1/2" = 1'-0"

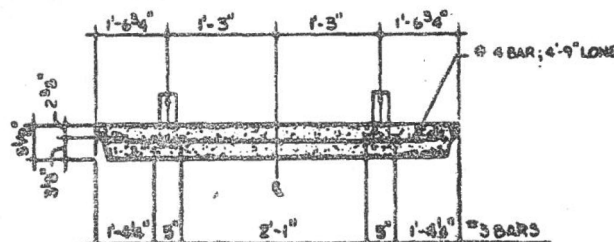


PANEL TYPE A-BH
FRONT VIEW

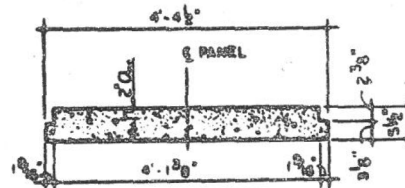


SECTION C-C

SECTION D-D



SECTION A-A

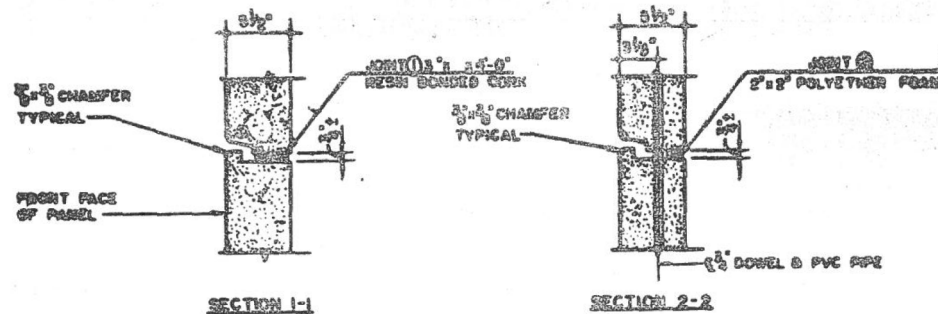


SECTION B-B

TYPICAL PANEL DETAILS
SCALE 3/4\"/>

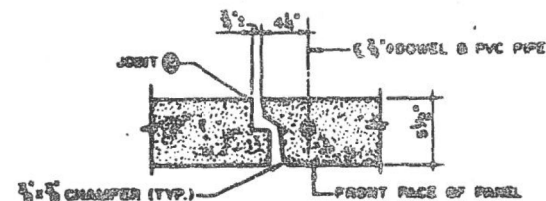
NOTE:

- 1 REINFORCING STEEL TO BE STEEL A615 GRADE 60.
- 2 3/8" x 3/8" CHAMFER SHALL BE PROVIDED ON ALL EXPOSED EDGES (FRONT FACE ONLY).
- 3 ALL PANELS AND OTHER RELATED ELEMENTS WILL BE DETAILED ON SHOP DRAWINGS.
- 4 ONE TON LIFTING INSERTS.
- 5 PANEL DESIGN THICKNESS IS 5 1/2". QUANTITY OF CONCRETE WILL INCREASE TO ACCOMMODATE ANY ARCHITECTURAL SURFACE FINISH THAT MAY BE SPECIFIED.



