

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	BRIDGE REPAIR 2022-4	VARIOUS	23	1
		ILLINOIS	CONTRACT NO. 78910	

FOR INDEX OF SHEETS, SEE SHEET NO. 3
FOR SUMMARY OF QUANTITIES, SEE SHEETS NO. 4-5

TRAFFIC DATA

BRIDGE NO. 1
SN 083-0038
IL 34
2019 ADT= 2850, 9% TRUCKS
TOWNSHIP- HARRISBURG
POSTED SPEED: 55 MPH

BRIDGE NO. 2
SN 076-0006
IL 146
2019 ADT= 950, 12% TRUCKS
TOWNSHIP- WEBSTER
POSTED SPEED: 55 MPH

BRIDGE NO. 3
SN 064-0003
US 45
2019 ADT= 2200, 7% TRUCKS
TOWNSHIP- GRANT
POSTED SPEED: 55 MPH

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

PROJECT ENGINEER: GRANT DETERDING
PROJECT DESIGNER: DAVID WILSON

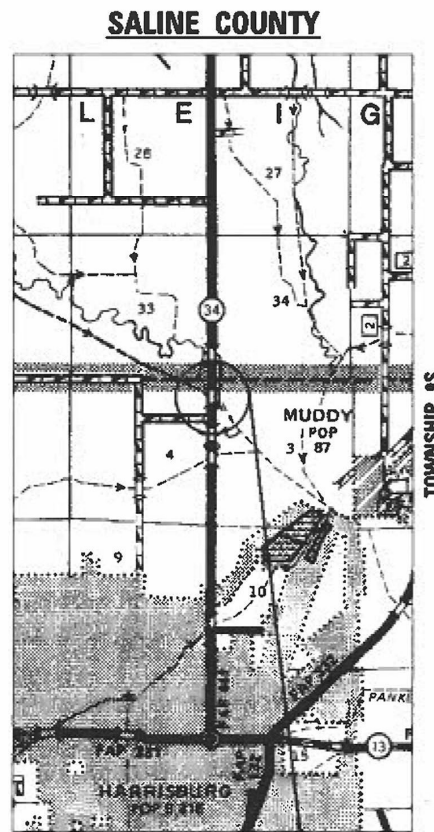
CONTRACT NO. 78910



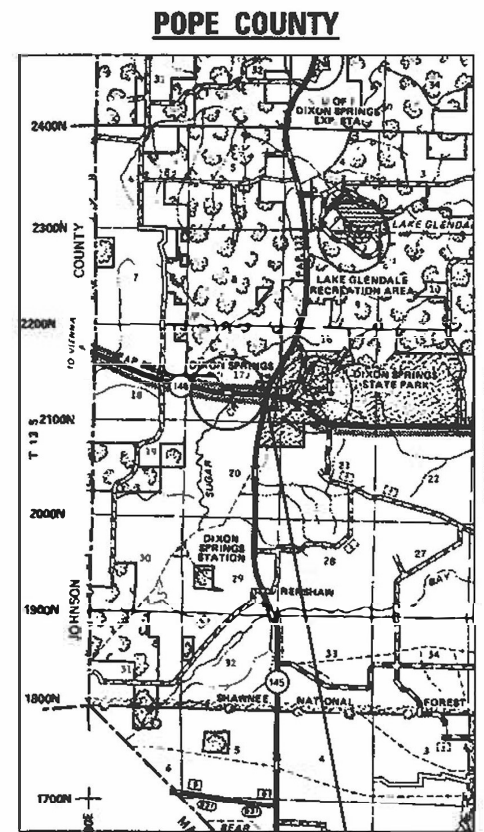
**PROPOSED
HIGHWAY PLANS**

VARIOUS ROUTES
SECTION BRIDGE REPAIR 2022-4
BRIDGE REPAIRS
SALINE, POPE AND MASSAC COUNTIES

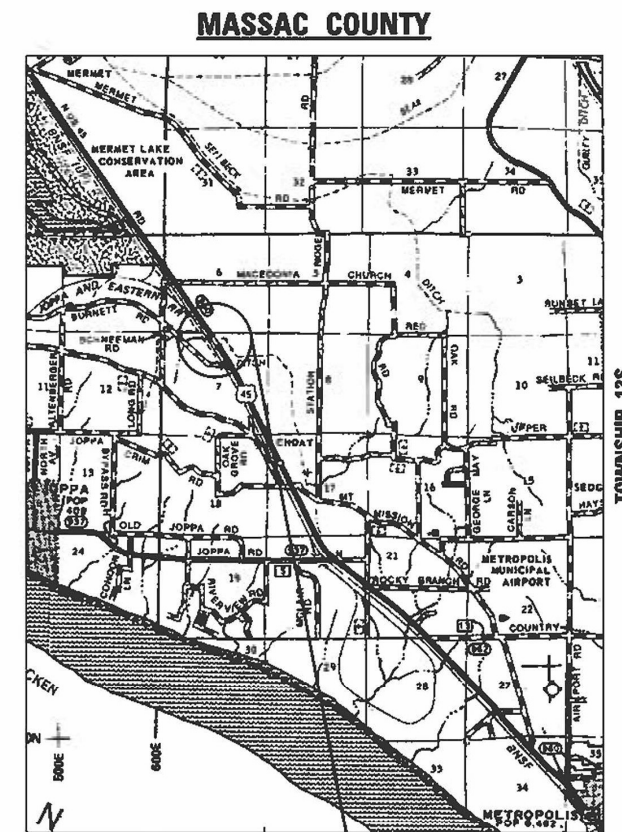
C-99-002-22



BRIDGE NO. 1
SALINE COUNTY
STRUCTURE 083-0038
IL 34 OVER MIDDLE FORK DITCH
2.1 MILES NORTH OF HARRISBURG

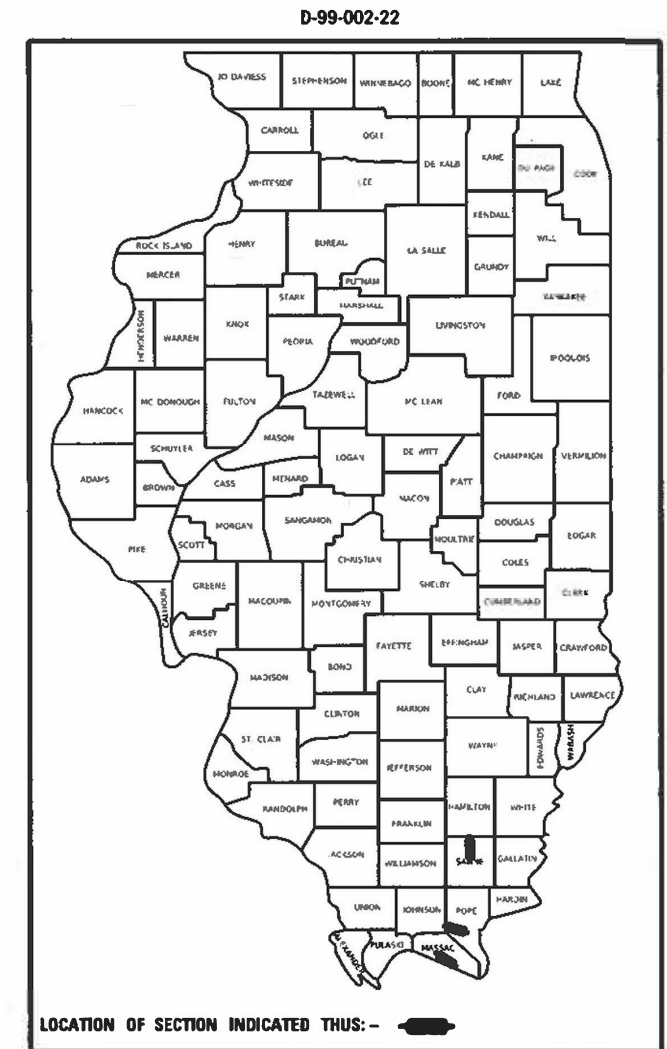


BRIDGE NO. 2
POPE COUNTY
STRUCTURE 076-0006
IL 146 OVER SUGAR CREEK
1.5 MILES EAST OF JOHNSON COUNTY
NEAR DIXON SPRINGS



BRIDGE NO. 3
MASSAC COUNTY
STRUCTURE 064-0003
US 45 OVER Q DITCH
3 MILES SOUTH OF MERMET

GROSS LENGTH = 436.02 FT. = 0.08 MILE
NET LENGTH = 436.02 FT. = 0.08 MILE



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED Jan 19 20 22
Stephen M. Nouraei
REGION FIVE ENGINEER

March 25 20 22
[Signature]
ENGINEER OF DESIGN AND ENVIRONMENT

March 28 20 22
Stephen M. Nouraei
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

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

Prepared By: Charles Stein
DISTRICT STUDIES & PLANS ENGINEER

Examined By: Nancy Hee
DISTRICT LAND ACQUISITION ENGINEER

Examined By: Carni Nelson
DISTRICT PROGRAM DEVELOPMENT ENGINEER

Examined By: [Signature]
DISTRICT OPERATIONS ENGINEER

Examined By: David J. Melchior
DISTRICT PROJECT IMPLEMENTATION ENGINEER

Examined By: David J. Melchior
DISTRICT CONSTRUCTION ENGINEER

Examined By: [Signature]
DISTRICT MATERIALS ENGINEER

MODEL: MODFLMAMP
FILE NAME: 31121

USER NAME = SUSERS	DESIGNED - _____	REVISED - _____
DRAWN - _____	REVISED - _____	
PLOT SCALE = SSCALES	CHECKED - _____	REVISED - _____
PLOT DATE = SUATES	DATE - _____	REVISED - _____

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SIGNATURE SHEET

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	BRIDGE REPAIR 2022-4	VARIOUS	23	2
				CONTRACT NO. 78910
ILLINOIS FED. AID PROJECT				

INDEX OF SHEETS

1	COVER SHEET
2	SIGNATURE SHEET
3	GENERAL NOTES, INDEX OF SHEETS, AND STANDARDS
4-5	SUMMARY OF QUANTITIES
6	SCHEDULES
7	GENERAL PLAN AND ELEVATION SN 083-0038
8	STAGING DETAILS & JOINT SEALER SN 083-0038
9	PIER #1 AND PIER #2 DETAILS SN 083-0038
10	PIER #1 CAP REPAIRS SN 083-0038
11	ABUTMENT REPAIRS SN 083-0038
12	GENERAL PLAN AND ELEVATION SN 076-0006
13	STAGING DETAILS SN 076-0006
14	STAGING PLAN SN 076-0006
15	PIER DETAILS SN 076-0006
16	PIER CAP REPAIRS SN 076-0006
17	WEST ABUTMENT HAMMERHEAD REPAIRS SN 076-0006
18	GENERAL PLAN AND ELEVATION SN 064-0003
19	STAGING DETAILS SN 064-0003
20	STAGING PLAN SN 064-0003
21	JOINT RECONSTRUCTION SN 064-0003
22	PREFORMED JOINT STRIP SEAL SN 064-0003
23	BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS SN 064-0003

STANDARDS

000001-08	STANDARD SYMBOLS ABBREVIATIONS AND PATTERNS
001006	DECIMAL OF AN INCH AND OF A FOOT
701001-02	OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY
701011-04	OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701201-05	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
701316-13	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR FOR SPEEDS > 45 MPH
701901-08	TRAFFIC CONTROL DEVICES
780001-05	TYPICAL PAVEMENT MARKINGS
862001-01	UNINTERRUPTIBLE POWER SUPPLY

GENERAL NOTES

FACTORS USED FOR ESTIMATING PLAN QUANTITIES ARE AS FOLLOWS AND SHALL NOT BE USED FOR THE BASIS OF FINAL QUANTITIES:
 ALL HOT-MIX ASPHALT 2.016 TONS/CUYD
 THE QUANTITY OF SHORT TERM PAVEMENT MARKING SHOWN IN THE PLANS IS BASED ON ONE APPLICATION EACH FOR THE SURFACE COURSE.

COMMITMENTS

NONE

MIXTURE REQUIREMENTS for SN 076-0006

Locations	Hot-Mix Asphalt Surface Course
Mixture Use(s):	Hot-Mix Asphalt Surface Course, Mix C, IL-9.5FG
AC/PG:	PG64-22
ABR% (Max):	See Special Provision
Design Air Voids:	4.0%, 70 Gyration Design
Mixture Composition: (Gradation Mixture)	IL-9.5 mm Fine Graded
Friction Aggregate:	Mix C
Mixture Weight:	112 lbs/Sq Yd/in
Quality Management Program:	QCQA
Sublot Size:	NA

MODEL NUMBER NAMES
FILE NAME: SHEET

USER NAME = \$USERS	DESIGNED - _____	REVISED - _____
	DRAWN - _____	REVISED - _____
PLOT SCALE = \$SCALES	CHECKED - _____	REVISED - _____
PLOT DATE = \$DATES	DATE - _____	REVISED - _____

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

GENERAL NOTES, INDEX OF SHEETS, AND STANDARDS

SCALE: _____ SHEET ____ OF ____ SHEETS STA. _____ TO STA. _____

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	BRIDGE REPAIR 2022-4	VARIOUS	23	3
			CONTRACT NO. 78910	
ILLINOIS FED. AID PROJECT				

SUMMARY OF QUANTITIES

COUNTY:	SALINE CO	POPE CO	MASSAC CO
ROUTE:	IL 34	IL 146	US 45
FUNDING:	100% STATE	100% STATE	100% STATE
LOCATION:	RURAL	URBAN	URBAN
	SN 083-0038	SN 076-0006	SN 064-0003
	0013	0013	0013

CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	SALINE CO	POPE CO	MASSAC CO
40604002	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5FG, MIX "C", N70	TON	42		42	
44000154	HOT-MIX ASPHALT SURFACE REMOVAL, 1 1/4"	SQ YD	592		592	
50102400	CONCRETE REMOVAL	CU YD	8.5			8.5
50300225	CONCRETE STRUCTURES	CU YD	10.4	2.4	8	
50300255	CONCRETE SUPERSTRUCTURE	CU YD	8.5			8.5
50300300	PROTECTIVE COAT	SQ YD	22			22
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	2,410	230	1,000	1,180
50800515	BAR SPLICERS	EACH	12			12
52000110	PREFORMED JOINT STRIP SEAL	FOOT	98			98
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	2	2	2
67100100	MOBILIZATION	L SUM	1	0.33	0.33	0.34
70100100	TRAFFIC CONTROL AND PROTECTION, STANDARD 701316	EACH	3	1	1	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	0.33	0.33	0.34
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	3	1	1	1
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	84	28	28	28

REV. - MS

MODEL NUMBER: MAM15
FILE NAME: 81115

USER NAME = SUSERS	DESIGNED - _____	REVISED - _____	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.			
PLOT SCALE = 5SCALES	DRAWN - _____	REVISED - _____		SCALE: _____	SHEET _____	OF _____	SHEETS	STA. _____	TO STA. _____	VAR	BRIDGE REPAIR 2022-4	VARIOUS	23	4
PLOT DATE = SDATES	CHECKED - _____	REVISED - _____		CONTRACT NO. 78910										
	DATE - _____	REVISED - _____		ILLINOIS FED. AID PROJECT										

SUMMARY OF QUANTITIES - CONT

COUNTY:	SALINE CO	POPE CO	MASSAC CO
ROUTE:	IL 34	IL 146	US 45
FUNDING:	100% STATE	100% STATE	100% STATE
LOCATION:	RURAL	URBAN	URBAN
	SN 083-0038	SN 076-0006	SN 064-0003
	0013	0013	0013

CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY			
70300100	SHORT TERM PAVEMENT MARKING	FOOT	340		340	
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	114		114	
70300221	TEMPORARY PAVEMENT MARKING - LINE 4"- PAINT	FOOT	340		340	
* 78001130	PAINT PAVEMENT MARKING - LINE 6"	FOOT	364		364	
78300201	PAVEMENT MARKING REMOVAL - GRINDING	SQ FT	114		114	
* 86200300	UNINTERRUPTABLE POWER SUPPLY, EXTENDED	EACH	3	1	1	1
Z0001905	STRUCTURAL STEEL REPAIR	POUND	5250	2060	3190	
Z0012755	STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5 INCHES)	SQ FT	258	94	164	
Z0073200	TEMPORARY SHORING AND CRIBBING	EACH	29	8	21	

* SPECIALTY ITEM

REV. - MS

MODEL NUMBER: MAM15
FILE NAME: 811215

USER NAME = SUSERS	DESIGNED - _____	REVISED - _____	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PLOT SCALE = 5SCALES	DRAWN - _____	REVISED - _____					VAR	BRIDGE REPAIR 2022-4	VARIOUS	23	5
PLOT DATE = SDATES	CHECKED - _____	REVISED - _____		SCALE: _____ SHEET ____ OF ____ SHEETS STA. _____ TO STA. _____			ILLINOIS FED. AID PROJECT CONTRACT NO. 78910				
	DATE - _____	REVISED - _____									

PAVEMENT MARKING SCHEDULE							
STATION		NOTES		PAINT PAVEMENT MARKING - LINE 6"			
				SOLID WHITE	YELLOW SKIP DASH	SOLID YELLOW	
				FOOT	FOOT	FOOT	
SN 076-0006							
670+95.29	RT	TO	672+56.60	RT	162	0	
670+95.29			672+56.60		ALONG CENTERLINE	40	
670+95.29	LT	TO	672+56.60	LT	162	0	
SUBTOTAL					324	40	0
TOTAL						364	

