

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9251	29BJR.BDR	ST. CLAIR	26	1
		ILLINOIS	CONTRACT NO. 76T26	

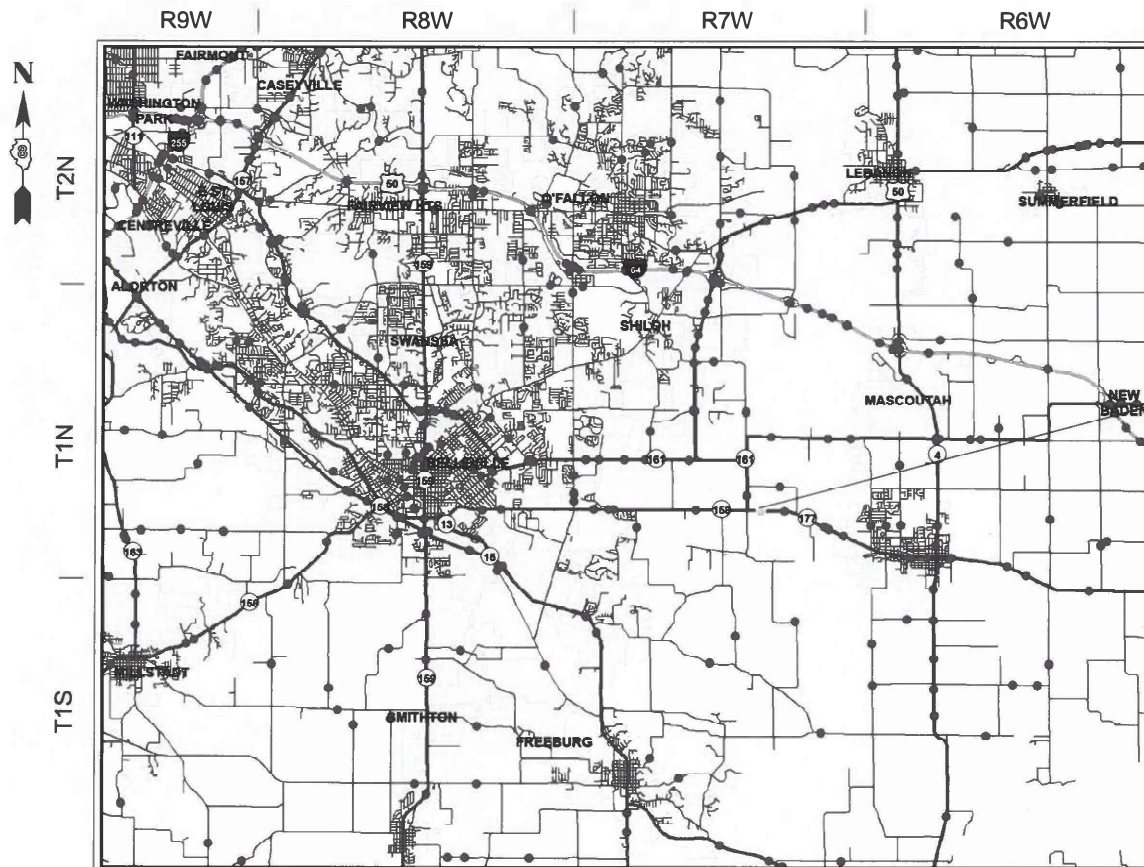
FOR INDEX OF SHEETS, SEE SHEET NO. 2

PROPOSED HIGHWAY PLANS

FAU ROUTE 9251 (IL 177)
SECTION 29BJR, BDR
BRIDGE DECK REPAIRS,
BRIDGE JOINT REPLACEMENT
ST. CLAIR COUNTY

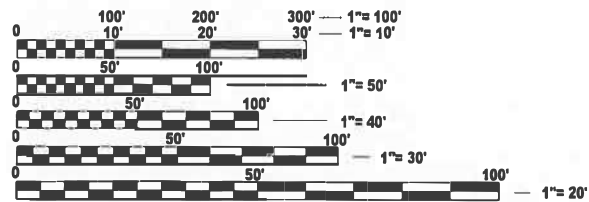
C-98-093-23

D-98-049-23



PROJECT LOCATION
SN 082-0289
LAT: 38.50433
LONG: -89.85855

FUNCTIONAL CLASSIFICATION
MINOR ARTERIAL
2021 ADT = 5750
SU 4.4% MU = 1.6%



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 EXCAVATION
1-800-892-0123
OR 811

PROJECT ENGINEER: CHERYL KEPLAR
PROJECT MANAGER: KAREN CHALLANDES

CONTRACT NO. 76T26

GROSS / NET LENGTH = 760 FT. = 0.144 MILE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED March 29, 2024
Kirk B. ... REGIONAL ENGINEER

May 10, 2024 [Signature]
ENGINEER OF DESIGN AND ENVIRONMENT

May 10, 2024 [Signature]
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

INDEX OF SHEETS

1	COVER SHEET
2	INDEX OF SHEETS, HIGHWAY STANDARDS, GENERAL NOTES, COMMITMENTS, AND MIX CHART
3-5	SUMMARY OF QUANTITIES
6	TYPICAL SECTION AND PERIMETER EROSION BARRIER DETAIL
7	STAGING SHEET
8	WIDTH RESTRICTION SIGNING
9-26	BRIDGE PLANS

HIGHWAY STADARDS

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
631031-18	TRAFFIC BARRIER TERMINAL, TYPE 6
701311-03	LANE CLOSURE 2L, 2W MOVING OPERATIONS - DAY ONLY
701321-18	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701326-04	LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING FOR SPEEDS ≥ 45 MPH
701901-09	TRAFFIC CONTROL DEVICES
704001-08	TEMPORARY CONCRETE BARRIER
780001-05	TYPICAL PAVEMENT MARKINGS
782006-01	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS

GENERAL NOTES

1 UTILITIES KNOWN TO HAVE FACILITIES WITHIN THE PROJECT AREA:

CHARTER COMMUNICATIONS, INC.
 CLEARWAVE FIBER LLC
 EVERSTREAM GLC HOLDING COMPANY, LLC
 FRONTIER COMMUNICATIONS
 MASCOUTAH COMMUNITY UNIT SCHOOL DISTRICT #19

2 NO SURVEY WAS PERFORMED FOR THIS PROJECT AND THE PLANS WERE CREATED USING MICROFILM AND FIELD MEASUREMENTS.

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 IF THE CONTRACTOR, FOR HIS CONSTRUCTION ACTIVITY, REMOVES TREES WITHIN THE RIGHT-OF-WAY LIMITS WHICH ARE NOT DESIGNATED ON THE PLANS FOR REMOVAL, I.E. IN ORDER TO GAIN ACCESS TO THE PROJECT SITE; IT WILL BE HIS RESPONSIBILITY TO REPLACE THE TREES AT A 1:1 RATIO. THE TREES WILL BE REPLACED WITH A 1 GALLON NATIVE ILLINOIS TREE SPECIES AND SHALL BE APPROVED BY THE ENGINEER. THE TREE REMOVAL AND TREE REPLACEMENT WILL BE AT THE CONTRACTOR'S EXPENSE, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

5 THE DEPARTMENT STRONGLY ENCOURAGES THE PRIME CONTRACTOR AND THEIR APPROVED SUB-CONTRACTORS TO HIRE MINORITY, WOMEN AND DISADVANTAGED INDIVIDUALS FROM ITS 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, ETC.) 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. CONTACT 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.

6 TWO CHANGEABLE MESSAGE SIGNS SHALL BE REQUIRED FOR THIS PROJECT. THEY SHALL BE PLACED TWO WEEKS PRIOR TO LANE CLOSURE. THE CHANGEABLE MESSAGE SIGNS SHALL BE PLACED AT THE DIRECTION OF THE ENGINEER.

COMMITMENTS

NONE

MIX CHART

MIXTURE USE	BASE COURSE WIDENING (stage)	
	SURFACE	BINDER
AC/PG	PG 64-22	PG 64-22
DESIGN AIR VOIDS	4.0% @ Ndes=70	4.0% @ Ndes=70
MIX COMPOSITION (Gradation)	IL 9.5	IL 19.0
FRICITION AGG	MIXTURE "D"	MIXTURE "B"
QUALITY MGMT PROGRAM	QC/QA	QC/QA
MatTranDev Required?	no	no

REV. - MS

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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS, HIGHWAY STANDARDS
 GENERAL NOTES, COMMITMENTS, AND MIX CHART

SCALE: SHEET OF SHEETS STA. TO STA.

F A U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9251	29BJR,BDR	ST. CLAIR	26	2
CONTRACT NO. 76T26				
ILLINOIS FED. AID PROJECT				

				CONSTR. CODE
				100% STATE
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	MINOR STRUCTURES
				0047 082-0289
20200500	EARTH EXCAVATION (WIDENING)	CU YD	59	59
20300100	CHANNEL EXCAVATION	CU YD	2400	2400
28000400	PERIMETER EROSION BARRIER	FOOT	500	500
35501316	HOT-MIX ASPHALT BASE COURSE, 8"	SQ YD	239	239
44004250	PAVED SHOULDER REMOVAL	SQ YD	267	267
50102400	CONCRETE REMOVAL	CU YD	33.4	33.4
50300255	CONCRETE SUPERSTRUCTURE	CU YD	70	70
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	10300	10300
50800515	BAR SPLICERS	EACH	56	56
* 63302700	REMOVE AND REERECT TRAFFIC BARRIER TERMINALS, TYPE 6	EACH	4	4
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6
67100100	MOBILIZATION	L SUM	1	1
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	1

* SPECIALTY ITEM

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9251	29BJR, BDR	ST. CLAIR	26	3
CONTRACT NO. 76T26				
ILLINOIS FED. AID PROJECT				

				CONSTR. CODE
				100% STATE
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	MINOR STRUCTURES
				0047 082-0289
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1
70106700	TEMPORARY RUMBLE STRIPS	EACH	6	6
70107005	PAVEMENT MARKING BLACKOUT TAPE, 5"	FOOT	808	808
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	28	28
70300100	SHORT TERM PAVEMENT MARKING	FOOT	220	220
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	361	361
70400100	TEMPORARY CONCRETE BARRIER	FOOT	400	400
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	400	400
70600250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2
70600350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2
* 78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	1422	1422
X5060601	CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES NO. 1	L SUM	1	1
X5870015	BRIDGE DECK CONCRETE SEALER	SQ FT	8869	8869
X7200201	WIDTH RESTRICTION SIGNING	L SUM	1	1

*SPECIALTY ITEMS

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9251	29BJR,BDR	ST. CLAIR	26	4
CONTRACT NO. 76T26				
ILLINOIS FED. AID PROJECT				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE	
				100% STATE	
				MINOR STRUCTURES	
				0047	
				082-0289	
Z0001495	BRIDGE APPROACH SHOULDER REMOVAL	SQ YD	28		28
Z0001903	STRUCTURAL STEEL REMOVAL	POUND	3260		3260
Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1		1
Z0010615	CLEANING EXISTING INLETS	EACH	4		4
Z0016002	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	10		10
Z0016200	DECK SLAB REPAIR (PARTIAL)	SQ YD	100		100

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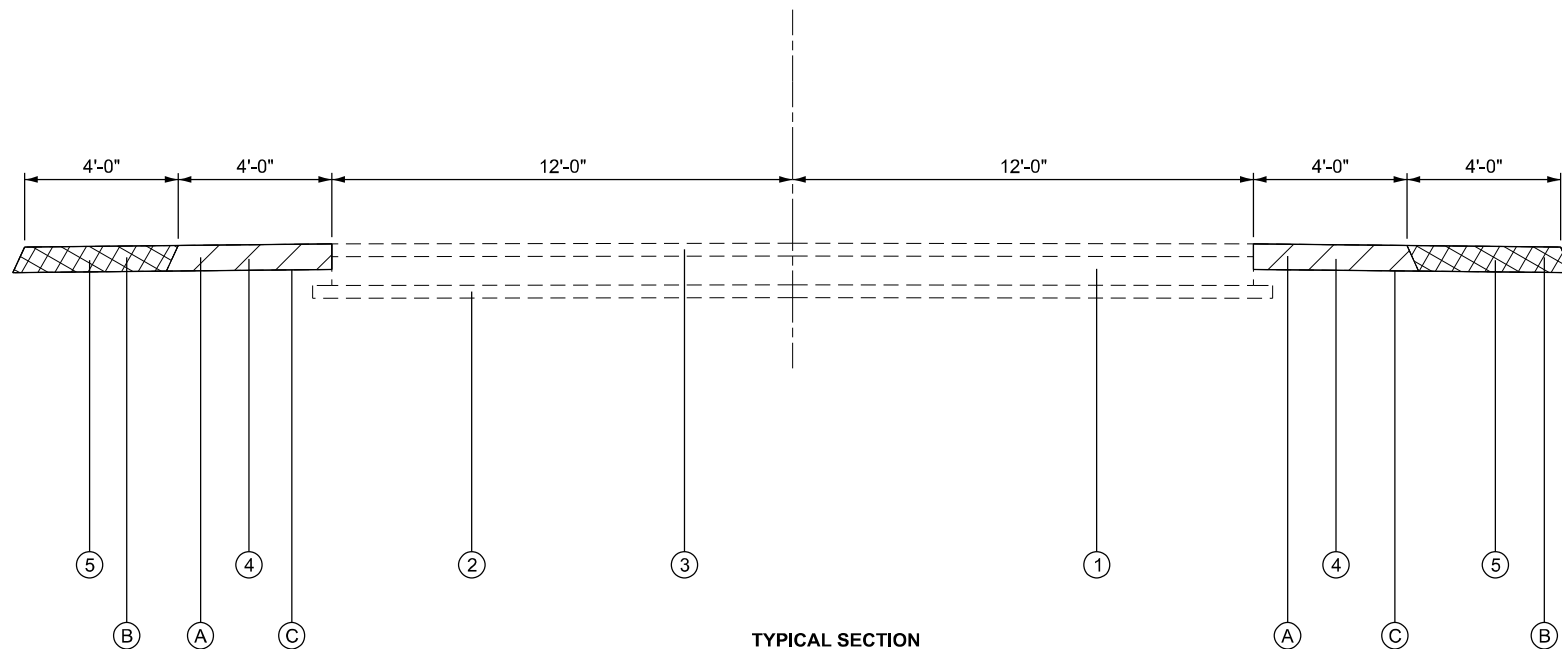
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

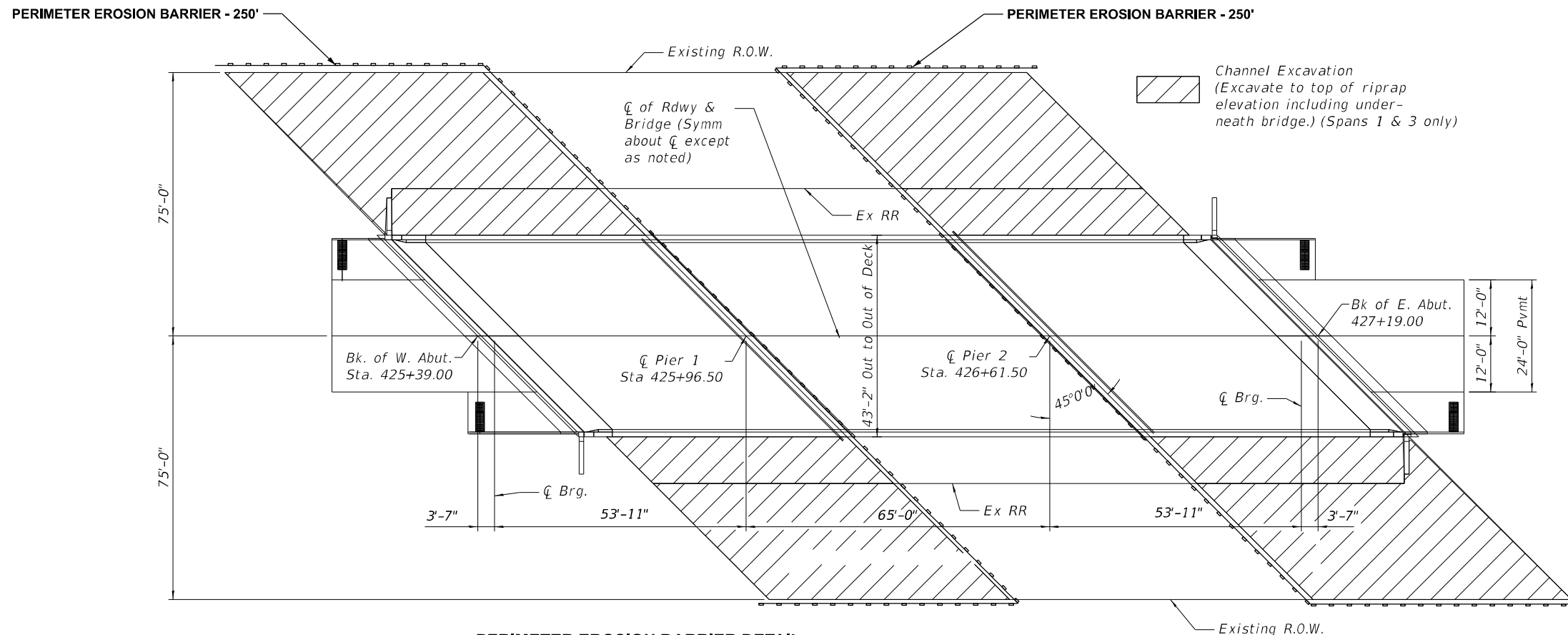
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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9251	29BJR, BDR	ST. CLAIR	26	5
CONTRACT NO. 76T26				
		ILLINOIS FED. AID PROJECT		



TYPICAL SECTION
BRIDGE STA. 425+39.00 TO STA. 427+19.00

- LEGEND
- 1 EXISTING PCC PAVEMENT, 8"
 - 2 EXISTING GRANULAR SUB-BASE 4"
 - 3 EXISTING RESURFACING, VARIES
 - 4 EXISTING HMA SHOULDER, VARIES 8"-14"
 - 5 EXISTING AGGREGATE SHOULDER, VARIES
 - A PROPOSED PAVED SHOULDER REMOVAL
 - B PROPOSED EARTH EXCAVATION (WIDENING)
 - C PROPOSED HOT-MIX ASPHALT BASE COURSE WIDENING, 8"



PERIMETER EROSION BARRIER DETAIL

PERIMETER EROSION BARRIER REQUIRED AROUND ALL CHANNEL EXCAVATION.
PERIMETER EROSION BARRIER PLACED AT ENGINEER'S DIRECTION.

