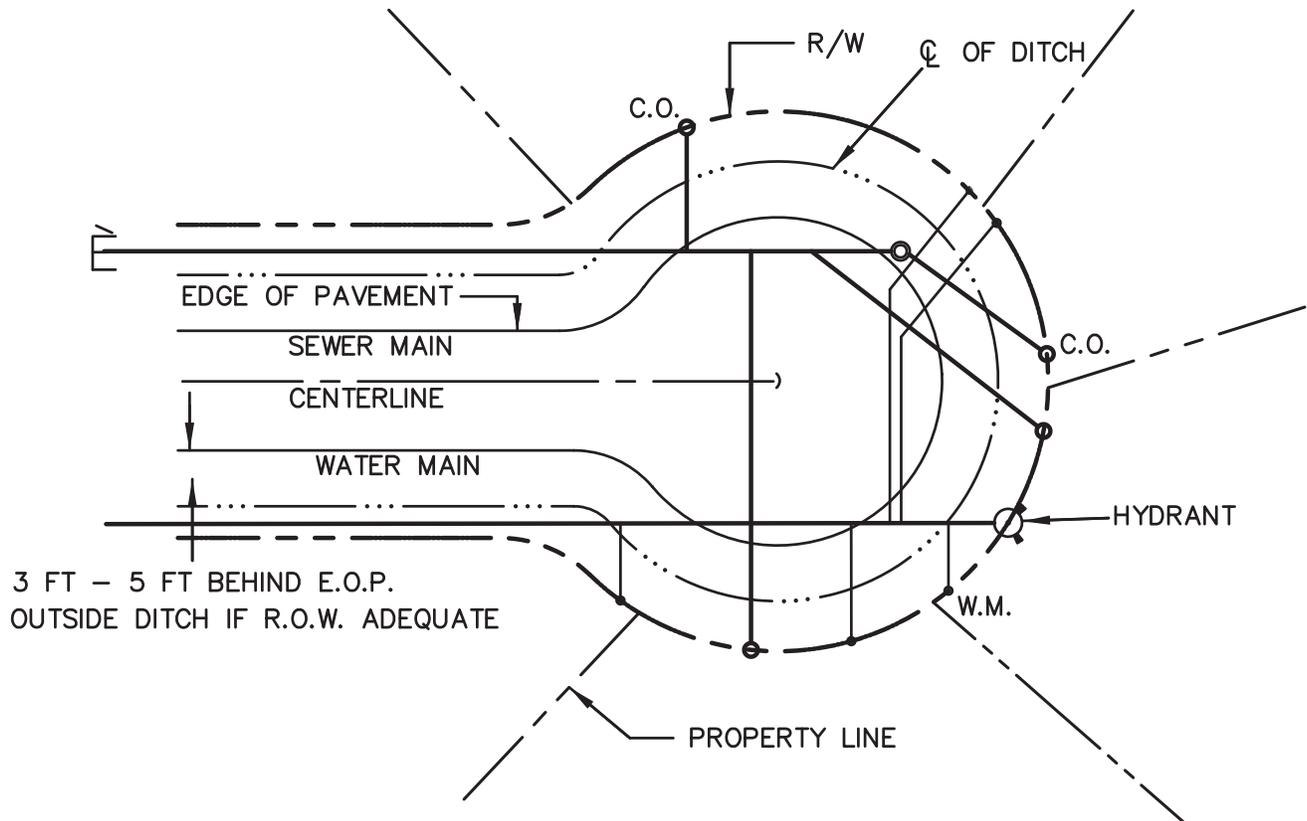


NOTES:

1. INSTALL SEWER LATERALS WITH TYPICAL 10 FOOT CLEARANCE TO WATER SERVICE LINES. SEE DETAIL "LATERAL SEWER CONNECTION"
2. IN THE EVENT THAT THE WATER SERVICES AND BOXES CANNOT BE ARRANGED AS REFLECTED IN THIS DETAIL, AT LEAST 10 FEET HORIZONTAL SEPARATION IS REQUIRED BETWEEN THE WATER METER BOX/SERVICE LINE AND HYDRANT.
3. INSTALL WATER AND SEWER CONNECTIONS AT 10 FEET APART TYPICALLY AT THE CENTER OF THE LOT BEING SERVED.
4. PROVIDE WATER AND SEWER SERVICE TO ALL LOTS IMMEDIATELY ADJACENT TO THE CONSTRUCTION.
5. WITH VDOT APPROVAL OR PRIVATE RIGHT-OF-WAY UTILITIES MAY BE LOCATED UNDER PAVEMENT

Not to Scale

DATE April 2013	Spotsylvania County Department of Utilities	<h1 style="margin: 0;">Typical Utility Installation</h1> <h2 style="margin: 0;">Curb and Gutter</h2>	DRWG. NO.
REVISIONS August 2018			<h1 style="margin: 0;">G1</h1>

