



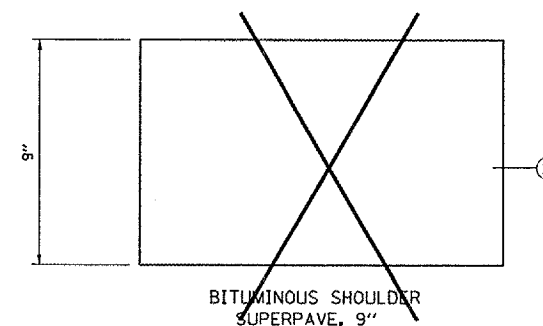
FBI ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	*	SANGAMON	559	4
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
084-9-41A, HKB, BY, BY-1 * 02-00382-02-PV				

MIXTURE REQUIREMENTS

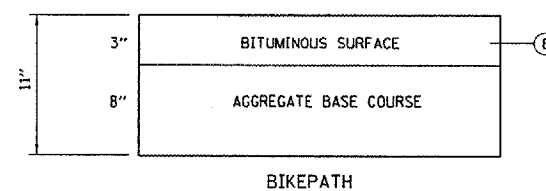
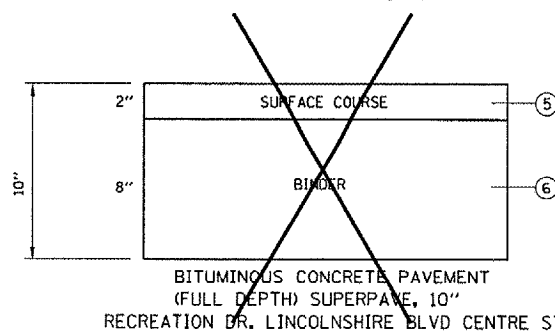
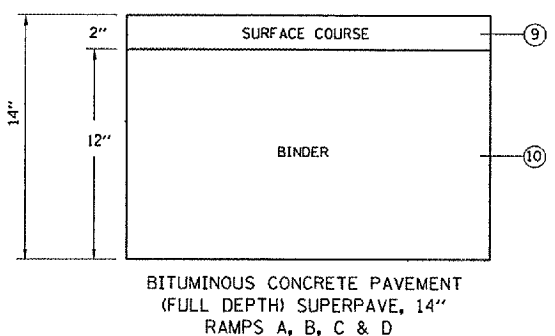
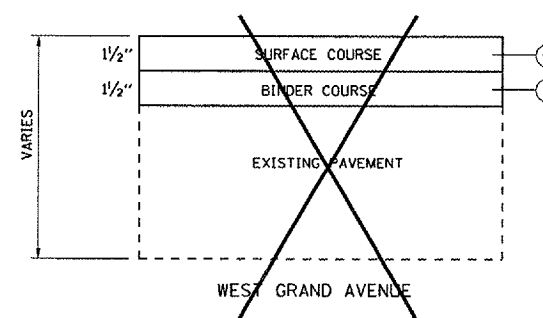
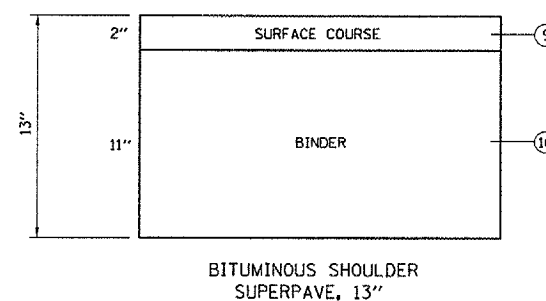
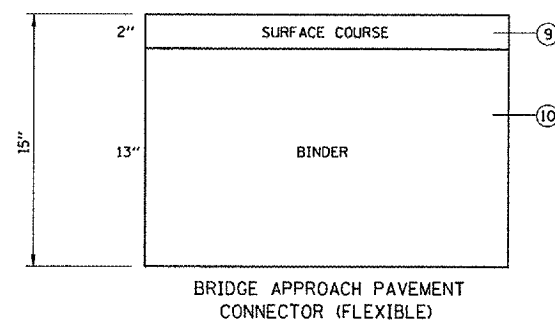
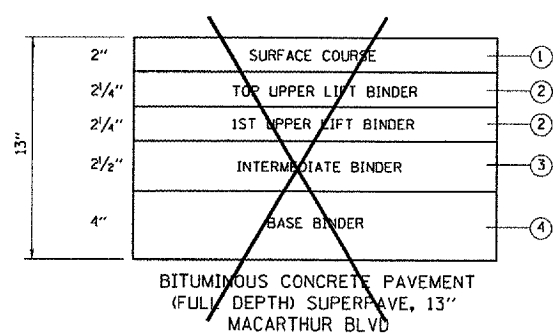
MIXTURE NUMBER:	NO. 1	NO. 2	NO. 3	NO. 4 *	NO. 5	NO. 6
LOCATION	I-72	I-72	I-72	I-72	SIDE STREETS	SIDE STREETS
MIXTURE USE (S):	TOP LIFT FULL-DEPTH PAVEMENT	TOP TWO UPPER LIFTS BINDER FULL-DEPTH PAVEMENT	INTERMEDIATE BINDER LIFT FULL-DEPTH PAVEMENT	BASE BINDER LIFT FULL-DEPTH PAVEMENT	SURFACE	BINDER
AC/PG:	SBS PG 70-28	SBS 64-28	PG 64-22	PG 64-22	PG 64-22	PG 64-22
RAP % (MAX):	10%	10%	15%	15%	15%	15%
DESIGN AIR VOIDS:	4.0% @ N DESIGN = 70	4.0% @ N DESIGN = 70	4.0% @ N DESIGN = 70	2.5% @ N DESIGN = 70	4.0% @ N DESIGN = 50	4.0% @ N DESIGN = 50
MIXTUR COMPOSITION (GRADATION MIXTURE)	IL 9.5 OR 12.5	IL 19.0	IL 19.0	IL 19.0	IL 9.5 OR 12.5	IL 19
FRICTION AGGREGATE	MIX "D"	N/A	N/A	N/A	MIX "C"	N/A

MIXTURE NUMBER:	NO. 7	NO. 8	NO. 9	NO. 10	NO. 11
LOCATION	WEST GRAND AVE	BIKE PATH	I-72	I-72	MACARTHUR BLVD RAMP
MIXTURE USE (S):	LEVELING BINDER	SURFACE (LOW ESAL)	SURFACE	BINDER	** BITUMINOUS SHOULDERS
AC/PG:	PG 64-22	PG 58-22	SBS PG 70-22	PG 64-22	PG 58-22
RAP % (MAX):	75%	30%	10%	10%	10%
DESIGN AIR VOIDS:	4.0% @ N DESIGN = 50	3.0% @ N DESIGN = 30	4.0% @ N DESIGN = 90	4.0% @ N DESIGN = 90	2.0% @ N DESIGN = 30
MIXTUR COMPOSITION (GRADATION MIXTURE)	IL 9.5 OR 12.5	IL 9.5	IL 9.5 OR 12.5	IL 19.0	BAM
FRICTION AGGREGATE	N/A	MIX "C"	MIX "D"	N/A	N/A

\* DESIGN THIS MIXTURE AT 4.0% AIR VOIDS. ADDITIONAL AC SHALL BE ADDED TO REDUCE AIR VOIDS TO 2.5%.  
 \*\* USE IL 9.5 LOW ESAL FOR TOP 2" OF SHOULDER (SEE SPECIAL PROVISIONS)



BITUMINOUS CONCRETE PAVING LIFT DIAGRAMS



REVISIONS	
NAME	DATE
PAY ITEM UPDATE	2/23/07

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 MIXTURE REQUIREMENTS  
 FAI-72, MACARTHUR BLVD  
 SEC NO. 02-00382-02-PV  
 SEC NO. (84-9-4)A, HKB, BY, BY-1  
 SANGAMON COUNTY, ILLINOIS

SCALE: VERT. DATE 2/23/2007  
 HORIZ. DATE 2/23/2007  
 DRAWN BY CLG  
 CHECKED BY JAD

REV. SHEET 2-09-07

# SUMMARY OF QUANTITIES

FAU ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	*	SANGAMON	559	6
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
(84-9-4)A,HBK,BY,BY-1		* 02-00382-02-PV		

CODE NO.	ITEM	UNIT	URBAN TOTAL QUANTITY	ROADWAY		STRUCTURE						
				MACARTHUR EXTENSION CITY SECTION 02-00382-02-PV STA. 798+08.49 TO STA. 876+31.00	MACARTHUR EXTENSION & I-72 INTERCHANGE	MACARTHUR EXTENSION OVER N.S. RAILROAD (S.N. 084-0512)	INTERURBAN TRAIL OVER N.S. RAILROAD (S.N. 084-7008)	MACARTHUR EXTENSION OVER INTERURBAN TRAIL (S.N. 084-7009)	MACARTHUR EXTENSION OVER I-72 (S.N. 084-0513)	I-72 INTERCHANGE RAMP B & C OVER U.P. RAILROAD (S.N. 084-0514 EB, S.N. 084-0516)	I-72 EB & WB OVER U.P. RAILROAD (S.N. 084-0074 EB, S.N. 084-0075 WB)	
				50% STATE / 50% CITY	FUNDING - 1M 90% FED / 10% STATE	FUNDING - 1M 90% FED / 10% STATE	FUNDING - 1M 90% FED / 10% STATE	FUNDING - 1M 90% FED / 10% STATE	FUNDING - 1M 90% FED / 10% STATE	FUNDING - 1M 90% FED / 10% STATE	FUNDING - 1M 90% FED / 10% STATE	FUNDING - 1M 90% FED / 10% STATE
28200200	FILTER FABRIC	SQ YD	2128	C000	C000	X181-5B	X932-5B	X928-2A	X781-2A	X171-5B	X171-5B	
31100100	SUB-BASE GRANULAR MATERIAL, TYPE A	TON	789.9									
35100500	AGGREGATE BASE COURSE, TYPE A 6"	SQ YD	165									
35100700	AGGREGATE BASE COURSE, TYPE A 8"	SQ YD	702	702								
40600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	3.0	1.0	0.8							1.2
<del>40600982</del>	<del>HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT</del>	<del>SQ YD</del>	<del>1274</del>									<del>1274</del>
<del>40603310</del>	<del>HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50</del>	<del>TON</del>	<del>79</del>									
<del>40603310</del>	<del>HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50</del>	<del>TON</del>	<del>79</del>									
<del>40603310</del>	<del>HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50</del>	<del>TON</del>	<del>132</del>									
<del>40603345</del>	<del>HOT-MIX ASPHALT SURFACE COURSE, MIXTURE D, N90</del>	<del>TON</del>	<del>482</del>									<del>350</del>
40701961	HOT-MIX ASPHALT PAVEMENT (FULL-DEPTH), 14"	SQ YD	145									
42001165	BRIDGE APPROACH PAVEMENT	SQ YD	544									
42001300	PROTECTIVE COAT	SQ YD	615	71		544						
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	108			108						
42400100	PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH	SQ FT	3970	3970								
44000100	PAVEMENT REMOVAL	SQ YD	15330	1804		13526						
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	18	18								
* 44000700	APPROACH SLAB REMOVAL	SQ YD	557			557						
* 44000920	BITUMINOUS CONCRETE SHOULDER REMOVAL	SQ YD	6329			6329						
44004000	PAVED DITCH REMOVAL	FOOT	110			110						
* 44004400	PAVEMENT REMOVAL (SPECIAL)	SQ YD	2169			2169						
* 48101620	AGGREGATE SHOULDERS, TYPE B 10"	SQ YD	1524			1524						
48203049	HOT-MIX ASPHALT SHOULDERS, 13"	SQ YD	6064			6064						
50102400	CONCRETE REMOVAL	CU YD	117.6									117.6
* 50104400	CONCRETE HEADWALL REMOVAL	EACH	16			16						
50104650	SLOPE WALL REMOVAL	SQ YD	2100									2100
50104720	REMOVAL OF EXISTING CONCRETE DECK	EACH	2									2
* 50105220	PIPE CULVERT REMOVAL	FOOT	358			358						
50157300	PROTECTIVE SHIELD	SQ YD	1007									1007

\* PAY ITEM REQUIRES A SPECIAL PROVISION

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SUMMARY OF QUANTITIES -2  
 FA1-72, MACARTHUR BLVD  
 SEC NO. 02-00382-02-PV  
 SEC NO. (84-9-4)A,HBK,BY,BY-1  
 SANGAMON COUNTY, ILLINOIS

SCALE: VERT. \_\_\_\_\_  
 HORIZ. \_\_\_\_\_  
 DATE 12/14/2006  
 DRAWN BY CLG  
 CHECKED BY JAD

Rev. 2-9-07



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12/14/2006  
 CLG  
 CLG  
 JAD





**PAVING SCHEDULE**

LOCATION	SUB-BASE GRANULAR MATERIAL TYPE A	AGGREGATE BASE COURSE TYPE A 6"	AGGREGATE BASE COURSE TYPE A 8"	HOT-MIX ASPHALT SURFACE COURSE MIX "C", N30	BITUMINOUS MATERIALS (PRIME COAT)	LEVELING BINDER (MACHINE METHOD), N50	HOT-MIX ASPHALT SURFACE COURSE MIX "C", N50	HOT-MIX ASPHALT SURFACE COURSE MIX "D", N90	HOT-MIX ASPHALT PAVEMENT (FULL-DEPTH), 14"
<b>MACARTHUR BOULEVARD</b>									
BEGIN STATION	END STATION	OFFSET							
873+94.94	875+32.67	LT		667		1.0	77.0	77.0	
				667		1.0	77.0	77.0	
<b>INTERSTATE 72</b>									
591+74.00	606+83.03	RT 6'		114.7					
591+74.00	606+67.61	RT 10'		189.2					
605+20.00	607+14.71	LT 6'		16.6					
605+20.00	607+30.80	LT 10'		30.0					
609+67.60	611+60.00	RT 6'		13.1					
609+68.96	611+90.00	RT 10'		28.0					
610+26.33	625+30.00	LT 6'		128.6					
610+46.45	625+50.30	LT 10'		214.3					
606+63.20	606+75.69	RT		8.1					33.0
607+08.10	607+22.76	LT		19.3					33.0
609+78.86	609+91.40	RT		8.1					39.0
610+35.60	610+50.50	LT		20.0					40.0
606+05.69	606+75.69	RT							33.0
609+78.86	610+48.86	RT							33.0
606+52.76	607+22.76	LT							33.0
610+35.60	611+05.60	LT							33.0
									132.0
									145.0
<b>BIKE PATH</b>									
BIKE PATH PATCH A				58					
BIKE PATH PATCH B				40					
BIKE PATH PATCH C				32					
BIKE PATH PATCH D				35					
				165					28
<b>WEST GRAND AVENUE</b>									
BEGIN STATION	END STATION	OFFSET							
502+50.00		RT		15		2.0	2.0		
				15		2.0	2.0		
<b>TOTAL</b>				<b>789.9</b>		<b>1.0</b>	<b>79.0</b>	<b>79.0</b>	<b>132.0</b>
				<b>165</b>					<b>145.0</b>
				<b>702</b>					<b>277.0</b>

**SHOULDER SCHEDULE**

LOCATION	AGGREGATE SHOULDERS TYPE B 10"	HOT-MIX ASPHALT SHOULDERS 13"	SHOULDER RUMBLE STRIP
<b>INTERSTATE 72</b>			
BEGIN STATION	END STATION	OFFSET	
591+74.00	606+83.03	RT (6')	
591+74.00	606+67.61	RT (10')	1006
591+74.00	608+71.11	RT(EB)	1660
591+74.00	608+90.68	LT(EB)	333
591+74.00	608+90.68	LT(EB)	337
591+74.00	606+75.90	EB OUTER	1502
591+74.00	608+87.50	EB MEDIAN	1514
605+20.00	607+14.84	LT (6')	130
605+20.00	607+22.40	WB MEDIAN	202
605+20.00	607+35.00	WB OUTER	215
605+20.00	607+31.43	LT (10')	235
605+20.00	607+19.38	RT(WB)	44
605+20.00	607+40.38	LT(WB)	49
609+68.96	611+90.00	RT(EB)	51
609+68.96	611+90.00	EB OUTER	224
609+68.96	611+90.00	RT (10')	246
609+80.00	611+60.00	EB MEDIAN	180
609+83.76	611+60.00	LT(EB)	39
609+87.44	611+60.00	RT (6')	115
610+18.15	625+30.00	RT(WB)	336
610+22.10	625+30.00	WB MEDIAN	1508
610+26.32	625+30.00	LT (6')	1002
610+37.20	625+50.30	WB OUTER	1513
610+43.74	625+50.30	LT(WB)	335
610+46.44	625+60.30	LT (10')	1671
			8858
			6064
			6858

**LIGHTING SCHEDULE**

LOCATION	JUN BX SS ES 8X8X6	PED UND LUM
<b>INTERURBAN TRAIL</b>		
PEDESTRIAN UNDERPASS LIGHTING	1	30
	1	30
<b>TOTAL</b>	<b>1</b>	<b>30</b>

**SIDEWALK SCHEDULE**

LOCATION	PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH	
		SQ FT
<b>MACARTHUR BOULEVARD</b>		
BEGIN STATION	END STATION	OFFSET
873+70.86	876+81.00	LT
		3970
		3970
<b>TOTAL</b>	<b>3970</b>	

**CURB AND GUTTER AND BRIDGE APPROACH PAVEMENT SCHEDULE**

LOCATION	BRIDGE APPROACH PAVEMENT	PROTECTIVE COAT	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	COMBINATION CONCRETE CURB AND GUTTER TYPE B-6.18
<b>MACARTHUR BOULEVARD</b>				
BEGIN STATION	END STATION	OFFSET		
873+94.30	875+32.20	LT	71	243.0
			71	243.0
<b>INTERSTATE 72</b>				
606+75.76	606+81.69	RT		27
606+81.69	607+11.29	RT	136	136
607+22.68	607+28.76	LT		27
607+28.76	607+59.16	LT	136	136
609+43.25	609+72.86	RT	136	136
609+72.86	609+78.78	RT		27
609+99.21	610+29.60	LT	136	136
610+29.60	610+35.68	LT		27
			544	544
			615	108
<b>TOTAL</b>	<b>544</b>	<b>615</b>	<b>108</b>	<b>243.0</b>

**EXPLORATION TRENCH SCHEDULE**

LOCATION	EXPLORATION TRENCH 52" DEPTH
<b>MACARTHUR BOULEVARD</b>	
ROADWAY TOTAL	2200
ROADWAY TOTAL	7500
<b>SUBTOTAL</b>	<b>9700</b>
<b>RAMP A</b>	
ROADWAY TOTAL	900
<b>SUBTOTAL</b>	<b>900</b>
<b>RAMP B</b>	
ROADWAY TOTAL	1800
<b>SUBTOTAL</b>	<b>1800</b>
<b>RAMP C</b>	
ROADWAY TOTAL	1800
<b>SUBTOTAL</b>	<b>1800</b>
<b>RAMP D</b>	
ROADWAY TOTAL	1400
<b>SUBTOTAL</b>	<b>1400</b>
<b>RECREATION DRIVE</b>	
ROADWAY TOTAL	2600
<b>SUBTOTAL</b>	<b>2600</b>
<b>LINCOLNSHIRE BOULEVARD</b>	
ROADWAY TOTAL	400
<b>SUBTOTAL</b>	<b>400</b>
<b>CENTRE STREET</b>	
ROADWAY TOTAL	300
<b>SUBTOTAL</b>	<b>300</b>
<b>INTERURBAN TRAIL</b>	
ROADWAY TOTAL	400
<b>SUBTOTAL</b>	<b>400</b>
<b>TOTAL</b>	<b>19300</b>

FAU ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	*	SANGAMON	559	40
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
184-9-4(A)HBK, BY-1 * 02-00382-02-PV				

**RIGHT-OF-WAY AND SURVEY MARKER SCHEDULE**

LOCATION	STATION	OFFSET	LT/RT	PERMANENT SURVEY MARKERS TYPE 1	SURVEY MARKER TYPE 1 (SPECIAL)	SURVEY MARKER TYPE 2 (SPECIAL)
<b>MACARTHUR BOULEVARD</b>						
	777+00.00			1		
	787+00.00			1		
	792+91.05	1423.69	LT		1	
	797+00.00			1		
	801+40.00	1081.47	RT		1	
	807+00.00			1		
	815+96.39			1		
	825+77.04	331.18	RT		1	
	827+17.88			1		
	828+20.08			1		
	842+08.82			1		
	842+57.10			1		
	852+51.70	297.39	LT			1
	858+23.72			1		
	867+72.90			1		
	872+68.69			1		
	879+02.91			1		
				13		
				3		
<b>TOTAL</b>				<b>13</b>	<b>3</b>	<b>1</b>

**FENCE SCHEDULE**

LOCATION	TEMPORARY FENCE	FENCE REMOVAL
<b>INTERSTATE 72</b>		
BEGIN STATION	END STATION	OFFSET
530+88.00	531+12.00	LT (BORROW AREA)
		24
569+50.00	608+09.00	LT
		3949
578+90.00	596+46.00	RT
		1733
585+85.00	597+61.00	LT (HAZEL DELL RD)
		1210
594+86.00	599+66.00	LT
		442
594+95.00	599+91.00	LT
		450
597+17.00	609+40.00	RT
		1171
598+18.00	601+77.00	RT (BORROW AREA)
		485
608+89.00	623+49.00	RT
		1460
609+71.00		LT/RT (MEDIAN)
		127
610+17.00	623+49.00	LT
		1430
		12481
<b>INTERURBAN TRAIL</b>		
WEST SIDE OF INTERURBAN TRAIL CONSTRUCTION		470
		470
<b>TOTAL</b>	<b>470</b>	<b>12481</b>

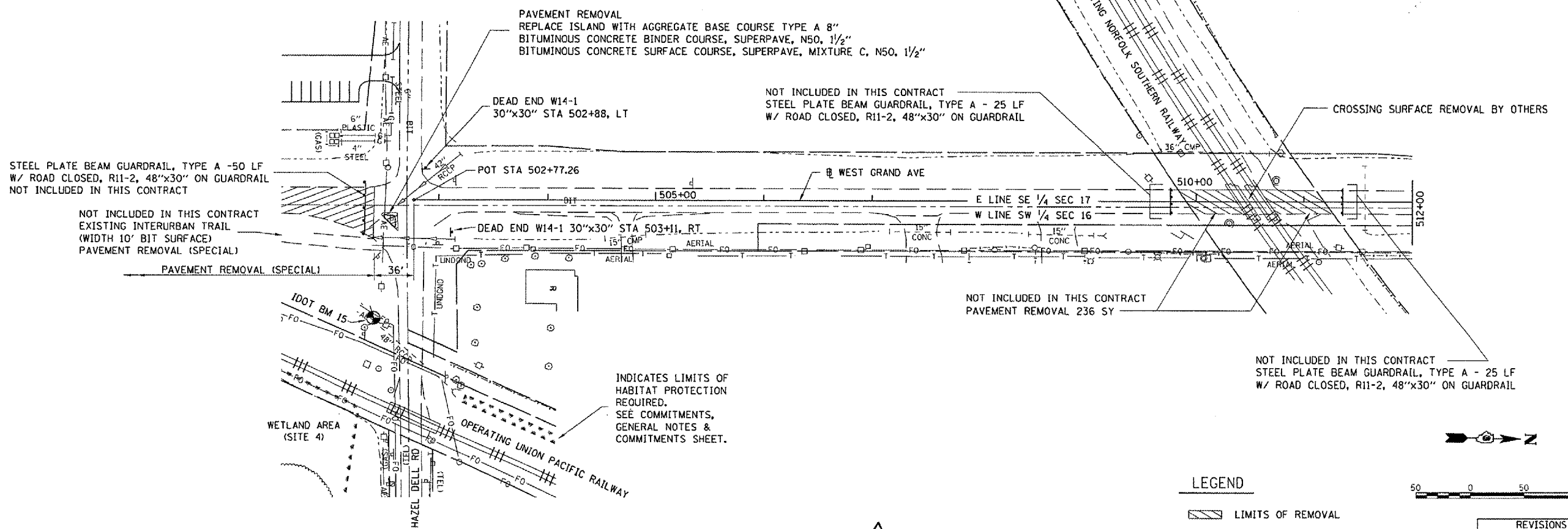
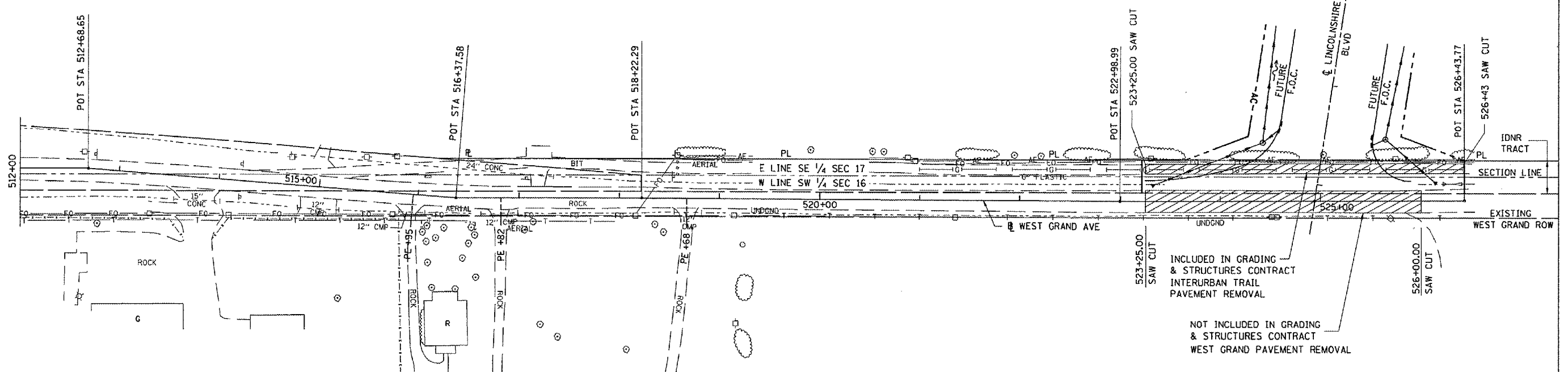
REVISIONS	
NAME	DATE
PAY ITEM UPDATE	2/23/07

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SCHEDULE OF QUANTITIES -4  
 FAI-72, MACARTHUR BLVD  
 SEC NO. 02-00382-02-PV  
 SEC NO. (84-9-4)A, HBK, BY-1  
 SANGAMON COUNTY, ILLINOIS

SCALE: VERT. HORIZ. DATE 05/20/2005 DRAWN BY CLG CHECKED BY MH

1 REV. SHEET 2-09-07

FAU ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	*	SANGAMON	559	119
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
(84-9-41A,HBK,BY-1 * 02-00382-02-PV				



LEGEND

▨ LIMITS OF REMOVAL



REVISIONS	
NAME	DATE
TEXT EDIT	2/23/07

△ REV. SHEET 2-09-07

DATE	BY

PLAN

REVIEWED: [ ]  
 CHECKED: [ ]  
 ALIGNED: [ ]  
 FILE NAME: [ ]  
 NO. [ ]

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**HANSON**

DATE	BY

PROFILE

REVIEWED: [ ]  
 CHECKED: [ ]  
 STRUCTURE: [ ]  
 NOTARY: [ ]  
 NO. [ ]

2/23/2007  
#FILES

DATE	10/27/06
BY	CLS
REVIEWED	JRW/AM 04/28/05

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4. Temporary Concrete Barrier	27. W.B. East Abutment Concrete Removal
5.-7. Top of Slab Elevations-(W.B.)	28. W.B. East Abutment
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20. Structural Steel Framing Plan	37. W.B. Piers 1-3
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22. Bearing Details	39. Substructure Repairs
23. Anchor Bolt Assembly Details	40. Bar Splicer Assembly Details
	41.-44. Borings

**GENERAL NOTES**

Fasteners shall be high strength bolts. Bolts 7/8" φ, open holes 15/16" φ, unless otherwise noted.  
 Calculated weight of Structural Steel: AASHTO M270 Grade 36 = E.B. 39,690 lbs - W.B. 40,040 lbs.  
 Expansion joint plates and attached bars shall be shop painted with the inorganic zinc rich primer.

Field welding of construction accessories will not be permitted to beams or girders.

Anchor bolts shall be set before bolting diaphragms over supports.  
 The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the wide flange beams and all splice plate material except fill plates.

Reinforcement bars shall conform to the requirements of AASHTO M 31 or M 322 Grade 60.

Slope wall shall be reinforced with welded wire fabric, 6"x6"-W4.0xW4.0, weighing 58 lbs. per 100 Sq. Ft.

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field 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 the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price for the work.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 1/2" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.

The contractor shall drive one HP10x42 test pile at the Abutments and Pier #2 for the E.B. & W.B. structures in a permanent location as directed by the Engineer before ordering the remainder of piles.

Prior to pouring the new concrete deck, all loose rust, loose mill scale, and other loose potentially detrimental foreign material shall be removed from the surfaces of the beams or girders in contact with concrete. The cost of this work will be included in the pay item covering removal of the existing concrete. All heavy rust and other tightly adhered potentially detrimental foreign matter shall also be removed from the surfaces of the beams or girders in contact with concrete. Tightly adhered paint may remain unless otherwise noted. This removal shall be accomplished by methods that will not damage the steel. The cost of this work will be paid for according to Article 109.04.

All existing construction accessories welded to the top flange over the pier between the quarter points of the beams or girders shall be removed. The remaining weld shall be ground smooth and inspected for cracks using magnetic particle testing. Any cracks that cannot be removed by grinding approximately 1/4 inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of this work will be paid for according to Article 109.04.

Concrete Sealer shall be applied to the seat area of the abutment extensions. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

The existing structural steel shall be painted, cleaned, and lead coatings removed under a separate contract.

All construction joints shall be banded.

If the Contractor elects to use cantilever forming brackets on the exterior beams or girders, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06 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.

No deck drains will be permitted in the span over tracks or within 10' of crossarms of a railroad pole line.

The Inorganic zinc rich primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. 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 Interstate Green Munsell No. 7.5G 4/8. See Special Provisions for "Cleaning and Painting New Metal Structures".

Drains shall be located clear of all diaphragms.  
 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.

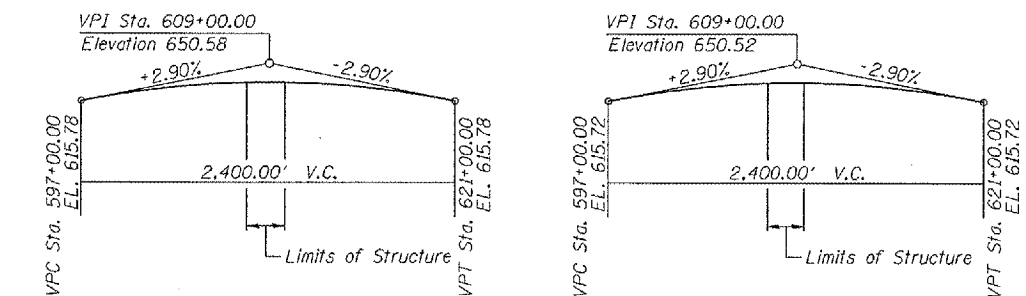
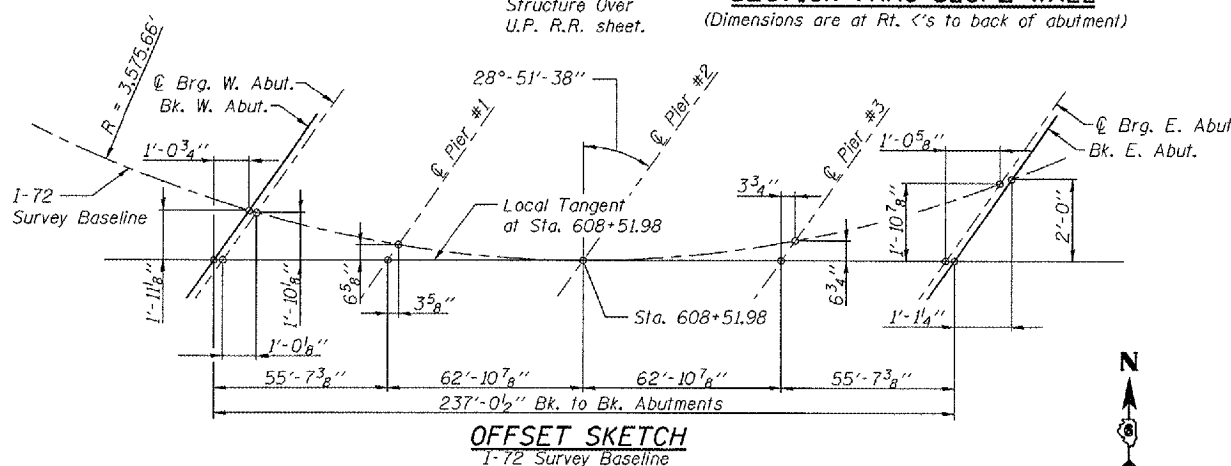
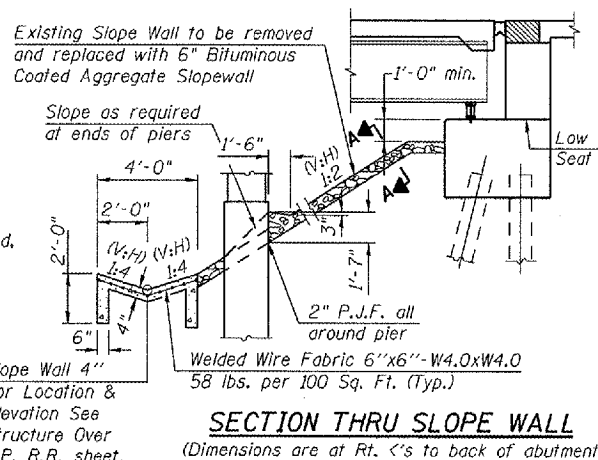
Top of slab elevations were set using the proposed profile grade shown on this sheet to account for a future mill of 1/4" and an overlay of 3 3/4".

