

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	29-2 (BDR, BRR, BJR)	MARION	24	1
		ILLINOIS	CONTRACT NO. 76U77	

FOR INDEX OF SHEETS, SEE SHEET NO. 2

PROPOSED HIGHWAY PLANS

**FAP ROUTE 322 (US 51)
SECTION 29-2 (BDR, BRR, BJR)
BRIDGE REPAIR AND JOINT REPLACEMENT -
US 51 OVER ICRR, SN 061-0077
MARION COUNTY**

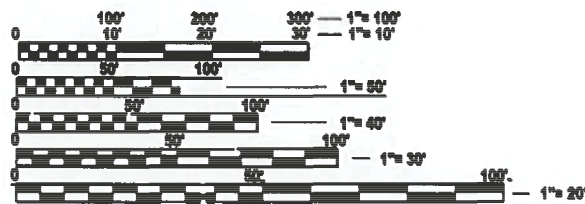
FUNCTIONAL CLASSIFICATION
US 51 - OTHER PRINCIPAL ARTERIAL

TRAFFIC DATA

US 51	
2025 ADT (ACTUAL)	= 4,150
2026 ADT (ESTIMATED)	= 4,200
2046 ADT (ESTIMATED)	= 4,600
MU	= 6.0%
SU	= 5.3%

C-98-141-25

PROJECT LOCATION
LAT = 38.89495266
LONG = 89.92776233



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 - BILLIE OWEN
PROJECT MANAGER - MIKE BERG

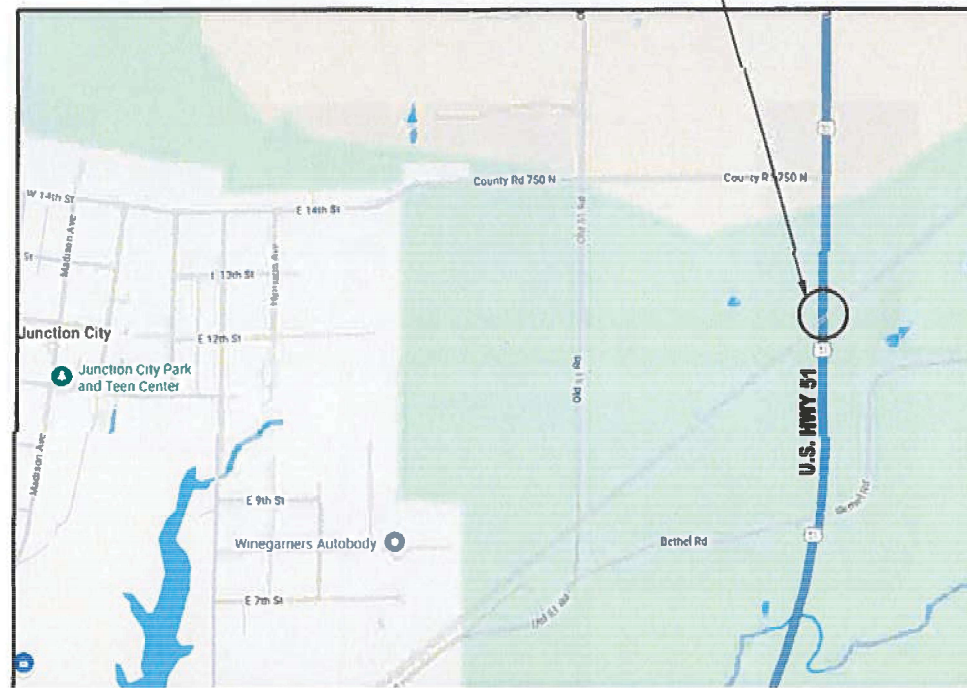
CONTRACT NO. 76U77


ALIEU KAMARA
082.074185
LICENSED PROFESSIONAL ENGINEER
03/06/2026
DATE
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RESPONSIBLE FOR SHEETS 1-14

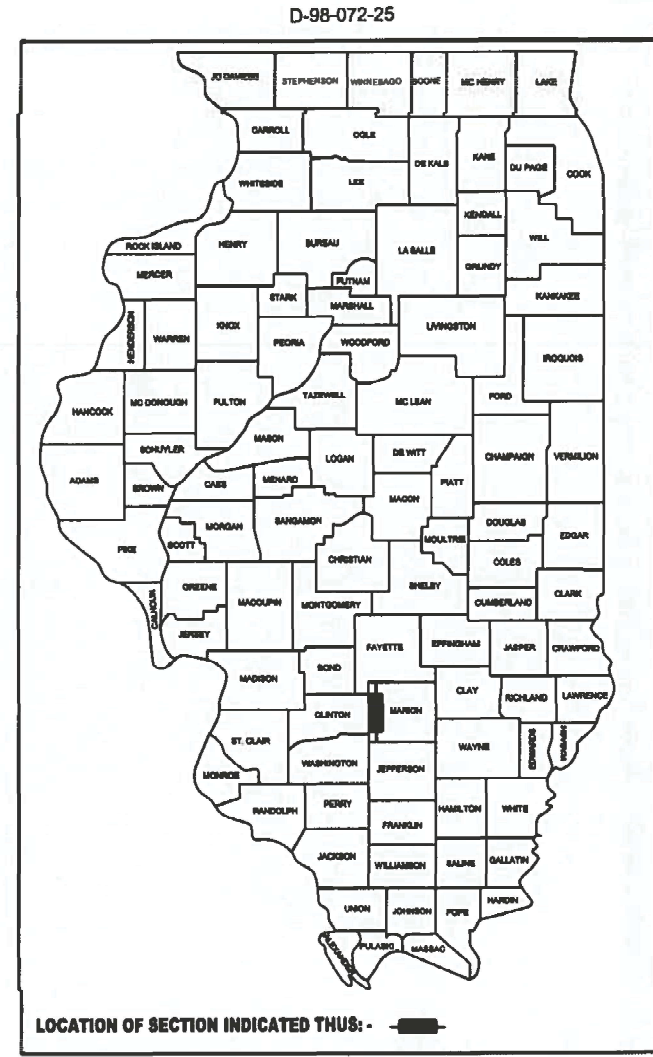


GROSS LENGTH = 500 FT. = 0.1 MILE
NET LENGTH = 500 FT. = 0.1 MILE


LICENSE EXPIRES 11/30/2027
DATE
RESPONSIBLE FOR SHEETS




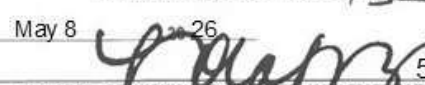
(LOCATION MAP NOT TO SCALE)



**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUBMITTED May 20 2026

REGIONAL ENGINEER

May 8 2026

ENGINEER OF DESIGN AND ENVIRONMENT

May 8 2026

DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

**PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS**

INDEX OF SHEETS

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2	INDEX OF SHEETS, HIGHWAY STANDARDS, GENERAL NOTES, AND COMMITMENTS
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7	SCHEDULE OF QUANTITIES
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10	PLAN VIEW
11	PRE-STAGE CONSTRUCTION
12-13	MOT CONSTRUCTION PLANS
14	WIDTH RESTRICTION SIGNING
15-24	STRUCTURE PLAN

HIGHWAY STANDARDS

000001-09	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001006	DECIMAL OF AN INCH AND OF A FOOT
442201-04	CLASS C AND D PATCHES
482006-03	HMA SHOULDER ADJACENT TO RIGID PAVEMENT
482011-03	HMA SHOULDER STRIPS/SHOULDERS WITH RESURFACING OR WIDENING AND RESURFACING PROJECTS
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
701321-19	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701326-04	LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING FOR SPEEDS ≥ 45 MPH
701901-11	TRAFFIC CONTROL DEVICES
704001-08	TEMPORARY CONCRETE BARRIER
780001-05	TYPICAL PAVEMENT MARKINGS
782006-01	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS
BLR 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

GENERAL NOTES

- ① THE CONTRACTOR AND THE ENGINEER SHALL BE AWARE THAT NO SURVEY WAS PERFORMED FOR THIS PROJECT. THE TOPOGRAPHY, AND QUANTITIES SHOWN IN THE PLANS WERE CREATED USING MICROFILM AND FIELD MEASUREMENTS. ALL SHALL BE ASSUMED TO BE APPROXIMATE. THE CONTRACTOR SHALL VERIFY DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.
- ② 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.
- ③ UTILITIES KNOWN TO HAVE FACILITIES WITHIN THE PROJECT AREA:

UTILITY	ABOVE GROUND	BELOW GROUND	J.U.L.I.E
AT&T ILLINOIS (COMMUNICATIONS)	X	X	X
CITY OF CENTRALIA (WATER & SANITARY SEWER)		X	X
CLEARWAVE FIBER LLC (COMMUNICATIONS)	X	X	X
- ④ THE CONTRACTOR SHALL TAKE CARE TO ENSURE HIS CONSTRUCTION ACTIVITIES DO NOT CAUSE ANY DAMAGE TO THE GUARDRAIL.
- ⑤ ALL TURF AREAS DISTURBED BY THE CONTRACTOR SHALL BE SEEDED WITH THE APPROPRIATE EROSION CONTROL, AS DIRECTED BY THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.
- ⑥ THE CONTRACTOR SHALL BE AWARE THAT THERE ARE MANHOLES & VALVES LOCATED WITHIN THE PROJECT LIMITS. CARE SHALL BE TAKEN IN THESE LOCATIONS DURING OPERATIONS.
- ⑦ THE CONTRACTOR SHALL PROVIDE POSITIVE AND ADEQUATE DRAINAGE AT ALL TIMES.
- ⑧ TWO (2) CHANGEABLE MESSAGE SIGNS SHALL BE REQUIRED FOR THIS PROJECT .THEY SHALL BE PLACED TWO (2) WEEKS PRIOR TO ANY LANE CLOSURE AND SHALL REMAIN UP FOR THE DURATION OF THE PROJECT. THE CHANGEABLE MESSAGE SIGNS SHALL BE PLACED ALONG US-51 AT THE DIRECTION OF THE ENGINEER.
- ⑨ MATERIAL TRANSFER DEVICE (MTD) CAN OPERATE IN AN UNLOADED CONDITION WITH A MAXIMUM GROSS WEIGHT OF 40 TONS FOR THE FOLLOWING STRUCTURES:
061-0077
- ⑩ ANY SOIL DISTURBANCE AREAS MUST BE REPLACED WITH MATERIAL DURING THE SAME WORK DAY. CONTRACTOR TO PLAN ACTIVITIES ACCORDINGLY SO SOIL DISTURBANCE AREAS ARE NOT LEFT OPEN AT THE END OF THE WORK DAY.
- ⑪ THE PROPOSED PAVEMENT MARKING SHALL MATCH THE LOCATIONS OF THE EXISTING PAVEMENT MARKING, AS DIRECTED BY THE ENGINEER.
- ⑫ THE CONTRACTOR IS ADVISED THAT ANOTHER SEPARATE CONTRACT IS, OR MAY BE, IN FORCE WITHIN OR ADJACENT TO THE LIMITS OF THIS PROJECT (LETTING 2/27/26). THE CONTRACTOR SHALL COORDINATE CONSTRUCTION OPERATIONS, INCLUDING BUT NOT LIMITED TO TRAFFIC CONTROL, STAGING, AND SCHEDULING, WITH THE OTHER CONTRACTOR SO AS NOT TO DELAY OR INTERFERE WITH THE PROGRESS OF WORK. WHEN CONFLICT ARISE BETWEEN CONTRACTORS, THE ENGINEER WILL DETERMINE THE ORDER OF OPERATIONS. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR COMPLIANCE WITH THESE REQUIREMENTS.

MIXTURE REQUIREMENTS

ROUTE	US 51
SECTION	29-2(BDR,BRR,BJR)
COUNTY	MARION
CONTRACT	76U77

ADT (CONSTRUCTION YR)	4050
MU%:	6.1
SU%:	6.1
20 YR. ESAL'S:	1.66

DESCRIPTION:	BRIDGE DECK REPAIRS, BRIDGE REPAIR, BRIDGE JOINT REPLACE/REPAIR - CM
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MIXTURE USE	BINDER	SURFACE		
AC/PG	PG 64-22	PG 64-22		
DESIGN AIR VOIDS	4.0% @ Ndes=70	4.0% @ Ndes=70		
MIX COMPOSITION (GRADATION)	IL 19.0	IL 9.5		
FRICTION AGG	MIXTURE "B"	MIXTURE "C"		
QUALITY MGMT PROGRAM	QC/QA	QC/QA		
MATTRANDEV REQUIRED?	NO	NO		

PLAN QUANTITIES FOR HOT-MIX ASPHALT ITEMS ARE CALCULATED USING A UNIT WEIGHT OF 112 LB/SQ YD/IN (59.8 KG/SQ M/25 MM THICKNESS).

ANY QCP PAY ITEM THAT HAS A QUANTITY OF 1800 TONS OR LESS WILL HAVE TWO SUBLOTS EACH OF WHICH WILL BE HALF OF THE PLAN QUANTITY OR HALF OF THE ADJUSTED QUANTITY BY THE RESIDENT ENGINEER/TECHNICIAN.

