

**MIN. BAR LAPS**

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

**EASTBOUND PIERS 1-3  
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape	
h <sub>19</sub> (E)	66	#5	13'-2"		
h <sub>20</sub> (E)	18	#5	13'-2"		
h <sub>21</sub> (E)	12	#4	13'-2"		
h <sub>22</sub> (E)	9	#4	13'-0"		
h <sub>23</sub> (E)	9	#4	4'-9"		
h <sub>24</sub> (E)	12	#4	9'-0"		
p <sub>2</sub> (E)	102	#6	2'-10"		
p <sub>7</sub> (E)	12	#7	15'-7"		
p <sub>8</sub> (E)	30	#8	13'-2"		
p <sub>9</sub> (E)	12	#6	11'-1"		
p <sub>10</sub> (E)	12	#4	9'-2"		
p <sub>11</sub> (E)	12	#4	13'-2"		
p <sub>12</sub> (E)	33	#6	3'-6"		
s <sub>4</sub> (E)	42	#5	10'-10"		
s <sub>5</sub> (E)	30	#5	21'-0"		
s <sub>6</sub> (E)	15	#5	27'-0"		
s <sub>7</sub> (E)	82	#4	7'-4"		
s <sub>8</sub> (E)	82	#4	2'-5"		
s <sub>9</sub> (E)	105	#4	12'-5"		
s <sub>11</sub> (E)	45	#4	8'-10"		
t(E)	63	#7	9'-4"		
u <sub>6</sub> (E)	36	#5	6'-5"		
u <sub>7</sub> (E)	24	#6	7'-3"		
v <sub>8</sub> (E)	42	#9	23'-4"		
w(E)	27	#5	23'-4"		
Structure Excavation				Cu. Yd.	164
Concrete Structures				Cu. Yd.	109.6
Reinforcement Bars Epoxy Coated				Pound	12780
Furnishing Steel Piles HPI0x42				Lin. Ft.	470
Driving Piles				Lin. Ft.	470
Test Piles Steel HPI0x42				Each	1

**Notes:**

Space reinforcement in cap to miss anchor bolts.  
 Four steps monolithically with cap.  
 Reinforcement bars designated (E) shall be Epoxy Coated. Abbreviation PI etc., indicates Pier #1.  
 \*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.  
 \*\*\*Salvage existing reinforcement bars. Cut as required to provide min. lap with new pier cap reinforcement bars. Bars damaged or not salvaged shall be replaced with either drilled and epoxy grouted bars or IDOT approved mechanical bar splicers as directed by the Engineer. No additional compensation will be allowed for either method.  
 \*\*\*\*Salvage existing reinforcement bars full length. Bars damaged or not salvaged shall be replaced with either drilled and epoxy grouted bars or IDOT approved mechanical bar splicers as directed by the Engineer. No additional compensation will be allowed for either method.  
 \*\*\*\*\*Alternate placement of 90° hooks in each column face, in each vertical line of s<sub>8</sub>(E) bars.  
 Drill holes for epoxy grouted bars to miss existing reinforcement.

**DIMENSIONS & ELEVATIONS**

Description	Pier #1	Pier #2	Pier #3
a	29'-0"	31'-6"	28'-3"
b	9'-9"	12'-9"	9'-9"
c	13'-0"	12'-6"	12'-3"
d	7'-2 <sup>7</sup> / <sub>8</sub> "	7'-3 <sup>5</sup> / <sub>8</sub> "	7'-4 <sup>1</sup> / <sub>2</sub> "
e	7'-2 <sup>3</sup> / <sub>4</sub> "	7'-3 <sup>1</sup> / <sub>2</sub> "	7'-4 <sup>1</sup> / <sub>2</sub> "
f	5'-3"	5'-3 <sup>5</sup> / <sub>8</sub> "	5'-4 <sup>1</sup> / <sub>2</sub> "
Elev. A	598.16	595.87	599.11
Elev. B	627.16	627.37	627.36
Elev. C	627.45	627.66	627.65
Elev. D	628.28	628.50	628.49
Elev. E	628.58	628.79	628.78
Elev. F	628.99	629.20	629.19

