

Detail Drawings for Connecting to Public Sewer

Typically for Use by Property Owner or Their Contractors to Connect To Public Sewer

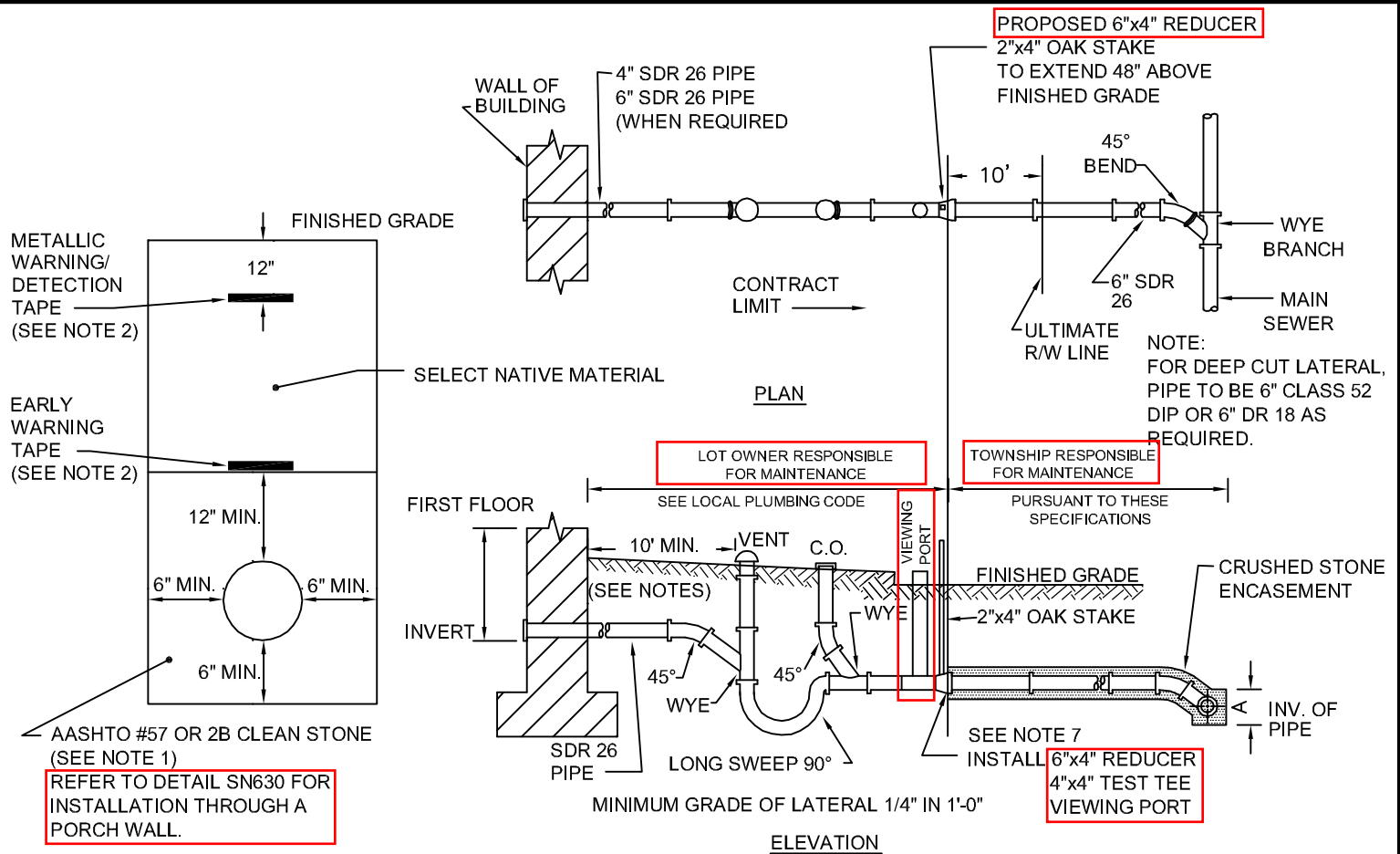
These drawings are generally used for connecting an individual property to an existing public sewer system. These drawing sets are further broken down into the following categories:

- 1) Connection of an existing property into an existing gravity sewer main
- 2) Connection of an existing property into an existing low-pressure sewer main – current method
- 3) Connection of an existing property into an existing low-pressure sewer main – previous method – still acceptable
- 4) Connection of newly constructed building to existing gravity sewer main

Detail Drawings for Connecting to Public Sewer

Typically for Use by Property Owner or Their Contractors to Connect To Gravity Sewer

These drawings are generally used for connecting an individual property to an existing GRAVITY sewer system. Note that a trap system in the lateral line may not be required if the indoor plumbing is fully trapped inside the building. There should still be a cleanout in the lateral line even if no trap is required.



NOTES:

1. STONE: AASHTO #57 OR 2B CLEAN STONE: BEDDING: 6" REQUIRED UNDER PIPE 6" REQUIRED ON BOTH SIDES OF PIPE 12" REQUIRED ABOVE TOP OF PIPE
2. TAPES: INSTALL EARLY WARNING TAPE, 3" WIDE POLYETHYLENE WITH THE MESSAGE "CAUTION SEWERLINE BURIED BELOW". STENCILLED EVERY 24 INCHES. ON TOP OF STONE BEDDING. INSTALL METALLIC WARNING/DETECTION TAPE, 3" WIDE METALLIC LINED WITH THE MESSAGE "CAUTION SEWERLINE BURIED BELOW". STENCILLED EVERY 24 INCHES, ONE FOOT BELOW FINISHED GRADE.
3. PIPE: SDR 26(4"), SDR 26(6") WHEN REQUIRED.
4. TRAP: LONG TURN 90'S OR LONG SWEEP 90'S- BXS TO FORM SWEEP (SHORT TURN 90'S NOT ACCEPTABLE). FITTINGS MAY BE SDR 26 OR SDR 35 FOR 4" PIPE.
5. CLEANOUT: TRAP SHALL BE PROVIDED WITH A CLEANOUT. CLEANOUT TO BE PROVIDED EVERY 100' AND AT EACH CHANGE IN DIRECTION GREATER THAN 45 DEGREES. CLEANOUTS TO BE SET FLUSH WITH FINISHED GRADE.
6. RELIEF VENT STACK: REQUIRED AT TRAP. VENT STACKS SHALL NOT BE LOCATED DIRECTLY BENEATH ANY DOOR, OPERABLE WINDOW OR OTHER INTAKE OPENING OF THE BUILDING OR OF AN ADJACENT BUILDING, NOR SHALL ANY VENT STACK BE WITHIN 10' HORIZONTALLY OF SUCH AN OPENING, NOR SHALL ANY VENT STACK BE WITHIN 10' HORIZONTALLY OF AN OVERHANG OR FACE OF BUILDING. STACK TO BE 12 INCHES HIGHER (VERTICALLY) FROM GROUND LEVEL AT STACK.

