STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 312	71BR	RANDOLPH	73	48
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

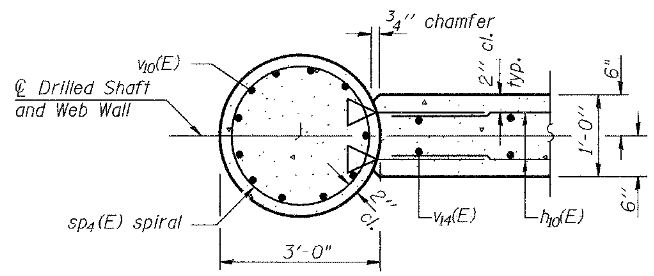
SHEET NO. 24
31 SHEETS

Contract No. 76125

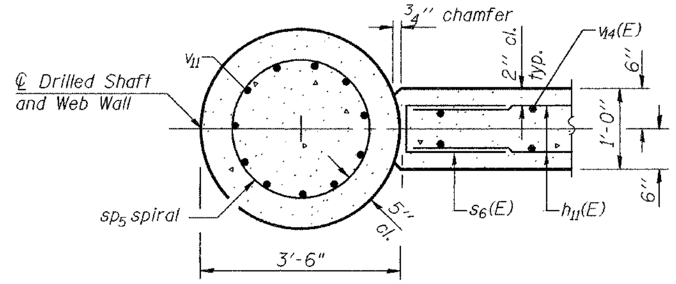
PIER 1
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h_8(E)	4	#4	24'-4"	
h_9(E)	4	#4	30'-10"	
h_{10}(E)	60	#4	10'-8"	
h_{11}(E)	42	#4	10'-2"	
h_{12}(E)	120	#4	2'-0"	
p_9(E)	4	#10	24'-4"	
p_{10}(E)	4	#10	30'-10"	
p_{11}(E)	4	#10	25'-11"	
p_{12}(E)	4	#10	32'-5"	
p_{13}(E)	6	#10	12'-6"	
s_3(E)	58	#4	12'-11"	
s_4(E)	16	#4	7'-8"	
s_5(E)	16	#4	7'-2"	
s_6(E)	42	#4	4'-0"	
** sp_4(E)	4	#5	11'-2"	
** sp_5	4	#5	23'-0"	
u_2(E)	6	#6	9'-11"	
v_{10}(E)	44	#9	13'-6"	
v_{11}	44	#9	22'-10"	
v_{12}(E)	44	#9	11'-6"	
v_{13}(E)	66	#4	9'-9"	
v_{14}(E)	66	#4	7'-11"	
Underwater Structure Excavation Protection Location 1		Each	1	
Drilled Shaft in Soil 42"		Foot	37.2	
Drilled Shaft in Rock 36"		Foot	55.7	
Concrete Structures		Cu. Yd.	54.3	
Reinforcement Bars, Epoxy Coated		Pound	9930	
Reinforcement Bars		Pound	5890	
Structure Excavation		Cu. Yd.	13.8	

Reinforcement Bars designated (E) shall be epoxy coated.
**Length is height of spiral.



SECTION A-A

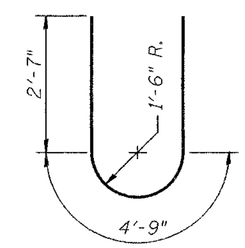


SECTION B-B

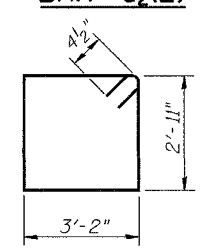
Construction Sequence for Web Wall:

1. Excavate between shafts to elevation of web wall base and set lower web wall forms through water to bear on the circular edge of drilled shafts. Secure in place with fill, struts or tie forms together as required.
2. Place the lower web wall reinforcement cage into the forms using spacers to maintain proper clearances.
3. If the forms can be sealed against the shafts and streambed to allow dewatering, the reinforcement and the concrete placement may be completed in the dry. Alternatively, the rebar cage can be lowered into position through water and the concrete discharged at the base of the excavation through a tremie pipe or pump hose, displacing water, sediment, and tainted concrete out the top of the forms.
4. Construct Columns.
5. Construct upper web walls.

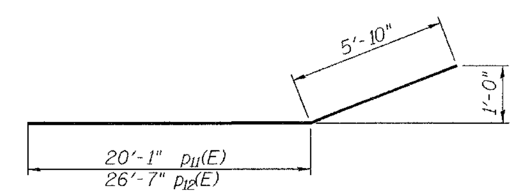
* If the prevailing water surface elevation during construction is consistently different than estimated on the plans, the contractor may propose an adjustment to the top of the drilled shaft elevation as part of their installation procedure. The top of all drilled shafts within a substructure unit shall be constructed to the same elevation and extend above the prevailing water surface. The quantities and reinforcement detailing are based on the top of shaft and the estimated elevations shown and may change based on the actual elevations encountered at each shaft and the final top of shaft elevation.



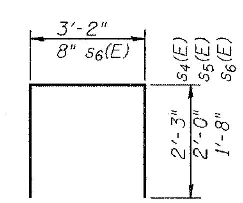
BAR u_2(E)



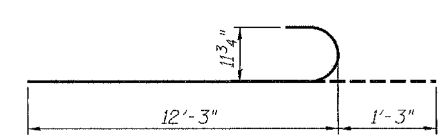
BAR s_3(E)



BARS p_{11}(E) & p_{12}(E)



BARS s_4(E), s_5(E) & s_6(E)



BAR v_{10}(E)

DESIGNED	T.L. Kurtenbach
CHECKED	J.E. Kramer
DRAWN	A.M. Seiber
CHECKED	JEK/TLK

January 26 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

PIER 1
F.A.P. RT. 312 - SEC. 71BR
RANDOLPH COUNTY
STATION 1128+90
STRUCTURE NO. 079-0048