

06-13-14 LETTING ITEM 255

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

**PROPOSED  
HIGHWAY PLANS**

FAP ROUTE 327 (US 50)  
SECTION 3BR-1-I-1  
BRIDGE REPAIR  
ST. CLAIR COUNTY

C-98-043-13

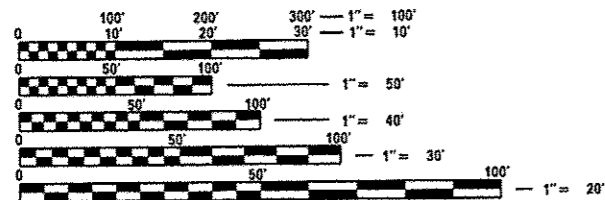
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	3BR-1-I-1	ST. CLAIR	20	1
		ILLINOIS	CONTRACT NO. 76G41	

FOR INDEX OF SHEETS, SEE SHEET NO. 2

**TRAFFIC DATA**

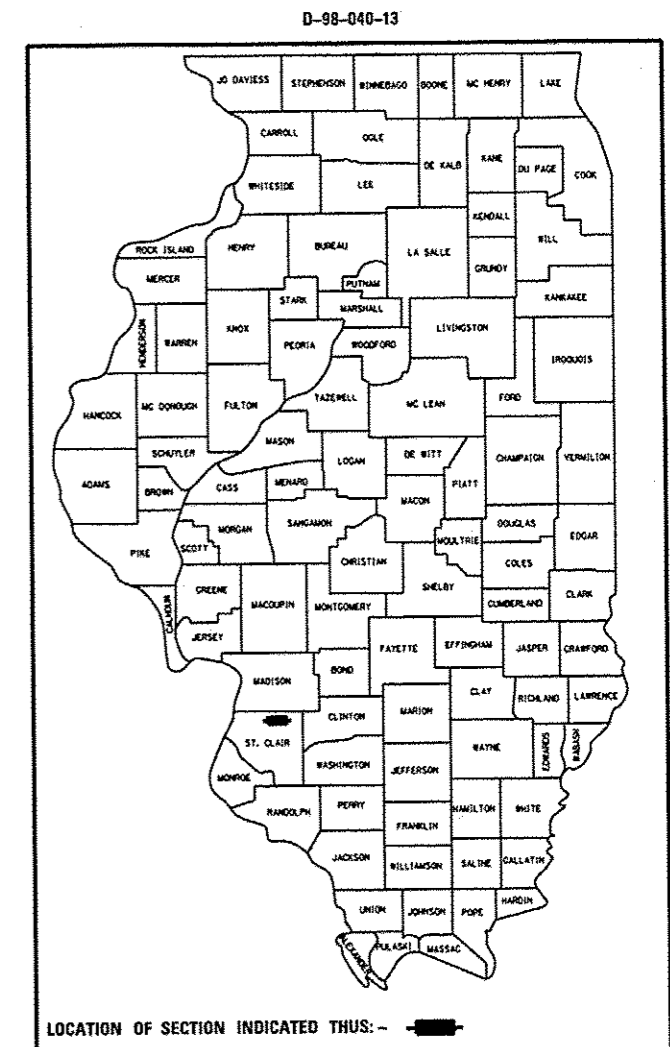
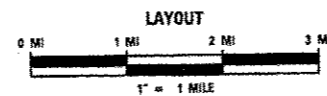
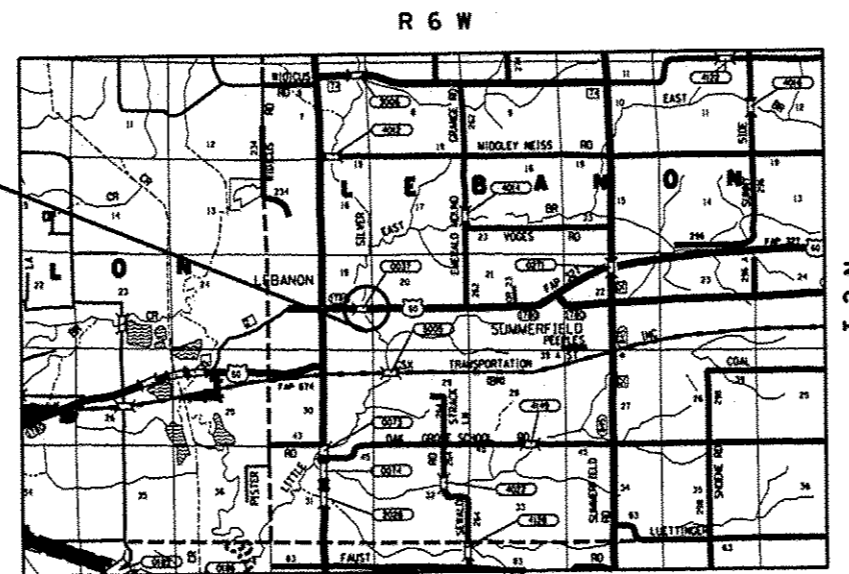
2013 ADT = 8850 (ACTUAL)  
2014 ADT = 8950 (ESTIMATED)  
2024 ADT = 10000 (ESTIMATED)  
2034 ADT = 10900 (ESTIMATED)  
SU = 4.5% MU = 7.1%

**BRIDGE REPAIR  
OVER LITTLE SILVER CREEK  
STA 20+51.28  
SN 082-0037  
BEGIN STA 19+17.11  
END STA 21+25.39**



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

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



LOCATION OF SECTION INDICATED THUS: - [black rectangle] -

PROJECT ENGINEER PATTI LEBEAU (618-346-3179)  
PROJECT MANAGER REBECCA THARP (618-346-3323)

**DESIGN DESIGNATION**  
N/A

GROSS LENGTH = 148.27 FT. = 0.028 MILE  
NET LENGTH = 148.27 FT. = 0.028 MILE

CONTRACT NO. 76G41

LATITUDE 38.60380 LONGITUDE 89.80081

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS


SUBMITTED Dec 17 20 13  
Jeffrey T. Ka...  
DEPUTY DIRECTOR OF HIGHWAYS, REGION 5 ENGINEER

Jan 24 20 14  
John D. Baranzelli, P.E.  
ENGINEER OF DESIGN AND ENVIRONMENT

Jan 24 20 14  
Omer Osman, P.E.  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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

# INDEX OF SHEETS


1	COVER SHEET
2	INDEX OF SHEETS, HIGHWAY STANDARDS, GENERAL NOTES, & COMMITMENTS
3-4	SUMMARY OF QUANTITIES
5	TYPICAL SECTIONS
6	SCHEDULE OF QUANTITIES
7	WIDE LOAD SIGNING
8	RIGHT-OF-WAY/STAGE CONSTRUCTION DETAILS 
9	STAGE I CONSTRUCTION
10	STAGE II CONSTRUCTION
11-20	STRUCTURAL SHEETS

# STANDARDS

000001-06	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
701321-13	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701326-04	LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS ≥ 45 MPH
701901-02	TRAFFIC CONTROL DEVICES
704001-07	TEMPORARY CONCRETE BARRIER
780001-04	TYPICAL PAVEMENT MARKINGS

# GENERAL NOTES

- ILLINOIS STATE LAW REQUIRES A 48-HOUR NOTICE BE GIVEN TO ALL UTILITIES WITHIN THE PROJECT AREA BEFORE DIGGING. FIELD MARKING OF FACILITIES MAY BE OBTAINED BY CONTACTING J.U.L.I.E. OR FOR NON-MEMBERS, THE UTILITY COMPANY DIRECTLY. AGENCIES KNOWN TO HAVE FACILITIES WITHIN THE PROJECT AREA ARE AS FOLLOWS:
  - AMEREN ILLINOIS
  - AT&T ILLINOIS-COMMUNICATIONS
  - CHARTER COMMUNICATIONS, INC.
  - CITY OF LEBANON
 MEMBERS OF J.U.L.I.E. CALL TOLL FREE (800) 892-0123 OR 811 AND ARE INDICATED BY \*. NON- J.U.L.I.E. MEMBERS MUST BE NOTIFIED INDIVIDUALLY.
- THE CONTRACTOR AND THE ENGINEER SHALL BE AWARE THAT NO SURVEY WAS PERFORMED FOR THIS PROJECT. THE STATIONING, TOPOGRAPHY, AND QUANTITIES SHOWN IN THE PLANS WERE CREATED USING MICROFILM AND FIELD MEASUREMENTS. ALL SHALL BE ASSUMED TO BE APPROXIMATE. THE CONTRACTOR SHALL VERIFY DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.
- ACCESS SHALL BE MAINTAINED TO ALL PROPERTIES UNLESS OTHERWISE NOTED IN THE PLANS.
- THE DEPARTMENT STRONGLY ENCOURAGES THE PRIME CONTRACTOR AND THEIR APPROVED SUB-CONTRACTORS TO HIRE MINORITY, WOMEN AND DISADVANTAGED INDIVIDUALS FROM ITS FEDERALLY FUNDED HIGHWAY CONSTRUCTION CAREERS TRAINING PROGRAM (HCCTP) TO HELP MEET WORKFORCE AND TRAINEE GOALS. THIS PROGRAM IS TRAINING MINORITIES, WOMEN AND DISADVANTAGED INDIVIDUALS IN HIGHWAY CONSTRUCTION-RELATED SKILLS, E.G., MATH FOR THE TRADES, JOB READINESS, TECHNICAL SKILLS COURSEWORK (CARPENTRY, CONCRETE FLATWORK, BLUEPRINT READING, SITE PLANS, SITE WORK, TOOLS USE, ETC.) AND OSHA 10 HOUR CERTIFICATION, TO PREPARE THEM FOR A CAREER IN THE HIGHWAY CONSTRUCTION TRADES. GRADUATES ARE WELL-TRAINED AND READY TO BECOME PRODUCTIVE ENTRY-LEVEL CONSTRUCTION WORKERS. CONTACT THE DISTRICT 8 EEO OFFICE AT 618-346-3360 AND/OR THE HCCTP COORDINATOR AT 618-874-6528 TO LEARN MORE ABOUT THE PROGRAM AND FOR ASSISTANCE IN MEETING WORKFORCE AND TRAINEE GOALS.
- THE THICKNESS OF HOT-MIX ASPHALT SURFACE MIXTURES SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS MAY OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE BITUMINOUS MIXTURE IS PLACED.
- A QUANTITY OF 775 FEET OF TEMPORARY PAVEMENT MARKING - LINE 6" WHITE HAS BEEN INCLUDED IN THE PLANS FOR PAINTING THE BOTTOM 6" OF THE TEMPORARY CONCRETE BARRIER.
- THE PROPOSED PAVEMENT MARKING SHALL MATCH THE LOCATIONS OF THE EXISTING PAVEMENT MARKING, AS DIRECTED BY THE ENGINEER.
- ALL TURF AREAS DISTURBED BY THE CONTRACTOR SHALL BE SEEDED WITH THE APPROPRIATE EROSION CONTROL, AS DIRECTED BY THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.
- EXISTING PAVEMENT MARKING SHALL BE TEMPORARILY COVERED PRIOR TO APPLICATION OF THE DECK SURFACE TREATMENT, TO PREVENT THE MATERIAL FROM BEING APPLIED TO THE MARKINGS AND TO PROTECT THE REFLECTIVE PROPERTIES OF THE MARKINGS. THE TEMPORARY COVERING MATERIAL USED SHALL BE SUCH THAT IT WILL NOT AFFECT THE MARKINGS REFLECTIVITY WHEN REMOVED. AFTER APPLICATION OF THE DECK SURFACE TREATMENT AND PRIOR TO OPENING TO TRAFFIC, COST IS INCLUDED WITH THE BRIDGE DECK CONCRETE SEALER SURFACE TREATMENT SPECIFIED.

- |   |  |
|---|--|
|  | 11. PROPERTY LINES AND/OR EXISTING ROW SHOWN IS APPROXIMATE  |
|   | 12. CHANNEL SHALL BE EXCAVATED TO IN ORDER TO PLACE RIPRAP AS DETAILED IN THE PLANS. ALL EXCAVATION SHALL OCCUR WITHIN THE LIMITS OF THE RIPRAP SHOWN ON PLANS. TRANSITION TO NATURAL CONDITIONS UPSTREAM AND DOWNSTREAM OF THE STRUCTURE. |

# COMMITMENTS

NONE

FILE NAME :	USER NAME :	DESIGNED :	REVISED :	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>INDEX OF SHEETS, HIGHWAY STANDARDS, GENERAL NOTES, &amp; COMMITMENTS</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
cr\pr_work\pilot\lewiska\08340841\087641-sheete.pln.dgn	lewiska	DRAWN :	REVISED :			327	3BR-1-I-1	ST. CLAIR	20	2	
PLOT SCALE :	CHECKED :	REVISOR :	DATE :			SCALE:		SHEET NO. OF SHEETS		STA. TO STA.	FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT
PLOT DATE :	DATE :	REVISED :	DATE :								CONTRACT NO. 76G41



CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE	
				URBAN	100% STATE
				BRIDGE	
				0014	
				S. N. 082-0037	
20300100	CHANNEL EXCAVATION	CU YD	185	185	
28100107	STONE RIPRAP, CLASS A4	SO YD	695	695	
28200200	FILTER FABRIC	SO YD	695	695	
35501320	HOT-MIX ASPHALT BASE COURSE, 9"	SO YD	145	145	
44004250	PAVED SHOULDER REMOVAL	SO YD	145	145	
50102400	CONCRETE REMOVAL	CU YD	4	4	
50300255	CONCRETE SUPERSTRUCTURE	CU YD	3.8	3.8	
50300260	BRIDGE DECK GROOVING	SO YD	431	431	
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	290	290	
50800515	BAR SPLICERS	EACH	8	8	
52000110	PREFORMED JOINT STRIP SEAL	FOOT	78	78	
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	4	4	
67100100	MOBILIZATION	L SUM	1	1	
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	1	
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1	

