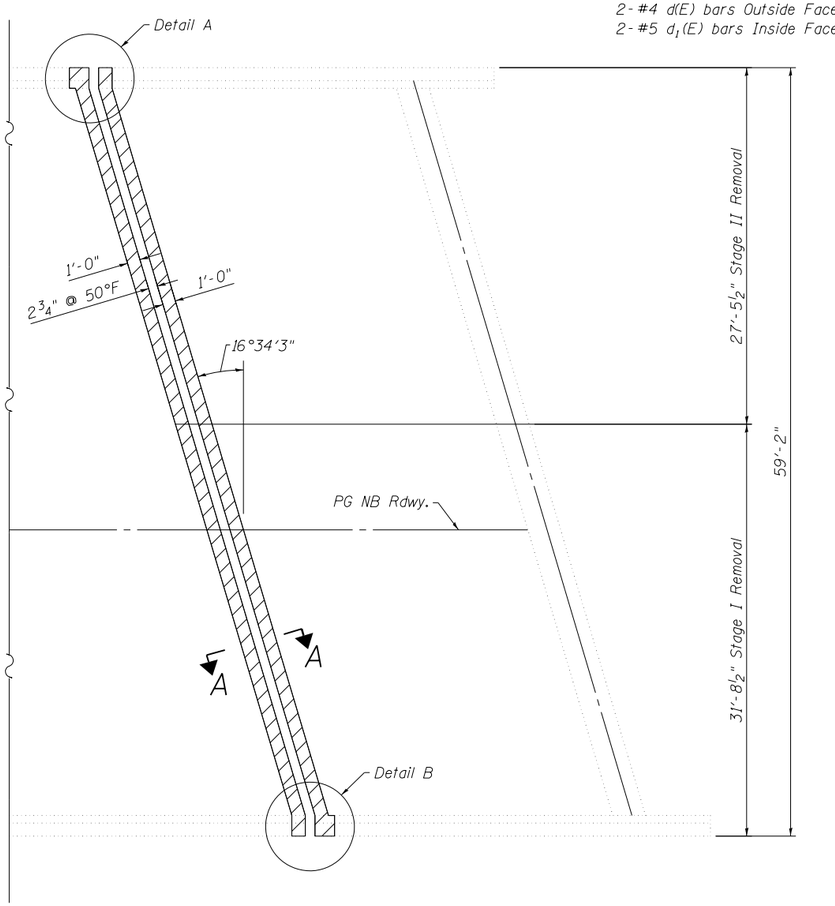
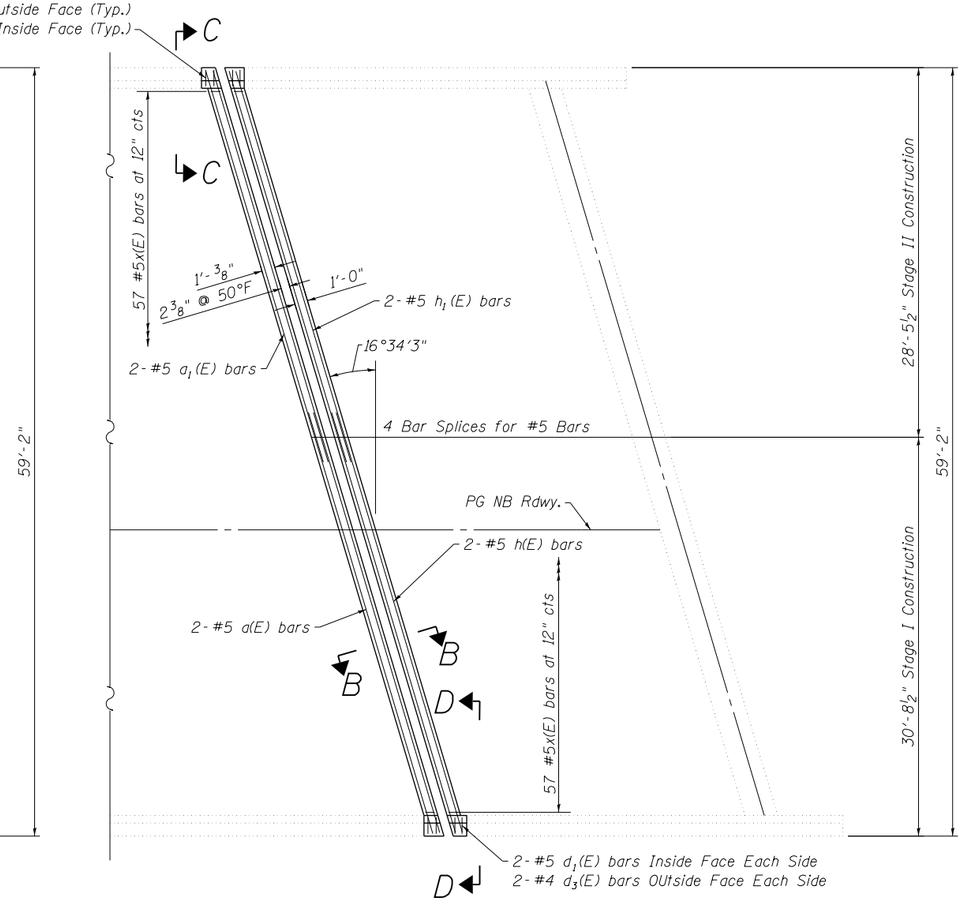


CONCRETE REMOVAL

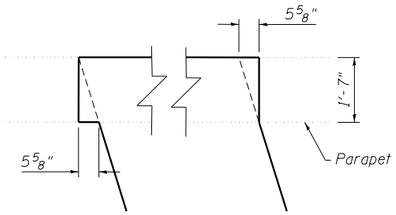
(NB North Abutment shown)
(NB South Abutment similar)



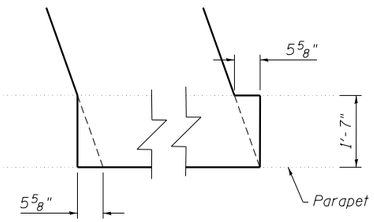
CONCRETE REPLACEMENT

(NB North Abutment shown)
(NB South Abutment similar)

N



DETAIL A



DETAIL B

MIN. LAP

#5 Bar 2'-7" Min. Lap.
#6 Bar 3'-1" Min. Lap.

NOTES:

1. Existing reinforcement 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 shall be included with Concrete Removal.
2. Trim existing reinforcement to accommodated proposed expansion joint.
3. See sheet 10 or section A-A, B-B, C-C and D-D.
4. Bars indicated thus: "4x2-#5 etc...", indicates 4 lines of bars with 2 lengths per line.

BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	5.8
Concrete Superstructure	Cu. Yd.	6.7
Protective Coat	Sq. Yd.	17

LEGEND

Concrete Removal

8/24/2012 10:09:38 PM - G:\CHIN\DOT\Bridge\CADD\060-0238&0239\0600238-76A89-06-N&S_Exp_Joint_RR.dgn

FILE NAME = 0600238-76A89-06-N&S_Exp_Joint_RR.dgn

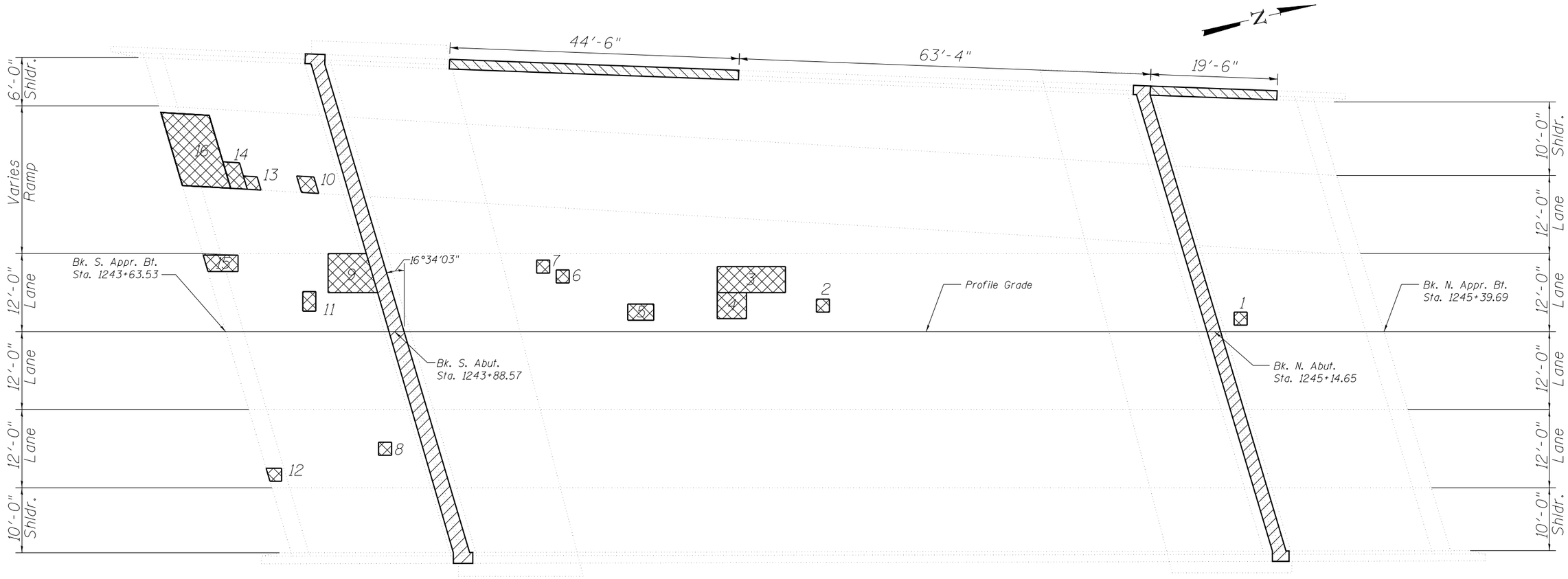
TranSystems

USER NAME = DMGolias	DESIGNED - WAE	REVISED -
	CHECKED - FAS	REVISED -
PLOT SCALE = 1118.0000 '1' / in.	DRAWN - DMG	REVISED -
PLOT DATE = 8/24/2012	CHECKED - SLZ	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ABUTMENT CONCRETE REMOVAL AND REPLACEMENT
STRUCTURE NO. 060-0238
SHEET NO. 6 OF 15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	201
		CONTRACT NO. 76A89		
	ILLINOIS	FED. AID PROJECT		



DECK PLAN VIEW

NOTE:

1. Apply Concrete sealer per Article 587 of the Standard Specifications to top and inside vertical faces of the parapets, end posts, and wing walls.
2. *There were no Deck Slab Repair (Full Depth) Patches identified in the deck survey. Quantity has been included in the event a full depth patch is identified during construction.

Patch No.	Patch Depth	Station	Length (ft)	Width (ft)	Quantity (sq. yd.)
1	Partial	1245+18.65	2	2	0.44
2	Partial	1244+54.42	2	2	0.44
3	Partial	1244+43.42	10.5	4	4.67
4	Partial	1244+40.42	4.5	4	2.00
5	Partial	1244+26.42	4	2.5	1.11
6	Partial	1244+14.42	2	2	0.44
7	Partial	1244+11.42	2	2	0.44
8	Partial	1243+87.1	2	2	0.44
9	Partial	1243+82.7	9	6	6.00
10	Partial	1243+75.57	2.5	2.5	0.69
11	Partial	1243+75.46	2	3	0.67
12	Partial	1243+70.	2	2	0.44
13	Partial	1243+66.97	2	2	0.44
14	Partial	1243+64.64	2	4	0.89
15	Partial	1243+62.19	5	2.5	1.39
16	Partial	1243+60.92	7	11	8.56

LEGEND

- Deck Slab Repair Partial Depth
- Concrete Removal for Joint Replacement (See concrete removal Sheet)
- Concrete Removal for Parapet Replacement (See parapet wall repair Sheet)

BILL OF MATERIAL

Item	Unit	Total
Deck Slab Repair-(Partial Depth)	Sq. Yd.	30
Deck Slab Repair-(Full Depth Type I)	Sq. Yd.	2
Concrete Sealer	Sq. Ft.	1198

10:09:39 PM - G:\CHIN\003\Bridge\CADD\060-0238&0239\0600239-76A89-07-Deck_Patching_Plan_SB.dgn
8/24/2012

FILE NAME = 0600239-76A89-07-Deck_Patching_Plan_SB.dgn

TranSystems

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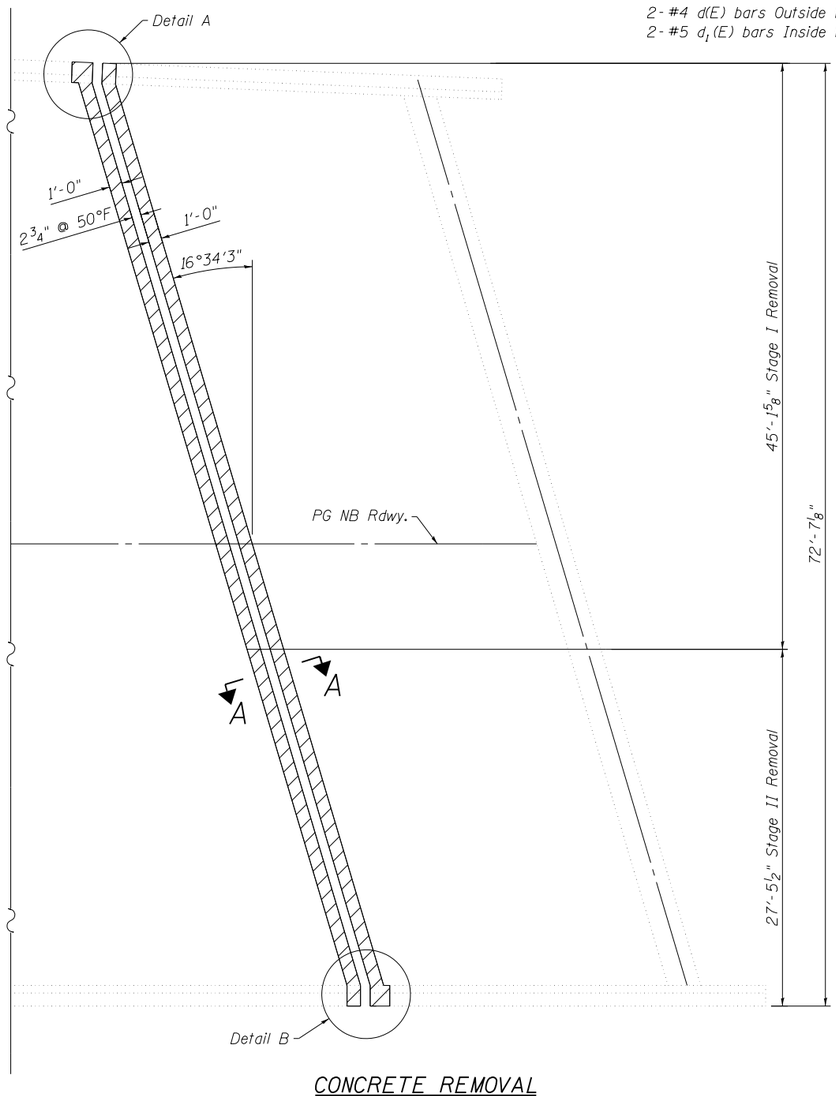
	X	CHECKED - FAS	REVISED -	
PLOT SCALE = 0.2000 '/ in.	X	DRAWN - DMG	REVISED -	
PLOT DATE = 8/24/2012	X	CHECKED - SLZ	REVISED -	

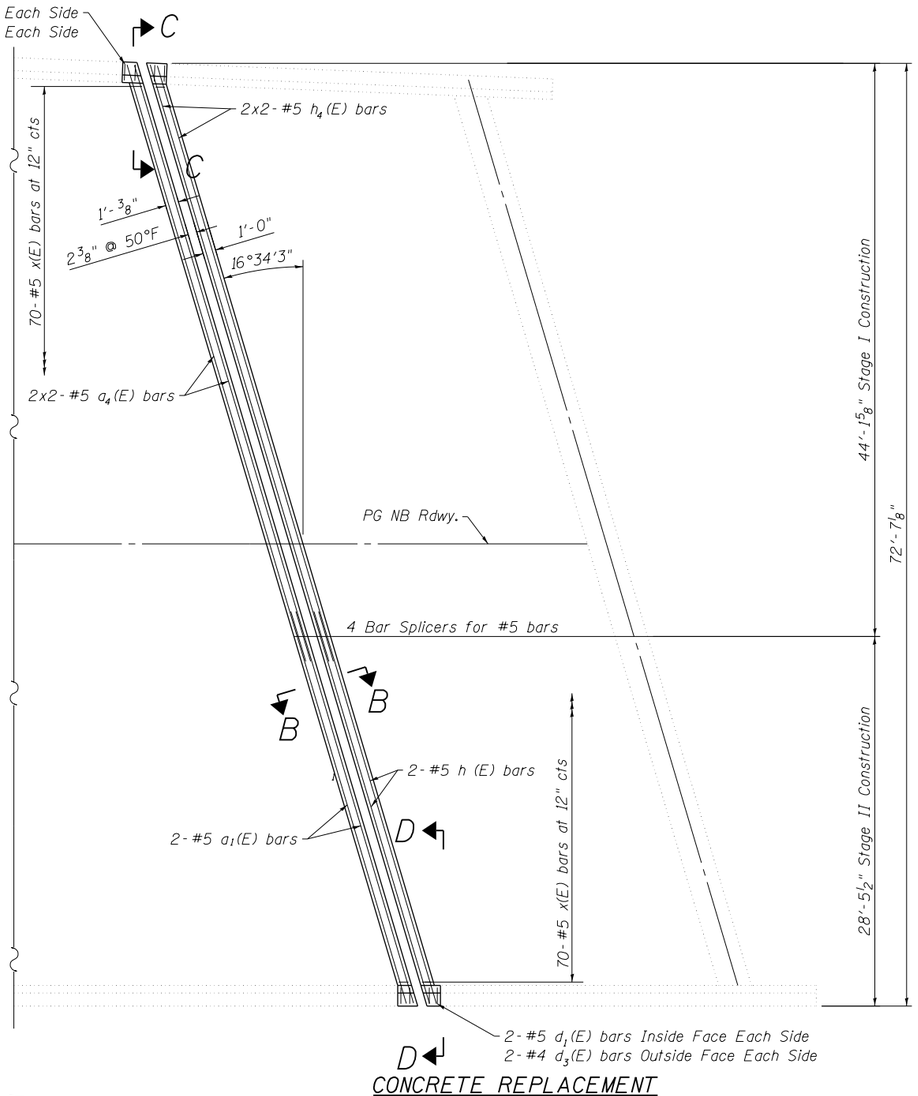
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXPANSION JOINT REPLACEMENT DETAILS
STRUCTURE NO. 060-0239
SHEET NO. 7 OF 15 SHEETS

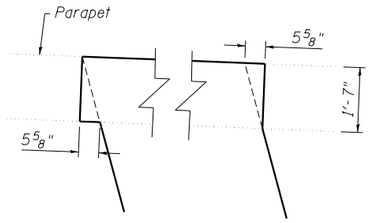
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	202
		CONTRACT NO. 76A89		
	ILLINOIS	FED. AID PROJECT		



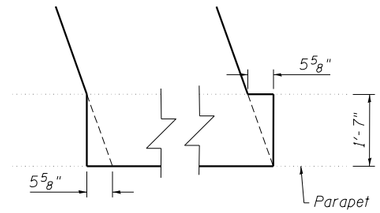
CONCRETE REMOVAL
(SB North Abutment shown)



CONCRETE REPLACEMENT
(SB North Abutment shown)



DETAIL A



DETAIL B

MIN. LAP

#5 Bar 2'-7" Min. Lap.
#6 Bar 3'-1" Min. Lap.

NOTES:

1. Existing reinforcement 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 shall be included with Concrete Removal.
2. Trim existing reinforcement to accommodated proposed expansion joint.
3. See sheet 10 or section A-A, B-B, C-C and D-D.
4. Bars indicated thus: "4x2-#5 etc...", indicates 4 lines of bars with 2 lengths per line.

BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	3.4
Concrete Superstructure	Cu. Yd.	3.9
Protective Coat	Sq. Yd.	10

LEGEND

Concrete Removal

FILE NAME = 0600238-76A89-08-N_Exp_Conc_RR.dgn
8/24/2012 10:09:40 PM- G:\CHIN\0013\Bridge\CADD\060-0238&0239\0600238-76A89-08-N_Exp_Conc_RR.dgn

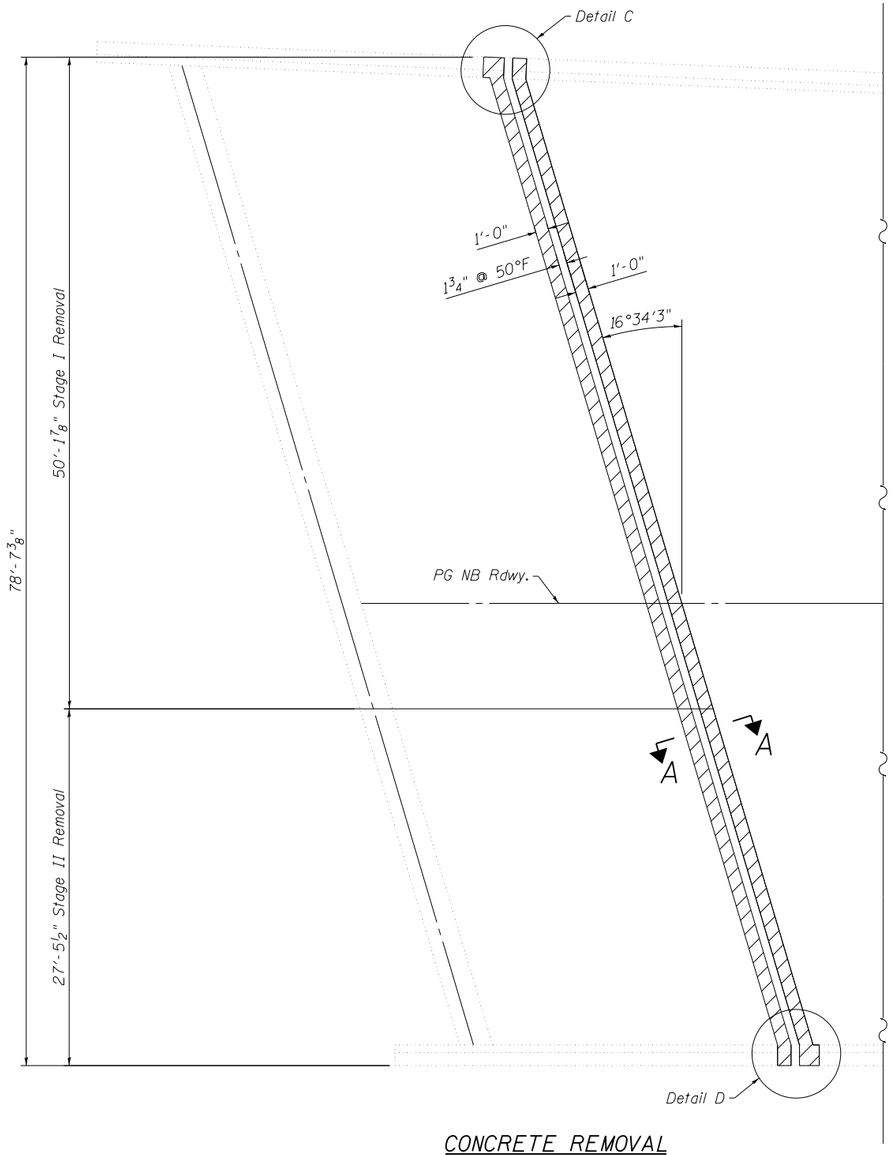
TranSystems

USER NAME = DMGolias	DESIGNED - WAE	REVISED -
	CHECKED - FAS	REVISED -
PLOT SCALE = 11:8.0000 '' / in.	DRAWN - DMG	REVISED -
PLOT DATE = 8/24/2012	CHECKED - SLZ	REVISED -

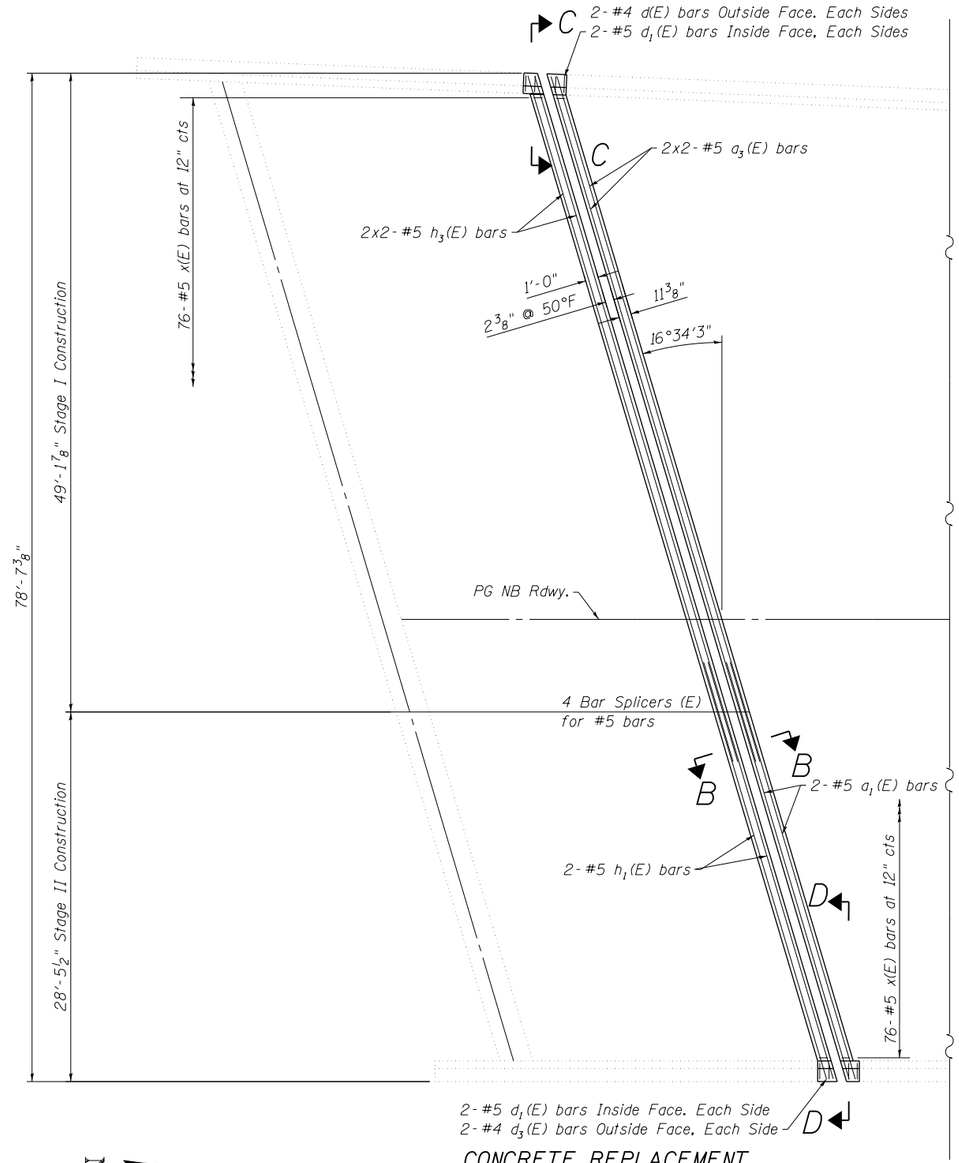
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH EXPANSION JOINT ABUTMENT CONCRETE REMOVAL AND REPLACEMENT SOUTH BOUND
STRUCTURE NO. 060-0239
SHEET NO. 8 OF 15 SHEETS

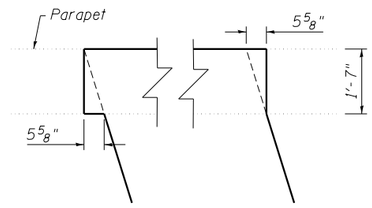
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	203
		CONTRACT NO. 76A89		
	ILLINOIS FED. AID PROJECT			



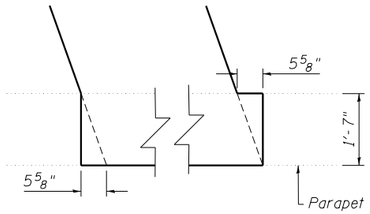
CONCRETE REMOVAL
(SB South Abutment shown)



CONCRETE REPLACEMENT
(SB South Abutment shown)



DETAIL C



DETAIL D

NOTES:

1. Existing reinforcement 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 shall be included with Concrete Removal.
2. Trim existing reinforcement to accommodated proposed expansion joint.
3. See sheet 10 or section A-A, B-B, C-C and D-D.
4. Bars indicated thus: "4x2-#5 etc...", indicates 4 lines of bars with 2 lengths per line.

MIN. LAP

#5 Bar 2'-7" Min. Lap.
#6 Bar 3'-1" Min. Lap.

BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	3.7
Concrete Superstructure	Cu. Yd.	4.3
Protective Coat	Sq. Yd.	10

LEGEND

Concrete Removal

FILE NAME = 0600230-76A89-09_S_Exp_Joint_RR.dgn

USER NAME = DMGolias	DESIGNED - WAE	REVISED -
	CHECKED - FAS	REVISED -
PLOT SCALE = 11:8.0000 '' / in.	DRAWN - DMG	REVISED -
PLOT DATE = 8/24/2012	CHECKED - SLZ	REVISED -

TranSystems

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT JOINT CONCRETE REMOVAL AND REPLACEMENT SOUTHBOUND
STRUCTURE NO. 060-0239
SHEET NO. 9 OF 15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	204
		CONTRACT NO. 76A89		
		ILLINOIS FED. AID PROJECT		

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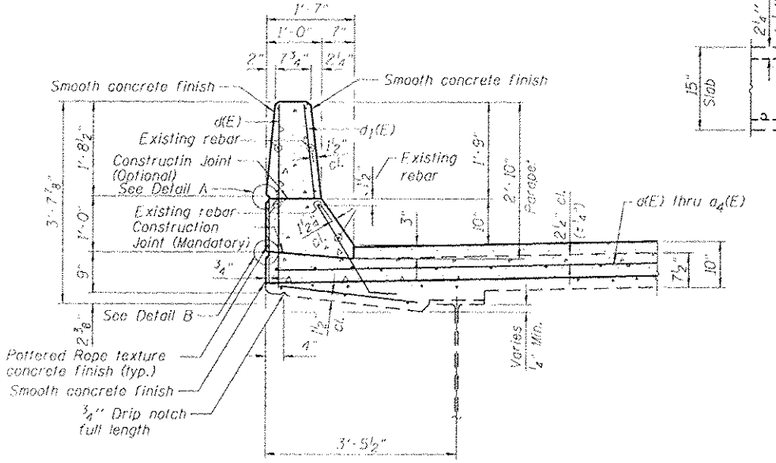
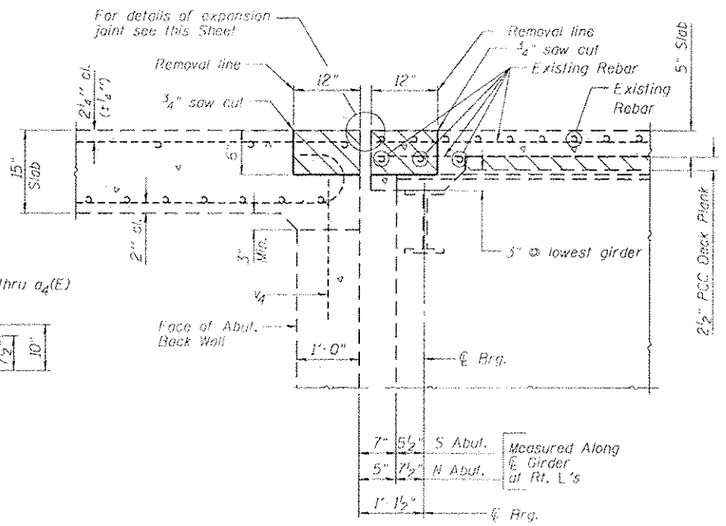
8/24/2012

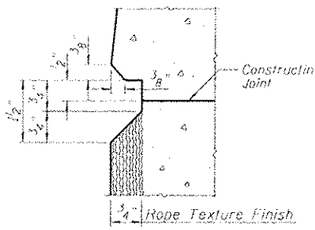


SECTION D-D

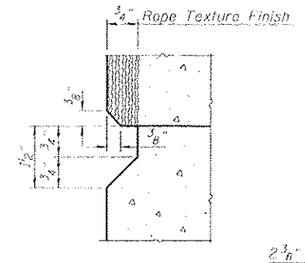
SECTION THRU PARAPET



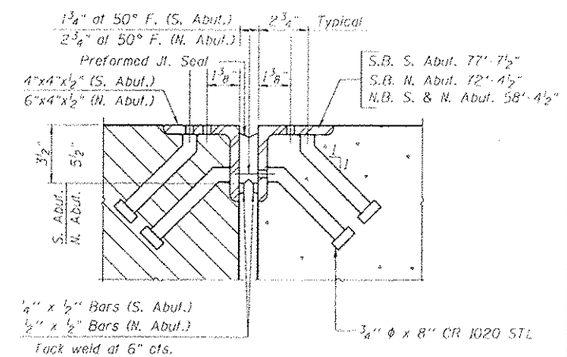
SECTION A-A



DETAIL A



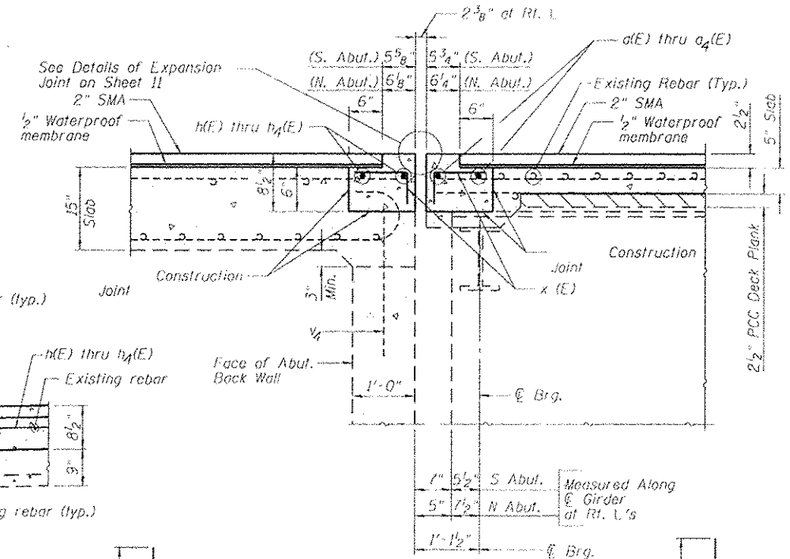
DETAIL B



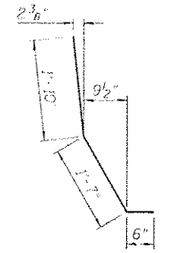
EXISTING EXPANSION JOINT
CROSS SECTION

BRIDGE 0238 (NB)
North and South Joint
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	4	#5	31'-0"	
a1(E)	4	#5	29'-2"	
d(E)	8	#4	5'-8"	
d1(E)	16	#5	3'-11"	
d3(E)	8	#4	5'-9"	
h(E)	4	#5	31'-0"	
h1(E)	4	#5	29'-2"	
x(E)	228	#5	1'-2"	
Item			Unit	Quantity
Reinforcement Bars, Epoxy Coated			Pound	1180
Bar Splicers			Each	8



SECTION B-B



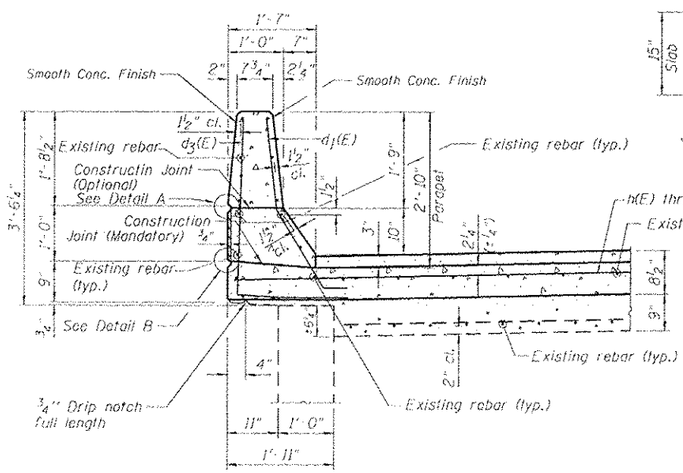
BAR d_1 (E)

BRIDGE 0239 (SB)
North Joint
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a1(E)	2	#5	29'-2"	
a4(E)	4	#5	23'-9"	
d(E)	4	#4	5'-8"	
d1(E)	8	#5	3'-11"	
d3(E)	4	#4	5'-9"	
h1(E)	2	#5	29'-2"	
h4(E)	4	#5	23'-9"	
x(E)	152	#5	1'-2"	
Item			Unit	Quantity
Reinforcement Bars, Epoxy Coated			Pound	1000
Bar Splicers			Each	4

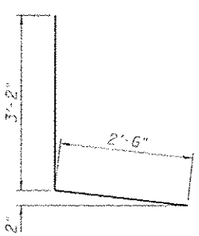
BRIDGE 0239 (SB)
South Joint
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a1(E)	2	#5	29'-2"	
a3(E)	1	#5	26'-5"	
d(E)	4	#4	5'-8"	
d1(E)	8	#5	3'-11"	
d3(E)	4	#4	5'-9"	
h1(E)	2	#5	29'-2"	
h3(E)	4	#5	26'-5"	
x(E)	140	#5	1'-2"	
Item			Unit	Quantity
Reinforcement Bars, Epoxy Coated			Pound	1110
Bar Splicers			Each	4

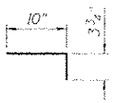


SECTION C-C

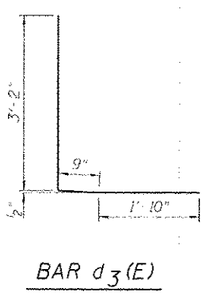
SECTION THRU PARAPET



BAR d (E)



BAR x (E)

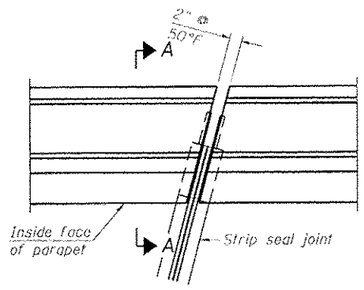


BAR d_3(E)

FILE NAME = 8608238-876489-W_Deck_Joint_Details.dgn

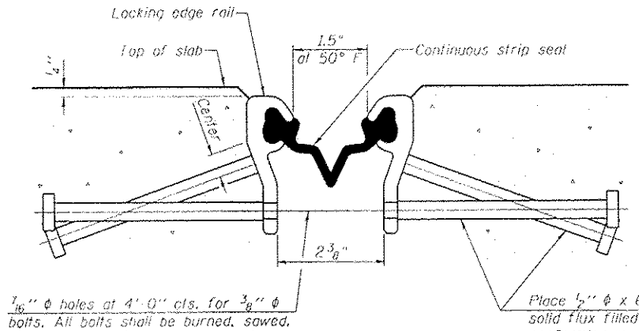
USER NAME = CMCollins	DESIGNED - WAE	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	CHECKED - FAS	REVISED -	DECK JOINT DETAILS STRUCTURE NO. 060-0238 & 060-0239
PLOT SCALE = 2.0 '/ in.	DRAWN - DMG	REVISED -	SHEET NO. 10 OF 15 SHEETS
PLOT DATE = 8/24/2012	CHECKED - SLZ	REVISED -	

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	205
		CONTRACT NO. 76489		
		ILLINOIS FED. AID PROJECT		

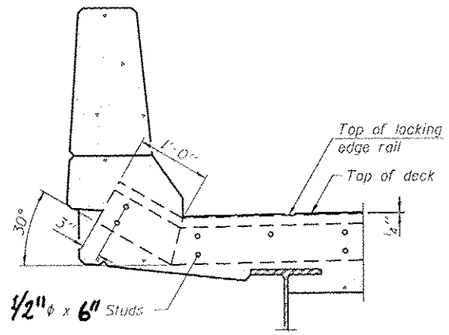


PLAN
(For skews ≤ 30°)

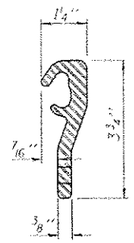
*Omit weld at seal opening.
**When joint is fixed, dimension is set at 1½".



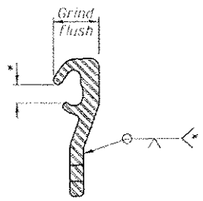
SECTION THRU STRIP SEAL JOINT FOR OVERLAY OVER DECK BEAMS



SECTION A-A



LOCKING EDGE RAIL



LOCKING EDGE RAIL SPLICE

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of ¼". The configuration of the strip seal shall match the configuration of the Locking Edge Rails.

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.

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

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	267.0

FILE NAME = 060238-76A89-11-Strip_Seal.dgn
USER NAME = OMGolios
PLOT SCALE = 0.0000 '/ in.
PLOT DATE = 8/24/2012

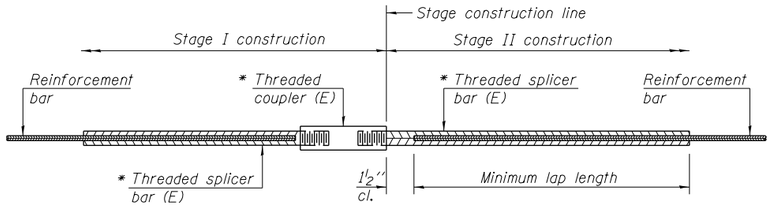
DESIGNED - WAE	X		REVISED -
CHECKED - FAS	X		REVISED -
DRAWN - OMG	X		REVISED -
CHECKED - SLZ	X		REVISED -

TranSystems

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHALLOW STRIP SEAL JOINT
STRUCTURE NO. 060-0238 & 060-0239
SHEET NO. 11 OF 15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	206
		CONTRACT NO. 76A89		
	[ILLINOIS] FED. AID PROJECT			



STANDARD BAR SPLICER ASSEMBLY

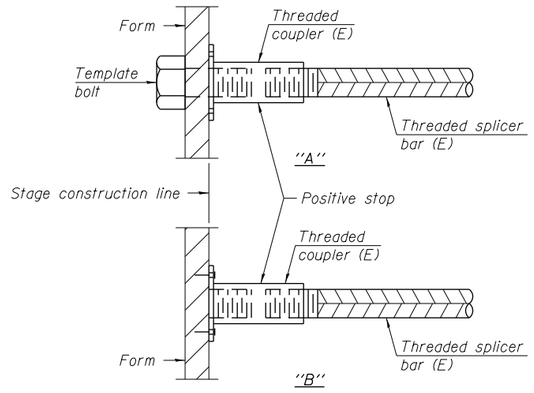
Minimum Lap Lengths					
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5
3, 4	1'-5''	1'-11''	2'-1''	2'-4''	2'-3''
5	1'-9''	2'-5''	2'-7''	2'-11''	2'-10''
6	2'-1''	2'-11''	3'-1''	3'-6''	3'-4''
7	2'-9''	3'-10''	4'-2''	4'-8''	4'-6''
8	3'-8''	5'-1''	5'-5''	6'-2''	5'-10''
9	4'-7''	6'-5''	6'-10''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

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, Top bar lap, Class B

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

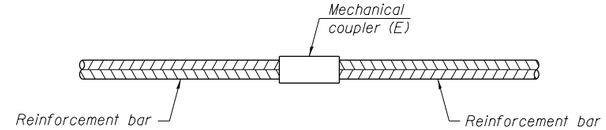
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
0238	#5	8	3
0239	#5	8	3



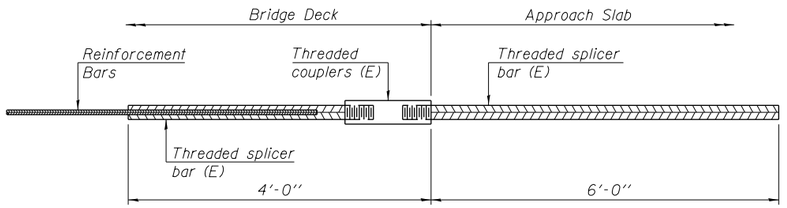
INSTALLATION AND SETTING METHODS

"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.



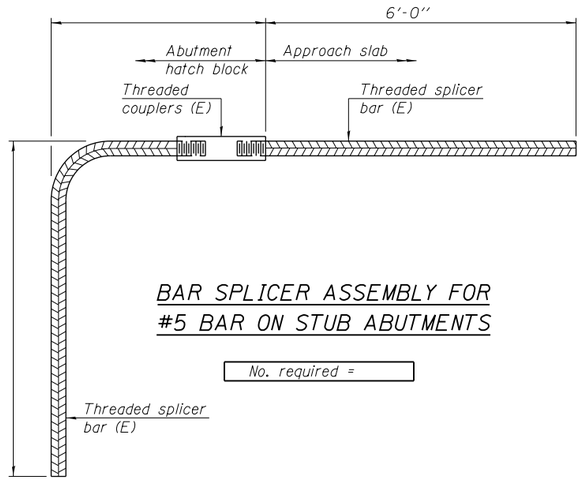
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



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

No. required = 16



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 special provision for Mechanical Splicers.

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

TranSystems

USER NAME = DMGolias	X	DESIGNED - WAE		REVISED -	
	X	CHECKED - FAS		REVISED -	
PLOT SCALE = 0.2.0000 '' / in.	X	DRAWN - DMG		REVISED -	
PLOT DATE = 8/24/2012	X	CHECKED - SLZ		REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 060-0238 & 060-0239
SHEET NO. 12 OF 15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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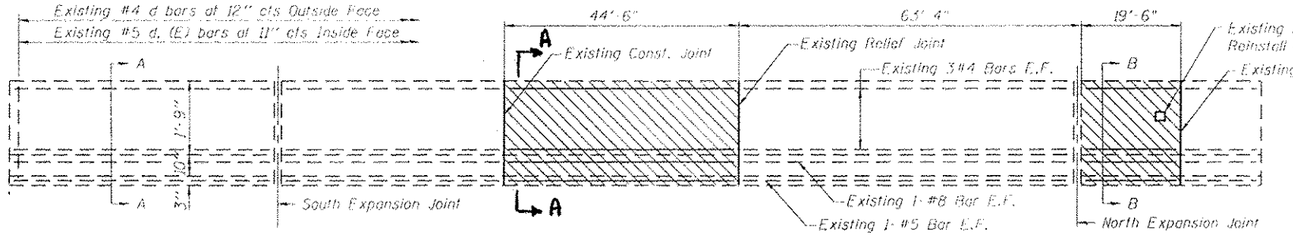
		CONTRACT NO. 76A89		
	ILLINOIS	FED. AID PROJECT		



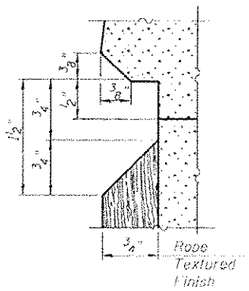
WEST PARAPET ELEVATION CONCRETE REMOVAL

North Approach

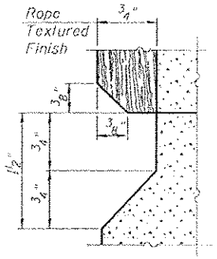
Existing Concrete Removal and Replacement

NOTES:

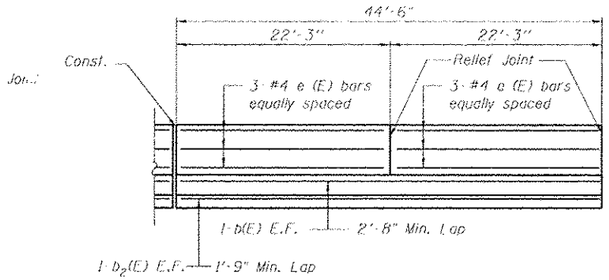
1) Replace all longitudinal bars. Splice onto existing rebar with approved bar splicer or anchor system
2) Existing vertical bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction.
3) Any bars that are damaged during removal shall be with an approved bar splicer or anchor system. Cost shall be included with concrete removal.