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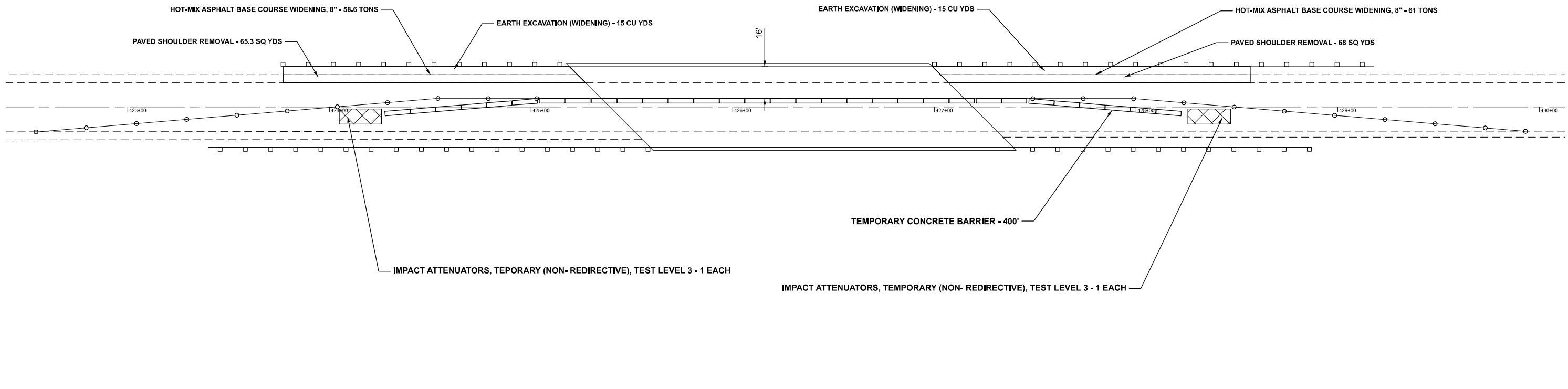
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTION AND
PERIMETER EROSION BARRIER DETAIL

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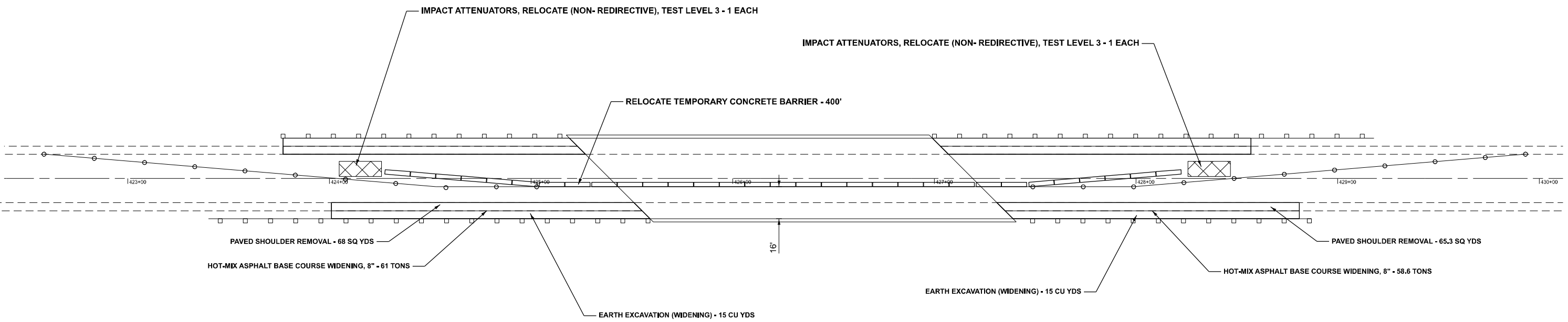
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9251	29BJR,BDR	ST. CLAIR	26	6
CONTRACT NO. 76T26				
ILLINOIS FED. AID PROJECT				



SEE STANDARD 701321 FOR DETAILS NOT SHOWN

STAGE 1

PAVEMENT MARKING SCHEDULE									
STA	TO	STA	COMMENTS	PAVEMENT MARKING	SHORT TERM	SHORT TERM	THERMOPLASTIC		
				BLACKOUT TAPE 5"	PAVEMENT MARKING	PAVEMENT MARKING REMOVAL	PAVEMENT MARKING - LINE 6"	YELLOW	WHITE
				FOOT	FOOT	SQ FT	FOOT	FOOT	
422+45	TO	426+57	NO PASSING WB	412	112	184	515	412	
426+57		430+53	PASSING BOTH	396	108	177	99	396	
TOTALS				808	220	361	1422		



SEE STANDARD 701321 FOR DETAILS NOT SHOWN

STAGE 2

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PLOT DATE = 3/28/2024	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

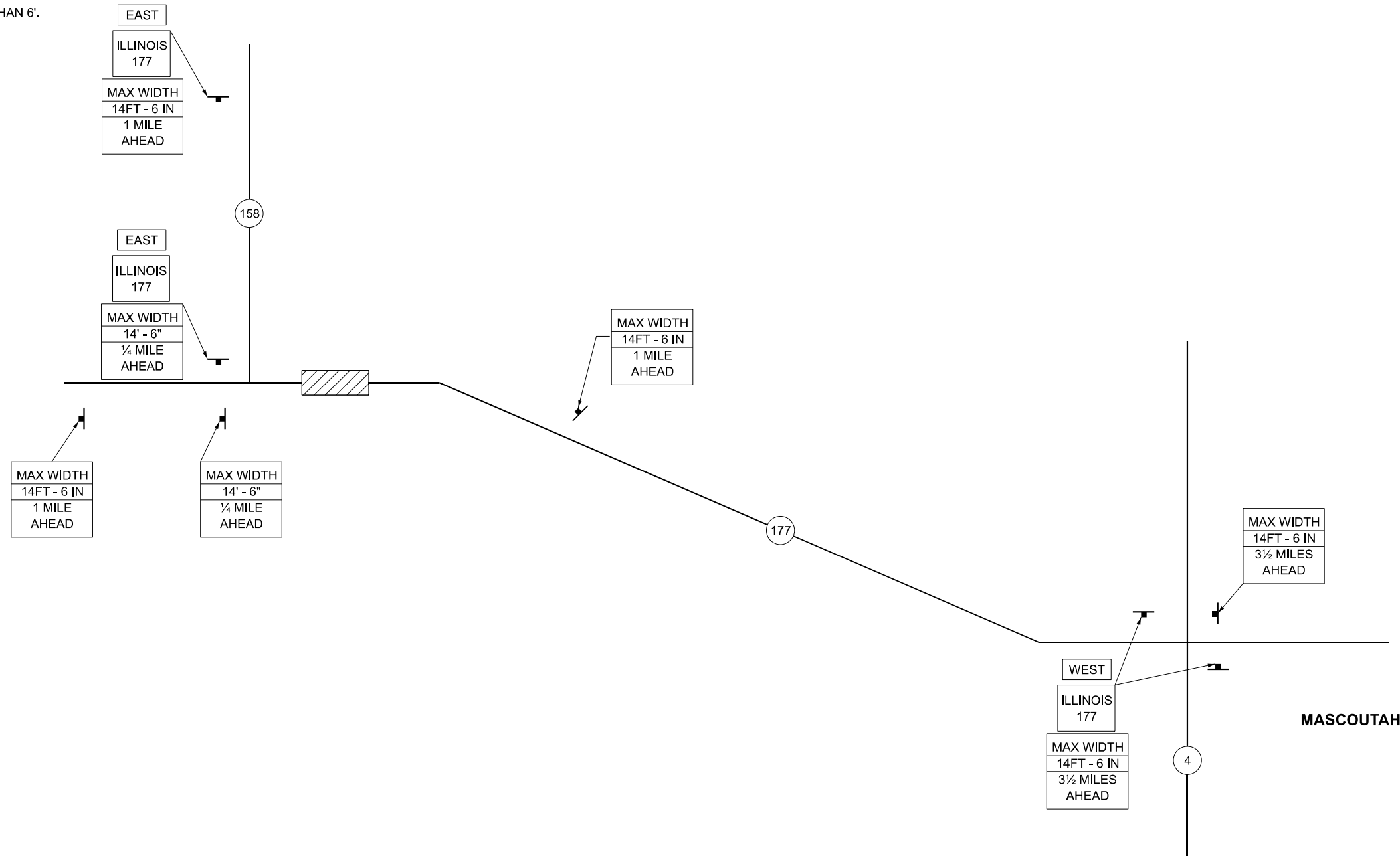
STAGING			
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	STA.	TO	STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9251	29BJR,BDR	ST. CLAIR	26	7
CONTRACT NO. 76T26				
ILLINOIS FED. AID PROJECT				



NOTES:

1. ALL SIGNS REQUIRED WILL BE SUPPLIED TO THE CONTRACTOR BY IDOT.
2. THE CONTRACTOR SHALL FURNISH THE POSTS AND ERECT SIGNS AT THE LOCATIONS SHOWN ON THIS SHEET, AS DIRECTED BY THE RE/RT. THE POSTS SHALL REMAIN PROPERTY OF THE CONTRACTOR.
3. THE CONTRACTOR SHALL GIVE ILLINOIS DEPARTMENT OF TRANSPORTATION BUREAU OF OPERATIONS TWO WEEKS NOTICE FOR SIGNS. THE CONTRACTOR SHALL PICK UP THE SIGNS AT THE T.M. BUILDING IN FAIRVIEW HEIGHTS AND RETURN THEM UPON COMPLETION OF THE CONTRACT. CONTACT JEAN SLOPE AT 618-3494-2189.
4. THE ABOVE NOTED WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE, LUMP SUM, FOR WIDTH RESTRICTION SIGNING AND NO OTHER COMPENSATION WILL BE ALLOWED.
5. SIGN SPACING WILL BE 400' OR TO FIT FIELD CONDITIONS.
6. THE HEIGHT TO THE BOTTOM OF THE LOWEST SIGN SHALL NOT BE LESS THAN 6'.



SIGNS REQUIRED

MAX WIDTH 14' - 6" ¼ MILE AHEAD	(2)	EAST	(2)
MAX WIDTH 14FT - 6 IN 1 MILE AHEAD	(3)	WEST	(2)
MAX WIDTH 14FT - 6 IN 3½ MILES AHEAD	(3)	ILLINOIS 177	(4)

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PLOT DATE = 3/28/2024	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**WIDTH RESTRICTION SIGNING
IL 177 OVER LOOP CREEK SN 082-0289**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9251	29BJR.BDR	ST. CLAIR	26	8
CONTRACT NO. 76T26				
ILLINOIS FED. AID PROJECT				

Existing Structure: 082-0289 was built in 1990 under F.A.S. Route 1848, Sec 29-4BR-1, contract 96204. The bridge consisted of 3 continuous wide flange beams supported on pile bent abutments and piers. In 2017 the bridge deck was sealed.

The deck ends, mudwalls, approach ends & SW bridge approach shoulder pavement shall be removed and replace solid. However, the inlet box shall be cleaned & reused. The remaining inlet boxes shall be cleaned. Before replacing solid, the beam ends shall be cleaned, painted and existing 12 diaphragms at abutments removed. The deck shall be patched.

Stage Construction shall be used.

GENERAL NOTES

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.

Existing reinforcement extending into removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included with "Concrete Removal".

Bridge deck concrete sealer shall be placed on top/inside faces of parapets full length, curbs & on the entire deck surface after patching. In addition, place sealer on top of new SW Bridge Approach Shoulder Pavement..

Quantities of deck repairs are estimated. The engineer shall show actual locations of deck repairs on as-built plans.

The concrete at joints shall have its final finish tined according to Article 420.09(e)(1) of the Standard Specifications. Cost included with "Concrete Superstructure".

Cleaning and painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". After removal of deck ends and end diaphragms, but prior to encasement of the steel beams, all beams, bearing and other structural steel within 7' (measured along the beam) of the deck joints shall be cleaned per Near White Blast Cleaning-SSPC-SP10.

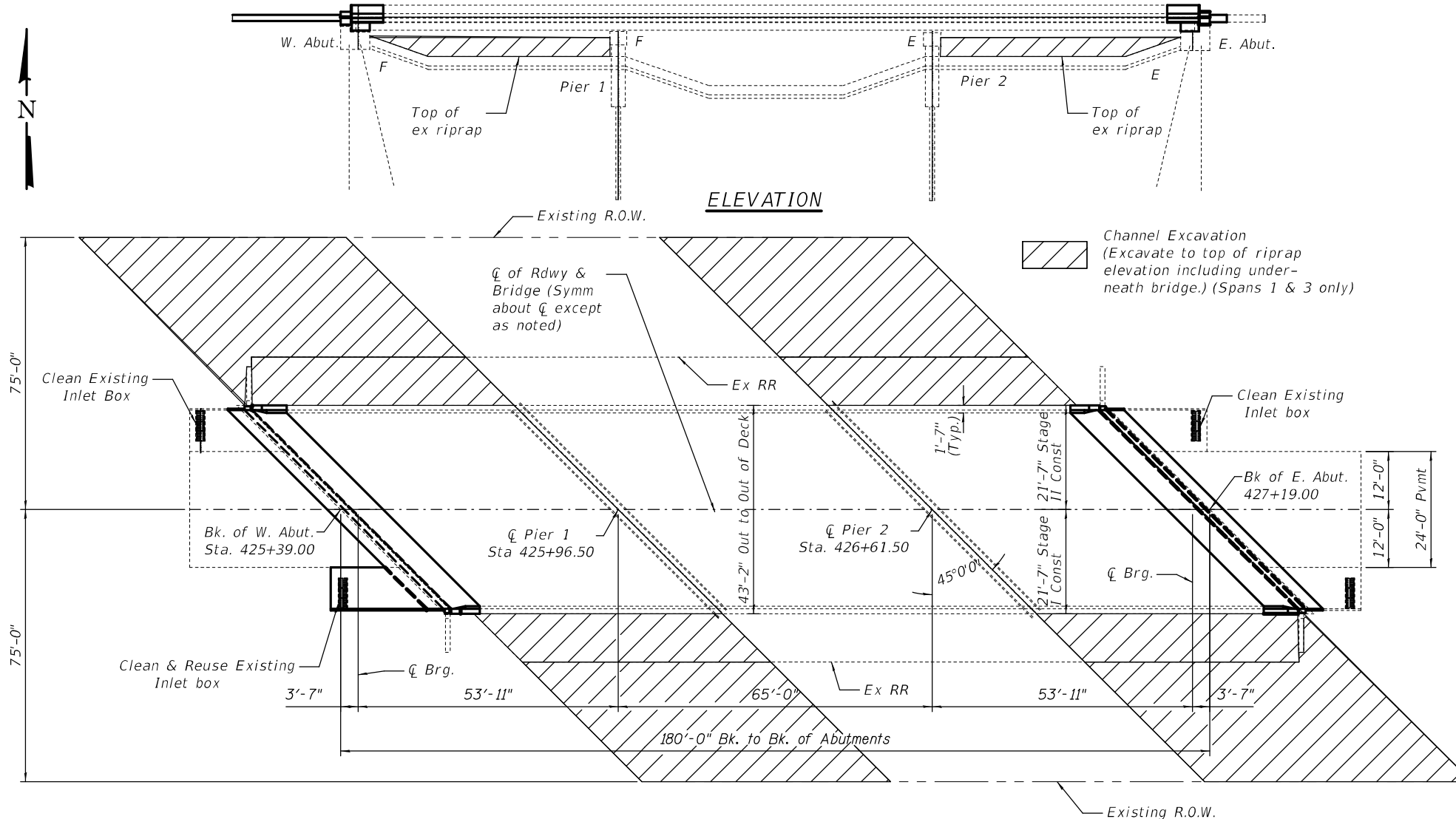
The designated areas cleaned per Near White Blast Cleaning shall be painted according to the requirements of paint system I-0Z/E/U. The color of the final finish coat for all steel surfaces shall be Interstate Green (Munsell No. 7.5G 4/8).

