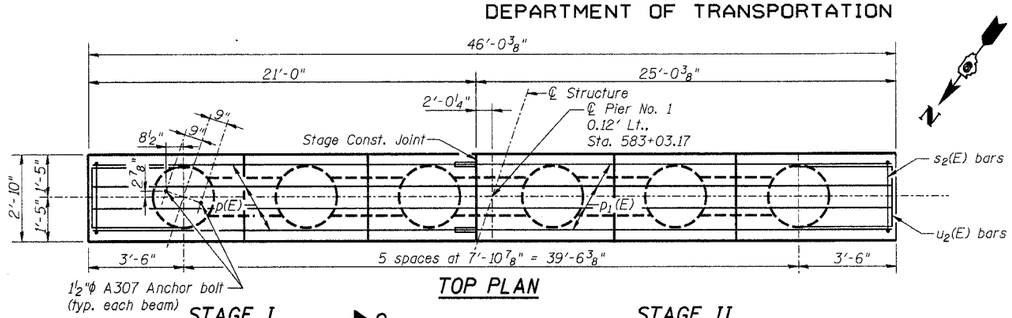
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 322	*	UNION	39	34
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 17
22 SHEETS

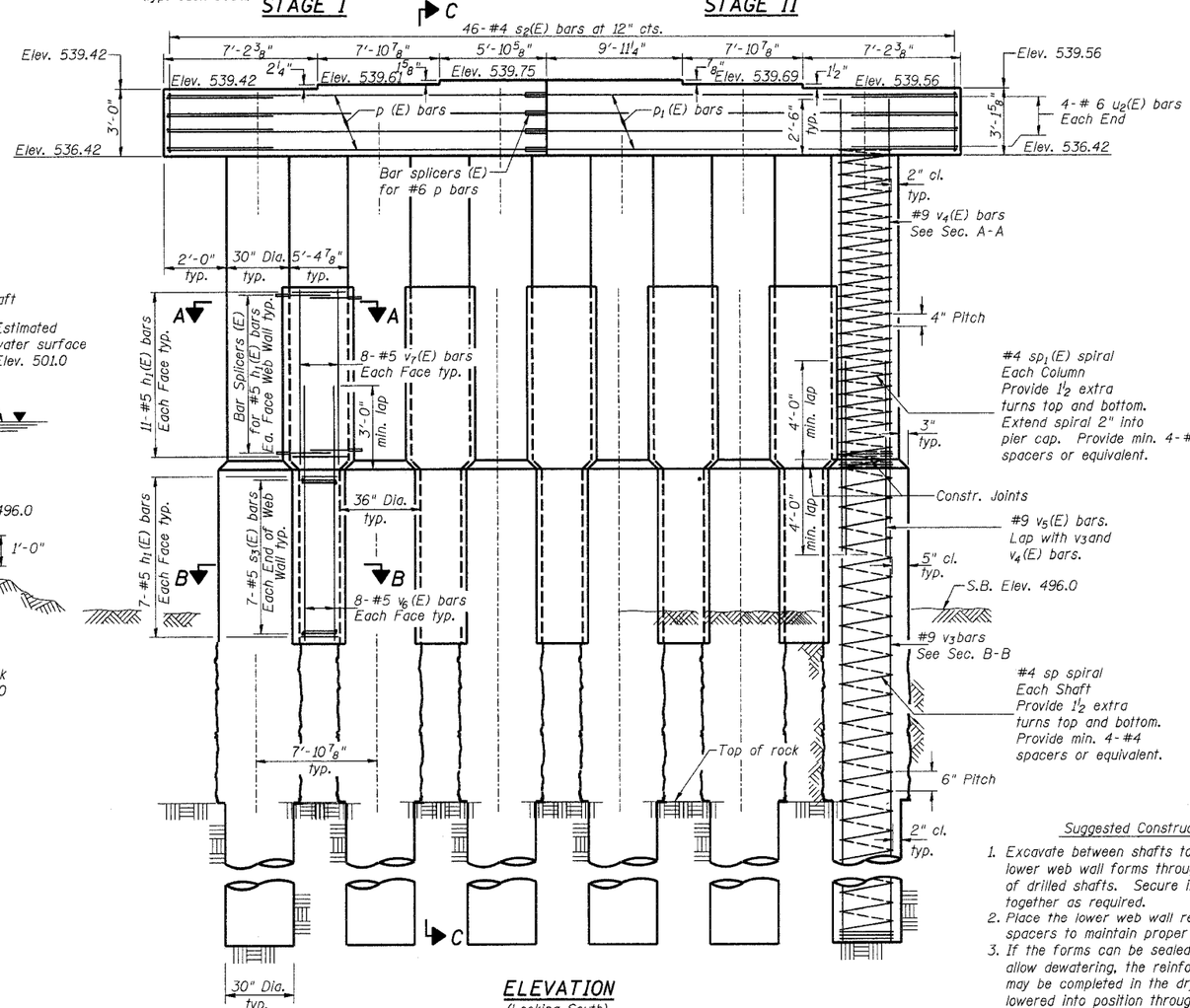
* (11-IVB)-1 CONTRACT NO. 98488

* 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.

