11-06-2020 LETTING ITEM 048

CURRENT TRAFFIC DATA	
ADT	22,400
P.V. %	54.6%
S.U. %	3.4%
M.U. %	42.0%

FOR INDEX OF SHEETS, SEE SHEET NO. 2

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED
HIGHWAY PLANS

F.A.I. ROUTE 70 (I–70)
SECTION D7 BRIDGE REPAIRS 2021–5
PROJECT NHPP–KKA7(307)
BRIDGE JOINT REPLACEMENT
& BRIDGE DECK OVERLAY
FAYETTE COUNTY

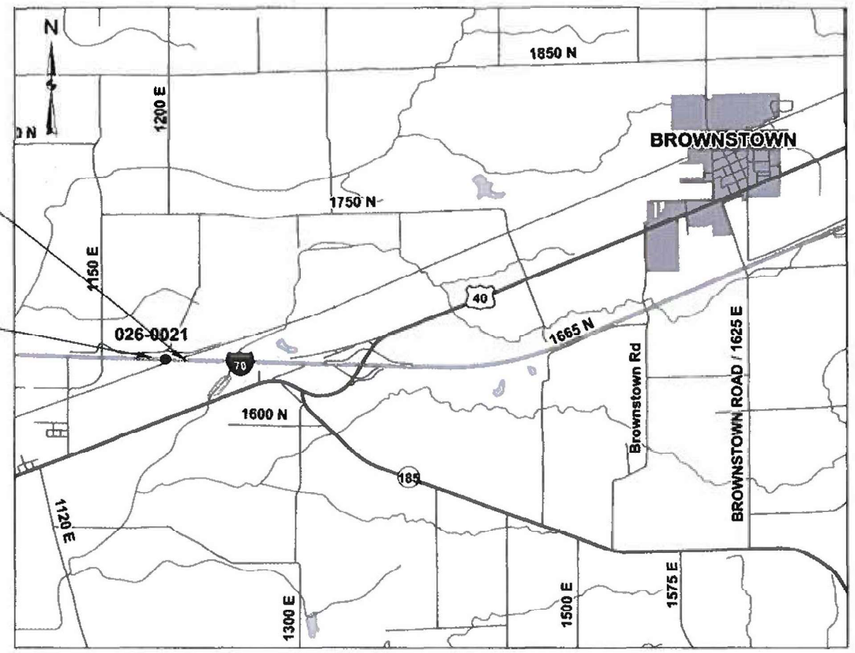
C–97–077–20

F.A.I. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
70	D7 BRIDGE REPAIRS 2021 5	FAYETTE	43	1
	ILLINOIS	CONTRACT NO. 74992		

* 43 + 1 = 44 TOTAL SHEETS

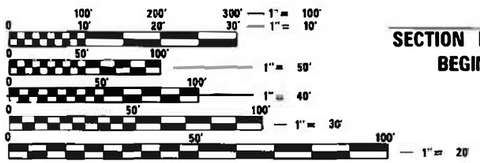
D-97-069-20

LOCATION OF SECTION INDICATED THUS: –



F.A.I ROUTE 70
SECTION BRIDGE REPAIRS 2021–5
ENDS STATION 710+53.92
(EASTBOUND ONLY)

F.A.I ROUTE 70
SECTION BRIDGE REPAIRS 2021–5
BEGINS STATION 705+70.32
(EASTBOUND ONLY)



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

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

GROSS LENGTH = 483.60 FT. = 0.092 MILE
NET LENGTH = 483.60 FT. = 0.092 MILE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED AUGUST 11 20 20
Jeffrey P. Myrtle
REGIONAL ENGINEER

October 2, 2020
ENGINEER OF DESIGN AND ENVIRONMENT

October 2, 2020
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PROJECT ENGINEER BRIAN LEWIS
PROJECT MANAGER BENJAMIN DETERS

CONTRACT NO. 74992

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

REV. - MS

INDEX OF SHEETS

* INCLUDES SHEET 27A

HIGHWAY STANDARDS

THE FOLLOWING STANDARDS ARE A PART OF THESE PLANS AND ARE INCLUDED FOLLOWING THE LAST NUMBERED SHEET OF THE PLANS.

000001-07	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001006	DECIMAL OF AN INCH AND OF A FOOT
420406	PAVEMENT CONNECTOR (HMA)FOR BRIDGE APPROACH SLAB
630001-12	STEEL PLATE BEAM GUARDRAIL
631031-16	TRAFFIC BARRIER TERMINAL, TYPE 6
642001-02	SHOULDER RUMBLE STRIPS, 16 IN.
701101-05	OFF-ROAD OPERATIONS, MULTILANE, 15' TO 24" FROM PAVEMENT EDGE
701106-02	OFF-ROAD OPERATIONS, MULTILANE, MORE THAN 15' AWAY
701400-09	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701401-12	LANE CLOSURE, FREEWAY/EXPRESSWAY
701402-12	LANE CLOSURE, FREEWAY/EXPRESSWAY, WITH BARRIER
701901-08	TRAFFIC CONTROL DEVICES
704001-08	TEMPORARY CONCRETE BARRIER
780001-05	TYPICAL PAVEMENT MARKINGS
781001-04	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
782006-01	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS

GENERAL NOTES

THE WORK IN THIS SECTION CONSISTS OF HMA SURFACE REMOVAL AND RESURFACING, GUARDRAIL, BRIDGE DECK SCARIFICATION, BRIDGE DECK CONCRETE OVERLAY, DECK PACTHING, EXPANSON JOINTS, NEW APPROACH PAVEMENTS AND PAVEMENT CONNECTORS, PAVEMENT MARKING, AND ANY OTHER WORK NEEDED TO COMPLETE THIS SECTION.

PAVEMENT MARKING TAPE SHALL BE USED FOR SHORT TERM PAVEMENT MARKINGS ON HMA SURFACE COURSE.
PAINT PAVEMENT MARKINGS SHALL BE PERMISSIBLE FOR SHORT TERM PAVEMENT MARKINGS ON OTHER HMA LIFTS AND MILLED SURFACES.

FINAL PAVEMENT MARKINGS ON PAVEMENT SURFACES SHALL BE AS FOLLOWS:
- CENTERLINE MARKINGS ON HOT-MIX ASPHALT SURFACE: PREFORMED PAVEMENT MARKINGS, TYPE B - INLAID - LINE 6"
- EDGELINE MARKINGS ON HOT-MIX ASPHALT SURFACE: THERMOPLASTIC PAVEMENT MARKING, LINE 6"
- MARKINGS ON PCC APPROACH PAVEMENTS AND BRIDGE DECK OVERLAY: MODIFIED URETHANE PAVEMENT MARKING - LINE 6"

THE FOLLOWING APPLICATION RATES WERE USED IN CALCULATING PLAN QUANTITIES AND HAVE BEEN INCLUDED FOR REFERENCE:
HOT-MIX ASPHALT SURFACE COURSE 112 LB/SQ YD/INCH

THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE TO THIS PROJECT:

APPLICATION	AC/PG	DESIGN AIR VOIDS	MIXTURE COMPOSITION	FRICTION AGGREGATE	QUALITY MANAGEMENT
POLYMERIZED HMA SURFACE COURSE, MIX "D", N90	SBS PG 70-22	4.0% @ N=90	IL - 9.5	MIXTURE D	QC/QA
HMA FLEXIBLE CONNECTOR (TOP LIFT)	SBS PG 70-22	4.0% @ N=90	IL - 9.5	MIXTURE D	QC/QA
HMA FLEXIBLE CONNECTOR (BOTTOM LIFTS)	SBS PG 70-22	4.0% @ N=90	IL - 19.0	N/A	QC/QA

REV. - MS

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS, HIGHWAY STANDARDS, & GENERAL NOTES

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 BRIDGE REPAIRS 2021-5	FAYETTE	43	2
		CONTRACT NO. 74992		
	ILLINOIS	FED. AID PROJECT		

90% FED
10% STATE

SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0059		
28100105	STONE RIPRAP, CLASS A3	SQ YD	14	14		
28200200	FILTER FABRIC	SQ YD	14	14		
31101000	SUBBASE GRANULAR MATERIAL, TYPE B	TON	90	90		
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	460	460		
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	889	889		
40600990	TEMPORARY RAMP	SQ YD	89	89		
40604164	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N90	TON	86	86		
42000070	PAVEMENT CONNECTOR (HMA) FOR BRIDGE APPROACH SLAB	SQ YD	447	447		
44000100	PAVEMENT REMOVAL	SQ YD	515	515		
50102400	CONCRETE REMOVAL	CU YD	80.4	80.4		
50157300	PROTECTIVE SHIELD	SQ YD	26	26		
50200100	STRUCTURE EXCAVATION	CU YD	38	38		
50300225	CONCRETE STRUCTURES	CU YD	74.8	74.8		

90% FED
10% STATE

SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0059		
50300255	CONCRETE SUPERSTRUCTURE	CU YD	78.7	78.7		
50300300	PROTECTIVE COAT	SQ YD	2350	2350		
50301350	CONCRETE SUPERSTRUCTURE (APPROACH SLAB)	CU YD	231.6	231.6		
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	6610	6610		
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	59170	59170		
50800515	BAR SPLICERS	EACH	329	329		
52000110	PREFORMED JOINT STRIP SEAL	FOOT	255	255		
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	7	7		
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	7	7		
52100520	ANCHOR BOLTS, 1"	EACH	28	28		
52200010	TEMPORARY SHEET PILING	SQ FT	100	100		
58600101	GRANULAR BACKFILL FOR STRUCTURES	CU YD	38	38		
58700300	CONCRETE SEALER	SQ FT	873	873		
* 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	313	313		

* SPECIALTY ITEM

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET 1 OF 3 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 BRIDGE REPAIRS 2021-5	FAYETTE	43	3
		CONTRACT NO. 74992		
	ILLINOIS FED. AID PROJECT			

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SUMMARY OF QUANTITIES

	CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0059		
*	63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	4		
	63200310	GUARDRAIL REMOVAL	FOOT	462	462		
	64200116	SHOULDER RUMBLE STRIPS, 16 INCH	FOOT	592	592		
	67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6		
	67100100	MOBILIZATION	L SUM	1	1		
	70100207	TRAFFIC CONTROL AND PROTECTION, STANDARD	EACH	1	1		
		701402					
	70100800	TRAFFIC CONTROL AND PROTECTION, STANDARD	L SUM	1	1		
		701401					
	70107007	PAVEMENT MARKING BLACKOUT TAPE, 7"	FOOT	6092	6092		
	70107025	CHANGEABLE MESSAGE SIGN	CAL DA	14	14		
	70300100	SHORT TERM PAVEMENT MARKING	FOOT	144	144		
	70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	3602	3602		
	70300240	TEMPORARY PAVEMENT MARKING - LINE 6"	FOOT	1889	1889		
	70400100	TEMPORARY CONCRETE BARRIER	FOOT	1127	1127		

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SUMMARY OF QUANTITIES

	CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0059		
	70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1102	1102		
	70600250	IMPACT ATTENUATORS, TEMPORARY (NON-	EACH	1	1		
		REDIRECTIVE), TEST LEVEL 3					
	70600350	IMPACT ATTENUATORS, RELOCATE (NON-	EACH	1	1		
		REDIRECTIVE), TEST LEVEL 3					
*	78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	592	592		
*	78004230	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B -	FOOT	40	40		
		INLAID - LINE 6"					
*	78009006	MODIFIED URETHANE PAVEMENT MARKING - LINE 6"	FOOT	1218	1218		
*	78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	4	4		
*	78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	4	4		
	78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	4	4		
	X0327371	PLUG EXISTING PIPE	CU YD	5	5		
	X0327980	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	945	945		
	X5030250	BRIDGE DECK GROOVING (LONGITUDINAL)	SQ YD	1423	1423		

* SPECIALTY ITEM

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET 2 OF 3 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 BRIDGE REPAIRS 2021-5	FAYETTE	43	4
		CONTRACT NO. 74992		
	ILLINOIS	FED. AID PROJECT		

90% FED
10% STATE

SUMMARY OF QUANTITIES

	CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0059		
	X6050700	REMOVE INLET BOX	EACH	2	2		
*	X7830074	GROOVING FOR RECESSED PAVEMENT MARKING 7"	FOOT	1809	1809		
	Z0001899	JACK AND REMOVE EXISTING BEARINGS	EACH	12	12		
	Z0001903	STRUCTURAL STEEL REMOVAL	POUND	3050	3050		
	Z0004552	APPROACH SLAB REMOVAL	SQ YD	178	178		
	Z0012111	BRIDGE DECK FLY ASH OR GGBF SLAG CONCRETE	SQ YD	1946	1946		
		OVERLAY, 2 1/2"					
	Z0012130	BRIDGE DECK SCARIFICATION 3/4"	SQ YD	1946	1946		
	Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO	SQ FT	402	402		
		OR LESS THAN 5 INCHES)					
	Z0012755	STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER	SQ FT	12	12		
		THAN 5 INCHES)					
	Z0016001	DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SQ YD	14	14		
	Z0016002	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	50	50		
	Z0029090	DIAMOND GRINDING (BRIDGE SECTION)	SQ YD	2108	2108		

90% FED
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SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0059		
Z0034806	MODULAR EXPANSION JOINT-SWIVEL 6"	FOOT	85	85		
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	1		
Z0073200	TEMPORARY SHORING AND CRIBBING	EACH	2	2		

* SPECIALTY ITEM

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

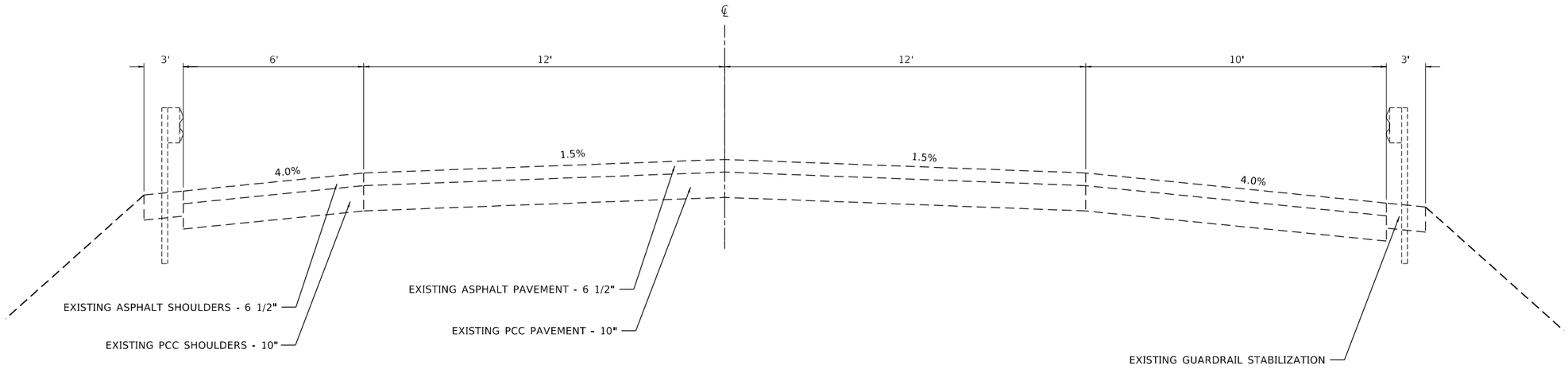
SUMMARY OF QUANTITIES

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 BRIDGE REPAIRS 2021-5	FAYETTE	43	5
		CONTRACT NO. 74992		
	ILLINOIS	FED. AID PROJECT		

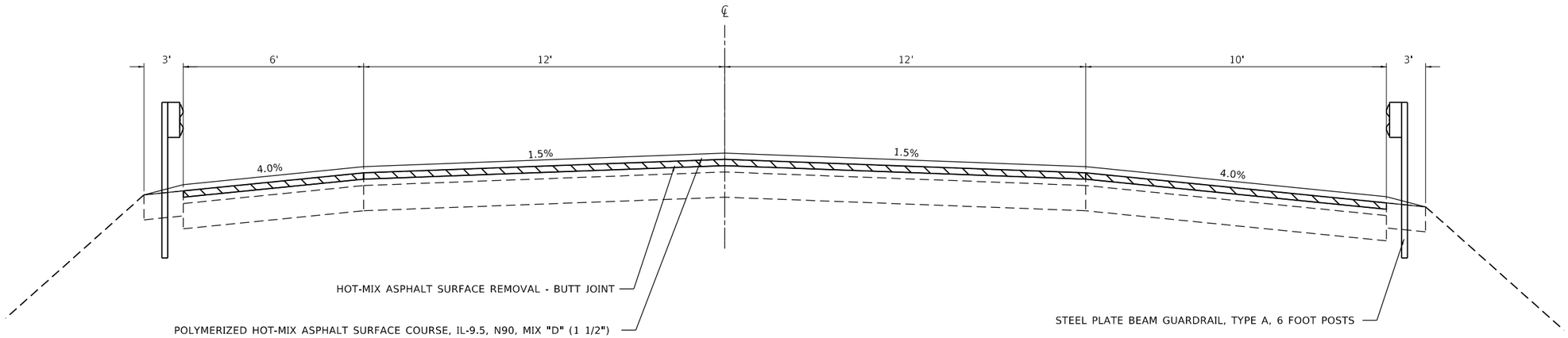
EXISTING TYPICAL CROSS SECTION

STATION	TO	STATION
703+88.83		704+88.83
711+28.20		712+28.20



PROPOSED TYPICAL CROSS SECTION

STATION	TO	STATION
703+88.83		704+88.83
711+28.20		712+28.20



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 BRIDGE REPAIRS 2021-5	FAYETTE	43	6
		CONTRACT NO. 74992		
	ILLINOIS FED. AID PROJECT			

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SCHEDULE OF QUANTITIES

STATION	TO	STATION	WIDTH (FOOT)	LENGTH (FOOT)	AREA (SQ YD)	PAVEMENT CONNECTOR (HMA) FOR BRIDGE APPROACH SLAB (SQ YD)
704+88.83		705+74.47	42.00	85.64	223.5	223.5
710+42.43		711+28.20	42.00	85.77	223.5	223.5
		TOTAL =				446.9
		ROUND TO:				447.0

STATION	TO	STATION	WIDTH (FOOT)	AREA (SQ YD)	PAVEMENT REMOVAL (SQ YD)
704+88.83		705+82.66	40.00	257.3	257.3
710+34.23		711+28.20	40.00	257.3	257.3
		TOTAL =			514.6
		ROUND TO:			515.0

STATION	TO	STATION	WIDTH (FOOT)	AREA (SQ YD)	APPROACH SLAB REMOVAL (SQ YD)
705+08.70		706+04.60	40.00	88.9	88.9
710+12.43		711+05.43	40.00	88.9	88.9
		TOTAL =			178.0
		GRAND TOTAL =			178.0

LOCATION	REFLECTOR SPACING (FEET)	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS (FOOT)	TRAFFIC BARRIER TERMINAL, TYPE 6 (EACH)	GUARDRAIL REMOVAL (FOOT)	GUARDRAIL REFLECTORS, TYPE A (EACH)
NW QUADRANT	80	112.5	1.0	150.0	1.0
NE QUADRANT	80	37.5	1.0	75.0	1.0
SW QUADRANT	80	50.0	1.0	87.0	1.0
SE QUADRANT	80	112.5	1.0	150.0	1.0
TOTAL =		312.5	4.0	462.0	4.0
ROUND TO:		313.0	4.0	462.0	4.0

STATION	TO	STATION	REMOVAL WIDTH (FOOT)	PAVING WIDTH (FOOT)	LENGTH (FOOT)	REMOVAL AREA (SQ YD)	PAVING AREA (SQ YD)	SURFACE COURSE THICKNESS (INCH)	BITUMINOUS MATERIALS (TACK COAT) (POUND)	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT (SQ YD)	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N90 (TON)
703+88.83		704+88.83	40.00	46.00	100.00	444.4	511.1	1.5	230.0	444.4	42.9
711+28.20		712+28.20	40.00	46.00	100.00	444.4	511.1	1.5	230.0	444.4	42.9
							TOTAL =		460.0	888.9	85.9
							ROUND TO:		460.0	889.0	86.0

LOCATION	STAGE I BARRIER SECTIONS	STAGE II BARRIER SECTIONS	TEMPORARY CONCRETE BARRIER (FOOT)	RELOCATE TEMPORARY CONCRETE BARRIER (FOOT)	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE) TEST LEVEL 3 (EACH)	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE) TEST LEVEL 3 (EACH)
WEST TAPER	18	16	227.8	202.5	1	1
TANGENT	71	71	899.2	899.2		
TOTAL =	89	87	1,127.0	1,101.7	1	1
ROUND TO:			1,127.0	1,102.0	1	1

STATION	TO	STATION	LENGTH (FEET)	DRIVING LANE LENGTH	PASSING LANE LENGTH	CL LENGTH	PAVEMENT MARKING BLACKOUT TAPE, 7" (FOOT)	SHORT TERM PAVEMENT MARKING REMOVAL (SQ FT)
687+60.76		714+64.68	2,703.9	2,703.9			2,703.9	1,577.3
687+27.91		714+31.49	2,703.6		2,703.6		2,703.6	1,577.1
687+27.91		714+64.68	2,736.8			684.2	684.2	399.1
					TOTAL =		6,092.0	3,554.0

DL/PL	STATION	LENGTH (FOOT)	PIPE DIAMETER (FOOT)	PLUG EXISTING PIPE (CU YD)	REMOVE INLET BOX (EACH)
DL	705+17.00	68.00	1.00	1.98	1.0
DL	710+40.00	74.00	1.00	2.15	1.0
	TOTAL =			4.13	2.0
	ROUND TO:			5.00	2.0

DL/PL	STATION	LENGTH (FOOT)	WIDTH (FOOT)	STONE RIPRAP, CLASS A3 (SQ YD)	FILTER FABRIC (SQ YD)
DL	704+98.00	6.00	10.00	6.7	6.7
DL	710+43.00	6.00	10.00	6.7	6.7
	TOTAL =			13.3	13.3
	ROUND TO:			14.0	14.0

DL/PL	STATION	TO	STATION	STRIPE WIDTH (INCH)	LENGTH (FOOT)	SHORT TERM PAVEMENT MARKING		SHORT TERM PAVEMENT MARKING REMOVAL		TEMPORARY PAVEMENT MARKING - LINE 6"		PAVEMENT MARKING REMOVAL - WATER BLASTING	
						WHITE (FOOT)	YELLOW (FOOT)	WHITE (FOOT)	YELLOW (FOOT)	WHITE (FOOT)	YELLOW (FOOT)	WHITE (FOOT)	YELLOW (FOOT)
DL	703+88.83		712+28.20	6.00	839.4	32.0		10.7		839.4		419.7	
PL	703+88.83		712+28.20	6.00	839.4		32.0		10.7		839.4		419.7
CL	703+88.83		712+28.20	6.00	839.4	80.0		26.7		209.8		104.9	
			SUB-TOTALS =			112.0	32.0	37.3	10.7	1,049.2	839.4	524.6	419.7
			TOTAL =			144.0		48.0		1,888.6		944.3	
			ROUND TO:			144.0		48.0		1,889.0		945.0	

DL/PL	STATION	TO	STATION	STRIPE WIDTH (INCH)	LENGTH (FOOT)	THERMOPLASTIC PAVEMENT MARKING - LINE 6 (FOOT)	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - INLAID- LINE 6" (FOOT)	MODIFIED URETHANE PAVEMENT MARKING - LINE 6"		RAISED REFLECTIVE PAVEMENT MARKER		GROOVING FOR RECESSED PAVEMENT MARKING, 7" (FOOT)
								WHITE (FOOT)	YELLOW (FOOT)	CRYSTAL (EACH)	AMBER (EACH)	
DL	703+88.83		705+18.67	6.00	129.8	129.8						129.8
DL	705+18.67		710+62.27	6.00	543.6			543.6				543.6
DL	710+62.27		712+28.20	6.00	165.9	165.9						165.9
CL	704+43.83		705+40.32	6.00	96.5		20.0					
CL	705+40.32		710+83.92	6.00	543.6			130.0				130.0
CL	710+83.92		711+73.20	6.00	89.3		20.0					
CL	703+88.83		704+88.83	---	100.0					2.0		
CL	711+28.20		712+28.20	---	100.0					2.0		
PL	703+88.83		705+61.97	6.00	173.1	173.1						173.1
PL	705+61.97		711+05.57	6.00	543.6				543.6			543.6
PL	711+05.57		712+28.20	6.00	122.6	122.6						122.6
			SUB-TOTALS =					673.6	543.6	4.0		
			TOTAL =			591.5	40.0	1,217.2		4.0		1,808.7
			ROUND TO:			592.0	40.0	1,218.0		4.0		1,809.0

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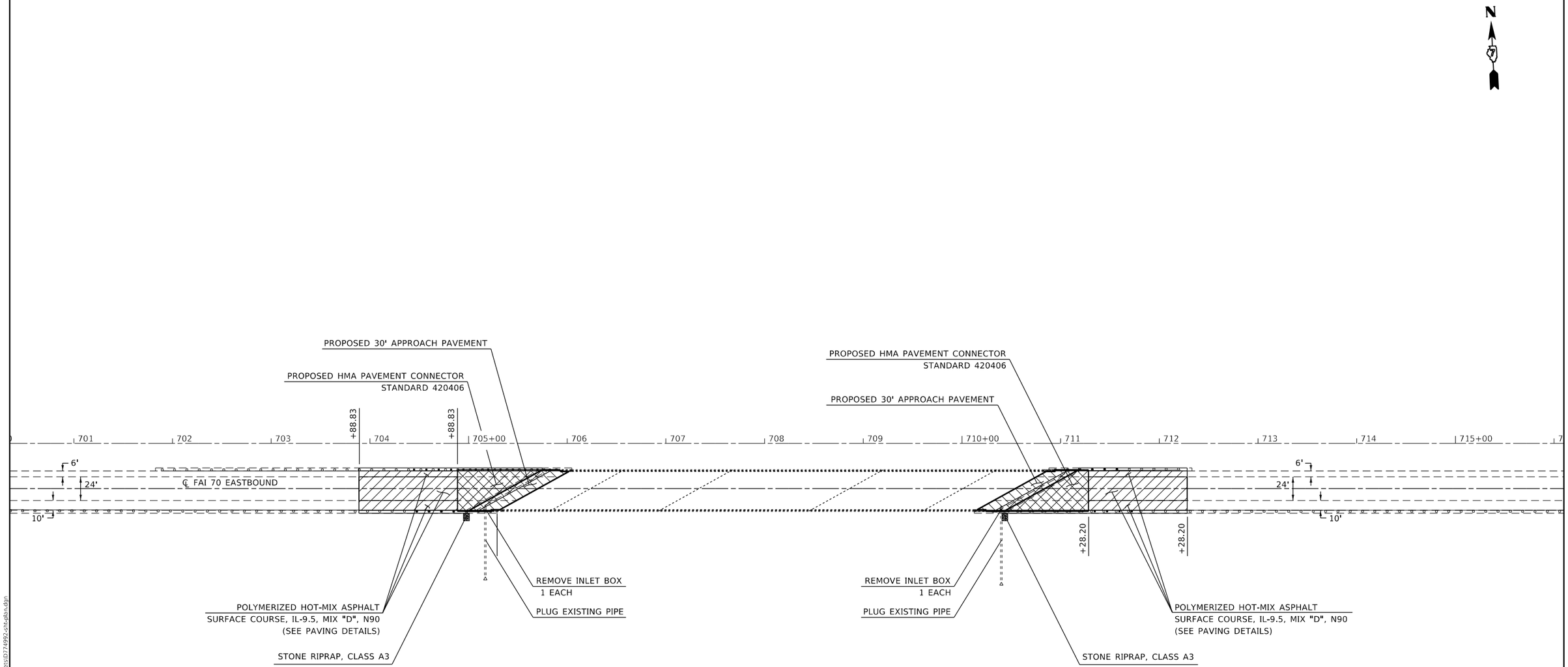
PLOT DATE = 8/13/2020	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 BRIDGE REPAIRS 2021-5	FAYETTE	43	7
		CONTRACT NO. 74992		
	ILLINOIS	FED. AID PROJECT		



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PLOT DATE = 8/13/2020	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAI 70 PLAN SHEET

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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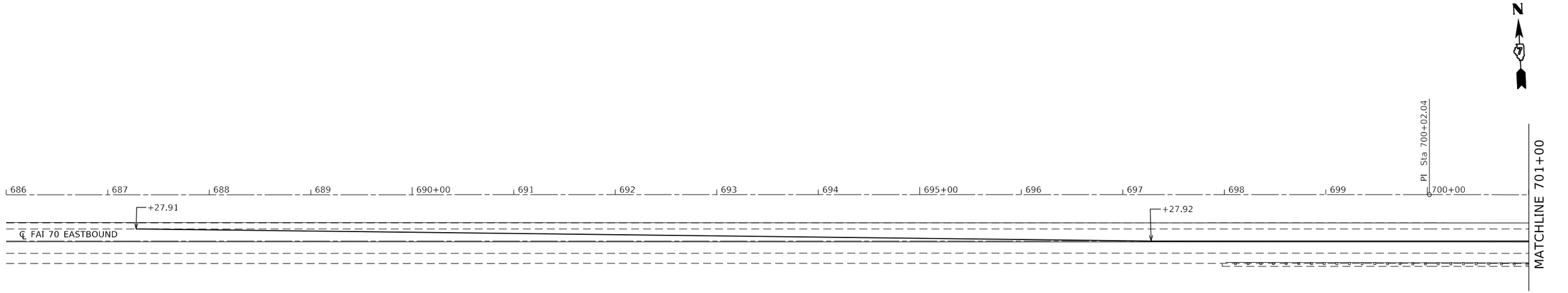
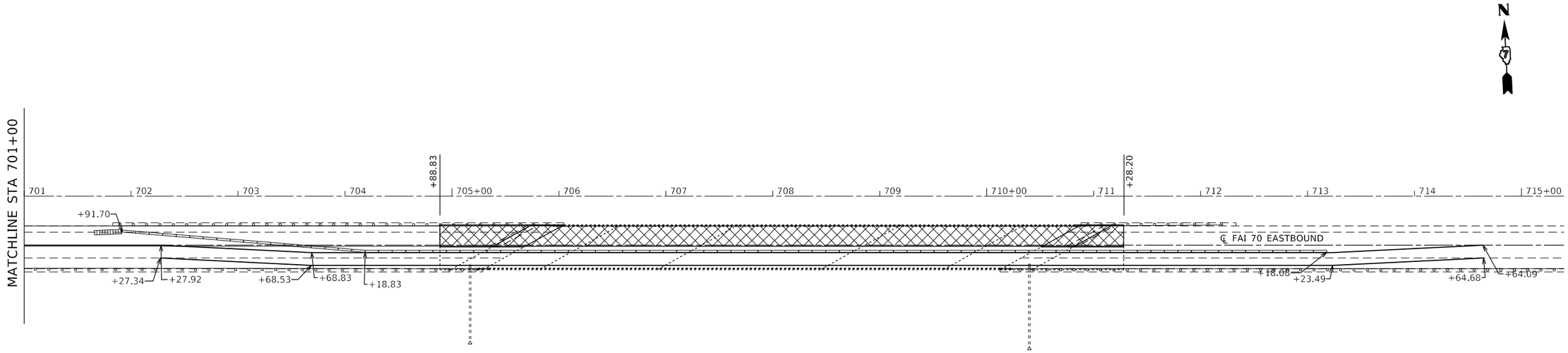
		CONTRACT NO. 74992		
	ILLINOIS FED. AID PROJECT			





SYMBOLS

- WORK AREA
- TEMPORARY CONCRETE BARRIER
- TYPE III BARRICADE WITH FLASHING LIGHTS
- IMPACT ATTENUATOR

NOTES

SEE TRAFFIC CONTROL AND PROTECTION STANDARD 701402
FOR INFORMATION NOT SHOWN ON THIS SHEET.

