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STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

ST. CLAIR 21 1 82-1-B-2BJB-2 ILLINOIS CONTRACT NO. 76U24

FOR INDEX OF SHEETS, SEE SHEET NO. 2

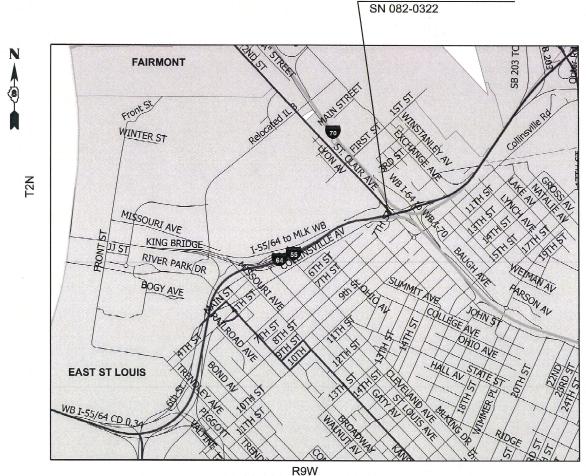
PROPOSED HIGHWAY PLANS

FAI ROUTE 70 (I-70) SECTION 82-1-B-2BJR-2

BRIDGE JOINT REPLACEMENT/REPAIRS ST. CLAIR COUNTY

C-98-048-25

PROJECT LOCATION



GROSS LENGTH = 1297 FT. = 0.246 MILE NET LENGTH = 1297 FT. = 0.246 MILE

CONTRACT NO. 76U24

1-800-892-0123

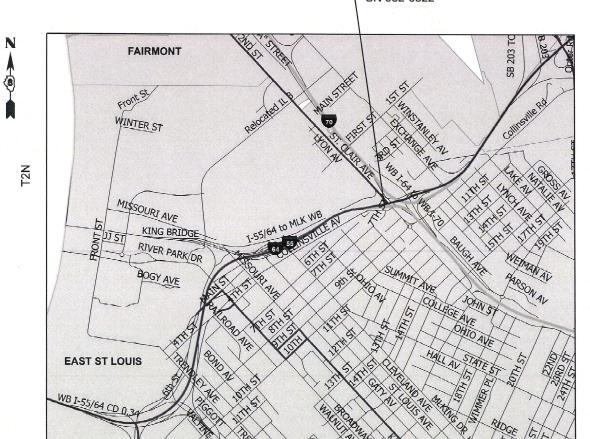
ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS

ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

PROJECT ENGINEER: BILLIE OWEN

PROJECT MANAGER: MICHAEL BERG

JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION



LOCATION OF SECTION INDICATED THUS: -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

REV - MS

INDEX OF SHEETS

- 1 COVER SHEET
- INDEX OF SHEETS, HIGHWAY STANDARDS, GENERAL NOTES, AND COMMITMENTS
- 3-4 SUMMARY OF QUANTITIES
- 5-7 STAGE I
- 8-10 STAGE II
- 11-21 STRUCTURE PLANS

GENERAL NOTES

1 UTILITIES KNOWN TO HAVE FACILITIES WITHIN THE PROJECT AREAS

AT&T ILLINOIS CITY OF EAST ST, LOUIS ILLINOIS AMERICAN WATER COMPANY LEVEL 3 COMMUNICATIONS, LLC

- 2 NO SURVEY WAS PREFORMED FOR THIS PROJECT AND THE PLANS WERE CREATED USING MICROFILM AND FIELD
- 3 THE RESIDENT ENGINEER SHALL VERIFY THE EXISTENCE OF HIGHWAY LIGHTING, INTELLIGENT TRANSPORTATION SYSTEMS (I.T.S.) UTILITIES, AND/OR ELECTRICAL CABLES ASSOCIATED WITH TRAFFIC SIGNALS WITHIN THE PROJECT LIMITS. IF ANY OF THESE EXIST WITHIN THE PROJECT LIMITS, AND IF THESE ITEMS REQUIRE LOCATING, THE CONTRACTOR SHALL BE DIRECTED TO DO SO ACCORDING TO SECTION 803 OF THE STANDARD SPECIFICATIONS. THIS WORK SHALL BE PAID FOR ACCORDING TO ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS.
- 4 2 CHANGEABLE MESSAGE BOARDS SHALL BE REQUIRED FOR THIS PROJECT. THEY SHALL BE PLACED 2 WEEKS PRIOR TO ANY LANE CLOSURE. THE CHANGEABLE MESSAGE BOARDS SHALL BE PLACED AS SHOWN IN THE PLANS AND AT THE DIRECTION OF THE ENGINEER.
- THE DEPARTMENT STRONGLY ENCOURAGES THE PRIME CONTRACTOR AND THEIR APPROVED SUB-CONTRACTORS TO HIRE MINORITY, WOMEN AND DISADVANTAGED INDIVIDUALS FROM IT'S FEDERALLY FUNDED HIGHWAY CONSTRUCTION CAREERS TRAINING PROGRAM (HCCTP) TO HELP MEET WORKFORCE AND TRAINEE GOALS. THIS PROGRAM IS TRAINING MINORITIES, WOMEN AND DISADVANTAGED INDIVIDUALS IN HIGHWAY CONSTRUCTION RELATED SKILLS, E.G., MATH FOR THE TRADES, JOB READINESS, TECHNICAL SKILLS COURSEWORK (CARPENTRY, CONCRETE FLATWORK, BLUEPRINT READING, SITE PLANS, SITE WORK, TOOLS USE, ECT.) AND OSHA 10 HOUR CERTIFICATION, TO PREPARE THEM FOR A CAREER IN THE HIGHWAY CONSTRUCTION TRADES. GRADUATES ARE WELL-TRAINED AND READY TO BECOME PRODUCTIVE ENTRY-LEVEL CONSTRUCTION WORKERS. CONTRACT THE DISTRICT 8 EEO OFFICE AT 618-346-3360 AND/OR THE HCCTP COORDINATOR AT 618-874-6528 TO LEARN MORE ABOUT THE PROGRAM AND FOR ASSISTANCE IN MEETING WORKFORCE AND TRAINEE GOALS.

HIGHWAY STANDARDS

000001-08 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS

001001-02 AREAS OF REINFORCEMENT BARS

001006 DECIMAL OF AN INCH AND OF A FOOT

701101-05 OFF ROAD MOVING OPERATIONS, MULTILANE, 15' TO 24" FROM PAVEMENT EDGE

701423-10 LANE CLOSURE, MULTILANE, WITH BARRIER, FOR SPEEDS 45 MPH TO 55MPH

701901-10 TRAFFIC CONTROL DEVICES

704001-08 TEMPORARY CONCRETE BARRIER

COMMITMENTS

NONE

USER NAME = michael.berg	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 4/4/2025	DATE -	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SCALE:

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SECTION

82-1B-2BJR-2

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			CONSTR. CODE
	Ī		BRIDGE
		TOTAL	0047
ITEM	UNIT	QUANTITY	S.N.082-0322
PROTECTIVE COAT	SQ YD	122	122
CONCRETE REMOVAL	CU YD	54.2	54.2
CONCRETE CURE POTRUCTURE	CHAD	C4.C	64.6
CONCRETE SUPERSTRUCTURE	COAD	64.6	64.6
STUD SHEAR CONNECTORS	EACH	30	30
REINFORCEMENT BARS, EPOXY COATED	POUND	12970	12970
BAR SPLICERS	EACH	101	101
MECHANICAL SPLICERS	EACH	135	135
			_
ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6
MORII IZATION	LSIM	1	1
INCULTATION	LOOW	<u>'</u>	. '
TRAFFIC CONTROL AND PROTECTION, STANDARD 701423	EACH	1	1
CHANGEABLE MESSAGE SIGN	CAL DA	204	204
TEMPORARY CONCRETE BARRIER	FOOT	1750	1750
DEL COATE TEMPODARY COMORETE SARRIES	FOOT	4705	4705
RELOCATE TEMPORARY CONCRETE BARRIER	F001	1/25	1725
IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE, NARROW), TEST	EACH	2	2
LEVEL 3	1	1	
	CONCRETE REMOVAL CONCRETE SUPERSTRUCTURE STUD SHEAR CONNECTORS REINFORCEMENT BARS, EPOXY COATED BAR SPLICERS MECHANICAL SPLICERS ENGINEER'S FIELD OFFICE, TYPE A MOBILIZATION TRAFFIC CONTROL AND PROTECTION, STANDARD 701423 CHANGEABLE MESSAGE SIGN TEMPORARY CONCRETE BARRIER RELOCATE TEMPORARY CONCRETE BARRIER	PROTECTIVE COAT SQ YD CONCRETE REMOVAL CU YD CONCRETE SUPERSTRUCTURE CU YD STUD SHEAR CONNECTORS EACH REINFORCEMENT BARS, EPOXY COATED POUND BAR SPLICERS EACH MECHANICAL SPLICERS EACH ENGINEER'S FIELD OFFICE, TYPE A CAL MO MOBILIZATION L SUM TRAFFIC CONTROL AND PROTECTION, STANDARD 701423 EACH CHANGEABLE MESSAGE SIGN CAL DA TEMPORARY CONCRETE BARRIER FOOT IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE, NARROW), TEST FACH IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE, NARROW), TEST FACH	ITEM UNIT QUANTITY PROTECTIVE COAT SQ YD 122 CONCRETE REMOVAL CU YD 54.2 CONCRETE SUPERSTRUCTURE CU YD 64.6 STUD SHEAR CONNECTORS EACH 30 REINFORCEMENT BARS, EPOXY COATED POUND 12970 BAR SPLICERS EACH 101 MECHANICAL SPLICERS EACH 135 ENGINEER'S FIELD OFFICE, TYPE A CAL MO 6 MOBILIZATION L SUM 1 TRAFFIC CONTROL AND PROTECTION, STANDARD 701423 EACH 1 CHANGEABLE MESSAGE SIGN CAL DA 204 TEMPORARY CONCRETE BARRIER FOOT 1750 RELOCATE TEMPORARY CONCRETE BARRIER FOOT 1725

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 ST CLAIR
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 CONTRACT NO. 76U24

SECTION 82-1-B-2BJR-2

TO STA.

