

050

11-09-2018 LETTING ITEM 050

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.P. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
653	(105BR)BRR	MARSHALL	26	1
ILLINOIS CONTRACT NO. 68E11				

FOR INDEX OF SHEETS, SEE SHEET NO. 2

PROPOSED HIGHWAY PLANS

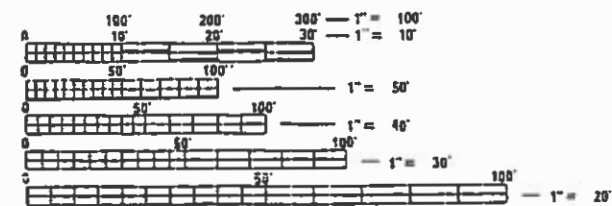
HIGHWAY STANDARDS		D4 STANDARDS
701001-02	701321-17	406101-D4
701006-05	704001-08	440001-D4
701201-04	780001-05	780001-D4
701311-03	782006	

FAP ROUTE 653 (IL 18)
SECTION (105BR)BRR
PROJECT
MARSHALL COUNTY

C-94-045-18

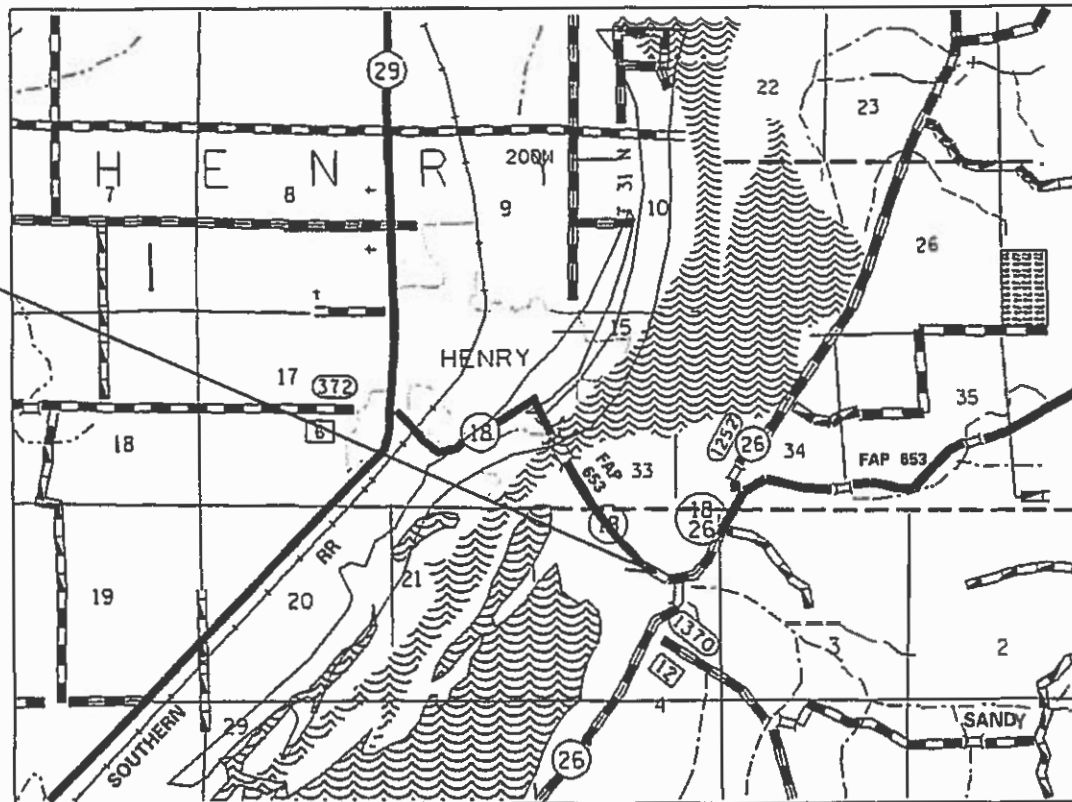
ADT = 2500 (2017)
SU = 2.8%
MU = 3.2%

PROJECT LOCATION
SN 062-0037 (IL 18 OVER SANDY CREEK)



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

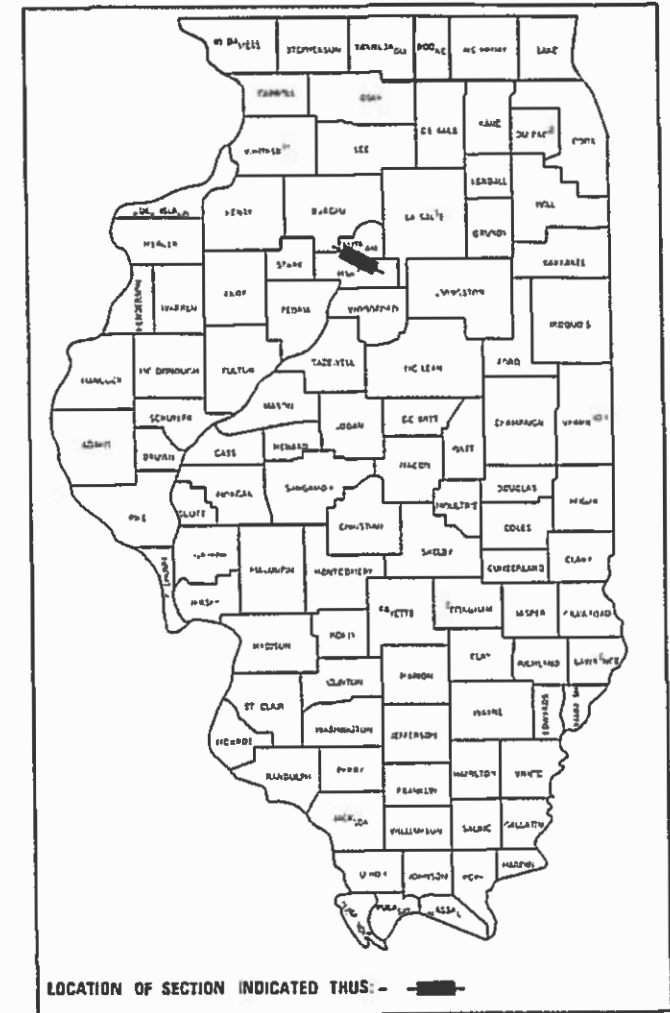
J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811



PROJECT ENGINEER: NICHOLAS JACK
PROJECT MANAGER: RICH DOTSON
CATALOG NO. 035589-00D
CONTRACT NO. 68E11

GROSS LENGTH = 876 FT. = 0.1659 MILE
NET LENGTH = 876 FT. = 0.1659 MILE

D-94-024-18



THIS PROJECT CONSISTS OF BRIDGE REPAIRS TO SN. 062-0037 CARRYING IL 18 OVER SANDY CREEK, 0.1 MILE WEST OF IL 26

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED Aug 22 2018
Keruel A. Barnett (KSD)
REGIONAL ENGINEER

Oct 5 2018
cc A. ETC
ENGINEER OF DESIGN AND ENVIRONMENT

Oct 9 2018
Paul P. Ch...
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

MODEL: Sheets
 FILE NAME: D:\cannon\GFH\Trans\p...
 USER: jonesco
 DATE: 8/24/2016

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONST. CODE
				100% STATE
				BRIDGE
				0013
				062-0037
20200500	EARTH EXCAVATION WIDENING	CU YD	40	40
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	118	118
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SO YD	163	163
40600990	TEMPORARY RAMP	SO YD	36	36
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	18.3	18.3
42001300	PROTECTIVE COAT	SO YD	27	27
44004250	PAVED SHOULDER REMOVAL	SO YD	9	9
48203029	HOT - MIX ASPHALT SHOULDERS, 8"	SO YD	89	89
50102400	CONCRETE REMOVAL	CU YD	9	9
50300255	CONCRETE SUPERSTRUCTURE	CU YD	9	9
50300260	BRIDGE DECK GROOVING	SO YD	515	515
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	1110	1110
50606701	CLEANING AND PAINTING STRUCTURAL STEEL, LOCATION 1	L SUM	1	1
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	990	990
50800515	BAR SPLICERS	EACH	22	22

USER NAME = jonesco	DESIGNED -	REVISED -
PLOT SCALE = 100.0000' / in.	DRAWN -	REVISED -
PLOT DATE = 8/24/2016	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES
SN. 062-0037

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
653	1105BRIBRR	MARSHALL	26	3
				CONTRACT NO. 68E11
ILLINOIS FED. AID PROJECT				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONST. CODE
				100% STATE
				BRIDGE
				0013
				062-0037
52000110	PREFORMED JOINT STRIP SEAL	FOOT	70	70
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE 1	EACH	10	10
52100520	ANCHOR BOLTS, 1"	EACH	20	20
67100100	MOBILIZATION	L SUM	1	1
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1
70106700	TEMPORARY RUMBLE STRIP	EACH	6	6
70300904	PAVEMENT MARKING TAPE, TYPE IV 4"	FOOT	1800	1800
70300924	PAVEMENT MARKING TAPE, TYPE IV 24"	FOOT	48	48
70400100	TEMPORARY CONCRETE BARRIER	FOOT	480	480
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	354	354
70600250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	2
70600350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2

MODEL SHEETS
 FILE NAME: C:\Users\JONESCO\Documents\18_Bridge Joint Replacement - Sandi Creek\18_Sandi_Creek.dgn

USER NAME = Jonesco	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 1/8" = 1' / in.	CHECKED -	REVISED -
PLOT DATE = 8/8/2018	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES
SN. 062-0037

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
653	1105BRIBRR	MARSHALL	26	4
				CONTRACT NO. 68E11
ILLINOIS FED. AID PROJECT				

BRIDGE DECK ITEMS SCHEDULE				
LOCATION	50300260 BRIDGE DECK GROOVING	Z0004556 HMA SURFACE REMOVAL (DECK)	Z0012130 BRIDGE DECK SCARIFICATION 3/4"	Z00121164 BRIDGE DECK MICROSILICA CONCRETE OVERLAY 2 1/2"
	SQ YD	SQ YD	SQ YD	SQ YD
SN. 062-0037	515	540	540	540
TOTALS	515	540	540	540

CONCRETE ITEMS SCHEDULE				
LOCATION	42001300 PROTECTIVE COAT	50102400 CONCRETE REMOVAL	50300255 CONCRETE SUPERSTRUCTURE	Z0065730 SLOPE WALL SLURRY PUMPING
	SQ YD	CU YD	CU YD	CU YD
SN. 062-0037	27	9	9	15
TOTALS	27	9	9	15

STEEL ITEMS SCHEDULE						
LOCATION	50500405 FURNISHING AND ERECTING STRUCTURAL STEEL	50800205 REINFORCEMENT BARS, EPOXY COATED	50800515 BAR SPLICERS	52100010 ELASTOMERIC BEARING ASSEMBLY, TYPE 1	52100520 ANCHOR BOLTS 1"	Z0001899 JACK AND REMOVE EXISTING BEARINGS
	POUND	POUND	EACH	EACH	EACH	EACH
SN.062-0037	1110	990	22	10	20	10
TOTALS	1110	990	22	10	20	10

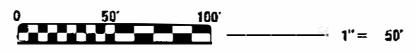
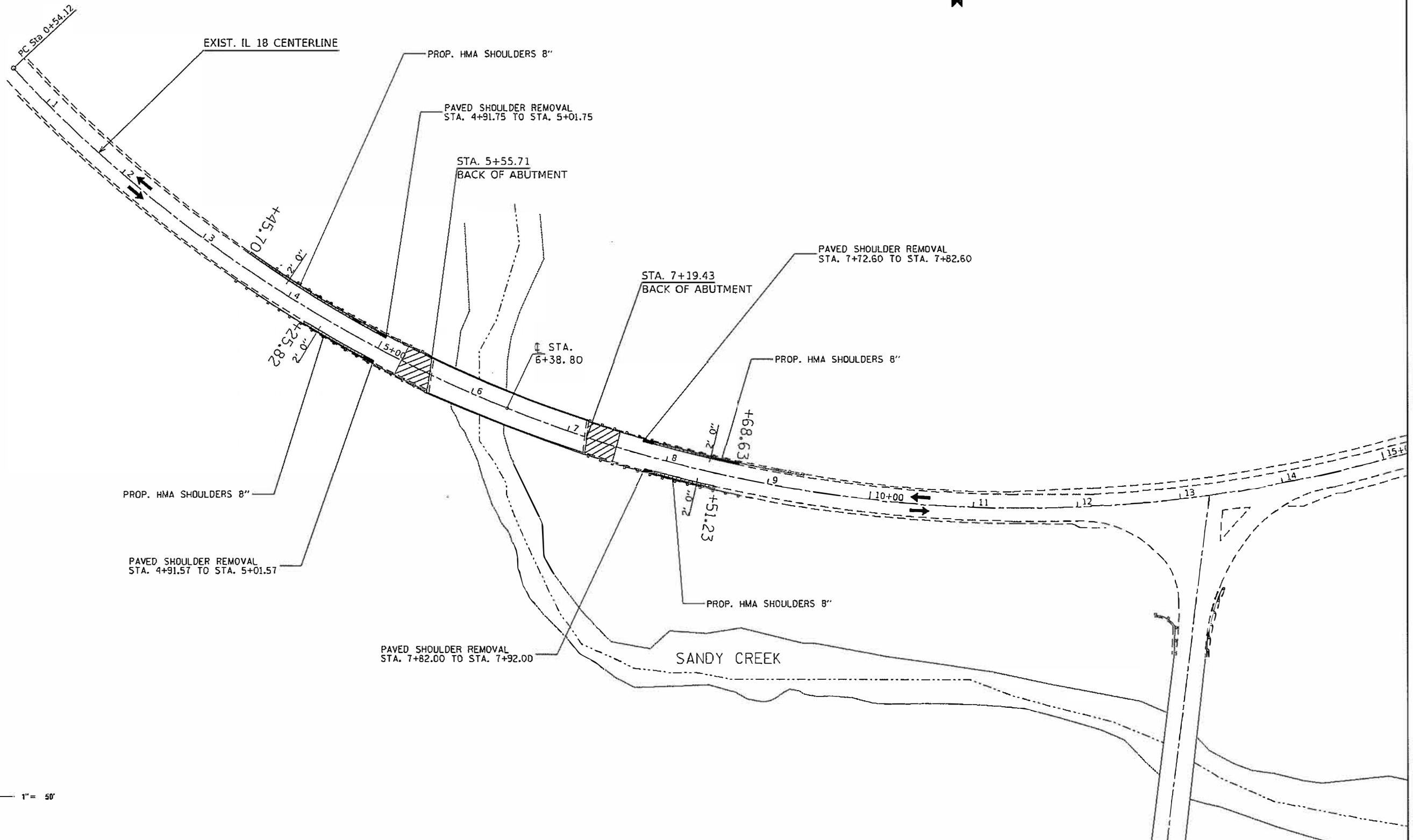
MISCELLANEOUS ITEMS SCHEDULE				
LOCATION	50606701 CLEANING AND PAINTING STRUCTURAL STEEL LOCATION 1	52000110 PREFORMED JOINT STRIP SEAL	67100100 MOBILIZATION	Z0007101 CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 1
	LSUM	FOOT	LSUM	LSUM
SN. 062-0037	1	70	1	1
TOTALS	1	70	1	1

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES
SN. 062-0037

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
653	{105BRIBRR	MARSHALL	26	7
CONTRACT NO. 68E11			ILLINOIS FED AID PROJECT	

