09-19-2025 LETTING ITEM 056

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	1
	ILLINOIS	CONTRACT NO. 74164		

FOR INDEX OF SHEETS, SEE SHEET NO. 2

CURRENT TRAFFIC DATA
2021 ADT 5,150

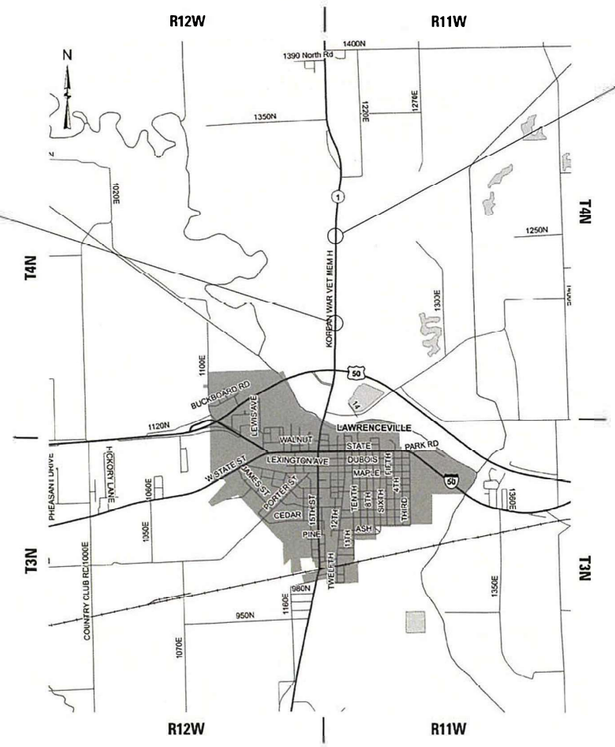
STATION EQUATION:
STATION 64 + 73.00 (BK.) = STATION 57 + 11.10 (AH.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED HIGHWAY PLANS

FAP ROUTE 332 (IL 1)
SECTION (16BR–1,BR–2)B–1
BRIDGE REPLACEMENT
LAWRENCE COUNTY
NHPP-9CSX(002)

C-97-075-06



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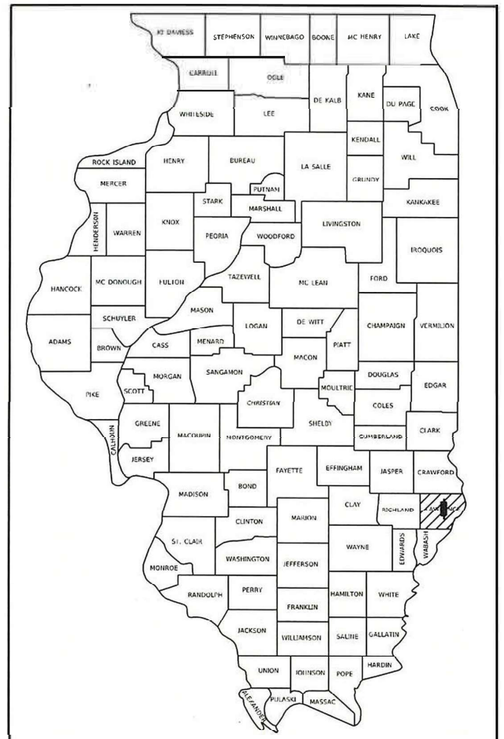
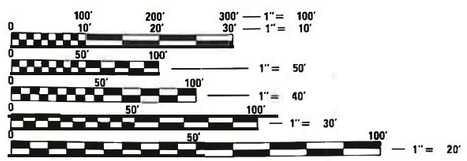


LOCATION OF SECTION INDICATED THUS:–

F.A.P. 332 (IL 1)
SECTION (16BR–1,BR–2)B–1
LAWRENCE COUNTY
S.N. 051–0005 (EXISTING)
S.N. 051–0075 (PROPOSED)
STATION 59 + 08.34

F.A.P. 332 (IL 1)
SECTION (16BR–1,BR–2)B–1
LAWRENCE COUNTY
S.N. 051–0004 (EXISTING)
S.N. 051–0074 (PROPOSED)
STATION 85 + 13.18



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

GROSS LENGTH = 1,249.01 FT. = 0.236 MILE
NET LENGTH = 1,249.01 FT. = 0.236 MILE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED January 30 20 25
Lou Renzaglia
REGIONAL ENGINEER

May 9 20 25
ENGINEER OF DESIGN AND ENVIRONMENT

May 9 20 25
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PROJECT ENGINEER: MATTHEW BOWER
PROJECT MANAGER: TRAVIS WALK

CONTRACT NO. 74164

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

REV - MS

INDEX OF SHEETS

HIGHWAY STANDARDS

STANDARD NO.	DESCRIPTION
000001 - 08	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
001001 - 02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001 - 07	TEMPORARY EROSION CONTROL SYSTEMS
420001 - 10	PAVEMENT JOINTS
420401 - 13	PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB
420406	PAVEMENT CONNECTOR (HMA) FOR BRIDGE APPROACH SLAB
420701 - 03	PAVEMENT WELDED WIRE REINFORCEMENT
482011 - 03	HMA SHLD, STRIPS/SHLDS, WITH RESURFACING OR WIDENING AND RESURFACING PROJECTS
515001 - 04	NAME PLATES FOR BRIDGES
630001 - 13	STEEL PLATE BEAM GUARDRAIL
630301 - 09	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631031 - 18	TRAFFIC BARRIER TERMINAL, TYPE 6
666001 - 01	RIGHT OF WAY MARKERS
667101 - 02	PERMANENT SURVEY MARKERS
701001 - 02	OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY
701006 - 05	OFF-RD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
701011 - 04	OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701201 - 05	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH
701301 - 04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701306 - 04	LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS ONLY, FOR SPEEDS ≥ 45 MPH
701311 - 03	LANE CLOSURE 2L, 2W, MOVING OPERATIONS - DAY ONLY
701321 - 19	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701326 - 04	LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS ≥ 45 MPH
701901 - 10	TRAFFIC CONTROL DEVICES
704001 - 08	TEMPORARY CONCRETE BARRIER
725001 - 01	OBJECT AND TERMINAL MARKERS
780001 - 05	TYPICAL PAVEMENT MARKINGS
781001 - 04	TYPICAL APPLICATIONS OF RAISED REFLECTIVE PAVEMENT MARKINGS
782006 - 01	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS AND HIGHWAY STANDARDS

SCALE: | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	2
		CONTRACT NO. 74164		
	ILLINOIS FED. AID PROJECT			

GENERAL NOTES

THE WORK INCLUDED IN SECTION (16BR-1,BR-2)B-1 CONSISTS OF THE COMPLETE REMOVAL AND REPLACEMENT OF EXISTING STRUCTURE NUMBERS 051-0004 AND 051-0005 WITH NEW STRUCTURES, BRIDGE APPROACH PAVEMENTS, HOT-MIX ASPHALT RESURFACING, RIP RAP, GUARDRAIL, PAVEMENT MARKING, TRAFFIC CONTROL, AND ANY OTHER WORK NECESSARY TO COMPLETE THIS SECTION. THE WORK SHALL BE COMPLETED UTILIZING STAGE CONSTRUCTION WITH TEMPORARY TRAFFIC SIGNALS. STRUCTURE NUMBER 051-0004, CARRIES ILLINOIS ROUTE 1 OVER THE EMBARRAS RIVER OVERFLOW AND IS LOCATED APPROXIMATELY 1 MILE NORTH OF US ROUTE 50 IN LAWRENCE COUNTY. EXISTING STRUCTURE NUMBER 051-0005, CARRIES ILLINOIS ROUTE 1 OVER THE EMBARRAS RIVER OVERFLOW AND IS LOCATED APPROXIMATELY 0.5 MILES NORTH OF US ROUTE 50 IN LAWRENCE COUNTY.

THE MATERIAL USED FOR AGGREGATE SHOULDERS, TYPE B SHALL BE CRUSHED STONE, CRUSHED CONCRETE, OR RAP. THE MATERIAL USED FOR AGGREGATE SURFACE COURSE, TYPE B SHALL BE CRUSHED STONE OR CRUSHED CONCRETE.

FULL DECK SLAB REPAIR QUANTITIES ARE APPROXIMATED. ACTUAL QUANTITIES AND LOCATIONS TO BE DETERMINED IN THE FIELD BY THE ENGINEER. THIS WORK IS INTENDED TO REPAIR ONLY THE AREAS OF SEVERE DETERIORATION. SOME MINOR DETERIORATED AREAS MAY BE LEFT UNREPAIRED.

COMMITMENTS

WETLANDS EXIST WITHIN AND ADJACENT TO THE PROPOSED PROJECT AREA. A PERIMETER EROSION BARRIER SHALL BE INSTALLED ALONG THE CONSTRUCTION LIMITS ACCORDING TO THE PLAN AND PROFILE SHEETS TO PROTECT THE ADJACENT WETLANDS FROM DISTURBANCE AND SEDIMENTATION. NO PERSON, PARKING OF VEHICLES, STORAGE OF EQUIPMENT, OR MATERAIL SHALL BE ALLOWED OUTSIDE OF THE CONSTRUCTION LIMITS AND THE ADJACENT WETLANDS SHALL NOT BE DISTURBED.

TREES TO BE REMOVED AS PART OF THIS CONTRACT ARE TO BE REPLACED, AND THE REPLACEMENT TREES ARE TO BE DELIVERED AND PLANTED AT RED HILLS STATE PARK IN SUMNER, IL. CONTACT INFORMATION REGARDING THIS MATTER IS LISTED BELOW:

RED HILLS STATE PARK
3571 RANGER LANE
SUMNER, IL 62466
CONTACT: TONY HOLTSCHLAG, SITE SUPERINTENDENT
PHONE: (618) 936-2469

THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE TO THIS PROJECT:

LOCATION(S)	MIXTURE USE(S)	PG	DESIGN AIR VOIDS	MIXTURE COMPOSITION	FRICTION AGGREGATE	MIXTURE WEIGHT	QUALITY MANAGEMENT PROGRAM	SUBLOT SIZE	MATERIAL TRANSFER DEVICE (REQUIRED?)
MAINLINE	POLYMERIZED HMA SURFACE COURSE, IL-9.5, MIX "D", N90	PG 70-22	4.0% @ N=90	IL - 9.5	MIXTURE D	N90	QCQA	3000	N/A
MAINLINE	POLYMERIZED HMA BINDER COURSE, IL-9.5FG, N90	PG 70-22	4.0% @ N=90	IL - 9.5FG	N/A	N90	QCQA	3000	N/A
MAINLINE	HMA BINDER COURSE, IL-19.0, N90 (MAX 4" LIFTS)	PG 64-22	4.0% @ N=90	IL - 19.0	N/A	N90	QCQA	3000	N/A
HMA CONNECTOR	HMA BINDER COURSE, IL-19.0, N90	PG 64-22	4.0% @ N=90	IL - 19.0	N/A	N90	QCQA	3000	N/A
SHOULDER	HMA SURFACE COURSE, IL-9.5, MIX "C", N70 (TOP LIFT)	PG 64-22	4.0% @ N=70	IL - 9.5	MIXTURE C	N70	QCQA	3000	N/A
SHOULDER	HMA BINDER COURSE, IL-19.0, N70 (BOTTOM LIFTS)	PG 64-22	4.0% @ N=70	IL - 19.0	N/A	N70	QCQA	3000	N/A
HMA WIDENING	HMA SURFACE COURSE, IL-9.5, MIX "C", N70 (TOP LIFT)	PG 64-22	4.0% @ N=70	IL - 9.5	MIXTURE C	N70	QCQA	3000	N/A
HMA WIDENING	HMA BINDER COURSE, IL-19.0, N70 (BOTTOM LIFTS)	PG 64-22	4.0% @ N=70	IL - 19.0	N/A	N70	QCQA	3000	N/A
PRE-STAGE APPROACH	HMA SURFACE COURSE, IL-9.5, MIX "C", N70	PG 64-22	4.0% @ N=70	IL - 9.5	MIXTURE C	N70	QCQA	3000	N/A
PRE-STAGE NB DECK	HMA SURFACE COURSE, IL-9.5, MIX "C", N70	PG 64-22	4.0% @ N=70	IL - 9.5	MIXTURE C	N70	QCQA	3000	N/A

THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN THE CALCULATING PLAN QUANTITIES:

HOT-MIX ASPHALT	112 LBS./SQ. YD/INCH
AGGREGATE SHOULDERS	2.05 TONS/CU YD
SUBBASE GRANULAR MATERIAL	1.80 TONS/CU YD

80% FED
20% STATE

SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0010 051-0074	CONSTRUCTION TYPE CODE 0010 051-0075	
20100500	TREE REMOVAL, ACRES	ACRE	1	0.5	0.5	
20200100	EARTH EXCAVATION	CU YD	272	131	141	
20300100	CHANNEL EXCAVATION	CU YD	2376	1325	1051	
20400800	FURNISHED EXCAVATION	CU YD	2766	1980	786	
* 25000200	SEEDING, CLASS 2	ACRE	1.75	1	0.75	
* 25000314	SEEDING, CLASS 4B	ACRE	3.25	1	2.25	
* 25000350	SEEDING, CLASS 7	ACRE	5	2	3	
* 25000400	NITROGEN FERTILIZER NUTRIENT	POUND	416	162	254	
* 25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	416	162	254	
* 25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	416	162	254	
* 25000700	AGRICULTURAL GROUND LIMESTONE	TON	20	8	12	
* 25100115	MULCH, METHOD 2	ACRE	3.25	1	2.25	
* 25100630	EROSION CONTROL BLANKET	SQ YD	7712	4351	3361	
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	15000	6000	9000	

80% FED
20% STATE

SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0010 051-0074	CONSTRUCTION TYPE CODE 0010 051-0075	
28000400	PERIMETER EROSION BARRIER	FOOT	4588	1816	2772	
28100107	STONE RIPRAP, CLASS A4	SQ YD	2605	1588	1017	
28200200	FILTER FABRIC	SQ YD	2605	1588	1017	
31101000	SUBBASE GRANULAR MATERIAL, TYPE B	TON	49	29	20	
35600716	HOT-MIX ASPHALT BASE COURSE WIDENING, 10"	SQ YD	848	377	471	
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	188	179	9	
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	1892	765	1127	
40600990	TEMPORARY RAMP	SQ YD	175	88	87	
40603090	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90	TON	153	76	77	
40603219	POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, IL-9.5FG, N90	TON	182	58	124	
40604052	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "C", N70	TON	244	78	166	
40604164	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N90	TON	365	143	222	

* SPECIALTY ITEM

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET 1 OF 5 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	4
		CONTRACT NO. 74164		
	ILLINOIS FED. AID PROJECT			

80% FED
20% STATE

SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0010 051-0074	CONSTRUCTION TYPE CODE 0010 051-0075	
42000060	WELDED WIRE REINFORCEMENT	SQ YD	134	134		
42000070	PAVEMENT CONNECTOR (HMA) FOR BRIDGE APPROACH SLAB	SQ YD	89		89	
42000080	PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB	SQ YD	134	134		
44000100	PAVEMENT REMOVAL	SQ YD	307	154	153	
44000157	HOT-MIX ASPHALT SURFACE REMOVAL, 2"	SQ YD	2168	692	1476	
44004250	PAVED SHOULDER REMOVAL	SQ YD	139	66	73	
48101500	AGGREGATE SHOULDERS, TYPE B 6"	SQ YD	679	279	400	
48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	5	2	3	
48203005	HOT-MIX ASPHALT SHOULDERS, 2"	SQ YD	848	377	471	
50100300	REMOVAL OF EXISTING STRUCTURES NO. 1	EACH	1	1		
50100400	REMOVAL OF EXISTING STRUCTURES NO. 2	EACH	1		1	
50200100	STRUCTURE EXCAVATION	CU YD	1625	220	1405	
50200300	COFFERDAM EXCAVATION	CU YD	260	260		

80% FED
20% STATE

SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0010 051-0074	CONSTRUCTION TYPE CODE 0010 051-0075	
50201101	COFFERDAM (TYPE 1) (LOCATION - 1)	EACH	1	1		
50201102	COFFERDAM (TYPE 1) (LOCATION - 2)	EACH	1	1		
50201103	COFFERDAM (TYPE 1) (LOCATION - 3)	EACH	1	1		
50201104	COFFERDAM (TYPE 1) (LOCATION - 4)	EACH	1	1		
50300100	FLOOR DRAINS	EACH	16		16	
50300225	CONCRETE STRUCTURES	CU YD	1277.4	302.9	974.5	
50300255	CONCRETE SUPERSTRUCTURE	CU YD	1808.4	584	1224.4	
50300300	PROTECTIVE COAT	SQ YD	7267	2349	4918	
50301350	CONCRETE SUPERSTRUCTURE (APPROACH SLAB)	CU YD	237.4	121	116.4	
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1	0.3	0.7	
50500505	STUD SHEAR CONNECTORS	EACH	41322	12330	28992	
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	752760	231020	521740	
50800515	BAR SPLICERS	EACH	5654	1812	3842	
50800530	MECHANICAL SPLICERS	EACH	476		476	

* SPECIALTY ITEM

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET 2 OF 5 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	5
		CONTRACT NO. 74164		
	ILLINOIS FED. AID PROJECT			

80% FED
20% STATE

SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0010 051-0074	CONSTRUCTION TYPE CODE 0010 051-0075	
51202000	FURNISHING STEEL PILES HP14X102	FOOT	14932	8970	5962	
51202100	FURNISHING STEEL PILES HP14X117	FOOT	8779		8779	
51202305	DRIVING PILES	FOOT	23711	8970	14741	
51204000	TEST PILE STEEL HP14X102	EACH	7	3	4	
51204100	TEST PILE STEEL HP14X117	EACH	2		2	
51204650	PILE SHOES	EACH	140		140	
51500100	NAME PLATES	EACH	2	1	1	
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	60		60	
52100520	ANCHOR BOLTS, 1''	EACH	216	72	144	
52200010	TEMPORARY SHEET PILING	SQ FT	566	566		
52200020	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	952	314	638	
58600101	GRANULAR BACKFILL FOR STRUCTURES	CU YD	230	121	109	
58700300	CONCRETE SEALER	SQ FT	910		910	
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	127	69	58	

80% FED
20% STATE

SUMMARY OF QUANTITIES

	CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0010 051-0074	CONSTRUCTION TYPE CODE 0010 051-0075	
	60100060	CONCRETE HEADWALLS FOR PIPE DRAINS	EACH	8	4	4	
	60146304	PIPE UNDERDRAINS FOR STRUCTURES 4''	FOOT	254	144	110	
*	63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT	FOOT	300	150	150	
		POSTS					
*	63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	8	4	4	
*	63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL)	EACH	8	4	4	
		TANGENT					
	63200310	GUARDRAIL REMOVAL	FOOT	1087.5	500	587.5	
	66600105	FURNISHING AND ERECTING RIGHT OF WAY MARKERS	EACH	10	10		
	66700205	PERMANENT SURVEY MARKERS, TYPE I	EACH	3	1	2	
	67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	18	9	9	
	67100100	MOBILIZATION	LSUM	1	0.5	0.5	
	70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD	EACH	2	1	1	
		701321					
	70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD	LSUM	1	0.5	0.5	
		701201					

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET 3 OF 5 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	6
		CONTRACT NO. 74164		
	ILLINOIS FED. AID PROJECT			

80% FED
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SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0010 051-0074	CONSTRUCTION TYPE CODE 0010 051-0075	
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD	L SUM	1	0.5	0.5	
	701306					
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD	LSUM	1	0.5	0.5	
	701326					
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	10	5	5	
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	2	1	1	
70107005	PAVEMENT MARKING BLACKOUT TAPE, 5"	FOOT	3519	1347	2172	
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	28	14	14	
70300100	SHORT TERM PAVEMENT MARKING	FOOT	676	252	424	
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	777	332	445	
70300221	TEMPORARY PAVEMENT MARKING - LINE 4"- PAINT	FOOT	5577	2025	3552	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	2369	925	1444	
70400125	PINNING TEMPORARY CONCRETE BARRIER	EACH	357	120	237	
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	2242	950	1292	

80% FED
20% STATE

SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0010 051-0074	CONSTRUCTION TYPE CODE 0010 051-0075	
70600250	IMPACT ATTENUATORS, TEMPORARY (NON-	EACH	3	2	1	
	REDIRECTIVE), TEST LEVEL 3					
70600260	IMPACT ATTENUATORS, TEMPORARY (FULLY	EACH	3		3	
	REDIRECTIVE, NARROW), TEST LEVEL 3					
70600332	IMPACT ATTENUATORS, RELOCATE (FULLY	EACH	1		1	
	REDIRECTIVE, NARROW), TEST LEVEL 3					
70600350	IMPACT ATTENUATORS, RELOCATE (NON-	EACH	3	2	1	
	REDIRECTIVE), TEST LEVEL 3					
* 72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	8	4	4	
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	7142	2527	4615	
* 78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	32	16	16	
* A2001016	TREE, ACER RUBRUM (RED MAPLE), 2" CALIPER,	EACH	10	5	5	
	BALLED AND BURLAPPED					
* A2001716	TREE, ACER SACCHARUM (SUGAR MAPLE), 2"	EACH	5	2	3	
	CALIPER, BALLED AND BURLAPPED					
* A2004416	TREE, GINKGO BILOBA (GINKGO), 2" CALIPER,	EACH	5	2	3	
	BALLED AND BURLAPPED					

* SPECIALTY ITEM

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET 4 OF 5 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	7
		CONTRACT NO. 74164		
	ILLINOIS FED. AID PROJECT			

80% FED
20% STATE

SUMMARY OF QUANTITIES

	CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0010 051-0074	CONSTRUCTION TYPE CODE 0010 051-0075	
*	A2006416	TREE, QUERCUS ALBA (WHITE OAK), 2" CALIPER,	EACH	45	23	22	
		BALLED AND BURLAPPED					
*	A2006516	TREE, QUERCUS BICOLOR (SWAMP WHITE OAK), 2"	EACH	45	23	22	
		CALIPER, BALLED AND BURLAPPED					
*	A2006716	TREE, QUERCUS MACROCARPA (BUR OAK), 2"	EACH	45	23	22	
		CALIPER, BALLED AND BURLAPPED					
*	A2006816	TREE, QUERCUS MUEHLENBERGII (CHINKAPIN OAK),	EACH	44	22	22	
		2" CALIPER, BALLED AND BURLAPPED					
*	A2022166	TREE, AESCULUS PAVIA (RED BUCKEYE), 6'	EACH	21	10	11	
		HEIGHT, BALLED AND BURLAPPED					
*	B2001116	TREE, CERCIS CANADENSIS (EASTERN REDBUD), 2"	EACH	15	7	8	
		CALIPER, TREE FORM, BALLED AND BURLAPPED					
*	B2010168	TREE, CORNUS KOUSA (KOUSA DOGWOOD), 8'	EACH	15	7	8	
		HEIGHT, BALLED AND BURLAPPED					
	X4060205	COLD MIX ASPHALT MIXTURE	TON	4	2	2	
	X4401198	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE	SQ YD	3095	1220	1875	
		DEPTH					
	X5030250	BRIDGE DECK GROOVING (LONGITUDINAL)	SQ YD	3640	1180	2460	

80% FED
20% STATE

SUMMARY OF QUANTITIES

	CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0010 051-0074	CONSTRUCTION TYPE CODE 0010 051-0075	
	X5080530	BAR TERMINATORS	EACH	788	676	112	
	X5230174	DRAINAGE SCUPPERS, DS-11	EACH	16		16	
	Z0004552	APPROACH SLAB REMOVAL	SQ YD	363	184	179	
	Z0016001	DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SQ YD	100	100		
	Z0016002	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	100	100		
	Z0029090	DIAMOND GRINDING (BRIDGE SECTION)	SQ YD	5700	1891	3809	
	Z0034390	MODULAR EXPANSION JOINT 6"	FOOT	86		86	
	Z0038700	PERMANENT BENCH MARKS	EACH	2	1	1	
	Z0049799	PROTECTING OR RESETTING SURVEY MARKERS	EACH	1		1	
Ø	Z0076600	TRAINEES	HOUR	1000	1000		
Ø	Z0076604	TRAINEES TRAINING PROGRAM GRADUATE	HOUR	1000	1000		

* SPECIALTY ITEM

Ø 0042

REV - MS

USER NAME = jessica.hille	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET 5 OF 5 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	8
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	

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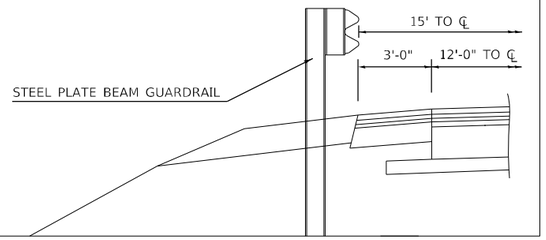
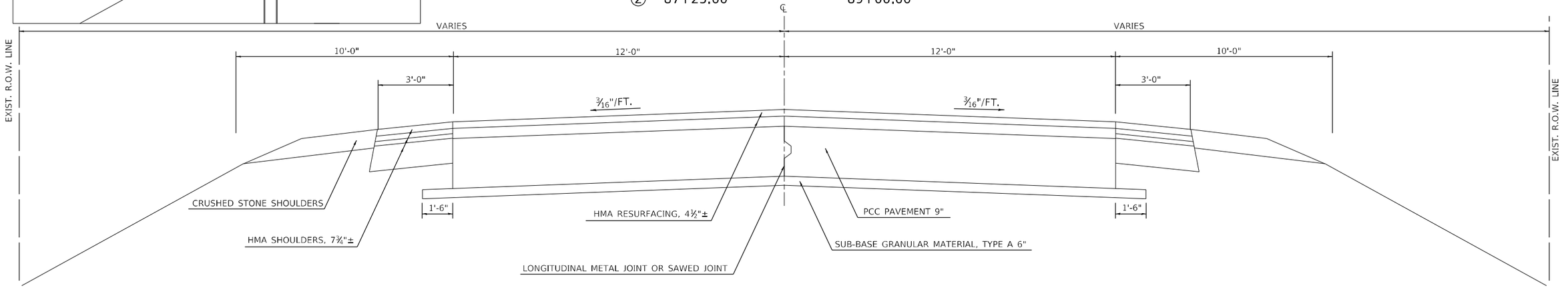
PAVED SHOULDER DETAIL AT GUARDRAIL

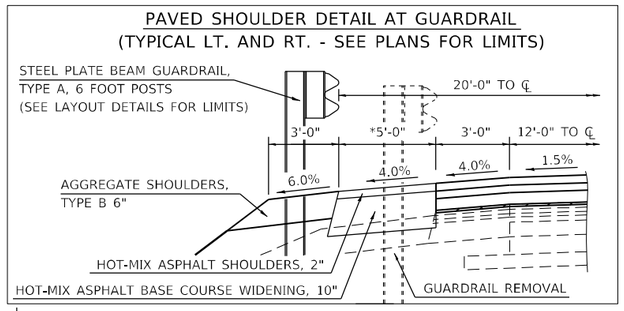


EXISTING TYPICAL CROSS SECTION ①

	STATION	TO	STATION	
	52+50.00		54+73.00	②
②	63+58.13		64+73.00	
STATION EQUATION: STA. 64+73.00 (BK) = STA. 57+11.10 (AH)				
	57+11.10		60+00.00	
	80+60.00		83+10.00	②
②	87+25.00		89+00.00	

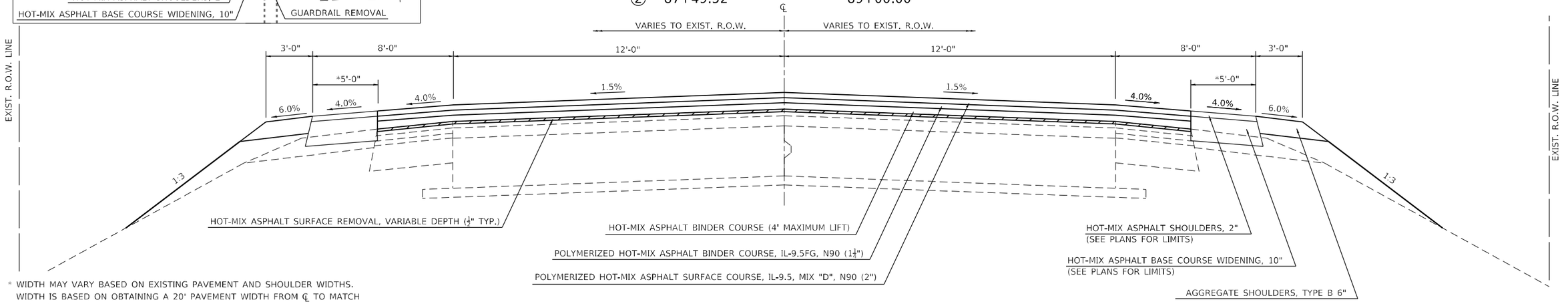


PAVED SHOULDER DETAIL AT GUARDRAIL
(TYPICAL LT. AND RT. - SEE PLANS FOR LIMITS)



PROPOSED TYPICAL CROSS SECTION ①

	STATION	TO	STATION	
	52+50.00		54+37.17	②
②	63+79.51		64+73.00	
STATION EQUATION: STA. 64+73.00 (BK) = STA. 57+11.10 (AH)				
	57+11.10		60+00.00	
	80+60.00		82+76.85	②
②	87+49.52		89+00.00	



* WIDTH MAY VARY BASED ON EXISTING PAVEMENT AND SHOULDER WIDTHS. WIDTH IS BASED ON OBTAINING A 20' PAVEMENT WIDTH FROM ℄ TO MATCH PROPOSED APPROACH PAVEMENT AND BRIDGE DECK WIDTH.

USER NAME = jessica.hille	DESIGNED -	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTIONS

SCALE: | SHEET 1 OF 2 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	9
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	

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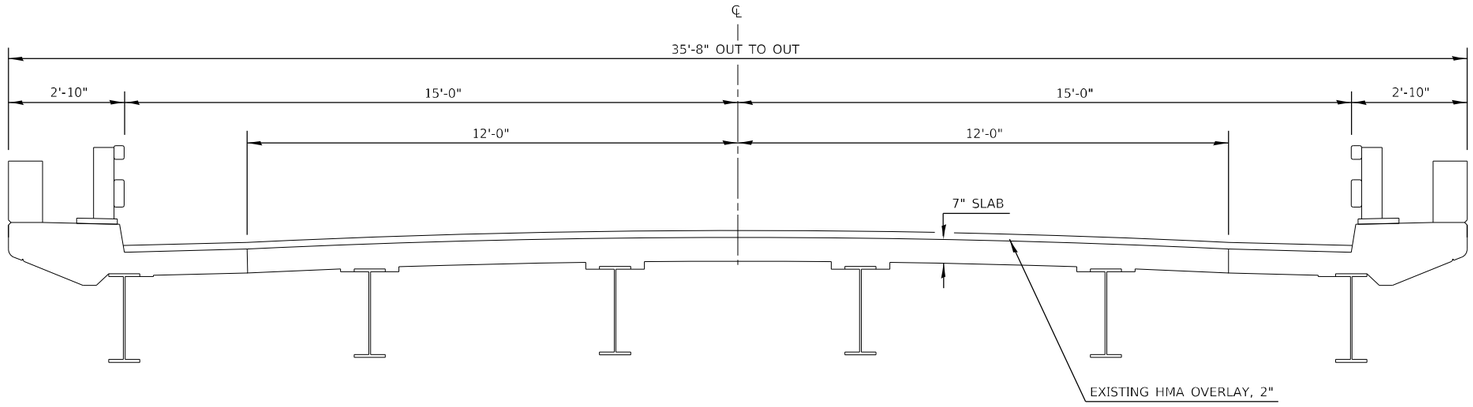
NOTE:

EXISTING APPROACH SLAB (S.N. 051-0005):
STA. 54+73.00 - STA. 54+99.00
STA. 63+18.13 - STA. 63+58.13

EXISTING APPROACH SLAB (S.N. 051-0004):
STA. 83+10.00 - STA. 83+39.00
STA. 86+85.00 - STA. 87+25.00

EXISTING TYPICAL CROSS SECTION ②

	STATION	TO	STATION	
①	54+73.00		63+58.13	①
①	83+10.00		87+25.00	①



NOTE:

PROPOSED HOT-MIX ASPHALT PAVEMENT CONNECTOR (STANDARD 420406):
S.N. 051-0075:
STA. 54+37.17 - STA. 54+47.17
STA. 63+69.51 - STA. 63+79.51

PROPOSED PCC PAVEMENT CONNECTOR (STANDARD 420401):
S.N. 051-0074:
STA. 82+76.85 - STA. 82+91.85
STA. 87+34.52 - STA. 87+49.52

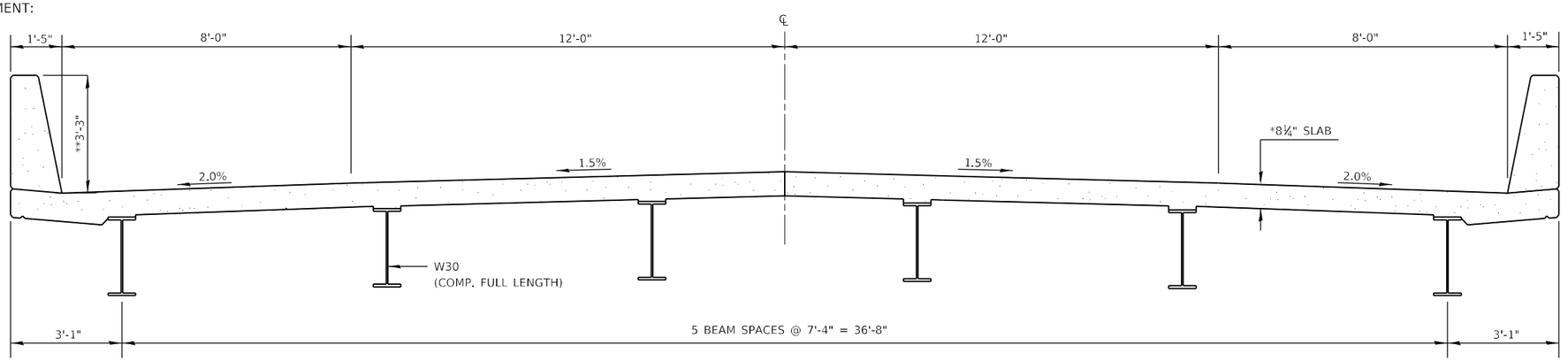
PROPOSED BRIDGE APPROACH PAVEMENT:
S.N. 051-0075:
STA. 54+47.17 - STA. 54+77.17
STA. 63+39.51 - STA. 63+69.51

S.N. 051-0074:
STA. 82+91.85 - STA. 83+21.85
STA. 87+04.52 - STA. 87+34.52

PROPOSED TYPICAL CROSS SECTION ②

	STATION	TO	STATION	
①	54+37.17		63+79.51	①
①	82+76.85		87+49.52	①

* PRIOR TO GRINDING
** AFTER GRINDING



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PLOT DATE = 1/30/2025	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

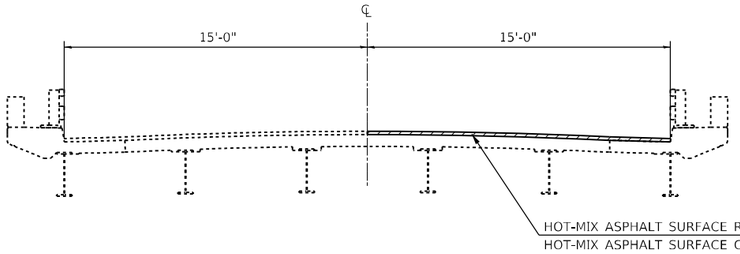
TYPICAL CROSS SECTIONS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	10
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	

STAGING TYPICALS

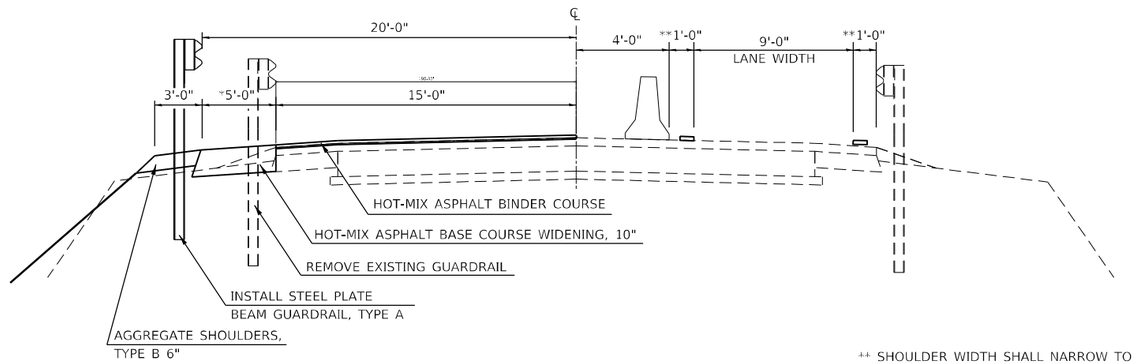
PRE-STAGE CONSTRUCTION



STATION	TO	STATION	LENGTH (FOOT)	WIDTH (FOOT)	THICKNESS (INCH)	HOT-MIX ASPHALT SURFACE REMOVAL, 2" 44000157 (SQ YD)	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "C", N70 40604052 (TON)
STRUCTURE NUMBER 051-0005							
54+73		63+58	885.1	15.0	2.0	1476.0	166.0
STRUCTURE NUMBER 051-0004							
83+10		87+25	415.0	15.0	2.0	692.0	78.0
					TOTAL =	2168.0	244.0

* PRE-STAGE HMA REMOVAL AND HMA SURFACE COURSE ONLY ON NBL.

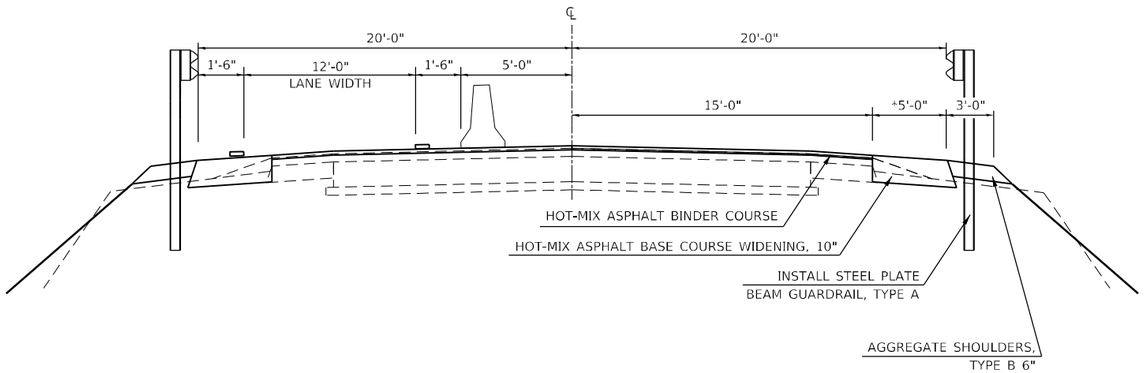
STAGE I CONSTRUCTION



* WIDTH MAY VARY BASED ON EXISTING PAVEMENT AND SHOULDER WIDTHS. WIDTH IS BASED ON OBTAINING A 20' PAVEMENT WIDTH FROM ℄ TO MATCH PROPOSED APPROACH PAVEMENT AND BRIDGE DECK WIDTH.

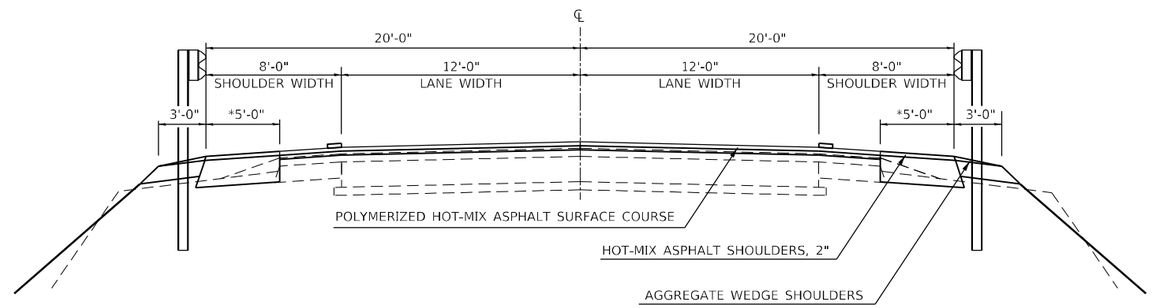
** SHOULDER WIDTH SHALL NARROW TO 6" ON EXISTING BRIDGE DECK AND APPROACHES

STAGE II CONSTRUCTION



* WIDTH MAY VARY BASED ON EXISTING PAVEMENT AND SHOULDER WIDTHS. WIDTH IS BASED ON OBTAINING A 20' PAVEMENT WIDTH FROM ℄ TO MATCH PROPOSED APPROACH PAVEMENT AND BRIDGE DECK WIDTH.

FINAL CONSTRUCTION



* WIDTH MAY VARY BASED ON EXISTING PAVEMENT AND SHOULDER WIDTHS. WIDTH IS BASED ON OBTAINING A 20' PAVEMENT WIDTH FROM ℄ TO MATCH PROPOSED APPROACH PAVEMENT AND BRIDGE DECK WIDTH.

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USER NAME = jessica.hille	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2025	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGING TYPICALS

SCALE: | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	11
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

SCHEDULE OF QUANTITIES

EROSION CONTROL

STATION	OFFSET	TO	STATION	OFFSET	LENGTH	PERIMETER EROSION BARRIER 28000400 (FOOT)
S.N. 051-0075						
53+00	38.2' LT.		53+50	46.7' LT.	50.7	50.7
53+50	46.7' LT.		54+00	59.1' LT.	51.5	51.5
54+00	59.1' LT.		54+52	60.6' LT.	52.0	52.0
54+52	60.6' LT.		54+65	56.4' LT.	13.7	13.7
54+65	56.4' LT.		56+00	56.4' LT.	135.0	135.0
56+00	56.4' LT.		62+14	56.5' LT.	614.0	614.0
62+14	56.5' LT.		63+06	56.5' LT.	92.0	92.0
63+06	56.5' LT.		63+65	56.4' LT.	59.0	59.0
63+65	56.4' LT.		64+00	49.1' LT.	35.8	35.8
64+00	49.1' LT.		64+50	43.2' LT.	50.3	50.3
64+50	43.2' LT.		64+73	45.6' LT.	23.1	23.1
STATION EQUATION: 64+73.00 (BK) = 57+11.00 (AH.)						
57+11	45.6' LT.		57+35	48.1' LT.	24.1	24.1
57+35	48.1' LT.		58+00	62.5' LT.	66.6	66.6
58+00	62.5' LT.		58+50	64.0 LT.	50.0	50.0
58+50	64.0' LT.		59+00	59.0' LT.	50.2	50.2
59+00	59.0' LT.		60+00	57.0' LT.	100.0	100.0
60+00	57.0' LT.		60+30	30.0' LT.	40.4	40.4
52+80	35.3' RT.		53+00	43.9' RT.	21.8	21.8
53+00	43.9' RT.		53+50	52.0' RT.	50.7	50.7
53+50	52.0' RT.		54+00	53.0' RT.	50.0	50.0
54+00	53.0' RT.		54+50	61.1' RT.	50.7	50.7
54+50	61.1' RT.		55+00	56.4' RT.	50.2	50.2
55+00	56.4' RT.		56+00	56.4' RT.	100.0	100.0
56+00	56.4' RT.		62+44	56.4' RT.	644.0	644.0
62+44	56.4' RT.		63+28	56.4' RT.	84.0	84.0
63+28	56.4' RT.		64+00	64.7' RT.	72.5	72.5
64+00	64.7' RT.		64+50	66.4 RT.	50.0	50.0
64+50	66.4' RT.		64+73	65.9' RT.	23.0	23.0
STATION EQUATION: 64+73.00 (BK) = 57+11.00 (AH.)						
57+11	65.9' RT.		57+38	65.0' RT.	27.0	27.0
57+38	65.0' RT.		57+70	42.9' RT.	38.9	38.9
				SUB-TOTAL 051-0075:		2,772.0

STATION	OFFSET	TO	STATION	OFFSET	LENGTH	PERIMETER EROSION BARRIER 28000400 (FOOT)
S.N. 051-0074						
80+40	34.9' LT.		81+00	59.3' LT.	64.8	64.8
81+00	59.3' LT.		81+50	61.1' LT	50.0	50.0
81+50	61.1' LT		82+00	71.6' LT.	51.1	51.1
82+00	71.6' LT.		83+00	74.9' LT.	100.1	100.1
83+00	74.9' LT.		83+57	56.4' LT.	59.9	59.9
83+57	56.4' LT.		86+87	56.4' LT.	330.0	330.0
86+87	56.4' LT.		87+00	58.3' LT.	13.1	13.1
87+00	58.3' LT.		87+50	76.6' LT.	53.2	53.2
87+50	76.6' LT.		88+50	67.6' LT.	100.4	100.4
88+50	67.6' LT.		89+00	65.7' LT.	50.0	50.0
89+00	65.7' LT.		89+50	70.4' LT.	50.2	50.2
89+50	70.4' LT.		89+82	30.0 LT.	51.5	51.5
80+30	30.0' RT.		80+52	58.5' RT.	36.0	36.0
80+52	58.5' RT.		81+00	72.2' RT.	49.9	49.9
81+00	72.2' RT.		81+50	75.9' RT.	50.1	50.1
81+50	75.9' RT.		82+00	75.8' RT.	50.0	50.0
82+00	75.8' RT.		82+85	80.3 RT.	85.1	85.1
FIELD ROAD OMISSION						
83+28	66.2' RT.		83+74	56.4' RT.	47.0	47.0
83+74	56.4' RT.		86+00	56.4' RT.	226.0	226.0
86+00	56.4' RT.		87+00	68.4' RT.	100.7	100.7
87+00	68.4' RT.		87+51	69.3' RT.	51.0	51.0
87+51	69.3' RT.		88+50	58.4' RT.	99.6	99.6
88+50	58.4' RT.		88+87	32.7' RT.	45.0	45.0
				SUB-TOTAL 051-0074:		1,816.0

RIGHT OF WAY MARKERS

STATION	OFFSET	FURNISHING AND ERECTING RIGHT OF WAY MARKERS 66600105 (EACH)
S.N. 051-0074		
80+00.00	70' RT.	1.0
81+00.00	100' RT.	1.0
81+00.00	70' LT.	1.0
82+00.00	90' LT.	1.0
83+00.00	90' LT.	1.0
84+00.00	70' LT.	1.0
86+00.00	70' LT.	1.0
87+50.00	90' LT.	1.0
89+50.00	90' LT.	1.0
90+00.00	75' LT.	1.0
TOTAL =		10.0

EARTHWORK

LOCATION	EARTH EXCAVATION 20200100 (CU YD)	EMBANKMENT (CU YD) (1)	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE 25% CU YD	NEEDED BORROW (FOR INFO ONLY) CU YD	CHANNEL EXCAVATION 20300100 (CU YD)	FURNISHED EXCAVATION 20400800 (CU YD)
S.N. 051-0075 LEFT	89.0	383.1	66.8	316.4	535.0	317.0
S.N. 051-0075 RIGHT	52.0	507.5	39.0	468.5	516.0	469.0
S.N. 051-0074 LEFT	61.0	1,053.3	45.8	1,007.6	628.0	1,008.0
S.N. 051-0074 RIGHT	70.0	1,024.1	52.5	971.6	697.0	972.0
TOTAL =	272.0				2,376.0	2,766.0

NOTES:

1- NO SHRINKAGE FACTOR APPLIED TO THE EMBANKMENT QUANTITY

2- NO PAYMENT WILL BE ALLOWED FOR OVERHAUL

3- EXCAVATION REQUIRED FOR AGGREGATE SHOULDERS IS MEAURED AND PAID FOR AS EARTH EXCAVATION

USER NAME = Jessica.hille	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2025	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULES OF QUANTITIES

SCALE: | SHEET 1 OF 6 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	12
		CONTRACT NO. 74164		
	ILLINOIS FED. AID PROJECT			

SCHEDULE OF QUANTITIES

PAVEMENT REMOVAL

STATION	TO	STATION	WIDTH (FOOT)	LENGTH (FOOT)	AREA (SQ YD)	PAVEMENT REMOVAL 44000100 (SQ YD)	APPROACH SLAB REMOVAL Z0004552 (SQ YD)
S.N. 051-0075							
54+37.20		54+73.00	24.00	35.80	95.5	95.5	
54+73.00		55+00.00	24.00	27.00	72.0		72.0
63+18.20		63+58.20	24.00	40.00	106.7		106.7
63+58.20		63+79.50	24.00	21.30	56.8	56.8	
			SUB-TOTAL S.N. 051-0075 =			153.0	179.0
S.N. 051-0074							
82+76.90		83+10.00	24.00	33.10	88.3	88.3	
83+10.00		83+39.00	24.00	29.00	77.3		77.3
86+85.00		87+25.00	24.00	40.00	106.7		106.7
87+25.00		87+49.50	24.00	24.50	65.3	65.3	
			SUB-TOTAL S.N. 051-0074 =			154.0	184.0
			TOTAL =			307.0	363.0

LT/RT	STATION	TO	STATION	WIDTH (FOOT)	LENGTH (FOOT)	AREA (SQ YD)	PAVED SHOULDER REMOVAL 44004250 (SQ YD)
S.N. 051-0075							
LT	54+37.20		54+73.00	3.00	35.80	11.9	11.9
LT	63+18.20		63+79.50	3.30	61.30	22.5	22.5
RT	54+37.20		54+73.00	3.00	35.80	11.9	11.9
RT	63+18.20		63+79.50	3.80	61.30	25.9	25.9
			SUB-TOTAL S.N. 051-0075 =				73.0
S.N. 051-0074							
LT	82+76.90		83+10.00	3.10	33.10	11.4	11.4
LT	86+85.00		87+49.50	3.10	64.50	22.2	22.2
RT	82+76.90		83+10.00	3.10	33.10	11.4	11.4
RT	86+85.00		87+49.50	2.90	64.50	20.8	20.8
			SUB-TOTAL S.N. 051-0074 =				66.0
			TOTAL =				139.0

TEMPORARY CONCRETE BARRIER

STAGE	LOCATION	STATION	TO	STATION	LENGTH (FOOT)	BARRIER SECTIONS NEEDED (EACH)	TEMPORARY CONCRETE BARRIER 70400100 (FOOT)	RELOCATE TEMPORARY CONCRETE BARRIER 70400200 (FOOT)	PINNING TEMPORARY CONCRETE BARRIER 70400125 (EACH)	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST-LEVEL 3 70600250 (EACH)	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST-LEVEL 3 70600260 (EACH)	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE, NARROW), TEST-LEVEL 3 70600332 (EACH)	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3 70600350 (EACH)
S.N. 051-0075													
I	TAPER	53+19.40		53+32.00	12.70	1	12.7				1.0	1.0	
I	TANGENT	53+32.00		64+73.00	1,141.00								
STATION EQUATION: STA. 64+73.00 (BK.) = STA. 57+11.00 (AH.)						105	1,330.0		237.0				
I	TANGENT	57+11.00		59+00.00	189.00								
I	TAPER	59+00.00		60+01.00	101.20	8	101.2			1.0			
II	TANGENT	53+32.00		64+73.00	1,141.00								
STATION EQUATION: STA. 64+73.00 (BK.) = STA. 57+11.00 (AH.)						91		1,152.6			1.0		1.0
II	TANGENT	57+11.00		57+22.60	11.60								
II	TANGENT	58+74.80		59+00.00	25.20	2		25.2			1.0		
II	TAPER	59+00.00		60+13.50	114.00	9		114.0					
				SUB-TOTAL S.N. 051-0075			1,444.0	1,292.0	237.0	1.0	3.0	1.0	1.0
S.N. 051-0074													
I	TAPER	80+44.70		81+45.90	101.20	8	101.2			1.0			
I	TANGENT	81+45.90		88+67.90	722.00	57	722.0		120.0				
I	TAPER	88+67.90		89+68.80	101.20	8	101.2			1.0			
II	TAPER	80+32.30		81+45.90	114.00	9		114.0					1.0
II	TANGENT	81+45.90		88+67.90	722.00	57		722.0					
II	TAPER	88+67.90		89+81.40	114.00	9		114.0					1.0
				SUB-TOTAL S.N. 051-0074			925.0	950.0	120.0	2.0	0.0	0.0	2.0
				GRAND TOTAL =			2,369.0	2,242.0	357.0	3.0	3.0	1.0	3.0

USER NAME = jessica.hille	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 1/30/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULES OF QUANTITIES

SCALE: | SHEET 2 OF 6 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	13
		CONTRACT NO. 74164		
	ILLINOIS FED. AID PROJECT			

SCHEDULE OF QUANTITIES

HOT-MIX ASPHALT - SHOULDERS

LT/RT	STATION	TO	STATION	WIDTH (FOOT)	LENGTH (FOOT)	AREA (SQ FT)	AREA (SQ YD)	HOT-MIX ASPHALT BASE COURSE WIDENING, 10" 35600716 (SQ YD)	HOT-MIX ASPHALT SHOULDERS, 2" 48203005 (SQ YD)
STRUCTURE NUMBER 051-0075									
LT	52+17.30		52+27.30	2.50	10.00	25.0	2.8	2.8	2.8
LT	52+27.30		54+37.17	5.00	209.87	1,049.4	116.6	116.6	116.6
BRIDGE OMISSION STRUCTURE 051-0075									
LT	63+79.51		64+73.00	5.00	93.49	467.5	51.9	51.9	51.9
STATION EQUATION: STATION 64+73.00 (BK,) = STATION 57+11.00 (AH,)									
LT	57+11.00		60+00.00	5.00	289.00	1,445.0	160.6	160.6	160.6
LT	60+00.00		60+10.00	2.50	10.00	25.0	2.8	2.8	2.8
RT	52+83.70		52+93.70	2.50	10.00	25.0	2.8	2.8	2.8
RT	52+93.70		54+37.17	5.00	143.47	717.4	79.7	79.7	79.7
BRIDGE OMISSION STRUCTURE 051-0075									
RT	63+79.51		64+70.90	5.00	91.39	457.0	50.8	50.8	50.8
RT	64+70.90		64+73.00	4.40	2.10	9.2	1.0	1.0	1.0
STATION EQUATION: STATION 64+73.00 (BK.) = STATION 57+11.00 (AH.)									
RT	57+11.00		57+18.90	1.90	7.90	15.0	1.7	1.7	1.7
STRUCTURE NUMBER 051-0074									
LT	80+42.60		80+52.60	2.50	10.00	25.0	2.8	2.8	2.8
LT	80+52.60		82+76.85	5.00	224.25	1,121.3	124.6	124.6	124.6
BRIDGE OMISSION STRUCTURE 051-0074									
LT	87+49.52		89+56.00	5.00	206.48	1,032.4	114.7	114.7	114.7
LT	89+56.00		89+66.00	2.50	10.00	25.0	2.8	2.8	2.8
RT	81+27.20		81+37.20	2.50	10.00	25.0	2.8	2.8	2.8
RT	81+37.20		82+76.85	5.00	139.65	698.3	77.6	77.6	77.6
BRIDGE OMISSION STRUCTURE 051-0074									
RT	87+49.52		88+37.40	5.00	87.88	439.4	48.8	48.8	48.8
RT	88+37.40		88+47.40	2.50	10.00	25.0	2.8	2.8	2.8
				SUB-TOTAL S.N. 051-0075 =					
				TOTAL S.N. 051-0075 =				471.0	471.0
				SUB-TOTAL S.N. 051-0074 =					
				TOTAL S.N. 051-0074 =				377.0	377.0
				GRAND TOTAL =				848.0	848.0

AGGREGATE SHOULDERS

LT/RT	STATION	TO	STATION	LENGTH (FOOT)	WIDTH (FOOT)	AREA (SQ FT)	AREA (SQ YD)	AGGREGATE WEDGE SHOULDER, TYPE B THICKNESS (INCH)	AGGREGATE SHOULDERS, TYPE B 6" 48101500 (SQ YD)	AGGREGATE WEDGE SHOULDER, TYPE B 48102100 (TON)
LT	52+57.10		54+47.17	190.07	3.00	570.2	63.4	1.25	63.4	0.4
LT	63+69.51		64+73.00	103.49	3.00	310.5	34.5	1.25	34.5	0.2
STATION EQUATION: STATION 64+73.00 (BK) = STATION 57+11.00 (AH)										
LT	57+11.00		60+16.60	305.60	3.00	916.8	101.9	1.25	101.9	0.7
RT	52+50.00		54+47.17	197.17	3.00	591.5	65.7	1.25	65.7	0.5
RT	63+59.51		64+73.00	113.49	3.00	340.5	37.8	1.25	37.8	0.3
STATION EQUATION: STATION 64+73.00 (BK) = STATION 57+11.00 (AH)										
RT	57+11.00		60+00.00	289.00	3.00	867.0	96.3	1.25	96.3	0.7
							SUB-TOTAL S.N. 051-0075		400.0	3.0
LT	80+36.50		82+91.85	255.35	3.00	766.1	85.1	1.25	85.1	0.6
LT	87+34.52		89+71.70	237.18	3.00	711.5	79.1	1.25	79.1	0.5
RT	81+14.70		82+91.85	177.15	3.00	531.5	59.1	1.25	59.1	0.4
RT	87+34.52		89+00.00	165.48	3.00	496.4	55.2	1.25	55.2	0.4
							SUB-TOTAL S.N. 051-0074		279.0	2.0
							GRAND TOTAL =		679.0	5.0

SCHEDULE OF QUANTITIES

HOT-MIX ASPHALT - MAINLINE

* NOTE: HMA THICKNESSES MAY BE BASED ON AVERAGES FOR VARYING THICKNESS. SEE PAVING DETAILS FOR MORE INFORMATION.

STATION	TO	STATION	LENGTH (FOOT)	AVG. WIDTH (FOOT)	AREA (SQ FT)	AREA (SQ YD)	* ADDITIONAL HOT MIX ASPHALT IL-19.0 BINDER COURSE THICKNESS (INCH)	* HOT MIX ASPHALT IL-19.0 BINDER COURSE THICKNESS (INCH)	* POLYMERIZED HOT MIX ASPHALT IL-9.5 FG BINDER COURSE THICKNESS (INCH)	* POLYMERIZED HOT MIX ASPHALT SURFACE COURSE THICKNESS (INCH)	1ST LIFT BINDER COURSE	2ND LIFT BINDER COURSE	3RD LIFT BINDER COURSE	SURFACE COURSE	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90 40603090 (TON)	POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, IL-9.5FG, N90 40603219 (TON)	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N90 40604164 (TON)	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH X4401198 (SQ YD)
											BITUMINOUS MATERIALS (TACK COAT) 40600290 (POUND)							
STRUCTURE NUMBER 051-0075																		
52+50.00		53+40.00	90.00	29.40	2,646.0	294.0				2.00				132.3			32.9	294.0
53+40.00		53+65.00	25.00	29.40	735.0	81.7				2.63				36.8			12.0	81.7
53+65.00		54+25.00	60.00	29.50	1,770.0	196.7			2.38	2.00			88.5	44.3		26.2	22.0	196.7
54+25.00		54+37.17	12.17	29.50	359.0	39.9		2.50	1.25	2.00		18.0	9.0	9.0	5.6	2.8	4.5	39.9
BRIDGE OMISSION - STRUCTURE NUMBER 051-0075																		
63+79.51		64+31.00	51.49	29.50	1,519.0	168.8	1.13	4.00	1.25	2.00	1.5	38.0	38.0	38.0	48.4	11.8	18.9	168.8
64+31.00		64+70.00	39.00	29.50	1,150.5	127.8		3.13	1.25	2.00		57.5	28.8	28.8	22.4	8.9	14.3	127.8
64+70.00		64+73.00	3.00	29.50	88.5	9.8			3.50	2.00			4.4	2.2		1.9	1.1	9.8
STATION EQUATION: STATION 64+73.00 (BK,) = STATION 57+11.00 (AH)																		
57+11.00		58+75.00	164.00	29.70	4,870.8	541.2			2.38	2.00			243.5	121.8		72.0	60.6	541.2
58+75.00		59+54.00	79.00	29.80	2,354.2	261.6				2.63				117.7			38.5	261.6
59+54.00		60+00.00	46.00	29.90	1,375.4	152.8				2.00				68.8			17.1	152.8
STRUCTURE NUMBER 051-0074																		
80+60.00		81+50.00	90.00	29.90	2,691.0	299.0				2.00				134.6			33.5	299.0
81+50.00		81+80.00	30.00	29.80	894.0	99.3				2.63				44.7			14.6	99.3
81+80.00		82+10.00	30.00	29.70	891.0	99.0			2.38	2.00			44.6	22.3		13.2	11.1	99.0
82+10.00		82+76.85	66.85	29.50	1,972.1	219.1		3.75	1.25	2.00		98.6	49.3	49.3	46.0	15.3	24.5	219.1
BRIDGE OMISSION - STRUCTURE NUMBER 051-0074																		
87+49.52		87+92.00	42.48	29.80	1,265.9	140.7		3.75	1.25	2.00		63.3	31.6	31.6	29.5	9.8	15.8	140.7
87+92.00		88+34.00	42.00	30.20	1,268.4	140.9			2.38	2.00			63.4	31.7		18.7	15.8	140.9
88+34.00		88+58.00	24.00	30.20	724.8	80.5				2.63				36.2			11.8	80.5
88+58.00		89+00.00	42.00	30.20	1,268.4	140.9				2.00				63.4			15.8	140.9
SUB-TOTAL S.N. 051-0075 =											1.5	113.4	412.2	599.5				
TOTAL S.N. 051-0075 =											1,127.0				77.0	124.0	222.0	1,875.0
SUB-TOTAL S.N. 051-0074 =											0.0	161.9	188.9	413.8				
TOTAL S.N. 051-0074 =											765.0				76.0	58.0	143.0	1,220.0
GRAND TOTAL =											1,892.0				153.0	182.0	365.0	3,095.0

HOT-MIX ASPHALT - SUMMARY

LOCATION	BITUMINOUS MATERIALS (TACK COAT) 40600290 (POUND)	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90 40603090 (TON)	POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, IL-9.5FG, N90 40603219 (TON)	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N90 40604164 (TON)	HOT-MIX ASPHALT BASE COURSE WIDENING, 10" 35600716 (SQ YD)	HOT-MIX ASPHALT SHOULDERS, 2" 48203005 (SQ YD)	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH X4401198 (SQ YD)
S.N. 051-0075							
S.N. 051-0075 MAINLINE	1,127.0	77.0	124.0	222.0			1,875.0
HMA SHOULDERS - 2"						471.0	
HMA BASE COURSE WIDENING, 10"					471.0		
S.N. 051-0074							
S.N. 051-0074 MAINLINE	765.0	76.0	58.0	143.0			1,220.0
HMA SHOULDERS - 2"						377.0	
HMA BASE COURSE WIDENING, 10"					377.0		
SUB-TOTAL S.N. 051-0075	1,127.0	77.0	124.0	222.0	471.0	471.0	1,875.0
SUB-TOTAL S.N. 051-0074	765.0	76.0	58.0	143.0	377.0	377.0	1,220.0
TOTAL =	1,892.0	153.0	182.0	365.0	848.0	848.0	3,095.0

MODEL: Default
FILE NAME: pw:\\dot-pw.bentley.com:PWDOT\Documents\IDOT Offices\District 7\Projects\74164\CADD\data\CADsheets\2024 CADsheets Updated by Travis\077416x-sht-schedule_2024.dgn

USER NAME = Jessica.Hille	DESIGNED -	REVISED -	**STATE OF ILLINOIS**
	DRAWN -	REVISED -	**DEPARTMENT OF TRANSPORTATION**
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2025	DATE -	REVISED -	

SCHEDULES OF QUANTITIES

SCALE: | SHEET 4 OF 6 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	15
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

SCHEDULE OF QUANTITIES

PAVEMENT MARKING

LINE/SD/NPZ	LT/RT/CL	LOCATION	STATION	TO	STATION	LENGTH (FEET)	STRIPE WIDTH (INCH)	NUMBER OF STRIPES	SHORT TERM PAVEMENT MARKING WHITE 70300100 (FOOT)	SHORT TERM PAVEMENT MARKING YELLOW 70300100 (FOOT)	SHORT TERM PAVEMENT MARKING REMOVAL 70300150 (SQ FT)	TEMPORARY PAVEMENT MARKING - LINE 4" - PAINT WHITE 70300221 (FOOT)	TEMPORARY PAVEMENT MARKING - LINE 4" - PAINT YELLOW 70300221 (FOOT)	PAINT PAVEMENT MARKING - LINE 4" WHITE 78001110 (FOOT)	PAINT PAVEMENT MARKING - LINE 4" YELLOW 78001110 (FOOT)
S.N. 051-0075															
LINE	LT & RT	EL	50+54.00		52+50.00	196.0	4.0	2						392.0	
LINE	LT & RT	EL	52+50.00		64+73.0	1,223.0	4.0	2	48.9		16.3	2,446.0		2,446.0	
STATION EQUATION: STATION 64+73.00 (BK) = STATION 57+11.00 (AH)															
LINE	LT & RT	EL	57+11.00		60+00.00	289.0	4.0	2	11.6		3.9	578.0		578.0	
LINE	LT & RT	EL	60+00.00		61+89.00	189.0	4.0	2						378.0	
NPZ	CL	CL	50+54.00		52+50.00	196.0	4.0	1.25							245.0
NPZ	CL	CL	52+50.00		54+00.00	47.2	4.0	1.25		15.0	5.0		187.5		187.5
SD	CL	CL	54+00.00		64+73.00	1.073.0	4.0	0.25		107.0	35.8		268.3		268.3
STATION EQUATION: STATION 64+73.00 (BK) = STATION 57+11.00 (AH)															
SD	CL	CL	57+11.00		60+00.00	289.0	4.0	0.25		28.9	9.6		72.3		72.3
SD	CL	CL	60+00.00		61+89.00	189.0	4.0	0.25							47.3
			SUB-TOTAL S.N 051-0075 =						60.5	151.2		3,024.0	528.0	3,794.0	820.3
			SUB-TOTAL S.N 051-0075 =						212.0		71.0	3,552.0		4,615.0	
S.N. 051-0074															
LINE	LT & RT	EL	78+68.00		80+00.00	132.0	4.0	2						264.0	
LINE	LT & RT	EL	80+00.00		89+00.00	900.0	4.0	2	36.0		12.0	1,800.0		1,800.0	
LINE	LT & RT	EL	89+00.00		89+91.00	91.0	4.0	2						182.0	
SD	CL	CL	78+68.00		80+00.00	132.0	4.0	0.25							33.0
SD	CL	CL	80+00.00		89+00.00	900.0	4.0	0.25		90.0	30.0		225.0		225.0
SD	CL	CL	89+00.00		89+91.00	91.0	4.0	0.25							22.8
			SUB-TOTALS 051-0074 =						36.0	90.0		1,800.0	225.0	2,246.0	280.8
			SUB-TOTALS 051-0074 =						126.0		42.0	2,025.0		2,527.0	

TOTAL (1 APPLICATION) =	338.0	113.0	5,577.0	7,142.0
TOTAL (2 APPLICATIONS) =	676.0	-----	-----	-----

EL = EDGE LINE
SD = SKIP DASH
NPZ = CENTERLINE NO PASSING ZONE

USER NAME = jessica.hille	DESIGNED -	REVISED -	**STATE OF ILLINOIS**
	DRAWN -	REVISED -	**DEPARTMENT OF TRANSPORTATION**
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2025	DATE -	REVISED -	

SCHEDULES OF QUANTITIES

SCALE: | SHEET 5 OF 6 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	16
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

SCHEDULE OF QUANTITIES

SEEDING

LOCATION	CLASS 2 SEEDING AREA (SQ FT)	CLASS 2 SEEDING AREA (ACRE)	CLASS 4B SEEDING AREA (SQ FT)	CLASS 4B SEEDING AREA (ACRE)	SEEDING, CLASS 2 25000200 (ACRE)	SEEDING, CLASS 4B 25000314 (ACRE)	SEEDING, CLASS 7 25000350 (ACRE)	NITROGEN FERTILIZER NUTRIENT 25000400 (POUND)	PHOSPHORUS FERTILIZER NUTRIENT 25000500 (POUND)	POTASSIUM FERTILIZER NUTRIENT 25000600 (POUND)	AGRICULTURAL GROUND LIMESTONE 25000700 (TON)	MULCH, METHOD 2 25100115 (ACRE)	EROSION CONTROL BLANKET 25100630 (SQ YD)
S.N. 051-0075													
S.N. 051-0075 - LEFT	17,450.1	0.40	46,269.7	1.06	0.40	1.06	1.46	131.7	131.7	131.7	5.85	1.06	1,938.9
S.N. 051-0075 - RIGHT	12,790.1	0.29	46,396.6	1.07	0.29	1.07	1.36	122.3	122.3	122.3	5.43	1.07	1,421.1
SUB-TOTALS S.N. 051-0075	30,240.2	0.69	92,666.3	2.13	0.75	2.25	3.00	254.0	254.0	254.0	12.0	2.25	3,361.0
S.N. 051-0074													
S.N. 051-0074 - LEFT	23,981.2	0.55	19,632.6	0.45	0.55	0.45	1.00	90.1	90.1	90.1	4.00	0.45	2,664.6
S.N. 051-0074 - RIGHT	10,718.5	0.25	19,029.8	0.44	0.25	0.44	0.68	61.5	61.5	61.5	2.73	0.44	1,190.9
PROPOSED FIELD ENTRANCE - RIGHT	4,451.8	0.10	130.5	0.00	0.10	0.00	0.11	9.5	9.5	9.5	0.42	0.00	494.6
SUB-TOTALS S.N. 051-0074	39,151.5	0.90	38,792.9	0.89	1.00	1.00	2.00	162.0	162.0	162.0	8.0	1.00	4,351.0
				TOTAL =	1.75	3.25	5.00	416.0	416.0	416.0	20.0	3.25	7,712.0

PAVEMENT MARKING BLACKOUT TAPE & REMOVAL

LINE TYPE/ LOCATION	STATION	TO	STATION	PAVEMENT MARKING BLACKOUT TAPE, 5" 70107005 (FOOT)
S.N. 051-0075				
STAGE 1				
SD CL	50+54.00		53+00.00	61.5
NPZ CL	50+54.00		53+00.00	246.0
SD CL	59+00.00		61+89.00	72.3
RT EL	52+46.00		64+73.00	1227.0
STATION EQUATION: STA 64+73.00 (BK) = STA 57+11.00 (AH)				
RT EL	57+11.10		59+82.00	270.9
STAGE 2				
LT EL	52+18.00		53+60.00	142.0
LT EL	58+75.00		60+29.00	154.0
SUB-TOTAL S.N. 051-0075 =				2174.0
S.N. 051-0074				
STAGE 1				
SD CL	78+68.00		81+46.00	69.5
SD CL	88+68.00		91+54.00	71.5
RT EL	80+61.00		89+53.00	892.0
STAGE 2				
LT EL	80+22.00		81+80.00	158.0
LT EL	88+34.00		89+91.00	157.0
SUB-TOTAL S.N. 051-0074 =				1348.0
GRAND TOTAL				3522.0

LINE TYPE/ LOCATION	STATION	TO	STATION	LENGTH (FOOT)	SHORT TERM PAVEMENT MARKING REMOVAL 70300150 (SQ YD)
S.N. 051-0075					
STAGE 1					
SD CL	50+54.00		53+00.00	61.5	25.6
NPZ CL	50+54.00		53+00.00	246.0	102.5
SD CL	59+00.00		61+89.00	72.3	30.1
RT EL	52+46.00		53+60.00	114.0	47.5
RT EL	58+75.00		59+82.00	107.0	44.6
STAGE 2					
LT EL	52+19.00		53+60.00	141.0	58.8
LT EL	58+75.00		60+29.00	154.0	64.2
SUB-TOTAL S.N. 051-0075 =					374.0
S.N. 051-0074					
STAGE 1					
SD CL	78+68.00		81+46.00	69.5	29.0
SD CL	88+68.00		91+54.00	71.5	29.8
RT EL	80+61.00		81+80.00	119.0	49.6
RT EL	88+34.00		89+53.00	119.0	49.6
STAGE 2					
LT EL	80+22.00		81+80.00	158.0	65.8
LT EL	88+34.00		89+91.0	157.0	65.4
SUB-TOTAL S.N. 051-0075 =					290.0
TOTAL					664.0
TOTAL ON SHEET 16					113.0
GRAND TOTAL					777.0

EL = EDGE LINE
SD = SKIP DASH
NPZ = CENTERLINE NO PASSING ZONE

USER NAME = jessica.hille	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2025	DATE -	REVISED -	

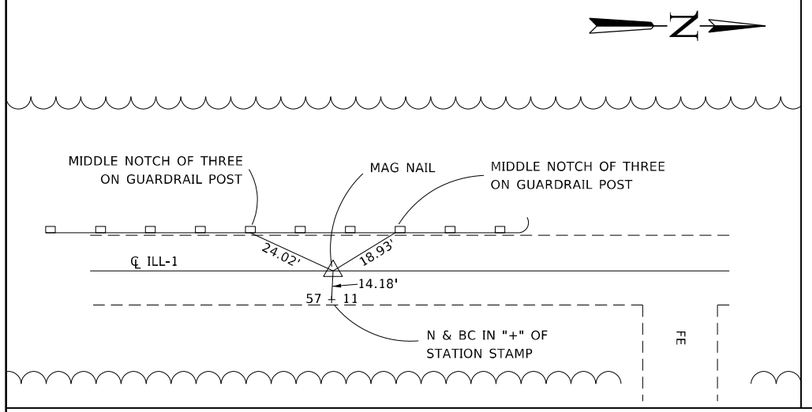
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULES OF QUANTITIES

SCALE: | SHEET 6 OF 6 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	17
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

POT STA. 64+73.00 BK = 57+11.10 AH



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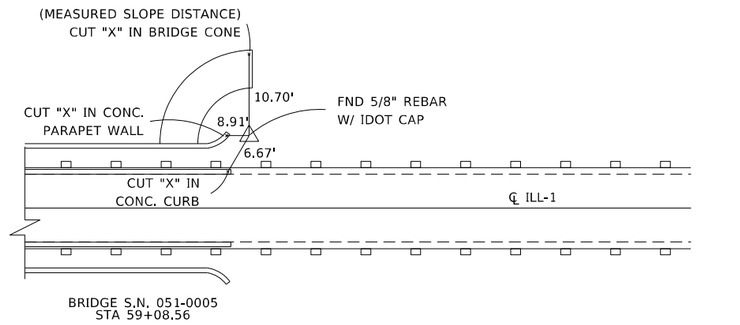

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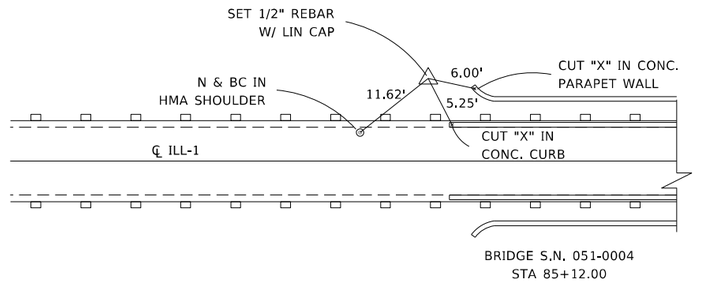


BENCHMARKS

EW 074 PER NGS DATA SHEET
ELEV. = 429.31

BM 202 CHISELED "□" LOCATED ON THE SOUTHERN MOST CORNER OF A TRIANGULAR SHAPED MEDIAN AT THE INTERSECTION OF THE US 50 OFF RAMP AND THE SOUTHBOUND LANES OF ILL 1
ELEV. = 429.57

L 1 CHISELED "□" LOCATED ALONG ILL 1 AT THE BASE OF THE NORTH END OF THE EAST PIER FOR US 50 OVER ILL 1. MARK IS AT THE INTERSECTION OF THE SOUTHWEST SIDE OF THE NORTH COLUMN AND THE CRASH WALL
ELEV. = 430.98

BM 5 STA. 54+72.60, 15.4' RT.
CHISELED "□" LOCATED ON THE SOUTHEAST CORNER OF S.N. 051-0005 ON BRIDGE HUB GUARD, STRUCTURE IS LOCATED ALONG ILL 1 FIRST STRUCTURE NORTH OF US 50 OVERPASS
ELEV. = 431.29

BM 7 STA. 63+18.30, 15.9' RT.
CHISELED "□" LOCATED ON THE NORTHEAST CORNER OF S.N. 051-0005 ON BRIDGE HUB GUARD, STRUCTURE IS LOCATED ALONG ILL 1 FIRST STRUCTURE NORTH OF US 50 OVERPASS
ELEV. = 431.55

L 2 STA. 66+88.70, 70.1' RT.
RAILROAD SPIKE IN THIRD POWER POLE NORTH OF S.N. 051-0005 ON WEST SIDE OF ILL 1, 0.7 MILES NORTH OF US 50 OVERPASS JUST SOUTH OF AGGREGATE DRIVE
ELEV. = 416.70

BM 12 83+11.00, 16.1' RT.
CHISELED "□" LOCATED ON THE SOUTHEAST CORNER OF S.N. 051-0004 ON BRIDGE HUB GUARD, STRUCTURE IS LOCATED ALONG ILL 1 SECOND STRUCTURE NORTH OF US 50 OVERPASS
ELEV. = 431.16

BM 13 86+83.40, 15.5' RT.
CHISELED "□" LOCATED ON THE NORTHEAST CORNER OF S.N. 051-0004 ON BRIDGE HUB GUARD, STRUCTURE IS LOCATED ALONG ILL 1 SECOND STRUCTURE NORTH OF US 50 OVERPASS
ELEV. = 431.36

BM 20 RAILROAD SPIKE IN POWER POLE SOUTHEAST QUADRANT OF ILL 1 AND 1300N (ROAD LEADING TO LAWRENCEVILLE IDOT OPERATIONS YARD)
ELEV. = 440.40

EW 073 STA. 67+12.20, 33.4' LT.
PER NGS DATA SHEET
ELEV. = 425.94

MODEL: Default
FILE NAME: aw:\\dot-pw.bentley.com:PWIDOT Documents\IDOT Office\District 7\Projects\74164\CADData\CADSheets\2024 CADsheets Updated by Travis\074164-sht-ATB_2024.dgn

USER NAME = jessica.hille	DESIGNED -	REVISED -	**STATE OF ILLINOIS**
	DRAWN -	REVISED -	**DEPARTMENT OF TRANSPORTATION**
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/31/2024	DATE -	REVISED -	

TIES & BENCHMARKS

SCALE: | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	18
		CONTRACT NO. 74164		
	ILLINOIS FED. AID PROJECT			

PLAN: NOTE BOOK NO. — SURVEYED, PLOTTED, ALIGNMENT CHECKED, R.O.W. CHECKED, CADD FILE NAME — BY — DATE

PROFILE: NOTE BOOK NO. — SURVEYED, PLOTTED, GRADES CHECKED, B.M. NOTED, STRUCTURE NOTATNS CK'ED — BY — DATE

MODEL: Default
FILE NAME: pw:\\ildot-pw.bentley.com:PWIDOT\Documents\IDOT Offices\District 7\Projects\74164\CADData\CADSheets\2024 CADSheets Updated by Travis\D774164-sht-plan_2024.dgn

USER NAME = jessica.hille	DESIGNED - ELH	REVISED - D7 Geometrics	
	DRAWN - JPC/RTM	REVISED - D7 Hydraulics	
PLOT SCALE = 40.0000 ' / in.	CHECKED - ELH	REVISED -	
PLOT DATE = 10/31/2024	DATE - 06/22/17	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

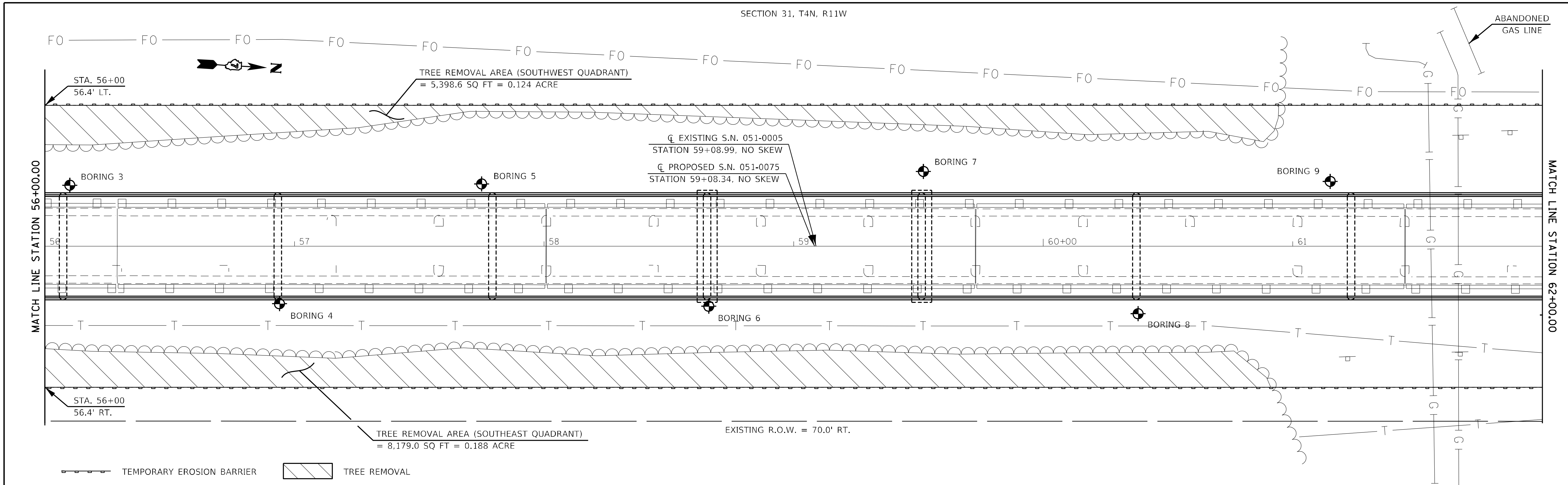
F.A.P. ROUTE 332 (IL 1) PLAN AND PROFILE
PROPOSED SN 051–0075

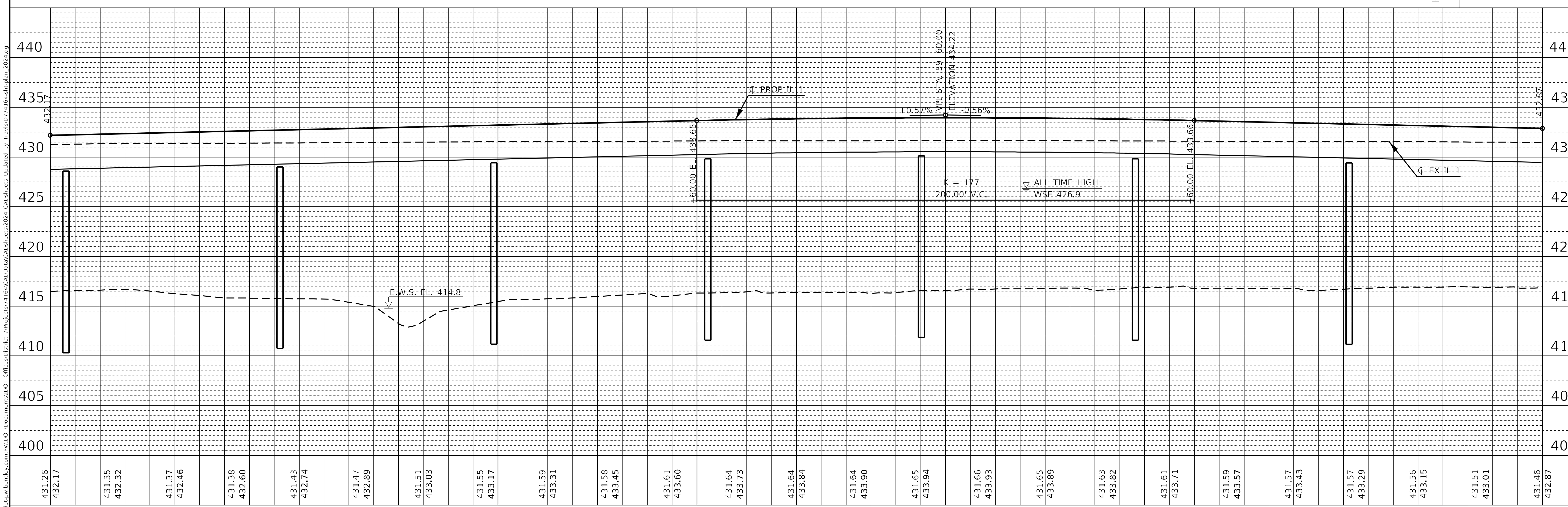
SCALE: SHEET 1 OF 3 SHEETS STA. 50+00 TO STA. 56+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	19

CONTRACT NO. 74164

ILLINOIS FED. AID PROJECT


SECTION 31, T4N, R11W
ABANDONED GAS LINE
STA. 56+00
56.4' LT.
TREE REMOVAL AREA (SOUTHWEST QUADRANT)
= 5,398.6 SQ FT = 0.124 ACRE
℄ EXISTING S.N. 051-0005
STATION 59+08.99, NO SKEW
℄ PROPOSED S.N. 051-0075
STATION 59+08.34, NO SKEW
BORING 3
BORING 4
BORING 5
BORING 6
BORING 7
BORING 8
BORING 9
MATCH LINE STATION 56+00.00
MATCH LINE STATION 62+00.00
56
57
58
59
60+00
61
STA. 56+00
56.4' RT.
TREE REMOVAL AREA (SOUTHEAST QUADRANT)
= 8,179.0 SQ FT = 0.188 ACRE
EXISTING R.O.W. = 70.0' RT.
TEMPORARY EROSION BARRIER
TREE REMOVAL


440
435
430
425
420
415
410
405
400
432.17
432.87
℄ PROP IL 1
VPI STA. 59+60.00
ELEVATION 434.22
+0.57%
-0.56%
+60.00 EL. 433.65
+60.00 EL. 433.66
K = 177
200.00' V.C.
ALL TIME HIGH
WSE 426.9
℄ EX IL 1
E.W.S. EL. 414.8
431.26 432.17
431.35 432.32
431.37 432.46
431.38 432.60
431.43 432.74
431.47 432.89
431.51 433.03
431.55 433.17
431.59 433.31
431.58 433.45
431.61 433.60
431.64 433.73
431.64 433.84
431.64 433.90
431.65 433.94
431.66 433.93
431.65 433.89
431.63 433.82
431.61 433.71
431.59 433.57
431.57 433.43
431.57 433.29
431.56 433.15
431.51 433.01
431.46 432.87
56+00
56+50
57+00
57+50
58+00
58+50
59+00
59+50
60+00
60+50
61+00
61+50
62+00

USER NAME = jessica,hille	DESIGNED - ELH	REVISED - D7 Geometrics	
	DRAWN - JPC/RTM	REVISED - D7 Hydraulics	
PLOT SCALE = 40.0000 ' / in.	CHECKED - ELH	REVISED -	
PLOT DATE = 10/31/2024	DATE - 06/22/17	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. ROUTE 332 (IL 1) PLAN AND PROFILE
PROPOSED SN 051–0075

SCALE: | SHEET 2 OF 3 SHEETS | STA. 56+00 TO STA. 62+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	20

CONTRACT NO. 74164

ILLINOIS | FED. AID PROJECT

SECTION 31, T4N, R11W ◄► SECTION 30, T4N, R11W

N

TREE REMOVAL AREA (NORTHWEST QUADRANT - AREA 1)
= 824.8 SQ FT = 0.019 ACRE

TREE REMOVAL AREA (NORTHWEST QUADRANT - AREA 2)
= 606.9 SQ FT = 0.014 ACRE

STA. 62+14, 56.5' LT.
STA. 63+06, 56.5' LT.
STA. 63+65, 56.4' LT.
STA. 64+00, 49.1' LT.
STA. 64+50, 43.2' LT.
STA. 57+35, 48.1' LT.
STA. 58+00, 62.5' LT.
STA. 58+50, 64.0' LT.
STA. 59+00, 59.0' LT.
STA. 60+00, 57.0' LT.
STA. 60+05, 52.0' LT.
STA. 60+30, 30.0' LT.

FO FO FO FO FO FO FO FO FO FO FO FO FO

MATCH LINE STATION 62+00.00

BORING 11
BORING 12
BORING 10

+18.13
+58.13
+69.51
+79.51
+39.51

10' FLEXIBLE PAVEMENT CONNECTOR
SEE STD. 420406 FOR DETAILS
3.0'
5.0' (TYP.)

POT STATION 64+73.00 (BK.) =
POT STATION 57+11.10 (AH.)
POT STA 64+73.00

62 | 63 | 64 | 58 | 59 | 60+00

29.5'
29.9'
+10.00
+00.00
+54.00
+70.90
+18.90

3.0'
5.0' (TYP.)
7.0'

PERMANENT SURVEY
MARKER, TYPE I (1 EACH)

PROTECTING OR RESETTING
SURVEY MARKERS (1 EACH)

PE (AGG)
STA 57+97.36

AGGREGATE SURFACE COURSE, TYPE B

SEE PAVING DETAILS

STA. 62+44, 56.4' RT.
STA. 63+28, 56.4' RT.
STA. 64+00, 64.7' RT.
STA. 64+50, 66.4' RT.
STA. 57+38, 65.0 RT.
STA. 57+70, 42.9' RT.

ABANDONED
GAS LINE

EXISTING R.O.W. = 70.0' RT.
TREE REMOVAL AREA (NORTHEAST QUADRANT)
= 2,398.9 SQ FT = 0.055 AC

TEMPORARY EROSION BARRIER
CONSTRUCTION LIMITS
HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH
TREE REMOVAL
PAVEMENT REMOVAL
PAVED SHOULDER REMOVAL
APPROACH SLAB REMOVAL

PLAN
SURVEYED
PLOTTED
CROSS SECTIONS CHECKED
R.O. WAY CHECKED
CADD FILE NAME
NOTE BOOK
NO.
BY
DATE

PROFILE
SURVEYED
PLOTTED
CROSS SECTIONS CHECKED
R.O. WAY CHECKED
STRUCTURE NOTATIONS CHKD
NOTE BOOK
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DATE

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440 435 430 425 420 415 410 405 400

432.87

EQUATION:
BK. 64+73.00 =
AH. 57+11.10

℄ PROP IL 1
+0.56%
429.71

℄ EX IL 1

☆ ALL TIME HIGH
WSE 426.9

62+00	62+50	63+00	63+50	64+00	64+50	57+50	58+00	58+50	59+00	59+50	60+00
431.46 / 432.87	431.43 / 432.73	431.39 / 432.59	431.34 / 432.45	431.26 / 432.31	431.18 / 432.17	431.16 / 432.03	431.12 / 431.89	431.05 / 431.75	431.01 / 431.60	430.99 / 431.46	430.88 / 431.26	430.78 / 431.12	430.66 / 430.98	430.55 / 430.83	430.42 / 430.69	430.29 / 430.55	430.18 / 430.41	430.07 / 430.27	429.96 / 430.13	429.85 / 429.99	429.78 / 429.85	429.71 / 429.71

USER NAME = jessica.hille	DESIGNED - ELH	REVISED - D7 Geometrics	
	DRAWN - JPC/RTM	REVISED - D7 Hydraulics	
PLOT SCALE = 40.0000 ' / in.	CHECKED - ELH	REVISED -	
PLOT DATE = 11/20/2024	DATE - 06/22/17	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. ROUTE 332 (IL 1) PLAN AND PROFILE
PROPOSED SN 051-0075

SCALE: | SHEET 3 OF 3 SHEETS | STA. 62+00 | TO STA. 60+38.1

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,8R-2)B-1	LAWRENCE	188	21
		CONTRACT NO. 74164		
	ILLINOIS FED. AID PROJECT			

PLAN
NOTE BOOK NO.
SURVEYED
ALIGNMENT CHECKED
R.O.W WAY CHECKED
CADD FILE NAME
BY
DATE

PROFILE
NOTE BOOK NO.
SURVEYED
PLOTTED
GRADES CHECKED
BM. NOTED
STRUCTURE NOTATNS CHKD
BY
DATE

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USER NAME = jessica.hille	DESIGNED - ELH	REVISED - D7 GEOMETRICS	
	DRAWN - JPC/RTM	REVISED - D7 HYDRAULICS	
PLOT SCALE = 40.0000 ' / in.	CHECKED - ELH	REVISED -	
PLOT DATE = 10/31/2024	DATE - 06/16/17	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. ROUTE 332 (IL 1) PLAN AND PROFILE
PROPOSED SN 051–0074

SCALE: | SHEET 1 OF 2 SHEETS | STA. 80+00 TO STA. 86+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	22

CONTRACT NO. 74164

ILLINOIS | FED. AID PROJECT

PLAN	SURVEYED PLOTTED ALIGNMENT CHECKED R.O.W. WAY CHECKED CADD FILE NAME	BY	DATE
NOTE BOOK NO.___			

PROFILE	SURVEYED PLOTTED GRADES CHECKED B.M. NOTED STRUCTURE NOTAT'NS CH'KD	BY	DATE
NOTE BOOK NO.___			

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USER NAME = jessica.hille	DESIGNED - ELH	REVISED - D7 GEOMETRICS	
	DRAWN - JPC/RTM	REVISED - D7 HYDRAULICS	
PLOT SCALE = 40.0000 ' / in.	CHECKED - ELH	REVISED -	
PLOT DATE = 10/31/2024	DATE - 06/16/17	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. ROUTE 332 (IL 1) PLAN AND PROFILE
PROPOSED SN 051-0074

SCALE: | SHEET 2 OF 2 SHEETS | STA. 86+00 TO STA. 92+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	23
		CONTRACT NO. 74164		
		ILLINOIS FED. AID PROJECT		

SECTION 30, T4N, R11W

N

STA. 80+92.38
PROP FE (AGG)

79 | 80+00 | 81 | 82 | 83 | 84

POT Sta 0+00.00

00+0

PC Sta 0+13.37

58.1'

EXIST. CURVE PROFE_CL1
PI STA. = 0+34.97
Δ = 81° 39' 57" (LT)
D = 229° 10' 59"
R = 25.00'
T = 21.60'
L = 35.63'
E = 8.04'
e = ___
T.R. = ___
S.E. RUN = ___
P.C. STA. = 0+13.37
P.T. STA. = 0+49.00

PI Sta 0+34.97

PC Sta 0+49.00

15'

STA. 80+00.00
70.0' RT.

EXISTING R.O.W. = 70.0' RT.

PR. ROW

STA. 81+00.00
100.0' RT.

STA 81+69.39
PE (AGG)

PI Sta 1+55.92

AGGREGATE SURFACE COURSE, TYPE B
(8" THICKNESS)

EXIST. CURVE PROFE_CL2
PI STA. = 1+55.92
Δ = 15° 32' 43" (RT)
D = 7° 18' 51"
R = 783.35'
T = 106.92'
L = 212.53'
E = 7.26'
e = ___
T.R. = ___
S.E. RUN = ___
P.C. STA. = 0+49.00
P.T. STA. = 2+61.53

EXISTING R.O.W. = 100.0' RT.

15'

26.40

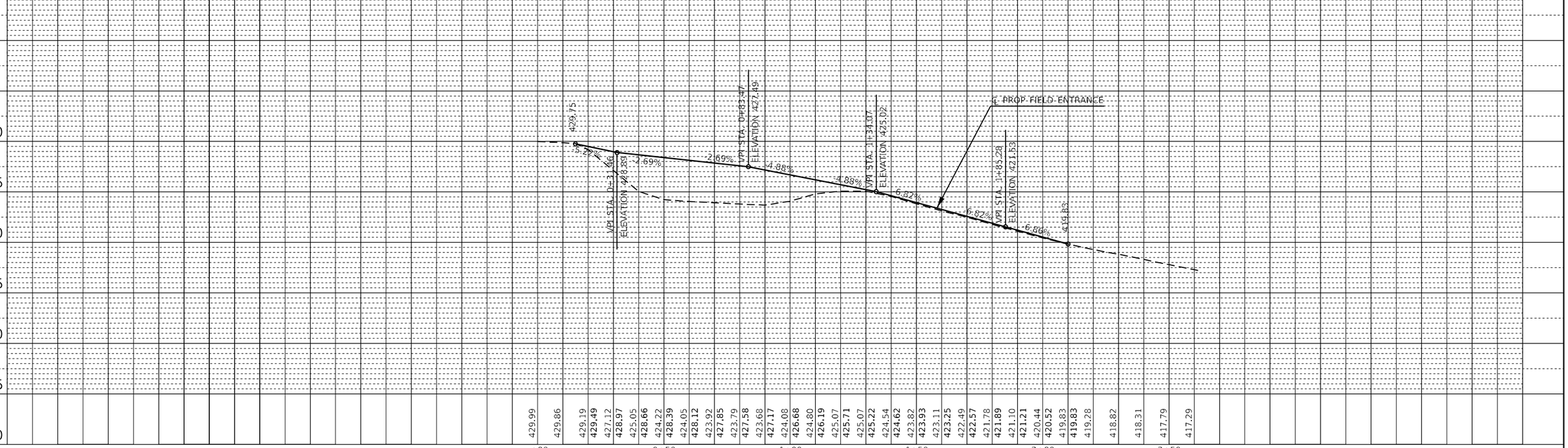
PT Sta 2+61.53

STA. 84+50.00
100.0' RT.

STA. 55+00.00
104.0' RT.

PLAN
SURVEYED
PLOTTED
CROSS SECTIONS CHECKED
R.O.W. STAKES CHECKED
NOTE BOOK
NO.
CADD FILE NAME
BY
DATE

PROFILE
SURVEYED
PLOTTED
CROSS SECTIONS CHECKED
R.O.W. STAKES CHECKED
NOTE BOOK
NO.
CADD FILE NAME
STRUCTURE NOTATIONS CHKD
BY
DATE



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USER NAME = jessica.hille	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/31/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

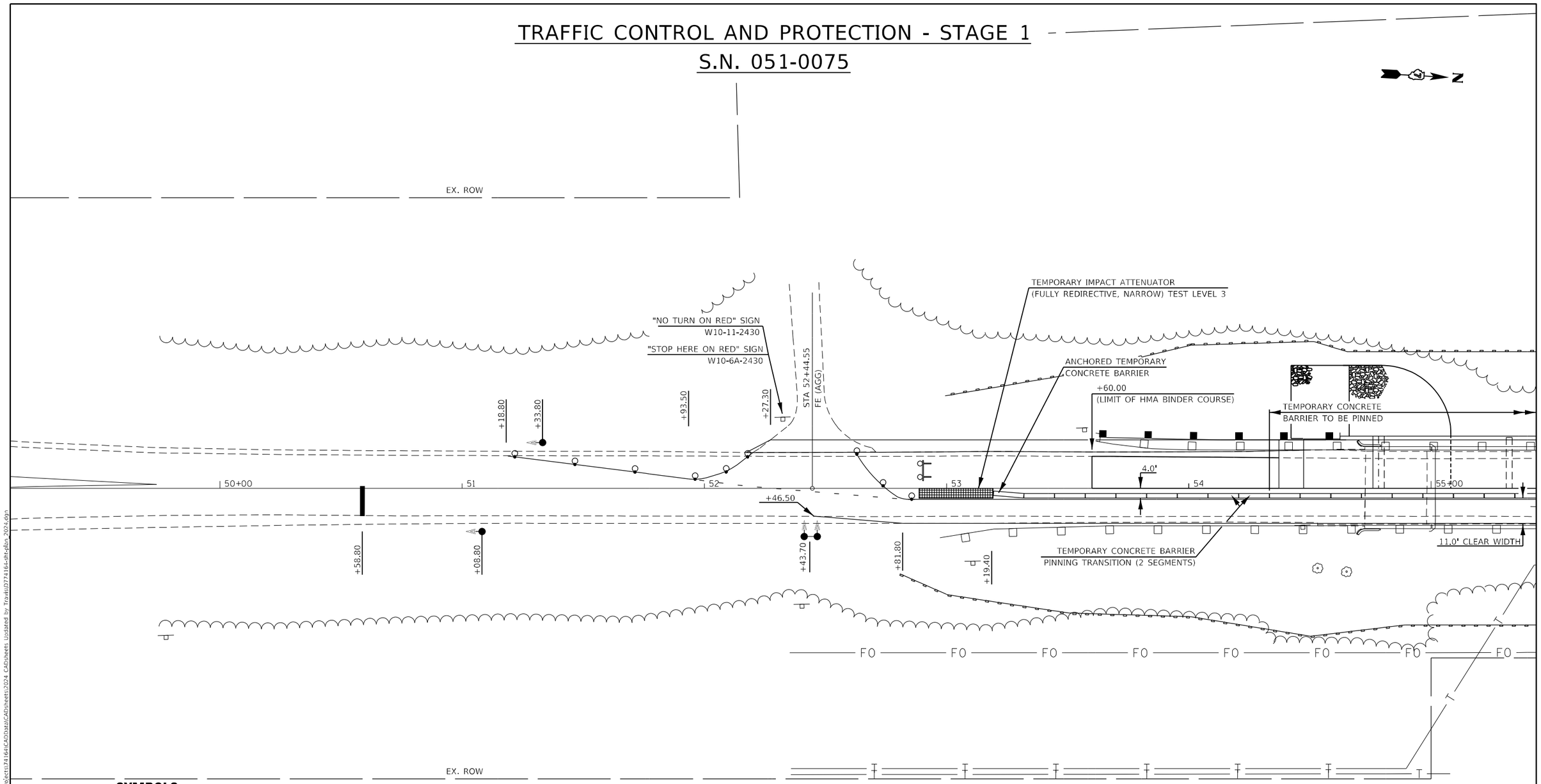
PROPOSED FIELD ENTRANCE PLAN & PROFILE
S.N. 051–0074

SCALE: | SHEET 1 OF 1 SHEETS | STA. 0+00.00 | TO STA. 2+26.40

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	24
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	

TRAFFIC CONTROL AND PROTECTION - STAGE 1

S.N. 051-0075



SYMBOLS

- TYPE III BARRICADE WITH FLASHING LIGHTS
- STOP BAR
- TEMPORARY BRIDGE TRAFFIC SIGNALS
- IMPACT ATTENUATOR
- TEMPORARY CONCRETE BARRIER
- DRUM WITH STEADY BURNING BI-DIRECTIONSL LIGHT
- DRUM

NOTES

"NO TURN ON RED" SIGN AND "STOP HERE ON RED" SIGN SHALL BE PAID FOR WITH TRAFFIC CONTROL AND PROTECTION STANDARD 701321.

SEE TRAFFIC CONTROL AND PROTECTION STANDARD 701321 FOR INFORMATION NOT SHOWN ON THIS SHEET.

SUGGESTED STAGE I SEQUENCE OF OPERATIONS:

1. ERECT SIGNS, TRAFFIC SIGNALS, TEMPORARY BARRIERS, ETC. ACCORDING TO TRAFFIC CONTROL STANDARD 701321 AND THE DETAILS IN THE PLANS.
2. REMOVE THE STAGE I PORTION OF THE EXISTING STRUCTURE, BRIDGE APRROACH, PAVEMENT, SHOULDERS, AND GUARDRAIL.
3. CONSTRUCT THE STAGE I PORTION OF THE PROPOSED STRUCTURE, BRIDGE APPROACH, PAVEMENT CONNECTOR, HMA BINDER COURSE, BASE COURSE WIDENING AGGREGATE SHOULDERS, RIP RAP, AND NEW GUARDRAIL.

NOTE: SEE STAGING TYPICALS FOR FURTHER DETAILS

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USER NAME = Jessica.hille	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 10/31/2024	DATE -	REVISED -

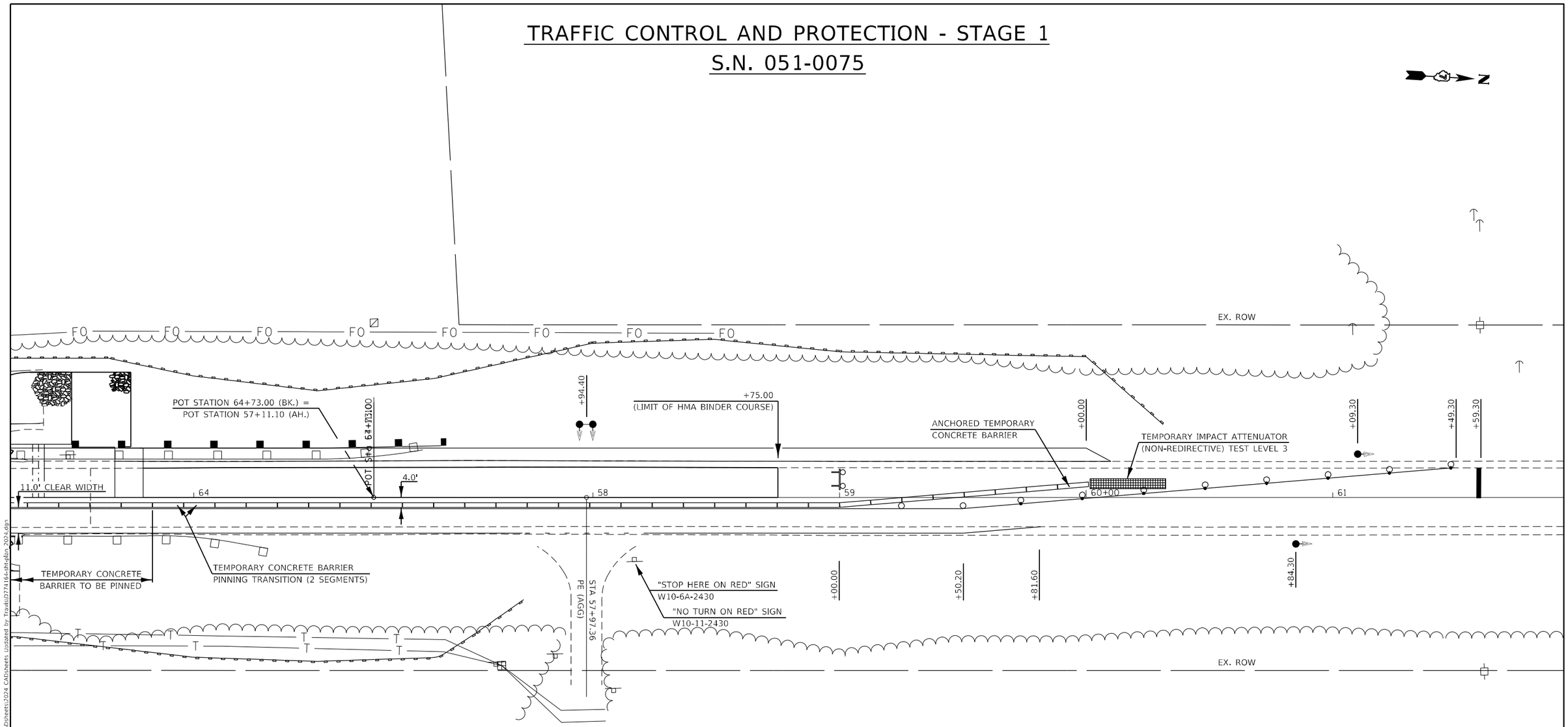
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL AND PROTECTION – STAGE 1
S.N. 051–0075

SCALE: | SHEET 1 OF 2 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	25
		CONTRACT NO. 74164		
		ILLINOIS FED. AID PROJECT		

TRAFFIC CONTROL AND PROTECTION - STAGE 1
S.N. 051-0075



SYMBOLS

- TYPE III BARRICADE WITH FLASHING LIGHTS
- STOP BAR
- TEMPORARY BRIDGE TRAFFIC SIGNALS
- IMPACT ATTENUATOR
- TEMPORARY CONCRETE BARRIER
- DRUM WITH STEADY BURNING BI-DIRECTIONSL LIGHT
- DRUM

NOTES

"NO TURN ON RED" SIGN AND "STOP HERE ON RED" SIGN SHALL BE PAID FOR WITH TRAFFIC CONTROL AND PROTECTION STANDARD 701321.

SEE TRAFFIC CONTROL AND PROTECTION STANDARD 701321 FOR INFORMATION NOT SHOWN ON THIS SHEET.

SUGGESTED STAGE I SEQUENCE OF OPERATIONS:

1. ERECT SIGNS, TRAFFIC SIGNALS, TEMPORARY BARRIERS, ETC. ACCORDING TO TRAFFIC CONTROL STANDARD 701321 AND THE DETAILS IN THE PLANS.

2. REMOVE THE STAGE I PORTION OF THE EXISTING STRUCTURE, BRIDGE APPROACH, PAVEMENT, SHOULDERS, AND GUARDRAIL.

3. CONSTRUCT THE STAGE I PORTION OF THE PROPOSED STRUCTURE, BRIDGE APPROACH, PAVEMENT CONNECTOR, HMA BINDER COURSE, BASE COURSE WIDENING AGGREGATE SHOULDERS, RIP RAP, AND NEW GUARDRAIL.

NOTE: SEE STAGING TYPICALS FOR FURTHER DETAILS

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USER NAME = jessica.hille	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 10/31/2024	DATE -	REVISED -

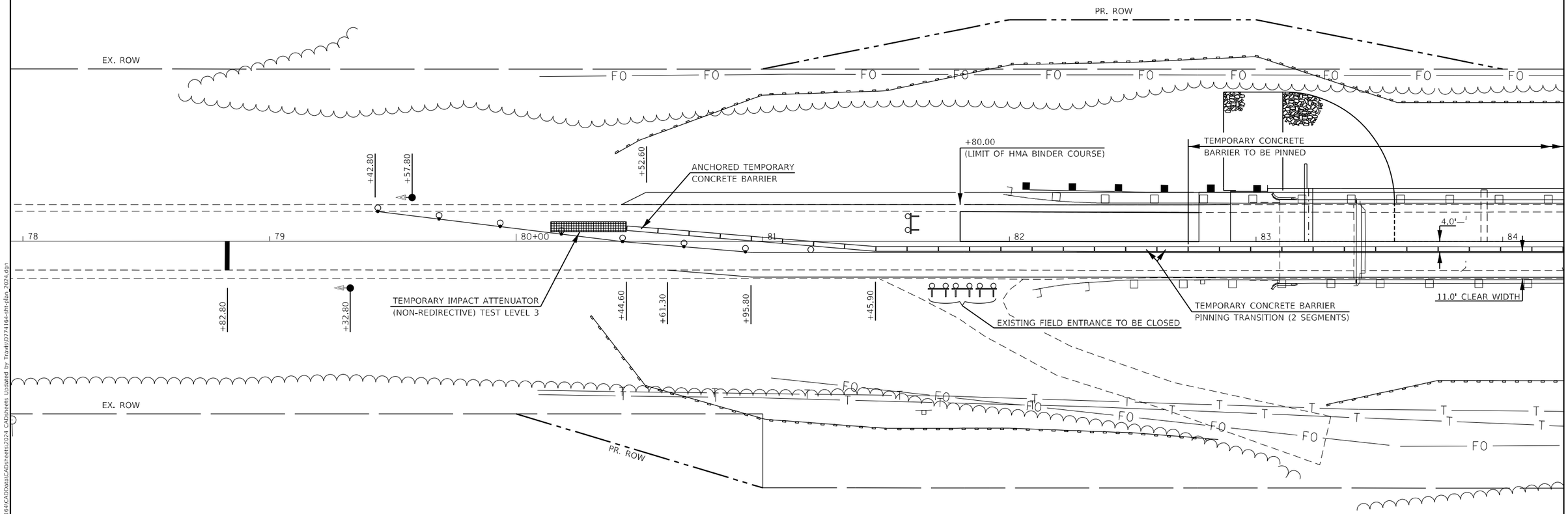
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL AND PROTECTION – STAGE 1
S.N. 051–0075

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	26
		CONTRACT NO. 74164		
	ILLINOIS FED. AID PROJECT			

TRAFFIC CONTROL AND PROTECTION - STAGE 1
S.N. 051-0074



SYMBOLS

- TYPE III BARRICADE WITH FLASHING LIGHTS
- STOP BAR
- TEMPORARY BRIDGE TRAFFIC SIGNALS
- IMPACT ATTENUATOR
- TEMPORARY CONCRETE BARRIER
- DRUM WITH STEADY BURNING BI-DIRECTIONSL LIGHT
- DRUM

NOTES

SEE TRAFFIC CONTROL AND PROTECTION STANDARD 701321
FOR INFORMATION NOT SHOWN ON THIS SHEET

SUGGESTED STAGE I SEQUENCE OF OPERATIONS:

1. ERECT SIGNS, TRAFFIC SIGNALS, TEMPORARY BARRIERS, ETC. ACCORDING TO TRAFFIC CONTROL STANDARD 701321 AND THE DETAILS IN THE PLANS.

2. REMOVE THE STAGE I PORTION OF THE EXISTING STRUCTURE, BRIDGE APPROACH, PAVEMENT, SHOULDERS, AND GUARDRAIL.

3. CONSTRUCT THE STAGE I PORTION OF THE PROPOSED STRUCTURE, BRIDGE APPROACH, PAVEMENT CONNECTOR, HMA BINDER COURSE, BASE COURSE WIDENING AGGREGATE SHOULDERS, RIP RAP, AND NEW GUARDRAIL.

NOTE: SEE STAGING TYPICALS FOR FURTHER DETAILS

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USER NAME = jessica.hille	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/31/2024	DATE -	REVISED -	

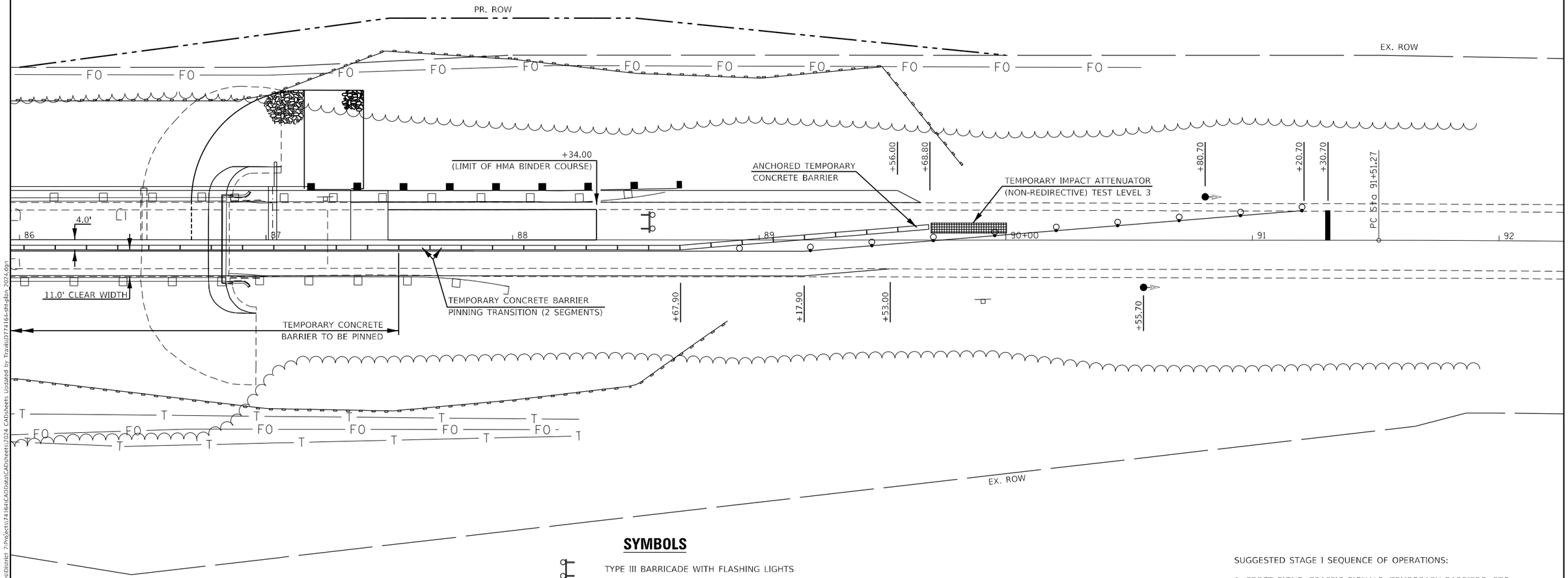
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL AND PROTECTION – STAGE 1
S.N. 051–0074

SCALE: | SHEET 1 OF 2 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	27
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

TRAFFIC CONTROL AND PROTECTION - STAGE 1
S.N. 051-0074



SYMBOLS

- TYPE III BARRICADE WITH FLASHING LIGHTS
- STOP BAR
- TEMPORARY BRIDGE TRAFFIC SIGNALS
- IMPACT ATTENUATOR
- TEMPORARY CONCRETE BARRIER
- DRUM WITH STEADY BURNING BI-DIRECTIONSL LIGHT
- DRUM

NOTES

SEE TRAFFIC CONTROL AND PROTECTION STANDARD 701321
FOR INFORMATION NOT SHOWN ON THIS SHEET

SUGGESTED STAGE I SEQUENCE OF OPERATIONS:

1. ERECT SIGNS, TRAFFIC SIGNALS, TEMPORARY BARRIERS, ETC. ACCORDING TO TRAFFIC CONTROL STANDARD 701321 AND THE DETAILS IN THE PLANS.
2. REMOVE THE STAGE I PORTION OF THE EXISTING STRUCTURE, BRIDGE APPROACH, PAVEMENT, SHOULDERS, AND GUARDRAIL.
3. CONSTRUCT THE STAGE I PORTION OF THE PROPOSED STRUCTURE, BRIDGE APPROACH, PAVEMENT CONNECTOR, HMA BINDER COURSE, BASE COURSE WIDENING AGGREGATE SHOULDERS, RIP RAP, AND NEW GUARDRAIL.

NOTE: SEE STAGING TYPICALS FOR FURTHER DETAILS

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USER NAME = Jessica.hille	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/31/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

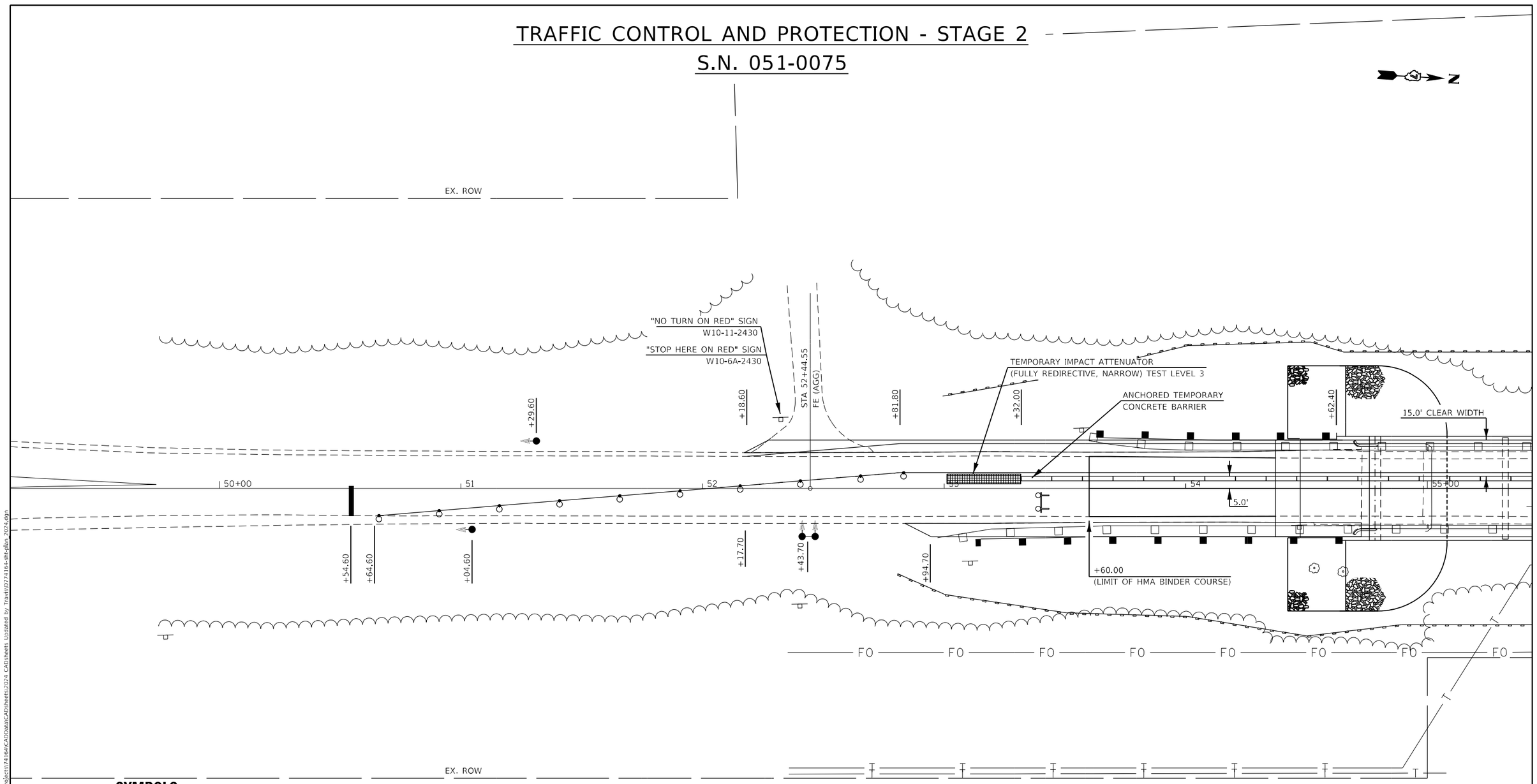
TRAFFIC CONTROL AND PROTECTION – STAGE 1
S.N. 051–0074

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	28
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

TRAFFIC CONTROL AND PROTECTION - STAGE 2

S.N. 051-0075



SYMBOLS

- TYPE III BARRICADE WITH FLASHING LIGHTS
- STOP BAR
- TEMPORARY BRIDGE TRAFFIC SIGNALS
- IMPACT ATTENUATOR
- TEMPORARY CONCRETE BARRIER
- DRUM WITH STEADY BURNING BI-DIRECTIONSL LIGHT
- DRUM

NOTES

SEE TRAFFIC CONTROL AND PROTECTION STANDARD 701321 FOR INFORMATION NOT SHOWN ON THIS SHEET

NOTES

"NO TURN ON RED" SIGN AND "STOP HERE ON RED" SIGN SHALL BE PAID FOR WITH TRAFFIC CONTROL AND PROTECTION STANDARD 701321.

SEE TRAFFIC CONTROL AND PROTECTION STANDARD 701321 FOR INFORMATION NOT SHOWN ON THIS SHEET.

SUGGESTED STAGE II SEQUENCE OF OPERATIONS:

1. ERECT SIGNS, TRAFFIC SIGNALS, TEMPORARY BARRIERS, ETC. ACCORDING TO TRAFFIC CONTROL STANDARD 701321 AND THE DETAILS IN THE PLANS.
2. REMOVE THE STAGE II PORTION OF THE EXISTING STRUCTURE, BRIDGE APRROACH, PAVEMENT, SHOULDERS, AND GUARDRAIL.
3. CONSTRUCT THE STAGE II PORTION OF THE PROPOSED STRUCTURE, BRIDGE APPROACH, PAVEMENT CONNECTOR, HMA BINDER COURSE, BASE COURSE WIDENING, AGGREGATE SHOULDERS, RIP RAP, AND NEW GUARDRAIL.

NOTE: SEE STAGING TYPICALS FOR FURTHER DETAILS

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USER NAME = jessica.hille	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/31/2024	DATE -	REVISED -	

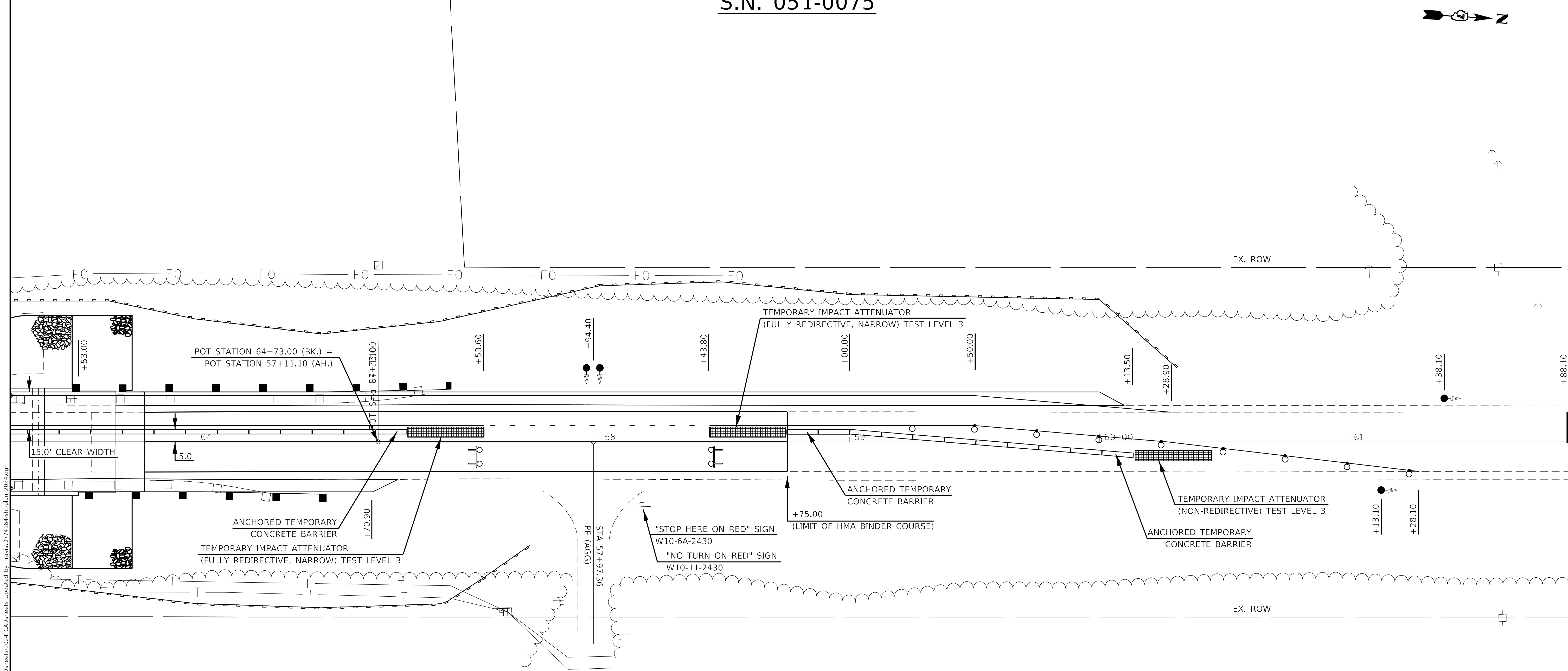
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL AND PROTECTION – STAGE 2
S.N. 051–0075

SCALE: | SHEET 1 OF 2 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	29
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

TRAFFIC CONTROL AND PROTECTION - STAGE 2
S.N. 051-0075



SYMBOLS

- TYPE III BARRICADE WITH FLASHING LIGHTS
- STOP BAR
- TEMPORARY BRIDGE TRAFFIC SIGNALS
- IMPACT ATTENUATOR
- TEMPORARY CONCRETE BARRIER
- DRUM WITH STEADY BURNING BI-DIRECTIONSL LIGHT
- DRUM

NOTES

"NO TURN ON RED" SIGN AND "STOP HERE ON RED" SIGN SHALL BE PAID FOR WITH TRAFFIC CONTROL AND PROTECTION STANDARD 701321.

SEE TRAFFIC CONTROL AND PROTECTION STANDARD 701321 FOR INFORMATION NOT SHOWN ON THIS SHEET.

SUGGESTED STAGE II SEQUENCE OF OPERATIONS:

1. ERECT SIGNS, TRAFFIC SIGNALS, TEMPORARY BARRIERS, ETC. ACCORDING TO TRAFFIC CONTROL STANDARD 701321 AND THE DETAILS IN THE PLANS.
2. REMOVE THE STAGE II PORTION OF THE EXISTING STRUCTURE, BRIDGE APPROACH, PAVEMENT, SHOULDERS, AND GUARDRAIL.
3. CONSTRUCT THE STAGE II PORTION OF THE PROPOSED STRUCTURE, BRIDGE APPROACH, PAVEMENT CONNECTOR, HMA BINDER COURSE, BASE COURSE WIDENING, AGGREGATE SHOULDERS, RIP RAP, AND NEW GUARDRAIL.