COMMITMENTS

NONE

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS, HIGHWAY STANDARDS,
GENERAL NOTES & COMMITMENTS

SCALE: NA SHEET 01 OF 01 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	29-2 (BDR,BRR,BJR)	MARION	24	02
CONTRACT NO. 76U77				
ILLINOIS		FED. AID PROJECT		

0047

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL	CONSTRUCTION TYPE CODES
				100% STATE
				BRIDGE 061-0077 RURAL
20200500	EARTH EXCAVATION (WIDENING)	CU YD	184	184
35100120	AGGREGATE BASE COURSE, TYPE A 2"	SQ YD	1,082	1,802
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	1,120	1,120
40600370	LONGITUDINAL JOINT SEALANT	FOOT	850	850
44004250	PAVED SHOULDER REMOVAL	SQ YD	650	650
48203037	HOT-MIX ASPHALT SHOULDERS, 10"	SQ YD	1,082	1,082
50102400	CONCRETE REMOVAL	CU YD	36.9	36.9
50300255	CONCRETE SUPERSTRUCTURE	CU YD	73.4	73.4
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	7,390	7,390
50800515	BAR SPLICERS	EACH	66	66
53016000	DECK SLAB REPAIR (PARTIAL)	SQ YD	30	30
53016002	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	20	20
60260100	INLETS TO BE ADJUSTED	EACH	4	4
* 63100089	TRAFFIC BARRIER TERMINAL, TYPE 6B	EACH	1	1
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	3	3

* SPECIALTY ITEM

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 DATE - 03/05/26

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: NA SHEET 01 OF 03 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	29-2 (BDR,BRR,BJR)	MARION	24	04
CONTRACT NO. 76U77				
		ILLINOIS	FED. AID PROJECT	

0047

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL	CONSTRUCTION TYPE CODES
				100% STATE
				BRIDGE 061-0077 RURAL
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
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	4	4
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1
70106700	TEMPORARY RUMBLE STRIPS	EACH	6	6
70107006	PAVEMENT MARKING BLACKOUT TAPE, 6"	FOOT	455	455
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	90	90
70300100	SHORT TERM PAVEMENT MARKING	FOOT	3,636	3,636
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	2,046	2,046
70400100	TEMPORARY CONCRETE BARRIER	FOOT	610	610
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	610	610
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	2,967	2,967

* SPECIALTY ITEM

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DATE - 03/05/26

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: NA SHEET 02 OF 03 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	29-2 (BDR,BRR,BJR)	MARION	24	05
CONTRACT NO. 76U77				
		ILLINOIS	FED. AID PROJECT	

0047

SUMMARY OF QUANTITIES

				CONSTRUCTION TYPE CODES	
				100% STATE	
CODE NO.	ITEM	UNIT	TOTAL	BRIDGE 061-0077 RURAL	
* 78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	40	40	
* 78200011	BARRIER WALL REFLECTORS, TYPE C	EACH	24	24	
X6050222	FILLING INLETS, TEMPORARY	EACH	4	4	
X5051204	STRUCTURAL STEEL REMOVAL	POUND	4,390	4,390	
X5051206	STRUCTURAL STEEL REPAIR	POUND	650	650	
X5870015	BRIDGE DECK CONCRETE SEALER	SQ FT	11,430	11,430	
X7200201	WIDTH RESTRICTION SIGNING	L SUM	1	1	
Z0007101	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO.1	L SUM	1	1	
Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO.1	L SUM	1	1	
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1	
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	1	
∅ Z0076604	TRAINEES TRAINING PROGRAM GRADUATE	HOUR	500	500	

* SPECIALTY ITEM

∅ 0042

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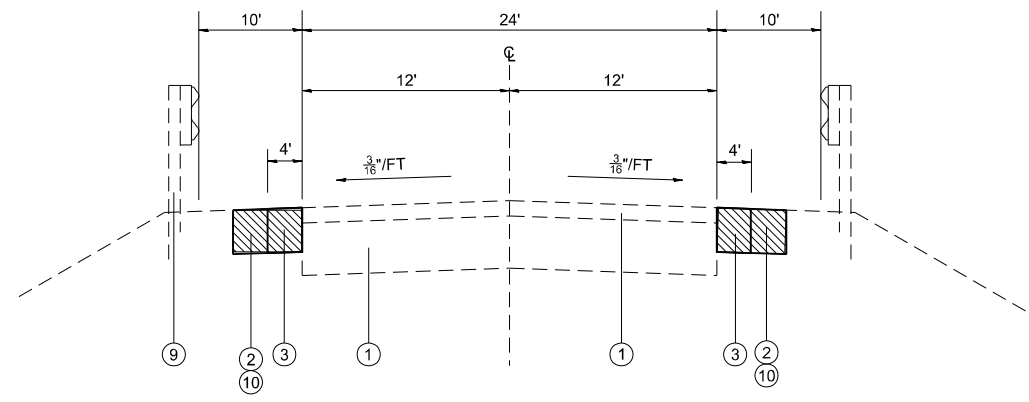
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

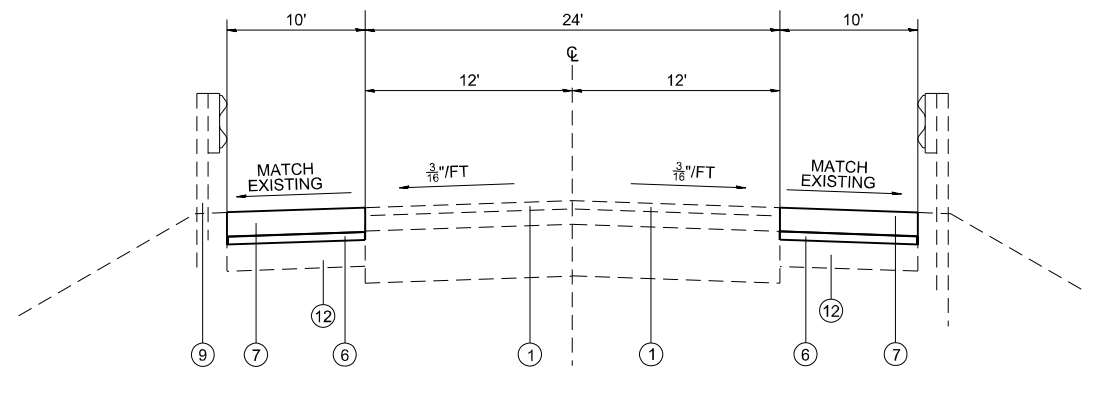
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CONTRACT NO. 76U77				
ILLINOIS FED. AID PROJECT				



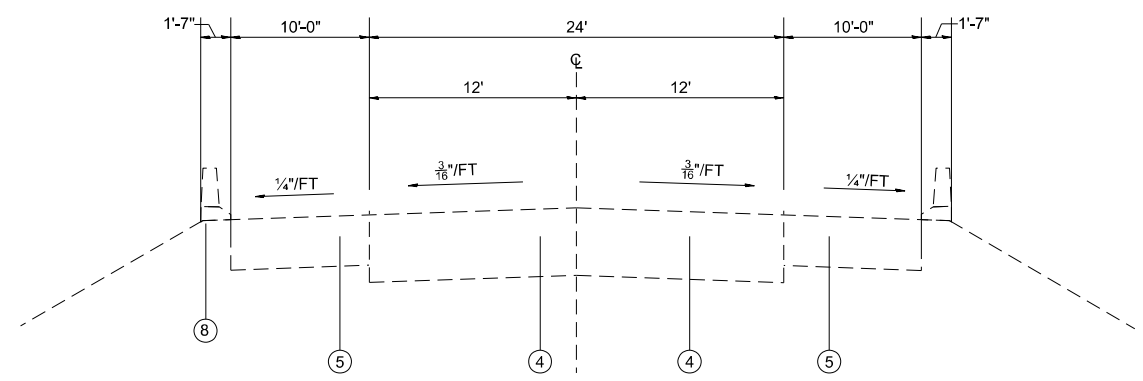
EXISTING APPROACH ROADWAY TYPICAL

STA. 1243+21.05 TO STA. 1245+96.05 - NB SOUTH SHOULDER
 STA. 1248+08.38 TO STA. 1250+18.38 - NB NORTH SHOULDER
 STA. 1243+86.05 TO STA. 1245+96.05 - SB SOUTH SHOULDER
 STA. 1248+08.38 TO STA. 1250+83.38 - SB NORTH SHOULDER



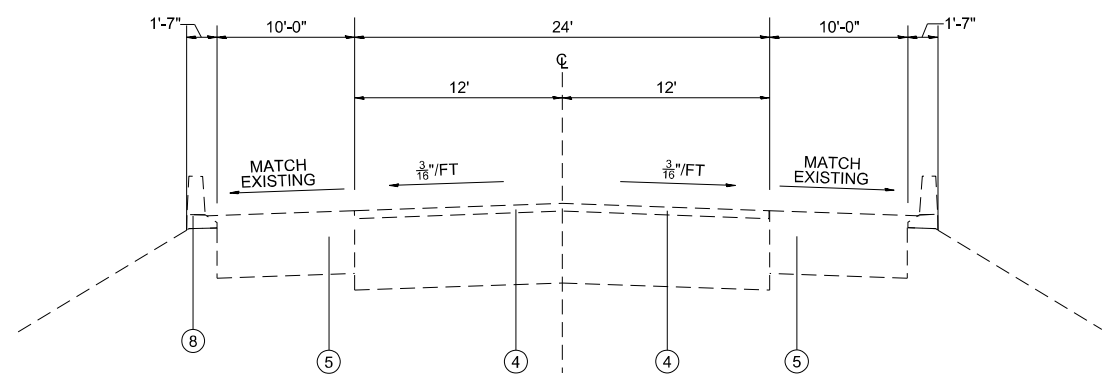
PROPOSED APPROACH ROADWAY TYPICAL

STA. 1243+21.05 TO STA. 1245+96.05 - NB SOUTH SHOULDER
 STA. 1248+08.38 TO STA. 1250+18.38 - NB NORTH SHOULDER
 STA. 1243+86.05 TO STA. 1245+96.05 - SB SOUTH SHOULDER
 STA. 1248+08.38 TO STA. 1250+83.38 - SB NORTH SHOULDER



EXISTING BRIDGE APPROACH PAVEMENT TYPICAL

STA. 1245+96.05 TO STA. 1248+08.38



PROPOSED BRIDGE APPROACH PAVEMENT TYPICAL

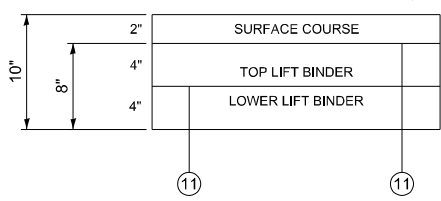
STA. 1245+96.05 TO STA. 1248+08.38

LEGEND

- ① EXISTING PAVEMENT
 - ② EXISTING AGGREGATE SHOULDER
 - ③ EXISTING HMA SHOULDER
 - ④ EXISTING BRIDGE APPROACH PAVEMENT
 - ⑤ EXISTING BRIDGE APPROACH SHOULDERS
 - ⑥ PROPOSED AGGREGATE BASE COURSE, TYPE A 2"
 - ⑦ PROPOSED HOT-MIX ASPHALT SHOULDERS, 10"
 - ⑧ EXISTING CONCRETE BARRIER (TYP.)
 - ⑨ EXISTING GUARDRAIL
 - ⑩ PROPOSED EARTH EXCAVATION WIDENING - [Hatched Box]
 - ⑪ PROPOSED BITUMINOUS MATERIAL TACK COAT
 - ⑫ EXISTING SUBBASE
- [Hatched Box] REMOVAL

NOTES

1. LIFT DETAILS FOR HOT-MIX ASPHALT SHOULDERS, 10"



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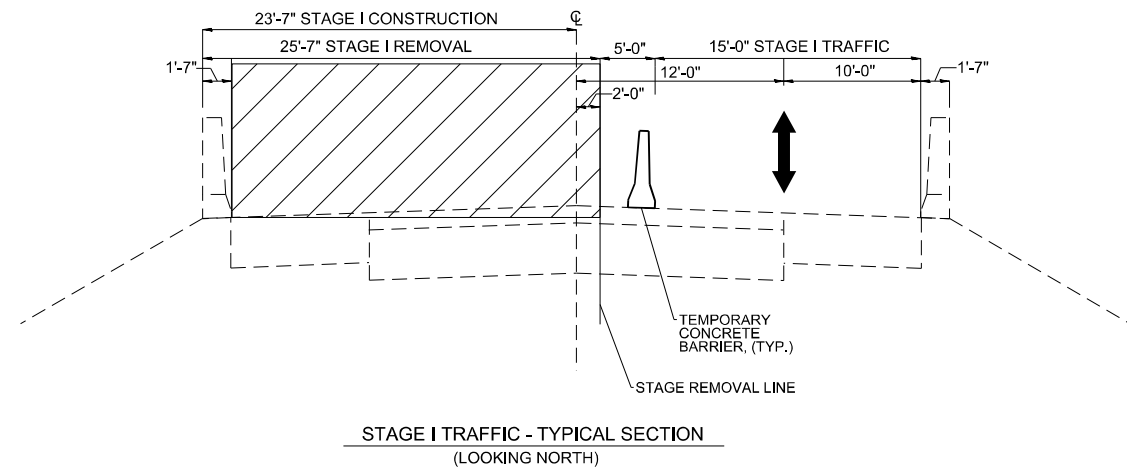
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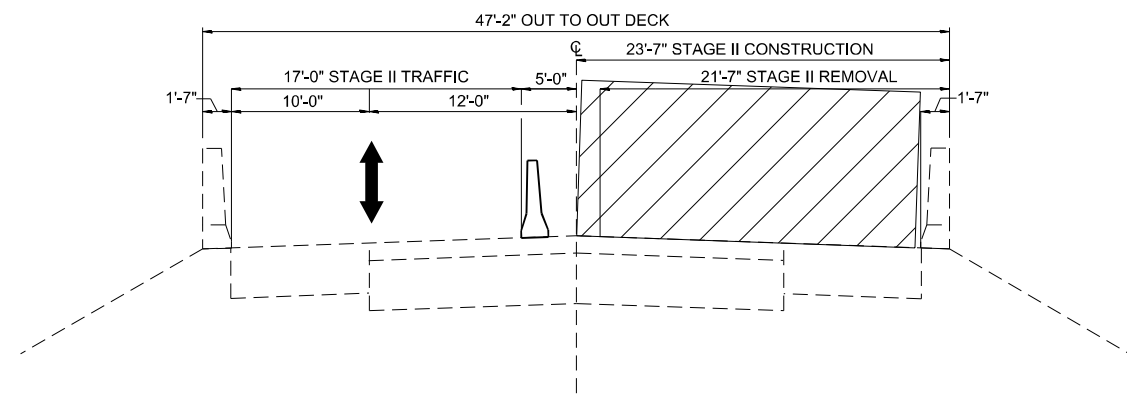
TYPICAL SECTIONS

SCALE: NA SHEET 01 OF 02 SHEETS STA. TO STA.