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE	
				URBAN	100% STATE
				BRIDGE	
				0014	
				S. N. 082-0037	
70106700	TEMPORARY RUMBLE STRIPS	EACH	6	6	
70300100	SHORT TERM PAVEMENT MARKING	FOOT	16	16	
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	337	337	
70300240	TEMPORARY PAVEMENT MARKING - LINE 6"	FOOT	775	775	
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SO FT	118	118	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	387.5	387.5	
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	387.5	387.5	
70600250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2	
70600350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2	
* 78009004	MODIFIED URETHANE PAVEMENT MARKING - LINE 4"	FOOT	337	337	
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	6	6	
* 78200430	GUARDRAIL MARKERS, TYPE C	EACH	12	12	
78300100	PAVEMENT MARKING REMOVAL	SO FT	27	27	
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	6	6	

\*  
\*  
\*

14 \* SPECIALTY ITEM

FILE NAME =	USER NAME = tharpri	DESIGNED -	REVISED -
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	PLOT SCALE = 100.0000' / 1"	CHECKED -	REVISED -
	PLOT DATE = 12/20/2013	DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

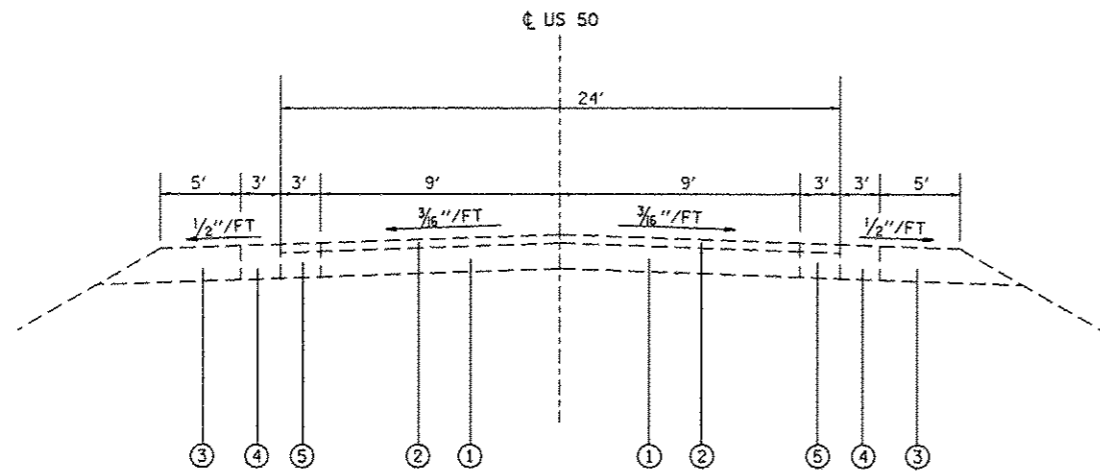
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327	3BR-1-1-1	ST. CLAIR	20	3
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.

2/19/2014

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE
				100% STATE
				BRIDGE 0014 S. N. 082-0037
X5870015	BRIDGE DECK CONCRETE SEALER	SQ FT	5459	5459
X7010202	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321 (SPECIAL)	EACH	1	1
X7200200	WIDE LOAD SIGNING	L SUM	1	1
Z0012148	BRIDGE DECK SCARIFICATION 3"	SQ YD	480	480
Z0012168	BRIDGE DECK MICROSILICA CONCRETE OVERLAY 3"	SQ YD	480	480
Z0015802	PLUG EXISTING DECK DRAINS	EACH	34	34

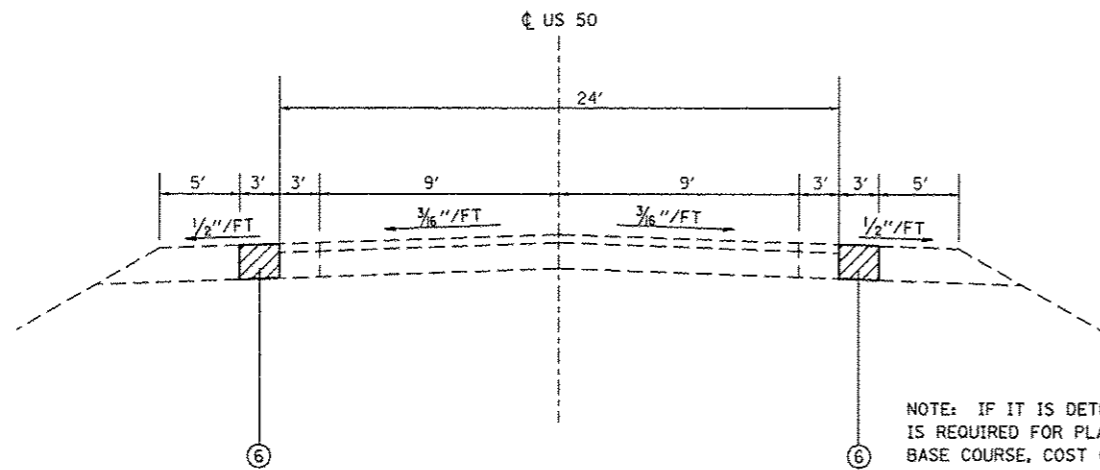
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FILE NAME =	USER NAME = tharpr1	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SUMMARY OF QUANTITIES</b>				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ai\pe\work\p\dot\tharpr1\034804\10076	41-sheets-plan.dgn	DRAWN -	REVISED -						327	3BR-1-1-1	ST. CLAIR	20	4
	PLOT SCALE = 100.0000' / 1"	CHECKED -	REVISED -		SCALE: SHEET NO. OF SHEETS STA. TO STA.				CONTRACT NO. 76G41				
	PLOT DATE = 12/20/2013	DATE -	REVISED -		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT								



**EXISTING TYPICAL SECTION**

STA. 14+60 TO STA. 19+77.11  
 STA. 21+25.39 TO STA. 26+70



**PROPOSED TYPICAL SECTION**

STA. 14+60 TO STA. 19+77.11  
 STA. 21+25.39 TO STA. 26+70

NOTE: IF IT IS DETERMINED THAT EARTHWORK IS REQUIRED FOR PLACEMENT OF PROPOSED HMA BASE COURSE, COST OF EARTHWORK SHALL BE INCLUDED IN THE COST OF HMA BASE COURSE, 9".

**LEGEND**

- ① EXISTING P.C.C. PAVEMENT (9'-6"-9')
- ② EXISTING RESURFACING
- ③ EXISTING AGGREGATE SHOULDER
- ④ EXISTING HMA SHOULDER ± 6"
- ⑤ EXISTING P.C.C. BASE COURSE WIDENING 9"
- ⑥ PROPOSED HMA BASE COURSE, 9"
- ▨ PROPOSED PAVED SHOULDER REMOVAL

THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE FOR THIS CONTRACT:

MIXTURE USE	BASE COURSE
AC/PG	PG 64-22
RAP % (MAX)	SEE SPEC.
DESIGN AIR VOIDS	4.0% @ Ndes=90
MIX COMPOSITION (GRADATION MIXTURE)	IL 19.0 FG
FRICTION AGG	MIXTURE "B"

PLAN QUANTITIES FOR HOT-MIX ASPHALT SURFACE COURSE ITEMS ARE CALCULATED USING A UNIT WEIGHT OF 112 LB/SQ YD/IN.

STAGING SCHEDULE						
LOCATION	TEMPORARY CONCRETE BARRIER	RELOCATE TEMPORARY CONCRETE BARRIER	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	TEMPORARY RUMBLE STRIP	TEMPORARY BRIDGE TRAFFIC SIGNALS
	FOOT	FOOT	EACH	EACH	EACH	EACH
STAGE I	387.5		2			
STAGE II		387.5		2		
STAGE I & II					6	1
TOTAL =	387.5	387.5	2	2	6	1

NOTE: TEMPORARY BRIDGE TRAFFIC SIGNAL QUANTITY IS FOR THE SYSTEM OF SIGNALS, PAID FOR AS EACH SYSTEM.

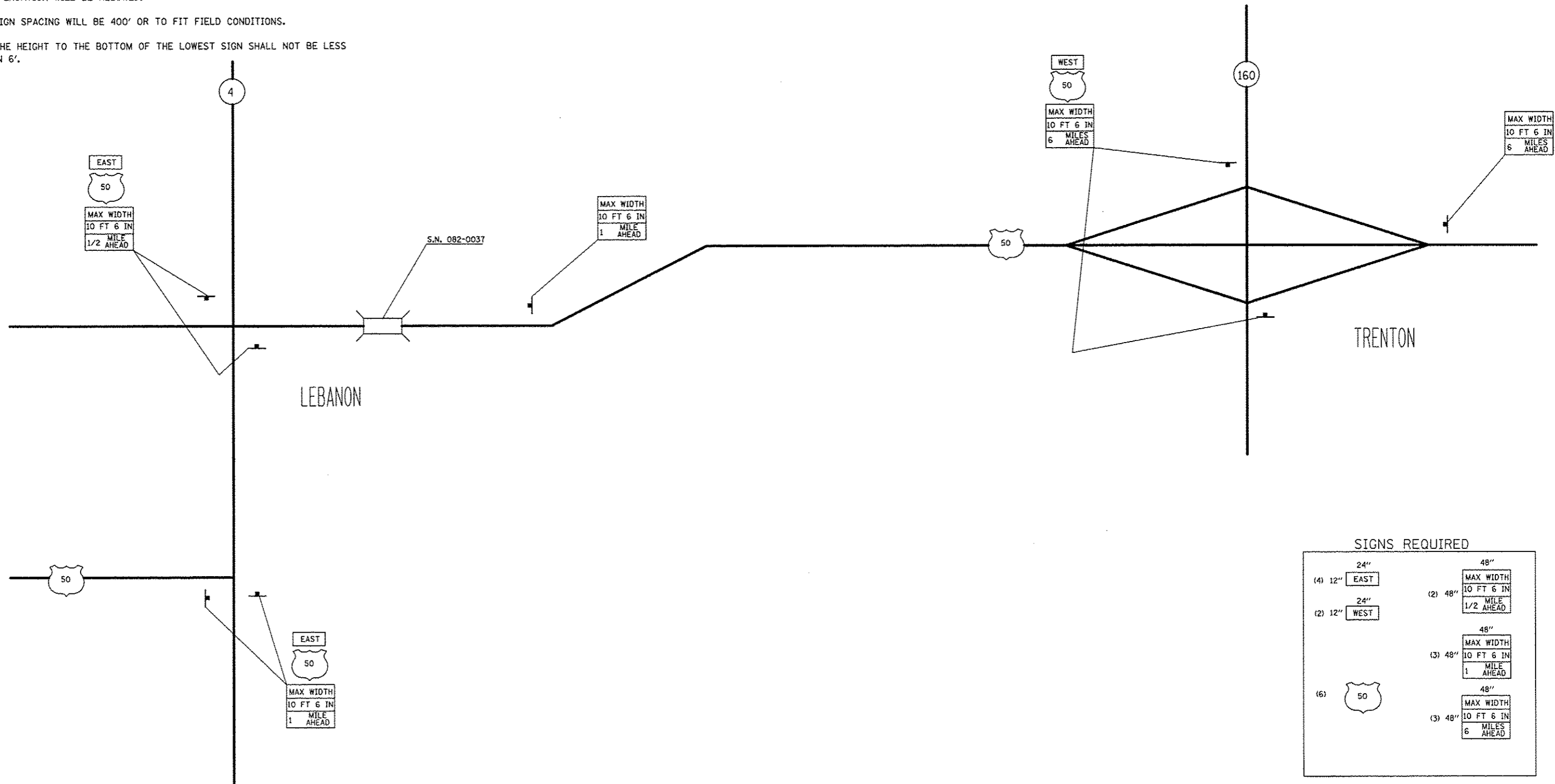
GUARDRAIL MARKERS				
LOCATION				GUARDRAIL MARKERS, TYPE C
STATION	TO	STATION	LT/RT	EACH
19+73.4	TO	21+20.7	LT	6
19+81.8	TO	21+29.1	RT	6
TOTAL =				12

WIDENING FOR STAGING SCHEDULE									
LOCATION		PAVED SHOULDER REMOVAL				HOT-MIX ASPHALT BASE COURSE, 9"			
		LEFT SHLD		RIGHT SHLD		LEFT SHLD		RIGHT SHLD	
		WIDTH	AREA	WIDTH	AREA	WIDTH	AREA	WIDTH	AREA
STATION TO	STATION	FOOT	SQ YD	FOOT	SQ YD	FOOT	SQ YD	FOOT	SQ YD
18+65	TO 19+81.8			3.0	38.9			3.0	38.9
21+29.1	TO 22+40			3.0	37.0			3.0	37.0
18+75	TO 19+73.4	3.0	32.8			3.0	32.8		
21+20.7	TO 22+30	3.0	36.4			3.0	36.4		
SUBTOTAL =			69.2		75.9		69.2		75.9
TOTAL =		145				145			

PAVEMENT MARKING SCHEDULE													
LOCATION			MODIFIED URETHANE PVMT MARKING - LINE 4"			SHORT TERM PVMT MARKING	TEMPORARY PVMT MARKING - LINE 4"			PAVEMENT MARKING REMOVAL	WORK ZONE PAVEMENT MARKING REMOVAL	RAISED REFLECTIVE PAVEMENT MARKER	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL
			CENTERLINE SKIP-DASH YELLOW	EDGE LINE WHITE			CENTERLINE SKIP-DASH YELLOW	EDGE LINE WHITE					
				LEFT	RIGHT			LEFT	RIGHT				
STA	TO STA	STA	FOOT	FOOT	FOOT	FOOT	FOOT	FOOT	FOOT	SQ FT	SQ FT	EACH	EACH
19+77.1	TO	21+25.4	40	148.3	148.3	16	40	148.3	148.3	27	117.5	6	6
TOTAL =			337			16	337			27	118	6	6