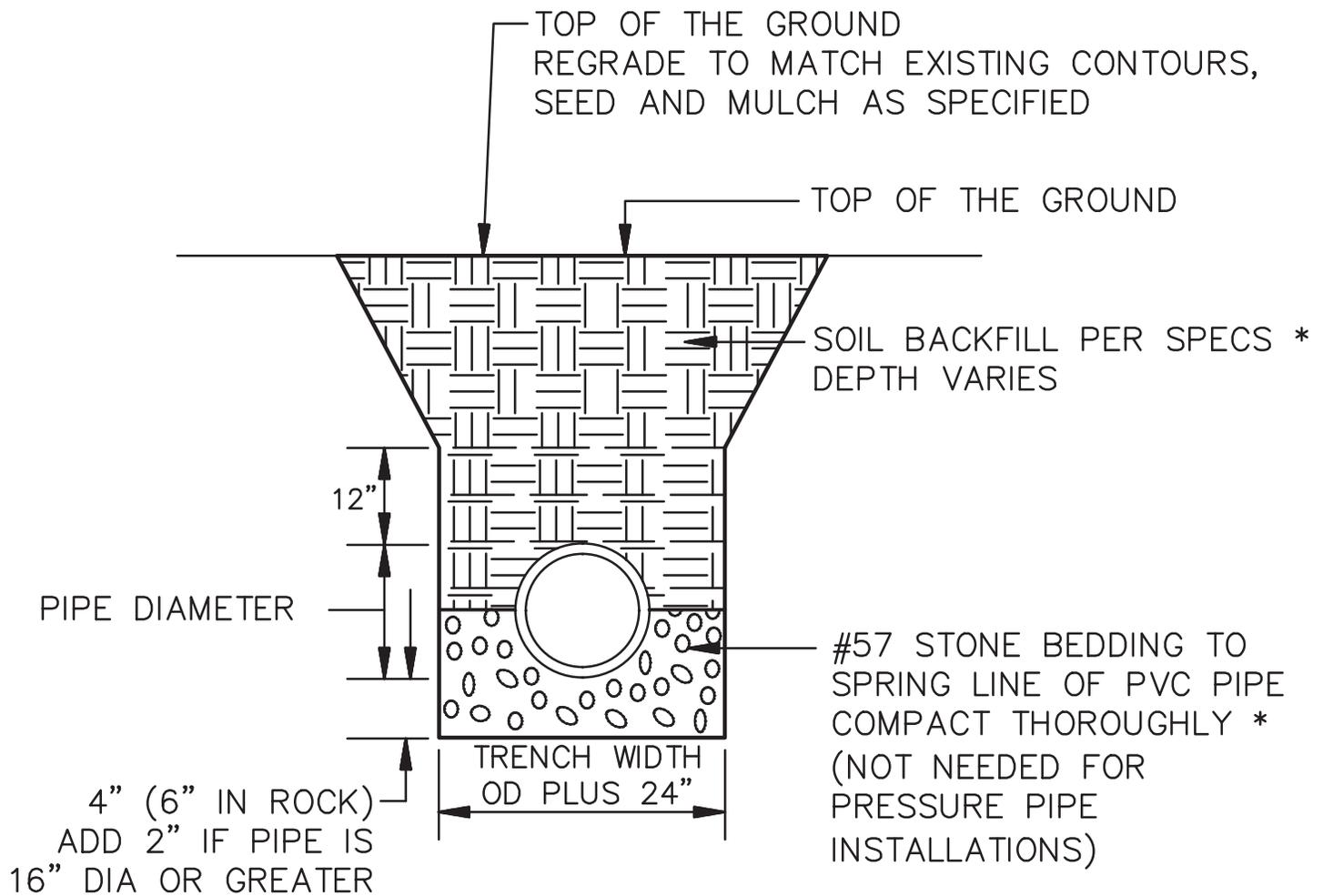


NOTES:

1. HYDRANT IS TO BE PLACED BETWEEN THE DITCH AND EDGE OF PAVEMENT ON LEVEL GROUND. IF THIS IS NOT POSSIBLE, THE UTILITY CONSTRUCTION INSPECTOR MUST BE CONSULTED. HYDRANT SHOULD BE 1' IN FRONT OF PROPERTY PIN OR BEYOND DITCH, MINIMUM 3.5' COVER UNDER DITCH.
2. IN THE EVENT THAT THE WATER SERVICES AND BOXES CANNOT BE ARRANGED AS REFLECTED IN THIS DETAIL, AT LEAST 10 FEET HORIZONTAL SEPARATION IS REQUIRED BETWEEN THE WATER METER BOX/SERVICE LINE AND HYDRANT.
3. INSTALL SEWER LATERALS WITH TYPICAL 10 FOOT CLEARANCE TO WATER SERVICE LINES. SEE DETAIL "LATERAL SEWER CONNECTION".
4. INSTALL WATER AND SEWER CONNECTIONS AT 10 FEET APART TYPICALLY AT THE CENTER OF THE LOT BEING SERVED.
5. PROVIDE WATER AND SEWER SERVICE TO ALL LOTS IMMEDIATELY ADJACENT TO THE CONSTRUCTION.
6. WATER SERVICES TO BE IN A PVC CONDUIT AT ROAD CROSSINGS. CONNECTION POINTS SHALL BE GLUED OR INTERDUCT.