NOTE: SEE STAGING TYPICALS FOR FURTHER DETAILS

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USER NAME = jessica.hille	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED -	
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PLOT DATE = 10/31/2024	DATE -	REVISED -	

TRAFFIC CONTROL AND PROTECTION – STAGE 2
S.N. 051–0075

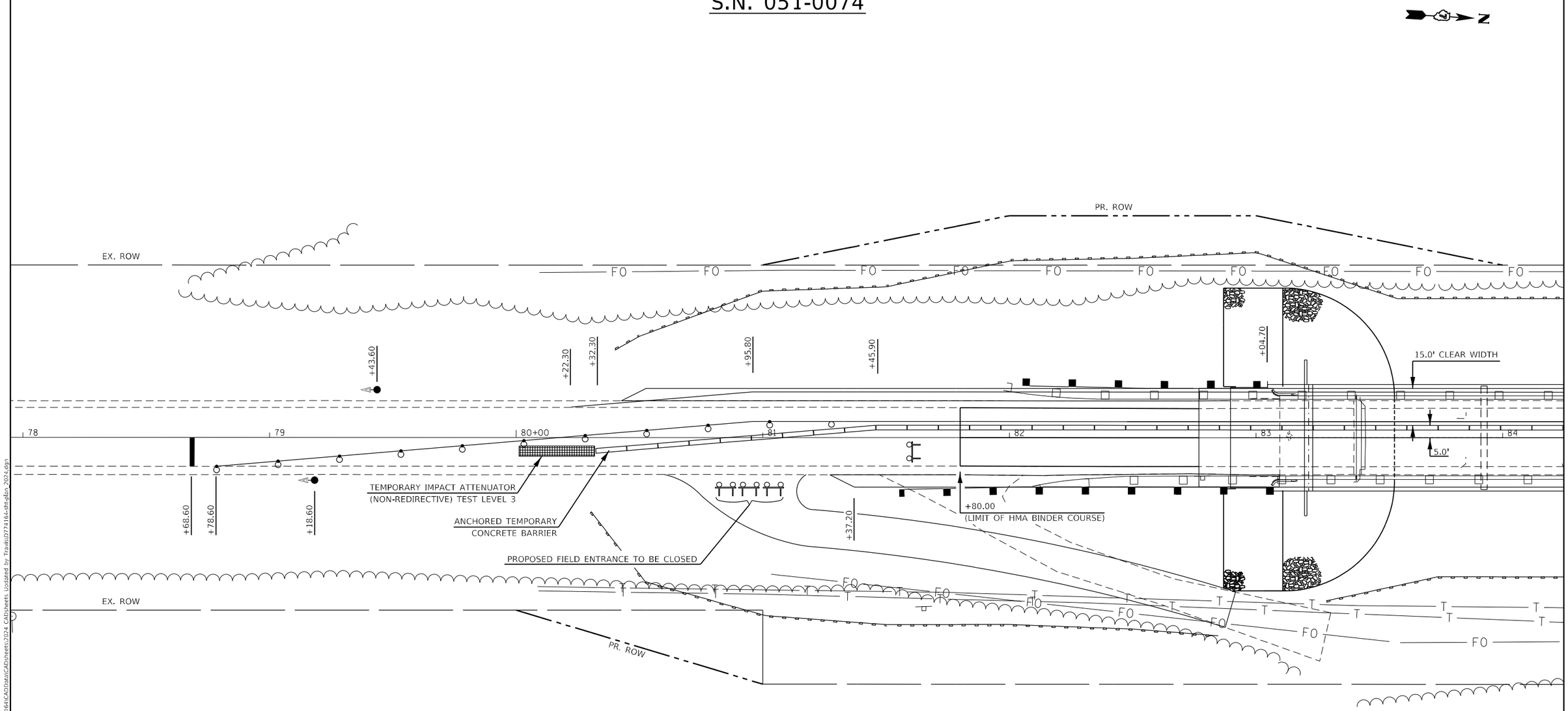
SCALE: | SHEET 2 OF 2 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	30

CONTRACT NO. 74164

ILLINOIS | FED. AID PROJECT

TRAFFIC CONTROL AND PROTECTION - STAGE 2
S.N. 051-0074



SYMBOLS

- TYPE III BARRICADE WITH FLASHING LIGHTS
- STOP BAR
- TEMPORARY BRIDGE TRAFFIC SIGNALS
- IMPACT ATTENUATOR
- TEMPORARY CONCRETE BARRIER
- DRUM WITH STEADY BURNING BI-DIRECTIONSL LIGHT
- DRUM

NOTES

SEE TRAFFIC CONTROL AND PROTECTION STANDARD 701321
FOR INFORMATION NOT SHOWN ON THIS SHEET

SUGGESTED STAGE I SEQUENCE OF OPERATIONS:

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NOTE: SEE STAGING TYPICALS FOR FURTHER DETAILS

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USER NAME = Jessica.hille	DESIGNED -	REVISED -	
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PLOT DATE = 10/31/2024	DATE -	REVISED -	

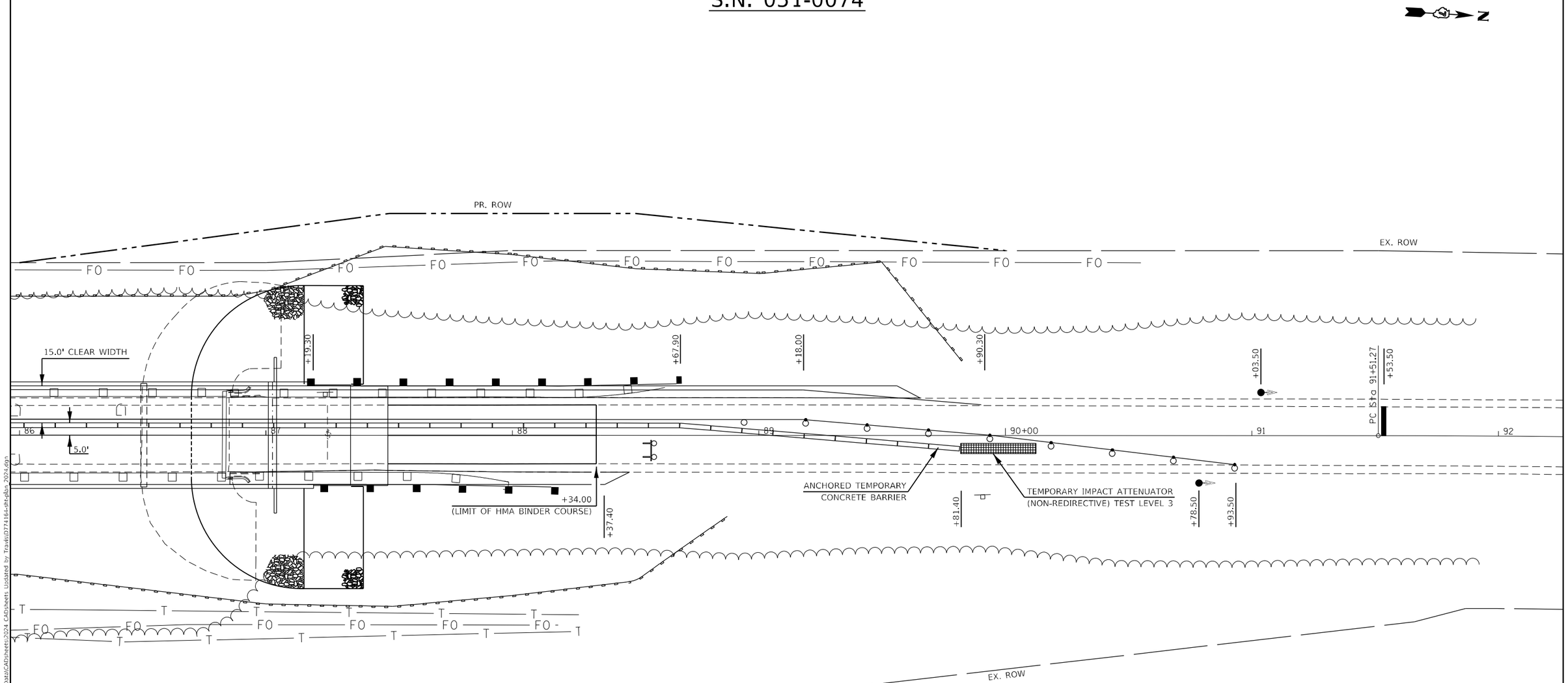
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL AND PROTECTION – STAGE 2
S.N. 051–0074

SCALE: | SHEET 1 OF 2 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	31
		CONTRACT NO. 74164		
	ILLINOIS FED. AID PROJECT			

TRAFFIC CONTROL AND PROTECTION - STAGE 2
S.N. 051-0074



SYMBOLS

- TYPE III BARRICADE WITH FLASHING LIGHTS
- STOP BAR
- TEMPORARY BRIDGE TRAFFIC SIGNALS
- IMPACT ATTENUATOR
- TEMPORARY CONCRETE BARRIER
- DRUM WITH STEADY BURNING BI-DIRECTIONSL LIGHT
- DRUM

NOTES

SEE TRAFFIC CONTROL AND PROTECTION STANDARD 701321
FOR INFORMATION NOT SHOWN ON THIS SHEET

SUGGESTED STAGE I SEQUENCE OF OPERATIONS:

1. ERECT SIGNS, TRAFFIC SIGNALS, TEMPORARY BARRIERS, ETC. ACCORDING TO TRAFFIC CONTROL STANDARD 701321 AND THE DETAILS IN THE PLANS.
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NOTE: SEE STAGING TYPICALS FOR FURTHER DETAILS

USER NAME = jessica.hille	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 10/31/2024	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL AND PROTECTION – STAGE 2
S.N. 051–0074

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	32
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	

MODEL: Default
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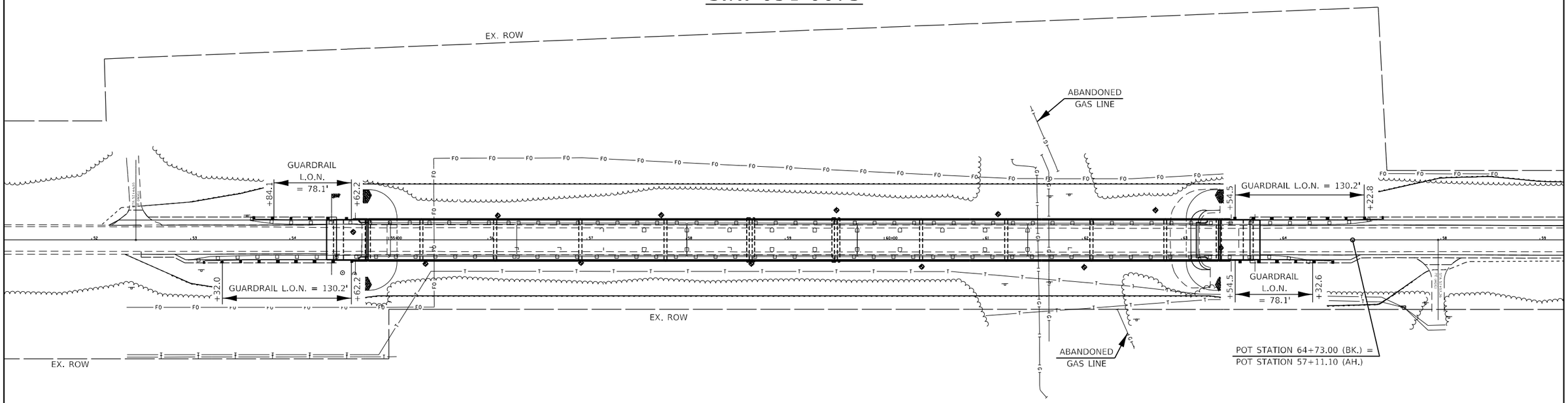
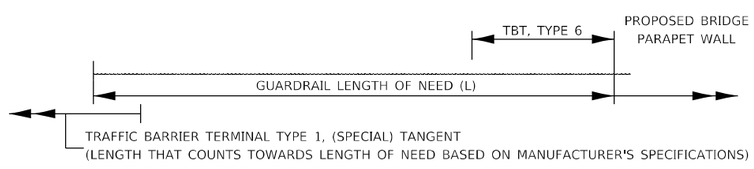
GUARDRAIL LAYOUT DETAILS
S.N. 051-0075



STATION	OFFSET	TO	STATION	OFFSET	STEEL PLATE BEAM GUARDRAIL TYPE A, 6 FOOT POSTS 63000001 (FOOT)	TRAFFIC BARRIER TERMINAL, TYPE 6 63100085 (EACH)	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT 63100167 (EACH)	GUARDRAIL REMOVAL 63200310 (FOOT)	TERMINAL MARKER - DIRECT APPLIED 72501000 (EACH)	GUARDRAIL REFLECTORS, TYPE A 78200005 (EACH)
STRUCTURE NUMBER 051-0075										
53+62.19	21.00' LT.		54+12.18	20.00' LT.			1.0		1.0	
54+12.18	20.00' LT.		54+24.68	20.00' LT.	12.5					4.0
54+24.68	20.00' LT.		54+64.07	20.00' LT.		1.0				
53+59.99	15.0' LT		54+72.49	15.0' LT				112.5		
63+52.61	20.00' LT.		63+92.00	20.00' LT.		1.0				
63+92.00	20.00' LT.		64+54.50	20.00' LT.	62.5					
64+54.50	20.00' LT.		64+73.00	20.33' LT.						4.0
STATION EQUATION: STA. 64+73.00 (BK.) = STA. 57+11.00 (AH.)							1.0		1.0	
57+11.00	20.00' LT.		57+42.59	21.00' LT.						
63+18.20	15.0' LT		64+73.00	15.0' LT						
STATION EQUATION: STA. 64+73.00 (BK.) = STA. 57+11.00 (AH.)								187.5		
57+11.00	15.0' LT		57+43.8	15.0' LT						
53+12.19	21.00' RT.		53+62.18	20.00' RT.			1.0		1.0	
53+62.18	20.00' RT.		54+24.68	20.00' RT.	62.5					4.0
54+24.68	20.00' RT.		54+64.07	20.00' RT.		1.0				
52+97.25	15.0' RT.		54+72.25	15.0' RT.				175.0		
63+52.61	20.00' RT.		63+92.00	20.00' RT.		1.0				
63+92.00	20.00' RT.		64+04.50	20.00' RT.	12.5					4.0
64+04.50	20.00' RT.		64+54.49	21.00' RT.			1.0		1.0	
63+18.20	15.0' RT.		64+30.70	15.0' RT.				112.5		
			TOTAL S.N. 051-0075 =		150.0	4.0	4.0	587.5	4.0	16.0

GUARDRAIL LENGTH OF NEED DETAIL



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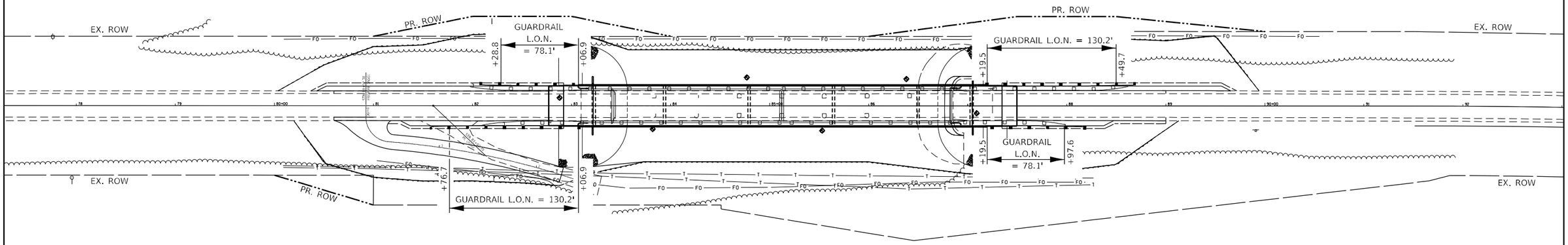
USER NAME = Jessica.hille	DESIGNED -	REVISED -	**STATE OF ILLINOIS**
	DRAWN -	REVISED -	**DEPARTMENT OF TRANSPORTATION**
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/31/2024	DATE -	REVISED -	

GUARDRAIL LAYOUT DETAILS

SCALE: | SHEET 1 OF 2 SHEETS | STA. | TO STA.

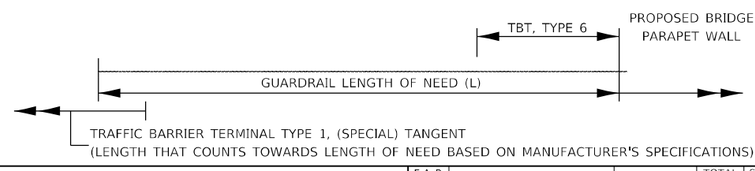
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	33
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

GUARDRAIL LAYOUT DETAILS
S.N. 051-0074



STATION	OFFSET	TO	STATION	OFFSET	STEEL PLATE BEAM GUARDRAIL TYPE A, 6 FOOT POSTS 63000001 (FOOT)	TRAFFIC BARRIER TERMINAL, TYPE 6 63100085 (EACH)	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT 63100167 (EACH)	GUARDRAIL REMOVAL 63200310 (FOOT)	TERMINAL MARKER - DIRECT APPLIED 72501000 (EACH)	GUARDRAIL REFLECTORS, TYPE A 78200005 (EACH)
STRUCTURE NUMBER 051-0074										
82+06.82	21.00' LT.		82+56.86	20.00' LT.			1.0		1.0	
82+56.86	20.00' LT.		82+69.36	20.00' LT.	12.5					4.0
82+69.36	20.00' LT.		83+08.75	20.00' LT.		1.0				
81+97.47	15.0' LT.		83+09.97	15.0' LT.				112.5		
87+17.62	20.00' LT.		87+57.01	20.00' LT.		1.0				
87+57.01	20.00' LT.		88+19.51	20.00' LT.	62.5					4.0
88+19.51	20.00' LT.		88+69.50	21.00' LT.			1.0		1.0	
86+86.88	15.0' LT.		88+61.88	15.0' LT.				175.0		
81+56.87	21.00' RT.		82+06.86	20.00' RT.			1.0		1.0	
82+06.86	20.00' RT.		82+69.36	20.00' RT.	62.5					4.0
82+69.36	20.00' RT.		83+08.75	20.00' RT.		1.0				
82+09.36	15.0' RT.		83+09.36	15.0' RT.				100.0		
87+17.62	20.00' RT.		87+57.01	20.00' RT.		1.0				
87+57.01	20.00' RT.		87+69.51	20.00' RT.	12.5					4.0
87+69.51	20.00' RT.		88+19.50	21.00' RT.			1.0		1.0	
86+86.09	15.0' RT.		87+98.59	15.0' RT.				112.5		
			TOTAL S.N. 051-0074 =		150.0	4.0	4.0	500.0	4.0	16.0

GUARDRAIL LENGTH OF NEED DETAIL



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PLOT DATE = 10/31/2024	DATE -	REVISED -	

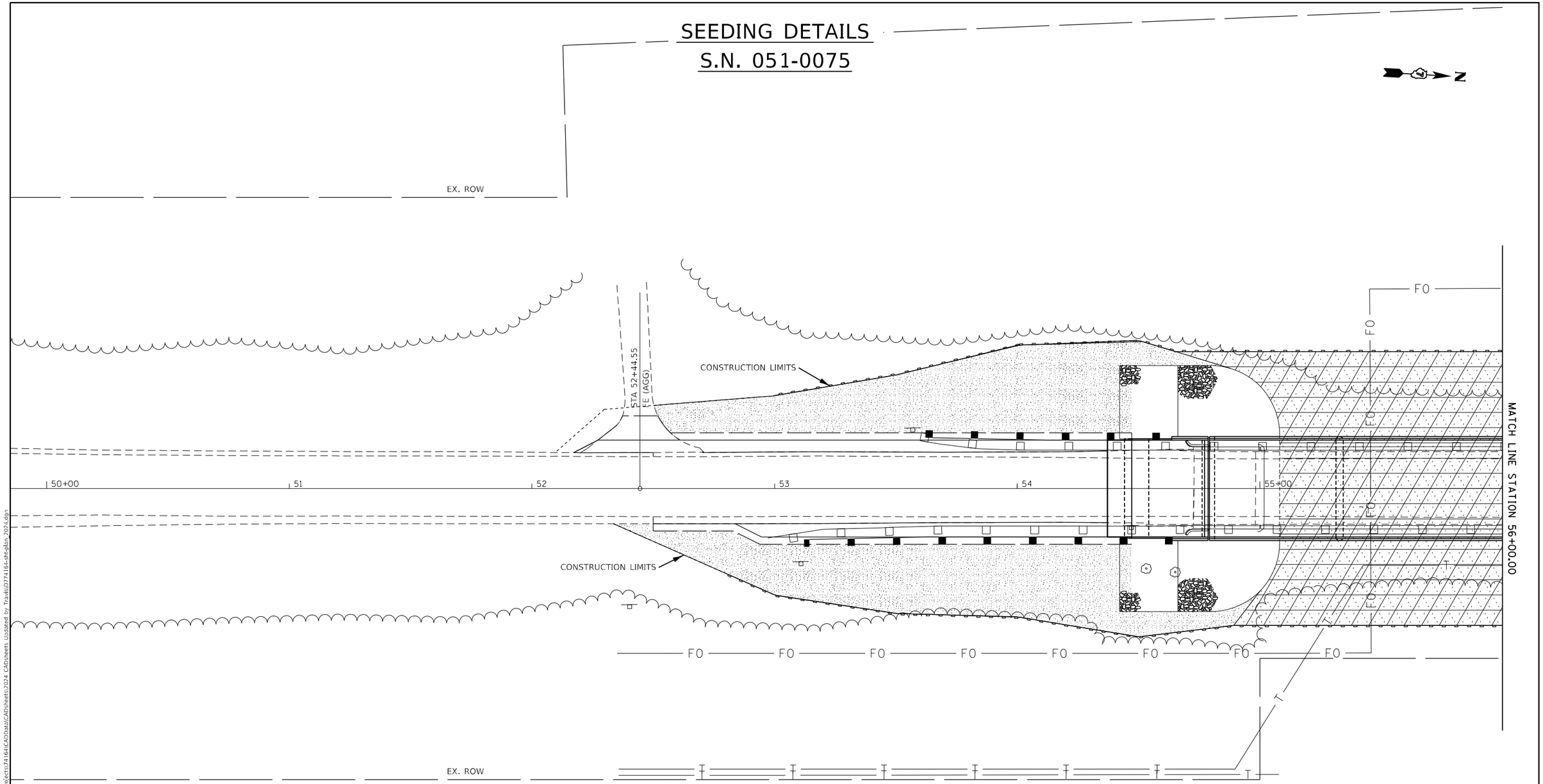
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GUARDRAIL LAYOUT DETAILS

SCALE: | SHEET 1 OF 2 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,8R-2)B-1	LAWRENCE	198	34
		CONTRACT NO. 74164		
	ILLINOIS FED. AID PROJECT			

SEEDING DETAILS
S.N. 051-0075



TEMPORARY EROSION BARRIER

SEEDING, CLASS 2

SEEDING, CLASS 4B

NOTE: SEE CROSS SECTION SHEETS FOR MORE DETAILED LIMITS AND OFFSETS

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	DRAWN -	REVISED -	**DEPARTMENT OF TRANSPORTATION**
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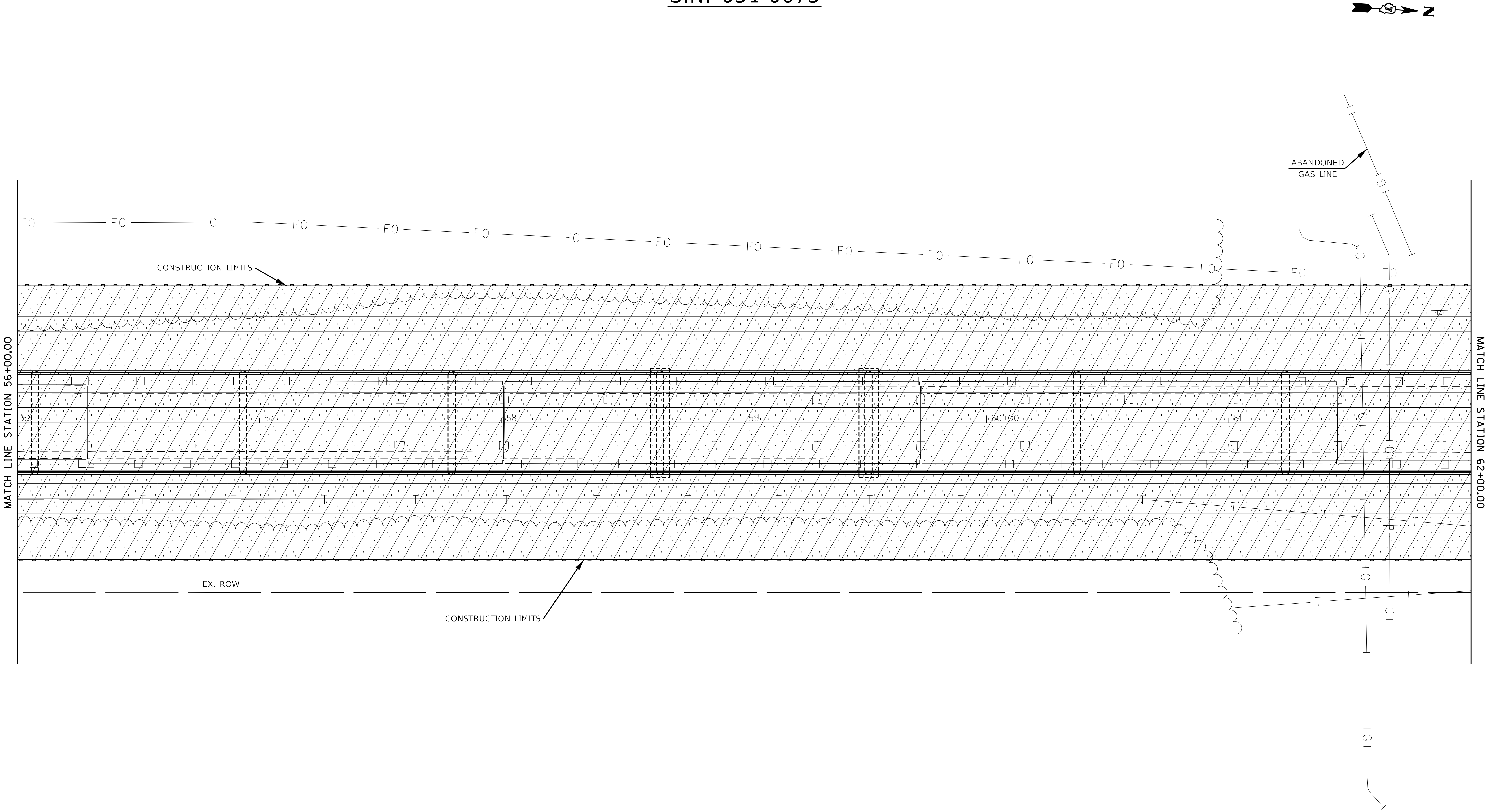
PLOT DATE = 10/31/2024	DATE -	REVISED -	

SEEDING DETAILS

SCALE: | SHEET 1 OF 5 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	35
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

SEEDING DETAILS
S.N. 051-0075



TEMPORARY EROSION BARRIER

SEEDING, CLASS 4B

NOTE: SEE CROSS SECTION SHEETS FOR MORE DETAILED LIMITS AND OFFSETS

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PLOT DATE = 10/31/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SEEDING DETAILS

SCALE: | SHEET 2 OF 5 SHEETS | STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	36

CONTRACT NO. 74164

ILLINOIS | FED. AID PROJECT

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SEEDING DETAILS
S.N. 051-0075

N

CONSTRUCTION LIMITS

EX. ROW

POT STATION 64+73.00 (BK.) =
POT STATION 57+11.10 (AH.)

POT STA 64+73.00

MATCH LINE STATION 62+00.00

62 | 63 | 64 | 58 | 59 | 60+00

PE (AGG)
STA 57+97.36

EX. ROW

CONSTRUCTION LIMITS

ABANDONED
GAS LINE

TEMPORARY EROSION BARRIER

SEEDING, CLASS 2

SEEDING, CLASS 4B

NOTE: SEE CROSS SECTION SHEETS FOR
MORE DETAILED LIMITS AND OFFSETS

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PLOT DATE = 10/31/2024	DATE -	REVISED -	

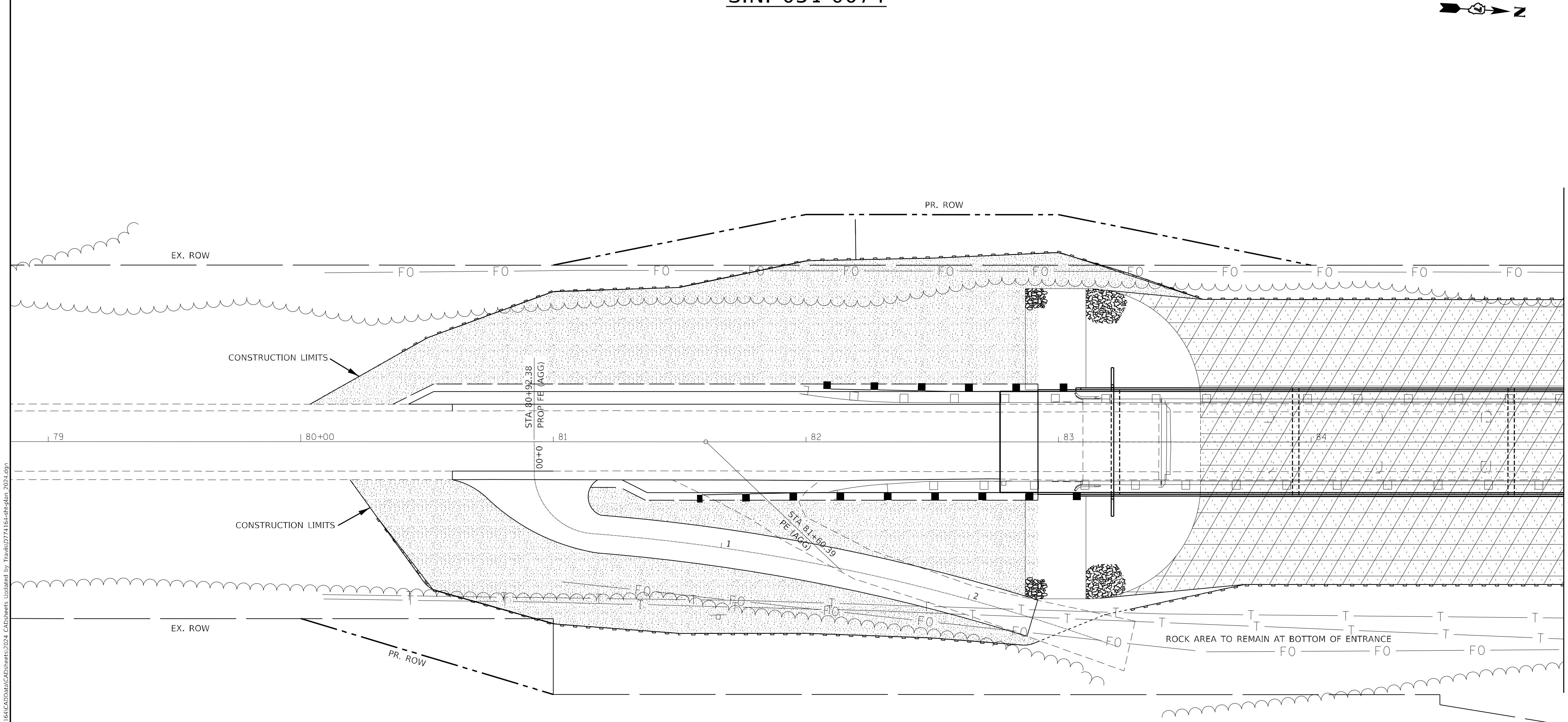
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SEEDING DETAILS

SCALE: | SHEET 3 OF 5 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	37
		CONTRACT NO. 74164		
	ILLINOIS FED. AID PROJECT			

SEEDING DETAILS
S.N. 051-0074



TEMPORARY EROSION BARRIER

SEEDING, CLASS 2

SEEDING, CLASS 4B

NOTE: SEE CROSS SECTION SHEETS FOR MORE DETAILED LIMITS AND OFFSETS

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	DRAWN -	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/31/2024	DATE -	REVISED -	

SEEDING DETAILS

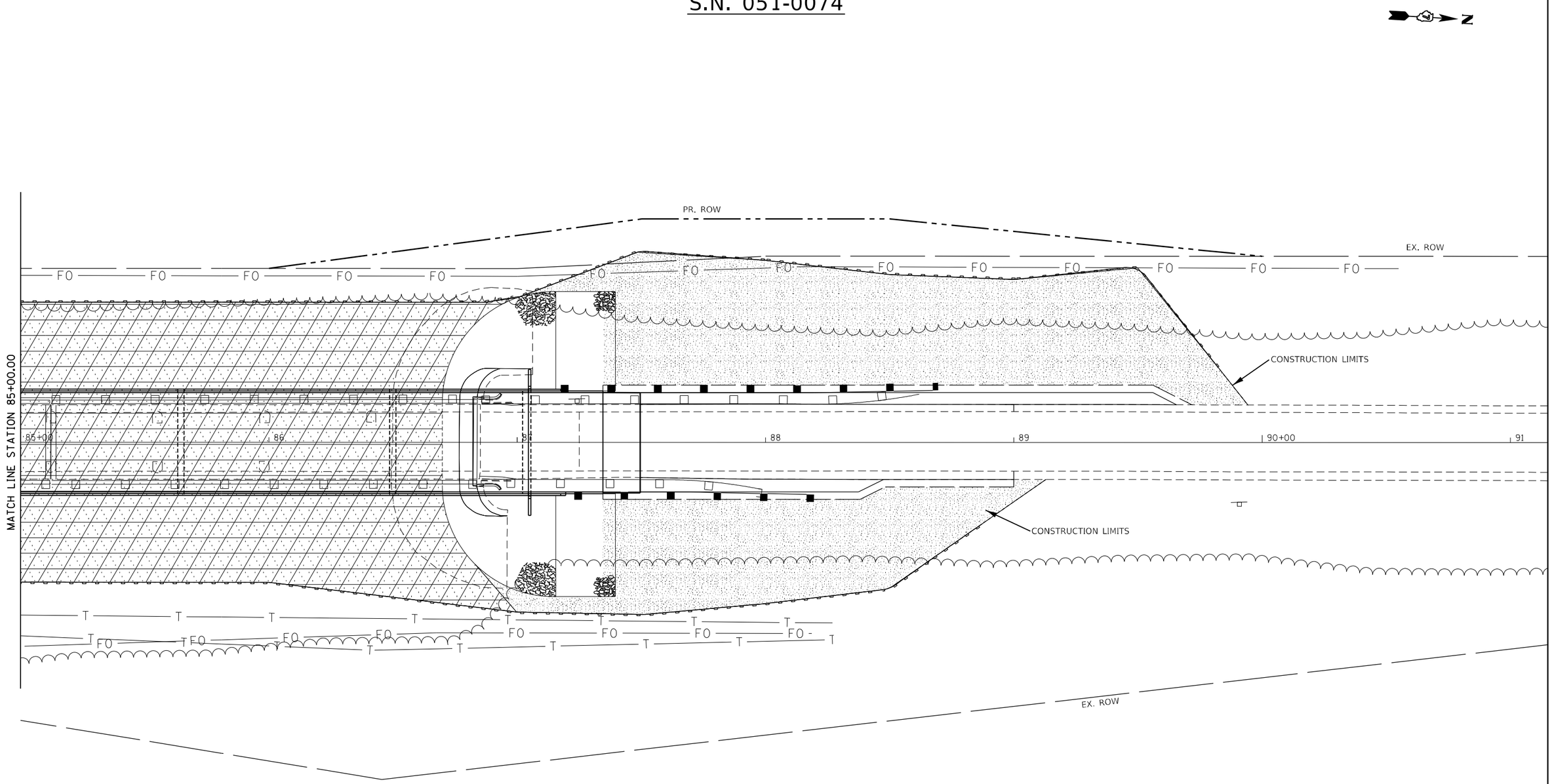
SCALE: | SHEET 4 OF 5 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	38

CONTRACT NO. 74164

ILLINOIS | FED. AID PROJECT

SEEDING DETAILS
S.N. 051-0074



TEMPORARY EROSION BARRIER

SEEDING, CLASS 2

SEEDING, CLASS 4B

NOTE: SEE CROSS SECTION SHEETS FOR MORE DETAILED LIMITS AND OFFSETS

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	DRAWN -	REVISED -	**DEPARTMENT OF TRANSPORTATION**
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/31/2024	DATE -	REVISED -	

SEEDING DETAILS

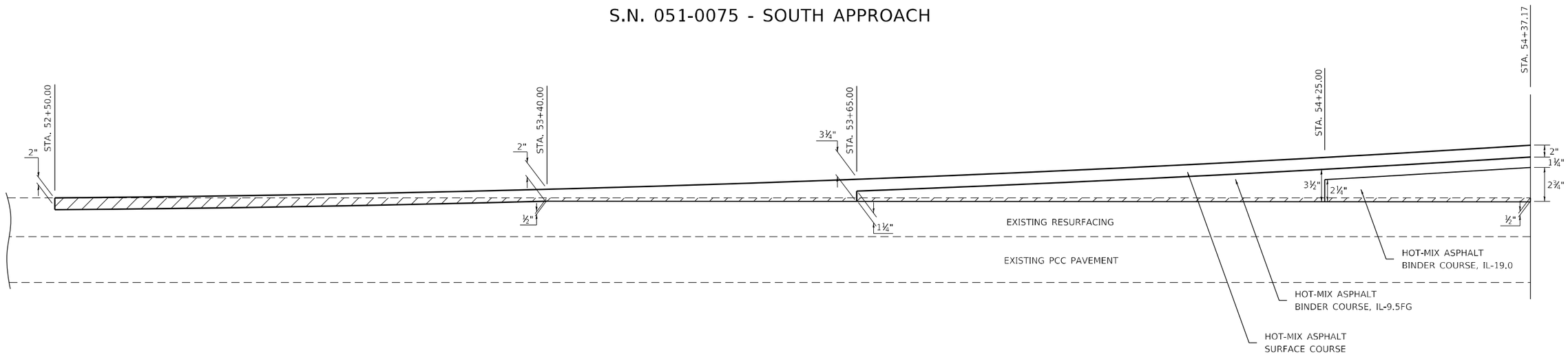
SCALE: | SHEET 5 OF 5 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	39
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	

NOTE: SEE PLAN & PROFILE SHEET
FOR EXISTING & PROPOSED
PAVEMENT GRADES

HOT-MIX ASPHALT PROFILE GRADE CHANGE DETAIL

S.N. 051-0075 - SOUTH APPROACH



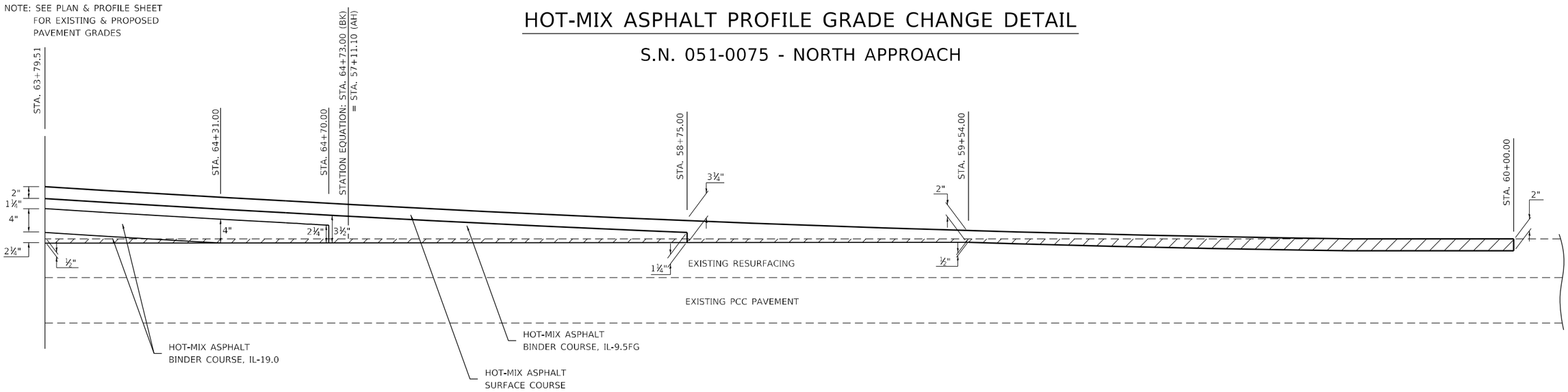
HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH

NOTE: NOT TO SCALE

NOTE: SEE PLAN & PROFILE SHEET
FOR EXISTING & PROPOSED
PAVEMENT GRADES

HOT-MIX ASPHALT PROFILE GRADE CHANGE DETAIL

S.N. 051-0075 - NORTH APPROACH



HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH

NOTE: NOT TO SCALE

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	DRAWN -	REVISED -
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PLOT DATE = 10/31/2024	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVING DETAILS – S.N. 051–0075

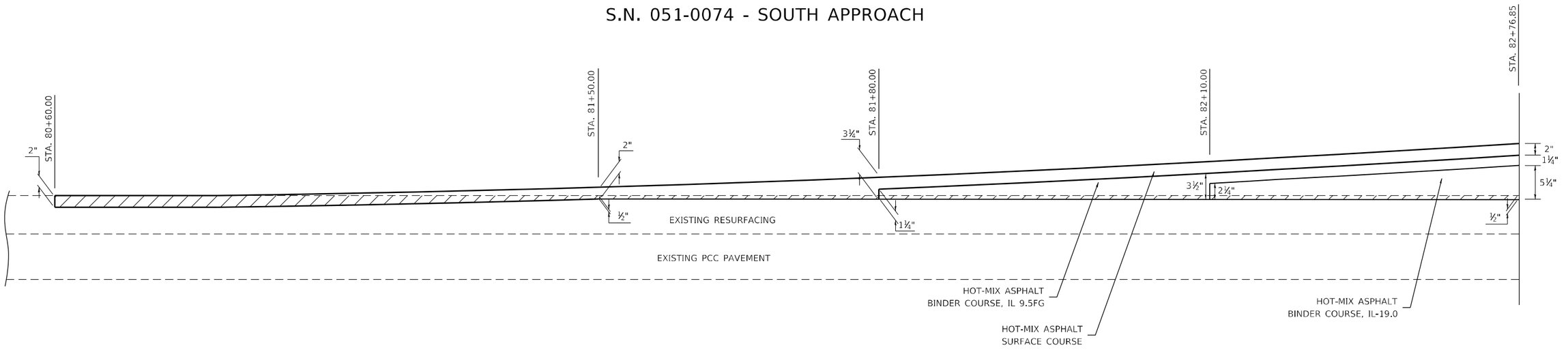
SCALE: | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	40
		CONTRACT NO. 74164		
	ILLINOIS FED. AID PROJECT			

NOTE: SEE PLAN & PROFILE SHEET
FOR EXISTING & PROPOSED
PAVEMENT GRADES

HOT-MIX ASPHALT PROFILE GRADE CHANGE DETAIL

S.N. 051-0074 - SOUTH APPROACH



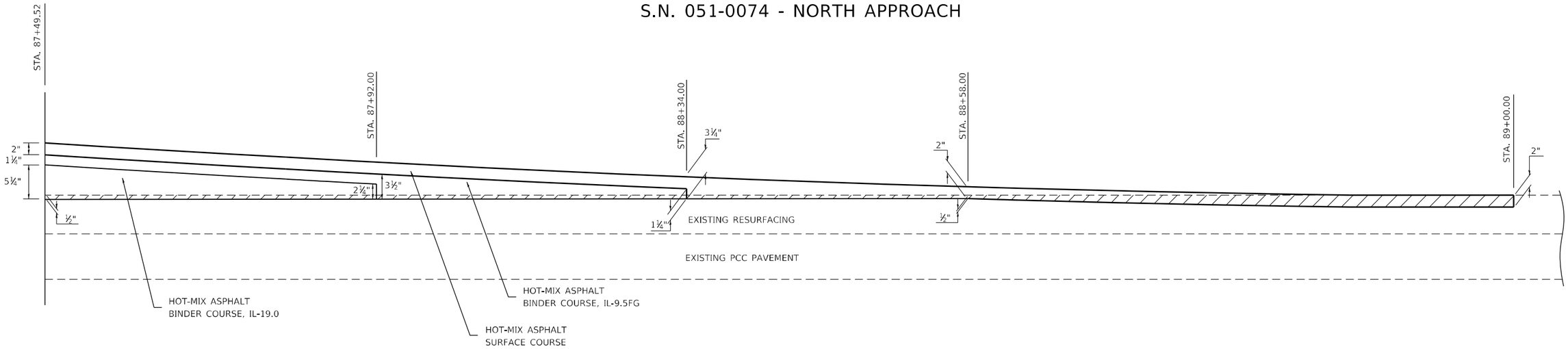
HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH

NOTE: NOT TO SCALE

NOTE: SEE PLAN & PROFILE SHEET
FOR EXISTING & PROPOSED
PAVEMENT GRADES

HOT-MIX ASPHALT PROFILE GRADE CHANGE DETAIL

S.N. 051-0074 - NORTH APPROACH



HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH

NOTE: NOT TO SCALE

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PLOT DATE = 10/31/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVING DETAILS – S.N. 051–0074

SCALE: | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	41
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	

Benchmark: Chiseled square on southeast corner of bridge hubguard of structure 051-0004, Station 83+11, 16.1 ft rt, Elevation 431.16

Existing Structure: SN 051-0004, an 11 span structure was built in 1923 as SBI Route 1, Section 16. In 1964 the superstructure was replaced, an approach span was added to the south abutment, and Pier 8 was converted to a new north abutment. The remaining three spans were filled. The existing bridge is 346'-0" back-to-back and 35'-8" out-to-out. The bridge is to be removed and replaced utilizing stage construction.

No salvage.

DESIGN SCOUR ELEVATION TABLE

Event / Limit State	Design Scour Elevations (ft.)						
	S. Abut.	Pier 1	Pier 2	Pier 3	Pier 4	N. Abut.	Item 113
Q100	423.9	405.5	405.5	405.5	405.5	424.1	5
Q200	423.9	405.5	405.5	405.5	405.5	424.1	
Design	423.9	405.5	405.5	405.5	405.5	424.1	
Check	423.9	405.5	405.5	405.5	405.5	424.1	

SEISMIC DATA

Seismic Performance Zone (SPZ) = 3
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.326g
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.746g
Soil Site Class = E

DESIGN SPECIFICATIONS

2017 AASHTO LRFD Bridge Design Specifications, 8th Edition

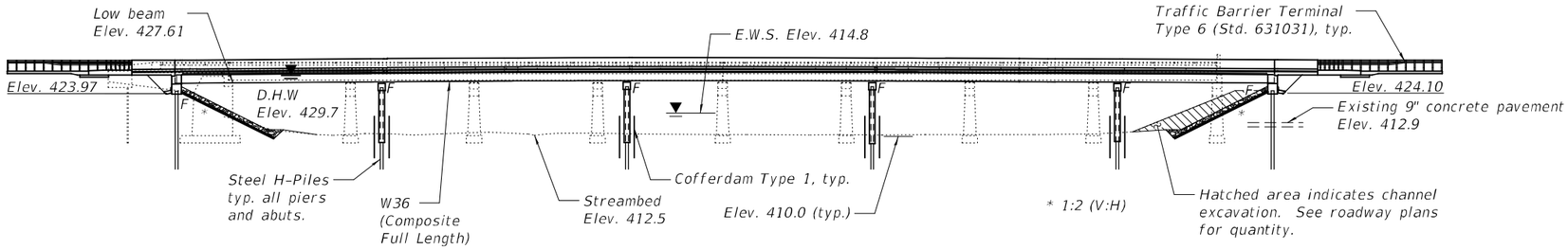
DESIGN STRESSES

FIELD UNITS

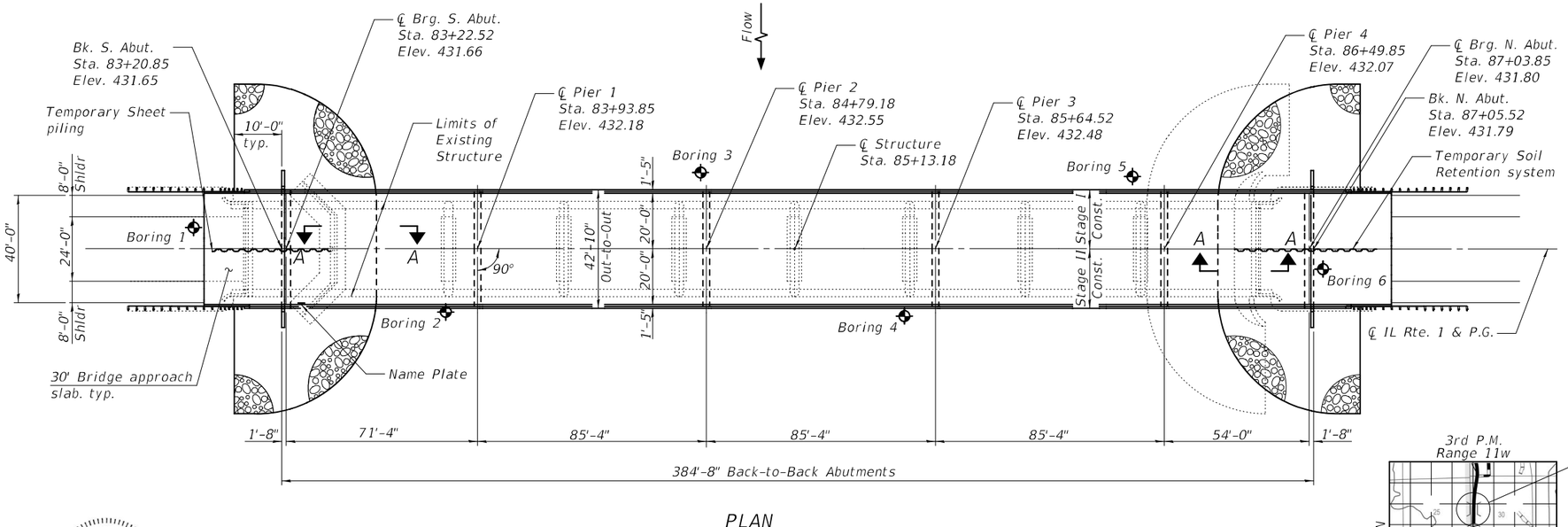
f'c = 4,000 psi (Superstructure)
f'c = 3,500 psi (Substructure)
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50)
All structural steel shall be metallized.

LOADING HL-93

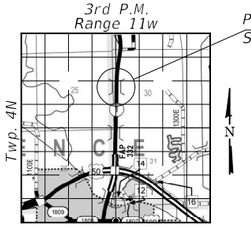
Allow 50#/sq. ft. for future wearing surface.



ELEVATION



PLAN

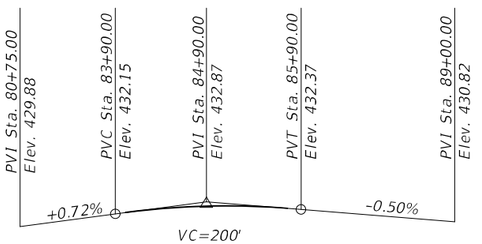


LOCATION SKETCH

STATION 85+13.18
BUILT BY
STATE OF ILLINOIS
F.A.P. RTE. 332 SEC. (16BR-1, BR-2)B-1
LOADING HL-93
STRUCTURE NO. 051-0074

NAME PLATES

See Std. 515001



PROFILE GRADE

(Along ℄ IL Rte. 1)

Note:
The profile grade shows the final elevations after grinding. Up to ¼" may be ground off the bridge deck and the bridge approach slab.

GENERAL PLAN & ELEVATION
ILLINOIS ROUTE 1 OVER
EMBARRAS RIVER OVERFLOW
F.A.P. RTE. 332 - SEC. (16BR-1,BR-2)B-1
LAWRENCE COUNTY
STATION 85+13.18
STRUCTURE NO. 051-0074

LICENSED STRUCTURAL ENGINEER
JAYME F. SCHIFF
081-005540
STATE OF ILLINOIS

EXPIRES 11-30-2024

DESIGNED - RYAN P. NEGANGARD	EXAMINED	ENGINEER OF BRIDGE DESIGN	DATE - 10-10-2024	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - JOE G. YOUNG	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -			332	(16BR-1, BR-2)B-1	LAWRENCE	198	42
DRAWN - JACQUES ELLOYE			REVISED -		SHEET 1 OF 41 SHEETS				CONTRACT NO. 74164	
CHECKED - R.P.N. / G.R.A. / J.G.Y.								ILLINOIS	FED. AID PROJECT	

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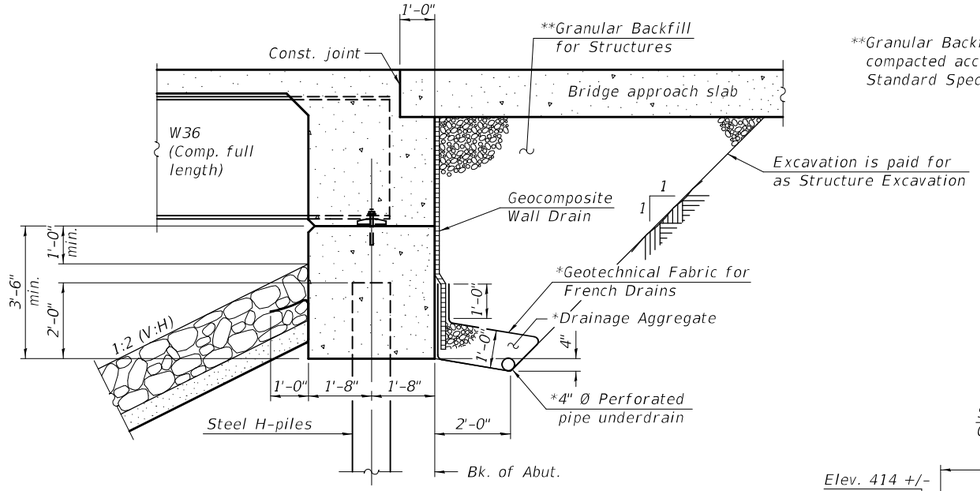
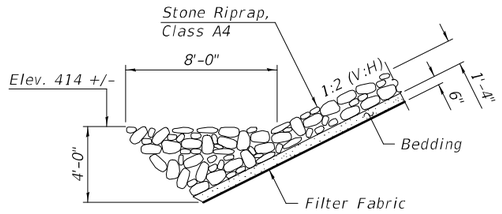


SECTION THRU INTEGRAL ABUTMENT

*Included in the cost of Pipe Underdrains for Structures.

Note:
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

**Granular Backfill behind the abutments shall be compacted according to Article 205.06 of the Standard Specifications.



SECTION A-A

GENERAL NOTES

Fasteners shall be ASTM F 3125 Grade A325 Type 1, hot dip galvanized bolts in metallized areas. Bolts 7/8 in. Ø, holes 15/16 in. Ø, unless otherwise noted. See Special Provision for "Metallizing of Structural Steel".

Calculated weight of Structural Steel = 436,870 lbs. (M270 Grade 50).

All new structural steel shall be AASHTO M270 Grade 50.

No field welding is permitted except as specified in the contract documents.

Reinforcement bars designated (E) shall be epoxy coated.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.

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

All new structural steel shall be metallized and coated with a clear sealer (System 1). See Special Provisions for "Metallizing of Structural Steel".

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.

The existing South approach bent shall be removed in its entirety. Cost included with Removal of Existing Structures No. 1.

WATERWAY INFORMATION

Drainage Area = 2,329.3 sq. mi.

Existing Overtopping Elev. 428.23 at Sta. 66+41
Proposed Overtopping Elev. 428.23 at Sta. 66+41

Flood Event		Discharge (cfs)		Opening Ft²		Nat. H.W.E.	Head - Ft.		Headwater Elev.	
		Exist.	Prop.	Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
10	SN 051-0063	20466	20466	7639	7639	426.5	0.2	0.2	426.7	426.7
	SN 051-0075	12950	12860	7560	8349					
	SN 051-0074	6913	7003	4045	4609					
	Total	40329	40329	19244	20597					
30 Overtopping	SN 051-0063	27365	27365	8450	8450	428.5	0.1	0.1	428.6	428.6
	SN 051-0075	17240	17185	8555	9896					
	SN 051-0074	8843	8898	4425	5232					
	Total	53448	53448	21430	23578					
50	SN 051-0063	31775	31775	8933	8933	429.7	0.1	0.0	429.8	429.7
	SN 051-0075	18512	18760	8555	10310					
	SN 051-0074	9579	9331	4425	5232					
	Total	59866	59866	21913	24475					
100	SN 051-0063	39647	39647	9899	9899	432.0	0.1	0.1	432.1	432.1
	SN 051-0075	18858	19021	8555	10310					
	SN 051-0074	9623	9460	4425	5232					
	Total	68128	68128	22879	25441					
200	SN 051-0063	42689	42689	10488	10488	433.4	0.0	0.0	433.4	433.4
	SN 051-0075	22598	22833	8555	10310					
	SN 051-0074	11590	11355	4425	5232					
	Total	76877	76877	23468	26030					
500	SN 051-0063	45887	45887	10681	10681	434.9	0.1	0.0	435.0	434.9
	SN 051-0075	27792	28082	8555	10310					
	SN 051-0074	14255	13965	4425	5232					
	Total	87934	87934	23661	26223					

INDEX OF SHEETS

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A4	Sq. Yd.		1140	1140
Filter Fabric	Sq. Yd.		1140	1140
Protective Coat	Sq. Yd.	2349		2349
Removal of Existing Structures No. 1	Each			1
Structure Excavation	Cu. Yd.		220	220
Cofferdam (Type 1) (Location - 1)	Each		1	1
Cofferdam (Type 1) (Location - 2)	Each		1	1
Cofferdam (Type 1) (Location - 3)	Each		1	1
Cofferdam (Type 1) (Location - 4)	Each		1	1
Cofferdam Excavation	Cu. Yd.		260	260
Concrete Structures	Cu. Yd.		302.9	302.9
Concrete Superstructure	Cu. Yd.	584.0		584.0
Concrete Superstructure (Approach Slab)	Cu. Yd.	121.0		121.0
Bridge Deck Grooving (Longitudinal)	Sq. Yd.	1180		1180
Furnishing and Erecting Structural Steel	L. Sum	0.30		0.30
Stud Shear Connectors	Each	12330		12330
Reinforcement Bars, Epoxy Coated	Pound	200980	30040	231020
Bar Splicers	Each	1556	256	1812
Furnishing Steel Piles HP14x102	Foot		8970	8970
Driving Piles	Foot		8970	8970
Test Pile Steel HP14x102	Each		3	3
Name Plates	Each	1		1
Anchor Bolts, 1"	Each		72	72
Geocomposite Wall Drain	Sq. Yd.		69	69
Granular Backfill For Structures	Cu. Yd.		121	121
Bar Terminators	Each	252	424	676
Diamond Grinding (Bridge Section)	Sq. Yd.	1891		1891
Pipe Underdrains For Structures 4"	Foot		144	144
Temporary Sheet Piling	Sq. Ft.		566	566
Temporary Soil Retention System	Sq. Ft.		314	314

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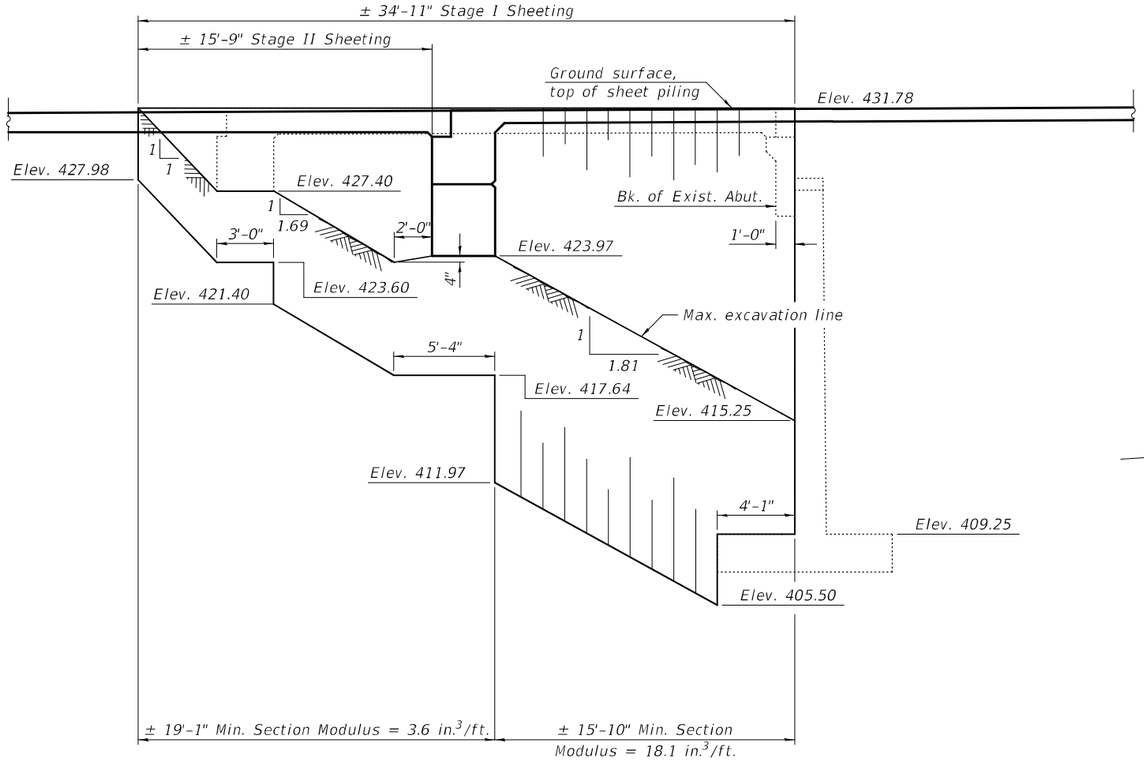
DESIGNED -	RYAN P. NEGANGARD	EXAMINED	ENGINEER OF BRIDGE DESIGN
CHECKED -	JOE G. YOUNG	PASSED	ENGINEER OF BRIDGES AND STRUCTURES
DRAWN -	DENNIS A. POP	DATE -	10-10-2024
CHECKED -	R.P.N. / G.R.A. / J.G.Y.	REVISED -	
		REVISED -	

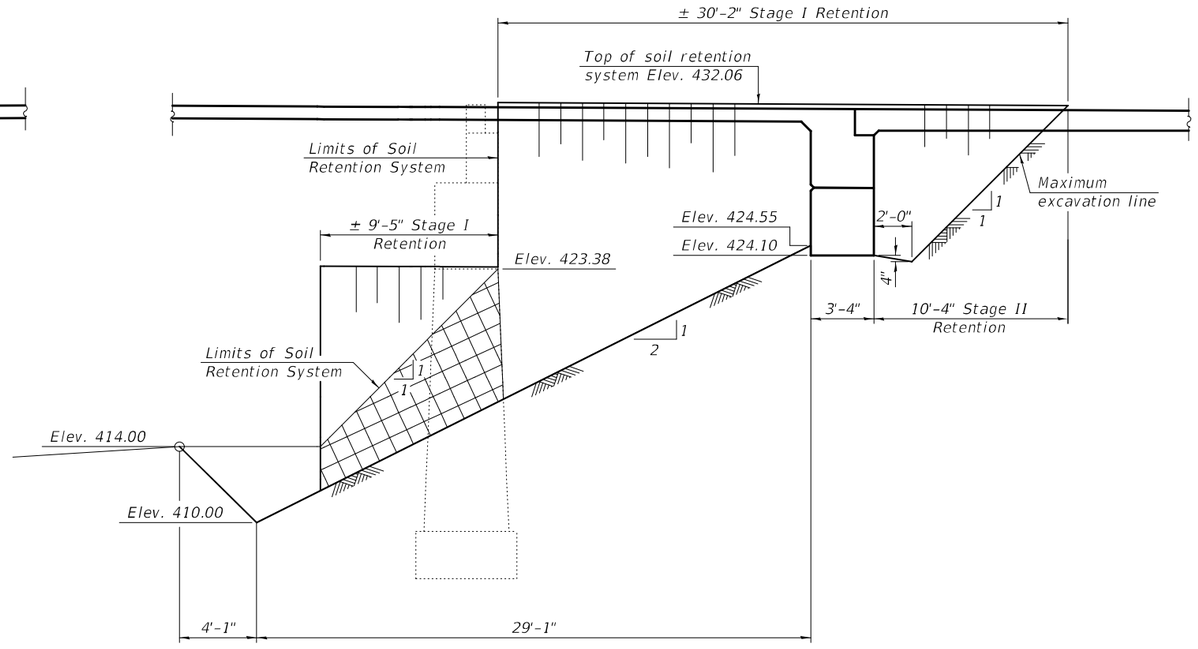
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DATA
STRUCTURE NO. 051-0074
SHEET 2 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	43
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		



TEMPORARY SHEET PILING
(South Abutment Looking West)



TEMPORARY SOIL RETENTION SYSTEM
(North Abutment Looking West)

During Stage I construction, the cross hatched area of soil under Stage I traffic shall remain as shown, unless another approved means of soil retention for the soil under the existing approach slab is provided.

Notes:

The Contractor shall connect the first sheet to the existing abutment wall to ensure stability of sheets driven to the top of the existing footing. This connection shall be reviewed and accepted by the Engineer and included in the cost for Temporary Sheet Piling.

If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer. (South Abutment).

A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan and details and calculations for review and acceptance by the Engineer. (North Abutment).

DESIGNED - RYAN P. NEGANGARD	EXAMINED	DATE - 10-10-2024
CHECKED - JOE G. YOUNG		
DRAWN - DENNIS A. POP	PASSED	REVISED -
CHECKED - R.P.N. / G.R.A. / J.G.Y.	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -

ENGINEER OF BRIDGE DESIGN

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY SHEET PILING & T.S.R. SYSTEM
STRUCTURE NO. 051-0074

SHEET 3 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	44
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

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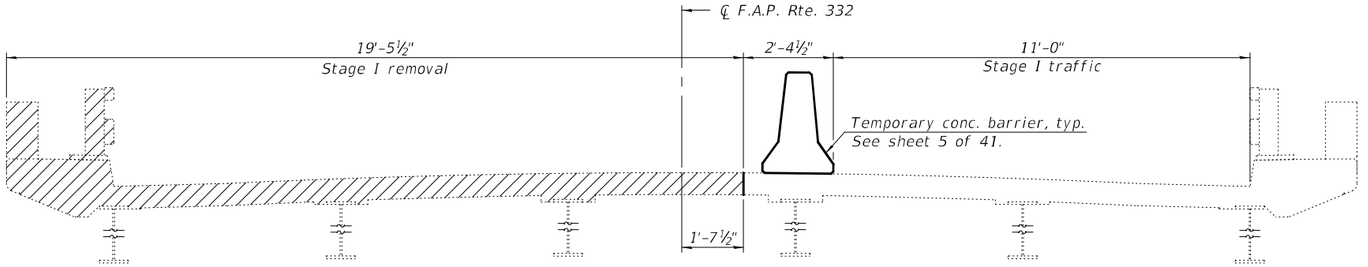
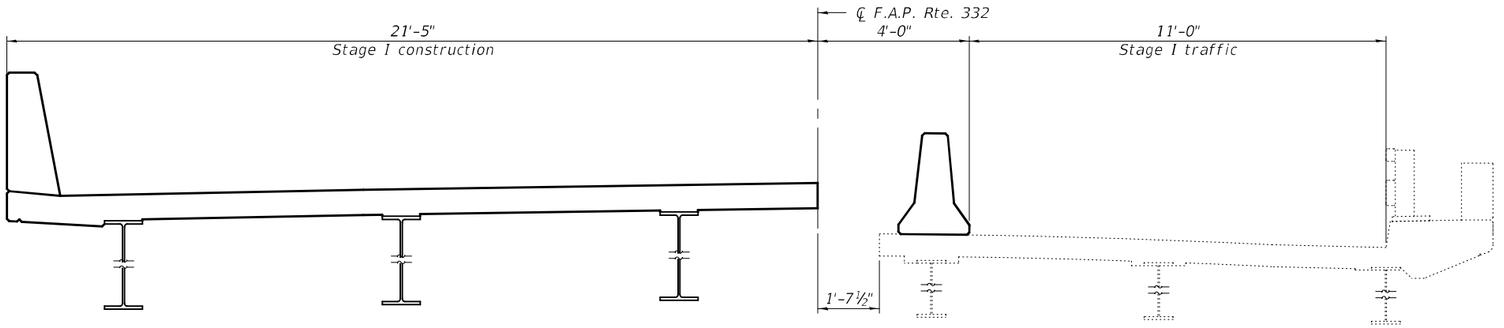
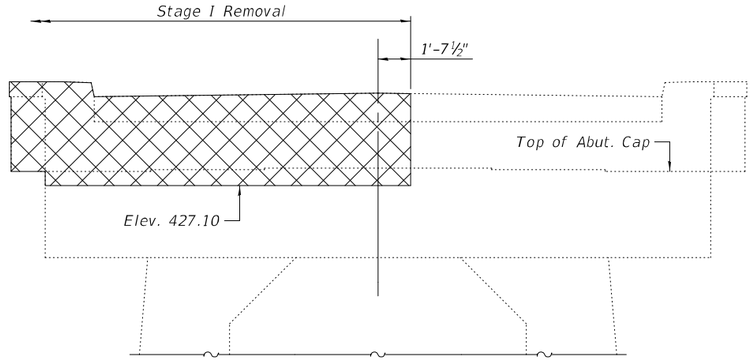


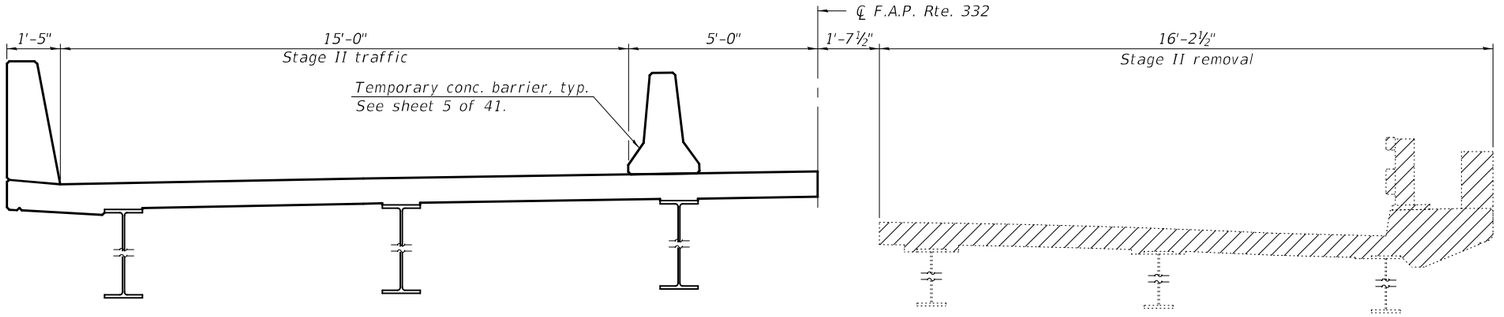
STAGE I REMOVAL



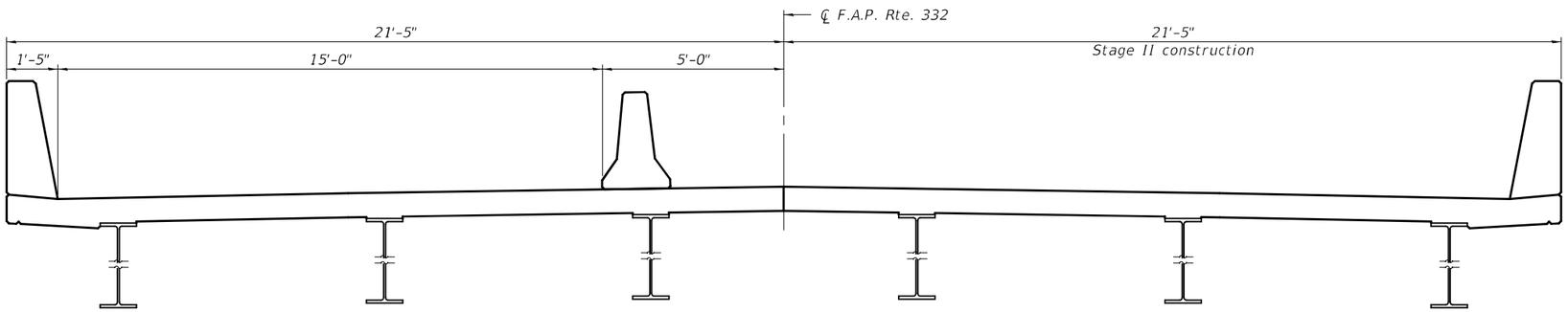
STAGE I CONSTRUCTION



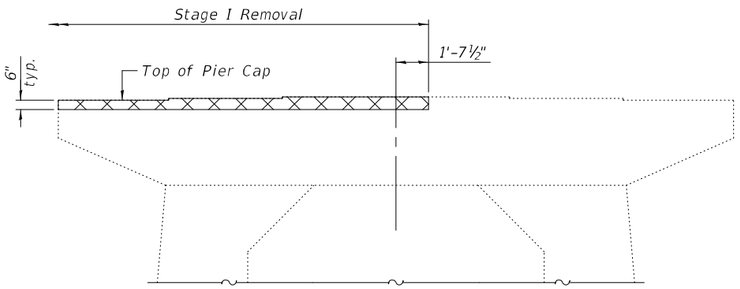
NORTH ABUTMENT CONCRETE REMOVAL
(Looking North)



STAGE II REMOVAL



STAGE II CONSTRUCTION



PIER CAP CONCRETE REMOVAL
(Looking North)

Notes:
Hatched area indicates Removal of Existing Structures No. 1.
For quantities of temporary concrete barrier, see roadway plans.
All staging cross sections are looking north.
Cross-hatched area indicates Stage I concrete removal. Cost included with Removal of Existing Structures No. 1.
Stage I partial removal limits are shown above for the North Abutment and piers. The remaining portions shall be removed to the required final elevations during Stage II Removal.

DESIGNED -	RYAN P. NEGANGARD	
CHECKED -	JOE G. YOUNG	
DRAWN -	DENNIS A. POP	
CHECKED -	R.P.N. / G.R.A. / J.G.Y.	

EXAMINED — ENGINEER OF BRIDGE DESIGN
PASSED — ENGINEER OF BRIDGES AND STRUCTURES
DATE - 10-10-2024
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION DETAILS
STRUCTURE NO. 051-0074
SHEET 4 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	45
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

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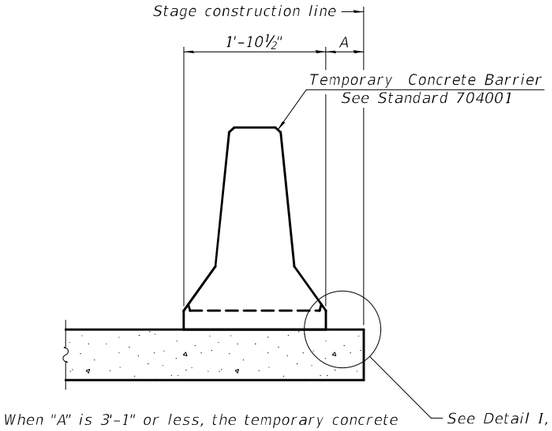
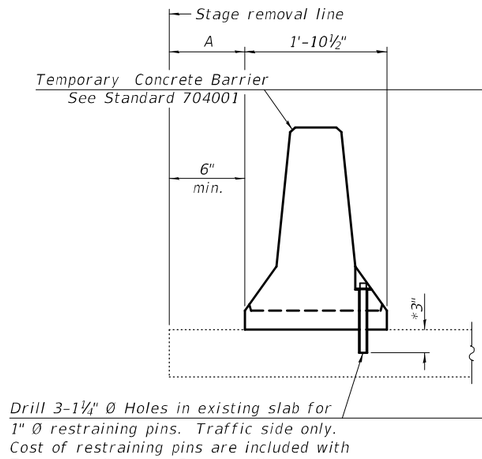


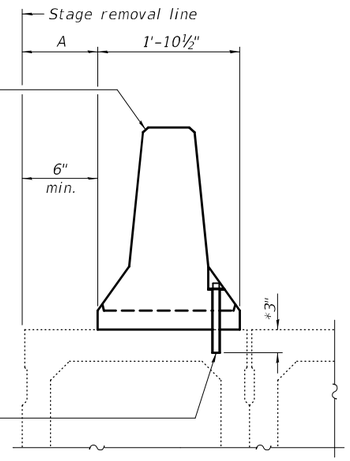
When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

NEW SLAB OR NEW DECK BEAM



Drill 3-1¼" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

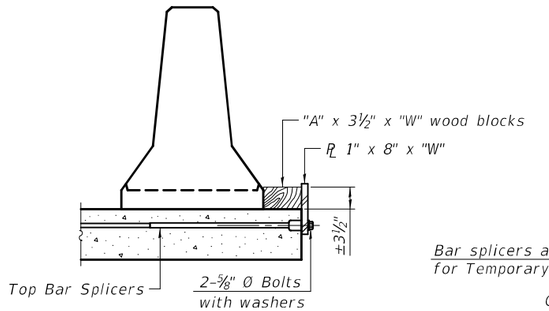
EXISTING SLAB



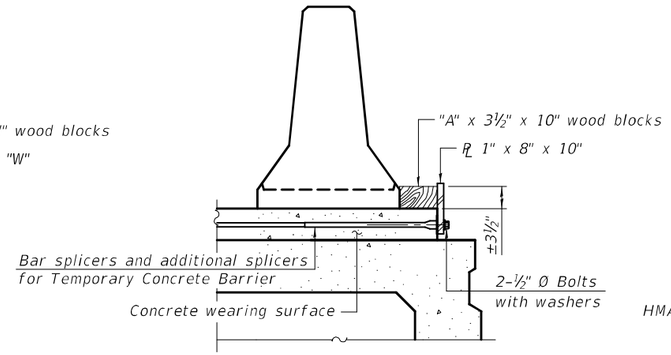
* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

EXISTING DECK BEAM

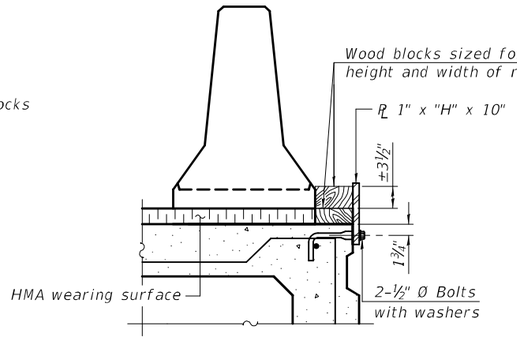
SECTIONS THRU SLAB OR DECK BEAM



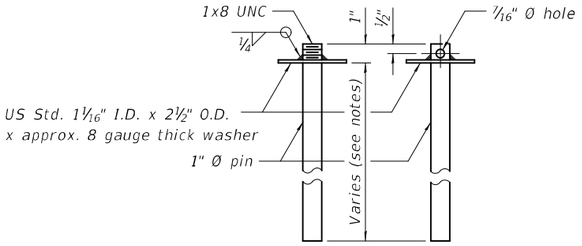
DETAIL I



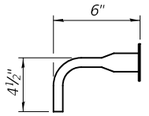
DETAIL II



DETAIL III



RESTRAINING PIN



BAR SPLICER FOR #4 BAR - DETAIL III

Notes:

Cost of retainer assembly is included with Temporary Concrete Barrier.

A retainer assembly shall be located at the approximate ℄ of each temporary concrete barrier.

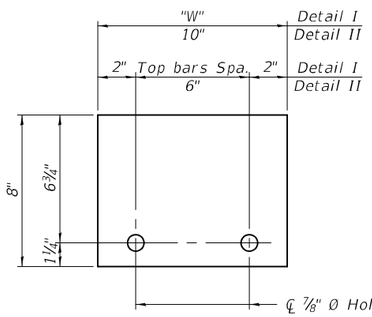
The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.

When the 'A' dimension is less than 1½", the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate. For deck beam applications the minimum required 'A' distance is 6" to accommodate the shear key clamping device.

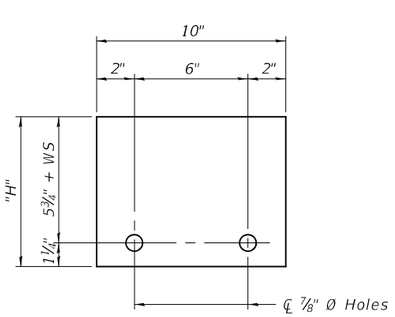
Detail I - Installation for a new bridge deck or bridge slab.

Detail II - Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the additional bar splicers is included with the concrete wearing surface.

Detail III - Installation for a new deck beam with no initial wearing surface or with an initial hot-mix asphalt (HMA) wearing surface present. The deck beam directly beneath the temporary concrete barrier shall be fabricated with bar splicer inserts in the side of the beam, as detailed, to accommodate the installation of the retainer assemblies. A pair of bar splicers, 6" apart, shall be placed at 6'-0" centers along the length of the beam. The cost of the bar splicers is included with the deck beam.



STEEL RETAINER ℄ 1" x 8" x "W"
(Detail I and II)



STEEL RETAINER ℄ 1" x "H" x 10"
(Detail III)

RAILING CRITERIA

NCHRP 350 Test Level	3
Railing Weight (plf)	440

R-27

10-12-2021

DESIGNED - RYAN P. NEGANGARD	EXAMINED	DATE - 10-10-2024	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY CONCRETE BARRIER STRUCTURE NO. 051-0074	
CHECKED - JOE G. YOUNG	PASSED	REVISED -			
DRAWN - DENNIS A. POP	ENGINEER OF BRIDGE DESIGN	REVISED -		SHEET 5 OF 41 SHEETS	
CHECKED - R.P.N. / G.R.A. / J.G.Y.	ENGINEER OF BRIDGES AND STRUCTURES				

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	46
		CONTRACT NO. 74164		
	ILLINOIS FED. AID PROJECT			

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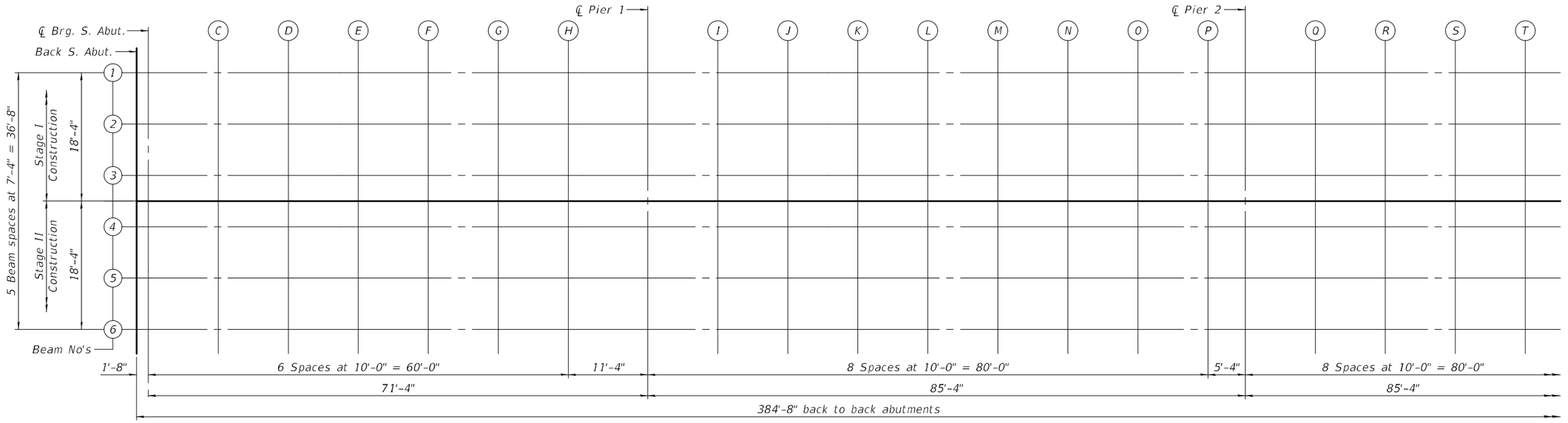
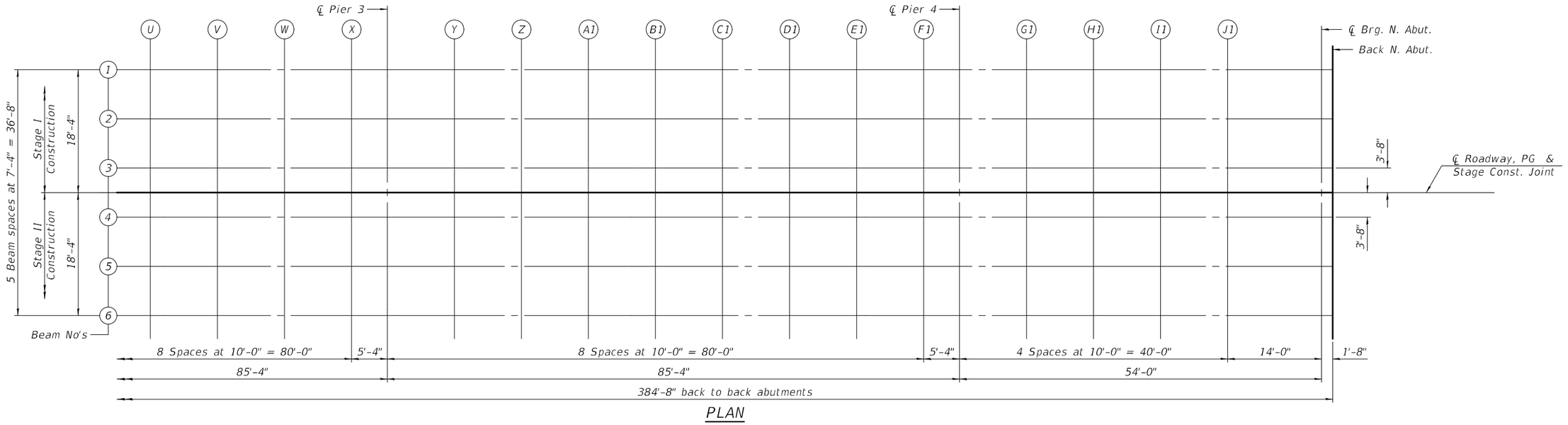


PLAN

N



PLAN

DESIGNED - RYAN P. NEGANGARD	EXAMINED		DATE - 10-10-2024	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**TOP OF SLAB ELEVATIONS STRUCTURE NO. 051-0074**	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - JOE G. YOUNG		ENGINEER OF BRIDGE DESIGN				332	(16BR-1, BR-2)B-1	LAWRENCE	198	47
DRAWN - DENNIS A. POP	PASSED		REVISED -		SHEET 6 OF 41 SHEETS			CONTRACT NO. 74164		
CHECKED - R.P.N. / G.R.A. / J.G.Y.		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -					ILLINOIS	FED. AID PROJECT	

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BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Back S. Abut.	83+20.85	-18.33	431.35	431.37
℄ Brg. S. Abut.	83+22.52	-18.33	431.36	431.38
C	83+32.52	-18.33	431.43	431.48
D	83+42.52	-18.33	431.50	431.57
E	83+52.52	-18.33	431.57	431.65
F	83+62.52	-18.33	431.65	431.72
G	83+72.52	-18.33	431.72	431.77
H	83+82.52	-18.33	431.79	431.83
℄ Pier 1	83+93.85	-18.33	431.87	431.89
I	84+03.85	-18.33	431.94	431.97
J	84+13.85	-18.33	432.00	432.05
K	84+23.85	-18.33	432.05	432.11
L	84+33.85	-18.33	432.10	432.17
M	84+43.85	-18.33	432.14	432.21
N	84+53.85	-18.33	432.18	432.24
O	84+63.85	-18.33	432.21	432.25
P	84+73.85	-18.33	432.23	432.26
℄ Pier 2	84+79.18	-18.33	432.24	432.26
Q	84+89.18	-18.33	432.26	432.29
R	84+99.18	-18.33	432.27	432.32
S	85+09.18	-18.33	432.27	432.33
T	85+19.18	-18.33	432.26	432.34
U	85+29.18	-18.33	432.25	432.32
V	85+39.18	-18.33	432.24	432.29
W	85+49.18	-18.33	432.22	432.26
X	85+59.18	-18.33	432.19	432.22
℄ Pier 3	85+64.52	-18.33	432.17	432.19
Y	85+74.52	-18.33	432.13	432.17
Z	85+84.52	-18.33	432.09	432.15
A1	85+94.52	-18.33	432.04	432.11
B1	86+04.52	-18.33	431.99	432.08
C1	86+14.52	-18.33	431.94	432.02
D1	86+24.52	-18.33	431.89	431.96
E1	86+34.52	-18.33	431.84	431.89
F1	86+44.52	-18.33	431.79	431.82
℄ Pier 4	86+49.85	-18.33	431.76	431.78
G1	86+59.85	-18.33	431.71	431.73
H1	86+69.85	-18.33	431.66	431.69
I1	86+79.85	-18.33	431.61	431.64
J1	86+89.85	-18.33	431.56	431.59
℄ Brg. N. Abut.	87+03.85	-18.33	431.49	431.51
Back N. Abut.	87+05.52	-18.33	431.49	431.51

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Back S. Abut.	83+20.85	-11.00	431.49	431.51
℄ Brg. S. Abut.	83+22.52	-11.00	431.50	431.52
C	83+32.52	-11.00	431.57	431.62
D	83+42.52	-11.00	431.64	431.71
E	83+52.52	-11.00	431.72	431.79
F	83+62.52	-11.00	431.79	431.86
G	83+72.52	-11.00	431.86	431.91
H	83+82.52	-11.00	431.93	431.97
℄ Pier 1	83+93.85	-11.00	432.01	432.03
I	84+03.85	-11.00	432.08	432.11
J	84+13.85	-11.00	432.14	432.19
K	84+23.85	-11.00	432.19	432.26
L	84+33.85	-11.00	432.24	432.32
M	84+43.85	-11.00	432.28	432.35
N	84+53.85	-11.00	432.32	432.38
O	84+63.85	-11.00	432.35	432.39
P	84+73.85	-11.00	432.37	432.40
℄ Pier 2	84+79.18	-11.00	432.38	432.40
Q	84+89.18	-11.00	432.40	432.43
R	84+99.18	-11.00	432.41	432.46
S	85+09.18	-11.00	432.41	432.47
T	85+19.18	-11.00	432.41	432.48
U	85+29.18	-11.00	432.40	432.46
V	85+39.18	-11.00	432.38	432.43
W	85+49.18	-11.00	432.36	432.40
X	85+59.18	-11.00	432.33	432.36
℄ Pier 3	85+64.52	-11.00	432.31	432.33
Y	85+74.52	-11.00	432.28	432.31
Z	85+84.52	-11.00	432.23	432.29
A1	85+94.52	-11.00	432.18	432.26
B1	86+04.52	-11.00	432.13	432.22
C1	86+14.52	-11.00	432.08	432.17
D1	86+24.52	-11.00	432.03	432.10
E1	86+34.52	-11.00	431.98	432.04
F1	86+44.52	-11.00	431.93	431.96
℄ Pier 4	86+49.85	-11.00	431.91	431.93
G1	86+59.85	-11.00	431.86	431.88
H1	86+69.85	-11.00	431.81	431.83
I1	86+79.85	-11.00	431.76	431.78
J1	86+89.85	-11.00	431.71	431.73
℄ Brg. N. Abut.	87+03.85	-11.00	431.64	431.66
Back N. Abut.	87+05.52	-11.00	431.63	431.65

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Back S. Abut.	83+20.85	-3.67	431.60	431.62
℄ Brg. S. Abut.	83+22.52	-3.67	431.61	431.63
C	83+32.52	-3.67	431.68	431.73
D	83+42.52	-3.67	431.75	431.82
E	83+52.52	-3.67	431.83	431.90
F	83+62.52	-3.67	431.90	431.97
G	83+72.52	-3.67	431.97	432.02
H	83+82.52	-3.67	432.04	432.08
℄ Pier 1	83+93.85	-3.67	432.12	432.14
I	84+03.85	-3.67	432.19	432.22
J	84+13.85	-3.67	432.25	432.30
K	84+23.85	-3.67	432.30	432.37
L	84+33.85	-3.67	432.35	432.43
M	84+43.85	-3.67	432.39	432.46
N	84+53.85	-3.67	432.43	432.49
O	84+63.85	-3.67	432.46	432.50
P	84+73.85	-3.67	432.48	432.51
℄ Pier 2	84+79.18	-3.67	432.49	432.51
Q	84+89.18	-3.67	432.51	432.54
R	84+99.18	-3.67	432.52	432.57
S	85+09.18	-3.67	432.52	432.58
T	85+19.18	-3.67	432.52	432.59
U	85+29.18	-3.67	432.51	432.57
V	85+39.18	-3.67	432.49	432.54
W	85+49.18	-3.67	432.47	432.51
X	85+59.18	-3.67	432.44	432.47
℄ Pier 3	85+64.52	-3.67	432.42	432.44
Y	85+74.52	-3.67	432.39	432.42
Z	85+84.52	-3.67	432.34	432.40
A1	85+94.52	-3.67	432.29	432.37
B1	86+04.52	-3.67	432.24	432.33
C1	86+14.52	-3.67	432.19	432.28
D1	86+24.52	-3.67	432.14	432.21
E1	86+34.52	-3.67	432.09	432.15
F1	86+44.52	-3.67	432.04	432.07
℄ Pier 4	86+49.85	-3.67	432.02	432.04
G1	86+59.85	-3.67	431.97	431.99
H1	86+69.85	-3.67	431.92	431.94
I1	86+79.85	-3.67	431.87	431.89
J1	86+89.85	-3.67	431.82	431.84
℄ Brg. N. Abut.	87+03.85	-3.67	431.75	431.77
Back N. Abut.	87+05.52	-3.67	431.74	431.76

DESIGNED -	RYAN P. NEGANGARD	EXAMINED	DATE - 10-10-2024
CHECKED -	JOE G. YOUNG		ENGINEER OF BRIDGE DESIGN
DRAWN -	DENNIS A. POP	PASSED	REVISED -
CHECKED -	R.P.N. / G.R.A. / J.G.Y.		ENGINEER OF BRIDGES AND STRUCTURES REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 051-0074

SHEET 7 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	48
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

℄ ROADWAY. P.G. & STAGE CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Back S. Abut.	83+20.85	0.00	431.65	431.67
℄ Brg. S. Abut.	83+22.52	0.00	431.66	431.68
C	83+32.52	0.00	431.74	431.78
D	83+42.52	0.00	431.81	431.88
E	83+52.52	0.00	431.88	431.96
F	83+62.52	0.00	431.95	432.02
G	83+72.52	0.00	432.02	432.08
H	83+82.52	0.00	432.10	432.13
℄ Pier 1	83+93.85	0.00	432.18	432.20
I	84+03.85	0.00	432.24	432.28
J	84+13.85	0.00	432.30	432.35
K	84+23.85	0.00	432.36	432.42
L	84+33.85	0.00	432.41	432.48
M	84+43.85	0.00	432.45	432.52
N	84+53.85	0.00	432.49	432.54
O	84+63.85	0.00	432.52	432.56
P	84+73.85	0.00	432.54	432.57
℄ Pier 2	84+79.18	0.00	432.55	432.57
Q	84+89.18	0.00	432.56	432.60
R	84+99.18	0.00	432.57	432.62
S	85+09.18	0.00	432.57	432.64
T	85+19.18	0.00	432.57	432.64
U	85+29.18	0.00	432.56	432.63
V	85+39.18	0.00	432.55	432.60
W	85+49.18	0.00	432.52	432.56
X	85+59.18	0.00	432.50	432.52
℄ Pier 3	85+64.52	0.00	432.48	432.50
Y	85+74.52	0.00	432.44	432.48
Z	85+84.52	0.00	432.40	432.45
A1	85+94.52	0.00	432.35	432.42
B1	86+04.52	0.00	432.30	432.39
C1	86+14.52	0.00	432.25	432.33
D1	86+24.52	0.00	432.20	432.27
E1	86+34.52	0.00	432.15	432.20
F1	86+44.52	0.00	432.10	432.13
℄ Pier 4	86+49.85	0.00	432.07	432.09
G1	86+59.85	0.00	432.02	432.04
H1	86+69.85	0.00	431.97	431.99
I1	86+79.85	0.00	431.92	431.95
J1	86+89.85	0.00	431.87	431.90
℄ Brg. N. Abut.	87+03.85	0.00	431.80	431.82
Back N. Abut.	87+05.52	0.00	431.79	431.81

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Back S. Abut.	83+20.85	3.67	431.60	431.62
℄ Brg. S. Abut.	83+22.52	3.67	431.61	431.63
C	83+32.52	3.67	431.68	431.73
D	83+42.52	3.67	431.75	431.82
E	83+52.52	3.67	431.83	431.90
F	83+62.52	3.67	431.90	431.97
G	83+72.52	3.67	431.97	432.02
H	83+82.52	3.67	432.04	432.08
℄ Pier 1	83+93.85	3.67	432.12	432.14
I	84+03.85	3.67	432.19	432.22
J	84+13.85	3.67	432.25	432.30
K	84+23.85	3.67	432.30	432.37
L	84+33.85	3.67	432.35	432.43
M	84+43.85	3.67	432.39	432.46
N	84+53.85	3.67	432.43	432.49
O	84+63.85	3.67	432.46	432.50
P	84+73.85	3.67	432.48	432.51
℄ Pier 2	84+79.18	3.67	432.49	432.51
Q	84+89.18	3.67	432.51	432.54
R	84+99.18	3.67	432.52	432.57
S	85+09.18	3.67	432.52	432.58
T	85+19.18	3.67	432.52	432.59
U	85+29.18	3.67	432.51	432.57
V	85+39.18	3.67	432.49	432.54
W	85+49.18	3.67	432.47	432.51
X	85+59.18	3.67	432.44	432.47
℄ Pier 3	85+64.52	3.67	432.42	432.44
Y	85+74.52	3.67	432.39	432.42
Z	85+84.52	3.67	432.34	432.40
A1	85+94.52	3.67	432.29	432.37
B1	86+04.52	3.67	432.24	432.33
C1	86+14.52	3.67	432.19	432.28
D1	86+24.52	3.67	432.14	432.21
E1	86+34.52	3.67	432.09	432.15
F1	86+44.52	3.67	432.04	432.07
℄ Pier 4	86+49.85	3.67	432.02	432.04
G1	86+59.85	3.67	431.97	431.99
H1	86+69.85	3.67	431.92	431.94
I1	86+79.85	3.67	431.87	431.89
J1	86+89.85	3.67	431.82	431.84
℄ Brg. N. Abut.	87+03.85	3.67	431.75	431.77
Back N. Abut.	87+05.52	3.67	431.74	431.76

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Back S. Abut.	83+20.85	11.00	431.49	431.51
℄ Brg. S. Abut.	83+22.52	11.00	431.50	431.52
C	83+32.52	11.00	431.57	431.62
D	83+42.52	11.00	431.64	431.71
E	83+52.52	11.00	431.72	431.79
F	83+62.52	11.00	431.79	431.86
G	83+72.52	11.00	431.86	431.91
H	83+82.52	11.00	431.93	431.97
℄ Pier 1	83+93.85	11.00	432.01	432.03
I	84+03.85	11.00	432.08	432.11
J	84+13.85	11.00	432.14	432.19
K	84+23.85	11.00	432.19	432.26
L	84+33.85	11.00	432.24	432.32
M	84+43.85	11.00	432.28	432.35
N	84+53.85	11.00	432.32	432.38
O	84+63.85	11.00	432.35	432.39
P	84+73.85	11.00	432.37	432.40
℄ Pier 2	84+79.18	11.00	432.38	432.40
Q	84+89.18	11.00	432.40	432.43
R	84+99.18	11.00	432.41	432.46
S	85+09.18	11.00	432.41	432.47
T	85+19.18	11.00	432.41	432.48
U	85+29.18	11.00	432.40	432.46
V	85+39.18	11.00	432.38	432.43
W	85+49.18	11.00	432.36	432.40
X	85+59.18	11.00	432.33	432.36
℄ Pier 3	85+64.52	11.00	432.31	432.33
Y	85+74.52	11.00	432.28	432.31
Z	85+84.52	11.00	432.23	432.29
A1	85+94.52	11.00	432.18	432.26
B1	86+04.52	11.00	432.13	432.22
C1	86+14.52	11.00	432.08	432.17
D1	86+24.52	11.00	432.03	432.10
E1	86+34.52	11.00	431.98	432.04
F1	86+44.52	11.00	431.93	431.96
℄ Pier 4	86+49.85	11.00	431.91	431.93
G1	86+59.85	11.00	431.86	431.88
H1	86+69.85	11.00	431.81	431.83
I1	86+79.85	11.00	431.76	431.78
J1	86+89.85	11.00	431.71	431.73
℄ Brg. N. Abut.	87+03.85	11.00	431.64	431.66
Back N. Abut.	87+05.52	11.00	431.63	431.65

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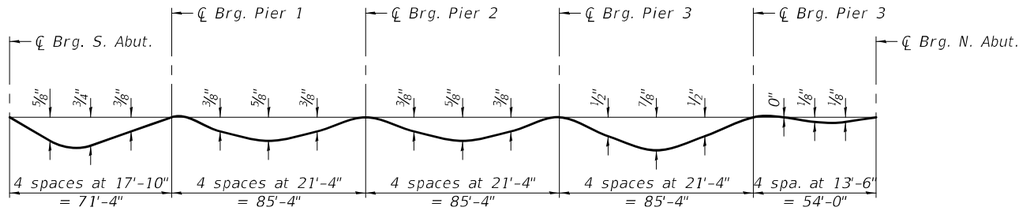
DESIGNED - RYAN P. NEGANGARD	EXAMINED		DATE - 10-10-2024	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**TOP OF SLAB ELEVATIONS STRUCTURE NO. 051-0074**
CHECKED - JOE G. YOUNG		ENGINEER OF BRIDGE DESIGN	REVISED -		SHEET 8 OF 41 SHEETS
DRAWN - DENNIS A. POP	PASSED		REVISED -		
CHECKED - R.P.N. / G.R.A. / J.G.Y.		ENGINEER OF BRIDGES AND STRUCTURES			

10/10/2024 11:56:27 AM

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	49
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

BEAM 6

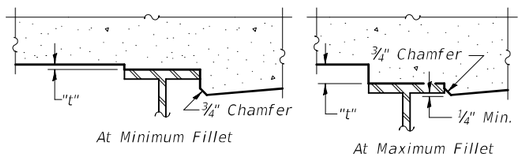
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Back S. Abut.	83+20.85	18.33	431.35	431.37
℄ Brg. S. Abut.	83+22.52	18.33	431.36	431.38
C	83+32.52	18.33	431.43	431.48
D	83+42.52	18.33	431.50	431.57
E	83+52.52	18.33	431.57	431.65
F	83+62.52	18.33	431.65	431.72
G	83+72.52	18.33	431.72	431.77
H	83+82.52	18.33	431.79	431.83
℄ Pier 1	83+93.85	18.33	431.87	431.89
I	84+03.85	18.33	431.94	431.97
J	84+13.85	18.33	432.00	432.05
K	84+23.85	18.33	432.05	432.11
L	84+33.85	18.33	432.10	432.17
M	84+43.85	18.33	432.14	432.21
N	84+53.85	18.33	432.18	432.24
O	84+63.85	18.33	432.21	432.25
P	84+73.85	18.33	432.23	432.26
℄ Pier 2	84+79.18	18.33	432.24	432.26
Q	84+89.18	18.33	432.26	432.29
R	84+99.18	18.33	432.27	432.32
S	85+09.18	18.33	432.27	432.33
T	85+19.18	18.33	432.26	432.34
U	85+29.18	18.33	432.25	432.32
V	85+39.18	18.33	432.24	432.29
W	85+49.18	18.33	432.22	432.26
X	85+59.18	18.33	432.19	432.22
℄ Pier 3	85+64.52	18.33	432.17	432.19
Y	85+74.52	18.33	432.13	432.17
Z	85+84.52	18.33	432.09	432.15
A1	85+94.52	18.33	432.04	432.11
B1	86+04.52	18.33	431.99	432.08
C1	86+14.52	18.33	431.94	432.02
D1	86+24.52	18.33	431.89	431.96
E1	86+34.52	18.33	431.84	431.89
F1	86+44.52	18.33	431.79	431.82
℄ Pier 4	86+49.85	18.33	431.76	431.78
G1	86+59.85	18.33	431.71	431.73
H1	86+69.85	18.33	431.66	431.69
I1	86+79.85	18.33	431.61	431.64
J1	86+89.85	18.33	431.56	431.59
℄ Brg. N. Abut.	87+03.85	18.33	431.49	431.51
Back N. Abut.	87+05.52	18.33	431.49	431.51



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections and grinding as shown on sheets 7 thru 9 of 41.
The slab is to be ground after curing to achieve smoothness but the slab is not to be ground to elevations below the "Theoretical Grade Elevations" shown on sheets 7 thru 9 of 41. For grinding the deck, see Special Provisons.



At Minimum Fillet

At Maximum Fillet

To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on sheets 7 thru 9 of 41. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection and grinding" shown on sheets 7 thru 9 of 41, minus 8¼" slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

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DESIGNED -	RYAN P. NEGANGARD	EXAMINED	DATE - 10-10-2024
CHECKED -	JOE G. YOUNG		REVISED -
DRAWN -	DENNIS A. POP	PASSED	REVISED -
CHECKED -	R.P.N. / G.R.A. / J.G.Y.	ENGINEER OF BRIDGE DESIGN / ENGINEER OF BRIDGES AND STRUCTURES	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 051-0074
SHEET 9 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	50
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

WEST EDGE OF SHOULDER

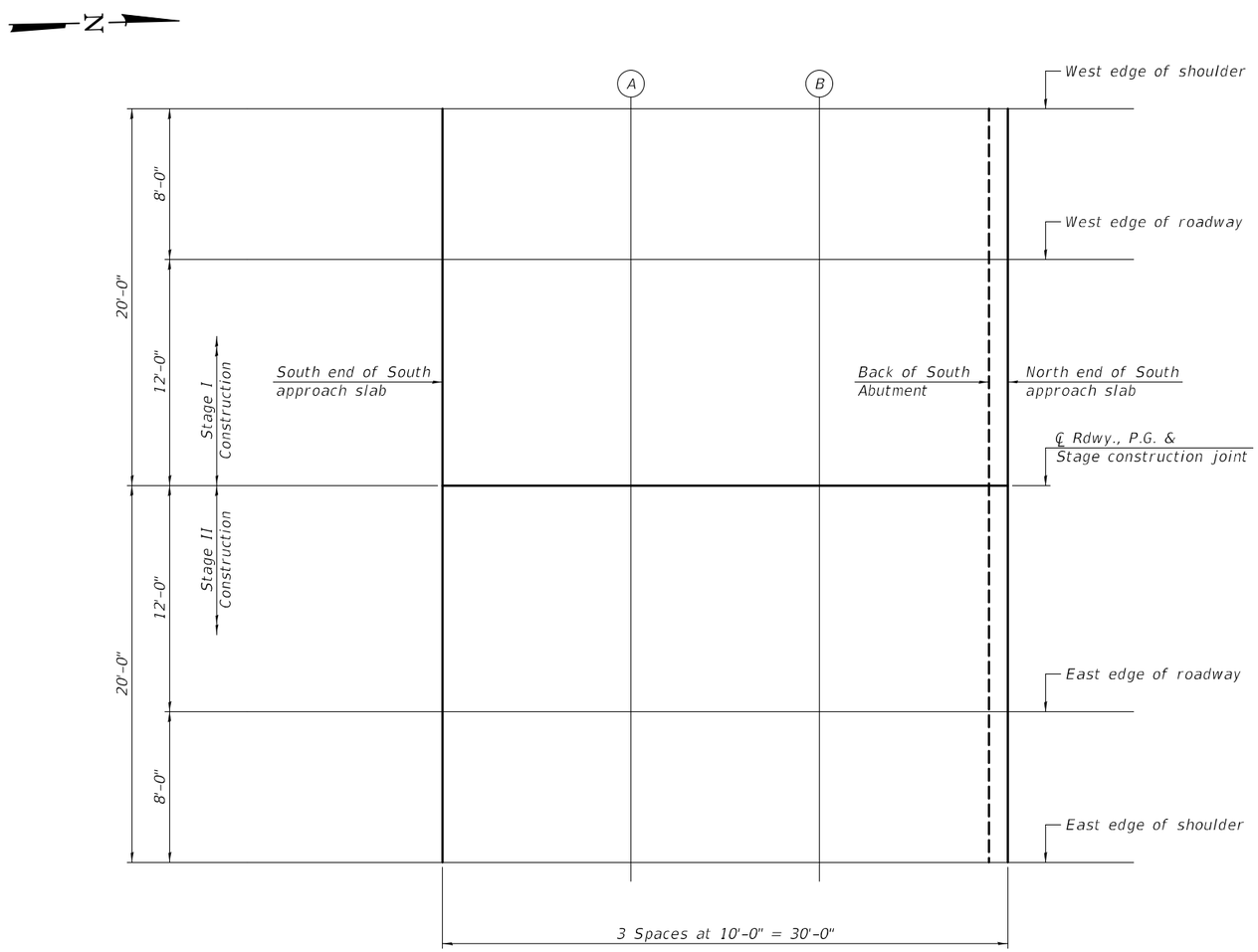
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elev.'s Adjusted For Grinding
S. End of S. Appr. Slab	82+91.85	-20.00	431.10	431.12
A	83+01.85	-20.00	431.18	431.20
B	83+11.85	-20.00	431.25	431.27
N. End of S. Appr. Slab	83+21.85	-20.00	431.32	431.34

WEST EDGE OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elev.'s Adjusted For Grinding
S. End of S. Appr. Slab	82+91.85	-12.00	431.26	431.28
A	83+01.85	-12.00	431.34	431.36
B	83+11.85	-12.00	431.41	431.43
N. End of S. Appr. Slab	83+21.85	-12.00	431.48	431.50

℄ ROADWAY, P.G. & STAGE CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elev.'s Adjusted For Grinding
S. End of S. Appr. Slab	82+91.85	0.00	431.44	431.46
A	83+01.85	0.00	431.52	431.54
B	83+11.85	0.00	431.59	431.61
N. End of S. Appr. Slab	83+21.85	0.00	431.66	431.68



PLAN

EAST EDGE OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elev.'s Adjusted For Grinding
S. End of S. Appr. Slab	82+91.85	12.00	431.26	431.28
A	83+01.85	12.00	431.34	431.36
B	83+11.85	12.00	431.41	431.43
N. End of S. Appr. Slab	83+21.85	12.00	431.48	431.50

EAST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elev.'s Adjusted For Grinding
S. End of S. Appr. Slab	82+91.85	20.00	431.10	431.12
A	83+01.85	20.00	431.18	431.20
B	83+11.85	20.00	431.25	431.27
N. End of S. Appr. Slab	83+21.85	20.00	431.32	431.34

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DESIGNED	-	RYAN P. NEGANGARD	
CHECKED	-	JOE G. YOUNG	
DRAWN	-	DENNIS A. POP	
CHECKED	-	R.P.N. / G.R.A. / J.G.Y.	

EXAMINED — ENGINEER OF BRIDGE DESIGN
PASSED — ENGINEER OF BRIDGES AND STRUCTURES
DATE - 10-10-2024
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SOUTH APPROACH SLAB ELEVATIONS
STRUCTURE NO. 051-0074
SHEET 10 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	51
		CONTRACT NO. 74164		
	ILLINOIS FED. AID PROJECT			

WEST EDGE OF SHOULDER

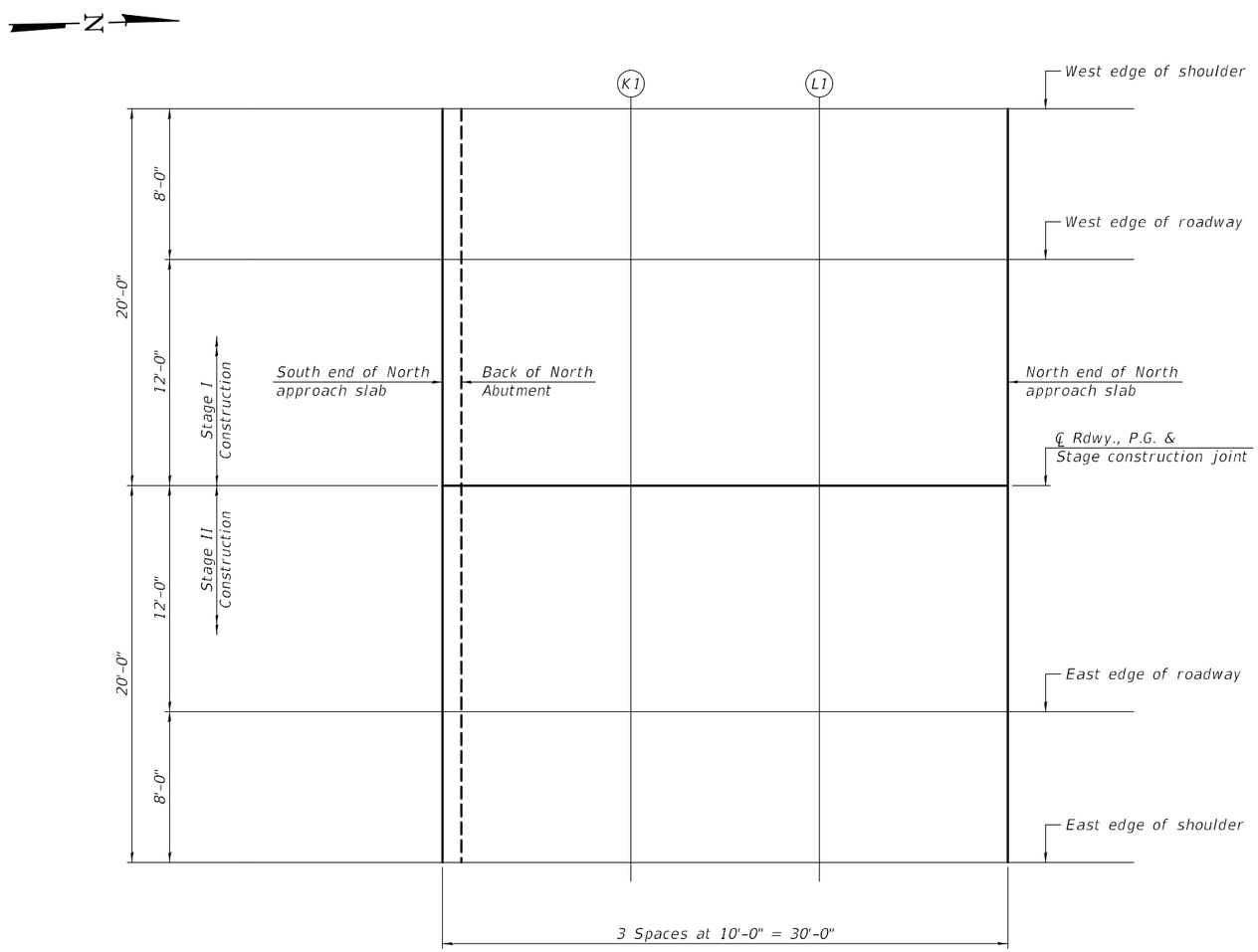
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elev.'s Adjusted For Grinding
S. End of N. Appr. Slab	87+04.52	-20.00	431.46	431.48
K1	87+14.52	-20.00	431.41	431.43
L1	87+24.52	-20.00	431.36	431.38
N. End of N. Appr. Slab	87+34.52	-20.00	431.31	431.33

WEST EDGE OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elev.'s Adjusted For Grinding
S. End of N. Appr. Slab	87+04.52	-12.00	431.62	431.64
K1	87+14.52	-12.00	431.57	431.59
L1	87+24.52	-12.00	431.52	431.54
N. End of N. Appr. Slab	87+34.52	-12.00	431.47	431.49

℄ ROADWAY, P.G. & STAGE CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elev.'s Adjusted For Grinding
S. End of N. Appr. Slab	87+04.52	0.00	431.80	431.82
K1	87+14.52	0.00	431.75	431.77
L1	87+24.52	0.00	431.70	431.72
N. End of N. Appr. Slab	87+34.52	0.00	431.65	431.67



PLAN

EAST EDGE OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elev.'s Adjusted For Grinding
S. End of N. Appr. Slab	87+04.52	12.00	431.62	431.64
K1	87+14.52	12.00	431.57	431.59
L1	87+24.52	12.00	431.52	431.54
N. End of N. Appr. Slab	87+34.52	12.00	431.47	431.49

EAST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elev.'s Adjusted For Grinding
S. End of N. Appr. Slab	87+04.52	20.00	431.46	431.48
K1	87+14.52	20.00	431.41	431.43
L1	87+24.52	20.00	431.36	431.38
N. End of N. Appr. Slab	87+34.52	20.00	431.31	431.33

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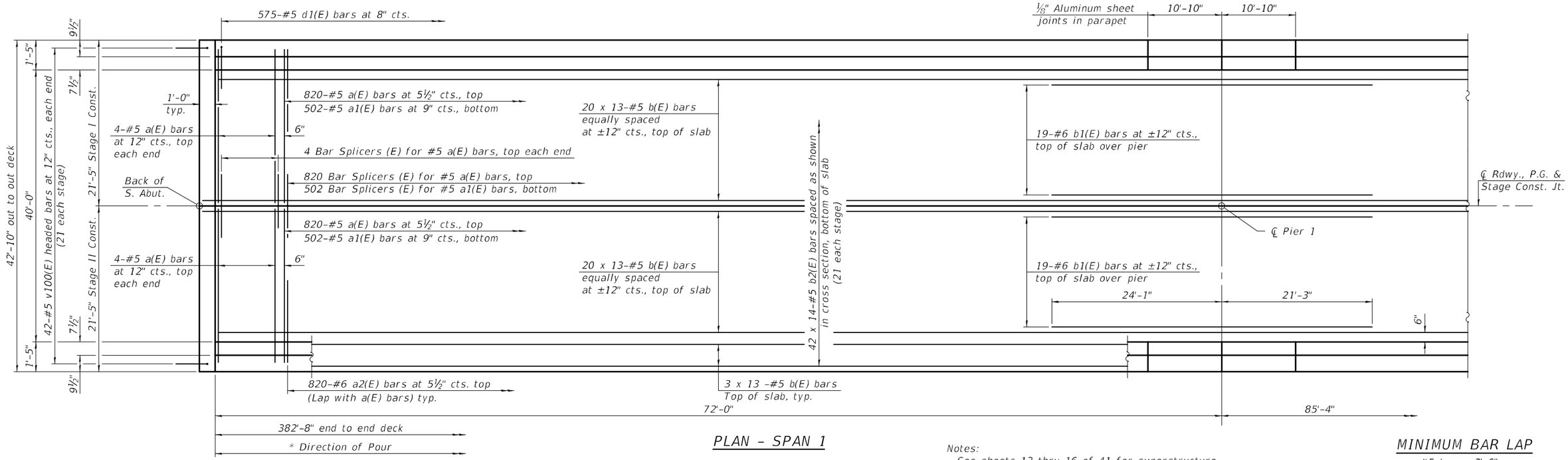
DESIGNED	-	RYAN P. NEGANGARD	
CHECKED	-	JOE G. YOUNG	
DRAWN	-	DENNIS A. POP	
CHECKED	-	R.P.N. / G.R.A. / J.G.Y.	

EXAMINED — ENGINEER OF BRIDGE DESIGN
PASSED — ENGINEER OF BRIDGES AND STRUCTURES
DATE - 10-10-2024
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF NORTH APPROACH SLAB ELEVATIONS
STRUCTURE NO. 051-0074
SHEET 11 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	52
		CONTRACT NO. 74164		
	ILLINOIS FED. AID PROJECT			

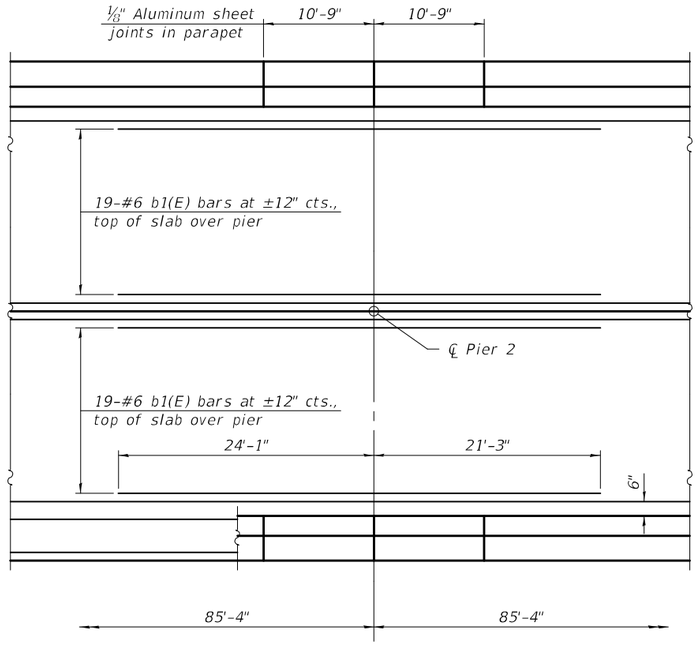


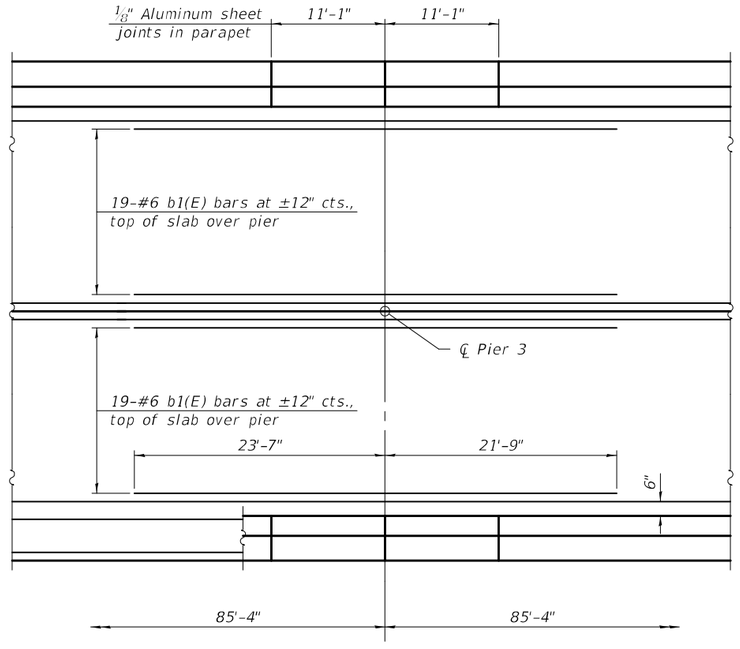
PLAN - SPAN 1

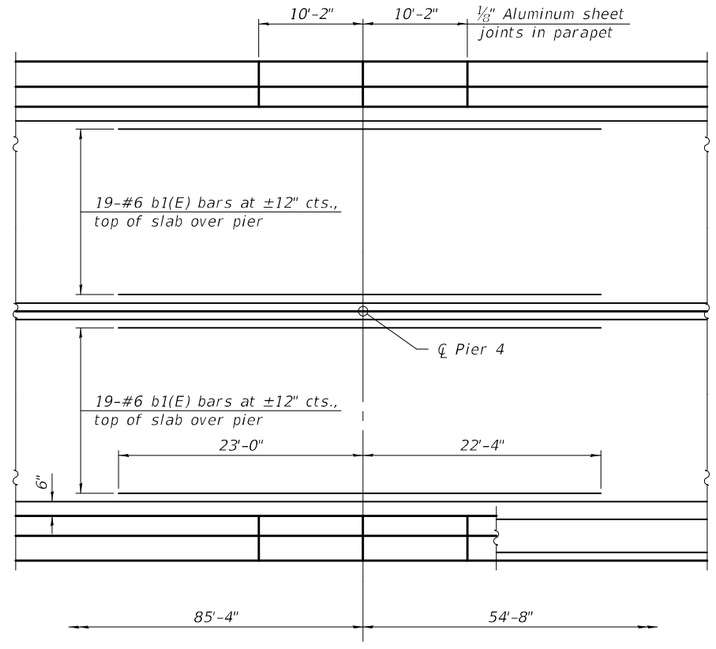
* The Contractor shall pour the deck from the South abutment to the North abutment, as shown in the deck plan detail. If the Contractor wishes to alter the deck pour direction or sequence from that shown, the Contractor shall submit a proposed alternate to the Engineer for acceptance.

Notes:
See sheets 13 thru 16 of 41 for superstructure details and Bill of Material.
Bars indicated thus 20 x 13-#5 etc. indicates 20 lines of bars with 13 lengths per line.

MINIMUM BAR LAP
#5 bar = 3'-6"







PLAN - SPAN 2 THRU 4

DESIGNED - RYAN P. NEGANGARD	EXAMINED	DATE - 10-10-2024	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
CHECKED - JOE G. YOUNG			
DRAWN - DENNIS A. POP	PASSED	REVISED -	
CHECKED - R.P.N. / G.R.A. / J.G.Y.	ENGINEER OF BRIDGE DESIGN / ENGINEER OF BRIDGES AND STRUCTURES	REVISED -	

SUPERSTRUCTURE
STRUCTURE NO. 051-0074
SHEET 12 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	53
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

MODEL: 051007-74164-012
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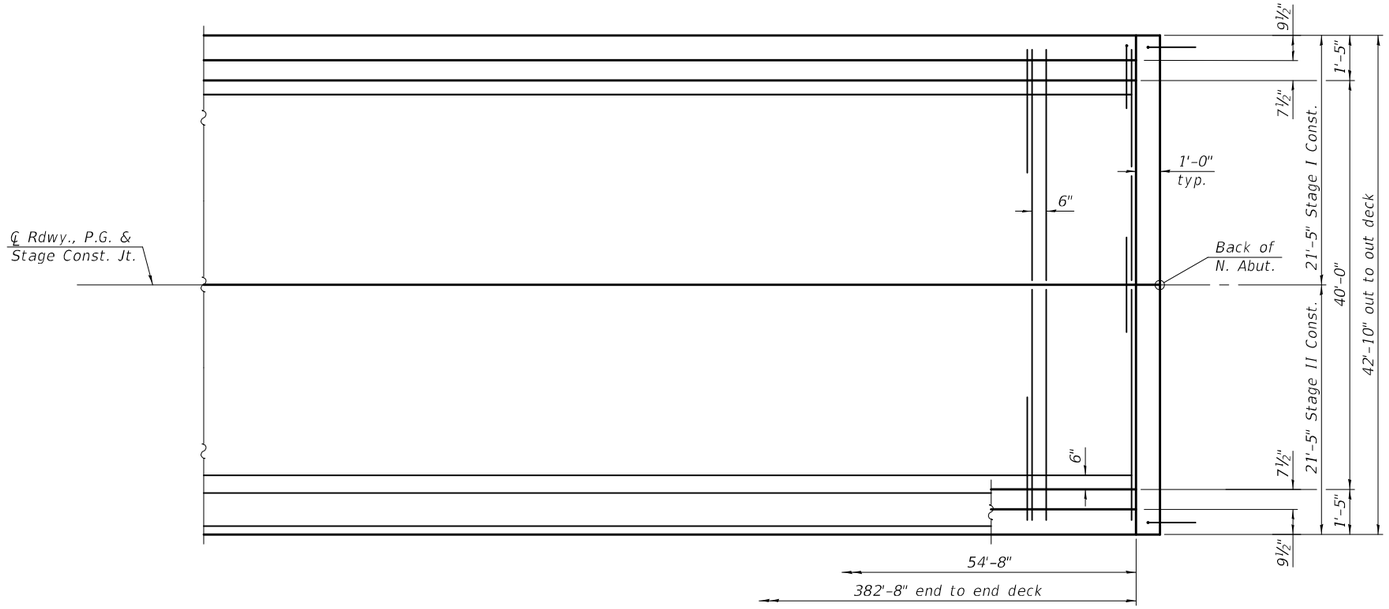
Notes:
See sheets 14 thru 16 of 41 for superstructure details and Bill of Material.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

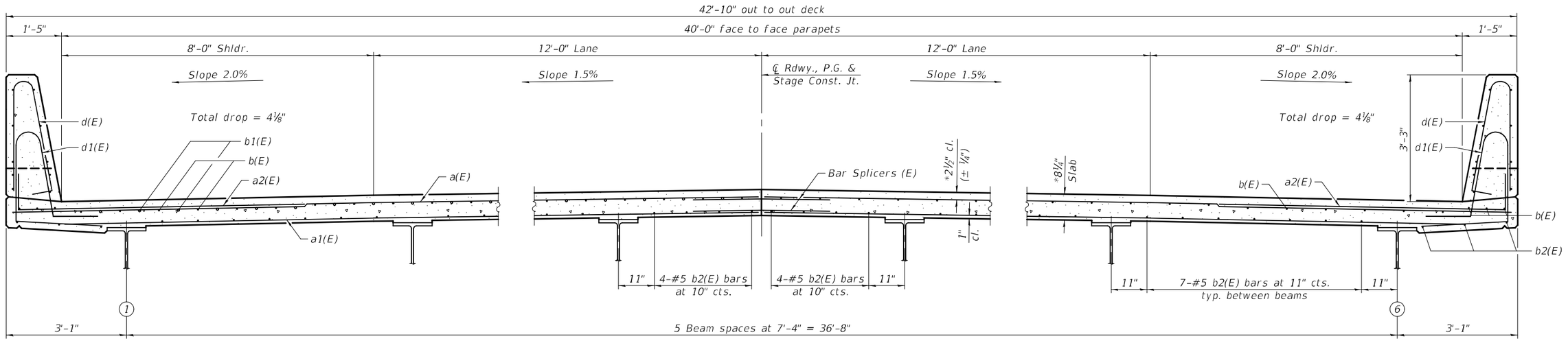
MINIMUM BAR LAP

#5 bar = 3'-6"



PLAN - SPAN 5

N



NEAR PIER

NEAR MIDSPAN

CROSS SECTION

(Looking North)

* Prior to grinding

DESIGNED - RYAN P. NEGANGARD	EXAMINED		DATE - 10-10-2024	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUPERSTRUCTURE STRUCTURE NO. 051-0074	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - JOE G. YOUNG						332	(16BR-1, BR-2)B-1	LAWRENCE	198	54
DRAWN - DENNIS A. POP	PASSED		REVISED -					CONTRACT NO. 74164		
CHECKED - R.P.N. / G.R.A. / J.G.Y.		ENGINEER OF BRIDGE DESIGN ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET 13 OF 41 SHEETS			ILLINOIS	FED. AID PROJECT	

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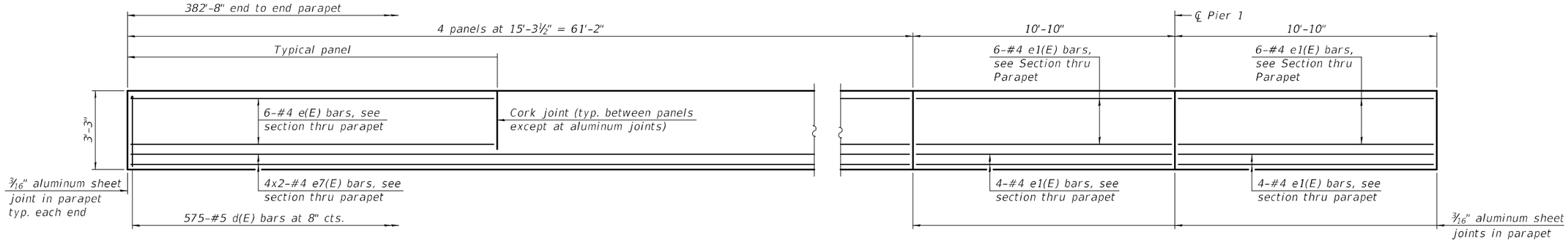
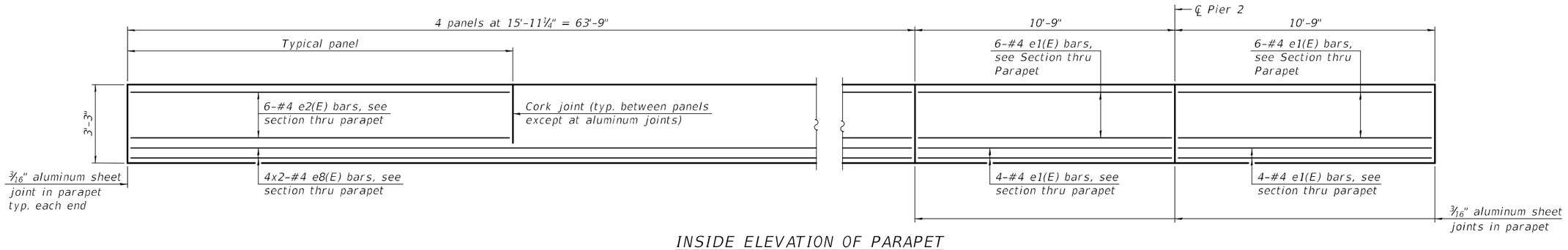
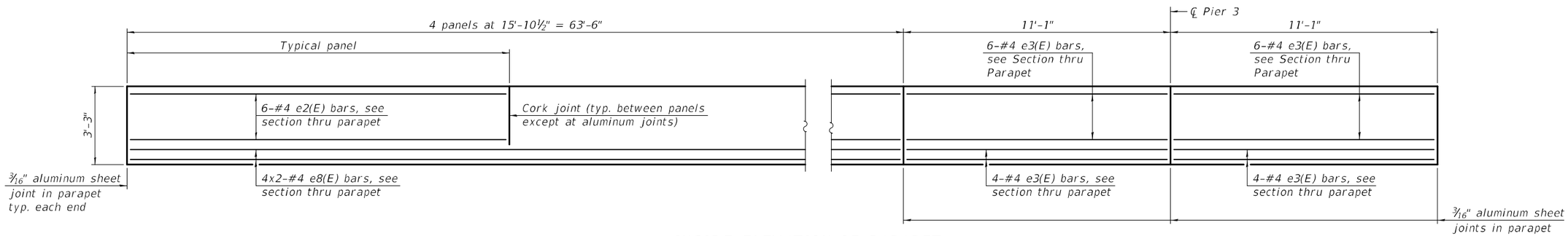


INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET

MINIMUM BAR LAP

(Parapet)
#4 bar = 2'-5"

Notes:
Bars indicated thus 4x2-#4 etc. indicates 4 line of bars with 2 lengths per line.
The 3/16" Aluminum sheet shall be ASTM B 209 alloy 3003-H14 and coated to minimize reaction with wet concrete. Cost included with Concrete Superstructure.
See sheets 14 thru 16 of 41 for additional superstructure details and Bill of Material.

DESIGNED - RYAN P. NEGANGARD	EXAMINED	DATE - 10-10-2024	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUPERSTRUCTURE DETAILS STRUCTURE NO. 051-0074	F.A.P. RTE. 332 | SECTION (16BR-1, BR-2)B-1 | COUNTY LAWRENCE | TOTAL SHEETS 198 | SHEET NO. 55
CHECKED - JOE G. YOUNG					CONTRACT NO. 74164
DRAWN - DENNIS A. POP	PASSED	REVISED -		SHEET 14 OF 41 SHEETS	ILLINOIS | FED. AID PROJECT
CHECKED - R.P.N. / G.R.A. / J.G.Y.	ENGINEER OF BRIDGE DESIGN ENGINEER OF BRIDGES AND STRUCTURES	REVISED -			

MODEL: 051007474164-014
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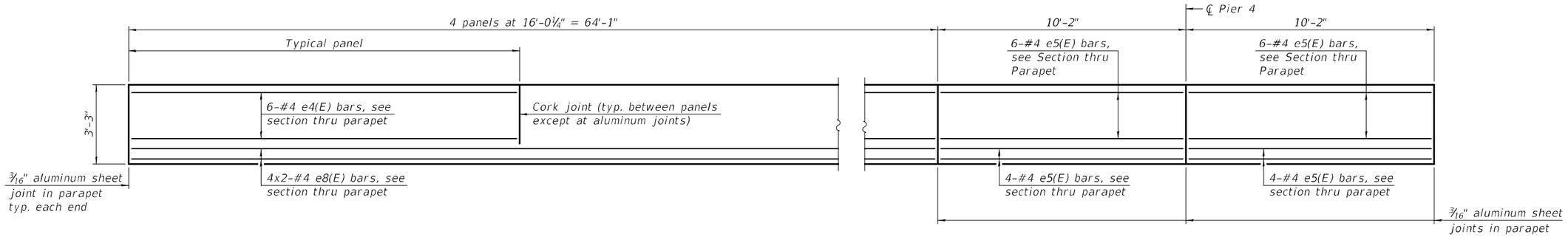
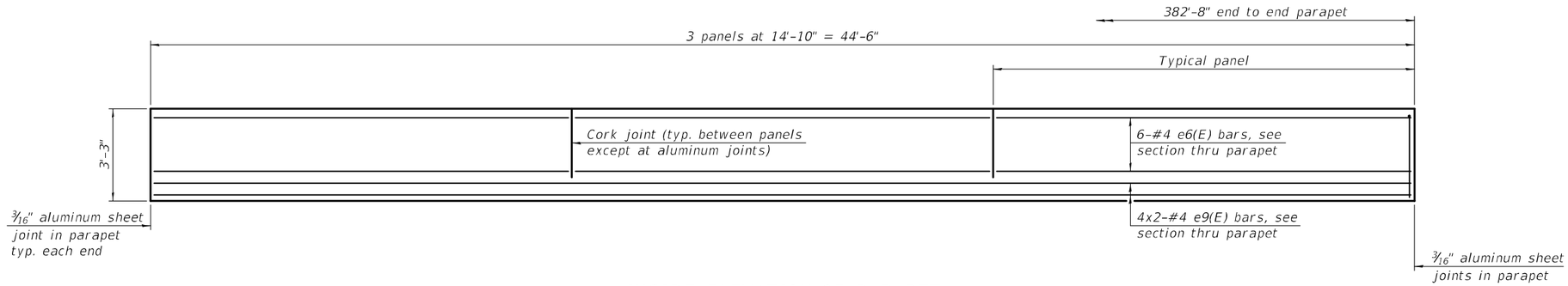
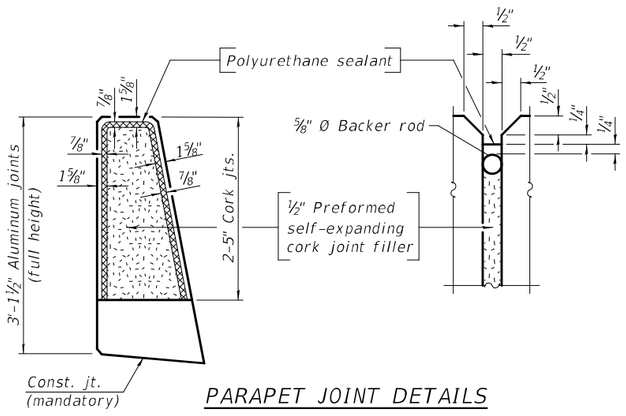


INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET



PARAPET JOINT DETAILS

MINIMUM BAR LAP

#4 bar = 2'-5"

Notes:

Bars indicated thus 4x2-#4 etc. indicates 4 line of bars with 2 lengths per line.