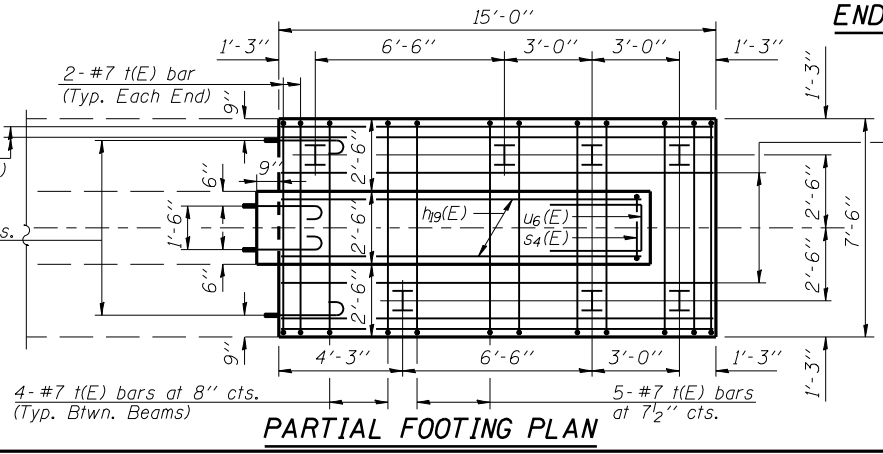
**BARS s<sub>4</sub>(E), s<sub>5</sub>(E), s<sub>6</sub>(E), s<sub>7</sub>(E), s<sub>11</sub>(E), u<sub>6</sub>(E) & u<sub>7</sub>(E)**

**A & B DIMENSIONS**

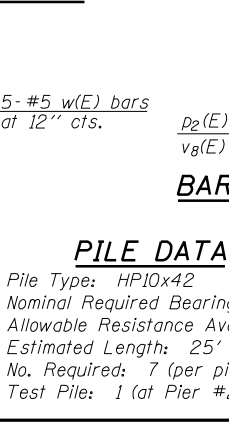
Bar	A	B
s <sub>4</sub> (E)	2'-2"	4'-4"
s <sub>5</sub> (E)	2'-2"	9'-5"
s <sub>6</sub> (E)	2'-2"	12'-5"
s <sub>7</sub> (E)	1'-8"	2'-10"
s <sub>11</sub> (E)	1'-10"	3'-6"
u <sub>6</sub> (E)	2'-1"	2'-2"
u <sub>7</sub> (E)	2'-1"	2'-7"

**ANCHOR BOLT LAYOUT DIMENSIONS**

Beam No.	Pier 1-A	Pier 1-B	Pier 2-A	Pier 2-B	Pier 3-A	Pier 3-B
8	3 <sup>7</sup> / <sub>8</sub> "	7 <sup>1</sup> / <sub>4</sub> "	4"	7 <sup>1</sup> / <sub>4</sub> "	4 <sup>1</sup> / <sub>8</sub> "	7 <sup>1</sup> / <sub>8</sub> "
13	3 <sup>7</sup> / <sub>8</sub> "	7 <sup>1</sup> / <sub>4</sub> "	4"	7 <sup>1</sup> / <sub>4</sub> "	4 <sup>1</sup> / <sub>8</sub> "	7 <sup>1</sup> / <sub>8</sub> "
14	3 <sup>15</sup> / <sub>16</sub> "	7 <sup>5</sup> / <sub>16</sub> "	3 <sup>5</sup> / <sub>16</sub> "	7 <sup>1</sup> / <sub>4</sub> "	4 <sup>1</sup> / <sub>16</sub> "	7 <sup>3</sup> / <sub>16</sub> "



**END VIEW**



**PILE DATA**

Pile Type: HPI0x42  
 Nominal Required Bearing: 335 kips  
 Allowable Resistance Available: 112 kips  
 Estimated Length: 25' (Piers 1 & 3), 20' (Pier 2)  
 No. Required: 7 (per pier, includes 1 test pile at Pier #2)  
 Test Pile: 1 (at Pier #2)

Bars epoxy grouted shall have an embedment sufficient to obtain 1.25 x the yield strength of the reinforcing bar.

Corporate License Number 184-001-084

**EASTBOUND PIERS 1-3  
 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**

JOB# 96S2002B  
 DATE 01/12/06

LAYOUT 06/27/03  
 DRAWN 07/17/03  
 REVIEWED JMM 10/27/03  
 \$FILES\$ 12/16/2006