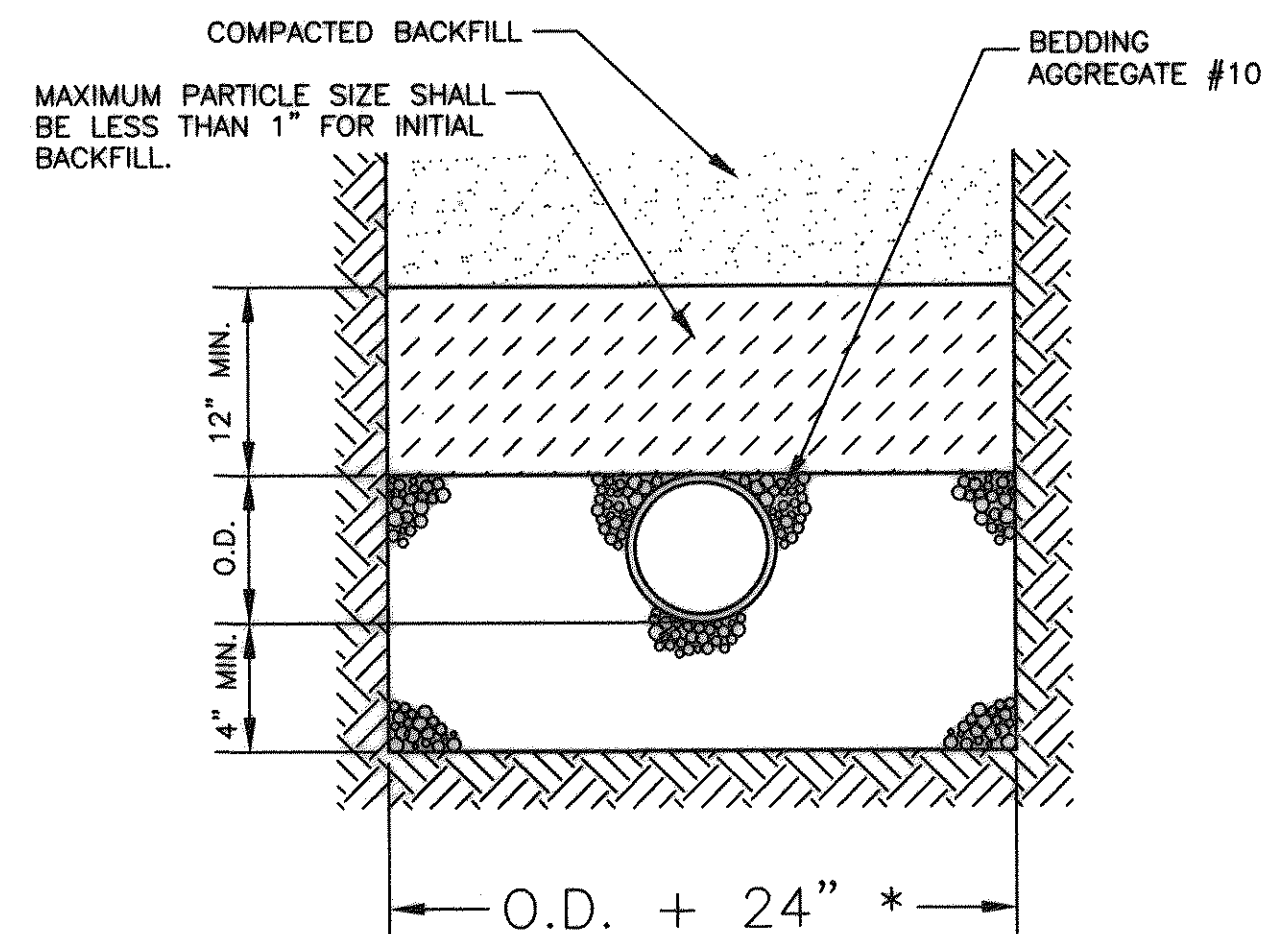


0.20 ABOVE EXIT PIPE
INVERT

NOTES:

1. DROP CONSTRUCTION IS TO BE AT EVERY LOCATION WHERE THE INFLUENT INVERT IS GREATER THAN OR EQUAL TO 2'-0" ABOVE THE EFFLUENT SEWER INVERT.