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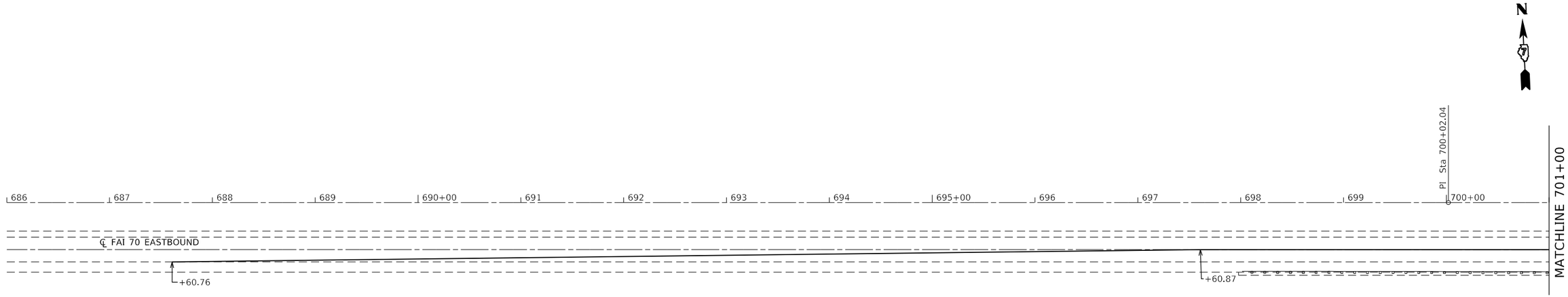
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 8/13/2020	DATE -	REVISED -

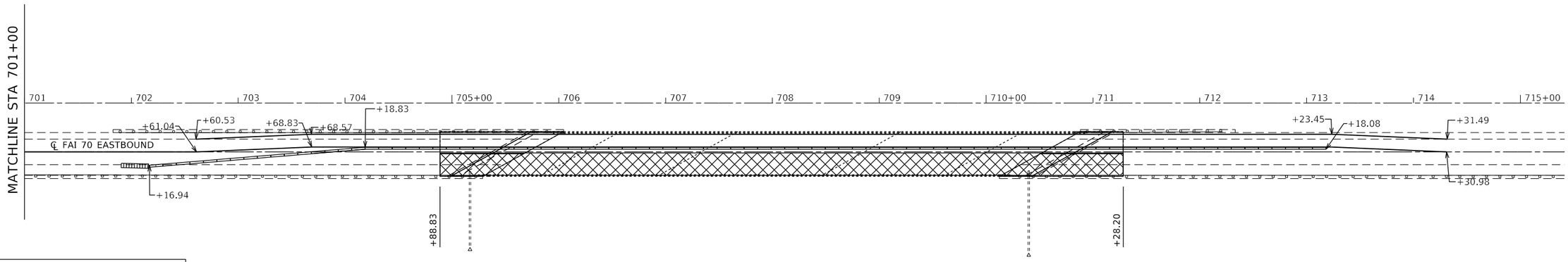
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN
STAGE 1

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 BRIDGE REPAIRS 2021-5	FAYETTE	43	9
		CONTRACT NO. 74992		
	ILLINOIS FED. AID PROJECT			





SYMBOLS

- WORK AREA
- TEMPORARY CONCRETE BARRIER
- TYPE III BARRICADE WITH FLASHING LIGHTS
- IMPACT ATTENUATOR

NOTES

SEE TRAFFIC CONTROL AND PROTECTION STANDARD 701402
FOR INFORMATION NOT SHOWN ON THIS SHEET.

USER NAME = steffenmk	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 8/13/2020	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN
STAGE 2

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 BRIDGE REPAIRS 2021-5	FAYETTE	43	10
		CONTRACT NO. 74992		
	ILLINOIS FED. AID PROJECT			

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Existing Structure: S.N. 026-0021 originally built in 1947 as F.A. 12 Section W-2-VB, consisting of a 5-span plate girder & wide flange beam superstructure on pile supported multi-column concrete piers and pile supported open abutments. Rebuilt in 1975 as F.A.I. 70 Section 26-3VBY-1 with widened superstructure and substructures. Redecked in 1984 as F.A.I. 70 Section 26-3VBR. The existing structure is 483'-7¼" back to back of abutments. The concrete deck is 38'-10" face to face of parapets. The overall bridge width is 42'-0" out to out of deck. The bridge pin and link steel connections and abutment expansion joints were repaired in 1999.

New concrete deck overlay and approach slabs will be built under staged construction. The existing bridge deck will be patched and the existing expansion joints will be removed and replaced. The existing substructures will be repaired.

SCOPE OF WORK

1. Perform bridge deck scarification on bridge deck.
2. Perform full-depth patching.
3. Remove and replace bearings at Piers 1 and 4.
4. Remove and replace expansion joints at West Abutment and Piers 1 and 4.
5. Remove expansion joint at East Abutment and replace with modular expansion joint.
6. Place concrete overlay.
7. Construct approach slabs.
8. Diamond grind bridge deck and approach slabs.

GENERAL NOTES

Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts (in painted areas and ASTM A325 Type 3 in unpainted areas). Bolts ¾ in. Ø, holes 15/16 in. Ø, unless otherwise noted.

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

Reinforcement bars designated (E) shall be epoxy coated.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

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.

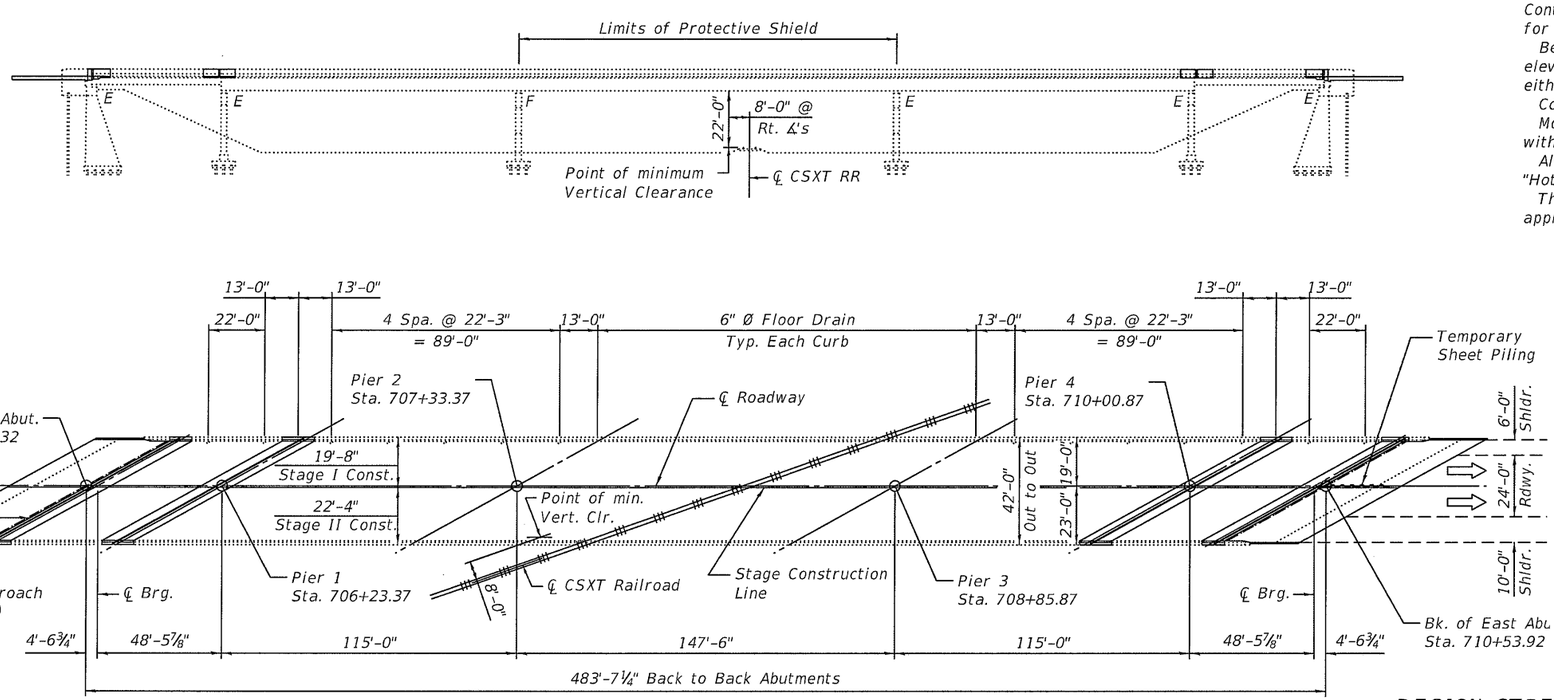
Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.

Concrete Sealer shall be applied to the designated areas of the abutments and piers.

Modular expansion joints shall be assembled in their final relative position with the ends in place for shop inspection and acceptance.

All new structural steel shall be hot-dip galvanized. See Special Provisions for "Hot Dip Galvanizing for Structural Steel."

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



PLAN

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Removal	Cu. Yd.	80.4
Protective Shield	Sq. Yd.	26
Structure Excavation	Cu. Yd.	38
Concrete Structures	Cu. Yd.	74.8
Concrete Superstructure	Cu. Yd.	78.7
Protective Coat	Sq. Yd.	2350
Concrete Superstructure (Approach Slab)	Cu. Yd.	231.6
Furnishing and Erecting Structural Steel	Pound	6610
Reinforcement Bars, Epoxy Coated	Pound	59,170
Bar Splicers	Each	329
Preformed Joint Strip Seal	Foot	255
Jack & Remove Existing Bearings	Each	10
Elastomeric Bearing Assembly, Type I	Each	7
Elastomeric Bearing Assembly, Type II	Each	7
Anchor Bolts, 1¼"	Each	28
Temporary Soil Retention System	Sq. Ft.	36
Granular Backfill for Structures	Cu. Yd.	38
Bridge Deck Grooving (Longitudinal)	Sq. Yd.	1423
Bridge Deck Fly Ash or GGBF Slag Concrete Overlay, 2½ Inch	Sq. Yd.	1946
Bridge Deck Scarification ¾"	Sq. Yd.	1946
Structural Repair of Concrete (Depth Equal To Or Less Than 5 Inches)	Sq. Ft.	402
Structural Repair of Concrete (Depth Greater Than 5 Inches)	Sq. Ft.	12
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	14
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	50
Diamond Grinding (Bridge Section)	Sq. Yd.	2108
Modular Expansion Joint-Swivel 6"	Foot	85
Structural Steel Removal	Pound	3050
Temporary Shoring and Cribbing	Each	4
Concrete Sealer	Sq. Ft.	873

DESIGN STRESSES

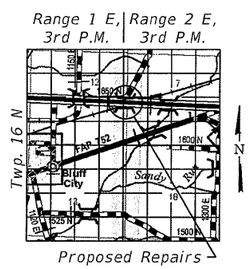
FIELD UNITS (New Construction)

f'c = 4,000 psi (Superstructure)
f'c = 3,500 psi (Substructure)
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50)

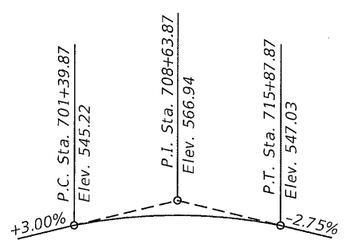
FIELD UNITS (Existing Construction)

f'c = 3,500 psi
fy = 60,000 psi

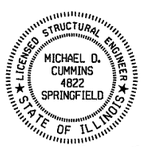
INDEX OF SHEETS



LOCATION SKETCH



EXISTING PROFILE GRADE



Michael D. Cummins 10/2/2020

(Expires 11/30/20)

GENERAL PLAN AND ELEVATION
F.A.I. ROUTE 70 (EB)
OVER CSXT RAILROAD
SECTION D7 BRIDGE REPAIR-2021-5
FAYETTE COUNTY
STA 708+29.47
STRUCTURE NO. 026-0021

CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2480.6	DESIGNED , AAN	REVISED ,	
FILE NAME = 026-0021-PTB 180-021-00-GPE.dgn	CHECKED , MDC	REVISED ,	
PLOT DATE = 10/2/2020	DRAWN , SJS	REVISED ,	
	CHECKED , MDC	REVISED ,	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 026-0021
SHEET 1 OF 27 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 Bridge Repair -2021-5	FAYETTE	43	11
		CONTRACT NO. 74992		
	ILLINOIS	FED. AID PROJECT		

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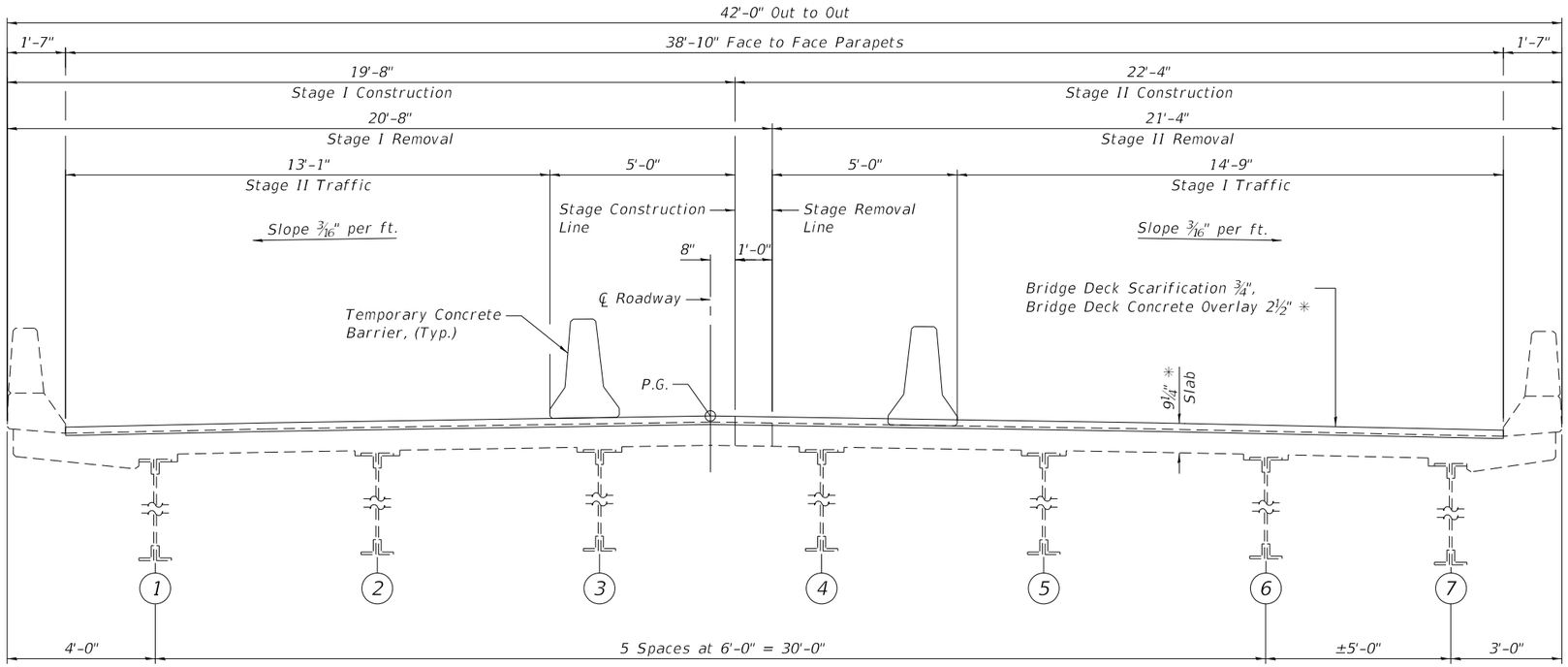
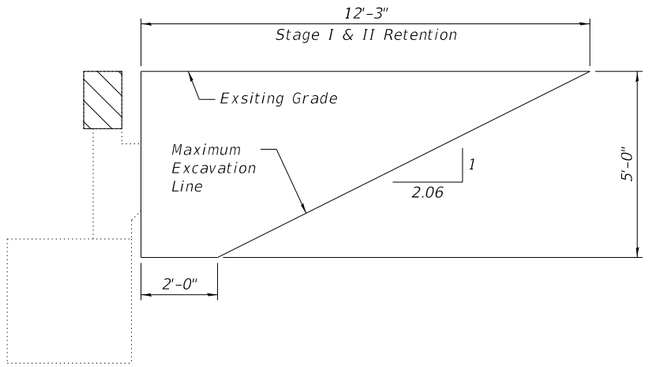


✳ Prior to Grinding

CROSS SECTION
(Looking East)



TEMPORARY SOIL RETENTION AT EAST ABUTMENT
(Dimensions taken along Stage Construction Line)

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CEC Cummins Engineering Corporation
Civil and Structural Engineering

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PLOT DATE = 10/1/2020	DRAWN , SJS	REVISED ,	
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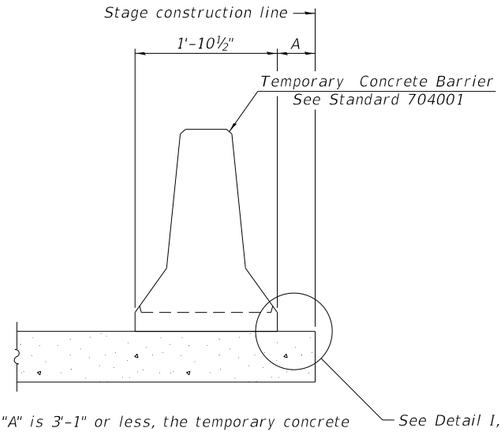
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

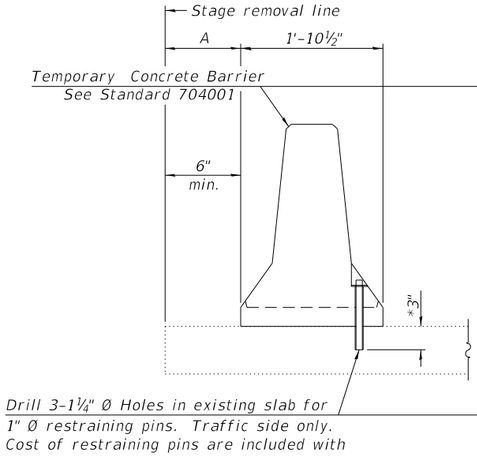
STAGE CONSTRUCTION DETAIL
STRUCTURE NO. 026-0021
SHEET 2 OF 27 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 Bridge Repair -2021-5	FAYETTE	43	12
		CONTRACT NO. 74992		
	ILLINOIS	FED. AID PROJECT		



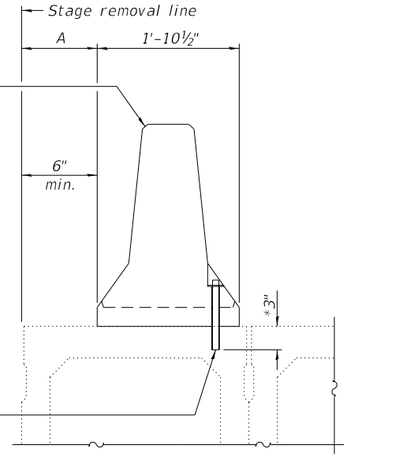
When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

NEW SLAB OR NEW DECK BEAM



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

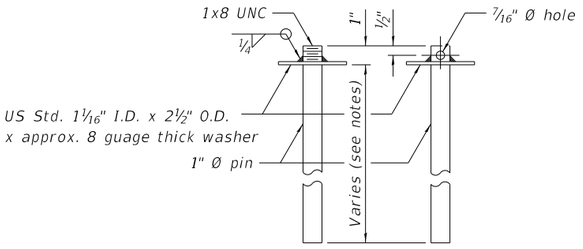
EXISTING SLAB



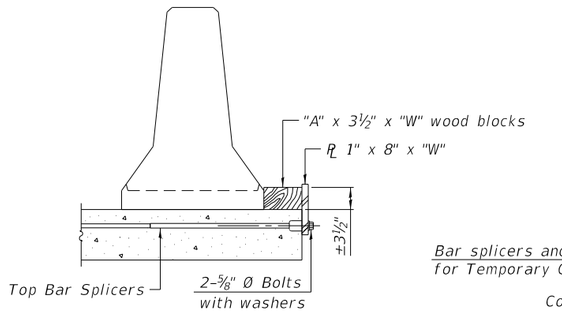
* When hot-mix asphalt wearng surface is present, embedment shall be 3" plus the wearing surface depth.

EXISTING DECK BEAM

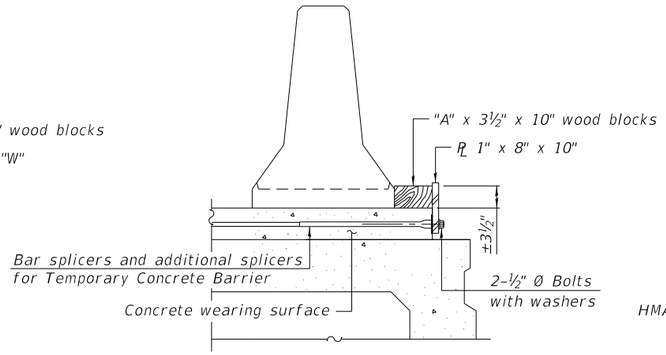
SECTIONS THRU SLAB OR DECK BEAM



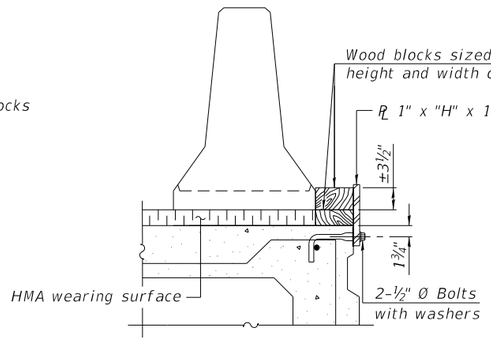
RESTRAINING PIN



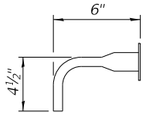
DETAIL I



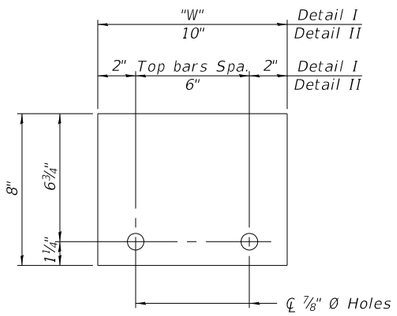
DETAIL II



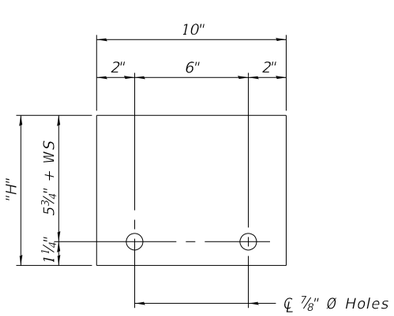
DETAIL III



BAR SPLICER FOR #4 BAR - DETAIL III



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



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

Notes:

Cost of retainer assembly is included with Temporary Concrete Barrier.

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

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

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

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

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

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

R-27

2-17-2017

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CEC Cummins Engineering Corporation
Civil and Structural Engineering

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PLOT DATE = 10/1/2020	DRAWN , SJS	REVISED ,	
	CHECKED , MDC	REVISED ,	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 026-0021

SHEET 3 OF 27 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 Bridge Repair -2021-5	FAYETTE	43	13
		CONTRACT NO. 74992		
	ILLINOIS FED. AID PROJECT			

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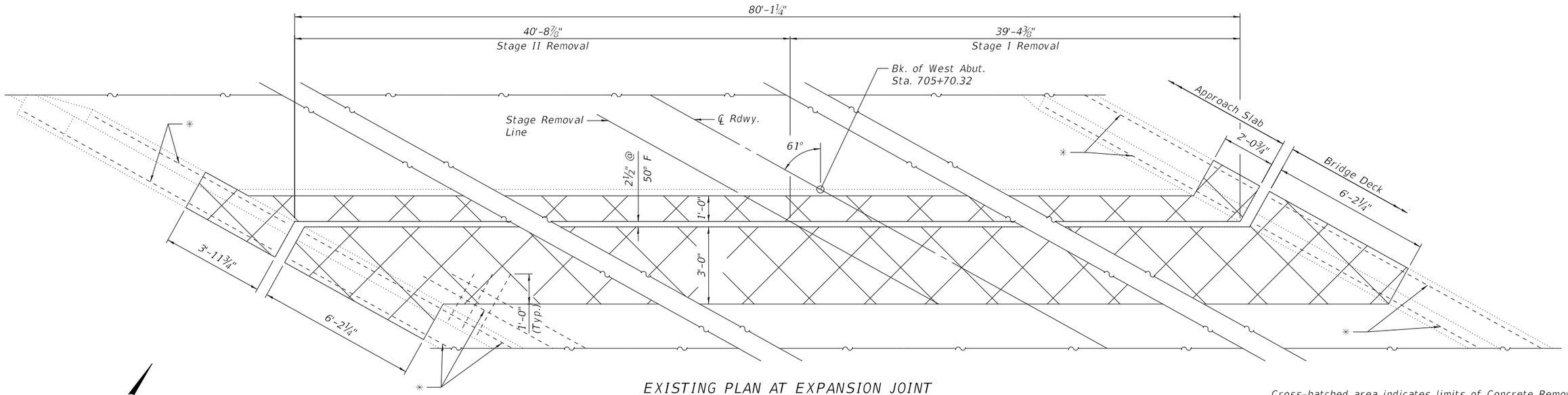
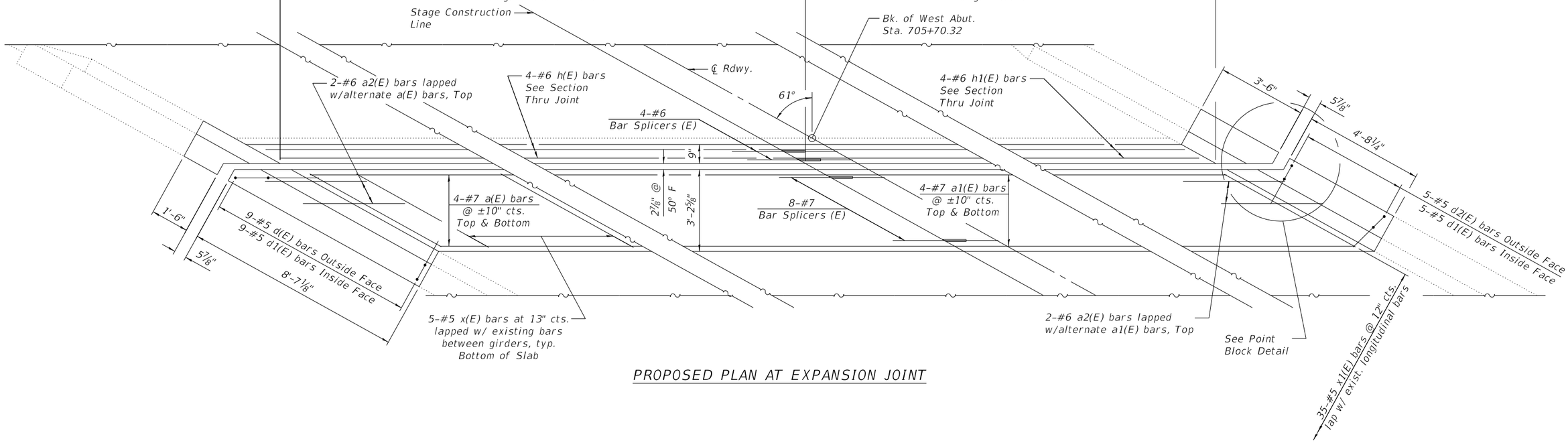


EXISTING PLAN AT EXPANSION JOINT

Cross-hatched area indicates limits of Concrete Removal.

✳ Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.



