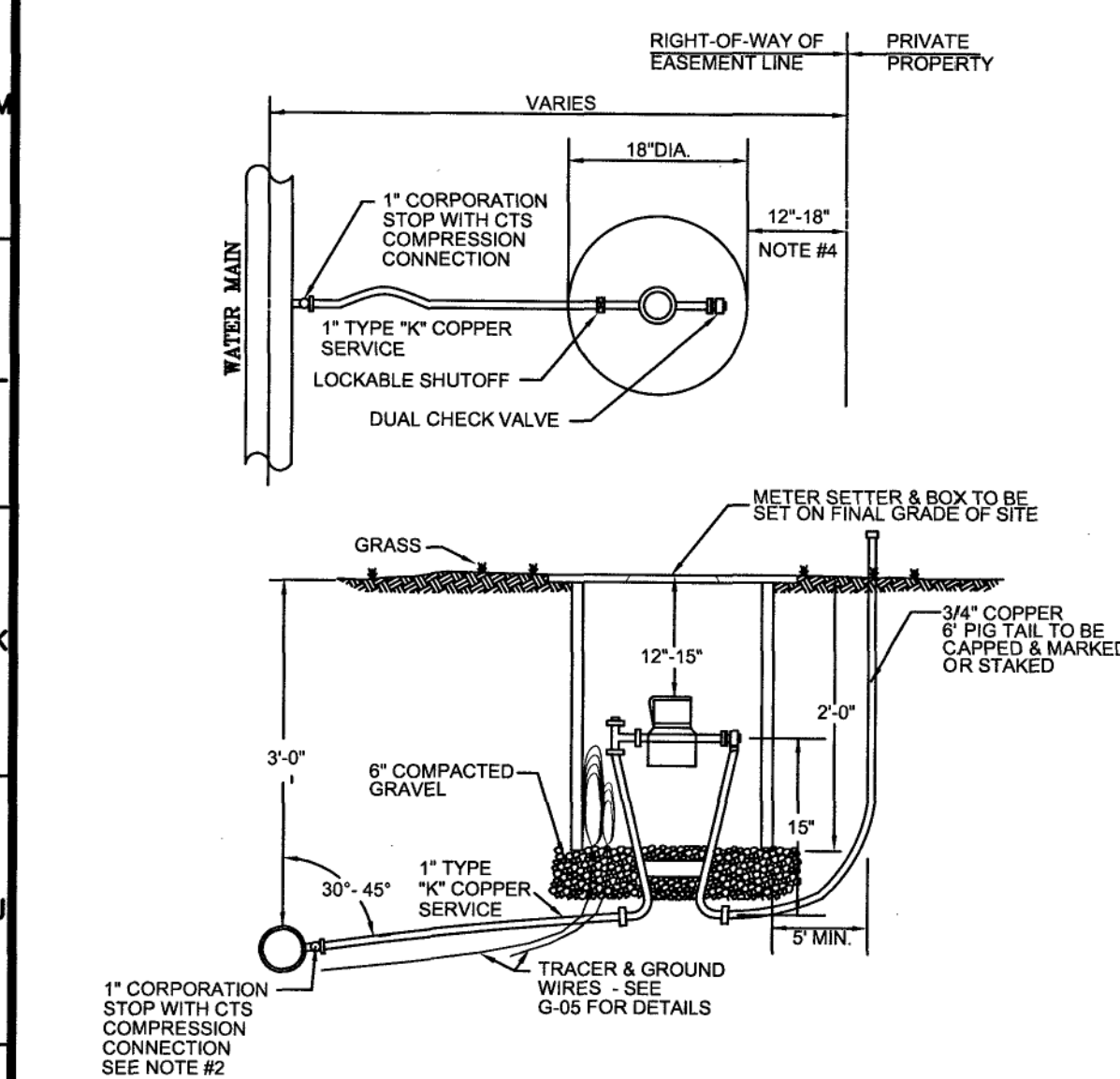
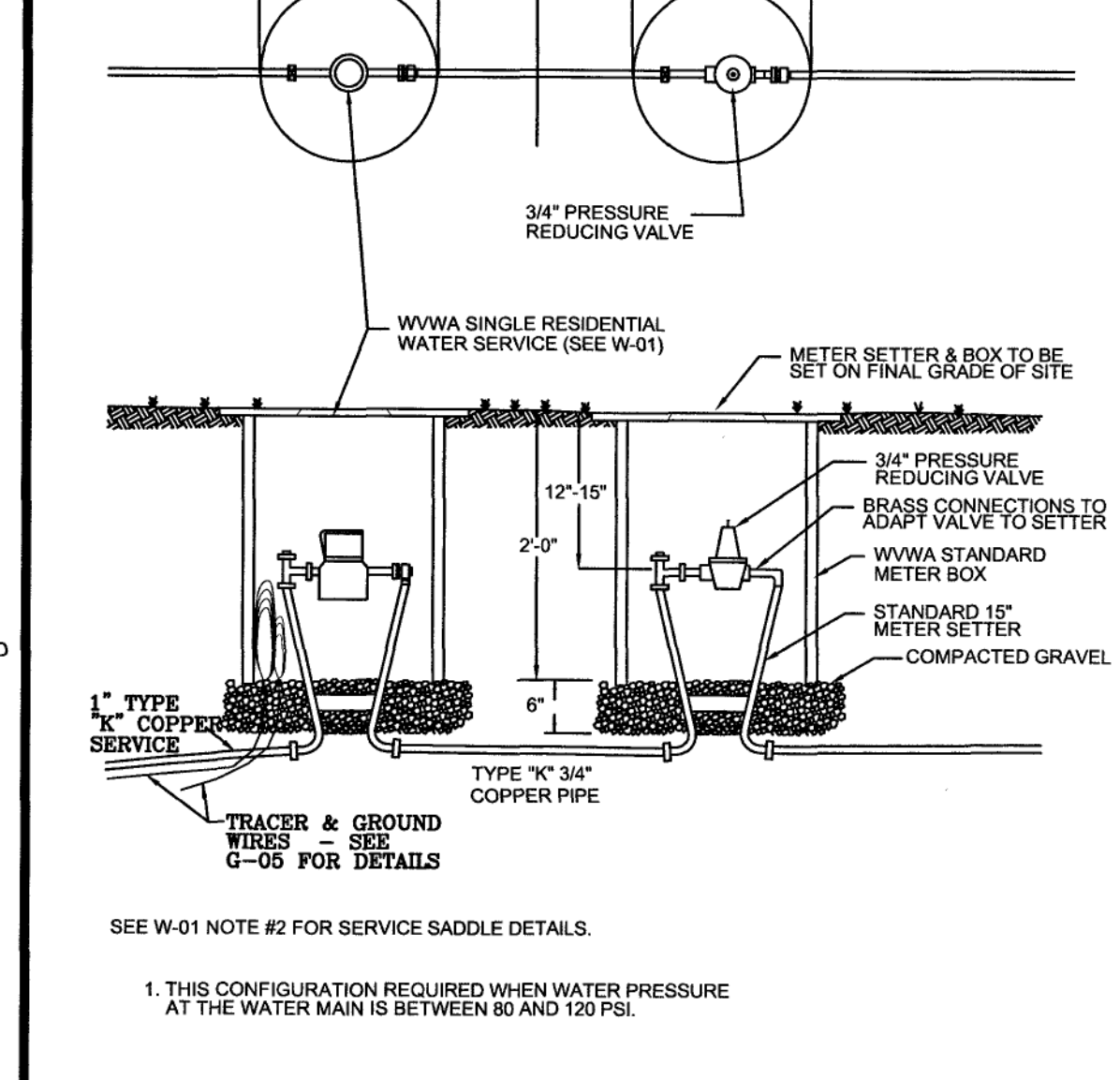