Containment of cleaning residue is required to control nuisance dust. See special provisions for Containment and Disposal of Non-Lead Paint Cleaning Residues.

SSPC QP1 Certification is required for this contract.

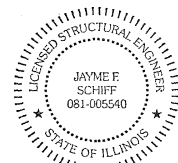
TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Removal	Cu. Yd.	33.4
Concrete Superstructure	Cu. Yd.	70.0
Reinforcement Bars, Epoxy Coated	Pound	10300
Bar Splicers	Each	56
Bridge Approach Shoulder Removal	Sq. Yd.	28
Bridge Deck Concrete Sealer	Sq. Ft.	8869.0
Structural Steel Removal	Pound	3260
Remove and Reerect Traffic Barrier Terminals, Type 6	Each	4
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	10
Deck Slab Repair (Partial)	Sq. Yd.	100
Cleaning and Painting Steel Bridge, No. 1	L. Sum	1
Containment & Disposal of Non-Lead Paint Cleaning Residues No. 1	L. Sum	1
Cleaning Existing Inlet	Each	4
Channel Excavation	Cu. Yd.	2400



SHEET INDEX

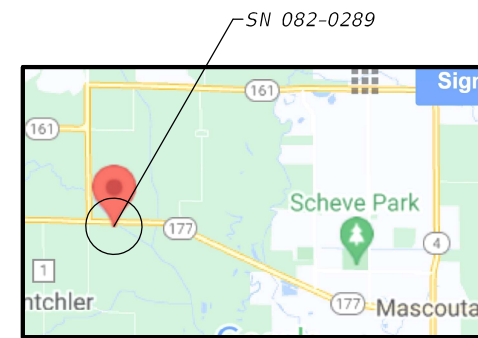
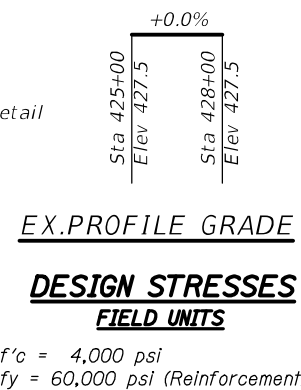
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- 2) Deck Section
- 3) Jt. Removal (W Abut.)
- 4) Jt Removal (E Abut)
- 5) Jt Replacement (W. Abut.)
- 6) Jt. Replacement (E. Abut.)
- 7 Details B & C (W Abut)
- 8) Details D & E (E Abut)
- 9) Cross Section (Appr. Rem & Repl.) (W. Abut.)
- 10) Cross Section (Appr. Rem & Repl.) (E. Abut.)
- 11) Existing & Proposed Jt Details (Except Bridge Appr Shld Pvmt)
- 12) Existing & Proposed Bridge Appr. Shld Pvmt
- 13) Diaphragm at W. Abut.
- 14) Diaphragm at E. Abut.
- 15) Temporary Concrete Barrier
- 16) Bar Splicer
- 17) SW Bridge Appr. Shld. Removal Detail
- 18) Repl of SW Bridge Appr Shld around Ex Inlet Box



EXPIRES 11-30-2024

Jayme F. Schiff

PLAN



LOCATION SKETCH

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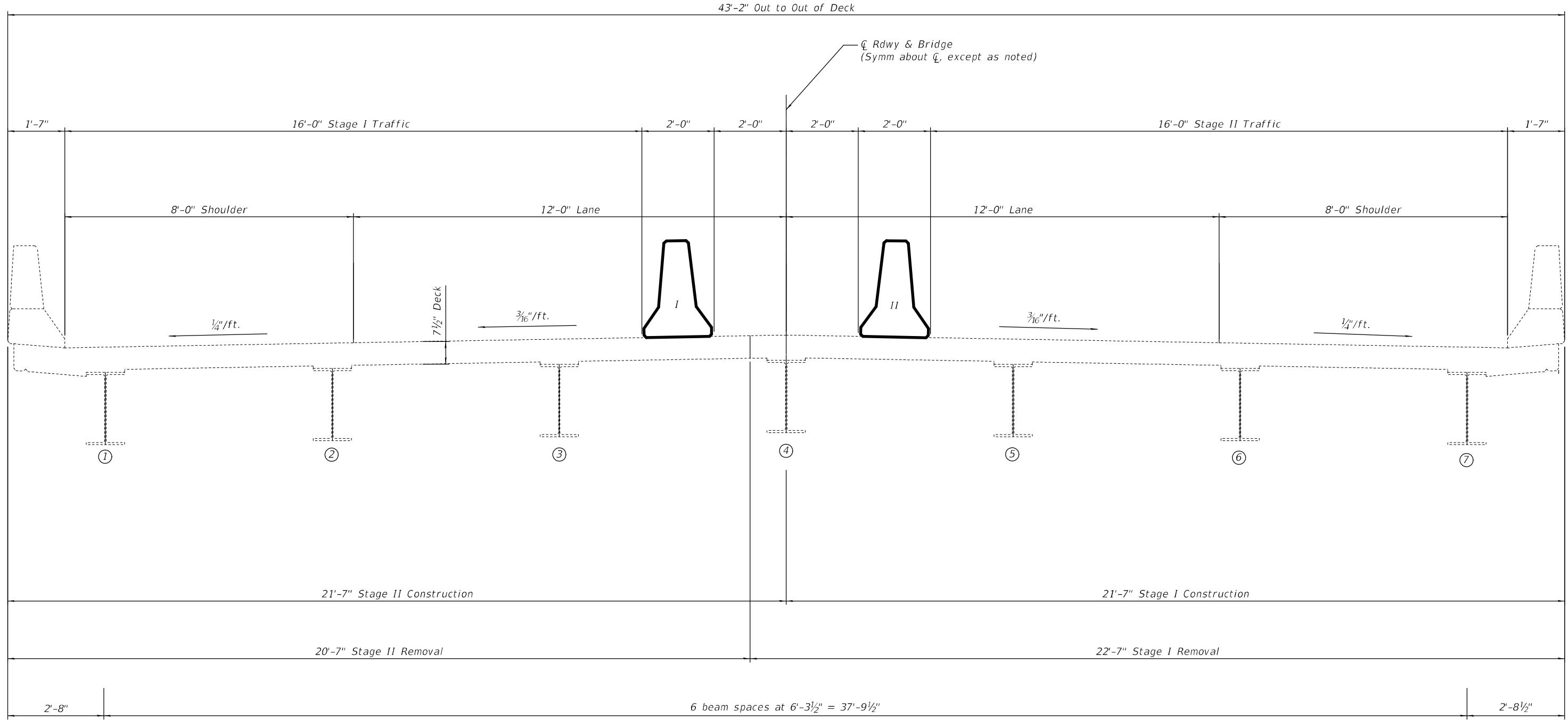
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GENERAL PLAN & ELEVATION (IL 177 over Loop Creek)
SN 082-0289**

SCALE: SHEET 1 OF 18 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9251	29BJR.BDR	ST. CLAIR	26	9
			CONTRACT NO. 76T26	
ILLINOIS FED. AID PROJECT				



DECK SECTION AWAY FROM ABUTMENTS
(Looking East)

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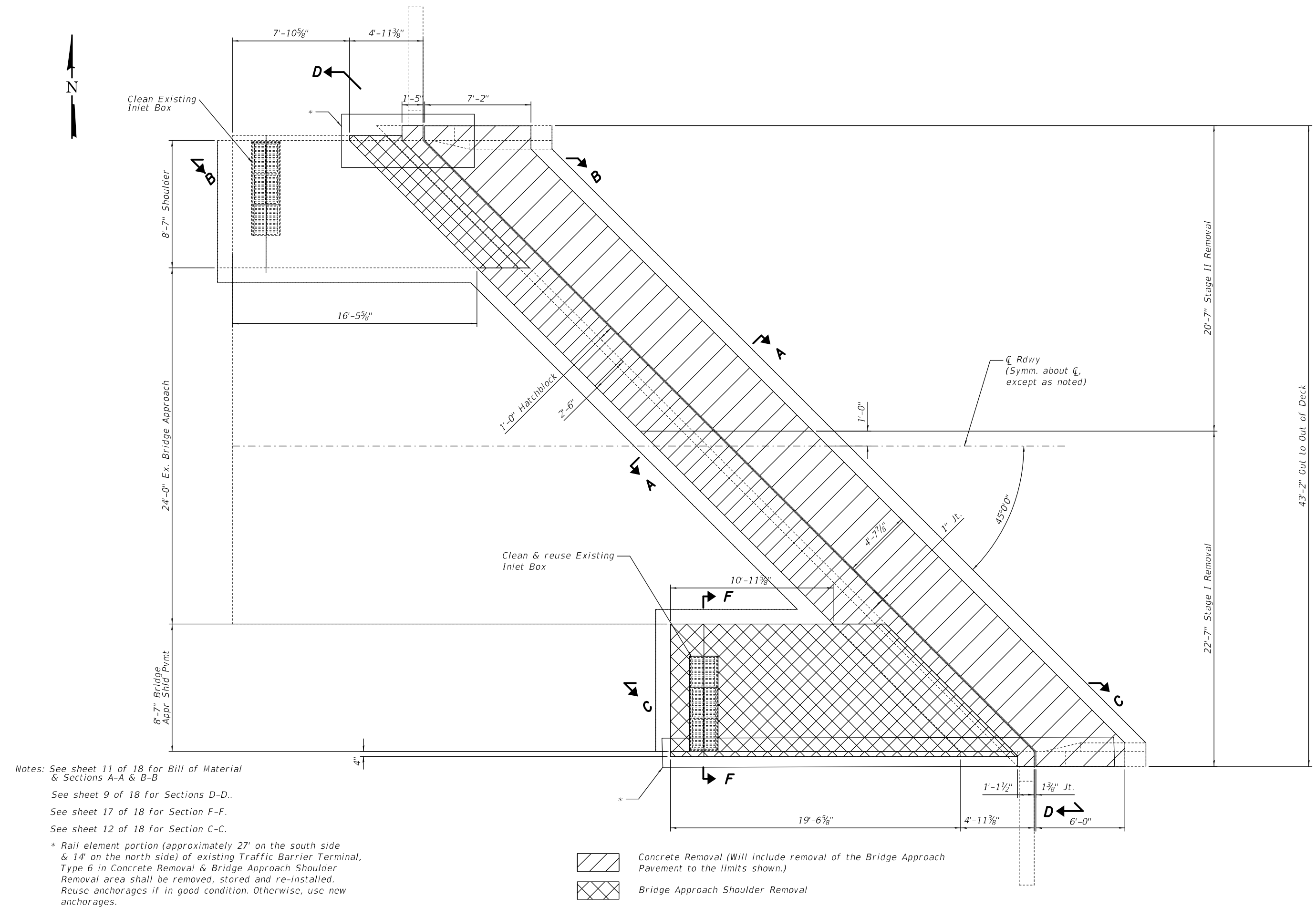
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PLOT DATE = 3/29/2024		

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DECK CROSS SECTION SN 082-0289			
SCALE:	SHEET 2	OF 18 SHEETS	STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9251	29BJR,BDR	ST. CLAIR	26	10
CONTRACT NO. 76T26				
ILLINOIS FED. AID PROJECT				

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Notes: See sheet 11 of 18 for Bill of Material & Sections A-A & B-B
 See sheet 9 of 18 for Sections D-D.
 See sheet 17 of 18 for Section F-F.
 See sheet 12 of 18 for Section C-C.
 * Rail element portion (approximately 27' on the south side & 14' on the north side) of existing Traffic Barrier Terminal, Type 6 in Concrete Removal & Bridge Approach Shoulder Removal area shall be removed, stored and re-installed. Reuse anchorages if in good condition. Otherwise, use new anchorages.

Concrete Removal (Will include removal of the Bridge Approach Pavement to the limits shown.)

Bridge Approach Shoulder Removal

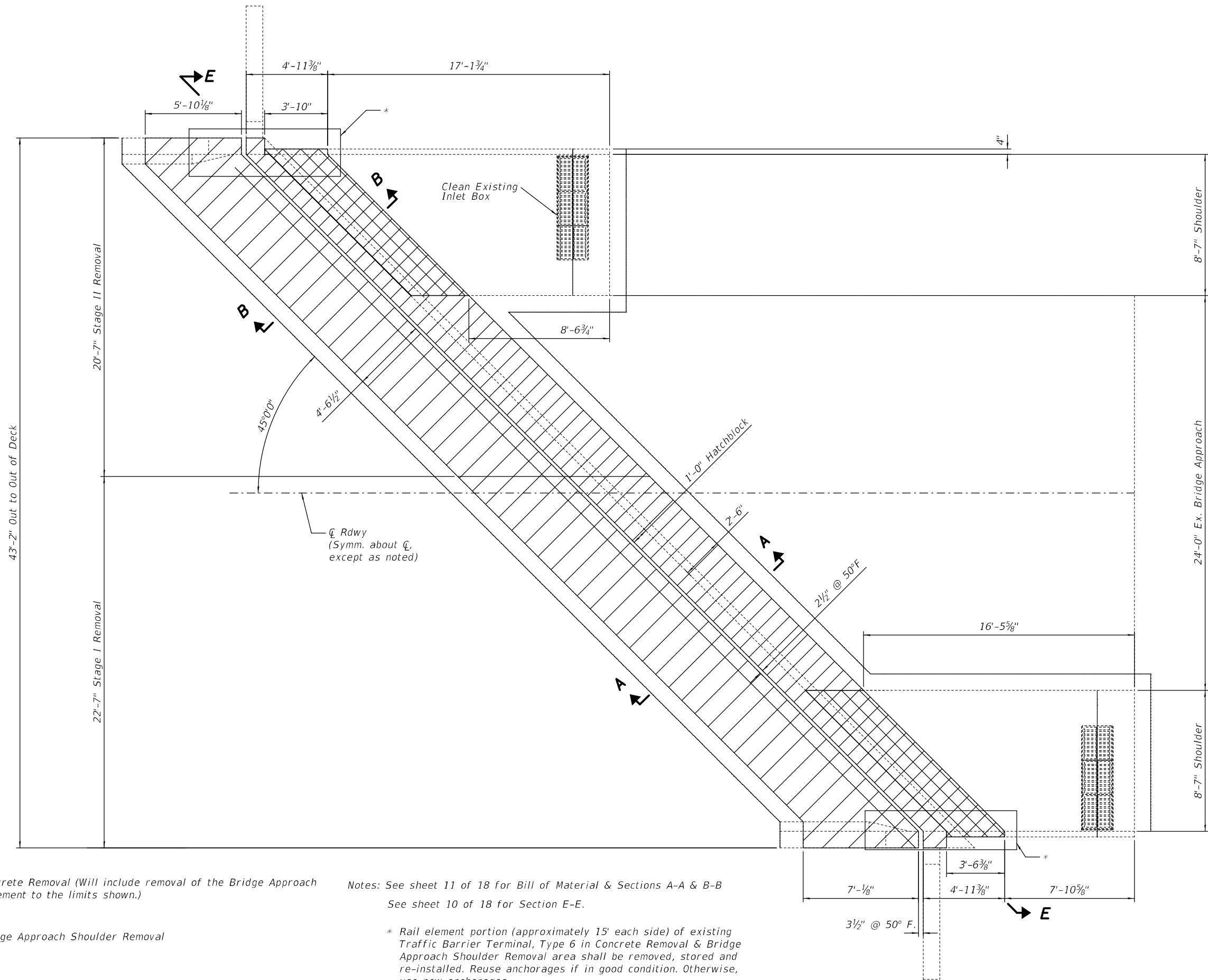
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PLOT DATE = 3/29/2024	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**JOINT REMOVAL (W. Abutment)
SN 082-0289**

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9251	29BJR.BDR	ST. CLAIR	26	11
CONTRACT NO. 76T26				
ILLINOIS FED. AID PROJECT				

SCALE: SHEET 3 OF 18 SHEETS STA. TO STA.



