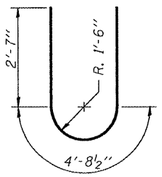
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

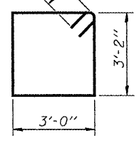
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 769	110B-2	MACOUPIN	78	69
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 29
38 SHEETS

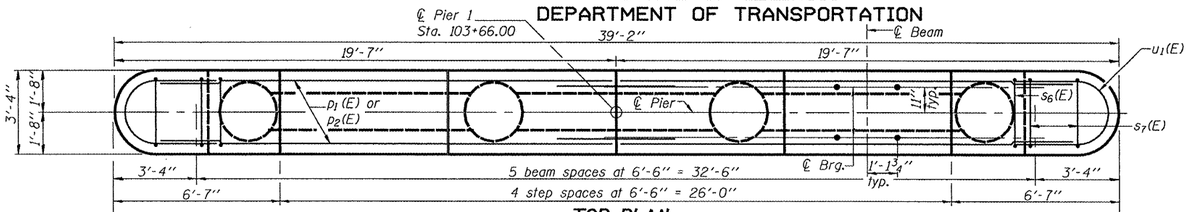
Contract #72813



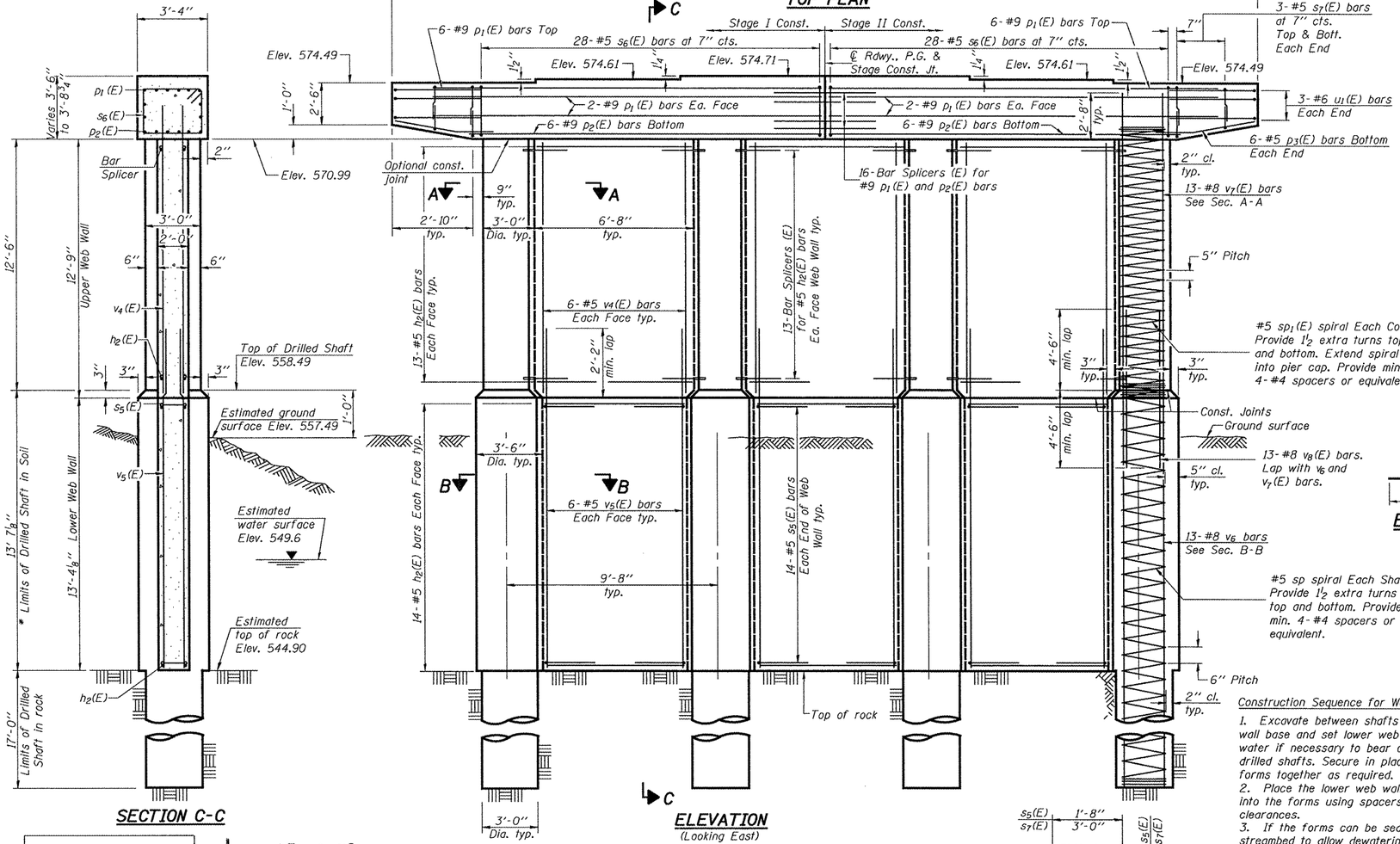
BAR $u_1(E)$



BAR $s_6(E)$

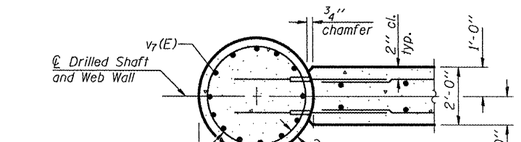


TOP PLAN

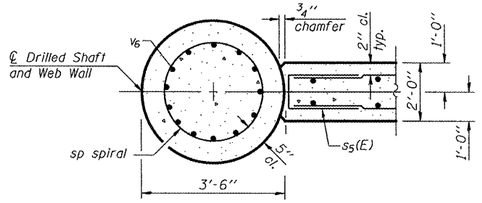


SECTION C-C

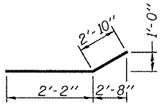
ELEVATION
(Looking East)



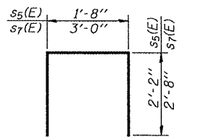
SECTION A-A



SECTION B-B



BAR $p_3(E)$



BARS $s_5(E)$ & $s_7(E)$

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$h_2(E)$	162	#5	5'-11"	—
$p_1(E)$	20	#9	17'-9"	—
$p_2(E)$	12	#9	16'-7"	—
$p_3(E)$	12	#5	5'-0"	—
$s_5(E)$	84	#5	6'-0"	⊔
$s_6(E)$	56	#5	13'-3"	⊐
$s_7(E)$	12	#5	8'-4"	⊔
** sp	4	#5	30'-7"	∿
** $sp_1(E)$	4	#5	12'-9"	∿
$u_1(E)$	6	#6	9'-11"	⊃
$v_4(E)$	36	#5	12'-6"	—
$v_5(E)$	36	#5	15'-6"	—
v_6	52	#8	30'-7"	—
$v_7(E)$	52	#8	15'-2"	—
$v_8(E)$	52	#8	9'-3"	—
Concrete Structures		Cu. Yd.	68.5	
Reinforcement Bars		Pound	6450	
Reinforcement Bars, Epoxy Coated		Pound	10,030	
Underwater Structure Excavation Protection Location 1		Each	1	
Bar Splicers		Each	172	
Drilled Shaft in Soil		Cu. Yd.	19.4	
Drilled Shaft in Rock		Cu. Yd.	17.8	
Structure Excavation		Cu. Yd.	81.2	
Anchor Bolts 1" ϕ		Each	12	

Cast steps monolithically with cap.
Space cap reinforcement to miss anchor bolts.
Minimum lap for spirals = 12'-4"
** Length is height of spiral.

*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 if necessary 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	Tom Kurtenbach
CHECKED	Jay Edwards
DRAWN	BECKY M. LEACH
CHECKED	TK/JE

June 17, 2008
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

P-DSWW 11-1-06

PIER 1
F.A.P. ROUTE 769 - SEC. 110B-2
MACOUPIN COUNTY
STATION 104+41.00
STRUCTURE NO. 059-0509

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