7. TESTING:

- AIR TEST REQUIRED 5 LB PSI, 5 MINUTES (MINIMUM)(NO LOSS). AT 6" TIE IN A 6"x4" REDUCER IS REQUIRED AND A 4" TEST TEE IMMEDIATELY AFTER 6"x4" REDUCER REQUIRED FOR TEST. ONCE LATERAL IS TESTED AND PASSES THE AIR TEST, A CLEANOUT STACK WITH CLEANOUT CAP SHALL BE INSTALLED IN THE 4" TEST TEE FOR INSPECTION PORT. DEPTH OF LATERAL TO BE 4' MINIMUM BELOW EXISTING GROUND GRADE. FOR NEW CONSTRUCTION THE DEPTH OF LATERAL SHALL BE 4' MINIMUM BELOW PROPOSED FINISHED GRADE. MAINTENANCE OF THE LATERAL BELONGS TO THE LOT BEING SERVICED BEGINNING AT THE VIEWING PORT.
8. DEPTH OF LATERAL: NEW CONSTRUCTION - THE DEPTH OF THE SEWER LATERAL SHALL BE 4' MINIMUM BELOW PROPOSED FINISHED GRADE TO THE TOP OF THE SEWER LATERAL PIPE. EXISTING CONSTRUCTION - THE DEPTH OF THE SEWER LATERAL SHALL BE 3' MINIMUM BELOW EXISTING FINISHED GRADE OR PROPOSED REGRADE, FINISHED GRADE.
 9. EXISTING HOUSE CONNECTION TO NEW SEWER LATERAL SHALL BE 5'(±) OUTSIDE THE EXISTING BUILDING WALL. THE ACTUAL TIE IN WILL BE DETERMINED ON A CASE BY CASE BASIS AS APPROVED BY THE FRANCONIA TOWNSHIP SEWER AUTHORITY OR THEIR DESIGNEE IN THE FIELD. A SHIELDED FERNCO FITTING IS REQUIRED TO TIE THE NEW SDR 26 PVC LATERAL ONTO DISSIMILAR MATERIALS I.E. CAST IRON. ALL PVC TO PVC TIE INS SHALL BE DONE WITH PVC FITTINGS AS APPROVED BY FRANCONIA TOWNSHIP SEWER AUTHORITY. ANY/ALL OTHER FITTINGS MUST BE APPROVED, PRIOR TO USE, BY THE FRANCONIA TOWNSHIP SEWER AUTHORITY.
 10. EXISTING TANK CLOSURE - AS SOON AS THE HOUSE OR BUILDING IS TIED IN WITH THE PUBLIC SEWER LATERAL, THE EXISTING TANK SHALL HAVE THE CONTENTS PUMPED BY A SEPTIC TANK PUMPER. THE TOP OF THE TANK SHALL BE BROKEN IN AND THE REMAINING TANK SHALL BE FILLED IMMEDIATELY WITH STONE OR NATIVE MATERIAL AND COMPACTED WITH BACKHOE BUCKET OR COMPACTION EQUIPMENT.

