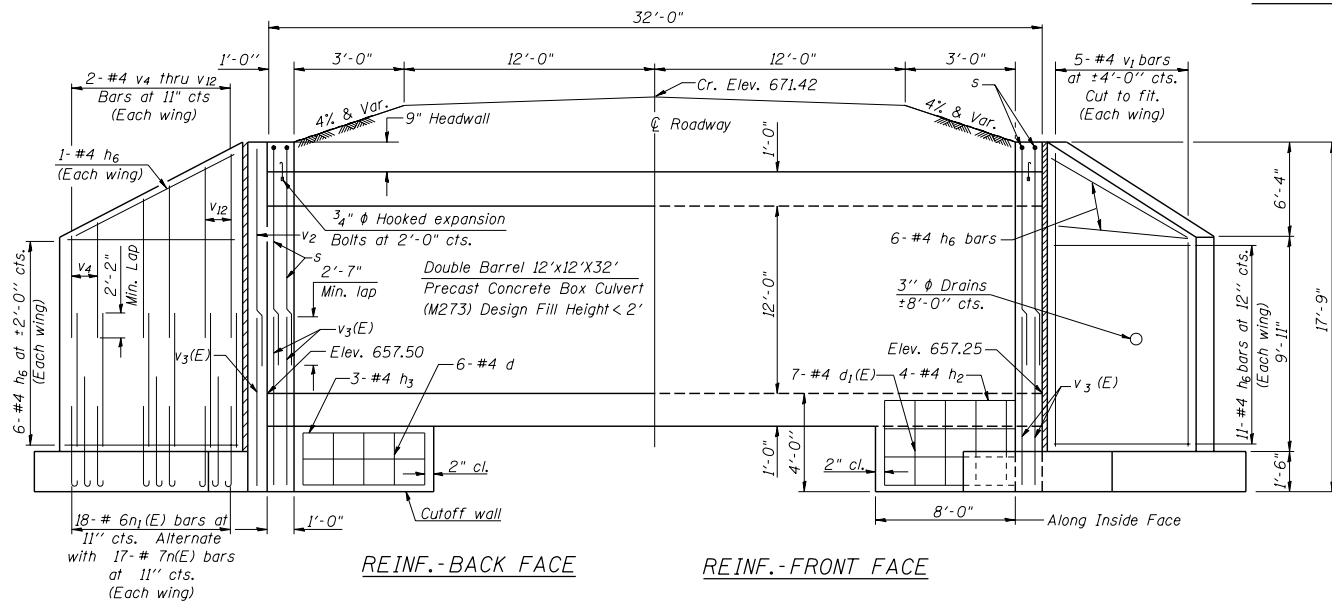


F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
516	241BR & 56BR	CHAMPAIGN	82	47
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

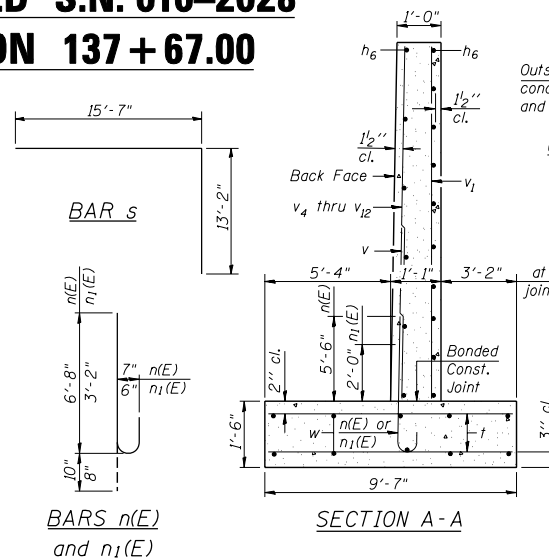
DETAIL OF CAST IN PLACE BOX CULVERT END SECTION