PROPOSED PLAN AT EXPANSION JOINT

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CEC Cummins Engineering Corporation
Civil and Structural Engineering

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PLOT DATE = 10/1/2020	DRAWN , SJS	REVISED ,	
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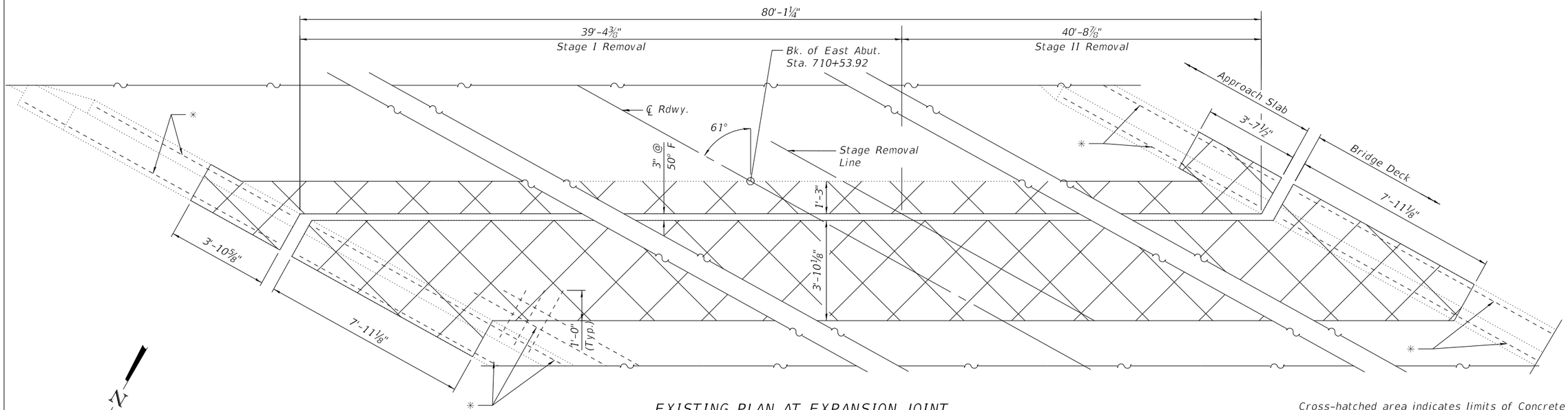
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT JOINT REPLACEMENT
STRUCTURE NO. 026-0021
SHEET 7 OF 27 SHEETS

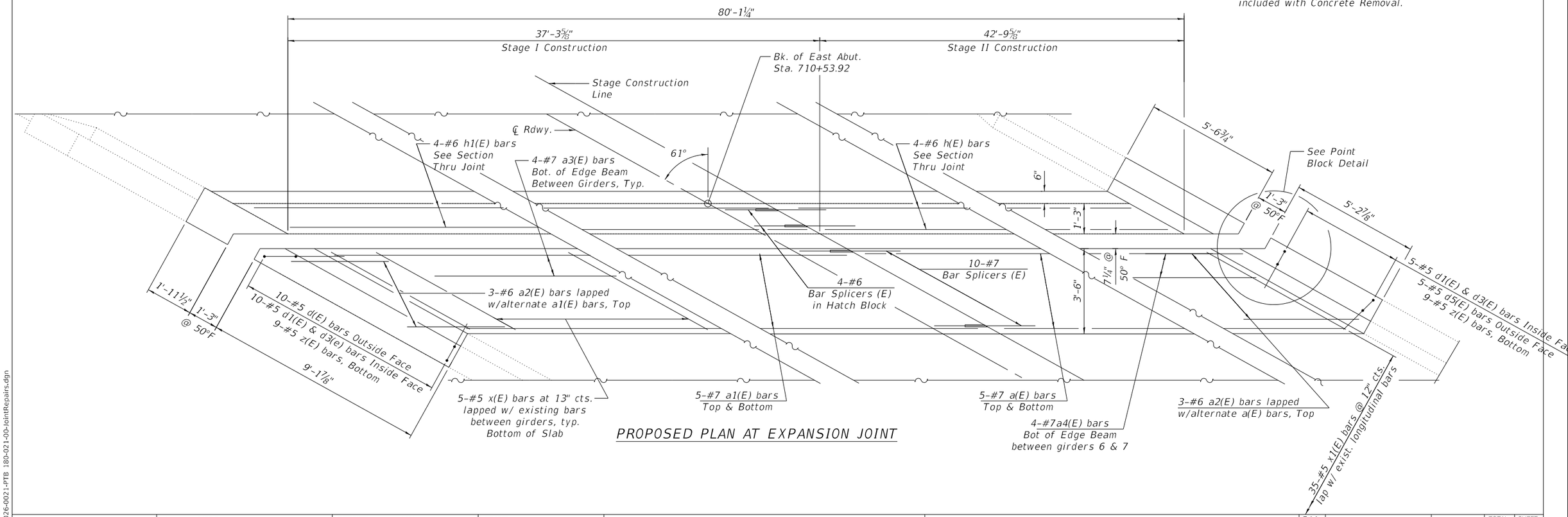
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 Bridge Repair -2021-5	FAYETTE	43	17
		CONTRACT NO. 74992		
	ILLINOIS FED. AID PROJECT			



EXISTING PLAN AT EXPANSION JOINT

Cross-hatched area indicates limits of Concrete Removal.

✳ Existing longitudinal reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.



PROPOSED PLAN AT EXPANSION JOINT

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CEC Cummins Engineering Corporation
Civil and Structural Engineering

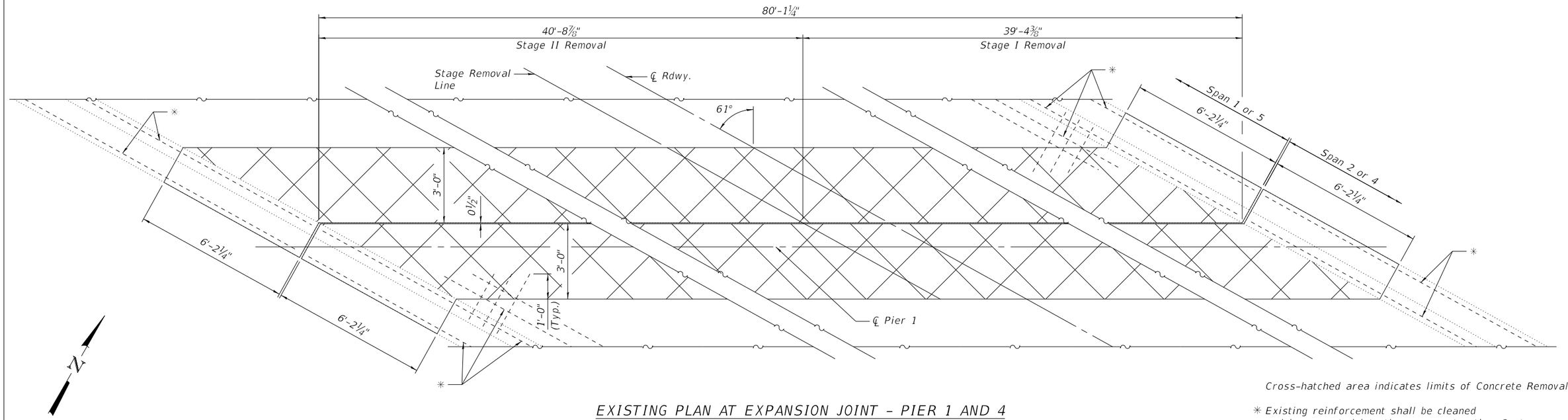
JOB = 2480.6	DESIGNED , AAN	REVISED ,	
FILE NAME = 026-0021-PTB 180-021-00-JointRepairs.dgn	CHECKED , MDC	REVISED ,	
PLOT DATE = 10/1/2020	DRAWN , SJS	REVISED ,	
	CHECKED , MDC	REVISED ,	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EAST ABUTMENT JOINT REPLACEMENT
STRUCTURE NO. 026-0021

SHEET 8 OF 27 SHEETS

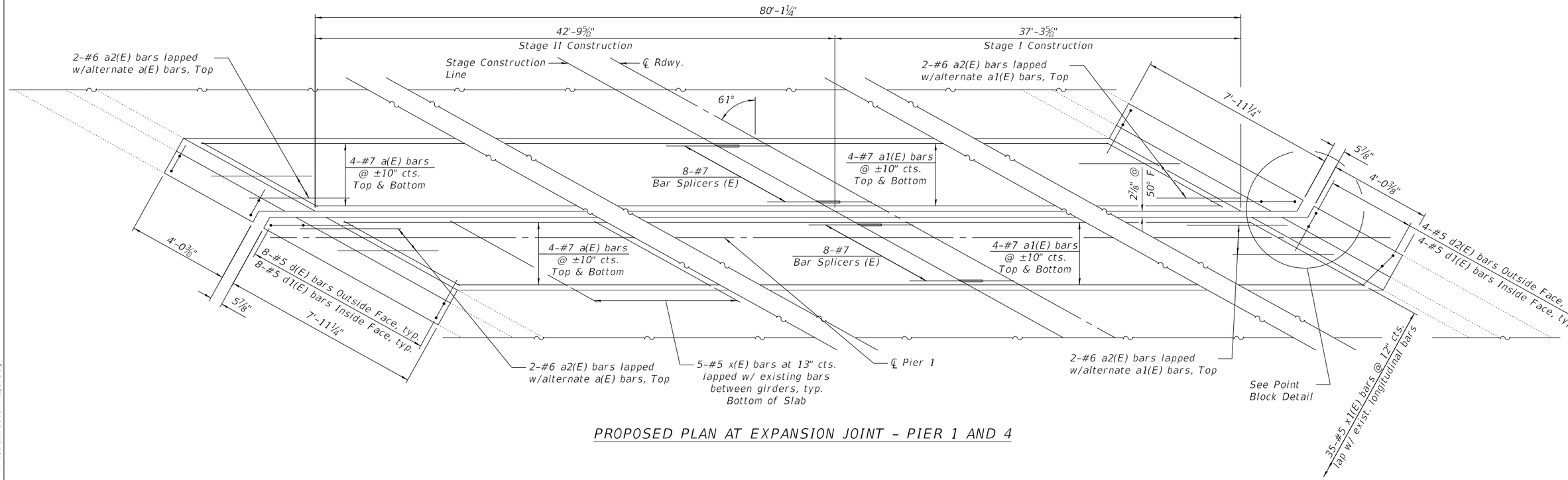
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 Bridge Repair -2021-5	FAYETTE	43	18
		CONTRACT NO. 74992		
	ILLINOIS FED. AID PROJECT			



Cross-hatched area indicates limits of Concrete Removal.

✳ Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.

EXISTING PLAN AT EXPANSION JOINT – PIER 1 AND 4



PROPOSED PLAN AT EXPANSION JOINT – PIER 1 AND 4

MODEL: Default
FILE NAME: 026-0021-PTB 180-021-00-JointRepairs.dgn

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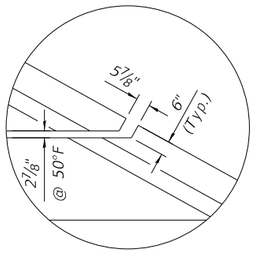
Civil and Structural Engineering

JOB = 2480.6	DESIGNED , AAN	REVISED ,	
FILE NAME = 026-0021-PTB 180-021-00-JointRepairs.dgn	CHECKED , MDC	REVISED ,	
PLOT DATE = 10/1/2020	DRAWN , SJS	REVISED ,	
	CHECKED , MDC	REVISED ,	

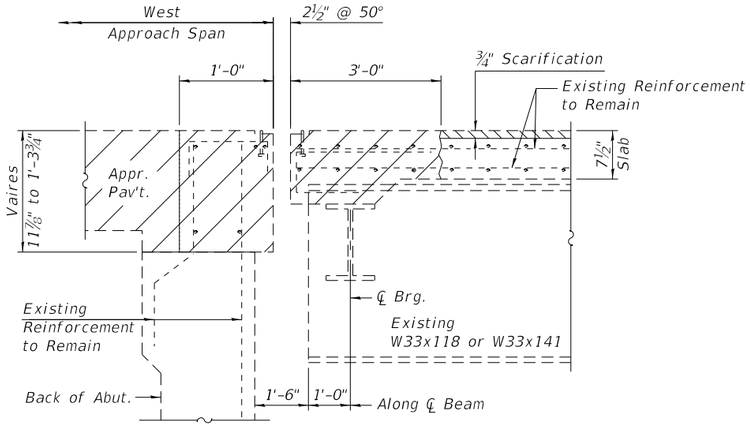
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIERS 1 & 4 JOINT REPLACEMENTS
STRUCTURE NO. 026-0021
SHEET 9 OF 27 SHEETS

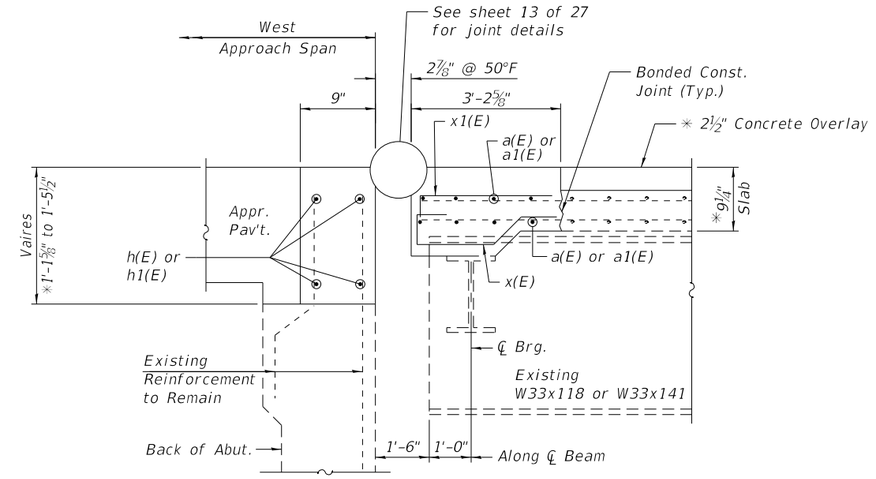
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 Bridge Repair -2021-5	FAYETTE	43	19
		CONTRACT NO. 74992		
	ILLINOIS	FED. AID PROJECT		



POINT BLOCK DETAIL
AT WEST ABUTMENT
AT PIERS 1 & 4

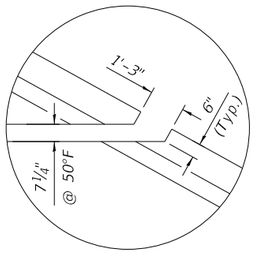


SECTION THRU JOINT
AT WEST ABUTMENT
(Showing Removal)
(Horiz. Dim. at Rt. ∠'s)

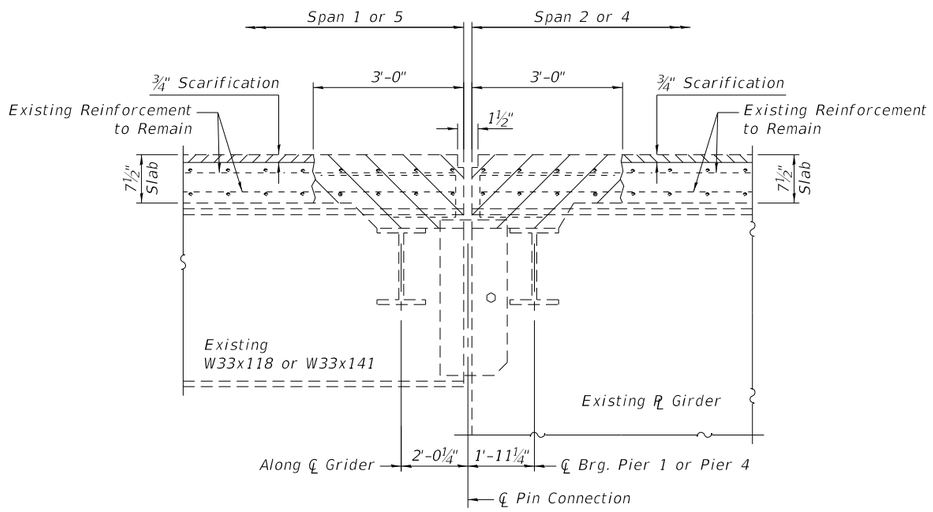


SECTION THRU JOINT
AT WEST ABUTMENT
(Showing Proposed)
(Horiz. Dim. at Rt. ∠'s)

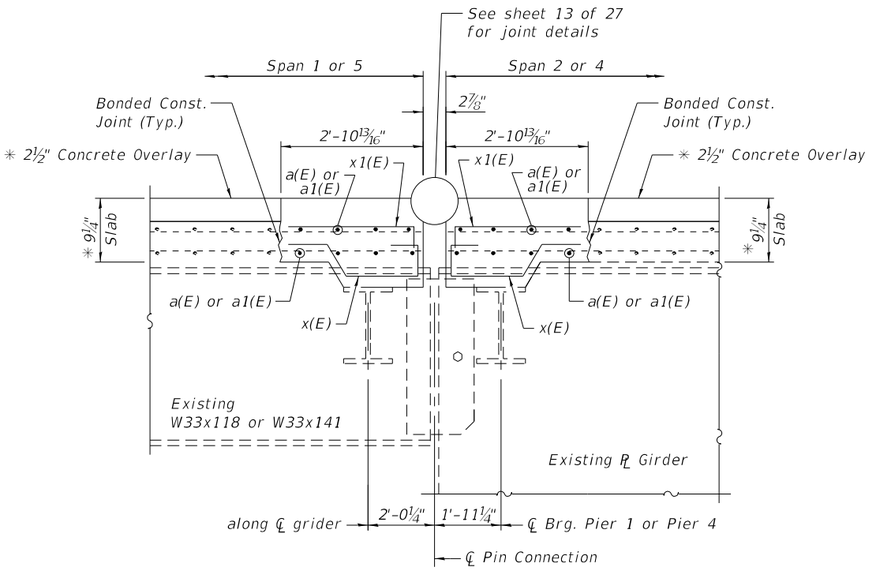
✳ Prior to Grinding



POINT BLOCK DETAIL
AT EAST ABUTMENT



SECTION THRU JOINT
AT PIER 1 AND 4
(Showing Removal)
(Horiz. Dim. at Rt. ∠'s)



SECTION THRU JOINT
AT PIER 1 AND 4
(Showing Proposed)
(Horiz. Dim. at Rt. ∠'s)

MODEL: Default
FILE NAME: 026-0021-PTB 180-021-00-JointRepairs.dgn

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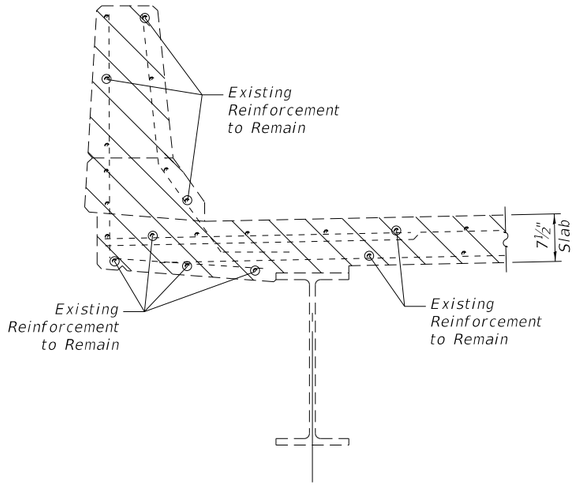
PLOT DATE = 10/1/2020	DRAWN , SJS	REVISED ,	
	CHECKED , MDC	REVISED ,	

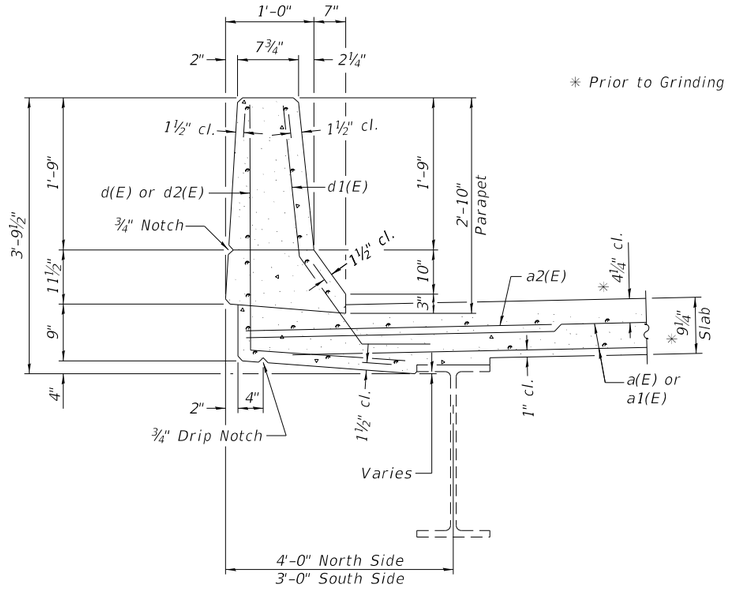
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

JOINT REPLACEMENT DETAILS
STRUCTURE NO. 026-0021
SHEET 10 OF 27 SHEETS

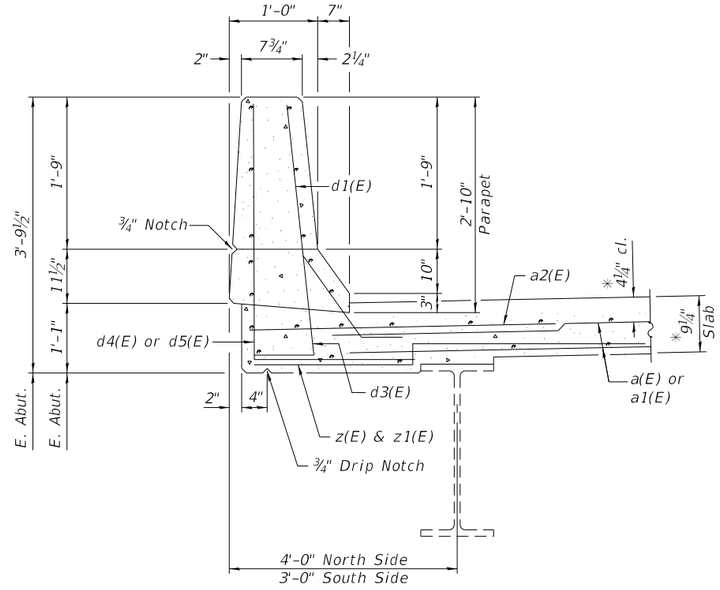
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 Bridge Repair -2021-5	FAYETTE	43	20
		CONTRACT NO. 74992		
		ILLINOIS	FED. AID PROJECT	



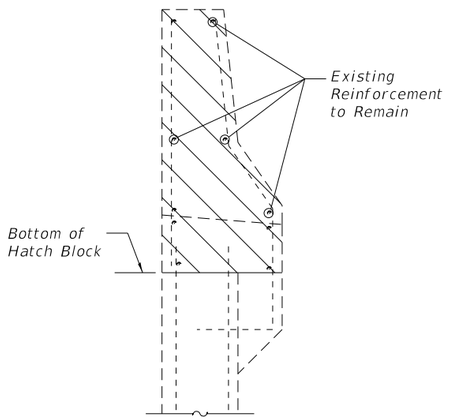
SECTION THRU PARAPET
(Showing Removal)



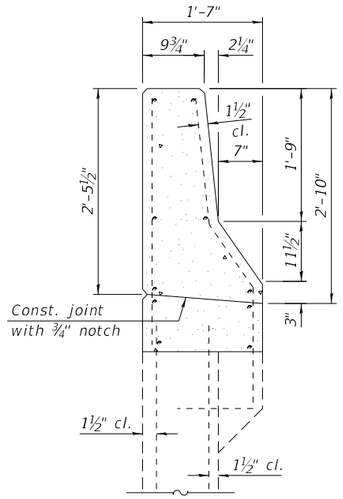
SECTION THRU PARAPET
AT PIERS 1 & 4, WEST ABUTMENT
(Showing Proposed)



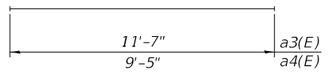
TYPICAL SECTION THRU PARAPET
NEAR ABUTMENT AT MODULAR JOINTS
(Showing Proposed)



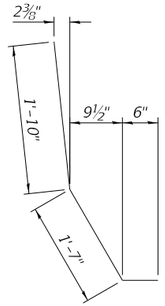
SECTION THRU
APPROACH PARAPET
(Showing Removal)



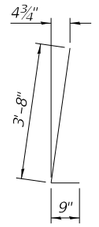
SECTION THRU
APPROACH PARAPET
(Showing Proposed)



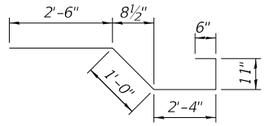
BAR a3(E) & a4(E)
(Headed)



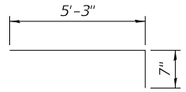
BAR d1(E)



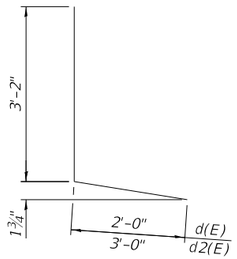
BAR d3(E)



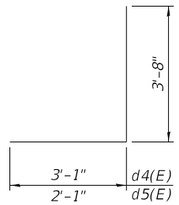
BAR x(E)



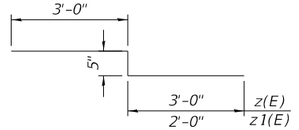
BAR x1(E)



BAR d(E) & d2(E)



BAR d4(E) & d5(E)



BAR z(E) & z1(E)

TWO SUPERSTRUCTURES
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	50	#7	44'-8"	———
a1(E)	50	#7	39'-2"	———
a2(E)	26	#6	6'-6"	———
a3(E)	20	#7	11'-7"	———
a4(E)	4	#7	9'-5"	———
d(E)	33	#5	5'-2"	L
d1(E)	81	#5	3'-11"	L
d2(E)	29	#5	6'-2"	L
d3(E)	15	#5	4'-5"	L
d4(E)	10	#5	6'-4"	⌋
d5(E)	5	#5	5'-9"	⌋
h(E)	8	#6	42'-5"	———
h1(E)	8	#6	36'-11"	———
x(E)	180	#5	7'-3"	⌐¬
x1(E)	210	#5	5'-10"	¬
z(E)	9	#5	6'-5"	⌐¬
Z1(E)	4	#5	5'-5"	⌐¬
Reinforcement Bars, Epoxy Coated		Pound	13,920	
Concrete Superstructure		Cu. Yd.	78.7	
Concrete Removal		Cu. Yd.	69.5	

Notes:
Hatched areas indicate limits of Concrete Removal.
Existing reinforcement to remain shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.
Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete removal.

MODEL: Default
FILE NAME: 026-0021-PTB 180-021-00-JointRepairs.dgn

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Civil and Structural Engineering

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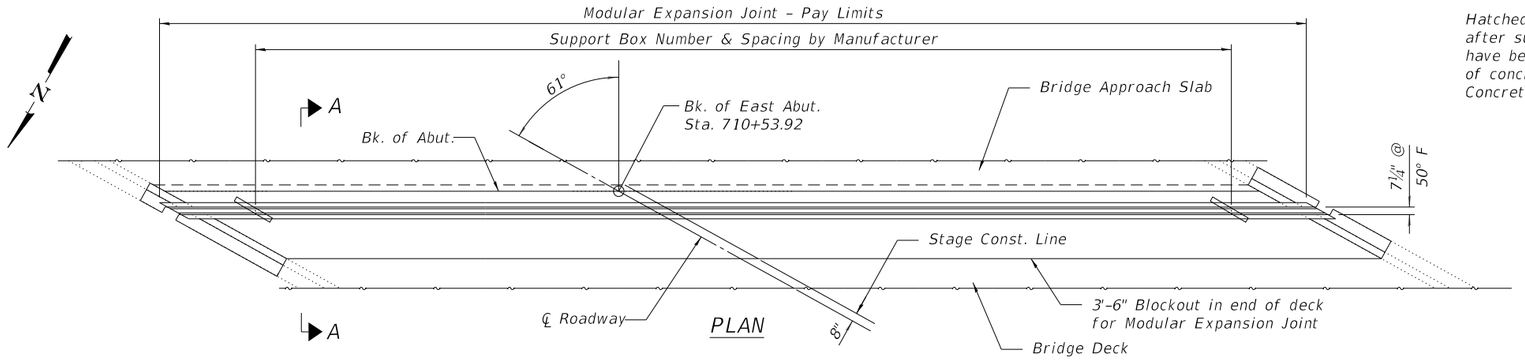
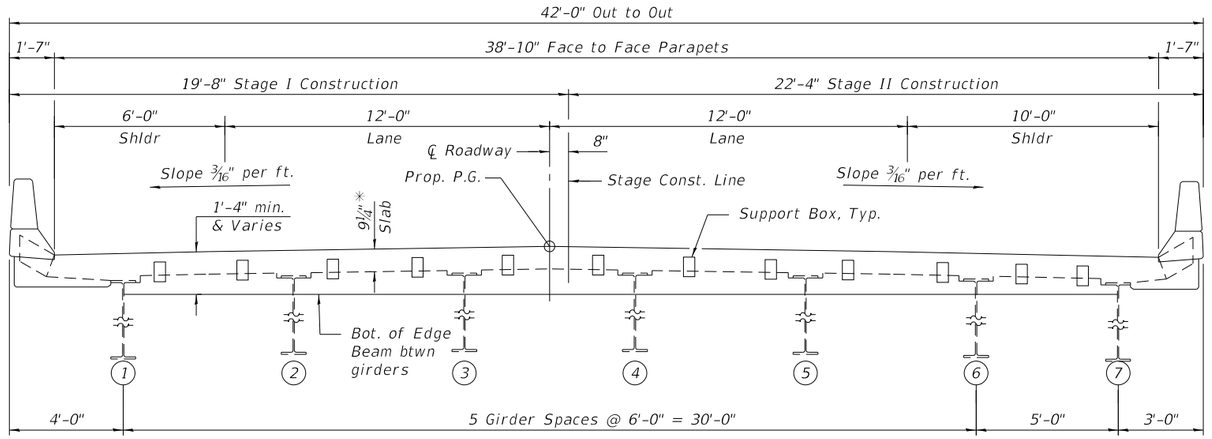
PLOT DATE = 10/1/2020	DRAWN , SJS	REVISED ,	
	CHECKED , MDC	REVISED ,	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

JOINT REPLACEMENT DETAILS
STRUCTURE NO. 026-0021
SHEET 11 OF 27 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 Bridge Repair -2021-5	FAYETTE	43	21
		CONTRACT NO. 74992		
	ILLINOIS	FED. AID PROJECT		



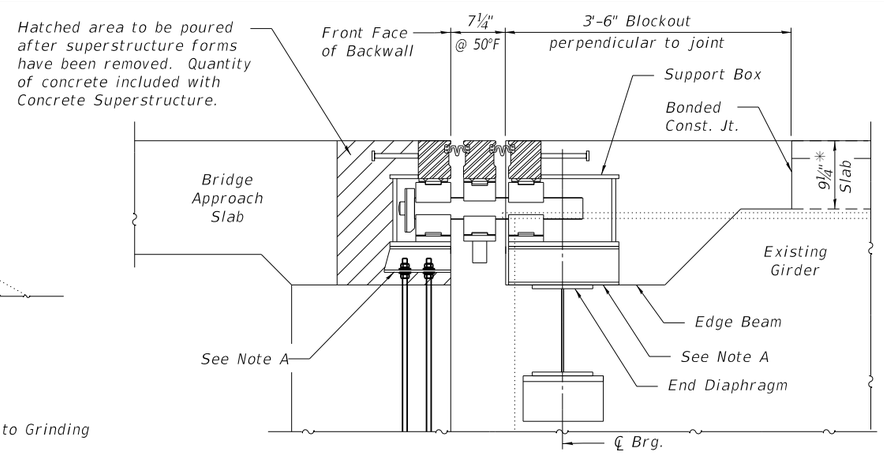


CROSS SECTION THRU JOINT

(Looking East)

Horizontal dimensions are at right angles, unless noted otherwise

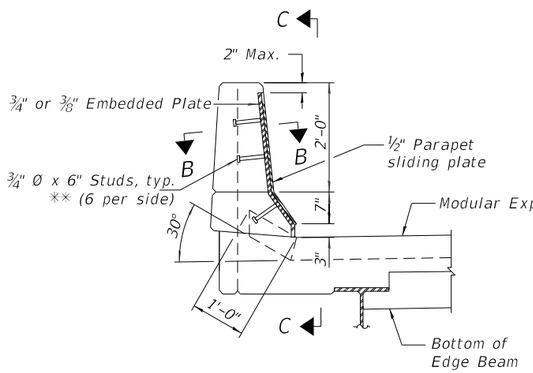
* Prior to Grinding



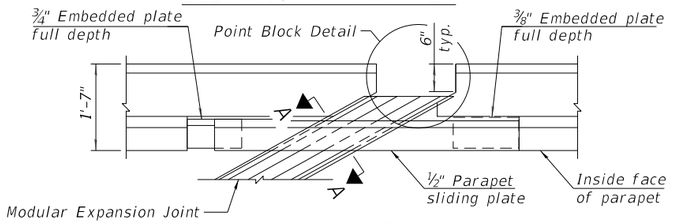
SECTION A-A

(Horizontal dimensions are at right angles, unless noted otherwise)

Note A: Support boxes shall be rigidly attached to Backwall, End Diaphragms, and Existing Girders by adjustable brackets, stools, or shims.