F.A.P. RTE. 322	SECTION 29-2 (BDR,BRR,BJR)	COUNTY MARION	TOTAL SHEETS 24	SHEET NO. 08
CONTRACT NO. 76U77				
ILLINOIS FED. AID PROJECT				



STAGE I TRAFFIC - TYPICAL SECTION
(LOOKING NORTH)



STAGE II TRAFFIC - TYPICAL SECTION
(LOOKING NORTH)

SUGGESTED SEQUENCE OF CONSTRUCTION

PRESTAGE CONSTRUCTION

1. PRESTAGE CONSTRUCTION SHALL CONSIST OF: REMOVAL OF THE EXISTING HMA SHOULDER FOR CONSTRUCTION OF THE PROPOSED WIDENING ON THE WEST SIDE OF THE PAVEMENT FOR STAGE I TRAFFIC.
2. TRAFFIC CONTROL FOR THIS WORK SHALL BE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF TC&P STD 701326.

STAGE I CONSTRUCTION:

1. STAGE I CONSTRUCTION SHALL CONSIST OF: CLOSING THE NORTHBOUND LANE OF US 51 AND SWITCHING BOTH LANES OF TRAFFIC TO THE SOUTHBOUND LANE; STAGE I BRIDGE REPAIRS AND JOINT REPLACEMENT; AND REMOVAL OF THE EXISTING HMA SHOULDERS FOR CONSTRUCTION OF THE PROPOSED WIDENING ON THE EAST SIDE OF THE PAVEMENT FOR STAGE II TRAFFIC. THIS WORK WILL BE DONE TO THE LIMITS SHOWN IN THE PLANS.
2. TRAFFIC CONTROL FOR THIS WORK SHALL BE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF TC&P STD 701321.

STAGE II CONSTRUCTION:

1. STAGE II CONSTRUCTION SHALL CONSIST OF: CLOSING THE SOUTHBOUND LANE OF US 51 AND SWITCHING BOTH LANES OF TRAFFIC TO THE NORTHBOUND LANES AND STAGE II BRIDGE REPAIRS AND JOINT REPLACEMENT. THIS WORK WILL BE DONE TO THE LIMITS SHOWN IN THE PLANS.
2. TRAFFIC CONTROL FOR THIS WORK SHALL BE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF TC&P STD 701321.

NOTES:

1. THE PROPOSED WIDENING SHALL CONSIST OF HOT MIX ASPHALT SHOULDERS - 10", AGGREGATE BASE COURSE, TYPE A 2" AND SHALL INCLUDE GRADING AGAINST WIDENING TO DRAIN.
2. ALL CONFLICTING PAVEMENT MARKING SHALL BE COVERED PRIOR TO PLACING PAVEMENT MARKING NECESSARY FOR STAGE CONSTRUCTION.
3. CHANGEABLE MESSAGE SIGNS SHALL BE PLACED 2 WEEKS PRIOR TO CONSTRUCTION AND AT THE DIRECTION OF THE ENGINEER.

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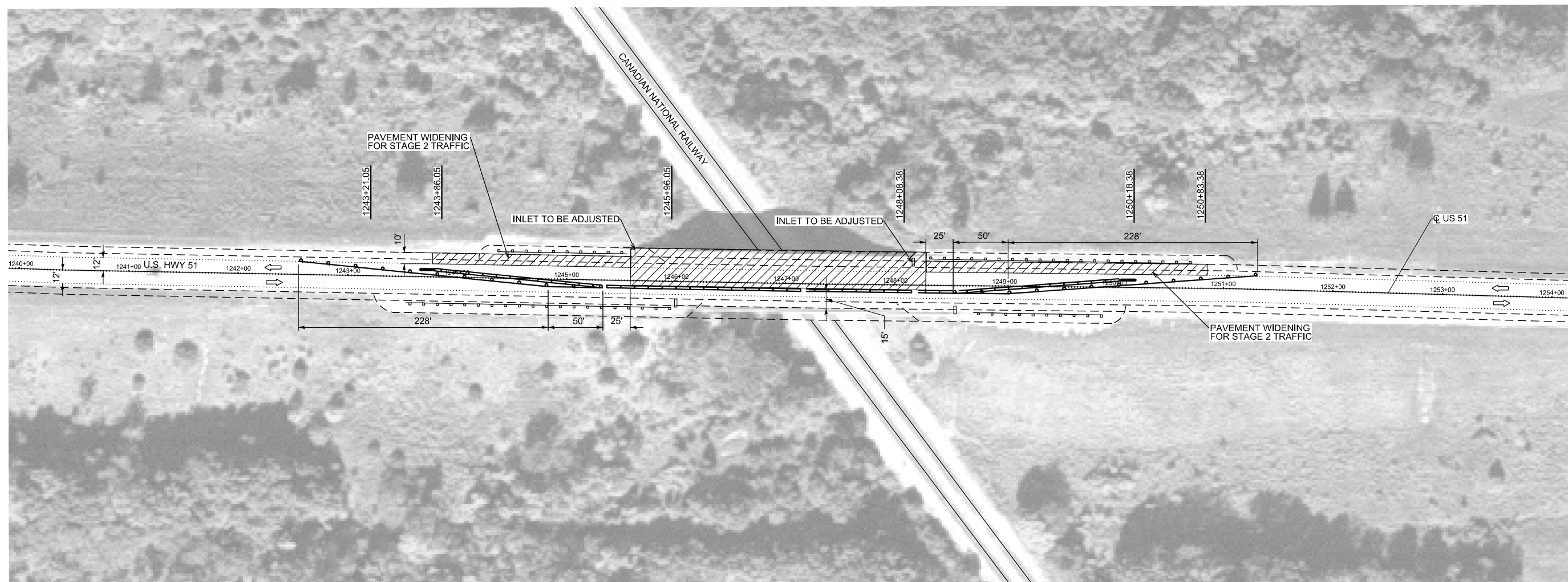
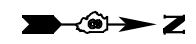
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STAGE CONSTRUCTION TYPICAL SECTIONS

SCALE: NA SHEET 02 OF 02 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	29-2 (BDR,BRR,BJR)	MARION	24	09
CONTRACT NO. 76U77				
		ILLINOIS	FED. AID PROJECT	



MOT PLAN LEGEND:

- WORK AREA
- DIRECTION OF TRAFFIC FLOW
- IMPACT ATTENUATOR
- TYPE III BARRICADE

- NOTES:**
- MOT CONFIGURATION BASED UPON AERIALS, NO TOPOGRAPHICAL SURVEY COMPLETED.
 - SEE HIGHWAY STANDARD 701321 FOR MORE DETAILS NOT SHOWN HERE.

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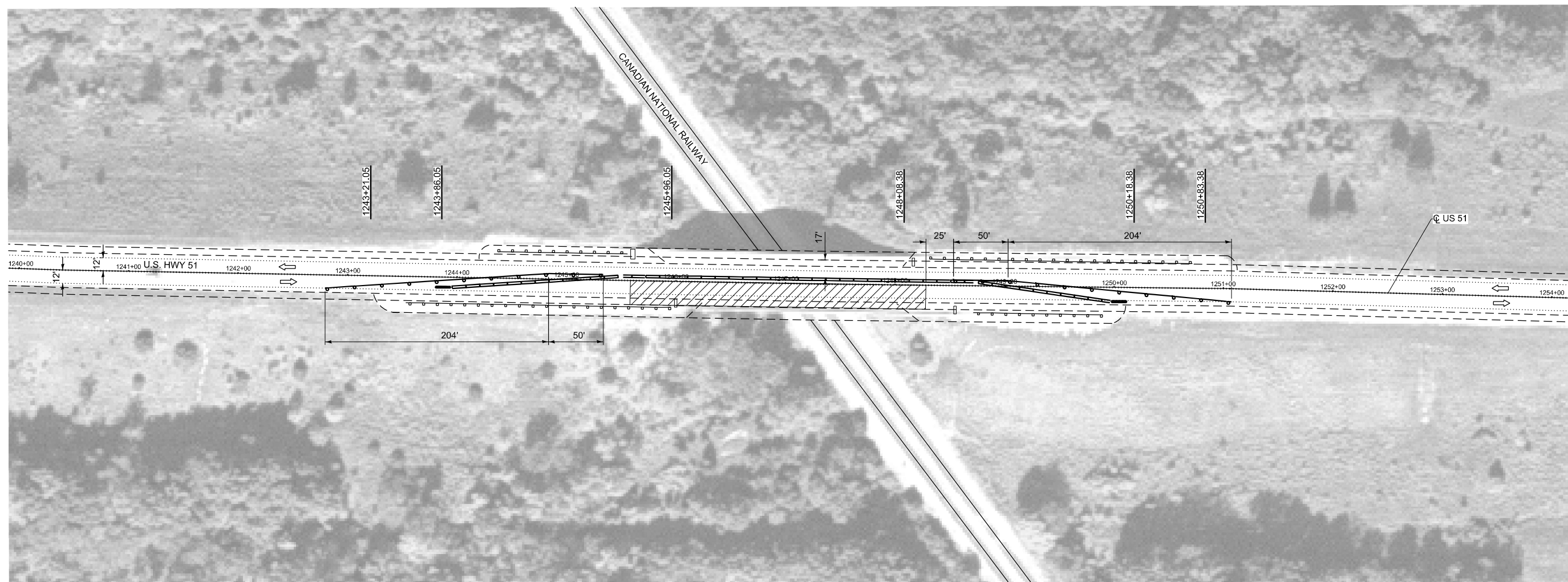
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION





MOT STAGE 1
CONSTRUCTION

SCALE: 1:1 SHEET 01 OF 02 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	29-2 (BDR,BRR,BJR)	MARION	24	12
CONTRACT NO. 76U77				
		ILLINOIS	FED. AID PROJECT	



MOT PLAN LEGEND:

	WORK AREA
	DIRECTION OF TRAFFIC FLOW
	IMPACT ATTENUATOR
	TYPE III BARRICADE

- NOTES:**
- MOT CONFIGURATION BASED UPON AERIALS, NO TOPOGRAPHICAL SURVEY COMPLETED.
 - SEE HIGHWAY STANDARD 701321 FOR MORE DETAILS NOT SHOWN HERE.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MOT STAGE 2
CONSTRUCTION

SCALE: 1:1 SHEET 02 OF 02 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	29-2 (BDR,BRR,BJR)	MARION	24	13
CONTRACT NO. 76U77				
		ILLINOIS	FED. AID PROJECT	

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Removal	Cu. Yd.	36.9
Concrete Superstructure	Cu. Yd.	73.4
Reinforcement Bars, Epoxy Coated	Pound	7,390
Bar Splicers	Each	66
Deck Slab Repair (Partial)	Sq. Yd.	30
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	20
Structural Steel Removal	Pound	4,390
Structural Steel Repair	Pound	650
Bridge Deck Concrete Sealer	Sq. Ft.	11,176
Containment and Disposal of Lead Paint Cleaning Residues No. 1	L. Sum	1
Cleaning and Painting Steel Bridge No. 1	L. Sum	1

INDEX OF SHEETS

1. General Plan and Elevation
2. Cross Sections
3. Temporary Concrete Barrier
4. South Abutment Joint Elimination Details
5. North Abutment Joint Elimination Details
6. Joint Elimination Details
7. Diaphragm Details
8. Deck Repair Plan
9. Beam Repair Details
10. Bar Splicer Assembly and Mechanical Splicer Details

