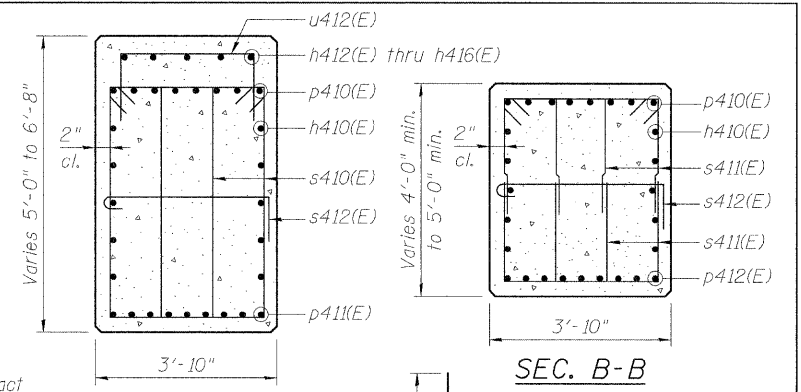
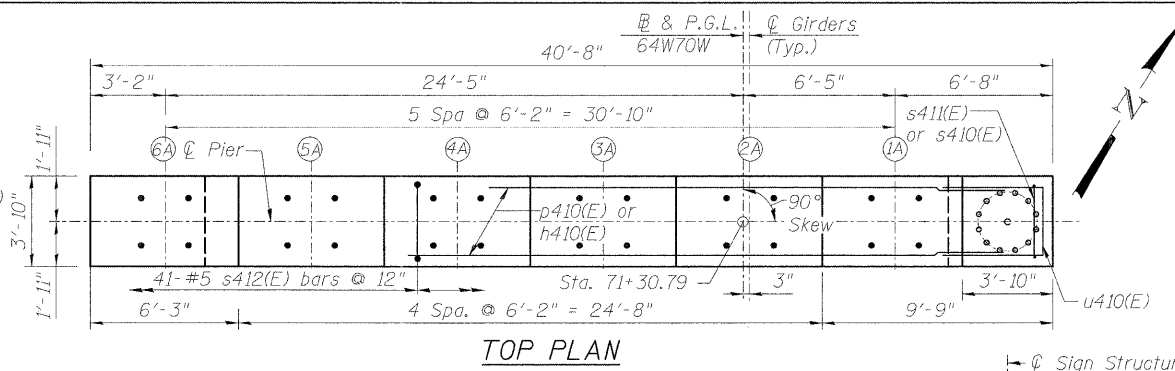


