

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51,23HB-1)BR	LAWRENCE	50	1
		ILLINOIS	CONTRACT NO. 74440	

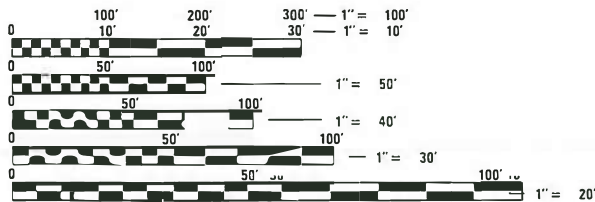
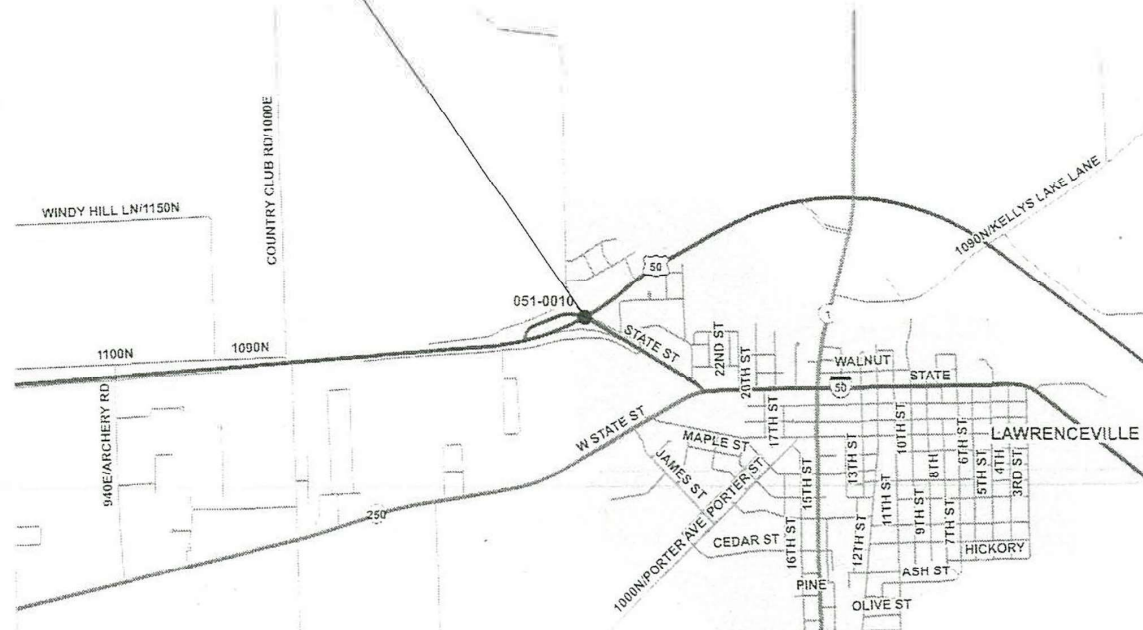
FOR INDEX OF SHEETS, SEE SHEET NO. 2
ADT = 3900

PROPOSED HIGHWAY PLANS

FAP ROUTE 327 (US 50)
SECTION (51,23HB-1)BR
PROJECT NHPP-EMW5(449)
BRIDGE DECK REPLACEMENT
LAWRENCE COUNTY

C-97-043-10

LOCATION OF PROPOSED
IMPROVEMENT
STRUCTURE # 051-0010



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

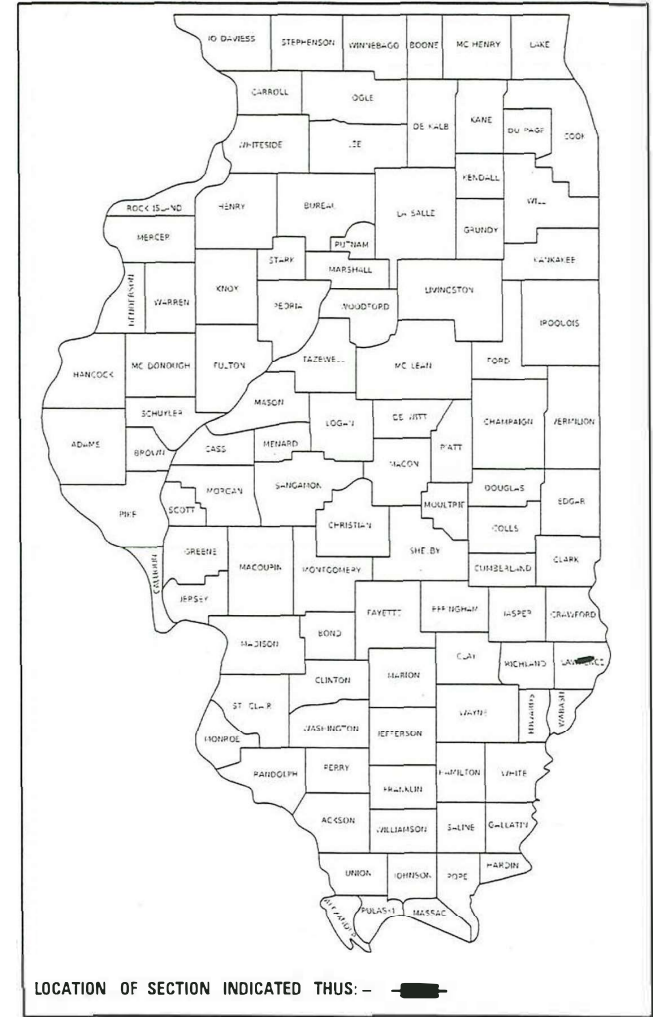
J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS
1-800-892-0123
OR 811

PROJECT ENGINEER BRIAN LEWIS
PROJECT MANAGER MICHELE REEDER

CONTRACT NO. 74440

GROSS LENGTH = 326.39 FT. = 0.062 MILE
NET LENGTH = 326.39xx FT. = 0.062 MILE

D-97-020-10



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED NOVEMBER 3 20 21
Jeffery P. Myerles
REGIONAL ENGINEER

December 10 20 21
[Signature]
ENGINEER OF DESIGN AND ENVIRONMENT

December 10 20 21
Stephen M. [Signature]
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

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OF THE STATE OF ILLINOIS

GENERAL NOTES

THE WORK INCLUDED IN THIS SECTION CONSISTS OF REPLACING THE EXISTING BRIDGE DECK, APPROACH PAVEMENTS, SLOPEWALL, GUARDRAIL, TOPSOIL EXCAVATION AND PLACEMENT, FURNISHED EXCAVATION AND ALL OTHER WORK NECESSARY TO COMPLETE THIS SECTION.

THE EXISTING BRIDGE HAS A CURVED DECK CONSTRUCTED ON STRAIGHT BEAMS. THE NEW DECK AND APPROACHES WILL BE CONSTRUCTED STRAIGHT ALONG A LOCAL TANGENT CONSTRUCT CONNECTOR PAVEMENTS WITH THE LONGITUDINAL EDGES PARALLEL TO ROADWAY CENTERLINE.

BASE COURSE WIDENING (SQ YD) SHALL INCLUDE ALL EXCAVATION FOR CONSTRUCTION OF THE WIDENING. THE WIDENING SHALL REMAIN IN PLACE AT THE CONCLUSION OF THE JOB.

ALL DISTURBED AREAS WITHIN THE CONSTRUCTION LIMITS SHALL BE FERTILIZED AND SEEDED. SEEDING SHALL BE CLASS 2 (SPECIAL) IN ACCORDANCE WITH THE SPECIAL PROVISIONS AND THE APPLICABLE ARTICLES OF SECTION 250 OF THE STANDARD SPECIFICATIONS.

THE CONTRACTOR SHALL HAVE THE OPTION OF MIX DESIGNS TO BE PLACED FOR THE GUARDRAIL STABILIZATION AT THE PROPOSED GURADRAI THE MIX DESIGN OPTIONS ARE LISTED BELOW:

APPLICATION	AC/PG	DESIGN AIR VOIDS	MIXTURE COMPOSITION	FRICTION AGGREGATE	QUALITY MANAGEMENT
HMA GUARDRAIL STABILIZATION (OPTION 1)	PG 64-22	4.0% @ N=70	IL - 9.5	MIXTURE C	QC/QA
HMA GUARDRAIL STABILIZATION (OPTION 2)	PG 64-22	4.0% @ N=70	IL - 9.5FG	N/A	QC/QA

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	INDEX OF SHEETS AND GENERAL NOTES
3-5	SUMMARY OF QUANTITIES
6	TYPICAL SECTIONS
7-8	SCHEDULES OF QUANTITIES
9-10	PLAN SHEETS
11-13	STAGING PLAN SHEETS
14-41	BRIDGE REPAIR PLANS SN 051-0010
42	GUARDRAIL DETAILS
43-50	CROSS SECTIONS
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
515001-04	NAME PLATE FOR BRIDGES
601101-02	CONCRETE HEADWALL FOR PIPE UNDERDRAINS
630001-12	STEEL PLATE BEAM GUARDRAIL
631031-17	TRAFFIC BARRIER TERMINAL, TYPE 6
630201-07	PCC/HMA STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
701001-02	OFF-ROAD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY
701006-05	OFF-ROAD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
701201-05	LANE CLOSURE, 2L, 2W, DAY ONLY FOR SPEEDS \geq 45 MPH
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
701321-18	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701901-08	TRAFFIC CONTROL DEVICES
704001-08	TEMPORARY CONCRETE BARRIER
780001-05	TYPICAL PAVEMENT MARKINGS
782006-01	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS
601001-05	PIPE UNDERDRAINS
630301-09	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
725001-01	OBJECT AND TERMIANLS MARKERS

MODEL NUMBER: MAMES
FILE NAME: 811E15

REV. - MS

USER NAME = SUSERS	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX OF SHEETS, HIGHWAY STANDARDS, LOCATIONS, & GENERAL NOTES	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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	DATE -	REVISED -			SCALE:	SHEET	OF	SHEETS	STA.	TO
					ILLINOIS FED. AID PROJECT					

80% FED
20% STATE

80% FED
20% STATE

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT		0013		
20200100	EARTH EXCAVATION	CU YD	11	11		
20400800	FURNISHED EXCAVATION	CU YD	755	755		
21101505	TOPSOIL EXCAVATION AND PLACEMENT	CU YD	244	244		
28000400	PERIMETER EROSION BARRIER	FOOT	1090	1090		
35400300	PORTLAND CEMENT CONCRETE BASE COURSE WIDENING 8"	SO YD	345	345		
44000100	PAVEMENT REMOVAL	SO YD	45	45		
44004250	PAVED SHOULDER REMOVAL	SO YD	270	270		
48203021	HOT-MIX ASPHALT SHOULDERS, 6"	SO YD	389	389		
50102400	CONCRETE REMOVAL	CU YD	26.8	26.8		
50104650	SLOPE WALL REMOVAL	SO YD	422	422		
50104720	REMOVAL OF EXISTING CONCRETE DECK	EACH	1	1		
50157300	PROTECTIVE SHIELD	SO YD	460	460		

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT		0013		
50200100	STRUCTURE EXCAVATION	CU YD	293	293		
50300225	CONCRETE STRUCTURES	CU YD	42.3	42.3		
50300255	CONCRETE SUPERSTRUCTURE	CU YD	297.2	297.2		
50300260	BRIDGE DECK GROOVING	SO YD	981	981		
50300300	PROTECTIVE COAT	SO YD	1254	1254		
50301350	CONCRETE SUPERSTRUCTURE (APPROACH SLAB)	CU YD	98.4	98.4		
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	2560	2560		
50500505	STUD SHEAR CONNECTORS	EACH	3456	3456		
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	116450	116450		
50800515	BAR SPLICERS	EACH	929	929		
51100100	SLOPE WALL 4 INCH	SO YD	486	486		
51500100	NAME PLATES	EACH	1	1		
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	12	12		
52100510	ANCHOR BOLTS, 3/4"	EACH	48	48		

REV. - MS

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PLOT DATE = 11/4/2021	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51,23HB-1)BR	LAWRENCE	50	3
ILLINOIS FED. AID PROJECT			CONTRACT NO. 74440	

80% FED
20% STATE

80% FED
20% STATE

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT		0013		
52200010	TEMPORARY SHEET PILING	SO FT	666	666		
52318802	DRAINAGE SYSTEM FOR STRUCTURES	L SUM	1	1		
58600101	GRANULAR BACKFILL FOR STRUCTURES	CU YD	246	246		
59100100	GEOCOMPOSITE WALL DRAIN	SO YD	118	118		
60100060	CONCRETE HEADWALLS FOR PIPE DRAINS	EACH	4	4		
60146304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	186	186		
* 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	600	600		
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	4		
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4	4		
63200310	GUARDRAIL REMOVAL	FOOT	706	706		
* 66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	40	40		
* 66900530	SOIL DISPOSAL ANALYSIS	EACH	1	1		
* 66901001	REGULATED SUBSTANCES PRE-CONSTRUCTION PLAN	L SUM	1	1		

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT		0013		
* 66901003	REGULATED SUBSTANCES FINAL CONSTRUCTION REPORT	L SUM	1	1		
* 66901006	REGULATED SUBSTANCES MONITORING	CAL DA	6	6		
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	8	8		
67100100	MOBILIZATION	L SUM	1	1		
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1		
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1		
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1		
70107005	PAVEMENT MARKING BLACKOUT TAPE, 5"	FOOT	876	876		
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	28	28		
70400100	TEMPORARY CONCRETE BARRIER	FOOT	675	675		
70400125	PINNING TEMPORARY CONCRETE BARRIER	EACH	18	18		
70600250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	2		
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	475	475		
70600350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	2		
* 72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4		

* SPECIALTY ITEM

REV. - MS

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

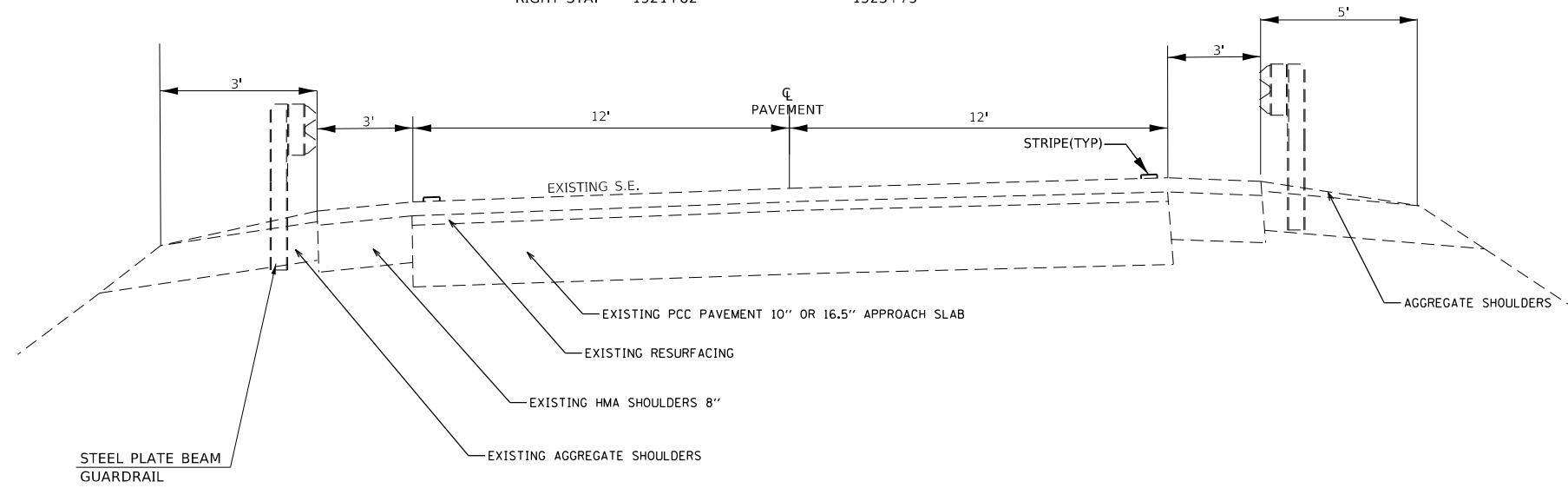
SUMMARY OF QUANTITIES

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 74440			ILLINOIS FED. AID PROJECT	

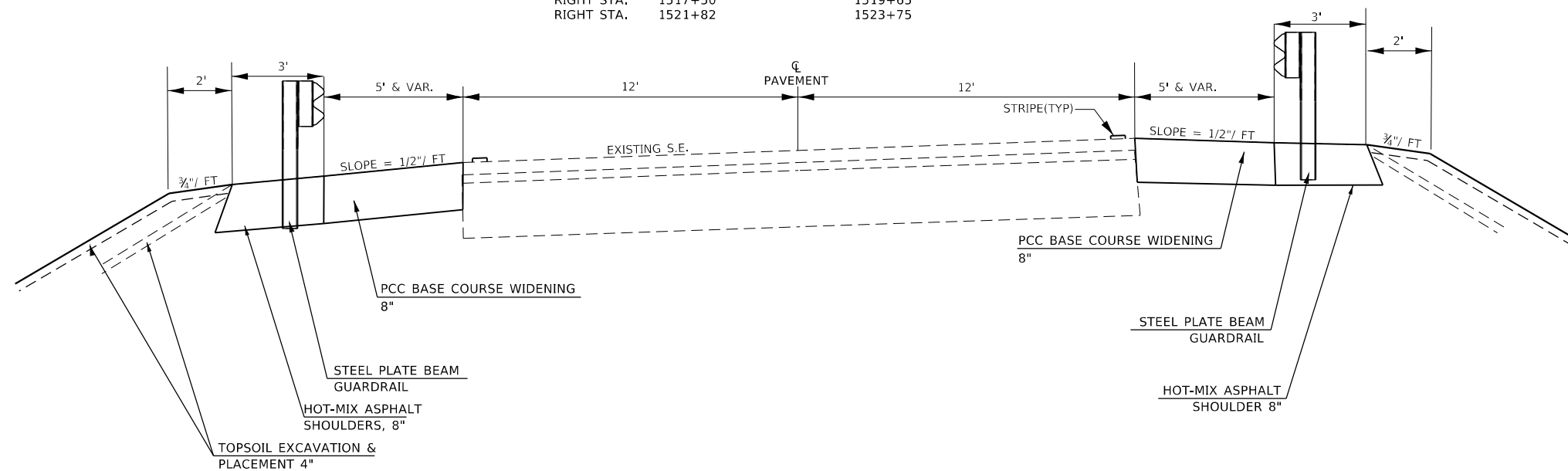
EXISTING TYPICAL SECTION US ROUTE 50

	STATION	TO	STATION
LEFT STA.	1518+50		1519+50
LEFT STA.	1521+66		1522+75
RIGHT STA.	1517+50		1519+65
RIGHT STA.	1521+82		1523+75



PROPOSED TYPICAL SECTION US ROUTE 50

	STATION	TO	STATION
LEFT STA.	1518+50		1519+50
LEFT STA.	1521+66		1522+75
RIGHT STA.	1517+50		1519+65
RIGHT STA.	1521+82		1523+75



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS	
SCALE:	SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51,23HB-1)BR	LAWRENCE	50	6
CONTRACT NO. 74440				
ILLINOIS FED. AID PROJECT				

GUARDRAIL REMOVAL				
LOCATION				LENGTH
SIDE	STA	TO	STA	(FT)
LT	1521+62	TO	1523+42	180
LT	1518+09	TO	1519+52	143
RT	1517+54	TO	1519+70	216
RT	1521+78	TO	1523+45	167
TOTAL				706

TEMPORARY CONCRETE BARRIER				
STAGE 1				
1518+27	TO	1523+02	475	FOOT
STAGE 2				
1517+31	TO	1524+03	200	FOOT
TOTAL			675	FOOT

RELOCATE TEMPORARY CONCRETE BARRIER				
STAGE 2				
1518+27	TO	1523+02	475	FOOT

PAVED SHOULDER REMOVAL PRESTAGE 1				
STA	TO	STA	SIDE	SQ YD
1518+50		1519+50	LT	34
1521+66		1522+75	LT	37
TOTAL				71
PAVED SHOULDER REMOVAL STAGE 1				
STA	TO	STA	SIDE	SQ YD
1517+50		1519+65	RT	72
1521+82		1523+75	RT	65
TOTAL				137
PAVED SHOULDER REMOVAL POSTSTAGE 1				
STA	TO	STA		
1519+02		1519+48	LT	26
1521+65		1522+29	LT	36
TOTAL				62
TOTAL				270

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PCC BASE COURSE WIDENING 8"				
PRESTAGE 1				
STA	TO	STA	SIDE	SQ YD
1518+50		1519+50	NW	56
1521+66		1522+75	NE	61
		TOTAL		117
PCC BASE COURSE WIDENING 8"				
STAGE 1				
STA	TO	STA	SIDE	SQ YD
1517+50		1519+65	SW	120
1521+82		1523+75	SE	108
		TOTAL		228

PROPOSED GUARDRAIL						
				STEEL PLATE BEAM GUARDRAIL TYPE A, 6 FOOT POSTS	TRAFFIC BARRIER TERMINAL, TYPE 6	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT
	STATION	TO	STATION	FOOT	EACH	EACH
NW Quad	1518+25.0	TO	1519+50.0	125.0		
NW Quad					1	1
NE Quad	1521+66.0	TO	1523+41.0	175.0		
NE Quad					1	1
SW Quad	1517+90.0	TO	1519+65.0	175.0		
SW Quad					1	1
SE Quad	1521+82.0	TO	1523+07.0	125.0		
SE Quad					1	1
			TOTAL =	600	4	4

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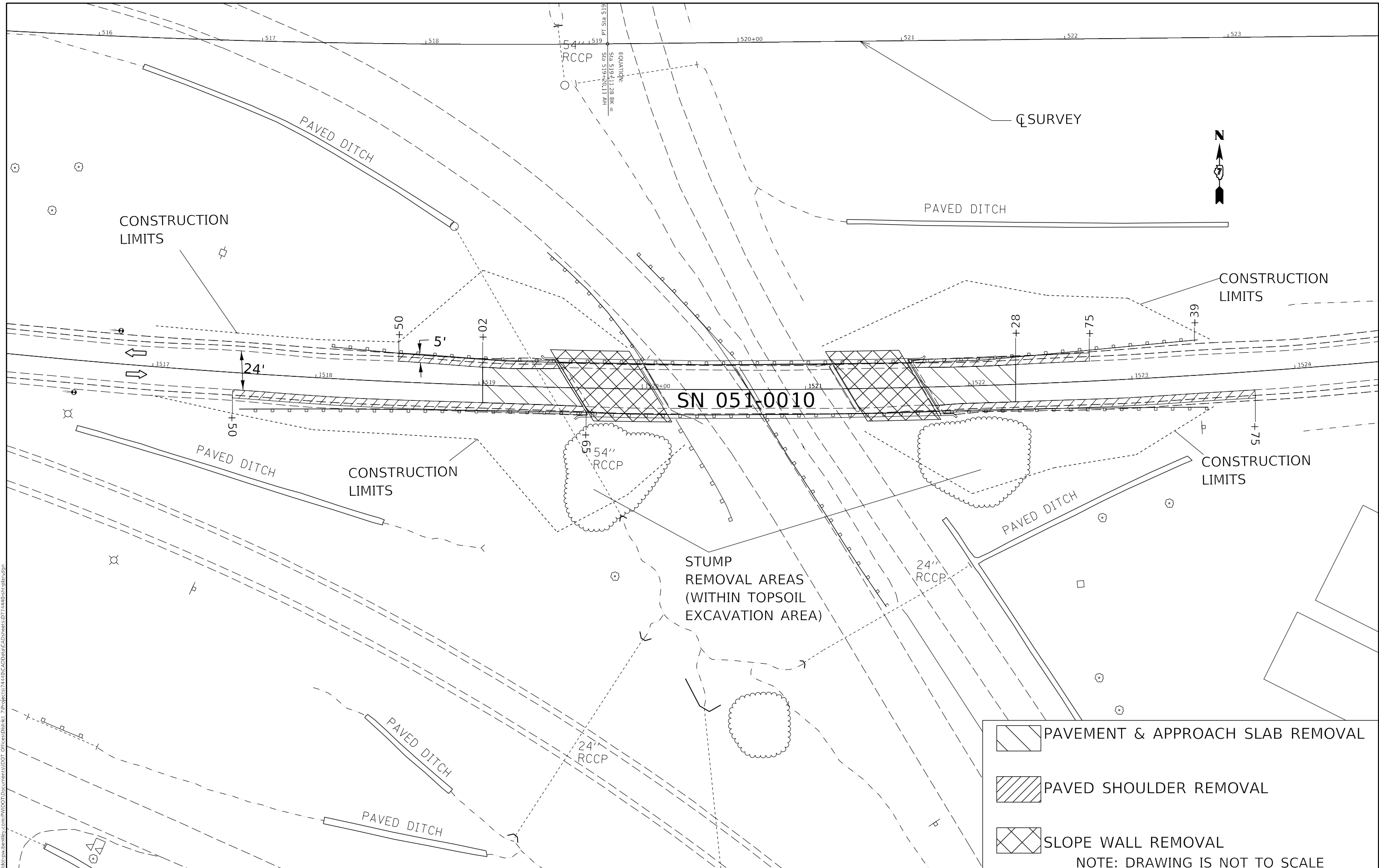
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

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SCHEDULES OF QUANTITIES

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51,23HB-1)BR	Lawrence	50	8
			CONTRACT NO. 74440	
		ILLINOIS	FED. AID PROJECT	



-  PAVEMENT & APPROACH SLAB REMOVAL
-  PAVED SHOULDER REMOVAL
-  SLOPE WALL REMOVAL

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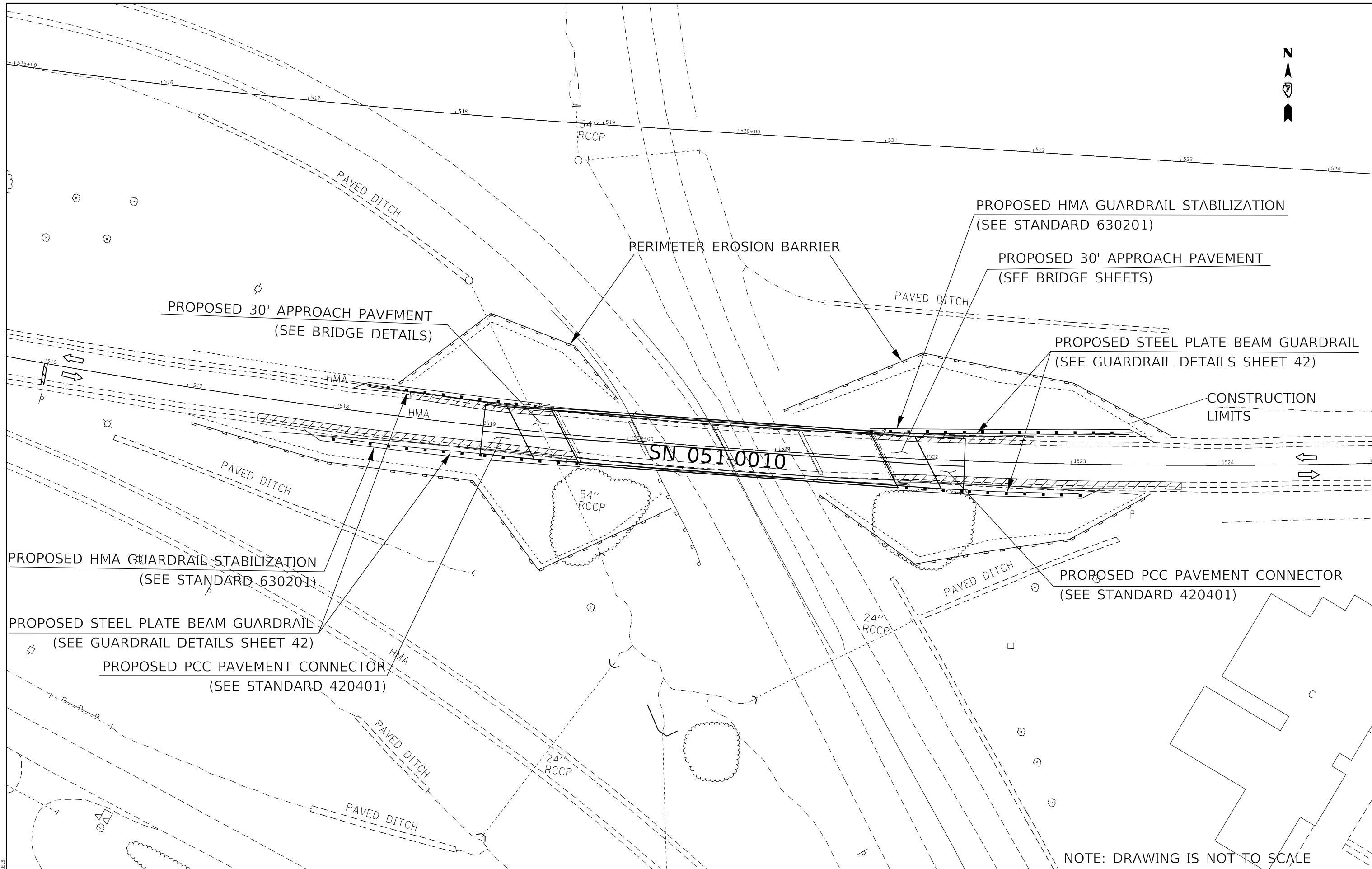
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

REMOVAL ITEMS

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE. 327	SECTION (51,23HB-1)BR	COUNTY Lawrence	TOTAL SHEETS 50	SHEET NO. 9
CONTRACT NO. 74440				
ILLINOIS FED. AID PROJECT				



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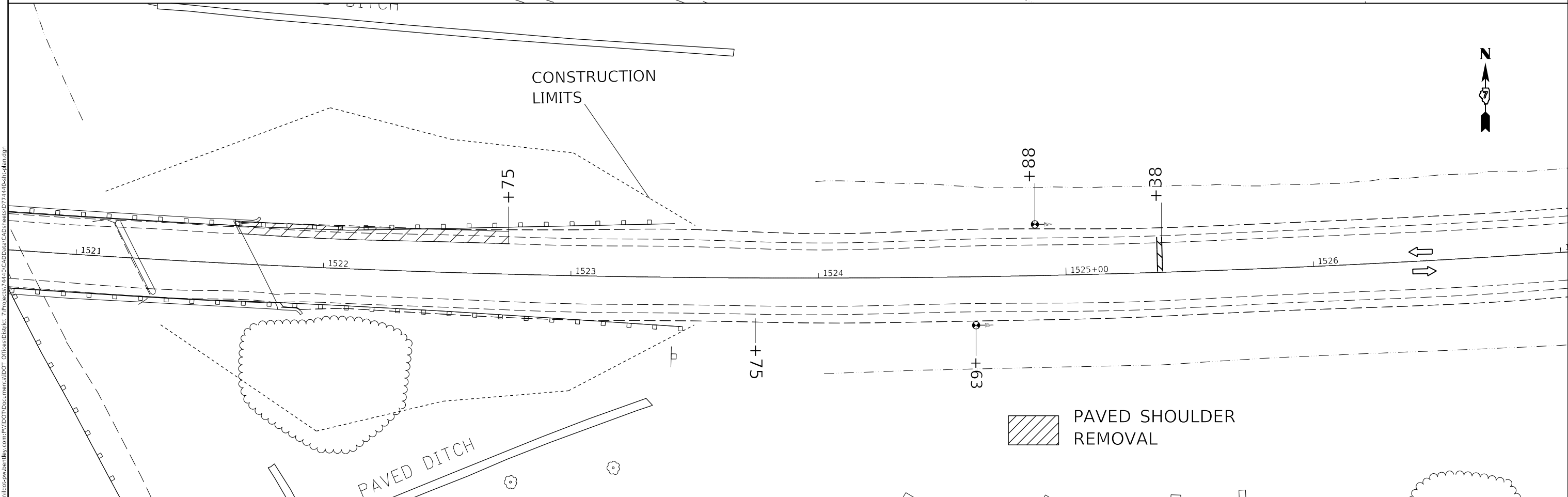
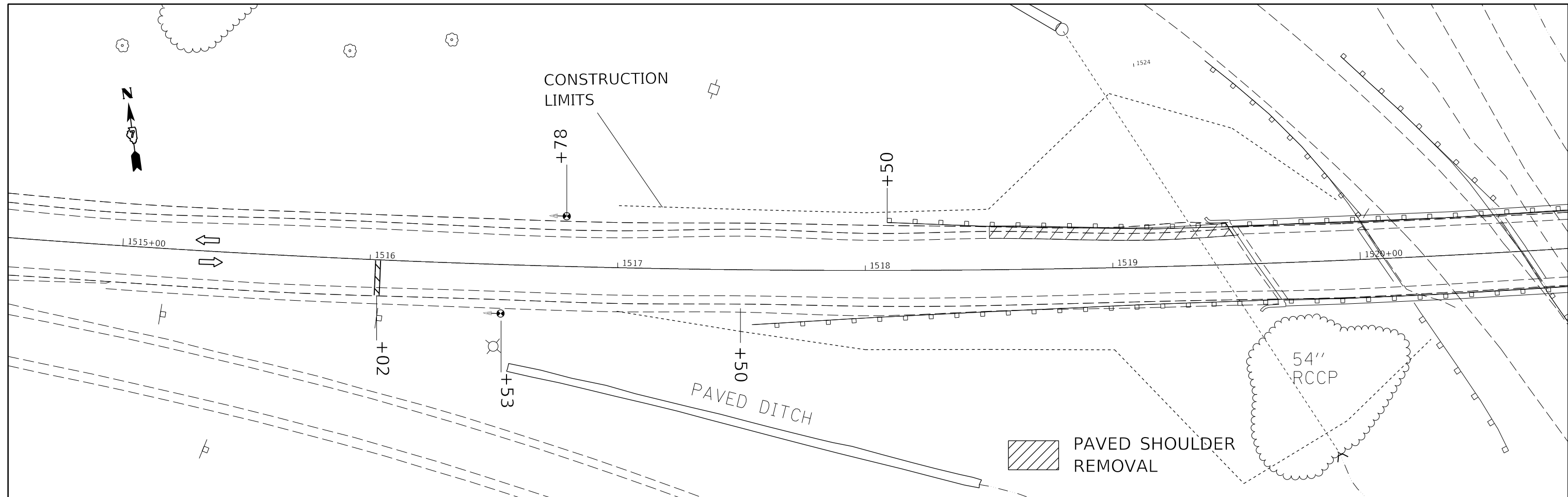
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	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