CONCRETE AND REINFORCEMENT SCHEDULE					
BRIDGE	LOCATION	CONCRETE REMOVAL (CU YD)	CONCRETE STRUCTURES (CU YD)	CONCRETE SUPERSTRUCTURE (CU YD)	REINFORCEMENT, EPOXY COATED (POUND)
SN 083-0003					
	PIER #1		2.4		230
SN 076-0006					
	PIER		8.0		1000
SN 064-0003					
	ABUT. JOINTS	8.5		8.5	1180
TOTAL		8.5	10.4	8.5	2410

MODEL NUMBER: MAMES
FILE NAME: 811215

GENERAL NOTES

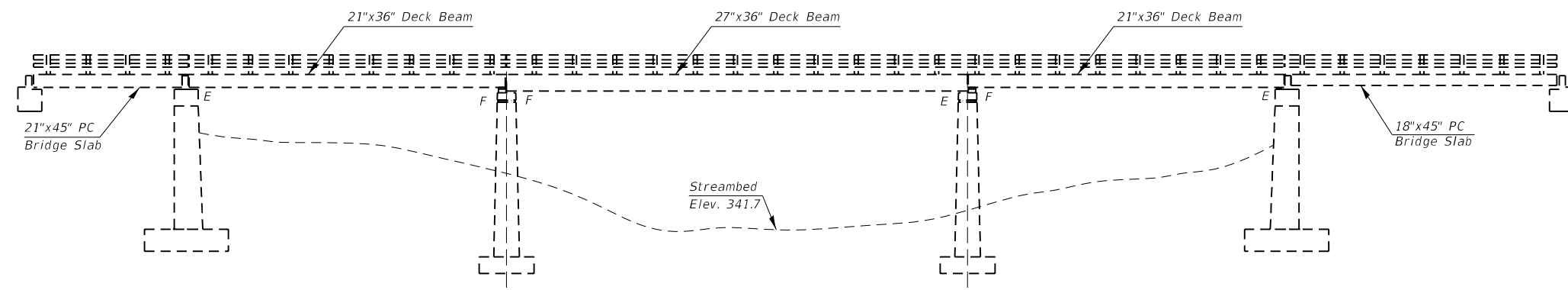
Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

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

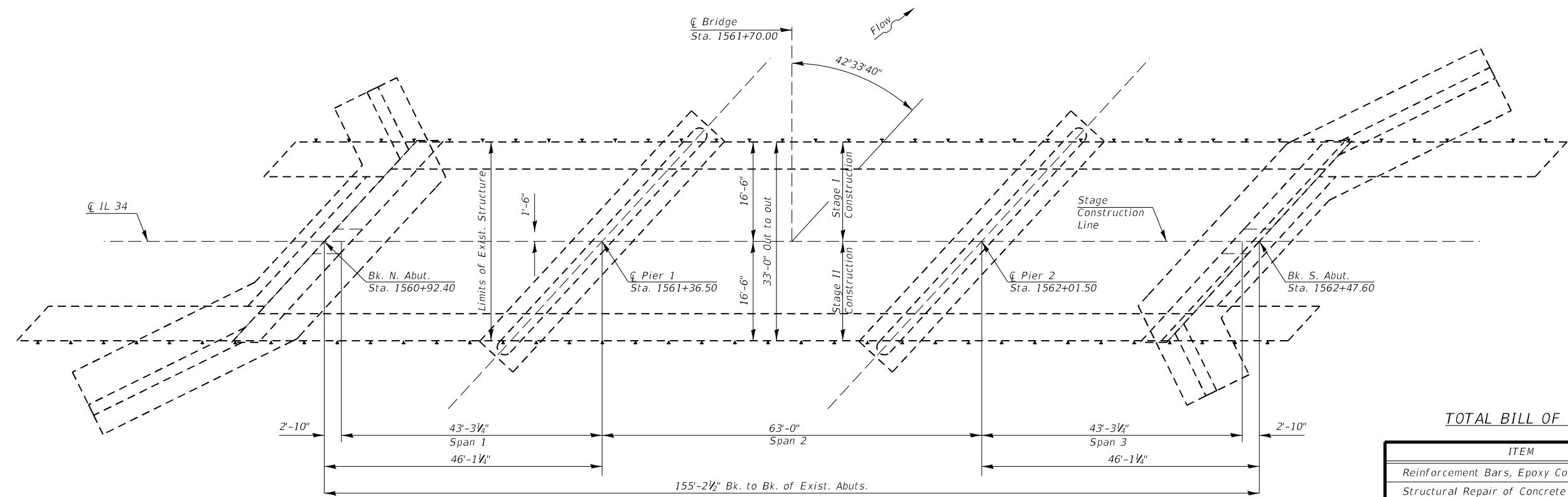
Reinforcement bars designated (E) shall be epoxy coated.

The Contractor shall use extreme care during concrete removal so as not to damage the PPC Deck beams.

Self consolidating concrete shall be used throughout. See Special Provisions.



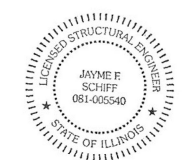
ELEVATION



PLAN

Scope of Work

1. Pier #1 - chip out bad concrete, add 6" to pier cap on the South side.
2. North Abutment structural repair of concrete ($\geq 5"$).
3. South Abutment structural repair of concrete ($\geq 5"$).
4. Pier #2 - structural repair of concrete ($\geq 5"$).
5. Reseal the formed joint over Pier #1.



Expires 11/30/2022

Jayne F. Schiff

TOTAL BILL OF MATERIAL (SN 083-0038)

ITEM	UNIT	QUANTITY
Reinforcement Bars, Epoxy Coated	Pound	230
Structural Repair of Concrete (Depth $\geq 5"$)	Sq. Ft.	94
Concrete Structures	Cu. Yd.	2.4
Temporary Shoring and Cribbing	Each	8
Structural Steel Repair	Pound	2060

GENERAL PLAN & ELEVATION
SN 083-0038
IL 34 OVER MIDDLE FORK DITCH
SALINE COUNTY

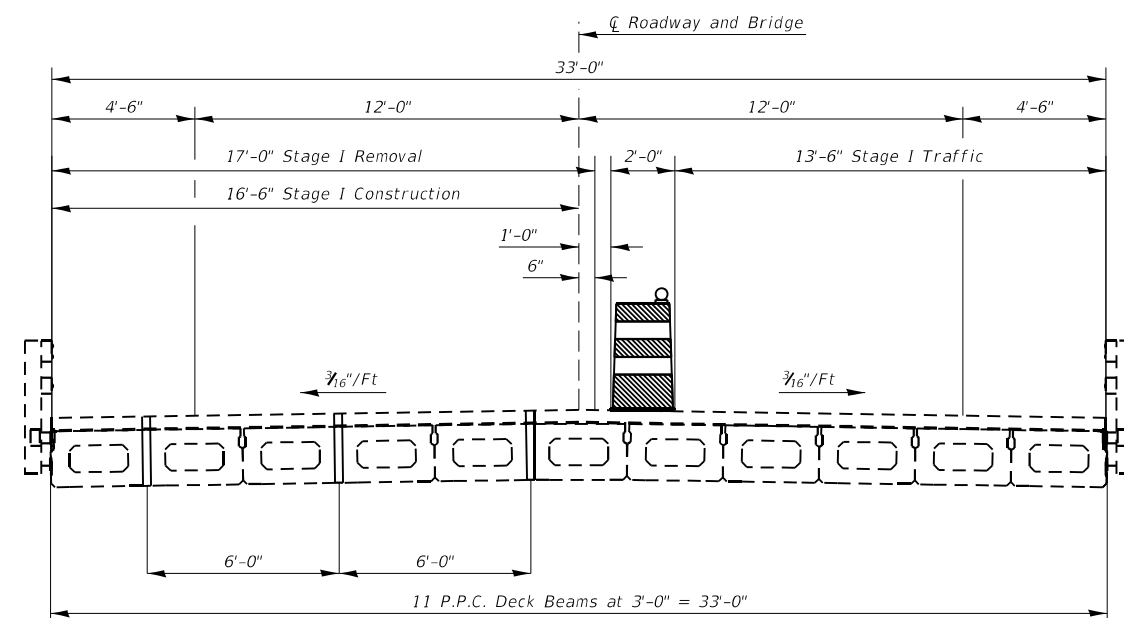
MODEL NUMBER: MAMTMS
 FILE NAME: 083-0038

USER NAME = SUSERS	DESIGNED - DW	REVISED - _____
PLOT SCALE = 5SCALES	CHECKED - GD	REVISED - _____
PLOT DATE = SDATES	DATE - _____	REVISED - _____

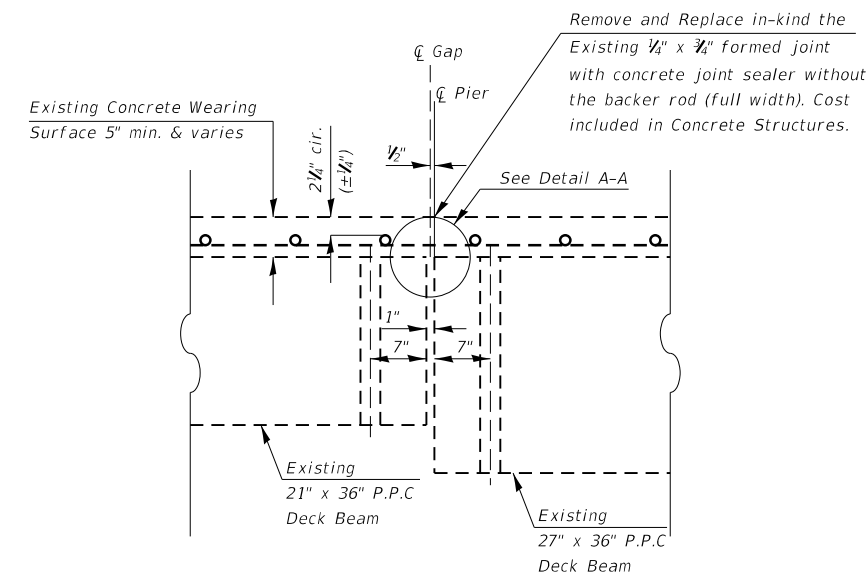
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
SN 083-0038
 SCALE: _____ SHEET _____ OF _____ SHEETS STA. _____ TO STA. _____

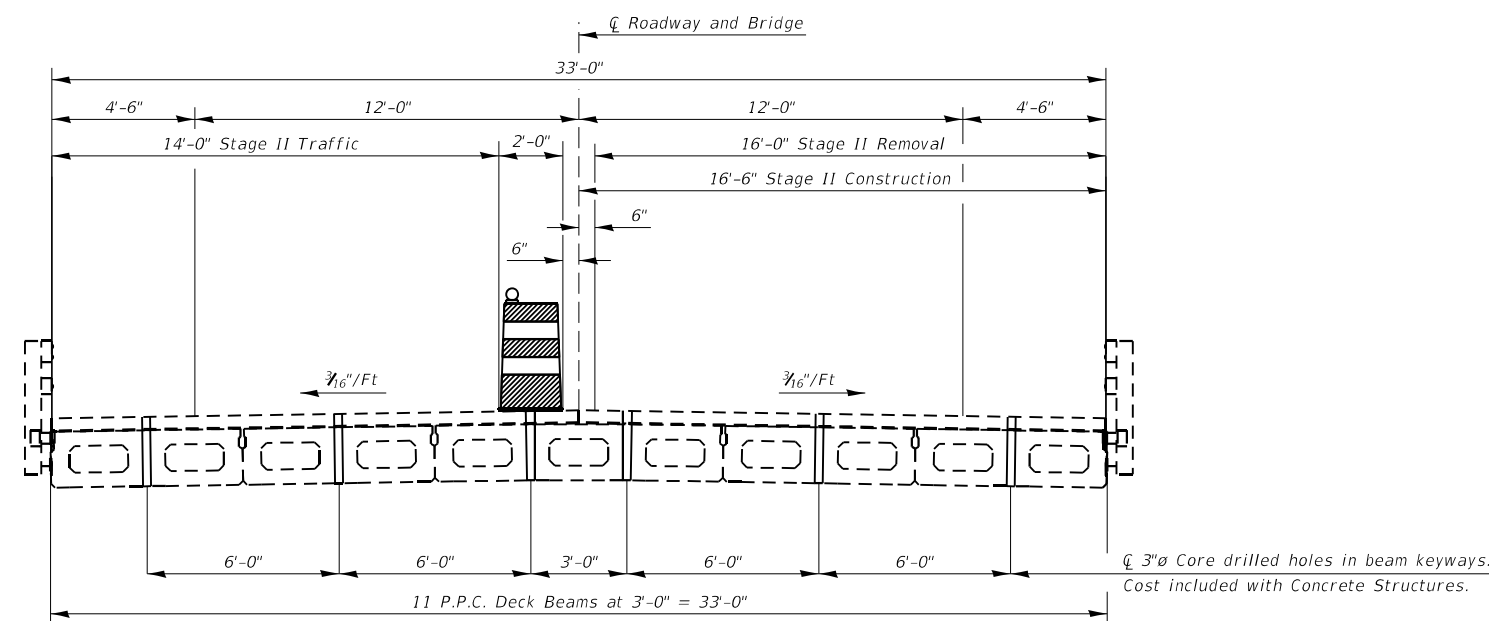
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	BRIDGE REPAIR 2022-4	VARIOUS	23	7
			CONTRACT NO. 78910	
ILLINOIS FED. AID PROJECT				



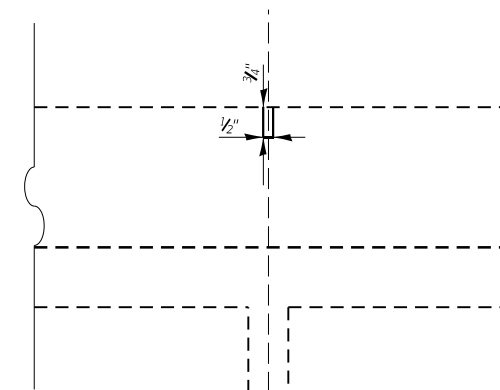
STAGE I REMOVAL/CONSTRUCTION
(Looking South)



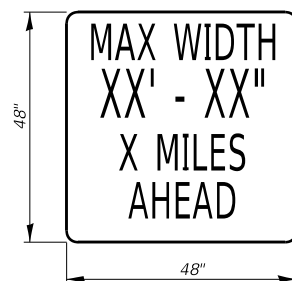
SECTION THRU PIER 1
(Dimensions @ Rt. L's)



STAGE II REMOVAL/CONSTRUCTION
(Looking South)



DETAIL A-A
(Dimensions @ Rt. L's)



MAX WIDTH SIGN

W12-1103 48" X 48" WITH XX' XX"
LETTERS BLACK ON ORANGE
MAX WIDTH & 2 MILES AHEAD
BLACK ON WHITE WITH M3-3 30X15
AND M1-1100 30X24

MODEL NUMBER: MAM15
FILE NAME: 0815

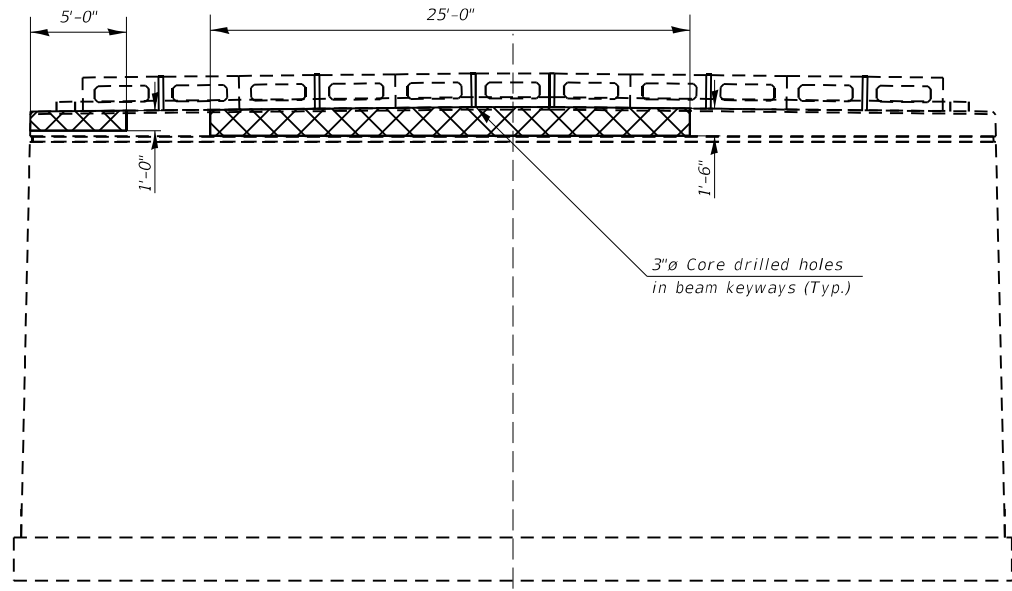
USER NAME = SUSERS	DESIGNED - _____	REVISED - _____
DRAWN - _____	REVISIONS - _____	REVISIONS - _____
PLOT SCALE = 5/8"=1'	CHECKED - _____	REVISIONS - _____
PLOT DATE = SDATES	DATE - _____	REVISIONS - _____

