

GENERAL

1. METHOD "A" PIPE BEDDING SHALL BE USED FOR ALL TYPES OF PIPE CULVERTS WITHIN THE APPLICABLE HEIGHT OF COVER RANGE NOTED IN THE STANDARD PC-1 TABLES UNLESS OTHERWISE NOTED ON THE PLANS.
2. H = HEIGHT OF COVER MEASURED FROM TOP OF CULVERT TO FINISHED GRADE.
3. b = EXCAVATION DEPTH AS SHOWN ON PLANS OR TO FIRM BEARING SOIL.

CIRCULAR PIPE

1. D = OUTSIDE DIAMETER OF PIPE.
2. d = INSIDE DIAMETER OF PIPE.
3. X = WIDTH OF CLASS I BACKFILL MATERIAL BEYOND THE EXTREMITY OF THE PIPE.
 $X = 12''$ WHERE d IS LESS THAN $36''$.
 $X = 18''$ WHERE d IS $36''$ AND GREATER.
4. WHERE DIRECTED BY THE ENGINEER, BEDDING MATERIAL MAY BE ELIMINATED FOR NORMAL EARTH FOUNDATIONS UNDER ROUTINE ENTRANCE PIPE (EXCEPT PLASTIC PIPE) $30''$ AND LESS IN DIAMETER WITH HEIGHT OF COVER $15'$ OR LESS.
5. REGULAR BACKFILL MATERIAL MAY BE USED IN LIEU OF CLASS I BACKFILL MATERIAL FOR ALL FOUNDATION TYPES FOR ROUTINE ENTRANCE PIPE (EXCEPT PLASTIC PIPE) $30''$ AND LESS IN DIAMETER WITH HEIGHT OF COVER $15'$ OR LESS.
6. BEDDING MATERIAL AND CLASS I BACKFILL MATERIAL MAY BE ELIMINATED FOR SHOULDER SLOT INLET (DI-13) OUTLET PIPES INSTALLATIONS.

ELLIPTICAL PIPE

1. S_1 = OUTSIDE SPAN DIMENSION OF PIPE.
2. S_2 = INSIDE SPAN DIMENSION OF PIPE.
3. R = OUTSIDE RISE DIMENSION OF PIPE.
4. X = WIDTH OF CLASS I BACKFILL MATERIAL BEYOND THE EXTREMITY OF THE PIPE.
 $X = 12''$ WHERE S_2 IS LESS THAN $36''$.
 $X = 18''$ WHERE S_2 IS $36''$ AND GREATER
5. WHERE DIRECTED BY THE ENGINEER, BEDDING MATERIAL MAY BE ELIMINATED FOR NORMAL EARTH FOUNDATIONS UNDER ROUTINE ENTRANCE PIPE WHERE S_2 IS $38''$ OR LESS AND HEIGHT OF COVER $15'$ OR LESS.
6. REGULAR BACKFILL MATERIAL MAY BE USED IN LIEU OF CLASS I BACKFILL MATERIAL FOR ALL FOUNDATION TYPES FOR ROUTINE ENTRANCE PIPE WHERE S_2 IS $38''$ OR LESS AND HEIGHT OF COVER $15'$ OR LESS.

PIPE ARCH

1. S = SPAN DIMENSION OF PIPE.
2. R = RISE DIMENSION OF PIPE.
3. B = SEE PC-1 TABLE FOR APPLICABLE PIPE MATERIAL
4. x = WIDTH OF CLASS I BACKFILL MATERIAL BEYOND THE EXTREMITY OF THE PIPE.
 $x = 12''$ WHERE S_2 IS LESS THAN $36''$.
 $x = 18''$ WHERE S_2 IS $36''$ AND GREATER
5. WHERE DIRECTED BY THE ENGINEER, BEDDING MATERIAL MAY BE ELIMINATED FOR NORMAL EARTH FOUNDATIONS UNDER ROUTINE ENTRANCE PIPE WHERE S_2 IS $35''$ OR LESS AND HEIGHT OF COVER $15'$ OR LESS.
6. REGULAR BACKFILL MATERIAL MAY BE USED IN LIEU OF CLASS I BACKFILL MATERIAL FOR ALL FOUNDATION TYPES FOR ROUTINE ENTRANCE PIPE WHERE S IS $35''$ OR LESS AND HEIGHT OF COVER $15'$ OR LESS.

SPECIFICATION
REFERENCE302
303**INSTALLATION OF PIPE CULVERTS & STORM SEWERS
GENERAL NOTES**

VIRGINIA DEPARTMENT OF TRANSPORTATION

VDOT

ROAD AND BRIDGE STANDARDS

REVISION DATE

SHEET 1 OF 1

107.00