The Steel H-piles shall be according to AASHTO M270 Grade 50.

The test piles shall be driven to 110 percent of the Nominal Required Bearing indicated in the pile data information.

**PROPOSED IMPROVEMENTS**

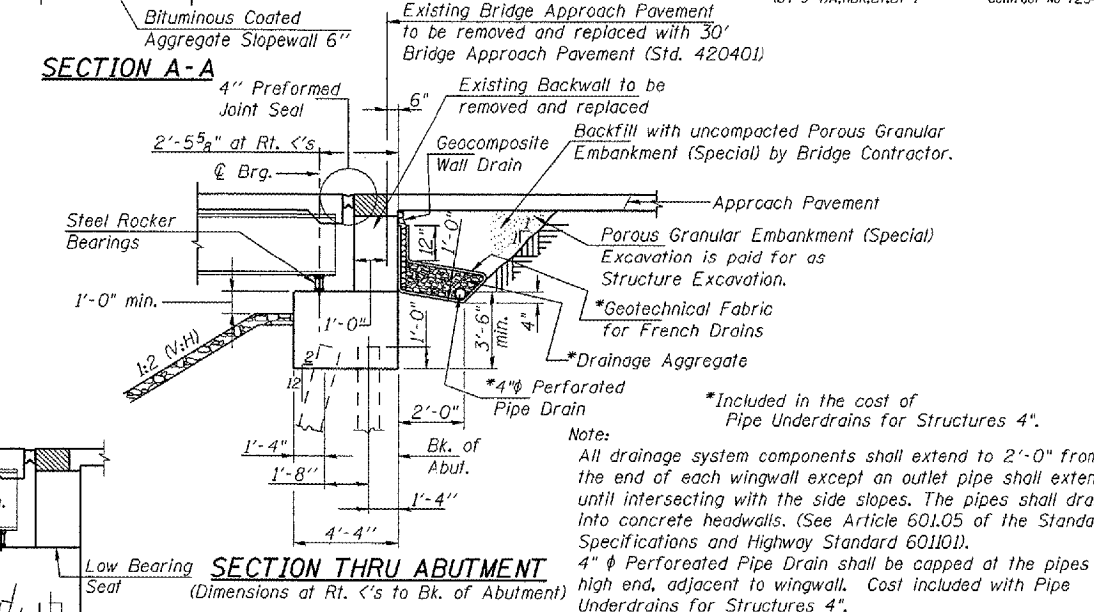
Existing dual structures to be widened. Existing concrete deck to be removed and widened using staged construction. Superstructure will be widened by adding one new beam line, utilizing the same type of beam and bearings as the existing structure. All diaphragms at the abutments to be replaced. Existing Structural Steel shall be cleaned and painted under a separate contract. Existing wingwalls and backwalls to be removed, abutments to be widened. Pier cap cantilevers removed, piers to be widened and repaired at locations of cracks and spalled areas. East and West slopewall to be removed and replaced. Existing approach pavements to be removed and replaced with 30' bridge approach pavements. Traffic to be maintained utilizing stage construction.



**I-72 W.B. PROPOSED PROFILE GRADE I-72 E.B. PROPOSED PROFILE GRADE**

(I-72 WB & EB Proposed Profile Grades shown above are a best fit vertical curve that was based on a survey of the existing deck, and were adjusted to account for a future mill of 1/4" and an overlay of 3 3/4")

ROUTE NO.	SECTION	COUNTY	DATE	SHEET	SHEET NO. 02
FAI 72	*	SANGAMON	559	255	44 SHEETS
FED. ROAD DIST. NO. 7	ILL. MO. DIST. NO. 1	FED. AID PROJECT NO.	Contract No 72541		



**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Removal	Cu. Yd.	-	117.6	117.6
Slope Wall Removal	Sq. Yd.	-	2100	2100
Removal of Existing Concrete Deck	Each	2	-	2
Porous Granular Embankment, Special	Cu. Yd.	-	132	132
Structure Excavation	Cu. Yd.	-	697	697
Floor Drains	Each	12	-	12
Concrete Structures	Cu. Yd.	-	340.0	340.0
Concrete Superstructure	Cu. Yd.	657.3	-	657.3
Bridge Deck Grooving	Sq. Yd.	1966	-	1966
Protective Coat	Sq. Yd.	2502	-	2502
Structural Repair of Conc. (Depth eq. to or less than 5")	Sq. Ft.	-	33	33
Furnishing and Erecting Structural Steel Bridge No. 1	L. Sum	1	-	1
Furnishing and Erecting Structural Steel Bridge No. 2	L. Sum	1	-	1
Stud Shear Connectors	Each	10710	-	10710
Structural Steel Removal	Pound	2920	-	2920
Reinforcement Bars, Epoxy Coated	Pound	148700	39400	188100
Slope Wall 4"	Sq. Yd.	-	152	152
Bituminous Coated Aggregate Slopewall 6"	Sq. Yd.	-	1982	1982
Furnishing Steel Piles HP10x42	Foot	-	1425	1425
Driving Piles	Foot	-	1425	1425
Test Pile Steel HP10x42	Each	-	6	6
Temporary Sheet Piling	Sq. Ft.	-	1105	1105
Name Plates	Each	2	-	2
Concrete Sealer	Sq. Ft.	-	98	98
Drainage Scuppers, DS-II	Each	4	-	4
Bridge Joint System (Expansion) 1 1/2"	Foot	187	-	187
Temporary Shoring and Cribbing	L. Sum	1	-	1
Bar Splicers	Each	1374	231	1605
Protective Shield	Sq. Yd.	1007	-	1007
Pipe Underdrains for Structures 4"	Foot	-	208	208
Geocomposite Wall Drain	Sq. Yd.	-	75	75
Concrete Encasement	Cu. Yd.	-	4.4	4.4

West Rail		East Rail	
Station	Elevation	Station	Elevation
0+00.00	605.31	0+00.03	605.33
0+67.95	605.32	0+67.76	605.35
1+83.17	605.26	1+83.48	605.25
2+80.82	605.24	2+80.71	605.24
3+81.80	605.12	3+81.74	605.13
4+81.65	605.26	4+81.69	605.24
5+78.38	605.39	5+78.51	605.36

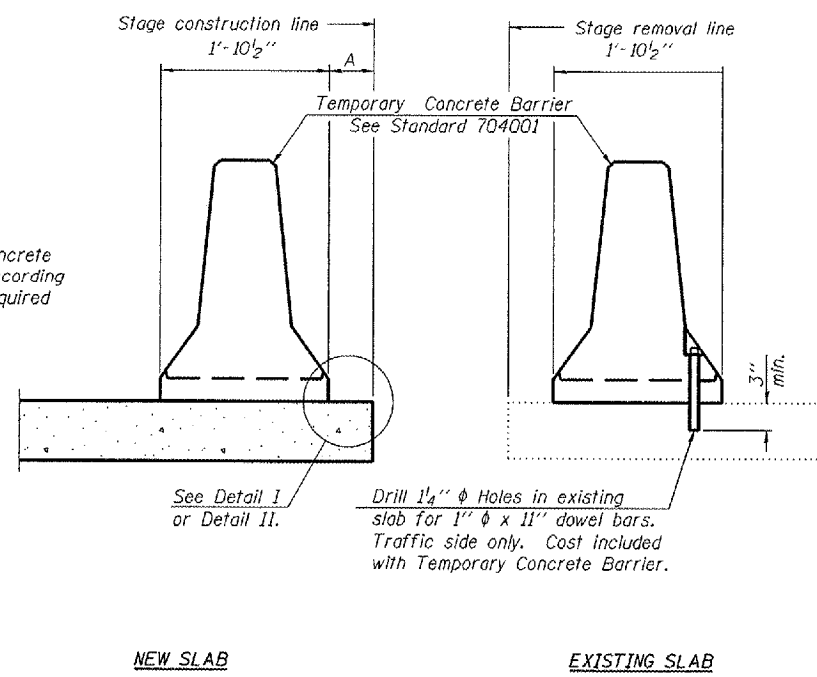
All discrepancies shall be brought to the attention of the Field Engineer.  
**EXISTING TOP OF RAIL ELEVATIONS UP R.R.**

Corporate License Number 184-001-084  
**GENERAL NOTES & BILL OF MATERIAL**  
**F.A.I. 72 OVER UNION PACIFIC RAILROAD**  
**SECTION (84-9-4)A,HBK,BY,BY-1**  
**SANGAMON COUNTY**  
**STATION 608+51.98**  
**STR NO. 084-0074 EB - 084-0075 WB**

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**HANSON**  
 DATE: 01/12/06

ROUTE NO.	SECTION	COUNTY	SHEETS	"OF"	SHEET NO. 04
FAI 72	*	SANGAMON	559	257	44 SHEETS
FED. ROAD DIST. NO. 7	BID LINES	FED. AID PROJECT			

\*(84-9-4)A,HBK,BY,BY-1 Contract No 72541



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

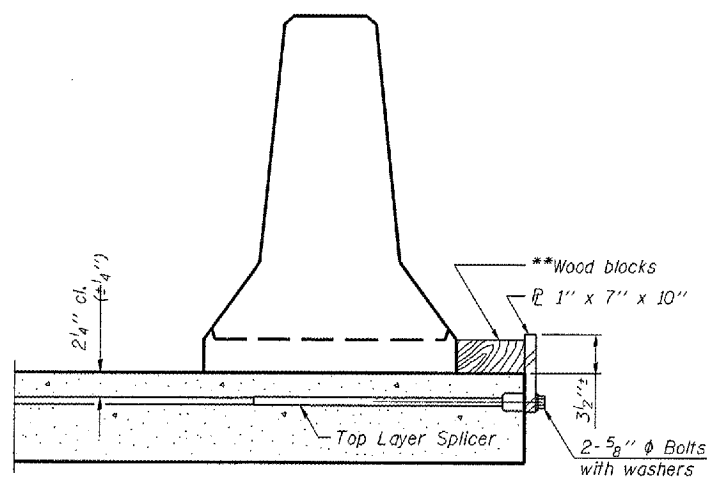
SECTIONS THRU SLAB

NOTES

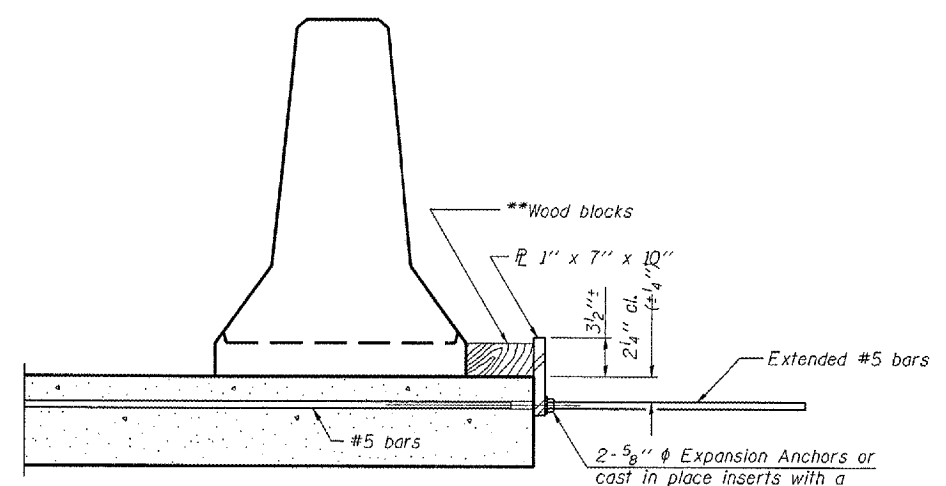
Detail I - With Bar Splicer or Couplers:  
Connect one (1) 1"x7"x10" steel  $\bar{R}$  to the top layer of couplers with 2- $\frac{5}{8}$ "  $\phi$  bolts screwed to coupler at approximate  $\bar{C}$  of each barrier panel.

Detail II - With Extended Reinforcement Bars:  
Connect one (1) 1"x7"x10" steel  $\bar{R}$  to the concrete slab with 2- $\frac{5}{8}$ "  $\phi$  Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate  $\bar{C}$  of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x 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.

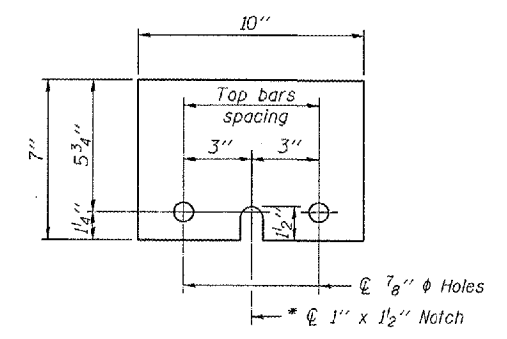


DETAIL I



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  $\bar{R}$  1" x 7" x 10"  
\* Required only with Detail II

#FILES \$DATES

LAYOUT	MM	06/27/03
DRAWN	DAP	07/17/03
REVIEWED	JMM	10/21/03

R-27 11-1-06

Corporate License Number 184-001-084  
**TEMPORARY CONCRETE BARRIER**  
 F.A.I. 72 OVER UNION PACIFIC RAILROAD  
 SECTION (84-9-4)A,HBK,BY,BY-1  
 SANGAMON COUNTY  
 STATION 608+51.98  
 STR NO. 084-0074 EB - 084-0075 WB

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**HANSON**

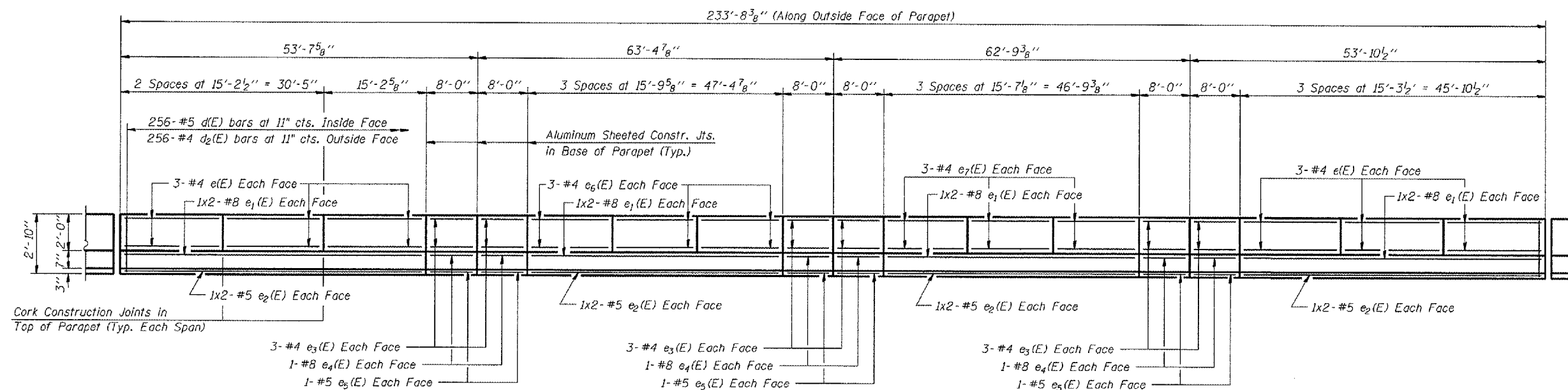
96S2002B  
 DATE: 01/12/06



Notes: Reinforcement bars designated (E) shall be epoxy coated.  
 Bars indicated thus 1x2-#5 etc. Indicates 1 line of bars with  
 2 lengths per line.  
 See sheet 13 of 44 for Superstructure Details and Bill of Material.

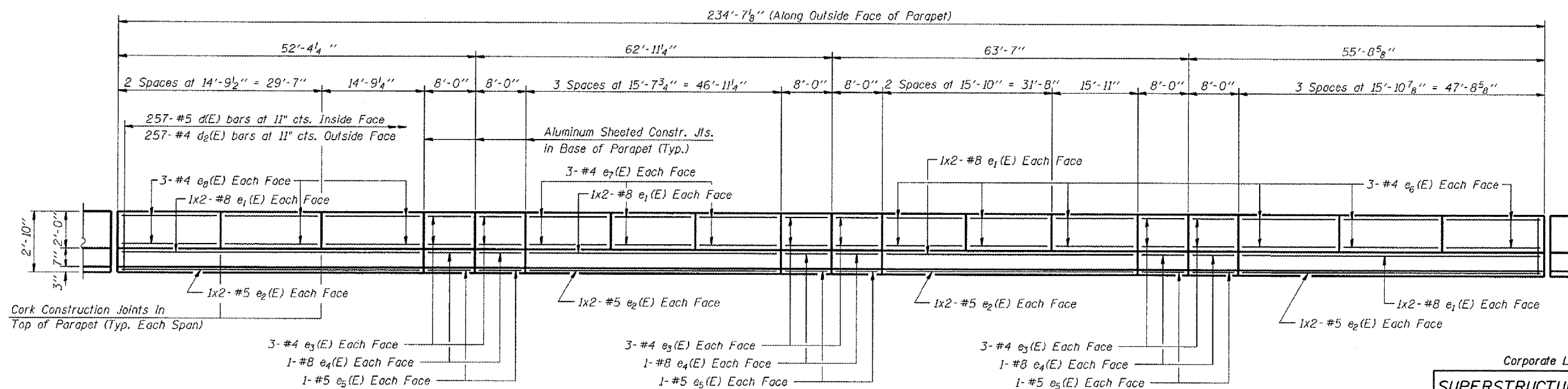
ROUTE NO.	SECTION	COUNTY	SHEET	SHEET	SHEET NO. 12
FAI 72	#	SANGAMON	559	265	44 SHEETS
FAU 8072					
REG. ROAD DIST. NO. 7	ILLINOIS	REG. A&D PROJECT-			

(84-9-4)A, H.B.K., BY-1 Contract No 72541



**INSIDE ELEVATION OF SOUTH PARAPET**  
 (Westbound Structure)

**MIN. BAR LAPS**  
 #5 Bar - 2'-2"  
 #8 Bar - 4'-6"



**INSIDE ELEVATION OF NORTH PARAPET**  
 (Westbound Structure)

⚠ Slipforming of Parapets not allowed on this structure.

FILES DATES

LAYOUT	MMI	06/27/03
DRAWN	DAP	07/11/03
REVIEWED	JMM	10/27/03

Corporate License Number 184-001-084

**SUPERSTRUCTURE DETAILS - WESTBOUND**  
**F.A.I. 72 OVER UNION PACIFIC RAILROAD**  
**SECTION (84-9-4)A, H.B.K., BY-1**  
**SANGAMON COUNTY**  
**STATION 608+51.98**  
**STR NO. 084-0074 EB - 084-0075 WB**

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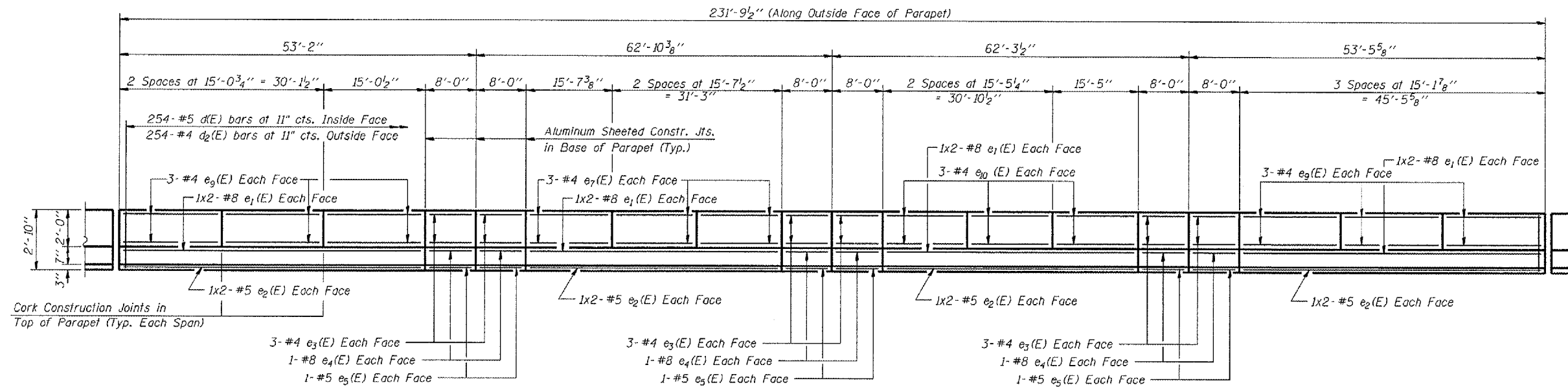
**HANSON**

JOB# 9652002B  
 DATE 01/12/06

Notes: Reinforcement bars designated (E) shall be epoxy coated.  
 Bars indicated thus 1x2-#5 etc. indicates 1 line of bars with  
 2 lengths per line.  
 See sheet 16 of 44 for Superstructure Details and Bill of Material.

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
FAI 72	#	SANGAMON	559	268
FAU 8071				
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

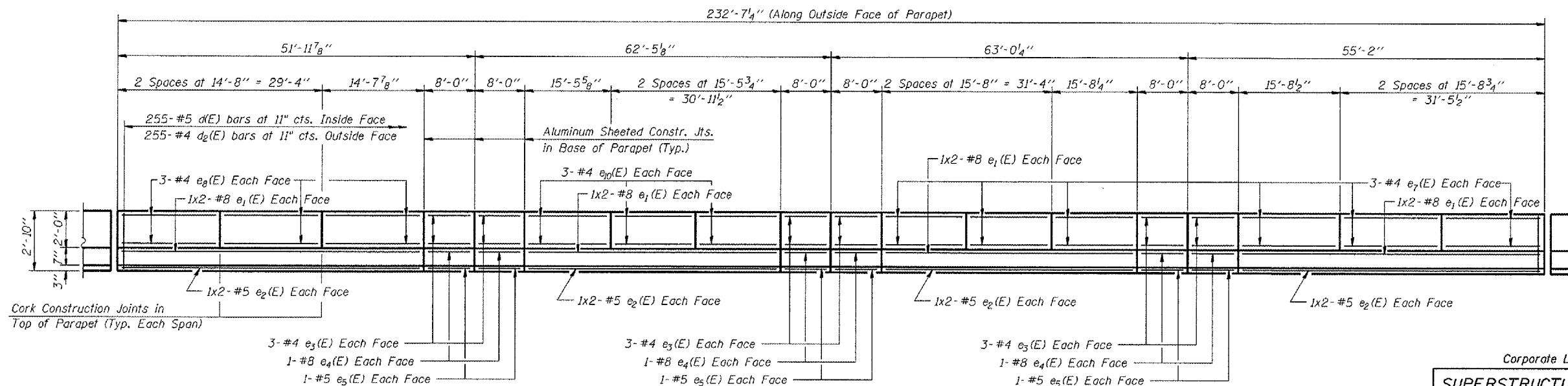
Contract No 72541



**INSIDE ELEVATION OF SOUTH PARAPET**  
 (Eastbound Structure)

**MIN. BAR LAPS**

#5 Bar - 2'-2"  
 #8 Bar - 4'-6"



**INSIDE ELEVATION OF NORTH PARAPET**  
 (Eastbound Structure)

Slipforming of Parapets not allowed on this structure.

Corporate License Number 184-001-084

**SUPERSTRUCTURE DETAILS- EASTBOUND**  
**F.A.I. 72 OVER UNION PACIFIC RAILROAD**  
**SECTION (84-9-4)A,HBK,BY,BY-1**  
**SANGAMON COUNTY**  
**STATION 608+51.98**  
**STR NO. 084-0074 EB - 084-0075 WB**

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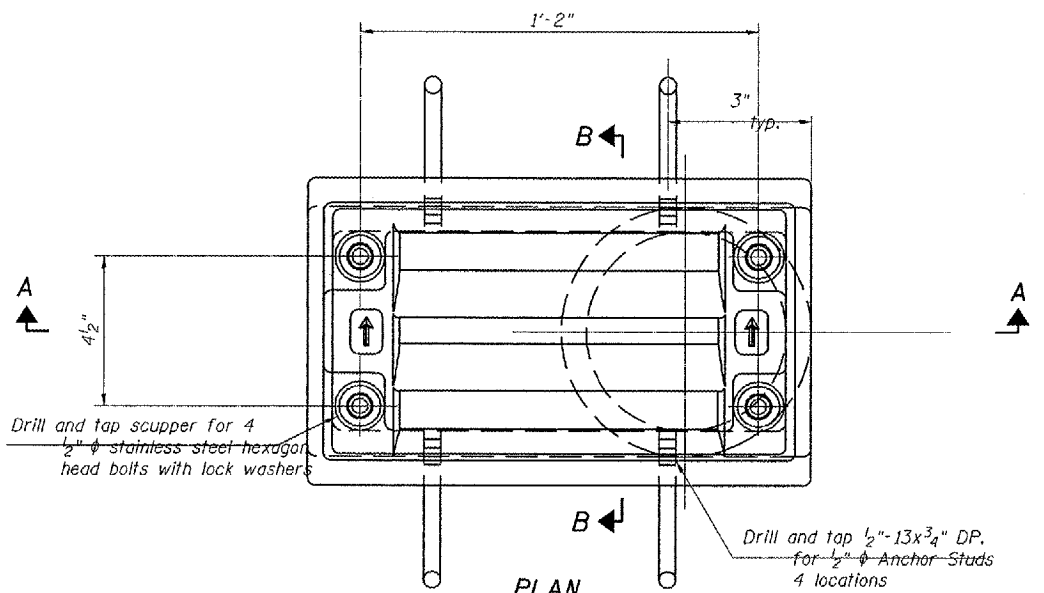
**HANSON**

96S2002B  
 01/12/06

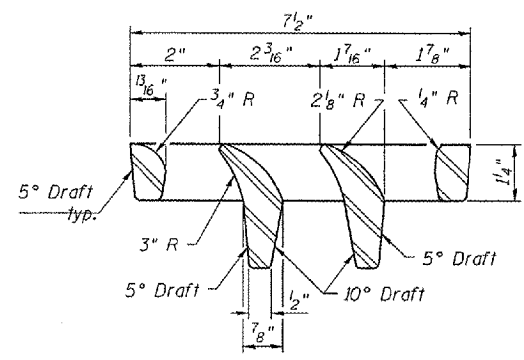
LAYOUT	MM	06/27/03
DRAWN	DAP	07/17/03
REVIEWED	JWM	10/27/03

ROUTE NO.	SECTION	COUNTY	DATE	SHEET NO.	SHEET NO. 17 44 SHEETS
FAI 72	*	SANGAMON	559	270	
FED. ROAD DIST. NO. 7					

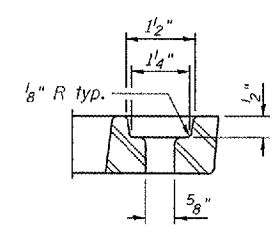
\*84-9-41A, H.B.K., B.Y., B.Y.-1 Contract No 72541



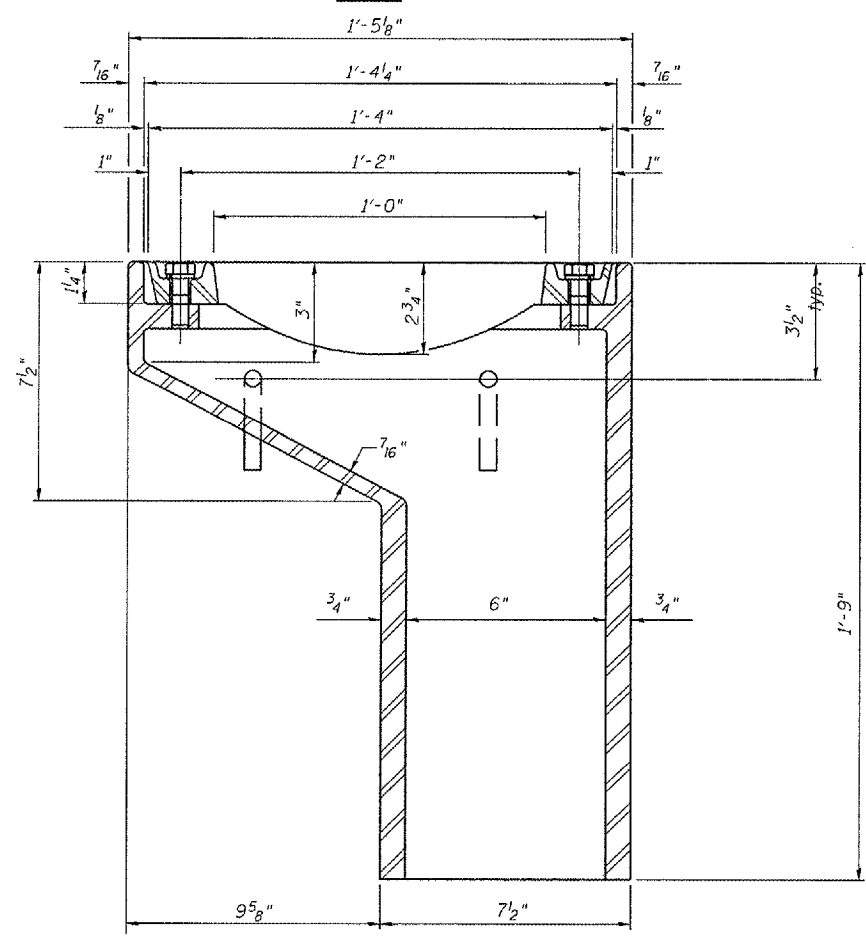
PLAN



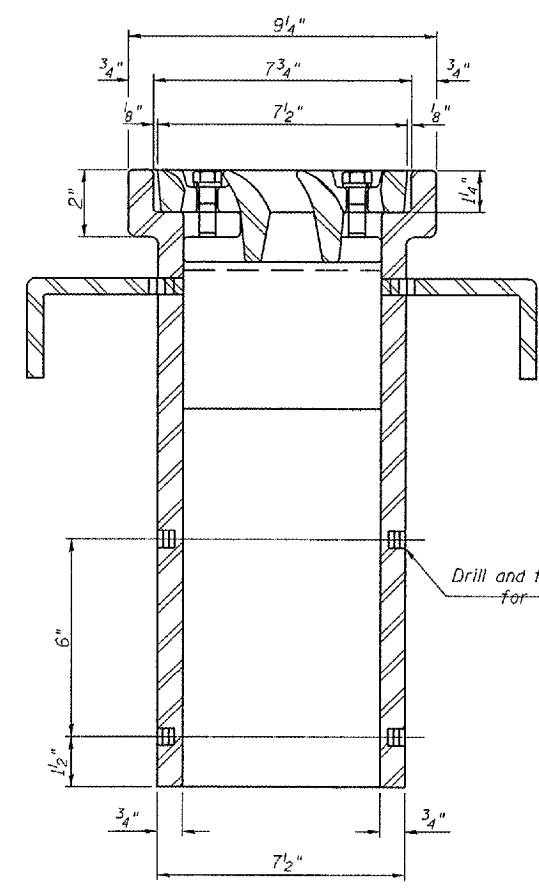
VANE GRATE DETAIL



BOLT HOLE DETAIL

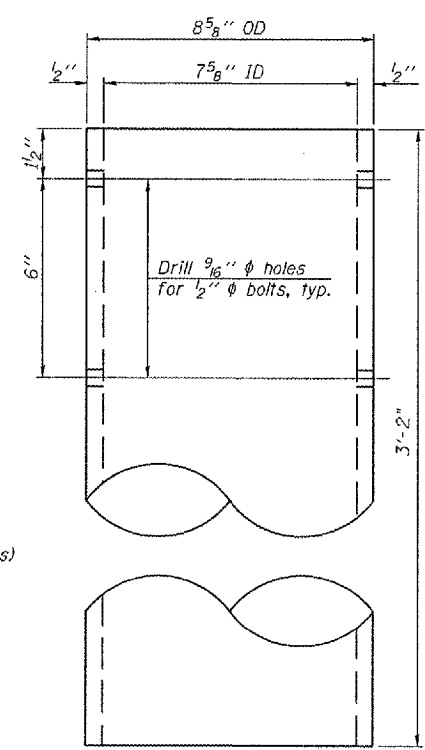


SECTION A-A  
See sheet 11-1-06 for scupper location relative to parapet.

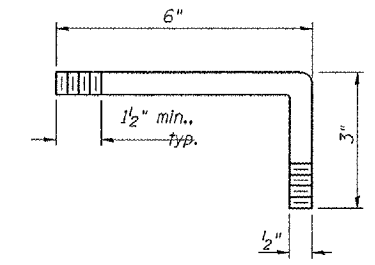


SECTION B-B

Drill and tap 1/2"-13x1/2" DP. for 1/2" bolts. (4 locations)



DOWNSPOUT



ANCHOR STUD DETAIL

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	4

Corporate License Number 184-001-084  
DRAINAGE SCUPPERS, DS-11  
F.A.I. 72 OVER UNION PACIFIC RAILROAD  
SECTION (84-9-4)A, H.B.K., B.Y., B.Y.-1  
SANGAMON COUNTY  
STATION 608+51.98  
STR NO. 084-0074 EB - 084-0075 WB

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96S2002B  
DATE 01/12/06

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-11.  
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.