DROP CONSTRUCTION AT STANDARD MANHOLE

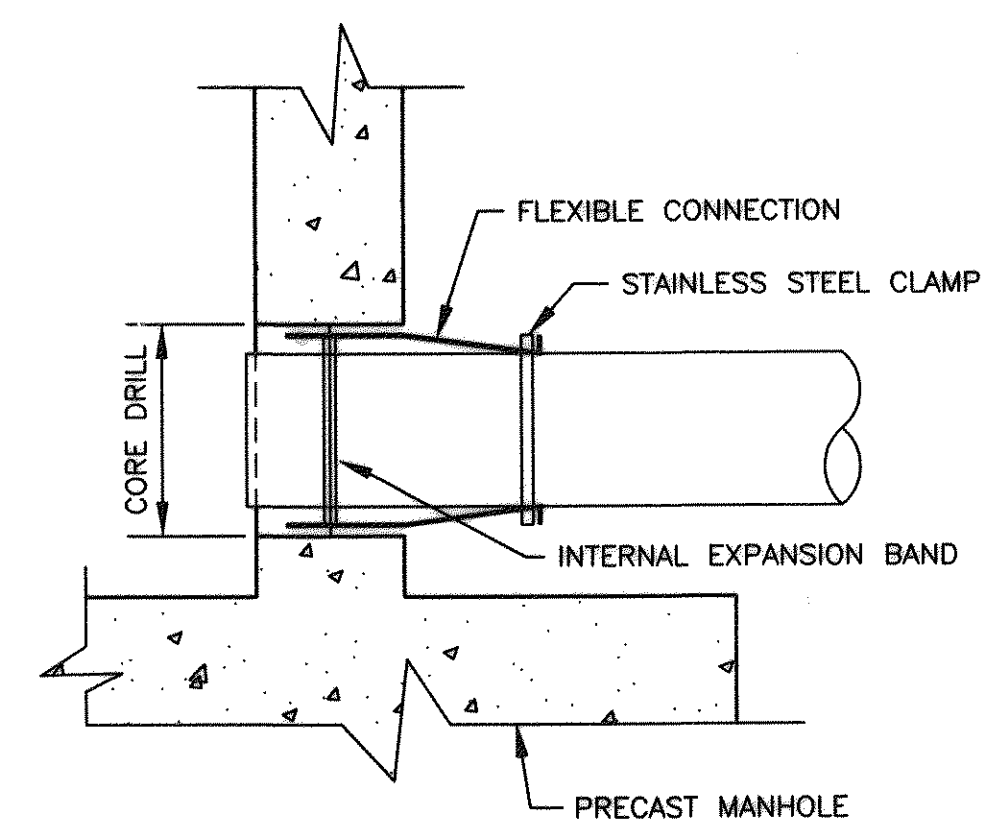


NOTES:

1. WHERE THE TRENCH BOTTOM IS IN ROCK, IT SHALL BE EXCAVATED TO A MINIMUM OF 8" BELOW THE BOTTOM OF THE PIPE AND BACKFILLED WITH BEDDING MATERIAL.
2. WHERE PIPE FOUNDATIONS ARE YIELDING, PIPE SHALL BE BEDDED ON A MINIMUM OF 8" BEDDING MATERIAL.
- * FOR PIPE LESS THAN 12" THE TRENCH WIDTH MAY BE 36" MAXIMUM.

