

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(21-HB-1)I	KNOX	55	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 68216		
	D-94-025-02	+ 4 59		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED HIGHWAY PLANS

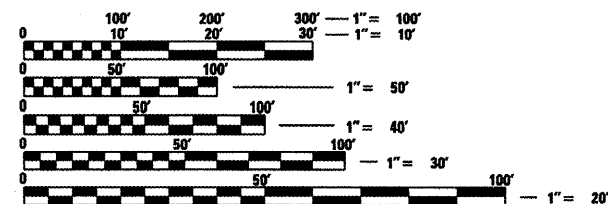
FAP ROUTE 313 (US 34)
SECTION (21-HB-1)I
PROJECT ACNHF-0313 (017)
KNOX COUNTY
C-94-025-02

INDEX OF SHEETS

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STANDARDS

- | | |
|-----------|-----------|
| 420401-06 | 601101 |
| 442001-04 | 701400-02 |
| 515001-02 | 701402-06 |
| 630001-07 | 701406-04 |
| 630301-04 | 701411-04 |
| 631011-04 | 701421-01 |
| 631026-04 | 701423-02 |
| 631031-06 | 701901 |
| 635006-02 | 704001-04 |
| 635011-01 | 780001-01 |
| 667101 | |

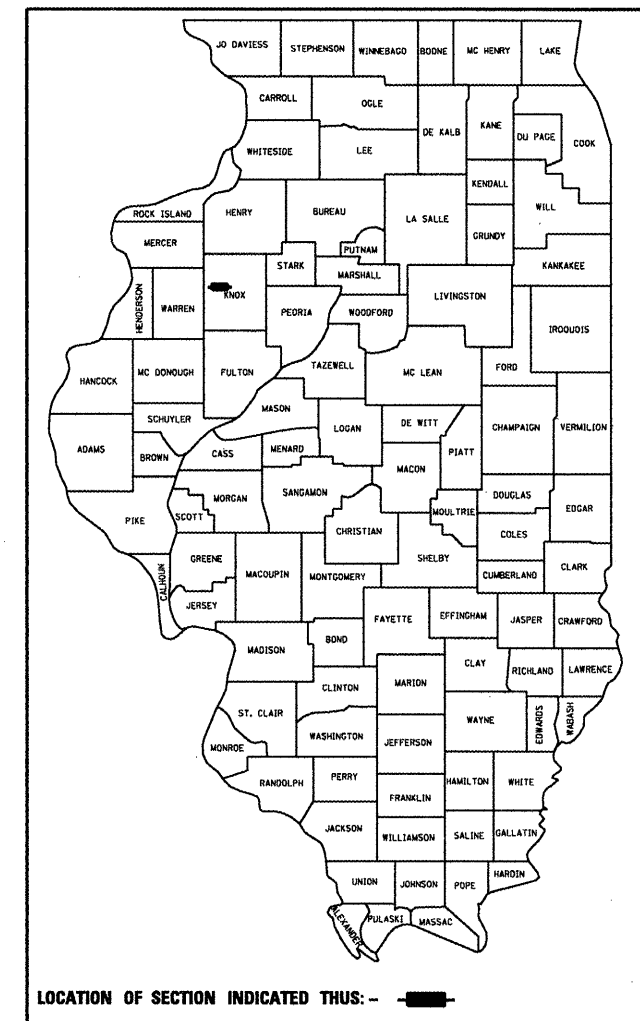
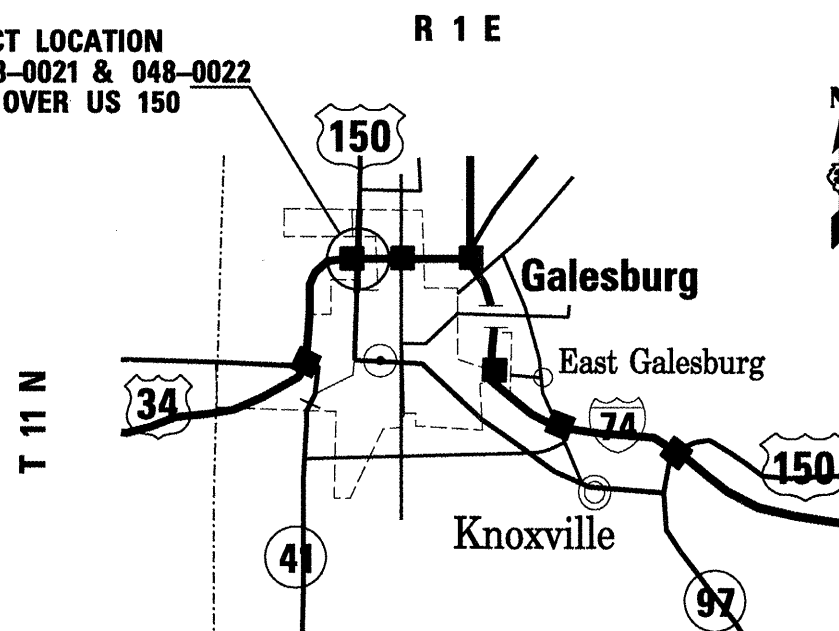


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

PROJECT ENGINEER: M. ADDIS (309)671-3454
PROJECT MANAGER: D. LAYNE (309)671-3475
CONTRACT NO. 68216
CATALOG NO. 032328-02D

PROJECT LOCATION
SN 048-0021 & 048-0022
US 34 OVER US 150



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED MAY 20 2008

Eric E. Harn
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

Eric E. Harn
ENGINEER OF DESIGN AND ENVIRONMENT

Christine M. Reed
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS**

THIS PROJECT CONSISTS OF THE COMPLETE REMOVAL AND REPLACEMENT OF THE BRIDGE DECKS ON SN 048-0021 & 048-0022; PAINTING OF THE STRUCTURES; SLOPEWALL REPAIR; BEARING REPLACEMENT; AND RELATED APPROACH ROADWAY WORK.

AVAILABILITY OF ELECTRONIC FILES

Micro Station and GEOPAK files of this project will be made available to the Contractor. If there is a conflict between the electronic files and the printed contract plans and documents, the printed contract plans and documents shall take precedence over the electronic files. The Contractor shall accept all risk associated with using the electronic files and shall hold the Department harmless for any errors or omissions in the electronic files and the data contained therein. Errors or delays resulting from the use of the electronic files by the Contractor shall not result in an extension of time for any interim or final completion date or shall not be considered cause for additional compensation. The Contractor shall not use, share, or distribute these electronic files except for the purpose of constructing this contract. Any claims by third parties due to use or errors shall be the responsibility of the Contractor. The Contractor shall include this disclaimer with the transfer of these electronic files to any other parties and shall include appropriate language binding them to similar responsibilities.

UTILITIES - LOCATIONS /INFORMATION ON PLANS

The locations of existing water mains, gas mains, sewers, electric power lines, telephone lines and other utilities as shown on the plans are based on careful field investigation and the best information available, but they are not guaranteed. Unless elevations are shown — all utility locations shown on the cross sections are based on the approximate depth supplied by the utility company. It shall be the Contractor's responsibility to ascertain their exact location from the utility companies and by field inspection.

PLAN ELEVATIONS - U. S. G. S. MEAN SEA LEVEL DATUM

Use one of the following two options.

1. All elevations shown on the plans are established from U. S. G. S. mean sea level datum.
2. All elevations shown refer to U. S. G. S. datum at mean sea level unless otherwise noted.

COMMITMENTS

No commitments have been made for this project.

ENVIRONMENTAL REVIEWS

Prior to the use of any proposed borrow areas, use areas (temporary access roads, detours, run-arounds, etc.) and/or waste areas, the Contractor shall file the required environmental resource request surveys according to Section 107.22 of the Standard Specifications. These surveys are required in order for the Department to conduct cultural and biological resource surveys for the proposed site.

Prior to any waste materials being removed from the construction site the required environmental resource surveys will need to be obtained and filed by the Contractor. Excess waste products removed from the construction site shall be disposed of as required in Section 202.03 of the Standard Specifications.

Any protruding metal bars shall be removed prior to the disposal of broken concrete at approved disposal sites.

The required environmental resource documentation shall include the following:

- * BDE Form 2289 (Environmental Survey Request)
- * A location map showing the size limits and location of the use area
- * Signed property owner agreement form-D4 P10100
- * Color photographs depicting the use area
- * Borrow Area Entry Agreement form-D4 P10101

Please note that a minimum of two weeks shall be allowed for the District to obtain the required environmental clearances.

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

Mixture Use(s):	HMA Surface Cse
RAP % (Max)**:	10%
ACPC:	SBS or SBR PG 70-22
Design Air Voids:	4.0% @ N-70
Mixture Composition: (Gradation Mixture)	IL 9.5 or 12.5
Friction Aggregate	Mixture D (Dolomite Only)

** If the RAP option is selected, the asphalt cement grade may need to be adjusted; this will be determined by the Engineer.

BUTT JOINT CUTTING TIME RESTRICTION

Butt joints shall not be milled more than three (3) days prior to placement of the bituminous surface course.

ENGINEERS FIELD OFFICE

Add the following sentence to the end of paragraph 670.02 (i) and 670.04 (e):
All of the telephone lines provided shall have unpublished numbers.

FILE NAME =	USER NAME = loynedm	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
S:\GEN\DRIFT\STDB\PLNS\Squad1\68216	son\general.dgn	DRAWN -	REVISED -			313	(21-HB-III)	KNOX	55	2	
	PLOT SCALE = 1/83.7051" / IN.	CHECKED -	REVISED -			CONTRACT NO. 68216					
	PLOT DATE = 3/18/2008	DATE -	REVISED -			SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.

URBAN

SUMMARY OF QUANTITIES

CONSTRUCTION TYPE CODE

CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE				
				Knox Co. Fed 80-State20 X271-2A				
20700400	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	321.5	321.5				
31100300	SUB-BASE GRANULAR MATERIAL, TYPE A 4"	SQ YD	1374.6	1374.6				
35400500	PORTLAND CEMENT CONCRETE BASE COURSE WIDENING 10"	SQ YD	392.9	392.9				
40600215	POLYMERIZED BITUMINOUS MATERIAL (PRIME COAT)	TON	0.3	0.3				
40600985	PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT	SQ YD	1333.9	1333.9				
40600990	TEMPORARY RAMP	SQ YD	478	478				
40603540	POLYMERIZED HOT - MIX ASPHALT SURFACE COURSE, MIX "D", N70	TON	236.8	236.8				
42001165	BRIDGE APPROACH PAVEMENT	SQ YD	675.7	675.7				
42001300	PROTECTIVE COAT	SQ YD	1457.7	1457.7				
42001420	BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)	SQ YD	678.9	678.9				
44000100	PAVEMENT REMOVAL	SQ YD	169.1	169.1				
44000700	APPROACH SLAB REMOVAL	SQ YD	848	848				
44000920	BITUMINOUS CONCRETE SHOULDER REMOVAL	SQ YD	629.2	629.2				
44200553	CLASS A PATCHES, TYPE II, 10 INCH	SQ YD	78.3	78.3				
44200559	CLASS A PATCHES, TYPE IV, 10 INCH	SQ YD	87.4	87.4				
44213000	PATCHING REINFORCEMENT	SQ YD	165.7	165.7				

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(21-HB-11)	KNOX	55	3
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 68216	

URBAN

SUMMARY OF QUANTITIES		UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE				
CODE NO	ITEM			Knox Co. Fed 80-State20 X271-2A				
44213200	SAW CUTS	FOOT	673.6	673.6				
50102400	CONCRETE REMOVAL	CU YD	73.2	73.2				
50104720	REMOVAL OF EXISTING CONCRETE DECK	EACH	2	2				
50157300	PROTECTIVE SHIELD	SQ YD	1472	1472				
50200100	STRUCTURE EXCAVATION	CU YD	427.4	427.4				
50300100	FLOOR DRAINS	EACH	20	20				
50300225	CONCRETE STRUCTURES	CU YD	28.3	28.3				
50300255	CONCRETE SUPER STRUCTURE	CU YD	907.5	907.5				
50300260	BRIDGE DECK GROOVING	SQ YD	2517	2517				
50300300	PROTECTIVE COAT	SQ YD	3020	3020				
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	9550	9550				
50500505	STUD SHEAR CONNECTORS	EACH	12,150	12,150				
50500715	JACK AND REMOVE EXISTING BEARINGS	EACH	36	36				
50600600	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1	1				
50600700	CLEANING AND PAINTING STEEL BRIDGE NO. 2	L SUM	1	1				
50606401	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 1	L SUM	1	1				
50606402	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 2	L SUM	1	1				
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	196,010	196,010				

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	PLOT DATE = 3/19/2008	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(21-HB-1)I	KNOX	55	4
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 68216	

URBAN

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE				
CODE NO	ITEM	UNIT		Knox Co. Fed 80-State20 X271-2A				
50800515	BAR SPLICERS	EACH	1,558	1,558				
51100100	SLOPE WALL 4 INCH	SQ YD	64.4	64.4				
51205200	TEMPORARY SHEET PILING	SQ FT	416	416				
51500100	NAME PLATES	EACH	2	2				
52000050	PREFORMED JOINT SEAL 4"	FOOT	229.7	229.7				
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	36	36				
52100520	ANCHOR BOLTS, 1"	EACH	72	72				
58700300	CONCRETE SEALER	SQ FT	8,730	8,730				
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	184	184				
60100060	CONCRETE HEADWALL FOR PIPE DRAINS	EACH	4	4				
60109580	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	337	337				
* 63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	1150	1150				
* 63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	4	4				
* 63100070	TRAFFIC BARRIER TERMINAL, TYPE 5	EACH	4	4				
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	4				
63200310	GUARD RAIL REMOVAL	FOOT	700	700				
* 63300205	REMOVAL AND REINSTALLATION OF EXISTING STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	200	200				
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	9	9				
67100100	MOBILIZATION	L SUM	1	1				

*Specialty Items

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(21-HB-1)I	KNOX	55	5
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 68216	

URBAN

SUMMARY OF QUANTITIES

CONSTRUCTION TYPE CODE

CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE				
				Knox Co. Fed 80-State20 X271-2A				
70100207	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402	EACH	2	2				
70100310	TRAFFIC CONTROL AND PORTECTION, STANDARD 701421	LSUM	1	1				
70100325	TRAFFIC CONTROL AND PROTECTION, STANDARD 701423	EACH	2	2				
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	6	6				
70100700	TRAFFIC CONTROL AND PROTECTION, STANDARD 701406	L SUM	1	1				
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	12	12				
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	136	136				
70300240	TEMPORARY PAVEMENT MARKING - LINE 6"	FOOT	340	340				
70300250	TEMPORARY PAVEMENT MARKING - LINE 8"	FOOT	728	728				
70300520	PAVEMENT MARKING TAPE, TYPE III 4"	FOOT	14816	14816				
70300625	TEMPORARY PAINT PAVEMENT MARKING LINE 4"	FOOT	2742	2742				
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	4934	4934				
70400100	TEMPORARY CONCRETE BARRIER	FOOT	2450	2450				
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	2450	2450				
* 78005110	EPOXY PAVEMENT MARKING - LINE 4"	FOOT	2742	2742				
* 78005130	EPOXY PAVEMENT MARKING - LINE 6"	FOOT	340	340				
* 78005140	EPOXY PAVEMENT MARKING - LINE 8"	FOOT	728	728				

•Specialty Items

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(21-HB-1)I	KNOX	55	6
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 68216	

URBAN

SUMMARY OF QUANTITIES

CONSTRUCTION TYPE CODE

CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE			
				Knox Co. Fed 80-State20 X271-2A			
78200410	GUARDRAIL MARKERS, TYPE A	EACH	24	24			
78200530	BARRIER WALL MARKERS, TYPE C	EACH	16	16			
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4			
78300100	PAVEMENT MARKING REMOVAL	SQ FT	1184	1184			
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1			
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	3	3			
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	5	5			
+ Z0076600	TRAINEES	HOUR	500	500			
X0323080	DRAINAGE SCUPPERS, DS-12	EACH	4	4			
X0325305	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	54	54			

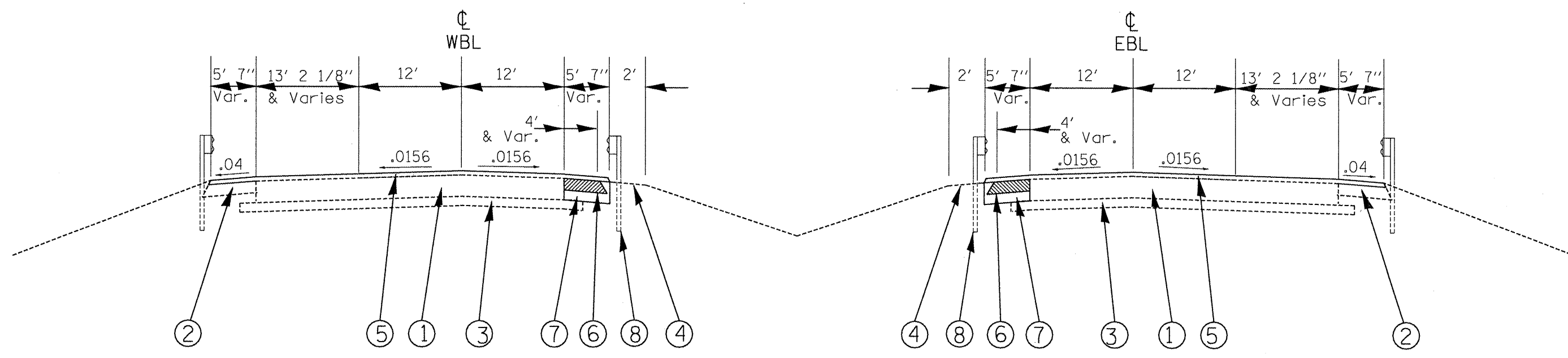
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(21-HB-DI	KNOX	55	7
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 68216	



For Locations See Schedules and Plan Sheets

- ① Existing PCC Pavement 10"
- ② Existing Bituminous Shoulders 8"
- ③ Existing Subbase Granular Material
- ④ Existing Aggregate Shoulder
- ⑤ Proposed Hot Mix Asphalt Surface Course 1 1/2 " to 2 1/4"
- ⑥ Proposed Bituminous Concrete Shoulder Removal
- ⑦ Proposed PCC Base Course Widening 10"
- ⑧ Proposed SPBGR

FILE NAME =	USER NAME = lqynedm	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PROPOSED TYPICAL SECTION				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
SA\GEN\DRAW\STD&PLNS\Squad\68216	erson\general.dgn	DRAWN -	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.	313	(21-HB-DI)	KNOX	55	8
		CHECKED -	REVISED -						CONTRACT NO. 68216						
		DATE -	REVISED -						ILLINOIS FED. AID PROJECT						

SUBBASE GRANULAR MATERIAL TYPE A 4"

LOCATION	SQ YD
UNDER APPROACH PAVEMENT	695.7
UNDER APP. PAVEMENT CONNECTOR	678.9
TOTAL	1374.6

PCC SURFACE REMOVAL-BUTT JOINT

LOCATION	SQ YD
WB 493+45 to 493+75	321.9
WB 498+41 to 499+01	352.9
EB 492+98 to 493+58	346.7
EB 497+98 to 498+58	312.4
TOTAL	1333.9

PCC BASE COURSE WIDENING 10"

LOCATION	SQ YD
WB 492+85 to 494+35	98.6
WB 497+85 to 499+61	94.8
EB 492+40 to 494+14	109.0
EB 497+68 to 499+18	90.3
TOTAL	392.9

Note: All excavation required to construct this item beyond the limits of Shoulder Removal shall be considered included in the agreed unit cost bid for PCC BASE COURSE WIDENING 10".

TEMPORARY RAMP

LOCATION	SQ YD
Stage I at Approach Pavements	116.0
Stage II at Approach Pavements	193.1
Final Stage at PCC Butt Joints	168.9
TOTAL	478.0

POLYMERIZED HMA SURFACE COURSE MIX "D" N70

LOCATION (1 1/2" to 2 1/4")	TONS
WB 493+45 to 494+40	56.8
WB 497+96 to 499+01	61.3
EB 492+98 to 494+03	63.5
EB 497+62 to 498+58	55.2
TOTAL	236.8

CLASS "A" PATCHING SCHEDULE

LOCATION	SAW CUTS LIN FT	TYPE II SQ YD	TYPE IV SQ YD	PATCH REINF SQ YD
WB 494+10	187.2		87.4	87.4
WB 498+21	156.0	27.3		27.3
EB 493+72	176.0	27.3		27.3
EB 497+90	154.4	23.7		23.7
TOTAL	673.6	78.3	87.4	165.7

**BRIDGE APPROACH PAVEMENT
& BAR SPLICERS**

LOCATION	SQ YDS	BAR SPLICERS
WB 494+70 to 495+00	163.7	39
WB 497+36 to 497+66	175.1	39
EB 494+38 to 494+68	172.0	39
EB 497+03 to 497+33	164.9	39
TOTAL	675.7	156

BRIDGE APPROACH PAVEMENT CONNECTOR

LOCATION	SQ YDS
WB 494+40 to 494+70	158.0
WB 497+66 to 497+96	180.0
EB 494+05 to 494+38	183.9
EB 497+32 to 497+62	157.0
TOTAL	678.9

PAVEMENT REMOVAL

LOCATION	SQ YDS
WB 494+32 to 494+53	37.2
WB 497+89 to 498+10	46.7
EB 493+91 to 494+11	47.8
EB 497+49 to 497+67	37.4
TOTAL	169.1

APPROACH SLAB REMOVAL

LOCATION	SQ YDS
WB 494+53 to 495+12	201.7
WB 497+29 to 497+90	221.2
EB 494+11 to 494+73	225.3
EB 496+90 to 497+49	199.8
TOTAL	848.0

BITUMINOUS CONCRETE SHOULDER REMOVAL

LOCATION	SQ YDS
WB 494+33 to 494+94	31.2
WB 494+57 to 495+15	41.3
WB 497+26 to 497+87	36.8
WB 497+50 to 498+15	54.8
EB 493+87 to 494+52	53.1
EB 494+11 to 494+76	29.5
EB 496+88 to 497+50	33.1
EB 497+09 to 497+70	42.5
TOTAL	322.3

PREFORMED JOINT SEAL 4"

LOCATION	LIN FT
WB 494+69	55.6
WB 497+66	59.1
EB 494+38	59.3
EB 497+33	55.7
TOTAL	229.7

**TEMPORARY CONCRETE BARRIER
& RELOCATE TEMPORARY CONCRETE BARRIER**

LOCATION	LIN FT
US 34	
WB 494+10 to 500+60	650
EB 491+26 to 497+76	650
US 150	
SB 471+15 to 476+93	575
NB 474+53 to 480+28	575
TOTAL	2450

**IMPACT ATTENUATOR (NON REDIRECTIVE) TL3
& IMPACT ATTENUATOR RELOCATE (NON REDIRECTIVE) TL3
(design speed 55 mph)**

LOCATION	EACH	EACH REL
US 34		
WB 500+60	1	1
EB 491+26	1	1
US 150	1	3
TOTAL	3	5

GUARD RAIL SCHEDULE

TRAFFIC BARRIER TERMINAL

LOCATION	Remove & Reinstall				SPBGR Type A	GR MKRS Type A*
	SPBGR Ty A	Type 2	Type 5	Type 6		
WB 493+15 to 495+15 (outside)		1	1		175	4
WB 494+64 to 494+90 (inside)		1	1			
WB 497+25 to 501+00 (inside)	50			1	275	4
WB 497+53 to 499+77 (outside)	50			1	125	4
EB 492+36 to 494+49 (outside)	50			1	125	4
EB 491+01 to 494+76 (inside)	50			1	275	4
EB 496+87 to 498+87 (outside)		1	1		175	4
EB 497+12 to 497+39 (inside)		1	1			
TOTAL	200 lin ft	4 each	4 each	4 each	1150 lin ft	24 each

GUARDRAIL REMOVAL

LOCATION	LIN FT
EBL	
493+61 to 494+61 (outside)	100
493+71 to 494+71 (inside)	100
497+06 to 499+18 (outside)	212
WBL	
493+73 to 495+10 (outside)	138
496+57 to 497+32 (inside)	75
497+65 to 498+40 (outside)	75
TOTAL	700 LF

BARRIER WALL MARKER TYPE C*

LOCATION	EACH
SN 048-0021	8
SN 048-0022	8
TOTAL	16

*monodirectional crystal

EPOXY PAVEMENT MARKING

LOCATION	4" EDGE		6" SKIP		8" SOLID	
	W	Y	W	W	W	W
WB 492+85 to 499+78	693	693	340		360	
EB 492+40 to 499+18	678	678	340		215	
RAMP GORES					300	
TOTAL			680 LF		875 LF	

CHANGEABLE MESSAGE SIGN

LOCATION	SIGNS	CAL MO
WB on US 150	1	3
EB on US 150	1	3
TOTAL	2	6

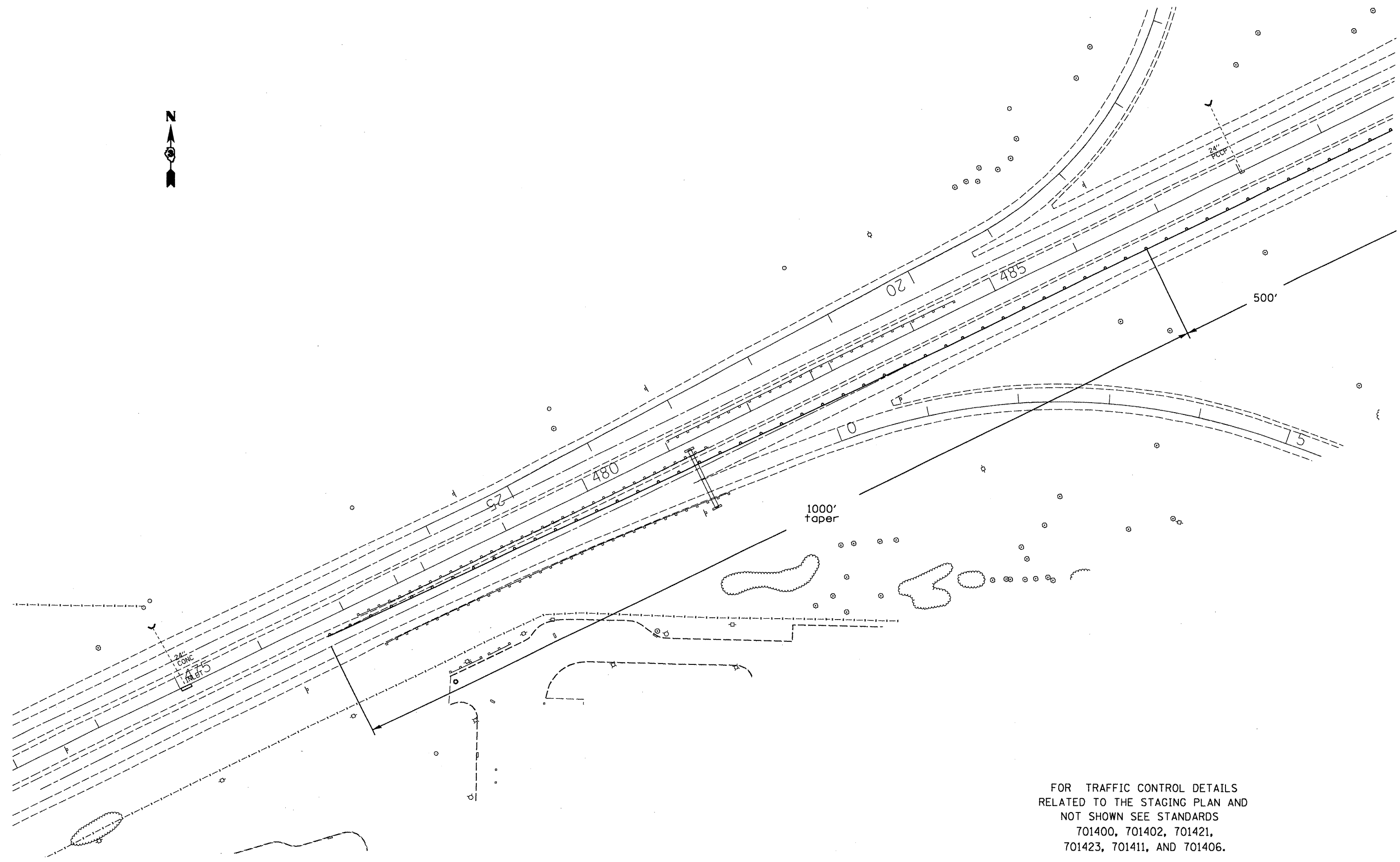
used in conjunction with TC&P Std 701423
for the Henderson Street lane closures required for painting.

PAVEMENT MARKING TAPE T3 4"

LOCATION	LIN FT
TC&P 701402	9556
TC&P 701411	820
TC&P 701423	4440
TOTAL	14816

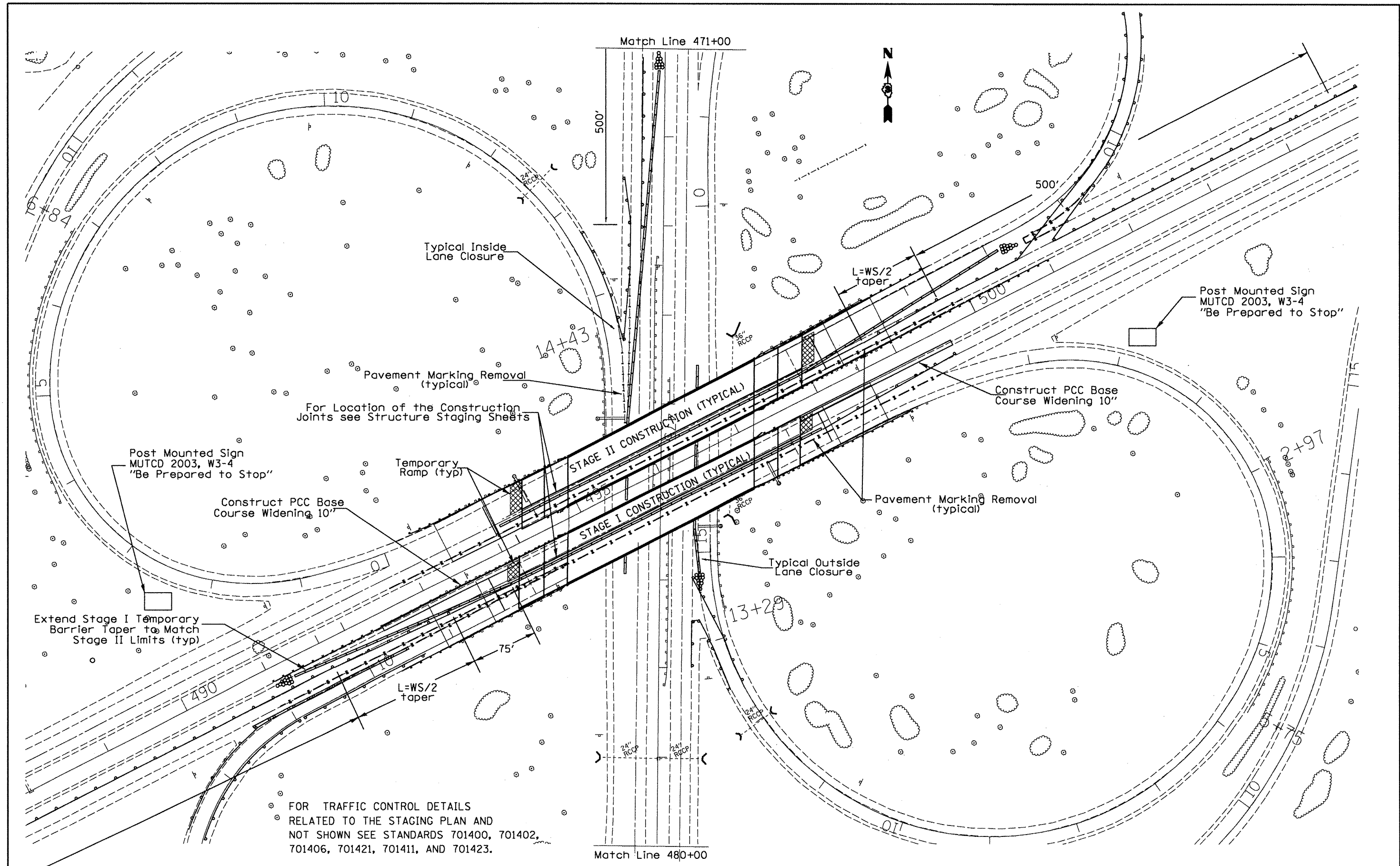
PAVEMENT MARKING REMOVAL

LOCATION	SQ FT
NB GORE US 150	80.5
SB GORE US 150	80.5
STAGE I US 34	501
STAGE II US 34	683
TOTAL	1345



FOR TRAFFIC CONTROL DETAILS
 RELATED TO THE STAGING PLAN AND
 NOT SHOWN SEE STANDARDS
 701400, 701402, 701421,
 701423, 701411, AND 701406.

FILE NAME =	USER NAME = jaynedm	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL STAGING PLAN			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S:\GEN\DRIFT\STD&PLNS\Squad\68216 Henerson\general.dgn		DRAWN -	REVISED -					313	(21-HB-1)I	KNOX	55	11
PLOT SCALE = 100.0000' / IN.		CHECKED -	REVISED -		SCALE: SHEET NO. OF SHEETS STA. TO STA.			FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				
PLOT DATE = 2/6/2008		DATE -	REVISED -					CONTRACT NO. 68216				



FOR TRAFFIC CONTROL DETAILS
 RELATED TO THE STAGING PLAN AND
 NOT SHOWN SEE STANDARDS 701400, 701402,
 701406, 701421, 701411, AND 701423.

Design Speed for Temporary Impact Attenuator - 55 mph Temporary Ramp

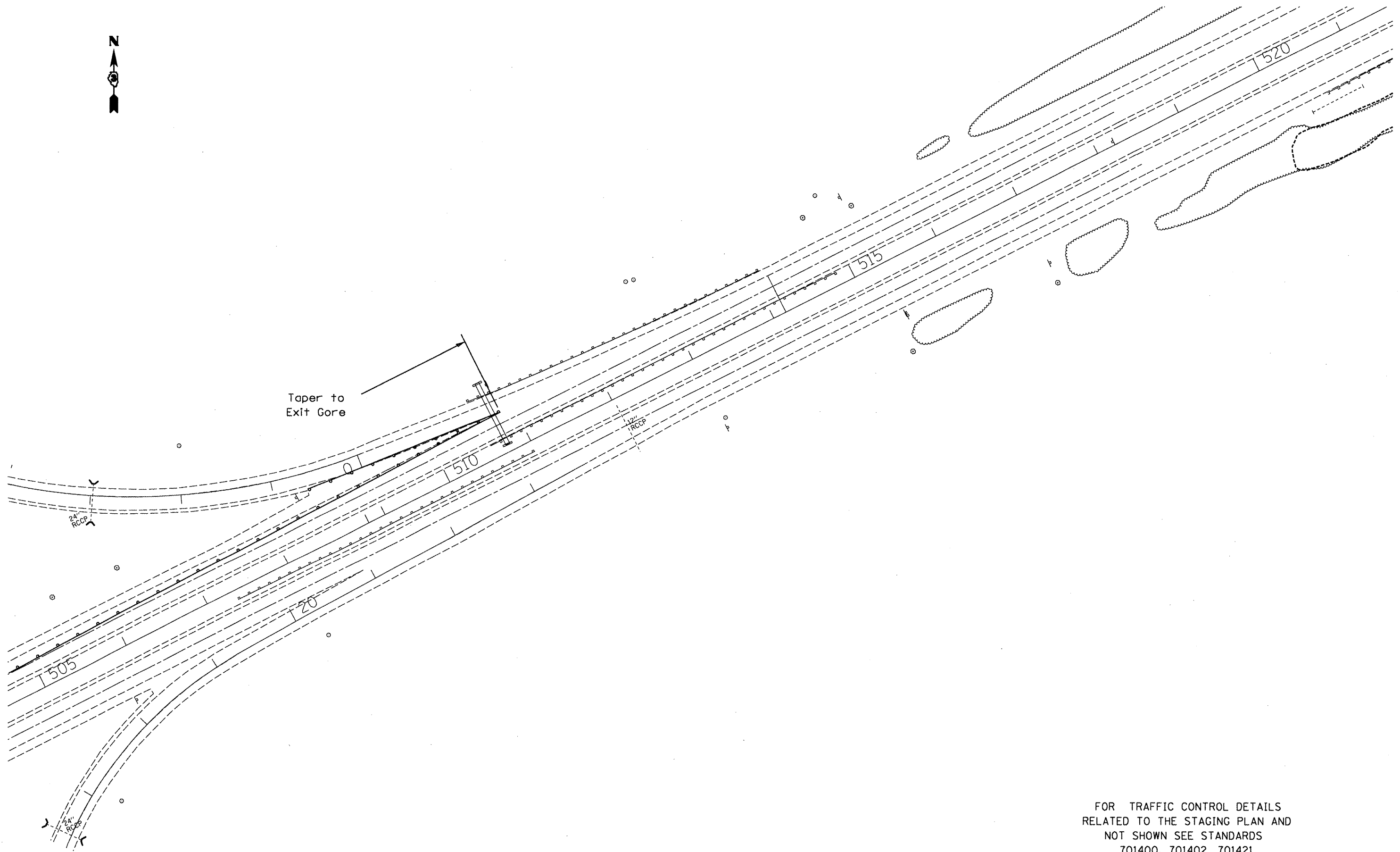
FILE NAME = S:\GEN\DRAWING\STD&PLNS\Squad1\68216_Hemerson\general.dgn	USER NAME = lsynedm	DESIGNED -	REVISED -
PLOT SCALE = 1/8" = 1' IN.	CHECKED -	REVISED -	REVISED -
PLOT DATE = 3/18/2008	DATE -	REVISED -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

GENERAL STAGING PLAN

SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(21-HB-11)	KNOX	55	12
FED. ROAD DIST. NO. (ILLINOIS) FED. AID PROJECT			CONTRACT NO. 68216	



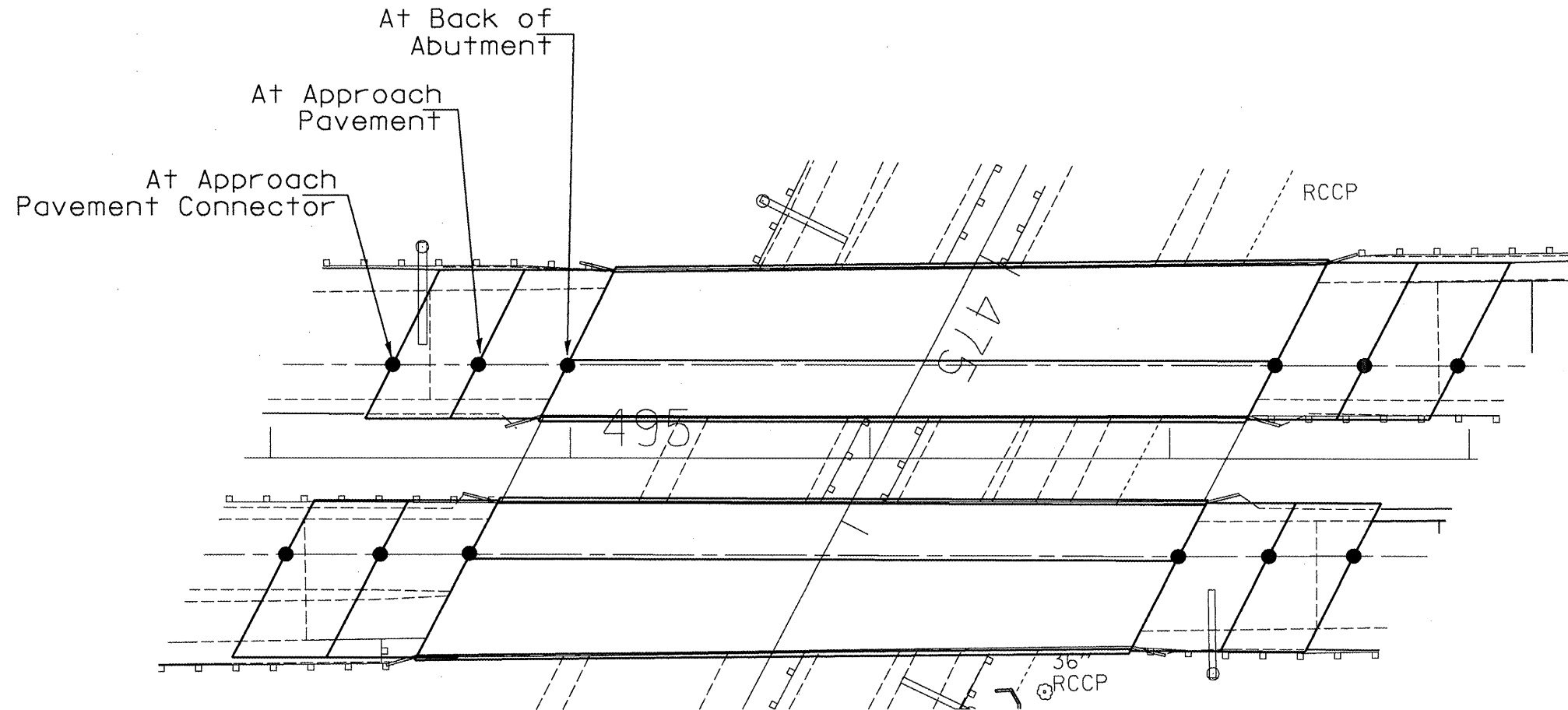
FOR TRAFFIC CONTROL DETAILS
 RELATED TO THE STAGING PLAN AND
 NOT SHOWN SEE STANDARDS
 701400, 701402, 701421,
 701423, 701411, AND 701406.