NOTCH DETAIL

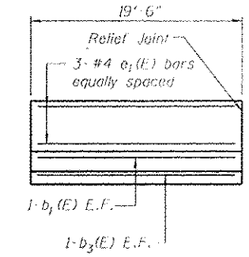


DETAIL "A"

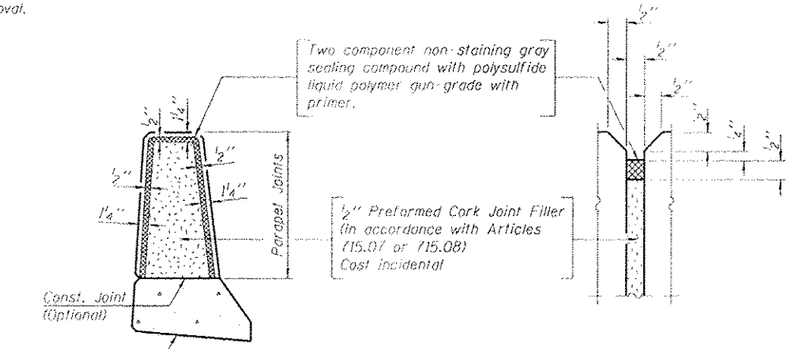


PARAPET ELEVATIONS

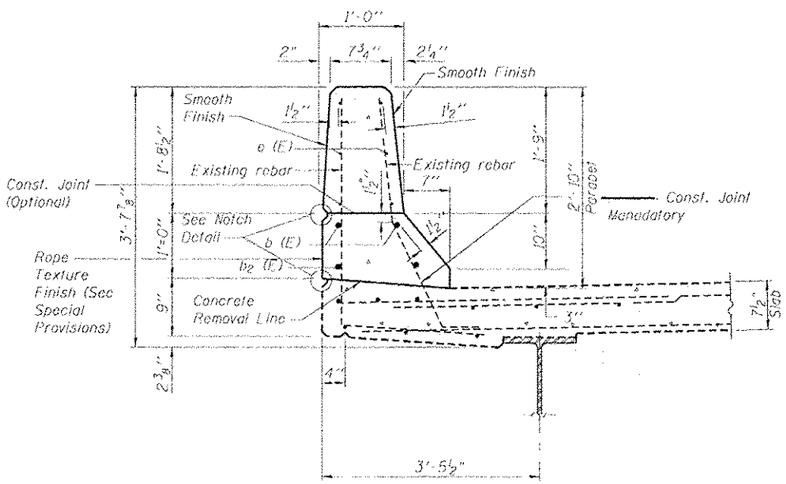
S.B. WEST PARAPET
(Looking From Inside)



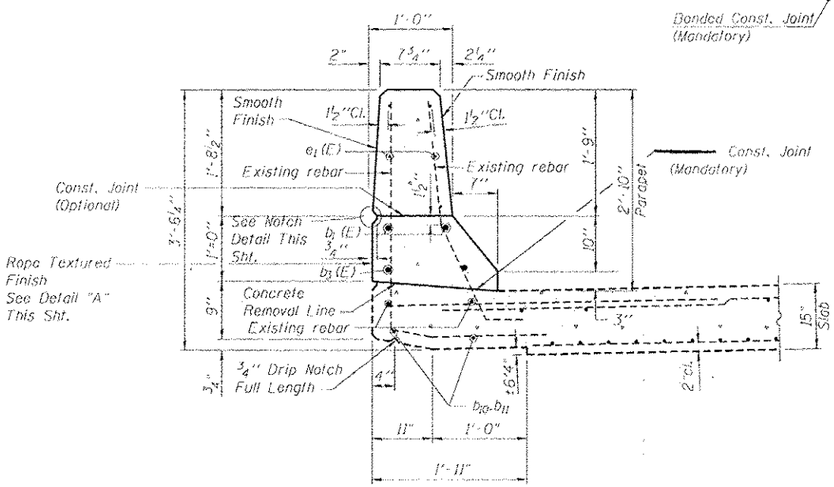
CONCRETE REPLACEMENT



RELIEF JOINT DETAILS



SECTION A-A



SECTION B-B

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
e (E)	12	#4	21'-11"	----
e1 (E)	6	#4	19'-2"	----
b (E)	4	#8	23'-7"	----
b1 (E)	2	#8	19'-4"	----
b2 (E)	4	#5	23'-2"	----
b3 (E)	2	#5	19'-4"	----

Item	Unit	Quantity
Concrete Removal	Cu. Yd.	6.9
Concrete Superstructure	Cu. Yd.	6.9
Reinforcement Bars, Epoxy Coated	Pound	763
Protective Coat	Sq. Yd.	25

8/24/2012

FILE NAME = 8689239-76A89-13-Parapet Removal replacement.dgn

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	X	CHECKED - FAS		REVISED
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PLOT DATE = 8/24/2012	X	CHECKED - SLZ		REVISED

TranSystems

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PARAPET WALL REPAIR DETAILS
STRUCTURE NO. 060-0239
SHEET NO. 13 OF 15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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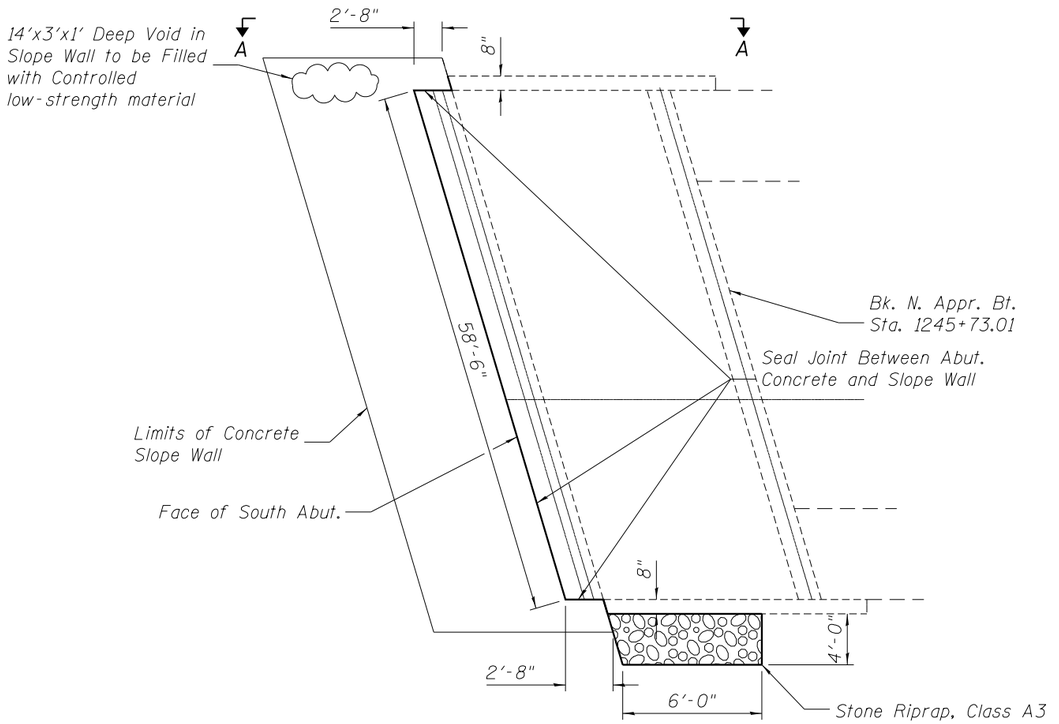
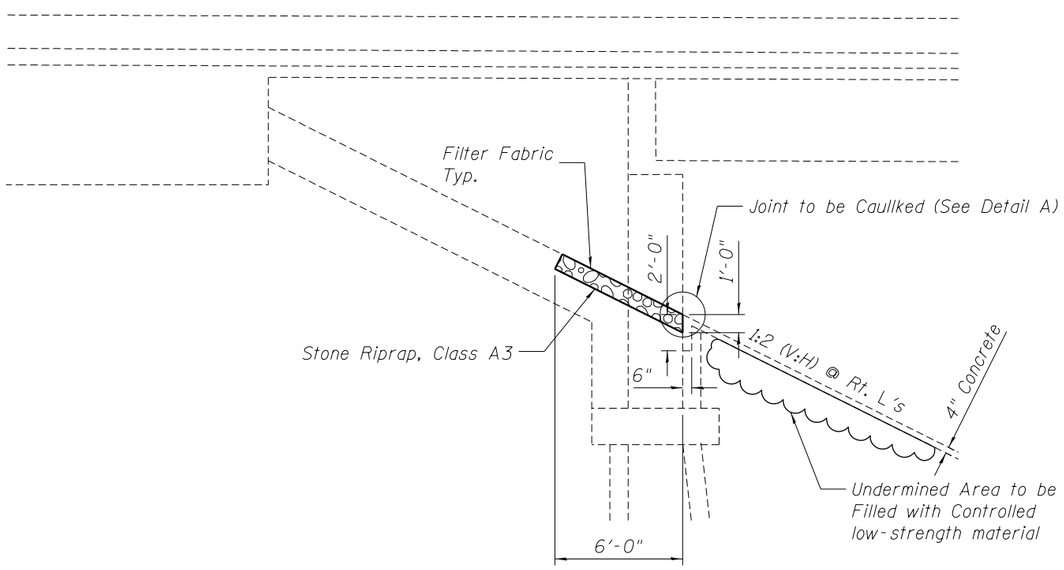
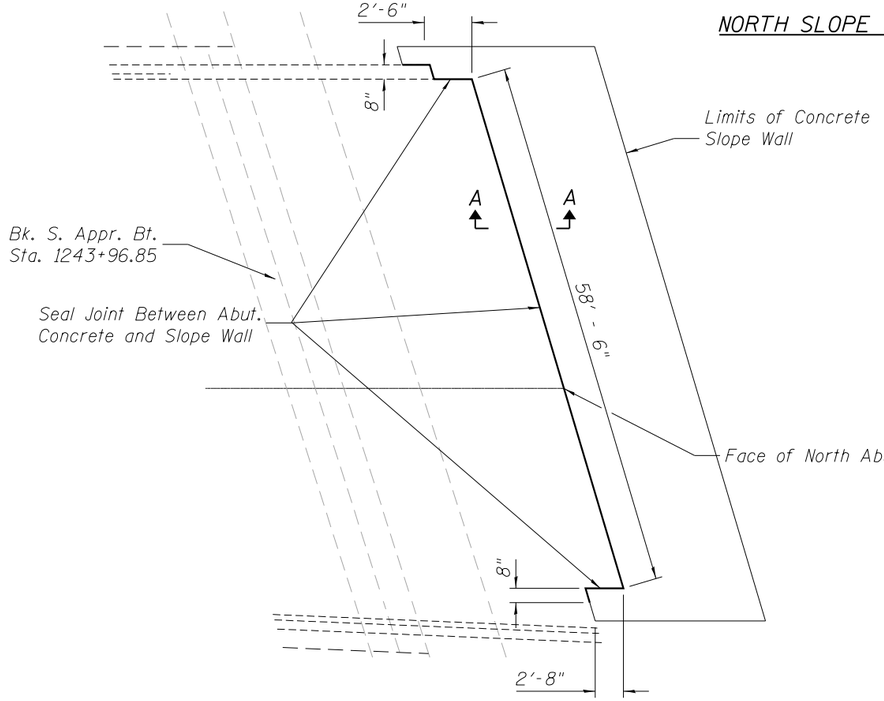
		CONTRACT NO. 76A89		
		ILLINOIS FED. AID PROJECT		



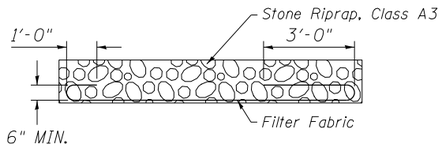
NORTH SLOPE WALL PLAN



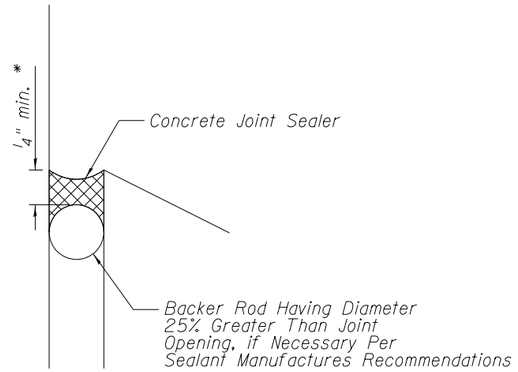
SECTION A-A
THROUGH SLOPE WALL



SOUTH SLOPE WALL PLAN



FILTER FABRIC TYPICAL DETAIL



DETAIL A

* 50% of Joint Opening

BILL OF MATERIAL

Item	Unit	Total
Concrete Joint Sealer	Foot	131
Controlled low-strength material	Cu Yd	2.0
Stone Riprap, Class A3	Ton	2
Fileter Fabric	Sq. Yd.	5

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8/24/2012

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TranSystems

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	CHECKED - FAS	REVISED -
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PLOT DATE = 8/24/2012	CHECKED - SWZ	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SLOPE WALL DETAILS
STRUCTURE NO. 060-0238
SHEET NO. 14 OF 15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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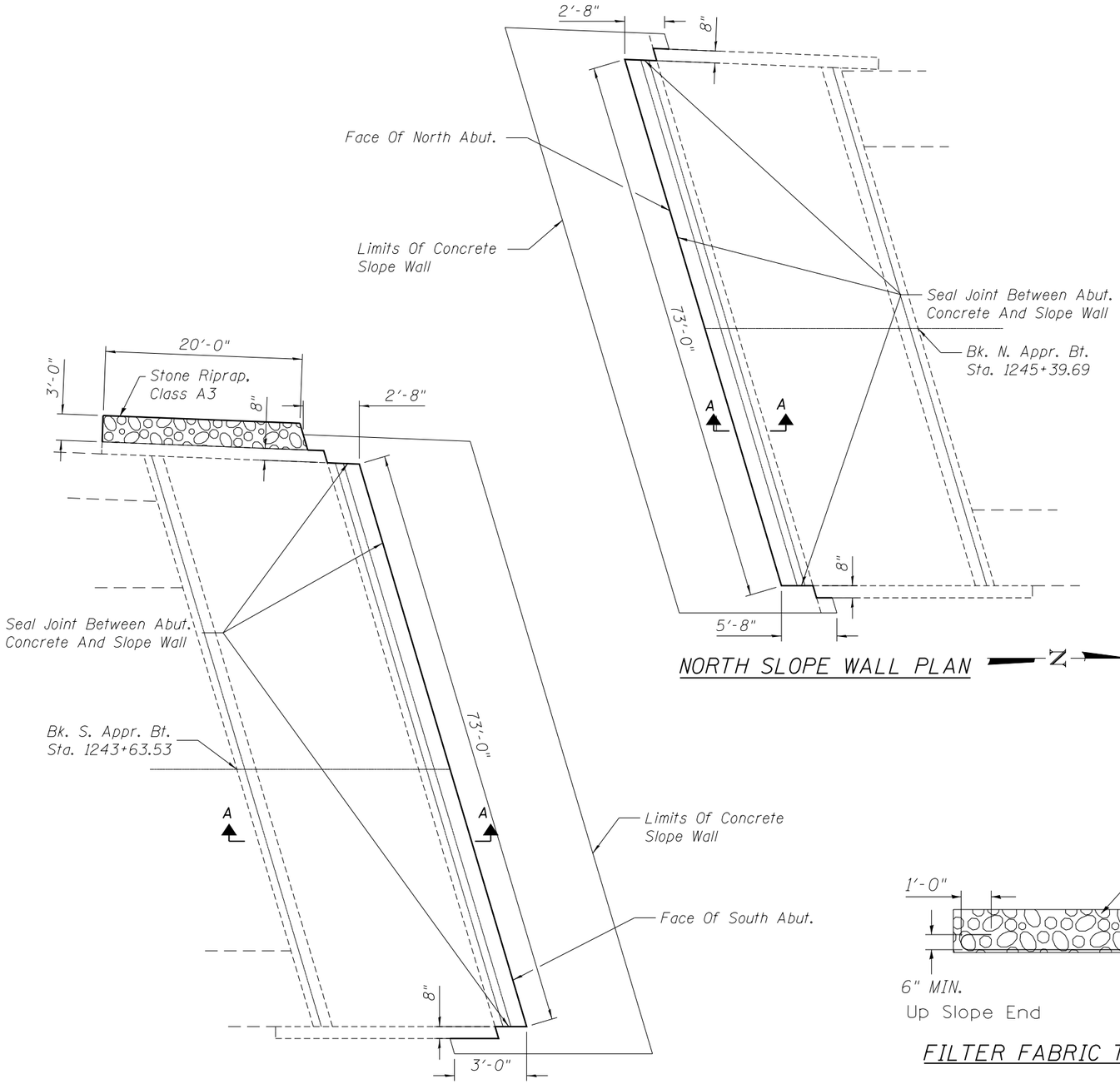
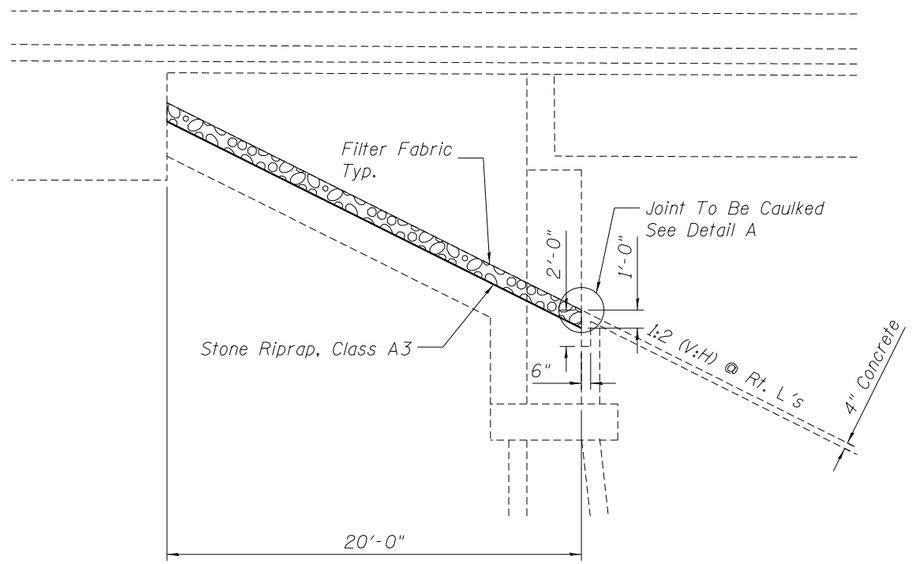
		CONTRACT NO. 76A89		
	ILLINOIS	FED. AID PROJECT		

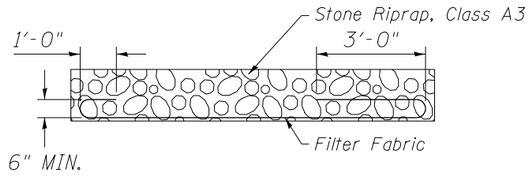


NORTH SLOPE WALL PLAN

SOUTH SLOPE WALL PLAN

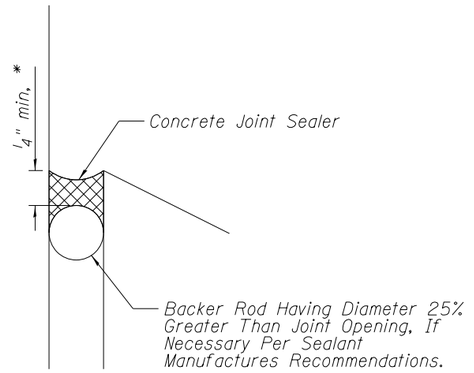


SECTION A-A
THROUGH SLOPE WALL



Up Slope End Down Slope End

FILTER FABRIC TYPICAL DETAIL



DETAIL A

* 50% of Joint Opening

BILL OF MATERIAL

Item	Unit	Total
Concrete Joint Sealer	Sq. Ft.	163
Stone Riprap, Class A3	Ton	4
Filter Fabric	Sq. Yd.	9

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8/24/2012

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TranSystems

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	CHECKED - FAS	REVISED -
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PLOT DATE = 8/24/2012	CHECKED - SWZ	REVISED -

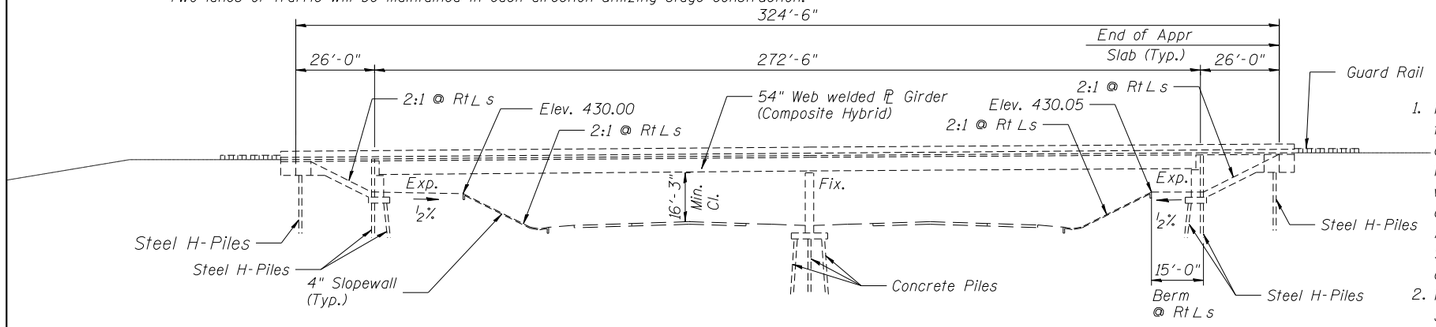
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SLOPE WALL DETAILS SOUTH BOUND
STRUCTURE NO. 060-0239
SHEET NO. 15 OF 15 SHEETS

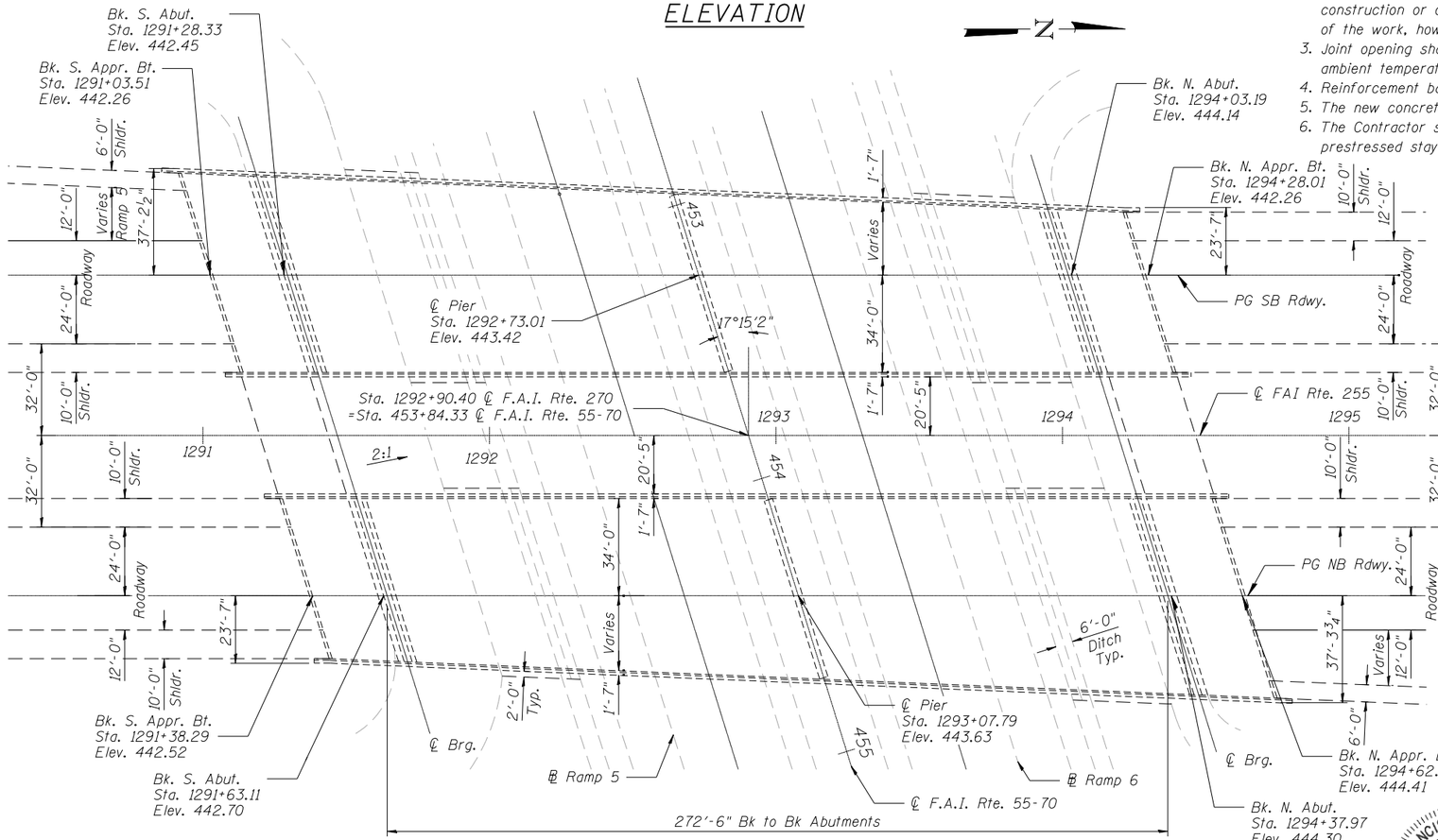
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	210
		CONTRACT NO. 76A89		
	ILLINOIS FED. AID PROJECT			

Bench Mark: B.M. 17 Top iron pin State Traverse Point "X"-57
Sta. 1291+42.12 ℄ FAI 255 El. 419.98

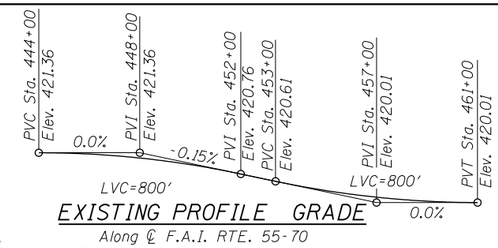
Existing Structure: The original structure was constructed in 1986 as FAI Route 255, Section 60-7HB. The dual superstructures consists of continuous two span composite welded plate girder bridges with 7½" decks. The decks consist of a 5" slab cast upon 2½" precast pre-stressed panels. The substructures consist of sand-filled vaulted abutments and concrete piers, all supported on steel piles. The back-to-back of approach slab dimension is 324′ -6" and out-to-out of deck dimension measures between 60′-5" to 71′- 6⅝" (SB) and 60′-5⅛" to 71′-7½". The span lengths are 143′-6" and 129′-0" (CI bearing to CI bearing) with a 17°-15′-02" right forward skew. Two lanes of traffic will be maintained in each direction utilizing stage construction.



ELEVATION

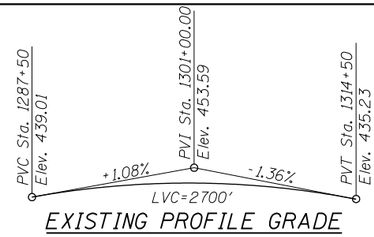


PLAN



EXISTING PROFILE GRADE

Along ℄ F.A.I. RTE. 55-70



EXISTING PROFILE GRADE

Along ℄ F.A.I. RTE. 255

GENERAL NOTES

1. Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale,and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete. As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer. Any cracks that cannot be removed by grinding ¼ in. deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.
2. Plan dimensions, elevation and details relative to existing plans are subject to nominal construction variations. The Contactor 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.
3. Joint opening shall be adjusted according to Art. 520.04 of the Standard Specifications when the deck is poured at an ambient temperature other than 50 deg F.
4. Reinforcement bars designated (E) shall be epoxy coated.
5. The new concrete deck surfaces shall have its final finish tined according to Article 420.09(e)(1).
6. The Contractor shall us extreme care during concrete removal so as not to damage the existing 2½" precast, prestressed stay-in-place forms.

INDEX OF SHEETS

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Stone Riprap, Class A3	Ton	25
Stone Dumped Riprap, Class A3	Ton	23
Filter Fabric	Sq Yd	13
Polymerized Hot-Mix Asphalt Surface Course, Stone Matrix Asphat, N80	Ton	479
Concrete Removal	Cu Yd	29.1
Protective Coat	Sq Yd	88
Concrete Superstructure	Cu Yd	36.3
Reinforcement Bars, Epoxy Coated	Pound	6500
Bar Splicers	Each	64
Preformed Joint Strip Seal	Foot	263.0
Waterproofing Membrane System	Sq Yd	4562
Concrete Sealer	Sq Ft	4387
Controlled Low-Strength Material	Cu Yd	3
Structural Repair Of Concrete (Depth Equal To Or Less Than 5 Inches)	Sq Ft	23
Deck Slab Repair - (Partial Depth)	Sq Yd	124
Deck Slab Repair - (Full Depth, Type I)	Sq Yd	4

DESIGN SPECIFICATIONS

Original Construction
AASHTO 1977 (Service Load Design)
& 1978, 1979 & 1980 Plus Applicable Interims

LOADING HS20-44

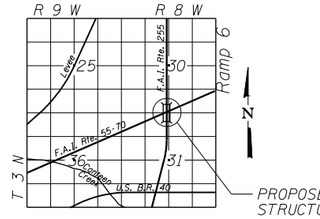
Original Construction
or Alternate Military Loading
Allow 25 p.s.f. for Fut.W.S.

DESIGN STRESSES

Original Construction
f′c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fs = 20,000 psi (M183) &
27,000 (M222 & M223 G50) psi (Struct.)
fc = 1,400 psi, fs = 24,000 psi (Substructure)

DATE: 03/09/2012
F. ALLEN SMITH, P.E., S.E.
NO. 081-005860
EXP. DATE 11/30/2012

FRANCIS A. SMITH JR. 081-005860 LICENSED STRUCTURAL ENGINEER ILLINOIS



LOCATION SKETCH

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TranSystems

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PLOT DATE = 10/17/2012	X	CHECKED - SLZ	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 060-0206 & 060-0207
SHEET NO. 1 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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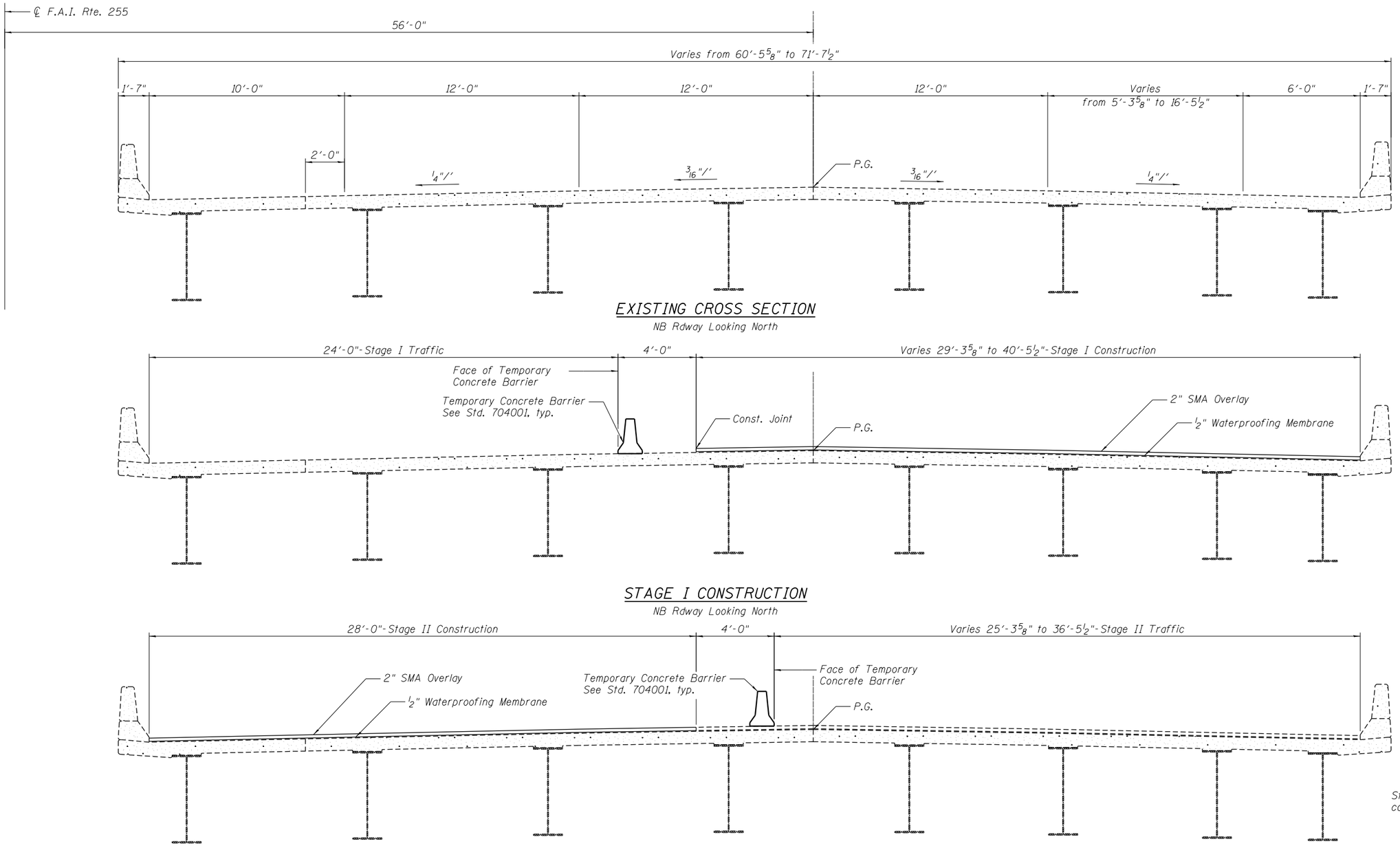
		CONTRACT NO. 76A89		
		ILLINOIS FED. AID PROJECT		



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8/24/2012

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PLOT DATE = 8/24/2012	CHECKED - SLZ	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION
STRUCTURE NO. 060-0206 NB
SHEET NO. 2 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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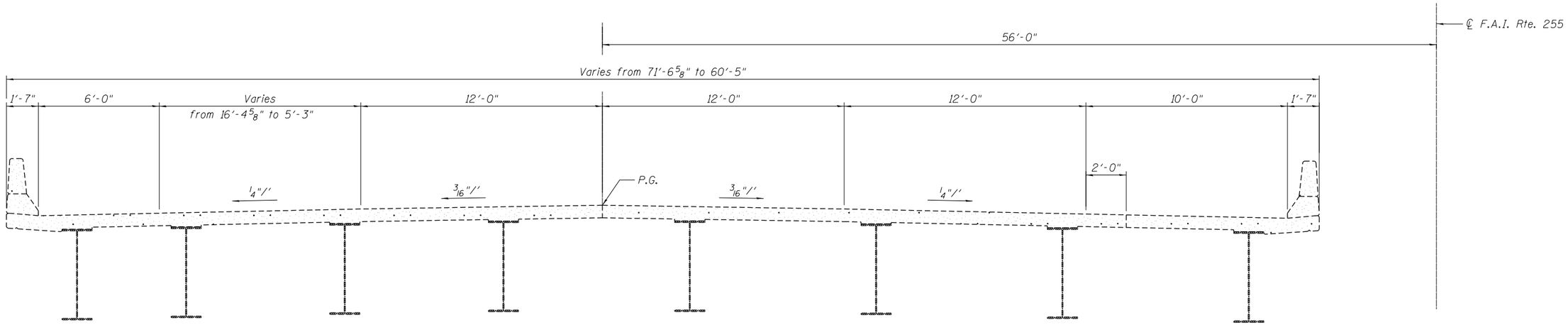
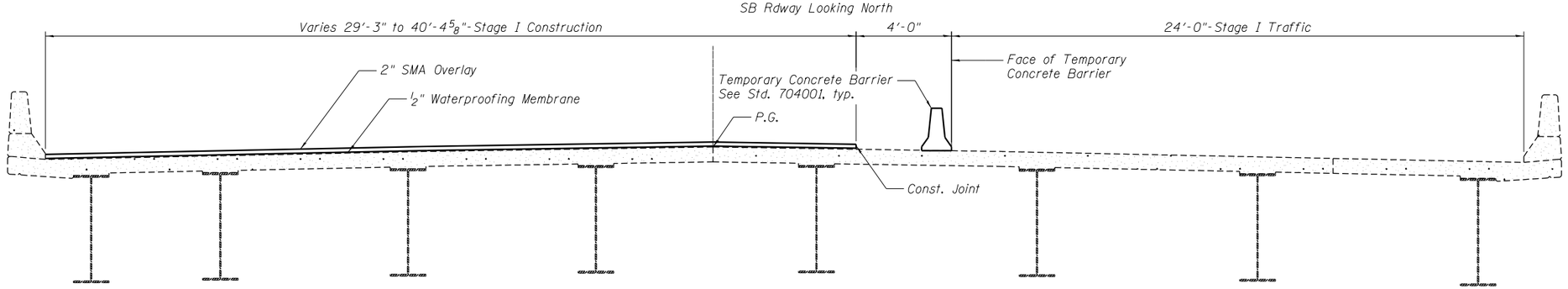
		CONTRACT NO. 76A89		
	ILLINOIS FED. AID PROJECT			



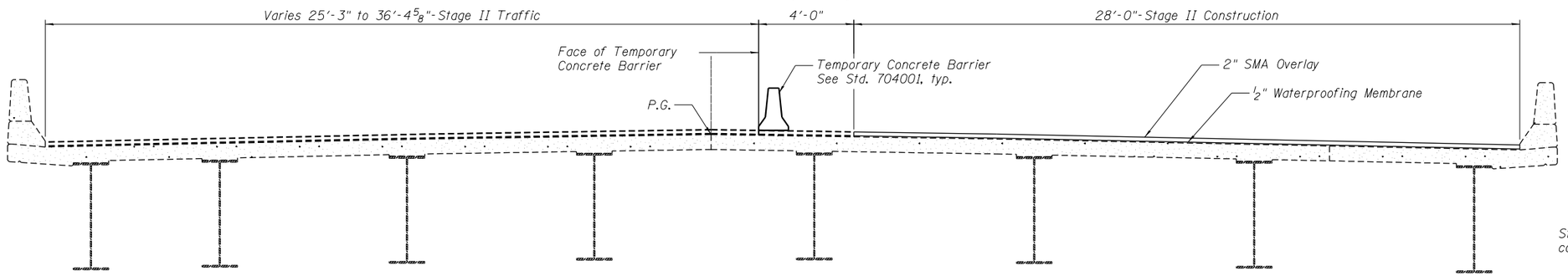
EXISTING CROSS SECTION

SB Rdway Looking North



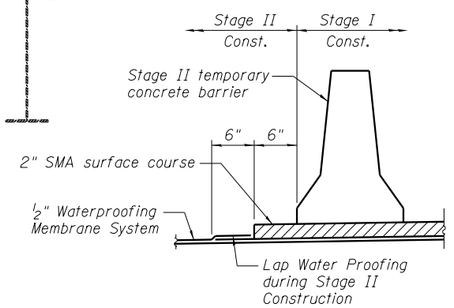
STAGE I CONSTRUCTION

SB Rdway Looking North



STAGE II CONSTRUCTION

SB Rdway Looking North



WATERPROOFING STAGING TYPICAL DETAIL

8/24/2012 10:06:21 PM - G:\CHI\0003\Bridge\CADD\060-0206&0207\0600207-76A89-03-Stage_Const_SB.dgn

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TranSystems

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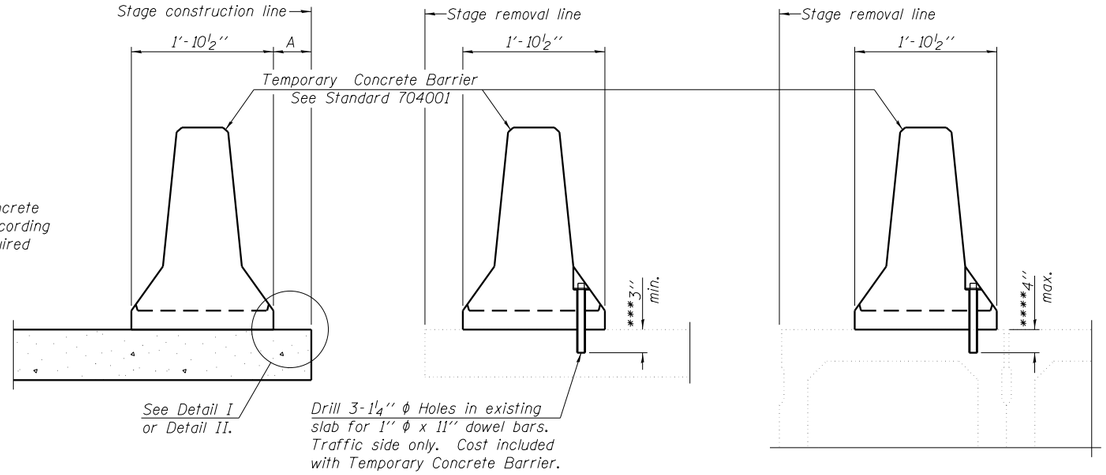
	CHECKED - FAS	REVISED -
PLOT SCALE = 5:4 '1' / in.	DRAWN - DMG	REVISED -
PLOT DATE = 8/24/2012	CHECKED - SLZ	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION
STRUCTURE NO. 060-0207 SB
SHEET NO. 3 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	213
		CONTRACT NO. 76A89		
	ILLINOIS FED. AID PROJECT			

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 PL to the top layer of couplers with 2-$\frac{5}{8}$'' ϕ bolts screwed to coupler at approximate ℄ of each barrier panel.

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

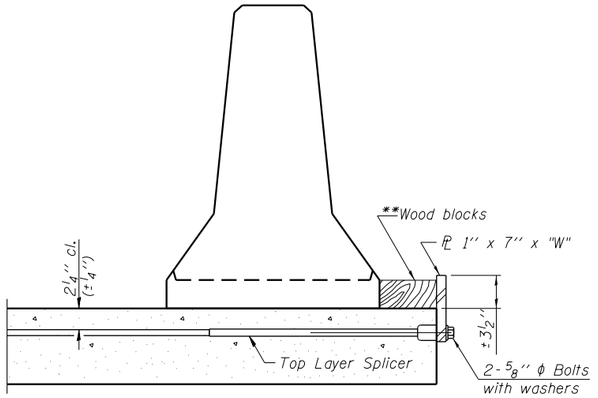
Cost of anchorage is included with Temporary Concrete Barrier.

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.

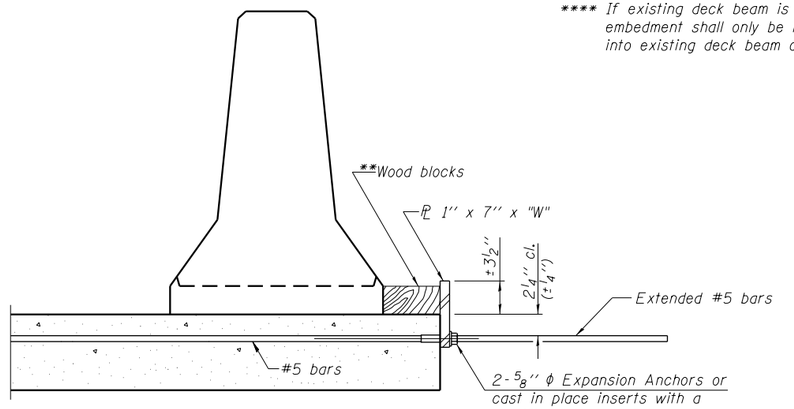
For Quantity of Temporary Concrete Barrier see Roadway Plans.

*** 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.



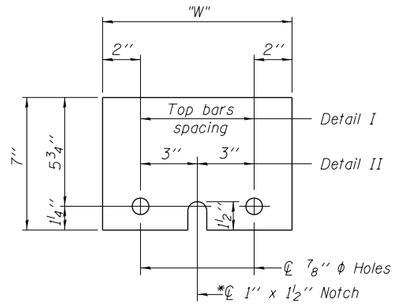
DETAIL I



DETAIL II

** 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''



STEEL RETAINER PL 1'' x 7'' x ''W''

* Required only with Detail II

TranSystems

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PLOT SCALE = 0:2.0000 '' / in.	X	DRAWN - DMG	REVISED -	
PLOT DATE = 8/24/2012	X	CHECKED - SLZ	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 060-0206 AND 060-0207
SHEET NO. 4 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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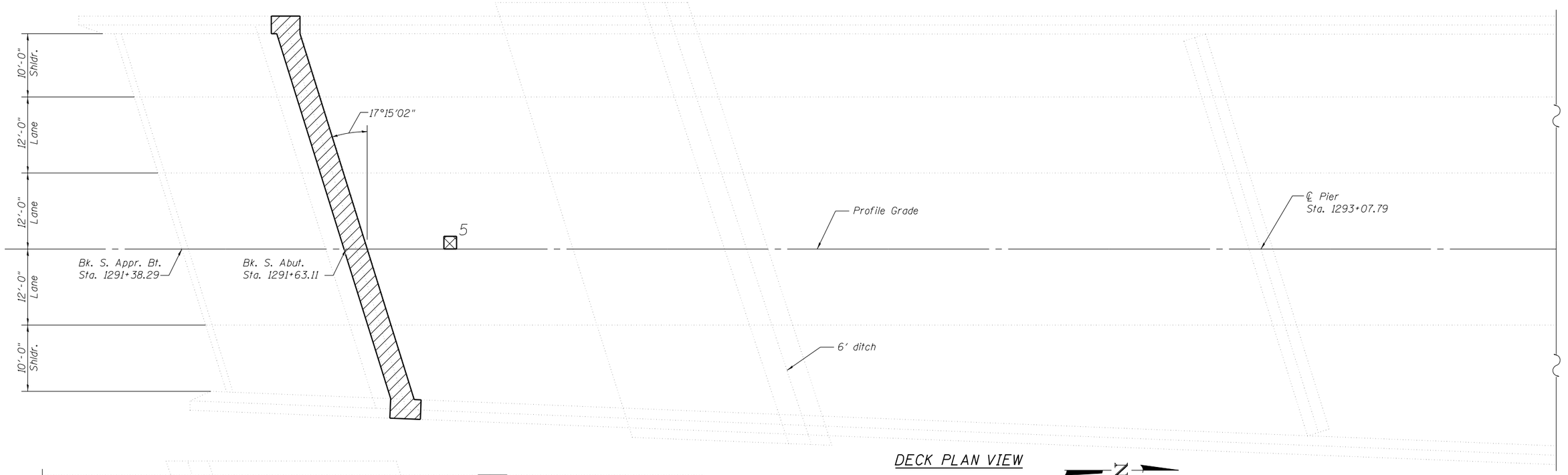
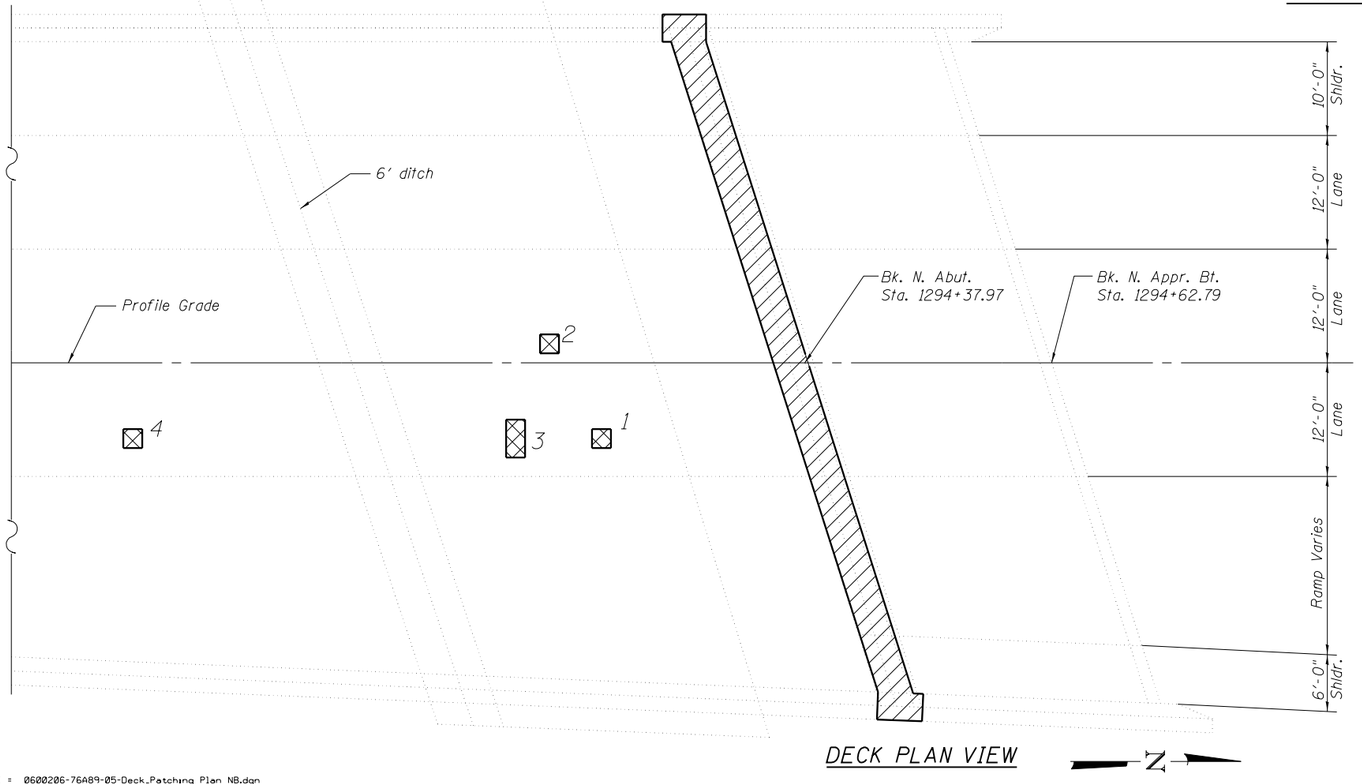
		CONTRACT NO. 76A89		
	ILLINOIS	FED. AID PROJECT		



DECK PLAN VIEW

N



DECK PLAN VIEW

N

Patch No.	Patch Depth	Station	Length (ft)	Width (ft)	Quantity (sq. yd.)
1	Partial	1294+16.5	2	2	0.44
2	Partial	1294+11.	2	2	0.44
3	Partial	1294+07.41	2	4	0.89
4	Partial	1293+67.	2	2	0.44
5	Partial	1291+79.55	2	2	0.44

LEGEND

Deck Slab Repair Partial Depth

Concrete Removal (see concrete removal sheet)

NOTE:

1. Apply Concrete sealer per Article 587 of the Standard Specifications to top and inside vertical faces of the parapets, end posts, and wing walls. Sealer shall not be applied to concrete surfaces that are to receive water proofing membrane.

* There were no Deck Slab Repair (Full Depth) Patches identified in the deck survey. Quantity has been included in the event a full depth patch is identified during construction.

BILL OF MATERIAL

Item	Unit	Total
Deck Slab Repair-(Partial Depth)	Sq. Yd.	4
Deck Slab Repair-(Full Depth Type I)*	Sq. Yd.	2
Concrete Sealer	Sq. Ft.	2193

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8/24/2012

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TranSystems

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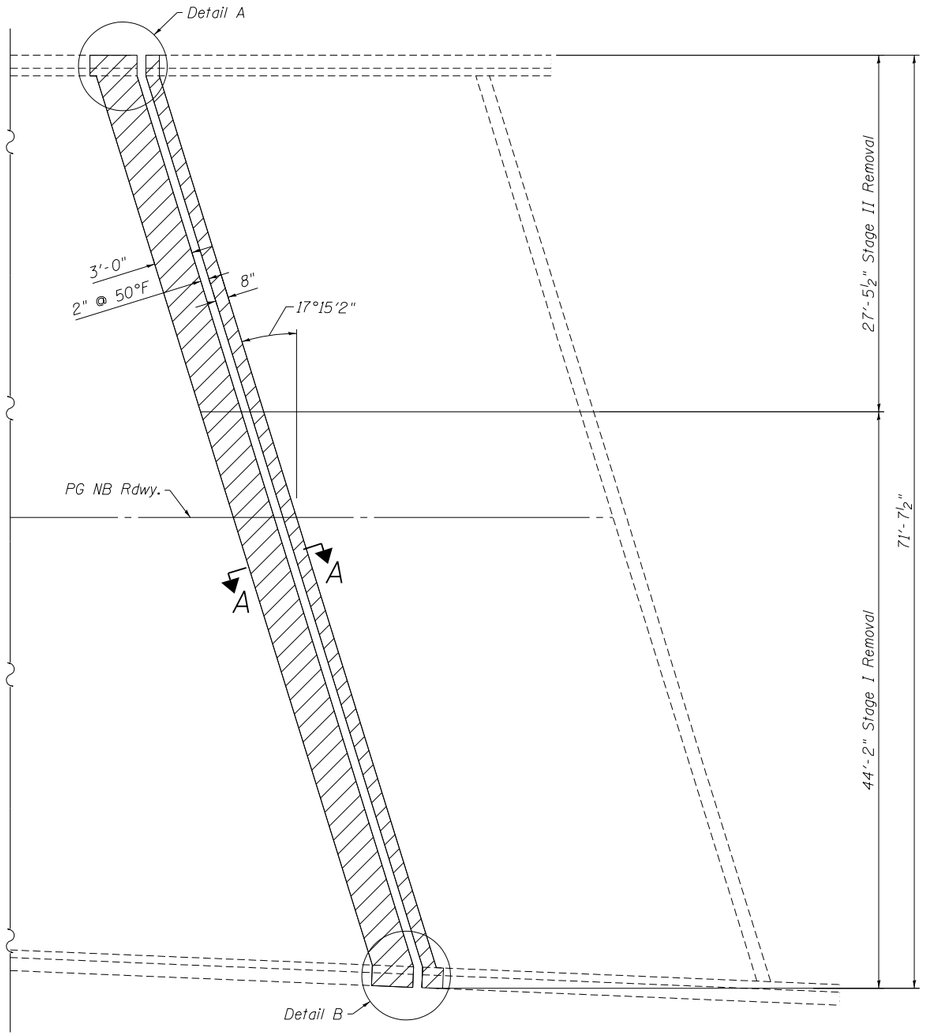
PLOT DATE = 8/24/2012	X	CHECKED - SLZ	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PATCHING PLAN NORTH BOUND
STRUCTURE NO. 060-0206

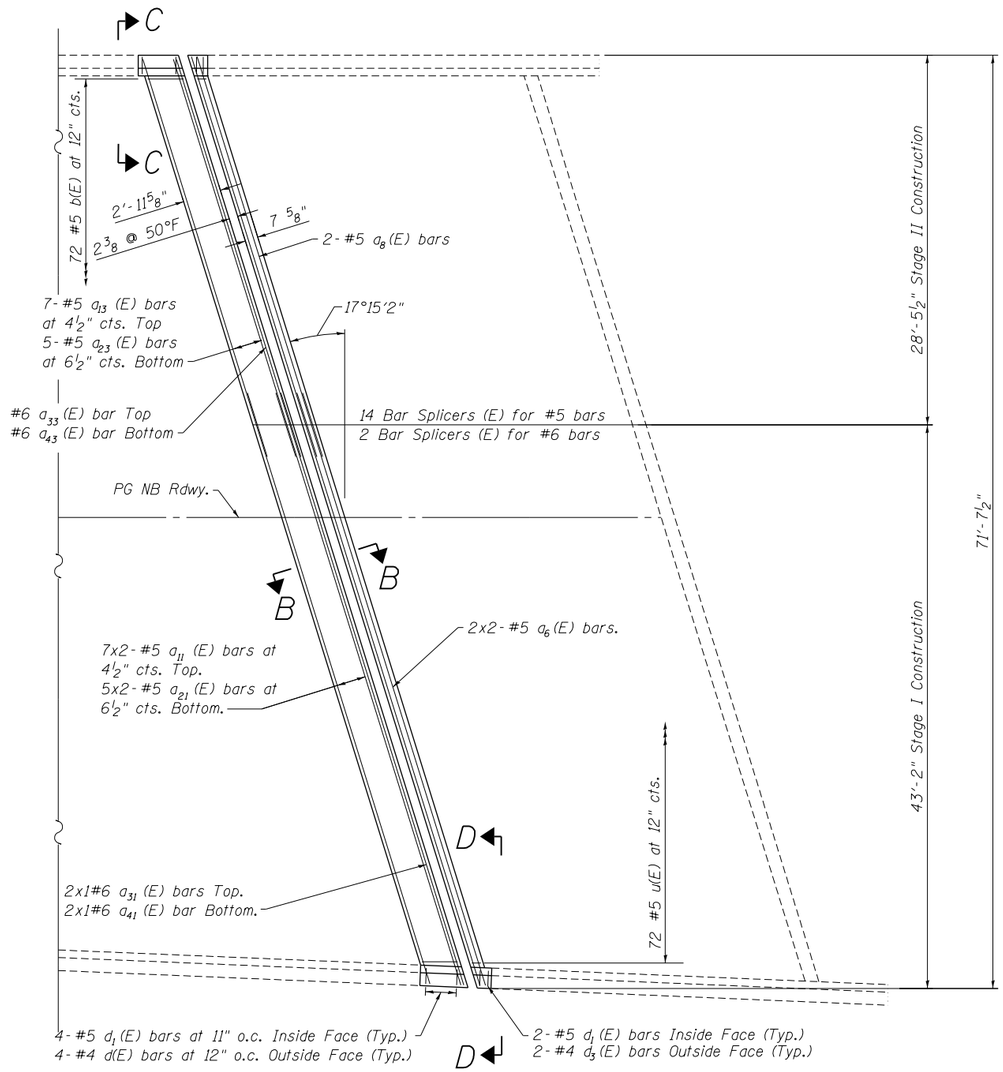
SHEET NO. 5 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	215
		CONTRACT NO. 76A89		
	ILLINOIS	FED. AID PROJECT		



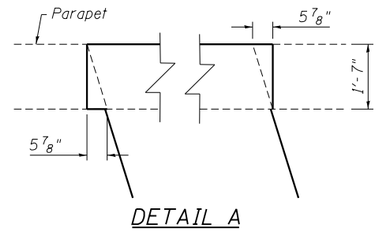
CONCRETE REMOVAL

(NB North Abutment Expansion Joint shown)

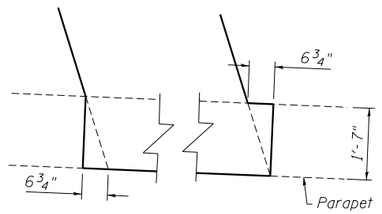


CONCRETE REPLACEMENT

(NB North Abutment Expansion Joint shown)



DETAIL A



DETAIL B

MIN. LAP

#5 Bar 2'-7" Min. Lap.
#6 Bar 3'-1" Min. Lap.