USER NAME = MICHAELDERG	DRAWN -	REVISED -	STATE OF ILLINOIS					
	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION					
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			-					

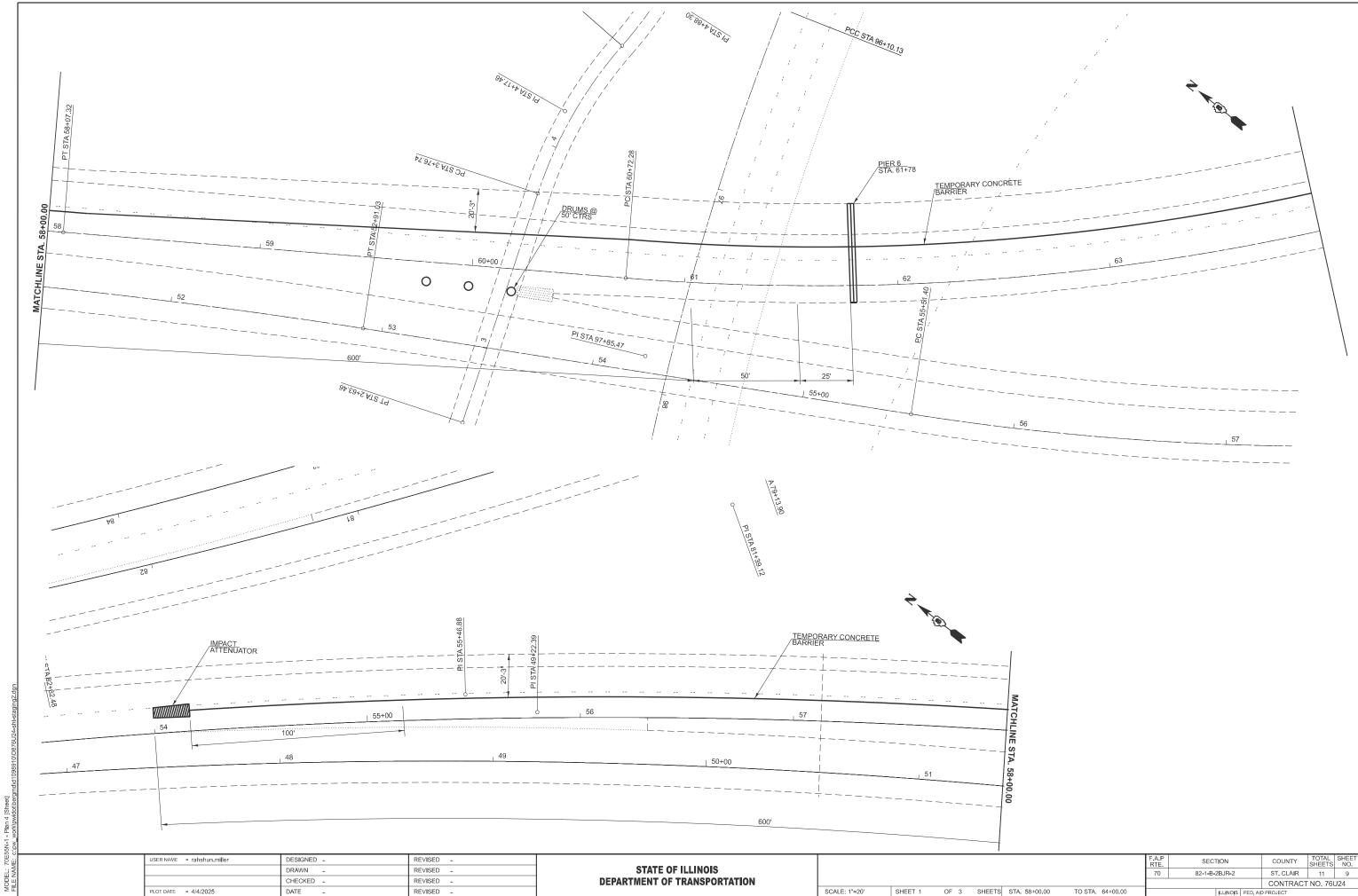
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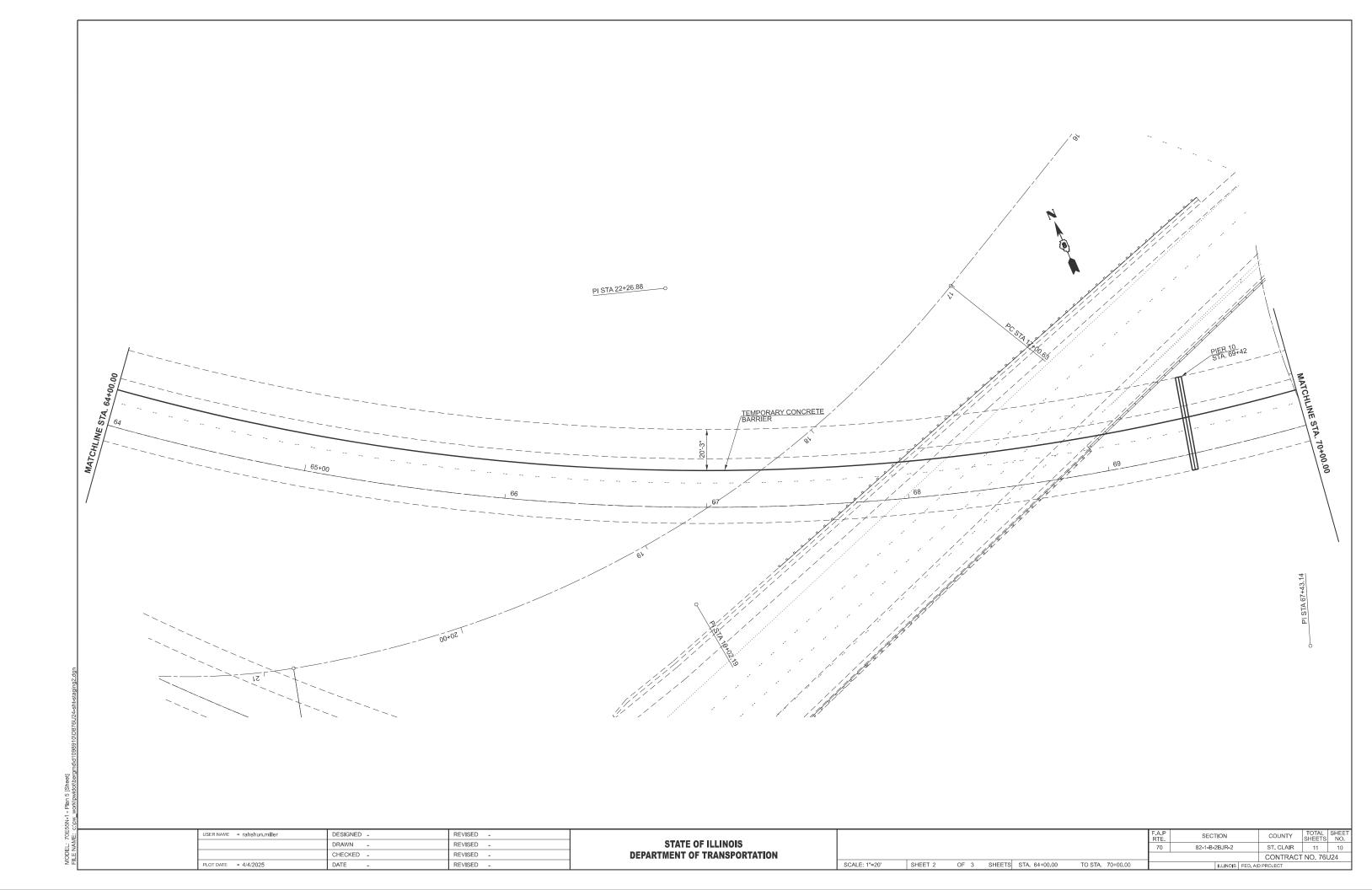
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					CONSTR. CODE
					BRIDGE
	CODE			TOTAL	0047
	NO.	ITEM	UNIT	QUANTITY	S.N.082-0322
	X7010035	TRAFFIC CONTROL AND PROTECTION, STANDARD 701423 (SPECIAL)	EACH	1	1
	Z0034806	MODULAR EXPANSION JOINT-SWIVEL 6"	FOOT	49	49
Ø	Z0076604	TRAINEES TRAINING PROGRAM GRADUATE	HOUR	1000	1000
	Z0034809	MODULAR EXPANSION JOINT-SWIVEL 9"	FOOT	98	98