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

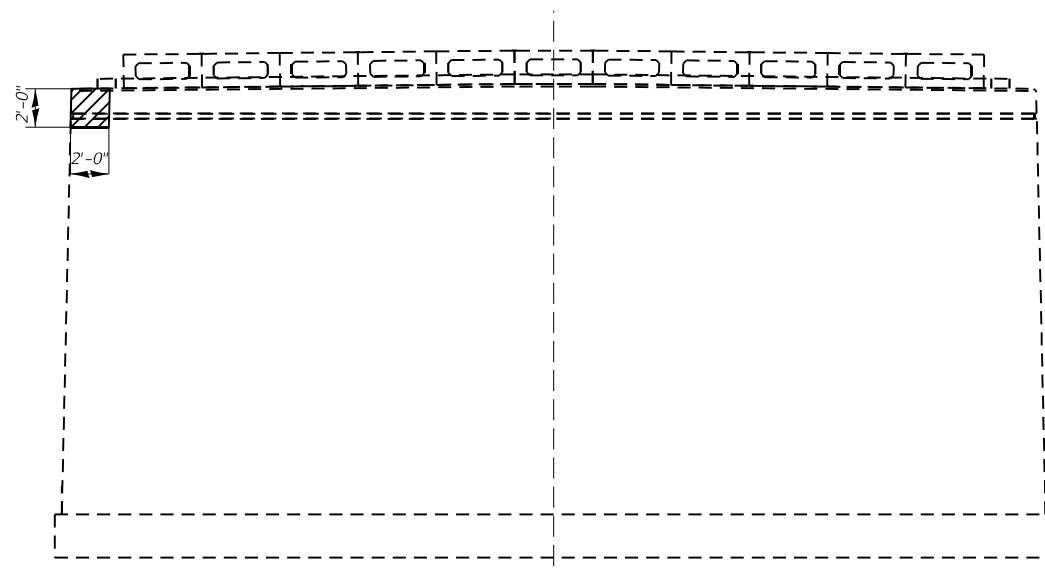
STAGING DETAILS & JOINT SEALER SN 083-0038

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

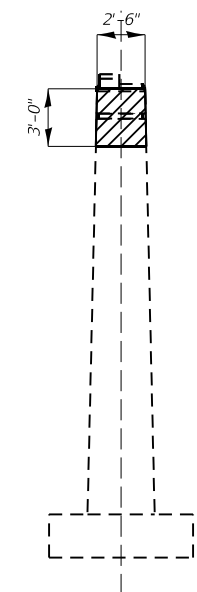
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	BRIDGE REPAIR 2022-4	VARIOUS	23	8
			CONTRACT NO. 78910	
ILLINOIS FED. AID PROJECT				



PIER #1
(Looking North)
See Sheet 10 for Pier Cap Repair Details



PIER #2
(Looking North)



PIER #2
(Looking West)

- Delaminated Concrete & Structural Repair of Concrete ($\geq 5'$)
- Delaminated Concrete, Structural Repair of Concrete ($\geq 5'$) used for preparation of new Concrete & Concrete Structures

BEAM REACTION TABLE

	Span 1 - Pier 1	Span 2 - Pier 1	Span 3 - Pier 2
R_{DL} (K)	16.7	27.4	16.7
R_{LL} (K)	28.9	31.1	28.9
R_L (K)	8.7	8.3	8.7
R_{Total} (K)	54.3	66.8	54.3

BILL OF MATERIAL (BOTH PIERS)

ITEM	UNIT	QUANTITY
Temporary Shoring and Cribbing	Each	8
Structural Repair of Concrete ($\geq 5'$)	Sq. Ft.	54

Note:
See Sheet 10 for quantity of Concrete Structures

PIER DETAILS
SN 083-0038
IL 34 OVER MIDDLE FORK DITCH
SALINE COUNTY

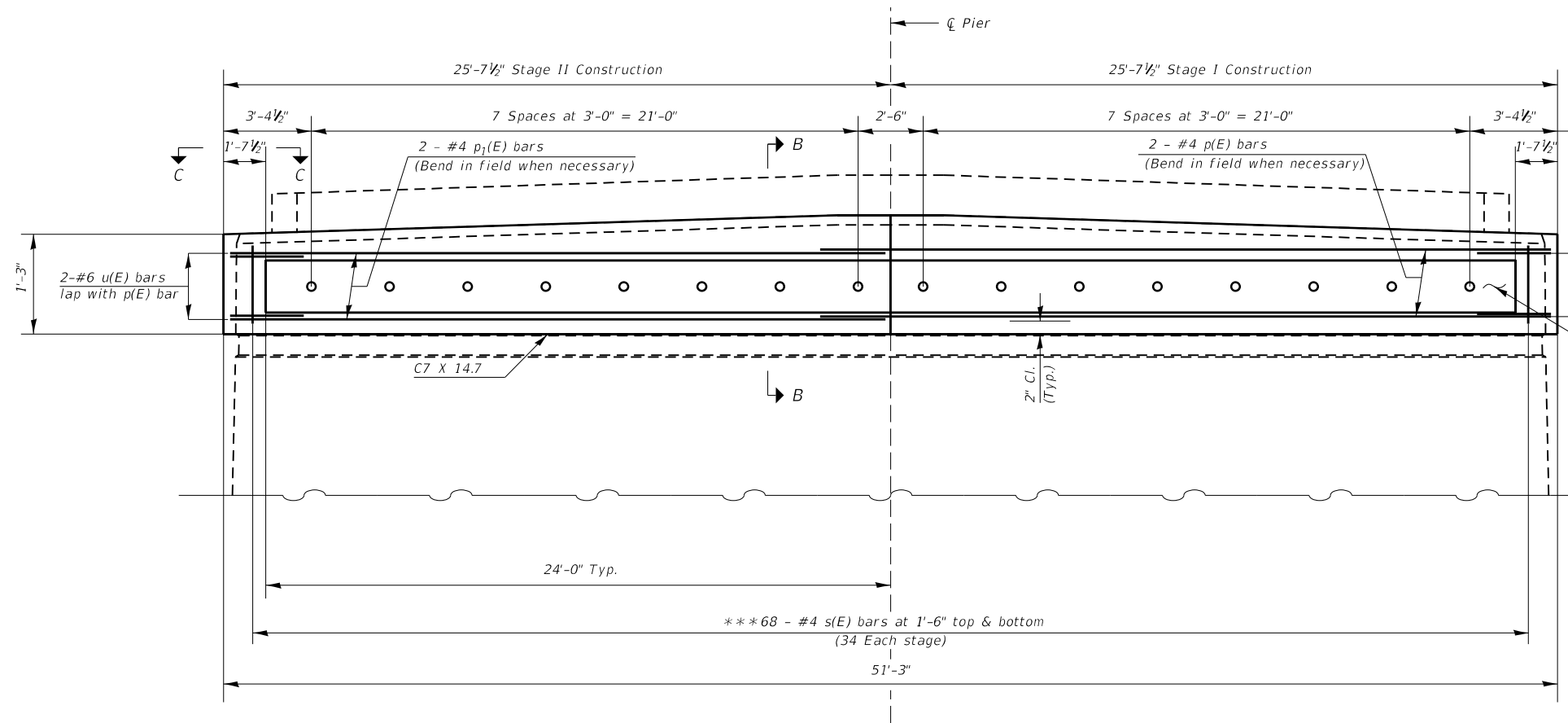
MODEL NUMBER: MAM16
FILE NAME: 083-0038

USER NAME = SUSERS	DESIGNED - _____	REVISED - _____
DRAWN - _____	REVISIONS - _____	
PLOT SCALE = 5/8"=1'-0"	CHECKED - _____	REVISIONS - _____
PLOT DATE = 5/20/2024	DATE - _____	REVISIONS - _____

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER #1 AND PIER #2 DETAILS
SN 083-0038
SCALE: _____ SHEET _____ OF _____ SHEETS STA. _____ TO STA. _____

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	BRIDGE REPAIR 2022-4	VARIOUS	23	9
			CONTRACT NO. 78910	
ILLINOIS FED. AID PROJECT				



1" \varnothing Post Tensioning Bars. Adjust location laterally to avoid damaging existing reinforcement.

Location and size of delaminated concrete on pier cap to be determined by the Engineer in the field.

Notes:

The 1" \varnothing bar shall be tightened to snug tight per Article 505.04 of the Standard Specifications and the threads set.

Threaded bars shall be in accordance with ASTM A193 B7. Nuts shall be in accordance with ASTM A194. Threaded bars, nuts, and washers shall be galvanized according to AASHTO M232.

Channels shall be galvanized according to AASHTO M111.

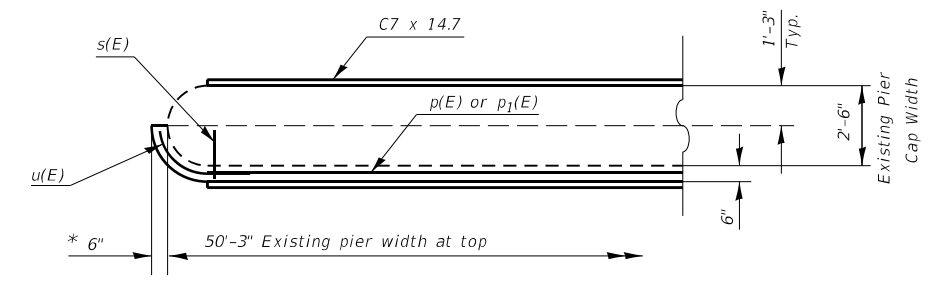
Stage I traffic control shall remain in place until Stage I concrete has cured.

Stage II traffic control shall remain in place until Stage II concrete has cured.

* Concrete to be poured monolithically with delaminated areas to be repaired.

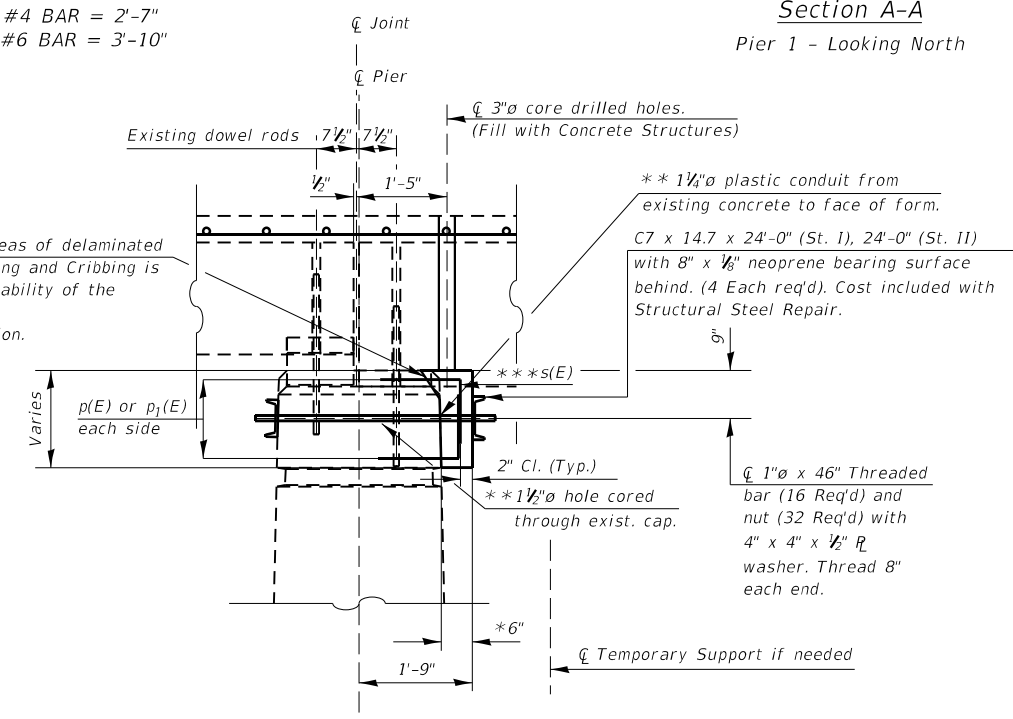
** Cost to be included with Concrete Structures.

*** Drill and epoxy grout 9" min. into existing cap according to Article 584 of the Standard Specifications. Trim leg to maintain minimum clearance. Cost included with Reinforcement Bars, Epoxy Coated.

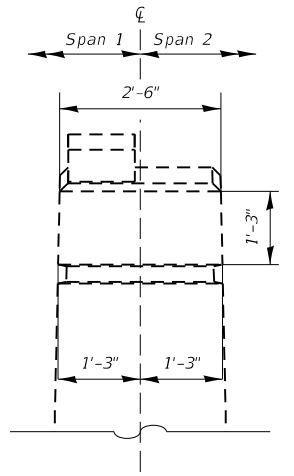


MINIMUM BAR LAP
 #4 BAR = 2'-7"
 #6 BAR = 3'-10"

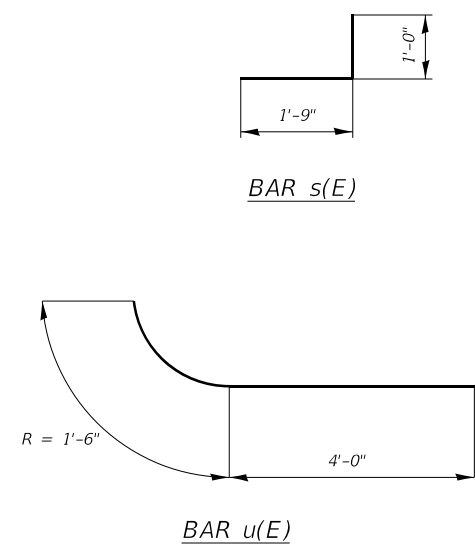
Section A-A
 Pier 1 - Looking North



Due to the anticipated areas of delaminated concrete Temporary Shoring and Cribbing is required to ensure the stability of the existing beams. See sheet 9 for its location.



Section B-B
 Existing Pier Cap (prior to any repairs)



VIEW C-C

BILL OF MATERIAL (Pier 1)

BAR	NO.	SIZE	LENGTH (Ft.)	SHAPE
p(E)	2	#4	28'-1"	—
p1(E)	2	#4	25'-4"	—
s(E)	68	#4	2'-9"	L
u(E)	4	#6	5'-6"	⌋
Concrete Structures			Cu Yd	2.4
Reinforcement Bars, Epoxy Coated			Pound	230
Structural Steel Repair			Pound	2052

Note:
 The type and Quantity of Concrete to replace the delaminated concrete & the ± 6 " Concrete widening to be included with Concrete Structures.

PIER CAP REPAIRS
 SN 083-0038
 IL 34 OVER MIDDLE FORK DITCH
 SALINE COUNTY

MODEL NUMBER: MAM165
FILE NAME: 083-0038

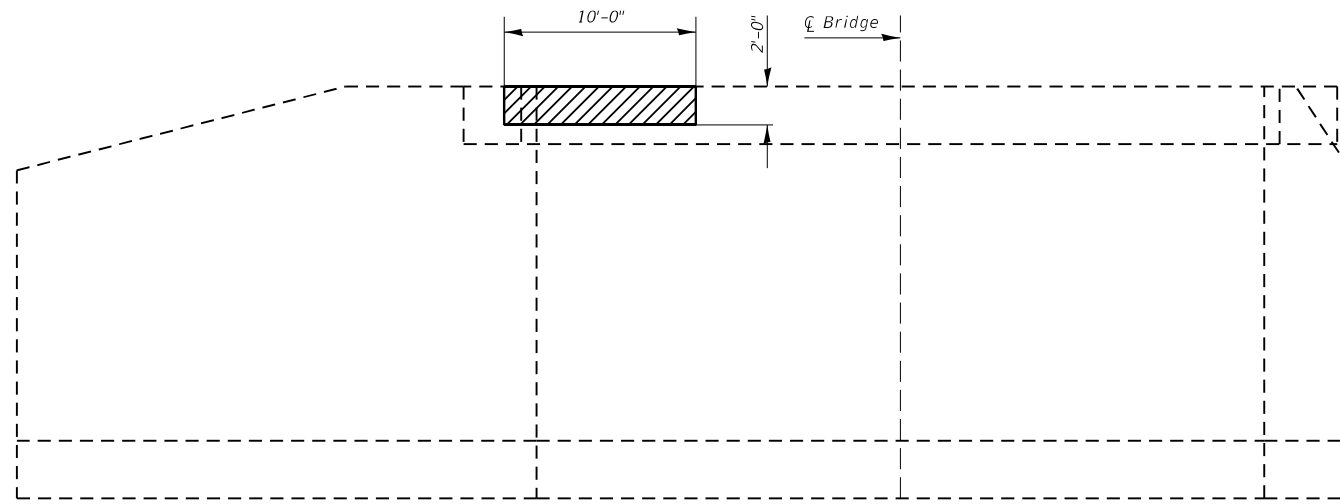
USER NAME = SUSERS	DESIGNED - _____	REVISED - _____
DRAWN - _____	REVISIONS - _____	REVISIONS - _____
PLOT SCALE = SCALES	CHECKED - _____	REVISIONS - _____
PLOT DATE = SDATES	DATE - _____	REVISIONS - _____

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER #1 CAP REPAIRS
 SN 083-0038

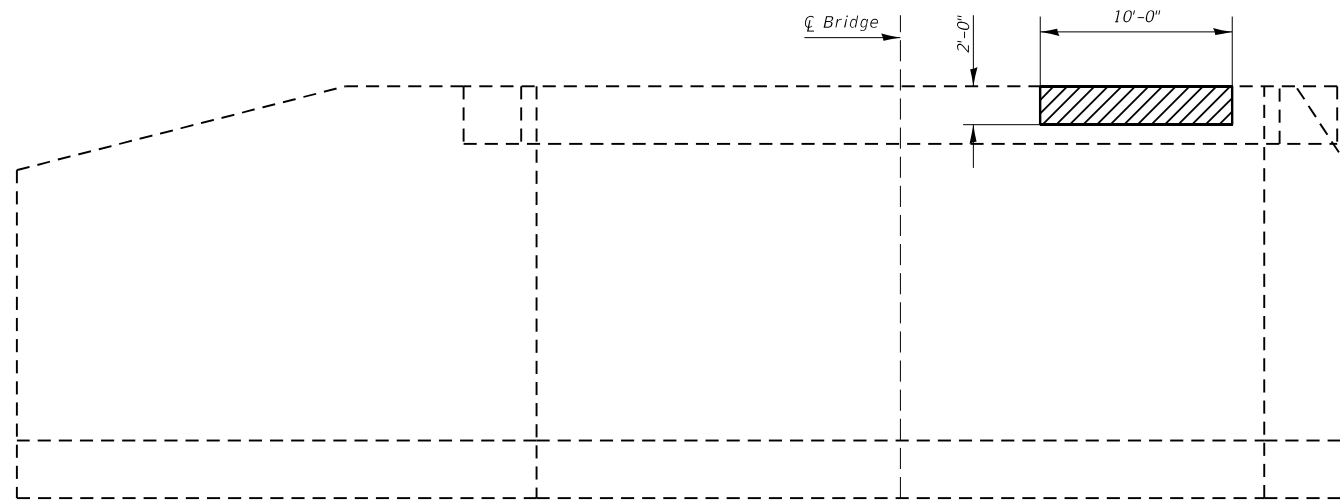
SCALE: _____ SHEET _____ OF _____ SHEETS STA. _____ TO STA. _____