Not to Scale

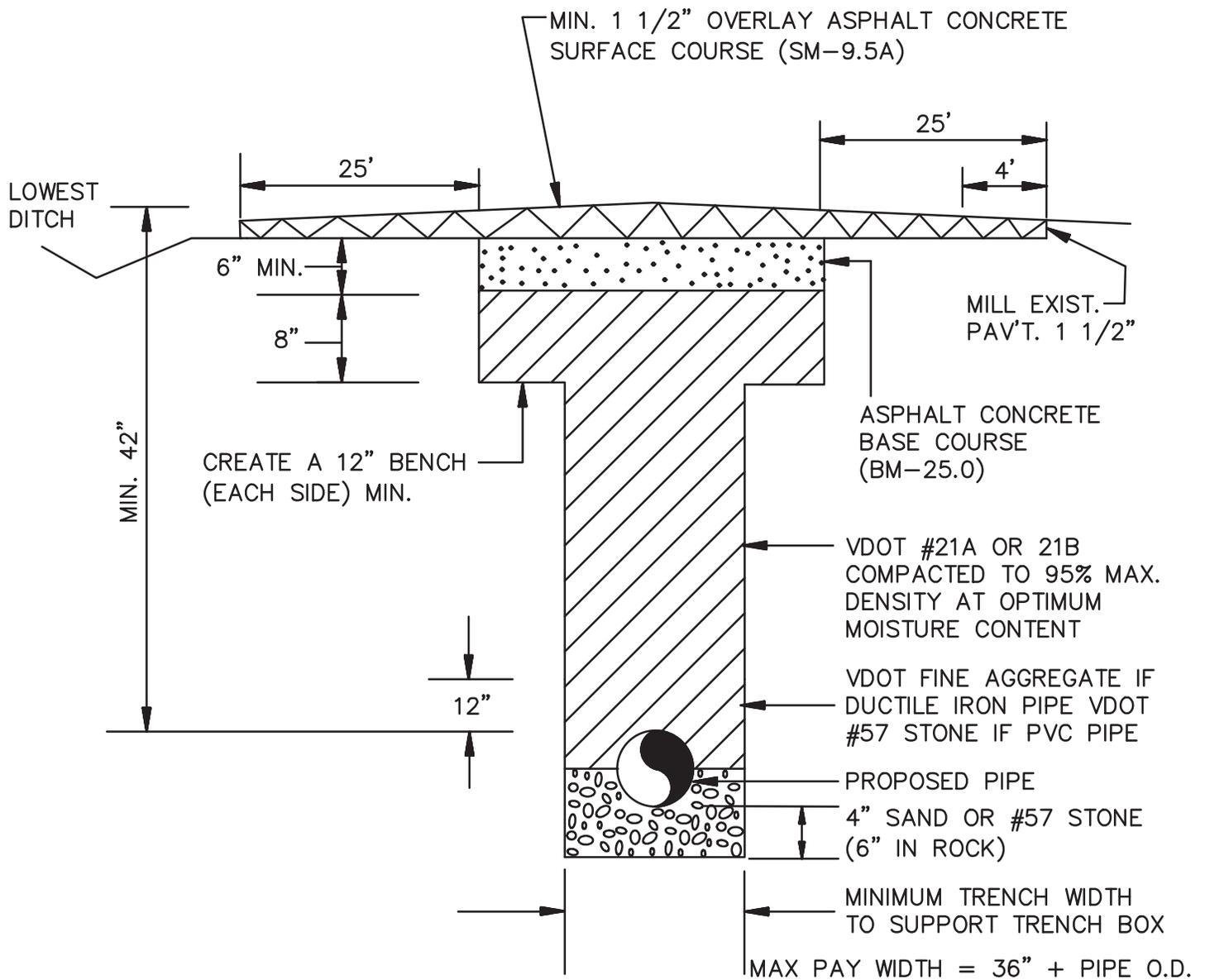
DATE April 2013	Spotsylvania County Department of Utilities	Typical Utility Installation Ditch	DRWG. NO.
REVISIONS August 2018			G2



* COMPACT TO 95% OF THEORETICAL DENSITY IF WITHIN 10 FT. OF ROAD SHOULDER, PAVEMENT OR STRUCTURES, AND 85% ELSEWHERE.

Not to Scale

DATE April 2013	Spotsylvania County Department of Utilities	PVC or DI Pipe Trench Unpaved Areas	DRWG. NO. G3
REVISIONS March 2017			



NOTES:

- A. RESTORATION SHOWN. FOR NEW PAVEMENT, INSTALL PIPE AS ABOVE, AND CONSTRUCT PAVEMENT SEPARATELY AS A SINGLE UNIT.
- B. FOR PARALLEL WORK, A COPY OF A DENSITY TEST RESULTS TAKEN EVERY 6 INCHES OF FILL MUST BE FURNISHED BY THE CONTRACTOR TO VDOT. THE TEST RESULTS MUST VERIFY THAT TESTS WERE TAKEN AT A MINIMUM SPACING OF EVERY 100 FEET ALONG THE TRENCH.
- C. COMPACT BEDDING AND BACKFILL TO 95% OF THEORETICAL DENSITY.
- D. RE-STRIPE PAVEMENT TO MATCH PRE-CONSTRUCTION CONDITIONS