NOTES:

1. Existing reinforcement 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 shall be included with Concrete Removal.
2. Trim existing reinforcement to accommodated proposed expansion joint.
3. See sheet 8 for section A-A, B-B, C-C and D-D.
4. Bars indicated thus: "4x2-#5 etc...", indicates 4 lines of bars with 2 lengths per line.

BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	8.0
Concrete Superstructure	Cu. Yd.	8.6
Protective Coat	Sq. Yd.	24

LEGEND

Concrete Removal

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8/24/2012

TranSystems

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PLOT SCALE = 1118 '1' / in.	DRAWN - DMG	REVISED -
PLOT DATE = 8/24/2012	CHECKED - SLZ	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT EXPANSION JOINT CONCRETE REMOVAL AND REPLACEMENT N.B.
STRUCTURE NO. 060-0206
SHEET NO. 6 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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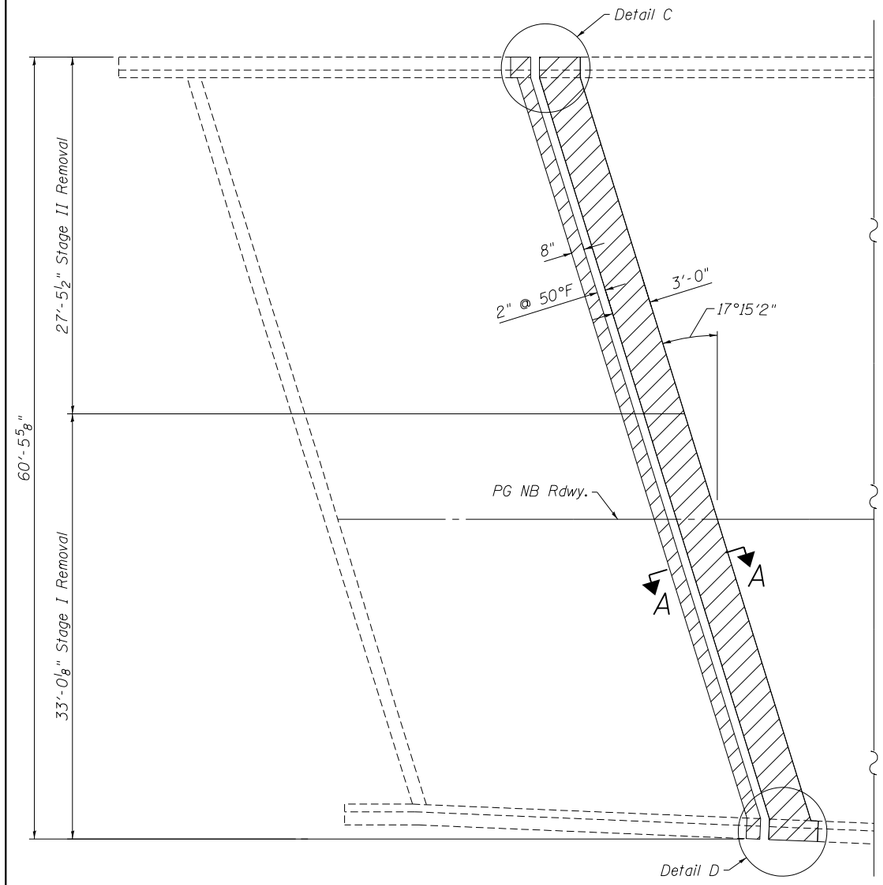
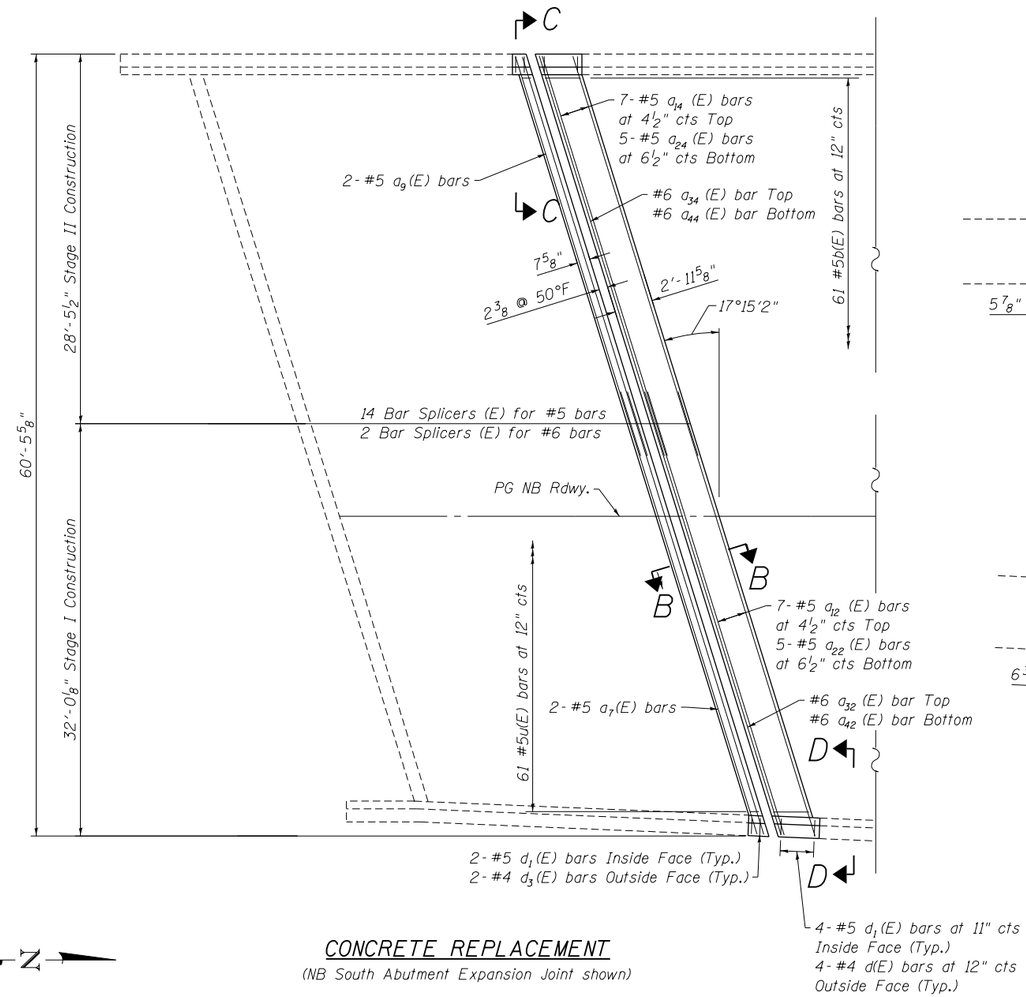
		CONTRACT NO. 76A89		
	ILLINOIS FED. AID PROJECT			



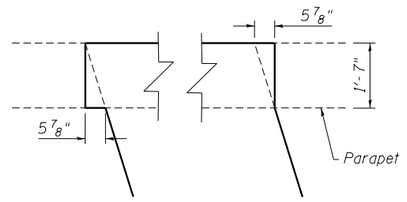
CONCRETE REMOVAL

(NB South Abutment Expansion Joint shown)

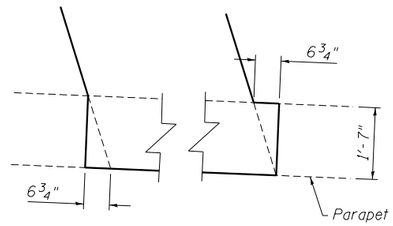


CONCRETE REPLACEMENT

(NB South Abutment Expansion Joint shown)



DETAIL C



DETAIL D

MIN. LAP

#5 Bar 2'-7" Min. Lap.
#6 Bar 3'-1" Min. Lap.

NOTES:

1. Existing reinforcement 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 shall be included with Concrete Removal.
2. Trim existing reinforcement to accommodated proposed expansion joint.
3. See sheet 8 for section A-A, B-B, C-C and D-D.
4. Bars indicated thus: "4x2-#5 etc...", indicates 4 lines of bars with 2 lengths per line.

BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	6.6
Concrete Superstructure	Cu. Yd.	8.1
Protective Coat	Sq. Yd.	20

LEGEND

Concrete Removal

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8/24/2012

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT EXPANSION JOINT CONCRETE REMOVAL AND REPLACEMENT N.B.
STRUCTURE NO. 060-0206
SHEET NO. 7 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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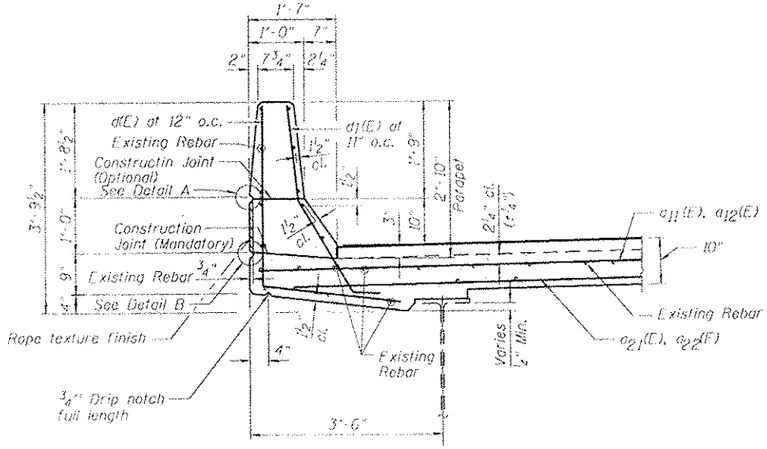
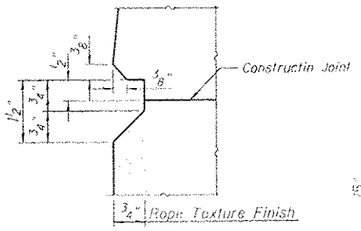
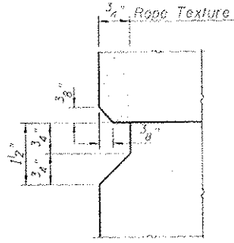
		CONTRACT NO. 76A89		
	ILLINOIS	FED. AID PROJECT		



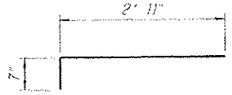
SECTION D-D THRU BRIDGE PARAPET



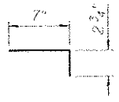
DETAIL A



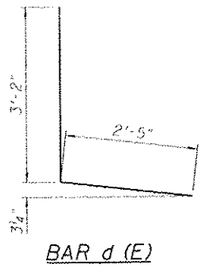
DETAIL B



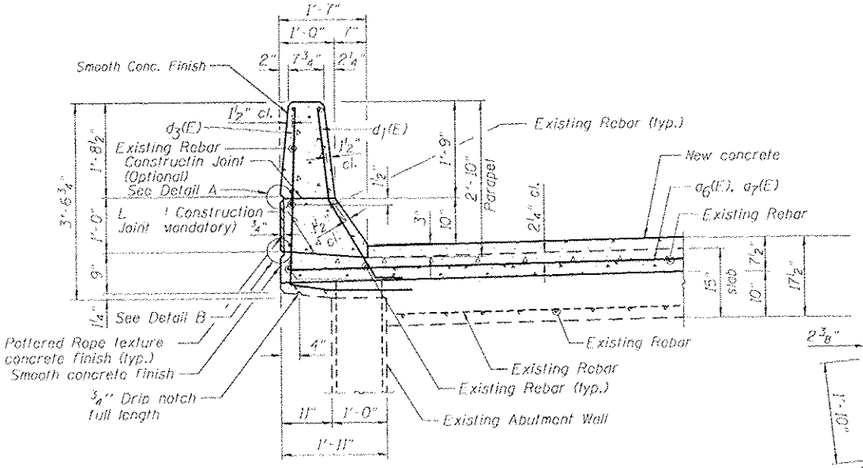
BAR b (E)



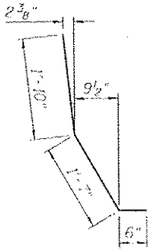
#5 BAR u (E)



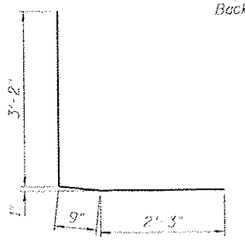
BAR d (E)



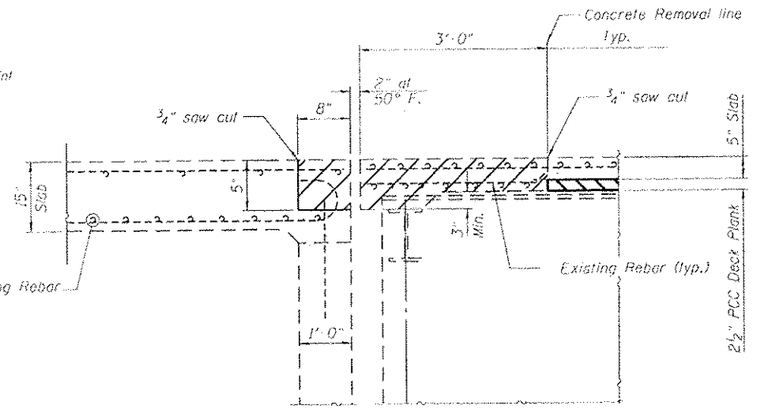
SECTION C-C THRU ABUTMENT PARAPET



BAR d_1 (E)



BAR d_3(E)



SECTION A-A

CONCRETE REMOVAL DETAIL

NORTH ABUTMENT BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a_{6}(E)	4	#5	23'-1"	
a_{8}(E)	2	#5	28'-4"	
a_{11}(E)	14	#5	23'-7"	
a_{13}(E)	7	#5	29'-4"	
a_{21}(E)	10	#5	23'-7"	
a_{23}(E)	5	#5	29'-4"	
a_{31}(E)	2	#6	23'-10"	
a_{33}(E)	1	#6	29'-4"	
a_{41}(E)	2	#6	23'-10"	
a_{43}(E)	1	#6	29'-4"	
b(E)	72	#5	3'-6"	
u(E)	72	#5	1'-4"	
d(E)	12	#4	5'-2"	
d_1(E)	12	#5	3'-11"	
d_3(E)	4	#4	6'-2"	

Item	Unit	Quantity
Reinforcement Bars, Epoxy Coated	Pound	1800
Bar Splicers	Each	16

SECTION B-B

SOUTH ABUTMENT BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a_{7}(E)	2	#5	31'-10"	
a_{9}(E)	2	#5	28'-4"	
a_{12}(E)	7	#5	32'-10"	
a_{14}(E)	7	#5	29'-4"	
a_{22}(E)	5	#5	32'-10"	
a_{24}(E)	5	#5	29'-4"	
a_{32}(E)	1	#6	32'-10"	
a_{34}(E)	1	#6	29'-4"	
a_{42}(E)	1	#6	32'-10"	
a_{44}(E)	1	#6	29'-4"	
b(E)	61	#5	3'-4"	
u(E)	61	#5	1'-4"	
d(E)	12	#4	5'-2"	
d_1(E)	12	#5	3'-11"	
d_3(E)	4	#4	6'-2"	

Item	Unit	Quantity
Reinforcement Bars, Epoxy Coated	Pound	1500
Bar Splicers	Each	16

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK JOINT DETAILS NORTH BOUND
STRUCTURE NO. 060-0206 (NB)
SHEET NO. 8 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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		CONTRACT NO. 76A89		
		ILLINOIS FED. AID PROJECT		

8/24/2012

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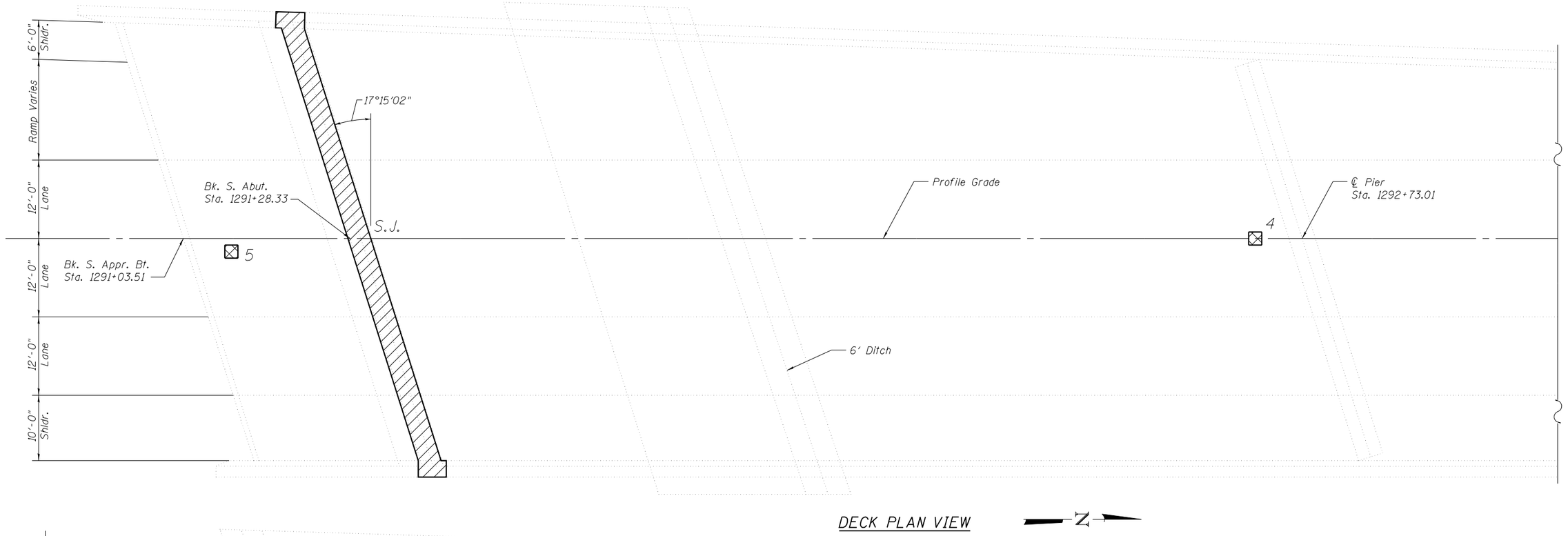
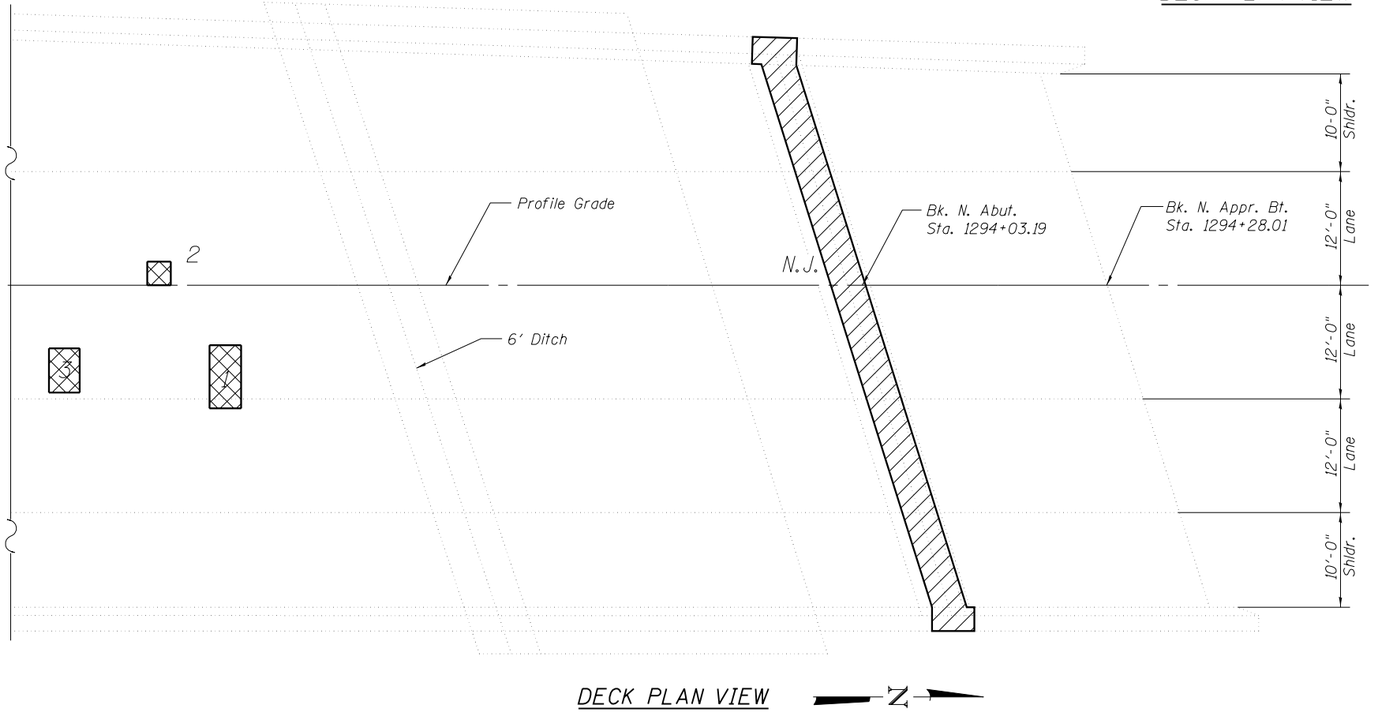


DECK PLAN VIEW



DECK PLAN VIEW

Patch No.	Patch Depth	Station	Length (ft)	Width (ft)	Quantity (sq. yd.)
1	Partial	1293+35.91	3.33	6.67	2.47
2	Partial	1293+28.91	2.5	2.5	0.69
3	Partial	1293+18.91	3.25	4.87	1.76
4	Partial	1292+66.91	2	2	0.44
5	Partial	1291+10.16	2	2	0.44

LEGEND

Deck Slab Repair Partial Depth

Concrete Removal (See Concrete Removal Sheet)

NOTE:

1. Apply Concrete sealer per Article 587 of the Standard Specifications to top and inside vertical faces of the parapets, end posts, and wing walls. Sealer shall not be applied to concrete surfaces that are to receive water proofing membrane.

* There were no Deck Slab Repair (Full Depth) Patches identified in the deck survey. Quantity has been included in the event a full depth patch is identified during construction.

BILL OF MATERIAL

Item	Unit	Total
Deck Slab Repair-(Partial Depth)	Sq. Yd.	6
Deck Slab Repair-(Full Depth Type I)*	Sq. Yd.	2
Concrete Sealer	Sq. Ft.	2194

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8/24/2012

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TranSystems

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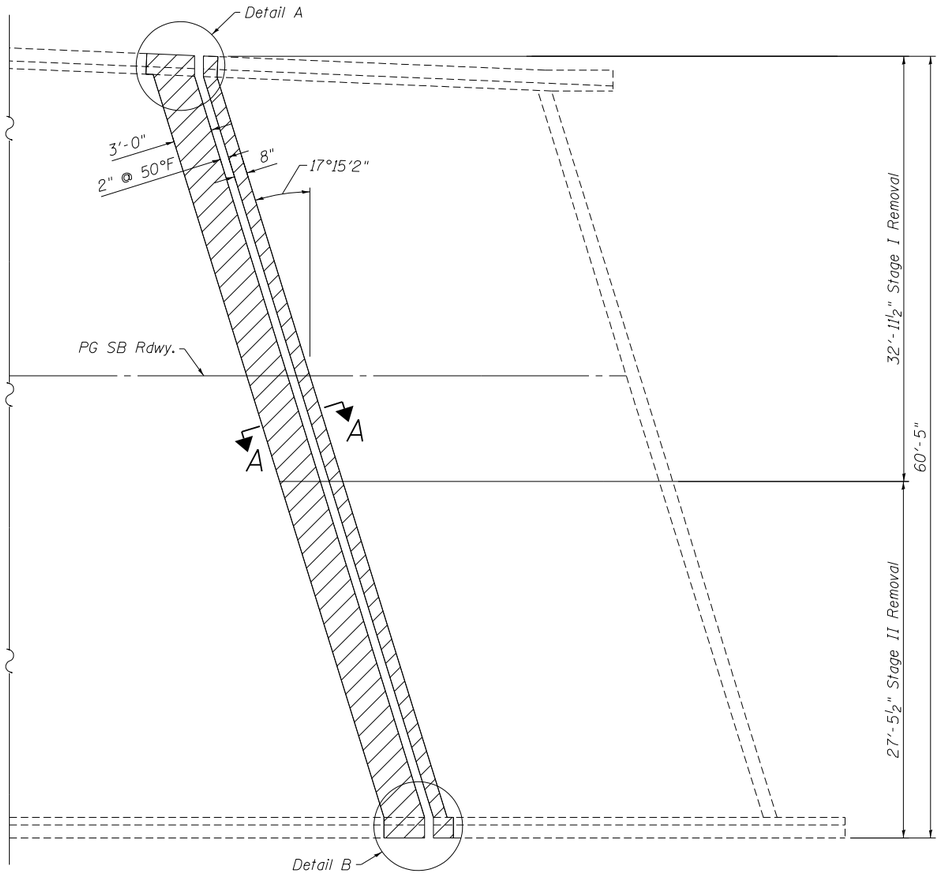
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

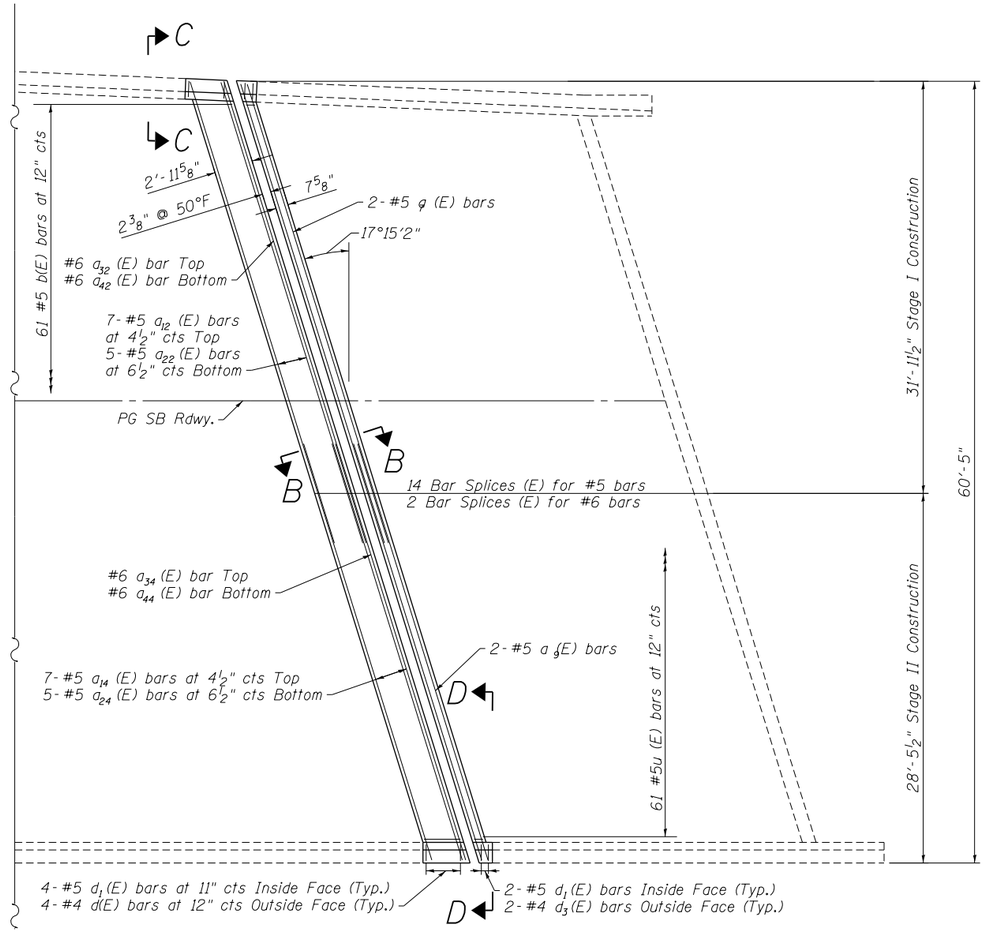
DECK PATCHING PLAN
STRUCTURE NO. 060-0207
SHEET NO. 9 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	219
		CONTRACT NO. 76A89		
	ILLINOIS FED. AID PROJECT			



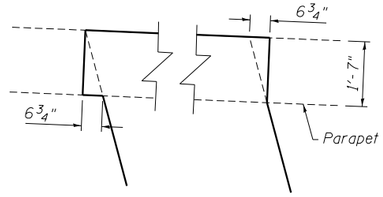
CONCRETE REMOVAL

(SB North Abutment Expansion Joint shown)

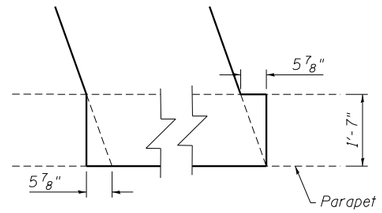


CONCRETE REPLACEMENT

(SB North Abutment Expansion Joint shown)



DETAIL A



DETAIL B

MIN. LAP

#5 Bar 2'-7" Min. Lap.
#6 Bar 3'-1" Min. Lap.

NOTES:

1. Existing reinforcement 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 shall be included with Concrete Removal.
2. Trim existing reinforcement to accommodated proposed expansion joint.
3. See sheet 12 for section A-A, B-B, C-C and D-D.
4. Bars indicated thus: "4x2-#5 etc...", indicates 4 lines of bars with 2 lengths per line.

BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	6.6
Concrete Superstructure	Cu. Yd.	8.0
Protective Coat	Sq. Yd.	20

LEGEND

Concrete Removal

10:06:27 PM- G:\CHI\0043\Bridge\CADD\060-0206&0207\0600207-76A89-10-N_Abut-Exp_Jt-R&R.dgn

8/24/2012

FILE NAME = 0600207-76A89-10-N_Abut-Exp_Jt_R&R.dgn

TranSystems

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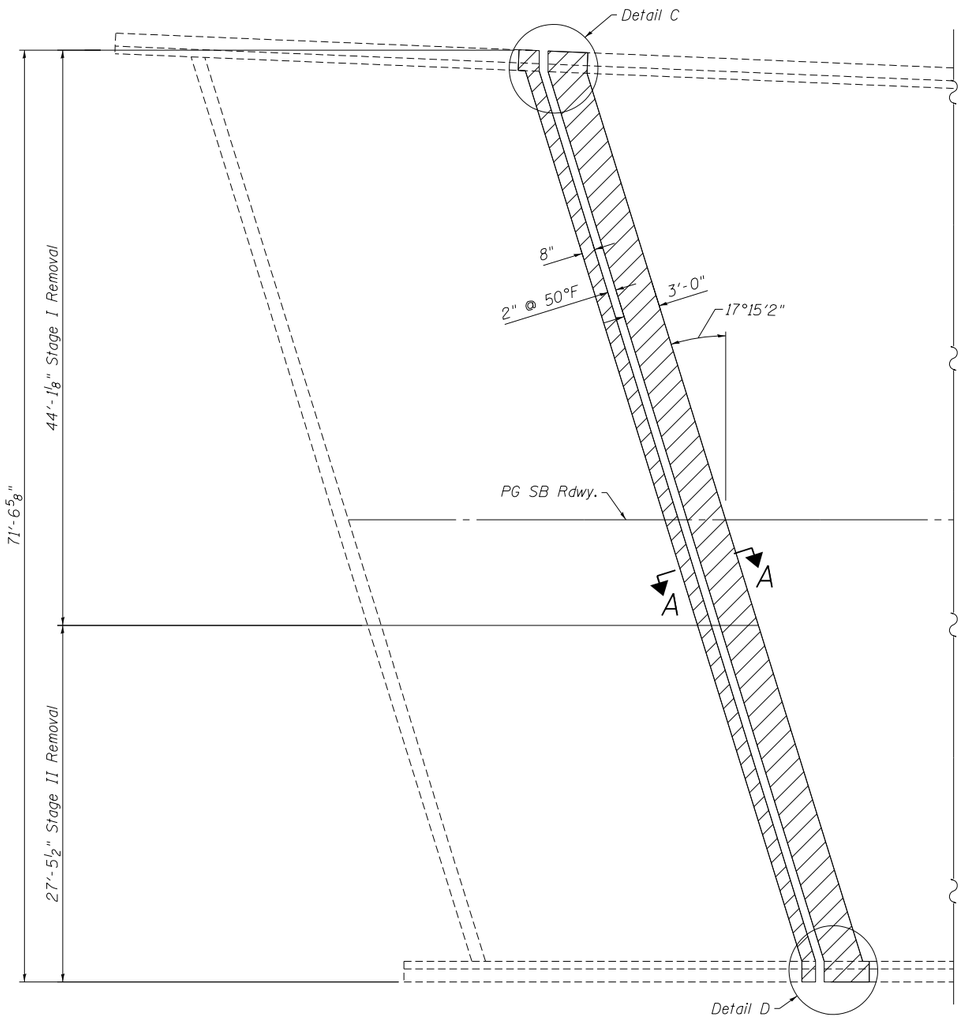
	CHECKED - FAS	REVISED -
PLOT SCALE = 1118.0000 '1' / in.	DRAWN - DMG	REVISED -
PLOT DATE = 8/24/2012	CHECKED - SLZ	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

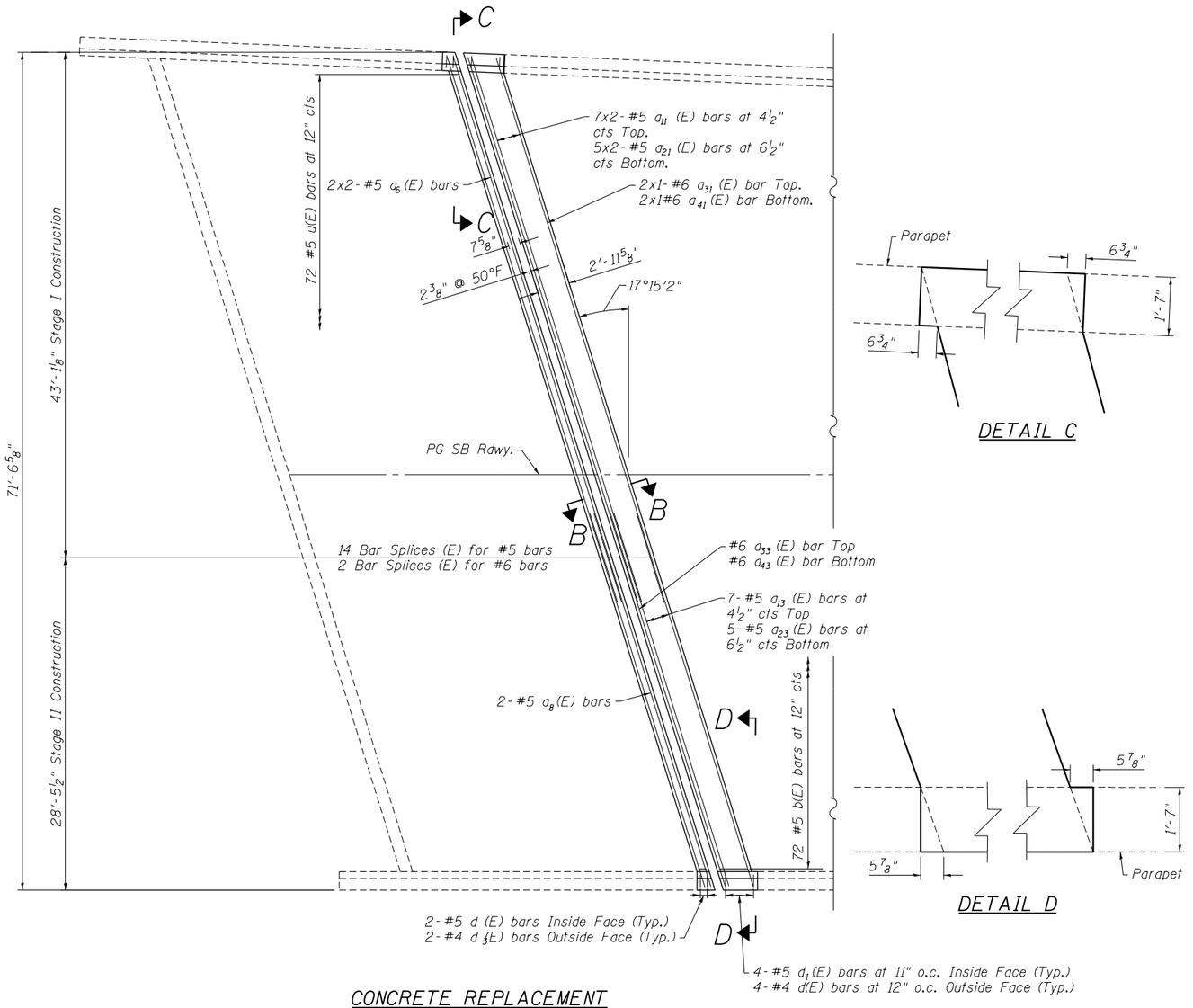
NORTH ABUTMENT EXPANSION JOINT CONCRETE REMOVAL AND REPLACEMENT S.B.
STRUCTURE NO. 060-0207
SHEET NO. 10 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	220
		CONTRACT NO. 76A89		
	ILLINOIS	FED. AID PROJECT		



CONCRETE REMOVAL

(SB South Abutment Expansion Joint shown)



CONCRETE REPLACEMENT

(SB South Abutment Expansion Joint shown)

DETAIL C

DETAIL D

MIN. LAP

#5 Bar 2'-7" Min. Lap.
#6 Bar 3'-1" Min. Lap.

NOTES:

1. Existing reinforcement 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 shall be included with Concrete Removal.
2. Trim existing reinforcement to accommodated proposed expansion joint.
3. See sheet 12 for section A-A, B-B, C-C and D-D.
4. Bars indicated thus: "4x2-#5 etc...", indicates 4 lines of bars with 2 lengths per line.

BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	7.8
Concrete Superstructure	Cu. Yd.	9.6
Protective Coat	Sq. Yd.	24

LEGEND

Concrete Removal

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8/24/2012

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PLOT DATE = 8/24/2012	CHECKED - SLZ	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT EXPANSION JOINT CONCRETE REMOVAL AND REPLACEMENT S.B.
STRUCTURE NO. 060-0207
SHEET NO. 11 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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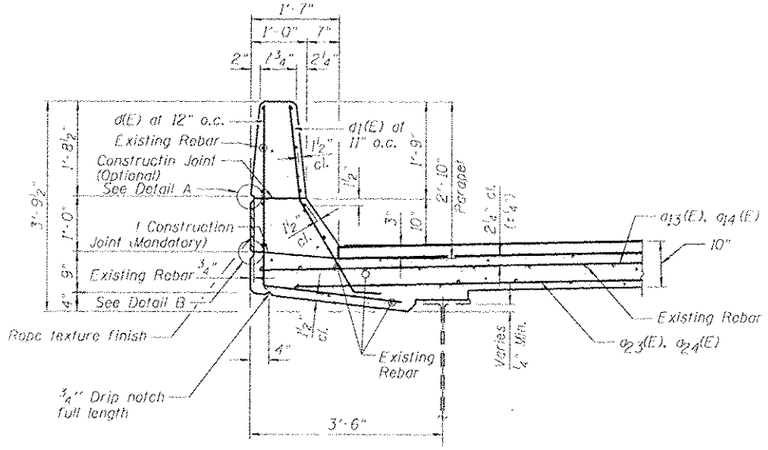
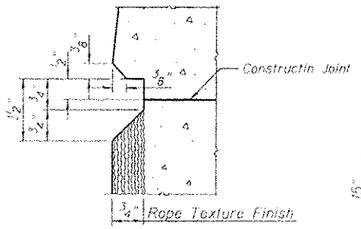
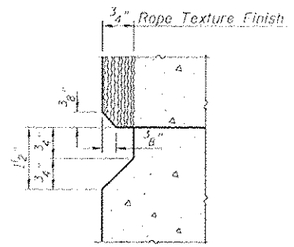
		CONTRACT NO. 76A89		
	ILLINOIS FED. AID PROJECT			



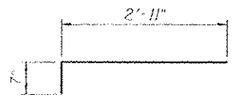
SECTION D-D THRU BRIDGE PARAPET



DETAIL A

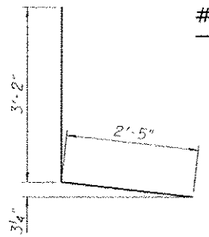


DETAIL B

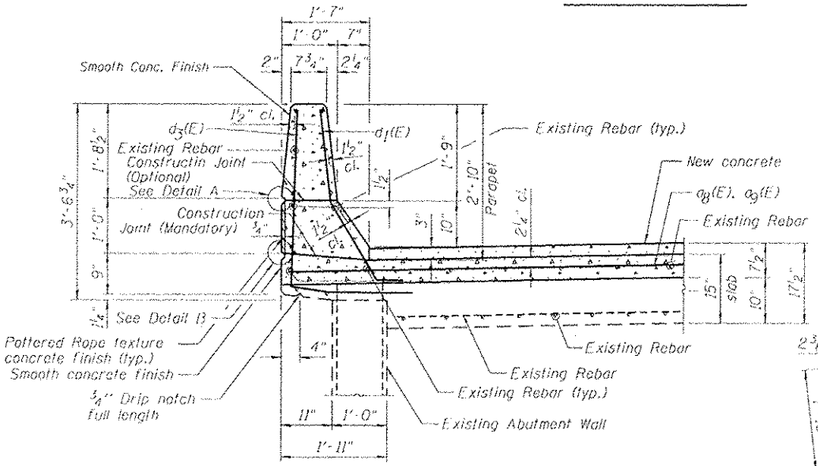


#5 BAR b (E)

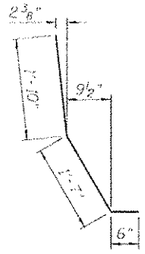
#5 BAR u (E)



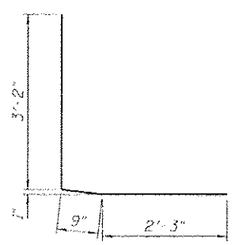
BAR d (E)



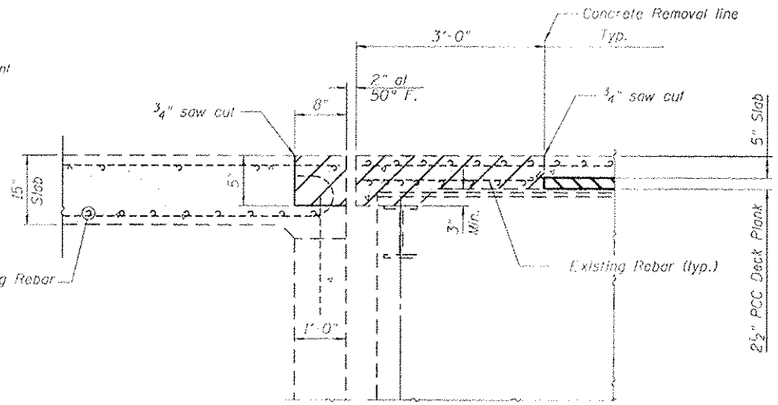
SECTION C-C THRU ABUTMENT PARAPET



BAR d1 (E)



BAR d3(E)



SECTION A-A

CONCRETE REMOVAL DETAIL

NORTH ABUTMENT
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$a_7(E)$	2	#5	31'-10"	
$a_9(E)$	2	#5	28'-4"	
$a_{10}(E)$	7	#5	32'-10"	
$a_{11}(E)$	7	#5	29'-4"	
$a_{22}(E)$	5	#5	32'-10"	
$a_{24}(E)$	5	#5	29'-4"	
$a_{32}(E)$	1	#6	32'-10"	
$a_{34}(E)$	1	#6	29'-4"	
$a_{42}(E)$	1	#6	32'-10"	
$a_{44}(E)$	1	#6	29'-4"	
b(E)	61		3'-6"	
u(E)	61	#5	1'-4"	
d(E)	12	#4	5'-2"	
$d_1(E)$	12	#5	3'-11"	
$d_3(E)$	4	#4	6'-2"	

Item	Unit	Quantity
Reinforcement Bars, Epoxy Coated	Pound	1500
Bar Splicers	Each	16

SECTION B-B

SOUTH ABUTMENT
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$a_6(E)$	2	#5	23'-1"	
$a_8(E)$	2	#5	28'-4"	
$a_{11}(E)$	7	#5	23'-7"	
$a_{13}(E)$	7	#5	29'-4"	
$a_{21}(E)$	5	#5	23'-7"	
$a_{23}(E)$	5	#5	29'-4"	
$a_{31}(E)$	1	#6	23'-10"	
$a_{33}(E)$	1	#6	29'-4"	
$a_{41}(E)$	1	#6	23'-10"	
$a_{43}(E)$	1	#6	29'-4"	
b(E)	61	#4	3'-4"	
u(E)	61	#5	1'-4"	
d(E)	12	#4	5'-4"	
$d_1(E)$	12	#5	3'-11"	
$d_3(E)$	4	#4	6'-2"	

Item	Unit	Quantity
Reinforcement Bars, Epoxy Coated	Pound	1700
Bar Splicers	Each	16

FILE NAME = 8608287-76489-12 Deck Joint Details SB.dgn

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK JOINT DETAILS SOUTH BOUND
STRUCTURE NO. 060-0207 (SB)
SHEET NO. 12 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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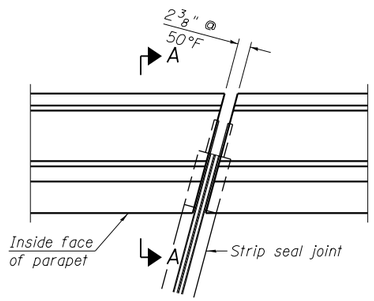
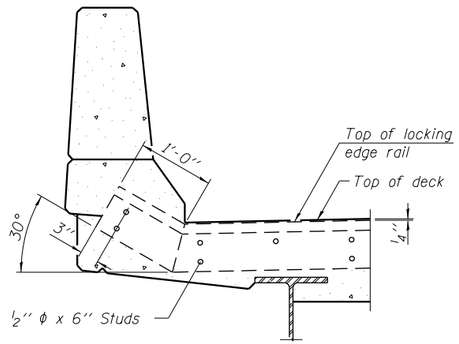
		CONTRACT NO. 76489		
	ILLINOIS FED. AID PROJECT			

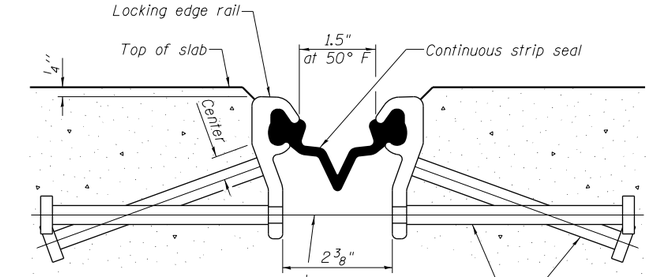


PLAN
(For skews ≤ 30°)



SECTION A-A

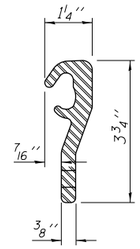
*Omit weld at seal opening.
**When joint is fixed, dimension is set at 1 1/2".



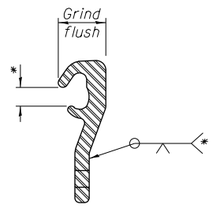
7/16" ϕ holes at 4'-0" cts. for 3/8" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

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.

SECTION THRU STRIP SEAL JOINT
FOR OVERLAY OVER DECK BEAMS



LOCKING EDGE RAIL



LOCKING EDGE RAIL SPLICE

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.