#FILES #DATES

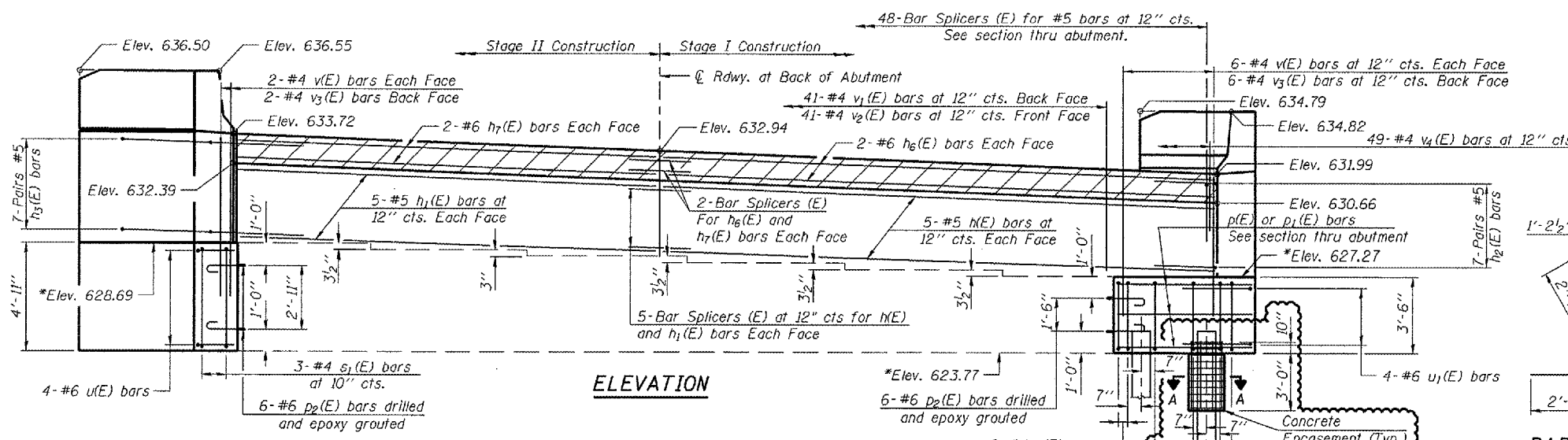
LAYOUT	JMM	06/27/03
DRAWN	DAP	07/17/03
REVIEWED	JMM	10/27/03

DS-11

11-1-06

(84-9-4)A, H.B.K. BY, BY-1 Contract No 72541

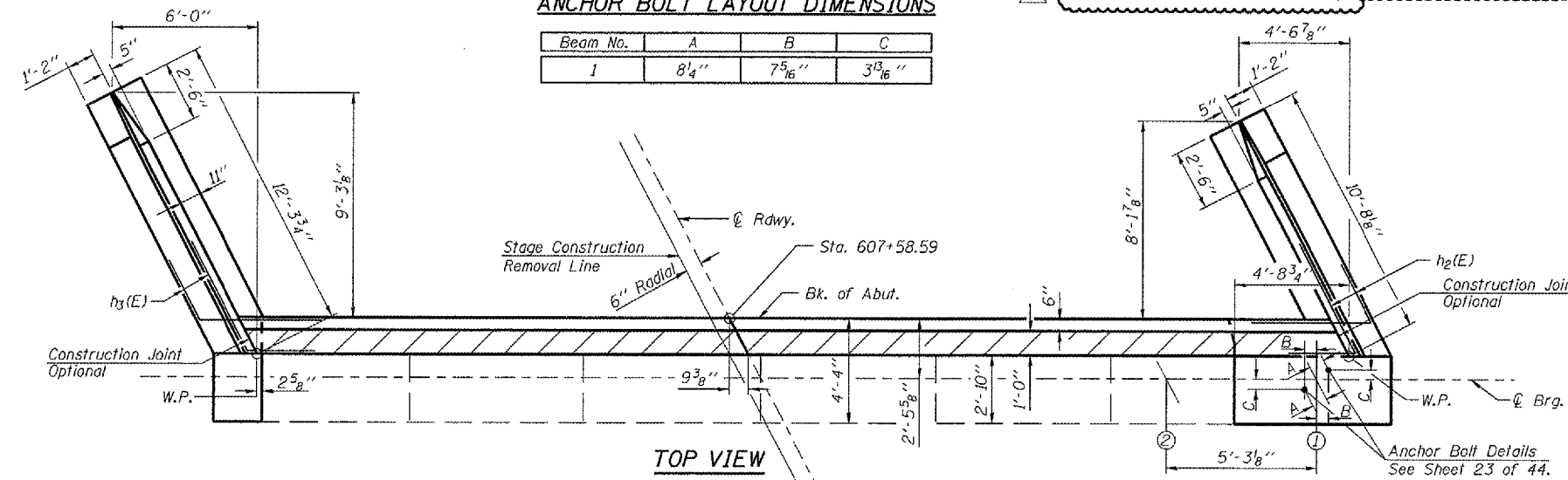
\* Elevations given are from existing plans, and have been adjusted by deducting 0.69'. The comparison data is based on a survey of the existing bearing seats, and is subject to normal construction tolerance variations.



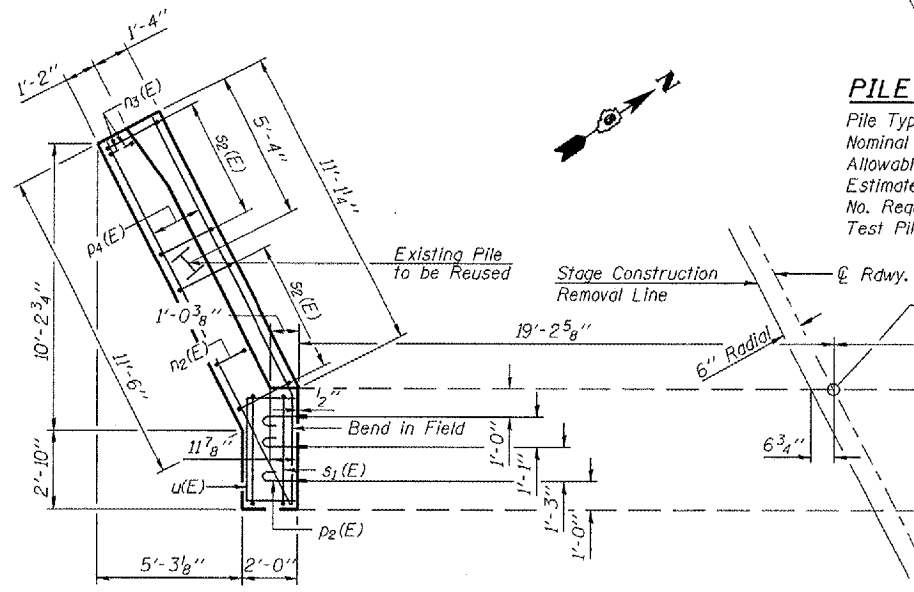
ELEVATION

ANCHOR BOLT LAYOUT DIMENSIONS

Beam No.	A	B	C
1	8 1/4"	7 5/8"	3 3/8"



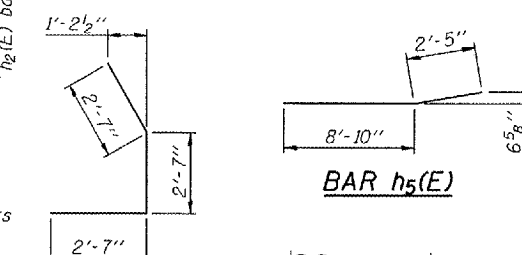
TOP VIEW



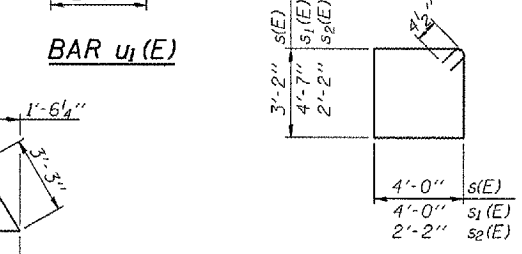
PLAN-PILE CAP

PILE DATA

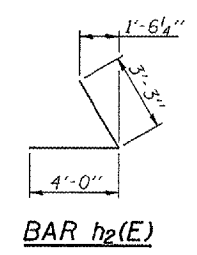
Pile Type: HP 10x42  
 Nominal Required Bearing: 335 kips  
 Allowable Resistance Available: 112 kips  
 Estimated Length: 55'  
 No. Required: 3 (Includes 1 Test Pile)  
 Test Pile: 1



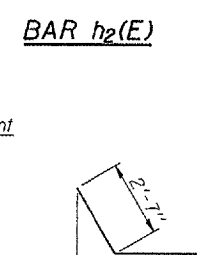
BAR h5(E)



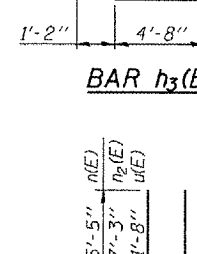
BARS s(E), s1(E) & s2(E)



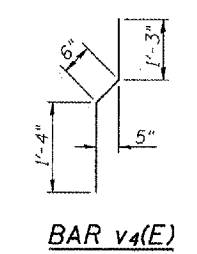
BAR u1(E)



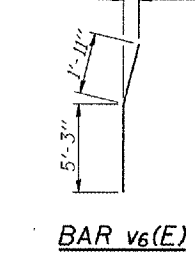
BAR h2(E)



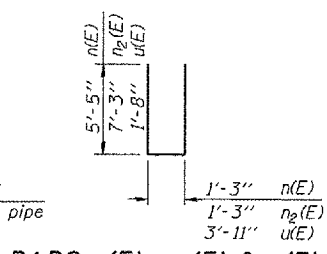
BAR h3(E)



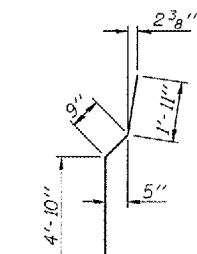
BAR v4(E)



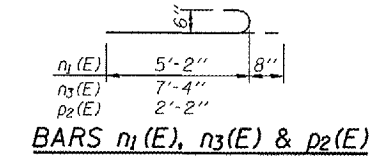
BAR v6(E)



BARS n(E), n2(E) & u(E)



BAR v7(E)



BARS n1(E), n3(E) & p2(E)

MIN. BAR LAPS

- #4 Bar - 1'-8"
- #5 Bar - 2'-2"
- #6 Bar - 2'-7"
- #7 Bar - 3'-5"

BILL OF MATERIAL

Bar No.	Size	Length	Shape
n(E)	10	#5	24'-6"
h1(E)	10	#5	19'-10"
h2(E)	14	#5	7'-3"
h3(E)	14	#5	7'-3"
h4(E)	27	#4	11'-3"
h5(E)	19	#4	11'-3"
h6(E)	4	#6	24'-6"
h7(E)	4	#6	19'-10"
n(E)	10	#6	12'-1"
n1(E)	6	#6	5'-10"
n2(E)	10	#6	15'-9"
n3(E)	6	#6	8'-0"
p(E)	5	#7	6'-2"
p1(E)	3	#7	5'-8"
p2(E)	12	#6	2'-10"
p3(E)	6	#7	11'-6"
p4(E)	6	#7	14'-6"
s(E)	7	#4	15'-1"
s1(E)	3	#4	17'-11"
s2(E)	24	#4	9'-5"
u(E)	4	#6	7'-3"
u1(E)	4	#6	7'-9"
v(E)	16	#4	6'-0"
v1(E)	41	#4	3'-7"
v2(E)	41	#4	3'-2"
v3(E)	8	#4	3'-5"
v4(E)	49	#4	3'-1"
v5(E)	24	#6	7'-2"
v6(E)	6	#6	7'-2"
v7(E)	20	#6	7'-6"
Structure Excavation	Cu. Yd.	91	
Concrete Structures	Cu. Yd.	29.8	
Reinforcement Bars Epoxy Coated	Pound	3560	
Furnishing Steel Piles HP10x42	Lin. Ft.	110	
Driving Piles	Lin. Ft.	110	
Test Piles Steel HP10x42	Each	1	
Concrete Encasement	Cu. Yd.	1.1	

Reinforcement Bars designated (E) shall be Epoxy Coated.  
 For details of Bar Splicers, see sheet 40 of 44.  
 Bars epoxy grouted shall have an embedment sufficient to obtain 1.25 x the yield strength of the reinforcing bar.  
 Drill holes for epoxy grouted bars to miss existing reinforcement.

Corporate License Number 184-001-084

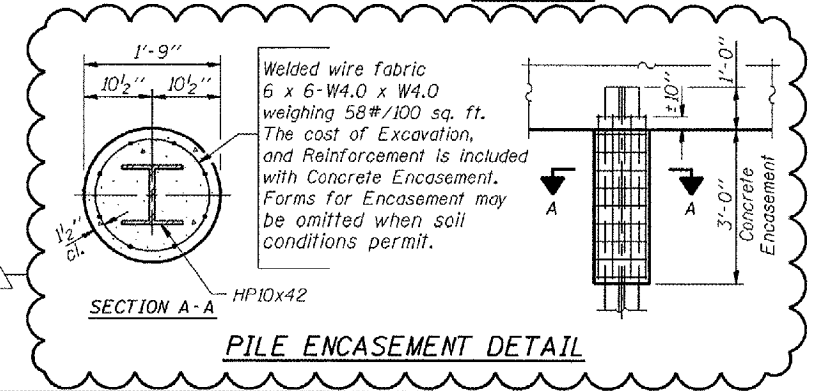
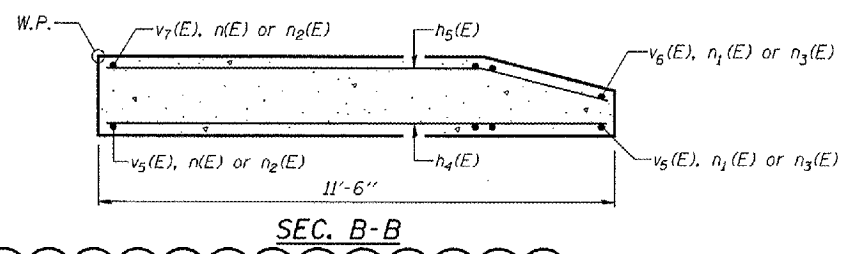
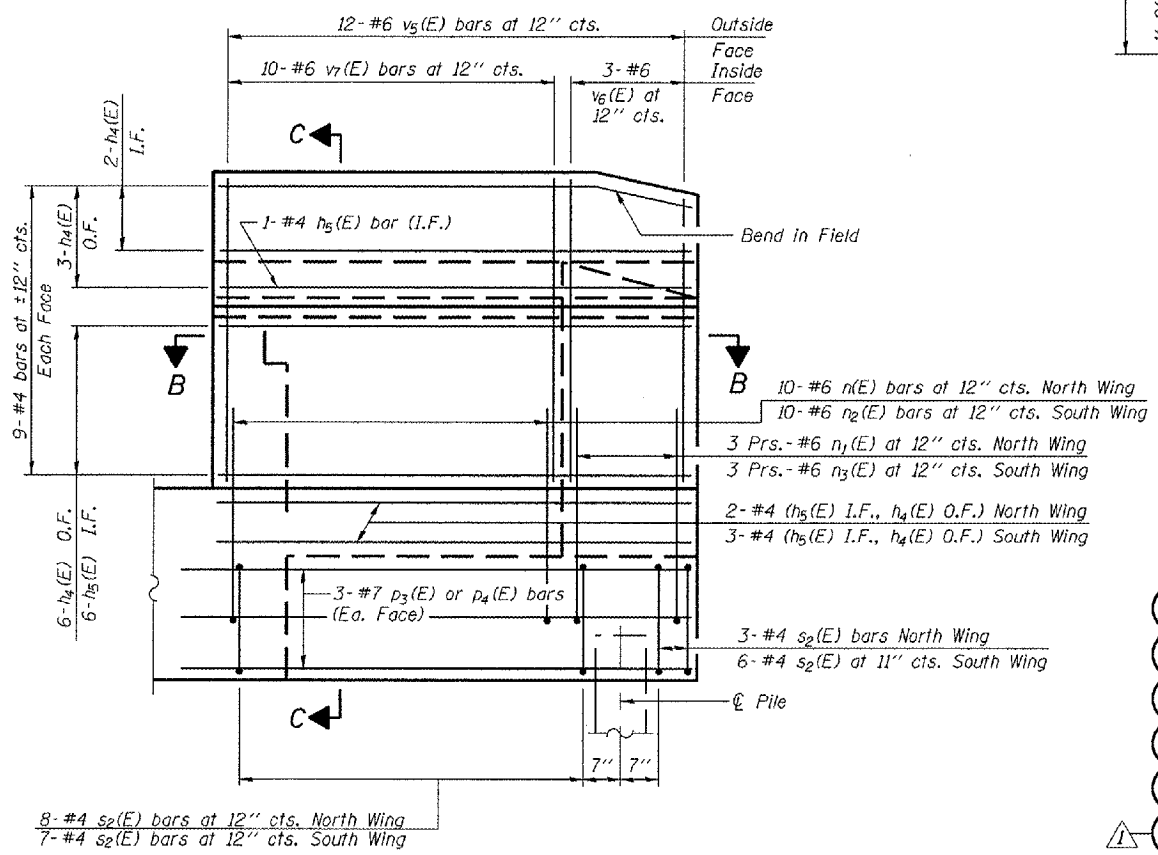
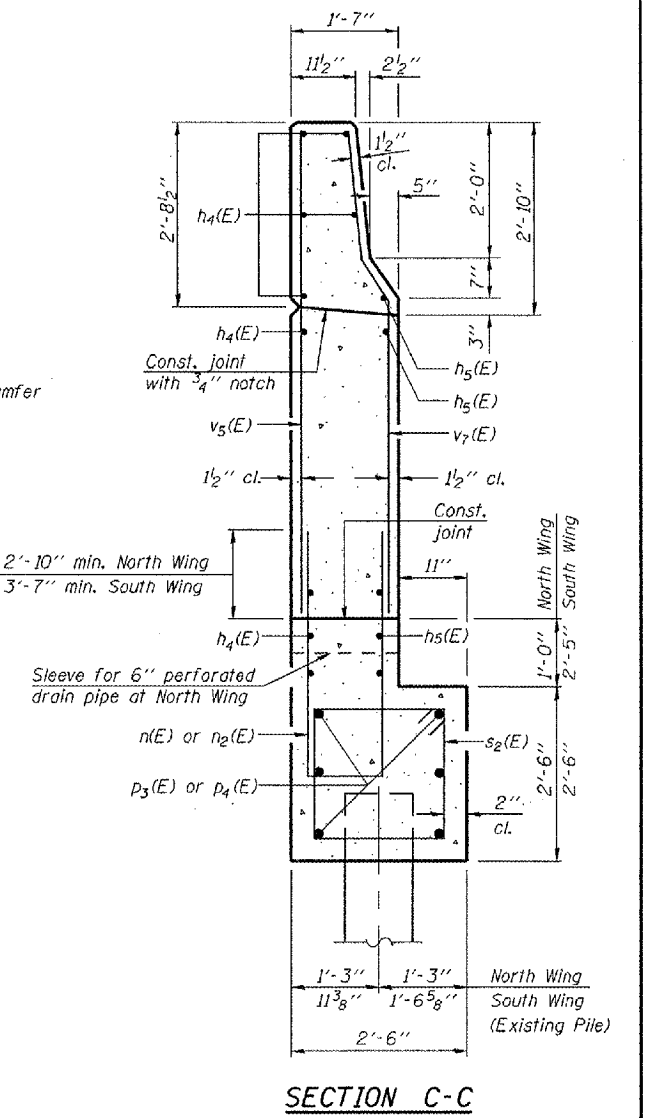
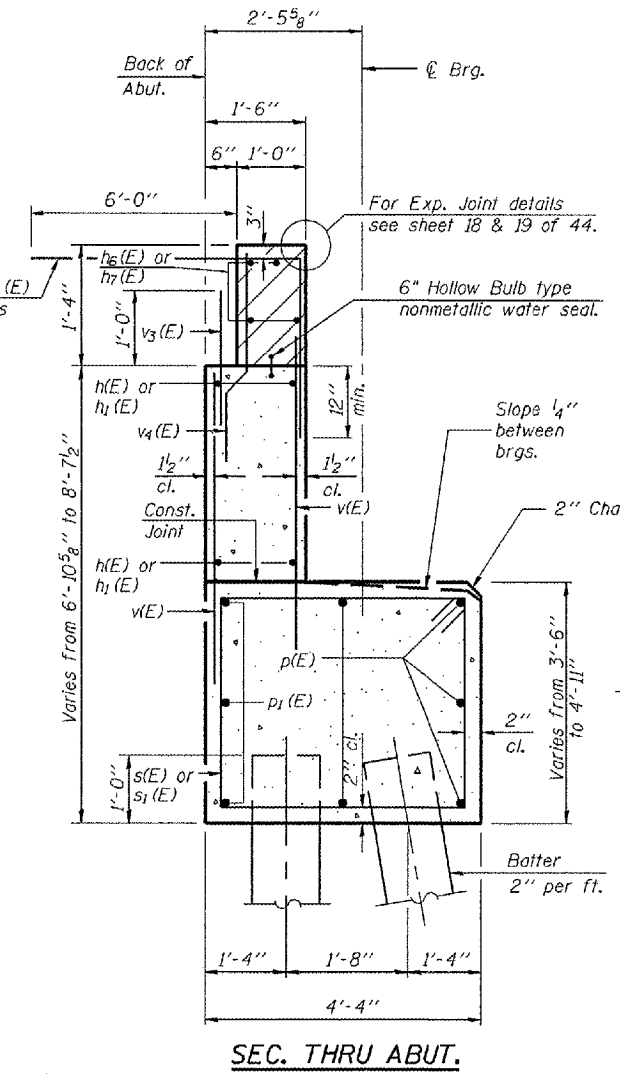
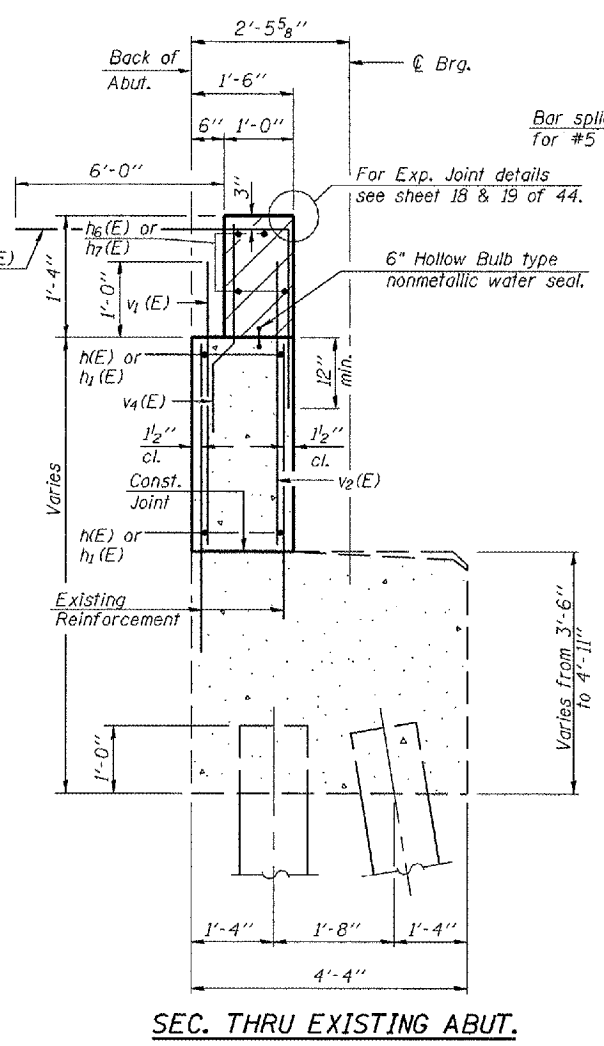
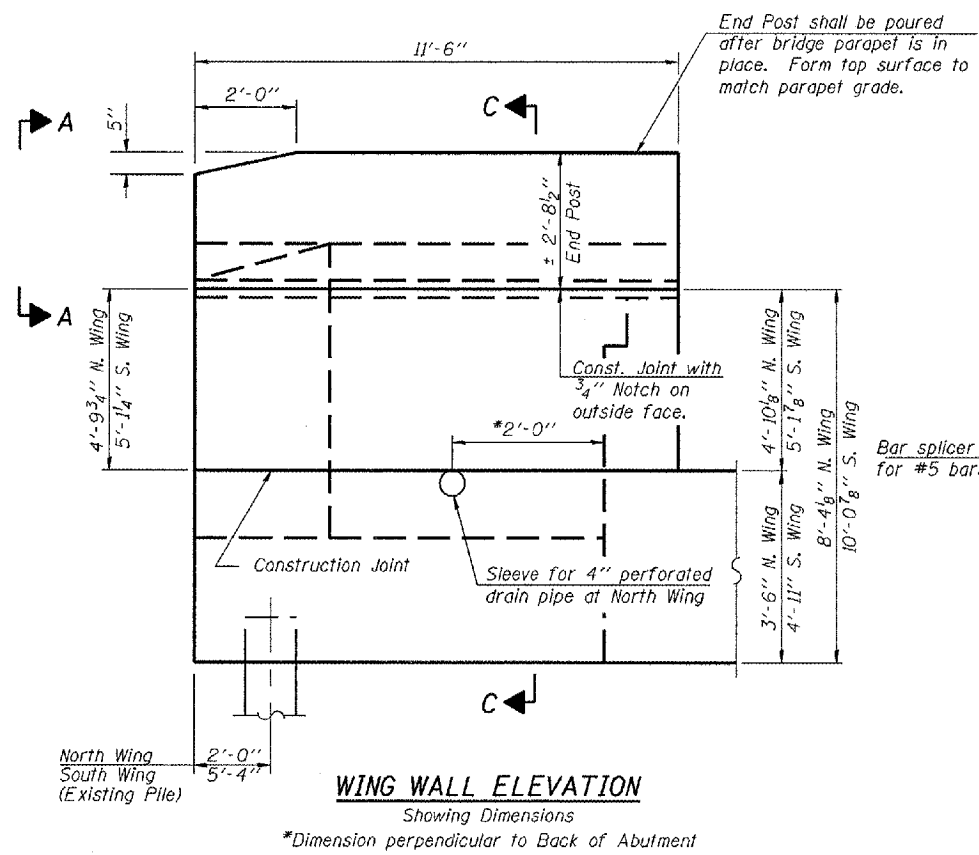
WESTBOUND-WEST ABUTMENT  
 F.A.I. 72 OVER UNION PACIFIC RAILROAD  
 SECTION (84-9-4)A, H.B.K. BY, BY-1  
 SANGAMON COUNTY  
 STATION 608+51.98  
 STR NO. 084-0074 EB - 084-0075 WB

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 96S2002B  
 DATE: 01/12/06

LAYOUT	JMM	06/27/03
DRAWN	DAP	07/17/03
REVIEWED	JMM	10/27/03

ROUTE NO.	SECTION	COUNTY	SHEET	DATE	SHEET NO. 26
FAI 72	*	SANGAMON	559	279	44 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT	

\*84-9-4(A), H.B.K., BY-1 Contract No 72541



**MIN. BAR LAPS**

#4 Bar	1'-8"
#5 Bar	2'-2"
#6 Bar	2'-7"
#7 Bar	3'-5"

Notes: Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure. Space reinforcement in cap to miss anchor bolts. Pour steps monolithically with cap. Reinforcement bars designated (E) shall be epoxy coated. Quantity of concrete in end post included with Concrete Superstructure on sheet 13 of 44. Cost for sleeve shall be included with Concrete Structures.

Corporate License Number 184-001-084

**WESTBOUND-WEST ABUTMENT DETAILS**  
F.A.I. 72 OVER UNION PACIFIC RAILROAD  
SECTION (84-9-4), H.B.K., BY-1  
SANGAMON COUNTY  
STATION 608+51.98  
STR NO. 084-0074 EB - 084-0075 WB

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9652002B

01/12/06

**HANSON**

LAYOUT	MM	06/21/03
DRAWN	DAP	07/17/03
REVIEWED	JWW	10/27/03

\* (84-9-4)A, H.B.K., BY-1 Contract No 72541

\* Elevations given are from existing plans, and have been adjusted by deducting 0.69'. The comparison data is based on a survey of the existing bearing seats, and is subject to normal construction tolerance variations.

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
$h_4(E)$	27	#4	11'-3"	
$h_5(E)$	19	#4	11'-3"	
$h_8(E)$	10	#5	20'-8"	
$h_9(E)$	14	#5	7'-3"	
$h_{10}(E)$	14	#5	7'-6"	
$h_{11}(E)$	4	#6	20'-8"	
$h_{12}(E)$	10	#5	25'-5"	
$h_{14}(E)$	4	#6	25'-5"	
$n(E)$	10	#6	12'-1"	
$n_1(E)$	6	#6	5'-10"	
$n_2(E)$	10	#6	15'-9"	
$n_3(E)$	6	#6	8'-0"	
$p_2(E)$	13	#6	2'-10"	
$p_3(E)$	3	#7	11'-6"	
$p_4(E)$	6	#7	14'-6"	
$p_5(E)$	8	#7	6'-6"	
$p_6(E)$	3	#7	8'-0"	
$s(E)$	9	#4	15'-1"	
$s_1(E)$	2	#4	17'-11"	
$s_2(E)$	23	#4	9'-5"	
$u_2(E)$	4	#6	7'-0"	
$u_3(E)$	4	#6	9'-1"	
$v(E)$	12	#4	6'-0"	
$v_1(E)$	42	#4	3'-7"	
$v_2(E)$	42	#4	3'-2"	
$v_3(E)$	6	#4	3'-5"	
$v_4(E)$	48	#4	3'-1"	
$v_5(E)$	24	#6	7'-2"	
$v_6(E)$	6	#6	7'-2"	
$v_7(E)$	20	#6	7'-6"	
Structure Excavation		Cu. Yd.	91	
Concrete Structures		Cu. Yd.	30.3	
Reinforcement Bars Epoxy Coated		Pound	3570	
Furnishing Steel Piles HPI0x42		Lin. Ft.	100	
Driving Piles		Lin. Ft.	100	
Test Piles Steel HPI0x42		Each	1	
Concrete Encasement		Cu. Yd.	1.1	

Reinforcement Bars designated (E) shall be Epoxy Coated. For details of Bar Splicers, see sheet 40 of 44.  
 Bars epoxy grouted shall have an embedment sufficient to obtain 1.25 x the yield strength of the reinforcing bar.  
 Drill holes for epoxy grouted bars to miss existing reinforcement.