NOTES

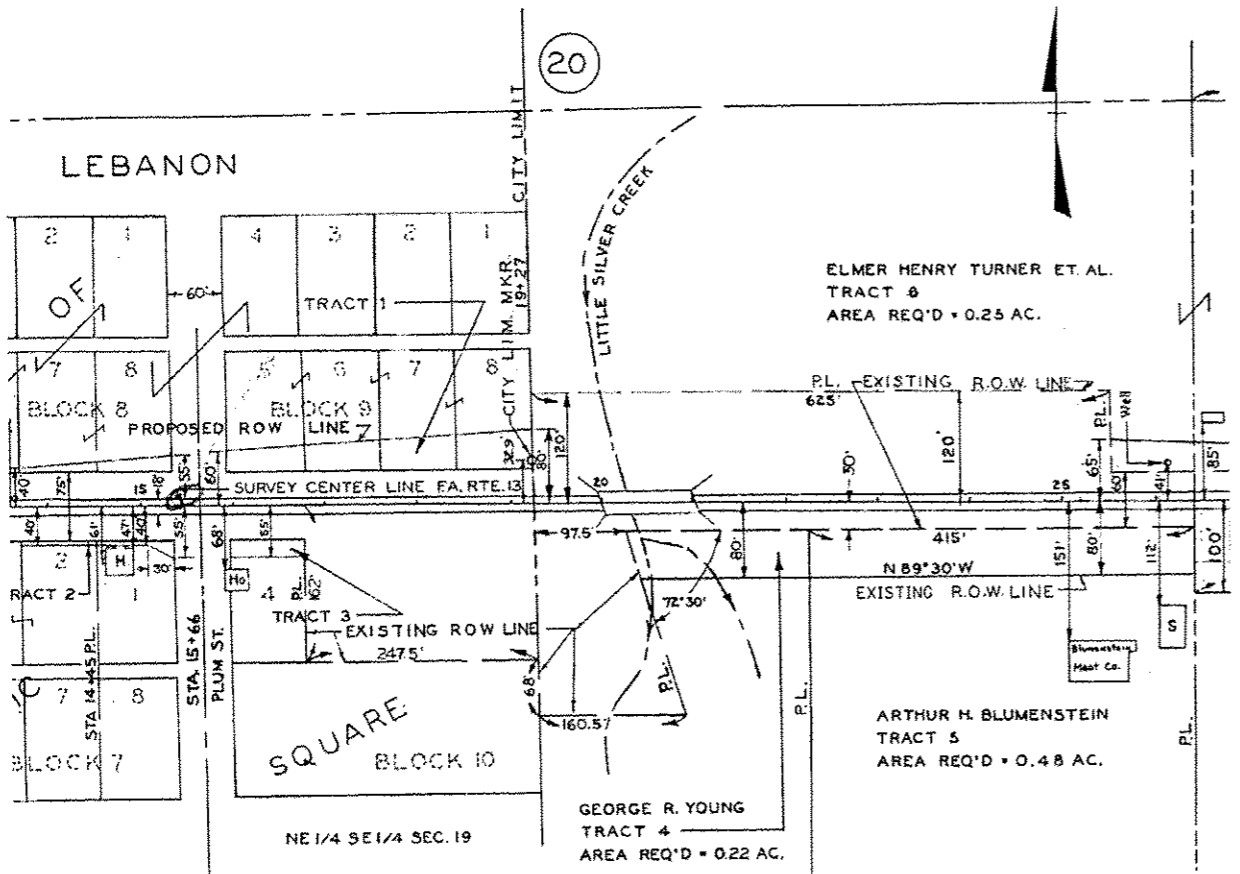
1. ALL SIGNS REQUIRED WILL BE SUPPLIED TO THE CONTRACTOR BY I.D.O.T.
2. THE CONTRACTOR SHALL FURNISH THE POSTS AND ERECT SIGNS AT THE LOCATIONS SHOWN ON THIS SHEET, AS DIRECTED BY THE RESIDENT ENGINEER/RESIDENT TECHNICIAN. THE POSTS SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.
3. THE CONTRACTOR SHALL GIVE ILLINOIS DEPARTMENT OF TRANSPORTATION, BUREAU OF OPERATIONS TWO WEEKS NOTICE FOR SIGNS. THE CONTRACTOR SHALL PICK UP THE SIGNS AT THE TRAFFIC MAINTENANCE BUILDING IN FAIRVIEW HQTS., AND RETURN THEM UPON COMPLETION OF THE CONTRACT. CONTACT JEAN SLAPE AT (618) 394-2189.
4. THE ABOVE NOTED WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE, LUMP SUM, FOR WIDE LOAD SIGNING AND NO OTHER COMPENSATION WILL BE ALLOWED.
5. SIGN SPACING WILL BE 400' OR TO FIT FIELD CONDITIONS.
6. THE HEIGHT TO THE BOTTOM OF THE LOWEST SIGN SHALL NOT BE LESS THAN 6'.



**SIGNS REQUIRED**

(4) 12" EAST	(2) 48" MAX WIDTH 10 FT 6 IN 1/2 MILE AHEAD
(2) 12" WEST	(3) 48" MAX WIDTH 10 FT 6 IN 1 MILE AHEAD
(6) 50	(3) 48" MAX WIDTH 10 FT 6 IN 6 MILES AHEAD

FILE NAME =	USER NAME = tharp1	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>WIDE LOAD SIGNING</b>			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\pr-work\pido\tharp1\08348041\087641-sheete.pln.dgn		DRAWN -	REVISED -					327	3BR-1-1-1	ST. CLAIR	20	7
PLOT SCALE = 100.0000' / in.		CHECKED -	REVISED -		SCALE: SHEET NO. OF SHEETS STA. TO STA.			CONTRACT NO. 76G41				
PLOT DATE = 12/28/2013		DATE -	REVISED -		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT							



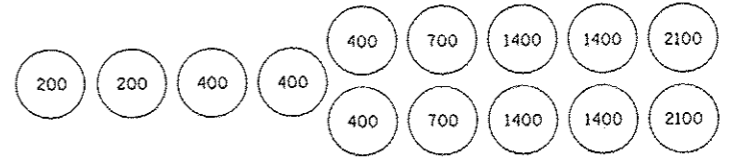
**SUGGESTED SEQUENCE OF CONSTRUCTION**

PRE - STAGE I:  
 REMOVE EXISTING HMA SHOULDERS (RIGHT) TO THE LIMITS DEFINED IN THE REMOVAL SCHEDULE.  
 CONSTRUCT 3' HMA BASE CSE 9" IN THE SOUTHWEST AND SOUTHEAST QUADRANTS AS SHOWN ON THE PLANS.  
 HMA BASE COURSE SHALL BE CONSTRUCTED WITHOUT DISTURBING THE EXISTING GUARDRAIL.  
 TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH TRAFFIC CONTROL AND PROTECTION, STANDARD 701326.

STAGE I:  
 PLACE STOP BARS AS SHOWN ON PLANS.  
 REMOVE CONFLICTING SKIP-DASH PAVEMENT MARKING BETWEEN STOP BARS.  
 PLACE 387.5 FOOT TEMPORARY CONCRETE BARRIER AND IMPACT ATTENUATORS, TEMPORARY.  
 SEE STANDARD 701321 FOR DETAILS NOT SHOWN ON PLANS.  
 REMOVE EXISTING HMA SHOULDERS (LEFT) TO THE LIMITS DEFINED IN THE REMOVAL SCHEDULE.  
 CONSTRUCT 3' HMA BASE CSE 9" IN THE NORTHWEST AND NORTHEAST QUADRANTS AS SHOWN ON PLANS.  
 HMA BASE COURSE SHALL BE CONSTRUCTED WITHOUT DISTURBING THE EXISTING GUARDRAIL.  
 PERFORM ALL STRUCTURAL WORK FOR STAGE I. SEE STRUCTURE PLANS.  
 PERFORM ANY ADDITIONAL NECESSARY WORK FOR STAGE I CONSTRUCTION.

STAGE II:  
 RELOCATE 387.5 FT TEMPORARY CONCRETE BARRIER AND IMPACT ATTENUATORS, TEMPORARY.  
 PLACE IMPACT ATTENUATOR, TEMPORARY.  
 SEE STANDARD 701321 FOR DETAILS NOT SHOWN ON PLANS.  
 PERFORM ALL STRUCTURAL WORK FOR STAGE II. SEE STRUCTURE PLANS.  
 PERFORM ANY ADDITIONAL NECESSARY WORK FOR STAGE II CONSTRUCTION.

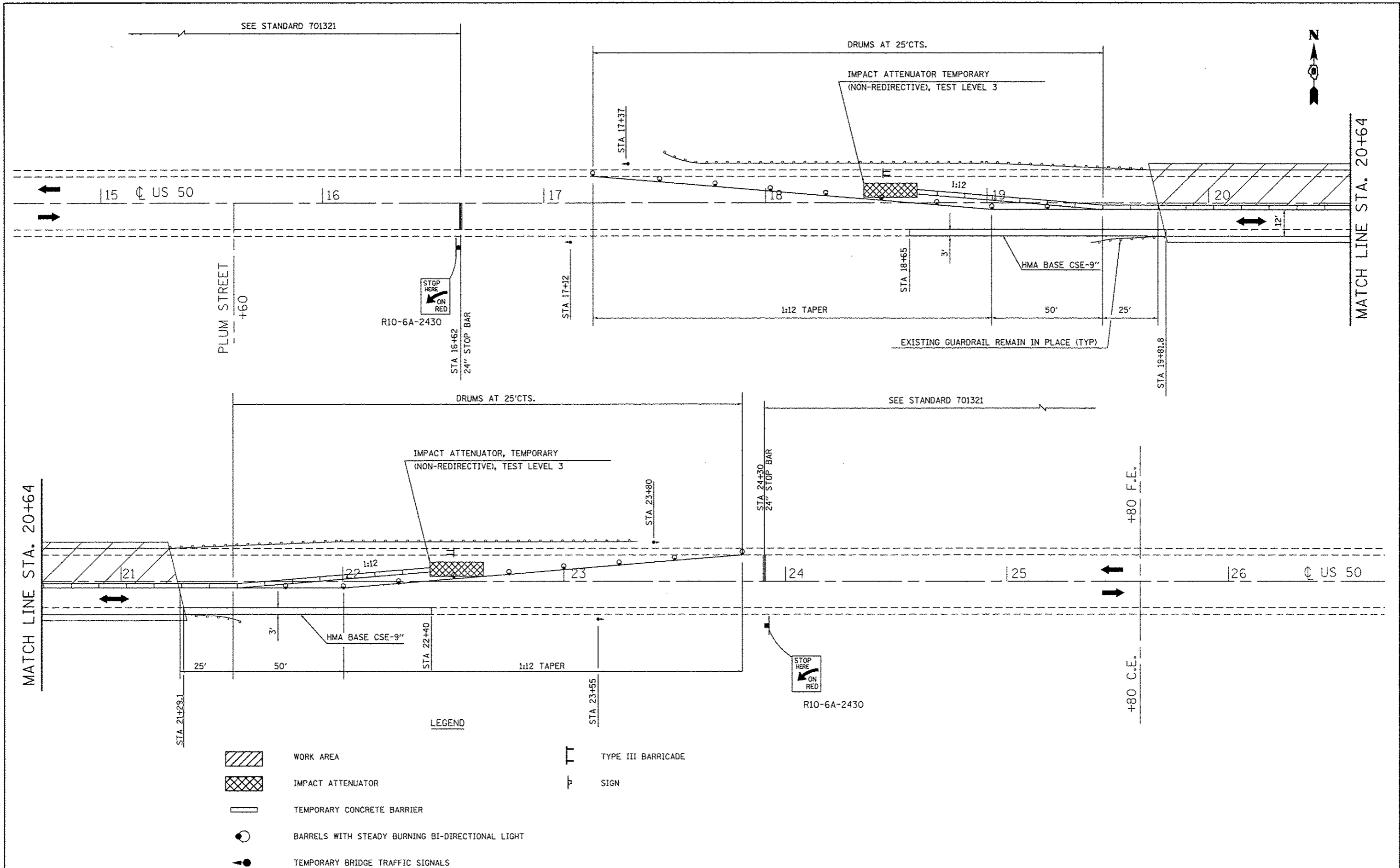
POST - STAGE II:  
 APPLY PAVEMENT MARKINGS UTILIZING TRAFFIC CONTROL AND PROTECTION, STANDARD 701311.  
 PERFORM ANY ADDITIONAL WORK REQUIRED.










SAND MODULE IMPACT ATTENUATOR LAYOUT  
(IF OPTION USED)

FILE NAME =	USER NAME = lewis	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>RIGHT-OF-WAY/STAGE CONSTRUCTION DETAILS</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
c:\pwwork\pwwork\lewis\034884\1007641-shoots_plan.dgn		DRAWN -	REVISED -			327	38R-1-1-1	ST. CLAIR	20	8	
PLOT SCALE = 1/8" = 1' / in.		CHECKED -	REVISED -			CONTRACT NO. 76641					
PLOT DATE = 2/19/2014		DATE -	REVISED -			ILLINOIS FED. AID PROJECT					
					SCALE: N/A	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.			