PROPOSED S.N. 010-2028

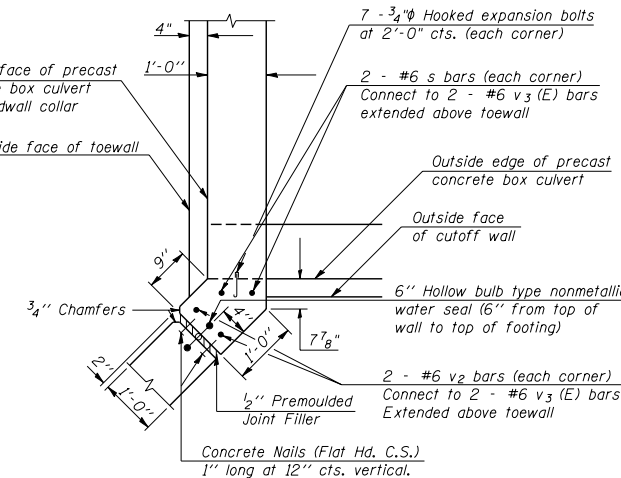
STATION 137+67.00



WINGWALL ELEVATION



SECTION A-A



CAST-IN-PLACE CORNER DETAIL FOR HEADWALL COLLAR

NOTES

- All bars should be rounded and shall conform to the requirements of Art. 1006.10 of Standard Specs.
- Class SI Concrete shall be used throughout.
- The Precast Concrete Box Culvert Sections shall conform to the requirements of AASHTO M273.
- Reinforcement bars designated (E) shall be epoxy coated.
- All construction joints shall be bonded.
- Expansion bolts shall be 3/4" hooked bolts. Hooked bolts shall extend 6" into concrete collar. The cost of the bolts shall be included in the cost of Box Culvert End Section.
- All dimensions are in FEET (')-INCHES (") unless otherwise noted.
- Concrete and Rebar quantities and lengths calculated for the cast-in-place End Sections will vary based on the precast box culverts supplied.
- End Sections will be paid for at the contract unit price each for BOX CULVERT END SECTION, as outlined in Art. 540.08, which prices shall include all concrete, rebar, and all other items necessary to complete the proposed work.
- Drain holes shall be provided in accordance with Art. 503.12.
- voids between the Precast Concrete Box Culvert and the Cast-in-place toewall / cutoff wall shall be filled with Non-shrink grout.
- Drawings not to scale.

NAME PLATE

* See Highway Standard 515001-02 for dimensions and placement.

* Name Plate will be paid for at the contract unit price per "EACH" for "NAME PLATES".

DESIGN STRESSES

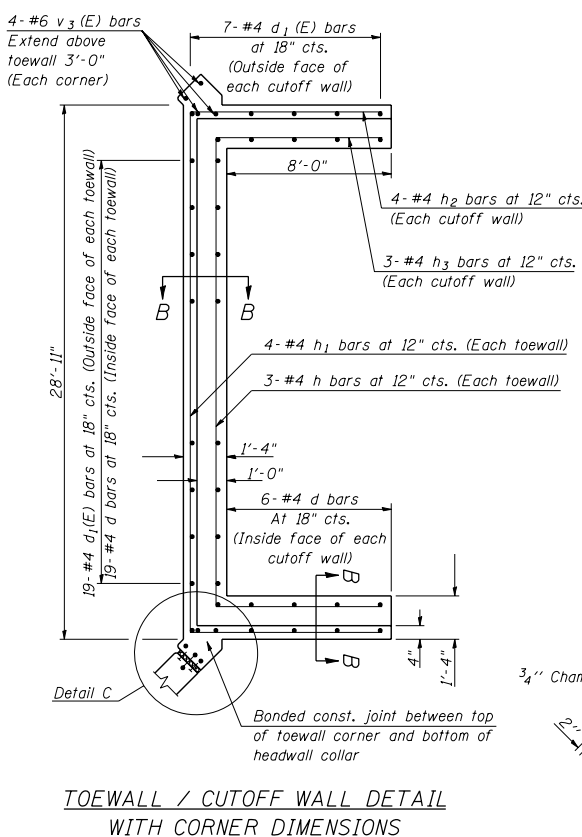
$f_y = 60,000 \text{ psi}$
 $f'_c = 3,500 \text{ psi}$