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	BRIDGE REPAIR 2022-4	VARIOUS	23	10
			CONTRACT NO. 78910	
ILLINOIS FED. AID PROJECT				



Delaminated Concrete & Structural Repair of Concrete (≥ 5'')

NORTH ABUTMENT
(Looking North)



BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Structural Repair of Concrete (≥5'')	Sq. Ft.	40

SOUTH ABUTMENT
(Looking South)

ABUTMENT REPAIRS
SN 083-0038
IL 34 OVER MIDDLE FORK DITCH
SALINE COUNTY

MODEL NAME: MAMES
FILE NAME: 083-0038

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ABUTMENT REPAIRS
SN 083-0038

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	BRIDGE REPAIR 2022-4	VARIOUS	23	11
			CONTRACT NO. 78910	
ILLINOIS FED. AID PROJECT				

GENERAL NOTES

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

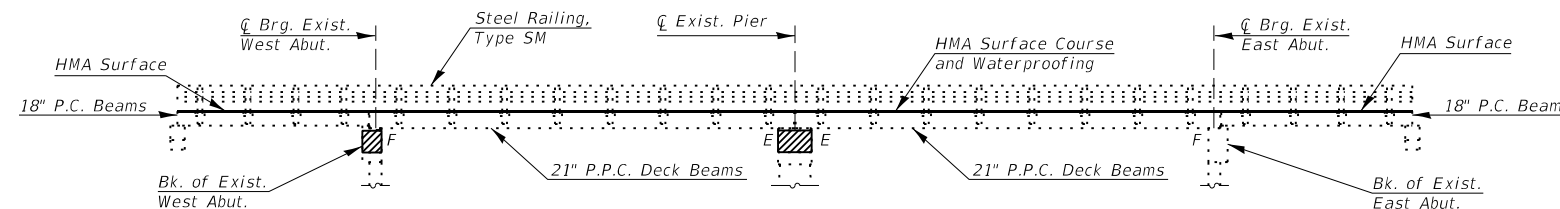
Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with the Concrete Removal.

Reinforcement bars designated (E) shall be epoxy coated.

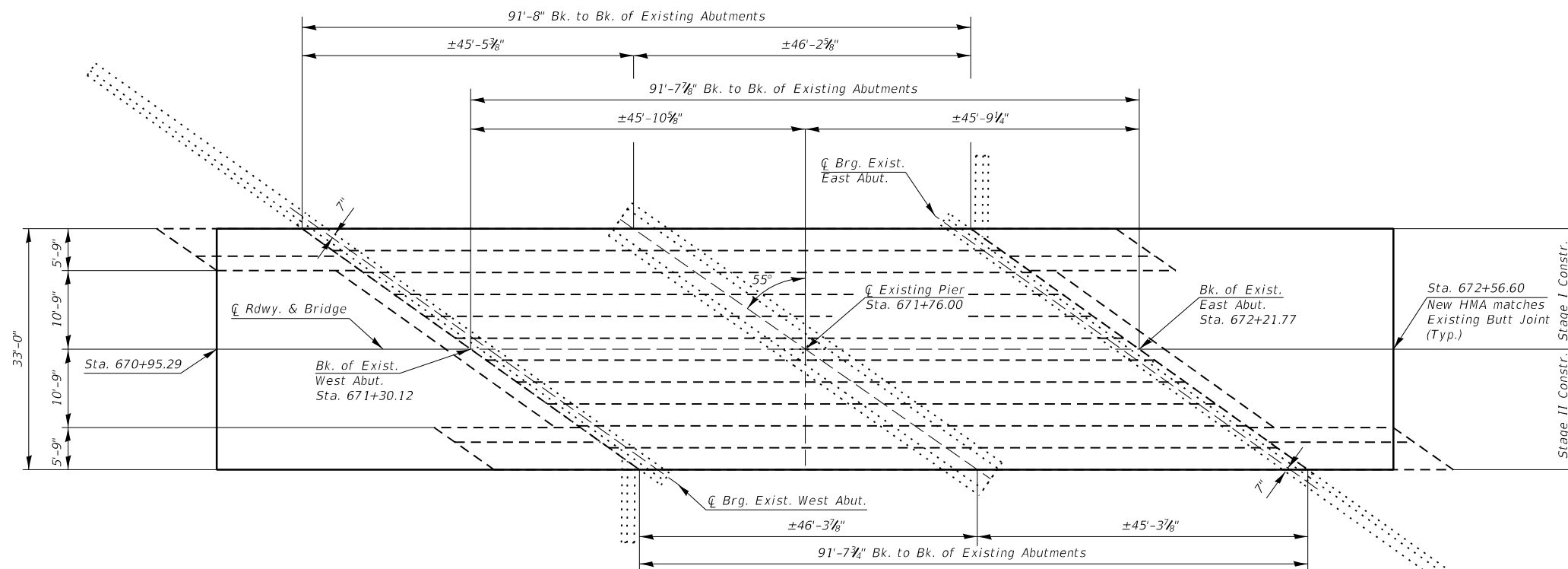
Care should be taken not to damage the existing strip seal expansion joint at the pier. Any damage done shall be at the expense of the contractor.

The Contractor shall use extreme care during concrete removal so as not to damage the PPC Deck beams.

Self consolidating concrete shall be used throughout. See Special Provisions.



ELEVATION



Scope of Work

1. Remove all delaminated concrete at pier.
2. Add additional ±6" to Pier Cap.
3. Structural repair of concrete of the west abutment.
4. HMA Surface Removal 1 1/4" and add 1 1/4" HMA Surface Course without getting into the waterproofing.

PLAN



Expires 11/30/2022

Jayme F. Schiff

TOTAL BILL OF MATERIAL (SN 076-0006)

ITEM	UNIT	QUANTITY
Reinforcement Bars, Epoxy Coated	Pound	1000
Hot-Mix Asphalt Surface Course, IL-9.5 F.G., "Mix C", N70	Ton	42
Structural Repair of Concrete (Depth ≥ 5")	Sq. Ft.	164
Concrete Structures	Cu. Yd.	8.0
Temporary Shoring and Cribbing	Each	21
Hot-Mix Asphalt Surface Removal, 1 1/4"	Sq. Yd.	592
Structural Steel Repair	Pound	3190

**GENERAL PLAN & ELEVATION
SN 076-0006
IL 146 OVER SUGAR CREEK
POPE COUNTY**

MODEL NUMBER: MAM16
FILE NAME: 076-0006

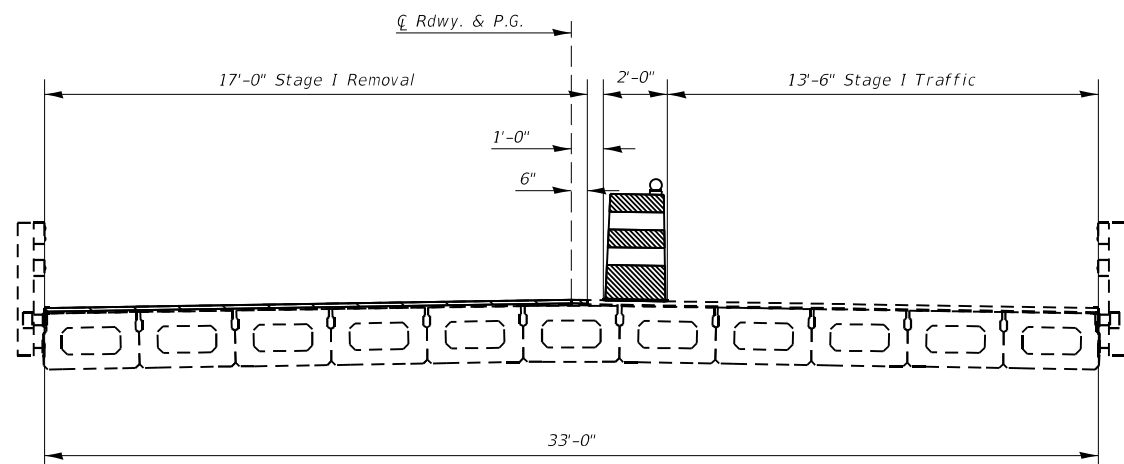
USER NAME = SUSERS	DESIGNED - DW	REVISED -
PLOT SCALE = SSCALES	CHECKED - GD	REVISED -
PLOT DATE = SDATES	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

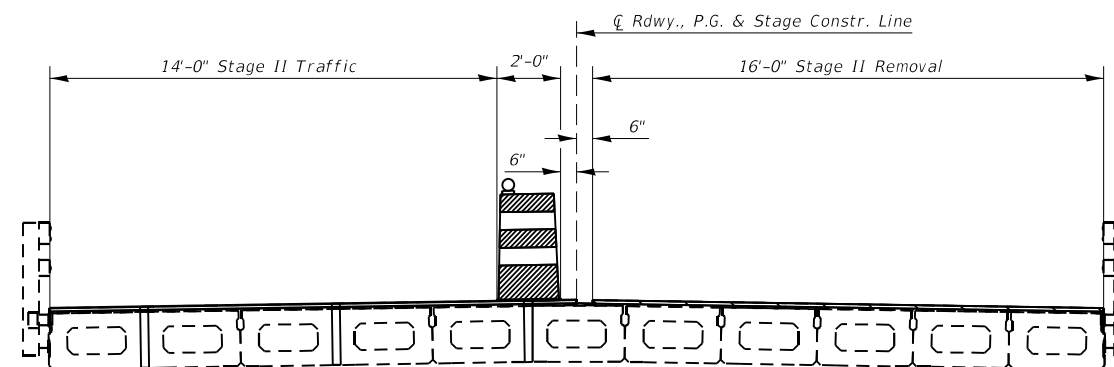
**GENERAL PLAN AND ELEVATION
SN 076-0006**

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

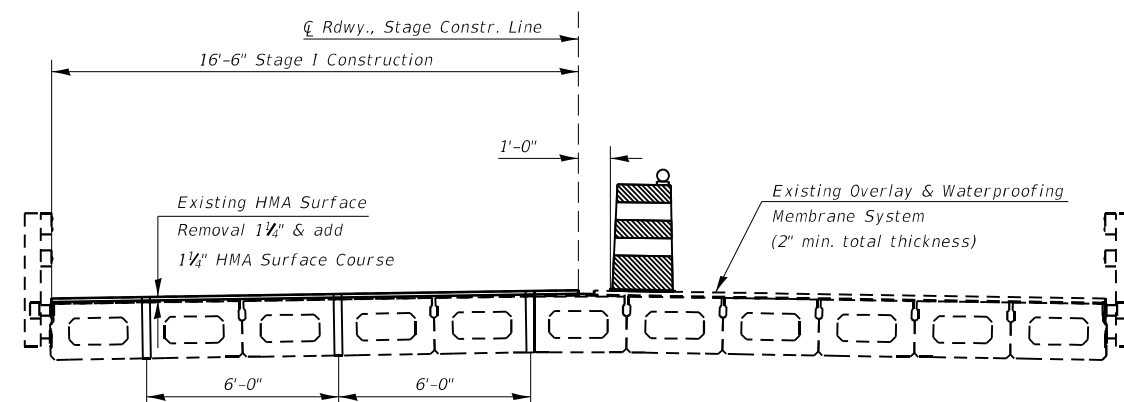
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	BRIDGE REPAIR 2022-4	VARIOUS	23	12
			CONTRACT NO. 78910	
		ILLINOIS FED. AID PROJECT		



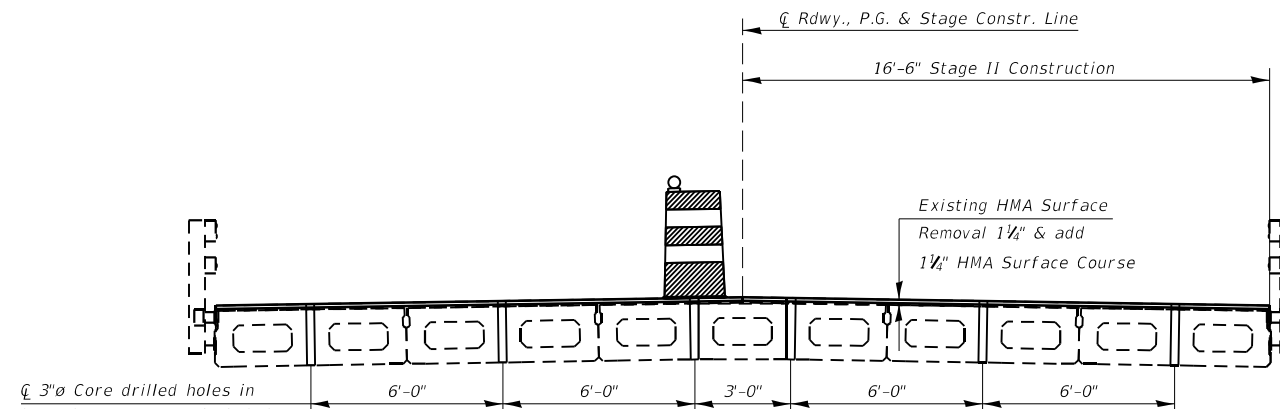
STAGE I REMOVAL
(Looking East)



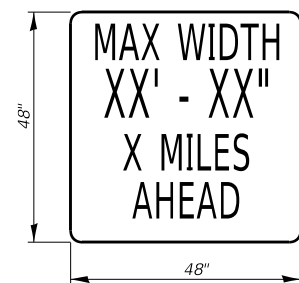
STAGE II REMOVAL
(Looking East)



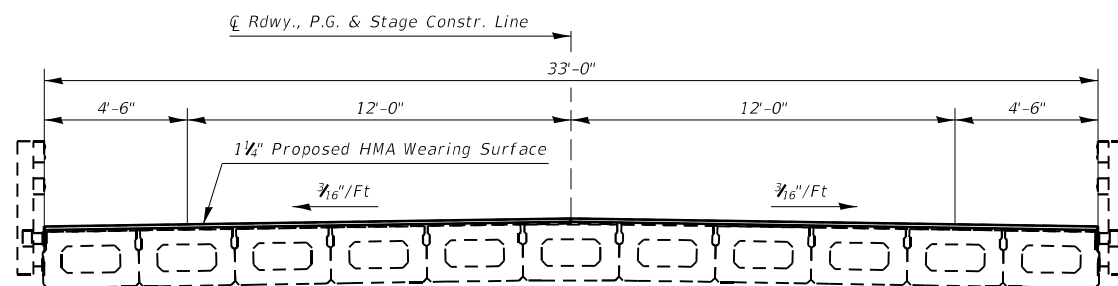
STAGE I CONSTRUCTION
(Looking East)



STAGE II CONSTRUCTION
(Looking East)



MAX WIDTH SIGN
W12-1103 48" X 48" WITH XX' XX"
LETTERS BLACK ON ORANGE
MAX WIDTH & 2 MILES AHEAD
BLACK ON WHITE WITH M3-3 30X15
AND M1-1100 30X24



CROSS SECTION
(All Cross Sections Looking East)

MODEL NUMBER: M1103
FILE NAME: 076-0006

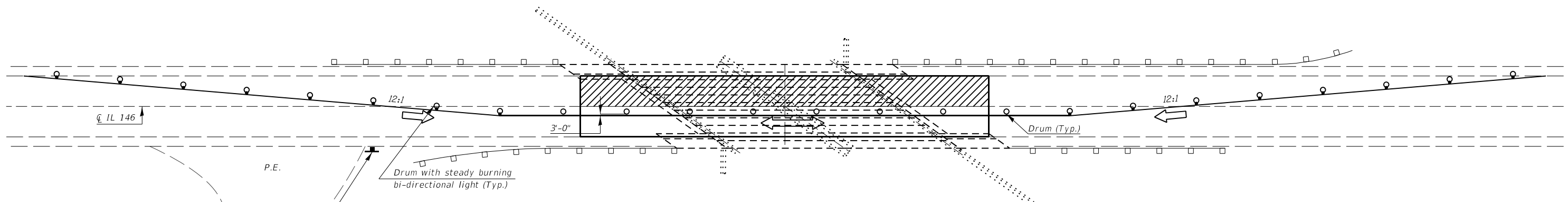
USER NAME = SUSERS	DESIGNED - _____	REVISED - _____
DRAWN - _____	REVISIONS - _____	REVISIONS - _____
PLOT SCALE = SCALES	CHECKED - _____	REVISIONS - _____
PLOT DATE = SDATES	DATE - _____	REVISIONS - _____