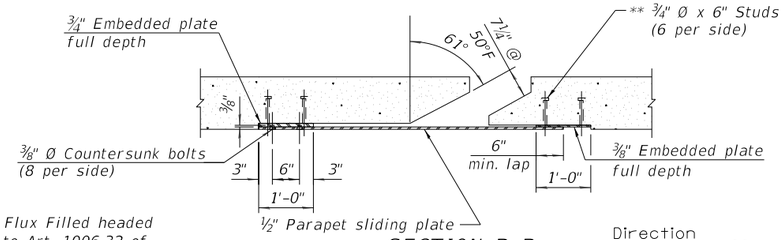


ELEVATION AT PARAPET



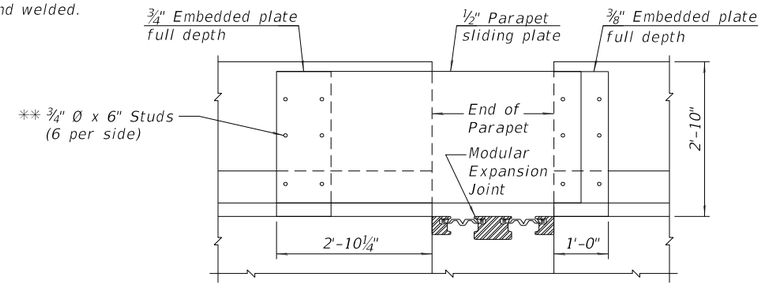
PLAN AT PARAPET

** Granular or solid Flux Filled headed studs conforming to Art. 1006.32 of the Standard Specifications, automatically end welded.



SECTION B-B

Direction of Traffic



SECTION C-C

Notes:

1. The Modular Expansion Joint shall be designed in accordance with the latest AASHTO Specifications for HS20-44 truck loading with impact.
2. The expansion joint device shall be a prefabricated modular assembly with multiple support bars and separator beams, providing a continuous seal across the deck.
3. The Joint shall be fabricated and installed according to the manufacturer's recommendations and as described in the GBSP No. 18 for Modular Expansion Joint and as approved by the Engineer.
4. The joint shall be fabricated to conform to the roadway profile and cross slope.
5. All exposed structural steel elements such as separator and edge beam support bars and cover plate shall be fabricated with AASHTO M270, Grade 50 steel unless specified otherwise by the manufacturer.
6. Bolts for the sliding plate assemblies shall be galvanized according to AASHTO M232.
7. The steel plates for the sliding plate assemblies shall be AASHTO M270, Grade 50 and galvanized according to AASHTO M111.
8. All materials, equipment and labor required to install the sliding plate assemblies in the parapets are included in the cost of Modular Expansion Joint-Swivel of the size specified.
9. No aluminum components shall be allowed.
10. All splices of center beams and edge beams shall be full penetration welds (upturn splices may be partial penetration welds).
11. Joint openings shall be adjusted according to Article 503.10(c) of the Standard Specifications when the blockout is cast at an ambient temperature other than 50°F.
12. Modular Expansion Joints shall be assembled in their final relative position with the ends in place for shop inspection and acceptance.
13. All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.
14. The joint provided shall provide longitudinal movement parallel to the centerline of roadway equal to 2¼" and transverse movement parallel to expansion joint equal to 2".

BILL OF MATERIAL

Item	Unit	Total
Modular Expansion Joint-Swivel 6"	Foot	85

MODEL: Default
FILE NAME: 026-0021-PTB 180-021-00-Modular.dgn

CEC Cummins Engineering Corporation
Civil and Structural Engineering

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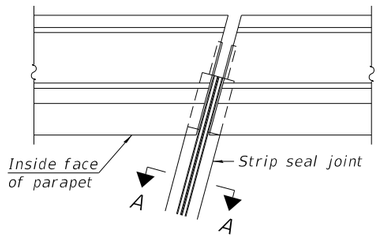
FILE NAME = 026-0021-PTB 180-021-00-Modular.dgn	CHECKED , MDC	REVISED ,	
PLOT DATE = 10/1/2020	DRAWN , SJS	REVISED ,	
	CHECKED , MDC	REVISED ,	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

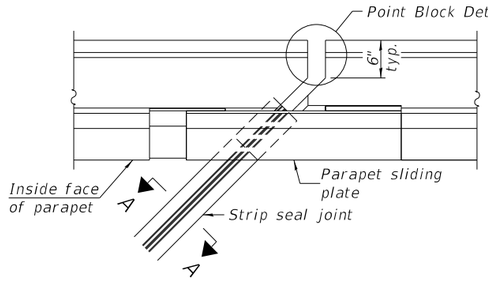
MODULAR EXPANSION JOINT
STRUCTURE NO. 026-0021

SHEET 12 OF 27 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 Bridge Repair -2021-5	FAYETTE	43	22
		CONTRACT NO. 74992		
	ILLINOIS FED. AID PROJECT			

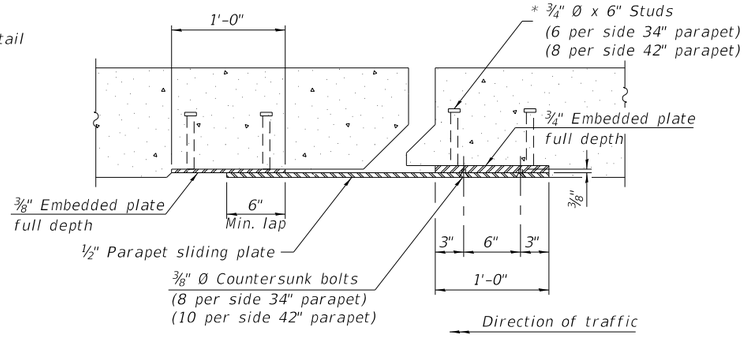


FOR SKEWS ≤ 30°



FOR SKEWS > 30°

PLAN AT PARAPET



SECTION B-B

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of ¼". The configuration of the strip seal shall match the configuration of the locking edge rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The locking edge rails depicted are configured for typical applications and are conceptual only. The actual configuration of the locking edge rails and matching strip seal may vary from manufacturer to manufacturer provided they fit the application and meet the minimum anchorage shown. Flanged edge rails, however, will not be allowed. Locking edge rails may exceed the 4½" maximum depth provided the anchorage system is revised according to the manufacturer's recommendation.

The manufacturer's recommended installation methods shall be followed.

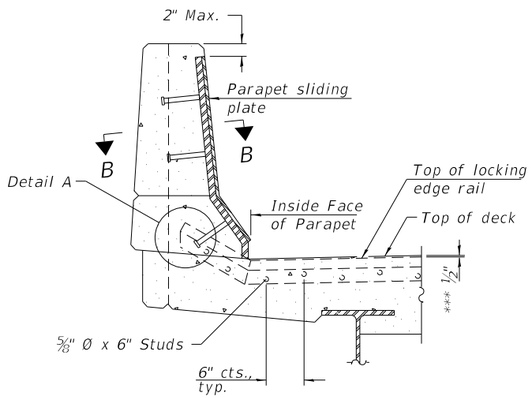
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

The Maximum space between locking edge rail segments shall be 3/16" and sealed with a suitable sealant; however, any rail joint within 10' measured perpendicular to the face of the curb or parapet shall be welded as shown in the locking edge rail splice detail.

Cost of parapet sliding plates, embedded plates, and anchorage studs included with Preformed Joint Strip Seal.

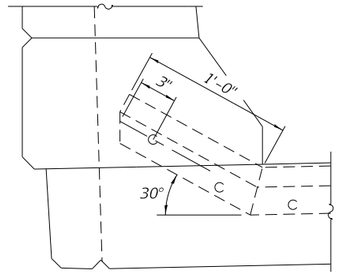
34" F-shape barrier shown, 42" F-shape similar as noted.

The concrete opening below the strip seal will vary based on the locking edge rail chosen by the Contractor. Deck and parapet lengths shown elsewhere in the plans are dimensioned to the concrete opening, not the joint opening, and are based on the rolled locking edge rail. If the Contractor elects to use a different locking edge rail, dimensional adjustments may be required. One exception to this would be the strip seal joint at the end of the precast bridge approach slab. For these cases the pavement connector length shall be adjusted, not the length of the bridge approach slab.



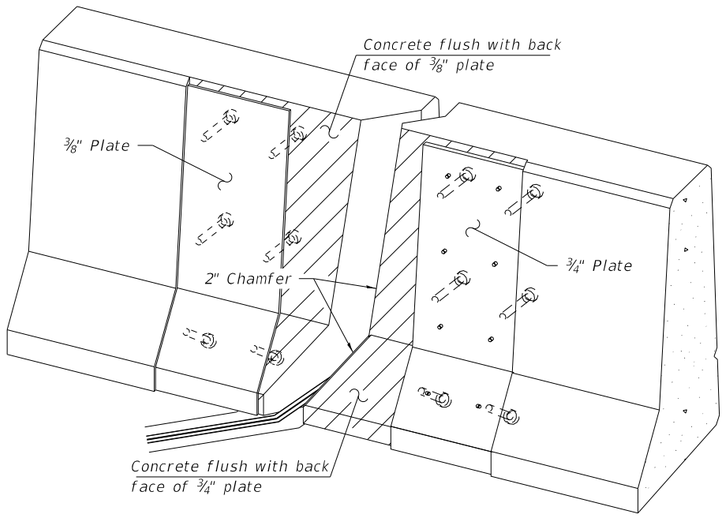
ELEVATION AT PARAPET

(Skews > 30° shown. Skews ≤ 30° similar except as shown in plan view.)



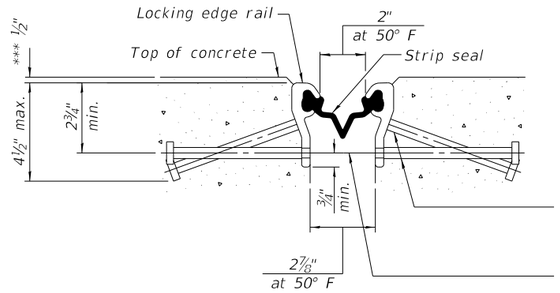
DETAIL A

*** Prior to ¼" Grinding

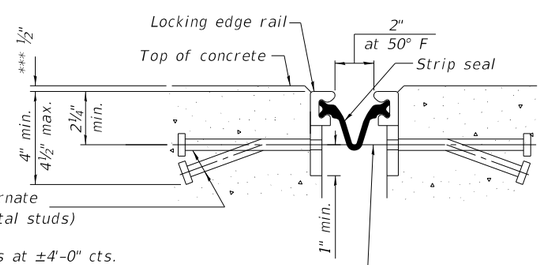


TRIMETRIC VIEW

(Showing embedded plates only)



SHOWING ROLLED RAIL JOINT



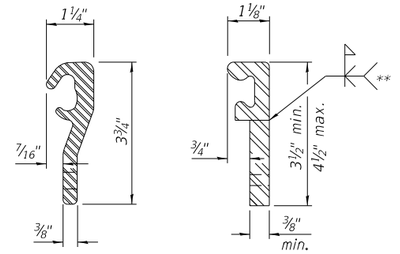
SHOWING WELDED RAIL JOINT

* ⅝" Ø x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs)

⅞" ϕ threaded rods in 7/16" ϕ holes at ±4'-0" cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.

SECTION A-A

** Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.*



ROLLED (EXTRUDED) RAIL

WELDED RAIL

LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue. Rolled rail shown, welded rail similar.

LOCKING EDGE RAILS

*** Back gouge not required if complete joint penetration is verified by mock-up.*

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	255

MODEL: Default
FILE NAME: 026-0021-PTB 180-021-00-StripSeal.dgn

CEC Cummins Engineering Corporation
Civil and Structural Engineering

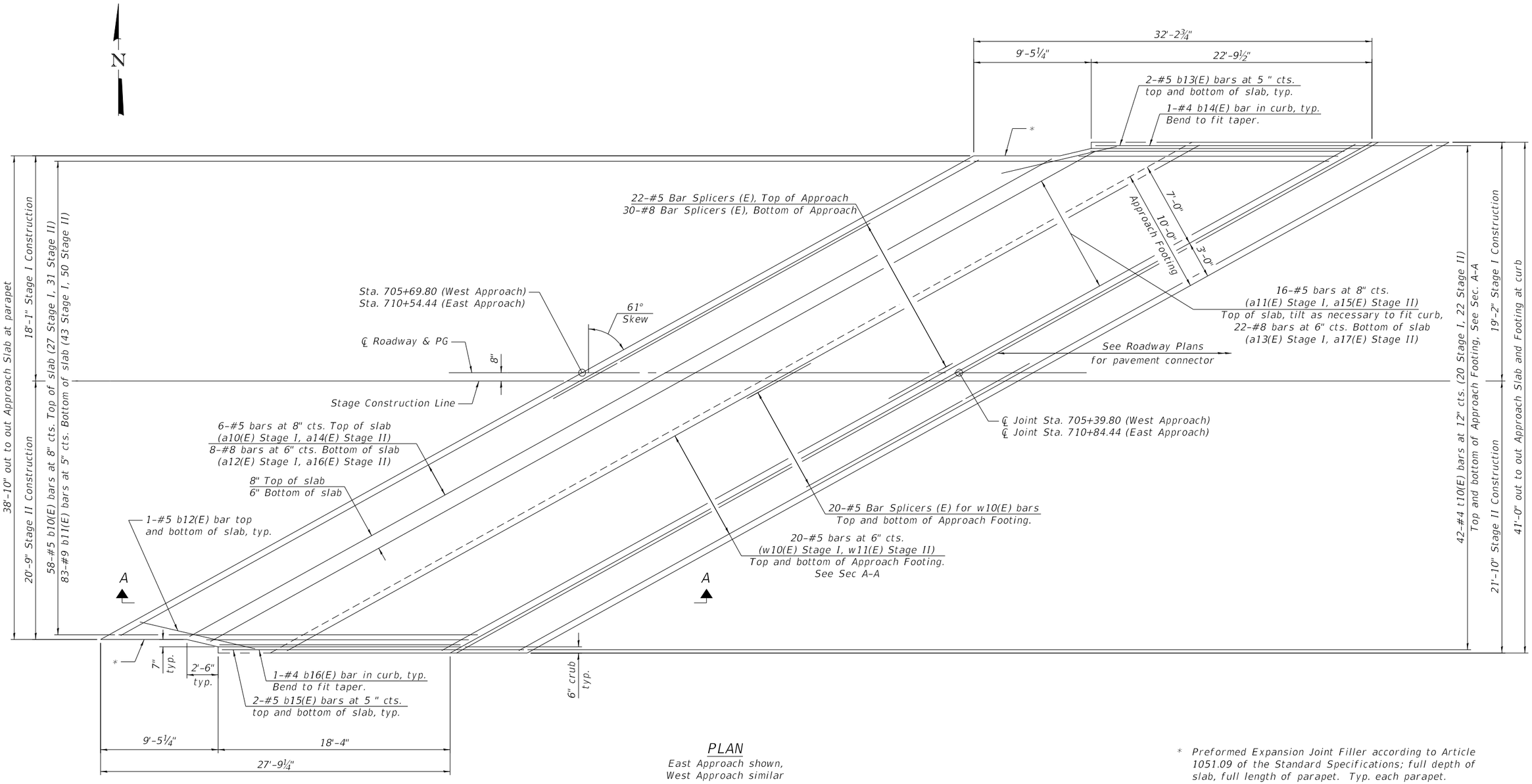
JOB = 2480.6		DESIGNED , AAN		REVISED ,	
FILE NAME = 026-0021-PTB 180-021-00-StripSeal.dgn		CHECKED , MDC		REVISED ,	
PLOT DATE = 10/1/2020		DRAWN , SJS		REVISED ,	
		CHECKED , MDC		REVISED ,	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MODIFIED PREFORMED JOINT STRIP SEAL
STRUCTURE NO. 026-0021

SHEET 13 OF 27 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 Bridge Repair -2021-5	FAYETTE	43	23
		CONTRACT NO. 74992		
	ILLINOIS	FED. AID PROJECT		



PLAN

East Approach shown,
West Approach similar

* Preformed Expansion Joint Filler according to Article 1051.09 of the Standard Specifications; full depth of slab, full length of parapet. Typ. each parapet.

MODEL: Default
FILE NAME: 026-0021-PTB 180-021-00-ApprSlabs.dgn

CEC Cummins Engineering Corporation
Civil and Structural Engineering

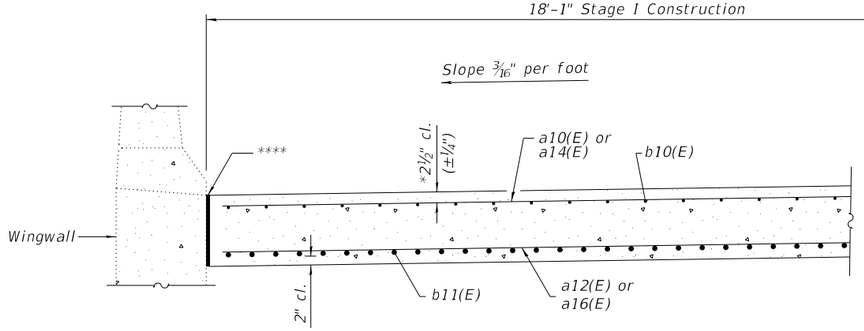
JOB = 2480.6	DESIGNED , AAN	REVISED ,	
FILE NAME = 026-0021-PTB 180-021-00-ApprSlabs.dgn	CHECKED , MDC	REVISED ,	
PLOT DATE = 10/1/2020	DRAWN , SJS	REVISED ,	
	CHECKED , MDC	REVISED ,	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

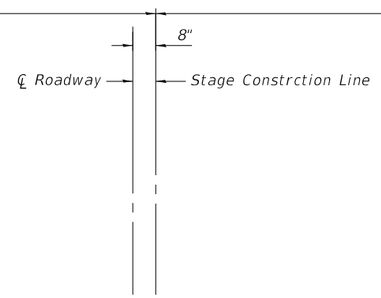
BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 026-0021

SHEET 14 OF 27 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 Bridge Repair -2021-5	FAYETTE	43	24
		CONTRACT NO. 74992		
	ILLINOIS	FED. AID PROJECT		



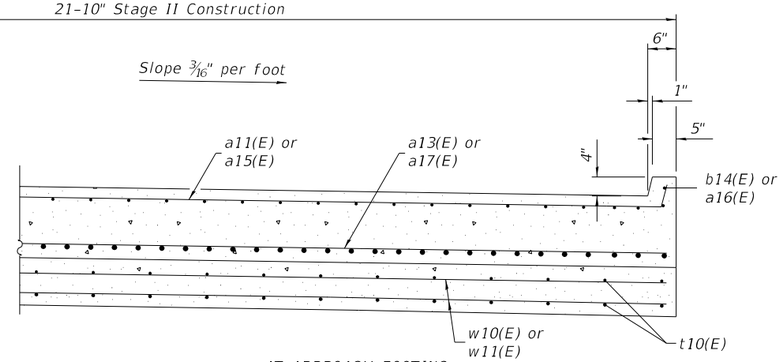
NEAR ABUTMENT



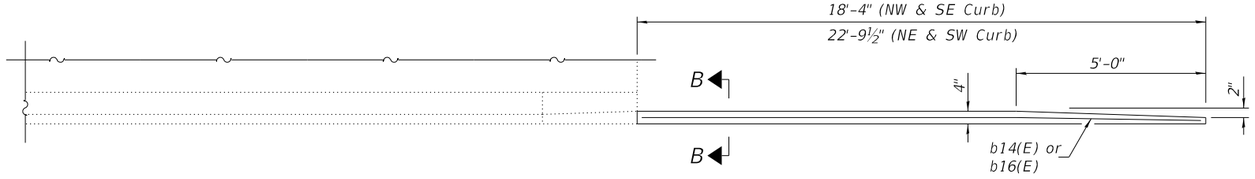
CROSS SECTION

(Looking East)

(East Approach shown, West Approach similar)



AT APPROACH FOOTING



INSIDE ELEVATION OF PARAPET AND CURB

Notes:

Approach slab shall be paid for as Concrete Superstructure (Approach Slab).

Approach footing concrete shall be paid for as Concrete Structures.

The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.

Cost of excavation for approach footing included with Concrete Structures.

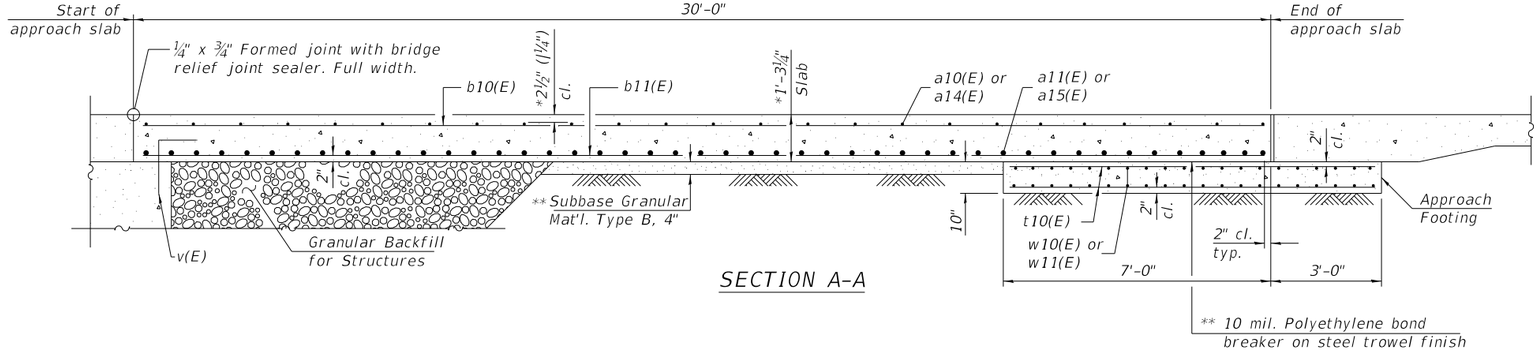
For Granular Backfill for Structures and drainage treatment details, see sheet of .

* Prior to grinding

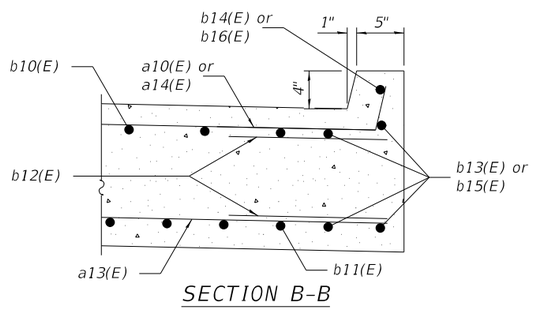
** Cost included with Concrete Superstructure (Approach Slab).

*** Per manufacturer recommendations

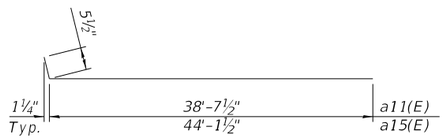
**** Preformed Expansion Joint Filler according to Article 1051.09 of the Standard Specifications; full depth of slab, full length of parapet. Typ. each parapet.



SECTION A-A



SECTION B-B



BAR a11(E) & a15(E)

TWO APPROACHES
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a10(E)	12	#5	36'-7"	
a11(E)	32	#5	39'-1"	
a12(E)	16	#8	36'-7"	
a13(E)	44	#8	38'-10"	
a14(E)	12	#5	42'-1"	
a15(E)	32	#5	44'-7"	
a16(E)	16	#8	42'-1"	
a17(E)	44	#8	44'-4"	
b10(E)	116	#5	29'-8"	
b11(E)	116	#9	29'-8"	
b12(E)	8	#5	8'-6"	
b13(E)	8	#5	22'-5"	
b14(E)	2	#4	22'-5"	
b15(E)	8	#5	18'-0"	
t10(E)	168	#4	9'-8"	
w10(E)	80	#5	38'-10"	
w11(E)	80	#5	44'-3"	
Concrete Superstructure (Approach Slab)		Cu. Yd.	231.6	
Concrete Structures		Cu. Yd.	52	
Reinforcement Bars, Epoxy Coated		Pound	40,660	

MODEL: Default
FILE NAME: 026-0021-PTB 180-021-00-ApprSlabs.dgn

CEC Cummins Engineering Corporation
Civil and Structural Engineering

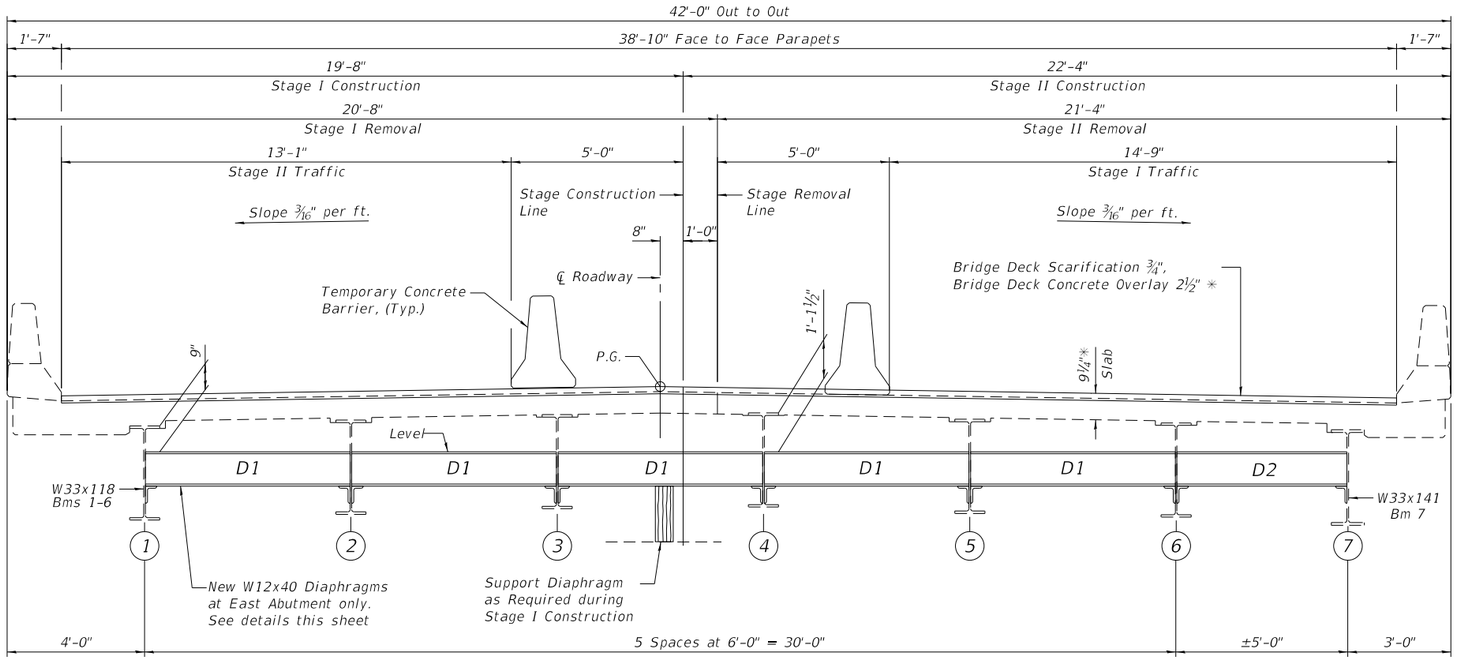
JOB = 2480.6	DESIGNED , AAN	REVISED ,	
FILE NAME = 026-0021-PTB 180-021-00-ApprSlabs.dgn	CHECKED , MDC	REVISED ,	
PLOT DATE = 10/1/2020	DRAWN , SJS	REVISED ,	
	CHECKED , MDC	REVISED ,	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 026-0021

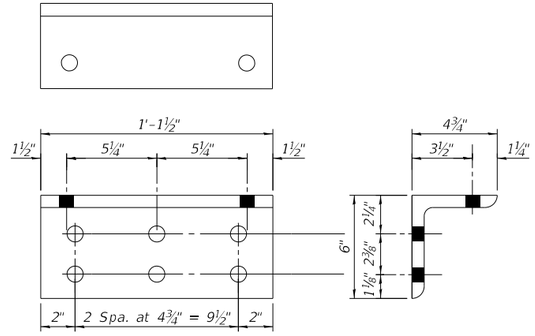
SHEET 15 OF 27 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 Bridge Repair -2021-5	FAYETTE	43	25
		CONTRACT NO. 74992		
	ILLINOIS FED. AID PROJECT			



CROSS SECTION

(Looking East)