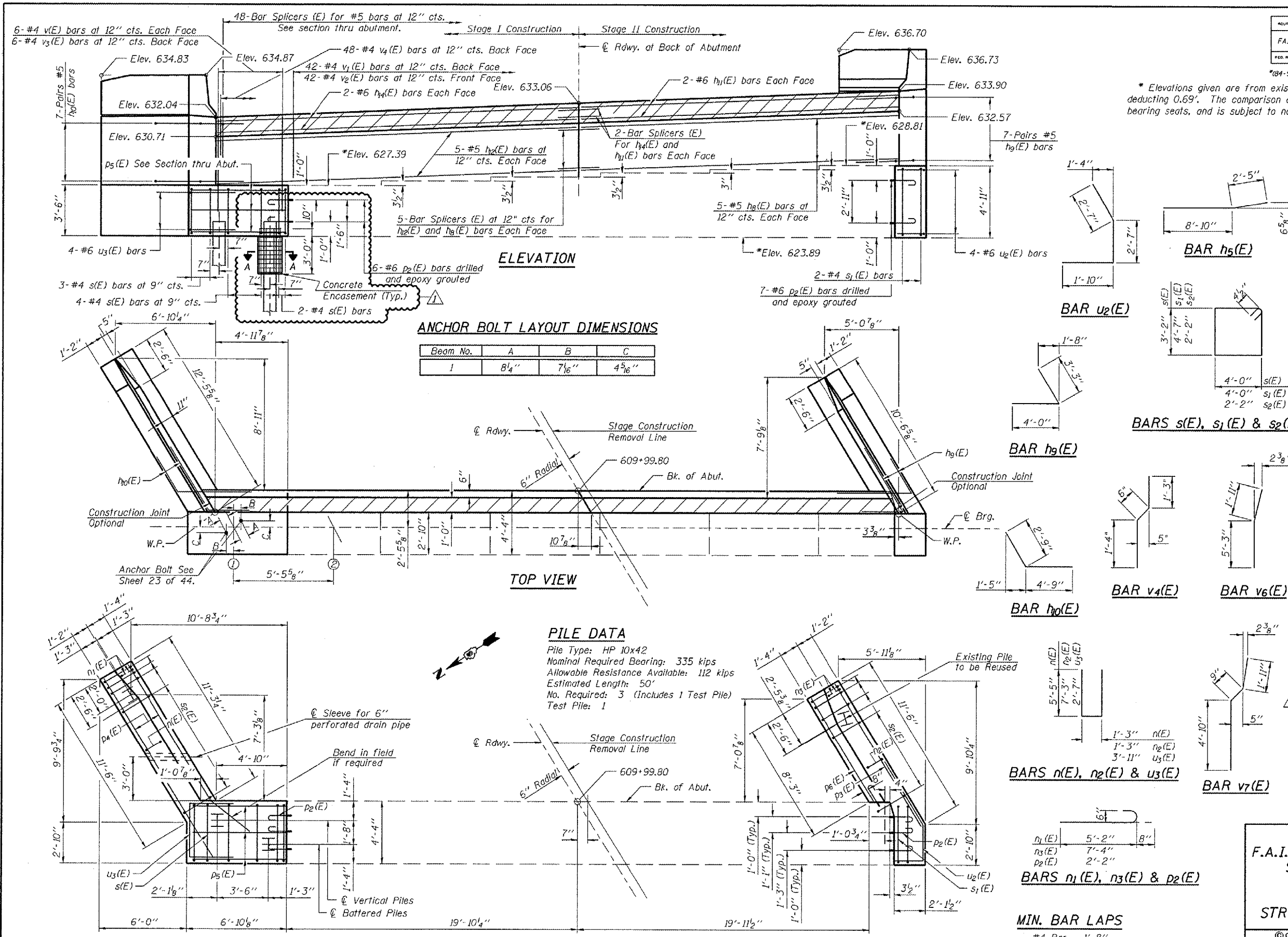
Corporate License Number 184-001-084

**WESTBOUND-EAST ABUTMENT**  
**F.A.I. 72 OVER UNION PACIFIC RAILROAD**  
**SECTION (84-9-4)A, H.B.K., BY-1**  
**SANGAMON COUNTY**  
**STATION 608+51.98**  
**STR NO. 084-0074 EB - 084-0075 WB**

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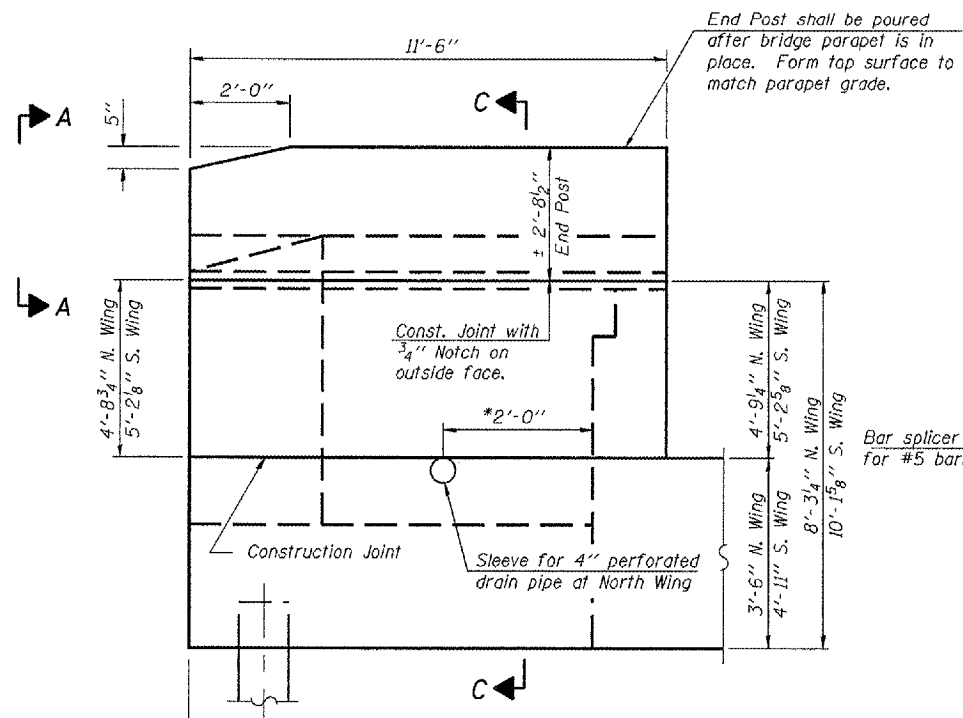
96S2002B  
 DATE: 01/12/06



LAYOUT	MM	06/21/03
DRAWN	DAP	07/11/03
REVIEWED	JMN	10/21/03

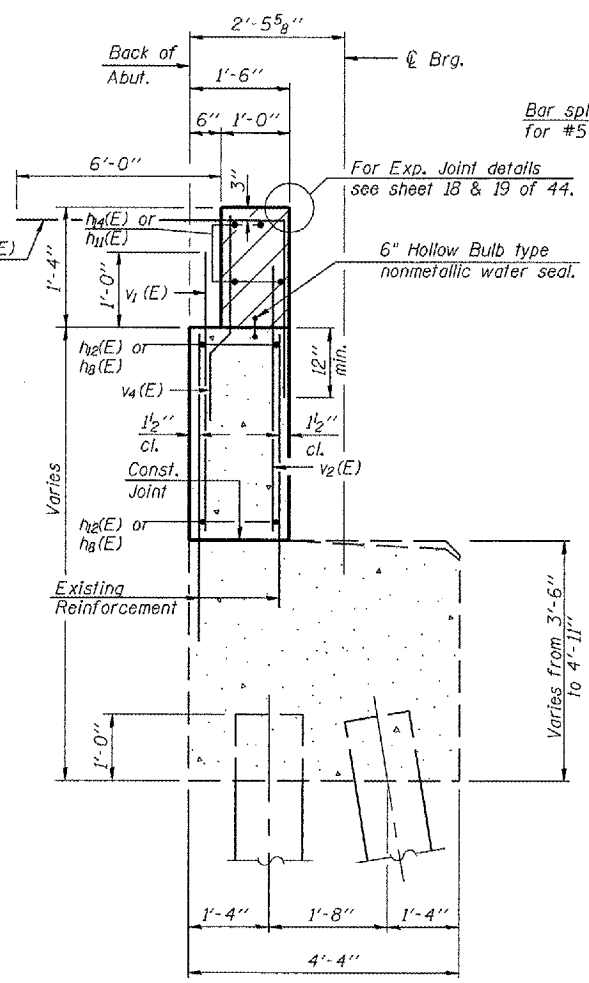
ROUTE NO.	SECTION	COUNTY	SHEET	"OF"	SHEET NO. 29
FAI 72	*	SANGAMON	559	282	44 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

(84-9-4)A, HBK, BY, BY-1 Contract No 72541



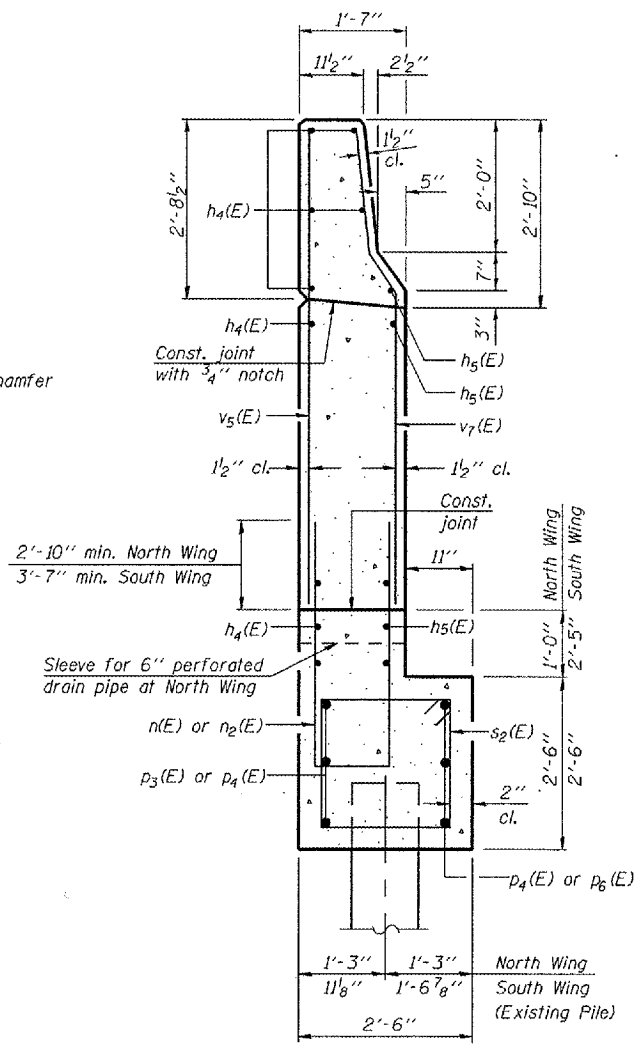
**WING WALL ELEVATION**

Showing Dimensions  
\*Dimension perpendicular to Back of Abutment

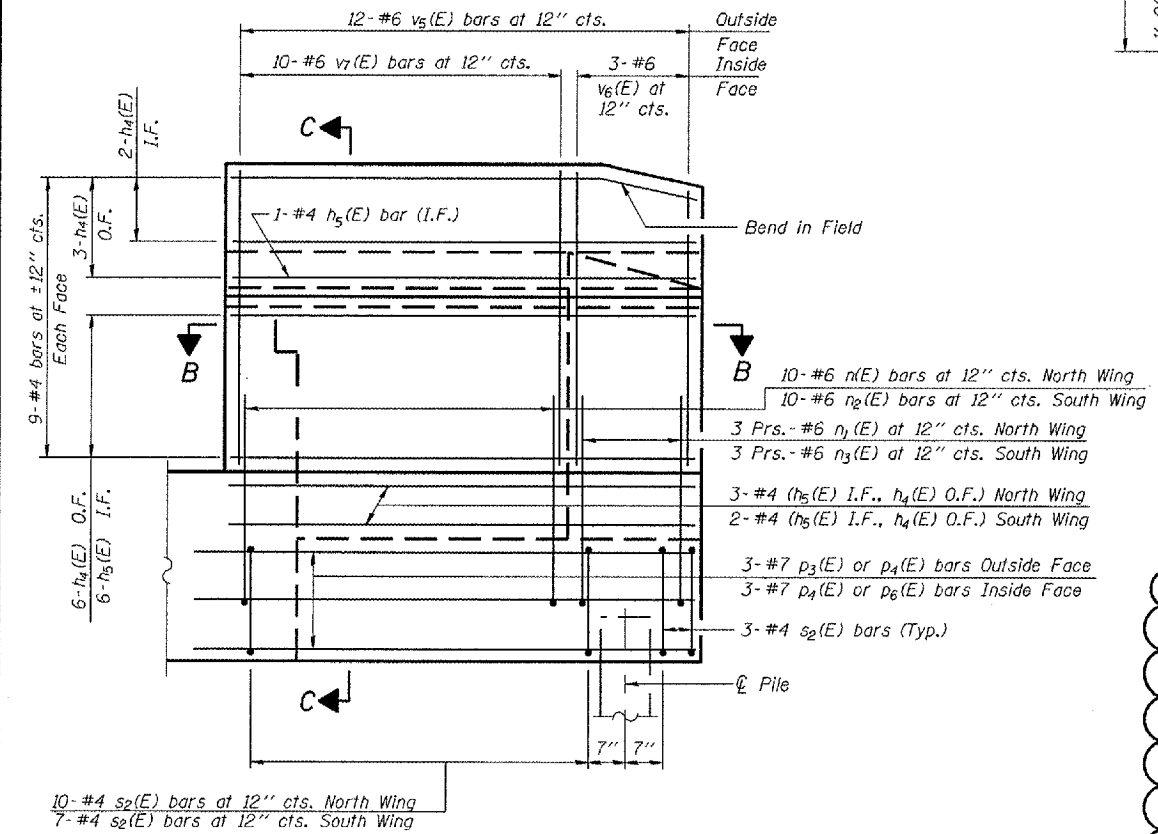


**SEC. THRU EXISTING ABUT.**

**SEC. THRU ABUT.**

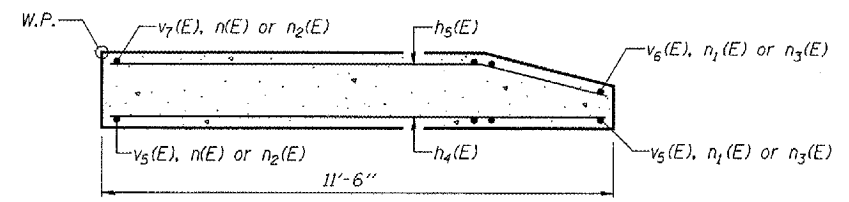


**SECTION C-C**

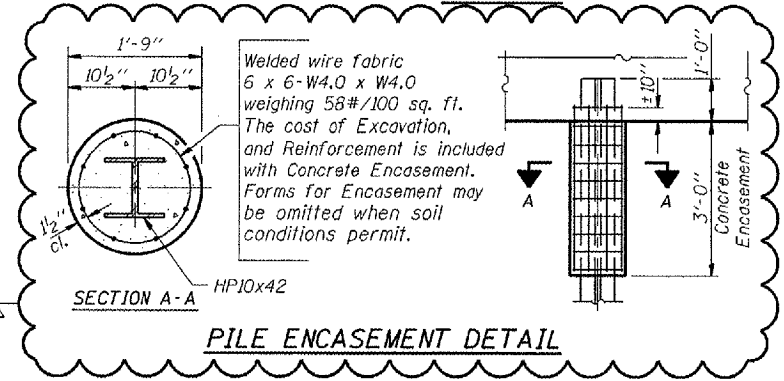


**WING WALL ELEVATION**

Showing Reinforcement



**SEC. B-B**



**SECTION A-A**

**PILE ENCASEMENT DETAIL**

**MIN. BAR LAPS**

- #4 Bar - 1'-8"
- #5 Bar - 2'-2"
- #6 Bar - 2'-7"
- #7 Bar - 3'-5"

Notes: Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure. Space reinforcement in cap to miss anchor bolts. Pour steps monolithically with cap. Reinforcement bars designated (E) shall be epoxy coated. Quantity of concrete in end post included with Concrete Superstructure on sheet 13 of 44. Cost for sleeve shall be included with Concrete Structures.

Corporate License Number 184-001-084  
**WESTBOUND-EAST ABUTMENT DETAILS**  
**F.A.I. 72 OVER UNION PACIFIC RAILROAD**  
**SECTION (84-9-4)A, HBK, BY, BY-1**  
**SANGAMON COUNTY**  
**STATION 608+51.98**  
**STR NO. 084-0074 EB - 084-0075 WB**

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**HANSON**  
 96S2002B  
 DATE: 01/12/06

LAYOUT	MM	06/27/03
DRAWN	DAP	07/17/03
REVIEWED	JMM	10/27/03

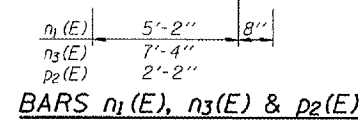
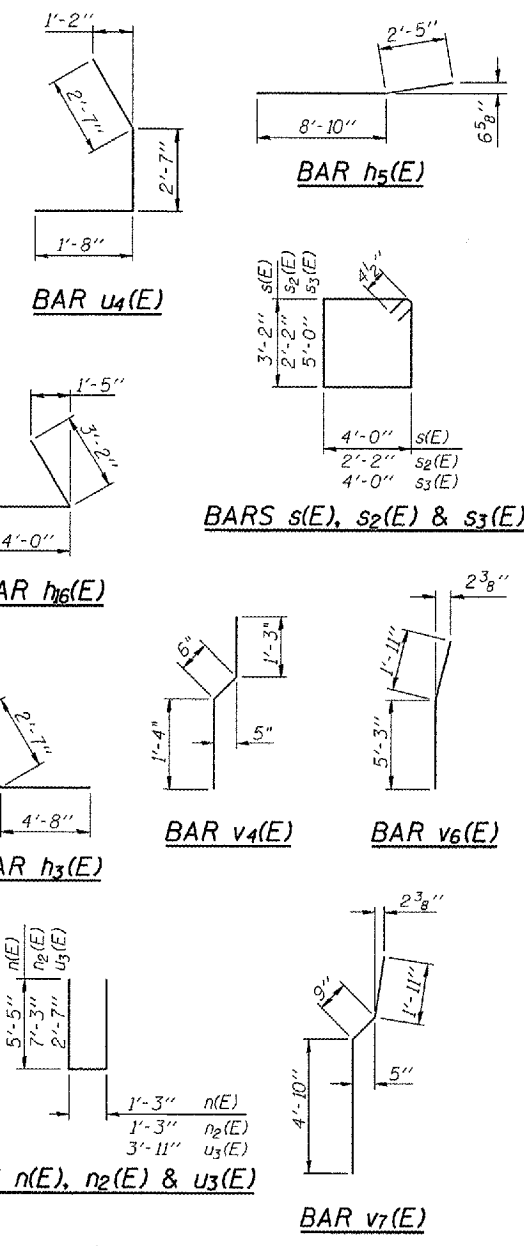
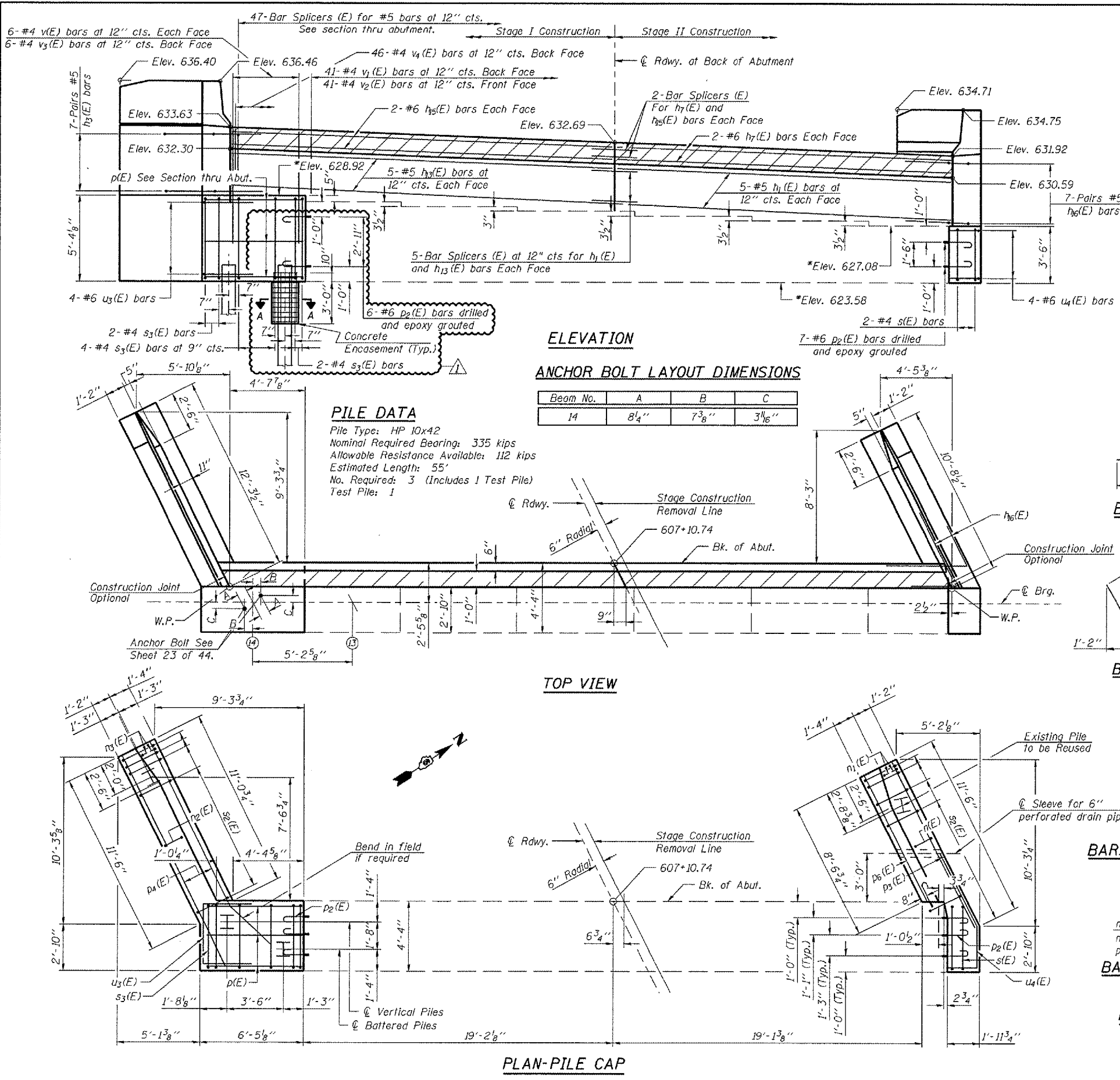
\* Elevations given are from existing plans, and have been adjusted by deducting 0.69'. The comparison data is based on a survey of the existing bearing seals, and is subject to normal construction tolerance variations.

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
$h_1(E)$	10	#5	19'-10"	
$h_3(E)$	14	#5	7'-3"	
$h_4(E)$	28	#4	11'-3"	
$h_5(E)$	20	#4	11'-3"	
$h_7(E)$	4	#6	19'-10"	
$h_{13}(E)$	10	#5	24'-3"	
$h_{15}(E)$	4	#6	24'-3"	
$h_{16}(E)$	14	#5	7'-2"	
$n(E)$	10	#6	12'-1"	
$n_1(E)$	6	#6	5'-10"	
$n_2(E)$	10	#6	15'-9"	
$n_3(E)$	6	#6	8'-0"	
$p(E)$	8	#7	6'-2"	
$p_2(E)$	13	#6	2'-10"	
$p_3(E)$	3	#7	11'-6"	
$p_4(E)$	6	#7	14'-6"	
$p_6(E)$	3	#7	8'-0"	
$s(E)$	2	#4	15'-1"	
$s_2(E)$	23	#4	9'-5"	
$s_3(E)$	8	#4	18'-9"	
$u_3(E)$	4	#6	9'-1"	
$u_4(E)$	4	#6	6'-10"	
$v(E)$	12	#4	6'-0"	
$v_1(E)$	41	#4	3'-7"	
$v_2(E)$	41	#4	3'-2"	
$v_3(E)$	6	#4	3'-5"	
$v_4(E)$	46	#4	3'-1"	
$v_5(E)$	24	#6	7'-2"	
$v_6(E)$	6	#6	7'-2"	
$v_7(E)$	20	#6	7'-6"	
Structure Excavation		Cu. Yd.	91	
Concrete Structures		Cu. Yd.	31.0	
Reinforcement Bars		Pound	3540	
Epoxy Coated				
Furnishing Steel Piles		Lin. Ft.	110	
HP10x42				
Driving Piles		Lin. Ft.	110	
Test Piles Steel		Each	1	
HP10x42				
Concrete Encasement		Cu. Yd.	1.1	

Reinforcement Bars designated (E) shall be Epoxy Coated.  
 For details of Bar Splicers, see sheet 40 of 44.  
 Bars epoxy grouted shall have an embedment sufficient to obtain 1.25 x the yield strength of the reinforcing bar.  
 Drill holes for epoxy grouted bars to miss existing reinforcement.  
 Corporate License Number JB4-001-084

**EASTBOUND-WEST ABUTMENT**  
**F.A.I. 72 OVER UNION PACIFIC RAILROAD**  
**SECTION (84-9-4)A,HBK,BY,BY-1**  
**SANGAMON COUNTY**  
**STATION 608+51.98**  
**STR NO. 084-0074 EB - 084-0075 WB**



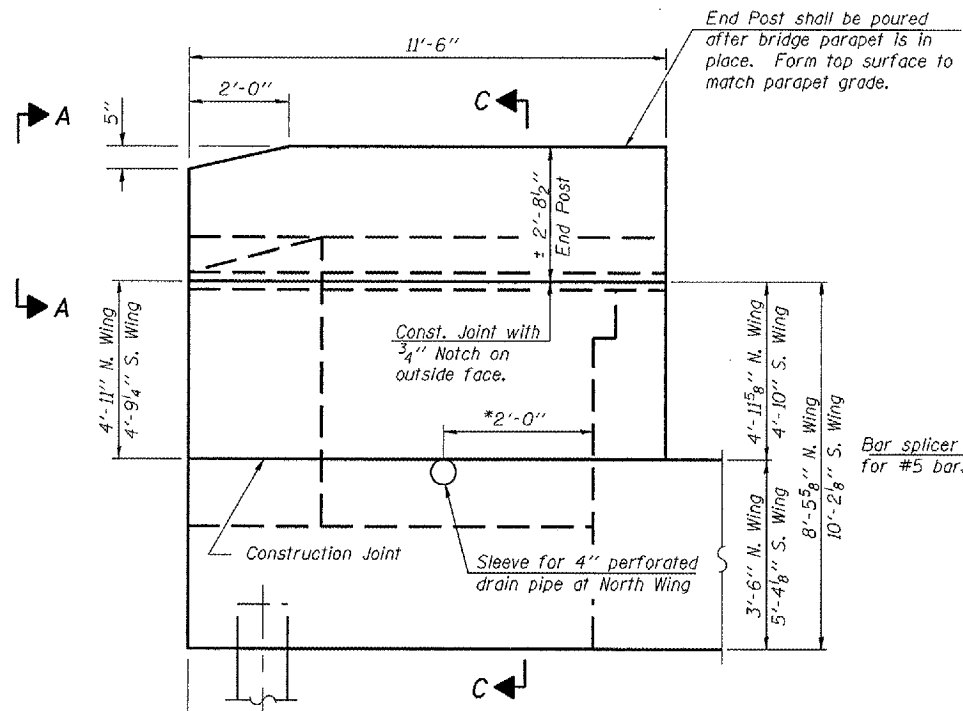
- MIN. BAR LAPS**
- #4 Bar - 1'-8"
  - #5 Bar - 2'-2"
  - #6 Bar - 2'-7"
  - #7 Bar - 3'-5"

MMW 06/27/03  
 DAP 07/17/03  
 JMM 10/27/03



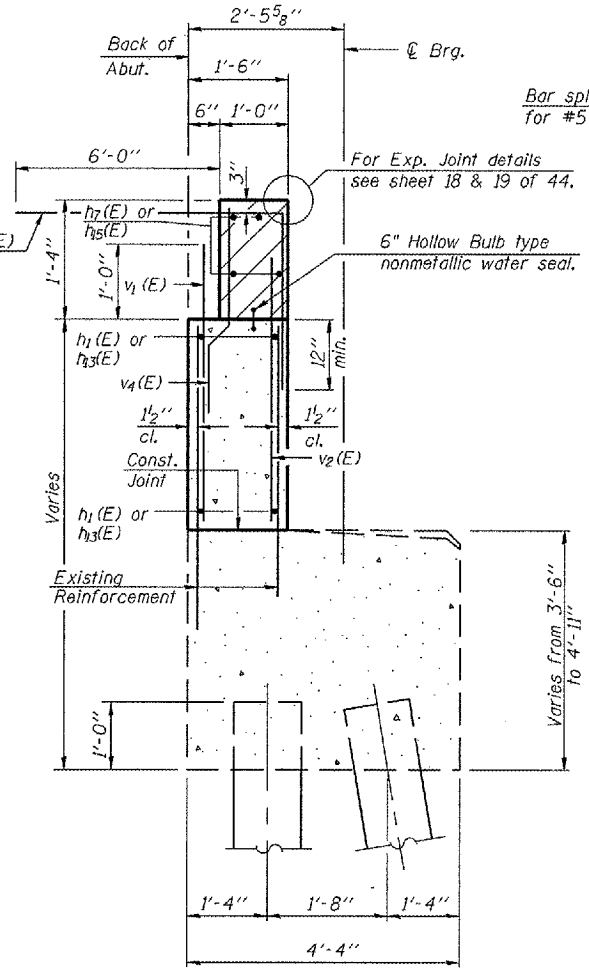
ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET	SHEET NO. 32
FAI 72	*	SANGAMON	559	285	44 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract No 72541

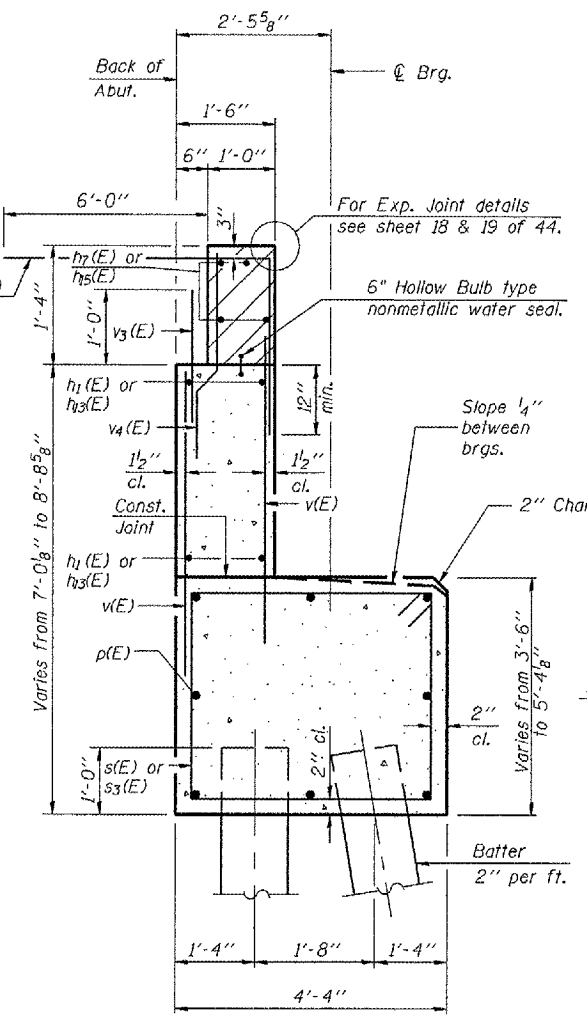


**WING WALL ELEVATION**  
Showing Dimensions

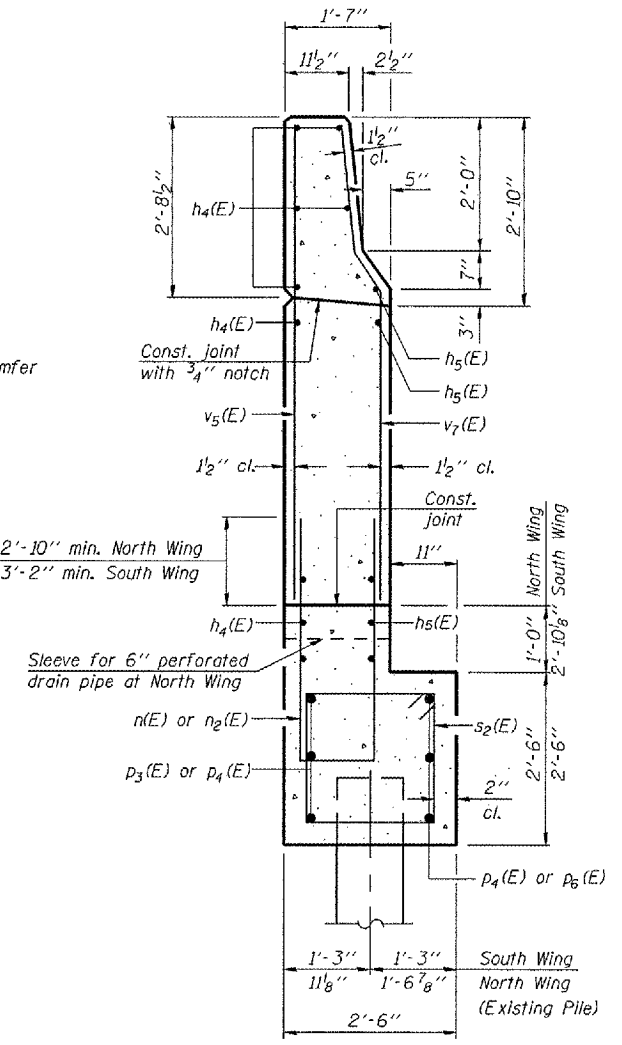
\*Dimension perpendicular to Back of Abutment



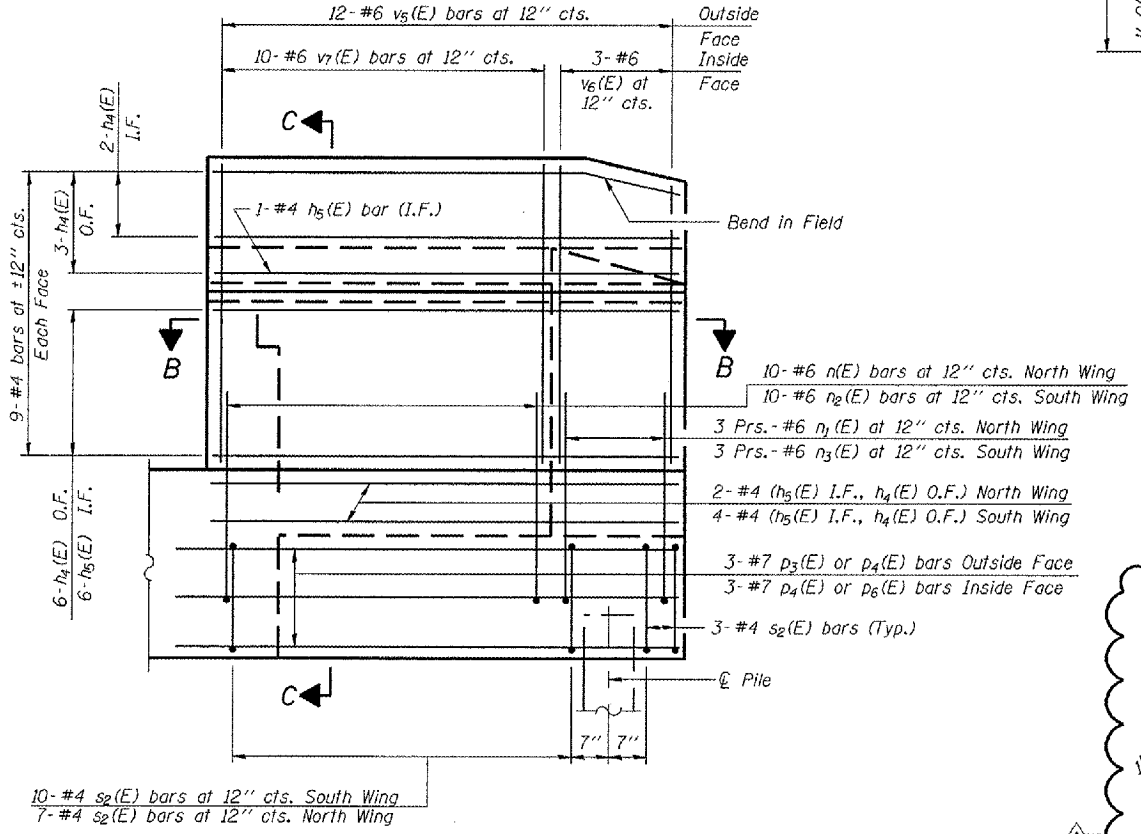
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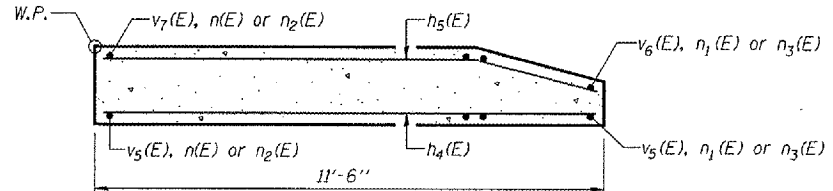
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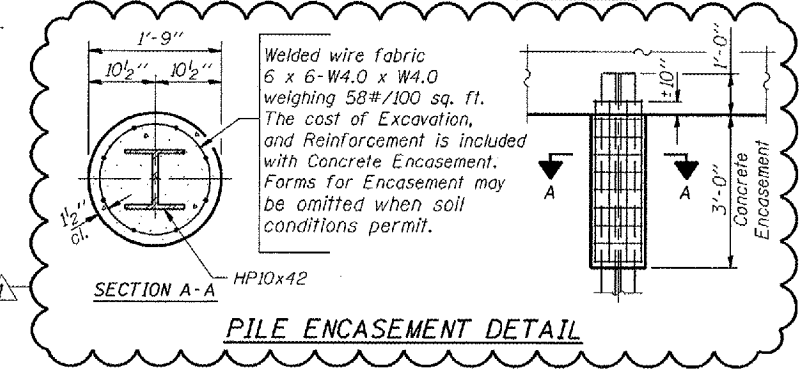
**SECTION C-C**



**WING WALL ELEVATION**  
Showing Reinforcement



**SEC. B-B**



**PILE ENCASEMENT DETAIL**

**MIN. BAR LAPS**

- #4 Bar - 1'-8"
- #5 Bar - 2'-2"
- #6 Bar - 2'-7"
- #7 Bar - 3'-5"

Notes: Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure. Space reinforcement in cap to miss anchor bolts. Pour steps monolithically with cap. Reinforcement bars designated (E) shall be epoxy coated. Quantity of concrete in end post included with Concrete Superstructure on sheet 16 of 44. Cost for sleeve shall be included with Concrete Structures.