UTILITY BEDDING DETAIL - TYPE 3

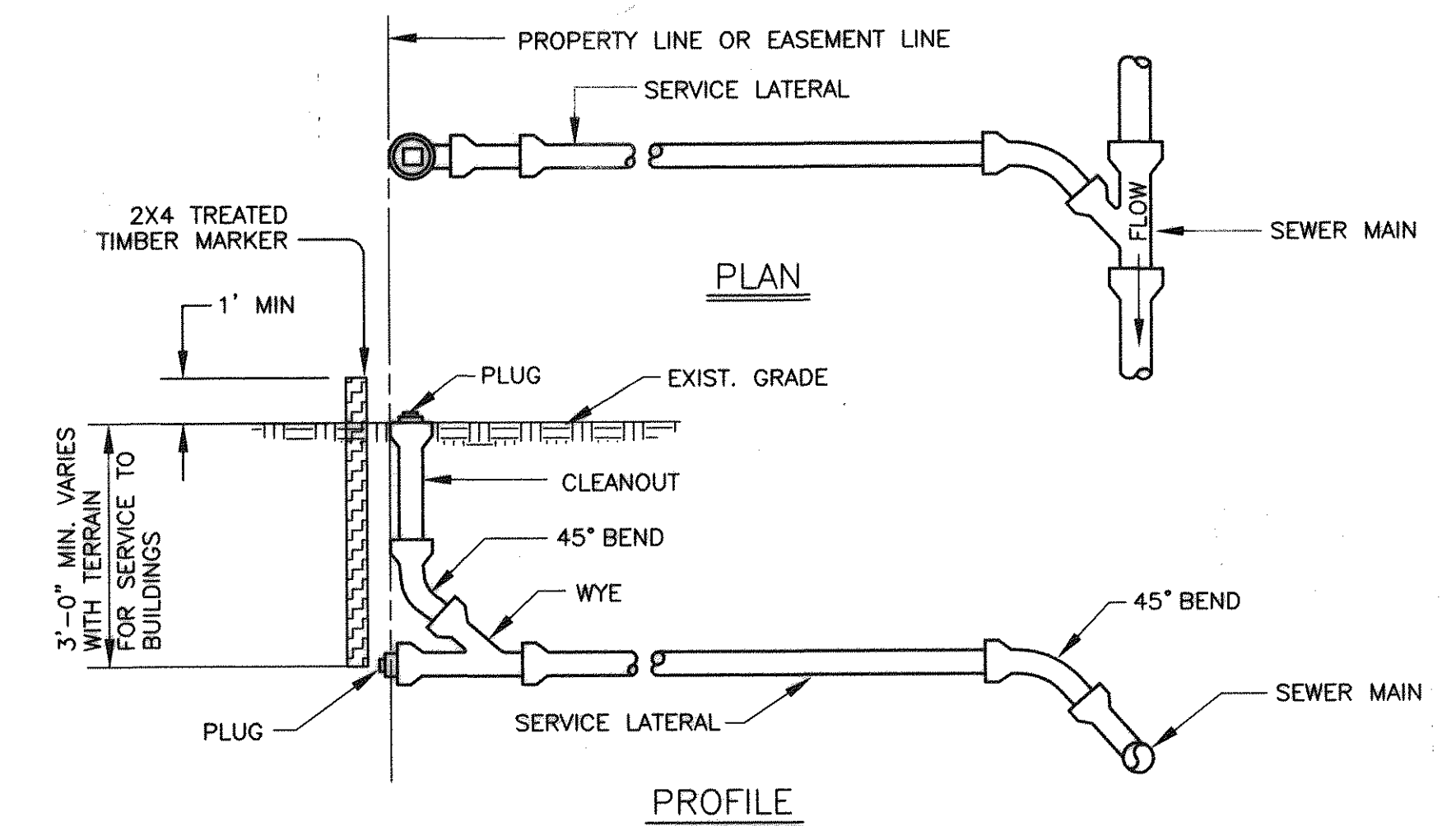
REF: 1993 VDOT ROAD AND BRIDGE STANDARDS DETAIL 1401.01