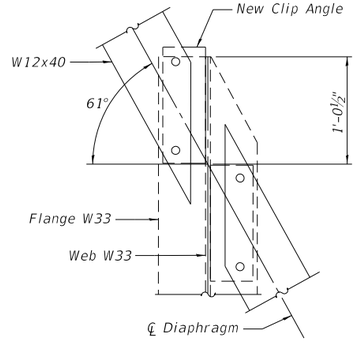


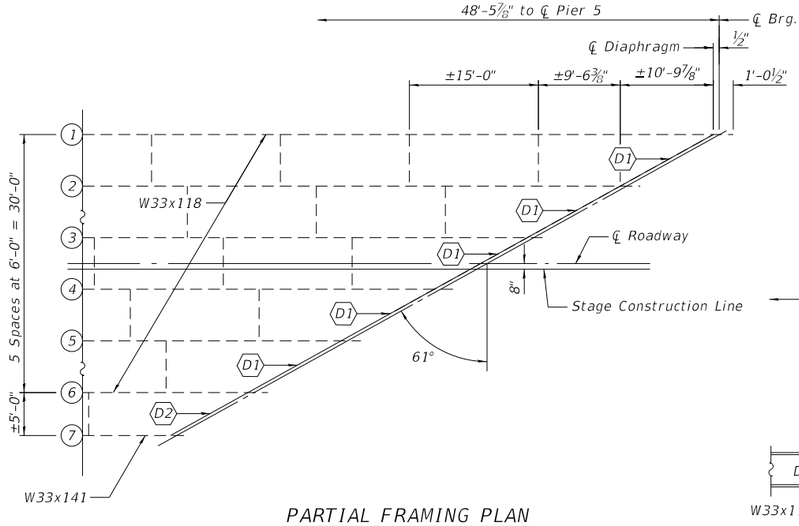
CLIP ANGLE

∠ 6 x 4 3/4 x 3/4" x 1'-1 1/2"

(12 Required)

✳ Prior to Grinding

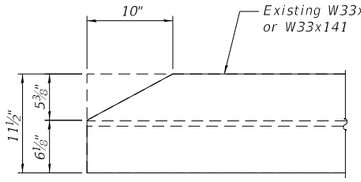




PARTIAL FRAMING PLAN

D1 – Replace existing W12x40 end diaphragm, Beams 1 to 6

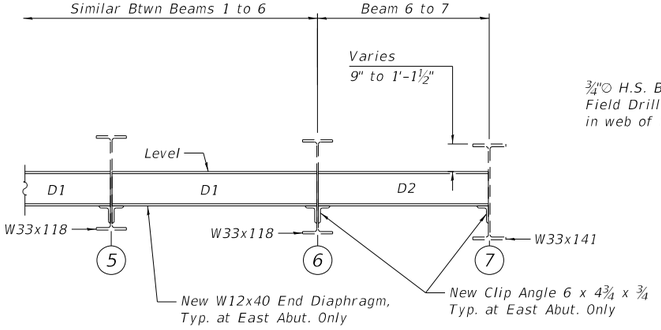
D2 – Replace existing W12x40 end diaphragm, Beam 6 to 7



CLIP DETAIL

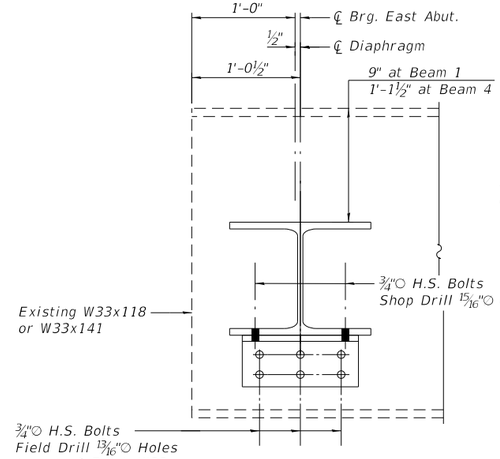
(7 Locations Required)

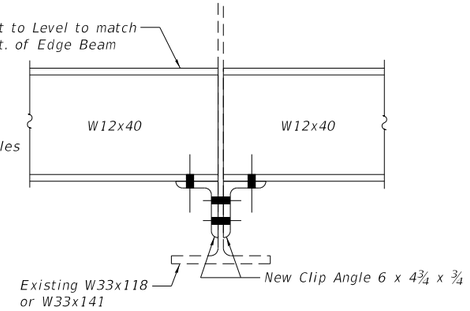
Cost included with Structural Steel Removal

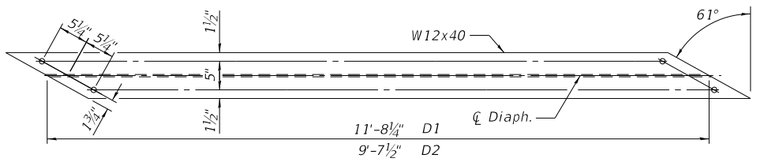


END DIAPHRAGM REPLACEMENT DETAILS

(East Abutment Only)







END DIAPHRAGM CONNECTION DETAILS

D1 (5 Required)

D2 (1 Required)

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Furnishing and Erecting Structural Steel	Pound	3100
Structural Steel Removal	Pound	3050

MODEL: Default
FILE NAME: 026-0021-PTB 180-021-00-Diaph.dgn

CEC Cummins Engineering Corporation
Civil and Structural Engineering

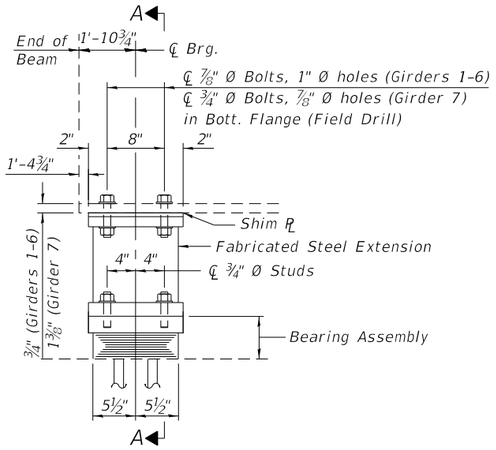
JOB = 2480,6		DESIGNED , AAN	REVISED ,	
FILE NAME = 026-0021-PTB 180-021-00-Diaph.dgn		CHECKED , MDC	REVISED ,	
PLOT DATE = 10/1/2020		DRAWN , SJS	REVISED ,	
		CHECKED , MDC	REVISED ,	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

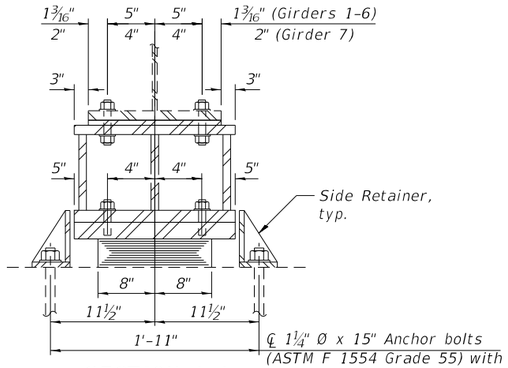
STEEL DETAILS
STRUCTURE NO. 026-0021

SHEET 16 OF 27 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 Bridge Repair -2021-5	FAYETTE	43	26
		CONTRACT NO. 74992		
		ILLINOIS	FED. AID PROJECT	

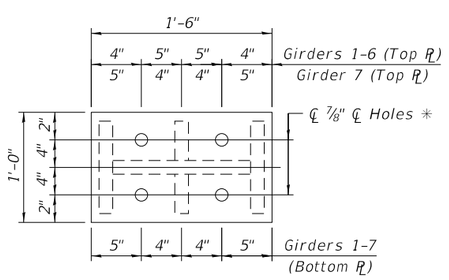


ELEVATION AT PIER 1

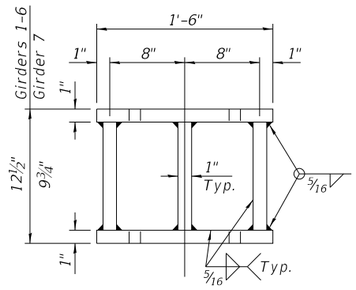


SECTION A-A

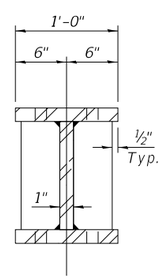
✳ Holes in Top PL for Girders 1-6 shall be a Ø



PLAN - TOP & BOTTOM



ELEVATION

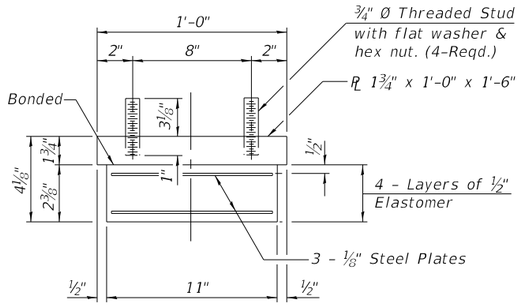


SECTION

FABRICATED STEEL EXTENSION

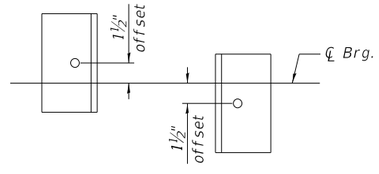
(7 Required)

TYPE I ELASTOMERIC EXPANSION BEARING WITH FABRICATED STEEL EXTENSION



BEARING ASSEMBLY

Note:
Shim plates shall not be placed under Bearing Assembly.



RETAINER LAYOUT PIER 1

BEAM REACTIONS

$R_{℄}$	(k)	89
$R_{⊥}$	(k)	30
Imp.	(k)	6
R_{Total}	(k)	125

Notes:

Side retainers and leveling pad required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

The ⅛" PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of ⅛" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

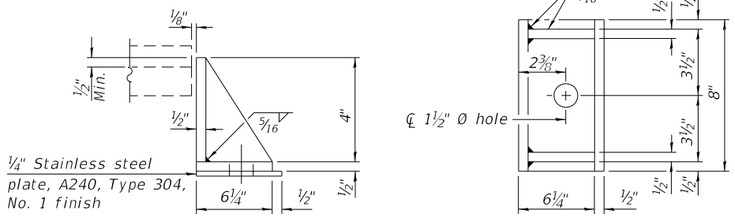
The structural steel plates of the bearing assembly, side retainers, tapered plates and steel extensions shall conform to the requirements of AASHTO M270 Grade 50W.

Two ⅛ in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

Drilling holes in flange, steel extensions and connection bolts included with Furnishing and Erecting Structural Steel.

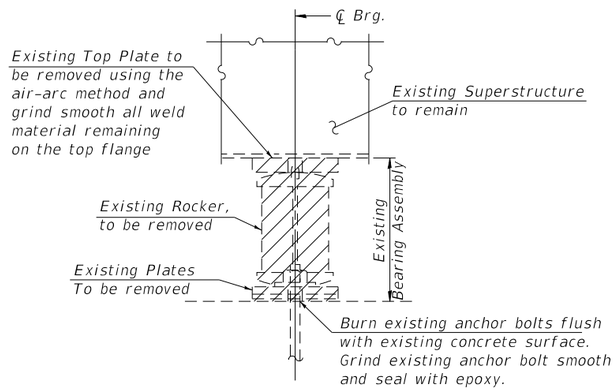
Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.

Minimum jack capacity = 55 tons.



SIDE RETAINER

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



EXISTING BEARING REMOVAL

Work is included with the cost for Jack and Remove Existing Bearings

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	7
Anchor Bolts, 1¼"	Each	14
Furnishing and Erecting Structural Steel	Pound	1800
Jack and Remove Existing Bearings	Each	6

MODEL: Default
FILE NAME: 026-0021-PTB 180-021-00-Bearingsl.dgn

CEC Cummins Engineering Corporation
Civil and Structural Engineering

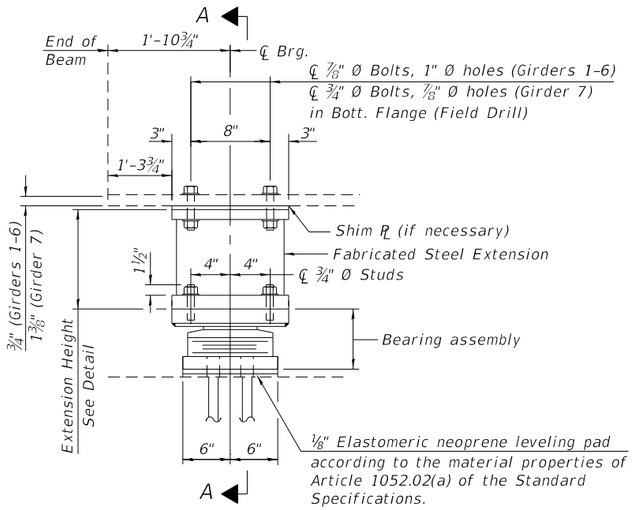
JOB = 2480.6	DESIGNED , AAN	REVISED ,	
FILE NAME = 026-0021-PTB 180-021-00-Bearingsl.dgn	CHECKED , MDC	REVISED ,	
PLOT DATE = 10/2/2020	DRAWN , SJS	REVISED ,	
	CHECKED , MDC	REVISED ,	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

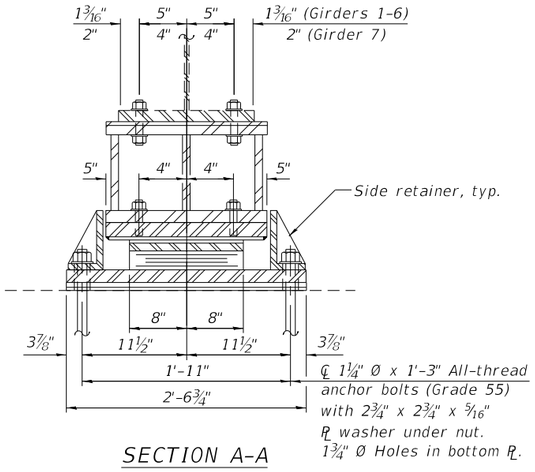
MODIFIED BEARING DETAILS - PIER 1
STRUCTURE NO. 026-0021

SHEET 17 OF 27 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 Bridge Repair -2021-5	FAYETTE	43	27
		CONTRACT NO. 74992		
	ILLINOIS	FED. AID PROJECT		

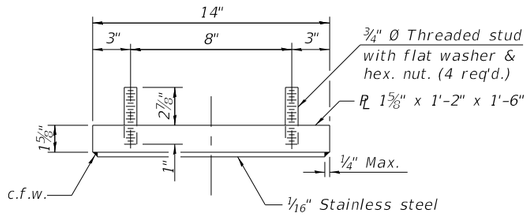


ELEVATION AT PIER 4

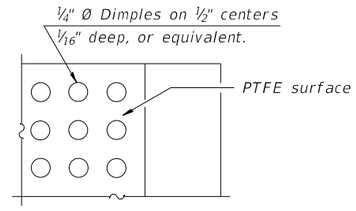


SECTION A-A

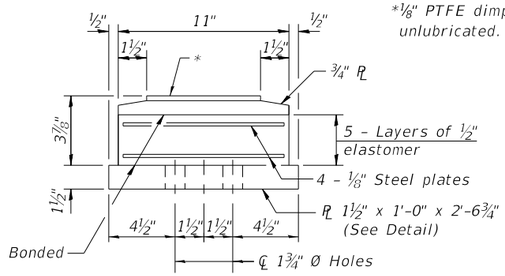
TYPE II ELASTOMERIC EXP. BRG.



TOP BEARING ASSEMBLY

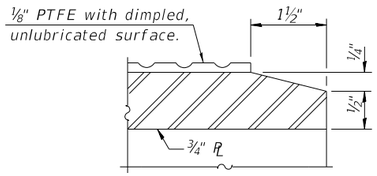


PLAN-PTFE SURFACE

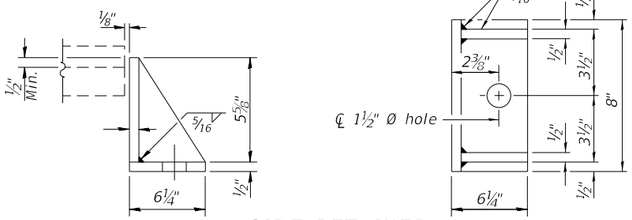


*⅛" PTFE dimpled, unlubricated.

BOTTOM BEARING ASSEMBLY

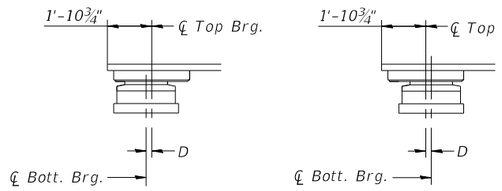


SECTION THRU PTFE



SIDE RETAINER

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



BELOW 50°F.

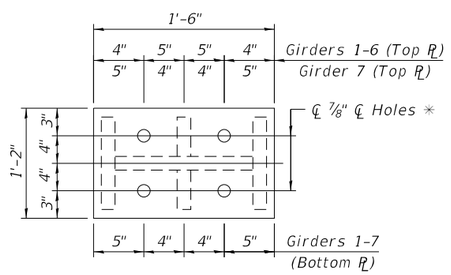
ABOVE 50°F.

D=⅛" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

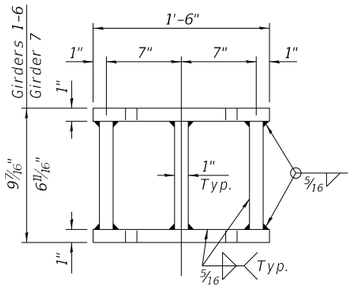
EXPANSION BEARING ORIENTATION

The above diagrams are for informational purposes only to show the amount of expected offset "D" for the current temperature in the field.

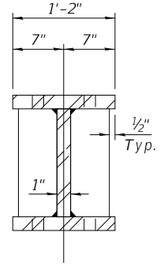
✳ Holes in Top PL for Girders 1-6 shall be a Ø



PLAN - TOP & BOTTOM



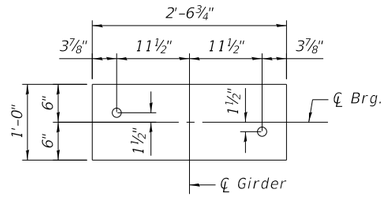
ELEVATION



SECTION

FABRICATED STEEL EXTENSION

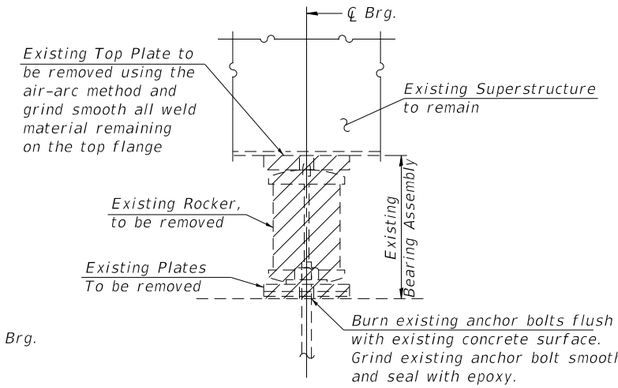
(7 Required)



BOTTOM BRG. PLATE DETAIL

BEAM REACTIONS

R_{DL}	(k)	89
R_{LL}	(k)	30
Imp.	(k)	6
R_{Total}	(k)	125



EXISTING BEARING REMOVAL

Work is included with the cost for Jack and Remove Existing Bearings

Notes:

Side retainers and leveling pad required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type II.

The ⅛" PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of ⅛" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

The structural steel plates of the bearing assembly, side retainers, tapered plates and steel extensions shall conform to the requirements of AASHTO M270 Grade 50W.

Two ⅛ in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

Drilling holes in flange, steel extensions and connection bolts included with Furnishing and Erecting Structural Steel.

Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.

Minimum jack capacity = 55 tons.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type II	Each	7
Anchor Bolts, 1¼"	Each	14
Furnishing and Erecting Structural Steel	Pound	1710
Jack and Remove Existing Bearings	Each	4

MODEL: Default
FILE NAME: 026-0021-PTB 180-021-00-Bearingsl.dgn

CEC Cummins Engineering Corporation
Civil and Structural Engineering

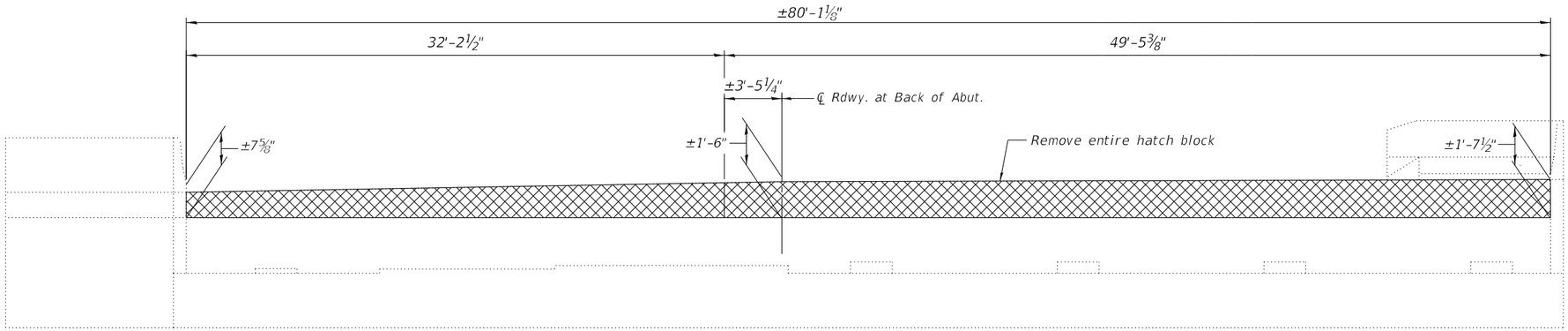
JOB = 2480.6	DESIGNED , AAN	REVISED ,	
FILE NAME = 026-0021-PTB 180-021-00-Bearingsl.dgn	CHECKED , MDC	REVISED ,	
PLOT DATE = 10/2/2020	DRAWN , SJS	REVISED ,	
	CHECKED , MDC	REVISED ,	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

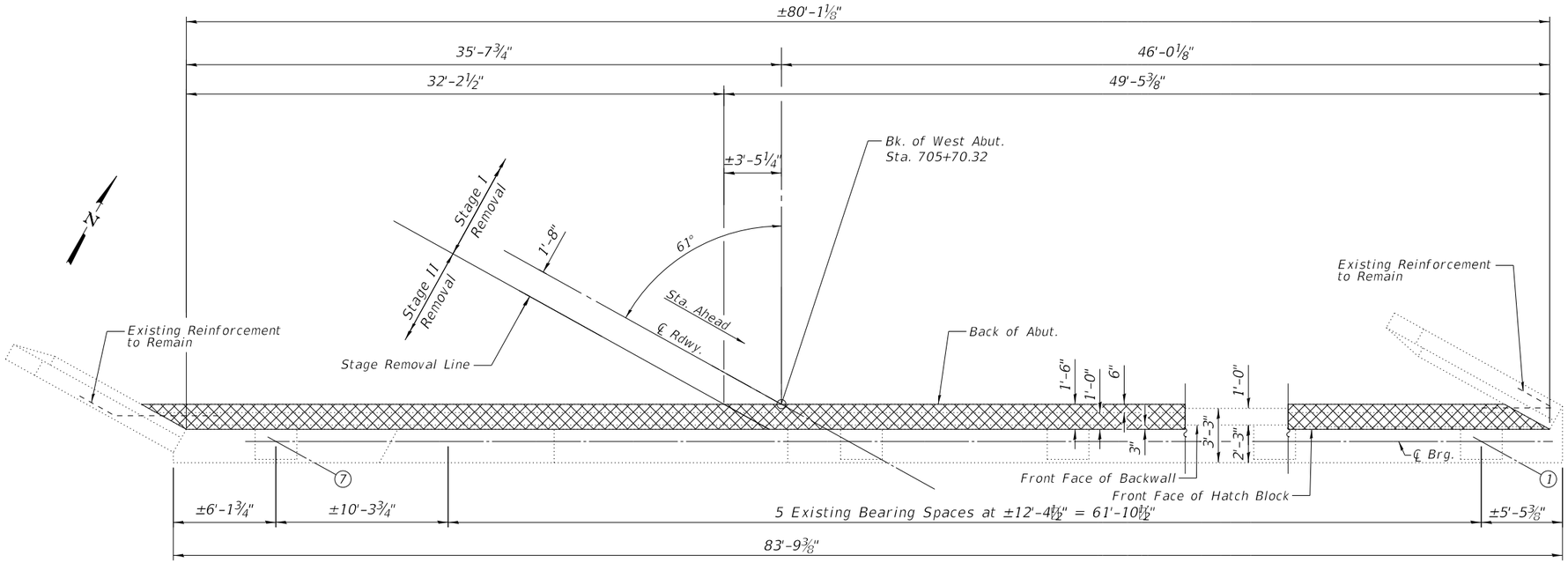
MODIFIED BEARING DETAILS - PIER 4
STRUCTURE NO. 026-0021

SHEET 17A OF 27 SHEETS

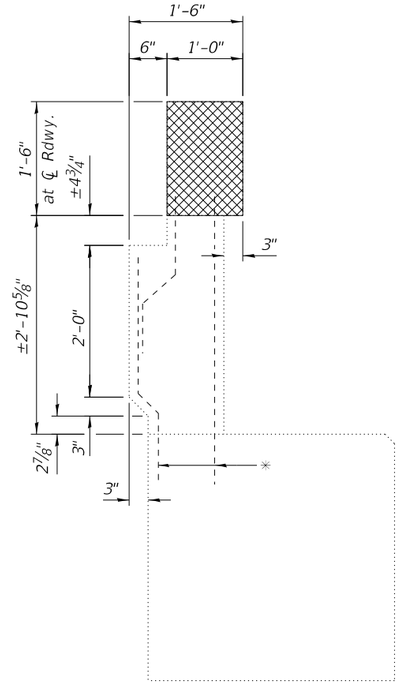
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 Bridge Repair -2021-5	FAYETTE	43	27A
		CONTRACT NO. 74992		
	ILLINOIS	FED. AID PROJECT		



ELEVATION



PLAN

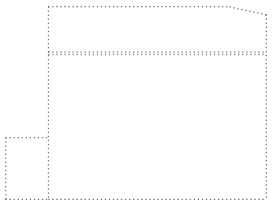


SECTION THRU ABUT

(Dimensions at right angles)

✳ Clean and incorporate existing bars into new construction. Trim as required.

SOUTH WINGWALL ELEVATION



NORTH WINGWALL ELEVATION

NOTES

1. Cross-hatched area indicates Concrete Removal.
2. Existing horizontal reinforcement which extends from the wingwalls into the removal areas is to be preserved, cleaned and incorporated into the new construction in accordance with Section 501.03 of the Standard Specifications. Cost included in CONCRETE REMOVAL.
3. Existing vertical bars in approach seat shall be cut off and covered with a layer of epoxy. Cost included with Concrete Removal.

LEGEND

- Structural Repair of Concrete (Depth ≤ 5")
- Concrete Removal

BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	4.9

MODEL: Default
FILE NAME: 026-0021-PTB 180-021-00-AbutsRepairs.dgn

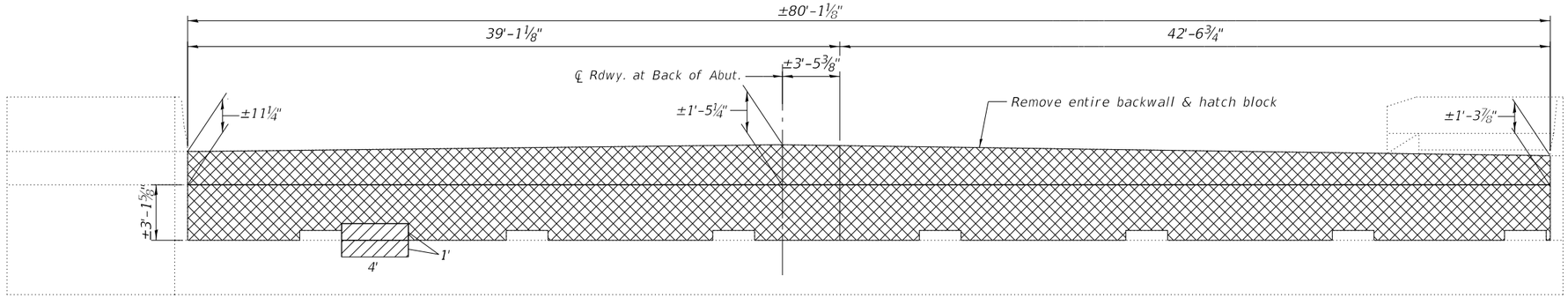
CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2480,6	DESIGNED , AAN	REVISED ,	
FILE NAME = 026-0021-PTB 180-021-00-AbutsRepairs.dgn	CHECKED , MDC	REVISED ,	
PLOT DATE = 10/1/2020	DRAWN , SJS	REVISED ,	
	CHECKED , MDC	REVISED ,	

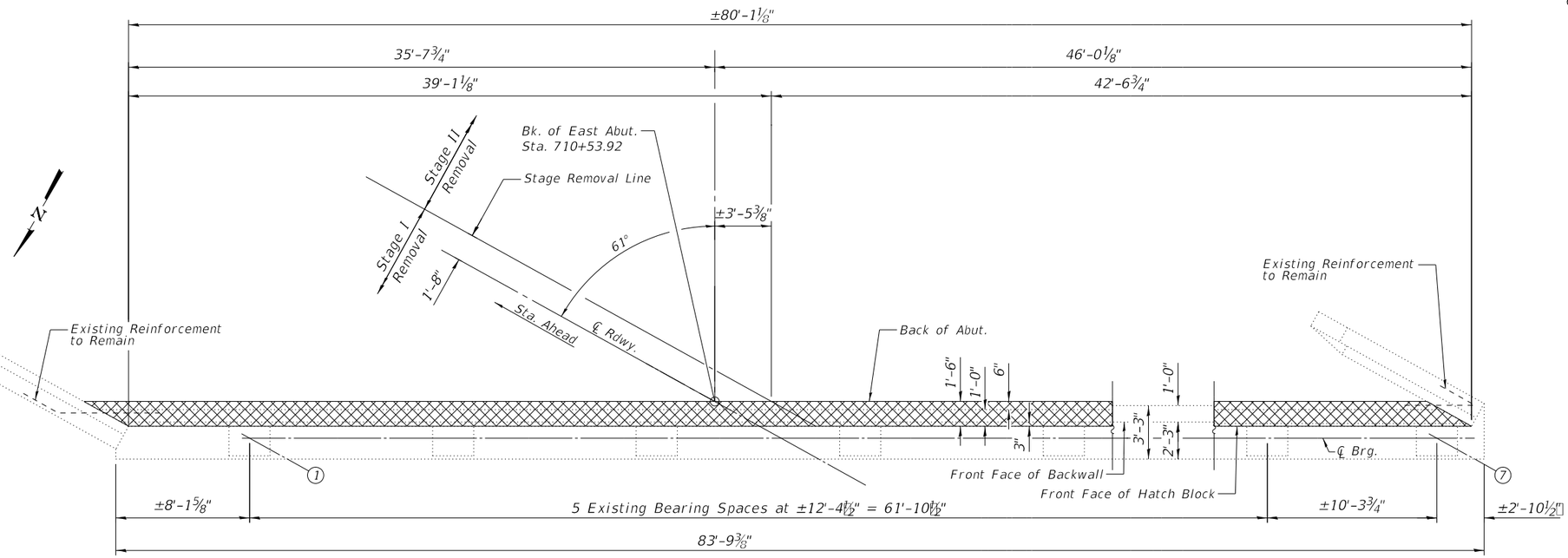
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT REPAIRS
STRUCTURE NO. 026-0021
SHEET 18 OF 27 SHEETS

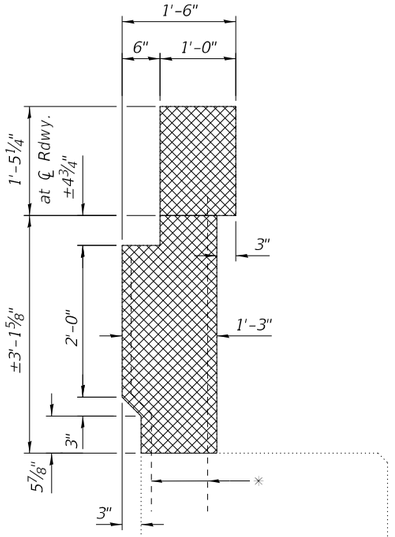
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 Bridge Repair -2021-5	FAYETTE	43	28
		CONTRACT NO. 74992		
	ILLINOIS FED. AID PROJECT			



ELEVATION



PLAN

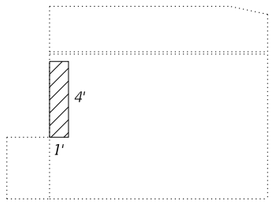


SECTION THRU ABUT

(Dimensions at right angles)

✳ Clean and incorporate existing bars into new construction. Trim as required.