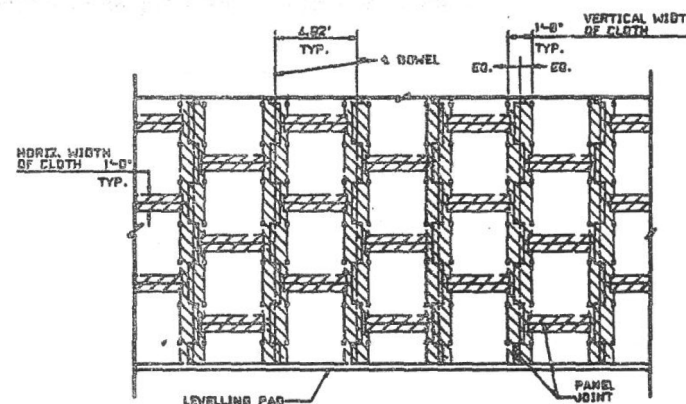
SECTION 1-1

SECTION 2-2

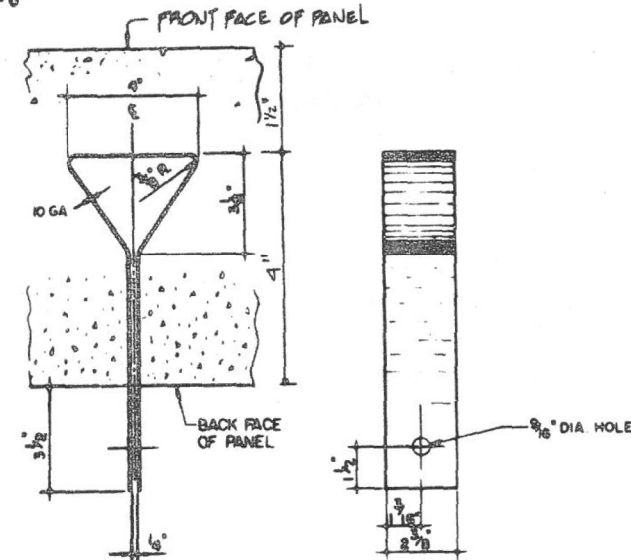


SECTION 3-3

SCALE: 1/2\"/>



FILTER CLOTH DETAIL
PARTIAL ELEVATION - BACK FACE
SCALE: 3/16" = 1'



TIE STRIP DETAIL "S"
NOT TO SCALE

F.A.S. RTE. 400 SECTION 43
KNOX COUNTY
STA. 75+40.97
STAGE I

DESIGNED	PS
CHECKED	KT
DRAWN	PS
CHECKED	KT

Sept 26 1983
EXAMINED *James J. Kesterson*
PASSED *James J. Kesterson*
APPROVED *James J. Kesterson*
DIRECTOR OF HIGHWAYS

This drawing contains information proprietary to The Reinforced Earth Company, and is being furnished for the use of ILLINOIS DOT only in connection with this project, and the information contained herein is not to be transmitted to any other organization unless specifically authorized in writing by The Reinforced Earth Company.
The Reinforced Earth Company is exclusive licensee in the United States under patents issued to Henri Vidal, and the handling of this drawing does not constitute an express or implied license under the Vidal patents.

The Reinforced Earth Company			
Reinforced Earth Wall			
F.A.S. RTE 400 OVER B.N. INC. 5 GALESBURG, KNOX COUNTY - IL			
STANDARD 5/2" PANEL DETAILS			
REV	DATE	DESCRIPTION	
1	6-17-83	4	