ALL PIPELINE CONNECTIONS TO PRECAST MANHOLES SHALL BE MADE WITH A FLEXIBLE BOOT. THE BOOT SHALL MEET ASTM SPECIFICATION C-923. BOOT SHALL BE MADE FROM NEOPRENE RUBBER AND HAVE A 3/8" MINIMUM WALL THICKNESS THROUGHOUT. THE INTERNAL EXPANSION BAND TO SECURE THE BOOT IN PLACE SHALL CONFORM TO ALUMINUM MATERIAL SPECIFICATION 6061-T6. THE EXTERNAL BAND TO CLAMP AND SEAL THE BOOT TO THE PIPE SHALL BE STAINLESS STEEL--CORROSION RESISTANT CONFORMING TO ASTM SPECIFICATION A-307. THE BOOT SHALL BE DESIGNED TO ALLOW CONSIDERABLE DEFLECTION AND SHALL ALLOW FOR LATERAL AND VERTICAL ANGULAR ADJUSTMENT THRU 20 DEGREES IN ALL DIRECTIONS. ALL FIELD INSTALLATION OF PIPE THRU FLEXIBLE CONNECTION SHALL BE DONE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.

FLEXIBLE CONNECTION DETAIL

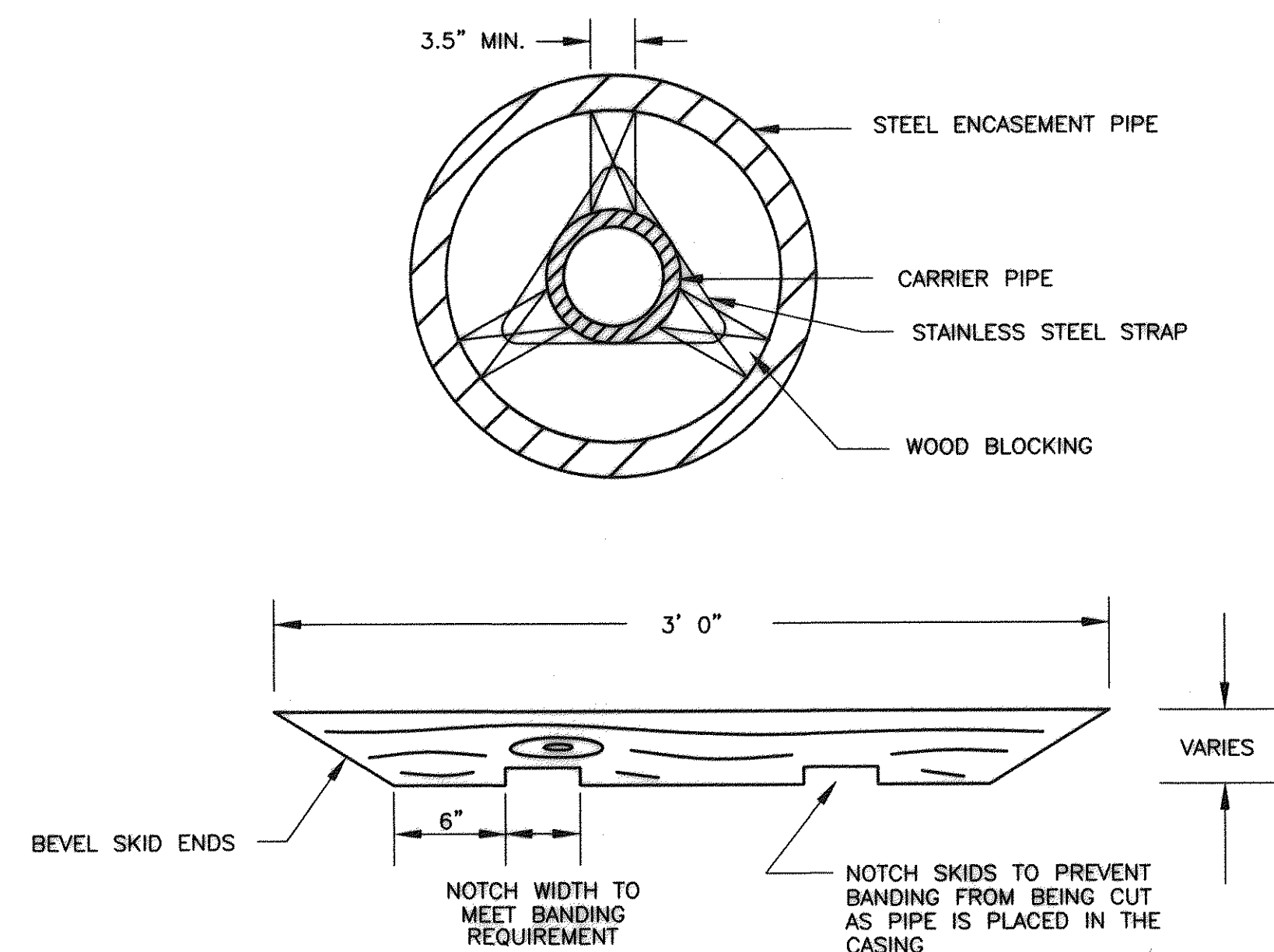
REF: 1993 VDOT ROAD AND BRIDGE STANDARDS DETAIL 1411.02



