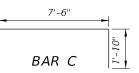


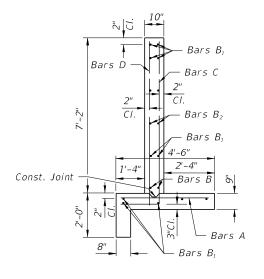
BENDING DIAGRAM



NOTE: All bar dimensions are out to out

ESTIMATED QUANTITIES

ITEM	UNIT	RCP	СМР	
Class II Concrete	Cu. Yd.	11.3	11.4	
Reinforcing Steel	Lb.	695	695	



TYPICAL SECTION THRU ENDWALL



(3"x1" Corr.)

(Class B Wall) -

В

SECTION AA

(See Option Below)

OPTIONAL ENTRANCE FOR CONCRETE PIPE

DESCRIPTION:

GENERAL NOTES

(Showing Bars In Back Face Of Wall)

- 1. Straight concrete endwalls are intended for use outside the clear zone.
- 2. Endwalls may be cast-in-place or precast construction. Cast-in-place endwalls shall conform to the details on this Index. Precast construction which adheres to this Index, including any additional reinforcement required for handling which shall be determined by the Contractor or supplier, does not require additional approvals. Deviations from this Index, for precast units, shall require the approval of the State Drainage Engineer prior to construction. For precast construction, see Index No. 201 for opening and grouting details.
- 3. Reinforcing steel shall be either Grade 40 or 60.

(Showing Bars In Front Face Of Wall)

4. Concrete shall be Class II, except ASTM C478 (4000 psi) concrete may be substituted for precast items manufactured in plants meeting the requirements of Section 449 of the Specifications.

- 5. Chamfer: All exposed edges and corners to be chamfered 3/4" unless otherwise shown.
- 6. That portion of corrugated metal pipe in direct contact with the concrete slab and extending 12" beyond shall have a continuous bituminous coating of .004" minimum thickness applied prior to placing of the concrete.
- 7. Sodding shall be in accordance with Index No. 281 and paid for under the contract unit price for Performance Turf, SY.
- 8. Basis of payment for either cast-in-place or precast construction shall be the estimated quantities tabulated on the Index. Concrete and reinforcing steel shall be paid for under the contract unit prices for Class II Concrete (Endwalls), CY and Reinforcing Steel (Roadway), LB.

REVISION 11/01/16

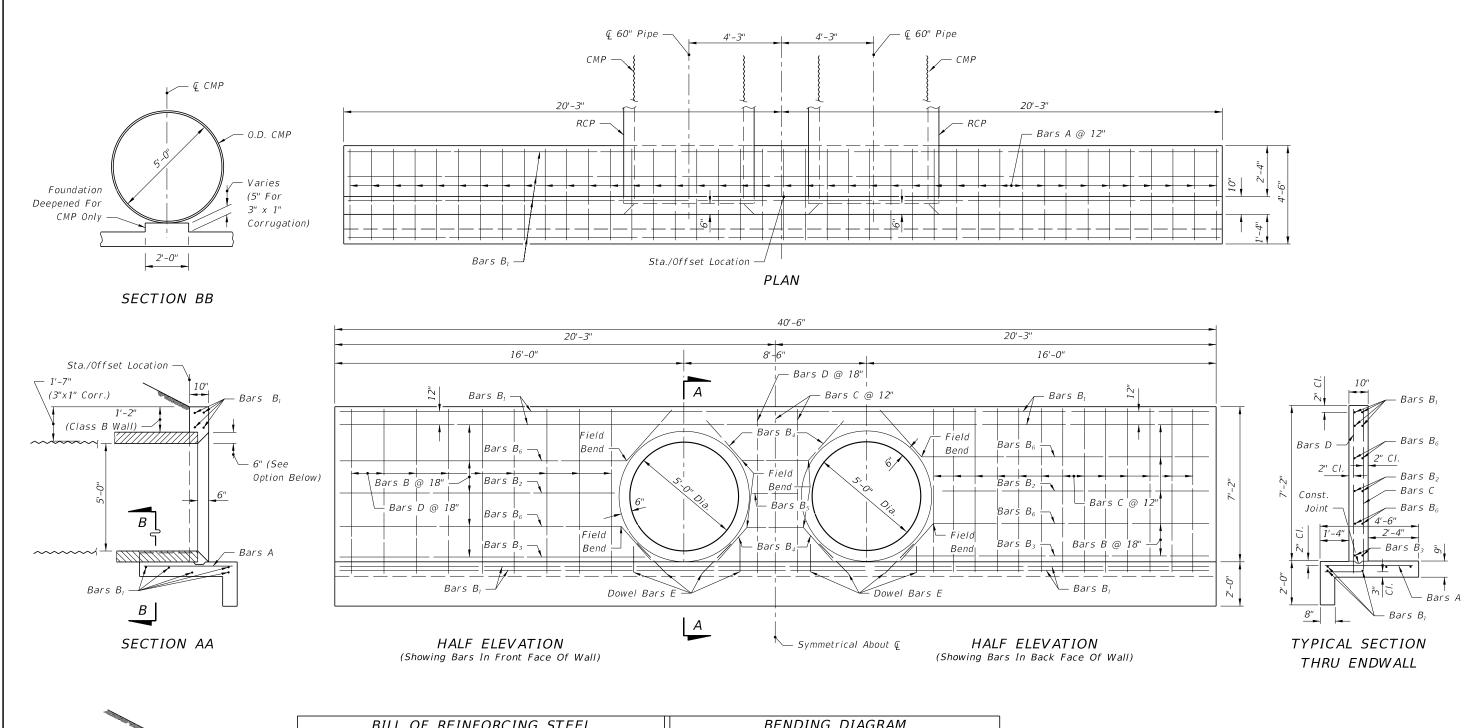


DESIGN STANDARDS

STRAIGHT CONCRETE ENDWALLS SINGLE AND DOUBLE 60" PIPE

INDEX NO. 251

SHEET NO. 1 of 2





DESCRIPTION:

OPTIONAL ENTRANCE FOR CONCRETE PIPE

	BILL OF REINFORCING STEEL					
MARK	SIZE	NO. REQD.	LENGTH	LOCATION	BENDING	
Α	#4	41	4'-2"	Footing	Straight	
B_1	#4	9	40'-2"	Footing & Wall	Straight	
B_2	#4	4	12'-6"	Wall	Straight	
B_3	#4	4	13'-9"	Wall	Straight	
B_4	#4	4	6'-0"	Wall	Field Bend	
B_5	#4	2	2'-2"	Wall	Straight	
B_6	#4	8	15'-0"	Wall	Field Bend	
С	#4	29	9'-4"	Footing & Wall	Bend	
D	#4	20	7'-6"	Footing & Wall	Straight	
Ε	#4	16	1'-8"	Footing & Wall	Straight	

	BENDING DIAGRAM							
G	7'-6	" -						
t	<u> </u>		-					
t		10"						
t	BAR							
t		'	_					
nd	NOTE: All bar dimensions are out to out							
t	ESTIMATED QUANTITIES							
nd	ITEM	UNIT	RCP	CMP				
	Class II Concrete	Cu. Yd.	13.7	13.8				
t .	Reinforcing Steel	Lb.	824	824				
t								

NDTE: See Sheet 1 of 2 For General Notes.

REVISION 11/01/16



FY 2017-18 DESIGN STANDARDS