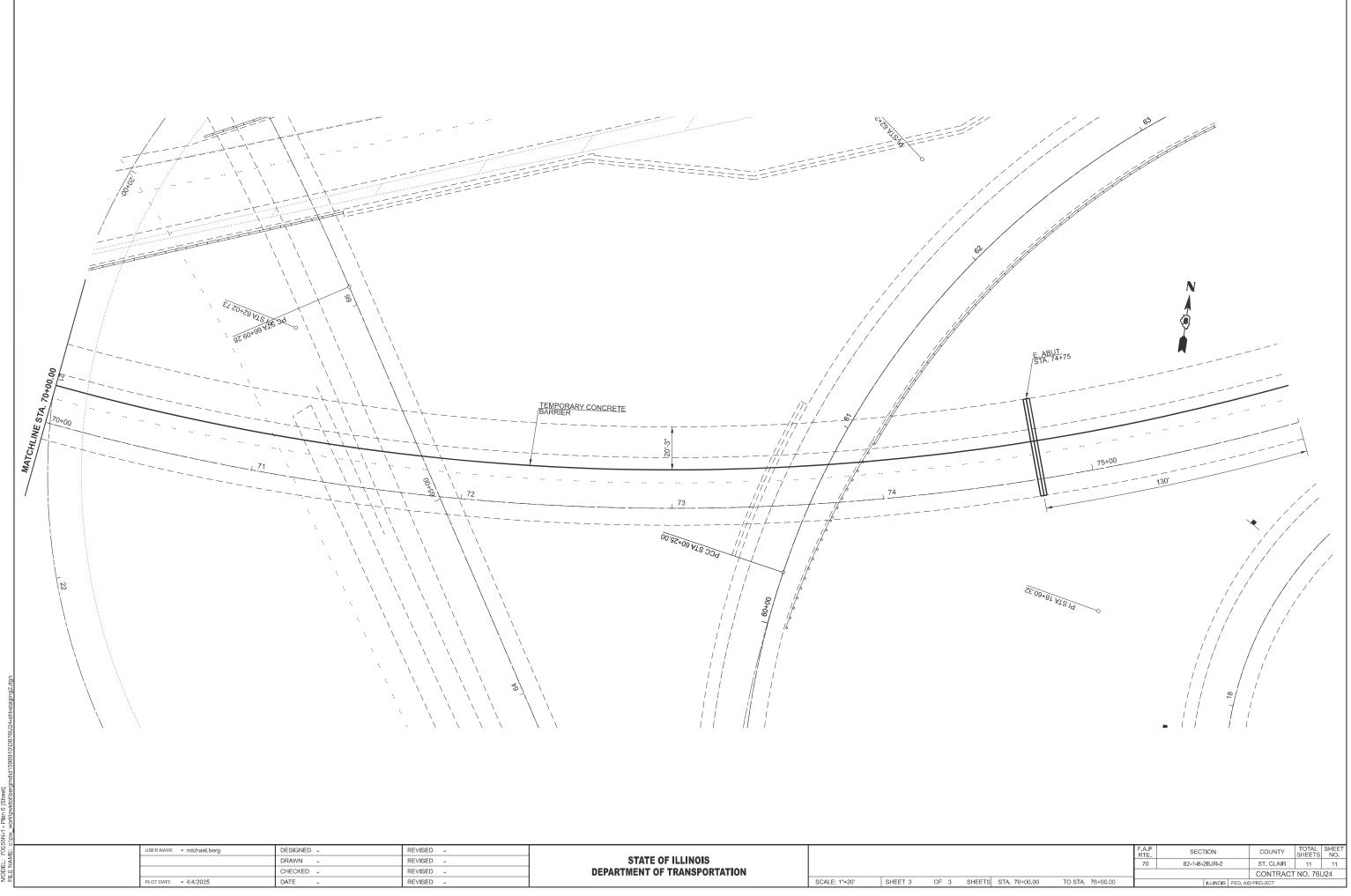
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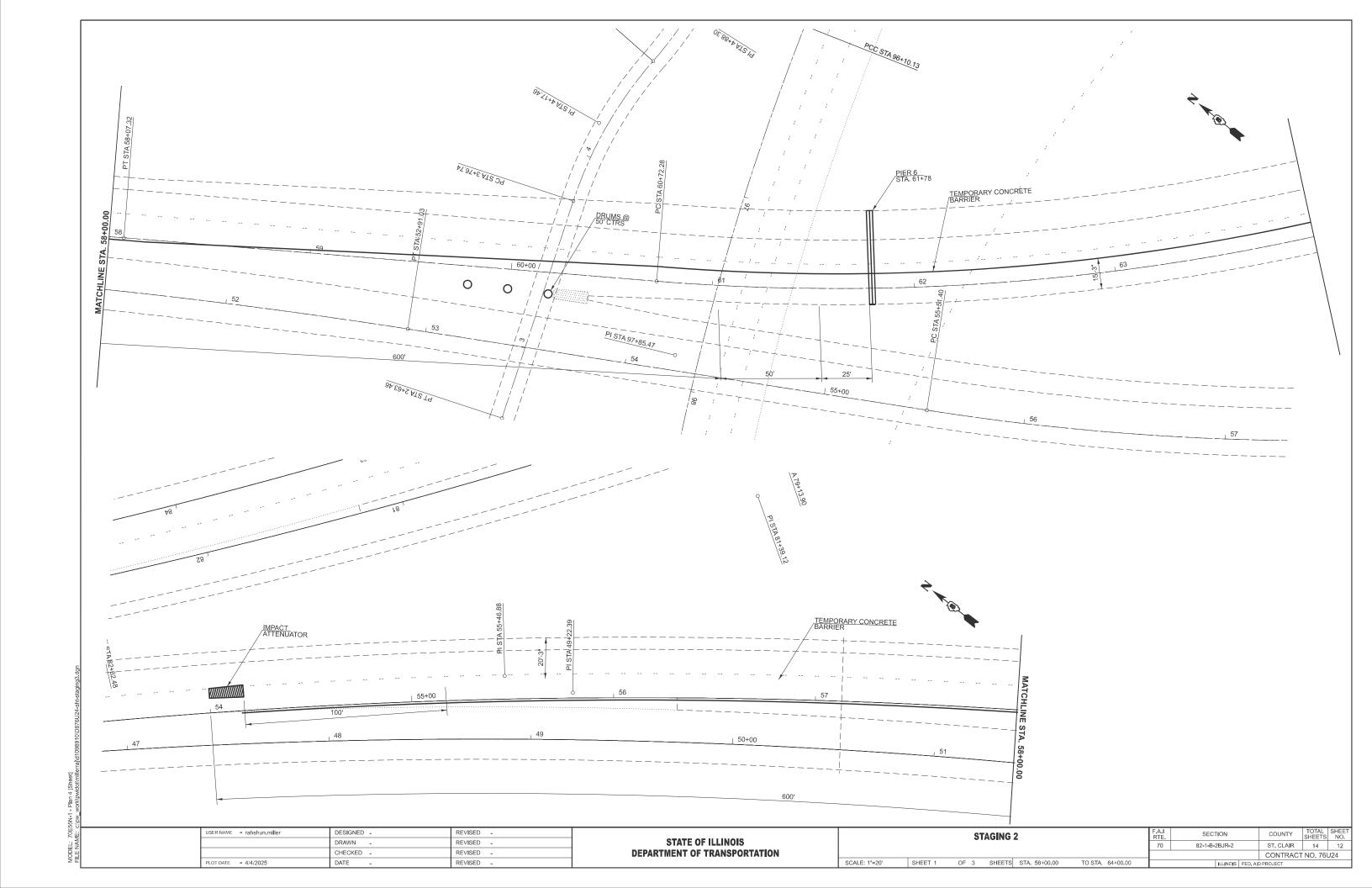
USER NAME = michael.berg	DESIGNED -	REVISED -							F.A.P RTF	SECTION	COUNTY	TOTAL	SHEET
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	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION								CONTRAC	CT NO. 76	Ú24
PLOT DATE = 4/4/2025	DATE -	REVISED -		SCALE:	SHEET 2	OF 2	SHEETS STA.	TO STA.		ILLINOIS FED.	AID PROJECT		