FOR RESIDENTIAL CONNECTIONS, LATERAL PIPES SHALL BE 4" DIA. PVC-SDR35 OR SCH. 40. FOR COMMERCIAL CONNECTIONS, THE LATERAL SIZE SHALL BE SPECIFIED ON THE PLANS BY THE ENGINEER.

TYPICAL SERVICE CONNECTION WITH CLEANOUT

NOT TO SCALE



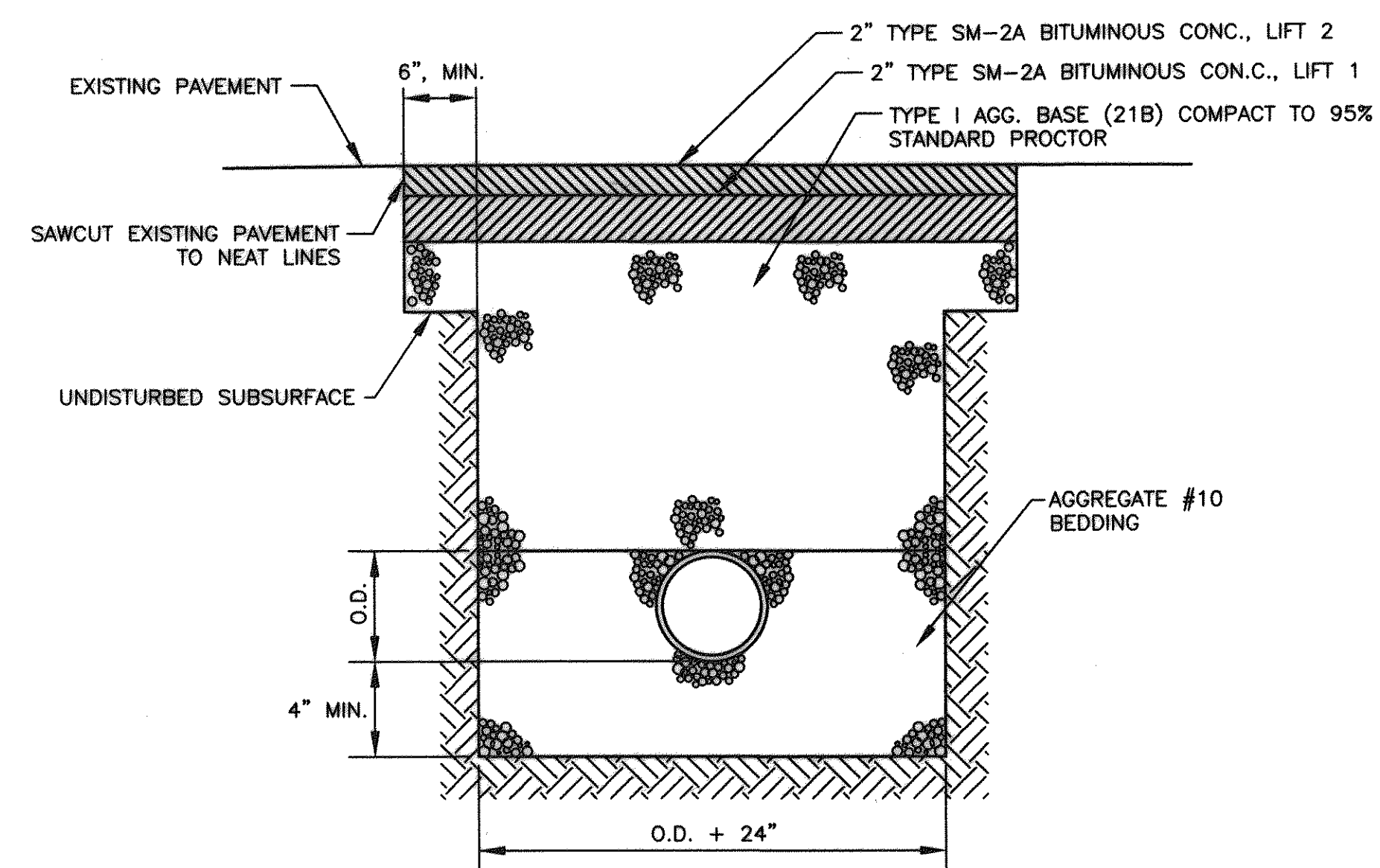
NOTES:

1. TIMBER SKIDS SHALL BE LOCUST, CYPRESS, PRESERVATIVE TREATED HARDWOOD, OR OTHER MATERIAL APPROVED BY THE ENGINEER.
2. TIMBER PRESERVATIVES SHALL BE USED ACCORDING TO THEIR SUITABILITY FOR THE CONDITION OF EXPOSURE TO WHICH THEY WILL BE SUBJECTED AND SHALL NOT BE USED INTERCHANGEABLY. TREATMENTS SHALL CONFORM TO THE FOLLOWING LIMITATIONS:
 - A. WATERBORNE PRESERVATIVES SHALL BE USED FOR TIMBER WHERE A CLEAN SURFACE IS DESIRABLE. THE MOISTURE CONTENT OF WOOD MATERIAL SHALL NOT BE MORE THAN 19 PERCENT AT THE TIME OF TREATMENT.
 - B. PRESERVATIVES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M133 EXCEPT THAT COAL TAR CREOSOTE SOLUTION WILL NOT BE PERMITTED.
 - C. PRESSURE TREATMENT SHALL CONFORM TO THE REQUIREMENTS OF AWPA C2.
3. METAL STRAPS AND CLIPS HOLDING BLOCKING TO CARRIER PIPE SHALL BE STAINLESS STEEL WITH A MINIMUM CROSS SECTION OF 0.014 SQ. IN. STRAP SPACING SHALL BE A MINIMUM OF TWO (2) BANDS PER SKID LENGTH.