- LEGEND**
-  WORK AREA
  -  IMPACT ATTENUATOR
  -  TEMPORARY CONCRETE BARRIER
  -  BARRELS WITH STEADY BURNING BI-DIRECTIONAL LIGHT
  -  TEMPORARY BRIDGE TRAFFIC SIGNALS
  -  TYPE III BARRICADE
  -  SIGN

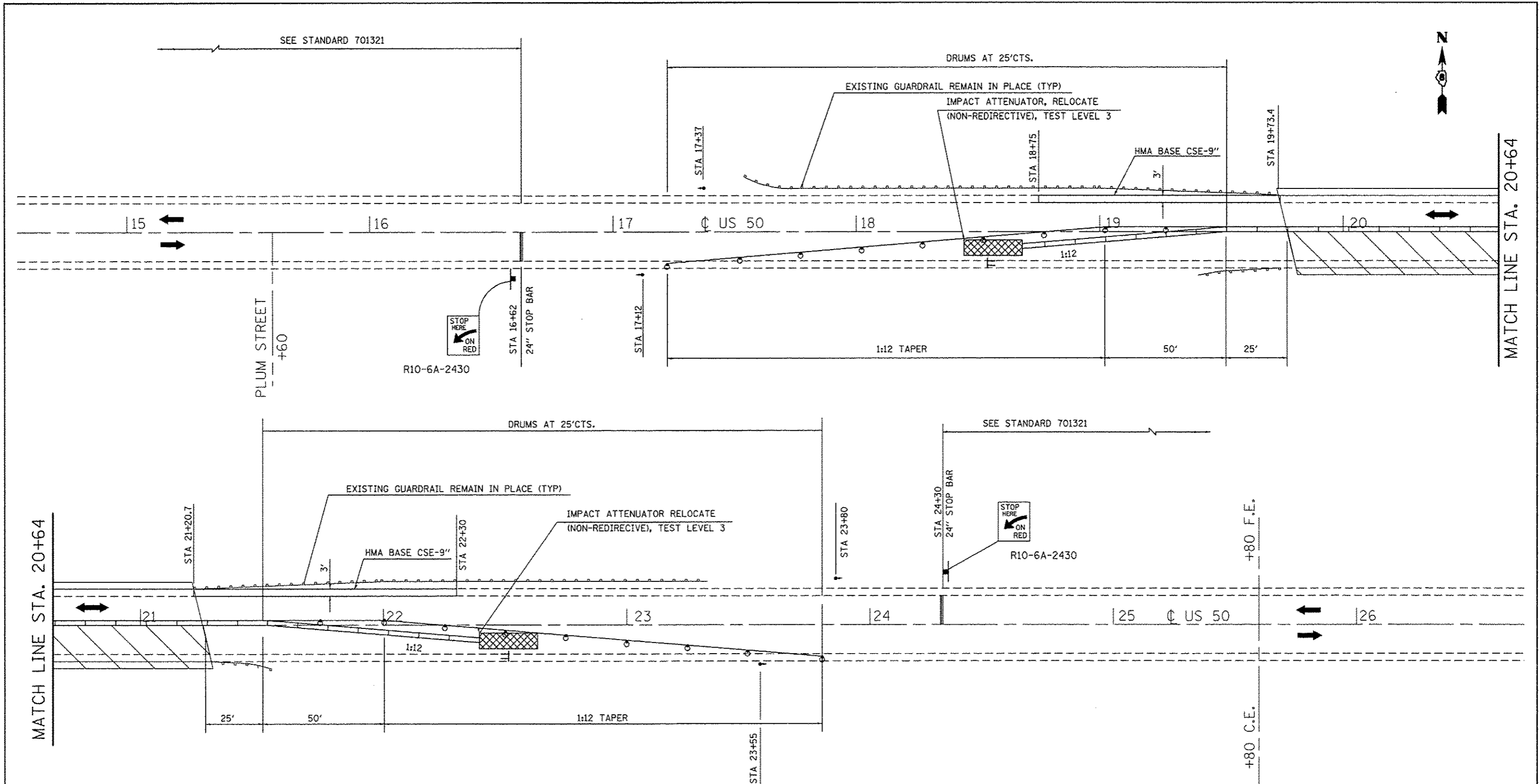
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	PLOT DATE = 12/20/2013	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**








<b>STAGE I CONSTRUCTION</b>			
SCALE:	SHEET	OF SHEETS	STA. TO STA.

NOTE: NOT TO SCALE

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	3BR-1-I-1	ST. CLAIR	20	9
CONTRACT NO. 76641			[ILLINOIS] FED. AID PROJECT	

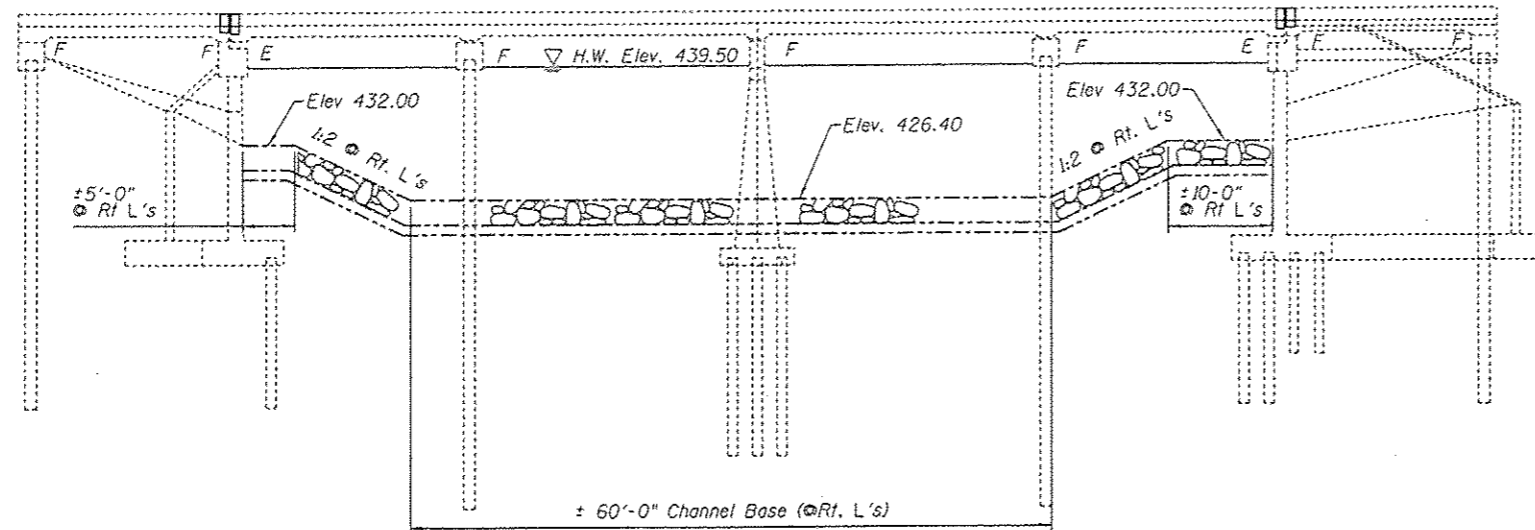


LEGEND

-  WORK AREA
-  IMPACT ATTENUATOR
-  TEMPORARY CONCRETE BARRIER
-  BARRELS WITH STEADY BURNING BI-DIRECTIONAL LIGHT
-  TEMPORARY BRIDGE TRAFFIC SIGNALS
-  TYPE III BARRICADE
-  SIGN

NOTE: NOT TO SCALE

FILE NAME =	USER NAME = tharpr1	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>STAGE II CONSTRUCTION</b>			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
ci:\pwork\pwork\dat\tharpr1\0340841\0876611-sheets.plandgn	PLOT SCALE = 48.0000 / in.	DRAWN -	REVISED -					327	3BR-1-1-1	ST. CLAIR	20	10	
#MODELNAME#	PLOT DATE = 12/28/2013	CHECKED -	REVISED -		SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.	CONTRACT NO. 76641	
		DATE -	REVISED -									ILLINOIS FED. AID PROJECT	



ELEVATION

GENERAL NOTES

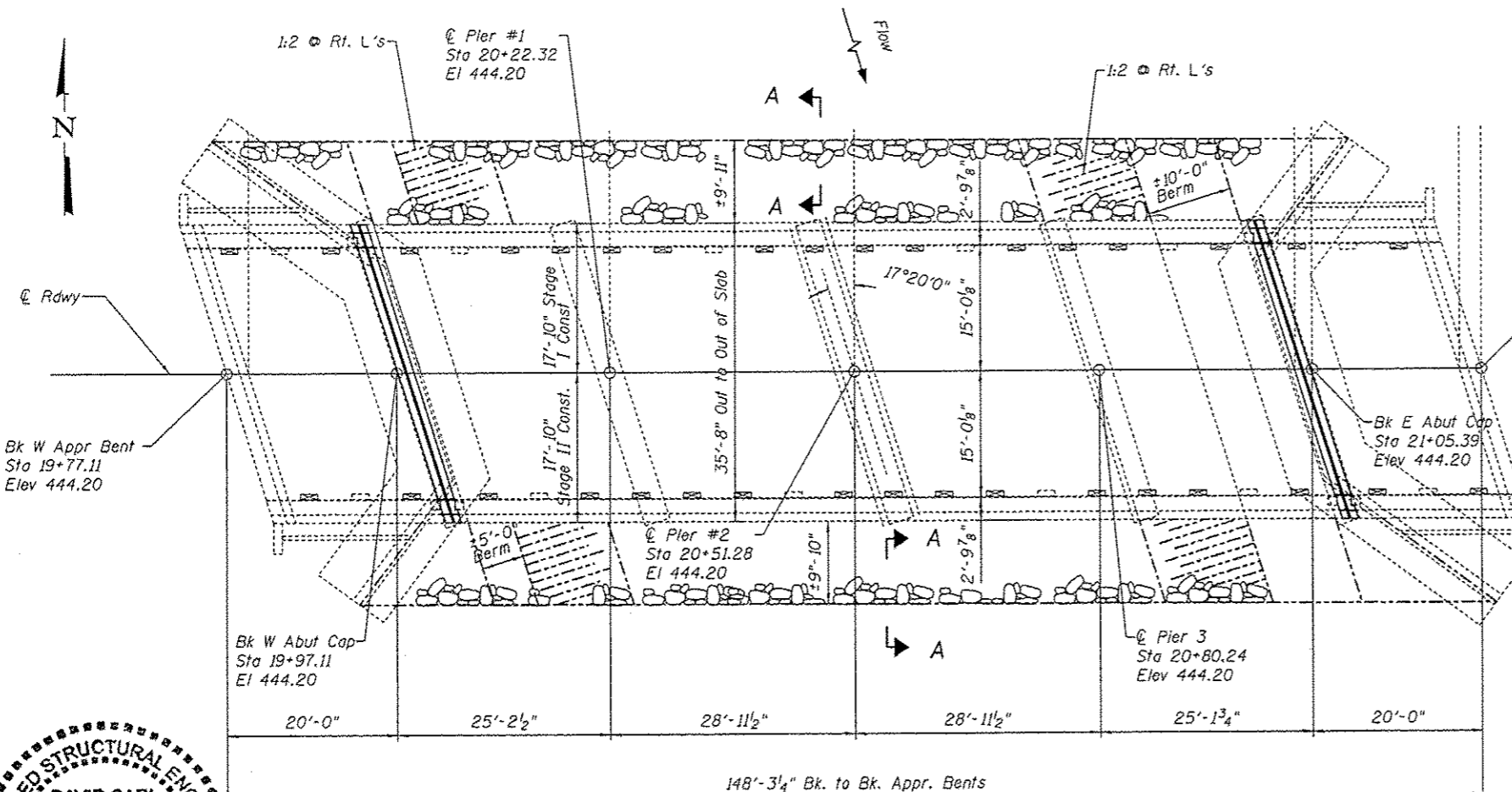
Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall 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.

Reinforcement bars designated (E) shall be epoxy coated.

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

Existing reinforcement bars extending into 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 Concrete Removal.

Bridge deck concrete sealer shall be placed on top/inside faces of curbs and on top of new concrete on bridge and approach slabs.

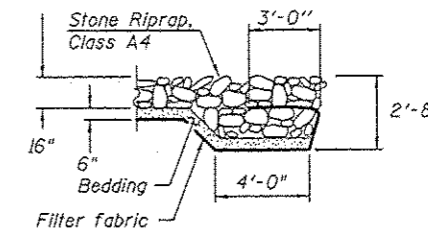


PLAN

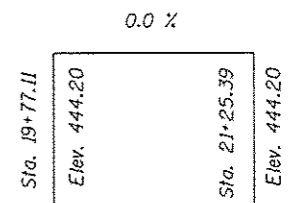
Replace slab ends and install Preformed Joint Strip Seals.

Replace microsilica overlay

Place riprap



SECTION A-A



PROFILE GRADE

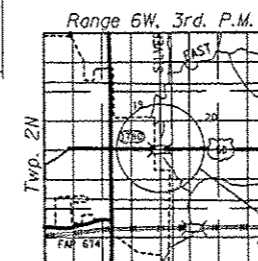
INDEX OF SHEETS

1. General Plan & Elevation
2. Deck Cross Section
3. Joint Removal
4. Joint Replacement (W. Abut.)
5. Joint Replacement (E. Abut.)
6. Joint Details
7. Strip Seal Details
8. Microsilica Rem. & Repl. Sequence
9. Temporary Concrete Barrier
10. Bar Splicers

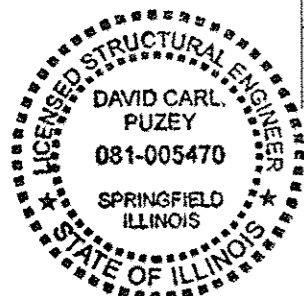
TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Removal	Cu. Yd.	4.0
Concrete Superstructure	Cu. Yd.	3.8
Bridge Deck Microsilica Concrete Overlay, 3"	Sq. Yd.	480
Bar Splicers	Each	8
Bridge Deck Scarification, 3"	Sq. Yd.	480
Bridge Deck Concrete Sealer	Sq. Ft.	5459
Preformed Joint Strip Seal	Foot	78
Plug Existing Deck Drains	Each	34
Bridge Deck Grooving	Sq. Yd.	431
Stone Riprap, Class A4	Sq. Yd.	695
Filter Fabric	Sq. Yd.	695
Reinforcement Bars, Epoxy Coated	Pound	290

\* Including Bridge Appr. Bents ✓



LOCATION SKETCH



DESIGNED - AYY	EXAMINED - [Signature]
CHECKED - SMR	PASSED - [Signature]
DRAWN - AYY	
CHECKED - SMR	