Corporate License Number 184-001-084

**EASTBOUND-WEST ABUTMENT DETAILS**  
F.A.I. 72 OVER UNION PACIFIC RAILROAD  
SECTION (84-9-4)A, HBK, BY, BY-1  
SANGAMON COUNTY  
STATION 608+51.98  
STR NO. 084-0074 EB - 084-0075 WB

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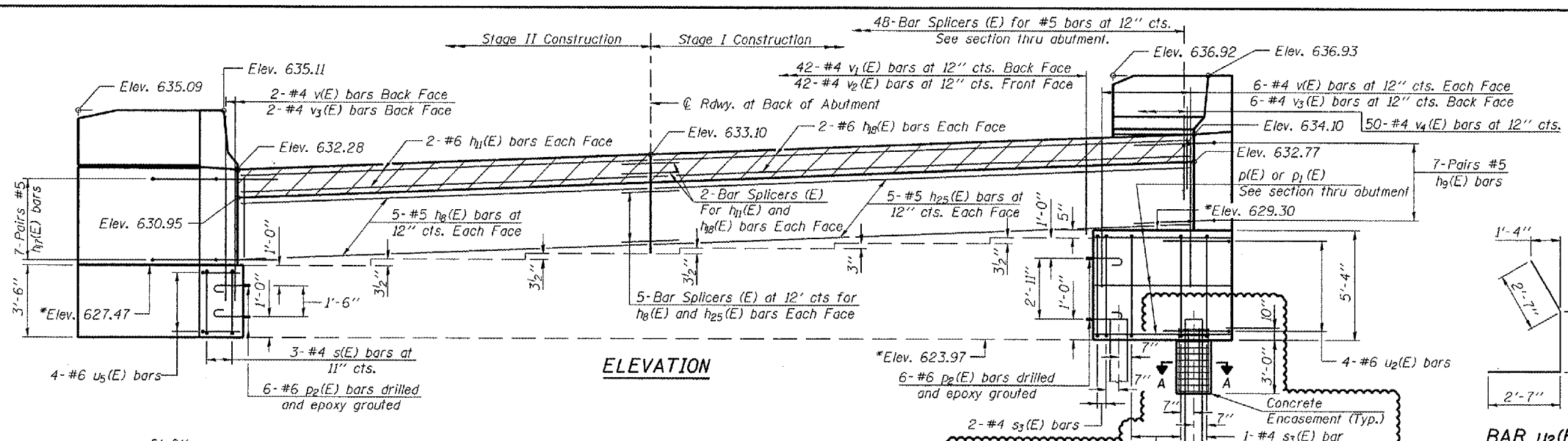
**HANSON**

96S2002B  
DATE: 01/12/06

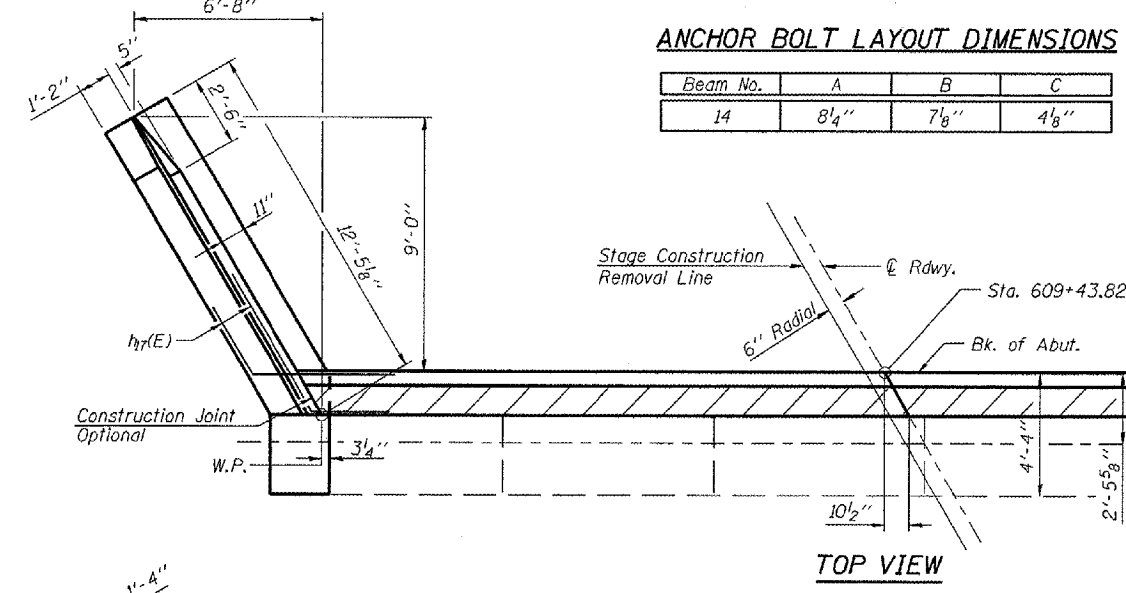
MAN	06/27/03
DAP	07/17/03
REVIEWED	JWM 10/27/03

\*(84-9-4)A, HBK, BY, BY-1 Contract No. 72541

\* Elevations given are from existing plans, and have been adjusted by deducting 0.69'. The comparison data is based on a survey of the existing bearing seats, and is subject to normal construction tolerance variations.

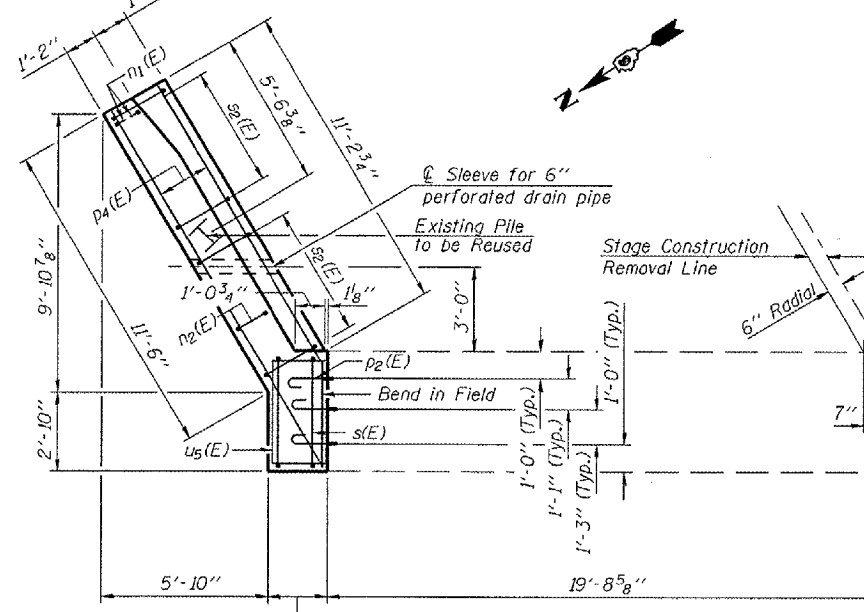


**ELEVATION**



**ANCHOR BOLT LAYOUT DIMENSIONS**

Beam No.	A	B	C
14	8 1/4"	7 1/8"	4 1/8"

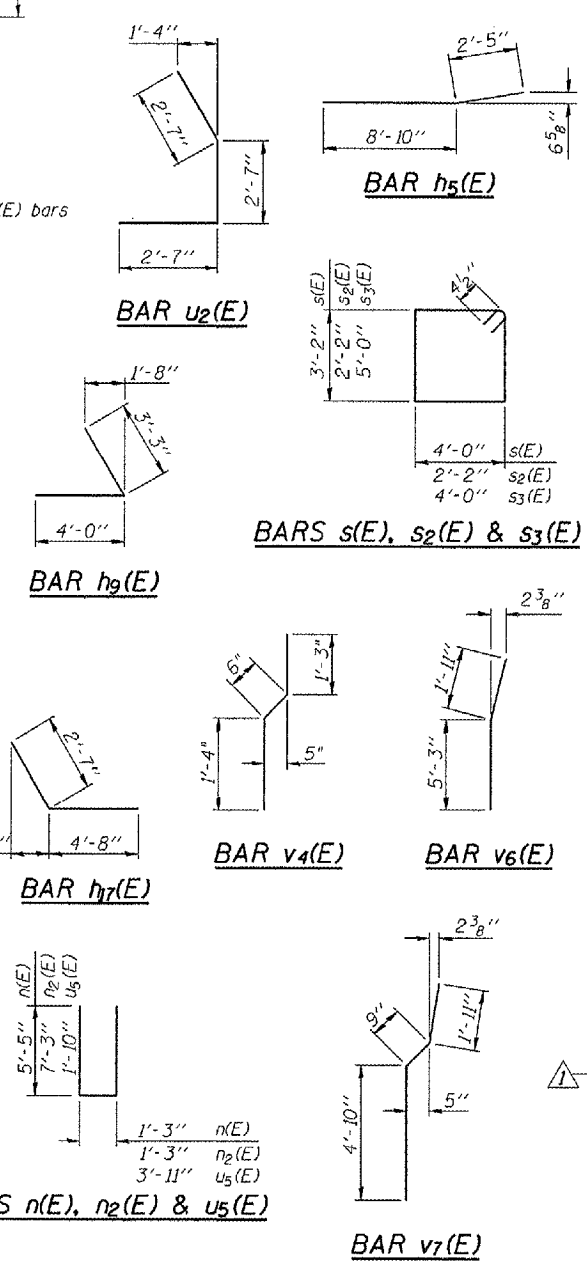


**PLAN-PILE CAP**

**PILE DATA**  
 Pile Type: HP 10x42  
 Nominal Required Bearing: 335 kips  
 Allowable Resistance Available: 112 kips  
 Estimated Length: 50'  
 No. Required: 3 (Includes 1 Test Pile)  
 Test Pile: 1

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h4(E)	28	#4	11'-3"	—
h5(E)	20	#4	11'-3"	—
h6(E)	10	#5	20'-6"	—
h7(E)	14	#5	7'-3"	—
h8(E)	4	#6	20'-6"	—
h9(E)	14	#5	7'-3"	—
h10(E)	4	#6	25'-2"	—
h11(E)	10	#5	25'-2"	—
n(E)	10	#6	12'-1"	—
n1(E)	6	#6	5'-10"	—
n2(E)	10	#6	15'-9"	—
n3(E)	6	#6	8'-0"	—
p(E)	5	#7	6'-2"	—
p1(E)	3	#7	5'-8"	—
p2(E)	12	#6	2'-10"	—
p3(E)	6	#7	11'-6"	—
p4(E)	6	#7	14'-6"	—
s(E)	3	#4	15'-1"	—
s2(E)	24	#4	9'-5"	—
s3(E)	7	#4	18'-9"	—
u2(E)	4	#6	7'-9"	—
u5(E)	4	#6	7'-7"	—
v(E)	14	#4	6'-0"	—
v1(E)	42	#4	3'-7"	—
v2(E)	42	#4	3'-2"	—
v3(E)	8	#4	3'-5"	—
v4(E)	50	#4	3'-1"	—
v5(E)	24	#6	7'-2"	—
v6(E)	6	#6	7'-2"	—
v7(E)	20	#6	7'-6"	—
Structure Excavation		Cu. Yd.	91	
Concrete Structures		Cu. Yd.	31.7	
Reinforcement Bars Epoxy Coated		Pound	3610	
Furnishing Steel Piles HP10x42		Lin. Ft.	100	
Driving Piles		Lin. Ft.	100	
Test Piles Steel HP10x42		Each	1	
Concrete Encasement		Cu. Yd.	1.1	



**MIN. BAR LAPS**  
 #4 Bar - 1'-8"  
 #5 Bar - 2'-2"  
 #6 Bar - 2'-7"  
 #7 Bar - 3'-5"

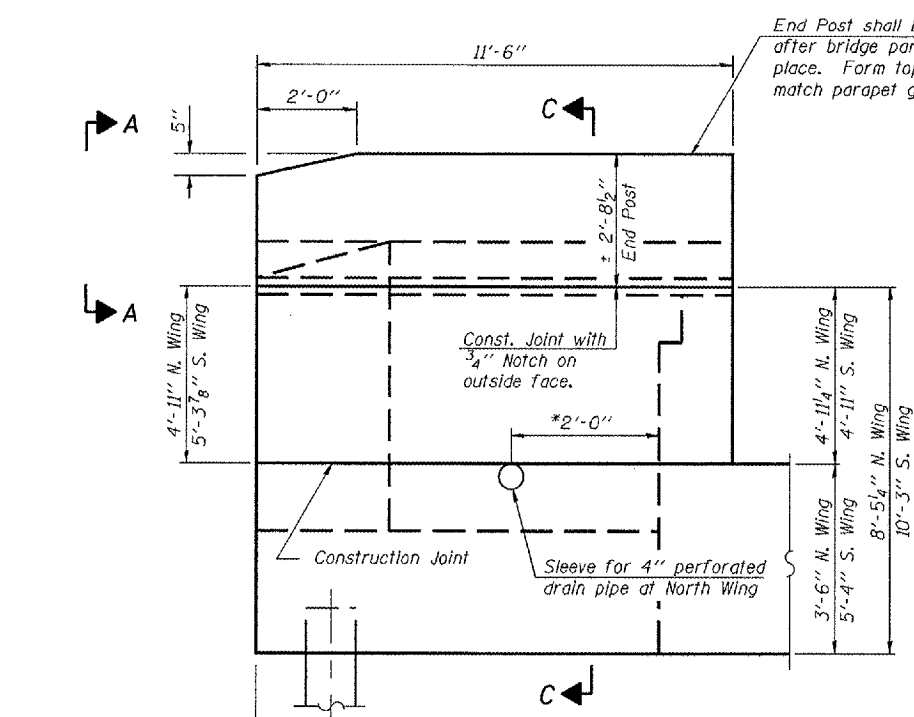
Reinforcement Bars designated (E) shall be Epoxy Coated.  
 For details of Bar Splicers, see sheet 40 of 44.  
 Bars epoxy grouted shall have an embedment sufficient to obtain 1.25 x the yield strength of the reinforcing bar.  
 Drill holes for epoxy grouted bars to miss existing reinforcement.

Corporate License Number 184-001-084  
**EASTBOUND-EAST ABUTMENT**  
**F.A.I. 72 OVER UNION PACIFIC RAILROAD**  
**SECTION (84-9-4)A, HBK, BY, BY-1**  
**SANGAMON COUNTY**  
**STATION 608+51.98**  
**STR NO. 084-0074 EB - 084-0075 WB**

PROJECT NO.	SECTION	COUNTY	SHEET	SHEET NO.
FAI 72	*	SANGAMON	559	288
FED. ROAD DIST. NO. 7	SLIPPER	FED. RD. PROJECT		

\*184-9-41A, HBK, BY, BY-1 Contract No 72541

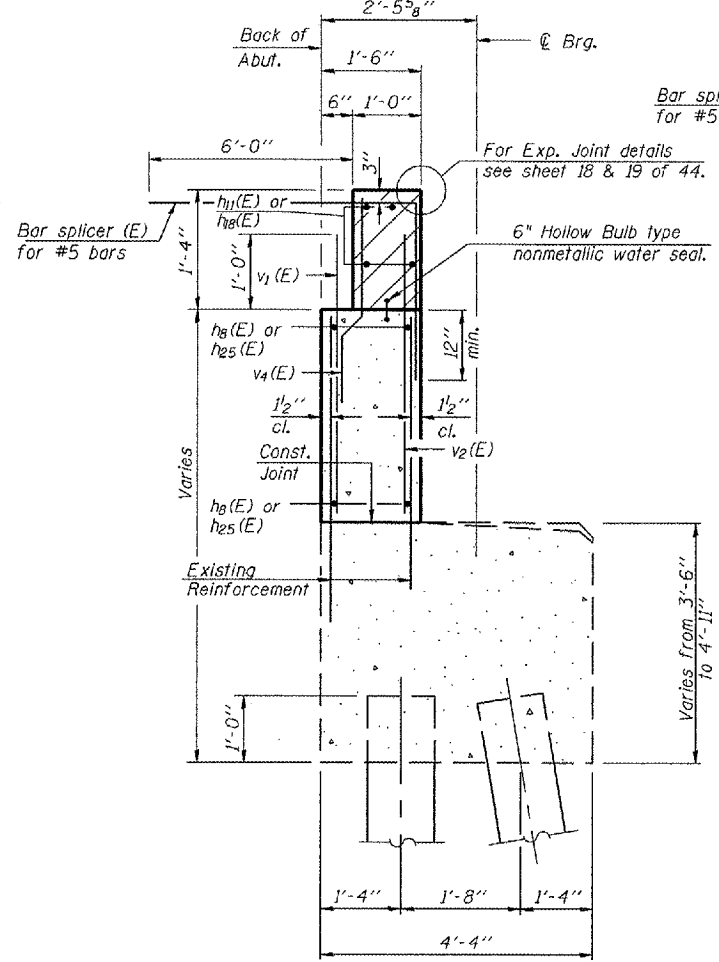
SHEET NO. 35  
44 SHEETS



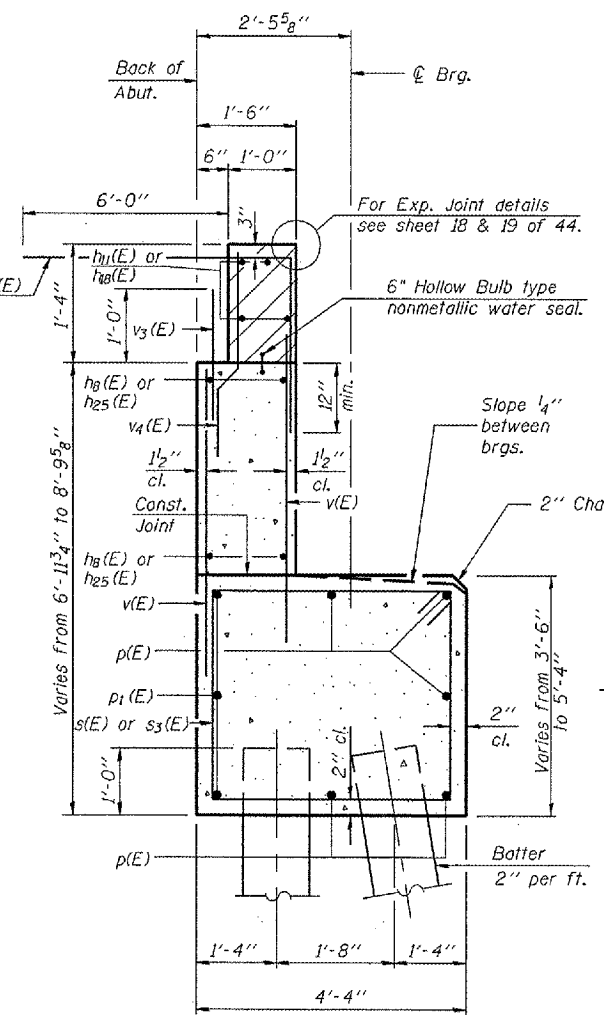
**WING WALL ELEVATION**

Showing Dimensions  
\*Dimension perpendicular to Back of Abutment

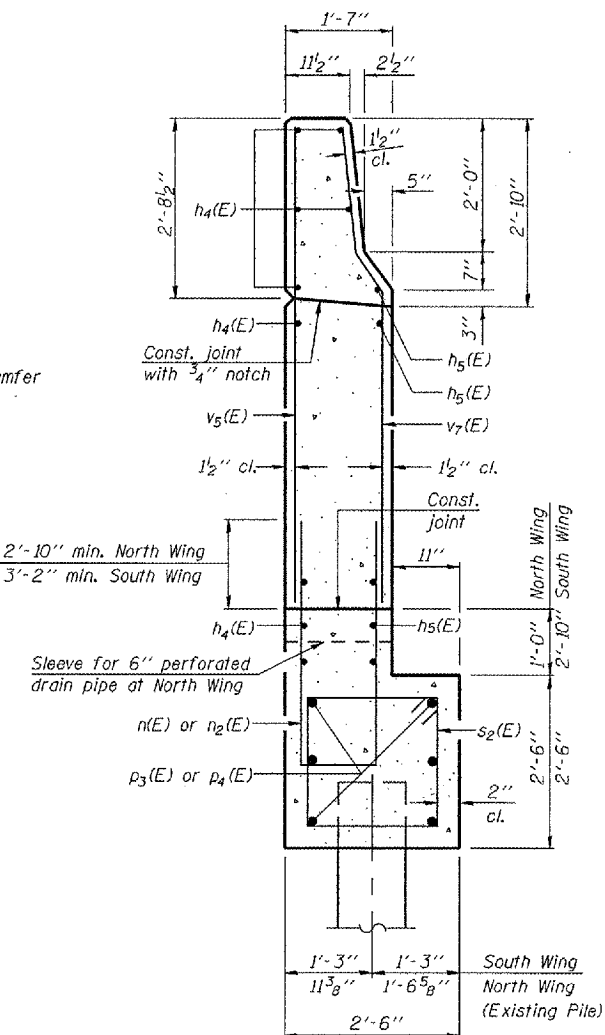
North Wing (Existing Pile) 5'-6 3/8"  
South Wing 2'-0"



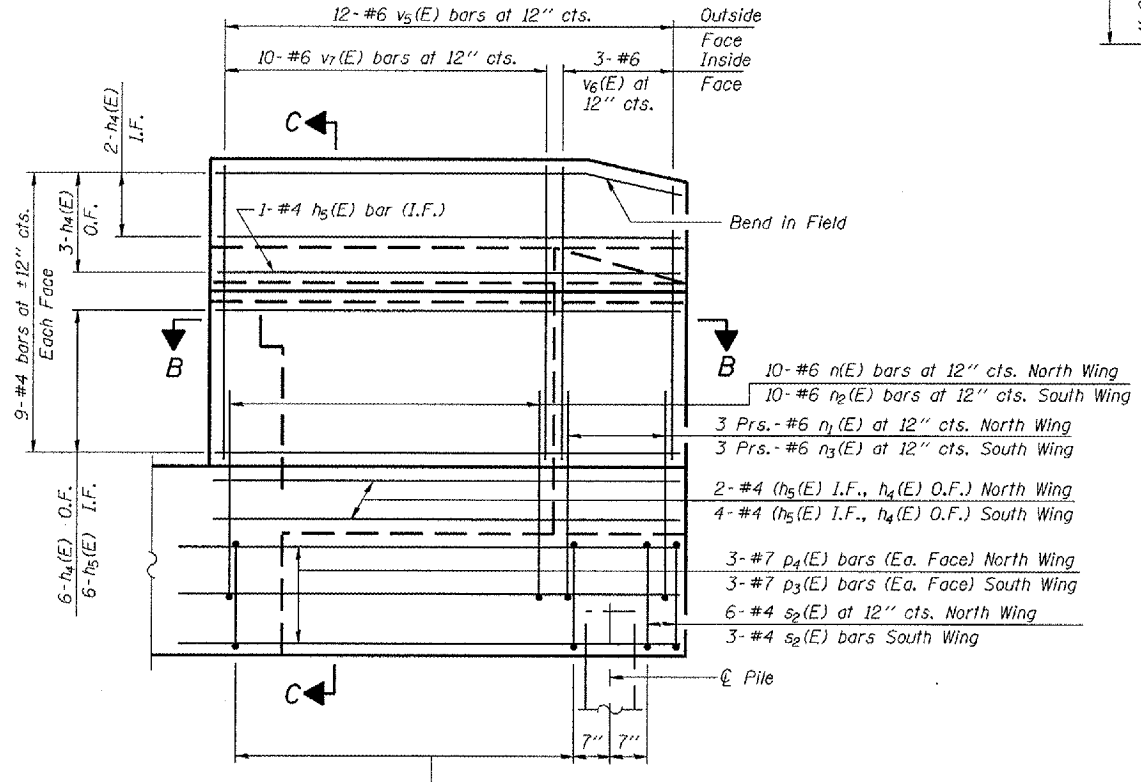
**SEC. THRU EXISTING ABUT.**



**SEC. THRU ABUT.**

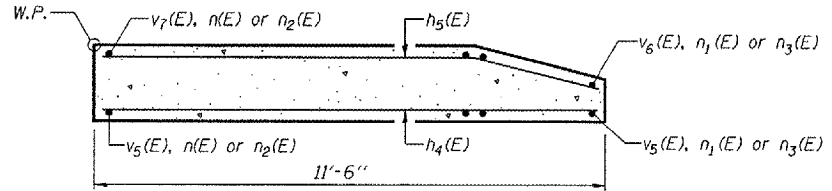


**SECTION C-C**

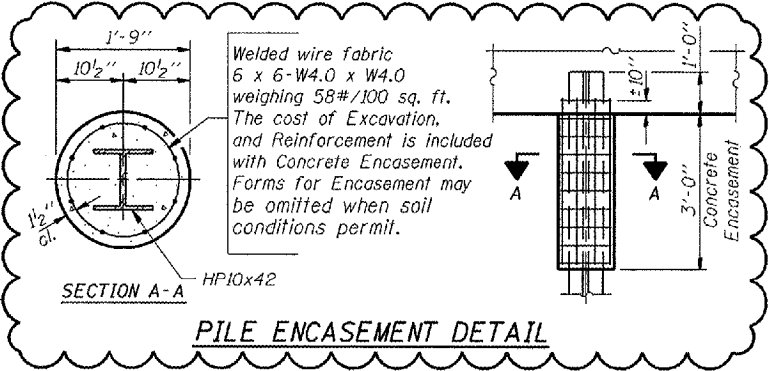


**WING WALL ELEVATION**

Showing Reinforcement



**SEC. B-B**



**PILE ENCASEMENT DETAIL**

**MIN. BAR LAPS**

- #4 Bar - 1'-8"
- #5 Bar - 2'-2"
- #6 Bar - 2'-7"
- #7 Bar - 3'-5"

Notes:  
Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure. Space reinforcement in cap to miss anchor bolts. Pour steps monolithically with cap. Reinforcement bars designated (E) shall be epoxy coated. Quantity of concrete in end post included with Concrete Superstructure on sheet 16 of 44. Cost for sleeve shall be included with Concrete Structures.

Corporate License Number 184-001-084

**EASTBOUND-EAST ABUTMENT DETAILS**  
F.A.I. 72 OVER UNION PACIFIC RAILROAD  
SECTION (84-9-41A, HBK, BY, BY-1  
SANGAMON COUNTY  
STATION 608+51.98  
STR NO. 084-0074 EB - 084-0075 WB

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**HANSON**  
96S2002B  
DATE: 01/12/06

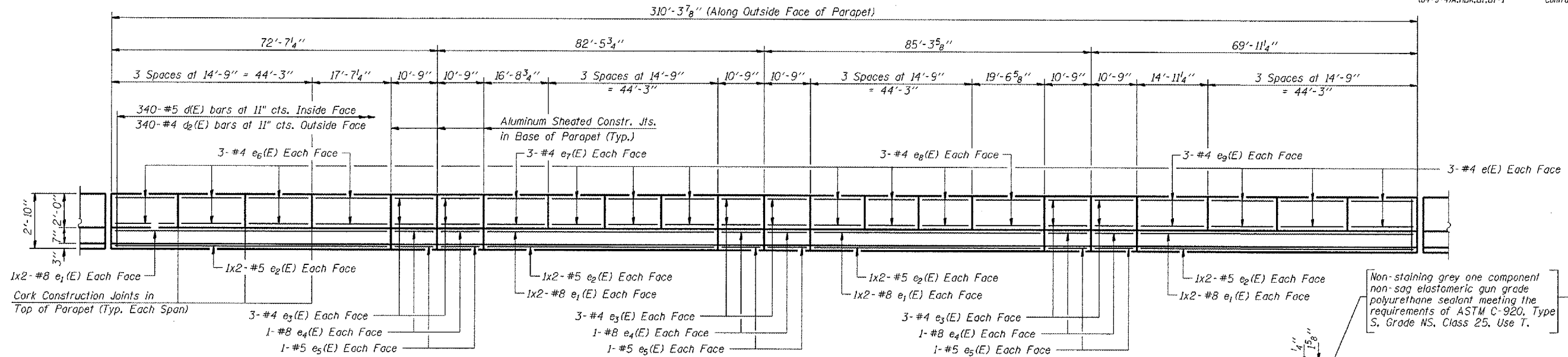
Revised 02/09/07 Rod

MMW	06/27/03
DAP	07/11/03
JMW	10/27/03
LAYOUT	
DRAWN	
REVIEWED	

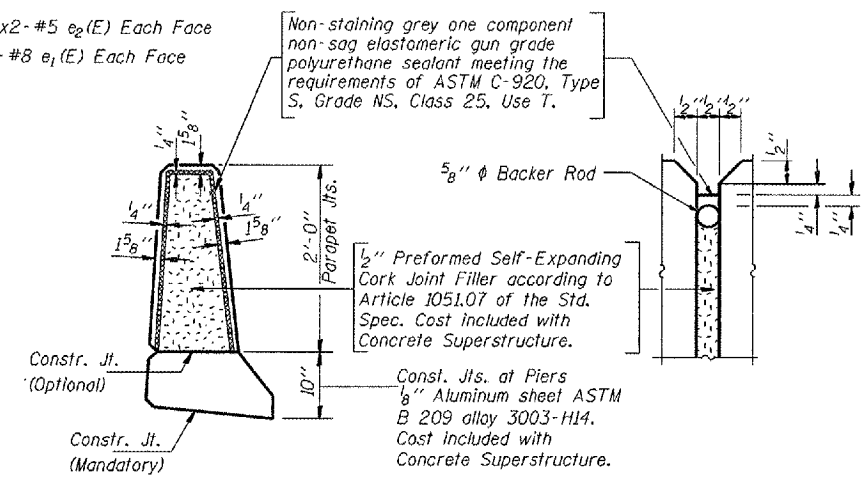


ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
FAI 72		SANGAMON	559	304
FAU 8071				22 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

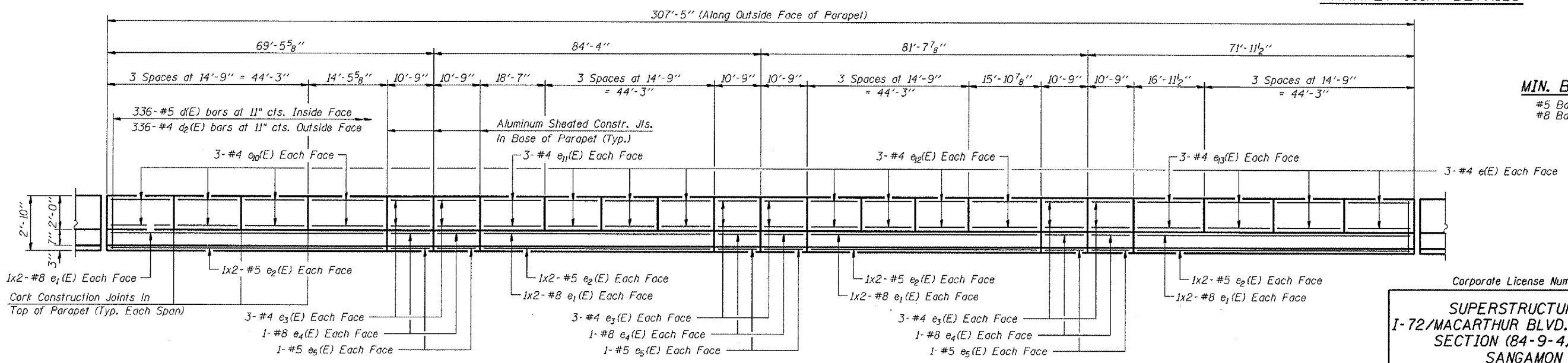
Contract No. 72541



**INSIDE ELEVATION OF SOUTH PARAPET**



**PARAPET JOINT DETAILS**



**INSIDE ELEVATION OF NORTH PARAPET**

**MIN. BAR LAPS**  
#5 Bar - 2'-2"  
#8 Bar - 4'-6"

Slipforming of Parapets not allowed on this structure.