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

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	263.2

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8/24/2012

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TranSystems

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHALLOW STRIP SEAL JOINT
STRUCTURE NO. 060-0206 AND 060-0207
SHEET NO. 13 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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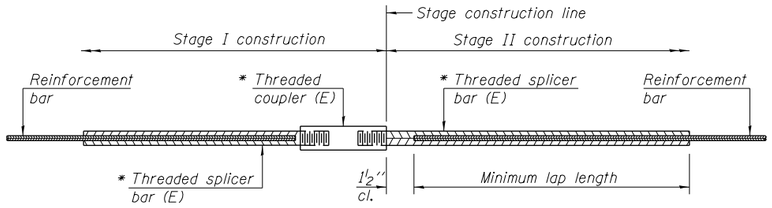
		CONTRACT NO. 76A89		
	ILLINOIS FED. AID PROJECT			



STANDARD BAR SPLICER ASSEMBLY

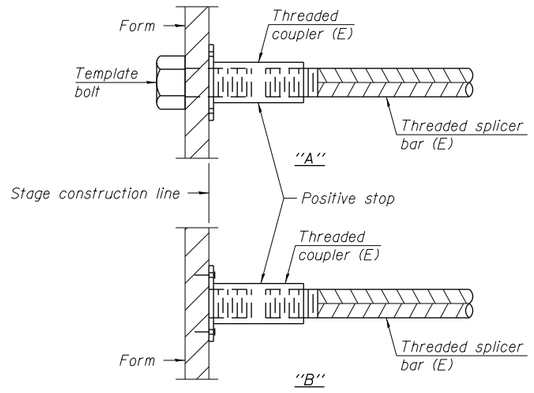
Minimum Lap Lengths					
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5
3, 4	1'-5''	1'-11''	2'-1''	2'-4''	2'-3''
5	1'-9''	2'-5''	2'-7''	2'-11''	2'-10''
6	2'-1''	2'-11''	3'-1''	3'-6''	3'-4''
7	2'-9''	3'-10''	4'-2''	4'-8''	4'-6''
8	3'-8''	5'-1''	5'-5''	6'-2''	5'-10''
9	4'-7''	6'-5''	6'-10''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

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, Top bar lap, Class B

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

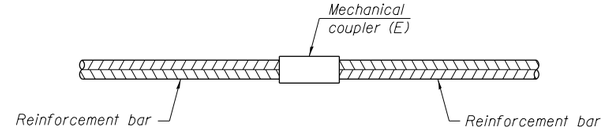
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
0206	#5	28	3
0206	#6	4	3
0207	#5	28	3
0207	#6	4	3



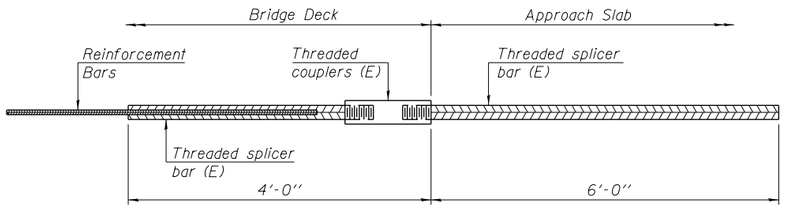
INSTALLATION AND SETTING METHODS

"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.



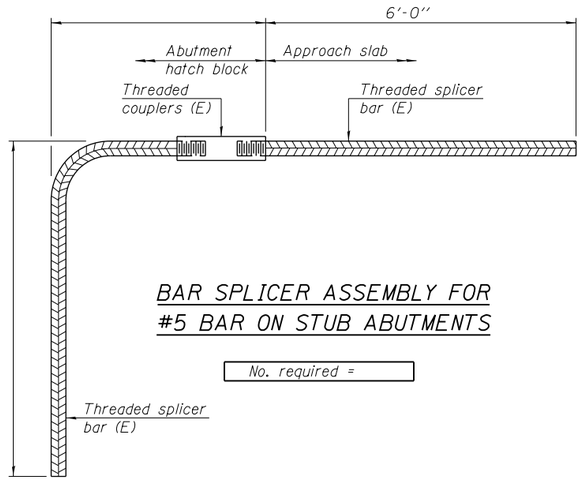
STANDARD MECHANICAL SPLICER

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 special provision for Mechanical Splicers.

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

BSD-1 7-1-10

FILE NAME = 0600206-76A89-14-Bar_Splicer.dgn

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TranSystems

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 060-0206 AND 060-0207
SHEET NO. 14 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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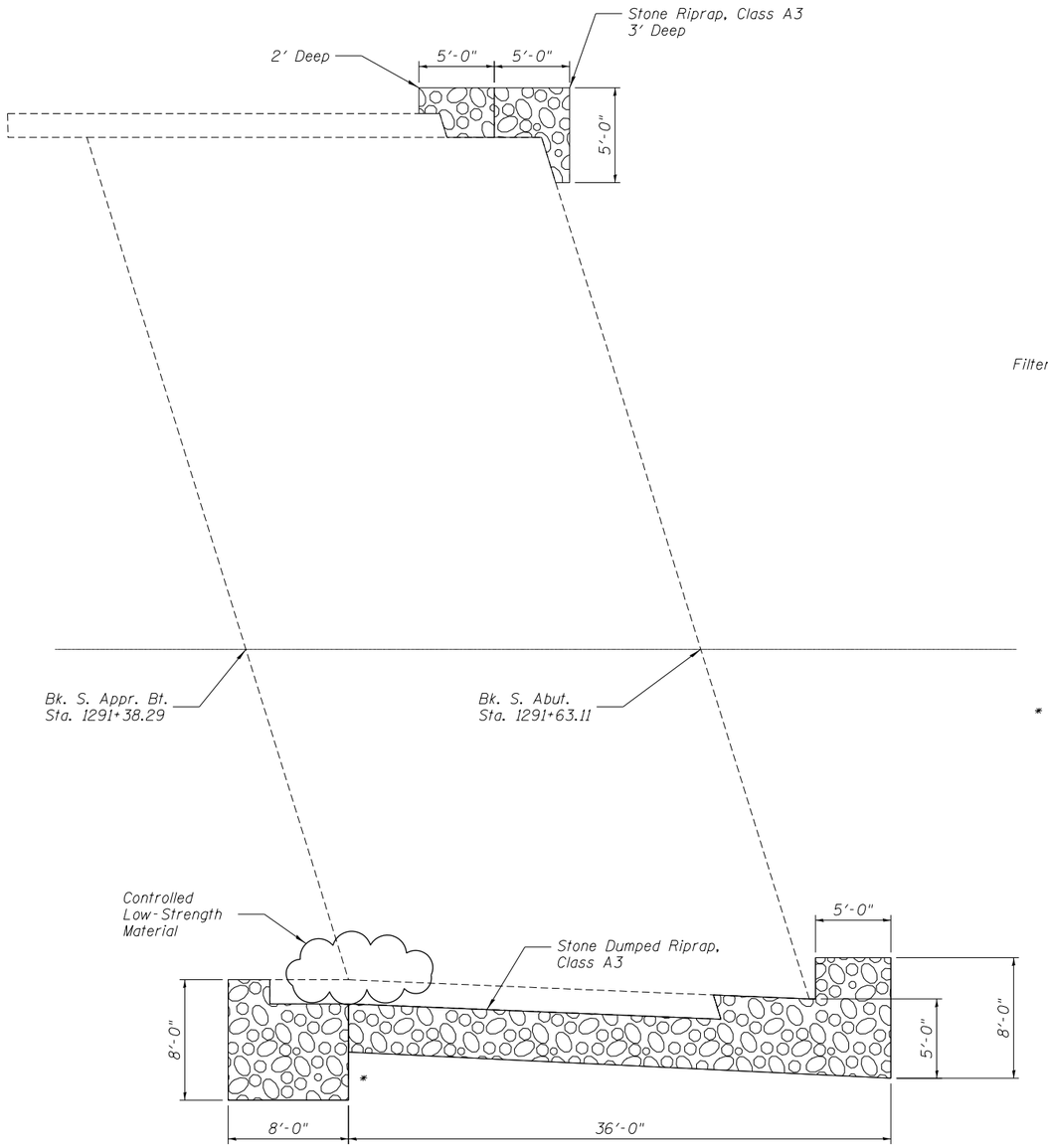
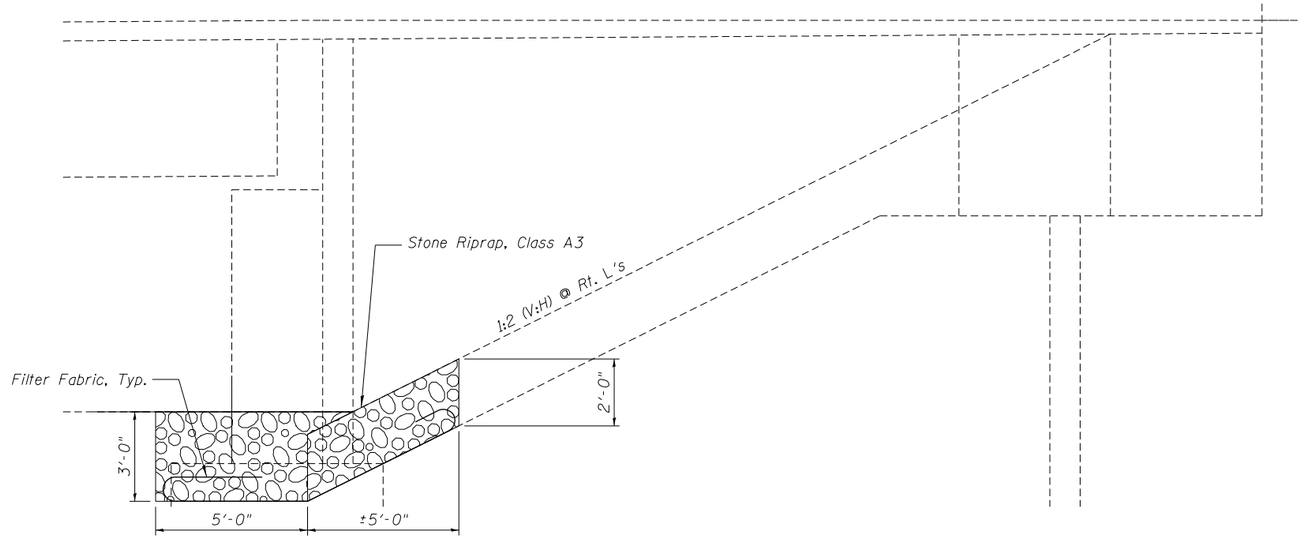
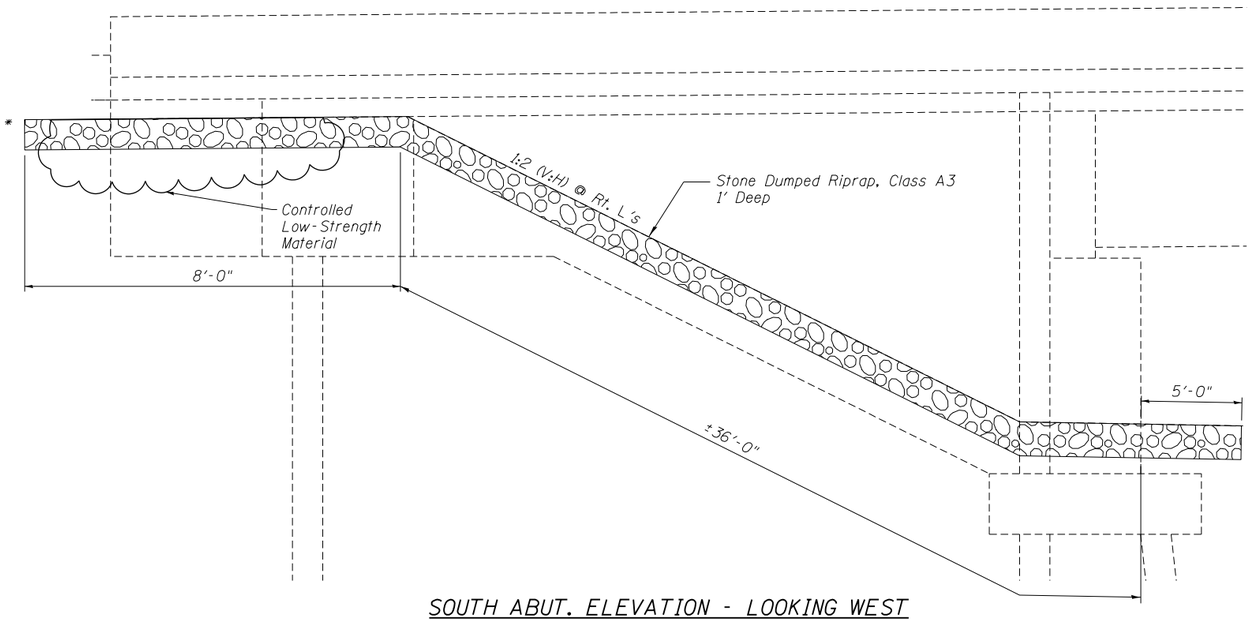
		CONTRACT NO. 76A89		
	ILLINOIS	FED. AID PROJECT		



SOUTH ABUT. PLAN



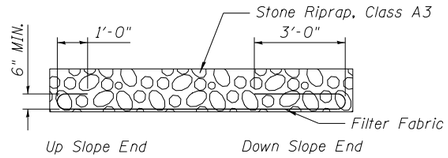
SOUTH ABUT. ELEVATION - LOOKING EAST



SOUTH ABUT. ELEVATION - LOOKING WEST

BILL OF MATERIAL

Item	Unit	Total
Stone Riprap, Class A3	Ton	11
Filter Fabric	Sq. Yd.	8
Controlled Low-Strength Material	Cu. Yd.	3
Stone Dumped Riprap, Class A3	Ton	23



FILTER FABRIC TYPICAL DETAIL

*Note: Do not disturb soil prior to riprap placement. Place riprap directly on existing soil.

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8/24/2012

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TranSystems

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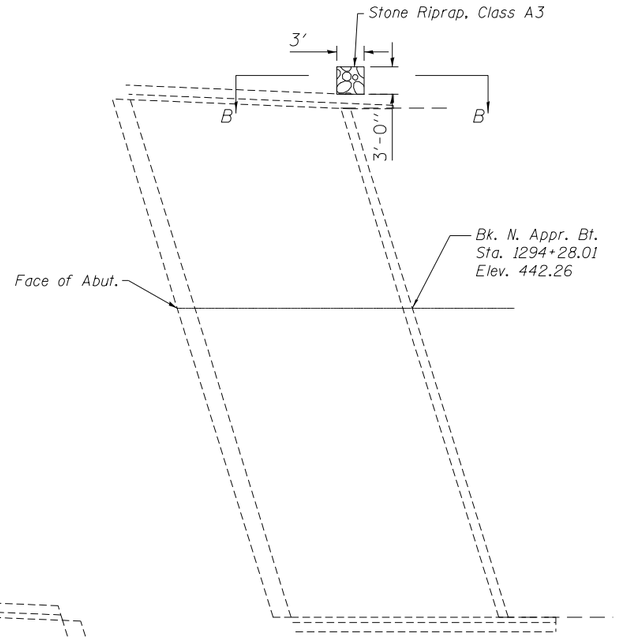
PLOT DATE = 8/24/2012	X	CHECKED - SLZ	REVISED -	

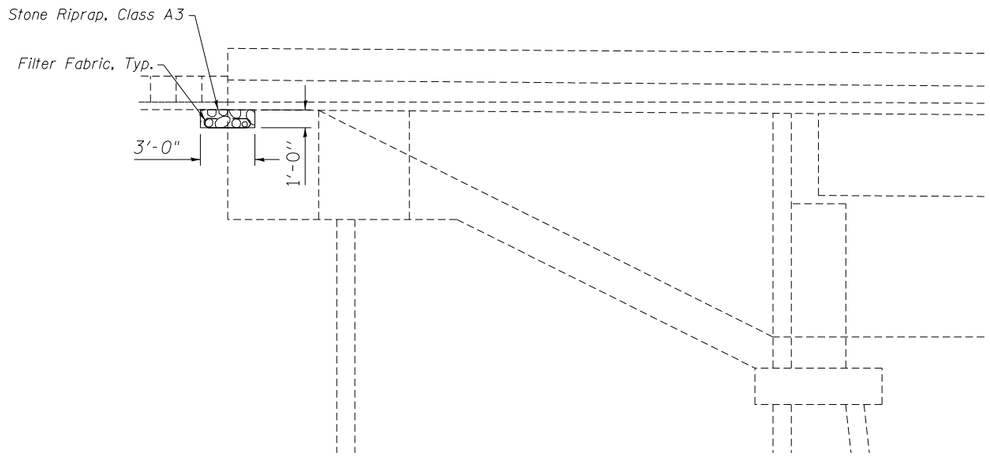
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SLOPE REPAIRS NORTH BOUND
STRUCTURE NO. 060-0206
SHEET NO. 15 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	225
		CONTRACT NO. 76A89		
	ILLINOIS	FED. AID PROJECT		

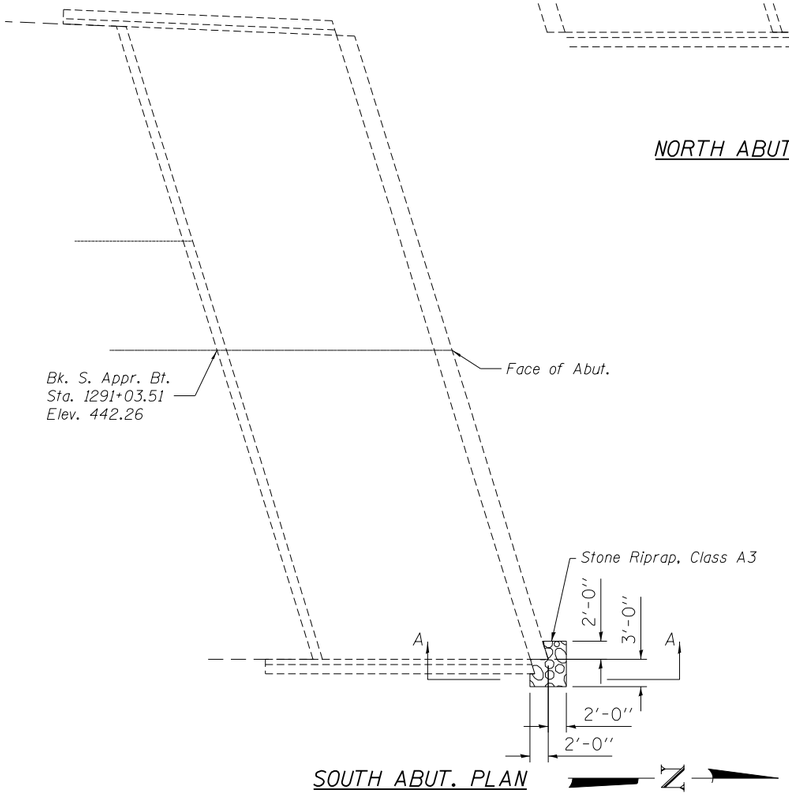


NORTH ABUT. PLAN

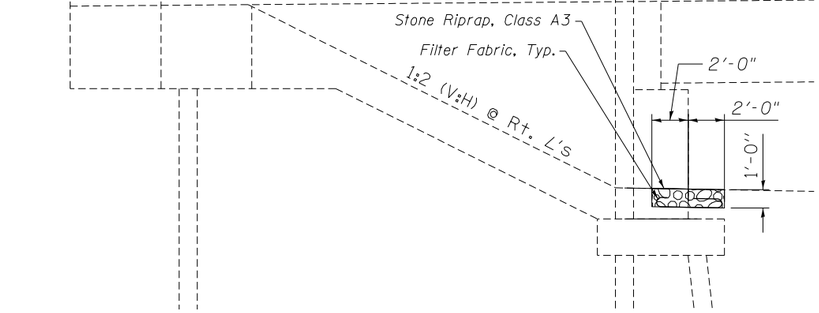


SECTION B-B

NORTH ABUT. ELEVATION - LOOKING EAST



SOUTH ABUT. PLAN

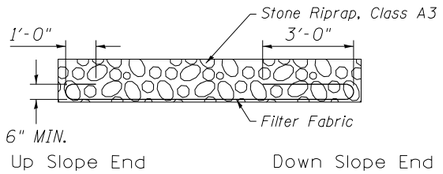


SECTION A-A

SOUTH ABUT. ELEVATION - LOOKING WEST

BILL OF MATERIAL

Item	Unit	Total
Stone Riprap, Class A3	Ton	3
Filter Fabric	Sq. Yd.	5



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8/24/2012

FILE NAME = 0600207-76A89-16-Slope_Repairs_SB.dgn

TranSystems

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	X	CHECKED - FAS	REVISED -
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PLOT DATE = 8/24/2012	X	CHECKED - SLZ	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SLOPE REPAIRS SOUTH BOUND
STRUCTURE NO. 060-0207

SHEET NO. 16 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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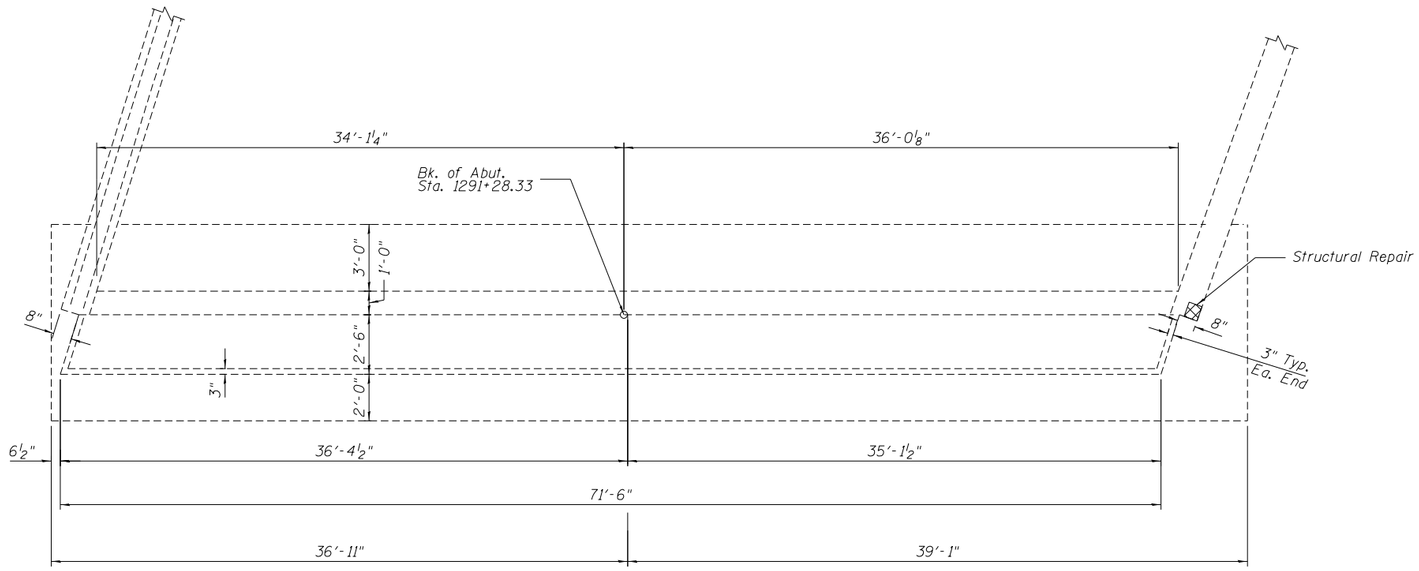
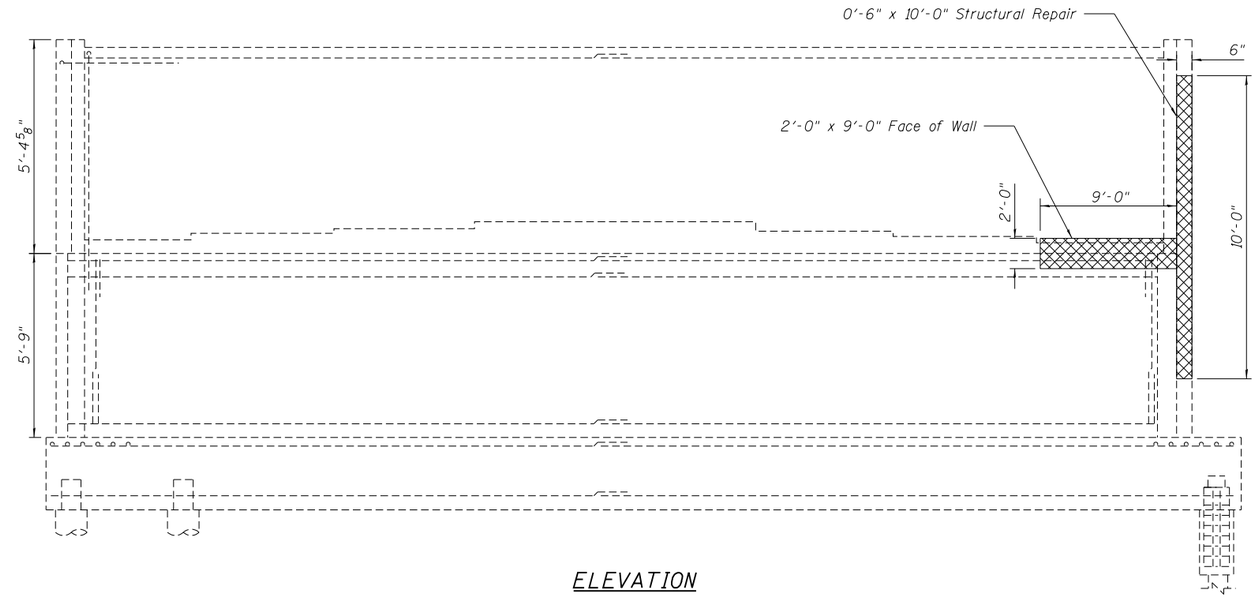
		CONTRACT NO. 76A89		
	ILLINOIS FED. AID PROJECT			



PLAN



ELEVATION

LEGEND

Structural Repair of Concrete

BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	23.0

Note:
Rope texture not required on repaired concrete surface.

FILE NAME = 0600207-76A89-17-S_Abut_Repairs.dgn

TranSystems

USER NAME = DMGolias	X	DESIGNED - WAE	REVISED -	
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PLOT DATE = 8/24/2012	X	CHECKED - SLZ	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

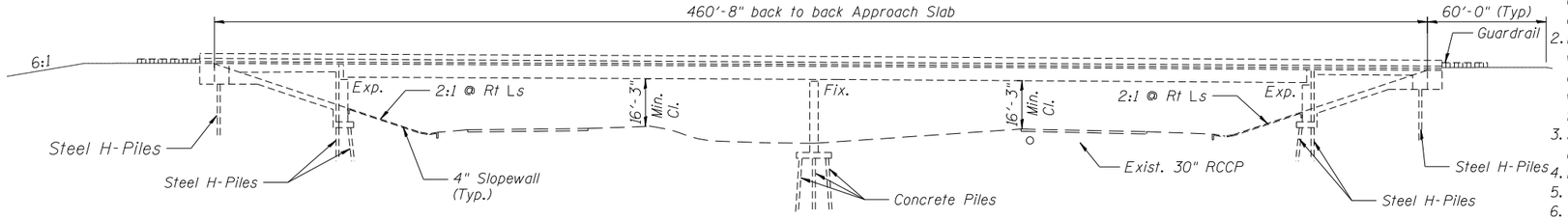
SOUTH ABUTMENT STRUCTURAL REPAIRS SOUTH BOUND
STRUCTURE NO. 060-0207
SHEET NO. 17 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	227
		CONTRACT NO. 76A89		
	ILLINOIS	FED. AID PROJECT		

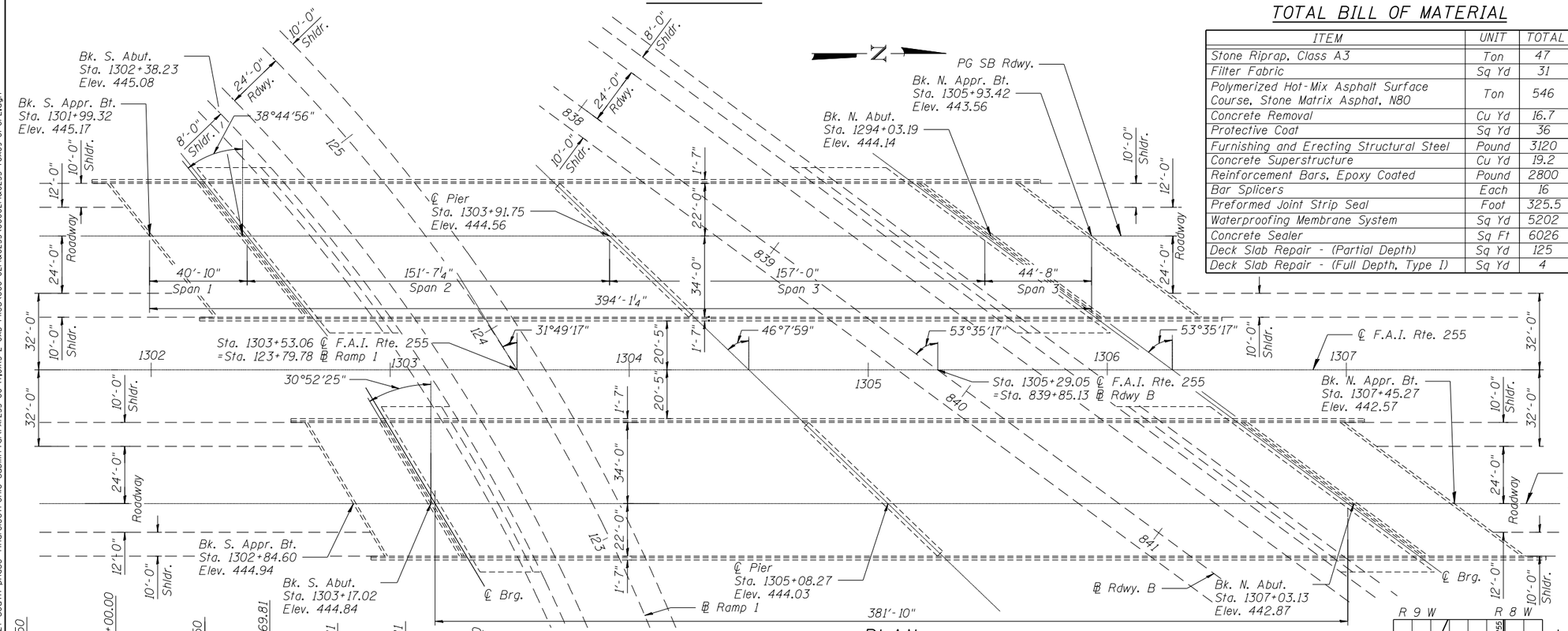
8/24/2012 10:06:33 PM- G:\CHI\0013\Bridge\CADD\060-0206&0207\0600207-76A89-17-S_Abut_Repairs.dgn

Bench Mark: B.M. 17 Top iron pin State Traverse Point "X"-57
Sta. 1291+42.12 ℄ F.A.I. 255 El. 419.98

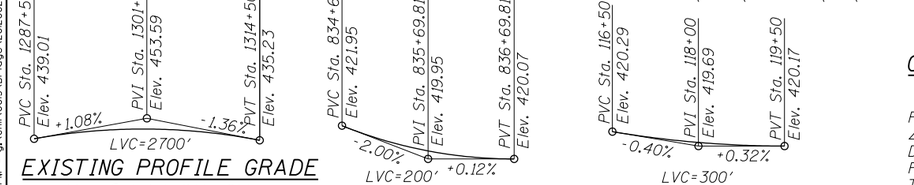
Existing Structure: The original structure was constructed in 1987 as FAI Route 255, Section 60-7HB-5. The dual superstructures consists of continuous two span composite welded plate girder bridges with 7½" decks. The decks consist of a 5" slab cast upon 2½" precast pre-stressed panels. The substructures consist of open vaulted abutments and concrete piers, all supported on steel piles. The 7 ½" thick abutment slabs rest on precast pre-stressed I-beams. The back-to-back of approach slab dimension is 394'-1¼" (SB) and 460'- 8" (NB) and out-to-out of deck dimension measures 59'-2" (SB & NB). The span lengths (CI bearing to CI bearing) vary between 146" - 9⅞" and 159'- 2⅞" for span 1 (SB) and between 150'-7⅞" and 167'-1⅝" span 2 (SB) and 175'-3½" and 195'-1⅛" span 1 (NB) and 182'-2½" and 196'-3⅞" span 2 (NB). The south bound bridge has a right forward skew of 38°-44'-39" (South Abut), 46°-07'-39" (Center pier), 53°-35'-17" (North Abut). The North bound structure has a right forward skew of 30°-52'-25" (South Abut), 46°-07'-39" (Center pier), 53°-35'-17" (North Abut). Two lanes of traffic will be maintained in each direction utilizing stage construction.



ELEVATION



PLAN



EXISTING PROFILE GRADE
Along ℄ F.A.I. RTE. 255

EXISTING PROFILE GRADE
Along ℄ Roadway B

EXISTING PROFILE GRADE
Along ℄ Ramp 1

CURVE DATA RAMP1

PI Sta. 122+49.50
Δ = 77°37'30"
D = 7°30'00"
R = 763.944'
T = 614.50'
L = 1035.00'
E = 216.48'

CURVE DATA ROADWAY B

PI Sta. 846+47.73
Δ = 46°36'08"
D = 5°00'00"
R = 1145.916'
T = 493.53'
L = 932.04'
E = 101.76'

DATE: 03/09/2012

F. ALLEN SMITH, P.E., S.E.
NO. 081-005860
EXP. DATE 11/30/2012

FRANCIS A. SMITH JR.
081-005860
LICENSED STRUCTURAL ENGINEER
ILLINOIS

GENERAL NOTES

1. Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale,and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete. As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer. Any cracks that cannot be removed by grinding ¼ in. deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.
2. Plan dimensions, elevations and details relative to existing plans are subject to nominal construction variations. The Contactor 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.
3. Joint opening shall be adjusted according to Art. 520.04 of the Standard Specifications when the deck is poured at an ambient temperature other than 50 deg. F.
4. Reinforcement bars designated (E) shall be epoxy coated.
5. The new concrete deck surfaces shall have its final finish tined according to Article 420.09(e)(1).
6. The Contractor shall us extreme care during concrete removal so as not to damage the existing 2½" precast, prestressed stay-in-place forms.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Stone Riprap, Class A3	Ton	47
Filter Fabric	Sq Yd	31
Polymerized Hot-Mix Asphalt Surface Course, Stone Matrix Asphat, N80	Ton	546
Concrete Removal	Cu Yd	16.7
Protective Coat	Sq Yd	36
Furnishing and Erecting Structural Steel	Pound	3120
Concrete Superstructure	Cu Yd	19.2
Reinforcement Bars, Epoxy Coated	Pound	2800
Bar Splicers	Each	16
Preformed Joint Strip Seal	Foot	325.5
Waterproofing Membrane System	Sq Yd	5202
Concrete Sealer	Sq Ft	6026
Deck Slab Repair - (Partial Depth)	Sq Yd	125
Deck Slab Repair - (Full Depth, Type I)	Sq Yd	4

INDEX OF SHEETS

DESIGN SPECIFICATIONS

Original Construction
AASHTO 1977
& 1978, 1979 & 1980 Plus Interims

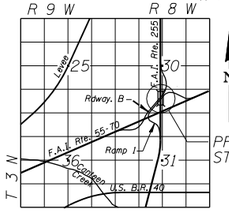
LOADING HS20-44

Original Construction
or Alternate Military Loading
Allow 25 p.s.f. for Fut.W.S.

DESIGN STRESSES

Original Construction
PRECAST PRESTRESSED UNITS
f'c = 5,000 psi
f'ci = 4,000 psi
f's = 270,000 psi - ½" ϕ strands
f'si = 189,000 psi - ½" ϕ strands

Load Factor Design for Slab.
f'c = 3,500 psi
fy = 60,000 psi
fs = 20,000 psi (M183) &
27,000 psi (M223 G50) & (M222 Structural)
fc = 1,400 psi, fs = 24,000 psi (Substructure)



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TranSystems

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 060-0214 & 060-0253
SHEET NO. 1 OF 16 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	228
		CONTRACT NO. 76A89		
		ILLINOIS FED. AID PROJECT		

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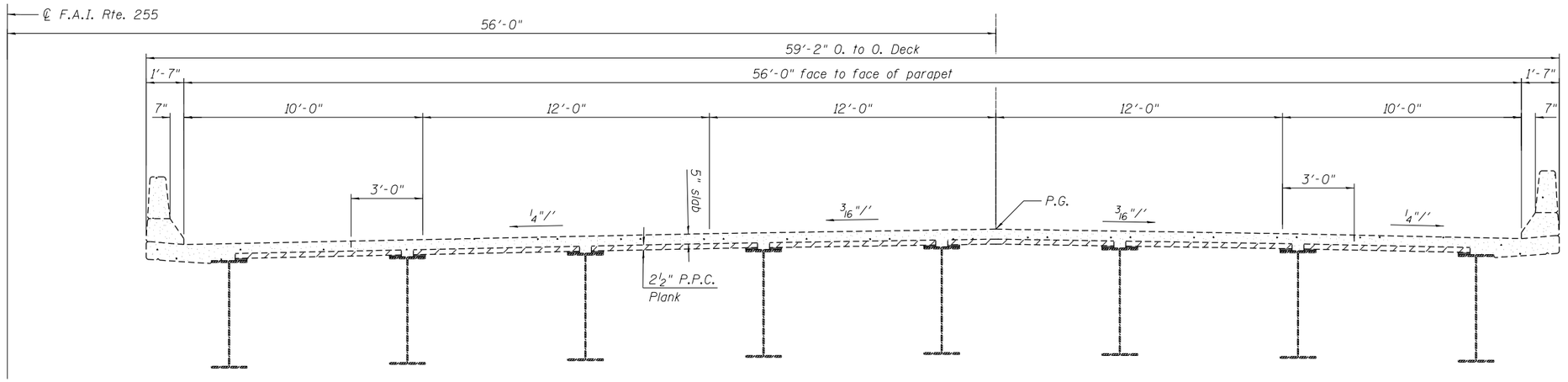
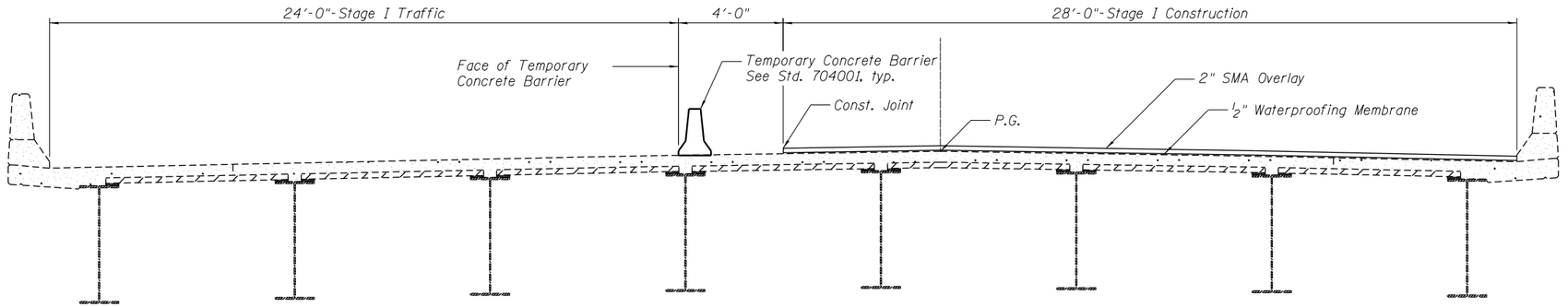


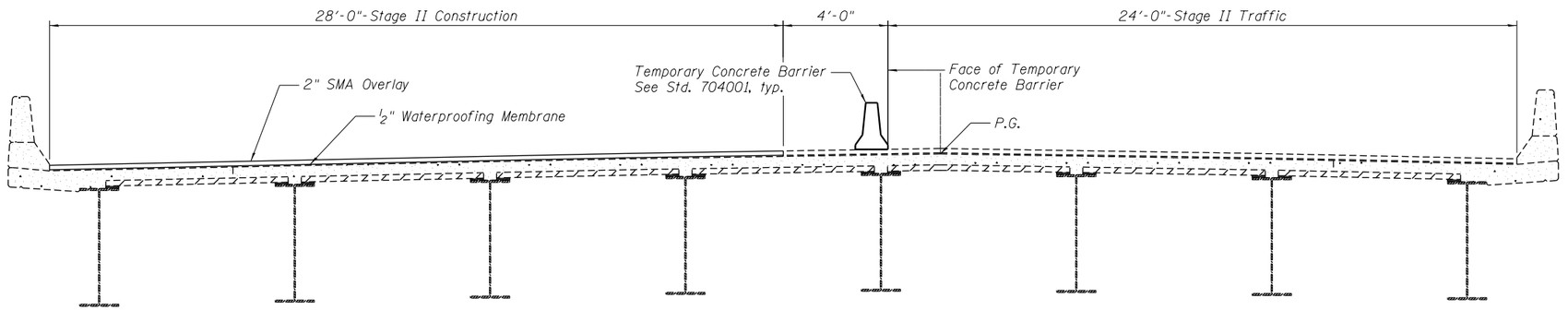
EXISTING CROSS SECTION

NB Rdway Looking North



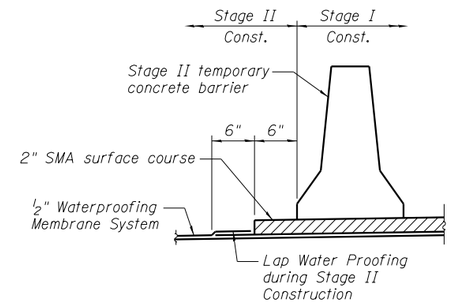
STAGE I CONSTRUCTION

NB Rdway Looking North



STAGE II CONSTRUCTION

NB Rdway Looking North



WATERPROOFING STAGING TYPICAL DETAIL

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8/24/2012

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PLOT DATE = 8/24/2012	CHECKED - SXZ	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION NORTHBOUND
STRUCTURE NO. 060-0214 NB

SHEET NO. 2 OF 16 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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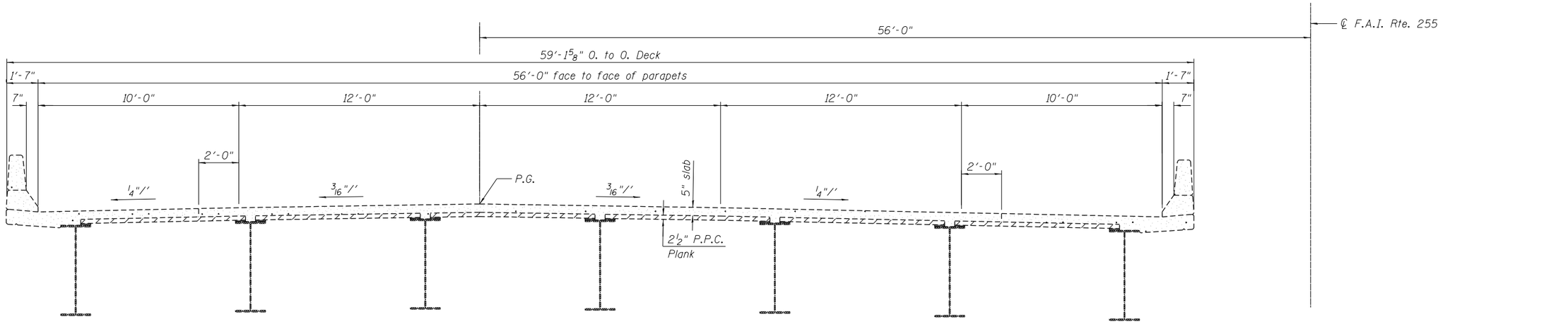
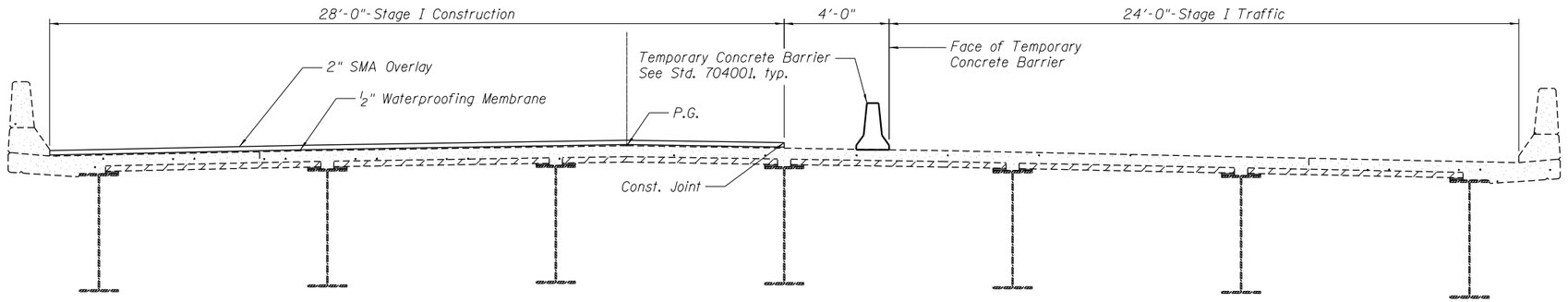
		CONTRACT NO. 76A89		
	ILLINOIS	FED. AID PROJECT		



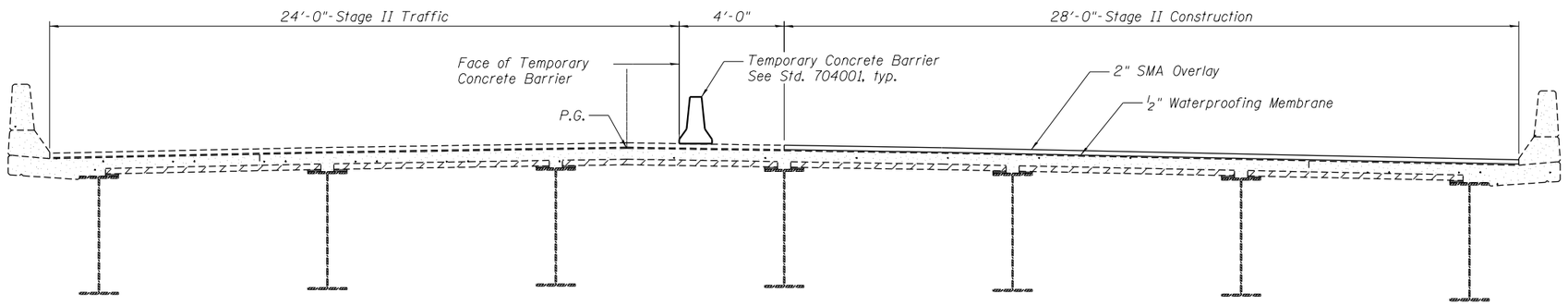
EXISTING CROSS SECTION

SB Rdway Looking North



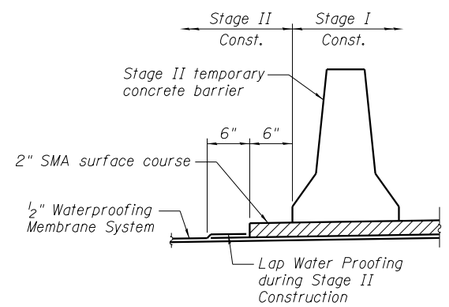
STAGE I CONSTRUCTION

SB Rdway Looking North



STAGE II CONSTRUCTION

SB Rdway Looking North



WATERPROOFING STAGING TYPICAL DETAIL

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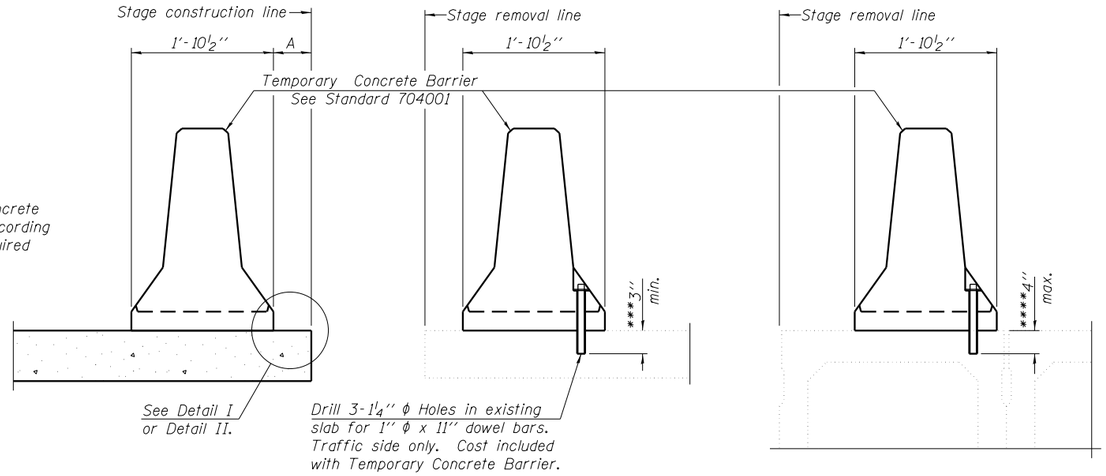
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION SOUTHBOUND
STRUCTURE NO. 060-0253 SB

SHEET NO. 3 OF 16 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	230
		CONTRACT NO. 76A89		
		ILLINOIS FED. AID PROJECT		

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".



NEW SLAB | EXISTING SLAB | EXISTING DECK BEAM

SECTIONS THRU SLAB OR DECK BEAM

NOTES

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

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

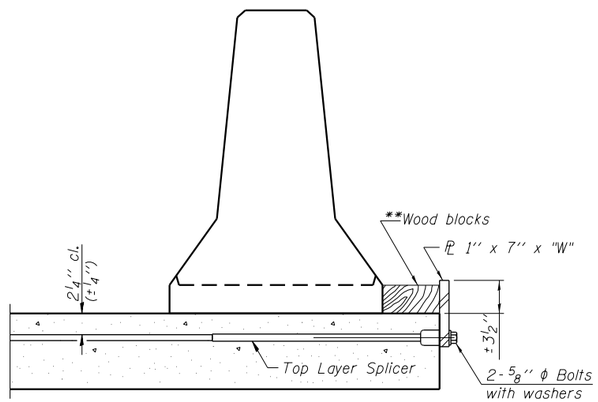
Cost of anchorage is included with Temporary Concrete Barrier.

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.

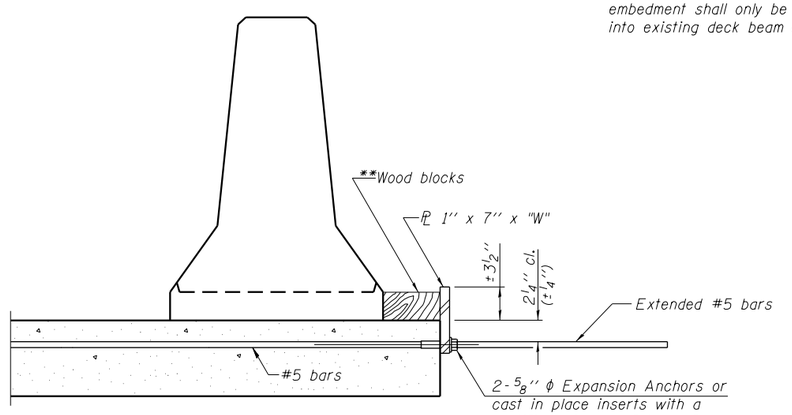
For Quantity of Temporary Concrete Barrier see Roadway Plans.

*** 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.



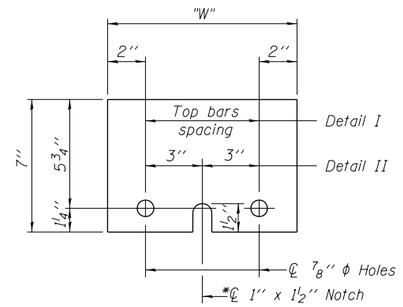
DETAIL I



DETAIL II

** 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''



STEEL RETAINER ℙ 1'' x 7'' x ''W''

* Required only with Detail II

Note: For Quantity of Temporary Concrete barriers see Roadway Plans.