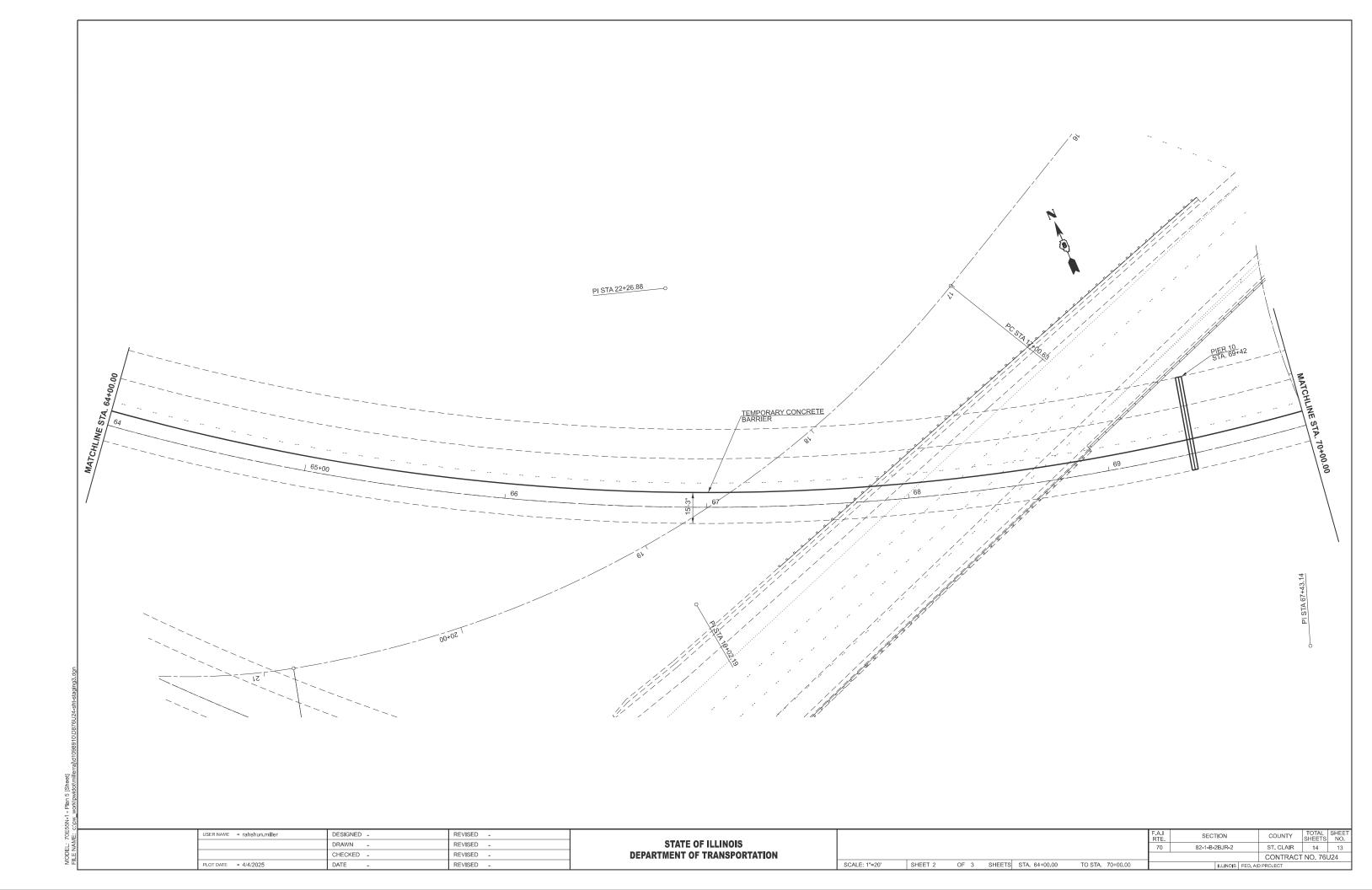


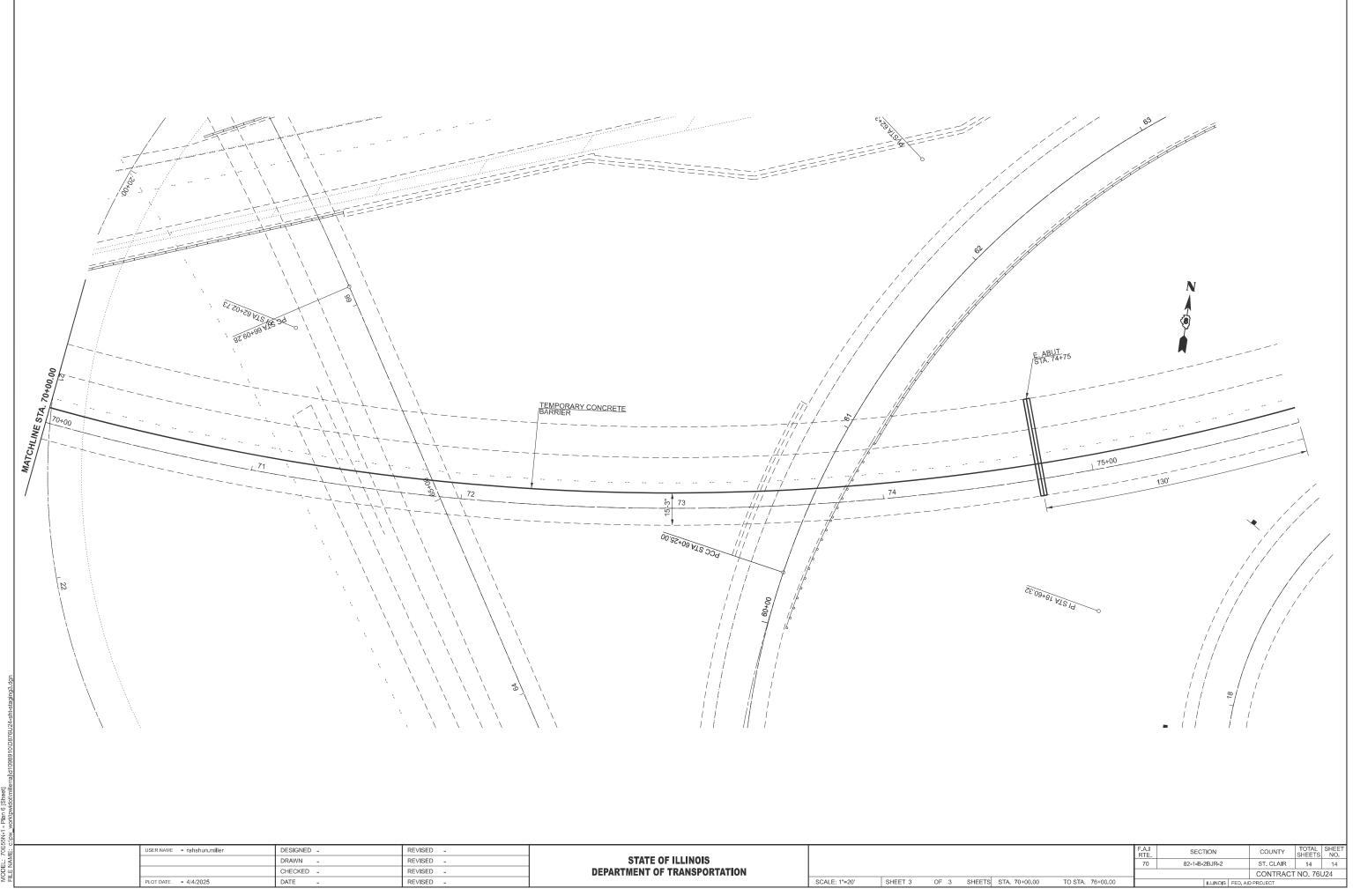




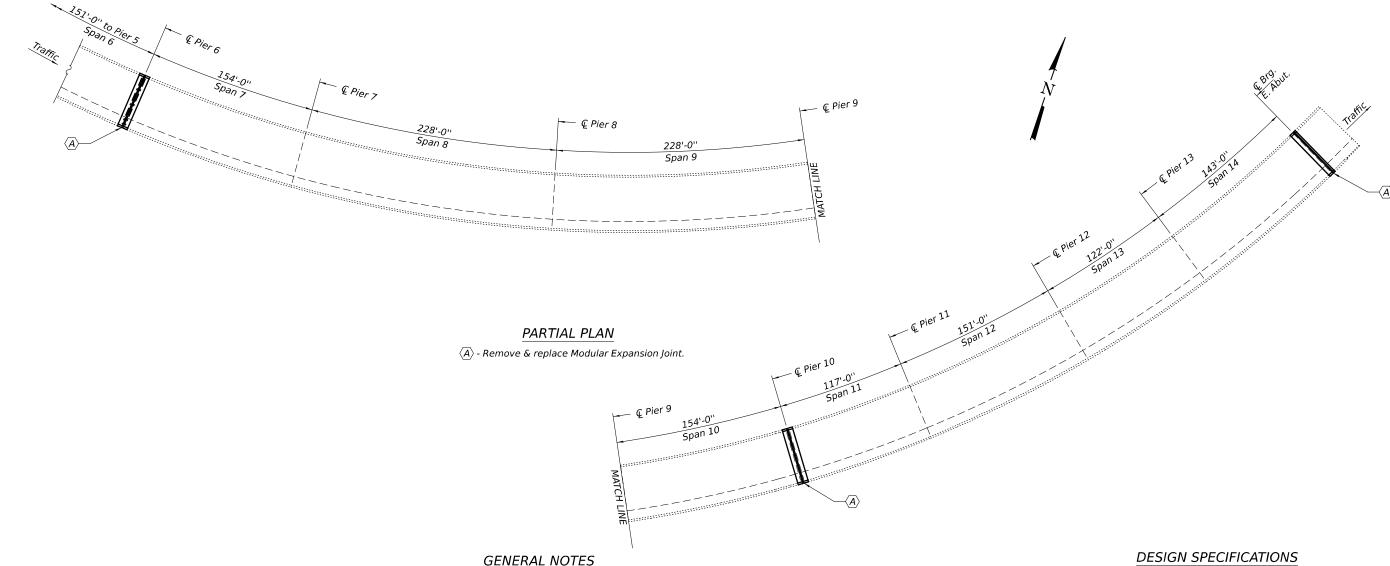
SHEET 3 OF 3 SHEETS STA. 70+00.00 TO STA. 76+00.00







SHEET 3 OF 3 SHEETS STA. 70+00.00 TO STA. 76+00.00



All structural steel shall conform to AASHTO Classification M-270 Gr. 50, unless

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 detrimental foreign material shall be removed from the surfaces in contact with concrete (SSPC-SP3 standards). 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 paid for according to Article 109.04 of the Standard Specifications. 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 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 $\frac{1}{4}$ 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 the existing structure have been taken from 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.

Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system at the contractor's expense.

The deck surface shall have its final finish tined according to Article 420.09(e)(1) of the Standard Specifications. Cost included with Concrete Superstructure. Joint openings shall be adjusted according to Article 520.04 of the Std. Specs. when the deck is poured at an ambient temperature other than 50° F.

The number, location and orientation of support boxes shall be determined by the manufacturer. All boxes shall be located to miss the top flanges of the girders. Modular expansion joints shall be assembled in their final relative position with the ends in place for inspection and acceptance.

The steel components for the Modular Expansion Joints shall be hot-dip galvanized according to Special Provision for "Hot Dip Galvanizing for Strutural Steel". Joint shall be fabricated to conform to the roadway profile and cross slopes.

LOCATION	TOTAL LONGITUDINAL	JOINT
LOCATION	MOVEMENT	SIZE
Pier 6	7.48''	9''
Pier 10	9.02''	9''
E. Abut.	3.97''	6''

DESIGN SPECIFICATIONS

2020 AASHTO LRFD Bridge Design Specifications, 9th Edition

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	54.2
Concrete Superstruture	Cu. Yd.	64.6
Reinforcement Bars, Epoxy Coated	Pound	12970
Protective Coat	Sq. Yd.	122
Bar Splicers	Each	101
Mechanical Splicers	Each	135
Shear Studs	Each	30
Modular Expansion Joint - Swivel 6"	Foot	49
Modular Expansion Joint - Swivel 9"	Foot	98

* Applied on new concrete only.



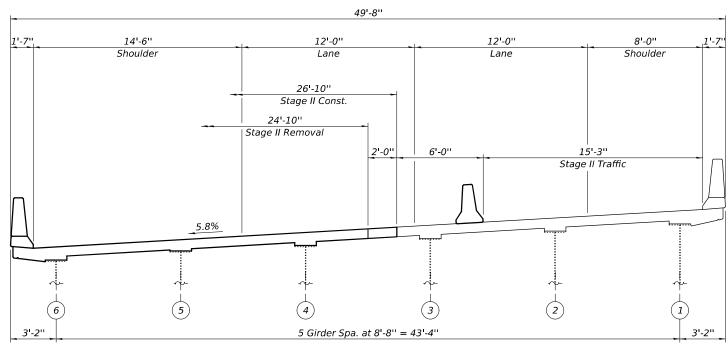
Expires: November 30, 2026

DESIGNED - Victor H. Veliz **EXAMINED** DATE - MAY 6, 2025 CHECKED - Stephen M. Ryan PASSED - 0 REVISED -CHECKED - VHV SMR REVISED

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION GENERAL PLAN (PARTIAL) I-70E OVER I-55, CSX & KCS RAILROADS SECTION 82-1 B-2BJR-2 ST. CLAIR 21 11 SN 082-0322 CONTRACT NO. 76U24 SHEET 1 OF 11 SHEETS

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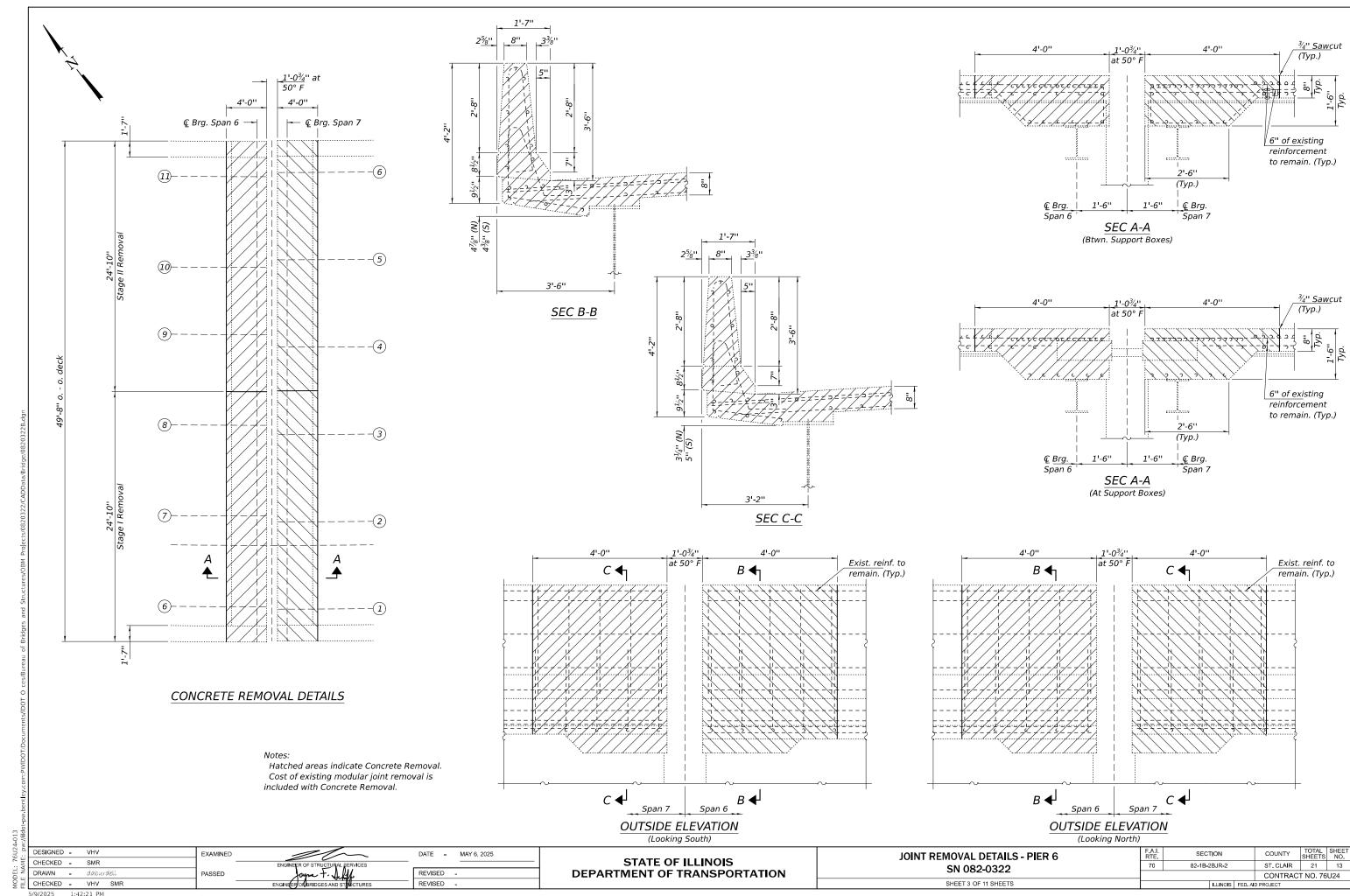




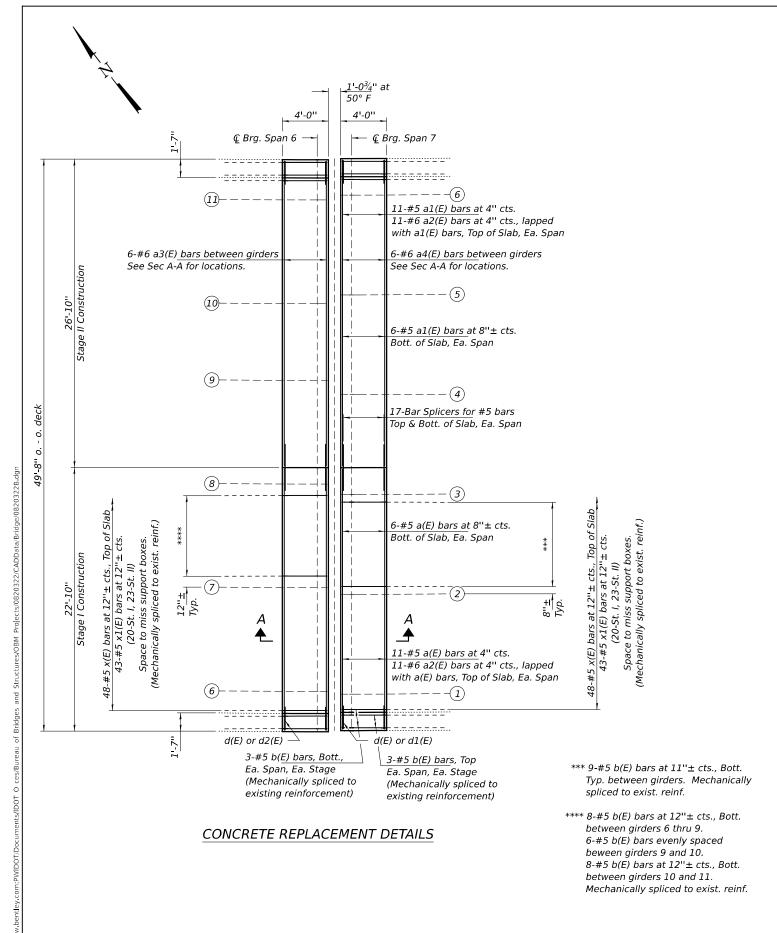
CROSS SECTION
Pier 6 (Span 7), Pier 10 & E. Abut.
(Looking East)