PROPOSED PLAN SHEET				
SCALE:	SHEET	OF	SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51,23HB-1)BR	Lawrence	50	10
CONTRACT NO. 74440				
ILLINOIS FED. AID PROJECT				

NOTE: DRAWING IS NOT TO SCALE



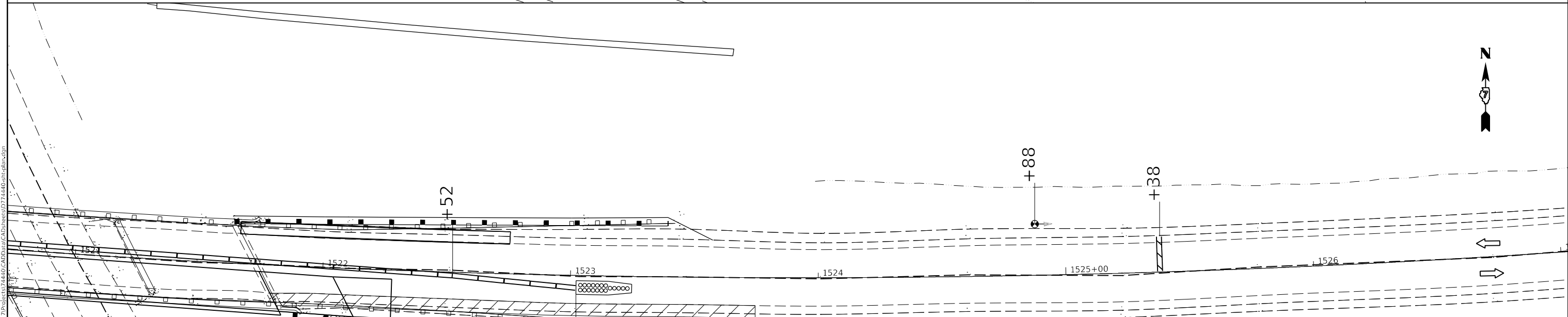
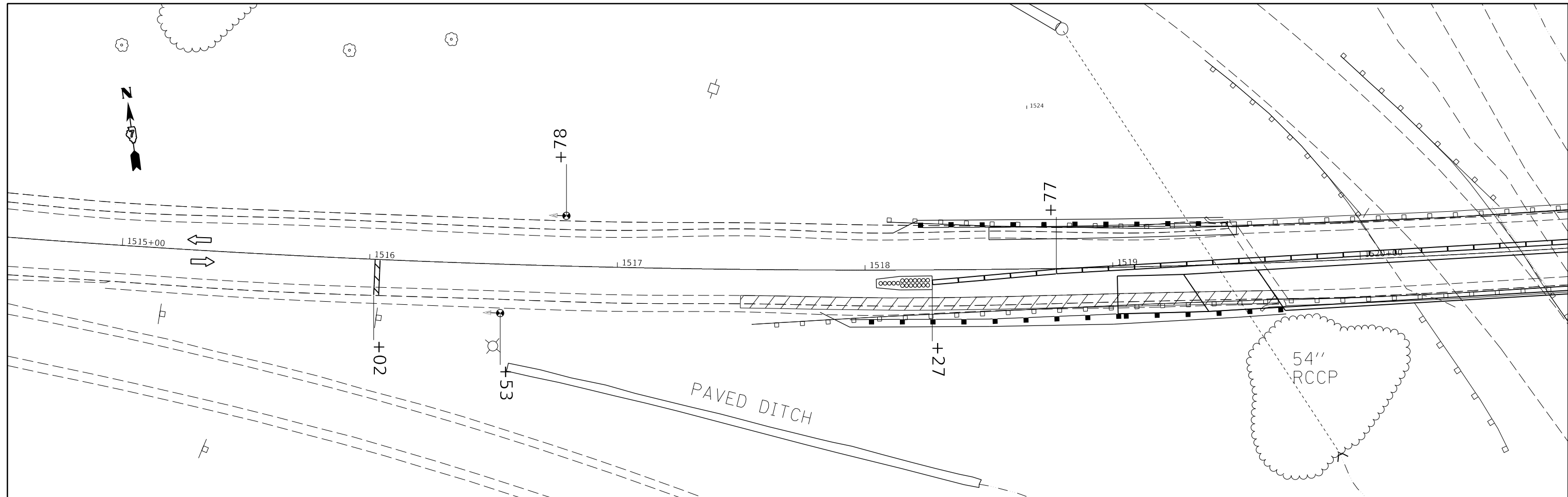
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51, 23 HB-1) BR	Lawrence	50	11
CONTRACT NO. 74440				
ILLINOIS FED. AID PROJECT				



SYMBOLS

	IMPACT ATTENUATOR
	TEMPORARY CONCRETE BARRIER
	STOP BAR
	TEMP. BRIDGE TRAFFIC SIGNAL
	PAVED SHOULDER REMOVAL

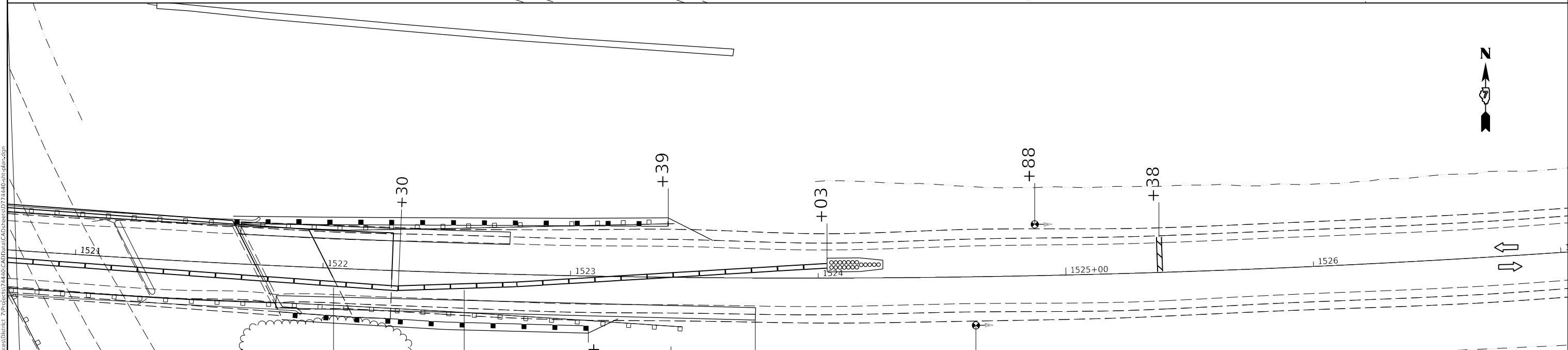
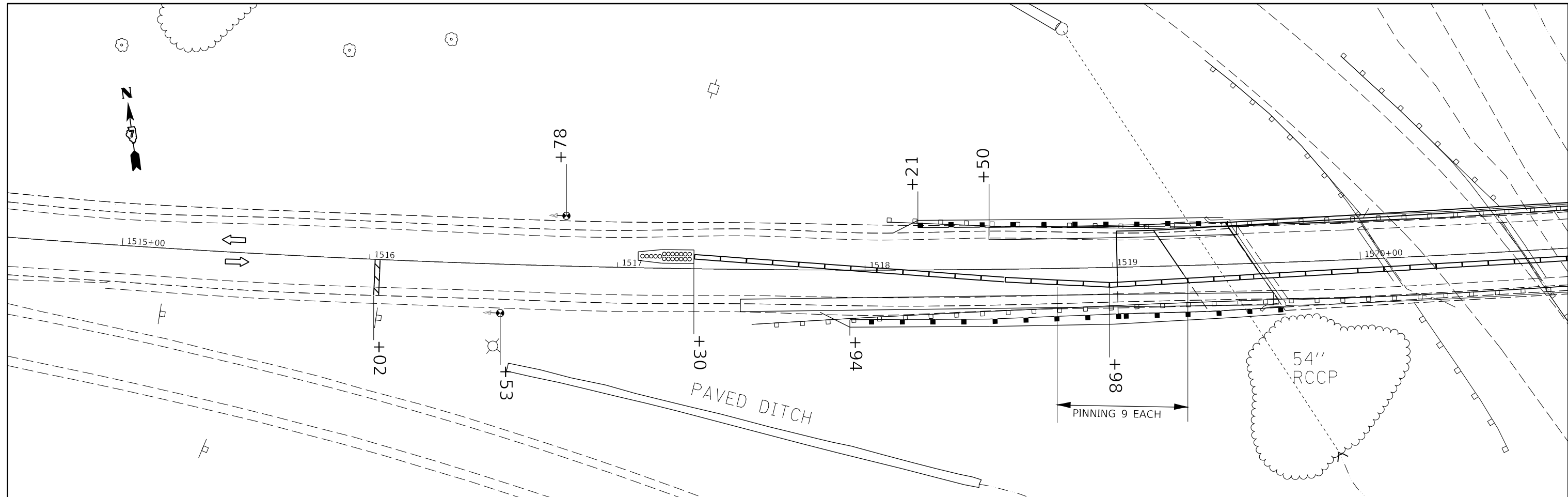
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PLOT DATE = 11/17/2021	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51,23HB-1)BR	Lawrence	50	12
CONTRACT NO. 74440				
ILLINOIS FED. AID PROJECT				



SYMBOLS

- IMPACT ATTENUATOR
- TEMPORARY CONCRETE BARRIER
- STOP BAR
- TEMP. BRIDGE TRAFFIC SIGNAL

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PLOT DATE = 11/17/2021	DATE -	REVISED -	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

STAGE 2

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51,23HB-1)BR	Lawrence	50	13
CONTRACT NO. 74440				
ILLINOIS FED. AID PROJECT				

Benchmark (BM 700): Chiseled square on the Southwest wingwall of SN 051-0010; Elev. 480.22; Sta. 1519+70; 19.6 ft Rt.

Existing Structure: Structure number 051-0010 was originally constructed in 1960 as F.A.I. Rte. 64, Section 51-23HB-1, station 520B+65.45 as a 4-span non-composite wide flange beam structure with 218'-3" back-to-back of abutments along the centerline of bridge chord. The superstructure is supported by multi-column piers and stub abutments with steel piles. In 1986, the structure was repaired and resurfaced. Existing deck and approach slabs are to be removed and replaced. Traffic is to be maintained utilizing stage construction.

No salvage

****CURVE DATA**

Existing Curve: C1STH
 P.I. Sta. = 1515+66.96
 $\Delta = 34^\circ 34' 32''$ Lt.
 $D = 1^\circ 15' 54''$
 $R = 4,529.17'$
 $T = 1,409.62'$
 $L = 2,733.16'$
 $E = 214.29'$
 $e = 1.5\%$
 P.C. Sta. = 1501+57.34
 P.T. Sta. = 1528+90.50

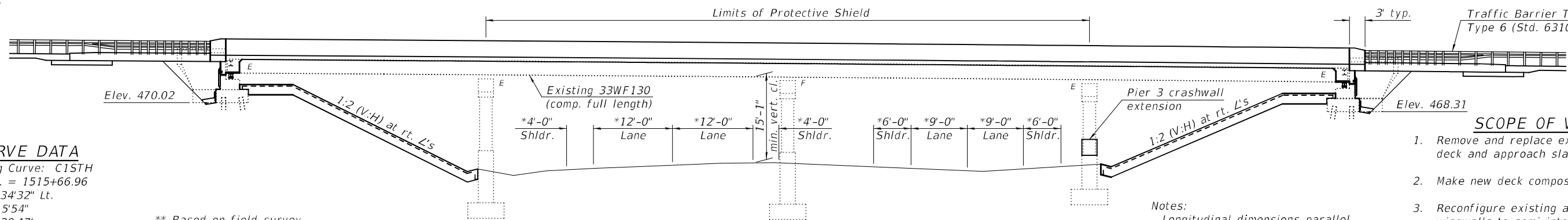
** Based on field survey.

* Taken from existing plans and measured radially.

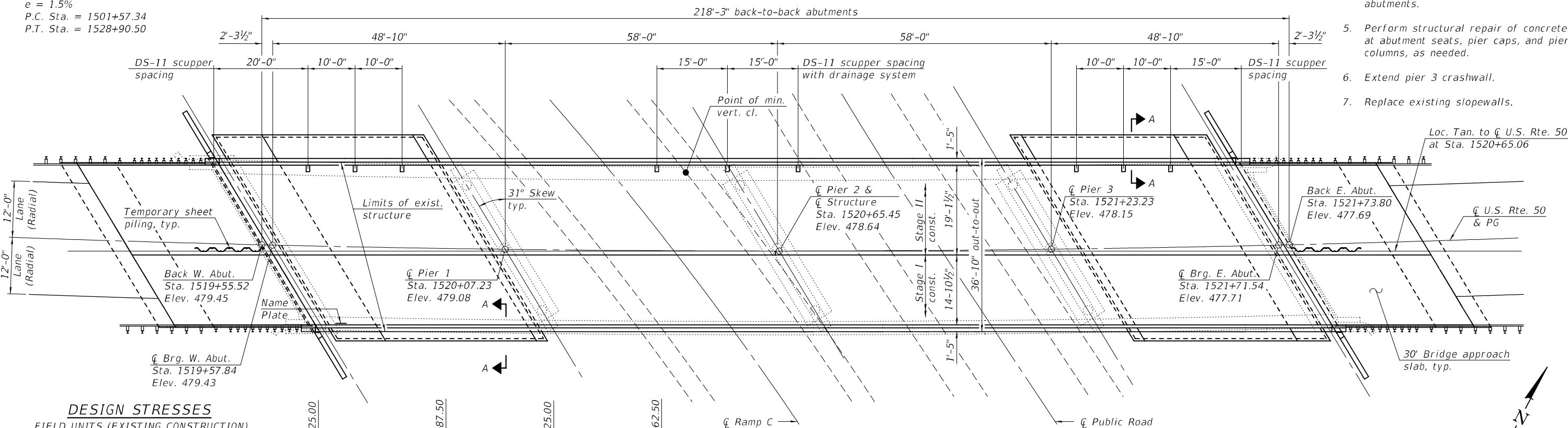
Notes:
 Longitudinal dimensions parallel to Local Tangent unless specified.
 See sheet 2 of 28 for slopewall details.

SCOPE OF WORK

1. Remove and replace existing concrete deck and approach slabs.
2. Make new deck composite full length.
3. Reconfigure existing abutments and wingwalls to semi-integral configuration.
4. Replace existing bearings at abutments.
5. Perform structural repair of concrete at abutment seats, pier caps, and pier columns, as needed.
6. Extend pier 3 crashwall.
7. Replace existing slopewalls.



ELEVATION



PLAN

DESIGN STRESSES

FIELD UNITS (EXISTING CONSTRUCTION)

$f'_c = 3,500$ psi (Superstructure)
 $f'_c = 3,500$ psi (Substructure)
 $f_y = 40,000$ psi (Reinforcement)
 $f_y = 33,000$ psi (Structural Steel)

FIELD UNITS (NEW CONSTRUCTION)

$f'_c = 4,000$ psi (Superstructure)
 $f'_c = 3,500$ psi (Substructure)
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 36,000$ psi (Structural Steel)

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications for Highway Bridges, 17th Edition

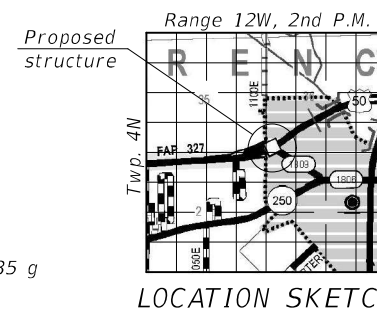
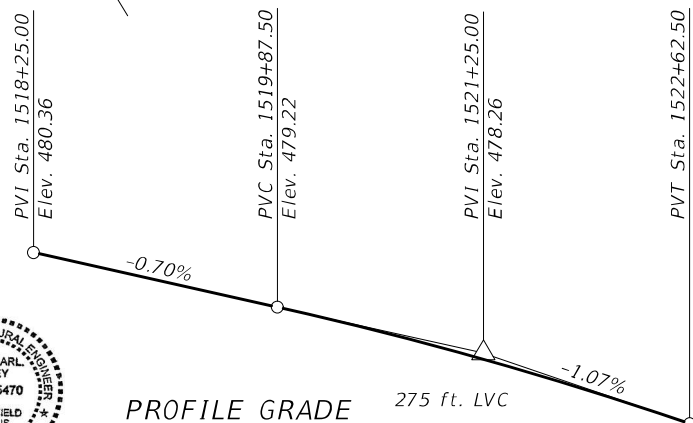
LOADING HS20-44

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

SEISMIC DATA

Seismic Performance Category (SPC) = A
 Horizontal Bedrock Acceleration Coefficient (A) = 0.085 g
 Site Coefficient (S) = 1.2

PROFILE GRADE
 (Along \bar{C} U.S. Rte. 50)



LOCATION SKETCH

GENERAL PLAN & ELEVATION
 U.S. ROUTE 50 OVER F.A.S. RTE. 1809
 F.A.P. ROUTE 327 - SEC. (51,23HB-1)BR
 LAWRENCE COUNTY
 STATION 1520+65.45
 STRUCTURE NO. 051-0010

MODEL: 0510010-74440-001
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EXPIRES 11-30-2022

DESIGNED - PAUL S. JOHNSON	EXAMINED
CHECKED - MICHAEL A. PAULIONIS	PASSED
DRAWN - ANDRO R. SAMANIEGO	
CHECKED - P.S.J. / M.A.P.	

DATE - **12-13-2021**
 ENGINEER OF BRIDGES AND STRUCTURES

REVIS	NO.	DATE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET 1 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51,23HB-1)BR	LAWRENCE	50	14
CONTRACT NO. 74440				
ILLINOIS FED. AID PROJECT				

STATION 1520+65.45
 RE-BUILT 20 BY
 STATE OF ILLINOIS
 F.A.P. RTE. 327 - SEC. (51,23HB-1)BR
 LOADING HS20-44
 STRUCTURE NO. 051-0010

NAME PLATE
 See Std. 515001

Existing name plate shall be cleaned and relocated next to new name plate. Cost included with Name Plates.

INDEX OF SHEETS

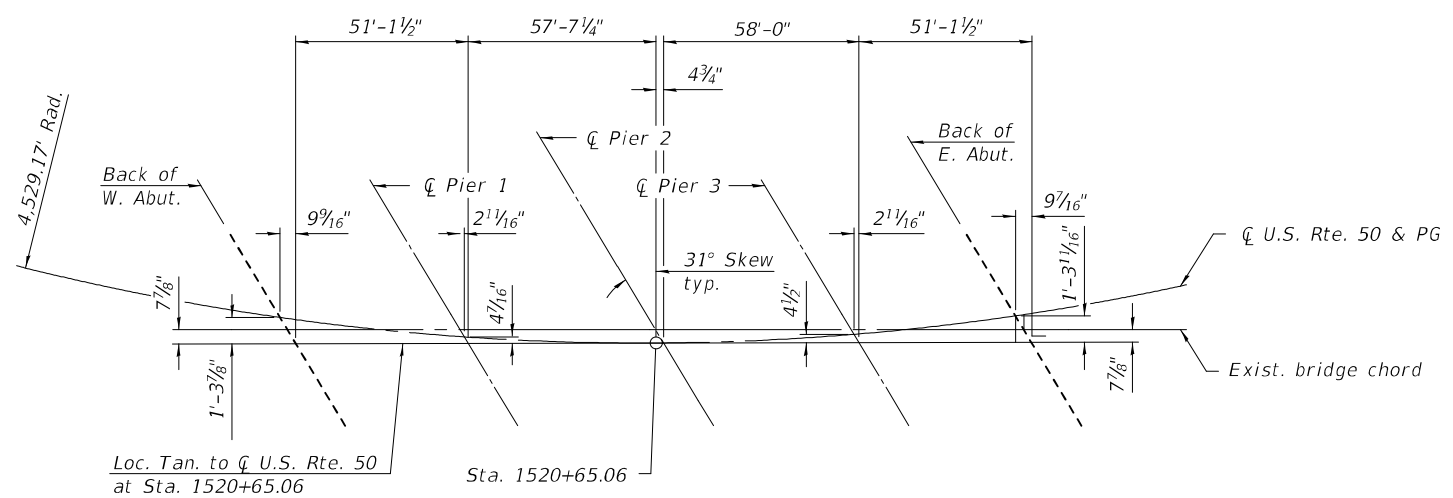
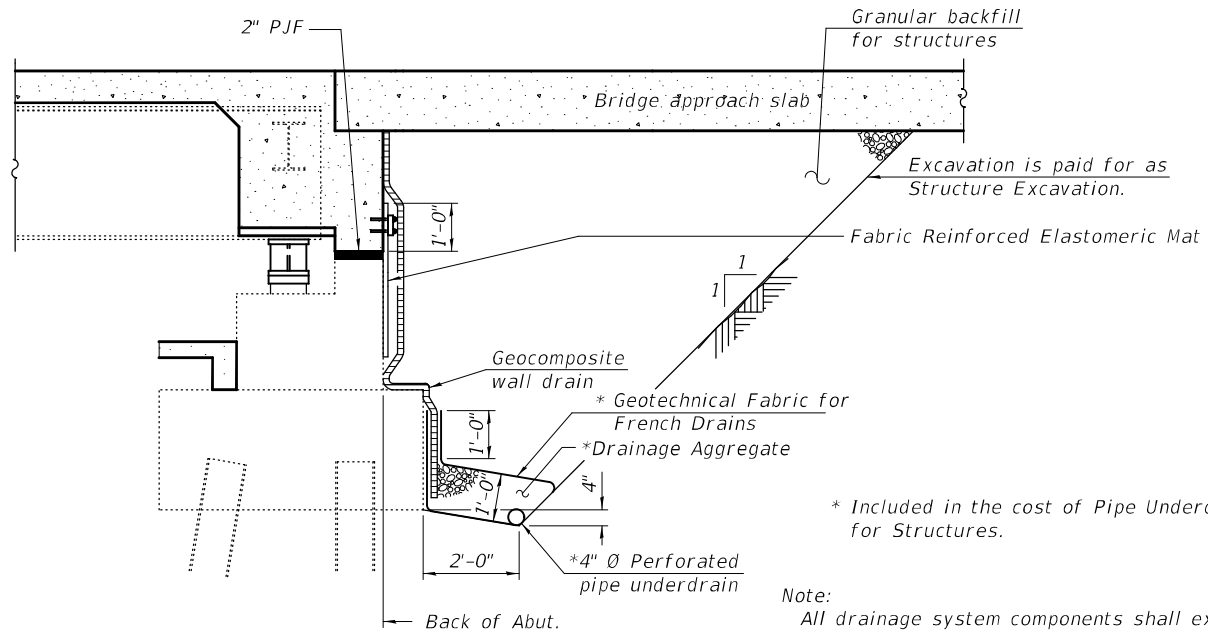
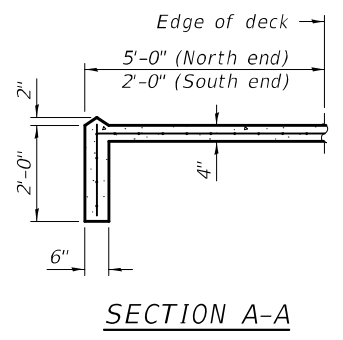
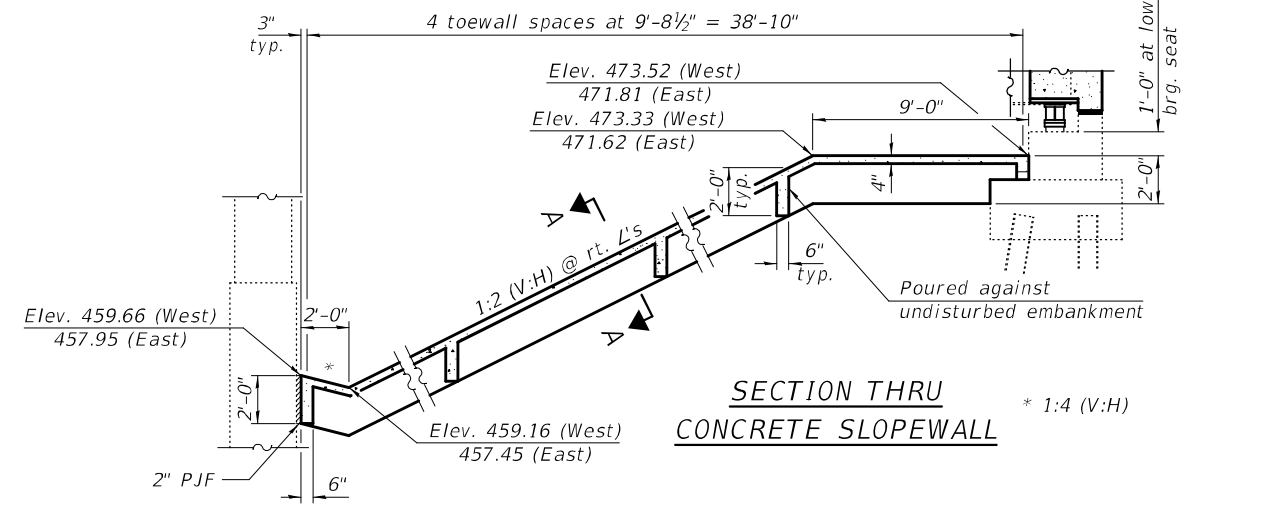
- 1 - General Plan & Elevation
- 2 - General Data
- 3 - Stage Construction Details
- 4 - Temporary Concrete Barrier
- 5-8 - Top of Slab Elevations
- 9 - West Approach Slab Elevations
- 10 - East Approach Slab Elevations
- 11 - Superstructure
- 12 - Superstructure Details
- 13 - Diaphragm Details
- 14-15 - Bridge Approach Slab Details
- 16 - Parapet Slipforming Option
- 17 - Drainage Scupper
- 18 - Drainage System for Structures
- 19 - Structural Steel Details
- 20 - Bearing Details
- 21 - West Abutment Removal & Repair
- 22 - East Abutment Removal & Repair
- 23-24 - Pier Repairs
- 25 - West Abutment Wingwalls
- 26 - East Abutment Wingwalls & Cap Extension
- 27 - Crashwall Extension at Pier 3
- 28 - Bar Splicer Assembly & Mechanical Splicer Details

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Removal	Cu. Yd.		26.8	26.8
Slope Wall Removal	Sq. Yd.		422	422
Removal of Existing Concrete Deck	Each	1		1
Protective Shield	Sq. Yd.	460		460
Structure Excavation	Cu. Yd.		293	293
Concrete Structures	Cu. Yd.		42.3	42.3
Concrete Superstructure	Cu. Yd.	297.2		297.2
Bridge Deck Grooving	Sq. Yd.	981		981
Protective Coat	Sq. Yd.	1,254		1,254
Concrete Superstructure (Approach Slab)	Cu. Yd.	98.4		98.4
Furnishing and Erecting Structural Steel	Pound		2,560	2,560
Stud Shear Connectors	Each	3,456		3,456
Reinforcement Bars, Epoxy Coated	Pound	109,270	7,180	116,450
Bar Splicers	Each	849	80	929
Slope Wall 4 inch	Sq. Yd.		486	486
Name Plates	Each	1		1
Elastomeric Bearing Assembly, Type 1	Each		12	12
Anchor Bolts, 3/4"	Each		48	48
Temporary Sheet Piling	Sq. Ft.		666	666
Granular Backfill for Structures	Cu. Yd.		246	246
Geocomposite Wall Drain	Sq. Yd.		118	118
Jack and Remove Existing Bearings	Each		12	12
Structural Repair of Concrete (Depth<=5")	Sq. Ft.		30	30
Drainage Scuppers, DS-11	Each	9		9
Drainage System for Structures	L. Sum		1	1
Pipe Underdrains for Structure 4"	Foot		186	186
Temporary Shoring and Cribbing	Each		2	2

GENERAL NOTES

Fasteners shall be ASTM F 3125 Grade A325 Type 1, mechanically galvanized bolts. Bolts 7/8 in. Ø, holes 1 1/16 in. Ø, unless otherwise noted.
 No field welding is permitted except as specified in the contract documents.
 Reinforcement bars designated (E) shall be epoxy coated.
 Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.
 As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer. Any cracks that cannot be removed by grinding 1/4 inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.
 Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
 Cleaning and field painting of structural steel shall be done under a separate painting contract.
 The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
 Slope wall shall be reinforced with welded wire fabric, 6" x 6" - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft.
 All existing steel end diaphragms and beam ends, measured along and on either side of the beam within 2 ft. of the proposed concrete diaphragm limits, shall be cleaned per Power Tool Cleaning-Modified SSPC SP-3. Areas required to be cleaned per Power Tool Cleaning-Modified SSPC SP-3 shall be coated with one coat of an approved organic zinc-rich or epoxy-mastic primer. Cost included in Concrete Superstructure.



SECTION THRU ABUTMENT
 (Horizontal dimensions are at right L's)

OFFSET SKETCH

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).

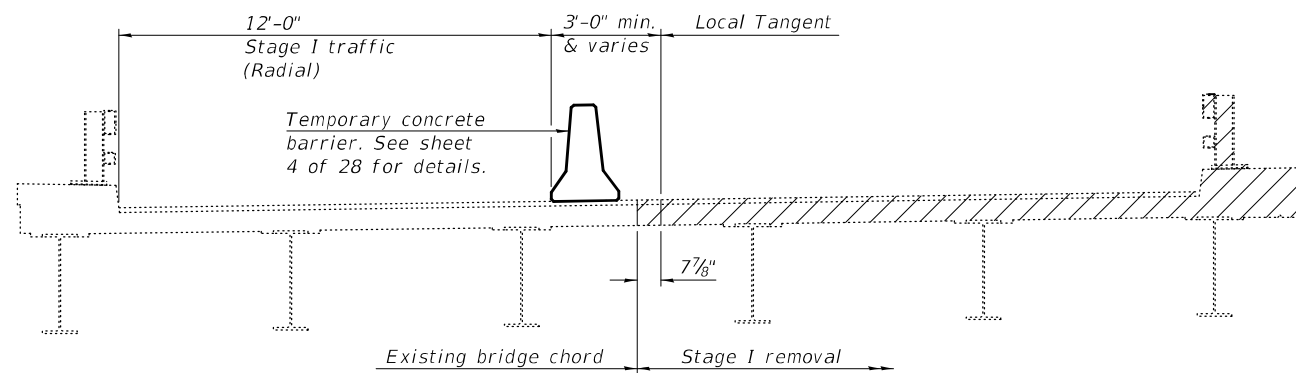
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DESIGNED - PAUL S. JOHNSON	EXAMINED	DATE - December 13, 2021
CHECKED - MICHAEL A. PAULIONIS	PASSED	REVISOR -
DRAWN - ANDRO R. SAMANIEGO		REVISOR -
CHECKED - P.S.J. / M.A.P.		