R-27 7-1-10

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8/24/2012

TranSystems

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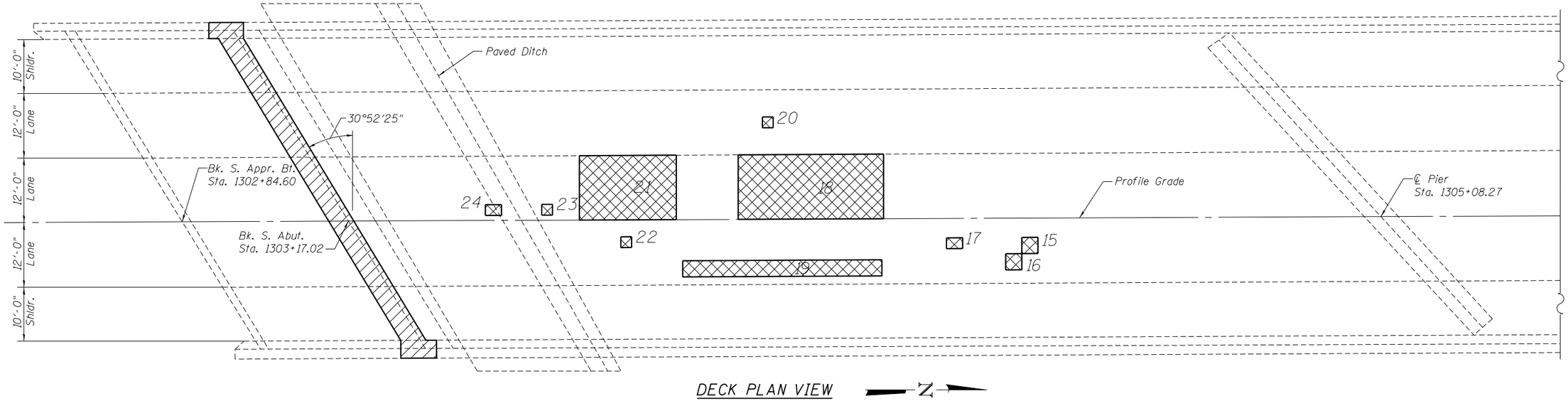
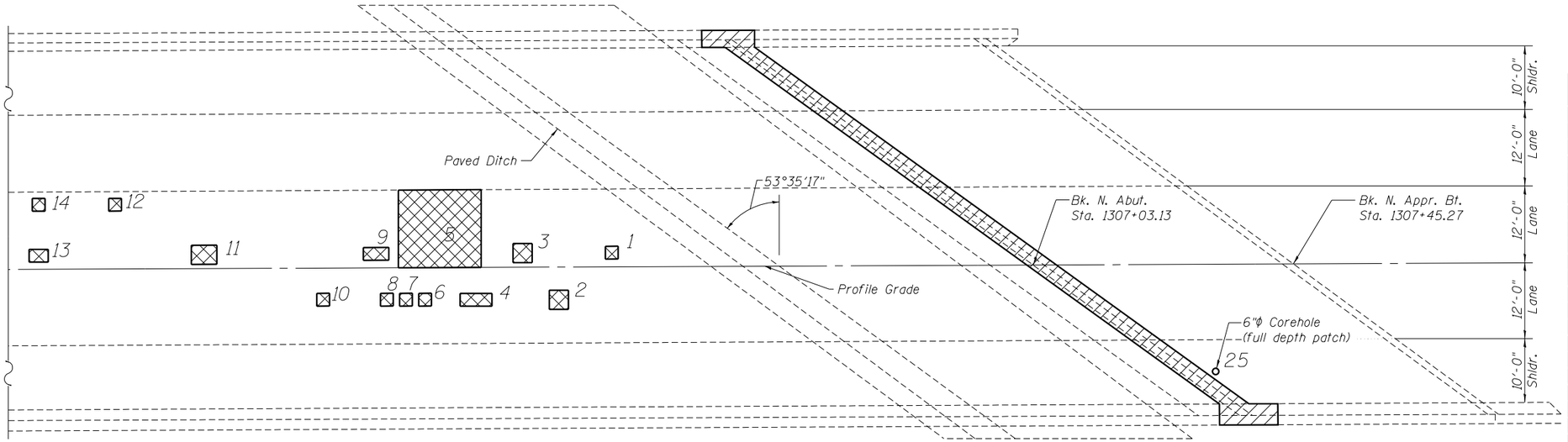
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER DETAILS FOR STAGE CONSTRUCTION
STRUCTURE NO. 060-0214 AND 060-0253
SHEET NO. 4 OF 16 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	231
		CONTRACT NO. 76A89		
	ILLINOIS FED. AID PROJECT			



DECK PLAN VIEW



DECK PLAN VIEW

Patch No.	Patch Depth	Station	Length (ft)	Width (ft)	Quantity (sq. yd.)
1	Partial	1306+36.96	2	2	0.44
2	Partial	1306+28.65	3	3	1.00
3	Partial	1306+22.96	3	3	1.00
4	Partial	1306+15.65	5	2	1.11
5	Partial	1306+09.96	13	12	17.33
6	Partial	1306+07.65	2	2	0.44
7	Partial	1306+04.65	2	2	0.44
8	Partial	1306+01.65	2	2	0.44
9	Partial	1305+99.96	4	2	0.89
10	Partial	1305+91.65	2	2	0.44
11	Partial	1305+72.96	4	3	1.33
12	Partial	1305+58.96	2	2	0.44
13	Partial	1305+46.96	3	2	0.67
14	Partial	1305+46.96	2	2	0.44
15	Partial	1304+43.65	3	3	1.00
16	Partial	1304+40.65	3	3	1.00
17	Partial	1304+29.65	3	2	0.67
18	Partial	1304+02.95	27	12	36.00
19	Partial	1303+97.65	37	3	12.33
20	Partial	1303+94.95	2	2	0.44
21	Partial	1303+68.95	18	12	24.00
22	Partial	1303+68.65	2	2	0.44
23	Partial	1303+53.95	2	2	0.44
24	Partial	1303+43.95	3	2	0.67
25	Full	1307+25.86	6" diam. corehole		0.02

NOTE:

1. Apply Concrete sealer per Article 587 of the Standard Specifications to top and inside vertical faces of the parapets, end posts, and wing walls. Sealer shall not be applied to concrete surfaces that are to receive water proofing membrane.
2. *Additional Deck Slab Repair (Full Depth) quantity has been included in the event full depth patches are identified during construction. Location not shown.

LEGEND

Deck Slab Repair Partial Depth

Concrete Removal (See Concrete Removal Sheets)

BILL OF MATERIAL

Item	Unit	Total
Deck Slab Repair-(Partial Depth)	Sq. Yd.	104
Deck Slab Repair-(Full Depth Type I)	Sq. Yd.	2
Concrete Sealer	Sq. Ft.	3237

FILE NAME = 0600214-76A89-05-Deck_Patching_Plan.dgn

TranSystems

USER NAME = DMGolias	DESIGNED - WAE	REVISED -
	CHECKED - FAS	REVISED -
PLOT SCALE = 0.2000 '/ in.	DRAWN - DMG	REVISED -
PLOT DATE = 8/24/2012	CHECKED - SLZ	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXPANSION JOINT REPLACEMENT DETAILS
STRUCTURE NO. 060-0214
SHEET NO. 5 OF 16 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	232
		CONTRACT NO. 76A89		
	ILLINOIS FED. AID PROJECT			

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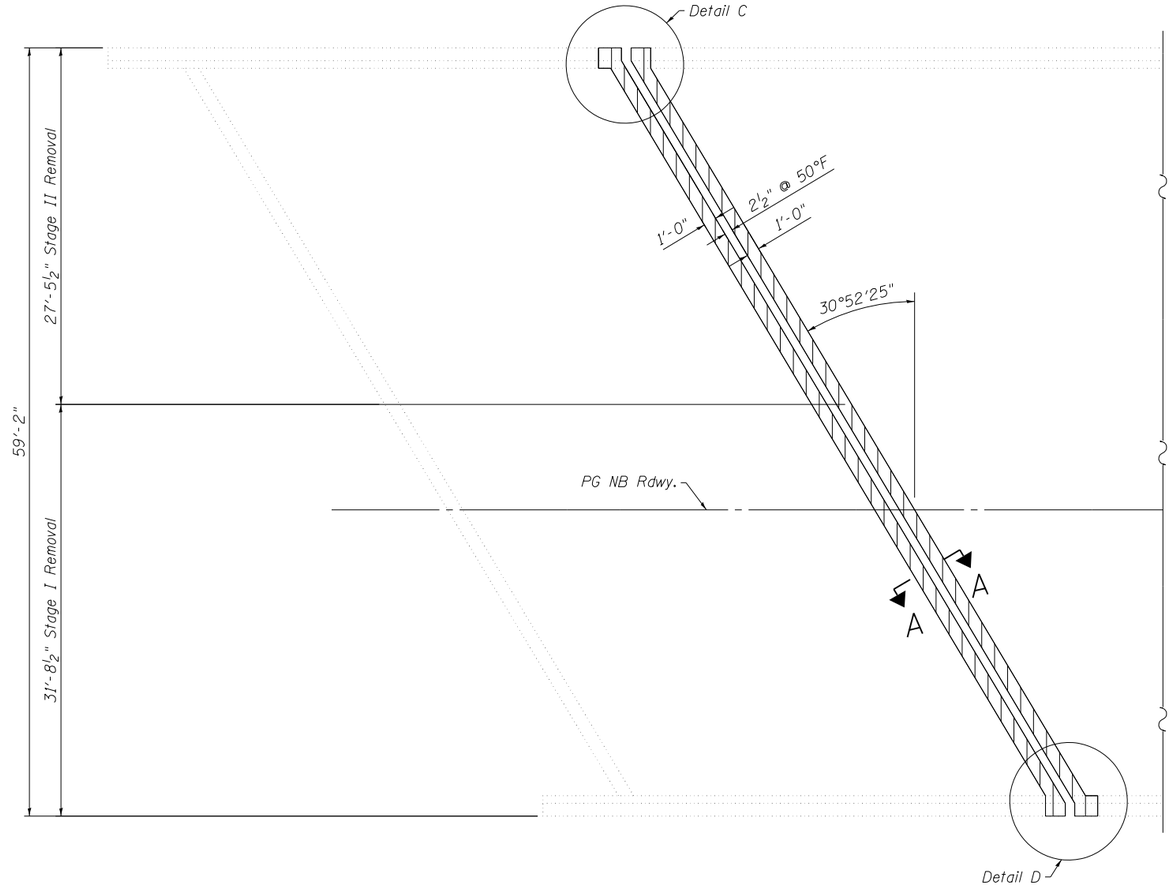
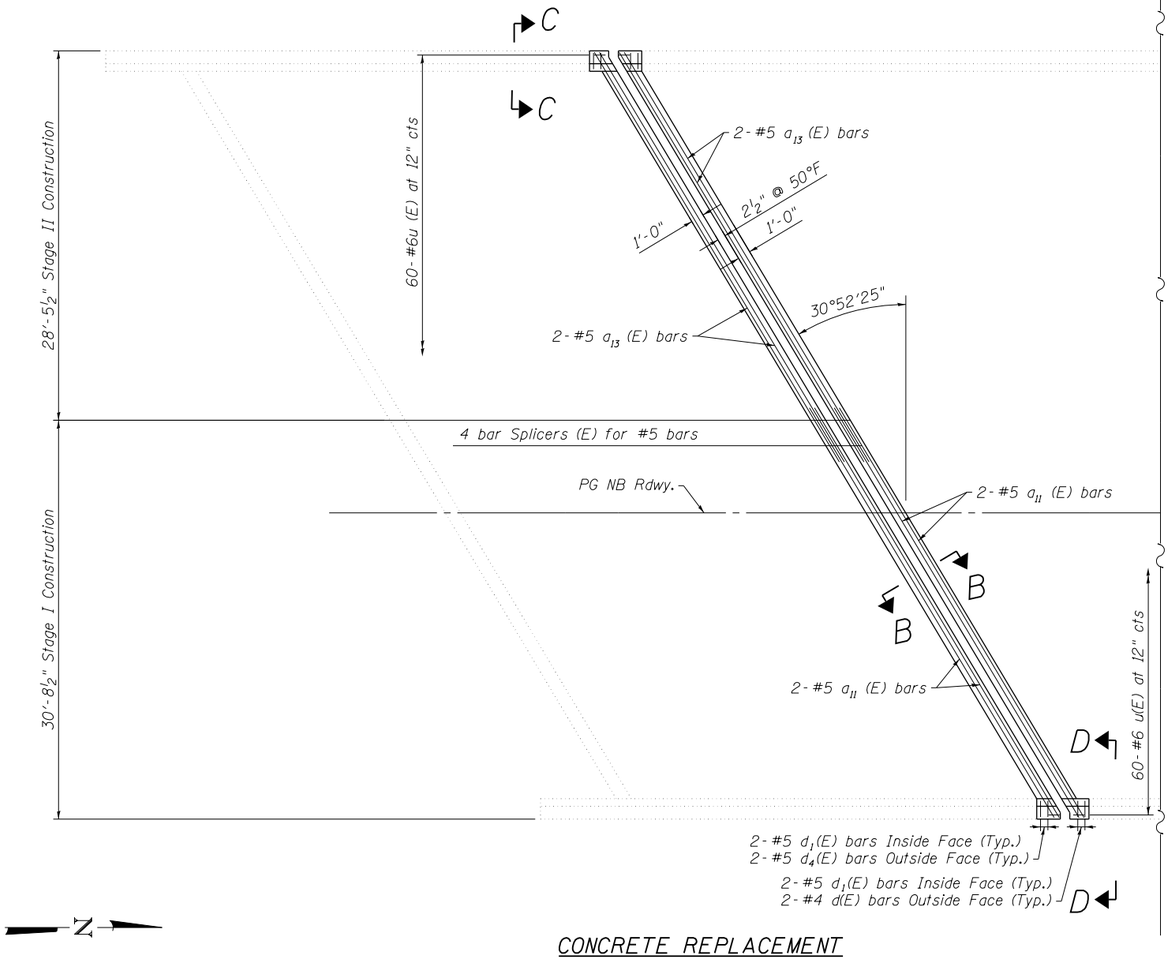
8/24/2012



CONCRETE REMOVAL

(NB South Abutment shown)



CONCRETE REPLACEMENT

(NB South Abutment shown)

Z

NOTES:

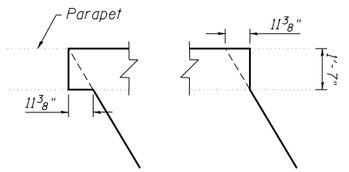
1. Existing reinforcement extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost shall be included with Concrete Removal.
2. Trim existing reinforcement to accommodated proposed expansion joint.
3. See sheet 11 for section A-A, B-B, C-C and D-D.
4. Bars indicated thus: "4x2-#5 etc...", indicates 4 lines of bars with 2 lengths per line.

BILL OF MATERIAL

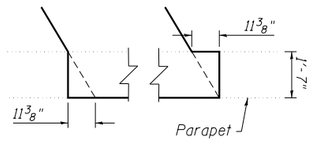
Item	Unit	Total
Concrete Removal	Cu. Yd.	3.4
Concrete Superstructure	Cu. Yd.	3.8
Protective Coat	Sq. Yd.	8

MIN. LAP

#5 Bar 2'-7" Min. Lap.
#6 Bar 3'-1" Min. Lap.



DETAIL C



DETAIL D

LEGEND

Concrete Removal

FILE NAME = 06000214-76A89-06-S_Abut_Exp_Joint_NB.dgn

USER NAME = DMGolias	DESIGNED - WAE	REVISED -
	CHECKED - FAS	REVISED -
PLOT SCALE = 1118 '1' / in.	DRAWN - DMG	REVISED -
PLOT DATE = 8/24/2012	CHECKED - SLZ	REVISED -

TranSystems

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT EXPANSION JOINT CONCRETE
STRUCTURE NO. 060-0214
SHEET NO. 6 OF 16 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	233
		CONTRACT NO. 76A89		
	ILLINOIS FED. AID PROJECT			

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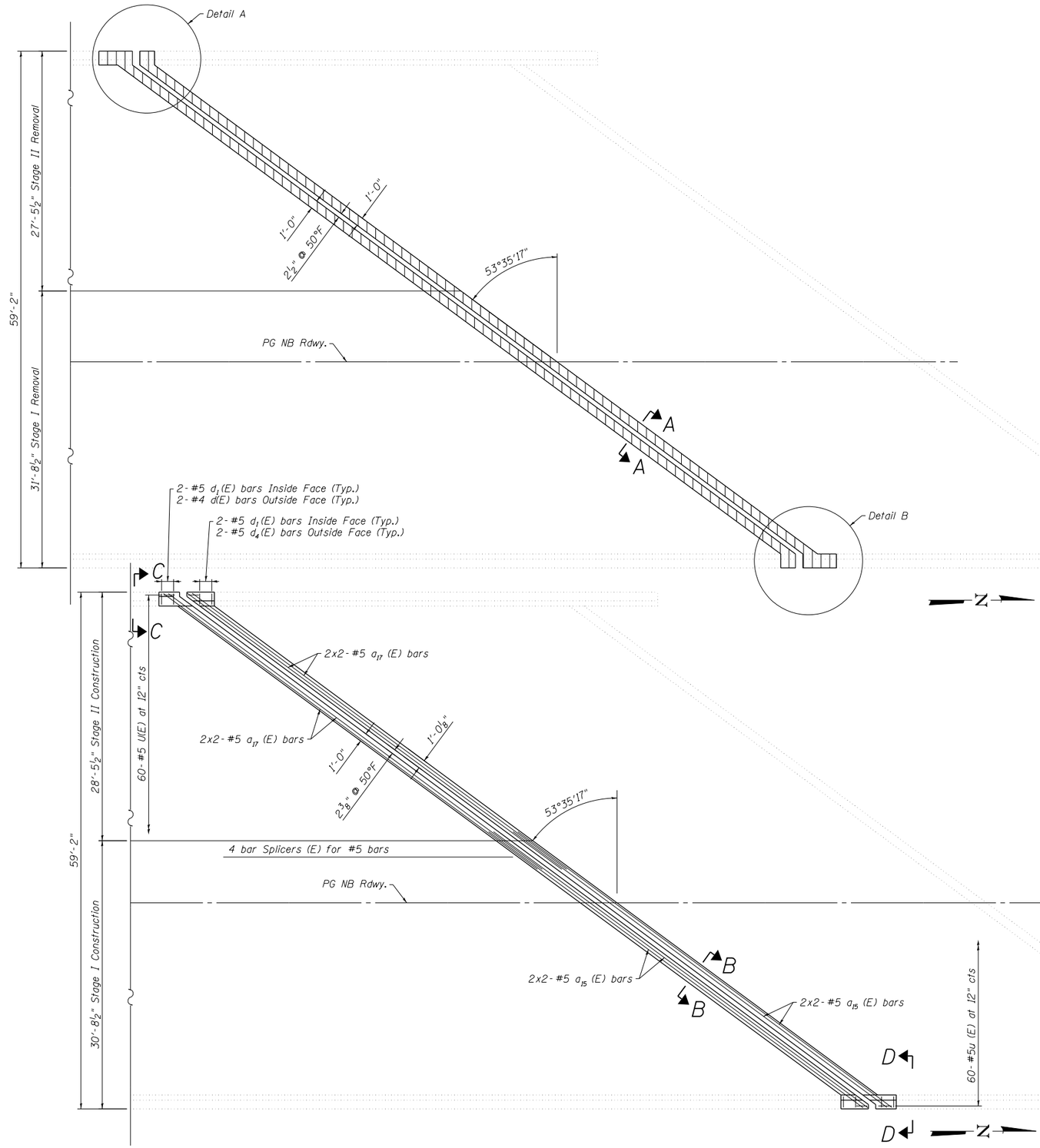
8/24/2012



CONCRETE REMOVAL
(NB North Abutment shown)

CONCRETE REPLACEMENT
(NB North Abutment shown)

NOTES:

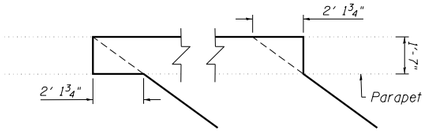
1. Existing reinforcement extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost shall be included with Concrete Removal.
2. Trim existing reinforcement to accommodated proposed expansion joint.
3. See sheet 11 for section A-A, B-B, C-C and D-D.
4. Bars indicated thus:
   "4x2-#5 etc...", indicates 4 lines of bars with 2 lengths per line.

MIN. LAP

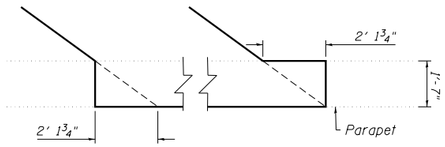
#5 Bar 2'-7" Min. Lap.
#6 Bar 3'-1" Min. Lap.

BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	4.8
Concrete Superstructure	Cu. Yd.	5.6
Protective Coat	Sq. Yd.	10



DETAIL A



DETAIL B

LEGEND

Concrete Removal

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8/24/2012

FILE NAME = 0600214-76A89-07-N_Abut_Exp_Joint_NB.dgn

TranSystems

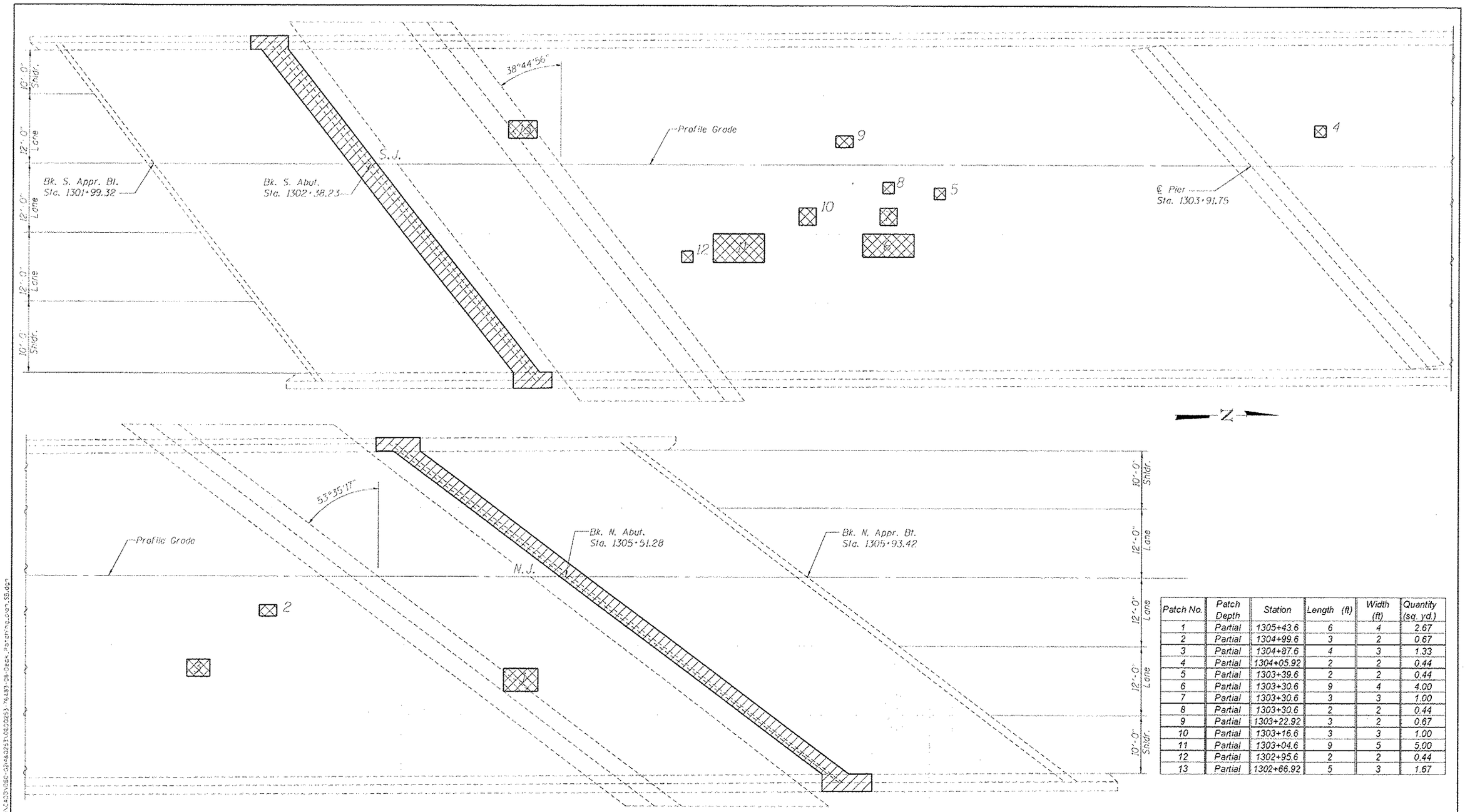
USER NAME = DMGolias	DESIGNED - WAE	REVISED -
	CHECKED - FAS	REVISED -
PLOT SCALE = 13.4 '/ in.	DRAWN - DMG	REVISED -
PLOT DATE = 8/24/2012	CHECKED - SLZ	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT EXPANSION JOINT CONCRETE
STRUCTURE NO. 060-0214

SHEET NO. 7 OF 16 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	234
		CONTRACT NO. 76A89		
	ILLINOIS FED. AID PROJECT			



DECK PLAN VIEW

Patch No.	Patch Depth	Station	Length (ft)	Width (ft)	Quantity (sq. yd.)
1	Partial	1305+43.6	6	4	2.67
2	Partial	1304+99.6	3	2	0.67
3	Partial	1304+87.6	4	3	1.33
4	Partial	1304+05.92	2	2	0.44
5	Partial	1303+39.6	2	2	0.44
6	Partial	1303+30.6	9	4	4.00
7	Partial	1303+30.6	3	3	1.00
8	Partial	1303+30.6	2	2	0.44
9	Partial	1303+22.92	3	2	0.67
10	Partial	1303+16.6	3	3	1.00
11	Partial	1303+04.6	9	5	5.00
12	Partial	1302+95.6	2	2	0.44
13	Partial	1302+66.92	5	3	1.67

NOTE:

Apply Concrete sealer per Article 587 of the Standard Specifications to top and inside vertical faces of the parapets, end posts, and wing walls. Sealer shall not be applied to concrete surfaces that are to receive water proofing membrane.

See Note 2, sheet 5 of 16.

LEGEND

- Deck Slab Repair Partial Depth
- Concrete Removal (See concrete removal Sheet)

BILL OF MATERIAL

Item	Unit	Total
Deck Slab Repair (Partial Depth)	Sq. Yd.	21
Deck Slab Repair (Full Depth Type I)	Sq. Yd.	2
Concrete Sealer	Sq. Ft.	2789

FILE NAME = 8082S3-76A89-08 Deck_Patching_plan_SB.dgn

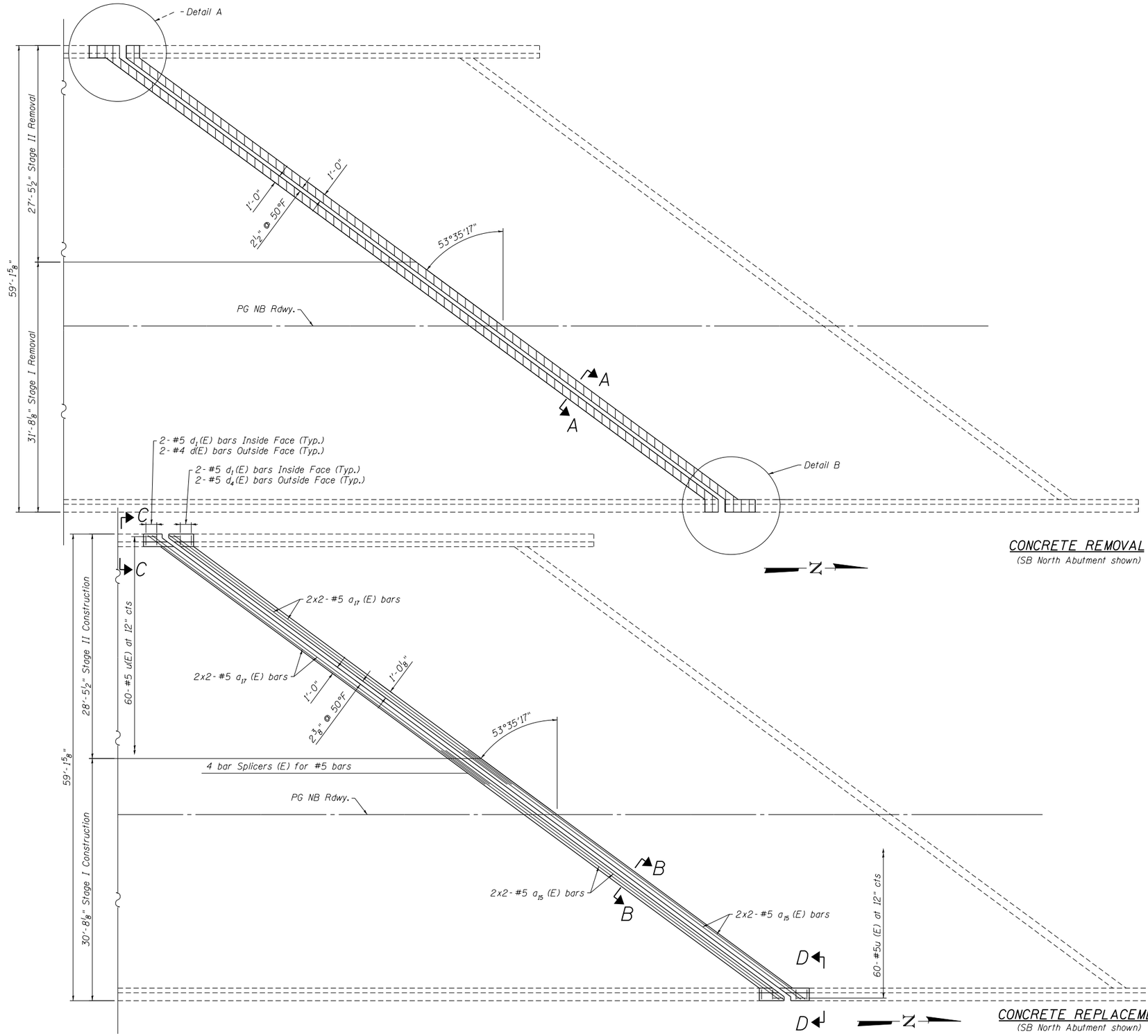
USER NAME = DMGallas	X	DESIGNED - WAE	REVISED -
	X	CHECKED - FAS	REVISED -
PLOT SCALE = 0.2 '/ in.	X	DRAWN - DMG	REVISED -
PLOT DATE = 8/24/2012	X	CHECKED - SLZ	REVISED -

TranSystems

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PATCHING PLAN SOUTHBOUND
STRUCTURE NO. 060-0253
SHEET NO. 8 OF 16 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	235
		CONTRACT NO. 76A89		
		ILLINOIS FED. AID PROJECT		



CONCRETE REMOVAL
(SB North Abutment shown)

CONCRETE REPLACEMENT
(SB North Abutment shown)

NOTES:

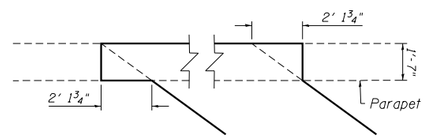
1. Existing reinforcement extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost shall be included with Concrete Removal.
2. Trim existing reinforcement to accommodated proposed expansion joint.
3. See sheet 11 for section A-A, B-B, C-C and D-D.
4. Bars indicated thus:
"4x2-#5 etc...", indicates 4 lines of bars with 2 lengths per line.

MIN. LAP

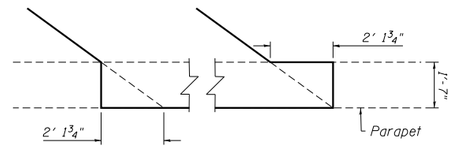
#5 Bar 2'-7" Min. Lap.
#6 Bar 3'-1" Min. Lap.

BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	4.8
Concrete Superstructure	Cu. Yd.	5.6
Protective Coat	Sq. Yd.	11



DETAIL A



DETAIL B

LEGEND

Concrete Removal

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	CHECKED - FAS	REVISED -
PLOT SCALE = 13:4 '/ in.	DRAWN - DMG	REVISED -
PLOT DATE = 8/24/2012	CHECKED - SLZ	REVISED -

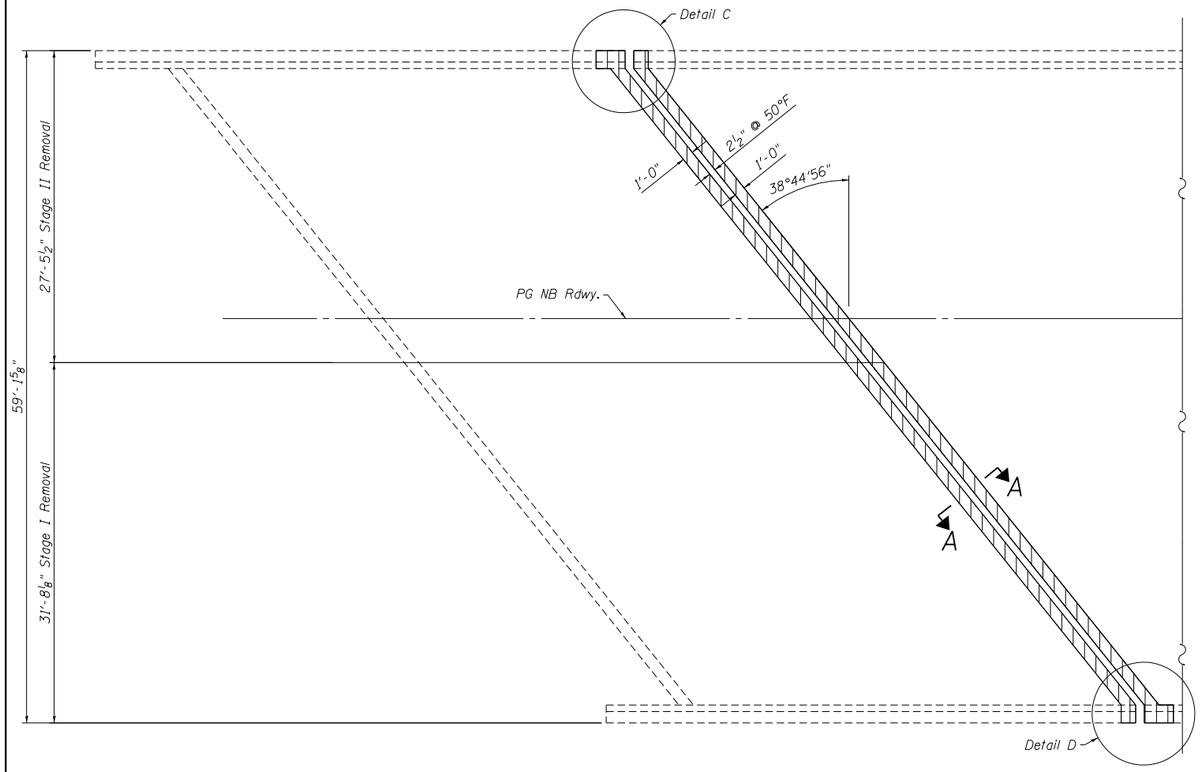
TranSystems

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT EXPANSION JOINT CONCRETE REMOVAL AND REPLACEMENT
STRUCTURE NO. 060-0253
SHEET NO. 9 OF 16 SHEETS

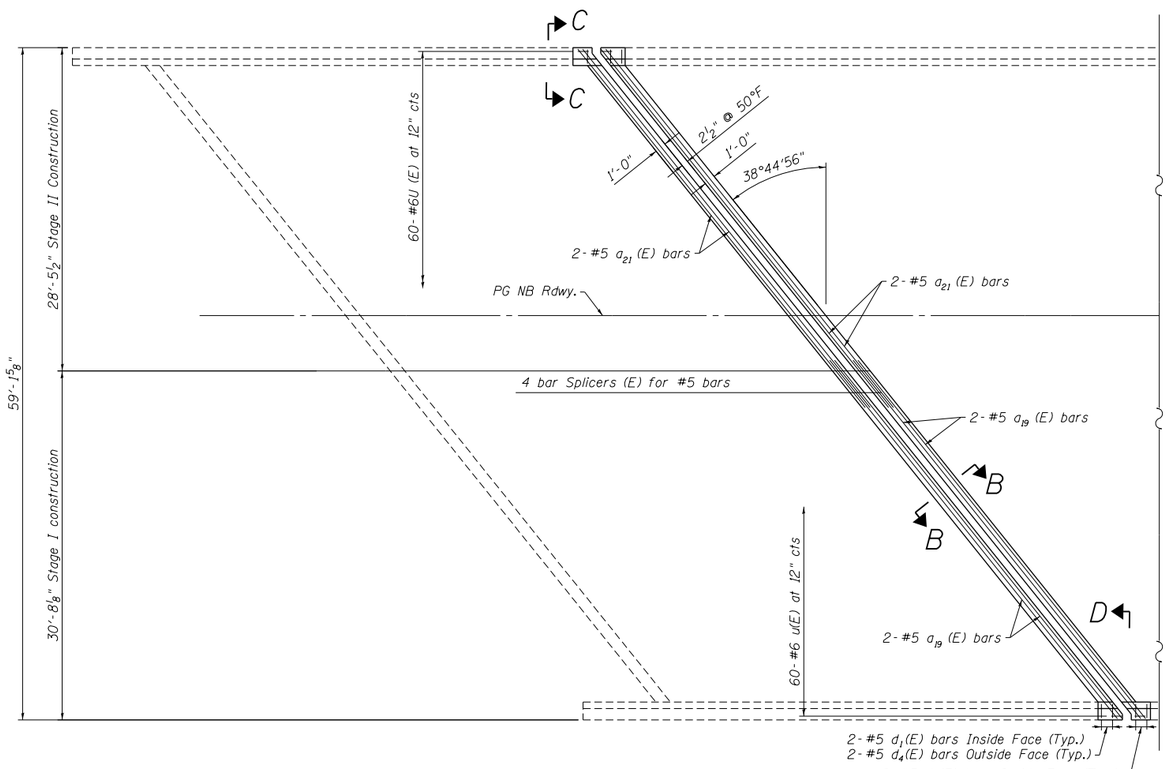
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	236
		CONTRACT NO. 76A89		
	ILLINOIS FED. AID PROJECT			

8/24/2012



CONCRETE REMOVAL

(SB South Abutment shown)



CONCRETE REPLACEMENT

(SB South Abutment shown)

NOTES:

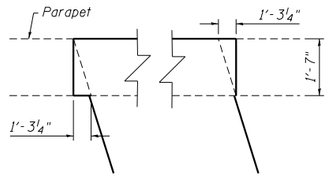
1. Existing reinforcement extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost shall be included with Concrete Removal.
2. Trim existing reinforcement to accommodated proposed expansion joint.
3. See sheet 11 for section A-A, B-B, C-C and D-D.
4. Bars indicated thus:
   "4x2-#5 etc...", indicates 4 lines of bars with 2 lengths per line.

MIN. LAP

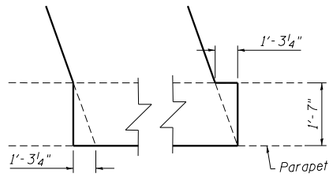
#5 Bar 2'-7" Min. Lap.
#6 Bar 3'-1" Min. Lap.

BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	3.7
Concrete Superstructure	Cu. Yd.	4.2
Protective Coat	Sq. Yd.	7



DETAIL C



DETAIL D

LEGEND

Concrete Removal

FILE NAME = 0600253-76A89-10-S_Abut_Exp_Jt_RR.dgn

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8/24/2012

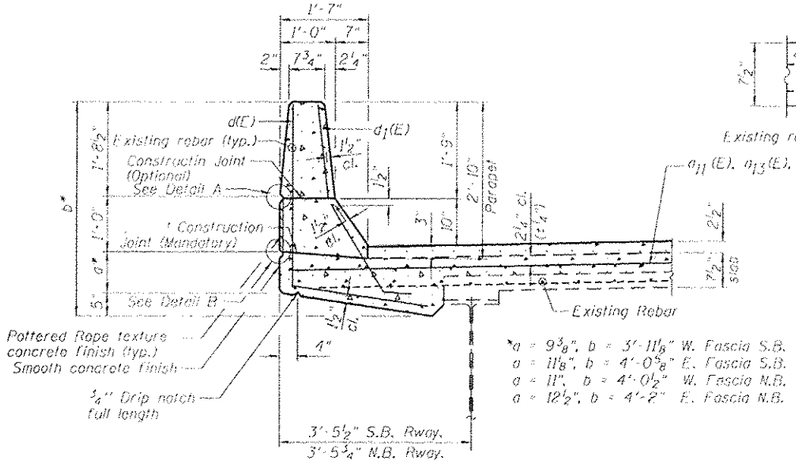
TranSystems

USER NAME = DMGolias | DESIGNED - WAE | REVISED -
CHECKED - FAS | REVISED -
PLOT SCALE = 1314 '1' / in. | DRAWN - DMG | REVISED -
PLOT DATE = 8/24/2012 | CHECKED - SLZ | REVISED -

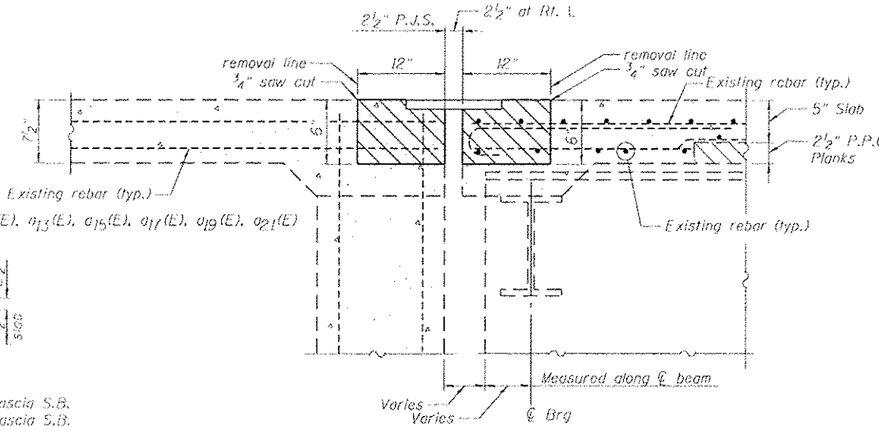
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT EXPANSION JOINT CONCRETE REMOVAL AND REPLACEMENT SOUTHBOUND
STRUCTURE NO. 060-0253
SHEET NO. 10 OF 16 SHEETS

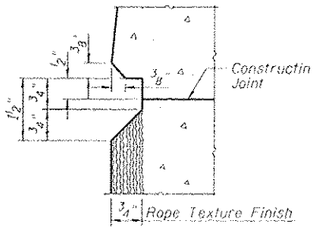
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	237
		CONTRACT NO. 76A89		
	ILLINOIS	FED. AID PROJECT		



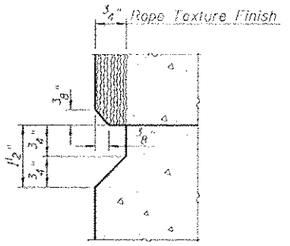
SECTION D-D
SECTION THRU PARAPET



SECTION A-A



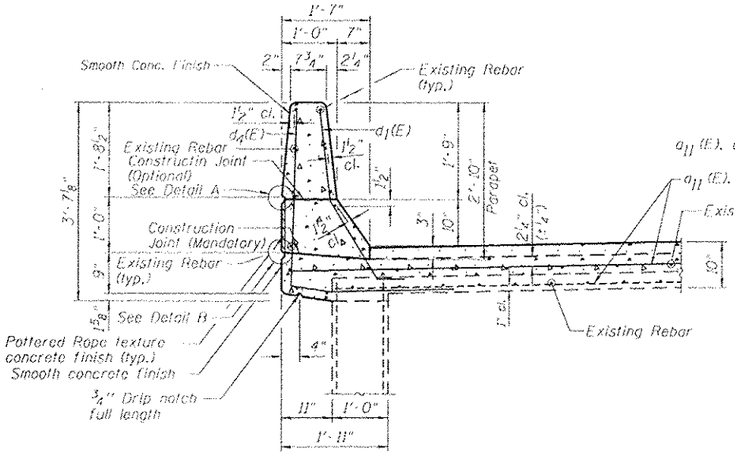
DETAIL A



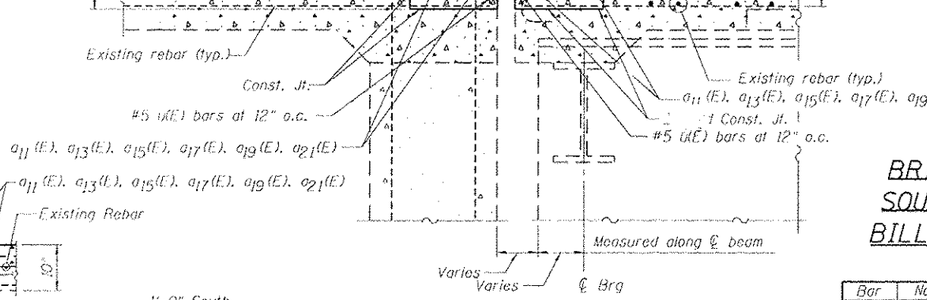
DETAIL B

BRIDGE 0253(SB)
SOUTH ABUTMENT
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$a_{19}(E)$	4	#5	34'-2"	
$a_{21}(E)$	4	#5	31'-8"	
d(E)	4	#4	5'-2"	
$d_1(E)$	8	#5	3'-11"	
$d_4(E)$	4	#5	6'-3"	
u(E)	132	#5	1'-6"	
Item			Unit	Quantity
Reinforcement Bars, Epoxy Coated			Pound	580
Bar Splicers			Each	4



SECTION C-C
SECTION THRU PARAPET



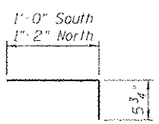
SECTION B-B

BRIDGE 0214(NB)
SOUTH ABUTMENT
BILL OF MATERIAL

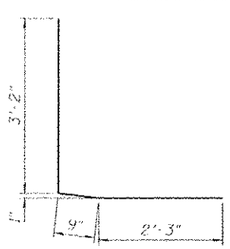
Bar	No.	Size	Length	Shape
$a_{11}(E)$	4	#5	34'-2"	
$a_{13}(E)$	4	#5	31'-8"	
d(E)	4	#4	5'-2"	
$d_1(E)$	8	#5	3'-11"	
$d_4(E)$	4	#5	6'-3"	
u(E)	146	#5	1'-3¾"	
Item			Unit	Quantity
Reinforcement Bars, Epoxy Coated			Pound	560
Bar Splicers			Each	4

BRIDGE 0214(NB)
BRIDGE 0253(NB)
NORTH ABUTMENT
BILL OF MATERIAL

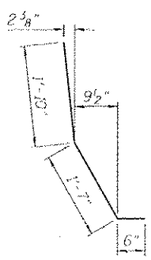
	0214	0253			
Bar	No.	No.	Size	Length	Shape
$a_{15}(E)$	8	8	#5	26'-4"	
$a_{17}(E)$	8	8	#5	24'-7"	
d(E)	4	4	#4	5'-2"	
$d_1(E)$	8	8	#5	3'-11"	
$d_4(E)$	4	4	#5	6'-3"	
u(E)	190	190	#5	1'-8"	
				0214	0253
Item			Unit	Quantity	Quantity
Reinforcement Bars, Epoxy Coated			Pound	830	830
Bar Splicers			Each	4	4



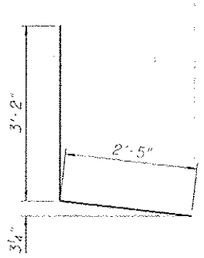
BAR u (E)



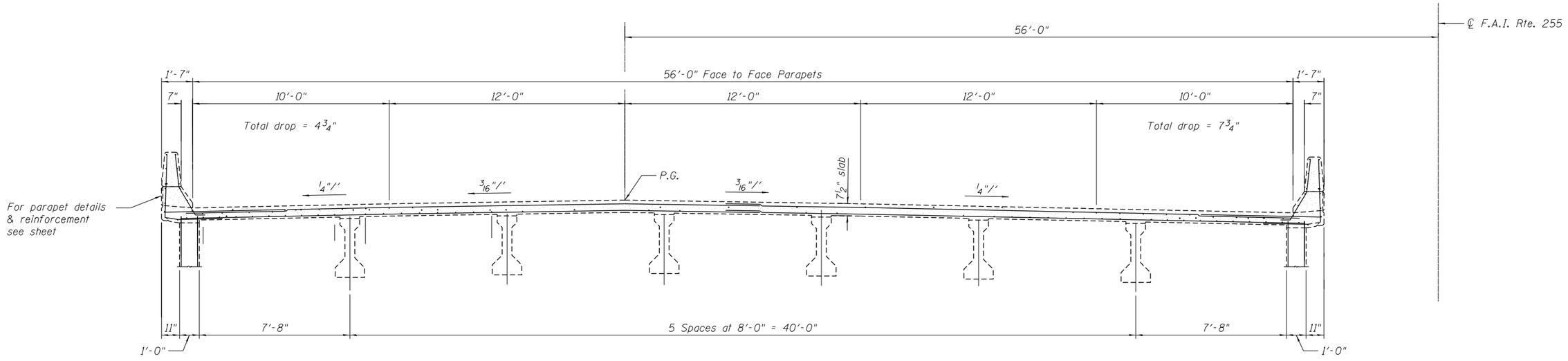
BAR $d_4(E)$



BAR $d_1(E)$

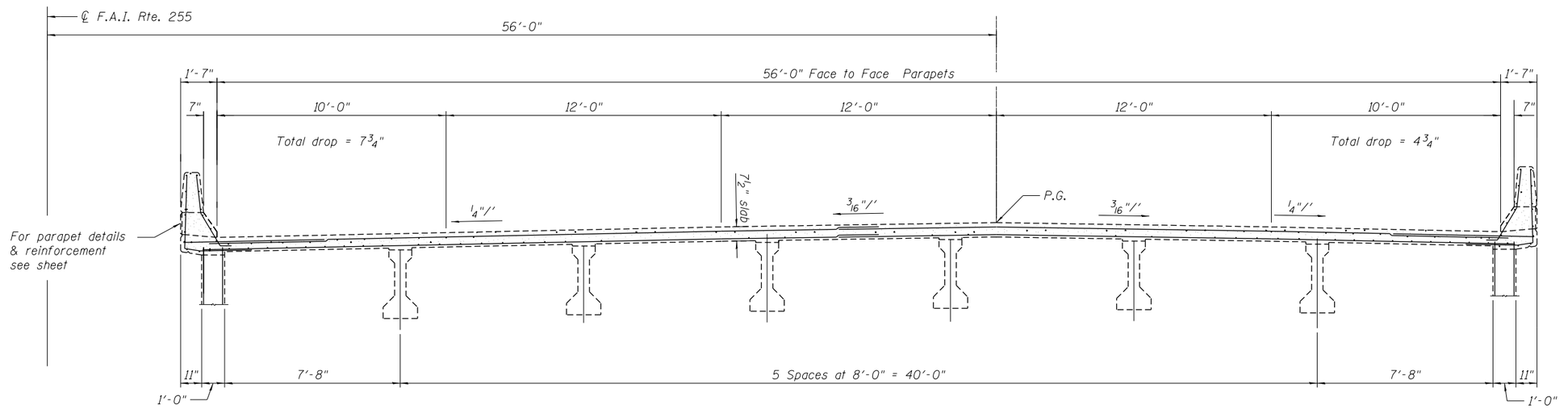


BAR d (E)