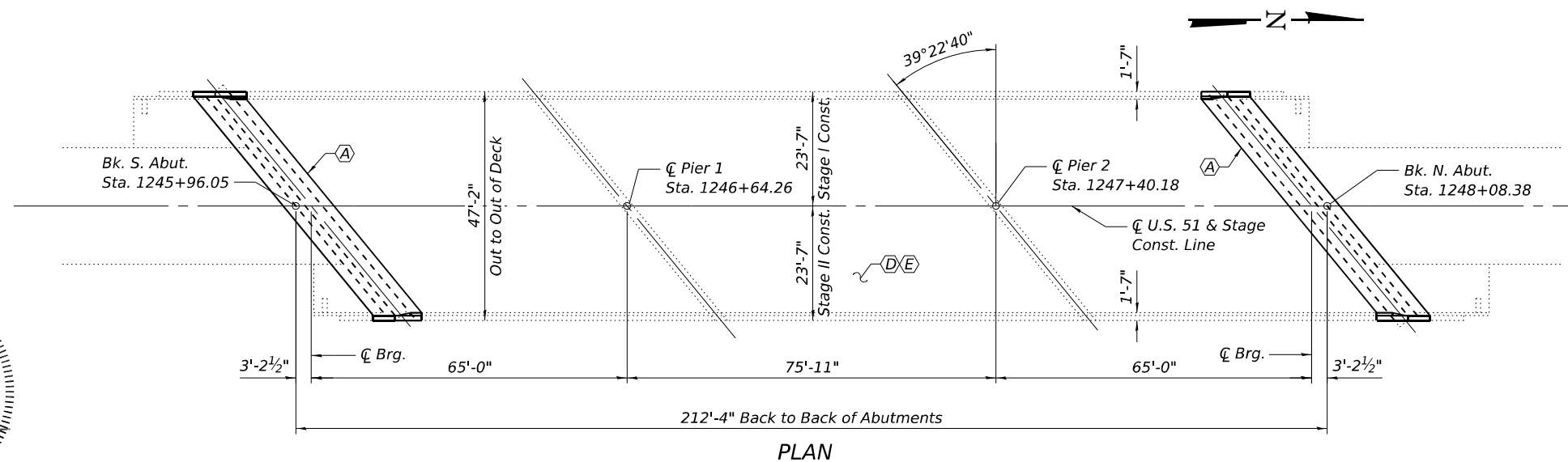
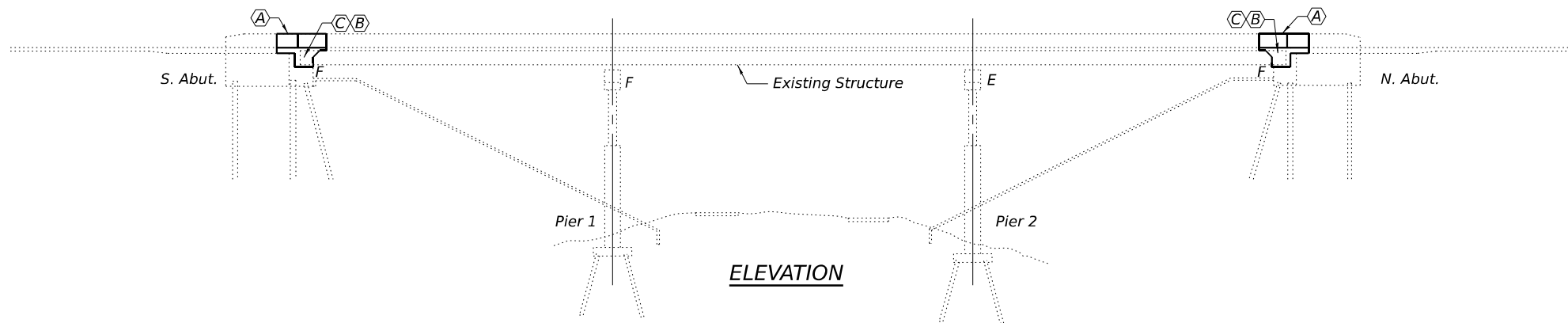
DESIGN STRESSES

FIELD UNITS (New Const.)
 $f'c = 4,000$ psi (Superstructure)
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 36,000$ psi (M270 Grade 36)

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.
 Fasteners shall be ASTM F 3125 Grade A325 Type 1, mechanically galvanized bolts. Bolts $\frac{3}{4}$ " ϕ , holes $1\frac{1}{16}$ " ϕ , unless otherwise noted.
 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.
 Plan dimensions and details relative to the existing structure have been taken from existing plans and 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.
 The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
 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 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 (SSPC-SP10) shall be painted according to the requirements of the Organic Zinc-Rich Primer/Epoxy/Urethane paint system. The color of the final finish coat for all steel surfaces shall be Interstate Green, Munsell No. 7.5G 4/8.
 A minimum of 2 air monitors will be required to monitor abrasive blasting operations at this site. See special provision for "Containment and Disposal of Lead Paint Cleaning Residues."
 SSPC QP1 and SSPC QP2 Certification is required for this Contract. No field welding is permitted except as specified in the contract documents.
 All new Structural Steel shall be hot-dip galvanized. See Special Provisions for "Hot Dip Galvanizing for Structural Steel".
 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.

- (A) Expansion joint elimination and approach pavement replacement at abutments.
- (B) Structural Steel Repairs.
- (C) Clean and paint beam ends prior to encasement.
- (D) Bridge Deck Concrete Sealer placed on top/inside faces of parapets full length, curbs, new concrete at joints, and existing deck surface full length after deck repairs.
- (E) Deck Slab Repair (Partial) and Deck Slab Repair (Full Depth, Type II) (see sheet 8 of 10).



GENERAL PLAN & ELEVATION
U.S. 51 OVER ILLINOIS CENTRAL R.R.
F.A.P. RTE. 322 - SEC. 29-2(BDR,BRR,BJR)
MARION COUNTY
STA. 1247+30.95
STRUCTURE NO. 061-0077

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
STRUCTURE NO. 061-0077

SHEET 1 OF 10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	29-2(BDR,BRR,BJR)	MARION	24	15
CONTRACT NO. 76U77				
ILLINOIS FED. AID PROJECT				

TOTAL BILL OF MATERIAL

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Reinforcement Bars, Epoxy Coated	Pound	7,390
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Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	20
Structural Steel Removal	Pound	4,390
Structural Steel Repair	Pound	650
Bridge Deck Concrete Sealer	Sq. Ft.	11,430
Containment and Disposal of Lead Paint Cleaning Residues No. 1	L. Sum	1
Cleaning and Painting Steel Bridge No. 1	L. Sum	1

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7. Diaphragm Details
8. Deck Repair Plan
9. Beam Repair Details
10. Bar Splicer Assembly and Mechanical Splicer Details

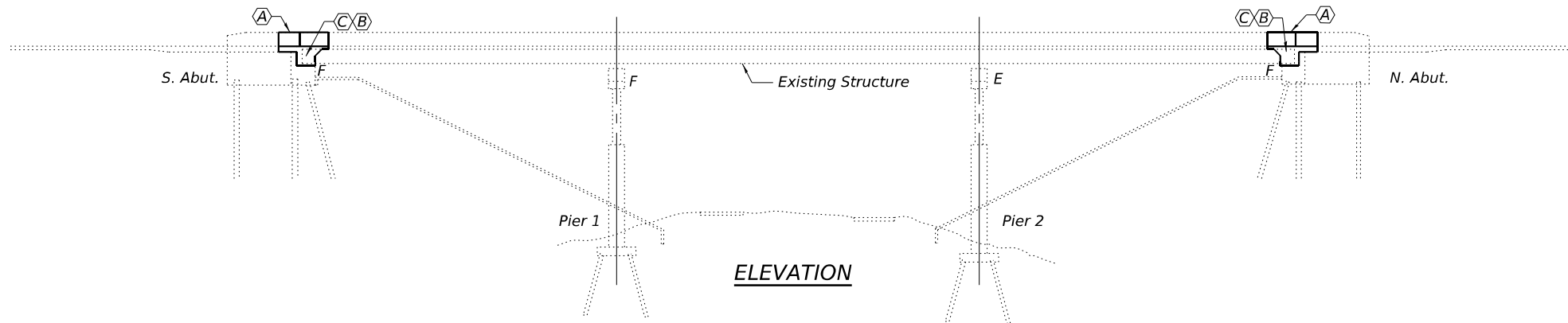
DESIGN STRESSES

FIELD UNITS (New Const.)
 $f'c = 4,000$ psi (Superstructure)
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 36,000$ psi (M270 Grade 36)

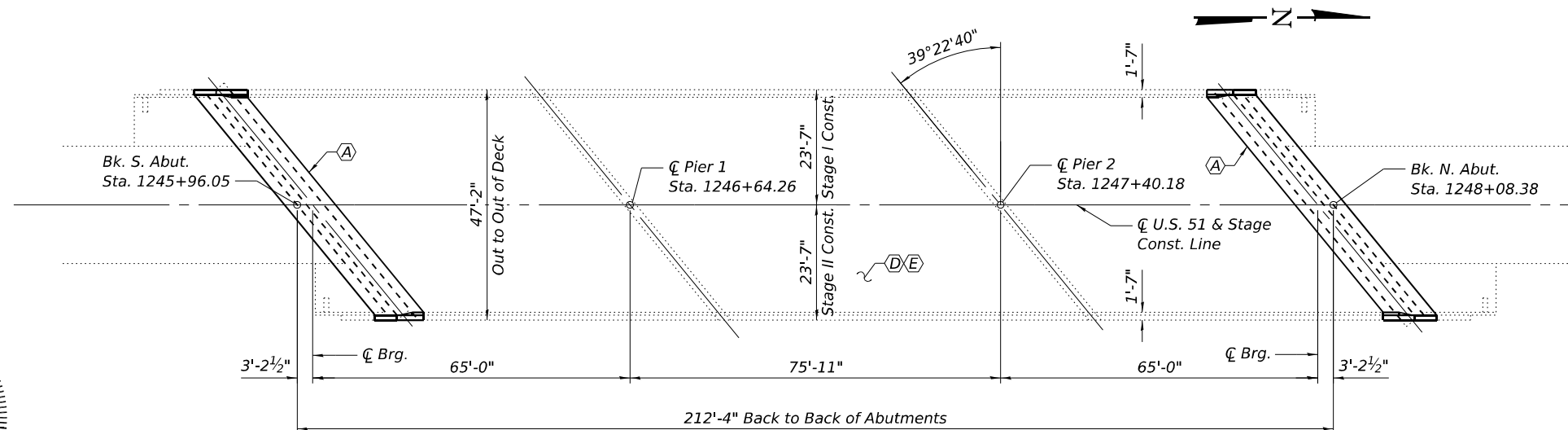
GENERAL NOTES

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 Fasteners shall be ASTM F 3125 Grade A325 Type 1, mechanically galvanized bolts. Bolts $\frac{3}{4}$ " ϕ , holes $1\frac{1}{16}$ " ϕ , unless otherwise noted.
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 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.

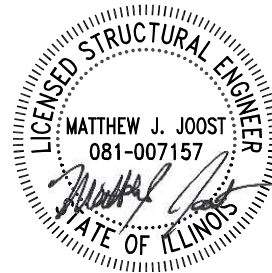
- (A) Expansion joint elimination and approach pavement replacement at abutments.
- (B) Structural Steel Repairs.
- (C) Clean and paint beam ends prior to encasement.
- (D) Bridge Deck Concrete Sealer placed on top/inside faces of parapets full length, curbs, new concrete at joints, and existing deck surface full length after deck repairs.
- (E) Deck Slab Repair (Partial) and Deck Slab Repair (Full Depth, Type II) (see sheet 8 of 10).