**NOTES:**

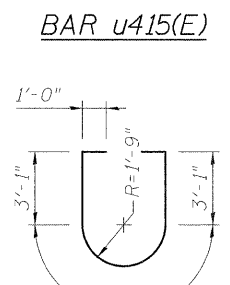
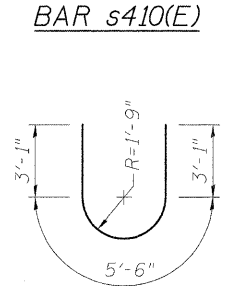
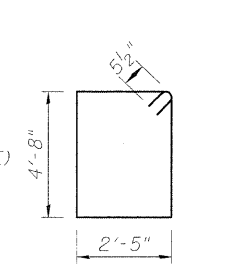
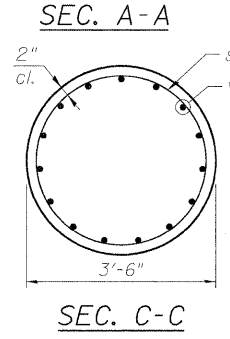
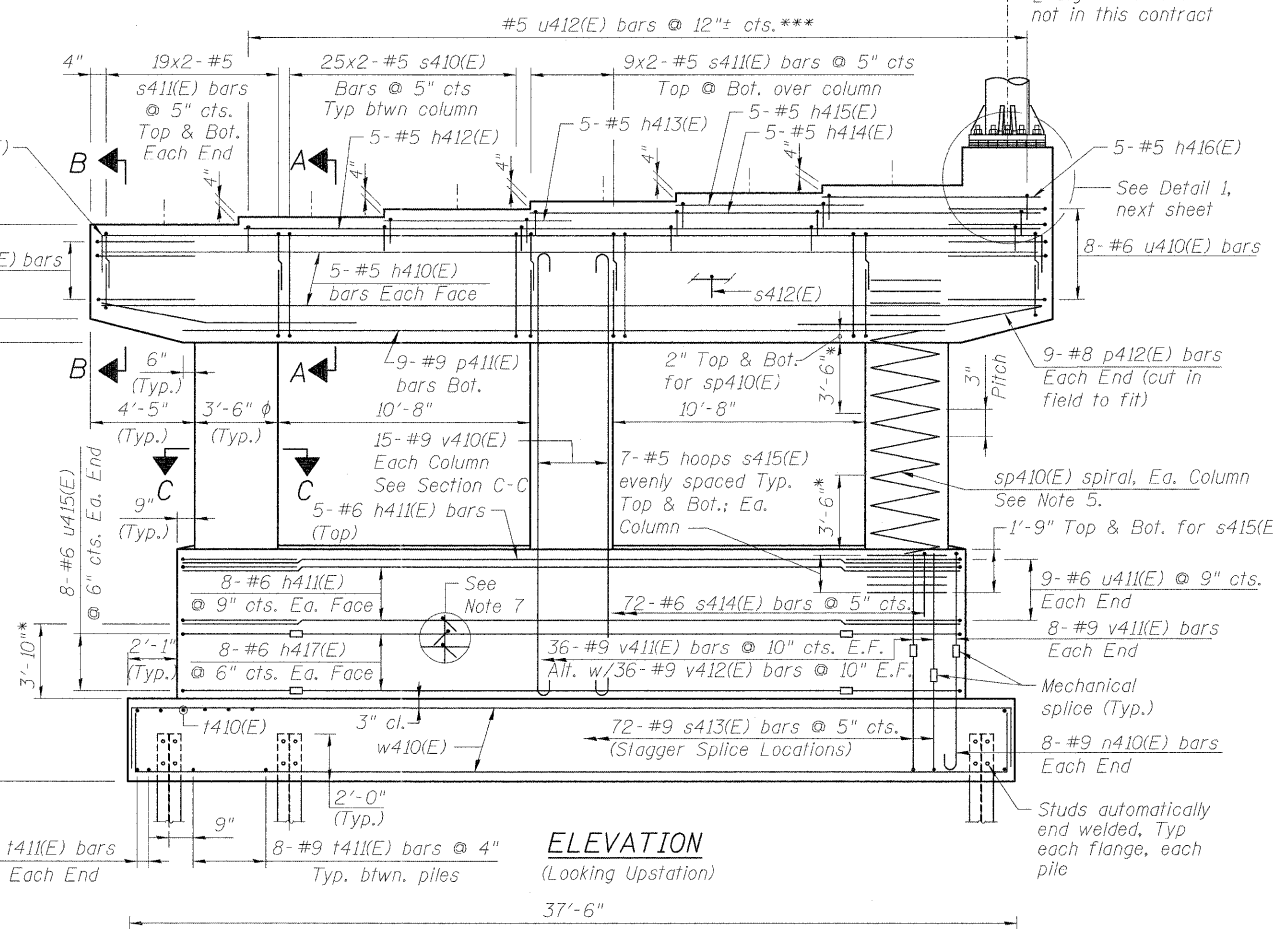
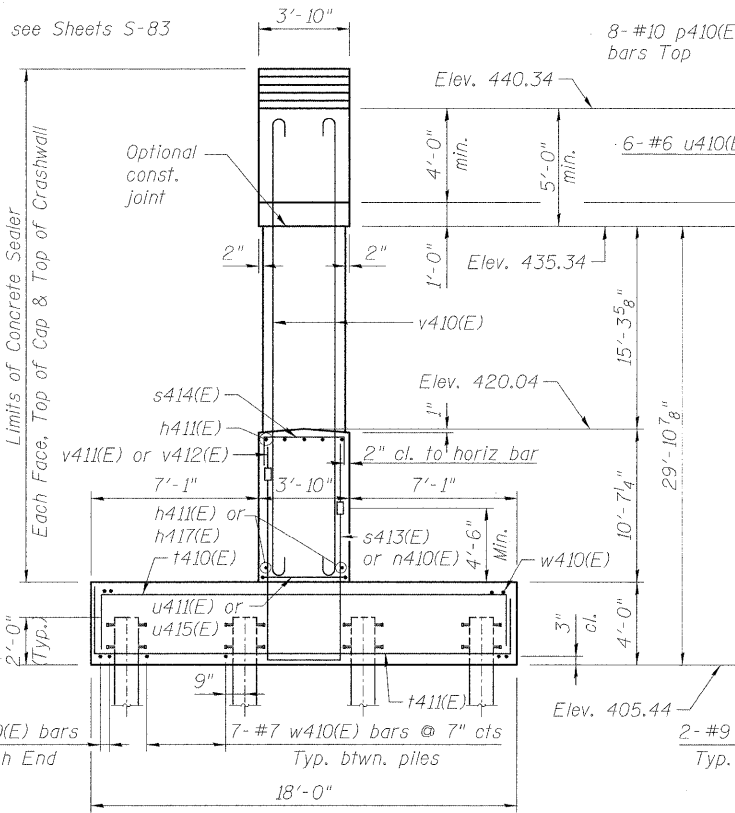
- Space reinforcement in cap to miss anchor bolts.
- Pour steps monolithically with cap.
- For details of piles, see sheet S-122.
- Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
- #5 sp410(E) spiral, each column
  - 1) Provide 1/2 extra turns, shop welded together 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 1/2 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.
- For anchor bolt details, see Sheets S-83 thru S-92.
- The s412(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 s412(E) @ 6" (vert) x 72 @ 5" (horiz)
  - 9-#5 s412(E) @ 9" (vert) x 37 @ 10" (horiz)