FILE NAME =	USER NAME = lsgnadm	DESIGNED -	REVISED -
S:\GEN\DRAF\STD&PLNS\Squad1\68216 Hen	erson\general.dgn	DRAWN -	REVISED -
	PLOT SCALE = 100.0000' / IN.	CHECKED -	REVISED -
	PLOT DATE = 2/6/2008	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

GENERAL STAGING PLAN			
SCALE:	SHEET NO.	OF SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(21-HB-DI)	KNOX	55	13
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 68216	



497+96
 805.43
 497+64.15
 805.66
 497+34.15
 805.84
 494+95.15
 805.99
 494+65.15
 805.94
 494+41
 805.90

Center Line of West Bound Lanes

1:480 HMA taper (typical)

497+61
 805.87
 497+32.29
 805.93
 497+02.29
 805.99
 494+65.54
 805.85
 494+35.54
 805.75
 494+05
 805.65

Center Line of East Bound Lanes

FILE NAME =
 S:\GEN\DRAW\STO&PLNS\Squad\68216

USER NAME = laynedm
 PERSON\general.dgn
 PLOT SCALE = 50.0000' / IN.
 PLOT DATE = 3/18/2008

DESIGNED - *user*
 DRAWN -
 CHECKED -
 DATE -

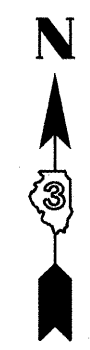
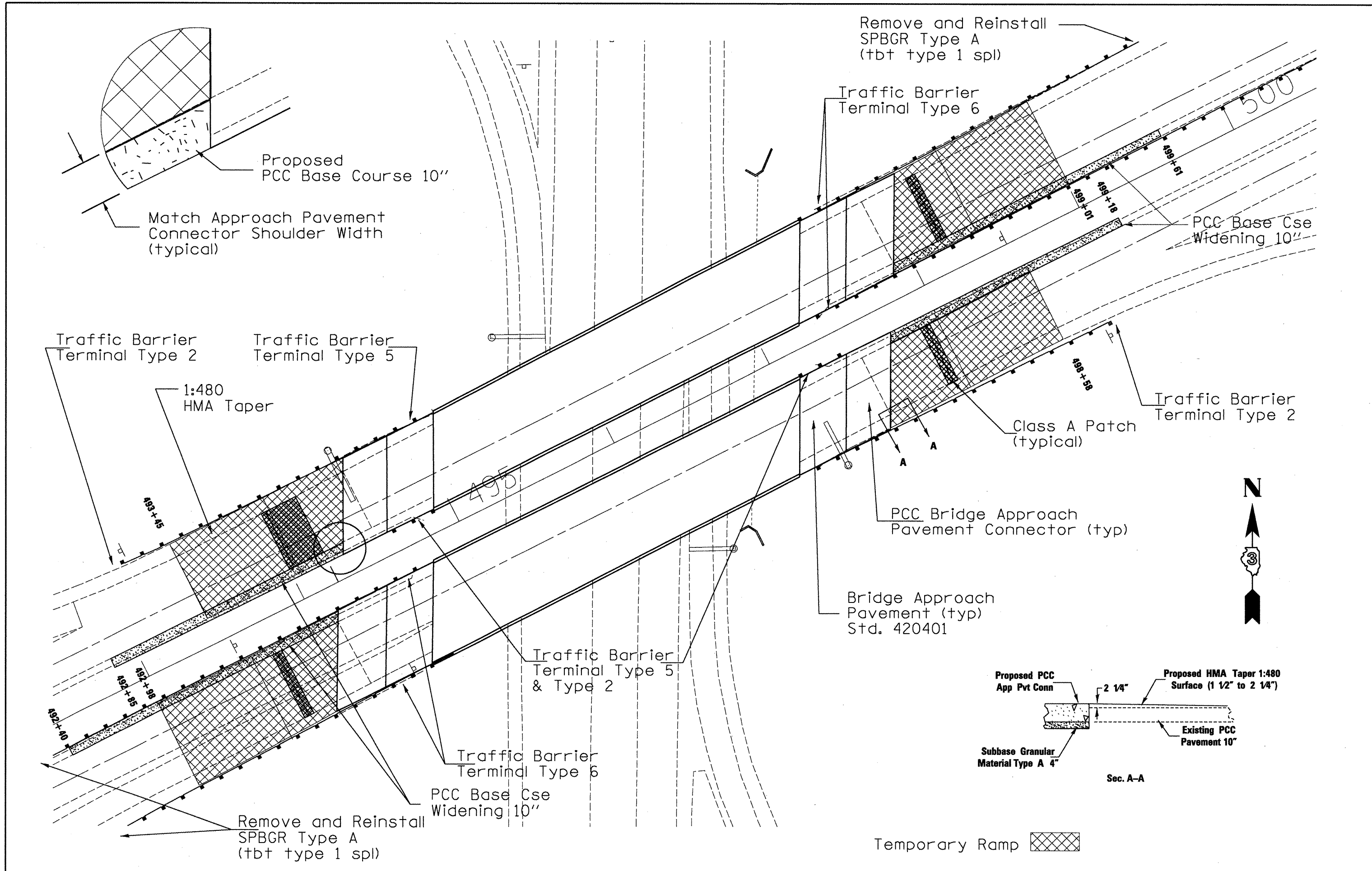
REVISED -
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

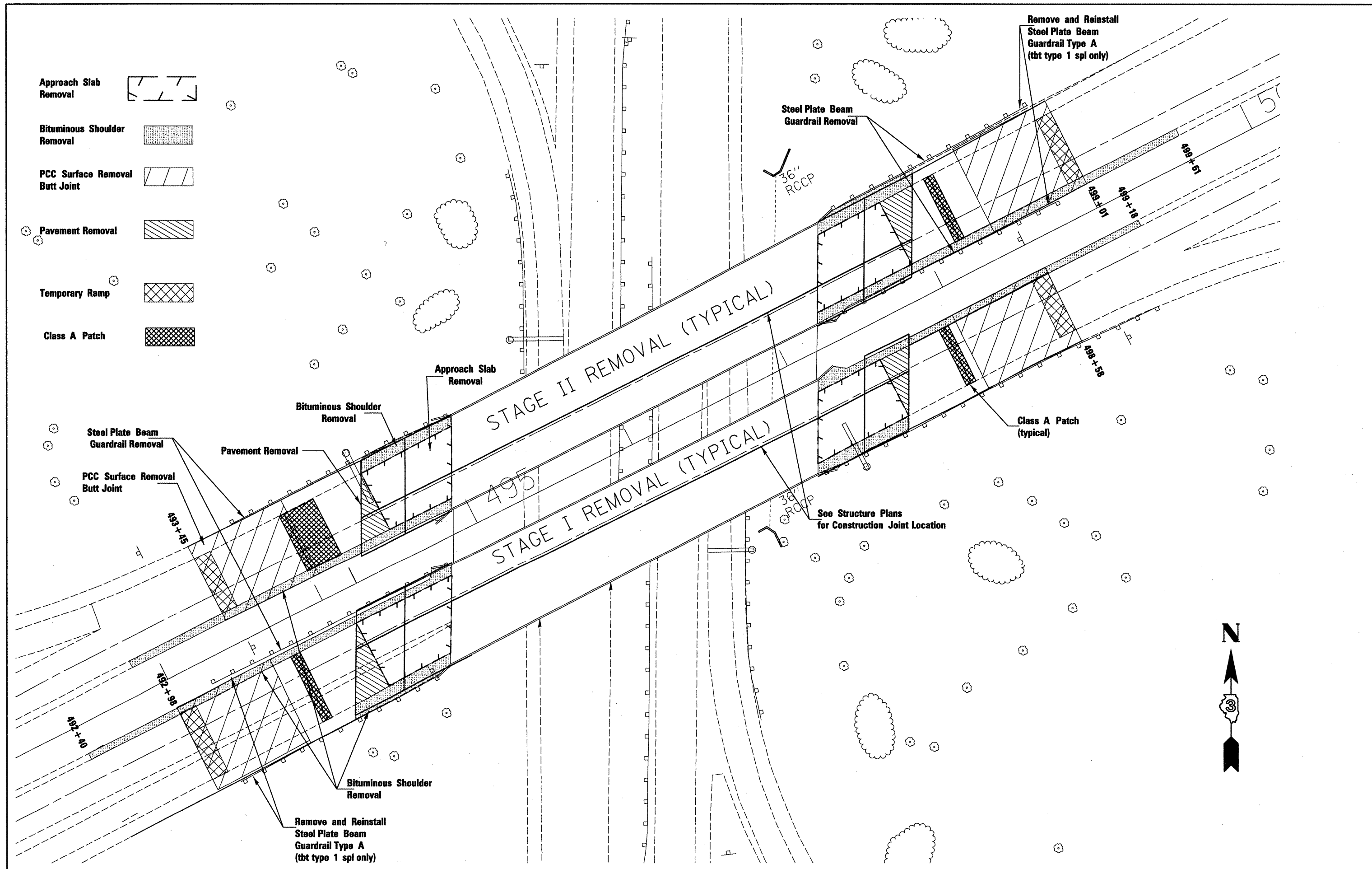
PROPOSED ROADWAY PROFILE

SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A. RTE. 313	SECTION (21-HB-11)	COUNTY KNOX	TOTAL SHEETS 56	SHEET NO. 14
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 68216	



FILE NAME *	USER NAME = lajnedm	DESIGNED - #user*	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ROADWAY PLAN			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
S:\GEN\DRFT\STD&PLNS\Squad1\68216	Person\general.dgn	DRAWN -	REVISED -		SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.	313	(21-HB-101)	KNOX	53 15
	PLOT SCALE = 50,000' / IN.	CHECKED -	REVISED -										
	PLOT DATE = 3/18/2008	DATE -	REVISED -										
										CONTRACT NO. 68216			
										FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			



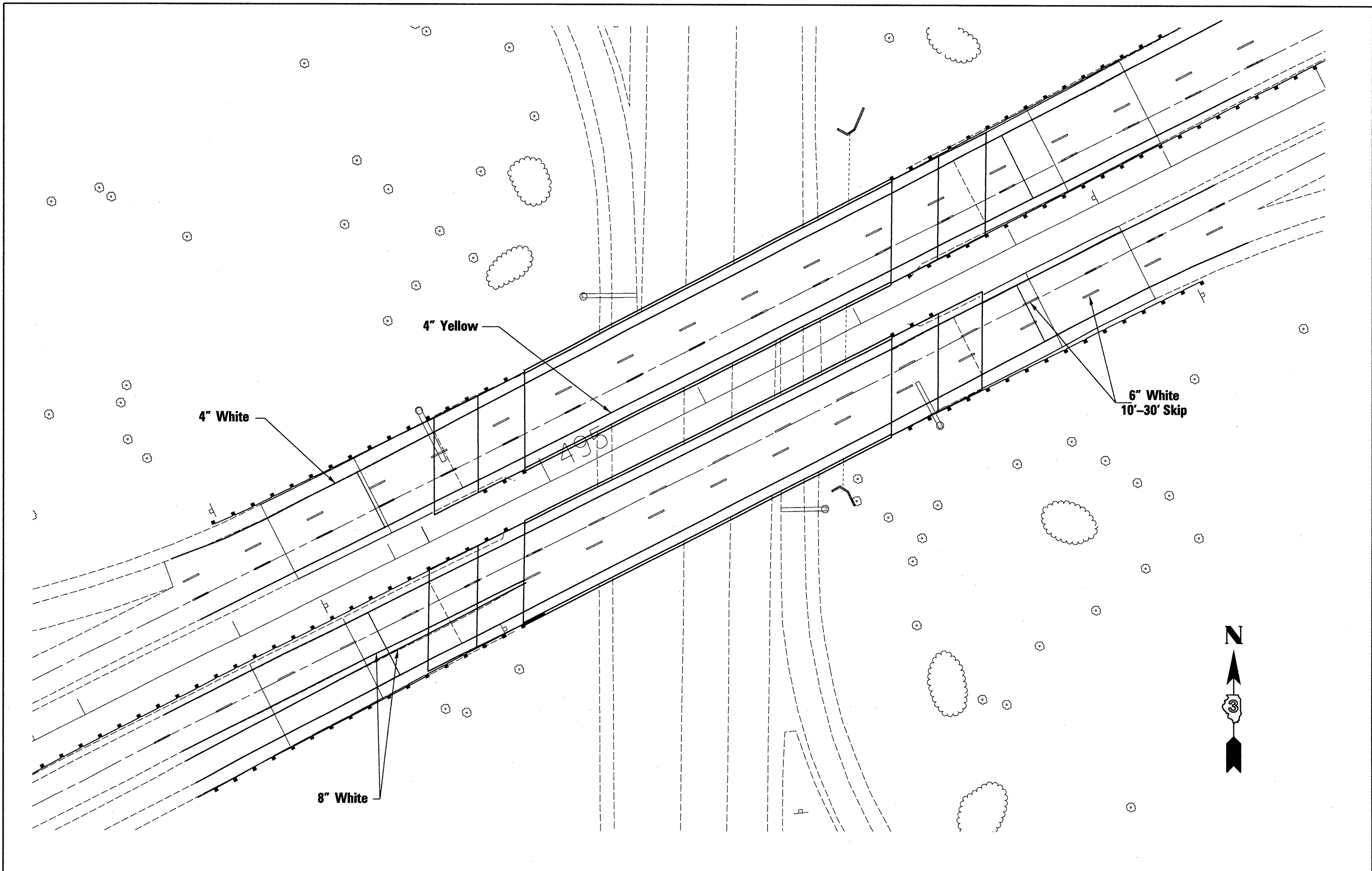
- Approach Slab Removal
- Bituminous Shoulder Removal
- PCC Surface Removal
- Butt Joint
- Pavement Removal
- Temporary Ramp
- Class A Patch

FILE NAME *	USER NAME * lsgndm	DESIGNED -	REVISED -
SA\GEN\DRFT\STD\PLNS\Squad\68216 Handerson\general.dgn		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

REMOVAL PLAN				
SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(21-HB-1)I	KNOX	55	16
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 68216	



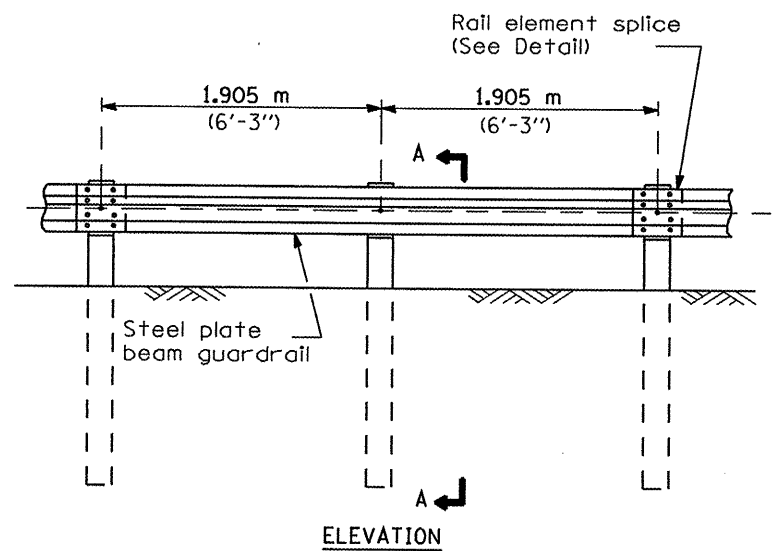
FILE NAME =	USER NAME = laynedm	DESIGNED -	REVISED -
S:\GEN\DRIFT\STD&PLNS\Squad\68216	erson\general.dgn	DRAWN -	REVISED -
	PLOT SCALE = 50.0000' / IN.	CHECKED -	REVISED -
	PLOT DATE = 3/18/2008	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

PAVEMENT MARKING			
SCALE:	SHEET NO.	OF SHEETS	STA. TO STA.

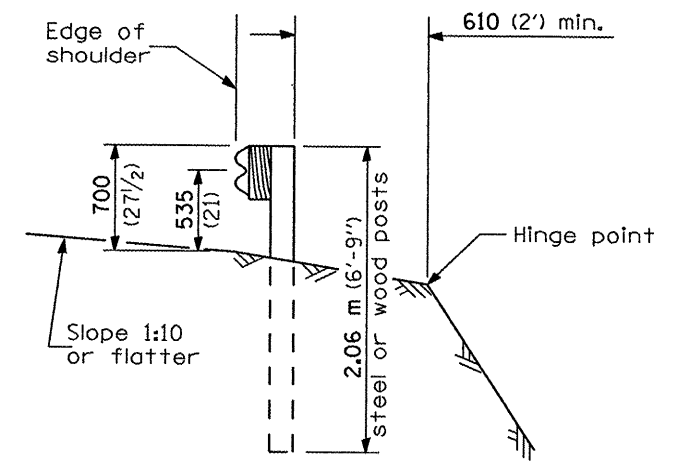
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(21-HB-1)1	KNOX	55	17
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				
CONTRACT NO. 68216				

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(21-HB-I) I	KAWK		17A
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 68216				

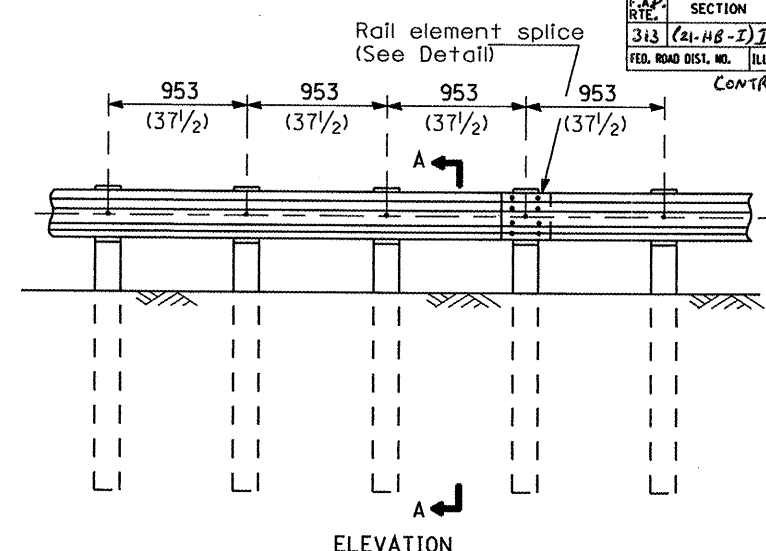


TYPE A

1.905 m (6'-3") Typical post spacing

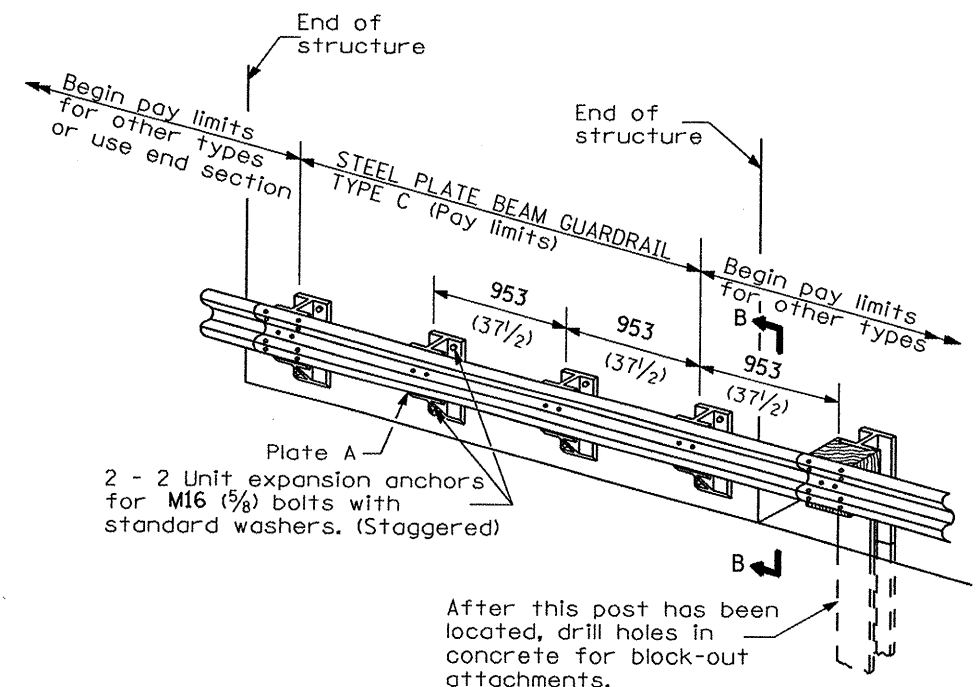


SECTION A-A



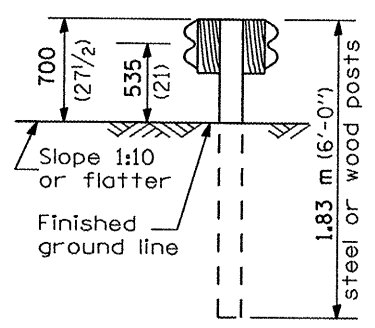
TYPE B

953 (37 1/2) Closed post spacing

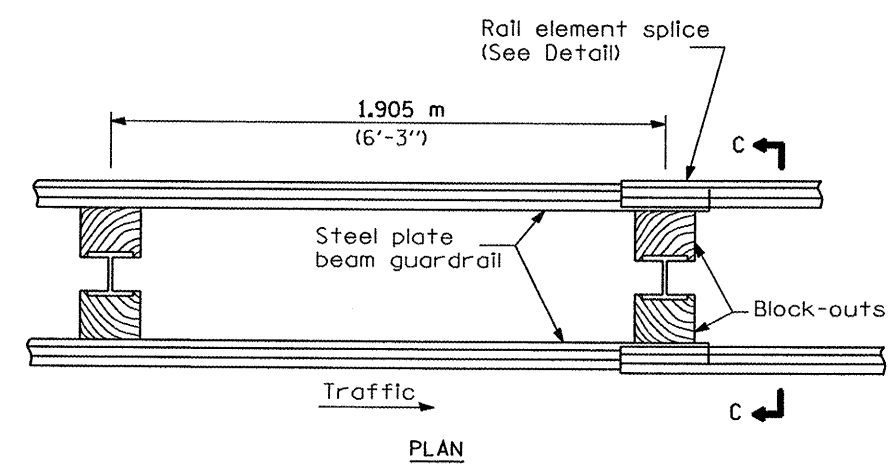


TYPE C

953 (37 1/2) Block-out spacing

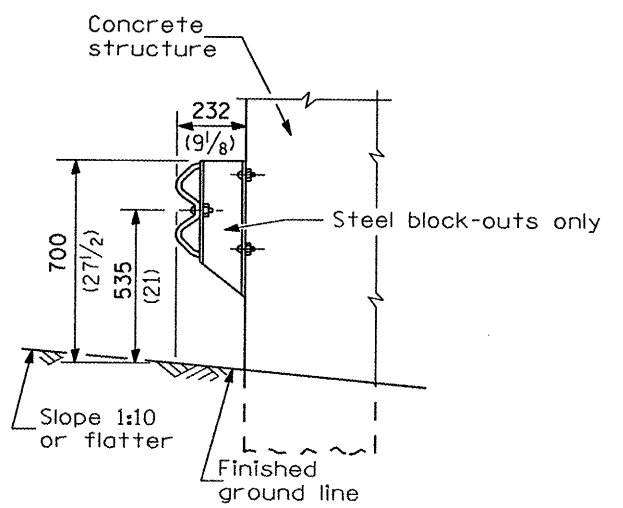


SECTION C-C



TYPE D

Double steel plate beam guardrail
1.905 m (6'-3") typical post spacing



SECTION B-B

GENERAL NOTES

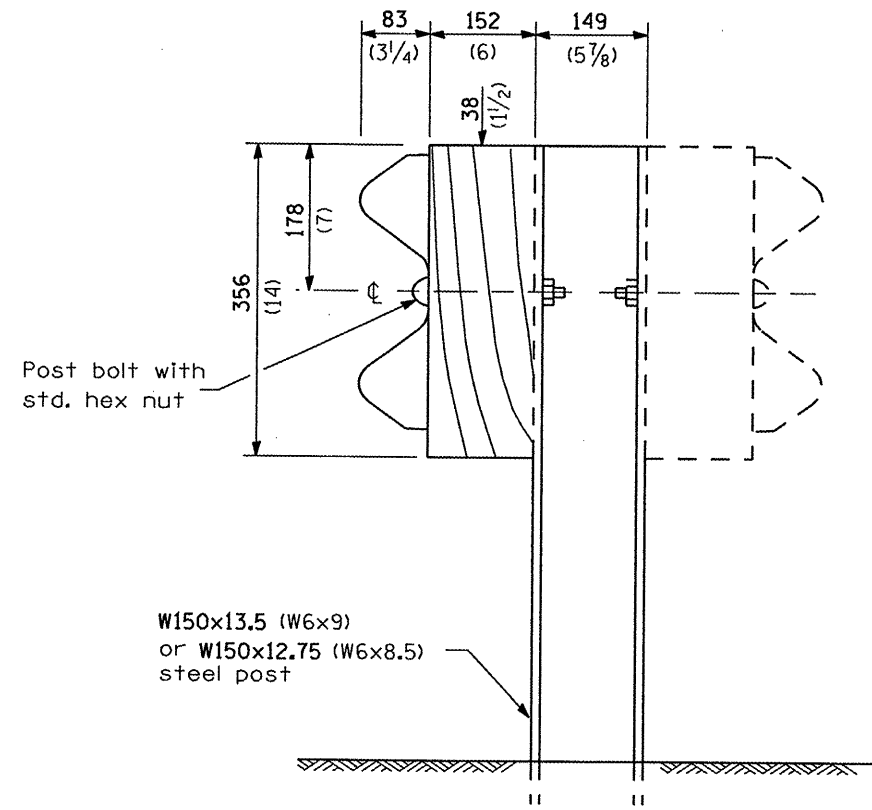
All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).
All dimensions are in millimeters (inches) unless otherwise shown.
The existing steel posts may be drilled to match the bolt pattern shown herein for the wood block-out, or a new steel post shall be provided.
This detail is applicable to the guardrail system used prior to January 1, 2007. For details on the Midwest Guardrail System, see Standard 630001.

**REMOVE AND REERECT
STEEL PLATE BEAM GUARDRAIL**

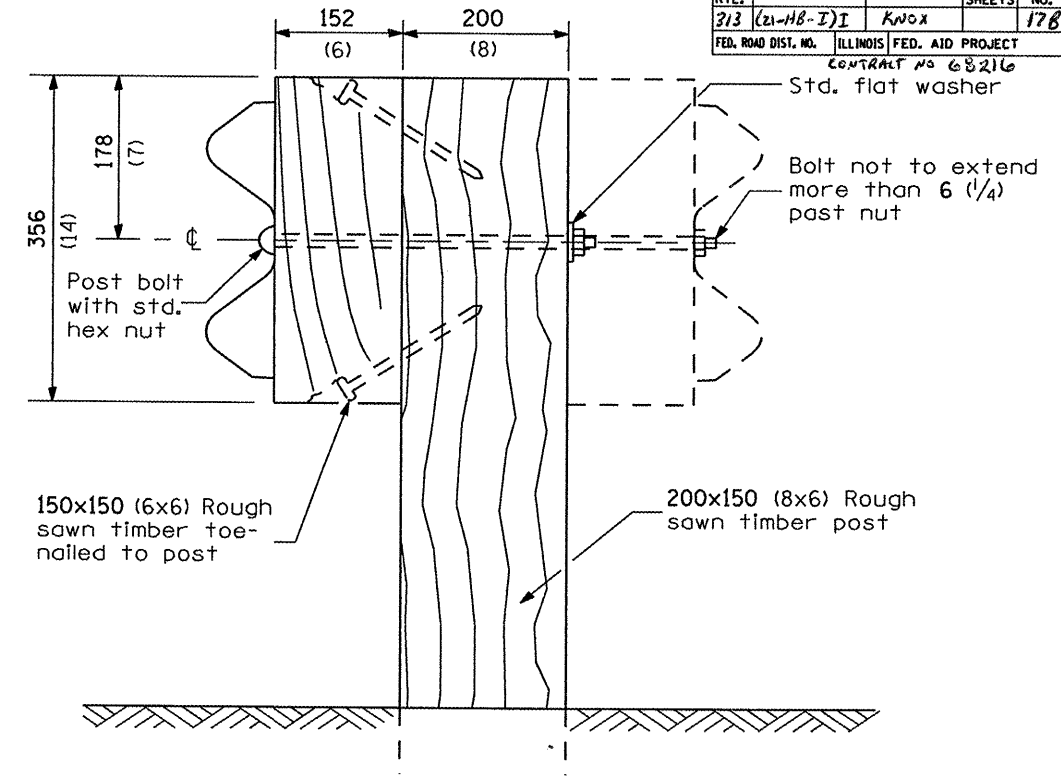
(Sheet 1 of 4)

DETAIL

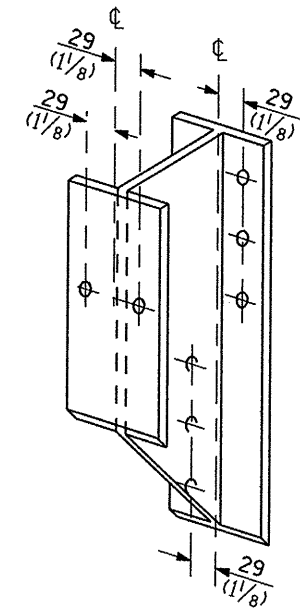
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
213	(21-HB-1)I	Knox	178	178
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
			CONTRACT NO. 68216	



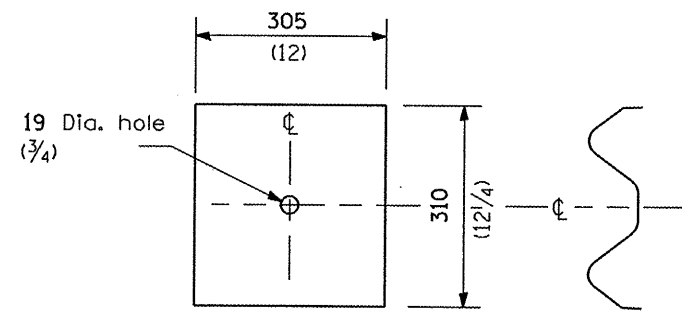
STEEL POST CONSTRUCTION



WOOD POST CONSTRUCTION



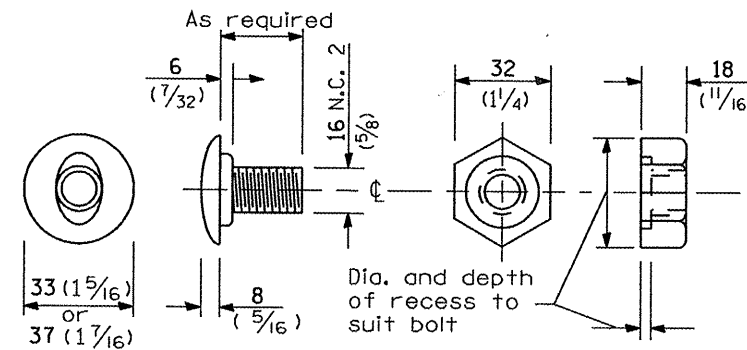
STEEL BLOCK-OUT DETAIL



NOTE

Plate A shall be placed between rail element and block-out at non-splice mounting points only when steel block-outs are used.

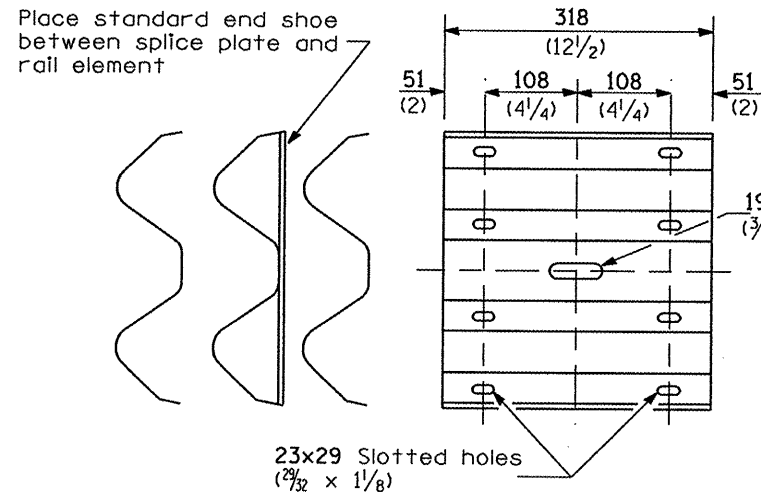
PLATE A



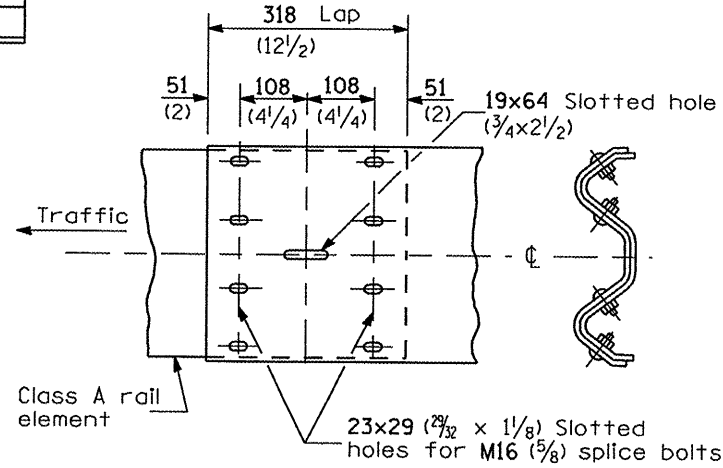
POST OR SPLICE BOLT & NUT

**REMOVE AND REERECT
STEEL PLATE BEAM GUARDRAIL**
(Sheet 2 of 4)
DETAIL

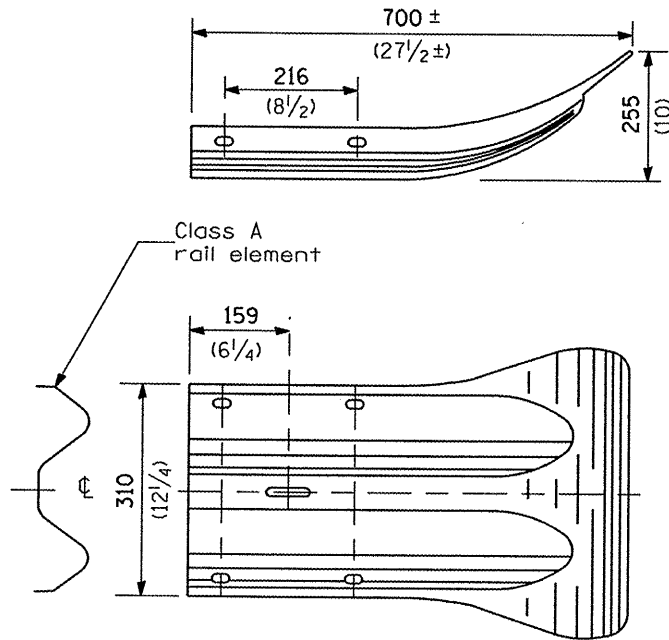
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(21-HB-I)	Knox		17C
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 68216				



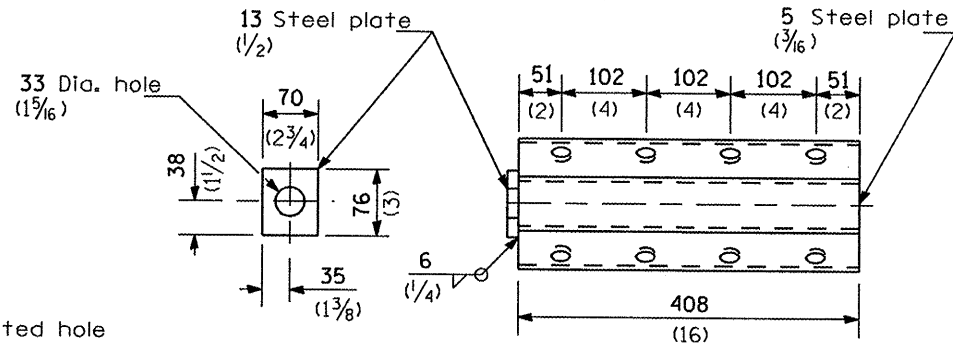
SPLICE PLATE



RAIL ELEMENT SPLICE



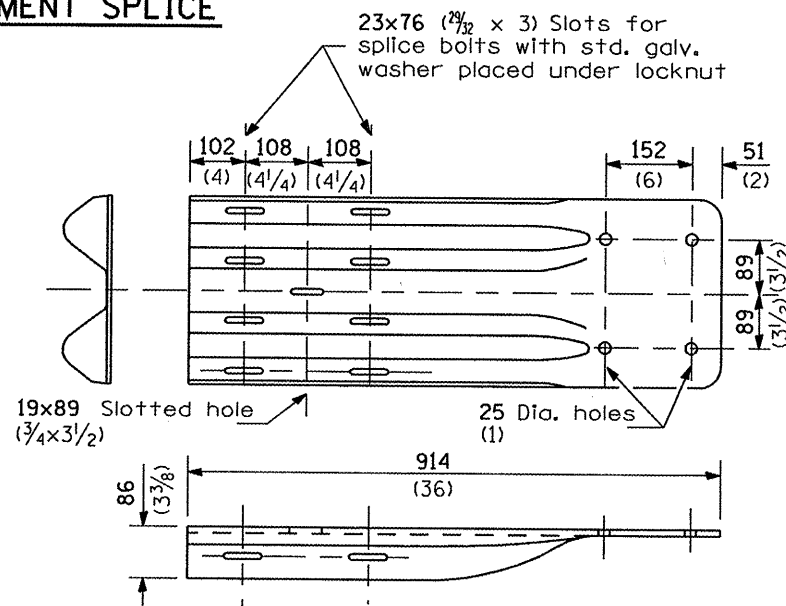
END SECTION



NOTE

Anchor plate T shall be used to attach cable assembly to guardrail when required on traffic barrier terminals.

ANCHOR PLATE T DETAILS



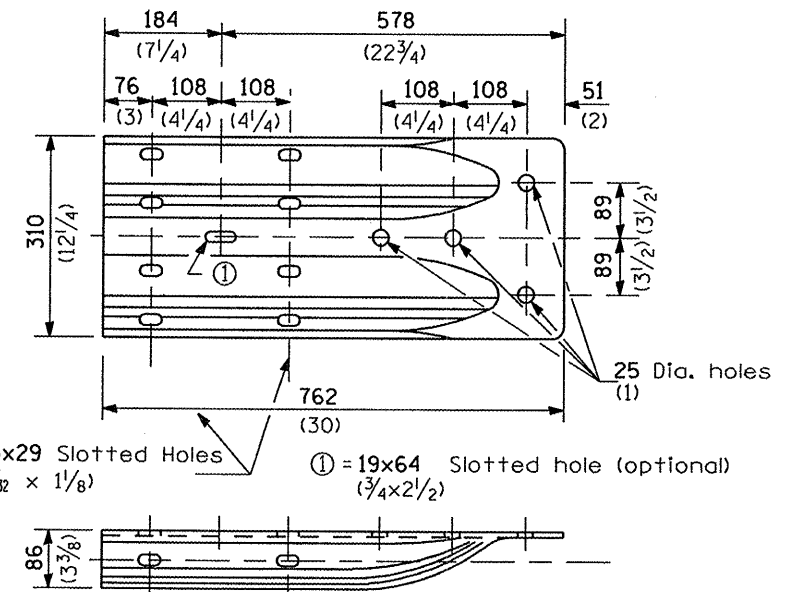
NOTE

When end shoe is attached to a bridge parapet which has an expansion joint, the bolts shall be provided with a locknut or double nut and shall be tightened only to a point that will allow guardrail movement.

The standard end shoe shall be attached to the concrete with pre-drilled or self-drilling anchor bolts. The anchor cone shall be set flush with the surface of the concrete.

Externally threaded studs protruding from the surface of the concrete will not be permitted.