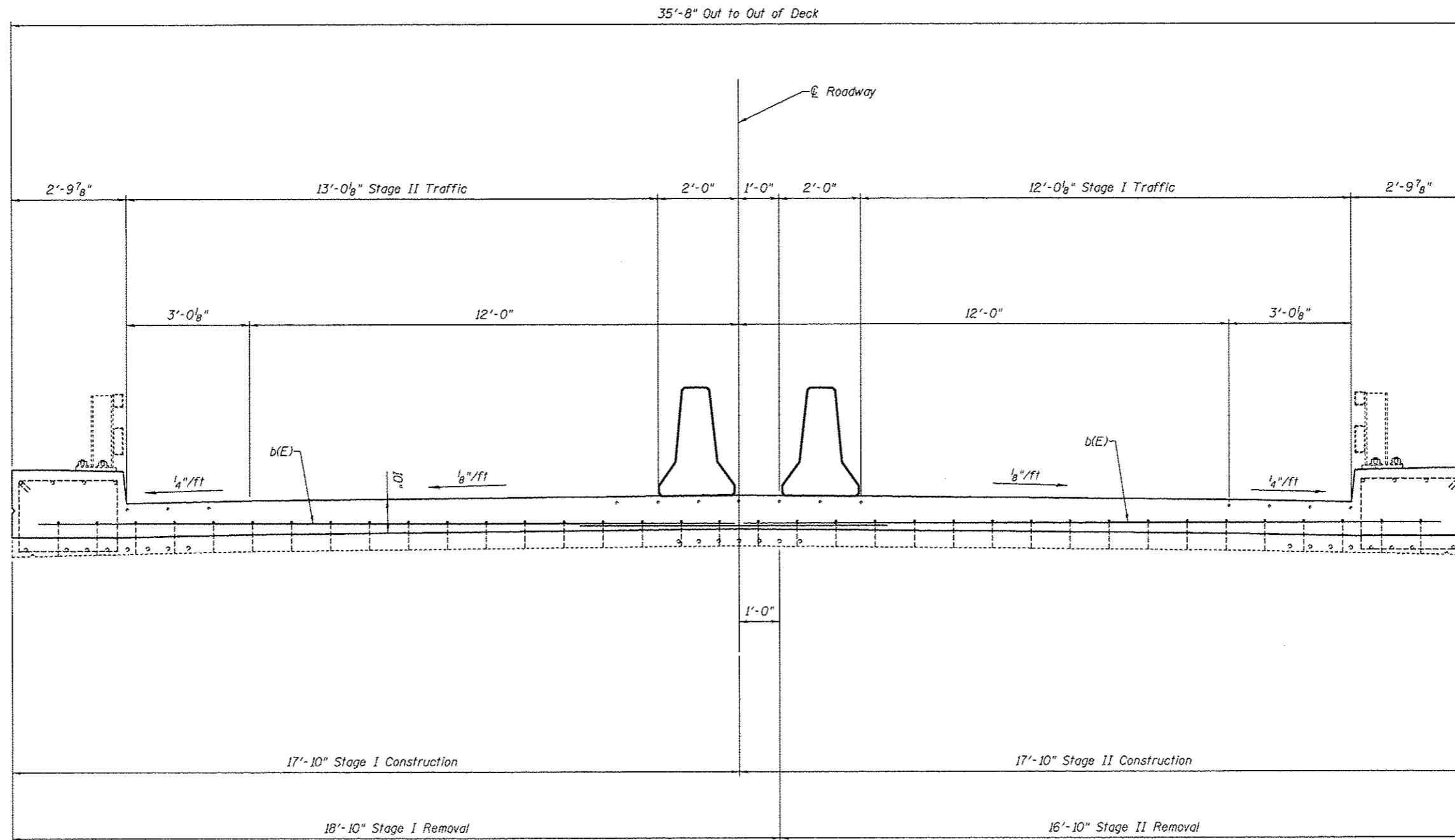
DATE - 1/21/14	REVISIONS
	REVISIONS

DATE - 1/21/14	REVISIONS
	REVISIONS

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION  
SN 082-0037  
SHEET NO. 1 OF 10 SHEETS

F.A.P. RTE. 327	SECTION 3BR-1-1-1	COUNTY ST. CLAIR	TOTAL SHEETS 20	SHEET NO. 11
CONTRACT NO. 76G41			ILLINOIS FEO. AID PROJECT	



**CROSS SECTION (DECK)**

Looking East

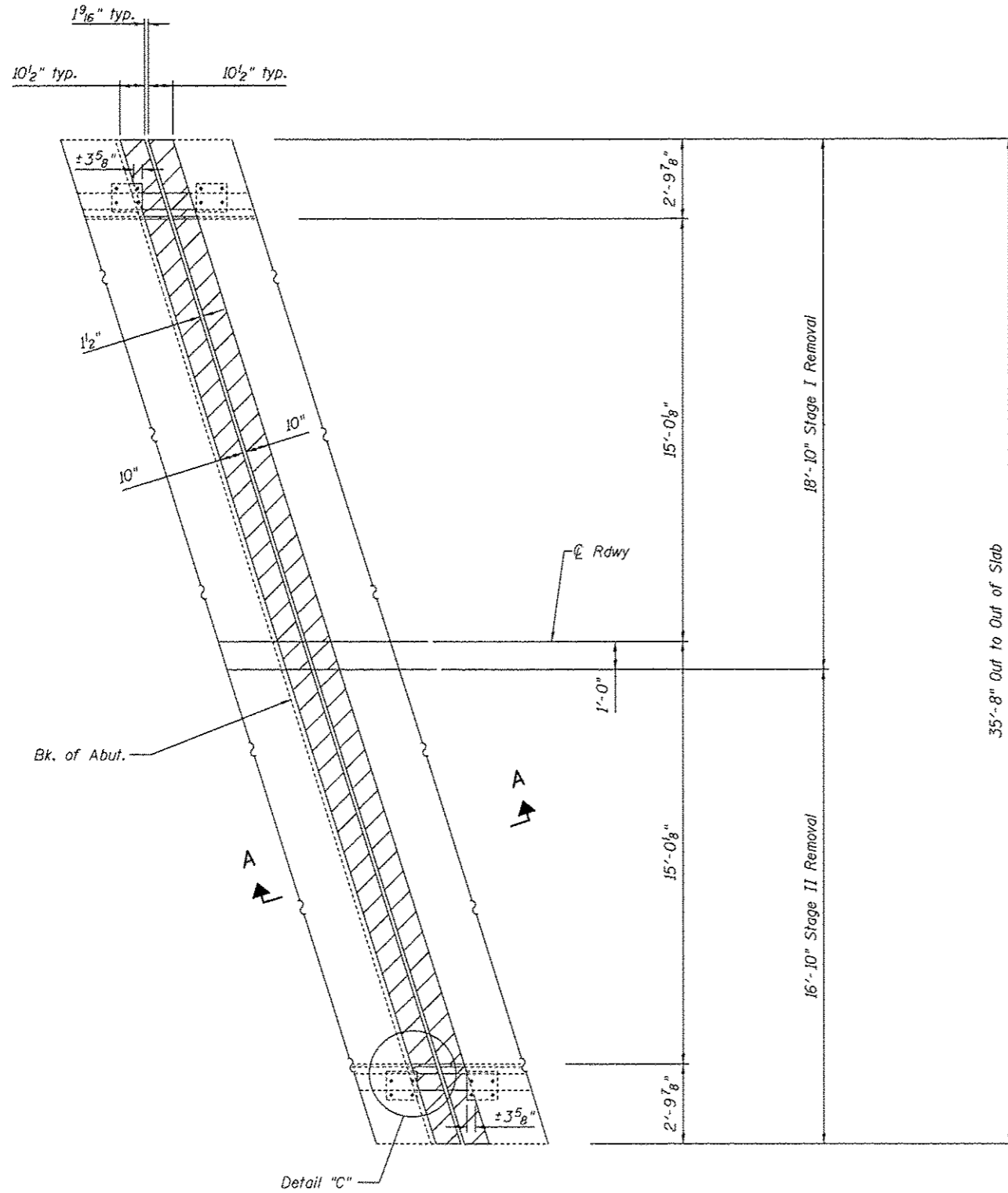
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CHECKED - _____	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYV	PASSED _____	REVISED _____
CHECKED - _____	ENGINEER OF BRIDGES AND STRUCTURES	REVISED _____

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

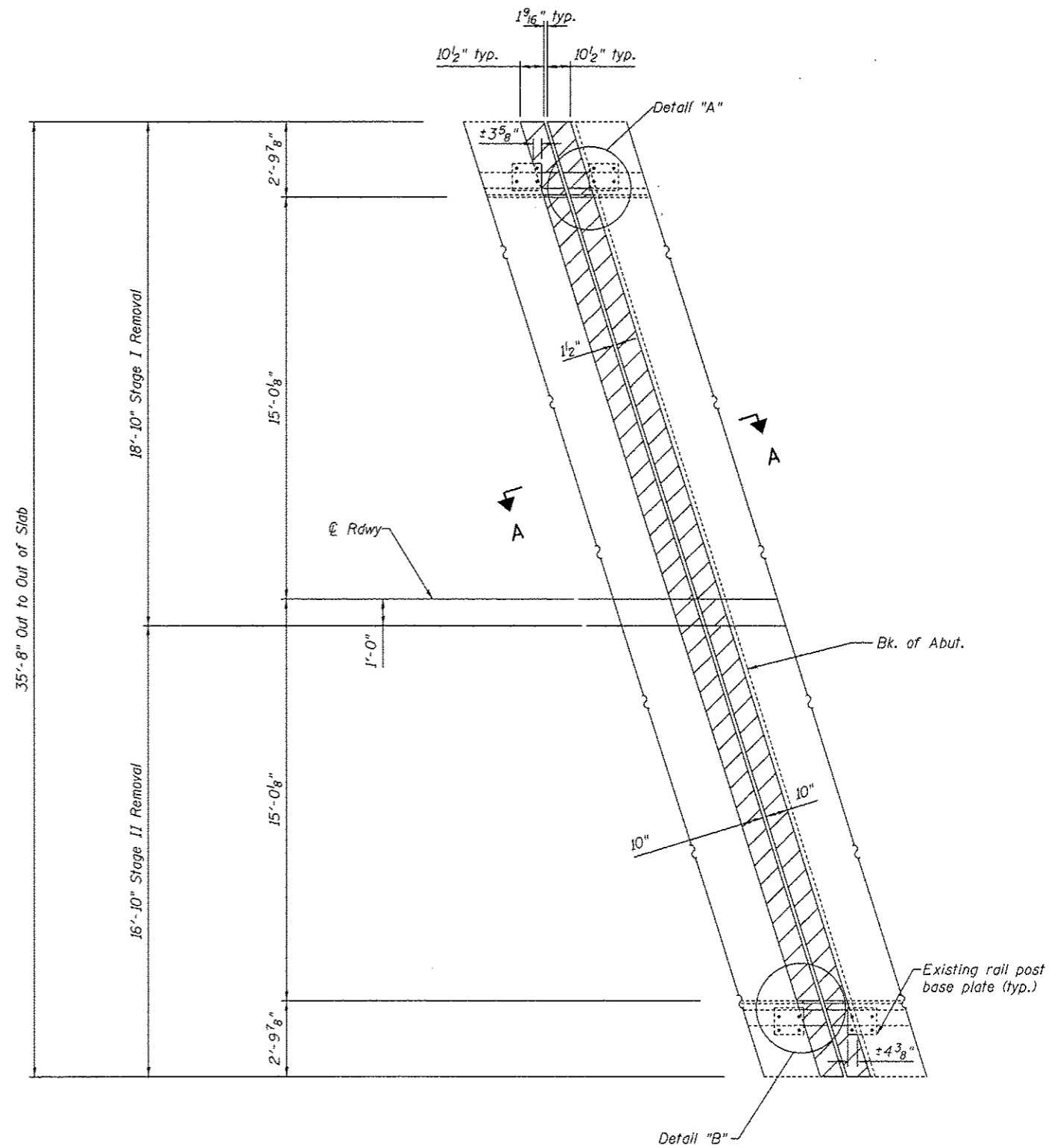
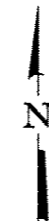
**CROSS SECTION  
SN 082-0037**

SHEET NO. 2 OF 10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	38R-1-I-1	ST. CLAIR	20	12
CONTRACT NO. 76G41			ILLINOIS FED. AID PROJECT	



**WEST ABUTMENT**



**EAST ABUTMENT**

Note:  
 See sheet 6 of 9 for Section A-A  
 Don't remove concrete underneath existing rail post base plate.