FRANCONIA TOWNSHIP STANDARD DETAIL

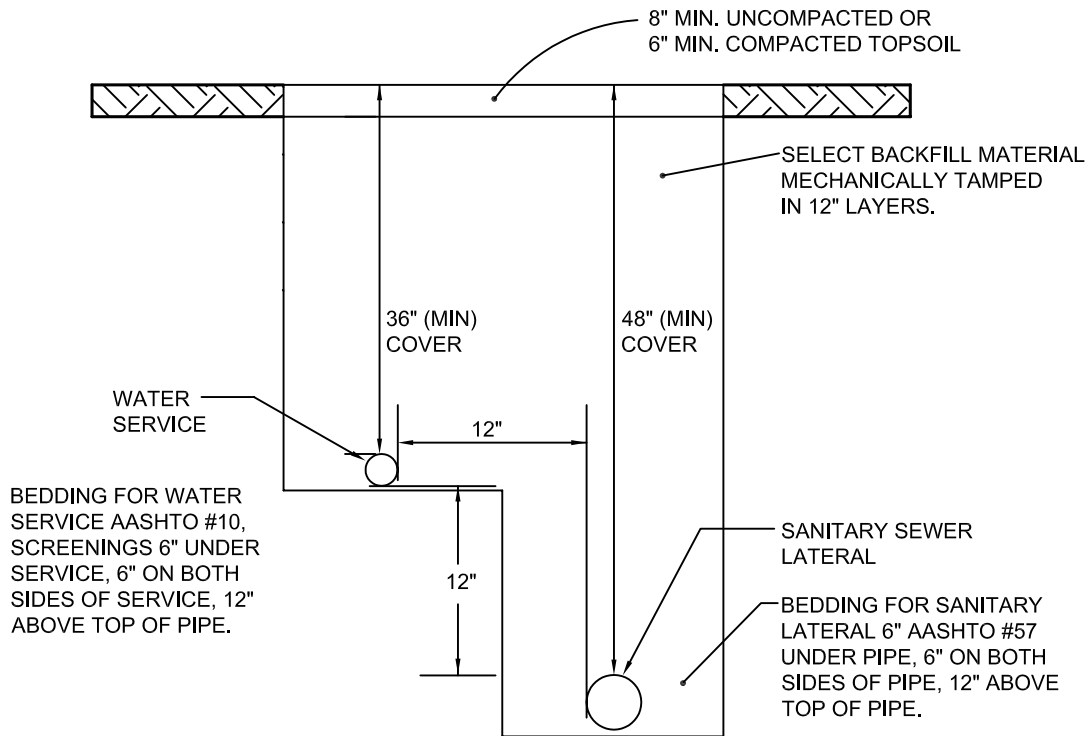
TYPICAL BUILDING/HOUSE CONNECTION FIRST FLOOR SERVICE



DATE 2-2015

NOT TO SCALE

SN611



FRANCONIA TOWNSHIP STANDARD DETAIL