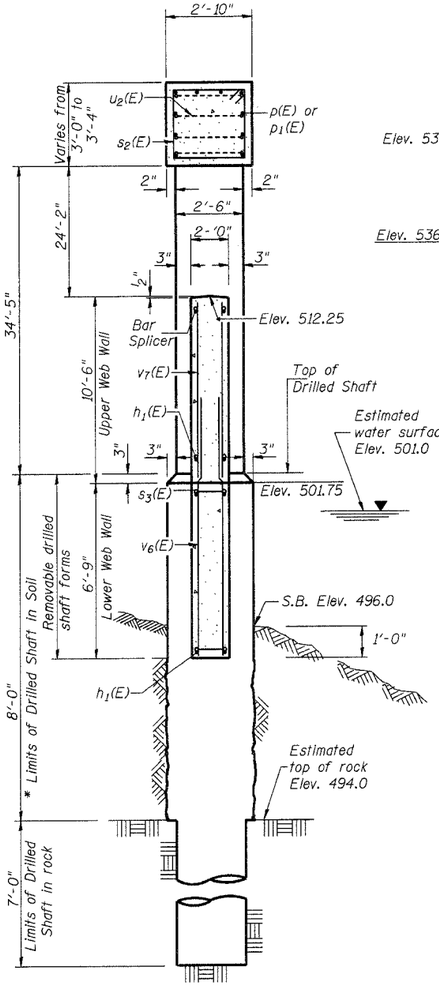


TOP PLAN

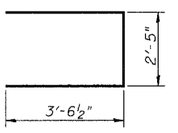
STAGE I STAGE II



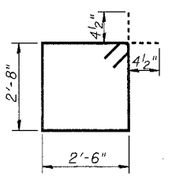
ELEVATION
(Looking South)



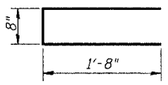
SECTION C-C



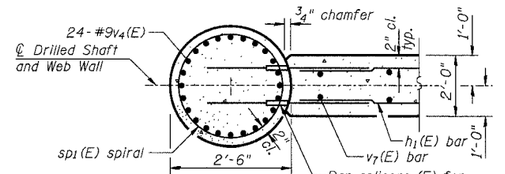
BAR u2(E)



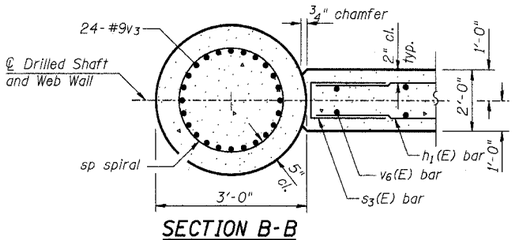
BAR s2(E)



BAR s3(E)



SECTION A-A



SECTION B-B

BILL OF MATERIAL

	Bar	No.	Size	Length	Shape
	h1(E)	180	#5	4'-9"	——
	p(E)	10	#6	20'-9"	——
	p1(E)	10	#6	24'-9"	——
	s2(E)	46	#4	11'-1"	⌐¬
	s3(E)	70	#5	4'-0"	⊐
**	sp	6	#4	15'-2"	∿∿
**	sp1(E)	6	#4	34'-7"	∿∿
	u2(E)	8	#6	9'-6"	⊐
	v3	144	#9	15'-0"	——
	v4(E)	144	#9	37'-6"	——
	v5(E)	144	#9	8'-0"	——
	v6(E)	80	#6	9'-9"	——
	v7(E)	80	#6	10'-3"	——

Drilled Shaft in Soil 36" Dia.	Foot	48
Drilled Shaft in Rock 30" Dia.	Foot	42
Concrete Structures	Cu. Yd.	86.4
Reinforcement Bars, Epoxy Coated	Pound	29750
Reinforcement Bars	Pound	8300
Bar Splicers	Each	120
Underwater Structure Excavation Protection - Location 1	Each	1

Reinforcement Bars designated (E) shall be epoxy coated.
Cast steps monolithically with cap.
Space cap reinforcement to miss anchor bolts.
Splices in spiral reinforcement shall be lap splices of 48 bar or wire diameters but not less than 12 inches, or shall be welded.
**Length is height of spiral.

Suggested 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.

DESIGNED	GLH
CHECKED	TML
DRAWN	RJN
CHECKED	TML

04/27/2005

P-DSWW 9-01-03

PIER 1
U.S. ROUTE 51 OVER TRIBUTARY TO DRURY CREEK AND CN/IC RAILROAD
FAP 322 - SECTION (11-IVB)-1
UNION COUNTY
STATION 583+74.84
STRUCTURE NO. 091-0073