ELEVATION



PLAN



Signed: 3/3/2026
 Expires: 11/30/2026

GENERAL PLAN & ELEVATION
U.S. 51 OVER ILLINOIS CENTRAL R.R.
F.A.P. RTE. 322 - SEC. 29-2(BDR,BRR,BJR)
MARION COUNTY
STA. 1247+30.95
STRUCTURE NO. 061-0077

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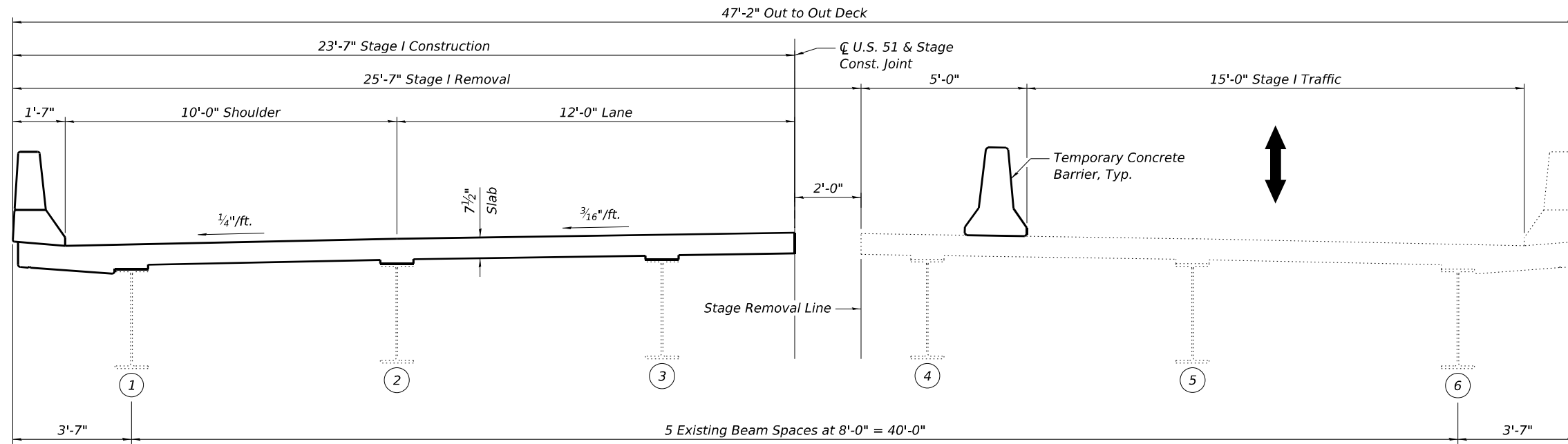
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
STRUCTURE NO. 061-0077

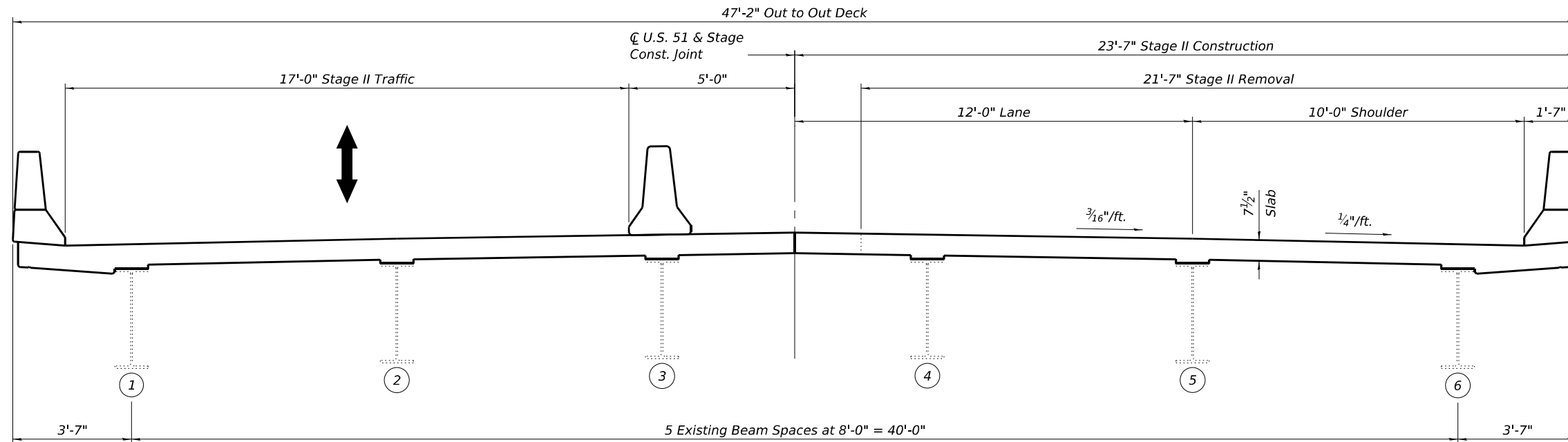
SHEET 1 OF 10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	29-2(BDR,BRR,BJR)	MARION	24	15
CONTRACT NO. 76U77				
ILLINOIS FED. AID PROJECT				



STAGE I CONSTRUCTION AT ABUTMENT

(Looking North)



STAGE II CONSTRUCTION AT ABUTMENT

(Looking North)

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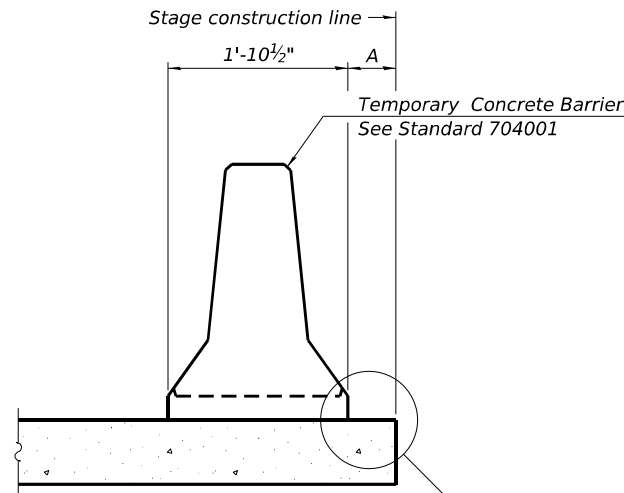
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS
STRUCTURE NO. 061-0077**

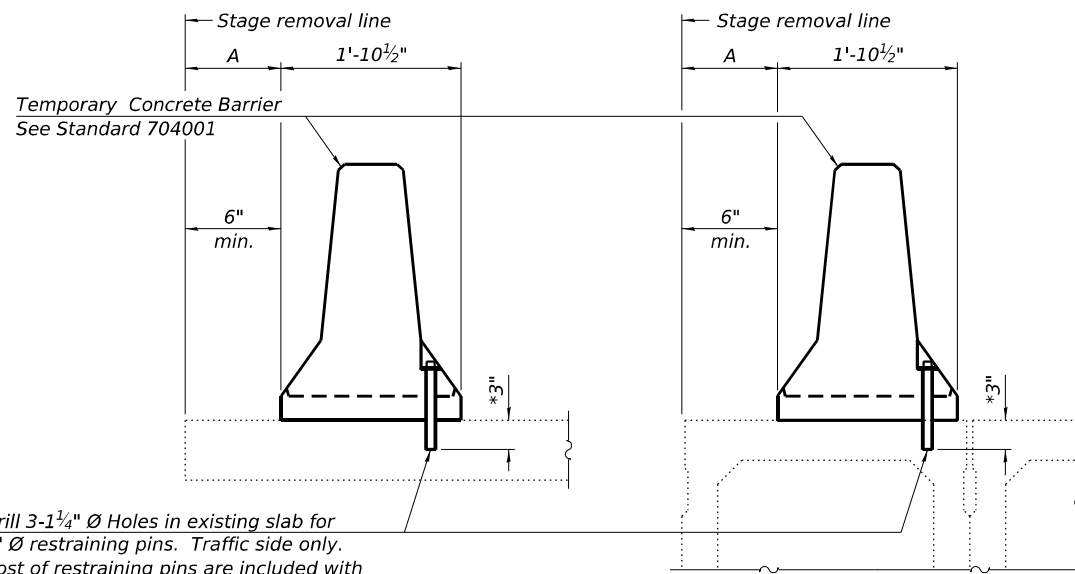
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CONTRACT NO. 76U77				
ILLINOIS FED. AID PROJECT				



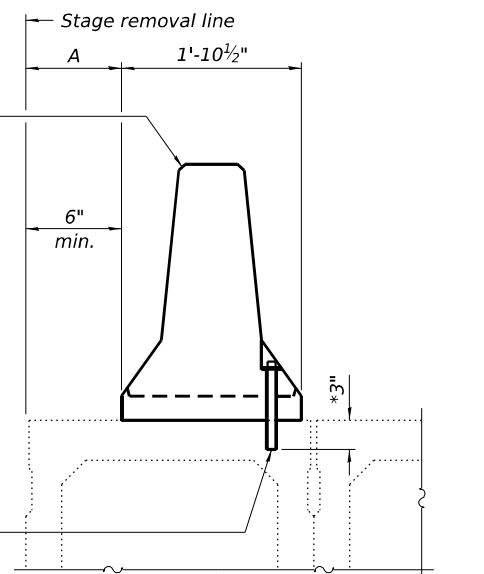
When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

NEW SLAB OR NEW DECK BEAM



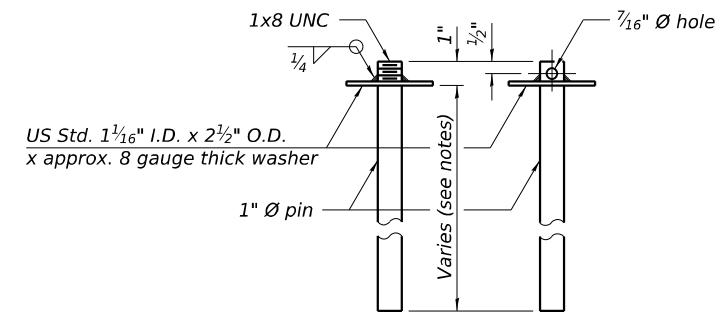
Drill 3-1/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

EXISTING SLAB



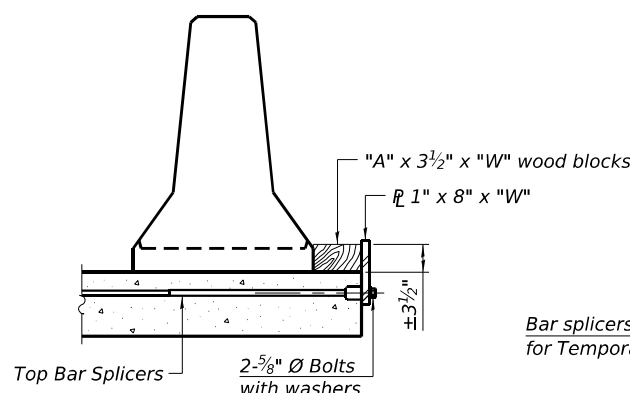
* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

EXISTING DECK BEAM

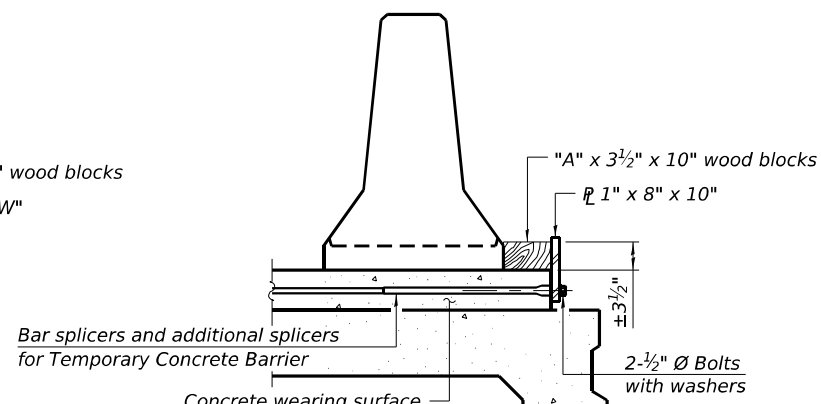


RESTRAINING PIN

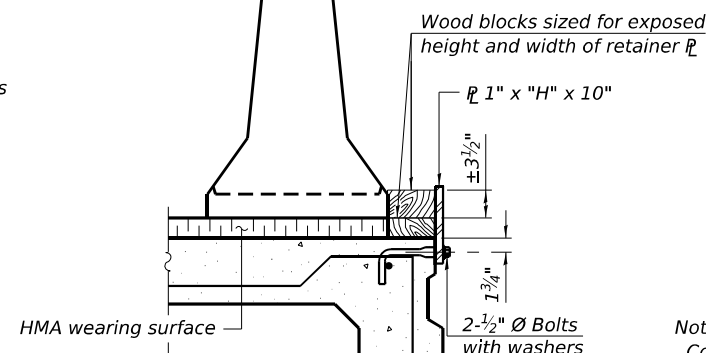
SECTIONS THRU SLAB OR DECK BEAM



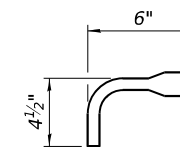
DETAIL I



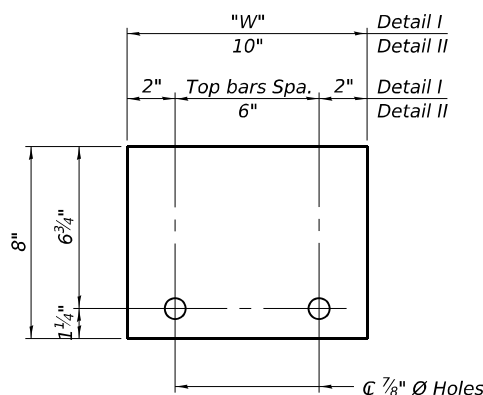
DETAIL II



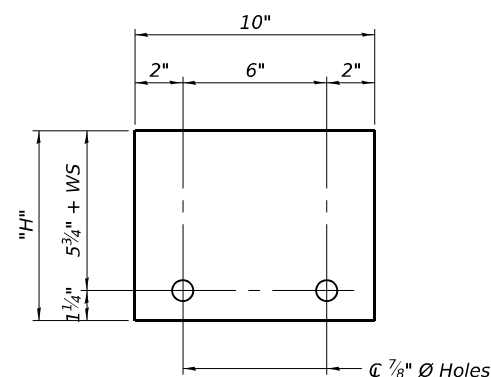
DETAIL III



BAR SPLICER FOR #4 BAR - DETAIL III



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



STEEL RETAINER P 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 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 5-15-2023