The 3/16" Aluminum sheet shall be ASTM B 209 alloy 3003-H14 and coated to minimize reaction with wet concrete. Cost included with Concrete Superstructure.

See sheets 14 thru 16 of 41 for additional superstructure details and Bill of Material.

The polyurethane sealant shall be according to Article 1050.04 of the Std. Spec. and the color shall be gray.

DESIGNED - RYAN P. NEGANGARD	EXAMINED	ENGINEER OF BRIDGE DESIGN	DATE - 10-10-2024	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**SUPERSTRUCTURE DETAILS STRUCTURE NO. 051-0074**
CHECKED - JOE G. YOUNG	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET 15 OF 41 SHEETS
DRAWN - DENNIS A. POP			REVISED -		
CHECKED - R.P.N. / G.R.A. / J.G.Y.					

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	56
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

MODEL: 051074-74164-015
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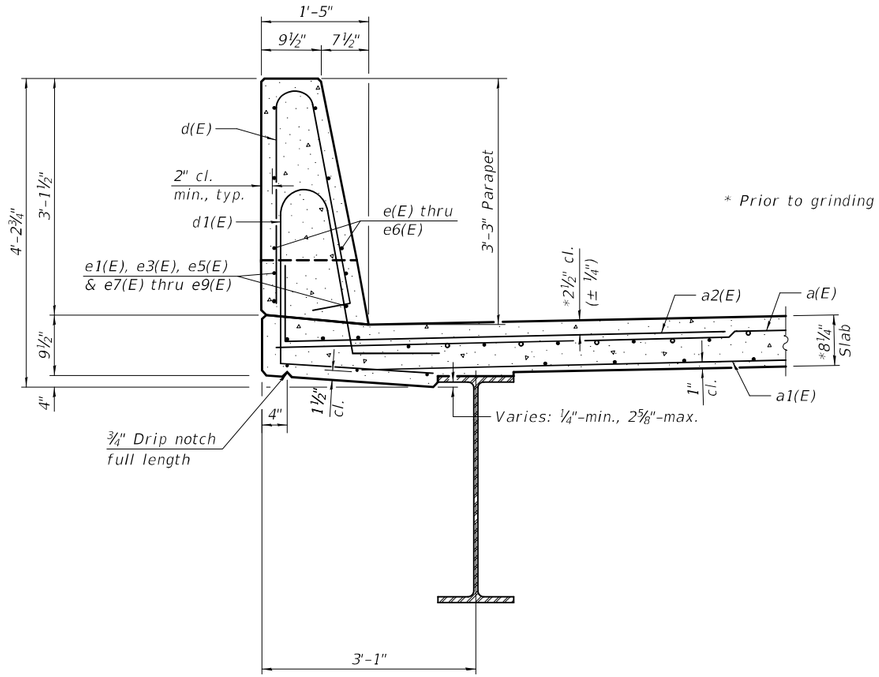
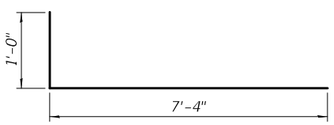


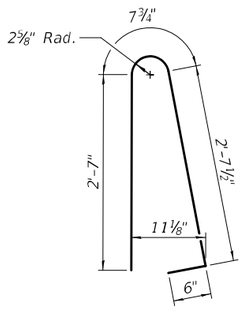
SECTION THRU PARAPET

* Prior to grinding

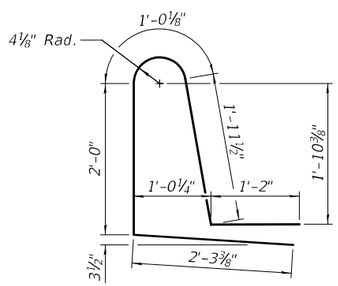
Note:
Bar Terminators, paid for separately. See Total Bill of Materials.



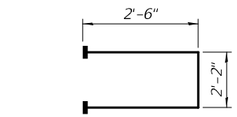
BAR a2(E)



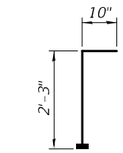
BAR d(E)



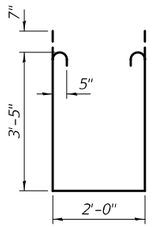
BAR d1(E)



BAR s10(E)
(Headed. 168-#5 Bar Terminators)



BAR v100(E)
(Headed. 84-#5 Bar Terminators)



BAR s11(E)

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	1656	#5	21'-1"	
a1(E)	1004	#5	20'-3"	
a2(E)	1640	#6	8'-4"	
b(E)	598	#5	32'-8"	
b1(E)	152	#6	45'-4"	
b2(E)	588	#5	30'-7"	
d(E)	1150	#5	6'-5"	
d1(E)	1150	#5	8'-5"	
e(E)	48	#4	15'-0"	
e1(E)	80	#4	10'-6"	
e2(E)	96	#4	15'-7"	
e3(E)	40	#4	10'-9"	
e4(E)	48	#4	15'-9"	
e5(E)	40	#4	9'-10"	
e6(E)	36	#4	14'-6"	
e7(E)	16	#4	31'-8"	
e8(E)	48	#4	33'-1"	
e9(E)	16	#4	23'-4"	
m10(E)	16	#6	21'-1"	
m11(E)	24	#6	7'-0"	
m12(E)	12	#6	2'-9"	
m13(E)	36	#5	4'-0"	
s10(E)	84	#5	7'-2"	
s11(E)	84	#5	10'-0"	
v100(E)	84	#5	3'-1"	
Reinforcement Bars, Epoxy Coated			Lbs.	153250
Concrete Superstructure			Cu. Yds.	576.2

MODEL: 051007A-74164-016
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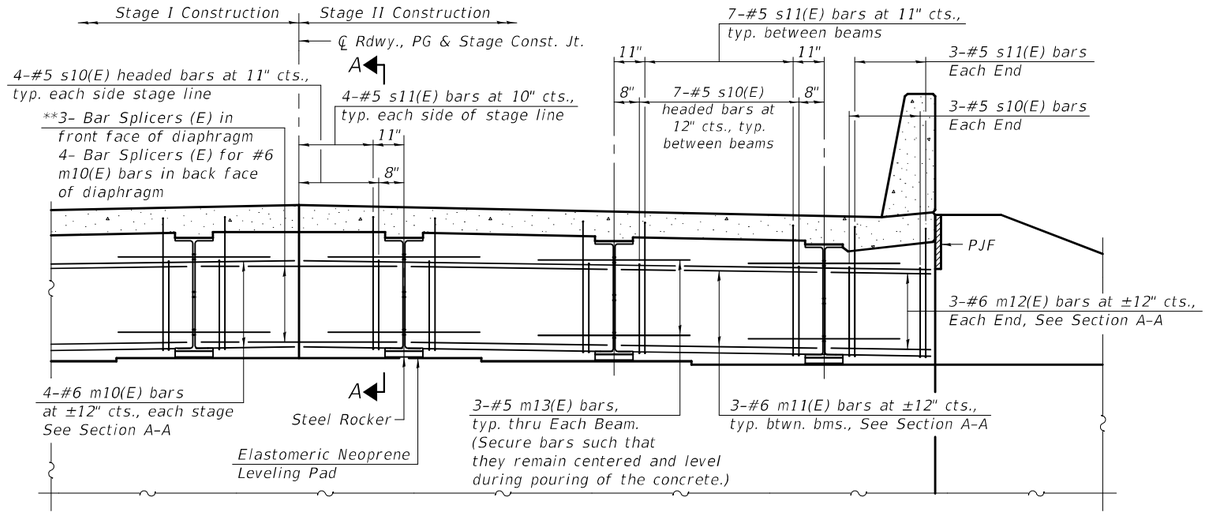
DESIGNED -	RYAN P. NEGANGARD	EXAMINED	DATE - 10-10-2024
CHECKED -	JOE G. YOUNG	PASSED	REVISED -
DRAWN -	DENNIS A. POP		REVISED -
CHECKED -	R.P.N. / G.R.A. / J.G.Y.		

ENGINEER OF BRIDGE DESIGN
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

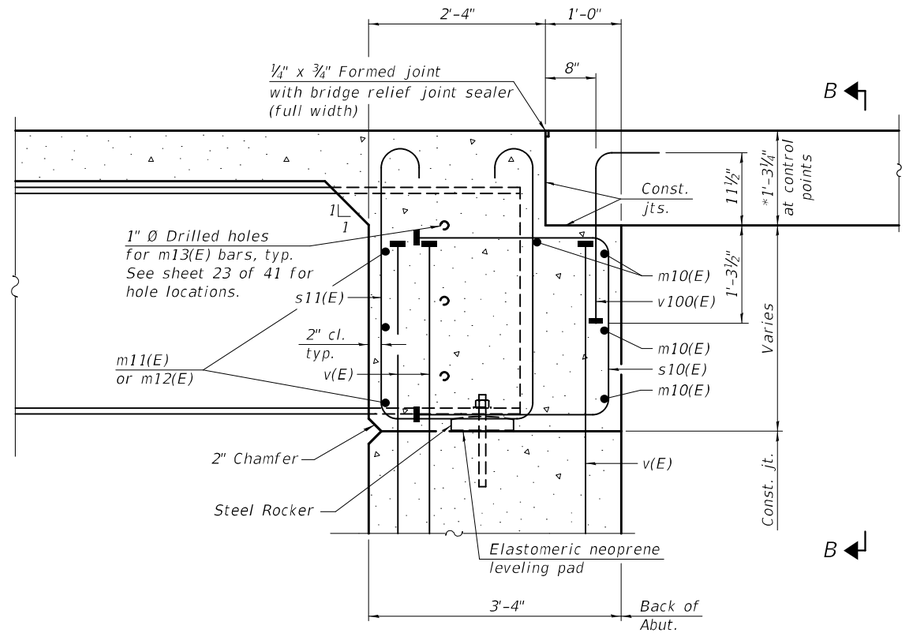
SUPERSTRUCTURE DETAILS
STRUCTURE NO. 051-0074
SHEET 16 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	57
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		



DIAPHRAGM AT ABUTMENT

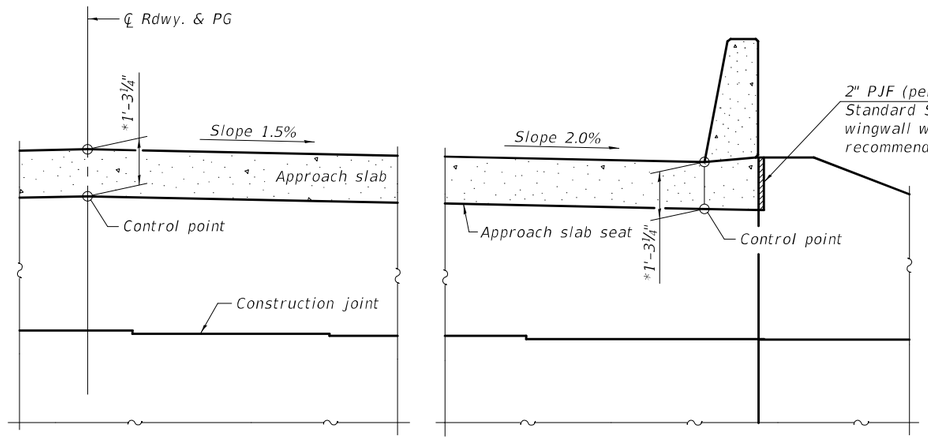
(Looking North)



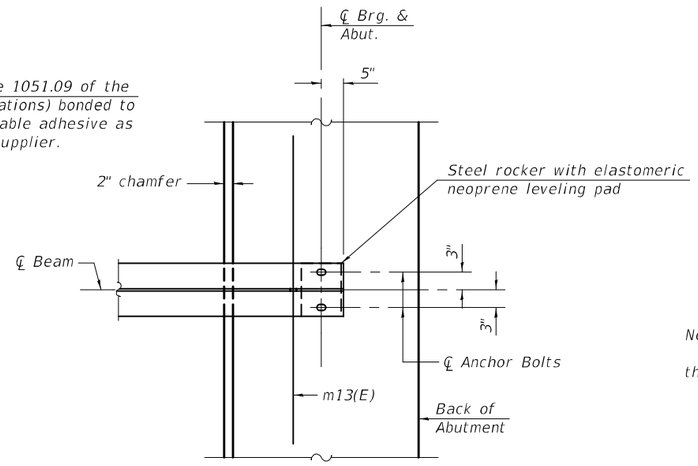
SECTION A-A

* Prior to grinding

** See sheet 31 of 41 for detail of bar splicers in front face of diaphragm.



SECTION B-B



PLAN AT ABUTMENT

(Showing bottom flange of beam)

Notes:

The approach slab seat shall have a constant slope determined from the control points shown.

See sheet 16 of 41 for superstructure details and Bill of Material.

DESIGNED	-	RYAN P. NEGANGARD
CHECKED	-	JOE G. YOUNG
DRAWN	-	DENNIS A. POP
CHECKED	-	R.P.N. / G.R.A. / J.G.Y.

EXAMINED — ENGINEER OF BRIDGE DESIGN

PASSED — ENGINEER OF BRIDGES AND STRUCTURES

DATE - 10-10-2024

REVISED -

REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIAPHRAGM DETAILS
STRUCTURE NO. 051-0074

SHEET 17 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	58
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

MODEL: 051074-74164-017
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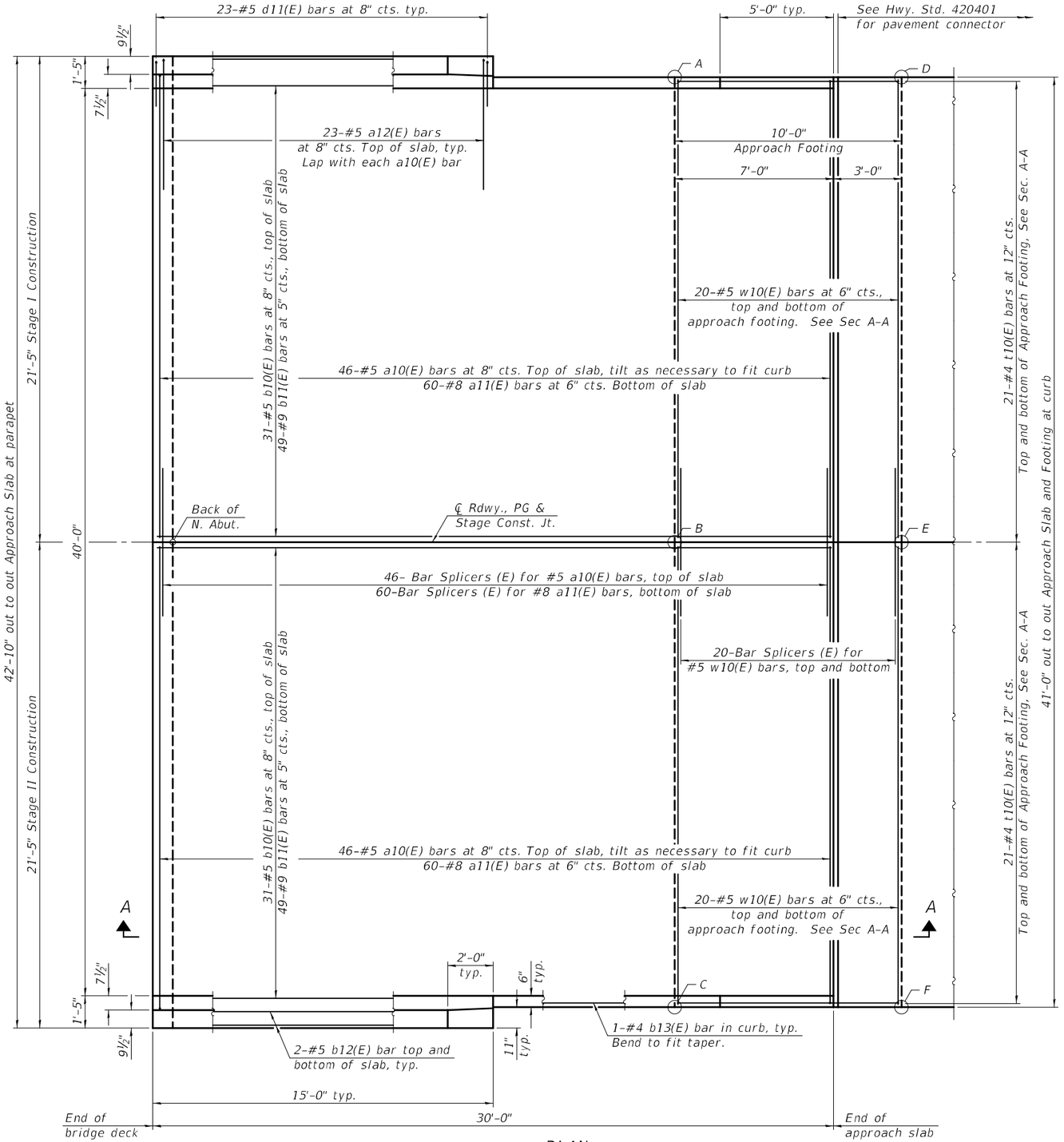
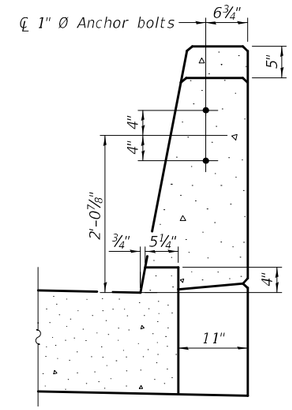


PLAN

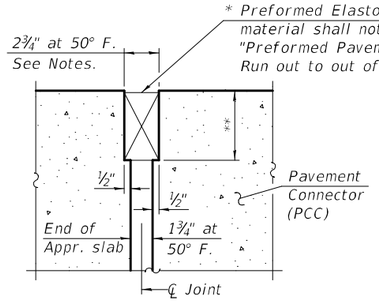
(North Approach shown, South similar by 180° rotation)

TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING

	South Approach			North Approach	
Point	Top	Bottom	Point	Top	Bottom
A-SW	429.89	429.06	A-NE	430.09	429.26
B-S ℄	430.24	429.41	B-N ℄	430.44	429.61
C-SE	429.89	429.06	C-NW	430.09	429.26
D-NW	429.82	428.99	D-SE	430.04	429.21
E-N ℄	430.17	429.34	E-S ℄	430.39	429.56
F-NE	429.82	428.99	F-SW	430.04	429.21



VIEW B-B



DETAIL A

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

Note:
For Section A-A, see sheet 19 of 41.

(Sheet 1 of 2)

DESIGNED	-	RYAN P. NEGANGARD	
CHECKED	-	JOE G. YOUNG	
DRAWN	-	DENNIS A. POP	
CHECKED	-	R.P.N. / G.R.A. / J.G.Y.	

EXAMINED — ENGINEER OF BRIDGE DESIGN
PASSED — ENGINEER OF BRIDGES AND STRUCTURES
DATE - 10-10-2024
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 051-0074
SHEET 18 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	59
		CONTRACT NO. 74164		
	ILLINOIS FED. AID PROJECT			

MODEL:
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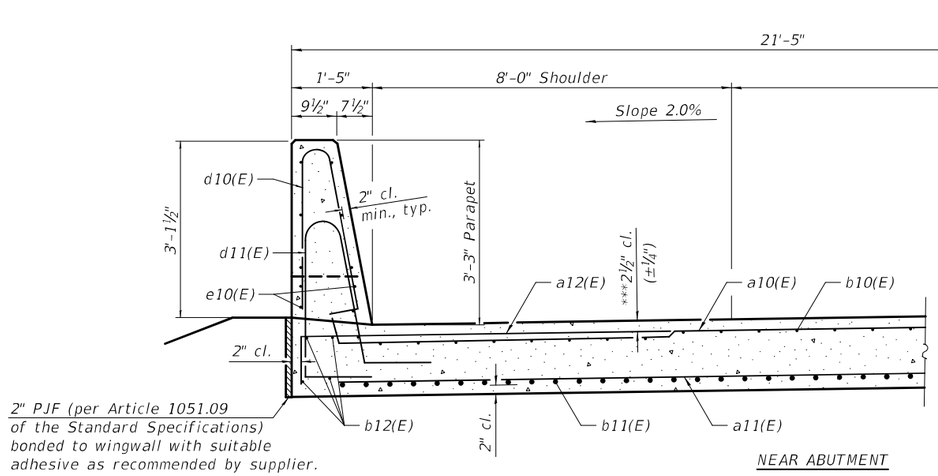
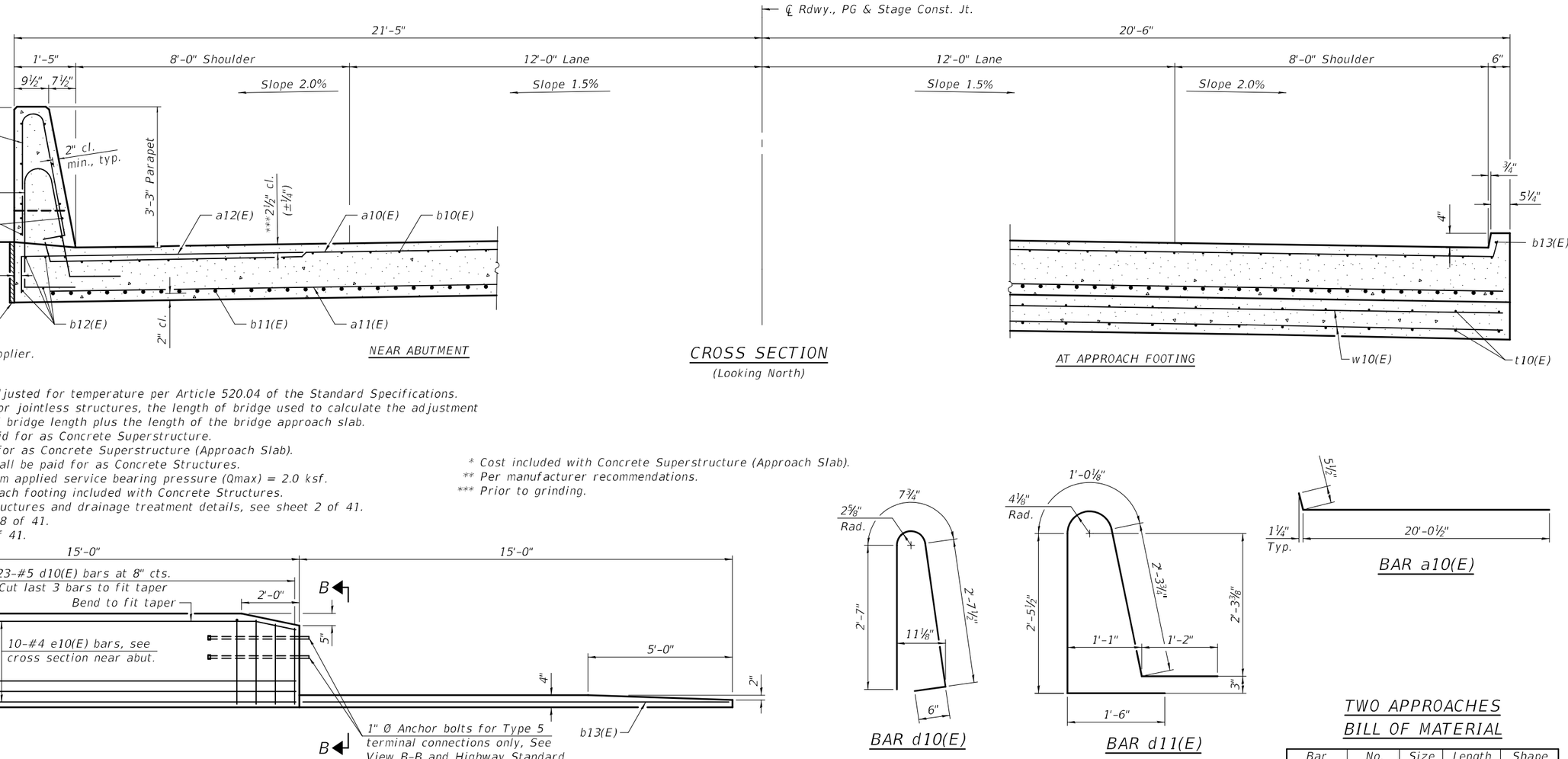


NEAR ABUTMENT



CROSS SECTION
(Looking North)

AT APPROACH FOOTING

Notes:

The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the adjustment shall be equal to half the total bridge length plus the length of the bridge approach slab.

Parapet concrete shall be paid for as Concrete Superstructure.

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.

For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 41.

For Section B-B, see sheet 18 of 41.

For Detail A, see sheet 18 of 41.

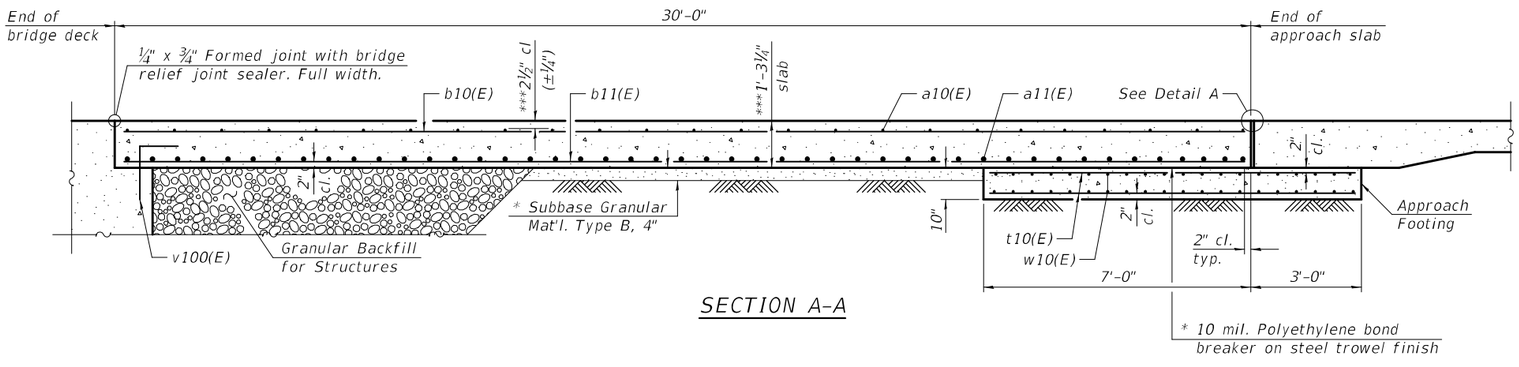
* Cost included with Concrete Superstructure (Approach Slab).
** Per manufacturer recommendations.
*** Prior to grinding.

BAR d10(E)

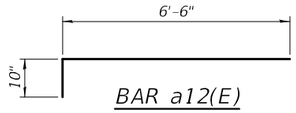
BAR d11(E)

BAR a10(E)

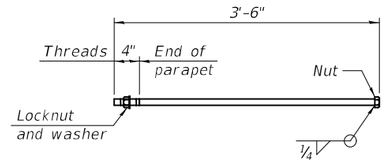
INSIDE ELEVATION OF PARAPET AND CURB



SECTION A-A



BAR a12(E)



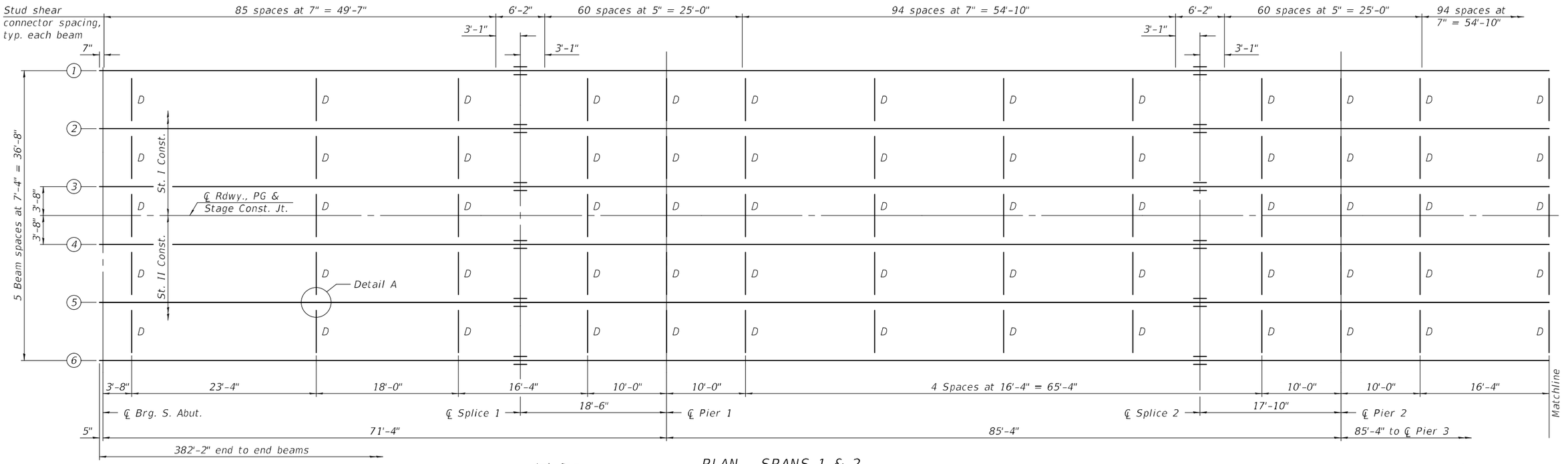
* 1" Ø ANCHOR BOLT

(Anchor bolt assemblies shall be galvanized according to Article 1006.09 of the Standard Specifications)

TWO APPROACHES BILL OF MATERIAL

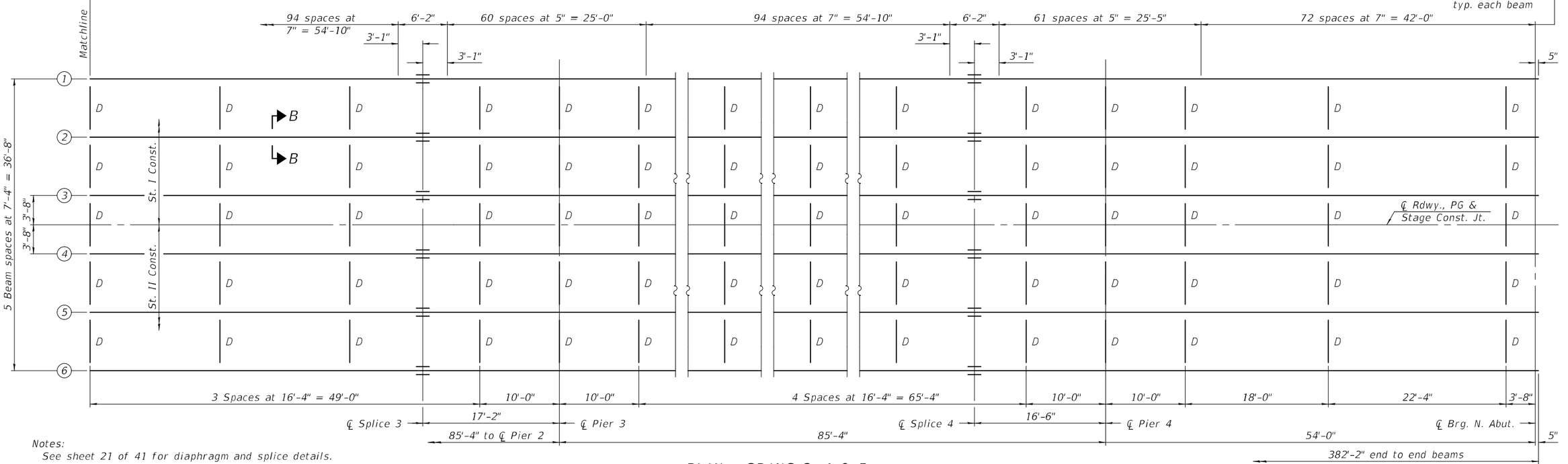
Bar	No.	Size	Length	Shape
a10(E)	184	#5	20'-6"	
a11(E)	240	#8	20'-2"	
a12(E)	92	#5	7'-4"	
b10(E)	124	#5	29'-8"	
b11(E)	196	#9	29'-8"	
b12(E)	16	#5	14'-8"	
b13(E)	4	#4	14'-8"	
d10(E)	92	#5	6'-5"	
d11(E)	92	#5	8'-6"	
e10(E)	40	#4	14'-8"	
t10(E)	168	#4	9'-8"	
w10(E)	160	#5	20'-2"	
Concrete Superstructure		Cu. Yd.	7.8	
Concrete Superstructure (Approach Slab)		Cu. Yd.	121.0	
Concrete Structures		Cu. Yd.	25.3	
Reinforcement Bars, Epoxy Coated		Pound	47730	

DESIGNED - RYAN P. NEGANGARD	EXAMINED	DATE - 10-10-2024	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE APPROACH SLAB DETAILS STRUCTURE NO. 051-0074	F.A.P. RTE. 332 / SECTION (16BR-1, BR-2)B-1 / COUNTY LAWRENCE / TOTAL SHEETS 198 / SHEET NO. 60
CHECKED - JOE G. YOUNG	ENGINEER OF BRIDGE DESIGN				CONTRACT NO. 74164
DRAWN - DENNIS A. POP	PASSED	REVISED -		SHEET 19 OF 41 SHEETS	ILLINOIS / FED. AID PROJECT
CHECKED - R.P.N. / G.R.A. / J.G.Y.	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -			



PLAN – SPANS 1 & 2

(All beams are W36x160, AASHTO M270, Grade 50, CVN)



Notes:
See sheet 21 of 41 for diaphragm and splice details.
See sheet 21 of 41 for Section B-B and Detail A.

PLAN – SPANS 3, 4 & 5

(All beams are W36x160, AASHTO M270, Grade 50, CVN)

DESIGNED	-	RYAN P. NEGANGARD	EXAMINED		DATE	-	10-10-2024	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**STRUCTURAL STEEL STRUCTURE NO. 051-0074**
CHECKED	-	JOE G. YOUNG	PASSED		REVISED	-			SHEET 20 OF 41 SHEETS
DRAWN	-	DENNIS A. POP		ENGINEER OF BRIDGE DESIGN	REVISED	-			
CHECKED	-	R.P.N. / G.R.A. / J.G.Y.		ENGINEER OF BRIDGES AND STRUCTURES					

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	61
		CONTRACT NO. 74164		
	ILLINOIS FED. AID PROJECT			

MODEL: 051007A-74164-020
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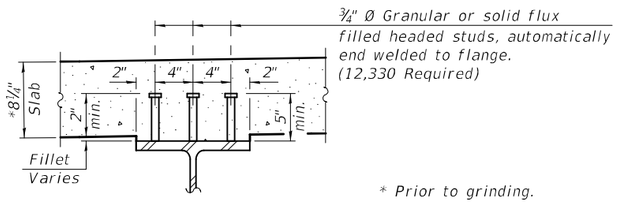
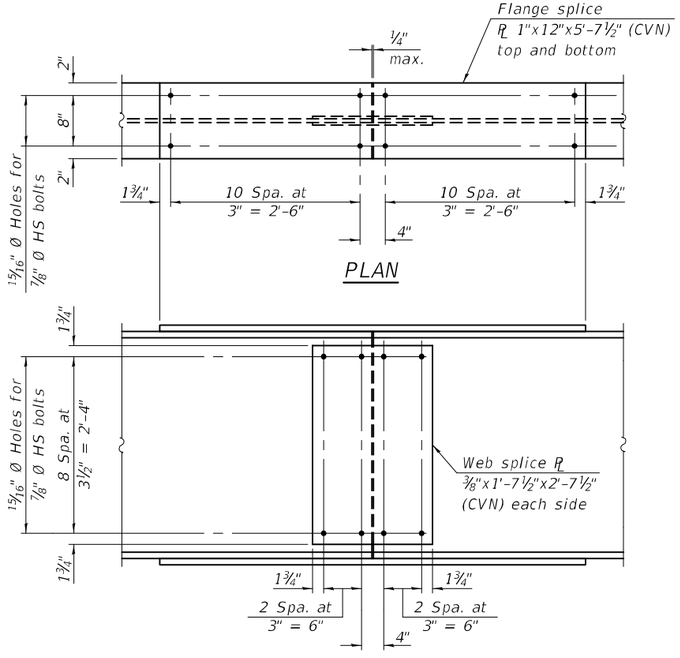


* Prior to grinding.

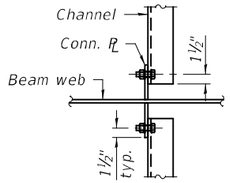
SECTION B-B
(Typical at each beam)



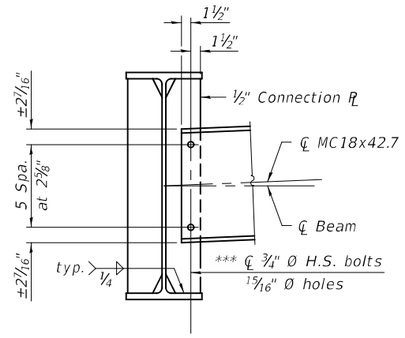
PLAN

ELEVATION

SPLICE DETAIL
(24 Required)



DETAIL A



DIAPHRAGM D
(130 Required)

*** Install only one ⅞" Ø H.S. bolt in center most hole above ℄ of beam at each end of the stage line diaphragm. The bolts shall be finger-tightened prior to deck pour to permit rotation. Install ¾" Ø H.S. bolts and fully tighten immediately after stage II deck pour is complete.

Notes:

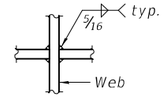
Two hardened washers required for each set of oversized holes.

Alternate channels of equal depth and larger weight are permitted to facilitate material acquisition. Alternate channels, if utilized, shall be provided at no additional cost to the Department.

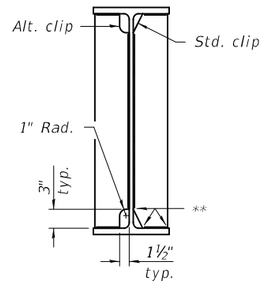
All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor rods.

Load carrying components designated "CVN" shall conform to the Charpy-V-Notch Impact Energy Requirement, Zone 2.

All splice plates shall be AASHTO M270, Grade 50.



WEB WELD DETAIL



WELD LIMITS AND CLIP DETAILS

** Stop welds ¼" (±⅛") from edges as shown. Typical.

DESIGNED	-	RYAN P. NEGANGARD
CHECKED	-	JOE G. YOUNG
DRAWN	-	DENNIS A. POP
CHECKED	-	R.P.N. / G.R.A. / J.G.Y.

EXAMINED — ENGINEER OF BRIDGE DESIGN

PASSED — ENGINEER OF BRIDGES AND STRUCTURES

DATE - 10-10-2024

REVISED -

REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL DETAILS
STRUCTURE NO. 051-0074

SHEET 21 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	62
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

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INTERIOR GIRDER MOMENT TABLE										
		0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.5 Sp. 3	Pier 3	0.5 Sp. 4	Pier 4	0.6 Sp. 5
Is	(in^4)	9750	9750	9750	9750	9750	9750	9750	9750	9750
Ic(n)	(in^4)	26282	26282	26282	26282	26282	26282	26282	26282	26282
Ic(3n)	(in^4)	19606	19606	19606	19606	19606	19606	19606	19606	19606
Ic(cr)	(in^4)	–	13002	–	13002	–	13002	–	13002	–
Ss	(in^3)	542	542	542	542	542	542	542	542	542
Sc(n)	(in^3)	793	793	793	793	793	793	793	793	793
Sc(3n)	(in^3)	722	722	722	722	722	722	722	722	722
Sc(cr)	(in^3)	–	616	–	616	–	616	–	616	–
DC1	(k/')	0.970	0.970	0.970	0.970	0.970	0.970	0.970	0.970	0.970
MDC1	('k)	350.5	604.5	291.8	577.7	285.9	616.2	330.3	489.1	143.8
DC2	(k/')	0.175	0.175	0.175	0.175	0.175	0.175	0.175	0.175	0.175
MDC2	('k)	63.2	109.1	52.6	104.2	51.6	111.2	59.6	88.2	25.9
DW	(k/')	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333
MDW	('k)	120.3	207.5	100.2	198.3	98.2	211.5	113.4	167.9	49.4
LLDF		0.587	0.574	0.560	0.560	0.560	0.560	0.560	0.596	0.632
M_{L+IM}	('k)	833.9	869.7	792.6	893.2	797.1	886.9	769.6	759.8	623.1
Mu (Strength I)	('k)	2157.0	2725.2	1968.0	2713.1	1964.1	2778.7	2004.3	2303.1	1376.6
Øf Mn	('k)	3045	3190	3045	3190	3045	3190	3045	3190	3045
fs DC1	(ksi)	7.76	13.38	6.46	12.79	6.33	13.64	7.31	10.83	3.18
fs DC2	(ksi)	1.05	2.13	0.87	2.03	0.86	2.17	0.99	1.72	0.43
fs DW	(ksi)	2.00	4.04	1.67	3.86	1.63	4.12	1.88	3.27	0.82
fs (L+IM)	(ksi)	12.62	16.94	11.99	17.40	12.06	17.28	11.65	14.80	9.43
fs (Service II)	(ksi)	27.21	41.58	24.59	41.30	24.50	42.39	25.33	35.06	16.69
0.95Rh Fyf	(ksi)	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5
fs (Total)(Strength I)	(ksi)	–	–	–	–	–	–	–	–	–
Øf Fn	(ksi)	–	–	–	–	–	–	–	–	–
Vf	(k)	28.2	31.9	28.4	31.8	28.2	31.8	26.3	32.3	26.9

GIRDER REACTION TABLE													
		South Abutment		Pier 1		Pier 2		Pier 3		Pier 4		North Abutment	
		Interior	Exterior	Interior	Exterior	Interior	Exterior	Interior	Exterior	Interior	Exterior	Interior	Exterior
LLDF		0.767	0.655	0.767	0.655	0.767	0.655	0.767	0.655	0.767	0.655	0.767	0.655
OCF		–	–	–	–	–	–	–	–	–	–	–	–
R_{DC1}	(k)	26.1	26.1	84.8	84.8	82.0	82.0	84.7	84.7	75.1	75.1	17.1	17.1
R_{DC2}	(k)	4.7	4.7	15.3	15.3	14.8	14.8	15.3	15.3	13.6	13.6	3.1	3.1
R_{DW}	(k)	9.0	9.0	29.1	29.1	28.2	28.2	29.1	29.1	25.8	25.8	5.9	5.9
R_{L}	(k)	62.5	53.3	105.3	89.9	107.4	91.7	107.0	91.3	96.6	81.6	56.9	48.6
R_{IM}	(k)	15.3	13.1	20.9	17.9	21.2	18.2	21.0	18.0	17.9	16.2	14.5	12.4
R_{TOTAL}	(k)	117.6	106.2	255.4	237.0	253.6	234.9	257.1	238.4	229.0	212.3	97.5	87.1

*TOP OF BEAM ELEVATIONS

Location	℄ Brg. S. Abut.	℄ Splice 1	℄ Brg. Pier 1	℄ Splice 2	℄ Brg. Pier 2	℄ Splice 3	℄ Brg. Pier 3	℄ Splice 4	℄ Brg. Pier 4	℄ Brg. N. Abut.
Beam 1	430.65	430.95	431.04	431.40	431.40	431.43	431.35	431.06	430.99	430.78
Beam 2	430.78	431.08	431.18	431.55	431.55	431.56	431.49	431.20	431.14	430.92
Beam 3	430.90	431.20	431.29	431.65	431.65	431.67	431.60	431.32	431.25	431.04
Beam 4	430.90	431.20	431.29	431.65	431.65	431.67	431.60	431.32	431.25	431.04
Beam 5	430.78	431.08	431.18	431.55	431.55	431.56	431.49	431.20	431.14	430.92
Beam 6	430.65	430.95	431.04	431.40	431.40	431.43	431.35	431.06	430.99	430.78

* For fabrication use only.

Is, Ss: Non-composite moment of inertia and section modulus of the steel section used for computing f_s(Total-Strength I, and Service II) due to non-composite dead loads ($in.^4$ and $in.^3$).

Ic(n), Sc(n): Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s(Total-Strength I, and Service II) in uncracked sections due to short-term composite live loads ($in.^4$ and $in.^3$).

Ic(3n), Sc(3n): Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s(Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).

Ic(cr), Sc(cr): Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).

DC1: Un-factored non-composite dead load (kips/ft.).

MDC1: Un-factored moment due to non-composite dead load (kip-ft.).

DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).

MDC2: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).

MDW: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

LLDF: Live Load Distribution Factor for moment and shear computed according to Article 4.6.2.2 and further IDOT provisions.

M_{L+IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

Mu (Strength I): Factored design moment (kip-ft.).
$1.25\ (M_{DC1} + M_{DC2}) + 1.5\ M_{DW} + 1.75\ M_{L+IM}$

Øf Mn: Compact composite positive moment capacity computed according to Article 6.10.7.1 or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft).

fs DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
M_{DC1} / S_{nc}

fs DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
$M_{DC2} / S_c(3n)$ or $M_{DC2} / S_c(cr)$ as applicable.

fs DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
$M_{DW} / S_c(3n)$ or $M_{DW} / S_c(cr)$ as applicable.

fs (L+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).
$M_{L+IM} / S_c(n)$ or $M_{L+IM} / S_c(cr)$ as applicable.

fs (Service II): Sum of stresses as computed below (ksi).
$f_s DC1 + f_s DC2 + f_s DW + 1.3\ f_s(L+IM)$

0.95RhFyf: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

fs (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).
$1.25\ (f_s DC1 + f_s DC2) + 1.5\ f_s DW + 1.75\ f_s(L+IM)$

Øf Fn: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).

Vf: Maximum factored shear range in span computed according to Article 6.10.10.

OCF: Obtuse Correction Factor applied to non-continuous exterior beam ends and computed according to Article 4.6.2.2.3c or as further simplified by IDOT provisions.

R_{DC1}: Un-factored reaction due to non-composite dead load (kip).

R_{DC2}: Un-factored reaction due to long-term composite (superimposed excluding future wearing surface) dead load (kip).

R_{DW}: Un-factored reaction due to long-term composite (superimposed future wearing surface only) dead load (kip).

R_{L}: Un-factored live load reaction (kip).

R_{IM}: Un-factored dynamic load allowance (impact) (kip)

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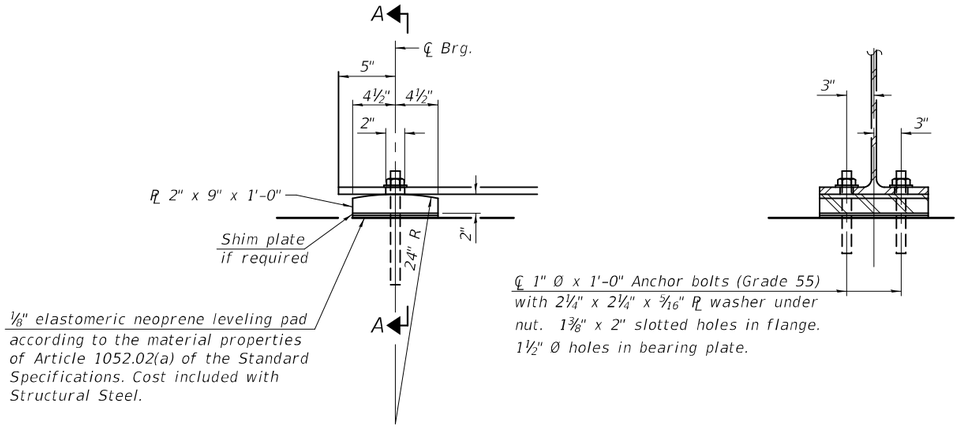
DESIGNED	-	RYAN P. NEGANGARD	
CHECKED	-	JOE G. YOUNG	
DRAWN	-	DENNIS A. POP	
CHECKED	-	R.P.N. / G.R.A. / J.G.Y.	

EXAMINED — ENGINEER OF BRIDGE DESIGN — DATE - 10-10-2024
PASSED — ENGINEER OF BRIDGES AND STRUCTURES — REVISED - — REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL DETAILS
STRUCTURE NO. 051-0074
SHEET 22 OF 41 SHEETS

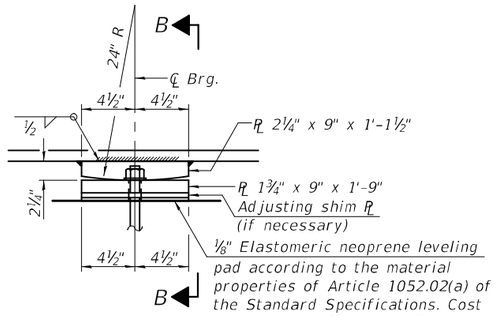
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	63
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		



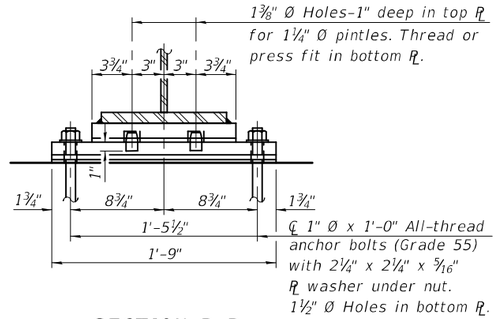
ELEVATION AT ABUTMENTS

SECTION A-A

FIXED BEARING
(12 Required)

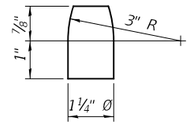


ELEVATION AT PIERS

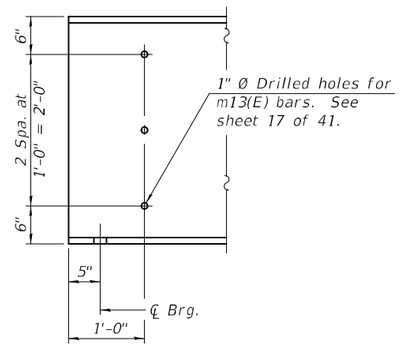


SECTION B-B

FIXED BEARING
(24 Required)



PINTLE



END OF BEAM ELEVATION
(Typical at each end of each beam)

Notes:
All bearing plates and pintles shall be AASHTO M270 Grade 50.
Two ⅛ in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on the bearing details.
Anchor bolts at all supports shall be installed as each member is erected unless an equivalent temporary means of lateral restraint is used.
The anchor bolt sizes and grades shown constitute a calculated seismic structural fuse. Substitution of higher diameter and/or grade anchor bolts will not be allowed.

BILL OF MATERIAL

Item	Unit	Total
Anchor Bolts, 1"	Each	72

DESIGNED - RYAN P. NEGANGARD	EXAMINED		DATE - 10-10-2024	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STRUCTURAL STEEL DETAILS STRUCTURE NO. 051-0074	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - JOE G. YOUNG						332	(16BR-1, BR-2)B-1	LAWRENCE	198	64
DRAWN - DENNIS A. POP	PASSED		REVISED -					CONTRACT NO. 74164		
CHECKED - R.P.N. / G.R.A. / J.G.Y.		ENGINEER OF BRIDGE DESIGN / ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET 23 OF 41 SHEETS			ILLINOIS	FED. AID PROJECT	

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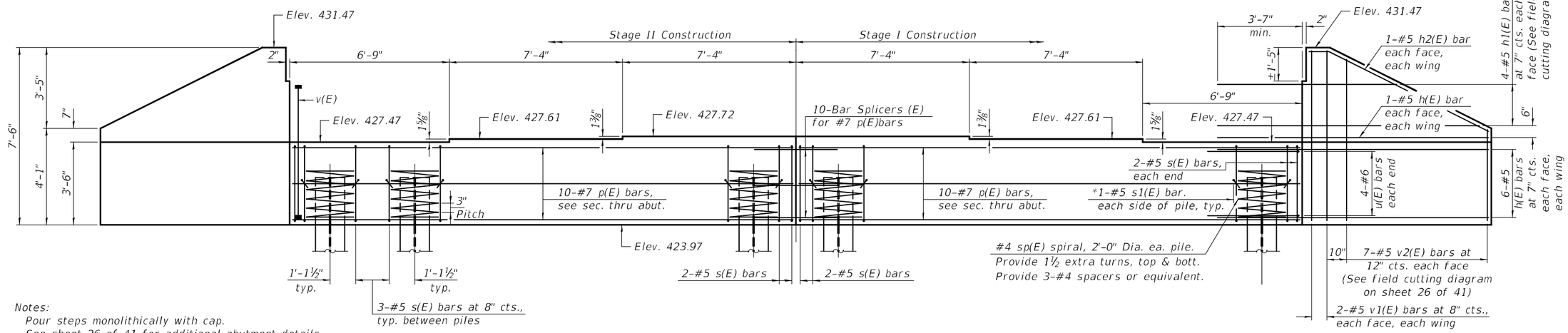
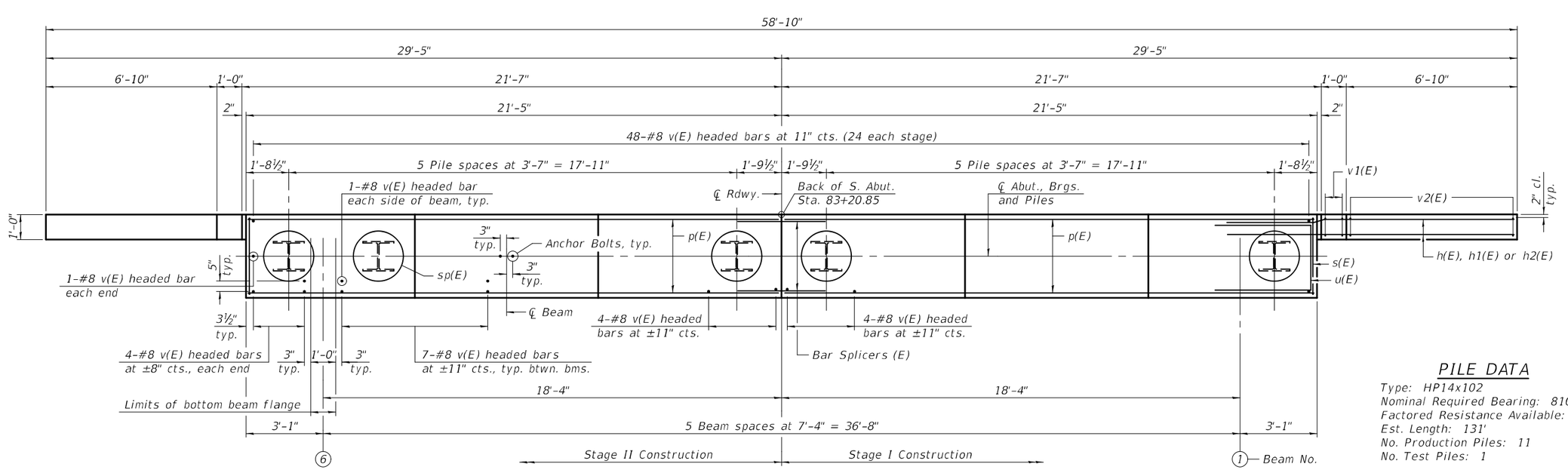


ELEVATION
(Looking South)

Notes:
Pour steps monolithically with cap.
See sheet 26 of 41 for additional abutment details and Bill of Material.
For bar splicer details, see sheet 31 of 41.
For details of piles, see sheet 29 of 41.

* Hook s1(E) bars around p(E) and s(E) bars. Clear cover for the s1(E) bars will be 1⅜".



PLAN

PILE DATA
Type: HP14x102
Nominal Required Bearing: 810 kips
Factored Resistance Available: 446 kips
Est. Length: 131'
No. Production Piles: 11
No. Test Piles: 1

DESIGNED	-	RYAN P. NEGANGARD
CHECKED	-	JOE G. YOUNG
DRAWN	-	DENNIS A. POP
CHECKED	-	R.P.N. / G.R.A. / J.G.Y.

EXAMINED — ENGINEER OF BRIDGE DESIGN
PASSED — ENGINEER OF BRIDGES AND STRUCTURES
DATE - 10-10-2024
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT
STRUCTURE NO. 051-0074
SHEET 24 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	65
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	

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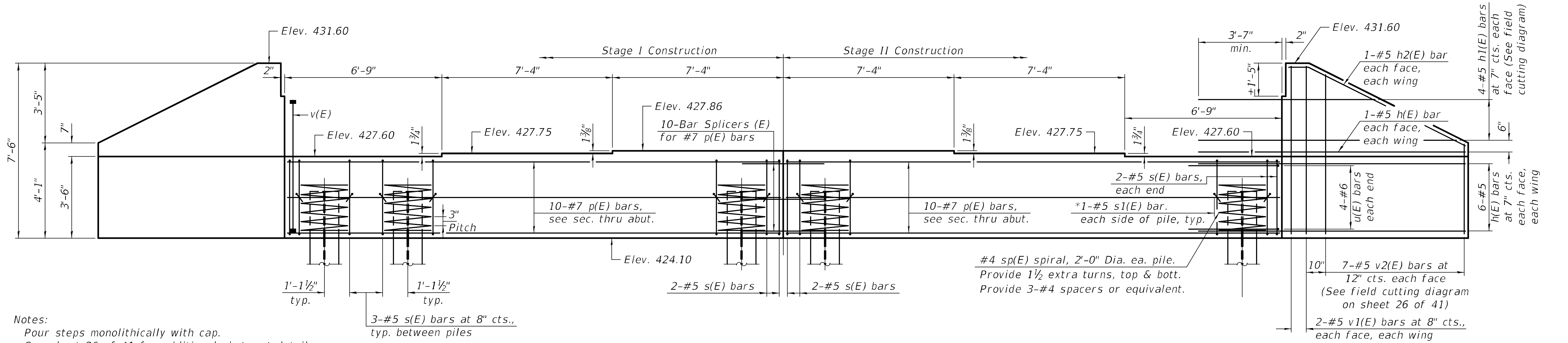
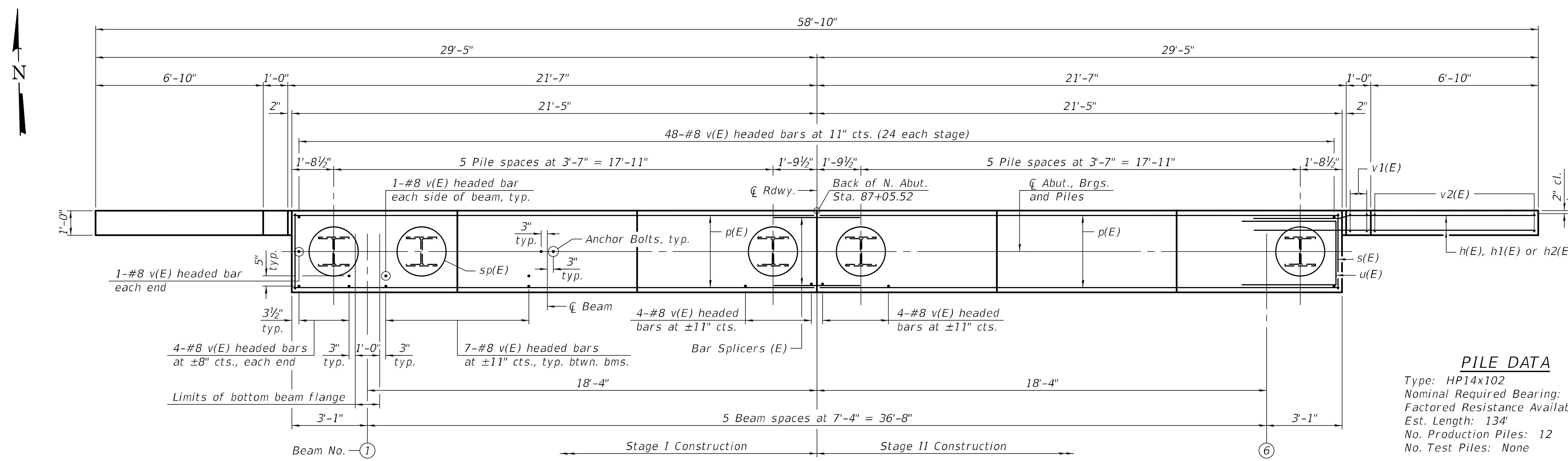


ELEVATION
(Looking North)

Notes:
Pour steps monolithically with cap.
See sheet 26 of 41 for additional abutment details and Bill of Material.
For bar splicer details, see sheet 31 of 41.
For details of piles, see sheet 29 of 41.

* Hook s1(E) bars around p(E) and s(E) bars. Clear cover for the s1(E) bars will be 1⅞".



PLAN

PILE DATA

Type: HP14x102
Nominal Required Bearing: 810 kips
Factored Resistance Available: 446 kips
Est. Length: 134'
No. Production Piles: 12
No. Test Piles: None

Note:
Piles at North Abutment shall be driven through 30" diameter precored holes extending below the bottom of the existing concrete pavement as indicated by boring log 6. Backfill the void with dry, loose sand according to Article 512.09(c) of the Standard Specifications. Cost included in driving piles.

DESIGNED - RYAN P. NEGANGARD	EXAMINED	ENGINEER OF BRIDGE DESIGN	DATE - 10-10-2024
CHECKED - JOE G. YOUNG			
DRAWN - DENNIS A. POP	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -
CHECKED - R.P.N. / G.R.A. / J.G.Y.			REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT
STRUCTURE NO. 051-0074

SHEET 25 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	66
		CONTRACT NO. 74164		
		ILLINOIS FED. AID PROJECT		

MODEL: 0510074-74164-025
FILE NAME: pw:\\idot-pw.bentley.com:PWIDOT\Documents\IDOT Offices\Bureau of Bridges and Structures\Projects\0510074\CADD Plans\0510074-74164.dgn
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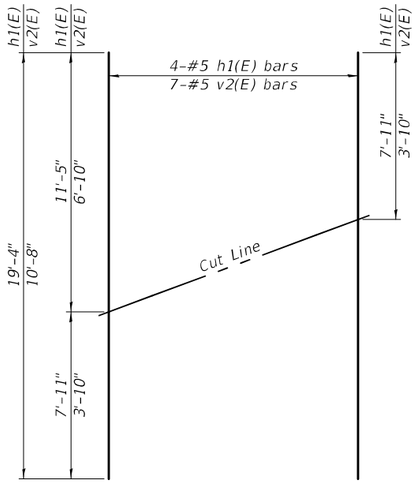
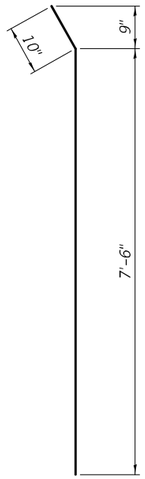
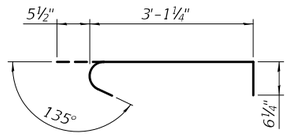


FIELD CUTTING DIAGRAM

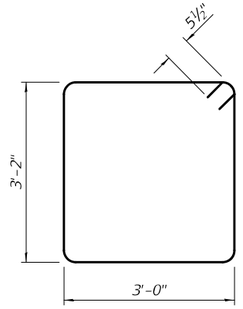
Order h1(E) and v2(E) full length. Cut as shown and use remainder of bars in opposite face.



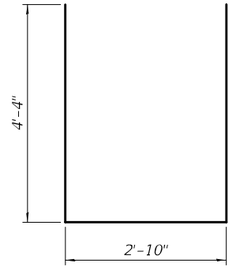
BAR h2(E)



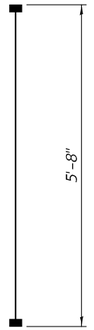
BAR s1(E)



BAR s(E)

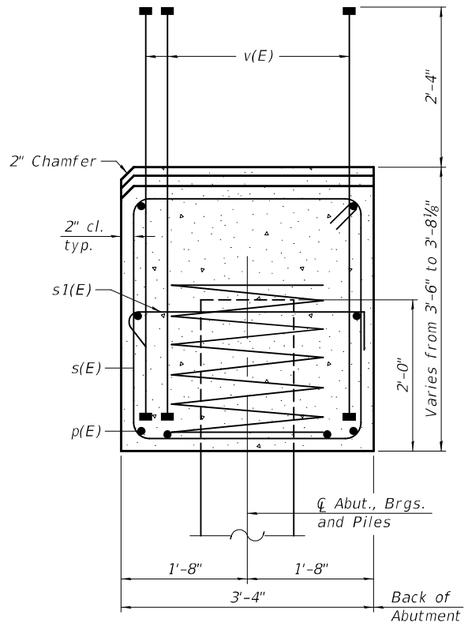


BAR u(E)

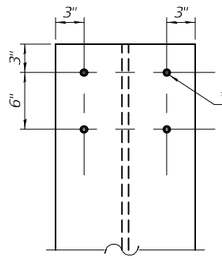


BAR v(E)

(Headed. 424-#8 Bar Terminators)



SEC. THRU ABUT.



** 4-¾" Ø x 4" Granular or solid flux filled headed studs automatically end welded (Typ. each flange, each pile)

** Typical each flange, each pile. Cost included with Furnishing Piles.

SEISMIC PILE DETAIL

Note:
Bar Terminators, paid for separately. See Total Bill of Material.

SOUTH ABUTMENT BILL OF MATERIAL

	Bar	No.	Size	Length	Shape
	h(E)	28	#5	11'-5"	
	h1(E)	8	#5	19'-4"	
	h2(E)	4	#5	8'-4"	
	p(E)	20	#7	21'-1"	
	s(E)	38	#5	13'-3"	
	s1(E)	24	#5	4'-1"	
*	sp(E)	12	#4	2'-0"	
	u(E)	8	#6	11'-6"	
	v(E)	106	#8	5'-8"	
	v1(E)	8	#5	7'-2"	
	v2(E)	14	#5	10'-8"	
	Structure Excavation			Cu. Yd.	110
	Concrete Structures			Cu. Yd.	22.8
	Reinforcement Bars, Epoxy Coated			Pound	4520
	Furnishing Steel Piles HP14x102			Foot	1441
	Driving Piles			Foot	1441
	Test Pile Steel HP14x102			Each	1

* Length is height of spiral.
For details of piles see sheet 29 of 41.

NORTH ABUTMENT BILL OF MATERIAL

	Bar	No.	Size	Length	Shape
	h(E)	28	#5	11'-5"	
	h1(E)	8	#5	19'-4"	
	h2(E)	4	#5	8'-4"	
	p(E)	20	#7	21'-1"	
	s(E)	38	#5	13'-3"	
	s1(E)	24	#5	4'-1"	
*	sp(E)	12	#4	2'-0"	
	u(E)	8	#6	11'-6"	
	v(E)	106	#8	5'-8"	
	v1(E)	8	#5	7'-2"	
	v2(E)	14	#5	10'-8"	
	Structure Excavation			Cu. Yd.	110
	Concrete Structures			Cu. Yd.	22.8
	Reinforcement Bars, Epoxy Coated			Pound	4520
	Furnishing Steel Piles HP14x102			Foot	1608
	Driving Piles			Foot	1608

* Length is height of spiral.
For details of piles see sheet 29 of 41.

DESIGNED -	RYAN P. NEGANGARD	EXAMINED	DATE - 10-10-2024
CHECKED -	JOE G. YOUNG		ENGINEER OF BRIDGE DESIGN
DRAWN -	DENNIS A. POP	PASSED	ENGINEER OF BRIDGES AND STRUCTURES
CHECKED -	R.P.N. / G.R.A. / J.G.Y.	REVISED -	
10/10/2024 1:09:40 PM		REVISED -	

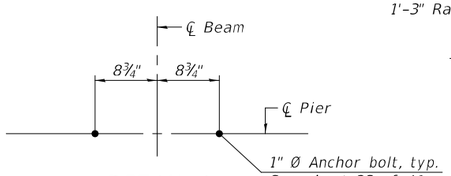
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ABUTMENT DETAILS
STRUCTURE NO. 051-0074
SHEET 26 OF 41 SHEETS

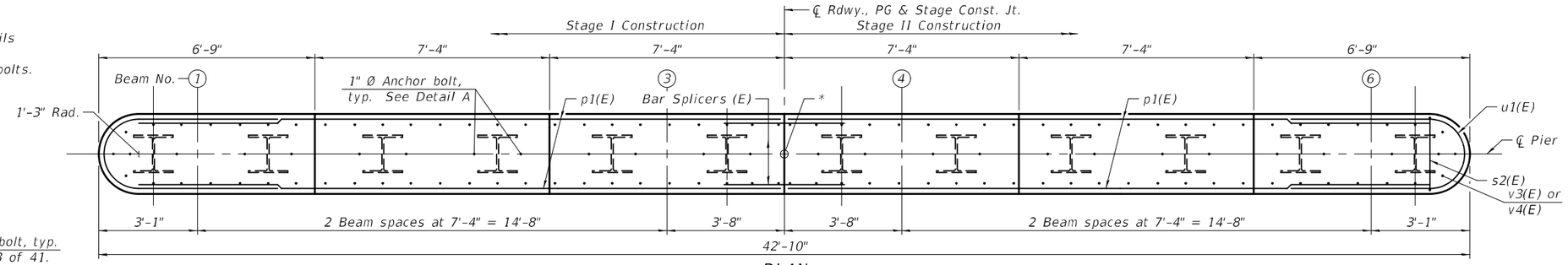
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	67
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

MODEL: 051007-74164-026
FILE NAME: pw:\\dot-pw.bentley.com:PWIDOT Documents\IDOT Offices\Bureau of Bridges and Structures\Projects\051007A\CADD Plans\051007-74164.dgn

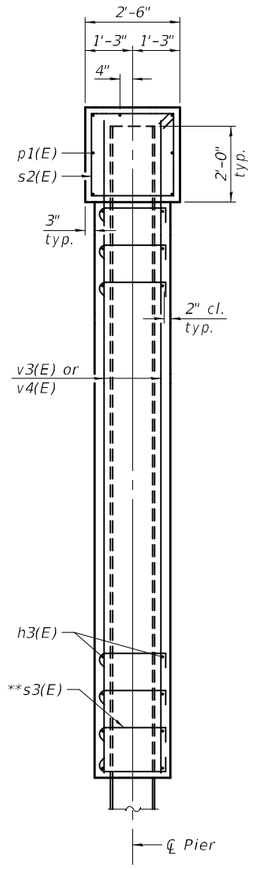
Notes:
Pour steps monolithically with cap.
See sheet 28 of 41 for additional pier details and Bill of Material.
Space reinforcement in cap to miss anchor bolts.
For details of piles, see sheet 29 of 41.



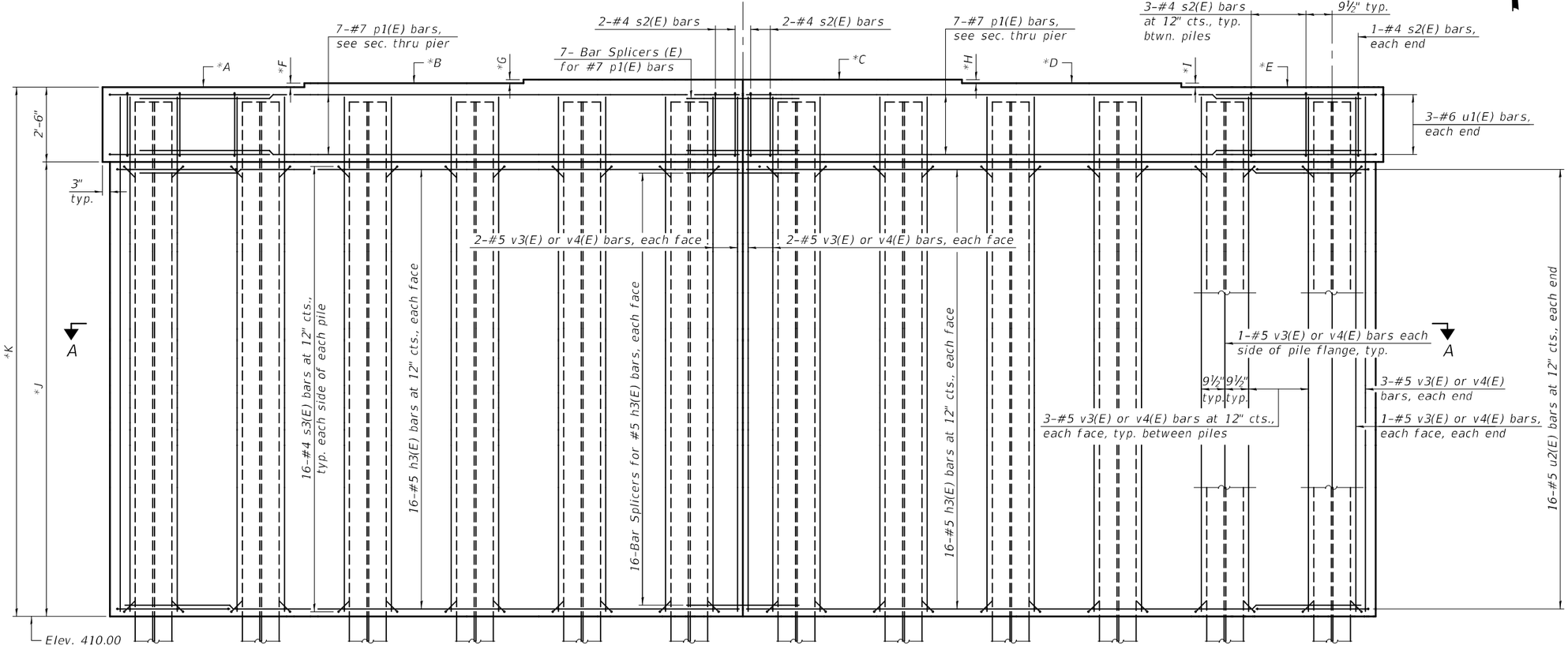
DETAIL A



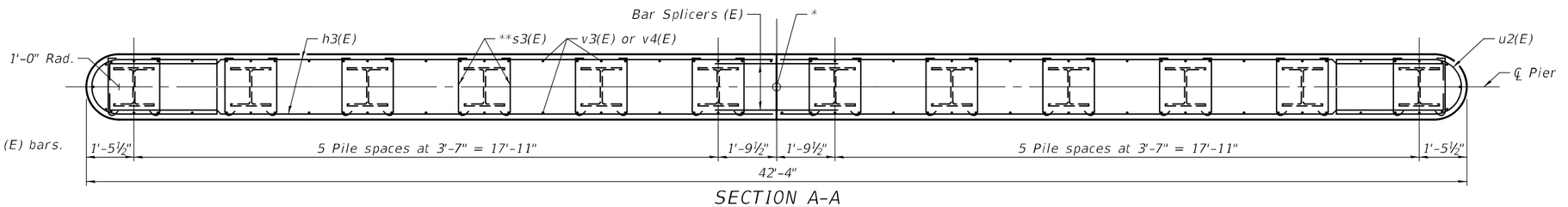
PLAN



SECTION THRU PIER



ELEVATION
(Looking North)



SECTION A-A

* See pier table on sheet 28 of 41.

** Hook s3(E) bar around h3(E) and v3(E) or v4 (E) bars. Clear cover for the s3(E) bar will be 1½".

DESIGNED - RYAN P. NEGANGARD	EXAMINED	ENGINEER OF BRIDGE DESIGN	DATE - 10-10-2024	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PIERS 1 THRU 4 STRUCTURE NO. 051-0074	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - JOE G. YOUNG						332	(16BR-1, BR-2)B-1	LAWRENCE	198	68
DRAWN - DENNIS A. POP	PASSED		REVISED -						CONTRACT NO. 74164	
CHECKED - R.P.N. / G.R.A. / J.G.Y.		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET 27 OF 41 SHEETS			ILLINOIS	FED. AID PROJECT	

MODEL: 051007A-74164-027
FILE NAME: pw:\\dot-pw.bentley.com:PWIDOT Documents\IDOT Offices\Bureau of Bridges and Structures\Projects\051007A\CADD Plans\051007A-74164.dgn
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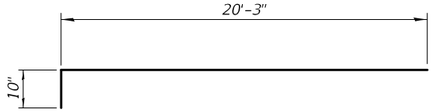
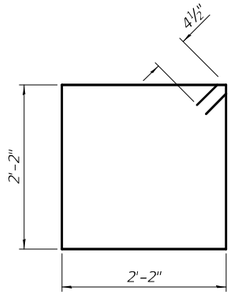
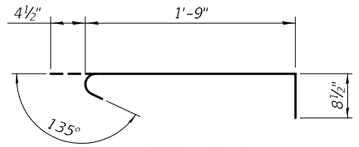


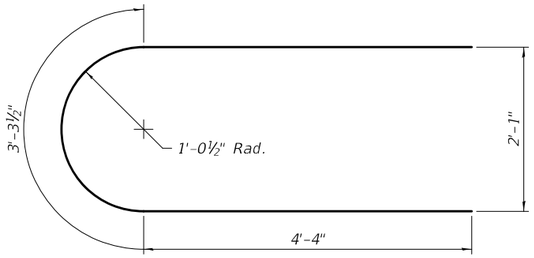
BAR h3(E)



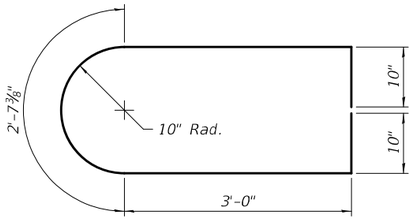
BAR s2(E)



BAR s3(E)



BAR u1(E)



BAR u2(E)

PIER 1 PILE DATA

Type: HP14x102
Nominal Required Bearing: 810 kips
Factored Resistance Available: 444 kips
Est. Length: 128'
No. Production Piles: 12
No. Test Piles: None

PIER 2 PILE DATA

Type: HP14x102
Nominal Required Bearing: 810 kips
Factored Resistance Available: 441 kips
Est. Length: 128'
No. Production Piles: 11
No. Test Piles: 1

PIER 3 PILE DATA

Type: HP14x102
Nominal Required Bearing: 810 kips
Factored Resistance Available: 439 kips
Est. Length: 128'
No. Production Piles: 12
No. Test Piles: None

PIER 4 PILE DATA

Type: HP14x102
Nominal Required Bearing: 810 kips
Factored Resistance Available: 438 kips
Est. Length: 131'
No. Production Piles: 11
No. Test Piles: 1

PIER TABLE

Location	Station	Elev. A	Elev. B	Elev. C	Elev. D	Elev. E	Step F	Step G	Step H	Step I	Wall Height 'J'	Min Pier Height 'K'
Pier 1	83+93.85	427.70	427.84	427.95	427.84	427.70	1⅝"	1⅜"	1⅜"	1⅝"	15'-2⅜"	17'-8⅜"
Pier 2	84+79.18	428.06	428.21	428.31	428.21	428.06	1¾"	1¼"	1¼"	1¾"	15'-6¾"	18'-0¾"
Pier 3	85+64.52	428.01	428.15	428.26	428.15	428.01	1⅝"	1⅜"	1⅜"	1⅝"	15'-6⅛"	18'-0⅛"
Pier 4	86+49.85	427.65	427.80	427.91	427.80	427.65	1¾"	1⅜"	1⅜"	1¾"	15'-1¾"	17'-7¾"

PIER NO. 1

Bar	No.	Size	Length	Shape
h3(E)	64	#5	21'-1"	
p1(E)	14	#7	20'-0"	
s2(E)	36	#4	9'-5"	
s3(E)	384	#4	2'-10"	
u1(E)	6	#6	12'-0"	
u2(E)	32	#5	10'-4"	
v3(E)	102	#5	17'-4"	
Cofferdam Excavation			Cu. Yd.	65
Concrete Structures			Cu. Yd.	57.5
Reinforcement Bars, Epoxy Coated			Pound	5230
Furnishing Steel Piles HP14x102			Foot	1536
Driving Piles			Foot	1536
Cofferdam (Type I) Location 1			Each	1

PIER NO. 2

Bar	No.	Size	Length	Shape
h3(E)	64	#5	21'-1"	
p1(E)	14	#7	20'-0"	
s2(E)	36	#4	9'-5"	
s3(E)	384	#4	2'-10"	
u1(E)	6	#6	12'-0"	
u2(E)	32	#5	10'-4"	
v4(E)	102	#5	17'-9"	
Cofferdam Excavation			Cu. Yd.	65
Concrete Structures			Cu. Yd.	58.6
Reinforcement Bars, Epoxy Coated			Pound	5270
Furnishing Steel Piles HP14x102			Foot	1408
Driving Piles			Foot	1408
Test Pile Steel HP14x102			Each	1
Cofferdam (Type I) Location 2			Each	1

PIER NO. 3

Bar	No.	Size	Length	Shape
h3(E)	64	#5	21'-1"	
p1(E)	14	#7	20'-0"	
s2(E)	36	#4	9'-5"	
s3(E)	384	#4	2'-10"	
u1(E)	6	#6	12'-0"	
u2(E)	32	#5	10'-4"	
v4(E)	102	#5	17'-9"	
Cofferdam Excavation			Cu. Yd.	65
Concrete Structures			Cu. Yd.	58.5
Reinforcement Bars, Epoxy Coated			Pound	5270
Furnishing Steel Piles HP14x102			Foot	1536
Driving Piles			Foot	1536
Cofferdam (Type I) Location 3			Each	1

PIER NO. 4

Bar	No.	Size	Length	Shape
h3(E)	64	#5	21'-1"	
p1(E)	14	#7	20'-0"	
s2(E)	36	#4	9'-5"	
s3(E)	384	#4	2'-10"	
u1(E)	6	#6	12'-0"	
u2(E)	32	#5	10'-4"	
v3(E)	102	#5	17'-4"	
Cofferdam Excavation			Cu. Yd.	65
Concrete Structures			Cu. Yd.	57.4
Reinforcement Bars, Epoxy Coated			Pound	5230
Furnishing Steel Piles HP14x102			Foot	1441
Driving Piles			Foot	1441
Test Pile Steel HP14x102			Each	1
Cofferdam (Type I) Location 4			Each	1

MODEL: 051007-74164-028
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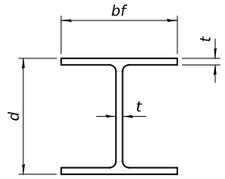
DESIGNED - RYAN P. NEGANGARD
CHECKED - JOE G. YOUNG
DRAWN - DENNIS A. POP
CHECKED - R.P.N. / G.R.A. / J.G.Y.

EXAMINED
ENGINEER OF BRIDGE DESIGN
PASSED
ENGINEER OF BRIDGES AND STRUCTURES
DATE - 10-10-2024
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

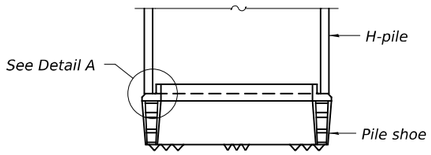
PIER DETAILS
STRUCTURE NO. 051-0074
SHEET 28 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	69
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

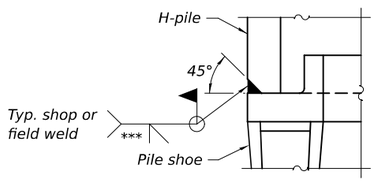


STEEL PILE TABLE

Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 18x181	18	18	1	36"
x157	17¾"	17⅞"	⅞"	36"
x135	17½"	17¾"	¾"	36"
HP 16x183	16½"	16½"	1⅛"	36"
x162	16¼"	16⅛"	1"	36"
x141	16	16	⅞"	36"
x121	15¾"	15⅞"	¾"	36"
HP 14x117	14¼"	14⅞"	13/16"	30"
x102	14"	14¾"	11/16"	30"
x89	13⅞"	14¾"	⅝"	30"
x73	13⅝"	14⅝"	½"	30"
HP 12x84	12¼"	12¼"	11/16"	24"
x74	12⅛"	12¼"	⅝"	24"
x63	12"	12⅛"	½"	24"
x53	11¾"	12"	7/16"	24"
HP 10x57	10"	10¼"	9/16"	24"
x42	9¾"	10⅛"	7/16"	24"
HP 8x36	8"	8⅛"	7/16"	18"



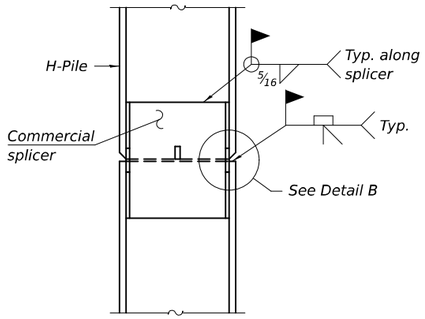
ELEVATION



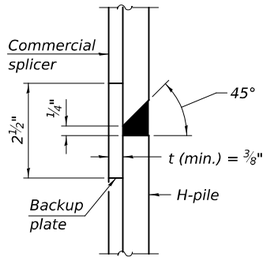
DETAIL A

SHOE ATTACHMENT

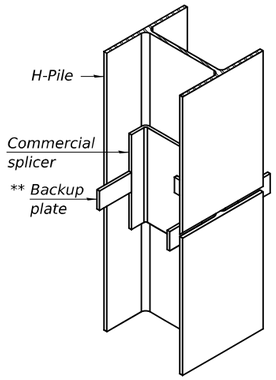
Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.



ELEVATION

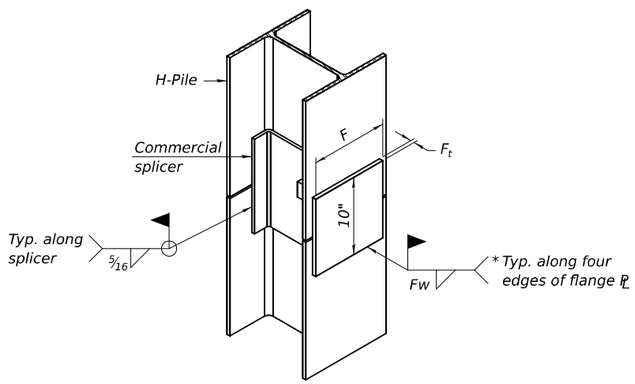


DETAIL B



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



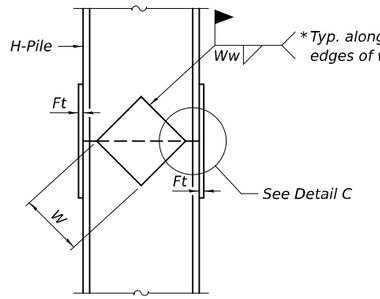
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

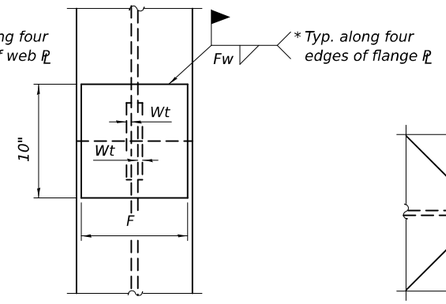
* *Interrupt welds ¼" from end of web and/or each flange.*

** *Remove portions of backup plates that extend outside the flanges.*

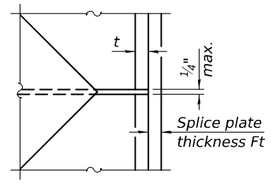
*** *Weld size per pile shoe manufacturer (5/16" min.).*



ELEVATION



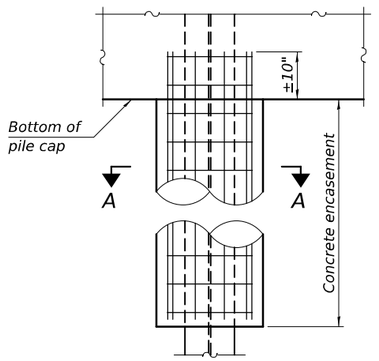
END VIEW



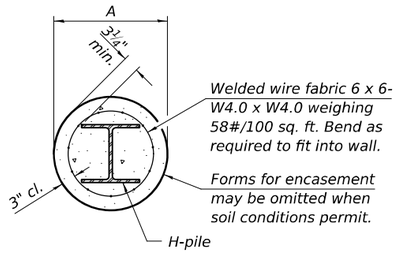
DETAIL C

Designation	F	Ft	Fw	W	Wt	Ww
HP 18x181	15½"	1½"	1"	9½"	⅞"	¾"
x157	15¼"	1¼"	1"	9½"	⅞"	¾"
x135	15¼"	1¼"	1"	9½"	⅞"	¾"
HP 16x183	13¾"	1½"	1"	8¼"	⅞"	¾"
x162	13½"	1½"	1"	8¼"	¾"	⅝"
x141	13½"	1¼"	⅞"	8¼"	¾"	⅝"
x121	13½"	1¼"	⅞"	8¼"	¾"	⅝"
HP 14x117	12½"	1¼"	⅞"	7¾"	⅝"	½"
x102	12½"	1"	¾"	7¾"	⅝"	½"
x89	12½"	⅞"	11/16"	7¾"	⅝"	½"
x73	12½"	¾"	9/16"	7¾"	⅝"	½"
HP 12x84	10"	1"	11/16"	6½"	⅝"	½"
x74	10"	⅞"	11/16"	6½"	⅝"	½"
x63	10"	¾"	½"	6½"	½"	⅜"
x53	10"	¾"	½"	6½"	½"	⅜"
HP 10x57	8"	⅞"	9/16"	5¼"	½"	⅜"
x42	8"	¾"	9/16"	5¼"	½"	⅜"
HP 8x36	6¾"	⅝"	7/16"	4"	½"	⅜"

WELDED PLATE FIELD SPLICE



ELEVATION



SECTION A-A

INDIVIDUAL PILE CONCRETE ENCASEMENT

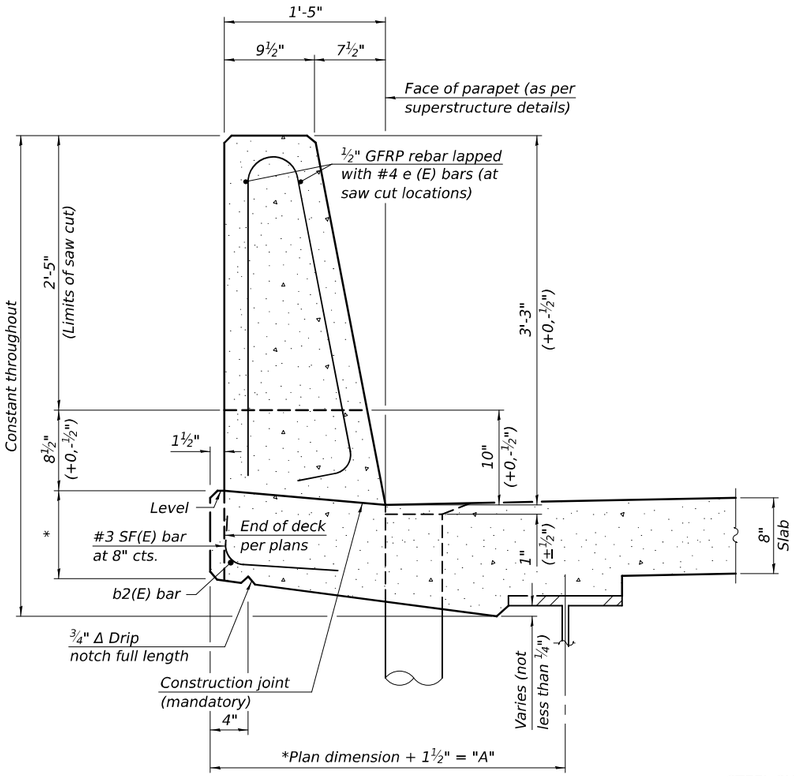
(when specified)

HP PILE DETAILS STRUCTURE NO.

F-HP 10-27-2023

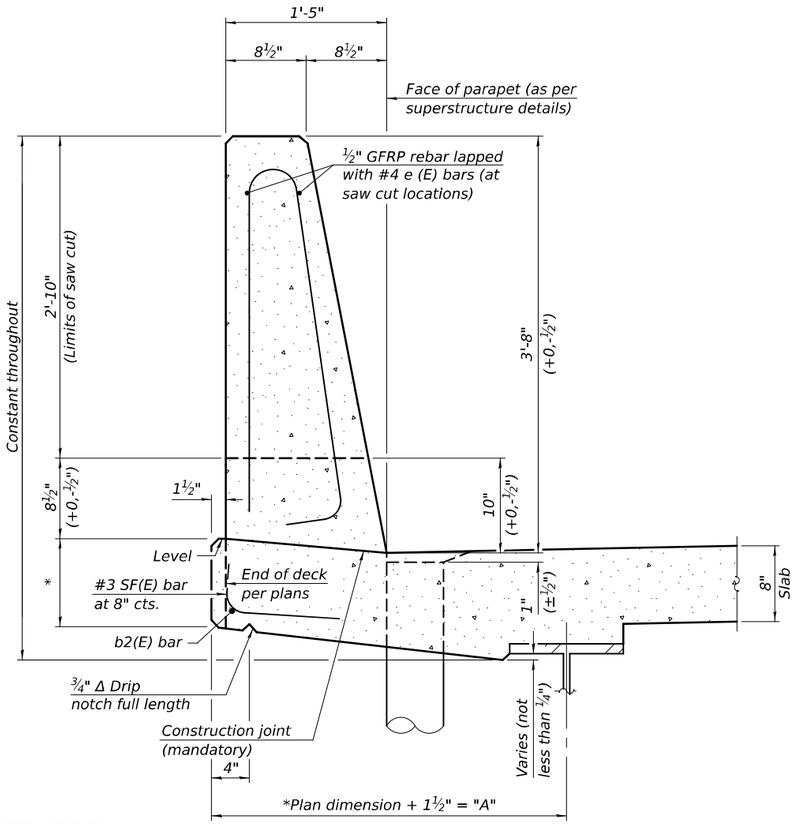
DESIGNED - RYAN P. NEGANGARD	EXAMINED		DATE - 10-10-2024	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	HP PILE DETAILS STRUCTURE NO. 051-0074
CHECKED - JOE G. YOUNG		ENGINEER OF BRIDGE DESIGN			SHEET 29 OF 41 SHEETS
DRAWN - DENNIS A. POP	PASSED		REVISED -		
CHECKED - R.P.N. / G.R.A. / J.G.Y.		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	70
		CONTRACT NO. 74164		
	ILLINOIS FED. AID PROJECT			



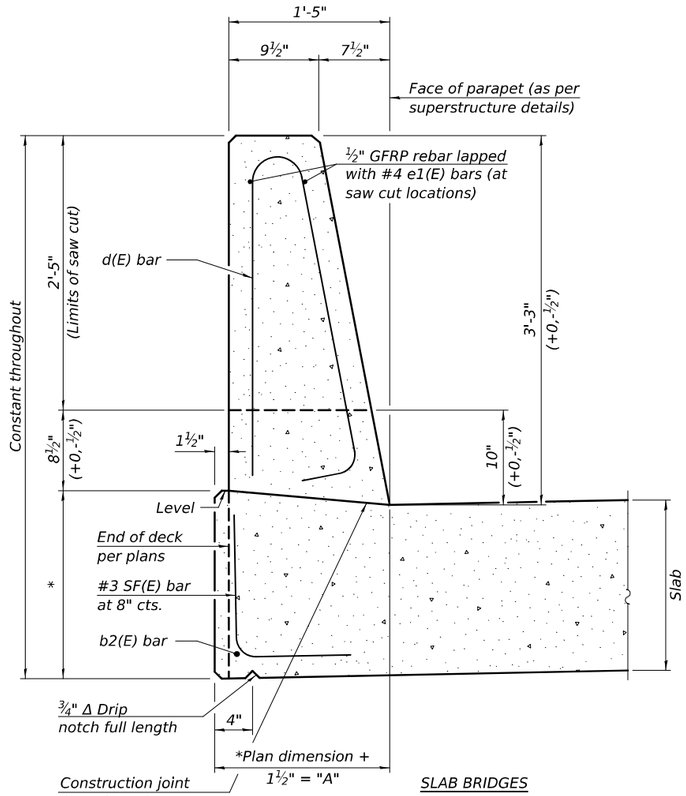
39" CONSTANT-SLOPE PARAPET SECTION

(Showing dimensions, d(E), and ½" Ø GFRP rebar)



44" CONSTANT-SLOPE PARAPET SECTION

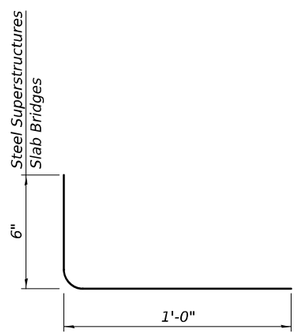
(Showing dimensions, d(E), and ½" Ø GFRP rebar)



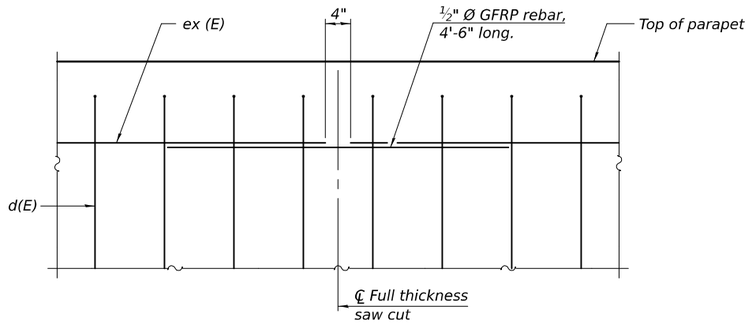
39" CONSTANT-SLOPE PARAPET SECTION

(Showing dimensions, d(E), and ½" Ø GFRP rebar)

*See Superstructure Details.



SF(E) BAR



DETAIL - GFRP REBAR STIFFENING ELEVATION

(Place as shown in parapet section at each parapet joint location.)

Notes:

All dimensions shall remain the same as shown on superstructure details, except dimension "A" which is to be revised as shown.
Additional concrete needed to revise dimension "A" (39" and 44" parapets):
Steel Superstructures: 0.00348 cu. yds./ft.
Slab Bridge Superstructures: cu. yds./ft.
Place full depth aluminum sheets as shown on superstructure details.
Replace all cork joint filler locations with a full thickness saw cut.
Steel and slab superstructures shown. Other superstructure types similar.

STEEL SUPERSTRUCTURES

SLAB BRIDGES

SFP 39-44

10/27/2023

DESIGNED -	RYAN P. NEGANGARD	EXAMINED	DATE - 10-10-2024
CHECKED -	JOE G. YOUNG		
DRAWN -	DENNIS A. POP	PASSED	REVISED -
CHECKED -	R.P.N. / G.R.A. / J.G.Y.		REVISED -

ENGINEER OF BRIDGE DESIGN

ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONCRETE PARAPET SLIPFORMING OPTION
STRUCTURE NO. 051-0074

SHEET 30 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	71
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	

MODEL: 051007-4-74164-030.dgn
FILE NAME: pw://idot-pw.bentley.com:PWIDOT Documents/IDOT O ces/Bureau of Bridges and Structures/OBM Projects/051007-4/CADData/Bridge/051007-4-74164-Design.dgn

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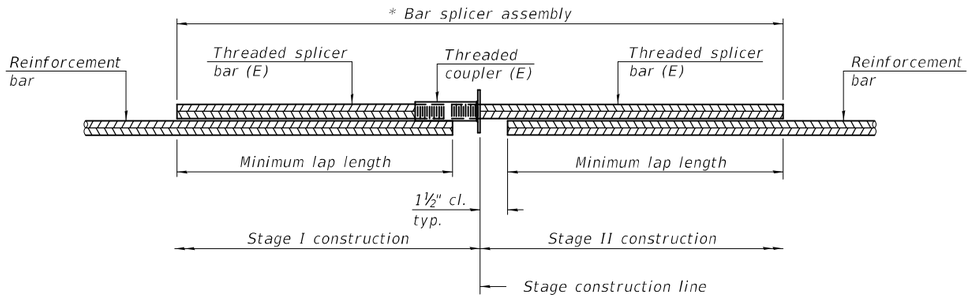


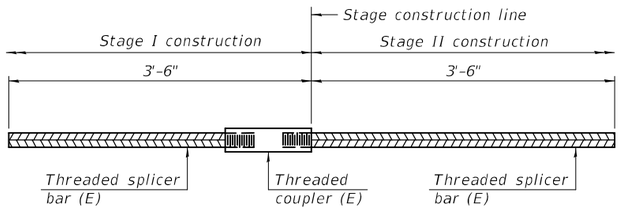
STANDARD BAR SPLICER ASSEMBLY PLAN

Only bar splicer assemblies as presented on the approved QPL list may be used.

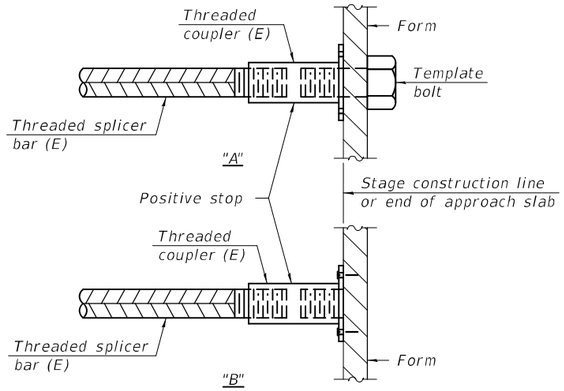
Threaded splicer bar length = min. lap length + 1½" + thread length

** Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.*

Location	Bar size	No. assemblies required	Minimum lap length
Slab	#5	1330	3'-6"
Approach Slab Top	#5	92	3'-4"
Approach Slab Bottom	#8	120	4'-9"
Approach Slab Footing	#5	80	3'-2"
Abutment Diaphragm, Back Face	#6	8	4'-0"
Abutment Diaphragm, Front Face	#6	6	See Diaphragm Bar Splicer Detail
Abutment Cap	#7	20	5'-6"
Pier Cap	#7	28	5'-0"
Pier Wall	#5	128	3'-7"

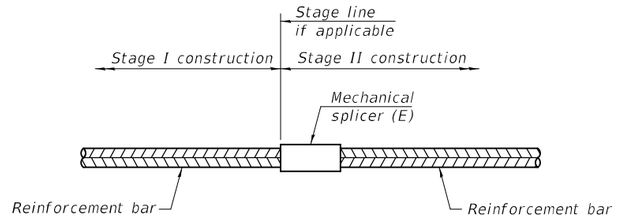


DIAPHRAGM BAR SPLICER DETAIL



INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required

Notes:
Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
All reinforcement shall be lapped and tied to the splicer bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
See approved list of bar splicer assemblies and mechanical splicers for alternatives.

MODEL: 0510074-74164-031
FILE NAME: pw:\\dot-pw.bentley.com:PWIDOT Documents\IDOT Offices\Bureau of Bridges and Structures\Projects\0510074\CADD Plans\0510074-74164.dgn
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DESIGNED - RYAN P. NEGANGARD	EXAMINED	DATE - 10-10-2024	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**
CHECKED - JOE G. YOUNG	ENGINEER OF BRIDGE DESIGN		
DRAWN - DENNIS A. POP	PASSED	REVISED -	
CHECKED - R.P.N. / G.R.A. / J.G.Y.	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -	

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 051-0074
SHEET 31 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	72
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 9/27/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0074
Station 85+12

BORING NO. 1 (S Abut)
Station 82+88
Offset 8.0ft Lt (West)
Ground Surface Elev. 430.73 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 403.7 ft
▽ Upon Completion Washed ft
▼ After 24 Hrs. 406.7 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
				7.25" Asphalt on 9.5" Concrete Pavement.
429.33				
				Estimated, CLAY, embankment.
				No samples.
426.23				
-5	3			Stiff, damp, gray, CLAY, embankment.
	3	1.40	27	
	4	B		
	2			
	3	1.24	27	
	4	B		
-10	3			
	4	1.90	24	
	4	B		
418.73				
	2			Medium, damp, gray, SILTY CLAY, embankment.
	3	0.82	28	
	3	B		
416.23				
-15	2			Stiff, damp, gray, CLAY w/ Silt, embankment.
	3	1.57	26	
	3	B		
413.73				
	1			Stiff, damp, gray, SILTY CLAY.
	1	1.15	27	
	1	B		
411.23				
-20	3			Stiff, damp, gray, CLAY w/ Silt.
				Stiff, damp, gray, CLAY w/ Silt. (continued)
	3	1.81	21	
	5	B		
408.23				
	2			Medium, damp, gray, LOAM.
	2	0.82	19	
	3	B		
406.23				
-25	2			Very soft, damp, gray, SANDY LOAM.
	2	0.21	16	
	2	B		
▽ 403.73				
	1			Loose to medium, wet, gray, fine grained, SAND. 6% passing #200 sieve.
	2		21	
	4			
-30	1			
	5			No recovery this trip.
	16			
	7			
-35	10		17	4% passing #200 sieve.
	10			
390.73 -40	4			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 9/27/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0074
Station 85+12

BORING NO. 1 (S Abut)
Station 82+88
Offset 8.0ft Lt (West)
Ground Surface Elev. 430.73 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 403.7 ft
▽ Upon Completion Washed ft
▼ After 24 Hrs. 406.7 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
	5		14	Medium, wet, gray, fine grained, SAND. 8% passing #200 sieve.
	6			
386.23				
-45	6			Stiff, damp, brown, SILTY CLAY.
	5	1.73	29	
	9	B		
380.73 -50	1			
	1	0.58	35	Medium, damp, brown, SILT CLAY.
	2	B		
				LL = 42.0
				PL = 31.7
				PI = 10.3
-55				
371.23				
-60	11			
	18		15	Dense to medium, wet, gray, fine grained, SAND. 5% passing #200 sieve.
	17			
-65				
	15			
-70				
	16		21	6% passing #200 sieve. (continued)
	6			
-75				
351.23				
-80	2			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

DESIGNED	-	RYAN P. NEGANGARD
CHECKED	-	JOE G. YOUNG
DRAWN	-	DENNIS A. POP
CHECKED	-	R.P.N. / G.R.A. / J.G.Y.

EXAMINED — ENGINEER OF BRIDGE DESIGN
PASSED — ENGINEER OF BRIDGES AND STRUCTURES
DATE - 10-10-2024
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 051-0074
SHEET 32 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	73
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

MODEL: 051074-74164-032
FILE NAME: pw:\\fdot-pw.bentley.com:PWIDOT\Documents\IDOT Offices\Bureau of Bridges and Structures\Projects\051074\CADD Plans\051074-74164.dgn

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Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 9/27/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0074
Station 85+12

BORING NO. 1 (S Abut)
Station 82+88
Offset 8.0ft Lt (West)
Ground Surface Elev. 430.73 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 403.7 ft
▽ Upon Completion Washed ft
▼ After 24 Hrs. 406.7 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Very soft, damp, gray, SILTY CLAY. (continued)	1 4	0.21 B	32
-85			
341.23			
Very soft, very damp, gray, SANDY LOAM. -90	4 9 11	0.16 B	23
-95			
331.23			
-100	6		

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Very dense, damp, gray, CLAY LOAM TILL. (continued)	8 10	2.47 B	15
-105			
-110	10 19 33		13
-115			
310.73-120	10		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 9/27/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0074
Station 85+12

BORING NO. 1 (S Abut)
Station 82+88
Offset 8.0ft Lt (West)
Ground Surface Elev. 430.73 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 403.7 ft
▽ Upon Completion Washed ft
▼ After 24 Hrs. 406.7 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Very dense, damp, gray, CLAY LOAM TILL.	21 33	+4.5 PP	8
-125			
301.23			
Very dense, moist, dark gray, SILTY CLAY SHALE. 300.93 -130	50/1" 50/1" 50/1"		8
Extent of exploration.			
-135			
-140			

Benchmark: BM13 Chiseled square on hubguard NE corner of existing structure Sta 86+83 Rt 15.5' = 431.16'

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

MODEL: 051007-74164-033
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DESIGNED -	RYAN P. NEGANGARD	EXAMINED	DATE - 10-10-2024
CHECKED -	JOE G. YOUNG		
DRAWN -	DENNIS A. POP	PASSED	REVISED -
CHECKED -	R.P.N. / G.R.A. / J.G.Y.		REVISED -

ENGINEER OF BRIDGE DESIGN
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 051-0074
SHEET 33 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	74
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 8/23/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0074
Station 85+12

BORING NO. 2
Station 83+82
Offset 23.5ft Rt (East)
Ground Surface Elev. 413.98 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 404.5 ft
▽ Upon Completion Washed ft
▼ After 528 Hrs. 407.0 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	
Riprap and broken concrete on soft, SILTY LOAM.				
No samples.				
409.48				
Stiff, damp, brown, SILTY CLAY.	-5 4			
	4		16	
	4			
▼ 406.48				
	4			
Very soft, damp, brown, SANDY LOAM.	4	0.17	19	
	4	S		
▽ 404.48				
Loose, wet, brown to gray, fine grained, SAND. 4% passing #200 sieve.	-10 3			
	3		26	
	3			
	1			
No recovery this trip.	3			
	4			
	-15 1			
2% passing #200 sieve.	3		24	
	3			
	3			
2% passing #200 sieve.	4		22	
	5			
393.98	-20 5			

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	
Loose, wet, gray, fine grained, SAND. 5% passing #200 sieve.		4		19
		5		
391.98				
		2		
Stiff, damp, gray, SANDY CLAY w/ Sand.		3	1.5	11
		4	PP	
389.48				
Gray, fine grained, SAND. 6% passing #200 sieve.	-25	4		
		5	0.3	32
388.28		5	PP	
Soft, damp, gray, SILTY LOAM.				
386.98				
Very stiff, damp, grayish brown, SILTY CLAY.		3		
		6	3.09	25
		7	B	
384.48				
Medium to soft, damp, gray/brown, SILT.	-30	2		
		3	0.74	34
		2	B	
	-35	2		
		3	0.62	44
		3	B	
373.98	-40	1		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 8/23/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0074
Station 85+12

BORING NO. 2
Station 83+82
Offset 23.5ft Rt (East)
Ground Surface Elev. 413.98 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 404.5 ft
▽ Upon Completion Washed ft
▼ After 528 Hrs. 407.0 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	
Medium to soft, damp, gray/brown, SILT.		2	0.37	44
		7	B	
369.48				
	-45	7		
		9		
No recovery this trip.		12		
Medium, wet, gray, fine grained, SAND.				
	-55			
353.98	-60	6		

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	
Medium, wet, gray, fine grained, SAND.		6		
		9		
	-65			
344.48				
Medium, damp, gray, SANDY LOAM w/ fine grained, Sand.	-70	8		
		12	0.69	21
		18	S	
	-75			
334.48				
	-80	5		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

DESIGNED	-	RYAN P. NEGANGARD
CHECKED	-	JOE G. YOUNG
DRAWN	-	DENNIS A. POP
CHECKED	-	R.P.N. / G.R.A. / J.G.Y.

EXAMINED — ENGINEER OF BRIDGE DESIGN
PASSED — ENGINEER OF BRIDGES AND STRUCTURES
DATE - 10-10-2024
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOILD BORING LOGS
STRUCTURE NO. 051-0074
SHEET 34 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	75
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

MODEL: 051007-74164-034
FILE NAME: pw:\\dot-pwbentley.com:PWIDOT\Documents\IDOT Offices\Bureau of Bridges and Structures\Projects\051007A\CADD Plans\051007-74164.dgn

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Illinois Department of Transportation — SOIL BORING LOG

Division of Highways
IDOT

Date 8/23/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0074
Station 85+12

BORING NO. 2
Station 83+82
Offset 23.5ft Rt (East)
Ground Surface Elev. 413.98 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 404.5 ft
▽ Upon Completion Washed ft
▼ After 528 Hrs. 407.0 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Medium, wet, gray, fine grained, SAND. (continued)	7 9		7
-85			
324.48			
Gray, SANDY LOAM. -90	9		
323.48	20 32	0.91 B	11
Medium to hard, damp, gray, SANDY CLAY TILL.			
-95			
-100	10		

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Medium to hard, damp, gray, SANDY CLAY TILL. (continued)	20 32	7.42 S	9
-105			
304.48			
Very dense, moist, gray, SILTY CLAY SHALE. 303.98-110	50/2" 50/1" 50/1"		6
Borehole continued with rock coring.			
-115			
-120			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

Illinois Department of Transportation — ROCK CORE LOG

Division of Highways
IDOT

Date 8/23/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence CORING METHOD Rotary, surf set diamond bit

STRUCT. NO. 051-0074
Station 85+12

CORING BARREL TYPE & SIZE NW, conv dbl bbl, split inner
Core Diameter 2.06 in
Top of Rock Elev. 304.48 ft
Begin Core Elev. 303.98 ft

BORING NO. 2
Station 83+82
Offset 23.5ft Rt (East)
Ground Surface Elev. 413.98 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Gray, weathered, SILTY CLAY SHALE 303.98	B2C1	88	0	3	
Limestone 0.15' lense.					
No recovery for bottom 0.5' of core run. 298.98-115					
Gray, weathered, SILTY CLAY SHALE	B2C2	92	10	2.4	
Coal seam at depth 117.0' to 118.0'					
Rock Core B2C2 at depth 119.1' to 119.6' = 86 tsf Qu.					
No recovery for bottom 0.5' of core run. 293.98-120					
Extent of exploration.					
Benchmark: BM13 Chiseled square on hubguard NE corner of existing structure Sta 86+83 Rt 15.5' = 431.16'					
-125					
-130					

Color pictures of the cores Available on request
Cores will be stored for examination until 08/23/22
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
RQD is the ratio of the total length of sound core specimens >4" to total length of core run BBS, form 138 (Rev. 8-99)

MODEL: 051007A-74164-035
FILE NAME: pw:\\dot-pwbentley.com:PWIDOT\Documents\IDOT Offices\Bureau of Bridges and Structures\Projects\051007A\CADD Plans\051007A-74164.dgn

DESIGNED	-	RYAN P. NEGANGARD
CHECKED	-	JOE G. YOUNG
DRAWN	-	DENNIS A. POP
CHECKED	-	R.P.N. / G.R.A. / J.G.Y.

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EXAMINED — ENGINEER OF BRIDGE DESIGN
PASSED — ENGINEER OF BRIDGES AND STRUCTURES
DATE - 10-10-2024
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 051-0074
SHEET 35 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	76
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 8/25/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0074
Station 85+12

BORING NO. 3
Station 84+77
Offset 28.5ft Lt (West)
Ground Surface Elev. 413.06 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 400.6 ft
▽ Upon Completion Washed ft
▼ After 480 Hrs. 407.6 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
				Riprap and broken concrete on soft, SILTY LOAM.
				No samples.
408.56				
-5	3			No recovery this trip.
	4			▼
	4			
				Medium, damp, gray, SILTY CLAY.
	2			
	3	0.7	40	
	3	B		
403.56				
-10	2			Very soft, damp, gray, SILT.
	1	0.29	33	
	1	B		
				▽
	1			
	1	0.21	36	
	1	B		
-15	1			
	1	0.21	42	
	1	B		
	1			
	2	0.21	44	
394.86	2	B		
				Loose, wet, gray, fine grained, SAND.
393.06 -20	3			
				Loose, wet, gray, fine grained, SAND. 5% passing #200 sieve.
	3			
	4			
			18	
391.06				
	3			Very soft, wet, gray, SANDY LOAM w/ few wood pieces.
	2	0.23	30	
	4	S		
388.56				
-25	3			Very soft, damp, gray, SILT.
387.56	4	0.21	31	
	6	B		Grayish brown, SILTY CLAY.
386.06				
	3			Very stiff, damp, brownish gray, CLAY.
	4	2.06	27	
384.66	8	B		
				Brown, fine grained, SANDY LOAM.
383.56				
-30	2			Medium, damp, brownish gray, SILTY CLAY.
	2	0.41	38	
	3	B		
378.56				
-35	1			Medium, damp, brownish gray, SILT.
	1	0.82	49	
	2	B		
373.56				
-40	1			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 8/25/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0074
Station 85+12

BORING NO. 3
Station 84+77
Offset 28.5ft Lt (West)
Ground Surface Elev. 413.06 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 400.6 ft
▽ Upon Completion Washed ft
▼ After 480 Hrs. 407.6 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
372.46	4	0.49	26	Medium, damp, gray, SILTY LOAM w/ Sand. (continued)
	5	B		
				Gray, SANDY LOAM.
368.56				
-45	8			Medium, wet, gray, fine grained, SAND. 3% passing #200 sieve.
	8		19	
	8			
-50	6			
	8		18	2% passing #200 sieve.
	9			
-55				
353.06 -60	6			
				Medium, wet, gray, fine grained, SAND. 2% passing #200 sieve.
	7		17	
	11			
-65				
343.56				
-70	13			Very soft, damp, gray, fine grained, SANDY LOAM.
	11	0.23	21	
	15	S		
-75				
333.56				
-80	8			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

MODEL: 051007A-74164-036
FILE NAME: pw:\\dot-pw.bentley.com:PWIDOT Documents\IDOT Offices\Bureau of Bridges and Structures\Projects\051007A\CADD Plans\051007A-74164.dgn

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DESIGNED -	RYAN P. NEGANGARD	EXAMINED	DATE - 10-10-2024
CHECKED -	JOE G. YOUNG		
DRAWN -	DENNIS A. POP	PASSED	REVISED -
CHECKED -	R.P.N. / G.R.A. / J.G.Y.	ENGINEER OF BRIDGE DESIGN / ENGINEER OF BRIDGES AND STRUCTURES	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 051-0074
SHEET 36 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	77
		CONTRACT NO. 74164		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation — SOIL BORING LOG

Division of Highways
IDOT

Date 8/25/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0074
Station 85+12

BORING NO. 3
Station 84+77
Offset 28.5ft Lt (West)
Ground Surface Elev. 413.06 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 400.6 ft
▽ Upon Completion Washed ft
▼ After 480 Hrs. 407.6 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
	12 16	0.15 S	19	Very soft, damp, gray, very fine grained, SANDY LOAM to SAND. (continued)
-85				
323.56				
-90	5 4 6	0.91 B	18	Medium, damp, gray, SANDY CLAY LOAM.
-95				
313.56				
-100	36			
	40 49	7.86 BS	8	Hard, damp, gray, SANDY CLAY LOAM TILL. (continued)
-105				
306.56				
306.06	50/2" 50/2" 50/2"		8	Very dense, moist, gray, SILTY CLAY SHALE.
				Borehole continued with rock coring.
-110				
-115				
-120				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

Illinois Department of Transportation — ROCK CORE LOG

Division of Highways
IDOT

Date 8/25/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence CORING METHOD Rotary, surf set diamond bit

STRUCT. NO. 051-0074
Station 85+12

CORING BARREL TYPE & SIZE NW, conv dbl bbl, split inner

Core Diameter 2.06 in
Top of Rock Elev. 306.56 ft
Begin Core Elev. 306.06 ft

BORING NO. 3
Station 84+77
Offset 28.5ft Lt (West)
Ground Surface Elev. 413.06 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)	Description
306.06	B3C1	89	10	3.3		Highly weathered, gray, SILTY CLAY SHALE.
						Alternating layers of Shale and Limestone from 108.7' to 109.8'.
-110						Rock Core B3C1 at depth 110.75' to 111.22' = 5.4 tsf Qu.
						No recovery for bottom 0.5' of core run.
301.06						
	B3C2	100	28	3.4		Dark gray, SILTY CLAY SHALE.
-115						Rock Core B3C2 at depth 114.65' to 115.15' = 22.4 tsf Qu.
296.06						Black, COAL at depth 116.8' to 117.0'.
	B3C3	97	63	2.1		Black, COAL at depth 117.0' to 117.8'.
						Highly weathered, gray, SILTY CLAY SHALE.
						Thinly layered, gray, SANDY CLAY LOAM SHALE.
-120						
291.06						Extent of exploration.
						Benchmark: BM13 Chiseled square on hubguard NE corner of existing structure Sta 86+83 Rt 15.5' = 431.16'
-125						

Color pictures of the cores Available on request
Cores will be stored for examination until 08/25/22
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
RQD is the ratio of the total length of sound core specimens >4" to total length of core run BBS, form 138 (Rev. 8-99)

DESIGNED	-	RYAN P. NEGANGARD	
CHECKED	-	JOE G. YOUNG	
DRAWN	-	DENNIS A. POP	
CHECKED	-	R.P.N. / G.R.A. / J.G.Y.	

EXAMINED — ENGINEER OF BRIDGE DESIGN
PASSED — ENGINEER OF BRIDGES AND STRUCTURES
DATE - 10-10-2024
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 051-0074
SHEET 37 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	78
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	

MODEL: 051074-74164-037
FILE NAME: pw:\\dot-pw.bentley.com:PWIDOT\Documents\IDOT Offices\Bureau of Bridges and Structures\Projects\051007A\CADD Plans\051074-74164.dgn
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Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 1 of 3

Date 8/24/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0074
Station 85+12

BORING NO. 4
Station 85+53
Offset 25.0ft Rt (East)
Ground Surface Elev. 413.78 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 394.3 ft
▽ Upon Completion Washed ft
▼ After 504 Hrs. 407.8 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
				Riprap and broken concrete on soft, SILTY LOAM.
				No samples.
409.28				
-5	2			Medium, damp, gray, SILTY CLAY.
	3	0.75	19	
	3	PP		
	2			
	2	0.66	41	
	3	BS		
404.28				
-10	1			Soft, damp, gray, SILT.
	2	0.41	34	
	2	B		
	1			
	1	0.33	35	
	1	B		
-15	0			
	0	0.25	51	
	1	B		
	0			
	0	0.21	40	
	1	B		
▽ 394.28				
-20	0			

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
	1		22	Very loose, wet, gray, fine grained, SAND. 4% passing #200 sieve. (continued)
	1			
391.78				
	6			Medium, wet, gray, fine grained, SAND.
	9			
	9			
389.28				
-25	3			Very soft, wet, gray, SANDY LOAM.
	3	0.23	22	
	3	S		
386.78				
	3			Very stiff, damp, grayish brown, SILTY CLAY.
	5	3.09	25	
	6	B		
384.28				
-30	7			Soft, damp, grayish brown, SILTY CLAY.
	5	0.49	47	
	3	B		
-35	1			
	1	0.49	48	
	2	B		
374.28				
-40	2			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 2 of 3

Date 8/24/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0074
Station 85+12

BORING NO. 4
Station 85+53
Offset 25.0ft Rt (East)
Ground Surface Elev. 413.78 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 394.3 ft
▽ Upon Completion Washed ft
▼ After 504 Hrs. 407.8 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
	3	1.24	34	Stiff, damp, grayish brown, SILTY CLAY. (continued)
	4	B		
368.78				
-45	6			Medium, damp, gray, fine grained, SAND. 3% passing #200 sieve.
	6		21	
	12			
-50	5			
	8		18	
	8			2% passing #200 sieve.
-55				
353.78 -60	6			

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
	9		17	Medium, damp, gray, fine grained, SAND. 7% passing #200 sieve.
	9			
-65				
-70	5			
	12		25	
	15			9% passing #200 sieve.
-75				
333.78 -80	7			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 3 of 3

Date 8/24/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0074
Station 85+12

BORING NO. 4
Station 85+53
Offset 25.0ft Rt (East)
Ground Surface Elev. 413.78 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
First Encounter 394.3 ft
Upon Completion Washed ft
After 504 Hrs. 407.8 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
	11			Low recovery, some small gravel retained. Estimated SAND w/ small gravel.
	14			
-85				
324.28				
-90	3			Stiff, damp, gray, LOAM.
	4	1.03	17	
	5	B		
-95				
314.28				
-100	15			

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
	34	5.24	8	Hard, damp, gray, SANDY CLAY TILL. (continued)
	42	S		
-105				
305.78				
				Very dense, moist, gray, SILTY CLAY SHALE.
303.98				
-110	50/1"		8	Extent of exploration
	50/1"			
	50/1"			
				Benchmark: BM13 Chiseled square on hubguard NE corner of existing structure Sta 86+83 Rt 15.5' = 431.16'
-115				
-120				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

DESIGNED -	RYAN P. NEGANGARD	EXAMINED	DATE - 10-10-2024
CHECKED -	JOE G. YOUNG		
DRAWN -	DENNIS A. POP	PASSED	REVISED -
CHECKED -	R.P.N. / G.R.A. / J.G.Y.		REVISED -

ENGINEER OF BRIDGE DESIGN

ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 051-0074
SHEET 38 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	79
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

MODEL: 051074-74164-038
FILE NAME: pw:\\dot-pw.bentley.com:PWIDOT\Documents\IDOT Offices\Bureau of Bridges and Structures\Projects\051074\CADD Plans\051074-74164.dgn

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Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 8/21/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0074
Station 85+12

BORING NO. 5
Station 86+38
Offset 27.0ft Lt (West)
Ground Surface Elev. 412.91 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 393.4 ft
▽ Upon Completion Washed ft
▼ After 576 Hrs. 407.9 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Riprap and broken concrete on soft, SILTY LOAM.			
No samples.			
408.41			
-5	2		
Stiff to medium, damp, gray, SILTY CLAY.	3	1.03	
	4	B	
	3		
	3	0.82	
	3	B	
-10	2		
	3	0.74	
	3	B	
	1		
	1	0.58	
	1	B	
398.41			
-15	1		
Soft, damp, gray, SILT.	1	0.33	
	1	B	
	1		
	0	0.33	
	1	B	
▽ 393.41			
-20	0		

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Loose, wet, gray, fine grained, SAND. 6% passing #200 sieve. (continued)	2		
	3		
390.91			
Soft, wet, gray, SANDY LOAM.	2		
	5	0.24	
	8	S	
387.61			
-25	2		
Medium, damp, gray, SILT.	3	0.4	
	2	PP	
385.91			
Stiff, damp, gray, SILTY LOAM.	4		
	6	1.65	
	6	B	
383.41			
-30	1		
Medium, damp, gray, SILT.	2	0.54	
	2	B	
-35	1		
	1	0.58	
	2	B	
372.91 -40	3		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 8/21/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0074
Station 85+12

BORING NO. 5
Station 86+38
Offset 27.0ft Lt (West)
Ground Surface Elev. 412.91 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 393.4 ft
▽ Upon Completion Washed ft
▼ After 576 Hrs. 407.9 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Stiff to medium, damp, gray, SILT.	6	1.24	
	8	B	
-45	5		
	9	0.91	
367.41	13	B	
Medium, wet, gray, fine grained, SAND.			
-50	6		
7% passing #200 sieve.	8		
	7		
-55			
352.91 -60	6		

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Medium, wet, gray, fine grained, SAND. 6% passing #200 sieve.	7		
	7		
-65			
343.41			
Medium, very wet, gray, SANDY LOAM.	6		
-70	8		
	10		
-75			
333.41			
Medium, damp, gray, LOAM. -80	8		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 8/21/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0074
Station 85+12

BORING NO. 5
Station 86+38
Offset 27.0ft Lt (West)
Ground Surface Elev. 412.91 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 393.4 ft
▽ Upon Completion Washed ft
▼ After 576 Hrs. 407.9 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Medium, damp, gray, LOAM. (continued)	16	0.82	
	22	B	
-85			
-90	6		
	3	0.62	
	6	B	
-95			
313.41			
Hard, damp, gray, SANDY CLAY. -100	14		

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Hard, damp, gray, SANDY CLAY. (continued)	28	6.18	
	41	BS	
308.41			
Very stiff, damp, gray, SILTY CLAY LOAM TILL. -105	25		
	36	2.89	
	45	S	
303.41			
Very dense, moist, gray, SILTY CLAY SHALE. 303.11 -110	50/2"		
Extent of exploration.	50/1"		
	50/1"		
Benchmark: BM13 Chiseled square on hubguard NE corner of existing structure Sta 86+83 Rt 15.5' = 431.16'			
-115			
-120			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

DESIGNED	-	RYAN P. NEGANGARD	
CHECKED	-	JOE G. YOUNG	
DRAWN	-	DENNIS A. POP	
CHECKED	-	R.P.N. / G.R.A. / J.G.Y.	

EXAMINED — ENGINEER OF BRIDGE DESIGN
PASSED — ENGINEER OF BRIDGES AND STRUCTURES
DATE - 10-10-2024
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 051-0074
SHEET 39 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	80
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

MODEL: 051074-74164-039
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Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 9/26/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0074
Station 85+12

BORING NO. 6 (N Abut)
Station 87+09
Offset 7.5ft Rt (East)
Ground Surface Elev. 430.88 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 400.0 ft
▽ Upon Completion Washed ft
▼ After 120 Hrs. 406.9 ft

	DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
3.75" Asphalt on 11" Concrete Pavement.				
429.68				
Estimated, CLAY, embankment.				
No samples.				
426.38				
Stiff to very stiff, damp, gray, CLAY w/ Silt, embankment.	-5	3		
		4	1.24	21
		5	B	
		4		
		4	1.81	20
		4	B	
	-10	4		
		4	2.27	20
		5	B	
		5		
		6	2.06	20
		8	B	
	-15	3		
		4	1.24	32
		6	B	
		11		
412.88		50/1"	1.65	31
9" concrete pavement, augered through. 412.08		50/1"	B	
	-20	3		
Estimated, CLAY. No recovery this trip.		4		
		3		
		2		
Stiff, damp, gray/brown, CLAY. (continued)		3	1.48	32
		5	B	
▼				
	-25	3		
		4	1.24	33
		4	BS	
403.88				
Medium to stiff, damp, gray, SILTY CLAY.		2		
		2	0.74	26
		2	B	
	-30	1		
		2	1.03	38
▽ 399.98		3	B	
Very loose, wet, gray, fine grained, SAND.				
	-35	1		
3% passing #200 sieve.		1		23
		1		
	-40	8		
390.88				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 9/26/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0074
Station 85+12

BORING NO. 6 (N Abut)
Station 87+09
Offset 7.5ft Rt (East)
Ground Surface Elev. 430.88 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 400.0 ft
▽ Upon Completion Washed ft
▼ After 120 Hrs. 406.9 ft

	DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Dense, wet, gray, fine grained, SAND. 5% passing #200 sieve.		14		25
		22		
386.38				
Very stiff, damp, gray, SILTY CLAY.	-45	4		
		6	3.30	27
		9	B	
381.38				
Soft, damp, gray, SILT. LL = 42.6 PL = 30.9 PI = 11.7	-50	1		
		2	0.41	47
		3	B	
	-55			
	-60	5		
Medium, damp, gray, SANDY LOAM. 370.68		5	0.58	22
		5	B	
	-65			
361.38				
Dense, wet, gray, SAND. 3% passing #200 sieve.	-70	12		
		20		24
		24		
	-75			
351.38				
	-80	5		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

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FILE NAME: pw:\\dot-pwbentley.com:PWIDOT\Documents\IDOT Offices\Bureau of Bridges and Structures\Projects\051007\CADD Plans\051007-74164.dgn

DESIGNED -	RYAN P. NEGANGARD	EXAMINED	DATE - 10-10-2024
CHECKED -	JOE G. YOUNG		ENGINEER OF BRIDGE DESIGN
DRAWN -	DENNIS A. POP	PASSED	REVISED -
CHECKED -	R.P.N. / G.R.A. / J.G.Y.		ENGINEER OF BRIDGES AND STRUCTURES REVISED -

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 051-0074
SHEET 40 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	81
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 9/26/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0074
Station 85+12

BORING NO. 6 (N Abut)
Station 87+09
Offset 7.5ft Rt (East)
Ground Surface Elev. 430.88 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 400.0 ft
▽ Upon Completion Washed ft
▼ After 120 Hrs. 406.9 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Medium, damp, gray, SANDY LOAM, (continued)	10 13	0.99 B	25
-85			
341.38			
Medium, wet, gray, fine grained, SAND.	5 7 12		24
-95			
330.88 -100	10		
Medium, wet, gray, fine grained, SAND. 5% passing #200 sieve.	12 14		25
-105			
321.38			
Very soft, damp, gray, fine grained, SANDY LOAM.	13 17 21	0.23 S	20
-115			
311.38			
-120	18		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 9/26/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0074
Station 85+12

BORING NO. 6 (N Abut)
Station 87+09
Offset 7.5ft Rt (East)
Ground Surface Elev. 430.88 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 400.0 ft
▽ Upon Completion Washed ft
▼ After 120 Hrs. 406.9 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Hard, damp, gray, SANDY CLAY LOAM TILL. (continued)	20 27	4.61 S	9
-125	15		
	23 36	5.27 S	11
301.38			
Stiff, damp, gray, SILTY CLAY SHALE.	20		
-130	30 44	1.24 BS	9
298.38			
Very dense, moist, black, COAL. 298.28	50/1"		22
Auger Refusal. Extent of exploration.	50/0" 50/0"		
-135			
Benchmark: BM13 Chiseled square on hubguard NE corner of existing structure Sta 86+83 Rt 15.5' = 431.16'			
-140			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

DESIGNED	-	RYAN P. NEGANGARD	
CHECKED	-	JOE G. YOUNG	
DRAWN	-	DENNIS A. POP	
CHECKED	-	R.P.N. / G.R.A. / J.G.Y.	