SCALE SHEET OF SHEETS STA TO STA



MODEL SHEETS
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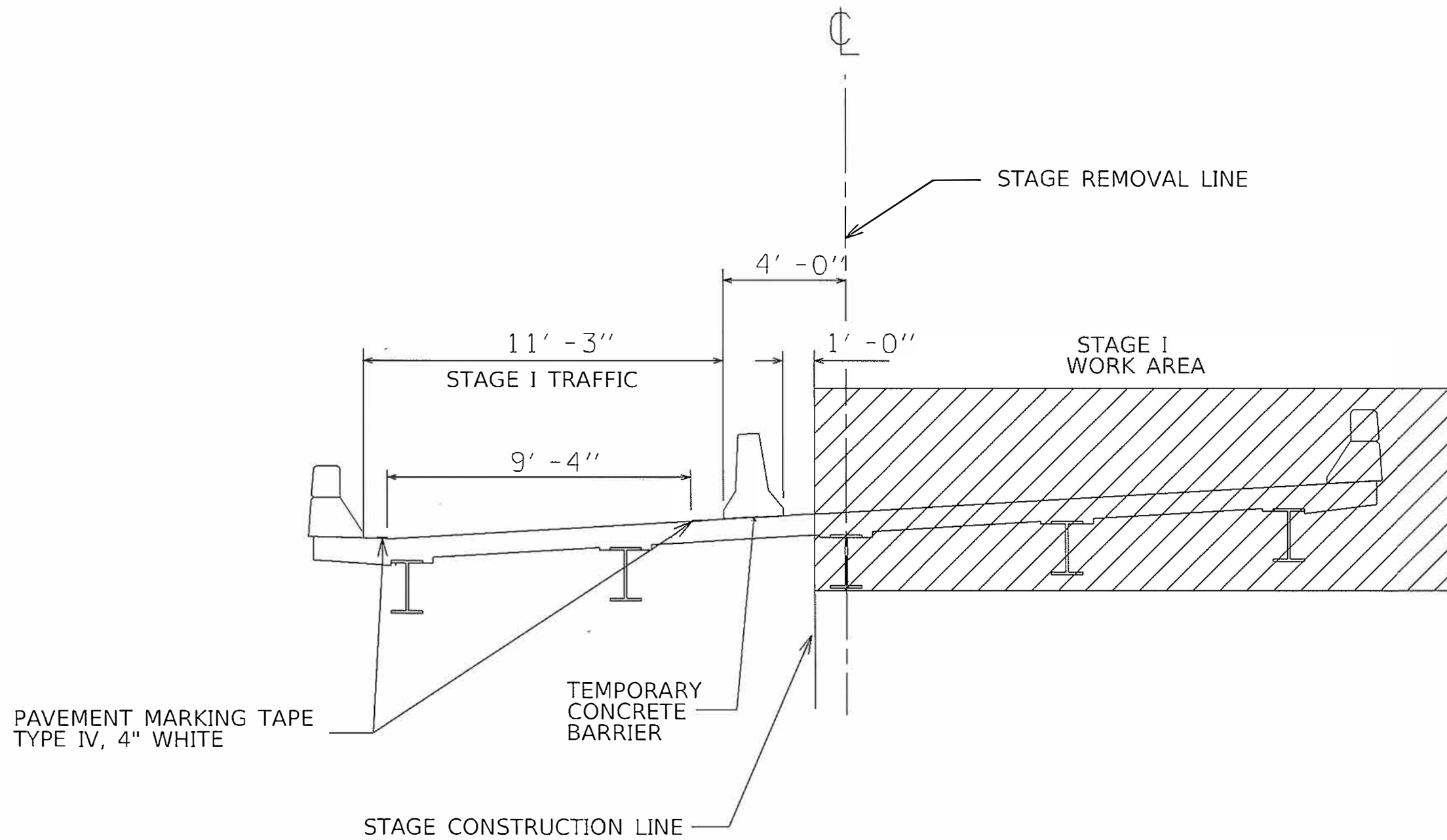
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PLOT DATE = 8/7/2018	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGING DETAILS
PRE STAGE PLAN

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
653	(105B)R1BRR	MARSHALL	26	8
CONTRACT NO. 68E11				
ILLINOIS FED AID PROJECT				



**TYPICAL SECTION
STAGE I**

MODEL SHEETS
 FILE NAME: C:\P\PROJECTS\CDR\105BR\105BR11.dwg
 18 Sandy Creek.dwg

USER NAME = jonescc	DESIGNED -	REVISED -
PLOT SCALE = 1/8" = 1'-0"	DRAWN -	REVISED -
PLOT DATE = 8/9/2018	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGING DETAILS			
STAGE ONE TYPICAL SECTION			
SCALE:	SHEET	OF SHEETS	STA TO STA.

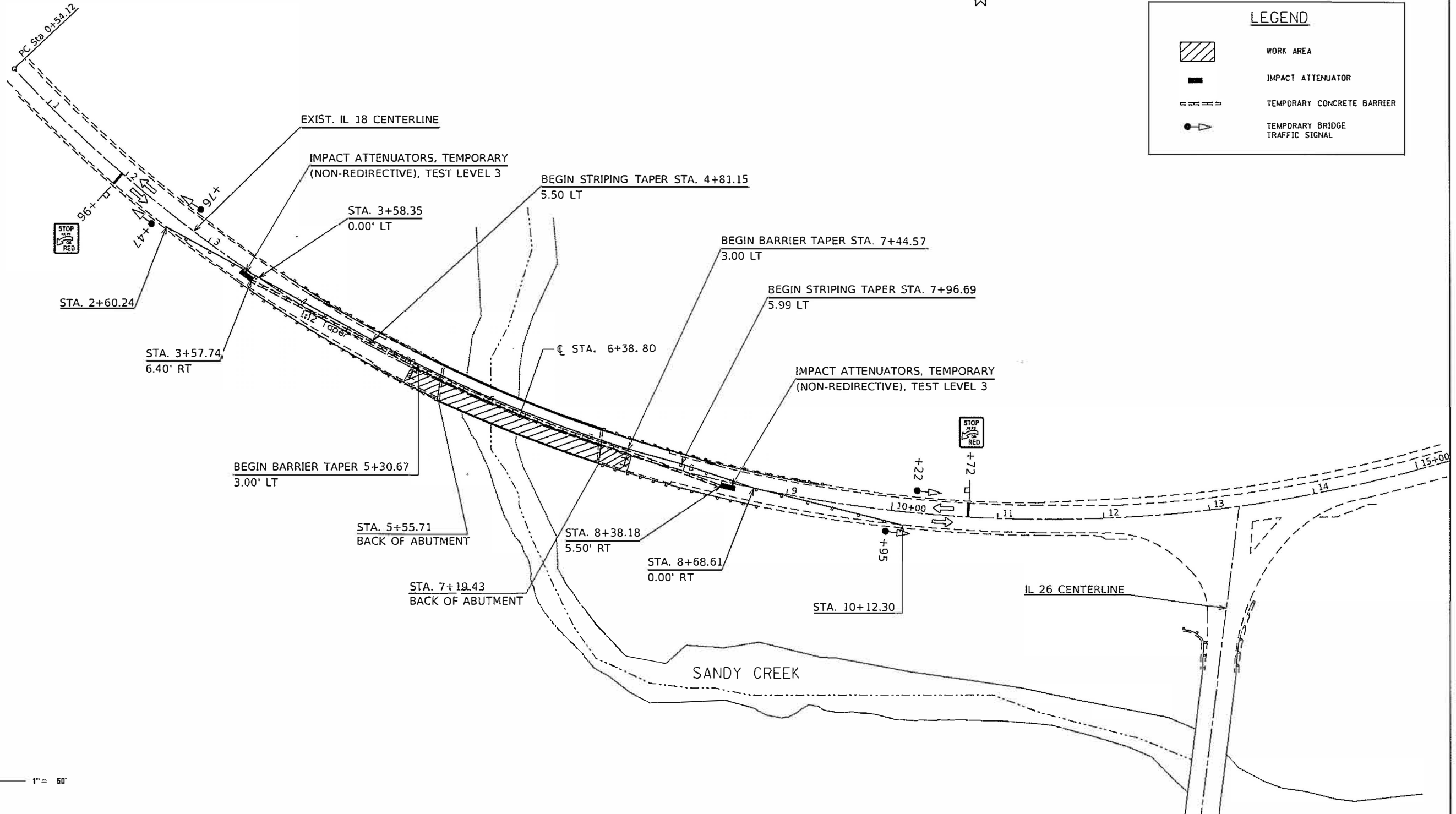
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
653	(105BR)BRR	MARSHALL	26	9
CONTRACT NO. 68E11				
ILLINOIS FED. AID PROJECT				

NOTES

Refer to Highway Standards 701321 and 701201 in conjunction with this sheet for exact placement of traffic management devices and other clarifications as construction symbols and dimensioning were duplicated off of these standards. The placement of Stage II Traffic Control Devices shall be a mirror image of Stage I across the centerline of the bridge.



LEGEND	
	WORK AREA
	IMPACT ATTENUATOR
	TEMPORARY CONCRETE BARRIER
	TEMPORARY BRIDGE TRAFFIC SIGNAL



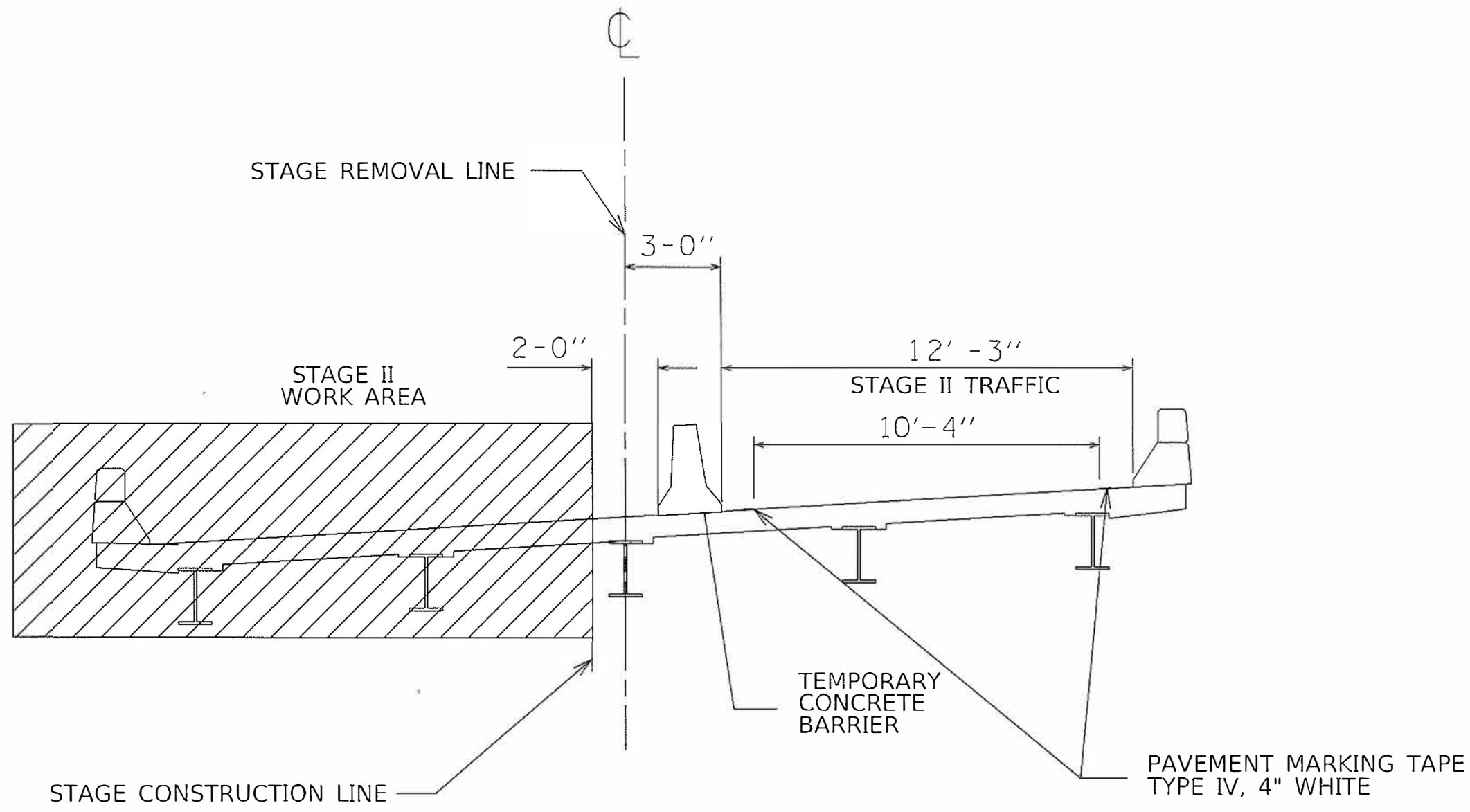
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	DRAWN -	REVISED -
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PLOT DATE = 8/3/2010	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

STAGING DETAILS	
STAGE ONE PLAN	
SCALE	SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
653	(105BR)BRR	MARSHALL	26	10
CONTRACT NO. 68E11				
ILLINOIS FED AID PROJECT				



TYPICAL SECTION
STAGE II

MODEL SHEET
 FILE NAME: C:\Users\jonesce\Documents\18 Bridge Joint Replacement_Sandy Creek\CAD\18 Sandy Creek.dgn

USER NAME = jonesce	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000' / in	CHECKED -	REVISED -
PLOT DATE = 8/8,2018	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGING DETAILS				
STAGE TWO TYPICAL SECTION				
SCALE	SHEET	OF	SHEETS	STA TO STA





F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
653	(105BR)BR	MARSHALL	26	11
CONTRACT NO. 68E11				
ILLINOIS FED AID PROJECT				

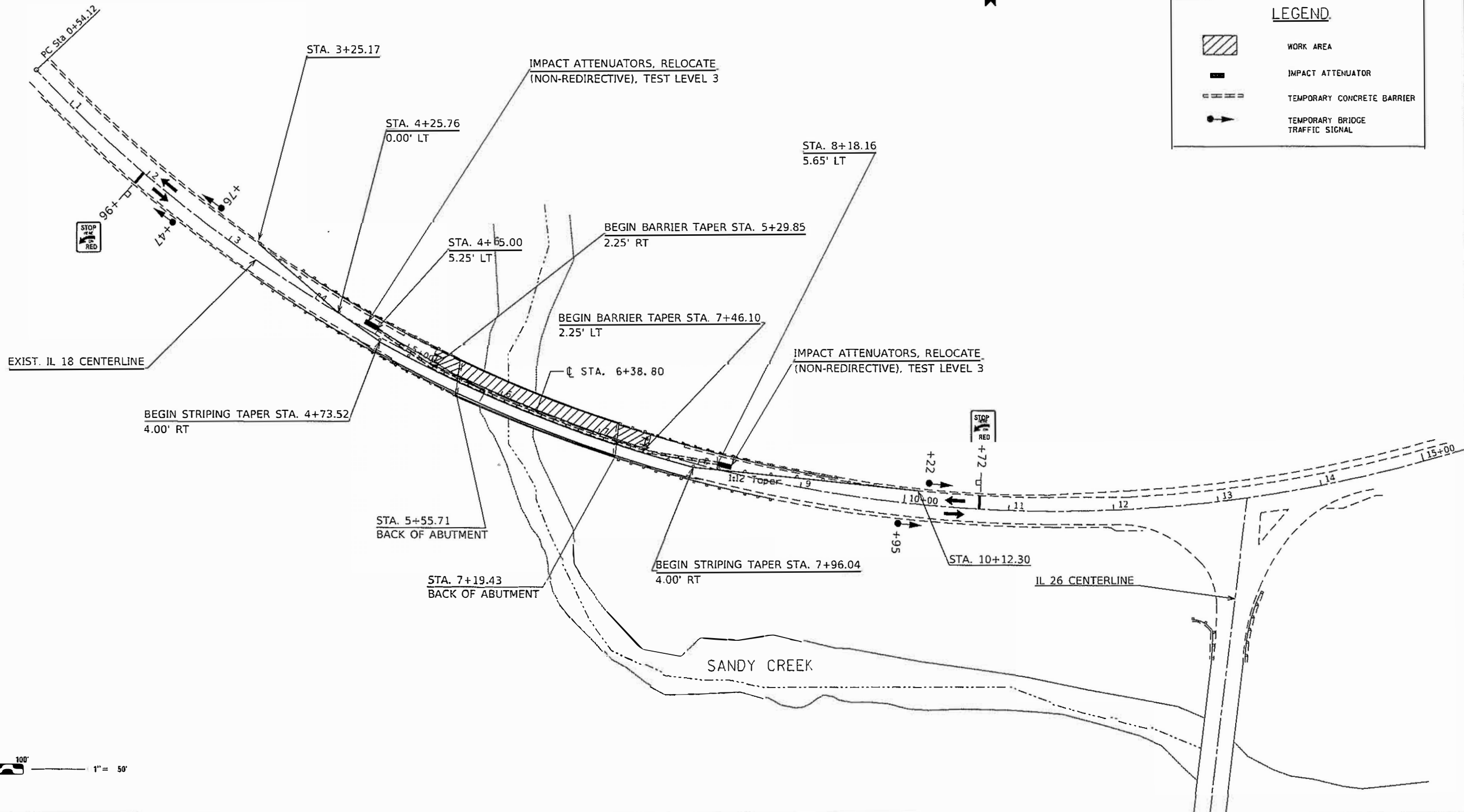
NOTES

Refer to Highway Standards 701321 and 701201 in conjunction with this sheet for exact placement of traffic management devices and other clarifications as construction symbols and dimensioning were duplicated off of these standards. The placement of Stage II Traffic Control Devices shall be a mirror image of Stage I across the centerline of the bridge.