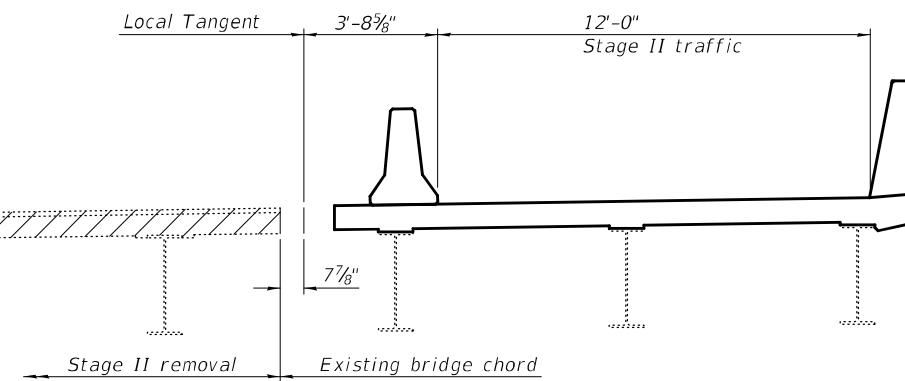
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DATA
STRUCTURE NO. 051-0010

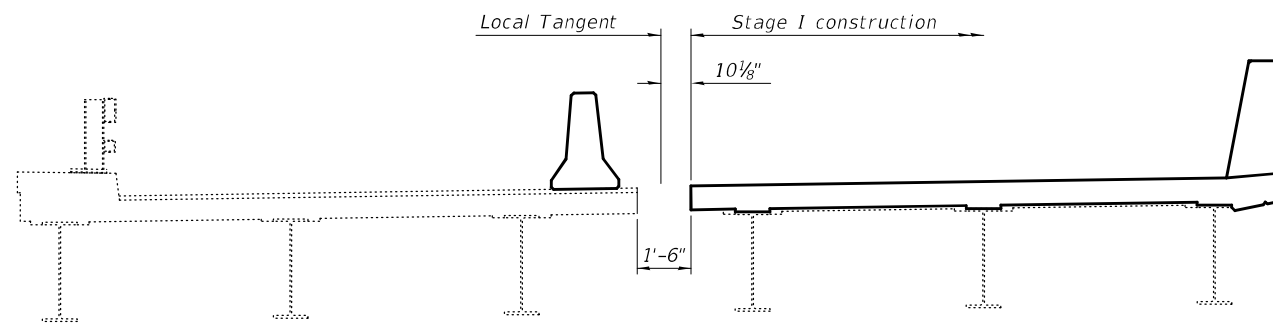
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SHEET 2 OF 28 SHEETS			CONTRACT NO. 74440	
ILLINOIS		FED. AID PROJECT		



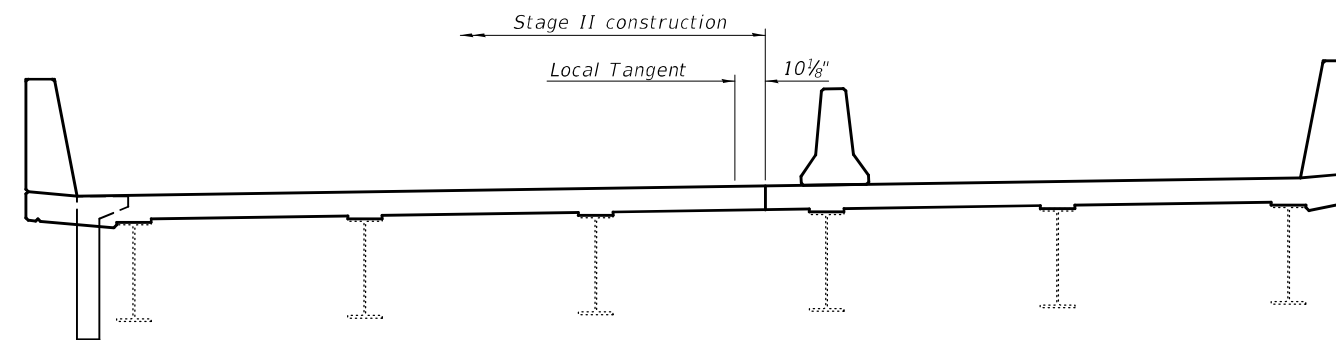
STAGE I REMOVAL



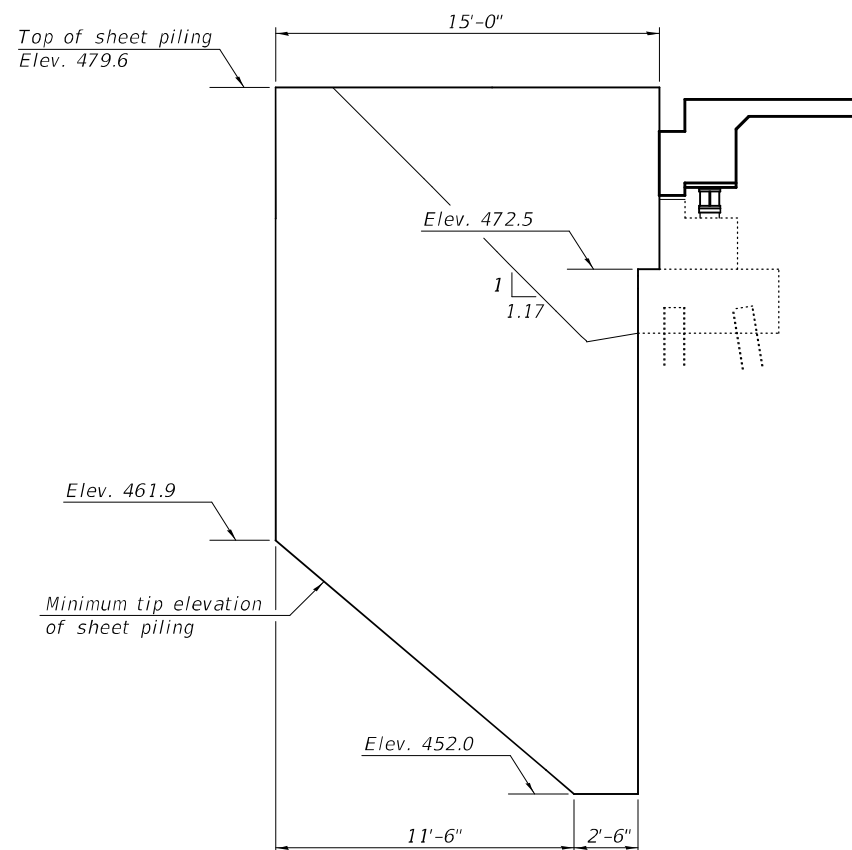
STAGE II REMOVAL



STAGE I CONSTRUCTION

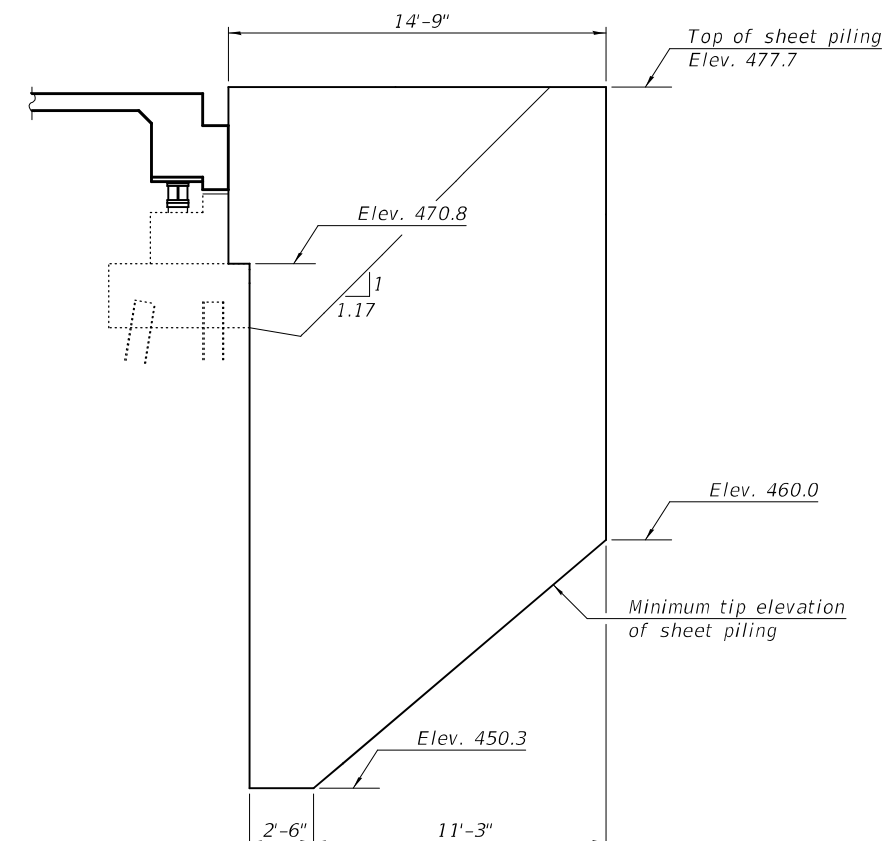


STAGE II CONSTRUCTION



**WEST ABUTMENT
TEMPORARY SHEET PILING**

Minimum section modulus = 17.7 in.³ /ft.



**EAST ABUTMENT
TEMPORARY SHEET PILING**

Minimum section modulus = 17.7 in.³ /ft.

Notes:
 Hatched areas of deck cross sections indicate Removal of Existing Concrete Deck.
 For quantity of temporary concrete barrier, see Roadway Plans.
 All deck cross sections are taken looking East.
 If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements as shown, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.
 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.

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DESIGNED	- PAUL S. JOHNSON
CHECKED	- MICHAEL A. PAULIONIS
DRAWN	- ANDRO R. SAMANIEGO
CHECKED	- P.S.J. / M.A.P.

EXAMINED	<i>Joanne F. Joffe</i> ENGINEER OF BRIDGE DESIGN
PASSED	<i>Carl Kasper</i> ENGINEER OF BRIDGES AND STRUCTURES

DATE	- December 13, 2021
REVISED	-
REVISED	-

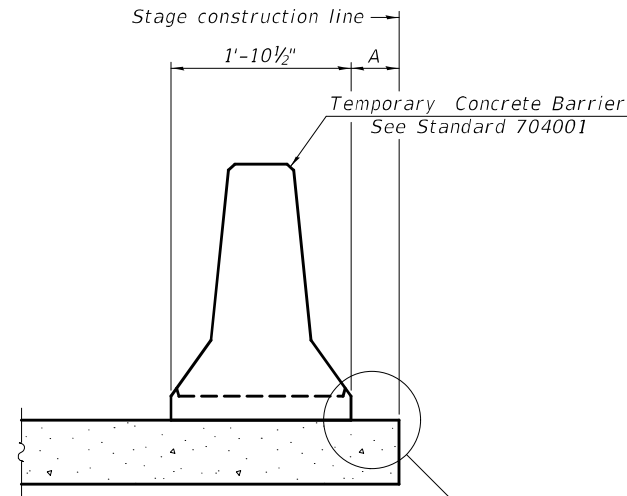
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**STAGE CONSTRUCTION DETAILS
STRUCTURE NO. 051-0010**

SHEET 3 OF 28 SHEETS

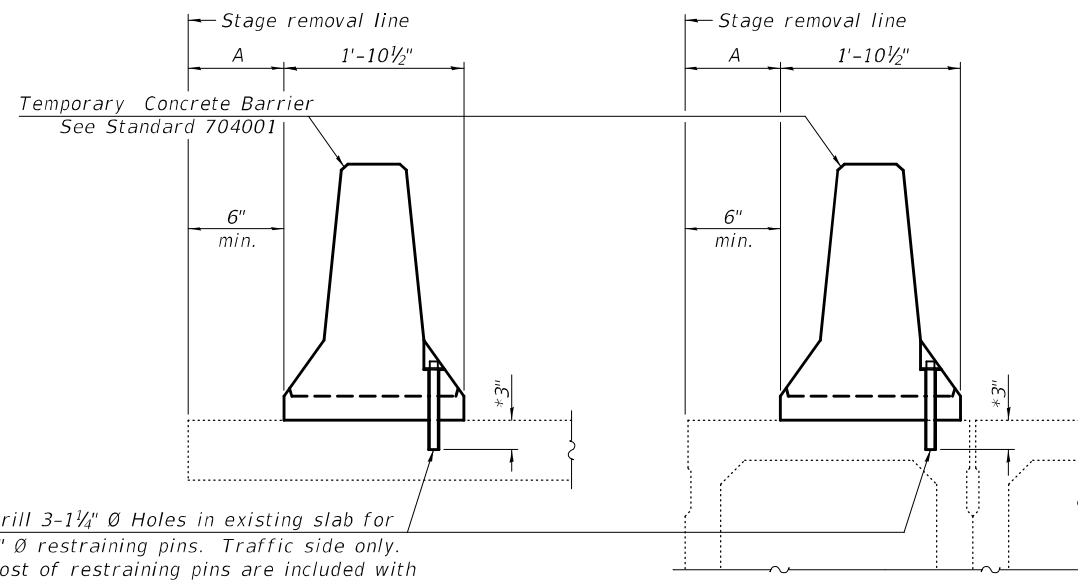
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327	(51,23HB-1)BR	LAWRENCE	50	16
CONTRACT NO. 74440				
ILLINOIS FED. AID PROJECT				

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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



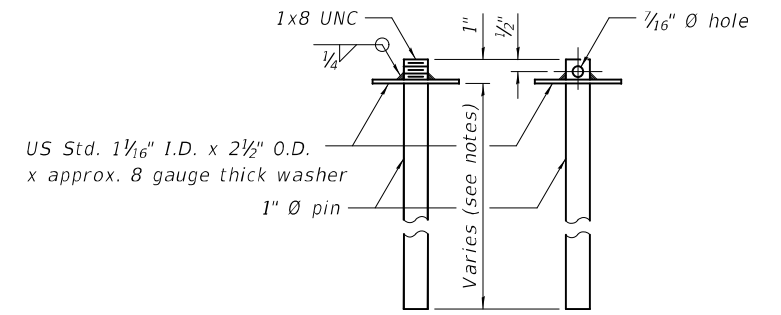
Drill 3-1/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

EXISTING SLAB

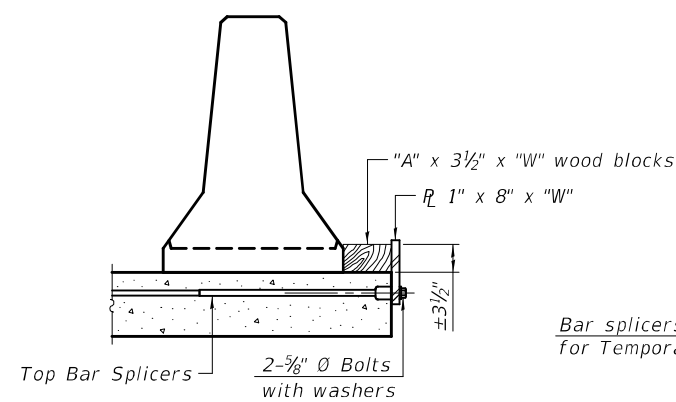
* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

EXISTING DECK BEAM

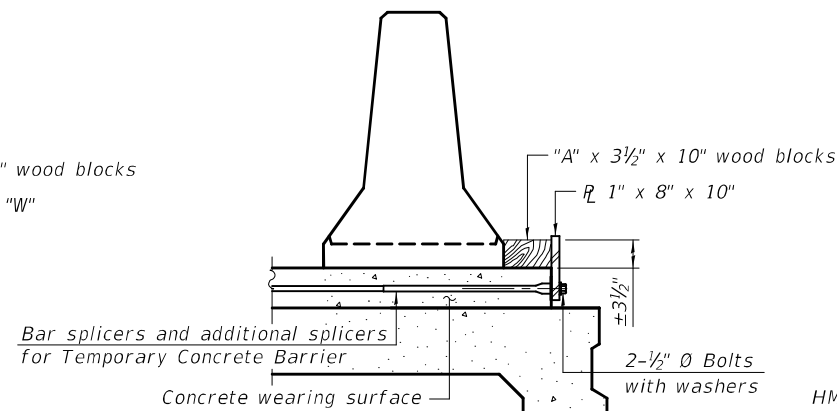
SECTIONS THRU SLAB OR DECK BEAM



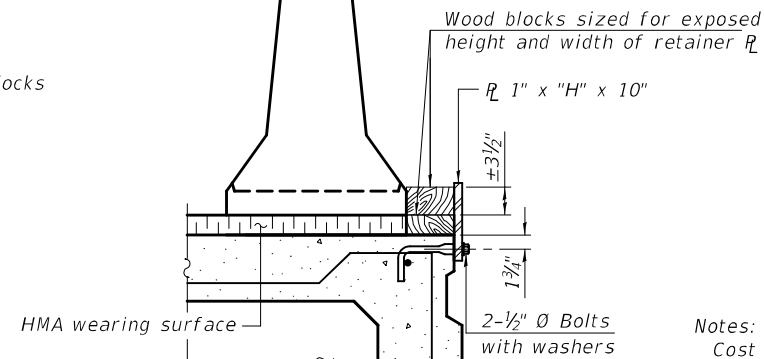
RESTRAINING PIN



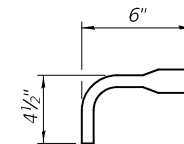
DETAIL I



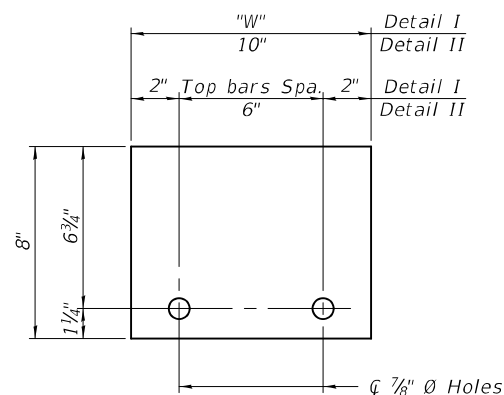
DETAIL II



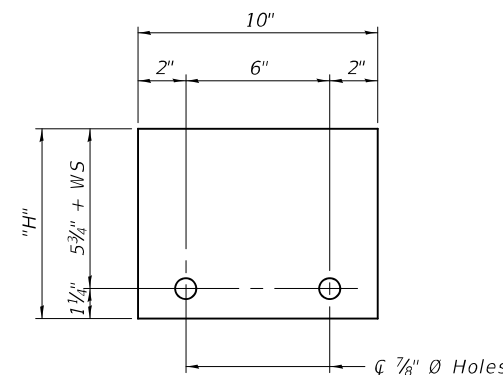
DETAIL III



BAR SPLICER FOR #4 BAR - DETAIL III



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



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

Notes:
 Cost of retainer assembly is included with Temporary Concrete Barrier.
 A retainer assembly shall be located at the approximate center 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 1 1/2', 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.

RAILING CRITERIA

NCHRP 350 Test Level	3
Railing Weight (plf)	440

R-27 10-12-2021

DESIGNED - PAUL S. JOHNSON	EXAMINED
CHECKED - MICHAEL A. PAULIONIS	PASSED
DRAWN - ANDRO R. SAMANIEGO	
CHECKED - P.S.J. / M.A.P.	

ENGINEER OF BRIDGE DESIGN

 ENGINEER OF BRIDGES AND STRUCTURES

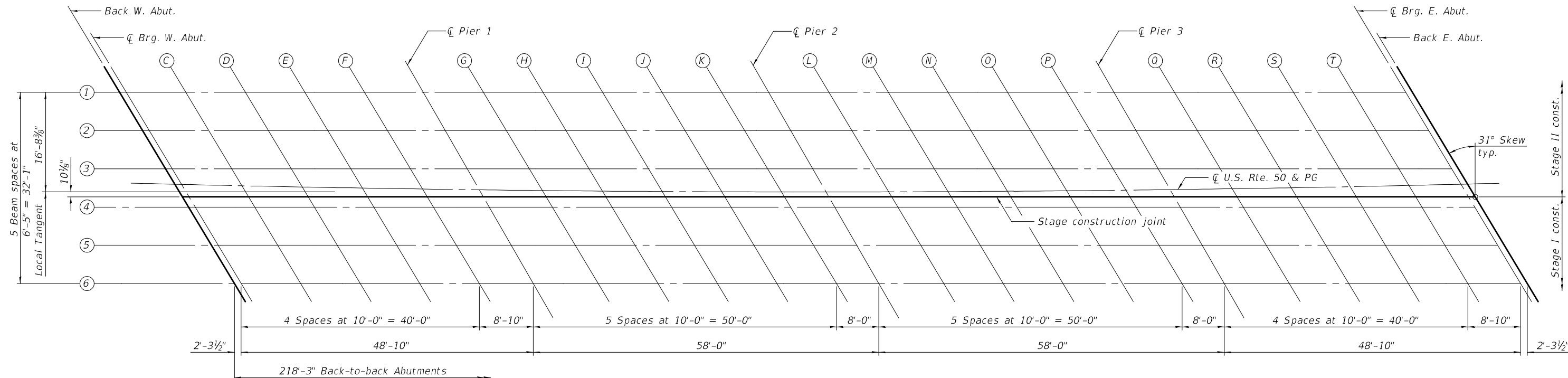
DATE - December 13, 2021
REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

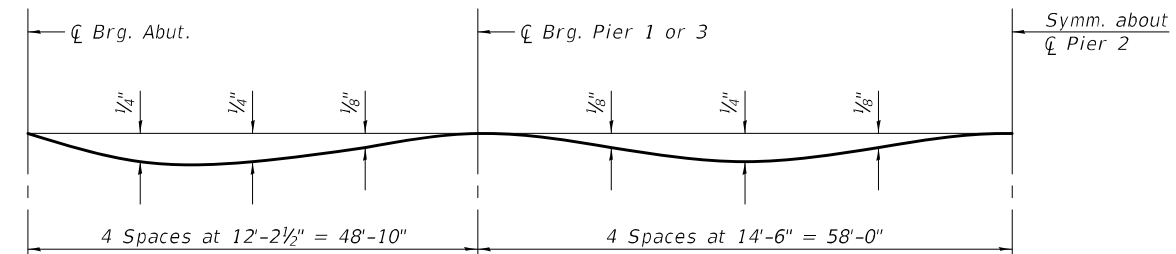
**TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 051-0010**

SHEET 4 OF 28 SHEETS

F.A.P. RTE. 327	SECTION (51,23HB-1)BR	COUNTY LAWRENCE	TOTAL SHEETS 50	SHEET NO. 17
			CONTRACT NO. 74440	
		ILLINOIS FED. AID PROJECT		



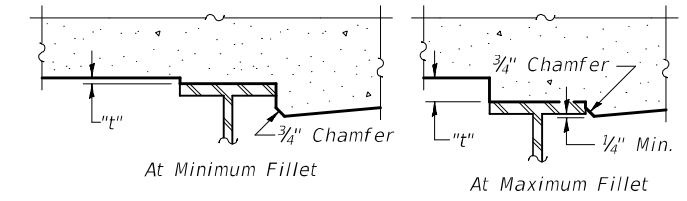
PLAN



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 as shown on sheet 6 through 8 of 28.



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" shown on sheets 6 through 8 of 28, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

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DESIGNED - PAUL S. JOHNSON	EXAMINED - <i>Joanne F. J. [Signature]</i>	DATE - December 13, 2021
CHECKED - MICHAEL A. PAULIONIS	PASSED - <i>Carl [Signature]</i>	REVISOR -
DRAWN - ANDRO R. SAMANIEGO	ENGINEER OF BRIDGES AND STRUCTURES	REVISOR -
CHECKED - P.S.J. / M.A.P.		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 051-0010

SHEET 5 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51,23HB-1)BR	LAWRENCE	50	18
CONTRACT NO. 74440				
ILLINOIS FED. AID PROJECT				

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
BK. of W. Abut.	1519+45.88	-15.14	479.29	479.29
Q Brg. W. Abut.	1519+48.18	-15.20	479.27	479.27
C	1519+58.21	-15.44	479.20	479.21
D	1519+68.24	-15.67	479.12	479.14
E	1519+78.27	-15.87	479.05	479.06
F	1519+88.31	-16.05	478.98	478.98
Q Brg. Pier 1	1519+97.17	-16.19	478.91	478.91
G	1520+07.21	-16.33	478.84	478.84
H	1520+17.24	-16.45	478.76	478.77
I	1520+27.28	-16.54	478.69	478.70
J	1520+37.32	-16.61	478.61	478.62
K	1520+47.35	-16.66	478.53	478.54
Q Brg. Pier 2	1520+55.38	-16.69	478.47	478.47
L	1520+65.42	-16.70	478.39	478.39
M	1520+75.46	-16.69	478.30	478.32
N	1520+85.49	-16.65	478.22	478.24
O	1520+95.53	-16.60	478.14	478.15
P	1521+05.57	-16.52	478.05	478.06
Q Brg. Pier 3	1521+13.59	-16.44	477.99	477.99
Q	1521+23.63	-16.32	477.90	477.91
R	1521+33.66	-16.18	477.81	477.83
S	1521+43.70	-16.02	477.73	477.74
T	1521+53.73	-15.83	477.64	477.65
Q Brg. E. Abut.	1521+62.60	-15.65	477.56	477.56
Bk. of E. Abut.	1521+64.89	-15.60	477.54	477.54

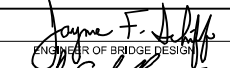

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
BK. of W. Abut.	1519+49.91	-8.82	479.35	479.35
Q Brg. W. Abut.	1519+52.21	-8.88	479.34	479.34
C	1519+62.22	-9.12	479.26	479.28
D	1519+72.24	-9.33	479.19	479.21
E	1519+82.26	-9.53	479.12	479.13
F	1519+92.28	-9.70	479.04	479.05
Q Brg. Pier 1	1520+01.13	-9.83	478.98	478.98
G	1520+11.15	-9.96	478.90	478.91
H	1520+21.17	-10.07	478.83	478.84
I	1520+31.20	-10.15	478.75	478.77
J	1520+41.22	-10.22	478.67	478.69
K	1520+51.24	-10.26	478.60	478.60
Q Brg. Pier 2	1520+59.26	-10.28	478.53	478.53
L	1520+69.28	-10.28	478.45	478.46
M	1520+79.31	-10.26	478.37	478.38
N	1520+89.33	-10.22	478.29	478.30
O	1520+99.35	-10.15	478.20	478.22
P	1521+09.37	-10.06	478.12	478.12
Q Brg. Pier 3	1521+17.39	-9.98	478.05	478.05
Q	1521+27.41	-9.85	477.96	477.97
R	1521+37.43	-9.70	477.88	477.89
S	1521+47.45	-9.53	477.79	477.81
T	1521+57.47	-9.34	477.70	477.71
Q Brg. E. Abut.	1521+66.32	-9.15	477.62	477.62
Bk. of E. Abut.	1521+68.61	-9.10	477.60	477.60

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
BK. of W. Abut.	1519+53.93	-2.50	479.42	479.42
Q Brg. W. Abut.	1519+56.22	-2.56	479.40	479.40
C	1519+66.23	-2.79	479.33	479.34
D	1519+76.23	-2.99	479.26	479.27
E	1519+86.24	-3.18	479.18	479.20
F	1519+96.24	-3.34	479.11	479.12
Q Brg. Pier 1	1520+05.08	-3.47	479.05	479.05
G	1520+15.09	-3.59	478.97	478.98
H	1520+25.10	-3.69	478.89	478.91
I	1520+35.10	-3.77	478.82	478.83
J	1520+45.11	-3.82	478.74	478.75
K	1520+55.12	-3.85	478.66	478.67
Q Brg. Pier 2	1520+63.13	-3.86	478.60	478.60
L	1520+73.14	-3.86	478.52	478.52
M	1520+83.14	-3.83	478.43	478.45
N	1520+93.15	-3.78	478.35	478.37
O	1521+03.16	-3.70	478.27	478.28
P	1521+13.17	-3.61	478.18	478.19
Q Brg. Pier 3	1521+21.17	-3.52	478.11	478.11
Q	1521+31.18	-3.38	478.03	478.03
R	1521+41.19	-3.23	477.94	477.96
S	1521+51.19	-3.05	477.85	477.87
T	1521+61.20	-2.84	477.76	477.77
Q Brg. E. Abut.	1521+70.03	-2.65	477.68	477.68
Bk. of E. Abut.	1521+72.32	-2.60	477.66	477.66

MODEL: 0510010-74440-006
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DESIGNED - PAUL S. JOHNSON	EXAMINED	DATE - December 13, 2021
CHECKED - MICHAEL A. PAULIONIS		
DRAWN - ANDRO R. SAMANIEGO	PASSED	
CHECKED - P.S.J. / M.A.P.		REVISER -
	ENGINEER OF BRIDGES AND STRUCTURES	REVISER -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS
STRUCTURE NO. 051-0010**

SHEET 6 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51,23HB-1)BR	LAWRENCE	50	19
			CONTRACT NO. 74440	
		ILLINOIS	FED. AID PROJECT	

CL ROADWAY & PROFILE GRADE LINE

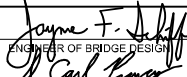

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
BK. of W. Abut.	1519+55.52	0.00	479.45	479.45
CL Brg. W. Abut.	1519+57.84	0.00	479.43	479.43
C	1519+67.84	0.00	479.36	479.37
D	1519+77.84	0.00	479.29	479.31
E	1519+87.84	0.00	479.22	479.23
F	1519+97.84	0.00	479.15	479.16
CL Brg. Pier 1	1520+07.23	0.00	479.08	479.08
G	1520+17.23	0.00	479.01	479.02
H	1520+27.23	0.00	478.93	478.95
I	1520+37.23	0.00	478.86	478.87
J	1520+47.23	0.00	478.78	478.79
K	1520+57.23	0.00	478.70	478.71
CL Brg. Pier 2	1520+65.45	0.00	478.64	478.64
L	1520+75.45	0.00	478.55	478.56
M	1520+85.45	0.00	478.47	478.49
N	1520+95.45	0.00	478.39	478.41
O	1521+05.45	0.00	478.30	478.32
P	1521+15.45	0.00	478.22	478.22
CL Brg. Pier 3	1521+23.23	0.00	478.15	478.15
Q	1521+33.23	0.00	478.06	478.07
R	1521+43.23	0.00	477.97	477.99
S	1521+53.23	0.00	477.88	477.90
T	1521+63.23	0.00	477.79	477.80
CL Brg. E. Abut.	1521+71.54	0.00	477.71	477.71
Bk. of E. Abut.	1521+73.80	0.00	477.69	477.69

STAGE CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
BK. of W. Abut.	1519+56.87	2.14	479.47	479.47
CL Brg. W. Abut.	1519+59.16	2.08	479.45	479.45
C	1519+69.16	1.86	479.38	479.39
D	1519+79.15	1.66	479.31	479.32
E	1519+89.15	1.48	479.23	479.25
F	1519+99.14	1.32	479.16	479.17
CL Brg. Pier 1	1520+07.97	1.20	479.09	479.09
G	1520+17.97	1.09	479.02	479.03
H	1520+27.97	1.00	478.94	478.96
I	1520+37.96	0.92	478.87	478.88
J	1520+47.96	0.88	478.79	478.80
K	1520+57.96	0.85	478.71	478.71
CL Brg. Pier 2	1520+65.96	0.84	478.64	478.64
L	1520+75.96	0.86	478.56	478.57
M	1520+85.95	0.89	478.48	478.49
N	1520+95.95	0.95	478.40	478.42
O	1521+05.95	1.03	478.31	478.33
P	1521+15.95	1.13	478.23	478.24
CL Brg. Pier 3	1521+23.94	1.23	478.16	478.16
Q	1521+33.94	1.37	478.07	478.08
R	1521+43.93	1.53	477.99	478.00
S	1521+53.93	1.72	477.90	477.91
T	1521+63.92	1.92	477.81	477.82
CL Brg. E. Abut.	1521+72.75	2.12	477.73	477.73
Bk. of E. Abut.	1521+75.04	2.18	477.71	477.71

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DESIGNED -	PAUL S. JOHNSON
CHECKED -	MICHAEL A. PAULIONIS
DRAWN -	ANDRO R. SAMANIEGO
CHECKED -	P.S.J. / M.A.P.

