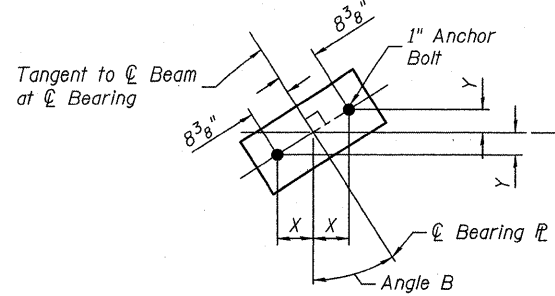


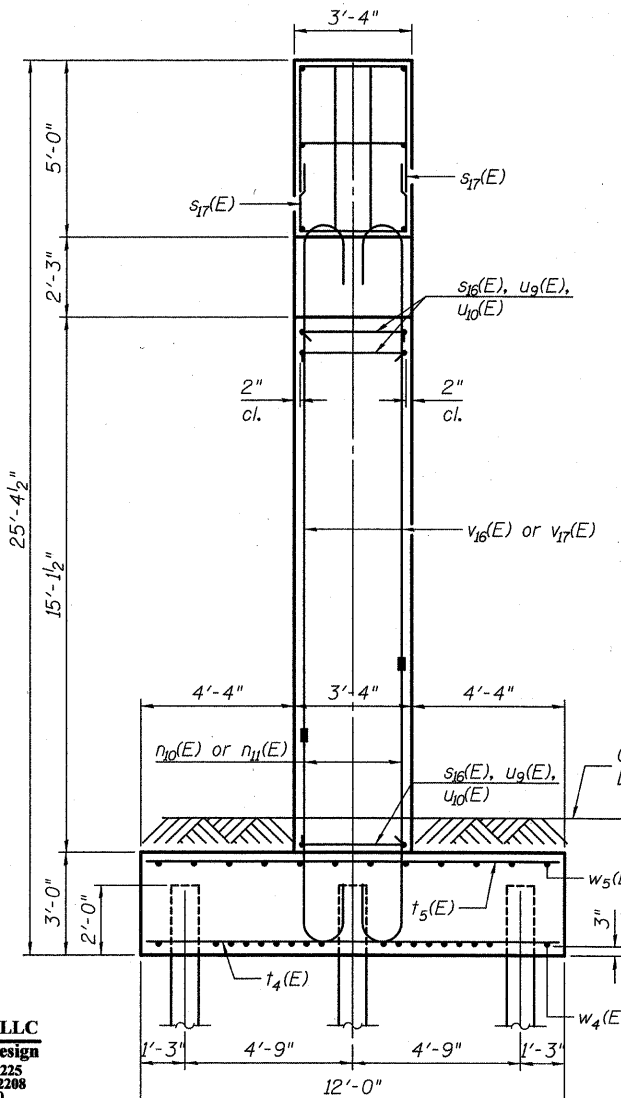
Notes:  
 Space reinforcement in cap to miss anchor bolts.  
 Pour steps monolithically with cap.  
 For details of piles, see sheet 29 of 33.  
 Each set of  $s_{17}(E)$ ,  $s_{16}(E)$  and  $s_{15}(E)$  bars has 4 bars (2 top and 2 bottom). See Section A-A.  
 For details of Mechanical Splice, see sheet 30 of 33.  
 The piers shall have all exposed surfaces treated with Concrete Sealer.