END SHOE



ALTERNATE END SHOE

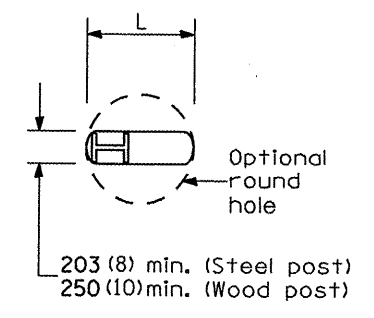
REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL

(Sheet 3 of 4)

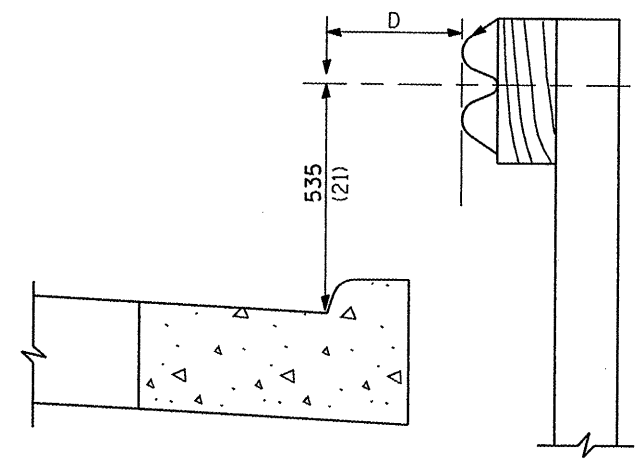
DETAIL

F.A.P. SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
213 (21-HB-I)I	KNOX		170
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT		

CONTRACT NO. 68216



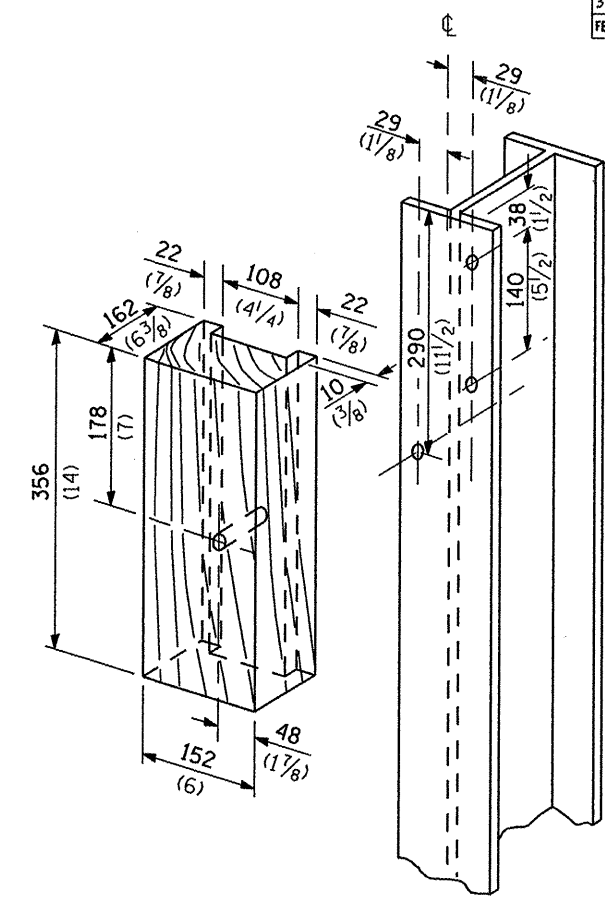
PLAN



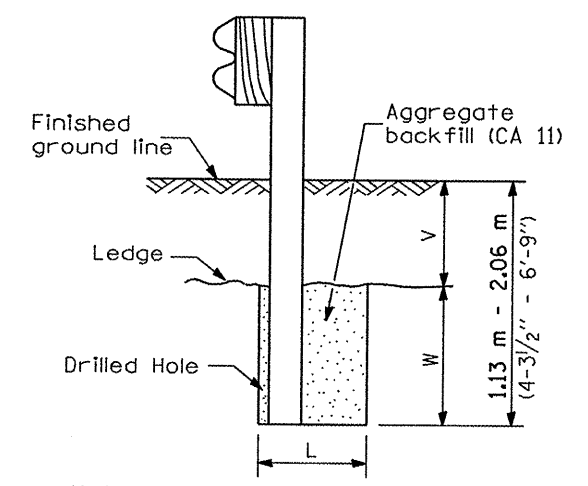
Note:
If it is necessary for D to be more than 300 (12) and less than 3.0 m (10'-0") type M-5 (M-2) curb and gutter (Std. 606001) shall be used in front of and in advance of the guardrail.

GUARDRAIL PLACED BEHIND CURB

(D = 0 desirable to 300 (12) maximum)



WOOD BLOCK-OUT AND STEEL POST DETAILS

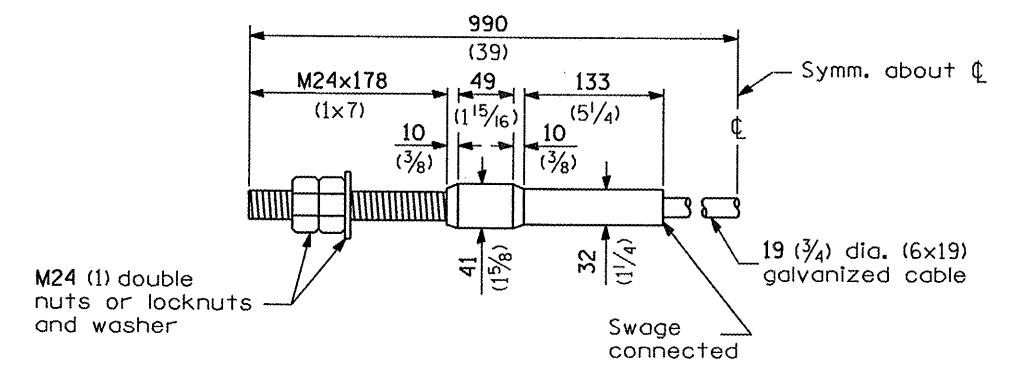


Note:
Ledge line is top of rock ledge or hard slag fill.

ELEVATION

FOOTING FOR POST WHEN IMPERVIOUS MATERIAL IS ENCOUNTERED

V	W	L	
		Steel Post	Wood Post
0 - 460 (0 - 18)	610 (24)	530 (21)	580 (23)
>460 - 825 (>18 - 41.5)	305 (12)	203 (8)	250 (10)
>825 - 1.13 m (>41.5 - 53.5)	305 - 0 (12 - 0)	203 (8)	250 (10)



CABLE ASSEMBLY

(18,100 kg (40,000 lbs.) min. breaking strength)
Tighten to taut tension.

REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL
(Sheet 4 of 4)
DETAIL

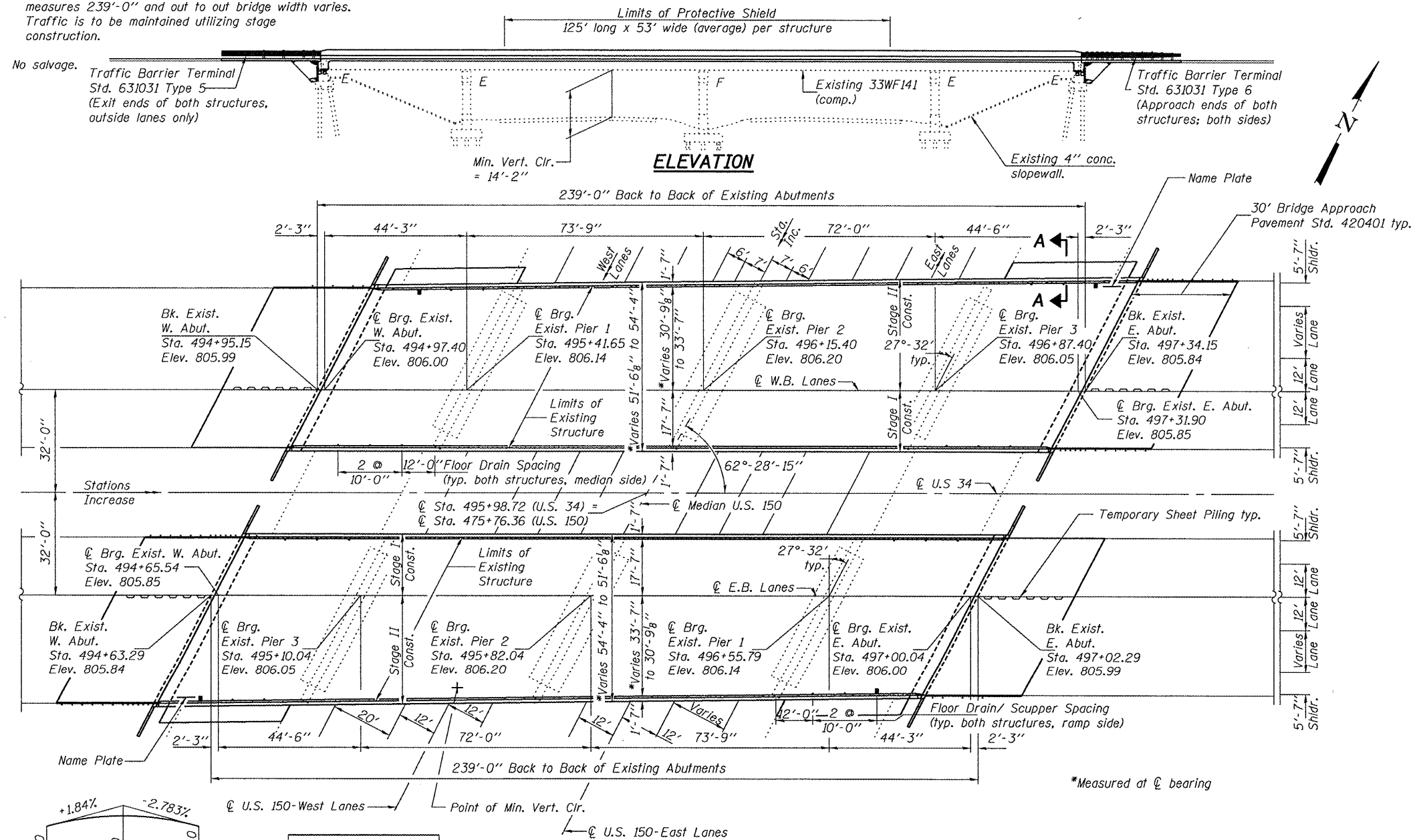
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET	SHEET NO.
F.A.P. 313	(21-HB-11)	KNOX	55	13	35 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT	

Contract #68216

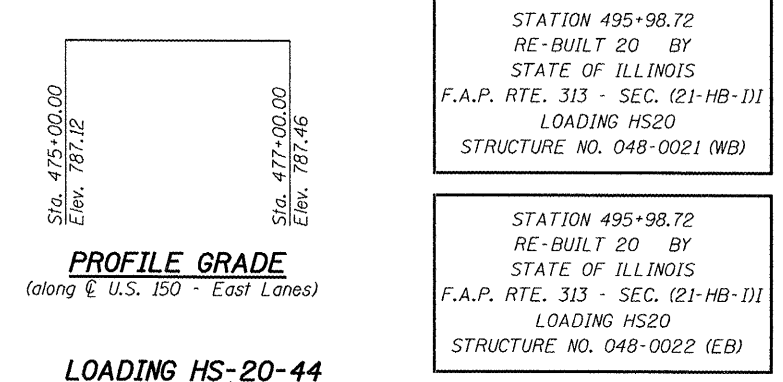
Bench Mark: A264, located at the Galesburg Municipal Airport, set vertically in the southwest face of the terminal building, about 30' southeast of the west corner of the building, and 30" above the sidewalk. Elevation 764.933

Existing Structure: The existing structures were originally built in 1965 as F.A. Route 29, Section 21HB. The existing structures are four span continuous, non-composite, rolled steel girder structures on pile bent abutments and multi-column piers on pile supported footings. The back to back of abutments measures 239'-0" and out to out bridge width varies. Traffic is to be maintained utilizing stage construction.

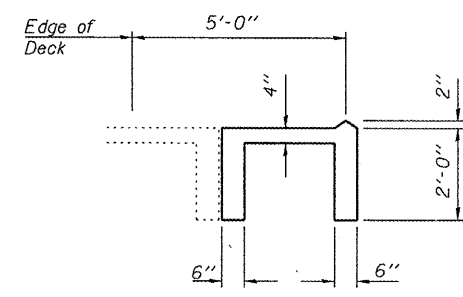


SCOPE OF WORK

1. Remove and replace bearings at the abutments.
2. Repair substructure.
3. Remove existing wingwalls as shown.
4. Repair slopewall. For slopewall Repair, see Roadway Plans.



LOADING HS-20-44
Allow 50#/sq. ft. for future wearing surface.
DESIGN SPECIFICATIONS
2002 AASHTO



SECTION A-A

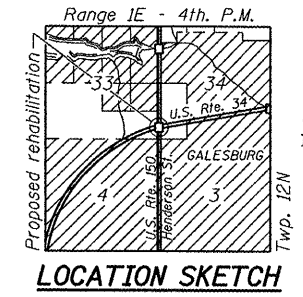
Slopewall shall be reinforced with welded wire fabric, 6" x 6" - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft.

DESIGN STRESSES

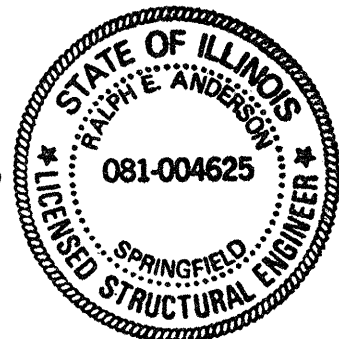
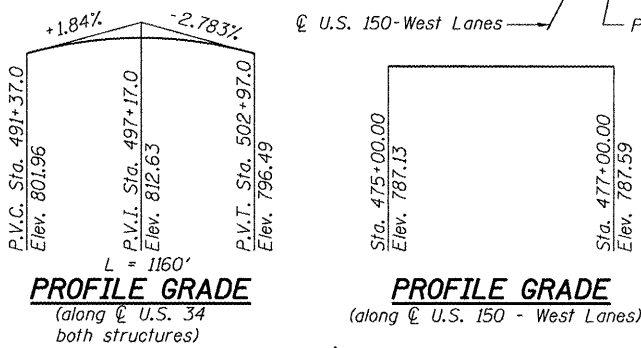
FIELD UNITS
New Construction
 $f'_c = 3,500$ psi
 $f_y = 60,000$ psi (reinforcement)
 $f_y = 36,000$ psi (structural steel)
Existing Construction
 $f'_c = 3,500$ psi
 $f_y = 40,000$ psi (reinforcement)
 $f_y = 36,000$ psi (Structural Steel)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.048g
Site Coefficient (S) = 1.1



GENERAL PLAN & ELEVATION
U.S. ROUTE 34 OVER
U.S. ROUTE 150 (HENDERSON STREET)
F.A.P. ROUTE 313 - SECTION (21-HB-11)
KNOX COUNTY
STA. 495+98.72
STRUCTURE NO. 048-0021 (WB)
STRUCTURE NO. 048-0022 (EB)



EXPIRES 11-30-2008

DESIGNED: Fess Teklehaimanot
CHECKED: Shum Shum
DRAWN: Greg Farmer
CHECKED: FT/DPN
EXAMINED: April 29, 2009
PASSED: Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET	SHEET NO.
F.A.P. 313	(21-HB-11)	KNOX	55	19	35 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #68216

GENERAL NOTES

Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts. Bolts $\frac{3}{4}$ in. ϕ , holes $\frac{13}{16}$ in. ϕ , unless otherwise noted.
No field welding is permitted except as specified in the contract documents. The Contractor shall test the existing welds by non-destructive methods within 2 ft. of the end of the existing cover plates for cracks after removal of the existing concrete deck. Dye penetrant (PT), magnetic particle (MT), or other approved testing method shall be performed by qualified personnel approved by the Engineer. If cracks are found, report them to the Bureau of Bridges and Structures for disposition. The cost of testing is included in Removal of Existing Concrete Deck. The cost of crack repair, if necessary, will be paid for according to Article 109.04 of the Standard Specifications.

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions

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

As directed by the Engineer, existing construction accessories welded to the top flange of beams 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 an individual acceptable to the Engineer. Any cracks that cannot be removed by grinding $\frac{1}{4}$ inch 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.

Plan dimensions and details relative to existing plans are subject to routine 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 based upon the unit price bid for the work.

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

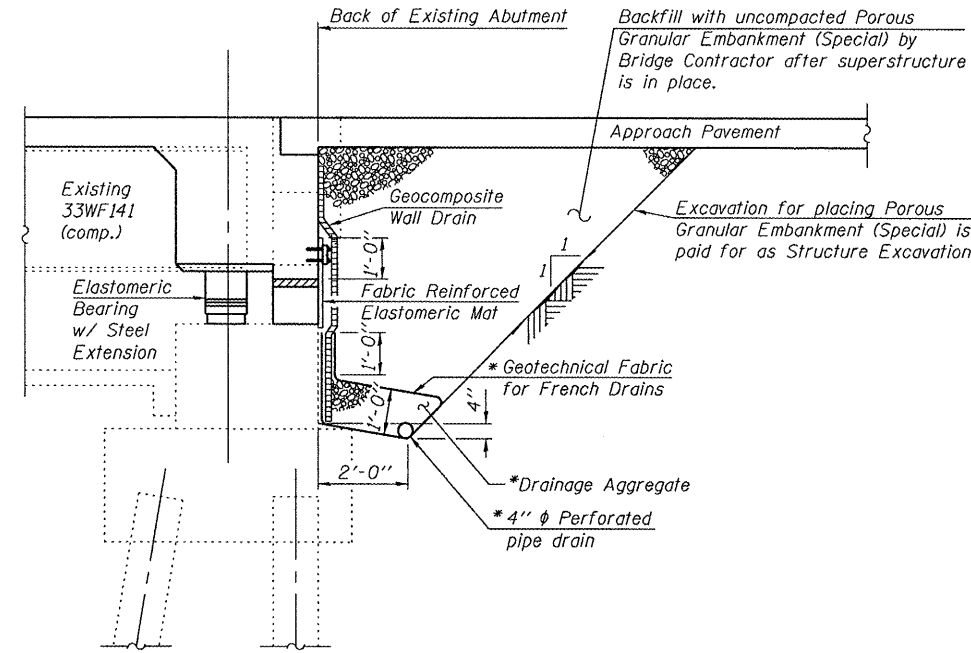
The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

If the Contractor elects to use cantilever forming brackets on the exterior beams, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06(b) of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior beam at each of these additional bracket locations.

Cleaning and painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". All existing steel shall be cleaned per Near White Blast Cleaning SSPC-SP10. All existing steel shall be painted according to the requirements of Paint System 1-OZ/E/U. The color of the final finish coat for all interior steel surfaces shall be Gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Blue, Munsell No. 10B 3/6.

A minimum of 2 air monitors will be required to monitor abrasive blasting operations at this site, see special provision for "Containment and Disposal of Lead Point Cleaning Residues".

All new structural steel shall be shop painted with an inorganic zinc rich primer per AASHTO M 300, Type 1. Field painting included with "Cleaning and Painting Existing Steel Structures."



SECTION THRU SEMI-INTEGRAL ABUTMENT
(Horiz. dim. @ Rt. L's)

* Included in the cost of Pipe Underdrains for Structures, 4"

Note:
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Slopedwall 4"	Sq. Yd.		64.4	64.4
Removal of Existing Concrete Deck	Each	2		2
Concrete Removal	Cu. Yd.		73.2	73.2
Structure Excavation	Cu. Yd.		427.4	427.4
Concrete Structures	Cu. Yd.		28.3	28.3
Concrete Superstructure	Cu. Yd.	907.5		907.5
Bridge Deck Grooving	Sq. Yd.	2517		2517
Protective Coat	Sq. Yd.	3020		3020
Elastomeric Bearing Assembly, Type I	Each	36		36
Stud Shear Connectors	Each	12150		12150
Reinforcement Bars, Epoxy Coated	Pound	190850	5160	196010
Name Plates	Each	2		2
Bar Splicers	Each	1550	8	1558
Floor Drains	Each	20		20
Drainage Scupper, DS-12	Each	4		4
Jack and Remove Existing Bearings	Each	36		36
Porous Granular Embankment (Special)	Cu. Yd.		321.5	321.5
Structural Repair of Concrete (Depth equal to or less than 5")	Sq. Ft.		54.0	54.0
Pipe Underdrains for Structures, 4"	Foot		337	337
Temporary Sheet Piling	Sq. Ft.		416	416
Concrete Sealer	Sq. Ft.		8730	8730
Geocomposite Wall Drain	Sq. Yd.		184	184
Protective Shield	Sq. Yd.	1472		1472
Anchor Bolts, 1"	Each	72		72
Furnishing and Erecting Structural Steel	Lbs.	9550		9550
Cleaning & Painting Steel Bridge No. 1	L. Sum	1		1
Cleaning & Painting Steel Bridge No. 2	L. Sum	1		1
Containment & Disposal of Lead Paint Cleaning Residues No. 1	L. Sum	1		1
Containment & Disposal of Lead Paint Cleaning Residues No. 2	L. Sum	1		1

INDEX OF SHEETS

- 1 General Plan and Elevation
- 2 General Data
- 3 Stage Construction Details
- 4 Temporary Concrete Barrier Details
- 5-12 Top of Slab Elevations
- 13-16 Top of Approach Slab Elevations
- 17 Superstructure
- 18-21 Superstructure Details
- 22 Diaphragm Details
- 23 Drainage Scuppers DS-12
- 24 Structural Steel
- 25 Structural Steel Details
- 26 Bearing Details
- 27-28 Abutment Concrete Removal
- 29 Abutment Concrete Removal Details
- 30-31 Concrete Repair Details
- 32-33 Abutment Details
- 34 Bar Splicer Assembly Details
- 35 Concrete Parapet Slipforming Option

GENERAL DATA

F.A.P. ROUTE 313 - SECTION (21-HB-11)

KNOX COUNTY

STA. 495+98.72

STRUCTURE NO. 048-0021 (WB)

STRUCTURE NO. 048-0022 (EB)

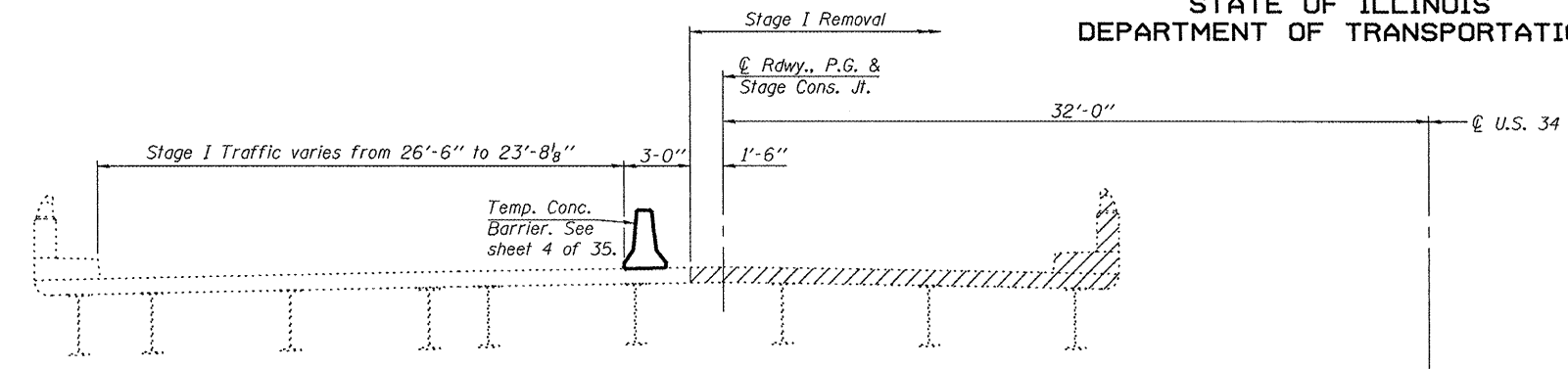
DESIGNED FT
CHECKED DPN
DRAWN Gregory D. Farmer
CHECKED FT/DPN

April 28 2008
EXAMINED *Thomas J. Damagala*
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

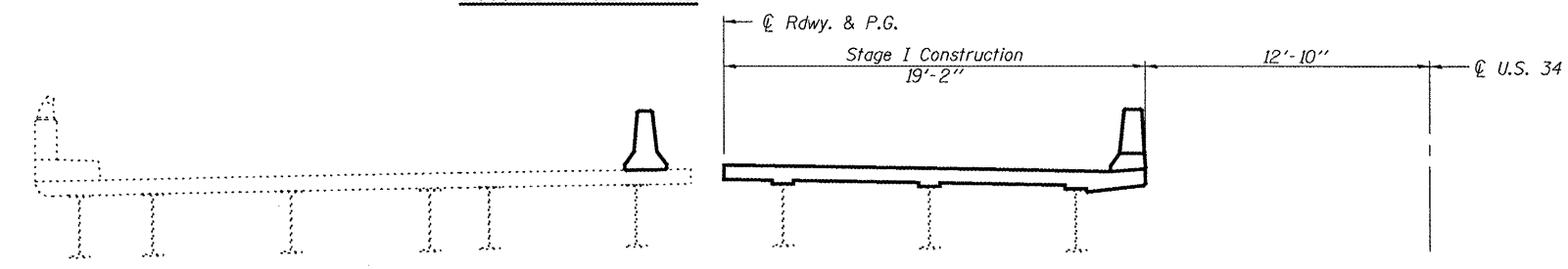
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F.A.P. 313	SECTION (21-HB-1)	COUNTY KNOX	ISIRI SHEETS 55	SHEET NO. 20	SHEET NO. 3 35 SHEETS
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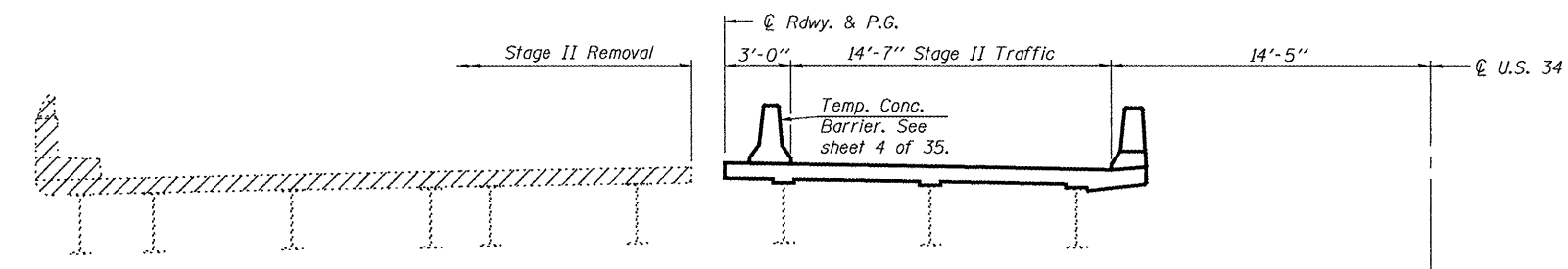
Contract #68216



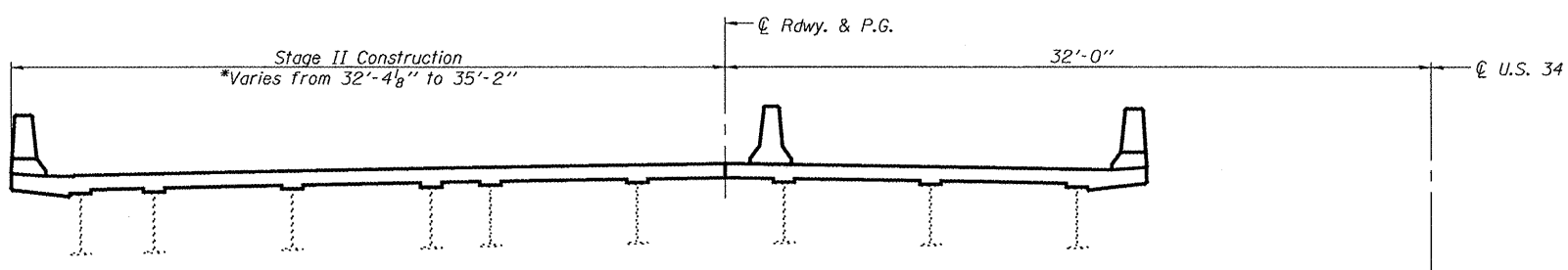
STAGE I REMOVAL



STAGE I CONSTRUCTION

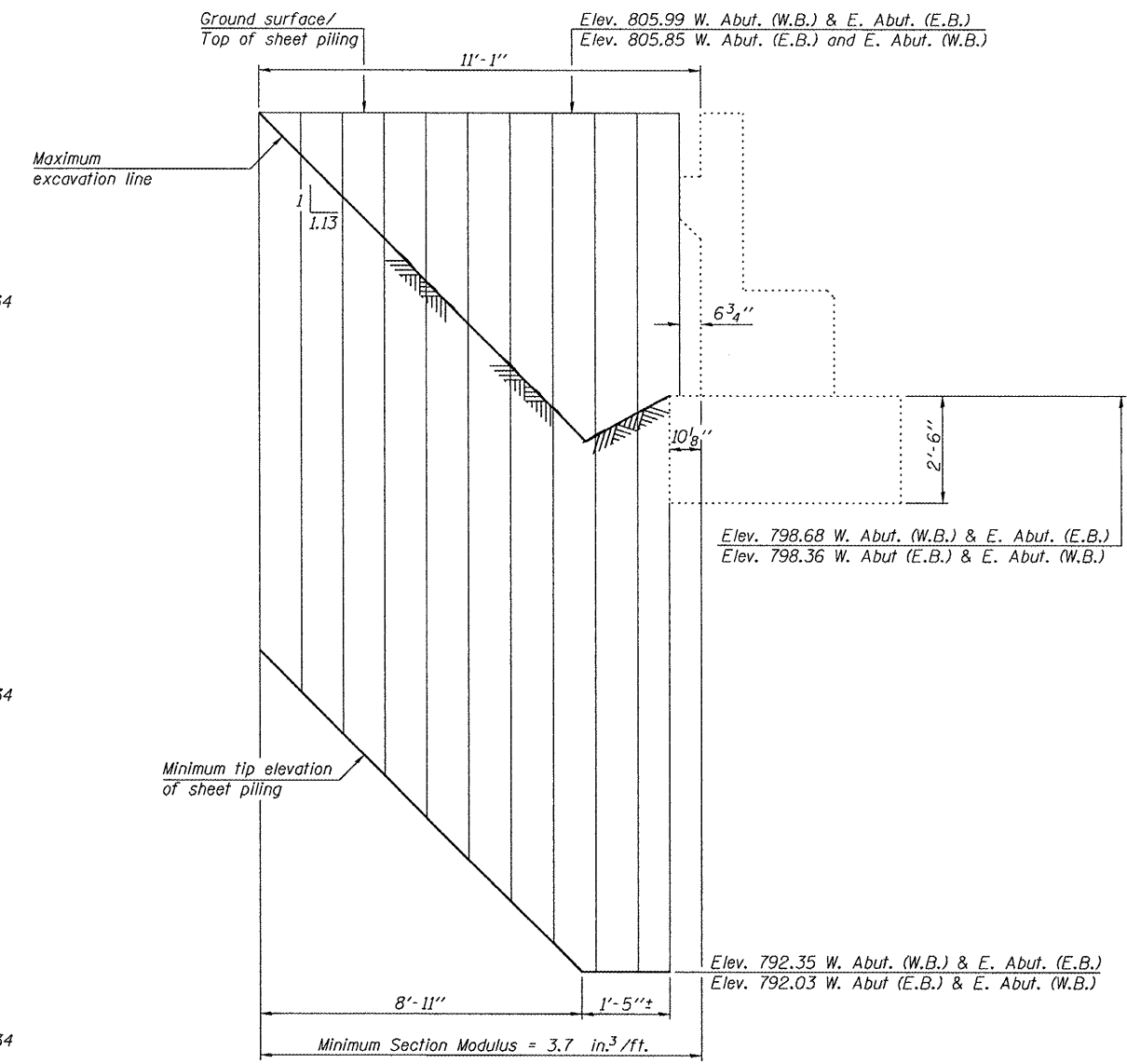


STAGE II REMOVAL



STAGE II CONSTRUCTION

*Measured at @ bearing



TEMPORARY SHEET PILING AND ABUTMENTS

Notes:
 If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.
 The Contractor shall connect the first sheet to the existing abutment wall to ensure stability of sheets driven to the top of the existing footing. This connection shall be reviewed and accepted by the Engineer and included in the cost for Temporary Sheet Piling.

STAGE CONSTRUCTION DETAILS
F.A.P. ROUTE 313 - SECTION (21-HB-1)
KNOX COUNTY
STA. 495+98.72
STRUCTURE NO. 048-0021 (WB)
STRUCTURE NO. 048-0022 (EB)

DESIGNED FT	APRIL 28 2008
CHECKED DPN	EXAMINED <i>Thomas J. Demas</i>
DRAWN Gregory D. Farmer	PASSED <i>Ralph E. Anderson</i>
CHECKED FT/DPN	

April 28 2008
 EXAMINED *Thomas J. Demas*
 ENGINEER OF BRIDGE DESIGN
 PASSED *Ralph E. Anderson*
 ENGINEER OF BRIDGES AND STRUCTURES

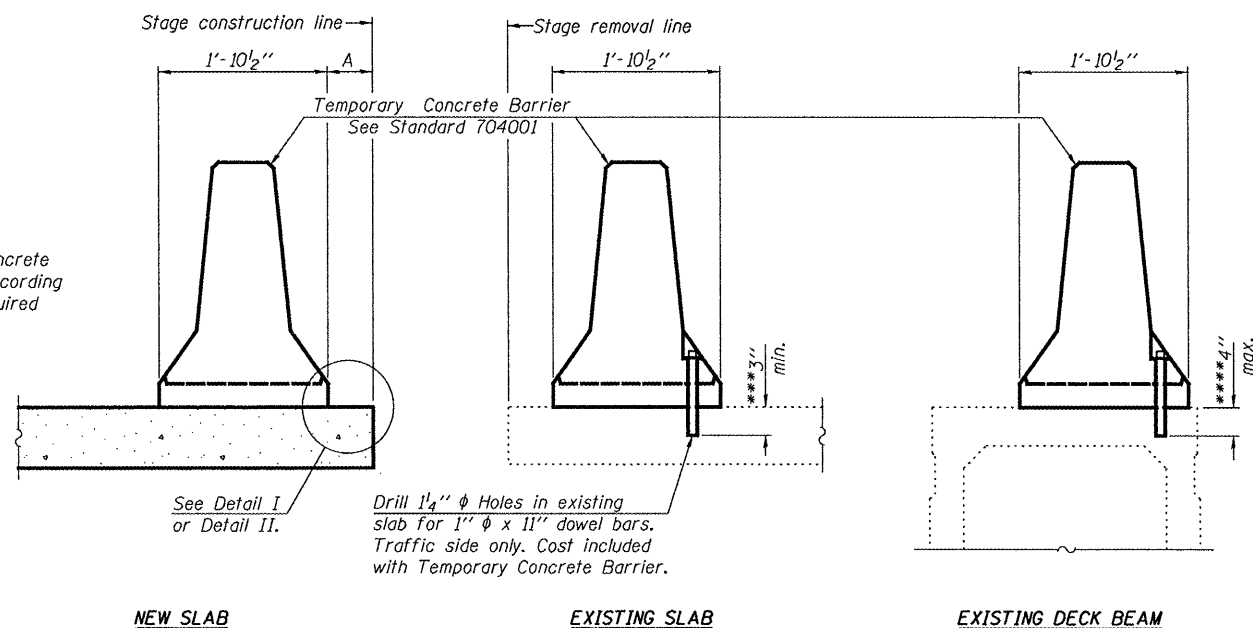
Note:
 Hatched areas indicate Removal of Existing Concrete Deck.
 For quantity of Temporary Concrete Barrier, see Roadway Plans.
 All cross sections are looking East for W.B. structure and looking West for E.B. structure.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
F.A.P. 313	(21-HB-11)	KNOX	55	21
FED. ROAD DIST. NO. 7	LENGTH	FED. AID PROJECT	35 SHEETS	

Contract #68216

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

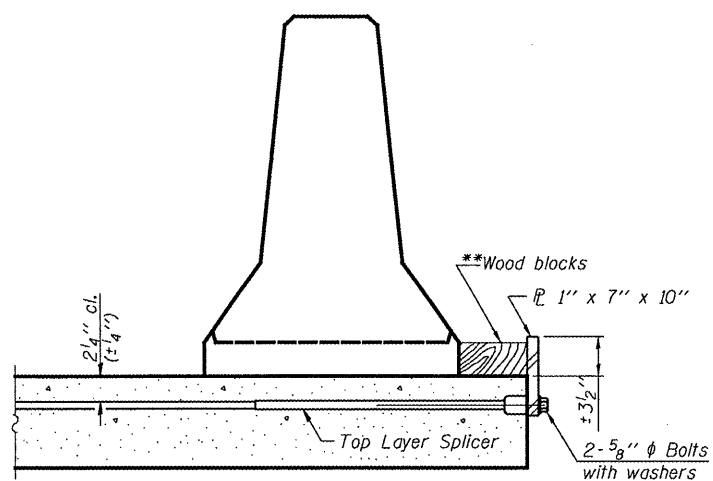
EXISTING DECK BEAM

SECTIONS THRU SLAB OR DECK BEAM

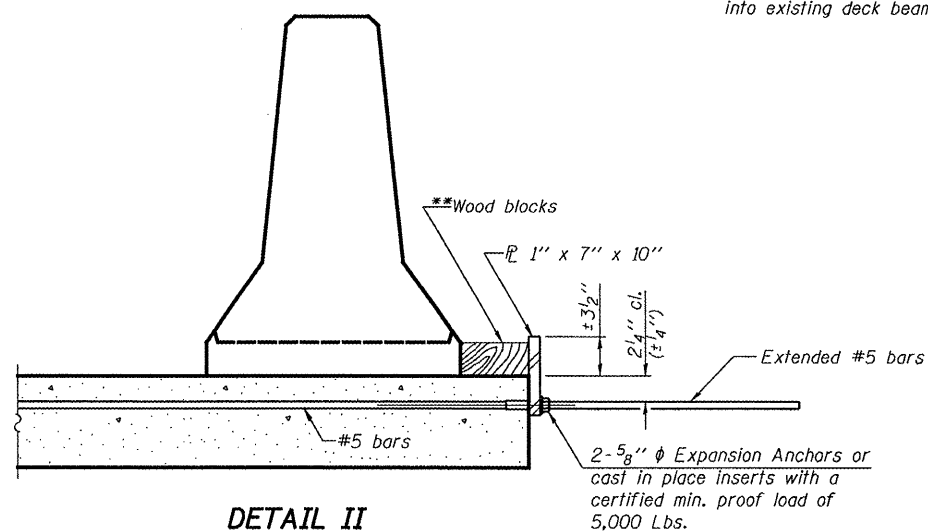
NOTES

- Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel PL to the top layer of couplers with 2-5/8" φ bolts screwed to coupler at approximate C of each barrier panel.
- Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel PL to the concrete slab or concrete wearing surface with 2-5/8" φ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate C of each barrier panel.
- Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

- ***Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.
- ****If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.