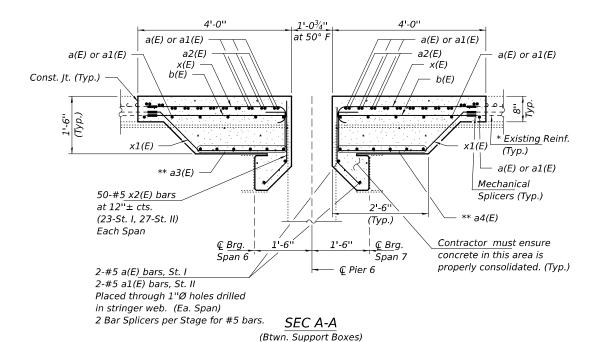
COUNTY TOTAL SHEET NO.

ST. CLAIR 21 12 F.A.I. RTE. DESIGNED - VHV EXAMINED DATE - MAY 6, 2025 SECTION STAGE CONSTRUCTION DETAILS STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION CHECKED - SMR 82-1B-2BJR-2 SN 082-0322 REVISED -DRAWN - daburdell PASSED CONTRACT NO. 76U24 S H CHECKED - VHV SMR REVISED -SHEET 2 OF 11 SHEETS



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4'-0'' 4'-0' 1'-03/4'' at 50° F a(E) or a1(E) a(E) or a1(E) a2(E) a(E) or a1(E)a2(E) a(E) or a1(E)x(E) Const. Jt. (Typ.) * Existing Reinf. (Typ.) ** a3(E) ** a4(E) a(E) or a1(E)a(E) or a1(E) Mechanical Splicers (Typ.) 2'-6' (Typ.) € Brg. 1'-6'' 1'-6'' Ç Brg. Span 6 Span 7 SEC A-A

> * Cut existing reinforcement 6" minimum from Concrete Removal line to facilitate installation of Mechanical Splicers.

(At Support Boxes)

** Bars to be adjusted and/or cut in field to miss support boxes or webs.

Note:

See sheet 5 of 11 for additional details and bar bending diagrams.

DESIGNED - VHV EXAMINED DATE - MAY 6, 2025

CHECKED - SMR

DRAWN - daburdell PASSED

CHECKED - VHV SMR

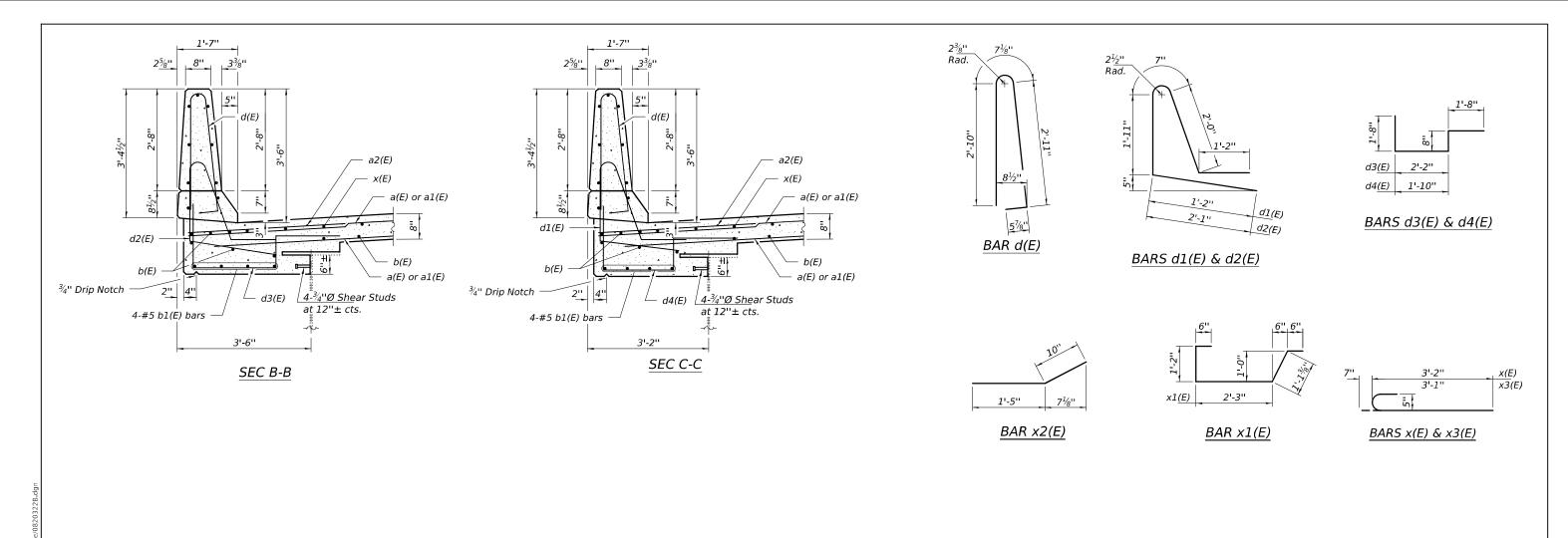
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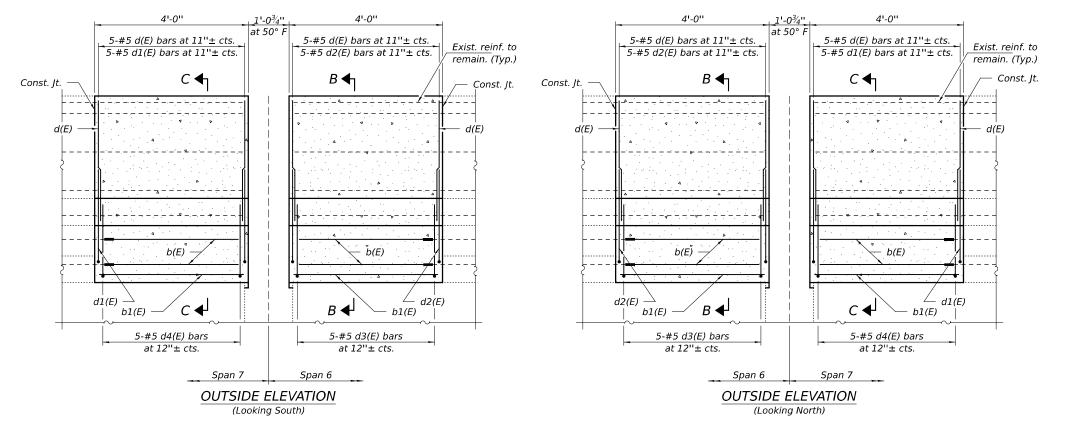
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION





BILL OF MATERIAL

Bar				
	No.	Size	Length	Shape
a(E)	38	#5	22'-6"	
a1(E)	38	#5	26'-6''	
a2(E)	44	#6	6'-6''	
a3(E)	30	#6	8'-8''	
a4(E)	30	#6	8'-4''	
b(E)	109	#5	3'-3''	
b1(E)	16	#5	3'-8''	
d(E)	20	#5	6'-10''	1
d1(E)	10	#5	6'-10''	L
d2(E)	10	#5	7'-9''	<u>L</u> -
d3(E)	10	#5	6'-2''	L-
d4(E)	10	#5	5'-10''	L-
x(E)	96	#5	3'-9''	
x1(E)	86	#5	5'-7''	
x2(E)	100	#5	2'-3''	
Concrete Removal			Cu. Yd.	19.8
Concrete Superstructure			Cu. Yd.	24.0
Bar Splicers			Each	38
Mechanical Splicers			Each	291
Stud Shear Connectors			Each	16
Protective	Coat	Sq. Yd.	44	
Dainfarca	ment Bars	Pound	5100	
Reimorcei	ated			
	iccu		Foot	40
Epoxy Coa Modular E			Foot	49