1. SETTER TO BE A.Y. McDONALD #20-215 WDD33, FORD VBHT72-15W-1133 OR APPROVED EQUAL.
2. SADDLES MUST BE USED WITH ALL PLASTIC & CLASS 50 DUCTILE IRON PIPE. SERVICE SADDLES SHALL BE USED IN ACCORDANCE WITH SECTION 2665 OF THE WATER STANDARDS. SERVICE SADDLES FOR PLASTIC PIPE SHALL BE POWERSEAL 3417, OR 3412AS, ROMAC 202S, OR 308, OR FORD METER F202 OR F203. FOR DUCTILE IRON PIPE USE THE ABOVE OR POWERSEAL 3413, ROMAC 202 OR FORD METER F202.
3. METER BOX MUST BE CARSONMID-STATES PLASTICS, INC. PLASTIC BOX WITH FORD A22-1 (ELECTRONIC READ LID) OR A.Y. McDONALD MODEL 74M202-TO CAST IRON BASE & COVER OR APPROVED EQUAL. USE OF TRAFFIC BEARING BOX SHALL BE APPROVED BY THE AUTHORITY. TRAFFIC BEARING BOX SHALL BE CARSONMID-STATES PLASTICS H20 OR EQUIVALENT AND LID SHALL BE FORD METER BOX G3H OR EQUIVALENT.
4. WHENEVER SIDEWALK EXISTS OR IS PROPOSED, MODIFY METER LOCATION AS DIRECTED.
5. CORPORATION STOP MUST BE FORD F1000-4-G OR APPROVED EQUAL.



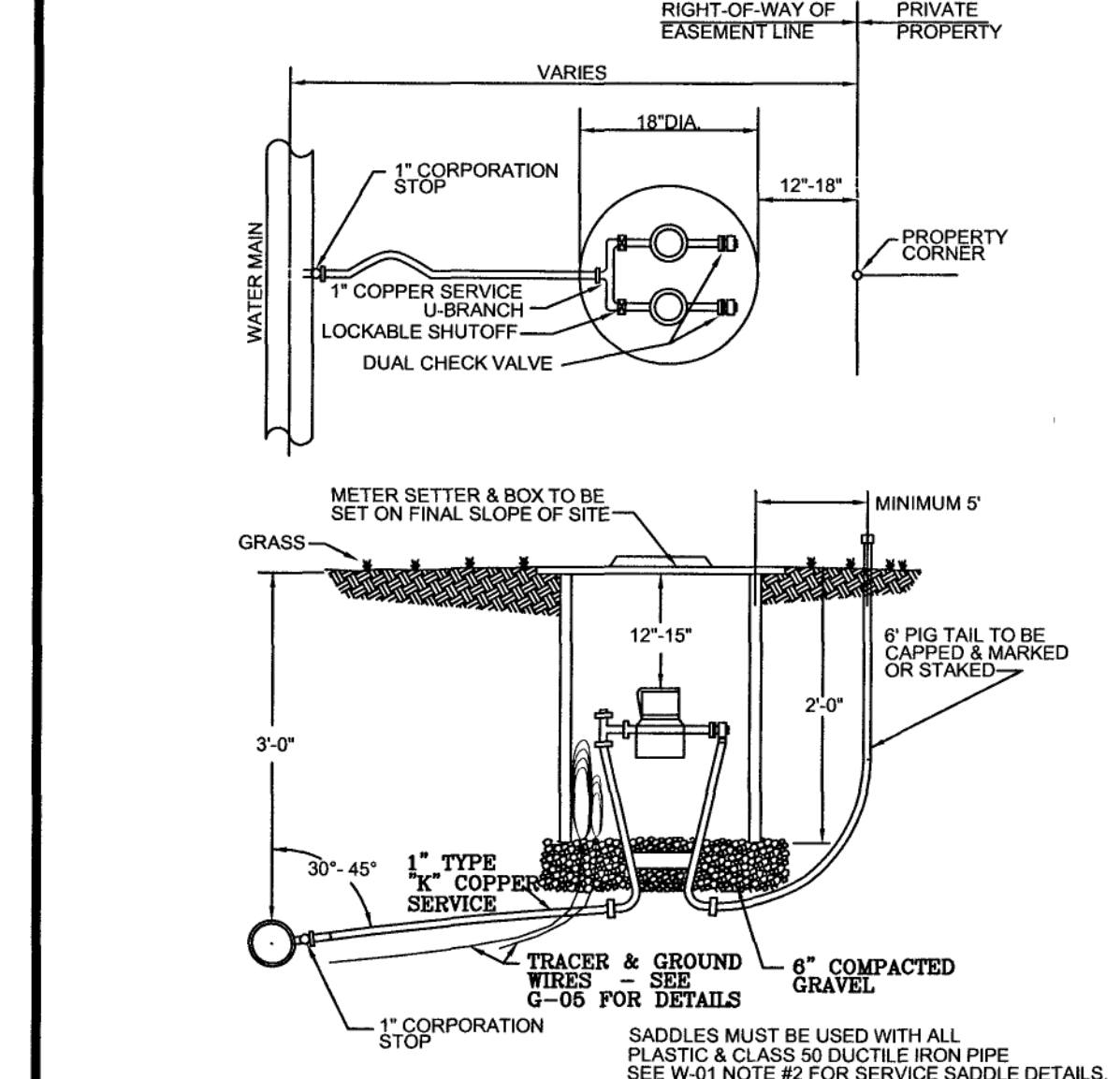
WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS			
REVISION DATE	DESCRIPTION	W-01	
07/01/04			
03/01/06			