ON LOT SEWER LATERAL/
WATER SERVICE SEPARATION DETAIL



DATE

4-4-07

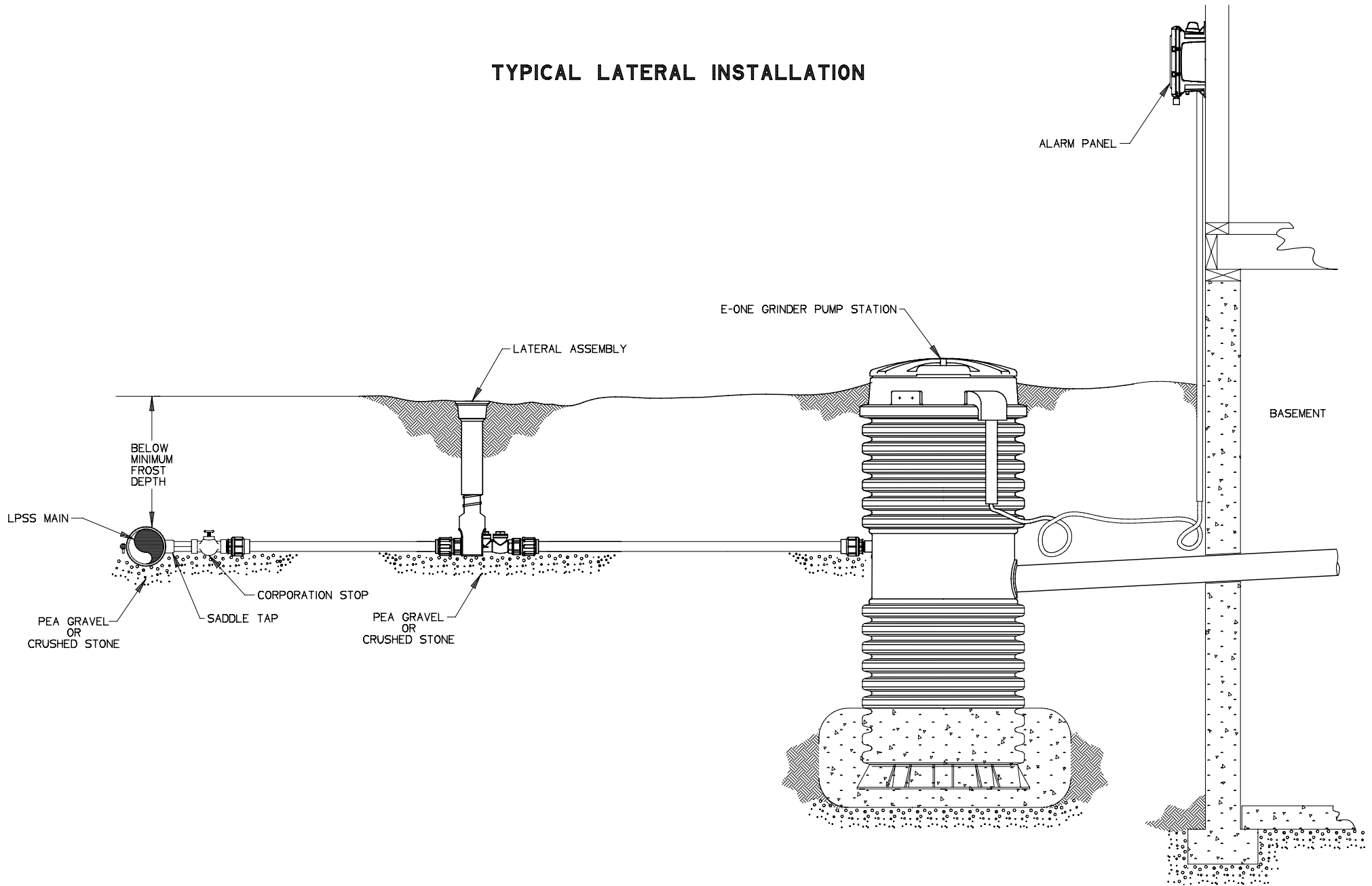
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SN627