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USER NAME = Johns00944

DESIGNED - RGC

CHECKED - RGC

DRAWN - EJM

CHECKED - 01/24/2022

REVISD -

REVISD -

REVISD -

REVISD -

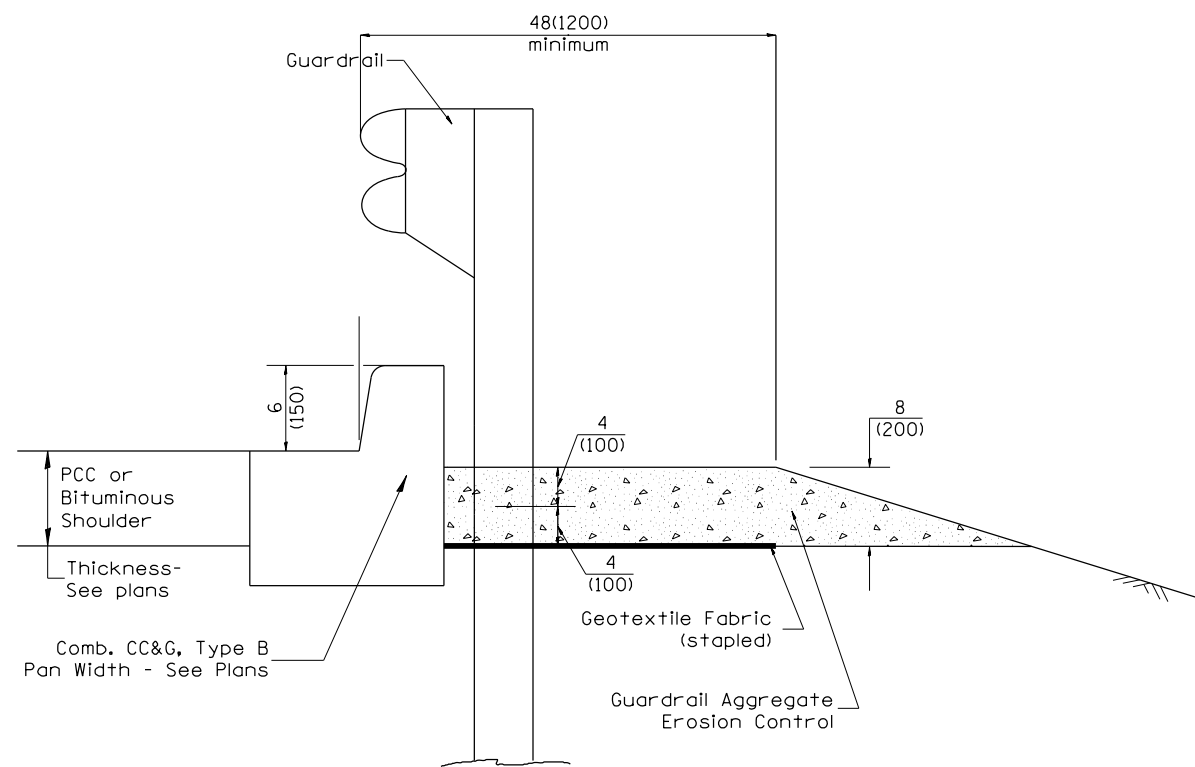
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PANEL DETAILS
MSE WALLS

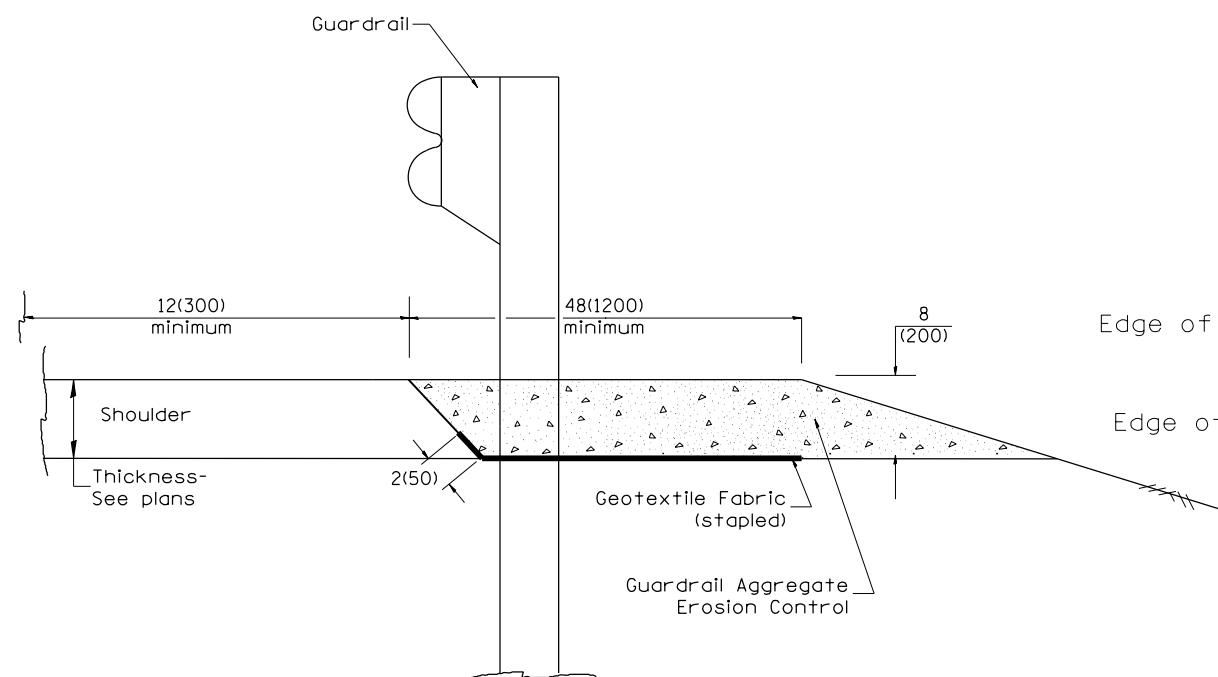
SHEET NO. 61 OF 61 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	77
CONTRACT NO. 89819				