Not to Scale

Pipe Trench
Existing Asphalt Surfaces
and Roadways

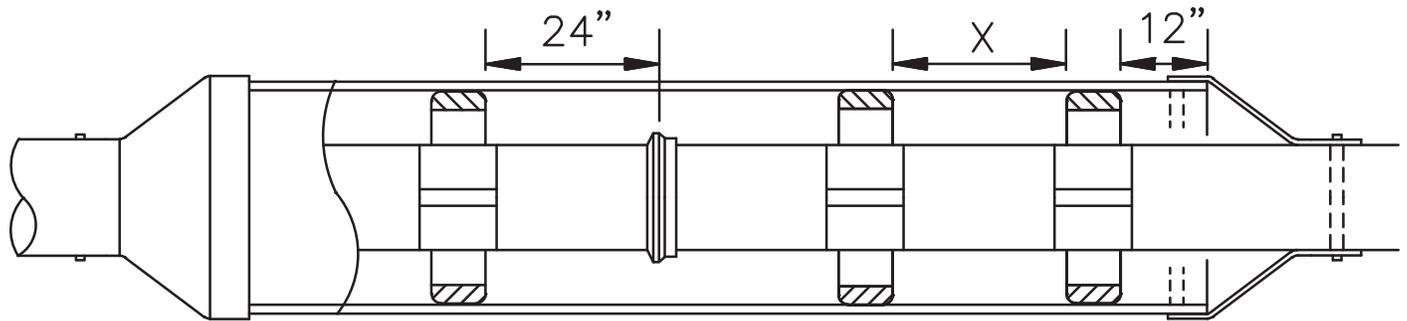
DATE
April 2013

REVISIONS

Spotsylvania County
Department of Utilities

DRWG. NO.

G4

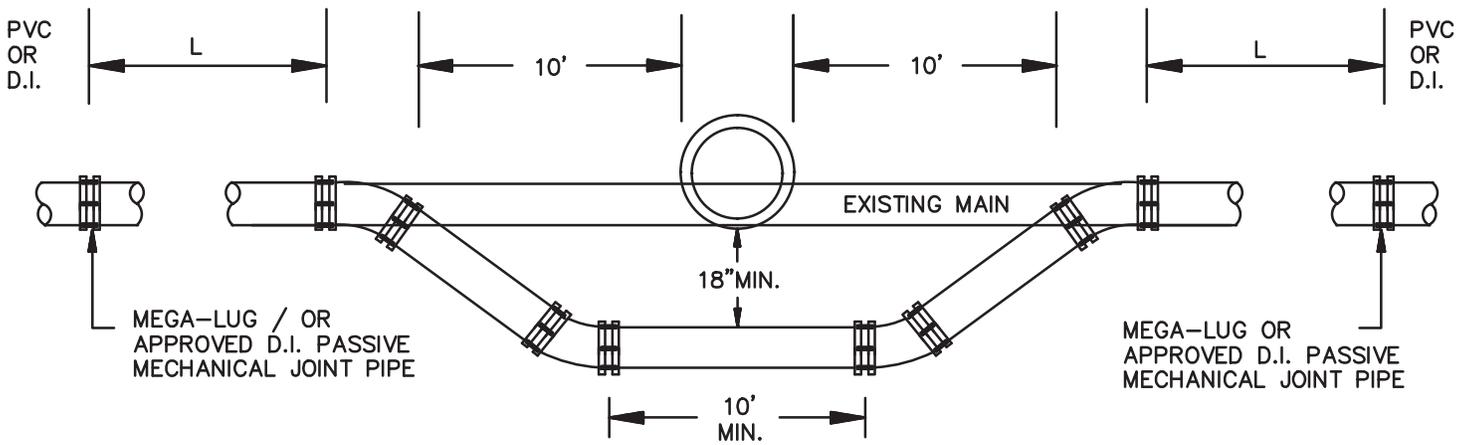


NOTES:

1. STEEL CASING PIPE SHALL BE ASTM 1-139 GRADE B, MINIMUM THICKNESS 0.375" FOR UP TO 24" CASING AND 0.625" FOR 24" THRU 42" CASING. GREATER THICKNESS MAY BE REQUIRED FOR LONG CASINGS, OR BY VDOT OR A.R.E.A. (RR). DESIGN MUST INCLUDE APPROPRIATE CORROSION CONTROL MEASURES.
2. CARRIER PIPE SHALL BE MECHANICAL JOINT DUCTILE IRON (MIN PRESSURE CLASS 350), RESTRAINED AT EACH JOINT FOR SEWER MAINS, DUCTILE IRON PIPE MUST EXTEND FROM MANHOLE TO MANHOLE. EXTEND RESTRAINED JOINT DUCTILE IRON PIPE MINIMUM FOUR PIPE LENGTHS BEYOND CASING.
3. FOR SEWER MAINS, INCREASE MIN. SLOPE THRU CASING BY 50% FROM MANHOLE TO MANHOLE.
4. DRAWINGS MUST SHOW SIZE AND LOCATION OF BORING PITS AND DIRECTION OF BORE.
5. CARRIER PIPE SHALL BE CENTERED WITHIN CASING BY AN APPROVED CASING SPACER MANUFACTURED FOR THE APPLICATION.
6. CASING PIPE SHALL BE SEALED BY USE OF WRAPAROUND END SEALS.
7. THREE CASING SPACERS SHALL BE ATTACHED TO EACH JOINT OF CARRIER PIPE WITH ONE AT THE CENTER AND ONE NOT MORE THAN 24" FROM EACH END.
8. ONE CASING SPACER SHALL BE LOCATED NOT MORE THAN 12" FROM EACH END OF CASING PIPE.
9. WHEN INSTALLING CARRIER PIPE, CONTRACTOR SHALL PUSH SO THAT PIPE JOINTS ARE ALWAYS BEING COMPRESSED.