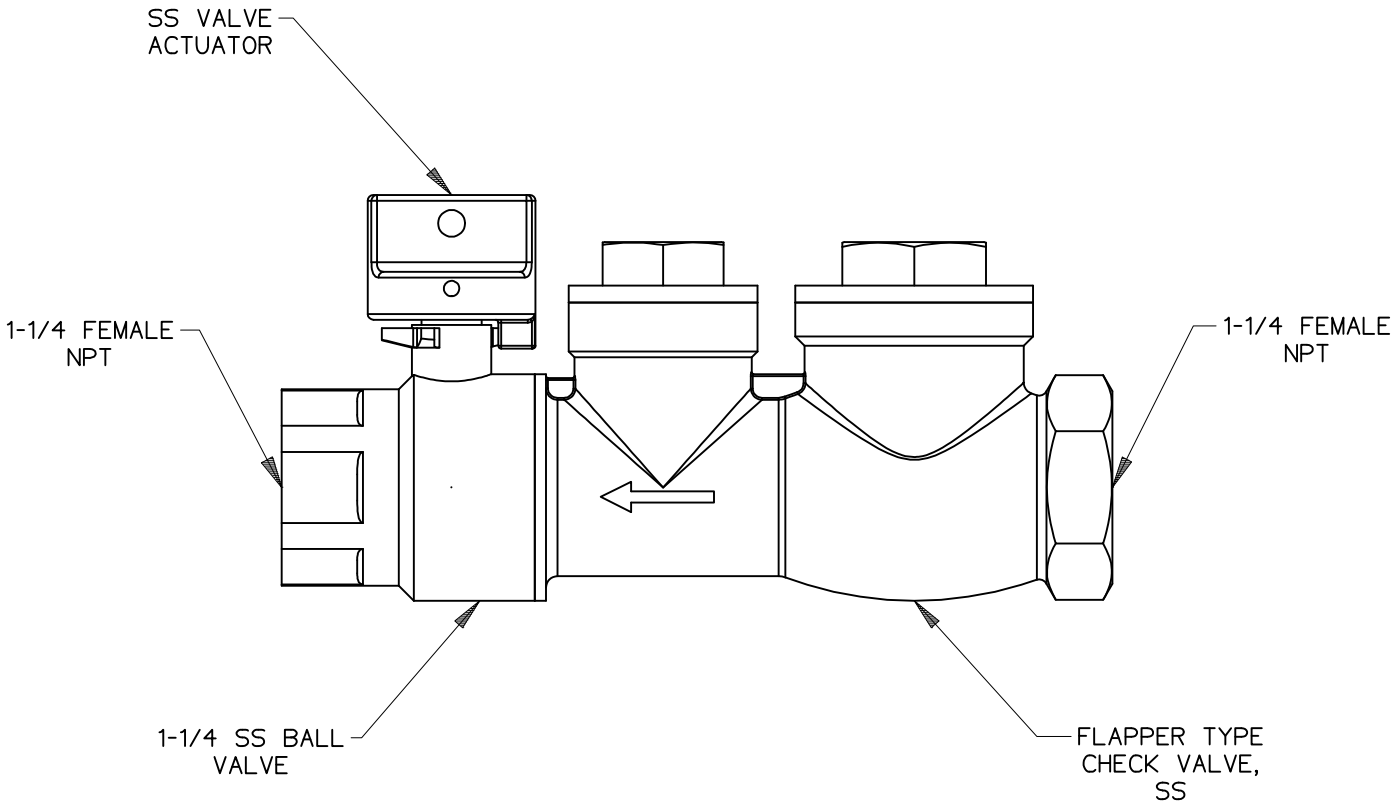
Detail Drawings for Connecting to Public Sewer Current Method Typically for Use by Property Owner or Their Contractors to Connect To Pressure Sewer