Concrete Removal (Will include removal of the Bridge Approach Pavement to the limits shown.)



Bridge Approach Shoulder Removal

Notes: See sheet 11 of 18 for Bill of Material & Sections A-A & B-B
See sheet 10 of 18 for Section E-E.

* Rail element portion (approximately 15' each side) of existing Traffic Barrier Terminal, Type 6 in Concrete Removal & Bridge Approach Shoulder Removal area shall be removed, stored and re-installed. Reuse anchorages if in good condition. Otherwise, use new anchorages.

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

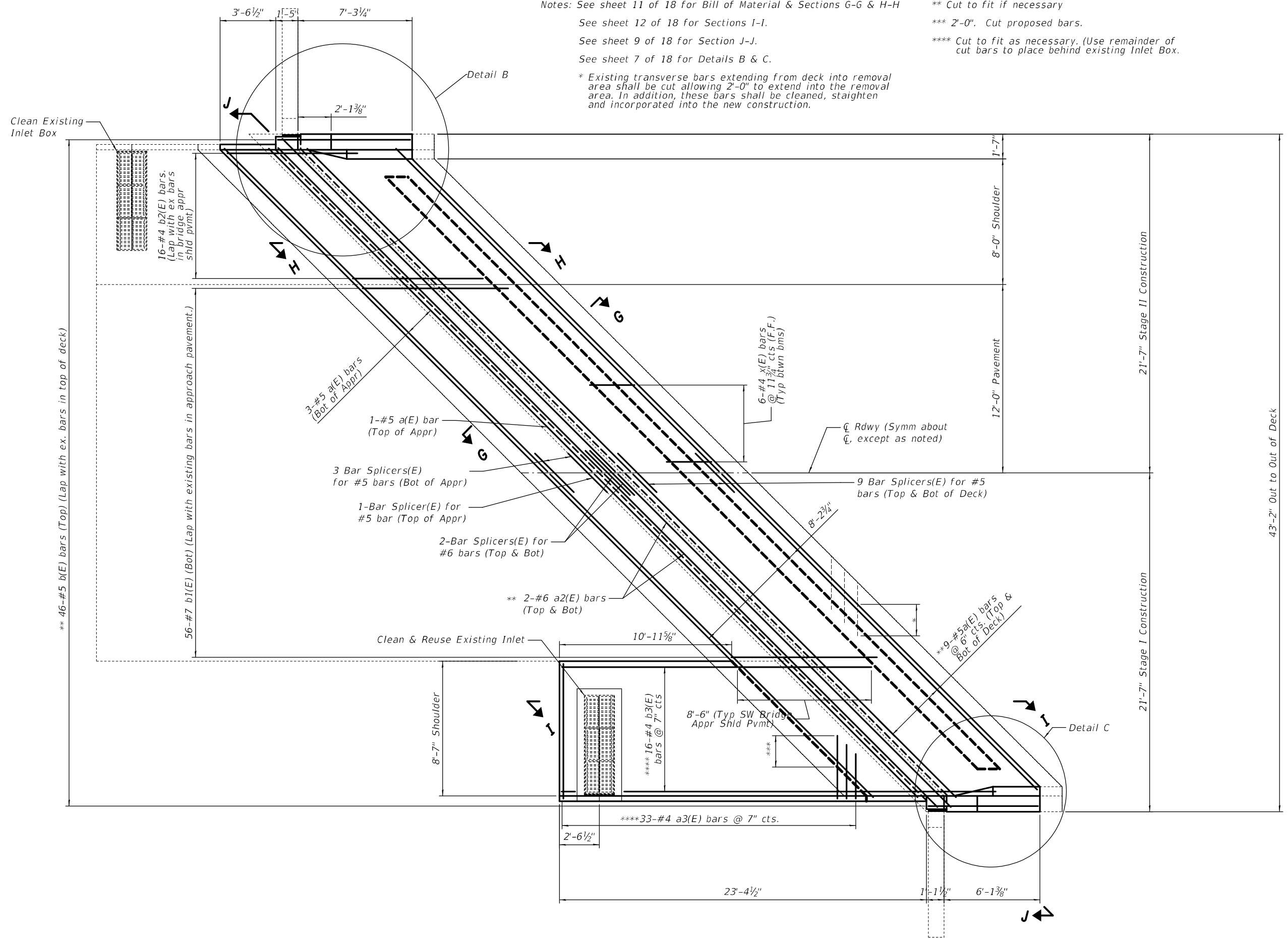
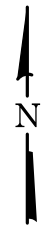
**JOINT REMOVAL (E. Abutment)
SN 082-0289**

SCALE: SHEET 4 OF 18 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9251	29BJR.BDR	ST. CLAIR	26	12
CONTRACT NO. 76T26				
ILLINOIS FED. AID PROJECT				

Notes: See sheet 11 of 18 for Bill of Material & Sections G-G & H-H
 See sheet 12 of 18 for Sections I-I.
 See sheet 9 of 18 for Section J-J.
 See sheet 7 of 18 for Details B & C.
 * Existing transverse bars extending from deck into removal area shall be cut allowing 2'-0" to extend into the removal area. In addition, these bars shall be cleaned, straighten and incorporated into the new construction.

** Cut to fit if necessary
 *** 2'-0". Cut proposed bars.
 **** Cut to fit as necessary. (Use remainder of cut bars to place behind existing Inlet Box.)



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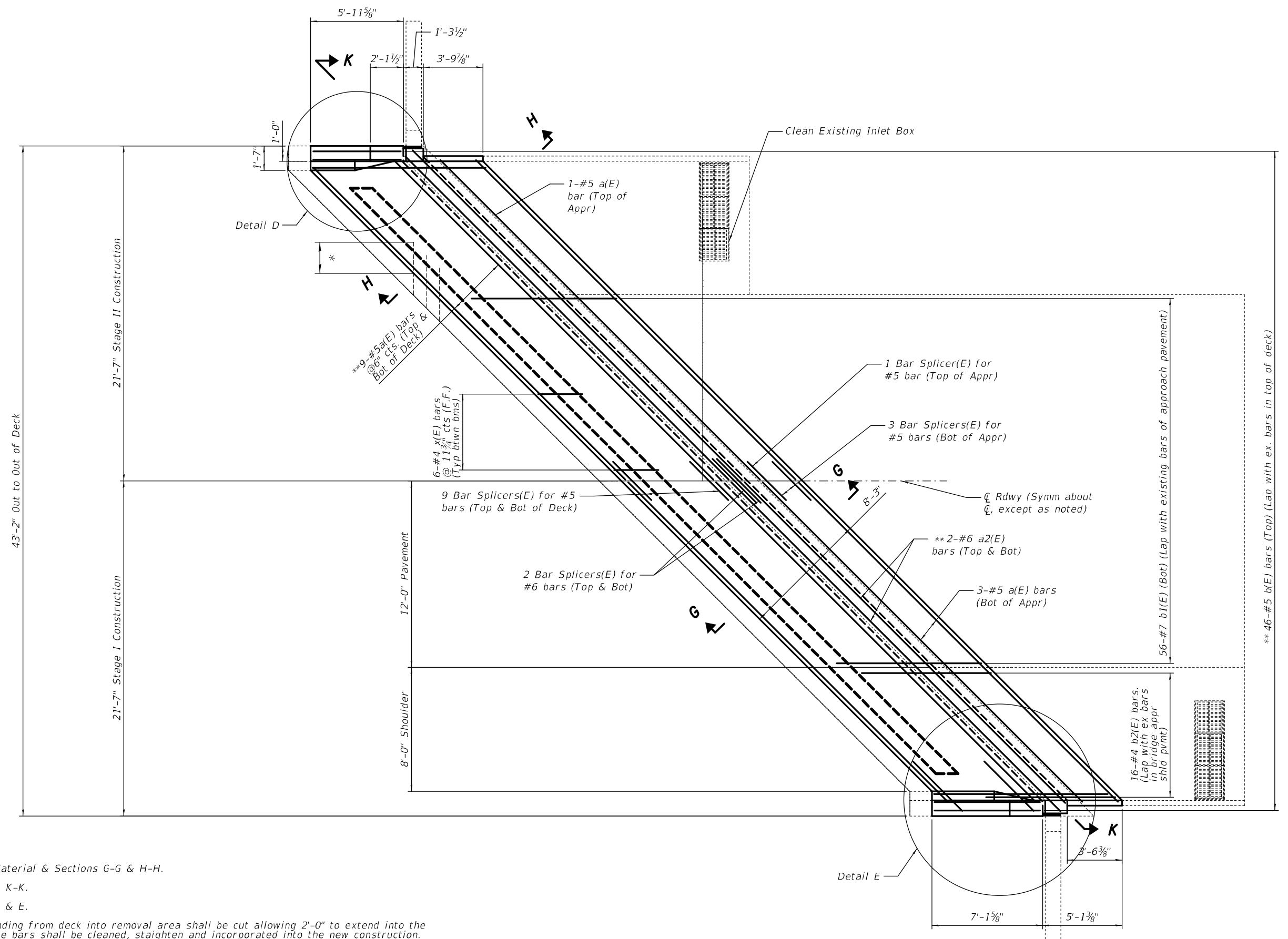
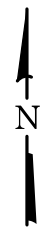
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

JOINT REPLACEMENT (W Abutment)
SN 082-0289

SCALE: SHEET 5 OF 18 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9251	29BJR,BDR	ST. CLAIR	26	13
CONTRACT NO. 76T26				
ILLINOIS FED. AID PROJECT				



Notes: See sheet 11 of 18 for Bill of Material & Sections G-G & H-H.

See sheet 10 of 18 for Sections K-K.

See sheet 8 of 18 for Details D & E.

* Existing transverse bars extending from deck into removal area shall be cut allowing 2'-0" to extend into the removal area. In addition, these bars shall be cleaned, straighten and incorporated into the new construction.

** Cut to fit if necessary

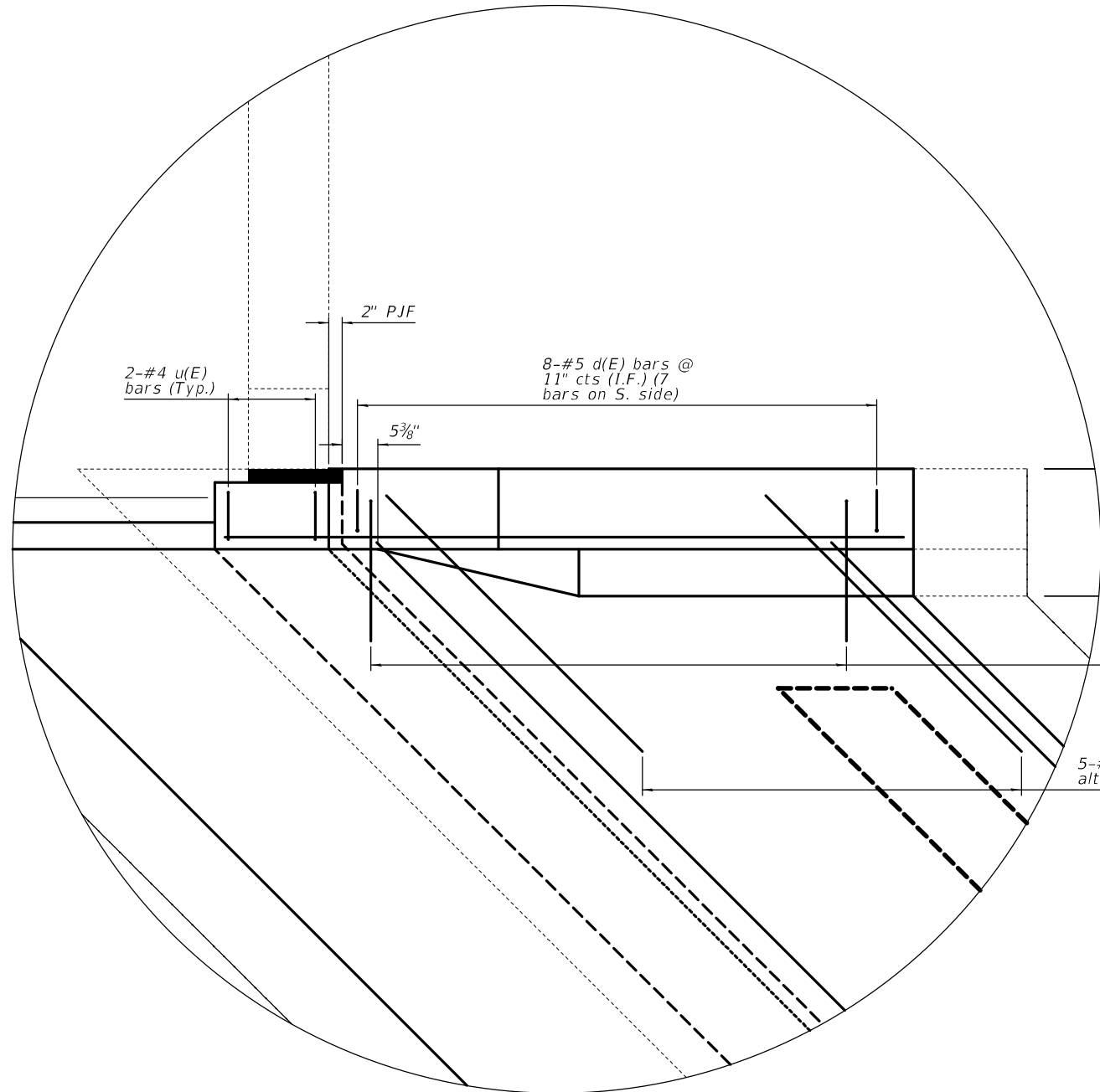
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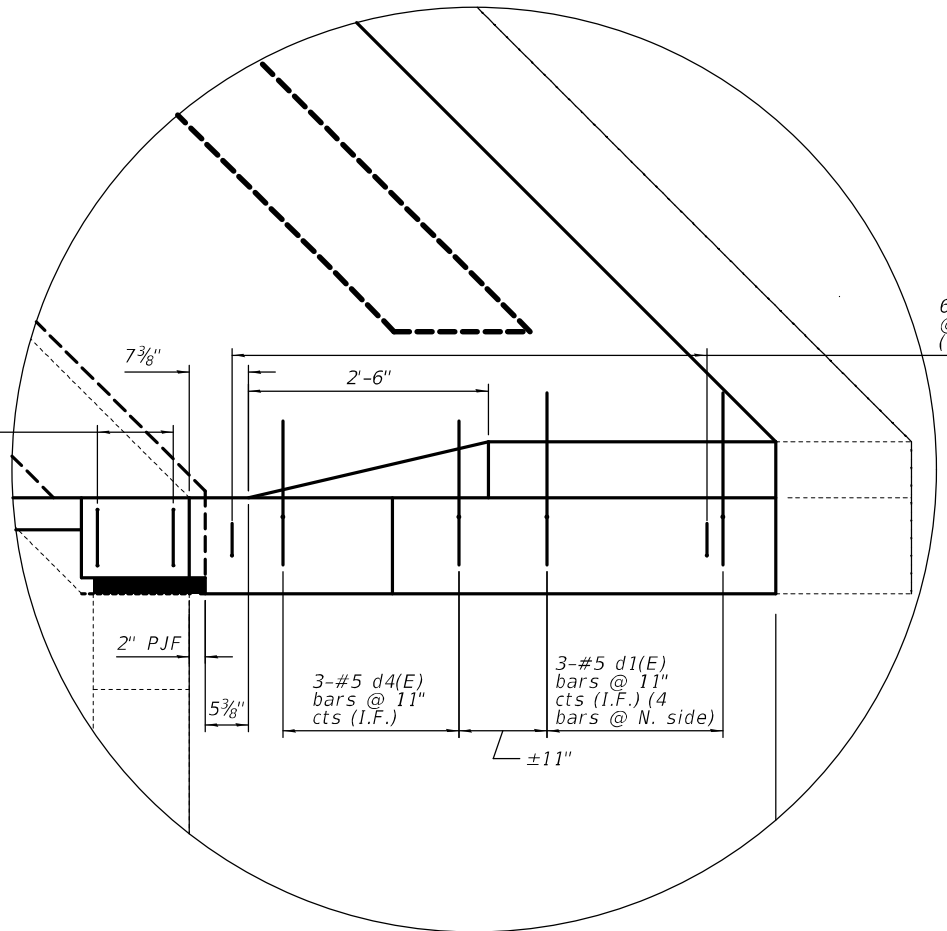
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

JOINT REPLACEMENT (E. Abutment) SN 082-0289			
SCALE:	SHEET 6	OF 18 SHEETS	STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9251	29BJR,BDR	ST. CLAIR	26	14
CONTRACT NO. 76T26				
ILLINOIS FED. AID PROJECT				



NORTH SIDE
(Detail B)



SOUTH SIDE
(Detail C)

Note: Both sides (Details) are similar, except as noted.