Max. Soil Pressure under footing = 3,522 psi

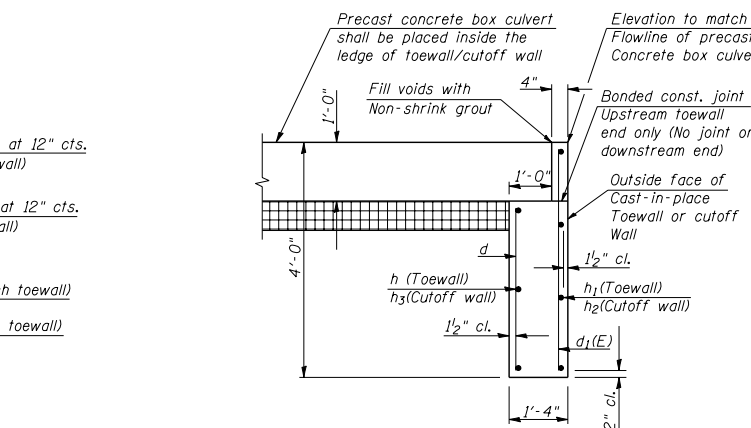
LOADING HS 20-44

BILL OF MATERIAL (ONE END SECTION)

Bar	No.	Size	Length	Shape
d	31	#4	2'-8"	
d1(E)	33	#4	3'-8"	
h	3	#4	27'-3"	
h1	4	#4	28'-8"	
h2	8	#4	8'-9"	
h3	6	#4	8'-0"	
h4	16	#4	1'-2"	
h5	16	#4	9"	
h6	48	#4	16'-11"	
n(E)	34	#7	7'-6"	
n1(E)	36	#6	3'-10"	
s	4	#6	28'-9"	
t	84	#6	9'-4"	
v	36	#5	7'-9"	
v1	10	#4	15'-11"	
v2	4	#6	12'-9"	
v3(E)	8	#6	6'-10"	
v4	4	#4	4'-8"	
v5	4	#4	5'-4"	
v6	4	#4	6'-0"	
v7	4	#4	6'-8"	
v8	4	#4	7'-4"	
v9	4	#4	8'-0"	
v10	4	#4	8'-8"	
v11	4	#4	9'-4"	
v12	4	#4	10'-0"	
w	28	#5	16'-11"	
Concrete/End Section				
Reinforcement Bars, Epoxy Coated		Cu. Yd.	46.0	
Reinforcement Bars, Poured		Pound	892.0	
Expansion Bolt 3/4" #		Each	28.0	
Item				
Box Culvert End Section		Unit	Oty.	
		Each	2.0	