NORTH WINGWALL ELEVATION



SOUTH WINGWALL ELEVATION

NOTES

1. Cross-hatched area indicates Concrete Removal.
2. Existing horizontal reinforcement which extends from the wingwalls into the removal areas is to be preserved, cleaned and incorporated into the new construction in accordance with Section 501.03 of the Standard Specifications. Cost included in CONCRETE REMOVAL.
3. Existing vertical bars in backwall shall be cut off and covered with a layer of epoxy. Cost included with Concrete Removal.

LEGEND

- Structural Repair of Concrete (Depth ≤ 5")
- Concrete Removal

BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	10.6
Structural Repair of Concrete (Depth Equal To Or Lesser Than 5 Inches)	Sq. Ft.	12

MODEL: Default
FILE NAME: 026-0021-PTB 180-021-00-AbutsRepairs.dgn

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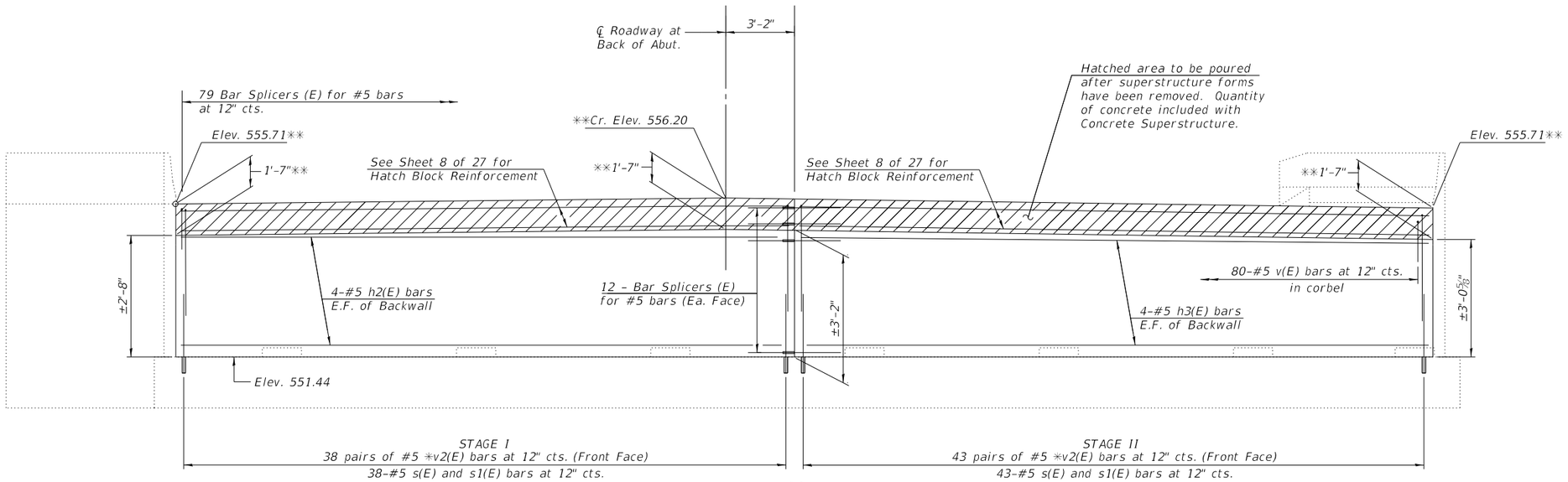
Civil and Structural Engineering

JOB = 2480.6	DESIGNED , AAN	REVISED ,	
FILE NAME = 026-0021-PTB 180-021-00-AbutsRepairs.dgn	CHECKED , MDC	REVISED ,	
PLOT DATE = 10/1/2020	DRAWN , SJS	REVISED ,	
	CHECKED , MDC	REVISED ,	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

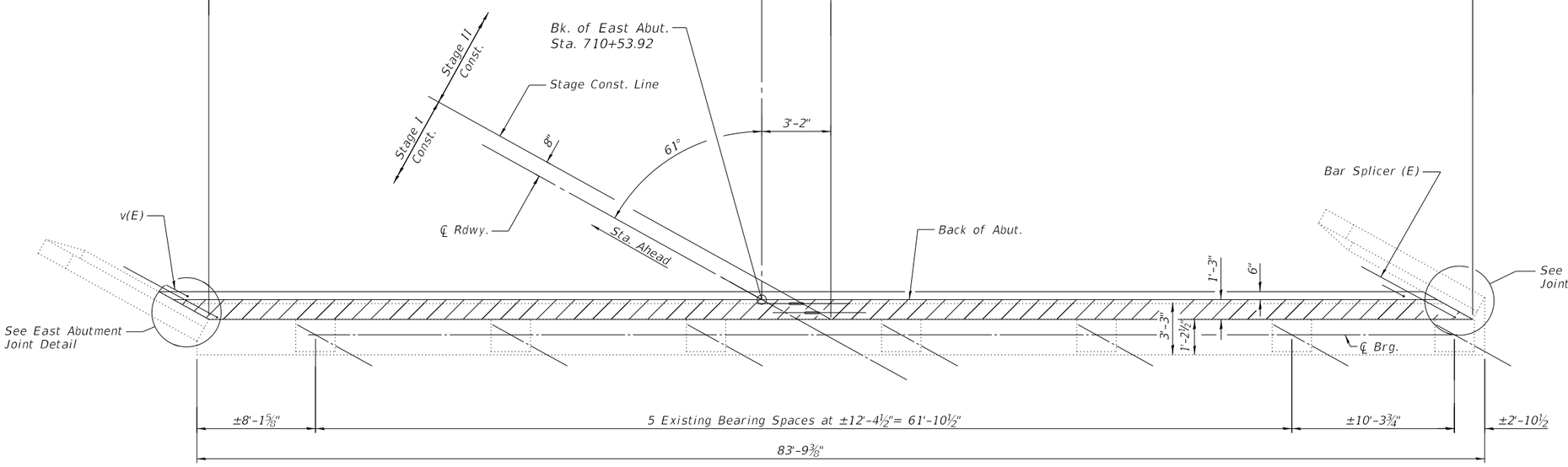
EAST ABUTMENT REPAIRS
STRUCTURE NO. 026-0021
SHEET 19 OF 27 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 Bridge Repair -2021-5	FAYETTE	43	29
		CONTRACT NO. 74992		
	ILLINOIS FED. AID PROJECT			



ELEVATION

** Prior to Grinding



PLAN

EAST ABUTMENT BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h2(E)	8	#5	36'-11"	
h4(E)	8	#5	42'-5"	
s(E)	81	#5	6'-1"	
s1(E)	81	#5	8'-1"	
v(E)	160	#5	4'-5"	
*v2(E)	162	#5	3'-3"	

Structure Excavation	Cu. Yd.	38
Concrete Structures	Cu. Yd.	15.7
Reinforcement Bars, Epoxy Coated	Pound	3150
Bar Spilcers	Each	79
Concrete Sealer	Sq. Ft.	242

Notes:

All bars designated with an asterisk (ex: *v2(E)) shall be epoxy grouted in accordance with Section 584 of the Standard Specifications. Minimum embedment = 9". Locate bars to miss existing reinforcement.

Existing wingwall reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.

Existing vertical bars in backwall shall be cut off and covered with a layer of epoxy. Cost included with Concrete Removal.

Concrete Sealer shall be applied to the front face of the backwall.

See Sheet 8 of 27 for point block details at hatch block.

See Section Thru East Abutment on Sheet 19 of 27.

MODEL: Default
FILE NAME: 026-0021-PTB 180-021-00-Abutments.dgn

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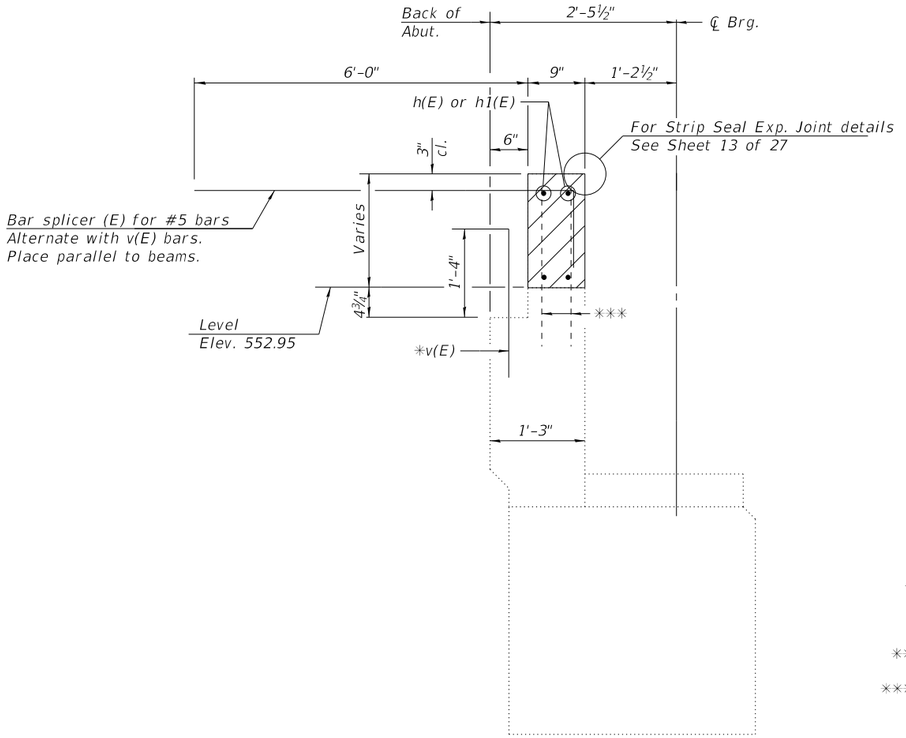
Civil and Structural Engineering

JOB = 2480.6	DESIGNED , AAN	REVISED ,	
FILE NAME = 026-0021-PTB 180-021-00-Abutments.dgn	CHECKED , MDC	REVISED ,	
PLOT DATE = 10/1/2020	DRAWN , SJS	REVISED ,	
	CHECKED , MDC	REVISED ,	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

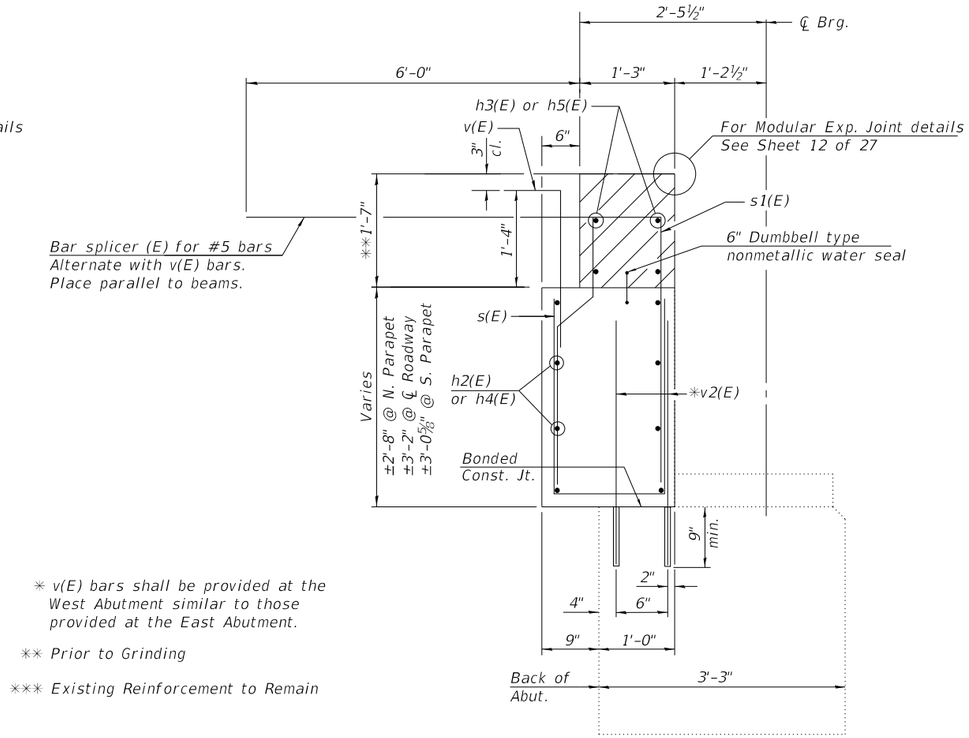
EAST ABUTMENT DETAILS
STRUCTURE NO. 026-0021
SHEET 20 OF 27 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 Bridge Repair -2021-5	FAYETTE	43	30
		CONTRACT NO. 74992		
	ILLINOIS	FED. AID PROJECT		



SEC. THRU WEST ABUTMENT

(Dimensions at Rt. L's)



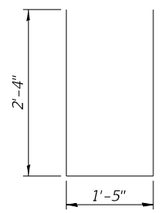
* v(E) bars shall be provided at the West Abutment similar to those provided at the East Abutment.

** Prior to Grinding

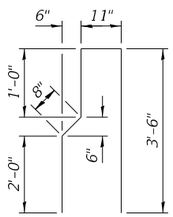
*** Existing Reinforcement to Remain

SEC. THRU EAST ABUTMENT

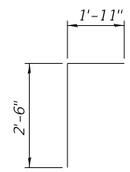
(Dimensions at Rt. L's)



BAR s(E)



BAR s1(E)



BAR v(E)

Notes:

*All bars designated with an asterisk (ex: *v1(E)) shall be epoxy grouted in accordance with Section 584 of the Standard Specifications. Minimum embedment = 9". Locate bars to miss existing reinforcement.*

Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.

Existing vertical bars in backwall shall be cut off and covered with a layer of epoxy. Cost included with Concrete Removal.

Concrete Sealer shall be applied to the front face of the backwall.

MODEL: Default
FILE NAME: 026-0021-PTB 180-021-00-AbutDet.dgn

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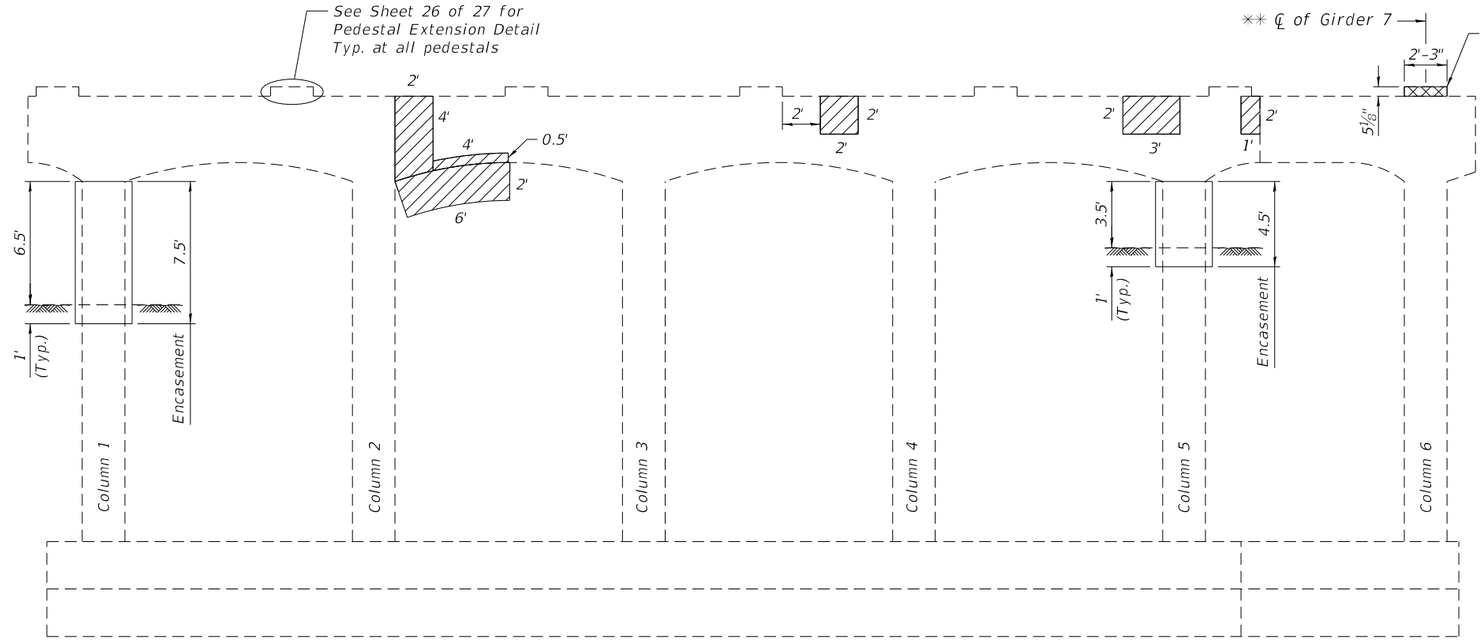
JOB = 2480.6	DESIGNED , AAN	REVISED ,	
FILE NAME = 026-0021-PTB 180-021-00-AbutDet.dgn	CHECKED , MDC	REVISED ,	
PLOT DATE = 10/1/2020	DRAWN , SJS	REVISED ,	
	CHECKED , MDC	REVISED ,	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ABUTMENT DETAILS
STRUCTURE NO. 026-0021

SHEET 21 OF 27 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 Bridge Repair -2021-5	FAYETTE	43	31
		CONTRACT NO. 74992		
	ILLINOIS FED. AID PROJECT			



WEST FACE OF PIER 1

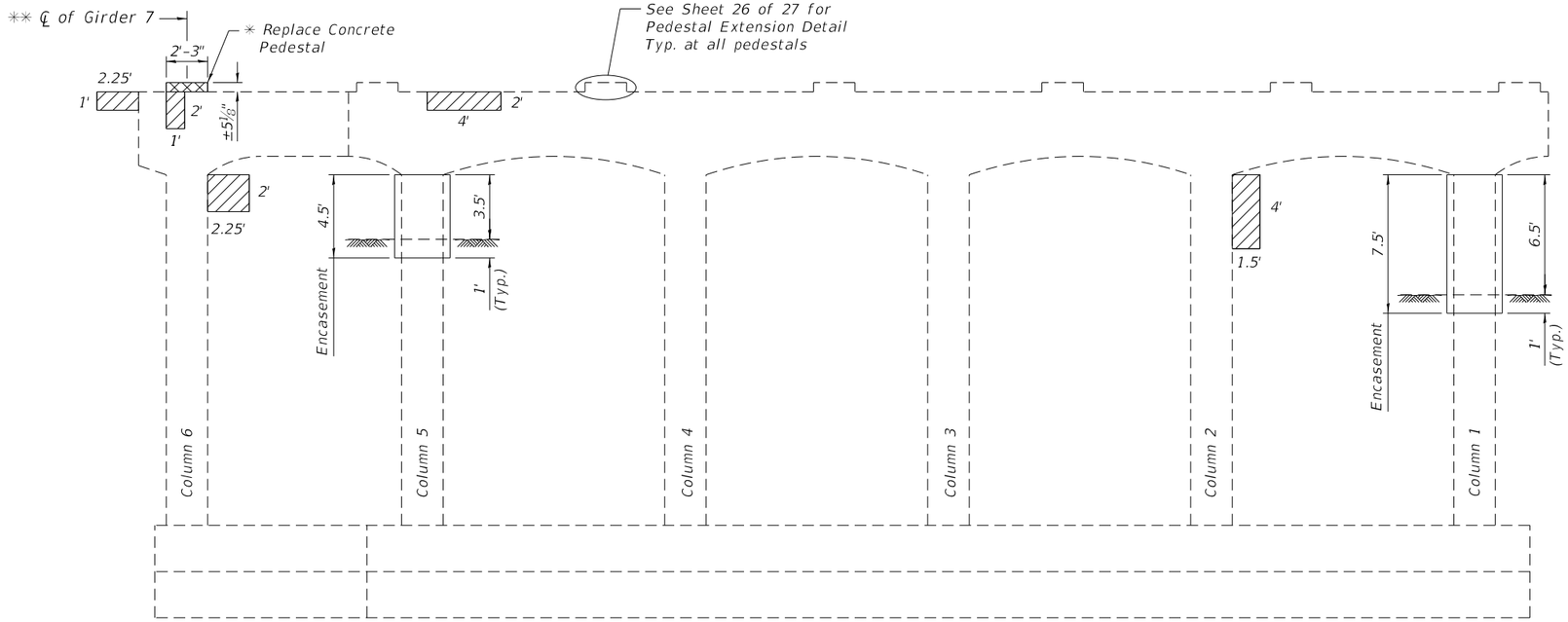
* Remove concrete pedestal down to top of pier cap and replace in kind. Reinforcement located in removal area shall be cleaned and reincorporated into new construction. Cost included with Concrete Removal. New pedestal to be constructed to same elevation as existing pedestal. Temporary Shoring and Cribbing shall be provided during pedestal replacement operation.

** Locations of Temporary Shoring & Cribbing

REACTION TABLE

R_{P}	(k)	89
R_{t}	(k)	30
Imp.	(k)	7
R_{Total}	(k)	126

Minimum Jack Capacity = 55 Ton



EAST FACE OF PIER 1

Note:
All unsound concrete shall be removed prior to column encasement. Cost included in Concrete Structures.
See Sheet 26 of 27 for reinforcement details, Bill of Material and Column Encasement Detail.

Structural Repair of Concrete, ≤ 5"

Concrete Removal

MODEL: Default
FILE NAME: 026-0021-PTB 180-021-00-PierRepairs.dgn

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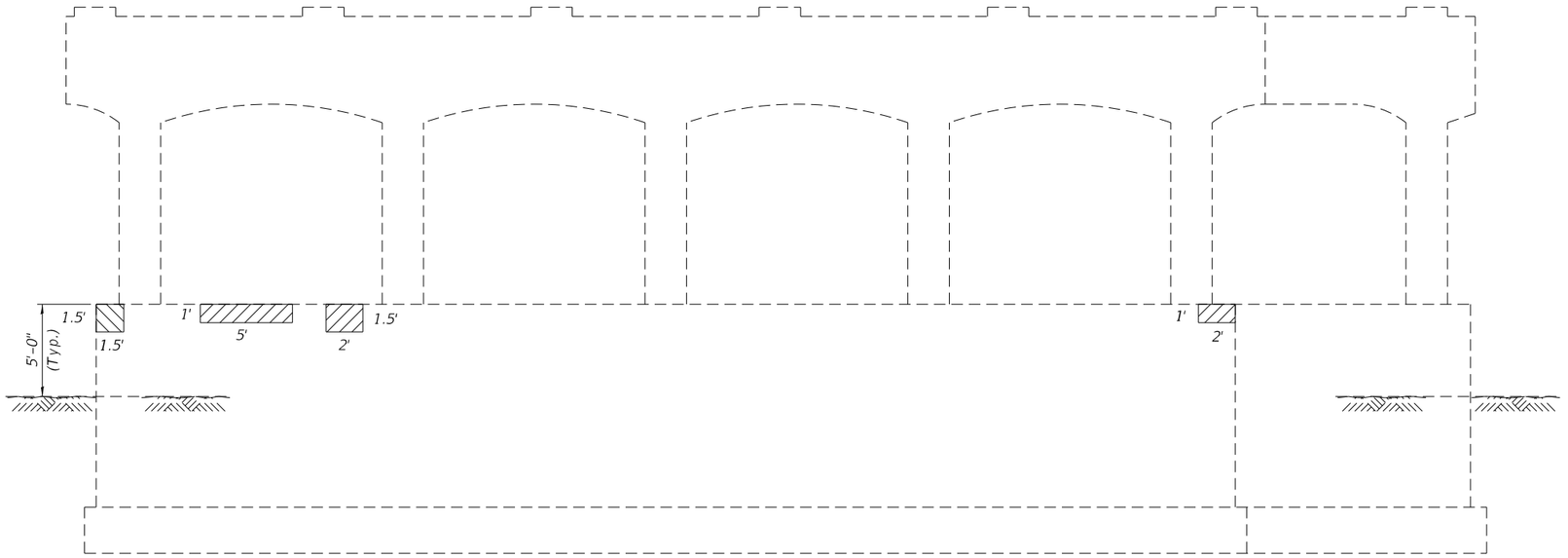
JOB = 2480.6	DESIGNED , AAN	REVISED ,	
FILE NAME = 026-0021-PTB 180-021-00-PierRepairs.dgn	CHECKED , MDC	REVISED ,	
PLOT DATE = 10/1/2020	DRAWN , SJS	REVISED ,	
	CHECKED , MDC	REVISED ,	

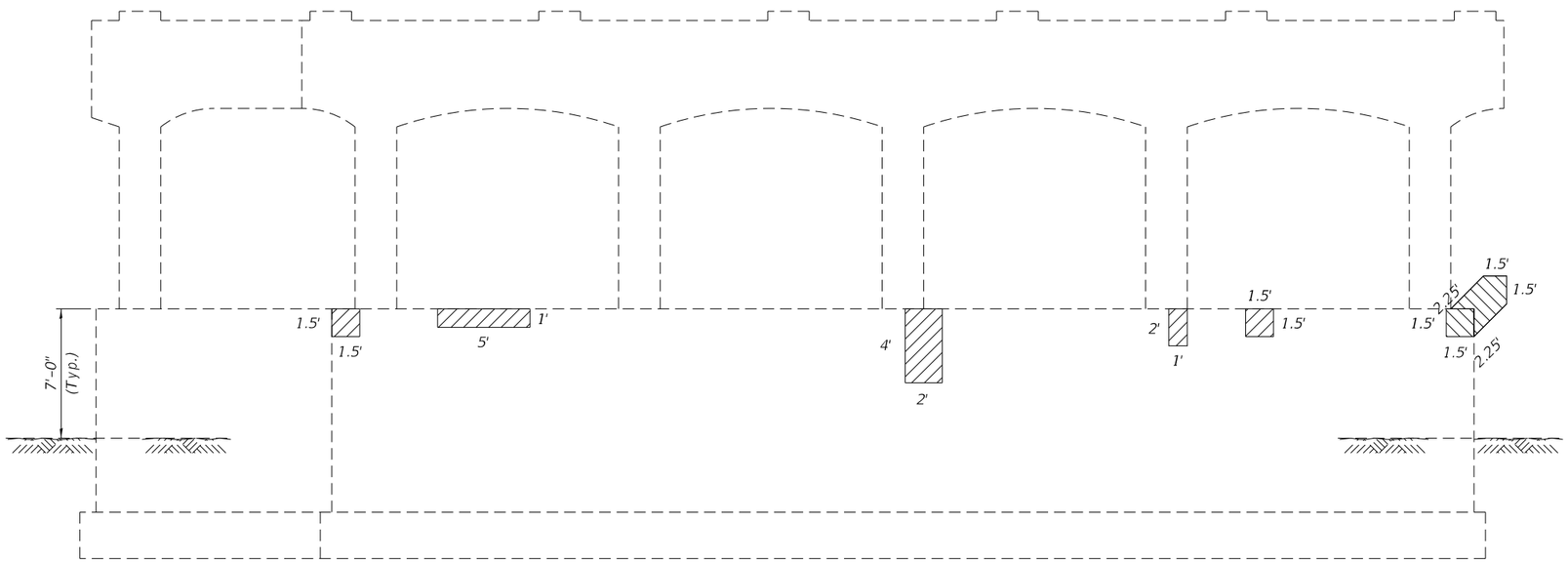
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 1 REPAIRS
STRUCTURE NO. 026-0021
SHEET 22 OF 27 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 Bridge Repair -2021-5	FAYETTE	43	32
		CONTRACT NO. 74992		
	ILLINOIS FED. AID PROJECT			



WEST FACE OF PIER 2



EAST FACE OF PIER 2

See Sheet 26 of 27 for Bill of Material.