EXAMINED — ENGINEER OF BRIDGE DESIGN
PASSED — ENGINEER OF BRIDGES AND STRUCTURES
DATE - 10-10-2024
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 051-0074
SHEET 41 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	82
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

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Benchmark: Chiseled square on Souteast corner of bridge hubguard of S.N. 051-0005; 15.4' Rt. Sta. 54+72.6
Elev. 431.29

Existing Structure: Structure No. 051-0005, a 22 span structure was built in 1923 as SBI Route 1, Section 16. The superstructure was replaced in 1964 and the three north end spans were filled in, reducing the number of spans to 19. The bridge is 819'-1½" back-to-back and 35'-8" out-to-out. The superstructure consists of a reinforced concrete deck on wide flange beams, supported by one closed and one open abutment and two-column piers on pile supported footings. The bridge is to be removed and replaced utilizing stage construction.

Salvage: None

DESIGN SPECIFICATIONS

2017 AASHTO LRFD Bridge Design Specifications, 8th Edition

DESIGN STRESSES

FIELD UNITS

f'c = 4,000 psi (Superstructure)
f'c = 3,500 psi (Substructure)
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50)
All structural steel shall be metallized.

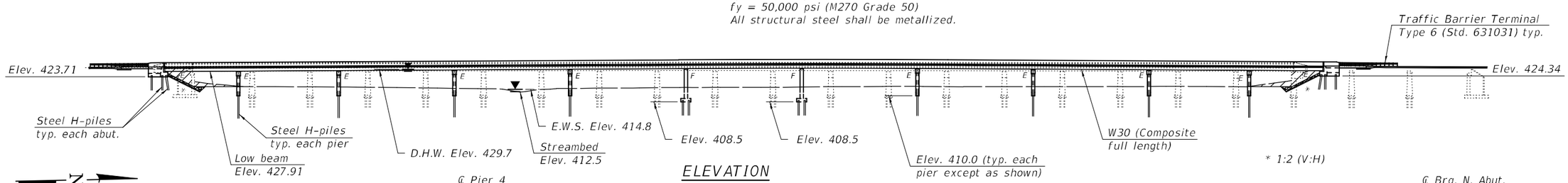
LOADING HL-93

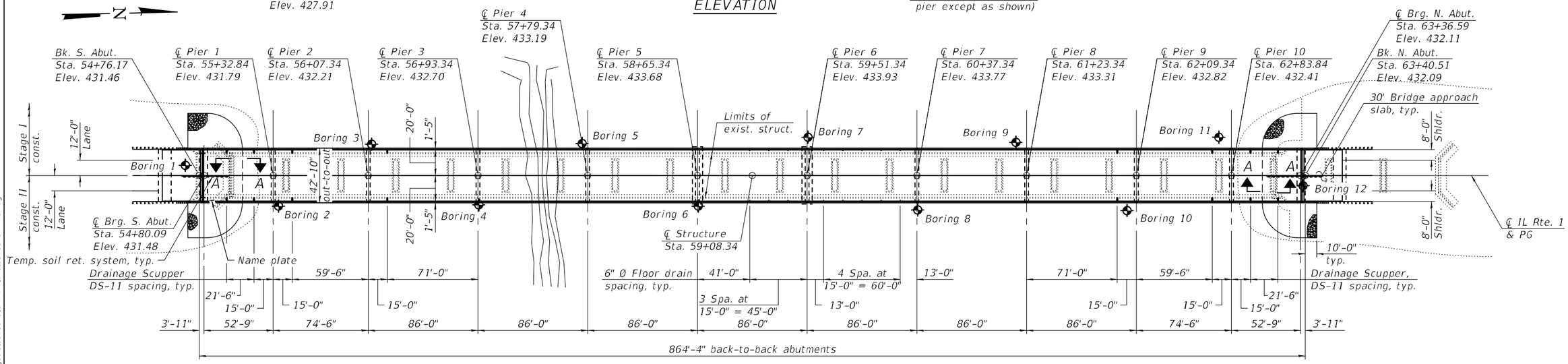
Allow 50#/sq. ft. for future wearing surface.

SEISMIC DATA

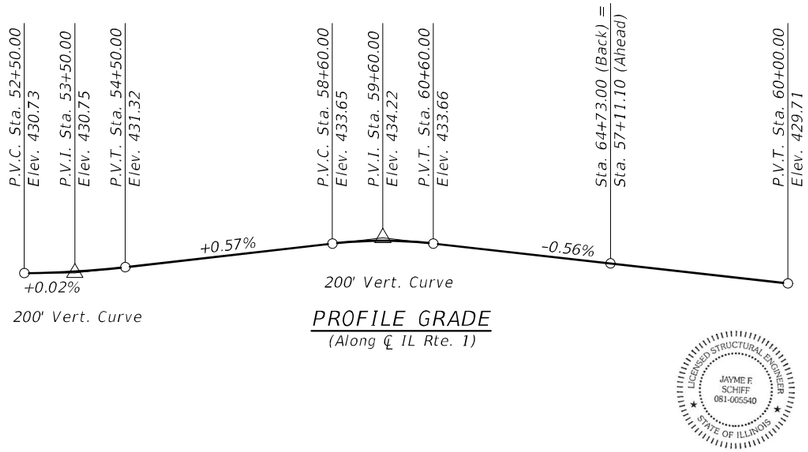
Seismic Performance Zone (SPZ) = 3
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.328 g
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.748 g
Soil Site Class = E

ELEVATION





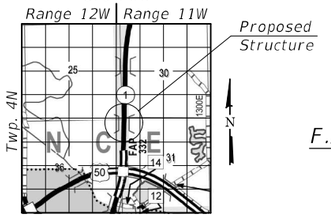
PLAN



PROFILE GRADE

(Along ℄ IL Rte. 1)

Note:
Up to ¼" may be ground off the bridge deck and the bridge approach slab.
The profile grade shows the final elevations after grinding.
Hatched area indicates channel excavation. See roadway plans for quantity. See sheet 5 of 59 for details.



LOCATION SKETCH

GENERAL PLAN & ELEVATION
ILLINOIS ROUTE 1 OVER EMBARRAS RIVER OVERFLOW
F.A.P. RTE. 332 - SEC. (16BR-1,BR-2)B-1
LAWRENCE COUNTY
STATION 59+08.34
STRUCTURE NO. 051-0075

LICENSED STRUCTURAL ENGINEER
JAYME F. SCHIFF
081-005540
STATE OF ILLINOIS

EXPIRES 11-30-2024

DESIGNED -	DAVID H. RICHTER	EXAMINED	DATE - 10-10-2024
CHECKED -	RYAN P. NEGANGARD		ENGINEER OF BRIDGE DESIGN
DRAWN -	MICHAEL B. MOSSMAN	PASSED	REVISED - ____
CHECKED -	D.H.R. / R.P.N. / G.R.A.		REVISED - ____
			ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET 1 OF 59 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	83
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	

MODEL: 051007S-74164-001
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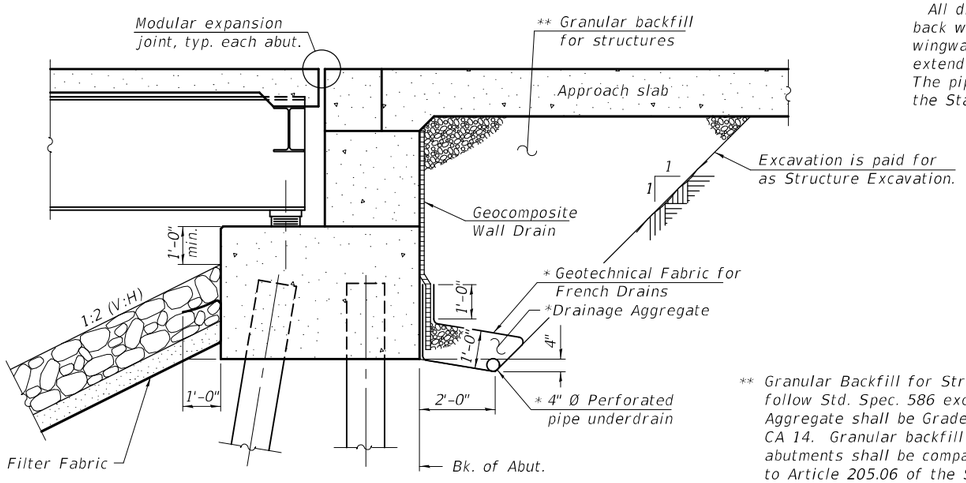


SECTION THRU PILE SUPPORTED STUB ABUTMENT

*Included in the cost of Pipe Underdrains for Structures.

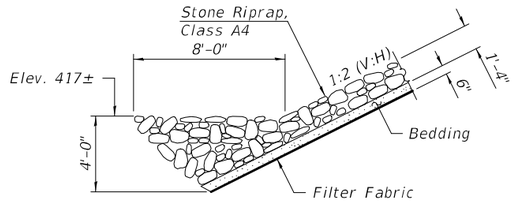
Note:
All drainage system components shall extend parallel to the abutment back wall until they intersect the wingwalls or 2'-0" from the end of the wingwalls when the wings are parallel to the abutment. The pipe shall extend under the wingwall, if necessary, until intersecting the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

STATION 59+08.34
BUILT 20 BY
STATE OF ILLINOIS
F.A.P. RTE. 332 – SEC. (16BR-1,BR-2)B-1
LOADING HL-93
STRUCTURE NO. 051 – 0075

NAME PLATE

See Std. 515001

** Granular Backfill for Structures shall follow Std. Spec. 586 except the Coarse Aggregate shall be Grade CA 7, CA 11 or CA 14. Granular backfill behind the abutments shall be compacted according to Article 205.06 of the Standard Specifications.



SECTION A-A

GENERAL NOTES

Fasteners shall be ASTM F 3125 Grade A325 Type 1, hot dip galvanized bolts in metallized areas. Bolts ⅞ in. Ø, holes $1^{5}/_{16}$ in. Ø, unless otherwise noted. See Special Provision for "Metallizing of Structural Steel".

Calculated weight of Structural Steel = 1,042,330 Lbs. (M270, Grade 50)

All new structural steel shall be AASHTO M270 Grade 50.

No field welding is permitted except as specified in the contract documents.

Reinforcement bars designated (E) shall be epoxy coated.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of ⅛ inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.

A film forming Concrete Sealer shall be applied to the designated areas of the front face of backwalls, seat areas, and front faces of pile caps of abutments.

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

All new structural steel shall be metallized and coated with a clear sealer (System 1). See Special Provisions for "Metallizing of Structural Steel".

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.

The existing south approach bent shall be removed in its entirety. Cost included with Removal of Existing Structures No. 2.

WATERWAY INFORMATION

Drainage Area = 2,329.3 sq. mi.

Existing Overtopping Elev. 428.23 at Sta. 66+41
Proposed Overtopping Elev. 428.23 at Sta. 66+41

Flood Event		Discharge (cfs)		Opening Ft²		Nat. H.W.E.	Head – Ft.		Headwater Elev.	
		Exist.	Prop.	Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
10	SN 051-0063	20466	20466	7639	7639	426.5	0.2	0.2	426.7	426.7
	SN 051-0075	12950	12860	7560	8349					
	SN 051-0074	6913	7003	4045	4609					
	Total	40329	40329	19244	20597					
30 Overtopping	SN 051-0063	27365	27365	8450	8450	428.5	0.1	0.1	428.6	428.6
	SN 051-0075	17240	17185	8555	9896					
	SN 051-0074	8843	8898	4425	5232					
	Total	53448	53448	21430	23578					
50	SN 051-0063	31775	31775	8933	8933	429.7	0.1	0.0	429.8	429.7
	SN 051-0075	18512	18760	8555	10310					
	SN 051-0074	9579	9331	4425	5232					
	Total	59866	59866	21913	24475					
100	SN 051-0063	39647	39647	9899	9899	432.0	0.1	0.1	432.1	432.1
	SN 051-0075	18858	19021	8555	10310					
	SN 051-0074	9623	9460	4425	5232					
	Total	68128	68128	22879	25441					
200	SN 051-0063	42689	42689	10488	10488	433.4	0.0	0.0	433.4	433.4
	SN 051-0075	22598	22833	8555	10310					
	SN 051-0074	11590	11355	4425	5232					
	Total	76877	76877	23468	26030					
500	SN 051-0063	45887	45887	10681	10681	434.9	0.1	0.0	435.0	434.9
	SN 051-0075	27792	28082	8555	10310					
	SN 051-0074	14255	13965	4425	5232					
	Total	87934	87934	23661	26223					

INDEX OF SHEETS

DESIGN SCOUR ELEVATION TABLE

Event / Limit State	Design Scour Elevations (ft.)												
	S. Abut.	Pier 1	Pier 2	Pier 3	Pier 4	Pier 5	Pier 6	Pier 7	Pier 8	Pier 9	Pier 10	N. Abut.	Item 113
Q100	423.8	408.6	409.0	409.0	409.0	409.0	408.5	408.3	408.1	407.2	405.5	424.5	5
Q200	423.8	408.6	409.0	409.0	409.0	409.0	408.5	408.3	408.1	407.2	405.5	424.5	
Design	423.8	408.6	409.0	409.0	409.0	409.0	408.5	408.3	408.1	407.2	405.5	424.5	
Check	423.8	408.6	409.0	409.0	409.0	409.0	408.5	408.3	408.1	407.2	405.5	424.5	

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A4	Sq. Yd.		678	678
Filter Fabric	Sq. Yd.		678	678
Protective Coat	Sq. Yd.	4,918		4,918
Removal of Existing Structures No. 2	Each			1
Structure Excavation	Cu. Yd.		1,405	1,405
Floor Drains	Each	16		16
Concrete Structures	Cu. Yd.		974.5	974.5
Concrete Superstructure	Cu. Yd.	1,224.4		1,224.4
Concrete Superstructure (Approach Slab)	Cu. Yd.	116.4		116.4
Furnishing and Erecting Structural Steel	L. Sum	0.70		0.70
Stud Shear Connectors	Each	28,992		28,992
Reinforcement Bars, Epoxy Coated	Pound	387,990	133,750	521,740
Bar Splicers	Each	3,238	604	3,842
Furnishing Steel Piles HP14x102	Foot		5,962	5,962
Furnishing Steel Piles HP14x117	Foot		8,779	8,779
Driving Piles	Foot		14,741	14,741
Test Pile Steel HP14x102	Each		4	4
Test Pile Steel HP14x117	Each		2	2
Pile Shoes	Each		140	140
Name Plates	Each	1		1
Elastomeric Bearing Assembly, Type I	Each	60		60
Anchor Bolts, 1"	Each		144	144
Temporary Soil Retention System	Sq. Ft.		638	638
Granular Backfill for Structures	Cu. Yd.		109	109
Concrete Sealer	Sq. Ft.		910	910
Geocomposite Wall Drain	Sq. Yd.		58	58
Drainage Scuppers, DS-11	Each	16		16
Bar Terminators	Each	112		112
Diamond Grinding (Bridge Section)	Sq. Yd.	3,809		3,809
Modular Expansion Joint 6"	Foot	86		86
Pipe Underdrains for Structures 4"	Foot		110	110
Bridge Deck Grooving (Longitudinal)	Sq. Yd.	2,460		2,460
Mechanical Splicers	Each		476	476

DESIGNED - DAVID H. RICHTER
CHECKED - RYAN P. NEGANGARD
DRAWN - MICHAEL B. MOSSMAN
CHECKED - D.H.R. / R.P.N. / G.R.A.

EXAMINED
ENGINEER OF BRIDGE DESIGN
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

DATE - OCTOBER 10, 2024
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DATA
STRUCTURE NO. 051 - 0075
SHEET 2 OF 59 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	84
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

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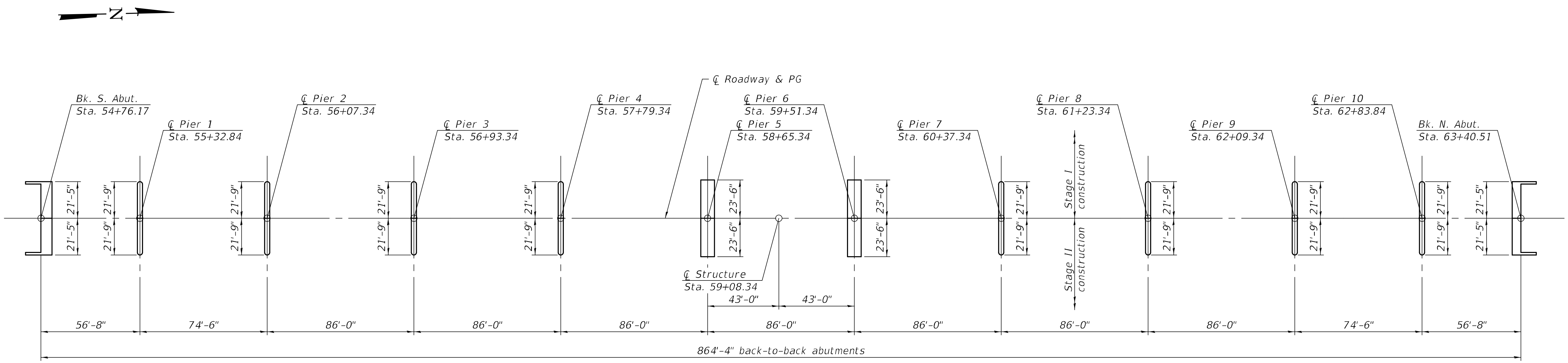
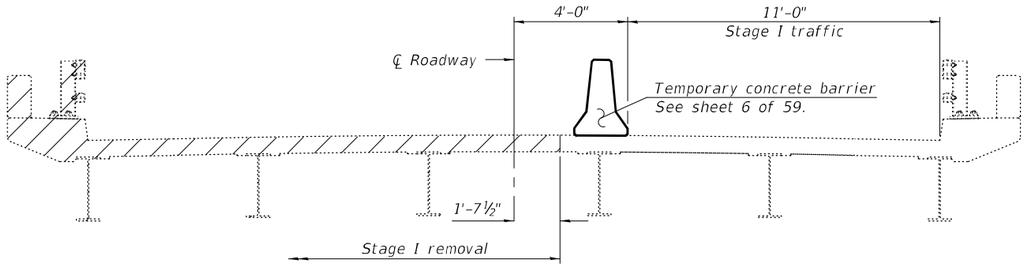


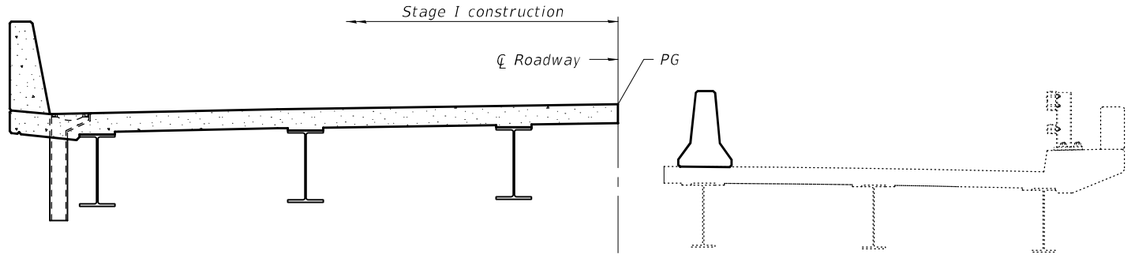
PLAN

DESIGNED - DAVID H. RICHTER	EXAMINED — ENGINEER OF BRIDGE DESIGN	DATE - OCTOBER 10, 2024	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUBSTRUCTURE LAYOUT STRUCTURE NO. 051 - 0075
CHECKED - RYAN P. NEGANGARD				
DRAWN - MICHAEL B. MOSSMAN	PASSED — ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		
CHECKED - D.H.R. / R.P.N. / G.R.A.		REVISED -		SHEET 3 OF 59 SHEETS

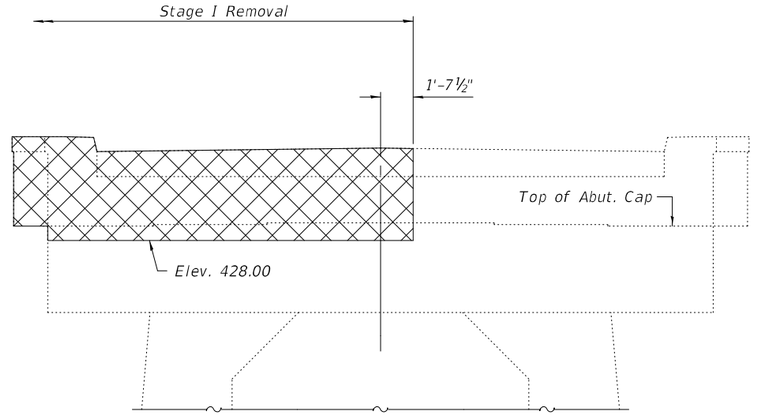
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	85
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		



STAGE I REMOVAL

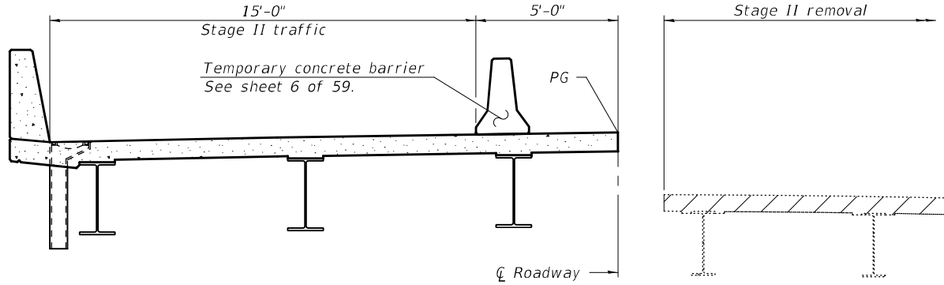


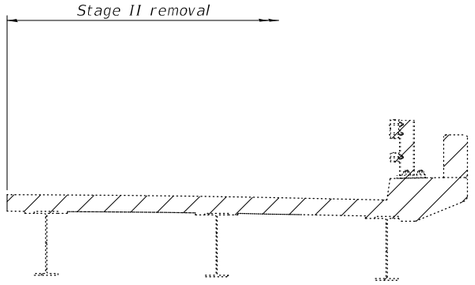
STAGE I CONSTRUCTION



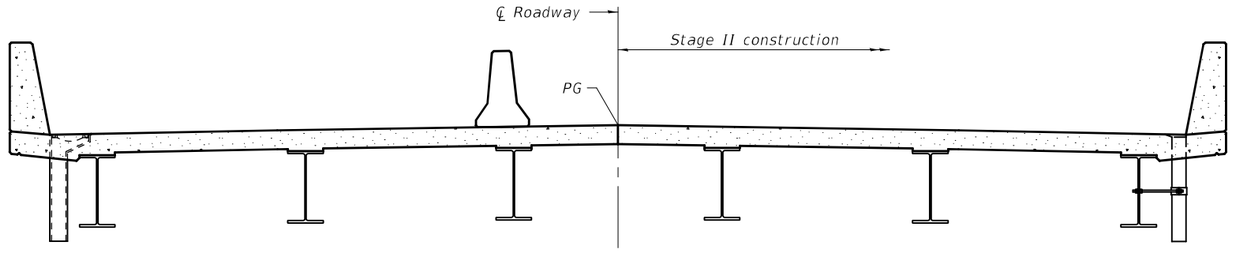
NORTH ABUTMENT CONCRETE REMOVAL

(Looking North)

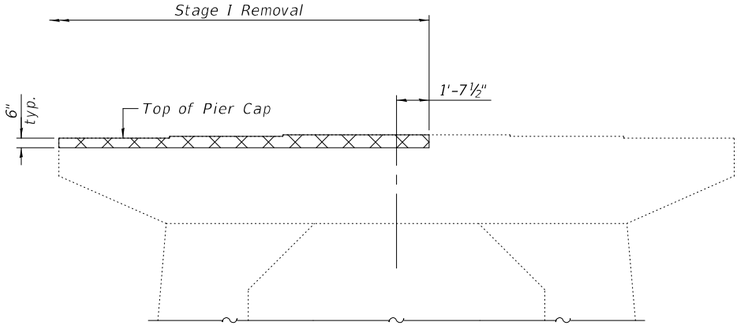




STAGE II REMOVAL



STAGE II CONSTRUCTION



PIERS 1 THRU 3 CONCRETE REMOVAL OF CAP

(Looking North)

Notes:

Hatched area indicates Removal of Existing Structures No. 2.

For quantities of temporary concrete barrier, see roadway plans.

All staging cross sections are looking north.

Crosshatched area indicates Stage I concrete removal. Cost included with Removal of Existing Structures No. 2.

Stage I partial removal limits are shown above for the north abutment and piers. The remaining portions shall be removed to the required final elevations during stage II removal.

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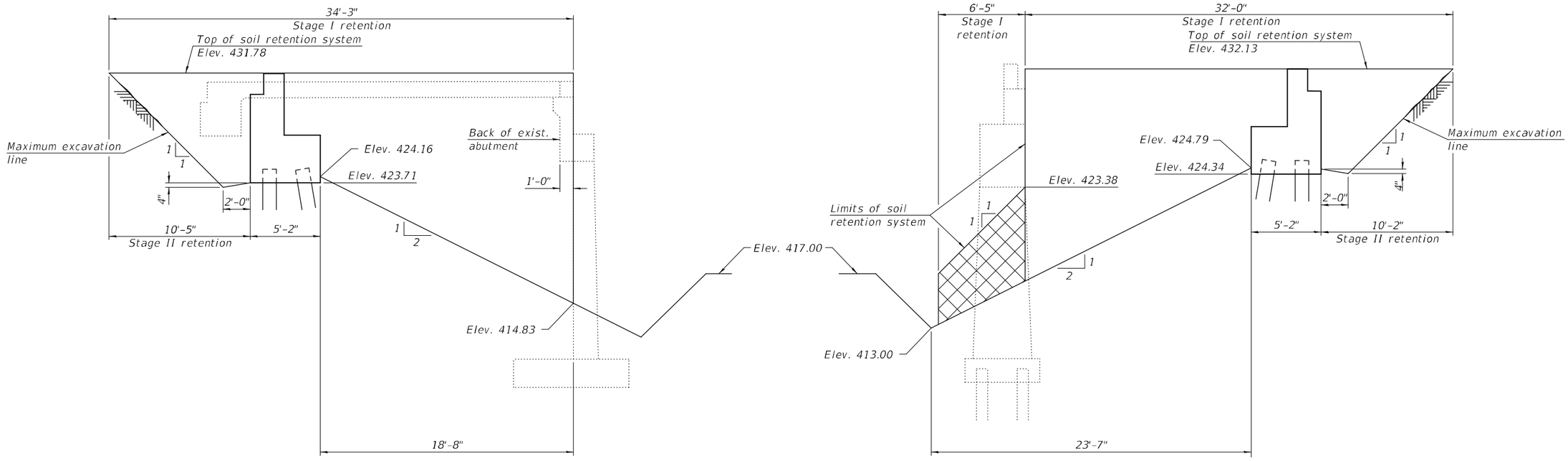
DESIGNED - DAVID H. RICHTER	EXAMINED	DATE - OCTOBER 10, 2024	**STATE OF ILLINOIS**	**STAGE CONSTRUCTION DETAILS**	
CHECKED - RYAN P. NEGANGARD			**DEPARTMENT OF TRANSPORTATION**	**STRUCTURE NO. 051 - 0075**	
DRAWN - MICHAEL B. MOSSMAN	PASSED	REVISED -		SHEET 4 OF 59 SHEETS	
CHECKED - D.H.R. / R.P.N. / G.R.A.	ENGINEER OF BRIDGE DESIGN	REVISED -			
	ENGINEER OF BRIDGES AND STRUCTURES				

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	86
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		



TEMPORARY SOIL RETENTION SYSTEM
(South Abutment Looking West)

TEMPORARY SOIL RETENTION SYSTEM
(North Abutment Looking West)

Notes:
A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan and details and calculations for review and acceptance by the Engineer.

During Stage I construction, the cross hatched area of soil under Stage I traffic shall remain as shown, unless another approved means of soil retention for the soil under the existing approach slab is provided.

DESIGNED -	DAVID H. RICHTER	EXAMINED	ENGINEER OF BRIDGE DESIGN
CHECKED -	RYAN P. NEGANGARD	PASSED	ENGINEER OF BRIDGES AND STRUCTURES
DRAWN -	MICHAEL B. MOSSMAN	DATE -	OCTOBER 10, 2024
CHECKED -	D.H.R. / R.P.N. / G.R.A.	REVISED -	
		REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY SOIL RETENTION SYSTEM
STRUCTURE NO. 051 - 0075
SHEET 5 OF 59 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	87
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

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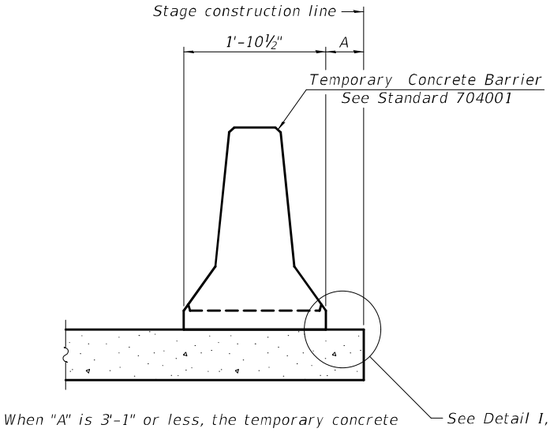
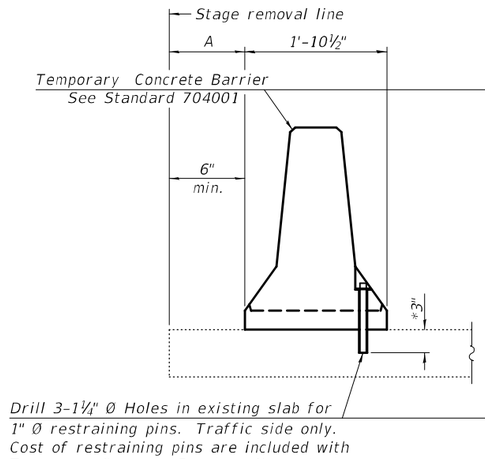


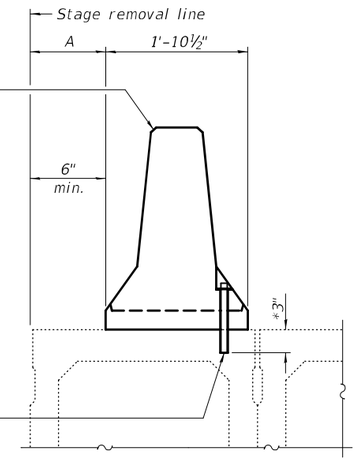
When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

NEW SLAB OR NEW DECK BEAM



Drill 3-1¼" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

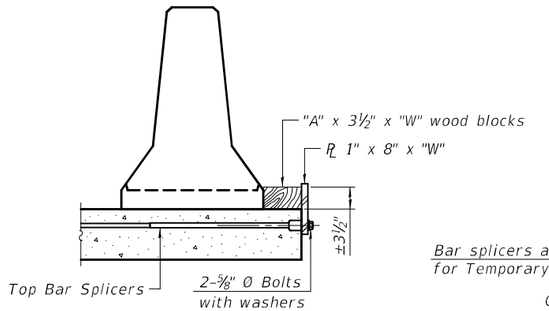
EXISTING SLAB



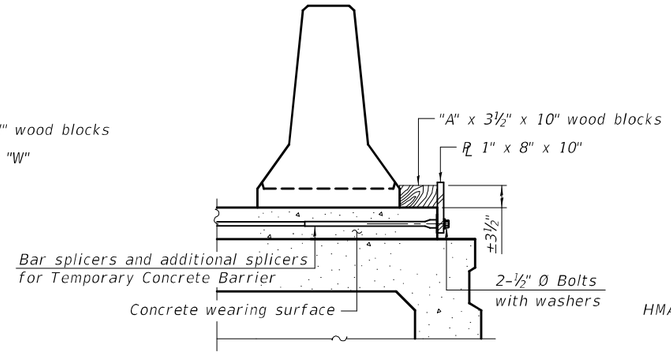
* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

EXISTING DECK BEAM

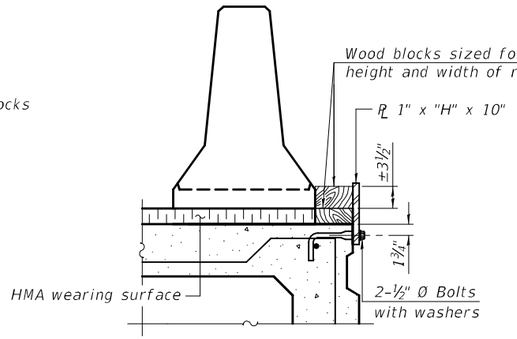
SECTIONS THRU SLAB OR DECK BEAM



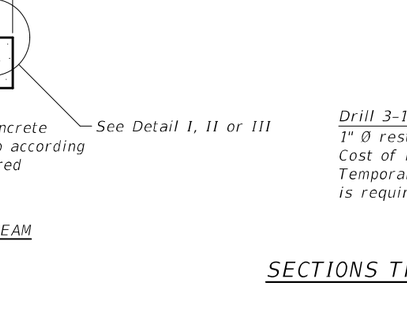
DETAIL I



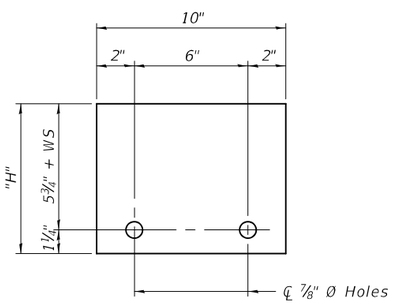
DETAIL II



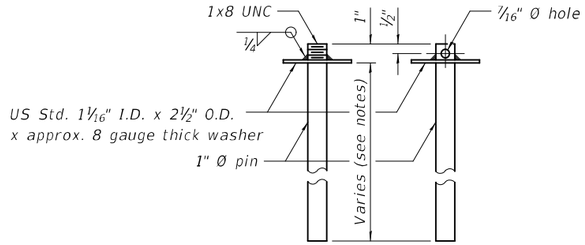
DETAIL III



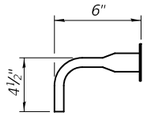
STEEL RETAINER ℄ 1" x 8" x "W"
(Detail I and II)



STEEL RETAINER ℄ 1" x "H" x 10"
(Detail III)



RESTRAINING PIN



BAR SPLICER FOR #4 BAR - DETAIL III

RAILING CRITERIA

NCHRP 350 Test Level	3
Railing Weight (plf)	440

R-27

10-12-2021

Notes:

Cost of retainer assembly is included with Temporary Concrete Barrier.

A retainer assembly shall be located at the approximate ℄ of each temporary concrete barrier.

The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.

When the 'A' dimension is less than 1½", the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate. For deck beam applications the minimum required 'A' distance is 6" to accommodate the shear key clamping device.

Detail I - Installation for a new bridge deck or bridge slab.

Detail II - Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the additional bar splicers is included with the concrete wearing surface.

Detail III - Installation for a new deck beam with no initial wearing surface or with an initial hot-mix asphalt (HMA) wearing surface present. The deck beam directly beneath the temporary concrete barrier shall be fabricated with bar splicer inserts in the side of the beam, as detailed, to accommodate the installation of the retainer assemblies. A pair of bar splicers, 6" apart, shall be placed at 6'-0" centers along the length of the beam. The cost of the bar splicers is included with the deck beam.

DESIGNED -	DAVID H. RICHTER	EXAMINED	DATE - OCTOBER 10, 2024
CHECKED -	RYAN P. NEGANGARD	PASSED	REVISED -
DRAWN -	MICHAEL B. MOSSMAN	ENGINEER OF BRIDGE DESIGN	REVISED -
CHECKED -	D.H.R. / R.P.N. / G.R.A.	ENGINEER OF BRIDGES AND STRUCTURES	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER
STRUCTURE NO. 051 - 0075
SHEET 6 OF 59 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	88
		CONTRACT NO. 74164		
	ILLINOIS FED. AID PROJECT			

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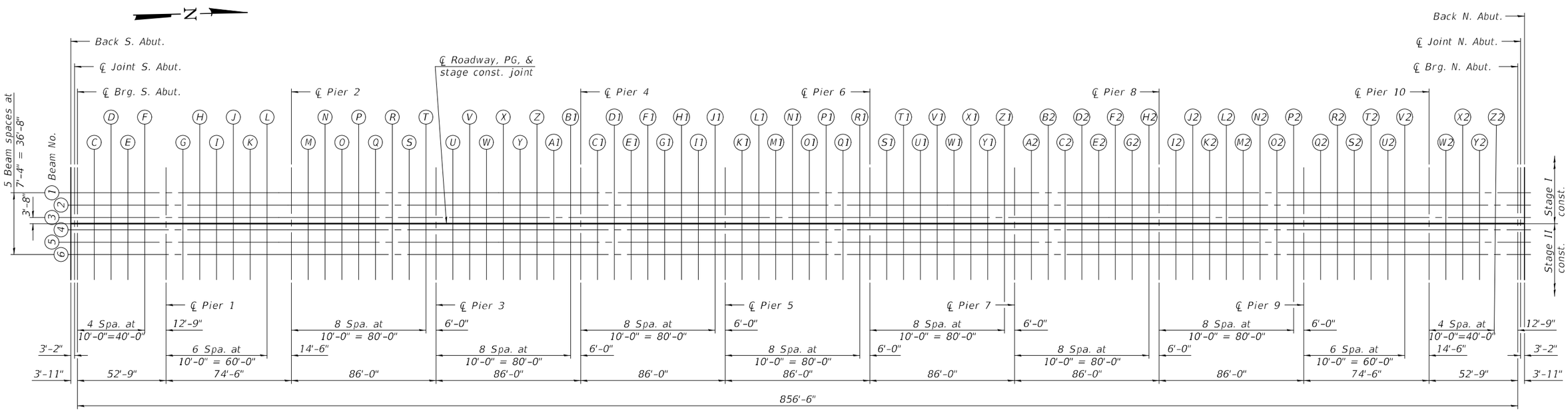
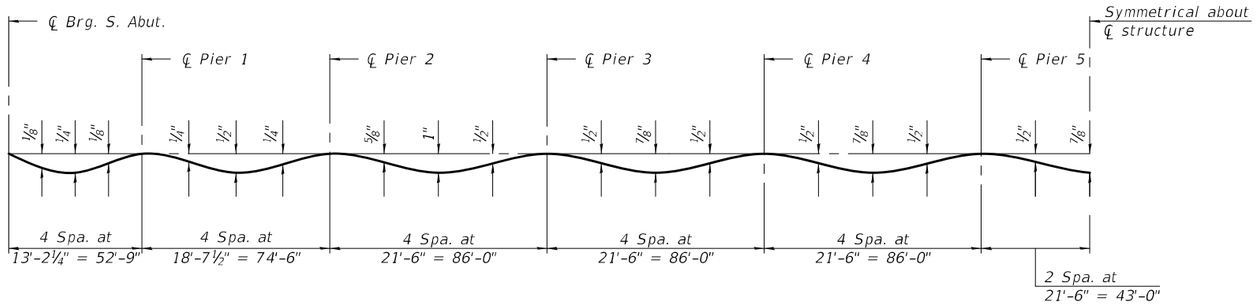


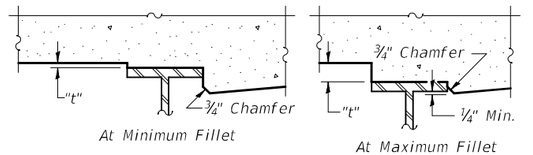
PLAN



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections and grinding as shown on sheets 8 thru 12 of 59.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection and Grinding" shown on sheets 8 thru 12 of 59, minus the initial slab thickness prior to grinding, equals the fillet heights "t" above top flange of beams.

The slab is to be ground after curing to achieve smoothness, but the slab is not to be ground to elevations below the "Theoretical Grade Elevations" shown on sheets 8 thru 12 of 59. For grinding the deck, see Special Provisions.

FILLET HEIGHTS

DESIGNED - DAVID H. RICHTER	EXAMINED	ENGINEER OF BRIDGE DESIGN	DATE - OCTOBER 10, 2024	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP OF SLAB ELEVATIONS STRUCTURE NO. 051 - 0075
CHECKED - RYAN P. NEGANGARD	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET 7 OF 59 SHEETS
DRAWN - MICHAEL B. MOSSMAN			REVISED -		
CHECKED - D.H.R. / R.P.N. / G.R.A.					

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	89
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

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BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. of S. Abut.	54+76.17	-18.33	431.16	431.18
℄ Joint S. Abut.	54+78.90	-18.33	431.17	431.19
℄ Brg. S. Abut.	54+80.09	-18.33	431.18	431.20
C	54+90.09	-18.33	431.23	431.27
D	55+00.09	-18.33	431.29	431.33
E	55+10.09	-18.33	431.35	431.38
F	55+20.09	-18.33	431.41	431.43
℄ Brg. Pier 1	55+32.84	-18.33	431.48	431.50
G	55+42.84	-18.33	431.54	431.57
H	55+52.84	-18.33	431.59	431.64
I	55+62.84	-18.33	431.65	431.70
J	55+72.84	-18.33	431.71	431.76
K	55+82.84	-18.33	431.76	431.81
L	55+92.84	-18.33	431.82	431.85
℄ Brg. Pier 2	56+07.34	-18.33	431.90	431.92
M	56+17.34	-18.33	431.96	432.00
N	56+27.34	-18.33	432.02	432.08
O	56+37.34	-18.33	432.07	432.16
P	56+47.34	-18.33	432.13	432.23
Q	56+57.34	-18.33	432.19	432.28
R	56+67.34	-18.33	432.25	432.32
S	56+77.34	-18.33	432.30	432.36
T	56+87.34	-18.33	432.36	432.39
℄ Brg. Pier 3	56+93.34	-18.33	432.39	432.41
U	57+03.34	-18.33	432.45	432.49
V	57+13.34	-18.33	432.51	432.56
W	57+23.34	-18.33	432.56	432.63
X	57+33.34	-18.33	432.62	432.71
Y	57+43.34	-18.33	432.68	432.76
Z	57+53.34	-18.33	432.74	432.80
A1	57+63.34	-18.33	432.79	432.84
B1	57+73.34	-18.33	432.85	432.88
℄ Brg. Pier 4	57+79.34	-18.33	432.88	432.90
C1	57+89.34	-18.33	432.94	432.98
D1	57+99.34	-18.33	433.00	433.06
E1	58+09.34	-18.33	433.05	433.13
F1	58+19.34	-18.33	433.11	433.20
G1	58+29.34	-18.33	433.17	433.25
H1	58+39.34	-18.33	433.23	433.29
I1	58+49.34	-18.33	433.28	433.33
J1	58+59.34	-18.33	433.34	433.37
℄ Brg. Pier 5	58+65.34	-18.33	433.37	433.39
K1	58+75.34	-18.33	433.42	433.46
L1	58+85.34	-18.33	433.47	433.53
M1	58+95.34	-18.33	433.51	433.58
N1	59+05.34	-18.33	433.54	433.63

BEAM 1 (CONTINUED)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
O1	59+15.34	-18.33	433.57	433.65
P1	59+25.34	-18.33	433.60	433.66
Q1	59+35.34	-18.33	433.61	433.66
R1	59+45.34	-18.33	433.62	433.66
℄ Brg. Pier 6	59+51.34	-18.33	433.63	433.65
S1	59+61.34	-18.33	433.63	433.67
T1	59+71.34	-18.33	433.63	433.69
U1	59+81.34	-18.33	433.62	433.69
V1	59+91.34	-18.33	433.60	433.69
W1	60+01.34	-18.33	433.58	433.67
X1	60+11.34	-18.33	433.56	433.63
Y1	60+21.34	-18.33	433.53	433.58
Z1	60+31.34	-18.33	433.49	433.52
℄ Brg. Pier 7	60+37.34	-18.33	433.47	433.49
A2	60+47.34	-18.33	433.42	433.46
B2	60+57.34	-18.33	433.37	433.42
C2	60+67.34	-18.33	433.31	433.38
D2	60+77.34	-18.33	433.26	433.34
E2	60+87.34	-18.33	433.20	433.28
F2	60+97.34	-18.33	433.14	433.21
G2	61+07.34	-18.33	433.09	433.14
H2	61+17.34	-18.33	433.03	433.06
℄ Brg. Pier 8	61+23.34	-18.33	433.00	433.02
I2	61+33.34	-18.33	432.94	432.98
J2	61+43.34	-18.33	432.89	432.95
K2	61+53.34	-18.33	432.83	432.91
L2	61+63.34	-18.33	432.77	432.87
M2	61+73.34	-18.33	432.72	432.81
N2	61+83.34	-18.33	432.66	432.74
O2	61+93.34	-18.33	432.61	432.66
P2	62+03.34	-18.33	432.55	432.58
℄ Brg. Pier 9	62+09.34	-18.33	432.52	432.54
Q2	62+19.34	-18.33	432.46	432.49
R2	62+29.34	-18.33	432.41	432.44
S2	62+39.34	-18.33	432.35	432.40
T2	62+49.34	-18.33	432.29	432.35
U2	62+59.34	-18.33	432.24	432.28
V2	62+69.34	-18.33	432.18	432.22
℄ Brg. Pier 10	62+83.84	-18.33	432.10	432.12
W2	62+93.84	-18.33	432.04	432.07
X2	63+03.84	-18.33	431.99	432.02
Y2	63+13.84	-18.33	431.93	431.97
Z2	63+23.84	-18.33	431.88	431.91
℄ Brg. N. Abut.	63+36.59	-18.33	431.80	431.82
℄ Joint N. Abut.	63+37.77	-18.33	431.80	431.82
Bk. of N. Abut.	63+40.50	-18.33	431.78	431.80

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. of S. Abut.	54+76.17	-11.00	431.30	431.32
℄ Joint S. Abut.	54+78.90	-11.00	431.31	431.33
℄ Brg. S. Abut.	54+80.09	-11.00	431.32	431.34
C	54+90.09	-11.00	431.38	431.41
D	55+00.09	-11.00	431.43	431.47
E	55+10.09	-11.00	431.49	431.52
F	55+20.09	-11.00	431.55	431.57
℄ Brg. Pier 1	55+32.84	-11.00	431.62	431.64
G	55+42.84	-11.00	431.68	431.71
H	55+52.84	-11.00	431.73	431.78
I	55+62.84	-11.00	431.79	431.84
J	55+72.84	-11.00	431.85	431.90
K	55+82.84	-11.00	431.91	431.95
L	55+92.84	-11.00	431.96	431.99
℄ Brg. Pier 2	56+07.34	-11.00	432.04	432.06
M	56+17.34	-11.00	432.10	432.15
N	56+27.34	-11.00	432.16	432.23
O	56+37.34	-11.00	432.22	432.30
P	56+47.34	-11.00	432.27	432.37
Q	56+57.34	-11.00	432.33	432.42
R	56+67.34	-11.00	432.39	432.46
S	56+77.34	-11.00	432.44	432.50
T	56+87.34	-11.00	432.50	432.53
℄ Brg. Pier 3	56+93.34	-11.00	432.54	432.56
U	57+03.34	-11.00	432.59	432.63
V	57+13.34	-11.00	432.65	432.70
W	57+23.34	-11.00	432.71	432.78
X	57+33.34	-11.00	432.76	432.85
Y	57+43.34	-11.00	432.82	432.90
Z	57+53.34	-11.00	432.88	432.94
A1	57+63.34	-11.00	432.93	432.98
B1	57+73.34	-11.00	432.99	433.02
℄ Brg. Pier 4	57+79.34	-11.00	433.03	433.05
C1	57+89.34	-11.00	433.08	433.12
D1	57+99.34	-11.00	433.14	433.20
E1	58+09.34	-11.00	433.20	433.27
F1	58+19.34	-11.00	433.25	433.34
G1	58+29.34	-11.00	433.31	433.39
H1	58+39.34	-11.00	433.37	433.43
I1	58+49.34	-11.00	433.42	433.47
J1	58+59.34	-11.00	433.48	433.51
℄ Brg. Pier 5	58+65.34	-11.00	433.51	433.53
K1	58+75.34	-11.00	433.57	433.60
L1	58+85.34	-11.00	433.61	433.67
M1	58+95.34	-11.00	433.65	433.72
N1	59+05.34	-11.00	433.69	433.77

BEAM 2 (CONTINUED)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
O1	59+15.34	-11.00	433.71	433.79
P1	59+25.34	-11.00	433.74	433.80
Q1	59+35.34	-11.00	433.75	433.80
R1	59+45.34	-11.00	433.77	433.80
℄ Brg. Pier 6	59+51.34	-11.00	433.77	433.79
S1	59+61.34	-11.00	433.77	433.81
T1	59+71.34	-11.00	433.77	433.83
U1	59+81.34	-11.00	433.76	433.83
V1	59+91.34	-11.00	433.75	433.83
W1	60+01.34	-11.00	433.73	433.81
X1	60+11.34	-11.00	433.70	433.77
Y1	60+21.34	-11.00	433.67	433.72
Z1	60+31.34	-11.00	433.63	433.66
℄ Brg. Pier 7	60+37.34	-11.00	433.61	433.63
A2	60+47.34	-11.00	433.56	433.60
B2	60+57.34	-11.00	433.51	433.57
C2	60+67.34	-11.00	433.45	433.52
D2	60+77.34	-11.00	433.40	433.48
E2	60+87.34	-11.00	433.34	433.42
F2	60+97.34	-11.00	433.29	433.35
G2	61+07.34	-11.00	433.23	433.28
H2	61+17.34	-11.00	433.17	433.20
℄ Brg. Pier 8	61+23.34	-11.00	433.14	433.16
I2	61+33.34	-11.00	433.08	433.13
J2	61+43.34	-11.00	433.03	433.09
K2	61+53.34	-11.00	432.97	433.05
L2	61+63.34	-11.00	432.92	433.01
M2	61+73.34	-11.00	432.86	432.95
N2	61+83.34	-11.00	432.80	432.88
O2	61+93.34	-11.00	432.75	432.80
P2	62+03.34	-11.00	432.69	432.73
℄ Brg. Pier 9	62+09.34	-11.00	432.66	432.68
Q2	62+19.34	-11.00	432.60	432.63
R2	62+29.34	-11.00	432.55	432.58
S2	62+39.34	-11.00	432.49	432.54
T2	62+49.34	-11.00	432.43	432.49
U2	62+59.34	-11.00	432.38	432.43
V2	62+69.34	-11.00	432.32	432.36
℄ Brg. Pier 10	62+83.84	-11.00	432.24	432.26
W2	62+93.84	-11.00	432.19	432.21
X2	63+03.84	-11.00	432.13	432.16
Y2	63+13.84	-11.00	432.07	432.11
Z2	63+23.84	-11.00	432.02	432.05
℄ Brg. N. Abut.	63+36.59	-11.00	431.95	431.97
℄ Joint N. Abut.	63+37.77	-11.00	431.94	431.96
Bk. of N. Abut.	63+40.50	-11.00	431.92	431.94

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. of S. Abut.	54+76.17	-3.67	431.41	431.43
℄ Joint S. Abut.	54+78.90	-3.67	431.42	431.44
℄ Brg. S. Abut.	54+80.09	-3.67	431.43	431.45
C	54+90.09	-3.67	431.49	431.52
D	55+00.09	-3.67	431.54	431.58
E	55+10.09	-3.67	431.60	431.63
F	55+20.09	-3.67	431.66	431.68
℄ Brg. Pier 1	55+32.84	-3.67	431.73	431.75
G	55+42.84	-3.67	431.79	431.82
H	55+52.84	-3.67	431.84	431.89
I	55+62.84	-3.67	431.90	431.95
J	55+72.84	-3.67	431.96	432.01
K	55+82.84	-3.67	432.02	432.06
L	55+92.84	-3.67	432.07	432.10
℄ Brg. Pier 2	56+07.34	-3.67	432.15	432.17
M	56+17.34	-3.67	432.21	432.26
N	56+27.34	-3.67	432.27	432.34
O	56+37.34	-3.67	432.33	432.41
P	56+47.34	-3.67	432.38	432.48
Q	56+57.34	-3.67	432.44	432.53
R	56+67.34	-3.67	432.50	432.57
S	56+77.34	-3.67	432.55	432.61
T	56+87.34	-3.67	432.61	432.64
℄ Brg. Pier 3	56+93.34	-3.67	432.65	432.67
U	57+03.34	-3.67	432.70	432.74
V	57+13.34	-3.67	432.76	432.81
W	57+23.34	-3.67	432.82	432.89
X	57+33.34	-3.67	432.87	432.96
Y	57+43.34	-3.67	432.93	433.01
Z	57+53.34	-3.67	432.99	433.05
A1	57+63.34	-3.67	433.04	433.09
B1	57+73.34	-3.67	433.10	433.13
℄ Brg. Pier 4	57+79.34	-3.67	433.14	433.16
C1	57+89.34	-3.67	433.19	433.23
D1	57+99.34	-3.67	433.25	433.31
E1	58+09.34	-3.67	433.31	433.38
F1	58+19.34	-3.67	433.36	433.45
G1	58+29.34	-3.67	433.42	433.50
H1	58+39.34	-3.67	433.48	433.54
I1	58+49.34	-3.67	433.53	433.58
J1	58+59.34	-3.67	433.59	433.62
℄ Brg. Pier 5	58+65.34	-3.67	433.62	433.64
K1	58+75.34	-3.67	433.68	433.71
L1	58+85.34	-3.67	433.72	433.78
M1	58+95.34	-3.67	433.76	433.83
N1	59+05.34	-3.67	433.80	433.88

BEAM 3 (CONTINUED)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
O1	59+15.34	-3.67	433.82	433.90
P1	59+25.34	-3.67	433.85	433.91
Q1	59+35.34	-3.67	433.86	433.91
R1	59+45.34	-3.67	433.88	433.91
℄ Brg. Pier 6	59+51.34	-3.67	433.88	433.90
S1	59+61.34	-3.67	433.88	433.92
T1	59+71.34	-3.67	433.88	433.94
U1	59+81.34	-3.67	433.87	433.94
V1	59+91.34	-3.67	433.86	433.94
W1	60+01.34	-3.67	433.84	433.92
X1	60+11.34	-3.67	433.81	433.88
Y1	60+21.34	-3.67	433.78	433.83
Z1	60+31.34	-3.67	433.74	433.77
℄ Brg. Pier 7	60+37.34	-3.67	433.72	433.74
A2	60+47.34	-3.67	433.67	433.71
B2	60+57.34	-3.67	433.62	433.68
C2	60+67.34	-3.67	433.56	433.63
D2	60+77.34	-3.67	433.51	433.59
E2	60+87.34	-3.67	433.45	433.53
F2	60+97.34	-3.67	433.40	433.46
G2	61+07.34	-3.67	433.34	433.39
H2	61+17.34	-3.67	433.28	433.31
℄ Brg. Pier 8	61+23.34	-3.67	433.25	433.27
I2	61+33.34	-3.67	433.19	433.24
J2	61+43.34	-3.67	433.14	433.20
K2	61+53.34	-3.67	433.08	433.16
L2	61+63.34	-3.67	433.03	433.12
M2	61+73.34	-3.67	432.97	433.06
N2	61+83.34	-3.67	432.91	432.99
O2	61+93.34	-3.67	432.86	432.91
P2	62+03.34	-3.67	432.80	432.84
℄ Brg. Pier 9	62+09.34	-3.67	432.77	432.79
Q2	62+19.34	-3.67	432.71	432.74
R2	62+29.34	-3.67	432.66	432.69
S2	62+39.34	-3.67	432.60	432.65
T2	62+49.34	-3.67	432.54	432.60
U2	62+59.34	-3.67	432.49	432.54
V2	62+69.34	-3.67	432.43	432.47
℄ Brg. Pier 10	62+83.84	-3.67	432.35	432.37
W2	62+93.84	-3.67	432.30	432.32
X2	63+03.84	-3.67	432.24	432.27
Y2	63+13.84	-3.67	432.18	432.22
Z2	63+23.84	-3.67	432.13	432.16
℄ Brg. N. Abut.	63+36.59	-3.67	432.06	432.08
℄ Joint N. Abut.	63+37.77	-3.67	432.05	432.07
Bk. of N. Abut.	63+40.50	-3.67	432.03	432.05

DESIGNED - DAVID H. RICHTER
CHECKED - RYAN P. NEGANGARD
DRAWN - MICHAEL B. MOSSMAN
CHECKED - D.H.R. / R.P.N. / G.R.A.

EXAMINED — ENGINEER OF BRIDGE DESIGN
PASSED — ENGINEER OF BRIDGES AND STRUCTURES
DATE - OCTOBER 10, 2024
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 051 - 0075
SHEET 9 OF 59 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	91
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

℄ ROADWAY, PG, & STAGE CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. of S. Abut.	54+76.17	0.00	431.46	431.48
℄ Joint S. Abut.	54+78.90	0.00	431.48	431.50
℄ Brg. S. Abut.	54+80.09	0.00	431.48	431.50
C	54+90.09	0.00	431.54	431.57
D	55+00.09	0.00	431.60	431.63
E	55+10.09	0.00	431.66	431.69
F	55+20.09	0.00	431.71	431.74
℄ Brg. Pier 1	55+32.84	0.00	431.79	431.81
G	55+42.84	0.00	431.84	431.88
H	55+52.84	0.00	431.90	431.94
I	55+62.84	0.00	431.96	432.01
J	55+72.84	0.00	432.01	432.07
K	55+82.84	0.00	432.07	432.11
L	55+92.84	0.00	432.13	432.16
℄ Brg. Pier 2	56+07.34	0.00	432.21	432.23
M	56+17.34	0.00	432.27	432.31
N	56+27.34	0.00	432.32	432.39
O	56+37.34	0.00	432.38	432.46
P	56+47.34	0.00	432.44	432.53
Q	56+57.34	0.00	432.49	432.58
R	56+67.34	0.00	432.55	432.62
S	56+77.34	0.00	432.61	432.66
T	56+87.34	0.00	432.67	432.70
℄ Brg. Pier 3	56+93.34	0.00	432.70	432.72
U	57+03.34	0.00	432.76	432.79
V	57+13.34	0.00	432.81	432.87
W	57+23.34	0.00	432.87	432.94
X	57+33.34	0.00	432.93	433.01
Y	57+43.34	0.00	432.99	433.06
Z	57+53.34	0.00	433.04	433.11
A1	57+63.34	0.00	433.10	433.15
B1	57+73.34	0.00	433.16	433.19
℄ Brg. Pier 4	57+79.34	0.00	433.19	433.21
C1	57+89.34	0.00	433.25	433.29
D1	57+99.34	0.00	433.30	433.36
E1	58+09.34	0.00	433.36	433.43
F1	58+19.34	0.00	433.42	433.51
G1	58+29.34	0.00	433.48	433.56
H1	58+39.34	0.00	433.53	433.60
I1	58+49.34	0.00	433.59	433.64
J1	58+59.34	0.00	433.65	433.68
℄ Brg. Pier 5	58+65.34	0.00	433.68	433.70
K1	58+75.34	0.00	433.73	433.77
L1	58+85.34	0.00	433.78	433.83
M1	58+95.34	0.00	433.82	433.89
N1	59+05.34	0.00	433.85	433.94

℄ ROADWAY, PG, & STAGE CONSTRUCTION JOINT (CONTINUED)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
O1	59+15.34	0.00	433.88	433.96
P1	59+25.34	0.00	433.90	433.97
Q1	59+35.34	0.00	433.92	433.97
R1	59+45.34	0.00	433.93	433.96
℄ Brg. Pier 6	59+51.34	0.00	433.93	433.95
S1	59+61.34	0.00	433.94	433.98
T1	59+71.34	0.00	433.93	433.99
U1	59+81.34	0.00	433.93	434.00
V1	59+91.34	0.00	433.91	434.00
W1	60+01.34	0.00	433.89	433.97
X1	60+11.34	0.00	433.87	433.93
Y1	60+21.34	0.00	433.83	433.88
Z1	60+31.34	0.00	433.80	433.83
℄ Brg. Pier 7	60+37.34	0.00	433.77	433.79
A2	60+47.34	0.00	433.73	433.76
B2	60+57.34	0.00	433.67	433.73
C2	60+67.34	0.00	433.62	433.69
D2	60+77.34	0.00	433.56	433.65
E2	60+87.34	0.00	433.51	433.59
F2	60+97.34	0.00	433.45	433.51
G2	61+07.34	0.00	433.39	433.44
H2	61+17.34	0.00	433.34	433.37
℄ Brg. Pier 8	61+23.34	0.00	433.31	433.33
I2	61+33.34	0.00	433.25	433.29
J2	61+43.34	0.00	433.19	433.26
K2	61+53.34	0.00	433.14	433.22
L2	61+63.34	0.00	433.08	433.18
M2	61+73.34	0.00	433.03	433.12
N2	61+83.34	0.00	432.97	433.05
O2	61+93.34	0.00	432.91	432.97
P2	62+03.34	0.00	432.86	432.89
℄ Brg. Pier 9	62+09.34	0.00	432.82	432.84
Q2	62+19.34	0.00	432.77	432.80
R2	62+29.34	0.00	432.71	432.75
S2	62+39.34	0.00	432.66	432.70
T2	62+49.34	0.00	432.60	432.65
U2	62+59.34	0.00	432.54	432.59
V2	62+69.34	0.00	432.49	432.53
℄ Brg. Pier 10	62+83.84	0.00	432.41	432.43
W2	62+93.84	0.00	432.35	432.38
X2	63+03.84	0.00	432.29	432.33
Y2	63+13.84	0.00	432.24	432.27
Z2	63+23.84	0.00	432.18	432.22
℄ Brg. N. Abut.	63+36.59	0.00	432.11	432.13
℄ Joint N. Abut.	63+37.77	0.00	432.10	432.12
Bk. of N. Abut.	63+40.50	0.00	432.09	432.11

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. of S. Abut.	54+76.17	3.67	431.41	431.43
℄ Joint S. Abut.	54+78.90	3.67	431.42	431.44
℄ Brg. S. Abut.	54+80.09	3.67	431.43	431.45
C	54+90.09	3.67	431.49	431.52
D	55+00.09	3.67	431.54	431.58
E	55+10.09	3.67	431.60	431.63
F	55+20.09	3.67	431.66	431.68
℄ Brg. Pier 1	55+32.84	3.67	431.73	431.75
G	55+42.84	3.67	431.79	431.82
H	55+52.84	3.67	431.84	431.89
I	55+62.84	3.67	431.90	431.95
J	55+72.84	3.67	431.96	432.01
K	55+82.84	3.67	432.02	432.06
L	55+92.84	3.67	432.07	432.10
℄ Brg. Pier 2	56+07.34	3.67	432.15	432.17
M	56+17.34	3.67	432.21	432.26
N	56+27.34	3.67	432.27	432.34
O	56+37.34	3.67	432.33	432.41
P	56+47.34	3.67	432.38	432.48
Q	56+57.34	3.67	432.44	432.53
R	56+67.34	3.67	432.50	432.57
S	56+77.34	3.67	432.55	432.61
T	56+87.34	3.67	432.61	432.64
℄ Brg. Pier 3	56+93.34	3.67	432.65	432.67
U	57+03.34	3.67	432.70	432.74
V	57+13.34	3.67	432.76	432.81
W	57+23.34	3.67	432.82	432.89
X	57+33.34	3.67	432.87	432.96
Y	57+43.34	3.67	432.93	433.01
Z	57+53.34	3.67	432.99	433.05
A1	57+63.34	3.67	433.04	433.09
B1	57+73.34	3.67	433.10	433.13
℄ Brg. Pier 4	57+79.34	3.67	433.14	433.16
C1	57+89.34	3.67	433.19	433.23
D1	57+99.34	3.67	433.25	433.31
E1	58+09.34	3.67	433.31	433.38
F1	58+19.34	3.67	433.36	433.45
G1	58+29.34	3.67	433.42	433.50
H1	58+39.34	3.67	433.48	433.54
I1	58+49.34	3.67	433.53	433.58
J1	58+59.34	3.67	433.59	433.62
℄ Brg. Pier 5	58+65.34	3.67	433.62	433.64
K1	58+75.34	3.67	433.68	433.71
L1	58+85.34	3.67	433.72	433.78
M1	58+95.34	3.67	433.76	433.83
N1	59+05.34	3.67	433.80	433.88

MODEL: 051007S-74164-010
FILE NAME: pw:\\dot-pwbentley.com:PWIDOT\Documents\IDOT Offices\Bureau of Bridges and Structures\Projects\051007S\CADD Plans\051007S-74164_dgn

10/10/2024 1:30:30 PM

DESIGNED -	DAVID H. RICHTER	EXAMINED	ENGINEER OF BRIDGE DESIGN
CHECKED -	RYAN P. NEGANGARD	PASSED	ENGINEER OF BRIDGES AND STRUCTURES
DRAWN -	MICHAEL B. MOSSMAN	DATE -	OCTOBER 10, 2024
CHECKED -	D.H.R. / R.P.N. / G.R.A.	REVISED -	
		REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 051 - 0075
SHEET 10 OF 59 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	92
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

BEAM 4 (CONTINUED)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
O1	59+15.34	3.67	433.82	433.90
P1	59+25.34	3.67	433.85	433.91
Q1	59+35.34	3.67	433.86	433.91
R1	59+45.34	3.67	433.88	433.91
℄ Brg. Pier 6	59+51.34	3.67	433.88	433.90
S1	59+61.34	3.67	433.88	433.92
T1	59+71.34	3.67	433.88	433.94
U1	59+81.34	3.67	433.87	433.94
V1	59+91.34	3.67	433.86	433.94
W1	60+01.34	3.67	433.84	433.92
X1	60+11.34	3.67	433.81	433.88
Y1	60+21.34	3.67	433.78	433.83
Z1	60+31.34	3.67	433.74	433.77
℄ Brg. Pier 7	60+37.34	3.67	433.72	433.74
A2	60+47.34	3.67	433.67	433.71
B2	60+57.34	3.67	433.62	433.68
C2	60+67.34	3.67	433.56	433.63
D2	60+77.34	3.67	433.51	433.59
E2	60+87.34	3.67	433.45	433.53
F2	60+97.34	3.67	433.40	433.46
G2	61+07.34	3.67	433.34	433.39
H2	61+17.34	3.67	433.28	433.31
℄ Brg. Pier 8	61+23.34	3.67	433.25	433.27
I2	61+33.34	3.67	433.19	433.24
J2	61+43.34	3.67	433.14	433.20
K2	61+53.34	3.67	433.08	433.16
L2	61+63.34	3.67	433.03	433.12
M2	61+73.34	3.67	432.97	433.06
N2	61+83.34	3.67	432.91	432.99
O2	61+93.34	3.67	432.86	432.91
P2	62+03.34	3.67	432.80	432.84
℄ Brg. Pier 9	62+09.34	3.67	432.77	432.79
Q2	62+19.34	3.67	432.71	432.74
R2	62+29.34	3.67	432.66	432.69
S2	62+39.34	3.67	432.60	432.65
T2	62+49.34	3.67	432.54	432.60
U2	62+59.34	3.67	432.49	432.54
V2	62+69.34	3.67	432.43	432.47
℄ Brg. Pier 10	62+83.84	3.67	432.35	432.37
W2	62+93.84	3.67	432.30	432.32
X2	63+03.84	3.67	432.24	432.27
Y2	63+13.84	3.67	432.18	432.22
Z2	63+23.84	3.67	432.13	432.16
℄ Brg. N. Abut.	63+36.59	3.67	432.06	432.08
℄ Joint N. Abut.	63+37.77	3.67	432.05	432.07
Bk. of N. Abut.	63+40.50	3.67	432.03	432.05

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. of S. Abut.	54+76.17	11.00	431.30	431.32
℄ Joint S. Abut.	54+78.90	11.00	431.31	431.33
℄ Brg. S. Abut.	54+80.09	11.00	431.32	431.34
C	54+90.09	11.00	431.38	431.41
D	55+00.09	11.00	431.43	431.47
E	55+10.09	11.00	431.49	431.52
F	55+20.09	11.00	431.55	431.57
℄ Brg. Pier 1	55+32.84	11.00	431.62	431.64
G	55+42.84	11.00	431.68	431.71
H	55+52.84	11.00	431.73	431.78
I	55+62.84	11.00	431.79	431.84
J	55+72.84	11.00	431.85	431.90
K	55+82.84	11.00	431.91	431.95
L	55+92.84	11.00	431.96	431.99
℄ Brg. Pier 2	56+07.34	11.00	432.04	432.06
M	56+17.34	11.00	432.10	432.15
N	56+27.34	11.00	432.16	432.23
O	56+37.34	11.00	432.22	432.30
P	56+47.34	11.00	432.27	432.37
Q	56+57.34	11.00	432.33	432.42
R	56+67.34	11.00	432.39	432.46
S	56+77.34	11.00	432.44	432.50
T	56+87.34	11.00	432.50	432.53
℄ Brg. Pier 3	56+93.34	11.00	432.54	432.56
U	57+03.34	11.00	432.59	432.63
V	57+13.34	11.00	432.65	432.70
W	57+23.34	11.00	432.71	432.78
X	57+33.34	11.00	432.76	432.85
Y	57+43.34	11.00	432.82	432.90
Z	57+53.34	11.00	432.88	432.94
A1	57+63.34	11.00	432.93	432.98
B1	57+73.34	11.00	432.99	433.02
℄ Brg. Pier 4	57+79.34	11.00	433.03	433.05
C1	57+89.34	11.00	433.08	433.12
D1	57+99.34	11.00	433.14	433.20
E1	58+09.34	11.00	433.20	433.27
F1	58+19.34	11.00	433.25	433.34
G1	58+29.34	11.00	433.31	433.39
H1	58+39.34	11.00	433.37	433.43
I1	58+49.34	11.00	433.42	433.47
J1	58+59.34	11.00	433.48	433.51
℄ Brg. Pier 5	58+65.34	11.00	433.51	433.53
K1	58+75.34	11.00	433.57	433.60
L1	58+85.34	11.00	433.61	433.67
M1	58+95.34	11.00	433.65	433.72
N1	59+05.34	11.00	433.69	433.77

BEAM 5 (CONTINUED)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
O1	59+15.34	11.00	433.71	433.79
P1	59+25.34	11.00	433.74	433.80
Q1	59+35.34	11.00	433.75	433.80
R1	59+45.34	11.00	433.77	433.80
℄ Brg. Pier 6	59+51.34	11.00	433.77	433.79
S1	59+61.34	11.00	433.77	433.81
T1	59+71.34	11.00	433.77	433.83
U1	59+81.34	11.00	433.76	433.83
V1	59+91.34	11.00	433.75	433.83
W1	60+01.34	11.00	433.73	433.81
X1	60+11.34	11.00	433.70	433.77
Y1	60+21.34	11.00	433.67	433.72
Z1	60+31.34	11.00	433.63	433.66
℄ Brg. Pier 7	60+37.34	11.00	433.61	433.63
A2	60+47.34	11.00	433.56	433.60
B2	60+57.34	11.00	433.51	433.57
C2	60+67.34	11.00	433.45	433.52
D2	60+77.34	11.00	433.40	433.48
E2	60+87.34	11.00	433.34	433.42
F2	60+97.34	11.00	433.29	433.35
G2	61+07.34	11.00	433.23	433.28
H2	61+17.34	11.00	433.17	433.20
℄ Brg. Pier 8	61+23.34	11.00	433.14	433.16
I2	61+33.34	11.00	433.08	433.13
J2	61+43.34	11.00	433.03	433.09
K2	61+53.34	11.00	432.97	433.05
L2	61+63.34	11.00	432.92	433.01
M2	61+73.34	11.00	432.86	432.95
N2	61+83.34	11.00	432.80	432.88
O2	61+93.34	11.00	432.75	432.80
P2	62+03.34	11.00	432.69	432.73
℄ Brg. Pier 9	62+09.34	11.00	432.66	432.68
Q2	62+19.34	11.00	432.60	432.63
R2	62+29.34	11.00	432.55	432.58
S2	62+39.34	11.00	432.49	432.54
T2	62+49.34	11.00	432.43	432.49
U2	62+59.34	11.00	432.38	432.43
V2	62+69.34	11.00	432.32	432.36
℄ Brg. Pier 10	62+83.84	11.00	432.24	432.26
W2	62+93.84	11.00	432.19	432.21
X2	63+03.84	11.00	432.13	432.16
Y2	63+13.84	11.00	432.07	432.11
Z2	63+23.84	11.00	432.02	432.05
℄ Brg. N. Abut.	63+36.59	11.00	431.95	431.97
℄ Joint N. Abut.	63+37.77	11.00	431.94	431.96
Bk. of N. Abut.	63+40.50	11.00	431.92	431.94

DESIGNED - DAVID H. RICHTER
CHECKED - RYAN P. NEGANGARD
DRAWN - MICHAEL B. MOSSMAN
CHECKED - D.H.R. / R.P.N. / G.R.A.

EXAMINED — ENGINEER OF BRIDGE DESIGN
PASSED — ENGINEER OF BRIDGES AND STRUCTURES
DATE - OCTOBER 10, 2024
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 051 - 0075
SHEET 11 OF 59 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	93
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. of S. Abut.	54+76.17	18.33	431.16	431.18
℄ Joint S. Abut.	54+78.90	18.33	431.17	431.19
℄ Brg. S. Abut.	54+80.09	18.33	431.18	431.20
C	54+90.09	18.33	431.23	431.27
D	55+00.09	18.33	431.29	431.33
E	55+10.09	18.33	431.35	431.38
F	55+20.09	18.33	431.41	431.43
℄ Brg. Pier 1	55+32.84	18.33	431.48	431.50
G	55+42.84	18.33	431.54	431.57
H	55+52.84	18.33	431.59	431.64
I	55+62.84	18.33	431.65	431.70
J	55+72.84	18.33	431.71	431.76
K	55+82.84	18.33	431.76	431.81
L	55+92.84	18.33	431.82	431.85
℄ Brg. Pier 2	56+07.34	18.33	431.90	431.92
M	56+17.34	18.33	431.96	432.00
N	56+27.34	18.33	432.02	432.08
O	56+37.34	18.33	432.07	432.16
P	56+47.34	18.33	432.13	432.23
Q	56+57.34	18.33	432.19	432.28
R	56+67.34	18.33	432.25	432.32
S	56+77.34	18.33	432.30	432.36
T	56+87.34	18.33	432.36	432.39
℄ Brg. Pier 3	56+93.34	18.33	432.39	432.41
U	57+03.34	18.33	432.45	432.49
V	57+13.34	18.33	432.51	432.56
W	57+23.34	18.33	432.56	432.63
X	57+33.34	18.33	432.62	432.71
Y	57+43.34	18.33	432.68	432.76
Z	57+53.34	18.33	432.74	432.80
A1	57+63.34	18.33	432.79	432.84
B1	57+73.34	18.33	432.85	432.88
℄ Brg. Pier 4	57+79.34	18.33	432.88	432.90
C1	57+89.34	18.33	432.94	432.98
D1	57+99.34	18.33	433.00	433.06
E1	58+09.34	18.33	433.05	433.13
F1	58+19.34	18.33	433.11	433.20
G1	58+29.34	18.33	433.17	433.25
H1	58+39.34	18.33	433.23	433.29
I1	58+49.34	18.33	433.28	433.33
J1	58+59.34	18.33	433.34	433.37
℄ Brg. Pier 5	58+65.34	18.33	433.37	433.39
K1	58+75.34	18.33	433.42	433.46
L1	58+85.34	18.33	433.47	433.53
M1	58+95.34	18.33	433.51	433.58
N1	59+05.34	18.33	433.54	433.63

BEAM 6 (CONTINUED)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
O1	59+15.34	18.33	433.57	433.65
P1	59+25.34	18.33	433.60	433.66
Q1	59+35.34	18.33	433.61	433.66
R1	59+45.34	18.33	433.62	433.66
℄ Brg. Pier 6	59+51.34	18.33	433.63	433.65
S1	59+61.34	18.33	433.63	433.67
T1	59+71.34	18.33	433.63	433.69
U1	59+81.34	18.33	433.62	433.69
V1	59+91.34	18.33	433.60	433.69
W1	60+01.34	18.33	433.58	433.67
X1	60+11.34	18.33	433.56	433.63
Y1	60+21.34	18.33	433.53	433.58
Z1	60+31.34	18.33	433.49	433.52
℄ Brg. Pier 7	60+37.34	18.33	433.47	433.49
A2	60+47.34	18.33	433.42	433.46
B2	60+57.34	18.33	433.37	433.42
C2	60+67.34	18.33	433.31	433.38
D2	60+77.34	18.33	433.26	433.34
E2	60+87.34	18.33	433.20	433.28
F2	60+97.34	18.33	433.14	433.21
G2	61+07.34	18.33	433.09	433.14
H2	61+17.34	18.33	433.03	433.06
℄ Brg. Pier 8	61+23.34	18.33	433.00	433.02
I2	61+33.34	18.33	432.94	432.98
J2	61+43.34	18.33	432.89	432.95
K2	61+53.34	18.33	432.83	432.91
L2	61+63.34	18.33	432.77	432.87
M2	61+73.34	18.33	432.72	432.81
N2	61+83.34	18.33	432.66	432.74
O2	61+93.34	18.33	432.61	432.66
P2	62+03.34	18.33	432.55	432.58
℄ Brg. Pier 9	62+09.34	18.33	432.52	432.54
Q2	62+19.34	18.33	432.46	432.49
R2	62+29.34	18.33	432.41	432.44
S2	62+39.34	18.33	432.35	432.40
T2	62+49.34	18.33	432.29	432.35
U2	62+59.34	18.33	432.24	432.28
V2	62+69.34	18.33	432.18	432.22
℄ Brg. Pier 10	62+83.84	18.33	432.10	432.12
W2	62+93.84	18.33	432.04	432.07
X2	63+03.84	18.33	431.99	432.02
Y2	63+13.84	18.33	431.93	431.97
Z2	63+23.84	18.33	431.88	431.91
℄ Brg. N. Abut.	63+36.59	18.33	431.80	431.82
℄ Joint N. Abut.	63+37.77	18.33	431.80	431.82
Bk. of N. Abut.	63+40.50	18.33	431.78	431.80

DESIGNED - DAVID H. RICHTER
CHECKED - RYAN P. NEGANGARD
DRAWN - MICHAEL B. MOSSMAN
CHECKED - D.H.R. / R.P.N. / G.R.A.

EXAMINED — ENGINEER OF BRIDGE DESIGN
PASSED — ENGINEER OF BRIDGES AND STRUCTURES
DATE - OCTOBER 10, 2024
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 051 - 0075
SHEET 12 OF 59 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	94
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

WEST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
S. End of S. Appr. Slab	54+47.17	-20.00	430.96	430.98
A	54+57.17	-20.00	431.02	431.04
B	54+67.17	-20.00	431.08	431.10
N. End of S. Appr. Slab	54+77.17	-20.00	431.13	431.15

WEST EDGE OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
S. End of S. Appr. Slab	54+47.17	-12.00	431.12	431.14
A	54+57.17	-12.00	431.18	431.20
B	54+67.17	-12.00	431.24	431.26
N. End of S. Appr. Slab	54+77.17	-12.00	431.29	431.31

℄ ROADWAY, P.G. & STAGE CONSTRUCTION JOINT

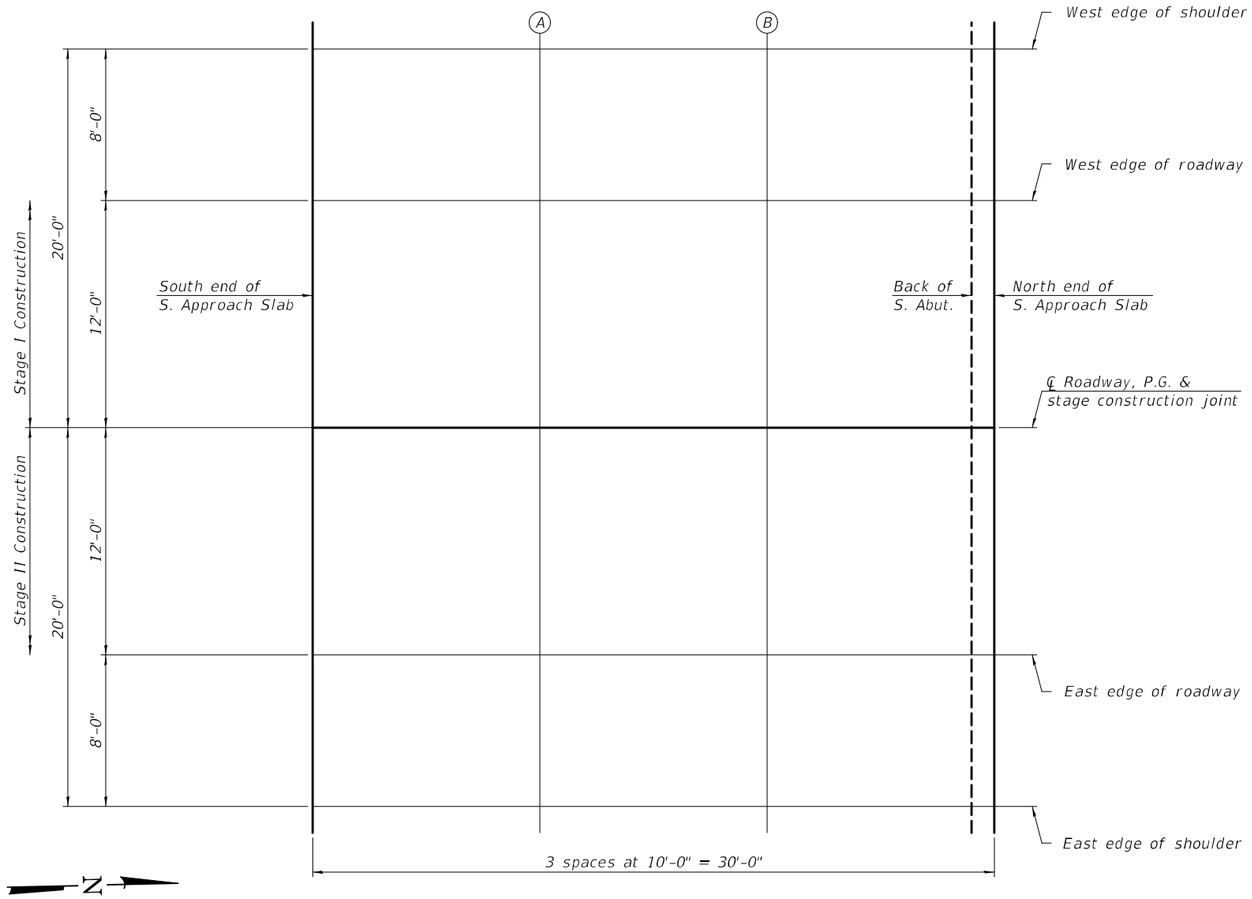
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
S. End of S. Appr. Slab	54+47.17	0.00	431.30	431.32
A	54+57.17	0.00	431.36	431.38
B	54+67.17	0.00	431.42	431.44
N. End of S. Appr. Slab	54+77.17	0.00	431.47	431.49

EAST EDGE OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
S. End of S. Appr. Slab	54+47.17	12.00	431.12	431.14
A	54+57.17	12.00	431.18	431.20
B	54+67.17	12.00	431.24	431.26
N. End of S. Appr. Slab	54+77.17	12.00	431.29	431.31

EAST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
S. End of S. Appr. Slab	54+47.17	20.00	430.96	430.98
A	54+57.17	20.00	431.02	431.04
B	54+67.17	20.00	431.08	431.10
N. End of S. Appr. Slab	54+77.17	20.00	431.13	431.15



PLAN

DESIGNED - DAVID H. RICHTER	EXAMINED	ENGINEER OF BRIDGE DESIGN	DATE - OCTOBER 10, 2024	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP OF SOUTH APPROACH SLAB ELEVATIONS STRUCTURE NO. 051 - 0075	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - RYAN P. NEGANGARD	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET 13 OF 59 SHEETS	332	(16BR-1,BR-2)B-1	LAWRENCE	198	95
DRAWN - MICHAEL B. MOSSMAN			REVISED -					CONTRACT NO. 74164		
CHECKED - D.H.R. / R.P.N. / G.R.A.							ILLINOIS	FED. AID PROJECT		

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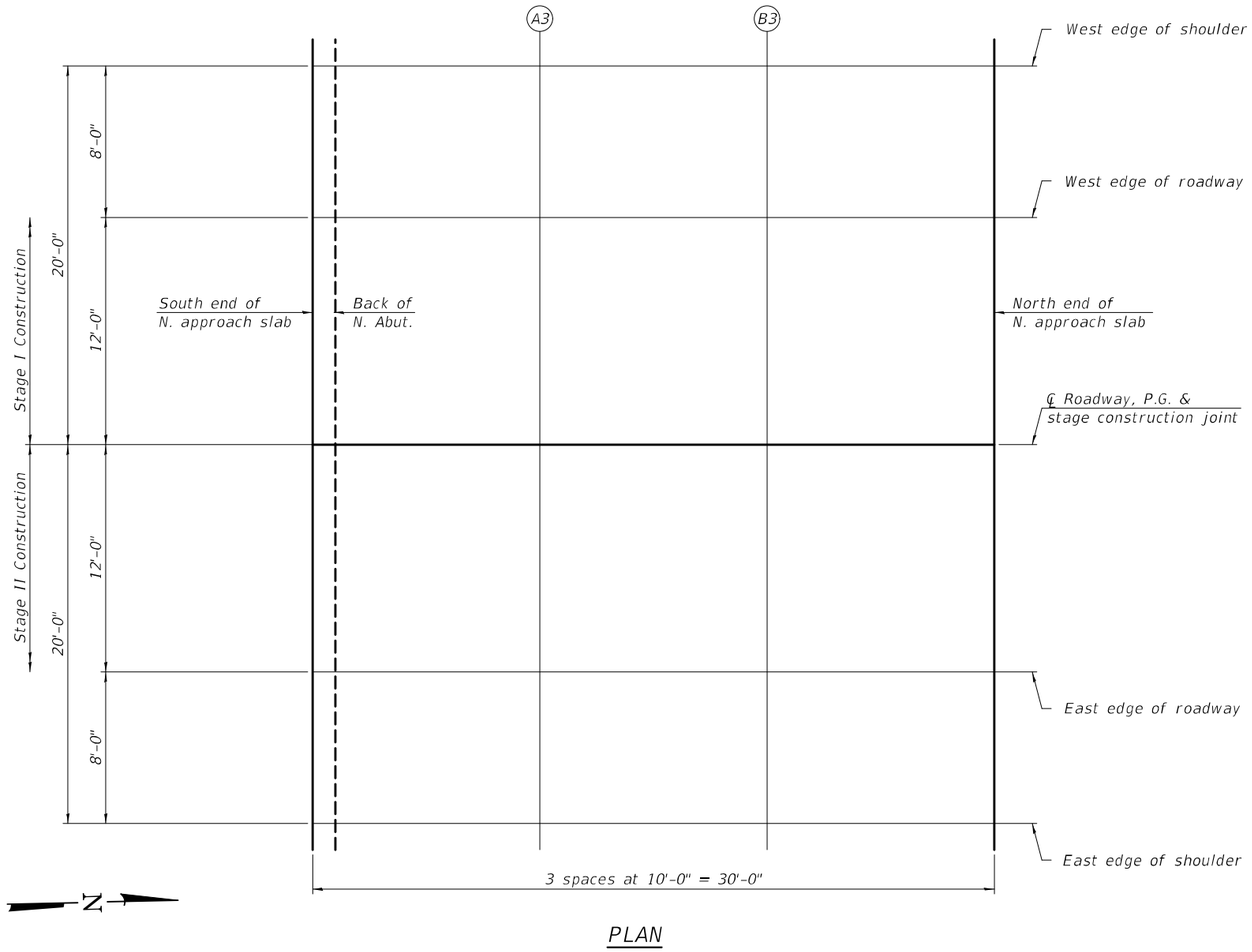
WEST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
S. End of N. Appr. Slab	63+39.51	-20.00	431.75	431.77
A3	63+49.51	-20.00	431.70	431.72
B3	63+59.51	-20.00	431.64	431.66
N. End of N. Appr. Slab	63+69.51	-20.00	431.59	431.61



PLAN

WEST EDGE OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
S. End of N. Appr. Slab	63+39.51	-12.00	431.91	431.93
A3	63+49.51	-12.00	431.86	431.88
B3	63+59.51	-12.00	431.80	431.82
N. End of N. Appr. Slab	63+69.51	-12.00	431.75	431.77

℄ ROADWAY, P.G. & STAGE CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
S. End of N. Appr. Slab	63+39.51	0.00	432.09	432.11
A3	63+49.51	0.00	432.04	432.06
B3	63+59.51	0.00	431.98	432.00
N. End of N. Appr. Slab	63+69.51	0.00	431.93	431.95

EAST EDGE OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
S. End of N. Appr. Slab	63+39.51	12.00	431.91	431.93
A3	63+49.51	12.00	431.86	431.88
B3	63+59.51	12.00	431.80	431.82
N. End of N. Appr. Slab	63+69.51	12.00	431.75	431.77

EAST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
S. End of N. Appr. Slab	63+39.51	20.00	431.75	431.77
A3	63+49.51	20.00	431.70	431.72
B3	63+59.51	20.00	431.64	431.66
N. End of N. Appr. Slab	63+69.51	20.00	431.59	431.61

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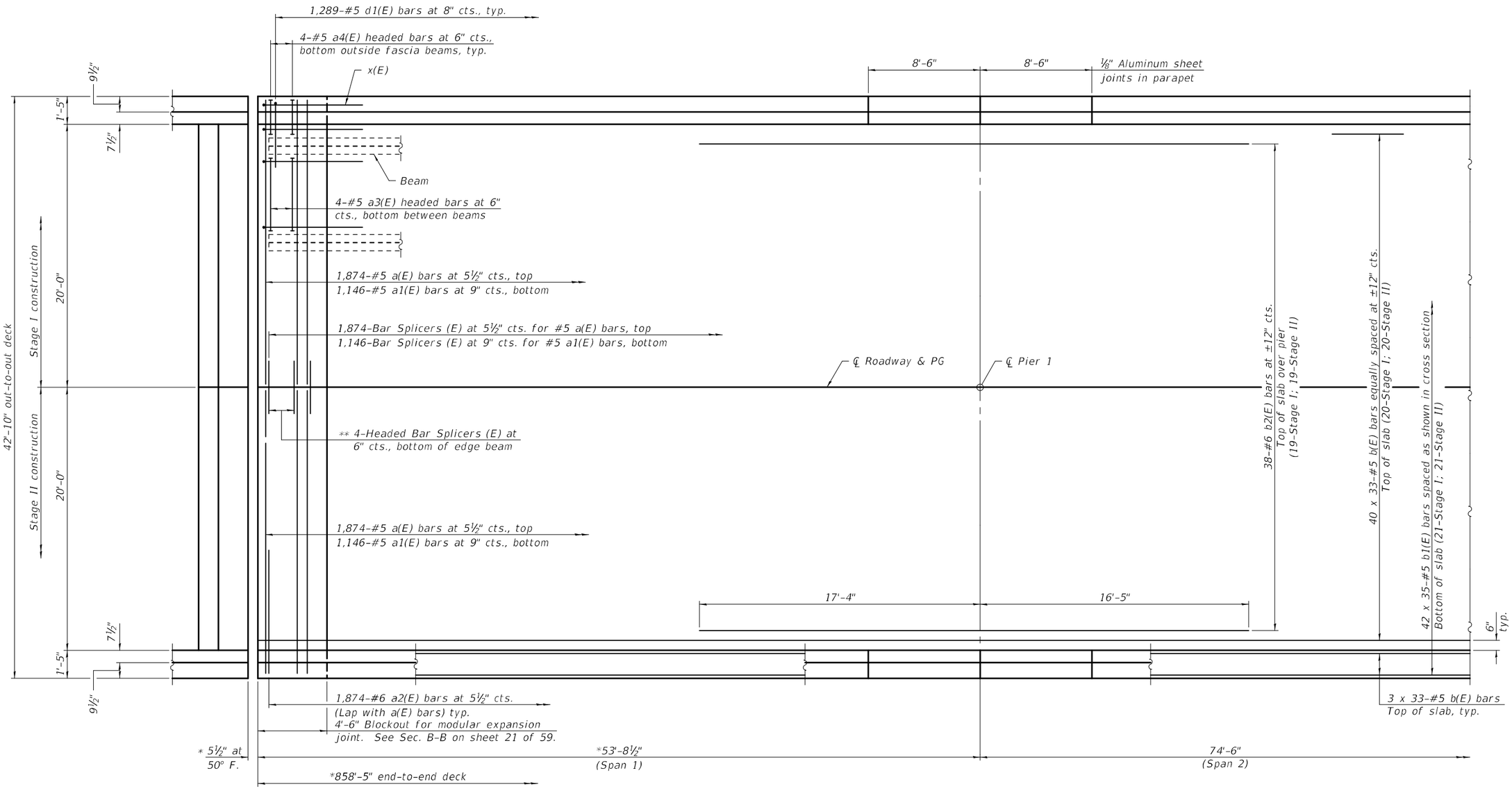
DESIGNED -	DAVID H. RICHTER	EXAMINED	DATE - OCTOBER 10, 2024
CHECKED -	RYAN P. NEGANGARD		
DRAWN -	MICHAEL B. MOSSMAN	PASSED	REVISED -
CHECKED -	D.H.R. / R.P.N. / G.R.A.		REVISED -

ENGINEER OF BRIDGE DESIGN
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF NORTH APPROACH SLAB ELEVATIONS
STRUCTURE NO. 051 - 0075
SHEET 14 OF 59 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	96
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		



PARTIAL PLAN

MINIMUM BAR LAP

#5 bar = 3'-6"

* Actual dimension may vary depending on modular joint manufacturer's design, typ.

** See sheet 42 of 59 for detail of headed bar splicers.

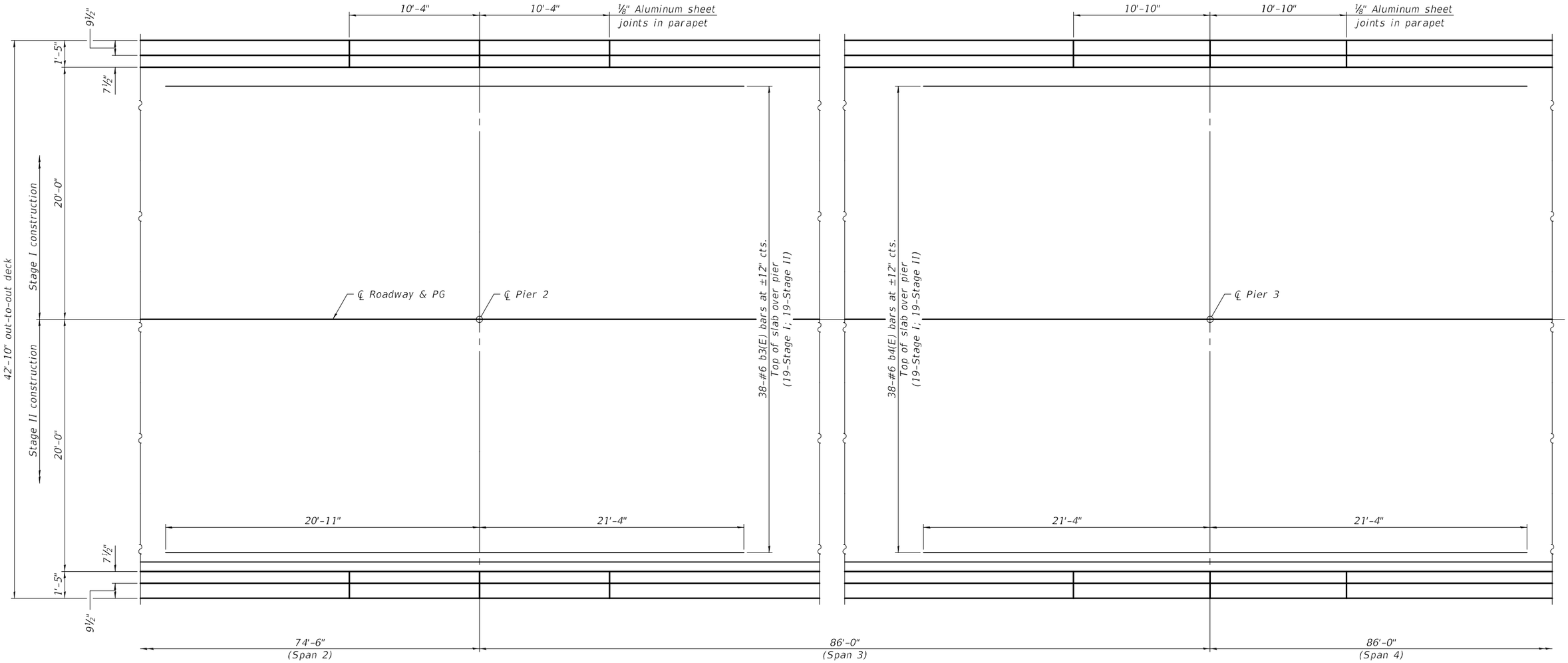
Notes:
See sheet 21 of 59 for superstructure details and Bill of Material.
See sheet 19 of 59 for x(E) bar locations and spacing.
Bars indicated thus 40 x 33-#5 etc. indicates 40 lines of bars with 33 lengths per line.

DESIGNED -	DAVID H. RICHTER	EXAMINED	DATE - OCTOBER 10, 2024
CHECKED -	RYAN P. NEGANGARD	PASSED	REVISED -
DRAWN -	MICHAEL B. MOSSMAN		REVISED -
CHECKED -	D.H.R. / R.P.N. / G.R.A.	ENGINEER OF BRIDGE DESIGN / ENGINEER OF BRIDGES AND STRUCTURES	

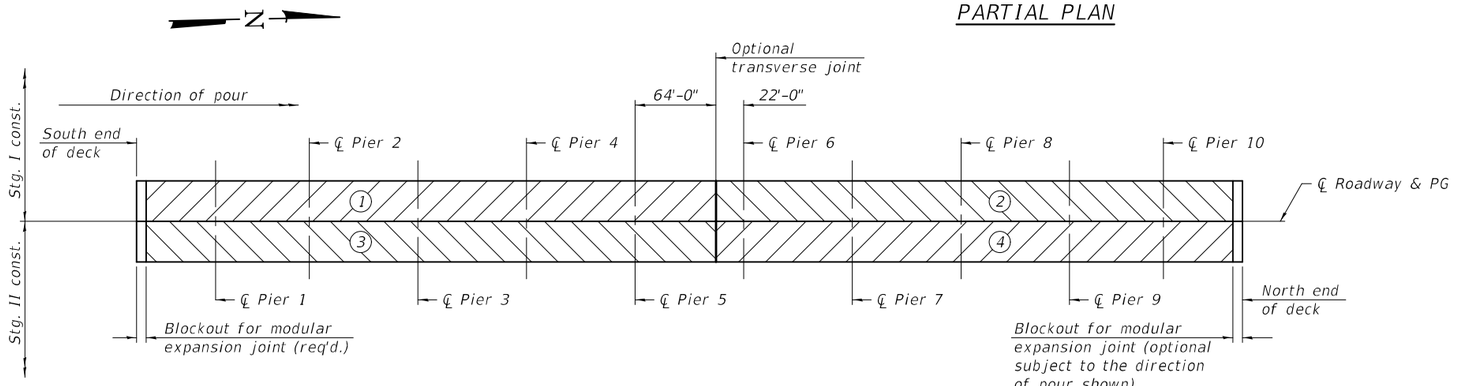
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
STRUCTURE NO. 051 - 0075
SHEET 15 OF 59 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	97
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	



PARTIAL PLAN



DECK POURING SEQUENCE

Notes:

The bridge deck shall be poured in the numeric sequence shown for each stage of construction. If the Contractor wishes to alter the deck pouring sequence from the sequence shown, the Contractor shall submit a proposed deck pouring sequence to the Engineer for review and acceptance.

When the deck pour is stopped for the day at one or more of the transverse bonded construction joints in the deck pouring sequence as shown, the next pour shall not be made until both of the following are met:

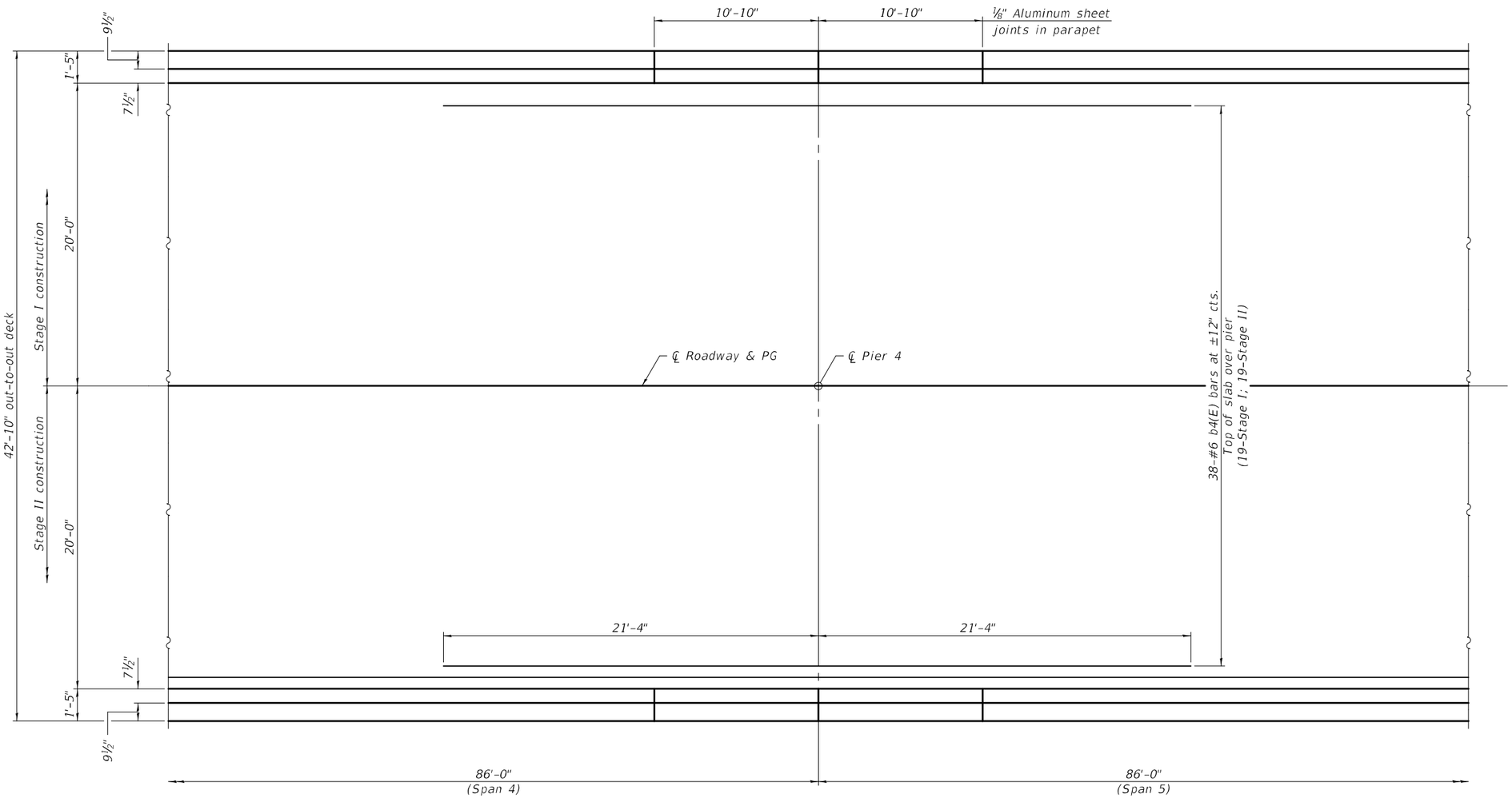
1) *At least 72 hours shall have elapsed from the end of the previous pour.*
2) *The concrete strength shall have attained a minimum flexural strength of 675 psi or a minimum compressive strength of 4000 psi.*

Blockout areas for modular expansion joint shall not be poured until the above noted time and strength requirements have been met for the adjoining pour.

Modular joint assemblies shall be installed with forming and reinforcement bars in place prior to pouring the adjoining concrete deck span.

Bearings at abutments shall be shimmed to prevent uplift during deck pour. *See sheet 31 of 59.*

DESIGNED - DAVID H. RICHTER	EXAMINED	ENGINEER OF BRIDGE DESIGN	DATE - OCTOBER 10, 2024	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**SUPERSTRUCTURE STRUCTURE NO. 051 - 0075**	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - RYAN P. NEGANGARD	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET 16 OF 59 SHEETS	332	(16BR-1,BR-2)B-1	LAWRENCE	198	98
DRAWN - MICHAEL B. MOSSMAN			REVISED -						CONTRACT NO. 74164	
CHECKED - D.H.R. / R.P.N. / G.R.A.								ILLINOIS	FED. AID PROJECT	



PARTIAL PLAN

N

DESIGNED - DAVID H. RICHTER	EXAMINED		DATE - OCTOBER 10, 2024	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**SUPERSTRUCTURE STRUCTURE NO. 051 - 0075**	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - RYAN P. NEGANGARD		ENGINEER OF BRIDGE DESIGN				332	(16BR-1,BR-2)B-1	LAWRENCE	198	99
DRAWN - MICHAEL B. MOSSMAN	PASSED		REVISED -		SHEET 17 OF 59 SHEETS				CONTRACT NO. 74164	
CHECKED - D.H.R. / R.P.N. / G.R.A.		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -					ILLINOIS	FED. AID PROJECT	

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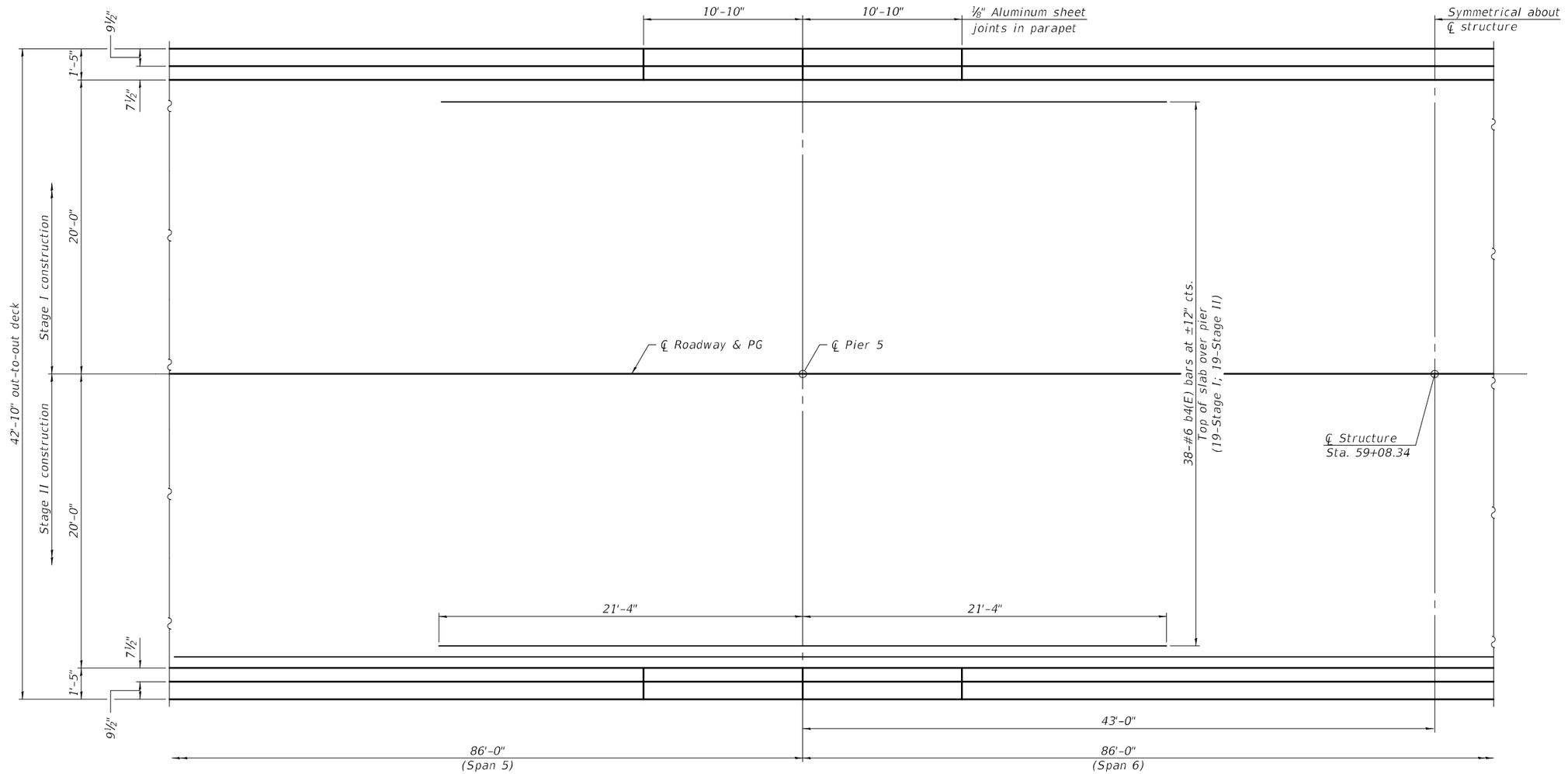

PARTIAL PLAN

N

DESIGNED - DAVID H. RICHTER	EXAMINED	DATE - OCTOBER 10, 2024	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**SUPERSTRUCTURE STRUCTURE NO. 051 - 0075**	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - RYAN P. NEGANGARD					332	(16BR-1,BR-2)B-1	LAWRENCE	198	100
DRAWN - MICHAEL B. MOSSMAN	PASSED	REVISED -		SHEET 18 OF 59 SHEETS			CONTRACT NO. 74164		
CHECKED - D.H.R. / R.P.N. / G.R.A.	ENGINEER OF BRIDGE DESIGN	REVISED -					ILLINOIS	FED. AID PROJECT	
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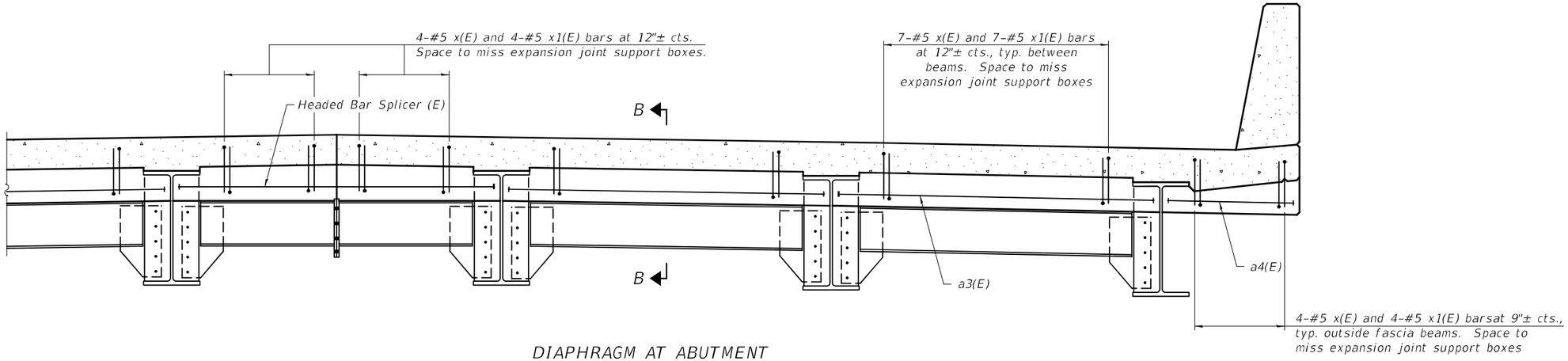
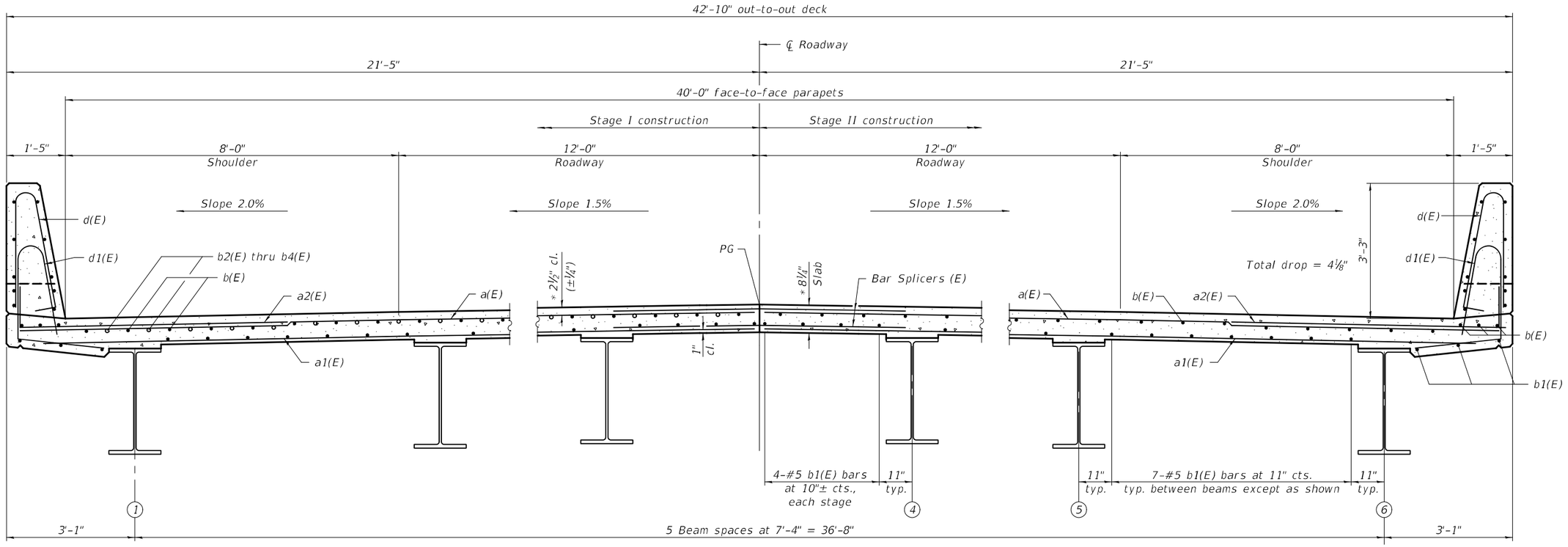


DIAPHRAGM AT ABUTMENT

Note:
For Section B-B, see sheet 21 of 59.



NEAR PIER

NEAR MIDSPAN

CROSS SECTION
(Looking North)

* Prior to grinding

DESIGNED -	DAVID H. RICHTER	EXAMINED	DATE - OCTOBER 10, 2024
CHECKED -	RYAN P. NEGANGARD	PASSED	
DRAWN -	MICHAEL B. MOSSMAN		REVISED -
CHECKED -	D.H.R. / R.P.N. / G.R.A.		REVISED -

ENGINEER OF BRIDGE DESIGN

ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
STRUCTURE NO. 051 - 0075
SHEET 19 OF 59 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	101
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	

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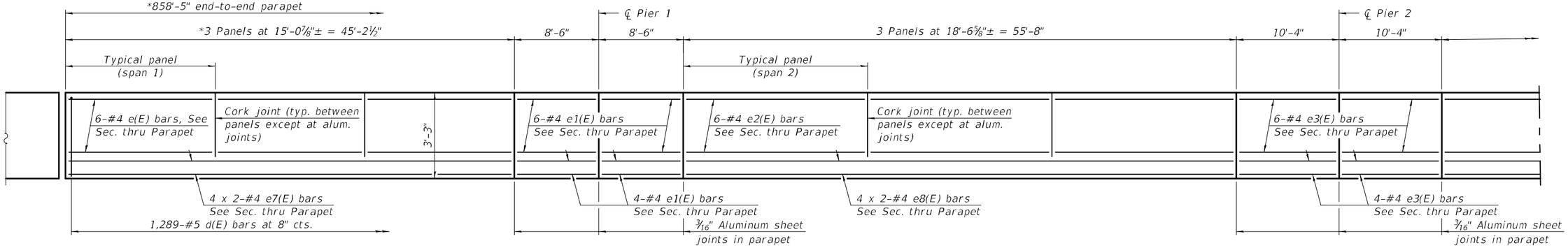
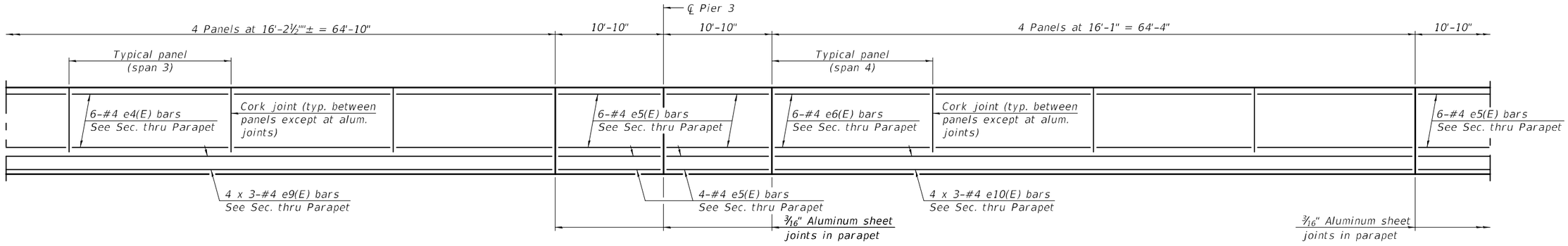
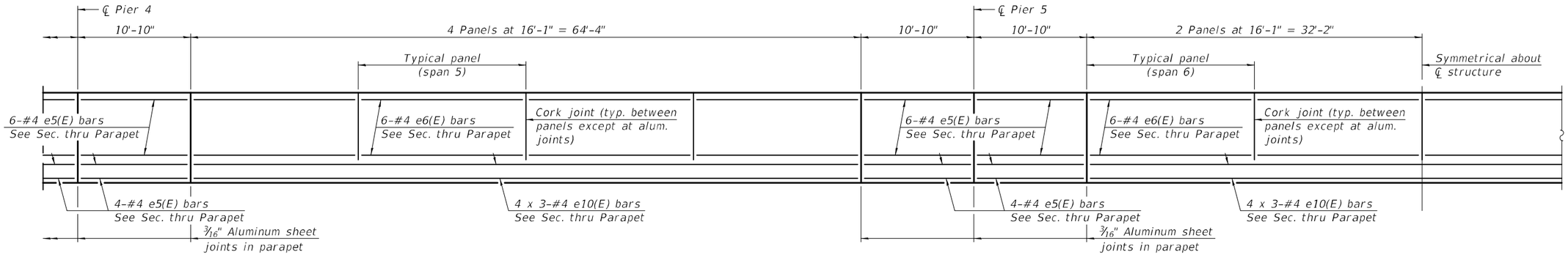
* Actual dimension may vary depending on modular joint manufacturer's design, typ.







INSIDE ELEVATION OF PARAPET

(West parapet shown; East parapet similar)

Note:
Bars indicated thus 4 x 2-#4 etc. indicates 4 line of bars with 2 lengths per line.

MINIMUM BAR LAP

#4 bar = 2'-5"

DESIGNED - DAVID H. RICHTER	EXAMINED	DATE - OCTOBER 10, 2024	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**SUPERSTRUCTURE DETAILS STRUCTURE NO. 051 - 0075**	F.A.P. RTE. 332 / SECTION (16BR-1,BR-2)B-1 / COUNTY LAWRENCE / TOTAL SHEETS 198 / SHEET NO. 102
CHECKED - RYAN P. NEGANGARD		REVISED -		SHEET 20 OF 59 SHEETS	CONTRACT NO. 74164
DRAWN - MICHAEL B. MOSSMAN	PASSED	REVISED -			ILLINOIS / FED. AID PROJECT
CHECKED - D.H.R. / R.P.N. / G.R.A.	ENGINEER OF BRIDGE DESIGN; ENGINEER OF BRIDGES AND STRUCTURES				

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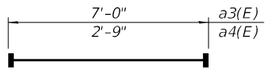
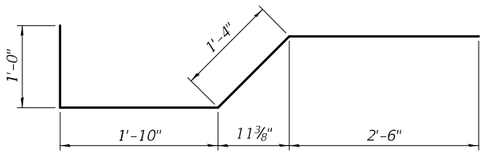
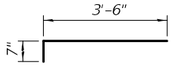


BARS a3(E) & a4(E)

(Headed. 96-#5 Bar terminators)



BAR x(E)

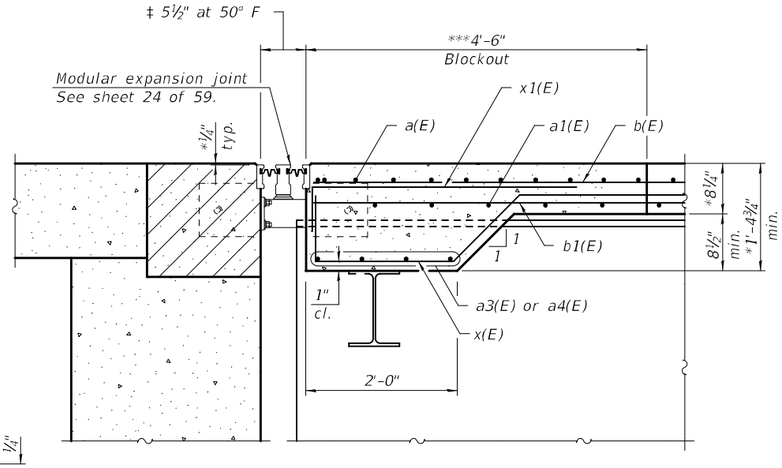


BAR x1(E)

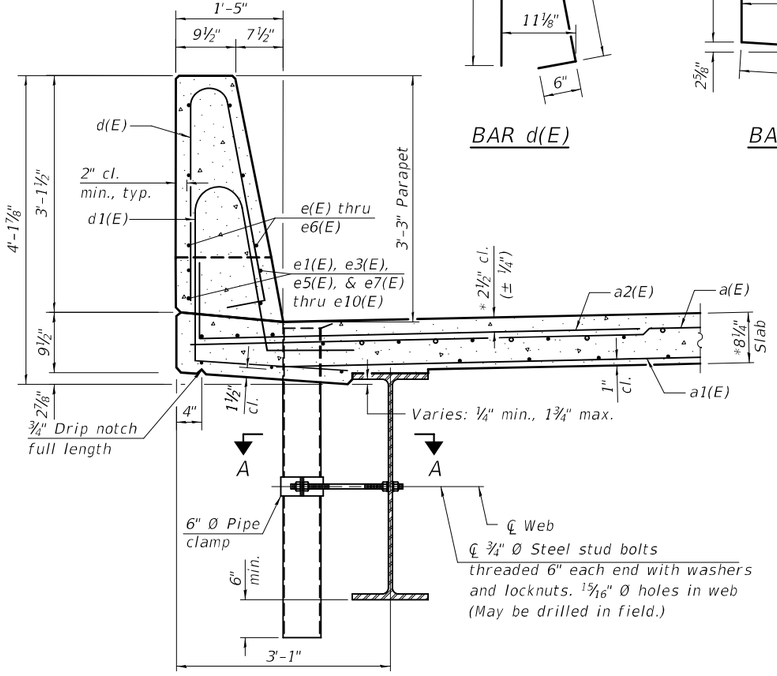
* Prior to grinding.

*** Bars in blockout may be adjusted in field if necessary to miss joint support boxes as approved by the Engineer (See sheet 24 of 59). See Special Provisions.

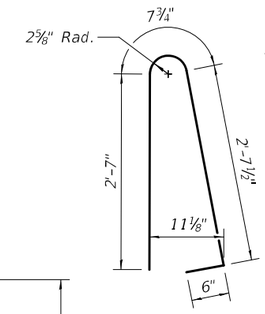
‡ Actual dimension may vary depending on modular joint manufacturer's design.



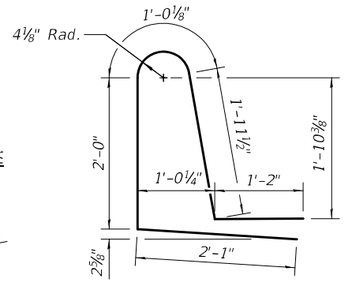
SECTION B-B



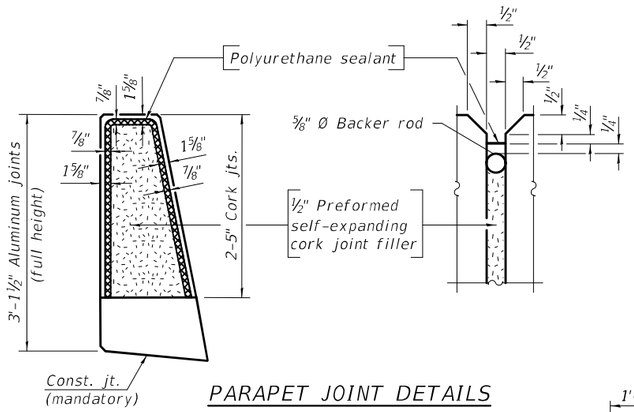
SECTION THRU PARAPET



BAR d(E)



BAR d1(E)



PARAPET JOINT DETAILS

Notes:

Fiberglass pipe shall conform to ASTM D2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.

The exterior surfaces of the floor drains shall be painted according to Article 506 with the finish coat as specified. The exterior surfaces of the drains shall be cleaned according to the Society of Protective Coating's Spec. SSPC-SP1 prior to painting.

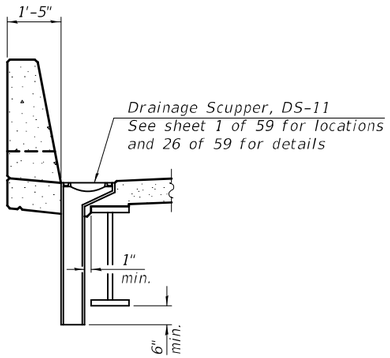
The top portion of aluminum floor drains shall be coated to minimize reaction with wet concrete.

The clamping device shall be galvanized according to AASHTO M 232. Cost of clamping device included with Floor Drains.

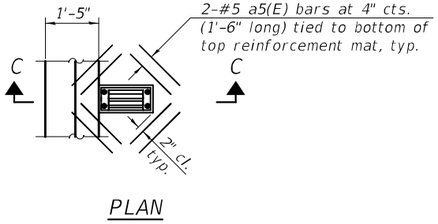
The 3/16" aluminum sheet shall be ASTM B 209 alloy 3003-H14 and coated to minimize reaction with wet concrete. Cost included with Concrete Superstructure.

The polyurethane sealant shall be according to Article 1050.04 of the Std. Spec. and the color shall be gray.

Bar Terminators, paid for separately. See Total Bill of Material.



SECTION C-C



PLAN

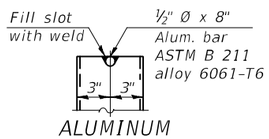
Note:

Cut longitudinal reinforcement to clear drainage scuppers.

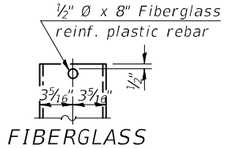
SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	3,748	#5	21'-2"	
a1(E)	2,292	#5	20'-4"	
a2(E)	3,748	#6	8'-4"	
a3(E)	32	#5	7'-0"	
a4(E)	16	#5	2'-9"	
a5(E)	128	#5	1'-6"	
b(E)	1,518	#5	29'-5"	
b1(E)	1,470	#5	28'-0"	
b2(E)	76	#6	33'-9"	
b3(E)	76	#6	42'-3"	
b4(E)	228	#6	42'-8"	
d(E)	2,578	#5	6'-5"	
d1(E)	2,578	#5	8'-3"	
e(E)	72	#4	14'-10"	
e1(E)	80	#4	8'-3"	
e2(E)	72	#4	18'-3"	
e3(E)	80	#4	10'-1"	
e4(E)	96	#4	15'-11"	
e5(E)	240	#4	10'-7"	
e6(E)	240	#4	15'-10"	
e7(E)	32	#4	23'-10"	
e8(E)	32	#4	28'-11"	
e9(E)	48	#4	23'-2"	
e10(E)	120	#4	23'-0"	
x(E)	88	#5	6'-8"	
x1(E)	88	#5	4'-1"	
Reinforcement Bars, Epoxy Coated		Lbs.	343,500	
Concrete Superstructure		Cu. Yds.	1,211.6	

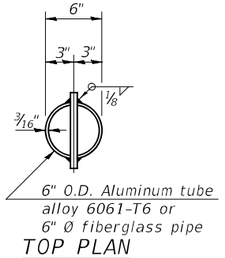
Bars indicated thus 1 x 2-#8 etc. indicates 1 line of bars with 2 lengths per line.



ALUMINUM TUBE

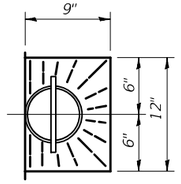


FIBERGLASS PIPE

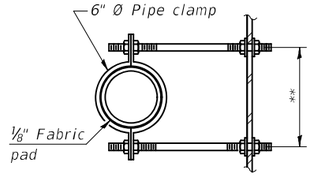


TOP PLAN

(Showing Aluminum Tube)



TOP PLAN



SECTION A-A

** Dimension as required by pipe clamp

DESIGNED -	DAVID H. RICHTER	EXAMINED	DATE - OCTOBER 10, 2024
CHECKED -	RYAN P. NEGANGARD	PASSED	REVISED -
DRAWN -	MICHAEL B. MOSSMAN		REVISED -
CHECKED -	D.H.R. / R.P.N. / G.R.A.		

ENGINEER OF BRIDGE DESIGN

ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 051 - 0075

SHEET 21 OF 59 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	103
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

MODEL: 0510075-74164-021
FILE NAME: pw:\\dot-pw.bentley.com:PWIDOT\Documents\IDOT Offices\Bureau of Bridges and Structures\Projects\0510075\CADD Plans\0510075-74164.dgn

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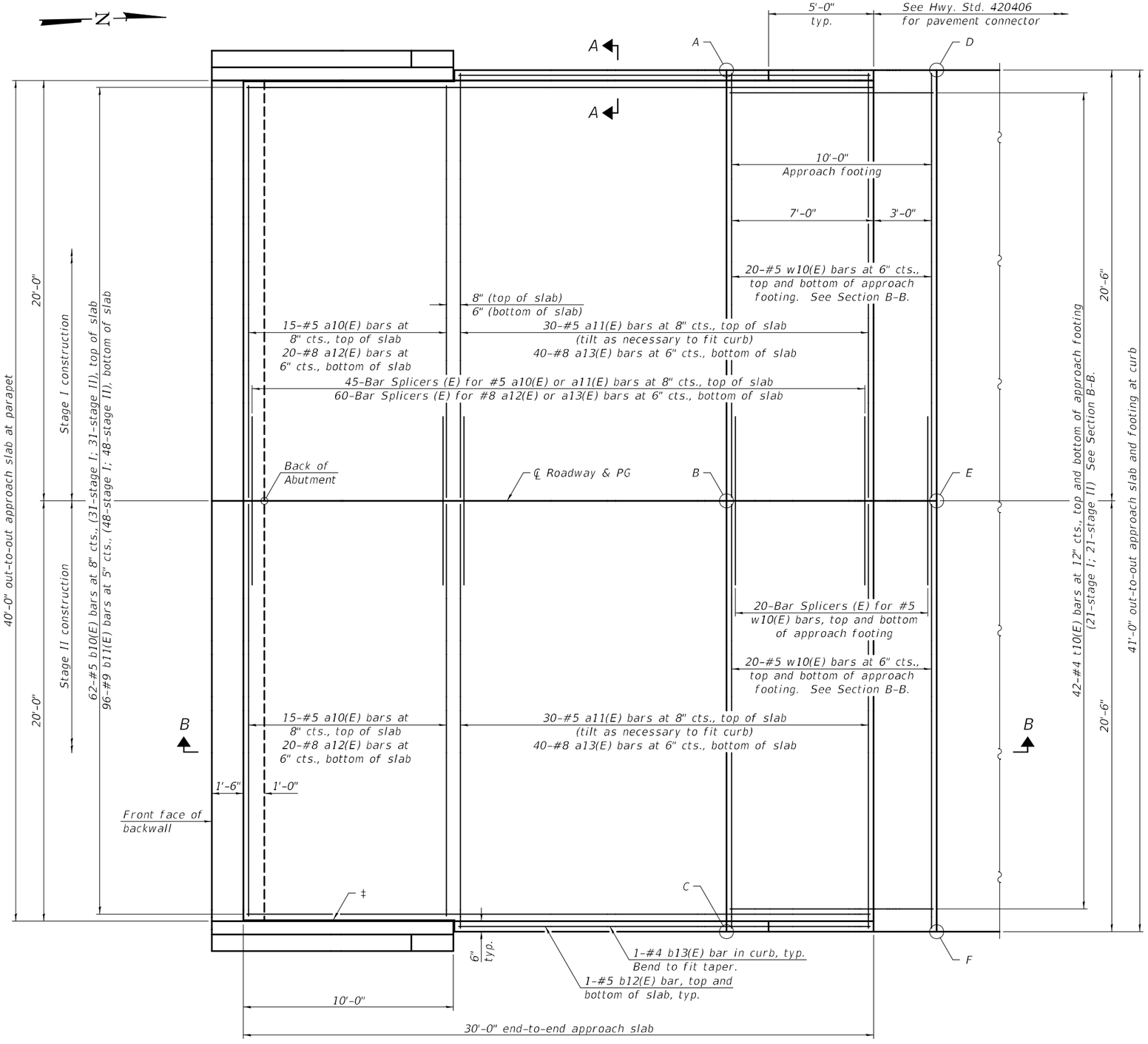


PLAN

(South Approach shown, North similar by 180° rotation)

TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING

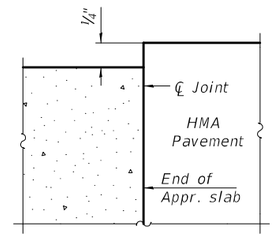
	South Approach			North Approach	
Point	Top	Bottom	Point	Top	Bottom
A-NE	429.74	428.91	A-SW	430.37	429.54
B-N ℄	430.09	429.26	B-S ℄	430.72	429.89
C-NW	429.74	428.91	C-SE	430.37	429.54
D-SE	429.69	428.86	D-NW	430.31	429.48
E-S ℄	430.04	429.21	E-N ℄	430.66	429.83
F-SW	429.69	428.86	F-NE	430.31	429.48

* Prior to grinding.