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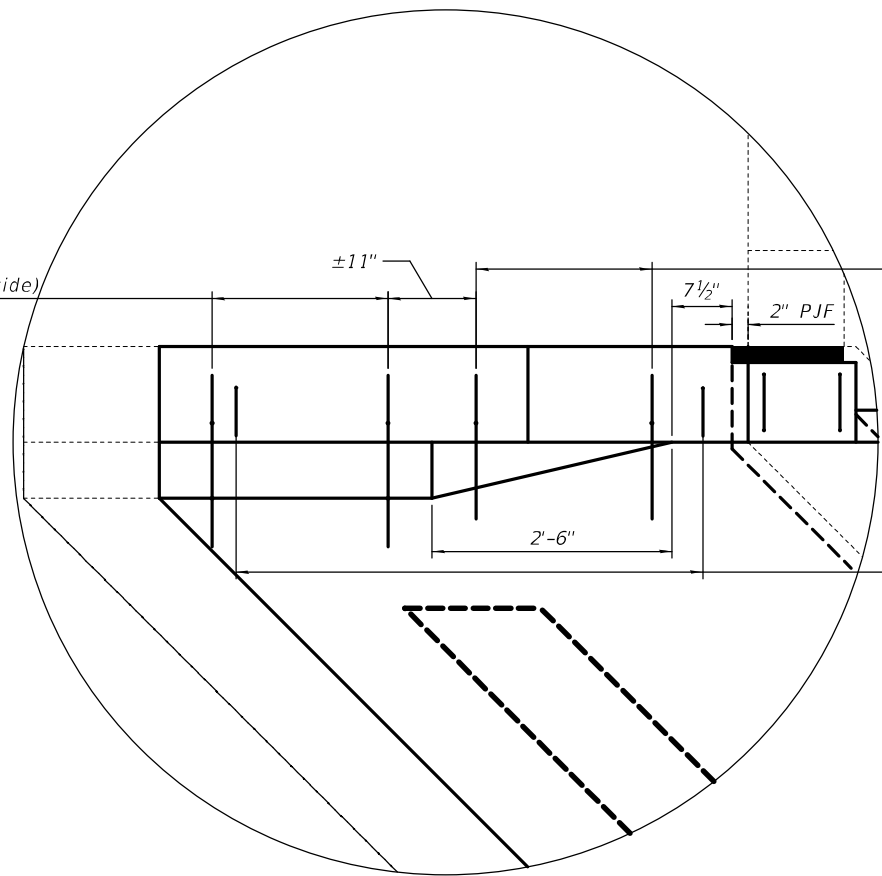
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAILS B & C (W. Abut)
SN 082-0289

SCALE: SHEET 7 OF 18 SHEETS STA. TO STA.

F.A.U. RTE. 9251	SECTION 29BJR.BDR	COUNTY ST. CLAIR	TOTAL SHEETS 26	SHEET NO. 15
CONTRACT NO. 76T26			ILLINOIS FED. AID PROJECT	

3-#5 d1(E)
bars @ 11"
cts (I.F.) (4
bars @ S. side)



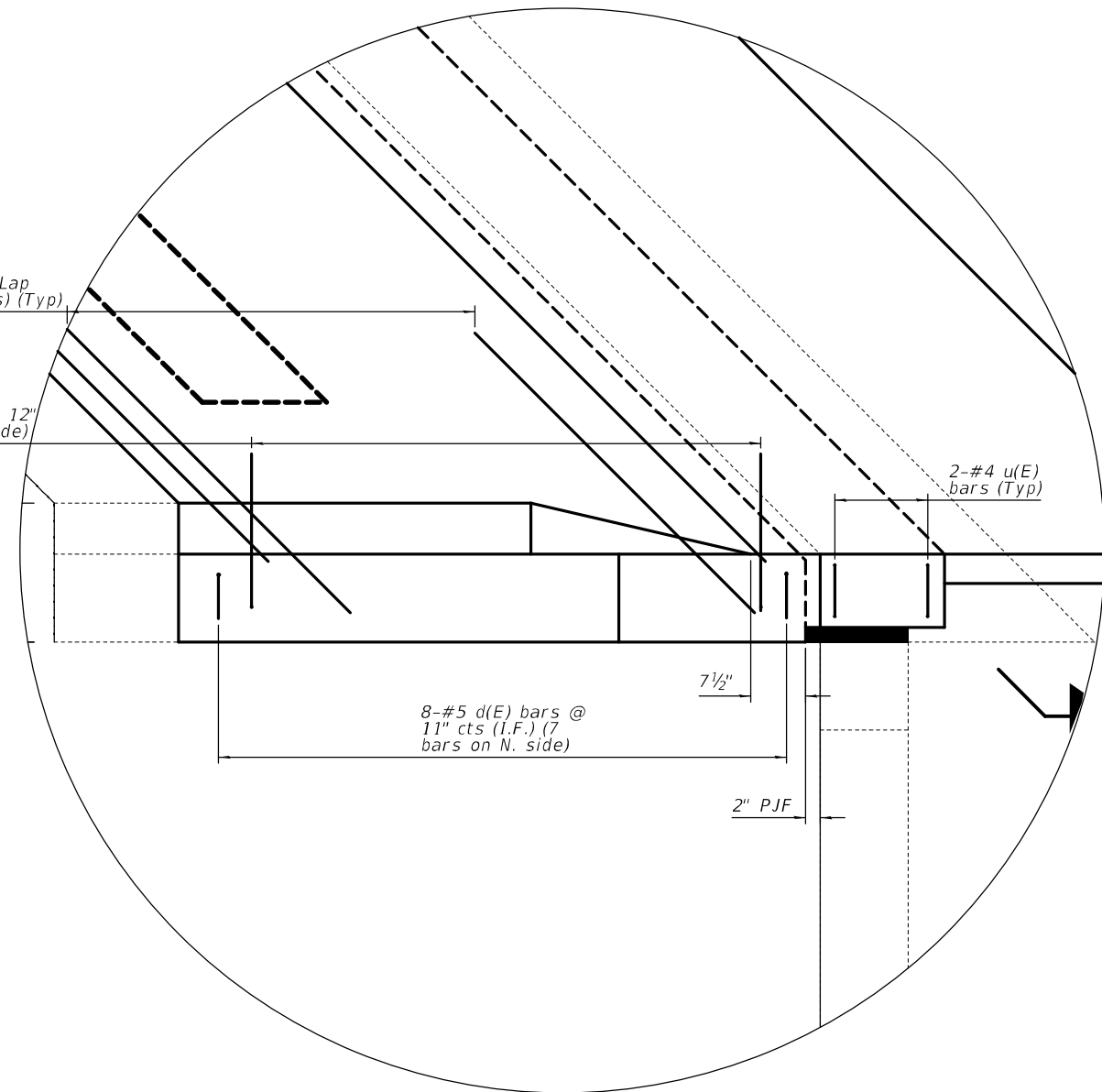
3-#5 d4(E)
bars @ 11"
cts (I.F.) (Typ)

6-#4 d2(E) bars
@ 12" cts (O.F.)
(7 bars on S side)

NORTH SIDE
(Detail D)

5-#6 a1(E) bars (Top) (Lap
with alternate a(E) bars) (Typ)

7-#4 d3(E) bars @ 12"
cts (6 bars on N side)



2-#4 u(E)
bars (Typ)

8-#5 d(E) bars @
11" cts (I.F.) (7
bars on N. side)

SOUTH SIDE
(Detail E)

Note: Both sides (Details) are similar, except as noted.

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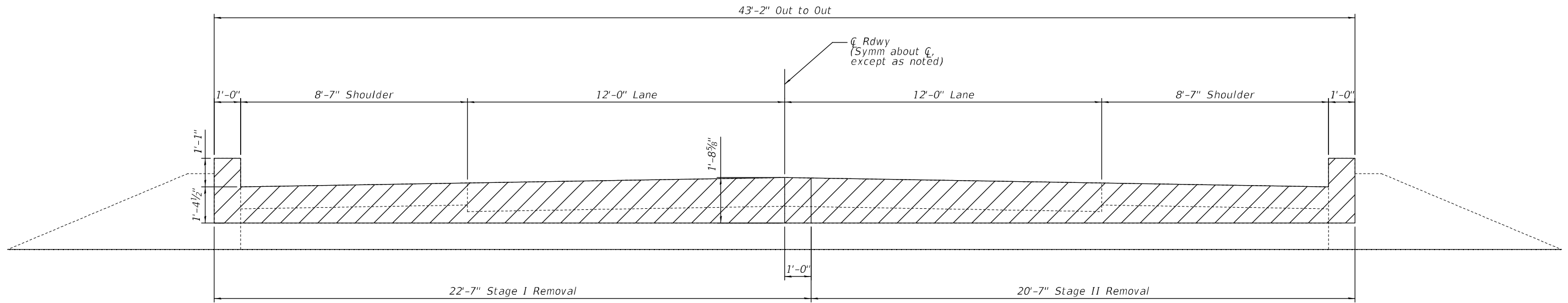
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

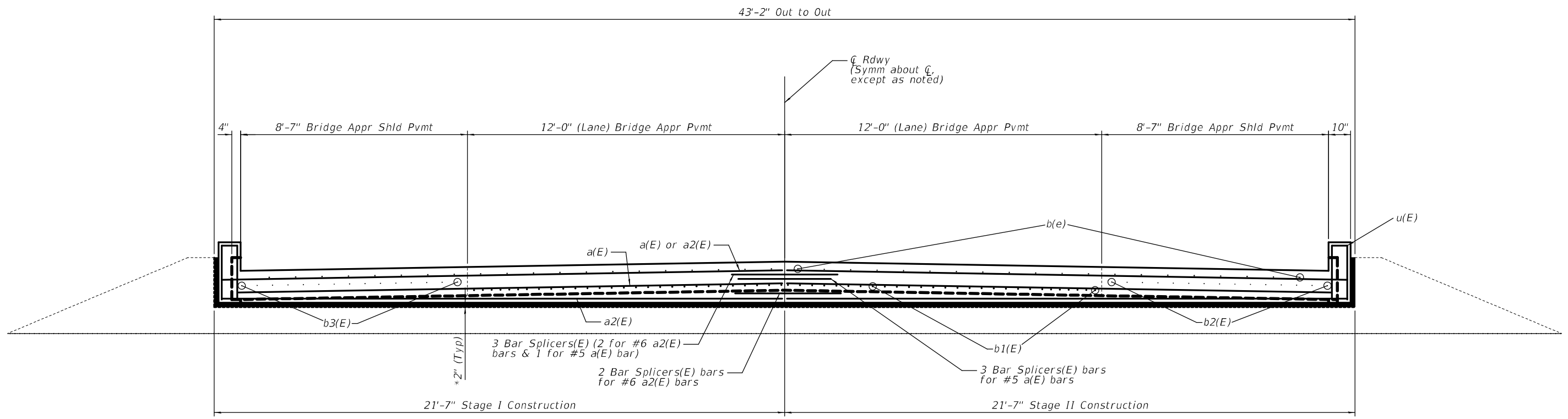
**DETAILS D & E (E. Abut)
SN 082-0289**

SCALE: SHEET 8 OF 18 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9251	29BJR,BDR	ST. CLAIR	26	16
CONTRACT NO. 76T26			ILLINOIS FED. AID PROJECT	



Section D-D



Section J-J

* Preformed Joint Filler.
(Cost included with Concrete Superstructure)

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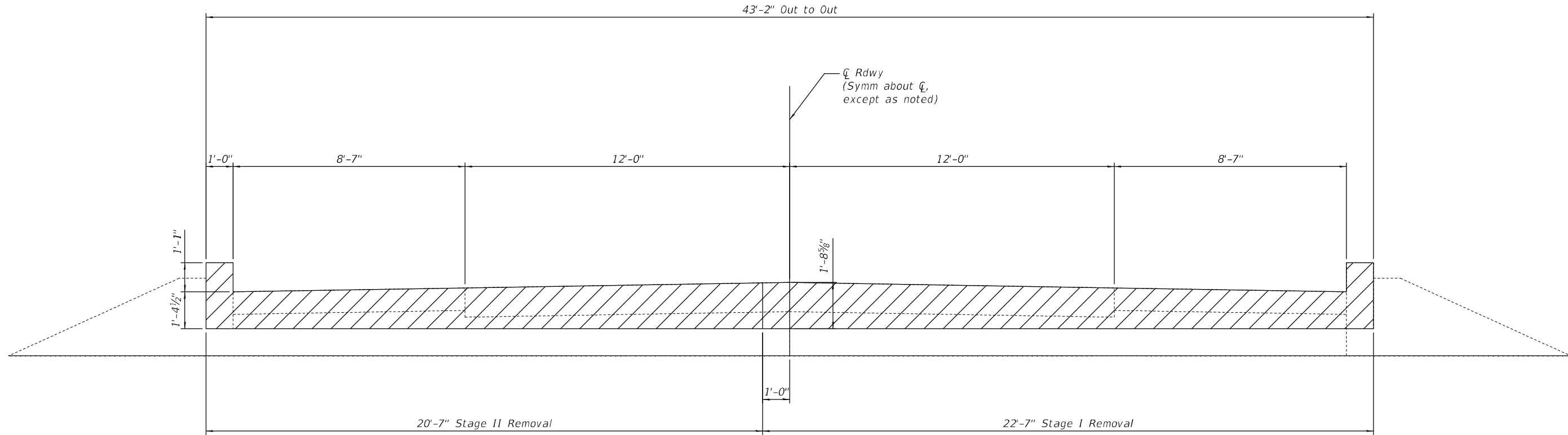
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

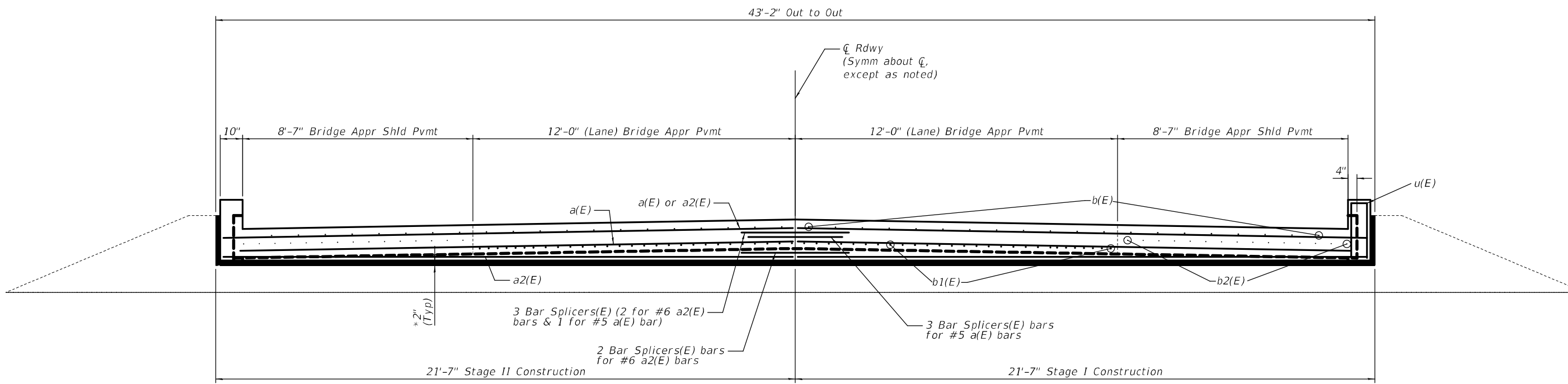
**CROSS SECTION (Appr. Rem. & Repl.) (W. Abut.)
SN 082-0289**

SCALE: SHEET 9 OF 18 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9251	29BJR,BDR	ST. CLAIR	26	17
CONTRACT NO. 76T26			ILLINOIS FED. AID PROJECT	



SECTION E-E



SECTION K-K

* Preformed Joint Filler.
(Cost included with Concrete Superstructure.)