LEGEND

-  WORK AREA
-  IMPACT ATTENUATOR
-  TEMPORARY CONCRETE BARRIER
-  TEMPORARY BRIDGE TRAFFIC SIGNAL



MODEL SHEETS
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PLOT SCALE = 100 0000 / 1 in	DRAWN -	REVISED -
PLOT DATE = 8/8/2018	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGING DETAILS	
STAGE TWO PLAN	
SCALE	SHEET OF SHEETS STA TO STA

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
653	(105BR)BR	MARSHALL	26	12
CONTRACT NO. 68E11				
ILLINOIS FED. AID PROJECT				

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

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

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

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the special provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

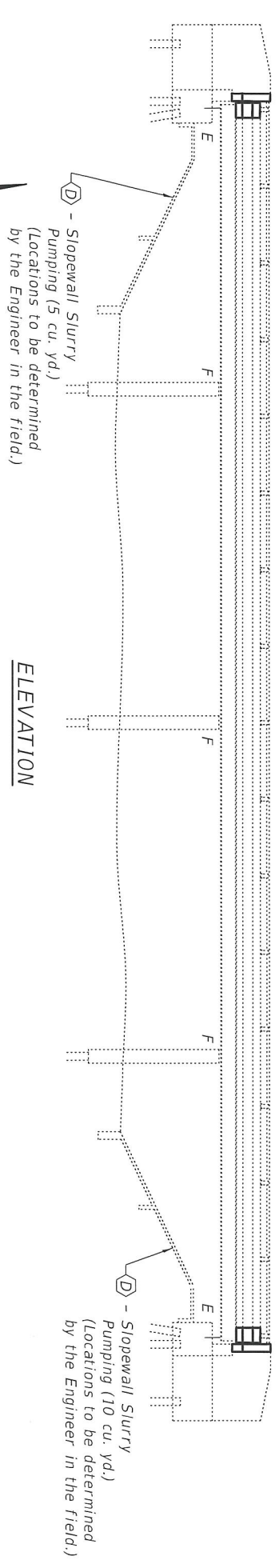
Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

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.

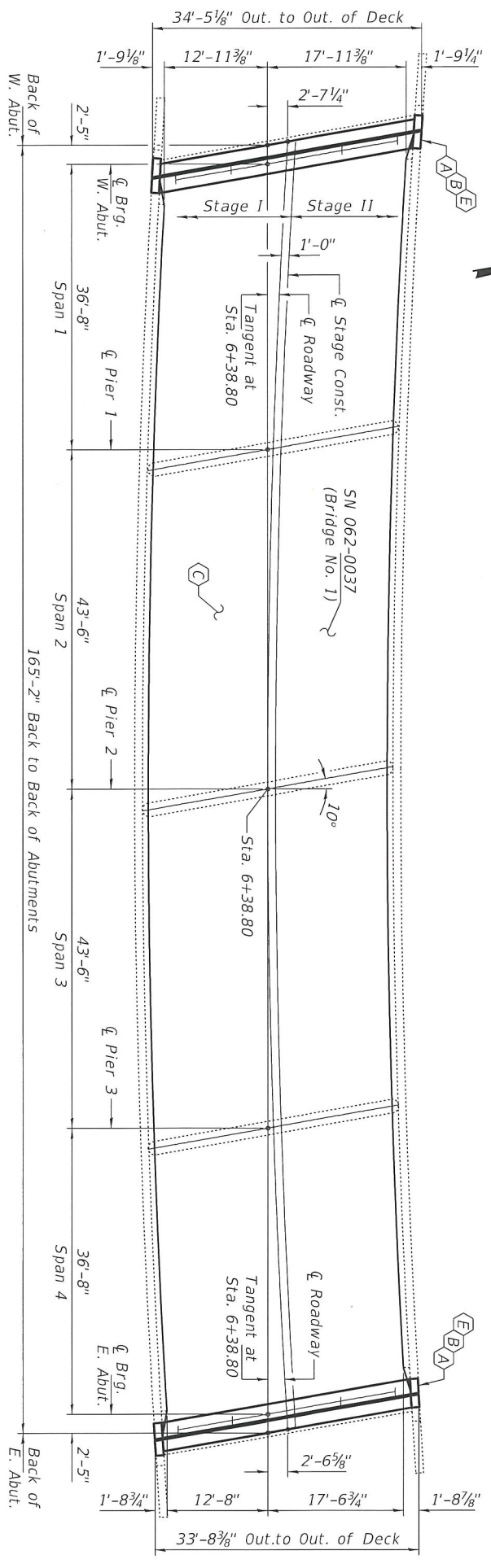
Cleaning and painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". Areas to be painted shall consist of all beam ends, end diaphragms, and all existing structural steel within 10 feet of the expansion joints. Also included in the areas to be painted are the exterior surfaces and bottom of the bottom flange of the fascia beams. The designated areas to be painted shall be cleaned per Near White Blast Cleaning - SSPC-SP10 and shall be painted according to the requirements of Paint System 1 - OZ/E/U. The color of the final finish coat shall be Interstate Green, Munsell No. 7.56 4/8.

Containment and disposal as specified shall follow the special provision for "Containment and Disposal of Lead Paint Blast Residue". A minimum of two air monitors shall be used for this project. The SSPC-QP1 and SSPC-QP2 painting Contractor certifications will be required.

Synthetic fibers shall be added to the Bridge Deck Microsilica Concrete Overlay. See Special Provisions.



ELEVATION



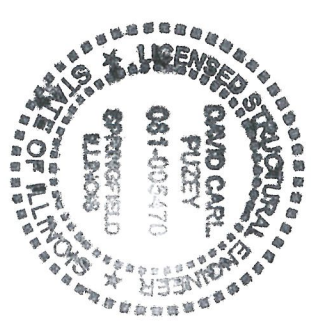
PLAN

- (A) - Remove & Replace Expansion Joints at Abutments.
- (B) - Remove & Replace Bearings at Abutments.
- (C) - Remove & Replace Wearing Surface
- (D) - Sloped Wall Slurry Pumping
- (E) - Repaint 10' of Beam Ends.

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	9.2
Concrete Superstructure	Cu. Yd.	9.2
Reinforcement Bars, Epoxy Coated	Pound	990
Bar Splicers	Each	22
HMA Surface Removal	Sq. Yd.	540
Bridge Deck Scarification, 3/4"	Sq. Yd.	540
Bridge Deck Microsilica Concrete Overlay, 2 1/2"	Sq. Yd.	540
Bridge Deck Grooving	Sq. Yd.	515
Pretorned Joint Strip Seal	Foot	70
Protective Coat	Sq. Yd.	27
Jack & Remove Existing Bearings	Each	10
Elastomeric Bearing Assembly, Type I	Each	10
Furnishing & Erecting Structural Steel	Pound	1110
Anchor Bolts, 1"Ø	Each	20
Sloped Wall Slurry Pumping	Cu. Yd.	15
Containment & Disposal of Lead Paint	L.S.	1
Cleaning Residues, Bridge No. 1	L.S.	1
Cleaning & Painting Structural Steel, Bridge No. 1	L.S.	1

* On new concrete areas only.



Expires: November 30, 2018

DESIGNED - *Samuel S. DeLo*
 CHECKED - *Stephen*
 DRAWN - *Steffen*
 CHECKED - *smc*

EXAMINED - *Timothy A. ...*
 PASSED - *...*

DATE - OCTOBER 2, 2018

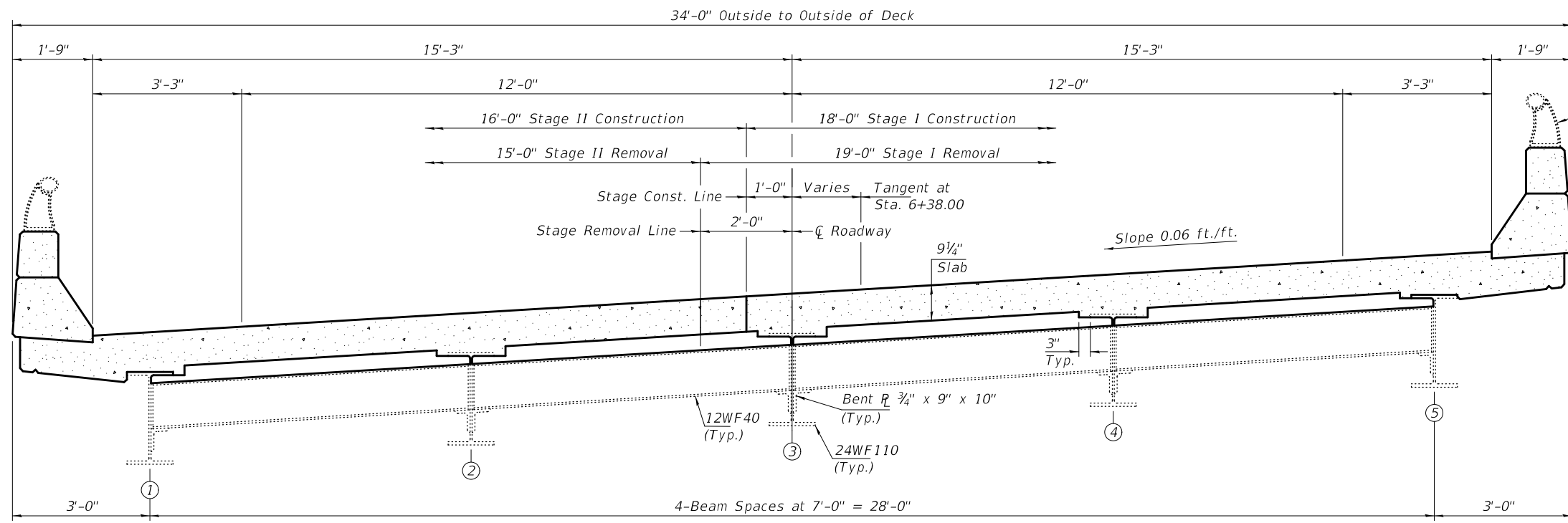
REVISIONS:

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
 ILLINOIS ROUTE 18 OVER SANDY CREEK
 SN 062-0037

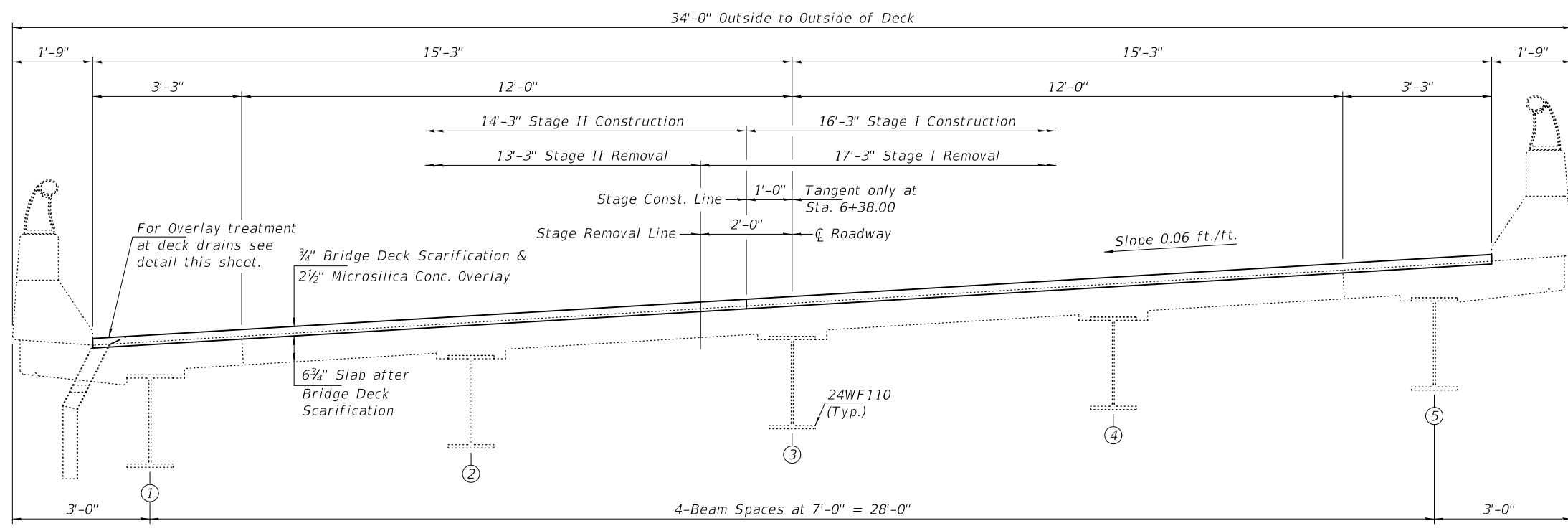
SHEET 1 OF 7 SHEETS

EAS FILE: Z371
 SECTION: (1058)RBR
 COUNTY: MARSHALL
 SHEETS: 28
 SHEET NO.: 13
 CONTRACT NO.: 68E11



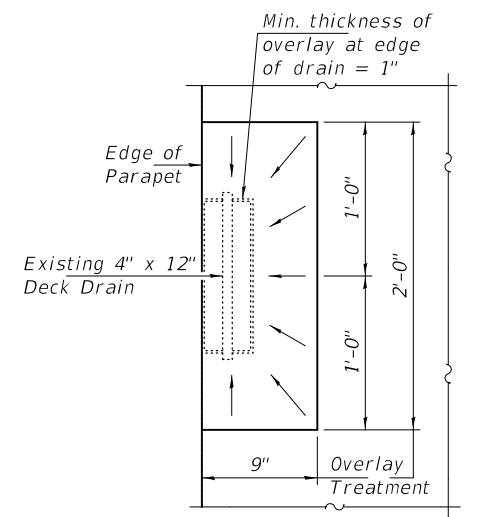
Existing Rail Post to be removed, stored, and re-installed. See details on sheet 4 of 7. (Typ.)

CROSS SECTION AT ABUTMENTS
(Looking East)



For Overlay treatment at deck drains see detail this sheet.