ILLINOIS FED. AID PROJECT 4



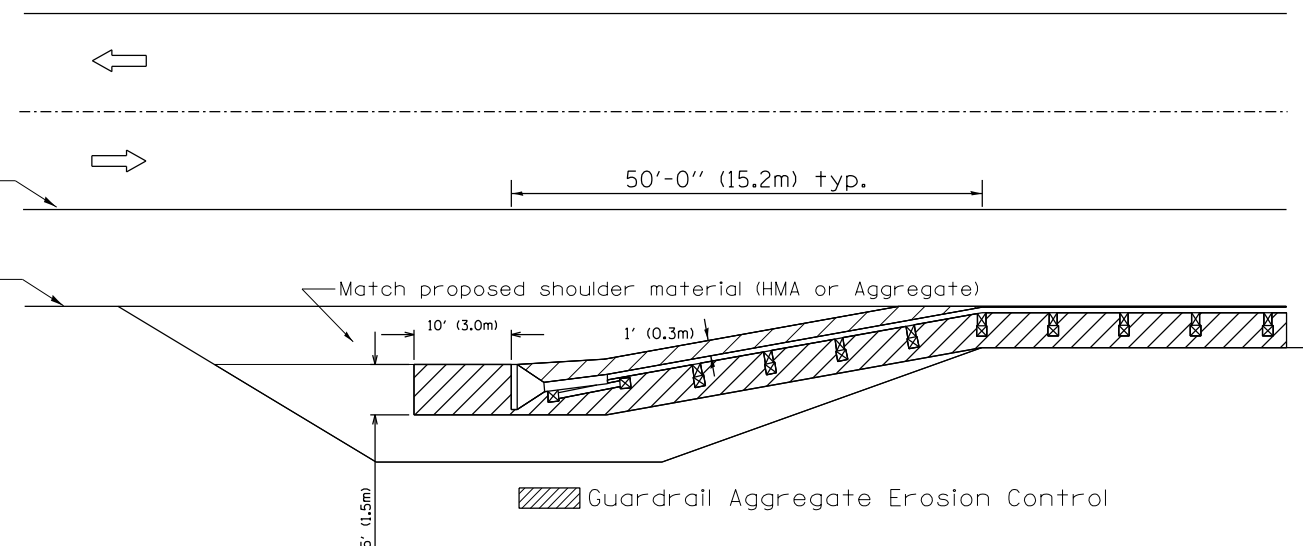
TYPICAL SECTION WITH COMBINATION CONCRETE CURB & GUTTER



TYPICAL SECTION WITHOUT EROSION CONTROL CURB

GENERAL NOTES: GUARDRAIL AGGREGATE EROSION CONTROL

1. This work shall consist of grading as needed, furnishing and installing geotextile fabric and staples, and furnishing, placing and shaping crushed aggregate around and behind Steel Plate Beam Guardrail posts in accordance with Plan Details.
2. Before placing the aggregate and the Geotextile Fabric, weeds and grass shall be removed from the area to be covered.
3. After the area has been prepared, and in a dry condition, the Geotextile fabric shall be placed with a 12(300) minimum overlap. A knife cut for guardrail post installation is necessary.
4. The aggregate shall be deposited, compacted and shaped by either mechanical or hand methods, in a manner reasonably true to line and grade.
5. The Contractor shall have the option of placing the guardrail before or after the Geotextile Fabric and Aggregate are in place. If the guardrail is placed after the Geotextile Fabric and Aggregate, then any voids must be filled and the aggregate returned to line and grade.
6. Materials shall meet the following requirements:
 - A. The crushed aggregate shall be CA1 gradation in accordance with Article 1004.01(c) of the Standard Specifications.
 - B. The Geotextile Fabric shall be nonwoven fabric in accordance with Article 1080.02 of the Standard Specifications.