\* Splicing of reinforcement will not be allowed in this region.  
 \*\* Length is height of spiral.  
 \*\*\* 10-u412(E) bars match w/ h416(E) bars  
 8-u412(E) bars match w/ h415(E) bars  
 22-u412(E) bars match w/ h414(E) bars  
 8-u412(E) bars match w/ h413(E) bars  
 34-u412(E) bars match w/ h412(E) bars  
 Adjust bars in field to avoid conflict with stirrups.



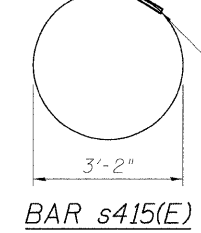
**TOP OF SEAT ELEVATION**

Beam No.	Seat Elev.
1A	442.01
2A	441.67
3A	441.34
4A	441.01
5A	440.68
6A	440.34



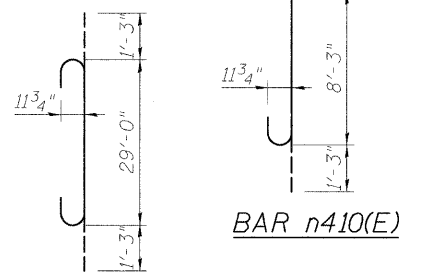
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h410(E)	10	#5	40'-4"	—
h411(E)	21	#6	29'-2"	—
h412(E)	5	#5	34'-1"	—
h413(E)	5	#5	7'-9"	—
h414(E)	5	#5	21'-9"	—
h415(E)	5	#5	7'-9"	—
h416(E)	5	#5	9'-5"	—
h417(E)	16	#6	23'-4"	—
n410(E)	16	#9	9'-6"	—
p410(E)	8	#10	44'-0"	—
p411(E)	9	#9	32'-6"	—
p412(E)	18	#8	11'-2"	—
s410(E)	100	#5	15'-1"	—
s411(E)	188	#5	9'-9"	—
s412(E)	1022	#5	5'-0"	—
s413(E)	72	#9	21'-10"	—
s414(E)	72	#6	9'-4"	—
s415(E)	42	#5	9'-11 3/8"	—
sp410(E)	3	#5	15'-8"	—
t410(E)	38	#6	24'-4"	—
t411(E)	76	#9	24'-4"	—
u410(E)	14	#6	9'-6"	—
u411(E)	18	#6	13'-8"	—
u412(E)	82	#5	5'-6"	—
u413(E)	12	#9	18'-6"	—
u414(E)	8	#6	10'-6"	—
u415(E)	16	#6	11'-8"	—
v410(E)	45	#9	31'-6"	—
v411(E)	88	#9	5'-11"	—
v412(E)	72	#9	3'-11"	—
w410(E)	47	#7	44'-2"	—