** Cost included with Concrete Superstructure (Approach Slab).

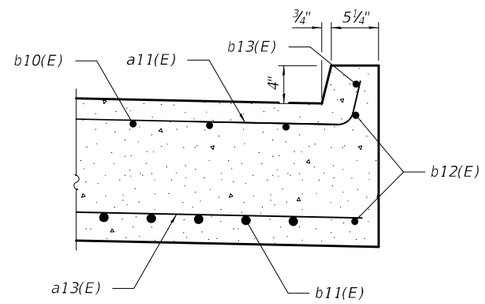
*** Per manufacturer recommendations.

‡ ½" Preformed Joint Filler according to Article 1051.09 of the Standard Specifications; full depth of slab, full length of parapet. Typ. each parapet.



FLEXIBLE PAVEMENT

DETAIL A



SECTION A-A

(Sheet 1 of 2)

DESIGNED - DAVID H. RICHTER	EXAMINED	DATE - OCTOBER 10, 2024	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE APPROACH SLAB DETAILS STRUCTURE NO. 051 - 0075	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - RYAN P. NEGANGARD	ENGINEER OF BRIDGE DESIGN				332	(16BR-1,BR-2)B-1	LAWRENCE	198	104
DRAWN - MICHAEL B. MOSSMAN	PASSED	REVISED -		SHEET 22 OF 59 SHEETS			CONTRACT NO. 74164		
CHECKED - D.H.R. / R.P.N. / G.R.A.	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -				ILLINOIS	FED. AID PROJECT		

MODEL: 051075-74164-022
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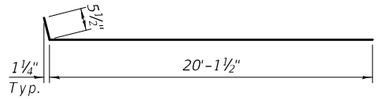
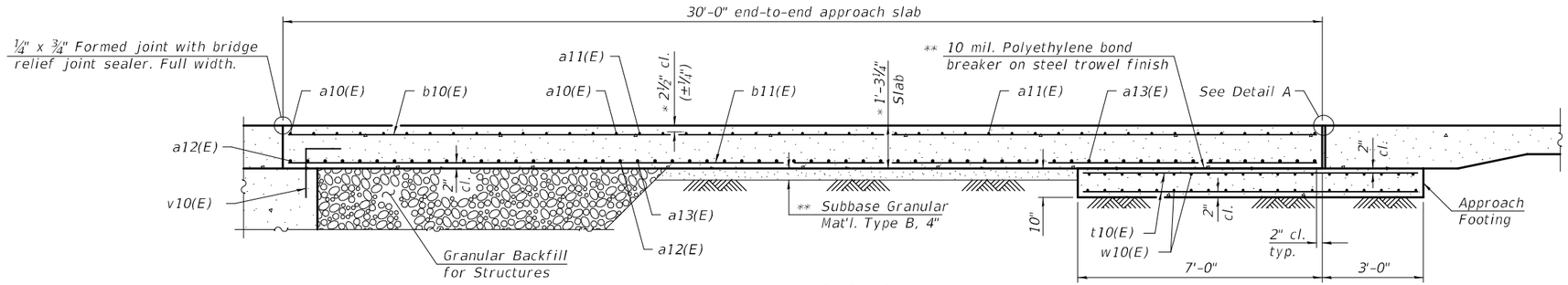
Notes:
Approach slab shall be paid for as Concrete Superstructure (Approach Slab).
Approach footing concrete shall be paid for as Concrete Structures.
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
Cost of excavation for approach footing included with Concrete Structures.
For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 59.
Parapet concrete shall be paid for as Concrete Superstructure.

INSIDE ELEVATION OF PARAPET AND CURB



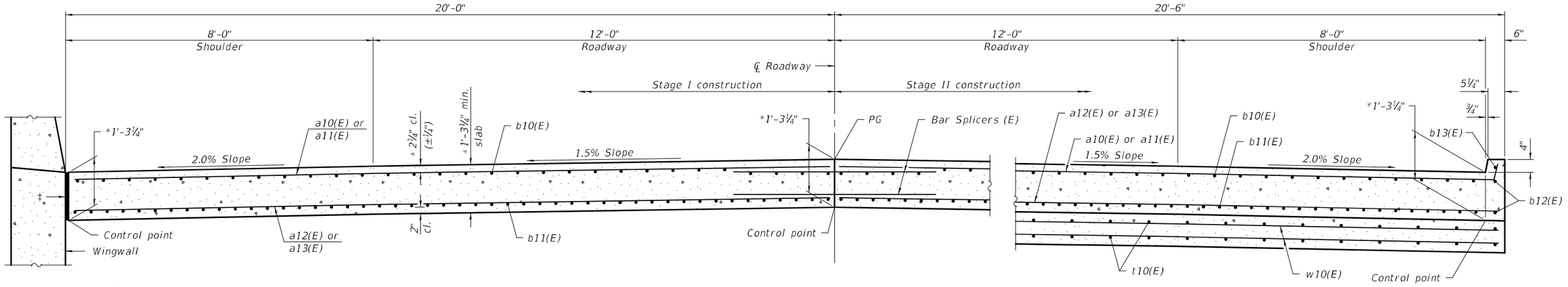
BAR a11(E)



SECTION B-B

TWO APPROACHES BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a10(E)	60	#5	19'-8"	
a11(E)	120	#5	20'-7"	
a12(E)	80	#8	19'-8"	
a13(E)	160	#8	20'-2"	
b10(E)	124	#5	29'-8"	
b11(E)	192	#9	29'-8"	
b12(E)	8	#5	19'-7"	
b13(E)	4	#4	19'-7"	
t10(E)	168	#4	9'-8"	
w10(E)	160	#5	20'-2"	
Concrete Superstructure			Cu. Yd.	12.8
Concrete Superstructure (Approach Slab)			Cu. Yd.	116.4
Concrete Structures			Cu. Yd.	25.3
Reinforcement Bars, Epoxy Coated			Pound	44,490



NEAR ABUTMENT

AT APPROACH FOOTING

CROSS SECTION
(Looking North)

* Prior to grinding.

** Cost included with Concrete Superstructure (Approach Slab).

*** Per manufacturer recommendations.

‡ ½" Preformed Joint Filler according to Article 1051.09 of the Standard Specifications; full depth of slab, full length of parapet. Typ. each parapet.

DESIGNED - DAVID H. RICHTER	EXAMINED	ENGINEER OF BRIDGE DESIGN	DATE - OCTOBER 10, 2024	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE APPROACH SLAB DETAILS STRUCTURE NO. 051 - 0075
CHECKED - RYAN P. NEGANGARD	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET 23 OF 59 SHEETS
DRAWN - MICHAEL B. MOSSMAN			REVISED -		
CHECKED - D.H.R. / R.P.N. / G.R.A.					

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	105
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

MODEL: 051075-74164-023
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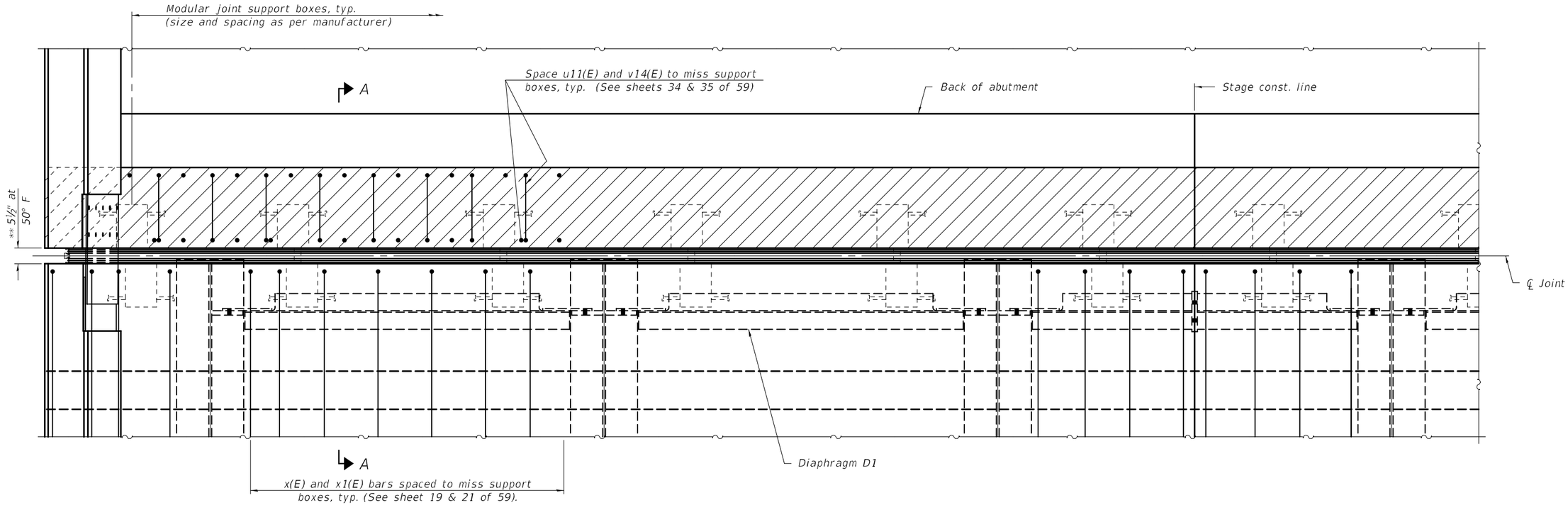
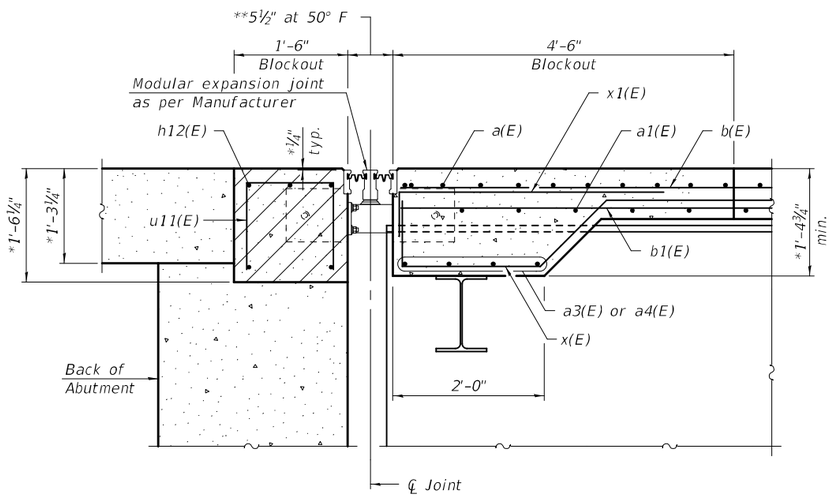


PARTIAL PLAN



SECTION A-A

* Prior to grinding.

** Actual dimension may vary depending on modular joint manufacturer's design.

Notes:

Modular joint support boxes shall be spaced between girder flanges and shall be rigidly attached to the top flange of end diaphragms by adjustable brackets, stools, or shims.

Modular expansion joints shall be assembled in their final relative position with the ends in place for shop inspection and acceptance.

Modular joint assemblies shall be installed with forming and reinforcement bars in place prior to pouring the adjoining concrete deck span.

Modular joint assembly shall be adjusted for temperature prior to pouring blockout area.

The modular expansion joints shall provide the following movement:

Total Longitudinal Movement (inches)	Size (inches)
4¾	6

BILL OF MATERIAL

Item	Unit	Total
Modular Expansion Joint 6"	Foot	86

DESIGNED - DAVID H. RICHTER	EXAMINED	ENGINEER OF BRIDGE DESIGN	DATE - OCTOBER 10, 2024	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	MODULAR EXPANSION JOINT DETAILS STRUCTURE NO. 051 - 0075
CHECKED - RYAN P. NEGANGARD	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET 24 OF 59 SHEETS
DRAWN - MICHAEL B. MOSSMAN			REVISED -		
CHECKED - D.H.R. / R.P.N. / G.R.A.					

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	106
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

MODEL: 051075-74164-024
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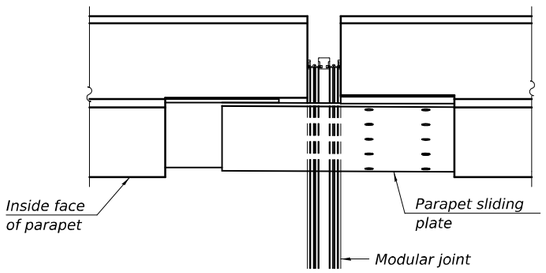
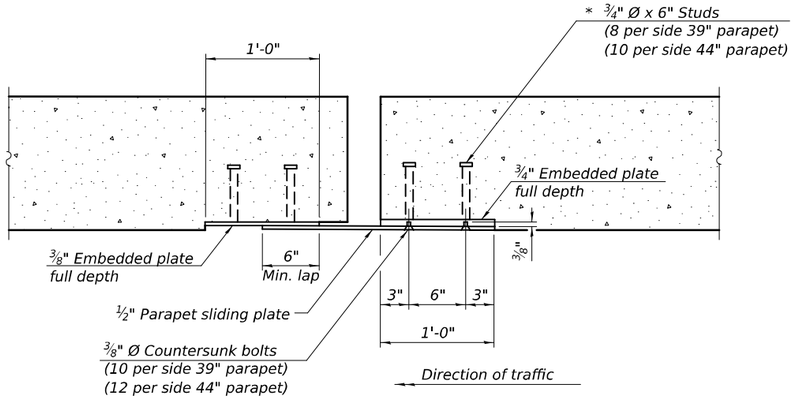


PLAN AT PARAPET



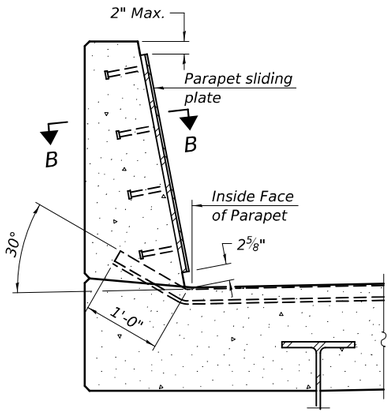
SECTION B-B

Notes:

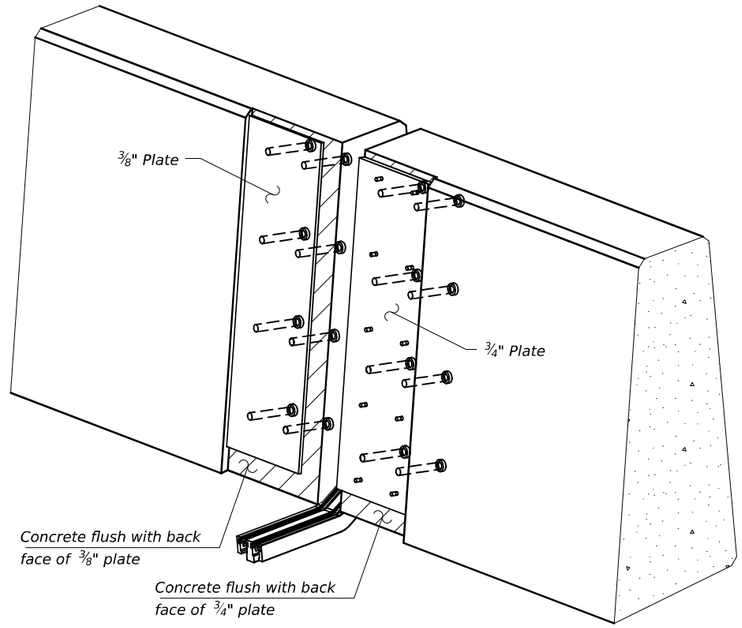
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

Cost of parapet sliding plates, embedded plates, and anchorage studs, is included with Modular Expansion Joint 6".

Actual dimension of joint opening may vary based on modular joint manufacturer's design.



SECTION AT PARAPET



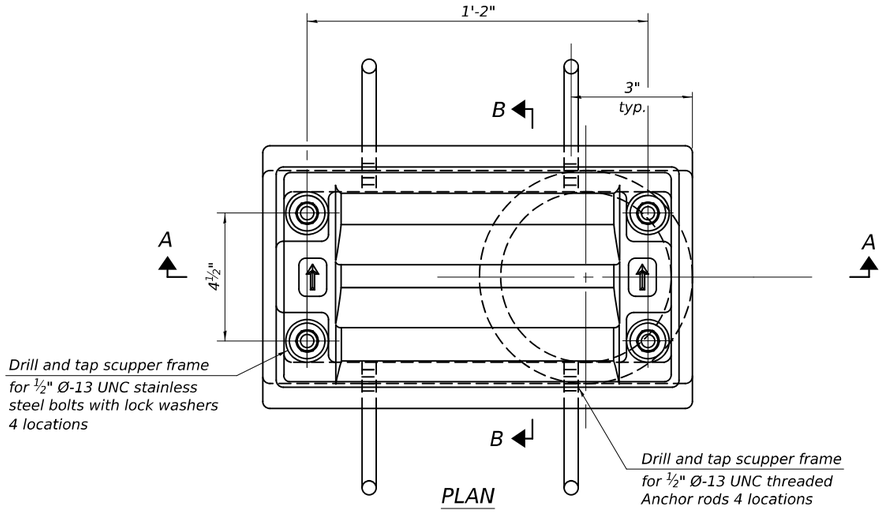
TRIMETRIC VIEW
(Showing embedded plates only)

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

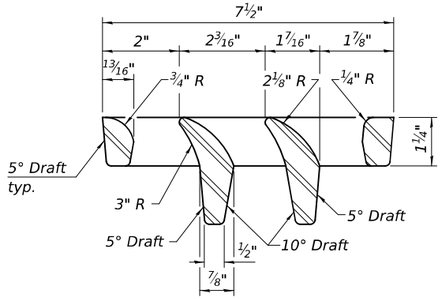
EJ-MOD-PSP *5-15-2023*

DESIGNED - DAVID H. RICHTER	EXAMINED		DATE - OCTOBER 10, 2024	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**SLIDING PLATE DETAILS STRUCTURE NO. 051-0075**
CHECKED - RYAN P. NEGANGARD					
DRAWN - MICHAEL B. MOSSMAN	PASSED	ENGINEER OF BRIDGE DESIGN	REVISED -		SHEET 25 OF 59 SHEETS
CHECKED - D.H.R. / R.P.N. / G.R.A.		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		

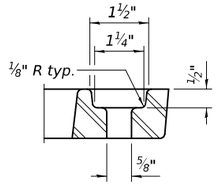
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	107
		CONTRACT NO. 74164		
	ILLINOIS FED. AID PROJECT			



PLAN



VANE GRATE DETAIL



GRATE BOLT HOLE DETAIL

Notes:

All cast iron parts shall be gray iron conforming to the requirements of AASHTO M105, Class 35B and AASHTO M306.

Bolts, anchor rods, nuts and washers shall be according to ASTM A307 and shall be galvanized according to AASHTO M232. As an alternate stainless steel may be used.

Stainless steel hardware shall be according to Article 1006.29(d) of the Standard Specifications.

Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frames and downspouts; however, the scupper grates shall remain cast iron. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval.

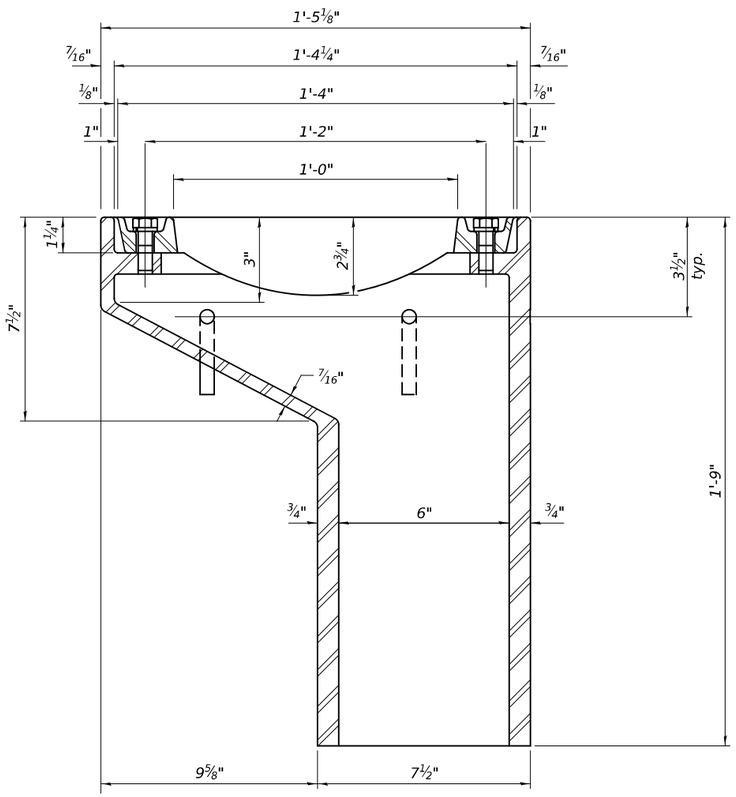
Structural steel scupper frames and downspouts, when utilized, shall be galvanized according to AASHTO M111.

As an alternate, fiberglass may be used for downspouts according to ASTM D2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. in lieu of the cast iron or structural steel.

Exterior surfaces of downspouts and exterior exposed surfaces of the scupper frame below deck shall be treated as specified on sheet 21 of 59.

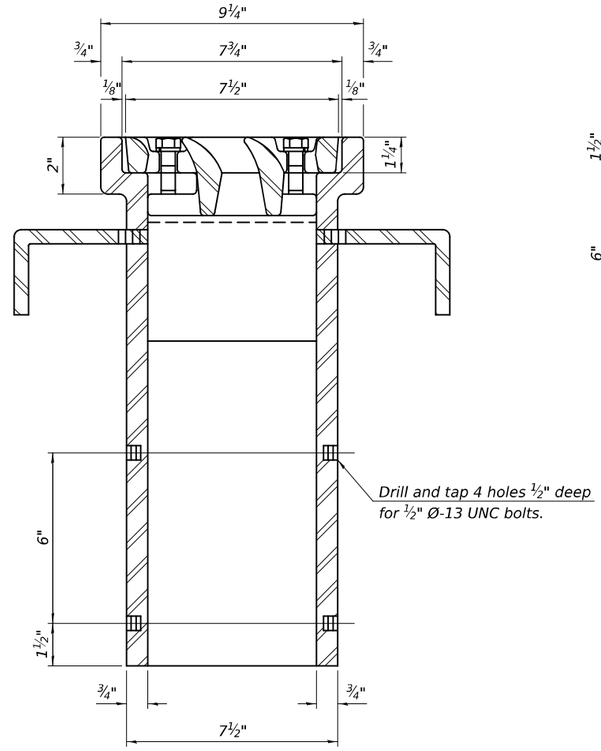
The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

Cost of the grate, frame, downspout, anchor rods, nuts and washers including complete installation of the scupper shall be paid for at the contract unit price for Drainage Scuppers, DS-11.

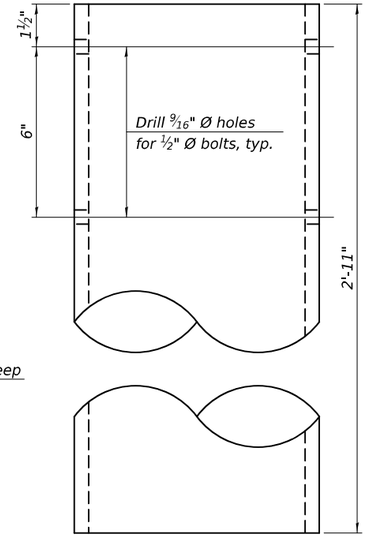


SECTION A-A

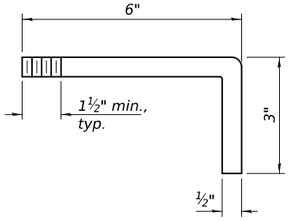
See sheet 21 of 59 for scupper location relative to parapet.



SECTION B-B



DOWNSPOUT



ANCHOR ROD DETAIL

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scuppers, DS-11	Each	16

DS-11 5-15-2023

DESIGNED - DAVID H. RICHTER	EXAMINED		DATE - OCTOBER 10, 2024	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DRAINAGE SCUPPERS, DS-11 STRUCTURE NO. 051-0075
CHECKED - RYAN P. NEGANGARD	PASSED	ENGINEER OF BRIDGE DESIGN	REVISED -		SHEET 26 OF 59 SHEETS
DRAWN - MICHAEL B. MOSSMAN		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		
CHECKED - D.H.R. / R.P.N. / G.R.A.					

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	108
		CONTRACT NO. 74164		
	ILLINOIS FED. AID PROJECT			

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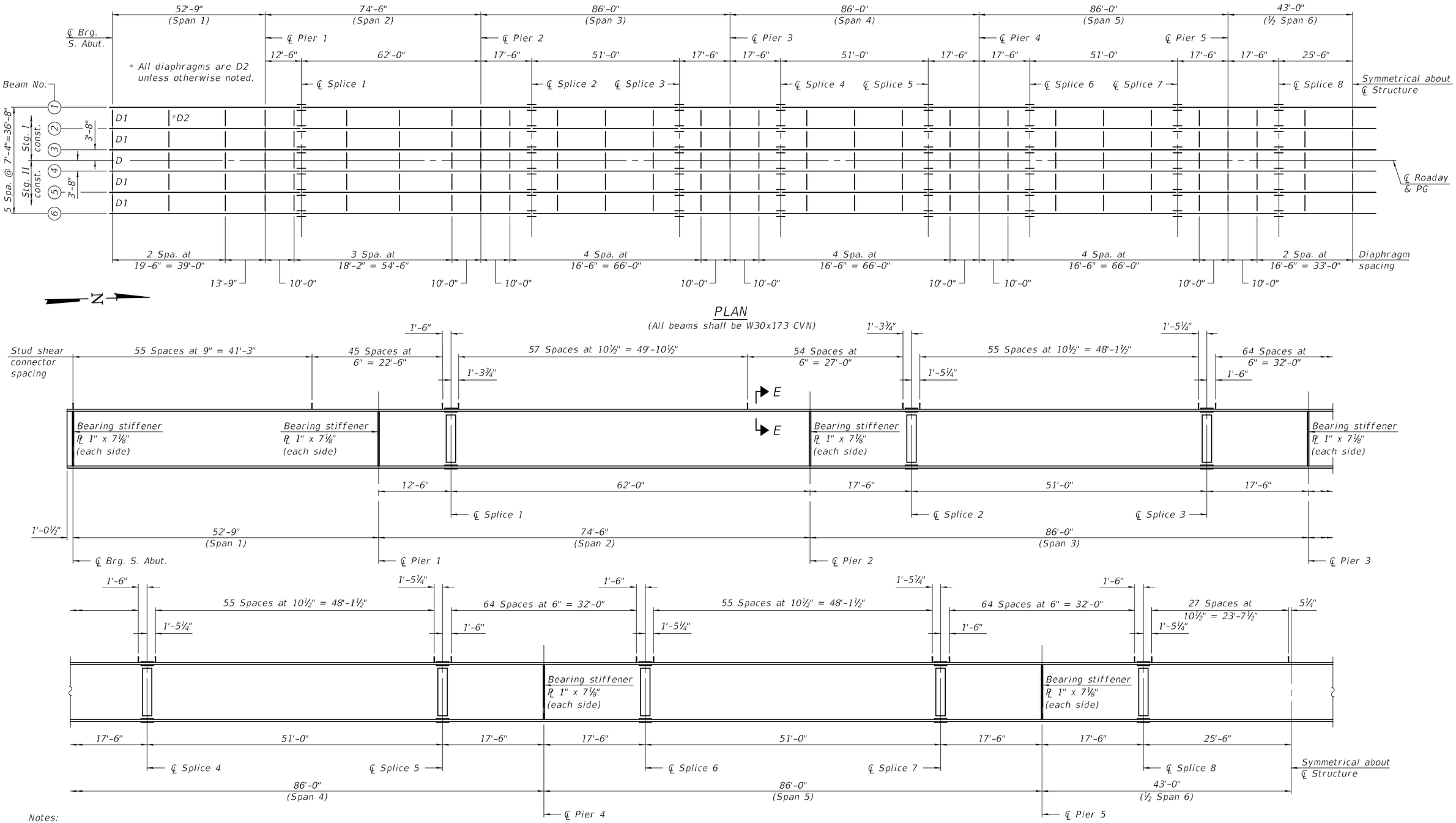

PLAN

(All beams shall be W30x173 CVN)

BEAM ELEVATION

Notes:

All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor rods.

Load carrying components designated "CVN" shall conform to the Charpy-V-Notch Impact Energy Requirement, Zone 2.

DESIGNED - DAVID H. RICHTER	EXAMINED	ENGINEER OF BRIDGE DESIGN	DATE - OCTOBER 10, 2024	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**STRUCTURAL STEEL STRUCTURE NO. 051 - 0075**	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - RYAN P. NEGANGARD						332	(16BR-1,BR-2)B-1	LAWRENCE	198	109
DRAWN - MICHAEL B. MOSSMAN	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET 27 OF 59 SHEETS			CONTRACT NO. 74164		
CHECKED - D.H.R. / R.P.N. / G.R.A.			REVISED -					ILLINOIS FED. AID PROJECT		

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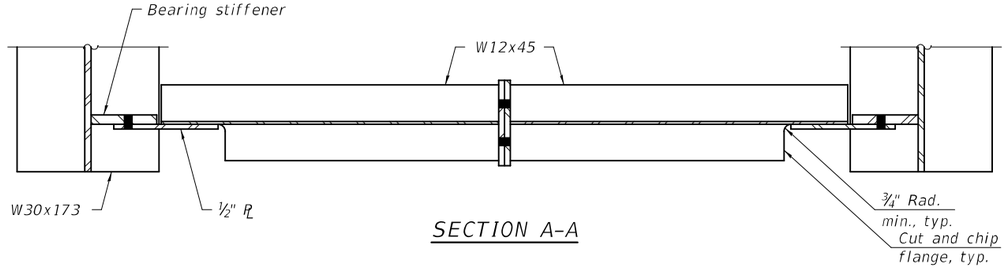
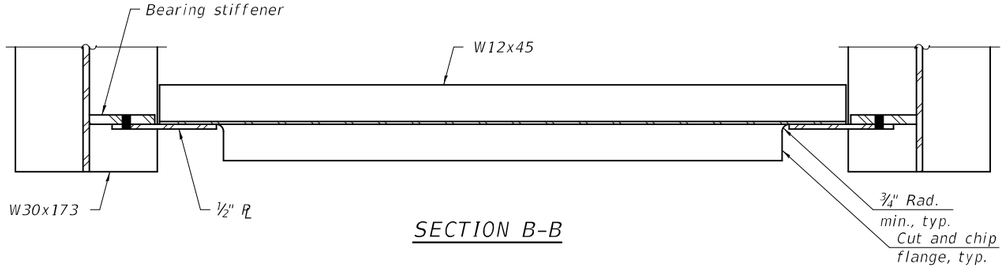
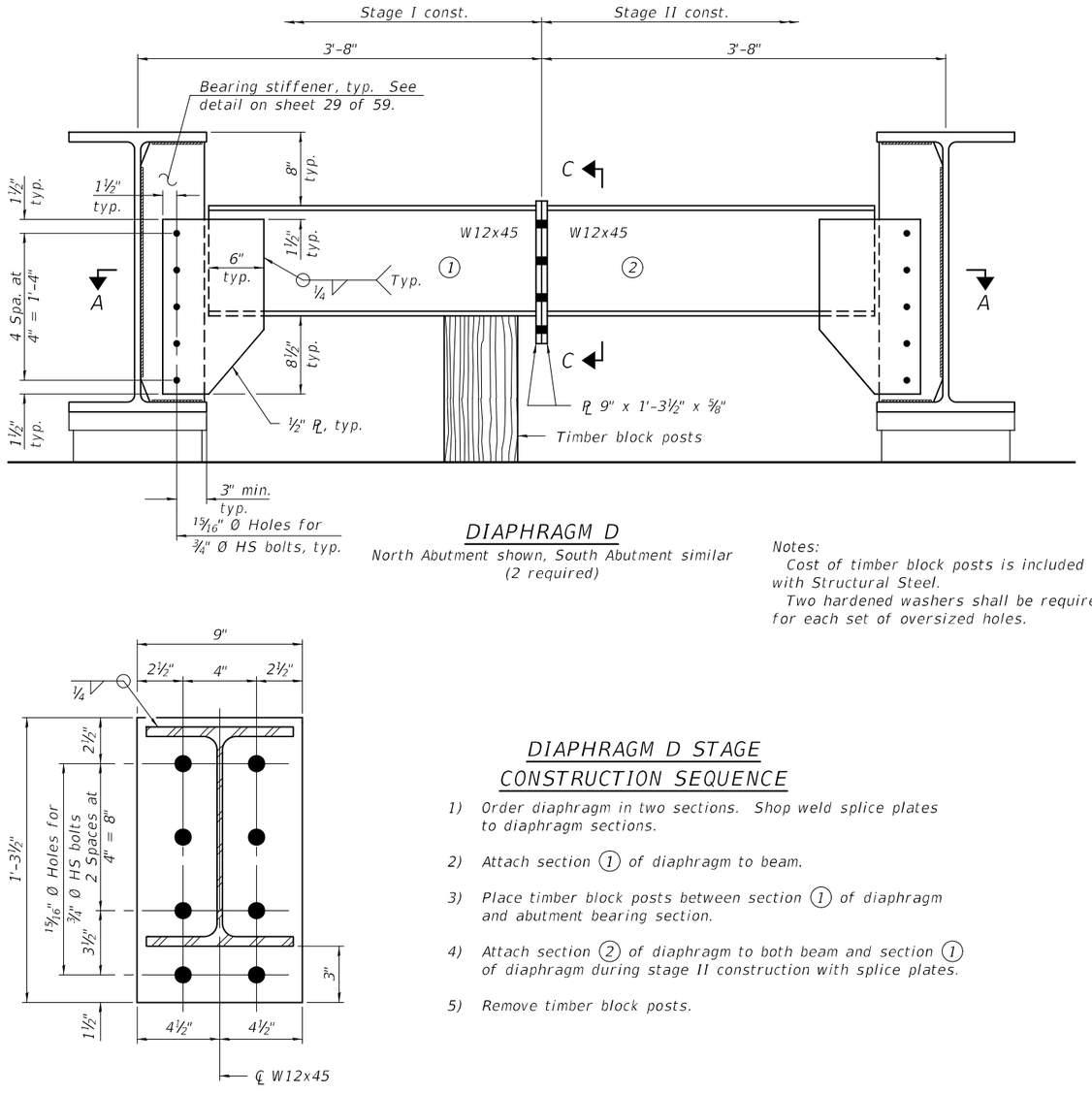


SECTION A–A



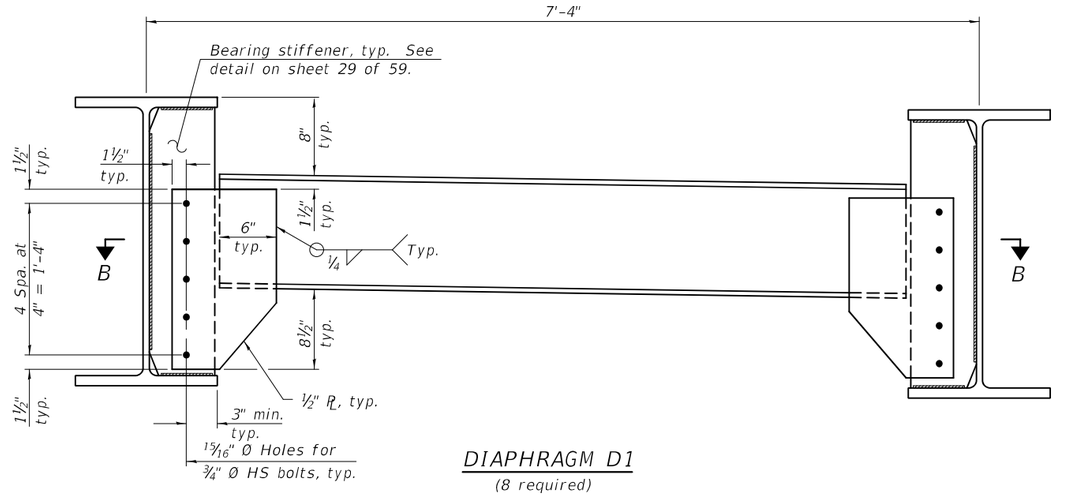
SECTION B–B



DIAPHRAGM D

North Abutment shown, South Abutment similar
(2 required)

Notes:
Cost of timber block posts is included with Structural Steel.
Two hardened washers shall be required for each set of oversized holes.



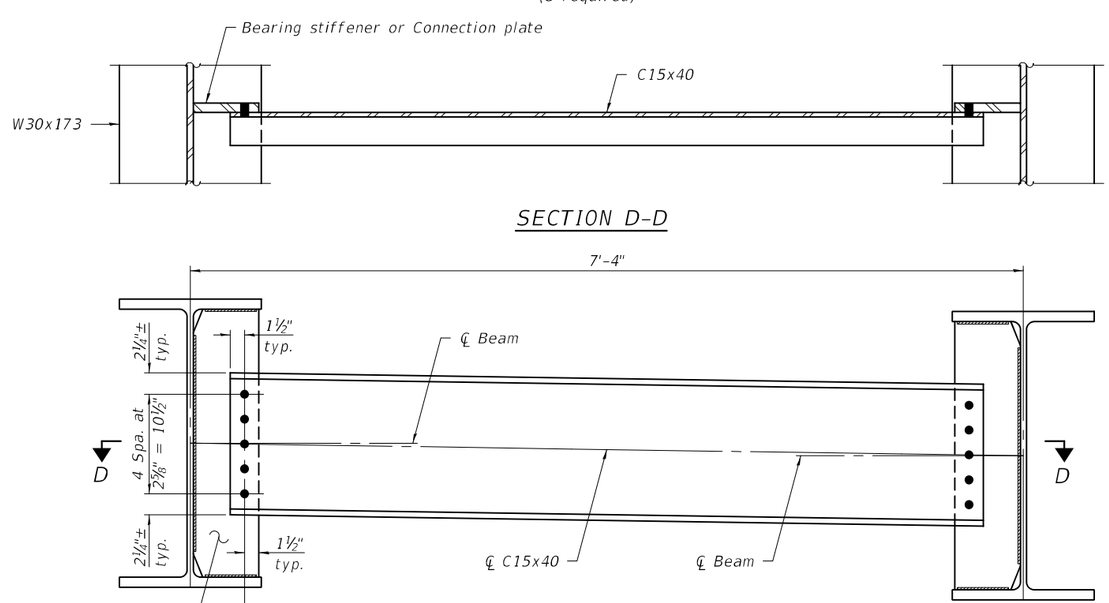
DIAPHRAGM D1

(8 required)

SECTION C–C

DIAPHRAGM D STAGE CONSTRUCTION SEQUENCE

1) Order diaphragm in two sections. Shop weld splice plates to diaphragm sections.
2) Attach section (1) of diaphragm to beam.
3) Place timber block posts between section (1) of diaphragm and abutment bearing section.
4) Attach section (2) of diaphragm to both beam and section (1) of diaphragm during stage II construction with splice plates.
5) Remove timber block posts.



SECTION D–D

DIAPHRAGM D2

(285 required)

DESIGNED - DAVID H. RICHTER	EXAMINED	ENGINEER OF BRIDGE DESIGN	DATE - OCTOBER 10, 2024	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STRUCTURAL STEEL DETAILS STRUCTURE NO. 051-0075
CHECKED - RYAN P. NEGANGARD	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET 28 OF 59 SHEETS
DRAWN - MICHAEL B. MOSSMAN			REVISED -		
CHECKED - D.H.R. / R.P.N. / G.R.A.					

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	110
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

MODEL: 051075-74164-028
FILE NAME: pw:\\dot-pw.bentley.com:PWDOT-Documents\IDOT Offices\Bureau of Bridges and Structures\Projects\051075\CADD Plans\051075-74164.dgn
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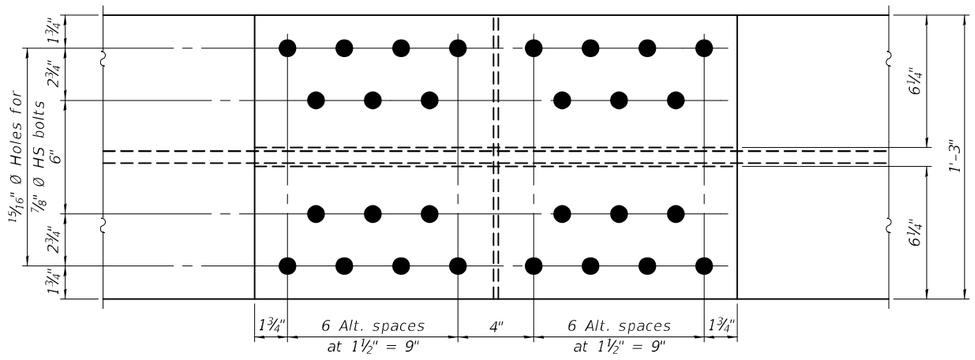
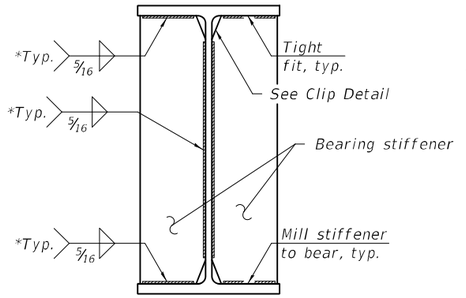
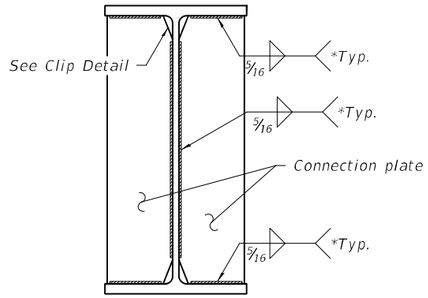


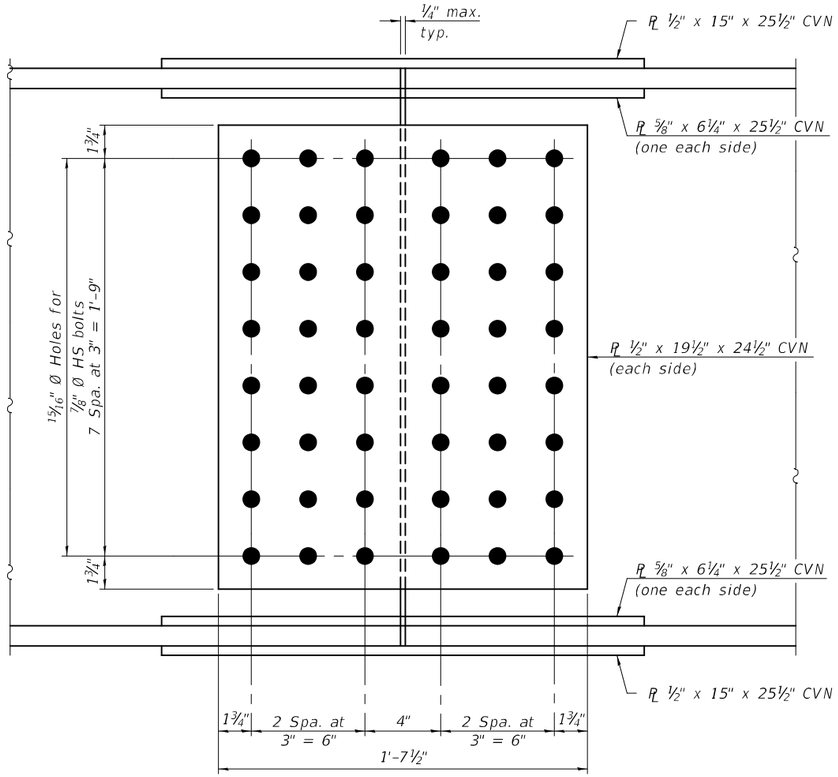
SPLICE PLAN



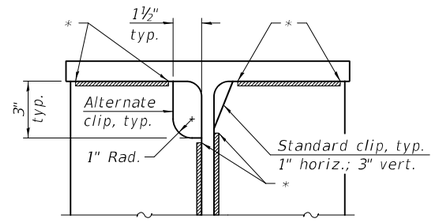
BEARING STIFFENER DETAIL



CONNECTION PLATE DETAIL



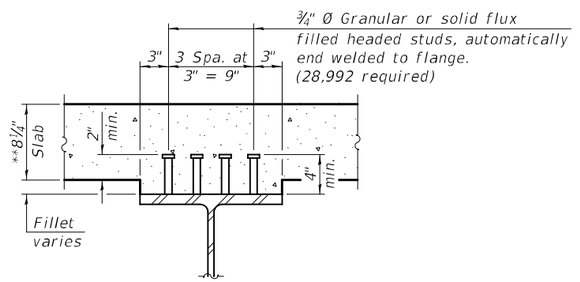
SPLICE ELEVATION



WELD LIMITS AND CLIP DETAIL

* Stop welds ¼" (±⅛") from edges as shown, typ.

** Prior to grinding



SECTION E-E

Note:
Load carrying components designated "CVN" shall conform to the Charpy-V-Notch Impact Energy Requirement, Zone 2.

DESIGNED - DAVID H. RICHTER	EXAMINED	ENGINEER OF BRIDGE DESIGN	DATE - OCTOBER 10, 2024	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STRUCTURAL STEEL DETAILS STRUCTURE NO. 051 - 0075	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - RYAN P. NEGANGARD	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET 29 OF 59 SHEETS	332	(16BR-1,BR-2)B-1	LAWRENCE	198	111
DRAWN - MICHAEL B. MOSSMAN			REVISED -						CONTRACT NO. 74164	
CHECKED - D.H.R. / R.P.N. / G.R.A.								ILLINOIS	FED. AID PROJECT	

MODEL: 051007S-74164-029
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INTERIOR BEAM MOMENT TABLE							
		0.4 Span 1 or 0.6 Span 11	Pier 1 and Pier 10	0.5 Span 2 and 0.5 Span 10	Pier 2 and Pier 9	0.5 Span 3, 0.5 Span 4, 0.5 Span 5, 0.5 Span 6, 0.5 Span 7, 0.5 Span 8, and 0.5 Span 9	Pier 3, Pier 4, Pier 5, Pier 6, Pier 7, and Pier 8
I_s	(in^4)	8230	8230	8230	8230	8230	8230
$I_c(n)$	(in^4)	21711	21711	21711	21711	21711	21711
$I_c(3n)$	(in^4)	16074	16074	16074	16074	16074	16074
$I_c(cr)$	(in^4)	–	10754	–	10754	–	10754
S_s	(in^3)	541	541	541	541	541	541
$S_c(n)$	(in^3)	773	773	773	773	773	773
$S_c(3n)$	(in^3)	704	704	704	704	704	704
$S_c(cr)$	(in^3)	–	609	–	609	–	609
DC1	(k/')	0.972	0.972	0.972	0.972	0.972	0.972
M_{DC1}	('k)	176	373	220	538	326	609
DC2	(k/')	0.175	0.175	0.175	0.175	0.175	0.175
M_{DC2}	('k)	31	68	39	98	58	111
DW	(k/')	0.3667	0.3667	0.3667	0.3667	0.3667	0.3667
M_{DW}	('k)	66	142	81	205	121	232
LLDF		0.624	0.594	0.570	0.559	0.549	0.549
M_{L+IM}	('k)	589	616	667	807	785	875
M_u (Strength I)	('k)	1392.1	1844.4	1615.6	2518.1	2039.4	2782.4
$\phi_f M_n$	('k)	3755.3	3103.9	3755.3	3103.9	3755.3	3103.9
f_s DC1	(ksi)	3.90	8.27	4.88	11.93	7.23	13.51
f_s DC2	(ksi)	0.53	1.34	0.66	1.93	0.99	2.19
f_s DW	(ksi)	1.13	2.80	1.38	4.04	2.06	4.57
f_s (L +IM)	(ksi)	9.14	12.14	10.35	15.90	12.19	17.24
f_s (Service II)	(ksi)	17.44	28.19	20.39	38.58	26.12	42.68
$0.95R_hF_{yf}$	(ksi)	47.5	47.5	47.5	47.5	47.5	47.5
f_s (Total)(Strength I)	(ksi)	–	–	–	–	–	–
$\phi_f F_n$	(ksi)	–	–	–	–	–	–
V_f	(k)	25.7	31.8	20.8	32.2	21.2	31.9

BEAM REACTION TABLE									
		Abut.		Pier 1 and Pier 10		Pier 2 and Pier 9		Pier 3, Pier 4, Pier 5, Pier 6, Pier 7, and Pier 8	
		Interior	Exterior	Interior	Exterior	Interior	Exterior	Interior	Exterior
LLDF		0.767	0.645	0.767	0.645	0.767	0.645	0.767	0.645
OCF		–	–	–	–	–	–	–	–
R_{DC1}	(k)	19.5	18.29	66.73	62.6	79.44	74.53	84.69	78.52
R_{DC2}	(k)	3.33	3.33	12.02	12.02	14.3	14.3	15.24	15.06
R_{DW}	(k)	6.98	6.98	25.18	25.18	29.96	29.96	31.93	31.56
R_L	(k)	56.32	47.35	92.24	77.55	101.82	85.60	106.04	89.76
R_{IM}	(k)	14.39	12.10	17.65	14.84	20.01	16.82	20.44	17.51
R_{TOTAL}	(k)	100.52	88.05	213.82	192.19	245.53	221.21	258.34	232.41

*TOP OF BEAM ELEVATIONS

Location	℄ Brg. S. Abut.	℄ Pier 1	℄ Splice 1	℄ Pier 2	℄ Splice 2	℄ Splice 3	℄ Pier 3	℄ Splice 4	℄ Splice 5	℄ Pier 4	℄ Splice 6	℄ Splice 7	℄ Pier 5	℄ Splice 8
Beam 1	430.47	430.75	430.82	431.19	431.30	431.58	431.68	431.78	432.07	432.17	432.27	432.56	432.65	432.74
Beam 2	430.61	430.89	430.96	431.33	431.44	431.73	431.82	431.92	432.21	432.31	432.41	432.70	432.79	432.89
Beam 3	430.72	431.00	431.07	431.44	431.55	431.84	431.93	432.03	432.32	432.42	432.52	432.81	432.90	433.00
Beam 4	430.72	431.00	431.07	431.44	431.55	431.84	431.93	432.03	432.32	432.42	432.52	432.81	432.90	433.00
Beam 5	430.61	430.89	430.96	431.33	431.44	431.73	431.82	431.92	432.21	432.31	432.41	432.70	432.79	432.89
Beam 6	430.47	430.75	430.82	431.19	431.30	431.58	431.68	431.78	432.07	432.17	432.27	432.56	432.65	432.74

Location	℄ Splice 9	℄ Pier 6	℄ Splice 10	℄ Splice 11	℄ Pier 7	℄ Splice 12	℄ Splice 13	℄ Pier 8	℄ Splice 14	℄ Splice 15	℄ Pier 9	℄ Splice 16	℄ Pier 10	℄ Brg. N. Abut.
Beam 1	432.90	432.90	432.91	432.82	432.74	432.67	432.38	432.28	432.19	431.91	431.81	431.44	431.37	431.10
Beam 2	433.04	433.05	433.06	432.96	432.88	432.81	432.52	432.43	432.33	432.05	431.95	431.58	431.51	431.24
Beam 3	433.15	433.16	433.17	433.07	432.99	432.92	432.63	432.54	432.44	432.16	432.06	431.69	431.62	431.35
Beam 4	433.15	433.16	433.17	433.07	432.99	432.92	432.63	432.54	432.44	432.16	432.06	431.69	431.62	431.35
Beam 5	433.04	433.05	433.06	432.96	432.88	432.81	432.52	432.43	432.33	432.05	431.95	431.58	431.51	431.24
Beam 6	432.90	432.90	432.91	432.82	432.74	432.67	432.38	432.28	432.19	431.91	431.81	431.44	431.37	431.10

* For fabrication use only.

I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s(Total-Strength I, and Service II) due to non-composite dead loads ($in.^4$ and $in.^3$).

$I_c(n)$, $S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s(Total-Strength I, and Service II) in uncracked sections due to short-term composite live loads ($in.^4$ and $in.^3$).

$I_c(3n)$, $S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s(Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).

$I_c(cr)$, $S_c(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).

DC1: Un-factored non-composite dead load (kips/ft.).

M_{DC1} : Un-factored moment due to non-composite dead load (kip-ft.).

DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).

M_{DC2} : Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).

M_{DW} : Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

LLDF: Live Load Distribution Factor for moment and shear computed according to Article 4.6.2.2 and further IDOT provisions.

M_{L+IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

M_u (Strength I): Factored design moment (kip-ft.).
$1.25\ (M_{DC1} + M_{DC2}) + 1.5\ M_{DW} + 1.75\ M_{L+IM}$

$\phi_f M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft).

f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
M_{DC1} / S_{nc}

f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
$M_{DC2} / S_c(3n)$ or $M_{DC2} / S_c(cr)$ as applicable.

f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
$M_{DW} / S_c(3n)$ or $M_{DW} / S_c(cr)$ as applicable.

f_s (L + IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).
$M_{L+IM} / S_c(n)$ or $M_{L+IM} / S_c(cr)$ as applicable.

f_s (Service II): Sum of stresses as computed below (ksi).
$f_s DC1 + f_s DC2 + f_s DW + 1.3\ f_s(L + IM)$

$0.95R_hF_{yf}$: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

f_s (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).
$1.25\ (f_s DC1 + f_s DC2) + 1.5\ f_s DW + 1.75\ f_s(L + IM)$

$\phi_f F_n$: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).

V_f: Maximum factored shear range in span computed according to Article 6.10.10.

OCF: Obtuse Correction Factor applied to non-continuous exterior beam ends and computed according to Article 4.6.2.2.3c-1 or as further simplified by IDOT provisions.

R_{DC1} : Un-factored reaction due to non-composite dead load (kip).

R_{DC2} : Un-factored reaction due to long-term composite (superimposed excluding future wearing surface) dead load (kip).

R_{DW} : Un-factored reaction due to long-term composite (superimposed future wearing surface only) dead load (kip).

R_L : Un-factored live load reaction (kip).

R_{IM} : Un-factored dynamic load allowance (impact) (kip).

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CHECKED - RYAN P. NEGANGARD	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET 30 OF 59 SHEETS	332	(16BR-1,BR-2)B-1	LAWRENCE	198	112
DRAWN - MICHAEL B. MOSSMAN			REVISED -						CONTRACT NO. 74164	
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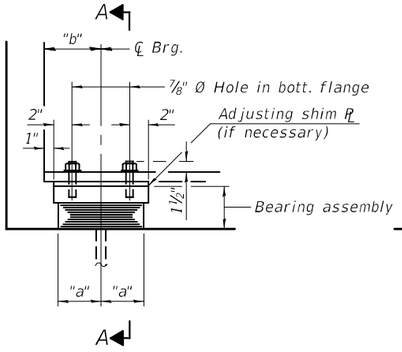
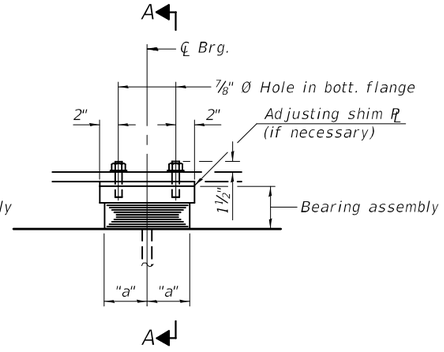
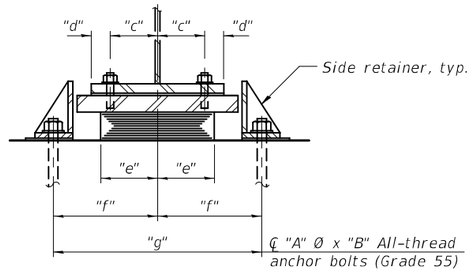


ELEVATION AT ABUTMENTS

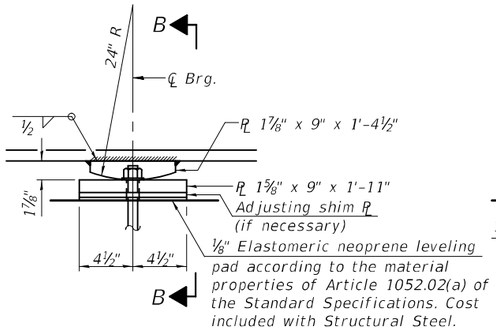


ELEVATION AT PIERS 1 THRU 4 & 7 THRU 10

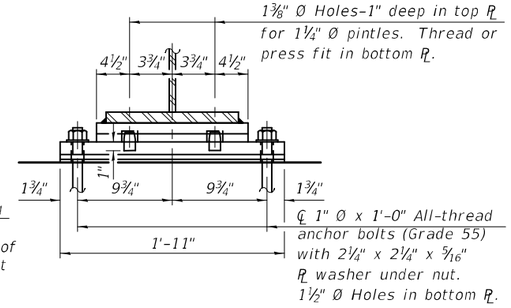


SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

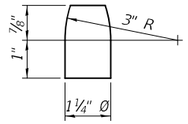


ELEVATION AT PIERS 5 & 6



SECTION B-B

FIXED BEARING



PINTLE

Notes:

Side retainers and stainless steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.

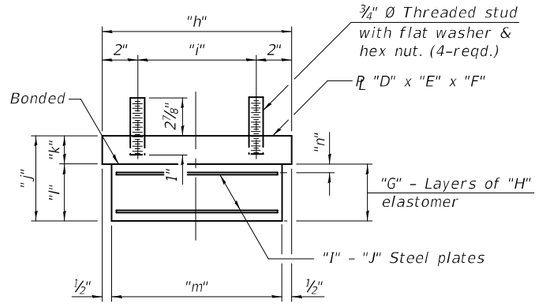
Anchor bolts and side retainers at all supports shall be installed as each member is erected unless an equivalent temporary means of lateral restraint is used.

The structural steel plates of the Bearing Assembly and pintles shall conform to the requirements of AASHTO M 270 Grade 50.

Two ⅛ in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

The anchor bolt sizes and grades shown constitute a calculated seismic structural fuse. Substitution of higher diameter and/or grade anchor bolts will not be allowed.

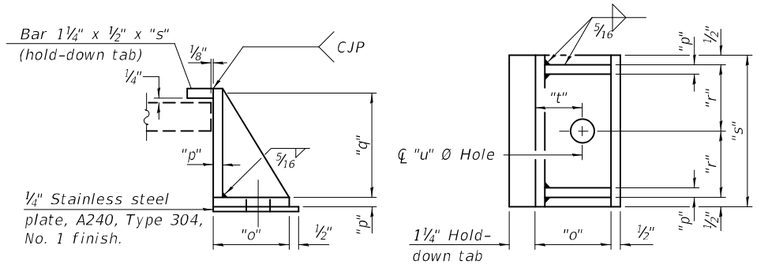
All bearing plates, side retainers, anchor bolts, nuts, washers and pintles shall be galvanized according to AASHTO M111 or M232 as applicable.



BEARING ASSEMBLY

Note:
Shim plates shall not be placed under bearing assembly.

Dimension	Bearing Location				
	N. & S. Abut.	Piers 1 & 10	Piers 2 & 9	Piers 3 & 8	Piers 4 & 7
a	11"	10"	7½"	7"	7"
b	1'-0½"	-	-	-	-
c	5½"	5½"	5½"	5½"	5½"
d	2"	2"	2"	2"	2"
e	1'-1"	1'-0"	1'-0"	11"	11"
f	1'-4¼"	1'-3¼"	1'-3¼"	1'-2¼"	1'-2¼"
g	2'-8½"	2'-6½"	2'-6½"	2'-4½"	2'-4½"
h	1'-11"	1'-9"	1'-4"	1'-3"	1'-3"
i	1'-7"	1'-5"	1'-0"	11"	11"
j	8¾"	9 13/16"	8¾"	7 7/16"	5 11/16"
k	1½"	2"	2⅜"	2⅜"	2⅜"
l	7¼"	7 13/16"	6⅜"	5 11/16"	3 5/16"
m	1'-10"	1'-8"	1'-3"	1'-2"	1'-2"
n	⅞"	13/16"	¾"	11/16"	11/16"
o	10⅜"	10⅜"	9⅜"	8¾"	8¾"
p	½"	½"	½"	½"	½"
q	8¾"	9 9/16"	8½"	7 3/16"	5 7/16"
r	11"	10"	7½"	6½"	6½"
s	1'-11"	1'-9"	1'-4"	1'-2"	1'-2"
t	2⅛"	2⅛"	2⅛"	2⅛"	2⅛"
u	1¼"	1¼"	1¼"	1¼"	1¼"
A	1"	1"	1"	1"	1"
B	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
C	2¼"	2¼"	2¼"	2¼"	2¼"
D	1½"	2"	2⅜"	2⅜"	2⅜"
E	1'-11"	1'-9"	1'-4"	1'-3"	1'-3"
F	2'-4"	2'-2"	2'-2"	2'-0"	2'-0"
G	7	8	7	6	4
H	⅞"	13/16"	¾"	11/16"	11/16"
I	6	7	6	5	3
J	3/16"	3/16"	3/16"	3/16"	3/16"



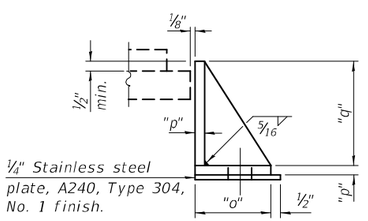
SIDE RETAINER AT ABUTMENTS

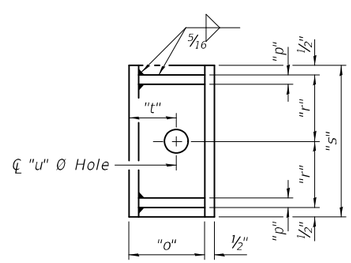
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

During the deck pour, the abutment bearing hold-down tabs shall be shimmed to prevent uplift during the deck pour, and the shims shall be removed after the deck pour is complete.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	60
Anchor Bolts, 1"	Each	144





SIDE RETAINER AT PIERS

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

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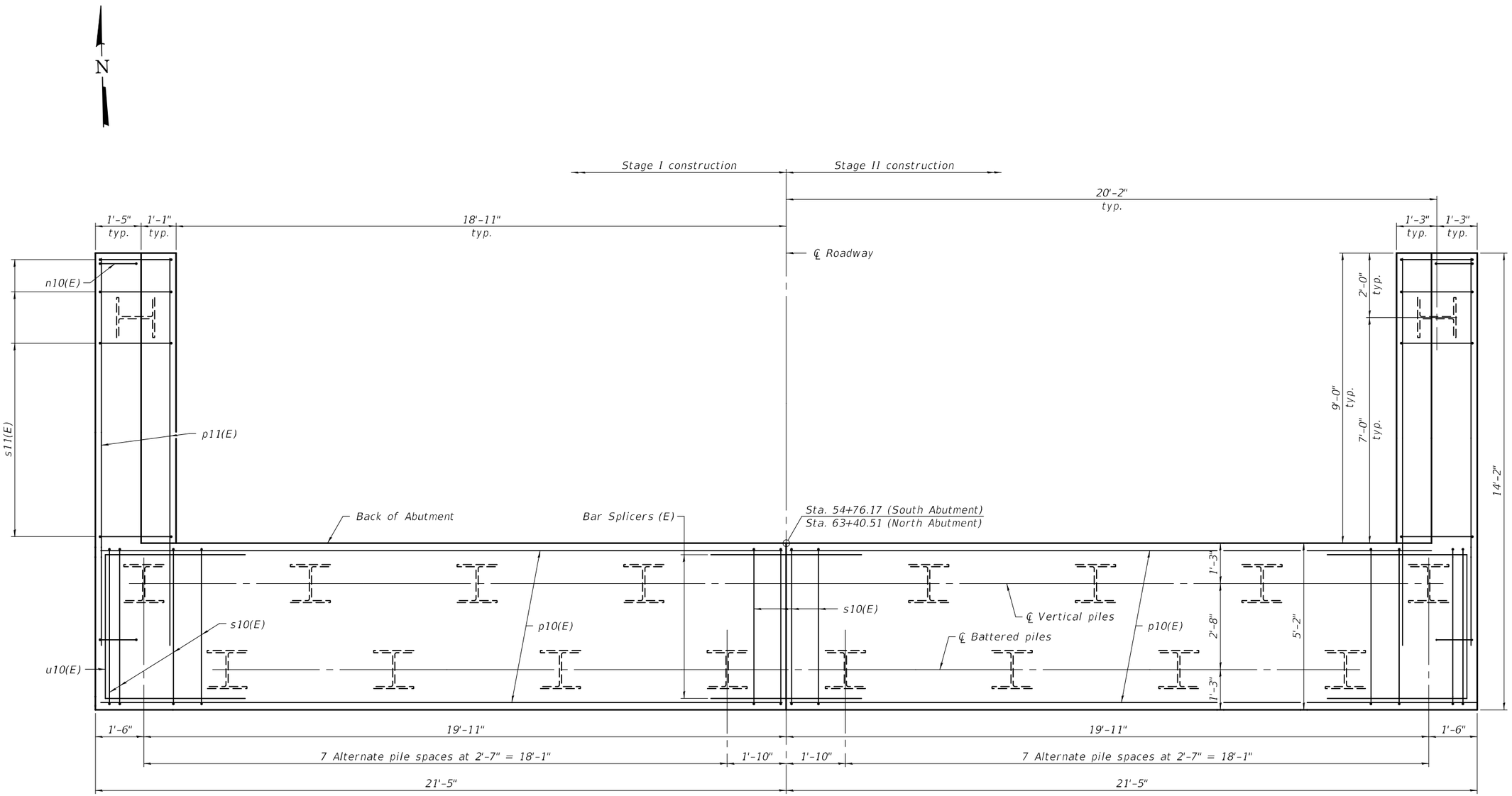
DESIGNED - DAVID H. RICHTER	EXAMINED		DATE - OCTOBER 10, 2024	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BEARINGS STRUCTURE NO. 051 - 0075	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - RYAN P. NEGANGARD						332	(16BR-1,BR-2)B-1	LAWRENCE	198	113
DRAWN - MICHAEL B. MOSSMAN	PASSED		REVISED -		SHEET 31 OF 59 SHEETS			CONTRACT NO. 74164		
CHECKED - D.H.R. / R.P.N. / G.R.A.		ENGINEER OF BRIDGE DESIGN ENGINEER OF BRIDGES AND STRUCTURES	REVISED -					ILLINOIS FED. AID PROJECT		



PILE CAP PLAN

(North Abutment shown; South Abutment similar)

(Sheet 1 of 4)

DESIGNED - DAVID H. RICHTER	EXAMINED		DATE - OCTOBER 10, 2024	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**ABUTMENT DETAILS STRUCTURE NO. 051 - 0075**	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - RYAN P. NEGANGARD		ENGINEER OF BRIDGE DESIGN				332	(16BR-1,BR-2)B-1	LAWRENCE	198	114
DRAWN - MICHAEL B. MOSSMAN	PASSED		REVISED -		SHEET 32 OF 59 SHEETS			CONTRACT NO. 74164		
CHECKED - D.H.R. / R.P.N. / G.R.A.		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -					ILLINOIS FED. AID PROJECT		

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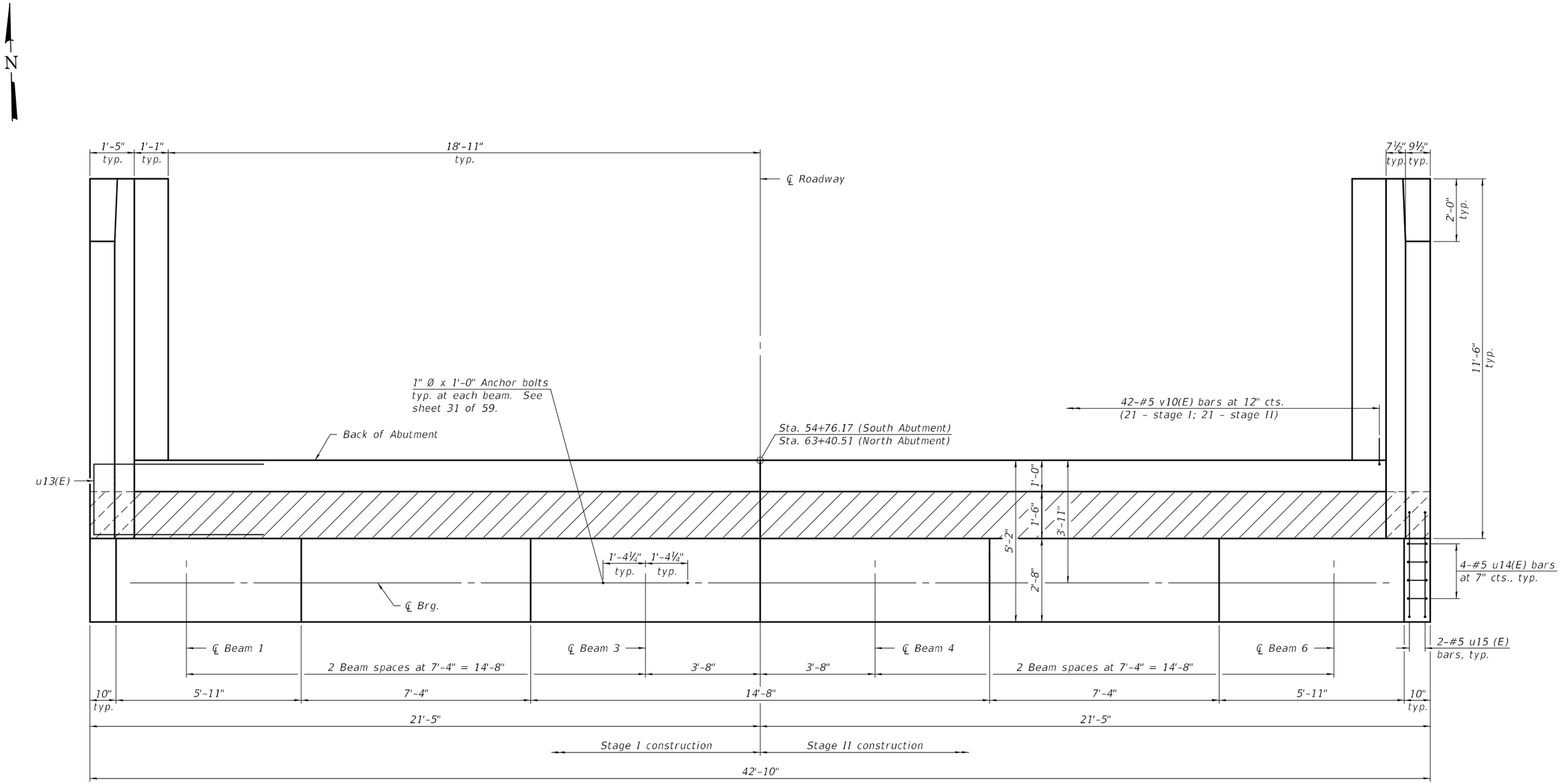

PLAN

(North Abutment shown; South Abutment similar)

DESIGNED - DAVID H. RICHTER	EXAMINED	DATE - OCTOBER 10, 2024	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**ABUTMENT DETAILS STRUCTURE NO. 051 - 0075**	F.A.P. RTE. 332 | SECTION (16BR-1,BR-2)B-1 | COUNTY LAWRENCE | TOTAL SHEETS 198 | SHEET NO. 115
CHECKED - RYAN P. NEGANGARD		REVISED -		SHEET 33 OF 59 SHEETS	CONTRACT NO. 74164
DRAWN - MICHAEL B. MOSSMAN	PASSED	REVISED -			ILLINOIS | FED. AID PROJECT
CHECKED - D.H.R. / R.P.N. / G.R.A.	ENGINEER OF BRIDGE DESIGN ENGINEER OF BRIDGES AND STRUCTURES				

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42-#5 u12(E) bars at 12" cts. (21 - stage I; 21 - stage II) See Sec. B-B on sheet 35 of 59.
** 42-#5 v14(E) bars at 12"± cts. (21 - stage I; 21 - stage II) each face, See Sec. B-B on sheet 35 of 59.
** 42-#5 u11(E) bars at 12"± cts. (21 - stage I; 21 - stage II) See Sec. B-B on sheet 35 of 59.

℄ Roadway & stage const. joint
*Cr. Elev. 431.49 (Front face of S. Abut. backwall)
*Cr. Elev. 432.12 (Front face of N. Abut. backwall)

42-#5 v11(E) bars at 12" cts. (21 - stage I; 21 - stage II) each face. See Sec. B-B on sheet 35 of 59.

Control point
*1'-6¼"
5-#5 h12(E) bars See Section B-B
PG
Control point
*1'-6¼"
B
5-#5 h12(E) bars See Section B-B
*1'-6¼"
Control point
Const. joint optional
10"
3-#5 u13(E) bars at 12"± cts., each end. See Plan View.
Const. joint optional
Elev. "A"
1⅝"
3-#5 h10(E) bars at 12"± cts., each face
Elev. "B"
1⅜"
Top of backwall (approach slab seat 3" above)
Elev. "C"
11-Bar Splicers (E) for #5 h10(E) bars. See Section B-B.
1⅜"
3-#5 h10(E) bars at 12"± cts., each face
Elev. "B"
1⅝"
Elev. "A"
u15(E)
1'-2"
3'-6"
u14(E)
4-#6 u10(E) bars each end. See Plan View.
2-#5 s10(E) bars each end
10-#7 p10(E) bars See Section B-B.
2-#5 s10(E) bars at 12" cts. Typ. between piles except as shown.
10-#7 p10(E) bars See Section B-B.
B
10-Bar Splicers (E) for #7 p10(E) bars. See Section B-B.
Elev. 423.71 (South Abutment)
Elev. 424.34 (North Abutment)
9½" typ.
9½" typ.
2-#5 s10(E) bars

* Prior to grinding

** Bars shall be adjusted in field to miss expansion joint support boxes as approved by the Engineer. See modular joint shop drawings.

ELEVATION

Location	Elevation "A"	Elevation "B"	Elevation "C"
South Abutment	427.21	427.35	427.46
North Abutment	427.84	427.98	428.09

11'-6"
2'-0"
5"
End post shall be poured after bridge parapet is in place.
*Elev. 431.16 (South Abutment)
*Elev. 431.78 (North Abutment)
3'-1½" End post
*Elev. 431.10 (South Abutment)
*Elev. 431.72 (North Abutment)
1½"
1½"
Const. joint with ¾" notch on outside face
2" Chamfer
2'-8"
Construction joint
¼"
1'-2"
*7'-5¼" (N. Abut.)
*7'-5⅜" (S. Abut.)
*3'-11¼" (N. Abut.)
*3'-11⅜" (S. Abut.)
3'-6"
*3'-10½" (N. Abut.)
*3'-10⅝" (S. Abut.)
2'-0"

WINGWALL ELEVATION
(Showing dimensions)

18-#6 v13(E) bars at 8" cts. (inside face)
18-#6 v12(E) bars at 8" cts. (outside face)
A
Bend in field
4-#4 h11(E) bars at 12"± cts., each face
C
C
18-#6 n10(E) bars at 8" cts. (space to miss pile in wingwall)
5-#4 h11(E) bars at 11"± cts., each face
2-#4 h11(E) bars each face
3-#7 p11(E) bars each face
7-#4 s11(E) bars at 12" cts.
3-#4 s11(E) bars
A
℄ Pile

WINGWALL ELEVATION
(Showing reinforcement)

(Sheet 3 of 4)

DESIGNED	-	DAVID H. RICHTER	
CHECKED	-	RYAN P. NEGANGARD	
DRAWN	-	MICHAEL B. MOSSMAN	
CHECKED	-	D.H.R. / R.P.N. / G.R.A.	

EXAMINED — ENGINEER OF BRIDGE DESIGN
PASSED — ENGINEER OF BRIDGES AND STRUCTURES
DATE - OCTOBER 10, 2024
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ABUTMENT DETAILS
STRUCTURE NO. 051 - 0075
SHEET 34 OF 59 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	116
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

MODEL: 051075-74164-034
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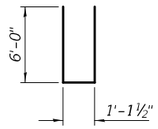
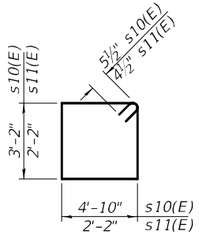
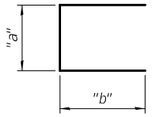


BAR n10(E)



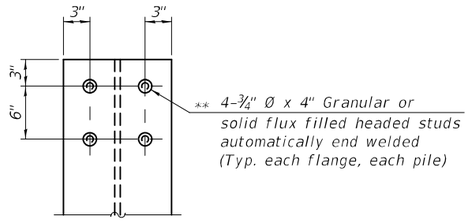
BARS s10(E) & s11(E)



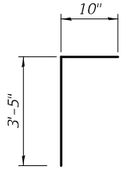
BARS u10(E)
THRU u15(E)

"a" & "b" DIMENSIONS

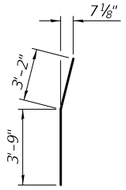
Bar	"a"	"b"
u10(E)	4'-10"	4'-4"
u11(E)	1'-2"	1'-2"
u12(E)	2'-2"	1'-9"
u13(E)	1'-11"	5'-5"
u14(E)	6"	3'-5"
u15(E)	2'-10"	3'-5"



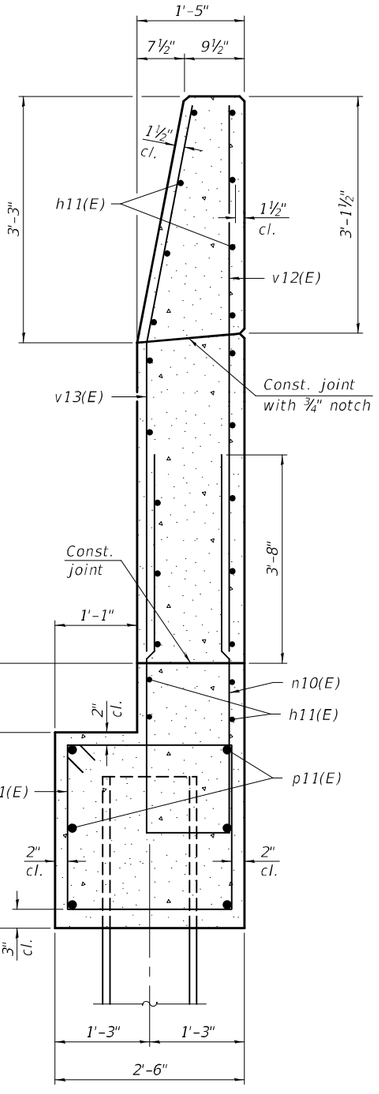
SEISMIC PILE DETAIL



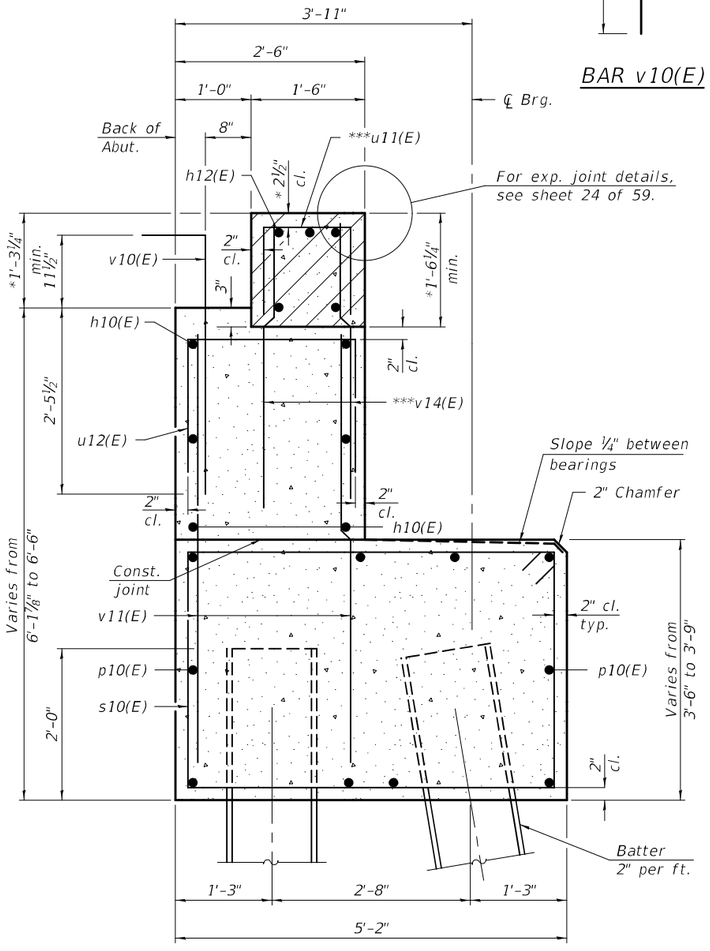
BAR v10(E)



BAR v13(E)



SECTION A-A



SECTION B-B

SOUTH ABUTMENT BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h10(E)	12	#5	19'-8"	
h11(E)	44	#4	11'-2"	
h12(E)	10	#5	21'-1"	
n10(E)	36	#6	13'-2"	
p10(E)	20	#7	21'-1"	
p11(E)	12	#7	12'-8"	
s10(E)	36	#5	16'-11"	
s11(E)	20	#4	9'-5"	
u10(E)	8	#6	13'-6"	
u11(E)	42	#5	3'-6"	
u12(E)	42	#5	5'-8"	
u13(E)	6	#5	12'-9"	
u14(E)	8	#5	7'-4"	
u15(E)	4	#5	9'-8"	
v10(E)	42	#5	4'-3"	
v11(E)	84	#5	5'-10"	
v12(E)	36	#6	6'-10"	
v13(E)	36	#6	6'-11"	
v14(E)	84	#5	3'-9"	
Structure Excavation		Cu. Yd.	121.0	
Concrete Structures		Cu. Yd.	49.2	
Reinforcement Bars, Epoxy Coated		Pound	5,950	
Furnishing Steel Piles, HP 14x117		Foot	2,106	
Driving Piles		Foot	2,106	
Concrete Sealer		Sq. Ft.	455	
Pile Shoes		Each	18	

NORTH ABUTMENT BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h10(E)	12	#5	19'-8"	
h11(E)	44	#4	11'-2"	
h12(E)	10	#5	21'-1"	
n10(E)	36	#6	13'-2"	
p10(E)	20	#7	21'-1"	
p11(E)	12	#7	12'-8"	
s10(E)	36	#5	16'-11"	
s11(E)	20	#4	9'-5"	
u10(E)	8	#6	13'-6"	
u11(E)	42	#5	3'-6"	
u12(E)	42	#5	5'-8"	
u13(E)	6	#5	12'-9"	
u14(E)	8	#5	7'-4"	
u15(E)	4	#5	9'-8"	
v10(E)	42	#5	4'-3"	
v11(E)	84	#5	5'-10"	
v12(E)	36	#6	6'-10"	
v13(E)	36	#6	6'-11"	
v14(E)	84	#5	3'-9"	
Structure Excavation		Cu. Yd.	121.0	
Concrete Structures		Cu. Yd.	49.2	
Reinforcement Bars, Epoxy Coated		Pound	5,950	
Furnishing Steel Piles, HP 14x117		Foot	1,904	
Driving Piles		Foot	1,904	
Test Pile Steel HP 14x117		Each	1	
Concrete Sealer		Sq. Ft.	455	
Pile Shoes		Each	18	

Notes:
Hatched area to be poured after superstructure falsework has been removed.
Quantity of concrete in end post and hatched area included with Concrete Superstructure on sheet 23 of 59.
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For details of piles, see sheet 41 of 59.
The top of back wall and approach slab seat shall have a constant slope determined from the control points shown.

* Prior to grinding.

** Typical each flange, each pile. Cost included with Furnishing Steel Piles, HP 14x117.

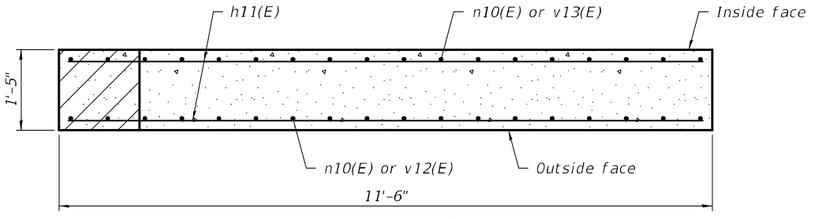
*** Space bars to miss expansion joint support boxes as approved by the Engineer. See modular joint shop drawings.

SOUTH ABUTMENT PILE DATA

Type: HP 14x117
Nominal Required Bearing: 929 kips
Factored Resistance Available: 511 kips
Est. Length: 117'
No. Production Piles: 18
No. Test Piles: None

NORTH ABUTMENT PILE DATA

Type: HP 14x117
Nominal Required Bearing: 929 kips
Factored Resistance Available: 511 kips
Est. Length: 112'
No. Production Piles: 17
No. Test Piles: 1



SECTION C-C

DESIGNED - DAVID H. RICHTER	EXAMINED	DATE - OCTOBER 10, 2024	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ABUTMENT DETAILS STRUCTURE NO. 051 - 0075	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - RYAN P. NEGANGARD					332	(16BR-1,BR-2)B-1	LAWRENCE	198	117
DRAWN - MICHAEL B. MOSSMAN	PASSED	REVISED -					CONTRACT NO. 74164		
CHECKED - D.H.R. / R.P.N. / G.R.A.		REVISED -		SHEET 35 OF 59 SHEETS			ILLINOIS FED. AID PROJECT		

ENGINEER OF BRIDGE DESIGN
ENGINEER OF BRIDGES AND STRUCTURES

MODEL: 051075-74164-035
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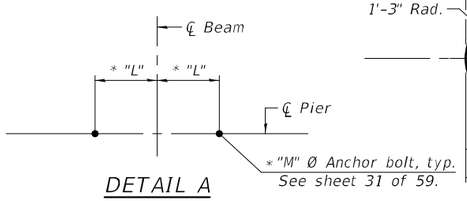
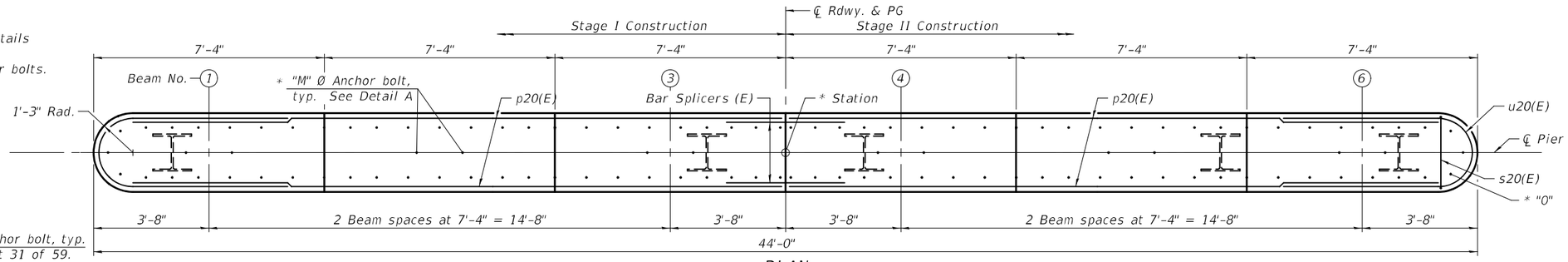
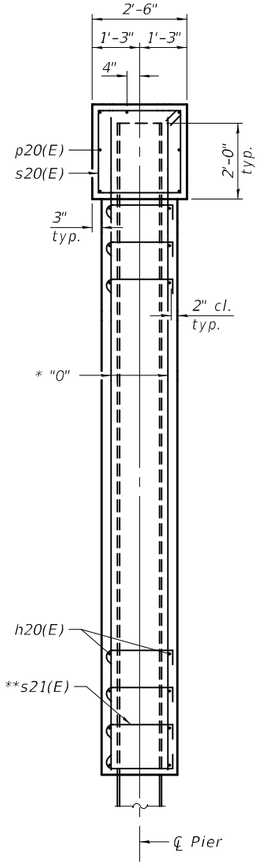
Notes:
Pour steps monolithically with cap.
See sheet 37 of 59 for additional pier details and Bill of Material.
Space reinforcement in cap to miss anchor bolts.
For details of piles, see sheet 41 of 59.



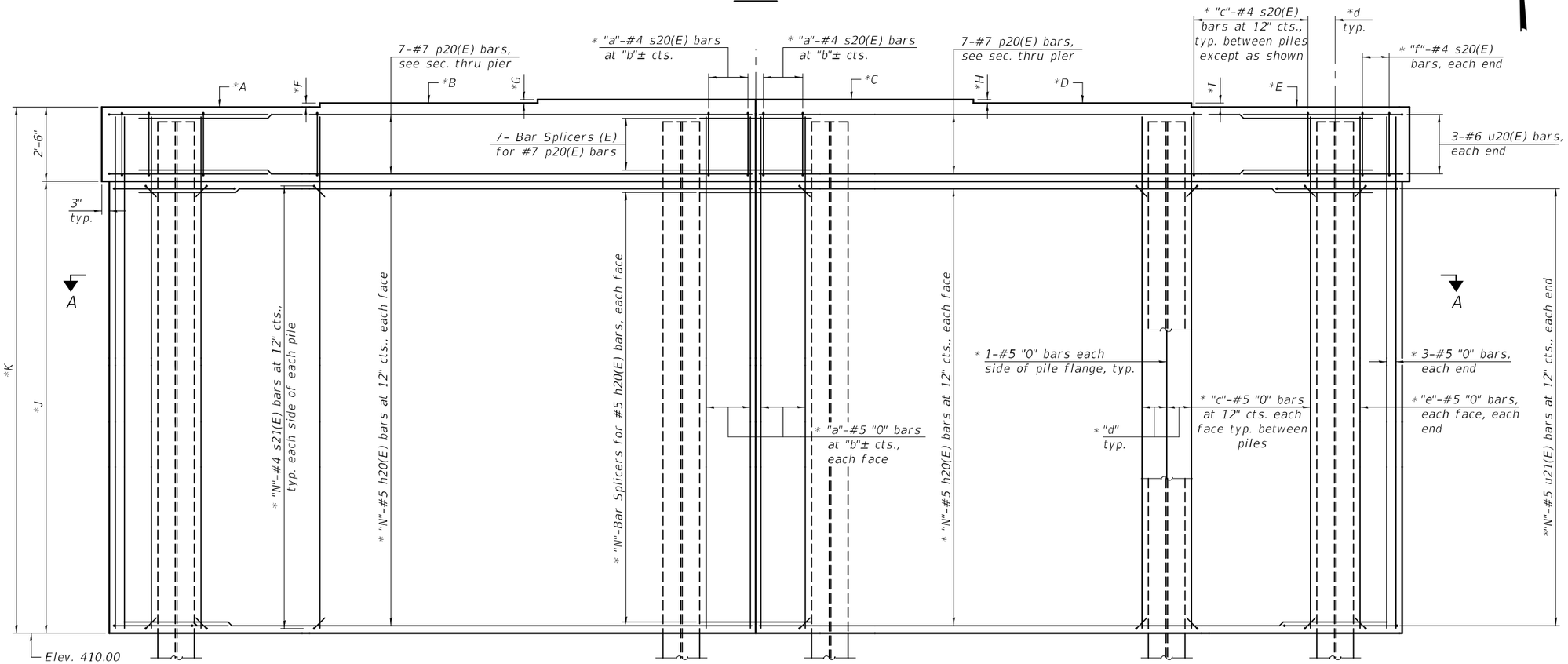
DETAIL A



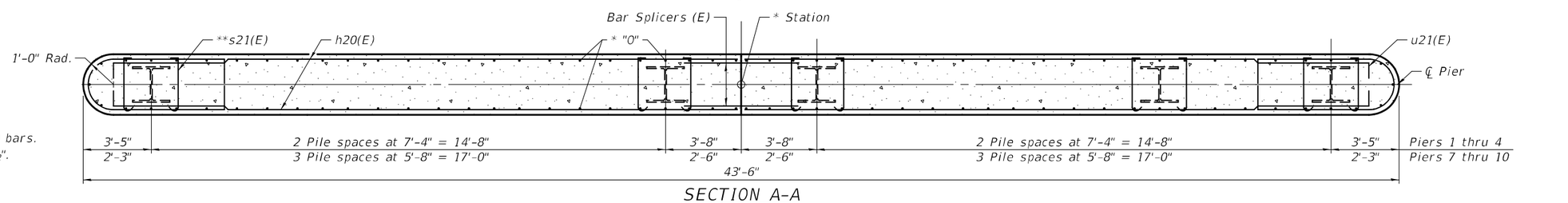
PLAN



SECTION THRU PIER



ELEVATION
(Looking North)



SECTION A-A

* See pier tables on sheet 37 of 59.

** Hook s21(E) bar around h20(E) and (* "0") bars. Clear cover for the s21(E) bar will be 1½".

DESIGNED - DAVID H. RICHTER	EXAMINED	DATE - OCTOBER 10, 2024	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**PIERS 1 THRU 4 & 7 THRU 10 STRUCTURE NO. 051 - 0075**	F.A.P. RTE. 332 | SECTION (16BR-1, BR-2)B-1 | COUNTY LAWRENCE | TOTAL SHEETS 198 | SHEET NO. 118
CHECKED - RYAN P. NEGANGARD					CONTRACT NO. 74164
DRAWN - MICHAEL B. MOSSMAN	PASSED	REVISED -		SHEET 36 OF 59 SHEETS	ILLINOIS | FED. AID PROJECT
CHECKED - D.H.R. / R.P.N. / G.R.A.	ENGINEER OF BRIDGE DESIGN	REVISED -			
	ENGINEER OF BRIDGES AND STRUCTURES				

MODEL: 051075-74164-036
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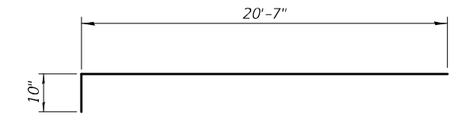
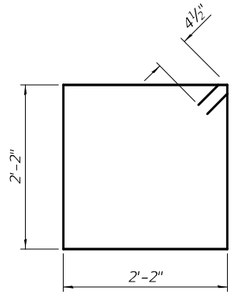
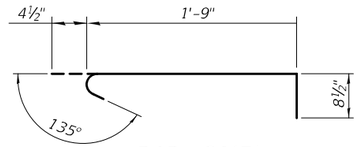


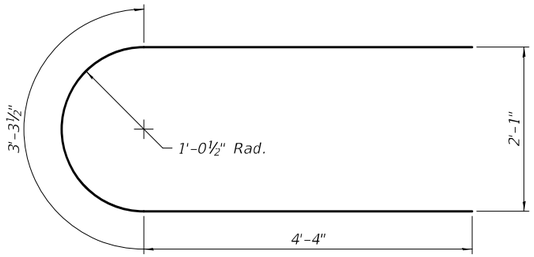
BAR h20(E)



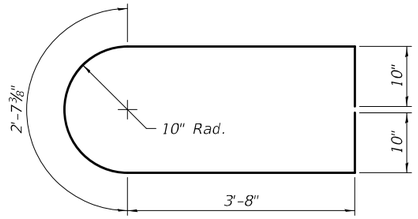
BAR s20(E)



BAR s21(E)



BAR u20(E)



BAR u21(E)

PIER PILE DATA

Pier	Pile Type	Nominal Required Bearing	Factored Resistance Available	Estimated Length	Production Piles	Test Piles
1	HP 14x102	810	445	117'	5	1
2	HP 14x102	810	446	119'	6	None
3	HP 14x102	810	446	118'	5	1
4	HP 14x102	810	446	115'	6	None
7	HP 14x102	810	445	115'	7	1
8	HP 14x102	810	446	112'	8	None
9	HP 14x102	810	443	110'	7	1
10	HP 14x102	810	443	114'	8	None

PIER TABLE

Location	Station	Elev. A	Elev. B	Elev. C	Elev. D	Elev. E	Step F	Step G	Step H	Step I	Wall Height 'J'	Min Pier Height 'K'	"L"	"M"	"N"	"O"
Pier 1	55+32.84	427.40	427.54	427.65	427.54	427.40	1⅝"	1⅜"	1⅜"	1⅝"	14'-10¾"	17'-4¾"	1'-3¼"	1"	16	v20(E)
Pier 2	56+07.34	427.93	428.07	428.18	428.07	427.93	1⅝"	1⅜"	1⅜"	1⅝"	15'-5⅛"	17'-11⅛"	1'-3¼"	1"	17	v21(E)
Pier 3	56+93.34	428.53	428.67	428.78	428.67	428.53	1⅝"	1⅜"	1⅜"	1⅝"	16'-0⅜"	18'-6⅜"	1'-2¼"	1"	17	v22(E)
Pier 4	57+79.34	429.16	429.30	429.41	429.30	429.16	1⅝"	1⅜"	1⅜"	1⅝"	16'-7⅞"	19'-1⅞"	1'-2¼"	1"	18	v23(E)
Pier 7	60+37.34	429.73	429.87	429.98	429.87	429.73	1⅝"	1⅜"	1⅜"	1⅝"	17'-2¾"	19'-8¾"	1'-2¼"	1"	18	v24(E)
Pier 8	61+23.34	429.13	429.27	429.38	429.27	429.13	1⅝"	1⅜"	1⅜"	1⅝"	16'-7½"	19'-1½"	1'-2¼"	1"	18	v23(E)
Pier 9	62+09.34	428.55	428.69	428.80	428.69	428.55	1⅝"	1⅜"	1⅜"	1⅝"	16'-0⅝"	18'-6⅝"	1'-3¼"	1"	17	v22(E)
Pier 10	62+83.84	428.02	428.16	428.27	428.16	428.02	1⅝"	1⅜"	1⅜"	1⅝"	15'-6¼"	18'-0¼"	1'-3¼"	1"	17	v21(E)

PIER TABLE

Location	"a"	"b"	"c"	"d"	"e"	"f"
Piers 1 thru 4	4	9"	6	1'-2"	2	3
Piers 7 thru 10	3	9"	5	10"	1	1

PIER NO. 1

Bar	No.	Size	Length	Shape
h20(E)	64	#5	21'-5"	
p20(E)	14	#7	20'-7"	
s20(E)	38	#4	9'-5"	
s21(E)	192	#4	2'-10"	
u20(E)	6	#6	12'-0"	
u21(E)	32	#5	11'-8"	
v20(E)	90	#5	17'-0"	
Structure Excavation			Cu. Yd.	69.0
Concrete Structures			Cu. Yd.	58.1
Reinforcement Bars, Epoxy Coated			Pound	4,710
Furnishing Steel Piles, HP14x102			Foot	585
Driving Piles			Foot	585
Test Pile, HP14x102			Each	1
Pile Shoes			Each	6

PIER NO. 2

Bar	No.	Size	Length	Shape
h20(E)	68	#5	21'-5"	
p20(E)	14	#7	20'-7"	
s20(E)	38	#4	9'-5"	
s21(E)	204	#4	2'-10"	
u20(E)	6	#6	12'-0"	
u21(E)	34	#5	11'-8"	
v21(E)	90	#5	17'-7"	
Structure Excavation			Cu. Yd.	69.0
Concrete Structures			Cu. Yd.	59.8
Reinforcement Bars, Epoxy Coated			Pound	4,910
Furnishing Steel Piles, HP14x102			Foot	714
Driving Piles			Foot	714
Pile Shoes			Each	6

PIER NO. 3

Bar	No.	Size	Length	Shape
h20(E)	68	#5	21'-5"	
p20(E)	14	#7	20'-7"	
s20(E)	38	#4	9'-5"	
s21(E)	204	#4	2'-10"	
u20(E)	6	#6	12'-0"	
u21(E)	34	#5	11'-8"	
v22(E)	90	#5	18'-2"	
Structure Excavation			Cu. Yd.	69.0
Concrete Structures			Cu. Yd.	61.7
Reinforcement Bars, Epoxy Coated			Pound	4,960
Furnishing Steel Piles, HP14x102			Foot	590
Driving Piles			Foot	590
Test Pile, HP14x102			Each	1
Pile Shoes			Each	6

PIER NO. 4

Bar	No.	Size	Length	Shape
h20(E)	72	#5	21'-5"	
p20(E)	14	#7	20'-7"	
s20(E)	38	#4	9'-5"	
s21(E)	216	#4	2'-10"	
u20(E)	6	#6	12'-0"	
u21(E)	36	#5	11'-8"	
v23(E)	90	#5	18'-9"	
Structure Excavation			Cu. Yd.	69.0
Concrete Structures			Cu. Yd.	63.7
Reinforcement Bars, Epoxy Coated			Pound	5,150
Furnishing Steel Piles, HP14x102			Foot	690
Driving Piles			Foot	690
Pile Shoes			Each	6

PIER NO. 7

Bar	No.	Size	Length	Shape
h20(E)	72	#5	21'-5"	
p20(E)	14	#7	20'-7"	
s20(E)	38	#4	9'-5"	
s21(E)	288	#4	2'-10"	
u20(E)	6	#6	12'-0"	
u21(E)	36	#5	11'-8"	
v24(E)	98	#5	19'-4"	
Structure Excavation			Cu. Yd.	69.0
Concrete Structures			Cu. Yd.	65.6
Reinforcement Bars, Epoxy Coated			Pound	5,500
Furnishing Steel Piles, HP14x102			Foot	805
Driving Piles			Foot	805
Test Pile, HP14x102			Each	1
Pile Shoes			Each	8

PIER NO. 8

Bar	No.	Size	Length	Shape
h20(E)	72	#5	21'-5"	
p20(E)	14	#7	20'-7"	
s20(E)	38	#4	9'-5"	
s21(E)	288	#4	2'-10"	
u20(E)	6	#6	12'-0"	
u21(E)	36	#5	11'-8"	
v23(E)	98	#5	18'-9"	
Structure Excavation			Cu. Yd.	69.0
Concrete Structures			Cu. Yd.	63.6
Reinforcement Bars, Epoxy Coated			Pound	5,440
Furnishing Steel Piles, HP14x102			Foot	896
Driving Piles			Foot	896
Pile Shoes			Each	8

PIER NO. 9

Bar	No.	Size	Length	Shape
h20(E)	68	#5	21'-5"	
p20(E)	14	#7	20'-7"	
s20(E)	38	#4	9'-5"	
s21(E)	272	#4	2'-10"	
u20(E)	6	#6	12'-0"	
u21(E)	34	#5	11'-8"	
v22(E)	98	#5	18'-2"	
Structure Excavation			Cu. Yd.	69.0
Concrete Structures			Cu. Yd.	61.8
Reinforcement Bars, Epoxy Coated			Pound	5,240
Furnishing Steel Piles, HP14x102			Foot	770
Driving Piles			Foot	770
Test Pile, HP14x102			Each	1
Pile Shoes			Each	8

PIER NO. 10

Bar	No.	Size	Length	Shape
h20(E)	68	#5	21'-5"	
p20(E)	14	#7	20'-7"	
s20(E)	38	#4	9'-5"	
s21(E)	272	#4	2'-10"	
u20(E)	6	#6	12'-0"	
u21(E)	34	#5	11'-8"	
v21(E)	98	#5	17'-7"	
Structure Excavation			Cu. Yd.	69.0
Concrete Structures			Cu. Yd.	60.1
Reinforcement Bars, Epoxy Coated			Pound	5,180
Furnishing Steel Piles, HP14x102			Foot	912
Driving Piles			Foot	912
Pile Shoes			Each	8

DESIGNED - DAVID H. RICHTER
CHECKED - RYAN P. NEGANGARD
DRAWN - MICHAEL B. MOSSMAN
CHECKED - D.H.R. / R.P.N. / G.R.A.

EXAMINED
ENGINEER OF BRIDGE DESIGN
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

DATE - OCTOBER 10, 2024
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIERS 1 THRU 4 & 7 THRU 10 DETAILS
STRUCTURE NO. 051 - 0075
SHEET 37 OF 59 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	119
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

MODEL: 051007S-74164-037
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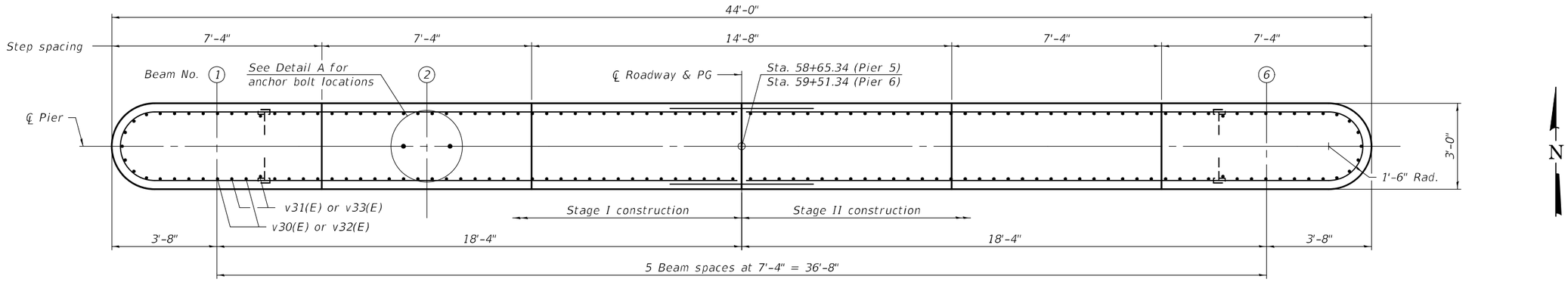
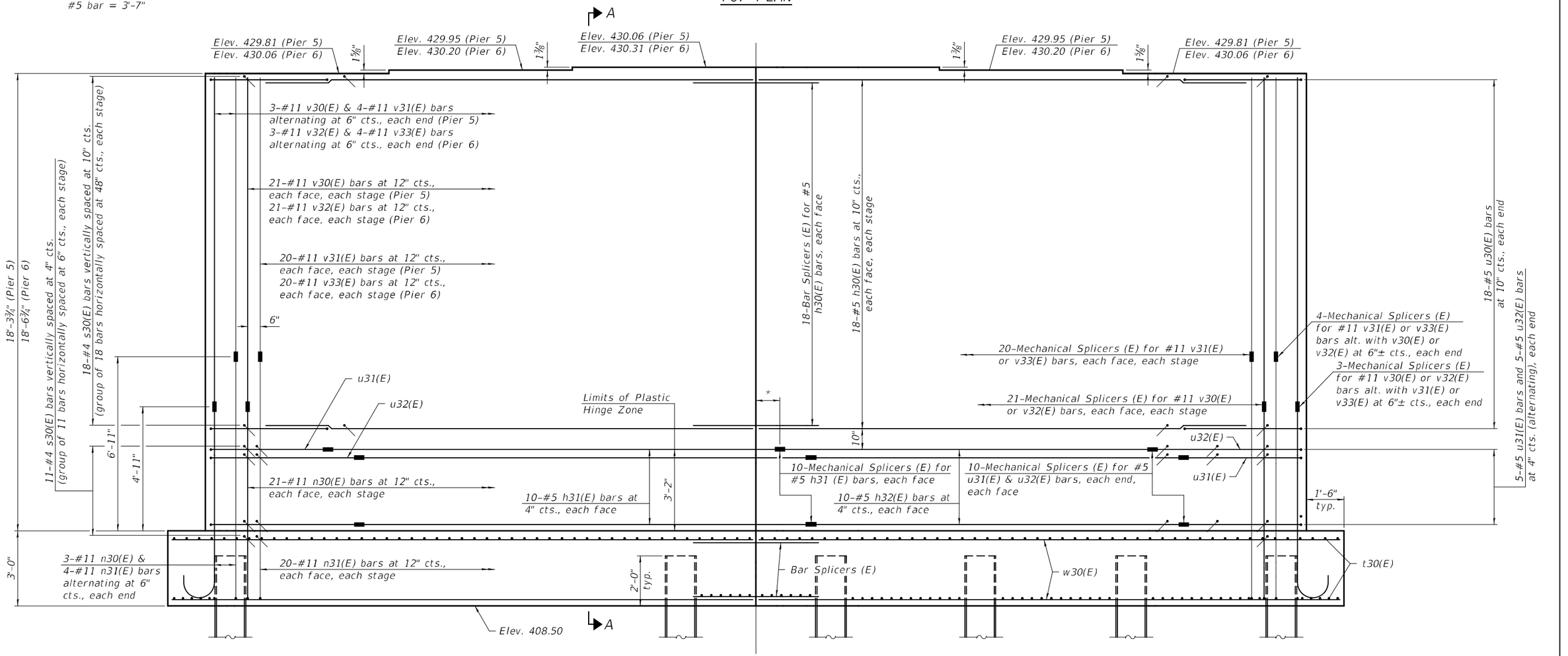


MINIMUM BAR LAP

#5 bar = 3'-7"

TOP PLAN

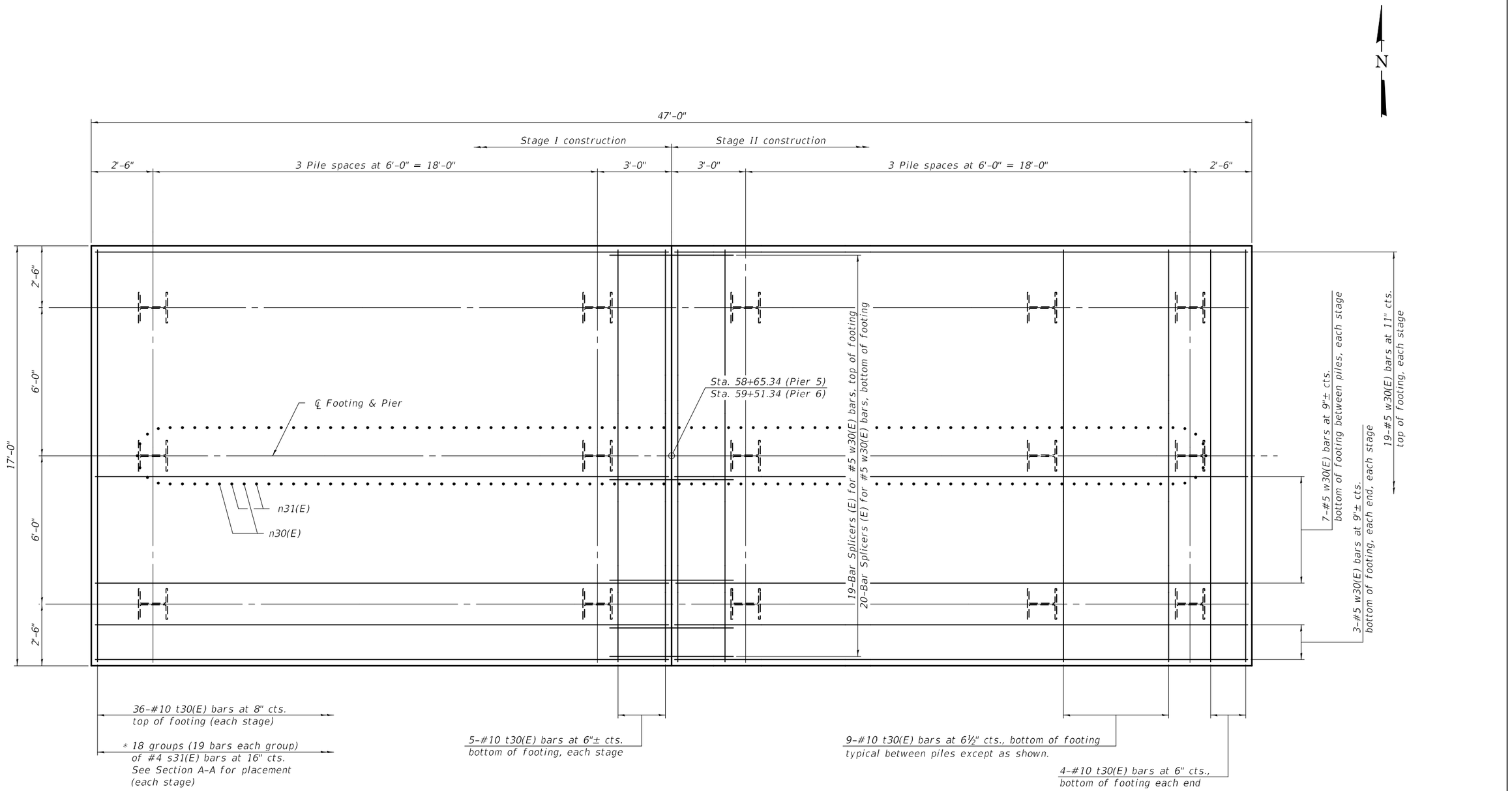


ELEVATION

(Looking North)

* 9"± and 1'-9"± extension of rebar length into stage II assumed. Contractor shall adjust the rebar lengths as required for the mechanical splicer selected from the IDOT approved suppliers list.

DESIGNED - DAVID H. RICHTER	EXAMINED	DATE - OCTOBER 10, 2024	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PIERS 5 & 6 STRUCTURE NO. 051 - 0075	F.A.P. RTE. 332 | SECTION (16BR-1, BR-2)B-1 | COUNTY LAWRENCE | TOTAL SHEETS 198 | SHEET NO. 120
CHECKED - RYAN P. NEGANGARD					CONTRACT NO. 74164
DRAWN - MICHAEL B. MOSSMAN	PASSED	REVISED -		SHEET 38 OF 59 SHEETS	ILLINOIS | FED. AID PROJECT
CHECKED - D.H.R. / R.P.N. / G.R.A.	ENGINEER OF BRIDGE DESIGN ENGINEER OF BRIDGES AND STRUCTURES	REVISED -			



FOOTING PLAN

* Orient s31(E) bars to encompass the intersections of the t30(E) and w30(E) bars in the top and bottom of footing.

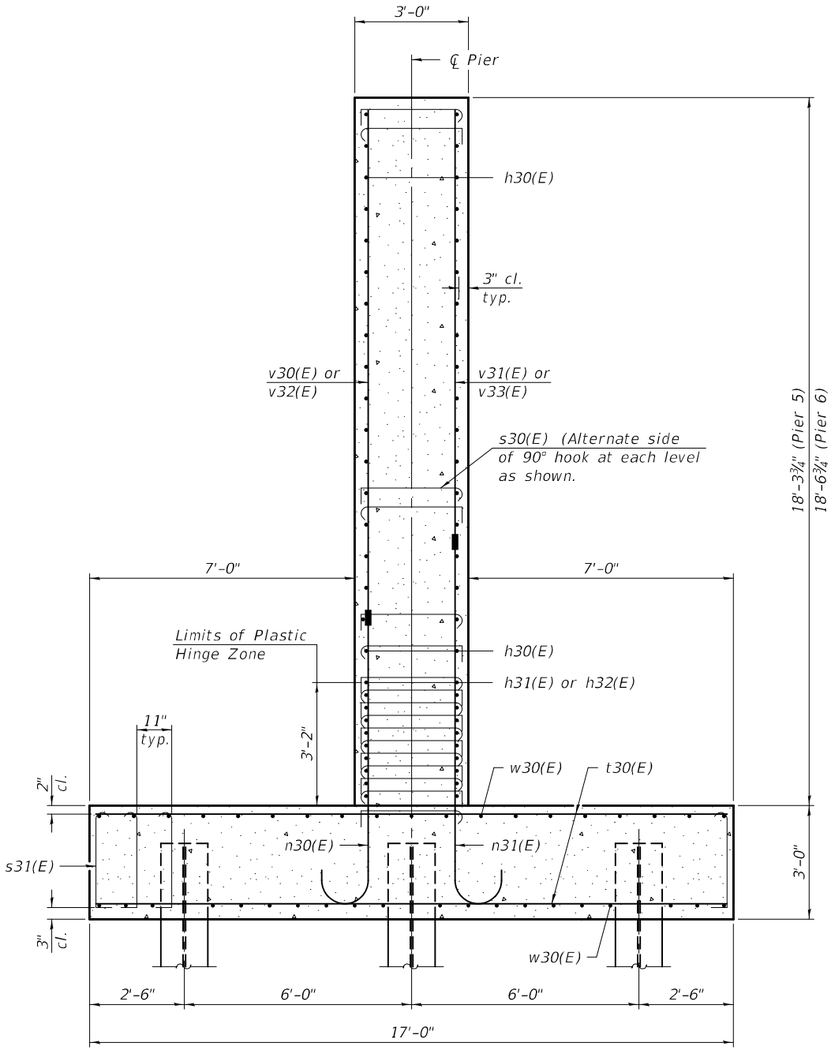
DESIGNED -	DAVID H. RICHTER	EXAMINED	DATE - OCTOBER 10, 2024
CHECKED -	RYAN P. NEGANGARD		
DRAWN -	MICHAEL B. MOSSMAN	PASSED	REVISED -
CHECKED -	D.H.R. / R.P.N. / G.R.A.	ENGINEER OF BRIDGE DESIGN	REVISED -
		ENGINEER OF BRIDGES AND STRUCTURES	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

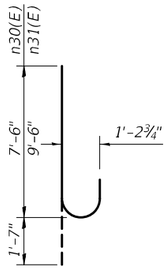
PIERS 5 & 6
STRUCTURE NO. 051 - 0075
SHEET 39 OF 59 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	121
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	

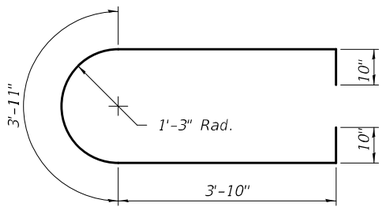
Notes:
Space reinforcement in stem to miss anchor bolts.
Pour steps monolithically with stem.
For details of piles, see sheet 41 of 59.
For details of bar splicers and mechanical splicers, see sheet 42 of 59.



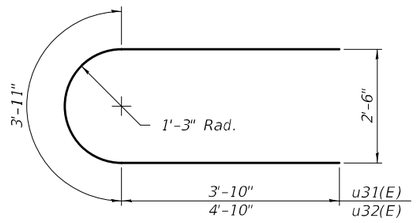
SECTION A-A



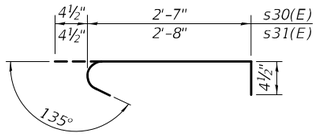
BARS n30(E) & n31(E)



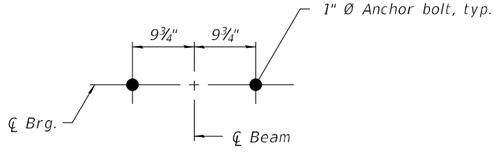
BAR u30(E)



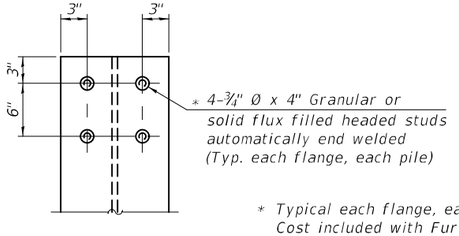
BARS u31(E) & u32(E)



BARS s30(E) & s31(E)



DETAIL A



* Typical each flange, each pile. Cost included with Furnishing Steel Piles, HP 14x117.

SEISMIC PILE DETAIL

PIER 5
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h30(E)	72	#5	20'-3"	——
h31(E)	20	#5	17'-5"	——
h32(E)	20	#5	14'-11"	——
n30(E)	90	#11	9'-1"	U
n31(E)	88	#11	11'-1"	U
s30(E)	1,118	#4	3'-4"	⌐ ¬
s31(E)	684	#4	3'-5"	⌐ ¬
t30(E)	144	#10	16'-8"	——
u30(E)	36	#5	13'-3"	⊂ ⊃
u31(E)	10	#5	11'-7"	⊂ ⊃
u32(E)	10	#5	13'-7"	⊂ ⊃
v30(E)	90	#11	13'-2"	——
v31(E)	88	#11	11'-2"	——
w30(E)	78	#5	23'-2"	——
Structure Excavation			Cu. Yd.	305.5
Concrete Structures			Cu. Yd.	177.6
Reinforcement Bars, Epoxy Coated			Pound	40,260
Furnishing Steel Piles, HP 14x117			Foot	2,369
Driving Piles			Foot	2,369
Test Pile, HP14x117			Each	1
Pile Shoes			Each	24

PIER 6
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h30(E)	72	#5	20'-3"	——
h31(E)	20	#5	17'-5"	——
h32(E)	20	#5	14'-11"	——
n30(E)	90	#11	9'-1"	U
n31(E)	88	#11	11'-1"	U
s30(E)	1,118	#4	3'-4"	⌐ ¬
s31(E)	684	#4	3'-5"	⌐ ¬
t30(E)	144	#10	16'-8"	——
u30(E)	36	#5	13'-3"	⊂ ⊃
u31(E)	10	#5	11'-7"	⊂ ⊃
u32(E)	10	#5	13'-7"	⊂ ⊃
v32(E)	90	#11	13'-5"	——
v33(E)	88	#11	11'-5"	——
w30(E)	78	#5	23'-2"	——
Structure Excavation			Cu. Yd.	305.5
Concrete Structures			Cu. Yd.	178.8
Reinforcement Bars, Epoxy Coated			Pound	40,500
Furnishing Steel Piles, HP 14x117			Foot	2,400
Driving Piles			Foot	2,400
Pile Shoes			Each	24

PIER 5
PILE DATA

Type: HP 14x117
Nominal Required Bearing: 929 kips
Factored Resistance Available: 511 kips
Est. Length: 103 '
No. Production Piles: 23
No. Test Piles: 1

PIER 6
PILE DATA

Type: HP 14x117
Nominal Required Bearing: 929 kips
Factored Resistance Available: 511 kips
Est. Length: 100 '
No. Production Piles: 24
No. Test Piles: None

DESIGNED -	DAVID H. RICHTER	EXAMINED	DATE - OCTOBER 10, 2024
CHECKED -	RYAN P. NEGANGARD		REVISED -
DRAWN -	MICHAEL B. MOSSMAN	PASSED	REVISED -
CHECKED -	D.H.R. / R.P.N. / G.R.A.		

ENGINEER OF BRIDGE DESIGN
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIERS 5 & 6
STRUCTURE NO. 051 - 0075
SHEET 40 OF 59 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	122
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

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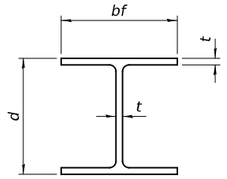
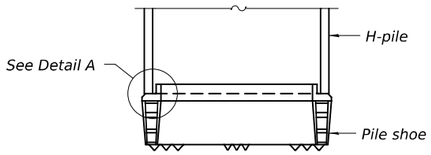
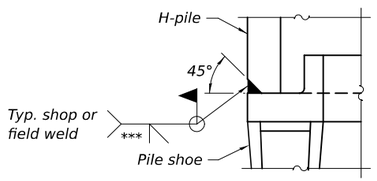


STEEL PILE TABLE

Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 18x181	18	18	1	36"
x157	17¾"	17⅞"	⅞"	36"
x135	17½"	17¾"	¾"	36"
HP 16x183	16½"	16½"	1⅛"	36"
x162	16¼"	16⅛"	1"	36"
x141	16	16	⅞"	36"
x121	15¾"	15⅞"	¾"	36"
HP 14x117	14¼"	14⅞"	13/16"	30"
x102	14"	14¾"	11/16"	30"
x89	13⅞"	14¾"	⅝"	30"
x73	13⅝"	14⅝"	½"	30"
HP 12x84	12¼"	12¼"	11/16"	24"
x74	12⅛"	12¼"	⅝"	24"
x63	12"	12⅛"	½"	24"
x53	11¾"	12"	7/16"	24"
HP 10x57	10"	10¼"	9/16"	24"
x42	9¾"	10⅛"	7/16"	24"
HP 8x36	8"	8⅛"	7/16"	18"



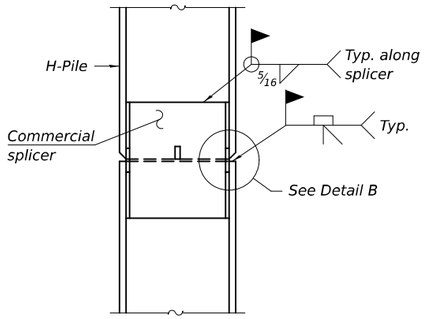
ELEVATION



DETAIL A

SHOE ATTACHMENT

Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.



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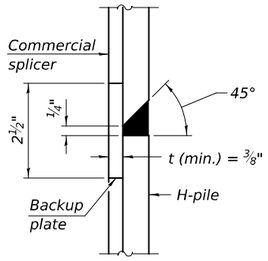
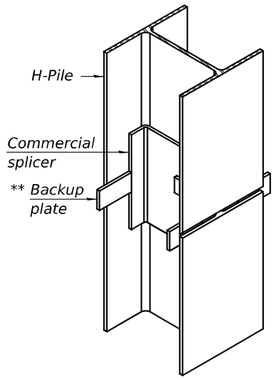
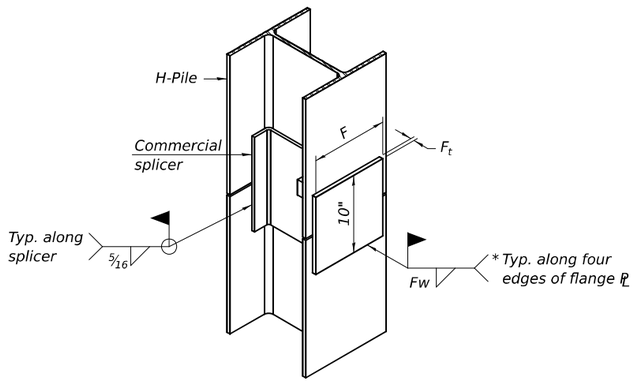


DETAIL B



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



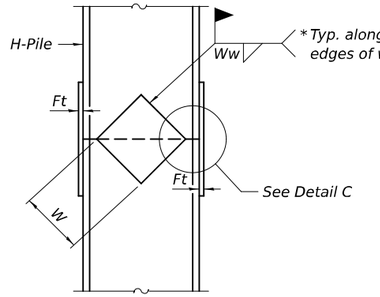
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

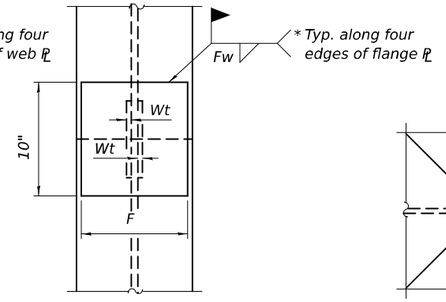
* Interrupt welds ¼" from end of web and/or each flange.

** Remove portions of backup plates that extend outside the flanges.

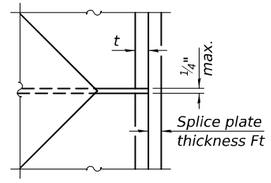
*** Weld size per pile shoe manufacturer (5/16" min.).



ELEVATION



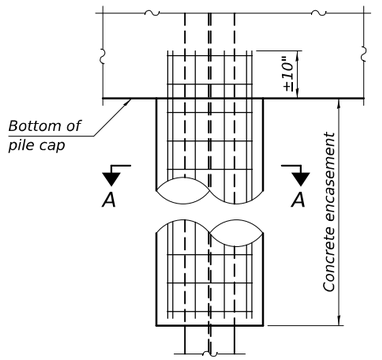
END VIEW



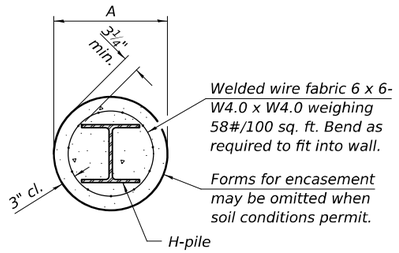
DETAIL C

Designation	F	Ft	Fw	W	Wt	Ww
HP 18x181	15½"	1½"	1"	9½"	⅞"	¾"
x157	15¼"	1¼"	1"	9½"	⅞"	¾"
x135	15¼"	1¼"	1"	9½"	⅞"	¾"
HP 16x183	13¾"	1½"	1"	8¼"	⅞"	¾"
x162	13½"	1½"	1"	8¼"	¾"	⅝"
x141	13½"	1¼"	⅞"	8¼"	¾"	⅝"
x121	13½"	1¼"	⅞"	8¼"	¾"	⅝"
HP 14x117	12½"	1¼"	⅞"	7¾"	⅝"	½"
x102	12½"	1"	¾"	7¾"	⅝"	½"
x89	12½"	⅞"	11/16"	7¾"	⅝"	½"
x73	12½"	¾"	9/16"	7¾"	⅝"	½"
HP 12x84	10"	1"	11/16"	6½"	⅝"	½"
x74	10"	⅞"	11/16"	6½"	⅝"	½"
x63	10"	¾"	½"	6½"	½"	⅜"
x53	10"	¾"	½"	6½"	½"	⅜"
HP 10x57	8"	⅞"	9/16"	5¼"	½"	⅜"
x42	8"	¾"	9/16"	5¼"	½"	⅜"
HP 8x36	6¾"	⅝"	7/16"	4"	½"	⅜"

WELDED PLATE FIELD SPLICE



ELEVATION



SECTION A-A

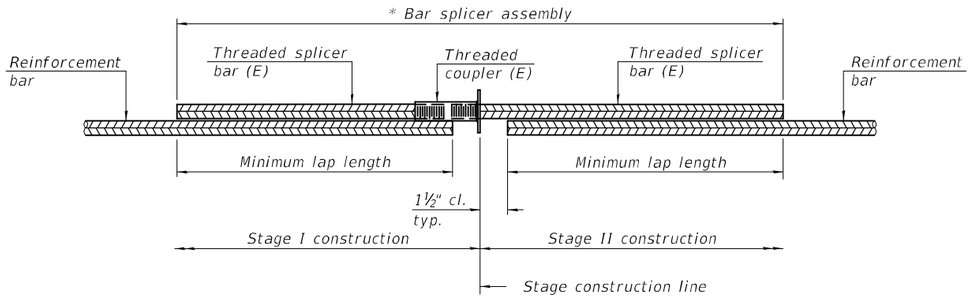
INDIVIDUAL PILE CONCRETE ENCASEMENT
(when specified)

HP PILE DETAILS STRUCTURE NO.

F-HP 10-27-2023

DESIGNED - DAVID H. RICHTER	EXAMINED	ENGINEER OF BRIDGE DESIGN	DATE - OCTOBER 10, 2024	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	HP PILE DETAILS STRUCTURE NO. 051-0075
CHECKED - RYAN P. NEGANGARD	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET 41 OF 59 SHEETS
DRAWN - MICHAEL B. MOSSMAN			REVISED -		
CHECKED - D.H.R. / R.P.N. / G.R.A.					

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	123
		CONTRACT NO. 74164		
	ILLINOIS FED. AID PROJECT			



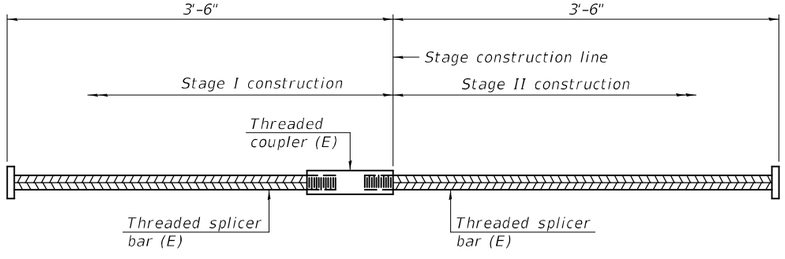
STANDARD BAR SPLICER ASSEMBLY PLAN

Only bar splicer assemblies as presented on the approved QPL list may be used.