All dimensions are in inches (millimeters) unless otherwise noted.

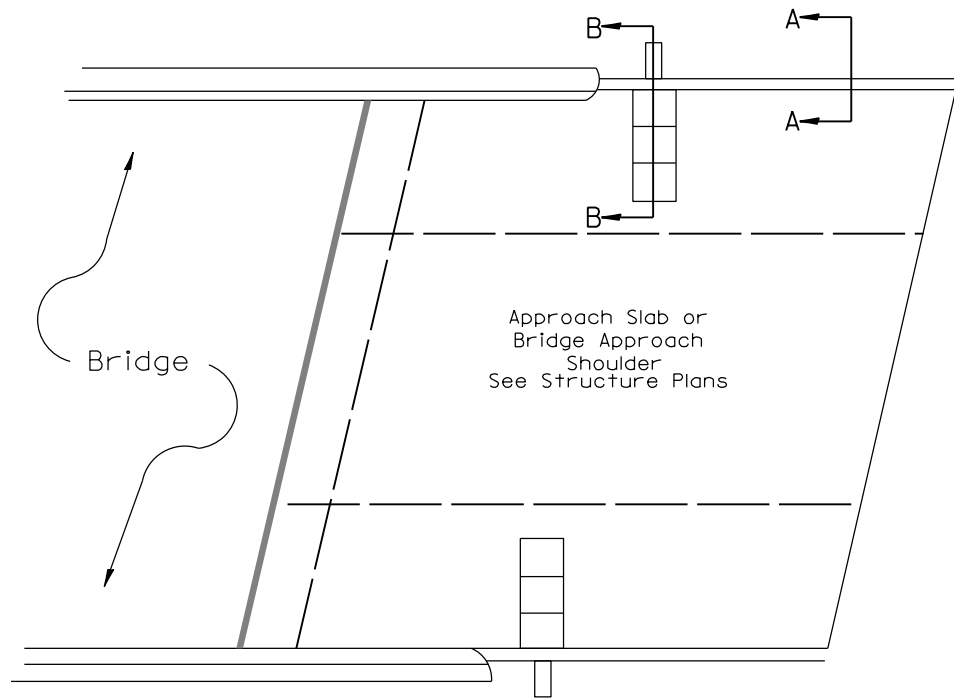
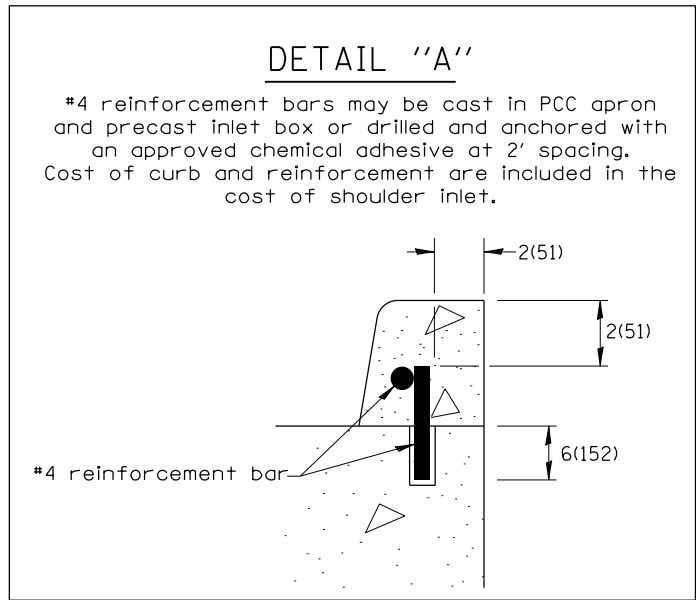
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	DRAWN -	REVISED -
PLOT SCALE = 10.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 2/3/2022	DATE = 01/24/2022	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