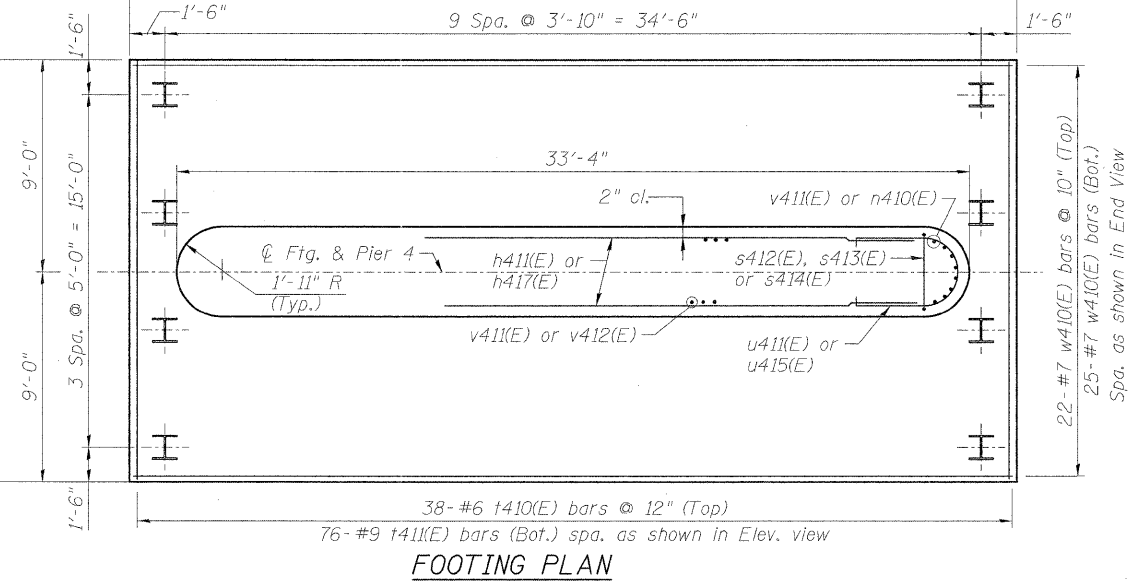


**A & B DIMENSIONS**

Bar	A	B
p410(E)	40'-4"	1'-10"
s411(E)	2'-5"	3'-8"
s414(E)	3'-4"	3'-0"
u410(E)	3'-4"	3'-1"
u412(E)	3'-6"	1'-0"
w410(E)	37'-2"	3'-6"
t410(E)	17'-8"	3'-4"
t411(E)	17'-8"	3'-4"



BARS p410(E), s411(E), s414(E), u410(E), u412(E), w410(E), t410(E), t411(E) BAR p412(E)



**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



USER NAME = Bheeta	DESIGNED = EJO	REVISED =
PLOT SCALE = 1/8" = 1'-0"	DRAWN = MJK	REVISED =
PLOT DATE = 05-02-11	CHECKED = DB	REVISED =
	DATE = 05-02-11	REVISED =

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**PIER 4 - S.N. 082-0325**  
**I-70W OVER I-55, CSX & KCS RAILROADS**

SCALE: NONE SHEET NO. S-110 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	225
S.N. 082-0323 & S.N. 082-0325			CONTRACT NO. 76C75	
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	