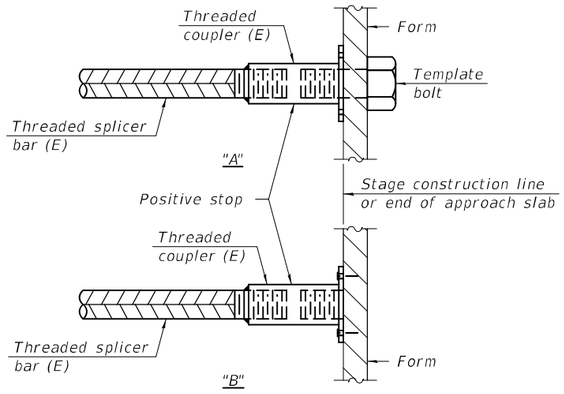
Threaded splicer bar length = min. lap length + 1½" + thread length

* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Slab	#5	3,020	3'-6"
Edge beam	#5	8	See Headed Bar Splicer Detail
Approach slab, top	#5	90	3'-4"
Approach slab, bottom	#8	120	4'-9"
Approach slab, footing	#5	80	3'-2"
Abutment backwall and hatch block	#5	22	3'-9"
Abutment cap	#7	20	5'-0"
Expansion pier cap	#7	56	5'-0"
Expansion pier wall	#5	276	3'-7"
Fixed pier wall	#5	72	3'-7"
Fixed pier footing	#5	78	3'-7"

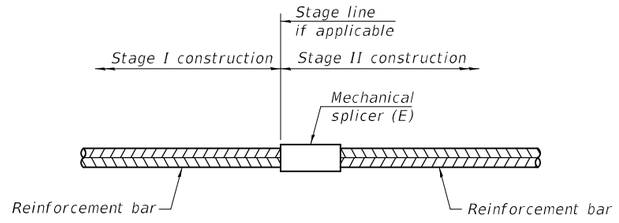


HEADED BAR SPLICER DETAIL



INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

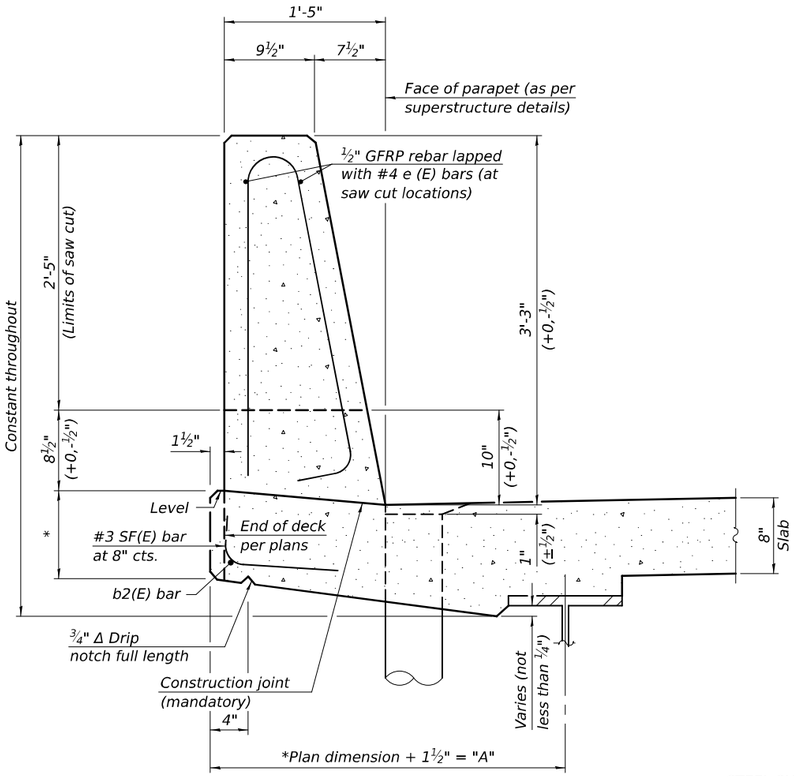
Location	Bar size	No. assemblies required

Notes:
Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
All reinforcement shall be lapped and tied to the splicer bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
See approved list of bar splicer assemblies and mechanical splicers for alternatives.

MODEL: 051007S-74164-042
FILE NAME: pw:\\dot-pw.bentley.com:PWIDOT\Documents\IDOT Offices\Bureau of Bridges and Structures\Projects\051007S\CADD Plans\051007S-74164.dgn
10/10/2024 1:31:08 PM

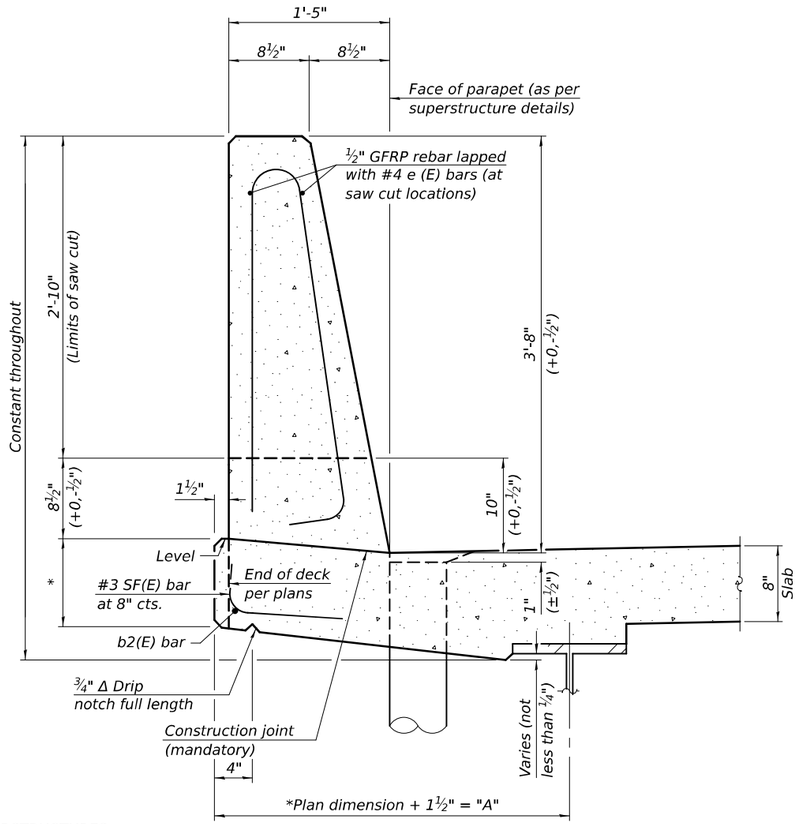
DESIGNED - DAVID H. RICHTER	EXAMINED	ENGINEER OF BRIDGE DESIGN	DATE - OCTOBER 10, 2024	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS STRUCTURE NO. 051 - 0075
CHECKED - RYAN P. NEGANGARD	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET 42 OF 59 SHEETS
DRAWN - MICHAEL B. MOSSMAN			REVISED -		
CHECKED - D.H.R. / R.P.N. / G.R.A.					

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	124
		CONTRACT NO. 74164		
	ILLINOIS FED. AID PROJECT			



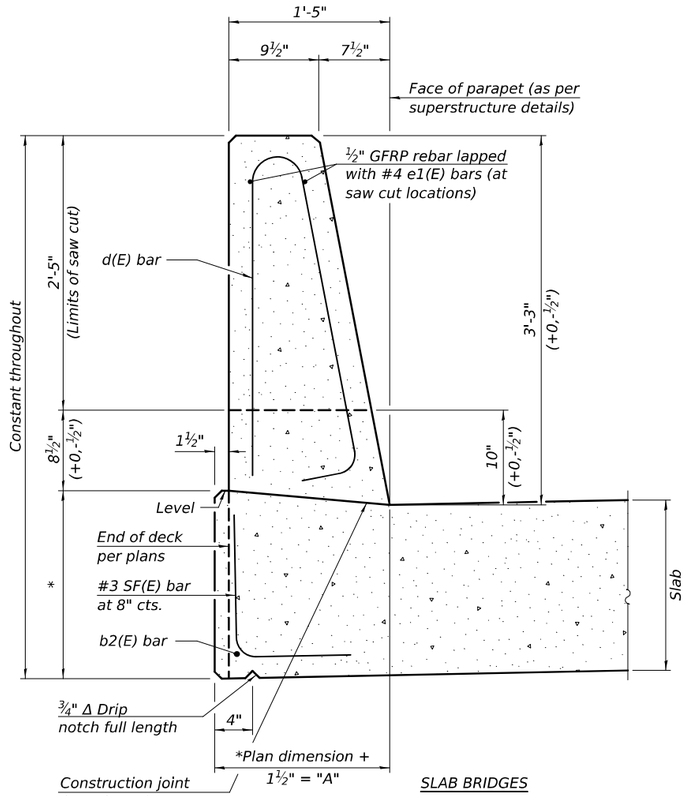
39" CONSTANT-SLOPE PARAPET SECTION

(Showing dimensions, d(E), and ½" Ø GFRP rebar)



44" CONSTANT-SLOPE PARAPET SECTION

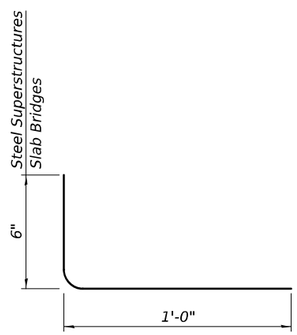
(Showing dimensions, d(E), and ½" Ø GFRP rebar)



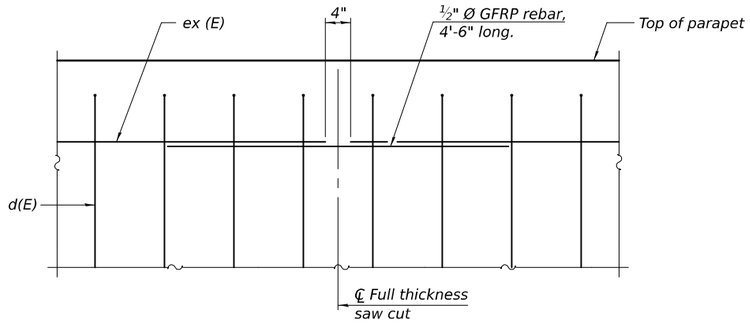
39" CONSTANT-SLOPE PARAPET SECTION

(Showing dimensions, d(E), and ½" Ø GFRP rebar)

*See Superstructure Details.



SF(E) BAR



DETAIL - GFRP REBAR STIFFENING ELEVATION

(Place as shown in parapet section at each parapet joint location.)

Notes:

All dimensions shall remain the same as shown on superstructure details, except dimension "A" which is to be revised as shown.
Additional concrete needed to revise dimension "A" (39" and 44" parapets):
Steel Superstructures: 0.00348 cu. yds./ft.
Slab Bridge Superstructures: cu. yds./ft.
Place full depth aluminum sheets as shown on superstructure details.
Replace all cork joint filler locations with a full thickness saw cut.
Steel and slab superstructures shown. Other superstructure types similar.

STEEL SUPERSTRUCTURES

SLAB BRIDGES

SFP 39-44

10/27/2023

DESIGNED - DAVID H. RICHTER	EXAMINED	ENGINEER OF BRIDGE DESIGN	DATE - OCTOBER 10, 2024	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**CONCRETE PARAPET SLIPFORMING OPTION STRUCTURE NO. 051-0075**
CHECKED - RYAN P. NEGANGARD	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET 43 OF 59 SHEETS
DRAWN - MICHAEL B. MOSSMAN			REVISED -		
CHECKED - D.H.R. / R.P.N. / G.R.A.					

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1, BR-2)B-1	LAWRENCE	198	125
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	

MODEL: 051075-74164-043.dgn
FILE NAME: pw://idot-pw.bentley.com:PWIDOT Documents/IDOT O ces/Bureau of Bridges and Structures/OBM Projects/051075/CADData/Bridge/051075-74164-Design.dgn

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Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 9/29/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0075
Station 62+80

BORING NO. 1 (S Abut)
Station 54+64
Offset 8.0ft Lt (West)
Ground Surface Elev. 430.74 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 403.7 ft
▽ Upon Completion Washed ft
▼ After 72 Hrs. 406.2 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
				6" asphalt on 13" concrete pavement.
429.14				
				Estimated, CLAY LOAM, embankment.
				No samples.
426.24				
-5	2			Stiff, damp, brown, CLAY LOAM, embankment.
	3	1.24	25	
	4	B		
	3			
	4	1.57	24	
	5	B		
-10	2			
	3	1.48	24	
	5	B		
418.74				
	2			Medium, damp, gray, SILTY CLAY, embankment.
	2	0.62	29	
	2	B		
-15	1			
	1	0.62	27	
	2	B		
413.74				
	1			Stiff, damp, brown, CLAY.
	3	1.40	25	
	4	B		
411.24				
-20	3			Stiff, damp, brown, SILTY CLAY.
	4	1.81	24	Stiff, damp, brown, SILTY CLAY. (continued)
	5	B		
408.74				
	2			Very stiff, damp, brown, CLAY.
	3	2.06	22	
	4	B		
406.24				
-25	2			Soft, very damp, brown, SILTY LOAM.
	1	0.33	25	
	3	B		
▽ 403.74				
	3			Loose, wet, brown, fine grained, SAND. 6% passing #200 sieve.
	1		26	
	2			
401.24				
-30	2			Very soft, very damp, gray, SANDY LOAM.
	3	0.18	21	
	3	S		
396.24				
-35	5			Medium to dense, wet, brown, fine grained, SAND. 4% passing #200 sieve.
	10		23	
	20			
391.24				
-40	2			Very soft, very damp, gray, SILT.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 9/29/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0075
Station 62+80

BORING NO. 1 (S Abut)
Station 54+64
Offset 8.0ft Lt (West)
Ground Surface Elev. 430.74 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 403.7 ft
▽ Upon Completion Washed ft
▼ After 72 Hrs. 406.2 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
				Very soft, very damp, gray, SILT. (continued)
386.24				
-45	4			Stiff, damp, gray, SILTY CLAY.
	5	2.06	28	
	6	B		
361.24				
-50	4			Dence, wet, gray, fine grained, SAND. 10% passing #200 sieve.
	5	1.65	28	
	6	B		
-55				
370.74 -60	1			
	7	0.21	27	Medium, damp, gray, SILTY CLAY.
	6	B		
-65				
	3	0.62	28	
	4	B		
-70	14			
	17		22	
	21			
-75				
351.24				
-80	6			Stiff, damp, gray, SILTY CLAY.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 9/29/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0075
Station 62+80

BORING NO. 1 (S Abut)
Station 54+64
Offset 8.0ft Lt (West)
Ground Surface Elev. 430.74 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 403.7 ft
▽ Upon Completion Washed ft
▼ After 72 Hrs. 406.2 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
				Stiff, damp, gray, SILTY CLAY. (continued)
-85				
	7	1.90	34	
	9	S		
-90	5			
	7	2.06	24	
	8	B		
-95				
331.24				
-100	6			Very stiff, damp, gray, LOAM.
	6	2.68	20	Very stiff, damp, gray, LOAM. (continued)
	10	B		
-105				
321.24				
-110	46			Very dense, wet, gray, fine grained, SAND. 9% passing #200 sieve.
	39		14	
	30			
-115				Benchmarks: BM 5 Chiseled square on hubguard on SE corner of existing structure Sta 54+73 Rt 15.4' = 431.29' BM 7 Chiseled square on hubguard on NE corner of existing structure Sta 63+18 Rt 15.9' = 431.55'
313.24				
313.14	50/1"		16	Very dense, moist, gray, SANDSTONE.
	50/0"			
	50/0"			Extent of exploration.
-120				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

DESIGNED - DAVID H. RICHTER	EXAMINED		DATE - OCTOBER 10, 2024	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORING LOGS STRUCTURE NO. 051 - 0075
CHECKED - RYAN P. NEGANGARD		ENGINEER OF BRIDGE DESIGN			SHEET 44 OF 59 SHEETS
DRAWN - MICHAEL B. MOSSMAN	PASSED		REVISED -		
CHECKED - D.H.R. / R.P.N. / G.R.A.		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	126
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 1 of 4

Date 9/11/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0075
Station 62+80

BORING NO. 2
Station 55+37
Offset 24.0ft Rt (East)
Ground Surface Elev. 416.79 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 402.3 ft
▽ Upon Completion Washed ft
▼ After 24 Hrs. 407.3 ft

		DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Riprap and broken concrete on CLAY. No samples.					
Hard, damp, brown mottled gray, CLAY.	412.29	-5	5 5 5	4.5 PP	19
Medium, damp, brown, CLAY w/ Silt.	409.79		5 4 6	0.74 B	25
▼		-10	3 3 4	0.74 B	25
Medium, damp, brown marbled gray, SILTY LOAM.	404.79		3 2 4	0.54 B	24
▽	401.79	-15	3		
Loose, wet, gray, fine grained, SAND. 8% passing #200 sieve.			3 4		26
3% passing #200 sieve.			0 1 5		28
	396.79	-20	5		
No recovery on this trip, estimated SAND.			12 16		
Loose, wet, gray fine grained, SAND w/ 1/2" Sandy Loam partings. 7% passing #200 sieve.			2 4 6		22
9% passing #200 sieve.		-25	3 3 4		21
Gray, SANDY LOAM.	389.79		2 3	1.11	25
Stiff, damp, gray, CLAY.	388.79		4	B	
Wet, gray, fine grained, SAND. 4% passing #200 sieve.	387.29	-30	8 6	1.07	29
Stiff, damp, gray, CLAY.	386.29		4	B	
Stiff, damp, gray, SILTY CLAY.	382.29	-35	4 4 5	1.24 B	26
		-40	5		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 2 of 4

Date 9/11/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0075
Station 62+80

BORING NO. 2
Station 55+37
Offset 24.0ft Rt (East)
Ground Surface Elev. 416.79 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 402.3 ft
▽ Upon Completion Washed ft
▼ After 24 Hrs. 407.3 ft

		DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Stiff, damp, gray, SILTY CLAY. (continued)			5 7	1.73 B	27
	371.79	-45	2		
Very soft, damp, gray, SILTY LOAM.			2 3	0.12 B	28
Medium, wet, gray, fine grained, SAND. 4% passing #200 sieve.	367.29	-50	12 12 14		20
		-55			
	356.79	-60	8		
Dense, wet, gray, fine grained, SAND. 5% passing #200 sieve.			16 19		19
		-65			
Very stiff, damp, gray, LOAM.	347.29	-70	5 6 9	2.27 B	26
		-75			
Stiff, damp, gray, SILTY CLAY.	337.29	-80	7		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

MODEL: 0510075-74164-045
FILE NAME: pw:\\ildot-pw.bentley.com:PWIDOT\Documents\IDOT Offices\Bureau of Bridges and Structures\Projects\0510075\CADD Plans\0510075-74164.dgn

DESIGNED - DAVID H. RICHTER
CHECKED - RYAN P. NEGANGARD
DRAWN - MICHAEL B. MOSSMAN
CHECKED - D.H.R. / R.P.N. / G.R.A.

10/10/2024 1:31:09 PM

EXAMINED Mark Shaffer
ENGINEER OF BRIDGE DESIGN
PASSED Jayne F. Schiff
ENGINEER OF BRIDGES AND STRUCTURES

DATE - OCTOBER 10, 2024
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 051 - 0075
SHEET 45 OF 59 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	127

CONTRACT NO. 74164
ILLINOIS FED. AID PROJECT

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 9/11/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0075
Station 62+80

BORING NO. 2
Station 55+37
Offset 24.0ft Rt (East)
Ground Surface Elev. 416.79 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 402.3 ft
▽ Upon Completion Washed ft
▼ After 24 Hrs. 407.3 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
	8 9	1.81 B	22	Stiff, damp, gray, SILTY CLAY. (continued)
-85				
327.29				
-90	15 15 17	0.65 B	19	Medium, damp, gray, SANDY LOAM.
-95				
317.29				
-100	50/3"		11	

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
	50/2" 50/1"			Very dense, very damp, gray, fine grained, SAND w/ small Gravel and Sandstone fragments. (continued)
312.29				
312.19 -105	50/1"		13	Hard, moist, gray, SANDSTONE.
311.79	50/0" 50/0"			Borehole continued with rock coring.
-110				
-115				
-120				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

ROCK CORE LOG

Date 9/11/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence CORING METHOD Rotary, surf set diamond bit

STRUCT. NO. 051-0075
Station 62+80

CORING BARREL TYPE & SIZE NW, conv dbl bbl, split inner
Core Diameter 2.06 in
Top of Rock Elev. 312.29 ft
Begin Core Elev. 311.79 ft

BORING NO. 2
Station 55+37
Offset 24.0ft Rt (East)
Ground Surface Elev. 416.79 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)	Description
311.79	B2C1	87	23	1.7		Soft, gray, SANDSTONE, scratches easily. Rock core B2C1 from 105.0' to 105.5' depth = 229.4 tsf
306.79-110	B2C2	34	0	2.2		Soft, gray, SANDSTONE, scratches easily. No recovery from 111.7' to 115.0' depth.
301.79-115						Extent of exploration. Benchmarks: BM 5 Chiseled square on hubguard on SE corner of existing structure Sta 54+73 Rt 15.4' = 431.29' BM 7 Chiseled square on hubguard on NE corner of existing structure Sta 63+18 Rt 15.9' = 431.55'
-120						
-125						

Color pictures of the cores Available on request
Cores will be stored for examination until 09/11/22
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
RQD is the ratio of the total length of sound core specimens >4" to total length of core run BBS, form 138 (Rev. 8-99)

DESIGNED	-	DAVID H. RICHTER	
CHECKED	-	RYAN P. NEGANGARD	
DRAWN	-	MICHAEL B. MOSSMAN	
CHECKED	-	D.H.R. / R.P.N. / G.R.A.	

EXAMINED — ENGINEER OF BRIDGE DESIGN
PASSED — ENGINEER OF BRIDGES AND STRUCTURES
DATE - OCTOBER 10, 2024
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 051 - 0075
SHEET 46 OF 59 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	128
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

MODEL: 051075-74164-046
FILE NAME: pw:\\fdot-pw.bentley.com:PWIDOT\Documents\IDOT Offices\Bureau of Bridges and Structures\Projects\051075\CADD Plans\051075-74164.dgn
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Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 9/14/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0075
Station 62+80

BORING NO. 3
Station 56+10
Offset 24.5ft Lt (West)
Ground Surface Elev. 416.31 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 395.5 ft
▽ Upon Completion Washed ft
▼ After 24 Hrs. 404.3 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Riprap and broken concrete on CLAY.			
No samples.			
411.81			
-5 Stiff, damp, brown, CLAY.	5		
	5	1.90	23
	5	B	
	4		
	5	2.47	23
	6	B	
406.31 -10	3		
Very soft, very damp, brown, SILTY LOAM.	3	0.16	26
	3	B	
404.31			
Medium, damp, brown mottled gray, SILTY CLAY.	2		
	2	0.82	25
	3	B	
401.81			
-15 Very stiff, damp, brown marbled gray, CLAY.	2		
	3	2.27	32
	4	B	
399.31			
Soft, very damp, gray, SILT.	1		
	1	0.29	38
	1	B	
-20	6		

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Soft, very damp, gray, SILT. (continued) ▽ 395.51	11	0.16	35
	12	B	
Loose to medium, wet, gray, fine grained, SAND.			
	7		
6% passing #200 sieve.	5		22
	5		
-25	10		
	15		22
	19		
	3		
9% passing #200 sieve.	4		21
	5		
386.81			
-30 Stiff, damp, gray, SILTY CLAY.	3		
	4	1.65	29
	5	B	
-35	4		
	5	1.65	27
	6	B	
376.31 -40	4		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W,O,H - Sampler Advanced By Weight of Hammer, W,O,P - Advanced by Weight of Pipe, B,S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 9/14/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0075
Station 62+80

BORING NO. 3
Station 56+10
Offset 24.5ft Lt (West)
Ground Surface Elev. 416.31 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 395.5 ft
▽ Upon Completion Washed ft
▼ After 24 Hrs. 404.3 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Stiff, damp, gray, SILTY CLAY.	6	1.65	26
	6	B	
-45	2		
	3	1.24	25
	4	B	
366.61			
-50 Medium, wet, gray, fine grained, SAND. 6% passing #200 sieve.	7		
	9		21
	14		
-55			
356.31 -60	21		

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Dense, wet, gray, fine grained, SAND w/ Sandstone fragments, 8% passing #200 sieve.	24		12
	25		
-65			
346.81			
-70 Soft to medium, damp, gray, CLAY LOAM.	8		
	8	0.5	22
	9	PP	
-75			
336.81			
-80 Very stiff, damp, gray, LOAM.	6		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W,O,H - Sampler Advanced By Weight of Hammer, W,O,P - Advanced by Weight of Pipe, B,S. - Before Seating
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Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 9/14/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0075
Station 62+80

BORING NO. 3
Station 56+10
Offset 24.5ft Lt (West)
Ground Surface Elev. 416.31 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 395.5 ft
▽ Upon Completion Washed ft
▼ After 24 Hrs. 404.3 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Very stiff, damp, gray, LOAM. (continued)	6	2.47	21
	10	B	
-85			
326.01			
-90 Gray, wet, fine grained, SAND. 11% passing #200 sieve.	20		
	25	0.62	21
	21	B	
-95			
316.81			
-100	14		

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Very soft, wet, gray, SANDY LOAM. (continued)	30	0.23	22
	18	S	
313.31			
Very dense, moist, gray, SANDSTONE.			
311.71			
-105 Extent of exploration.	*		11
* 50/1", 50/0", 50/0"			
Benchmarks:			
BM 5 Chiseled square on hubguard on SE corner of existing structure Sta 54+73 Rt 15.4' = 431.29'			
BM 7 Chiseled square on hubguard on NE corner of existing structure Sta 63+18 Rt 15.9' = 431.55'			
-110			
-115			
-120			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W,O,H - Sampler Advanced By Weight of Hammer, W,O,P - Advanced by Weight of Pipe, B,S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

DESIGNED - DAVID H. RICHTER	EXAMINED	ENGINEER OF BRIDGE DESIGN	DATE - OCTOBER 10, 2024	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORING LOGS STRUCTURE NO. 051 - 0075	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - RYAN P. NEGANGARD	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET 47 OF 59 SHEETS	332	(16BR-1,BR-2)B-1	LAWRENCE	198	129
DRAWN - MICHAEL B. MOSSMAN			REVISED -						CONTRACT NO. 74164	
CHECKED - D.H.R. / R.P.N. / G.R.A.								ILLINOIS	FED. AID PROJECT	

MODEL: 051075-74164-047
FILE NAME: pw:\\dot-pw.bentley.com:PWIDOT\Documents\IDOT Offices\Bureau of Bridges and Structures\Projects\051075\CADD Plans\051075-74164.dgn
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Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 9/5/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0075
Station 62+80

BORING NO. 4
Station 56+94
Offset 23.0ft Rt (East)
Ground Surface Elev. 416.18 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 396.7 ft
▽ Upon Completion Washed ft
▼ After 216 Hrs. 407.2 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
				Riprap and broken concrete on CLAY.
				No samples.
411.68				
-5	7			Hard, damp, brown, CLAY.
	8	4.5	18	
	10	PP		
	4			
	5	1.98	25	
	6	B		
▼				
-10	3			
	4	2.06	28	
	5	B		
404.18				
	3			Stiff, damp, gray mottled brown, SILTY CLAY.
	4	1.32	26	
	4	B		
401.68				
-15	2			Very soft, damp, gray, SILT.
	2	0.21	31	
	2	B		
	1			
	1	0.21	31	LL = 26.3 PL = 16.3 PI = 10.0
	1	B		
▽ 396.68				
-20	2			
				Medium to loose, wet, gray, fine grained, SAND. 7% passing #200 sieve.
	9		22	
	12			
	2			
				6% passing #200 sieve.
	4		20	
	6			
-25	5			
	4		21	12% passing #200 sieve.
	7			
	6			
				7% passing #200 sieve. (continued)
	8		14	
386.68	7			
-30	3			Very soft, damp, gray, fine grained, SANDY LOAM.
	4	0.09	18	
	7	S		
381.68				
-35	4			Very stiff, damp, brown to gray, SILTY CLAY.
	5	2.27	25	
	7	B		
-40	3			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 9/5/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0075
Station 62+80

BORING NO. 4
Station 56+94
Offset 23.0ft Rt (East)
Ground Surface Elev. 416.18 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 396.7 ft
▽ Upon Completion Washed ft
▼ After 216 Hrs. 407.2 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
				Very stiff, damp, brown to gray, SILTY CLAY. (continued)
	3	2.27	25	
	5	B		
371.68				
-45	1			Very soft, damp, gray, SILTY LOAM.
	2	0.25	27	
	4	B		
				LL = 27.3 PL = 22.4 PI = 4.9
366.68				
-50	9			Medium, wet, gray, fine grained, SAND. 4% passing #200 sieve.
	13		23	
	12			
-55				
356.18 -60	17			
				Medium, wet, gray, fine grained, SAND. 5% passing #200 sieve.
	21		17	
	16			
-65				
346.68				
-70	6			Stiff, damp, gray, SILTY CLAY.
	7	1.90	20	
	9	B		
-75				
336.68				
-80	6			Stiff, damp, gray, SANDY LOAM.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
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Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 9/5/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0075
Station 62+80

BORING NO. 4
Station 56+94
Offset 23.0ft Rt (East)
Ground Surface Elev. 416.18 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 396.7 ft
▽ Upon Completion Washed ft
▼ After 216 Hrs. 407.2 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
				Stiff, damp, gray, SANDY LOAM. (continued)
	8	1.11	22	
	10	B		
-85				
326.68				
-90	35			Very dense, wet, dark gray, fine grained, SAND. 5% passing #200 sieve.
	28		17	
	36			
-95				
316.18 -100	18			
				Very dense, wet, dark gray, fine grained, SAND. 8% passing #200 sieve.
	31		15	
	32			
313.18				
				Very dense, moist, gray, estimated SANDSTONE. Low recovery, chips/pieces of Sandstone.
311.48				
-105	50/1"			Extent of exploration.
	50/1"			
	50/0"			
				Benchmarks: BM 5 Chiseled square on hubguard on SE corner of existing structure Sta 54+73 Rt 15.4' = 431.29' BM 7 Chiseled square on hubguard on NE corner of existing structure Sta 63+18 Rt 15.9' = 431.55'
-110				
-115				
-120				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

DESIGNED - DAVID H. RICHTER	EXAMINED		DATE - OCTOBER 10, 2024	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORING LOGS STRUCTURE NO. 051 - 0075
CHECKED - RYAN P. NEGANGARD		ENGINEER OF BRIDGE DESIGN	REVISED -		SHEET 48 OF 59 SHEETS
DRAWN - MICHAEL B. MOSSMAN	PASSED		REVISED -		
CHECKED - D.H.R. / R.P.N. / G.R.A.		ENGINEER OF BRIDGES AND STRUCTURES			

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	130
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 9/7/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0075
Station 62+80

BORING NO. 5
Station 57+75
Offset 25.00ft Lt (West)
Ground Surface Elev. 415.27 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 400.8 ft
▽ Upon Completion Washed ft
▼ After 24 Hrs. 400.8 ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Riprap and broken concrete on CLAY.			
No samples.			
410.77			
Hard, damp, gray mottled brown, CLAY. -5	5		
	6 7	4.5 PP	19
	4		
	4 5	1.90 B	24
-10	4		
	4 6	1.90 B	22
	1		
402.27	2 3	0.12 B	23
Very soft, very damp, gray, SILTY LOAM.			
▽▼400.77			
Medium, wet, gray, fine grained, SAND. *5% passing #200 sieve.* -15	8		
	7 6		20
	6		
6% passing #200 sieve.	9 10		21
395.27 -20	6		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Loose, wet, gray, fine grained, SAND. *5% passing #200 sieve.*	5 5		23
393.27			
Very soft, very damp, gray, SANDY LOAM.	1		
	2 2	0.21 B	21
-25	3		
	4 5	0.12 BS	21
388.27			
Medium, wet, gray, fine grained, SAND. *9% passing #200 sieve.*	3		
	6 8		19
-30	5		
5% passing #200 sieve. 384.47	5 4		19
Stiff, damp, gray, CLAY w/ Silt.			
-35	5		
	6 7	2.06 B	27
-40	4		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W,O,H - Sampler Advanced By Weight of Hammer, W,O,P - Advanced by Weight of Pipe, B,S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 9/7/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0075
Station 62+80

BORING NO. 5
Station 57+75
Offset 25.00ft Lt (West)
Ground Surface Elev. 415.27 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 400.8 ft
▽ Upon Completion Washed ft
▼ After 24 Hrs. 400.8 ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Stiff, damp, gray, CLAY w/ Silt. *(continued)*	5 6	1.81 B	29
370.77			
Soft, damp, gray, LOAM. -45	2		
	2 3	0.33 B	27
365.77			
Medium, wet, gray, fine grained, SAND. *4% passing #200 sieve.* -50	7		
	7 7		21
364.47			
Gray, CLAY w/ Silt.			
-55			
355.77			
-60	19		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Very dense, wet, gray, fine grained, SAND. *5% passing #200 sieve. (continued)*	25 26		18
-65			
345.77			
Medium, damp, gray, LOAM. -70	7		
	8 9	0.82 B	23
-75			
335.77			
-80	10		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W,O,H - Sampler Advanced By Weight of Hammer, W,O,P - Advanced by Weight of Pipe, B,S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

DESIGNED - DAVID H. RICHTER	EXAMINED	ENGINEER OF BRIDGE DESIGN	DATE - OCTOBER 10, 2024	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORING LOGS STRUCTURE NO. 051 - 0075	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - RYAN P. NEGANGARD						332	(16BR-1,BR-2)B-1	LAWRENCE	198	131
DRAWN - MICHAEL B. MOSSMAN	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET 49 OF 59 SHEETS			CONTRACT NO. 74164		
CHECKED - D.H.R. / R.P.N. / G.R.A.			REVISED -					ILLINOIS	FED. AID PROJECT	

MODEL: 0510075-74164-049
FILE NAME: pw:\\dot-pw.bentley.com:PWDOTDocuments\IDOT Offices\Bureau of Bridges and Structures\Projects\051007S\CADD Plans\0510075-74164.dgn
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Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 9/7/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0075
Station 62+80

BORING NO. 5
Station 57+75
Offset 25.00ft Lt (West)
Ground Surface Elev. 415.27 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 400.8 ft
▽ Upon Completion Washed ft
▼ After 24 Hrs. 400.8 ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
	11 17	0.62 B	21	Medium, damp, gray, SILTY LOAM w/ fine grained, Sand. *(continued)*
				Very dense, wet, brown, fine grained, SAND. *10% passing #200 sieve. (continued)*
				313.27 Hard, moist, gray, SANDSTONE.
				310.67
-85			12	310.27-105
				Borehole continued with rock coring.
				325.77
-90				Very dense, wet, brown, fine grained, SAND. *10% passing #200 sieve.*
		15		
-95				
-100	50/1"	13		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
	50/1" 50/1"		
-110	50/1" 50/0" 50/0"		
-115			
-120			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

ROCK CORE LOG

Date 9/7/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence CORING METHOD Rotary, surf set diamond bit

STRUCT. NO. 051-0075
Station 62+80

BORING NO. 5
Station 57+75
Offset 25.0ft Lt (West)
Ground Surface Elev. 415.27 ft

CORING BARREL TYPE & SIZE NW, conv dbl bbl, split inner
Core Diameter 2.06 in
Top of Rock Elev. 313.27 ft
Begin Core Elev. 310.27 ft

DEPTH (ft)	CORE (#)	CORE RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)	Description
	B5C1	59	18	1.1		Soft, gray, SANDSTONE, scratches easily. 310.27
						Rock core B5C1 from 107.11' to 107.60' depth = 277.6 tsf.
						No recovery from 107.95' to 110.00' depth.
						305.27-110
	B5C2	55	8	1.1		Soft, gray, SANDSTONE, scratches easily.
						Rock core B5C2 from 111.65' to 112.05' depth = 244.9tsf.
						No recovery from 112.75' to 115.00' depth.
						300.27-115
						Extent of exploration.
						Benchmarks: BM 5 Chiseled square on hubguard on SE corner of existing structure Sta 54+73 Rt 15.4' = 431.29' BM 7 Chiseled square on hubguard on NE corner of existing structure Sta 63+18 Rt 15.9' = 431.55'
-120						
-125						

Color pictures of the cores Available on request
Cores will be stored for examination until 09/07/22
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
RQD is the ratio of the total length of sound core specimens >4" to total length of core run BBS, form 138 (Rev. 8-99)

DESIGNED -	DAVID H. RICHTER	EXAMINED	DATE - OCTOBER 10, 2024
CHECKED -	RYAN P. NEGANGARD		
DRAWN -	MICHAEL B. MOSSMAN	PASSED	REVISED -
CHECKED -	D.H.R. / R.P.N. / G.R.A.		REVISED -

ENGINEER OF BRIDGE DESIGN
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 051 - 0075
SHEET 50 OF 59 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	132
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

MODEL: 051075-74164-050
FILE NAME: pw:\\dot-pw.bentley.com:PWIDOT\Documents\IDOT Offices\Bureau of Bridges and Structures\Projects\051075\CADD Plans\051075-74164.dgn
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Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 9/1/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0075
Station 62+80

BORING NO. 6
Station 58+66
Offset 24.0ft Rt (East)
Ground Surface Elev. 415.87 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 401.4 ft
▼ Upon Completion Washed ft
▼ After 312 Hrs. 406.9 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
				Riprap and broken concrete on SILTY CLAY.
				No samples.
411.37				
-5	4			Very stiff, damp, brown mottled gray, SILTY CLAY.
	4	2.68	20	
	4	B		
408.87				
	3			Very soft, damp, gray, SILTY LOAM.
	3	0.40	30	
▼ 406.37	4	B		
-10	2			Very soft, very damp, brown, SANDY LOAM.
405.67	3	0.04	25	
	4	B		Brown, fine grained, SAND.
403.87				
	2			Very soft, damp, brown, SANDY LOAM.
	2	0.16	24	
▽ 401.37	2	B		
-15	3			Medium, wet, brown, fine grained, SAND.
	5		25	5% passing #200 sieve.
	7			
	6			
	6		18	8% passing #200 sieve.
395.87 -20	8			
	6			Medium to loose, wet, gray, fine grained, SAND. 4% passing #200 sieve.
	7		25	
	1			
	3		19	12% passing #200 sieve.
	5			
-25	6			
	5		22	5% passing #200 sieve.
	3			
	4			
	4		20	9% passing #200 sieve.
	5			
-30	2			
	3		18	11% passing #200 sieve.
	5			
381.37				
-35	4			Stiff, damp, brownish gray, SILTY CLAY.
	5	1.65	27	
	7	B		
375.87 -40	6			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 9/1/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0075
Station 62+80

BORING NO. 6
Station 58+66
Offset 24.0ft Rt (East)
Ground Surface Elev. 415.87 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 401.4 ft
▼ Upon Completion Washed ft
▼ After 312 Hrs. 406.9 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
	6	1.40	28	Gray, SANDY LOAM.
375.37	3	B		Stiff, damp, gray, SILTY CLAY.
370.87 -45	1			
	3	1.07	30	Gray, SILT.
370.37	3	B		Gray, SILTY CLAY.
365.87 -50	6			
	6		26	Medium, wet, gray, fine grained, SAND. 5% passing #200 sieve.
	5			
-55				
355.87 -60	8			
	13		20	Medium, wet, gray, fine grained, SAND. 3% passing #200 sieve.
	15			
-65				
346.37				
-70	6			Stiff, damp, gray, LOAM.
	7	1.90	23	
	9	B		
336.37				
-80	7			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 9/1/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0075
Station 62+80

BORING NO. 6
Station 58+66
Offset 24.0ft Rt (East)
Ground Surface Elev. 415.87 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 401.4 ft
▼ Upon Completion Washed ft
▼ After 312 Hrs. 406.9 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
	9	2.47	24	Very stiff, damp, gray, SILTY LOAM w/ very fine Sand. Artesian condition. (continued)
	11	B		
-85				
326.37				
-90	50/3"			Very dense, wet, gray, fine grained, SAND. 8% passing #200 sieve.
	50/3"		19	
	50/4"			
				Hard drilling at 94' depth.
-95				
315.87 -100	50/4"			
	50/5"		15	Very dense, wet, gray, fine grained, SAND. 10% passing #200 sieve.
	48			
311.37				
311.27 -105	50/1"		14	Very dense, moist, gray, SANDSTONE. Low recovery, chips/pieces of Sandstone.
	50/0"			
	50/0"			
				Extent of exploration.
				Benchmarks: BM 5 Chiseled square on hubguard on SE corner of existing structure Sta 54+73 Rt 15.4' = 431.29'
-110				BM 7 Chiseled square on hubguard on NE corner of existing structure Sta 63+18 Rt 15.9' = 431.55'
-115				
-120				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

DESIGNED - DAVID H. RICHTER	EXAMINED	ENGINEER OF BRIDGE DESIGN	DATE - OCTOBER 10, 2024	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORING LOGS STRUCTURE NO. 051 - 0075
CHECKED - RYAN P. NEGANGARD	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET 51 OF 59 SHEETS
DRAWN - MICHAEL B. MOSSMAN			REVISED -		
CHECKED - D.H.R. / R.P.N. / G.R.A.			REVISED -		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	133
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

MODEL: 051075-74164-051
FILE NAME: pw:\\dot-pw.bentley.com:PWIDOT Documents\IDOT Offices\Bureau of Bridges and Structures\Projects\051075\CADD Plans\051075-74164.dgn
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Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 9/6/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0075
Station 62+80

BORING NO. 7
Station 59+52
Offset 30.0ft Lt (West)
Ground Surface Elev. 416.53 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 404.5 ft
▽ Upon Completion Washed ft
▼ After 192 Hrs. 407.0 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	
				Riprap and broken concrete on CLAY.
				No samples.
412.03				
-5	6			Stiff, damp, brown, CLAY.
	5	2.0	17	
	5	PP		
409.53				
	4			Soft, damp, brown, CLAY LOAM.
	4	0.33	19	
407.03	4	B		
-10	3			Very soft, damp, brown, SANDY LOAM.
	1	0.16	22	
	1	B		
▽ 404.53				
	2			Loose to medium, wet, brown to gray, fine grained, SAND. 7% passing #200 sieve.
	3		25	
	3			
-15	3			
	4		24	4% passing #200 sieve.
	7			
	6			
	8		23	4% passing #200 sieve.
	9			
396.53 -20	1			

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	
	1			Low recovery this trip, large piece of wood in sampler.
	2			
	2			Loose to medium, wet, gray, fine grained, SAND. 6% passing #200 sieve.
	4		22	
	6			
-25	5			
	7		23	5% passing #200 sieve.
	5			
	4			
	6		13	33% passing #200 sieve.
	10			
-30	3			
	3		19	7% passing #200 sieve.
	4			
382.03				
-35	3			Very stiff, damp, gray, CLAY w/ Silt.
	5	2.05	25	
	6	B		
376.53 -40	5			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 9/6/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0075
Station 62+80

BORING NO. 7
Station 59+52
Offset 30.0ft Lt (West)
Ground Surface Elev. 416.53 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 404.5 ft
▽ Upon Completion Washed ft
▼ After 192 Hrs. 407.0 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	
376.03	5	1.81	26	Gray, SANDY LOAM w/ Silt.
	5	B		Stiff, damp, brownish gray, SILTY CLAY.
372.03				
-45	1			Soft, damp, gray, SILT to SILTY LOAM
	2	0.41	29	
	2	B		
367.03				
-50	9			Medium to dense, wet, gray, fine grained, SAND. 10% passing #200 sieve.
	12		27	
	13			
-55				
356.53 -60	13			

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	
	18		15	Medium to dense, wet, gray, fine grained, SAND. 4% passing #200 sieve.
	18			
-65				
347.03				
-70	7			Very stiff, damp, gray, LOAM.
	9	2.47	25	
	11	B		
-75				
336.53 -80	6			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

DESIGNED -	DAVID H. RICHTER	EXAMINED	ENGINEER OF BRIDGE DESIGN
CHECKED -	RYAN P. NEGANGARD	PASSED	ENGINEER OF BRIDGES AND STRUCTURES
DRAWN -	MICHAEL B. MOSSMAN	DATE -	OCTOBER 10, 2024
CHECKED -	D.H.R. / R.P.N. / G.R.A.	REVISED -	
		REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 051 - 0075
SHEET 52 OF 59 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	134
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

MODEL: 05100075-74164-052
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Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 9/6/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0075
Station 62+80

BORING NO. 7
Station 59+52
Offset 30.0ft Lt (West)
Ground Surface Elev. 416.53 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 404.5 ft
▽ Upon Completion Washed ft
▼ After 192 Hrs. 407.0 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
	8	1.40	24	Stiff, damp, gray, LOAM.
	12	B		
				Dense, wet, gray, fine grained, SAND. (#11)% passing #200 sieve.
				313.03
				Hard, moist, gray, SANDSTONE.
				311.93
-85				311.53-105
				Borehole continued with rock coring,
327.03				
-90	32			Dense, wet, gray, fine grained, SAND. 12% passing #200 sieve.
	27		16	
	34			
-95				
316.53-100	15			

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
	34		15
	37		
	50/1"		12
	50/0"		
	50/0"		
-110			
-115			
-120			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

ROCK CORE LOG

Date 9/6/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence CORING METHOD Rotary, surf set diamond bit

STRUCT. NO. 051-0075
Station 62+80

CORING BARREL TYPE & SIZE NW, conv dbl bbl, split inner
Core Diameter 2.06 in
Top of Rock Elev. 313.03 ft
Begin Core Elev. 405.53 ft

BORING NO. 7
Station 59+52
Offset 30.0ft Lt (West)
Ground Surface Elev. 416.53 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)	Description
311.53	B7C1	74	25	1.7		Gray, fine grained, SANDSTONE w/ thin, black, partings.
						Rock core B7C1 from 107.50' to 108.00' depth = 198.4 tsf.
						No recovery from 108.65' to 110.00' depth.
306.53-110						Gray, fine grained, SANDSTONE, scratches easily.
						No recovery from 112.60' to 115.00' depth.
301.53-115						Extent of exploration.
-120						Benchmarks: BM 5 Chiseled square on hubguard on SE corner of existing structure Sta 54+73 Rt 15.4' = 431.29' BM 7 Chiseled square on hubguard on NE corner of existing structure Sta 63+18 Rt 15.9' = 431.55'
-125						

Color pictures of the cores Available on request
Cores will be stored for examination until 09/06/22
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
RQD is the ratio of the total length of sound core specimens >4" to total length of core run BBS, form 138 (Rev. 8-99)

DESIGNED -	DAVID H. RICHTER	EXAMINED	DATE - OCTOBER 10, 2024
CHECKED -	RYAN P. NEGANGARD		
DRAWN -	MICHAEL B. MOSSMAN	PASSED	REVISED -
CHECKED -	D.H.R. / R.P.N. / G.R.A.		REVISED -

ENGINEER OF BRIDGE DESIGN
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 051 - 0075
SHEET 53 OF 59 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	135
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

MODEL: 051075-74164-053
FILE NAME: pw:\\fdot-pw.bentley.com:PWIDOT\Documents\IDOT Offices\Bureau of Bridges and Structures\Projects\051075\CADD Plans\051075-74164.dgn
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Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 1 of 3

Date 8/31/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0075
Station 62+80

BORING NO. 8
Station 60+38
Offset 27.00ft Rt (East)
Ground Surface Elev. 416.73 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 404.7 ft
▽ Upon Completion Washed ft
▼ After 336 Hrs. 407.2 ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Riprap and broken concrete on SILTY CLAY LOAM.			
No samples.			
412.23			
Very stiff, damp, brown, SILTY CLAY LOAM. -5	3		
	4	3.30	19
	5	S	
409.73			
Very soft, very damp, brown, SANDY LOAM.	5		
	6	0.21	22
	3	B	
▼ -10	3		
	3	0.08	23
	4	B	
▽404.73			
Loose, wet, brown to gray, fine grained, SAND. *3% passing #200 sieve.*	1		
	1		26
	2		
-15	2		
5% passing #200 sieve.	2		25
	3		
	2		
6% passing #200 sieve.	2		19
	4		
396.73 -20	4		
Medium to loose, wet, gray, fine grained, SAND. *5% passing #200 sieve.*	5		21
	6		
	2		
4% passing #200 sieve.	3		17
	4		
-25	3		
5% passing #200 sieve.	8		22
	11		
	4		
1% passing #200 sieve.	7		20
	10		
-30	5		
2% passing #200 sieve.	5		21
	9		
382.23			
Medium, damp, gray, SILTY CLAY. -35	1		
	2	0.82	30
	2	B	
376.73 -40	3		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 2 of 3

Date 8/31/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0075
Station 62+80

BORING NO. 8
Station 60+38
Offset 27.00ft Rt (East)
Ground Surface Elev. 416.73 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 404.7 ft
▽ Upon Completion Washed ft
▼ After 336 Hrs. 407.2 ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium, damp, gray, SILTY CLAY.	4	0.66	25
	6	B	
371.73 -45	3		
Very soft, damp, gray, SILTY CLAY LOAM. LL = 27.4 PL = 23.6 PI = 3.8	3	0.21	31
	3	B	
367.23 -50	9		
Very soft, very damp, gray, SANDY LOAM.	9	0.16	21
	10	B	
-55			
357.23 -60	4		
Medium, damp, gray, SILTY LOAM. *(continued)* 356.03	8	0.49	27
	14	B	
Gray, fine grained, SAND.			
-65			
347.23			
Stiff, damp, gray, SILTY CLAY. -70	7		
	9	1.81	31
	10	BS	
-75			
337.23			
Stiff, damp, gray, SILTY LOAM. -80	6		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 3 of 3

Date 8/31/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0075
Station 62+80

BORING NO. 8
Station 60+38
Offset 27.00ft Rt (East)
Ground Surface Elev. 416.73 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 404.7 ft
▽ Upon Completion Washed ft
▼ After 336 Hrs. 407.2 ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Stiff, damp, gray, SILTY LOAM. *(continued)*	9	1.11	24
	17	B	
-85			
327.23			
Very dense, wet, gray, fine grained, SAND. *7% passing #200 sieve.* -90	50		
	50/4"		18
	42		
-95			
* Very dense, moist, gray, SANDSTONE. Low recovery, only fragments of Sandstone recovered.			
** 50/0", 50/1", 50/1"			
317.23			
* 317.03 -100	**		2
Extent of exploration.			
Benchmarks: BM 5 Chiseled square on hubguard on SE corner of existing structure Sta 54+73 Rt 15.4' = 431.29' BM 7 Chiseled square on hubguard on NE corner of existing structure Sta 63+18 Rt 15.9' = 431.55'			
-105			
-110			
-115			
-120			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

DESIGNED -	DAVID H. RICHTER	EXAMINED	DATE - OCTOBER 10, 2024
CHECKED -	RYAN P. NEGANGARD	PASSED	REVISED -
DRAWN -	MICHAEL B. MOSSMAN		REVISED -
CHECKED -	D.H.R. / R.P.N. / G.R.A.	ENGINEER OF BRIDGE DESIGN / ENGINEER OF BRIDGES AND STRUCTURES	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 051 - 0075
SHEET 54 OF 59 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	136
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

MODEL: 051075-74164-054
FILE NAME: pw:\\dot-pw.bentley.com:PWIDOT Documents\IDOT Offices\Bureau of Bridges and Structures\Projects\051075\CADD Plans\051075-74164.dgn

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Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 8/30/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0075
Station 62+80

BORING NO. 9
Station 61+15
Offset 26.0ft Lt (West)
Ground Surface Elev. 416.94 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 404.9 ft
▼ Upon Completion Washed ft
▼ After 360 Hrs. 407.4 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
				Riprap and broken concrete on CLAY.
				No samples.
412.44				
-5	4			Stiff, damp, brown, CLAY.
	4	1.90	24	
	4	B		
409.94				
	4			Medium to very soft, damp, brown, SANDY LOAM.
	4	0.44	16	
	4	S		
-10	4			▼
	4	0.04	21	
	3	B		
▽ 404.94				
	4			Loose, wet, brown, fine grained, SAND. 4% passing #200 sieve.
	4		24	
	4			
-15	2			
	3		26	5% passing #200 sieve.
	4			
	6			
	7		22	4% passing #200 sieve.
	11			
396.94 -20	7			
				Medium, wet, brown, fine grained, SAND. 5% passing #200 sieve.
	6		21	
	7			
	6			
	9		16	7% passing #200 sieve.
	11			
392.44				
-25	6			Very soft, very damp, gray, SILTY LOAM.
	9	0.2	28	
	11	PP		
389.94				
	5			Medium, wet, gray, fine grained, SAND. 2% passing #200 sieve.
	8		20	
	11			
-30	5			
	7		19	3% passing #200 sieve.
	11			
382.44				
-35	0			Medium, damp, gray, SILTY CLAY.
	1	0.87	30	
	1	B		
377.44				
-40	3			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 8/30/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0075
Station 62+80

BORING NO. 9
Station 61+15
Offset 26.0ft Lt (West)
Ground Surface Elev. 416.94 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 404.9 ft
▼ Upon Completion Washed ft
▼ After 360 Hrs. 407.4 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
	4	0.21	36	Very soft, damp, gray, SILT.
	6	B		
				LL = 40.9
				PL = 35.8
				PI = 5.1 (continued)
372.44				
-45	2			Medium, damp, gray, SILTY CLAY.
	2	0.82	29	
	2	B		
367.44				
-50	6			Soft, very damp, gray, fine, SANDY LOAM.
	8	0.21	22	
	10	B		
357.44				
-60	11			
				Medium, wet, gray, fine grained, SAND. 2% passing #200 sieve. (continued)
	13		19	
	13			
-65				
347.44				
-70	6			Very stiff, damp, gray, SILTY LOAM.
	8	2.89	21	
	10	B		
-75				
337.44				
-80	7			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
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Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 8/30/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0075
Station 62+80

BORING NO. 9
Station 61+15
Offset 26.0ft Lt (West)
Ground Surface Elev. 416.94 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 404.9 ft
▼ Upon Completion Washed ft
▼ After 360 Hrs. 407.4 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
	11	2.47	23	Very dense, damp, gray, SANDY LOAM w/ Sand, (continued)
	17	B		
				Benchmarks:
				BM 5 Chiseled square on hubguard on SE corner of existing structure Sta 54+73 Rt 15.4' = 431.29'
				BM 7 Chiseled square on hubguard on NE corner of existing structure Sta 63+18 Rt 15.9' = 431.55'
-85				
-90	26			
	29		16	
	37			
-95				
319.94				
				Very dense, moist, gray, SANDSTONE.
				* 50/1", 50/1", 50/0"
317.34				
Extent of exploration. -100	*		12	
-105				
-110				
-115				
-120				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

DESIGNED - DAVID H. RICHTER	EXAMINED	ENGINEER OF BRIDGE DESIGN	DATE - OCTOBER 10, 2024	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORING LOGS STRUCTURE NO. 051 - 0075
CHECKED - RYAN P. NEGANGARD	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET 55 OF 59 SHEETS
DRAWN - MICHAEL B. MOSSMAN			REVISED -		
CHECKED - D.H.R. / R.P.N. / G.R.A.			REVISED -		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	137
		CONTRACT NO. 74164		
	ILLINOIS FED. AID PROJECT			

MODEL: 051075-74164-055
FILE NAME: pw:\\dot-pw.bentley.com:PWDOTDocuments\IDOT Offices\Bureau of Bridges and Structures\Projects\051075\CADD Plans\051075-74164.dgn
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Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 8/29/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0075
Station 62+80

BORING NO. 10
Station 62+02
Offset 27.5ft Rt (East)
Ground Surface Elev. 416.98 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 405.0 ft
▽ Upon Completion Washed ft
▼ After 384 Hrs. 407.5 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
				Riprap and broken concrete on CLAY.
				No samples.
412.48				
-5	4			Medium, damp, brown, CLAY.
	3	0.82	17	
	4	B		
409.98				
	3			Medium, damp, brown, LOAM.
	3	0.62	21	
	3	B		
407.48				
-10	2			Very soft, very damp, gray, SANDY LOAM.
	2	0.16	23	
	2	B		
▽ 404.98				
	2			Loose, wet, brown, fine grained, SAND. 7% passing #200 sieve.
	3		24	
	4			
-15	3			
	3		30	4% passing #200 sieve.
	4			
	3			
	4		22	3% passing #200 sieve.
	5			
396.98 -20	3			

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
	6		28	Medium, wet, gray, fine grained, SAND w/ wood pieces. 5% passing #200 sieve.
394.98				
	1			Very soft, wet, gray, SANDY LOAM.
	1	0.21	18	
	3	B		
392.48				
-25	4			Medium to loose, wet, gray, SAND, 6% passing #200 sieve.
	6		22	
	5			
	3			With wood pieces. 2% passing #200 sieve.
	4		27	
	4			
-30	8			
	9		19	2% passing #200 sieve.
	11			
382.48				
-35	1			Soft, damp, gray, SILTY CLAY.
	2	0.41	35	
	3	B		LL = 38.3 PL = 32.9 PI = 5.4
377.48				
-40	1			Stiff, damp, gray, SILTY CLAY.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 8/29/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0075
Station 62+80

BORING NO. 10
Station 62+02
Offset 27.5ft Rt (East)
Ground Surface Elev. 416.98 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 405.0 ft
▽ Upon Completion Washed ft
▼ After 384 Hrs. 407.5 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
	2	1.32	30	Stiff, damp, gray, SILTY CLAY. (continued)
	3	B		
372.48				
-45	2			Soft, damp, gray, SILTY LOAM.
	2	0.49	27	
	3	B		
	3			
367.48				
-50	7			Very stiff, damp, gray, LOAM. 5" Gray, Sandy Loam lense.
	5	2.47	26	
	6	B		
357.48				
-60	13			

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
	19		20	Dense, wet, gray, fine grained, SAND. 4% passing #200 sieve. (continued)
	21			
-65				
347.48				
-70	4			Very stiff, damp, gray, SILTY CLAY LOAM.
	5	2.47	25	
	6	B		
-75				
337.48				
-80	7			Gray, SANDY LOAM.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 8/29/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0075
Station 62+80

BORING NO. 10
Station 62+02
Offset 27.5ft Rt (East)
Ground Surface Elev. 416.98 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 405.0 ft
▽ Upon Completion Washed ft
▼ After 384 Hrs. 407.5 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
336.78				Gray, SANDY CLAY LOAM.
	11	1.11	24	
	10	B		
-85				
327.48				
-90	25			Very dense, damp, gray, SANDY LOAM.
	27		21	
	27			
-95	19			
321.48	28		11	
	50/3"			Very dense, moist, gray, SANDSTONE.
317.28				* 50/1", 50/1", 50/0"
-100	*		13	

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
				Extent of Exploration.
				Benchmarks: BM 5 Chiseled square on hubguard on SE corner of existing structure Sta 54+73 Rt 15.4' = 431.29' BM 7 Chiseled square on hubguard on NE corner of existing structure Sta 63+18 Rt 15.9' = 431.55'
-105				
-110				
-115				
-120				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

DESIGNED - DAVID H. RICHTER	EXAMINED	ENGINEER OF BRIDGE DESIGN	DATE - OCTOBER 10, 2024	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORING LOGS STRUCTURE NO. 051 - 0075
CHECKED - RYAN P. NEGANGARD	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET 56 OF 59 SHEETS
DRAWN - MICHAEL B. MOSSMAN			REVISED -		
CHECKED - D.H.R. / R.P.N. / G.R.A.					

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	138
		CONTRACT NO. 74164		
	ILLINOIS FED. AID PROJECT			

MODEL: 05100?5-74164-056
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Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 8/28/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0075
Station 62+80

BORING NO. 11
Station 62+74
Offset 30.0ft Lt (West)
Ground Surface Elev. 417.07 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 406.6 ft
▽ Upon Completion Washed ft
▼ After 408 Hrs. 407.6 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Riprap and broken concrete on SILTY CLAY.			
No samples.			
412.57			
-5 Hard, damp, brown, SILTY CLAY.	5		
	6 5	+4.5 PP	25
410.07			
Soft, damp, brown, SANDY LOAM.	3		
	5 6	0.41 B	19
▼			
-10 No recovery this trip. ▽ 406.57	5 7 7		
Medium to loose, wet, gray, fine grained, SAND.			
	2		
3% passing #200 sieve.	3 4	0.33 B	25
-15	4		
4% passing #200 sieve.	5 6		22
	7		
3% passing #200 sieve.	5 4		22
397.07 -20	3		
Medium to loose, wet, gray, fine grained, SAND. 6% passing #200 sieve.	6 9		18
395.07			
Very soft, very damp, gray, fine grained, SANDY LOAM.	4		
	8 11	0.22 S	22
-25	1		
	2 6	0.17 S	24
387.57			
-30 Medium, wet, gray, fine grained, SAND. 5% passing #200 sieve.	5 9 11		18
382.57			
-35 Soft, damp, gray, SILT.	3		
LL = 42.1 PL = 32.9 PI = 9.2	3 4	0.49 B	33
377.57			
-40 Stiff, damp, gray, SILTY CLAY.	2		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 8/28/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0075
Station 62+80

BORING NO. 11
Station 62+74
Offset 30.0ft Lt (West)
Ground Surface Elev. 417.07 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 406.6 ft
▽ Upon Completion Washed ft
▼ After 408 Hrs. 407.6 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Stiff, damp, gray, SILTY CLAY. (continued)	2 3	1.32 B	31
372.57			
-45 Medium, damp, gray, SILTY LOAM.	2 2 3	0.91 B	27
367.57			
-50 Medium, damp, gray, SILTY CLAY.	5		
366.57	11 19	0.62 B	27
Gray, SILTY CLAY w/ SAND partings.			
-55			
357.57			
-60	14		
Dense, wet, gray, fine grained, SAND. 5% passing #200 sieve. (continued)	20 22		18
-65			
347.57			
-70 Stiff, damp, gray, SILTY CLAY.	7 8 9	1.54 S	28
-75			
337.57			
-80 Very stiff, damp, gray, LOAM	6		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

DESIGNED - DAVID H. RICHTER	EXAMINED	DATE - OCTOBER 10, 2024	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORING LOGS STRUCTURE NO. 051 - 0075	F.A.P. RTE. 332 / SECTION (16BR-1,BR-2)B-1 / COUNTY LAWRENCE / TOTAL SHEETS 198 / SHEET NO. 139
CHECKED - RYAN P. NEGANGARD	ENGINEER OF BRIDGE DESIGN				CONTRACT NO. 74164
DRAWN - MICHAEL B. MOSSMAN	PASSED	REVISED -		SHEET 57 OF 59 SHEETS	ILLINOIS / FED. AID PROJECT
CHECKED - D.H.R. / R.P.N. / G.R.A.	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -			

MODEL: 051007S-74164-057
FILE NAME: pw:\\dot-pw.bentley.com:PWIDOT Documents\IDOT Offices\Bureau of Bridges and Structures\Projects\051007S\CADD Plans\051007S-74164.dgn
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Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 8/28/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0075
Station 62+80

BORING NO. 11
Station 62+74
Offset 30.0ft Lt (West)
Ground Surface Elev. 417.07 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 406.6 ft
▽ Upon Completion Washed ft
▼ After 408 Hrs. 407.6 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Very stiff, damp, gray, LOAM (continued)	8 11	2.68 B	23
-85			
327.57			
Stiff, damp, gray, SILTY CLAY.	-90 13		
326.77	21	1.24	25
Gray, SILTY CLAY w/ SANDY LOAM partings.	23	B	
-95			
* Very dense, moist, gray, SANDY CLAY SHALE. ** 50/1", 50/0", 50/0"			
317.57			
* 317.07-100	**		12

Borehole continued with rock coring.
Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

ROCK CORE LOG

Date 8/28/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence CORING METHOD Rotary, surf set diamond bit

STRUCT. NO. 051-0075
Station 62+80

CORING BARREL TYPE & SIZE NW, conv dbl bbl, split inner
Core Diameter 2.06 in
Top of Rock Elev. 317.57 ft
Begin Core Elev. 317.07 ft

BORING NO. 11
Station 62+74
Offset 30.0ft Lt (West)
Ground Surface Elev. 417.07 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Gray, SANDSTONE, easily scratched. Silty Clay Shale 1" layer. 317.07	B11C1	93	86	1.4	
Rock Core B11C1 at depth 102.0' to 102.6' = 233.0 tsf Qu.					
312.07-105					
Gray, SANDSTONE, easily scratched.	B11C2	92	69	1.1	
Rock Core B11C2 at depth 108.4' to 109.3' = 240.0 tsf Qu.					
307.07-110					
Extent of exploration.					
Benchmarks: BM 5 Chiseled square on hubguard on SE corner of existing structure Sta 54+73 Rt 15.4' = 431.29' BM 7 Chiseled square on hubguard on NE corner of existing structure Sta 63+18 Rt 15.9' = 431.55'					
-115					
-120					

Color pictures of the cores Available on request
Cores will be stored for examination until 08/28/22
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
RQD is the ratio of the total length of sound core specimens >4" to total length of core run BBS, form 138 (Rev. 8-99)

DESIGNED - DAVID H. RICHTER	EXAMINED	ENGINEER OF BRIDGE DESIGN	DATE - OCTOBER 10, 2024	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORING LOGS STRUCTURE NO. 051 - 0075
CHECKED - RYAN P. NEGANGARD	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET 58 OF 59 SHEETS
DRAWN - MICHAEL B. MOSSMAN			REVISED -		
CHECKED - D.H.R. / R.P.N. / G.R.A.					

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	140
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

MODEL: 051075-74164-058
FILE NAME: pw:\\dot-pw.bentley.com:PWIDOT\Documents\IDOT Offices\Bureau of Bridges and Structures\Projects\051075\CADD Plans\051075-74164.dgn

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Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 9/28/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0075
Station 62+80

BORING NO. 12 (N Abut)
Station 63+40
Offset 8.0ft Rt (East)
Ground Surface Elev. 431.15 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 404.2 ft
▽ Upon Completion Washed ft
▼ After 96 Hrs. 407.2 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
3" asphalt on 13" concrete pavement. 18" sleeper slab directly beneath concrete pavement.			
428.35			
Estimated, CLAY, embankment.			
No samples. 426.65			
-5 Very stiff, damp, gray, CLAY, embankment.	3 4 5	2.89 B	20
424.15			
Very stiff, damp, gray, SANDY CLAY LOAM, embankment.	3 5 7	2.84 S	19
421.65			
-10 Very stiff, damp, gray, SILTY CLAY LOAM, embankment.	5 7 10	3.09 BS	18
419.15			
Stiff, damp, gray, LOAM, embankment. Broken concrete pieces and strong creosote odor in samples.	4 6 10	2.47 B	17
-15	6 8 7	1.5 PP	19
414.15			
Very stiff, damp, gray, CLAY, embankment.	3 3 3	2.2 PP	26
411.65			
-20	3		

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Stiff, damp, brown, CLAY LOAM. Low recovery, piece of concrete in sampler shoe. (continued)	4 5	1.2 PP	22
409.15			
Medium, damp, brown marlbed gray, SILTY CLAY LOAM.	2 3 3	0.74 B	21
▼ 406.65			
-25 Very soft, wet, brown, SILTY LOAM.	2 2 3	0.1 PP	22
▽ 404.15			
Medium, wet, brown fine grained, SAND. 5% passing #200 sieve.	3 5 8		23
-30	5 7 9		24
4% passing #200 sieve.			
-35	7 15 17		
No recovery on this trip.			
391.15 -40	3		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 9/28/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0075
Station 62+80

BORING NO. 12 (N Abut)
Station 63+40
Offset 8.0ft Rt (East)
Ground Surface Elev. 431.15 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 404.2 ft
▽ Upon Completion Washed ft
▼ After 96 Hrs. 407.2 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Medium, wet, brown, fine grained, SAND. 9% passing #200 sieve.	5 6		20
2% passing #200 sieve. 386.15 -45	7		
Stiff, damp, gray, CLAY w/ Silt.	5 4	1.65 B	31
381.65			
-50 Very soft, very damp, gray, SILT.	1 2 2	0.16 B	37
371.65			
-60 Soft, damp, gray, LOAM.	3		

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Soft, damp, gray, LOAM. (continued) 370.65	7 8	0.41 B	25
Gray, SANDY LOAM.			
-65			
361.65			
-70 Dense, wet, gray, fine grained, SAND. 7% passing #200 sieve.	9 15 16		22
-75			
351.65			
-80 Very stiff, damp, gray, CLAY.	5		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 9/28/17

ROUTE FAP 332 (IL 1) DESCRIPTION Embarras River Overflow LOGGED BY E. Sandschafer

SECTION (16BR-1,BR-2)B-1 LOCATION W 1/2, SEC. 30, TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0075
Station 62+80

BORING NO. 12 (N Abut)
Station 63+40
Offset 8.0ft Rt (East)
Ground Surface Elev. 431.15 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 404.2 ft
▽ Upon Completion Washed ft
▼ After 96 Hrs. 407.2 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Very stiff, damp, gray, CLAY. (continued)	8 10	2.89 B	18
-85			
341.65			
-90 Very stiff, damp, gray, LOAM.	10 12 17	2.68 BS	22
-95			
331.65			
-100	25		

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Medium, damp, gray, SANDY LOAM. (continued)	31 37	0.62 B	17
-105			
321.65			
-110 Very dense, damp, gray, SANDY LOAM TILL.	50/5"		
	37 30		13
317.45			
Hard, damp, gray, SILTY CLAY SHALE. 316.45			
-115 Extent of exploration.	50/1" 50/1" 50/1"		7
Benchmarks: BM 5 Chiseled square on hubguard on SE corner of existing structure Sta 54+73 Rt 15.4' = 431.29' BM 7 Chiseled square on hubguard on NE corner of existing structure Sta 63+18 Rt 15.9' = 431.55'			
-120			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, Form 137 (Rev. 8-99)

DESIGNED - DAVID H. RICHTER	EXAMINED	ENGINEER OF BRIDGE DESIGN	DATE - OCTOBER 10, 2024	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORING LOGS STRUCTURE NO. 051 - 0075	F.A.P. RTE.	SECTION	COUNTY / TOTAL SHEETS / SHEET NO.
CHECKED - RYAN P. NEGANGARD						332	(16BR-1,BR-2)B-1	LAWRENCE / 198 / 141
DRAWN - MICHAEL B. MOSSMAN	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET 59 OF 59 SHEETS			CONTRACT NO. 74164
CHECKED - D.H.R. / R.P.N. / G.R.A.			REVISED -					ILLINOIS / FED. AID PROJECT

MODEL: 05100075-74164-059
FILE NAME: pw:\\dot-pw.bentley.com:PWDOTDocuments\IDOT Offices\Bureau of Bridges and Structures\Projects\05100075\CADD Plans\05100075-74164.dgn
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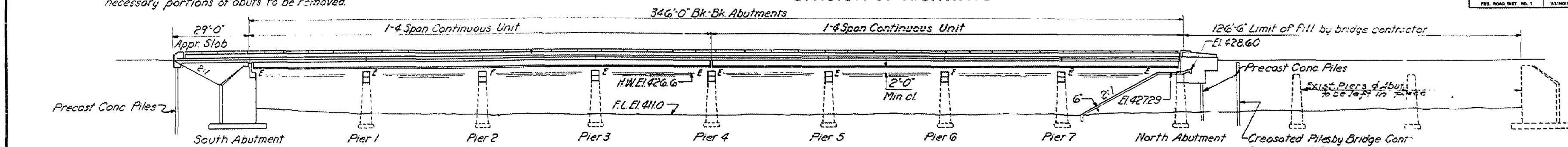
B.M. Chiseled square Top of S.W. Wingwall of bridge 15' Lt. of Sta. 83+40 El. 429.10
Existing Structure R.C. Deck Girder, 11 spans at 40' c/c, 22' Rdwy., Built 1923 on R.C. Piers & closed Abuts. Superstructure, Top ± 4' of piers and necessary portions of abuts. to be removed.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

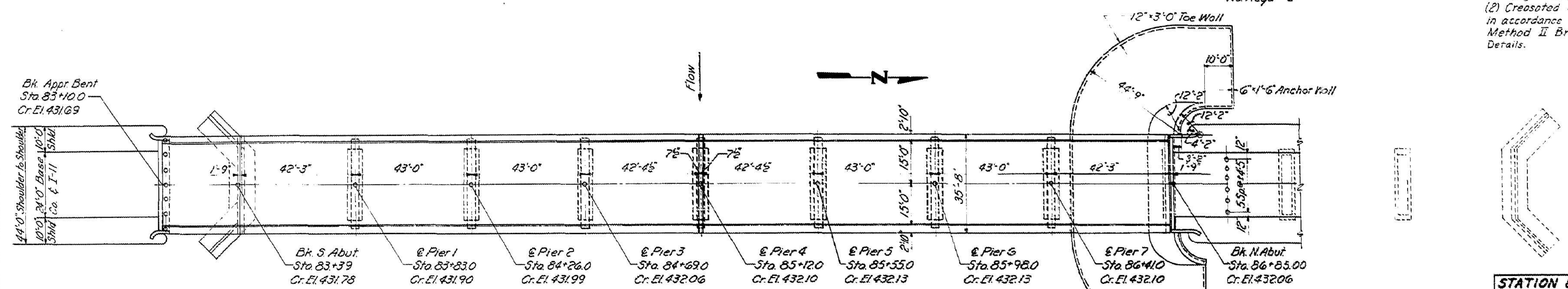
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	16 BR	Lawrence	44	21

SHEET NO. 1
10 SHEETS



ELEVATION

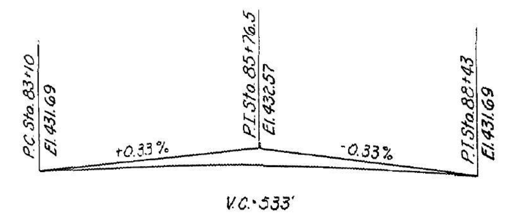
Note: (1) Embankment Quantities included on Rdwy. Plan Sheets
(2) Creosoted Piles are to be placed in accordance with Standard 1909-4 Method II Bridge Approach Slab Details.



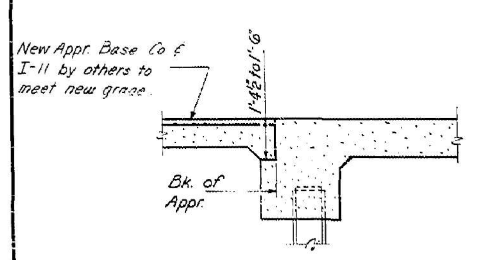
PLAN

STATION 85+12.00
BUILT 196 BY
STATE OF ILLINOIS
S.B.I. RT. 1 SEC. 16-BR
PROJ. F-233(14)
LOADING H20-S16

NAME PLATE
See Std. 2113



V.C. DIAGRAM



SEC. AT SOUTH APPROACH BENT

GENERAL NOTES

Class X concrete shall be used throughout.

Coarse aggregate to be used in parapet handrails and end post must be absolutely free of chert, flint, limonite, lignite and soft sandstone.

The concrete floor slab shall be finished in accordance with Article 51.19 of the Standard Specifications.

Slope wall shall be reinforced with welded wire fabric 6"×6" mesh weighing 58# per 100 sq. ft.

Layout of slope walls may be varied to suit ground conditions in the field as directed by the Engineer.

All reinforcemet bars shall be lapped 20 diameters unless otherwise shown.

Rivets ¾"ø Open holes 13/16"ø unless otherwise noted.

Anchor bolts shall be set before riveting diaphragms over supports.

The exposed surfaces of the expansion guard shall be given two shop coats of red lead paint, the contact surfaces shall be given one coat of red lead paint. Anchor studs shall not be painted.

Expansion guards are included in the quantity of Structural Steel. Est. Wt. 2530 lbs.

Except as otherwise provided, all structural steel shall receive one shop coat of red lead paint and two field coats of aluminum paint. See Article 56 to 56.5 inclusive of the Standard Specifications.

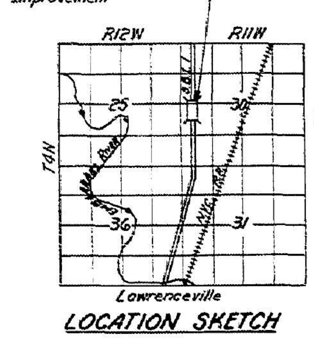
All Structural Steel shall conform to the Specification for Structural Steel ASTM Designation A36.

The contractor shall verify all dimensions in the field before fabrication of structural steel and handrails.

The contractor shall drive one precast concrete test pile in a permanent location at the South approach slab bent as directed by the Engineer before ordering the remainder of piles.

Concrete piles at the North abutment shall be driven in holes precored through the embankment in accordance with Article 60.9(c) of the Standard Specifications.

Proposed Improvement



LOCATION SKETCH

WATERWAY INFORMATION

Drainage Area	2260 Sq. Miles
Character	Rolling, Wooded & Cultivated
Present Opening	5600 Sq. Ft.
Proposed Opening	4550 Sq. Ft.

TOTAL BILL OF MATERIAL

Item	Unit	Super.	Sub.	Total
Concrete Removal	Cu. Yds.		95	95
Expansion Bolts ⅞"ø	Each		56	56
Removal of Existing Superstructure	Each			1
* Class A Excav. for Structure	Cu. Yds.			40
Class X Concrete	Cu. Yds.	421.1	181.6	602.7
Structural Steel	Lbs.	249,520		249,520
Aluminum Handrail	Lin. Ft.	738		738
Reinforcement Bars	Lbs.	87,340	12,480	99,820
Creosoted Piles Up 20'	Lin. Ft.			90
Precast Concrete Piles 12"	Lin. Ft.		260	260
Test Piles (Precast Concrete)	Each		1	1
Name Plates	Each	1		1
Slope Wall (6)	Sq. Yds.		610	610
Protective Coat	Sq. Yds.	1580		1580
** BRIDGE SEAT SEALANT	LUMP SUM	0.3		0.3

* Includes 20 Cu. Yds. for slope wall Excav.
** AT BOTH ABUTMENTS AND PIER 4

DESIGNED	V.H. [signature]	EXAMINED	[signature] ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
CHECKED	T. M. Yang E.S.	PASSED	[signature] ENGINEER OF DESIGN
DRAWN	W.E. Dickerson	APPROVED	V.E. [signature] HIGHWAY ENGINEER
CHECKED	T. M. Yang		

March 15 1963

DESIGN STRESSES

f'c = 1400 psi Super & Sub.
vc = 75 psi Footing
fs = 20,000 psi Reinf.
fs = 20,000 psi Struct. (A-36)
n = 10
LOADING H20-S16-44

PROJ. F-233(14)
GENERAL PLAN & ELEVATION
EMBARRASS RIVER OVERFLOW
S.B.I. RT. 1 SEC. 16-BR
LAWRENCE COUNTY
STA. 85+12.00

Borrow Excavations of 8620 Cu. Yds. removed from Bill of Material E.J.S. 1-6-64

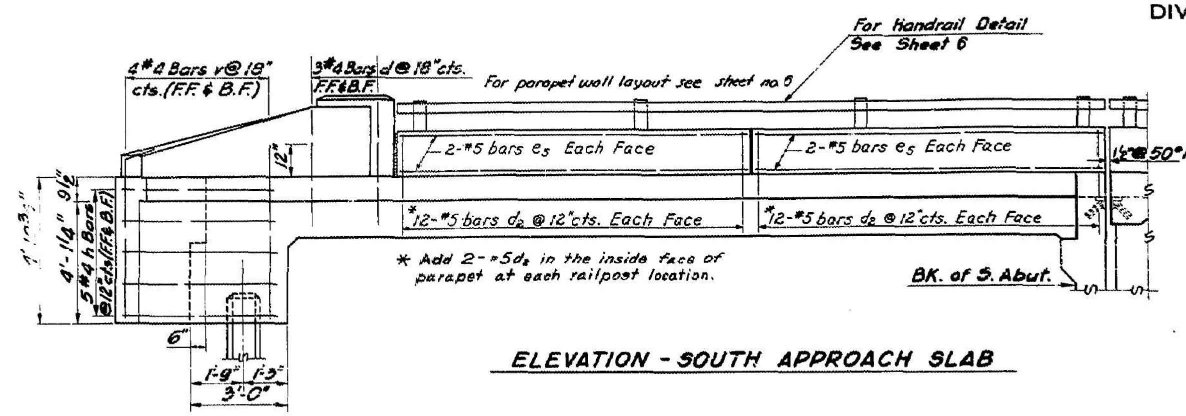
FOR INOFRMATION ONLY

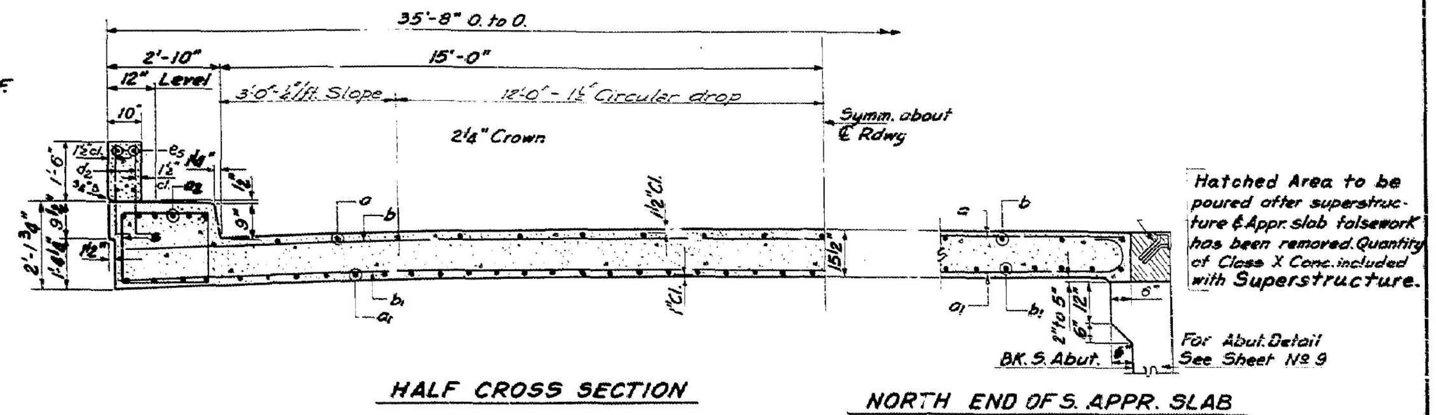
USER NAME = jessica.hille	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING STRUCTURE DETAILS – S.N. 051–0004	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN -	REVISED -			332	(16BR-1,BR-2)B-1	LAWRENCE	198	142
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -			CONTRACT NO. 74164				
PLOT DATE = 8/8/2024	DATE -	REVISED -		SCALE: SHEET 1 OF 10 SHEETS STA. TO STA.	ILLINOIS FED. AID PROJECT				

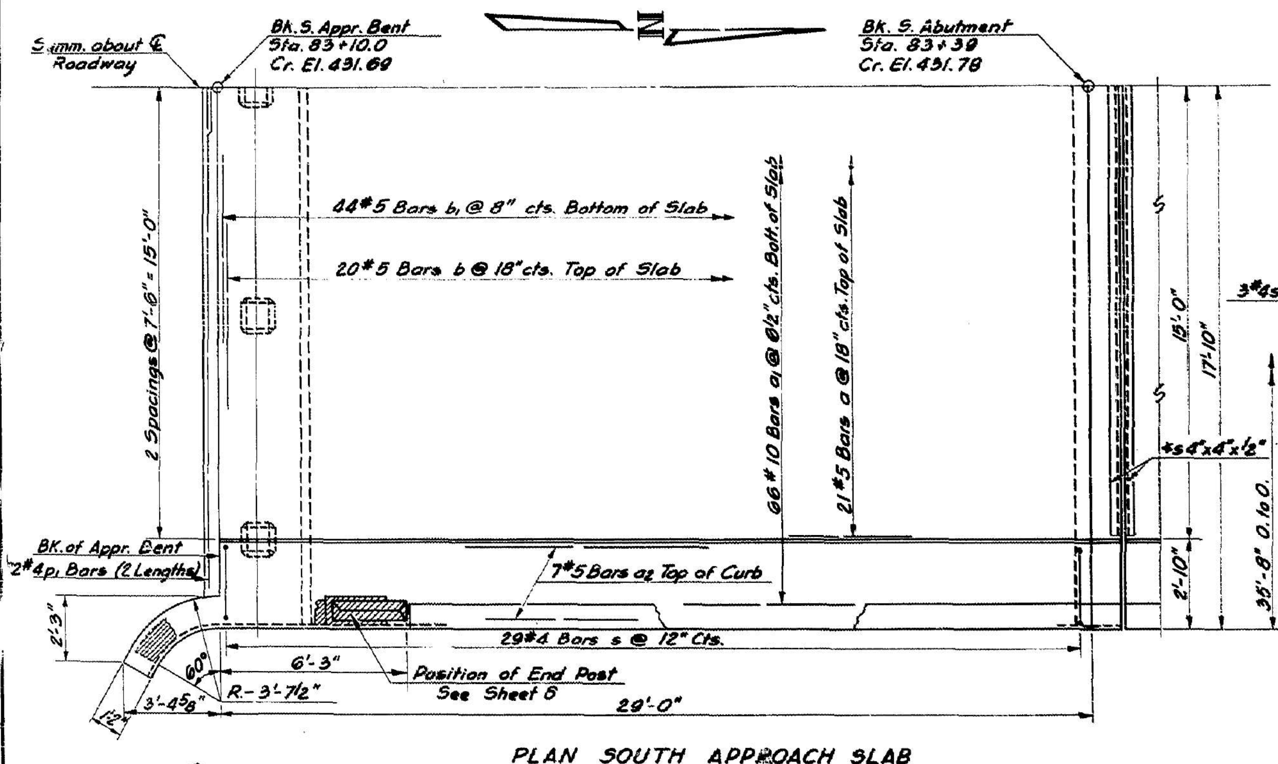
MODEL: Default
FILE NAME: pw:\\idot-pw.bentley.com:PWIDOT\Documents\IDOT Offices\District 7\Projects\74164\CADData\CADSheets\2024 CADSheets Updated\D774164-sht-details 2024.dgn

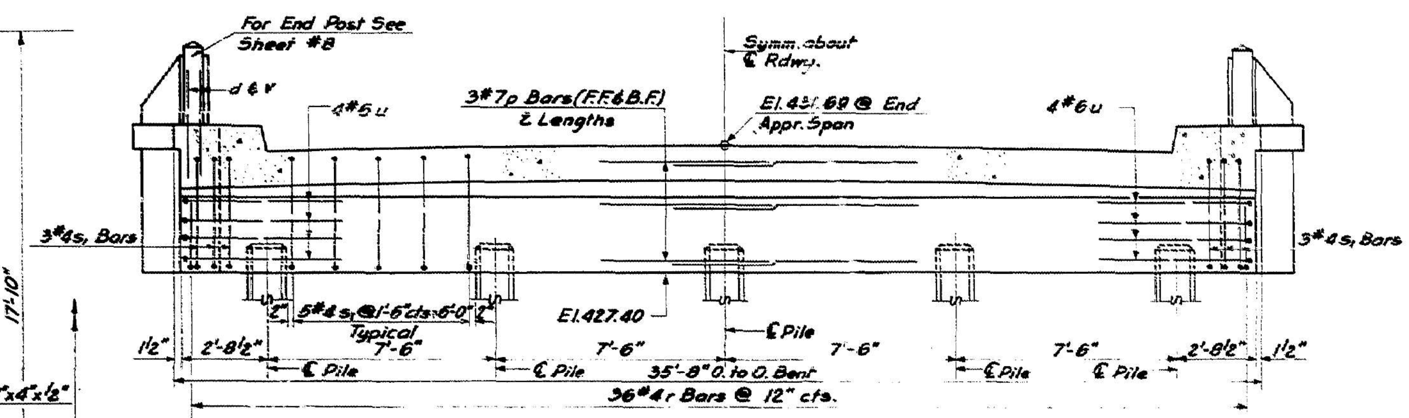
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

SHEET NO. 2
10 SHEETS



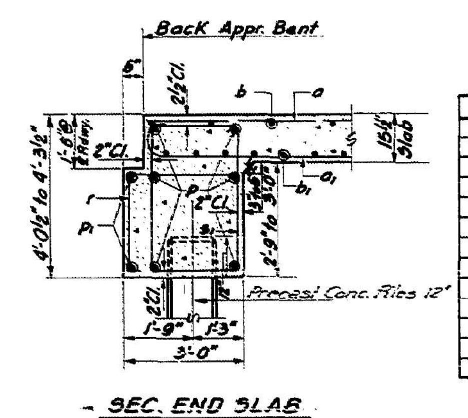


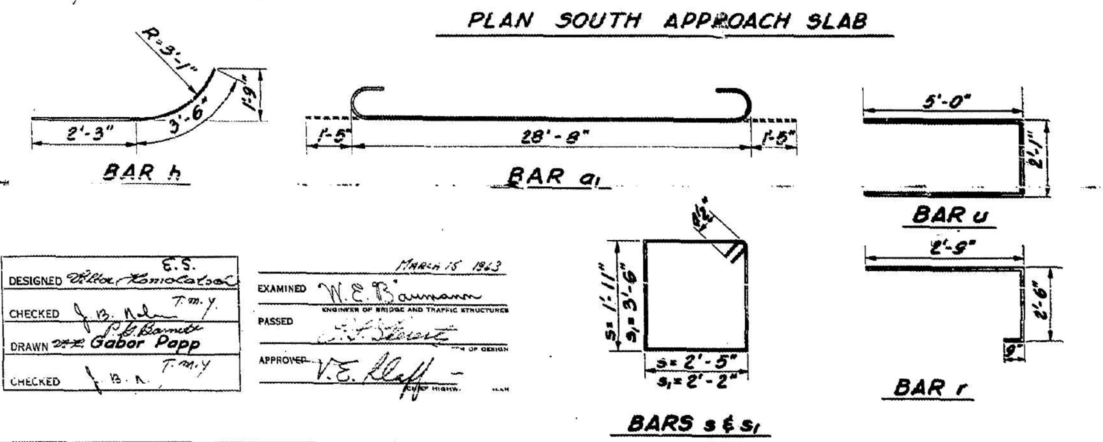




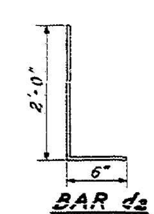
BILL OF MATERIAL OF 1 APPR. SLABS AND 1 BENT

BAR	No.	SIZE	LENGTH	SHAPE	BAR	No.	SIZE	LENGTH	SHAPE
a	21	#5	28'-6"	——	r	36	#4	6'-0"	⌐
a_1	66	#10	31'-6"	⊂⊃					
a_2	14	#5	28'-9"	——	s	58	#4	9'-5"	□
					s_1	26	#4	12'-1"	□
b	20	#5	33'-0"	——					
b_1	44	#5	35'-0"	——	u	8	#6	12'-1"	⊐
e_5	16	#5	11'-6"	——					
d	12	#4	3'-0"	——	v	16	#4	5'-9"	——
d_2	112	#5	2'-6"	L	Class X Concrete			Cu. Yds.	71.3
h	20	#4	5'-9"	——	Reinforcement Bars			Lbs.	14,310
					Precast Conc. Piles 12"			Lin. Ft.	200
p	12	#7	19'-0"	——	Test Pile Precast Conc.			Each	1
p_1	4	#4	18'-6"	——					





PILE DATA
Type : Precast Concrete 12"
Capacity : 35 Tons
Est. Length : 50 Ft.
No. Req'd : 5
(Includes 1 Test Pile)



APPROACH SLAB DETAIL
EMBARRASS RIVER OVERFLOW
S.B.I. RT. 1 SEC. 16-BR
LAWRENCE COUNTY
STA. 85+12.00

DESIGNED E.S. Villar
CHECKED J.B. T.M.Y.
DRAWN Gabor Papp
CHECKED J.B.A. T.M.Y.
EXAMINED W.E. Baumann, March 15 1963
PASSED
APPROVED V.E. Gleff

1" Open Joint changed to 1 1/2" EJS. 1-6-64

FOR INOFRMATION ONLY

USER NAME = jessica.hille	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 8/8/2024	DATE -	REVISED -	

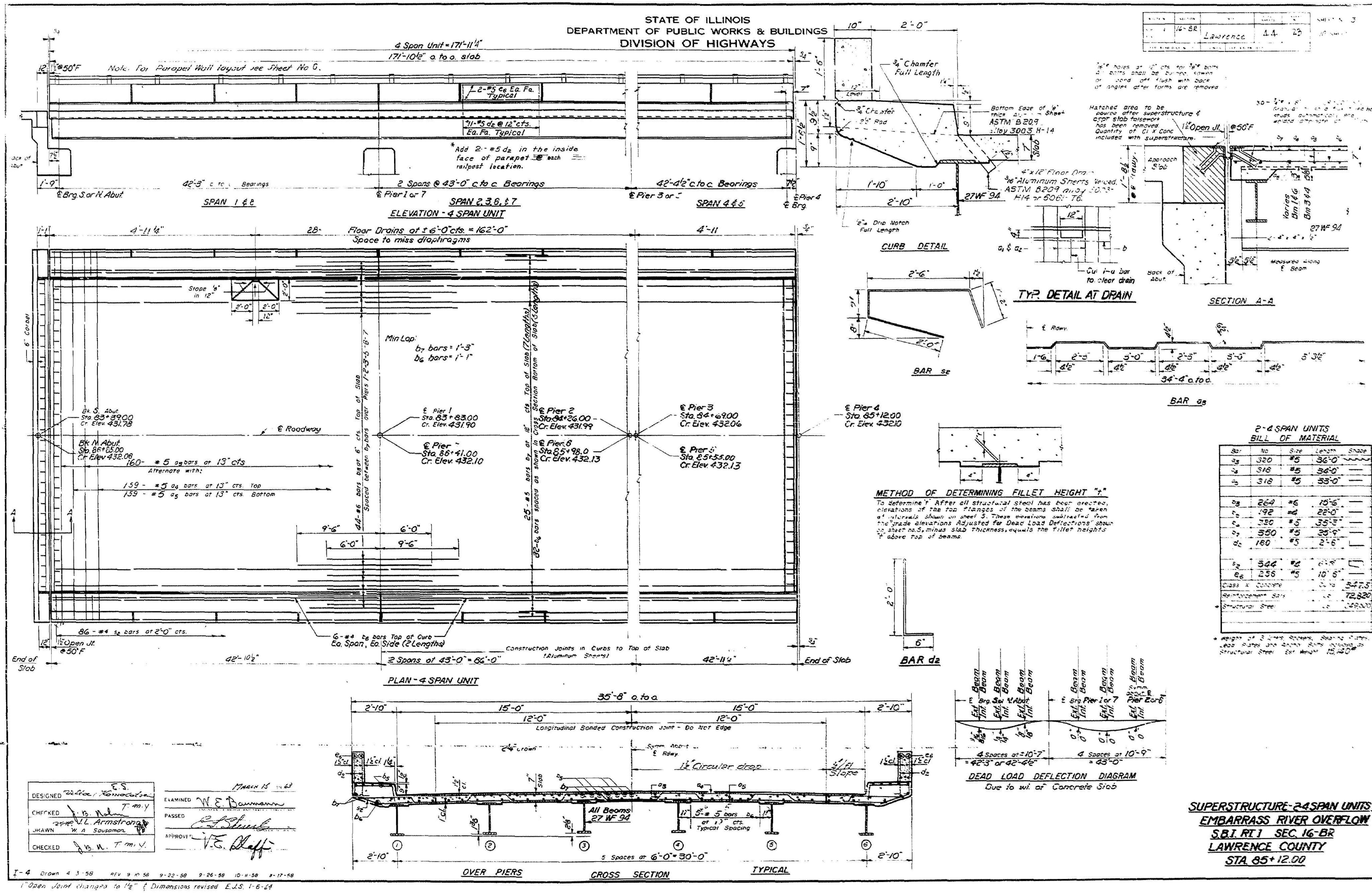
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS – S.N. 051–0004

SCALE: SHEET 2 OF 10 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	143

CONTRACT NO. 74164
ILLINOIS FED. AID PROJECT



2-4 SPAN UNITS
BILL OF MATERIAL

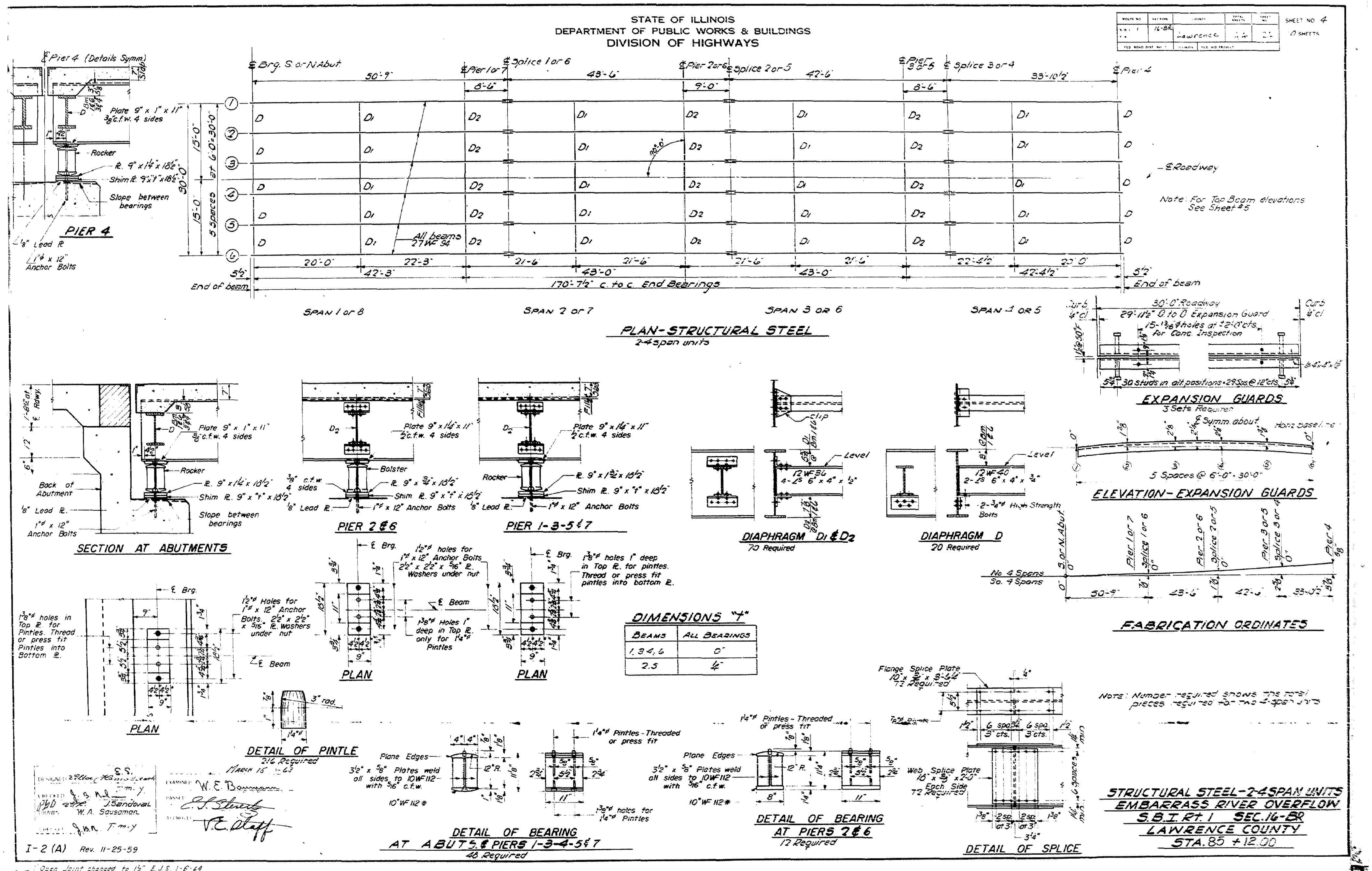
Bar	No	Size	Length	Shape
a_3	320	#5	36'-0"	~~~
a_4	318	#5	34'-0"	—
a_5	318	#5	33'-0"	—
b_3	264	#6	15'-6"	—
b_5	192	#4	22'-0"	—
b_6	320	#5	35'-3"	—
b_7	550	#5	25'-9"	—
d_2	160	#5	2'-6"	L
s_2	344	#4	[illegible]	⊏
e_6	256	#5	10'-6"	—
Class X Concrete			Cu. Yd.	347.5
Reinforcement Bars			Lb.	72,820
* Structural Steel			Lb.	249,300

* Weight of 3 Plates, Rockers, Bearing Plates, Lead Plates and Anchor Bolts included in Structural Steel. Est. Weight 15,420#

FOR INOFRMATION ONLY

USER NAME = jessica.hille	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING STRUCTURE DETAILS – S.N. 051–0004
	DRAWN -	REVISED -		
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -		
PLOT DATE = 8/8/2024	DATE -	REVISED -		SCALE: SHEET 3 OF 10 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	144
CONTRACT NO. 74164				
ILLINOIS FED. AID PROJECT				


STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS
SHEET NO. 4
Lawrence
PLAN-STRUCTURAL STEEL
2-4 span units
SPAN 1 or 8
SPAN 2 or 7
SPAN 3 OR 6
SPAN 4 OR 5
170'-7½" c. to c. End Bearings
End of beam
All beams 27WF 94
Note: For Top Beam elevations See Sheet #5
℄ Roadway
PIER 4
SECTION AT ABUTMENTS
PIER 2 & 6
PIER 1-3-5 & 7
DIAPHRAGM D1 & D2
70 Required
DIAPHRAGM D
20 Required
EXPANSION GUARDS
3 Sets Required
ELEVATION-EXPANSION GUARDS
FABRICATION ORDINATES
DIMENSIONS "t"
BEAMS | ALL BEARINGS
1,3,4,6 | 0"
2,5 | ¼"
PLAN
DETAIL OF PINTLE
216 Required
DETAIL OF BEARING
AT ABUTS. & PIERS 1-3-4-5 & 7
48 Required
DETAIL OF BEARING
AT PIERS 2 & 6
12 Required
DETAIL OF SPLICE
NOTE: Number required shows the total pieces required for the 2-4 span units
STRUCTURAL STEEL-2-4SPAN UNITS
EMBARRASS RIVER OVERFLOW
S.B.I. Rt. 1 SEC. 16-BR
LAWRENCE COUNTY
STA. 85 + 12.00
I-2 (A) Rev. 11-25-59
Open Joint changed to 1½" E.J.S. 1-6-64

FOR INOFRMATION ONLY

USER NAME = jessica.nille	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 8/8/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS – S.N. 051–0004

SCALE: SHEET 4 OF 10 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	145

CONTRACT NO. 74164

ILLINOIS FED. AID PROJECT

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
... 1	16BR	Lawrence	44	25
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHEET NO 5
10 SHEETS

Beam	Sta.	Offset	"A"	"B"
Bk So Abut.	8339.000	15.000	431.594	431.594
	8339.000	9.000	431.711	431.711
	8339.000	3.000	431.773	431.773
	8339.000	.000	431.781	431.781
	8339.000	- 3.000	431.773	431.773
	8339.000	- 9.000	431.711	431.711
	8339.000	- 15.000	431.594	431.594
℄ Brg. So. A.	8340.750	15.000	431.599	431.599
	8340.750	9.000	431.716	431.716
	8340.750	3.000	431.778	431.778
	8340.750	.000	431.786	431.786
	8340.750	- 3.000	431.778	431.778
	8340.750	- 9.000	431.716	431.716
	8340.750	- 15.000	431.599	431.599
	8350.750	15.000	431.627	431.642
	8350.750	9.000	431.744	431.759
	8350.750	3.000	431.807	431.822
	8350.750	.000	431.815	431.829
	8350.750	- 3.000	431.807	431.822
	8350.750	- 9.000	431.744	431.759
	8350.750	- 15.000	431.627	431.642
	8360.750	15.000	431.658	431.675
	8360.750	9.000	431.775	431.795
	8360.750	3.000	431.834	431.854
	8360.750	.000	431.842	431.862
	8360.750	- 3.000	431.834	431.854
	8360.750	- 9.000	431.772	431.792
	8360.750	- 15.000	431.655	431.675
	8370.750	15.000	431.681	431.693
	8370.750	9.000	431.798	431.810
	8370.750	3.000	431.860	431.872
	8370.750	.000	431.868	431.880
	8370.750	- 3.000	431.860	431.872
	8370.750	- 9.000	431.798	431.810
	8370.750	- 15.000	431.681	431.693
℄ Brg. P-1	8383.000	15.000	431.711	431.711
	8383.000	9.000	431.828	431.828
	8383.000	3.000	431.891	431.891
	8383.000	.000	431.898	431.898
	8383.000	- 3.000	431.891	431.891
	8383.000	- 9.000	431.828	431.828
	8383.000	- 15.000	431.711	431.711
	8393.000	15.000	431.734	431.734
	8393.000	9.000	431.851	431.851
	8393.000	3.000	431.914	431.914
	8393.000	.000	431.922	431.922
	8393.000	- 3.000	431.914	431.914
	8393.000	- 9.000	431.851	431.851
	8393.000	- 15.000	431.734	431.734
	8403.000	15.000	431.756	431.756
	8403.000	9.000	431.874	431.874
	8403.000	3.000	431.936	431.936
	8403.000	.000	431.944	431.944
	8403.000	- 3.000	431.936	431.936
	8403.000	- 9.000	431.874	431.874
	8403.000	- 15.000	431.756	431.756
	8413.000	15.000	431.777	431.777
	8413.000	9.000	431.894	431.894
	8413.000	3.000	431.957	431.957
	8413.000	.000	431.965	431.965
	8413.000	- 3.000	431.957	431.957
	8413.000	- 9.000	431.894	431.894
	8413.000	- 15.000	431.777	431.777

Beam	Sta.	Offset	"A"	"B"
℄ Brg. P-2	8426.000	15.000	431.803	431.803
	8426.000	9.000	431.920	431.920
	8426.000	3.000	431.982	431.982
	8426.000	.000	431.990	431.996
	8426.000	- 3.000	431.982	431.982
	8426.000	- 9.000	431.920	431.920
	8426.000	- 15.000	431.803	431.803
	8436.000	15.000	431.821	431.821
	8436.000	9.000	431.938	431.938
	8436.000	3.000	432.000	432.000
	8436.000	.000	432.008	432.008
	8436.000	- 3.000	432.000	432.000
	8436.000	- 9.000	431.938	431.938
	8436.000	- 15.000	431.821	431.821
	8446.000	15.000	431.837	431.837
	8446.000	9.000	431.954	431.954
	8446.000	3.000	432.017	432.017
	8446.000	.000	432.025	432.025
	8446.000	- 3.000	432.017	432.017
	8446.000	- 9.000	431.954	431.954
	8446.000	- 15.000	431.837	431.837
	8456.000	15.000	431.853	431.853
	8456.000	9.000	431.970	431.970
	8456.000	3.000	432.032	432.032
	8456.000	.000	432.040	432.040
	8456.000	- 3.000	432.032	432.032
	8456.000	- 9.000	431.970	431.970
	8456.000	- 15.000	431.853	431.853
℄ Brg. P-3	8469.000	15.000	431.871	431.871
	8469.000	9.000	431.988	431.988
	8469.000	3.000	432.051	432.051
	8469.000	.000	432.059	432.059
	8469.000	- 3.000	432.051	432.051
	8469.000	- 9.000	431.988	431.988
	8469.000	- 15.000	431.871	431.871
	8479.000	15.000	431.884	431.894
	8479.000	9.000	432.001	432.011
	8479.000	3.000	432.063	432.073
	8479.000	.000	432.071	432.081
	8479.000	- 3.000	432.063	432.073
	8479.000	- 9.000	432.001	432.011
	8479.000	- 15.000	431.884	431.894
	8489.000	15.000	431.895	431.915
	8489.000	9.000	432.012	432.032
	8489.000	3.000	432.075	432.095
	8489.000	.000	432.083	432.102
	8489.000	- 3.000	432.075	432.095
	8489.000	- 9.000	432.012	432.032
	8489.000	- 15.000	431.895	431.915
	8499.000	15.000	431.906	431.922
	8499.000	9.000	432.023	432.039
	8499.000	3.000	432.085	432.102
	8499.000	.000	432.093	432.109
	8499.000	- 3.000	432.085	432.102
	8499.000	- 9.000	432.023	432.039
	8499.000	- 15.000	431.906	431.922
℄ Brg. P-4 (Span-4)	8511.375	15.000	431.916	431.916
	8511.375	9.000	432.034	432.034
	8511.375	3.000	432.096	432.096
	8511.375	.000	432.104	432.104
	8511.375	- 3.000	432.096	432.096
	8511.375	- 9.000	432.034	432.034
	8511.375	- 15.000	431.916	431.916
℄ Pier-4	8512.000	15.000	431.917	431.917
	8512.000	9.000	432.034	432.034
	8512.000	3.000	432.097	432.097
	8512.000	.000	432.104	432.104
	8512.000	- 3.000	432.097	432.097
	8512.000	- 9.000	432.034	432.034
	8512.000	- 15.000	431.917	431.917

Beam	Sta.	Offset	"A"	"B"
℄ Brg. P-4 Span - 5	8512.625	15.000	431.917	431.917
	8512.625	9.000	432.035	432.035
	8512.625	3.000	432.097	432.097
	8512.625	.000	432.105	432.105
	8512.625	- 3.000	432.097	432.097
	8512.625	- 9.000	432.035	432.035
	8512.625	- 15.000	431.917	431.917
	8522.625	15.000	431.925	431.939
	8522.625	9.000	432.042	432.057
	8522.625	3.000	432.104	432.119
	8522.625	.000	432.112	432.127
	8522.625	- 3.000	432.104	432.119
	8522.625	- 9.000	432.042	432.057
	8522.625	- 15.000	431.925	431.939
	8532.625	15.000	431.931	431.941
	8532.625	9.000	432.048	432.058
	8532.625	3.000	432.110	432.131
	8532.625	.000	432.118	432.138
	8532.625	- 3.000	432.110	432.131
	8532.625	- 9.000	432.048	432.058
	8532.625	- 15.000	431.931	431.941
	8542.625	15.000	431.936	431.946
	8542.625	9.000	432.053	432.063
	8542.625	3.000	432.115	432.137
	8542.625	.000	432.123	432.125
	8542.625	- 3.000	432.115	432.137
	8542.625	- 9.000	432.053	432.063
	8542.625	- 15.000	431.936	431.948
℄ Brg. P-5	8555.000	15.000	431.940	431.940
	8555.000	9.000	432.057	432.057
	8555.000	3.000	432.119	432.119
	8555.000	.000	432.127	432.127
	8555.000	- 3.000	432.119	432.119
	8555.000	- 9.000	432.057	432.057
	8555.000	- 15.000	431.940	431.940
	8565.000	15.000	431.942	431.942
	8565.000	9.000	432.059	432.059
	8565.000	3.000	432.121	432.121
	8565.000	.000	432.129	432.129
	8565.000	- 3.000	432.121	432.121
	8565.000	- 9.000	432.059	432.059
	8565.000	- 15.000	431.942	431.942
	8575.000	15.000	431.943	431.943
	8575.000	9.000	432.060	432.060
	8575.000	3.000	432.122	432.122
	8575.000	.000	432.130	432.130
	8575.000	- 3.000	432.122	432.122
	8575.000	- 9.000	432.060	432.060
	8575.000	- 15.000	431.943	431.943
℄ Brg. P-6	8585.000	15.000	431.942	431.942
	8585.000	9.000	432.059	432.059
	8585.000	3.000	432.122	432.122
	8585.000	.000	432.130	432.130
	8585.000	- 3.000	432.122	432.122
	8585.000	- 9.000	432.059	432.059
	8585.000	- 15.000	431.942	431.942
Bk. No. Abut.	8598.000	15.000	431.940	431.940
	8598.000	9.000	432.057	432.057
	8598.000	3.000	432.119	432.119
	8598.000	.000	432.127	432.127
	8598.000	- 3.000	432.119	432.119
	8598.000	- 9.000	432.057	432.057
	8598.000	- 15.000	431.940	431.940

Beam	Sta	Offset	A	B
	8608.000	15.000	431.936	431.936
	8608.000	9.000	432.053	432.053
	8608.000	3.000	432.116	432.116
	8608.000	.000	432.124	432.124
	8608.000	- 3.000	432.116	432.116
	8608.000	- 9.000	432.053	432.053
	8608.000	- 15.000	431.936	431.936
	8618.000	15.000	431.932	431.932
	8618.000	9.000	432.049	432.049
	8618.000	3.000	432.111	432.111
	8618.000	.000	432.119	432.119
	8618.000	- 3.000	432.111	432.111
	8618.000	- 9.000	432.049	432.049
	8618.000	- 15.000	431.932	431.932
	8628.000	15.000	431.926	431.926
	8628.000	9.000	432.043	432.043
	8628.000	3.000	432.106	432.106
	8628.000	.000	432.113	432.113
	8628.000	- 3.000	432.106	432.106
	8628.000	- 9.000	432.043	432.043
	8628.000	- 15.000	431.926	431.926
℄ Brg. P-7	8641.000	15.000	431.911	431.911
	8641.000	9.000	432.029	432.029
	8641.000	3.000	432.096	432.096
	8641.000	.000	432.104	432.104
	8641.000	- 3.000	432.096	432.096
	8641.000	- 9.000	432.034	432.034
	8641.000	- 15.000	431.917	431.917
	8651.000	15.000	431.908	431.918
	8651.000	9.000	432.025	432.035
	8651.000	3.000	432.088	432.097
	8651.000	.000	432.095	432.105
	8651.000	- 3.000	432.088	432.097
	8651.000	- 9.000	432.025	432.035
	8651.000	- 15.000	431.908	431.918
	8661.000	15.000	431.898	431.918
	8661.000	9.000	432.015	432.035
	8661.000	3.000	432.078	432.097
	8661.000	.000	432.085	432.105
	8661.000	- 3.000	432.078	432.097
	8661.000	- 9.000	432.015	432.035
	8661.000	- 15.000	431.898	431.918
	8671.000	15.000	431.887	431.904
	8671.000	9.000	432.004	432.021
	8671.000	3.000	432.067	432.087
	8671.000	.000	432.074	432.091
	8671.000	- 3.000	432.067	432.087
	8671.000	- 9.000	432.004	432.021
	8671.000	- 15.000	431.887	431.904
℄ Brg. No. Abut.	8683.250	15.000	431.872	431.872
	8683.250	9.000	431.989	431.989
	8683.250	3.000	432.051	432.051
	8683.250	.000	432.059	432.059
	8683.250	- 3.000	432.051	432.051
	8683.250	- 9.000	431.989	431.989
	8683.250	- 15.000	431.872	431.872
Bk. No. Abut.	8685.000	15.000	431.869	431.869
	8685.000	9.000	431.987	431.987
	8685.000	3.000	432.049	432.049
	8685.000	.000	432.057	432.057
	8685.000	- 3.000	432.049	432.049
	8685.000	- 9.000	431.987	431.987
	8685.000	- 15.000	431.869	431.869

NOTE:
"A" denotes theoretical grade elevations at top of slab.
"B" denotes theoretical grade elevations at top of slab, adjusted for dead load deflections.

TOP OF BEAM ELEVATIONS

Beams \ Points	So.Abut	Pier-1	Spl.-1	Pier-2	Spl.-2	Pier-3	Spl.-3	Pier-4	Spl.-4	Pier-5	Spl.-5	Pier-6	Spl.-6	Pier-7	No.Abut
Beam 1 & 6	431.02	431.08	431.09	431.16	431.18	431.23	431.24	431.34	431.29	431.29	431.29	431.29	431.29	431.29	431.29
Beam 2 & 5	431.14	431.20	431.21	431.28	431.30	431.35	431.36	431.46	431.41	431.41	431.41	431.41	431.41	431.41	431.41
Beam 3 & 4	431.20	431.26	431.27	431.34	431.36	431.41	431.42	431.52	431.47	431.47	431.47	431.47	431.47	431.47	431.47

DESIGNED	V. Homolatsch
CHECKED	J. B. Nolan
DRAWN	E. Stickan
CHECKED	T. M. Yang

March 16, 1963
EXAMINED
ENGINEER OF BRIDGES AND TRAFFIC REGULATIONS
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF ENGINEER

ELEVATIONS TOP SLAB & BEAMS
EMBARRASS RIVER OVERFLOW
S.B.I. RT. 1 - SEC. 16-BR
LAWRENCE COUNTY
STATION 85 + 12.00

FOR INOFRMATION ONLY

USER NAME = jessica.hille	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 8/8/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS – S.N. 051-0004

SCALE: | SHEET 5 OF 10 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	146
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

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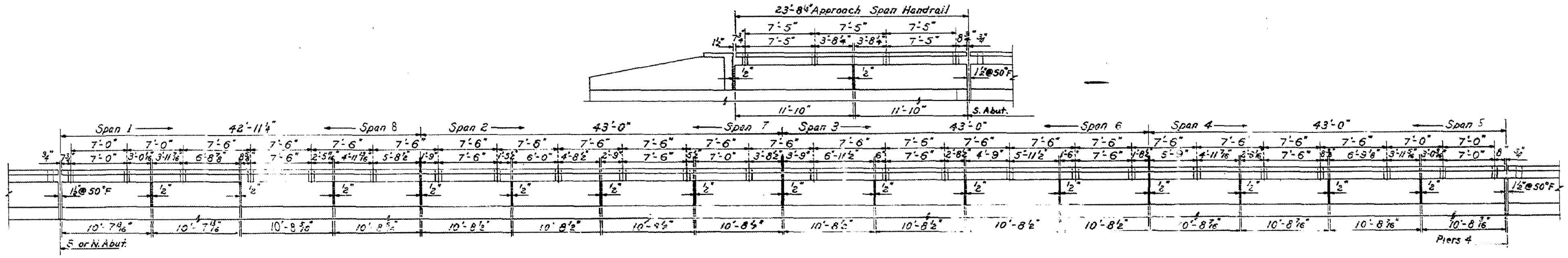
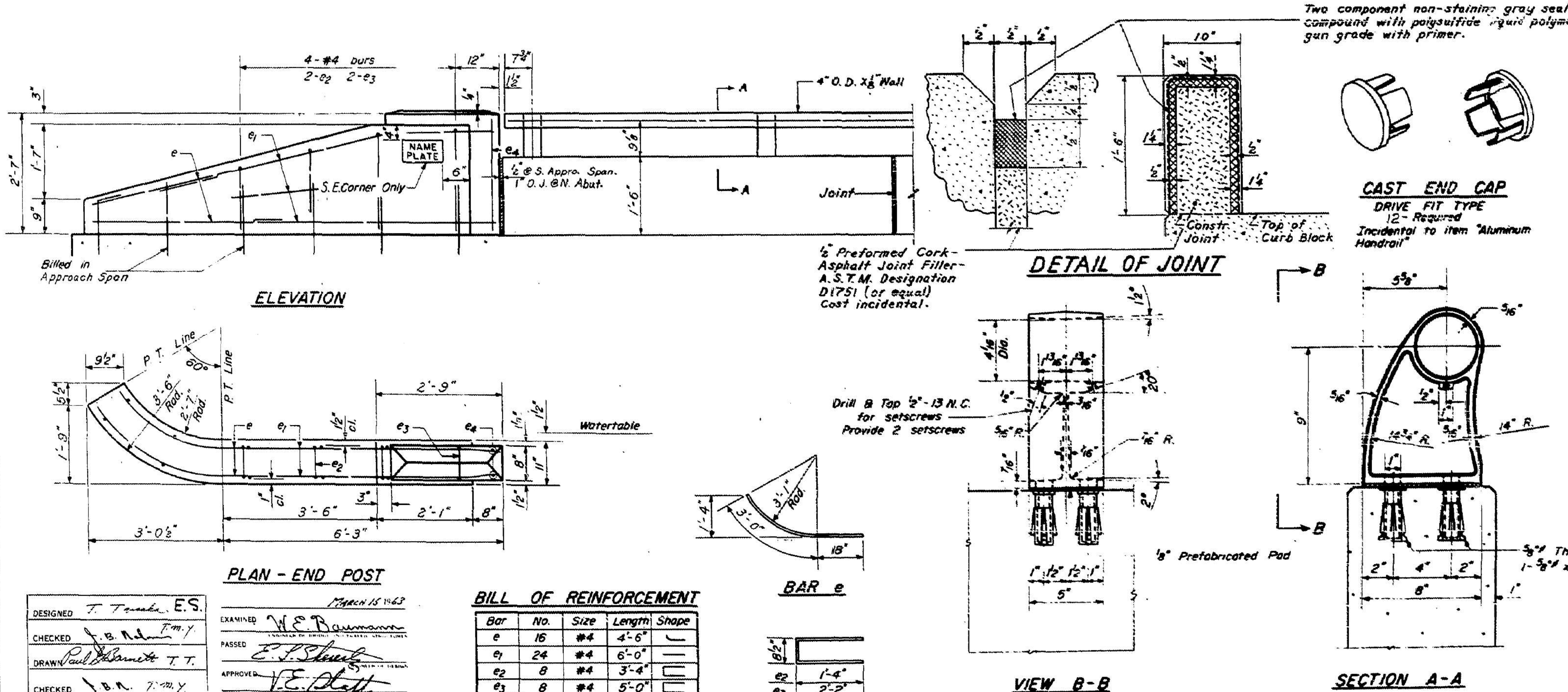
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

Route No.	Section	County	Total Sheets	Sheet No.
1	16-BR	Lawrence	44	26

SHEET NO. 6
10 SHEETS



ELEVATION



ELEVATION

PLAN - END POST

DETAIL OF JOINT

CAST END CAP
DRIVE FIT TYPE
12 - Required
Incidental to item "Aluminum Handrail"

BAR e

BAR e_2 or e_3

VIEW B-B

SECTION A-A

RAIL POST DETAILS

BILL OF MATERIAL

Item	Unit	Quantity
Aluminum Handrail	Lin. Ft.	738
Reinforcement Bars	Lbs.	210
Class X Concrete	Cu. Yds.	2.3
Name Plates	Each	1

BILL OF REINFORCEMENT

Bar	No.	Size	Length	Shape
e	16	#4	4'-6"	
e_1	24	#4	6'-0"	
e_2	8	#4	3'-4"	
e_3	8	#4	5'-0"	
e_4	8	#4	2'-3"	

NOTES

All Posts shall be placed normal to parapet
All Posts shall be of Aluminum conforming to ASTM Specification B-108 alloy SG-70B-T6.
All Rail Tubing shall be of Aluminum conforming to ASTM Specification B-235 alloy 6061-T6
Aluminum handrail will be paid for at the contract unit price per lineal foot for ALUMINUM HANDRAIL, measured as specified, which price shall be payment in full for all materials, fabrication and erection.
For material composition of Prefabricated Pad, See Art 54.9 (f), (Bearings and Anchorage), of the Std. Specs.
Set Screws shall be of Aluminum conforming to ASTM Specification B-211 alloy 2024-T4
Rail Tubing may extend a maximum of three panel lengths.
Aluminum handrail shall be measured in lineal feet. The length paid for shall be overall length along the top longitudinal railing member through all post gaps.

⅝"Ø Threaded Inserts. Provide 1-Stainless steel washer and 1-⅝"Ø x 2" Stainless Steel Bolt with each Insert
4 - Required each post

DESIGNED	T. Tanaka E.S.
CHECKED	J.B.R. T.m.Y
DRAWN	Paul Barnett T.T.
CHECKED	J.B.R. T.m.Y

March 15 1963
EXAMINED W.E. Baumann
PASSED E.F. Sheel
APPROVED V.E. Staff

HANDRAIL
EMBARRASS RIVER OVERFLOW
S.B.I. RT. 1-SEC. 16-BR
LAWRENCE COUNTY
STA. 85+12.00

1" Open Joint changed to 1½" & Dimensions revised. E.J.S. 1-6-64

FOR INOFRMATION ONLY

USER NAME = jessica.hille	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING STRUCTURE DETAILS - S.N. 051-0004	F.A.P. RTE. 332	SECTION (16BR-1,BR-2)B-1	COUNTY LAWRENCE	TOTAL SHEETS 198	SHEET NO. 147
	DRAWN -	REVISED -			CONTRACT NO. 74164				
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -		SCALE: SHEET 6 OF 10 SHEETS STA. TO STA.	ILLINOIS FED. AID PROJECT				
PLOT DATE = 8/8/2024	DATE -	REVISED -							

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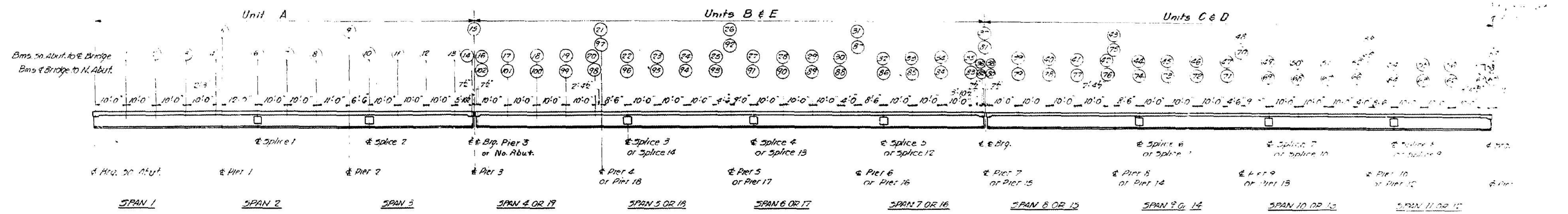
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

1	16-BR	LAWRENCE	44	15



TOP OF SLAB ELEVATIONS

Beams \ Points	℄ Brg. So. Abut.	1	2	3	4	℄ Pier 1 (5)	℄ Splice 1	7	8	℄ Pier 2 (9)	℄ Splice 2	11	12	13	℄ Brg. on Pier 3	℄ Pier 3 (15)	℄ Brg. on Pier 3 or N. Abut.	17 or 101	18 or 100	19 or 99	20 or 98
Beam 1	431.602	431.632	431.663	431.692	431.721	431.727	431.761	431.788	431.815	431.843	431.860	431.885	431.909	431.932	431.946	431.947	431.948	431.971	431.992	432.013	432.034
Beam 2	431.719	431.750	431.780	431.809	431.838	431.845	431.878	431.905	431.932	431.960	431.977	432.002	432.026	432.049	432.063	432.064	432.066	432.088	432.110	432.131	432.151
Beam 3	431.781	431.812	431.842	431.872	431.901	431.907	431.941	431.968	431.994	432.023	432.039	432.064	432.088	432.112	432.125	432.127	432.128	432.150	432.172	432.193	432.213
℄ Roadway	431.789	431.820	431.850	431.880	431.908	431.915	431.948	431.976	432.002	432.031	432.047	432.072	432.096	432.120	432.133	432.134	432.136	432.158	432.180	432.201	432.221
Beam 4	431.781	431.812	431.842	431.872	431.901	431.907	431.941	431.968	431.994	432.023	432.039	432.064	432.088	432.112	432.125	432.127	432.128	432.150	432.172	432.193	432.213
Beam 5	431.719	431.750	431.780	431.809	431.838	431.845	431.878	431.905	431.932	431.960	431.977	432.002	432.026	432.049	432.063	432.064	432.066	432.088	432.110	432.131	432.151
Beam 6	431.602	431.632	431.663	431.692	431.721	431.727	431.761	431.788	431.815	431.843	431.860	431.885	431.909	431.932	431.946	431.947	431.948	431.971	431.992	432.013	432.034

Beams \ Points	℄ Pier 4 or Pier 18	℄ Splice 3 or Splice 14	23 or 95	24 or 94	25 or 93	℄ Pier 5 or Pier 17	℄ Splice 4 or Splice 13	28 or 90	29 or 89	30 or 88	℄ Pier 6 or Pier 16	℄ Splice 5 or Spl. 12	33 or 85	34 or 84	35 or 83	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Beam 1	432.039	432.055	432.074	432.092	432.110	432.118	432.133	432.149	432.164	432.179	432.185	432.197	432.210	432.223	432.235	432.239	432.240	432.241	432.252	432.262	432.272	432.281
Beam 2	432.156	432.172	432.191	432.210	432.227	432.235	432.250	432.266	432.282	432.296	432.302	432.314	432.327	432.340	432.352	432.356	432.357	432.358	432.369	432.379	432.389	432.398
Beam 3	432.218	432.235	432.254	432.272	432.290	432.298	432.313	432.329	432.344	432.359	432.365	432.376	432.390	432.402	432.414	432.419	432.420	432.420	432.431	432.442	432.451	432.460
℄ Roadway	432.226	432.243	432.262	432.280	432.298	432.305	432.320	432.337	432.352	432.367	432.372	432.384	432.398	432.410	432.422	432.427	432.427	432.428	432.439	432.449	432.459	432.468
Beam 4	432.218	432.235	432.254	432.272	432.290	432.298	432.313	432.329	432.344	432.359	432.365	432.376	432.390	432.402	432.414	432.419	432.420	432.420	432.431	432.442	432.451	432.460
Beam 5	432.156	432.172	432.191	432.210	432.227	432.235	432.250	432.266	432.282	432.296	432.302	432.314	432.327	432.340	432.352	432.356	432.357	432.358	432.369	432.379	432.389	432.398
Beam 6	432.039	432.055	432.074	432.092	432.110	432.118	432.133	432.149	432.164	432.179	432.185	432.197	432.210	432.223	432.235	432.239	432.240	432.241	432.252	432.262	432.272	432.281

Beams \ Points	℄ Pier 8 or Pier 14	℄ Splice 6 or Spl. 11	45 or 73	46 or 72	47 or 71	℄ Pier 9 or Pier 13	℄ Splice 7 or Spl. 10	50 or 68	51 or 67	52 or 66	℄ Pier 10 or Pier 12	℄ Splice 8 or Spl. 9	55 or 63	56 or 62	57 or 61	℄ Brg. on Pier 11	℄ Pier 11
Beam 1	432.283	432.290	432.297	432.304	432.310	432.313	432.318	432.323	432.327	432.330	432.331	432.334	432.336	432.337	432.337	432.337	432.338
Beam 2	432.400	432.407	432.414	432.421	432.428	432.430	432.435	432.440	432.444	432.447	432.449	432.451	432.453	432.454	432.455	432.455	432.455
Beam 3	432.462	432.469	432.477	432.484	432.490	432.493	432.498	432.502	432.506	432.510	432.511	432.513	432.515	432.516	432.517	432.517	432.517
℄ Roadway	432.470	432.477	432.485	432.492	432.498	432.501	432.505	432.510	432.514	432.518	432.519	432.521	432.523	432.524	432.525	432.525	432.525
Beam 4	432.462	432.469	432.477	432.484	432.490	432.493	432.498	432.502	432.506	432.510	432.511	432.513	432.515	432.516	432.517	432.517	432.517
Beam 5	432.400	432.407	432.414	432.421	432.428	432.430	432.435	432.440	432.444	432.447	432.449	432.451	432.453	432.454	432.455	432.455	432.455
Beam 6	432.283	432.290	432.297	432.304	432.310	432.313	432.318	432.323	432.327	432.330	432.331	432.334	432.336	432.337	432.337	432.337	432.338

Note: Dead load deflections are not included in these elevations.
For 3 Span unit deflection see sheet 5
For 4 Span unit deflection see sheet 4

TOP OF BEAM ELEVATIONS

Beams \ Points	So. Abut.	Pier 1	Splice 1	Pier 2	Splice 2	Pier 3 or N. Abut.	Pier 4 or Pier 18	Splice 3 or Spl. 14	Pier 5 or Pier 17	Splice 4 or Splice 13	Pier 6 or Pier 16	Splice 5 or Spl. 12	Pier 7 or Pier 15	Pier 8 or Pier 14	Splice 6 or Splice 11	Pier 9 or Pier 13	Splice 7 or Spl. 10	Pier 10 or Pier 12	Splice 8 or Splice 9	℄ Pier 11
Beam 1	431.02	431.10	431.12	431.19	431.21	431.36	431.40	431.41	431.47	431.48	431.54	431.55	431.63	431.64	431.64	431.66	431.67	431.68	431.68	431.75
Beam 2	431.14	431.22	431.24	431.31	431.33	431.48	431.52	431.53	431.59	431.60	431.66	431.67	431.77	431.76	431.76	431.78	431.79	431.80	431.80	431.87
Beam 3	431.20	431.28	431.30	431.37	431.39	431.54	431.58	431.59	431.65	431.66	431.72	431.73	[illegible]	431.83	431.82	431.84	431.85	431.86	431.86	431.93
Beam 4	431.20	431.28	431.30	431.37	431.39	431.54	431.58	431.59	431.65	431.66	431.72	431.73	431.83	431.83	431.82	431.84	431.85	431.86	431.86	431.93
Beam 5	431.14	431.22	431.24	431.31	431.33	431.48	431.52	431.53	431.59	431.60	431.66	431.67	431.77	431.76	431.76	431.78	431.79	431.80	431.80	431.87
Beam 6	431.02	431.10	431.12	431.19	431.21	431.36	431.40	431.41	431.47	431.48	431.54	431.55	431.65	431.63	431.64	431.66	431.67	431.68	431.68	431.75

DESIGNED [signature]
CHECKED J. B. [signature] E.J.S.
DRAWN [signature] N. Miller
CHECKED J. B. H. E.J.S.