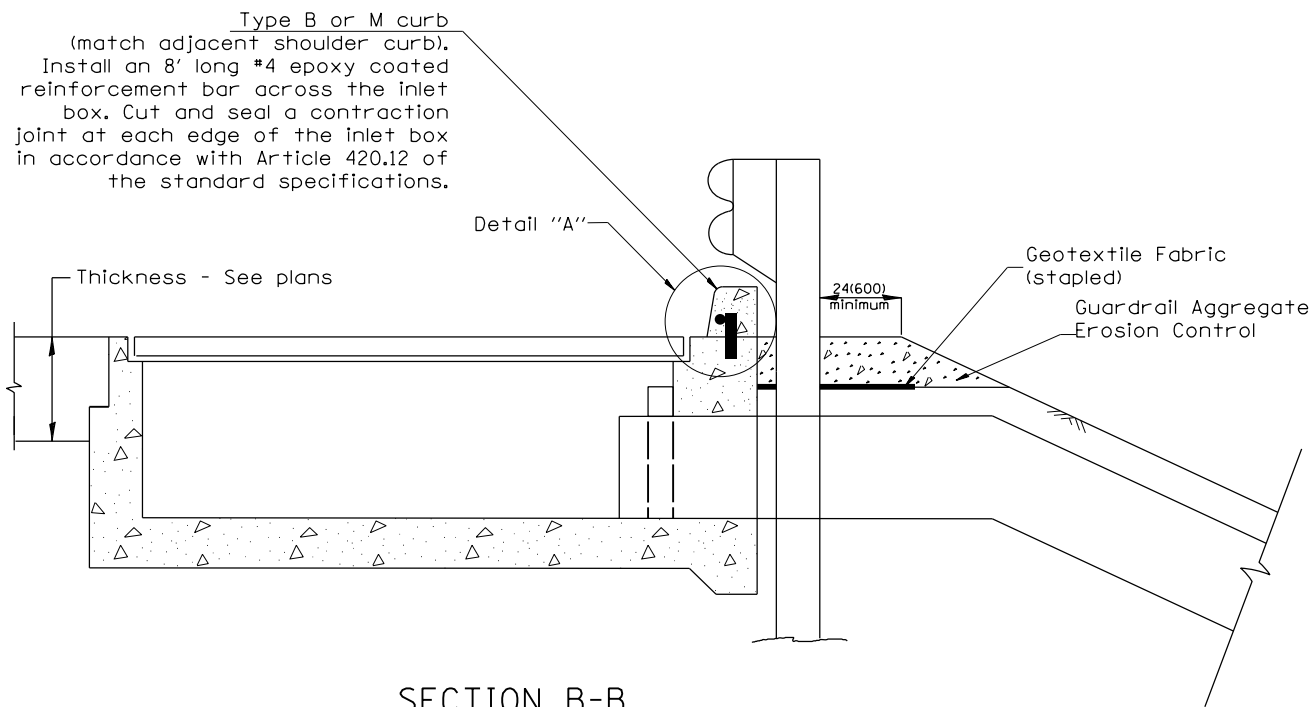
GUARDRAIL EROSION CONTROL TREATMENTS
CADD STD. 630101-D4