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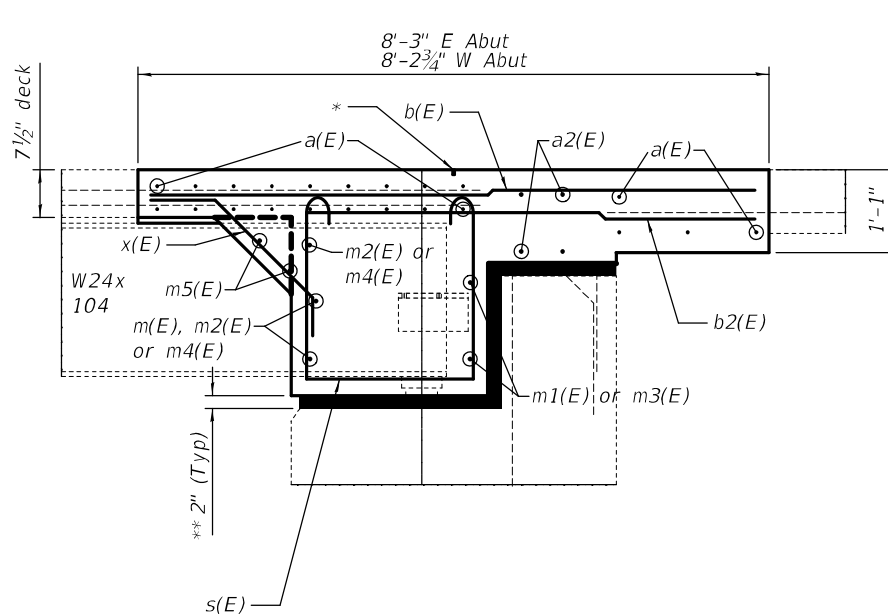
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

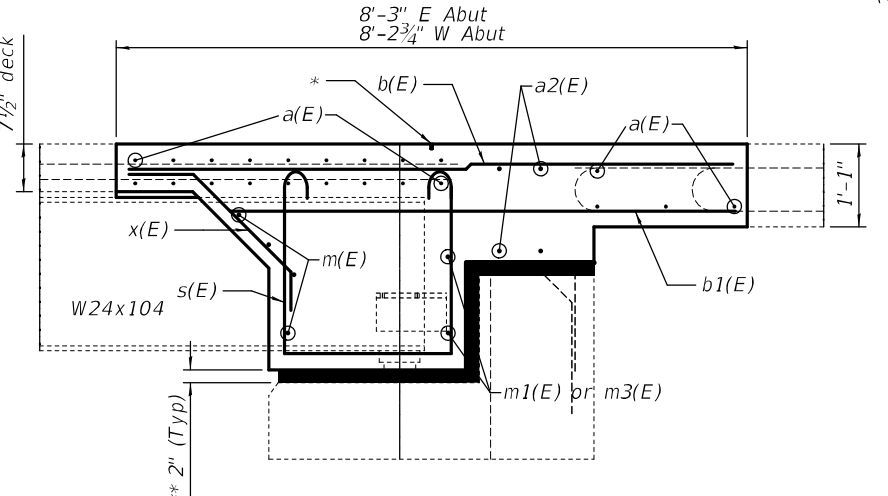
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SN 082-0289

SCALE: SHEET 10 OF 18 SHEETS STA. TO STA.

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CONTRACT NO. 76T26			ILLINOIS FED. AID PROJECT	

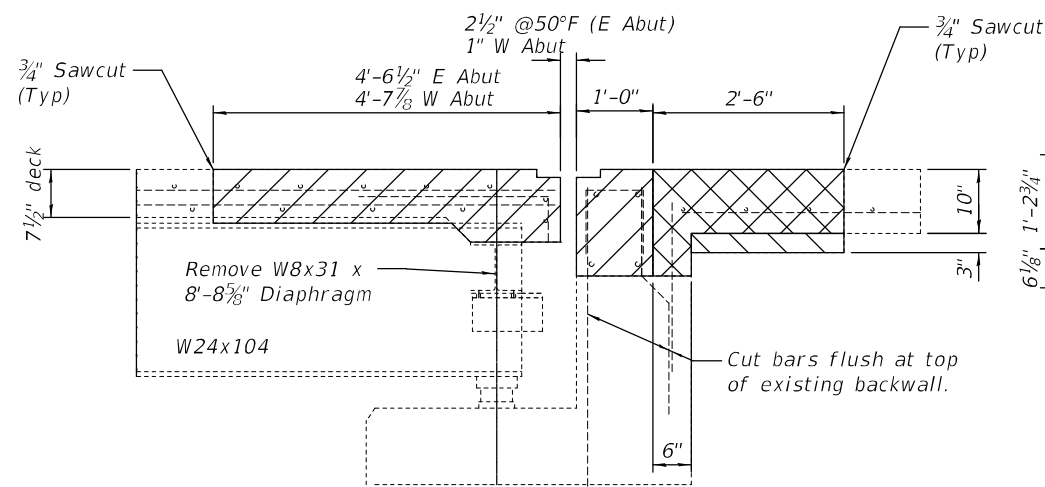


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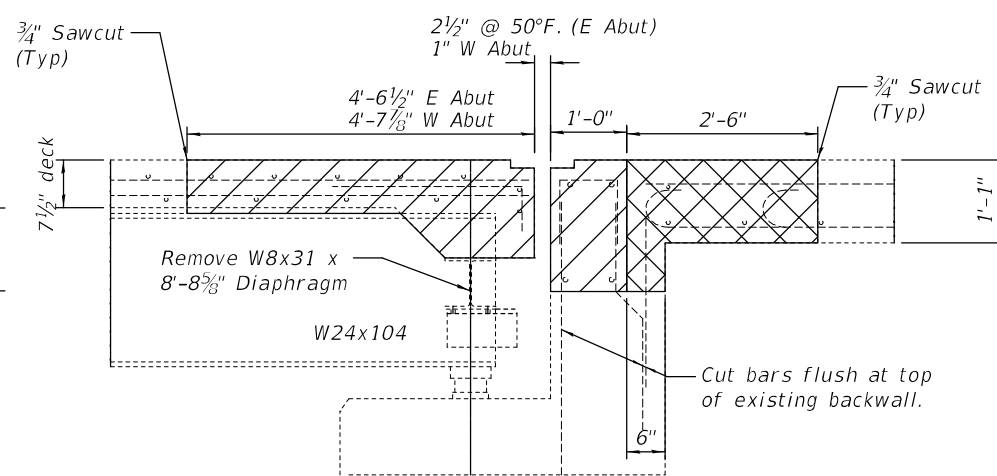


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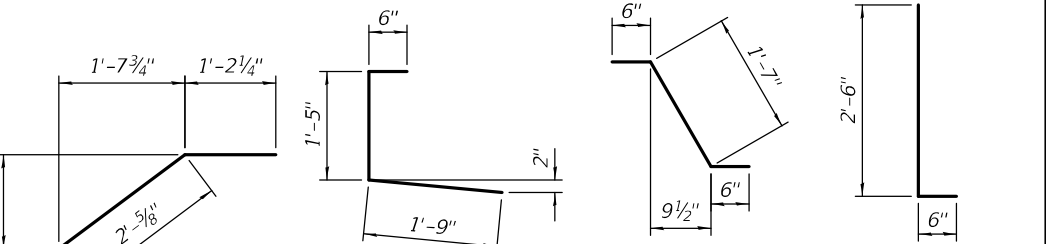
BAR m4(E)



SECTION B-B



SECTION A A

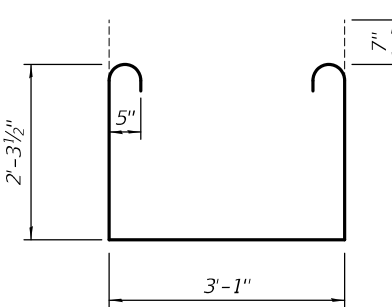


BAR x(E)

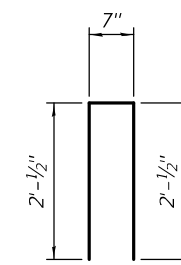
BAR d3(E)

BAR d1(E)

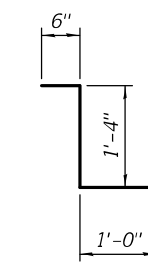
BAR d(E) & d2(E)



BAR s(E)



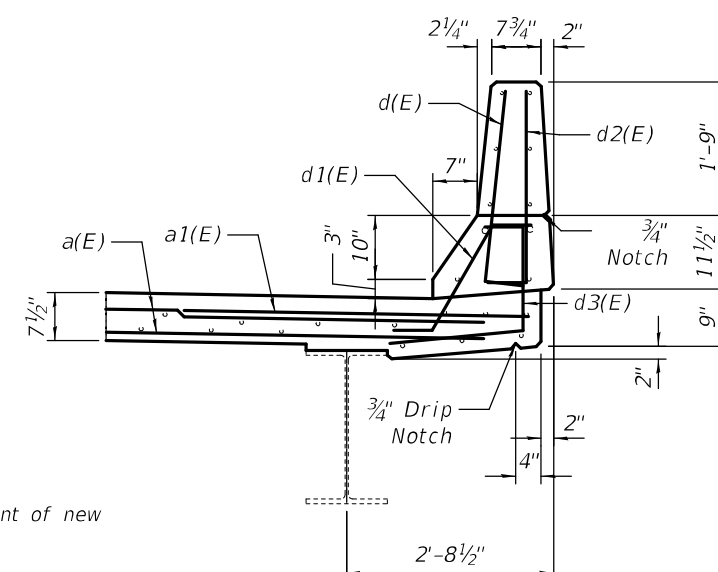
BAR u(E)



BAR d4(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	88	#5	29'-1"	
a1(E)	20	#6	4'-6"	
a2(E)	16	#6	29'-11"	
a3(E)	33	#4	8'-7"	
b(E)	84	#5	11'-2"	
b1(E)	112	#7	9'-4"	
b2(E)	64	#4	8'-3"	
b3(E)	16	#4	23'-9"	
d(E)	30	#5	3'-0"	
d1(E)	14	#5	2'-7"	
d2(E)	26	#4	3'-0"	
d3(E)	26	#4	3'-8"	
d4(E)	12	#5	2'-10"	
m(E)	32	#6	12'-11"	
m1(E)	4	#6	30'-3"	
m2(E)	6	#6	10'-4"	
m3(E)	4	#6	29'-4"	
m4(E)	6	#6	13'-3"	
m5(E)	8	#6	15'-1"	
s(E)	88	#5	8'-10"	□
u(E)	8	#4	4'-8"	□
x(E)	72	#4	3'-9"	⤴
Concrete Removal		Cu. Yd.	33.3	
Concrete Superstructure		Cu. Yd.	70.0	
Reinforcement Bars, Epoxy Coated		Pound	10300	



PARAPET SECTION

- Concrete Removal (Will include removal of the Bridge Approach Pavement to the limits shown.)
- Bridge Approach Shoulder Removal
- Minor excavation at shoulder included with cost of Concrete Removal.

Notes: Existing end diaphragms to be removed to facilitate placement of new reinforcement and concrete.

The m(E), m2(E), m4(E) and m5(E) bars are to be placed through 1"Ø holes drilled in the beam webs.

* 1/4" x 3/4" Formed Joint with bridge relief joint sealer.

** Preformed Joint Filler. (Cost included with Concrete Superstructure.)

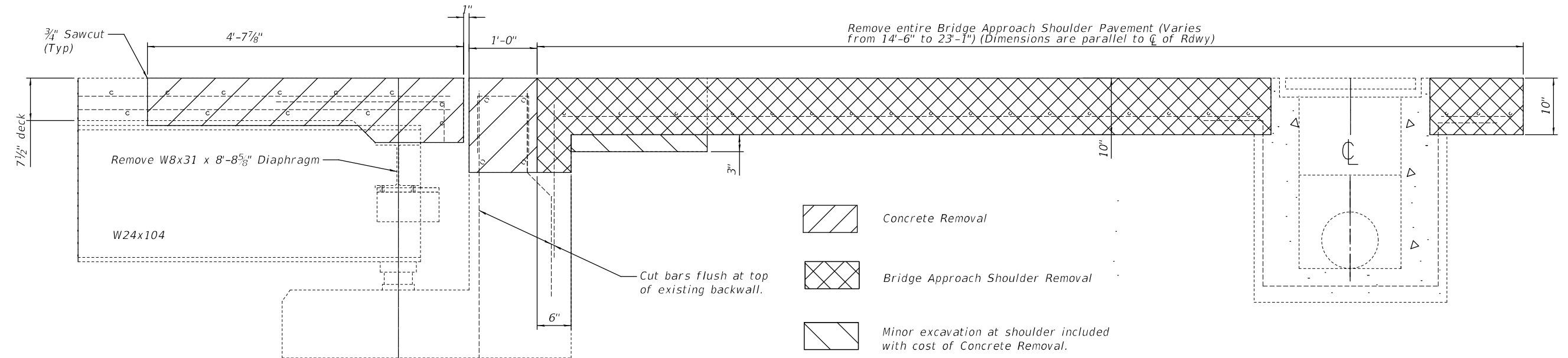
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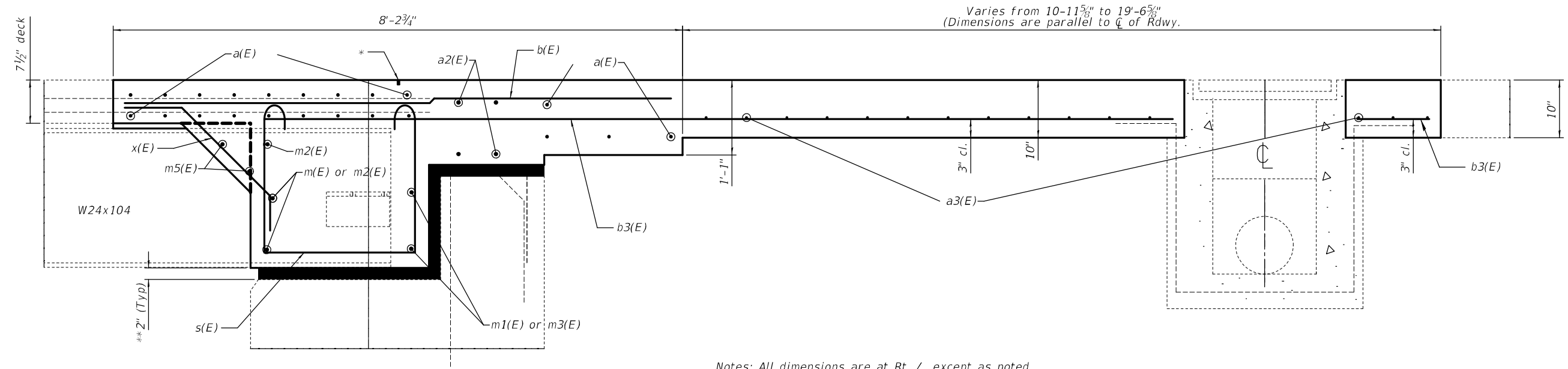
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

EXISTING & PROPOSED JOINT DETAILS (Except Bridge Appr Shld Pmnt)			
SN 082-0289			
SCALE:	SHEET 11	OF 18 SHEETS	STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9251	29BJR.BDR	ST. CLAIR	26	19
CONTRACT NO. 76T26				
ILLINOIS FED. AID PROJECT				



SECTION C-C



SECTION I-I

Notes: All dimensions are at Rt. \perp , except as noted.

See sheets 1, 3 & 17 of 18 for location to reuse existing Inlet Box.

Existing end diaphragms to be removed to facilitate placement of new reinforcement and concrete.

The m(E), m2(E), & m5(E) bars are to be placed through 1" \varnothing holes drilled in the beam webs.

* 1/4" x 3/4" Formed Joint with bridge relief joint sealer.