March 15 1963
EXAMINED W. E. [signature] ENGINEER OF BRIDGES AND TRAFFIC STRUCTURES
PASSED [signature] ENGINEER OF DESIGN
APPROVED V. E. [signature] CHIEF HIGHWAY ENGINEER

TOP SLAB & BEAM ELEVATIONS
EMBARRASS RIVER OVERFLOW
S.B.I. RT. 1 - SEC. 16-BR
LAWRENCE COUNTY
STATION 59+08.56

Open Joint & Dimensions revised E.J.S. 1-6-64

FOR INOFRMATION ONLY

USER NAME = jessica.nille	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING STRUCTURE DETAILS - S.N. 051-0004	F.A.P. RTE. 332	SECTION (16BR-1,BR-2)B-1	COUNTY LAWRENCE	TOTAL SHEETS 198	SHEET NO. 148
	DRAWN -	REVISED -					CONTRACT NO. 74164		
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -		SCALE: SHEET 7 OF 10 SHEETS STA. TO STA.					
PLOT DATE = 8/8/2024	DATE -	REVISED -			ILLINOIS FED. AID PROJECT				

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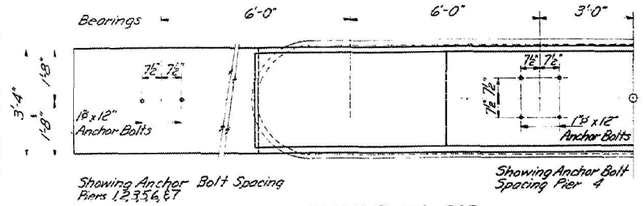
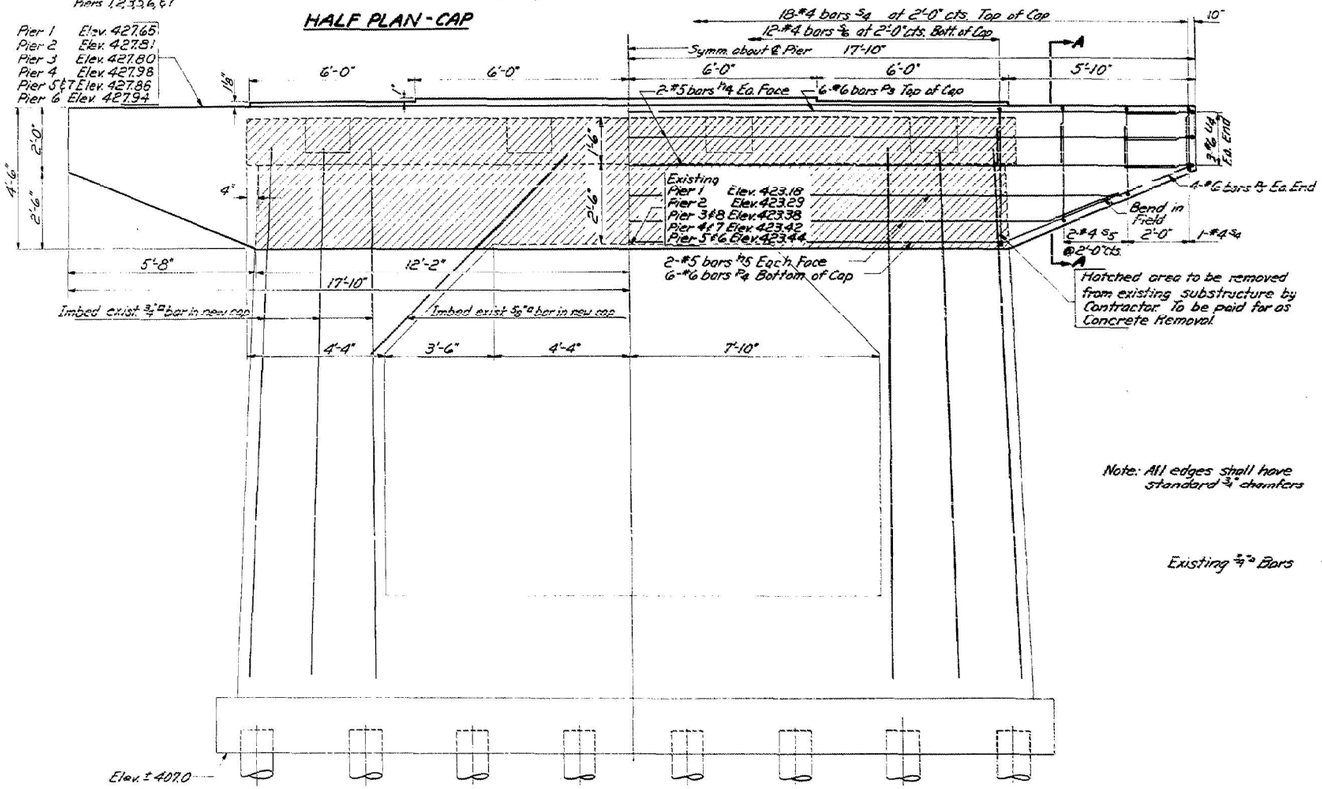
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1	16-BR	Lawrence	44	28
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

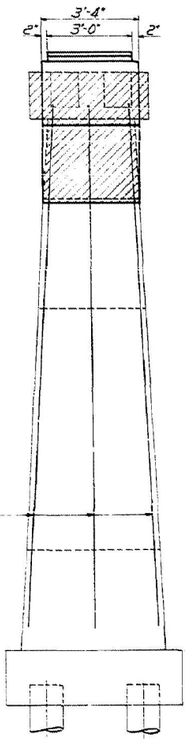
SHEET NO. 8
10 SHEETS



HALF PLAN - CAP



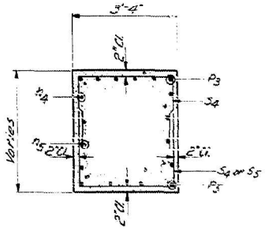
ELEVATION



END VIEW

Note: All edges shall have standard ¾" chamfers

Existing ¾" ø Bars

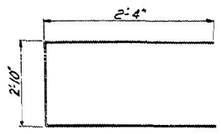


SECTION A-A

TOTAL BILL OF MATERIAL - 7 PIERS

Bar	No.	Size	Length	Shape
S4	28	#5	35'-0"	—
P5	28	#5	30'-6"	—
P3	42	#6	35'-0"	—
P4	42	#6	24'-3"	—
P5	56	#6	7'-6"	—
S4	140	#4	6'-8"	□
S5	28	#4	9'-4"	□
S6	84	#4	9'-5"	□
U4	42	#6	7'-6"	⊏
Class "A" Concrete		Cu. Yds.		188.9
Reinforcement Bars		Lbs.		8,030
Concrete Removal		Cu. Yds.		32.0

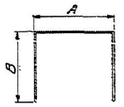
BAR U4



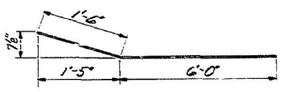
A & B Dimensions

Bar	A	B
S4	3'-0"	1'-10"
S5	3'-0"	3'-2"
S6	3'-0"	3'-4"

BAR S4, S5 & S6



BAR P5



DESIGNED	Viktor Hatholatsch	EXAMINED	March 15, 1963 W.E. Baumann ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
CHECKED	T.M.Y.	PASSED	ENGINEER OF DESIGN
DRAWN	Viktor Hatholatsch	APPROVED	CHIEF HIGHWAY ENGINEER
CHECKED	T.M.Y.		

PIERS 1 THRU 7
EMBARRASS RIVER OVERFLOW
S.B.I. RT. 1 SEC. 16-BR
LAWRENCE COUNTY
STA. 85+12.00

FOR INOFRMATION ONLY

USER NAME = jessica.ville	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 8/8/2024	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS – S.N. 051-0004

SCALE: | SHEET 8 OF 10 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	149
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

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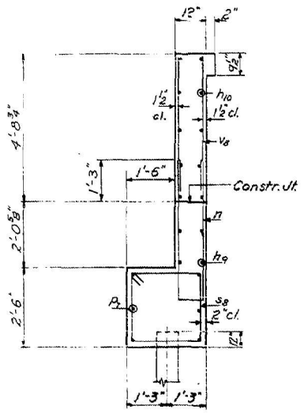
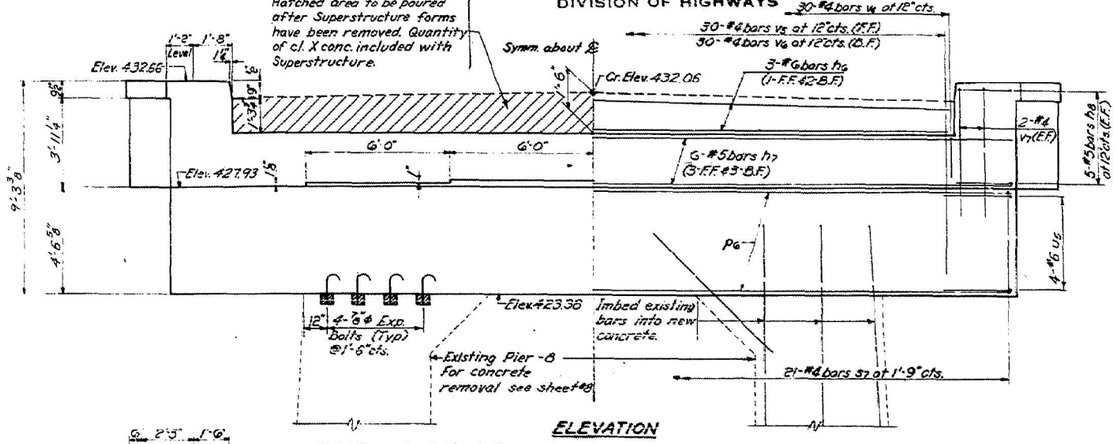
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 332	16BR	Lawrence	44	29

SHEET NO. 9
10 SHEETS

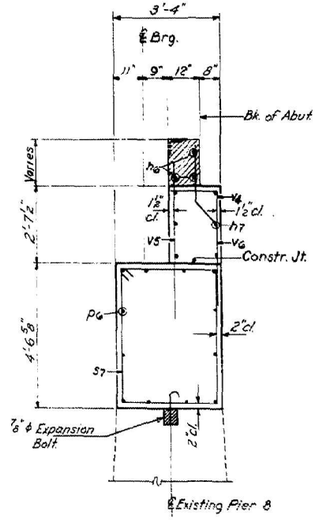


SECTION BB

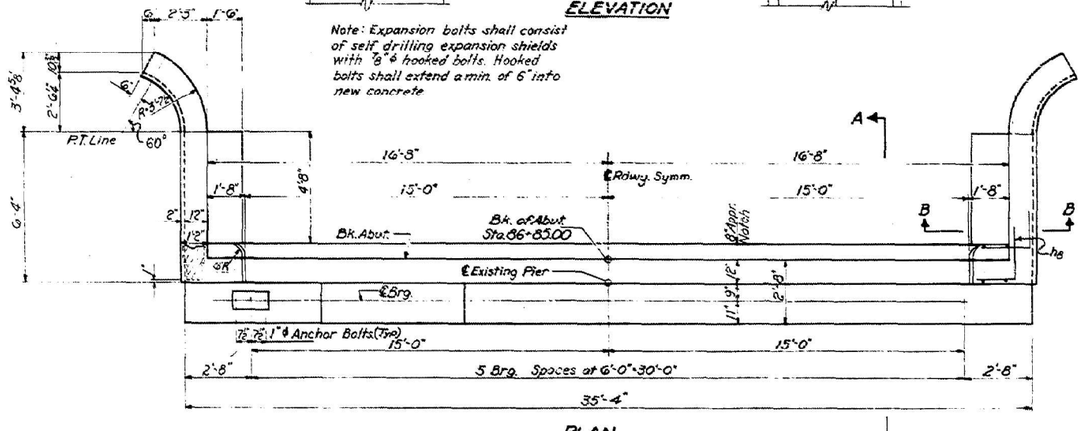


ELEVATION

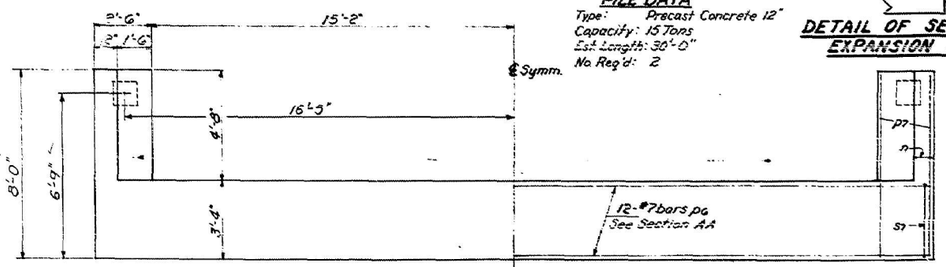
Note: Expansion bolts shall consist of self drilling expansion shields with ⅞" ϕ hooked bolts. Hooked bolts shall extend a min. of 6" into new concrete



SECTION AA

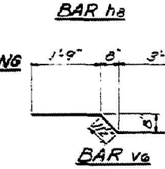


PLAN

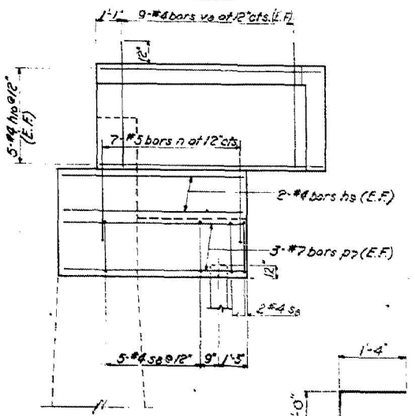


FOOTING PLAN

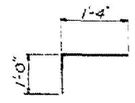
PILE DATA
Type: Precast Concrete 12"
Capacity: 15 Tons
Est. Length: 30'-0"
No. Req'd: 2



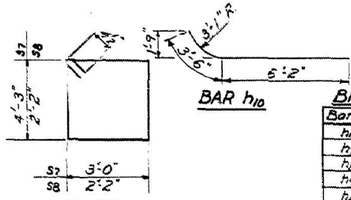
DETAIL OF SELF DRILLING EXPANSION BOLT



WING WALL



BAR V3

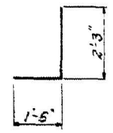


BAR h10

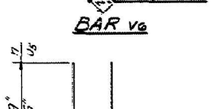
BARS S7 & S8

BILL OF MATERIAL

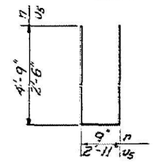
Bars	No.	Size	Length	Shape
h_8	3	#6	29'-9"	
h_7	6	#5	35'-0"	
h_8	20	#5	3'-9"	
h_9	8	#4	7'-9"	
h_{10}	20	#4	9'-8"	
n	14	#5	10'-3"	
P_6	12	#7	35'-0"	
P_7	12	#7	7'-9"	
S_7	21	#4	15'-3"	
S_8	14	#4	9'-5"	
V_8	8	#6	7'-11"	
V_4	30	#4	2'-4"	
V_5	30	#4	5'-5"	
V_6	30	#4	6'-4"	
V_7	8	#4	6'-3"	
V_8	36	#4	5'-9"	
Class 'A' Concrete		Cu. Yds.	55.0	
Reinforcement Bars		Lbs.	2,670	
Expansion Bolts ⅞ ϕ		Ea.	8	
Precast Conc. Piles 12"		Lin. Ft.	60	



BAR h8



BAR V8



BAR n & V8

NO. ABUTMENT
EMBARRASS RIVER OVERFLOW
S.B.I RT. 1 SEC. 16-BR
LAWRENCE COUNTY
STA. 85+12.00

DESIGNED	Emery J. Stiska	EXAMINED	MARCH 15 1963
CHECKED	T. m. Y.		
DRAWN	Thomas A. Lewis, W.E. Dickerson		
CHECKED	T. m. Y.		

Expansion bolt Detail added. E.J.S. 1-6-64

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USER NAME = jessica.hille	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 8/8/2024	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS – S.N. 051-0004

SCALE: | SHEET 9 OF 10 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	150
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

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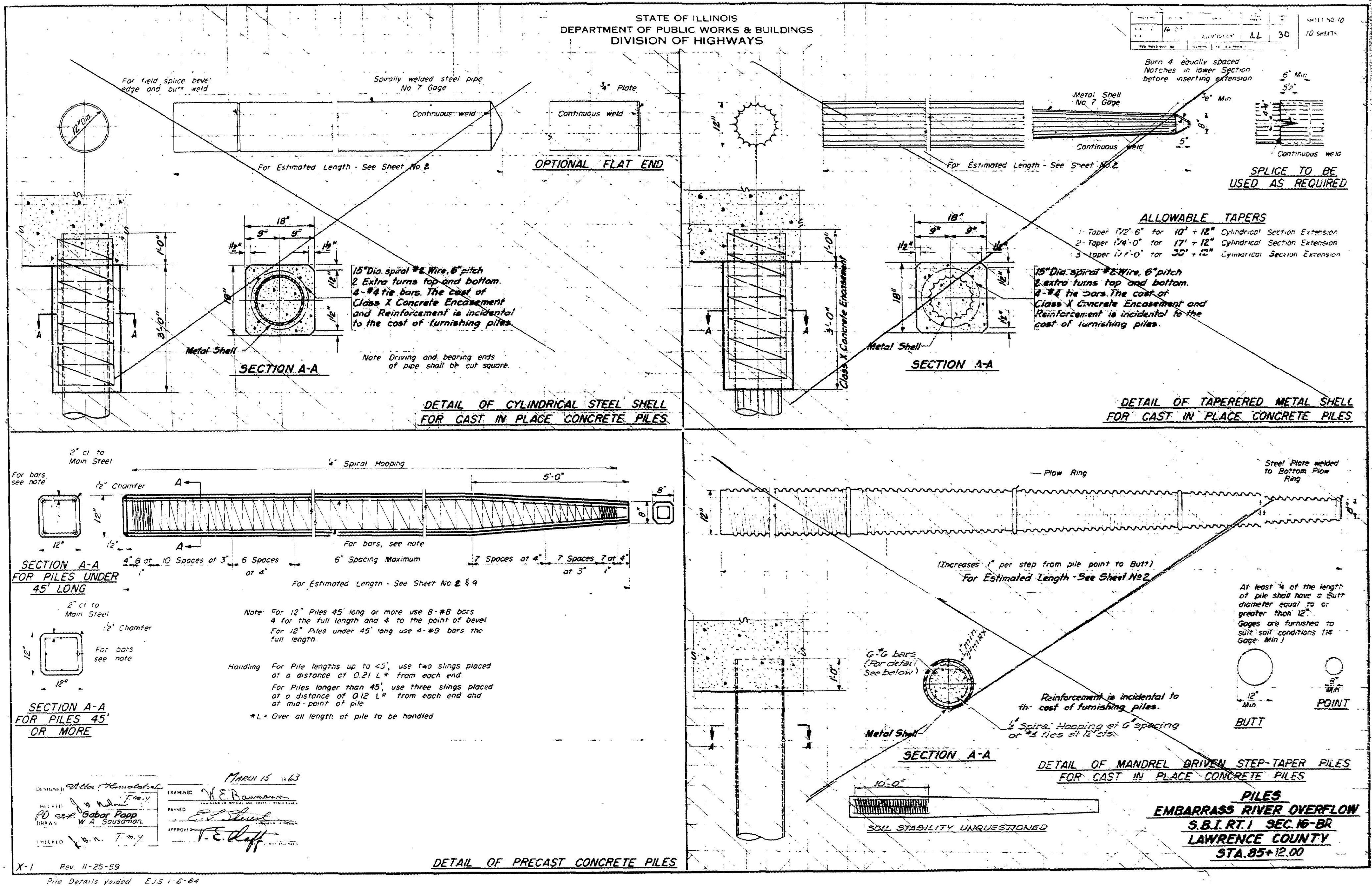

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS
For field splice bevel edge and butt weld
Spirally welded steel pipe No 7 Gage
Continuous weld
¼" Plate
OPTIONAL FLAT END
For Estimated Length - See Sheet No 2
SECTION A-A
15"Dia. spiral #8 Wire, 6" pitch
2 Extra turns top and bottom.
4-#4 tie bars. The cost of Class X Concrete Encasement and Reinforcement is incidental to the cost of furnishing piles.
Metal Shell
Note Driving and bearing ends of pipe shall be cut square.
DETAIL OF CYLINDRICAL STEEL SHELL FOR CAST IN PLACE CONCRETE PILES
Burn 4 equally spaced Notches in lower Section before inserting extension
Metal Shell No 7 Gage
SPLICE TO BE USED AS REQUIRED
ALLOWABLE TAPERS
1- Taper 17'2"-6" for 10' + 12" Cylindrical Section Extension
2- Taper 17'4"-0" for 17' + 12" Cylindrical Section Extension
3- Taper 17'7"-0" for 30' + 12" Cylindrical Section Extension
15"Dia. spiral #8 Wire, 6" pitch
2 extra turns top and bottom.
4-#4 tie bars. The cost of Class X Concrete Encasement and Reinforcement is incidental to the cost of furnishing piles.
Class X Concrete Encasement
DETAIL OF TAPERERED METAL SHELL FOR CAST IN PLACE CONCRETE PILES
2" cl to Main Steel
For bars see note
½" Chamfer
¼" Spiral Hooping
For bars, see note
6" Spacing Maximum
SECTION A-A FOR PILES UNDER 45' LONG
For Estimated Length - See Sheet No. 2 & 9
Note For 12" Piles 45' long or more use 8-#8 bars 4 for the full length and 4 to the point of bevel
For 12" Piles under 45' long use 4-#9 bars the full length.
Handling For Pile lengths up to 45', use two slings placed at a distance of 0.21 L* from each end.
For Piles longer than 45', use three slings placed at a distance of 0.12 L* from each end and at mid-point of pile
*L = Over all length of pile to be handled
SECTION A-A FOR PILES 45' OR MORE
DETAIL OF PRECAST CONCRETE PILES
Plow Ring
Steel Plate welded to Bottom Plow Ring
(Increases 1" per step from pile point to Butt)
For Estimated Length - See Sheet No 2
At least ¼ of the length of pile shall have a Butt diameter equal to or greater than 12".
Gages are furnished to suit soil conditions (14 Gage Min.)
BUTT
POINT
Reinforcement is incidental to the cost of furnishing piles.
¼" Spiral Hooping at 6" spacing or #4 ties at 12" cts.
SECTION A-A
DETAIL OF MANDREL DRIVEN STEP-TAPER PILES FOR CAST IN PLACE CONCRETE PILES
SOIL STABILITY UNQUESTIONED
PILES
EMBARRASS RIVER OVERFLOW
S.B.I. RT. 1 SEC. 16-BR
LAWRENCE COUNTY
STA. 85+12.00
March 15 1963
Gabor Papp
W A Sausaman
X-1 Rev 11-25-59
Pile Details Voided EJS 1-6-64

FOR INOFRMATION ONLY

USER NAME = jessica.hille	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING STRUCTURE DETAILS – S.N. 051–0004
	DRAWN -	REVISED -		
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -		
PLOT DATE = 8/8/2024	DATE -	REVISED -		SCALE: SHEET 10 OF 10 SHEETS STA. TO STA.

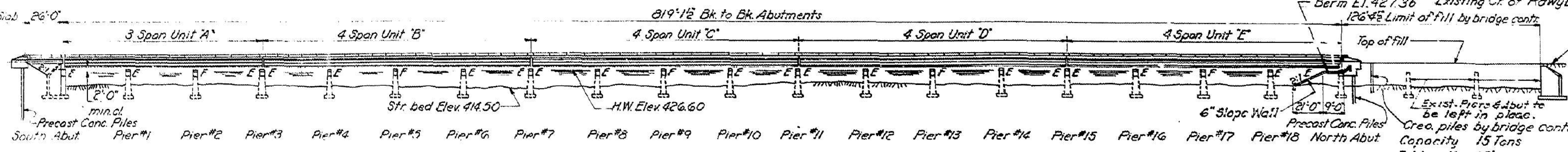
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	151
		CONTRACT NO. 74164		
		ILLINOIS FED. AID PROJECT		

B.M. Chiseled Square on top of S.W. wing wall bridge 15' Lt Sta. 55+00 Elev 424.39
Existing Structure: R.C. Deck Girder, 22 Spans at 40'-0" ct. 22' Rdwy Built 1923 on R.C. Piers & Closed Abuts. Superstructure and Substructure as required, shall be removed.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. 1	16 BR	LAWRENCE	44	9
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT.	

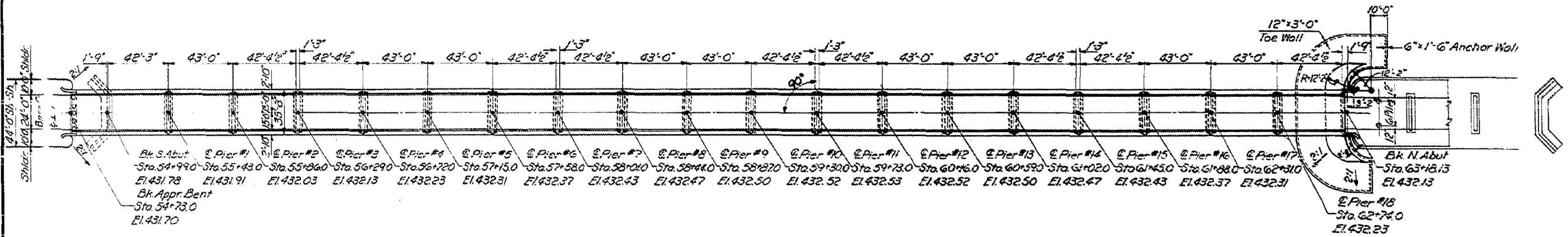
SHEET NO 1
12 SHEETS



ELEVATION

Embankment quantities included on Roadway plan sheets

Note: Creosoted piles are to be placed in accordance with Standard 1934-4 Method II Bridge Approach Slab Detail



PLAN

GENERAL NOTES

Class X concrete shall be used throughout.

Coarse aggregate to be used in parapet handrails and end posts must be absolutely free of chert, flint, limonite, lignite and soft sandstone.

The concrete floor slab shall be finished in accordance with Article 51.19 of the Standard Specifications.

Slope walls shall be reinforced with welded wire fabric 6"×6" mesh, weighing 58# per 100 sq. ft.

Layout of slope walls may be varied to suit ground conditions in the field as directed by the Engineer.

All reinforcement bars shall be lapped 20 diameters unless otherwise shown.

Rivets ¾" Open holes 13/16" unless otherwise noted.

Anchor bolts shall be set before riveting diaphragms over supports.

The exposed surfaces of the expansion guard shall be given two shop coats of red lead paint, the contact surfaces shall be given one coat of red lead paint. Anchor studs shall not be painted.

Expansion guards are included in the quantity of Structural Steel. Est. Wt. 4630 lbs.

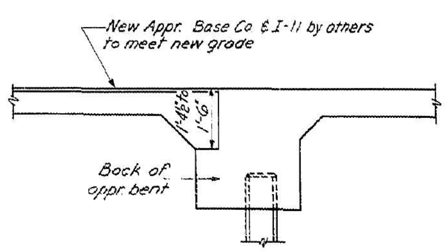
Except as otherwise provided all structural steel shall receive one shop coat of red lead paint and two field coats of aluminum paint. See Article 56.1 to 56.5 inclusive of the Standard Specifications.

All structural steel shall conform to the Specifications for Structural Steel A.S.T.M. Designation A36.

The contractor shall verify all dimensions in the field before fabrication of the structural steel and handrails.

The contractor shall drive one precast concrete test pile in a permanent location of the South approach slab bent as directed by the Engineer before ordering the remaining piles.

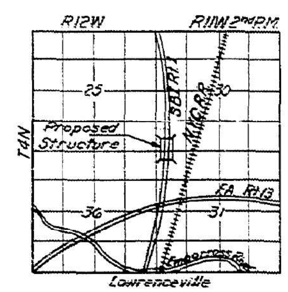
Concrete piles at the North abutment shall be driven in holes precored through the embankment in accordance with Article 60.9(c) of the Standard Specifications.



SECTION AT SOUTH APPROCH BENT

STATION 59+08.56
BUILT 196 BY
STATE OF ILLINOIS
SBI RT. 1 SEC. 16-BR
PROJ. F-233(14)
LOADING H20-S16

NAME PLATE LETTERING
See Std. 2113



LOCATION SKETCH

TOTAL BILL OF MATERIAL

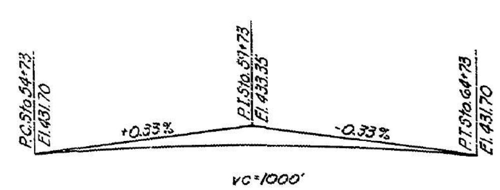
	Item	Unit	Super	Sub	Total
	Concrete Removal	Cu. Yds.		2220	2220
	Expansion Bolts ⅞"	Each		52	52
	Removal of Existing Superstructure	Each			1
*	Class A Excavation for Structures	Cu. Yds.		40	40
	Class X Concrete	Cu. Yds.	887.5	393.3	1281.1
	Structural Steel	Lbs.	591,180		591,180
	Aluminum Handrail	Lin. Ft.	1675		1675
	Reinforcement Bars	Lbs.	184,370	24,900	209,270
	Creosoted Piles-Up 20'	Lin. Ft.			90
	Precast Concrete Piles 12"	Lin. Ft.		260	260
	Test Piles (Precast Concrete)	Each		1	1
	Name Plates	Each	1		1
	Slope Wall (6")	Sq. Yds.		550	550
	Protective Coat	Sq. Yds.	3760		3760
**	BRIDGE SEAT SEALANT	LUMP SUM	0.7		0.7

* Including 20 cu. yds. for toe wall excavation.
** AT BOTH ABUTMENTS & PIERS 3, 7, 11, 15

WATERWAY INFORMATION

Drainage Area — 2260 Sq. Miles
Character — Rolling, wooded & cultivated

Present Opening — 9430 Sq. Ft.
Proposed Opening — 8060 Sq. Ft.



V.C. DIAGRAM

DESIGN STRESSES
fc = 1400 psi. Super. & Sub.
Vc = 75 psi. Footing
fs = 20,000 psi. Reinf.
fs = 20,000 psi. Struct. (A-36)
n = 10
LOADING H20-S16-44

DESIGNED	T. M. Ayonga
CHECKED	E. J. Stiska
DRAWN	W. E. Dickerson
CHECKED	E. J. Stiska

March 15 1963
EXAMINED W. E. Baumann, ENGINEER OF BRIDGES AND TRAFFIC STRUCTURES
PASSED [signature], ENGINEER OF DESIGN
APPROVED V. E. [signature], CHIEF HIGHWAY ENGINEER

PROJ. F-233( )
GENERAL PLAN & ELEVATION
EMBARRASS RIVER OVERFLOW
S.B.I. RT. 1 SEC. 16-BR
LAWRENCE COUNTY
STA. 59+08.56

Job Title Station changed on all sheets. Borrow Excav. 7200 Cu. Yd. removed from Bill Of Material E.J.S. 1-6-64

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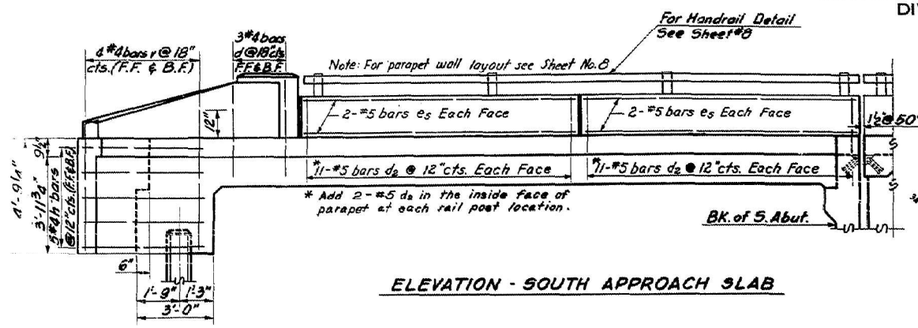
USER NAME = jessica.hille	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING STRUCTURE DETAILS – S.N. 051–0005
	DRAWN -	REVISED -		
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -		
PLOT DATE = 8/8/2024	DATE -	REVISED -		SCALE: SHEET 1 OF 12 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	152
		CONTRACT NO. 74164		
		ILLINOIS FED. AID PROJECT		

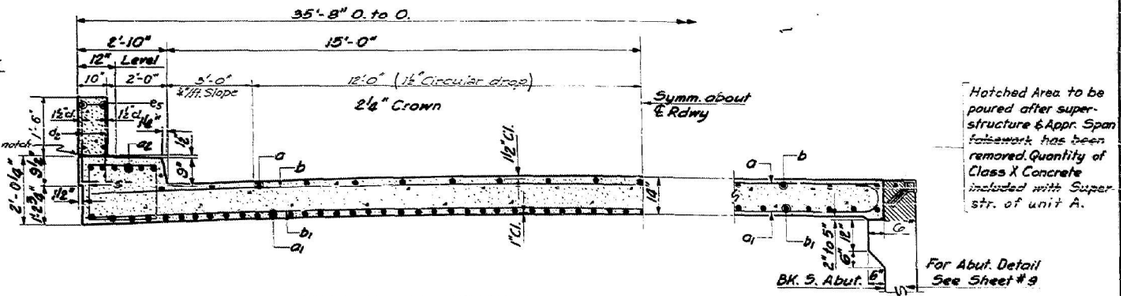
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1 / I.R.	74-3R	Lawrence	44	10
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 2
12 SHEETS



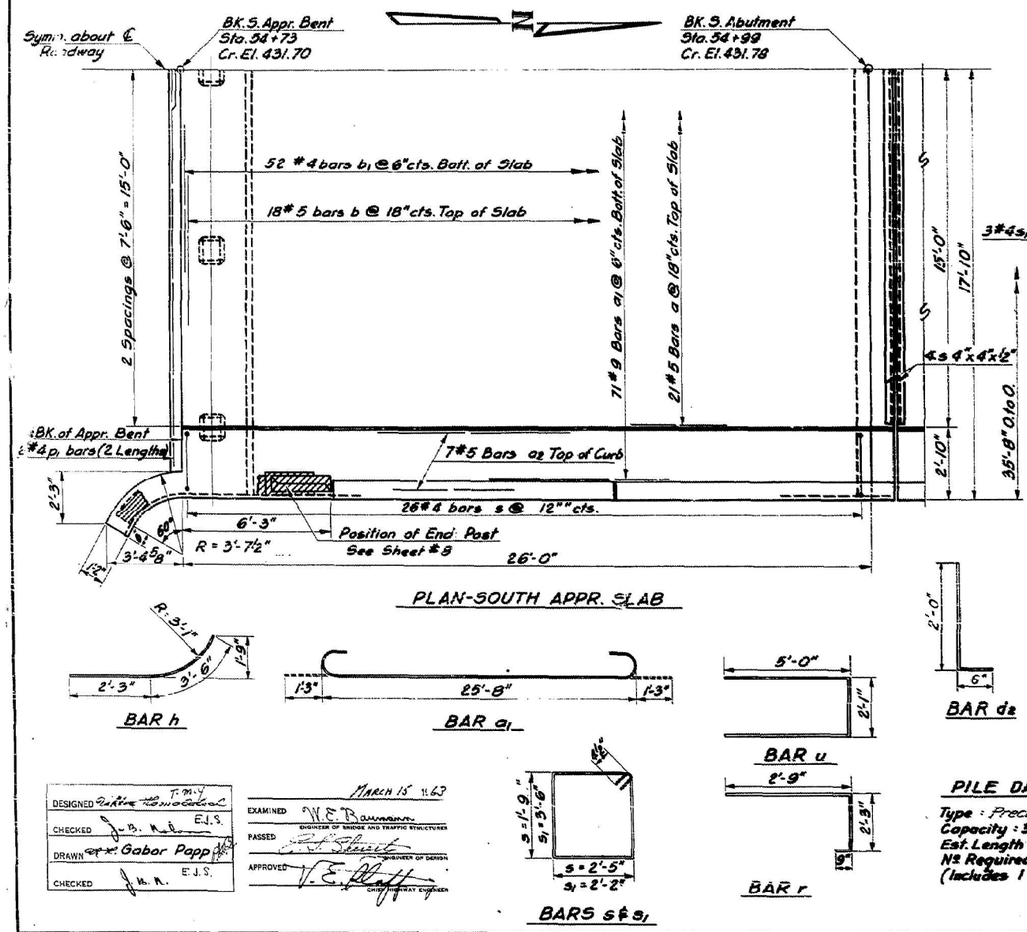
ELEVATION - SOUTH APPROACH SLAB



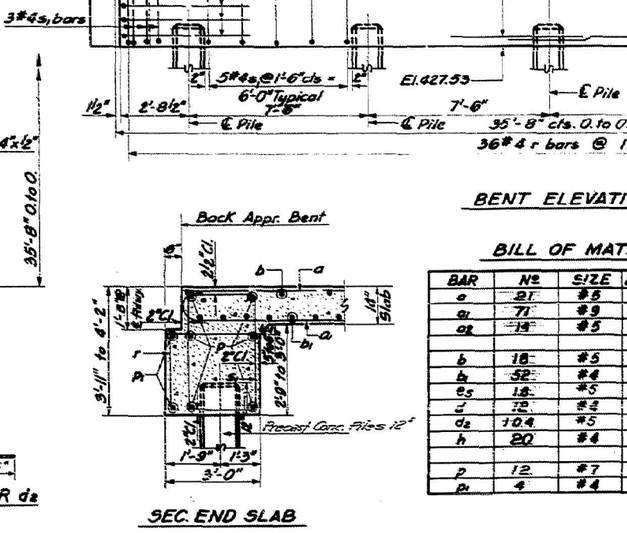
Hatched Area to be poured after superstructure & Appr. Span falsework has been removed. Quantity of Class X Concrete included with Super str. of unit A.

HALF CROSS SECTION

NORTH END OF S. APPR. SLAB



PLAN-SOUTH APPR. SLAB



BENT ELEVATION

SEC. END SLAB

BILL OF MATERIAL OF S. APPR. SPAN AND BENT

BAR	No.	SIZE	LENGTH	SHAPE	BAR	No.	SIZE	LENGTH	SHAPE
a	21	#5	35'-6"		r	36	#4	5'-9"	
a1	71	#9	28'-2"						
a2	14	#5	25'-9"		s	32	#4	9'-1"	
					s1	26	#4	12'-1"	
b	18	#5	35'-0"						
b1	52	#4	35'-0"		u	8	#6	12'-1"	
e5	18	#5	10'-0"						
d	12	#4	3'-0"		v	16	#6	5'-0"	
d2	104	#5	2'-6"		Class X Concrete			Cu. Yds.	59.5
h	20	#4	5'-9"		Reinforcement Bars			Lbs.	11,500
					Precast Conc. Piles 12"			Lin. Ft.	200
p	12	#7	18'-0"		Test Pile Precast Conc.			Each	1
p1	4	#4	18'-6"						

BAR h

BAR a1

BAR u

BAR d2

BAR r

BARS s & s1

DESIGNED	T. M. Y.	
CHECKED	J. B. K.	E.J.S.
DRAWN	Gabor Papp	
CHECKED	J. B. K.	E.J.S.

MARCH 15 1963

EXAMINED	W. E. Baumann, ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED	ENGINEER OF DESIGN
APPROVED	CHIEF HIGHWAY ENGINEER

PILE DATA

Type : Precast Conc. 12"
Capacity : 35 Tons
Est. Length : 50 Ft.
No. Required : 5
(Includes 1 Test Pile)

APPROACH SLAB DETAIL
EMBARRASS RIVER OVERFLOW
S.B.I. RT. 1 SEC. 16-BR
LAWRENCE COUNTY
STA. 59+08.56

1" Open Joint changed to 1½" E.J.S. 1-6-64

FOR INOFRMATION ONLY

USER NAME = jessica.hille	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 8/8/2024	DATE -	REVISED -	

EXISTING STRUCTURE DETAILS – S.N. 051-0005

SCALE: | SHEET 2 OF 12 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	153
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

MODEL: Default
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STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

3-Span Unit = 128'-11¼" to ℄ Pier 3

128'-9½" c to c Slab

Note: For parapet wall layout see sheet no 8

Note: For Expansion Guard Details See Sheet 5

ELEVATION

SPAN 1 — 42'-3" c to c Bearings — ℄ Brg 3 Ab't.
SPAN 2 — 43'-0" c to c Bearings — ℄ Pier 1 — ℄ Pier 2
SPAN 3 — 42'-4½" c to c Brgs — ℄ Pier 3

#5 @ 50°F

7½" — 42" — 8½" — 1'-6" — 1'-6½" — 9" — 15" — 8½"

2-#5 c6 Ea Fc Typical

#11-#5 ds @ 12" cts. E.F. Typical

"Add 2-#5d2 in the inside face of parapet at each rail post location"

For detail of Pier 3 Brg. See Sheet 4

21-Floor Drains @ ±6'0" cts. = 120'0" Space to miss diaphragms

± 4'-5"

Slope "a" in 13"

2'-0" — 2'-0" — 12" — 2'-0"

Min. Lap:
½ bars 1'3"
¼ bars 1'0"

3 Span Unit Symm. about this line except as noted.

℄ Pier #1 Sta 55+43.0 Cr. Elev. 431.91

℄ Pier #2 Sta 55+94.0 Cr. Elev. 432.05

℄ Pier #3 Sta. 56+28.0 Cr. Elev. 432.13

℄ Roadway

Br. S. Abut. Sta 54+99.0 Cr. Elev 431.78

32 ds @ 12" cts. (Alt.) (For Exp Guard See Sheet 5)

6" corbel

120-#5 d2 bars at 13" cts. Alternate with:
119 - #5 d2 bars at 13" cts. Top
119 - #5 d2 bars at 13" cts. Bottom

14-#6 bars by dia. 6" cts. Top of Slab Spaced between 6 bars spaced as shown on Cross Section Bottom of Slab

25-#5 bars ds at 6" cts. Top of Slab Lengths as shown on Cross Section

9'-6" — 6'-0" — 6'-0" — 9'-6"

65-#4 s2 bars at 2'-0" cts.

16" Open Jt @ 50°

End of Slab

42'-10½"

(2-Lengths) Each Span Each Side — 6-#4 s2 bars Top at Curb

Construction Joints in Curbs to Top of Slab (Aluminum Sheets)

43'-0" — 43'-0"

HALF PLAN

35'-8" a to a

2'-10" — 15'-0" — 12'-0" — 12'-0" — 15'-0" — 2'-10"

Longitudinal Bonded Construction Joint - Do Not Edge

1½" Circular drop

¾" Ft. Slope

Symm. about ℄ Roadway

24" Crown

Crown Elev.

7" Slab

All Beams 27 WF 94

11 - 6-#5 bars d2 at 10" cts. Typical Spacing

11"

5 Spaces at 6'-0" = 30'-0"

OVER PIERS — CROSS SECTION — TYPICAL

CURB DETAIL

10" — 2'-0" — ¾" Chamfer Full Length — 12" Level — 8" — 1'-6" — 9" — 15" — 8½" — ¾" Chamfer 45° Pad — Bottom Edge of "a" thick Aluminum Sheet (A.S.T.M. B 209 alloy 3003 - H14) — 3" Slab — 1'-10" — 1'-0" — 2'-10" — 27 WF 94 — 4" ø 12" Floor Drain ⅛" Alum. sheet welded ASTM B209 alloy 3003 - H14 or 6061 - T6.

¾" Drip Notch Full Length

Cost of aluminum sheets and drains shall be incidental.

2'-6" — 15" — 1'-2" — 7" — 8" — 5'-0"

BAR s2

SECTION A-A

Hatched area to be poured after superstructure & rail slab falsework has been removed. Quantity of Cl. A Conc included with Superstr. (unit A)

1½ d2 @ 50°

Approx. Slope

3" Slab

Vert. Bar #6 @ 3'-4"

27 WF 94

Measured along ℄ Beam

Back of Abut

℄ Brg

℄ Roov.

1'-6" — 2'-3" — 5'-0" — 21'-3" — 5'-0" — 3'-3½" — 45° — 45° — 45° — 45°

34'-4" c to c

BAR d2

METHOD OF DETERMINING FILLET HEIGHT "x"

After all Structural Steel has been erected elevations of the top flanges of the beams shall be taken at intervals shown on SHEET No.7. From these elevations subtract the increment of deflections for these points, determined from the D.L. Deflection Diagram. The elevations so attained subtracted from the theoretical grade elevations, minus floor thickness, equals the fillet heights above top of beam.

2'-0" — 5"

BAR d2

DEAD LOAD DEFLECTION DIAGRAM
Due to wt. of Concrete Slab

℄ Brg. S. Abut. — ℄ Brg. Pier 1 — ℄ Brg. Pier 2 — End Beam — Int. Beam

4 Spaces at 10'-7" = 42'-4½" — 4 Spaces at 10'-9" = 43'-0"

BILL OF MATERIAL

Bar	No	Size	Length	Shape
s2	120	#5	36'-0"	—
s2	119	#5	34'-0"	—
s2	119	#5	33'-0"	—
ds	130	#5	33'-5"	—
ds	64	#5	16'-5"	—
ds	180	#5	46'-3"	—
c6	72	#4	22'-0"	—
d2	600	#5	2'-6"	⌐
s2	130	#4	6'-5"	⌐
c6	76	#5	10'-6"	—
Class A Concrete			cu. yd.	139.5
Reinforcement Bars			lbs.	27,020
③ Structural Steel			lbs.	93,380

③ Weight of Stiffeners, Splices, Bolt Nuts and Drain Holes not included in Structural Steel Est. Weight 5,950#

TYP. DETAIL AT DRAIN

12" — c6 ℄ c6 — bc — Cut 1-d2 Bar to clear drain

DESIGNED	T.M.Y.	EXAMINED	MARCH 15 1963
CHECKED	E.J.S.	PASSED	
DRAWN	A.Lawler, W.A. Sauerman, Asst.	APPROVED	
CHECKED	E.J.S.		

I-4 Drawn 4-3-58 REV 9-10-58 9-22-58 9-26-58 10-8-58 8-17-58
1" Open Joint changed to 1½" & Dimension revisions E.J.S. 1-6-64

UNIT A
SUPER STRUCTURE — 3 SPAN UNIT
EMBARRASS RIVER OVERFLOW
S.B.I. RT. 1 SEC. 16-BR
LAWRENCE COUNTY
STA. 59+08.56

FOR INOFRMATION ONLY

USER NAME = Jessica.hille	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 8/8/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS – S.N. 051–0005

SCALE: | SHEET 3 OF 12 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	154
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	

MODEL: Default
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STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

171'-10½" c to c. Slab (Units B,C,&D)
171'-11⅝" c to c. Slab (Unit E)

Note: For Parapet Wall layout see Sheet No. 8.

12-#6 d_6 Each Face Typical

#6 - #5 d_5 @ 12" cts. Each Face Typical

* Add 2-#5 d_6 in the inside face of parapet at each rail post location.

42'-4½" c to c. Bearings — 2 Span @ 43'-0" c. to c. Bearings — 42'-4½" c. to c. Bearings

℄ Brg Pier 3,7,11 & 15
℄ Pier 3,7,11 & 15

SPAN 4, 8, 12 & 16

℄ Pier 4, 8, 12 & 16

ELEVATION SPAN 5, 6, 9, 10, 13, 14, 17 & 18

4 Span Units

SPAN 7, 11, 15 & 19

℄ Brg Pier 7, 11, 15

4'-11½" (Spans 7, 11, & 15)
5'-0" (Span 19)

4'-11½"

28-Floor Drains @ ±6'-0" cts. = 162'-0"
Space to miss diaphragms.

Slope "a" in 12"

2'-0" 2'-0" 12"

℄ Pier # 3
Sta. 56+28.0
El. 432.15

℄ Pier # 7
Sta. 38+10.0
El. 432.43

℄ Pier # 11
Sta. 39+73.0
El. 432.53

℄ Pier # 15
Sta. 61+45.0
El. 432.48

160 - #5 a_5 bars at 13" cts. Alternate with a_6 bars

159 - #5 a_5 bars at 13" cts. Top

159 - #5 a_5 bars at 13" cts. Bottom

Min Lap: b_5 bars = 1'-5"
b_6 bars = 1'-10"

Top of Slab

℄ Pier # 4
Sta. 54+72.0
El. 432.23

℄ Pier # 8
Sta. 38+44.0
El. 432.47

℄ Pier # 12
Sta. 60+14.0
El. 432.52

℄ Pier # 16
Sta. 61+88
El. 432.37

℄ Pier # 5
Sta. 57+15.0
El. 432.31

℄ Pier # 9
Sta. 38+87.0
El. 432.50

℄ Pier # 13
Sta. 60+59.0
El. 432.50

℄ Pier # 17
Sta. 62+31.0
El. 432.51

Bottom of Slab (Lengths)

℄ Pier # 6
Sta. 57+58.0
El. 432.37

℄ Pier # 10
Sta. 39+50.0
El. 432.52

℄ Roadway

℄ Pier # 14
Sta. 61+02.0
El. 432.47

℄ Pier # 18
Sta. 62+74
El. 432.25

℄ Pier # 7
Sta. 38+01.0
El. 432.43

℄ Pier # 11
Sta. 39+73.0
El. 432.53

℄ Pier # 15
Sta. 61+45
El. 432.43

℄ Exp. at N Abut.
El. 432.15

Bk. N. Abut.
Sta. 63+18.13
El. = 432.13

1'-0½"

84 - #4 s_4 bars at 2'-0" cts.

1½" O.J. @ 50°

¾" ℄ Pier — End of Slab

42'-11½" — 42'-11½" — 12" — a_8 a_5 — D_7 — Cut 1-a_6 bar to clear drain

TYP. DETAIL AT DRAIN

6-#6 by 6'-0" Top of Curb (2 Lengths) Each Span - Each Side

Construction Joints (Aluminum Sheet)

2 Spans @ 43'-0" = 86'-0"

42'-11½" — End of Slab — 43'-0" — Unit B, C, & D — Unit E

PLAN 4 Span Unit

35'-8" c. to c.

2'-10" — 15'-0" — 12'-0" — 12'-0" — 15'-0" — 2'-10"

Longitudinal Bonded Construction Joint - Do Not Edge

24" Crown — Symm. about ℄ Roadway — 15" Circular slope — 4" ℄ Slope

All Beams 27 W 94

6-@ 5 bars b_6 at 10" cts. Typical Spacing

5 Spaces at 6'-0" = 30'-0"

OVER PIERS — CROSS SECTION — TYPICAL

DESIGNED	T.M.Y.	EXAMINED	March 15 1963
CHECKED	E.J.S.	PASSED	
DRAWN	W. A. Sausaman R.A.B.	APPROVED	
CHECKED	E.J.S.		

I-4 Drawn 4-3-58 REV. 9-10-58 9-22-58 9-26-58 10-6-58 9-17-58
1" Open Joint Changed to 1½" & dimension revisions E.J.S. 1-6-54

10" — 2'-0" — ¾" Chamfer Full Length — ¾" Chamfer — 45° Rad. — Level — 1'-6" — 9½" — 1'-6½" — 9" — 6" — 4" — Slope

Bottom Edge of 6" thick Aluminum Sheet A.S.T.M. B 209 Alloy 3003-H14

4"x12" Floor drain 16" Aluminum Sheet Welded. ASTM-B20 alloy 3003-H14 or Subst. To.

1'-10" — 1'-0" — 2'-10" — 27 W 94 or Subst. To.

Cost of aluminum sheets and drains to be incidental.

½"x6" Drip Notch Full Length

CURB DETAIL

** See Elev. on sh. #3 for end distance at N. Abut.

2'-6" — 1'-2" — 1'-1" — 8" — 2'-0"

BAR s_4

℄ Pier — 4'-2" — 5'-0" — 5'-0" — 5'-0" — 5'-0" — 5'-0" — 4'-2" — 1'-6" — 2'-3" — 3'-0" — 3'-3" — 5'-0" — 5'-0" — 5'-0" — 1'-6" — 45° — 45° — 45° — 45° — 39'-4" c. to c.

BAR a_5

1½"O.J. @ 50°

Varies Bar #4 @ 5½" to 8½"

7" Slab

27 W 94 — 27 W 94

5½" — 2'-2" — Beams along ℄ Beam

℄ Brg — ℄ Pier 11, 7, 3

SECTION H

(for Sec. at N. Abut. in Sec. A-A of sh #3)

METHOD OF DETERMINING FILLET HEIGHT "t"

After all Structural Steel has been erected elevations of the top flanges of the beams shall be taken at intervals shown on Sheet No. 7. From these elevations subtract the increment of deflections for these points, determined from the D.L. Deflection Diagram. The elevations so obtained subtracted from the theoretical grade elevations, minus floor thickness, equals the fillet heights above top of beam.

2'-0" — 6"

BAR d_2

℄ Brg. Pier 3,7,11 & 15 & N. Abt. — ℄ Brg. Pier 4,8,12, 14, 16, & 18

Ext. Beam — Int. Beam

4 Spaces at 11'-9" = 42'-4½" — 4 Spaces at 10'-9" = 43'-0"

DEAD LOAD DEFLECTION DIAGRAM

Due to wt. of Concrete Slab

FOR 4 SPAN UNITS

BILL OF MATERIAL

Bar	Type	Size	Length	Shape
a_5	RB	#5	36'-0"	—
a_6	RB	#5	34'-0"	—
a_8	RB	#5	38'-0"	—
b_5	RB	#6	15'-6"	—
b_6	RB	#4	22'-0"	—
d_2	RB	#3	35'-3"	—
d_5	RB	#5	2'-6"	—
d_6	RB	#5	10'-6"	—
s_4	RB	#4	6'-5"	—
e_5	RB	#5	10'-6"	—
Concrete				695 C.Y.
Reinforcing Steel				45,540
Structural Steel				207,300

UNITS B, C, D & E
SUPERSTRUCTURE - 4 SPAN UNITS
EMBARRASS RIVER OVERFLOW
S.B.I. RT. 1 SEC. 16-BR
LAWRENCE COUNTY
STA. SN 0856

FOR INOFRMATION ONLY

USER NAME = jessica.hille	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 8/8/2024	DATE -	REVISED -	

EXISTING STRUCTURE DETAILS – S.N. 051-0005

SCALE: | SHEET 4 OF 12 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	155
		CONTRACT NO. 74164		
	ILLINOIS FED. AID PROJECT			

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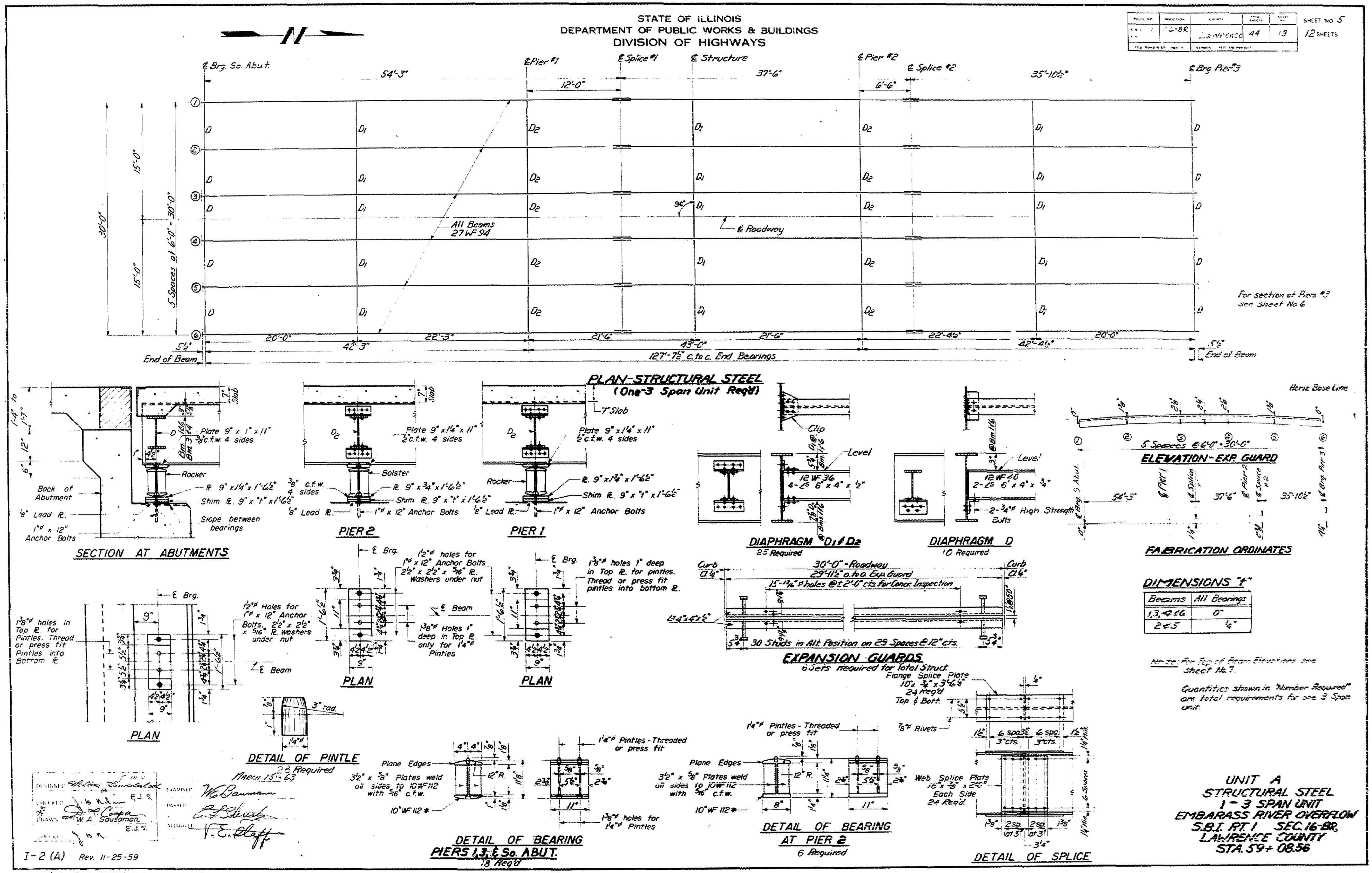
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS
SHEET No. 5
12 SHEETS
Lawrence
N
℄ Brg. So. Abut.
℄ Pier #1
℄ Splice #1
℄ Structure
℄ Pier #2
℄ Splice #2
℄ Brg. Pier #3
54'-3"
37'-6"
35'-10½"
12'-0"
6'-6"
All Beams 27 WF 94
℄ Roadway
5 Spaces at 6'-0" = 30'-0"
30'-0"
15'-0"
For section at Piers #3 see sheet No. 6
20'-0"
42'-3"
22'-3"
21'-6"
43'-0"
22'-4½"
42'-4½"
End of Beam
127'-7½" c. to c. End Bearings
PLAN - STRUCTURAL STEEL
(One-3 Span Unit Req'd)
SECTION AT ABUTMENTS
Back of Abutment
Rocker
Plate 9" x 1" x 11"
⅜" c.f.w. 4 sides
℞. 9" x 1¼" x 1'-6½"
Shim ℞. 9" x "t" x 1'-6½"
⅛" Lead ℞.
1"ϕ x 12" Anchor Bolts
Slope between bearings
PIER 2
Bolster
PIER 1
7" Slab
DIAPHRAGM D₁ & D₂
25 Required
Clip
Level
12 WF 36
4-∠s 6" x 4" x ½"
DIAPHRAGM D
10 Required
12 WF 40
2-∠s 6" x 4" x ⅜"
2-¾"ϕ High Strength Bolts
Horiz. Base Line
5 Spaces @ 6'-0" = 30'-0"
ELEVATION - EXP. GUARD
FABRICATION ORDINATES
DIMENSIONS "t"
Beams | All Bearings
1, 3, 4 & 6 | 0"
2 & 5 | ½"
PLAN
DETAIL OF PINTLE
28 Required
3" rad.
Curb
30'-0" - Roadway
29'-11½" c. to c. Exp. Guard
30 Studs in Alt. Position on 29 Spaces @ 12" cts.
EXPANSION GUARDS
6 Sets Required for Total Struct.
Note: For Top of Beam Elevations see sheet No. 7.
Quantities shown in "Number Required" are total requirements for one 3 Span unit.
DETAIL OF BEARING
PIERS 1, 3 & So. ABUT.
18 Req'd
DETAIL OF BEARING
AT PIER 2
6 Required
Plane Edges
3½" x ⅝" Plates weld all sides to 10WF112 with 5/16" c.f.w.
10" WF 112 #
1¼"ϕ Pintles - Threaded or press fit
1⅜"ϕ holes for 1¼"ϕ Pintles
Flange Splice Plate 10" x ¾" x 3'-6¾" 24 Req'd Top & Bott.
⅞"ϕ Rivets
Web Splice Plate 16" x ⅜" x 2'-0" Each Side 24 Req'd
DETAIL OF SPLICE
UNIT A
STRUCTURAL STEEL
1 - 3 SPAN UNIT
EMBARASS RIVER OVERFLOW
S.B.I. RT. 1 SEC. 16-BR.
LAWRENCE COUNTY
STA. 59+08.56
DESIGNED
CHECKED
DRAWN W. A. Sausaman
E.J.S.
March 15 - 63
I-2 (A) Rev. 11-25-59

Open Joint & Stud Detail revised. E.J.S. 1-6-64

FOR INOFRMATION ONLY

USER NAME = jessica.nille	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING STRUCTURE DETAILS – S.N. 051–0005	F.A.P. RTE. 332	SECTION (16BR-1,BR-2)B-1	COUNTY LAWRENCE	TOTAL SHEETS 198 / SHEET NO. 156
	DRAWN -	REVISED -					CONTRACT NO. 74164	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -		SCALE: SHEET 5 OF 12 SHEETS STA. TO STA.			ILLINOIS FED. AID PROJECT	
PLOT DATE = 8/8/2024	DATE -	REVISED -						

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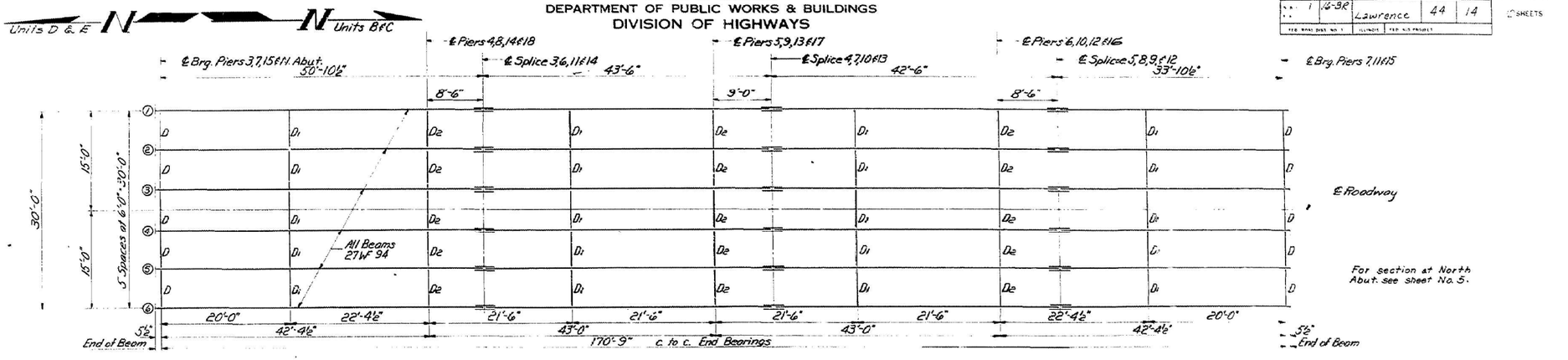
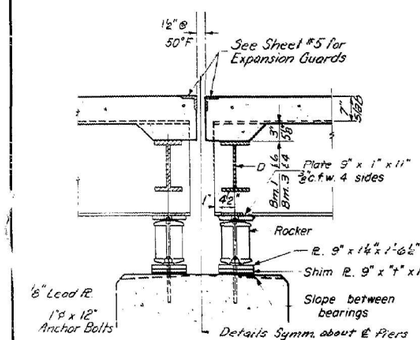
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 332	16-BR	Lawrence	44	14
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

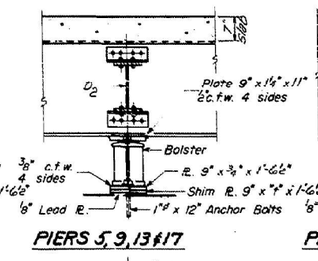
SHEET NO 6
12 SHEETS



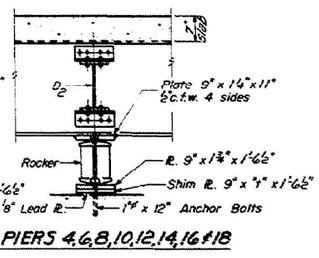
PLAN - STRUCTURAL STEEL
(Four-4 Span Units Req'd)



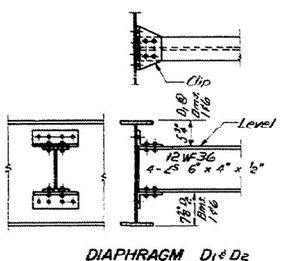
SECTION AT PIERS 3,7,11, & 15



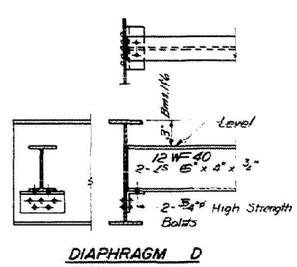
PIERS 5, 9, 13 & 17



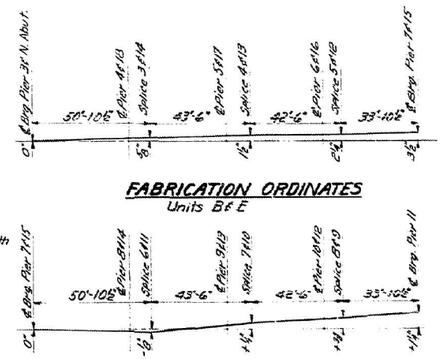
PIERS 4,6,8,10,12,14,16 & 18

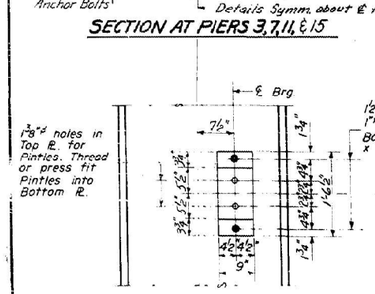


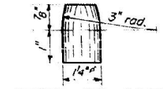
DIAPHRAGM D1 & D2
140 Required



DIAPHRAGM D
40 Required



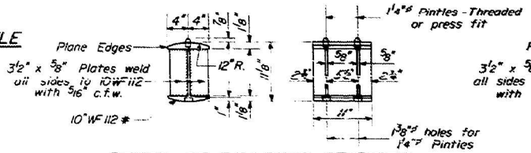




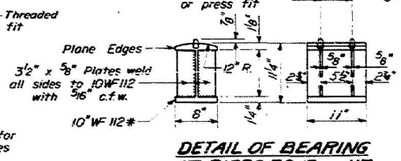
DETAIL OF PINTLE
432 Required

DIMENSIONS "f"

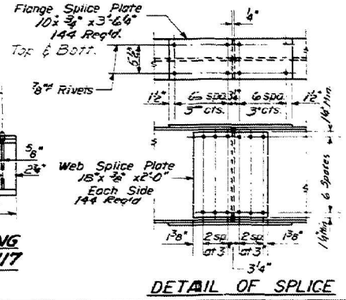
Beams	All Bearings
1,3,4&6	0"
2&5	4"



DETAIL OF BEARING AT PIERS 3,4,6,7,8,10,11,12,14,15,16,18 & N. ABUT.
96 Required



DETAIL OF BEARING AT PIERS 5,9,13 and 17
24 Required



DETAIL OF SPLICE

Notes: Quantities shown in "Number Required" are total requirements for four 4 span units.
For Top of Beam Elevations see Sheet 7.

UNITS B,C,D&E
STRUCTURAL STEEL
4 SPAN UNITS
EMBARRASS RIVER OVERFLOW
S.B.I. RT. 1 SEC. 16-BR
LAWRENCE COUNTY
STA. 59+08.56

I-2 (A) Rev. 11-25-59

Open Joint Revised E.J.S. 1-6-64

FOR INOFRMATION ONLY

USER NAME = jessica.hille	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 8/8/2024	DATE -	REVISED -	

EXISTING STRUCTURE DETAILS – S.N. 051-0005

SCALE: | SHEET 6 OF 12 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	157
		CONTRACT NO. 74164		
	ILLINOIS FED. AID PROJECT			

MODEL: Default
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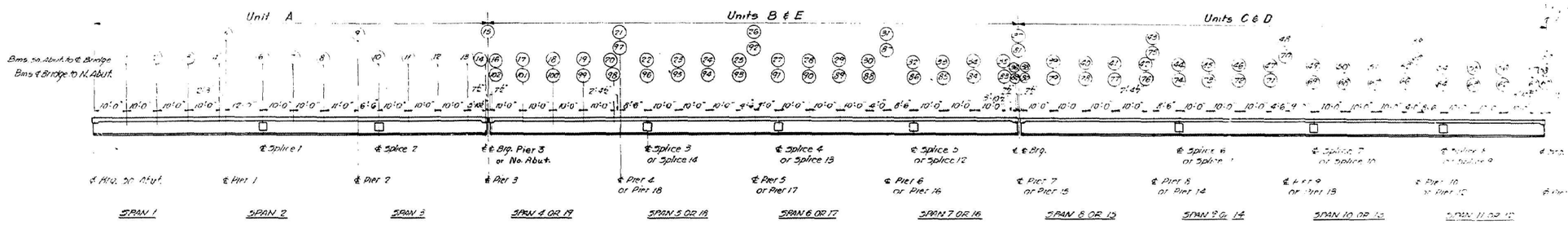
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

1	16-BR	Lawrence	44	15	Sheet No. 7 12 Sheets



TOP OF SLAB ELEVATIONS

Beams \ Points	℄ Brg. So. Abut.	①	②	③	④	℄ Pier 1 ⑤	℄ Splice 1	⑦	⑧	℄ Pier 2 ⑨	℄ Splice 2	⑪	⑫	⑬	℄ Brg. on Pier 3
Beam 1	431.602	431.632	431.663	431.692	431.721	431.727	431.761	431.788	431.815	431.843	431.860	431.885	431.909	431.932	431.946
Beam 2	431.719	431.750	431.780	431.809	431.838	431.845	431.878	431.905	431.932	431.960	431.977	432.002	432.026	432.049	432.063
Beam 3	431.781	431.812	431.842	431.872	431.901	431.907	431.941	431.968	431.994	432.023	432.039	432.064	432.088	432.112	432.125
℄ Roadway	431.789	431.820	431.850	431.880	431.908	431.915	431.948	431.976	432.002	432.031	432.047	432.072	432.096	432.120	432.133
Beam 4	431.781	431.812	431.842	431.872	431.901	431.907	431.941	431.968	431.994	432.023	432.039	432.064	432.088	432.112	432.125
Beam 5	431.719	431.750	431.780	431.809	431.838	431.845	431.878	431.905	431.932	431.960	431.977	432.002	432.026	432.049	432.063
Beam 6	431.602	431.632	431.663	431.692	431.721	431.727	431.761	431.788	431.815	431.843	431.860	431.885	431.909	431.932	431.946

Beams \ Points	℄ Pier 3 ⑮	℄ Brg. on Pier 3 or N. Abut.	⑰ or (101)	⑱ or (100)	⑲ or (99)	⑳ or (98)	℄ Pier 4 or Pier 18	℄ Splice 3 or Splice 14	㉓ or (95)	㉔ or (94)	㉕ or (93)	℄ Pier 5 or Pier 17	℄ Splice 4 or Splice 13	㉘ or (90)
Beam 1	431.947	431.948	431.971	431.992	432.013	432.034	432.039	432.055	432.074	432.092	432.110	432.118	432.133	432.149
Beam 2	432.064	432.066	432.088	432.110	432.131	432.151	432.156	432.172	432.191	432.210	432.227	432.235	432.250	432.266
Beam 3	432.127	432.128	432.150	432.172	432.193	432.213	432.218	432.235	432.254	432.272	432.290	432.298	432.313	432.329
℄ Roadway	432.134	432.136	432.156	432.180	432.201	432.221	432.226	432.243	432.262	432.280	432.298	432.305	432.320	432.337
Beam 4	432.127	432.128	432.150	432.172	432.193	432.213	432.218	432.235	432.254	432.272	432.290	432.298	432.313	432.329
Beam 5	432.064	432.066	432.088	432.110	432.131	432.151	432.156	432.172	432.191	432.210	432.227	432.235	432.250	432.266
Beam 6	431.947	431.948	431.971	431.992	432.013	432.034	432.039	432.055	432.074	432.092	432.110	432.118	432.133	432.149

Beams \ Points	㉙ or (89)	㉚ or (88)	℄ Pier 6 or Pier 16	℄ Splice 5 or Spl. 12	㉝ or (85)	㉞ or (84)	㉟ or (83)	℄ [illegible]	℄ [illegible]	℄ [illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Beam 1	432.164	432.179	432.185	432.197	432.210	432.223	432.235	432.239	432.240	432.241	432.252	432.262	432.272	432.281
Beam 2	432.282	432.296	432.302	432.314	432.327	432.340	432.352	432.356	432.357	432.358	432.369	432.379	432.389	432.398
Beam 3	432.344	432.359	432.365	432.376	432.390	432.402	432.414	432.419	432.420	432.420	432.431	432.442	432.451	432.460
℄ Roadway	432.352	432.367	432.372	432.384	432.398	432.410	432.422	432.427	432.427	432.428	432.439	432.449	432.459	432.468
Beam 4	432.344	432.359	432.365	432.376	432.390	432.402	432.414	432.419	432.420	432.420	432.431	432.442	432.451	432.460
Beam 5	432.282	432.296	432.302	432.314	432.327	432.340	432.352	432.356	432.357	432.358	432.369	432.379	432.389	432.398
Beam 6	432.164	432.179	432.185	432.197	432.210	432.223	432.235	432.239	432.240	432.241	432.252	432.262	432.272	432.281

Beams \ Points	℄ Pier 8 or Pier 14	℄ Splice 6 or Spl. 11	㊺ or (73)	㊻ or (72)	㊼ or (71)	℄ Pier 9 or Pier 13	℄ Splice 7 or Spl. 10	㊿ or (69)	(51) or (67)	(52) or (66)	℄ Pier 10 or Pier 12	℄ Splice 8 or Spl. 9	(55) or (63)	(56) or (62)	(57) or (61)	℄ Brg. Pier 11	℄ Pier 11
Beam 1	432.283	432.290	432.297	432.304	432.310	432.313	432.318	432.323	432.327	432.330	432.331	432.334	432.336	432.337	432.337	432.337	432.338
Beam 2	432.400	432.407	432.414	432.421	432.428	432.430	432.435	432.440	432.444	432.447	432.449	432.451	432.453	432.454	432.455	432.455	432.455
Beam 3	432.462	432.469	432.477	432.484	432.490	432.493	432.498	432.502	432.506	432.510	432.511	432.513	432.515	432.516	432.517	432.517	432.517
℄ Roadway	432.470	432.477	432.485	432.492	432.498	432.501	432.505	432.510	432.514	432.518	432.519	432.521	432.523	432.524	432.525	432.525	432.525
Beam 4	432.462	432.469	432.477	432.484	432.490	432.493	432.498	432.502	432.506	432.510	432.511	432.513	432.515	432.516	432.517	432.517	432.517
Beam 5	432.400	432.407	432.414	432.421	432.428	432.430	432.435	432.440	432.444	432.447	432.449	432.451	432.453	432.454	432.455	432.455	432.455
Beam 6	432.283	432.290	432.297	432.304	432.310	432.313	432.318	432.323	432.327	432.330	432.331	432.334	432.336	432.337	432.337	432.337	432.338

Note:
Dead load deflections are not included in these elevations
For 5 Span unit deflection see sheet 5
For 4 Span unit deflection see sheet 4

TOP OF BEAM ELEVATIONS

Beams \ Points	So. Abut.	Pier 1	Splice 1	Pier 2	Splice 2	Pier 3 or N. Abut.	Pier 4 or Pier 18	Splice 3 or Spl. 14	Pier 5 or Pier 17	Splice 4 or Splice 13
Beam 1	431.02	431.10	431.12	431.19	431.21	431.36	431.40	431.41	431.47	431.48
Beam 2	431.14	431.22	431.24	431.31	431.33	431.48	431.52	431.53	431.59	431.60
Beam 3	431.20	431.28	431.30	431.37	431.39	431.54	431.58	431.59	431.65	431.66
Beam 4	431.20	431.28	431.30	431.37	431.39	431.54	431.58	431.59	431.65	431.66
Beam 5	431.14	431.22	431.24	431.31	431.33	431.48	431.5	431.53	431.59	431.60
Beam 6	431.02	431.10	431.12	431.19	431.21	431.36	431.40	431.41	431.47	431.48

Beams \ Points	Pier 6 or Pier 16	Splice 5 or Spl. 12	Pier 7 or Pier 15	Pier 8 or Pier 14	Splice 6 or Splice 11	Pier 9 or Pier 13	Splice 7 or Spl. 10	Pier 10 or Pier 12	Splice 8 or Splice 9	℄ Pier 11
Beam 1	431.54	431.55	431.65	431.64	431.64	431.66	431.67	431.68	431.68	431.75
Beam 2	431.66	431.67	431.77	[illegible]	431.76	431.78	431.79	431.80	431.80	431.87
Beam 3	431.72	431.75	[illegible]	431.82	431.82	431.84	431.85	431.86	431.86	431.93
Beam 4	431.72	431.75	431.83	431.82	431.82	431.84	431.85	431.86	431.86	431.93
Beam 5	431.66	431.67	431.77	431.76	431.76	431.78	431.79	431.80	431.80	431.87
Beam 6	431.54	431.55	431.65	431.62	431.64	431.66	431.67	431.68	431.68	431.75

DESIGNED	Walter Hamilton
CHECKED	J. B. Nelson E.J.S.
DRAWN	Bennett J. Miller
CHECKED	J. B. N. E.J.S.

March 15 1963
EXAMINED W. E. Baumann
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED V. E. Blaff
CHIEF HIGHWAY ENGINEER

TOP SLAB & BEAM ELEVATIONS
EMBARRASS RIVER OVERFLOW
S.B.I. RT. 1 - SEC. 16-BR
LAWRENCE COUNTY
STATION 59+08.36

Open Joint & Dimensions revised E.J.S 1-6-64

FOR INOFRMATION ONLY

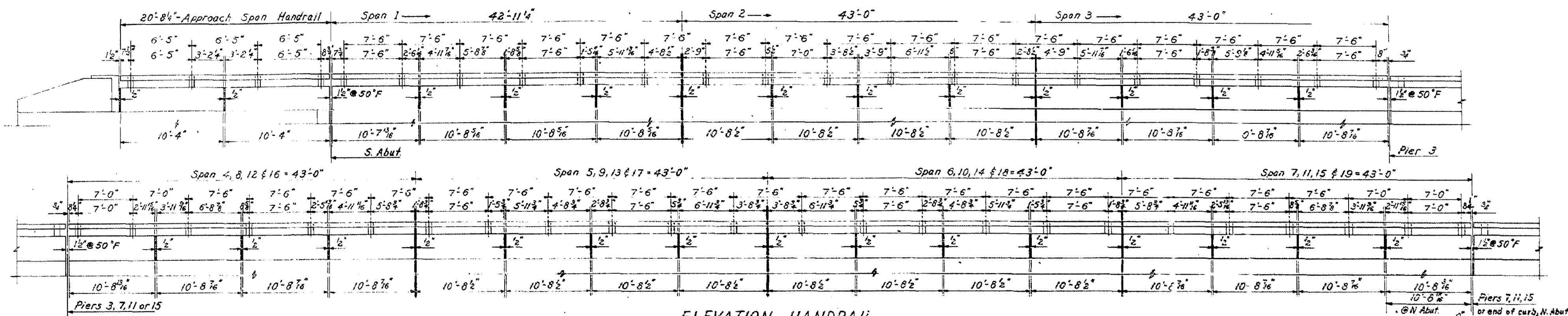
USER NAME = jessica.hille	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING STRUCTURE DETAILS - S.N. 051-0005	
	DRAWN	REVISED -			
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -			
PLOT DATE = 8/8/2024	DATE -	REVISED -		SCALE: SHEET 7 OF 12 SHEETS STA. TO STA.	

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	158
		CONTRACT NO. 74164		
		ILLINOIS FED. AID PROJECT		

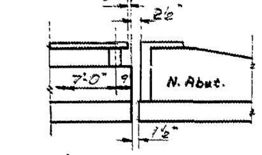
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

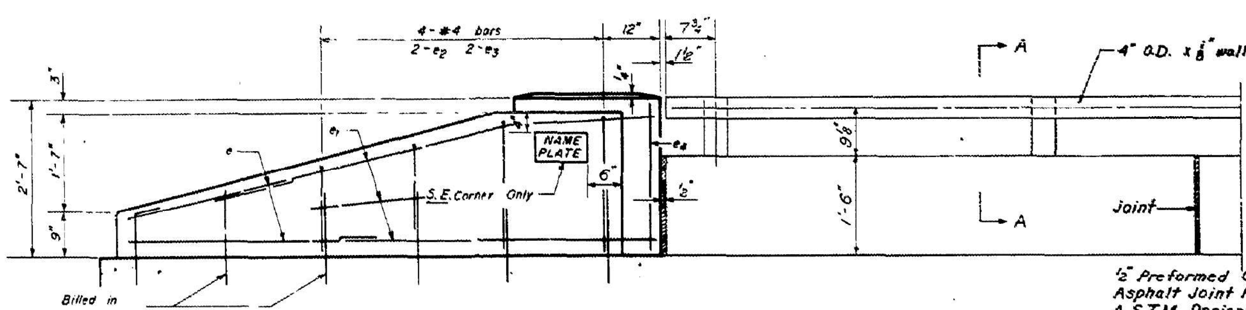
F.A. RTE.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
1	14-BR	Lawrence	44	16

SHEET NO. 8
12 SHEETS

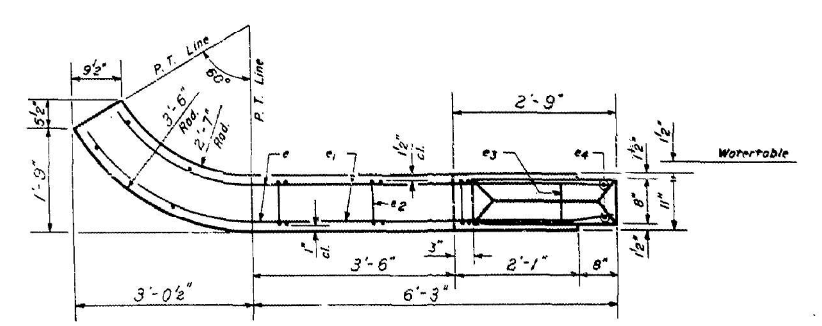


ELEVATION HANDRAIL

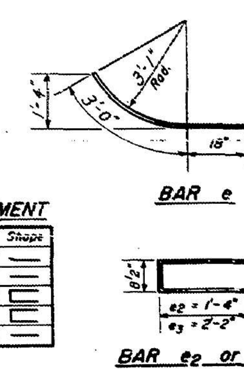


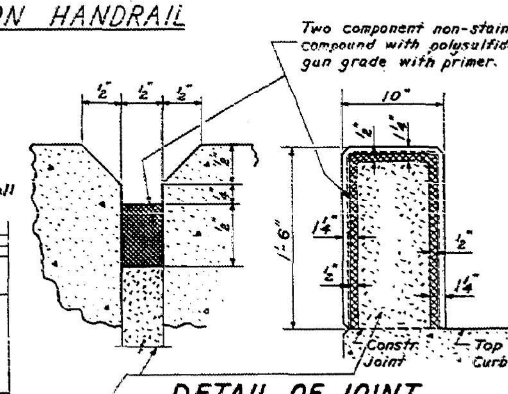


ELEVATION

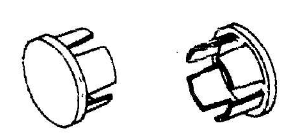


PLAN - END POST

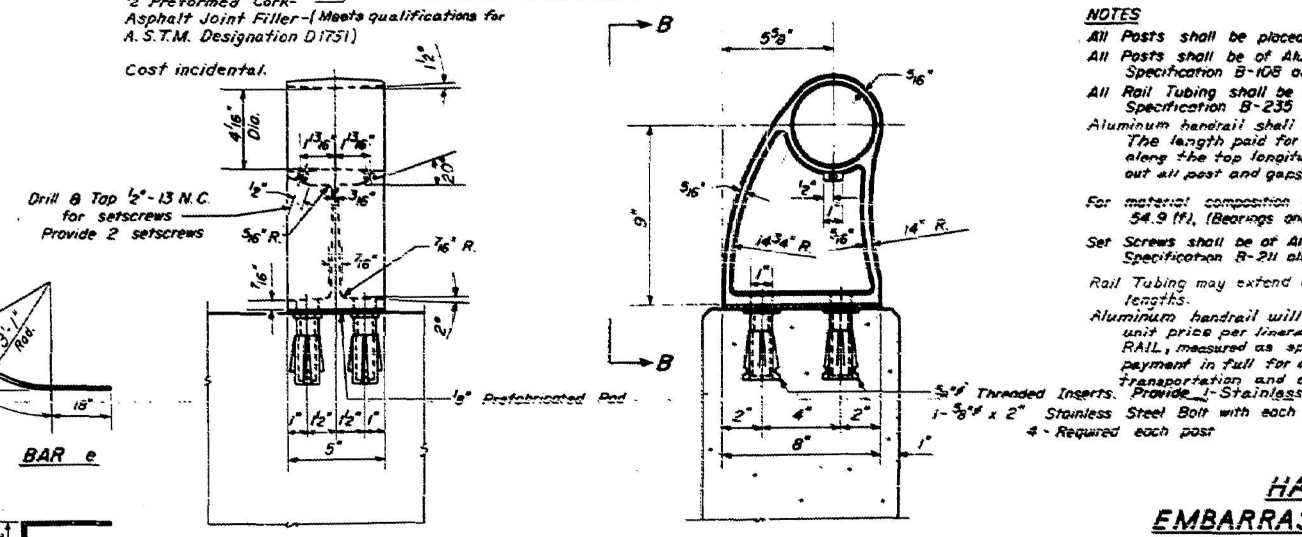




DETAIL OF JOINT



CAST END CAP
DRIVE FIT TYPE
24 - Required
Incidental to item "Aluminum Handrail"



VIEW B-B

SECTION A-A

RAIL POST DETAILS

BILL OF MATERIAL

Item	Unit	Quantity
Aluminum Handrail	Lin. Ft.	1675
Class X Concrete	Cu. Yds.	2.3
Reinforcement Bars	Lbs.	210
Name Plates	Each	1

BILL OF REINFORCEMENT

Bar	No.	Size	Length	Shape
e	16	#4	4'-6"	—
e1	24	#4	6'-0"	—
e2	8	#4	3'-4"	⊏
e3	8	#4	5'-0"	⊏
e4	8	#4	2'-3"	—

NOTES

All Posts shall be placed normal to parapet

All Posts shall be of Aluminum conforming to ASTM Specification B-108 alloy SG-70B-T6.

All Rail Tubing shall be of Aluminum conforming to ASTM Specification B-235 alloy 6061-T6.

Aluminum handrail shall be measured in lineal feet. The length paid for shall be the overall length along the top longitudinal railing members throughout all post and gaps.

For material composition of Prefabricated Pad, See Art. 54.9 (f), (Bearings and Anchorage), of the Std. Specs.

Set Screws shall be of Aluminum conforming to ASTM Specification B-211 alloy 2024 - T4.

Rail Tubing may extend a maximum of three panel lengths.

Aluminum handrail will be paid for at the contract unit price per lineal foot for ALUMINUM HANDRAIL, measured as specified; which price shall be payment in full for all materials, fabrication, transportation and erection.

DESIGNED	T. T.	EXAMINED	W. E. Baumann
CHECKED	E.J.S.	PASSED	E. J. Sheets
DRAWN	T. T.	APPROVED	V. E. Plott
CHECKED	E.J.S.		

March 15 1963

HANDRAIL
EMBARRASS RIVER OVERFLOW
S.B.I. RT. 1 SEC. 16-BR
LAWRENCE COUNTY
STA. 59+08.56

Open Joint & Dimensions Revised E.J.S. 1-6-64

FOR INOFRMATION ONLY

USER NAME = jessica.nille	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 8/8/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS - S.N. 051-0005

SCALE: SHEET 8 OF 12 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	159

CONTRACT NO. 74164
ILLINOIS FED. AID PROJECT

MODEL: Default
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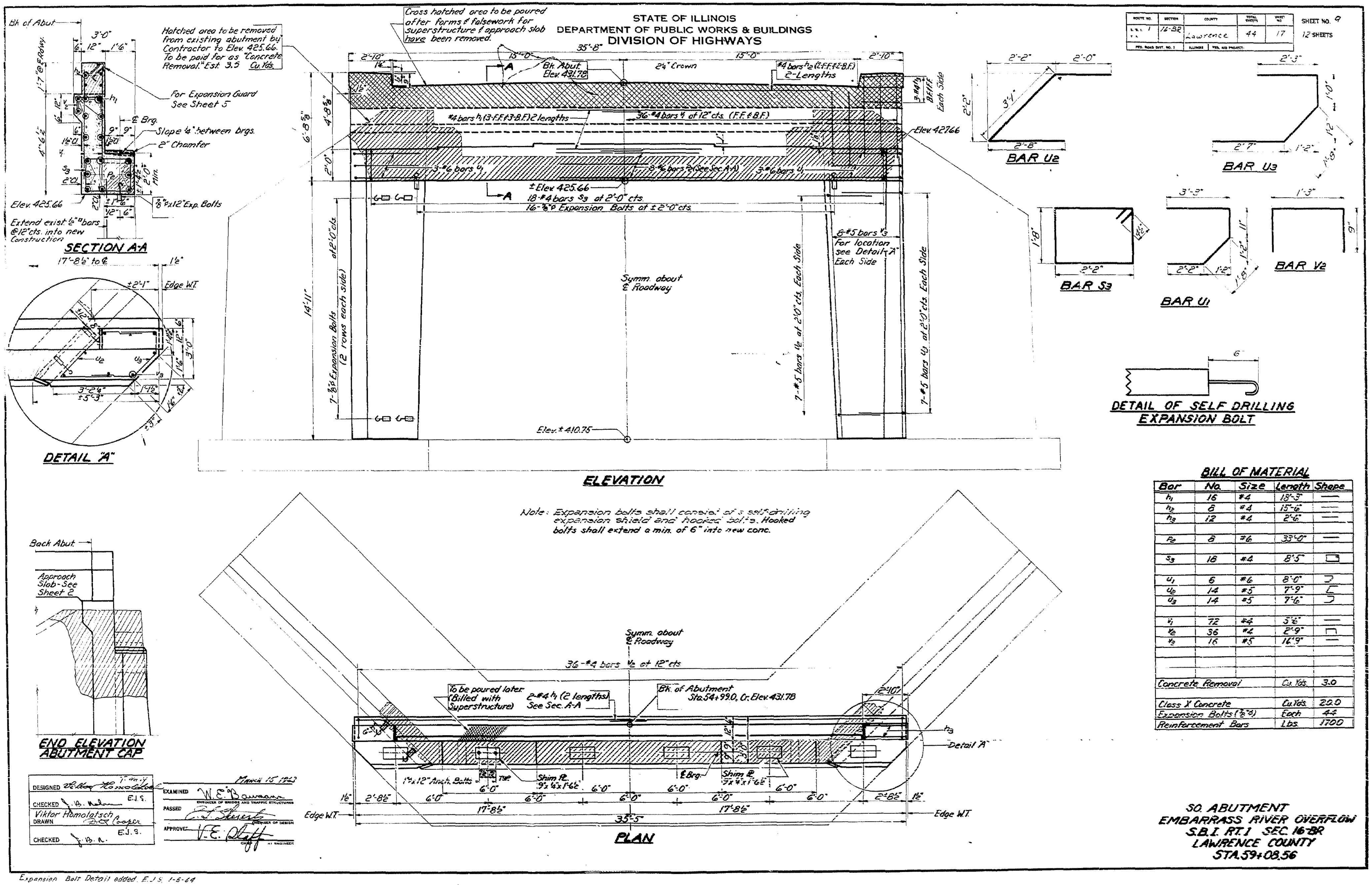


BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h_1	16	#4	18'-3"	—
h_2	8	#4	15'-6"	—
h_3	12	#4	2'-6"	—
P_2	8	#6	33'-0"	—
S_3	18	#4	8'-5"	▭
U_1	6	#6	8'-0"	
U_2	14	#5	7'-9"	
U_3	14	#5	7'-6"	
V_1	72	#4	5'-6"	—
V_2	36	#4	2'-9"	⊓
V_3	16	#5	16'-9"	—
Concrete Removal			Cu. Yds.	3.0
Class X Concrete			Cu. Yds.	22.0
Expansion Bolts (⅝"φ)			Each	44
Reinforcement Bars			Lbs.	1700

FOR INOFRMATION ONLY

USER NAME = jessica.hille	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 8/8/2024	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

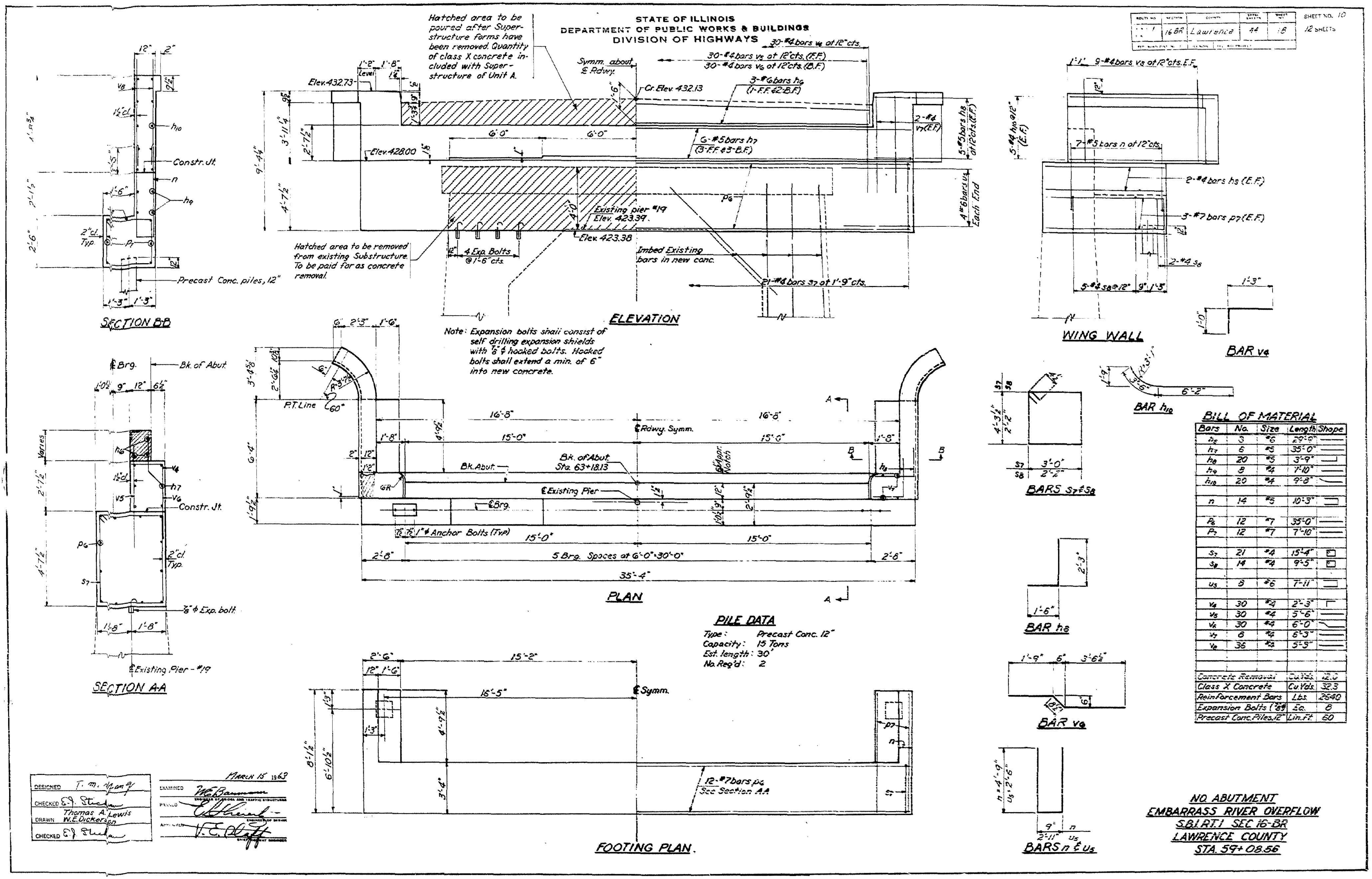
EXISTING STRUCTURE DETAILS – S.N. 051–0005

SCALE: SHEET 9 OF 12 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	160

CONTRACT NO. 74164

ILLINOIS FED. AID PROJECT



BILL OF MATERIAL

Bars	No.	Size	Length	Shape
h_5	3	#6	29'-9"	
h_7	6	#5	35'-0"	
h_8	20	#5	3'-9"	
h_9	8	#4	7'-10"	
h_{10}	20	#4	9'-8"	
n	14	#5	10'-3"	
p_6	12	#7	35'-0"	
p_7	12	#7	7'-10"	
s_7	21	#4	15'-4"	
s_8	14	#4	9'-5"	
u_5	8	#6	7'-11"	
v_4	30	#4	2'-3"	
v_5	30	#4	5'-6"	
v_6	30	#4	6'-0"	
v_7	6	#4	6'-3"	
v_8	36	#4	5'-5"	
Concrete Removal			Cu.Yds.	12.0
Class X Concrete			Cu.Yds.	32.3
Reinforcement Bars			Lbs.	2540
Expansion Bolts (7/8"ϕ)			Ea.	6
Precast Conc. Piles, 12"			Lin.Ft.	60

PILE DATA

Type: Precast Conc. 12"
Capacity: 15 Tons
Est. length: 30'
No. Req'd: 2

DESIGNED T. M. Young
CHECKED E.J. Stuben
DRAWN Thomas A. Lewis / W.E. Dickerson
CHECKED E.J. Stuben
MARCH 15 1963

FOR INOFRMATION ONLY

USER NAME = jessica.hille	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 8/8/2024	DATE -	REVISED -	

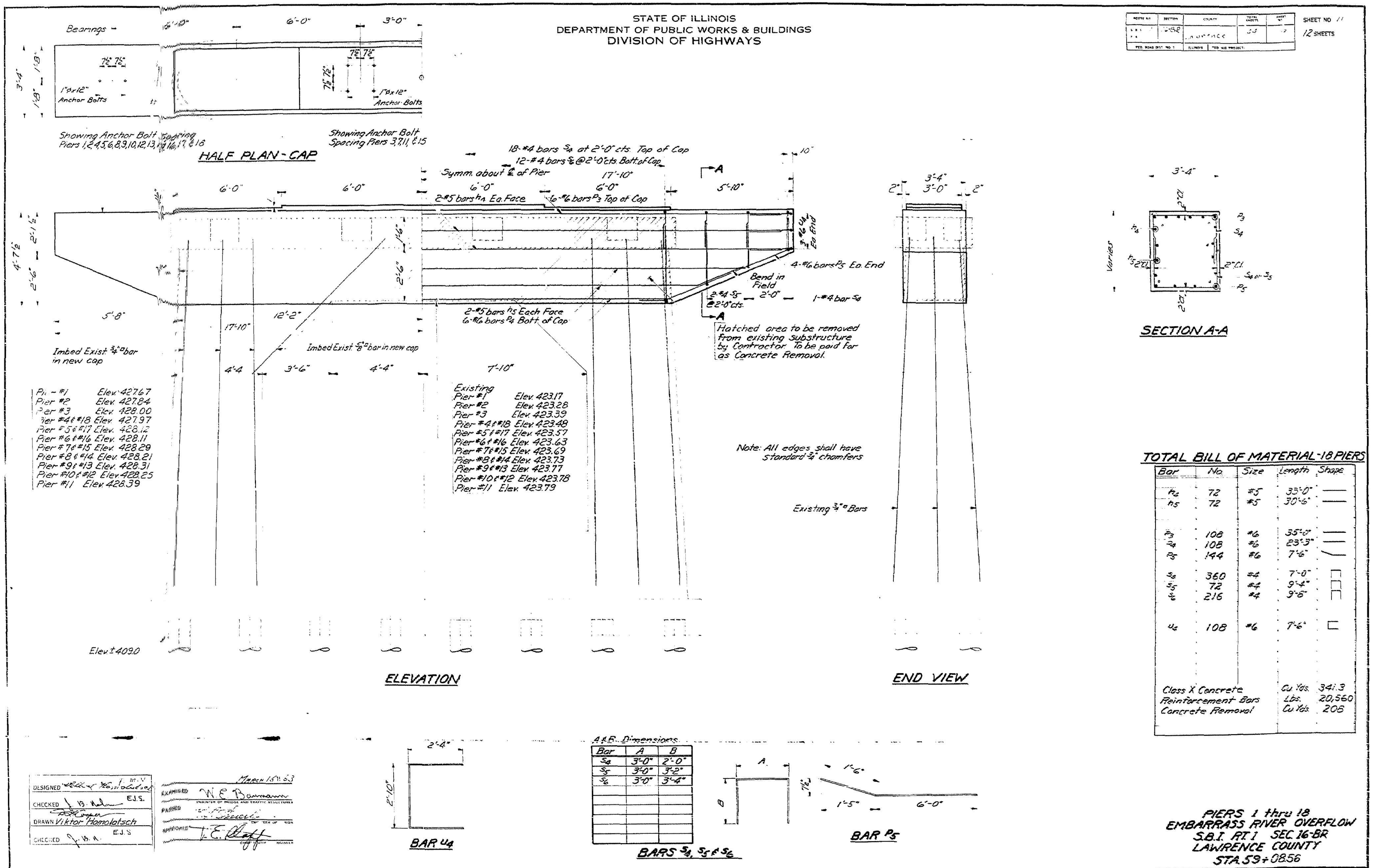
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS – S.N. 051–0005

SCALE: SHEET 10 OF 12 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	161

CONTRACT NO. 74164
ILLINOIS FED. AID PROJECT



STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS
SHEET NO 11
12 SHEETS
Bearings
1"⌀x12" Anchor Bolts
Showing Anchor Bolt Spacing Piers 1,2,4,5,6,8,9,10,12,13,14,16,17 & 18
Showing Anchor Bolt Spacing Piers 3,7,11, & 15
HALF PLAN - CAP
18-#4 bars S4 at 2'-0" cts. Top of Cap
12-#4 bars S6 @ 2'-0" cts. Bott. of Cap
Symm. about ℄ of Pier
2-#5 bars h4 Ea. Face
6-#6 bars P3 Top of Cap
4-#6 bars P5 Ea. End
Bend in Field
2-#4 S5 @ 2'-0" cts.
1-#4 bar S4
2-#5 bars h5 Each Face
6-#6 bars P4 Bott. of Cap
Hatched area to be removed from existing substructure by Contractor. To be paid for as Concrete Removal.
Imbed Exist. 3/4"⌀ bar in new cap
Imbed Exist. 3/4"⌀ bar in new cap
Pier #1 Elev. 427.67
Pier #2 Elev. 427.84
Pier #3 Elev. 428.00
Pier #4 & #18 Elev. 427.97
Pier #5 & #17 Elev. 428.12
Pier #6 & #16 Elev. 428.11
Pier #7 & #15 Elev. 428.29
Pier #8 & #14 Elev. 428.21
Pier #9 & #13 Elev. 428.31
Pier #10 & #12 Elev. 428.25
Pier #11 Elev. 428.39
Existing
Pier #1 Elev. 423.17
Pier #2 Elev. 423.28
Pier #3 Elev. 423.39
Pier #4 & #18 Elev. 423.48
Pier #5 & #17 Elev. 423.57
Pier #6 & #16 Elev. 423.63
Pier #7 & #15 Elev. 423.69
Pier #8 & #14 Elev. 423.73
Pier #9 & #13 Elev. 423.77
Pier #10 & #12 Elev. 423.78
Pier #11 Elev. 423.79
Note: All edges shall have standard 3/4" chamfers
Existing 3/4"⌀ Bars
Elev. ±409.0
ELEVATION
END VIEW
SECTION A-A
Varies
BAR U4
BARS S4, S5 & S6
BAR P5
PIERS 1 thru 18
EMBARRASS RIVER OVERFLOW
S.B.I. RT. 1 SEC. 16-BR
LAWRENCE COUNTY
STA. 59+08.56
DESIGNED
CHECKED E.J.S.
DRAWN Viktor Homolotsch
CHECKED
EXAMINED
PASSED
APPROVED
March 15, 1963

TOTAL BILL OF MATERIAL - 18 PIERS

Bar	No.	Size	Length	Shape
h_4	72	#5	33'-0"	
h_5	72	#5	30'-6"	
P_3	108	#6	35'-0"	
P_4	108	#6	23'-3"	
P_5	144	#6	7'-6"	
S_4	360	#4	7'-0"	
S_5	72	#4	9'-4"	
S_6	216	#4	9'-6"	
U_4	108	#6	7'-6"	

Class X Concrete	Cu. Yds.	341.3
Reinforcement Bars	Lbs.	20,560
Concrete Removal	Cu. Yds.	206

A & B Dimensions

Bar	A	B
S_4	3'-0"	2'-0"
S_5	3'-0"	3'-2"
S_6	3'-0"	3'-4"

FOR INOFRMATION ONLY

USER NAME = jessica.hille	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 8/8/2024	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS – S.N. 051–0005

SCALE: SHEET 11 OF 12 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	162

CONTRACT NO. 74164

ILLINOIS FED. AID PROJECT

MODEL: Default
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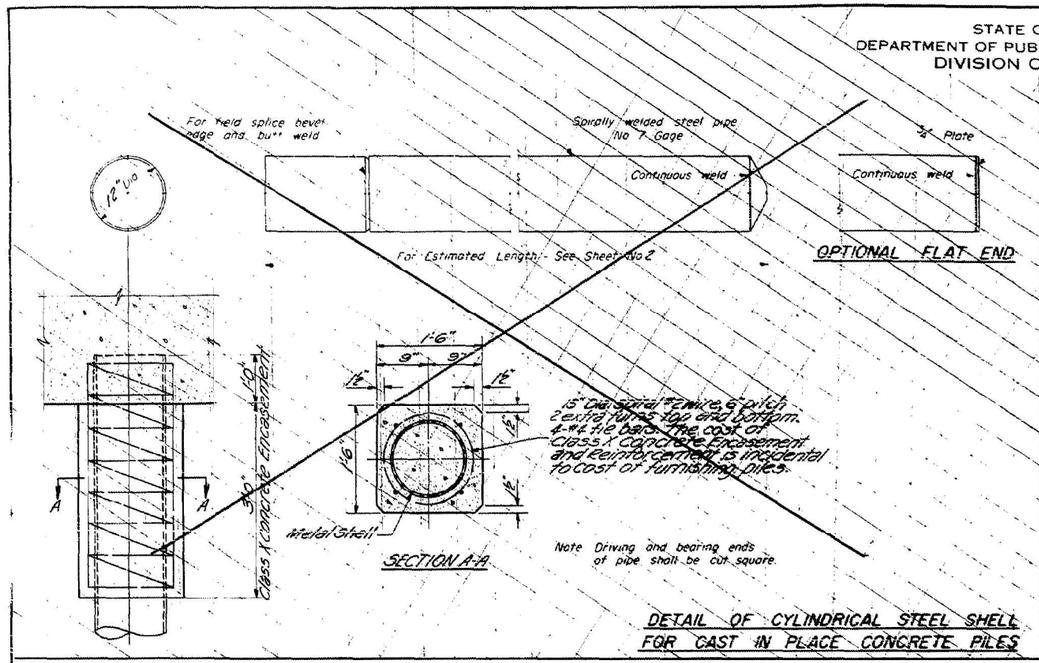
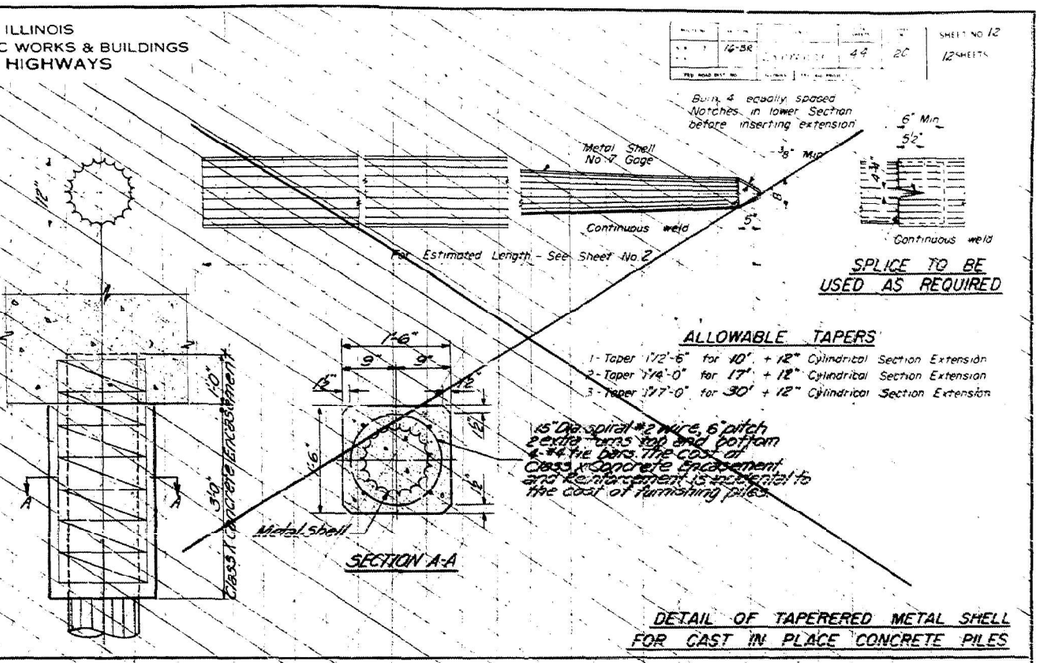
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

	16-BR		44	20	SHEET NO 12 12 SHEETS



OPTIONAL FLAT END

DETAIL OF CYLINDRICAL STEEL SHELL FOR CAST IN PLACE CONCRETE PILES

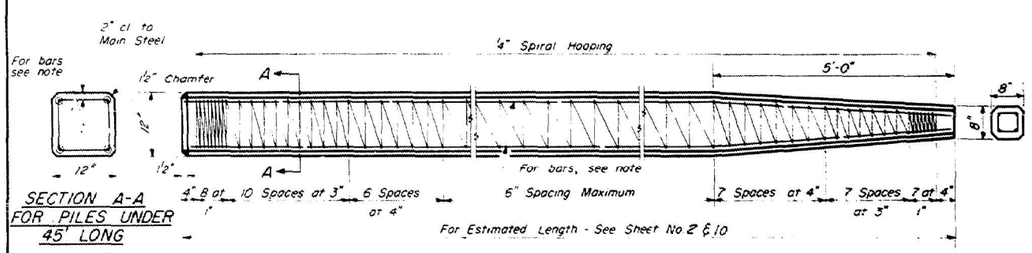


SPLICE TO BE USED AS REQUIRED

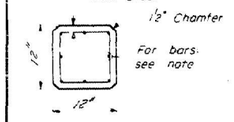
ALLOWABLE TAPERS

1 - Taper 1/2"-6" for 10' + 12" Cylindrical Section Extension
2 - Taper 1/4"-0" for 17' + 12" Cylindrical Section Extension
3 - Taper 1/7"-0" for 30' + 12" Cylindrical Section Extension

DETAIL OF TAPERERED METAL SHELL FOR CAST IN PLACE CONCRETE PILES



SECTION A-A FOR PILES UNDER 45' LONG



SECTION A-A FOR PILES 45' OR MORE

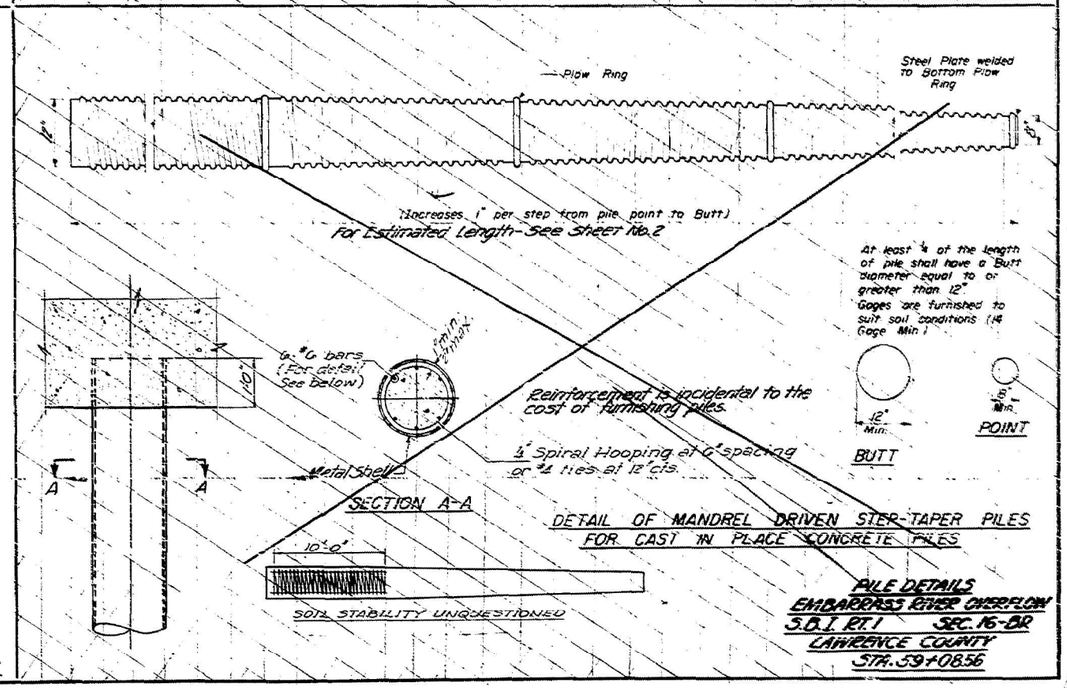
Note For 12" Piles 45' long or more use 8-#8 bars 4 for the full length and 4 to the point of bevel.
For 12" Piles under 45' long use 4-#9 bars the full length.

Handling For Pile lengths up to 45', use two slings placed at a distance of 0.21 L* from each end.
For Piles longer than 45', use three slings placed at a distance of 0.12 L* from each end and at mid-point of pile.
*L - Over all length of pile to be handled

DESIGNED	E.J.S.	EXAMINED	March 15 1963
DETAILED	E.J.S.	PASSED	
DRAWN	W.A. Sausaman	APPROVED	
CHECKED	E.J.S.		

X-1 Rev. 11-25-59

DETAIL OF PRECAST CONCRETE PILES



DETAIL OF MANDREL DRIVEN STEP-TAPER PILES FOR CAST IN PLACE CONCRETE PILES

PILE DETAILS
EMBARRASS RIVER OVERFLOW
S.B.I. RT 1 SEC. 16-BR
LAWRENCE COUNTY
STA. 59+08.56

Pile Details Voided EJS 1-6-64

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USER NAME = jessica.hille	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 8/8/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS – S.N. 051–0005

SCALE: | SHEET 12 OF 12 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	163
		CONTRACT NO. 74164		
	ILLINOIS FED. AID PROJECT			

MODEL: Default
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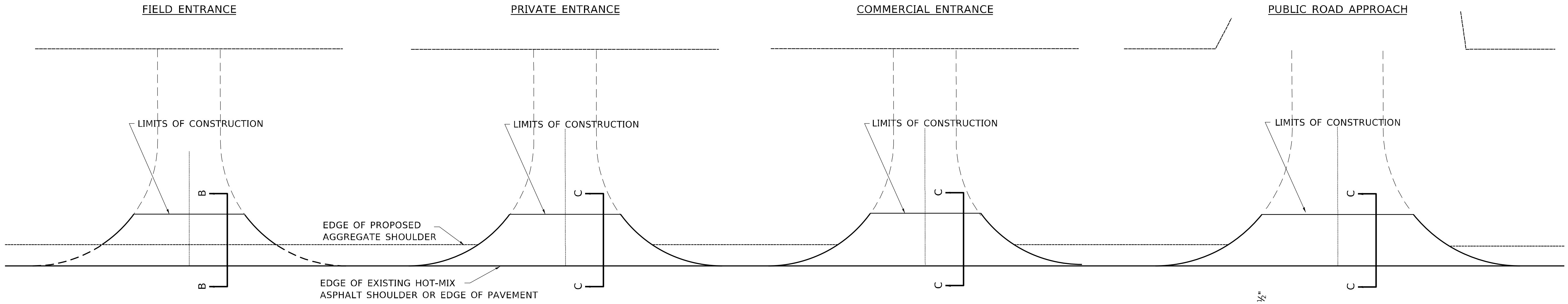
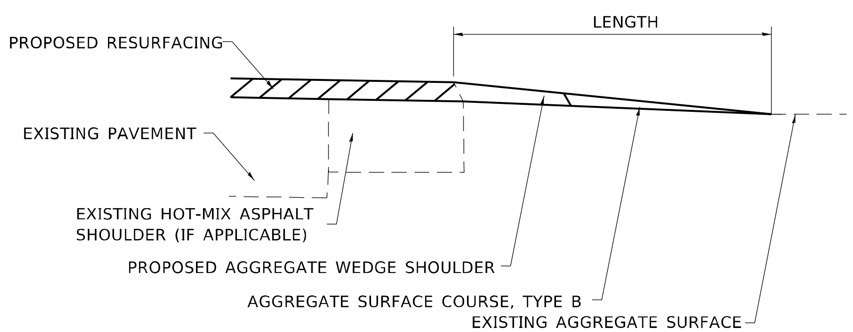
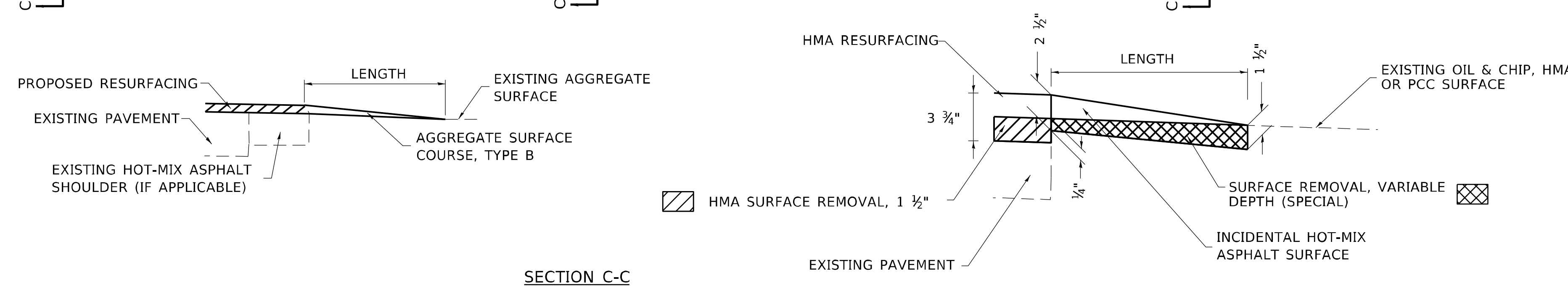
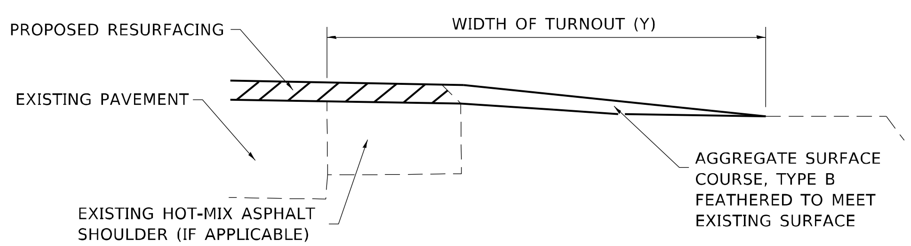




SECTION B-B



SECTION C-C



TYPICAL SECTION AT MAILBOX TURNOUT

NOTE: SEE STANDARD 406201 FOR MAILBOX TURNOUT DETAILS

NOTES

LENGTH = 10' UNLESS OTHERWISE NOTED ON PLANS

IF THERE IS NOT EXISTING HOT-MIX ASPHALT SHOULDER THEN THE ENTRANCE TAPER STARTS AT THE EDGE OF EXISTING PAVEMENT.

THE COST OF THE BITUMINOUS MATERIALS (TACK COAT) FOR ENTRANCES AND PUBLIC ROAD APPROACHES SHALL BE INCLUDED IN THE PAY ITEM INCIDENTAL HOT-MIX ASPHALT SURFACING.

SIDE	STATION	TYPE	SURFACE REMOVAL, VARIABLE DEPTH (SPECIAL)	INCIDENTAL HOT-MIX ASPHALT SURFACING	AGGREGATE SURFACE COURSE, TYPE B
			SQ YD	TON	TON
LT	52+44	FE			4.9
RT	58+00	PE			3.8
RT	80+92	FE			178.1

SIDE	STATION	TYPE	SURFACE REMOVAL, VARIABLE DEPTH (SPECIAL)	INCIDENTAL HOT-MIX ASPHALT SURFACING	AGGREGATE SURFACE COURSE, TYPE B
			SQ YD	TON	TON

SIDE	STATION	TYPE	SURFACE REMOVAL, VARIABLE DEPTH (SPECIAL)	INCIDENTAL HOT-MIX ASPHALT SURFACING	AGGREGATE SURFACE COURSE, TYPE B
			SQ YD	TON	TON

SIDE	STATION	TYPE	SURFACE REMOVAL, VARIABLE DEPTH (SPECIAL)	INCIDENTAL HOT-MIX ASPHALT SURFACING	AGGREGATE SURFACE COURSE, TYPE B
			SQ YD	TON	TON

FE=FIELD ENTRANCE
PE=PRIVATE ENTRANCE
CE=COMMERCIAL ENTRANCE
PRA - PUBLIC ROAD APPROACH
MBT - MAILBOX TURNOUT

USER NAME = jessica.hille	DESIGNED - 08-03-99	REVISED - 03-13-07	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/31/2024	DATE -	REVISED -	

RURAL ENTRANCE SCHEDULE AND MAILBOX TURNOUT DETAILS WITH SHOULDERS

SCALE: SHEET 1 OF 1 SHEETS STA. TO STA.

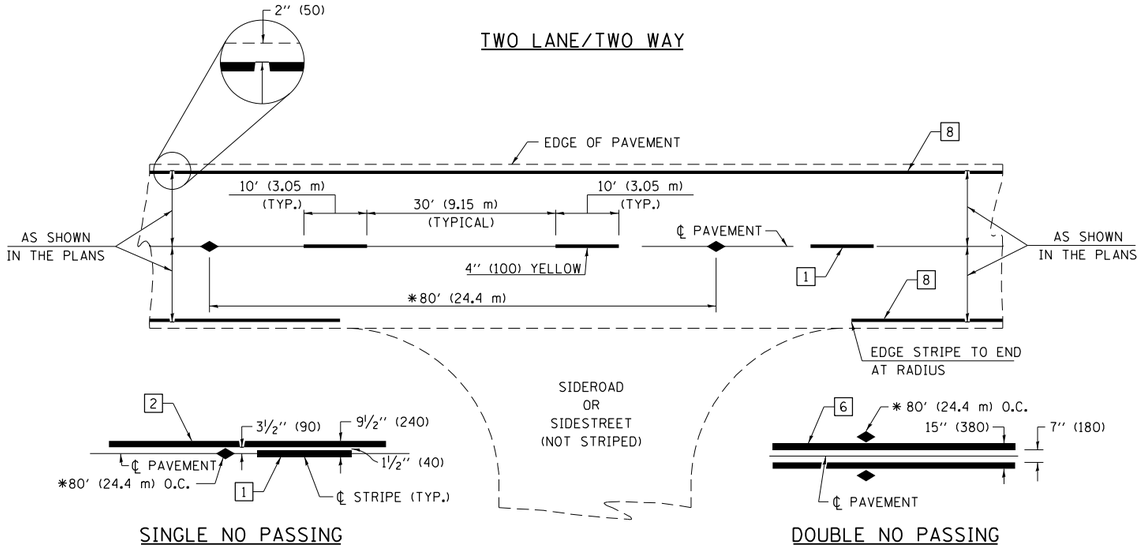
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	164

CONTRACT NO. 74164

ILLINOIS FED. AID PROJECT

MODEL: Default

TWO LANE/TWO WAY



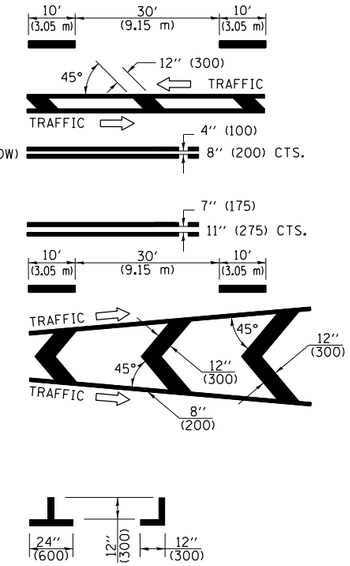
SINGLE NO PASSING

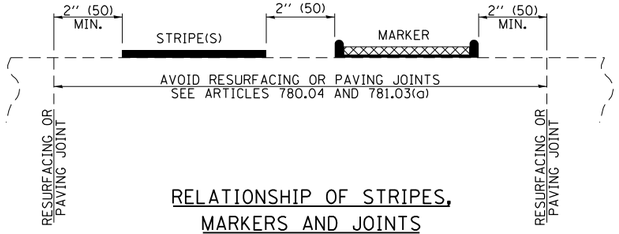
DOUBLE NO PASSING

* REDUCE TO 40' (12.2 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEEDS OF 45 mph (70 km/h) OR LESS.

PAVEMENT MARKING LEGEND

1	4" (100) SKIP-DASH (YELLOW)
2	4" (100) SOLID (YELLOW)
3	12" (300) DIAGONAL (YELLOW)
4	4" (100) DOUBLE YELLOW (NARROW)
5	12" (300) SOLID WHITE
6	4" (100) DOUBLE YELLOW (WIDE)
7	6" (150) SKIP-DASH (WHITE)
8	4" (100) SOLID (WHITE)
9	12" (300) DIAGONAL (WHITE)
10	6" (150) SOLID (WHITE)
11	24" (600) STOP BAR (WHITE)
12	8" (200) SOLID (WHITE)
13	4" (100) PARKING WHITE



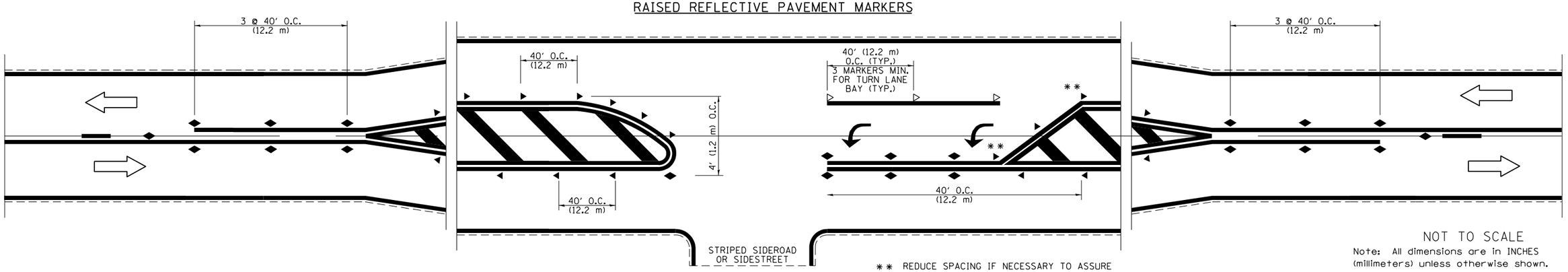


RELATIONSHIP OF STRIPES, MARKERS AND JOINTS

TYPICAL PAVEMENT MARKERS LEGEND

- TWO-WAY AMBER MARKER
- ONE-WAY AMBER MARKER
- ONE-WAY CRYSTAL MARKER

RAISED REFLECTIVE PAVEMENT MARKERS



** REDUCE SPACING IF NECESSARY TO ASSURE MARKERS AT CORNER POINTS.

NOT TO SCALE

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 7 DETAIL NO. 78000001

USER NAME = Jessica.Hille	DESIGNED -	REVISED - NAS 6/22	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/31/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND RAISED REFLECTIVE PAVEMENT MARKERS (RURAL AND URBAN APPLICATIONS)

SCALE: | SHEET 1 OF 4 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	165
		CONTRACT NO. 74164		
	ILLINOIS FED. AID PROJECT			

MODEL: Default
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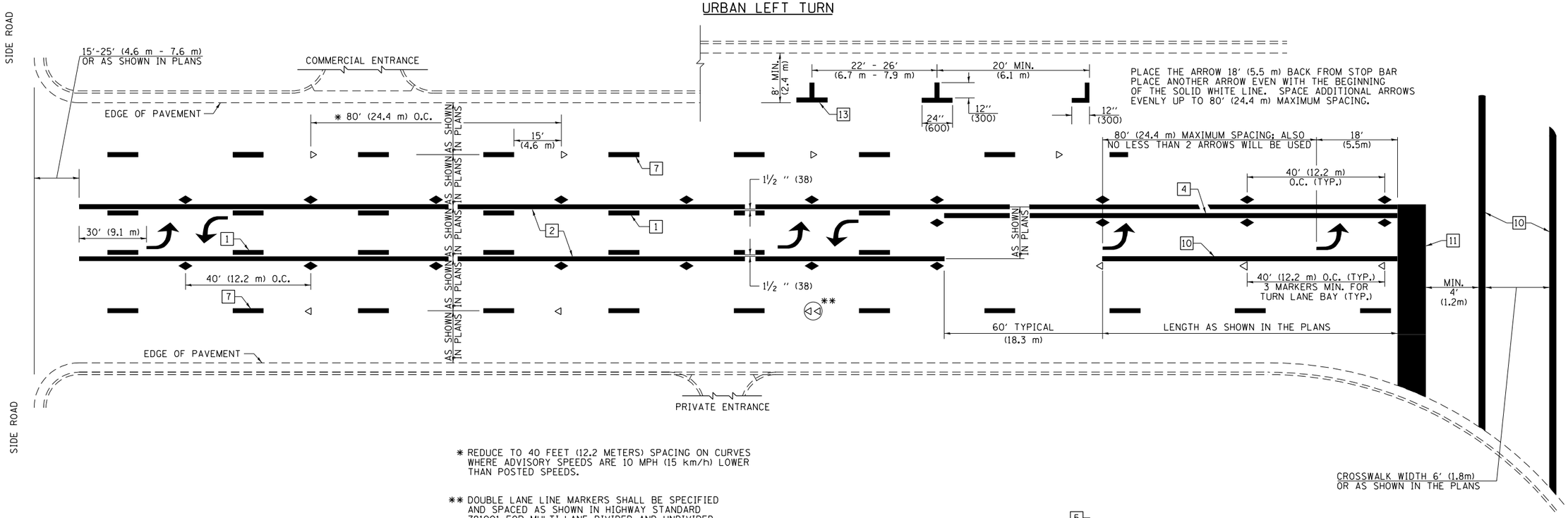
URBAN LEFT TURN

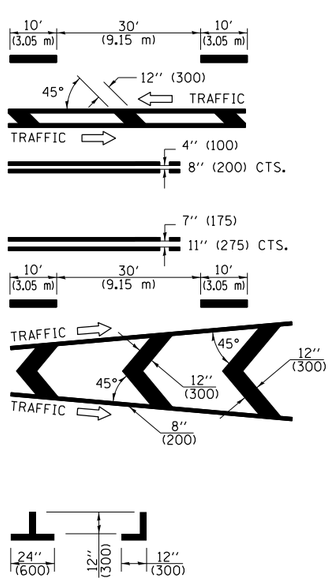


* REDUCE TO 40 FEET (12.2 METERS) SPACING ON CURVES WHERE ADVISORY SPEEDS ARE 10 MPH (15 km/h) LOWER THAN POSTED SPEEDS.

** DOUBLE LANE LINE MARKERS SHALL BE SPECIFIED AND SPACED AS SHOWN IN HIGHWAY STANDARD 781001 FOR MULTI-LANE DIVIDED AND UNDIVIDED HIGHWAYS.

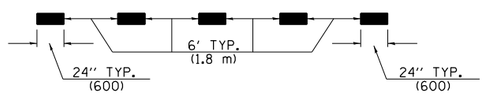
PAVEMENT MARKING LEGEND

1. 4" (100) SKIP-DASH (YELLOW)
2. 4" (100) SOLID (YELLOW)
3. 12" (300) DIAGONAL (YELLOW)
4. 4" (100) DOUBLE YELLOW (NARROW)
5. 12" (300) SOLID WHITE
6. 4" (100) DOUBLE YELLOW (WIDE)
7. 6" (150) SKIP-DASH (WHITE)
8. 4" (100) SOLID (WHITE)
9. 12" (300) DIAGONAL (WHITE)
10. 6" (150) SOLID (WHITE)
11. 24" (600) STOP BAR (WHITE)
12. 8" (200) SOLID (WHITE)
13. 4" (100) PARKING WHITE

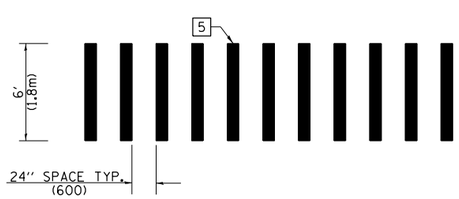


GENERAL NOTES

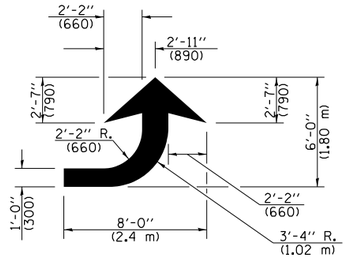
1. TURN ARROW PAIRS SHALL BE PLACED AT 250'(75 m) INTERVALS AND SHALL BE EVENLY SPACED BETWEEN BOTH ENDS OF THE BIDIRECTIONAL LEFT TURN LANE. USE A MINIMUM OF TWO PAIRS PER BLOCK.
2. THE SOLID YELLOW PAVEMENT MARKINGS [2] SHOULD GENERALLY START OR END NEAR THE RADIUS POINT OF EACH STREET RETURN EXCEPT WHERE ONE OR BOTH ENDS WOULD INCLUDE STOP BARS.
3. THE SKIP-DASH PAVEMENT MARKINGS [1] OR [7] SHOULD BE CENTERED BETWEEN BOTH ENDS OF EACH CITY BLOCK AND SHALL BE PLACED SO THEY LINE UP ACROSS FROM EACH OTHER.
4. USE LARGE ARROW SIZE FOR BOTH RURAL AND URBAN LOCATIONS. (SEE SECTION 780 FOR SYMBOLS TABLE)
5. LANE LINE EXTENSIONS SHALL BE THE SAME COLOR AND WIDTH AS THE LANE LINE BEING EXTENDED.
6. ALL WHITE SKIP-DASH LINES SHALL BE 6" IN WIDTH.