Not to Scale

DATE April 2013	Spotsylvania County Department of Utilities	Pipe Encased in Steel Casing Pipe	DRWG. NO.
REVISIONS March 2017			G5

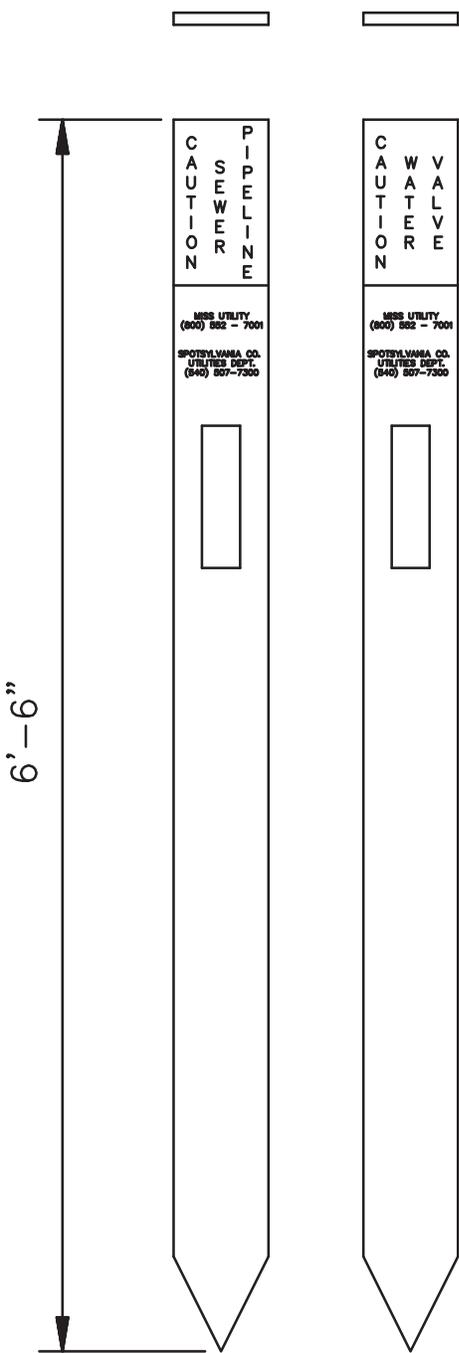


LOWERED SECTION TO BE OF DUCTILE IRON MECHANICAL RESTRAINED JOINT PIPE WITH RESTRAINED JOINTS AT ANY INCLUDED JOINTS. THE ENGINEER SHALL CALCULATE LENGTH OF RESTRAINED SECTION AND DETAIL ON PROFILE SECTION.

MIN. 4" OF # 57 STONE BELOW & ABOVE PVC PIPE
 MIN. 4" OF FINE AGGREGATE BELOW & ABOVE D.I. PIPE

Not to Scale

DATE April 2013	Spotsylvania County Department of Utilities	Pipe Offsets	DRWG. NO. G6
REVISIONS			



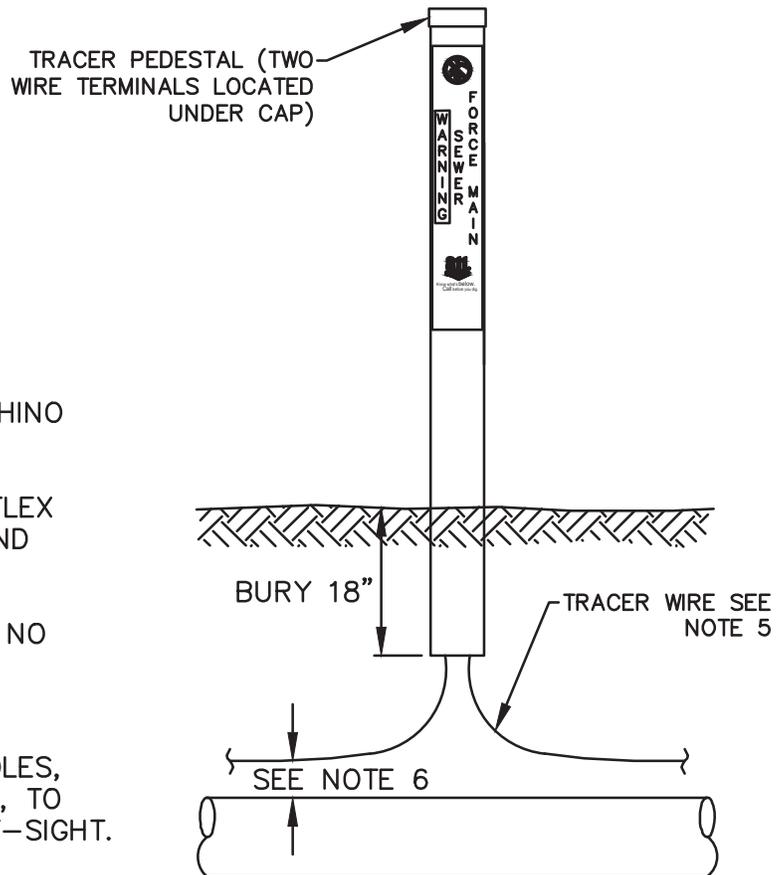
- ← CAUTION WITH TYPE OF UTILITY GREEN FOR SEWER AND BLUE FOR WATER
- ← BOTH PHONE NUMBERS FOR MISS UTILITY (800) 552-7001 SPOTSYLVANIA UTILITIES (540) 507-7300
- ← REFLECTIVE TAPE