Structural Repair of Concrete, ≤ 5"

Structural Repair of Concrete, ≥ 5"

MODEL: Default
FILE NAME: 026-0021-PTB 180-021-00-PierRepairs.dgn

CEC Cummins Engineering Corporation
Civil and Structural Engineering

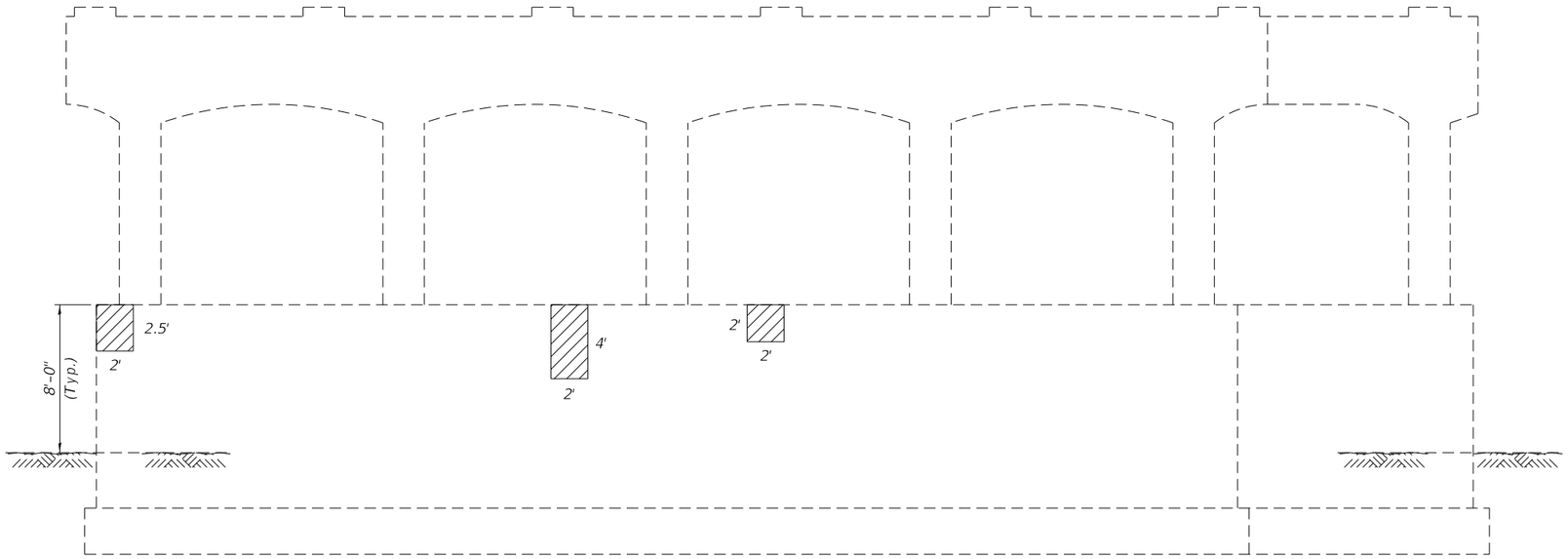
JOB = 2480.6	DESIGNED , AAN	REVISED ,	
FILE NAME = 026-0021-PTB 180-021-00-PierRepairs.dgn	CHECKED , MDC	REVISED ,	
PLOT DATE = 10/1/2020	DRAWN , SJS	REVISED ,	
	CHECKED , MDC	REVISED ,	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

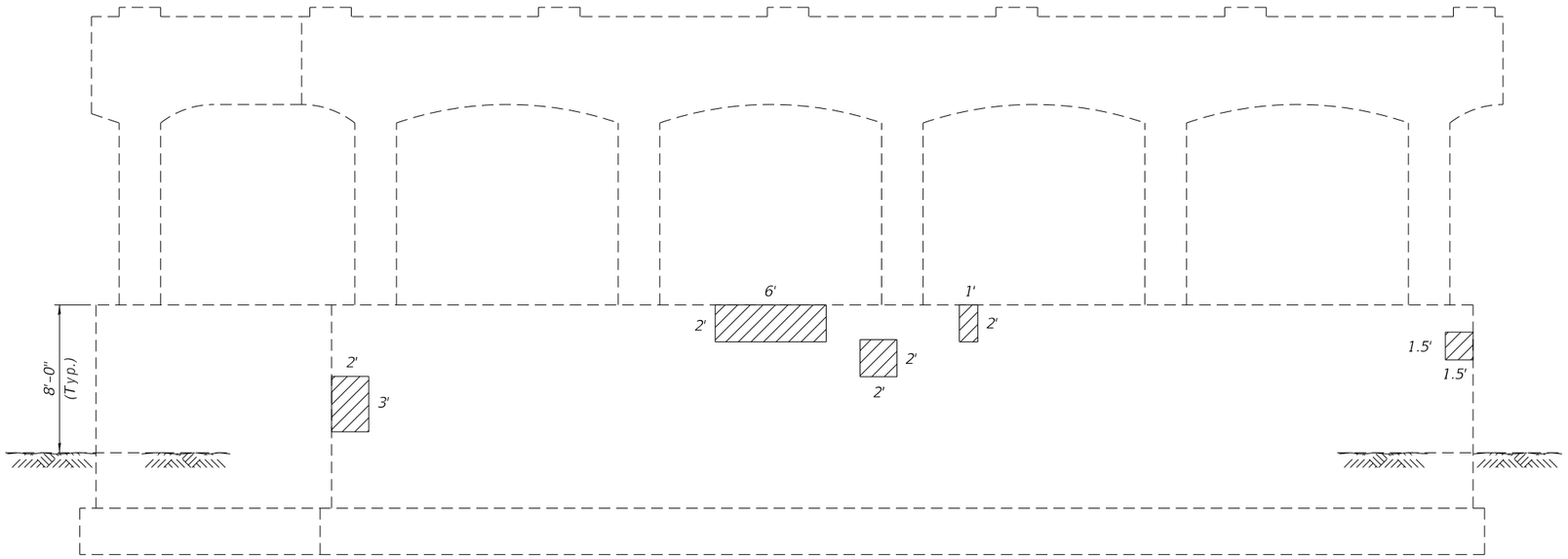
PIER 2 REPAIRS
STRUCTURE NO. 026-0021

SHEET 23 OF 27 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 Bridge Repair -2021-5	FAYETTE	43	33
		CONTRACT NO. 74992		
	ILLINOIS	FED. AID PROJECT		



WEST FACE OF PIER 3



EAST FACE OF PIER 3

See Sheet 26 of 27 for Bill of Material.

Structural Repair of Concrete, ≤ 5"

MODEL: Default
FILE NAME: 026-0021-PTB 180-021-00-PierRepairs.dgn

CEC Cummins Engineering Corporation
Civil and Structural Engineering

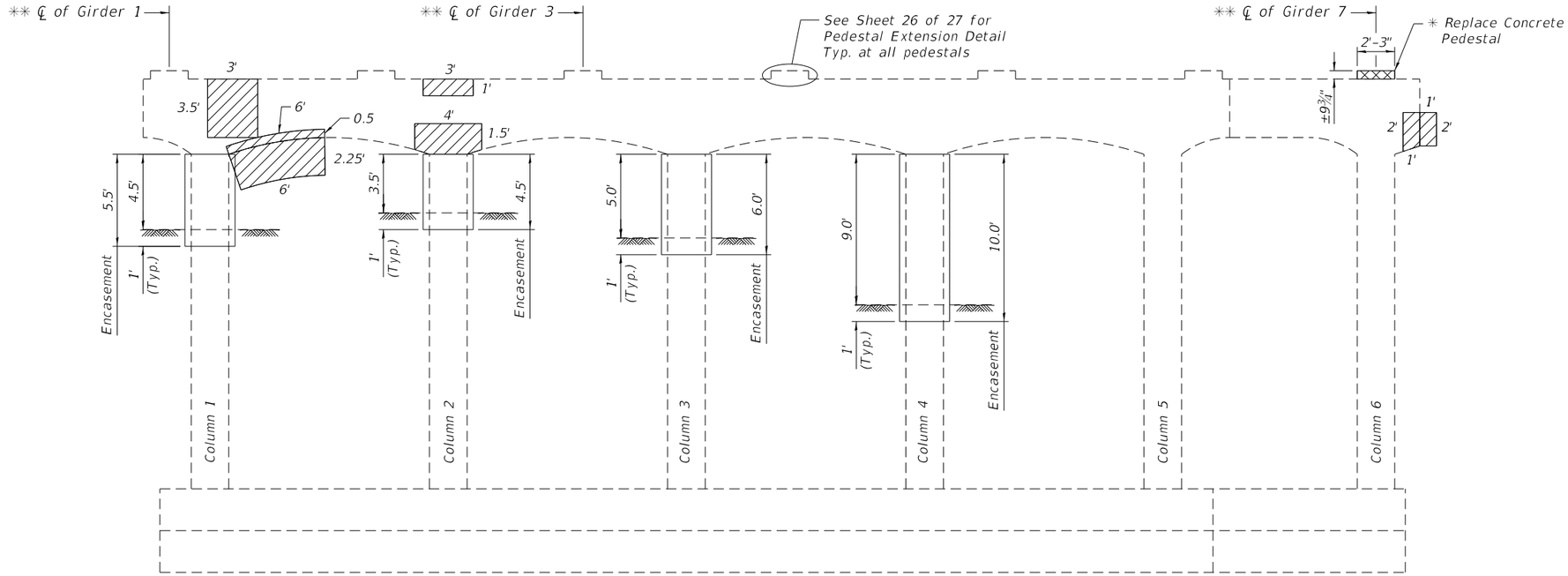
JOB = 2480.6	DESIGNED , AAN	REVISED ,	
FILE NAME = 026-0021-PTB 180-021-00-PierRepairs.dgn	CHECKED , MDC	REVISED ,	
PLOT DATE = 10/1/2020	DRAWN , SJS	REVISED ,	
	CHECKED , MDC	REVISED ,	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

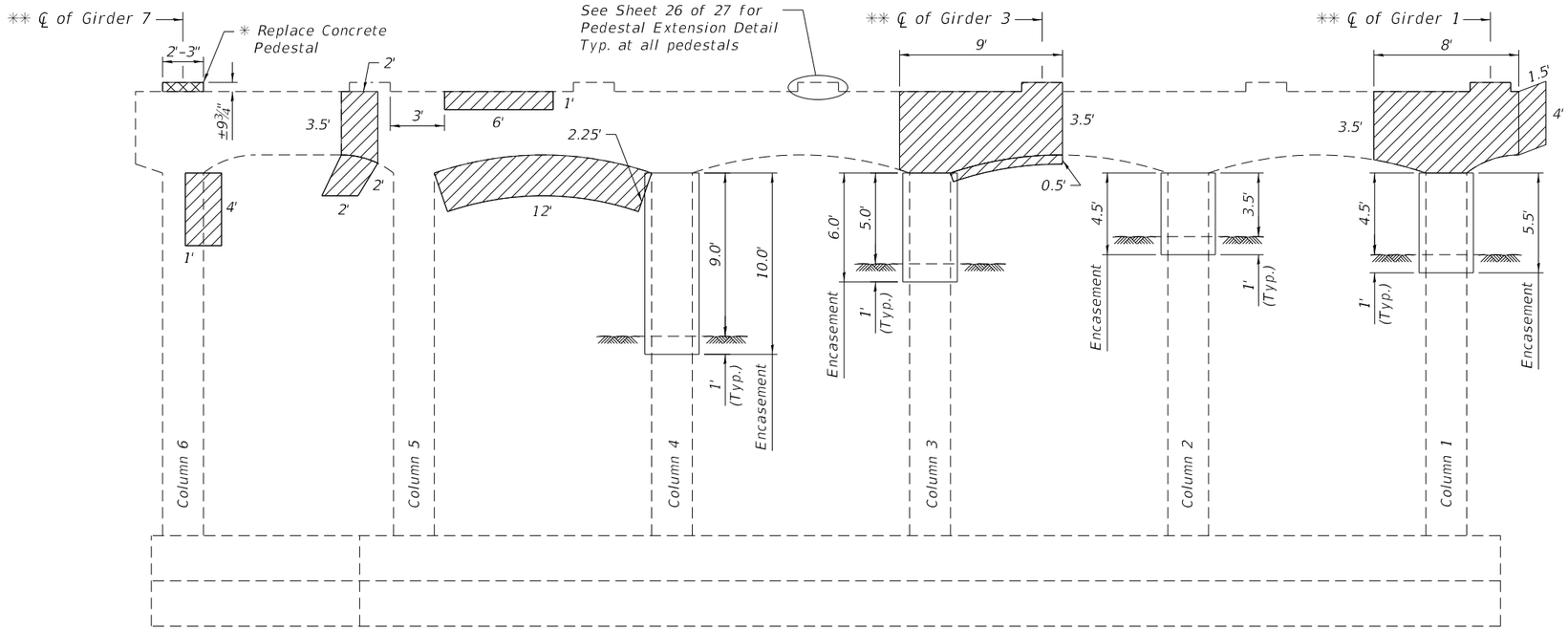
PIER 3 REPAIRS
STRUCTURE NO. 026-0021

SHEET 24 OF 27 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 Bridge Repair -2021-5	FAYETTE	43	34
		CONTRACT NO. 74992		
	ILLINOIS	FED. AID PROJECT		



WEST FACE OF PIER 4



EAST FACE OF PIER 4

* Remove concrete pedestal down to top of pier cap and replace in kind. Reinforcement located in removal area shall be cleaned and reincorporated into new construction. Cost included with Concrete Removal. New pedestal to be constructed to same elevation as existing pedestal. Temporary Shoring and Cribbing shall be provided during pedestal replacement operation.

** Locations of Temporary Shoring & Cribbing

REACTION TABLE

$R_{\mathbb{Q}}$	(k)	89
$R_{\mathbb{L}}$	(k)	30
Imp.	(k)	7
R_{Total}	(k)	126

Minimum Jack Capacity = 55 Ton

Note:
All unsound concrete shall be removed prior to column encasement. Cost included in Concrete Structures.
See Sheet 26 of 27 for reinforcement details, Bill of Material and Column Encasement Detail.

Structural Repair of Concrete, ≤ 5"

Concrete Removal

MODEL: Default
FILE NAME: 026-0021-PTB 180-021-00-PierRepairs.dgn

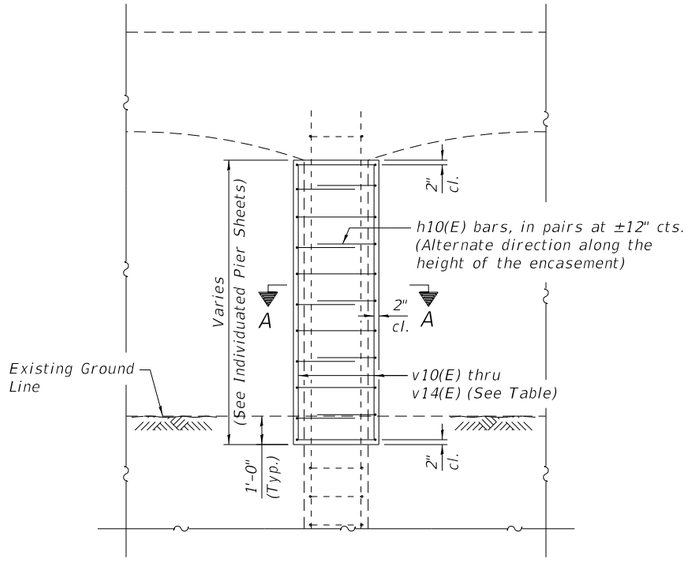
CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2480.6		DESIGNED	AAN	REVISED	
FILE NAME = 026-0021-PTB 180-021-00-PierRepairs.dgn		CHECKED	MDC	REVISED	
PLOT DATE = 10/1/2020		DRAWN	SJS	REVISED	
		CHECKED	MDC	REVISED	

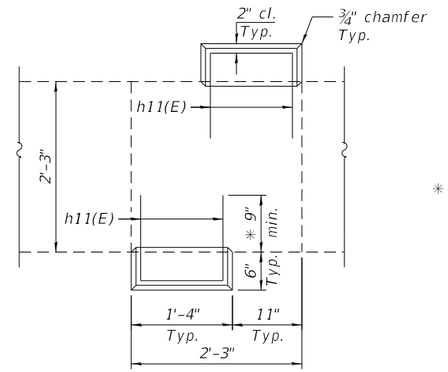
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 4 REPAIRS
STRUCTURE NO. 026-0021
SHEET 25 OF 27 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 Bridge Repair -2021-5	FAYETTE	43	35
		CONTRACT NO. 74992		
	ILLINOIS	FED. AID PROJECT		

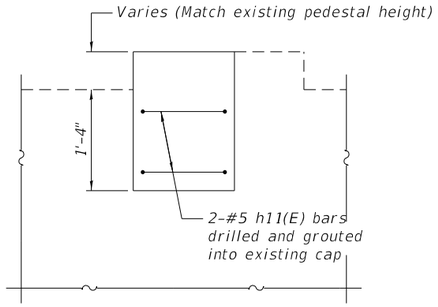


COLUMN ENCASEMENT DETAIL



PLAN

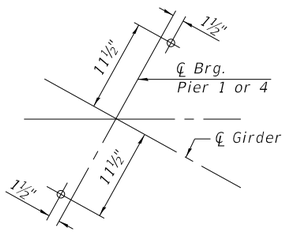
* Epoxy grout h11(E) bars in accordance with Article 584 of the Standard Specifications.



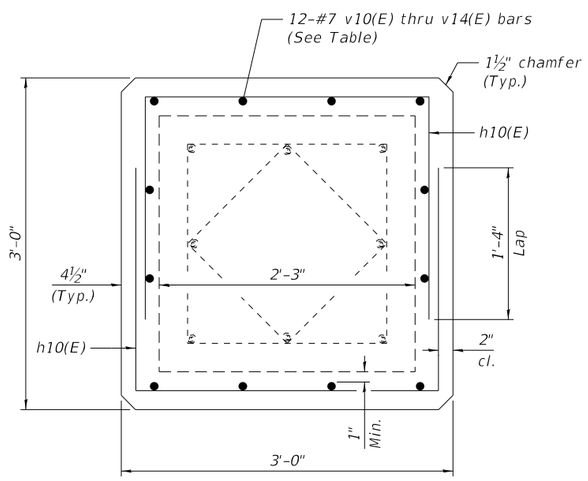
ELEVATION

PEDESTAL EXTENSION DETAIL

(14 Pedestal Locations Req'd)



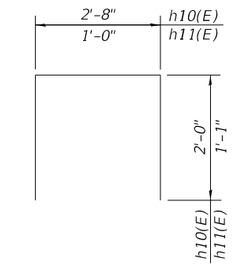
ANCHOR BOLT LAYOUT DETAIL



SECTION A-A

v(E) BAR TABLE

Location	
Pier 1, Column 1	v10(E)
Pier 1, Column 5	v11(E)
Pier 4, Column 1	v12(E)
Pier 4, Column 2	v11(E)
Pier 4, Column 3	v13(E)
Pier 4, Column 4	v14(E)



BARS h10(E) & h11(E)

BILL OF MATERIAL

	Bar	No.	Size	Length	Shape
	h10(E)	84	#4	6'-8"	⊓
	h11(E)	56	#5	3'-2"	⊓
	v10(E)	12	#7	7'-1"	——
	v11(E)	24	#7	4'-1"	——
	v12(E)	12	#7	5'-1"	——
	v13(E)	12	#7	5'-8"	——
	v14(E)	12	#7	9'-8"	——
	Concrete Structures		Cu. Yd.	7.1	
	Reinforcement Bars, Epoxy Coated		Pound	1440	
	Structural Repair of Concrete, ≤ 5"		Sq. Ft.	402	
	Structural Repair of Concrete, ≥ 5"		Sq. Ft.	12	
	Concrete Removal		Cu. Yd.	0.3	
**	Temporary Shoring and Cribbing		Each	4	

Concrete Sealer shall be applied to all new concrete at column encasements and pedestal extensions.

** Includes cost of removal of existing bearings at these locations. See Sheets 22 and 25 of 27 for locations.

MODEL: Default
FILE NAME: 026-0021-PTB 180-021-00-PierRepairs.dgn

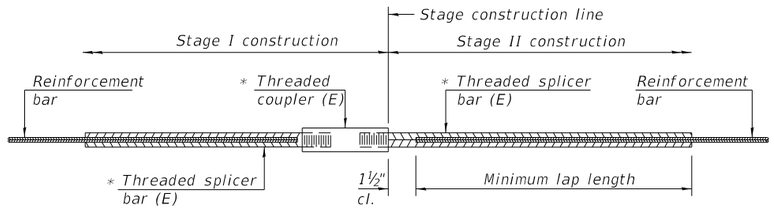
CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2480.6	DESIGNED , AAN	REVISED ,	
FILE NAME = 026-0021-PTB 180-021-00-PierRepairs.dgn	CHECKED , MDC	REVISED ,	
PLOT DATE = 10/2/2020	DRAWN , SJS	REVISED ,	
	CHECKED , MDC	REVISED ,	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER REPAIR DETAILS - PIERS 1 & 4
STRUCTURE NO. 026-0021
SHEET 26 OF 27 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 Bridge Repair -2021-5	FAYETTE	43	36
		CONTRACT NO. 74992		
	ILLINOIS	FED. AID PROJECT		

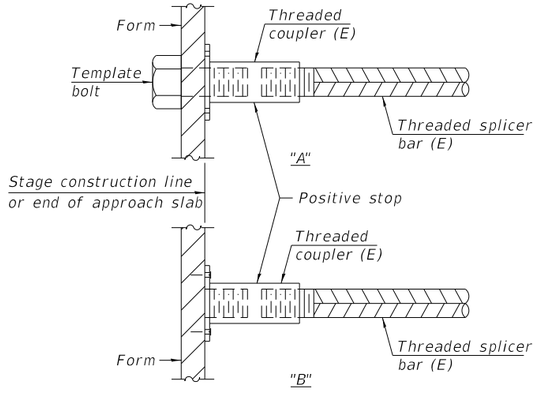


STANDARD BAR SPLICER ASSEMBLY

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

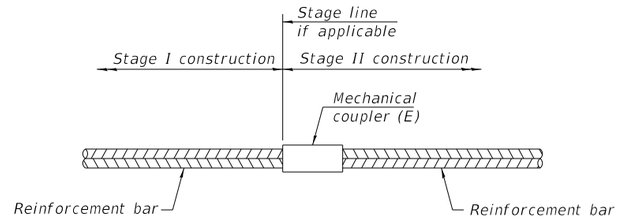
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
W. Abut. Jt.	#7	8	5'-3"
W. Abut. Jt.	#6	4	4'-0"
E. Abut. Jt.	#7	10	5'-3"
E. Abut. Jt.	#6	4	4'-0"
Pier 1 & 4 Jt.	#7	32	5'-3"
Appr. Slabs	#5	44	2'-3"
Appr. Slabs	#8	60	3'-8"
Appr. Footing	#5	80	2'-3"
East Abut.	#5	8	3'-4"



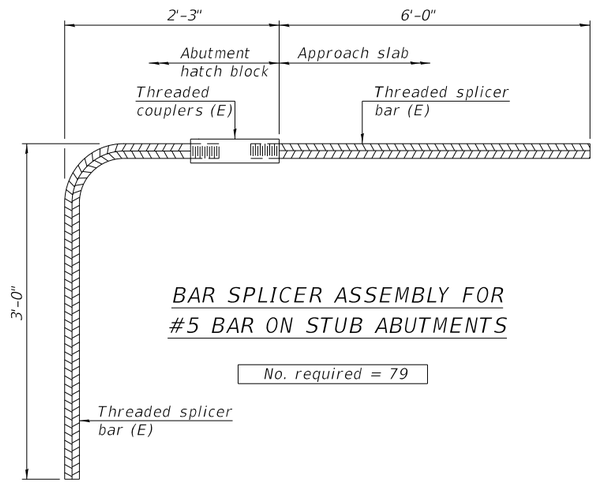
INSTALLATION AND SETTING METHODS

"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



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required = 79

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

All reinforcement shall be lapped and tied to the splicer bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.

See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1

2-17-2017

MODEL: Default
FILE NAME: 026-0021-PTB 180-021-00-BarSplicer.dgn

CEC Cummins Engineering Corporation
Civil and Structural Engineering

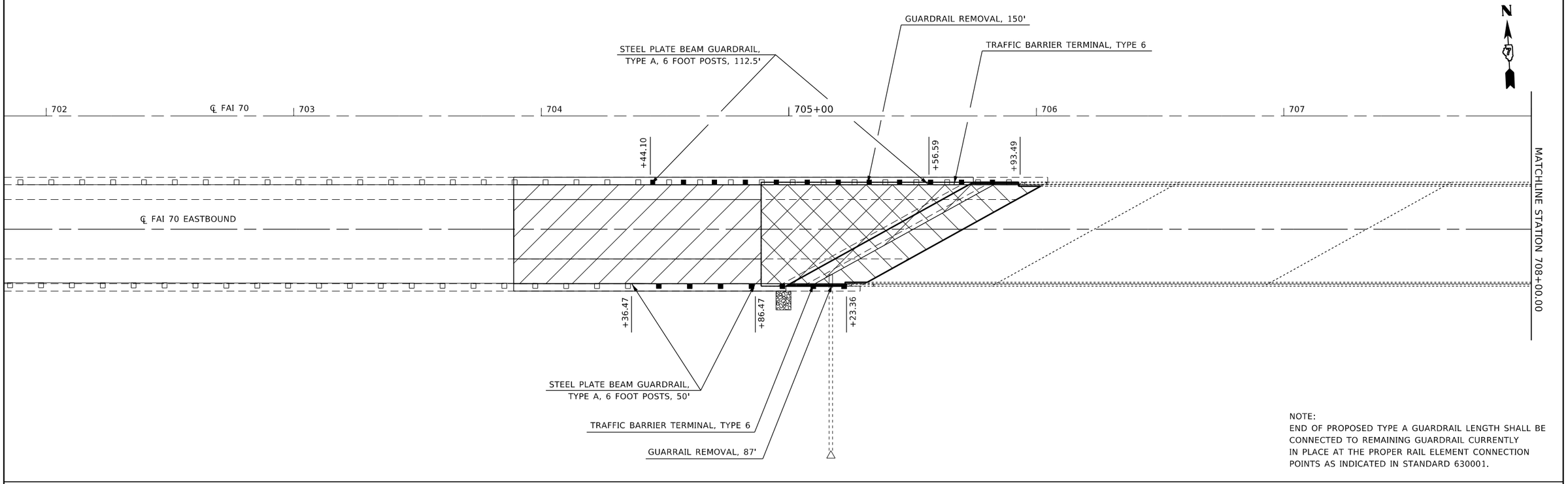
JOB = 2480.6	DESIGNED , AAN	REVISED ,	
FILE NAME = 026-0021-PTB 180-021-00-BarSplicer.dgn	CHECKED , MDC	REVISED ,	
PLOT DATE = 10/1/2020	DRAWN , SJS	REVISED ,	
	CHECKED , MDC	REVISED ,	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

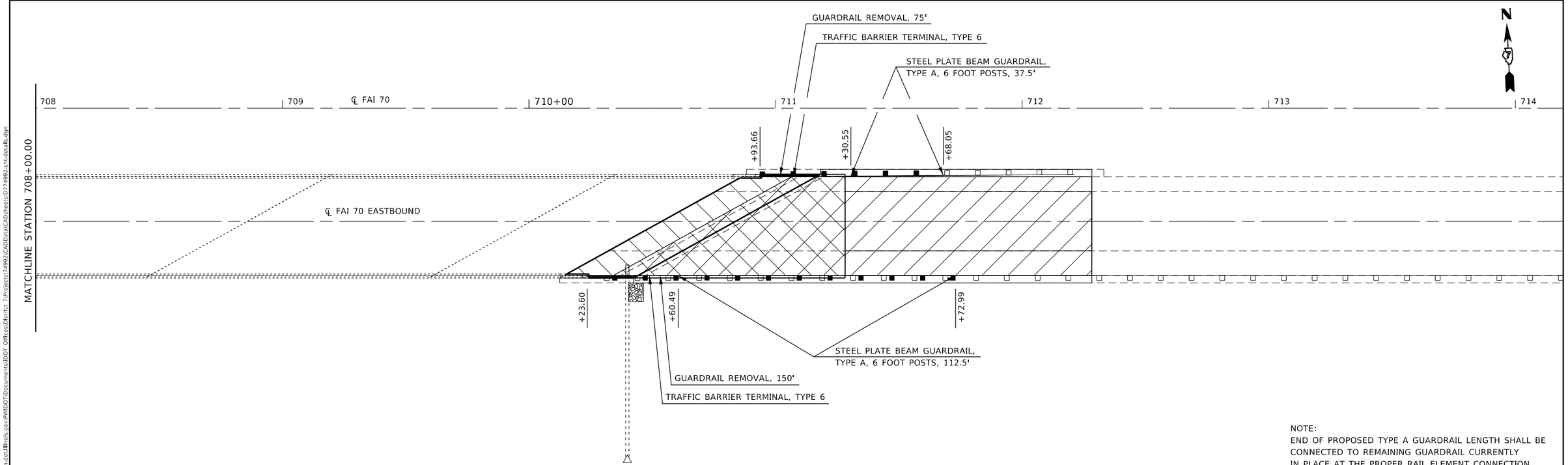
BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 026-0021

SHEET 27 OF 27 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 Bridge Repair -2021-5	FAYETTE	43	37
		CONTRACT NO. 74992		
	ILLINOIS	FED. AID PROJECT		



NOTE:
END OF PROPOSED TYPE A GUARDRAIL LENGTH SHALL BE CONNECTED TO REMAINING GUARDRAIL CURRENTLY IN PLACE AT THE PROPER RAIL ELEMENT CONNECTION POINTS AS INDICATED IN STANDARD 630001.



NOTE:
END OF PROPOSED TYPE A GUARDRAIL LENGTH SHALL BE CONNECTED TO REMAINING GUARDRAIL CURRENTLY IN PLACE AT THE PROPER RAIL ELEMENT CONNECTION POINTS AS INDICATED IN STANDARD 630001.