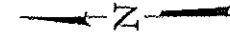
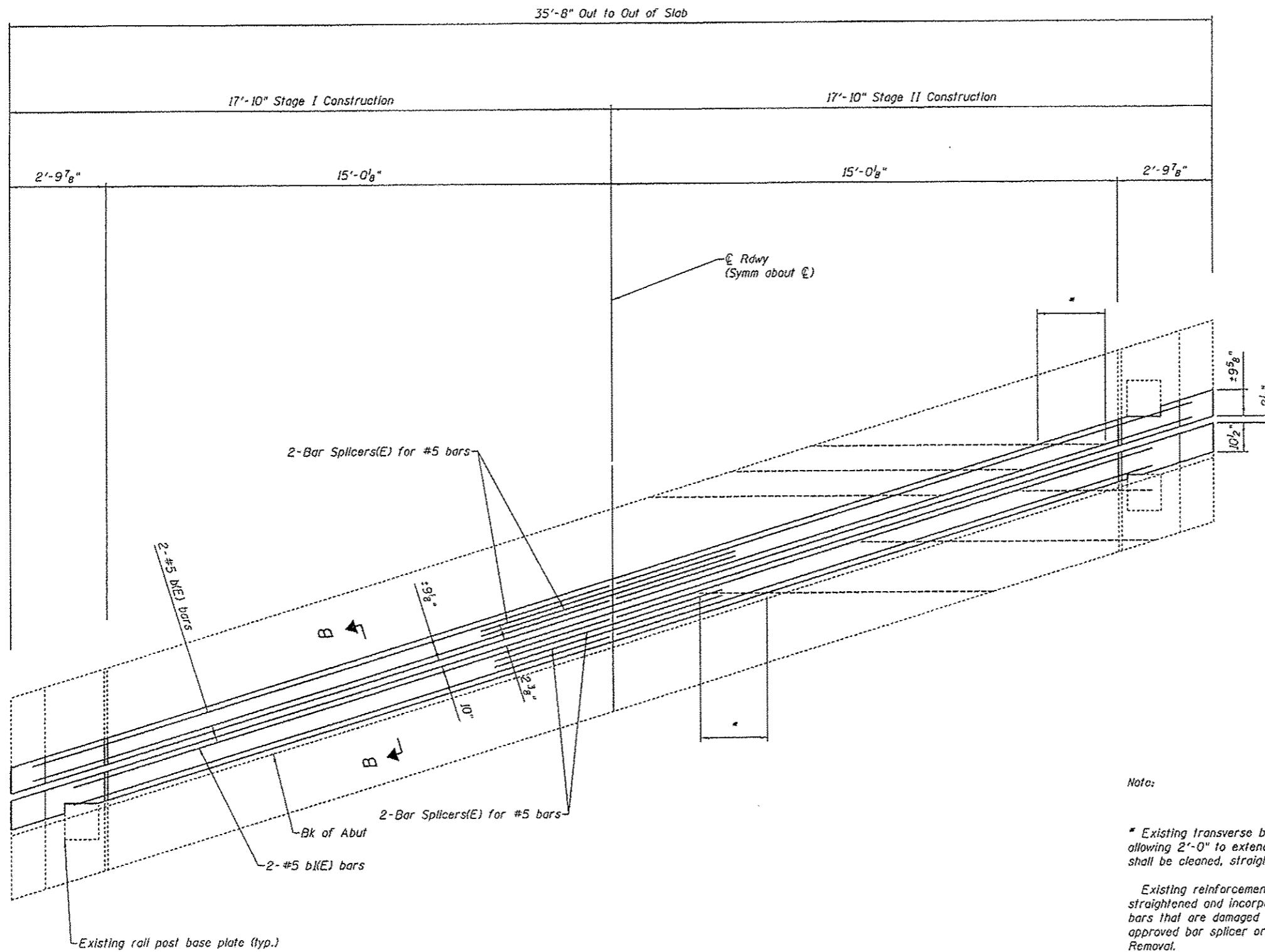
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CHECKED -	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYV	PASSED	REVIS
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	REVIS

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CONCRETE REMOVAL  
 SN 082-0037**

SHEET NO. 3 OF 10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	3BR-1-I-1	ST CLAIR	20	13
CONTRACT NO. 76C41			ILLINOIS FED. AID PROJECT	



Note:

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

Existing reinforcement bars extending into 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 Concrete Removal.

See sheet 6 of 10 for Section B-B.

CONCRETE REPLACEMENT

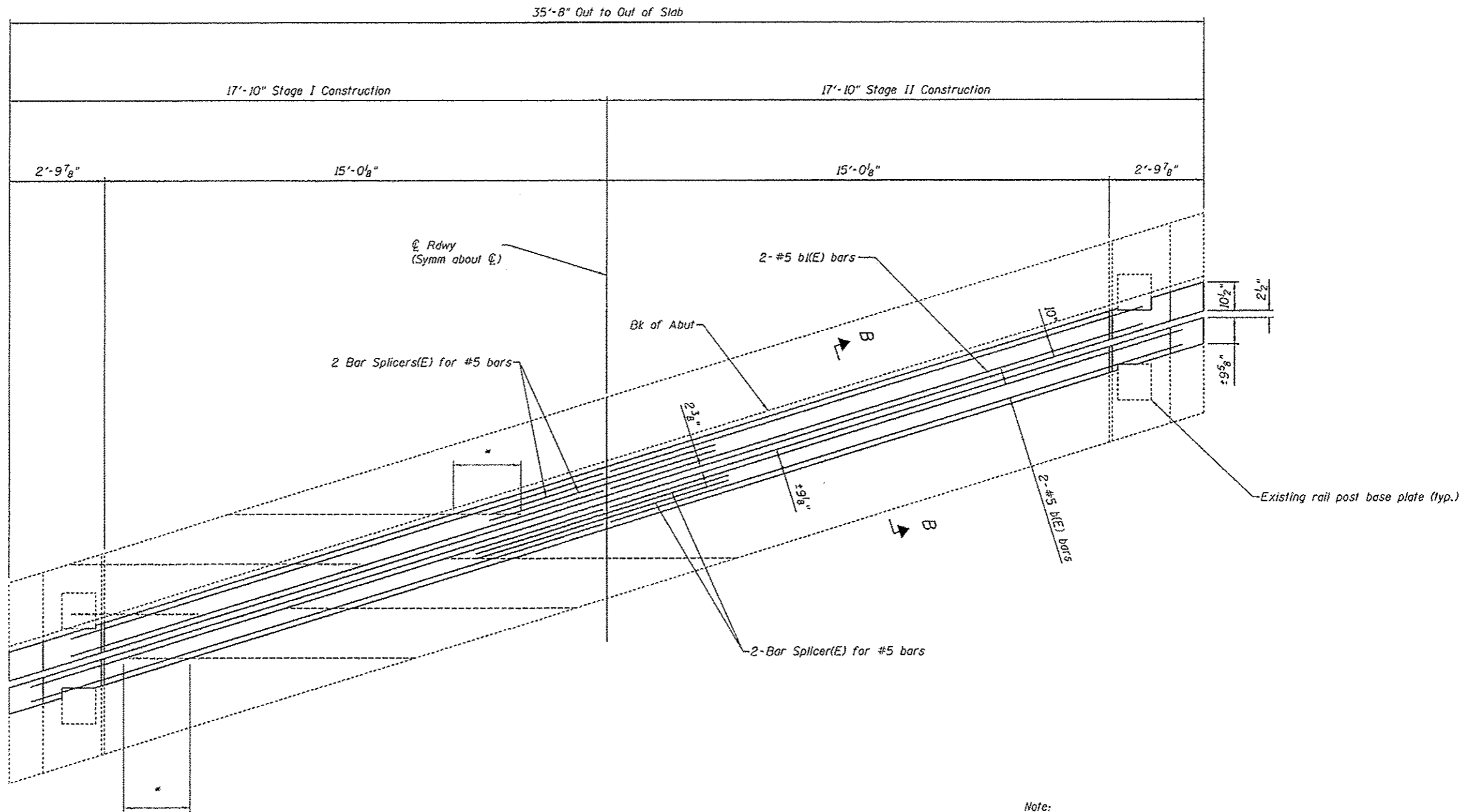
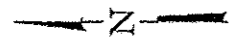
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CHECKED -	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYW	PASSED	REVISED
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	REVISED

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

JOINT REPLACEMENT (W. Abut.)  
SN 082-0037

SHEET NO. 4 OF 10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	3BR-1-1-1	ST CLAIR	20	14
CONTRACT NO. 76G41				
ILLINOIS FED. AID PROJECT				



CONCRETE REPLACEMENT

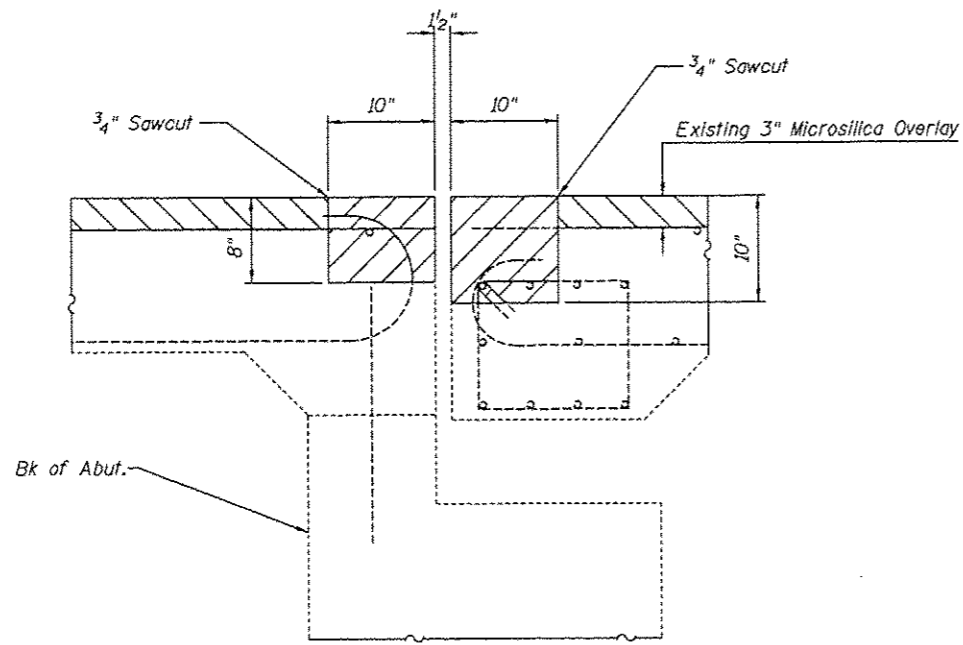
Note:

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

Existing reinforcement bars extending into 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 Concrete Removal.

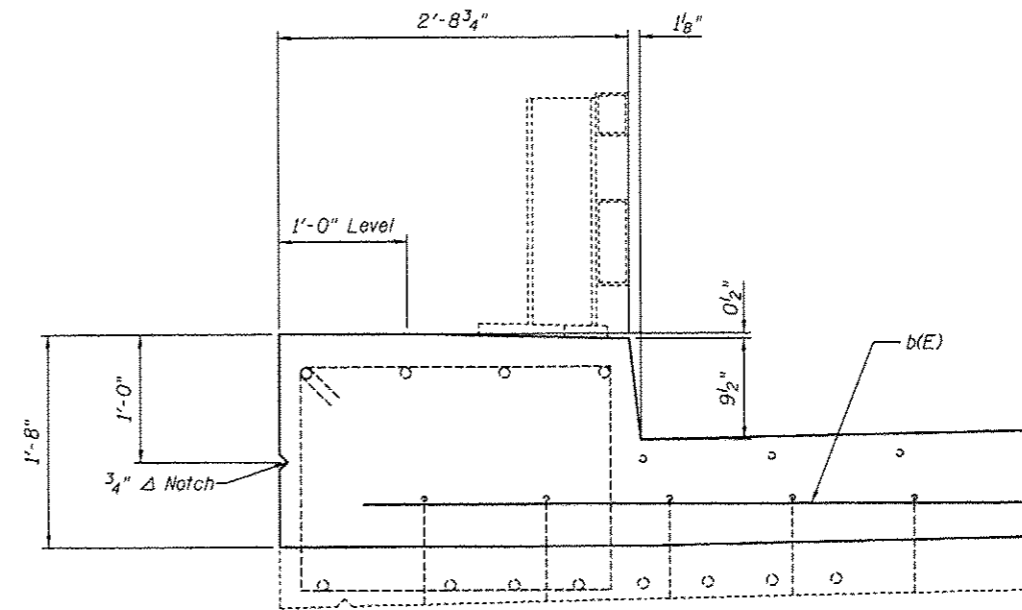
See sheet 6 of 10 for Section B-B.

DESIGNED - AYY	EXAMINED	DATE -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	JOINT REPLACEMENT (E. Abut.) SN 082-0037		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED -	ENGINEER OF STRUCTURAL SERVICES	REVISOR		SHEET NO. 5 OF 10 SHEETS		327	3BR-1-1-1	ST. CLAIR	20	15
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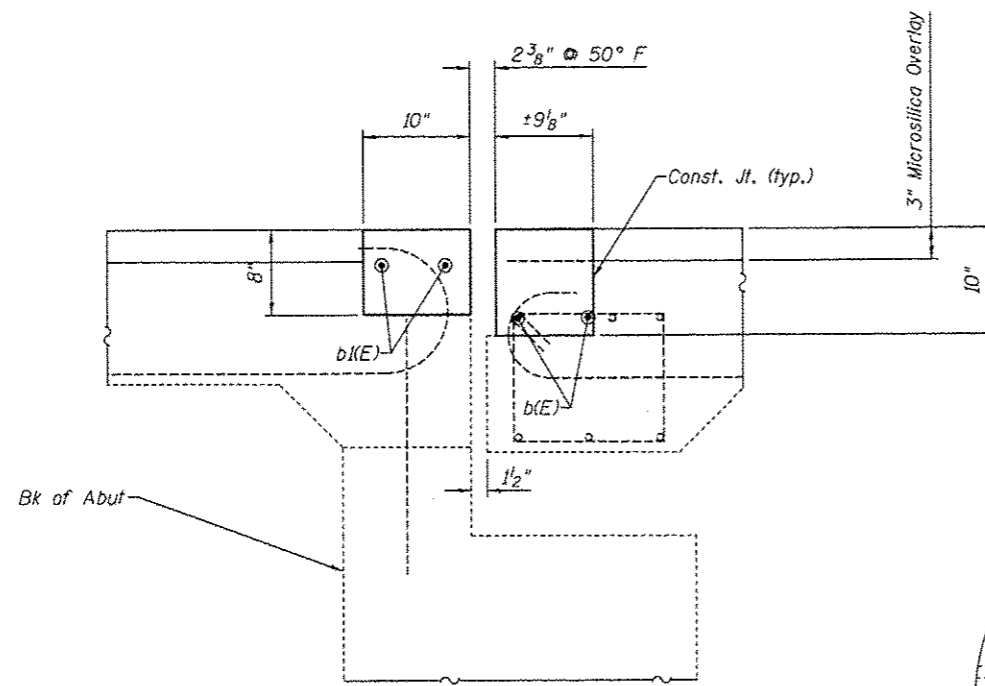


**SECTION A-A**

All dimensions are at right angles to jt.

