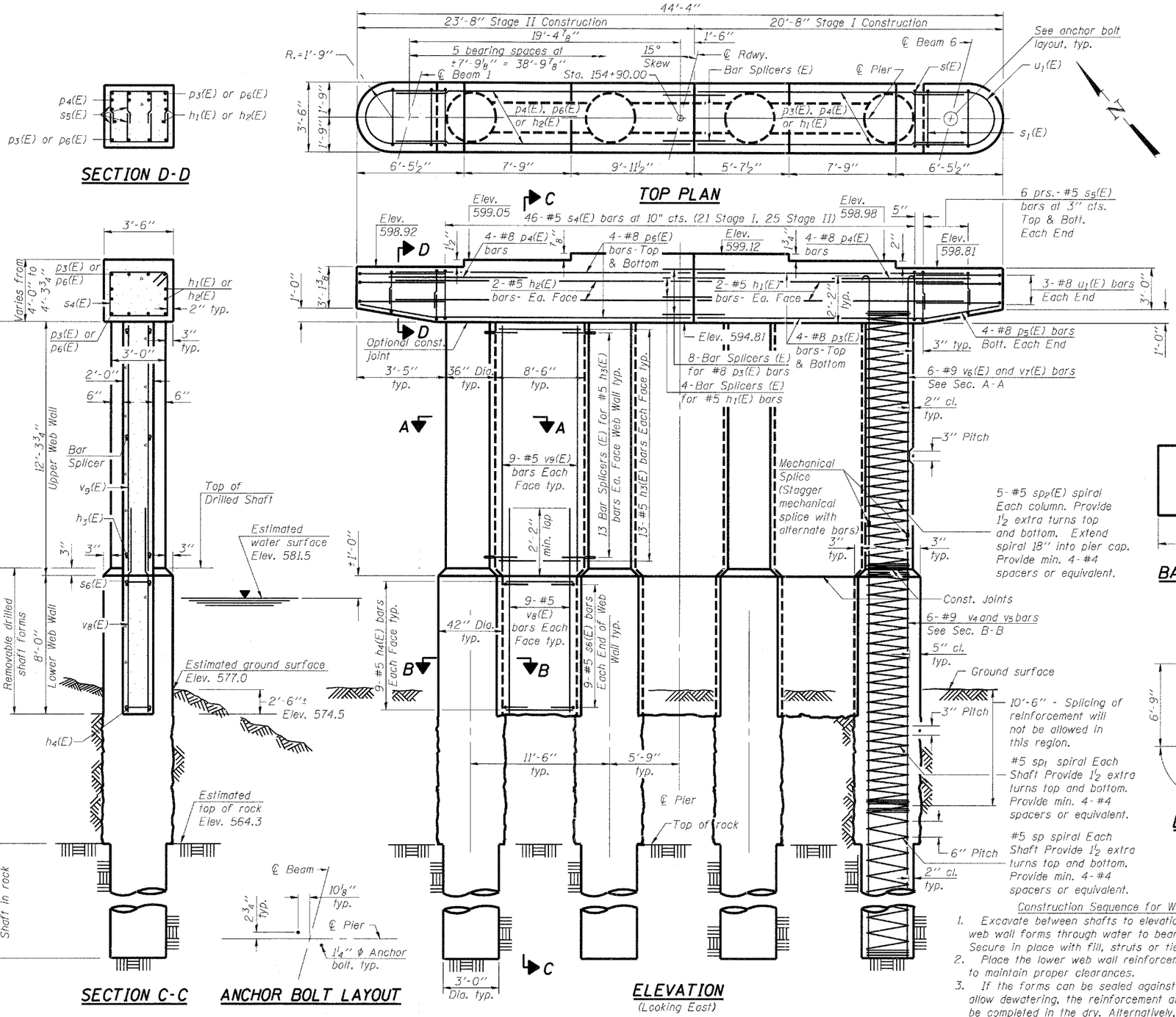
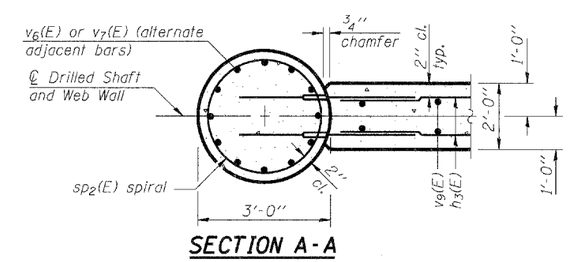
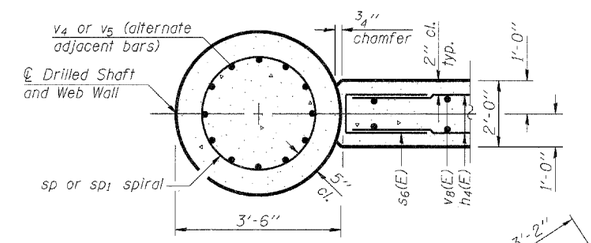
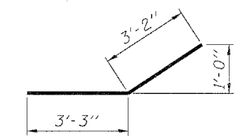
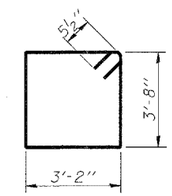




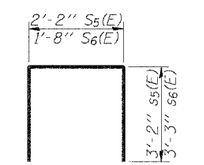




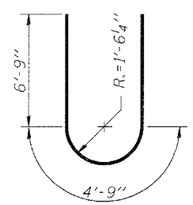
BAR p5(E)



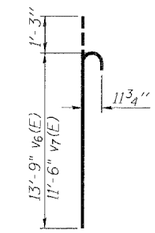
BAR s4(E)



BARS s5(E) & s6(E)



BAR u1(E)



BAR v6(E), v7(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h1(E)	4	#5	18'-9"	
h2(E)	4	#5	21'-9"	
h3(E)	78	#5	8'-4'	
h4(E)	54	#5	7'-10"	
p3(E)	8	#8	18'-9"	
p4(E)	8	#8	9'-11"	
p5(E)	8	#8	6'-5"	
p6(E)	8	#8	21'-9"	
s4(E)	46	#5	14'-7"	
s5(E)	24	#5	8'-6"	
s6(E)	54	#5	8'-2"	
** sp	4	#5	9'-3"	
** sp1	4	#5	16'-3"	
** sp2(E)	4	#5	13'-7"	
u1(E)	6	#8	18'-3"	
v4	24	#9	25'-11"	
v5	24	#9	28'-2"	
v6(E)	24	#9	15'-0"	
v7(E)	24	#9	12'-9"	
v8(E)	54	#5	10'-0"	
v9(E)	54	#5	11'-11"	
Concrete Structures			Cu. Yd.	75.1
Reinforcement Bars			Pound	7800
Reinforcement Bars, Epoxy Coated			Pound	9790
Underwater Structure Excavation Protection Location 1			Each	1
Drilled Shaft in Soil			Cu. Yd.	26.3
Drilled Shaft in Rock			Cu. Yd.	7.3

Cast steps monolithically with cap
Space cap reinforcement to miss anchor bolts.
** Length is height of spiral.
For details of the bar splicers and mechanical splicers, see sheet 22 of 24.

When splicing of spiral reinforcement is necessary, the spirals shall be provided with 1 1/2 extra turns at then 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.

* 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.

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.

Note: Middle web wall to be constructed during Stage II.