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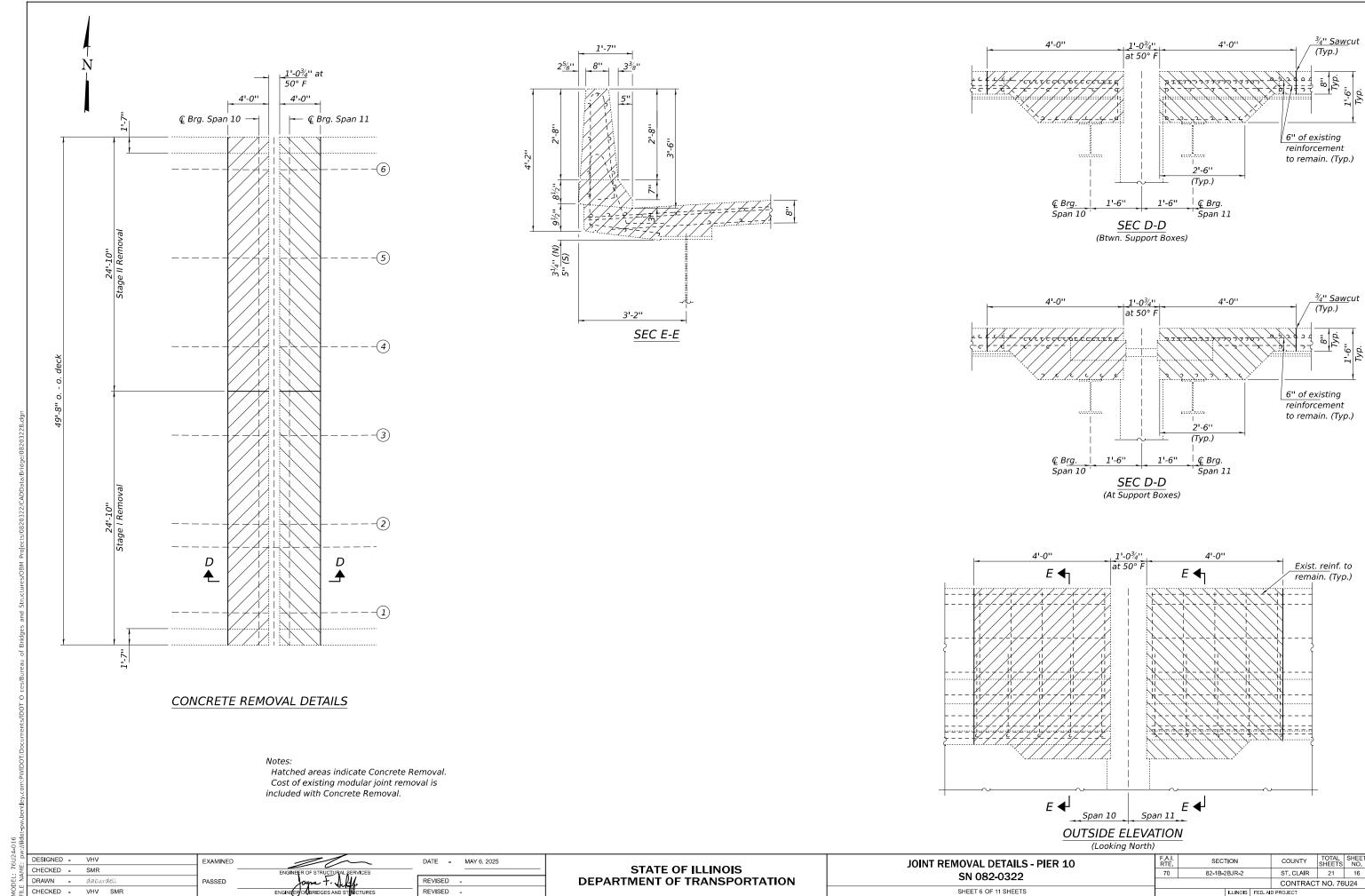
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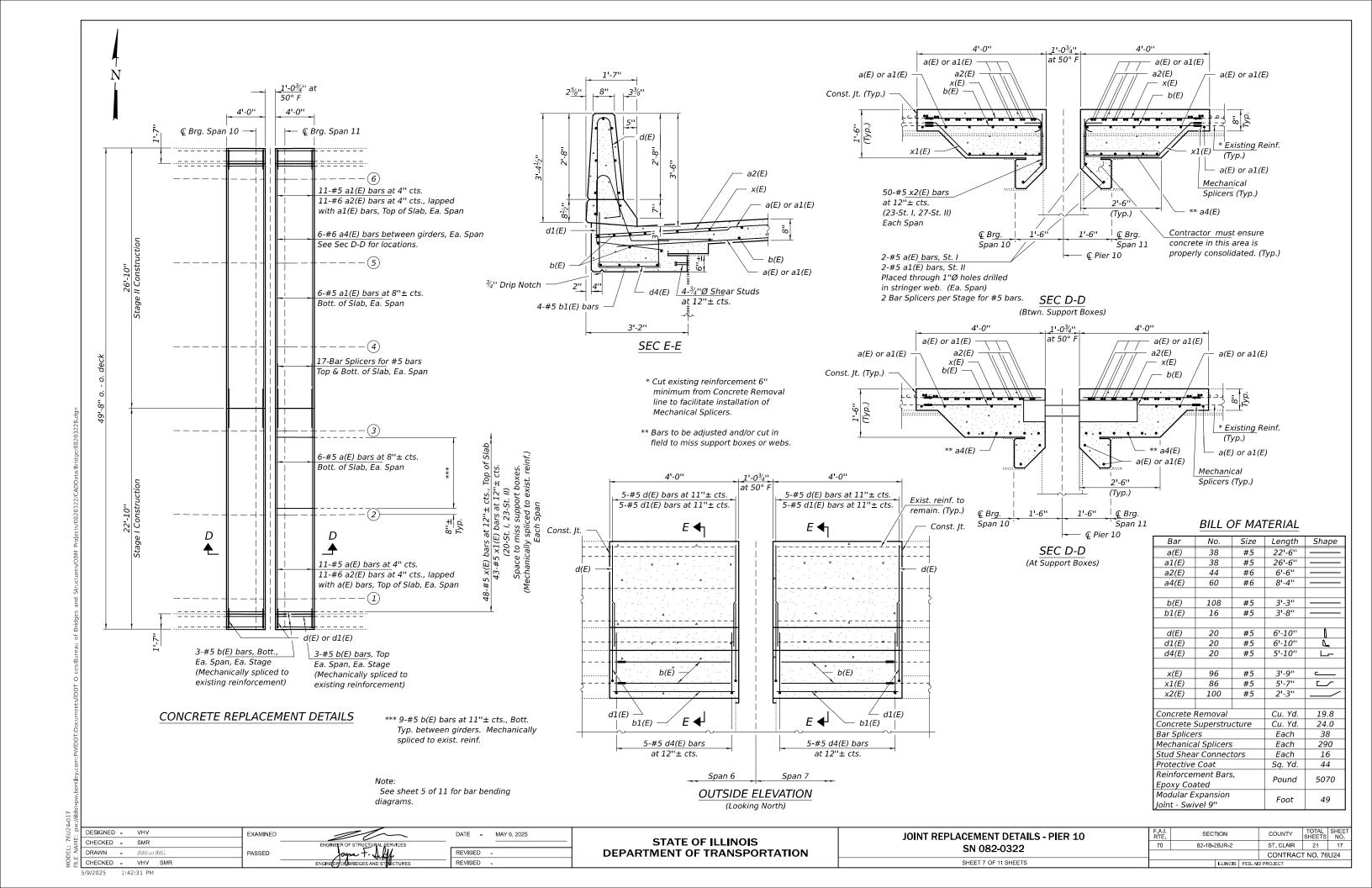
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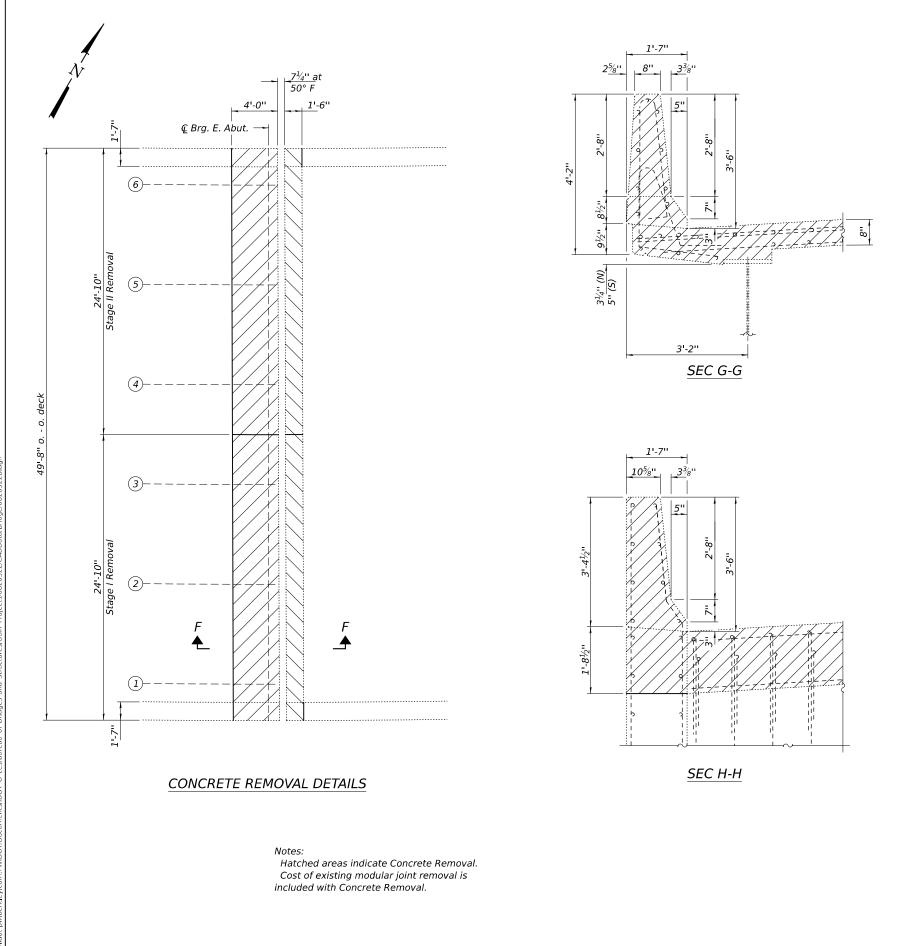
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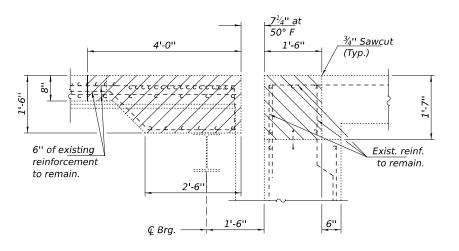
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION JOINT REPLACEMENT DETAILS - PIER 6 SN 082-0322 SHEET 5 OF 11 SHEETS