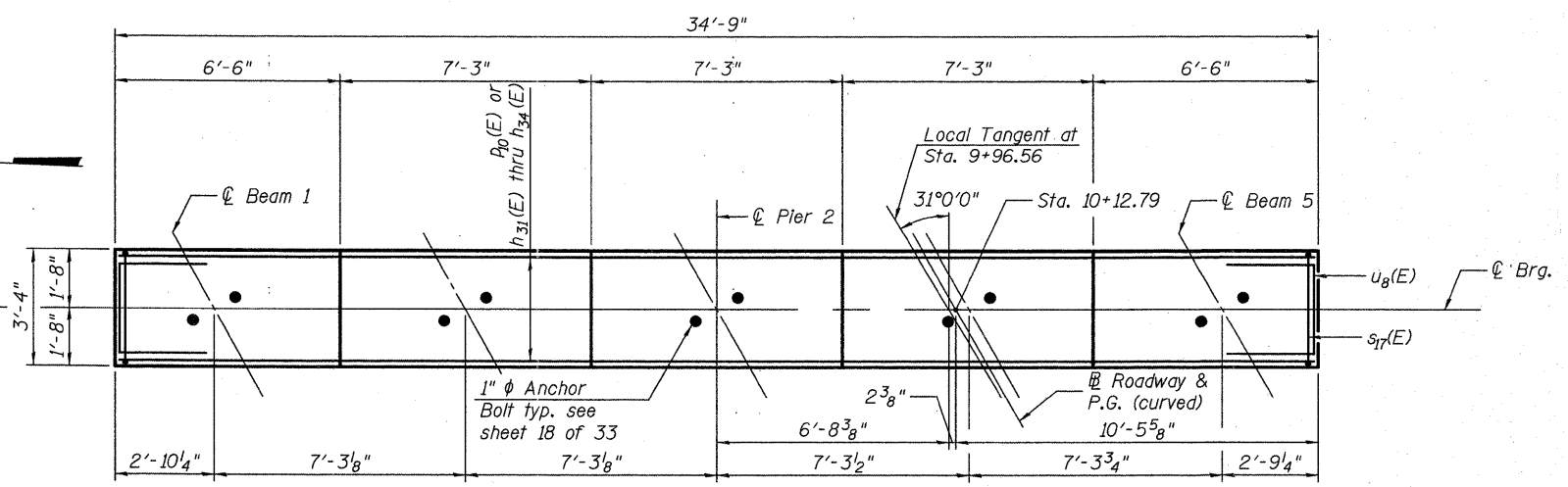
**ANCHOR BOLT LAYOUT**

**ANCHOR BOLT LAYOUT DIMENSIONS**

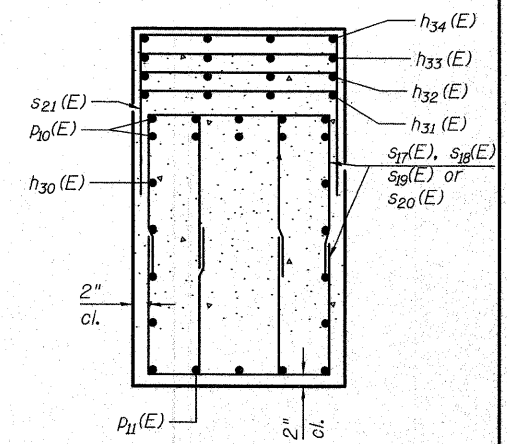
	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5
Angle B	28°59'	29°15'	29°31'	29°47'	30°4'
X	7 3/8"	7 1/4"	7 1/4"	7 1/4"	7 1/4"
Y	4"	4 1/8"	4 1/8"	4 1/8"	4 1/4"