1. SETTER TO BE A.Y. McDONALD #20-215 WDD33, FORD VBHT72-15W-1133 OR APPROVED EQUAL.
2. METER BOX MUST BE CARSONMID-STATES PLASTICS, INC. PLASTIC BOX WITH FORD A22-1 (ELECTRONIC READ LID) OR A.Y. McDONALD MODEL 74M202-TO CAST IRON BASE & COVER OR APPROVED EQUAL.
3. CORPORATION STOP MUST BE FORD F1000-4-G OR APPROVED EQUAL.



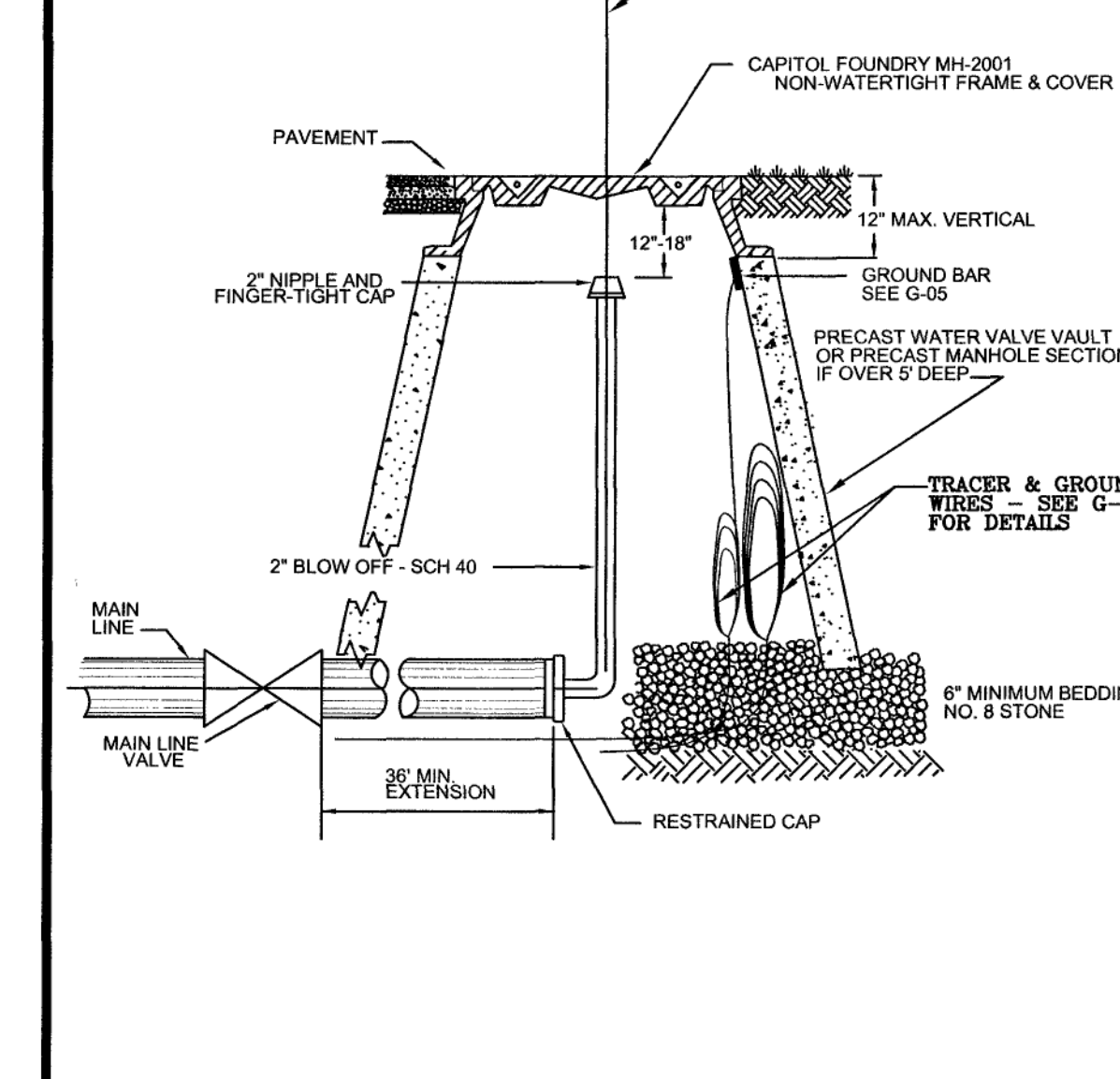
WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS			
REVISION DATE	DESCRIPTION	W-02	
07/01/04			
03/01/06			

1. SETTER TO BE A.Y. McDONALD #20-215 WDD33, FORD VBHT72-15W-1133 OR APPROVED EQUAL.
2. METER BOX MUST BE CARSONMID-STATES PLASTICS, INC. PLASTIC BOX WITH FORD A22-1 (ELECTRONIC READ LID) OR A.Y. McDONALD MODEL 74M202-TO CAST IRON BASE & COVER OR APPROVED EQUAL.
3. CORPORATION STOP MUST BE FORD F1000-4-G OR APPROVED EQUAL.