CROSS SECTION

S.B. ROADWAY



CROSS SECTION

N.B. ROADWAY

FOR INFORMATION ONLY

8/24/2012 10:07:28 PM - G:\CHIL\0013\Bridge\CADD\060-0214&0253\060214&0253-76A89-12-Approach Section.dgn

FILE NAME = 060214&0253-76A89-12-Approach Section.dgn

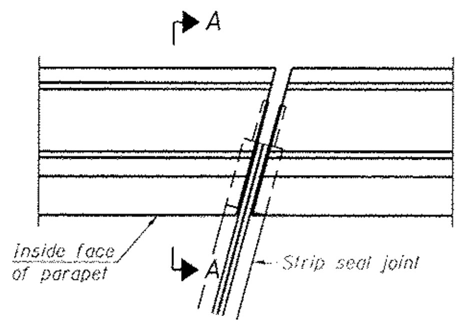
TranSystems

USER NAME = DMGolias	DESIGNED - WAE	REVISED -
	CHECKED - FAS	REVISED -
PLOT SCALE = 5:4 '-' / in.	DRAWN - DMG	REVISED -
PLOT DATE = 8/24/2012	CHECKED - SJXZ	REVISED -

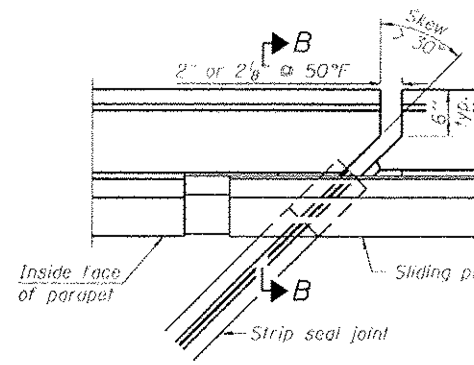
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

APPROACH CROSS SECTIONS
STRUCTURE NO. 060-0214 NB & 060-0253 SB
SHEET NO. 12 OF 16 SHEETS

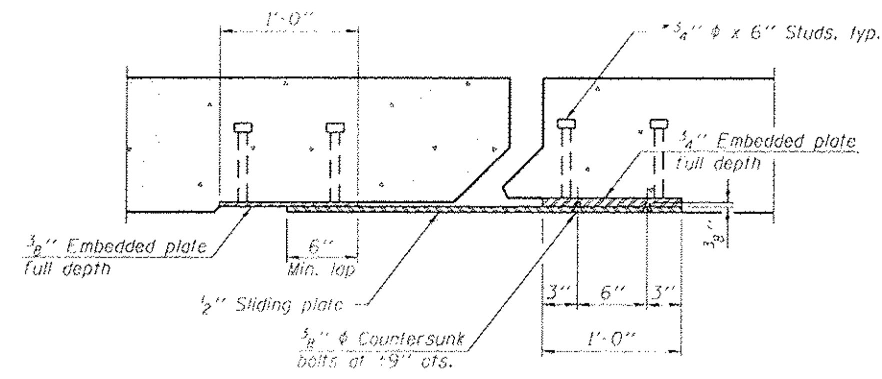
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	239
		CONTRACT NO. 76A89		
	ILLINOIS FED. AID PROJECT			



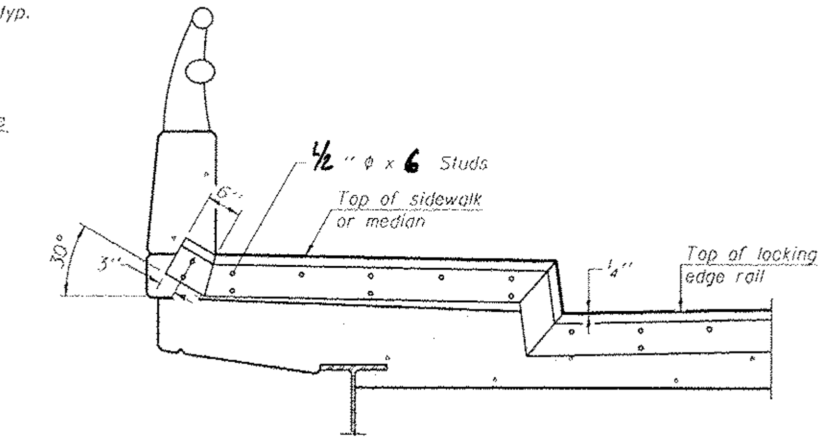
PLAN
(For skews < 30°)



PLAN
(For skews > 30°)
Showing point block

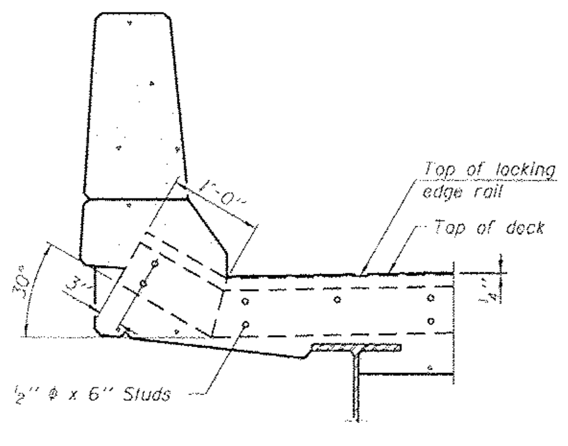


SECTION C-C

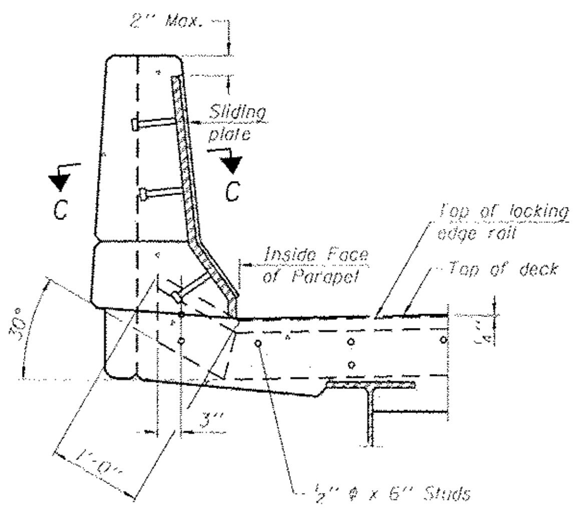


TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN

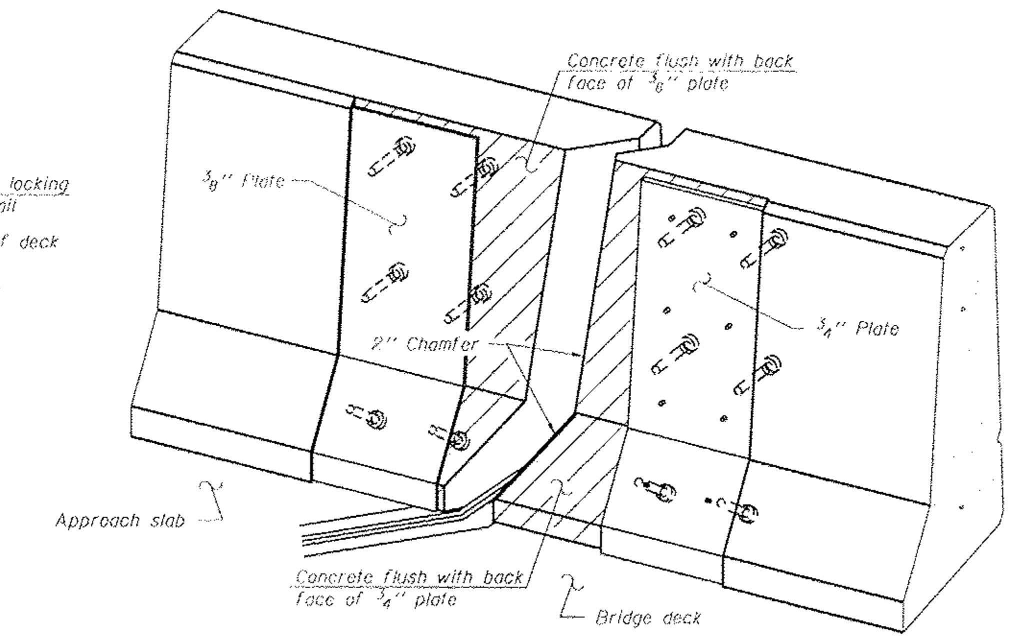
Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.



SECTION A-A

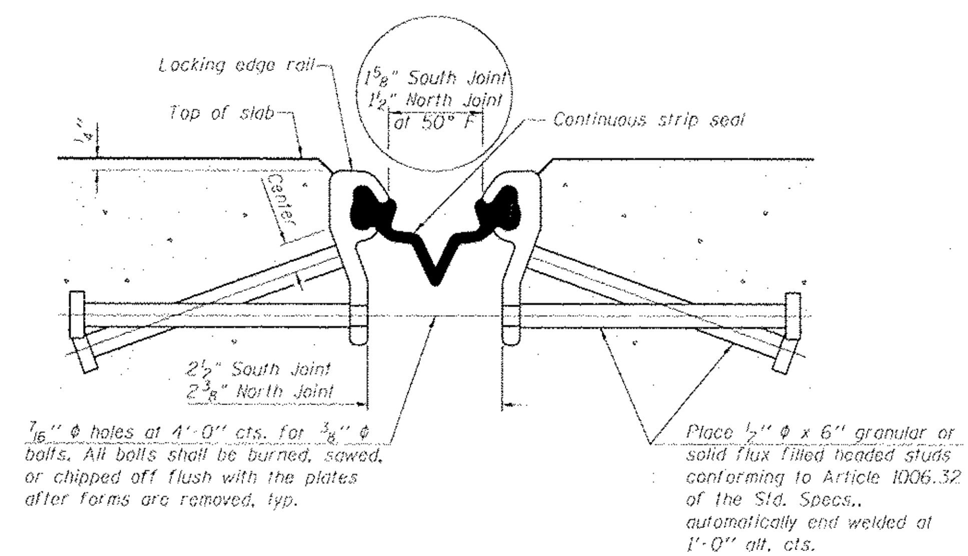


SECTION B-B

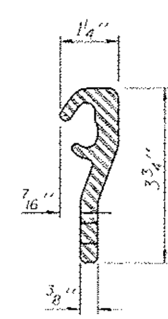


TRIMETRIC VIEW
(Showing back plates only)

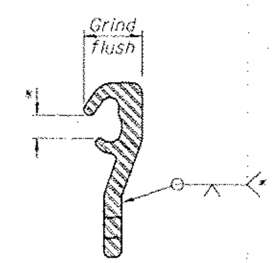
*Omit weld at seal opening.
**When joint is fixed, dimension is set at $1\frac{1}{2}$".



SECTION THRU STRIP SEAL JOINT FOR OVERLAY OVER DECK BEAMS



LOCKING EDGE RAIL



LOCKING EDGE RAIL SPLICE

Notes:
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.
Parapet plates and anchorage studs for skews > 30° included in the cost of Preformed Joint Strip Seal.
The strip seal shall be made continuous and shall have a minimum thickness of $\frac{1}{4}$". 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	325.8

FILE NAME = 06002148&0253-76A89-13-Strip_Seal_Joint.dgn

TranSystems

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	CHECKED - FAS	REVISED -	
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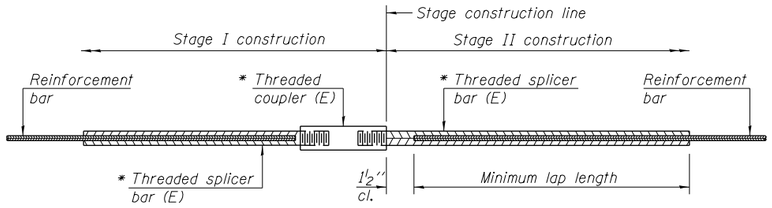
PLOT DATE = 8/24/2012	CHECKED - SLZ	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHALLOW JOINT STRIP SEAL DETAILS
STRUCTURE NO. 060-0214 AND 060-0253
SHEET NO. 13 OF 16 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	240

CONTRACT NO. 76A89
ILLINOIS FED. AID PROJECT



STANDARD BAR SPLICER ASSEMBLY

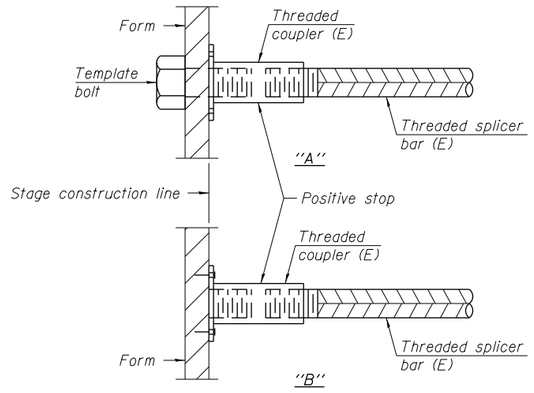
Minimum Lap Lengths					
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5
3, 4	1'-5''	1'-11''	2'-1''	2'-4''	2'-3''
5	1'-9''	2'-5''	2'-7''	2'-11''	2'-10''
6	2'-1''	2'-11''	3'-1''	3'-6''	3'-4''
7	2'-9''	3'-10''	4'-2''	4'-8''	4'-6''
8	3'-8''	5'-1''	5'-5''	6'-2''	5'-10''
9	4'-7''	6'-5''	6'-10''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

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, Top bar lap, Class B

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

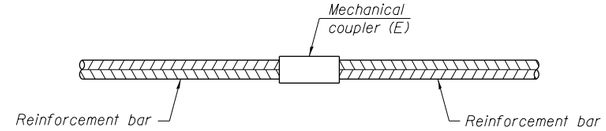
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
0214	#5	8	3
0253	#5	8	3



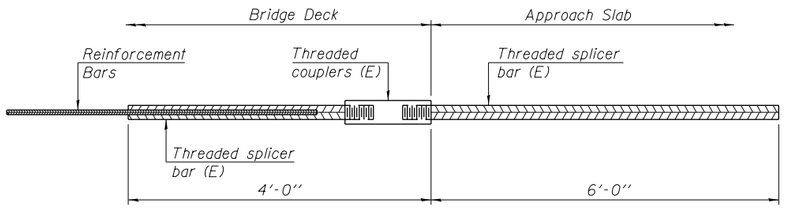
INSTALLATION AND SETTING METHODS

"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.



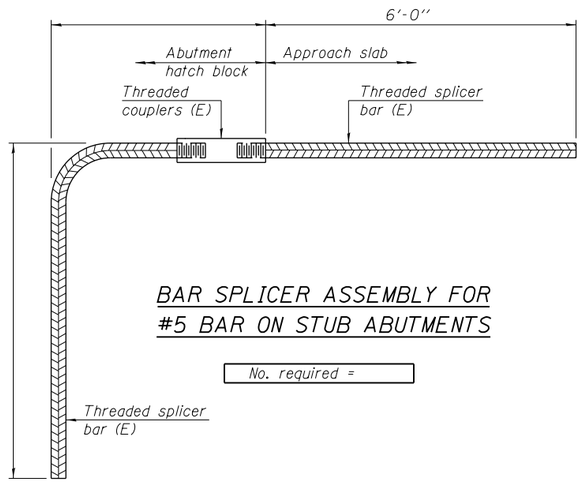
STANDARD MECHANICAL SPLICER

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 special provision for Mechanical Splicers.

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

10:07:30 PM- G:\CHI\0003\Bridge\CADD\060-0214&0253\060214&0253-76A89-14-Bar_Splicer.dgn
8/24/2012

BSD-1 7-1-10
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TranSystems

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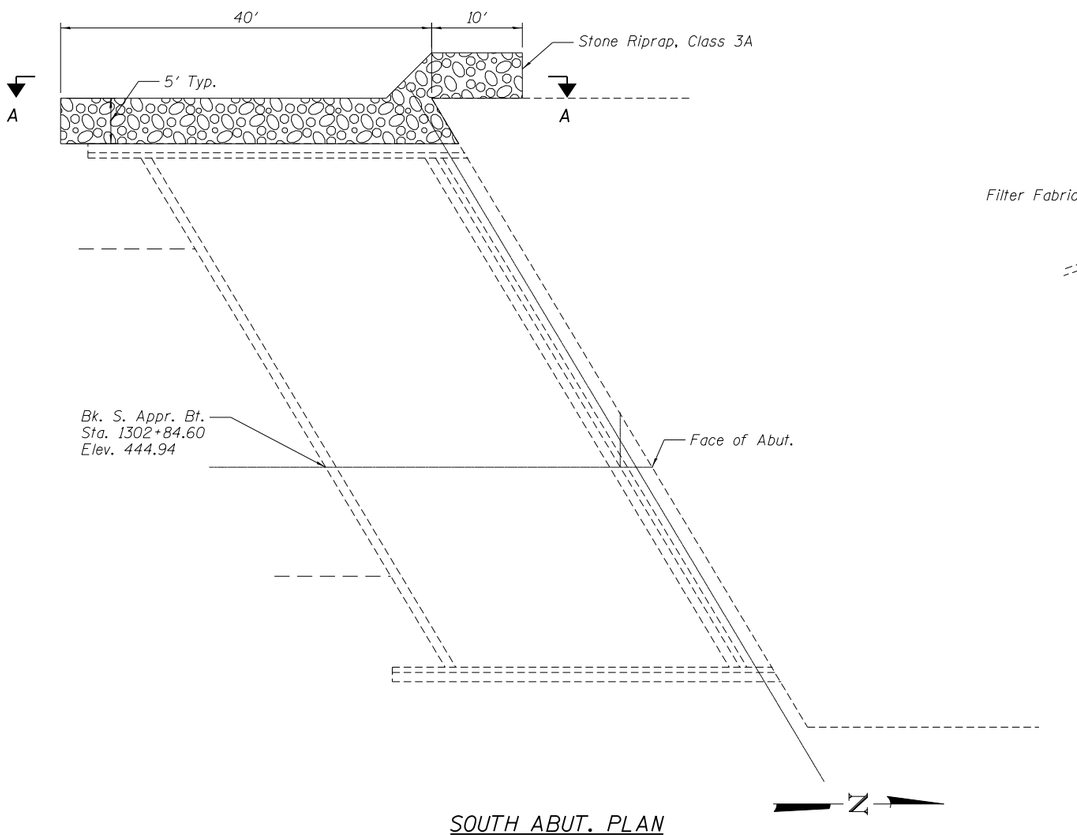
PLOT DATE = 8/24/2012	X	CHECKED - SLZ	REVISED -	

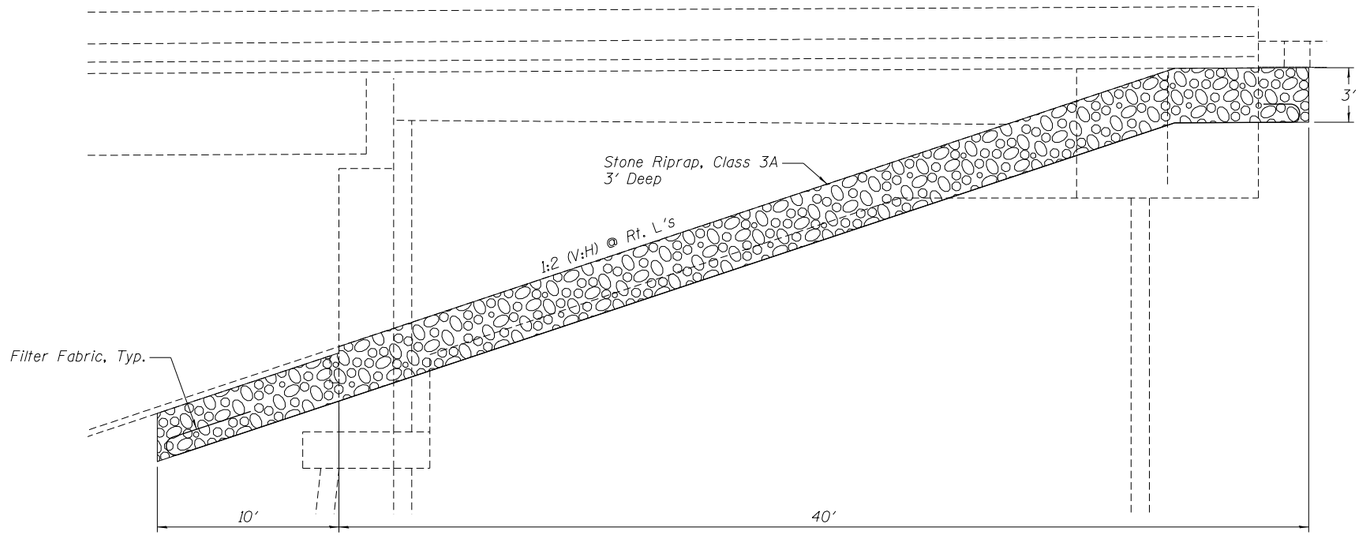
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 060-0214 AND 060-0214
SHEET NO. 14 OF 16 SHEETS

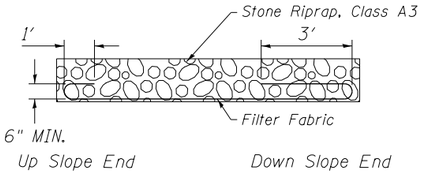
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	241
		CONTRACT NO. 76A89		
	ILLINOIS	FED. AID PROJECT		



SOUTH ABUT. PLAN



SECTION A-A
SOUTH ABUT. ELEVATION - LOOKING EAST



FILTER FABRIC TYPICAL DETAIL

BILL OF MATERIAL

Item	Unit	Total
Stone Riprap, Class A3	Ton	47
Filter Fabric	Sq. Yd.	31

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8/24/2012

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TranSystems

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SLOPE WALL REPAIRS DETAILS
STRUCTURE NO. 060-0214
SHEET NO. 15 OF 16 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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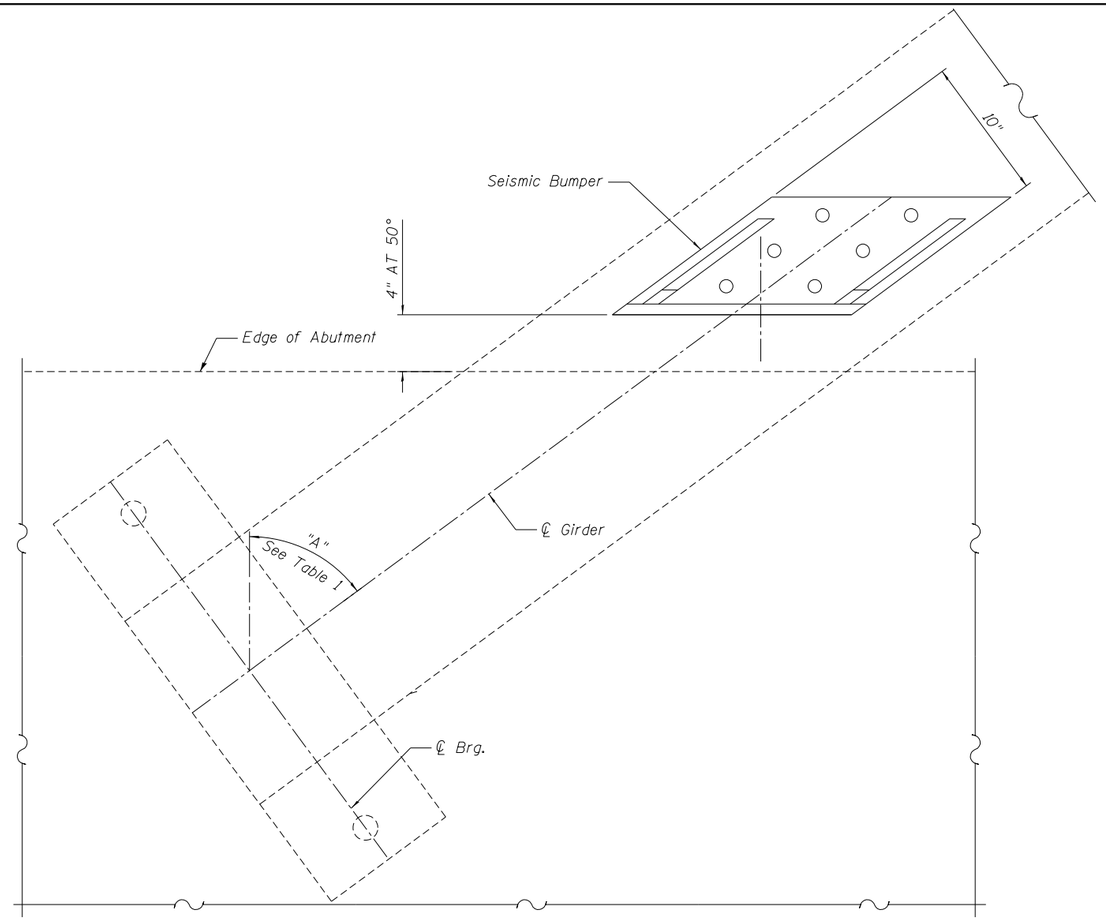
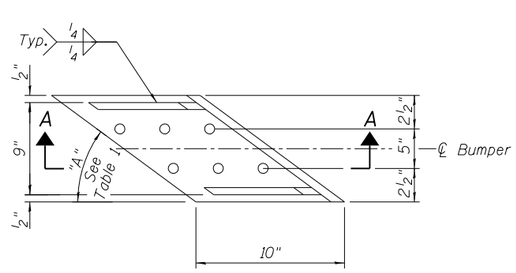
		CONTRACT NO. 76A89		
	ILLINOIS	FED. AID PROJECT		

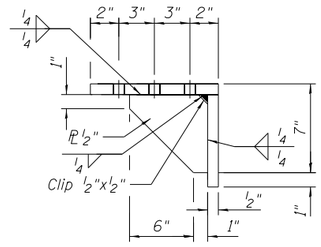


PLAN AT ABUTMENT BRG.

Typical each Girder



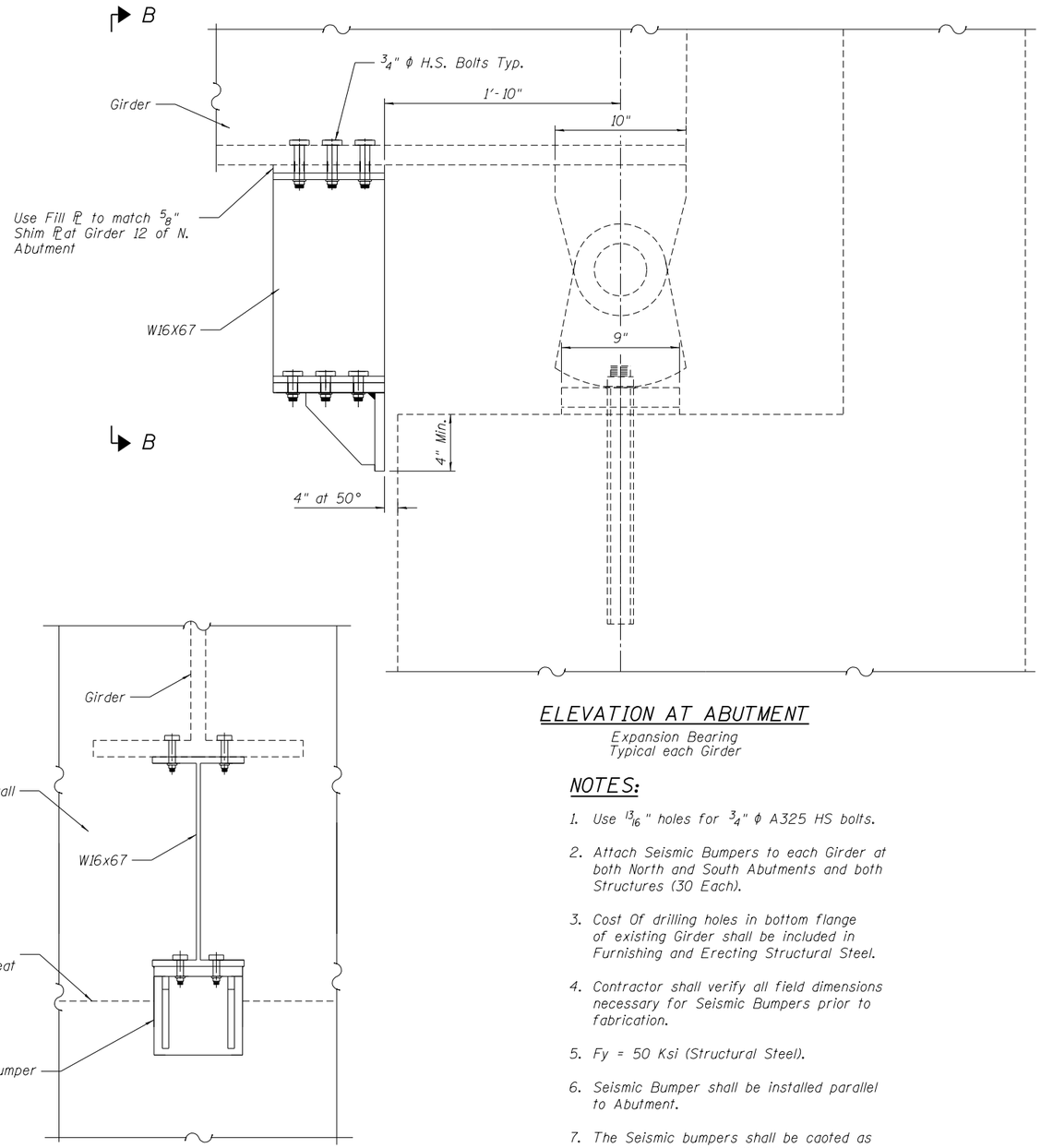
SEISMIC BUMPER



SECTION A-A

TABLE 1

Location	Angle "A"
NB South Abutment	30°52'25"
NB North Abutment	53°35'17"
SB South Abutment	31°49'17"
SB North Abutment	53°35'17"



ELEVATION AT ABUTMENT

Expansion Bearing
Typical each Girder

VIEW B-B

Typical each Girder

NOTES:

1. Use 13/16" holes for 3/4" ϕ A325 HS bolts.
2. Attach Seismic Bumpers to each Girder at both North and South Abutments and both Structures (30 Each).
3. Cost Of drilling holes in bottom flange of existing Girder shall be included in Furnishing and Erecting Structural Steel.
4. Contractor shall verify all field dimensions necessary for Seismic Bumpers prior to fabrication.
5. Fy = 50 Ksi (Structural Steel).
6. Seismic Bumper shall be installed parallel to Abutment.
7. The Seismic bumpers shall be coated as specified in Article 506.08 (b) of the Standard Specifications.

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Structural Steel	Pound	3120

10:07:32 PM - G:\CHI\0013\Bridge\CADD\060-0214&0253\060021486253-76A89-16- Bumper.dgn

8/24/2012

FILE NAME = 0600214&0253-76A89-16- Bumper.dgn

TranSystems

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PLOT DATE = 8/24/2012	CHECKED - FAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

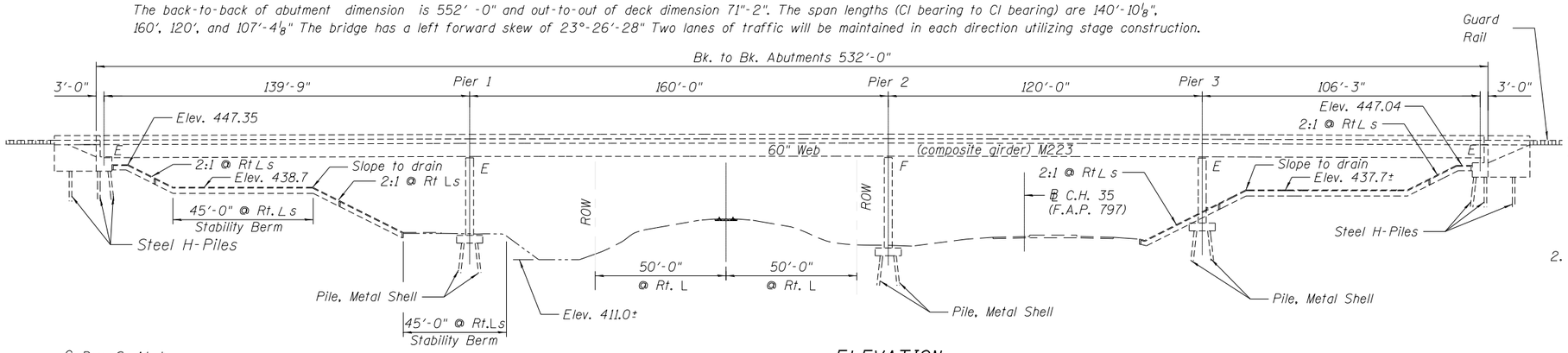
SEISMIC BUMPERS
STRUCTURE NO. 060-0214 NB AND 060-0253 SB

SHEET NO. 16 OF 16 SHEETS

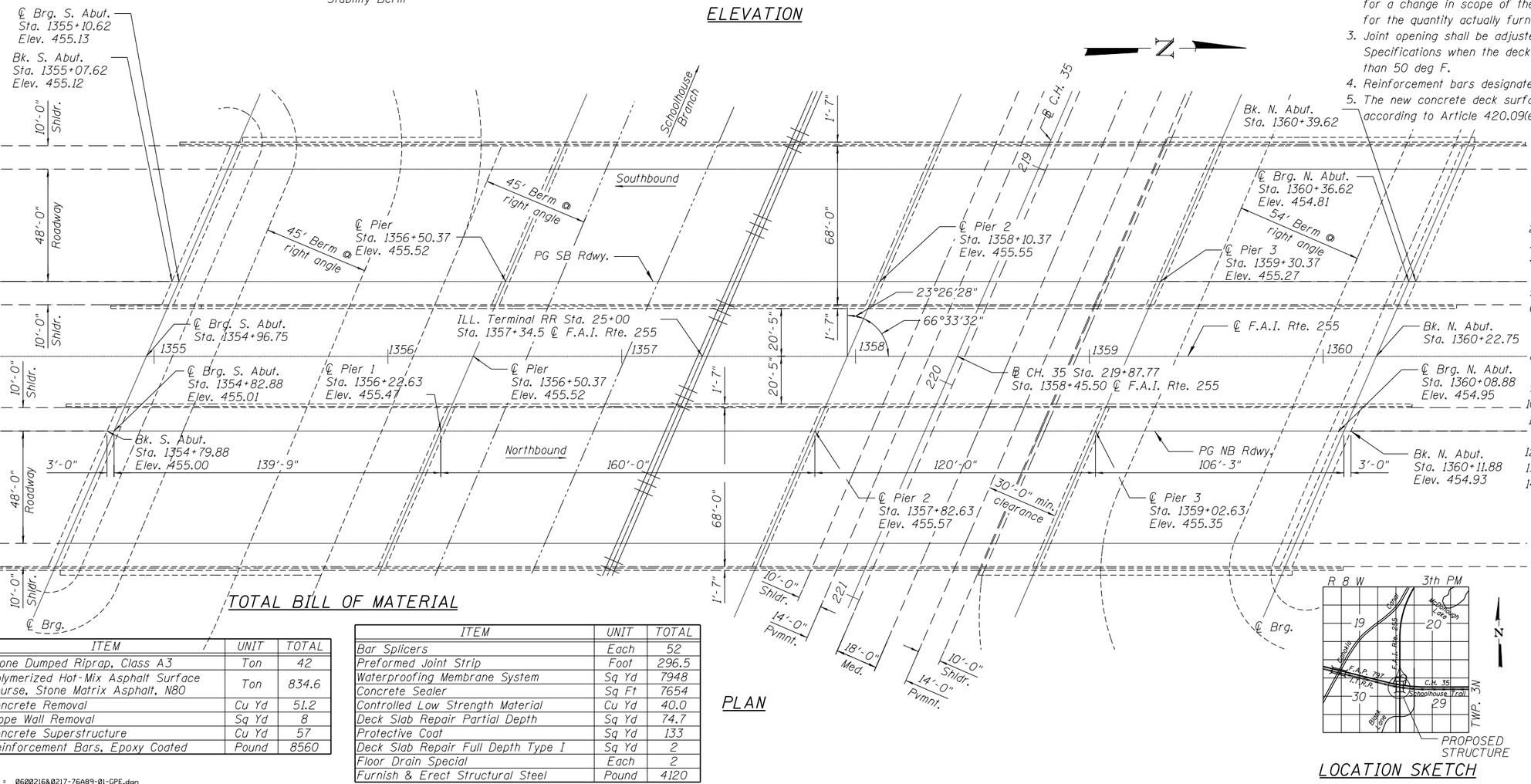
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	243
		CONTRACT NO. 76A89		
	ILLINOIS FED. AID PROJECT			

Bench Mark: Chiseled square on N.W. wingwall of bridge carrying Black Lane over Schoolhouse Branch 100'S. of C.H. 35 Elev. 428.64

Existing Structure: The original structure was constructed in 1987 as FAI Route 255, Section 60-8BHVB. The dual superstructures consist of continuous four span composite welded plate girder bridges with 7½" decks. The substructures consist of closed abutments and concrete piers, all supported on steel piles. The back-to-back of abutment dimension is 552'-0" and out-to-out of deck dimension 71"-2". The span lengths (CI bearing to CI bearing) are 140'-10⅛", 160', 120', and 107'-4⅛" The bridge has a left forward skew of 23°-26'-28" Two lanes of traffic will be maintained in each direction utilizing stage construction.



ELEVATION



PLAN

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Stone Dumped Riprap, Class A3	Ton	42
Polymerized Hot-Mix Asphalt Surface Course, Stone Matrix Asphalt, N80	Ton	834.6
Concrete Removal	Cu Yd	51.2
Slope Wall Removal	Sq Yd	8
Concrete Superstructure	Cu Yd	57
Reinforcement Bars, Epoxy Coated	Pound	8560

ITEM	UNIT	TOTAL
Bar Splicers	Each	52
Preformed Joint Strip	Foot	296.5
Waterproofing Membrane System	Sq Yd	7948
Concrete Sealer	Sq Ft	7654
Controlled Low Strength Material	Cu Yd	40.0
Deck Slab Repair Partial Depth	Sq Yd	74.7
Protective Coat	Sq Yd	133
Deck Slab Repair Full Depth Type I	Sq Yd	2
Floor Drain Special	Each	2
Furnish & Erect Structural Steel	Pound	4120

GENERAL NOTES

1. Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale,and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete. As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer. Any cracks that cannot be removed by grinding ¼ in. deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.
2. Plan dimensions, elevations and details relative to existing plans are subject to nominal construction variations. The Contactor 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.
3. Joint opening shall be adjusted according to Art. 520.04 of the Standard Specifications when the deck is poured at an ambient temperature other than 50 deg F.
4. Reinforcement bars designated (E) shall be epoxy coated.
5. The new concrete deck surfaces shall have its final finish tined according to Article 420.09(e)(1).

INDEX OF SHEETS

LOCATION SKETCH

FRANCIS A. SMITH JR. 081-005860 LICENSED STRUCTURAL ENGINEER ILLINOIS

F. ALLEN SMITH, P.E., S.E.
NO. 081-005860
EXP. DATE 11/30/2012

FILE NAME = 0600216&0217-76A89-01-GPE.dgn

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PLOT DATE = 10/18/2012	CHECKED - SLZ	X	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 060-0216 & 060-0217
SHEET NO. 1 OF 14 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	244
		CONTRACT NO. 76A89		
	ILLINOIS FED. AID PROJECT			

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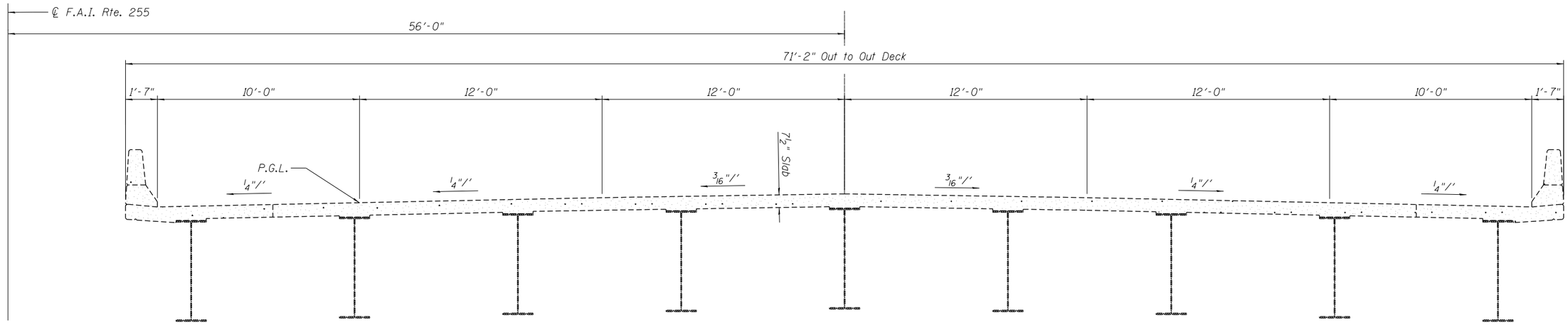
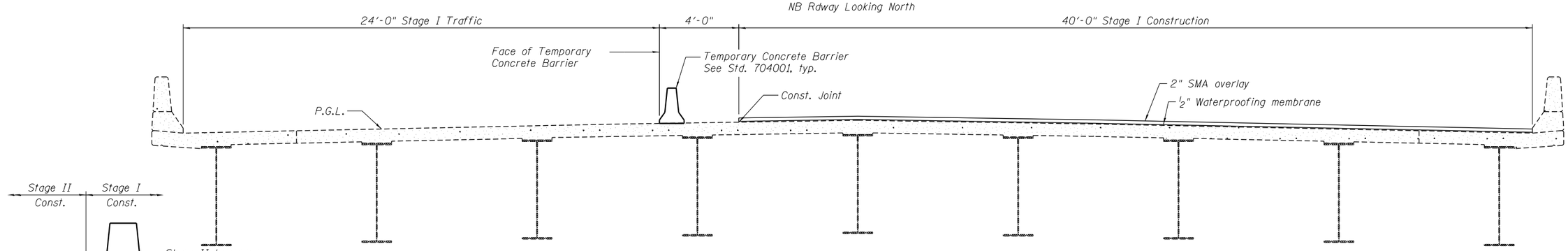


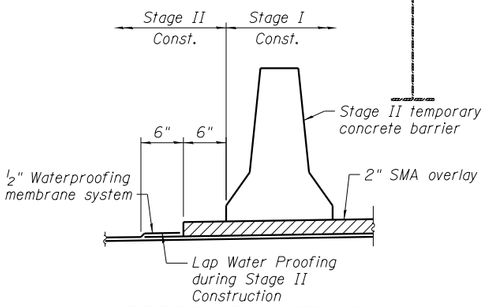
EXISTING CROSS SECTION

NB Rdway Looking North

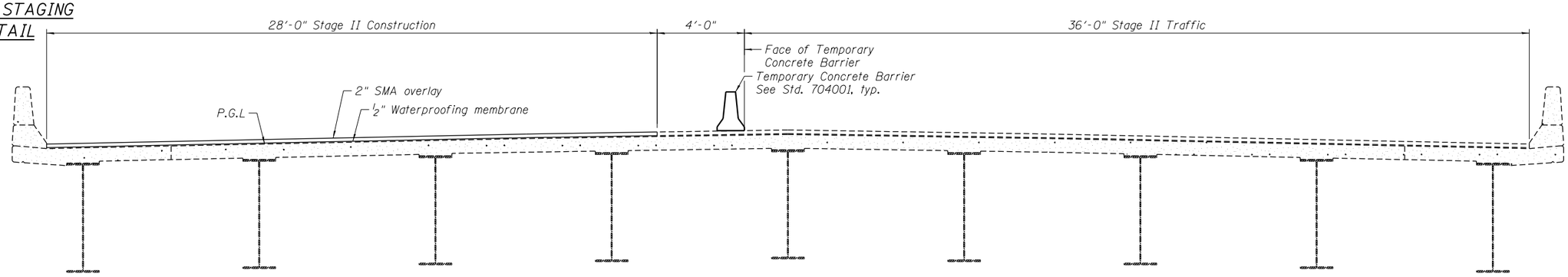


STAGE I CONSTRUCTION

NB Rdway Looking North



WATERPROOFING STAGING TYPICAL DETAIL



STAGE II CONSTRUCTION

NB Rdway Looking North

10:08:51 PM - G:\CHI\0013\Bridge\CADD\060-0216&021T\0600216-76A89-02-Stage.Const.NB.dgn

8/24/2012

FILE NAME = 0600216-76A89-02-Stage.Const.NB.dgn

Tran Systems

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION NORTHBOUND
STRUCTURE NO. 060-0216 NB

SHEET NO. 2 OF 14 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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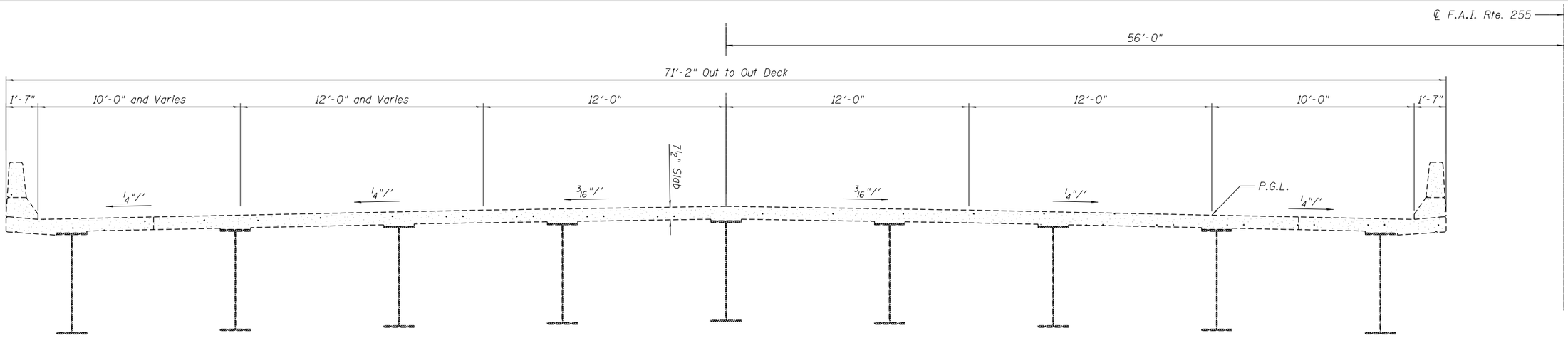
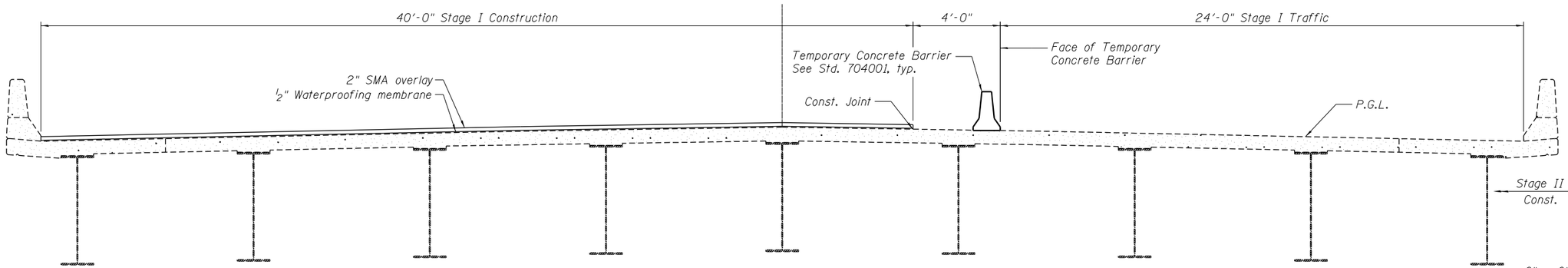
		CONTRACT NO. 76A89		
	ILLINOIS FED. AID PROJECT			



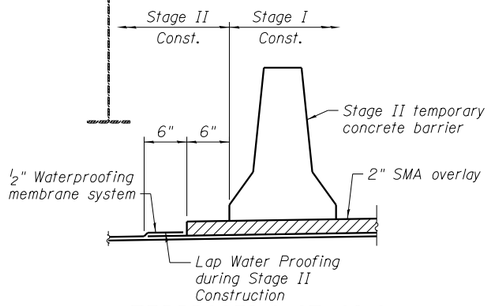
EXISTING CROSS SECTION

SB Rdway Looking North

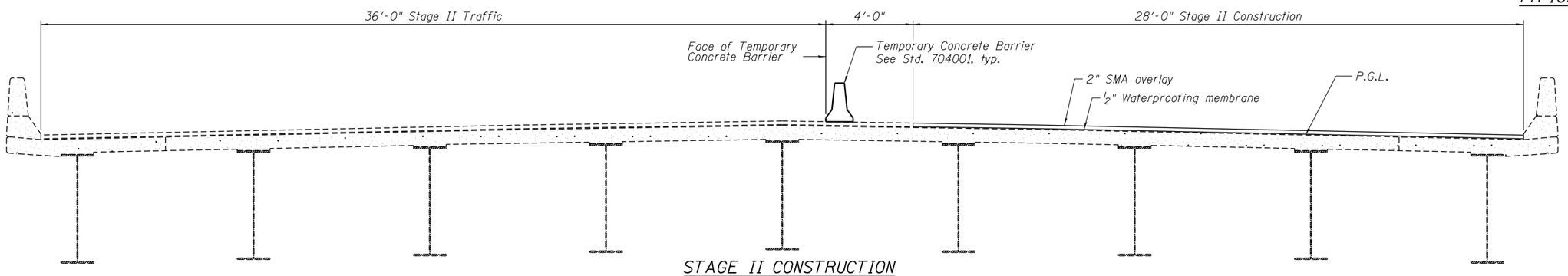


STAGE I CONSTRUCTION

SB Rdway Looking North



WATERPROOFING STAGING TYPICAL DETAIL



STAGE II CONSTRUCTION

SB Rdway Looking North

10:08:52 PM - G:\CHIN\0043\Bridge\CADD\060-0216&0217\0600217-76A89-03-Stage_Const_SB.dgn

8/24/2012

FILE NAME = 0600217-76A89-03-Stage_Const_SB.dgn

TranSystems

USER NAME = DMGolias	DESIGNED - WAE	REVISED -
	CHECKED - FAS	REVISED -
PLOT SCALE = 5i4 '1' / in.	DRAWN - DMG	REVISED -
PLOT DATE = 8/24/2012	CHECKED - SWZ	REVISED -

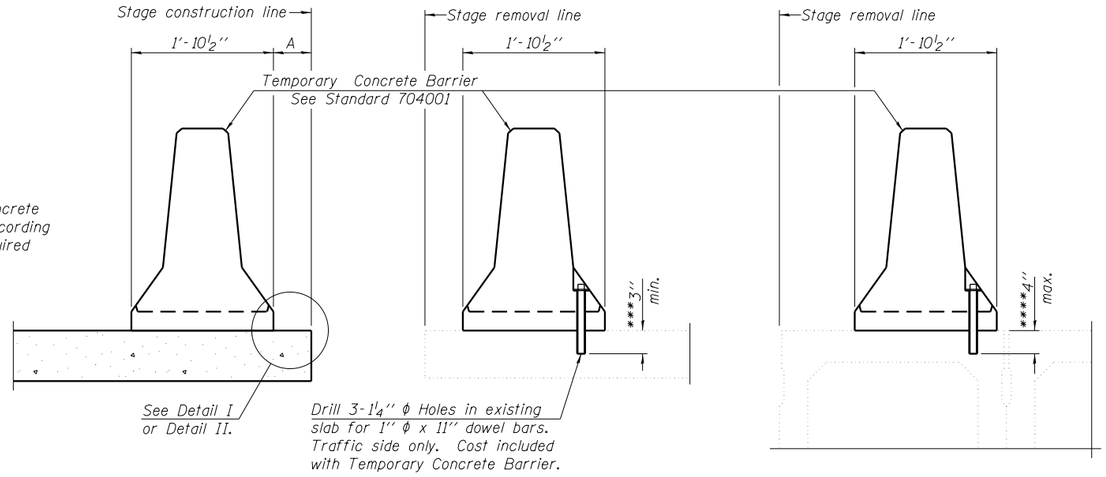
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION SOUTHBOUND
STRUCTURE NO. 060-0217 SB

SHEET NO. 3 OF 14 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	246
		CONTRACT NO. 76A89		
	ILLINOIS	FED. AID PROJECT		

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 ℙ to the top layer of couplers with 2-⅝'' ϕ bolts screwed to coupler at approximate ℄ of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1'' x 7'' x ''W'' steel ℙ to the concrete slab or concrete wearing surface with 2-⅝'' ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

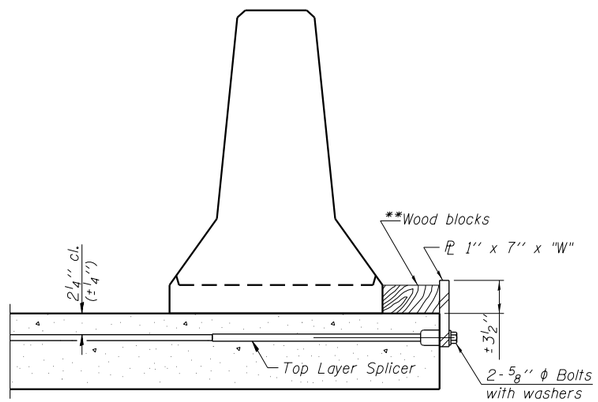
Cost of anchorage is included with Temporary Concrete Barrier.