NOTE:
 MARKERS ARE REQUIRED ON ALL 12" OR LARGER WATER LINE VALVES, ALL OFFSITE SEWER MANHOLES AND ALL OFFSITE WATER LINE VALVES.

Not to Scale

DATE April 2013	Spotsylvania County Department of Utilities	Utilities Markers	DRWG. NO. G7
REVISIONS March 2017			

UTILITY	TYPE OF PIPE	POST	DECALS (3 PER POST)
WATER	IRON	78" BLUE MARKER	SD-7443K
	NON-METALLIC	54" BLUE TRACER PEDESTAL AND 78" BLUE MARKER	SD-7443K
GRAVITY SEWER	ALL TYPES	78" GREEN MARKER	SD-7442K
PRESSURIZED SEWER	IRON	78" GREEN MARKER	SD-7441K
	NON-METALLIC	54" BLUE TRACER PEDESTAL AND 78" GREEN MARKER	SD-7441K



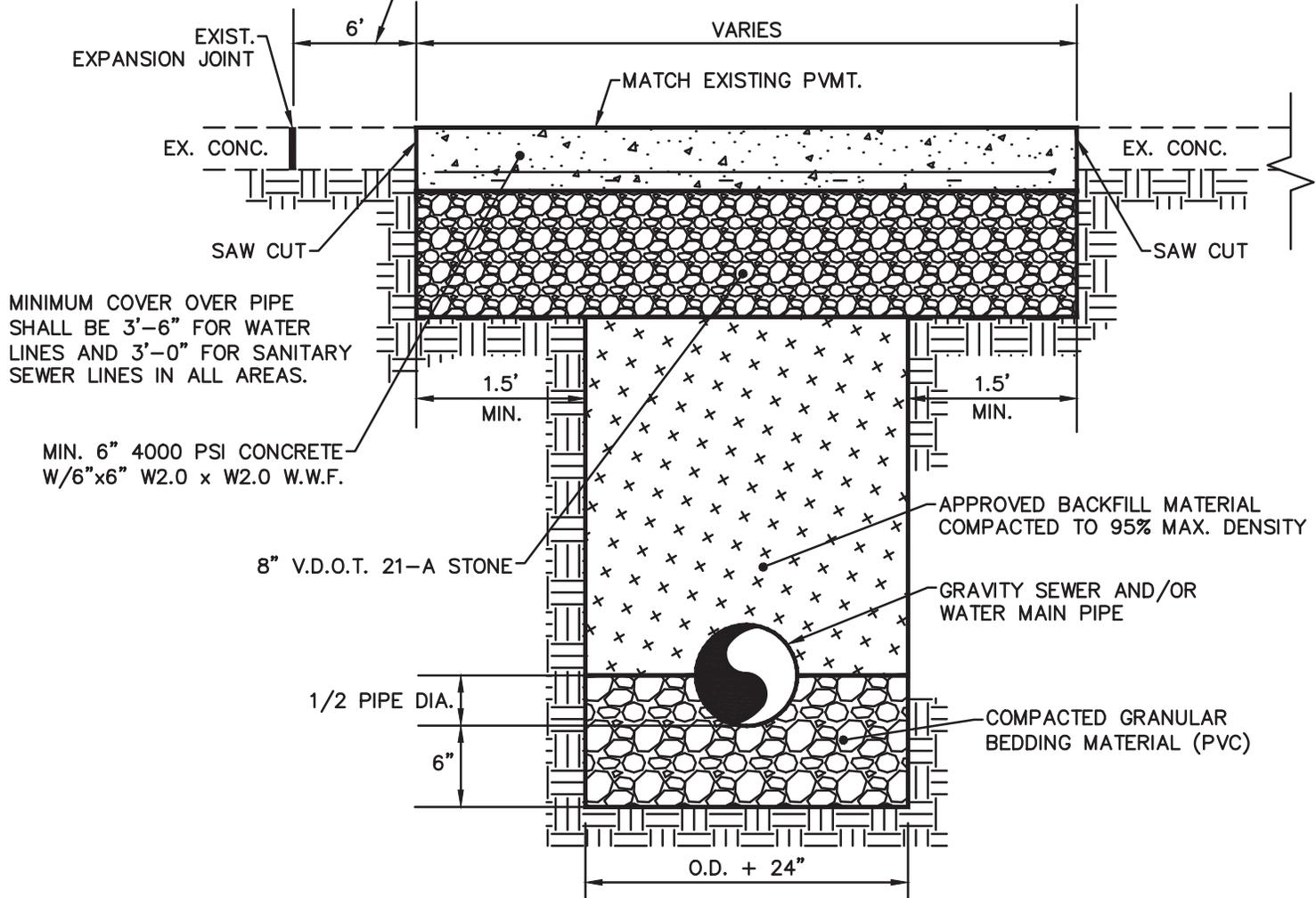
NOTES:

1. MARKER POSTS TO BE TRIVIEW BY RHINO MARKING AND PROTECTION SYSTEMS.
2. TRACER PEDESTALS TO BE TRIVIEW FLEX TEST STATION BY RHINO MARKING AND PROTECTION SYSTEMS.
3. TRACER PEDESTALS TO BE LOCATED NO MORE THAN 1000' APART.
4. MARKER POSTS TO BE SPACED AT INTERVALS OF 300'-500', AT MANHOLES, VALVES, AND CHANGES IN DIRECTION, TO ACCOMPLISH A CONTINUOUS LINE-OF-SIGHT.
5. TRACER WIRE TO BE #12 SOLID COPPER WITH 45 MIL POLYETHYLENE INSULATION. NO SPLICES.
6. TYPICALLY 4"-12". FOR PIPES 12" DIA. AND LARGER, AFFIX WIRE TO PIPE ON CENTER LINE.

Not to Scale

DATE March 2017	Spotsylvania County Department of Utilities	Marker Posts and Tracer Pedestals	DRWG. NO. G8
REVISIONS			

NOTE: REMOVE EXISTING CONCRETE TO EXPANSION JOINT WHEN LESS THAN 6 FEET. EXTEND CONCRETE, BASE AND WWF TO EXPANSION JOINT (REPLACE EXPANSION JOINT AS REQUIRED) TYPICAL BOTH SIDES.



Not to Scale

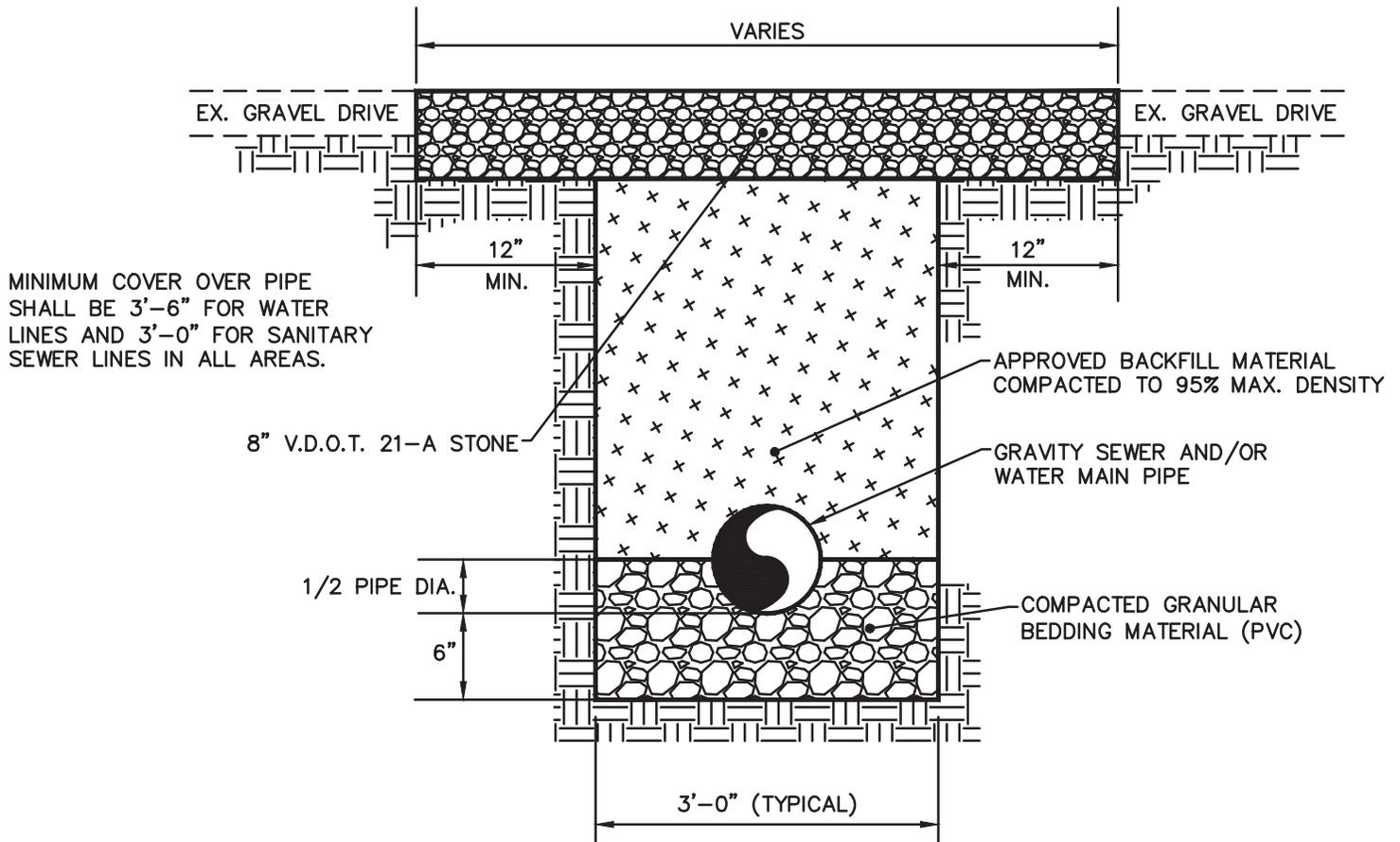
Concrete Pavement Replacement

(Driveways, Parking Areas, etc.)