SCALE:	SHEET 1	OF 2	SHEETS	STA.	TO STA.
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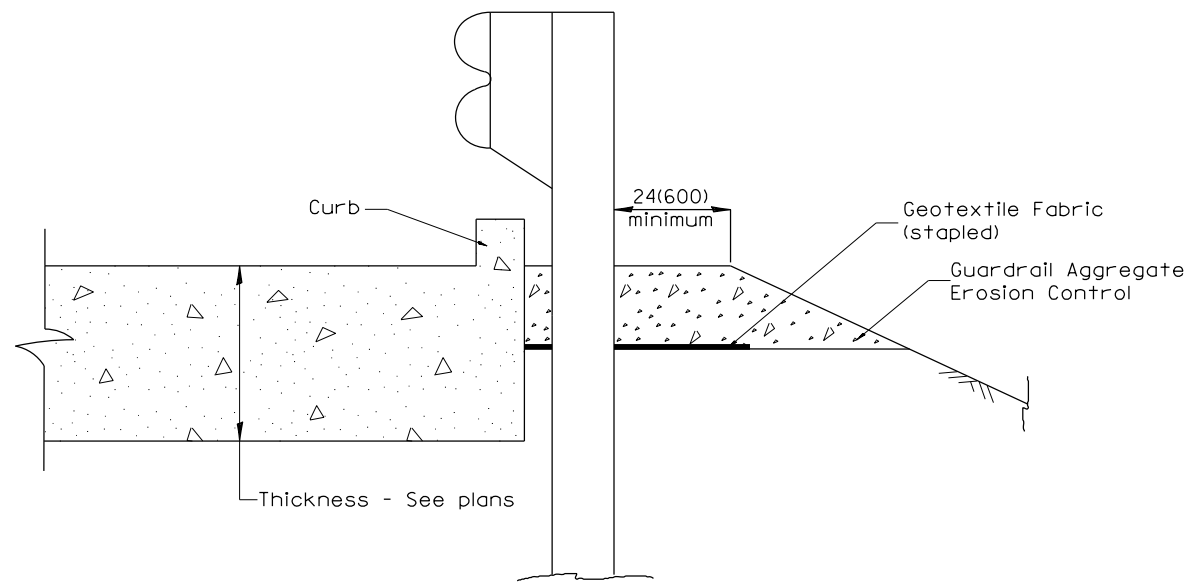
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	78
		CONTRACT NO. 89819		
	ILLINOIS	FED. AID PROJECT		



PLAN VIEW
APPROACH SLAB OR SHOULDER PLACEMENT



SECTION B-B
TYPICAL SECTION AT INLETS
TYPE E, F & G (HIGHWAY STANDARD 610001)



SECTION A-A
TYPICAL SECTION WITH BRIDGE APPROACH CURB

All dimensions are in inches (millimeters) unless otherwise noted.

LAYOUT	
DRAWN	
REVIEWED	

MODEL: Sheet 2
FILE NAME: I:\18\0043\18-00043-CADD\Road\Sheet\sh-cb14.dwg

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	DRAWN -	REVISED -
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PLOT DATE = 2/3/2022	DATE - 01/24/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

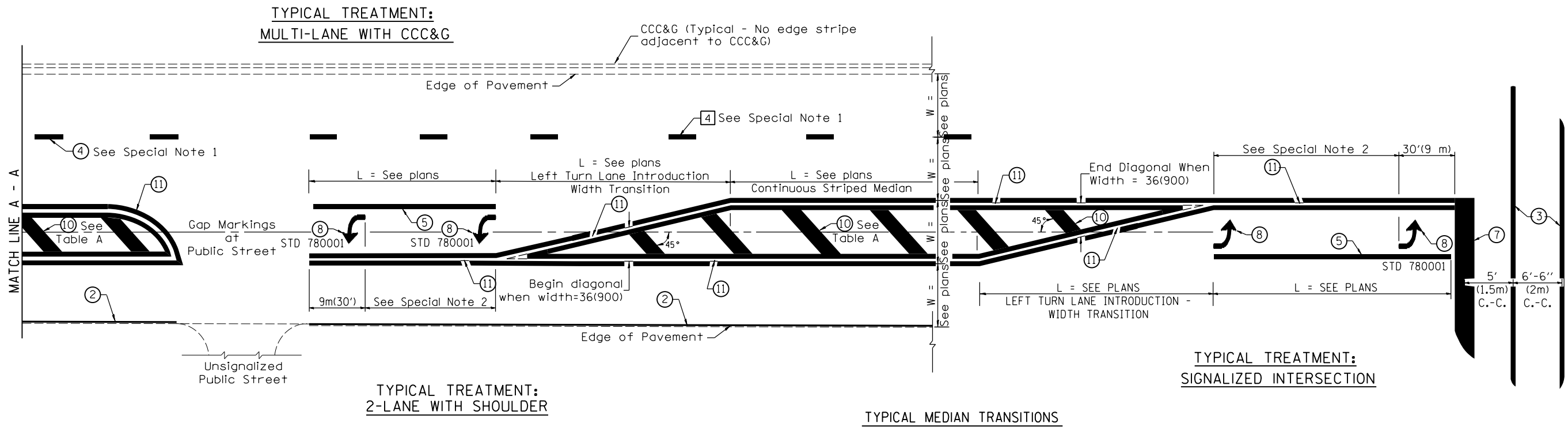
GUARDRAIL EROSION CONTROL TREATMENTS
CADD STD. 630101-D4