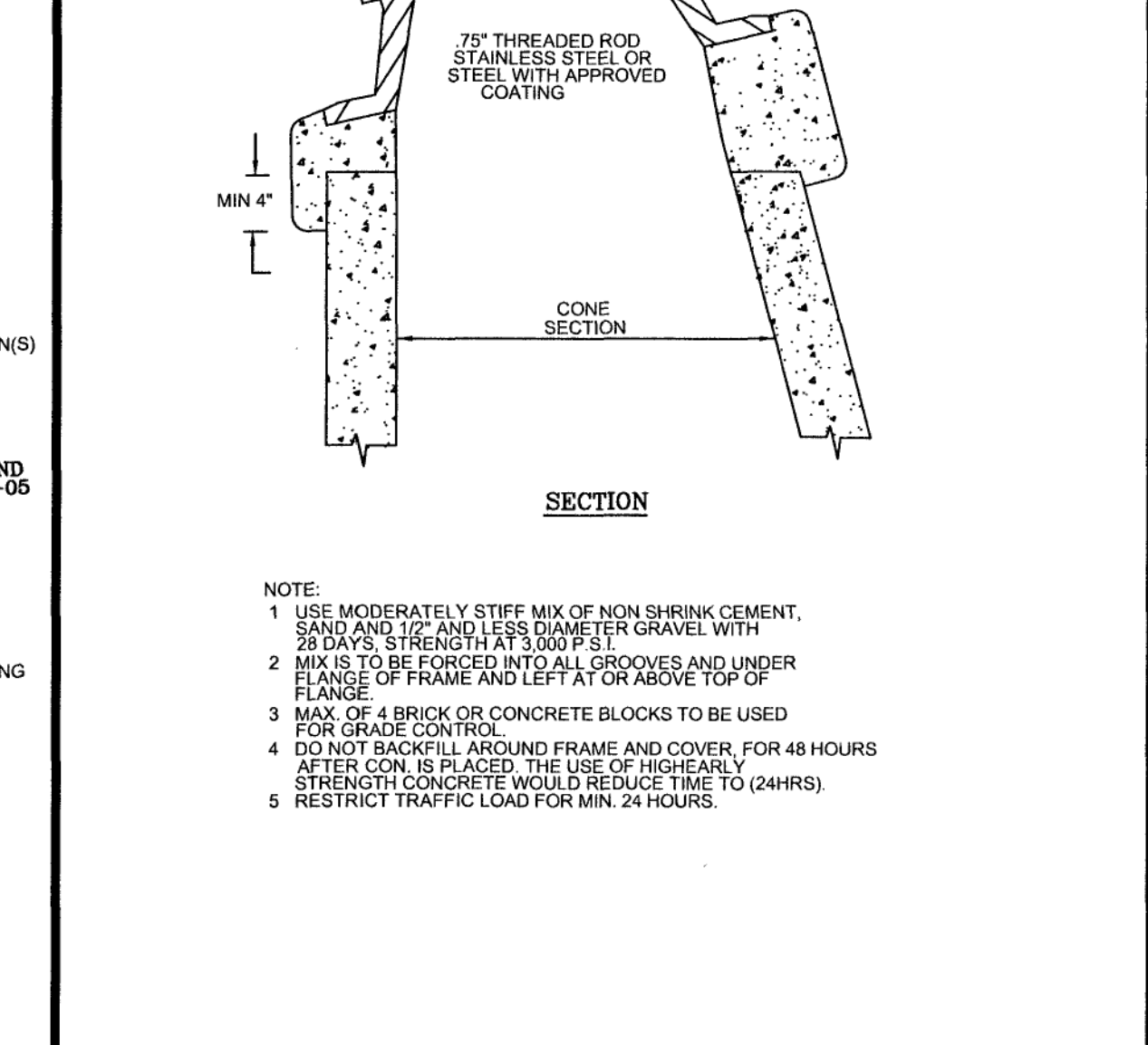
WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS			
REVISION DATE	DESCRIPTION	W-04	
07/01/04			
03/01/06			

1. SETTER TO BE A.Y. McDONALD #20-215 WDD33, FORD VBHT72-15W-1133 OR APPROVED EQUAL.
2. METER BOX MUST BE CARSONMID-STATES PLASTICS, INC. PLASTIC BOX WITH FORD A22-1 (ELECTRONIC READ LID) OR A.Y. McDONALD MODEL 74M202-TO CAST IRON BASE & COVER OR APPROVED EQUAL.
3. CORPORATION STOP MUST BE FORD F1000-4-G OR APPROVED EQUAL.