EXAMINED	
PASSED	
	ENGINEER OF BRIDGES AND STRUCTURES

DATE -	December 13, 2021
REVISED -	
REVISED -	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS
STRUCTURE NO. 051-0010**

SHEET 7 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51,23HB-1)BR	LAWRENCE	50	20
			CONTRACT NO. 74440	
		ILLINOIS	FED. AID PROJECT	

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
BK. of W. Abut.	1519+57.94	3.82	479.49	479.49
Q Brg. W. Abut.	1519+60.23	3.77	479.47	479.47
C	1519+70.22	3.55	479.40	479.41
D	1519+80.21	3.35	479.32	479.34
E	1519+90.20	3.17	479.25	479.27
F	1520+00.19	3.02	479.18	479.18
Q Brg. Pier 1	1520+09.02	2.90	479.11	479.11
G	1520+19.01	2.79	479.04	479.04
H	1520+29.00	2.70	478.96	478.97
I	1520+39.00	2.63	478.88	478.90
J	1520+48.99	2.58	478.81	478.82
K	1520+58.99	2.56	478.73	478.73
Q Brg. Pier 2	1520+66.98	2.55	478.66	478.66
L	1520+76.98	2.57	478.58	478.59
M	1520+86.97	2.61	478.50	478.51
N	1520+96.97	2.66	478.42	478.43
O	1521+06.96	2.75	478.33	478.34
P	1521+16.95	2.85	478.25	478.25
Q Brg. Pier 3	1521+24.95	2.95	478.18	478.18
Q	1521+34.94	3.09	478.09	478.10
R	1521+44.93	3.26	478.00	478.02
S	1521+54.92	3.44	477.91	477.93
T	1521+64.91	3.65	477.82	477.84
Q Brg. E. Abut.	1521+73.73	3.86	477.74	477.74
Bk. of E. Abut.	1521+76.02	3.91	477.72	477.72

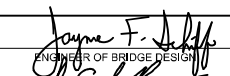

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
BK. of W. Abut.	1519+61.94	10.15	479.55	479.55
Q Brg. W. Abut.	1519+64.22	10.09	479.54	479.54
C	1519+74.20	9.88	479.46	479.48
D	1519+84.17	9.69	479.39	479.41
E	1519+94.15	9.52	479.32	479.33
F	1520+04.13	9.38	479.24	479.25
Q Brg. Pier 1	1520+12.94	9.27	479.18	479.18
G	1520+22.92	9.17	479.10	479.11
H	1520+32.90	9.08	479.03	479.04
I	1520+42.88	9.02	478.95	478.97
J	1520+52.86	8.99	478.87	478.88
K	1520+62.84	8.97	478.79	478.80
Q Brg. Pier 2	1520+70.83	8.97	478.73	478.73
L	1520+80.81	9.00	478.65	478.65
M	1520+90.79	9.04	478.56	478.58
N	1521+00.77	9.11	478.48	478.50
O	1521+10.75	9.20	478.40	478.41
P	1521+20.73	9.31	478.31	478.32
Q Brg. Pier 3	1521+28.71	9.42	478.24	478.24
Q	1521+38.69	9.57	478.15	478.16
R	1521+48.66	9.74	478.07	478.08
S	1521+58.64	9.94	477.98	477.99
T	1521+68.62	10.16	477.89	477.90
Q Brg. E. Abut.	1521+77.43	10.37	477.81	477.81
Bk. of E. Abut.	1521+79.71	10.42	477.79	477.79

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
BK. of W. Abut.	1519+65.92	16.47	479.62	479.62
Q Brg. W. Abut.	1519+68.21	16.42	479.60	479.60
C	1519+78.17	16.22	479.53	479.54
D	1519+88.13	16.04	479.46	479.48
E	1519+98.09	15.88	479.39	479.40
F	1520+08.06	15.75	479.31	479.32
Q Brg. Pier 1	1520+16.86	15.64	479.25	479.25
G	1520+26.83	15.55	479.17	479.18
H	1520+36.79	15.47	479.09	479.11
I	1520+46.76	15.42	479.02	479.03
J	1520+56.72	15.39	478.94	478.95
K	1520+66.69	15.39	478.86	478.86
Q Brg. Pier 2	1520+74.66	15.40	478.79	478.79
L	1520+84.63	15.43	478.71	478.72
M	1520+94.59	15.48	478.63	478.64
N	1521+04.56	15.56	478.54	478.56
O	1521+14.52	15.66	478.46	478.47
P	1521+24.49	15.78	478.37	478.38
Q Brg. Pier 3	1521+32.46	15.89	478.31	478.31
Q	1521+42.42	16.05	478.22	478.23
R	1521+52.39	16.23	478.13	478.14
S	1521+62.35	16.43	478.04	478.06
T	1521+72.31	16.66	477.95	477.96
Q Brg. E. Abut.	1521+81.11	16.88	477.87	477.87
Bk. of E. Abut.	1521+83.39	16.94	477.85	477.85

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DESIGNED - PAUL S. JOHNSON	EXAMINED	DATE - December 13, 2021
CHECKED - MICHAEL A. PAULIONIS		
DRAWN - ANDRO R. SAMANIEGO	PASSED	
CHECKED - P.S.J. / M.A.P.		REVISER -
	ENGINEER OF BRIDGES AND STRUCTURES	REVISER -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS
STRUCTURE NO. 051-0010**

SHEET 8 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51,23HB-1)BR	LAWRENCE	50	21
			CONTRACT NO. 74440	
		ILLINOIS	FED. AID PROJECT	

NORTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. end of W. Appr. slab	1519+15.96	-15.84	479.49
A	1519+25.99	-16.15	479.41
B	1519+36.02	-16.45	479.34
E. end of W. Appr. slab	1519+46.05	-16.72	479.26

☐ U.S. Rte. 50 & PG

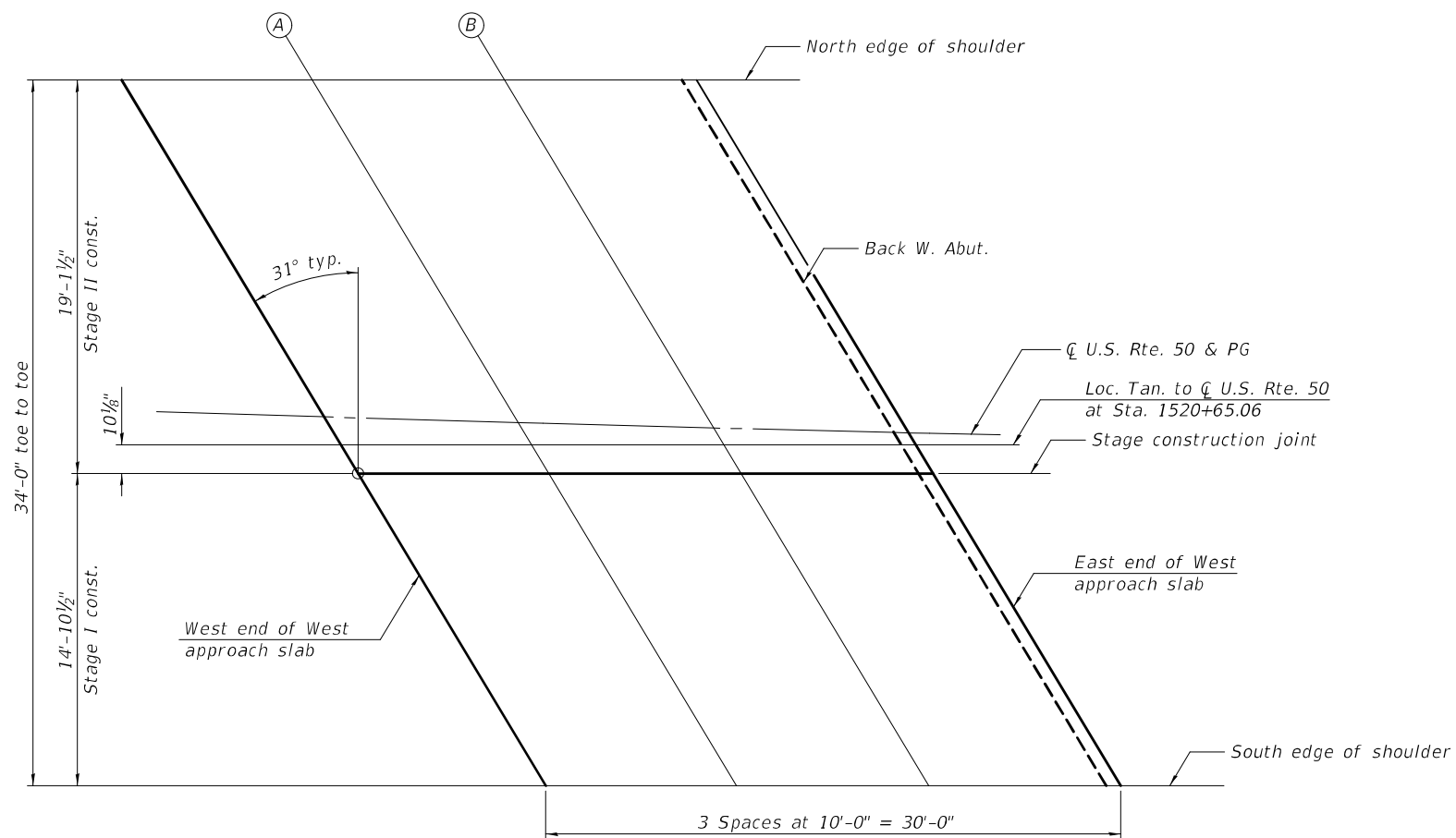
Location	Station	Offset	Theoretical Grade Elevations
W. end of W. Appr. slab	1519+26.19	0.00	479.65
A	1519+36.38	0.00	479.58
B	1519+46.55	0.00	479.51
E. end of W. Appr. slab	1519+56.70	0.00	479.44

STAGED CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations
W. end of W. Appr. slab	1519+28.07	2.92	479.68
A	1519+38.06	2.63	479.61
B	1519+48.05	2.36	479.53
E. end of W. Appr. slab	1519+58.04	2.11	479.46

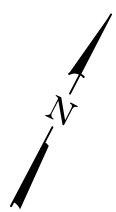
SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. end of W. Appr. slab	1519+37.41	17.52	479.84
A	1519+47.37	17.25	479.76
B	1519+57.33	17.00	479.69
E. end of W. Appr. slab	1519+67.29	16.78	479.62



PLAN

MODEL: 0510010-74440-009
FILE NAME: p:\w\p\w\benley.com\FWIDOT\Documents\Bureau of Bridges and Structures\Projects\0510010\CADD Plans\0510010-74440



DESIGNED - PAUL S. JOHNSON	EXAMINED - <i>Jaime F. Joffe</i>	DATE - December 13, 2021
CHECKED - MICHAEL A. PAULIONIS	PASSED - <i>Carl King</i>	REVISER -
DRAWN - ANDRO R. SAMANIEGO	ENGINEER OF BRIDGES AND STRUCTURES	REVISER -
CHECKED - P.S.J. / M.A.P.		

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TOP OF WEST APPROACH SLAB ELEVATIONS
STRUCTURE NO. 051-0010**

F.A.P. RTE. 327	SECTION (51,23HB-1)BR	COUNTY LAWRENCE	TOTAL SHEETS 50	SHEET NO. 22
CONTRACT NO. 74440				
ILLINOIS		FED. AID PROJECT		

NORTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. end of E. Appr. slab	1521+62.80	-17.23	477.53
U	1521+72.84	-17.00	477.44
V	1521+82.87	-16.75	477.35
E. end of E. Appr. slab	1521+92.91	-16.48	477.25

☐ U.S. Rte. 50 & PG

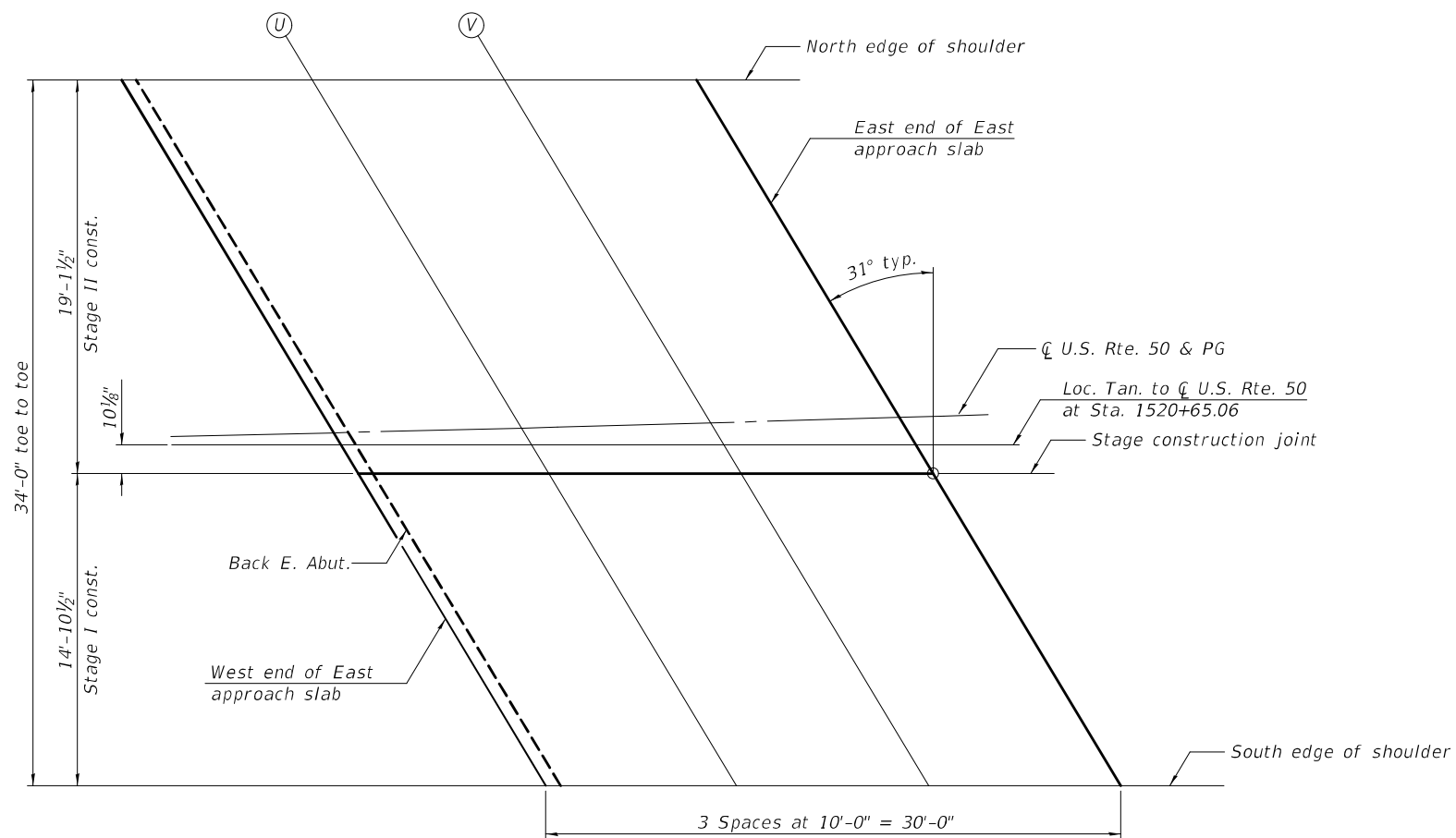
Location	Station	Offset	Theoretical Grade Elevations
W. end of E. Appr. slab	1521+72.65	0.00	477.70
U	1521+82.51	0.00	477.60
V	1521+92.35	0.00	477.51
E. end of E. Appr. slab	1522+02.18	0.00	477.41

STAGED CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations
W. end of E. Appr. slab	1521+73.87	2.15	477.72
U	1521+83.87	2.40	477.63
V	1521+93.86	2.68	477.53
E. end of E. Appr. slab	1522+03.85	2.97	477.44

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. end of E. Appr. slab	1521+82.42	17.25	477.86
U	1521+92.38	17.52	477.77
V	1522+02.33	17.81	477.68
E. end of E. Appr. slab	1522+12.29	18.12	477.58



PLAN

MODEL: 0510010-74440-010
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DESIGNED - PAUL S. JOHNSON	EXAMINED - <i>Joanne F. J. [Signature]</i>
CHECKED - MICHAEL A. PAULIONIS	PASSED - <i>Carl [Signature]</i>
DRAWN - ANDRO R. SAMANIEGO	
CHECKED - P.S.J. / M.A.P.	

DATE - December 13, 2021
 ENGINEER OF BRIDGES AND STRUCTURES

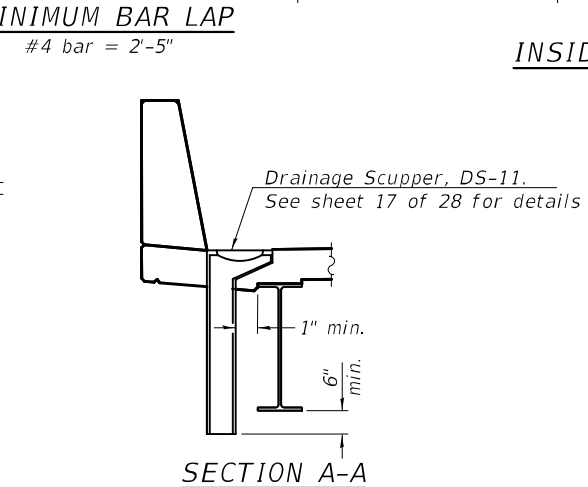
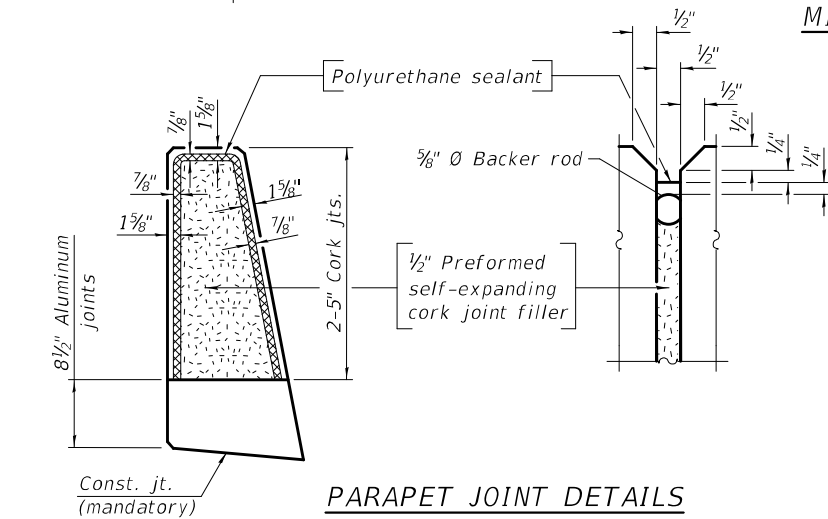
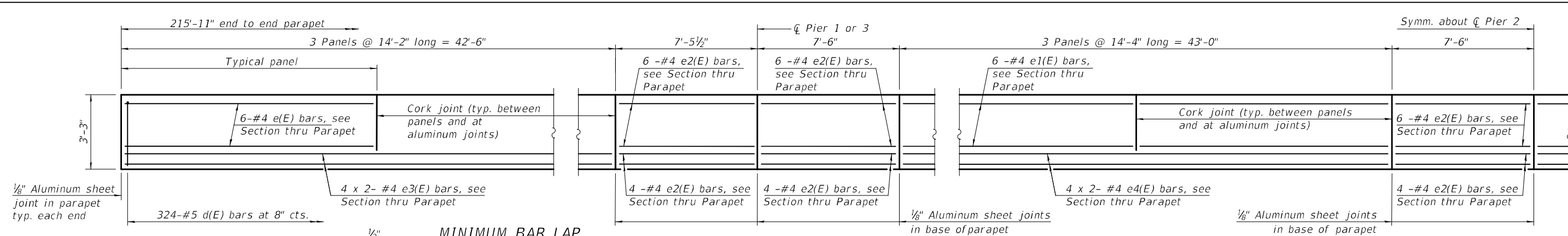
REVISER -	DATE -
REVISION -	

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

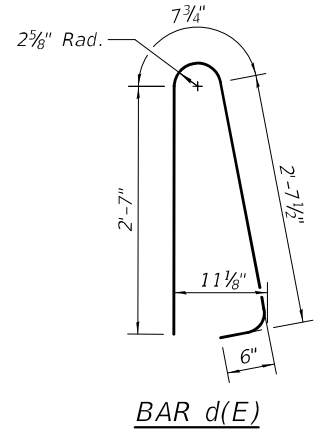
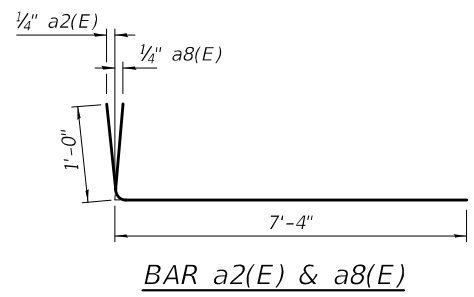
TOP OF EAST APPROACH SLAB ELEVATIONS
 STRUCTURE NO. 051-0010

SHEET 10 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51,23HB-1)BR	LAWRENCE	50	23
CONTRACT NO. 74440				
ILLINOIS FED. AID PROJECT				

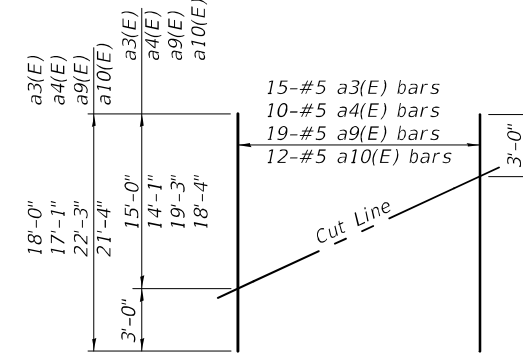
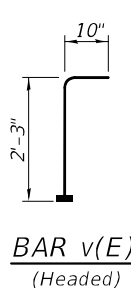
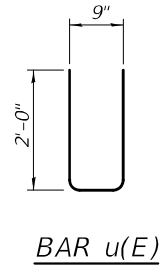
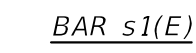
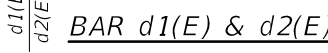
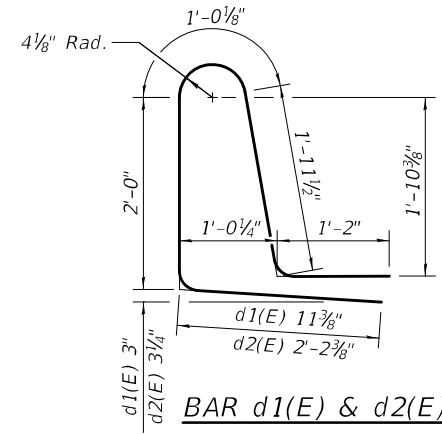
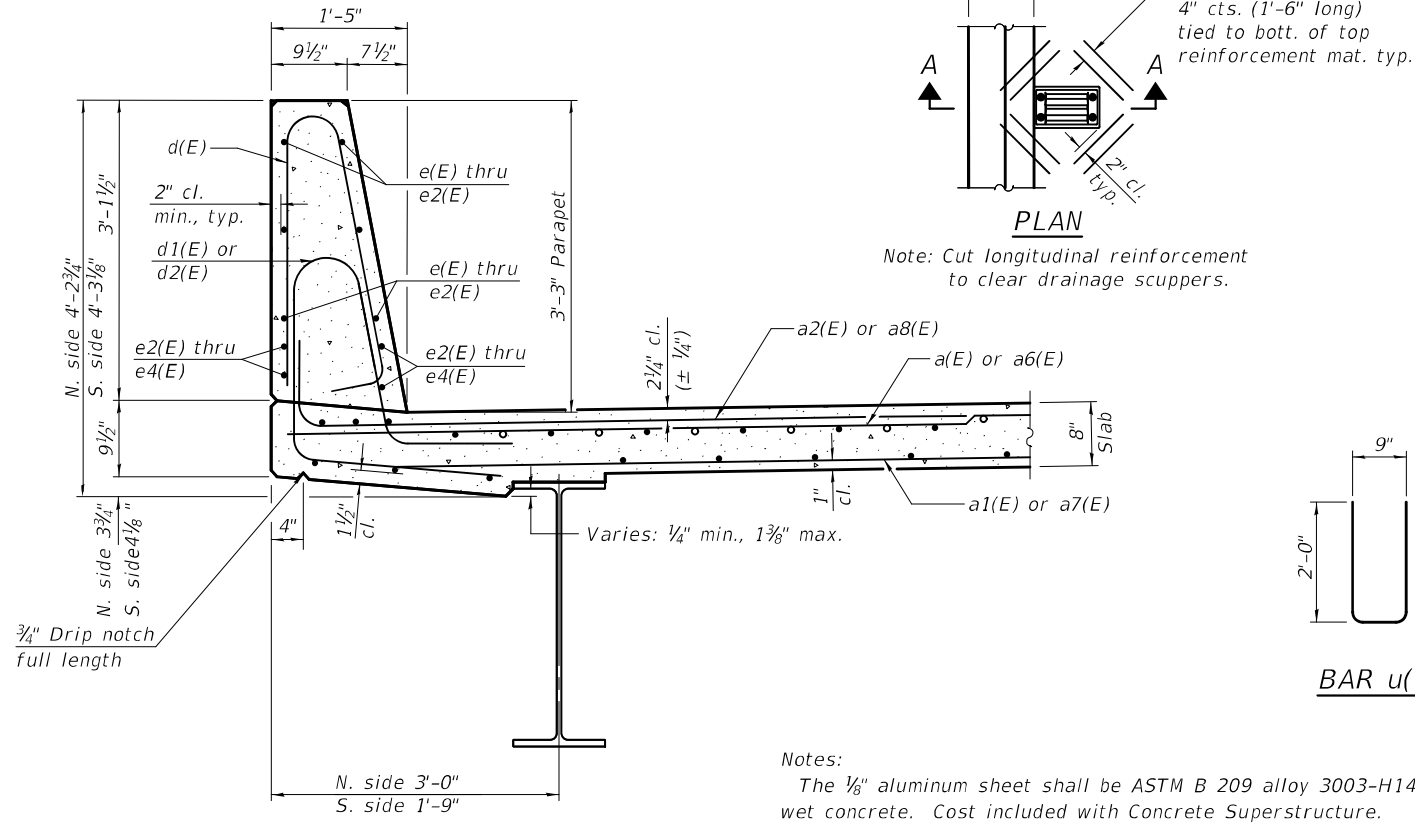


INSIDE ELEVATION OF PARAPET



SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
a(E)	382	#5	15'-11"	—	
a1(E)	248	#5	15'-5"	—	
a2(E)	392	#6	8'-4"	┌	
a3(E)	15	#5	18'-0"	—	
a4(E)	10	#5	17'-1"	—	
a5(E)	4	#5	18'-7"	—	
a6(E)	378	#5	20'-2"	—	
a7(E)	246	#5	19'-8"	—	
a8(E)	392	#6	8'-4"	┌	
a9(E)	19	#5	22'-3"	—	
a10(E)	12	#5	21'-4"	—	
a11(E)	4	#5	23'-6"	—	
a12(E)	72	#5	1'-6"	—	
b(E)	360	#5	27'-1"	—	
b1(E)	33	#6	34'-0"	—	
b2(E)	288	#5	30'-0"	—	
b3(E)	66	#6	32'-3"	—	
d(E)	648	#5	6'-5"	┌	
d1(E)	324	#5	7'-1"	┌	
d2(E)	324	#5	8'-4"	┌	
e(E)	72	#4	13'-10"	—	
e1(E)	72	#4	14'-0"	—	
e2(E)	120	#4	7'-2"	—	
e3(E)	32	#4	22'-4"	—	
e4(E)	32	#4	22'-7"	—	
m(E)	18	#6	18'-7"	—	
m1(E)	4	#4	18'-7"	—	
m2(E)	18	#6	23'-6"	—	
m3(E)	4	#4	23'-6"	—	
s(E)	70	#5	7'-8"	┌	
s1(E)	70	#5	9'-0"	┌	
u(E)	70	#4	4'-9"	┌	
v(E)	74	#5	3'-1"	┌	
Reinforcement Bars, Epoxy Coated				Pound	74,010
Concrete Superstructure				Cu. Yds.	295.6



FIELD CUTTING DIAGRAM

Order a3(E), a4(E), a9(E) and a10(E) bars full length. Cut as shown and use remainder of bars in opposite end of deck.

Notes:
 The 1/8" 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.
 Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.

SECTION THRU PARAPET
 (Note: Scuppers are for north side only)

MODEL: 0510010-74440-012
 FILE NAME: p:\w\p-w-bentley.com\FWIDOT\Documents\DOT Offices\Bureau of Bridges and Structures\Projects\0510010\CADD Plans\0510010-74440

DESIGNED - PAUL S. JOHNSON
CHECKED - MICHAEL A. PAULIONIS
DRAWN - ANDRO R. SAMANIEGO
CHECKED - P.S.J. / M.A.P.

EXAMINED
 PASSED

 ENGINEER OF BRIDGE DESIGN

 ENGINEER OF BRIDGES AND STRUCTURES

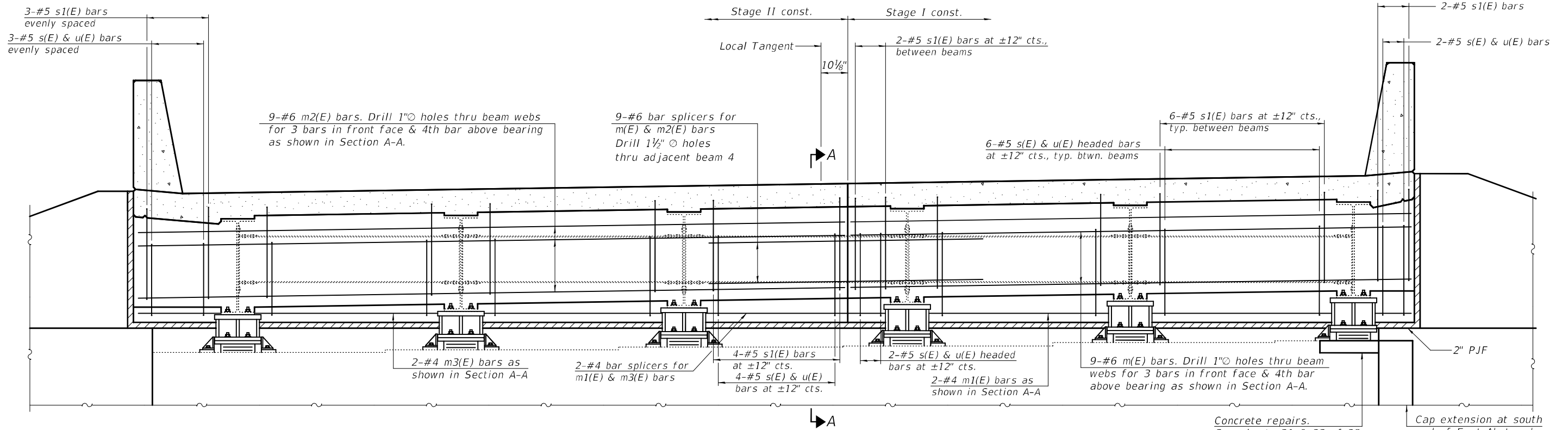
DATE - December 13, 2021
REVISED -
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**SUPERSTRUCTURE DETAILS
 STRUCTURE NO. 051-0010**

SHEET 12 OF 28 SHEETS

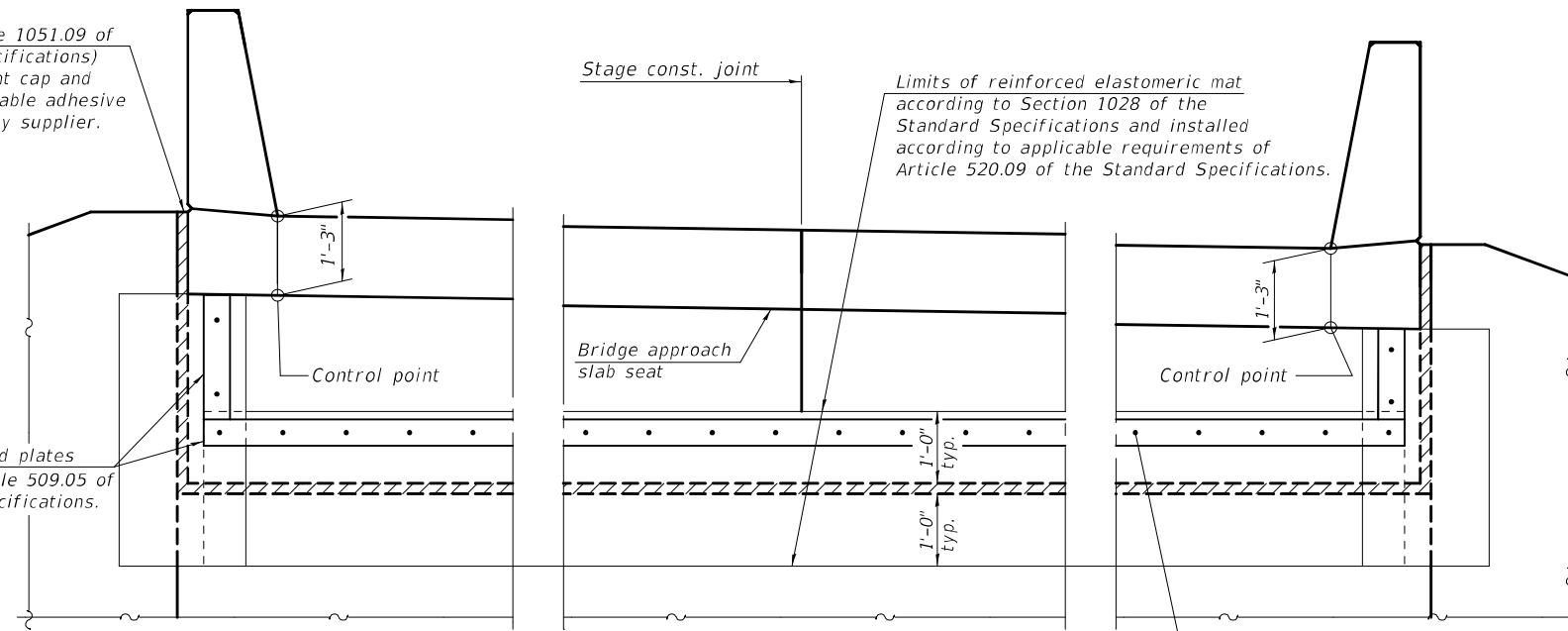
F.A.P. RTE. 327	SECTION (51,23HB-1)BR	COUNTY LAWRENCE	TOTAL SHEETS 50	SHEET NO. 25
CONTRACT NO. 74440				
ILLINOIS FED. AID PROJECT				



DIAPHRAGM AT EAST ABUTMENT
(Looking east along Local Tangent, West abutment similar)

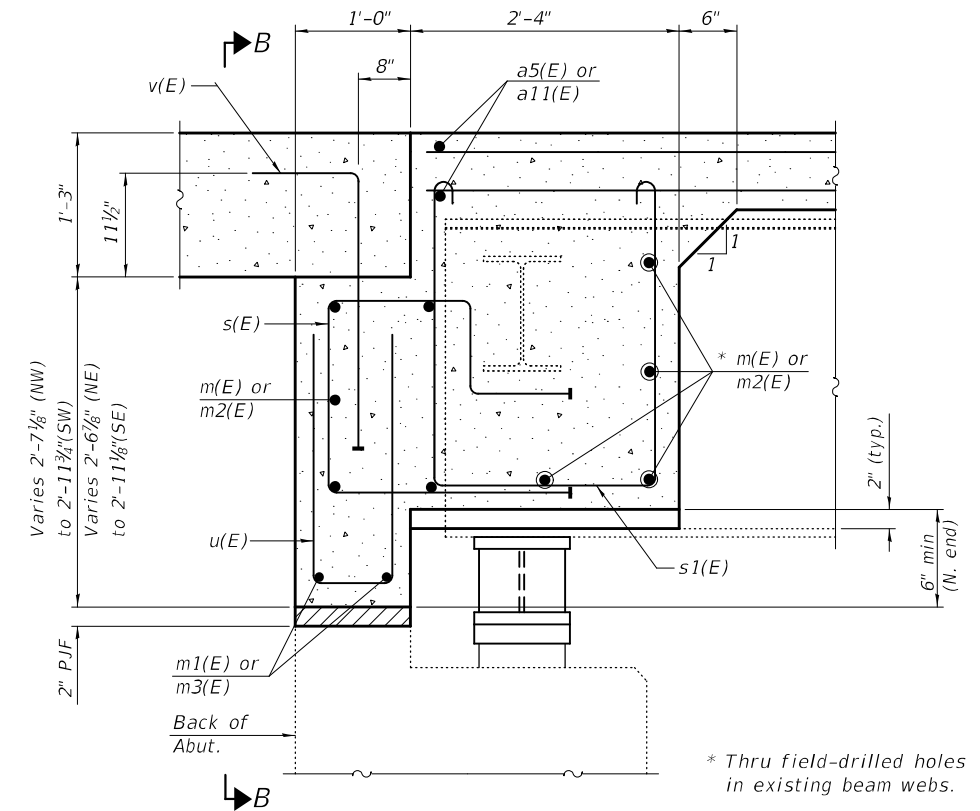
Concrete repairs. See sheets 21 & 22 of 28.
Cap extension at south end of East Abut. only. See sheet 26 of 28

2" PJF (Per Article 1051.09 of the Standard Specifications) bonded to abutment cap and wingwall with suitable adhesive as recommended by supplier.



VIEW B-B

(Showing approach seat control locations, 2" PJF, and limits of Fabric Reinforced Elastomeric Mat.)