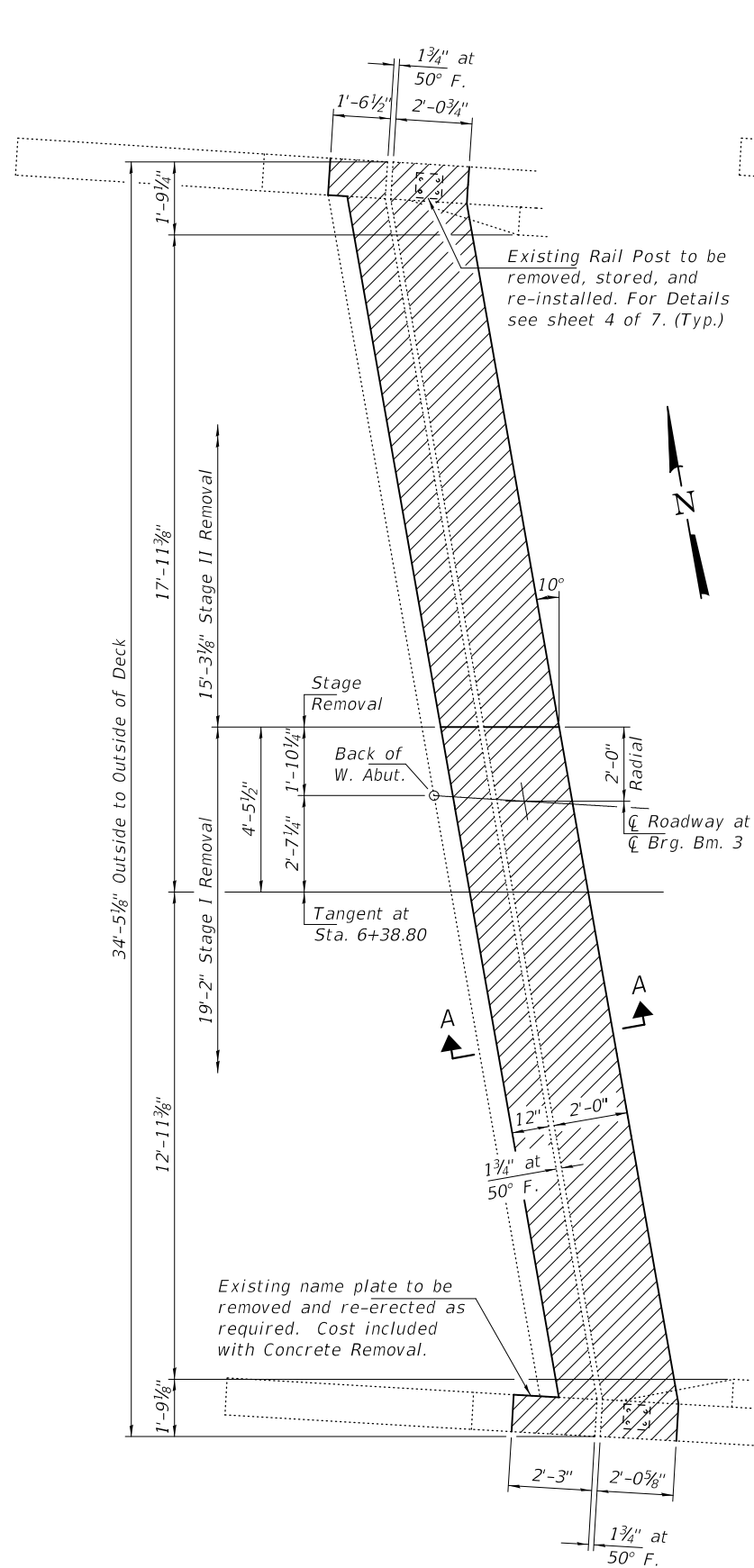
CROSS SECTION AT MID SPANS
(Looking East)



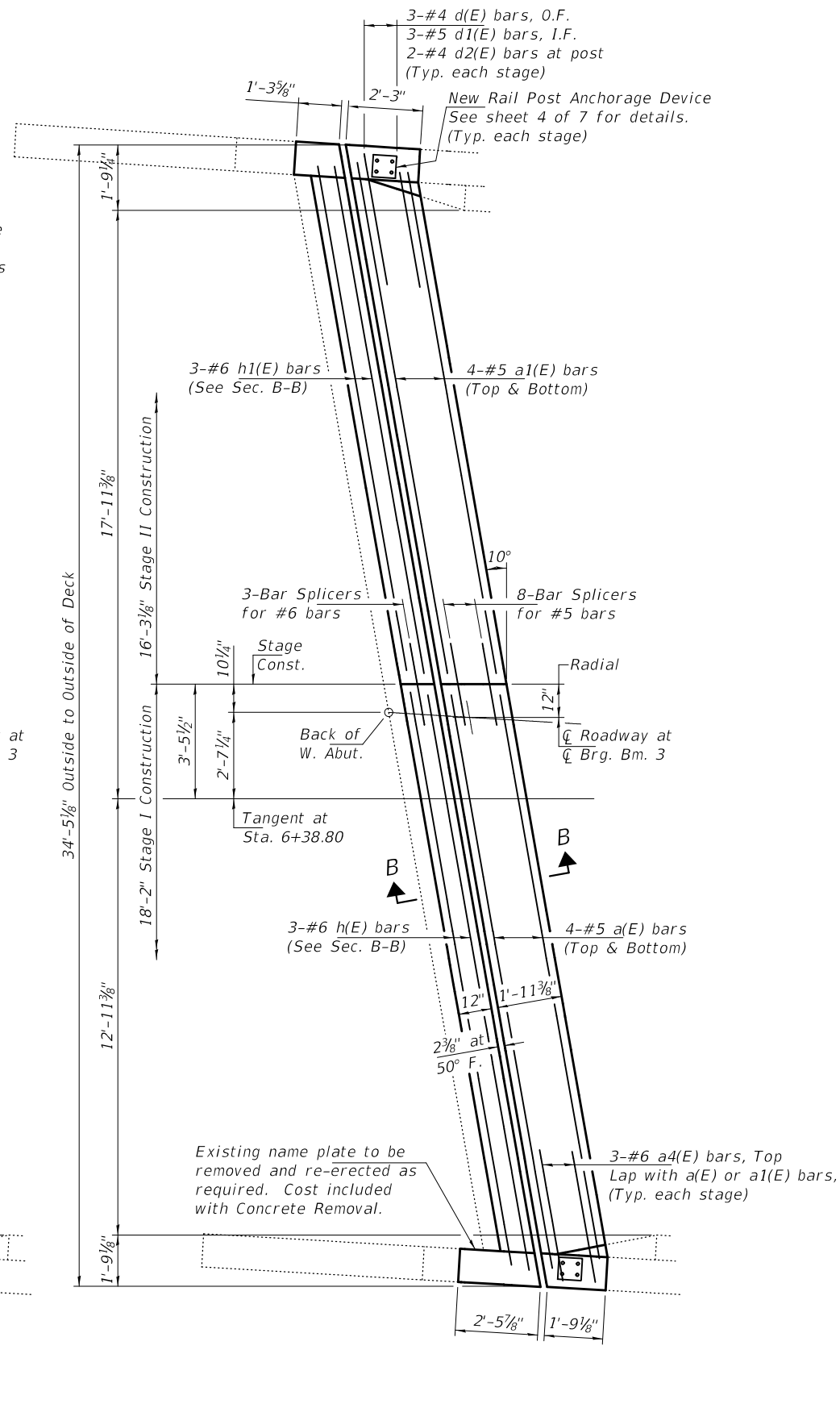
Note:
All dimensions along radii.

OVERLAY TREATMENT AT DRAINS

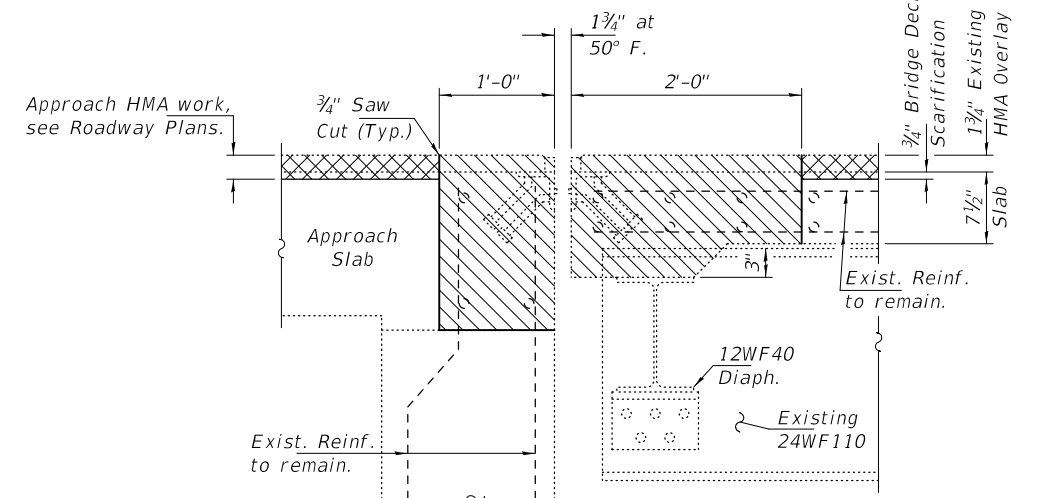
DESIGNED - HSS	EXAMINED	DATE - OCTOBER 2, 2018	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS AND STAGING DETAILS SN 062-0037	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
CHECKED - SMR	<i>Timothy A. Daulton</i> ENGINEER OF STRUCTURAL SERVICES	REVISED -			2371	(105BR)BRR	MARSHALL	26	14	
DRAWN - STEFFEN	PASSED <i>Carl Ringer</i> ENGINEER OF BRIDGES AND STRUCTURES	REVISED -			CONTRACT NO. 68E11					
CHECKED - HSS SMR					SHEET 2 OF 7 SHEETS					
					ILLINOIS FED. AID PROJECT					



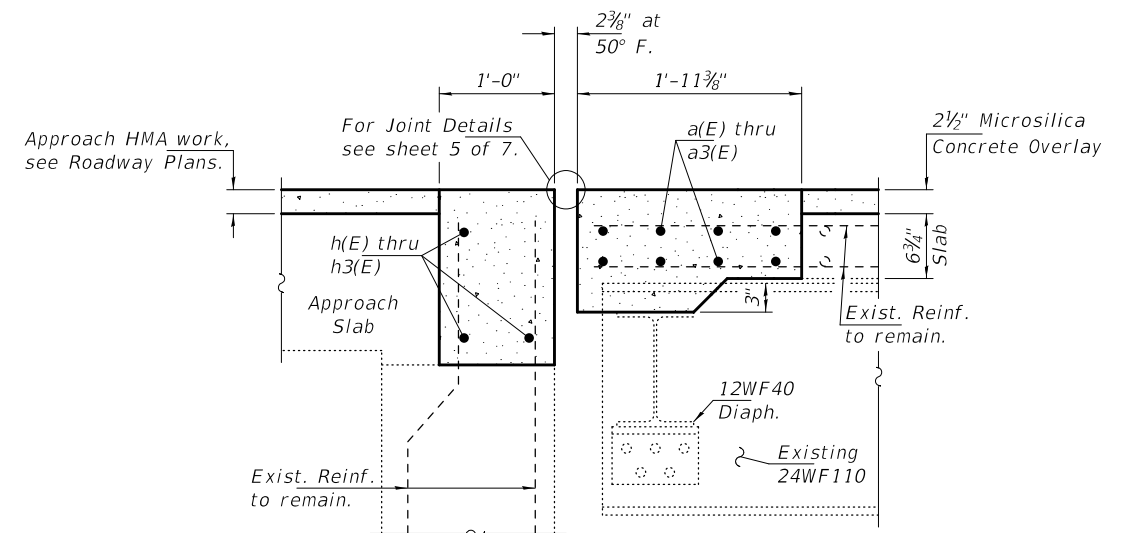
CONCRETE REMOVAL (W. ABUT.)



CONCRETE REPLACEMENT (W. ABUT.)



SECTION A-A
(Dims. at Rt. L's)



SECTION B-B
(Dims. at Rt. L's)

BILL OF MATERIAL (W. ABUT.)

Bar	No.	Size	Length	Shape
a(E)	8	#5	17'-2"	—
a1(E)	8	#5	15'-3"	—
a4(E)	6	#6	4'-0"	—
d(E)	6	#4	4'-9"	L
d1(E)	6	#5	3'-5"	L
d2(E)	4	#4	2'-1"	□
h(E)	3	#6	17'-2"	—
h1(E)	3	#6	15'-3"	—
Concrete Removal		Cu. Yd.	4.7	
Concrete Superstructure		Cu. Yd.	4.7	
Bar Splicers		Each	11	
Reinforcement Bars, Epoxy Coated		Pound	500	

Notes:
Hatched areas indicate Concrete Removal.
Cross Hatched areas indicate HMA Surface Removal & 3/4" Bridge Deck Scarification.
For parapet details and reinforcement bending details see sheet 4 of 7.

DESIGNED - HSS
CHECKED - SMR
DRAWN - STEFFEN
CHECKED - HSS SMR

EXAMINED
PASSED
Timothy A. [Signature]
ENGINEER OF STRUCTURAL SERVICES
[Signature]
ENGINEER OF BRIDGES AND STRUCTURES

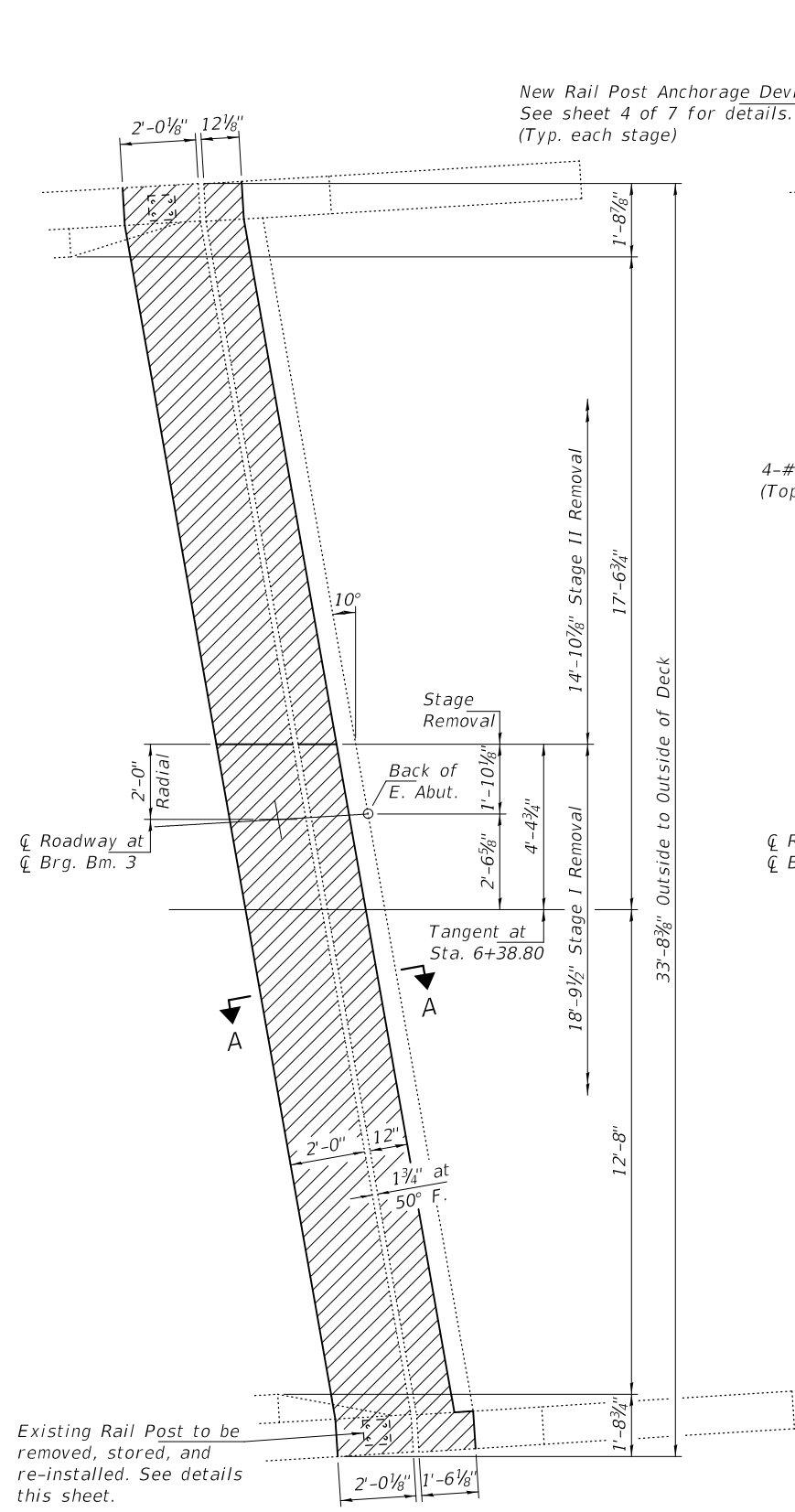
DATE - OCTOBER 2, 2018
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