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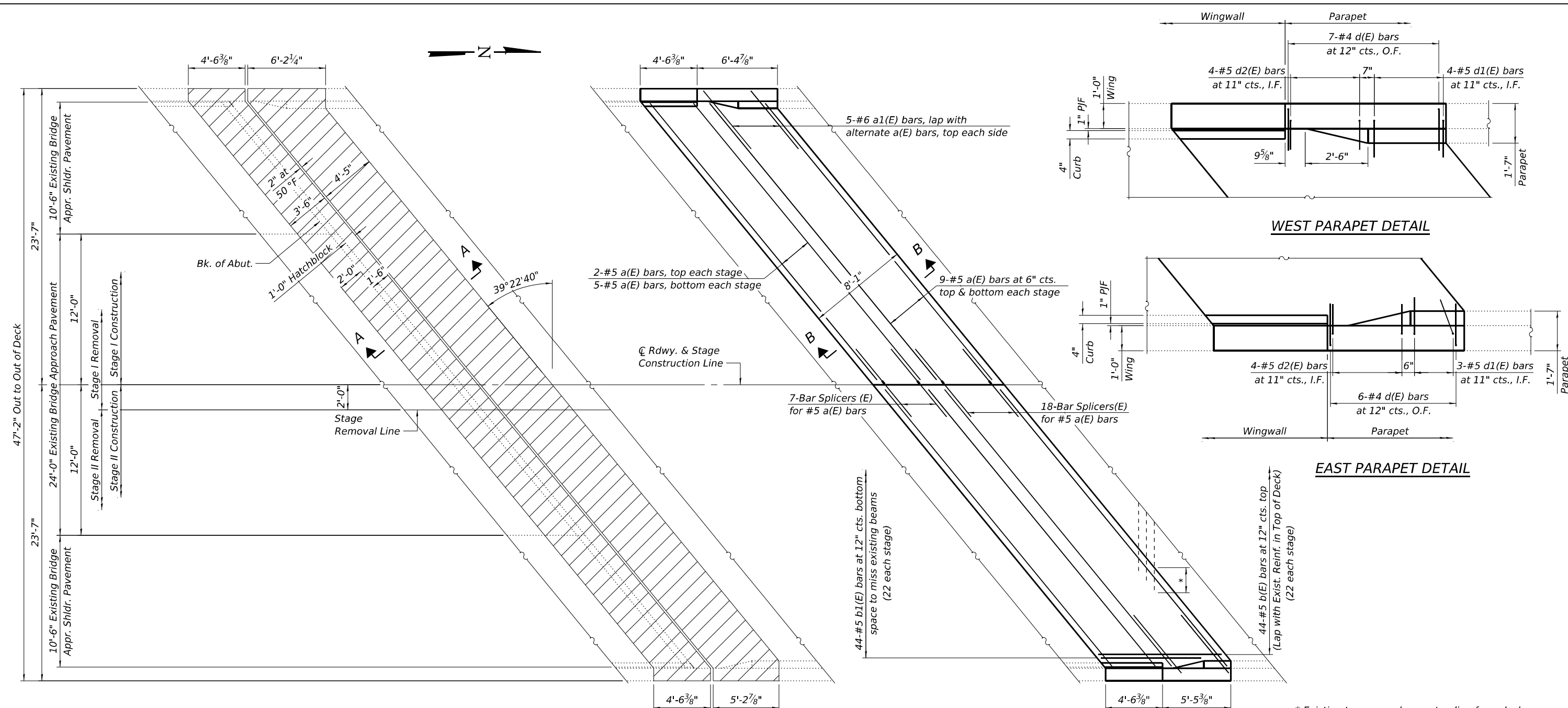
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**TEMPORARY CONCRETE BARRIER
 STRUCTURE NO. 061-0077**

SHEET 3 OF 10 SHEETS

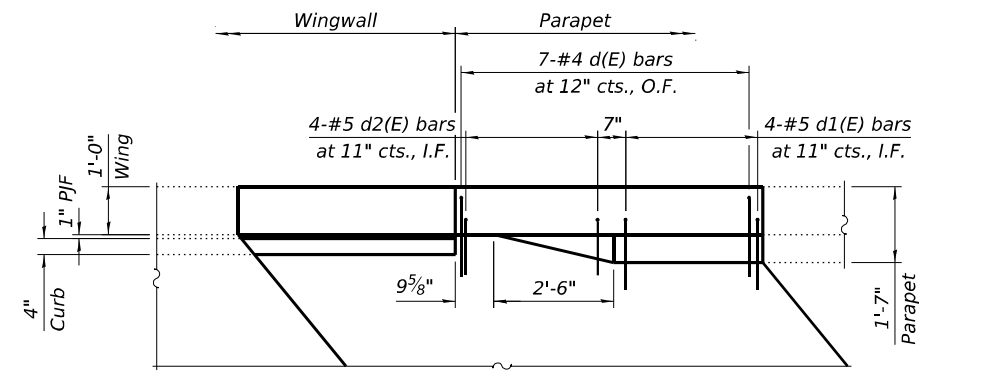
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CONTRACT NO. 76U77				
ILLINOIS FED. AID PROJECT				



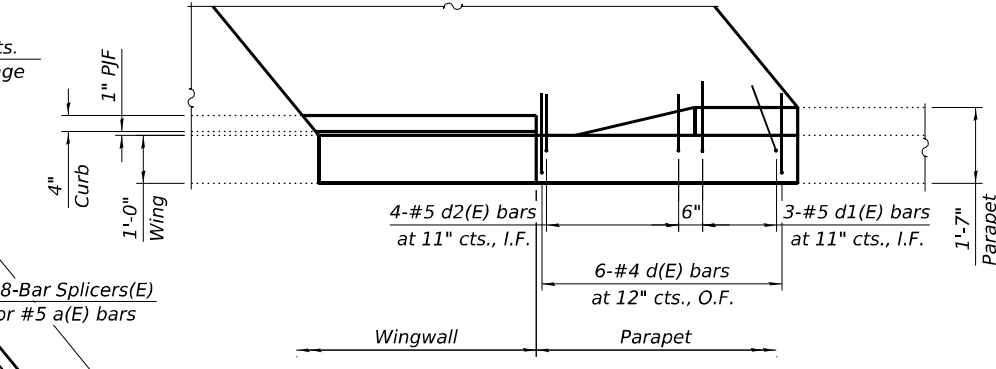
Concrete Removal

CONCRETE REMOVAL PLAN

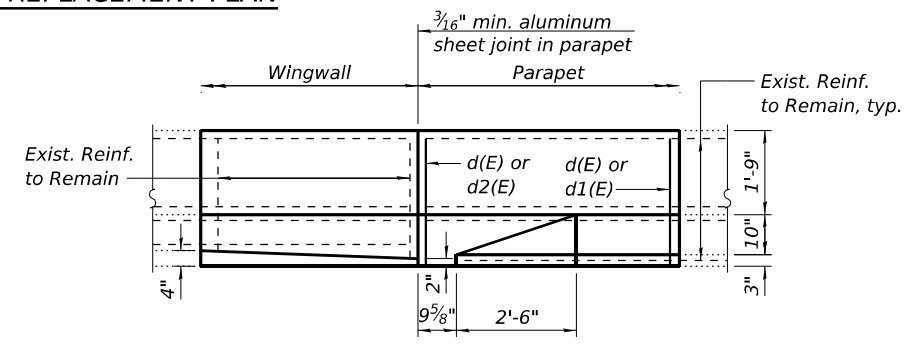
CONCRETE REPLACEMENT PLAN



WEST PARAPET DETAIL



EAST PARAPET DETAIL



INSIDE ELEVATION OF PARAPET & CURB

See Sheet 6 of 10 for Sections thru Parapet and Wingwall Parapet

Notes:
 See Sheet 6 of 10 for Bill of Material, Parapet Details, and Sections A-A & B-B.
 See Sheet 10 of 10 for Bar Splicer details

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TWM
 ENGINEERING
 GEOSPATIAL SERVICES
 TWM, INC.
 WWW.TWM-INC.COM
 IL DESIGN FIRM
 LICENSE NO:
 184-001220

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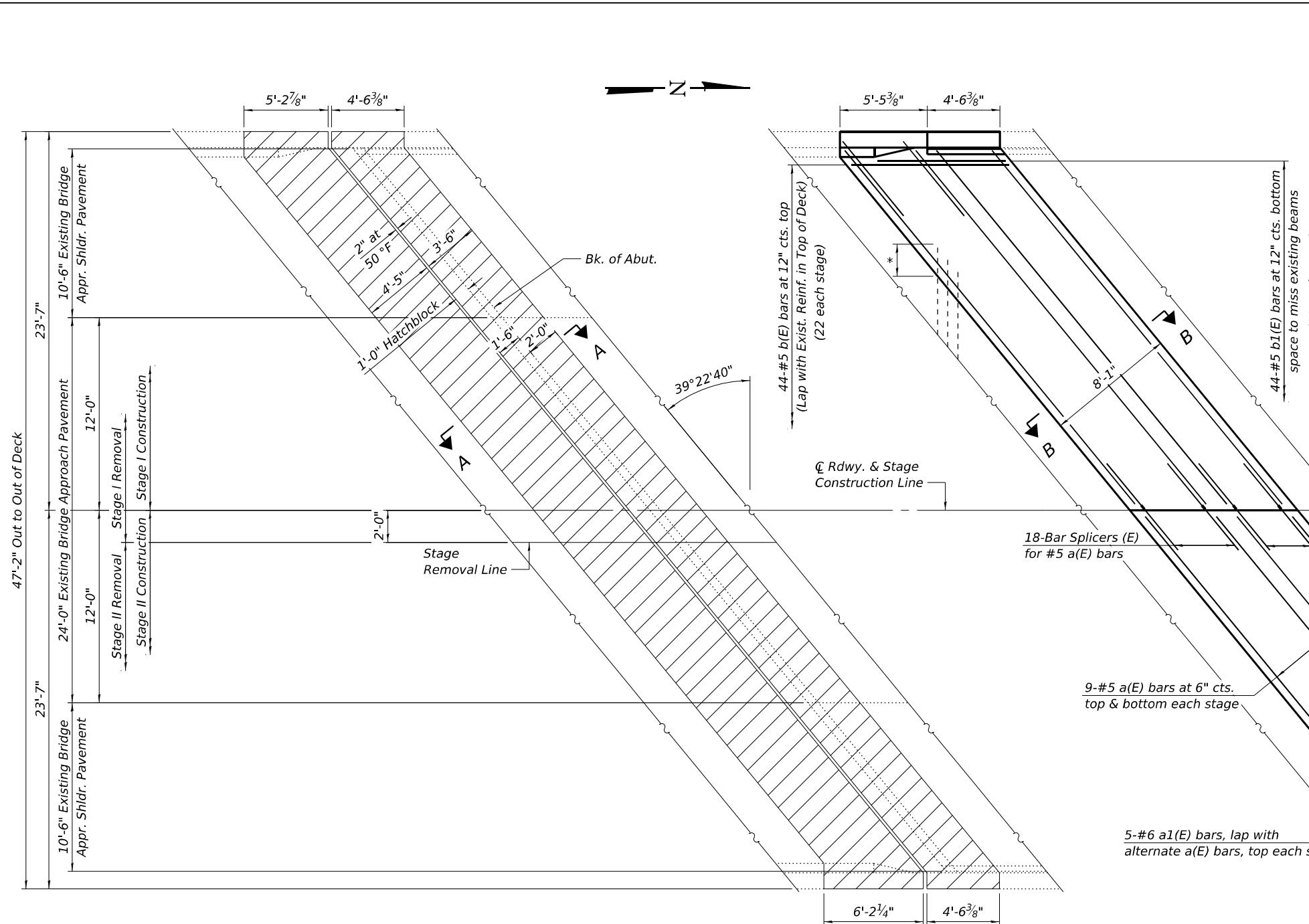
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**SOUTH ABUTMENT JOINT ELIMINATION DETAILS
 STRUCTURE NO. 061-0077**

SHEET 4 OF 10 SHEETS

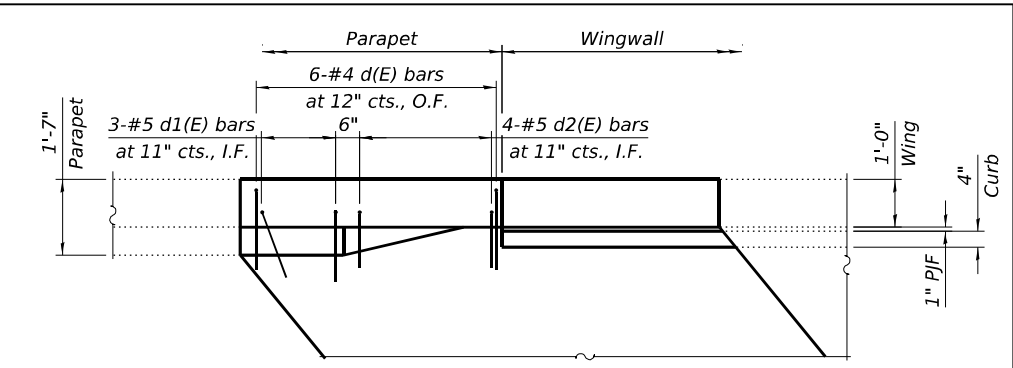
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ILLINOIS FED. AID PROJECT				