SECTION A-A
(at Rt. L's)

Notes:
See sheet 12 of 28 for superstructure details and Bill of Material.
The s(E), s1(E) and u(E) bars shall be placed parallel to the beams.
Spacing for these bars shall be at right angles to the beams.
The approach slab seat shall have a constant slope determined from the control points shown.
Cost of fabric reinforced elastomeric mat, galvanized plate, stainless steel expansion bolts with nuts and washers and installation are included in the cost of Concrete Superstructure.

MODEL: 0510010-74440-013
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DESIGNED - PAUL S. JOHNSON	EXAMINED
CHECKED - MICHAEL A. PAULIONIS	PASSED
DRAWN - ANDRO R. SAMANIEGO	
CHECKED - P.S.J. / M.A.P.	

ENGINEER OF BRIDGE DESIGN

 ENGINEER OF BRIDGES AND STRUCTURES

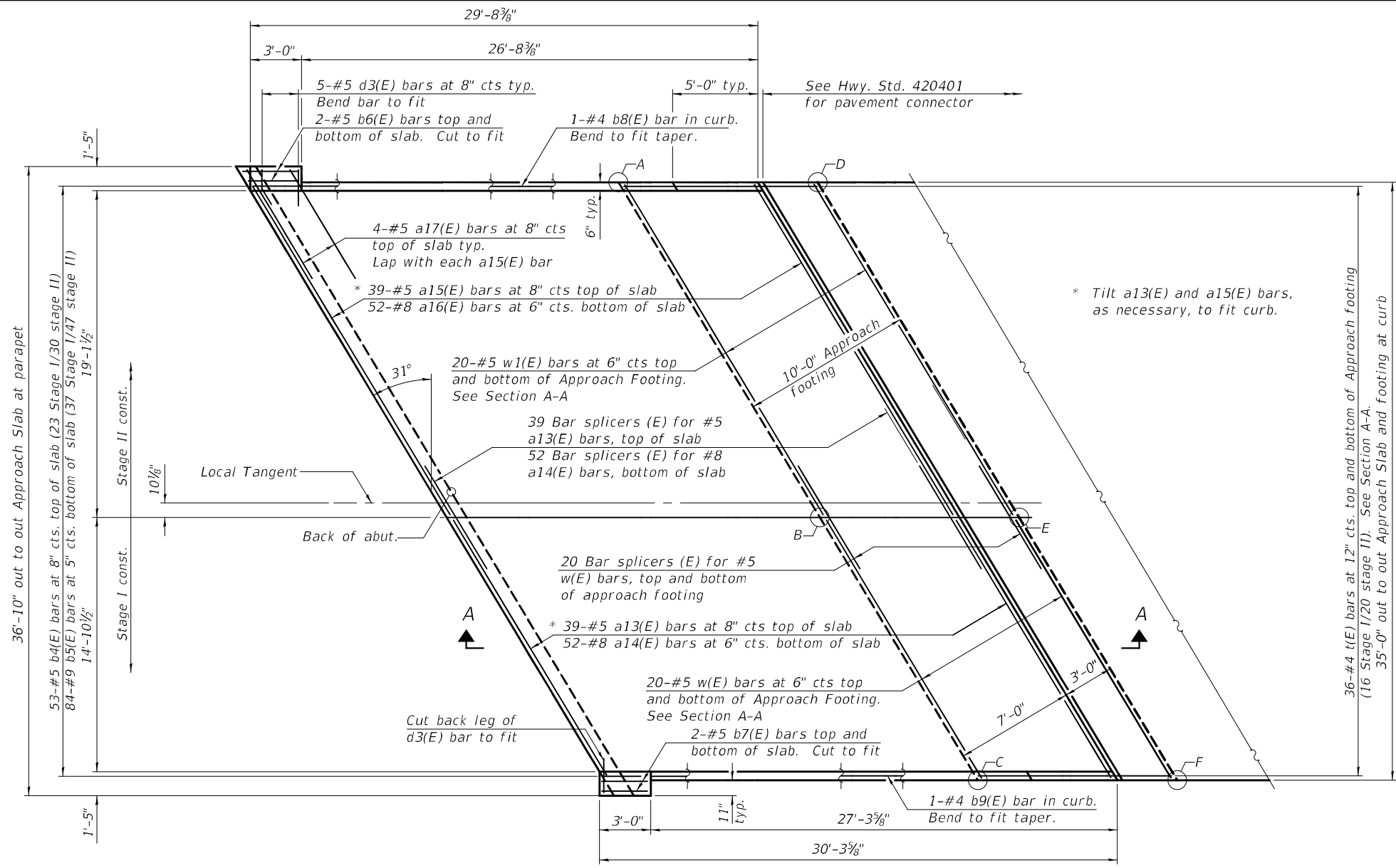
DATE - December 13, 2021
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DIAPHRAGM DETAILS
STRUCTURE NO. 051-0010**

SHEET 13 OF 28 SHEETS

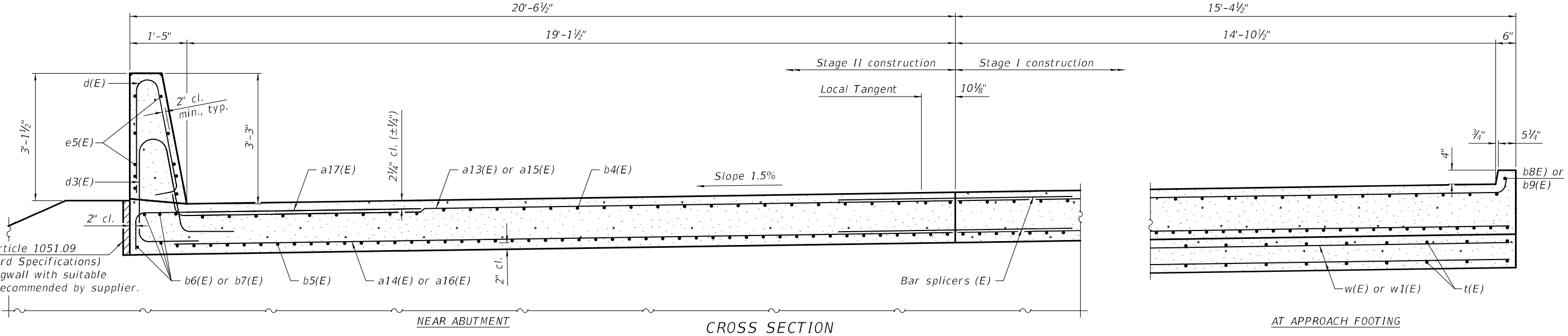
F.A.P. RTE. 327	SECTION (51,23HB-1)BR	COUNTY LAWRENCE	TOTAL SHEETS 50	SHEET NO. 26
CONTRACT NO. 74440				
ILLINOIS FED. AID PROJECT				



PLAN
(East approach shown; West approach similar)

TOP AND BOTTOM ELEVATIONS
FOR APPROACH FOOTING

Point	West Approach		East Approach	
	Top	Bottom	Top	Bottom
A (nw)	478.26	477.43	476.08	475.25
B (wsc)	478.46	477.63	476.27	475.44
C (sw)	478.62	477.79	476.41	475.58
D (ne)	478.17	477.34	475.97	475.14
E (esc)	478.37	477.54	476.16	475.33
F (se)	478.53	477.70	476.30	475.47



CROSS SECTION
(Looking East)

AT APPROACH FOOTING

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 CHECKED - MICHAEL A. PAULIONIS
 DRAWN - ANDRO R. SAMANIEGO
 CHECKED - P.S.J./M.A.P.

EXAMINED
 PASSED
 ENGINEER OF BRIDGES AND STRUCTURES

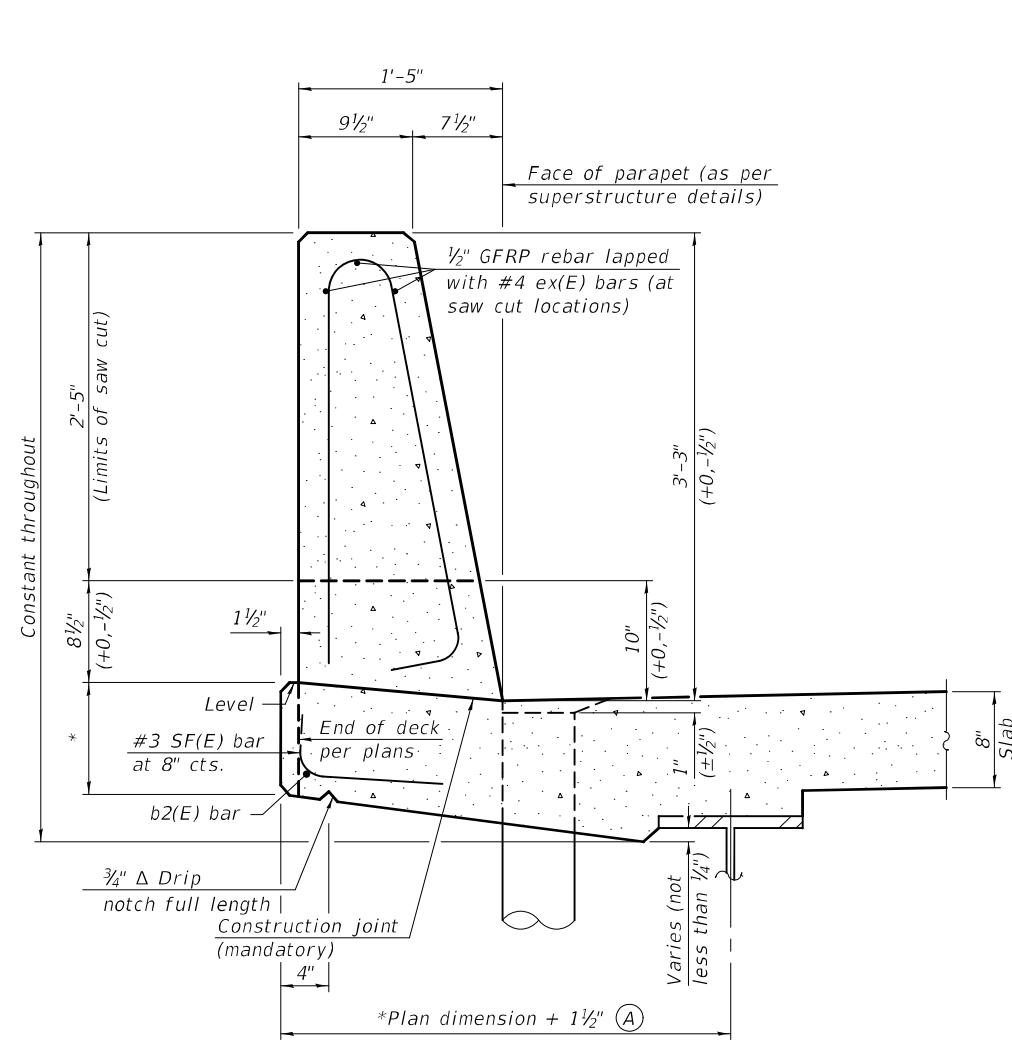
DATE - December 13, 2021
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BRIDGE APPROACH SLAB DETAILS
 STRUCTURE NO. 051-0010

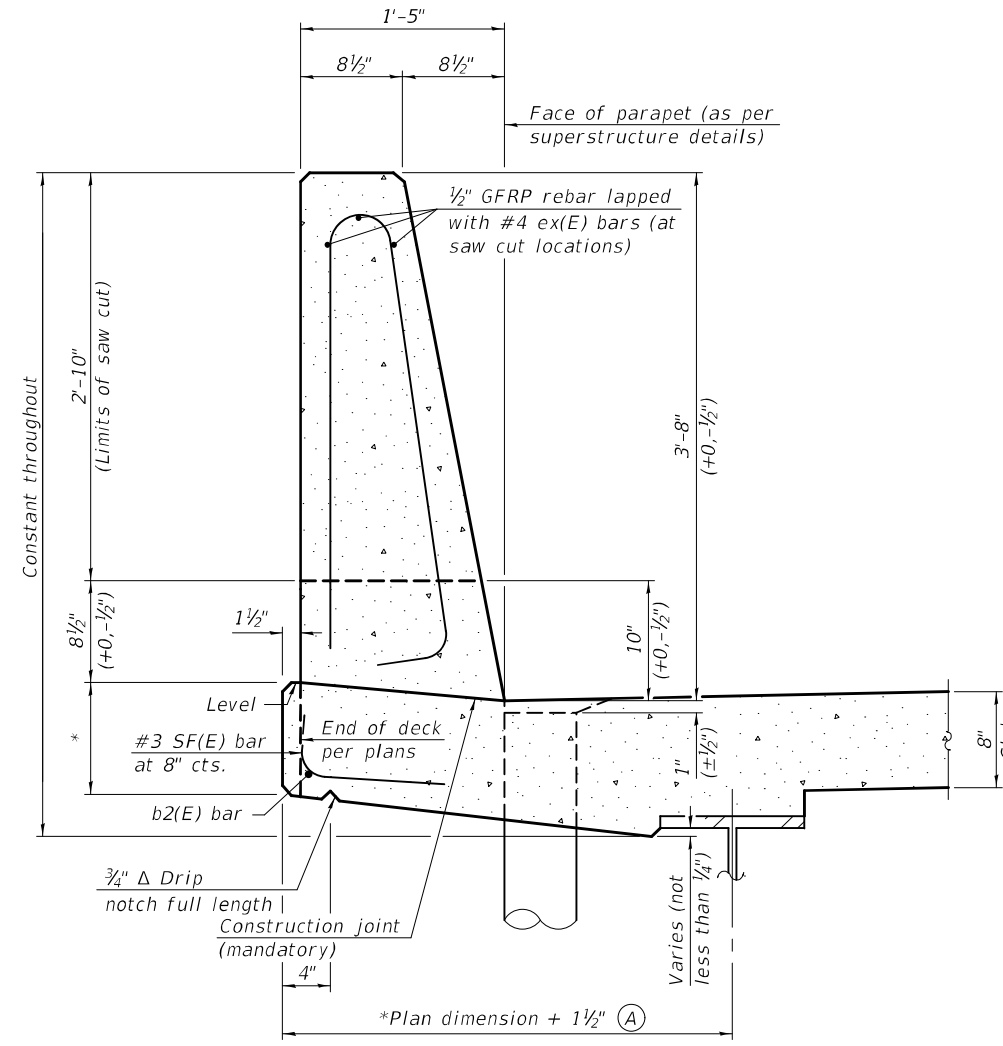
SHEET 14 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51,23HB-1)BR	LAWRENCE	50	27
CONTRACT NO. 74440				
ILLINOIS FED. AID PROJECT				



**39" CONSTANT-SLOPE
 PARAPET SECTION**

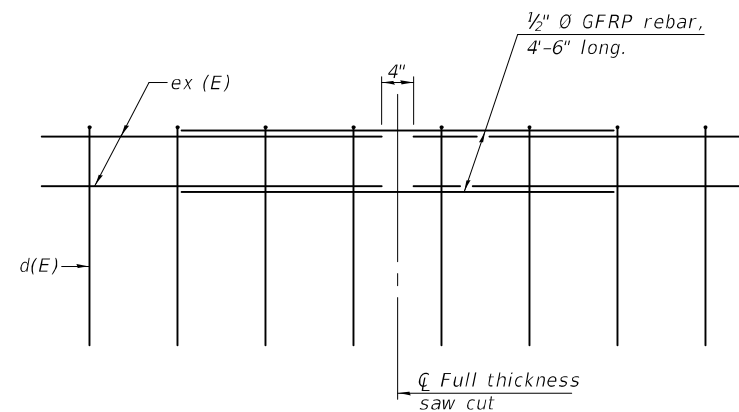
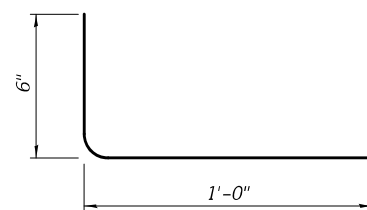
(Showing dimensions, d(E), and 1/2" Ø GFRP rebar)



**44" CONSTANT-SLOPE
 PARAPET SECTION**

(Showing dimensions, d(E), and 1/2" Ø GFRP rebar)

*See Superstructure Details.



GFRP REBAR STIFFENING DETAIL

(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 = 0.00348 cu. yds./ft. for 39" and 44" parapets.
 Place aluminum sheets as shown on superstructure details.
 Replace all cork joint filler locations with a full thickness saw cut.
 Steel superstructure shown. Other superstructure types similar.

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SFP 39-44

1-1-2020

DESIGNED - PAUL S. JOHNSON	EXAMINED
CHECKED - MICHAEL A. PAULIONIS	PASSED
DRAWN - ANDRO R. SAMANIEGO	
CHECKED - P.S.J. / M.A.P.	

DATE - December 13, 2021
 ENGINEER OF BRIDGES AND STRUCTURES

REVIS	DATE
REVIS	DATE

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

CONCRETE PARAPET SLIPFORMING OPTION
 STRUCTURE NO. 051-0010

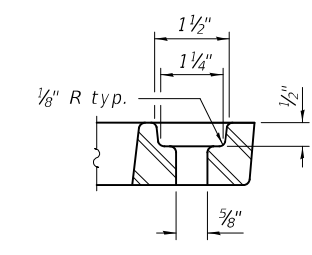
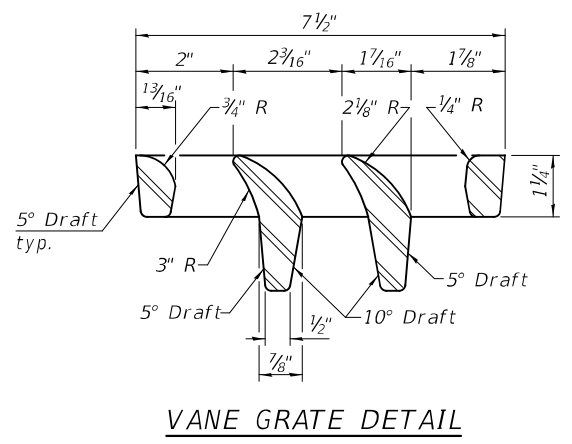
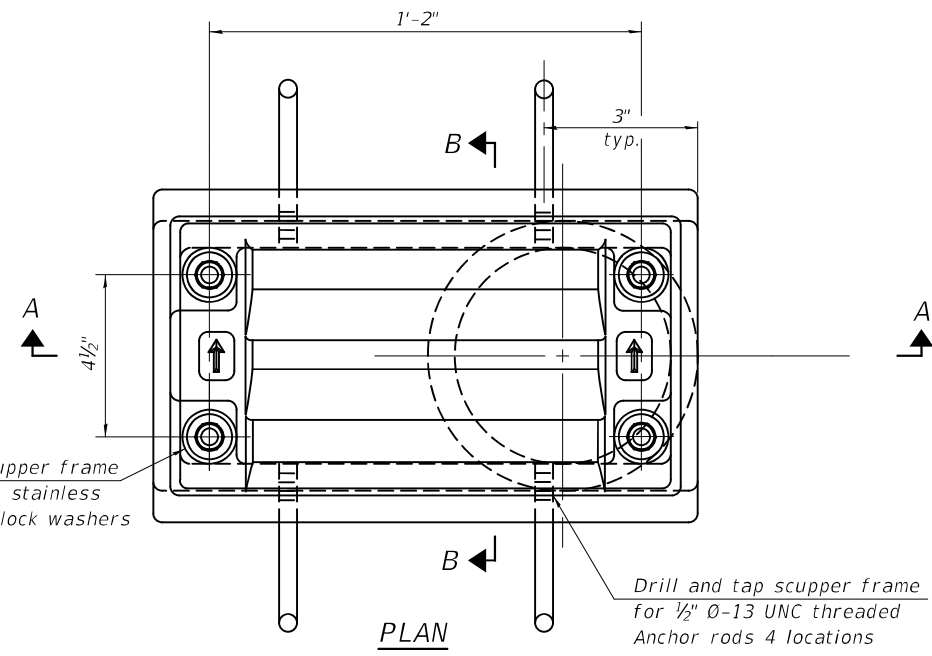
SHEET 16 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51,23HB-1)BR	LAWRENCE	50	29
CONTRACT NO. 74440				

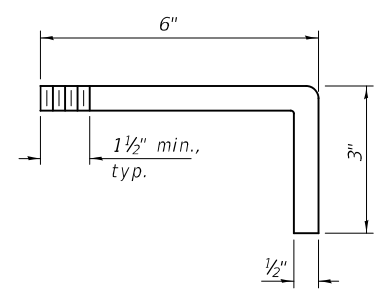
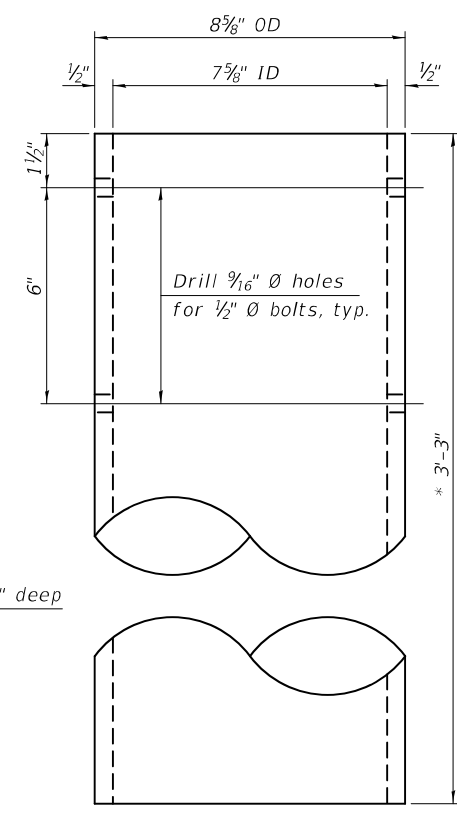
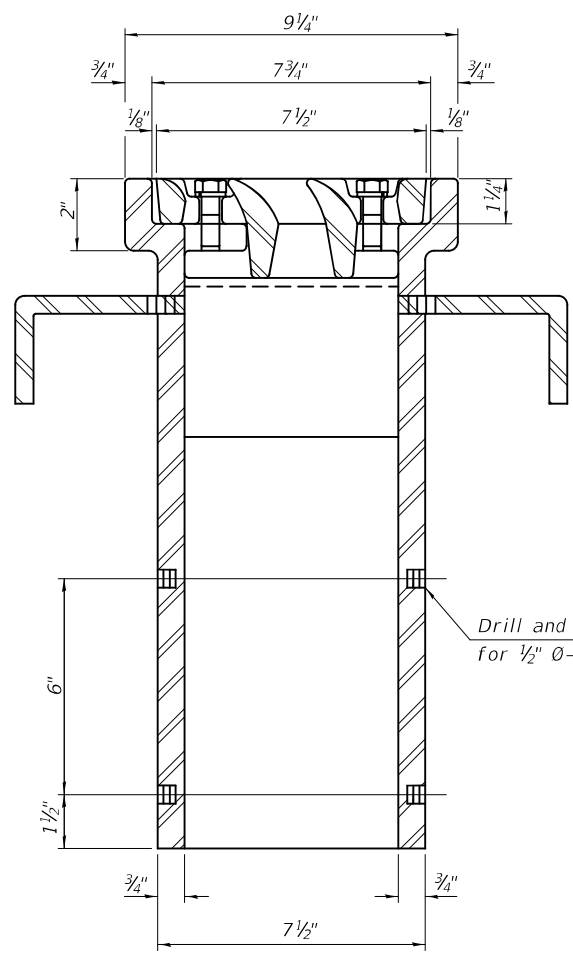
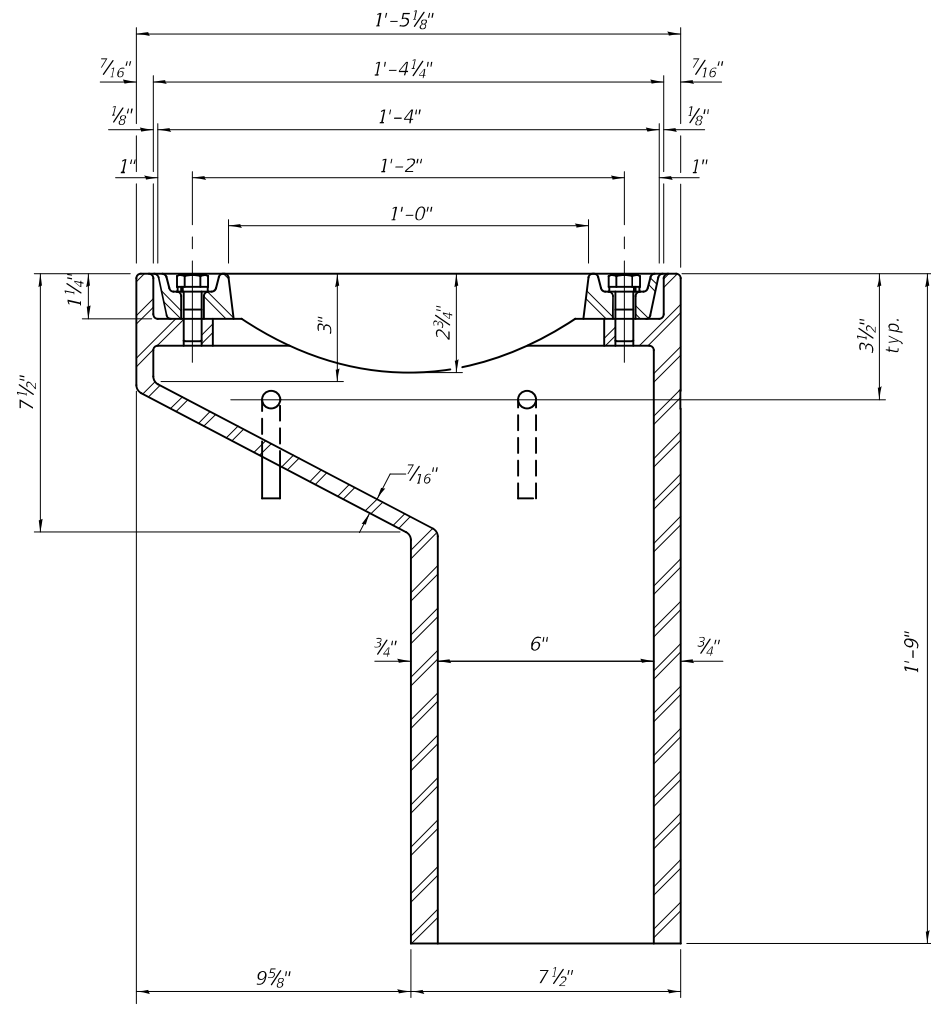
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MODEL: 0510010-74440-017
 FILE NAME: p:\w\lido-ppw-bentley.com\FWIDOT\Documents\DOT Offices\Bureau of Bridges and Structures\Projects\0510010-74440



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 2 of 28.
 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 Scupper, DS-11.



BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	9

* Provide this length for 6 free-fall scuppers (3 in each end span). Contractor to determine length for 3 scuppers near Pier 2 in coordination with final Drainage System details.

DS-11

1-1-2020

DESIGNED - PAUL S. JOHNSON	EXAMINED - <i>Joanne F. Joffe</i>	DATE - December 13, 2021
CHECKED - MICHAEL A. PAULIONIS	PASSED - <i>Paul Johnson</i>	REVISOR -
DRAWN - ANDRO R. SAMANIEGO	ENGINEER OF BRIDGES AND STRUCTURES	REVISOR -
CHECKED - P.S.J. / M.A.P.		

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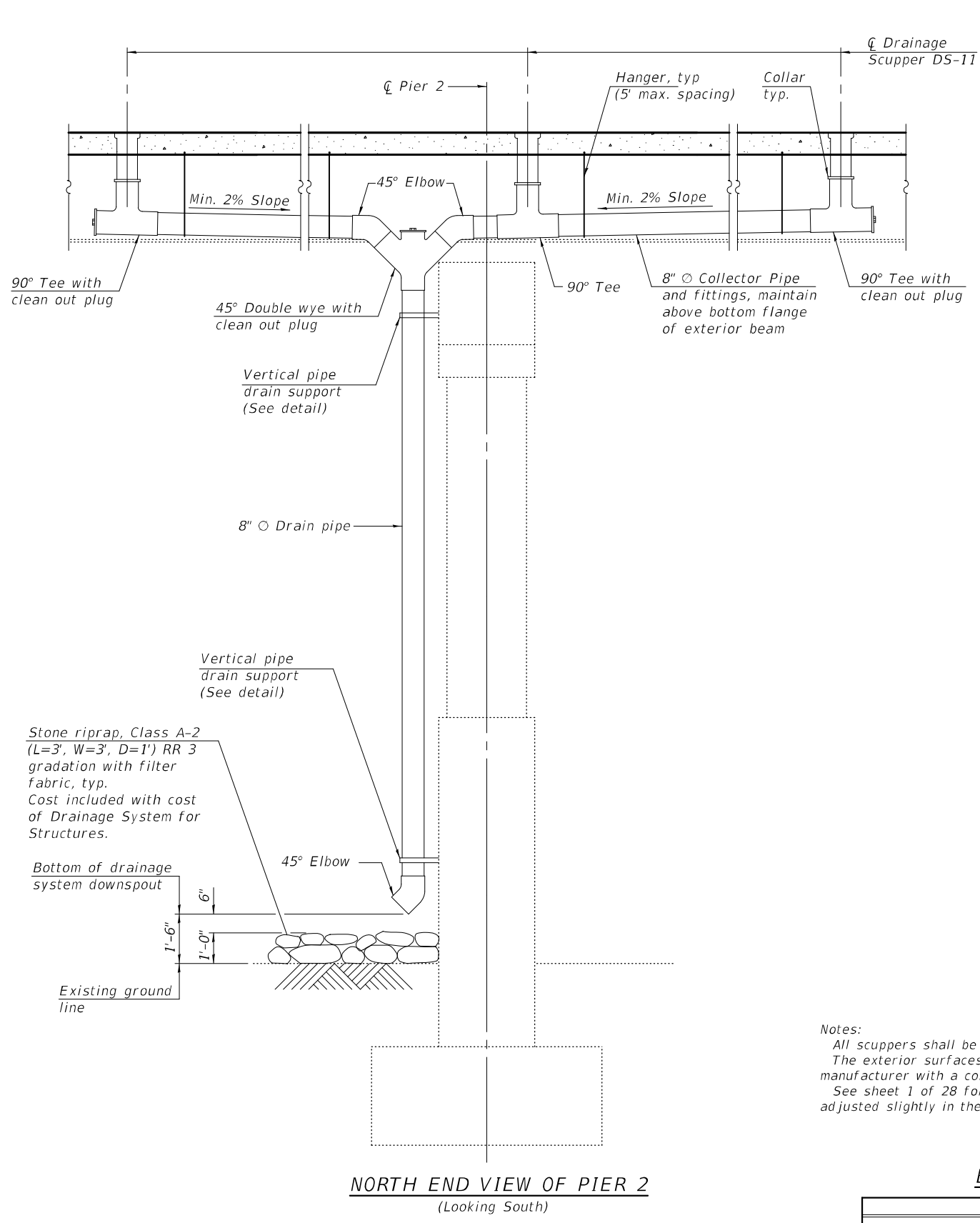
DRAINAGE SCUPPER, DS-11
 STRUCTURE NO. 051-0010

SHEET 17 OF 28 SHEETS

F.A.P. RTE. 327	SECTION (51,23HB-1)BR	COUNTY LAWRENCE	TOTAL SHEETS 50	SHEET NO. 30
CONTRACT NO. 74440				
ILLINOIS FED. AID PROJECT				

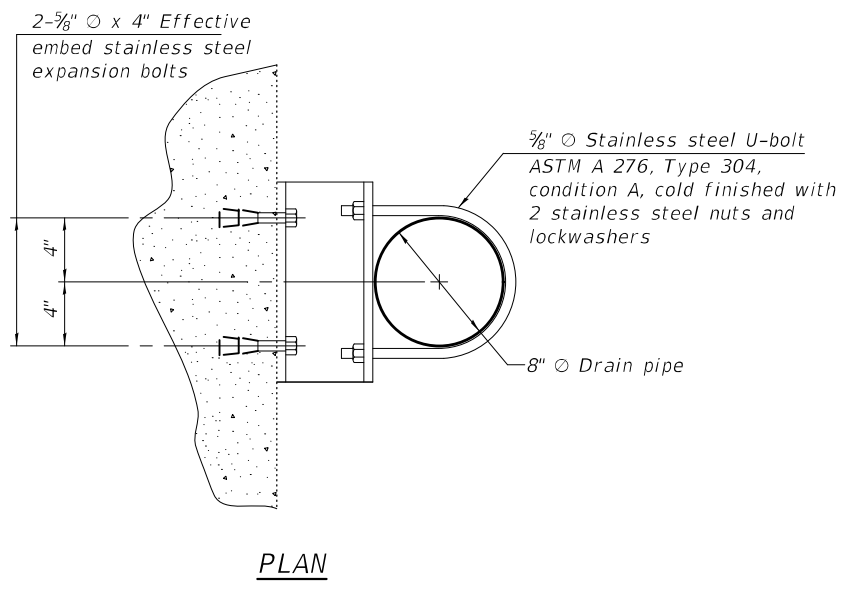
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MODEL: 0510010-74440-018
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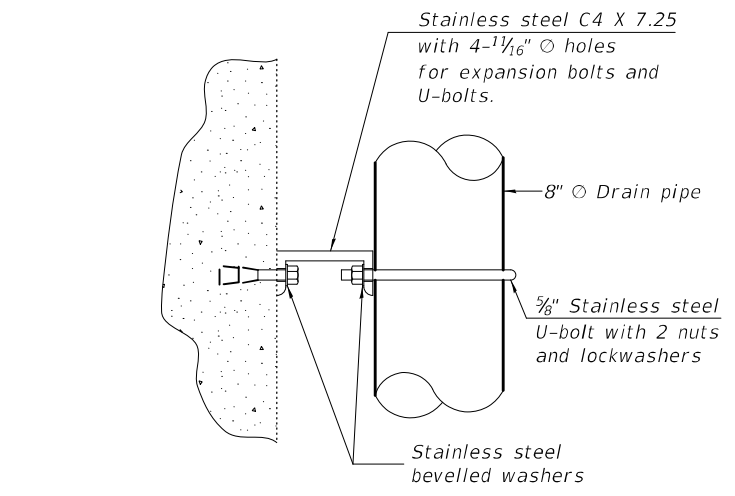


Stone riprap, Class A-2 (L=3', W=3', D=1') RR 3 gradation with filter fabric, typ. Cost included with cost of Drainage System for Structures.