DATE March 2017
REVISIONS

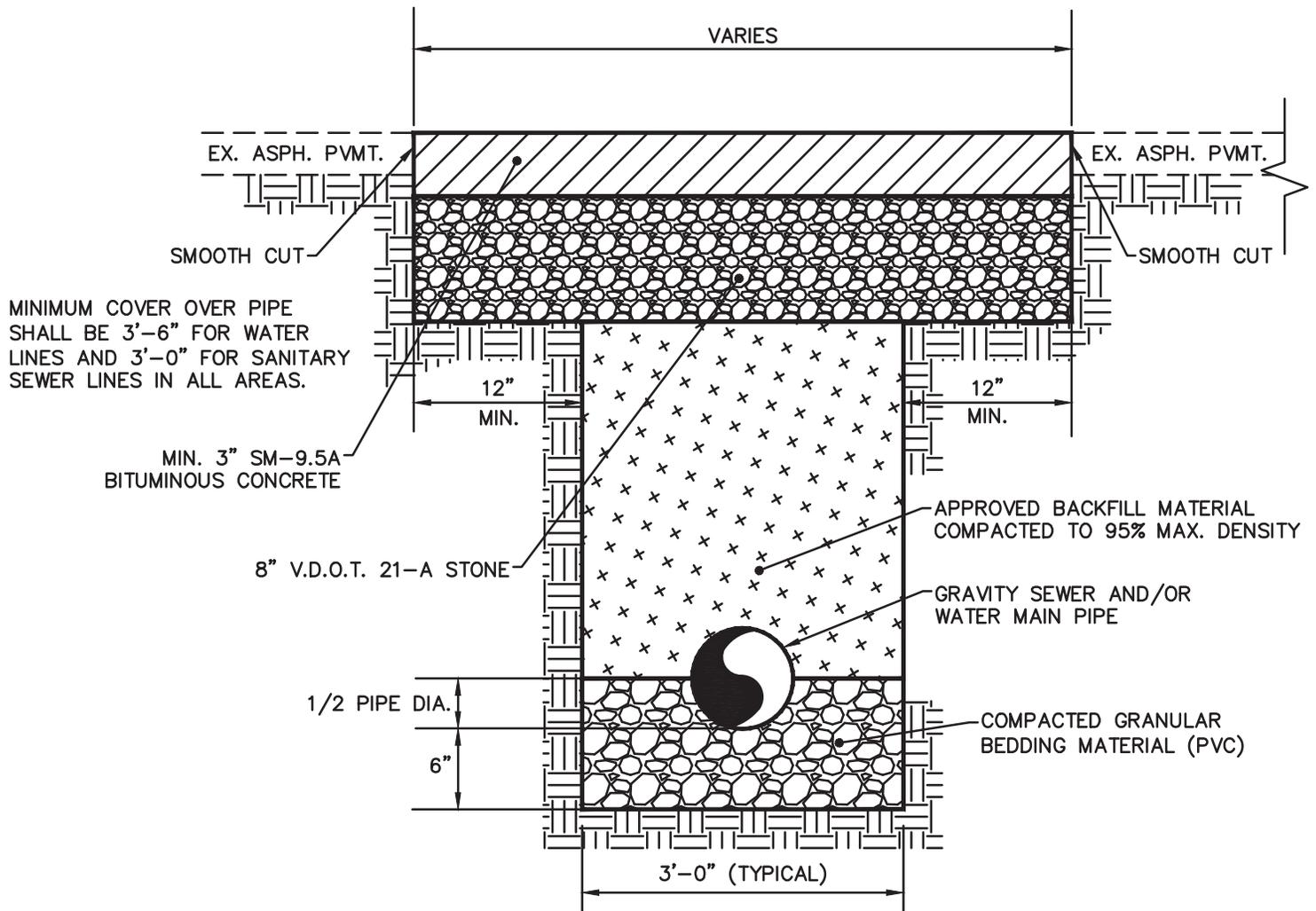
Spotsylvania County
Department of Utilities

DRWG. NO. G9



Not to Scale

DATE March 2017	Spotsylvania County Department of Utilities	Gravel Driveway Replacement (Driveways, Parking Areas, etc.)	DRWG. NO. G10
REVISIONS			



Not to Scale

Asphalt Pavement Replacement
(Driveways, Parking Areas, etc.)

DATE
March 2017

Spotsylvania County
Department of Utilities

DRWG. NO.

G11

REVISIONS