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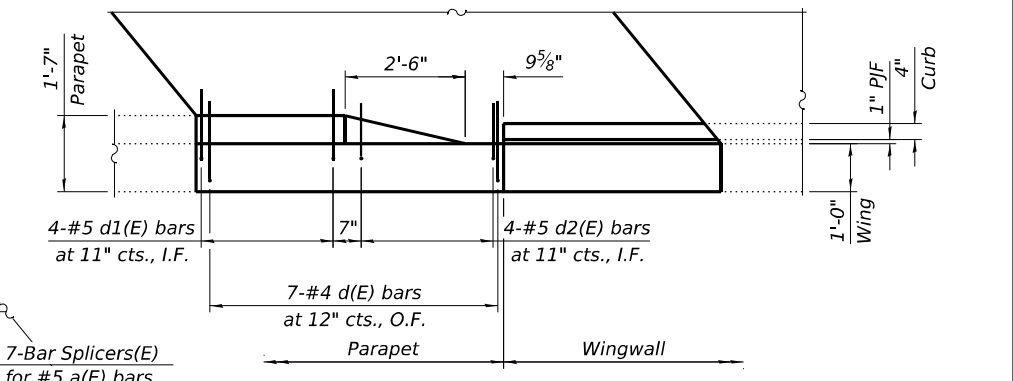


Concrete Removal

CONCRETE REMOVAL PLAN



WEST PARAPET DETAIL

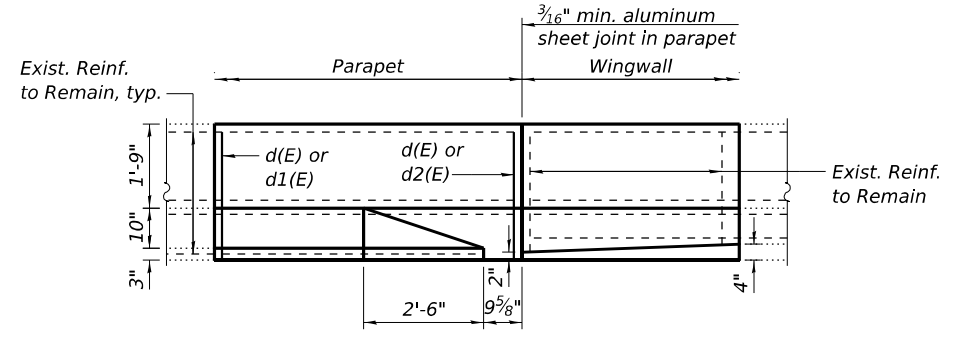


EAST PARAPET DETAIL

18-Bar Splicers (E) for #5 a(E) bars
 7-Bar Splicers (E) for #5 a(E) bars
 9-#5 a(E) bars at 6" cts. top & bottom each stage
 2-#5 a(E) bars, top each stage
 5-#5 a(E) bars, bottom each stage
 5-#6 a1(E) bars, lap with alternate a(E) bars, top each side

* Existing transverse bars extending from deck into removal area shall be cut allowing 2'-0" to extend into removal area.

CONCRETE REPLACEMENT PLAN



INSIDE ELEVATION OF PARAPET & CURB

See Sheet 6 of 10 for Sections thru Parapet and Wingwall Parapet

Notes:
 See Sheet 6 of 10 for Bill of Material, Parapet Details, and Sections A-A & B-B.
 See Sheet 10 of 10 for Bar Splicer details.

TWM
 TWM, INC.
 ENGINEERING
 GEOSPATIAL SERVICES
 IL DESIGN FIRM LICENSE NO: 184-001220

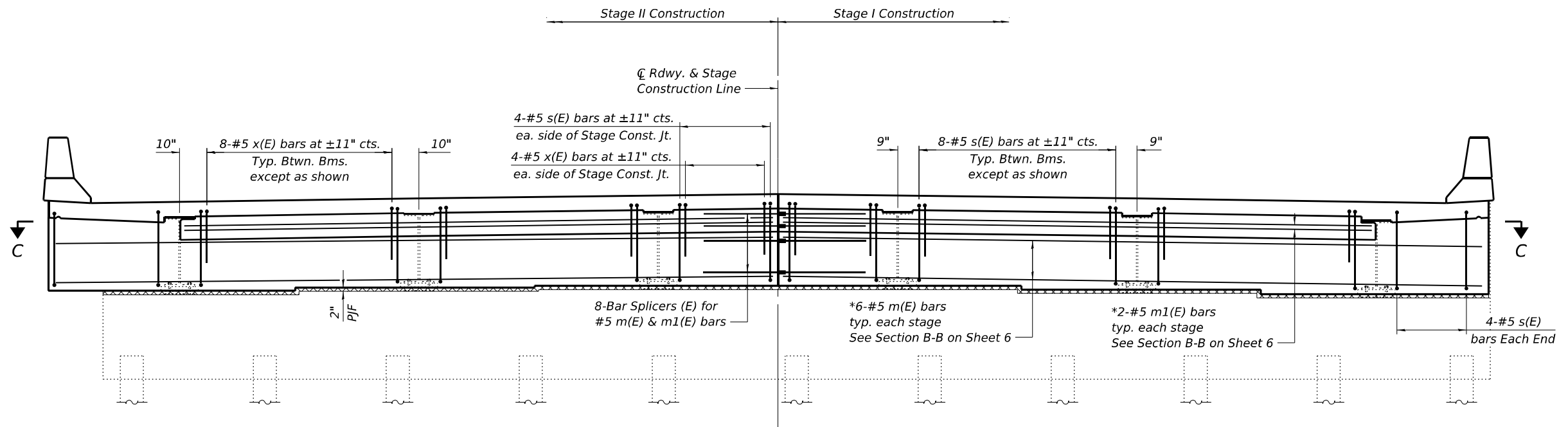
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**NORTH ABUTMENT JOINT ELIMINATION DETAILS
 STRUCTURE NO. 061-0077**

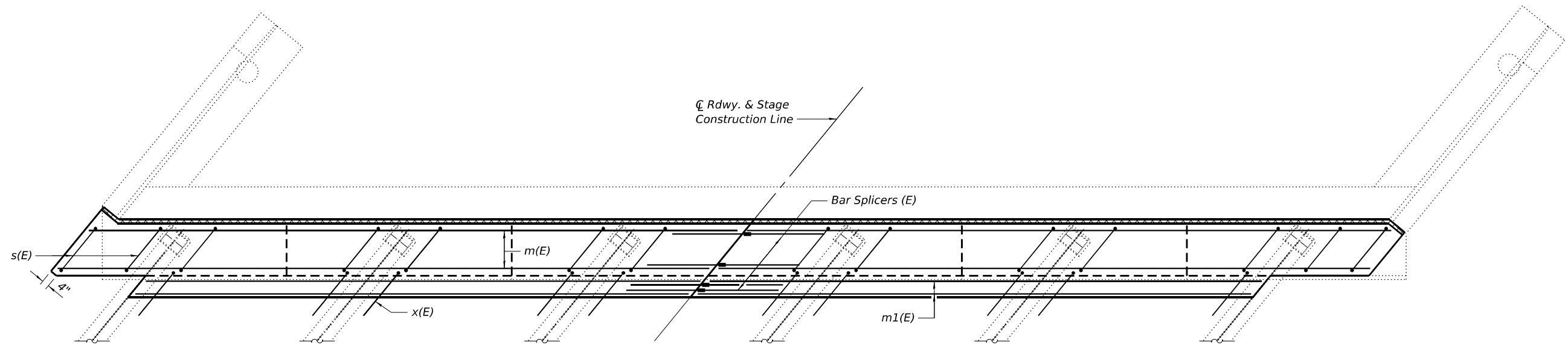
SHEET 5 OF 10 SHEETS

F.A.P. RTE. 322	SECTION 29-2(BDR,BRR,BJR)	COUNTY MARION	TOTAL SHEETS 24	SHEET NO. 19
CONTRACT NO. 76U77				
ILLINOIS FED. AID PROJECT				



DIAPHRAGM AT ABUTMENT
(South Abutment looking South shown, North Abutment similar)

*Bars to be placed through 1" Ø holes drilled in beam webs where appropriate



SECTION C-C

Notes:
See Sheet 6 of 10 for Superstructure details and Bill of Material.
See Sheet 10 of 10 for Bar Splicer details.
The s(E) and x(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.

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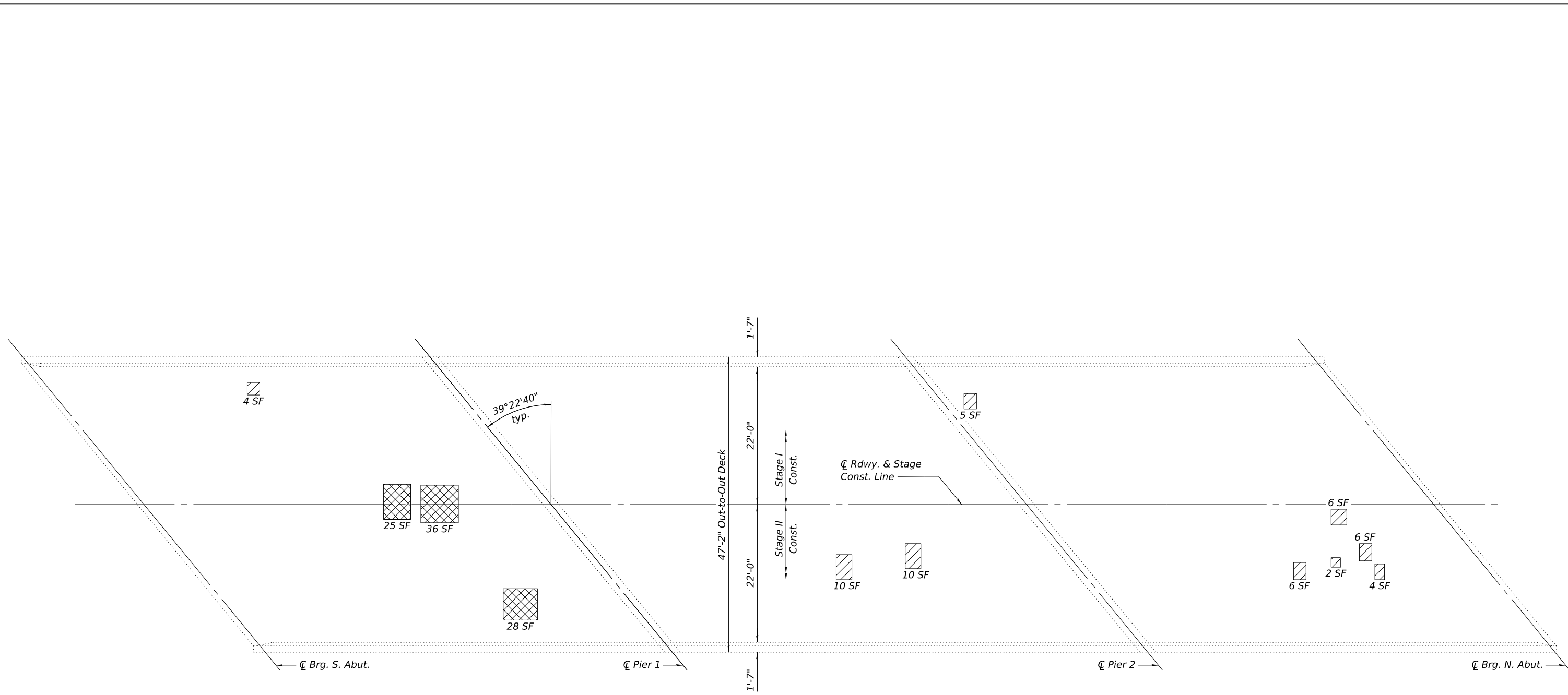
**STATE OF ILLINOIS
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**DIAPHRAGM DETAILS
STRUCTURE NO. 061-0077**

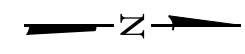
SHEET 7 OF 10 SHEETS

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CONTRACT NO. 76U77				
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- Deck Slab Repair (Partial)
- Deck Slab Repair (Full Depth, Type II)



DECK REPAIR PLAN

Notes:
 *Areas of deck repairs shown are estimated. Quantities increased over deck survey for contingency.
 The Engineer shall show actual locations and size of deck repairs on As-built Plans.