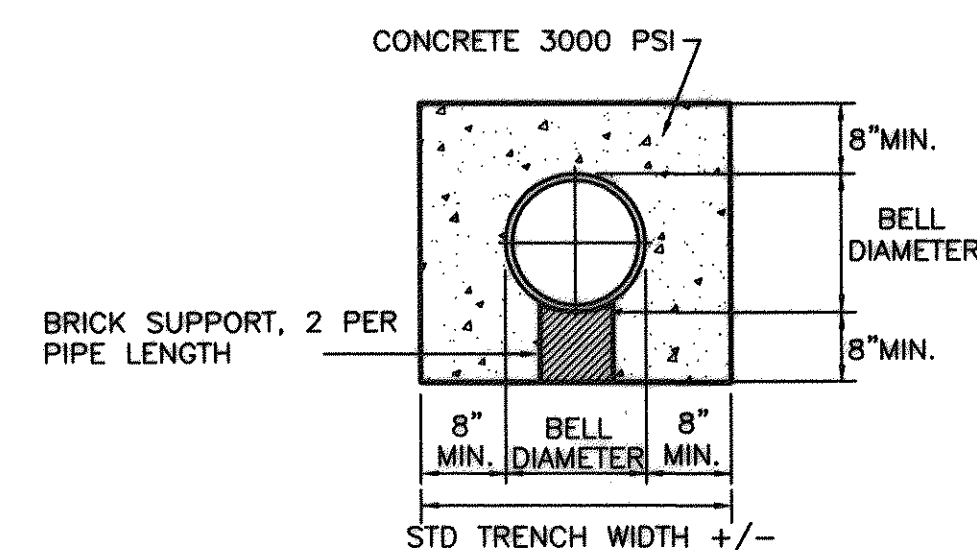
TIMBER SKID

NOT TO SCALE

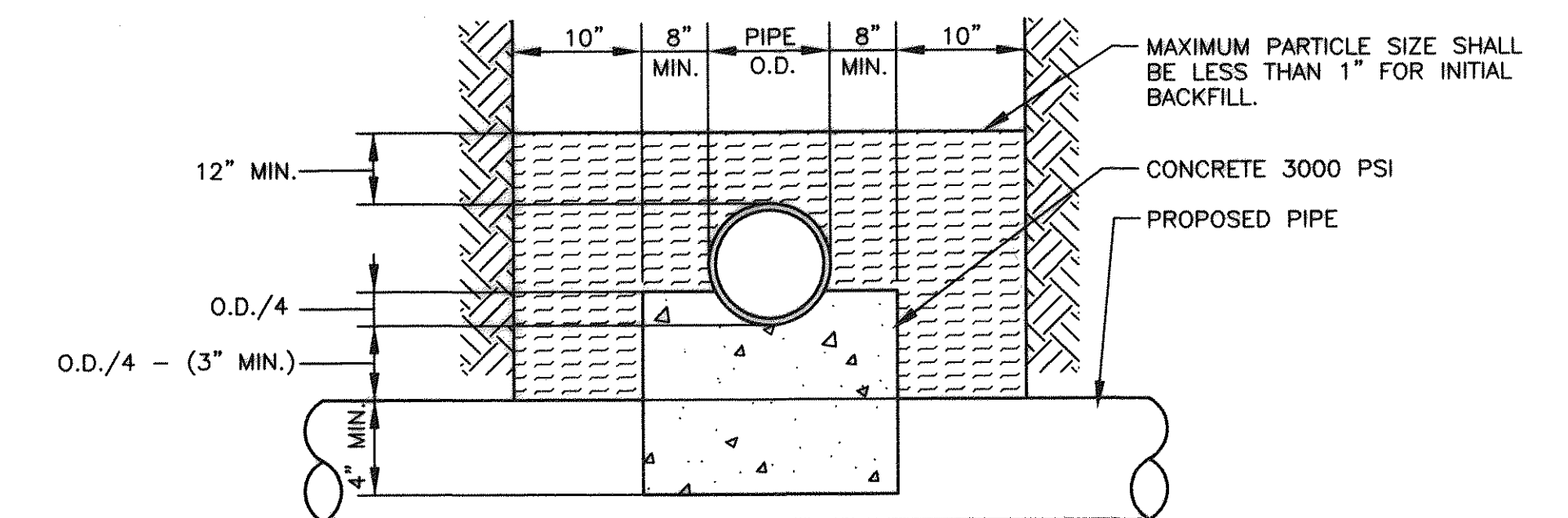
SOURCE: 1993 VDOT ROAD AND BRIDGE STANDARDS SEC. 1404.01