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

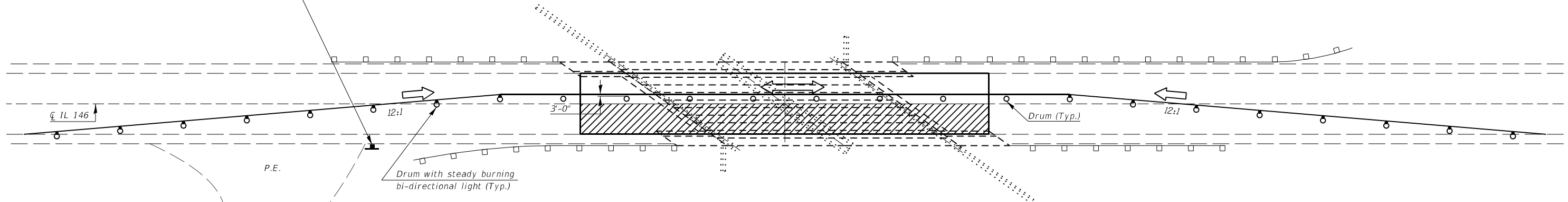
STAGING DETAILS SN 076-0006

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	BRIDGE REPAIR 2022-4	VARIOUS	23	13
			CONTRACT NO. 78910	
ILLINOIS FED. AID PROJECT				



STAGE I TRAFFIC



STAGE II TRAFFIC



MODEL NUMBER: MAMTMS
FILE NAME: 07615

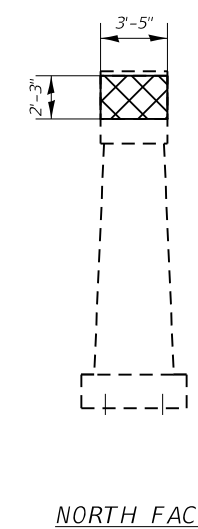
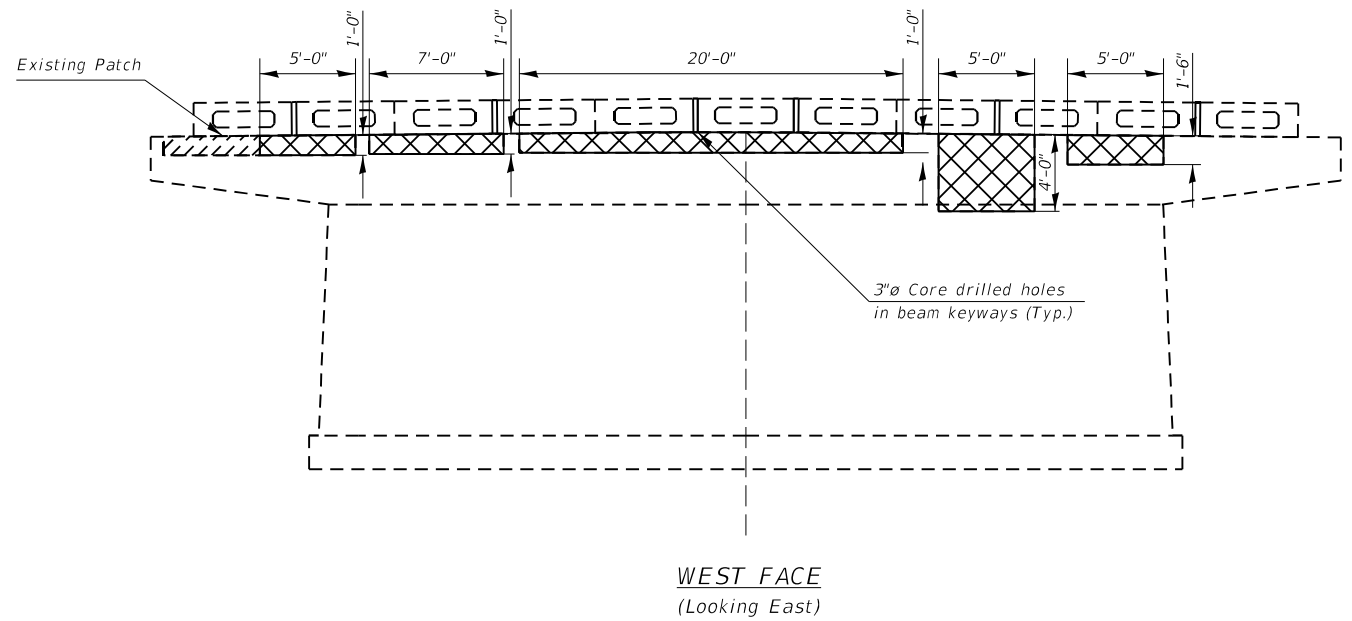
USER NAME = SUSERS	DESIGNED - _____	REVISED - _____
DRAWN - _____	REVISIONS - _____	REVISIONS - _____
PLOT SCALE = 5/8"=1'	CHECKED - _____	REVISIONS - _____
PLOT DATE = 5/20/2024	DATE - _____	REVISIONS - _____


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

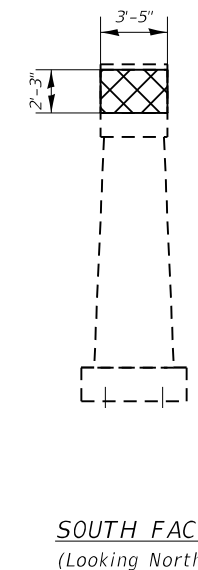
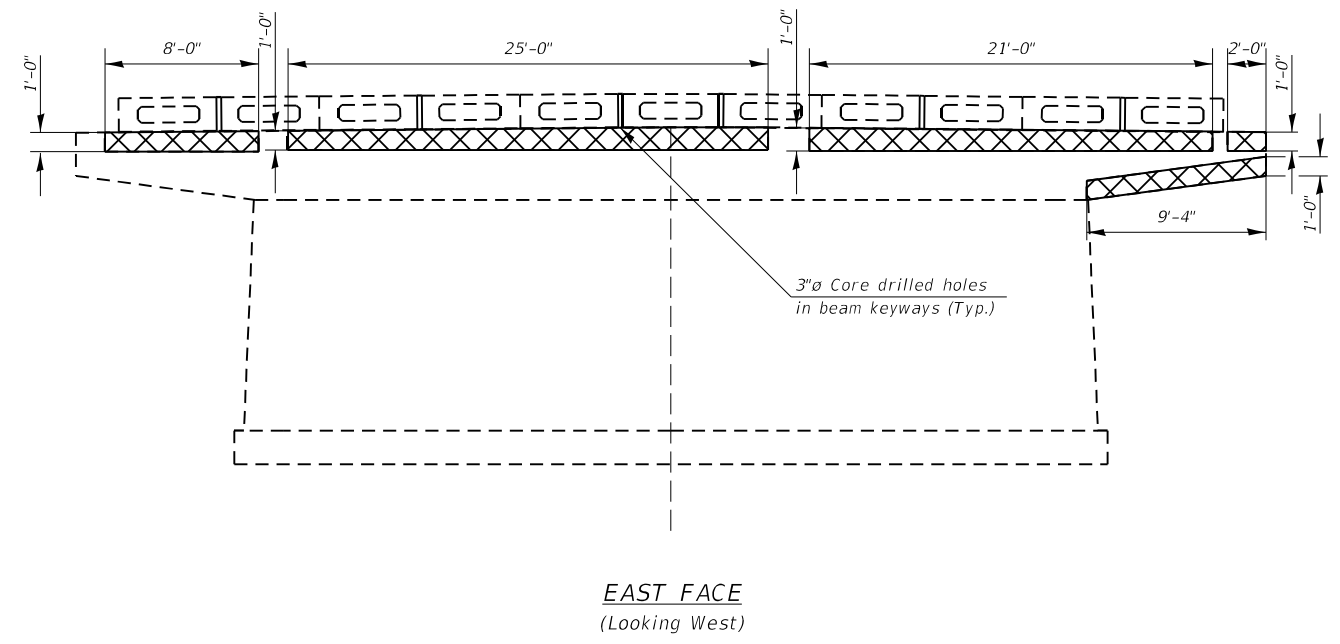
STAGING PLAN
SN 076-0006

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	BRIDGE REPAIR 2022-4	VARIOUS	23	14
			CONTRACT NO. 78910	
ILLINOIS FED. AID PROJECT				



 Delimitated Concrete, Structural Repair of Concrete ($\geq 5'$) used for preparation of new Concrete & Concrete Structures



BEAM REACTION TABLE

	Span 1 - Pier 1	Span 2 - Pier 1
R_{DC1} (K)	12.2	12.2
R_{DC2} (K)	0.5	0.5
R_{DW} (K)	4.4	4.4
R_{LL+H} (K)	23.3	23.3
R_{TOTAL} (K)	40.4	40.4

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Temporary Shoring and Cribbing	Each	21
Structural Repair of Concrete ($\geq 5'$)	Sq. Ft.	143

Note:
See Sheet 16 for quantity of Concrete Structures

PIER DETAILS
SN 076-0006
IL 146 OVER SUGAR CREEK
POPE COUNTY

MODEL NUMBER: MAM16
FILE NAME: 07615

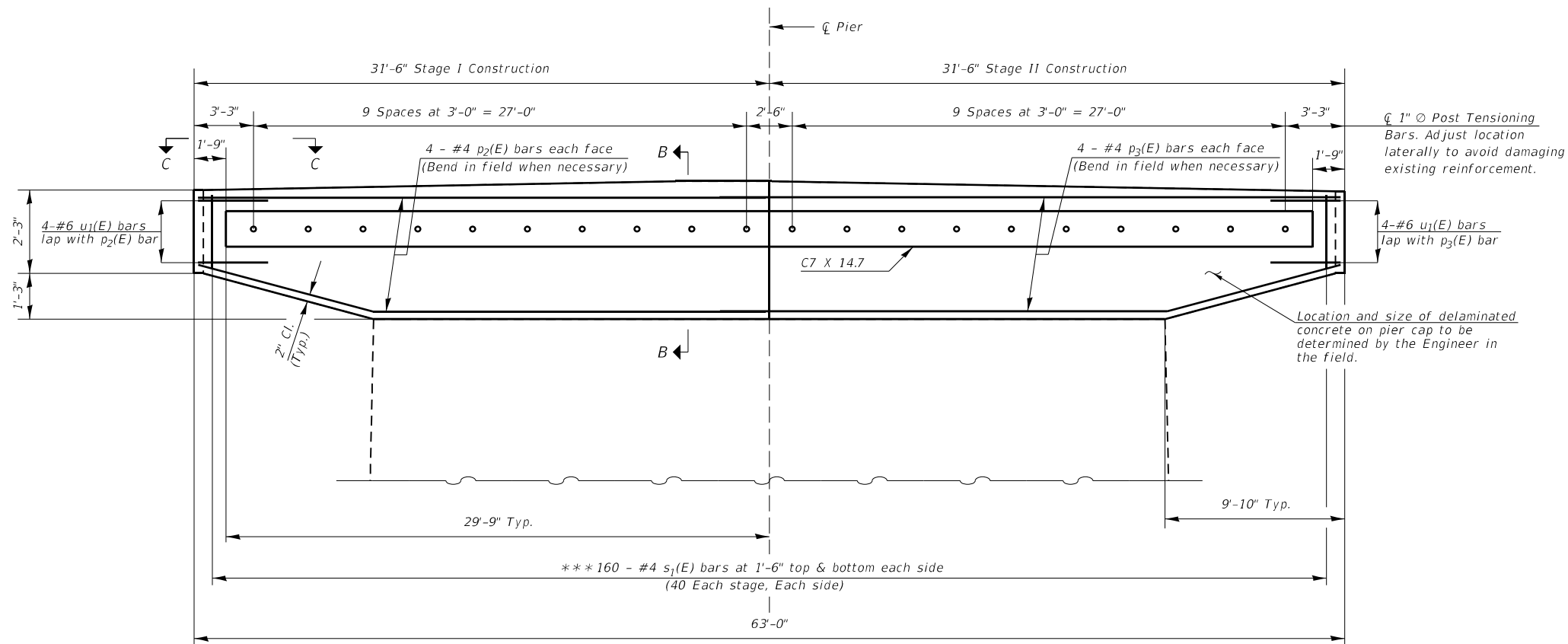
USER NAME = SUSERS	DESIGNED - _____	REVISED - _____
DRAWN - _____	DRAWN - _____	REVISED - _____
PLOT SCALE = 5SCALES	CHECKED - _____	REVISED - _____
PLOT DATE = SDATES	DATE - _____	REVISED - _____

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER DETAILS
SN 076-0006

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	BRIDGE REPAIR 2022-4	VARIOUS	23	15
			CONTRACT NO. 78910	
ILLINOIS FED. AID PROJECT				

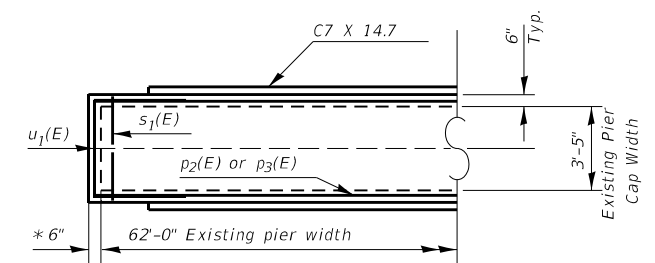


MINIMUM BAR LAP

#4 BAR = 2'-7"
#6 BAR = 3'-10"

SECTION A-A
(Looking East)

Notes:
The 1" \odot bar shall be tightened to snug tight per Article 505.04 of the Standard Specifications and the threads set.
Threaded bars shall be in accordance with ASTM A193 B7. Nuts shall be in accordance with ASTM A194. Threaded bars, nuts, and washers shall be galvanized according to AASHTO M232.
Channels shall be galvanized according to AASHTO M111.
Stage I traffic control shall remain in place until Stage I concrete has cured.
Stage II traffic control shall remain in place until Stage II concrete has cured.
* Concrete to be poured monolithically with delaminated areas to be repaired.
** Cost to be included with Concrete Structures.
*** Drill and epoxy grout 9" min. into existing cap according to Article 584 of the Standard Specifications. Trim leg to maintain minimum clearance. Cost included with Reinforcement Bars, Epoxy Coated.



VIEW C-C

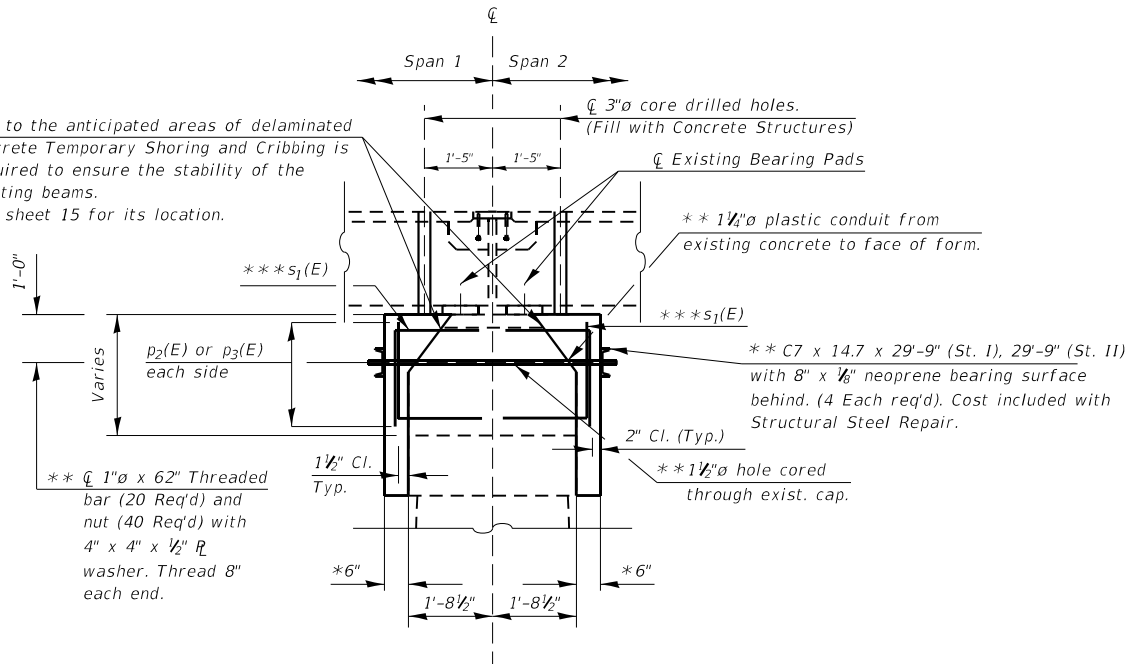
BILL OF MATERIAL (Pier)

BAR	NO.	SIZE	LENGTH (FL.)	SHAPE
p ₂ (E)	8	#4	33'-11"	—
p ₃ (E)	8	#4	31'-2"	—
s ₁ (E)	160	#4	4'-9"	L
u ₁ (E)	8	#6	12'-0"	C
Concrete Structures			Cu Yd	8.0
Reinforcement Bars, Epoxy Coated			Pound	1000
Structural Steel Repair			Pound	3190

Note:
The type and quantity of concrete to replace the delaminated concrete & the ± 6 " concrete widening to be included with Concrete Structures.

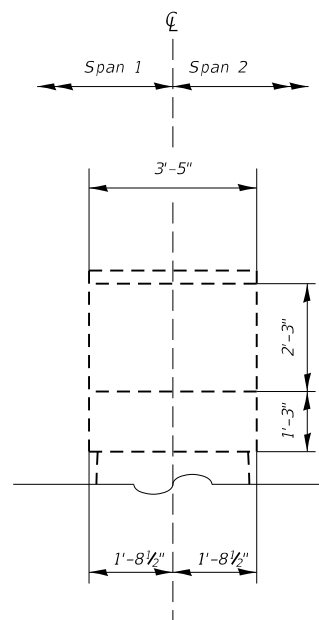
PIER CAP REPAIRS
SN 076-0006
IL 146 OVER SUGAR CREEK
POPE COUNTY

Due to the anticipated areas of delaminated concrete Temporary Shoring and Cribbing is required to ensure the stability of the existing beams.
See sheet 15 for its location.