BILL OF MATERIAL

Item	Unit	Total
* Deck Slab Repair (Partial)	Sq. Yd.	30
* Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	20



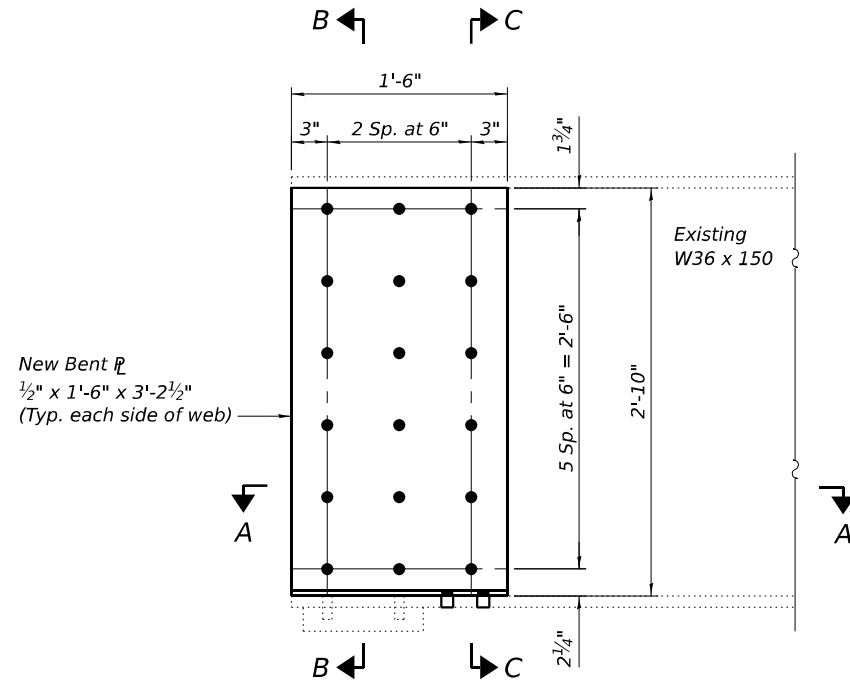
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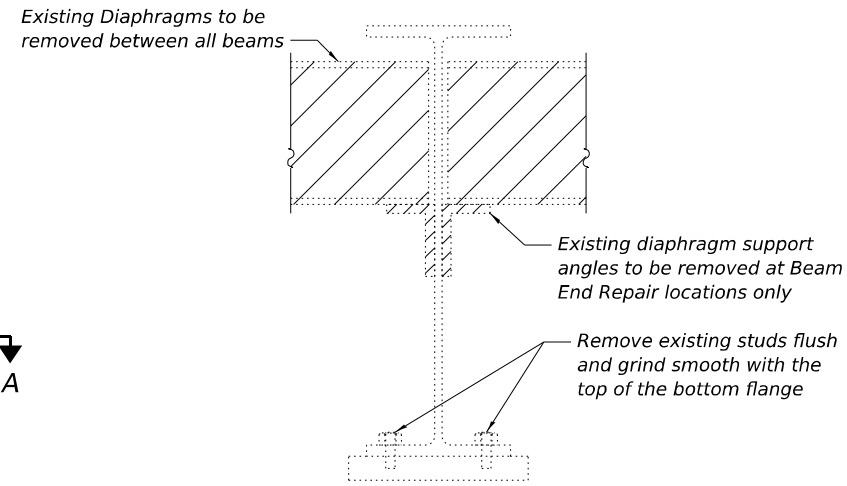
**DECK REPAIR PLAN
 STRUCTURE NO. 061-0077**

SHEET 8 OF 10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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			CONTRACT NO. 76U77	
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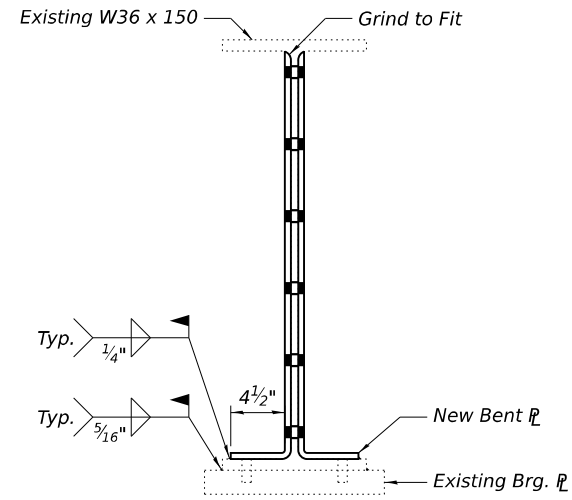


BEAM END REPAIRS



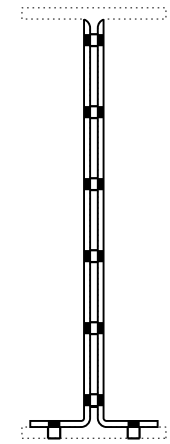
SECTION B-B

(Showing diaphragm & clip angle removal)



SECTION B-B

(Showing beam end repairs)

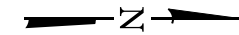


SECTION C-C

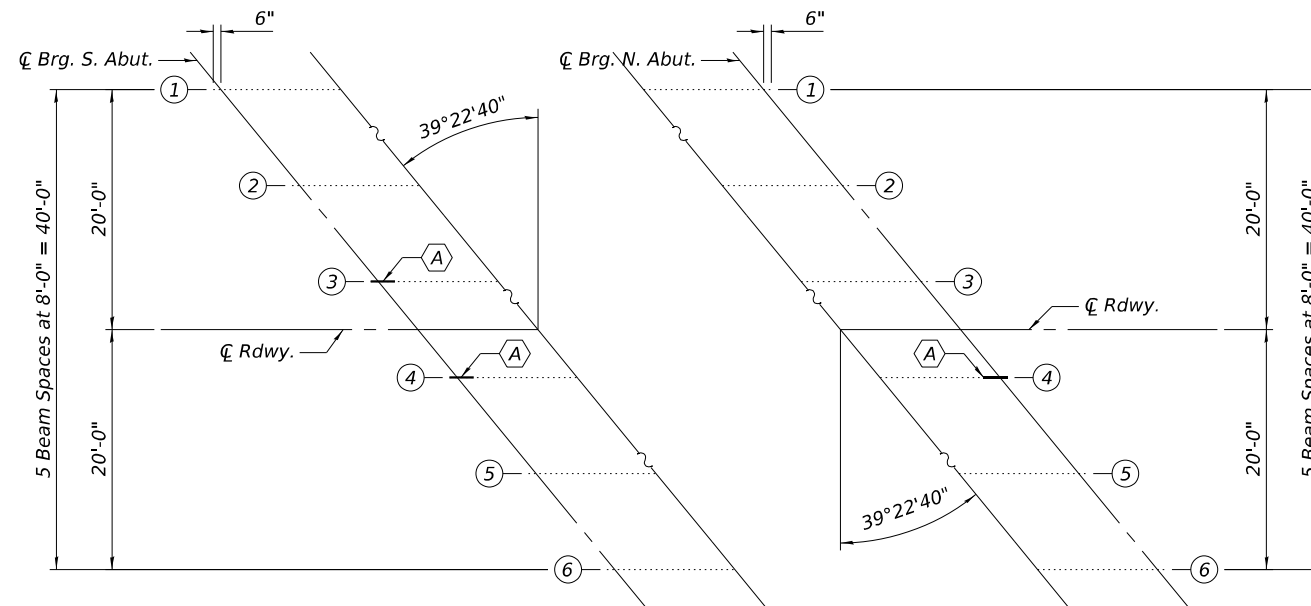
For details not shown, see Section B-B

BOLT HOLE LEGEND

- Field drill holes
- Shop drill holes



A - Beam End Repairs

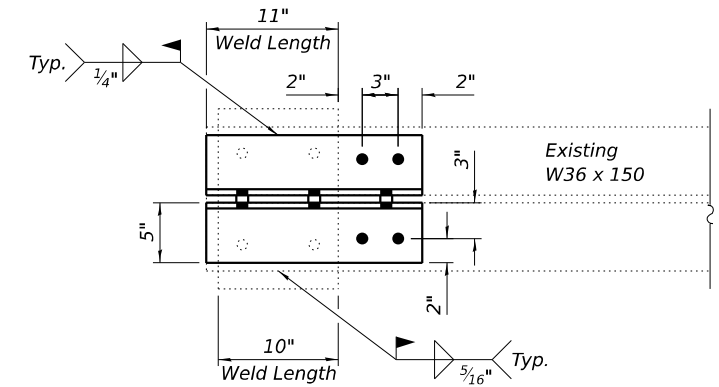


FRAMING PLAN - S. ABUT.

All Beams are W36 x 150

FRAMING PLAN - N. ABUT.

All Beams are W36 x 150



SECTION A-A

Notes:

- Existing diaphragm support angle to be removed using air-arc method and grind smooth all weld material remaining on web. Cost included with the Structural Steel Removal.
- All holes in existing steel shall be field drilled using shop drilled holes in new steel as a template, except as noted.
- Cost of furnishing and erecting steel for beam end repairs shall be included with Structural Steel Repair.
- Removal of existing diaphragm support angles, where required, and diaphragms shall be included in Structural Steel Removal.

BILL OF MATERIAL

Item	Unit	Total
Structural Steel Removal	Pound	4,390
Structural Steel Repair	Pound	650

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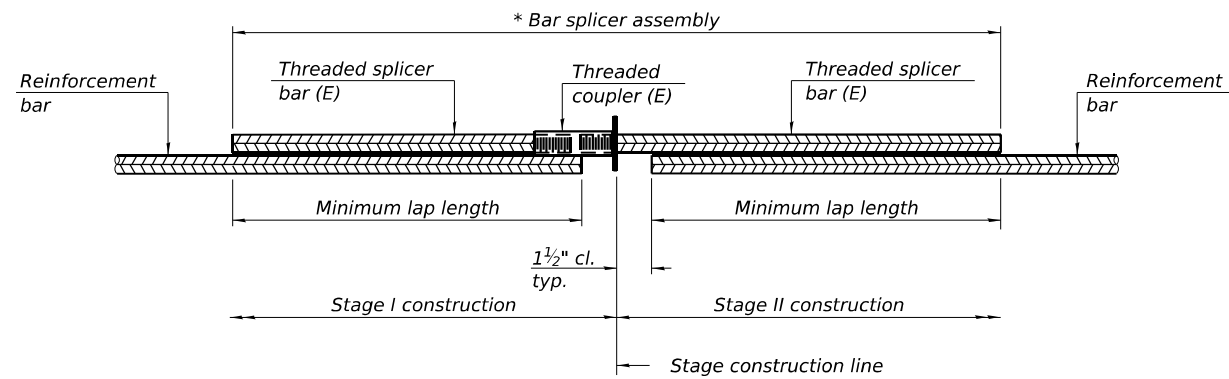
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**STATE OF ILLINOIS
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**BEAM REPAIR DETAILS
STRUCTURE NO. 061-0077**

SHEET 9 OF 10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 76U77				
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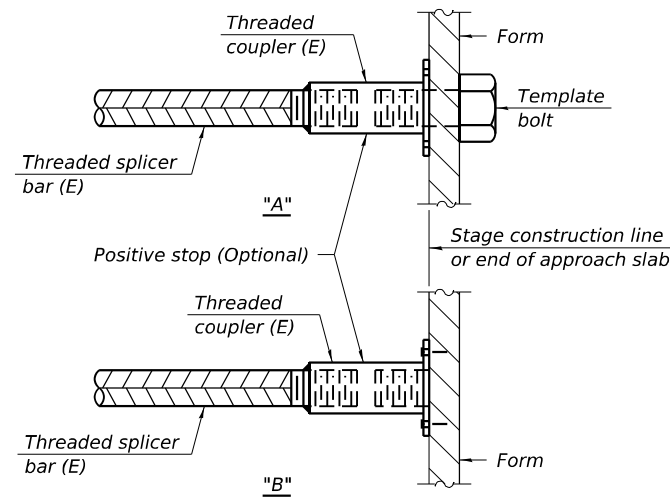
STANDARD BAR SPLICER ASSEMBLY PLAN

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

Threaded splicer bar length = min. lap length + 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	36	3'-10"
Integral Approach	#5	14	2'-6"
Diaphragm	#5	16	2'-6"

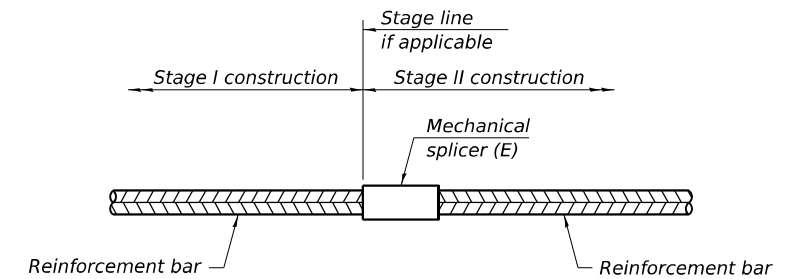


INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.

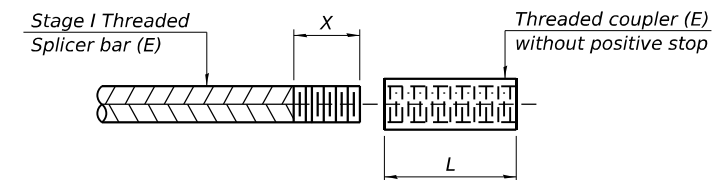
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



THREADING OF ASSEMBLIES

The threaded length "X" shall be no more than L/2. The bar should be tightened until 0-1 thread(s) is/are exposed.

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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BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 061-0077

SHEET 10 OF 10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	29-2(BDR,BRR,BJR)	MARION	24	24
CONTRACT NO. 76U77				
ILLINOIS FED. AID PROJECT				