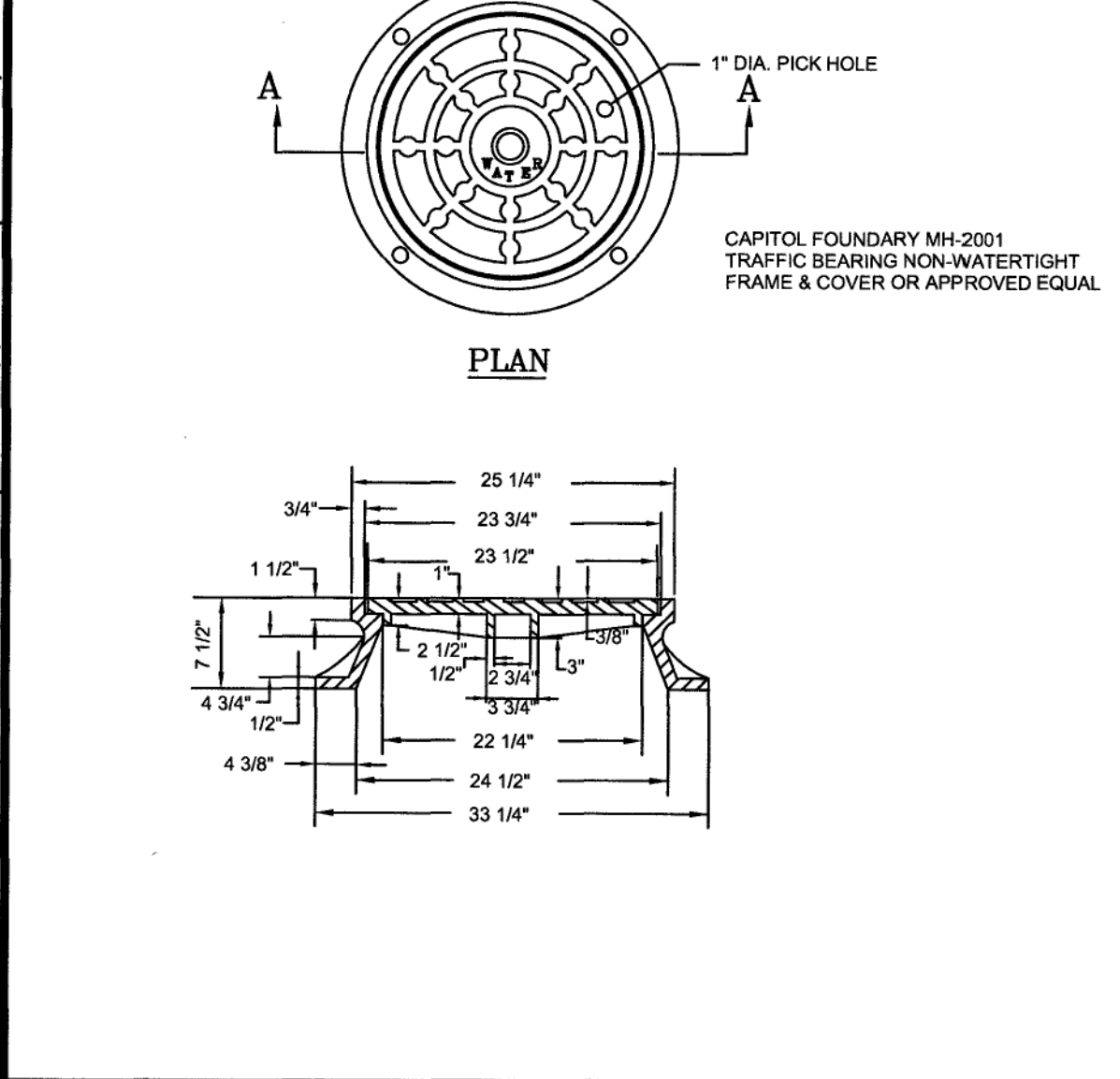
WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS			
REVISION DATE	DESCRIPTION	W-10	
07/01/04			
03/01/06			

1. SETTER TO BE A.Y. McDONALD #20-215 WDD33, FORD VBHT72-15W-1133 OR APPROVED EQUAL.
2. METER BOX MUST BE CARSONMID-STATES PLASTICS, INC. PLASTIC BOX WITH FORD A22-1 (ELECTRONIC READ LID) OR A.Y. McDONALD MODEL 74M202-TO CAST IRON BASE & COVER OR APPROVED EQUAL.
3. CORPORATION STOP MUST BE FORD F1000-4-G OR APPROVED EQUAL.



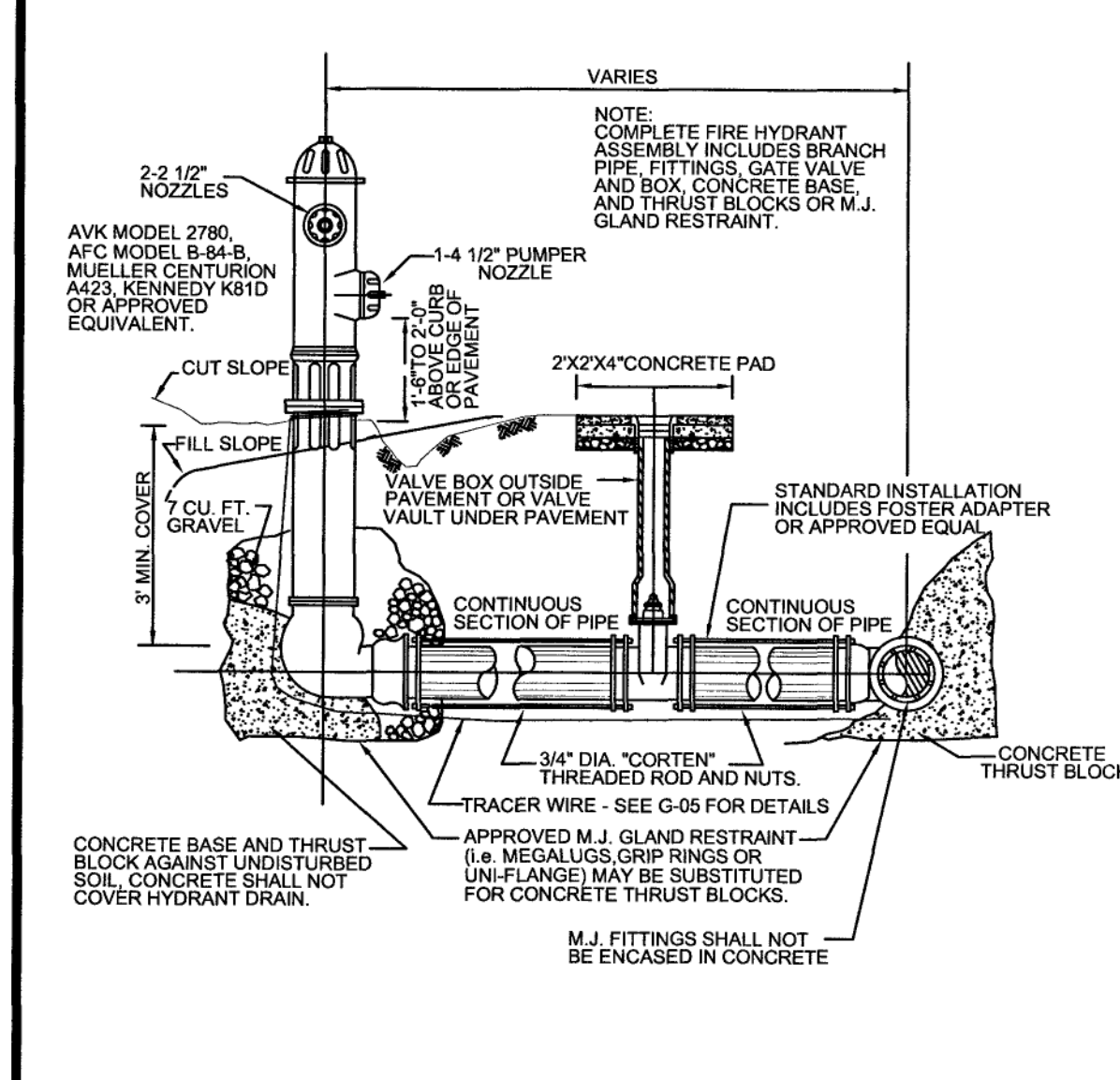
WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS			
REVISION DATE	DESCRIPTION	W-16	
07/01/04			
03/01/06			