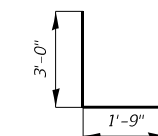
SECTION B-B

Liberal grease and wrap
Threaded bar in waxed
paper prior to insertion.

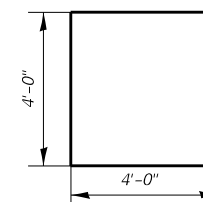


SECTION B-B

Existing Pier Cap
(prior to any repairs)



BAR s₁(E)



BAR u₁(E)

MODEL NUMBER: MAM16
FILE NAME: 076006

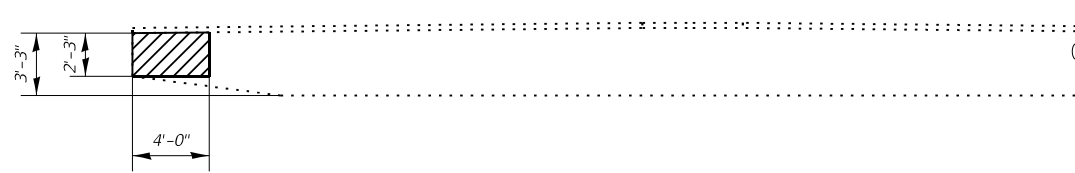
USER NAME = SUSERS	DESIGNED - _____	REVISED - _____
PLOT SCALE = 5SCALES	DRAWN - _____	REVISED - _____
PLOT DATE = SDATES	CHECKED - _____	REVISED - _____
	DATE - _____	REVISED - _____

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

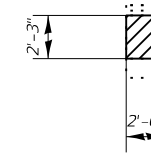
PIER CAP REPAIRS
SN 076-0006

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	BRIDGE REPAIR 2022-4	VARIOUS	23	16
			CONTRACT NO. 78910	
ILLINOIS FED. AID PROJECT				



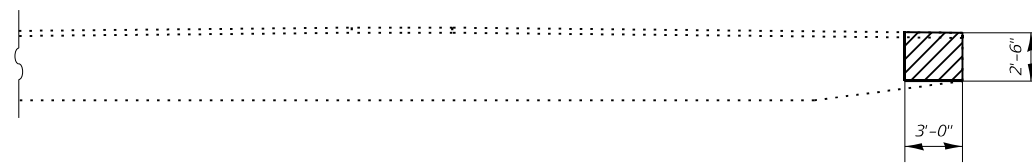
SOUTH END
(Looking West)



SOUTH END
(Looking North)



Delaminated Concrete & Structural Repair of Concrete (≥ 5'')



SOUTH END
(Looking East)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Structural Repair of Concrete (≥5'')	Sq. Ft.	21

WEST ABUTMENT HAMMERHEAD REPAIRS
SN 076-0006
IL 146 OVER SUGAR CREEK
POPE COUNTY

MODEL NUMBER: MAM16
FILE NAME: 07615

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT HAMMERHEAD REPAIRS
SN 076-0006

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	BRIDGE REPAIR 2022-4	VARIOUS	23	17
			CONTRACT NO. 78910	
ILLINOIS FED. AID PROJECT				

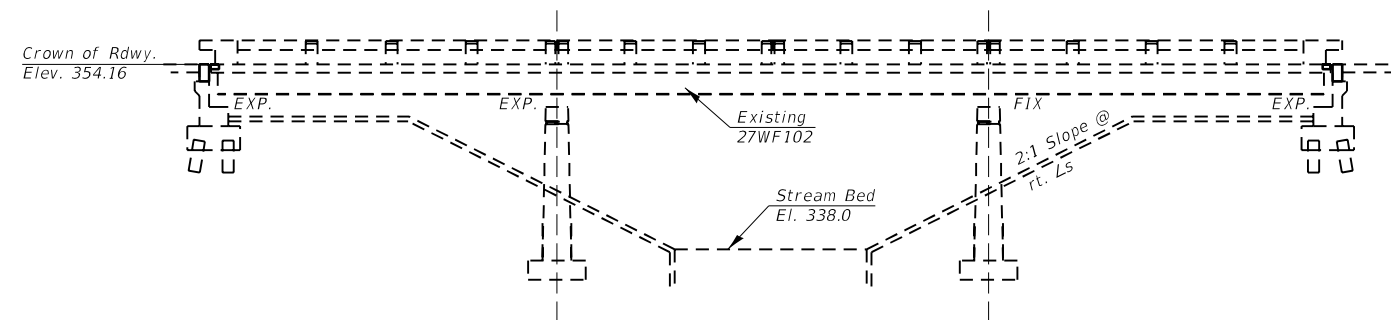
GENERAL NOTES

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

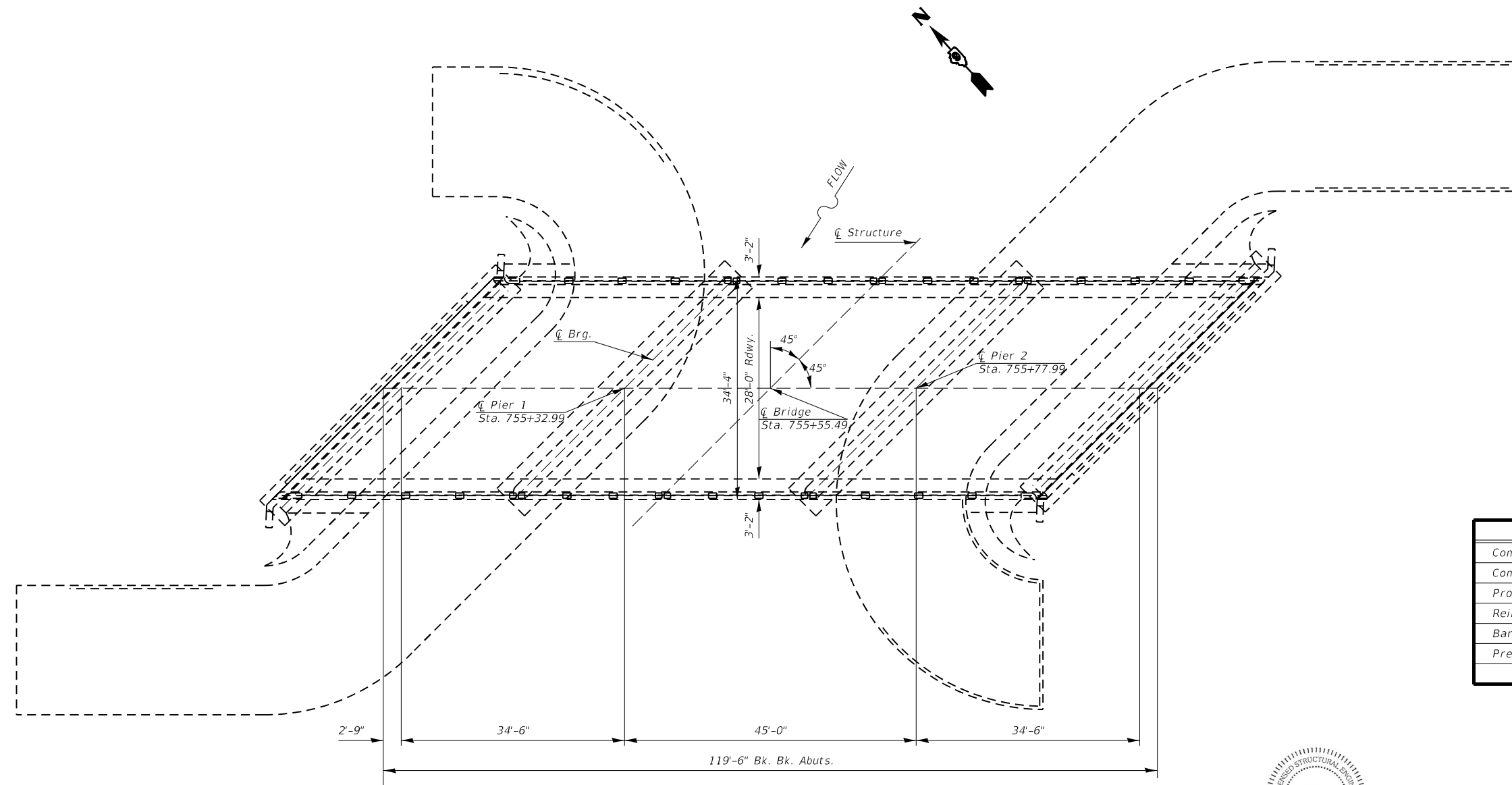
Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with the Concrete Removal.

Reinforcement bars designated (E) shall be epoxy coated.

Joint openings shall be adjusted according to Article 520.04 of the Std. Specs. when the deck is poured at an ambient temperature other than 50°F.



ELEVATION



PLAN

Scope of Work

1. Partial depth joint reconstruction with new strip seal at both abutments.

TOTAL BILL OF MATERIAL (SN 064-0003)

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	8.5
Concrete Superstructure	Cu. Yd.	8.5
Protective Coat	Sq. Yd.	22
Reinforcement Bars, Epoxy Coated	Pound	1180
Bar Splicers	Each	12
Preformed Joint Strip Seal	Foot	98



Expires 11/30/2022

Jayme F. Schiff

GENERAL PLAN & ELEVATION
SN 064-0003
US 45 OVER Q DITCH
MASSAC COUNTY

MODEL NUMBER: MAM1ES
FILE NAME: 011215

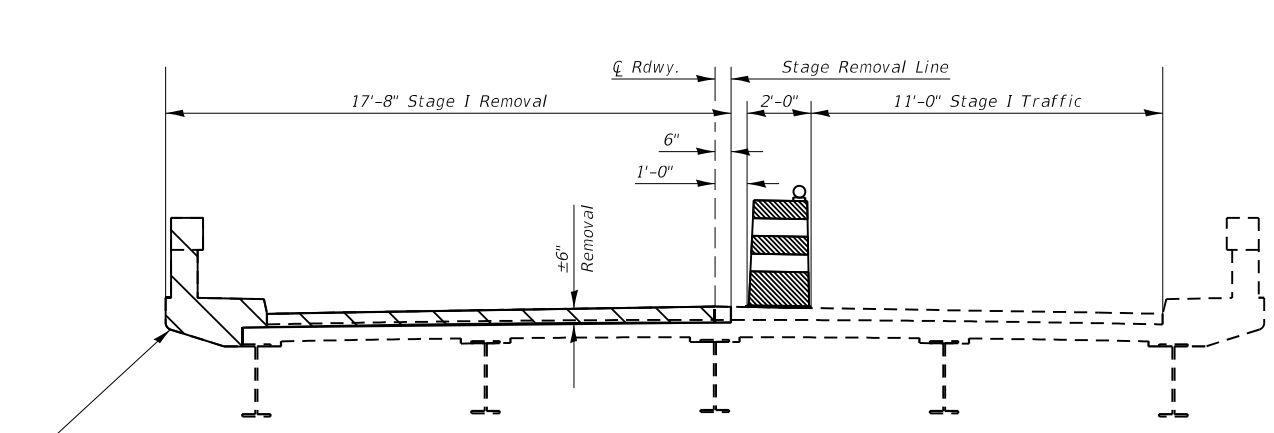
USER NAME = SUSERS	DESIGNED - <u>DW</u>	REVISED - _____
PLOT SCALE = 5SCALES	DRAWN - _____	REVISED - _____
PLOT DATE = SDATES	CHECKED - <u>GD</u>	REVISED - _____
	DATE - _____	REVISED - _____

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
SN 064-0003

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

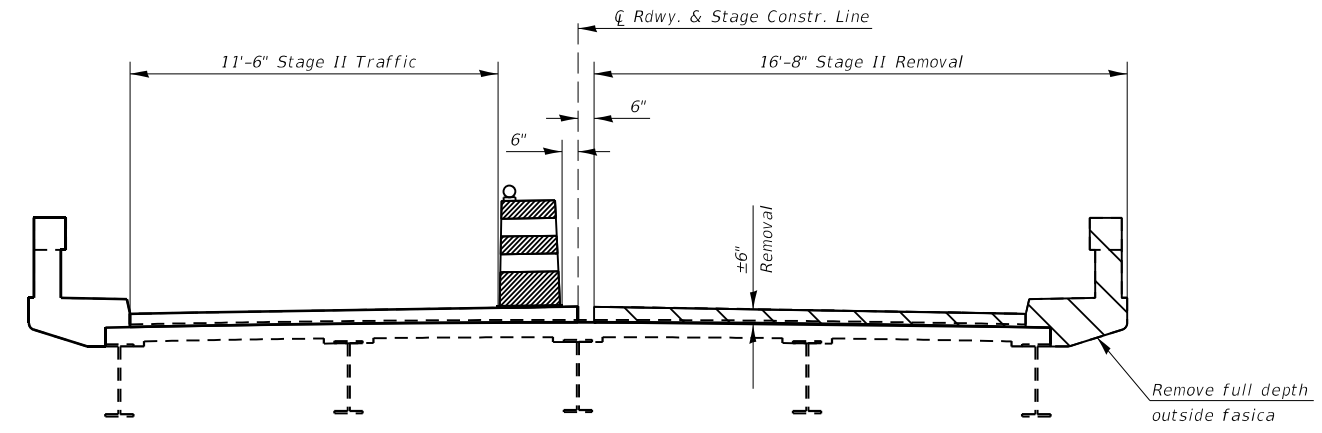
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	BRIDGE REPAIR 2022-4	VARIOUS	23	18
			CONTRACT NO. 78910	
ILLINOIS FED. AID PROJECT				



Remove full depth outside fascia beam flange

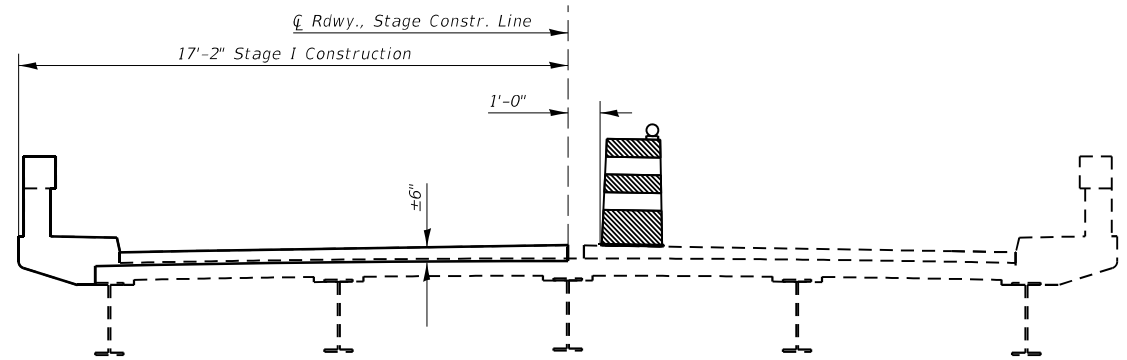
Note: Existing deck thickness including reinforced concrete wearing surface varies from 10 1/2" at curb to 11 1/2" at CL Rdwy.

STAGE I REMOVAL
(Looking South)

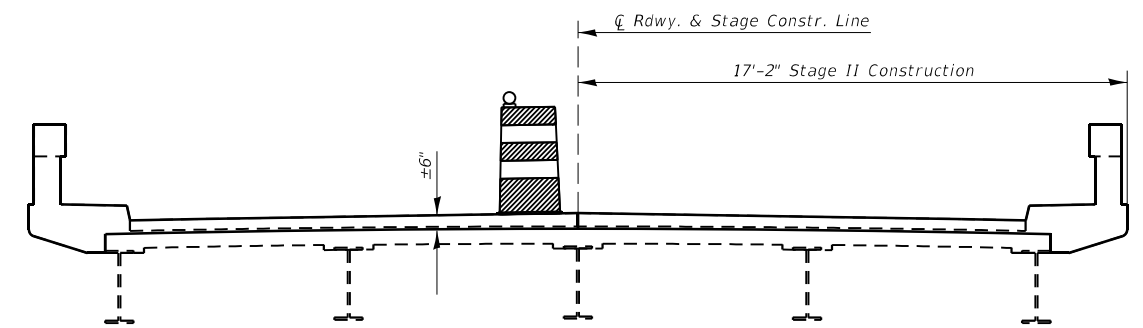


Remove full depth outside fascia beam flange

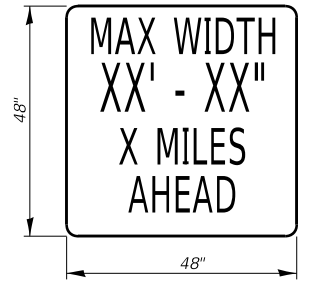
STAGE II REMOVAL
(Looking South)



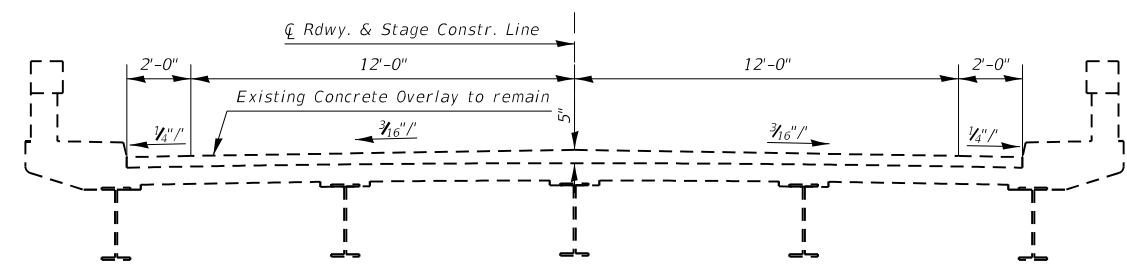
STAGE I CONSTRUCTION
(Looking South)



STAGE II CONSTRUCTION
(Looking South)