**END VIEW**



**TOP PLAN**



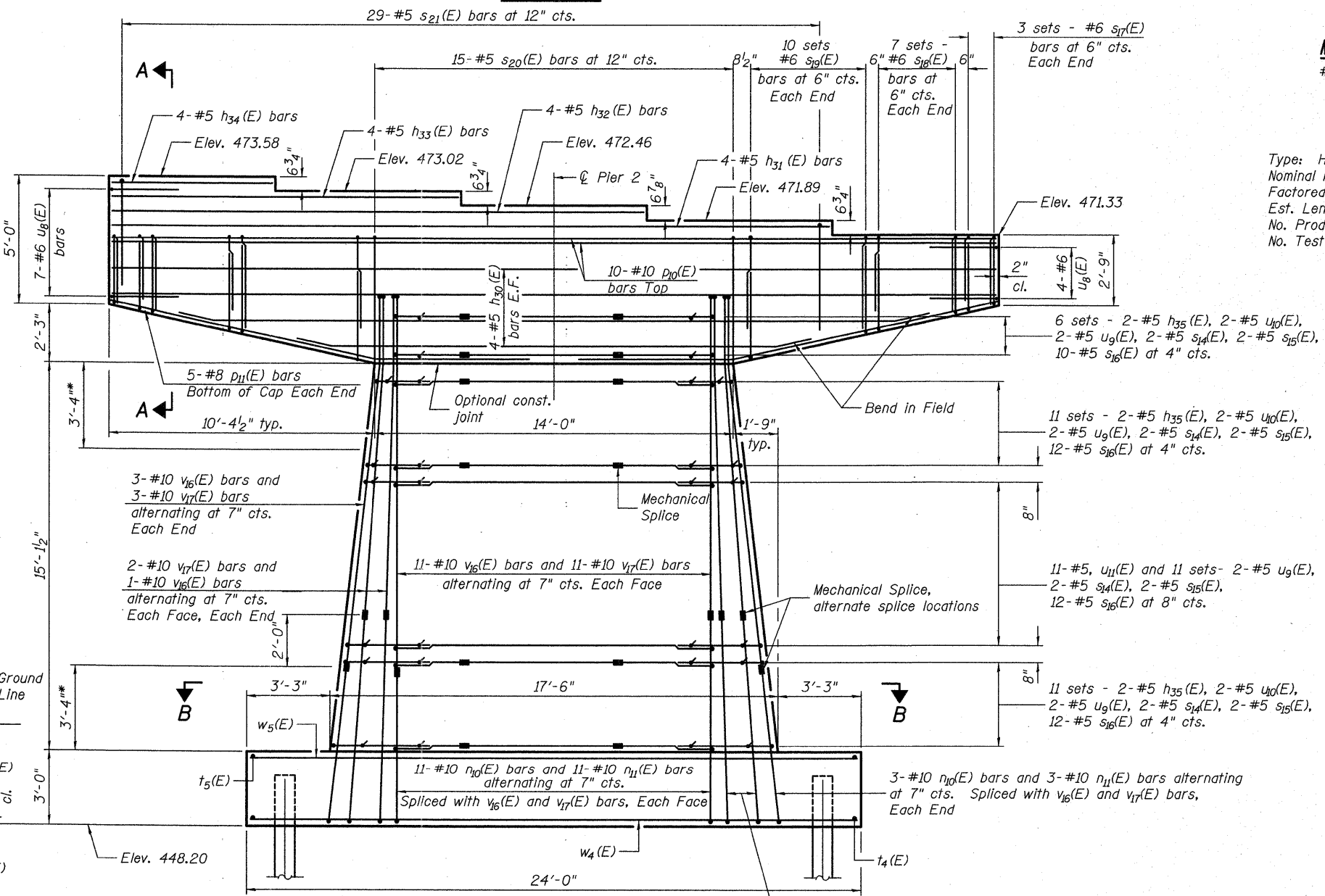
**SECTION A-A**

**MIN BAR LAP**

#6 bars = 2'-3"

**PILE DATA**

Type: HP 12x53 with Pile Shoes  
 Nominal Required Bearing: 412 kip  
 Factored Resistance Available: 227 kip  
 Est. Length: 22'  
 No. Production Piles: 12  
 No. Test Piles: 1



**ELEVATION**

(Looking East)

\* Limits of plastic hinging region. No lap splices allowed.

**PIER 2**  
**STRUCTURE NO. 100-0098**

SHEET NO. 27 OF 33 SHEETS

**EFK Moen, LLC**  
 Civil Engineering Design  
 331 Salem Place, Suite 225  
 Fairview Heights, IL 62208  
 Phone 618-206-4250

FILE NAME = 1000098-78182-027-Pier_2' (1 of 2).dgn	USER NAME = ja	DESIGNED - CTW	REVISED -
DATE = 9/7/2011	PLOT SCALE = 0.1/0.000 '1' / IN.	CHECKED - CDL	REVISED -
	PLOT DATE = 9/7/2011	DRAWN - DP	REVISED -
		DATE - 9/7/2011	REVISED -

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(X1-6-2)HB-2	WILLIAMSON	968	710
CONTRACT NO. 78182				

ILLINOIS FED. AID PROJECT