1. PUBLIC HYDRANTS SHALL BE PAINTED SILVER WITH AN OIL-BASED PAINT AND PRIVATE HYDRANTS SHALL BE PAINTED WHITE WITH AN OIL-BASED PAINT.
2. FIRE HYDRANT SHALL BE INSTALLED 2' MIN. AND 4' MAX. FROM BACK OF CURB OR 6' MIN. AND 12' MAX. WHEN CURB IS NOT PRESENT, FIRE HYDRANT TO BE INSTALLED WITHIN RIGHT-OF-WAY OR EASEMENT LINE.
3. AREA AROUND HYDRANT AT A RADIUS OF 4' TO BE LEVEL AND UNOBSTRUCTED.
4. WATERPROOF BAGS SHALL BE PLACED OVER ALL NEWLY INSTALLED FIRE HYDRANTS.
5. HIGH PRESSURE (OVER 120 PSI) REQUIRES THE USE ALL 3 RESTRAINTS.



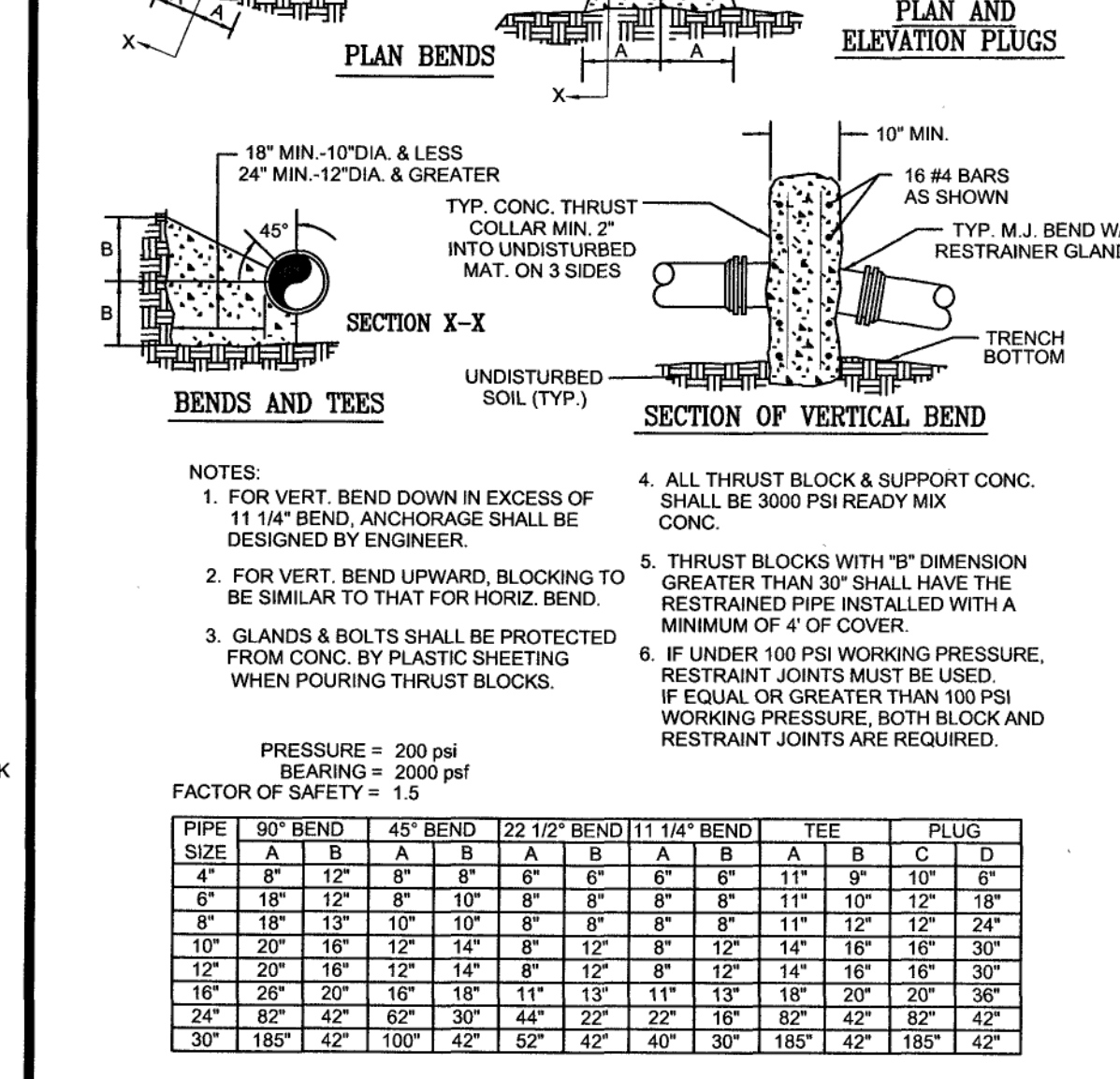
WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS			
REVISION DATE	DESCRIPTION	W-17	
07/01/04			
03/01/06			

1. FOR VERT. BEND DOWN IN EXCESS OF 11 1/4" BEND, ANCHORAGE SHALL BE DESIGNED BY ENGINEER.
2. FOR VERT. BEND UPWARD, BLOCKING TO BE SIMILAR TO THAT FOR HORIZ. BEND.
3. GLANDS & BOLTS SHALL BE PROTECTED FROM CONC. BY PLASTIC SHEETING WHEN POURING THRUST BLOCKS.