MAX WIDTH SIGN
W12-1103 48" X 48" WITH XX' XX"
LETTERS BLACK ON ORANGE
MAX WIDTH & 2 MILES AHEAD
BLACK ON WHITE WITH M3-3 30X15
AND M1-1100 30X24



Concrete Removal (shown at Joint locations on Deck Slab)

CROSS SECTION
(All Cross Sections Looking South)

MODEL NUMBER: M1103
FILE NAME: 064-003

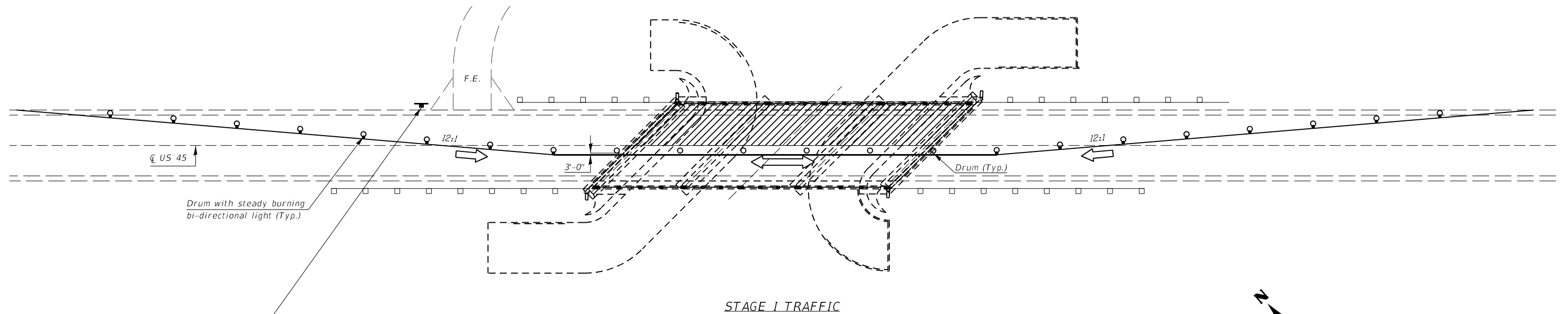
USER NAME = SUSERS	DESIGNED - _____	REVISED - _____
DRAWN - _____	REVISIONS - _____	REVISIONS - _____
PLOT SCALE = SSCALES	CHECKED - _____	REVISIONS - _____
PLOT DATE = SDATES	DATE - _____	REVISIONS - _____

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

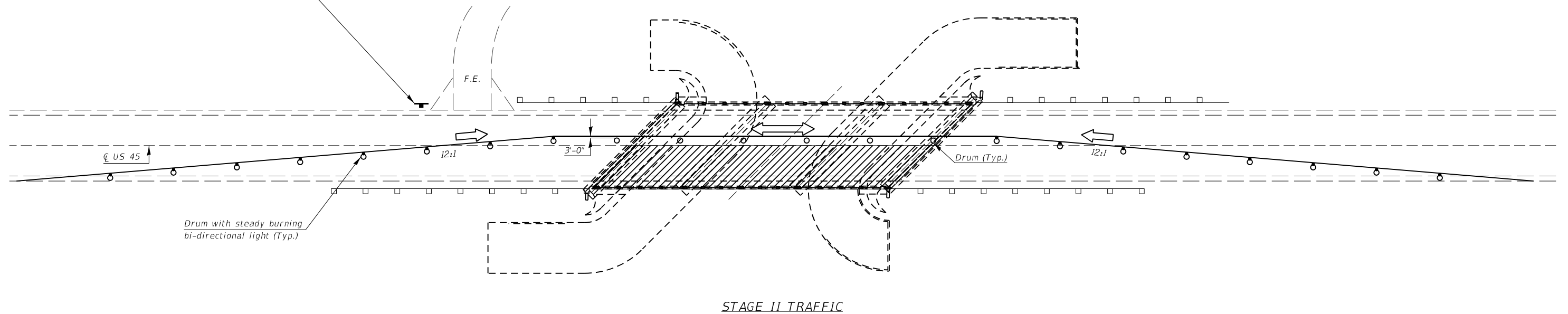
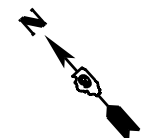
STAGING DETAILS SN 064-0003

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	BRIDGE REPAIR 2022-4	VARIOUS	23	19
			CONTRACT NO. 78910	
ILLINOIS FED. AID PROJECT				



STAGE I TRAFFIC



STAGE II TRAFFIC

MODEL NUMBER: MAM16
FILE NAME: 064-003

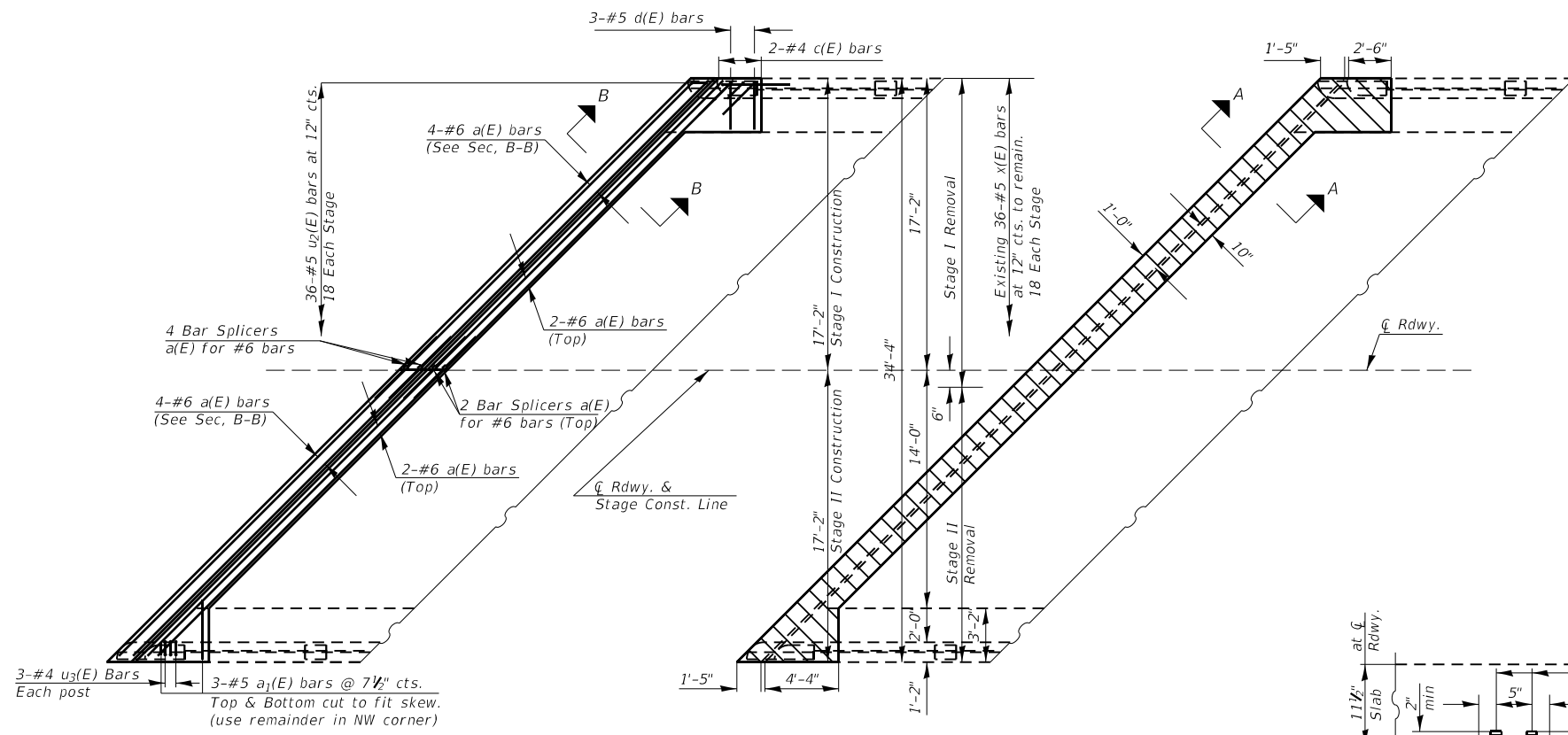
USER NAME = SUSERS	DESIGNED - _____	REVISED - _____
	DRAWN - _____	REVISED - _____
PLOT SCALE = 5SCALES	CHECKED - _____	REVISED - _____
PLOT DATE = SDATES	DATE - _____	REVISED - _____

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

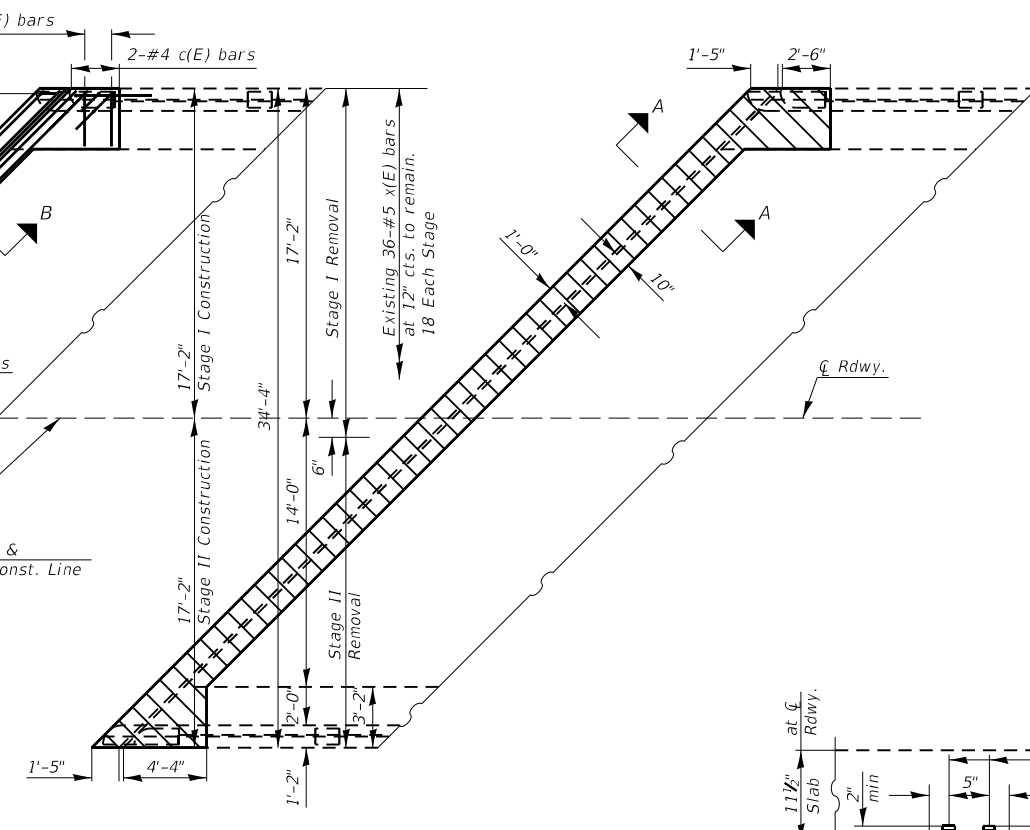
STAGING PLAN
SN 064-0003

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	BRIDGE REPAIR 2022-4	VARIOUS	23	20
			CONTRACT NO. 78910	
ILLINOIS FED. AID PROJECT				

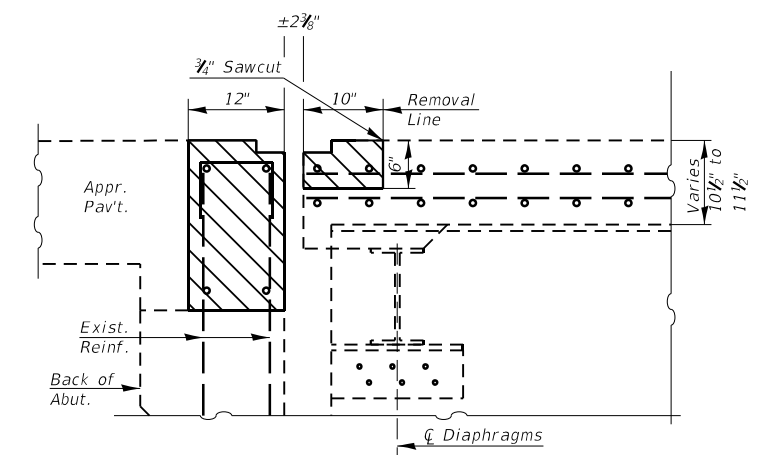
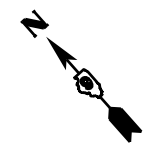


**NORTH ABUTMENT PLAN
SHOWING CONCRETE REPLACEMENT**
(South Abutment similar by 180° rotation)

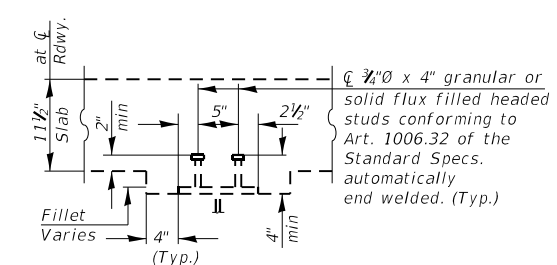


**NORTH ABUTMENT PLAN
SHOWING CONCRETE REMOVAL**
South Abutment similar by 180° rotation

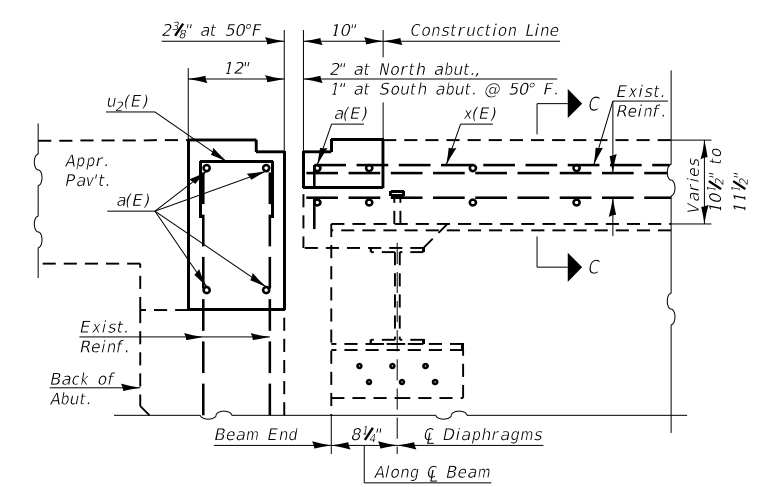
Concrete Removal



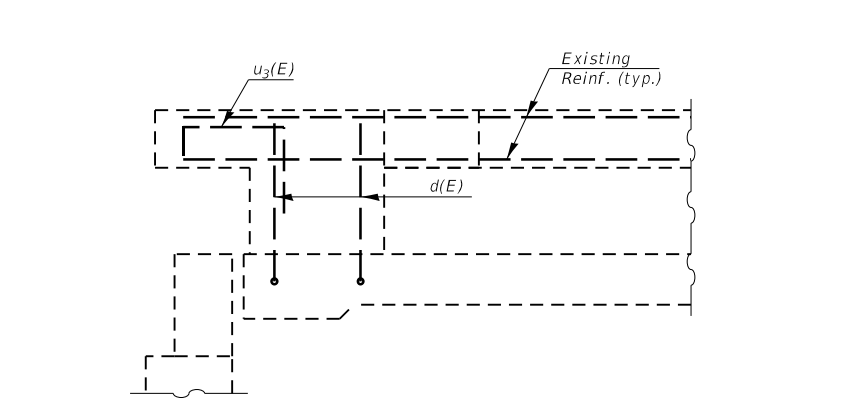
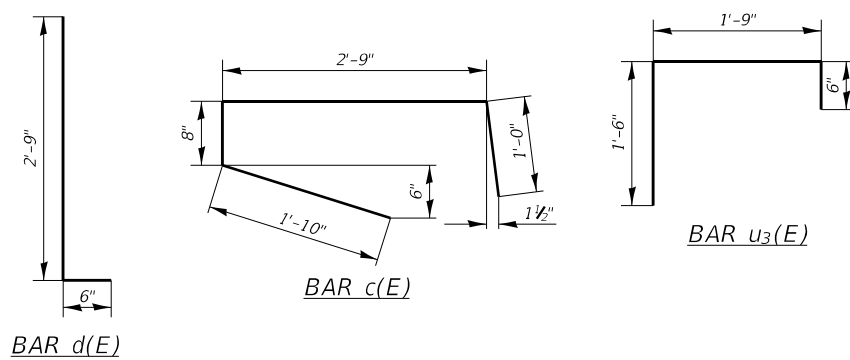
SECTION A-A