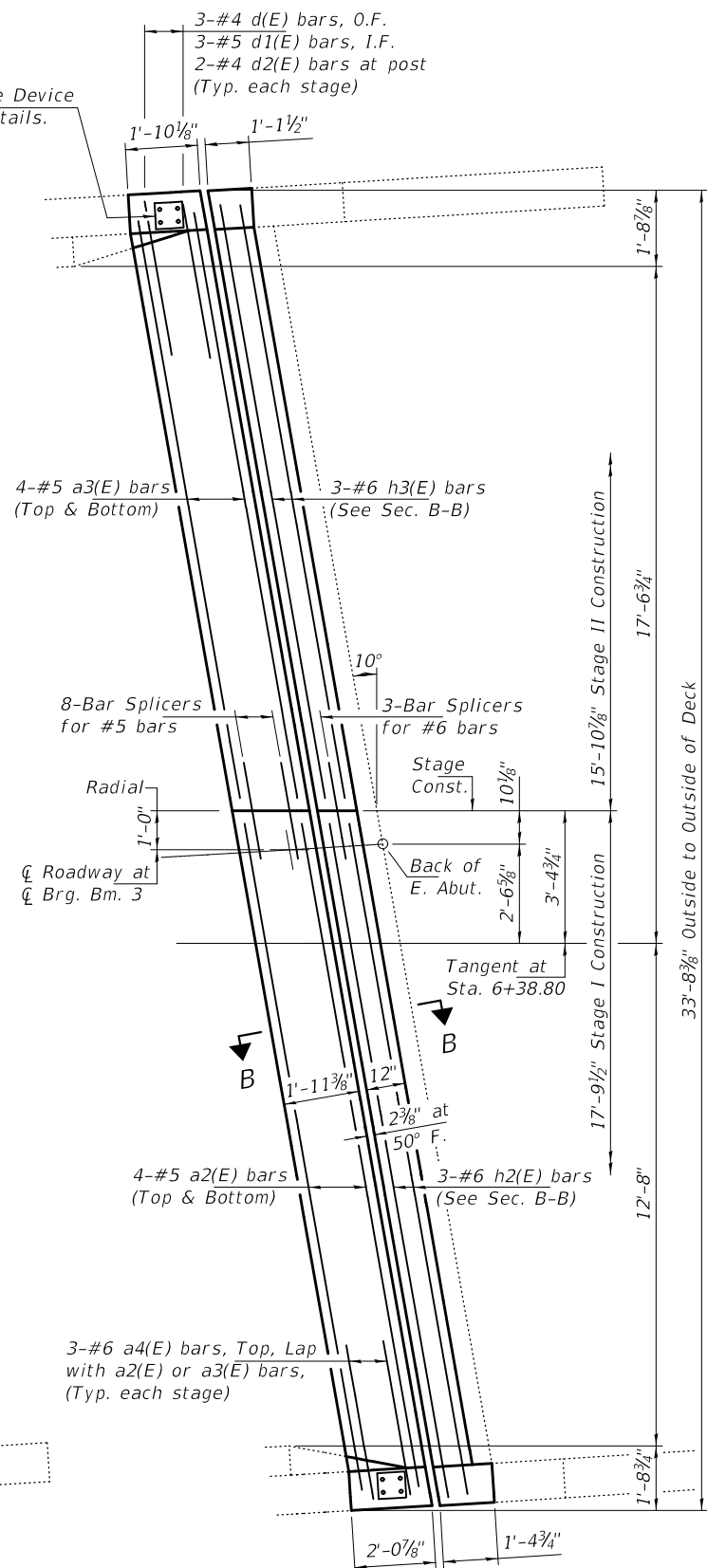
JOINT REMOVAL & REPLACEMENT DETAILS AT WEST ABUTMENT
SN 062-0037

SHEET 3 OF 7 SHEETS

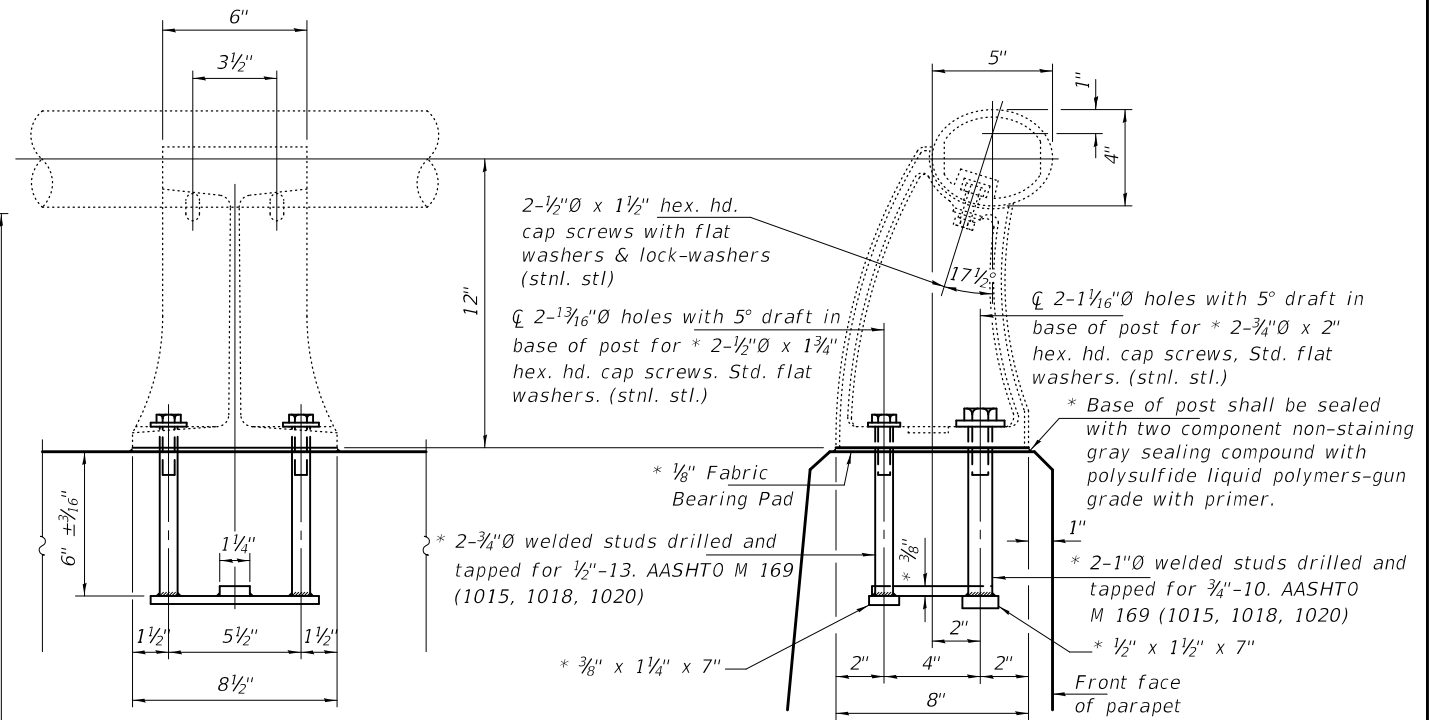
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2371	(105BR)BRR	MARSHALL	26	15
ILLINOIS FED. AID PROJECT			CONTRACT NO. 68E11	



CONCRETE REMOVAL (E. ABUT.)



CONCRETE REPLACEMENT (E. ABUT.)

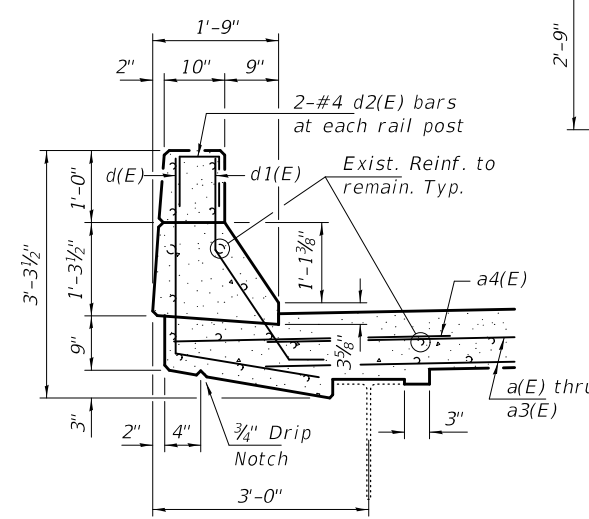


RAIL POST DETAILS

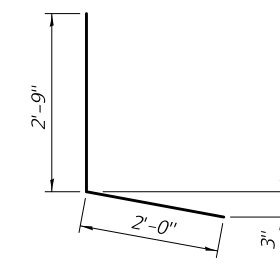
* New Rail Post anchorage devices will be required at each location where posts are connected to new construction. Cost included with Concrete Superstructure.



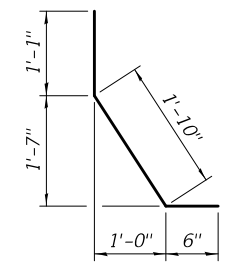
BAR a4(E)



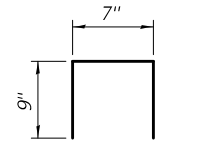
TYPICAL PARAPET SECTION



BAR d(E)



BAR d1(E)



BAR d2(E)

BILL OF MATERIAL (E. ABUT.)

Bar	No.	Size	Length	Shape
a2(E)	8	#5	16'-9"	—
a3(E)	8	#5	14'-10"	—
a4(E)	6	#6	4'-0"	—
d(E)	6	#4	4'-9"	L
d1(E)	6	#5	3'-5"	L
d2(E)	4	#4	2'-1"	□
h2(E)	3	#6	16'-9"	—
h3(E)	3	#6	14'-10"	—
Concrete Removal		Cu. Yd.	4.5	
Concrete Superstructure		Cu. Yd.	4.5	
Bar Splicers		Each	11	
Reinforcement Bars, Epoxy Coated		Pound	490	

Notes:
Hatched areas indicate Concrete Removal.
Cross Hatched areas indicate HMA Surface Removal & 3/4" Bridge Deck Scarification.
For Sections A-A & B-B see sheet 3 of 7.

DESIGNED - HSS
CHECKED - SMR
DRAWN - STEFFEN
CHECKED - HSS SMR

EXAMINED - *Timothy A. Smith*
ENGINEER OF STRUCTURAL SERVICES
PASSED - *Carl Ringer*
ENGINEER OF BRIDGES AND STRUCTURES

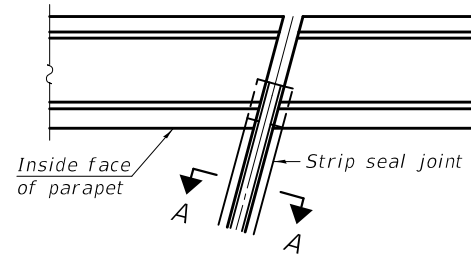
DATE - OCTOBER 2, 2018
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

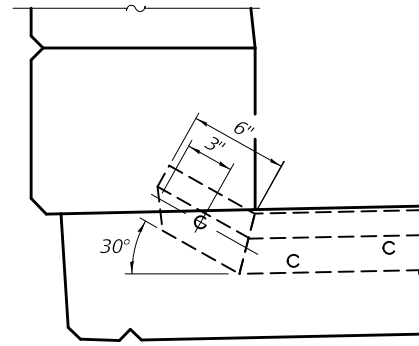
JOINT REMOVAL & REPLACEMENT DETAILS AT EAST ABUTMENT
SN 062-0037

SHEET 4 OF 7 SHEETS

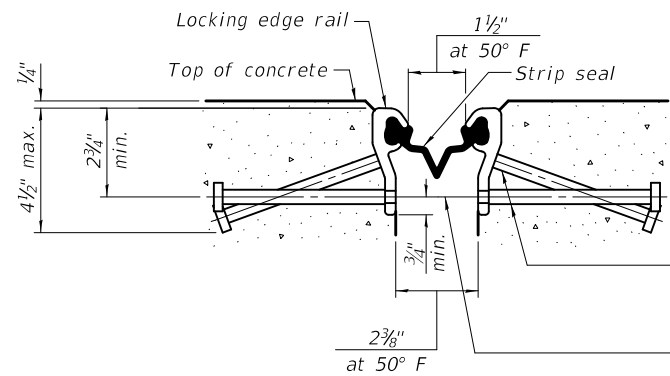
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2371	(105BR)BRR	MARSHALL	26	16
CONTRACT NO. 68E11				
ILLINOIS FED. AID PROJECT				



FOR SKEWS $\leq 30^\circ$
PLAN AT PARAPET



ELEVATION AT PARAPET
 (Skews $\leq 30^\circ$)



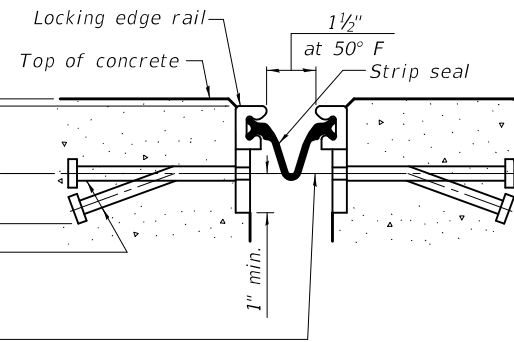
SHOWING ROLLED RAIL JOINT

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

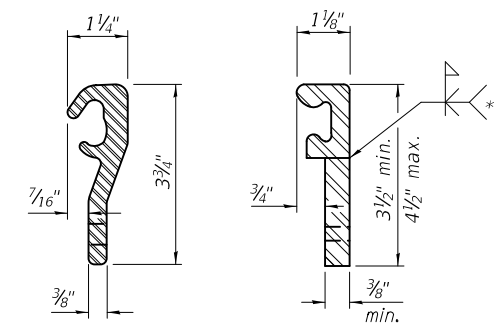
$\frac{3}{8}$ " ϕ threaded rods in $\frac{7}{16}$ " ϕ holes at ± 4 "-0" cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.

SECTION A-A

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



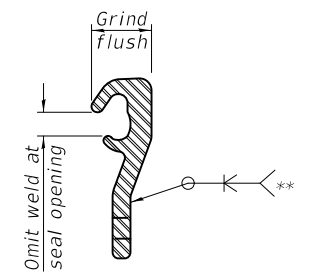
SHOWING WELDED RAIL JOINT



LOCKING EDGE RAILS
 ROLLED (EXTRUDED) RAIL WELDED RAIL

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	70

EJ-SS1 LT30/REPS

6-22-18

DESIGNED - HSS	CHECKED - SMR
DRAWN - STEFFEN	CHECKED - HSS SMR

EXAMINED	<i>Timothy A. Daulton</i> ENGINEER OF STRUCTURAL SERVICES
PASSED	<i>Carl R. Meyer</i> ENGINEER OF BRIDGES AND STRUCTURES

DATE - OCTOBER 2, 2018
REVISED -
REVISED -

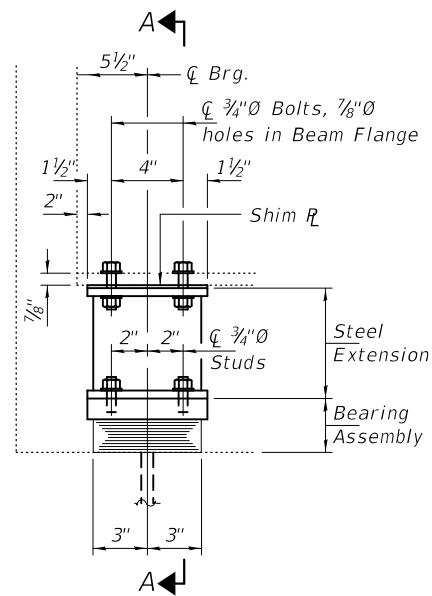
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL DETAILS
 SN 062-0037

SHEET 5 OF 7 SHEETS

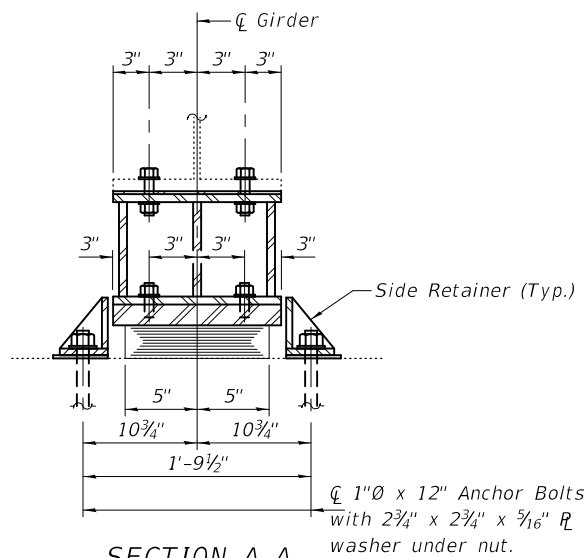
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2371	(105BR)BRR	MARSHALL	26	17
ILLINOIS			FED. AID PROJECT	

CONTRACT NO. 68E11



ELEVATION AT ABUTMENT

TYPE I ELASTOMERIC EXP. BRG.