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.

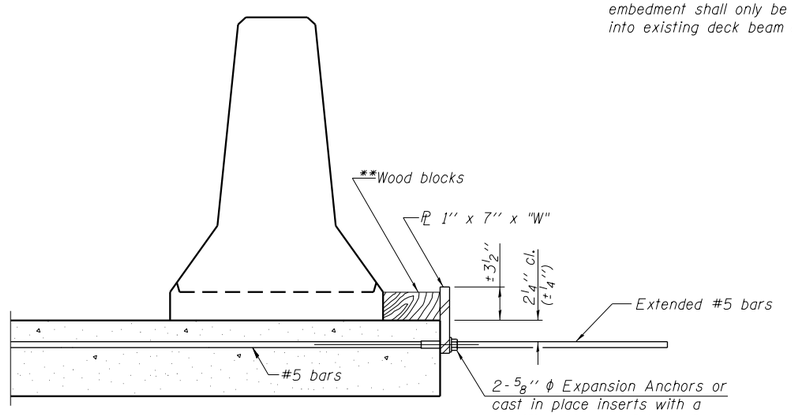
For Quantity of Temporary Concrete Barrier see Roadway Plans.

*** 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.



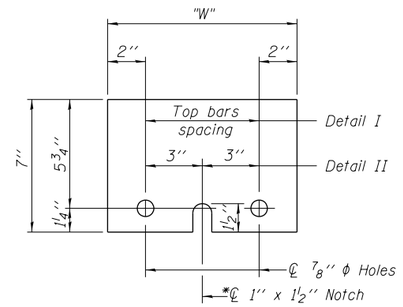
DETAIL I



DETAIL II

** 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''



STEEL RETAINER ℙ 1'' x 7'' x ''W''

* Required only with Detail II

Note: For Quantity of Temporary Concrete barriers see Roadway Plans.

R-27 7-1-10
FILE NAME = 0600216&0217-76A89-04-Temporary_Barrier.dgn

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	X	CHECKED - FAS	REVISED -	
PLOT SCALE = 0i2.0000 'i' / in.	X	DRAWN - DMG	REVISED -	
PLOT DATE = 8/24/2012	X	CHECKED - SLZ	REVISED -	

TranSystems

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 060-0216 AND 060-0217
SHEET NO. 4 OF 14 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	247
		CONTRACT NO. 76A89		
	ILLINOIS FED. AID PROJECT			

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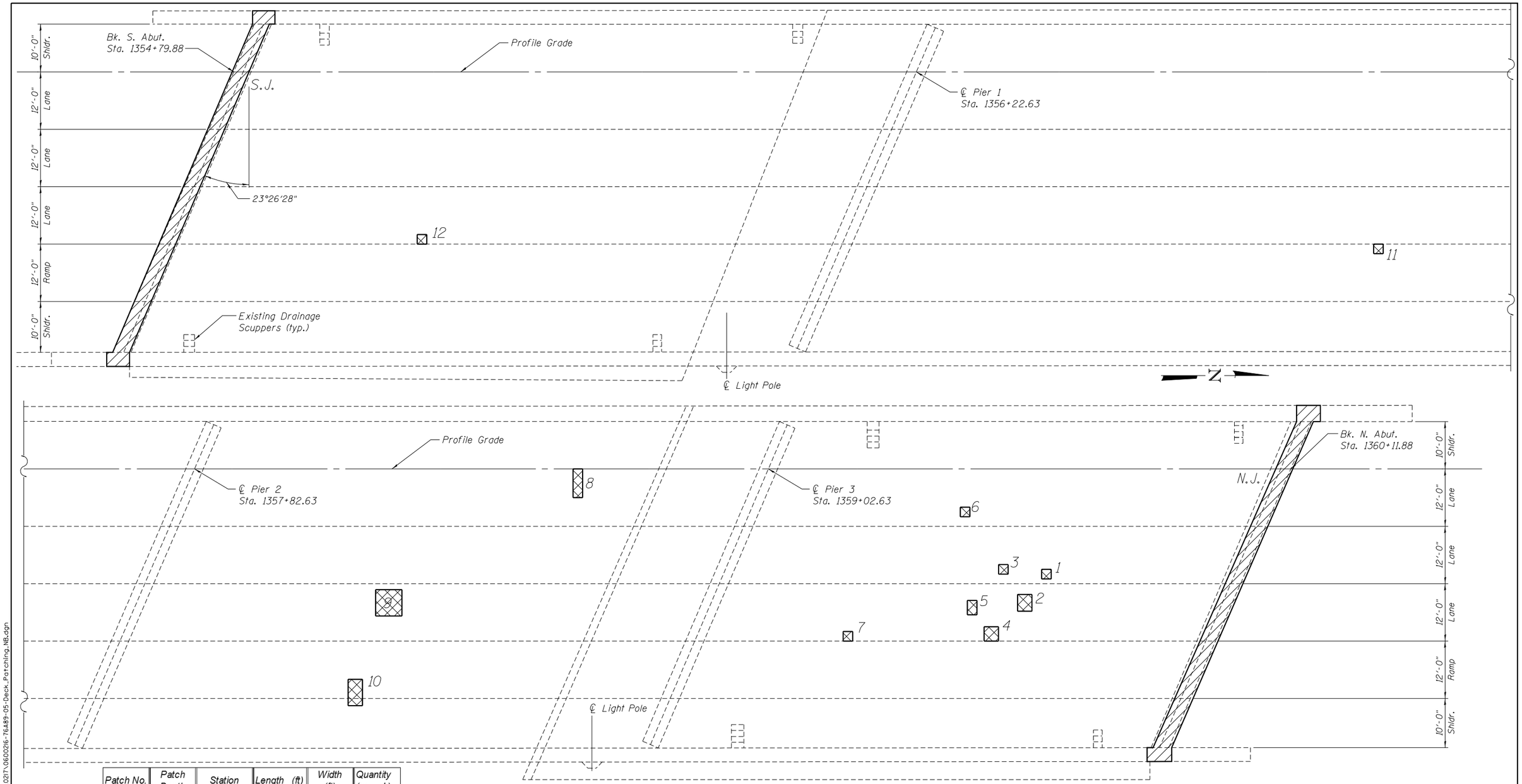
8/24/2012



DECK PLAN VIEW

Patch No.	Patch Depth	Station	Length (ft)	Width (ft)	Quantity (sq. yd.)
1	Partial	1359+60.78	2	2	0.44
2	Partial	1359+56.25	3	3.5	1.17
3	Partial	1359+51.78	2	2	0.44
4	Partial	1359+49.25	3	3	1.00
5	Partial	1359+45.25	2	3	0.67
6	Partial	1359+43.78	2	2	0.44
7	Partial	1359+19.25	2	2	0.44
8	Partial	1358+62.78	2	6	1.33
9	Partial	1358+23.25	5.5	5.5	3.36
10	Partial	1358+16.25	3	5.5	1.83
11	Partial	1357+19.25	2	2	0.44
12	Partial	1355+19.25	2	2	0.44

NOTES:

Apply Concrete sealer per Article 587 of the Standard Specifications to the top and inside vertical faces of the parapets, end posts, and wing walls.

* Additional Deck Slab Repair (Full Depth quantity has been included in the event full depth patches are identified during construction. (Location not shown.

LEGEND

Deck Slab Repair Partial Depth

Concrete Removal (See Concrete Removal Sheet)

BILL OF MATERIAL

Item	Unit	Total
Deck Slab Repair-(Partial Depth)	Sq. Yd.	12.6
Deck Slab Repair-(Full Depth Type I)	Sq. Yd.	2
Concrete Sealer	Sq. Ft.	3974

FILE NAME = 0600216-76A89-05-Deck_Patching_NB.dgn

TranSystems

USER NAME = DMGolias	DESIGNED - WAE	REVISED -
	CHECKED - FAS	REVISED -
PLOT SCALE = 0.2 '/ in.	DRAWN - DMG	REVISED -
PLOT DATE = 8/24/2012	CHECKED - SLZ	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PATCHING PLAN N.B.
STRUCTURE NO. 060-0216
SHEET NO. 5 OF 14 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	248
		CONTRACT NO. 76A89		
		ILLINOIS	FED. AID PROJECT	

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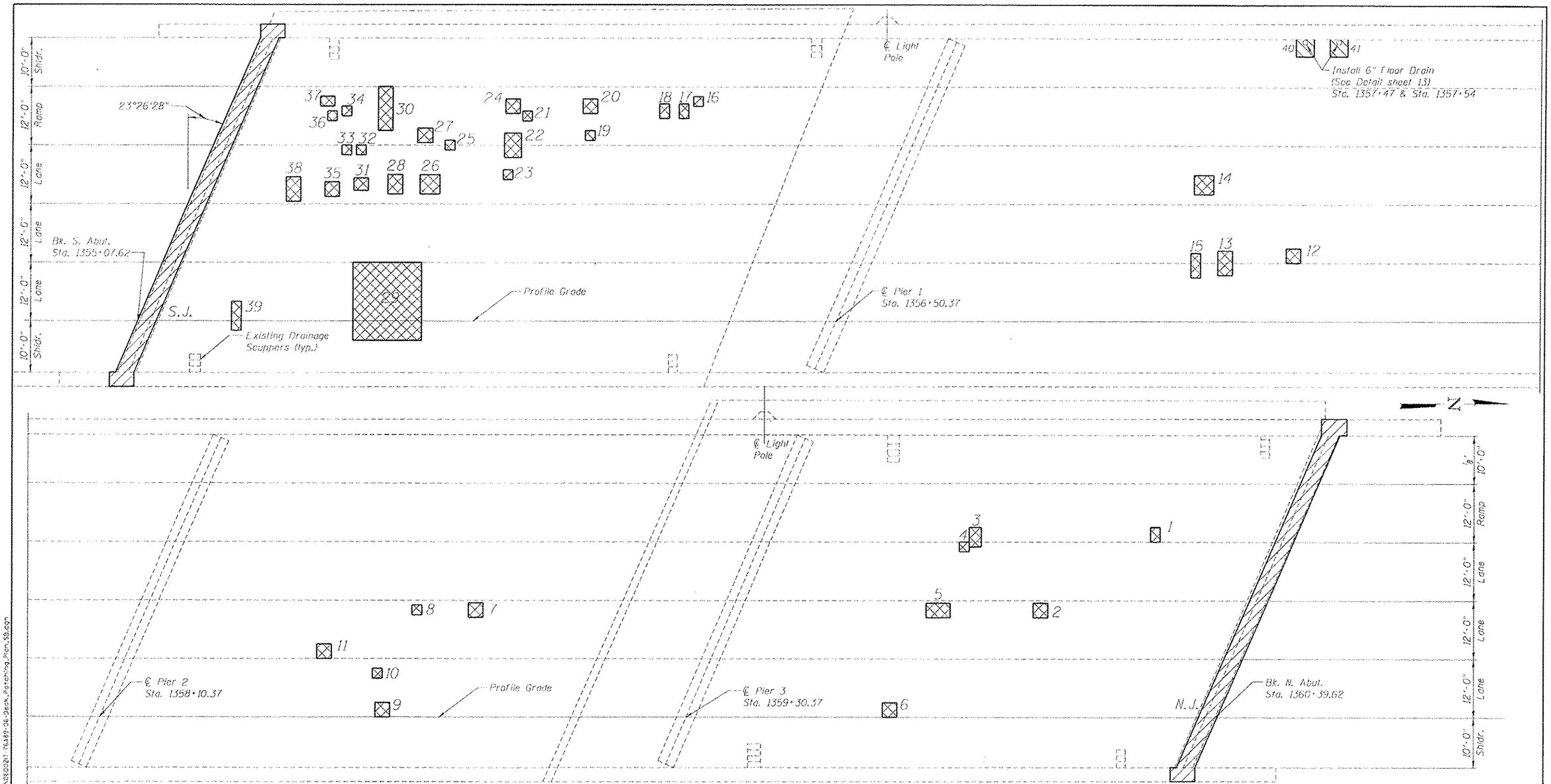
8/24/2012



DECK PLAN VIEW

LEGEND

- Deck Slab Repair Partial Depth
- Concrete Removal (See Concrete Removal Sheet)
- Deck Slab Repair Full Depth

Patch No.	Patch Depth	Station	Length (ft)	Width (ft)	Quantity (sq. yd.)	Patch No.	Patch Depth	Station	Length (ft)	Width (ft)	Quantity (sq. yd.)	Patch No.	Patch Depth	Station	Length (ft)	Width (ft)	Quantity (sq. yd.)
1	Partial	1360+29.26	2	3	0.67	15	Partial	1357+26.62	2	5	1.11	29	Partial	1355+60.62	14	16	24.89
2	Partial	1360+05.62	3	3	1.00	16	Partial	1356+24.26	2	2	0.44	30	Partial	1355+60.26	3	9	3.00
3	Partial	1359+92.26	2.5	4	1.11	17	Partial	1356+21.26	2	3	0.67	31	Partial	1355+55.26	3	2.5	0.83
4	Partial	1359+90.01	2	2	0.44	18	Partial	1356+17.26	2	3	0.67	32	Partial	1355+55.26	2	2	0.44
5	Partial	1359+84.62	5	3	1.67	19	Partial	1356+02.26	2	2	0.44	33	Partial	1355+52.26	2	2	0.44
6	Partial	1359+74.62	3	3	1.00	20	Partial	1356+02.26	3	3	1.00	34	Partial	1355+52.26	2	2	0.44
7	Partial	1358+89.62	3	3	1.00	21	Partial	1355+89.26	2	2	0.44	35	Partial	1355+49.26	3	3	1.00
8	Partial	1358+77.62	2	2	0.44	22	Partial	1355+86.26	3.5	5	1.94	36	Partial	1355+49.26	2	2	0.44
9	Partial	1358+70.62	3	3	1.00	23	Partial	1355+86.26	3	3	1.00	37	Partial	1355+48.26	3	2	0.67
10	Partial	1358+69.62	2	2	0.44	24	Partial	1355+85.26	2	2	0.44	38	Partial	1355+41.26	3	5	1.67
11	Partial	1358+58.62	3	3	1.00	25	Partial	1355+73.26	2	2	0.44	39	Partial	1355+29.62	2	6	1.33
12	Partial	1357+46.62	3	3	1.00	26	Partial	1355+69.26	4	4	1.78	40	Full	1357+47	1	1	0.11
13	Partial	1357+32.62	3	5	1.67	27	Partial	1355+68.26	3	3	1.00	41	Full	1357+54	1	1	0.11
14	Partial	1357+28.26	4	4	1.78	28	Partial	1355+62.26	3	4	1.33						

BILL OF MATERIAL

Item	Unit	Total
Deck Slab Repair (Partial Depth)	Sq. Yd.	62.1
* Deck Slab Repair (Full Depth Type I)	Sq. Yd.	2
Concrete Sealer	Sq. Ft.	3974
Floor Drain	Each	2

NOTES:

Apply concrete sealer per Article 587 of the Standard Specifications to the top and inside vertical faces of the parapets, end posts and wing walls.

*Additional Deck Slab Repair (Full Depth) quantity has been included in the event full depth patches are identified during construction. Location not shown.

FILE NAME = 8626217-76A89-06-Deck_Patching_Plan_SB.dgn

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8/24/2012

TranSystems

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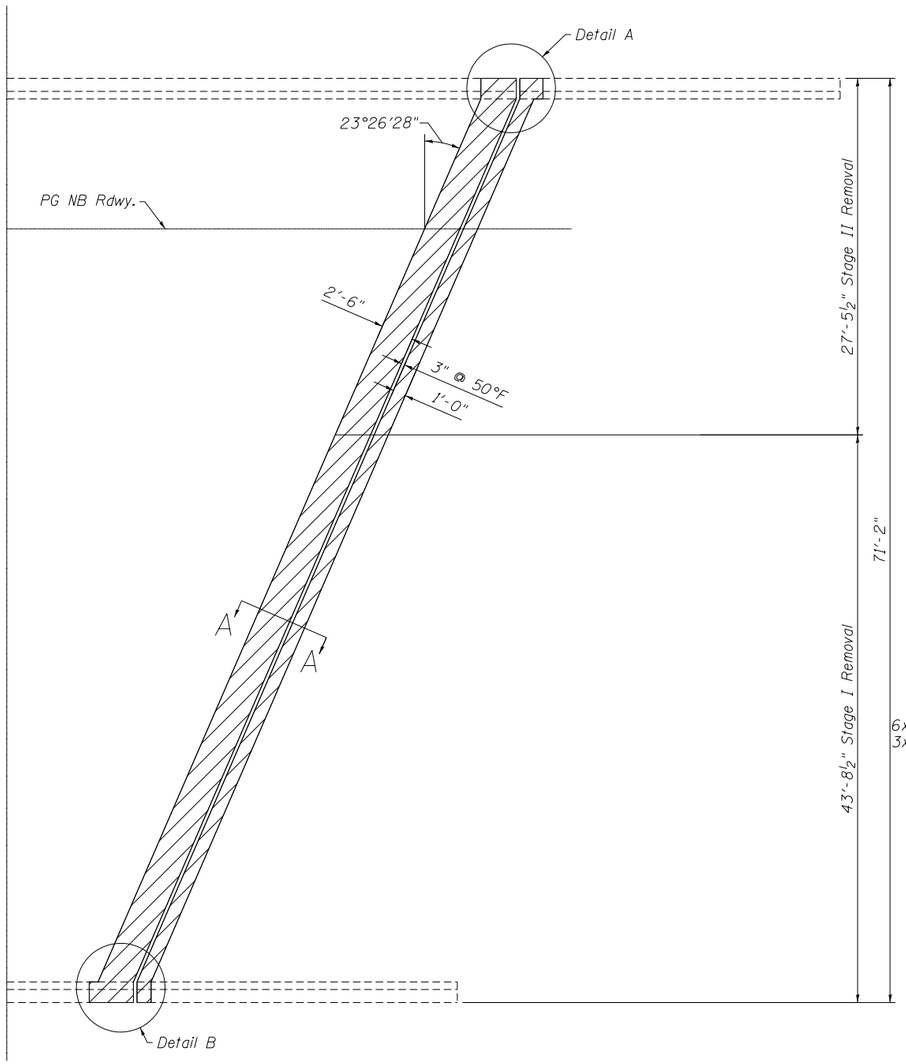
PLOT SCALE = 0.2.0000 '/ in.	CHECKED - FAS	REVISED -
PLOT DATE = 8/24/2012	DRAWN - DMG	REVISED -
	CHECKED - SLZ	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

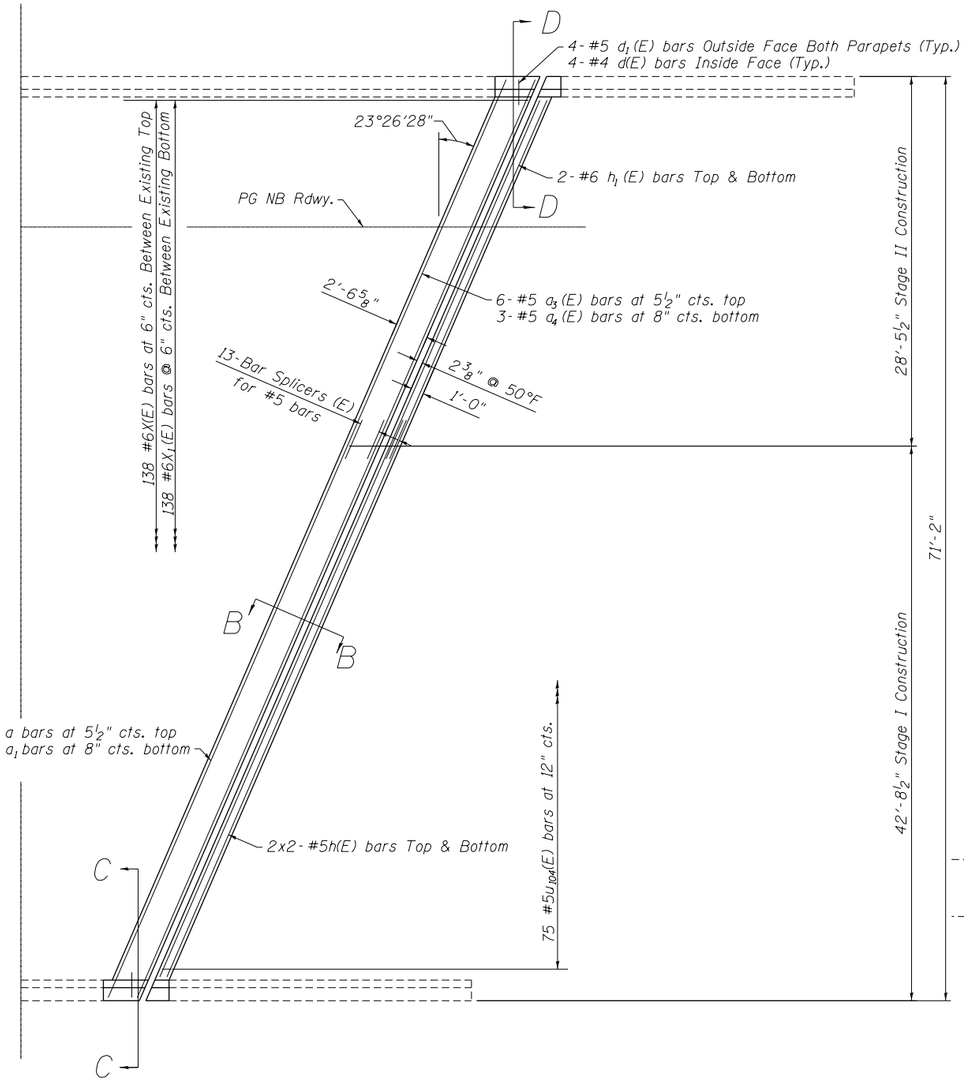
DECK PATCHING PLAN SOUTHBOUND
STRUCTURE NO. 060-0217
SHEET NO. 6 OF 14 SHEETS

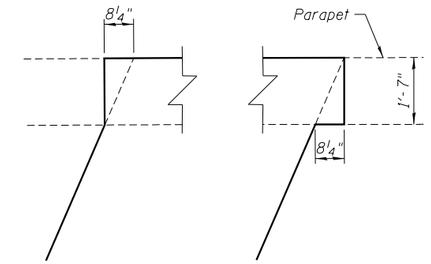
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	249
		CONTRACT NO. 76A89		
		ILLINOIS FED. AID PROJECT		



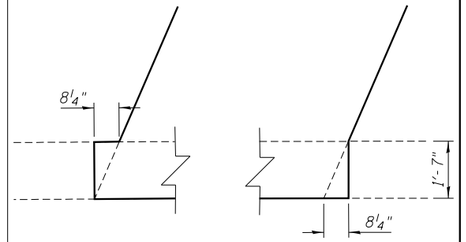
CONCRETE REMOVAL

(NB North Abutment shown)
(SB North Abutment similar)





DETAIL A



DETAIL B

MIN. LAP

#5 Bar 2'-7" Min. Lap.

CONCRETE REPLACEMENT

(NB North Abutment shown)
(SB North Abutment similar)

NOTES:

1. Existing reinforcement 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 shall be included with Concrete Removal.
2. Trim existing reinforcement to accommodated proposed expansion joint.
3. See sheet 9 for section A-A, B-B, C-C and D-D
4. Bars indicated thus:
   "4x2-#5 etc...", indicates 4 lines of bars with 2 lengths per line.
5. Protective coat applied to new concrete and top and face of parapets.

BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	25.6
Concrete Superstructure	Cu. Yd.	28.5
Protective Coat	Sq. Yd.	67

LEGEND

Concrete Removal

10:08:56 PM- G:\CHI\005\Bridge\CADD\060-0216&0217\0600216&0217_76A89-07-North_Abut_Exp_Joint.dgn
8/24/2012

FILE NAME = 0600216&0217_76A89-07-North_Abut_Exp_Joint.dgn

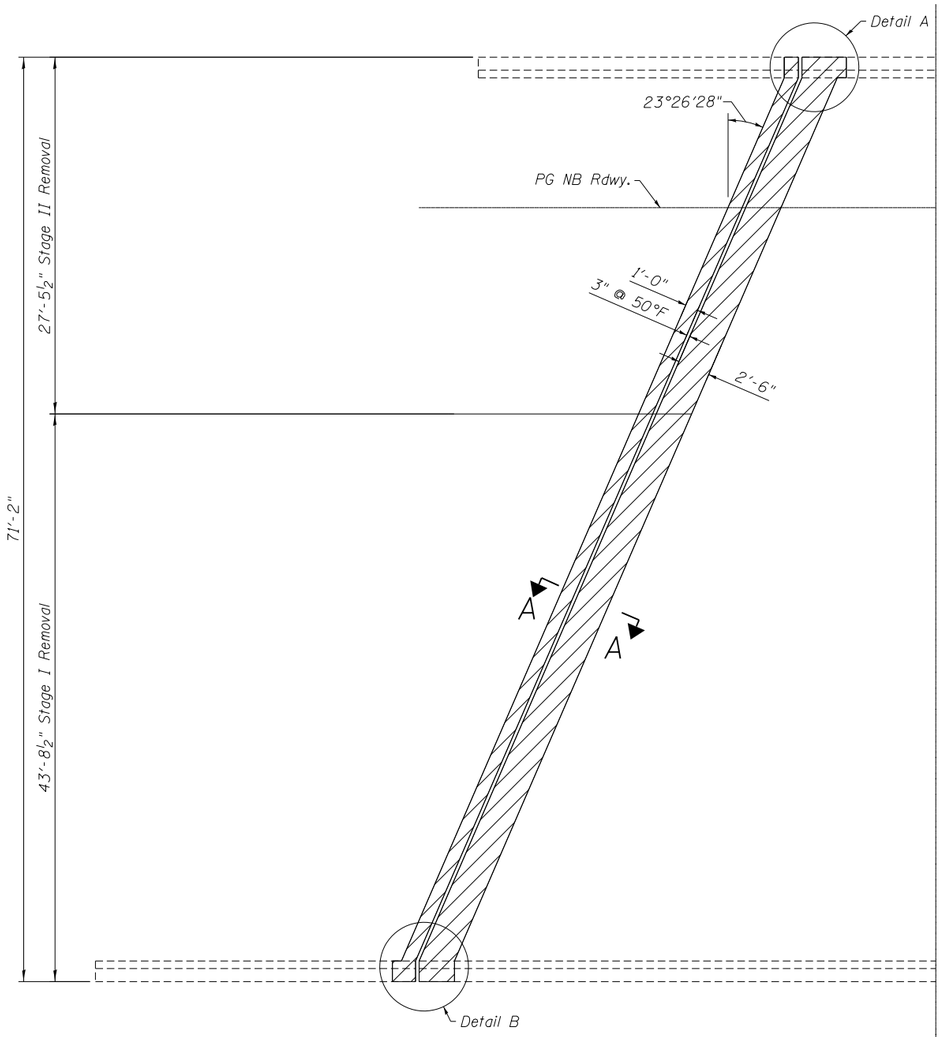
TranSystems

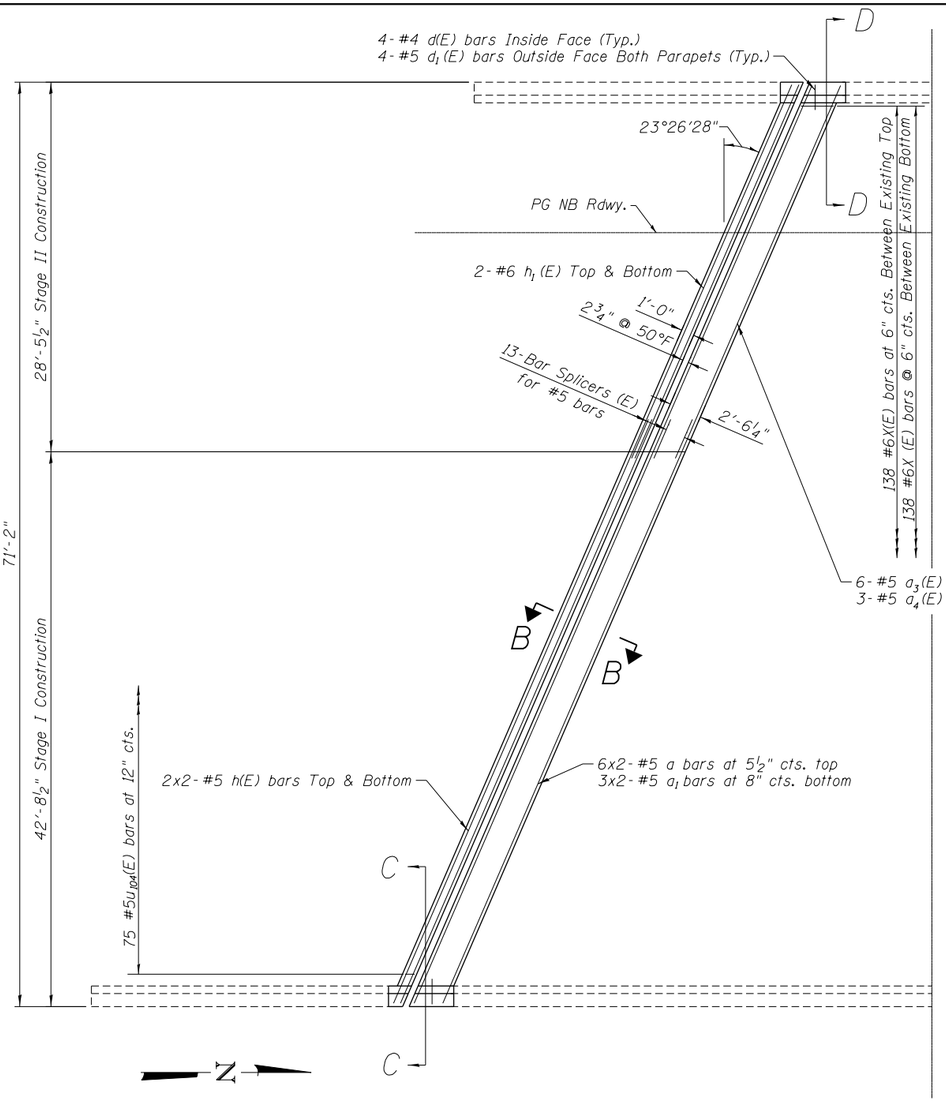
USER NAME = DMGolias	DESIGNED - WAE	REVISED -
	CHECKED - FAS	REVISED -
PLOT SCALE = 1118 '1' / in.	DRAWN - DMG	REVISED -
PLOT DATE = 8/24/2012	CHECKED - SLZ	REVISED -

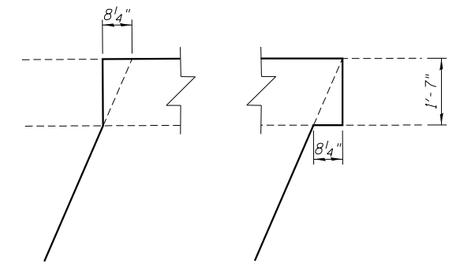
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT EXPANSION JOINT CONCRETE REMOVAL AND REPLACEMENT N.B. AND S.B. STRUCTURE NO. 060-0216 & 060-0217
SHEET NO. 7 OF 14 SHEETS

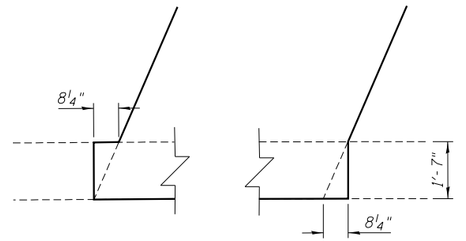
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	250
		CONTRACT NO. 76A89		
	ILLINOIS FED. AID PROJECT			







DETAIL A



DETAIL B

CONCRETE REMOVAL

(NB South Abutment shown)
(SB South Abutment similar)

CONCRETE REPLACEMENT

(NB South Abutment shown)
(SB South Abutment similar)

MIN. LAP

#5 Bar 2'-7" Min. Lap.

NOTES:

1. Existing reinforcement 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 shall be included with Concrete Removal.
2. Trim existing reinforcement to accommodated proposed expansion joint.
3. See sheet 9 for section A-A, B-B, C-C and D-D.
4. Bars indicated thus: "4x2-#5 etc...", indicates 4 lines of bars with 2 lengths per line.
5. Protective coat applied to new concrete and top and face of parapets.

BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	25.6
Concrete Superstructure	Cu. Yd.	28.5
Protective Coat	Sq. Yd.	66

LEGEND

Concrete Removal

FILE NAME = 0600216&0217-76A89-08- South.Abut Exp.Joint.dgn

USER NAME = DMGolias	DESIGNED - WAE	REVISED -	
	CHECKED - FAS	REVISED -	
PLOT SCALE = 1118 '1' / in.	DRAWN - DMG	REVISED -	
PLOT DATE = 8/24/2012	CHECKED - SLZ	REVISED -	

TranSystems

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT EXPANSION JOINT CONCRETE REMOVAL AND REPLACEMENT N.B. AND S.B.
STRUCTURE NO. 060-0216 & 060-0217
SHEET NO. 8 OF 14 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	251
		CONTRACT NO. 76A89		
	ILLINOIS FED. AID PROJECT			

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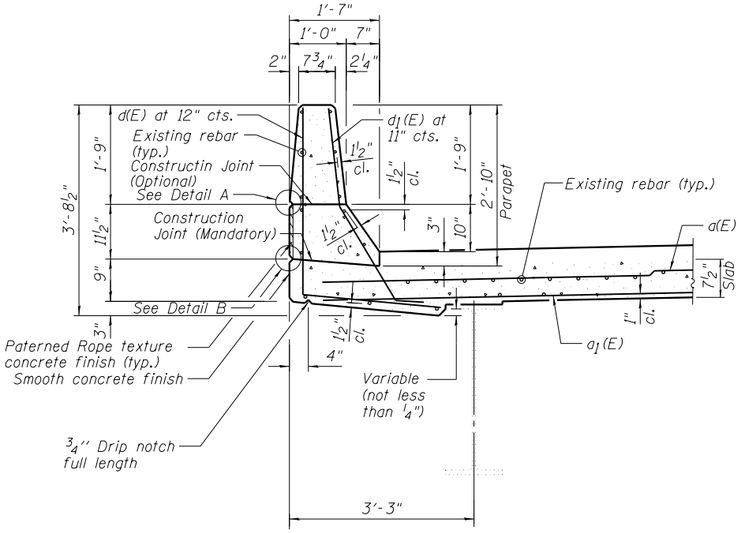
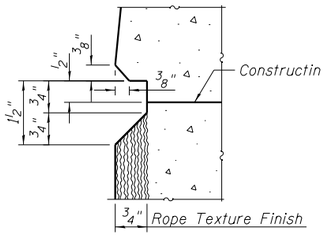
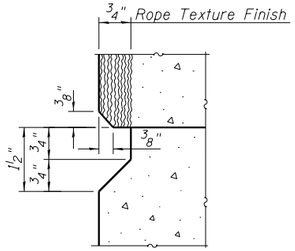


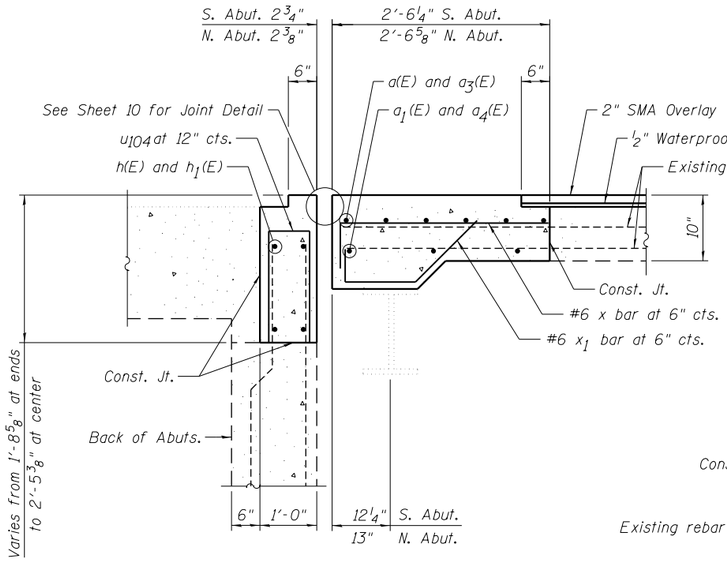
SECTION D-D
SECTION THRU PARPET



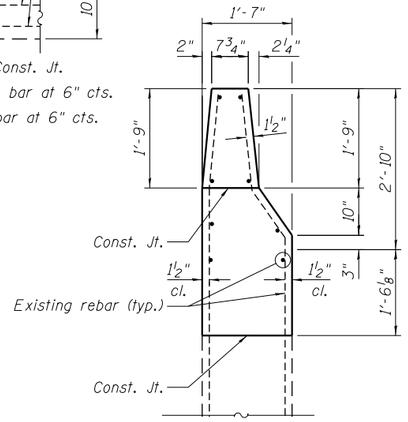
DETAIL A



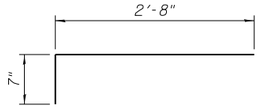
DETAIL B



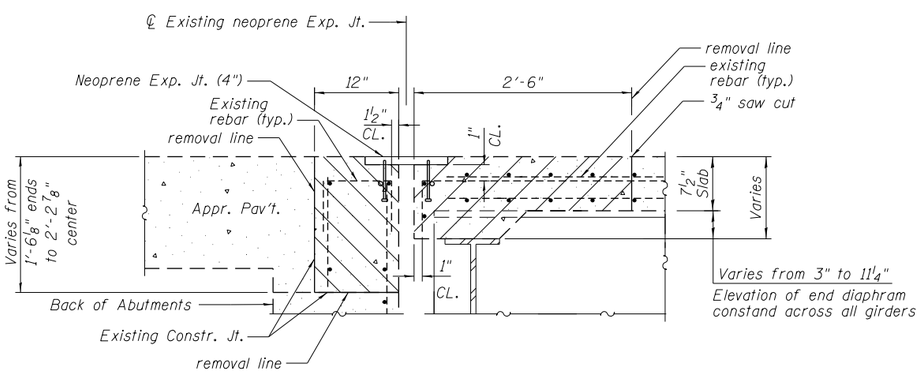
SECTION B-B



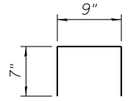
SECTION C-C
SECTION THRU WINGWALL



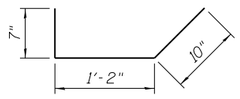
#6 BAR x (E)



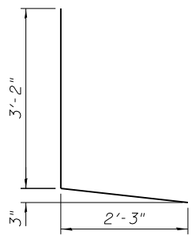
SECTION A-A



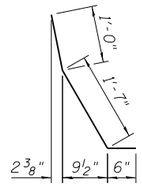
#5 BAR u104(E)



#6 BAR x1(E)



#4 BAR d(E)



#5 BAR d1(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	48	#5	24'-0"	——
a_1(E)	48	#5	23'-4"	——
a_3(E)	24	#5	30'-6"	——
a_4(E)	24	#5	29'-10"	——
d(E)	16	#4	5'-5"	L
d_1(E)	16	#5	3'-11"	L
h(E)	32	#5	23'-3"	——
h_1(E)	16	#5	28'-11"	——
u_{104}(E)	300	#5	1'-11"	⊓
x(E)	552	#6	3'-3"	⌐¬
x_1(E)	552	#6	2'-7"	⌐_

Item	Unit	Quantity
Reinforcement Bars, Epoxy Coated	Pound	8560
Bar Splicers	Each	52

8/24/2012 10:08:58 PM - G:\CHIN\0013\Bridge\CADD\060-0216&0217\060021&0217-76A89-09-Deck_details.dgn

FILE NAME = 060021&0217-76A89-09-Deck_details.dgn

TranSystems

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	CHECKED - FAS	REVISED -
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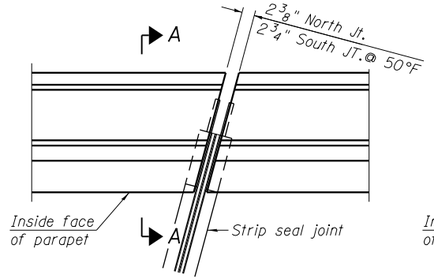
PLOT DATE = 8/24/2012	CHECKED - SLZ	REVISED -

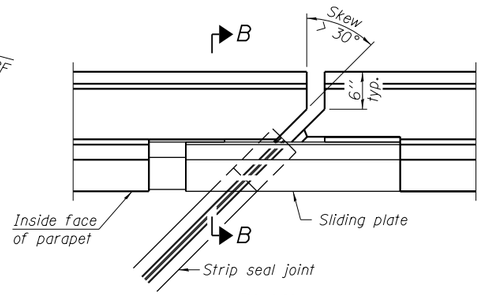
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK JOINT DETAILS N.B. AND S.B.
STRUCTURE NO. 060-0216 & 060-0217
SHEET NO. 9 OF 14 SHEETS

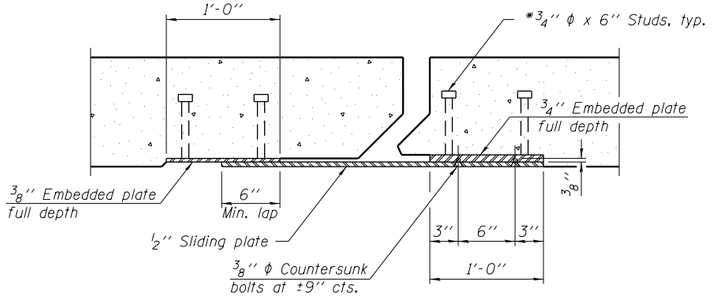
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	252
		CONTRACT NO. 76A89		
	ILLINOIS	FED. AID PROJECT		



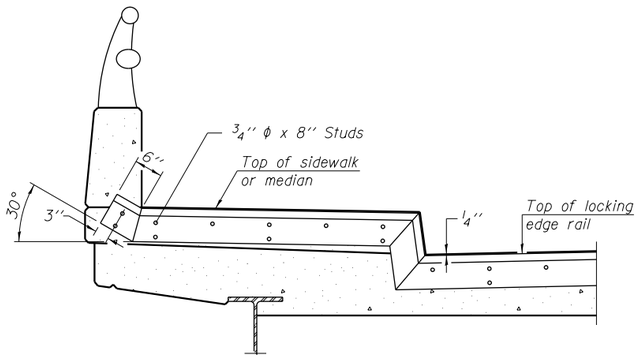
PLAN
(For skews ≤ 30°)



PLAN
(For skews > 30°)
Showing point block

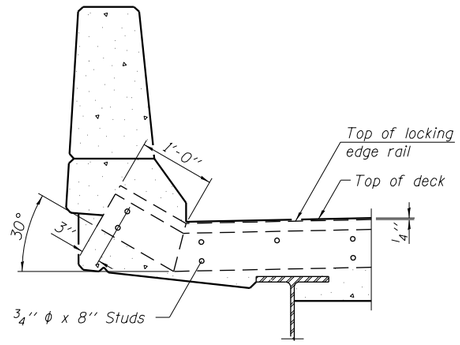


SECTION C-C

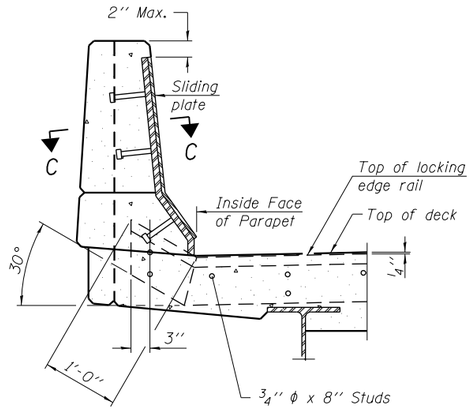


TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN

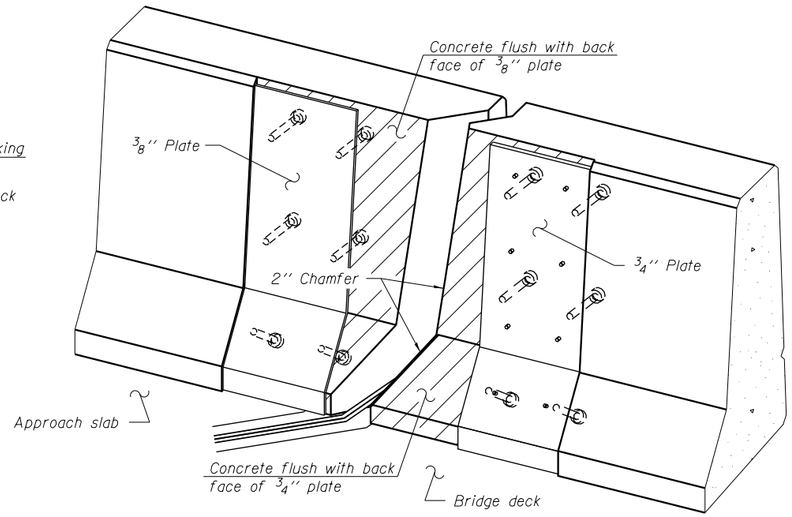
Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.



SECTION A-A



SECTION B-B



TRIMETRIC VIEW
(Showing back plates only)

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. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. 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. Locking Edge Rails may be spliced at slope discontinuities.

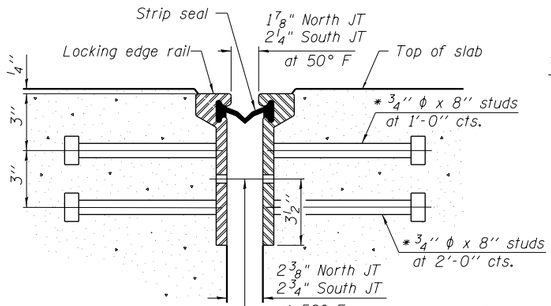
The manufacturer's recommended installation methods shall be followed.

The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

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

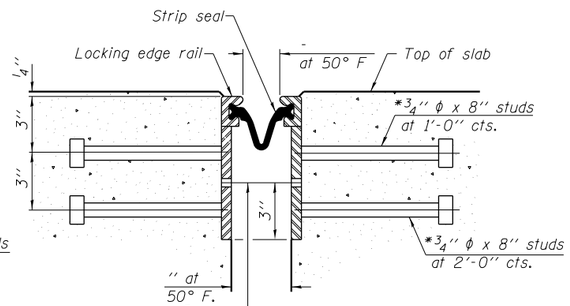
Maximum space between rail segments at stage lines shall be 3/16", sealed with a suitable sealant.

Parapet plates and anchorage studs for skews > 30° included in the cost of Preformed Joint Strip Seal.



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.

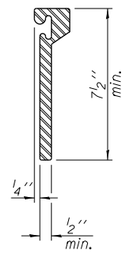
SECTION THRU ROLLED RAIL JOINT



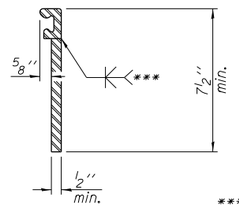
7/16" ϕ holes at 4'-0" cts. for 3/8" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

SECTION THRU WELDED RAIL JOINT

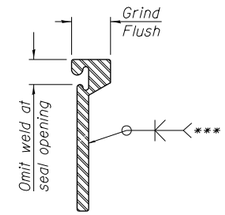
* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



ROLLED EXTRUDED RAIL



WELDED RAIL



*** 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.

LOCKING EDGE RAILS

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	296.6

EJ-SSJ 7-1-10
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10:08:59 PM - G:\CHIN\0013\Bridge\CADD\060-0216&0217\0600216#0217-76A89- 10-Strip_Seal.dgn
8/24/2012

TranSystems

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	X	CHECKED - FAS	REVISED -
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PLOT DATE = 8/24/2012	X	CHECKED - SLZ	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL DETAILS
STRUCTURE NO. 060-0216 AND 060-0217
SHEET NO. 10 OF 14 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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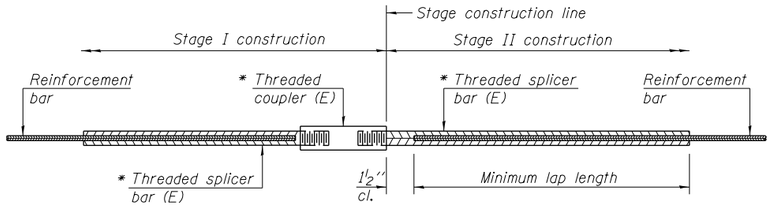
		CONTRACT NO. 76A89		
	ILLINOIS FED. AID PROJECT			



STANDARD BAR SPLICER ASSEMBLY

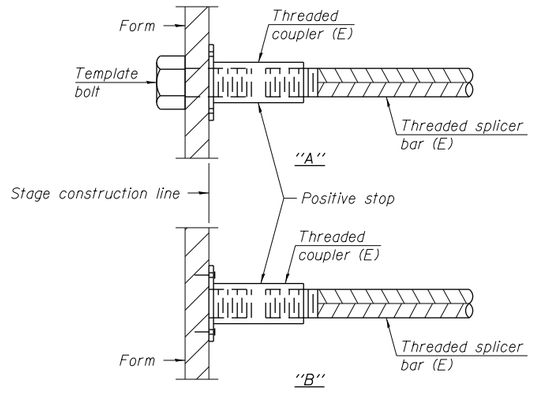
Minimum Lap Lengths					
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5
3, 4	1'-5''	1'-11''	2'-1''	2'-4''	2'-3''
5	1'-9''	2'-5''	2'-7''	2'-11''	2'-10''
6	2'-1''	2'-11''	3'-1''	3'-6''	3'-4''
7	2'-9''	3'-10''	4'-2''	4'-8''	4'-6''
8	3'-8''	5'-1''	5'-5''	6'-2''	5'-10''
9	4'-7''	6'-5''	6'-10''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

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, Top bar lap, Class B

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

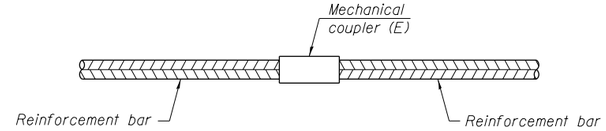
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
0216	#5	26	3
0217	#5	26	3



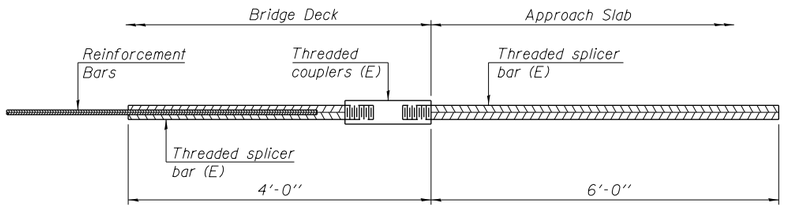
INSTALLATION AND SETTING METHODS

"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.