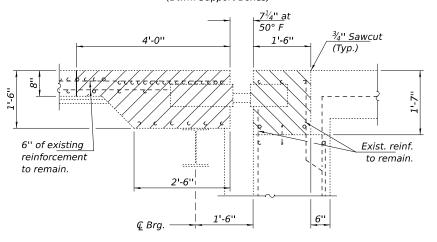
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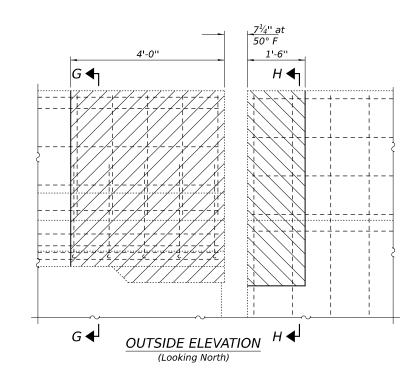




SEC F-F (Btwn. Support Boxes)



SEC F-F (At Support Box)



JOINT REMOVAL DETAILS - EAST ABUTMENT SN 082-0322 SHEET 8 OF 11 SHEETS

SECTION COUNTY 82-1B-2BJR-2 ST. CLAIR 21 18 CONTRACT NO. 76U24

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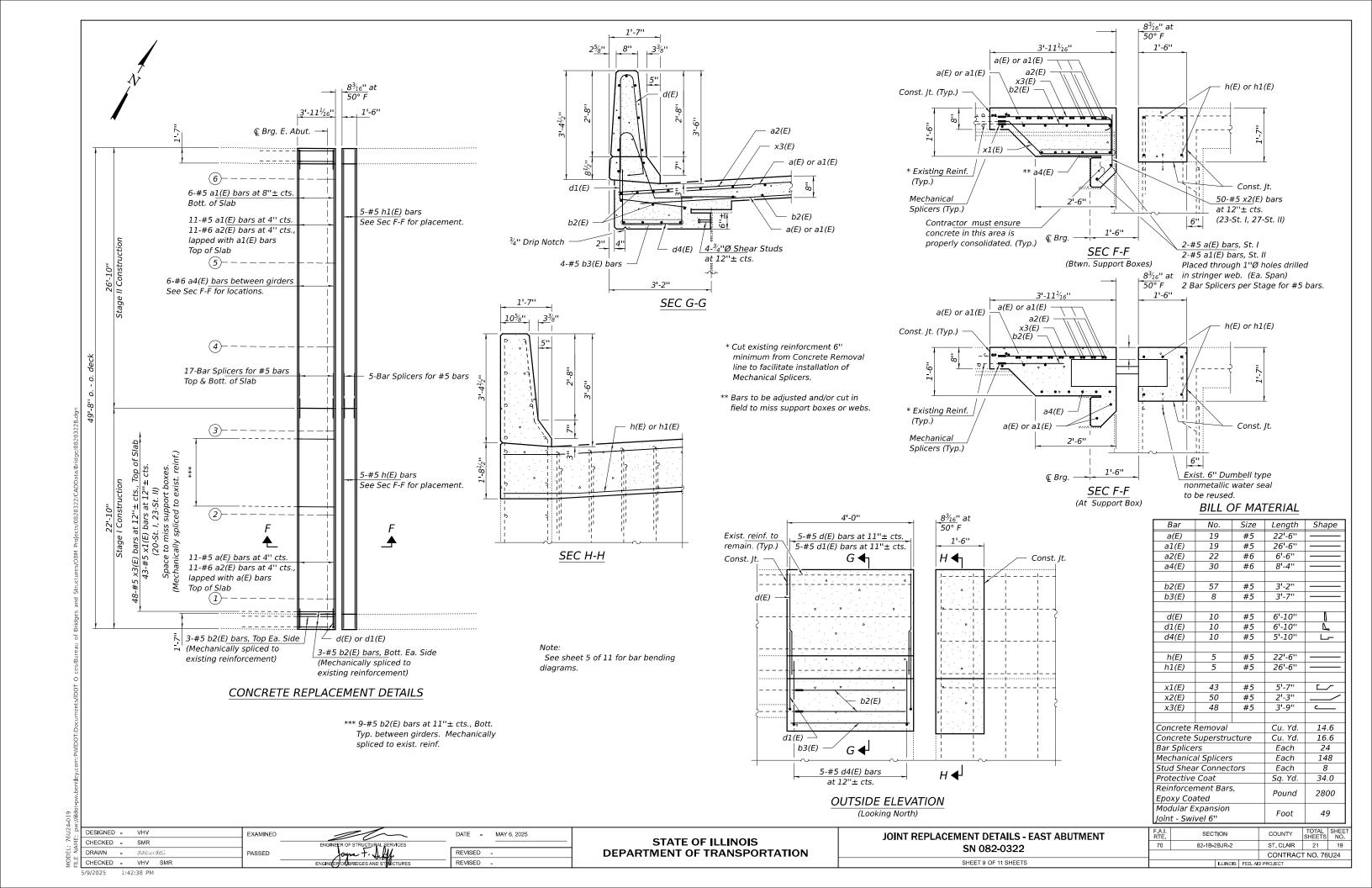
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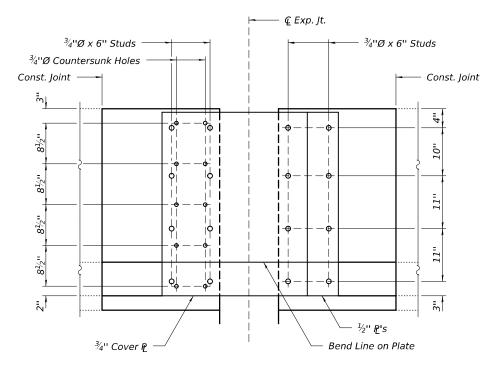
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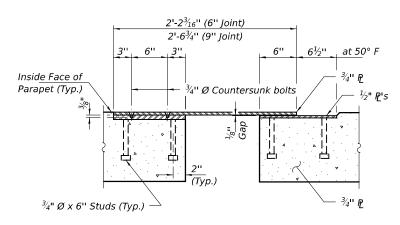
DATE - MAY 6, 2025 REVISED -REVISED

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION





SEC J-J



SEC I-I

COUNTY TOTAL SHEET NO.

ST. CLAIR 21 20 F.A.I. RTE. DESIGNED - VHV EXAMINED DATE - MAY 6, 2025 SECTION **SLIDING PLATE DETAILS** STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION CHECKED - SMR 82-1B-2BJR-2 SN 082-0322 REVISED -DRAWN - daburdell PASSED CONTRACT NO. 76U24 Q H CHECKED - VHV SMR REVISED -SHEET 10 OF 11 SHEETS

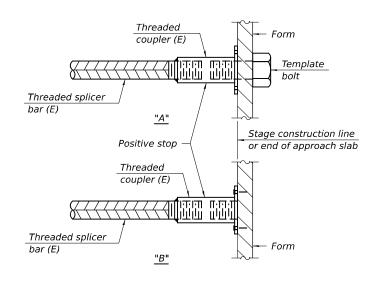
STANDARD BAR SPLICER ASSEMBLY PLAN

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

Threaded splicer bar length = min. lap length + $1\frac{1}{2}$ " + thread length

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

Location	Bar	No. assemblies	Minimum
Location	size	required	lap length
Pier 6	#5	38	3'-10''
Pier 10	#5	38	3'-10''
E. Abut.	#5	24	3'-10''

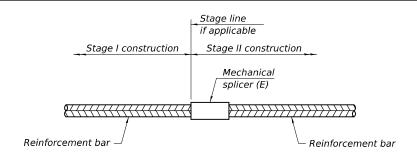


INSTALLATION AND SETTING METHODS

"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	No. assemblies
Location	size	required
Pier 6	#5	291
Pier 10	#5	290
E. Abut.	#5	148

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.

BSD-1

5-15-2023

DESIGNED - VHV EXAMINED DATE -MAY 6, 2025 CHECKED - SMR DRAWN - daburdel PASSED REVISED -오를 CHECKED - VHV SMR REVISED

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS SN 082-0322 SHEET 11 OF 11 SHEETS

SECTION COUNTY 82-1B-2BJR-2 ST CLAIR 21 21 CONTRACT NO. 76U24

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