NORTH END VIEW OF PIER 2
(Looking South)



PLAN



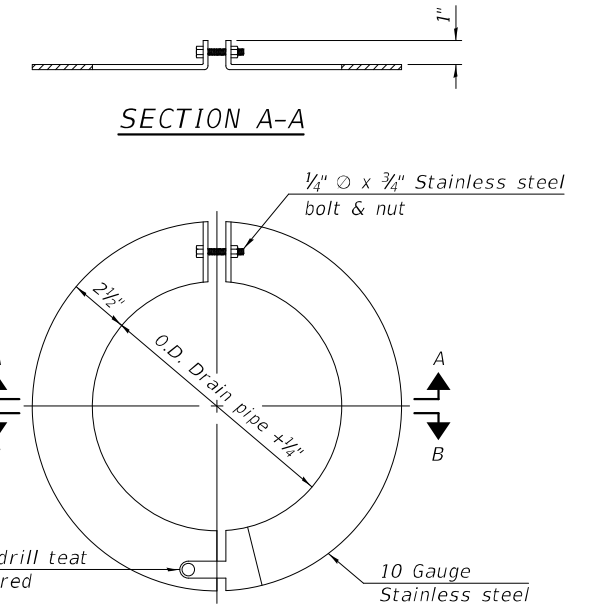
ELEVATION

VERTICAL PIPE DRAIN SUPPORT

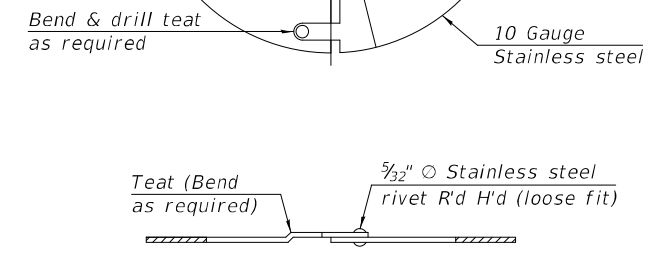
Notes:
 All scuppers shall be free fall drains except those shown on this sheet.
 The exterior surfaces of fiberglass shall be pigmented by the manufacturer with a color that matches the concrete piers.
 See sheet 1 of 28 for approximate scupper locations which may be adjusted slightly in the field with the Engineer's approval.

BILL OF MATERIAL

Item	Unit	Quantity
Drainage System for Structures	L Sum	1

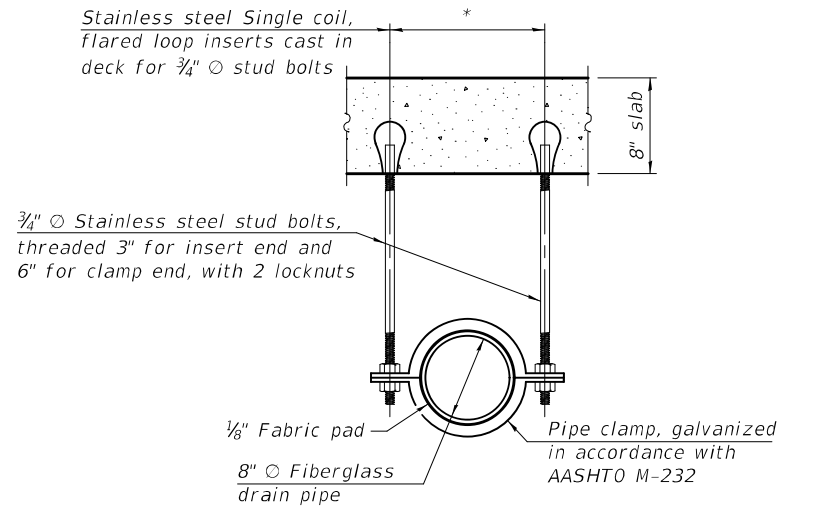


SECTION A-A



SECTION B-B

DETAIL OF EXPANSION COLLAR



PIPE HANGER DETAIL

* Dimension as required by pipe clamp

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DRAINAGE SYSTEM FOR STRUCTURES
STRUCTURE NO. 051-0010

SHEET 18 OF 28 SHEETS

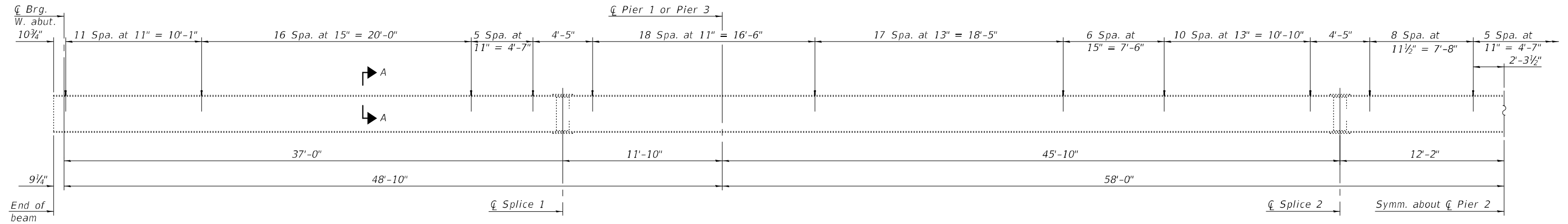
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51,23HB-1)BR	LAWRENCE	50	31
CONTRACT NO. 74440				
ILLINOIS FED. AID PROJECT				

DESIGNED - PAUL S. JOHNSON
 CHECKED - MICHAEL A. PAULIONIS
 DRAWN - ANDRO R. SAMANIEGO
 CHECKED - P.S.J. / M.A.P.

EXAMINED - *Jaime F. Salas*
 PASSED - *Carl Kasper*
 ENGINEER OF BRIDGES AND STRUCTURES

DATE - December 13, 2021

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EXISTING 33WF130 BEAM ELEVATION
(Showing shear stud spacing, typ. beams 1 thru 6)

INTERIOR BEAM MOMENT TABLE					
		0.4 Sp. 1 or 0.6 Sp. 4	Pier 1 or Pier 3	0.5 Sp. 2 or 0.5 Sp. 3	Pier 2
I_s	(in ⁴)	6,710	6,710	6,710	6,710
$I_c(n)$	(in ⁴)	19,700	9,510	19,700	9,510
$I_c(3n)$	(in ⁴)	14,400	9,510	14,400	9,510
S_s	(in ³)	406	406	406	406
$S_c(n)$	(in ³)	628	479	628	479
$S_c(3n)$	(in ³)	566	479	566	479
Z	(in ³)	-	-	-	-
Q	(k/')	0.825	0.825	0.825	0.825
M_Q	(k)	141	-239	114	-227
s_Q	(k/')	0.458	0.458	0.458	0.458
$M_s Q$	(k)	78	-133	63	-126
M_L	(k)	283	-227	277	-236
M_I	(k)	82	-64	76	-64
$S_3 [M_L + I]$	(k)	608	-485	587	-500
M_{CF}	(k)	23	-15	22	-15
M_a	(k)	1,103	-1,133	1,022	-1,129
$*M_u$	(k)	-	-	-	-
$f_s Q$ (non-comp)	(ksi)	4.2	-7.1	3.4	-6.7
$f_s s_Q$ (comp)	(ksi)	1.7	-3.3	1.3	-3.2
$f_s S_3 [M_L + I]$	(ksi)	11.6	-12.1	11.2	-12.5
$f_s CF$	(ksi)	0.4	-0.4	0.4	-0.4
f_s (overload)	(ksi)	17.9	-22.9	16.3	-22.8
** f_s (total)	(ksi)	23.2	-29.8	21.2	-29.6
VR	(k)	46.5	47.6	50.8	50.3

I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total and Overload) 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 and Overload) 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 and Overload) due to long-term composite (superimposed) dead loads (in.⁴ and in.³).

Z : Plastic Section Modulus of the steel section in non-composite areas (in.³).

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

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

s_Q : Un-factored long-term composite (superimposed) dead load (kips/ft.).

$M_s Q$: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).

M_L : Un-factored live load moment (kip-ft.).

M_I : Un-factored moment due to impact (kip-ft.).

M_a : Factored design moment (kip-ft.).

$1.3 [M_Q + M_s Q + \frac{5}{3} (M_L + M_I)]$

M_u : Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).

f_s (Overload): Sum of stresses as computed from the moments below (ksi).

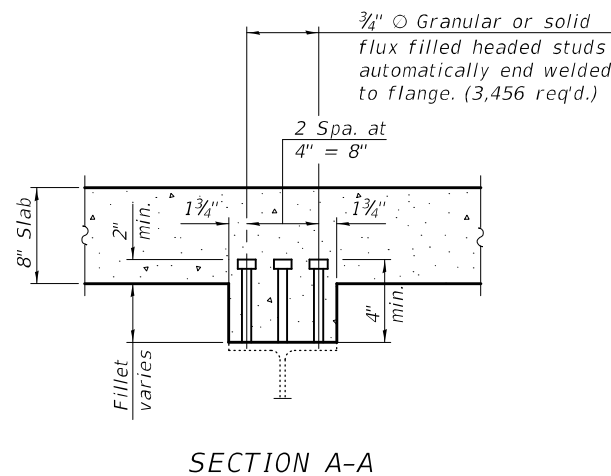
$M_Q + M_s Q + \frac{5}{3} (M_L + M_I)$

f_s (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).

$1.3 [M_Q + M_s Q + \frac{5}{3} (M_L + M_I)]$

VR: Maximum ℓ + impact shear range within span for stud shear connector design (kips).

M_{CF}, f_s_{CF}, R_{CF} : Unfactored moment, stress and reaction due to centrifugal force.



* Compact section
** Braced non-compact and partially braced section

INTERIOR BEAM REACTION TABLE				
	W. abut. or E. abut.	Pier 1 or Pier 3	Pier 2	
R_Q	(k)	23.7	76.5	73.7
R_L	(k)	32.3	39.9	39.9
R_I	(k)	9.3	11.2	10.9
R_{CF}	(k)	2.6	3.2	3.2
R_{Total}	(k)	67.9	130.8	127.7

Abutment R DL shown is for superstructure DL & SDL only.
For bearing design, also include tributary approach slab reaction, tributary weight of concrete diaphragm, and weight of steel extension. (Sum=52.1 k)

MODEL: 0510010-74440-019
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DESIGNED - PAUL S. JOHNSON
CHECKED - MICHAEL A. PAULIONIS
DRAWN - ANDRO R. SAMANIEGO
CHECKED - P.S.J. / M.A.P.

EXAMINED
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

DATE - December 13, 2021
REVISED -
REVISED -

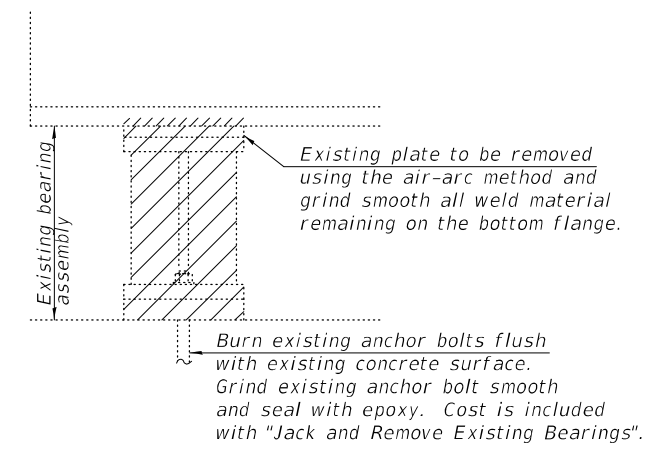
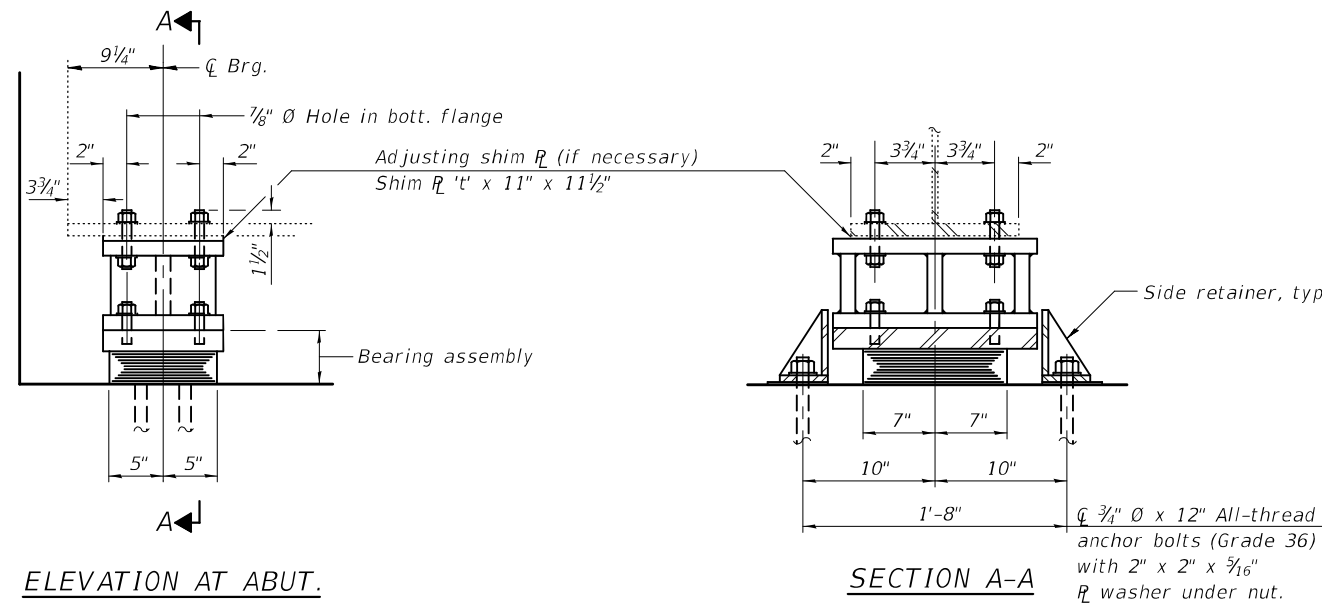
STATE OF ILLINOIS
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STRUCTURAL STEEL DETAILS
STRUCTURE NO. 051-0010

SHEET 19 OF 28 SHEETS

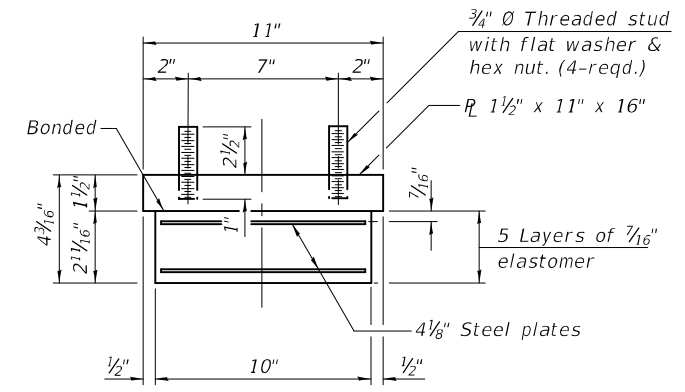
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	(51,23HB-1)BR	LAWRENCE	50	32
CONTRACT NO. 74440				
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EXISTING BEARING REMOVAL DETAIL

TYPE I ELASTOMERIC EXP. BRG.



BEARING ASSEMBLY

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.
 All steel extensions, bearing plates, side retainers, anchor bolts, nuts, washers and pintles shall be galvanized according to AASHTO M111 or M232 as applicable.

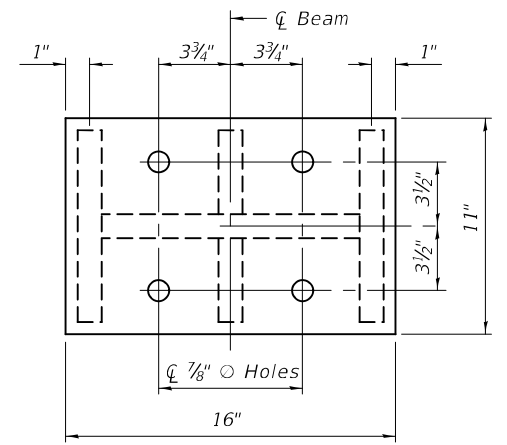
EXTENSION HEIGHTS / SHIM THICKNESSES

West Abutment		Beam #	East Abutment	
h	t		h	t
9 1/8"	1/4"	1	9 1/8"	1/4"
9 1/8"	1/4"	2	9 1/8"	1/4"
9 1/8"	0	3	9 1/8"	0
8 3/8"	0	4	9 1/8"	1/4"
8 3/8"	1/4"	5	9 1/8"	1/4"
9 1/8"	1/4"	6	9 1/8"	1/2"

Prior to ordering extensions & shims, the Contractor shall field-verify the height between the bottom of beam and its seat at each bearing as this height shall be maintained.
 In addition to above extensions and shim plates, two 1/8 in. adjusting shims shall be provided for each bearing and, if needed, shall be placed as shown on bearing details.

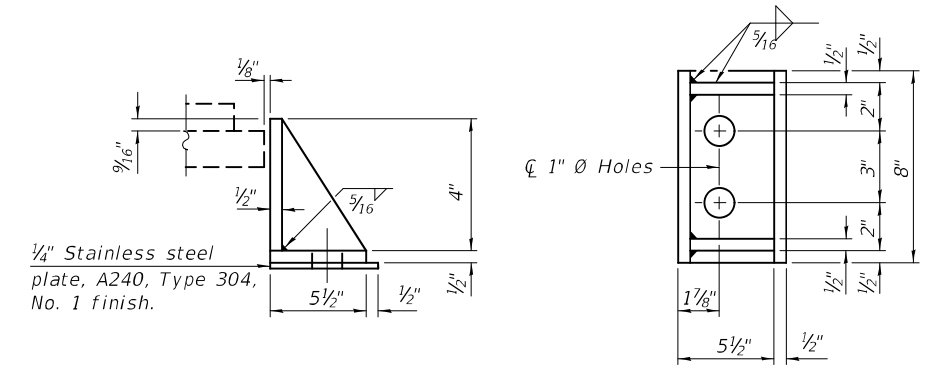
BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	12
Anchor Bolts, 3/4"	Each	48
Jack and Remove Existing Bearings	Each	12
F. & E. Structural Steel	Pound	2,560



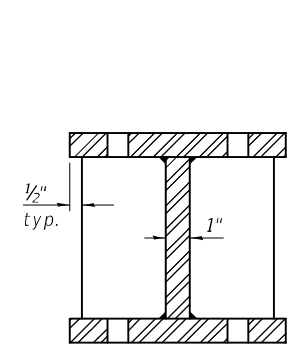
PLAN STEEL EXTENSION

Note:
 Shim plates shall not be placed under bearing assembly.

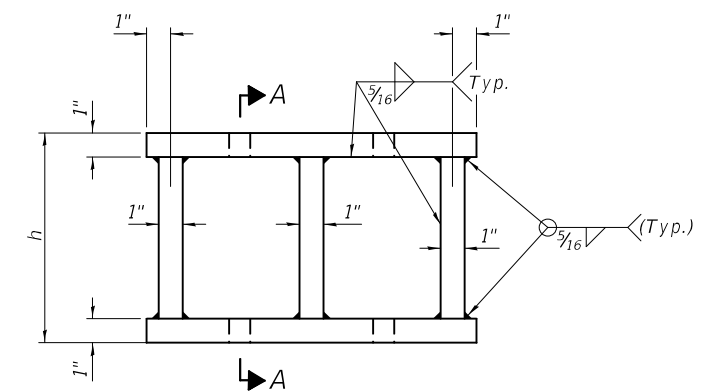


SIDE RETAINER

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



SECTION A-A



ELEVATION STEEL EXTENSION

MODEL: 0510010-74440-020
 FILE NAME: p:\w\p\w\benley.com\FWIDOT\Documents\DOT Offices\Bureau of Bridges and Structures\Projects\0510010\CADD Plans\0510010-74440

I-2E-1 6-15-2019

DESIGNED - PAUL S. JOHNSON	EXAMINED - <i>Joanne F. Joffe</i>	DATE - December 13, 2021
CHECKED - MICHAEL A. PAULIONIS	PASSED - <i>Carl Perry</i>	REVISIONS -
DRAWN - ANDRO R. SAMANIEGO	ENGINEER OF BRIDGES AND STRUCTURES	REVISIONS -
CHECKED - P.S.J. / M.A.P.		

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**BEARING DETAILS
 STRUCTURE NO. 051-0010**

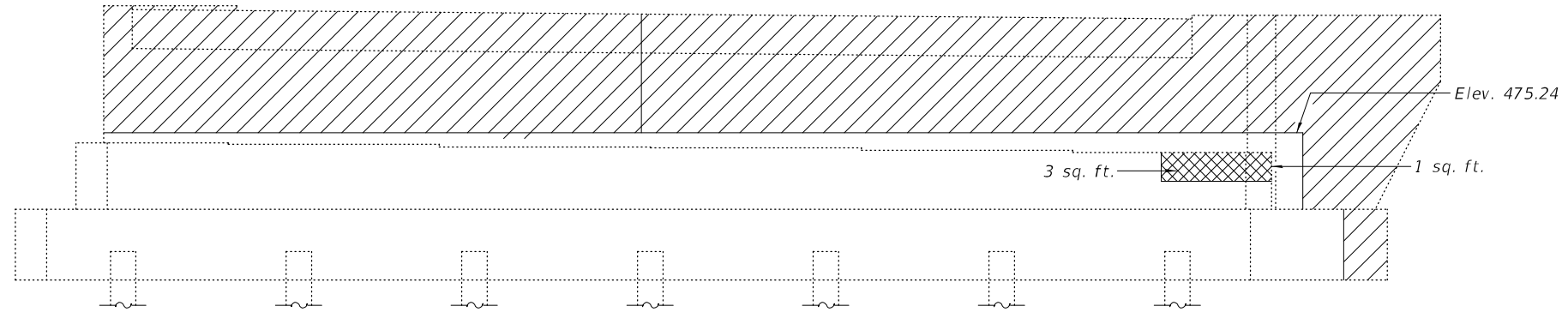
SHEET 20 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51,23HB-1)BR	LAWRENCE	50	33
CONTRACT NO. 74440				

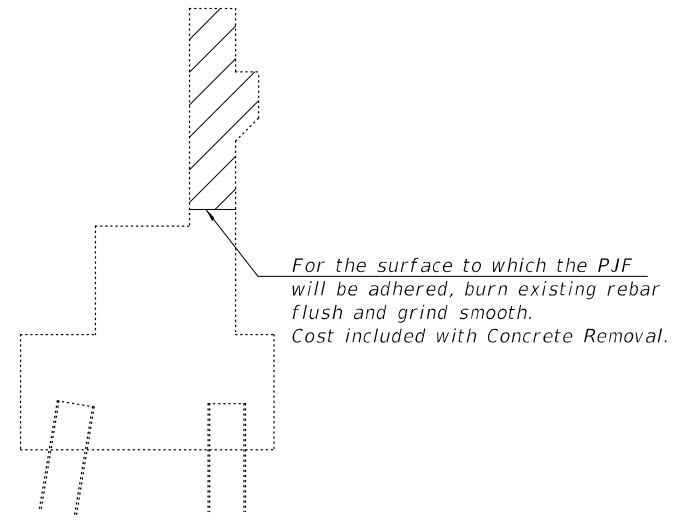
ILLINOIS FED. AID PROJECT

12/13/2021 11:03:26 AM

MODEL: 0510010-74440-021
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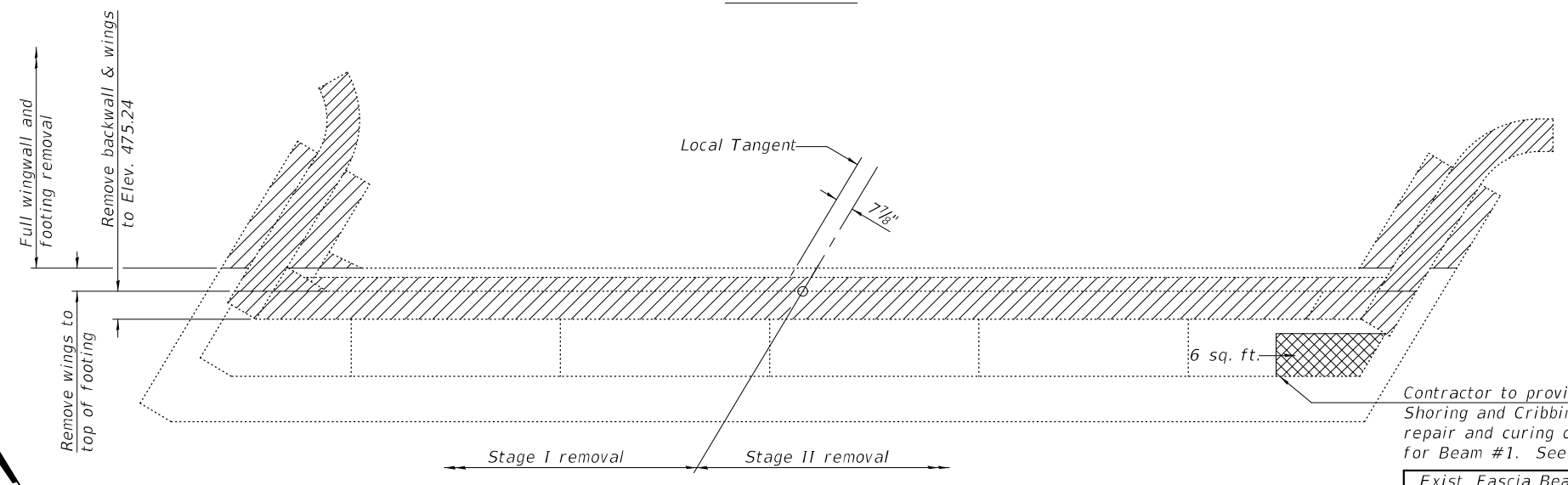


ELEVATION



SECTION THRU ABUTMENT

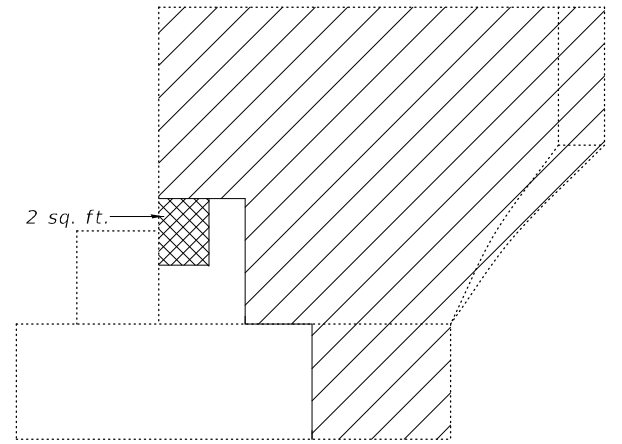
For the surface to which the PJF will be adhered, burn existing rebar flush and grind smooth. Cost included with Concrete Removal.



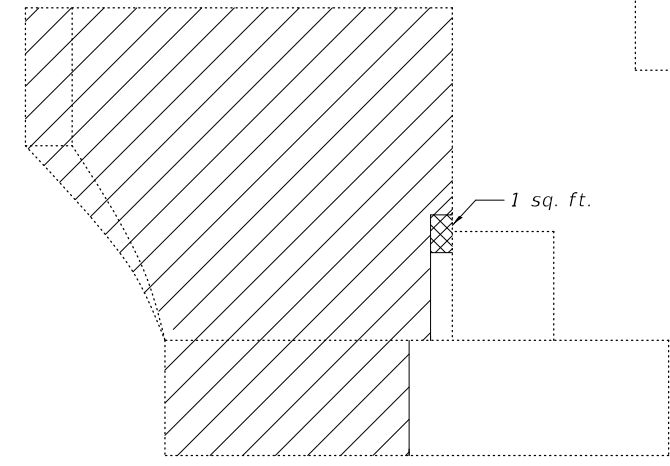
PLAN

Contractor to provide Temporary Shoring and Cribbing to facilitate repair and curing of beam seat for Beam #1. See special provision.

Exist. Fascia Beam Reactions (k)	
R_D before deck removal	21.6
R_D after deck removal	2.6
R_U (incl. R_{CF})	34.2
R_I	9.1



NORTHWEST WINGWALL ELEVATION



SOUTHWEST WINGWALL ELEVATION

BILL OF MATERIAL

Item	Unit	Quantity
Concrete Removal	Cu. Yd.	13.9
Structural Repair Of Concrete (Depth Equal to or Less than 5 Inches)	Sq. Ft.	13
Temporary Shoring & Cribbing	Each	1

LEGEND

- Concrete Removal
- Structural Repair of Concrete (Depth Equal to or Less than 5 inches)

DESIGNED - PAUL S. JOHNSON	EXAMINED -
CHECKED - MICHAEL A. PAULIONIS	PASSED -
DRAWN - ANDRO R. SAMANIEGO	
CHECKED - P.S.J. / M.A.P.	

DATE - December 13, 2021
 ENGINEER OF BRIDGE DESIGN
 ENGINEER OF BRIDGES AND STRUCTURES

REVISD -
REVISD -

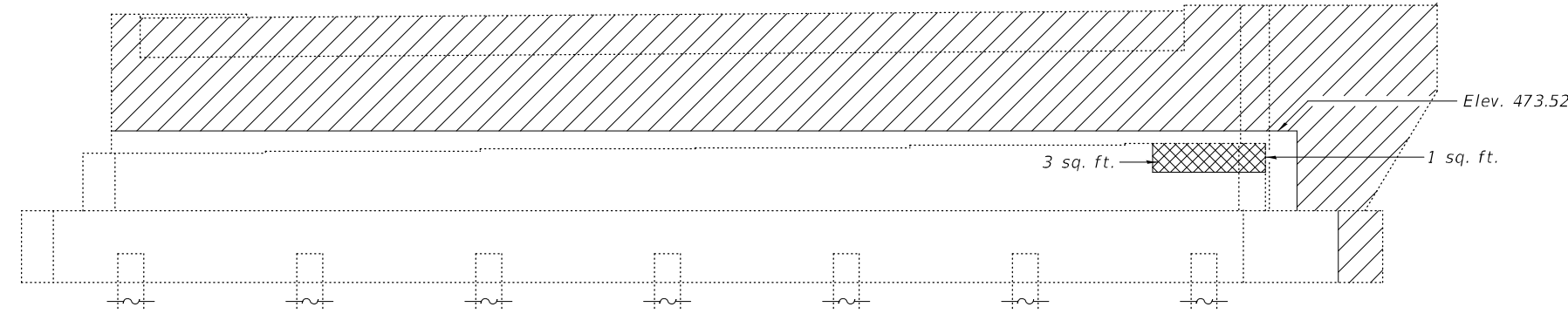
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT REMOVAL & REPAIR
 STRUCTURE NO. 051-0010

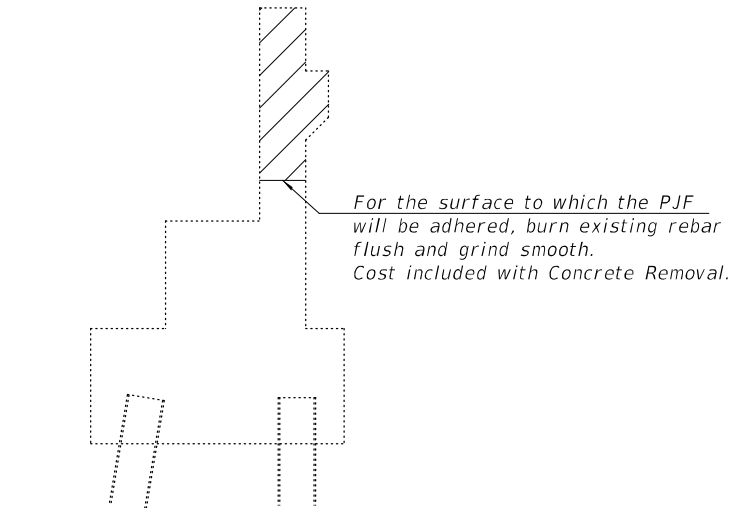
SHEET 21 OF 28 SHEETS

F.A.P. RTE. 327	SECTION (51,23HB-1)BR	COUNTY LAWRENCE	TOTAL SHEETS 50	SHEET NO. 34
			CONTRACT NO. 74440	
		ILLINOIS FED. AID PROJECT		

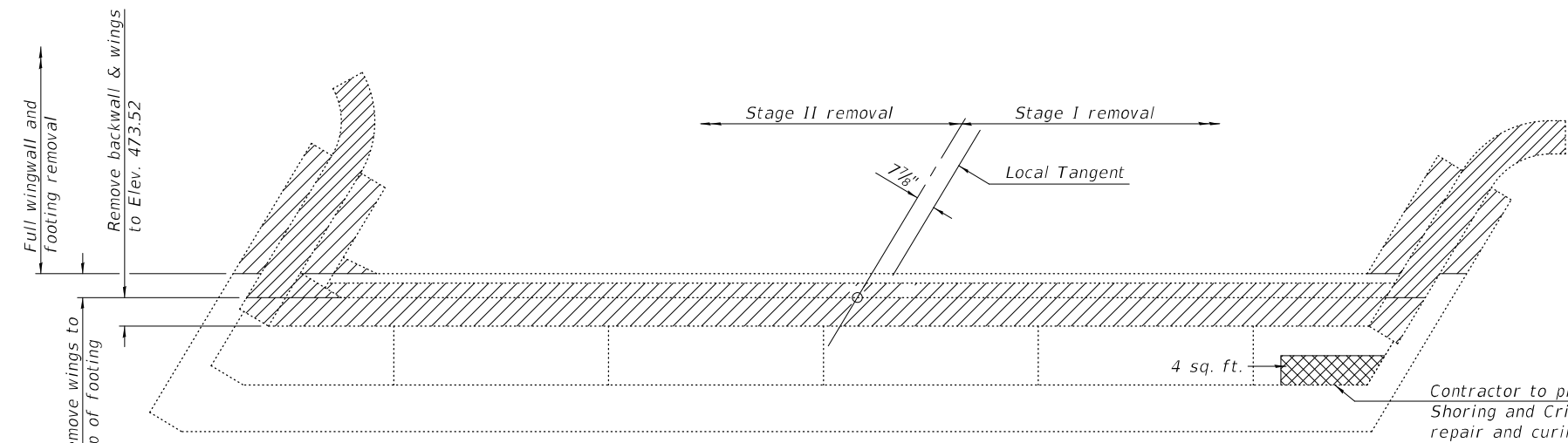
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ELEVATION



SECTION THRU ABUTMENT



PLAN

Exist. Fascia Beam Reactions (k)	
R_D before deck removal	21.6
R_D after deck removal	2.6
R_L (incl. R_{CF})	34.2
R_I	9.1

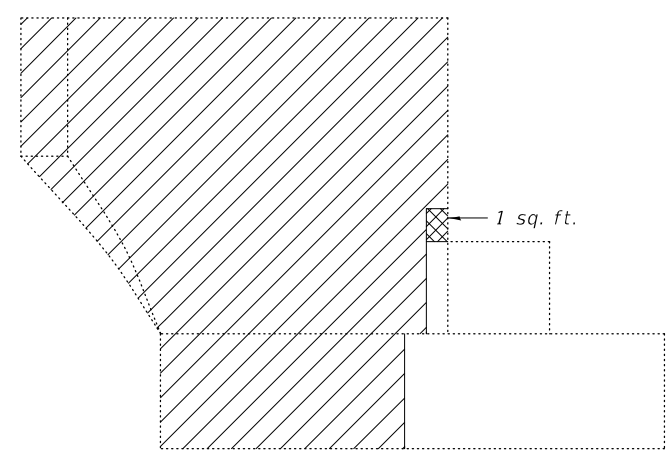
BILL OF MATERIAL

Item	Unit	Quantity
Concrete Removal	Cu. Yd.	12.9
Structural Repair Of Concrete (Depth Equal to or Less than 5 Inches)	Sq. Ft.	9
Temporary Shoring & Cribbing	Each	1

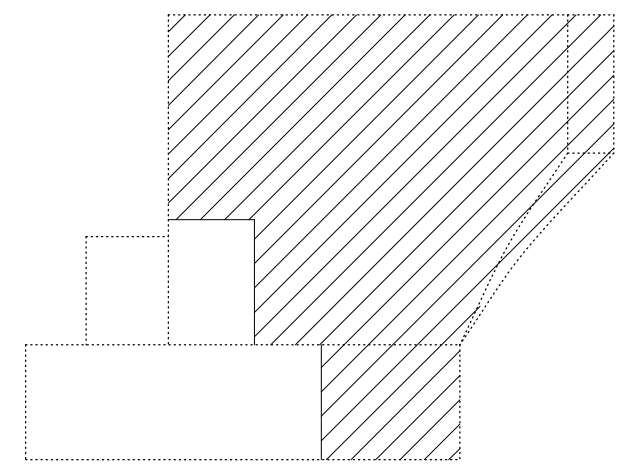
LEGEND

- Concrete Removal
- Structural Repair of Concrete (Depth Equal to or Less than 5 inches)

Coordinate beam seat repairs with the adjacent cap extension details as shown on Sheet 26 of 28.