SECTION A-A

BEAM REACTIONS

R _∅	(K)	15.8
R _⊥	(K)	32.2
Imp.	(K)	9.7
R (Total)	(K)	57.7

Notes:

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

New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.

Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Adjustment must account for deck heave due to pack rust (if present).

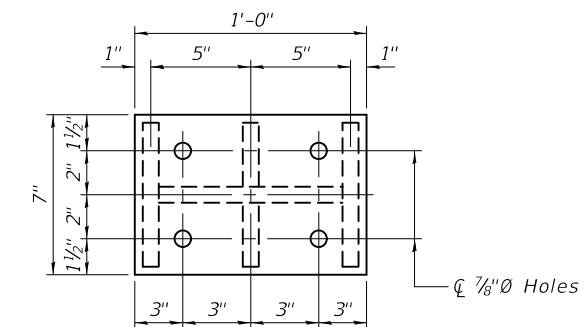
Min. jack capacity = 30 Tons.

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (F_y=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

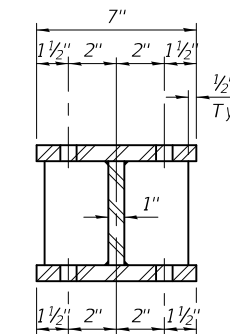
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.

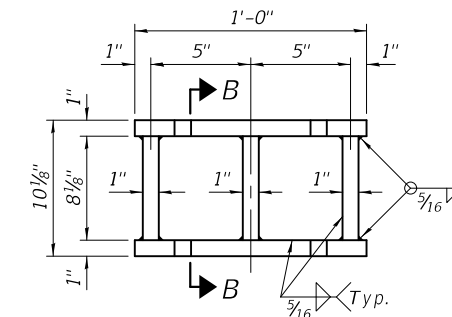
New bearing plates, steel extensions, shim plates, side retainers, anchor bolts, connection bolts, nuts and washers shall be galvanized according to AASHTO M111 or M232 as applicable.



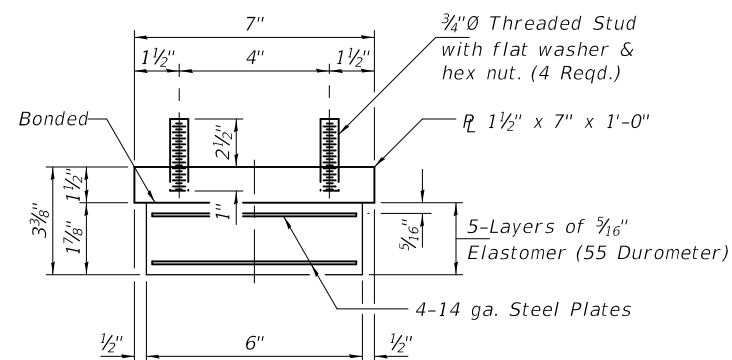
PLAN TOP AND BOTTOM PLATE



SECTION B-B



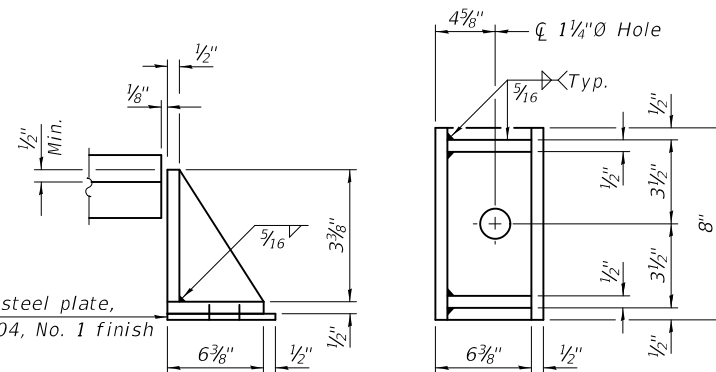
STEEL EXTENSION DETAIL



BEARING ASSEMBLY

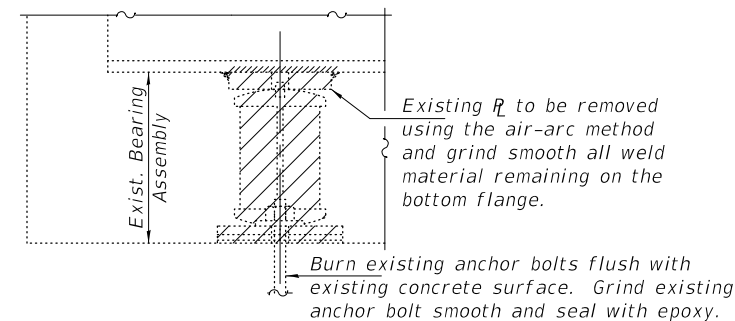
Note:

Shim plates shall not be placed under Bearing Assembly.



SIDE RETAINER

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



EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	10
Jack and Remove Existing Bearings	Each	10
Furnishing and Erecting Structural Steel	Pound	1110
Anchor Bolts, 1"∅	Each	20

DESIGNED - HSS
CHECKED - SMR
DRAWN - STEFFEN
CHECKED - HSS SMR

EXAMINED	<i>Timothy A. Andujar</i> ENGINEER OF STRUCTURAL SERVICES
PASSED	<i>Carl R. Roper</i> ENGINEER OF BRIDGES AND STRUCTURES

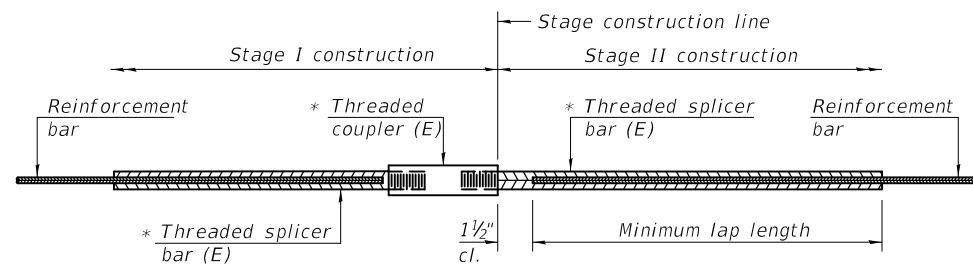
DATE - OCTOBER 2, 2018
REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BEARING REPLACEMENT DETAILS
SN 062-0037**

SHEET 6 OF 7 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2371	(105BR)BRR	MARSHALL	26	18
CONTRACT NO. 68E11				
ILLINOIS FED. AID PROJECT				

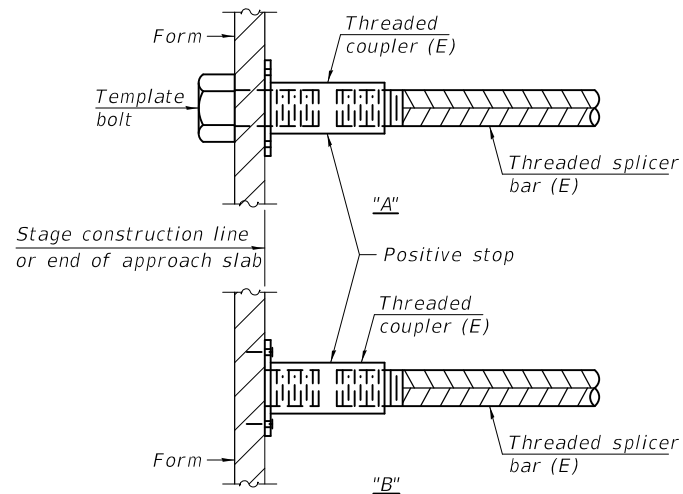


STANDARD BAR SPLICER ASSEMBLY

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
Bridge Deck	#5	16	3'-6"
Abutment	#6	6	4'-0"

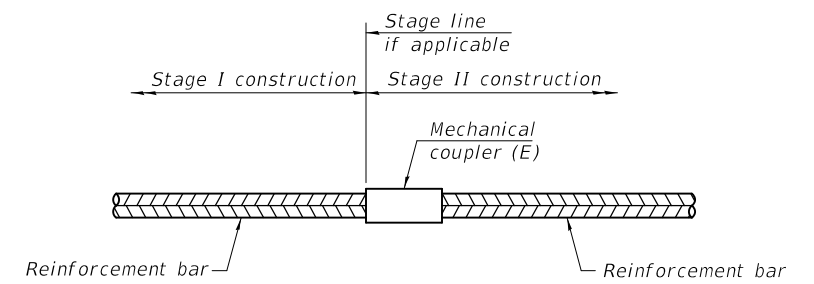


INSTALLATION AND SETTING METHODS

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

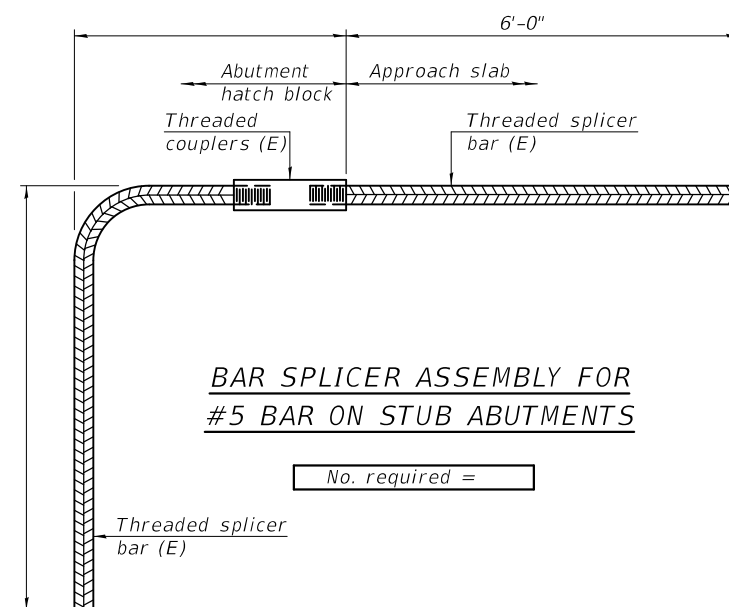
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



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

2-17-2017

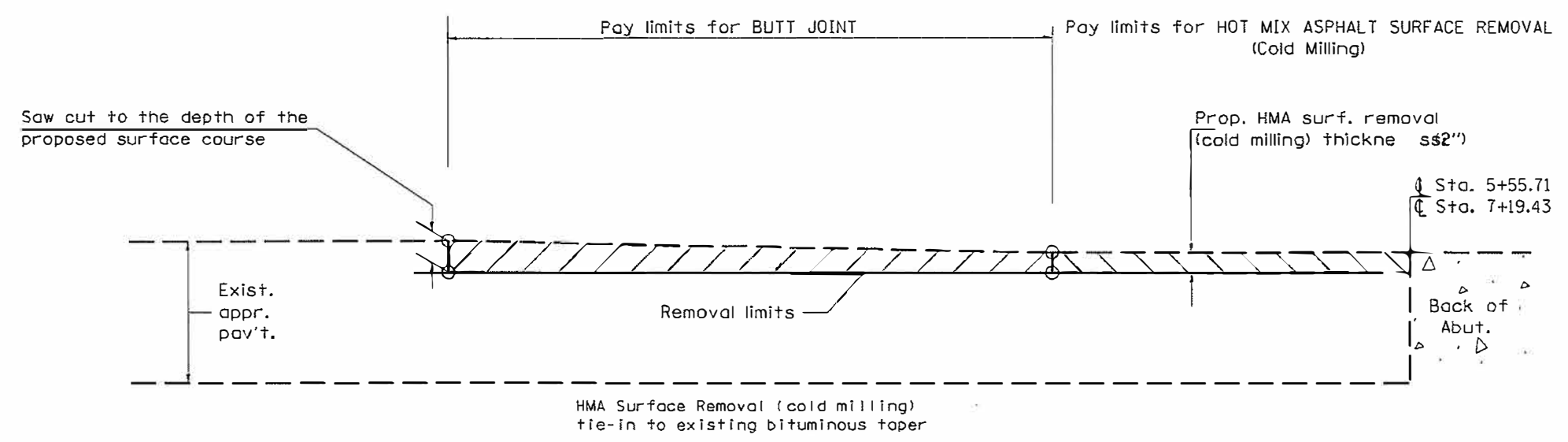
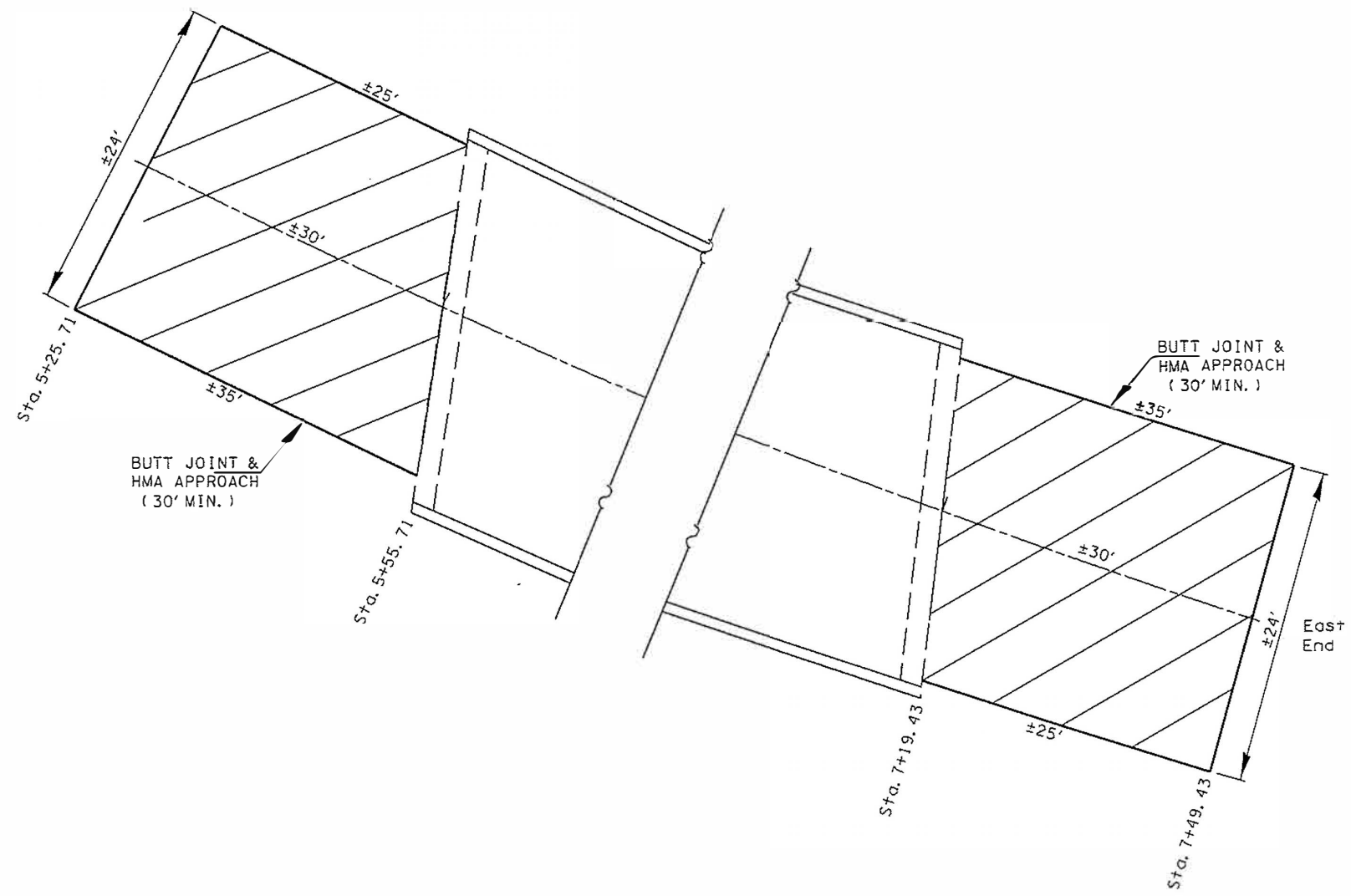
DESIGNED - HSS	EXAMINED	DATE - OCTOBER 2, 2018
CHECKED - SMR	<i>Timothy A. Daulton</i> ENGINEER OF STRUCTURAL SERVICES	REVISED -
DRAWN - STEFFEN	PASSED	REVISED -
CHECKED - HSS SMR	<i>Carl Kruger</i> ENGINEER OF BRIDGES AND STRUCTURES	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
SN 062-0037**