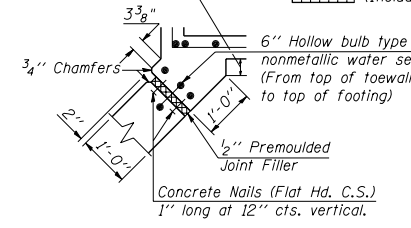


TOEWALL / CUTOFF WALL DETAIL WITH CORNER DIMENSIONS

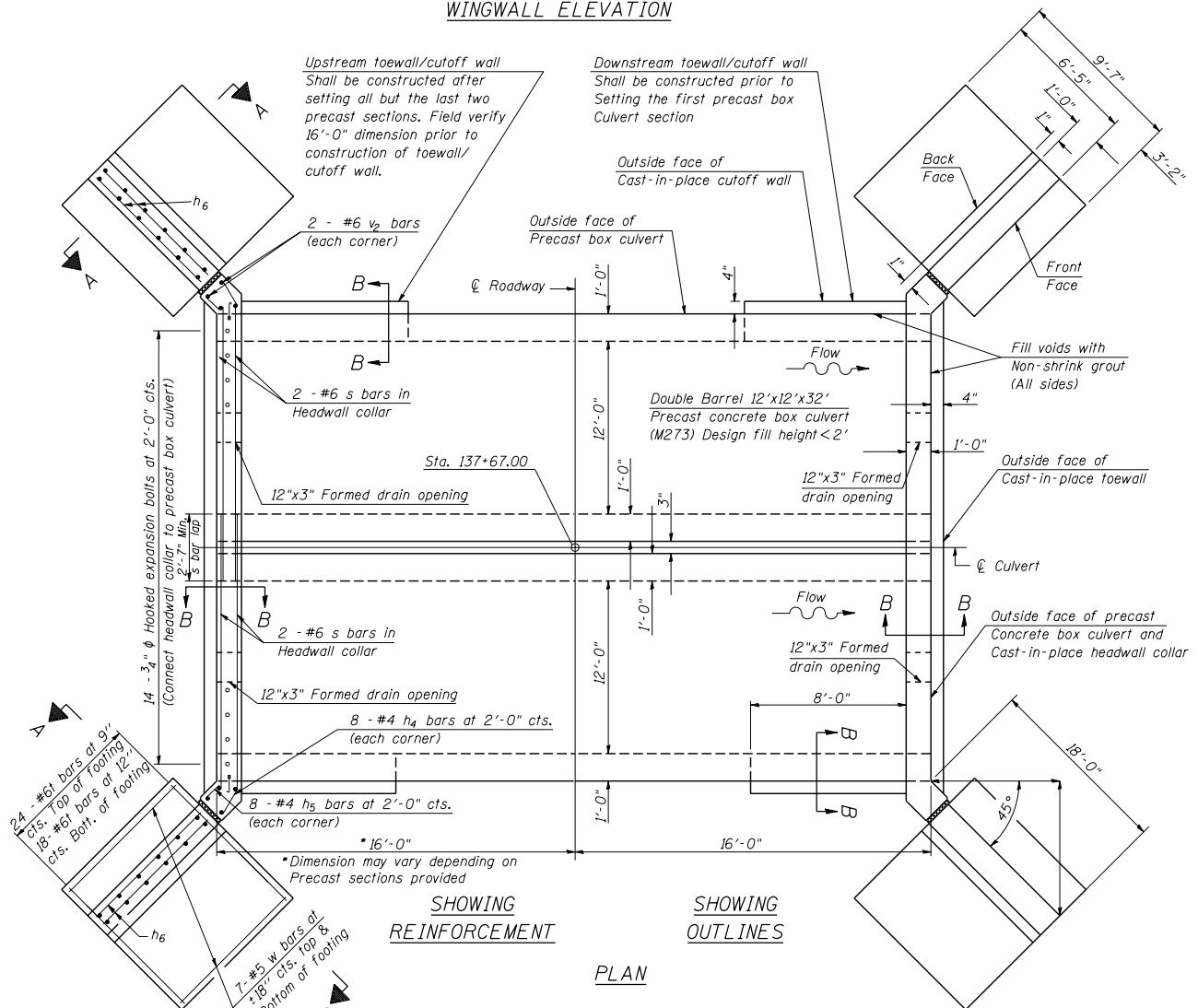


SECTION B-B TOEWALL/CUTOFF WALL DETAIL ONLY (SIDE WALL OF PRECAST BOX CULVERT NOT SHOWN)

Porous Granular Material - CA 7 (6")
(Included in pay item for precast box culvert)



CORNER DETAIL C



PLAN

PLOT DATE = 7/6/2006
 FILE NAME = c:\projects\050304 (v8)\70359endsection.dgn
 USER NAME = piersonbr

ILLINOIS DEPARTMENT OF TRANSPORTATION
BOX CULVERT END SECTION DETAIL
 PROPOSED S.N. 010-2028
 F.A.S. 516/(C.H. 12)
 SECTION 241BR & 56BR
 CHAMPAIGN COUNTY

SCALE: NOT TO SCALE DRAWN BY: B.B.P.
 DATE: 06/15/06 CHECKED BY: G.A.E.