** Prefomed Joint Filler
(Cost included with Concrete Superstructure)

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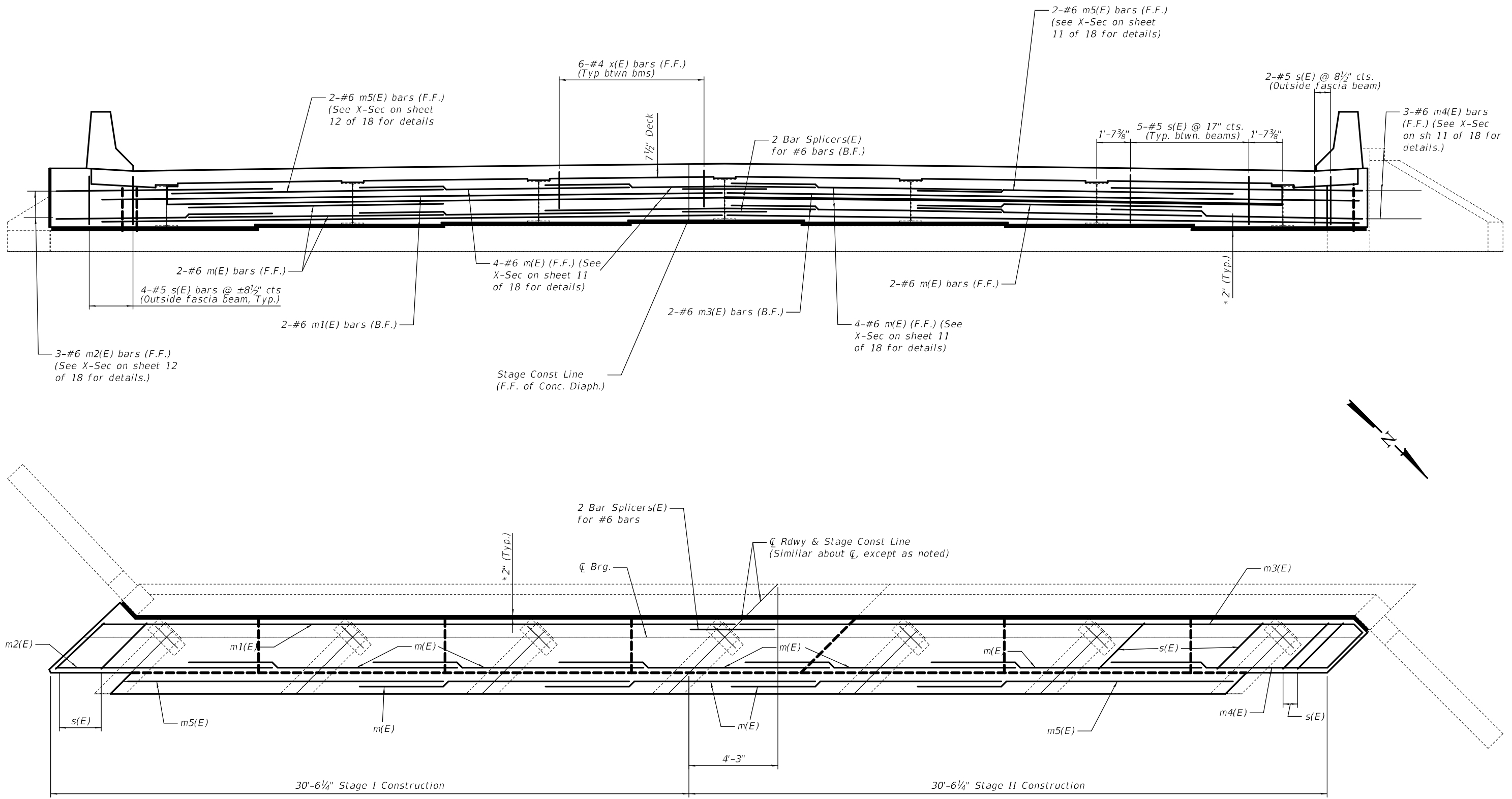
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PLOT DATE = 3/29/2024	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**EXISTING & PROPOSED BRIDGE APPROACH SHOULDER PAVEMENT
SN 082-0289**

SCALE: SHEET 12 OF 18 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9251	29BJR, BDR	ST CLAIR	26	20
CONTRACT NO. 76T26			ILLINOIS FED. AID PROJECT	



PLAN VIEW THRU DIAPHRAGM

MIN. BAR LAPS

#6 bars = 4'-0"

* Preformed Joint Filler.
(Cost included with Concrete Superstructure)

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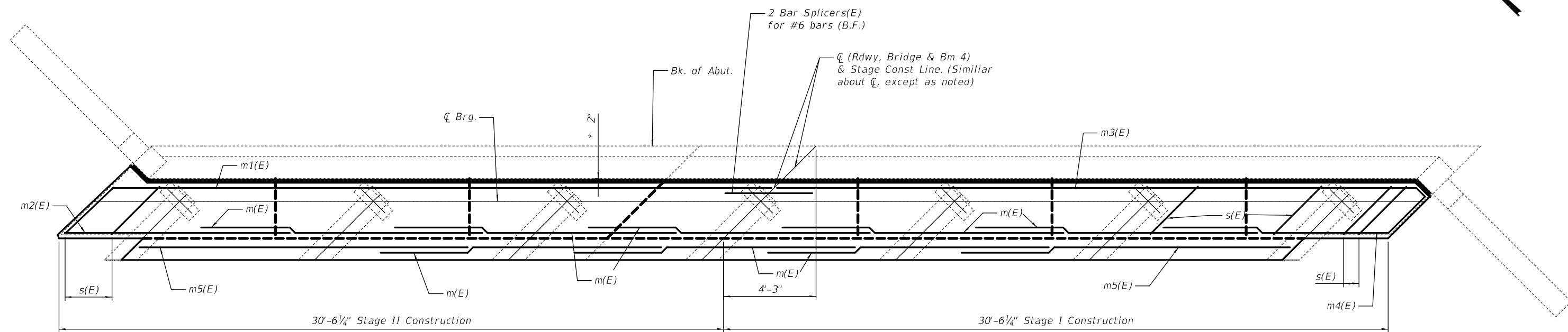
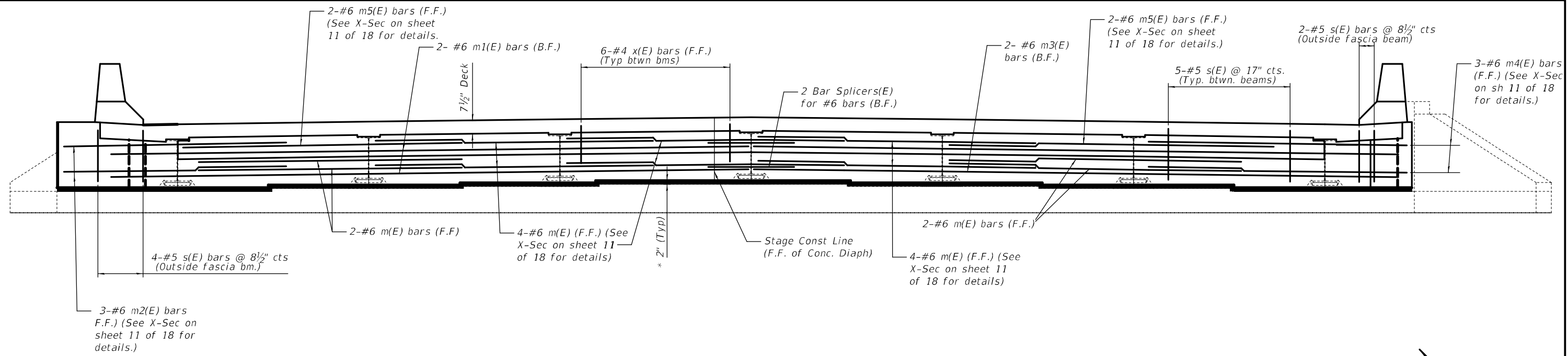
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PLOT DATE = 4/4/2024	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIAPHRAGM AT WEST ABUTMENT
SN 082-0289

SCALE: SHEET 13 OF 18 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9251	29BJR.BDR	ST. CLAIR	26	21
CONTRACT NO. 76T26			ILLINOIS FED. AID PROJECT	



PLAN VIEW THRU DIAPHRAGM

MIN. BAR LAPS

#6 bars = 4'-0"

* Preformed Joint Filler.
(Cost included with Concrete Superstructure)

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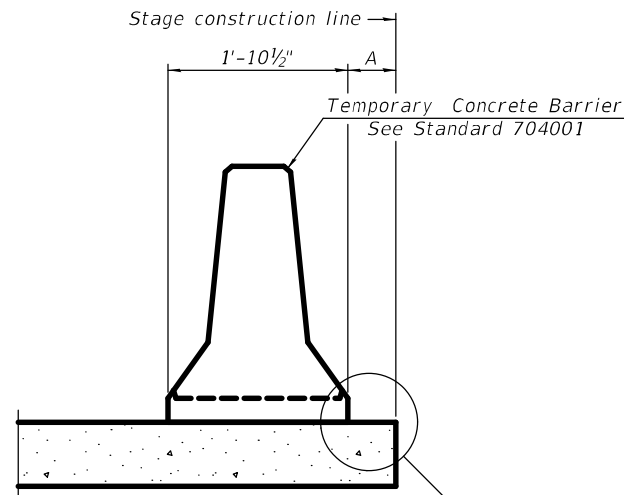
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PLOT DATE = 4/4/2024	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DIAPHRAGM AT EAST ABUTMENT
SN 082-0289**

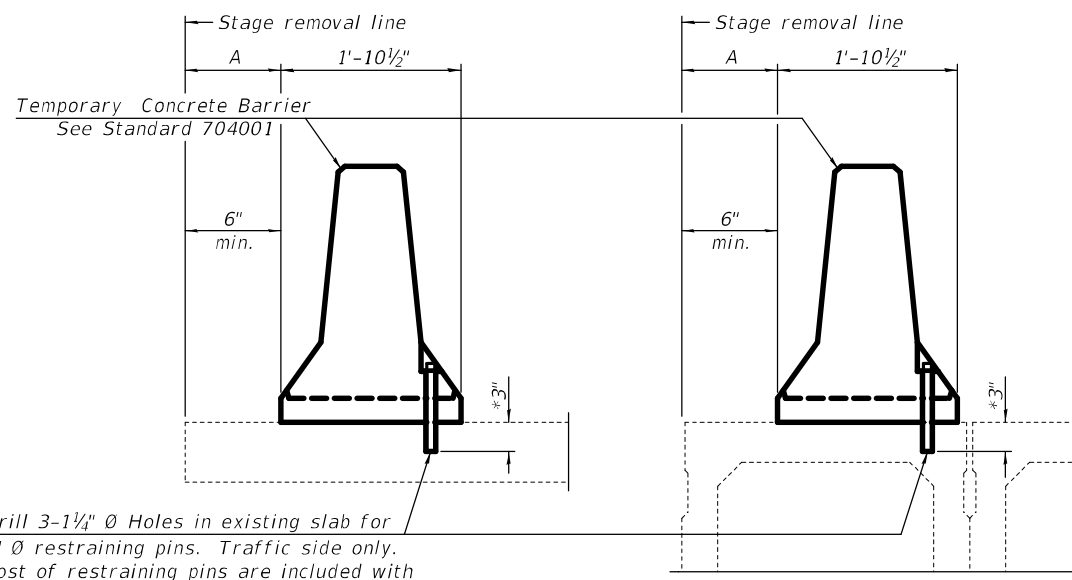
SCALE: SHEET 14 OF 18 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9251	29BJR,BDR	ST. CLAIR	26	22
ILLINOIS FED. AID PROJECT			CONTRACT NO. 76T26	



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



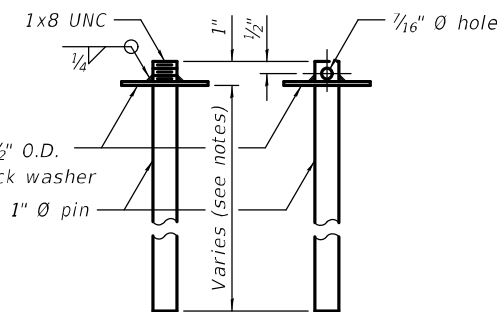
Drill 3-1/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

EXISTING SLAB

EXISTING DECK BEAM

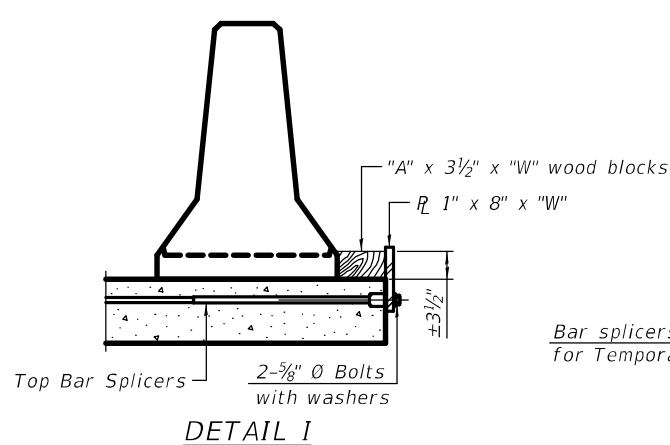
* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

SECTIONS THRU SLAB OR DECK BEAM

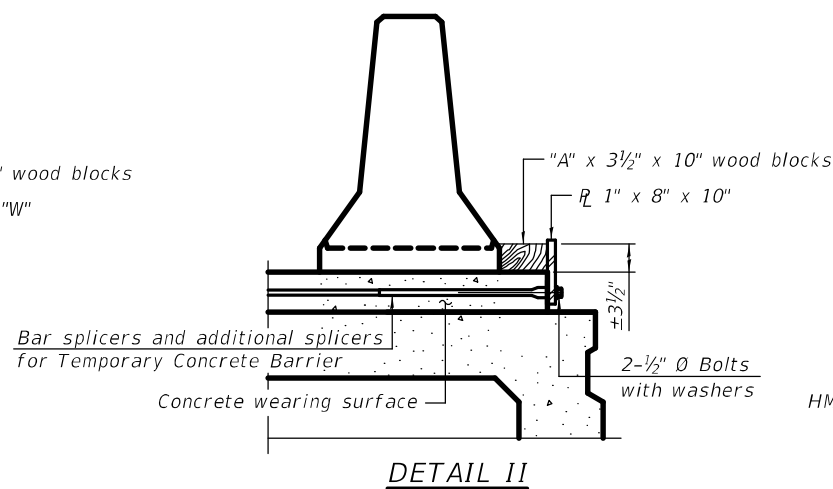


RESTRAINING PIN

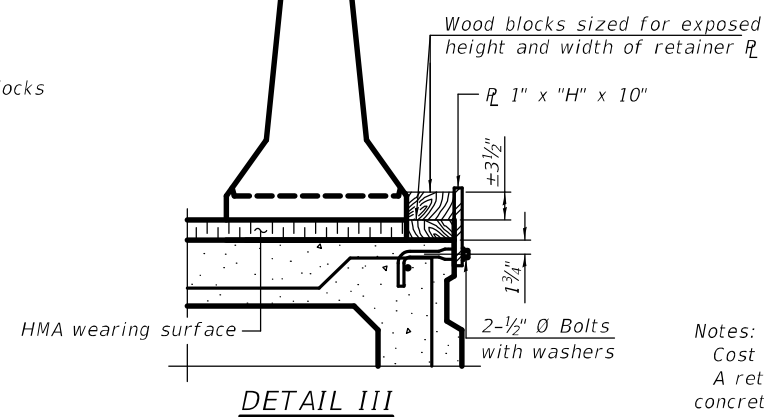
US Std. 1 1/16" I.D. x 2 1/2" O.D. x approx. 8 gauge thick washer



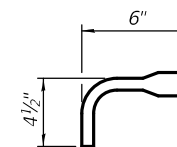
DETAIL I



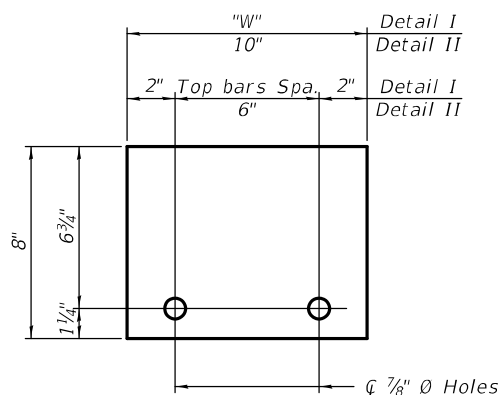
DETAIL II



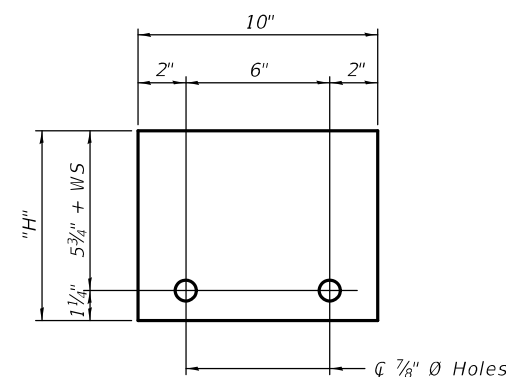
DETAIL III



BAR SPLICER FOR #4 BAR - DETAIL III



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



STEEL RETAINER R 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 \bar{C} 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