SHEET 7 OF 7 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2371	(105BR)BRR	MARSHALL	26	19
CONTRACT NO. 68E11				
ILLINOIS FED. AID PROJECT				



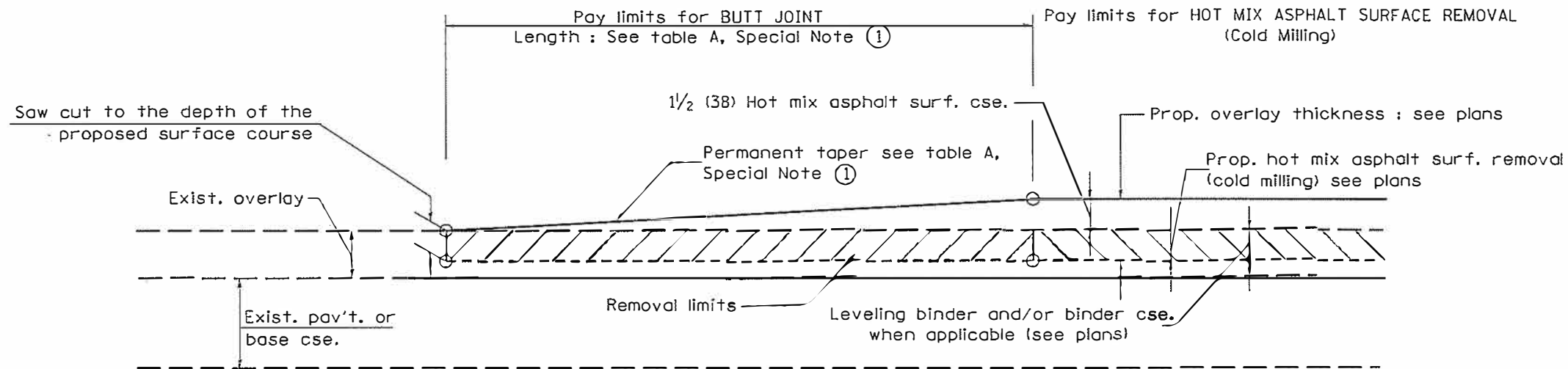
MODEL SHEETS
 FILE NAME: C:\WORK\DESIGN\18 Bridge Joint Reinforcement_Sandy Creek\000118_Sandy Creek.dwg

USER NAME = jgncscc	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 1/8" = 100' 0000	CHECKED -	REVISED -
PLOT DATE = 7/26/2018	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGED BUTT JOINT DETAIL				
SN. 062-0037				
SCALE	SHEET	OF	SHEETS	STA TO STA

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
653	(1058R)8RR	MARSHALL	26	20
			CONTRACT NO. 68E11	
ILLINOIS FED AID PROJECT				



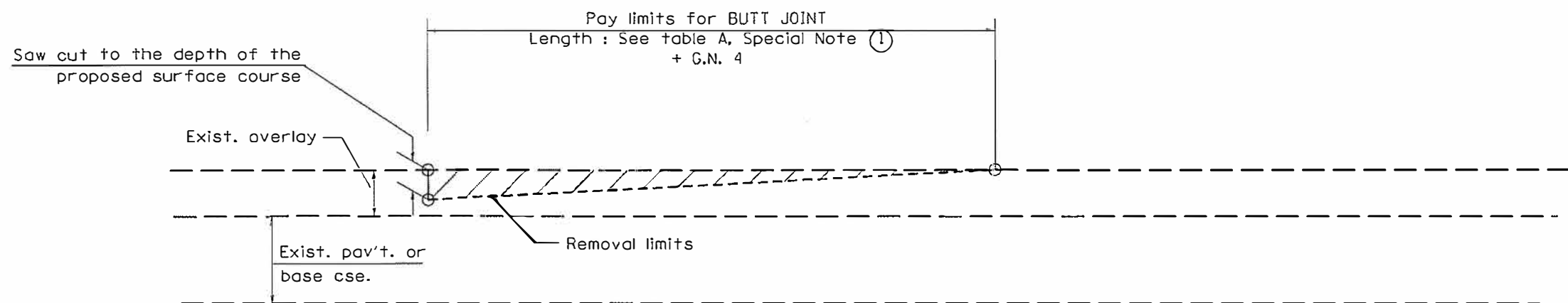
CASE 1 : WITH HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)

**TABLE A
TAPER RATES**

SPECIAL NOTE NUMBER	ELEMENT	MAINLINE INTERSTATES & 4-LANE EXPRESSWAYS	ALL OTHERS
①	BUTT JOINT TAPER RATE	1:480	1:240
②	TEMPORARY RAMP TAPER RATE	1:80	1:40

GENERAL NOTES

1. The work shall be done in accordance with Article 406.08 and the Special Provision for Butt Joints.
2. The pavement surface to be removed may be either bituminous or P.C. concrete. The work shall be performed in accordance with Article 440.04 and the Special Provisions for Butt Joints.
3. The saw cut joints shall be primed just prior to the placing of bituminous material. The work will be in accordance with the applicable portions of Article 406.05.
4. The length of butt joint is based on the taper rate times change in cold milling depth within the butt joint pay limits, unless otherwise indicated.
5. Temporary ramps are paid for separately and not included in the cost of the butt joints.



CASE 2 : NO HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)

All dimensions are in inches (millimeters) unless otherwise noted.

01-01-97	RENUM. C-23.01, NEW REVISION BOX	T.P.	08-21-13	MAJOR MODIFICATIONS	R.D.
04-01-97	CORRECTION TO DEPTH	J.A.	02-29-16	MINOR CORRECTIONS	R.D.
09-15-05	REVISED DESIGNER NOTE	M.M.A.	04-12-16	MINOR CORRECTIONS	R.D.
10-16-06	REVISED TO 2007 SPEC.	M.A.	02-14-17	ADDED NOTE 5	R.D.

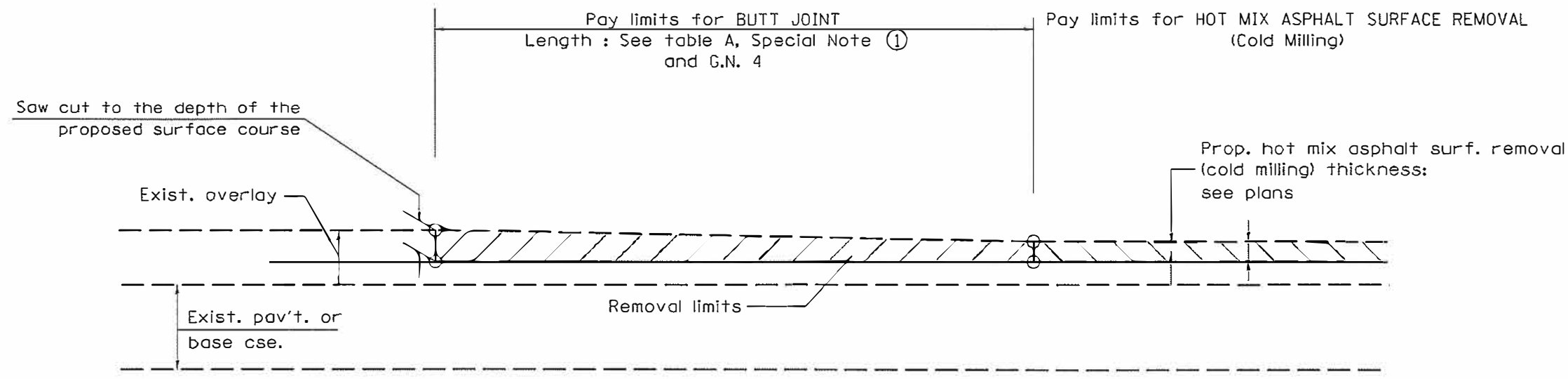
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BUTT JOINTS
SN. 062-0037**

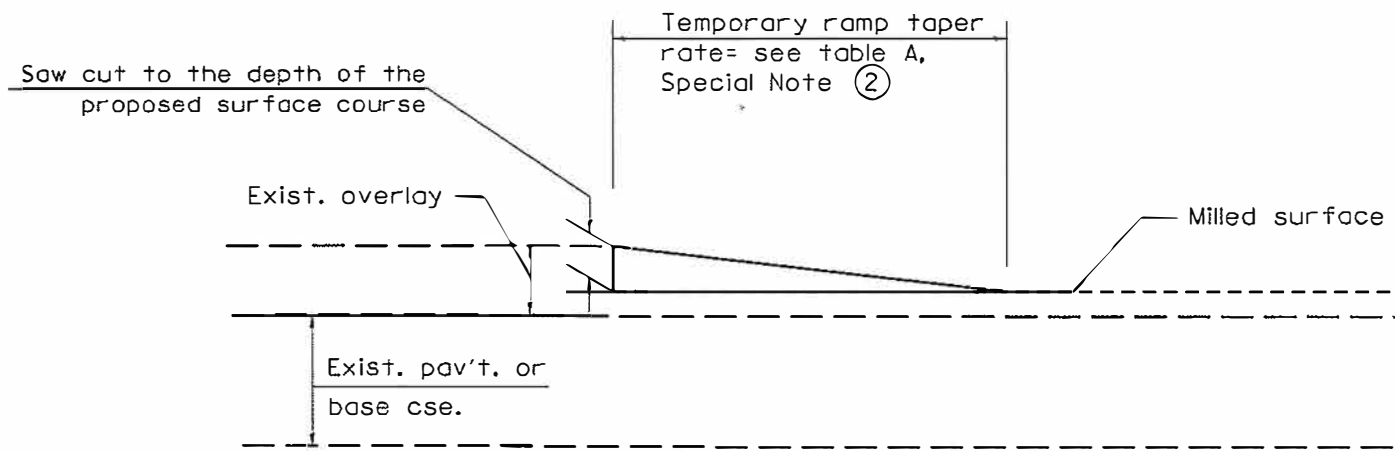
NOT TO SCALE

SHT. 1 OF 3
CADD STD. 406101-04

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
653	(105BR)BRR	MARSHALL	26	21
				CONTRACT NO. 68E11
FED. ROAD DIST. NO. ILLINDISIFED. AID PROJECT				



**CASE 3 : HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)
TIE-IN TO EXISTING BITUMINOUS TAPER**



DETAIL TEMPORARY RAMP

All dimensions are in inches (millimeters) unless otherwise noted.

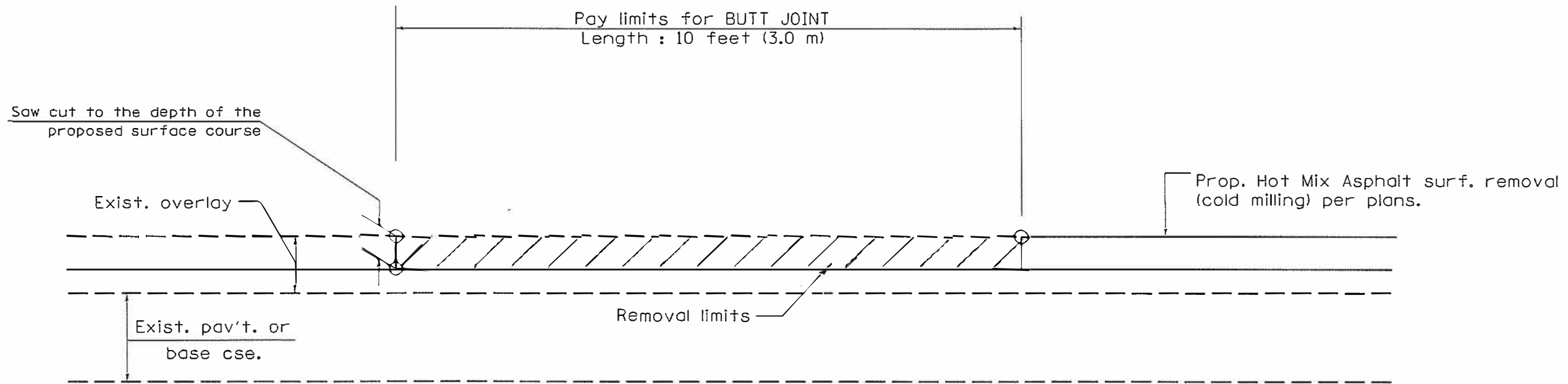
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BUTT JOINTS
SN. 062-0037

NOT TO SCALE

SHT. 2 OF 3
CADD STD. 406101-D4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
553	(105B)BRR	MARSHALL	26	22
				CONTRACT NO. 68E11
FED. RD. DIST. NO. ILL. HOUS. FED. AID PROJECT				



CASE 4 : SINGLE LIFT OVERLAY WITH EQUIVALENT DEPTH
HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)
TIE-IN TO EXISTING BITUMINOUS TAPER

All dimensions are in inches (millimeters) unless otherwise noted.