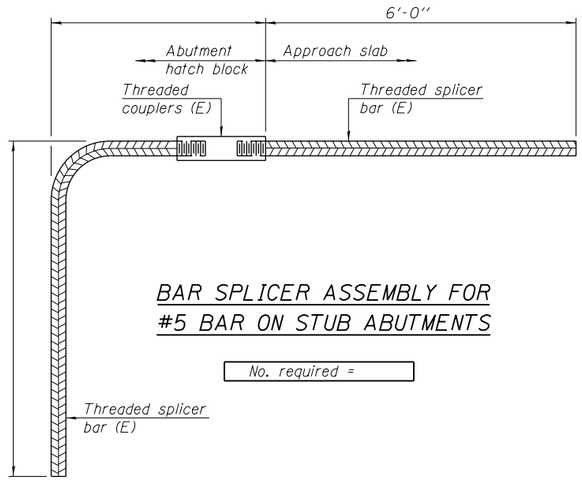
STANDARD MECHANICAL SPLICER

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 special provision for Mechanical Splicers.

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

10:09:00 PM- G:\CHI\0003\Bridge\CADD\060-0216&0217\060026&0217-76A89-11-Bar_Splicer.dgn
8/24/2012

BSD-1 7-1-10
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TranSystems

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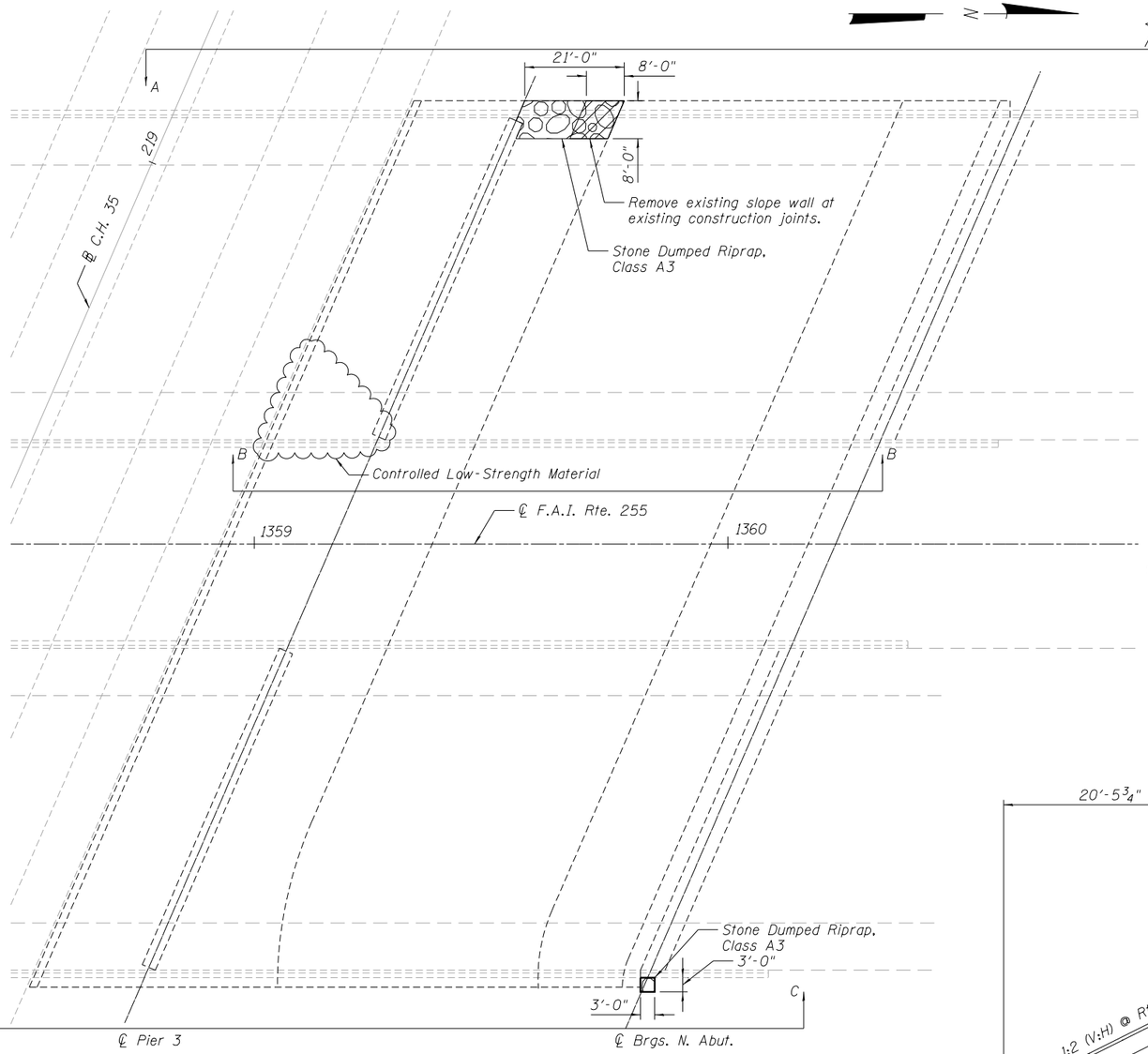
PLOT SCALE = Ø2 '' / in.	X	DRAWN - DMG		REVISED -	
PLOT DATE = 8/24/2012	X	CHECKED - SLZ		REVISED -	

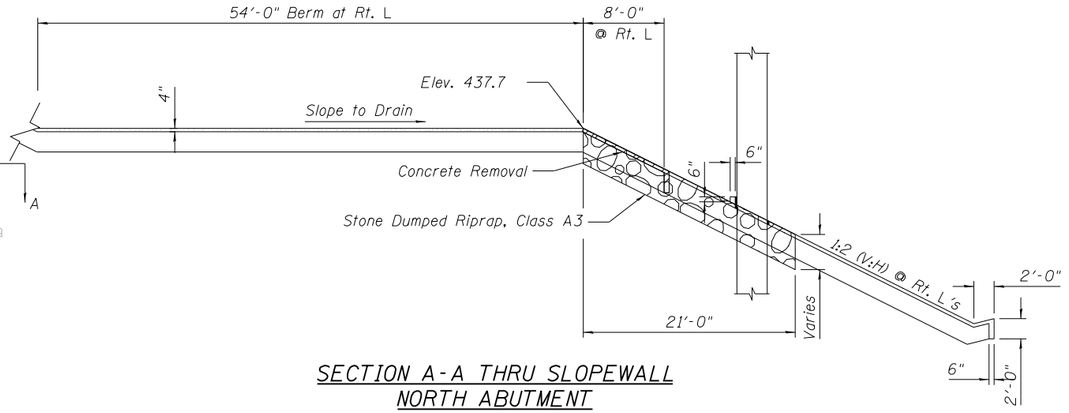
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 060-0216 AND 060-0217
SHEET NO. 11 OF 14 SHEETS

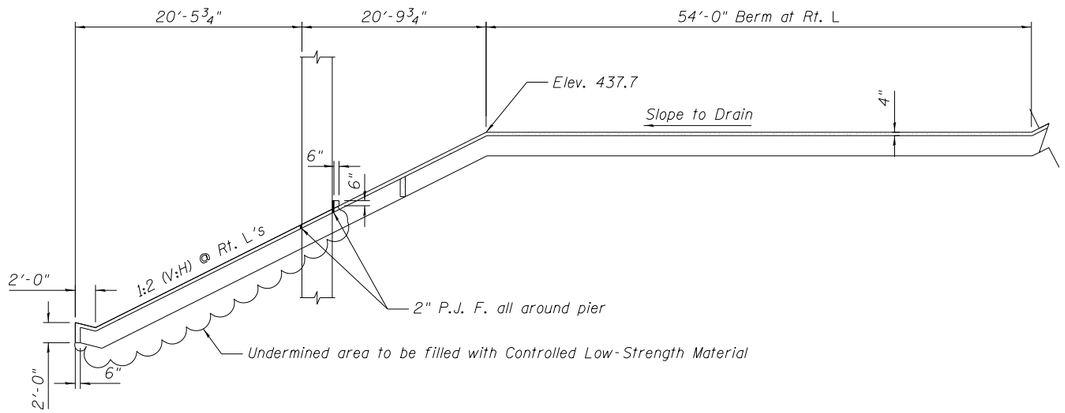
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	254
		CONTRACT NO. 76A89		
	ILLINOIS	FED. AID PROJECT		



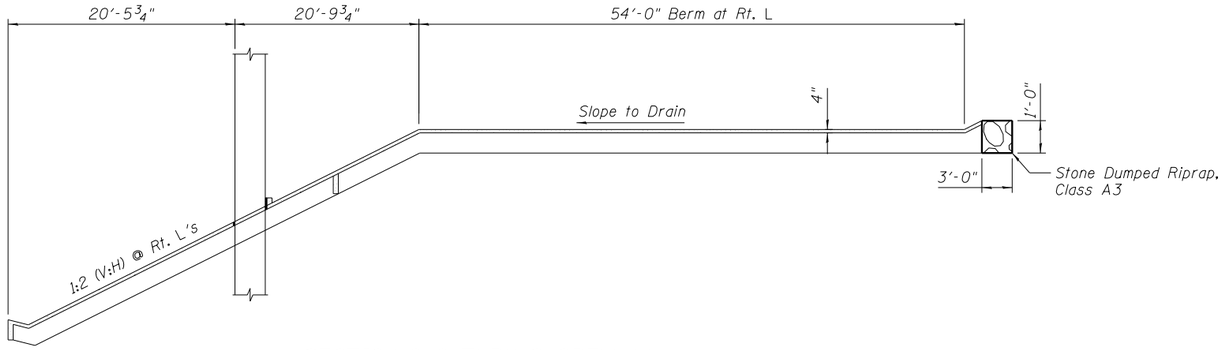
PLAN OF SLOPEWALL NORTH ABUTMENT



SECTION A-A THRU SLOPEWALL NORTH ABUTMENT



SECTION B-B THRU SLOPEWALL NORTH ABUTMENT



SECTION C-C THRU SLOPEWALL NORTH ABUTMENT

BILL OF MATERIAL

Item	Unit	Quantity
Stone Dumped Riprap, Class A3	Ton	41
Controlled Low-Strength Material	Cu Yd	40
Slope Wall Removal	Sq Yd	8

LEGEND

Concrete Removal

Stone Dumped Riprap Class. A3

10:09:01 PM - G:\CHI\0013\Bridge\CADD\060-0216&021T\0600216&0217-76A89-12-SlopeWall.dgn

8/24/2012

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TranSystems

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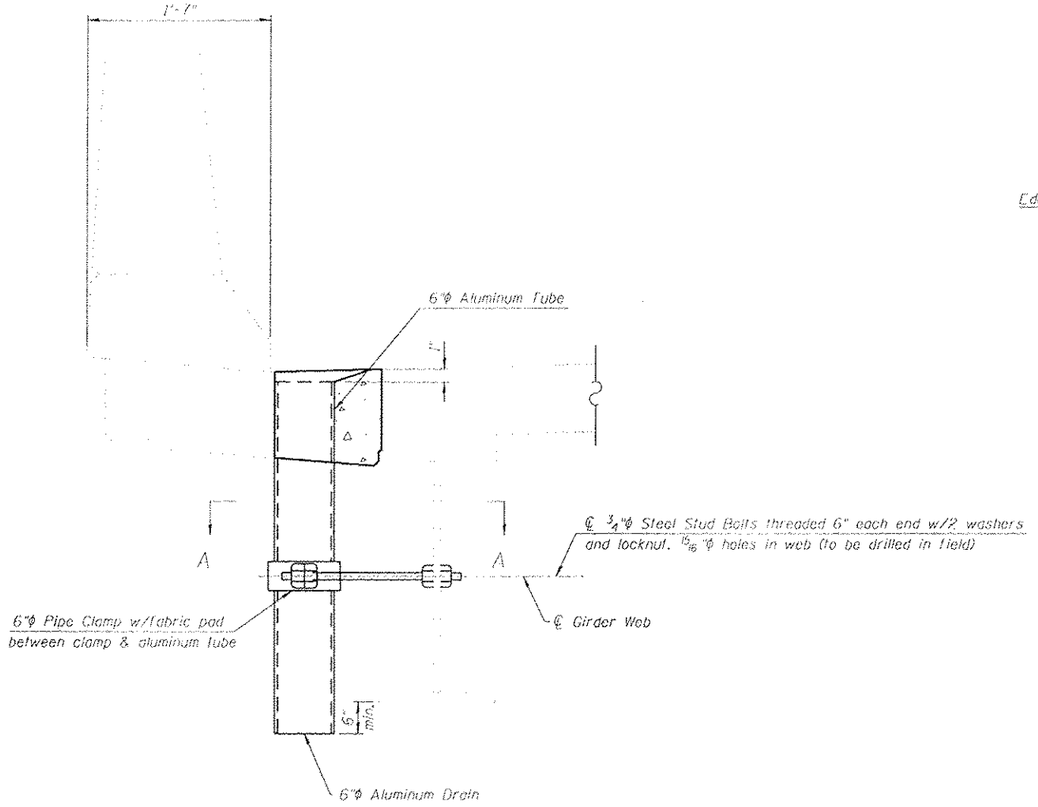
PLOT DATE = 8/24/2012	CHECKED - SLZ	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

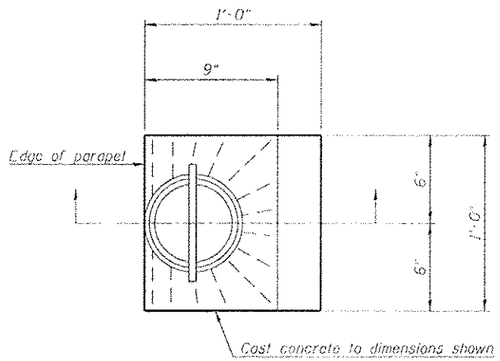
SLOPE WALL REPAIRS DETAILS
STRUCTURE NO. 060-0216 AND 060-0217

SHEET NO. 12 OF 14 SHEETS

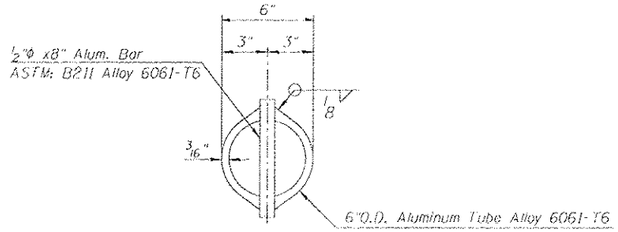
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	255
		CONTRACT NO. 76A89		
	ILLINOIS FED. AID PROJECT			



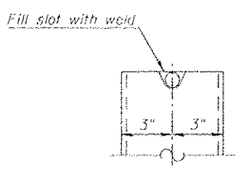
SECTION AT PARAPET



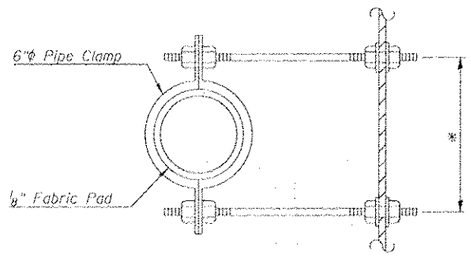
TOP PLAN



TOP PLAN



ALUMINUM TUBE



SECTION A-A

* Dimension as required by Pipe Clamp.

BILL OF MATERIAL

Item	Unit	Total
Floor Drain (Special)	Each	2

Note:
The exterior surface of the floor drains shall be painted with the finish coat as specified in Article 1008.04 of the standard specifications. The exterior surface of the drains shall be cleaned according to Society of Protective Coating's Spec. SSPC-SP1 prior to painting. Galvanize clamping device according to AASHTO M232. Cost of clamping device and galvanizing included with Floor Drains.

FILE NAME = 2602217-76A89-13-Floor_Drain.dgn

TranSystems

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	CHECKED - FAS	REVISED -
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PLOT DATE = 8/24/2012	CHECKED - SLZ	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FLOOR DRAIN FOR STEEL BEAMS DETAIL
STRUCTURE NO. 060-0217
SHEET NO. 13 OF 14 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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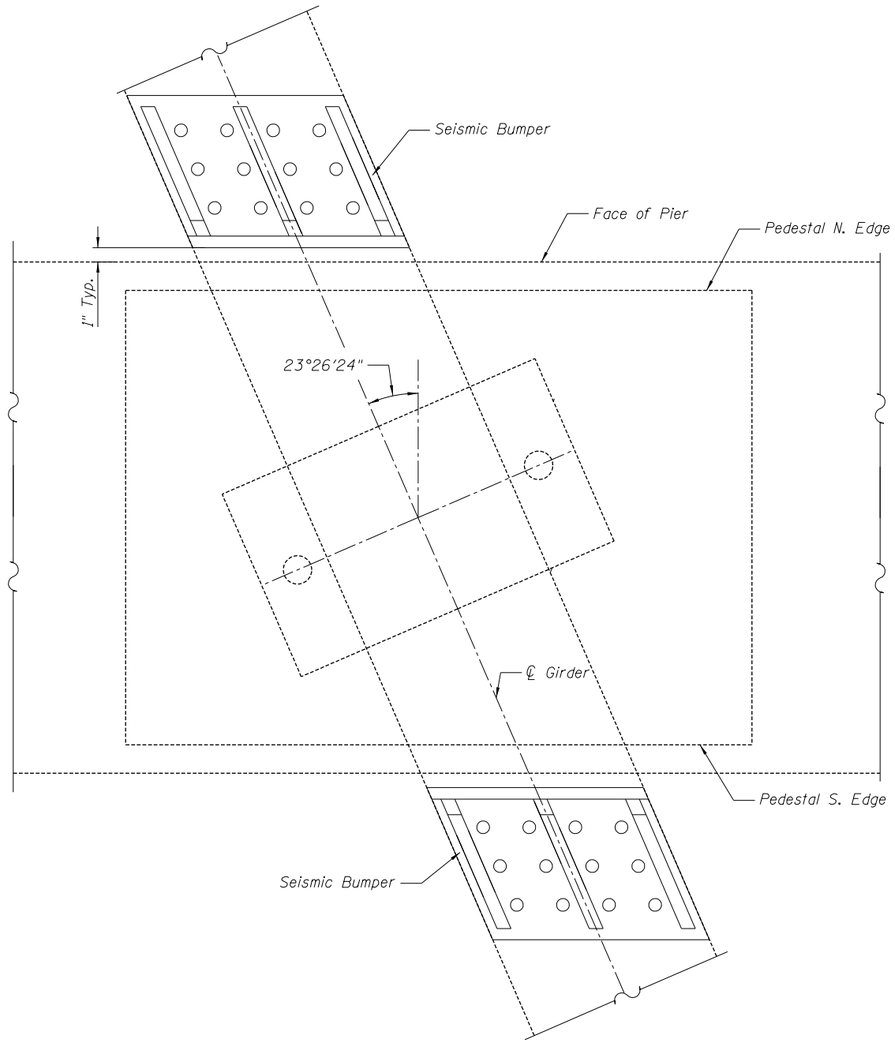
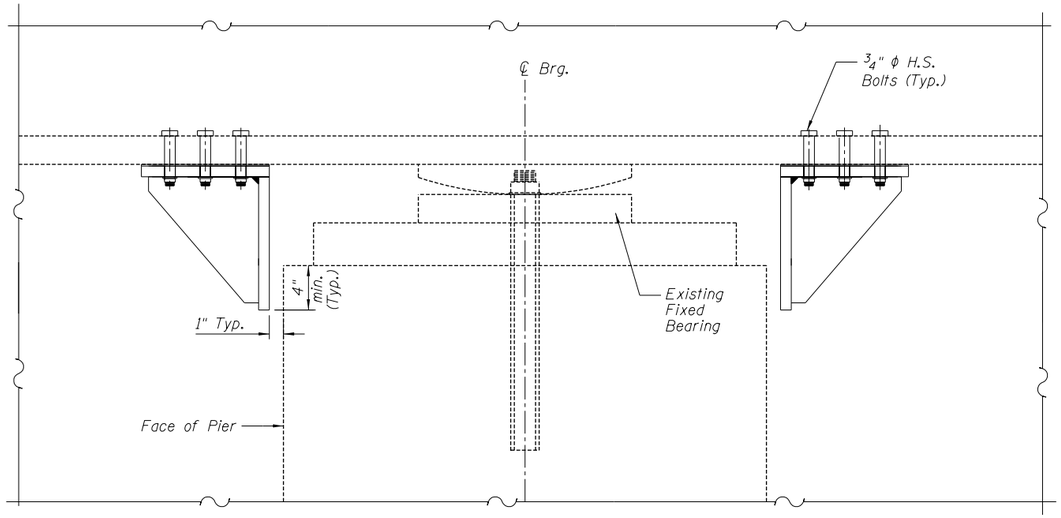
		CONTRACT NO. 76A89		
	ILLINOIS FED. AID PROJECT			

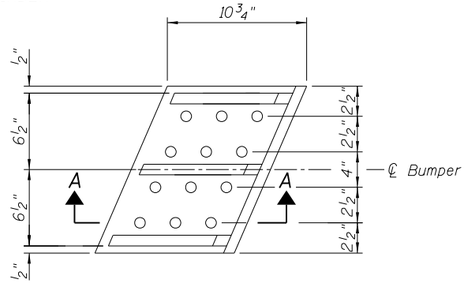
8/24/2012



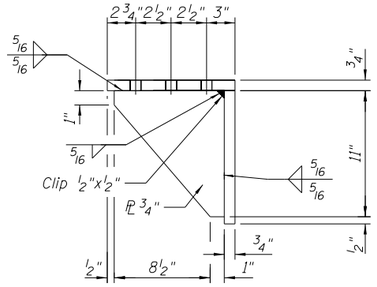
PLAN AT PIER 2
TYPICAL EACH GIRDER



ELEVATION AT PIER 2
FIXED BEARING



SEISMIC BUMPER



SECTION A-S

NOTES:

1. Use $^{13}/_{16}$" holes for $^{3}/_{4}$" ϕ A325 HS bolts.
2. Attach Seismic Bumpers to each Girder at both North and South Abutments and both Structures (36 Each).
3. Cost Of drilling holes in bottom flange of existing Girder shall be included in Furnishing and Erecting Structural Steel.
4. Contractor shall verify all field dimensions necessary for Seismic Bumpers prior to fabrication.
5. Fy = 50 Ksi (Structural Steel).
6. Seismic Bumper shall be installed parallel to Pier.
7. The Seismic bumpers shall be coated as specified in Article 506.08 (b) of the Standard Specifications.

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Structural Steel	Pound	4120

10:09:02 PM- G:\CHI\0013\Bridge\CADD\060-0216&0217\0600216&0217-76A89-14- Bumper.dgn
8/24/2012

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WAE
TranSystems
SLZ

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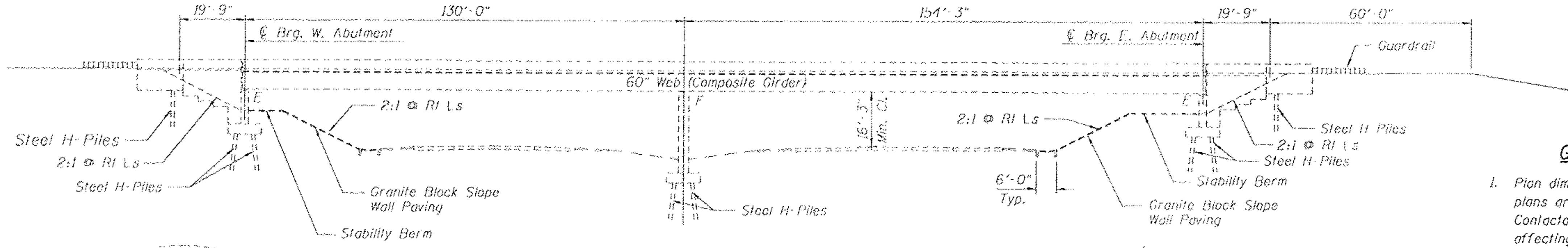
	CHECKED - FAS	REVISED -
PLOT SCALE = 2:8 '' / in.	DRAWN - DMG	REVISED -
PLOT DATE = 8/24/2012	CHECKED - FAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

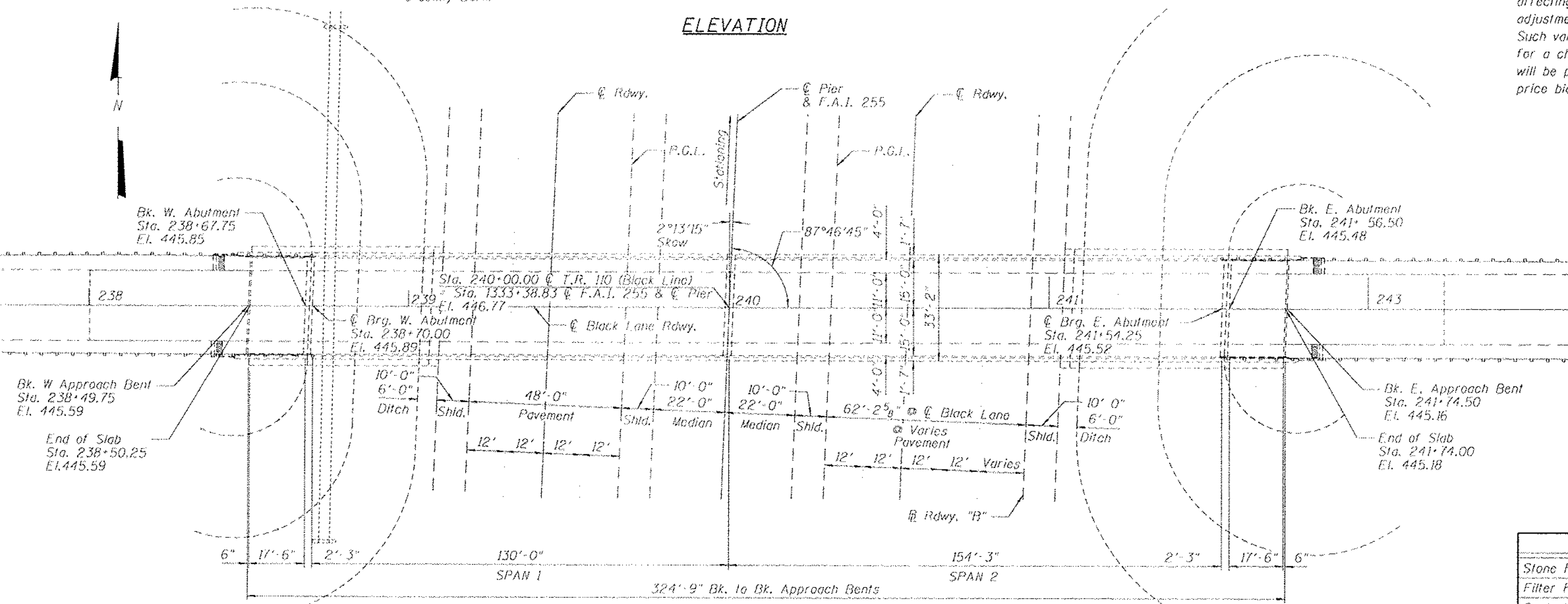
SEISMIC BUMPERS
STRUCTURE NO. 060-0216 NB AND 060-0217 SB
SHEET NO. 14 OF 14 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	257
		CONTRACT NO. 76A89		
	ILLINOIS FED. AID PROJECT			

Bench Mark: B.M. "A" R.R Spike in P.P. at Sta.1334+00 - 730' Lt., Elev. 422.22
Existing Structure: The original structure was constructed in 1986 as FAI Route 255, Section 60-8HB.
The bridge superstructure consists of a continuous two span composite welded plate girder bridge with a 7½" deck. The substructures consist of sand filled vaulted abutments and a concrete pier all supported on steel piles. The abutment slabs are 12" thick. The back-to-back of abutment dimension is 324'-9" with an out-to-out deck dimension of 33'-2". The span lengths (C/ bearing to C/ bearing) are 130'-0" and 154'-3". The bridge has a left forward skew of 2°-13'-15". Two lanes of traffic will be maintained on the bridge utilizing stage construction.



ELEVATION



PLAN

GENERAL NOTES

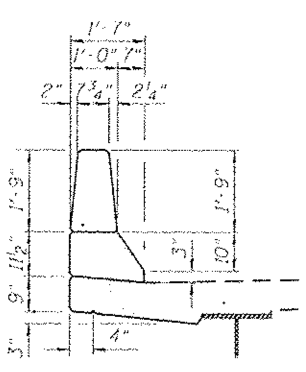
1. Plan dimensions, elevations and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such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

Apply Concrete sealer per Article 587 of the Standard Specifications to the bridge deck, top and inside vertical faces of the parapets, and posts, and wing walls.

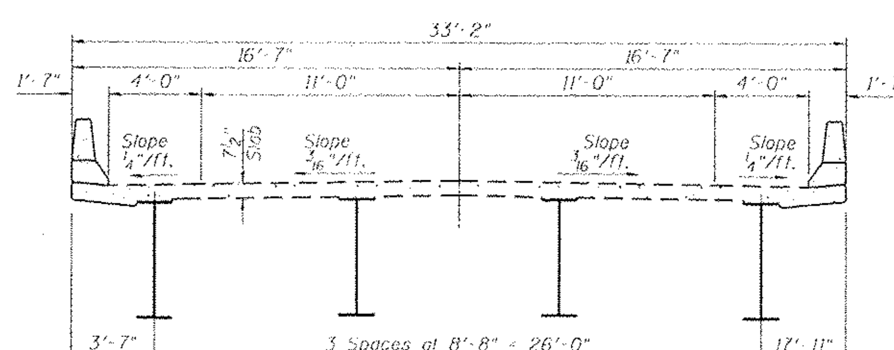
INDEX OF SHEETS

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Stone Riprap, Class A3	Ton	5
Filter Fabric	Sq Yd	6
Controled low strength material	Cu Yd	15
Concrete Sealer	Sq Ft	12,157
Granite Block replacement	Sq Ft	98
Furnish & Erect Structural Steel	Pound	450



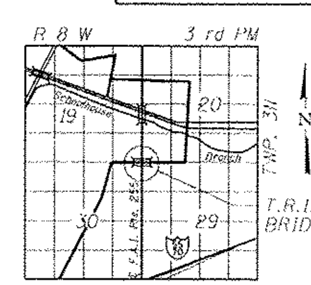
PARAPET DETAIL



CROSS SECTION

FRANCIS A. SMITH JR.
081-005860
LICENSED STRUCTURAL ENGINEER
ILLINOIS

DATE: 03/09/2012
F. ALLEN SMITH, P.E., S.E.
NO. 081-005860
EXP. DATE 11/30/2012



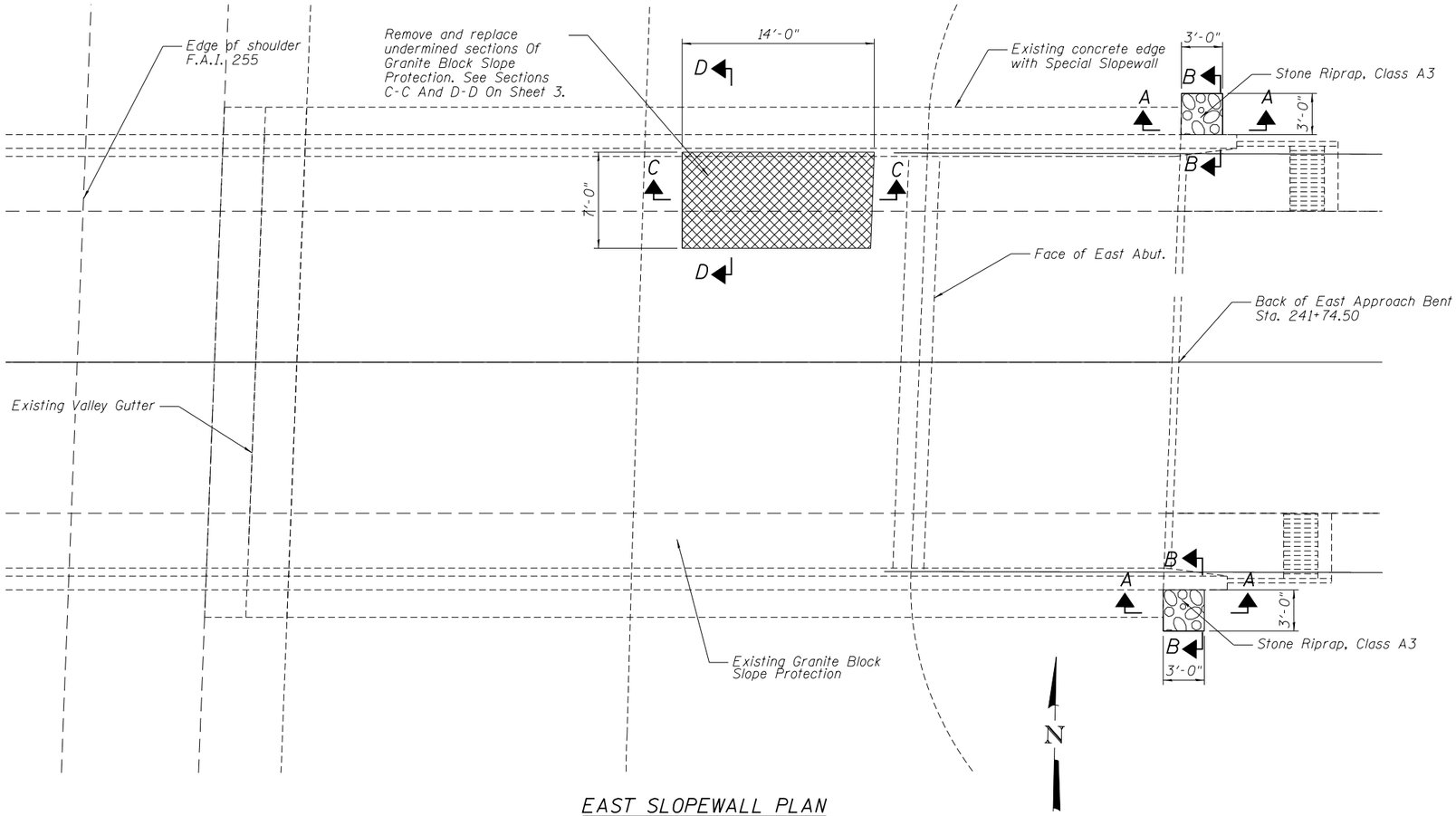
LOCATION SKETCH

FILE NAME: 0600215-76A89-01-GPE.dgn

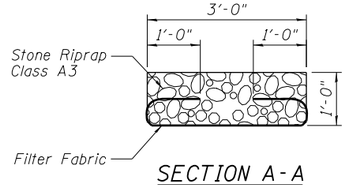
TranSystems	USER NAME: sdignann PLOT SCALE: 40.0 ' / IN. PLOT DATE: 10/17/2012	DESIGNED - WAE CHECKED - FAS DRAWN - DMG CHECKED - SLZ	REVISED REVISED REVISED REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN AND ELEVATION STRUCTURE NO. 060-0215 SHEET NO. 1 OF 4 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	258

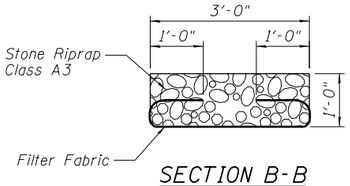
CONTRACT NO. 76A89
ILLINOIS FED. AID PROJECT



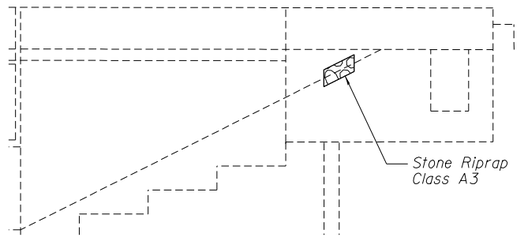
EAST SLOPEWALL PLAN



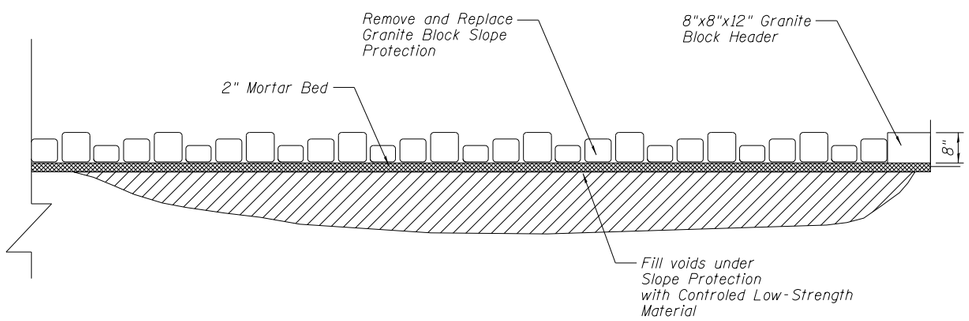
SECTION A-A



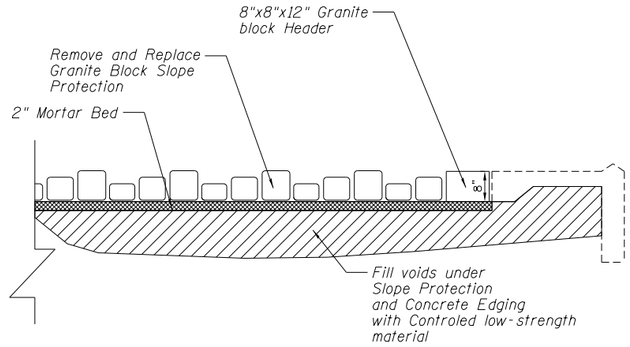
SECTION B-B



RIPRAP PLACEMENT ON SLOPE



SECTION C-C



SECTION D-D

BILL OF MATERIAL

Item	Unit	Total
Stone Riprap, Class A3	Tons	2.0
Filter Fabric	Sq. Yd.	2
Granite Block Replacement	Sq. Ft.	98
Controled low-strength material	Cu. Yd.	8

GRANITE BLOCK REPAIR NOTES

1. Remove blocks from affected area.
2. Remove Unsuitable Bedding and Subgrade material as directed by Engineer.
3. Install Controled low-strength material in Voids up to botton of Proposed Mortar Bed.
4. Reset Granite Blocks on 2" Mortar bed as shown.
5. Supply additional Granite blocks if necessary to replace missing or broken blocks. Replacement block color and grain structure shall match existing blocks.
6. Random pattern of Granite blocks shall conform to the following percentages:

48% - 4" x 8" x 12"
26% - 6" x 8" x 12"
26% - 8" x 8" x 12"

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8/24/2012

FILE NAME = 0600215-76A89-02-Slopewall_repairs_E_Abut.dgn

TranSystems

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	CHECKED - FAS	REVISED -
PLOT SCALE = 10.0 '' / in.	DRAWN - DMG	REVISED -
PLOT DATE = 8/24/2012	CHECKED - SLZ	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SLOPEWALL REPAIRS EAST ABUTMENT
STRUCTURE NO. 060-0215
SHEET NO. 2 OF 4 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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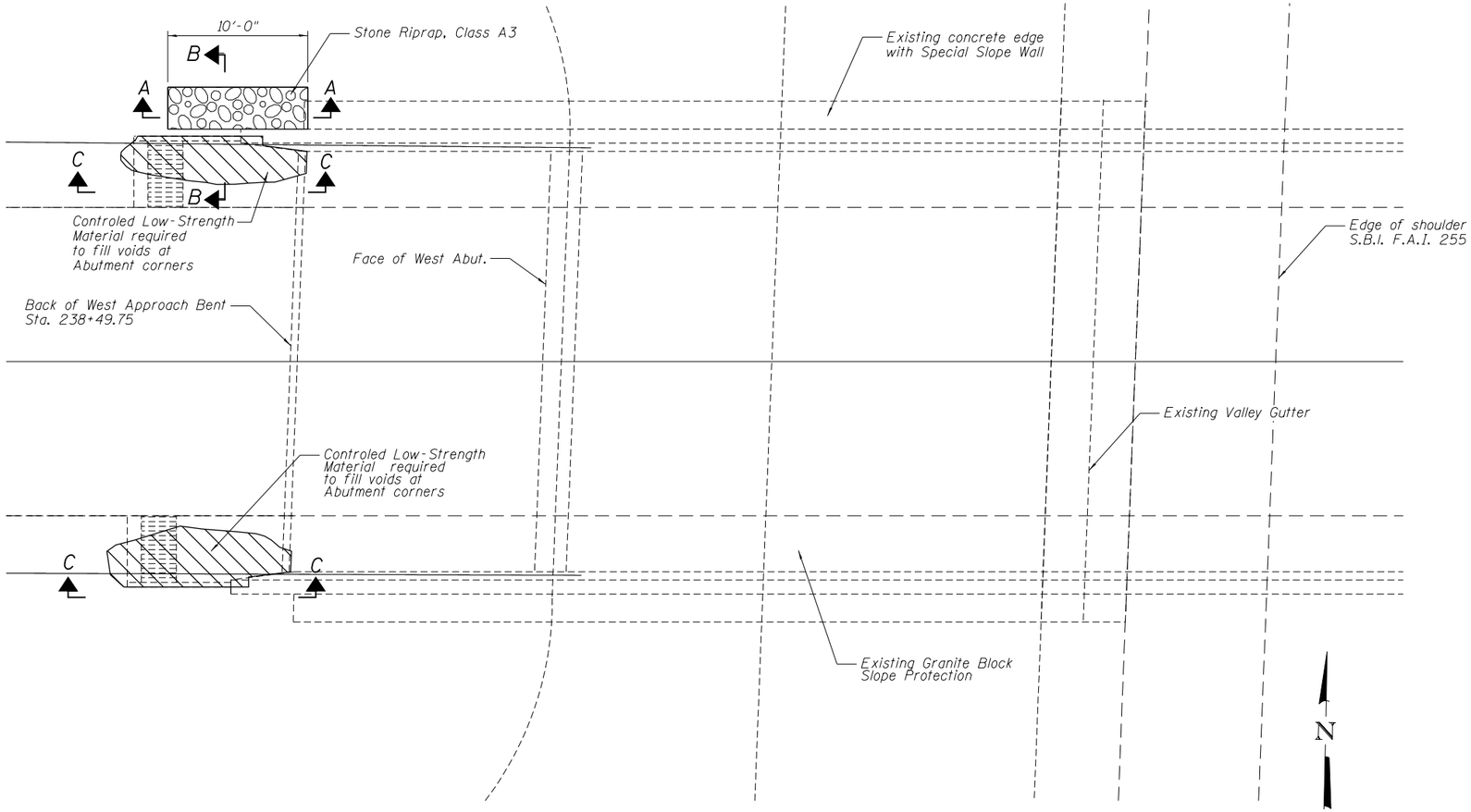
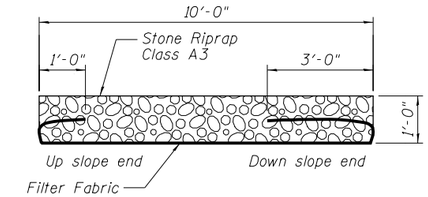
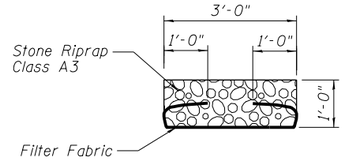
		CONTRACT NO. 76A89		
	ILLINOIS	FED. AID PROJECT		



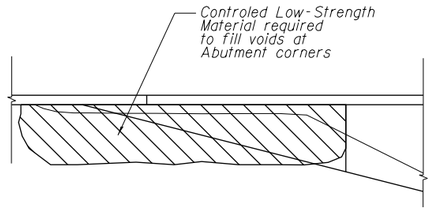
WEST SLOPEWALL PLAN



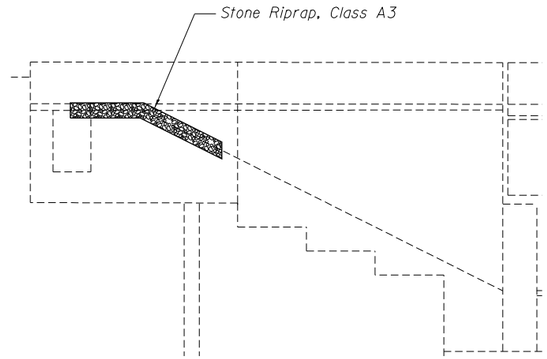
SECTION A-A



SECTION B-B



SECTION C-C



RIPRAP PLACEMENT ON SLOPE

BILL OF MATERIAL

Item	Unit	Total
Stone Riprap, Class A3	Ton	3
Filter Fabric	Sq. Yd.	4
Controled Low-Strength Material	Cu. Yd.	7

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8/24/2012

FILE NAME = 0600215-76A89-03-Slopewall_repairs_W_Abut.dgn

TranSystems

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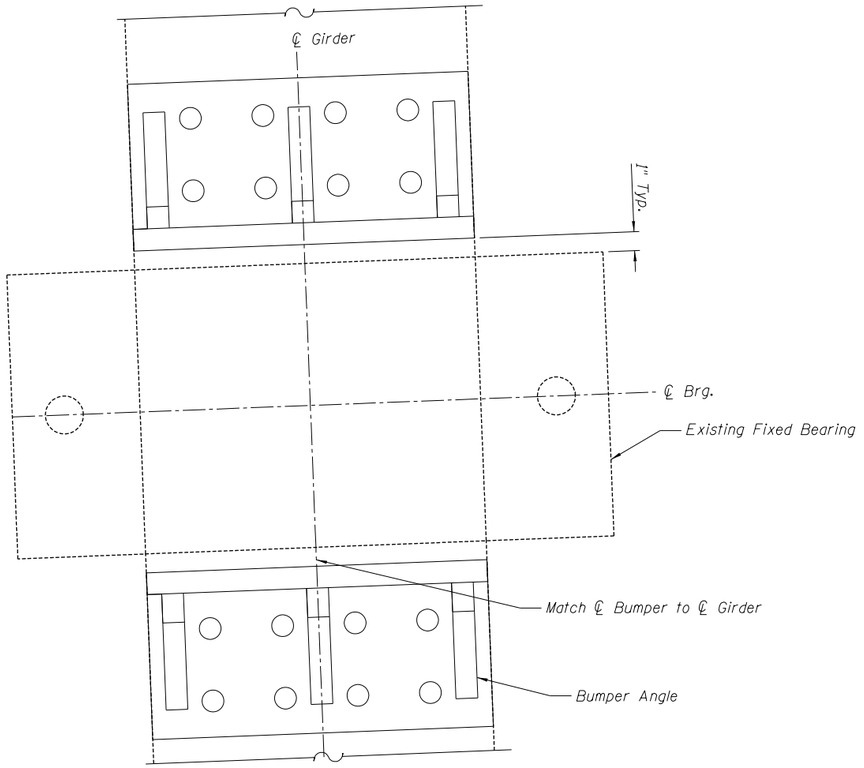
PLOT SCALE = 10.00 ' / in.	DRAWN - DMG	REVISED -
PLOT DATE = 8/24/2012	CHECKED - SLZ	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SLOPEWALL REPAIRS WEST ABUTMENT
STRUCTURE NO. 060-0215

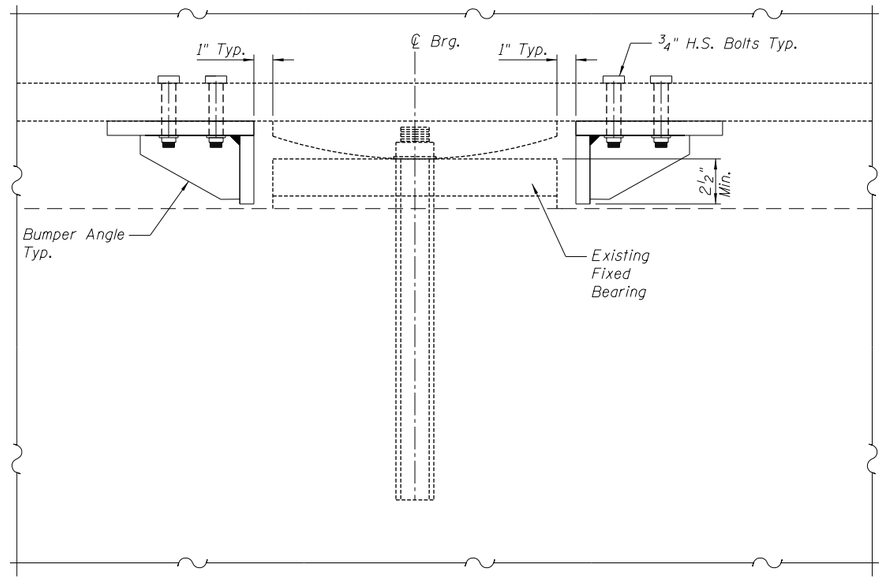
SHEET NO. 3 OF 4 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	260
		CONTRACT NO. 76A89		
	ILLINOIS FED. AID PROJECT			



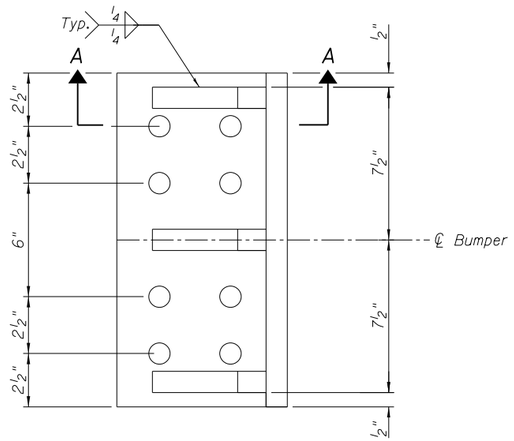
PLAN AT PIER BRG.

Typical each Girder

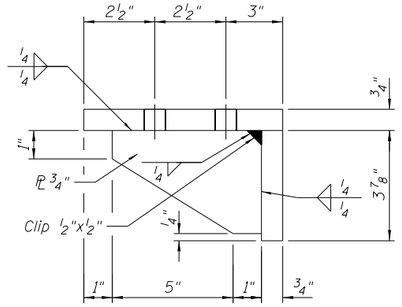


ELEVATION AT PIER

FIXED BEARING



BUMPER ANGLE



SECTION A-A

NOTES:

1. Use $^{13}/_{16}$" holes for ¾" ϕ A325 HS bolts.
2. Attach Seismic Bumpers to each Girder at pier 1 (8 required).
3. Cost Of drilling holes in bottom flange of existing Girder shall be included in Furnishing and Erecting Structural Steel.
4. Contractor shall verify all field dimensions necessary for Seismic Bumpers prior to fabrication.
5. Fy = 50 Ksi (Structural Steel).
6. Seismic Bumper shall be installed parallel to bearing plate.
7. The Seismic bumpers shall be coated as specified in Article 506.08 (b) of the Standard Specifications.

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Structural Steel	Pound	450

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8/24/2012

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TranSystems

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PLOT DATE = 8/24/2012	CHECKED - FAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SEISMIC BUMPERS
STRUCTURE NO. 060-0215
SHEET NO. 4 OF 4 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8) RS-2	MADISON	261	261
		CONTRACT NO. 76A89		
	ILLINOIS FED. AID PROJECT			