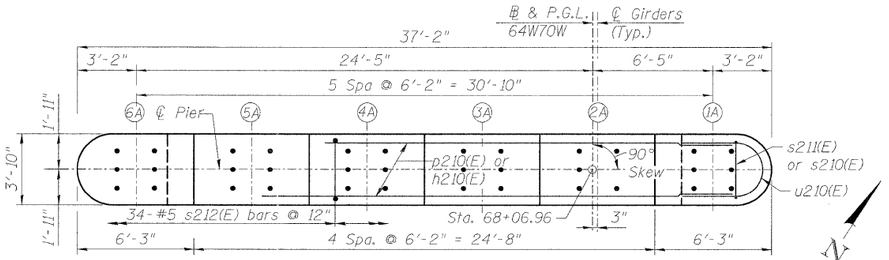
NOTES:

1. Space reinforcement in cap to miss anchor bolts.
2. Pour steps monolithically with cap.
3. For details of piles, see sheet S-122.
4. Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
5. #5 sp210(E) spiral, each column
   1) Provide 1½ extra turns, shop welded together per AWS D1.4 top and bottom. Extend spiral 2" into pier cap & crashwall. Provide 4-#4 spacers or equivalent.
   2) When splicing spiral reinforcement is necessary, the spiral shall be provided with 1½ extra turns at the ends to be spliced. These additional turns shall either be welded together according to AWS D1.4, or shall both terminate with a 135° standard hook.
6. The s212(E) cross-tie bars shall be placed so that orientation of 180° hook of two successive cross-ties alternate end to end. A single layer of bars shall be provided across top mat of footing reinforcement. Space bars as follows:
   9-#5 s212(E) @ 6" (vert) x 46 @ 7" (horiz)
   7-#5 s212(E) @ 9" (vert) x 24 @ 1'-2" (horiz)
7. For anchor bolt details, see Sheets S-83 thru S-92.

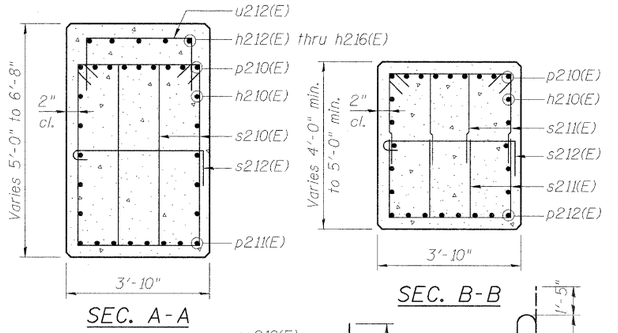
* Splicing of reinforcement will not be allowed in this region.

** Length is height of spiral.

*** 30-u212(E) bars match w/ h212(E) bars
8-u212(E) bars match w/ h213(E) bars
18-u212(E) bars match w/ h214(E) bars
8-u212(E) bars match w/ h215(E) bars
5-u212(E) bars match w/ h216(E) bars
Adjust bars in field to avoid conflict with stirrups.

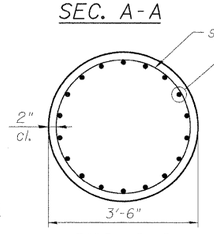


TOP PLAN

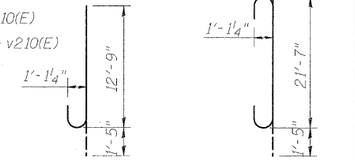


SEC. A-A

SEC. B-B



SEC. C-C

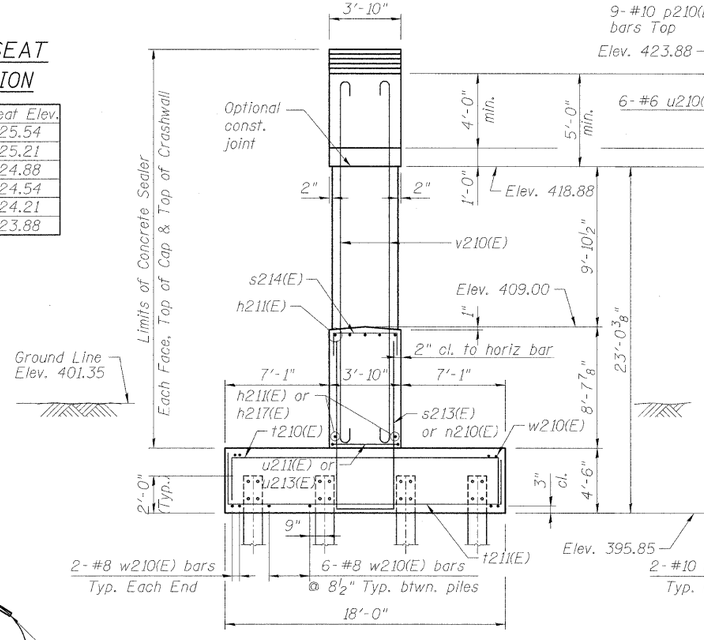


BAR n210(E)