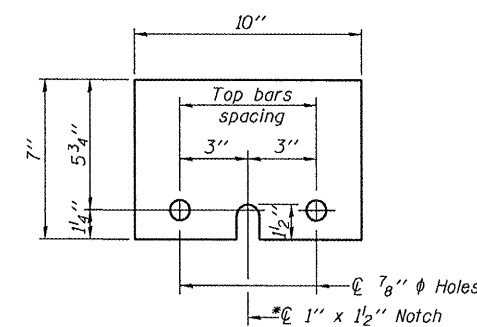


DETAIL I



DETAIL II

**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.



STEEL RETAINER PL 1" x 7" x 10"

* Required only with Detail II

TEMPORARY CONCRETE BARRIER
F.A.P. RAUTE 313 - SECTION (21-HB-11)
KNOX COUNTY
STA. 495+98.72
STRUCTURE NO. 048-0021
STRUCTURE NO. 048-0022

DESIGNED	FT
CHECKED	DPN
DRAWN	Gregory D. Farmer
CHECKED	FT/DPN

April 28 2008
EXAMINED *Thomas J. Demagalki*
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

R-27

9-3-07

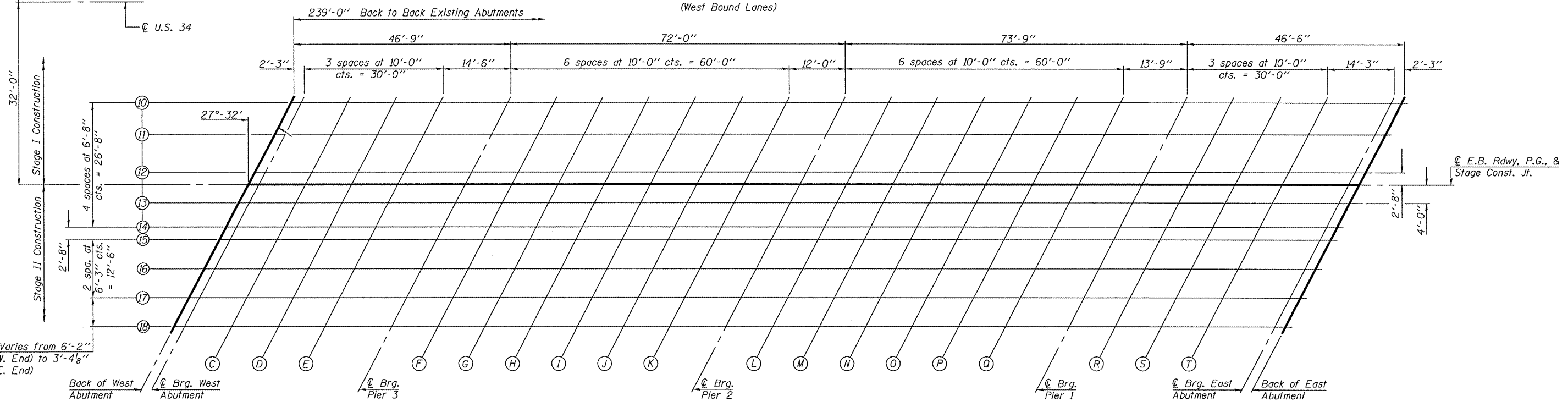
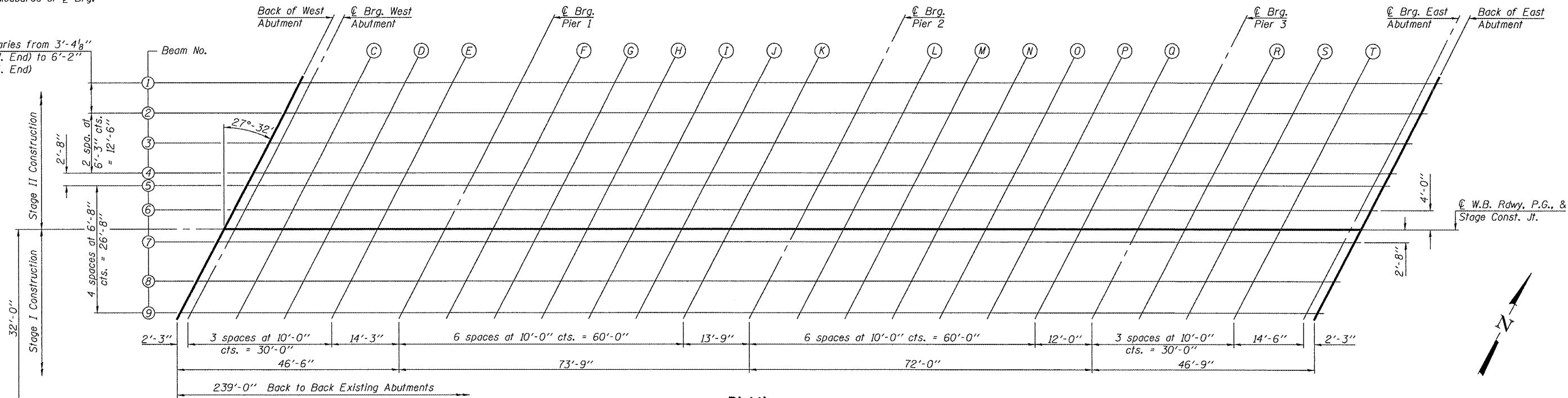
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F.A.P. 313	SECTION (21-HB-11)	COUNTY KNOX	TOTAL SHEETS 55	SHEET NO. 22	SHEET NO. 5 35 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT	

Contract #68216

*Measured at \O Brg.

*Varies from 3'-4 $\frac{1}{8}$ "
(W. End) to 6'-2"
(E. End)



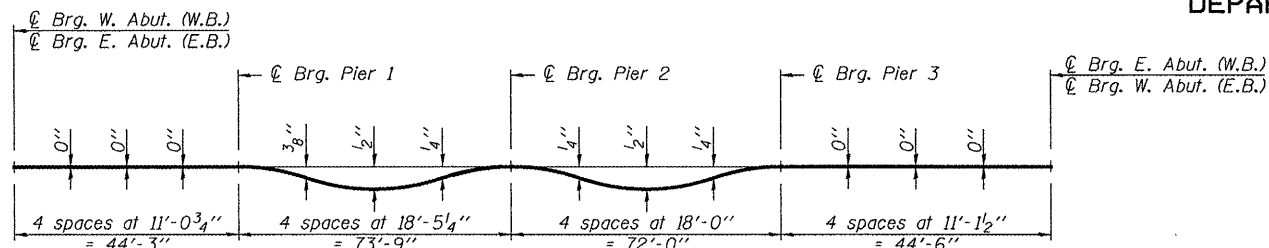
TOP OF SLAB ELEVATIONS
F.A.P. ROUTE 313- SECTION (21-HB-11)
KNOX COUNTY
STA. 495+98.72
STRUCTURE NO. 048-0021
STRUCTURE NO. 048-0022

DESIGNED FT	APRIL 28 2008
CHECKED DPN	EXAMINED <i>Thomas J. Demagallo</i>
DRAWN Gregory D. Farmer	PASSED <i>Ralph E. Anderson</i>
CHECKED FT/DPN	ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO.
F.A.P. 313	(21-HB-11)	KNOX	55 23	35 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Contract #68216

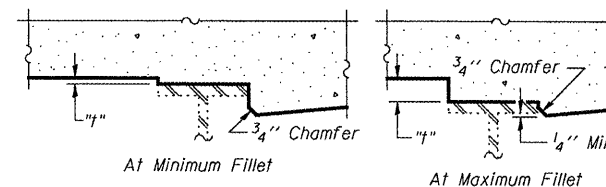


DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note:

The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below and on sheets 7-12 of 35.



To determine "I": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on sheet 5 of 35. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown below and on sheets 7-12 of 35, minus slab thickness, equals the fillet heights "I" above top flange of beams.

FILLET HEIGHTS

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	495+10.35	-29.15	805.51	805.51
⊕ Brg. W. Abut.	495+12.61	-29.18	805.51	805.51
C	495+22.67	-29.30	805.54	805.55
D	495+32.74	-29.42	805.57	805.57
E	495+42.80	-29.54	805.59	805.59
⊕ Brg. Pier 1	495+57.14	-29.71	805.62	805.62
F	495+67.20	-29.83	805.63	805.64
G	495+77.26	-29.95	805.64	805.67
H	495+87.33	-30.07	805.64	805.69
I	495+97.39	-30.19	805.64	805.69
J	496+07.45	-30.31	805.64	805.67
K	496+17.51	-30.43	805.63	805.64
⊕ Brg. Pier 2	496+31.35	-30.60	805.61	805.61
L	496+41.41	-30.72	805.59	805.60
M	496+51.48	-30.84	805.57	805.59
N	496+61.54	-30.96	805.55	805.58
O	496+71.60	-31.08	805.52	805.56
P	496+81.66	-31.20	805.48	805.51
Q	496+91.73	-31.32	805.45	805.46
⊕ Brg. Pier 3	497+03.80	-31.47	805.39	805.39
R	497+13.87	-31.58	805.35	805.35
S	497+23.93	-31.70	805.30	805.30
T	497+33.99	-31.82	805.24	805.25
⊕ Brg. E. Abut.	497+48.58	-32.00	805.16	805.16
Bk. E. Abut.	497+50.84	-32.03	805.14	805.14

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	495+08.62	-25.83	805.57	805.57
⊕ Brg. W. Abut.	495+10.87	-25.83	805.58	805.58
C	495+20.87	-25.83	805.61	805.62
D	495+30.87	-25.83	805.64	805.64
E	495+40.87	-25.83	805.67	805.67
⊕ Brg. Pier 1	495+55.12	-25.83	805.69	805.69
F	495+65.12	-25.83	805.71	805.72
G	495+75.12	-25.83	805.72	805.75
H	495+85.12	-25.83	805.73	805.77
I	495+95.12	-25.83	805.73	805.78
J	496+05.12	-25.83	805.73	805.76
K	496+15.12	-25.83	805.73	805.74
⊕ Brg. Pier 2	496+28.87	-25.83	805.71	805.71
L	496+38.87	-25.83	805.70	805.71
M	496+48.87	-25.83	805.68	805.70
N	496+58.87	-25.83	805.66	805.69
O	496+68.87	-25.83	805.63	805.67
P	496+78.87	-25.83	805.60	805.63
Q	496+88.87	-25.83	805.57	805.59
⊕ Brg. Pier 3	497+00.87	-25.83	805.52	805.52
R	497+10.87	-25.83	805.48	805.48
S	497+20.87	-25.83	805.43	805.44
T	497+30.87	-25.83	805.38	805.39
⊕ Brg. E. Abut.	497+45.37	-25.83	805.30	805.30
Bk. E. Abut.	497+47.62	-25.83	805.29	805.29

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	495+05.36	-19.58	805.69	805.69
⊕ Brg. W. Abut.	495+07.61	-19.58	805.70	805.70
C	495+17.61	-19.58	805.73	805.74
D	495+27.61	-19.58	805.76	805.77
E	495+37.61	-19.58	805.79	805.79
⊕ Brg. Pier 1	495+51.86	-19.58	805.82	805.82
F	495+61.86	-19.58	805.84	805.85
G	495+71.86	-19.58	805.85	805.88
H	495+81.86	-19.58	805.86	805.90
I	495+91.86	-19.58	805.86	805.91
J	496+01.86	-19.58	805.86	805.89
K	496+11.86	-19.58	805.86	805.87
⊕ Brg. Pier 2	496+25.61	-19.58	805.85	805.85
L	496+35.61	-19.58	805.83	805.84
M	496+45.61	-19.58	805.82	805.84
N	496+55.61	-19.58	805.80	805.83
O	496+65.61	-19.58	805.77	805.81
P	496+75.61	-19.58	805.74	805.78
Q	496+85.61	-19.58	805.71	805.73
⊕ Brg. Pier 3	496+97.61	-19.58	805.67	805.67
R	497+07.61	-19.58	805.63	805.63
S	497+17.61	-19.58	805.58	805.58
T	497+27.61	-19.58	805.53	805.54
⊕ Brg. E. Abut.	497+42.11	-19.58	805.45	805.45
Bk. E. Abut.	497+44.36	-19.58	805.44	805.44

DESIGNED FT
CHECKED DPN
DRAWN Gregory D. Farmer
CHECKED FT/DPN

April 28 2008
EXAMINED *Thomas J. Demas*
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

TOP OF SLAB ELEVATIONS
F.A.P. ROUTE 313- SECTION (21-HB-11)
KNOX COUNTY
STA. 495+98.72
STRUCTURE NO. 048-0021
STRUCTURE NO. 048-0022

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	DATE	SHEET	SHEET NO. 7 35 SHEETS
F.A.P. 313	(21-HB-11)	KNOX	55	24	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

Contract #68216

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	495+02.10	-13.33	805.81	805.81
⊕ Brg. W. Abut.	495+04.35	-13.33	805.81	805.81
C	495+14.35	-13.33	805.85	805.85
D	495+24.35	-13.33	805.88	805.89
E	495+34.35	-13.33	805.91	805.91
⊕ Brg. Pier 1	495+48.60	-13.33	805.94	805.94
F	495+58.60	-13.33	805.96	805.97
G	495+68.60	-13.33	805.97	806.01
H	495+78.60	-13.33	805.98	806.03
I	495+88.60	-13.33	805.99	806.03
J	495+98.60	-13.33	805.99	806.02
K	496+08.60	-13.33	805.99	806.01
⊕ Brg. Pier 2	496+22.35	-13.33	805.98	805.98
L	496+32.35	-13.33	805.97	805.98
M	496+42.35	-13.33	805.95	805.98
N	496+52.35	-13.33	805.93	805.97
O	496+62.35	-13.33	805.91	805.95
P	496+72.35	-13.33	805.88	805.92
Q	496+82.35	-13.33	805.85	805.87
⊕ Brg. Pier 3	496+94.35	-13.33	805.81	805.81
R	497+04.35	-13.33	805.77	805.77
S	497+14.35	-13.33	805.73	805.73
T	497+24.35	-13.33	805.68	805.68
⊕ Brg. E. Abut.	497+38.85	-13.33	805.60	805.60
Bk. E. Abut.	497+41.10	-13.33	805.59	805.59

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	495+00.71	-10.67	805.85	805.85
⊕ Brg. W. Abut.	495+02.96	-10.67	805.86	805.86
C	495+12.96	-10.67	805.89	805.90
D	495+22.96	-10.67	805.93	805.93
E	495+32.96	-10.67	805.95	805.95
⊕ Brg. Pier 1	495+47.21	-10.67	805.99	805.99
F	495+57.21	-10.67	806.01	806.02
G	495+67.21	-10.67	806.02	806.05
H	495+77.21	-10.67	806.03	806.08
I	495+87.21	-10.67	806.04	806.08
J	495+97.21	-10.67	806.04	806.07
K	496+07.21	-10.67	806.04	806.05
⊕ Brg. Pier 2	496+20.96	-10.67	806.03	806.03
L	496+30.96	-10.67	806.02	806.03
M	496+40.96	-10.67	806.01	806.03
N	496+50.96	-10.67	805.99	806.02
O	496+60.96	-10.67	805.96	806.00
P	496+70.96	-10.67	805.94	805.97
Q	496+80.96	-10.67	805.91	805.92
⊕ Brg. Pier 3	496+92.96	-10.67	805.86	805.86
R	497+02.96	-10.67	805.82	805.82
S	497+12.96	-10.67	805.78	805.78
T	497+22.96	-10.67	805.73	805.74
⊕ Brg. E. Abut.	497+37.46	-10.67	805.66	805.66
Bk. E. Abut.	497+39.71	-10.67	805.64	805.64

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	494+97.24	-4.00	805.94	805.94
⊕ Brg. W. Abut.	494+99.49	-4.00	805.95	805.95
C	495+09.49	-4.00	805.99	805.99
D	495+19.49	-4.00	806.02	806.02
E	495+29.49	-4.00	806.05	806.05
⊕ Brg. Pier 1	495+43.74	-4.00	806.08	806.08
F	495+53.74	-4.00	806.10	806.12
G	495+63.74	-4.00	806.12	806.15
H	495+73.74	-4.00	806.13	806.18
I	495+83.74	-4.00	806.14	806.18
J	495+93.74	-4.00	806.14	806.18
K	496+03.74	-4.00	806.14	806.16
⊕ Brg. Pier 2	496+17.49	-4.00	806.14	806.14
L	496+27.49	-4.00	806.13	806.14
M	496+37.49	-4.00	806.12	806.14
N	496+47.49	-4.00	806.10	806.13
O	496+57.49	-4.00	806.08	806.11
P	496+67.49	-4.00	806.05	806.08
Q	496+77.49	-4.00	806.02	806.04
⊕ Brg. Pier 3	496+89.49	-4.00	805.98	805.98
R	496+99.49	-4.00	805.94	805.94
S	497+09.49	-4.00	805.90	805.90
T	497+19.49	-4.00	805.85	805.86
⊕ Brg. E. Abut.	497+33.99	-4.00	805.78	805.78
Bk. E. Abut.	497+36.24	-4.00	805.77	805.77

DESIGNED FT
CHECKED DPN
DRAWN Gregory D. Farmer
CHECKED FT/DPN

April 28 2008
 EXAMINED *Thomas J. Demagali*
 PRINCIPAL ENGINEER OF BRIDGE DESIGN
 PASSED *Ralph E. Anderson*
 ENGINEER OF BRIDGES AND STRUCTURES

TOP OF SLAB ELEVATIONS
 F.A.P. ROUTE 313- SECTION (21-HB-11)
 KNOX COUNTY
 STA. 495+98.72
 STRUCTURE NO. 048-0021
 STRUCTURE NO. 048-0022

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET	SHEET NO.
F.A.P. 313	(21-HB-11)	KNOX	55	25	35 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #68216

W.B. RDWY., P.G., & STAGE CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	494+95.15	0.00	805.99	805.99
⊕ Brg. W. Abut.	494+97.40	0.00	806.00	806.00
C	495+07.40	0.00	806.04	806.05
D	495+17.40	0.00	806.08	806.08
E	495+27.40	0.00	806.11	806.11
⊕ Brg. Pier 1	495+41.65	0.00	806.14	806.14
F	495+51.65	0.00	806.16	806.18
G	495+61.65	0.00	806.18	806.21
H	495+71.65	0.00	806.19	806.24
I	495+81.65	0.00	806.20	806.25
J	495+91.65	0.00	806.21	806.24
K	496+01.65	0.00	806.21	806.22
⊕ Brg. Pier 2	496+15.40	0.00	806.20	806.20
L	496+25.40	0.00	806.19	806.20
M	496+35.40	0.00	806.18	806.20
N	496+45.40	0.00	806.16	806.20
O	496+55.40	0.00	806.14	806.18
P	496+65.40	0.00	806.12	806.15
Q	496+75.40	0.00	806.09	806.11
⊕ Brg. Pier 3	496+87.40	0.00	806.05	806.05
R	496+97.40	0.00	806.01	806.01
S	497+07.40	0.00	805.97	805.98
T	497+17.40	0.00	805.93	805.93
⊕ Brg. E. Abut.	497+31.90	0.00	805.85	805.85
Bk. E. Abut.	497+34.15	0.00	805.84	805.84

BEAM 7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	494+93.76	2.67	805.95	805.95
⊕ Brg. W. Abut.	494+96.01	2.67	805.96	805.96
C	495+06.01	2.67	805.99	806.00
D	495+16.01	2.67	806.03	806.03
E	495+26.01	2.67	806.06	806.06
⊕ Brg. Pier 1	495+40.26	2.67	806.10	806.10
F	495+50.26	2.67	806.12	806.13
G	495+60.26	2.67	806.14	806.17
H	495+70.26	2.67	806.15	806.19
I	495+80.26	2.67	806.16	806.20
J	495+90.26	2.67	806.16	806.20
K	496+00.26	2.67	806.17	806.18
⊕ Brg. Pier 2	496+14.01	2.67	806.16	806.16
L	496+24.01	2.67	806.15	806.16
M	496+34.01	2.67	806.14	806.16
N	496+44.01	2.67	806.12	806.16
O	496+54.01	2.67	806.10	806.14
P	496+64.01	2.67	806.08	806.11
Q	496+74.01	2.67	806.05	806.07
⊕ Brg. Pier 3	496+86.01	2.67	806.01	806.01
R	496+96.01	2.67	805.98	805.98
S	497+06.01	2.67	805.94	805.94
T	497+16.01	2.67	805.89	805.90
⊕ Brg. E. Abut.	497+30.51	2.67	805.82	805.82
Bk. E. Abut.	497+32.76	2.67	805.81	805.81

BEAM 8

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	494+90.28	9.33	805.83	805.83
⊕ Brg. W. Abut.	494+92.53	9.33	805.84	805.84
C	495+02.53	9.33	805.88	805.88
D	495+12.53	9.33	805.91	805.92
E	495+22.53	9.33	805.95	805.95
⊕ Brg. Pier 1	495+36.78	9.33	805.99	805.99
F	495+46.78	9.33	806.01	806.02
G	495+56.78	9.33	806.03	806.06
H	495+66.78	9.33	806.04	806.09
I	495+76.78	9.33	806.05	806.10
J	495+86.78	9.33	806.06	806.09
K	495+96.78	9.33	806.06	806.08
⊕ Brg. Pier 2	496+10.53	9.33	806.06	806.06
L	496+20.53	9.33	806.05	806.06
M	496+30.53	9.33	806.04	806.06
N	496+40.53	9.33	806.03	806.06
O	496+50.53	9.33	806.01	806.05
P	496+60.53	9.33	805.99	806.02
Q	496+70.53	9.33	805.96	805.98
⊕ Brg. Pier 3	496+82.53	9.33	805.92	805.92
R	496+92.53	9.33	805.89	805.89
S	497+02.53	9.33	805.85	805.85
T	497+12.53	9.33	805.80	805.81
⊕ Brg. E. Abut.	497+27.03	9.33	805.73	805.73
Bk. E. Abut.	497+29.28	9.33	805.72	805.72

DESIGNED FT	April 28 2008
CHECKED DPN	EXAMINED <i>Thomas J. Demas</i>
DRAWN Gregory D. Farmer	PASSED <i>Ralph E. Carlson</i>
CHECKED FT/DPN	

TOP OF SLAB ELEVATIONS
F.A.P. ROUTE 313- SECTION (21-HB-11)
KNOX COUNTY
STA. 495+98.72
STRUCTURE NO. 048-0021
STRUCTURE NO. 048-0022

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 9 35 SHEETS
F.A.P. 313	(21-HB-1)1	KNOX	55	26	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #68216

BEAM 9

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	494+86.81	16.00	805.69	805.69
⊕ Brg. W. Abut.	494+89.06	16.00	805.70	805.70
C	494+99.06	16.00	805.74	805.74
D	495+09.06	16.00	805.78	805.78
E	495+19.06	16.00	805.81	805.81
⊕ Brg. Pier 1	495+33.31	16.00	805.85	805.85
F	495+43.31	16.00	805.88	805.89
G	495+53.31	16.00	805.90	805.93
H	495+63.31	16.00	805.91	805.96
I	495+73.31	16.00	805.92	805.97
J	495+83.31	16.00	805.93	805.96
K	495+93.31	16.00	805.94	805.95
⊕ Brg. Pier 2	496+07.06	16.00	805.94	805.94
L	496+17.06	16.00	805.93	805.94
M	496+27.06	16.00	805.92	805.94
N	496+37.06	16.00	805.91	805.94
O	496+47.06	16.00	805.89	805.93
P	496+57.06	16.00	805.87	805.90
Q	496+67.06	16.00	805.84	805.86
⊕ Brg. Pier 3	496+79.06	16.00	805.81	805.81
R	496+89.06	16.00	805.77	805.77
S	496+99.06	16.00	805.74	805.74
T	497+09.06	16.00	805.69	805.70
⊕ Brg. E. Abut.	497+23.56	16.00	805.63	805.63
Bk. E. Abut.	497+25.81	16.00	805.61	805.61

BEAM 10

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	494+71.63	-16.00	805.62	805.62
⊕ Brg. W. Abut.	494+73.88	-16.00	805.63	805.63
C	494+83.88	-16.00	805.67	805.68
D	494+93.88	-16.00	805.72	805.72
E	495+03.88	-16.00	805.76	805.76
⊕ Brg. Pier 3	495+18.38	-16.00	805.81	805.81
F	495+28.38	-16.00	805.84	805.85
G	495+38.38	-16.00	805.86	805.89
H	495+48.38	-16.00	805.89	805.92
I	495+58.38	-16.00	805.90	805.94
J	495+68.38	-16.00	805.92	805.94
K	495+78.38	-16.00	805.93	805.94
⊕ Brg. Pier 2	495+90.38	-16.00	805.94	805.94
L	496+00.38	-16.00	805.94	805.95
M	496+10.38	-16.00	805.93	805.96
N	496+20.38	-16.00	805.93	805.97
O	496+30.38	-16.00	805.92	805.96
P	496+40.38	-16.00	805.90	805.94
Q	496+50.38	-16.00	805.88	805.91
⊕ Brg. Pier 1	496+64.13	-16.00	805.85	805.85
R	496+74.13	-16.00	805.82	805.82
S	496+84.13	-16.00	805.79	805.79
T	496+94.13	-16.00	805.76	805.76
⊕ Brg. E. Abut.	497+08.38	-16.00	805.70	805.70
Bk. E. Abut.	497+10.63	-16.00	805.69	805.69

BEAM 11

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	494+68.16	-9.33	805.72	805.72
⊕ Brg. W. Abut.	494+70.41	-9.33	805.73	805.74
C	494+80.41	-9.33	805.78	805.79
D	494+90.41	-9.33	805.83	805.83
E	495+00.41	-9.33	805.87	805.87
⊕ Brg. Pier 3	495+14.91	-9.33	805.92	805.92
F	495+24.91	-9.33	805.95	805.97
G	495+34.91	-9.33	805.98	806.01
H	495+44.91	-9.33	806.00	806.04
I	495+54.91	-9.33	806.02	806.06
J	495+64.91	-9.33	806.04	806.06
K	495+74.91	-9.33	806.05	806.06
⊕ Brg. Pier 2	495+86.91	-9.33	806.06	806.06
L	495+96.91	-9.33	806.06	806.07
M	496+06.91	-9.33	806.06	806.09
N	496+16.91	-9.33	806.06	806.10
O	496+26.91	-9.33	806.05	806.09
P	496+36.91	-9.33	806.03	806.07
Q	496+46.91	-9.33	806.02	806.04
⊕ Brg. Pier 1	496+60.66	-9.33	805.99	805.99
R	496+70.66	-9.33	805.96	805.96
S	496+80.66	-9.33	805.93	805.93
T	496+90.66	-9.33	805.89	805.90
⊕ Brg. E. Abut.	497+04.91	-9.33	805.84	805.84
Bk. E. Abut.	497+07.16	-9.33	805.83	805.83

DESIGNED FT	April 28 2008
CHECKED DPN	EXAMINED <i>Thomas J. Demagalki</i>
DRAWN Gregory D. Farmer	PASSED <i>Ralph E. Anderson</i>
CHECKED FT/DPN	

TOP OF SLAB ELEVATIONS
F.A.P. ROUTE 313- SECTION (21-HB-1)1
KNOX COUNTY
STA. 495+98.72
STRUCTURE NO. 048-0021
STRUCTURE NO. 048-0022

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
F.A.P. 313	(21-HB-11)	KNOX	55	27
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	35 SHEETS	

Contract #68216

BEAM 12

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	494+64.68	-2.67	805.81	805.81
⊕ Brg. W. Abut.	494+66.93	-2.67	805.82	805.82
C	494+76.93	-2.67	805.87	805.88
D	494+86.93	-2.67	805.92	805.92
E	494+96.93	-2.67	805.96	805.96
⊕ Brg. Pier 3	495+11.43	-2.67	806.01	806.01
F	495+21.43	-2.67	806.05	806.06
G	495+31.43	-2.67	806.08	806.10
H	495+41.43	-2.67	806.10	806.14
I	495+51.43	-2.67	806.12	806.16
J	495+61.43	-2.67	806.14	806.16
K	495+71.43	-2.67	806.15	806.16
⊕ Brg. Pier 2	495+83.43	-2.67	806.16	806.16
L	495+93.43	-2.67	806.17	806.17
M	496+03.43	-2.67	806.17	806.19
N	496+13.43	-2.67	806.16	806.20
O	496+23.43	-2.67	806.15	806.20
P	496+33.43	-2.67	806.14	806.18
Q	496+43.43	-2.67	806.13	806.15
⊕ Brg. Pier 1	496+57.18	-2.67	806.10	806.10
R	496+67.18	-2.67	806.07	806.07
S	496+77.18	-2.67	806.04	806.05
T	496+87.18	-2.67	806.01	806.01
⊕ Brg. E. Abut.	497+01.43	-2.67	805.96	805.96
Bk. E. Abut.	497+03.68	-2.67	805.95	805.95

⊕ E.B. RDWY., P.G., & STAGE CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	494+63.29	0.00	805.84	805.84
⊕ Brg. W. Abut.	494+65.54	0.00	805.85	805.86
C	494+75.54	0.00	805.91	805.91
D	494+85.54	0.00	805.95	805.95
E	494+95.54	0.00	806.00	806.00
⊕ Brg. Pier 3	495+10.04	0.00	806.05	806.05
F	495+20.04	0.00	806.08	806.10
G	495+30.04	0.00	806.11	806.14
H	495+40.04	0.00	806.14	806.18
I	495+50.04	0.00	806.16	806.20
J	495+60.04	0.00	806.18	806.20
K	495+70.04	0.00	806.19	806.20
⊕ Brg. Pier 2	495+82.04	0.00	806.20	806.20
L	495+92.04	0.00	806.21	806.22
M	496+02.04	0.00	806.21	806.23
N	496+12.04	0.00	806.20	806.25
O	496+22.04	0.00	806.20	806.24
P	496+32.04	0.00	806.19	806.22
Q	496+42.04	0.00	806.17	806.19
⊕ Brg. Pier 1	496+55.79	0.00	806.14	806.14
R	496+65.79	0.00	806.12	806.12
S	496+75.79	0.00	806.09	806.09
T	496+85.79	0.00	806.06	806.06
⊕ Brg. E. Abut.	497+00.04	0.00	806.00	806.00
Bk. E. Abut.	497+02.29	0.00	805.99	805.99

BEAM 13

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	494+61.20	4.00	805.77	805.77
⊕ Brg. W. Abut.	494+63.45	4.00	805.78	805.79
C	494+73.45	4.00	805.83	805.84
D	494+83.45	4.00	805.88	805.88
E	494+93.45	4.00	805.92	805.92
⊕ Brg. Pier 3	495+07.95	4.00	805.98	805.98
F	495+17.95	4.00	806.02	806.03
G	495+27.95	4.00	806.05	806.07
H	495+37.95	4.00	806.07	806.11
I	495+47.95	4.00	806.09	806.13
J	495+57.95	4.00	806.11	806.14
K	495+67.95	4.00	806.13	806.14
⊕ Brg. Pier 2	495+79.95	4.00	806.14	806.14
L	495+89.95	4.00	806.14	806.15
M	495+99.95	4.00	806.15	806.17
N	496+09.95	4.00	806.14	806.18
O	496+19.95	4.00	806.14	806.18
P	496+29.95	4.00	806.13	806.16
Q	496+39.95	4.00	806.11	806.13
⊕ Brg. Pier 1	496+53.70	4.00	806.08	806.08
R	496+63.70	4.00	806.06	806.06
S	496+73.70	4.00	806.03	806.04
T	496+83.70	4.00	806.00	806.01
⊕ Brg. E. Abut.	496+97.95	4.00	805.95	805.95
Bk. E. Abut.	497+00.20	4.00	805.94	805.94

DESIGNED FT	
CHECKED DPN	
DRAWN Gregory D. Farmer	
CHECKED FT/DPN	

April 28 2008
 EXAMINED *Thomas J. Demagala*
 PASSED *Ralph E. Anderson*
 ENGINEER OF BRIDGES AND STRUCTURES

TOP OF SLAB ELEVATIONS
F.A.P. ROUTE 313- SECTION (21-HB-11)
KNOX COUNTY
STA. 495+98.72
STRUCTURE NO. 048-0021
STRUCTURE NO. 048-0022

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 313	(21-HB-1)I	KNOX	55	28
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	35 SHEETS	

Contract #68216

BEAM 14

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	494+57.73	10.67	805.64	805.64
⊕ Brg. W. Abut.	494+59.98	10.67	805.66	805.66
C	494+69.98	10.67	805.71	805.72
D	494+79.98	10.67	805.76	805.76
E	494+89.98	10.67	805.81	805.81
⊕ Brg. Pier 3	495+04.48	10.67	805.86	805.86
F	495+14.48	10.67	805.90	805.91
G	495+24.48	10.67	805.93	805.96
H	495+34.48	10.67	805.96	806.00
I	495+44.48	10.67	805.98	806.02
J	495+54.48	10.67	806.00	806.03
K	495+64.48	10.67	806.02	806.03
⊕ Brg. Pier 2	495+76.48	10.67	806.03	806.03
L	495+86.48	10.67	806.04	806.05
M	495+96.48	10.67	806.04	806.07
N	496+06.48	10.67	806.04	806.08
O	496+16.48	10.67	806.03	806.08
P	496+26.48	10.67	806.03	806.06
Q	496+36.48	10.67	806.01	806.03
⊕ Brg. Pier 1	496+50.23	10.67	805.99	805.99
R	496+60.23	10.67	805.97	805.96
S	496+70.23	10.67	805.94	805.94
T	496+80.23	10.67	805.91	805.91
⊕ Brg. E. Abut.	496+94.48	10.67	805.86	805.86
Bk. E. Abut.	496+96.73	10.67	805.85	805.85

BEAM 15

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	494+56.34	13.33	805.59	805.59
⊕ Brg. W. Abut.	494+58.59	13.33	805.60	805.61
C	494+68.59	13.33	805.65	805.66
D	494+78.59	13.33	805.70	805.71
E	494+88.59	13.33	805.75	805.75
⊕ Brg. Pier 3	495+03.09	13.33	805.81	805.81
F	495+13.09	13.33	805.85	805.86
G	495+23.09	13.33	805.88	805.91
H	495+33.09	13.33	805.91	805.94
I	495+43.09	13.33	805.93	805.97
J	495+53.09	13.33	805.95	805.98
K	495+63.09	13.33	805.97	805.98
⊕ Brg. Pier 2	495+75.09	13.33	805.98	805.98
L	495+85.09	13.33	805.99	806.00
M	495+95.09	13.33	805.99	806.02
N	496+05.09	13.33	805.99	806.03
O	496+15.09	13.33	805.99	806.03
P	496+25.09	13.33	805.98	806.02
Q	496+35.09	13.33	805.97	805.99
⊕ Brg. Pier 1	496+48.84	13.33	805.94	805.94
R	496+58.84	13.33	805.92	805.92
S	496+68.84	13.33	805.89	805.90
T	496+78.84	13.33	805.86	805.87
⊕ Brg. E. Abut.	496+93.09	13.33	805.81	805.81
Bk. E. Abut.	496+95.34	13.33	805.81	805.81

BEAM 16

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	494+53.08	19.58	805.44	805.44
⊕ Brg. W. Abut.	494+55.33	19.58	805.45	805.46
C	494+65.33	19.58	805.51	805.51
D	494+75.33	19.58	805.56	805.56
E	494+85.33	19.58	805.61	805.61
⊕ Brg. Pier 3	494+99.83	19.58	805.67	805.67
F	495+09.83	19.58	805.70	805.72
G	495+19.83	19.58	805.74	805.77
H	495+29.83	19.58	805.77	805.81
I	495+39.83	19.58	805.79	805.83
J	495+49.83	19.58	805.81	805.84
K	495+59.83	19.58	805.83	805.84
⊕ Brg. Pier 2	495+71.83	19.58	805.85	805.85
L	495+81.83	19.58	805.86	805.87
M	495+91.83	19.58	805.86	805.89
N	496+01.83	19.58	805.86	805.90
O	496+11.83	19.58	805.86	805.90
P	496+21.83	19.58	805.85	805.89
Q	496+31.83	19.58	805.84	805.86
⊕ Brg. Pier 1	496+45.58	19.58	805.82	805.82
R	496+55.58	19.58	805.80	805.80
S	496+65.58	19.58	805.77	805.78
T	496+75.58	19.58	805.74	805.75
⊕ Brg. E. Abut.	496+89.83	19.58	805.70	805.70
Bk. E. Abut.	496+92.08	19.58	805.69	805.69

DESIGNED FT
CHECKED DPN
DRAWN Gregory D. Farmer
CHECKED FT/DPN

April 28 2008
 EXAMINED *Thomas J. Demagala*
 ENGINEER OF BRIDGE DESIGN
 PASSED *Ralph E. Anderson*
 ENGINEER OF BRIDGES AND STRUCTURES

TOP OF SLAB ELEVATIONS
F.A.P. ROUTE 313- SECTION (21-HB-1)I
KNOX COUNTY
STA. 495+98.72
STRUCTURE NO. 048-0021
STRUCTURE NO. 048-0022

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
F.A.P. 313	(21-HB-11)	KNOX	55 29	35 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

Contract #68216

BEAM 17

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	494+49.82	25.83	805.29	805.29
⊕ Brg. W. Abut.	494+52.07	25.83	805.30	805.31
C	494+62.07	25.83	805.36	805.37
D	494+72.07	25.83	805.41	805.41
E	494+82.07	25.83	805.46	805.46
⊕ Brg. Pier 3	494+96.57	25.83	805.52	805.52
F	495+06.57	25.83	805.56	805.58
G	495+16.57	25.83	805.60	805.63
H	495+26.57	25.83	805.63	805.67
I	495+36.57	25.83	805.65	805.69
J	495+46.57	25.83	805.68	805.70
K	495+56.57	25.83	805.70	805.71
⊕ Brg. Pier 2	495+68.57	25.83	805.71	805.71
L	495+78.57	25.83	805.72	805.73
M	495+88.57	25.83	805.73	805.76
N	495+98.57	25.83	805.73	805.77
O	496+08.57	25.83	805.73	805.78
P	496+18.57	25.83	805.72	805.76
Q	496+28.57	25.83	805.71	805.74
⊕ Brg. Pier 1	496+42.32	25.83	805.69	805.69
R	496+52.32	25.83	805.67	805.67
S	496+62.32	25.83	805.65	805.65
T	496+72.32	25.83	805.62	805.63
⊕ Brg. E. Abut.	496+86.57	25.83	805.58	805.58
Bk. E. Abut.	496+88.82	25.83	805.57	805.57

BEAM 18

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	494+46.60	32.03	805.14	805.14
⊕ Brg. W. Abut.	494+48.86	32.00	805.16	805.16
C	494+58.92	31.88	805.22	805.22
D	494+68.98	31.76	805.27	805.27
E	494+79.05	31.64	805.32	805.32
⊕ Brg. Pier 3	494+93.64	31.47	805.39	805.39
F	495+03.70	31.35	805.44	805.45
G	495+13.76	31.23	805.48	805.50
H	495+23.83	31.11	805.51	805.55
I	495+33.89	30.99	805.54	805.58
J	495+43.95	30.87	805.57	805.59
K	495+54.01	30.75	805.59	805.60
⊕ Brg. Pier 2	495+66.09	30.60	805.61	805.61
L	495+76.15	30.48	805.62	805.63
M	495+86.21	30.36	805.63	805.66
N	495+96.28	30.24	805.64	805.68
O	496+06.34	30.12	805.64	805.69
P	496+16.40	30.00	805.64	805.68
Q	496+26.47	29.88	805.63	805.65
⊕ Brg. Pier 1	496+40.30	29.71	805.62	805.62
R	496+50.37	29.59	805.60	805.60
S	496+60.43	29.47	805.58	805.58
T	496+70.49	29.35	805.56	805.56
⊕ Brg. E. Abut.	496+84.83	29.18	805.51	805.51
Bk. E. Abut.	496+87.09	29.15	805.51	805.51

DESIGNED FT	April 28 2008
CHECKED DPN	EXAMINED <i>Thomas J. Donagallo</i>
DRAWN Gregory D. Farmer	PASSED <i>Ralph E. Anderson</i>
CHECKED FT/DPN	

EXAMINED *Thomas J. Donagallo*
ENGINEER OF BRIDGE DESIGN
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

TOP OF SLAB ELEVATIONS
F.A.P. ROUTE 313- SECTION (21-HB-11)
KNOX COUNTY
STA. 495+98.72
STRUCTURE NO. 048-0021
STRUCTURE NO. 048-0022

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.	SHEET NO. 13 35 SHEETS
F.A.P. 313	(21-HB-11)	KNOX	55	30	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #68216

NORTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
End of W. Appr. Pavement	494+82.34	-31.17	805.35
A	494+92.34	-31.17	805.40
B	495+02.34	-31.17	805.44
Begin. of W. Appr. Pavement	495+12.34	-31.17	805.47

NORTH EDGE OF EXTERIOR TRAFFIC LANE

Location	Station	Offset	Theoretical Grade Elevations
End of W. Appr. Pavement	494+79.19	-25.14	805.46
A	494+89.19	-25.14	805.51
B	494+99.19	-25.14	805.55
Begin. of W. Appr. Pavement	495+09.19	-25.14	805.59

NORTH EDGE OF INTERIOR TRAFFIC LANE

Location	Station	Offset	Theoretical Grade Elevations
End of W. Appr. Pavement	494+72.35	-12.00	805.70
A	494+82.35	-12.00	805.75
B	494+92.35	-12.00	805.79
Begin. of W. Appr. Pavement	495+02.35	-12.00	805.84

W.B. RDWY., P.G., & STAGE CONSTRUCTION JOINT

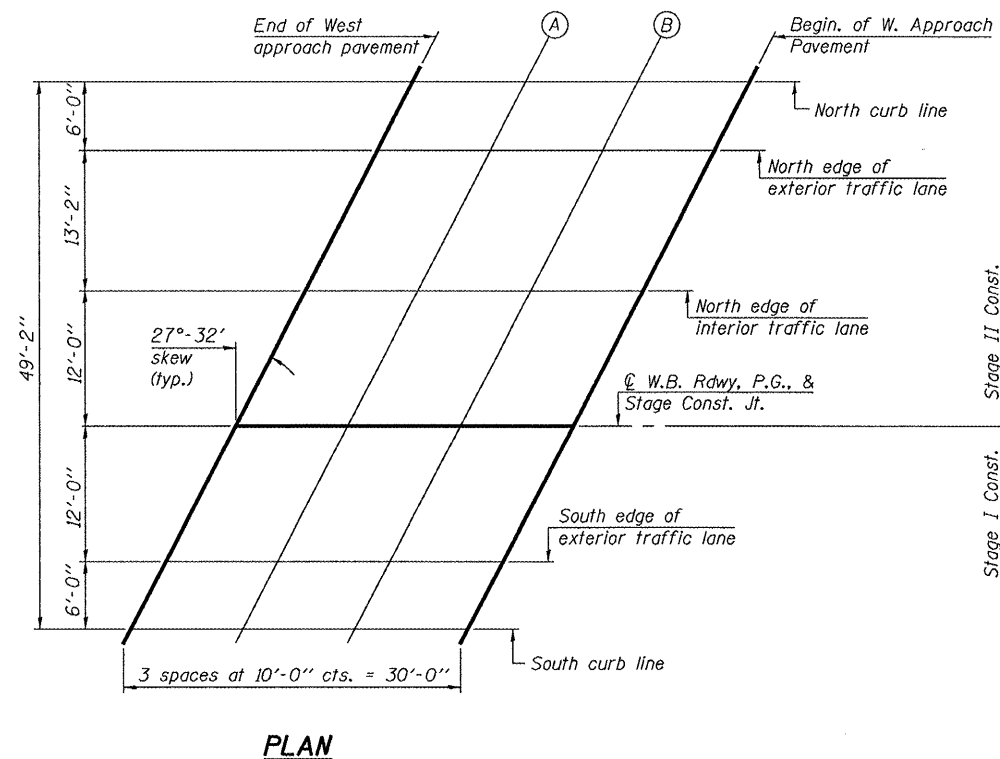
Location	Station	Offset	Theoretical Grade Elevations
End of W. Appr. Pavement	494+66.09	0.00	805.86
A	494+76.09	0.00	805.91
B	494+86.09	0.00	805.95
Begin. of W. Appr. Pavement	494+96.09	0.00	806.00