Notes:  
Reinforcement bars designated (E) shall be epoxy coated.  
Bars indicated thus 1x2-#5 etc. indicates 1 line of bars with 2 lengths per line.  
See sheet 08 of 22 for superstructure details and bill of material.

FILES & DATES

LAYOUT	MM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JWM	02/24/05

Corporate License Number 184-001-084

**SUPERSTRUCTURE DETAILS**  
I-72/MACARTHUR BLVD. RAMP B OVER UPRR  
SECTION (84-9-4)A,HBK,BY,BY-1  
SANGAMON COUNTY  
STATION 33+95.61  
STRUCTURE NUMBER 084-0514

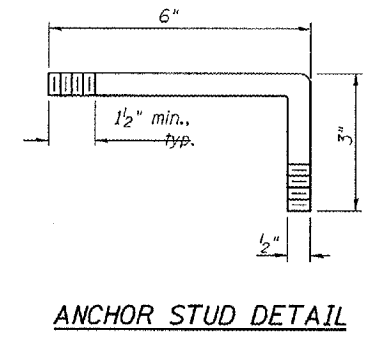
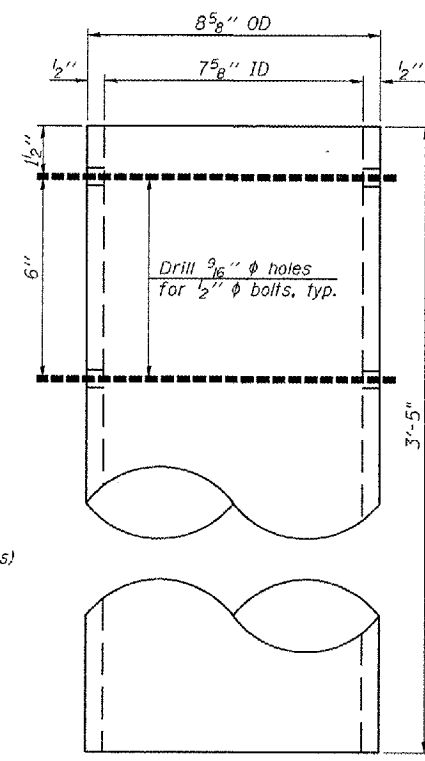
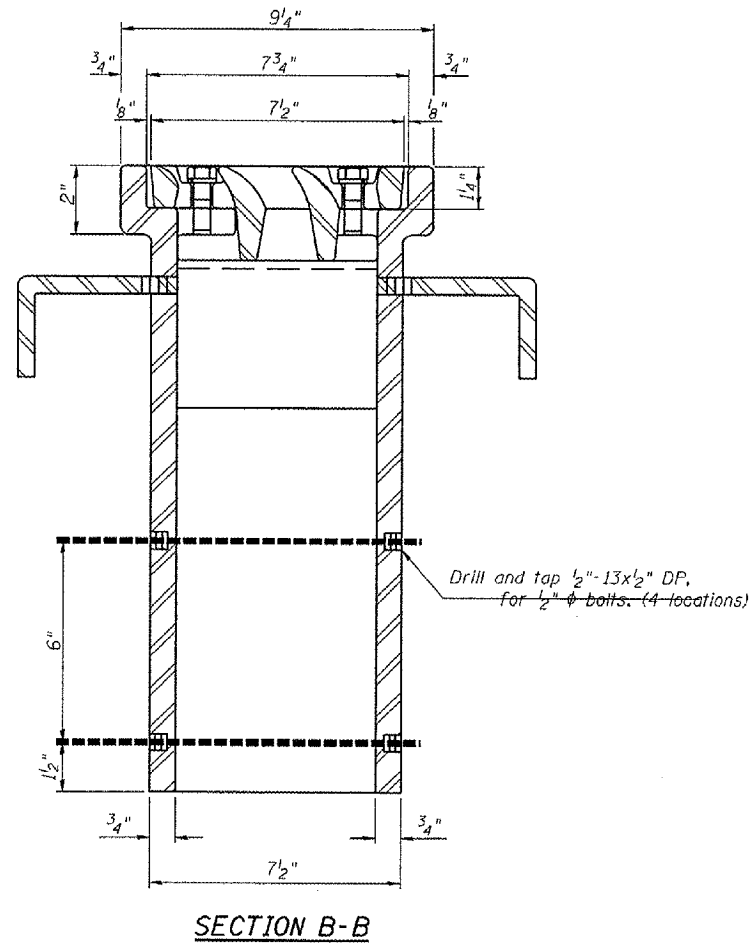
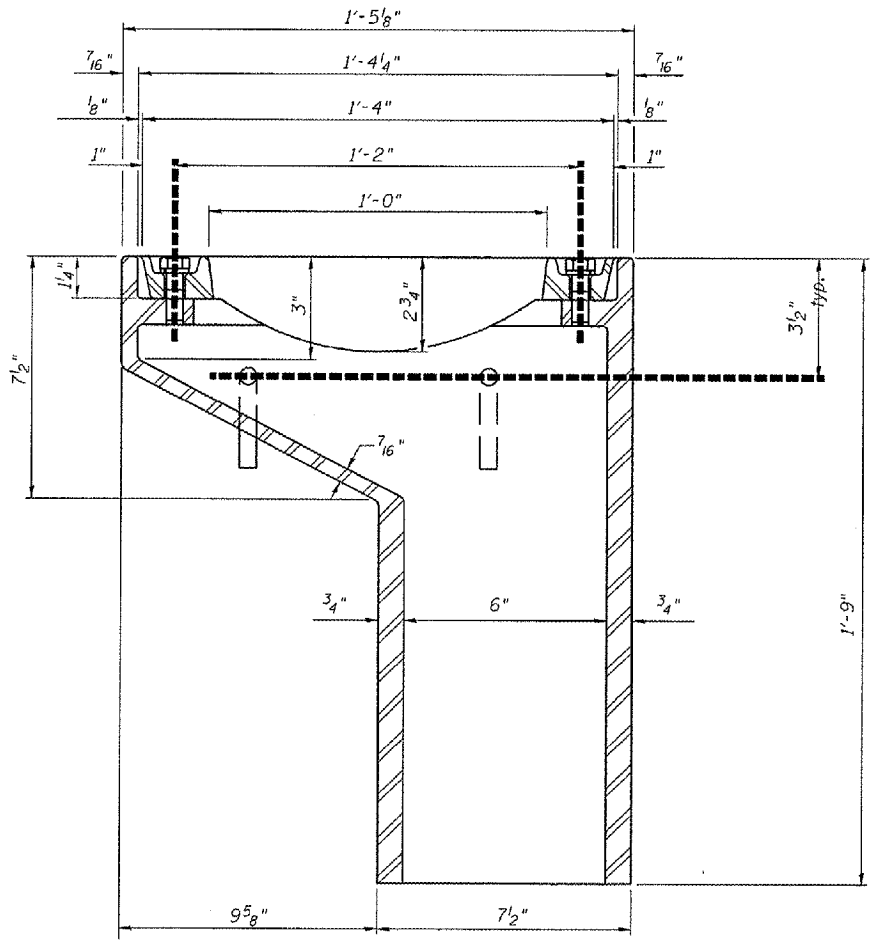
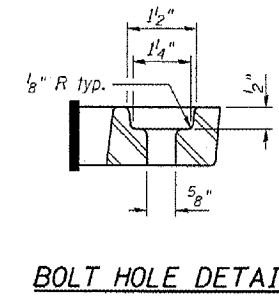
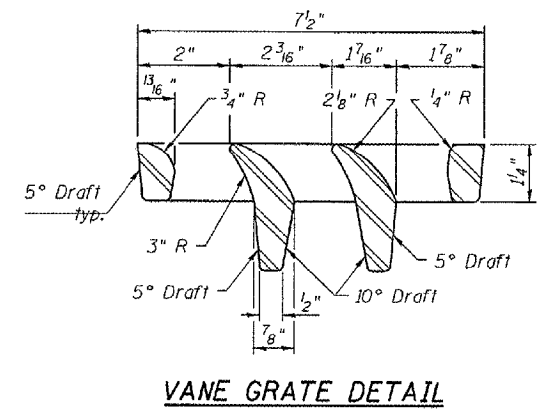
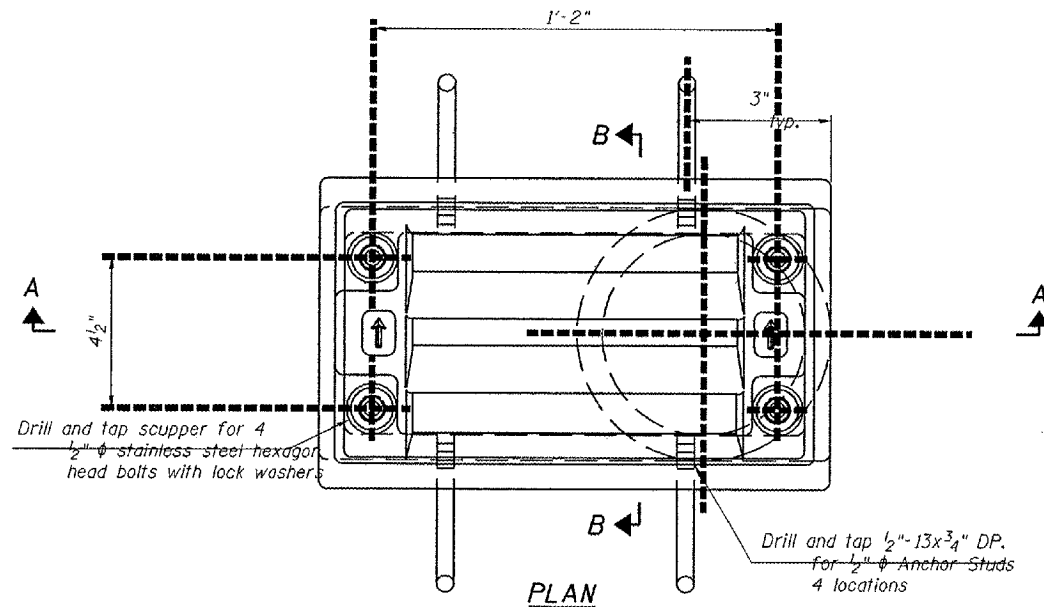
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**HANSON**

96S2002B  
DATE: 11/16/05

PROJECT NO.	SECTION	COUNTY	SHEET NO.	SHEET	SHEET NO. 10
FAI 72	*	SANGAMON	559	307	22 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

\*84-9-4)A,HBK,BY,BY-1 Contract No. 72541



**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-11.

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.

**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	1

Corporate License Number 184-001-084

**DRAINAGE SCUPPER, DS-11**  
I-72/MACARTHUR BLVD. RAMP B OVER UPRR  
SECTION (84-9-4)A,HBK,BY,BY-1  
SANGAMON COUNTY  
STATION 33+95.61  
STRUCTURE NUMBER 084-0514

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JOB# 96S2002B  
DATE 11/16/05

FILES  
SCALE

LAYOUT	MM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JWM	02/24/05

DS-11

11-1-06



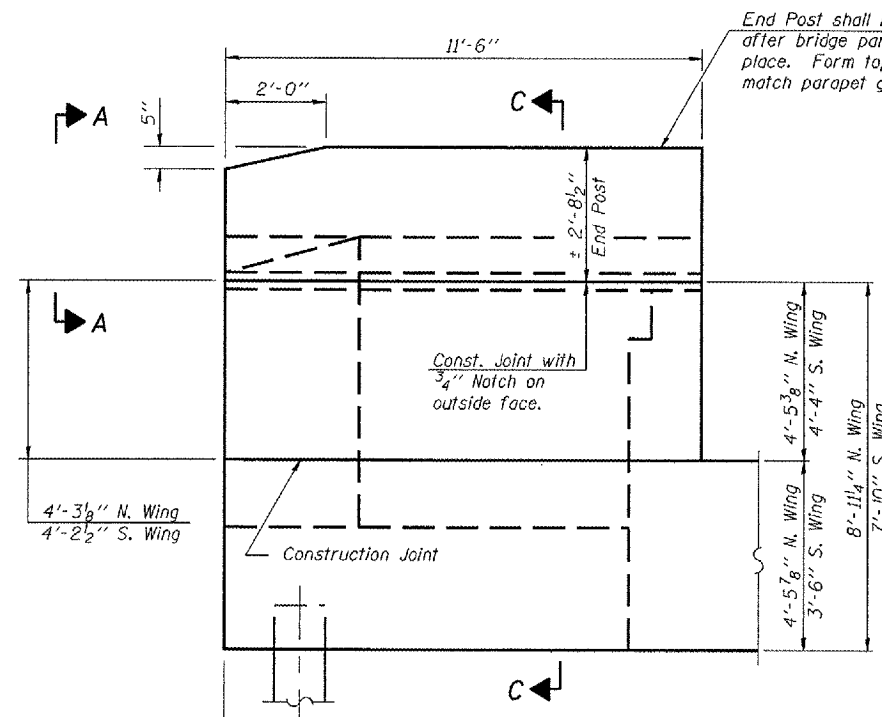
ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
FAJ 72	*	SANGAMON	559	313
FAU 8021				22 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

\*84-9-41A, H.B.K., BY, BY-1 Contract No. 72541

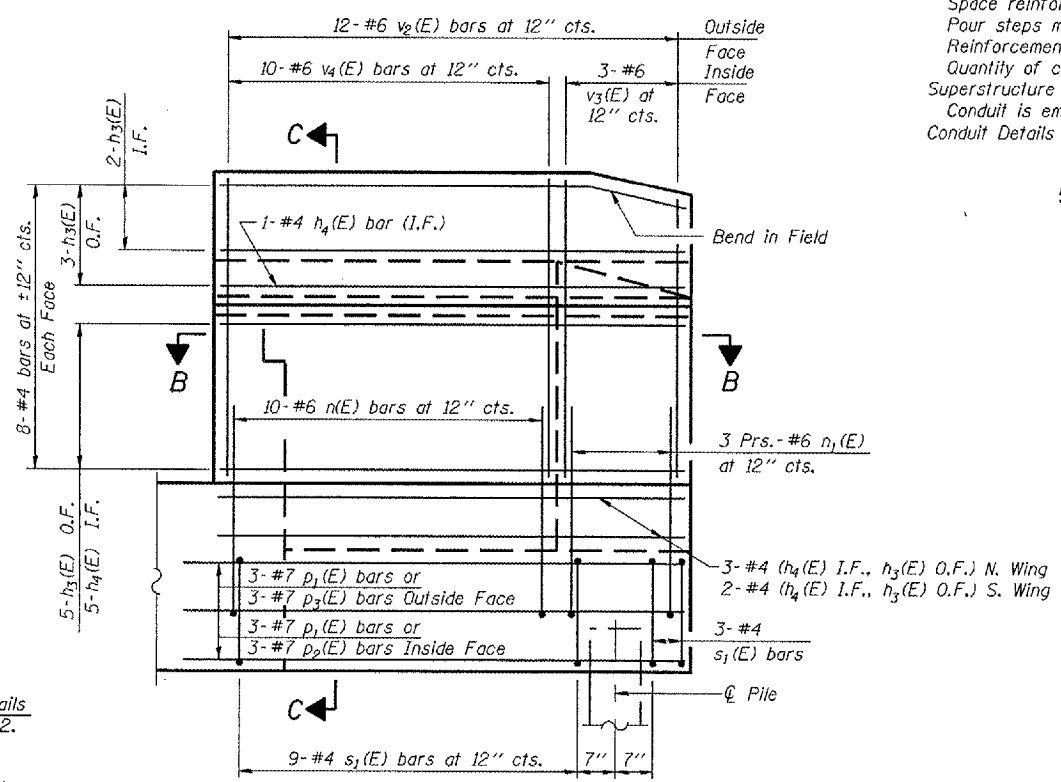
Notes: Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure. Space reinforcement in cap to miss anchor bolts. Pour steps monolithically with cap. Reinforcement bars designated (E) shall be epoxy coated. Quantity of concrete in end post included with Concrete Superstructure on sheet 08 of 22. Conduit is embedded in the South Wing. For details, see Conduit Details sheet in the Roadway Plans.

**MIN. BAR LAPS**

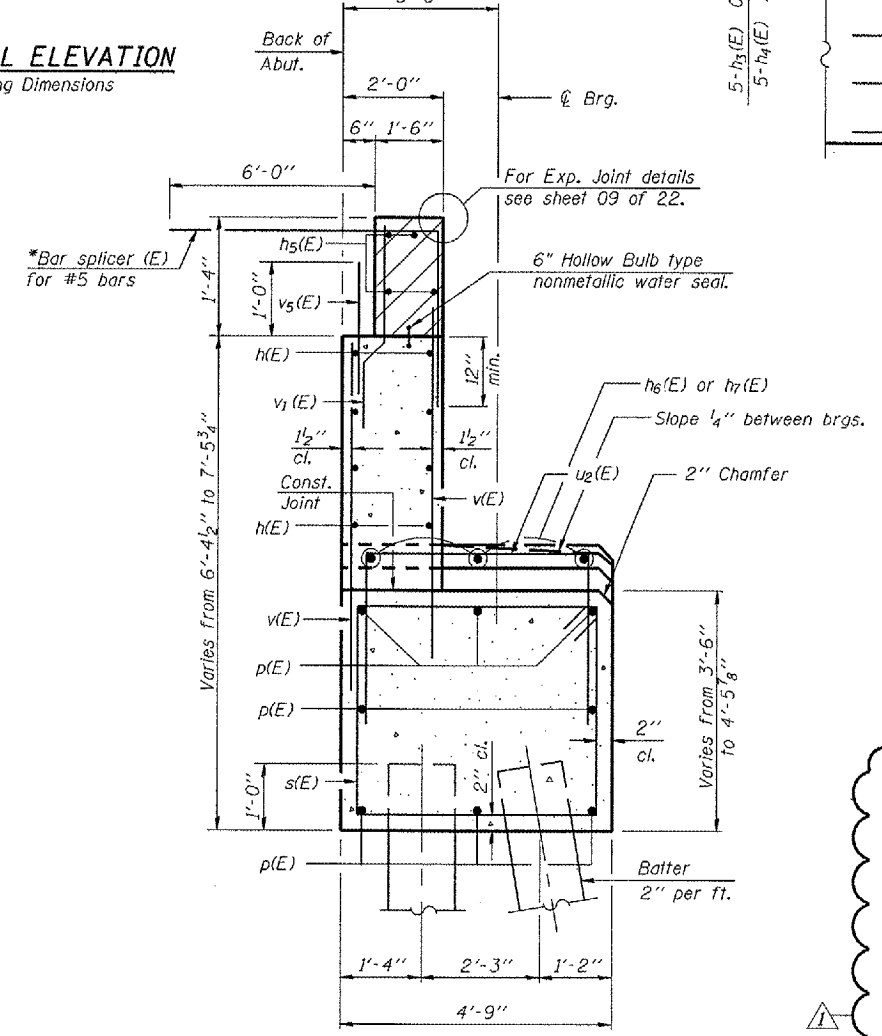
- #4 Bar - 1'-8"
- #5 Bar - 2'-2"
- #6 Bar - 2'-7"
- #7 Bar - 3'-5"
- #8 Bar - 4'-6"



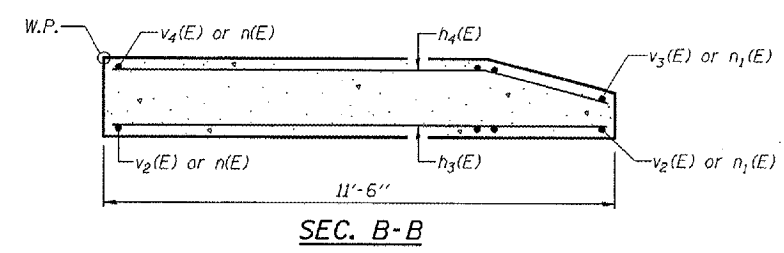
**WING WALL ELEVATION**  
Showing Dimensions



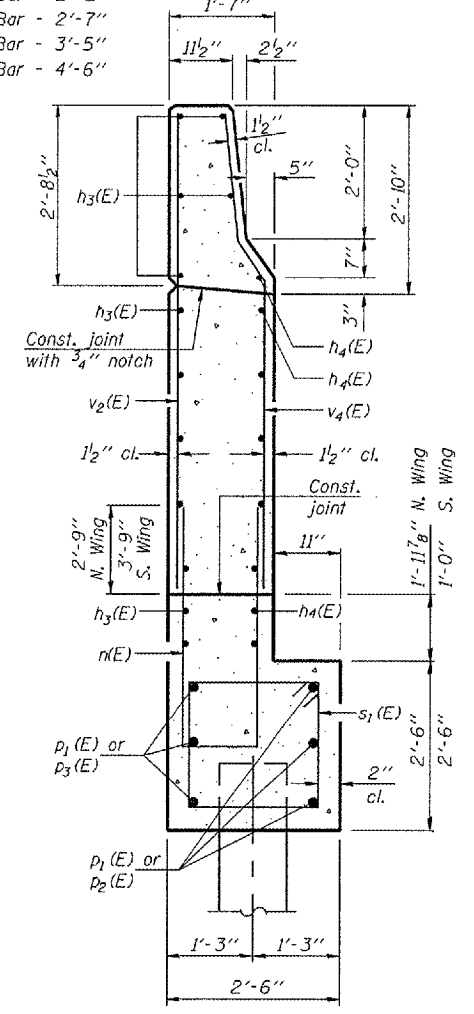
**WING WALL ELEVATION**  
Showing Reinforcement



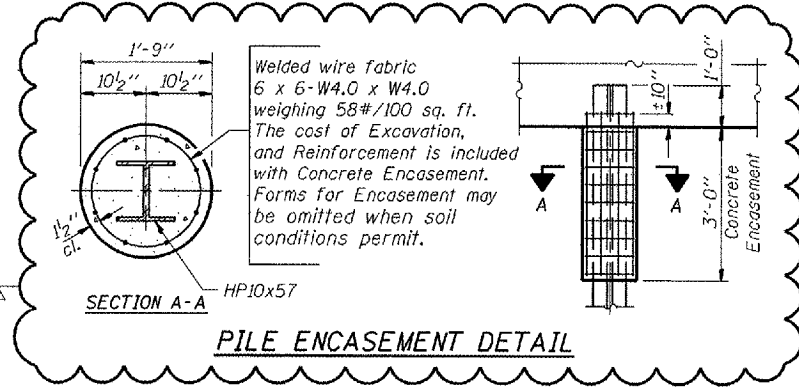
**SEC. THRU ABUT.**  
\*Alternate with #4 v(E) bars  
Place parallel to the beams



**SEC. B-B**



**SECTION C-C**



**PILE ENCASEMENT DETAIL**

Corporate License Number 184-001-084

**WEST ABUTMENT DETAILS**  
I-72/MACARTHUR BLVD. RAMP B OVER UPRR  
SECTION (84-9-4)A, H.B.K., BY, BY-1  
SANGAMON COUNTY  
STATION 33+95.61  
STRUCTURE NUMBER 084-0514

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 DATE: 11/16/05

LAYOUT	MM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JWM	02/24/05



Contract No. 72541  
**ANCHOR BOLT LAYOUT DIMENSIONS**

Beam No.	A	B
1	6' 7/16"	6' 5/8"
2	6' 7/16"	6' 5/8"
3	6' 7/16"	6' 5/8"
4	6' 7/16"	6' 1/16"
5	6' 7/16"	6' 1/16"

**ABUTMENT BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
n(E)	18	#5	19'-9"	
h <sub>3</sub> (E)	25	#4	11'-3"	
h <sub>4</sub> (E)	17	#4	11'-3"	
h <sub>5</sub> (E)	8	#6	21'-10"	
h <sub>6</sub> (E)	12	#5	7'-0"	
h <sub>7</sub> (E)	12	#5	7'-1"	
h <sub>8</sub> (E)	3	#5	24'-8"	
h <sub>9</sub> (E)	3	#5	8'-0"	
n(E)	20	#6	13'-4"	
n <sub>1</sub> (E)	12	#6	6'-10"	
p(E)	16	#8	24'-0"	
p <sub>1</sub> (E)	6	#7	13'-0"	
p <sub>2</sub> (E)	3	#7	11'-4"	
p <sub>3</sub> (E)	3	#7	13'-1"	
s(E)	43	#5	16'-1"	
s <sub>1</sub> (E)	26	#4	9'-5"	
u(E)	4	#6	9'-5"	
u <sub>2</sub> (E)	26	#4	9'-9"	
u <sub>3</sub> (E)	4	#6	8'-9"	
v(E)	76	#5	6'-0"	
v <sub>1</sub> (E)	38	#4	3'-1"	
v <sub>2</sub> (E)	24	#6	6'-9"	
v <sub>3</sub> (E)	6	#6	6'-9"	
v <sub>4</sub> (E)	20	#6	6'-9"	
v <sub>5</sub> (E)	38	#5	2'-10"	
Structure Excavation		Cu. Yd.	128	
Concrete Structures		Cu. Yd.	50.1	
Reinforcement Bars, Epoxy Coated		Pound	5420	
Furnishing Steel Piles HP10x57		Foot	450	
Driving Piles		Foot	450	
Test Piles Steel HP10x57		Each	1	
Concrete Encasement		Cu. Yd.	2.9	

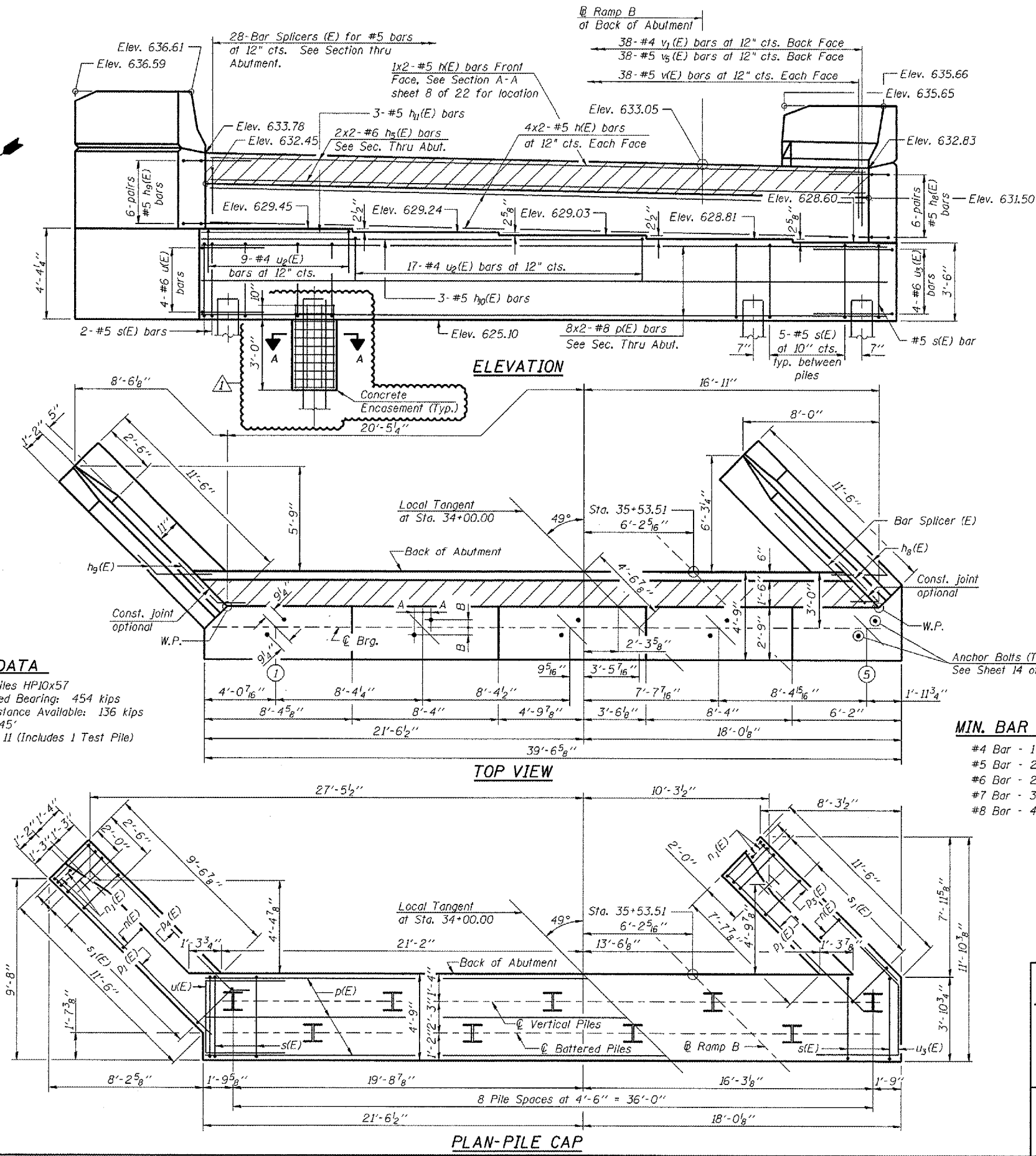
**MIN. BAR LAPS**

- #4 Bar - 1'-8"
- #5 Bar - 2'-2"
- #6 Bar - 2'-7"
- #7 Bar - 3'-5"
- #8 Bar - 4'-6"

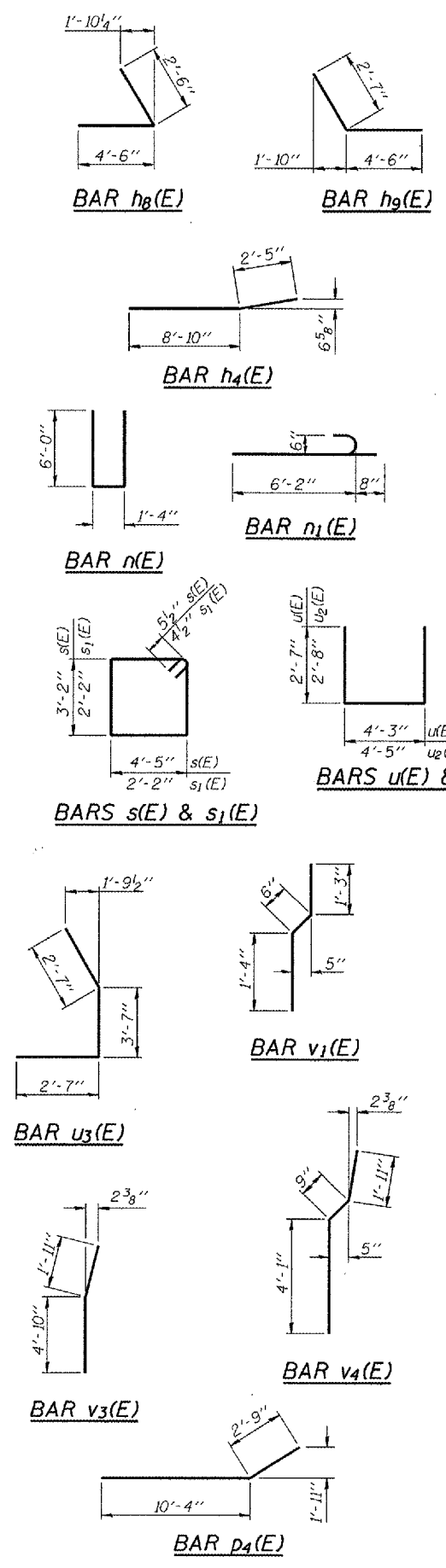
Notes:  
 Reinforcement bars designated (E) shall be epoxy coated.  
 For details of Bar Splicers, see sheet 20 of 22.  
 Conduit is embedded in the South Wing. For details see Conduit Details sheet in the Roadway Plans  
 Corporate License Number 184-001-084

**EAST ABUTMENT**  
 I-72/MACARTHUR BLVD. RAMP B OVER UPRR  
 SECTION (84-9-4)A, H.B.K., BY, BY-1  
 SANGAMON COUNTY  
 STATION 33+95.61  
 STRUCTURE NUMBER 084-0514

Revised 02/09/07 Rod



**PILE DATA**  
 Type: Steel Piles HP10x57  
 Nominal Required Bearing: 454 kips  
 Allowable Resistance Available: 136 kips  
 Est. Length: 45'  
 No. Required: 11 (Includes 1 Test Pile)

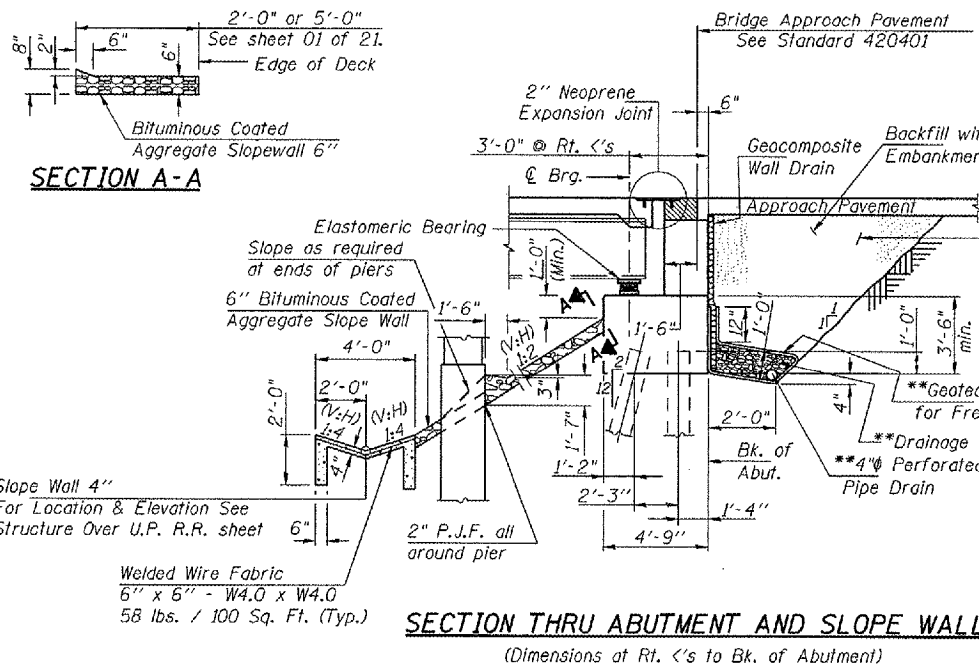


LAYOUT	MMH	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JMK	02/24/05



**GENERAL NOTES**

Fasteners shall be high strength bolts. Bolts 7/8" φ, open holes 5/16" φ, unless otherwise noted.  
 Calculated weight of Structural Steel: AASHTO M 270 Grade 50 = 165090 lbs.  
 Field welding of construction accessories will not be permitted to beams.  
 Anchor bolts shall be set before bolting diaphragms over supports.  
 The structural steel bearing plates of the Elastomeric Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50.  
 The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the wide flange beams and all splice plate material except fill plates.  
 Reinforcement bars shall conform to the requirements of AASHTO M 31 or M 322 Grade 60.  
 The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.  
 Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 1/8" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.  
 The Contractor shall drive one test pile in a permanent location at each substructure as directed by the Engineer before ordering the remainder of piles.  
 Concrete Sealer shall be applied to the seat area of the Abutments.  
 All Construction joints shall be banded.  
 The Inorganic zinc rich primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. 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 Interstate Green Munsell No. 7.5G 4/8. See Special Provisions for "Cleaning and Painting New Metal Structures".  
 No deck drains will be permitted in the span over tracks or within 10' of crossarms of a railroad pole line.  
 An unconfined compressive strength of 1.5 tons is required during placement of embankment material.  
 The piles of the abutments shall be driven through 18" φ pre-cored holes extending to Elev. 600.5 at the E. Abut. and 600.7 at the W. Abut. or to the present ground elevation or whichever occurs first. The annular spacing around the pile shall then be backfilled with dry loose sand. The cost of complying with these requirements shall be included with driving steel piles.  
 Drains shall be located clear of all diaphragms.  
 A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.  
 The Steel H-piles shall be according to AASHTO M270 Grade 50.  
 The test piles shall be driven to 110 percent of the Nominal Required Bearing indicated in the pile data information.