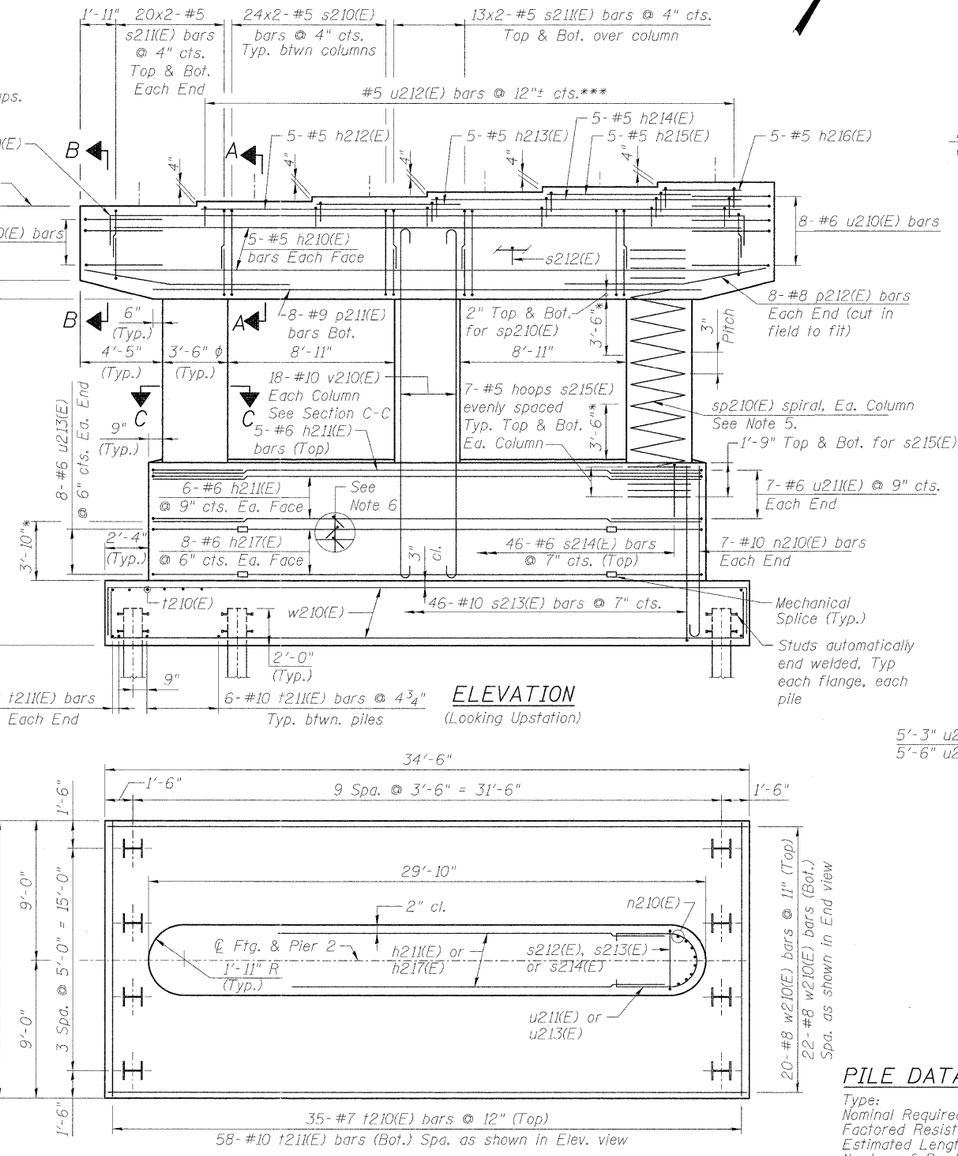
BAR v210(E)