SCALE: SHEET 2 OF 2 SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	79
CONTRACT NO. 89819				
ILLINOIS FED. AID PROJECT				



1. Refer to State Standard 7800001 for additional Pavement Markings including letters & arrows.
2. See Plans for Pavement Markings adjacent to curbed islands and medians, and through lane reductions.
3. Refer to Article 780.13 for letter, number and symbol areas (sq. ft.)
4. Areas are grooved 1" beyond each edge for the following symbols:
 - Through Arrow= 14.8 sq. ft.
 - Large Left or Right Arrow= 21.9 sq. ft.
 - 2 Arrow Combination Left (or Right) and Through= 34.9 sq. ft.
 - Wrong Way Arrow= 29.5 sq. ft.
 - Railroad Crossing Symbol= 69.8 sq. ft.(For further information, refer to BDE Special Provision:
Grooving for Recessed Pavement Markings)

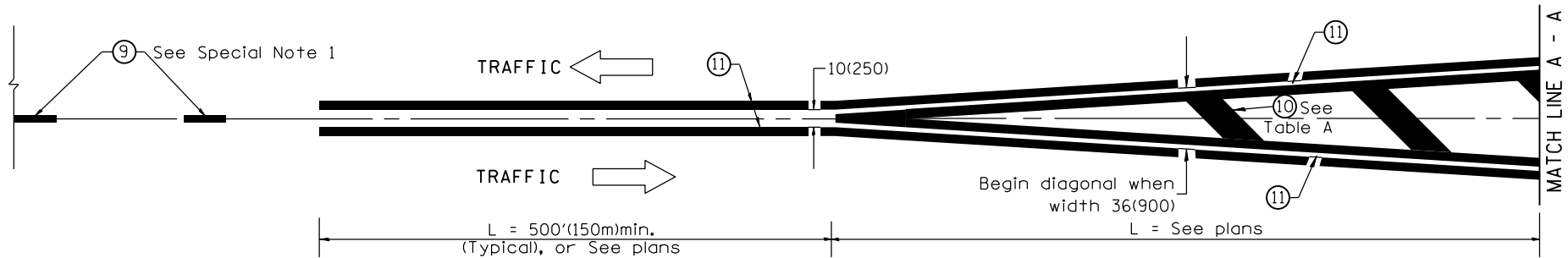


FLUSH PAVED MEDIAN: RESTRICTED LEFT TURN LANE

TABLE A

RECOMMENDED SPACING BETWEEN DIAGONAL LINES

SPEED LIMIT RANGE	CONTINUOUS	INTERSECTION CHANNELIZATION (Includes Width Transitions for Median and Left Turn Lane Introductions)
Less Than 30 mph (50 km/h)	50' (15m)	15' (5m)
30 - 45 mph (50 - 70 km/h)	75' (23m)	20' (6m)
Over 45 mph (70 km/h)	150' (46m)	30' (9m)



All dimensions are in inches (millimeters) unless otherwise noted.

LAYOUT	
DRAWN	
REVIEWED	

MODEL: Sheet 2
FILE NAME: I:\18\004181\0058A\CAD\Road\Sheet\sh-Dtbl4_02.dgn

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	DRAWN -	REVISED -
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PLOT DATE = 2/3/2022	DATE - 01/24/2022	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TYPICAL PAVEMENT MARKINGS
CADD STD. 780001-D4**

SCALE: SHEET 2 OF 2 SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
400	18-00043-01-BR	KNOX	81	81
CONTRACT NO. 89819				
ILLINOIS FED. AID PROJECT				