ROUTE NO.	SECTION	COUNTY	SHEETS	"POST"	SHEET NO. 02
FAI 72		SANGAMON	559	321	21 SHEETS
FAU 8071					
PER. ROAD DIST. NO. 7	BLINDS	PER. AID PROJECT			

Contract No 72541

**INDEX OF SHEETS**

1. General Plan and Elevation
2. General Notes and Bill of Material
3. Footing Layout
4. Top of Slab Elevations
5. Top of Slab Elevations
6. Superstructure
7. Superstructure Details
8. Superstructure Details
9. Neoprene Expansion Joint Details
10. Drainage Scupper, DS-II
11. Structural Steel Framing Plan
12. Structural Steel Details
13. Elastomeric Bearing Details, Type II
14. Anchor Bolt Assembly Details
15. East Abutment
16. East Abutment Details
17. West Abutment
18. West Abutment Details
19. Piers 1-3
20. Bar Splicer Assembly Details
21. Borings

STATION 46+01.97  
 BUILT 20\_\_ BY  
 STATE OF ILLINOIS  
 F.A.I. 72 SEC. (84-9-4)A,HBK,BY,BY1  
 LOADING HS20-44  
 STR. NO. 084-0516

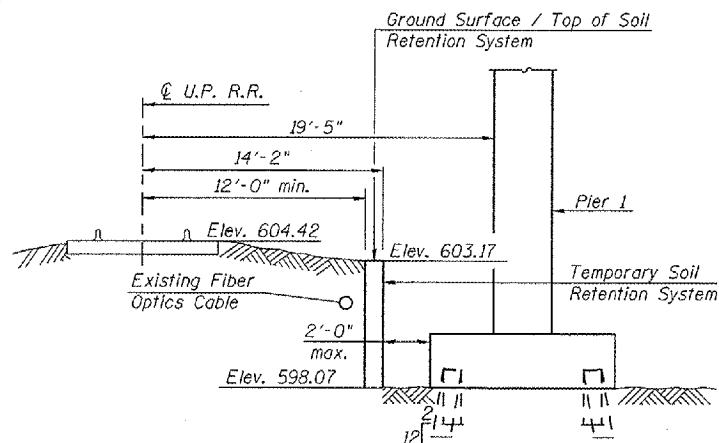
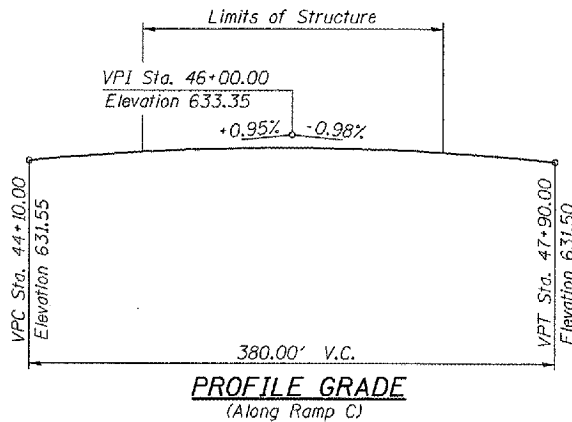
**NAME PLATE**  
 See Std. 515001

**TOTAL BILL OF MATERIAL**

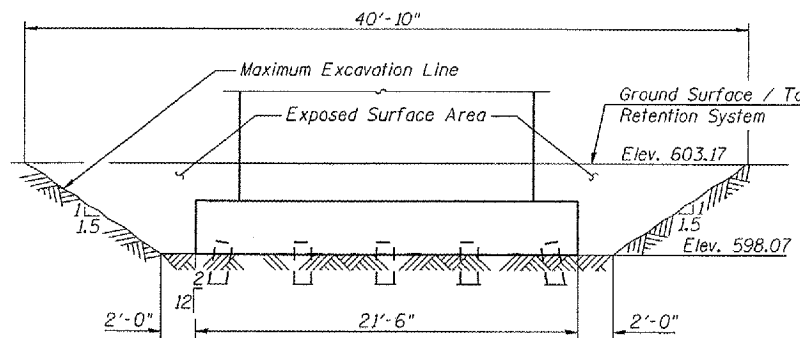
West Rail		East Rail	
Station	Elevation	Station	Elevation
0+00.00	605.31	0+00.03	605.33
0+67.95	605.32	0+67.76	605.35
1+83.47	605.26	1+83.48	605.25
2+80.82	605.24	2+80.71	605.24
3+81.80	605.12	3+81.74	605.13
4+81.65	605.26	4+81.69	605.24
5+78.38	605.39	5+78.51	605.36

**EXISTING TOP OF RAIL ELEVATIONS UP R.R.**

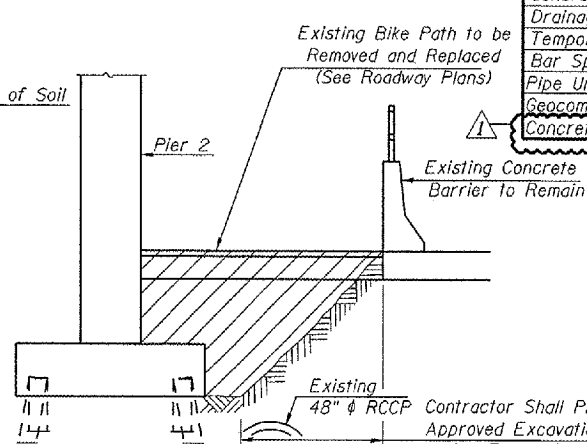
Note:  
 The elevations of the existing top-of-rail profile shall be verified before beginning construction. All discrepancies shall be brought to the attention of the Chief Engineer Bridges and Structures.



**SECTION AT PIER 1**  
 Distances shown perpendicular to U.P. R.R.



**ELEVATION AT PIER 1**  
 Slopes and distances shown along alignment of sheeting and pier.



**SECTION AT PIER 2**

Contractor Shall Provide Approved Excavation Protection during Excavation and Pier Construction. Cost shall be Included with Structure Excavation.

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment, Special	Cu. Yd.	-	94	94
Structure Excavation	Cu. Yd.	-	399	399
Floor Drains	Each	4	-	4
Neoprene Expansion Joint 2"	Foot	60.5	-	60.5
Concrete Structures	Cu. Yd.	-	307.1	307.1
Concrete Superstructure	Cu. Yd.	214.4	-	214.4
Bridge Deck Grooving	Sq. Yd.	595	-	595
Protective Coat	Sq. Yd.	856	-	856
Elastomeric Bearing Assembly, Type II	Each	10	-	10
Furnishing and Erecting Structural Steel Bridge No. 4	L. Sum	1	-	1
Stud Shear Connectors	Each	3690	-	3690
Reinforcement Bars, Epoxy Coated	Pound	51660	44700	96360
Slope Wall 4"	Sq. Yd.	-	36	36
Bituminous Coated Aggregate Slope Wall 6"	Sq. Yd.	-	464	464
Furnishing Steel Piles HPI0x57	Foot	-	1475	1475
Driving Piles	Foot	-	1475	1475
Test Pile Steel HPI0x57	Each	-	5	5
Name Plates	Each	1	-	1
Concrete Sealer	Sq. Ft.	-	177	177
Drainage Scuppers, DS-II	Each	2	-	2
Temporary Soil Retention System	Sq. Ft.	-	169	169
Bar Splicers	Each	-	57	57
Pipe Underdrains for Structures 4"	Foot	-	79	79
Geocomposite Wall Drain	Sq. Yd.	-	45	45
Concrete Encasement	Cu. Yd.	-	4.8	4.8

Corporate License Number 184-001-084  
**GENERAL NOTES & BILL OF MATERIAL**  
 I-72/MACARTHUR BLVD. RAMP C OVER UPRR  
 SECTION (84-9-4)A,HBK,BY,BY-1  
 SANGAMON COUNTY  
 STATION 46+01.97  
 STRUCTURE NUMBER 084-0516

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**HANSON**  
 DATE 11/16/05

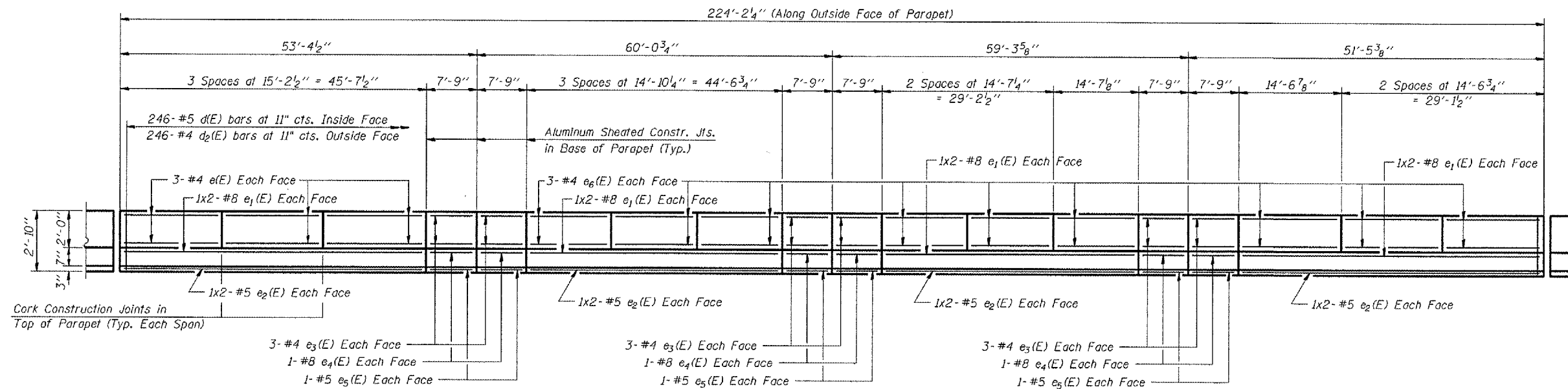
LAYOUT	MM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JMM	02/24/05

**TEMPORARY SOIL RETENTION SYSTEM DETAILS**

Notes: Reinforcement bars designated (E) shall be epoxy coated.  
 Bars indicated thus 1x2-#5 etc. indicates 1 line of bars with  
 2 lengths per line.  
 See sheet 08 of 21 for Superstructure Details and Bill of Material.

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET	SHEET NO. 07
FAI 72 FAU 8071	*	SANGAMON	559	326	21 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

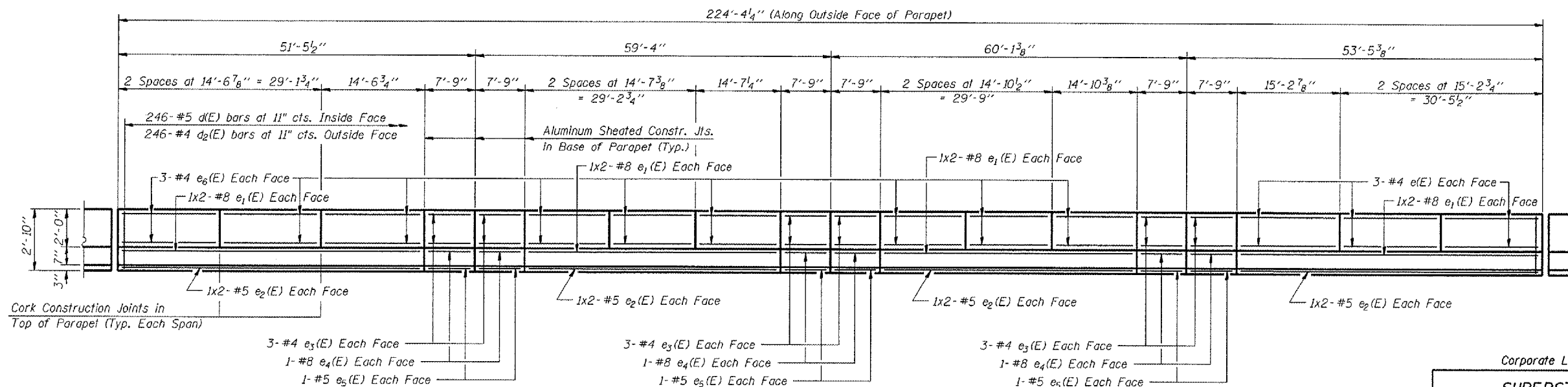
184-9-4)A,HBK,BY,BY-1 Contract No 72541



**INSIDE ELEVATION OF SOUTH PARAPET**

**MIN. BAR LAPS**

#5 Bar - 2'-2"  
 #8 Bar - 4'-6"



**INSIDE ELEVATION OF NORTH PARAPET**

Slipforming of Parapets not allowed on this structure.

LAYOUT	MMH	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JMM	02/24/05

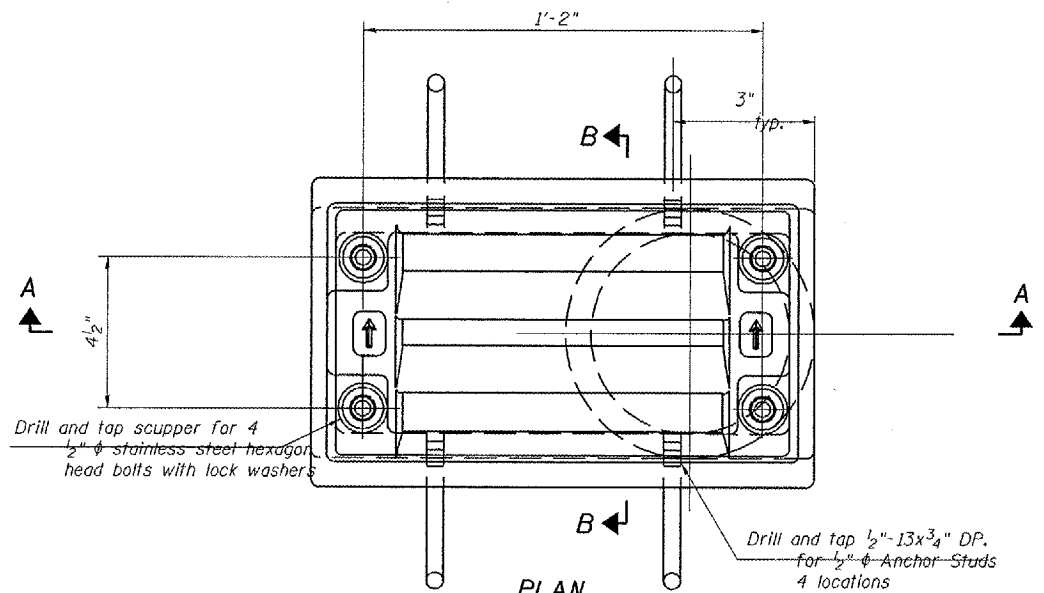
Corporate License Number 184-001-084

**SUPERSTRUCTURE DETAILS**  
 I-72/MACARTHUR BLVD. RAMP C OVER UPRR  
 SECTION (84-9-4)A,HBK,BY,BY-1  
 SANGAMON COUNTY  
 STATION 46+01.97  
 STRUCTURE NUMBER 084-0516

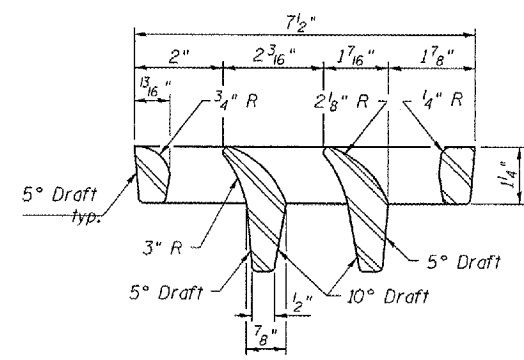
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 11/16/05

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 10
FAI 72	*	SANGAMON	559	329	21 SHEETS
FAU 8071					
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

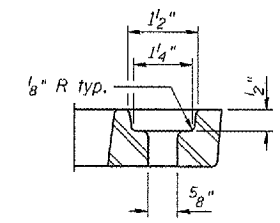
(84-9-4)A,HBK,BY,BY-1 Contract No 72541



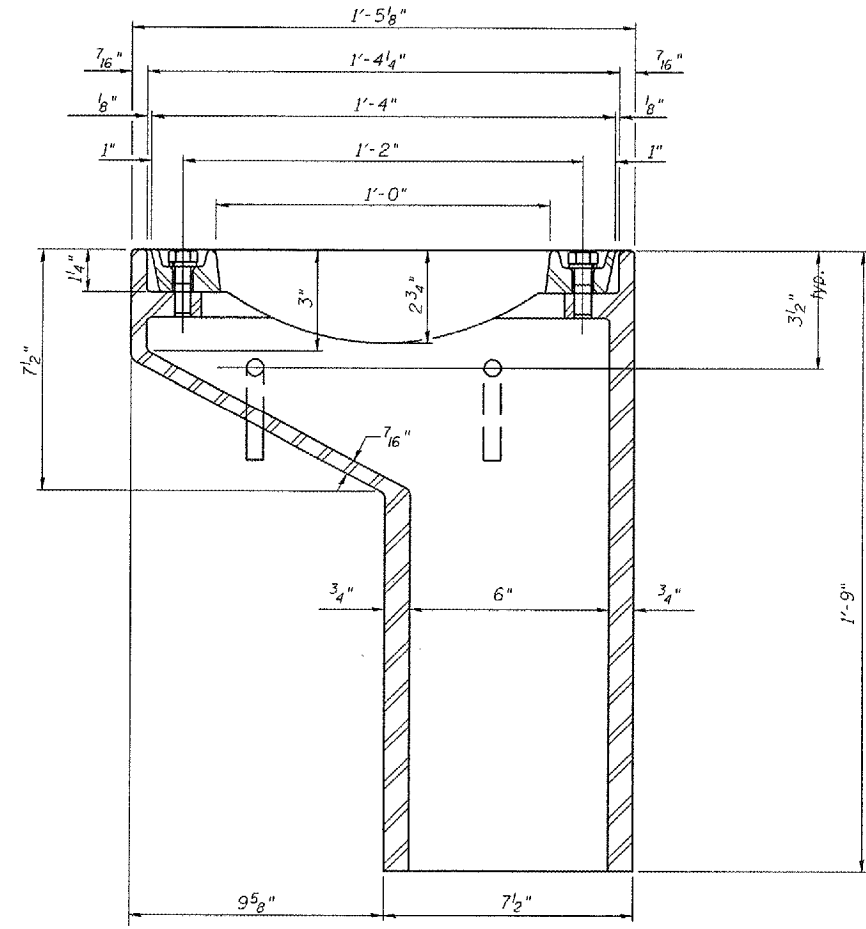
PLAN



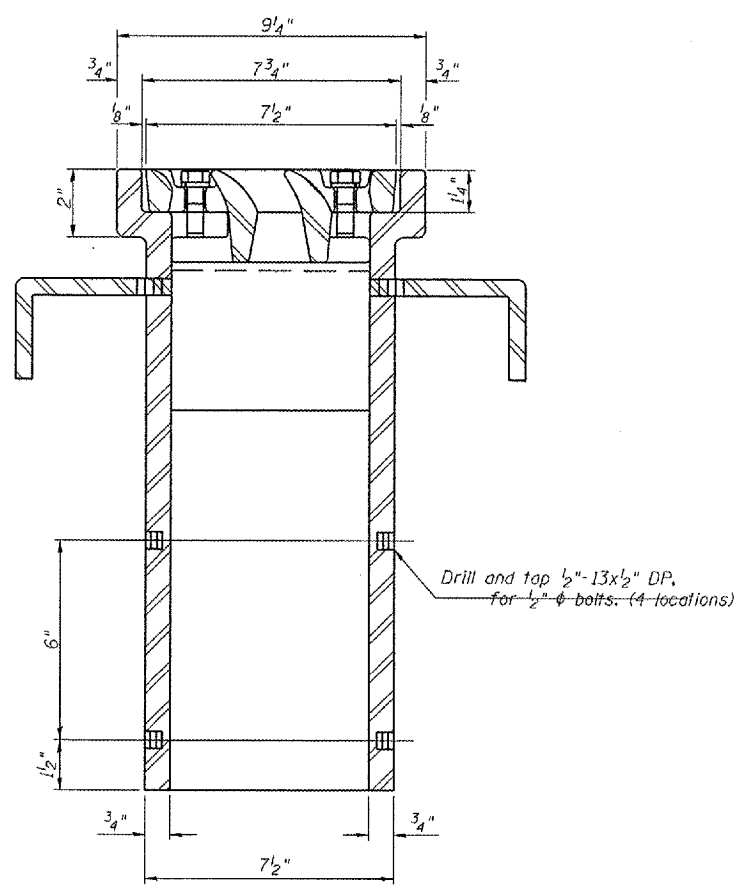
VANE GRATE DETAIL



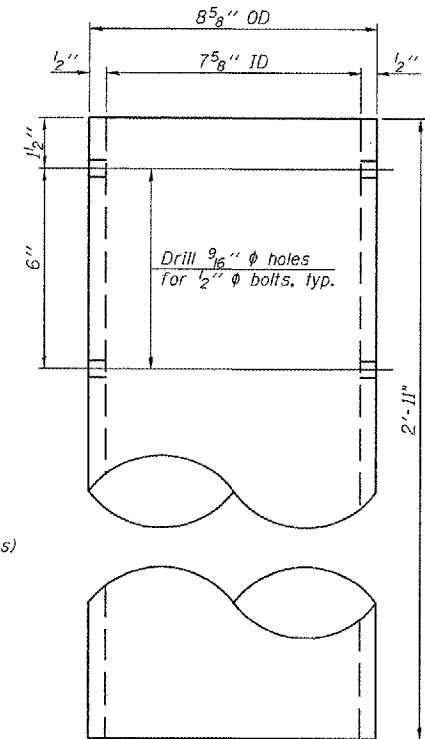
BOLT HOLE DETAIL



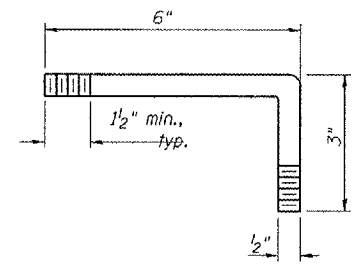
SECTION A-A  
See sheet 01 for scupper location relative to parapet.



SECTION B-B



DOWNSPOUT



ANCHOR STUD DETAIL

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	2

Corporate License Number 184-001-084

DRAINAGE SCUPPER, DS-11  
I-72/MACARTHUR BLVD. RAMP C OVER UPRR  
SECTION (84-9-4)A,HBK,BY,BY-1  
SANGAMON COUNTY  
STATION 46+01.97  
STRUCTURE NUMBER 084-0516

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DATE# 11/16/05

FILES SORTED  
LAYOUT  
DRAWN  
REVIEWED  
MMW 06/27/03  
DAP 01/04/05  
JWM 02/24/05

DS-11

11-1-06

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET	SHEET NO. 15
FAI 72	#	SANGAMON	559	334	21 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

(84-9-4)A, H.B.K. BY. BY-1 Contract No 72541  
**ANCHOR BOLT LAYOUT DIMENSIONS**

Beam No.	A	B
1	8 <sup>5</sup> / <sub>16</sub> "	4"
2	8 <sup>5</sup> / <sub>16</sub> "	4"
3	8 <sup>5</sup> / <sub>16</sub> "	4"
4	8 <sup>5</sup> / <sub>16</sub> "	4 <sup>1</sup> / <sub>16</sub> "
5	8 <sup>5</sup> / <sub>16</sub> "	4 <sup>1</sup> / <sub>16</sub> "

**ABUTMENT**

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	14	#5	15'-6"	
h <sub>1</sub> (E)	10	#5	6'-2"	
h <sub>2</sub> (E)	10	#5	6'-2"	
h <sub>3</sub> (E)	25	#4	11'-3"	
h <sub>4</sub> (E)	17	#4	11'-3"	
h <sub>5</sub> (E)	8	#6	15'-7"	
h <sub>6</sub> (E)	3	#5	17'-9"	
h <sub>7</sub> (E)	3	#5	4'-9"	
n(E)	10	#6	14'-4"	
n <sub>1</sub> (E)	6	#6	7'-2"	
n <sub>4</sub> (E)	10	#6	11'-6"	
n <sub>5</sub> (E)	6	#6	5'-9"	
p(E)	16	#7	17'-0"	
p <sub>1</sub> (E)	3	#7	13'-0"	
p <sub>2</sub> (E)	3	#7	13'-0"	
p <sub>3</sub> (E)	3	#7	12'-0"	
p <sub>4</sub> (E)	3	#7	11'-4"	
s(E)	33	#5	16'-1"	
s <sub>1</sub> (E)	24	#4	9'-5"	
u(E)	4	#6	10'-0"	
u <sub>1</sub> (E)	4	#6	8'-4"	
u <sub>2</sub> (E)	20	#4	10'-5"	
v(E)	60	#5	5'-4"	
v <sub>1</sub> (E)	30	#4	3'-1"	
v <sub>2</sub> (E)	24	#6	6'-1"	
v <sub>3</sub> (E)	6	#6	6'-1"	
v <sub>4</sub> (E)	20	#6	6'-3"	
v <sub>5</sub> (E)	30	#5	2'-10"	
Structure Excavation		Cu. Yd.	101	
Concrete Structures		Cu. Yd.	41.6	
Reinforcement Bars, Epoxy Coated		Pound	4190	
Furnishing Steel Piles HP10x57		Foot	384	
Driving Piles		Foot	384	
Test Piles Steel HP10x57		Each	1	
Concrete Encasement		Cu. Yd.	2.4	

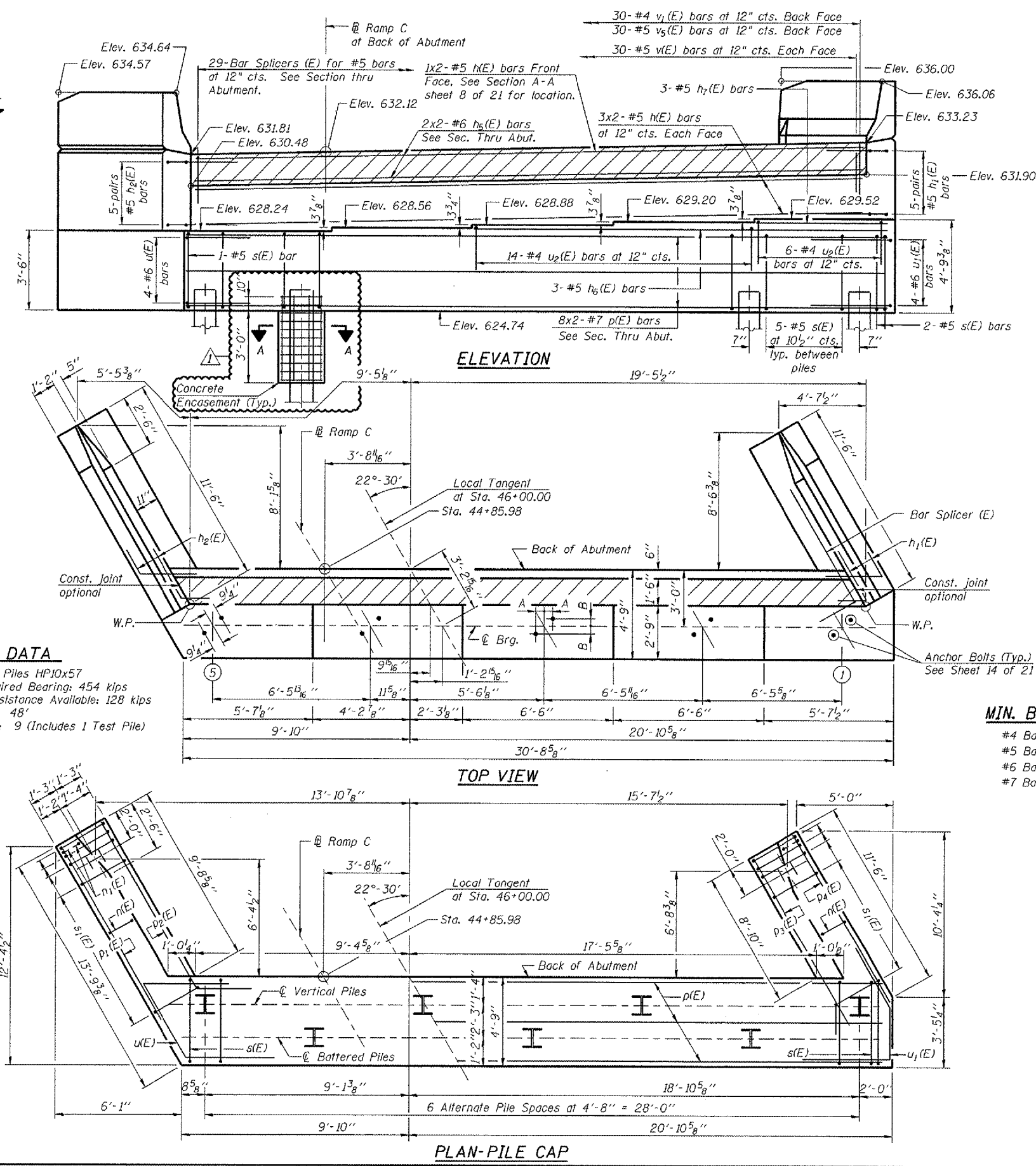
- MIN. BAR LAPS**
- #4 Bar - 1'-8"
  - #5 Bar - 2'-2"
  - #6 Bar - 2'-7"
  - #7 Bar - 3'-5"

Notes:  
 Reinforcement bars designated (E) shall be epoxy coated. For details of Bar Splicers, see sheet 20 of 21. Conduit is embedded in the North Wing. For details see Conduit Details sheet in the Roadway Plans. Corporate License Number 184-001-084

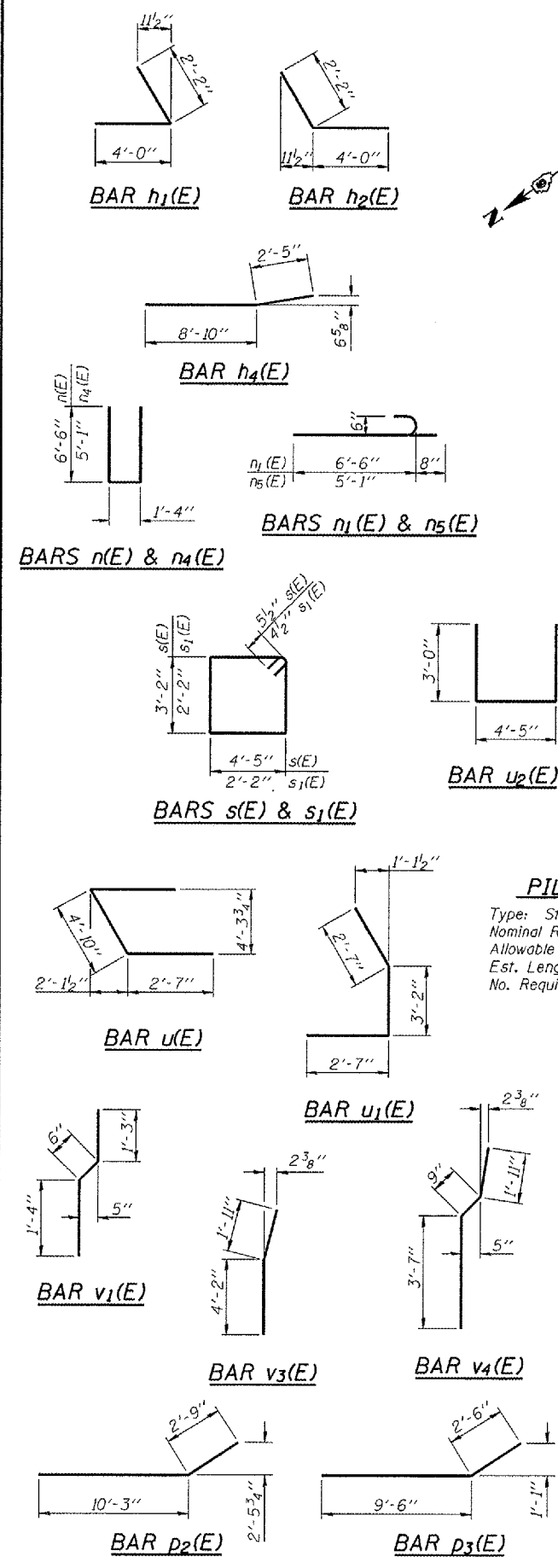
**EAST ABUTMENT**  
 I-72/MACARTHUR BLVD. RAMP C OVER UPRR  
 SECTION (84-9-4)A, H.B.K. BY. BY-1  
 SANGAMON COUNTY  
 STATION 46+01.97  
 STRUCTURE NUMBER 084-0516