SOUTH EDGE OF EXTERIOR TRAFFIC LANE

Location	Station	Offset	Theoretical Grade Elevations
End of W. Appr. Pavement	494+59.83	12.00	805.64
A	494+69.83	12.00	805.69
B	494+79.83	12.00	805.74
Begin. of W. Appr. Pavement	494+89.83	12.00	805.78

SOUTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
End of W. Appr. Pavement	494+56.71	18.00	805.49
A	494+66.71	18.00	805.55
B	494+76.71	18.00	805.60
Begin. of W. Appr. Pavement	494+86.71	18.00	805.65



DESIGNED FT	April 28 2008
CHECKED DPN	EXAMINED <i>Thomas J. Demagali</i>
DRAWN Gregory D. Farmer	PASSED <i>Ralph C. Anderson</i>
CHECKED FT/DPN	

TOP OF WEST APPROACH SLAB ELEVATIONS (W.B.)
F.A.P. ROUTE 313 - SECTION (21-HB-11)
KNOX COUNTY
STA. 495+98.72
STRUCTURE NO. 048-0021
STRUCTURE NO. 048-0022

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET	SHEET NO.
F.A.P. 313	(21-HB-1)I	KNOX	55	31	35 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #68216

NORTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
End of W. Appr. Pavement	494+43.61	-18.00	805.42
A	494+53.61	-18.00	805.48
B	494+63.61	-18.00	805.53
Begin. of W. Appr. Pavement	494+73.61	-18.00	805.58

NORTH EDGE OF EXTERIOR TRAFFIC LANE

Location	Station	Offset	Theoretical Grade Elevations
End of W. Appr. Pavement	494+40.49	-12.00	805.52
A	494+50.49	-12.00	805.58
B	494+60.49	-12.00	805.64
Begin. of W. Appr. Pavement	494+70.49	-12.00	805.69

☉ E.B. RDWY., P.G., & STAGE CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations
End of W. Appr. Pavement	494+34.23	0.00	805.67
A	494+44.23	0.00	805.73
B	494+54.23	0.00	805.79
Begin. of W. Appr. Pavement	494+64.23	0.00	805.85

SOUTH EDGE OF INTERIOR TRAFFIC LANE

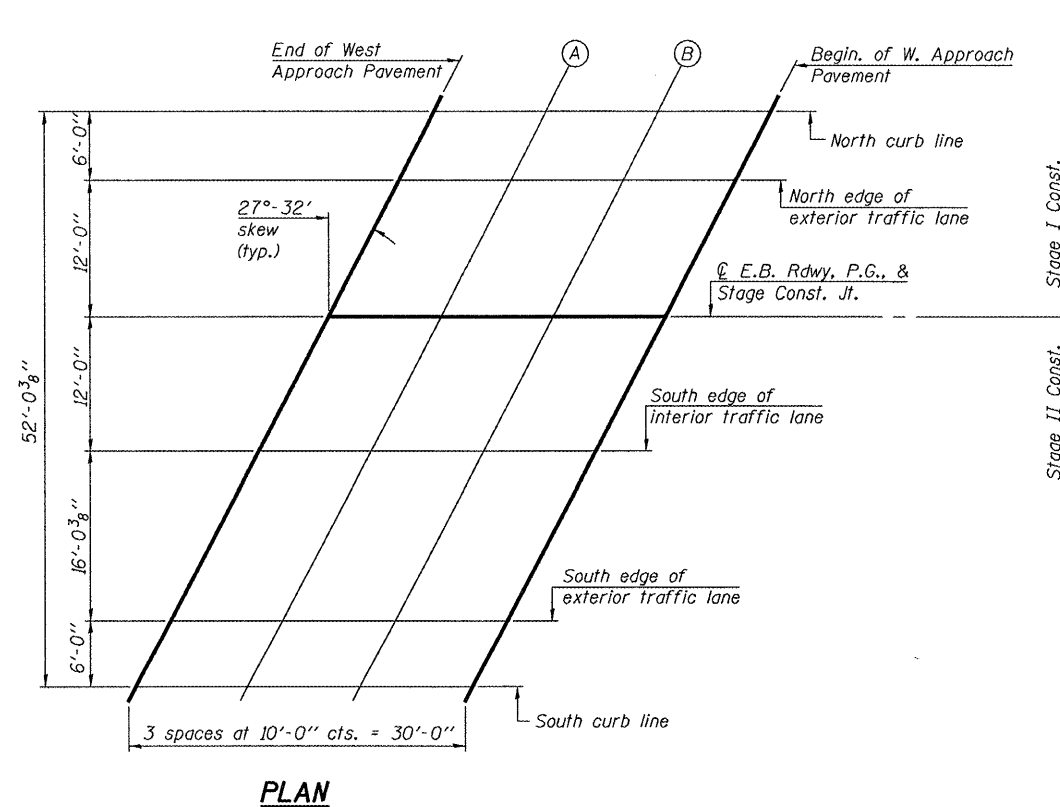
Location	Station	Offset	Theoretical Grade Elevations
End of W. Appr. Pavement	494+27.97	12.00	805.44
A	494+37.97	12.00	805.51
B	494+47.97	12.00	805.57
Begin. of W. Appr. Pavement	494+57.97	12.00	805.63

SOUTH EDGE OF EXTERIOR TRAFFIC LANE

Location	Station	Offset	Theoretical Grade Elevations
End of W. Appr. Pavement	494+19.64	27.99	805.05
A	494+29.64	27.99	805.12
B	494+39.64	27.99	805.18
Begin. of W. Appr. Pavement	494+49.64	27.99	805.24

SOUTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
End of W. Appr. Pavement	494+16.49	34.03	804.90
A	494+26.49	34.03	804.97
B	494+36.49	34.03	805.04
Begin. of W. Appr. Pavement	494+46.49	34.03	805.10



PLAN

DESIGNED	FT
CHECKED	DPN
DRAWN	Gregory D. Farmer
CHECKED	FT/DPN

April 28 2008
 EXAMINED *Thomas J. Demagala*
 PASSED *Ralph E. Anderson*
 ENGINEER OF BRIDGES AND STRUCTURES

TOP OF WEST APPROACH SLAB ELEVATIONS (E.B.)

F.A.P. ROUTE 313 - SECTION (21-HB-1)I

KNOX COUNTY

STA. 495+98.72

STRUCTURE NO. 048-0021

STRUCTURE NO. 048-0022

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	POST MILE	SHEET NO.	SHEET NO.
F.A.P. 313	(21-HB-DI)	KNOX	55	32	35 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #68216

NORTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
Begin. of E. Appr. Pavement	497+50.95	-34.03	805.10
U	497+60.95	-34.03	805.04
V	497+70.95	-34.03	804.97
End of E. Appr. Pavement	497+80.95	-34.03	804.90

NORTH EDGE OF EXTERIOR TRAFFIC LANE

Location	Station	Offset	Theoretical Grade Elevations
Begin. of E. Appr. Pavement	497+47.80	-27.99	805.24
U	497+57.80	-27.99	805.18
V	497+67.80	-27.99	805.12
End of E. Appr. Pavement	497+77.80	-27.99	805.05

NORTH EDGE OF INTERIOR TRAFFIC LANE

Location	Station	Offset	Theoretical Grade Elevations
Begin. of E. Appr. Pavement	497+39.47	-12.00	805.63
U	497+49.47	-12.00	805.57
V	497+59.47	-12.00	805.51
End of E. Appr. Pavement	497+69.47	-12.00	805.44

W.B. RDWY., P.G., & STAGE CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations
Begin. of E. Appr. Pavement	497+33.21	0.00	805.85
U	497+43.21	0.00	805.79
V	497+53.21	0.00	805.73
End of E. Appr. Pavement	497+63.21	0.00	805.67

SOUTH EDGE OF EXTERIOR TRAFFIC LANE

Location	Station	Offset	Theoretical Grade Elevations
Begin. of E. Appr. Pavement	497+26.95	12.00	805.69
U	497+36.95	12.00	805.64
V	497+46.95	12.00	805.58
End of E. Appr. Pavement	497+56.95	12.00	805.52

SOUTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
Begin. of E. Appr. Pavement	497+23.83	18.00	805.58
U	497+33.83	18.00	805.53
V	497+43.83	18.00	805.48
End of E. Appr. Pavement	497+53.83	18.00	805.42

TOP OF EAST APPROACH SLAB ELEVATIONS (W.B.)

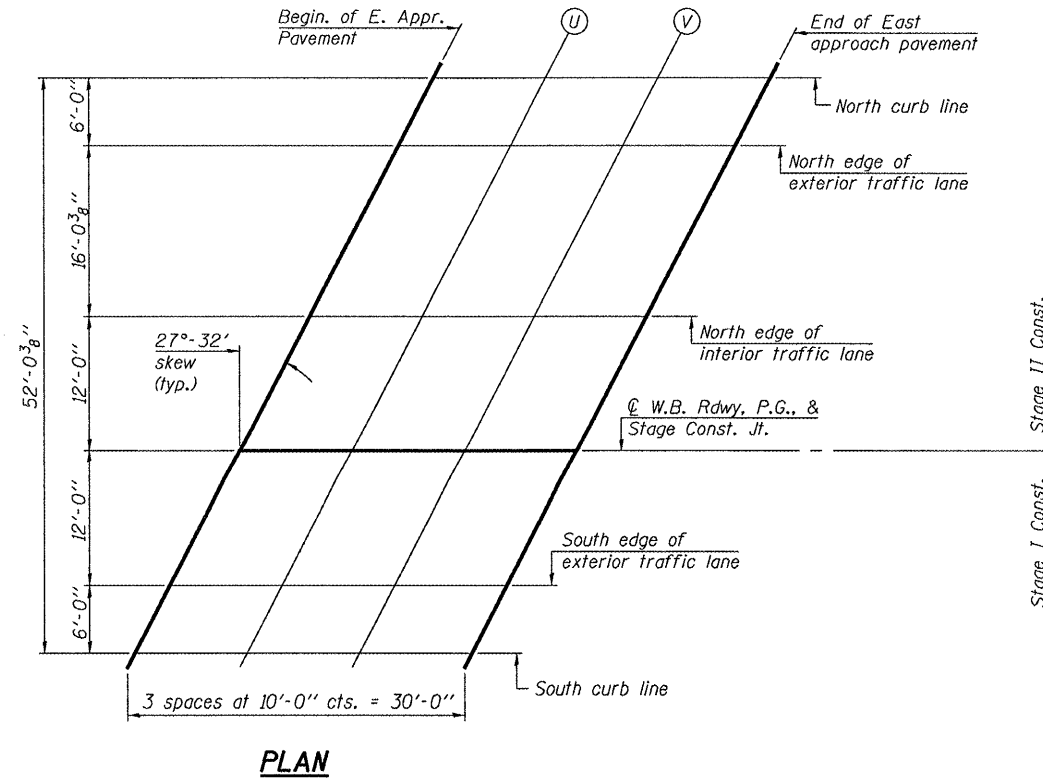
F.A.P. ROUTE 313 - SECTION (21-HB-DI)

KNOX COUNTY

STA. 495+98.72

STRUCTURE NO. 048-0021

STRUCTURE NO. 048-0022



DESIGNED FT	April 28, 2008
CHECKED DPN	
DRAWN Gregory D. Farmer	
CHECKED FT/DPN	

EXAMINED *Thomas J. Donagalli*
 PASSED *Ralph E. Anderson*
 ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO.
F.A.P. 313	(21-HB-II)	KNOX	55	33
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

Contract #68216

NORTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
Begin. of E. Appr. Pavement	497+10.73	-18.00	805.64
U	497+20.73	-18.00	805.60
V	497+30.73	-18.00	805.55
End of E. Appr. Pavement	497+40.73	-18.00	805.49

NORTH EDGE OF EXTERIOR TRAFFIC LANE

Location	Station	Offset	Theoretical Grade Elevations
Begin. of E. Appr. Pavement	497+07.61	-12.00	805.78
U	497+17.61	-12.00	805.74
V	497+27.61	-12.00	805.69
End of E. Appr. Pavement	497+37.61	-12.00	805.64

☉ E.B. RDWY., P.G., & STAGE CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations
Begin. of E. Appr. Pavement	497+01.35	0.00	806.00
U	497+11.35	0.00	805.96
V	497+21.35	0.00	805.91
End of E. Appr. Pavement	497+31.35	0.00	805.86

SOUTH EDGE OF INTERIOR TRAFFIC LANE

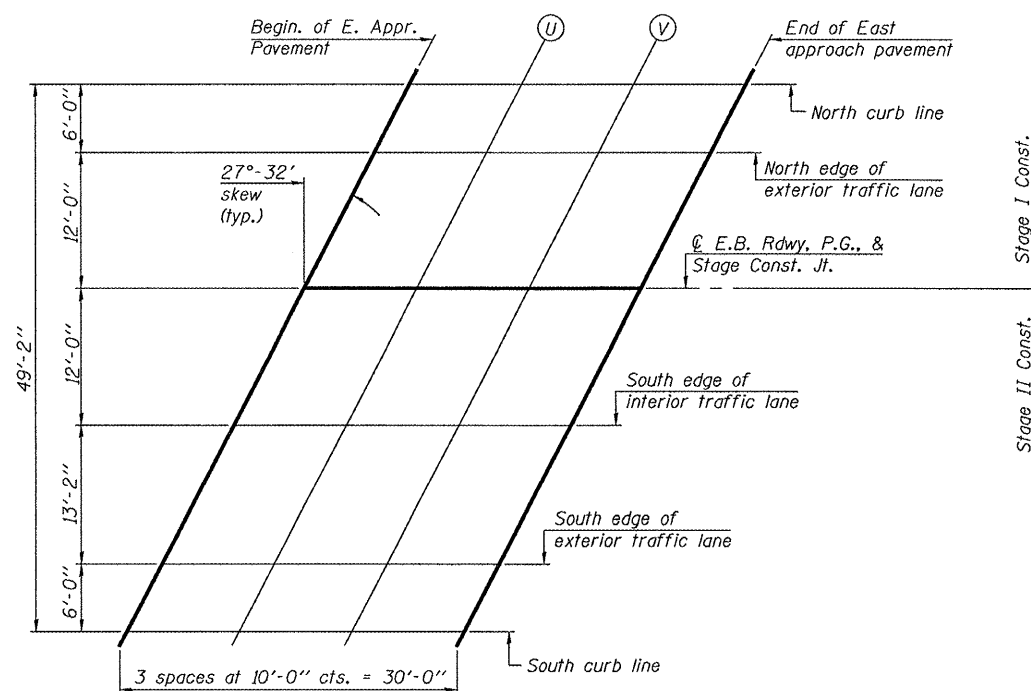
Location	Station	Offset	Theoretical Grade Elevations
Begin. of E. Appr. Pavement	496+95.09	12.00	805.84
U	497+05.09	12.00	805.80
V	497+15.09	12.00	805.75
End of E. Appr. Pavement	497+25.09	12.00	805.70

SOUTH EDGE OF EXTERIOR TRAFFIC LANE

Location	Station	Offset	Theoretical Grade Elevations
Begin. of E. Appr. Pavement	496+88.25	25.14	805.59
U	496+98.25	25.14	805.55
V	497+08.25	25.14	805.51
End of E. Appr. Pavement	497+18.25	25.14	805.46

SOUTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
Begin. of E. Appr. Pavement	496+85.10	31.17	805.47
U	496+95.10	31.17	805.44
V	497+05.10	31.17	805.39
End of E. Appr. Pavement	497+15.10	31.17	805.35



PLAN

DESIGNED FT
CHECKED DPN
DRAWN Gregory D. Farmer
CHECKED FT/DPN

April 28 2008
 EXAMINED *Thomas J. Donagalli*
 PASSED *Ralph E. Carlson*
 ENGINEER OF BRIDGES AND STRUCTURES

TOP OF EAST APPROACH SLAB ELEVATIONS (E.B.)

F.A.P. ROUTE 313 - SECTION (21-HB-II)

KNOX COUNTY

STA. 495+98.72

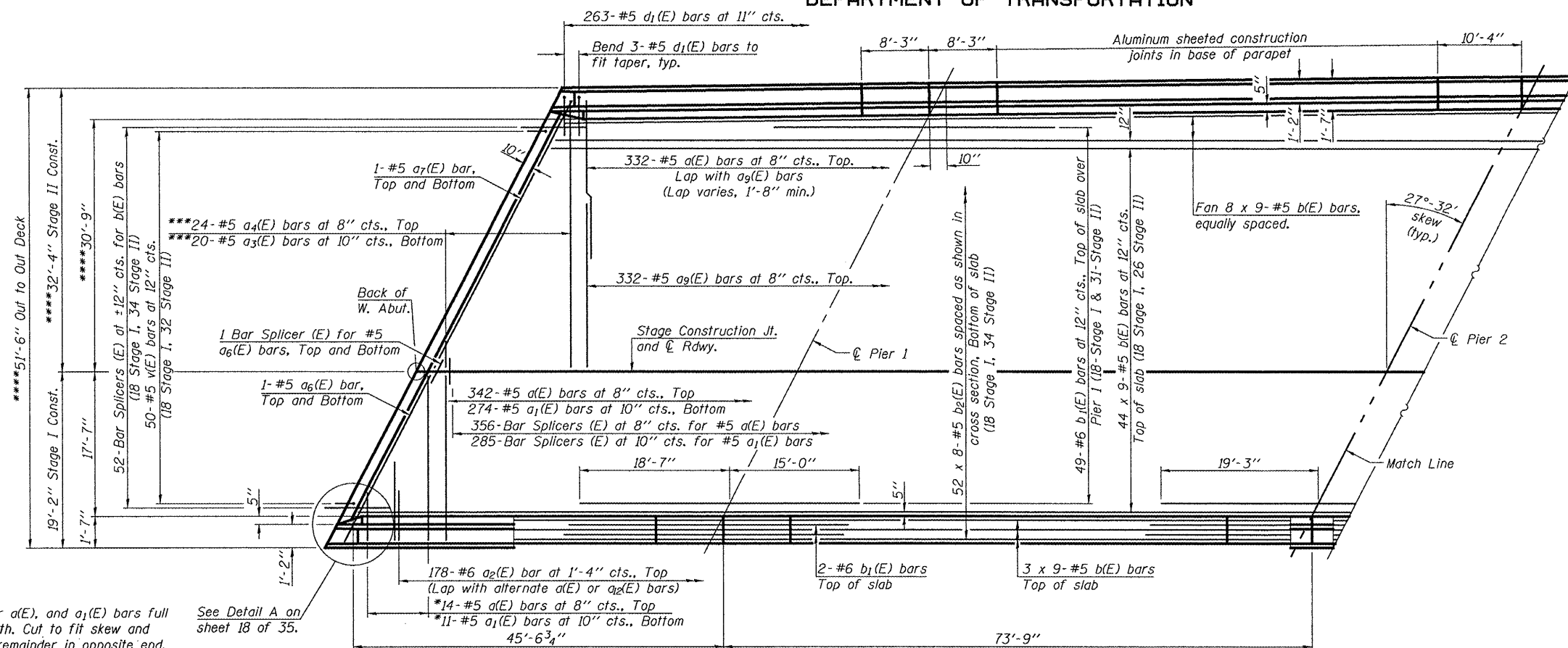
STRUCTURE NO. 048-0021

STRUCTURE NO. 048-0022

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F.A.P. 313	SECTION (21-HB-11)	COUNTY KNOX	SHEET NO. 55	SHEET NO. 34	SHEET NO. 17 35 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

Contract #68216



MINIMUM BAR LAP
#5 bar = 1'-8"

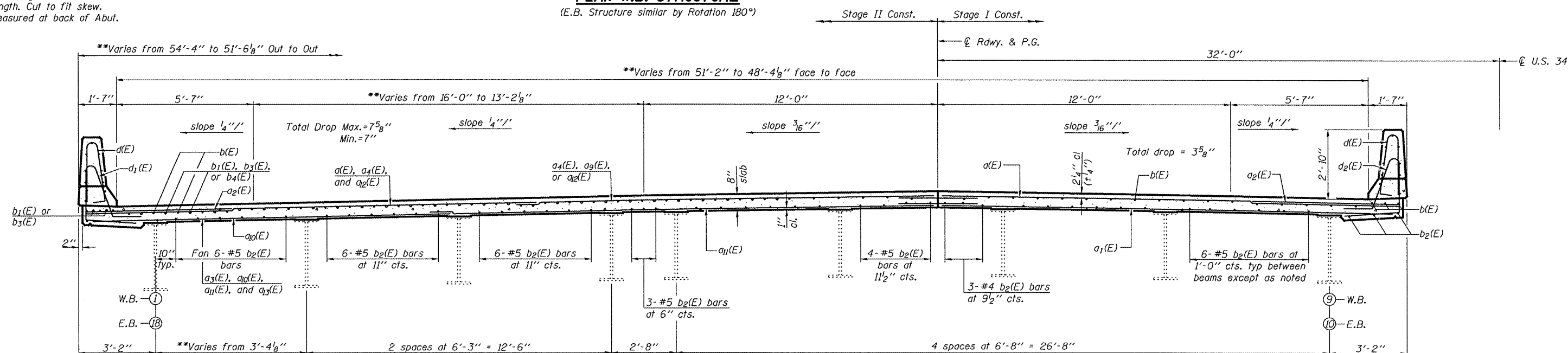
Notes: See sheet 19 of 35 for superstructure details and Bill of Material.
Bars indicated thus 52 x 8-#5 etc. indicates 52 lines of bars with 8 lengths per line.
See sheets 20 & 21 of 35 for Parapet reinforcement
See sheet 22 of 35 for diaphragm details.

*Order a(E), and a₁(E) bars full length. Cut to fit skew and use remainder in opposite end.
**Order a₃(E) and a₄(E) bars full length. Cut to fit skew.
***Measured at back of Abut.

See Detail A on sheet 18 of 35.

PLAN-W.B. STRUCTURE

(E.B. Structure similar by Rotation 180°)



CROSS SECTION

W.B. Looking East
E.B. Looking West

**Measured at ϕ bearing

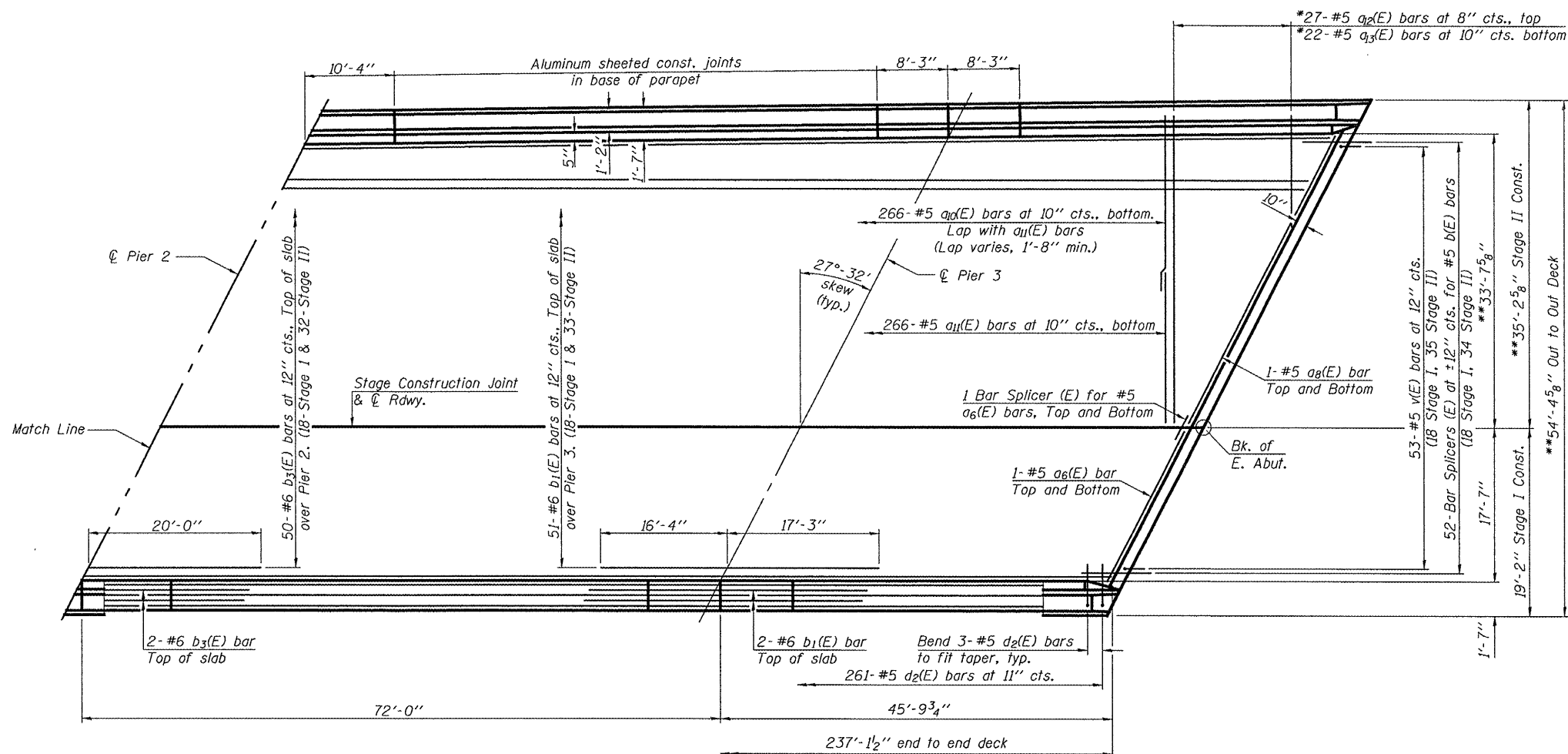
DESIGNED FT	April 28 2008
CHECKED DPN	EXAMINED <i>Thomas J. Donagalli</i>
DRAWN Gregory D. Farmer	PASSED <i>Ralph E. Anderson</i>
CHECKED FT/DPN	ENGINEER OF BRIDGES AND STRUCTURES

SUPERSTRUCTURE
F.A.P. ROUTE 313 - SECTION (21-HB-11)
KNOX COUNTY
STA. 495+98.72
STRUCTURE NO. 048-0021
STRUCTURE NO. 048-0022

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 18
F.A.P. 313	(21-HB-11)	KNOX	55	35	35 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

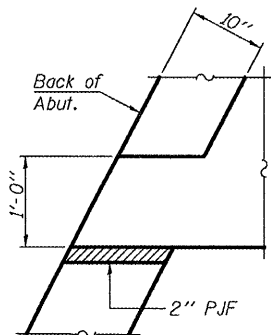
Contract #68216



Notes: See sheet 19 of 35 for superstructure details and Bill of Material.
See sheets 20 & 21 of 35 for Parapet reinforcement
See sheet 22 of 35 for diaphragm details.

PLAN-W.B. STRUCTURE
(East Bound Structure similar by rotation 180°)

MINIMUM BAR LAP
#5 bar = 1'-8"



DETAIL A
Parapet and approach not shown.
Detail shown at South West corner of the West Bound Bridge, and the North East corner of the East Bound Bridge. The rest of the corners are similar.

*Order a2(E) and a3(E) bar full length.
Cut to fit skew.
**Measured at back of Abutment

DESIGNED	FT
CHECKED	DPN
DRAWN	Gregory D. Farmer
CHECKED	FT/DPN

April 28 2008
EXAMINED *Thomas J. Demagala*
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

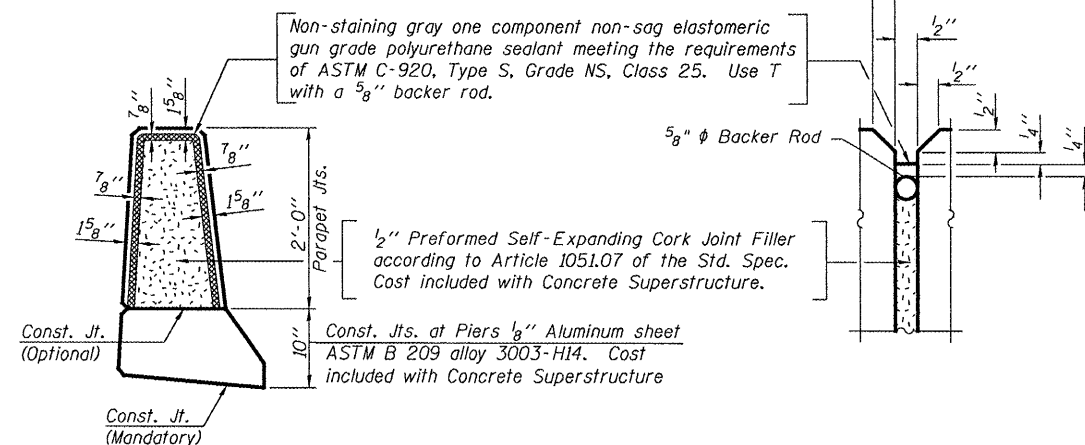
SUPERSTRUCTURE DETAILS
F.A.P. ROUTE 313 - SECTION (21-HB-11)
KNOX COUNTY
STA. 495+98.72
STRUCTURE NO. 048-0021
STRUCTURE NO. 048-0022

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO.
F.A.P. 313	(21-HB-11)	KNOX	55	36
FED. ROAD DIST. NO. 7		BLINDS	FED. AID PROJECT	35 SHEETS
Contract #68216				

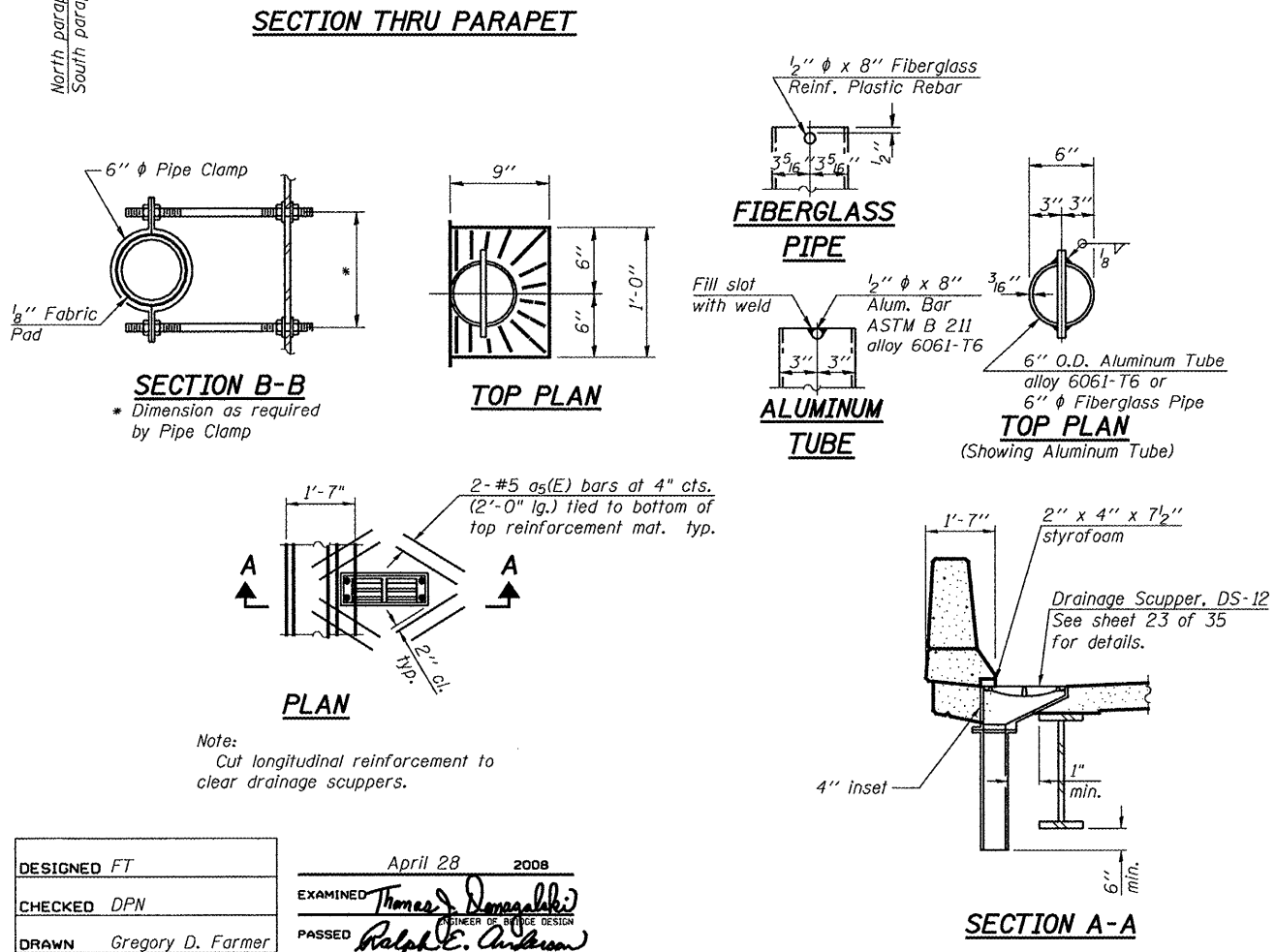
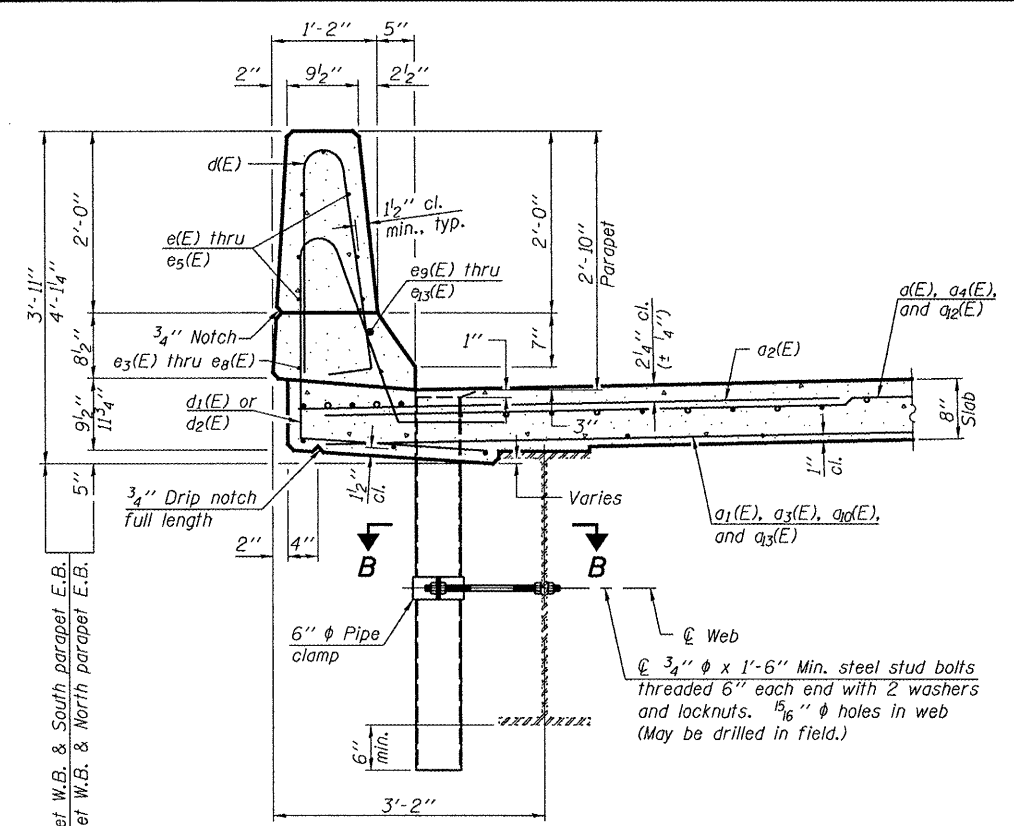
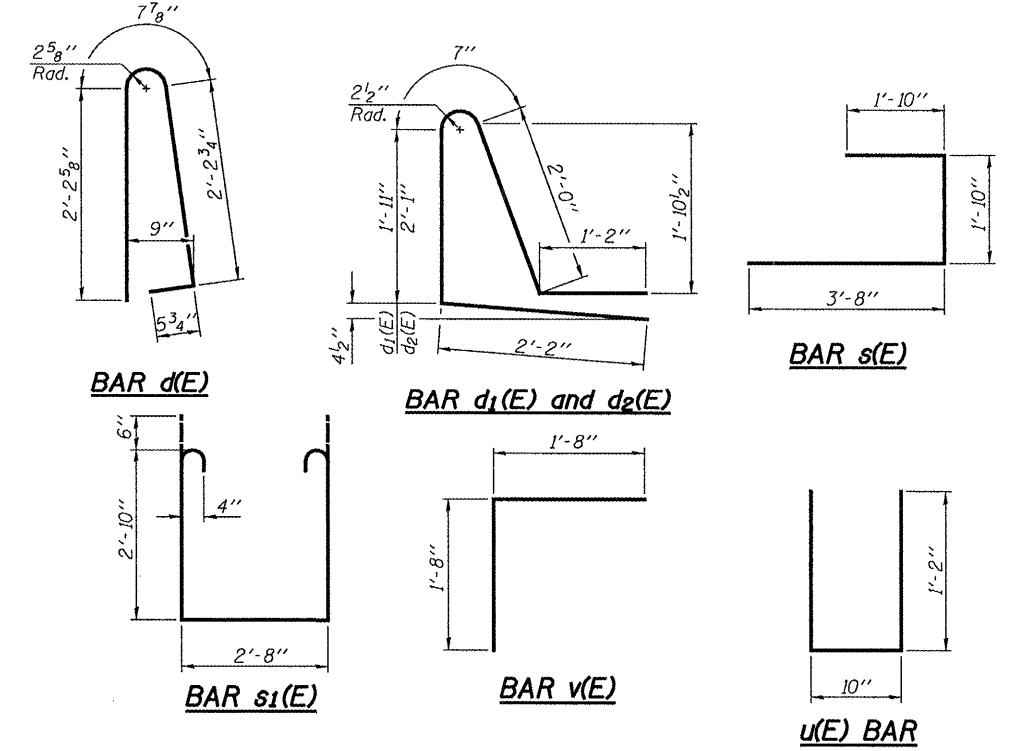
TWO SUPERSTRUCTURES
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	1376	#5	18'-8"	
a1(E)	570	#5	18'-5"	
a2(E)	712	#6	6'-0"	
a3(E)	40	#5	30'-9"	
a4(E)	48	#5	31'-0"	
a5(E)	32	#5	2'-0"	
a6(E)	8	#5	21'-1"	
a7(E)	4	#5	35'-11"	
a8(E)	4	#5	39'-2"	
a9(E)	664	#5	18'-1"	
a10(E)	532	#5	21'-3"	
a11(E)	532	#5	16'-8"	
a12(E)	54	#5	33'-10"	
a13(E)	44	#5	33'-7"	
b(E)	1044	#5	28'-0"	
b1(E)	216	#6	33'-7"	
b2(E)	832	#5	31'-3"	
b3(E)	108	#6	39'-3"	
d(E)	1040	#5	5'-7"	
d1(E)	526	#5	7'-10"	
d2(E)	522	#5	8'-0"	
e(E)	84	#4	18'-10"	
e1(E)	84	#4	18'-1"	
e2(E)	84	#4	17'-6"	
e3(E)	64	#4	10'-1"	
e4(E)	128	#4	8'-0"	
e5(E)	28	#4	19'-1"	
e6(E)	16	#4	19'-9"	
e7(E)	8	#4	27'-5"	
e8(E)	8	#4	28'-4"	
e9(E)	16	#8	20'-10"	
e10(E)	16	#8	8'-0"	
e11(E)	8	#8	28'-6"	
e12(E)	8	#8	10'-1"	
e13(E)	8	#8	29'-4"	
m(E)	24	#6	10'-3"	
m1(E)	20	#6	21'-0"	
m2(E)	12	#6	7'-2"	
m3(E)	16	#6	3'-0"	
m4(E)	4	#6	4'-2"	
m5(E)	10	#6	35'-11"	
m6(E)	10	#6	39'-2"	
m7(E)	12	#6	9'-9"	
m8(E)	4	#6	6'-6"	
m9(E)	2	#6	3'-4"	
m10(E)	2	#6	6'-8"	
m11(E)	8	#6	11'-0"	
m12(E)	10	#6	35'-0"	
m13(E)	10	#6	38'-3"	
m14(E)	20	#6	20'-2"	
m15(E)	8	#6	13'-5"	
s(E)	226	#5	7'-4"	
s1(E)	198	#4	9'-4"	
u(E)	218	#5	3'-2"	
v(E)	206	#5	3'-4"	
Reinforcement Bars, Epoxy Coated		Pound	190850	
Concrete Superstructure		Cu. Yds.	907.5	



PARAPET JOINT DETAILS

Notes:
The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting Existing Steel Structures. The exterior surfaces of the drains shall be cleaned according to Steel Structures Painting Council's Spec. SSPC-SP1 prior to painting.
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.