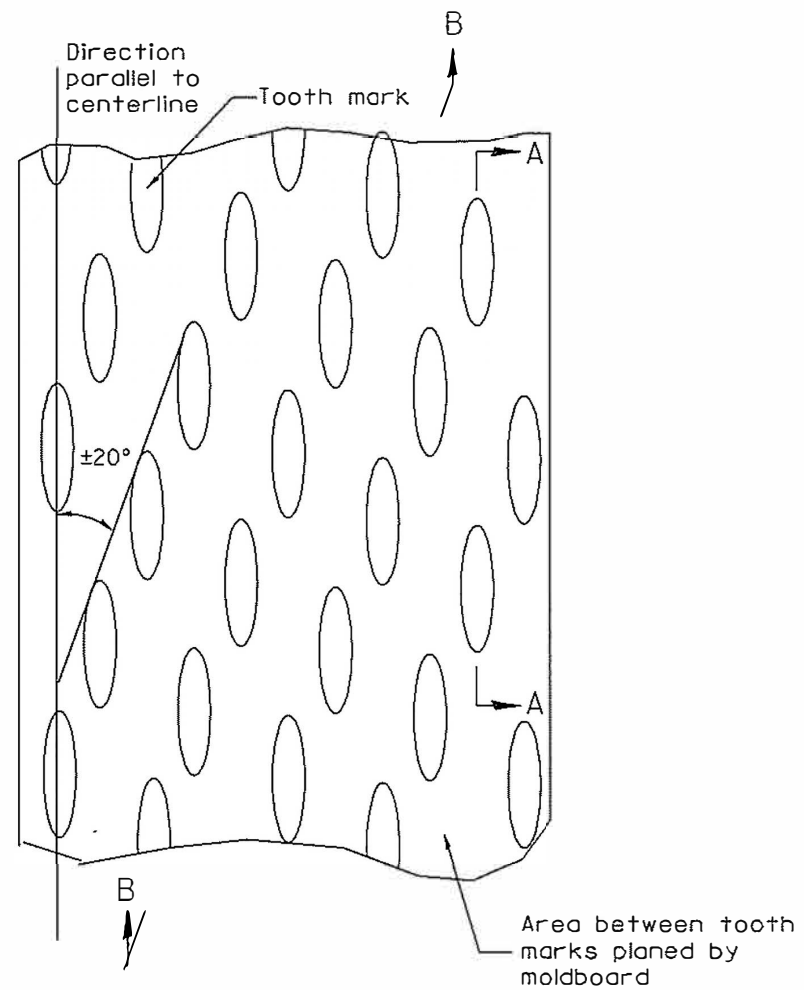
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BUTT JOINTS
 SN. 062-0037

NOT TO SCALE

SHT. 3 OF 3
 CADD STD. 406101-04

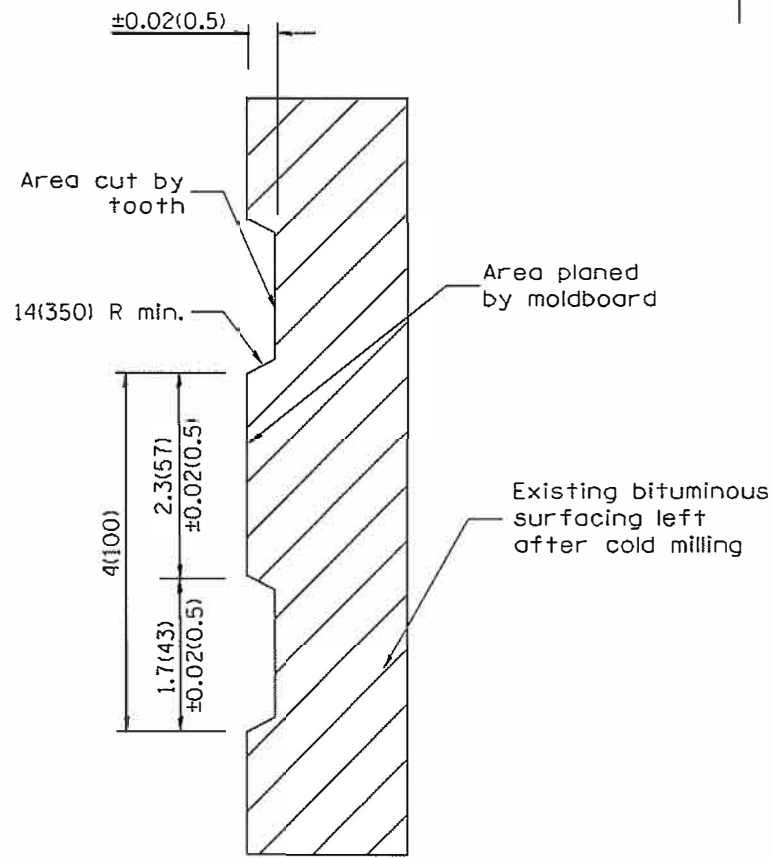
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
653	(105BR)BRR	MARSHALL	26	23
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 68E11	



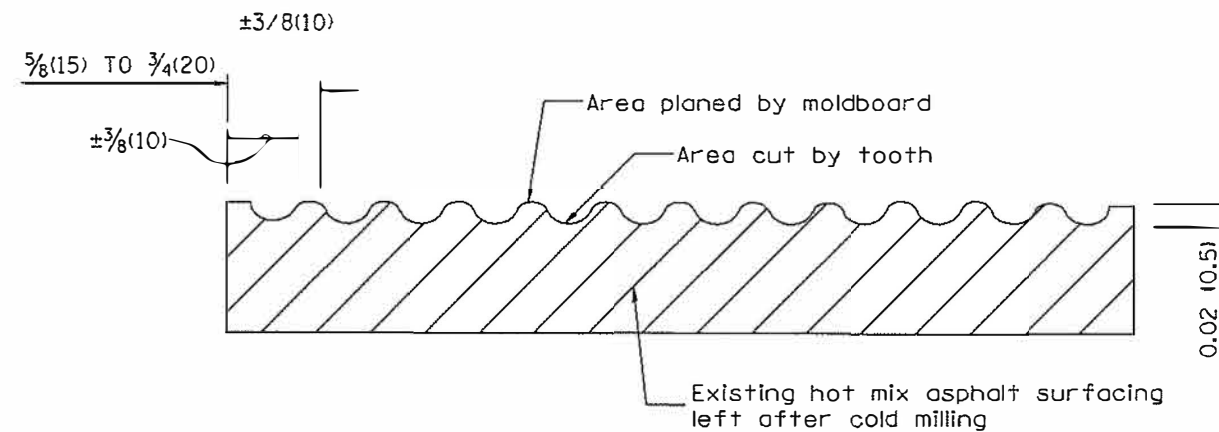
PLAN

General notes:

1. Coldmilling shall consist of two processes: Cutting with carbide teeth mounted on a rotating drum, and planing with a moldboard mounted immediately behind the cutting drum.
2. Other similar patterns will be acceptable if they consist of a smooth, flat, planed surface interspersed with a pattern of discontinuous longitudinal striations.



SECTION A-A



SECTION B-B PROJECTED
PERPENDICULAR TO CENTERLINE

All dimensions are in inches (millimeters) unless otherwise noted.

01-01-97	RENUM. C-104.01, NEW REVISION BOX	T.P.
04-20-98	REMOVED MILLING DETAIL FROM STANDARD	J.A.
09-08-98	CORRECT NOTE LEADER PLACEMENT	R.W.
10-16-06	REVISED TO 2007 SPEC.	M.A.

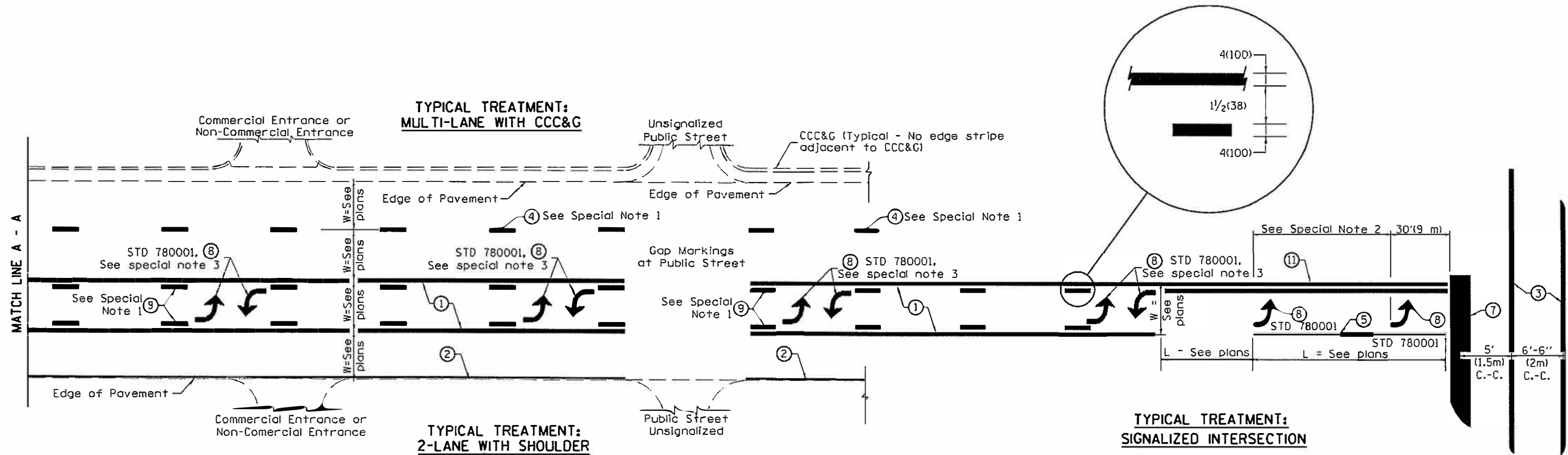
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)
SN. 062-0037

NOT TO SCALE

CADD STD. 440001-04

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
653	(105BRIBRR	MARSHALL	26	24
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 68E11	



FLUSH PAVED MEDIAN: TWO-WAY LEFT TURN LANE WITH ONE-WAY LEFT TURN LANE AT SIGNALIZED INTERSECTION

TYPICAL PAVEMENT MARKING LEGEND

(Note: This is a District Standard Legend. Some elements may not apply to specific project.)

- ① 4(100) Solid (Yellow)
- ② 4(100) Solid (White)
- ③ 2-6(150) Crosswalk @ 6'-6" (2m) min C.-C. (White)
2-8(200) Crosswalk @ 6'-6" (2m) min C.-C. (White) (When traffic signals are present.)
- ④ 6(150) Skip-Dash (White) (See Special Note 1)
- ⑤ 8(200) Solid (White)
- ⑥ 12(300) Diagonal (White) (Item ⑥ is shown on Std. 780001)
- ⑦ 24(600) Stop Bar (White)
- ⑧ Letters & Arrows (See Std. 780001 and Special Notes 2 & 3)
- ⑨ 4(100) Skip-Dash (Yellow) (See Special Note 1)
- ⑩ 12(300) Diagonal (Yellow) (See Table A) 45°
- ⑪ 4(100) Double Solid (Yellow) 11(280) C.-C. See Table A

SPECIAL NOTES

1. Skip-Dash markings will be centered between both ends of city blocks and shall be placed in alignment transversely across the pavement.
2. The following shall apply to arrows located in one-way left turn lanes:
 - A. A minimum of two (2) arrows is required.
 - B. The maximum spacing between arrows is 80' (24 m).
 - C. Arrows shall be evenly spaced if three (3) or more are required.
3. The following shall apply to arrow pairs located in two-way left turn lanes:
 - A. A minimum of two (2) arrow pairs is required.
 - B. The maximum spacing between arrow pairs is 200' (61 m).
 - C. Arrow pairs shall be evenly spaced if three (3) or more are required.
 - D. The spacing between Bi Directional Left Turn Arrows is 33' (10 m).

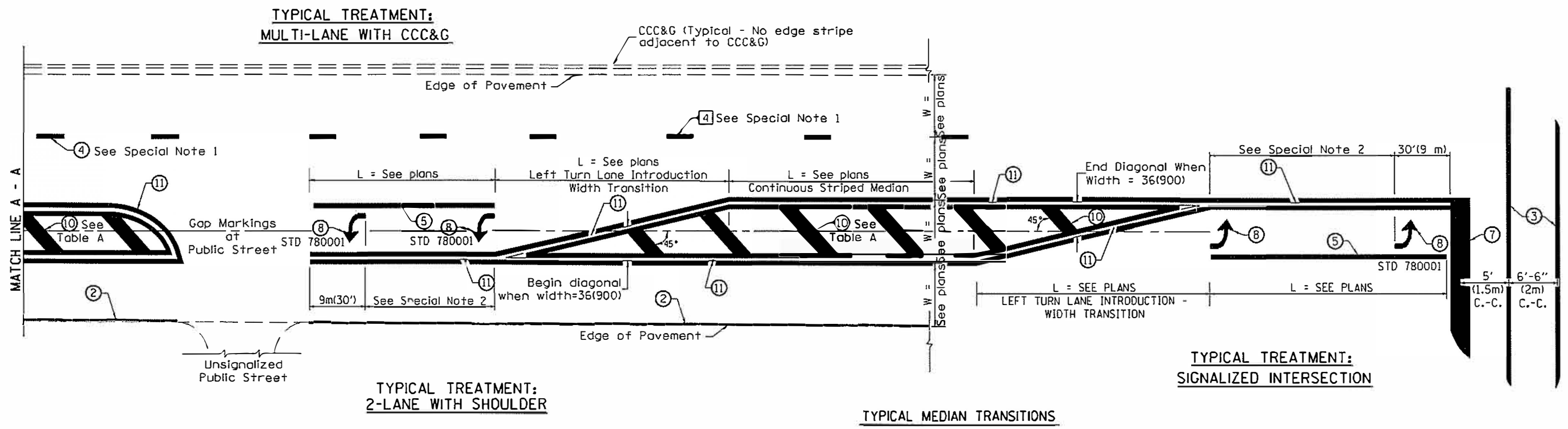
GENERAL NOTES

1. Refer to State Standard 780001 for additional Pavement Markings including letters & arrows.
2. See Plans for Pavement Markings adjacent to curbed islands and medians, and through lane reductions.
3. Refer to Article 780.13 for letter, number and symbol areas (sq. ft.)
4. Areas are grooved 1" beyond each edge for the following symbols:
 - Through Arrow= 14.8 sq. ft.
 - Large Left or Right Arrow= 21.9 sq. ft.
 - 2 Arrow Combination Left (or Right) and Through= 34.9 sq. ft.
 - Wrong Way Arrow= 29.5 sq. ft.
 - Railroad Crossing Symbol= 69.8 sq. ft.
 (For further information, refer to BDE Special Provision: Grooving for Recessed Pavement Markings)

01-01-97	RENJM, F-8.03, NEW REVISION BOX	T.P.	10-16-06	REVISED TO 2007 SPEC.		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL PAVEMENT MARKINGS SN. 062-0037	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
02-07-97	ADD B1 DIRECTIONAL DIMENSION	J.A.	2/29/16	ADDED GROOVING AREAS	R.D.			653	1105BRIBRR	MARSHALL	26	25
10-97	CORRECT B1 DIRECTIONAL DIMENSION	J.A.									CONTRACT NO. 68E11	
08-02	ADD CROSSWALK DIMS. WITH T.S.	M.A.									SHT. 1 OF 2 CADD STD. 780001-04	

NOT TO SCALE

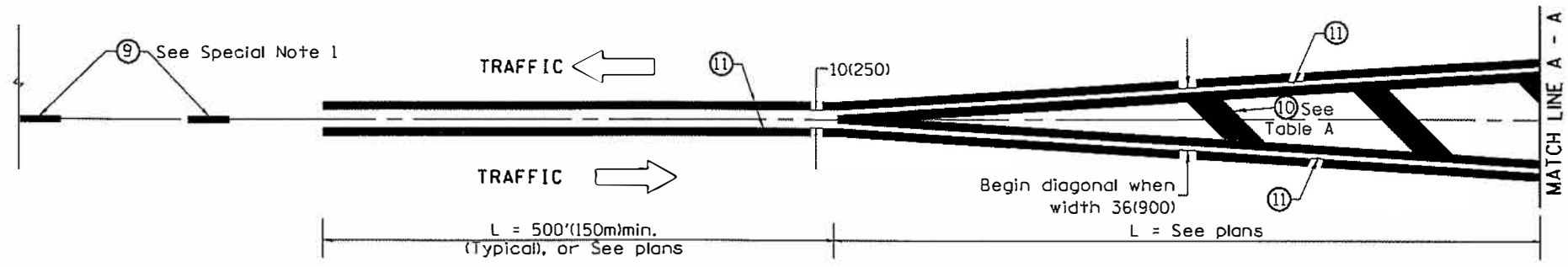
FED. ROAD DIST. NO. [ILL] 105 FED. AID PROJ. JECT



FLUSH PAVED MEDIAN: RESTRICTED LEFT TURN LANE

TABLE A
RECOMMENDED SPACING BETWEEN DIAGONAL LINES

SPEED LIMIT RANGE	INTERSECTION CHANNELIZATION (Includes Width Transitions for Median and Left Turn Lane Introductions)	
	CONTINUOUS	
Less Than 30 mph (50 km/h)	50' (15m)	15' (5m)
30 - 45 mph (50 - 70 km/h)	75' (23m)	20' (6m)
Over 45 mph (70 km/h)	150' (46m)	30' (9m)



All dimensions are in inches (millimeters) unless otherwise noted.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL PAVEMENT MARKINGS
SN. 062-0037

NOT TO SCALE

SHT. 2 OF 2
CADD STD. 780001-D4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
553	(105BR)BR	MARSHALL	26	26
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 68E11	