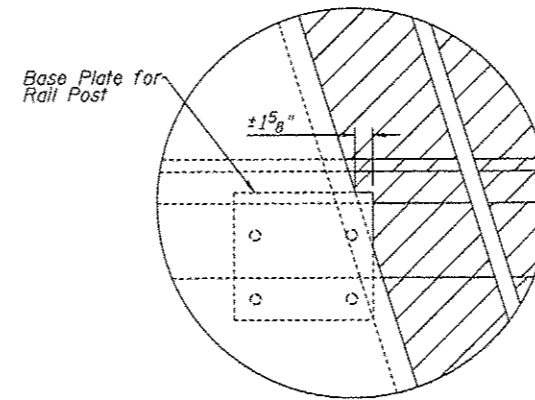


**CURB SECTION (DECK)**

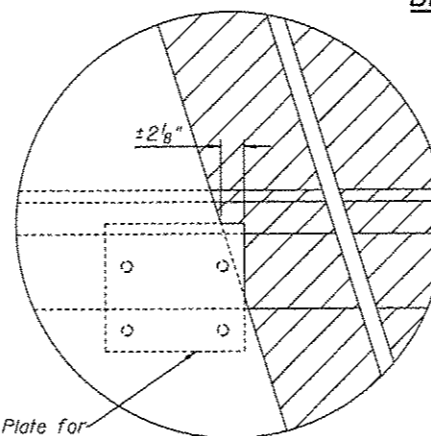


**SECTION B-B**

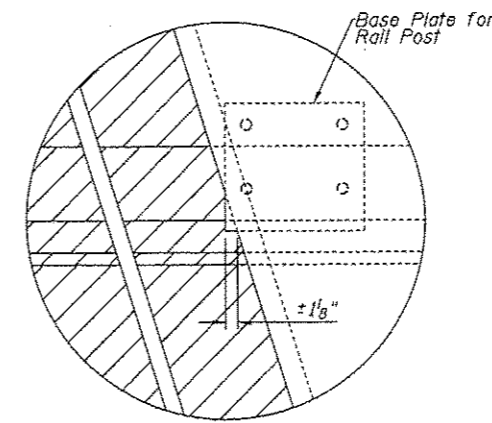
All dimensions are at right angles to jt.



**DETAIL "C"**



**DETAIL "B"**



**DETAIL "A"**

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
b(E)	8	#5	17'-11"	—
b(E)	8	#5	16'-8"	—
Concrete Removal			Cu. Yd.	4.0
Concrete Superstructure			Cu. Yd.	3.8
Reinforcement Bars, Epoxy Coated			Lbs.	290

Reinforcement bars designated (E) shall be epoxy coated.

DESIGNED - AYV	EXAMINED	DATE
CHECKED -	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYV	PASSED	REVISED
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	REVISED

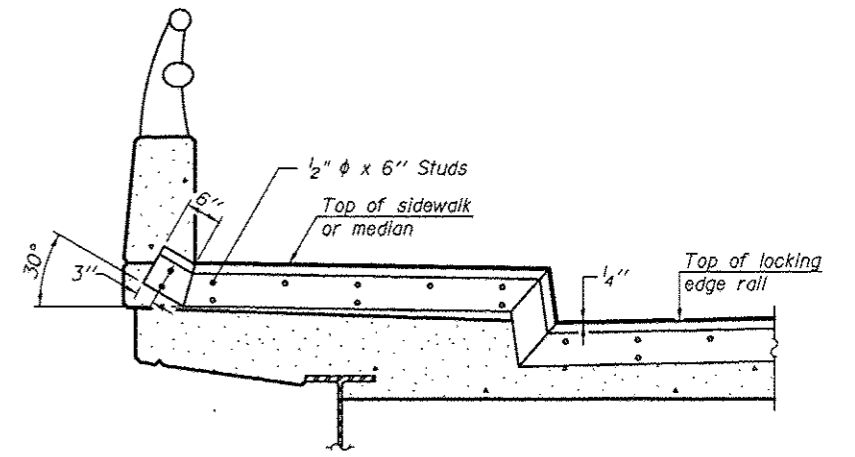
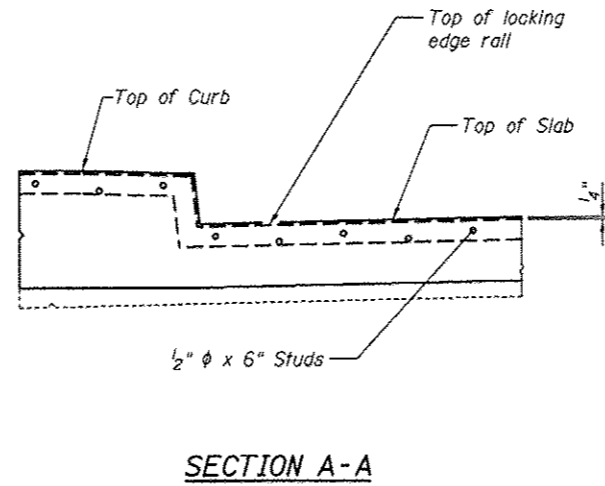
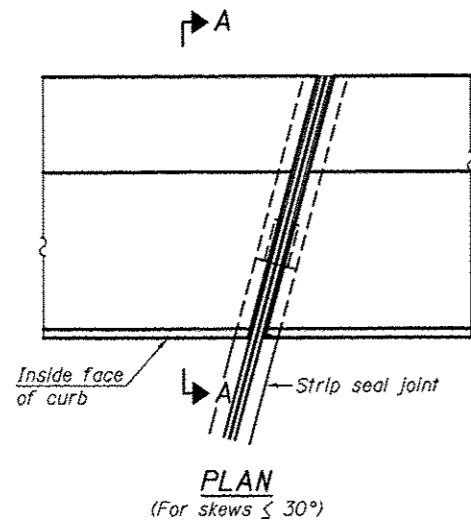
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**JOINT DETAILS  
SN 082-0037**

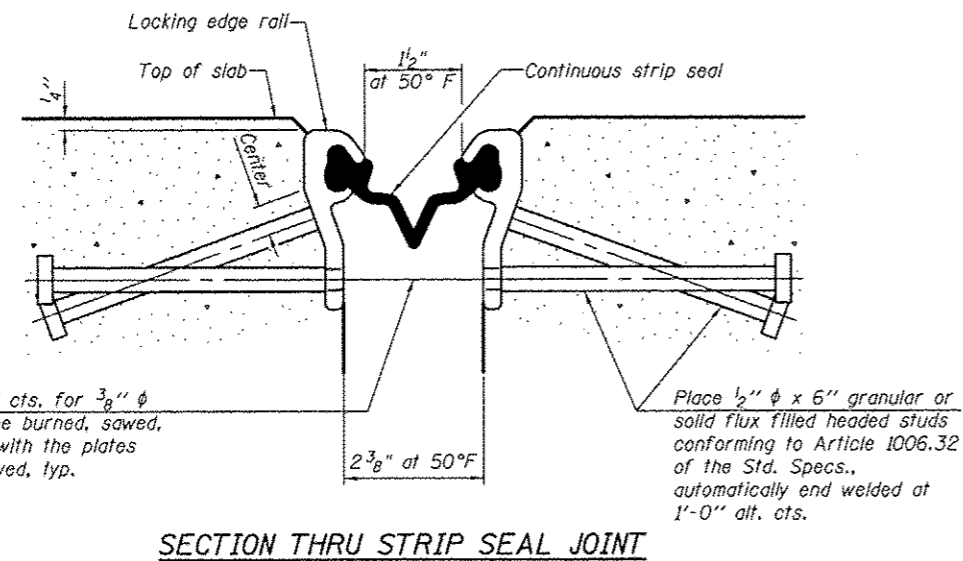
SHEET NO. 6 OF 10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 76G41				
ILLINOIS FED. AID PROJECT				



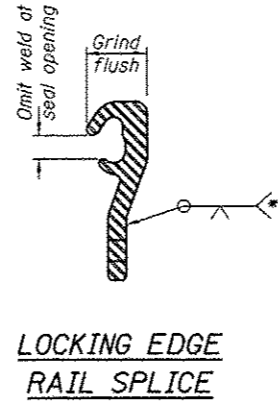
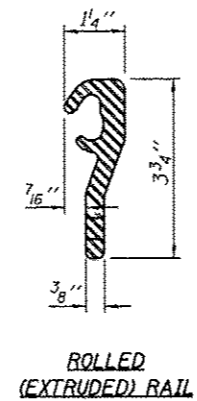


**TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN**  
 Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.



7/16" φ holes at 4'-0" cts. for 3/8" φ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

Place 1/2" φ x 6" granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded at 1'-0" alt. cts.

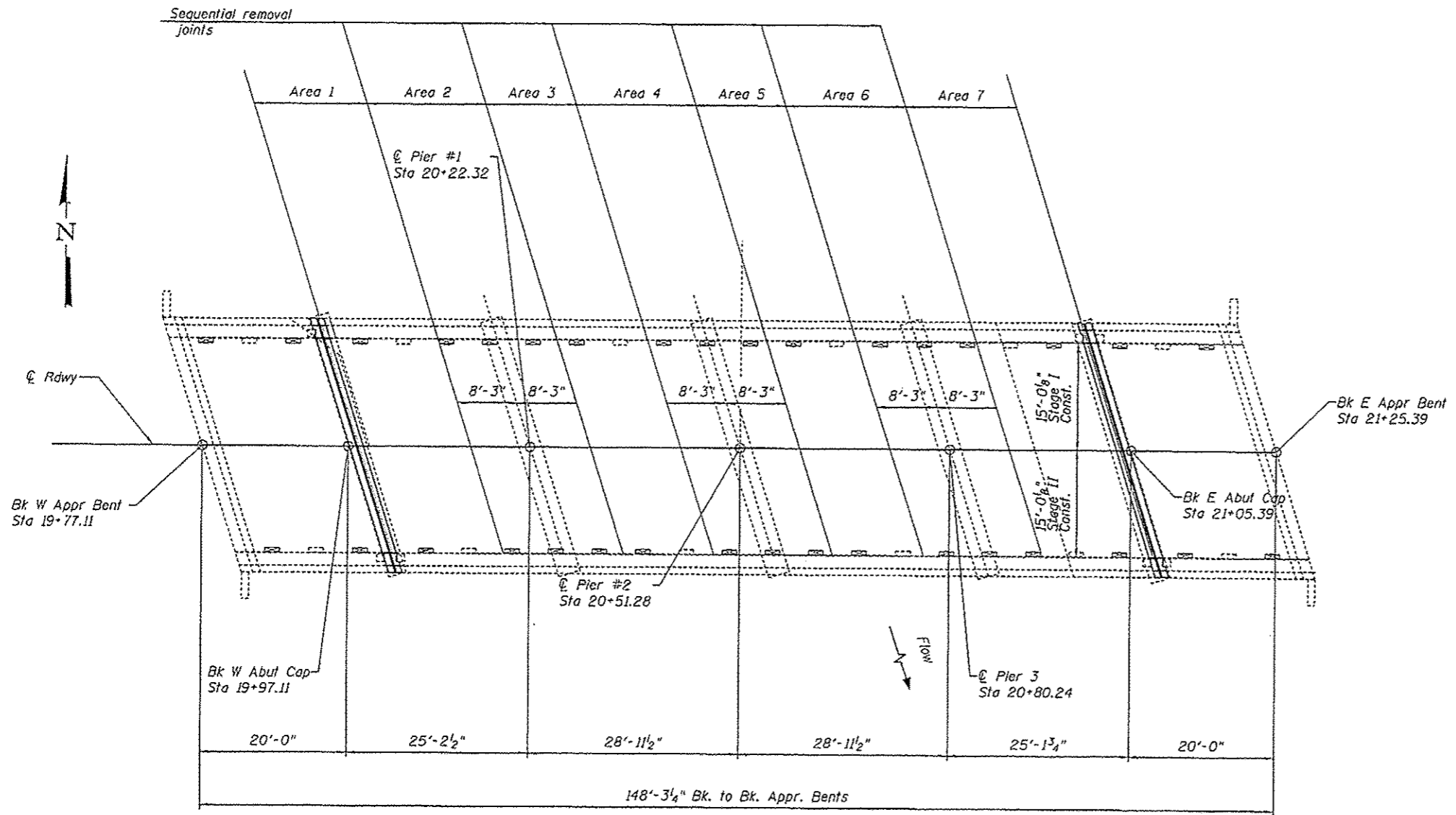


\* Back gouge not required if complete joint penetration is verified by mock-up.

**Notes:**  
 The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails.  
 The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.  
 The inside of the Locking Edge Rail groove shall be free of weld residue. Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.  
 The manufacturer's recommended installation methods shall be followed.

**BILL OF MATERIAL**

Item	Unit	Total
Preformed Joint Strip Seal	Foot	78



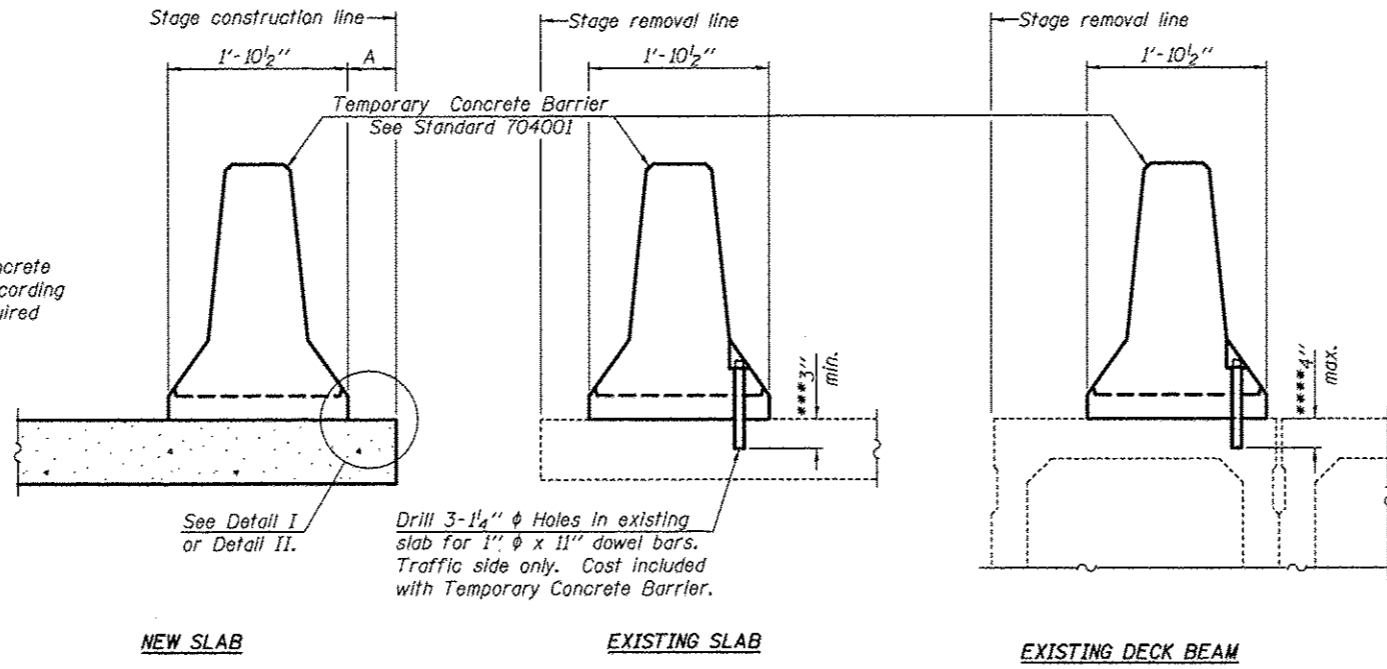
**PLAN**

**MICROSILICA REMOVAL AND REPLACEMENT SEQUENCE (BRIDGE DECK)**

Areas 2, 4, & 6 over the pier shall be done before areas 1, 3, 5 & 7 in order to maintain the structural integrity of the negative moment reinforcement bars. At least 72 hours shall have elapsed from the end of the previous pour and the concrete shall have attained a minimum modulus of rupture of 650 psi or a minimum compressive strength of 3500 psi. Care shall be taken not to debond the top mat of negative moment reinforcement during concrete removal. Any deviations from this sequence must be approved by the Engineer prior to removal operations.