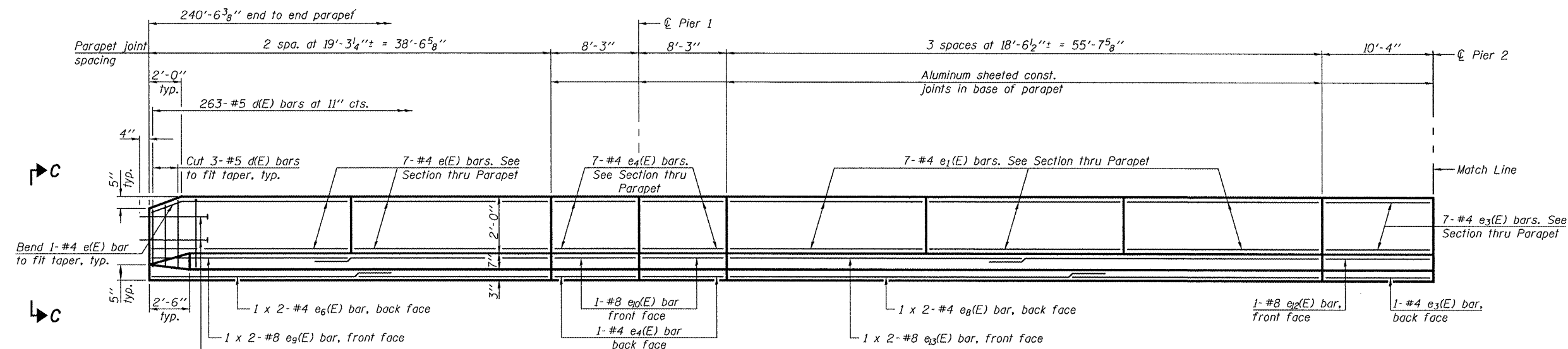
DESIGNED FT	April 28 2008
CHECKED DPN	EXAMINED <i>Thomas J. Donaghy</i>
DRAWN Gregory D. Farmer	PASSED <i>Ralph E. Anderson</i>
CHECKED FT/DPN	

SUPERSTRUCTURE DETAILS
F.A.P. ROUTE 313 - SECTION (21-HB-11)
KNOX COUNTY
STA. 495+98.72
STRUCTURE NO. 048-0021
STRUCTURE NO. 048-0022

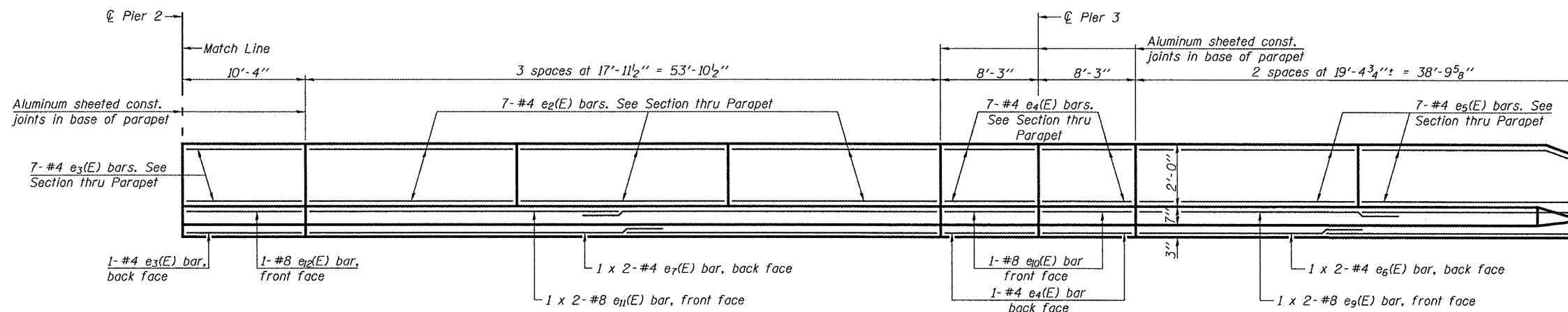
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	STATION	SHEET NO.	SHEET NO.
F.A.P. 313	(21-HB-DI)	KNOX	55	37	35 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

Contract #68216



1" ϕ x 3'-6" Anchor Bolts at this end of North Parapet (W.B.) and South Parapet (E.B.) only. Cost included with Concrete Superstructure on sheet 19 of 35.

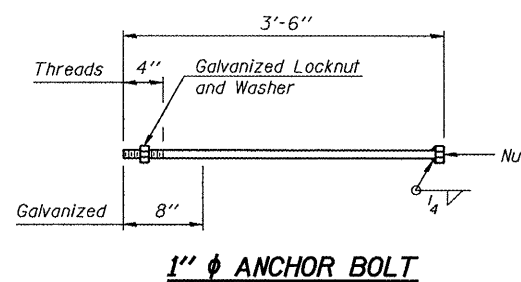
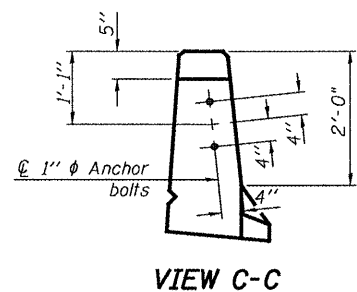


INSIDE ELEVATION OF PARAPET

North Parapet (W.B.) shown.
South Parapet (E.B.) similar by 180° rotation.

MINIMUM BAR LAP

(Parapet)
#4 bar = 1'-4"
#8 bar = 3'-5"



DESIGNED	FT
CHECKED	DPN
DRAWN	Gregory D. Farmer
CHECKED	FT/DPN

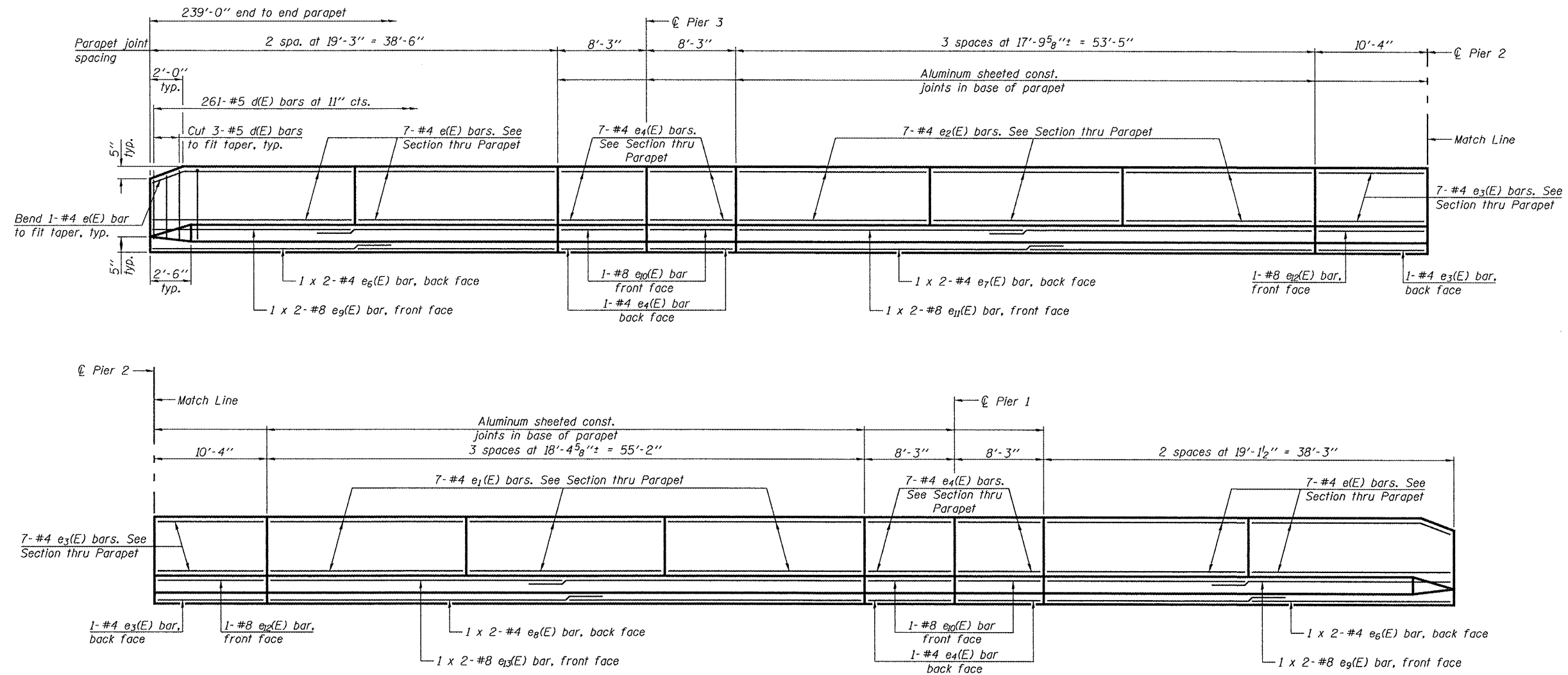
April 28 2008
EXAMINED *Thomas J. Donagallo*
PASSED *Ralph E. Anderson*
PRINCIPAL ENGINEER
ENGINEER OF BRIDGES AND STRUCTURES

SUPERSTRUCTURE DETAILS
F.A.P. ROUTE 313 - SECTION (21-HB-DI)
KNOX COUNTY
STA. 495+98.72
STRUCTURE NO. 048-0021
STRUCTURE NO. 048-0022

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F.A.P. 313	SECTION (21-HB-1)I	COUNTY KNOX	SHEET 55	SHEET 38	SHEET NO. 21 35 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT-	

Contract #68216



INSIDE ELEVATION OF PARAPET

South Parapet (W.B.) shown.
North Parapet (E.B.) similar by 180° rotation.

MINIMUM BAR LAP

(Parapet)
#4 bar = 1'-4"
#8 bar = 3'-5"

DESIGNED FT
CHECKED DPN
DRAWN Gregory D. Farmer
CHECKED FT/DPN

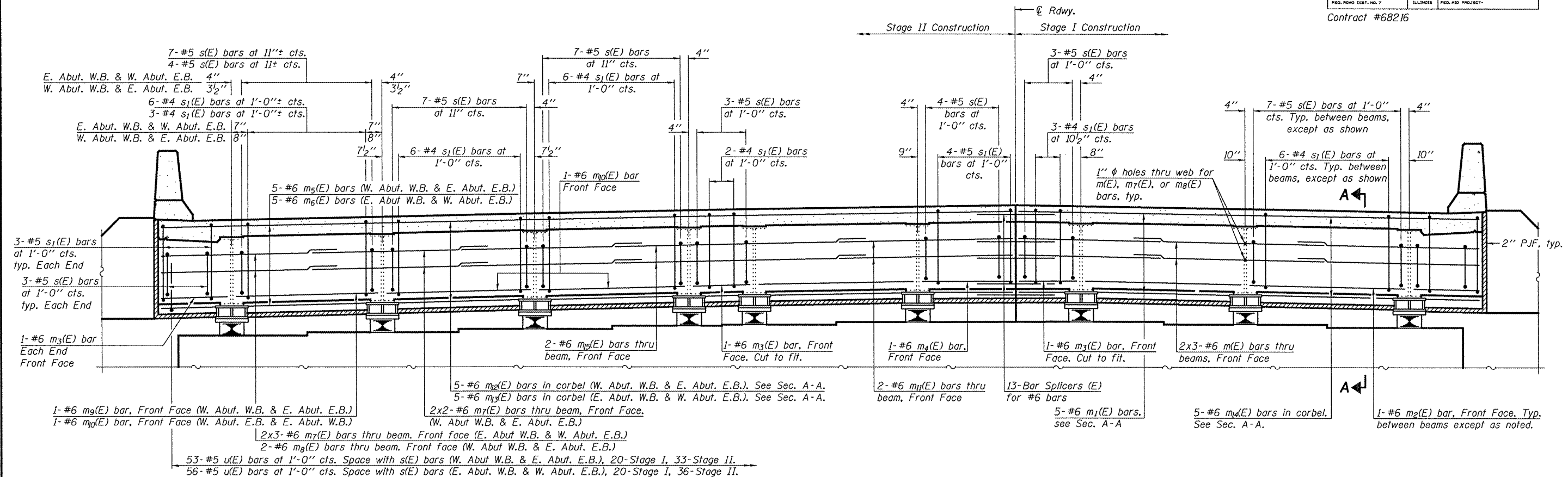
April 28 2008
EXAMINED *Thomas J. Demagallo*
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

SUPERSTRUCTURE DETAILS
F.A.P. ROUTE 313 - SECTION (21-HB-1)I
KNOX COUNTY
STA. 495+98.72
STRUCTURE NO. 048-0021
STRUCTURE NO. 048-0022

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET	SHEET NO. 22
F.A.P. 313	(21-HB-11)	KNOX	55	39	35 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

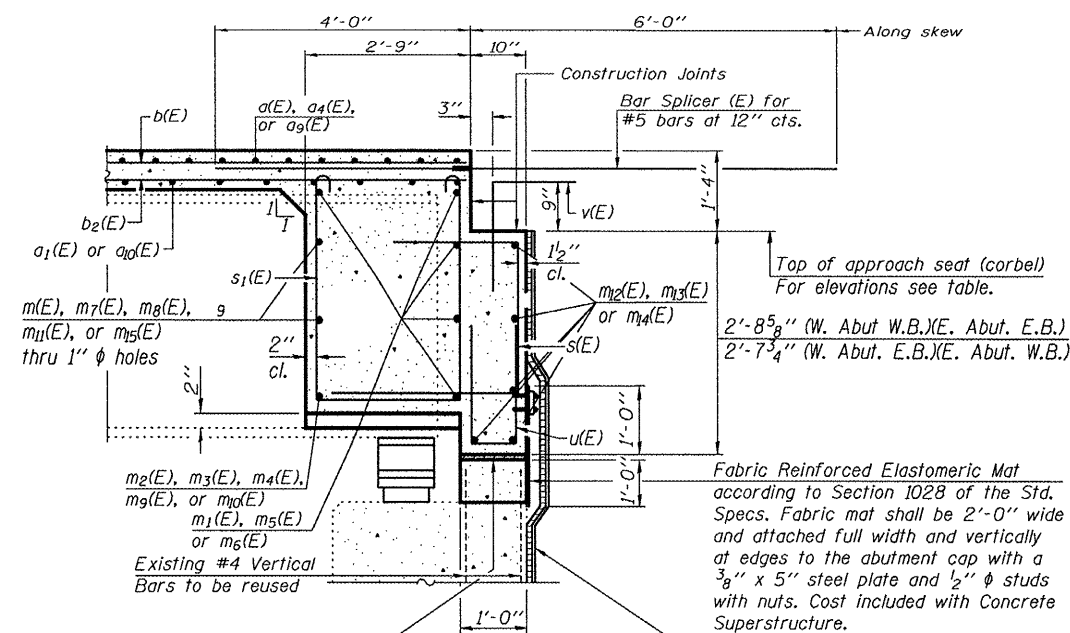
Contract #68216



DIAPHRAGM ELEVATION AT ABUTMENTS
(Looking East at East Abutment W.B. shown, other locations similar, except as noted)
(Side retainers adjacent to bearings not shown for clarity)

TOP OF CORBEL ELEVATION AT BACK OF ABUTMENT

Location	W.B. Structure	E.B. Structure
West Abutment		
North Edge of Parapet	804.15	804.26
⊙ Roadway & P.G.	804.66	804.51
South Edge of Parapet	804.32	803.77
East Abutment		
North Edge of Parapet	803.77	804.32
⊙ Roadway & P.G.	804.51	804.66
South Edge of Parapet	804.26	804.15



MINIMUM BAR LAP
#6 Bar = 2'-9"

Notes: Reinforcement bars in diaphragm are billed with superstructure on sheet 19 of 35.
Concrete in diaphragm is included with Concrete Superstructure on sheet 19 of 35.
For details of s(E), s₁(E), v(E), and u(E) see sheet 19 of 35.
The s(E), s₁(E) and u(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams. See sheet 34 of 35 for Bar Splicer Details.

DIAPHRAGM DETAILS
F.A.P. ROUTE 313 - SECTION (21-HB-11)
KNOX COUNTY
STA. 495+98.72
STRUCTURE NO. 048-0021
STRUCTURE NO. 048-0022

DESIGNED FT	April 28, 2008
CHECKED DPN	EXAMINED <i>Thomas J. Demagalli</i>
DRAWN Gregory D. Farmer	PASSED <i>Ralph E. Anderson</i>
CHECKED FT/DPN	

2" P.J.F. (Per Article 105.108 of the Standard Specifications) full width and vertically at edges, bonded to the Abutment cap with suitable adhesive as recommended by supplier.

SECTION A-A

(Existing steel diaphragm not shown for clarity.)
(Dimensions at Rt. L's unless otherwise shown.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO.
F.A.P. 313	(21-HB-1)	KNOX	55 40	35 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Contract #68216

Notes:

All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.

Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.

Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.

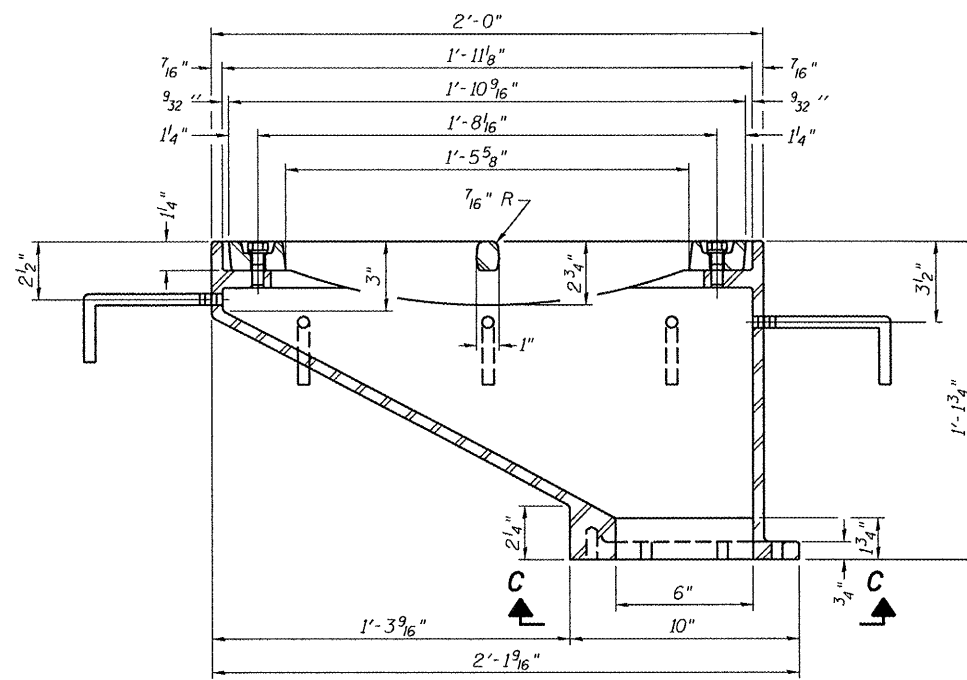
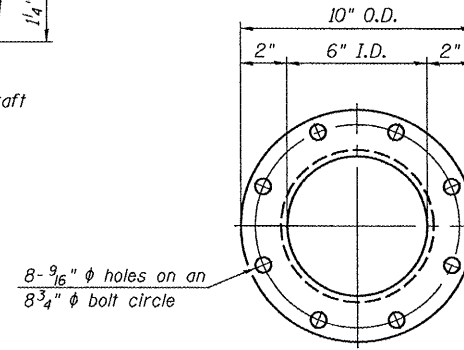
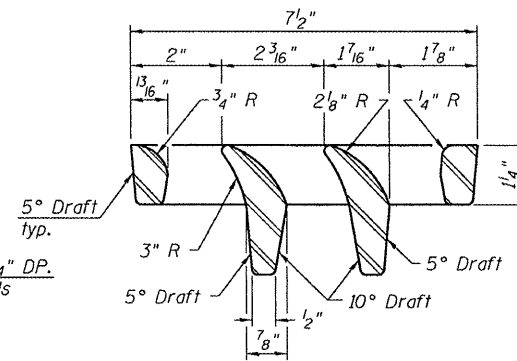
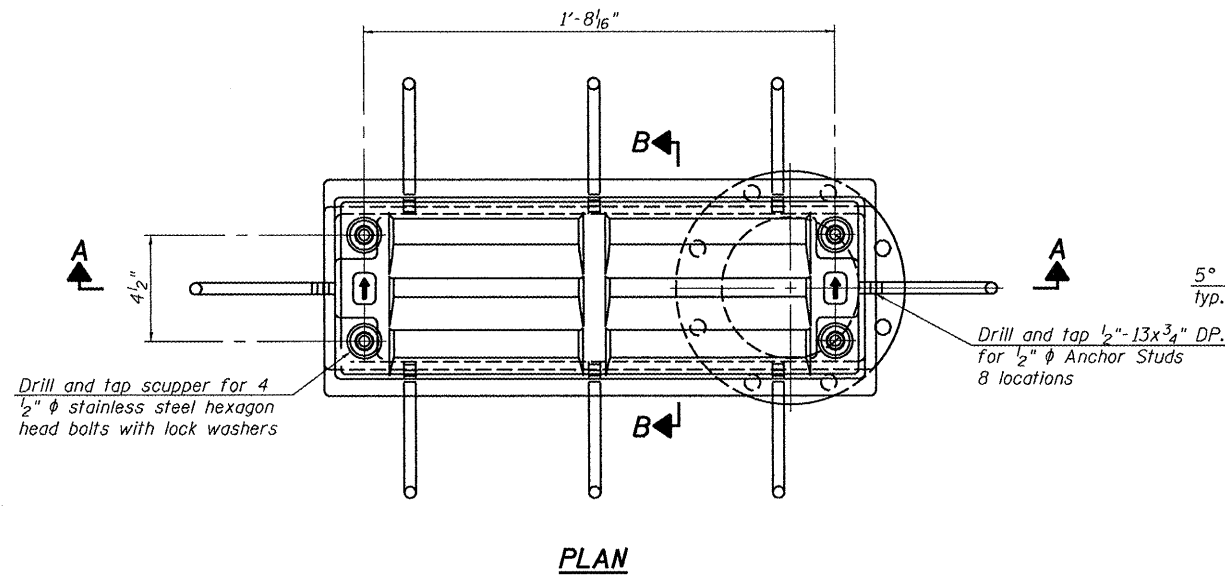
As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.

Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate.

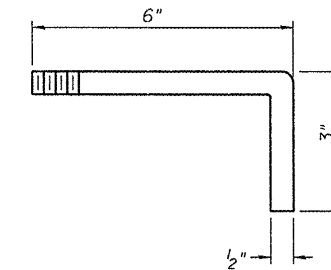
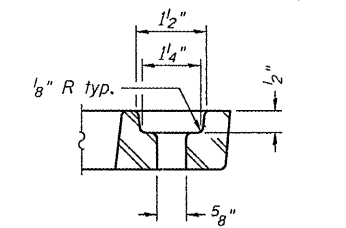
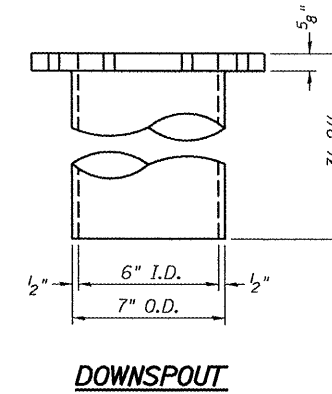
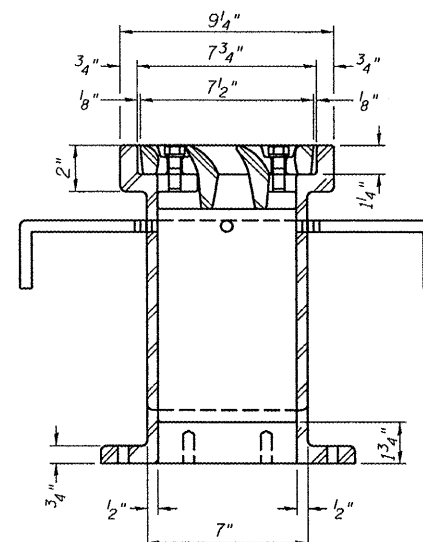
Structural steel frames and downspouts shall be galvanized according to AASHTO M111. The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-12.

Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.



See sheet 19 of 35 for scupper location relative to parapet.



BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-12	Each	4

DRAINAGE SCUPPER, DS-12
F.A.P. ROUTE 313 - SECTION (21-HB-1)
KNOX COUNTY
STA 495+98.72
STRUCTURE NO. 048-0021
STRUCTURE NO. 048-0022

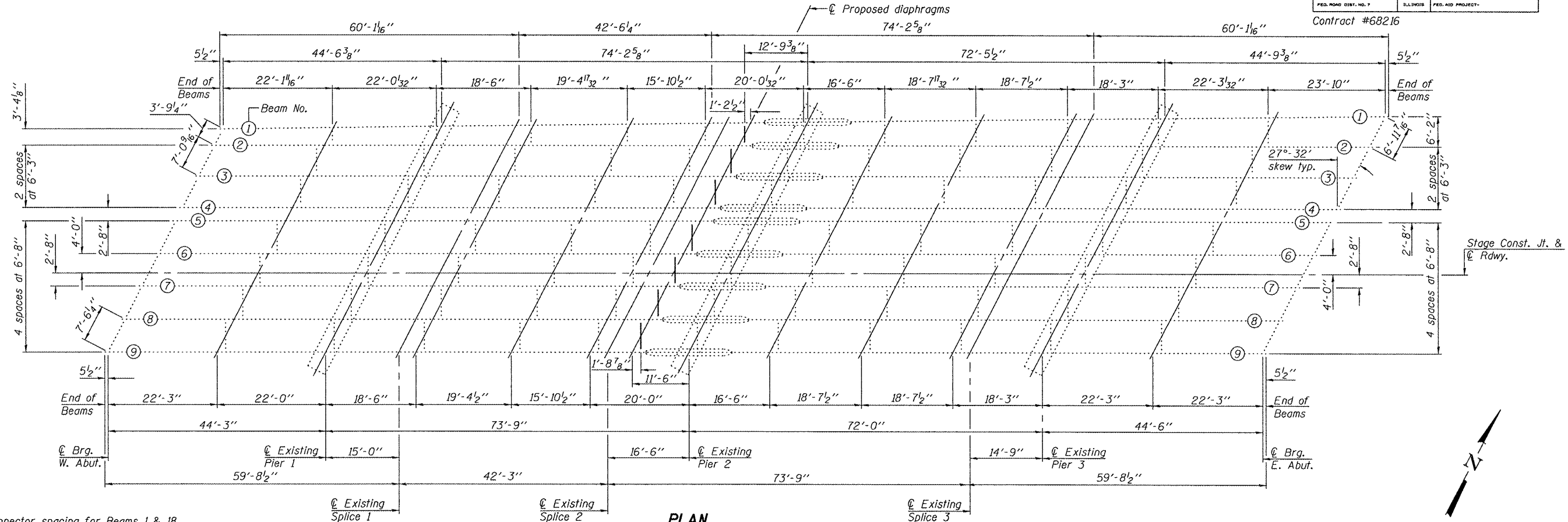
DESIGNED FT	April 28 2008
CHECKED DPN	EXAMINED <i>Thomas J. Demagalli</i>
DRAWN Gregory D. Farmer	PASSED <i>Ralph E. Anderson</i>
CHECKED FT/DPN	ENGINEER OF BRIDGES AND STRUCTURES

DS-12

11-1-06

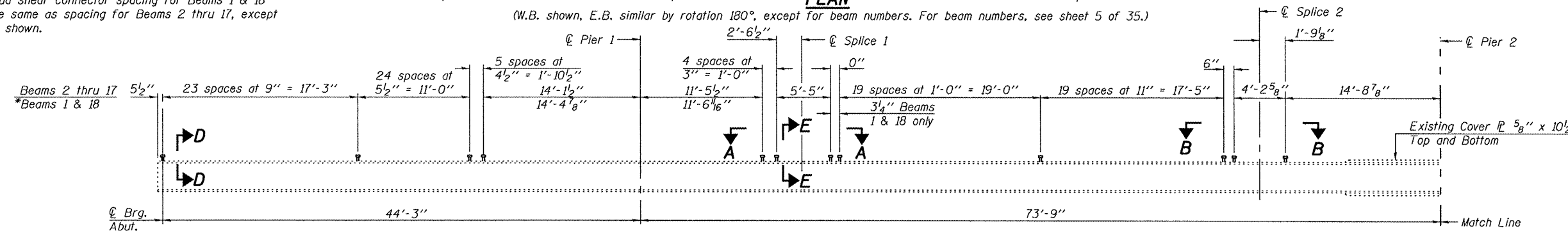
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET	SHEET NO.
F.A.P. 313	(21-HB-11)	KNOX	55	41	35 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	Contract #68216		

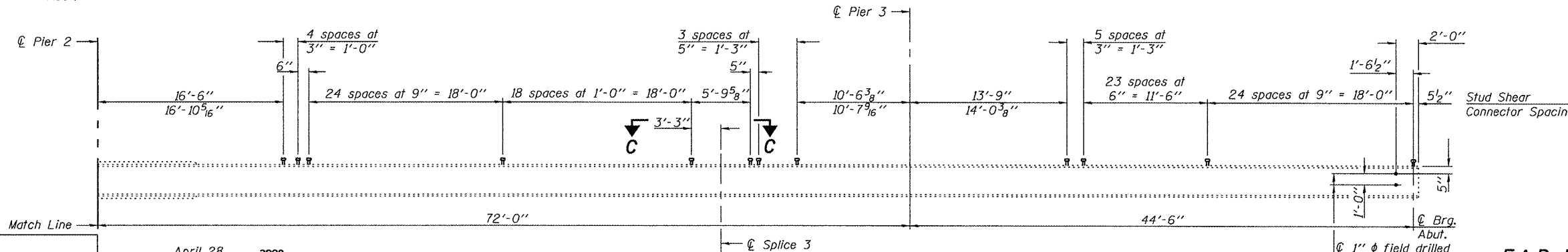


*Stud shear connector spacing for Beams 1 & 18 are same as spacing for Beams 2 thru 17, except as shown.

(W.B. shown, E.B. similar by rotation 180°, except for beam numbers. For beam numbers, see sheet 5 of 35.)



Note:
For View A-A, B-B, C-C, and Sections D-D and E-E see sheet 25 of 35.



BEAM ELEVATION
(All existing beams are 33WF141)

DESIGNED FT	April 28 2008
CHECKED DPN	EXAMINED <i>Thomas J. Demagala</i>
DRAWN Gregory D. Farmer	PASSED <i>Ralph C. Anderson</i>
CHECKED FT/DPN	

STRUCTURAL STEEL
F.A.P. ROUTE 313 - SECTION (21-HB-11)
KNOX COUNTY
STA. 495+98.72
STRUCTURE NO. 048-0021
STRUCTURE NO. 048-0022

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

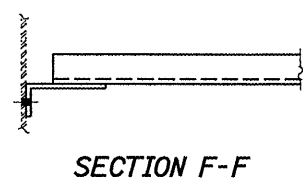
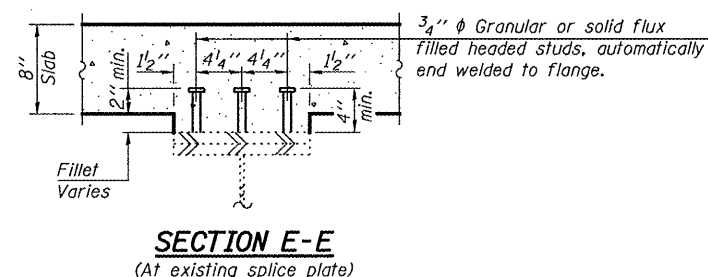
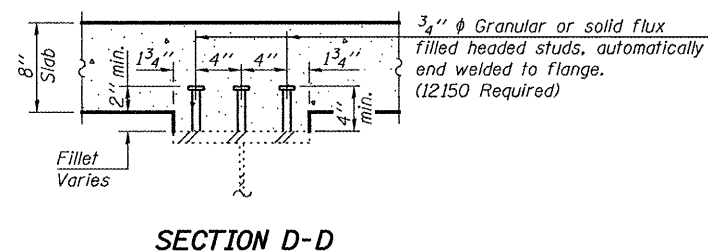
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F.A.P. 313	(21-HB-11)	KNOX	55	42	35 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #68216

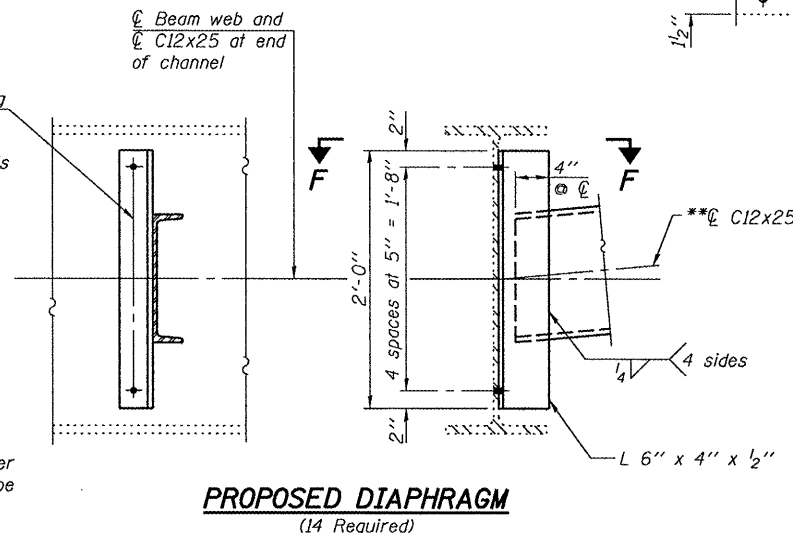
		0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.5 Sp. 3	Pier 3	0.6 Sp. 4
I_s	(in ⁴)	7450	7450	7450	11227	7450	7450	7450
$I_c(n)$	(in ⁴)	19570		19570		19570		19570
$I_c(3n)$	(in ⁴)	14331		14331		14331		14331
S_s	(in ³)	448	448	448	650	448	448	448
$S_c(n)$	(in ³)	652		652		652		652
$S_c(3n)$	(in ³)	589		589		589		589
Q	(k/')	0.905	1.338	0.905	1.338	0.905	1.338	0.905
M_D	(k)	85	438	215	671	196	414	95
s_D	(k/')	0.433		0.433		0.433		0.433
M_{sD}	(k)	54		140		129		57
M_L	(k)	270		446		296		210
M_{Imp}	(k)	80		112		75		57
$^{3/2} [M_L + M_{Imp}]$	(k)	584		455		907		589
M_a	(k)	940		1161		1671		1601
M_u	(k)	1967		2693		2049		1983
f_s non-comp	(ksi)	2.3	11.7	5.8	12.4	5.2	11.1	2.5
f_s (comp)	(ksi)	1.1		2.8		2.6		1.2
$f_s^{3/2} [M_L + M_{Imp}]$	(ksi)	10.7	12.2	17.1	11.4	16.7	11.9	10.8
f_s (Overload)	(ksi)	14.1	23.9	25.7	23.8	24.5	23.0	14.5
f_s (Total)	(ksi)		31.1		30.9		29.9	
VR	(k)	48.9		44.7		44.9		44.8

	W. Abut.	Pier 1	Pier 2	Pier 3	E. Abut.	
R_D	(k)	*50.0	85.7	104.2	83.6	*50.8
R_L	(k)	33.2	42.1	47.2	41.8	33.3
Imp.	(k)	9.8	11.4	11.9	11.4	9.8
R_{Total}	(k)	93.0	139.2	163.3	136.8	93.9

*Dead load reactions include 30.3 kips for concrete diaphragm and approach pavement.

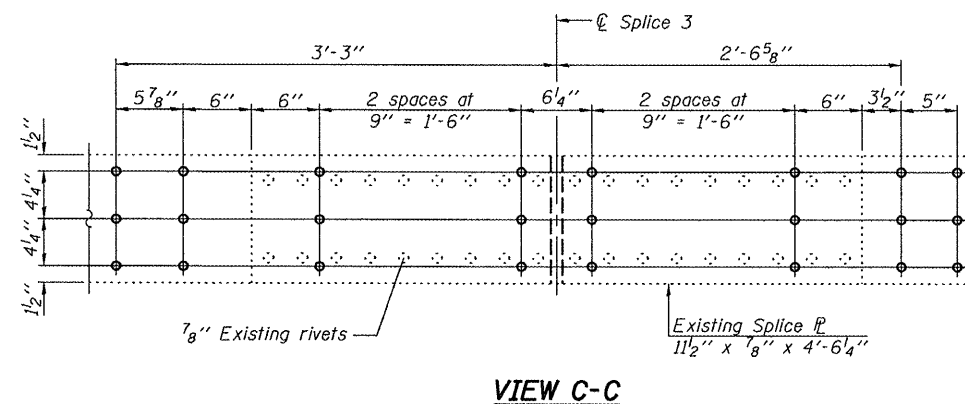
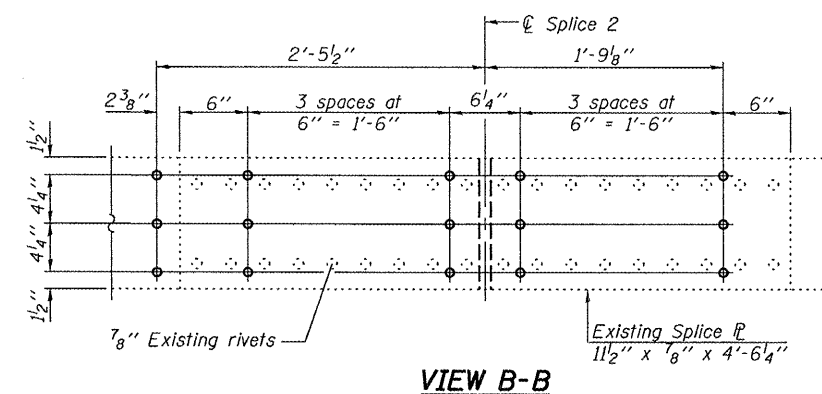
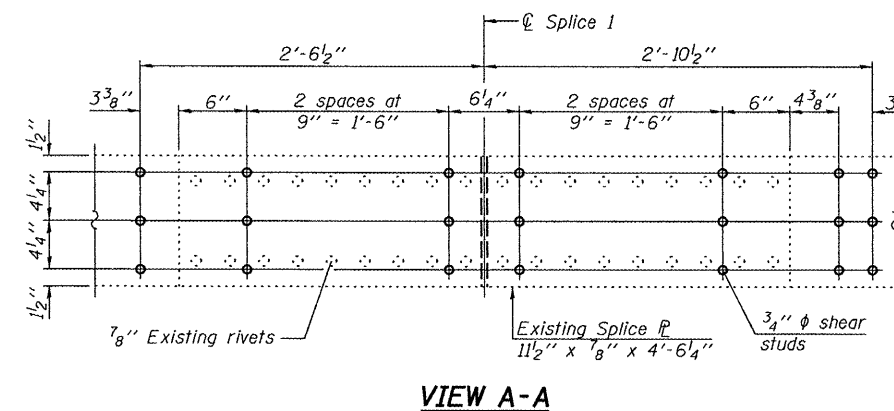


Field drill 1/16 inch diameter holes in existing beams thru 1/16 inch diameter holes in new connection angles for 3/4 inch diameter H.S. Bolts. Cost of field drilling is included with Furnishing and Erecting Structural Steel.



**Alternate channel C12x30 may be used to facilitate material acquisition. The calculated weight of structural steel is based on the lighter section C12x25. The alternate, if utilized, will be provided at no extra cost to the department.

- I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total and Overload) due to non-composite dead loads (in⁴ and in³).
- $I_c(n), S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total and Overload) due to short-term composite live loads (in⁴ and in³).
- $I_c(3n), S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total and Overload) due to long-term composite (superimposed) dead loads (in⁴ and in³).
- Q : Un-factored non-composite dead load (kips/ft.).
- M_D : Un-factored moment due to non-composite dead load (kip-ft.).
- s_D : Un-factored long-term composite (superimposed) dead load (kips/ft.).
- M_{sD} : Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).
- M_L : Un-factored live load moment (kip-ft.).
- M_{Imp} : Un-factored moment due to impact (kip-ft.).
- M_a : Factored design moment (kip-ft.).
- M_u : Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).
- f_s (Overload): Sum of stresses as computed from the moments below (ksi).
- f_s (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).
- VR: Maximum f_s + impact horizontal shear range within the composite portion of the span for stud shear connector design (kips).