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PLOT DATE = 8/13/2020	DATE -	REVISED -

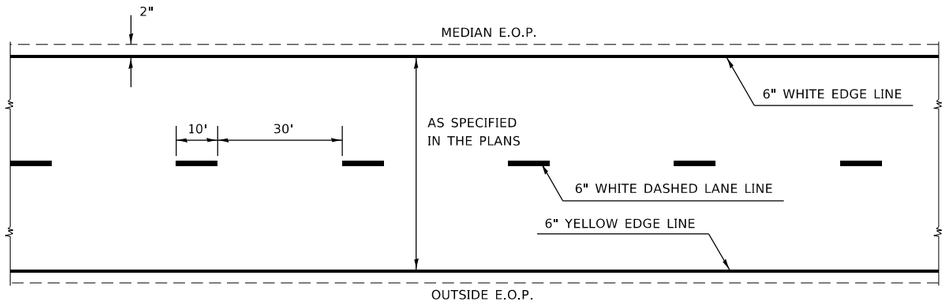
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GUARDRAIL DETAILS

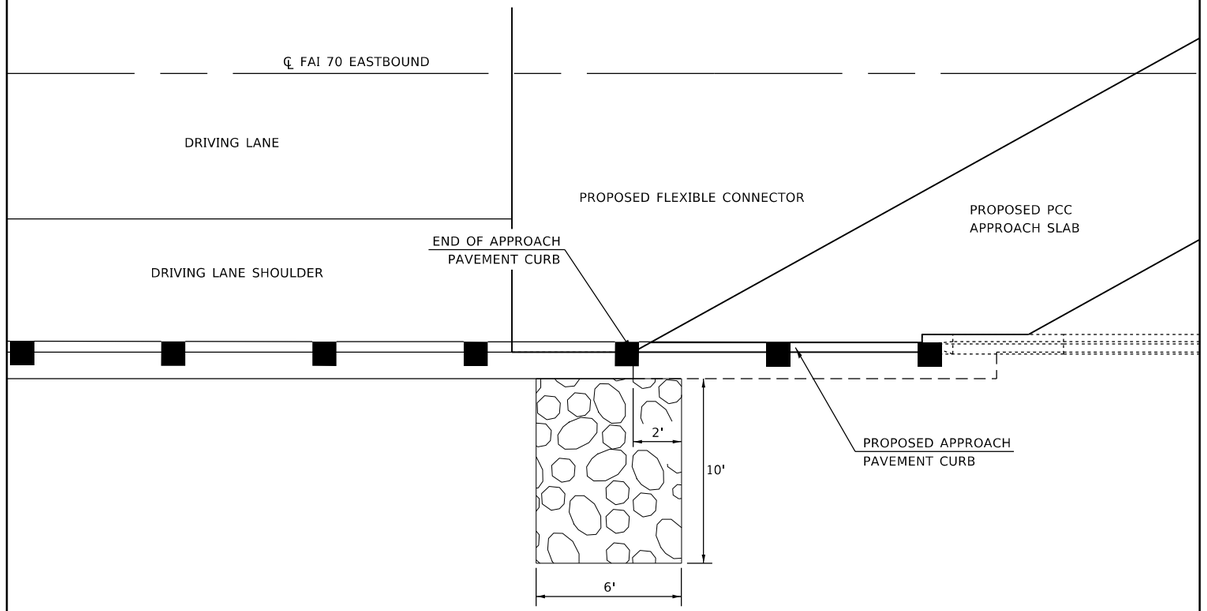
SCALE: | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 BRIDGE REPAIRS 2021-5	FAYETTE	43	38
		CONTRACT NO. 74992		
	ILLINOIS FED. AID PROJECT			

TYPICAL CENTERLINE & EDGELINE MARKINGS

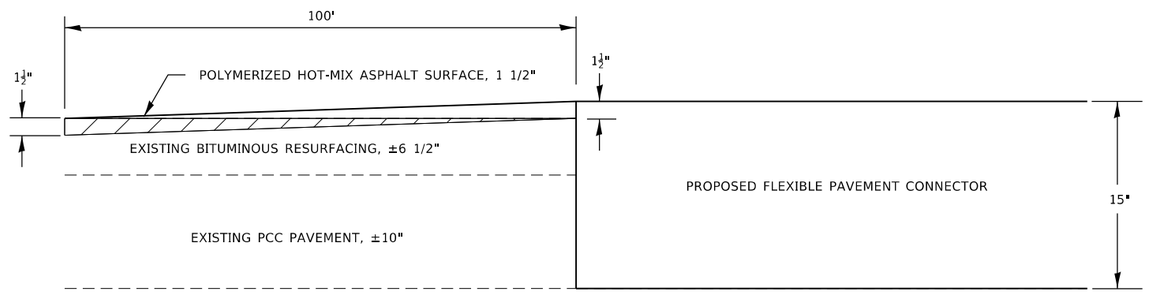


STONE RIPRAP, CLASS A3 DETAIL



HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT DETAIL

STA 703+88.83 TO STA 704+88.83
STA 711+28.20 TO STA 712+28.20



HOT-MIX ASPHALT SURFACE REMOVAL, BUTT-JOINT

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	DRAWN -	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 8/13/2020	DATE -	REVISED -	

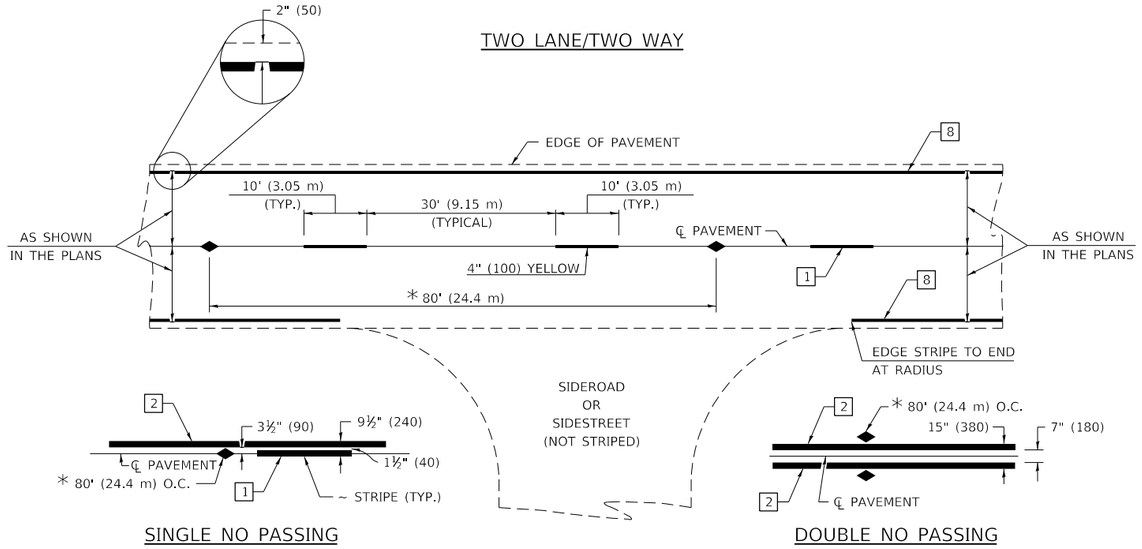
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISCELLANEOUS DETAILS

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 BRIDGE REPAIRS 2021-5	FAYETTE	43	39
		CONTRACT NO. 74992		
	ILLINOIS FED. AID PROJECT			

TWO LANE/TWO WAY



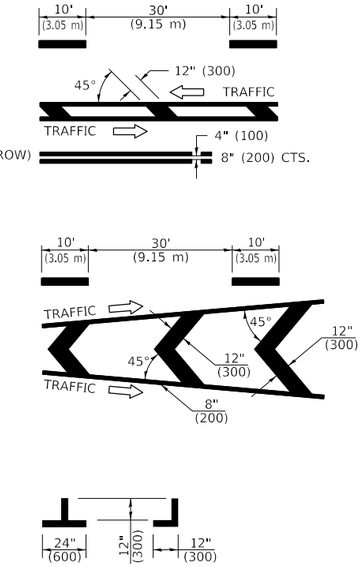
SINGLE NO PASSING

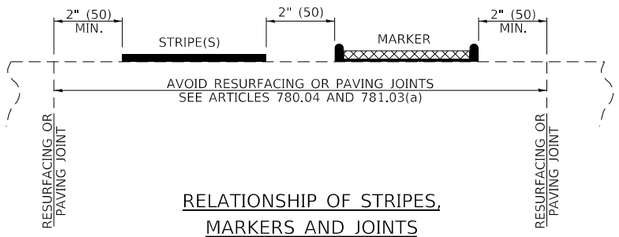
DOUBLE NO PASSING

* REDUCE TO 40' (12.2 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEEDS OF 45 mph (70 km/h) OR LESS.

PAVEMENT MARKING LEGEND

1	4" (100) SKIP-DASH (YELLOW)
2	4" (100) SOLID (YELLOW)
3	12" (300) DIAGONAL (YELLOW)
4	4" (100) DOUBLE YELLOW (NARROW)
5	12" (300) SOLID WHITE
6	RESERVED
7	6" (150) SKIP-DASH (WHITE)
8	4" (100) SOLID (WHITE)
9	12" (300) DIAGONAL (WHITE)
10	6" (150) SOLID (WHITE)
11	24" (600) STOP BAR (WHITE)
12	8" (200) SOLID (WHITE)
13	4" (100) PARKING WHITE



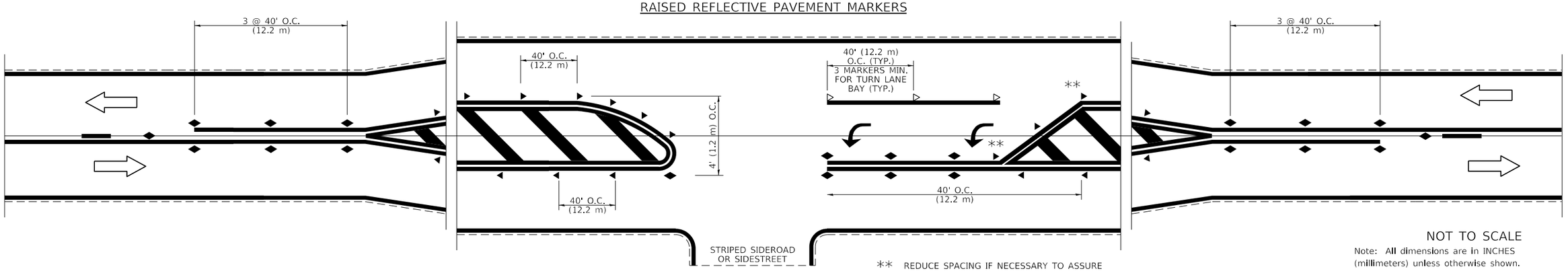


RELATIONSHIP OF STRIPES, MARKERS AND JOINTS

TYPICAL PAVEMENT MARKERS LEGEND

- TWO-WAY AMBER MARKER
- ONE-WAY AMBER MARKER
- ONE-WAY CRYSTAL MARKER

RAISED REFLECTIVE PAVEMENT MARKERS



** REDUCE SPACING IF NECESSARY TO ASSURE MARKERS AT CORNER POINTS.

NOT TO SCALE

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

* D7 BRIDGE REPAIRS 2021-6

DISTRICT 7 DETAIL NO. 78000001

USER NAME = steffenmk	DESIGNED -	REVISED -	
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PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 8/13/2020	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND RAISED REFLECTIVE PAVEMENT MARKERS (RURAL AND URBAN APPLICATIONS

SCALE: | SHEET 1 OF 4 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 BRIDGE REPAIRS 2021-5	FAYETTE	43	40
		CONTRACT NO. 74992		
		ILLINOIS	FED. AID PROJECT	

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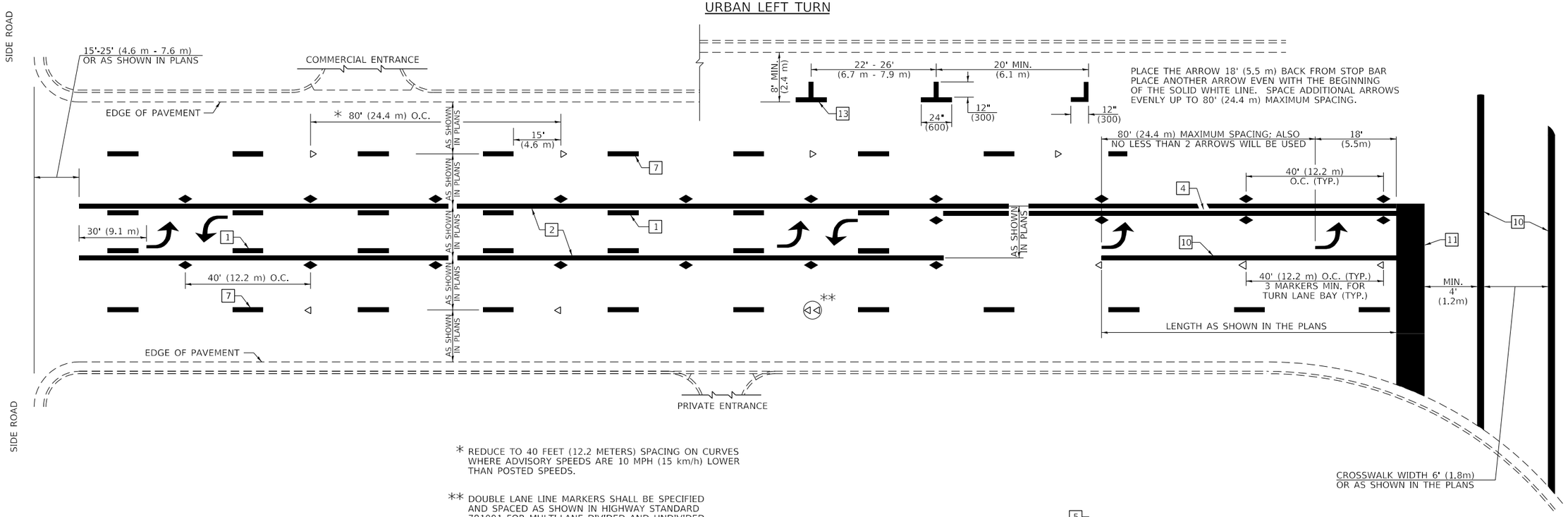
URBAN LEFT TURN

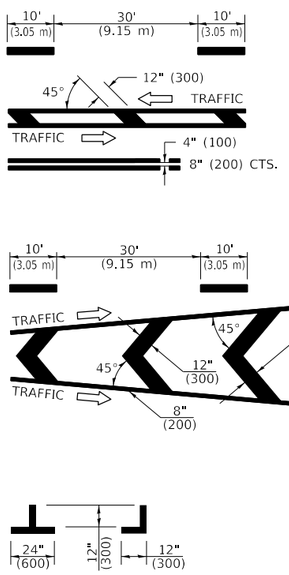


* REDUCE TO 40 FEET (12.2 METERS) SPACING ON CURVES WHERE ADVISORY SPEEDS ARE 10 MPH (15 km/h) LOWER THAN POSTED SPEEDS.

** DOUBLE LANE LINE MARKERS SHALL BE SPECIFIED AND SPACED AS SHOWN IN HIGHWAY STANDARD 781001 FOR MULTI-LANE DIVIDED AND UNDIVIDED HIGHWAYS.

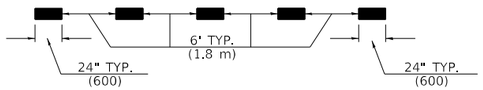
PAVEMENT MARKING LEGEND

1. 4" (100) SKIP-DASH (YELLOW)
2. 4" (100) SOLID (YELLOW)
3. 12" (300) DIAGONAL (YELLOW)
4. 4" (100) DOUBLE YELLOW (NARROW)
5. 12" (300) SOLID WHITE
6. RESERVED
7. 6" (150) SKIP-DASH (WHITE)
8. 4" (100) SOLID (WHITE)
9. 12" (300) DIAGONAL (WHITE)
10. 6" (150) SOLID (WHITE)
11. 24" (600) STOP BAR (WHITE)
12. 8" (200) SOLID (WHITE)
13. 4" (100) PARKING WHITE

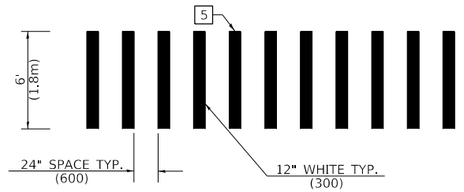


GENERAL NOTES

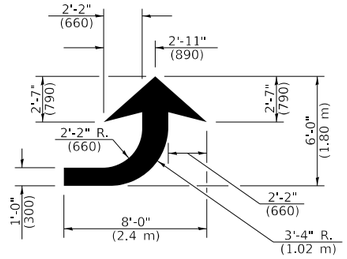
1. TURN ARROW PAIRS SHALL BE PLACED AT 250'(75 m) INTERVALS AND SHALL BE EVENLY SPACED BETWEEN BOTH ENDS OF THE BIDIRECTIONAL LEFT TURN LANE. USE A MINIMUM OF TWO PAIRS PER BLOCK.
2. THE SOLID YELLOW PAVEMENT MARKINGS 2 SHOULD GENERALLY START OR END NEAR THE RADIUS POINT OF EACH STREET RETURN EXCEPT WHERE ONE OR BOTH ENDS WOULD INCLUDE STOP BARS.
3. THE SKIP-DASH PAVEMENT MARKINGS 1 OR 7 SHOULD BE CENTERED BETWEEN BOTH ENDS OF EACH CITY BLOCK AND SHALL BE PLACED SO THEY LINE UP ACROSS FROM EACH OTHER.
4. USE LARGE ARROW SIZE FOR BOTH RURAL AND URBAN LOCATIONS. (SEE LAST PAGE OF SECTION 780x FOR SYMBOLS TABLE)
5. LANE LINE EXTENSIONS SHALL BE THE SAME COLOR AND WIDTH AS THE LANE LINE BEING EXTENDED.



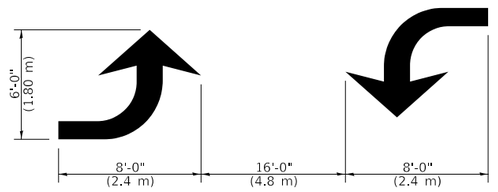
LANE LINE EXTENSIONS



CROSSWALK DETAIL
(DECATUR CITY LIMITS ONLY)



LEFT ARROW
REVERSE FOR RIGHT ARROW
AREA = 15.6 SQ. FT. (1.47 m^2)
(WHITE)



TYPICAL DOUBLE
TURN ARROWS (WHITE)

NOT TO SCALE

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

* D7 BRIDGE REPAIRS 2021-6

DISTRICT 7 DETAIL NO. 78000001

USER NAME = steffenmk	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 8/13/2020	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND RAISED REFLECTIVE PAVEMENT MARKERS
(RURAL AND URBAN APPLICATIONS

SCALE: | SHEET 2 OF 4 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 BRIDGE REPAIRS 2021-5	FAYETTE	43	41
		CONTRACT NO. 74992		
	ILLINOIS FED. AID PROJECT			

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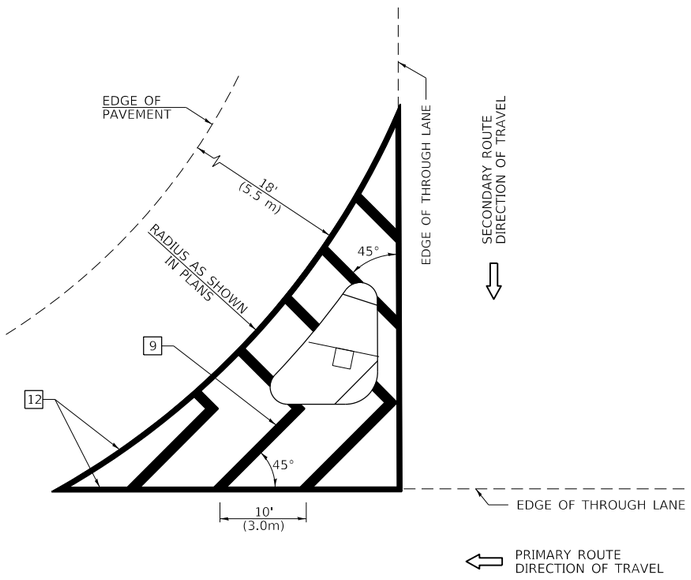
ISLAND



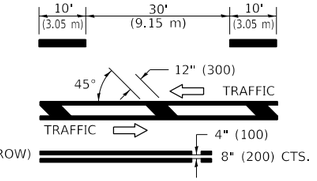
GENERAL NOTES

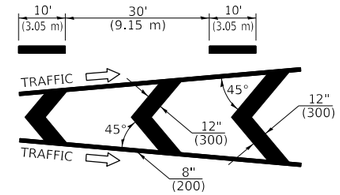
1. RAISED AND CORRUGATED MEDIANS SHALL BE OUTLINED WITH [2] IF PRESENT.
2. SOME OF THE INFORMATION INCLUDED WITH THIS DETAIL MAY NOT BE APPLICABLE TO THIS IMPROVEMENT.
3. PAVEMENT MARKINGS ARE TO BE EXTENDED THROUGH OMISSIONS WHEN APPLICABLE.
4. FINAL PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO PLACING ANY RAISED REFLECTIVE PAVEMENT MARKERS.
5. THE FOLLOWING CRITERIA SHALL BE USED FOR SELECTING THE DIAGONAL PAVEMENT MARKING SPACING:

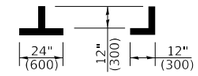
<30 MPH	(<50 km/h)	15' (4.5 m)
30-45 MPH	(50-75 km/h	20' (6.0 m)
>45 MPH	(>75 km/h	30' (9.0 m)

PAVEMENT MARKING LEGEND

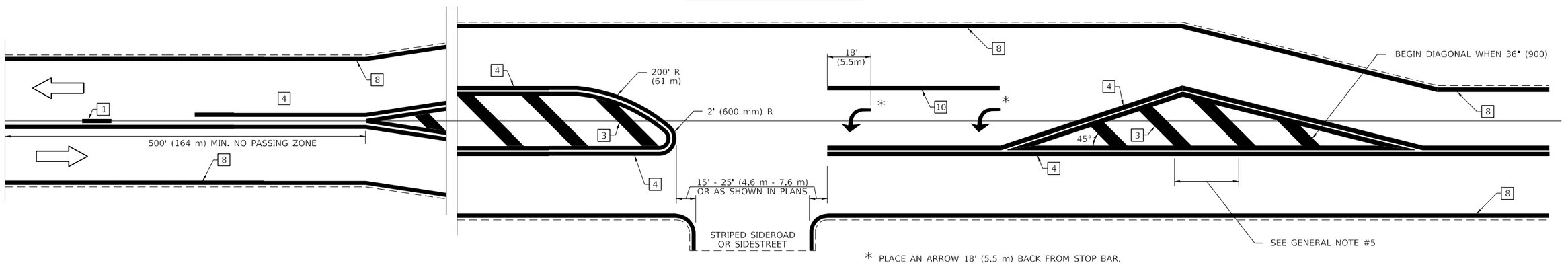
[1]	4" (100) SKIP-DASH (YELLOW)
[2]	4" (100) SOLID (YELLOW)
[3]	12" (300) DIAGONAL (YELLOW)
[4]	4" (100) DOUBLE YELLOW (NARROW)
[5]	12" (300) SOLID WHITE
[6]	RESERVED
[7]	6" (150) SKIP-DASH (WHITE)
[8]	4" (100) SOLID (WHITE)
[9]	12" (300) DIAGONAL (WHITE)
[10]	6" (150) SOLID (WHITE)
[11]	24" (600) STOP BAR (WHITE)
[12]	8" (200) SOLID (WHITE)
[13]	4" (100) PARKING WHITE







RURAL LEFT TURN STRIPING



* PLACE AN ARROW 18' (5.5 m) BACK FROM STOP BAR. PLACE ANOTHER ARROW EVEN WITH THE BEGINNING OF THE SOLID WHITE LINE. SPACE ADDITIONAL ARROWS EVENLY UP TO 80' (24.4 m) MAXIMUM SPACING. USE MINIMUM OF 2 ARROWS.

NOT TO SCALE

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

* D7 BRIDGE REPAIRS 2021-6

DISTRICT 7 DETAIL NO. 78000001

USER NAME = steffenmk	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 8/13/2020	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND RAISED REFLECTIVE PAVEMENT MARKERS (RURAL AND URBAN APPLICATIONS

SCALE: | SHEET 3 OF 4 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 BRIDGE REPAIRS 2021-5	FAYETTE	43	42
		CONTRACT NO. 74992		
	ILLINOIS	FED. AID PROJECT		

MODEL: Default
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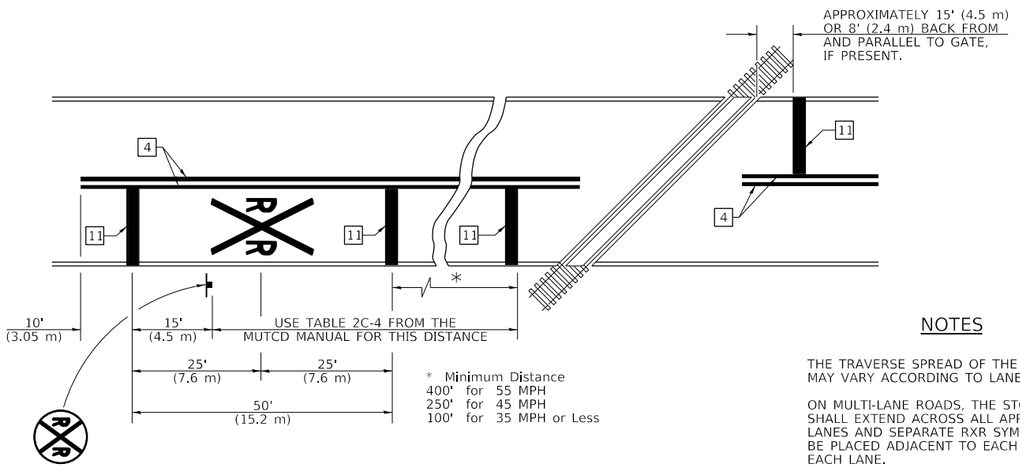
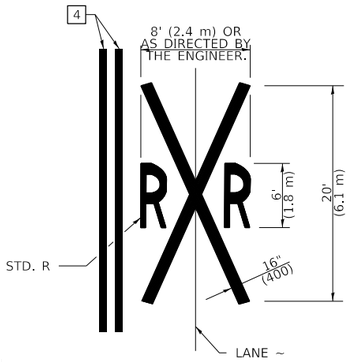
PAVEMENT MARKINGS AT RAILROAD-HIGHWAY GRADE CROSSING





NOTES

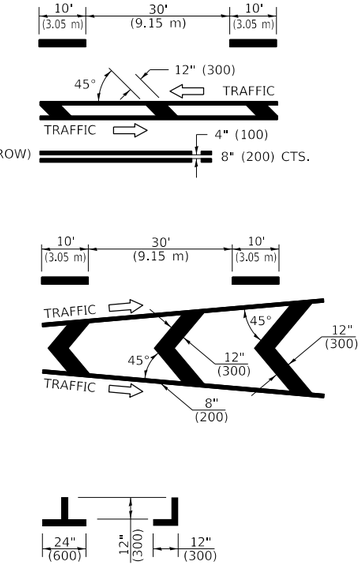
THE TRAVERSE SPREAD OF THE "X" MAY VARY ACCORDING TO LANE WIDTH.

ON MULTI-LANE ROADS, THE STOP LINES SHALL EXTEND ACROSS ALL APPROACH LANES AND SEPARATE RXR SYMBOLS SHALL BE PLACED ADJACENT TO EACH OTHER IN EACH LANE.

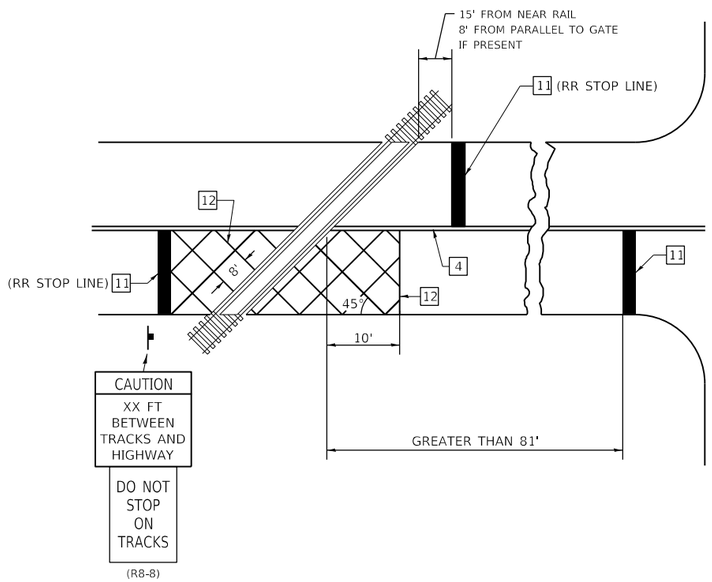
WHEN THE PAVEMENT MARKING SYMBOL IS USED, A PORTION OF THE SYMBOL SHOULD BE LOCATED DIRECTLY ADJACENT TO THE ADVANCE WARNING SIGN (W10-1) AS PLACED BY TABLE II-1, CONDITION B OF THE MUTCD.

PAVEMENT MARKING LEGEND

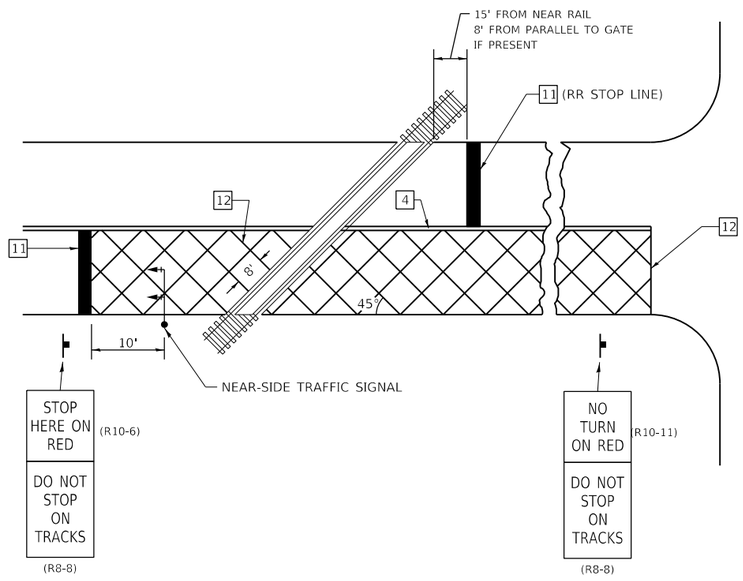
1	4" (100) SKIP-DASH (YELLOW)
2	4" (100) SOLID (YELLOW)
3	12" (300) DIAGONAL (YELLOW)
4	4" (100) DOUBLE YELLOW (NARROW)
5	12" (300) SOLID WHITE
6	RESERVED
7	6" (150) SKIP-DASH (WHITE)
8	4" (100) SOLID (WHITE)
9	12" (300) DIAGONAL (WHITE)
10	6" (150) SOLID (WHITE)
11	24" (600) STOP BAR (WHITE)
12	8" (200) SOLID (WHITE)
13	4" (100) PARKING WHITE



RAILROAD CROSSING WITH INTERCONNECT ONLY



RAILROAD CROSSING WITH INTERCONNECT AND PRE-SIGNALS



GENERAL NOTES

1. SUPPLEMENTAL PAVEMENT MARKINGS TO BE INSTALLED ONLY ON APPROACHES TO INTERSECTIONS CONTROLLED BY TRAFFIC SIGNALS WHICH ARE INTERCONNECTED WITH THE RAILROAD WARNING SIGNALS.
2. EXTEND PAVEMENT MARKINGS TO THE INTERSECTION ONLY WHERE NEAR-SIDE TRAFFIC SIGNALS ARE USED.

SUPPLEMENTAL PAVEMENT MARKING TREATMENT FOR RAILROAD-HIGHWAY GRADE CROSSING

NOT TO SCALE

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

* D7 BRIDGE REPAIRS 2021-6

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PAVEMENT MARKING AND RAISED REFLECTIVE PAVEMENT MARKERS (RURAL AND URBAN APPLICATIONS

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 BRIDGE REPAIRS 2021-5	FAYETTE	43	43
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MODEL: Default
FILE NAME: pw:\\planroom.dot.illinois.gov:PWIDOT\Documents\IDOT Offices\District 7\Projects\74992\CADData\CADsheets\D774992-sht-details.dgn