NORTHEAST WINGWALL ELEVATION



SOUTHEAST WINGWALL ELEVATION

DESIGNED - PAUL S. JOHNSON	EXAMINED -	DATE - December 13, 2021
CHECKED - MICHAEL A. PAULIONIS	PASSED -	REVISER -
DRAWN - ANDRO R. SAMANIEGO	ENGINEER OF BRIDGES AND STRUCTURES	REVISER -
CHECKED - P.S.J. / M.A.P.		

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**EAST ABUTMENT REMOVAL & REPAIR
 STRUCTURE NO. 051-0010**

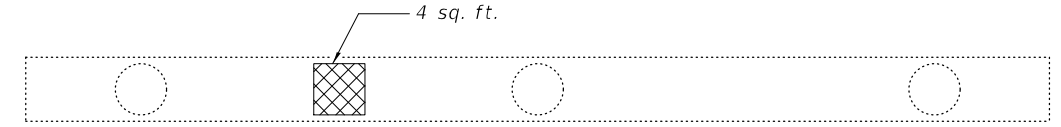
SHEET 22 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 74440				
ILLINOIS FED. AID PROJECT				

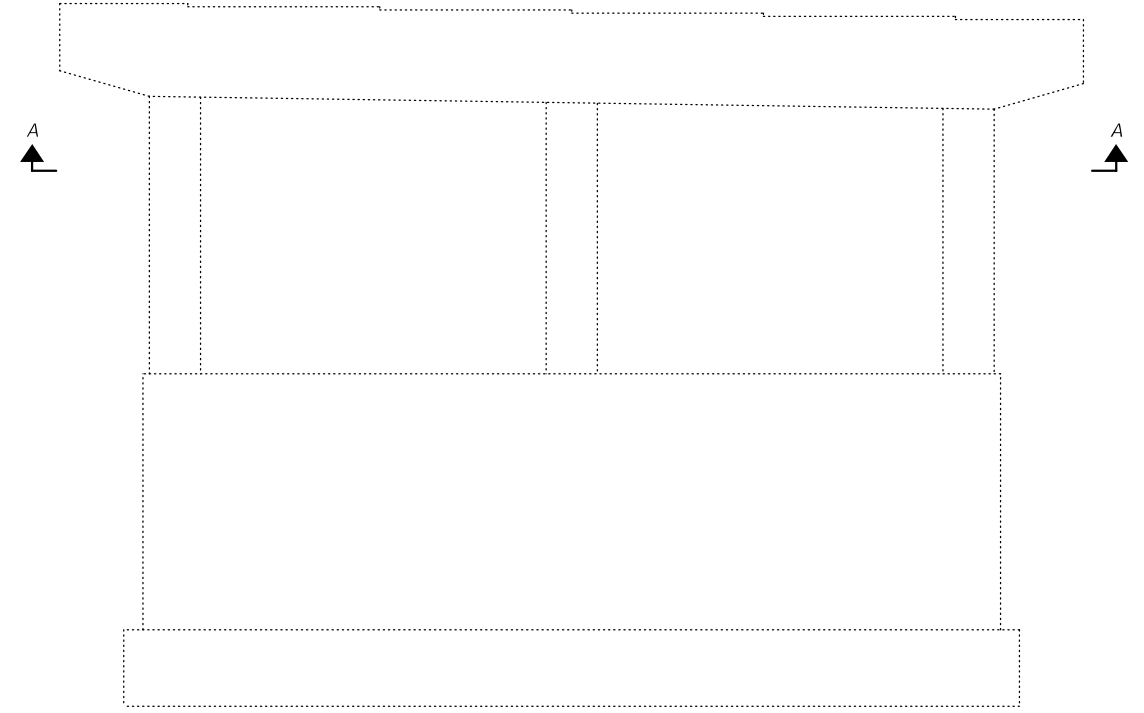
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WEST FACE



SECTION A-A



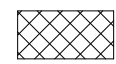
EAST FACE

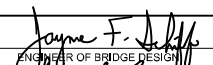

PIER 1

BILL OF MATERIAL

Item	Unit	Quantity
Structural Repair Of Concrete (Depth Equal to or Less than 5 Inches)	Sq. Ft.	4

LEGEND

 Structural Repair of Concrete (Depth Equal to or Less than 5 inches)

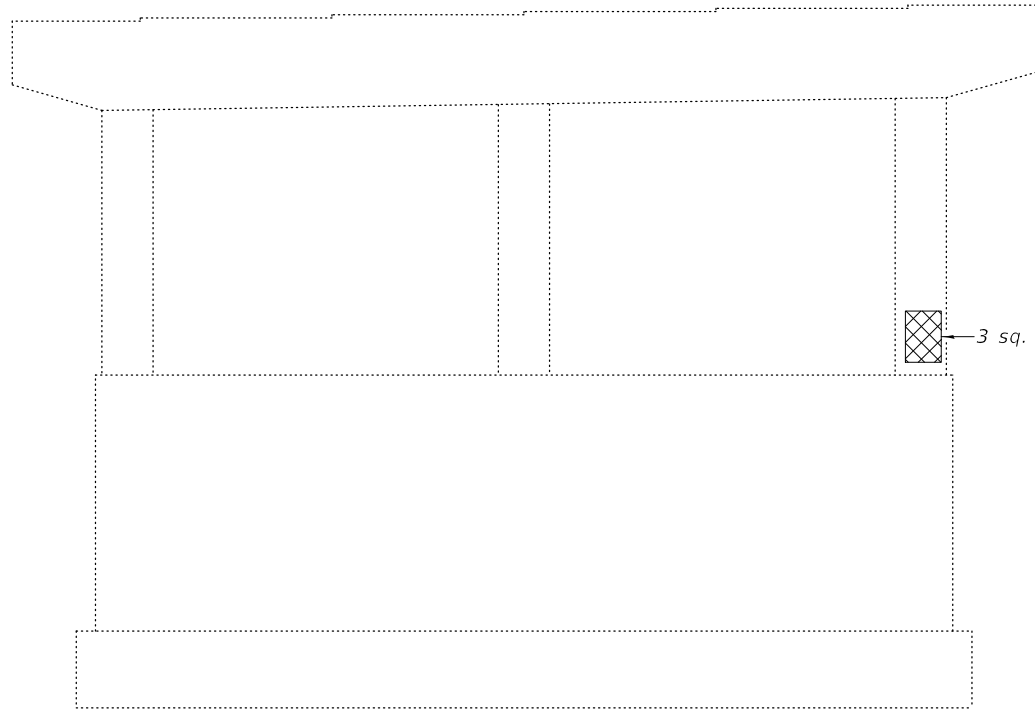
DESIGNED - PAUL S. JOHNSON	EXAMINED - 	DATE - December 13, 2021
CHECKED - MICHAEL A. PAULIONIS	PASSED - 	REVISIED -
DRAWN - ANDRO R. SAMANIEGO	ENGINEER OF BRIDGES AND STRUCTURES	REVISIED -
CHECKED - P.S.J. / M.A.P.		

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**PIER 1 REPAIRS
 STRUCTURE NO. 051-0010**

SHEET 23 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51,23HB-1)BR	LAWRENCE	50	36
CONTRACT NO. 74440			ILLINOIS FED. AID PROJECT	

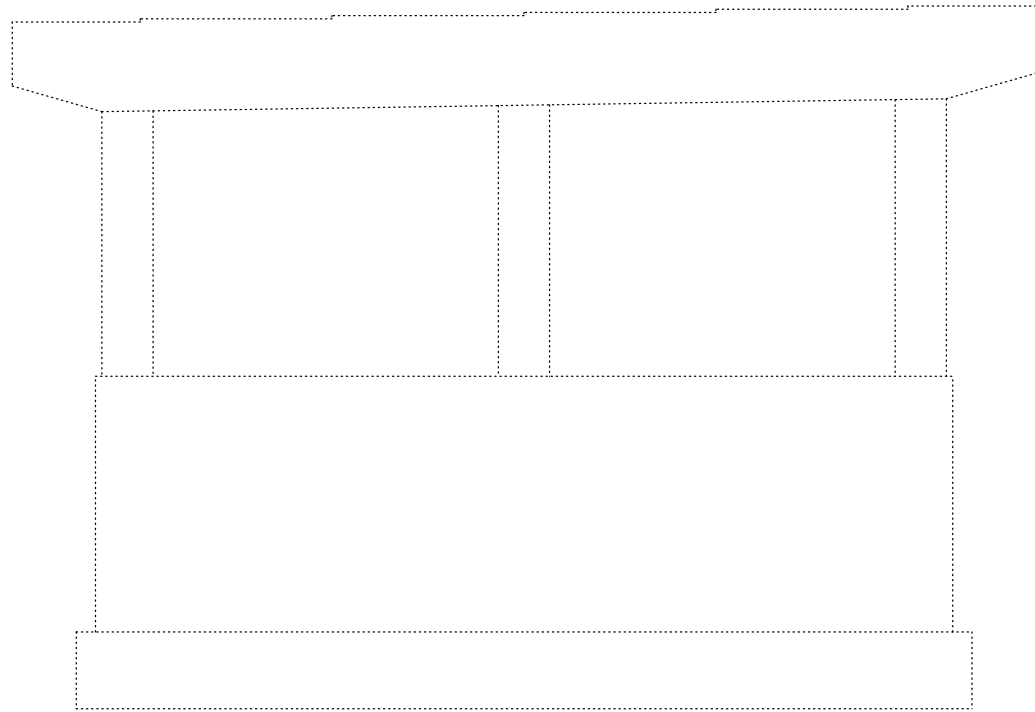


WEST FACE

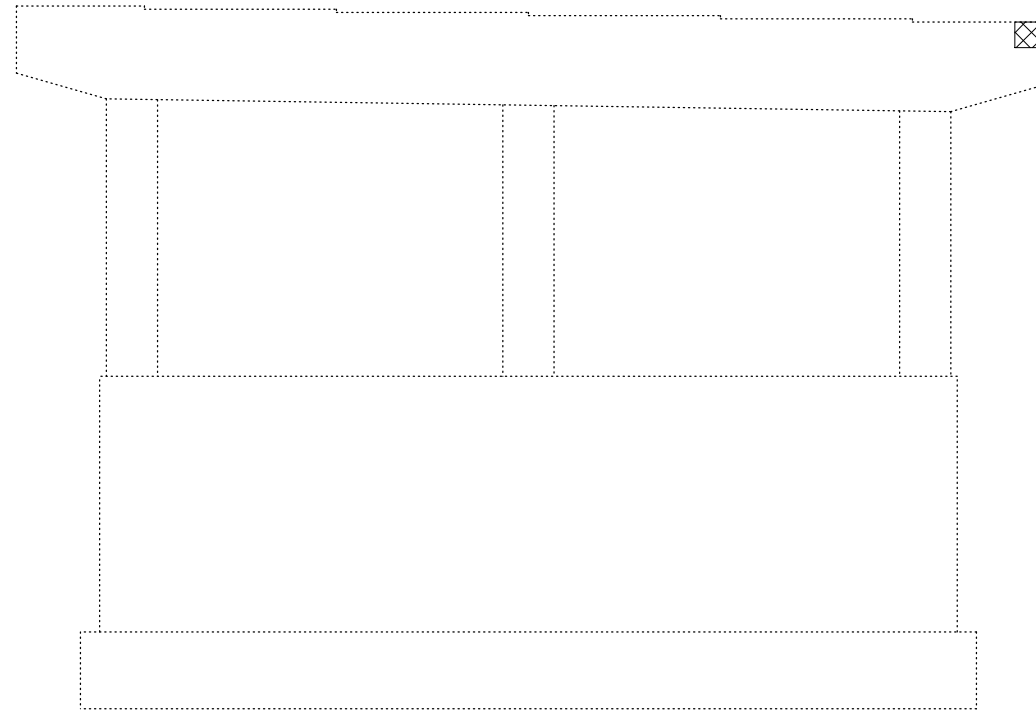


EAST FACE

PIER 2



WEST FACE



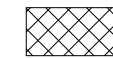
EAST FACE

PIER 3

BILL OF MATERIAL

Item	Unit	Quantity
Structural Repair Of Concrete (Depth Equal to or Less than 5 Inches)	Sq. Ft.	4

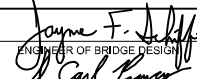

LEGEND



Structural Repair of Concrete
(Depth Equal to or Less than 5 inches)

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FILE NAME: p:\w\p\w\benley.com\FWIDOT\Documents\DOT Offices\Bureau of Bridges and Structures\Projects\0510010\CADD Plans\0510010-74440

DESIGNED -	PAUL S. JOHNSON
CHECKED -	MICHAEL A. PAULIONIS
DRAWN -	ANDRO R. SAMANIEGO
CHECKED -	P.S.J. / M.A.P.

EXAMINED	
PASSED	
	ENGINEER OF BRIDGE DESIGN
	ENGINEER OF BRIDGES AND STRUCTURES

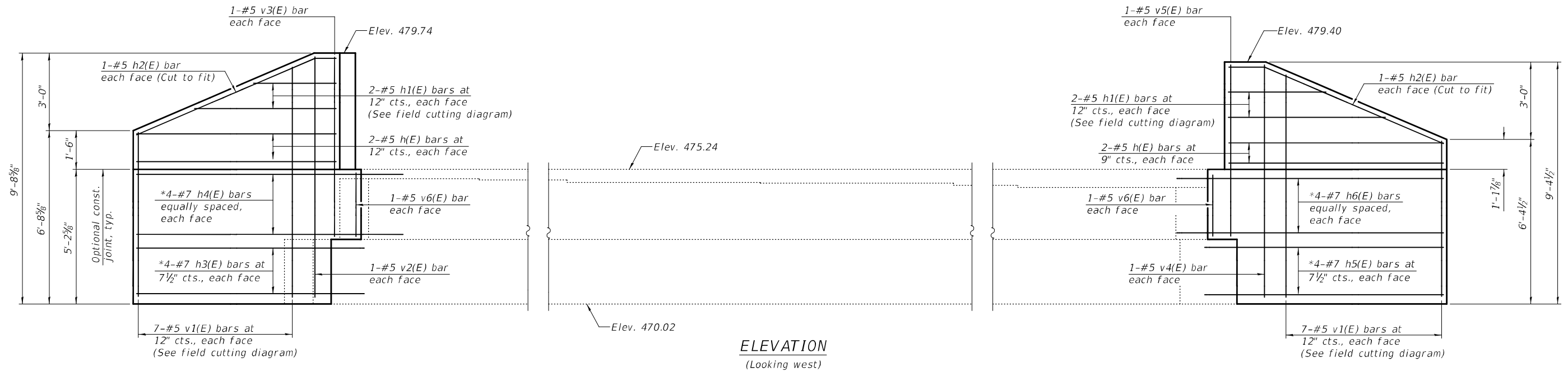
DATE -	December 13, 2021
REVISED -	
REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 2 & 3 REPAIRS
STRUCTURE NO. 051-0010

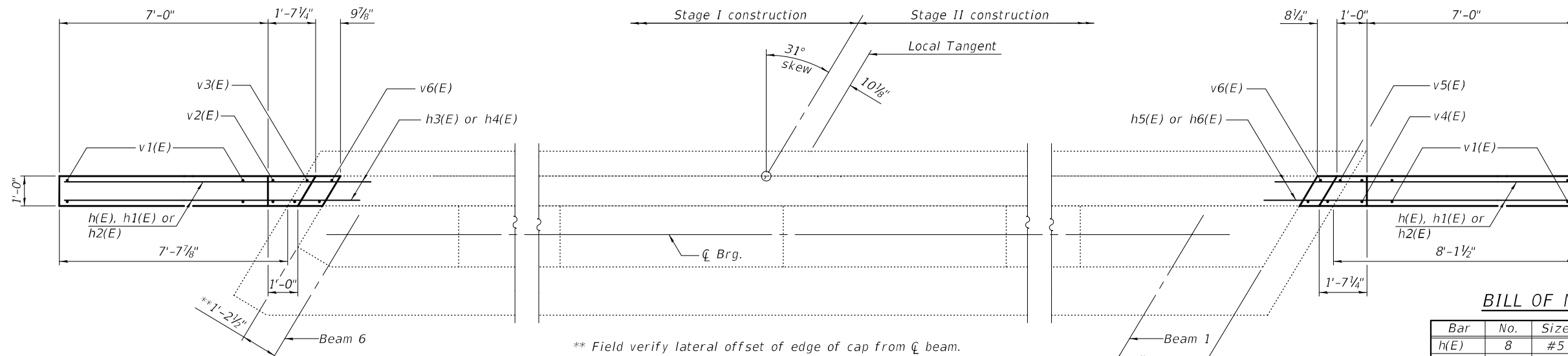
SHEET 24 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51,23HB-1)BR	LAWRENCE	50	37
			CONTRACT NO. 74440	
			ILLINOIS FED. AID PROJECT	



ELEVATION
(Looking west)

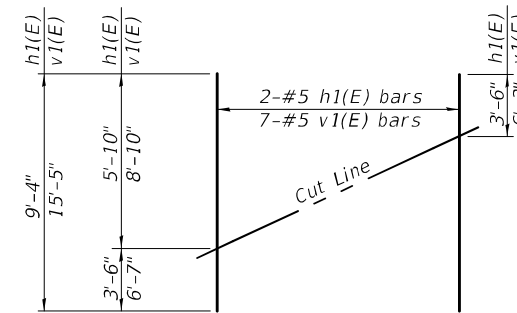
* Drill and grout #7 h3(E), #7 h5(E), #7 h4(E) & #7 h6(E) bars 9" min. into existing footing or existing cap/backwall according to Section 584 of the Standard Specifications.



PLAN

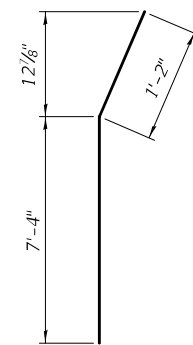
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	8	#5	8'-1"	—
h1(E)	4	#5	9'-4"	—
h2(E)	4	#5	8'-6"	—
h3(E)	4	#7	8'-9"	—
h4(E)	8	#7	10'-3"	—
h5(E)	8	#7	8'-7"	—
h6(E)	8	#7	9'-9"	—
v1(E)	14	#5	15'-5"	—
v2(E)	2	#5	9'-4"	—
v3(E)	2	#5	6'-10"	—
v4(E)	2	#5	9'-0"	—
v5(E)	2	#5	6'-6"	—
v6(E)	4	#5	2'-4"	—
Reinforcement Bars, Epoxy Coated			Pound	1,050
Concrete Structures			Cu. Yds.	5.2



FIELD CUTTING DIAGRAM

Order h1(E) and v1(E) bars full length.
Cut as shown and use remainder of bars in opposite wing.



Bar h2(E)

MODEL: 0510010-74440-025
FILE NAME: p:\w\p\w\benley.com\FWIDOT\Documents\DOT Offices\Bureau of Bridges and Structures\Projects\0510010-74440

DESIGNED - PAUL S. JOHNSON
CHECKED - MICHAEL A. PAULIONIS
DRAWN - ANDRO R. SAMANIEGO
CHECKED - P.S.J. / M.A.P.

EXAMINED
PASSED

Joanne F. Joffe
ENGINEER OF BRIDGE DESIGN
Carl King
ENGINEER OF BRIDGES AND STRUCTURES

DATE - December 13, 2021
REVISED -
REVISED -

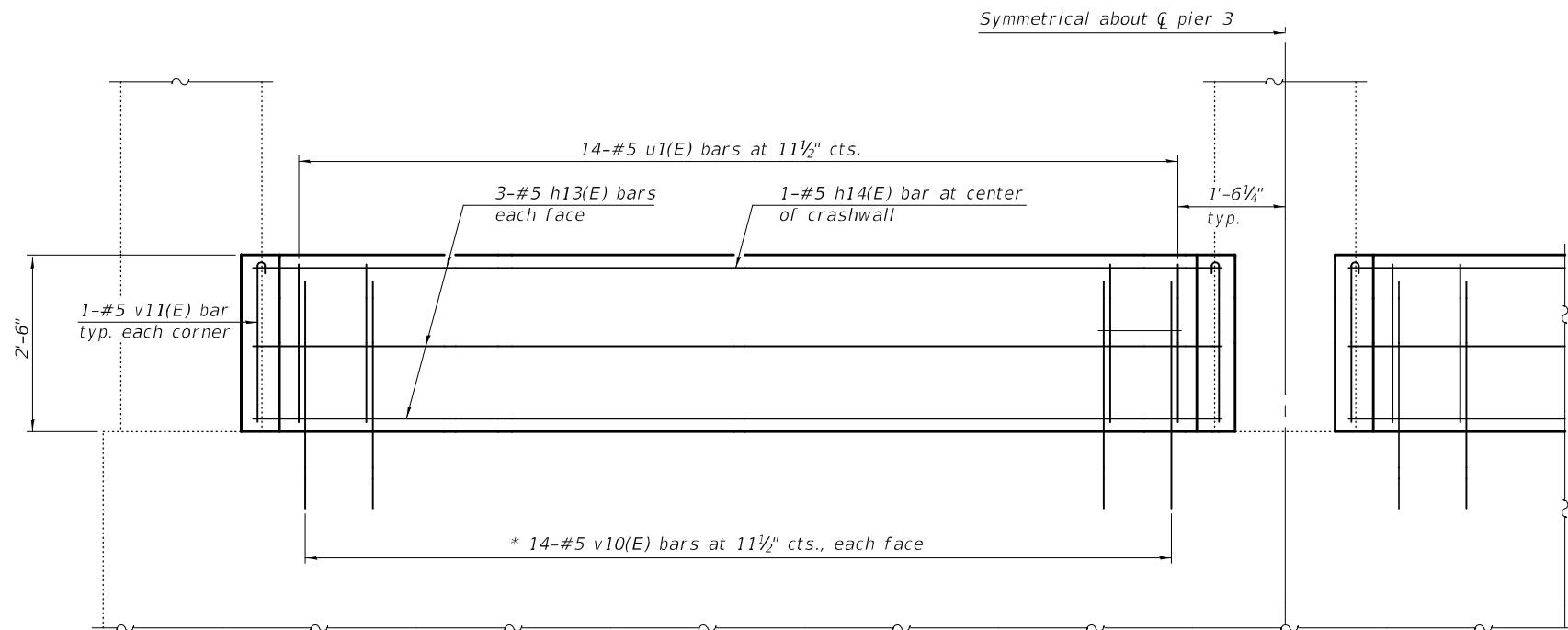
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**WEST ABUTMENT WINGWALLS
STRUCTURE NO. 051-0010**

SHEET 25 OF 28 SHEETS

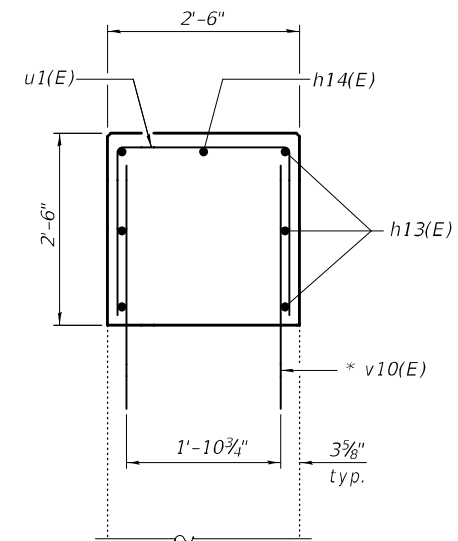
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51,23HB-1)BR	LAWRENCE	50	38
CONTRACT NO. 74440				
ILLINOIS FED. AID PROJECT				

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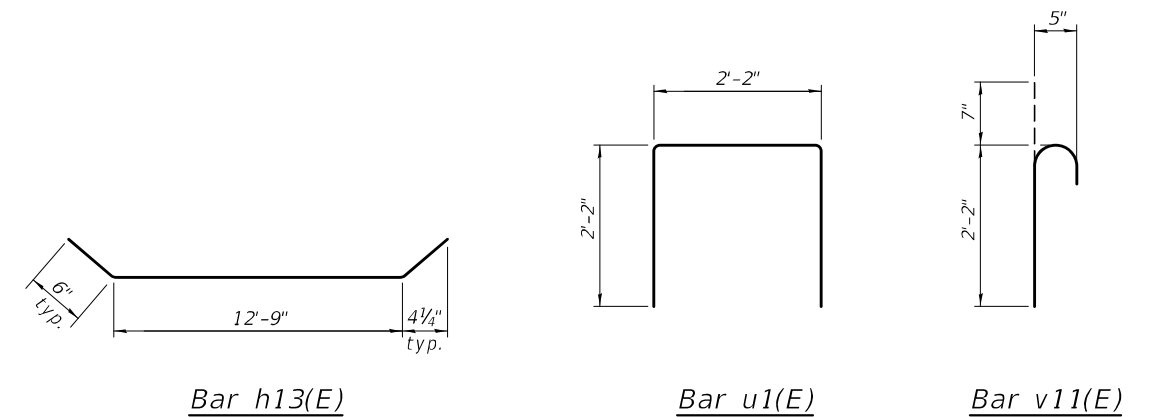


ELEVATION
(Pier 3)

* Drill and grout 9" min. into existing cap in accordance with Standard Specification Article 584.



SECTION

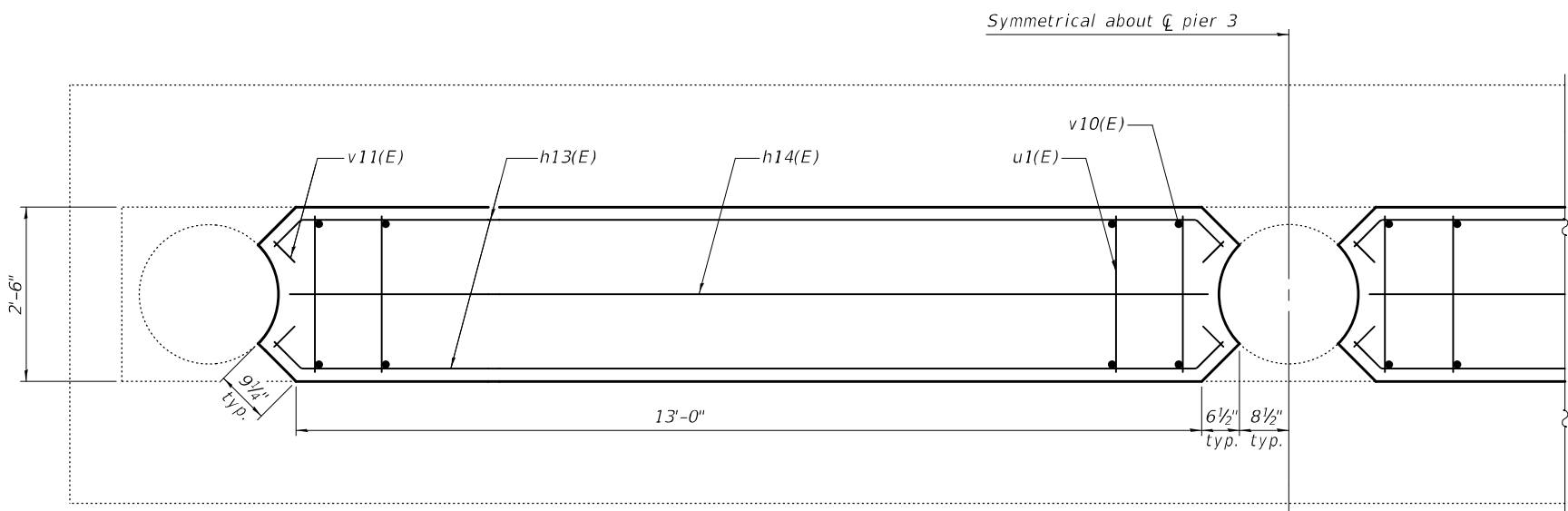


Bar h13(E)

Bar u1(E)

Bar v11(E)

Bar	No.	Size	Length	Shape
h13(E)	12	#5	13'-9"	U
h14(E)	2	#5	13'-2"	U
u1(E)	28	#5	6'-6"	U
v10(E)	56	#5	2'-9"	U
v11(E)	8	#5	2'-9"	Hook
Reinforcement Bars, Epoxy Coated			Pound	570
Concrete Structures			Cu. Yds.	6.3



PLAN

MODEL: 0510010-74440-027
FILE NAME: p:\w\lido-ppw-bentley.com\FWIDOT\Documents\Bridges and Structures\Projects\0510010\CADD Plans\0510010-74440

DESIGNED - PAUL S. JOHNSON
CHECKED - MICHAEL A. PAULIONIS
DRAWN - ANDRO R. SAMANIEGO
CHECKED - P.S.J. / M.A.P.