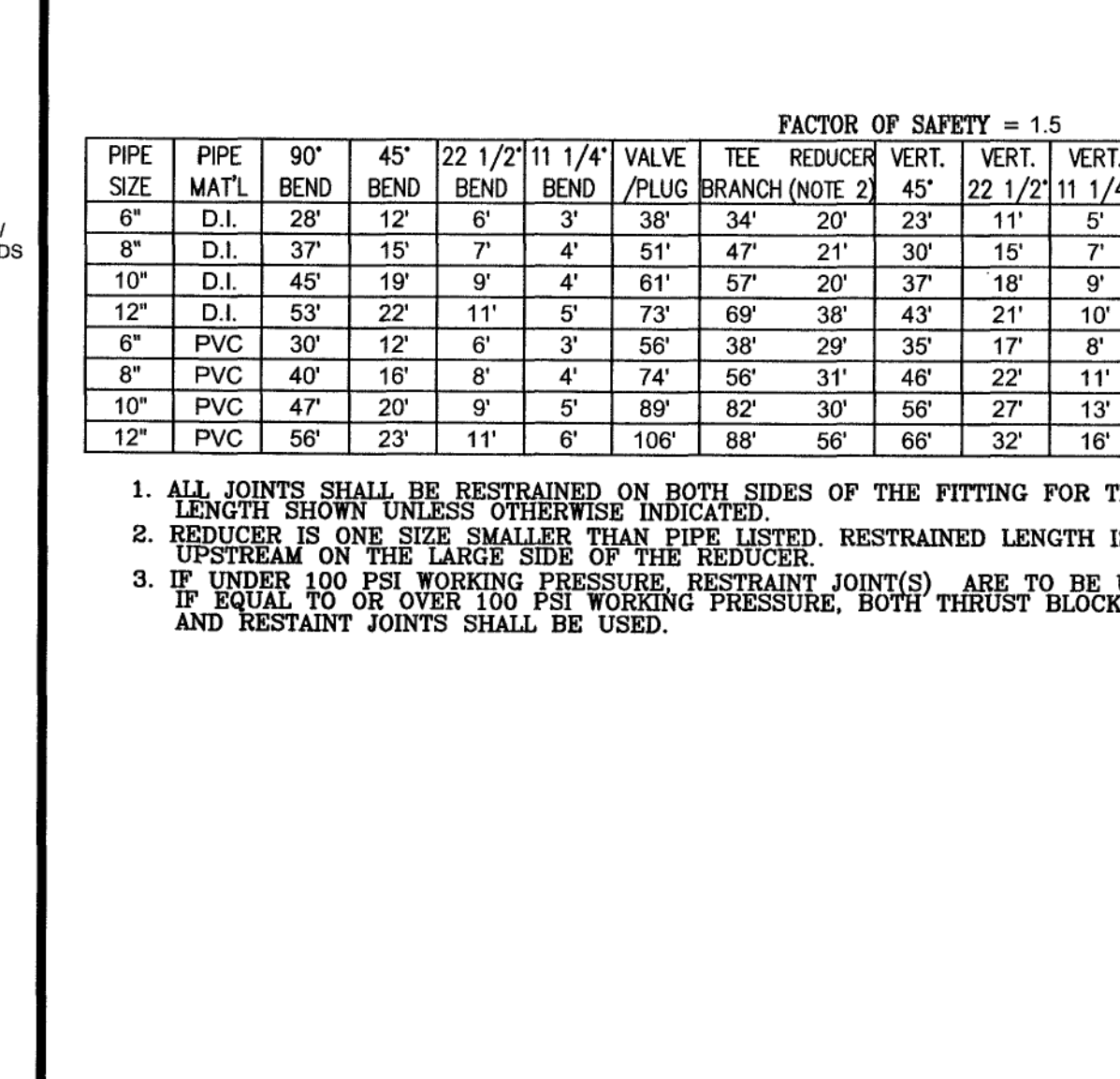
WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS			
REVISION DATE	DESCRIPTION	W-18	
07/01/04			
03/01/06			

1. FOR VERT. BEND DOWN IN EXCESS OF 11 1/4" BEND, ANCHORAGE SHALL BE DESIGNED BY ENGINEER.
2. FOR VERT. BEND UPWARD, BLOCKING TO BE SIMILAR TO THAT FOR HORIZ. BEND.
3. GLANDS & BOLTS SHALL BE PROTECTED FROM CONC. BY PLASTIC SHEETING WHEN POURING THRUST BLOCKS.