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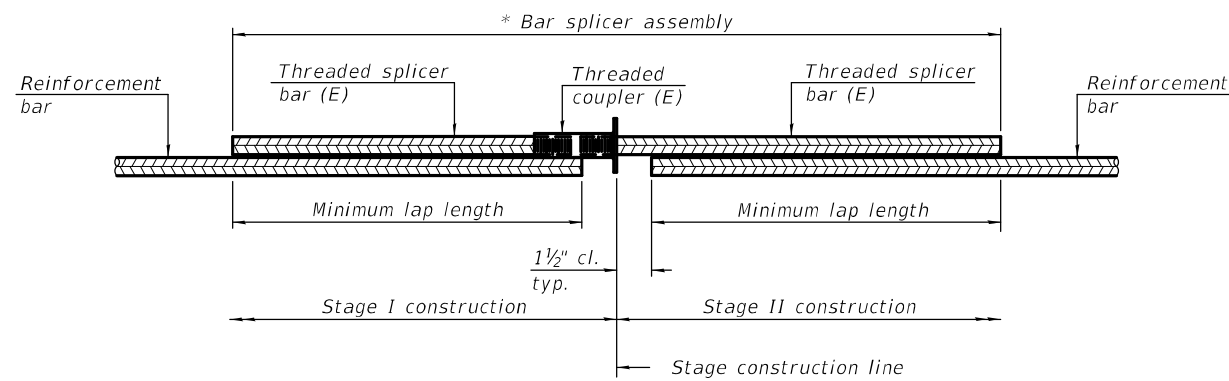
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER
STRUCTURE NO. 082-0289

SCALE: SHEET 15 OF 18 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9251	29BJR.BDR	ST. CLAIR	26	23
			CONTRACT NO. 76T26	
ILLINOIS FED. AID PROJECT				

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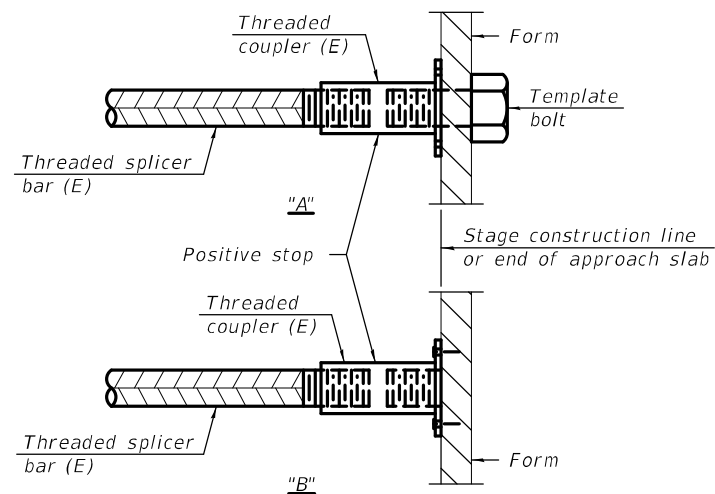


STANDARD BAR SPLICER ASSEMBLY PLAN
 (All components shall be provided from one supplier)

Threaded splicer bar length = min. lap length + 1 1/2" + thread length

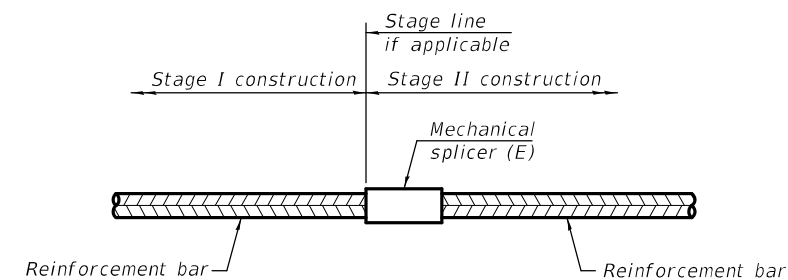
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Abutments	#5	44	3'-6"
Abutments	#6	12	4'-0"



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.

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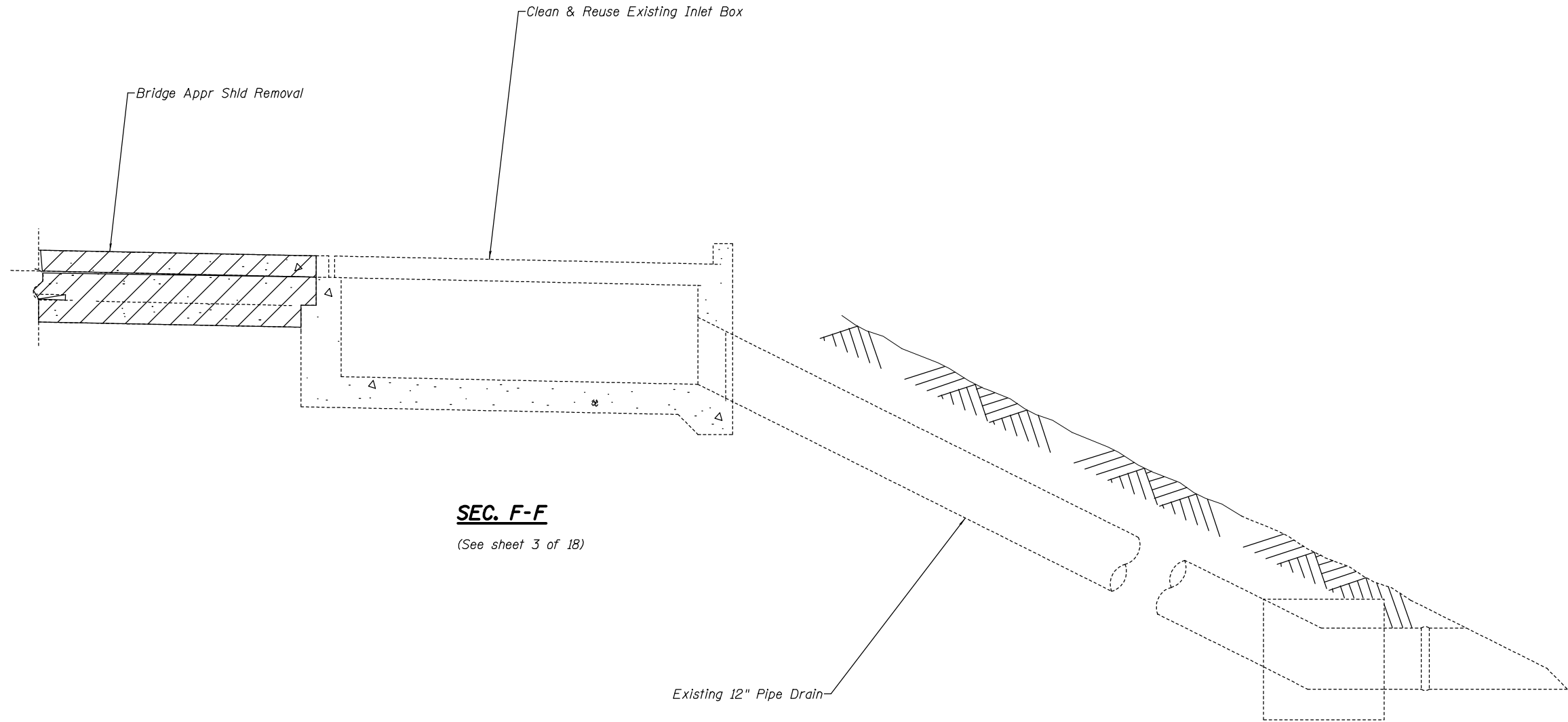
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
 STRUCTURE NO. 082-0289**

SCALE: SHEET 16 OF 18 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9251	29BJR,BDR	ST CLAIR	26	24
ILLINOIS			FED. AID PROJECT	

CONTRACT NO. 76T26



SEC. F-F
(See sheet 3 of 18)

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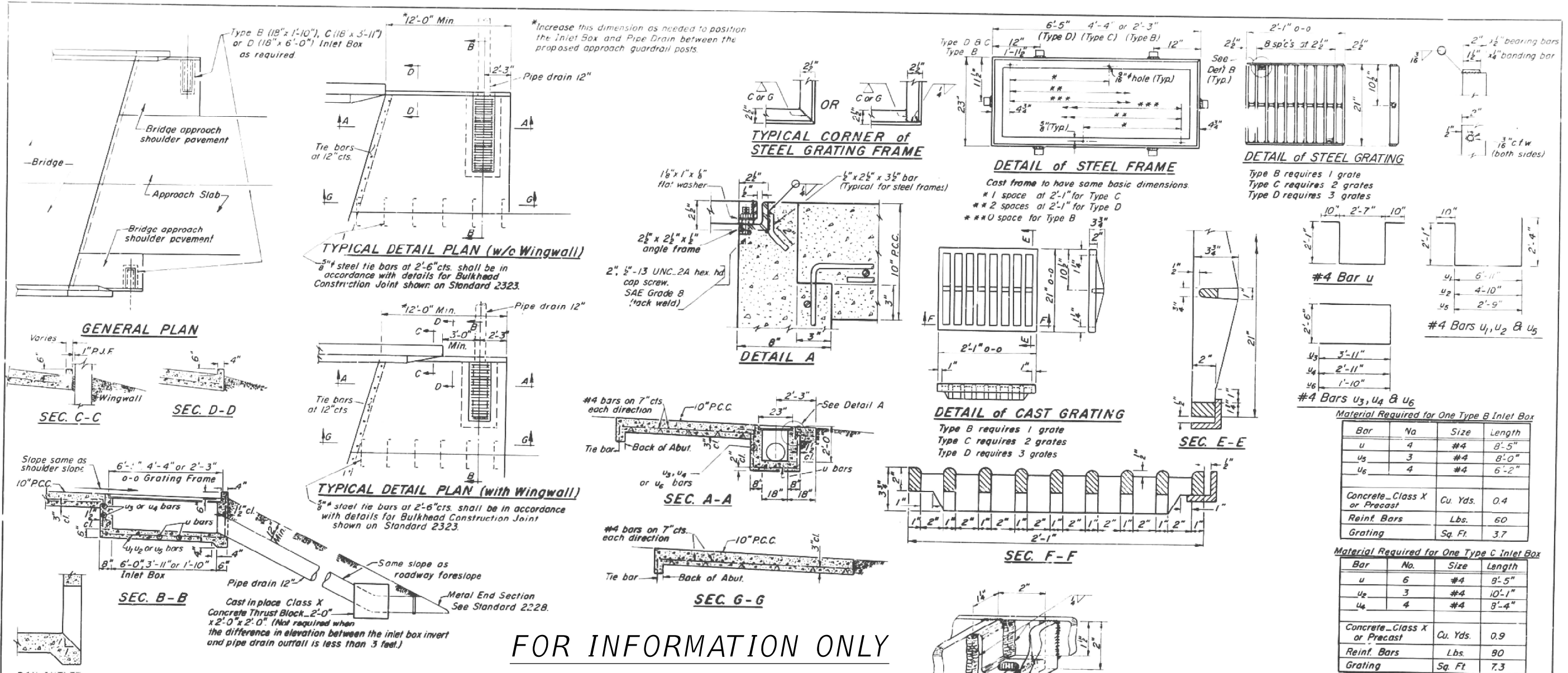
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SW BRIDGE APPROACH SHOULDER REMOVAL DETAIL
SN 082-0289**

SCALE: SHEET 17 OF 18 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9251	29BJR,BDR	ST CLAIR	26	25
CONTRACT NO. 76T26			ILLINOIS FED. AID PROJECT	



FOR INFORMATION ONLY

GENERAL NOTES

When Inlet Box or Boxes are not required, surface of the shoulder pavement shall be finished to provide a smooth transition from back of the abutment to normal approach roadway shoulder.

See plans for location of bridge approach shoulder pavement.

Use Type C Inlet Box for 5' and 6' shoulder widths, use Type D Inlet Box for 7' and wider shoulder widths, use Type B Inlet Box for shoulders less than 5' wide.

For placement of approach shoulder pavement on existing construction substitute expansion anchor ties for tie bars. For non-rigid approaches, shoulder pavement will be as shown except omit tie bars in approach pavement.

The material for 12" Pipe Drains shall be either corrugated steel, aluminum alloy or polyethylene (PE) pipe with UV protection.

Corrugated steel and aluminum alloy pipe shall have 2' coupling bands. All pipe connections shall be water tight.

The P.C. Concrete used in the shoulder slab shall meet the requirements of Section 40B of the Standard Specifications.

The lengths of #4 bars used in the approach shoulder pavement shall be as required to accommodate the length, width and skew of the slab.

Class X concrete or precast concrete shall be used for the inlet. Precast concrete shall be in accordance with Sections 503.01 thru 505.05 of the Standard Specifications except that the concrete strength shall be 4000 psi after 28 days.

All exposed edges of the inlet, except the upper perimeter, shall be beveled $\frac{3}{8}$ ".

Shop drawings will not be required for precast Inlet Boxes.

A 3" deep CA-12 bedding conforming to Article 704.0, D Quality or better shall be provided under full length and width of precast units, and all voids around the pipe drain entrance, both inside and outside, shall be sealed with mortar.

The grating shall seat firmly in the frame and steel grates shall be secured to the frame with a locking device as shown. Cast grates will not require the locking device.

Steel grating and frames shall conform to Article 710.04 of the Standard Specifications and shall be galvanized to AASHTO Specification M III after fabrication.

Cast grating and frames shall conform to Article 710.17 of the Standard Specifications. Cast grating and frames shall not be galvanized.

Pipe drains shall be installed, measured and paid for in accordance with Section 607 of the Standard Specifications, except sand bedding will not be required.

Metal End Sections shall be installed, measured and paid for in accordance with Section 511 of the Standard Specifications.

Bridge approach shoulder pavement will be measured in place and paid for in square yards as P.C. CONCRETE BRIDGE APPROACH SHOULDER PAVEMENT which shall include the cost of subgrade preparation, expansion anchor ties, reinforcement and joint fillers. In computing the area for payment, a deduction will be made for the area displaced by the inlet. (1.2 Sq. Yds. Type C; 1.7 Sq. Yds. Type D, 0.6 Sq. Yds. Type B)

The contract unit price "Each" for TYPE (B, C or D) INLET BOX STANDARD 2324, in place, shall include the frame and grating, class X or precast concrete, reinforcement bars, excavation, bedding when required, and compacted backfill.

The contract unit price "Each" for CONCRETE THRUST BLOCKS, in place, shall include excavation and compacted backfilling.

Material Required for One Type B Inlet Box

Bar	No.	Size	Length
u	4	#4	8'-5"
u ₅	3	#4	8'-0"
u ₆	4	#4	6'-2"
Concrete - Class X or Precast		Cu. Yds.	0.4
Reinf. Bars		Lbs.	60
Grating		Sq. Ft.	3.7

Material Required for One Type C Inlet Box

Bar	No.	Size	Length
u	6	#4	8'-5"
u ₂	3	#4	10'-1"
u ₄	4	#4	8'-4"
Concrete - Class X or Precast		Cu. Yds.	0.9
Reinf. Bars		Lbs.	90
Grating		Sq. Ft.	7.3

Material Required for One Type D Inlet Box

Bar	No.	Size	Length
u	8	#4	8'-5"
u ₁	3	#4	12'-2"
u ₃	4	#4	10'-4"
Concrete - Class X or Precast		Cu. Yds.	1.2
Reinf. Bars		Lbs.	100
Grating		Sq. Ft.	11.0

BRIDGE APPROACH SHOULDER PAVEMENT

STANDARD 2324 - 6
(Full Size)

Illinois Department of Transportation

PASSED July 18, 1984
 Approved July 18, 1984
 ISSUED 12-1-69

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FOR INFORMATION ONLY - EX BRIDGE APPR SHLD PVMT
SN 082-0289

SCALE: SHEET 18 OF 18 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 76T26				
ILLINOIS FED. AID PROJECT				

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