STRUCTURAL STEEL DETAILS
F.A.P. ROUTE 313 - SECTION (21-HB-11)
KNOX COUNTY
STA. 495+98.72
STRUCTURE NO. 048-0021
STRUCTURE NO. 048-0022

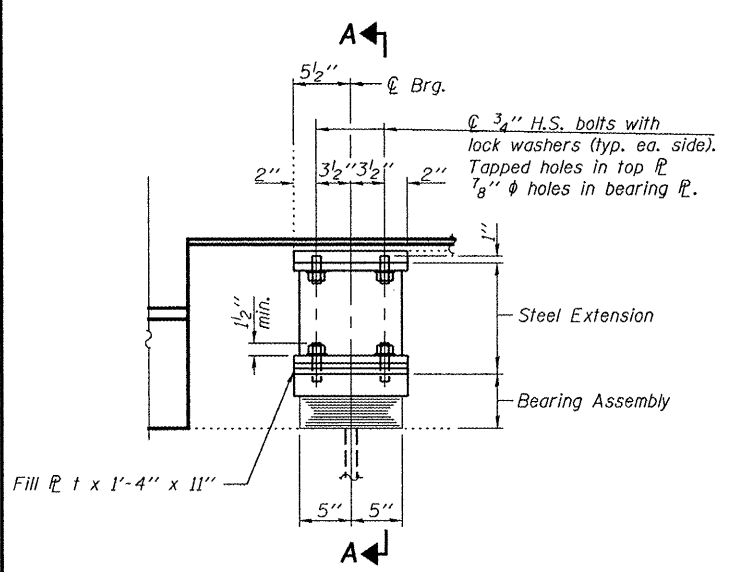
DESIGNED FT
CHECKED DPN
DRAWN Gregory D. Farmer
CHECKED FT/DPN

April 28 2008
EXAMINED Thomas J. Demagalli
PASSED Ralph E. Anderson

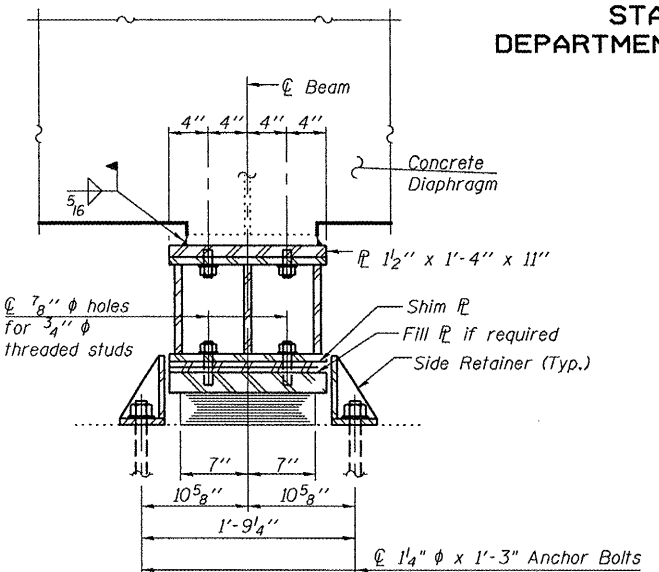
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO.
F.A.P. 313	(21-HB-11)	KNOX	55	43
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	35 SHEETS

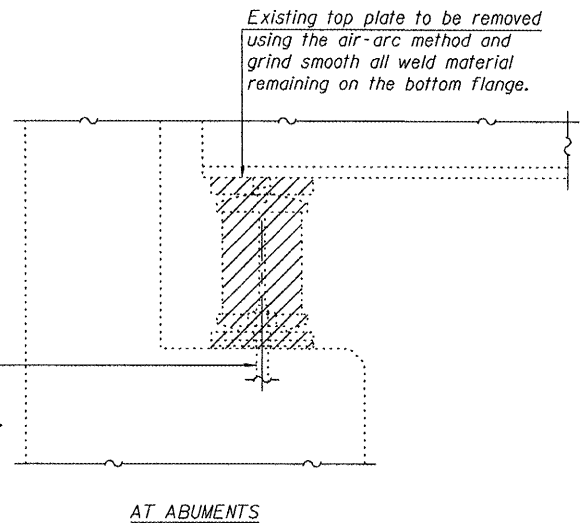
Contract #68216



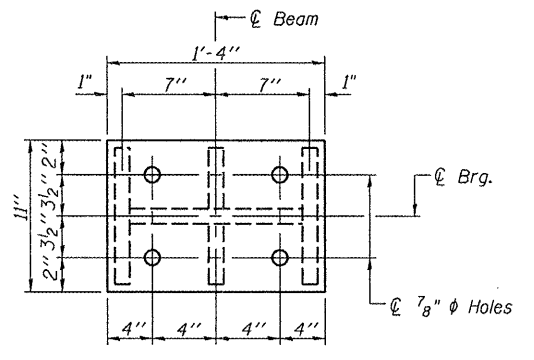
ELEVATION AT ABUTMENT
See Table for "H" dimensions



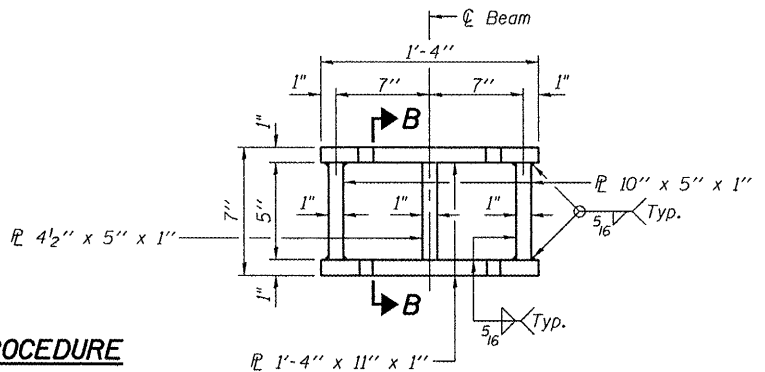
SECTION A-A
Fill 1' x 1'-4" x 11" ϕ 1 1/4" ϕ x 1'-3" Anchor Bolts ASTM F1554 Gr. 36 with 2 3/4" x 2 3/4" x 5/16" washer under nut.



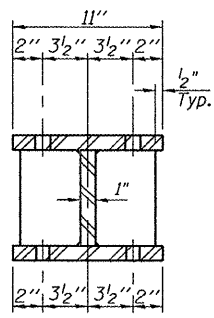
EXISTING BEARING REMOVAL
Burn the existing anchor bolts flush with existing concrete surface. Grind existing anchor bolts smooth and seal with epoxy. Cost included with Jack and Remove Existing Bearings. Typ.



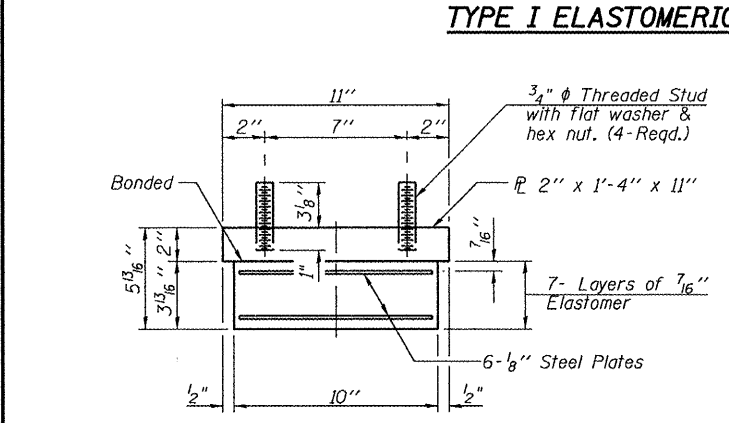
PLAN TOP AND BOTTOM PLATE



STEEL EXTENSION DETAIL

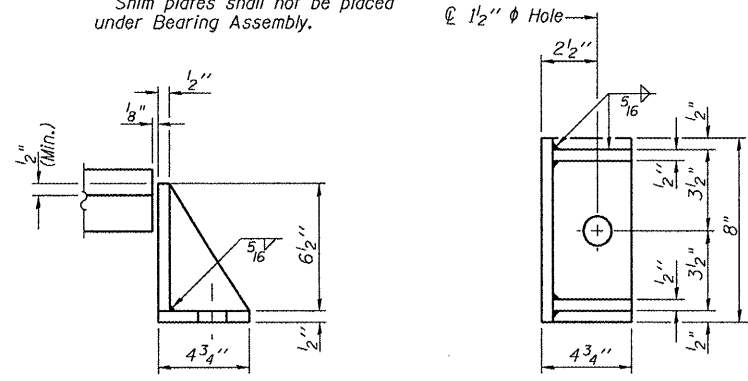


SECTION B-B



BEARING ASSEMBLY

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



SIDE RETAINER

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

TYPE I ELASTOMERIC EXP. BRG.

Notes:
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (F_y = 36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
Anchor bolts for side retainers shall be installed in drilled holes.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.
Two 1/8" adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

JACK AND REMOVE EXISTING BEARING PROCEDURE

1. The Contractor shall submit for approval by the Engineer, plans for jacking existing beams and installing new bearings prior to commencing any related work.
2. Jacking and removing existing bearings shall be done after existing concrete deck is removed and prior to pouring the concrete deck.
3. Prior to ordering any material, the Contractor shall verify steel extension height and shim plate thickness required at each bearing so that total height of new bearing, steel extension, and fill matches height of existing bearing and shim.
4. There shall be at least one jack per bearing, and the jack shall be placed close to the bearing.
5. For limitations on lift amounts, see Special Provisions.
6. The maximum dead load reaction per beam (weight of steel only) at West and East Abutments is 3.5 kips. Minimum jack capacity is 6 kips for West and East Abutments.
7. The new bearing and steel extensions shall be in place and the jacks shall be lowered before the new concrete deck is poured.
8. Jacking against diaphragms is prohibited.

"H" DIMENSIONS

W.B. Bridge			E.B. Bridge		
Location (Beam No.)	West Abutment	East Abutment	Location (Beam No.)	West Abutment	East Abutment
1	1/8"	3/16"	10	0	0
2	0	0	11	0	0
3	1/4"	0	12	1/8"	1/8"
4	3/8"	0	13	0	0
5	0	0	14	0	0
6	0	0	15	0	3/8"
7	1/8"	1/8"	16	0	1/4"
8	0	0	17	0	0
9	0	0	18	3/16"	1/8"

DESIGNED FT	April 28, 2008
CHECKED DPN	EXAMINED <i>Thomas J. Donagall</i>
DRAWN Gregory D. Farmer	PASSED <i>Ralph E. Anderson</i>
CHECKED FT/DPN	

BILL OF MATERIAL

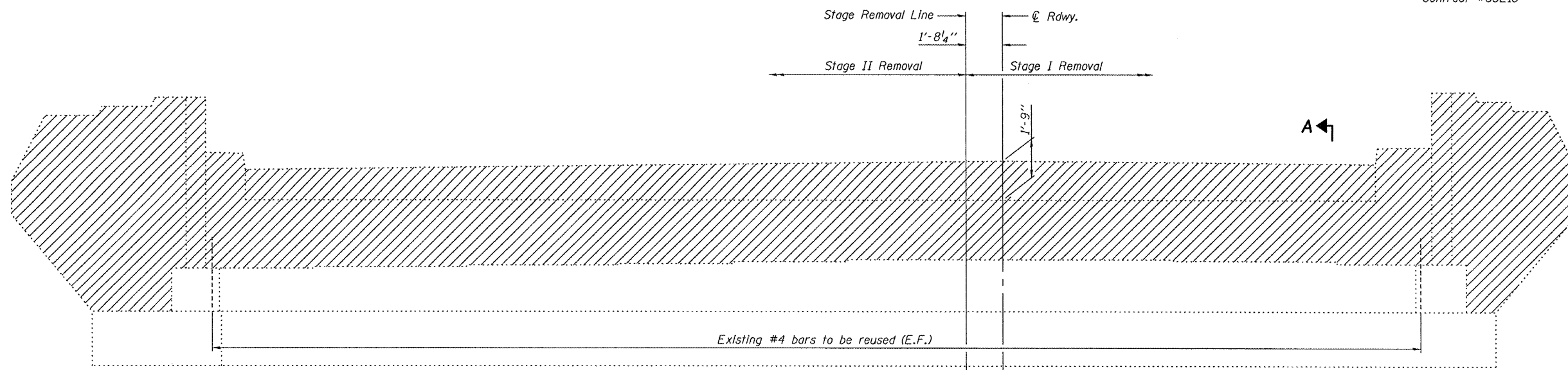
Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	36
Jack and Remove Existing Bearings	Each	36
Anchor Bolts, 1"	Each	72

BEARING DETAILS
F.A.P. ROUTE 313 - SECTION (21-HB-11)
KNOX COUNTY
STA. 495+98.72
STRUCTURE NO. 048-0021
STRUCTURE NO. 048-0022

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.	SHEET NO.
F.A.P. 313	(21-HB-1)I	KNOX	55	44	35 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

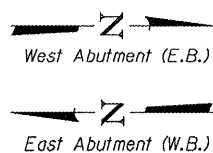
Contract #68216



ELEVATION

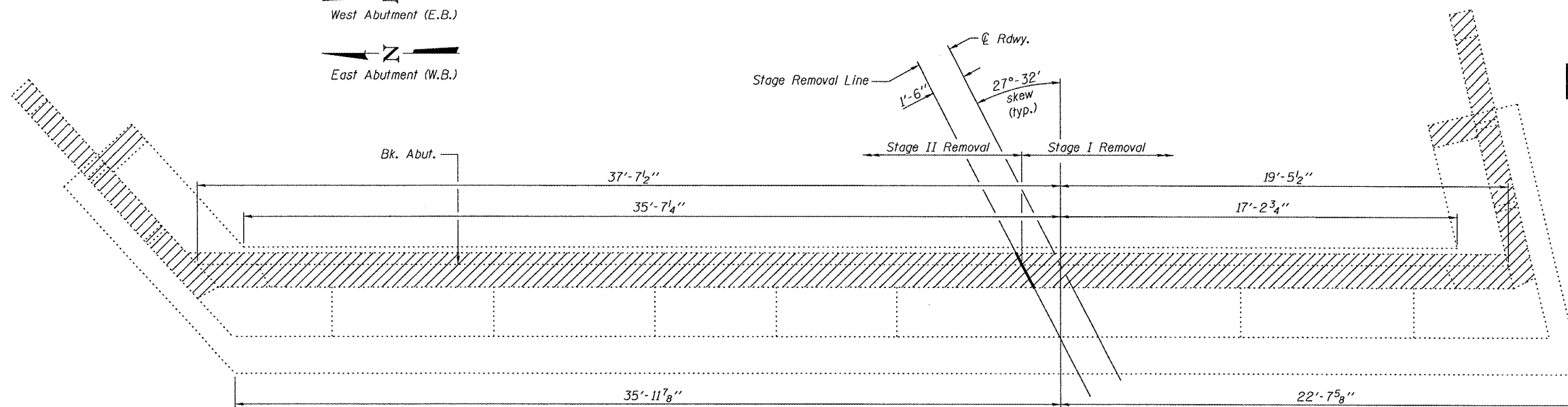
Looking West at West Abutment (E.B.)
Looking East at East Abutment (W.B.)

Note: See Sec. A-A on sheet 29 of 35.



**TWO ABUTMENTS
BILL OF MATERIAL**

Item	Unit	Total
Concrete Removal	Cu. Yd.	36.7



PLAN

CONCRETE REMOVAL WEST ABUTMENT (E.B.) AND EAST ABUTMENT (W.B.)
F.A.P. ROUTE 313 - SECTION (21-HB-1)I
KNOX COUNTY
STA. 495+98.72
STRUCTURE NO. 048-0021 (W.B.)
STRUCTURE NO. 048-0022 (E.B.)

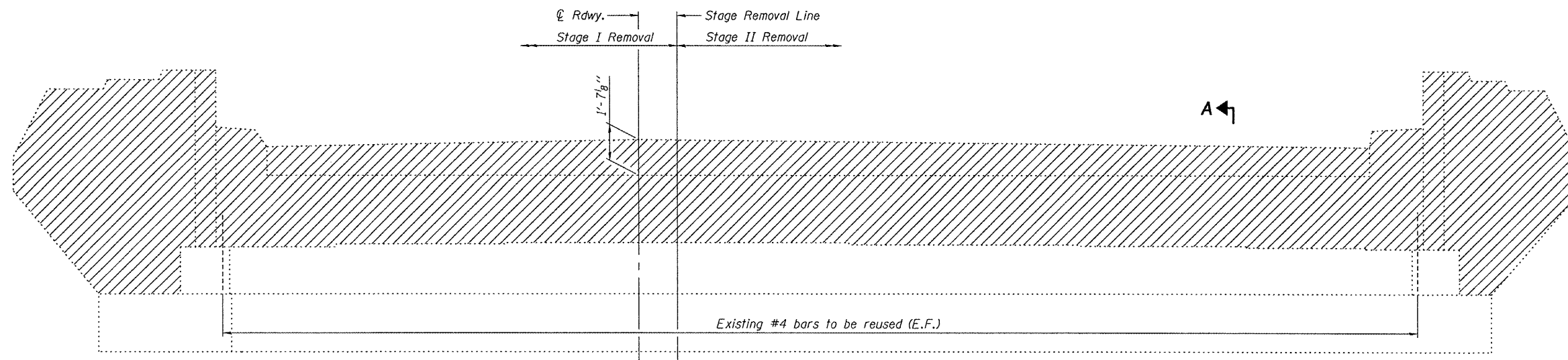
DESIGNED	FT
CHECKED	DPN
DRAWN	Gregory D. Farmer
CHECKED	FT/DPN

April 28 2008
EXAMINED *Thomas Demagallo*
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F.A.P. 313	SECTION (21-HB-1)I	COUNTY KNOX	TOTAL SHEETS 55	SHEET NO. 45	SHEET NO. 28 35 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT	

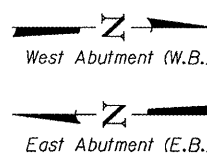
Contract #68216



ELEVATION

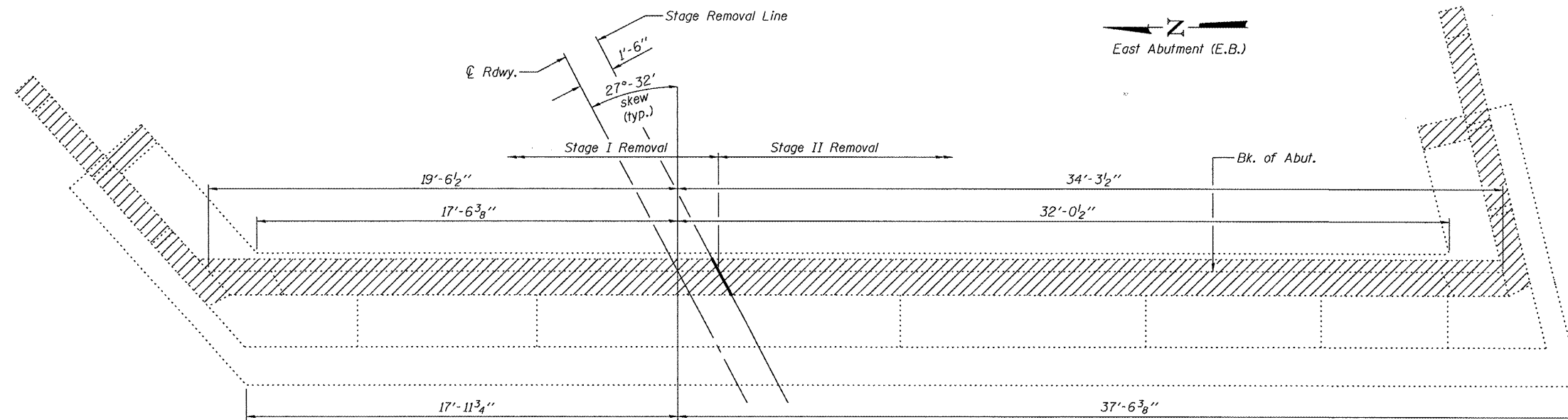
Looking West at West Abutment (W.B.)
Looking East at East Abument (E.B.)

Note: See Sec. A-A on sheet 29 of 35.



**TWO ABUTMENTS
BILL OF MATERIAL**

Item	Unit	Total
Concrete Removal	Cu. Yd.	36.5



PLAN

CONCRETE REMOVAL WEST ABUTMENT (W.B.) AND EAST ABUMENT (E.B.)

F.A.P. ROUTE 313 - SECTION (21-HB-1)I

KNOX COUNTY

STA. 495+98.72

STRUCTURE NO. 048-0021 (W.B.)

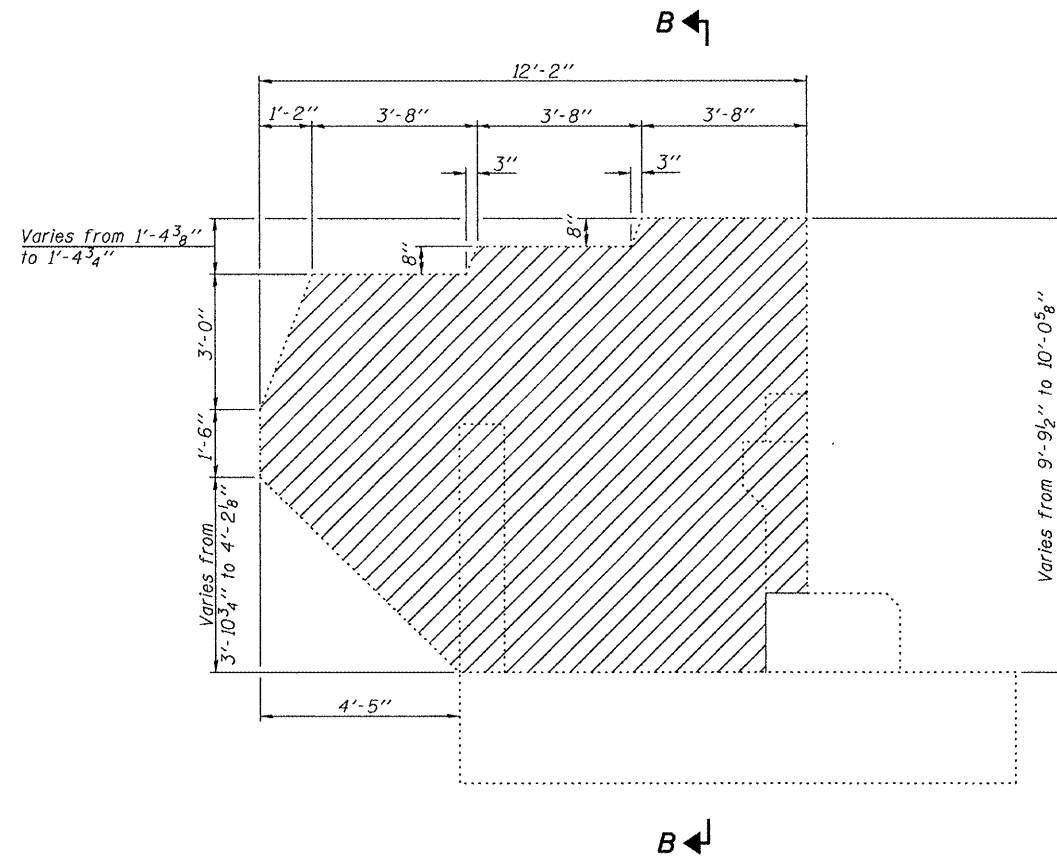
STRUCTURE NO. 048-0022 (E.B.)

DESIGNED FT	April 28 2008
CHECKED DPN	EXAMINED <i>Thomas J. Demasalki</i>
DRAWN Gregory D. Farmer	PASSED <i>Ralph C. Anderson</i>
CHECKED FT/DPN	ENGINEER OF BRIDGES AND STRUCTURES

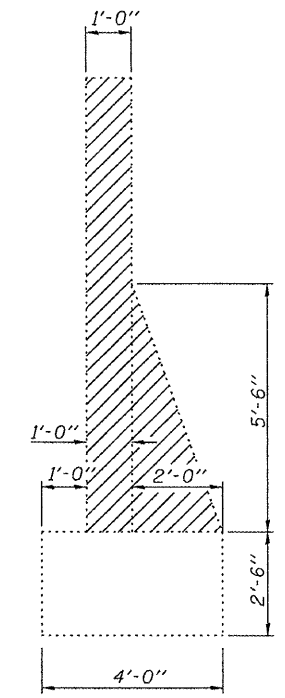
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET	SHEET NO.
F.A.P. 313	(21-HB-1)I	KNOX	55	46	35 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

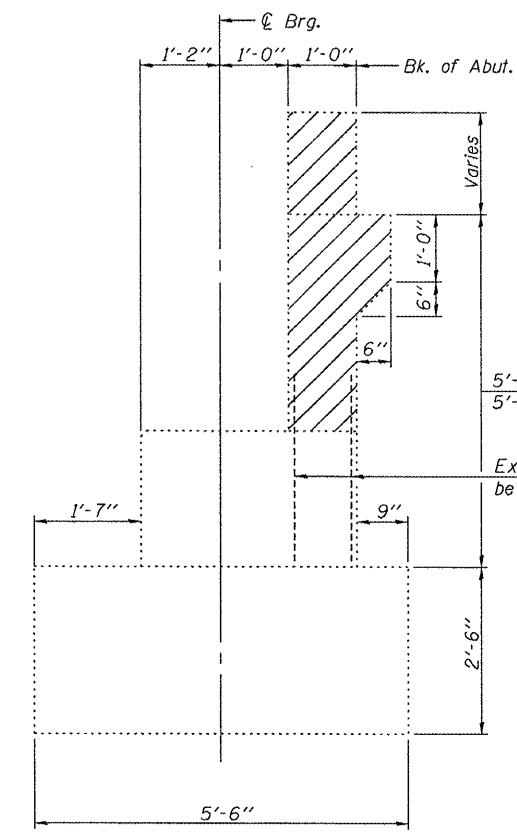
Contract #68216



END POST ELEVATION



SEC. B-B



SEC. A-A

5'-1 3/4" for West Abut. (E.B.) and East Abut. (W.B.)
5'-2 3/8" for West Abut. (W.B.) and East Abut. (E.B.)
Existing #4 bars to be reused

Notes: Hatched areas indicate Concrete Removal.
Existing reinforcement extending into new concrete shall be cleaned, straightened and incorporated into the new construction. Cost included with Concrete Removal.
Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included with Concrete Removal.
Existing reinforcement not extending into new construction shall be cut off and covered with a 2" layer cement grout. Cost shall be included with the cost of Concrete Removal.

DESIGNED	FT
CHECKED	DPN
DRAWN	Gregory D. Farmer
CHECKED	FT

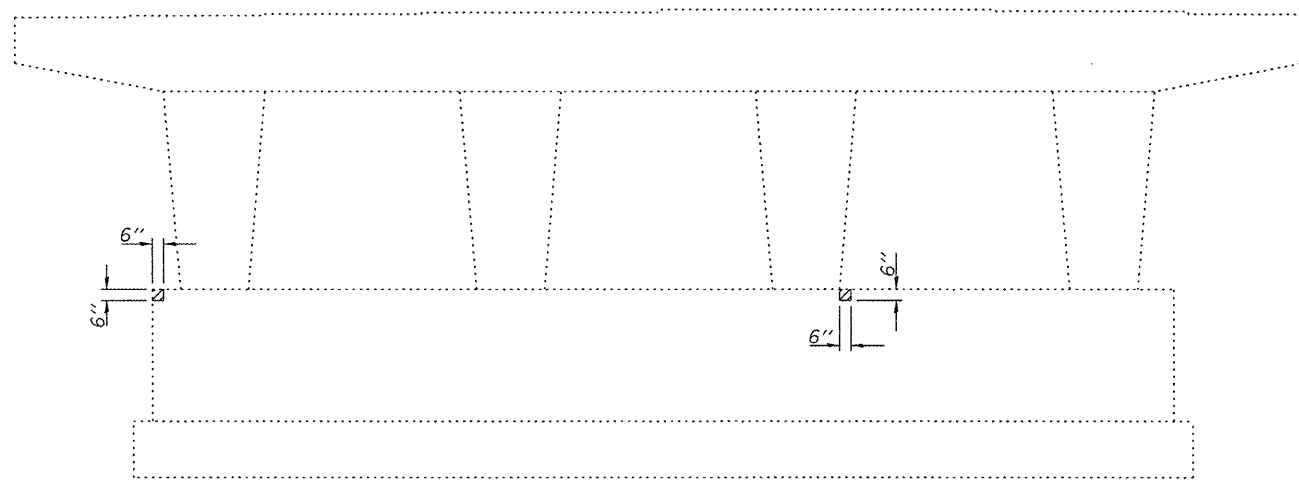
April 28 2008
EXAMINED *Thomas J. Demagali*
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

CONCRETE REMOVAL
F.A.P. ROUTE 313 - SECTION (21-HB-1)I
KNOX COUNTY
STA. 495+98.72
STRUCTURE NO. 048-0021 (W.B.)
STRUCTURE NO. 048-0022 (E.B.)

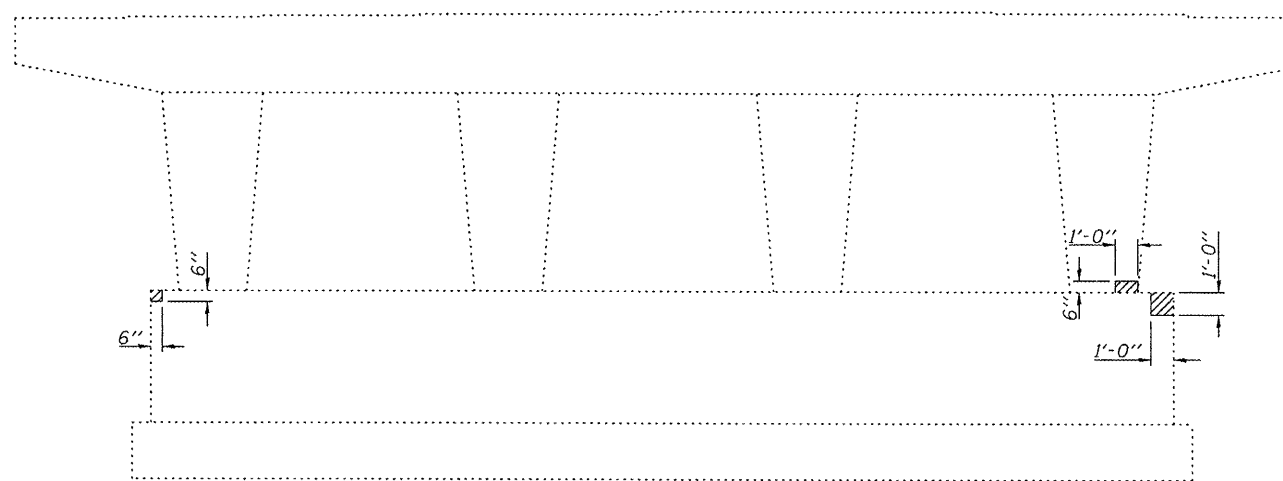
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET	SHEET NO.
F.A.P. 313	21-HB-111	KNOX	55	47	30
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-		35 SHEETS

Contract #68216

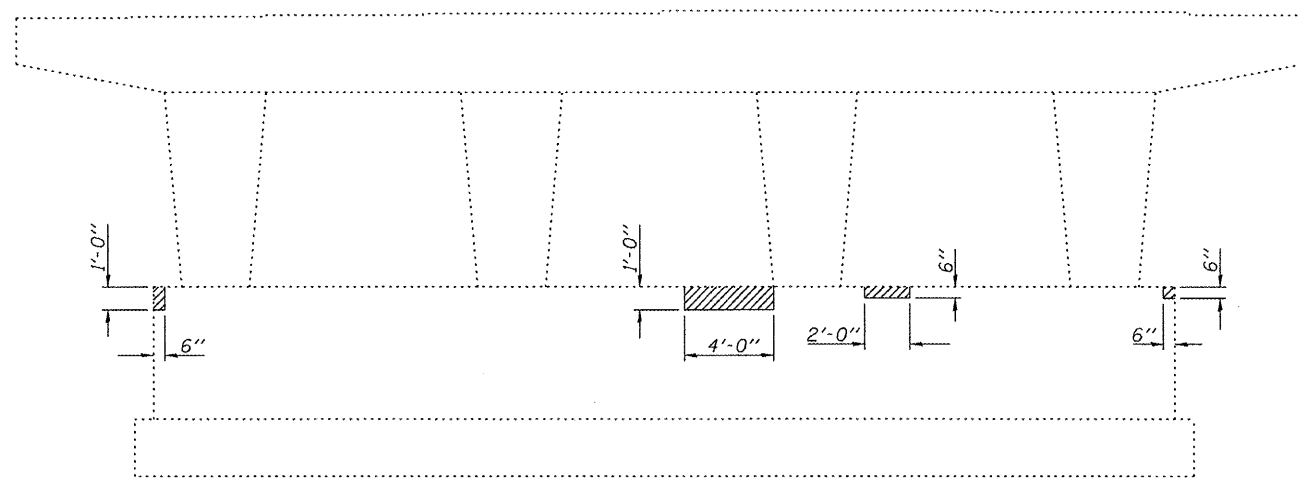


ELEVATION PIER 2
(Looking West)

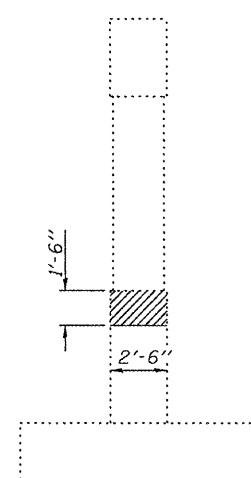


ELEVATION PIER 3
(Looking West)

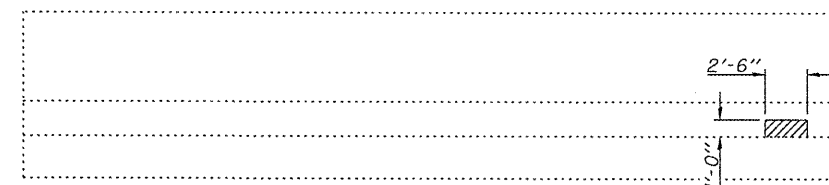
➔ A



ELEVATION PIER 2
(Looking East)



VIEW A-A



ELEVATION EAST ABUT.
(Looking East)

➔ A

BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth equal to or less than 5')	Sq. Ft.	14
Concrete Sealer	Sq. Ft.	4224

Note:
Concrete Sealer shall be applied to the exposed area of existing concrete surface above existing ground line or slopewalls.
Hatched area indicates Structural Repair of Concrete (Depth equal to or less than 5').

DESIGNED	FT
CHECKED	DPN
DRAWN	Gregory D. Farmer
CHECKED	FT/DPN

April 28 2008
EXAMINED *Thomas J. Demagalli*
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

CONCRETE REPAIR (E.B.)
F.A.P. ROUTE 313 - SECTION (21-HB-111)
KNOX COUNTY
STA. 495+98.72
STRUCTURE NO. 048-0021 (W.B.)
STRUCTURE NO. 048-0022 (E.B.)

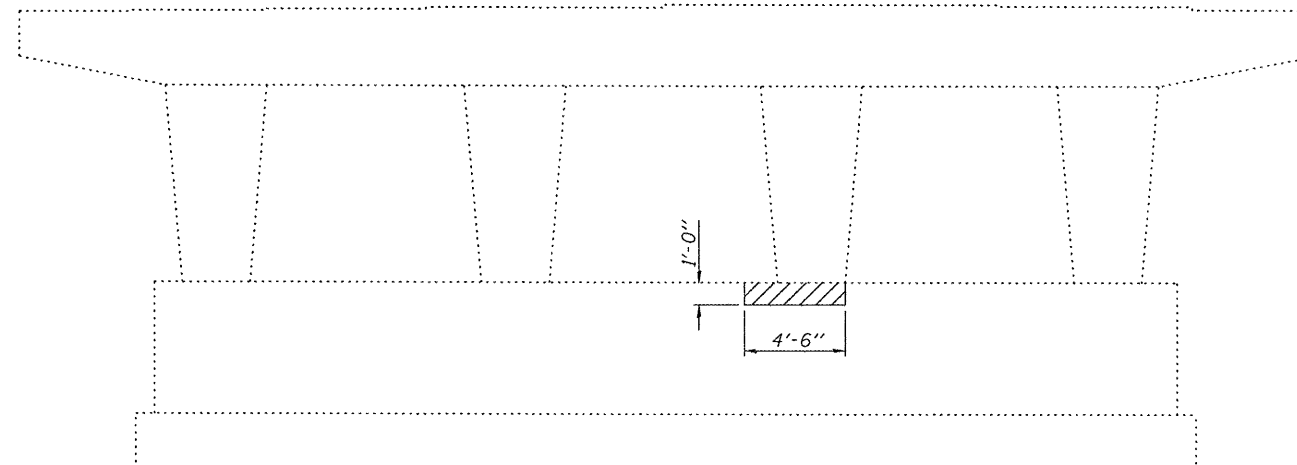
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET	SHEET NO.
F.A.P. 313	(21-HB-1)	KNOX	55	48	31
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

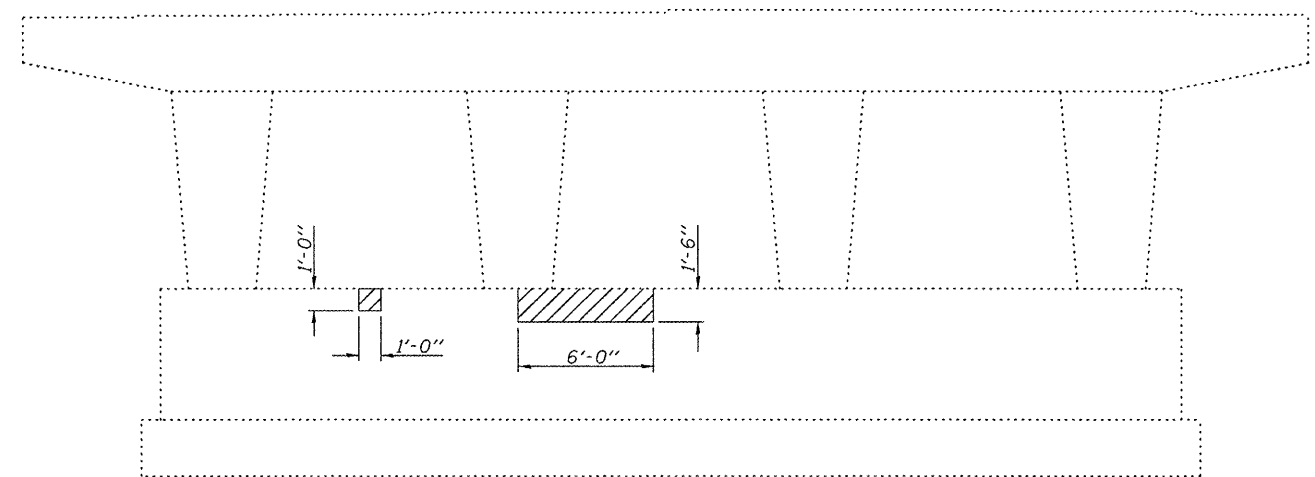
Contract #68216



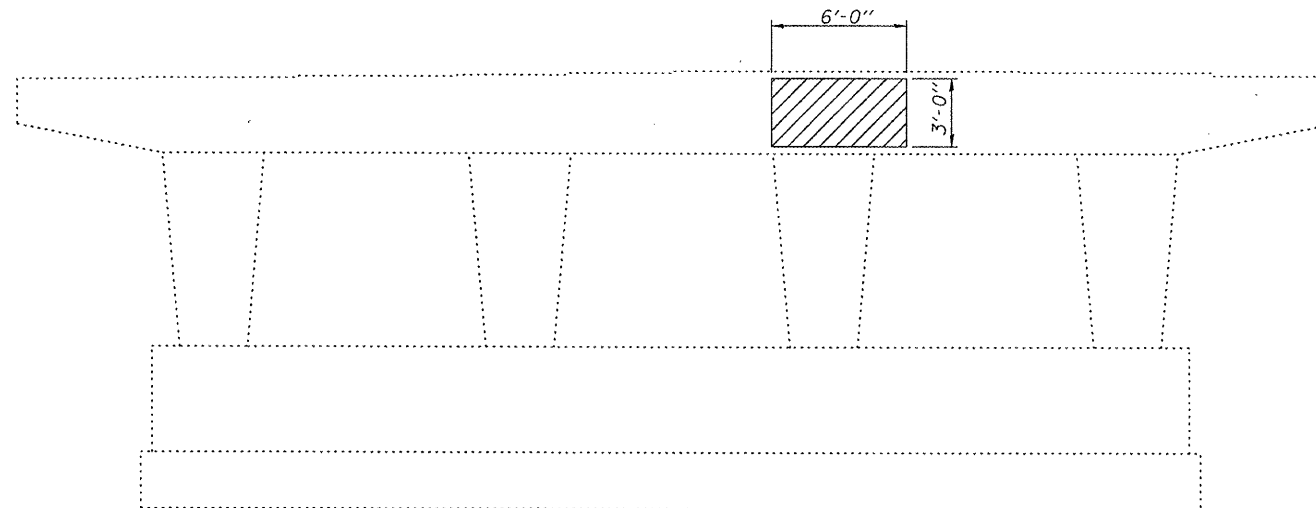
ELEVATION PIER 1
(Looking East)



ELEVATION PIER 2
(Looking West)

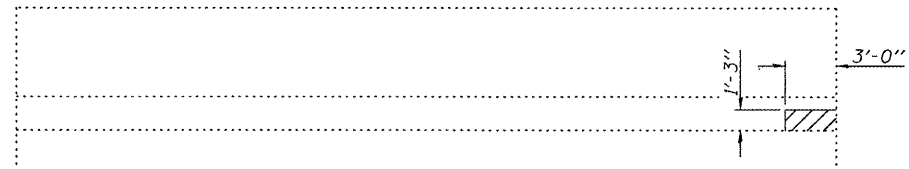


ELEVATION PIER 2
(Looking East)



ELEVATION PIER 3
(Looking East)

Note:
Concrete Sealer shall be applied to the exposed area of existing concrete surface above existing ground line or slopewalls.
Hatched area indicates Structural Repair of Concrete (Depth equal to or less than 5")



ELEVATION WEST ABUT.
(Looking West)

BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth equal to or less than 5")	Sq. Ft.	40.0
Concrete Sealer	Sq. Ft.	4224

CONCRETE REPAIR (W.B.)
F.A.P. ROUTE 313 - SECTION (21-HB-1)
KNOX COUNTY
STA. 495+98.72
STRUCTURE NO. 048-0021 (W.B.)
STRUCTURE NO. 048-0022 (E.B.)