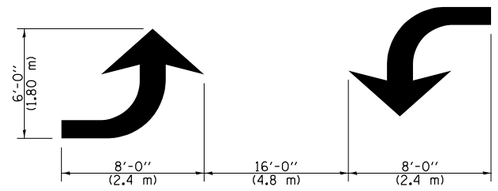
LANE LINE EXTENSIONS



CROSSWALK DETAIL
(DECATUR CITY LIMITS ONLY)



LEFT ARROW
REVERSE FOR RIGHT ARROW
AREA = 15.6 SQ. FT. (1.47 m^2)
(WHITE)



TYPICAL DOUBLE
TURN ARROWS (WHITE)

NOT TO SCALE

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 7 DETAIL NO. 78000001

USER NAME = Jessica.hille	DESIGNED -	REVISED - NAS 6/22	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/31/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND RAISED REFLECTIVE PAVEMENT MARKERS (RURAL AND URBAN APPLICATIONS)

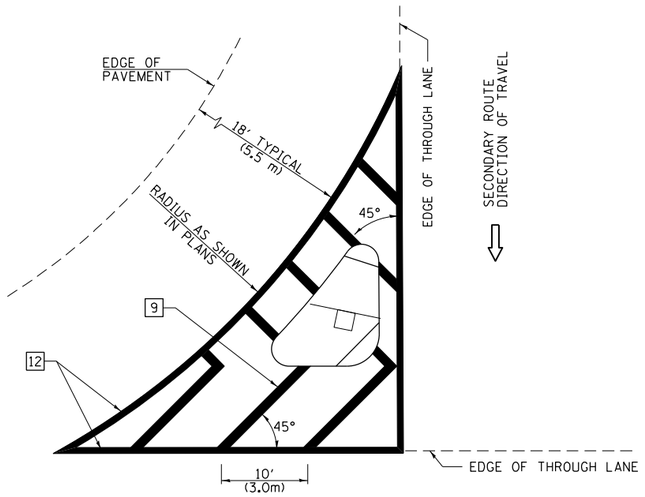
SCALE: | SHEET 2 OF 4 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	166
		CONTRACT NO. 74164		
	ILLINOIS FED. AID PROJECT			

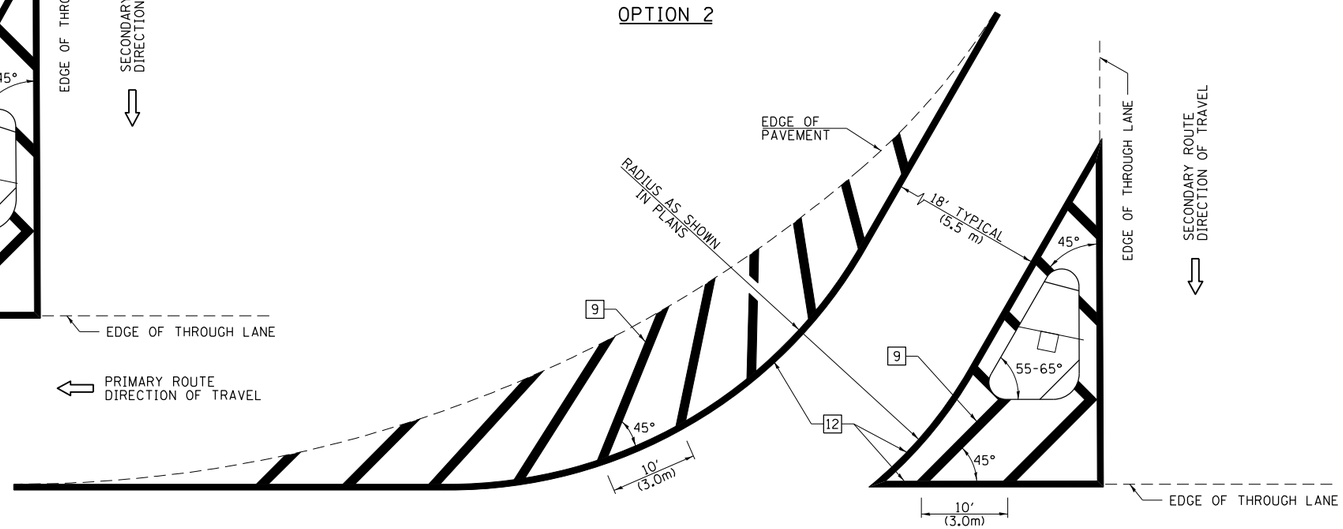
MODEL: Default
FILE NAME: pw:\\dot-pw.bentley.com:PWDOT Documents\IDOT Offices\District 7\Projects\74164\CADData\CADSheets\2024 CADsheets Updated by Travis\D774164-dtl-details_2024.dgn

ISLANDS

OPTION 1



OPTION 2



GENERAL NOTES

1. RAISED AND CORRUGATED MEDIANS SHALL BE OUTLINED WITH [2].
2. SOME OF THE INFORMATION INCLUDED WITH THIS DETAIL MAY NOT BE APPLICABLE TO THIS IMPROVEMENT.
3. PAVEMENT MARKINGS ARE TO BE EXTENDED THROUGH OMISSIONS WHEN APPLICABLE.
4. FINAL PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO PLACING ANY RAISED REFLECTIVE PAVEMENT MARKERS.
5. THE FOLLOWING CRITERIA SHALL BE USED FOR SELECTING THE DIAGONAL PAVEMENT MARKING SPACING:

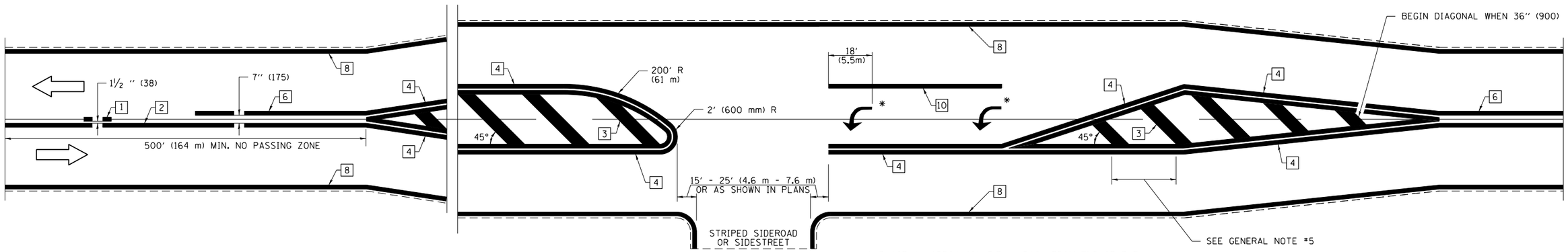
<30 MPH	(<50 km/h)	15′ (4.5 m)
30-45 MPH	(50-75 km/h	20′ (6.0 m)
>45 MPH	(>75 km/h	30′ (9.0 m)

6. THE USE OF ISLAND STRIPING OPTION 1 OR OPTION 2 SHALL BE AS SHOWN ON THE PLANS.

PAVEMENT MARKING LEGEND

1	4″ (100) SKIP-DASH (YELLOW)	10′ (3.05 m) 30′ (9.15 m) 10′ (3.05 m)
2	4″ (100) SOLID (YELLOW)	12″ (300) TRAFFIC 45° TRAFFIC
3	12″ (300) DIAGONAL (YELLOW)	
4	4″ (100) DOUBLE YELLOW (NARROW)	4″ (100) 8″ (200) CTS.
5	12″ (300) SOLID WHITE	
6	4″ (100) DOUBLE YELLOW (WIDE)	7″ (175) 11″ (275) CTS.
7	6″ (150) SKIP-DASH (WHITE)	10′ (3.05 m) 30′ (9.15 m) 10′ (3.05 m)
8	4″ (100) SOLID (WHITE)	
9	12″ (300) DIAGONAL (WHITE)	TRAFFIC 45° 12″ (300) 45° 12″ (300) TRAFFIC 8″ (200)
10	6″ (150) SOLID (WHITE)	
11	24″ (600) STOP BAR (WHITE)	
12	8″ (200) SOLID (WHITE)	
13	4″ (100) PARKING WHITE	24″ (600) 12″ (300) 12″ (300)

RURAL LEFT TURN STRIPING



* PLACE AN ARROW 18′ (5.5 m) BACK FROM END OF THE SOLID WHITE LINE. PLACE ANOTHER ARROW EVEN WITH THE BEGINNING OF THE SOLID WHITE LINE. SPACE ADDITIONAL ARROWS EVENLY UP TO 80′ (24.4 m) MAXIMUM SPACING. USE MINIMUM OF 2 ARROWS.

NOT TO SCALE

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 7 DETAIL NO. 78000001

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	167
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	

USER NAME = jessica.hille	DESIGNED -	REVISED - NAS 6/22	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ′ / in.	CHECKED -	REVISED -	
PLOT DATE = 10/31/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

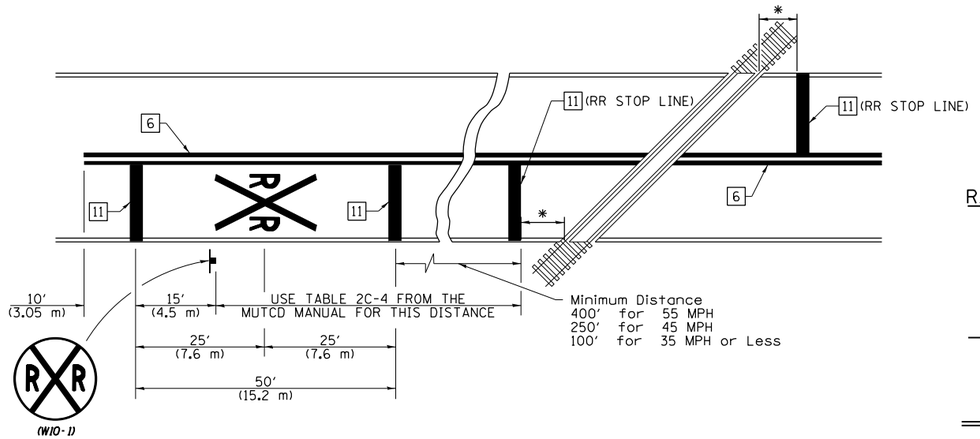
PAVEMENT MARKING AND RAISED REFLECTIVE PAVEMENT MARKERS (RURAL AND URBAN APPLICATIONS)

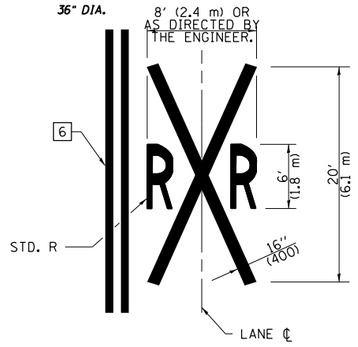
SCALE: | SHEET 3 OF 4 SHEETS | STA. | TO STA.

MODEL: Default
FILE NAME: pw:\\illdot-pw.bentley.com:PWIDOT\Documents\IDOT Offices\District 7\Project\74164\CAD\Data\CADsheets\2024 CADsheets Updated by Travis\D7741641-pht-details_2024.dgn

SUPPLEMENTAL PAVEMENT MARKING TREATMENT FOR RAILROAD-HIGHWAY GRADE CROSSING

PAVEMENT MARKINGS AT RAILROAD-HIGHWAY GRADE CROSSING





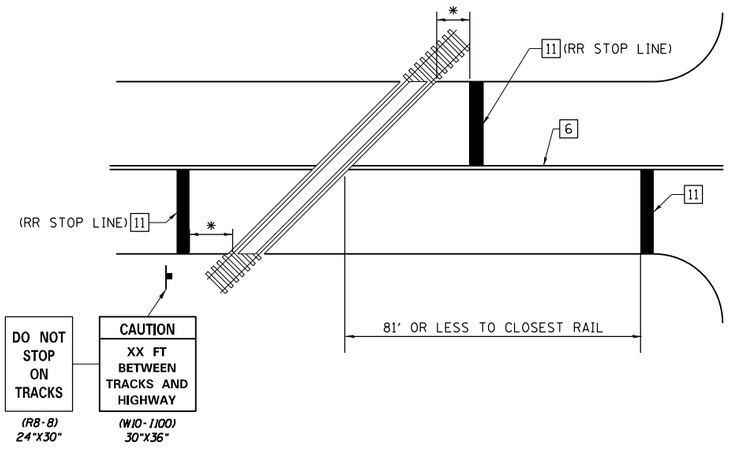
NOTES

THE TRAVERSE SPREAD OF THE "X" MAY VARY ACCORDING TO LANE WIDTH.

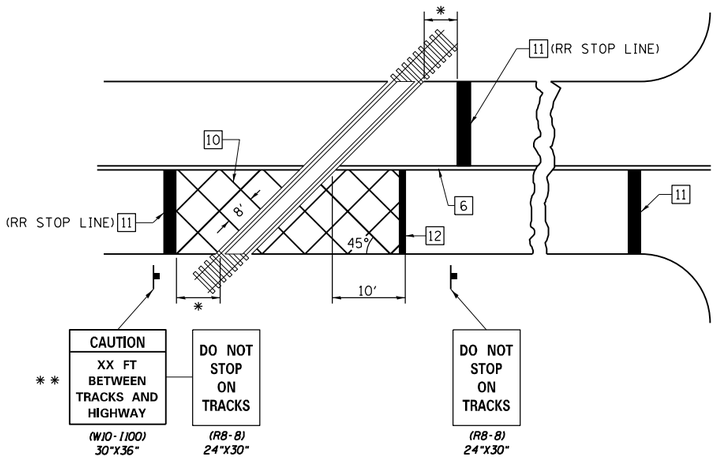
ON MULTI-LANE ROADS, THE STOP LINES SHALL EXTEND ACROSS ALL APPROACH LANES AND SEPARATE RXR SYMBOLS SHALL BE PLACED ADJACENT TO EACH OTHER IN EACH LANE.

WHEN THE PAVEMENT MARKING SYMBOL IS USED, A PORTION OF THE SYMBOL SHOULD BE LOCATED DIRECTLY ADJACENT TO THE ADVANCE WARNING SIGN (W10-1) AS PLACED BY TABLE II-1, CONDITION B OF THE MUTCD.

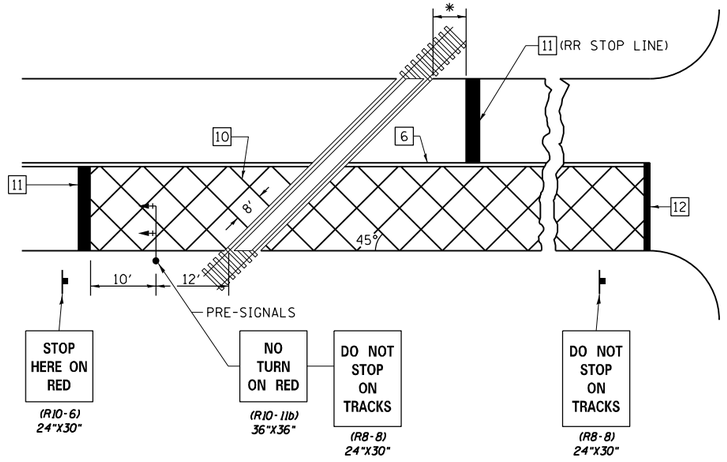
RAILROAD CROSSING WITH NON-SIGNALIZED INTERSECTION



RAILROAD CROSSING WITH INTERCONNECT ONLY

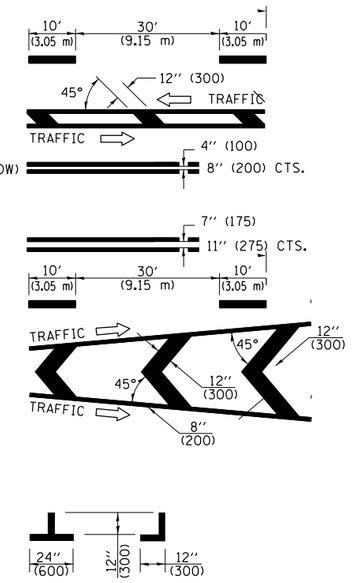


RAILROAD CROSSING WITH INTERCONNECT AND PRE-SIGNALS



PAVEMENT MARKING LEGEND

1. 4" (100) SKIP-DASH (YELLOW)
2. 4" (100) SOLID (YELLOW)
3. 12" (300) DIAGONAL (YELLOW)
4. 4" (100) DOUBLE YELLOW (NARROW)
5. 12" (300) SOLID WHITE
6. 4" (100) DOUBLE YELLOW (WIDE)
7. 6" (150) SKIP-DASH (WHITE)
8. 4" (100) SOLID (WHITE)
9. 12" (300) DIAGONAL (WHITE)
10. 6" (150) SOLID (WHITE)
11. 24" (600) STOP BAR (WHITE)
12. 8" (200) SOLID (WHITE)
13. 4" (100) PARKING WHITE



GENERAL NOTES

1. SUPPLEMENTAL PAVEMENT MARKINGS TO BE INSTALLED ONLY ON APPROACHES TO INTERSECTIONS CONTROLLED BY TRAFFIC SIGNALS WHICH ARE INTERCONNECTED WITH THE RAILROAD WARNING SIGNALS.
2. EXTEND PAVEMENT MARKINGS TO THE INTERSECTION ONLY WHERE PRE-SIGNALS ARE USED.
3. WHEN PEDESTRIAN SIGNALS ARE PRESENT WITH INTERCONNECTED SIGNALS, WARNING SIGN W10-1101 (18"X24") SHALL BE PLACED NEAR EACH PEDESTRIAN SIGNAL HEAD. COUNTDOWN PEDESTRIAN SIGNAL HEADS SHALL NOT BE UTILIZED ALONG WITH INTERCONNECTED SIGNALS.

CAUTION
WALK TIME SHORTENED WHEN TRAIN APPROACHES
(W10-1101) 18"X24"

4. PLEASE REFER TO THE IDOT BUREAU OF OPERATION MEMO OPS T-06 DATED DECEMBER 1, 2020 FOR ADDITIONAL INFORMATION

* 15' FROM NEAR RAIL OR 8' FROM AND PARALLEL TO GATE IF PRESENT

** WARNING SIGN W10-1100 SHALL BE USED AS AN INTERIM MEASURE AT INTERCONNECTED SIGNAL LOCATIONS WHERE PRE-SIGNALS ARE TO BE INSTALLED IN THE FUTURE. THIS SIGN SHALL BE REMOVED WHEN THE PRE-SIGNALS ARE INSTALLED AND THE PAVEMENT MARKINGS ARE EXTENDED TO THE INTERSECTION.

NOT TO SCALE

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 7 DETAIL NO. 78000001

USER NAME = jessica.hille	DESIGNED -	REVISED - NAS 6/22	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/31/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND RAISED REFLECTIVE PAVEMENT MARKERS (RURAL AND URBAN APPLICATIONS)

SCALE: | SHEET 4 OF 4 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	168
		CONTRACT NO. 74164		
	ILLINOIS	FED. AID PROJECT		

MODEL: Default
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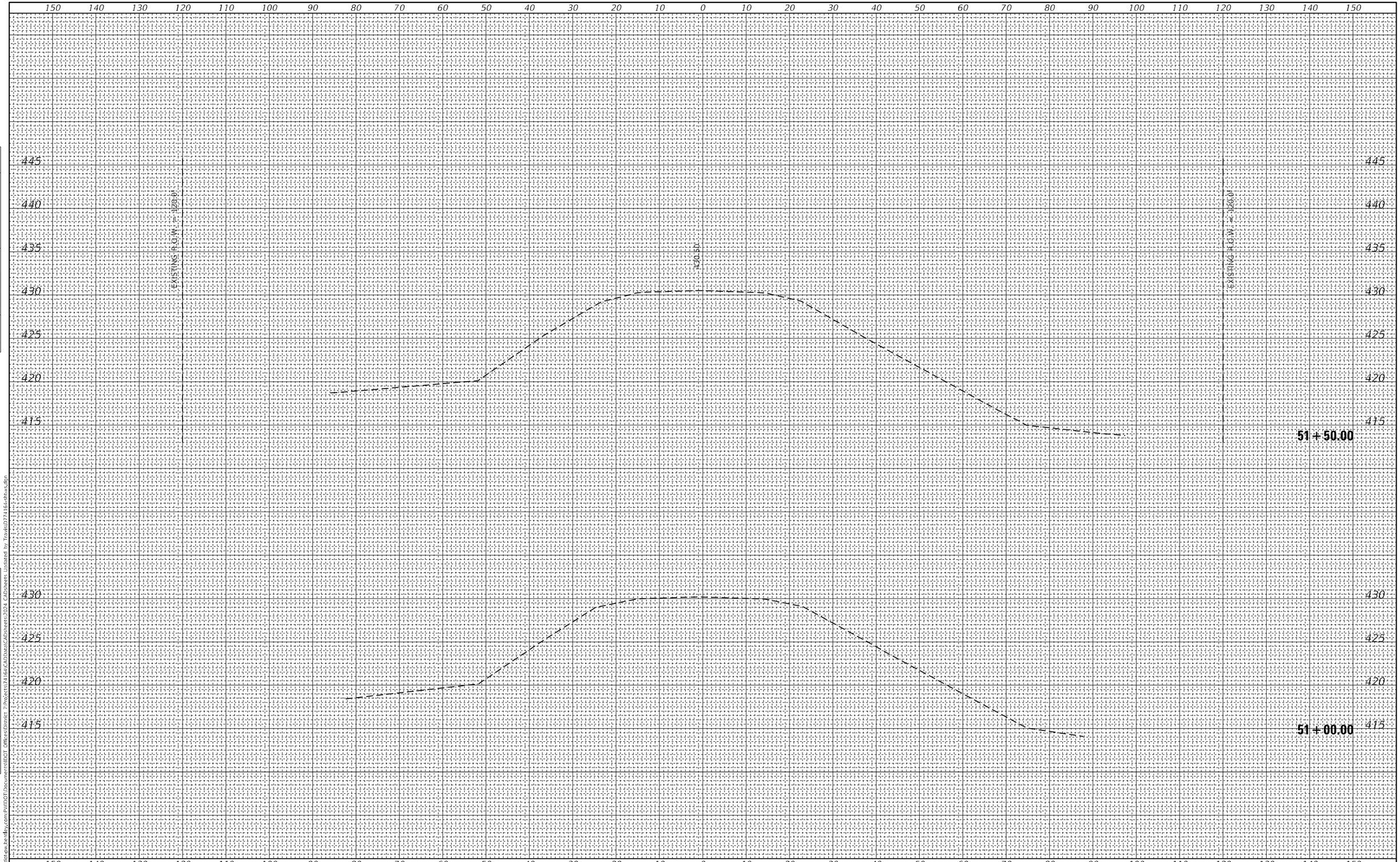

USER NAME = jessica.hille	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/31/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – S.N. 051–0075

SCALE: | SHEET 1 OF 19 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	189	169
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	

ORIGINAL SURVEY | FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

MODEL: Default
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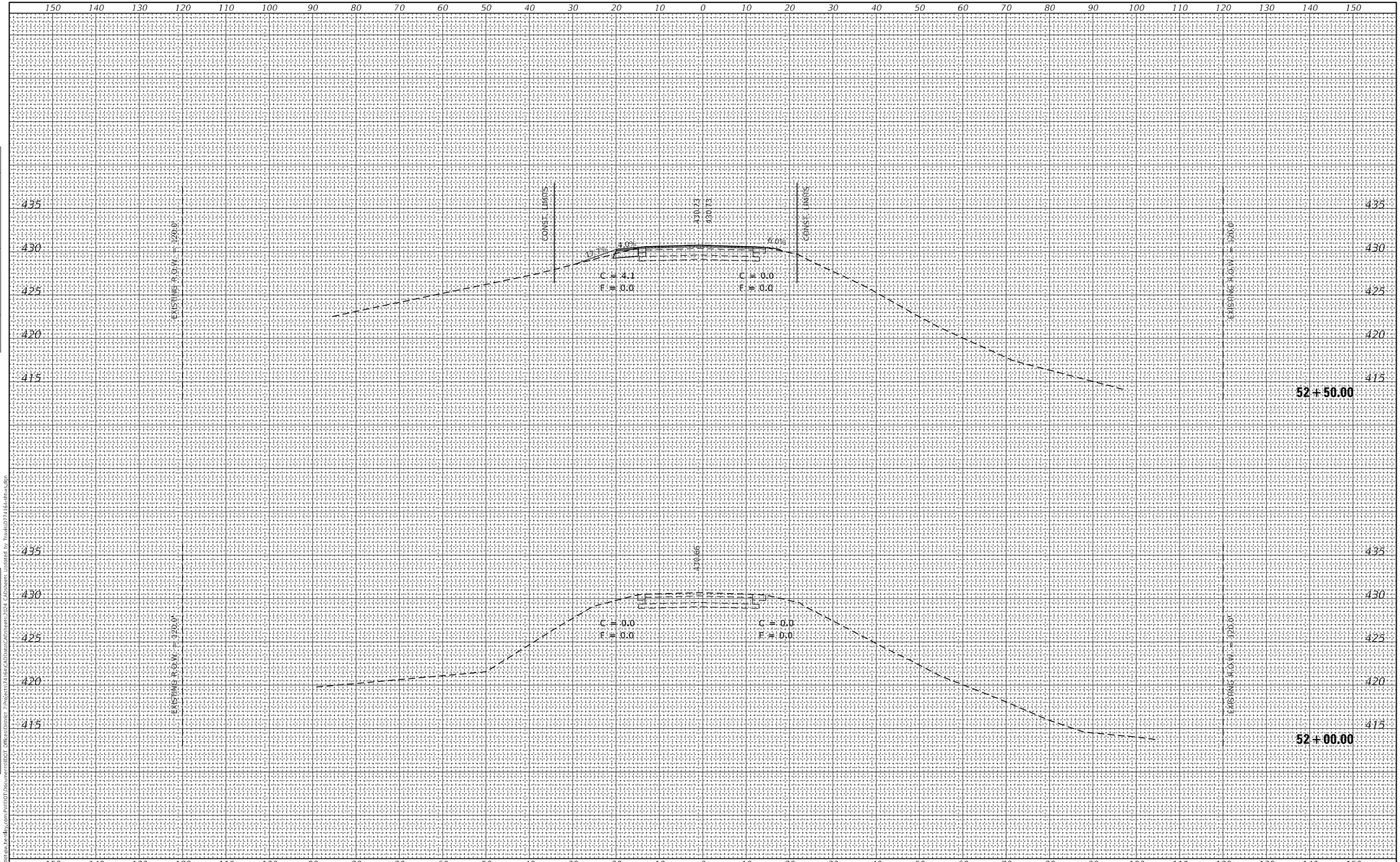

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PLOT DATE = 10/31/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – S.N. 051–0075

SCALE: | SHEET 2 OF 19 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	170
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	

FINAL SURVEY | NOTE BOOK | NO. | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED | BY | DATE

ORIGINAL SURVEY | NOTE BOOK | NO. | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED | BY | DATE

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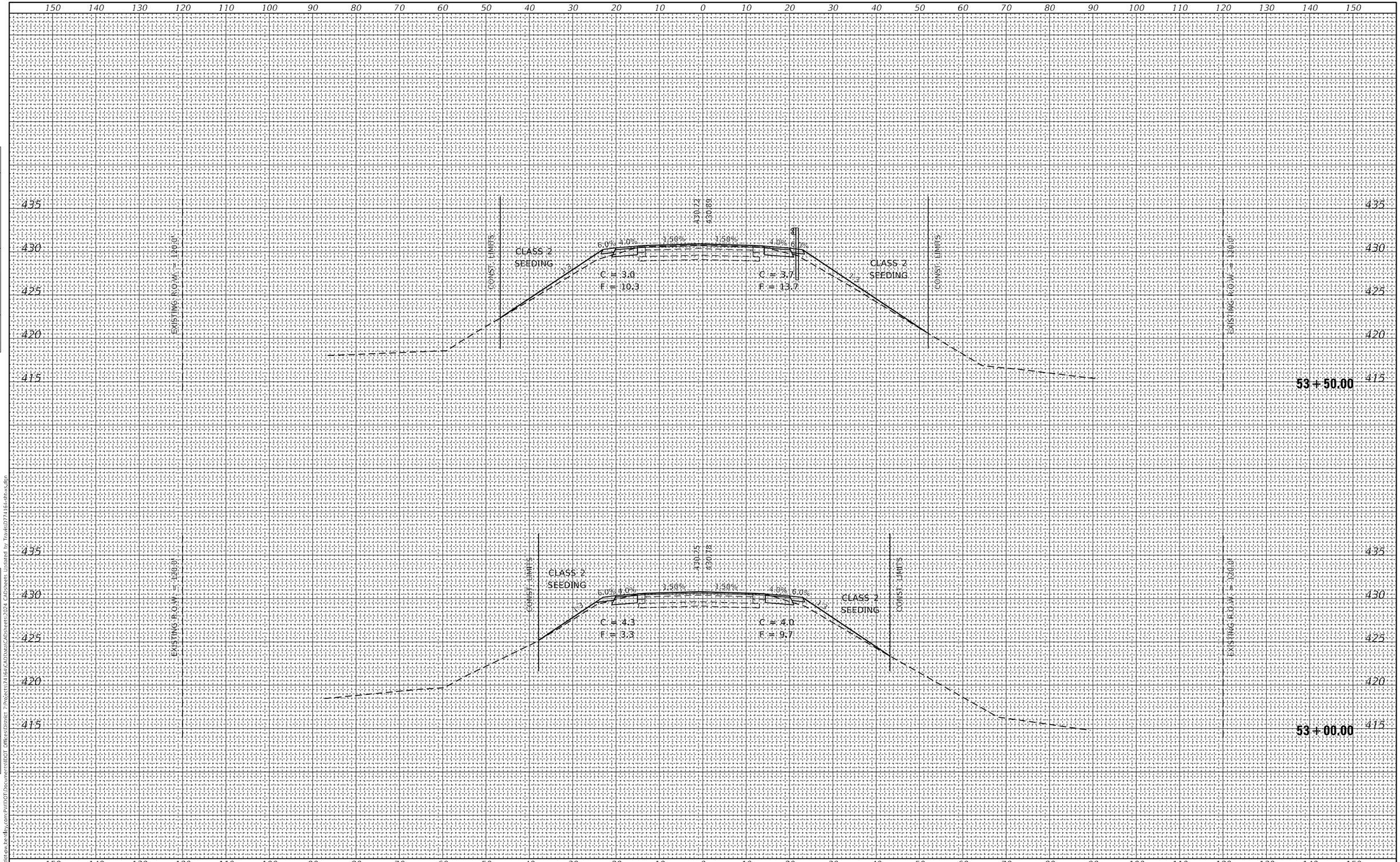

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PLOT DATE = 10/31/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – S.N. 051–0075

SCALE: | SHEET 3 OF 19 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	171
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	

FINAL SURVEY
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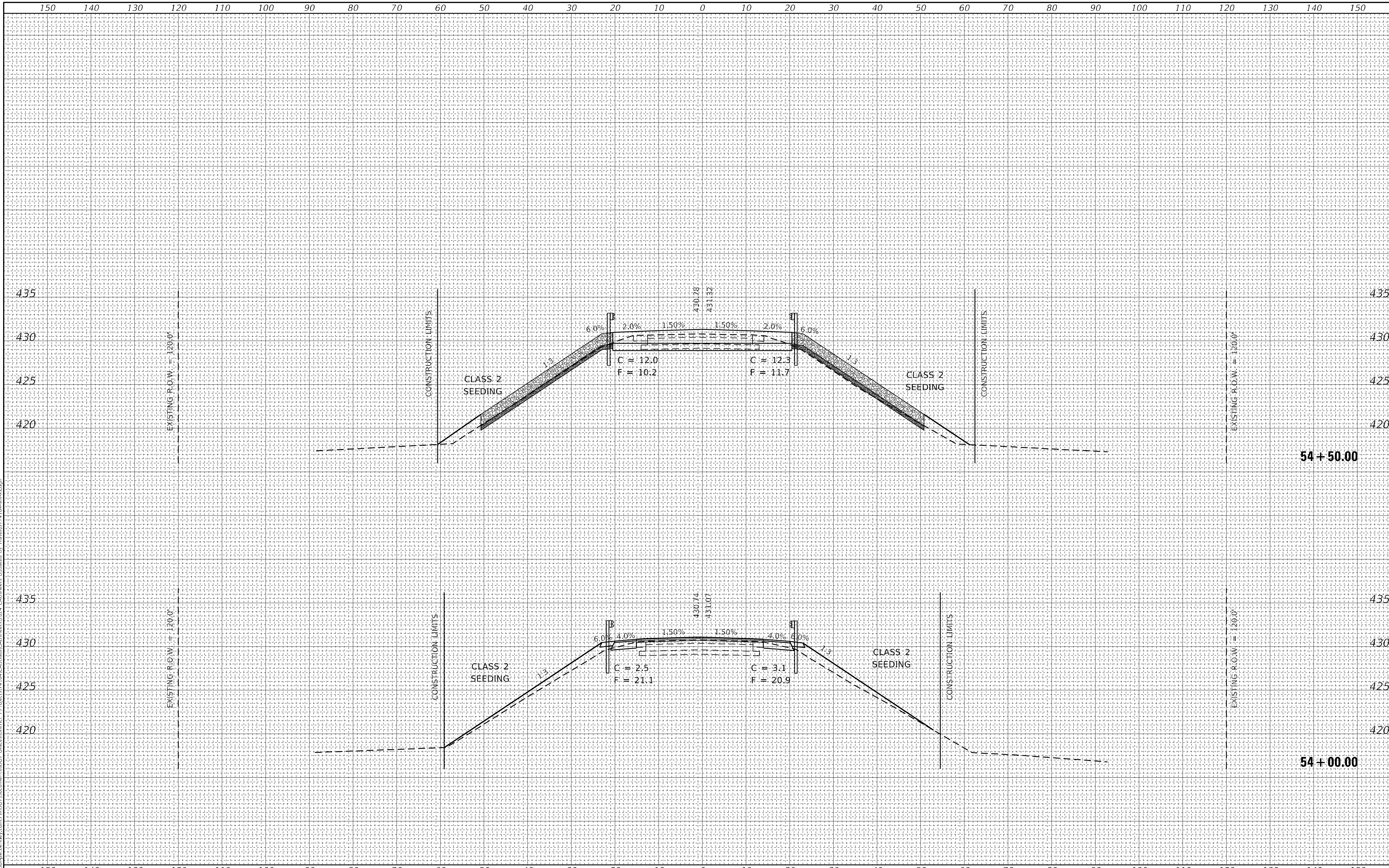

FINAL SURVEY — NOTE BOOK NO. — SURVEYED / PLOTTED / TEMPLATE / AREAS / AREAS CHECKED — BY — DATE

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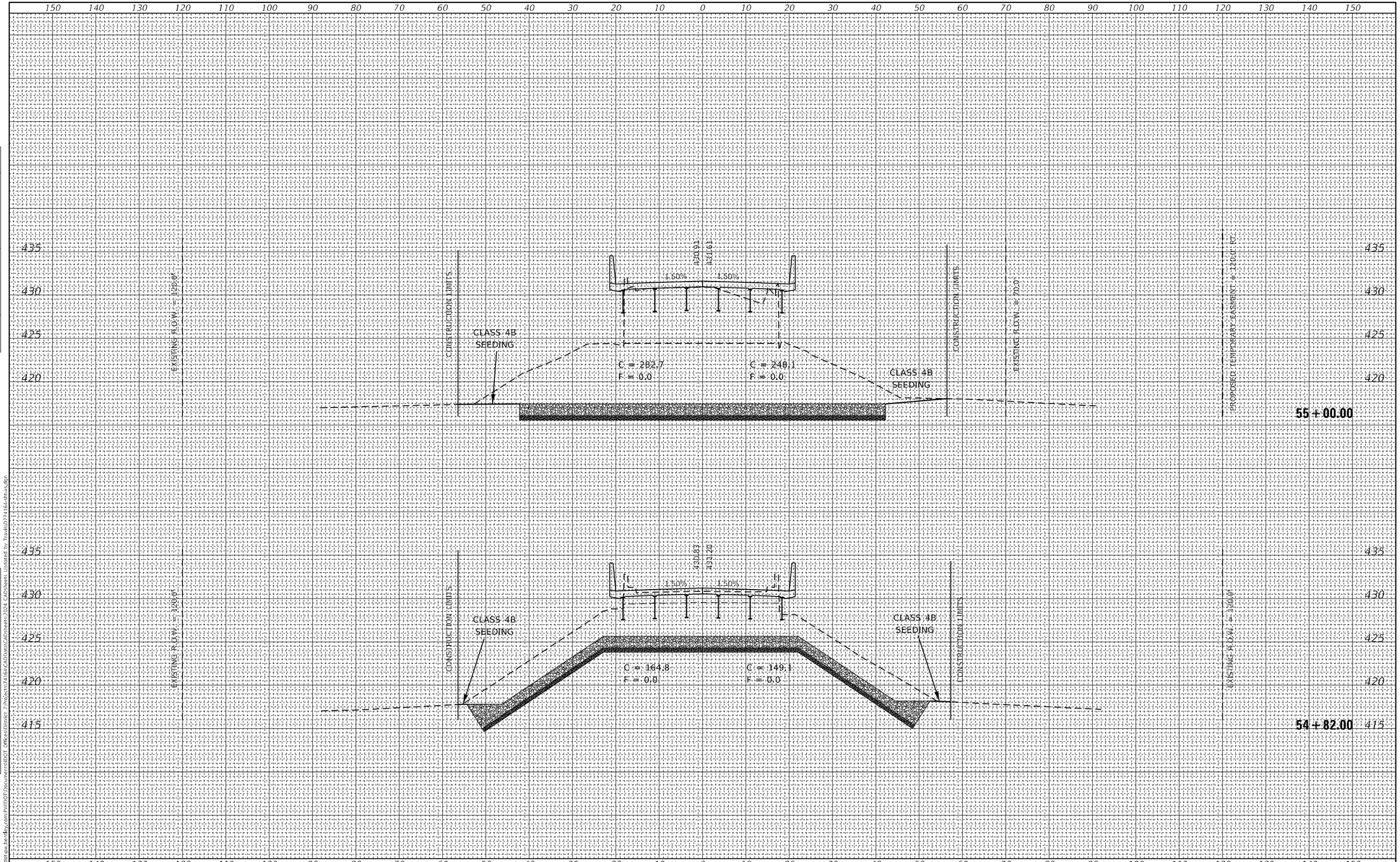
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – S.N. 051–0075

SCALE: SHEET 4 OF 19 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	172
		CONTRACT NO. 74164		
		ILLINOIS FED. AID PROJECT		



FINAL SURVEY
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ORIGINAL SURVEY
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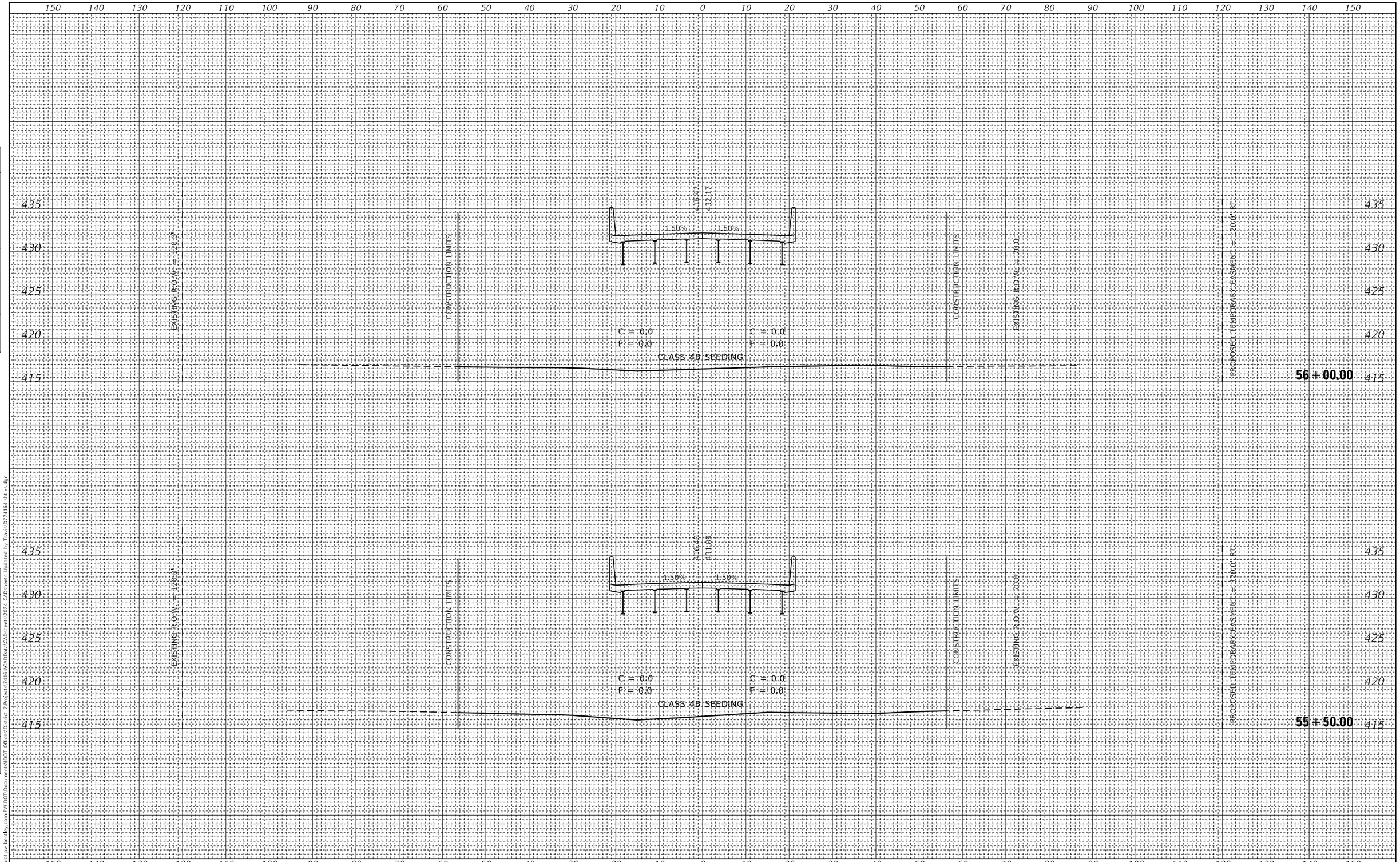
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – S.N. 051–0075

SCALE: | SHEET 5 OF 19 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	173
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	



FINAL SURVEY
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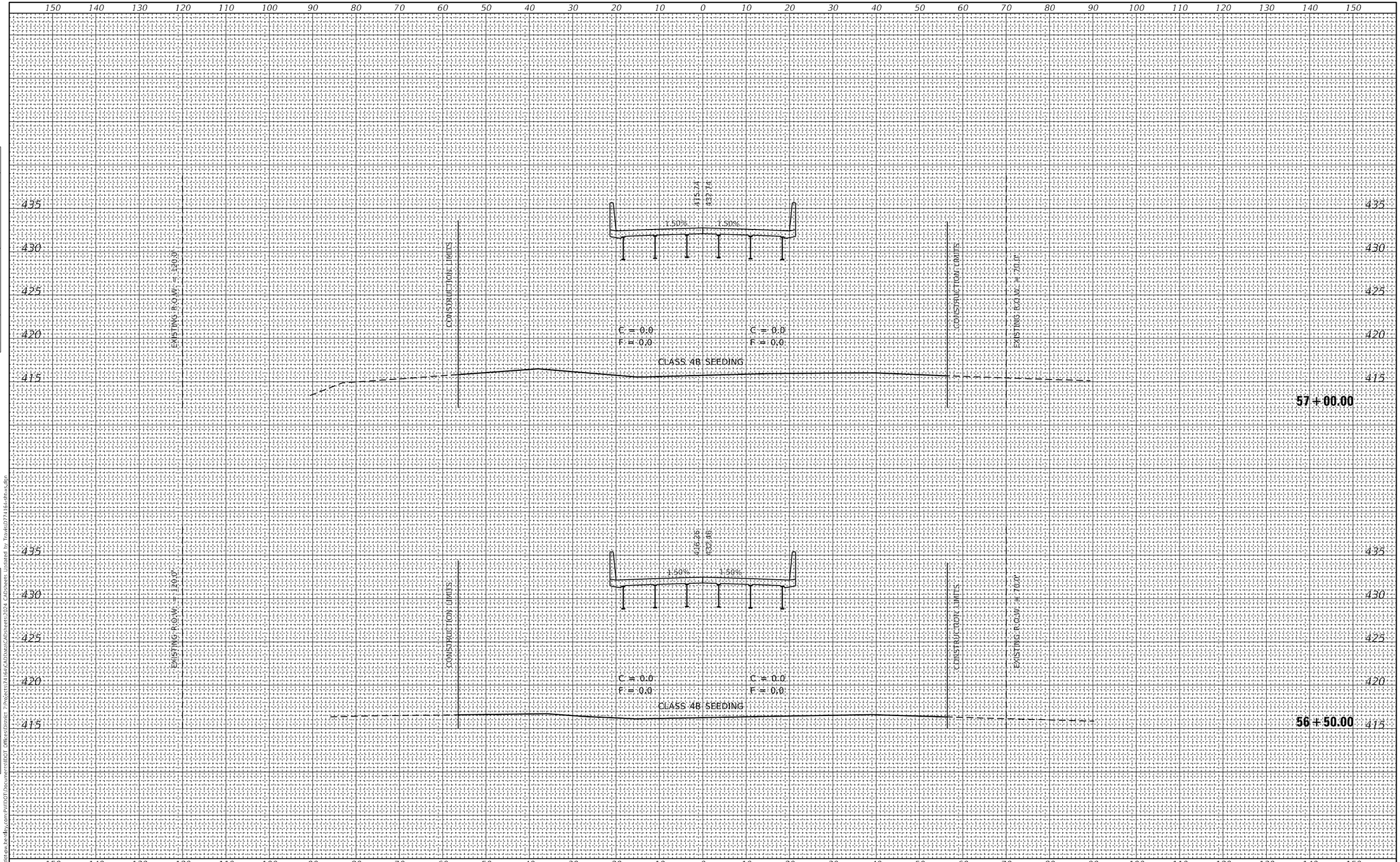
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – S.N. 051–0075

SCALE: | SHEET 6 OF 19 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	174
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	



FINAL SURVEY
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ORIGINAL SURVEY
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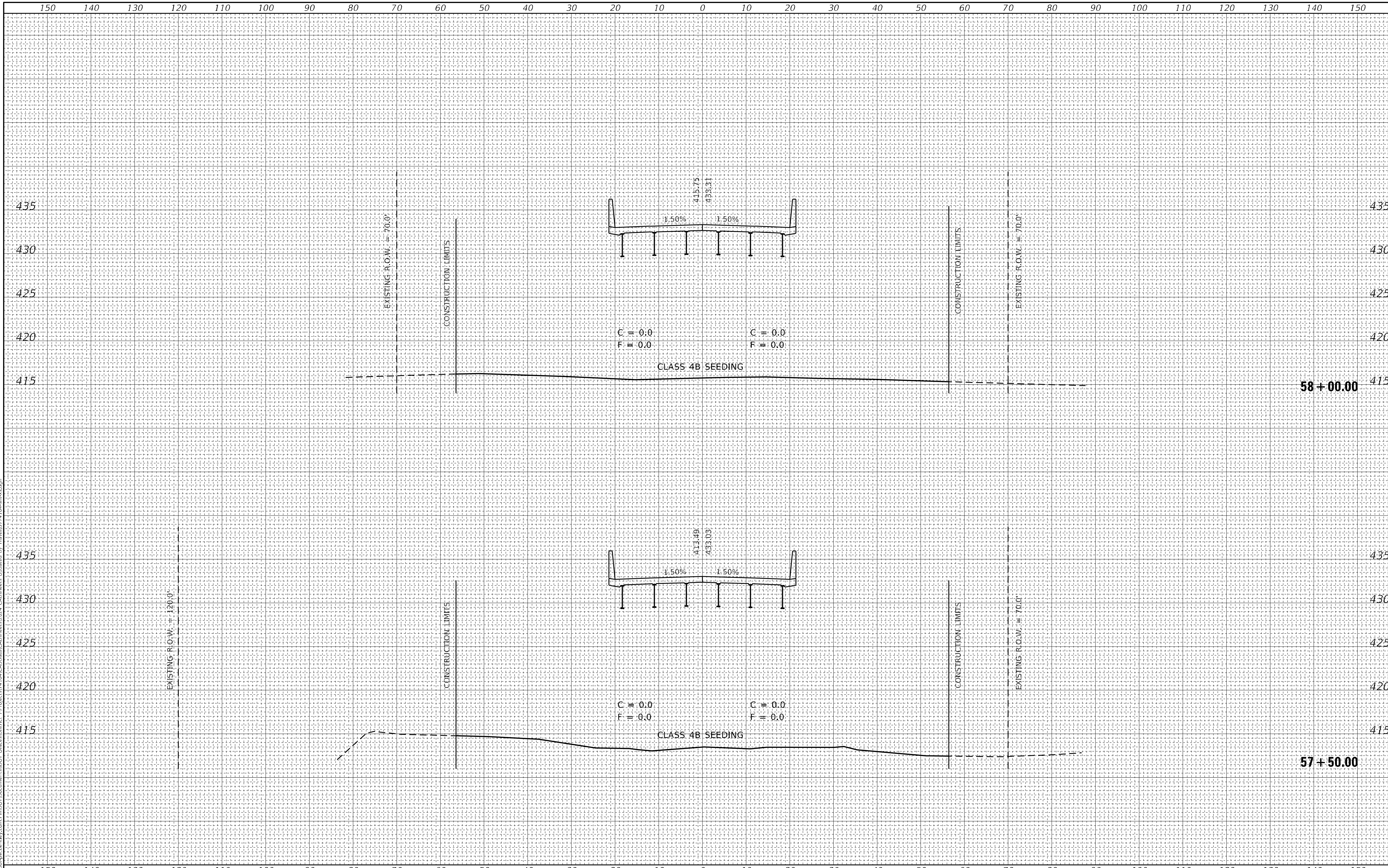
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – S.N. 051–0075

SCALE: | SHEET 7 OF 19 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	175
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	



FINAL SURVEY — NOTE BOOK NO. — SURVEYED / PLOTTED / TEMPLATE / AREAS / AREAS CHECKED — BY — DATE

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

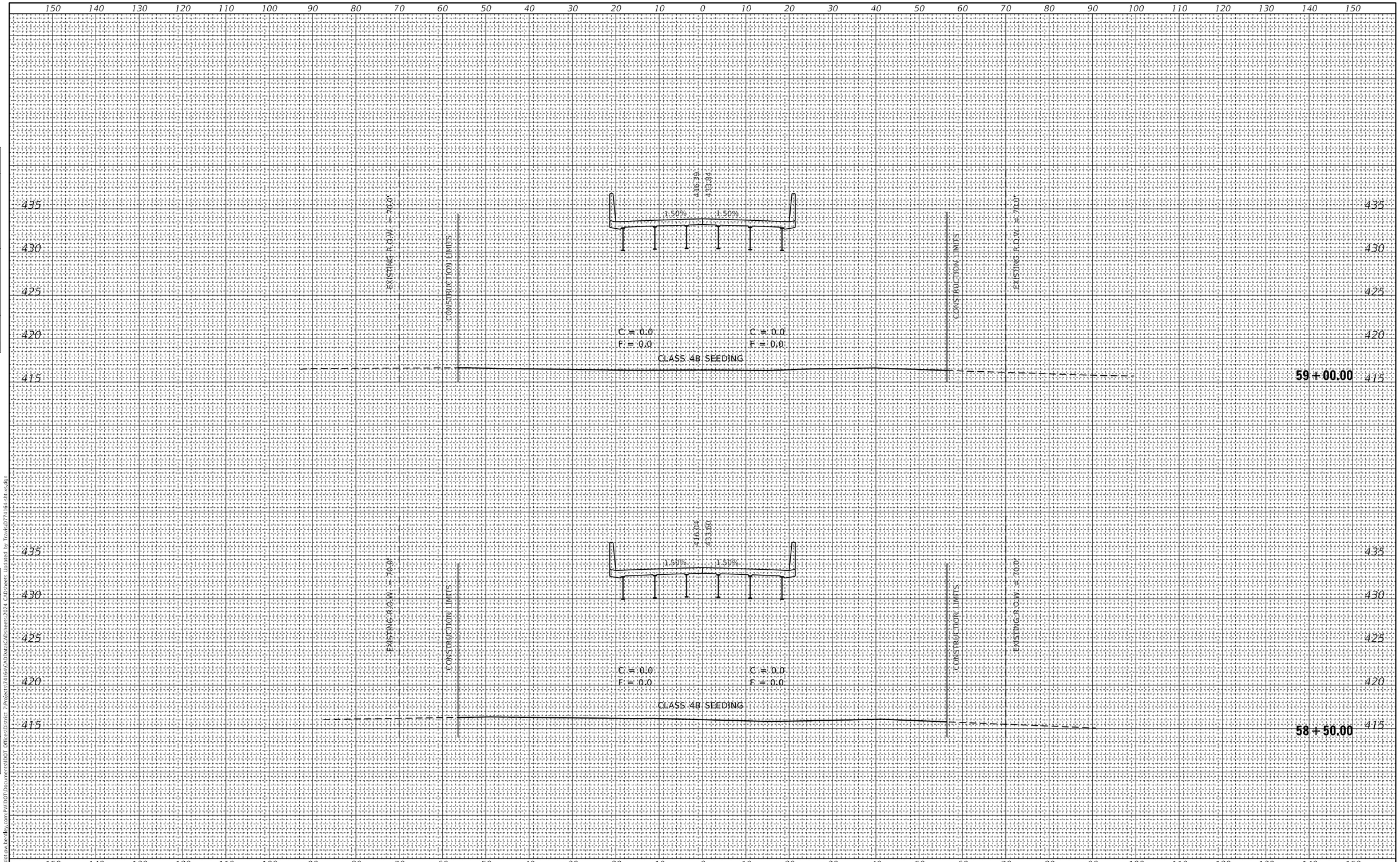
CROSS SECTIONS – S.N. 051–0075

SCALE: SHEET 8 OF 19 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	176

CONTRACT NO. 74164

ILLINOIS FED. AID PROJECT



FINAL SURVEY
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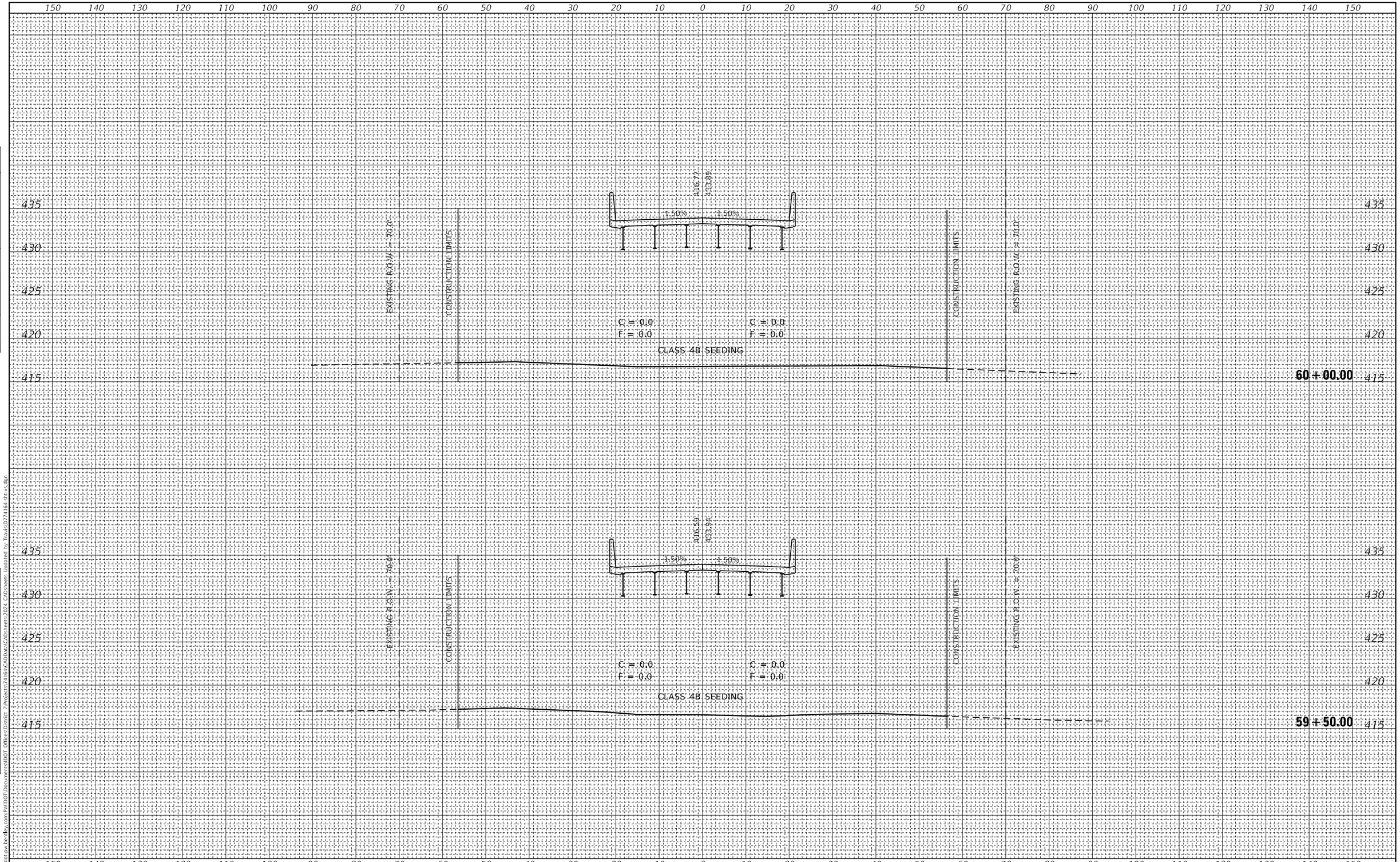
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – S.N. 051–0075

SCALE: | SHEET 9 OF 19 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	177
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	



FINAL SURVEY
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ORIGINAL SURVEY
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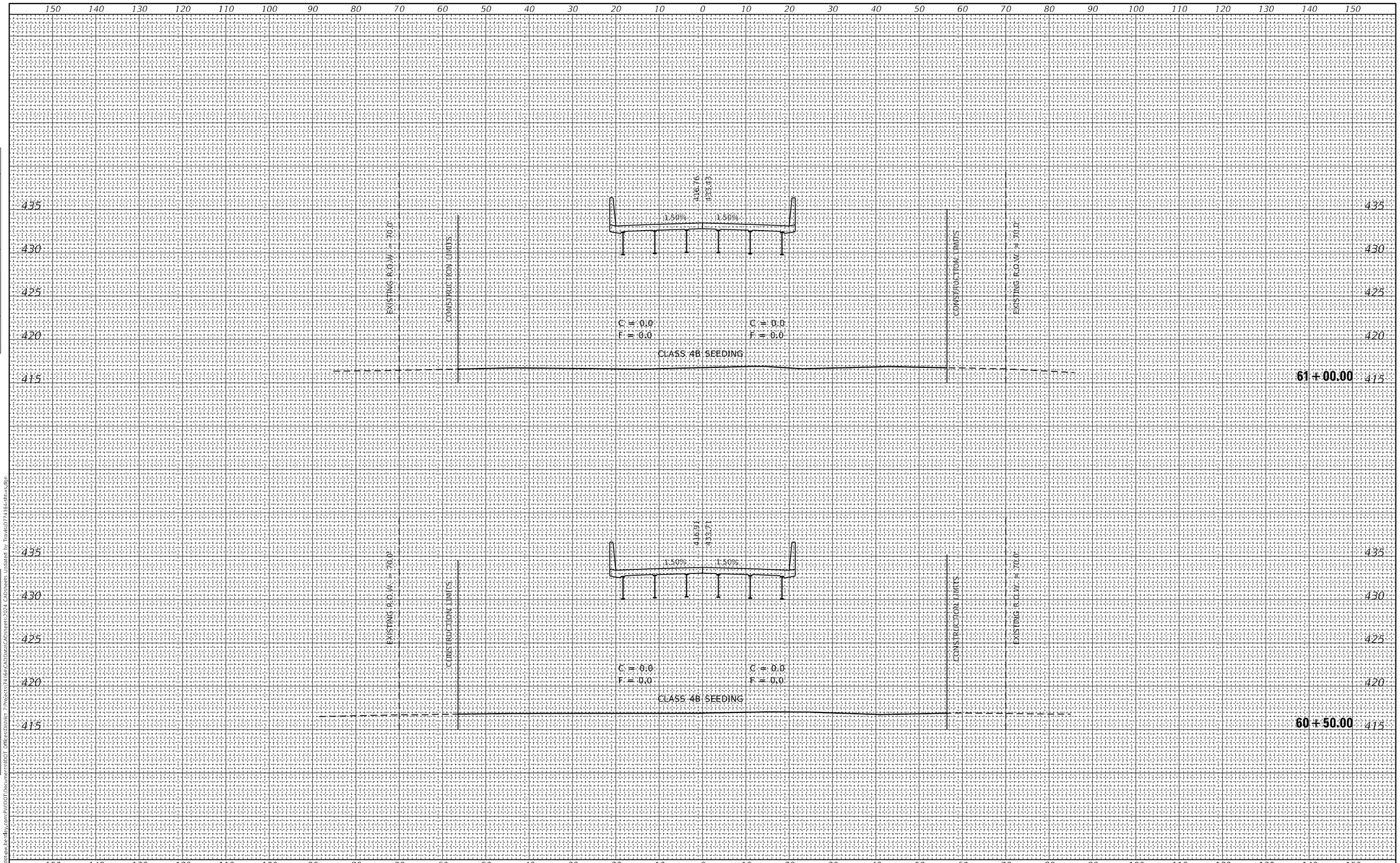
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – S.N. 051–0075

SCALE: | SHEET 10 OF 19 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	178
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – S.N. 051–0075

SCALE: | SHEET 11 OF 19 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	179
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	

ORIGINAL SURVEY | NOTE BOOK | NO. | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED | BY | DATE

FINAL SURVEY | NOTE BOOK | NO. | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED | BY | DATE

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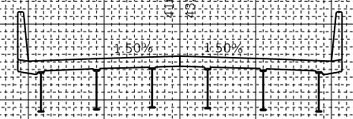
425
420
415



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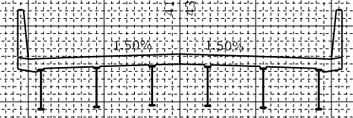
F = 0.0
C = 0.0
F = 0.0
CONSTRUCTION LIMITS
EXISTING R.O.W. = 70.0'
CLASS 4B SEEDING

62 + 00.00



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CONSTRUCTION LIMITS
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F = 0.0
C = 0.0
F = 0.0
CONSTRUCTION LIMITS
EXISTING R.O.W. = 70.0'
CLASS 4B SEEDING

61 + 50.00

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PLOT DATE = 10/31/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – S.N. 051–0075

SCALE: | SHEET 12 OF 19 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	180
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	

FINAL SURVEY
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ORIGINAL SURVEY
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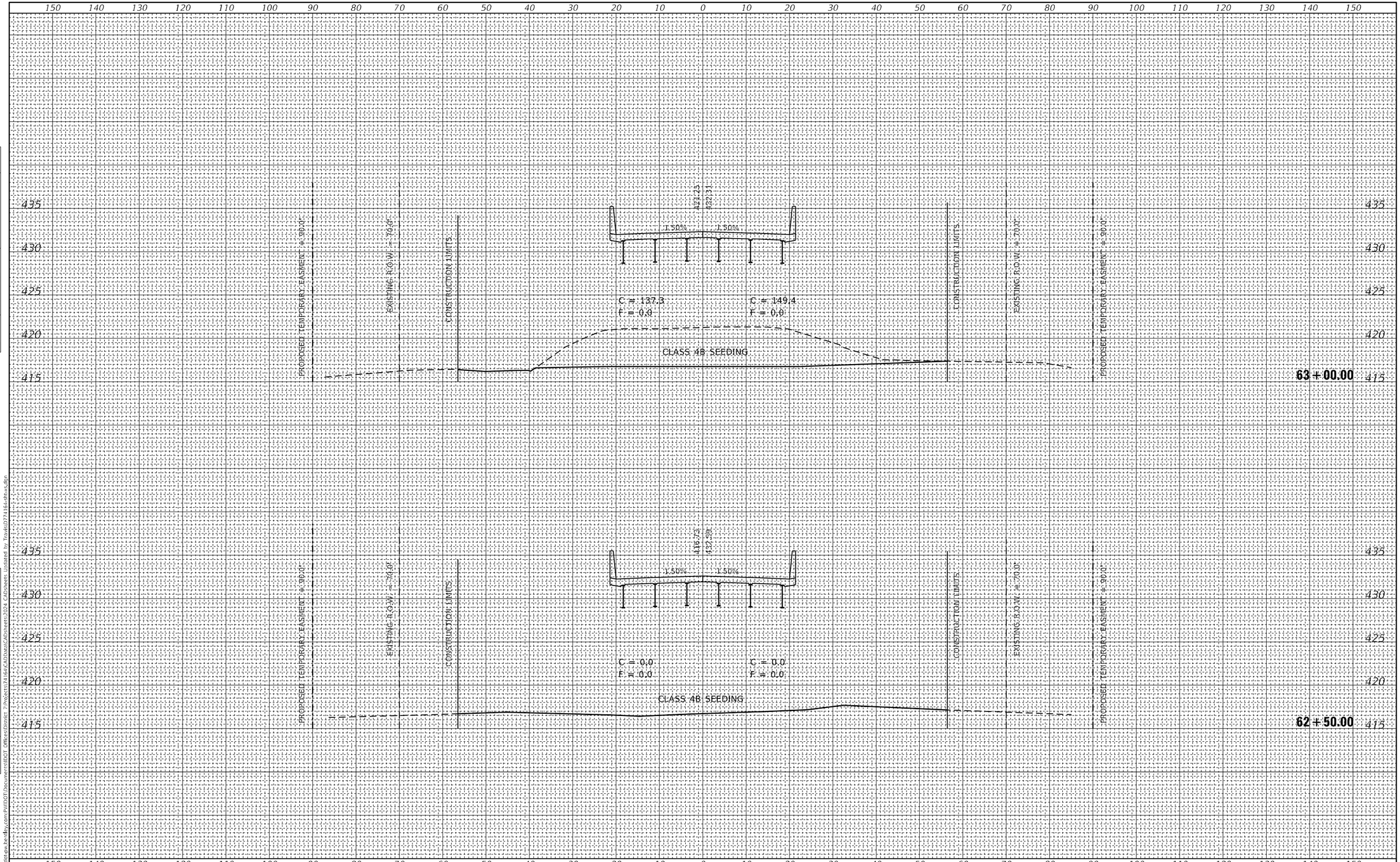

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – S.N. 051–0075

SCALE: | SHEET 13 OF 19 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	181
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	

FINAL SURVEY
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ORIGINAL SURVEY
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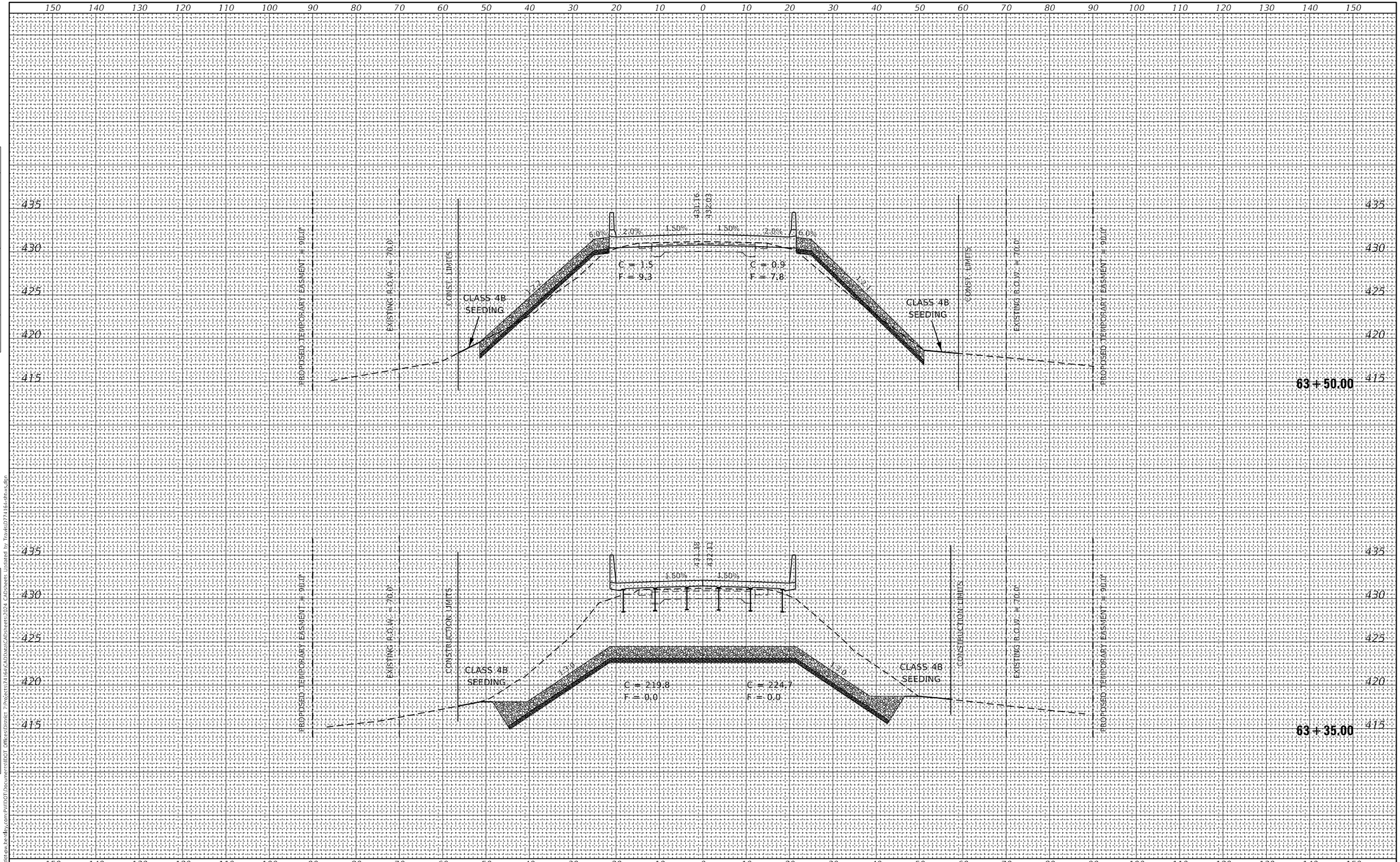

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – S.N. 051–0075

SCALE: | SHEET 14 OF 19 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	182
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	

ORIGINAL SURVEY | FINAL SURVEY
NOTE BOOK
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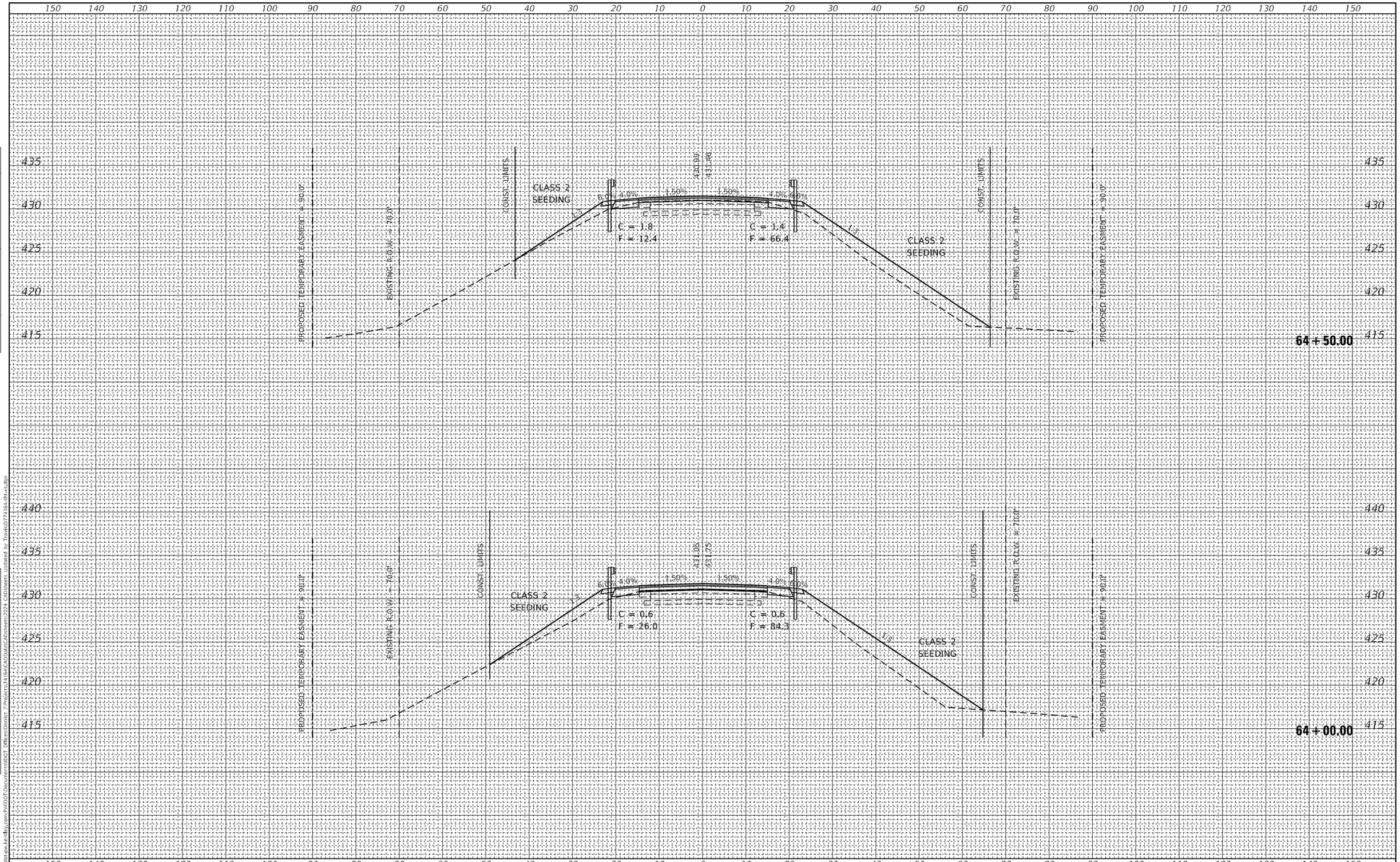

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PLOT DATE = 10/31/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – S.N. 051–0075

SCALE: | SHEET 15 OF 19 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	183
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	

FINAL SURVEY | NOTE BOOK | NO. | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED | BY | DATE

ORIGINAL SURVEY | NOTE BOOK | NO. | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED | BY | DATE

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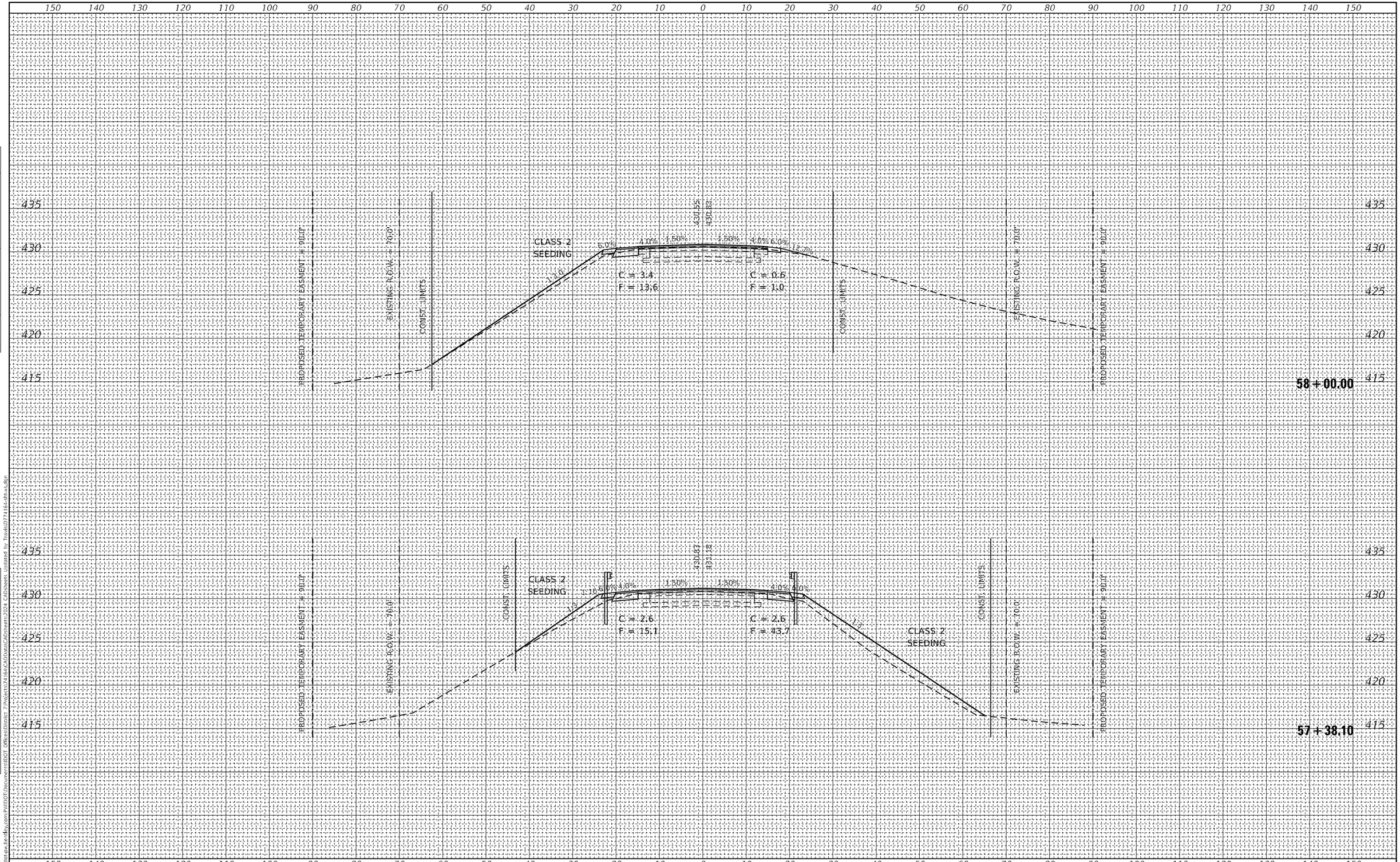

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PLOT DATE = 10/31/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – S.N. 051–0075

SCALE: | SHEET 16 OF 19 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	184
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	

ORIGINAL SURVEY / FINAL SURVEY
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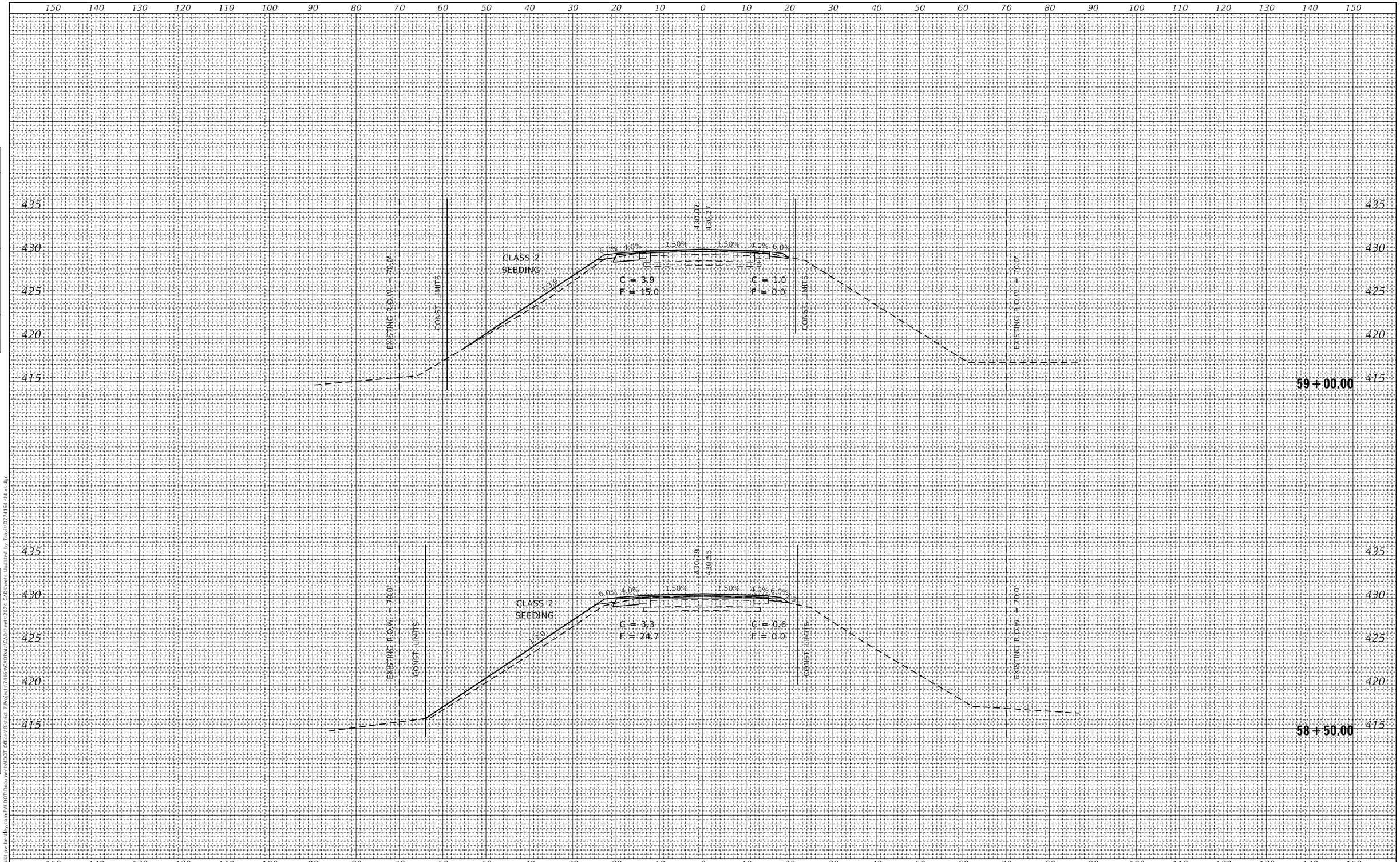

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PLOT DATE = 10/31/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – S.N. 051–0075

SCALE: | SHEET 17 OF 19 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	185
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	

FINAL SURVEY | NOTE BOOK | NO. | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED | BY | DATE

ORIGINAL SURVEY | NOTE BOOK | NO. | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED | BY | DATE

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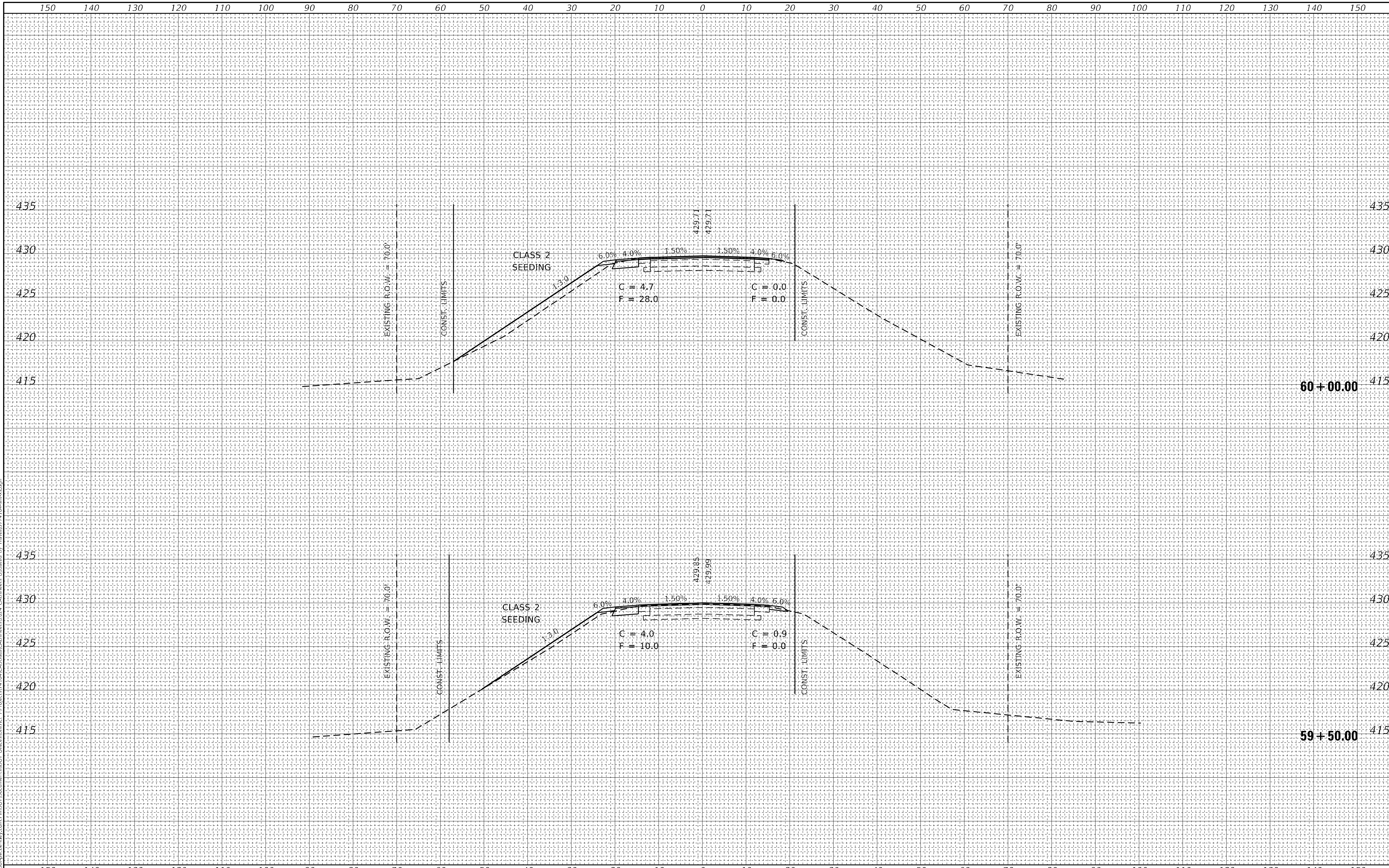

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PLOT DATE = 10/31/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – S.N. 051–0075

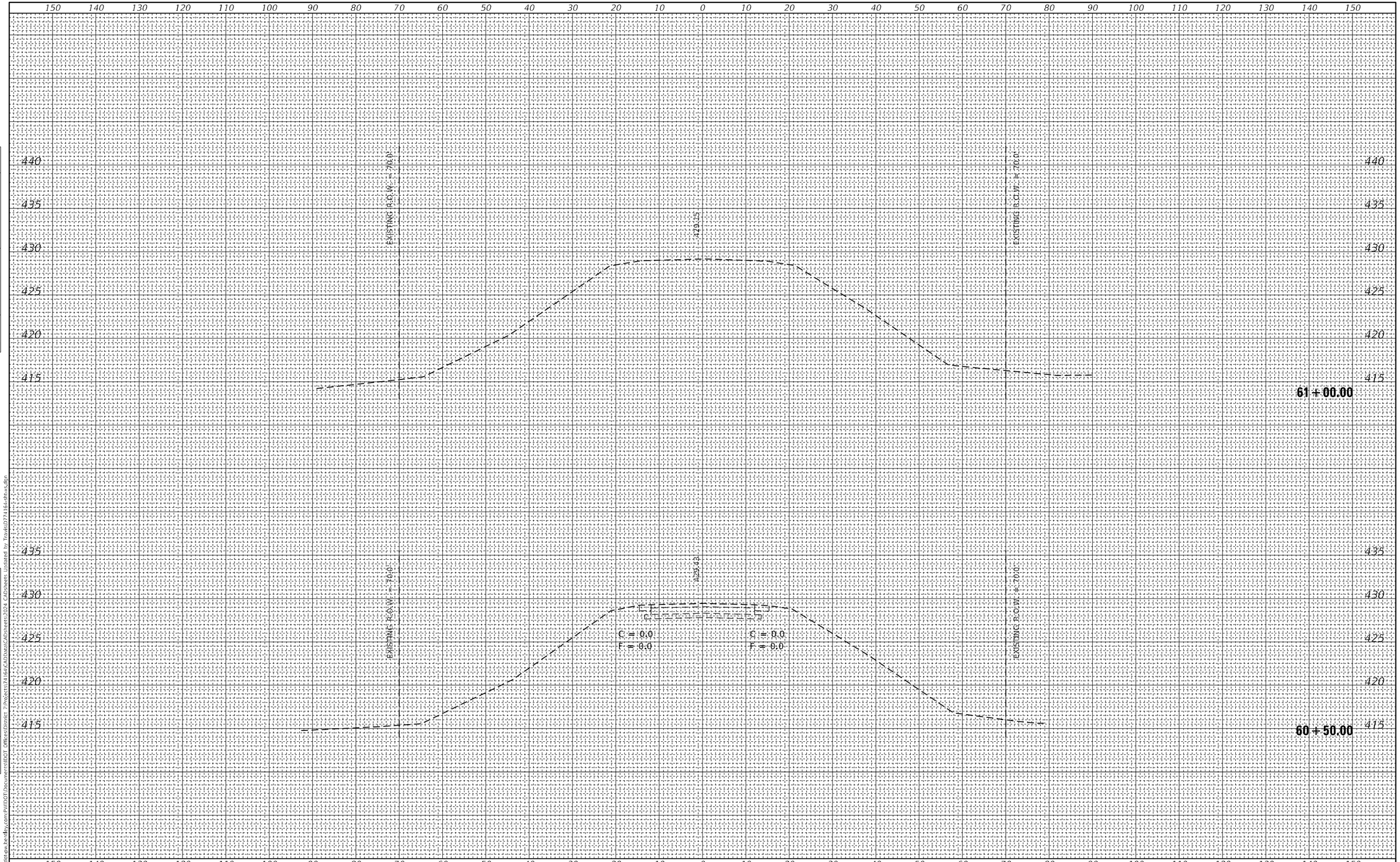
SCALE: SHEET 18 OF 19 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	186

CONTRACT NO. 74164

ILLINOIS FED. AID PROJECT

MODEL: Default



FINAL SURVEY
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ORIGINAL SURVEY
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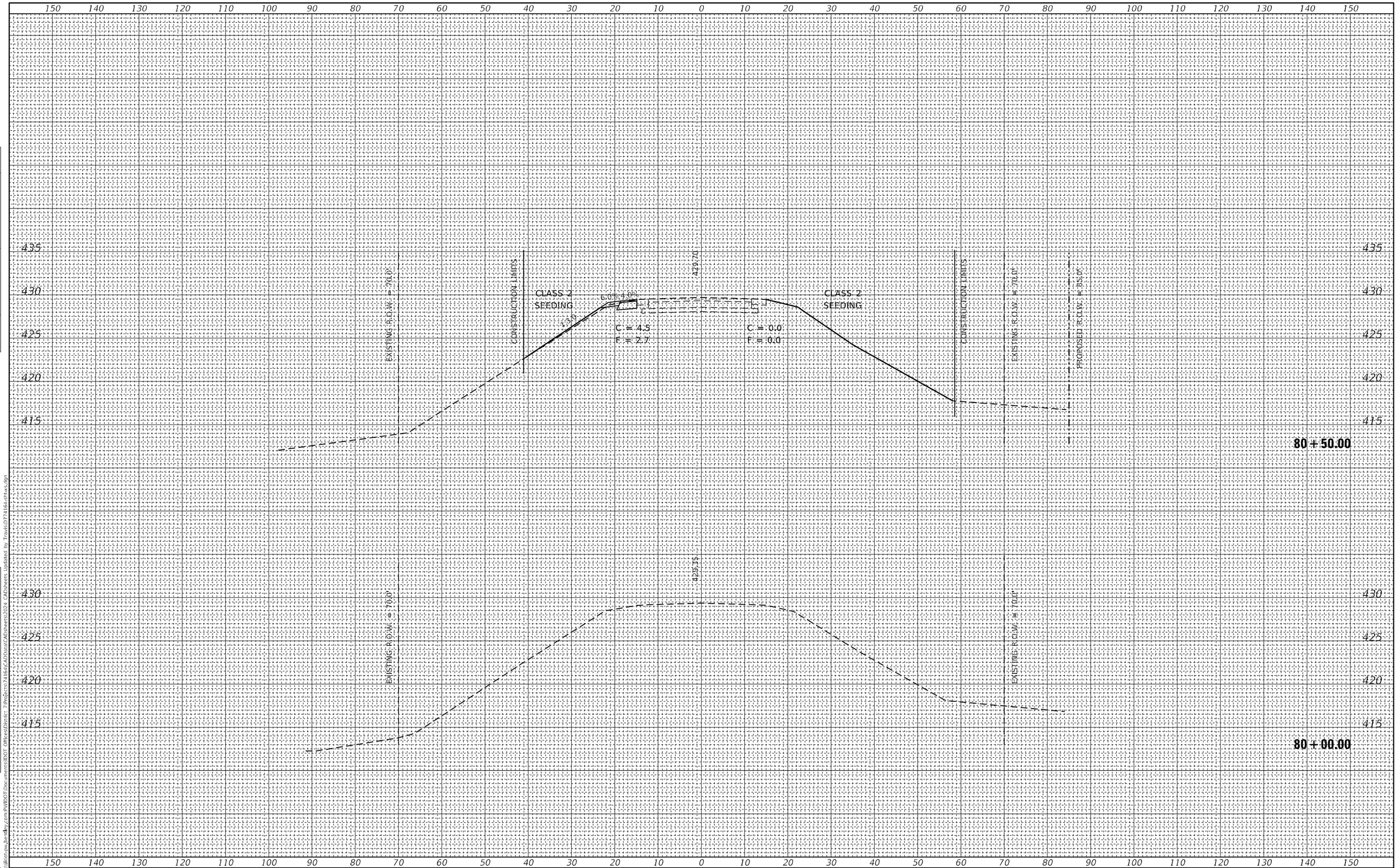
PLOT DATE = 10/31/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – S.N. 051–0075

SCALE: | SHEET 19 OF 19 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	187
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	



FINAL SURVEY	NOTE BOOK	NO.
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AREAS CHECKED		

BY	DATE

ORIGINAL SURVEY	NOTE BOOK	NO.
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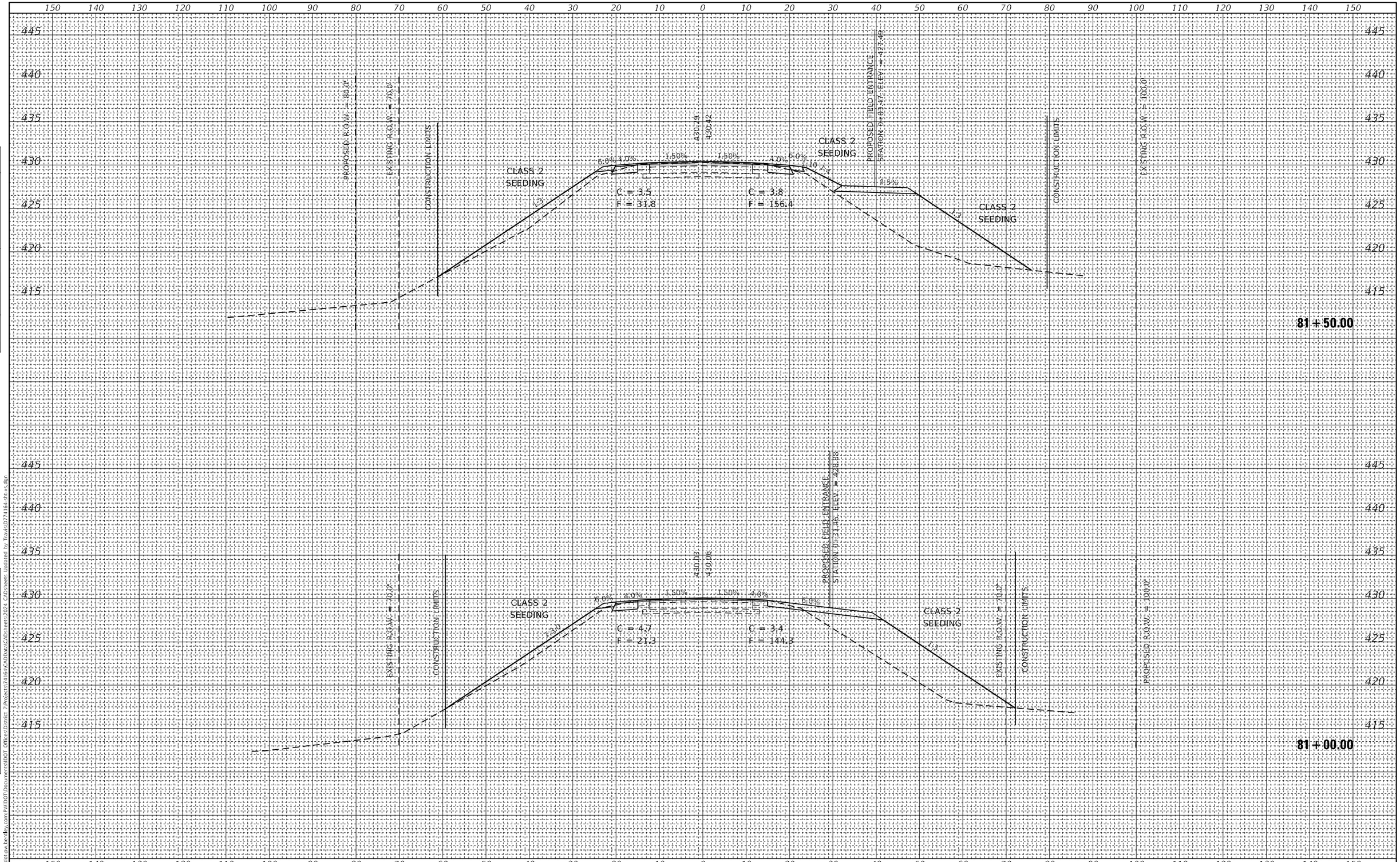
PLOT DATE = 10/31/2024	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – S.N. 051–0074

SCALE: | SHEET 1 OF 11 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	188
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	



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PLOT DATE = 10/31/2024	DATE -	REVISED -	

CROSS SECTIONS – S.N. 051–0074

SCALE: | SHEET 2 OF 11 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	189
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	

ORIGINAL SURVEY | NOTE BOOK | NO. | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED | BY | DATE

FINAL SURVEY | NOTE BOOK | NO. | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED | BY | DATE

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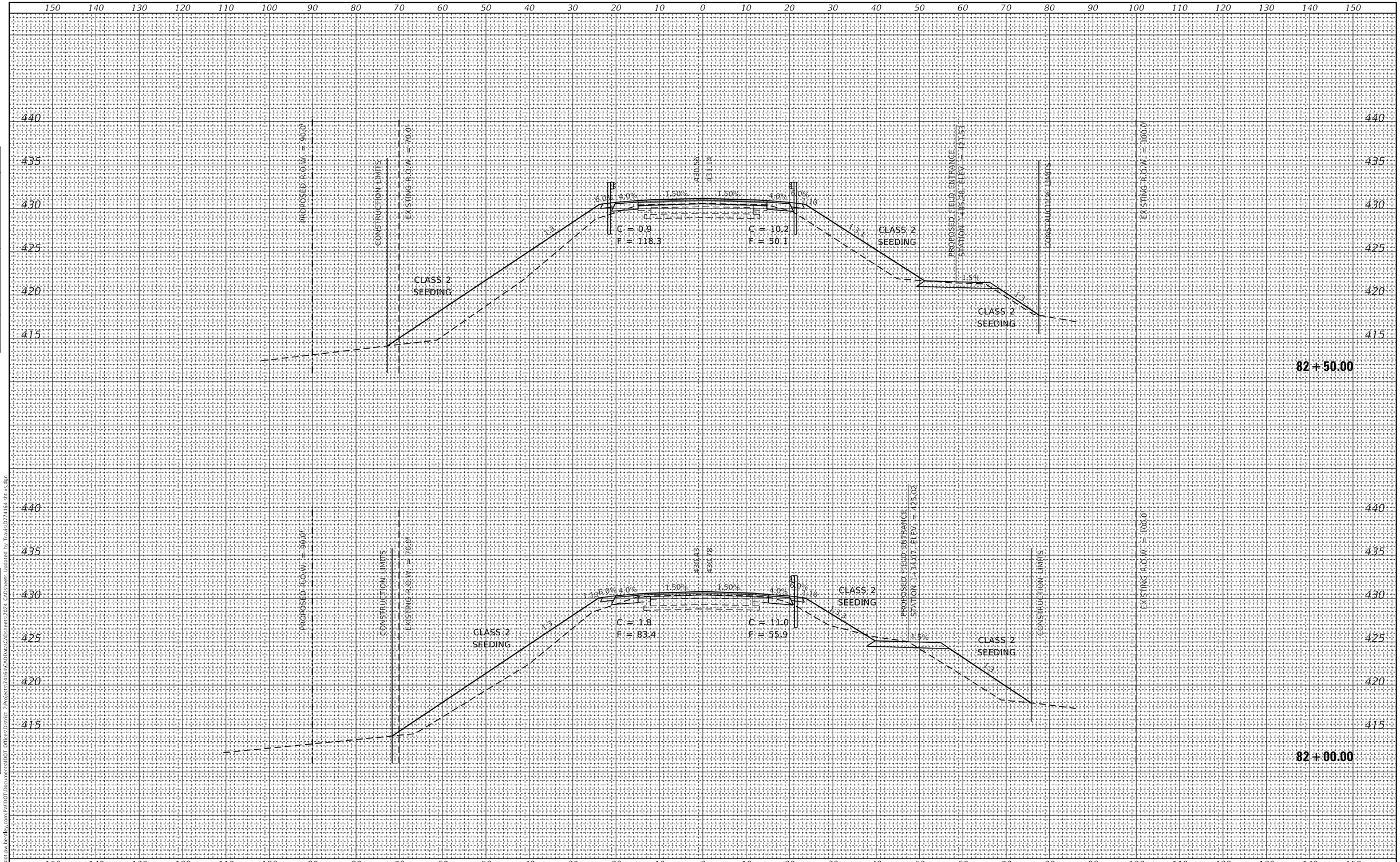

FINAL SURVEY
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ORIGINAL SURVEY
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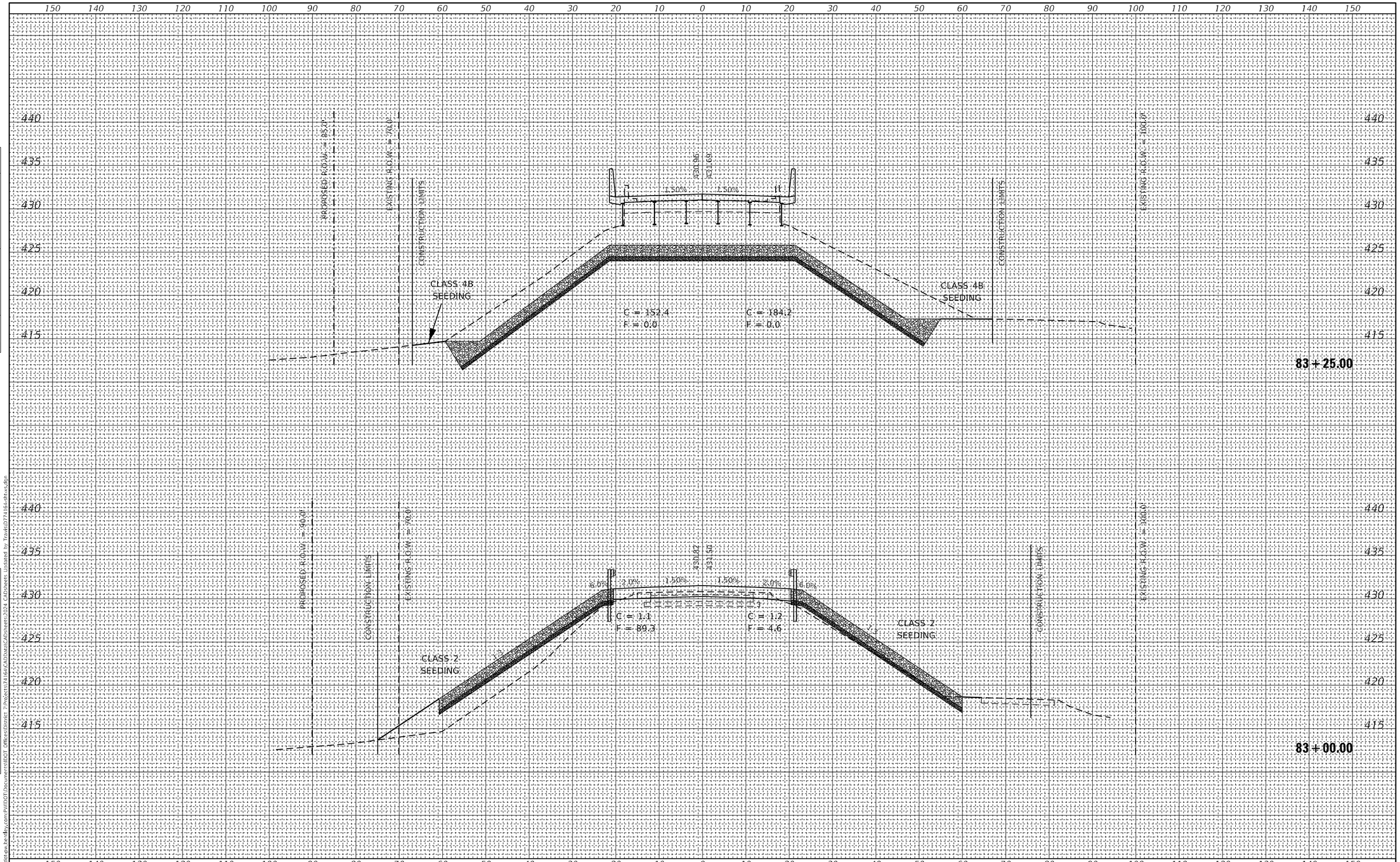
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – S.N. 051–0074

SCALE: | SHEET 3 OF 11 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	190
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	



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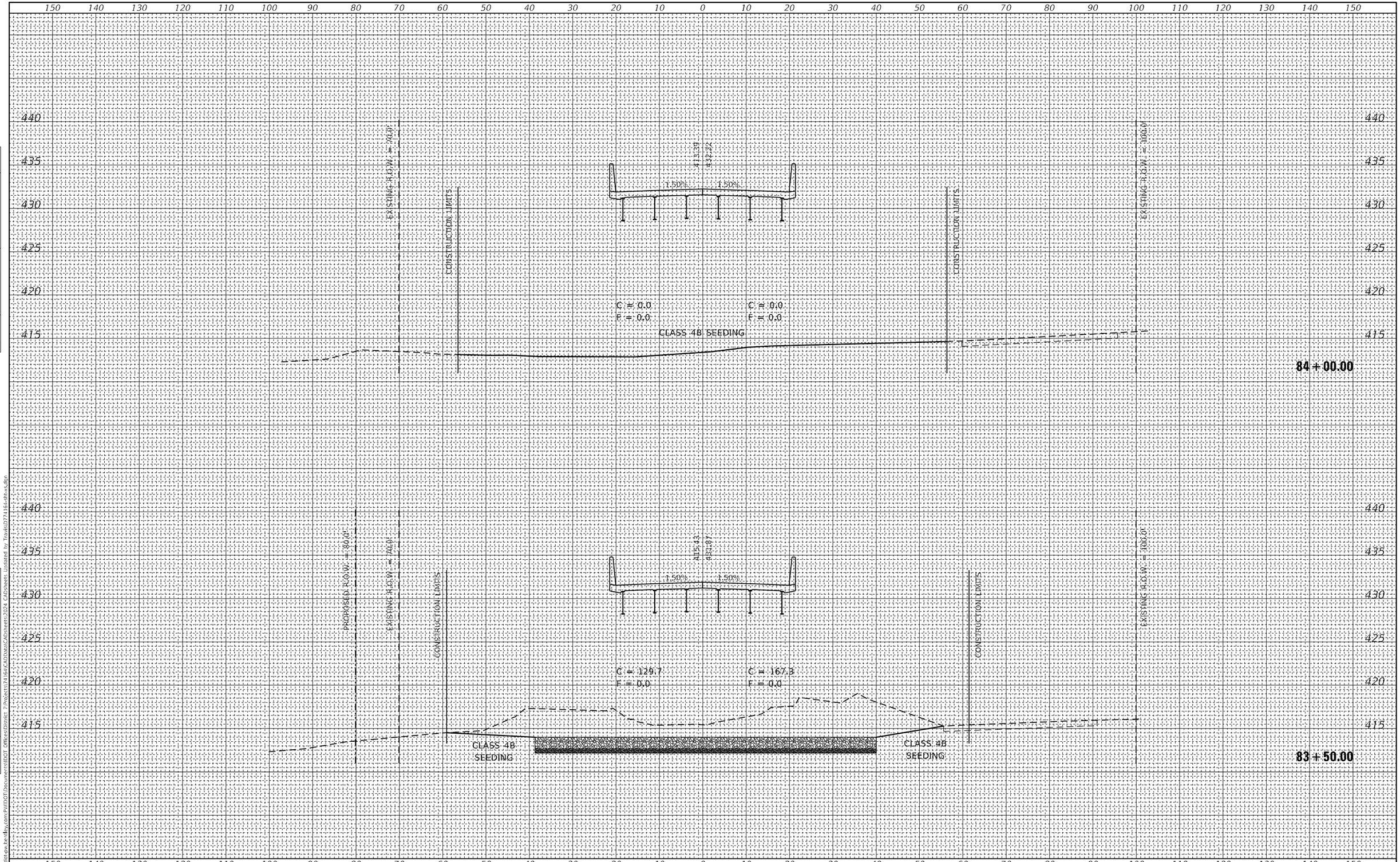
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – S.N. 051–0074

SCALE: | SHEET 4 OF 11 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	191
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – S.N. 051–0074

SCALE: | SHEET 5 OF 11 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	192
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

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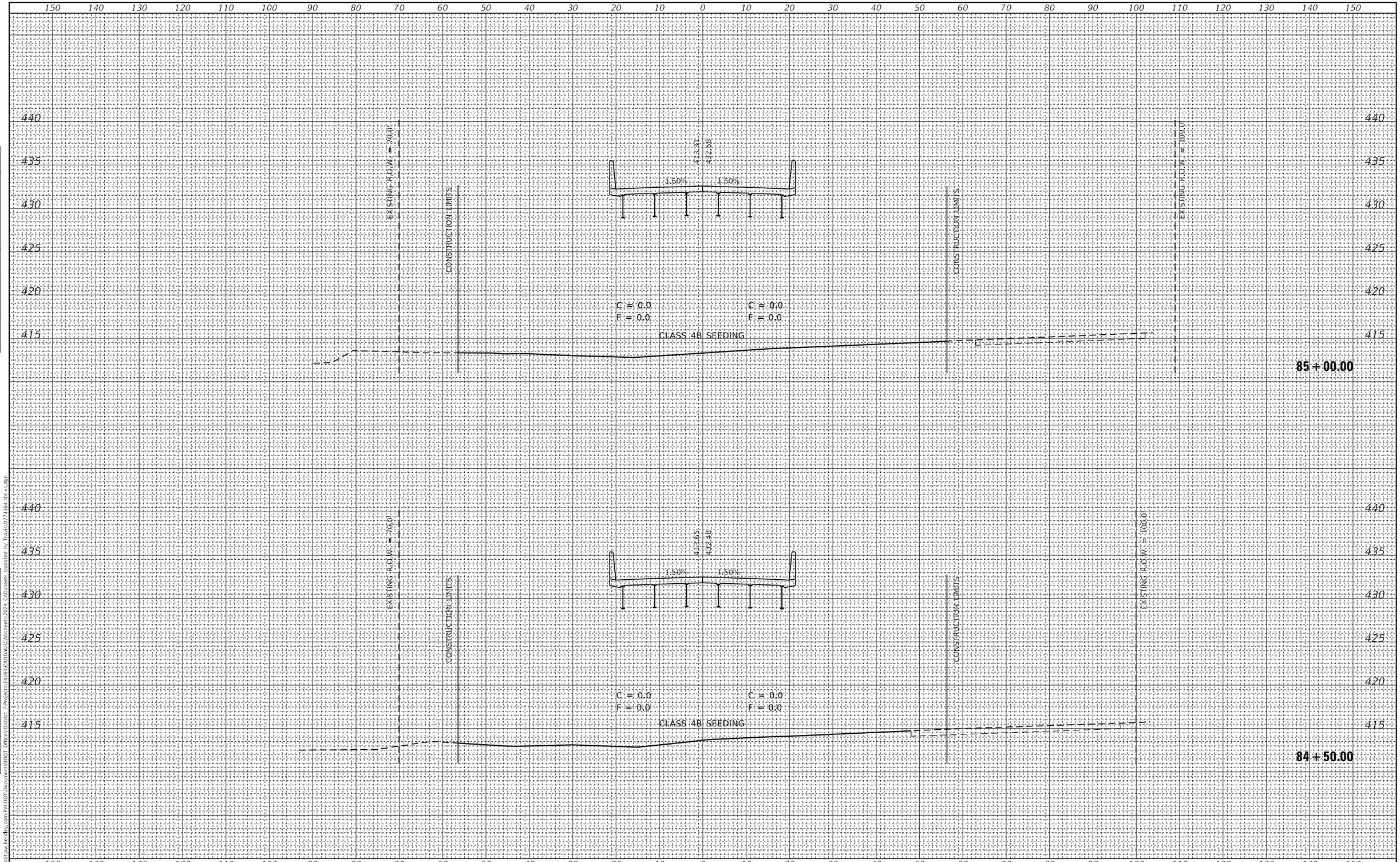

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ORIGINAL SURVEY
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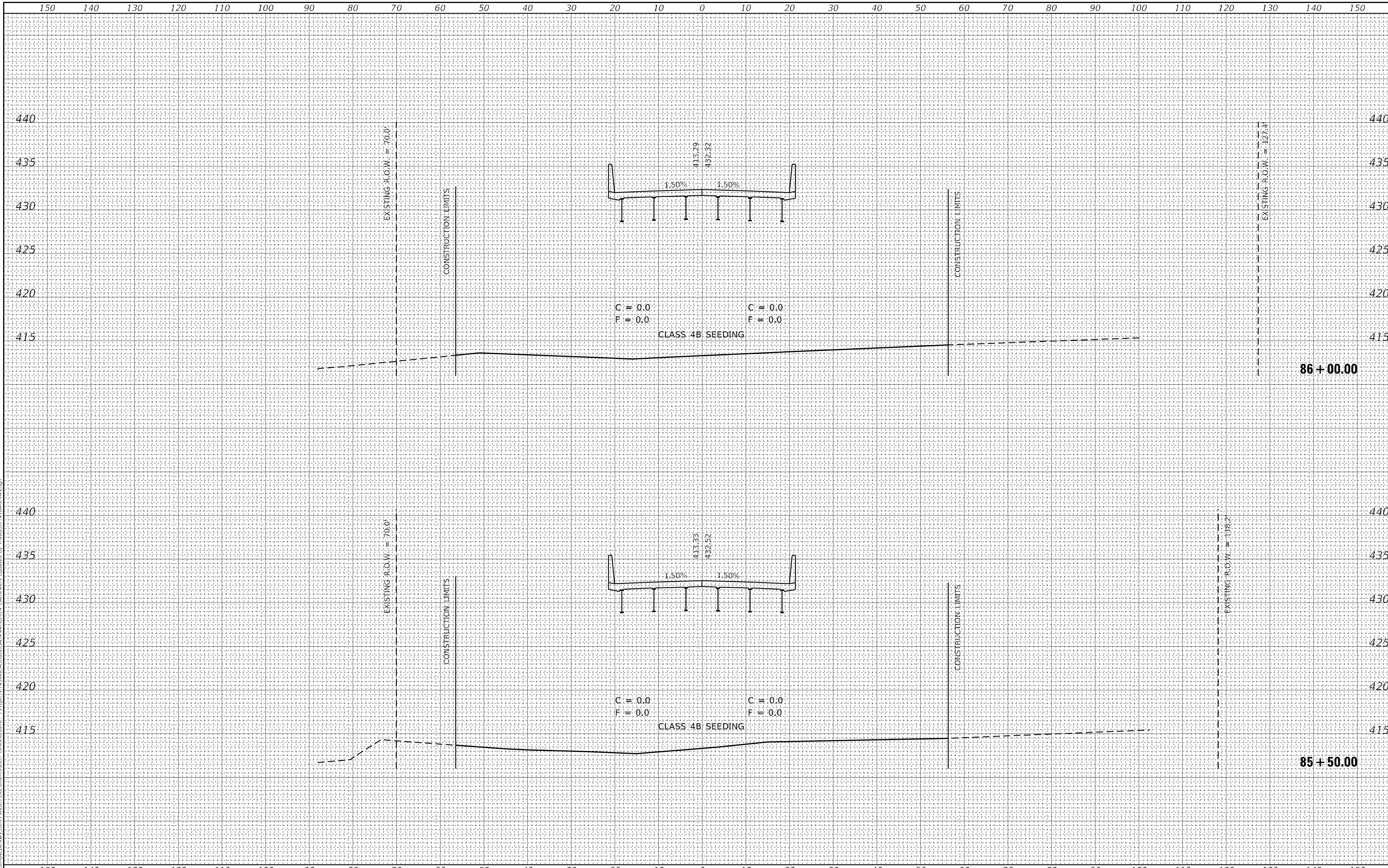
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – S.N. 051–0074

SCALE: | SHEET 6 OF 11 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	193
		CONTRACT NO. 74164		
		ILLINOIS FED. AID PROJECT		



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

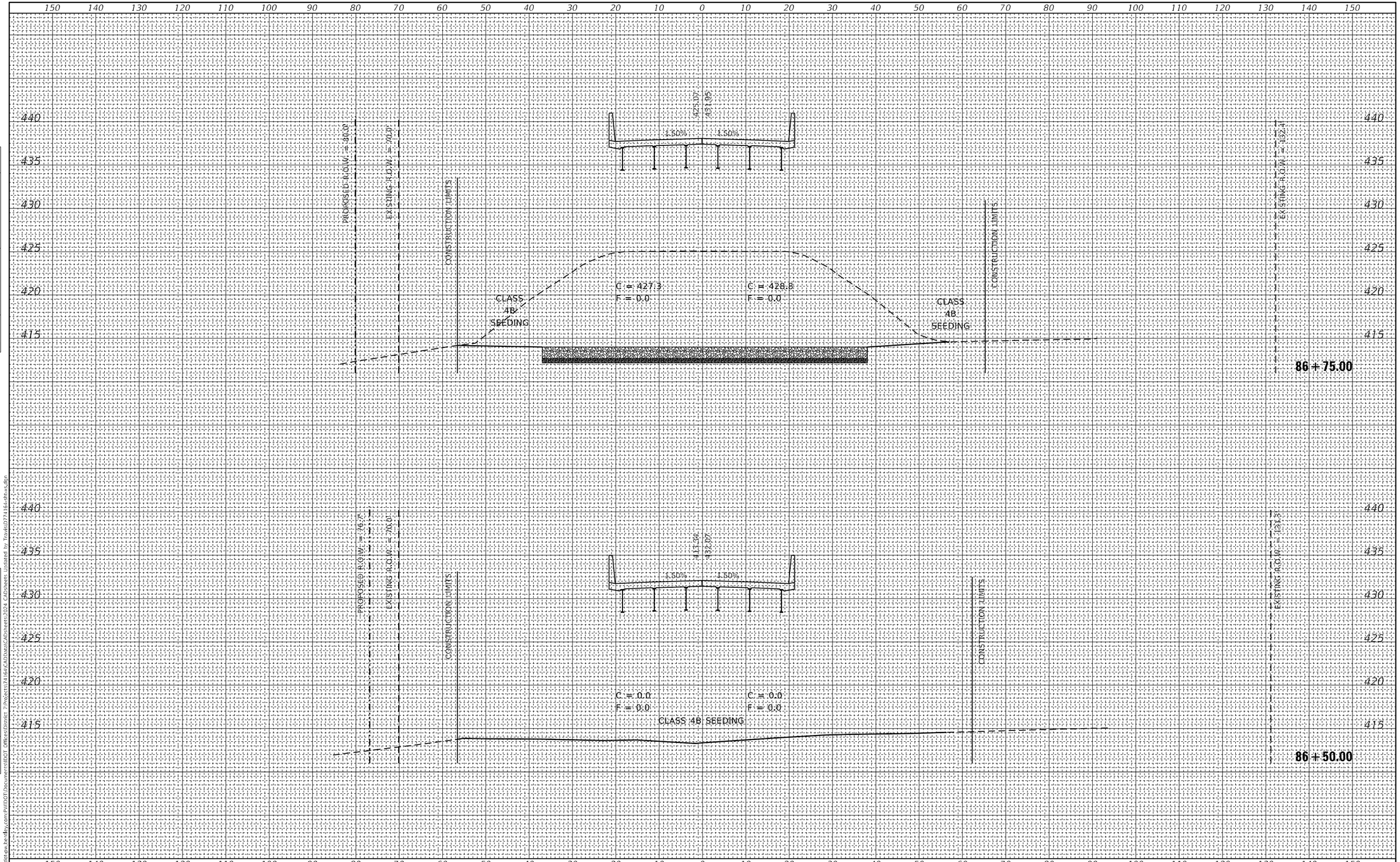
CROSS SECTIONS – S.N. 051–0074

SCALE: SHEET 7 OF 11 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	194

CONTRACT NO. 74164

ILLINOIS FED. AID PROJECT



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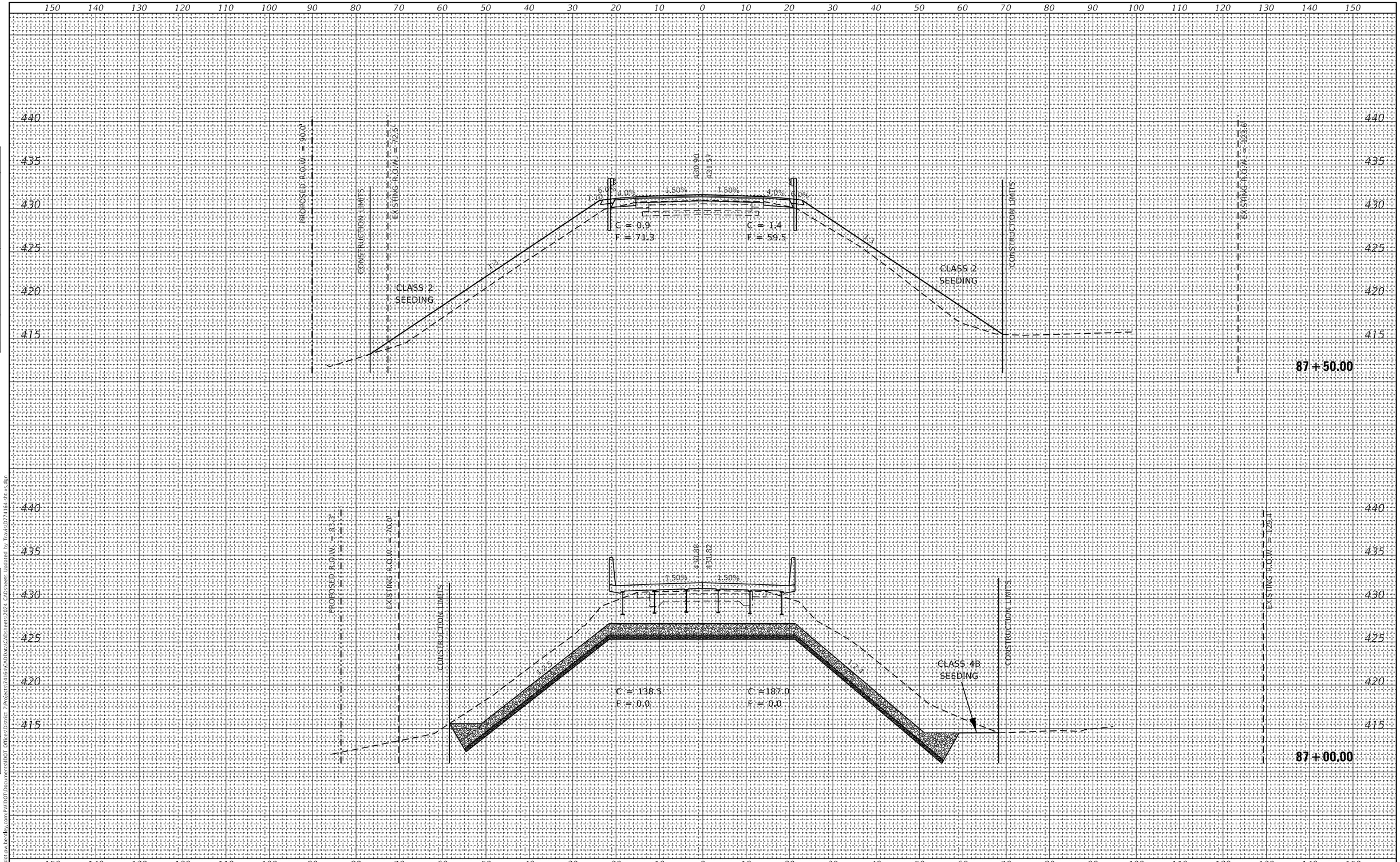
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – S.N. 051–0074

SCALE: | SHEET 8 OF 11 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	195
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	



FINAL SURVEY
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ORIGINAL SURVEY
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

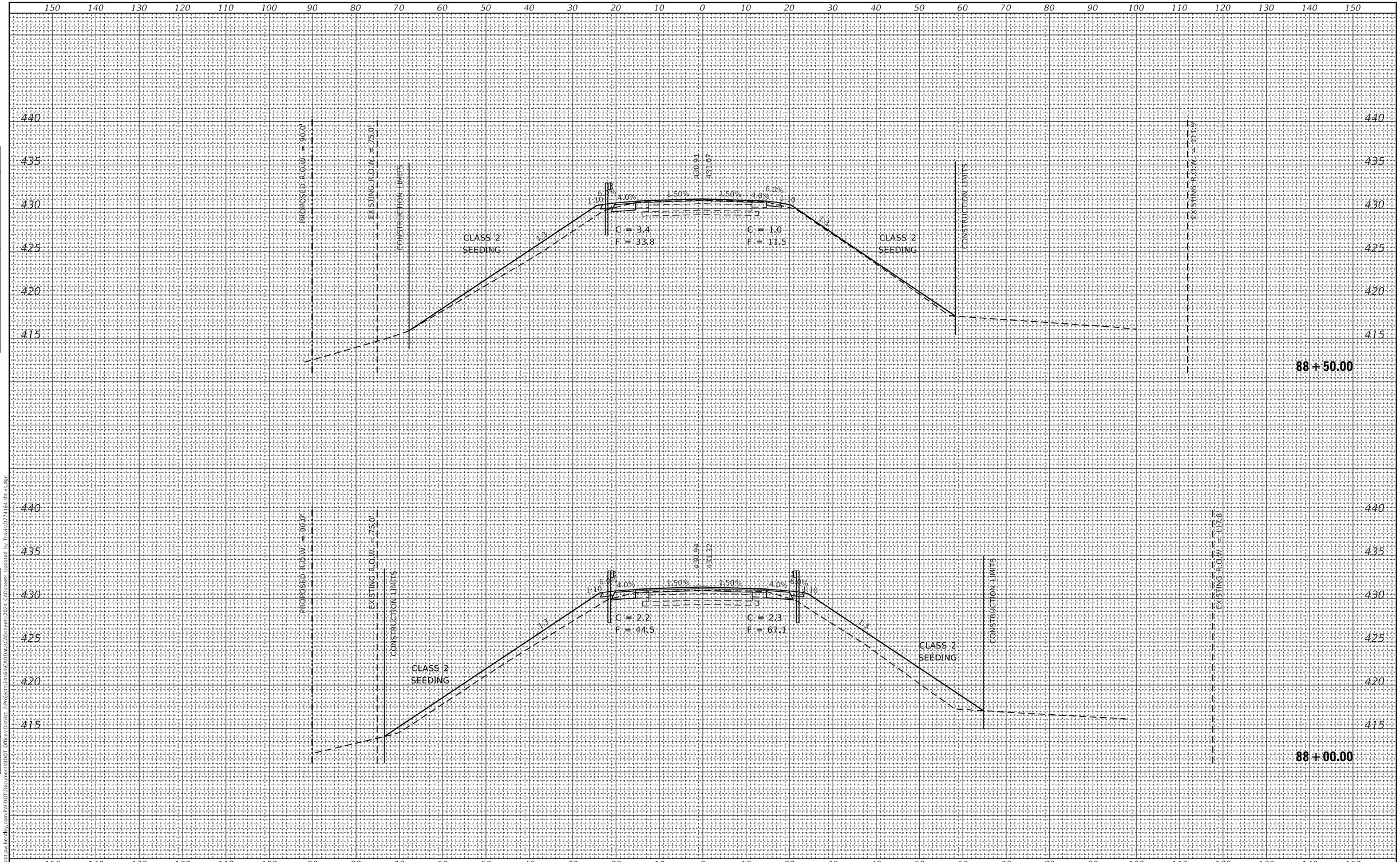
CROSS SECTIONS – S.N. 051–0074

SCALE: SHEET 9 OF 11 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	196

CONTRACT NO. 74164

ILLINOIS FED. AID PROJECT



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – S.N. 051–0074

SCALE: | SHEET 10 OF 11 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	197
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	

ORIGINAL SURVEY
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FINAL SURVEY
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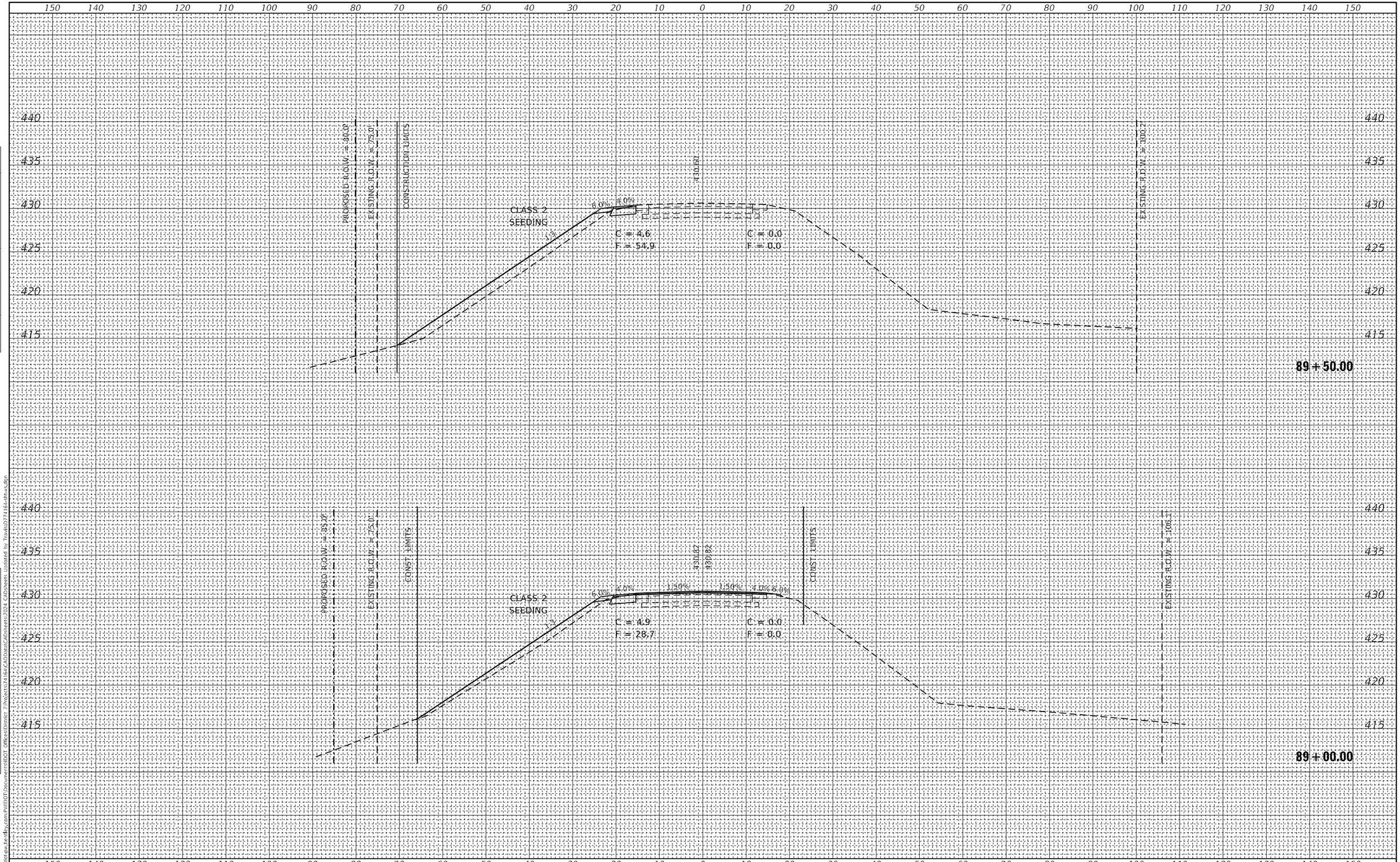

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – S.N. 051–0074

SCALE: | SHEET 11 OF 11 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	(16BR-1,BR-2)B-1	LAWRENCE	198	198
		CONTRACT NO. 74164		
		ILLINOIS	FED. AID PROJECT	

FINAL SURVEY | NOTE BOOK | NO. | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED | BY | DATE

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