TOP OF SEAT ELEVATION

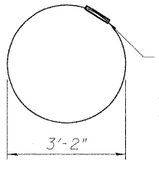
Beam No.	Seat Elev.
1A	425.54
2A	425.21
3A	424.88
4A	424.54
5A	424.21
6A	423.88



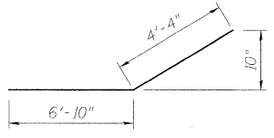
END VIEW



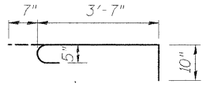
ELEVATION (Looking Upstation)



BAR s215(E)

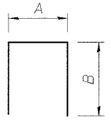


BAR p212(E)



BAR s212(E)

A & B DIMENSIONS



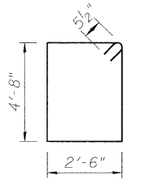
Bar	A	B
p210(E)	33'-4"	1'-10"
s211(E)	2'-6"	3'-8"
s213(E)	3'-4"	12'-9"
s214(E)	3'-4"	3'-0"
u212(E)	3'-6"	1'-0"
w210(E)	34'-2"	4'-0"
t210(E)	17'-8"	3'-10"
t211(E)	17'-8"	3'-10"

BARS p210(E), s211(E), s213(E), s214(E), u212(E), w210(E), t210(E), t211(E)

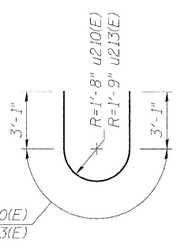
FOOTING PLAN

PILE DATA

Type:	HP14x89
Nominal Required Bearing:	500 kips
Factored Resistance Available:	250 kips
Estimated Length:	108 ft.
Number of Production Piles:	39
Number of Test Piles:	1

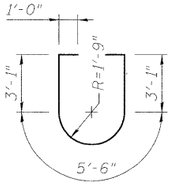


BAR s210(E)



BAR u210(E)

BAR u213(E)



BAR u211(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h210(E)	10	#5	33'- 0"	
h211(E)	17	#6	25'- 8"	
h212(E)	5	#5	28'- 10"	
h213(E)	5	#5	7'- 9"	
h214(E)	5	#5	16'- 4"	
h215(E)	5	#5	7'- 9"	
h216(E)	5	#5	4'- 2"	
h217(E)	16	#6	19'- 10"	
n210(E)	14	#10	14'- 2"	
p210(E)	9	#10	37'- 0"	
p211(E)	8	#9	29'- 0"	
p212(E)	16	#8	11'- 2"	
s210(E)	96	#5	15'- 3"	
s211(E)	212	#5	9'- 10"	
s212(E)	616	#5	5'- 0"	
s213(E)	46	#10	28'- 10"	
s214(E)	46	#6	9'- 4"	
s215(E)	42	#5	9'- 11 3/8"	
** sp210(E)	3	#5	10'- 3"	
t210(E)	35	#7	25'- 4"	
t211(E)	58	#10	25'- 4"	
u210(E)	14	#6	11'- 5"	
u211(E)	14	#6	13'- 8"	
u212(E)	69	#5	5'- 6"	
u213(E)	16	#6	11'- 8"	
v210(E)	54	#10	24'- 5"	
w210(E)	42	#8	42'- 2"	

Item	Unit	Quantity
Structure Excavation	Cu. Yd.	172.5
Concrete Structures	Cu. Yd.	179.2
Reinforcement Bars, Epoxy Coated	Pound	40,090
Furnishing Steel Piles, HP14x89	Foot	4212
Driving Piles	Foot	4212
Test Pile Steel HP14x89	Each	1
Pile Shoes	Each	40
Concrete Sealer	Sq Ft	1597
Mechanical Splicers	Each	32

AECOM

USER NAME = Bhatta	DESIGNED - EJO	REVISED -	
	DRAWN - GF	REVISED -	
PLOT SCALE = 0:1 '1' / in.	CHECKED - DB	REVISED -	
PLOT DATE = @DATE@	DATE - 05-02-11	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 2 – S.N. 082–0325
I–70W OVER I–55, CSX & KCS RAILROADS

SCALE: NONE | SHEET NO. S-107 OF S-138 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-1	ST. CLAIR	319	222
S.N. 082-0323 & S.N. 082-0325		CONTRACT NO. 76C75		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

P:\P60246\091\900_CAD\901_Design\76C900_Master_Consolidated\Structural\082-0323\Sheet\S107_082-0325_76C75_Pier2.dgn