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**HANSON**  
 DATED 11/16/05

Revised 02/09/07 Rod



**PILE DATA**  
 Type: Steel Piles HP10x57  
 Nominal Required Bearing: 454 kips  
 Allowable Resistance Available: 128 kips  
 Est. Length: 48'  
 No. Required: 9 (Includes 1 Test Pile)

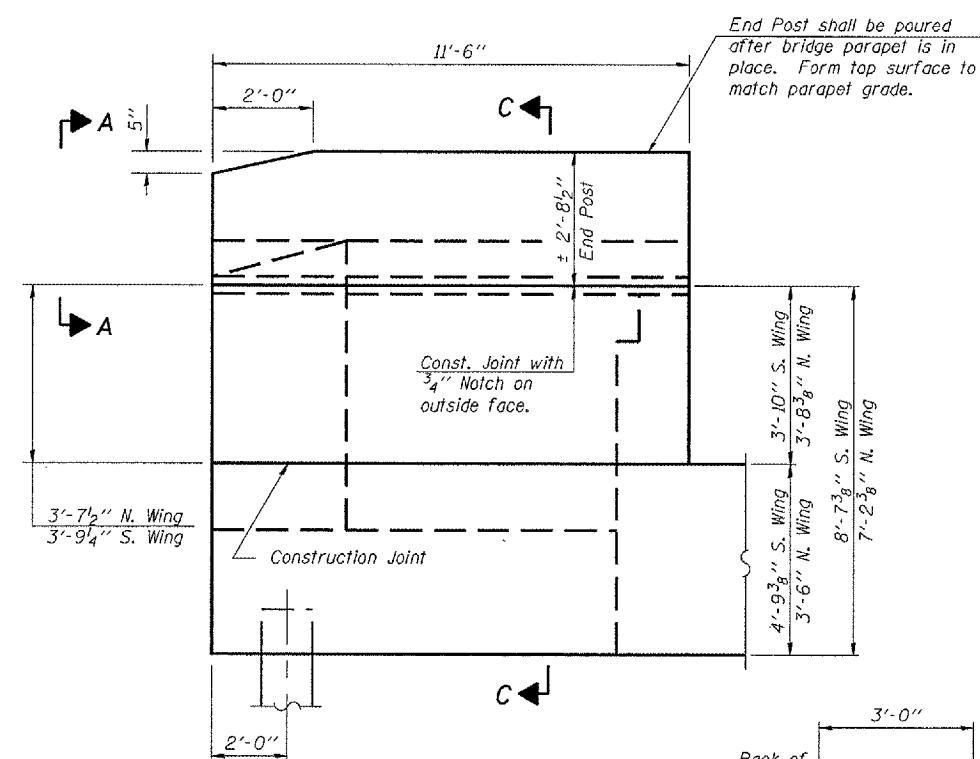


LAYOUT	MW	06/21/03
DRAWN	DAP	01/04/05
REVIEWED	JWN	02/24/05

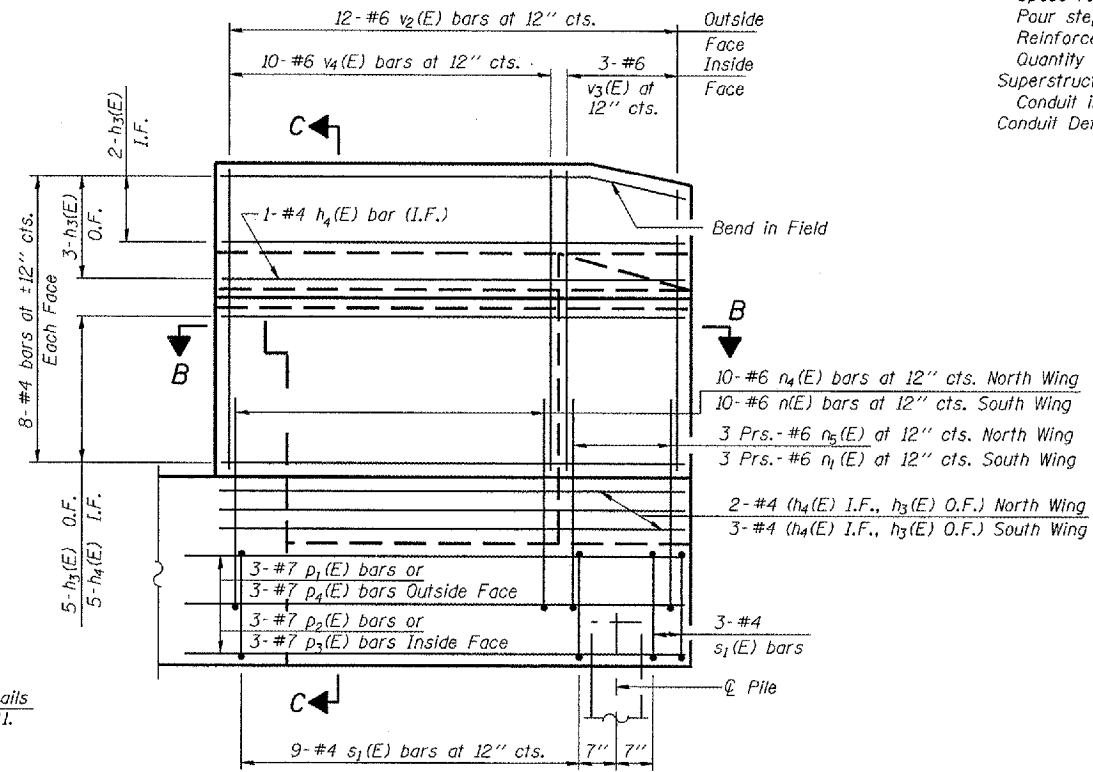
ROUTE NO.	SECTION	COUNTY	PROJECT	SHEET	SHEET NO. 16
FAI 72 FAU 8071	*	SANGAMON	559	335	21 SHEETS
FED. ROAD DIST. NO. 7		ILL. PROJ. FED. AID PROJECT-			

\*84-9-41A, H.B.K., BY, BY-1 Contract No 72541

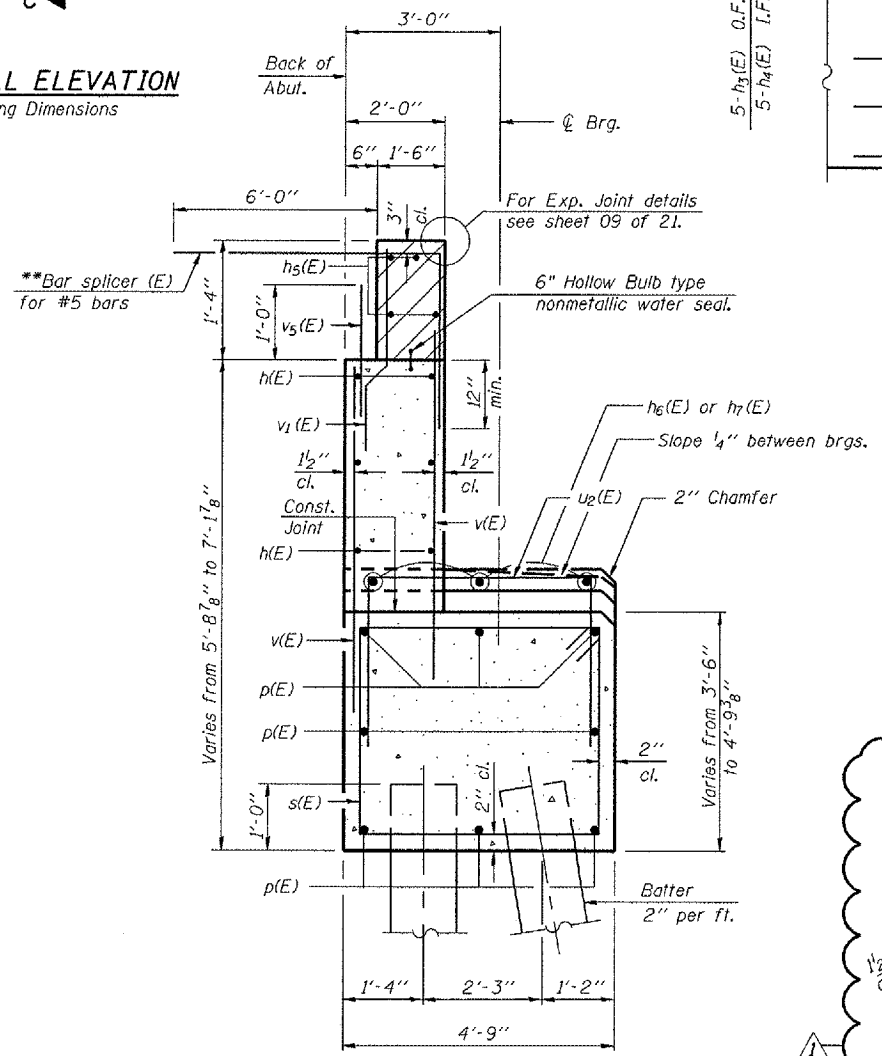
Notes: Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure. Space reinforcement in cap to miss anchor bolts. Pour steps monolithically with cap. Reinforcement bars designated (E) shall be epoxy coated. Quantity of concrete in end post included with Concrete Superstructure on sheet 08 of 21. Conduit is embedded in the North Wing. For details, see Conduit Details sheet in the Roadway Plans.



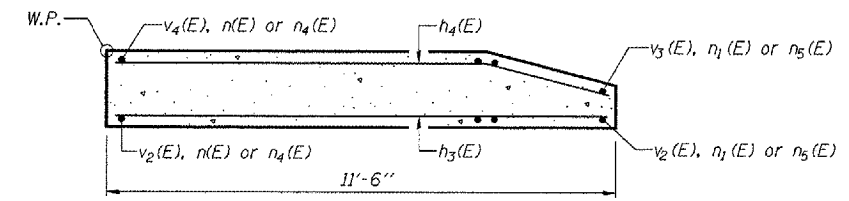
**WING WALL ELEVATION**  
Showing Dimensions



**WING WALL ELEVATION**  
Showing Reinforcement



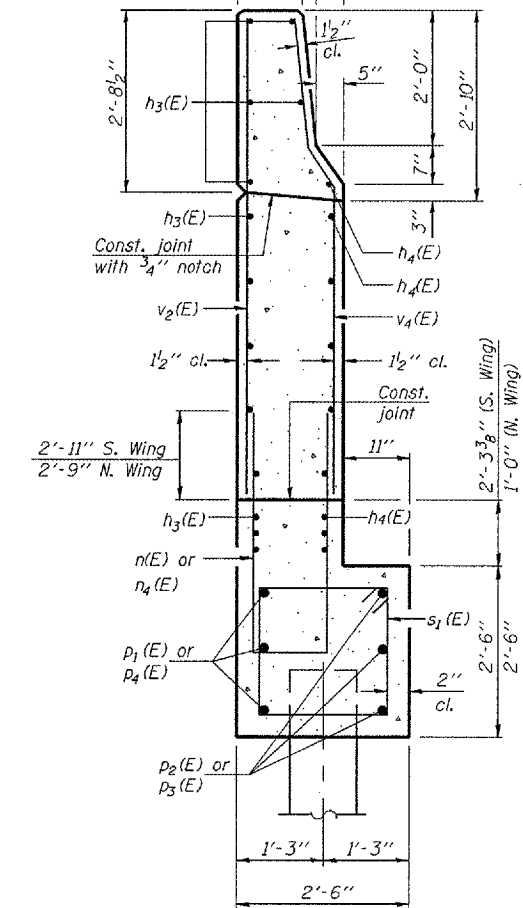
**SEC. THRU ABUT.**  
\*\*Alternate with #4 v(E) bars  
Place parallel to the beams



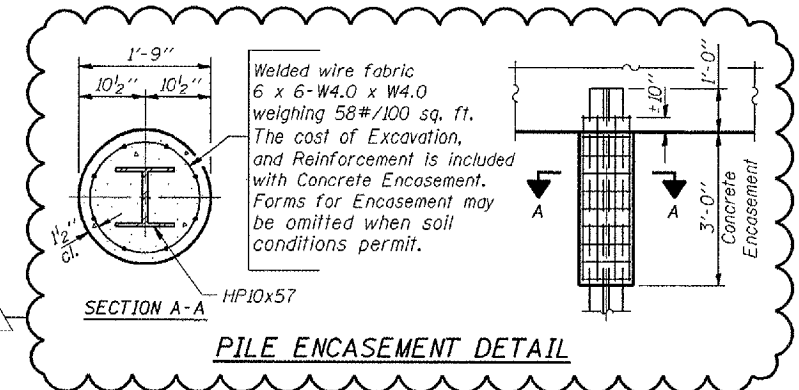
**SEC. B-B**

**MIN. BAR LAPS**

- #4 Bar - 1'-8"
- #5 Bar - 2'-2"
- #6 Bar - 2'-7"
- #7 Bar - 3'-5"



**SECTION C-C**



**PILE ENCASEMENT DETAIL**

Corporate License Number 184-001-084  
**EAST ABUTMENT DETAILS**  
 I-72/MACARTHUR BLVD. RAMP C OVER UPRR  
 SECTION (84-9-4)A, H.B.K., BY, BY-1  
 SANGAMON COUNTY  
 STATION 46+01.97  
 STRUCTURE NUMBER 084-0516

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**HANSON**  
 DATE: 11/16/05

LAYOUT	MMW	06/27/03
DRAWN	DAF	01/04/05
REVIEWED	JWN	02/24/05

**ANCHOR BOLT LAYOUT DIMENSIONS**

Beam No.	A	B
1	8 <sup>3</sup> / <sub>4</sub> "	3"
2	8 <sup>3</sup> / <sub>4</sub> "	3"
3	8 <sup>3</sup> / <sub>4</sub> "	3"
4	8 <sup>3</sup> / <sub>4</sub> "	3"
5	8 <sup>3</sup> / <sub>4</sub> "	3 <sup>1</sup> / <sub>16</sub> "

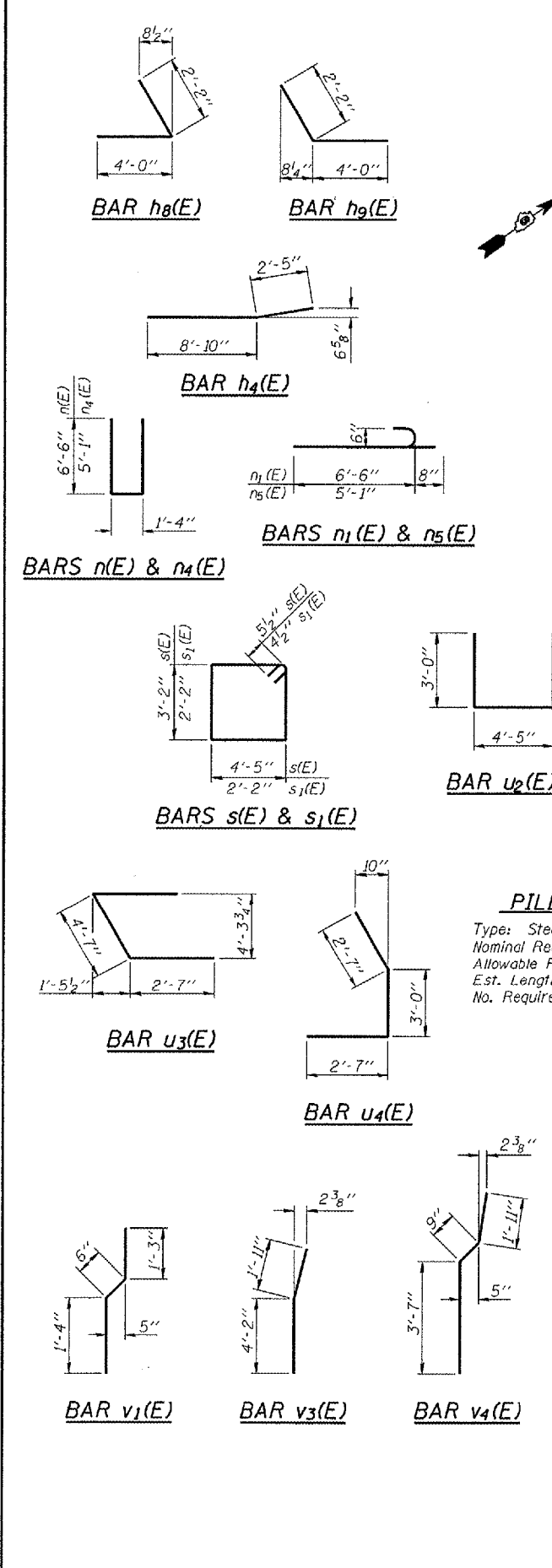
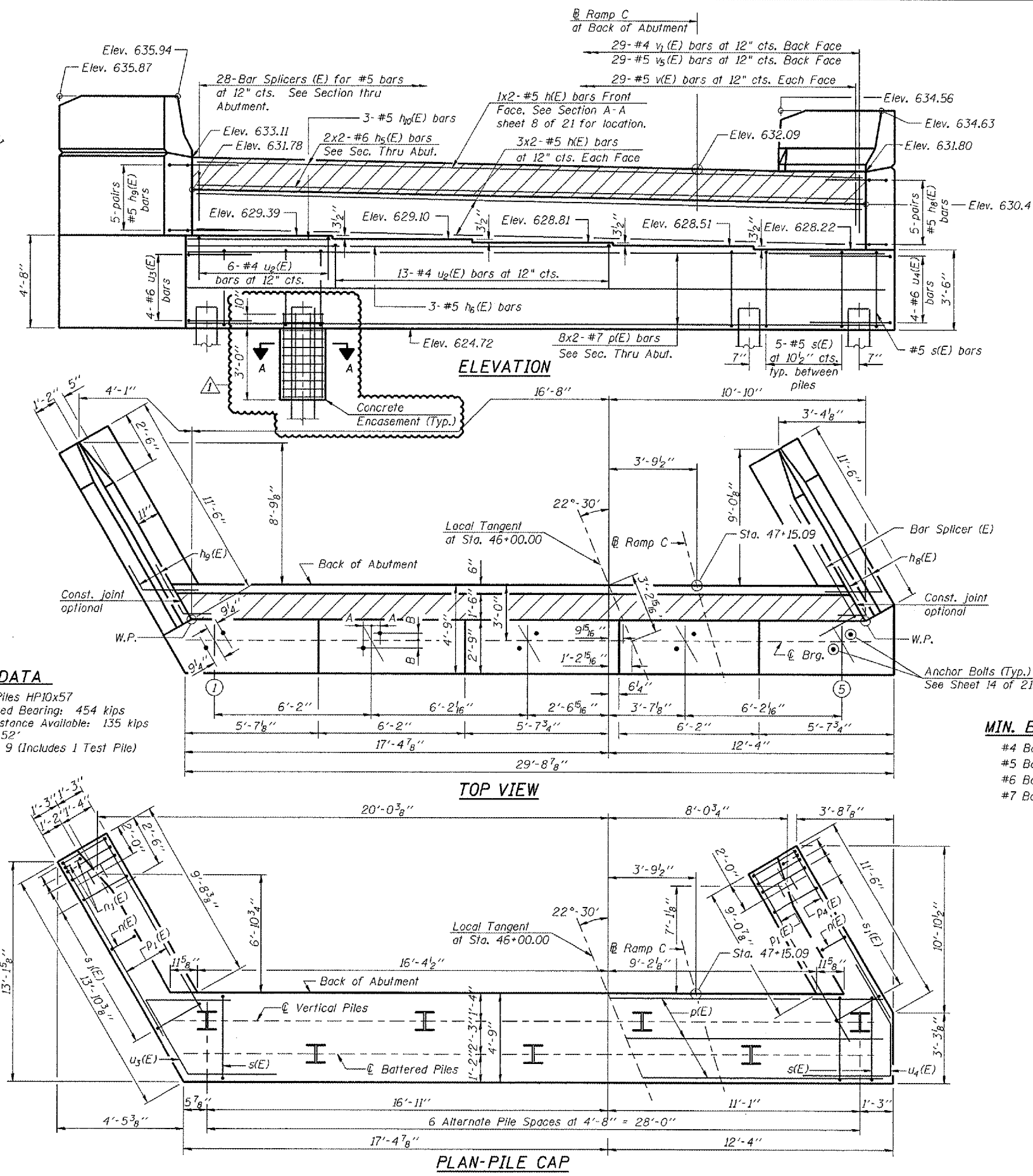
**ABUTMENT BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
n(E)	14	#5	15'-6"	
n <sub>3</sub> (E)	25	#4	11'-3"	
n <sub>4</sub> (E)	17	#4	11'-3"	
n <sub>5</sub> (E)	8	#6	15'-7"	
n <sub>6</sub> (E)	3	#5	17'-7"	
n <sub>8</sub> (E)	10	#5	6'-2"	
n <sub>9</sub> (E)	10	#5	6'-2"	
n <sub>10</sub> (E)	3	#5	5'-3"	
n(E)	10	#6	14'-4"	
n <sub>1</sub> (E)	6	#6	7'-2"	
n <sub>4</sub> (E)	10	#6	11'-6"	
n <sub>5</sub> (E)	6	#6	5'-9"	
p(E)	16	#7	17'-0"	
p <sub>1</sub> (E)	9	#7	13'-0"	
p <sub>4</sub> (E)	3	#7	11'-4"	
s(E)	31	#5	16'-1"	
s <sub>1</sub> (E)	24	#4	9'-5"	
u <sub>2</sub> (E)	19	#4	10'-5"	
u <sub>3</sub> (E)	4	#6	9'-9"	
u <sub>4</sub> (E)	4	#6	8'-2"	
v(E)	58	#5	5'-4"	
v <sub>1</sub> (E)	29	#4	3'-1"	
v <sub>2</sub> (E)	24	#6	6'-1"	
v <sub>3</sub> (E)	6	#6	6'-1"	
v <sub>4</sub> (E)	20	#6	6'-3"	
v <sub>5</sub> (E)	29	#5	2'-10"	
Structure Excavation		Cu. Yd.	95	
Concrete Structures		Cu. Yd.	40.1	
Reinforcement Bars, Epoxy Coated		Pound	4140	
Furnishing Steel Piles HP10x57		Foot	416	
Driving Piles		Foot	416	
Test Piles Steel HP10x57		Each	1	
Concrete Encasement		Cu. Yd.	2.4	

**MIN. BAR LAPS**  
 #4 Bar - 1'-8"  
 #5 Bar - 2'-2"  
 #6 Bar - 2'-7"  
 #7 Bar - 3'-5"

Notes:  
 Reinforcement bars designated (E) shall be epoxy coated.  
 For details of Bar Splicers, see sheet 20 of 21.  
 Conduit is embedded in the North Wing. For details see Conduit Details sheet in the Roadway Plans.  
 Corporate License Number 184-001-084

**WEST ABUTMENT**  
 I-72/MACARTHUR BLVD. RAMP C OVER UPRR  
 SECTION (84-9-4)A, H.B.K., BY, BY-1  
 SANGAMON COUNTY  
 STATION 46+01.97  
 STRUCTURE NUMBER 084-0516



**PILE DATA**  
 Type: Steel Piles HP10x57  
 Nominal Required Bearing: 454 kips  
 Allowable Resistance Available: 135 kips  
 E.st. Length: 52'  
 No. Required: 9 (Includes 1 Test Pile)

LAYOUT	MMW	06/21/03
DRAWN	DAP	01/04/05
REVIEWED	JHM	10/24/05



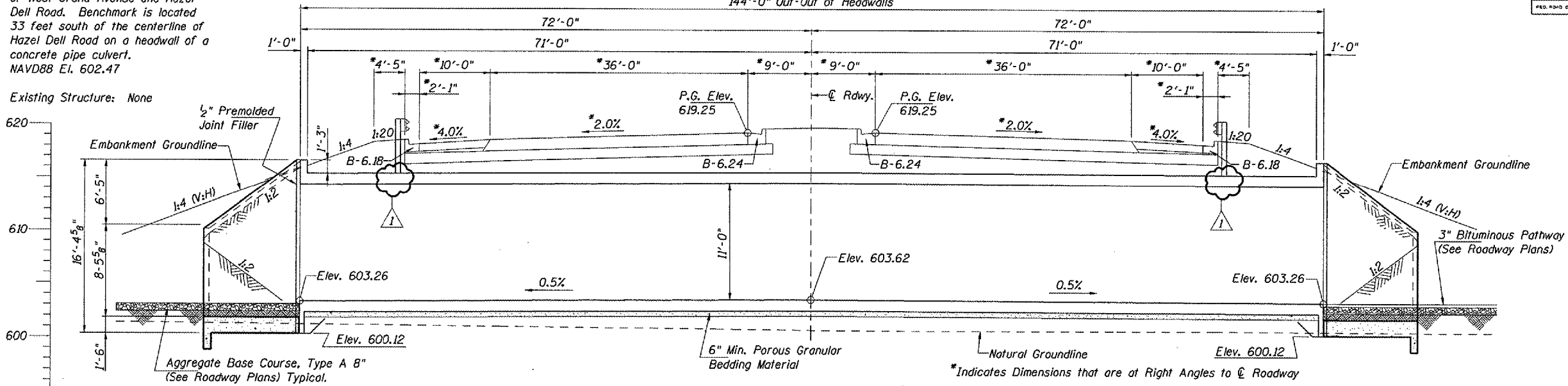


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	DATE	SHEET NO.
		SANGAMON	559	345
SHEET NO. 1 3 SHEETS				
CONTRACT NO. 72541				

Bench Mark:  
IDOT BM #15 Chiseled square at the southeast quadrant of the intersection of West Grand Avenue and Hazel Dell Road. Benchmark is located 33 feet south of the centerline of Hazel Dell Road on a headwall of a concrete pipe culvert. NAVD88 El. 602.47

Existing Structure: None



LONGITUDINAL SECTION ALONG CL OF BOX  
Dimensions are along CL of culvert unless otherwise noted.

GENERAL NOTES

Construct Roadway Embankment to Elevation 616.00 Minimum and allow a 7 month settling period prior to constructing Pedestrian Underpass.

The Top and Sides of the Box Culvert & Back Face of Wingwalls and Headwalls shall be waterproofed according to article 503.18 of the Standard Specifications for Road and Bridge Construction.

Reinforcement Bars shall conform to the requirements of AASHTO M-31 or M-322. Grade 60 for deformed bars.

Nonmetallic Water Seal, Waterproofing, Concrete Nails and 1/2" Premolded Joint Filler shall be included with the cost for 'Concrete Box Culverts'.

Backfill around Box Culvert and Wing Walls with a minimum of 1'-0" of Porous Granular Embankment (Special). Structure Excavation material containing Coal Combustion Byproduct (CCB) may be used for Embankment in those areas shown as CCB. CCB backfill or Embankment shall not be placed within 1'-0" of Cast-in-place Concrete Structures. See Roadway Plans.

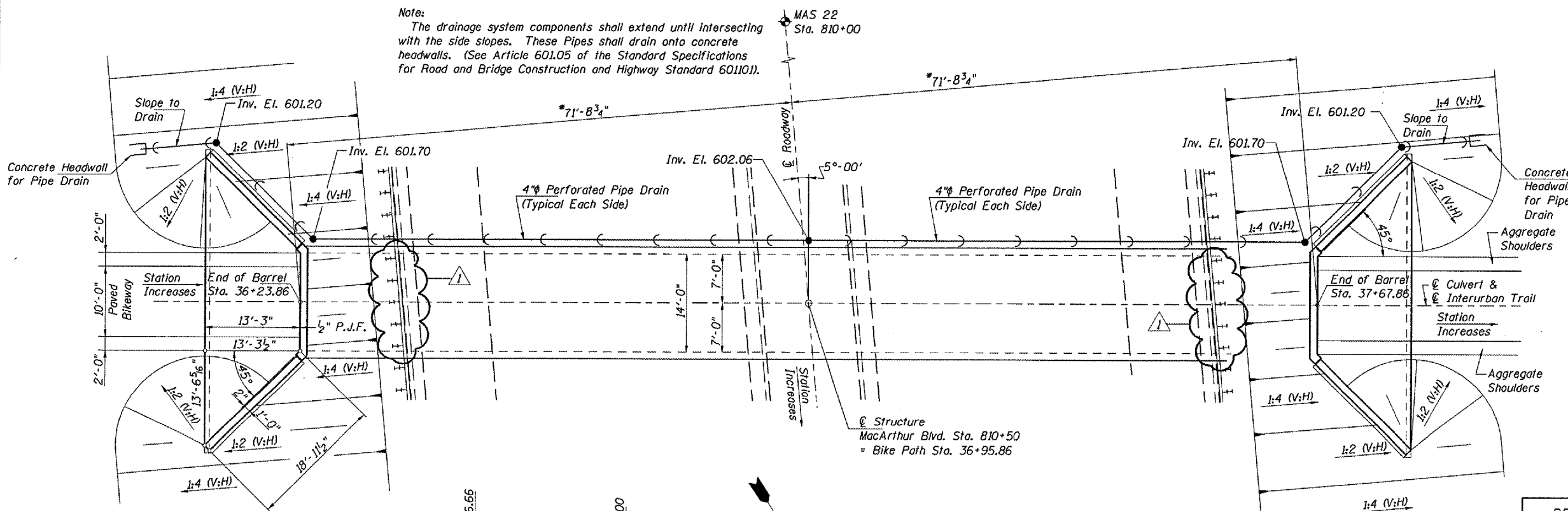
Place soil and aggregate base course on top of apron slab prior to backfilling behind wingwalls.

Bars indicated thus 12 x 4 - #5 etc. Indicates 12 lines of bars with 4 lengths per line.

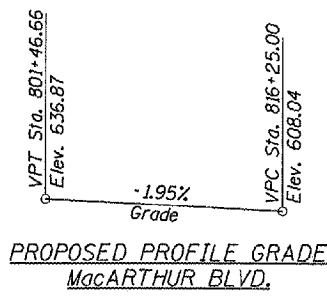
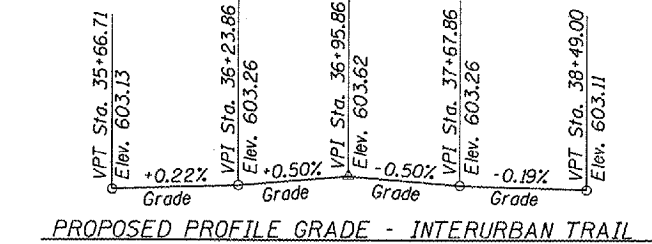
All construction joints shall be bonded. Precast Alternative will not be allowed.

The top of the bottom slab shall be given a final finish by brushing except the surface shall not be divided by grooves. See Article 424.06 of the Illinois Department of Transportation, Standard Specifications for Road and Bridge Construction. Cost shall be included with "Concrete Box Culverts".

Note:  
The drainage system components shall extend until intersecting with the side slopes. These Pipes shall drain onto concrete headwalls. (See Article 601.05 of the Standard Specifications for Road and Bridge Construction and Highway Standard 601101).



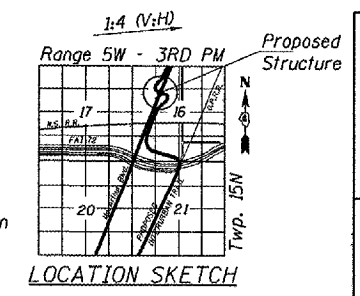
PLAN  
Indicates Boring Location (For Boring Data see Volume 1, Grading Plans, Boring Sheets)



DESIGN SPECIFICATIONS  
AASHTO 2002  
LOADING HS20-44  
Allow 50 p.s.f. for future wearing surface

DESIGN STRESSES  
FIELD UNITS  
f'c = 3,500 psi  
fy = 60,000 psi (reinf.)

INDEX of SHEETS  
1. General Plan and Elevation  
2. Barrel Details  
3. Wingwall Details



SIGNATURE: \_\_\_\_\_  
DATE SIGNED: \_\_\_\_\_  
LIC. EXP. DATE: \_\_\_\_\_

Corporate License Number 184-001-084

PEDESTRIAN UNDERPASS - G.P. & E.  
MacARTHUR BLVD. over INTERURBAN TRAIL  
SECTION 02-00382-02-PV  
SANGAMON COUNTY  
STATION 810+50.00  
STRUCTURE NO. 084-7009

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96S2002b  
DATE 11/16/06