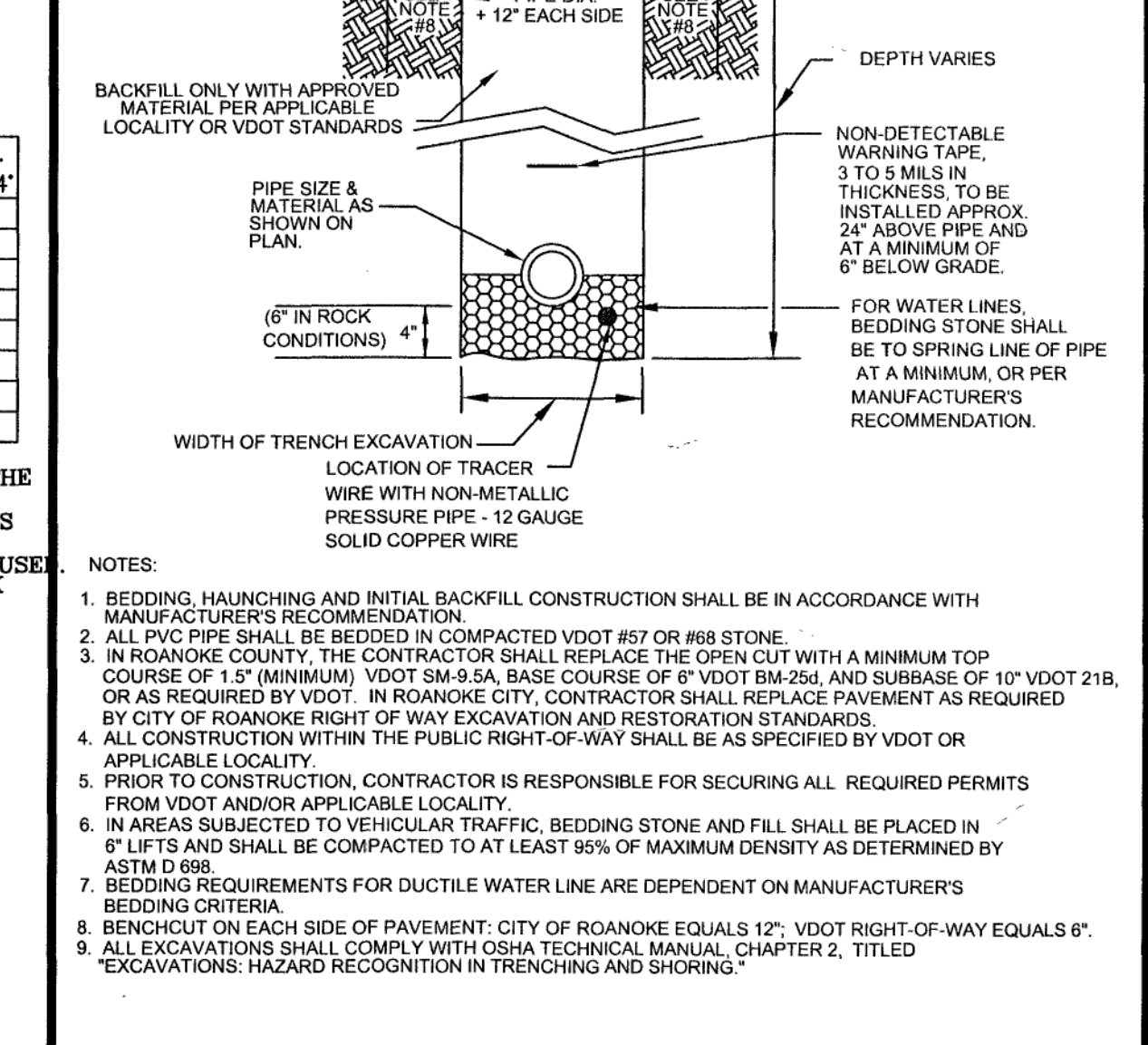
WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS			
REVISION DATE	DESCRIPTION	W-19	
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03/01/06			

1. ALL JOINTS SHALL BE RESTRAINED ON BOTH SIDES OF THE FITTING FOR THE LENGTH SHOWN UNLESS OTHERWISE INDICATED.
2. REDUCER IS ONE SIZE SMALLER THAN PIPE LISTED. RESTRAINED LENGTH IS UPSTREAM ON THE LARGE SIDE OF THE REDUCER.
3. IF UNDER 100 PSI WORKING PRESSURE, RESTRAINT JOINT(S) ARE TO BE USED IF EQUAL TO OR OVER 100 PSI WORKING PRESSURE, BOTH THRUST BLOCK AND RESTRAINT JOINTS SHALL BE USED.



WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS			
REVISION DATE	DESCRIPTION	W-20	
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1. BEDDING, HAUNCHING AND INITIAL BACKFILL CONSTRUCTION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION.
2. ALL PVC PIPE SHALL BE BEDDED IN COMPACTED VDOT #57 OR #68 STONE.
3. IN ROANOKE COUNTY, THE CONTRACTOR SHALL REPLACE THE OPEN CUT WITH A MINIMUM TOP COURSE OF 1' (MINIMUM) VDOT SM-9A BASE COURSE OF 8" VDOT BM-25U, AND SUBBASE OF 10" VDOT 21B, OR AS REQUIRED BY VDOT. IN ROANOKE CITY, CONTRACTOR SHALL REPLACE PAVEMENT AS REQUIRED BY CITY OF ROANOKE RIGHT OF WAY EXCAVATION AND RESTORATION STANDARDS.
4. ALL CONSTRUCTION WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE AS SPECIFIED BY VDOT OR APPLICABLE LOCALITY.
5. PRIOR TO CONSTRUCTION, CONTRACTOR IS RESPONSIBLE FOR SECURING ALL REQUIRED PERMITS FROM VDOT AND/OR APPLICABLE LOCALITY.
6. IN AREAS SUBJECTED TO VEHICULAR TRAFFIC, BEDDING STONE AND FILL SHALL BE PLACED IN 6" LIFTS AND SHALL BE COMPACTED TO AT LEAST 95% OF MAXIMUM DENSITY AS DETERMINED BY BEDDING CRITERIA.
7. BEDDING REQUIREMENTS FOR DUCTILE IRON PIPE ARE DEPENDENT ON MANUFACTURER'S BEDDING CRITERIA.
8. BENCH CUT ON EACH SIDE OF PAVEMENT: CITY OF ROANOKE EQUALS 12"; VDOT RIGHT-OF-WAY EQUALS 6".
9. ALL EXCAVATIONS SHALL COMPLY WITH OSHA TECHNICAL MANUAL, CHAPTER 2, TITLED "EXCAVATIONS: HAZARD RECOGNITION IN TRENCHING AND SHORING."



WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS			
REVISION DATE	DESCRIPTION	W-25	
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