DESIGNED - AYW	EXAMINED	DATE -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	MICROSILICA REMOVAL & REPLACEMENT SEQUENCE SN 082-0037		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED -	PASSED	REVISER				327	JBR-1-1-1	ST. CLAIR	20	18
DRAWN - AYW	ENGINEER OF BRIDGES AND STRUCTURES	REVISER		SHEET NO. 8 OF 10 SHEETS		CONTRACT NO. T6G41		ILLINOIS FED. AID PROJECT		
CHECKED -	ENGINEER OF STRUCTURAL SERVICES	REVISER								

When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



**SECTIONS THRU SLAB OR DECK BEAM**

**NOTES**

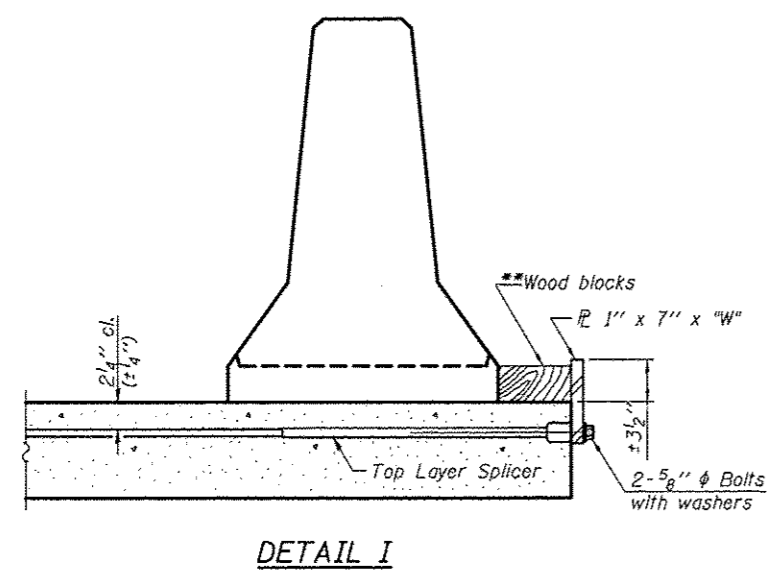
Detail I - With Bar Splicer or Couplers:  
Connect one (1) 1" x 7" x "W" steel  $\bar{P}$  to the top layer of couplers with 2-5/8"  $\phi$  bolts screwed to coupler at approximate  $\bar{C}$  of each barrier panel.

Detail II - With Extended Reinforcement Bars:  
Connect one (1) 1" x 7" x "W" steel  $\bar{P}$  to the concrete slab or concrete wearing surface with 2-5/8"  $\phi$  Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate  $\bar{C}$  of each barrier panel.

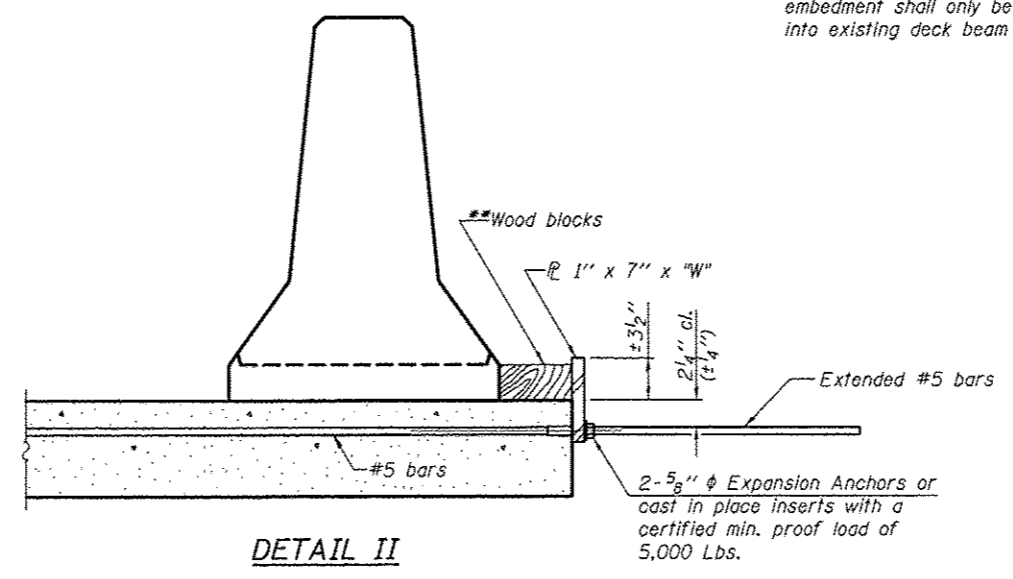
Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x "W" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

\*\*\* Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

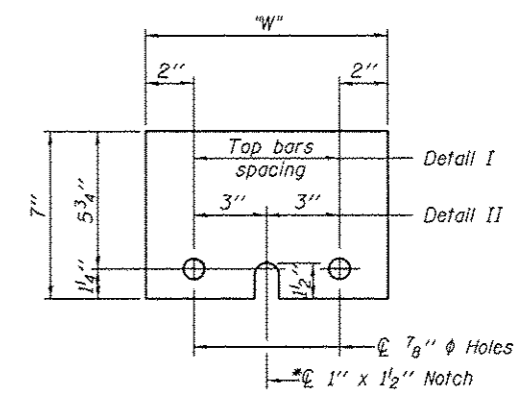
\*\*\*\* If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



**DETAIL I**



**DETAIL II**



**STEEL RETAINER  $\bar{P}$  1" x 7" x "W"**  
\* Required only with Detail II

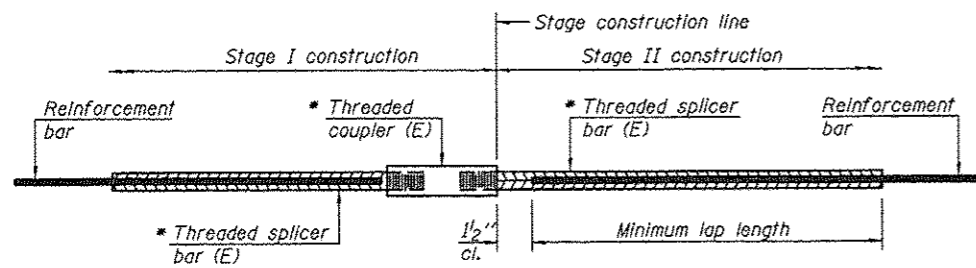
\*\* Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

"W" = Top bars spacing + 4"

R-27

7-1-10

DESIGNED - AYV	EXAMINED	DATE -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION STRUCTURE NO. 082-0037</b>	F.A.P. RYE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
CHECKED -	ENGINEER OF STRUCTURAL SERVICES	REVISED			327	39R-1-1-1	ST. CLAIR	20	19	
DRAWN - AYV	PASSED	ENGINEER OF BRIDGES AND STRUCTURES			REVISED	CONTRACT NO. 76G41				
CHECKED -						SHEET NO. 9 OF 10 SHEETS				



**STANDARD BAR SPLICER ASSEMBLY**

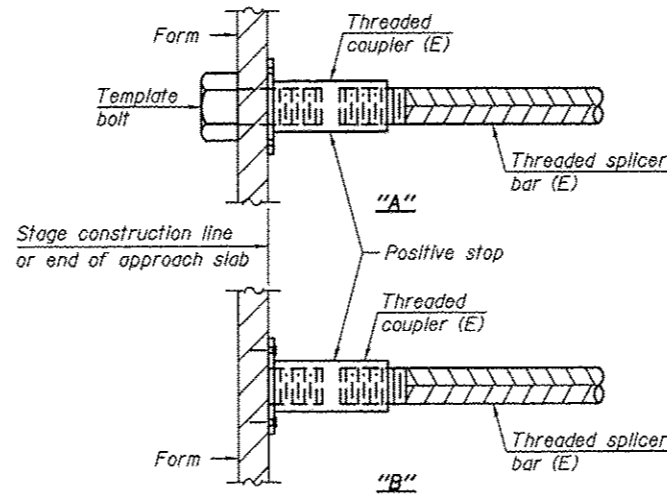
Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"	6'-5"	6'-10"	7'-9"	8'-7"	9'-8"

- Table 1: Black bar, 0.8 Class C
- Table 2: Black bar, Top bar lap, 0.8 Class C
- Table 3: Epoxy bar, 0.8 Class C
- Table 4: Epoxy bar, Top bar lap, 0.8 Class C
- Table 5: Epoxy bar, Class C
- Table 6: Epoxy bar, Top bar top, Class C

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

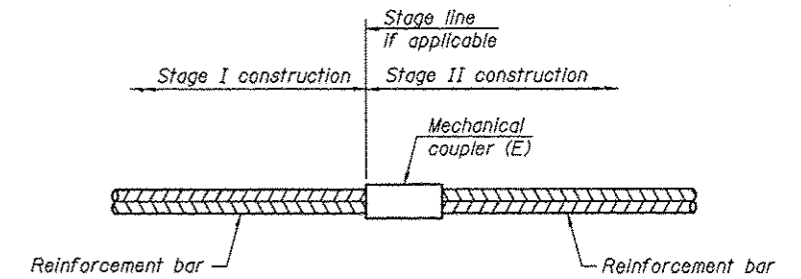
\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Main Slab	#5	4	3
Approach Slab	#5	4	3



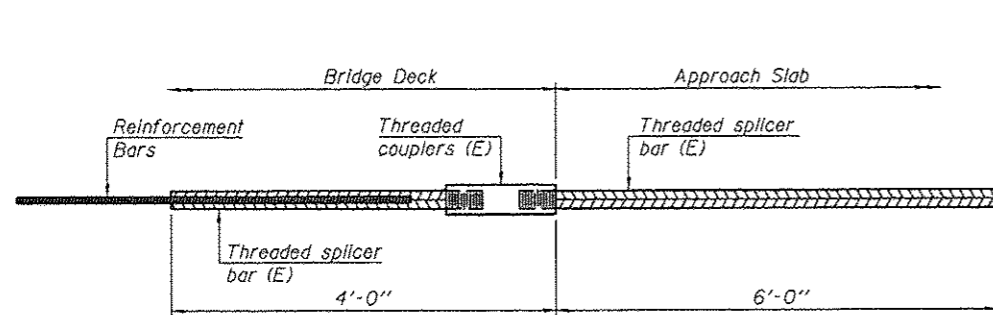
**INSTALLATION AND SETTING METHODS**

"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.



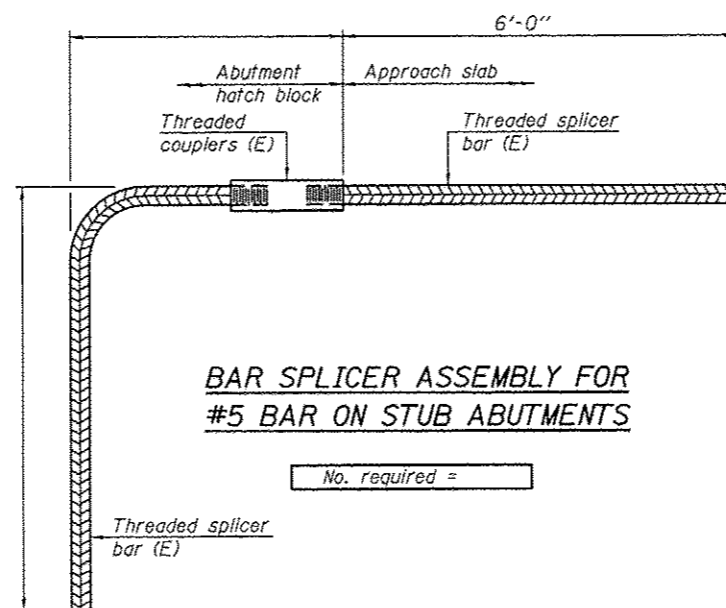
**STANDARD MECHANICAL SPLICER**

Location	Bar size	No. assemblies required



**BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS**

No. required =



**BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS**

No. 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.

BSD-1

1-27-12

DESIGNED - AYV	EXAMINED	DATE -
CHECKED -	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYV	PASSED	REVISOR
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	REVISOR

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS  
STRUCTURE NO. 082-0037

SHEET NO. 10 OF 10 SHEETS

F.A.P. RTE. 327	SECTION 38R-1-I-1	COUNTY ST. CLAIR	TOTAL SHEETS 20	SHEET NO. 20
CONTRACT NO. 76G41			ILLINOIS FED. AID PROJECT	