PC-1

DIAMETER INCHES	AREA SQ. FT.	MAXIMUM HEIGHT OF COVER IN FEET				DIAMETER INCHES
		NONREINFORCED CONCRETE (STRENGTH) (SEE NOTE 4)	REINFORCED CONCRETE CLASS			
			III	IV	V	
12	0.8	14' (1800)	14'	19'	29'	12
15	1.2	14' (2125)	14'	19'	29'	15
18	1.8	14' (2400)	14'	20'	29'	18
21	2.4	13' (2700)	14'	20'	29'	21
24	3.1	13' (3000)	14'	20'	29'	24
27	4.0		14'	20'	29'	27
30	4.9		14'	20'	29'	30
33	5.9		14'	20'	29'	33
36	7.1		14'	20'	30'	36
42	9.6		14'	21'	30'	42
48	12.6		14'	21'	30'	48
54	15.9		14'	21'	30'	54
60	19.6		14'	21'	30'	60
66	23.8		14'	21'	30'	66
72	28.3		14'	21'	30'	72
78	33.2		14'	21'	30'	78
84	38.5		14'	21'	30'	84
90	44.4		14'	21'	30'	90
96	50.3		14'	21'	30'	96
102	56.7		14'	21'	30'	102
108	63.6		14'	21'	30'	108

NOTES:

1. COVER HEIGHTS INDICATED IN TABLES ARE FOR FINISHED CONSTRUCTION. THE COVER HEIGHTS WERE RETAINED TO MATCH FORMER COVER HEIGHTS BASED ON ALLOWABLE STRESS DESIGN. COVER HEIGHTS WERE NOT RE-CALCULATED USING LRFD.
2. TO PROTECT PIPE DURING CONSTRUCTION, MINIMUM HEIGHTS OF COVER PRIOR TO ALLOWING CONSTRUCTION TRAFFIC TO CROSS INSTALLATION ARE TO BE 1/2 DIAMETER OR 3'0", WHICHEVER IS GREATER. THE COVER SHALL EXTEND THE FULL LENGTH OF THE PIPE. THE APPROACH FILL RAMP IS TO EXTEND A MINIMUM OF 10(DIAMETER + 36") ON EACH SIDE OF THE PIPE, OR TO THE INTERSECTION WITH A CUT.
3. STANDARD MINIMUM FINISHED HEIGHT OF COVER FOR ALL PIPES, EXCEPT THOSE UNDER ENTRANCES, SHALL BE 2.0' OR 1/2 DIAMETER, WHICHEVER IS GREATER. IN CASES IN WHICH THESE COVER HEIGHTS CANNOT BE ACHIEVED, AN ABSOLUTE MINIMUM FINISHED COVER HEIGHT OF 1.0' WILL BE ALLOWED ONLY IF ALL POSSIBLE MEANS TO OBTAIN THE STANDARD VALUE HAVE BEEN EXHAUSTED. THE MINIMUM FINISHED HEIGHT OF COVER FOR PIPES UNDER ENTRANCES IS 9".
4. CRUSHING STRENGTH (POUNDS PER LINEAR FOOT ULTIMATE STRENGTH) PER ASTM C76:
   2000 LBS FOR CLASS III PIPE
   3000 LBS FOR CLASS IV PIPE
   3750 LBS FOR CLASS V PIPE
5. FOR HEIGHT OF COVER GREATER THAN THAT SHOWN FOR CLASS V, A SPECIAL DESIGN CONCRETE PIPE IS REQUIRED.
6. NONREINFORCED PIPE TO BE USED ONLY UNDER ENTRANCES AND LOWER FUNCTIONAL CLASSIFICATION (LFC) ROADWAYS (SEE SHEET 17 OF 18).
7. SEE STANDARD PB-1 FOR PIPE BEDDING AND BACKFILL REQUIREMENTS.
8. PIPE WITH LESS THAN THE STANDARD MINIMUM COVER IS TO BE MINIMUM CLASS III REINFORCED.

VDOT
ROAD AND BRIDGE STANDARDS

SHEET 1 OF 18 | REVISION DATE 11/15
107.05

A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE.

CONCRETE PIPE
HEIGHT OF COVER TABLE FOR HL-93 LIVE LOAD

VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION REFERENCE
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