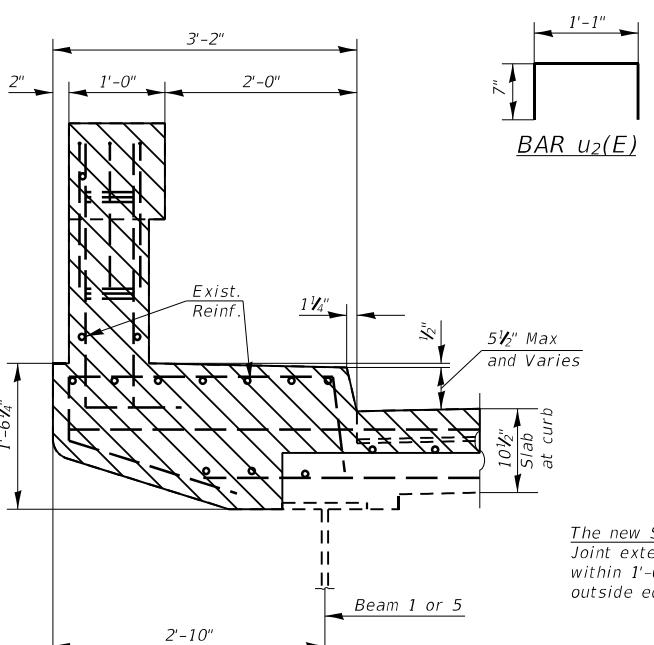
SECTION C-C



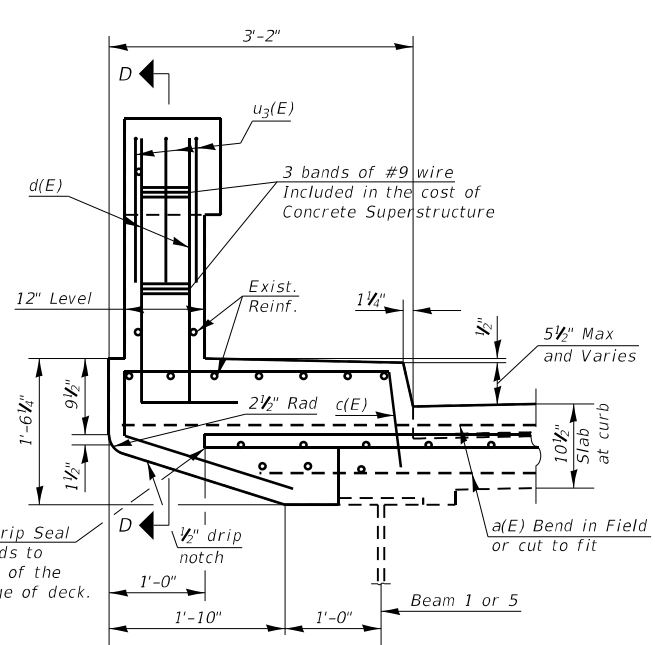
SECTION B-B
Dimensions measured @ Right Angles



SECTION D-D



SECTION THRU CURB REMOVAL



SECTION THRU CURB

BILL OF MATERIAL (2 ABUTMENTS)

BAR	NO.	SIZE	LENGTH (Ft.)	SHAPE
a(E)	24	#6	23'-11"	
a ₁ (E)	12	#5	3'-6"	
c(E)	8	#4	6'-3"	
d(E)	12	#5	3'-3"	
u ₂ (E)	72	#5	2'-3"	
u ₃ (E)	12	#4	3'-9"	
Concrete Removal			Cu Yd	8.5
Concrete Superstructure			Cu Yd	8.5
Reinforcement Bars, Epoxy Coated			Pound	1180
Bar Splicers			Each	12
Protective Coat			Sq Yd	22

Note: Care should be taken not to damage reinforcement bars when chipping away concrete.

**JOINT RECONSTRUCTION
SN 064-0003
US 45 OVER Q DITCH
MASSAC COUNTY**

MODEL NUMBER/MATERIALS FILE NUMBER: 064003

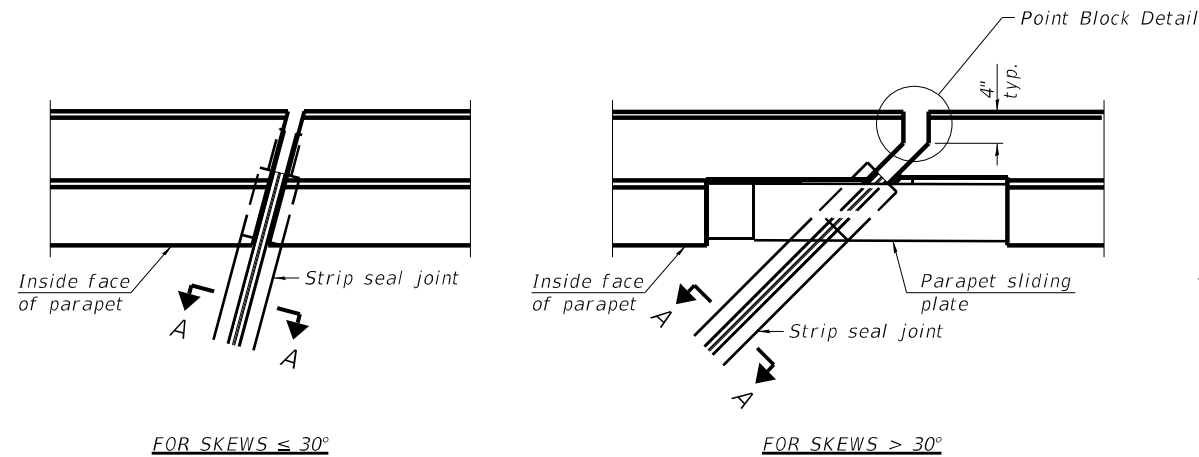
USER NAME = SUSERS	DESIGNED - _____	REVISED - _____
DRAWN - _____	REVISED - _____	REVISED - _____
PLOT SCALE = 5/8"=1'	CHECKED - _____	REVISED - _____
PLOT DATE = 5/24/23	DATE - _____	REVISED - _____

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

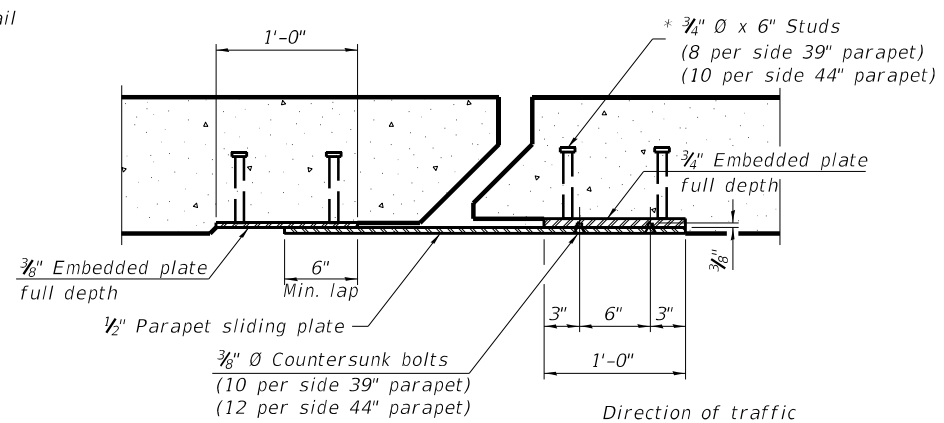
JOINT RECONSTRUCTION SN 064-0003

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

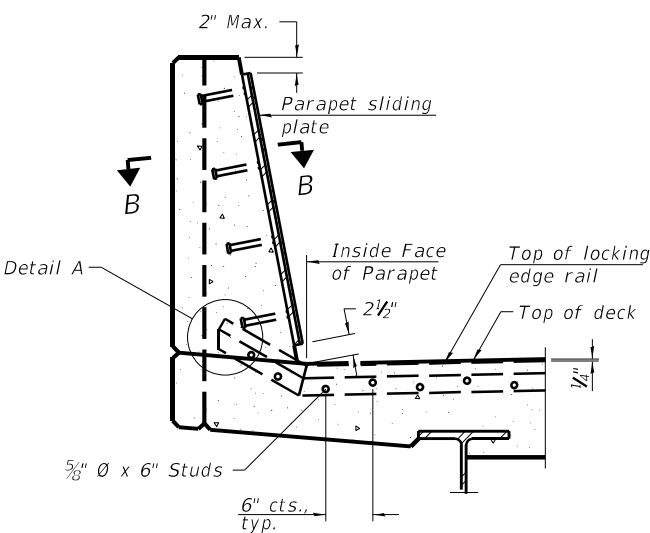
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	BRIDGE REPAIR 2022-4	VARIOUS	23	21
			CONTRACT NO. 78910	
ILLINOIS FED. AID PROJECT				



PLAN AT PARAPET

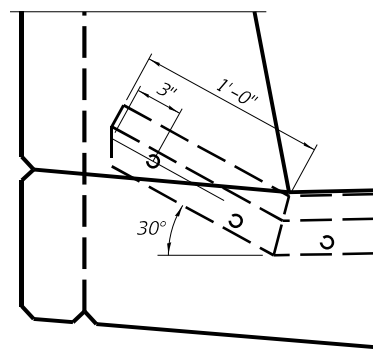


SECTION B-B

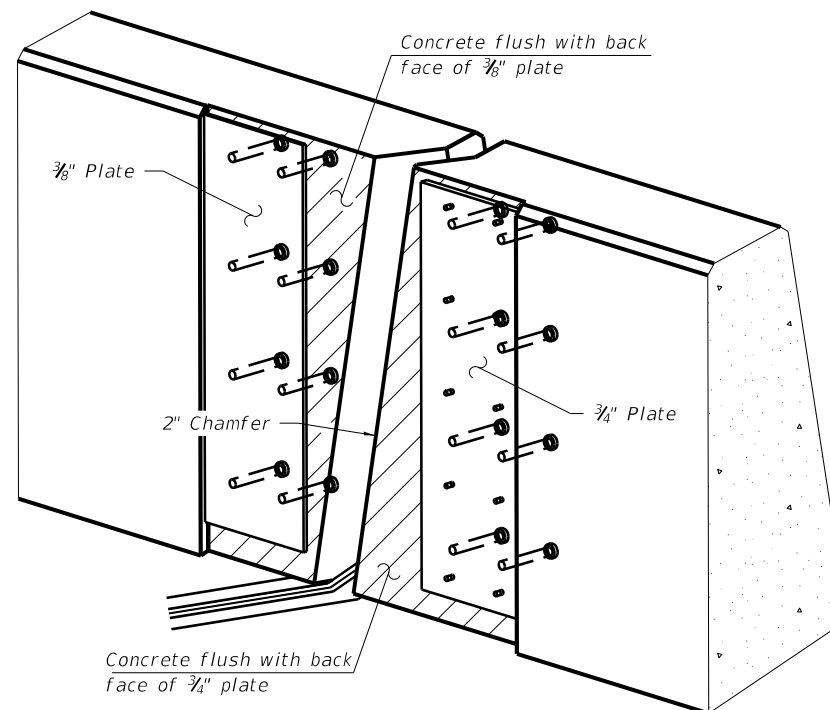


SECTION A-A

(Skews $> 30^\circ$ shown. Skews $\leq 30^\circ$ similar except as shown in plan view.)

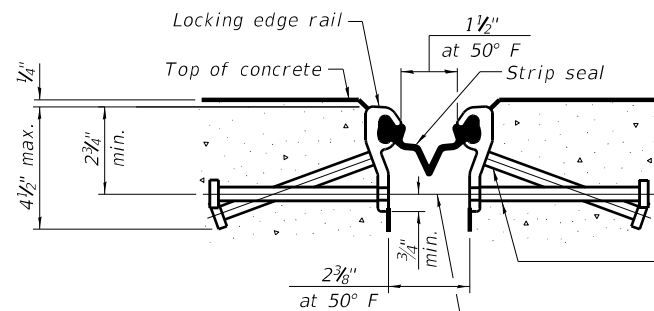


DETAIL A



TRIMETRIC VIEW

(Showing embedded plates only)



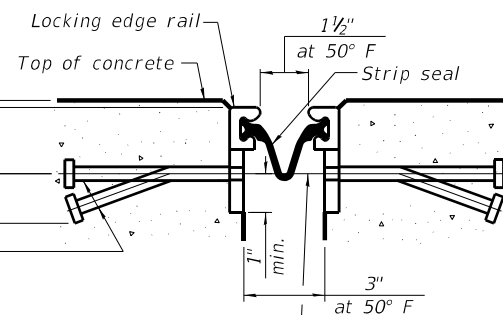
SHOWING ROLLED RAIL JOINT

* $\frac{5}{8}$ " ϕ x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs)

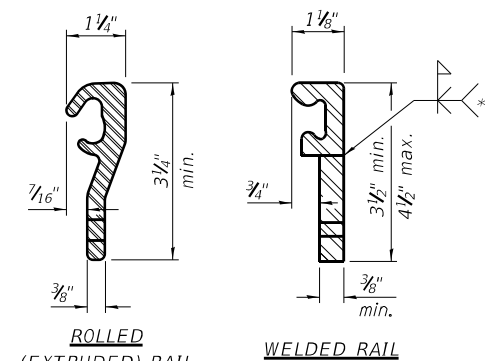
$\frac{3}{8}$ " ϕ threaded rods in $\frac{7}{16}$ " ϕ holes at ± 4 "-0" cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.

SECTION A-A

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

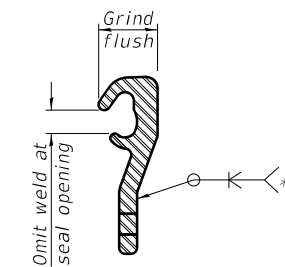


SHOWING WELDED RAIL JOINT



LOCKING EDGE RAILS

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



LOCKING EDGE RAIL SPLICE

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

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	98

EJ-SS

1-1-2020

MODEL NUMBER/MATERIALS FILE NUMBER: SEE LISTS

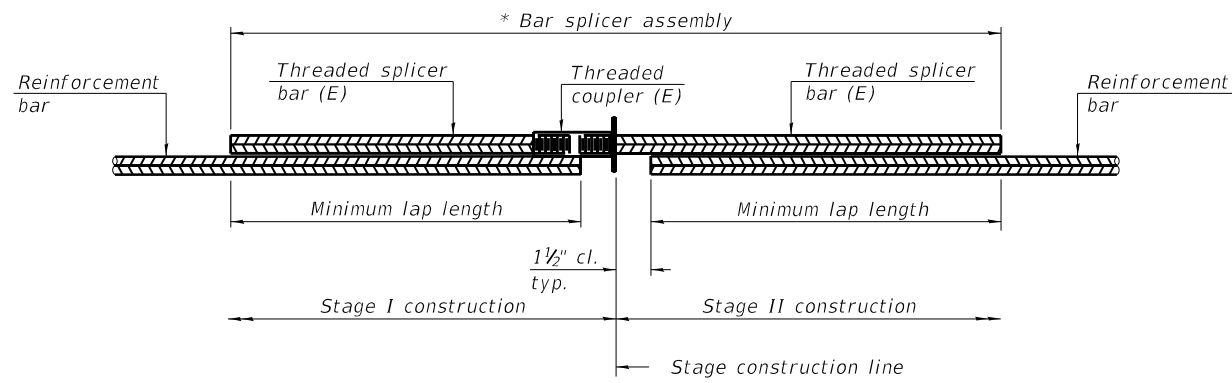
USER NAME = SUSERS	DESIGNED -	REVISED -
PLOT SCALE = SSCALES	CHECKED -	REVISED -
PLOT DATE = SDATES	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL
SN 064-0003

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	BRIDGE REPAIR 2022-4	VARIOUS	23	22
			CONTRACT NO. 78910	
ILLINOIS FED. AID PROJECT				

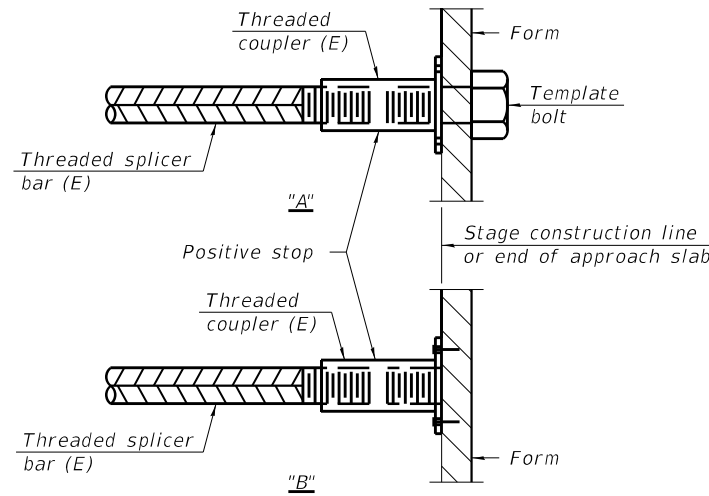


STANDARD BAR SPLICER ASSEMBLY PLAN
(All components shall be provided from one supplier)

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

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

Location	Bar size	No. assemblies required	Minimum lap length
Abutments (deck)	#6	4	4'-10"
Hatch Block	#6	8	4'-0"

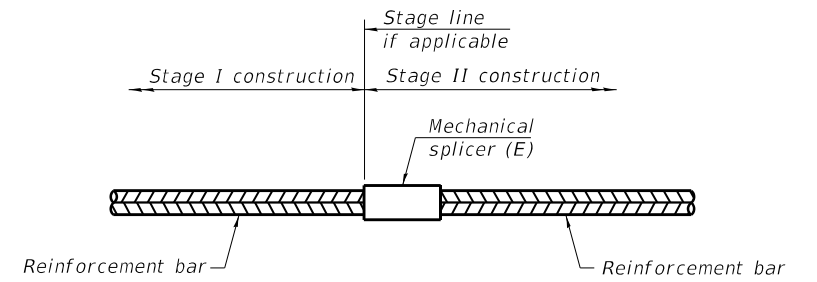


INSTALLATION AND SETTING METHODS

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

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

(E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required

Notes:

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

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

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

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

MODEL NUMBER: MAMTES
FILE NAME: BSD-1

BSD-1

1-1-2020

USER NAME = SUSERS	DESIGNED - _____	REVISED - _____
DRAWN - _____	REVISIONS - _____	REVISIONS - _____
PLOT SCALE = SSCALES	CHECKED - _____	REVISIONS - _____
PLOT DATE = SDATES	DATE - _____	REVISIONS - _____

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
SN 064-0003

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE REPAIR 2020-8	VARIOUS	23	23
ILLINOIS FED. AID PROJECT			CONTRACT NO. 78910	