PAVEMENT REMOVAL AND REPLACEMENT DETAIL

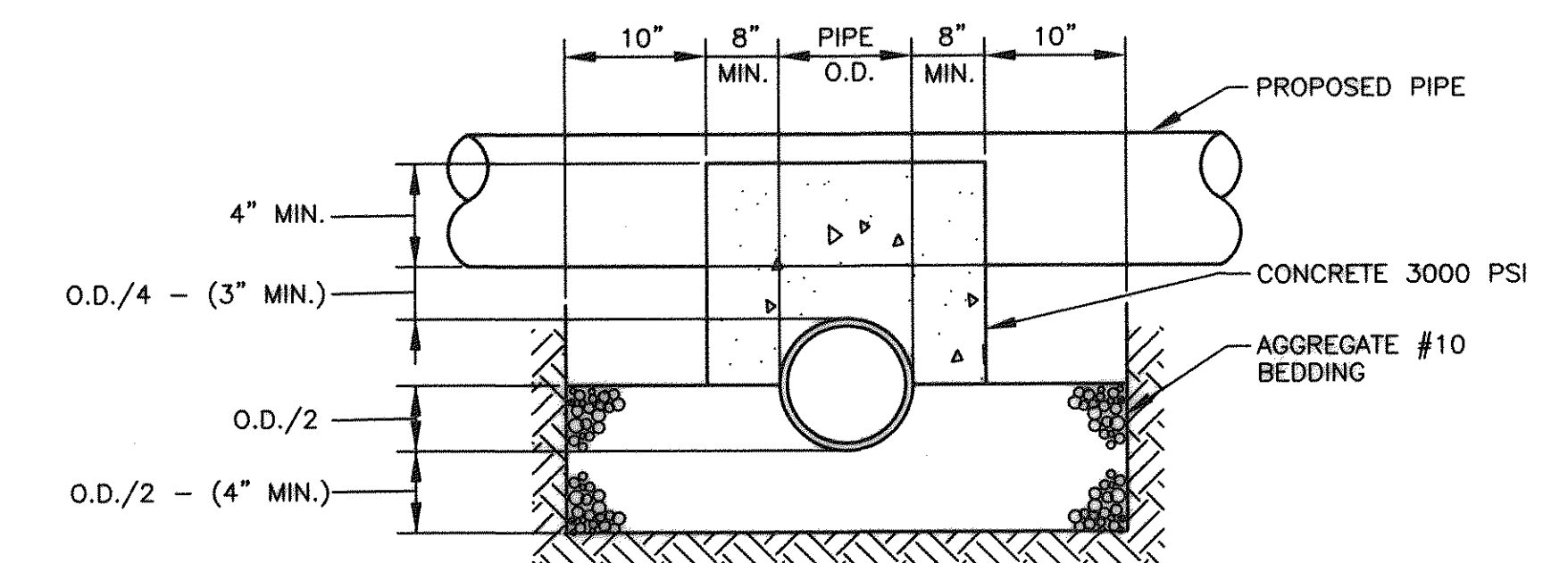


CONCRETE ENCASED PIPE



CONCRETE CRADLE

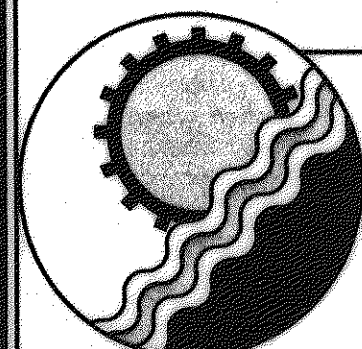
CONCRETE CRADLE OR CAP
SHALL FOLLOW THE PIPE
CONTOUR A MIN. OF 4"
ABOVE OR BELOW THE CROWN.



CONCRETE CAP

UTILITY PROTECTION DETAILS

REF: 1993 VDOT ROAD AND BRIDGE STANDARDS DETAIL 1401.01



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AS-BUILT

No.	Revision	By	Appd.	Date	Drawn	GREENFIELD COLLECTOR AND TINKER CREEK EXTENSION SANITARY SEWER DETAILS	NONE
1	BEDDING SPEC.	SCG	WPJ	1/30/97	JHG		DECEMBER 1996
					Designed SCG		
					Checked WPJ/JST		PROJECT: 96081
					Approved WPJ		21 of 27