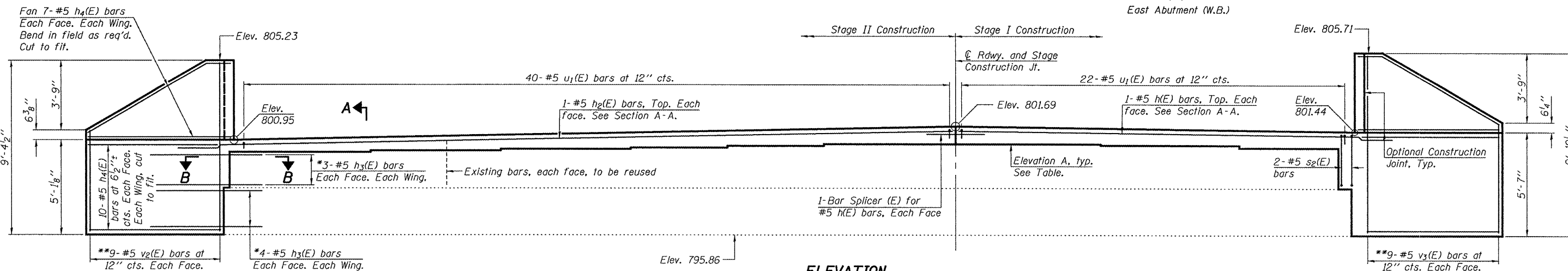
DESIGNED	FT
CHECKED	DPN
DRAWN	Gregory D. Farmer
CHECKED	FT/DPN

April 28 2008
EXAMINED *Thomas J. Demagali*
ENGINEER OF BRIDGE DESIGN
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	DATE	SHEET	SHEET NO.
F.A.P. 313	(21-HB-1)I	KNOX	55	49	35 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

Contract #68216



ELEVATION

Looking West at West Abutment (E.B.)
Looking East at East Abutment (W.B.)

*Epoxy Grout $h_3(E)$ bars in 9" min. drilled holes according to Article 584 of the Standard Specifications. Cost included with Reinforcement Bars, Epoxy Coated.
**See Field Cutting Diagram

MIN. BAR LAP
#5 Bar = 1'-8"

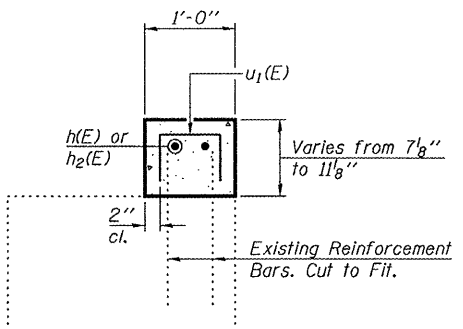
ELEVATION A

Location	Elevation
Beams 1 & 18	800.36
Beams 2 & 17	800.45
Beams 3 & 16	800.54
Beams 4 & 15	800.59
Beams 5 & 14	800.68
Beams 6 & 13	800.76
Beams 7 & 12	800.76
Beams 8 & 11	800.72
Beams 9 & 10	800.57

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$h(E)$	4	#5	23'-8"	
$h_2(E)$	4	#5	41'-9"	
$h_3(E)$	56	#5	2'-11"	
$h_4(E)$	136	#5	9'-7"	
$s_2(E)$	4	#5	6'-3"	
$u_1(E)$	124	#5	1'-6"	
$v_2(E)$	18	#5	14'-5"	
$v_3(E)$	18	#5	15'-4"	
Concrete Sealer		Sq. Ft.	146	
Structure Excavation		Cu. Yd.	218.9	
Concrete Structures		Cu. Yd.	14.2	
Reinforcement Bars, Epoxy Coated		Pound	2580	

For details of Bar Splicers, see sheet 34 of 35.



SECTION B-B

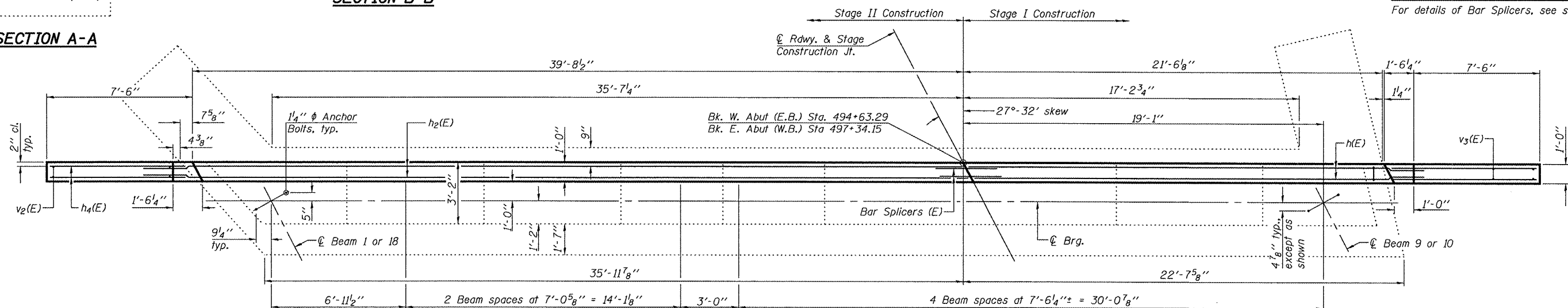
BAR $u_1(E)$

BAR $s_2(E)$

FIELD CUTTING DIAGRAM

Order $v_2(E)$ and $v_3(E)$ bars full length. Cut as shown and use remainder of bars in opposite face.

SECTION A-A



PLAN

Note:
Concrete Sealer shall be applied to the exposed area of existing concrete surface above the top of slopewall or existing ground line.
Existing anchor bolts at each bearing location shall be cut off, ground flush and sealed with epoxy. Cost included with Concrete Removal.
Beams 1 thru 9 are at W.B. structure. Beams 10 thru 18 are at E.B. structure

WEST ABUTMENT (E.B.) AND EAST ABUTMENT (W.B.)

F.A.P. ROUTE 313 - SECTION (21-HB-1)I

KNOX COUNTY

STA. 495+98.72

STRUCTURE NO. 048-0021 (W.B.)

STRUCTURE NO. 048-0022 (E.B.)

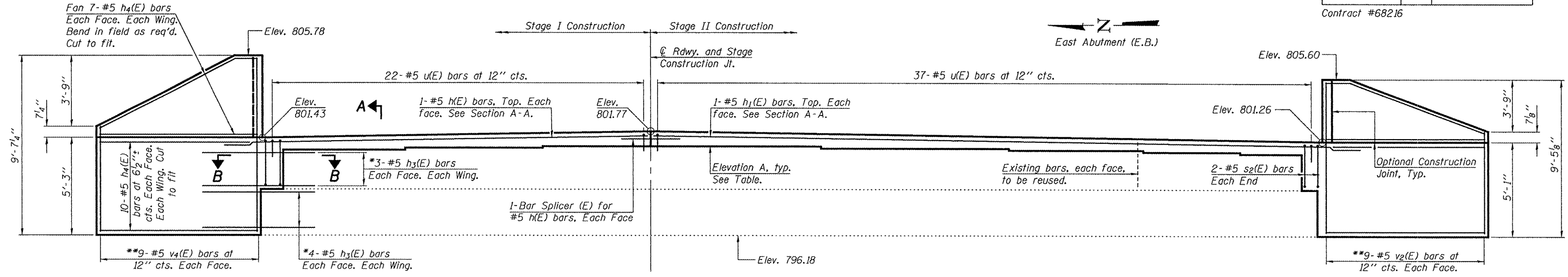
DESIGNED FT
CHECKED DPN
DRAWN Gregory D. Farmer
CHECKED FT/DPN

April 28 2008
EXAMINED *Thomas J. Demagali*
PASSED *Ralph C. Anderson*
PRINCIPAL ENGINEER OF BRIDGE DESIGN
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET	SHEET NO.
F.A.P. 313	(21-HB-11)	KNOX	55	50	35 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

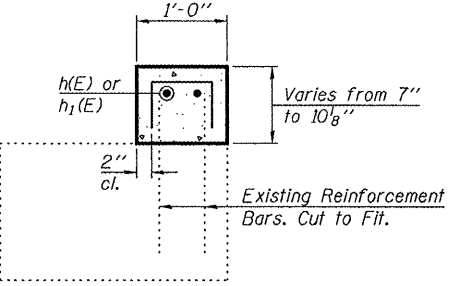
Contract #68216



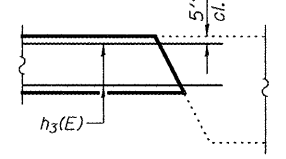
ELEVATION

Looking West at West Abutment (W.B.)
Looking East at East Abutment (E.B.)

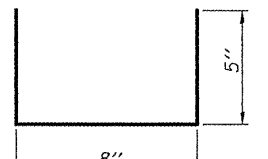
*Epoxy Grout h₃(E) bars in 9" min. drilled holes according to Article 584 of the Standard Specifications. Cost included with Reinforcement Bars, Epoxy Coated.
**See Field Cutting Diagram



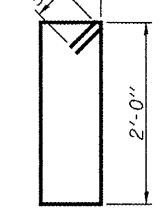
SECTION A-A



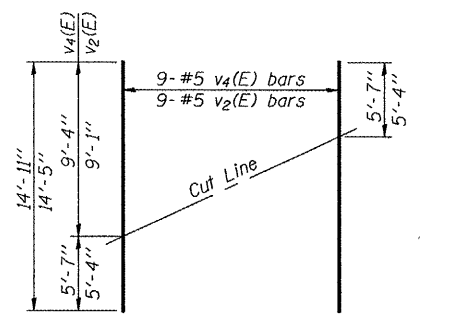
SECTION B-B



BAR U₁(E)



BAR S₂(E)



FIELD CUTTING DIAGRAM
Order v₂(E) and v₄(E) bars full length. Cut as shown and use remainder of bars in opposite face.

MIN. BAR LAP

#5 Bar = 1'-8"

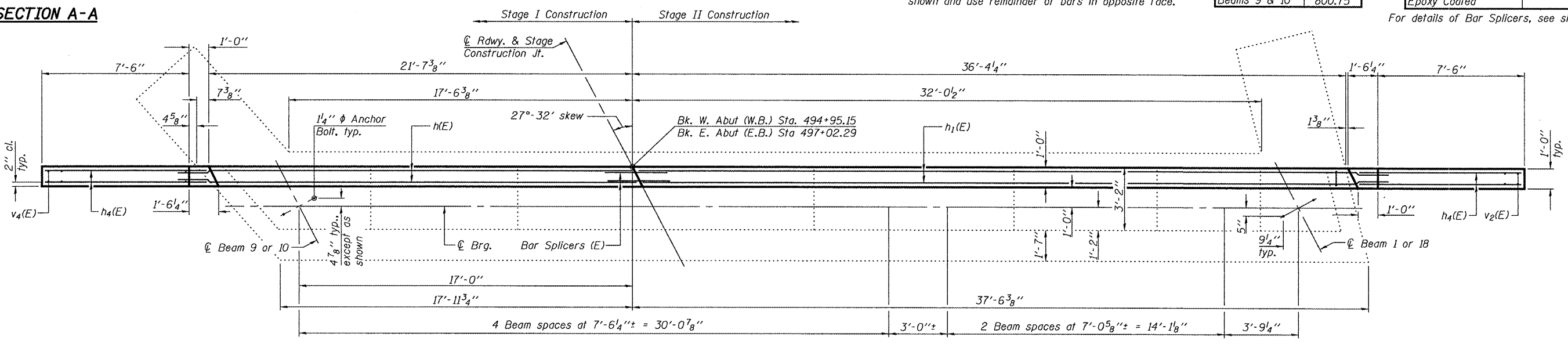
ELEVATION A

Location	Elevation
Beams 1 & 18	800.68
Beams 2 & 17	800.74
Beams 3 & 16	800.80
Beams 4 & 15	800.84
Beams 5 & 14	800.84
Beams 6 & 13	800.93
Beams 7 & 12	800.93
Beams 8 & 11	800.87
Beams 9 & 10	800.75

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	4	#5	23'-8"	—
h ₁ (E)	4	#5	38'-5"	—
h ₃ (E)	56	#5	2'-11"	—
h ₄ (E)	136	#5	9'-7"	—
s ₂ (E)	8	#5	6'-3"	□
u ₁ (E)	118	#5	1'-6"	—
v ₂ (E)	18	#5	14'-5"	—
v ₄ (E)	18	#5	14'-11"	—
Concrete Sealer		Sq. Ft.	136	
Structure Excavation		Cu. Yd.	208.5	
Concrete Structures		Cu. Yd.	14.1	
Reinforcement Bars, Epoxy Coated		Pound	2580	

For details of Bar Splicers, see sheet 34 of 35.



PLAN

Note:
Concrete Sealer shall be applied to the exposed area of existing concrete surface above the top of sloped wall or existing ground line.
Existing anchor bolts at each bearing location shall be cut off, ground flush and sealed with epoxy. Cost included with Concrete Removal.
Beams 1 thru 9 are at W.B. structure. Beams 10 thru 18 are at E.B. structure

DESIGNED FT
CHECKED DPN
DRAWN Gregory D. Farmer
CHECKED FT/DPN

April 28 2008
EXAMINED *Thomas J. Demagallo*
PASSED *Ralph E. Carlson*
ENGINEER OF BRIDGES AND STRUCTURES

WEST ABUTMENT (W.B.) AND EAST ABUTMENT (E.B.)

F.A.P. ROUTE 313 - SECTION (21-HB-11)
KNOX COUNTY
STA. 495+98.72
STRUCTURE NO. 048-0021 (W.B.)
STRUCTURE NO. 048-0022 (E.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
F.A.P. 313	(21-HB-1)I	KNOX	55	51	35 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

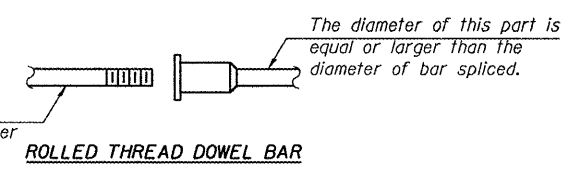
Contract #68216

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

- ① Minimum Capacity = $1.25 \times f_y \times A_l$
(Tension in kips)
 - ② Minimum *Pull-out Strength = $0.66 \times f_y \times A_l$
(Tension in kips)
- Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_l = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

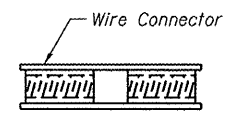
BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-0"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



ROLLED THREAD DOWEL BAR



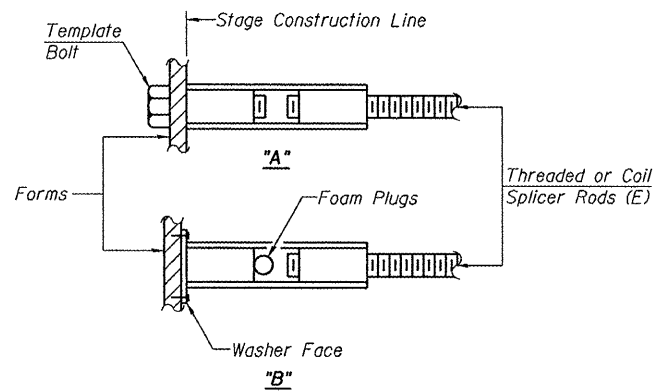
**** ONE PIECE**



WELDED SECTIONS

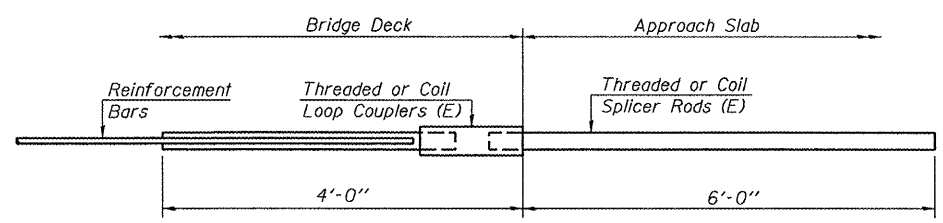
BAR SPLICER ASSEMBLY ALTERNATIVES

**Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



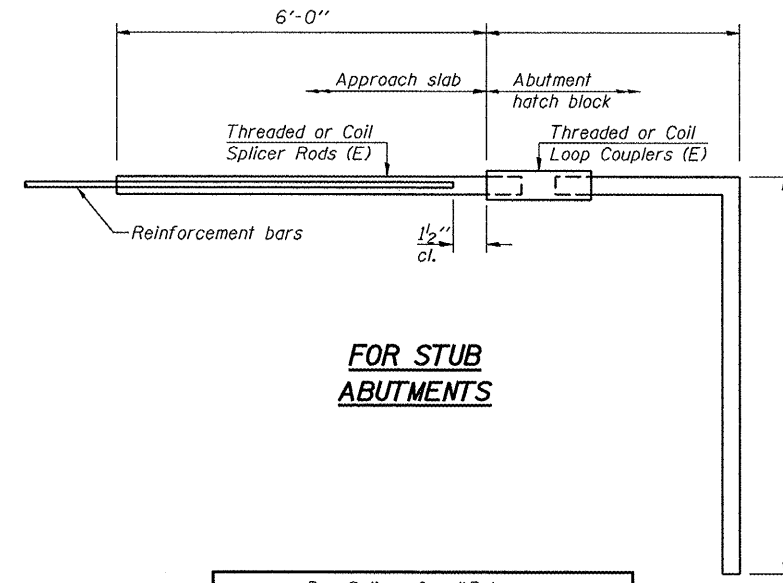
INSTALLATION AND SETTING METHODS

"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.



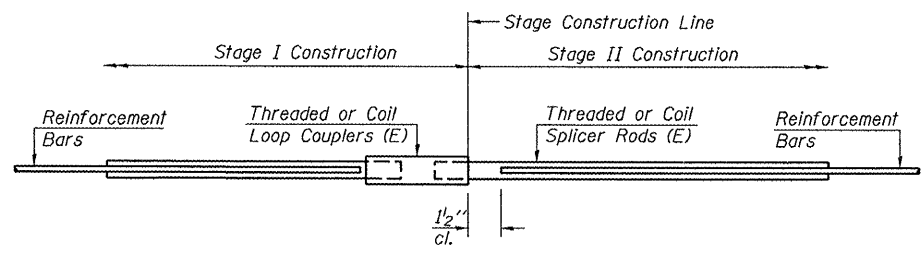
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = 208



FOR STUB ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required =



STANDARD

Bar Size	No. Assemblies Required	Location
#5	1290	Deck
#6	52	Diaphragm
#5	8	Abutment

BAR SPLICER ASSEMBLY DETAILS
F.A.P. ROUTE 313 - SECTION (21-HB-1)I

KNOX COUNTY
STA. 495+98.72
STRUCTURE NO. 048-0021 (W.B.)
STRUCTURE NO. 048-0022 (E.B.)

DESIGNED FT
CHECKED DPN
DRAWN Gregory D. Farmer
CHECKED FT/DPN

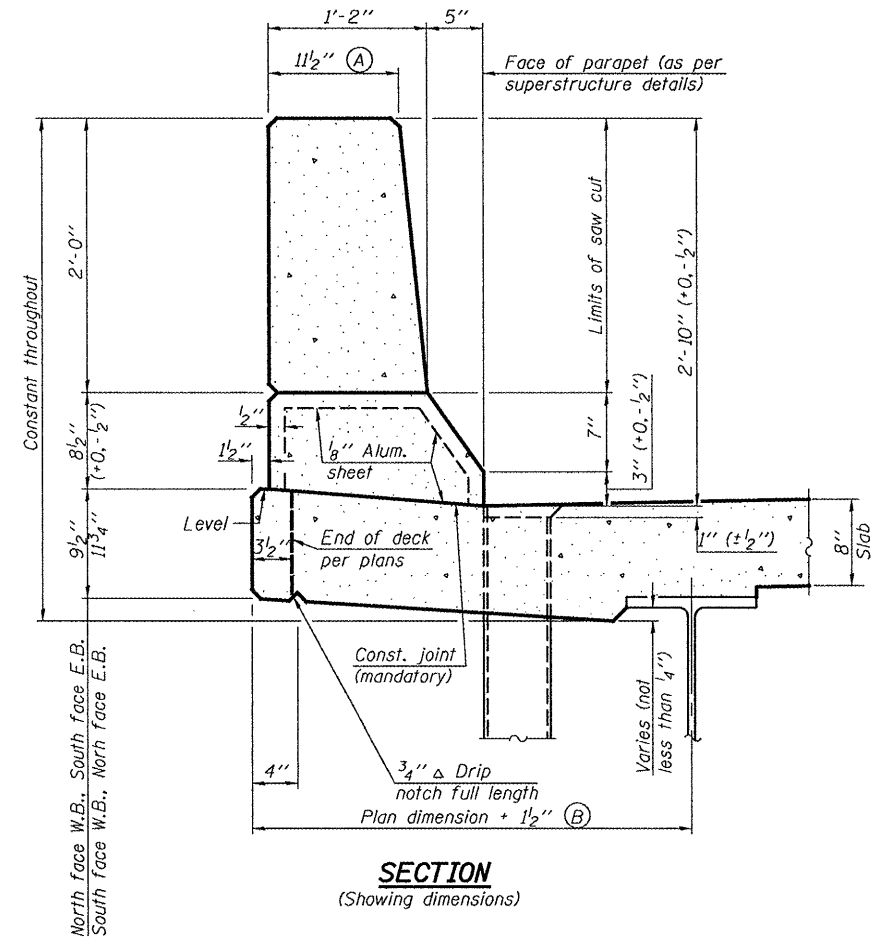
April 28 2008
EXAMINED *Thomas J. Donagallo*
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

BSD-1 11-1-06

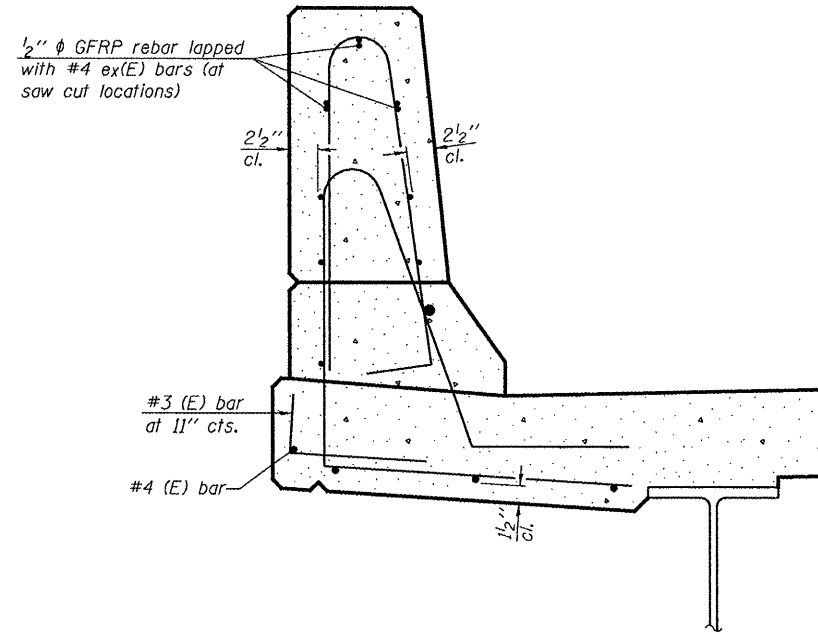
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F.A.P. 313	SECTION (21-HB-1)I	COUNTY KNOX	SHEET NO. 55	SHEET 52	SHEET NO. 35 35 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT	

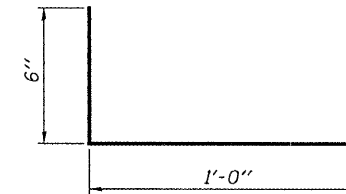
Contract #68216



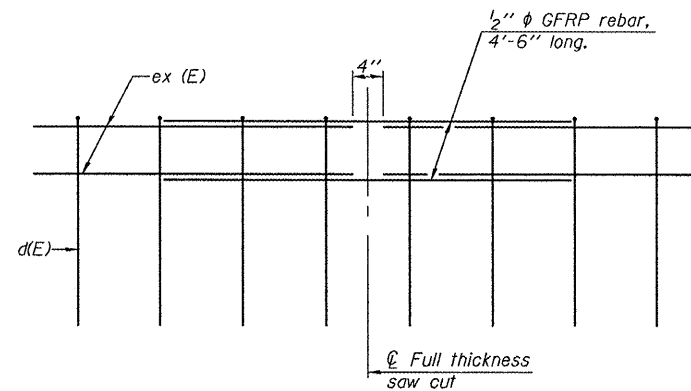
SECTION
(Showing dimensions)



SECTION
(Showing reinforcement clearances for slip forming and additional reinforcement bars)



#3 (E) BAR

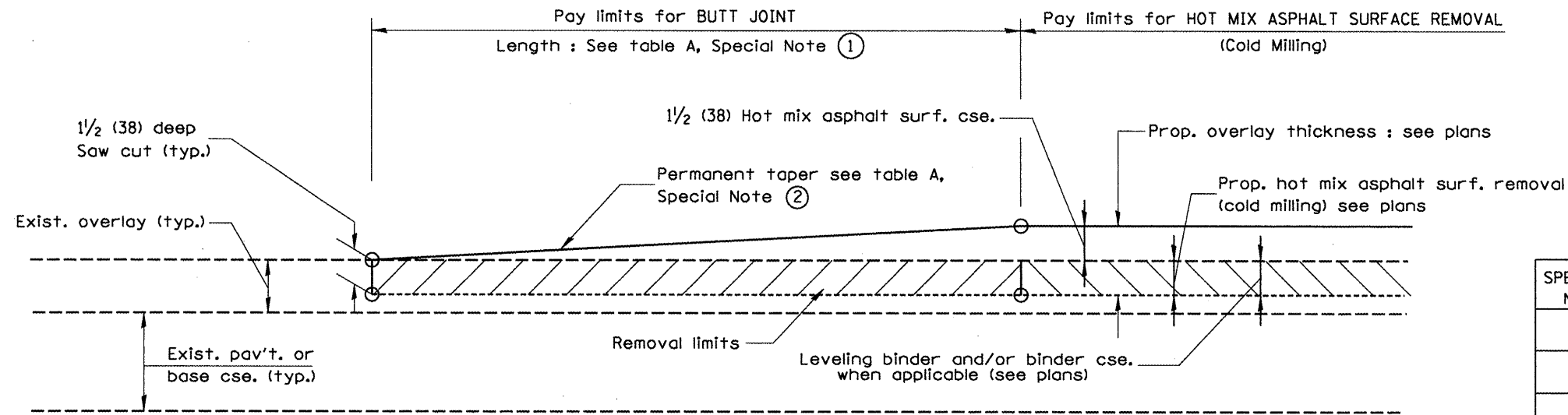


GFRP REBAR STIFFENING DETAIL
(Place as shown in parapet section at each parapet joint location.)

CONCRETE PARAPET SLIPFORMING OPTION
F.A.P. ROUTE 313 - SECTION (21-HB-1)I
KNOX COUNTY
STA. 495+98.72
STRUCTURE NO. 048-0021 (W.B.)
STRUCTURE NO. 048-0022 (E.B.)

DESIGNED FT
CHECKED DPN
DRAWN Gregory D. Farmer
CHECKED FT/DPN

April 28 2008
EXAMINED *Thomas J. Domagala*
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES



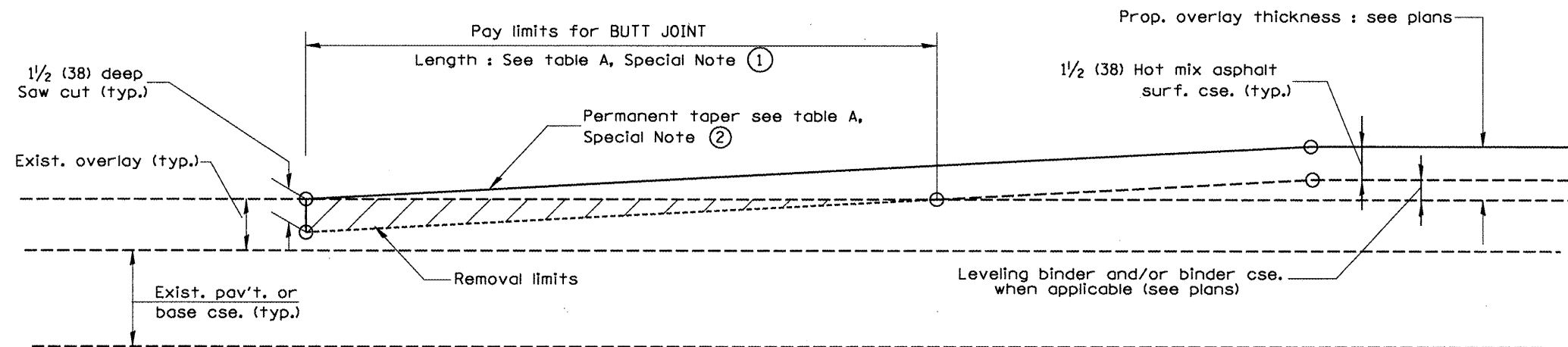
CASE 1 : WITH HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)

**TABLE A
(LENGTHS AND TAPER RATES)**

SPECIAL NOTE NUMBER	ELEMENT	MAINLINE INTERSTATES & 4-LANE EXPRESSWAYS	ALL OTHERS
①	LENGTH OF BUTT JOINT	60'(18.0 m)	30'(9.0 m)
②	PERMANENT TAPER RATE	1:480	1:240
③	TEMPORARY RAMP TAPER RATE	1:80	1:40
④	TEMPORARY RAMP LENGTH	10'(3.0 m)	5'(1.5 m)
⑤	LENGTH OF BUTT JOINT	10'(3.0 m)	10'(3.0 m)

GENERAL NOTES

1. The work shall be done in accordance with Article 406.08 and the Special Provision for Butt Joints.
2. The pavement surface to be removed may be either bituminous or P.C. concrete. The work shall be performed in accordance with Article 440.04 and the Special Provisions for Butt Joints.
3. The saw cut joints shall be primed just prior to the placing of bituminous material. The work will be in accordance with the applicable portions of Article 406.05.



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

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

ILLINOIS DEPARTMENT OF TRANSPORTATION				
DISTRICT CADD STANDARD				
BUTT JOINTS				
CADD STD NO. 406101-D4 SHEET 1 OF 3				
SCALE: NOT DRAWN TO SCALE		DRAWN BY CADD		
DATE _____ CHECKED BY _____				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(21-HB-11)	KNOX	55	53
CONTRACT NO. 68216				
FED. ROAD DIST. NO. _____ ILLINOIS FED. AID PROJECT _____				

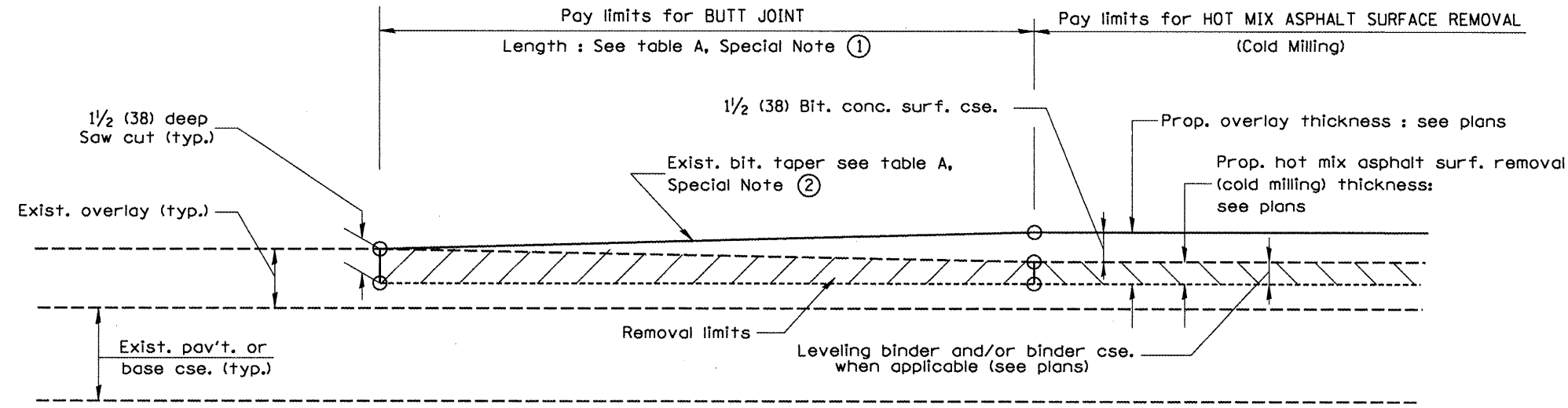
DATE	REVISIONS	BY
1-1-97	RENUM. C-23.01, NEW REVISION BOX	T.P.
4-1-97	CORRECTION TO DEPTH	J.A.
9-15-05	REVISED DESIGNER NOTE	M.M.A.
10-16-06	REVISED TO 2007 SPEC.	M.A.

FILE NAME =	USER NAME = lagnedn	DESIGNED -	REVISED -
S:\GEN\DRFT\STD&PLNS\Squad\68216 Henderson\general.dgn		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -

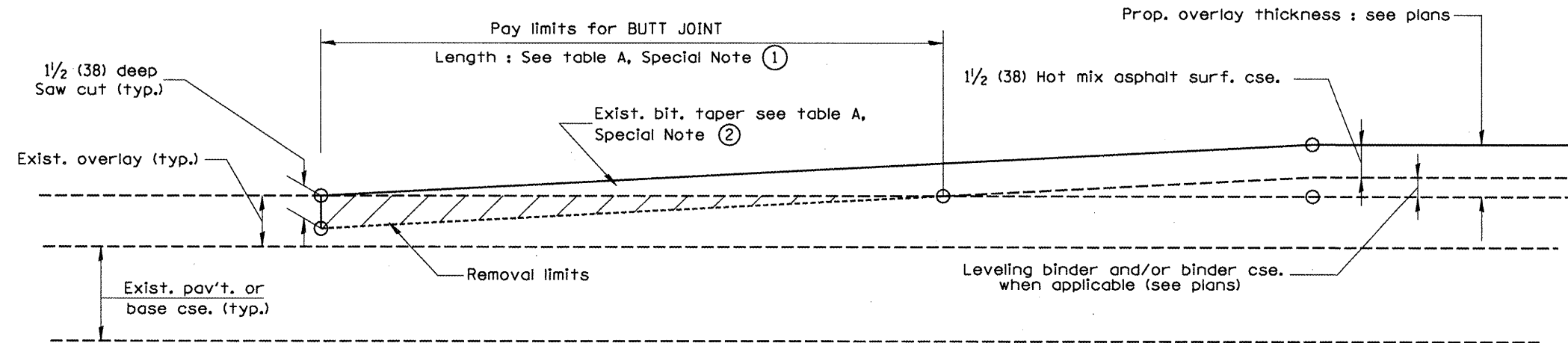
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

406101-D4 (1)

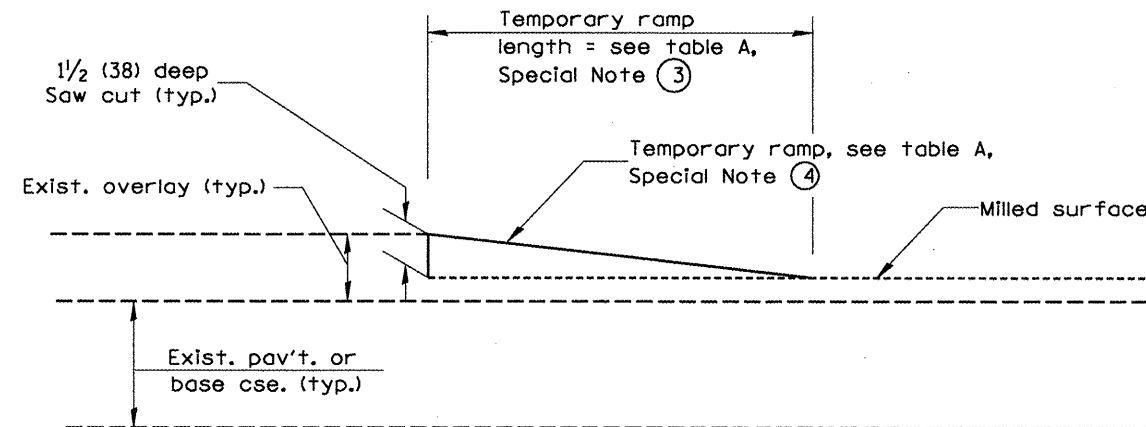
SCALE: _____ SHEET NO. _____ OF _____ SHEETS STA. _____ TO STA. _____



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



CASE 4 : NO HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)
TIE-IN TO EXISTING BITUMINOUS TAPER



DETAIL TEMPORARY RAMP

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

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT CADD STANDARD

BUTT JOINTS

CADD STD NO. 406101-D4 SHEET 2 OF 3
DRAWN BY CADD

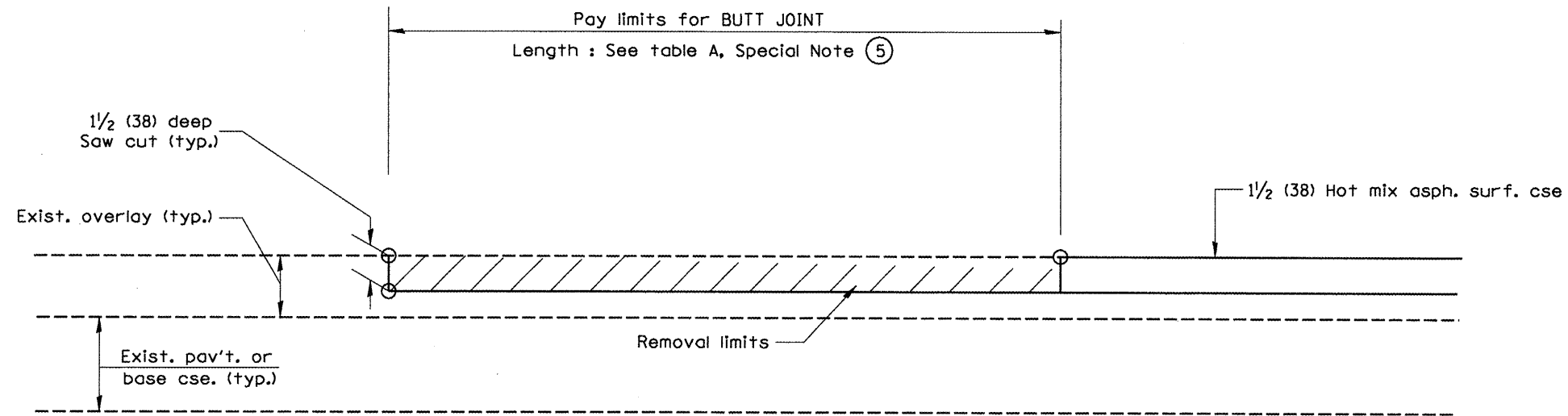
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	I21-HB-DI	KNOX	55	54
CONTRACT NO. 68216				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

FILE NAME =	USER NAME = lajnedn	DESIGNED -	REVISED -
SHAGEN\DRIFT\STD&PLNS\Squad\68216	Person\general.dgn	DRAWN -	REVISED -
	PLOT SCALE = 1/8" = 1' IN.	CHECKED -	REVISED -
	PLOT DATE = 3/19/2008	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

406101-D4 (2)

SCALE: SHEET NO. OF SHEETS STA. TO STA.



**CASE 5 : WITH HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)
TIE-IN TO EXISTING BITUMINOUS TAPER**

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

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT CADD STANDARD

BUTT JOINTS
CADD STD NO. 406101-D4 SHEET 3 OF 3
DRAWN BY CADD
SCALE: NOT DRAWN TO SCALE
CHECKED BY

FILE NAME =	USER NAME = lajnedm	DESIGNED -	REVISED -
S:\GEN\DRFT\STD&PLNS\Squad1\68216	erson\general.dgn	DRAWN -	REVISED -
	PLOT SCALE = 110.0000' / IN.	CHECKED -	REVISED -
	PLOT DATE = 3/19/2008	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

406101-D4 (3)
SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(21-HB-11)	KNOX	55	55
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
CONTRACT NO. 68216				