EXAMINED
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

DATE - December 13, 2021
REVISED -
REVISED -

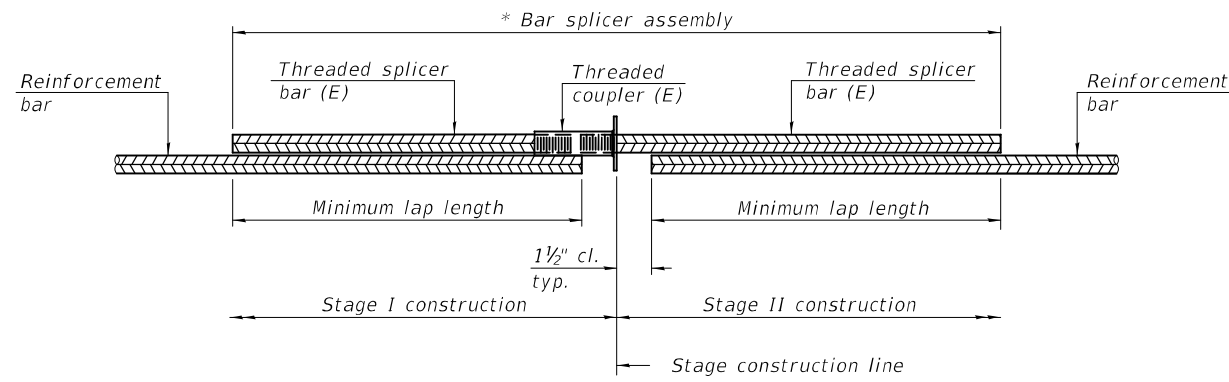
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CRASHWALL EXTENSION DETAILS (PIER 3)
STRUCTURE NO. 051-0010

SHEET 27 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51,23HB-1)BR	LAWRENCE	50	40
CONTRACT NO. 74440				
ILLINOIS FED. AID PROJECT				

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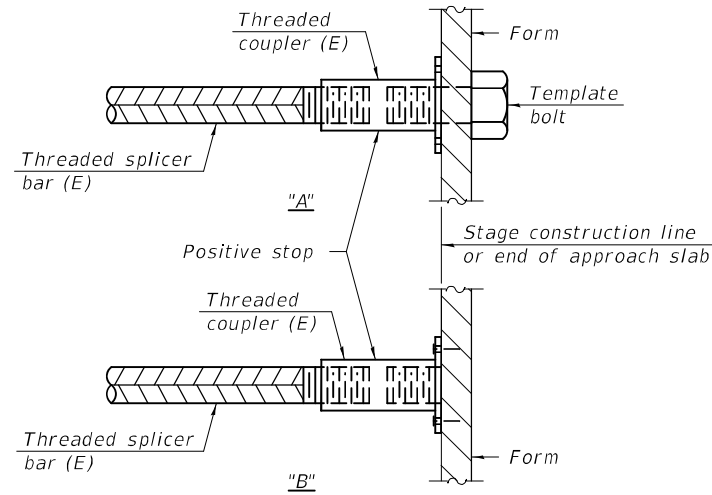


STANDARD BAR SPLICER ASSEMBLY PLAN
 (All components shall be provided from one supplier)

Threaded splicer bar length = min. lap length + 1 1/2" + 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
Deck	#5	645	3'-6"
Diaphragms	#6	18	4'-0"
Diaphragms	#4	4	2'-5"
Approach Slabs	#5	78	3'-4"
Approach Slabs	#8	104	4'-9"
Approach Footings	#5	80	3'-2"

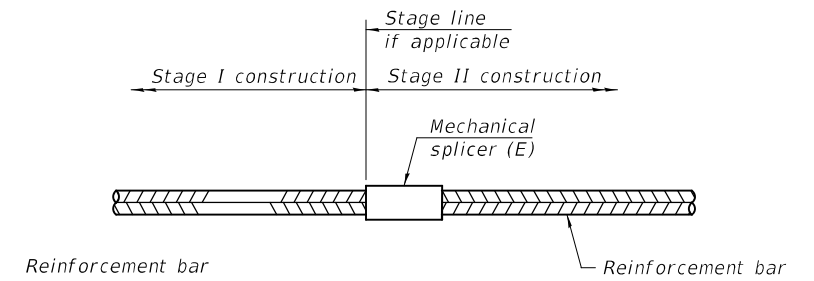


INSTALLATION AND SETTING METHODS

"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: 0510010-74440-028
 FILE NAME: p:\w\idol-pw\benley.com\FWIDOT\Documents\DOT Offices\Bureau of Bridges and Structures\Projects\0510010\CADD Plans\0510010-74440

BSD-1

1-1-2020

DESIGNED - PAUL S. JOHNSON	EXAMINED	DATE - December 13, 2021
CHECKED - MICHAEL A. PAULIONIS	PASSED	REVISER -
DRAWN - ANDRO R. SAMANIEGO		REVISER -
CHECKED - P.S.J. / M.A.P.		

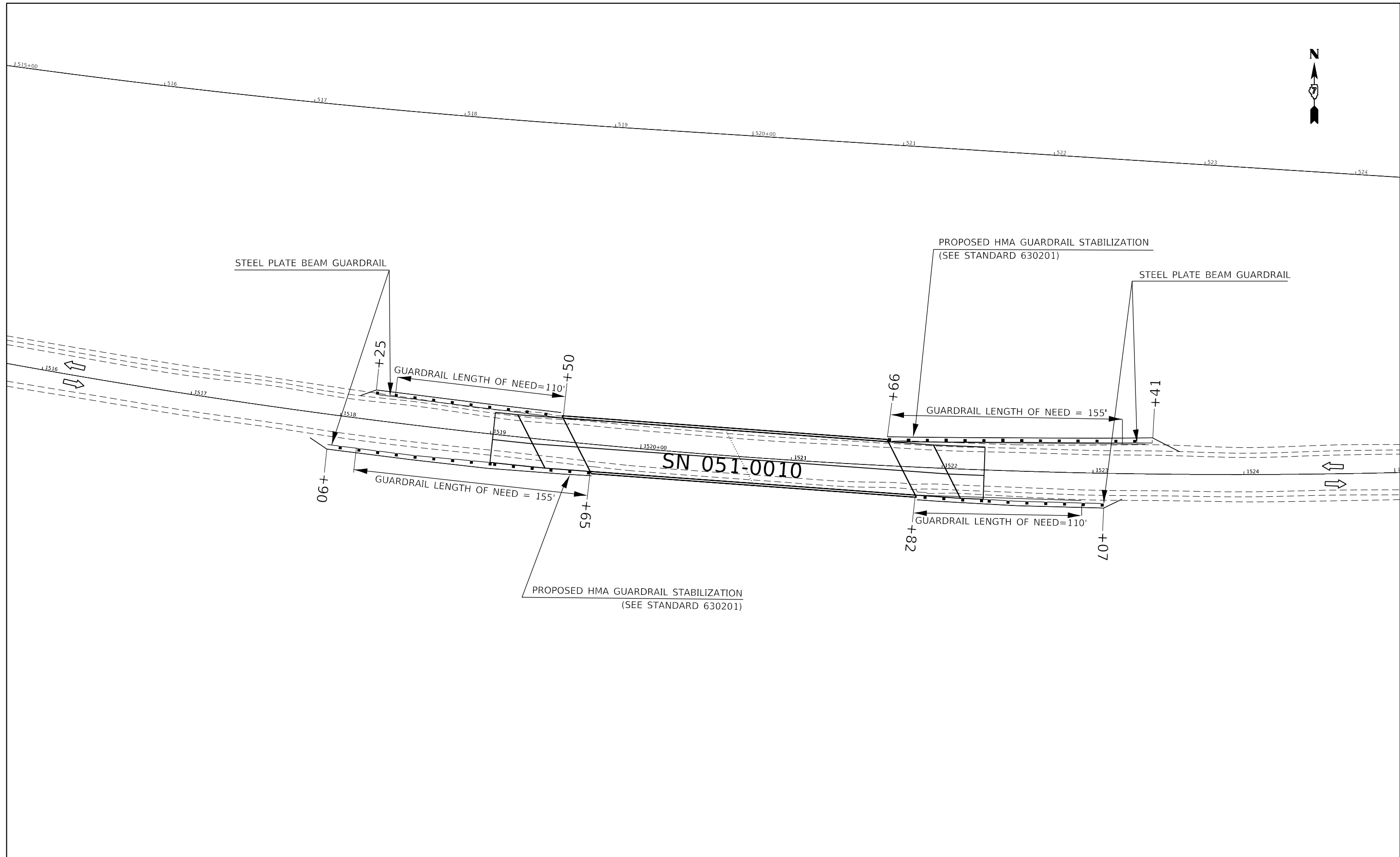
Joanne F. J. [Signature]
 ENGINEER OF BRIDGE DESIGN
Carl [Signature]
 ENGINEER OF BRIDGES AND STRUCTURES

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
 STRUCTURE NO. 051-0010**

F.A.P. RTE. 327	SECTION (51,23HB-1)BR	COUNTY LAWRENCE	TOTAL SHEETS 50	SHEET NO. 41
			CONTRACT NO. 74440	
		ILLINOIS	FED. AID PROJECT	

SHEET 28 OF 28 SHEETS



NOTE: DRAWING IS NOT TO SCALE

MODEL NAME: MAMES
FILE NAME: 311215

USER NAME = SUSERS	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 5SCALES	CHECKED -	REVISED -
PLOT DATE = SDATES	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

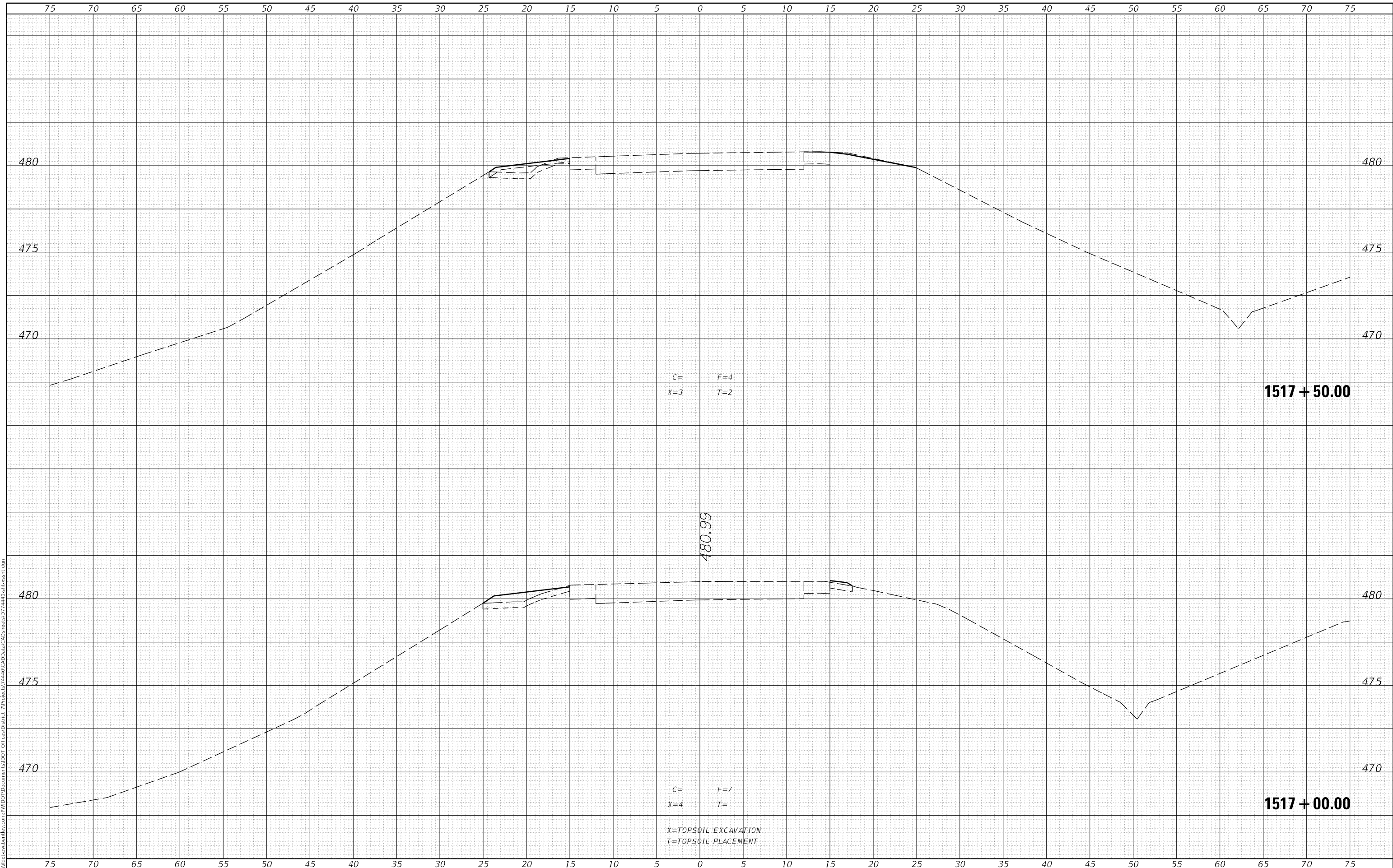
GUARDRAIL DETAILS				
SCALE:	SHEET	OF	SHEETS	STA. TO STA.

F.A.P. RTE. 327	SECTION (51,23HB-1)BR	COUNTY Lawrence	TOTAL SHEETS 50	SHEET NO. 42
CONTRACT NO. 74440				
ILLINOIS FED. AID PROJECT				

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS CHECKED	
FINAL SURVEY	
NOTE BOOK	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS CHECKED	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	

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USER NAME =	Reedermr	DESIGNED -	REVISIED -
		DRAWN -	REVISIED -
PLOT SCALE =	10.0000' / in.	CHECKED -	REVISIED -
PLOT DATE =	11/17/2021	DATE -	REVISIED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS

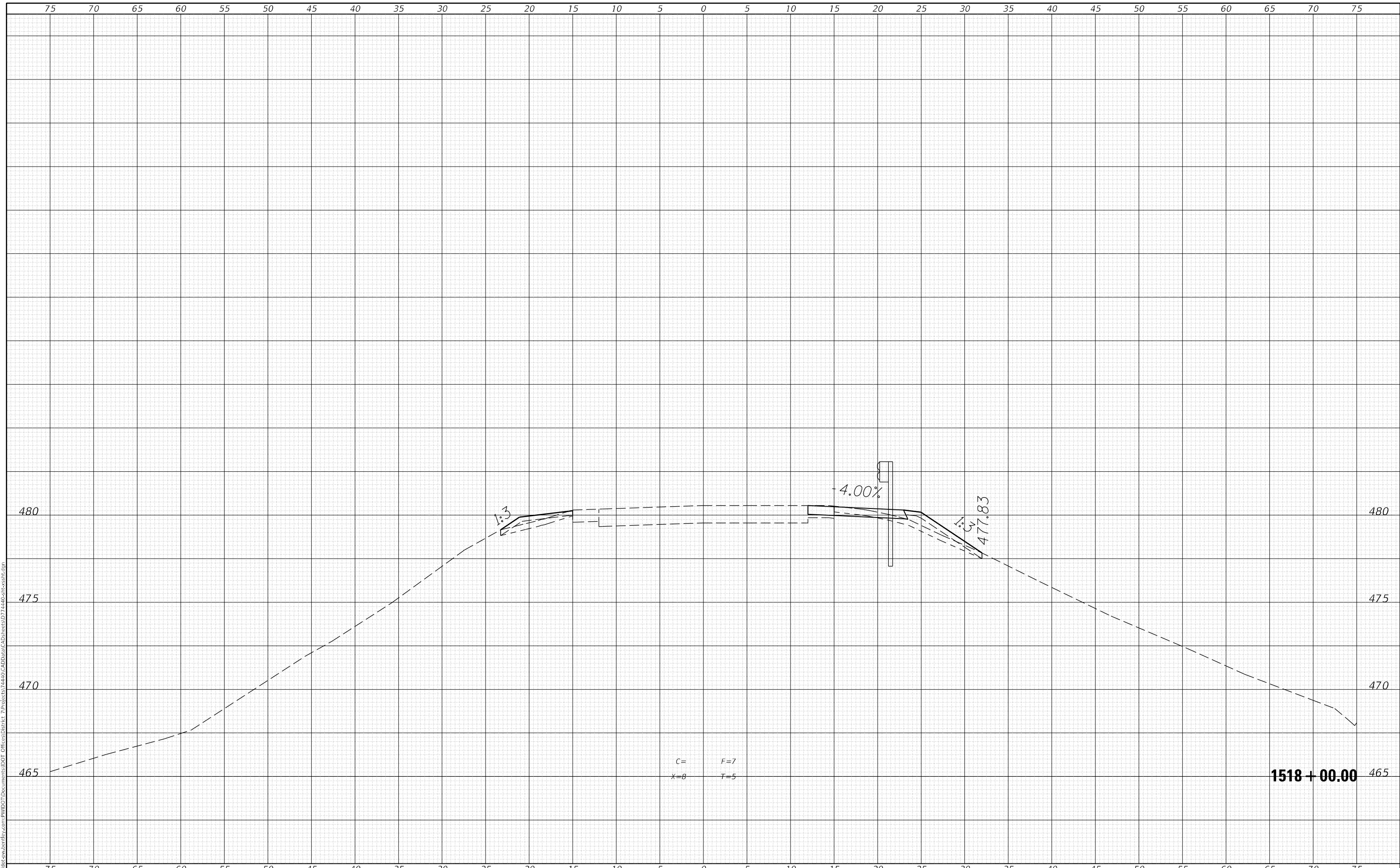
SCALE: SHEET OF SHEETS STA. 1517+00.00 TO STA. 1517+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51,23HB-1)BR	LAWRENCE	50	43
			CONTRACT NO. 74440	
			ILLINOIS FED. AID PROJECT	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS CHECKED	
FINAL SURVEY NOTE BOOK NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS CHECKED	
ORIGINAL SURVEY NOTE BOOK NO.	

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	DRAWN -	REVISED -
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PLOT DATE = 11/17/2021	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS

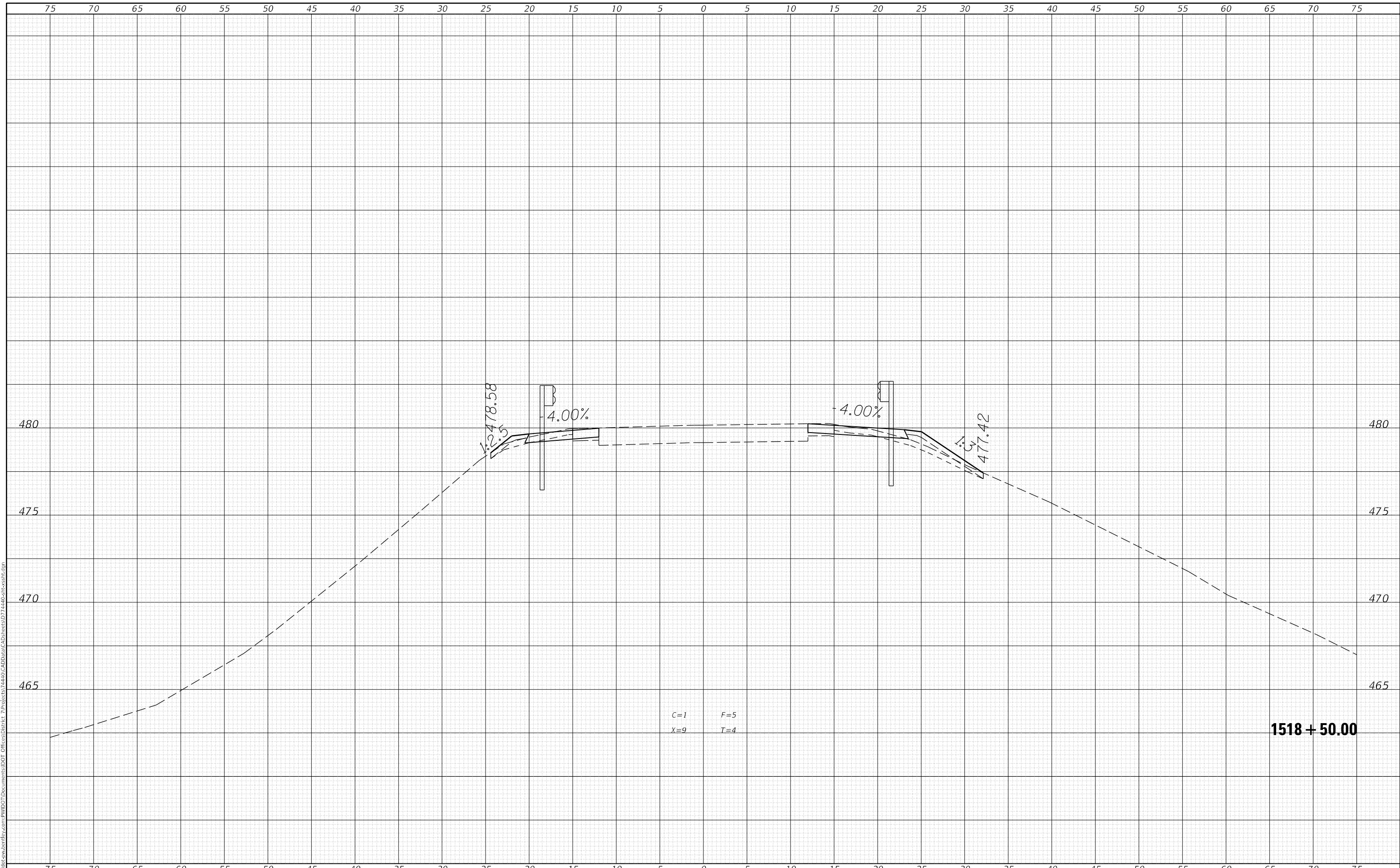
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51.23HB-1)BR	LAWRENCE	50	44
CONTRACT NO. 74440				
ILLINOIS FED. AID PROJECT				

FINAL SURVEY NO.	SURVEYED AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED AREAS CHECKED	BY	DATE

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PLOT DATE = 11/17/2021	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS

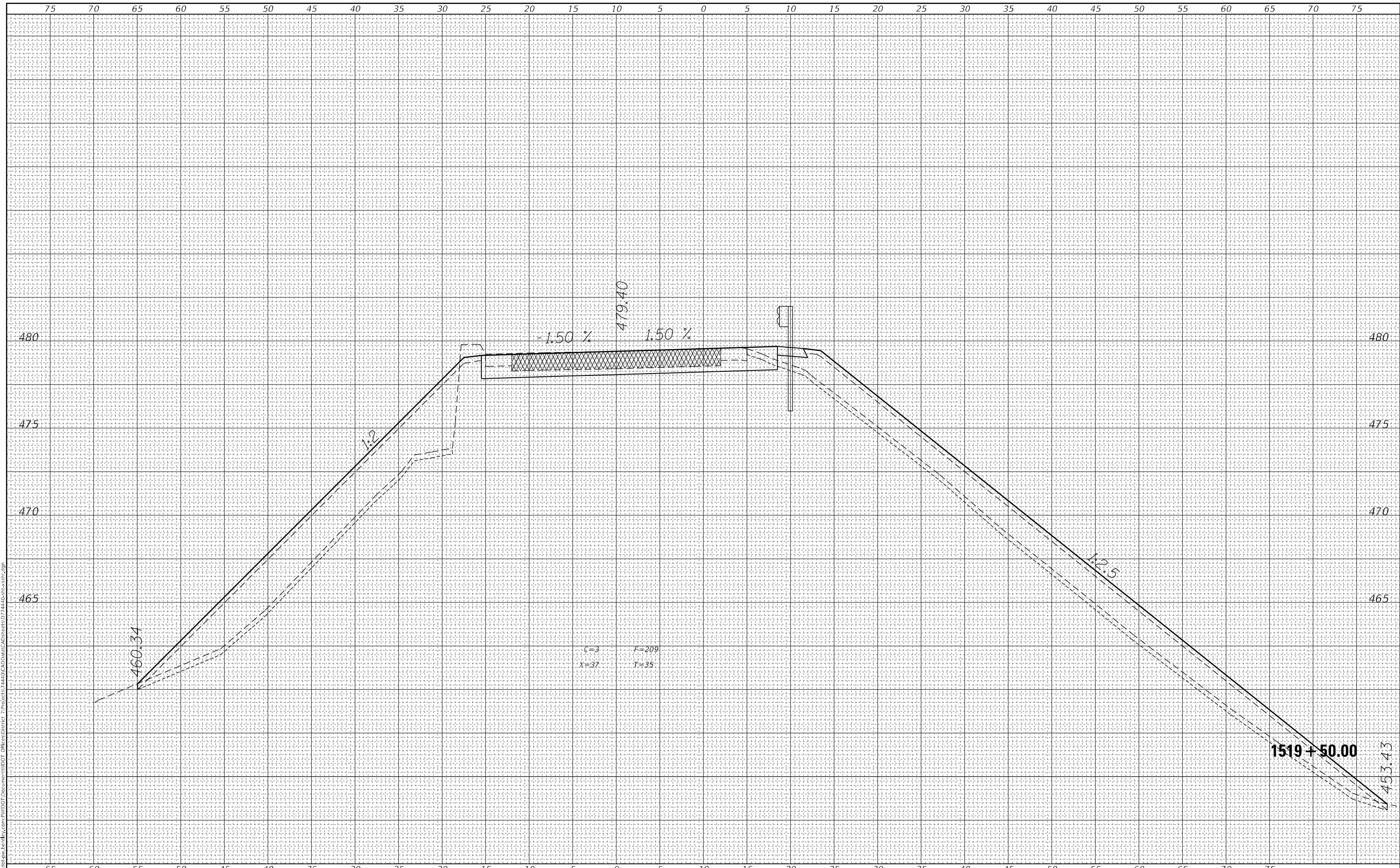
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51.23HB-1)BR	LAWRENCE	50	45
CONTRACT NO. 74440			ILLINOIS FED. AID PROJECT	

FINAL SURVEY NO.	SURVEYED	BY	DATE
	NOTED		
	PLOTTED		
	AREAS CHECKED		

ORIGINAL SURVEY NO.	SURVEYED	BY	DATE
	NOTED		
	PLOTTED		
	AREAS CHECKED		

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PLOT DATE = 11/4/2021	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

SCALE:	SHEET	OF	SHEETS	STA. 1519+50.00	TO STA. 1519+50.00
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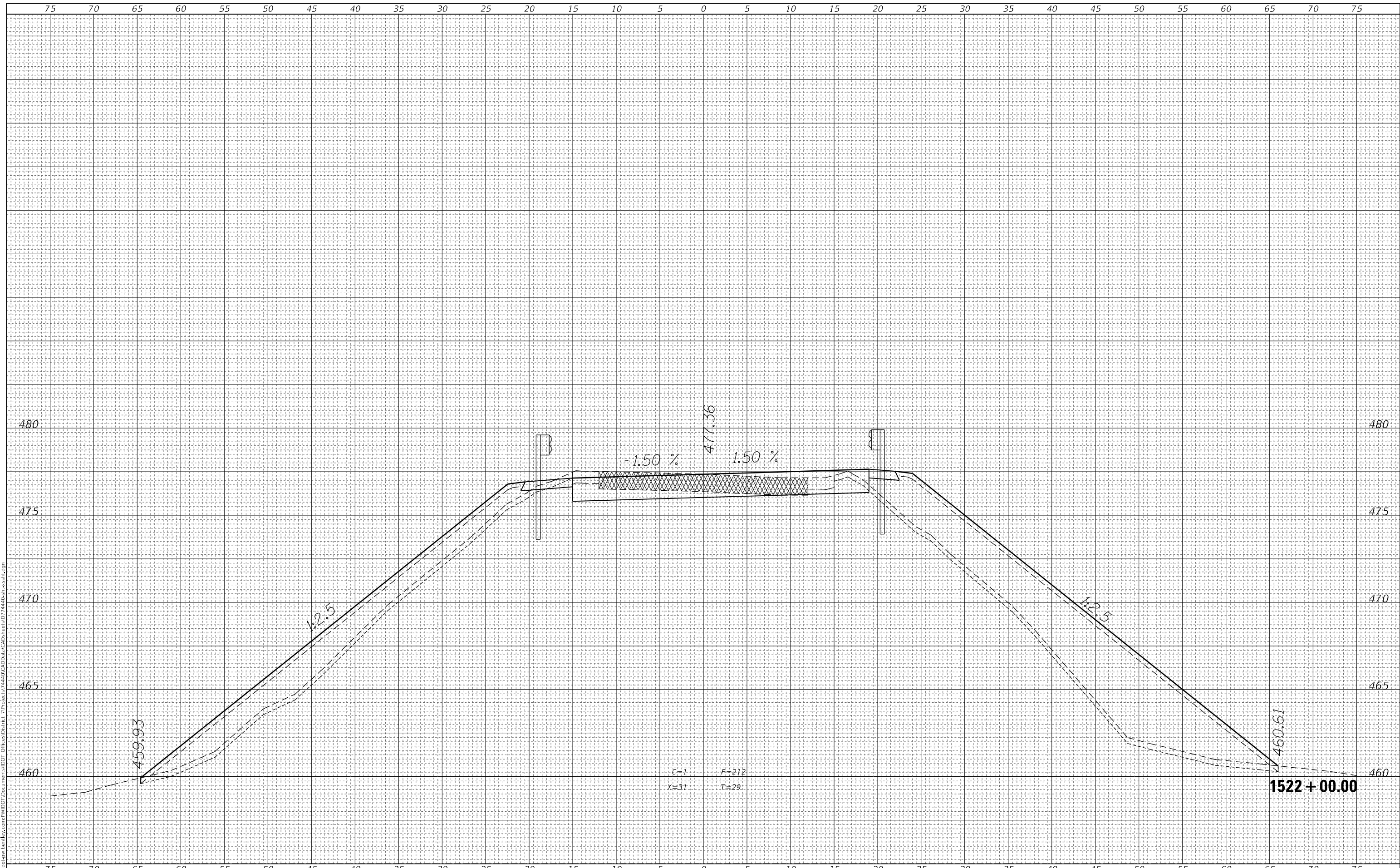
CROSS SECTIONS

F.A.P. RTE. 327	SECTION (51,23HB-1)BR	COUNTY LAWRENCE	TOTAL SHEETS 50	SHEET NO. 47
			CONTRACT NO. 74440	
		ILLINOIS	FED. AID PROJECT	

FINAL SURVEY NO.	SURVEYED	DATE
NOTE BOOK	PLOTTED	
	TEMPLATE	
	AREAS CHECKED	

ORIGINAL SURVEY NO.	SURVEYED	DATE
NOTE BOOK	PLOTTED	
	TEMPLATE	
	AREAS CHECKED	

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	DRAWN -	REVISED -
PLOT SCALE = 10,0000 * / in.	CHECKED -	REVISED -
PLOT DATE = 11/4/2021	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS

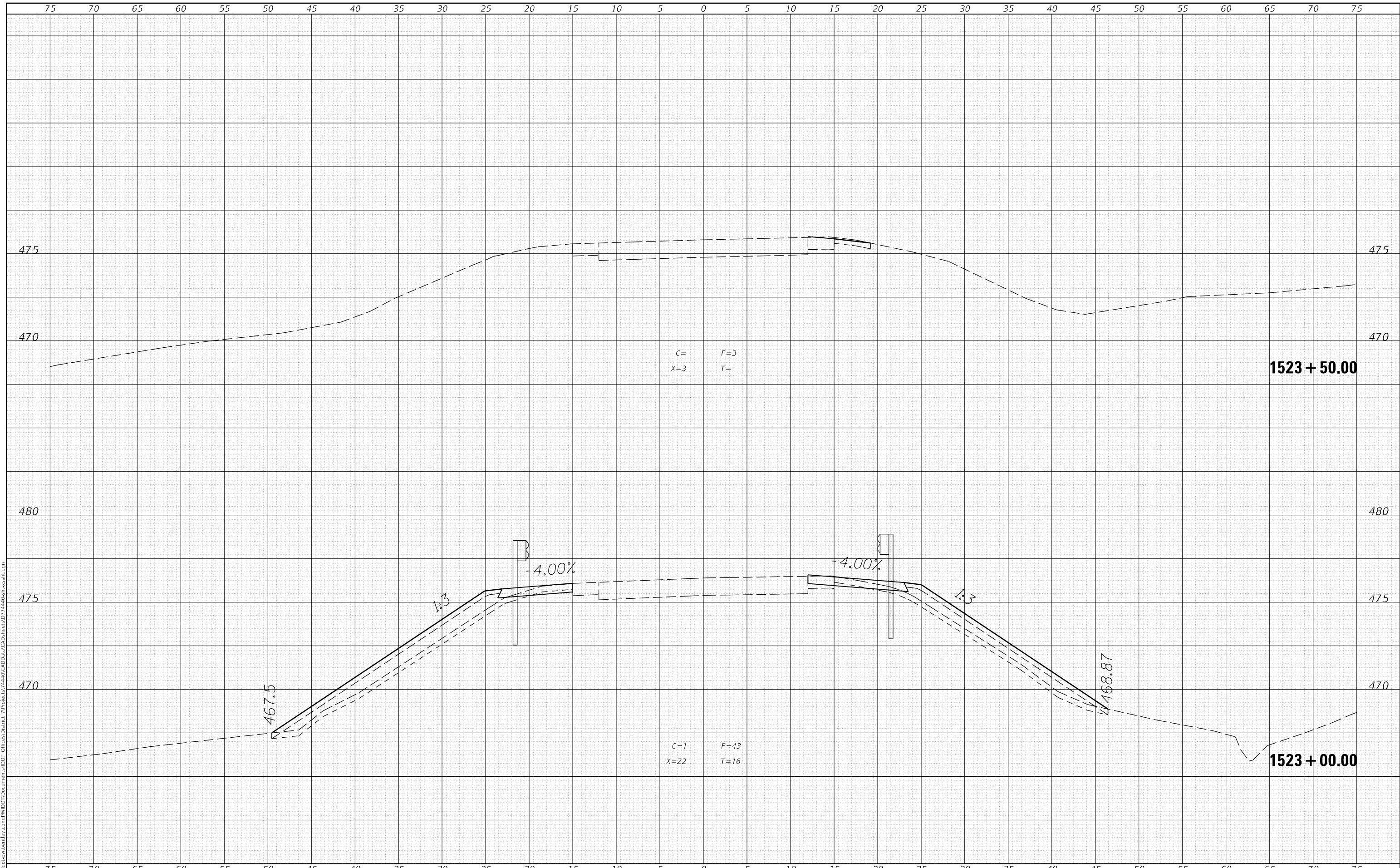
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F.A.P. RTE. 327	SECTION (51,23HB-1)BR	COUNTY LAWRENCE	TOTAL SHEETS 50	SHEET NO. 48
			CONTRACT NO. 74440	
		ILLINOIS FED. AID PROJECT		

DATE	
BY	
FINAL SURVEY NO.	
SURVEYED PLOTTED AREAS CHECKED	
NOTE BOOK	
TEMPLATE	
AREAS CHECKED	

DATE	
BY	
ORIGINAL SURVEY NO.	
SURVEYED PLOTTED AREAS CHECKED	
NOTE BOOK	
TEMPLATE	
AREAS CHECKED	

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USER NAME = Reedermr	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 10.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 11/17/2021	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS

SCALE: SHEET OF SHEETS STA. 1523+00.00 TO STA. 1523+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51.23HB-1)BR	LAWRENCE	50	50
CONTRACT NO. 74440				
ILLINOIS		FED. AID PROJECT		