These drawings are generally used for connecting an individual property to an existing Low Pressure sewer system. These drawings depict the current method for making these connections. Note that the previous method – shown in the next section – is still acceptable.

TYPICAL LATERAL INSTALLATION



**STAINLESS STEEL
LATERAL ASSEMBLY
NO FITTINGS**



PART IS A BALL VALVE CURB STOP WITH FEMALE PIPE THREADS,
VALVE POSITION STOPS (OPEN/CLOSED), AND INTEGRAL CHECK VALVE
MATERIAL: STAINLESS STEEL

PRESSURE RATING: 235 PSI

TO ORDER SS LATERAL, NO FITTINGS
USE PART NUMBER NB0184P01

NOTES:

1. FOR SS FITTING INTO SS THREAD, USE PIPE DOPE OR TEFLON TAPE, NOT BOTH
2. FOR PLASTIC FITTINGS INTO SS THREAD, USE BOTH PIPE DOPE AND 2 LAYERS OF TEFLON TAPE

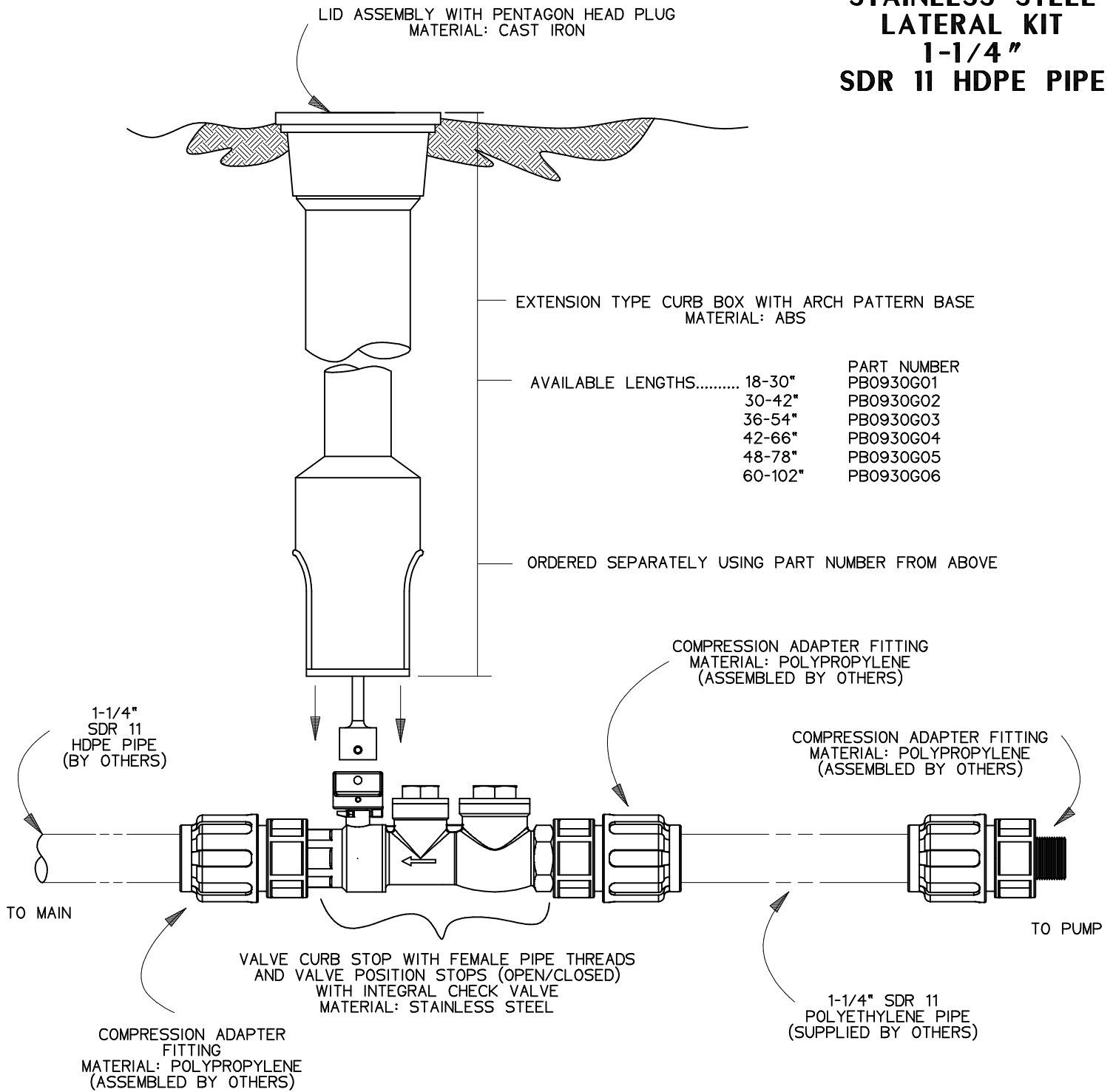
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STAINLESS STEEL LATERAL ASSEMBLY
NO FITTINGS

NA0330P05

STAINLESS STEEL LATERAL KIT 1-1/4" SDR 11 HDPE PIPE



NOTES:

1. SS CURB STOP/CHECK VALVE AND FITTINGS ARE PROVIDED SEPARATELY, TO BE ASSEMBLED BY OTHERS
2. TO ASSEMBLE, APPLY A DOUBLE LAYER OF TEFLON TAPE, AND A LAYER OF PIPE DOPE (SUPPLIED BY OTHERS) TO THE THREADS ON THE PLASTIC FITTINGS AND INSTALL PER THE MANUFACTURER'S INSTRUCTIONS
*FOR SS FITTING INTO SS THREAD, USE PIPE DOPE OR TEFLON TAPE, NOT BOTH
3. ASSEMBLY IS TO BE PRESSURE TESTED (BY OTHERS)
4. ASSEMBLY IS TO BE USED WITH SDR11 HDPE PIPE
5. TO ORDER SS LATERAL KIT, USE PART NUMBER NCO193G01
6. CURB BOX IS TO BE ORDERED SEPARATELY, SEE ABOVE

KIT PARTS ARE NOT ASSEMBLED

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STAINLESS STEEL LATERAL KIT 1-1/4" SDR 11 HDPE PIPE				
NA0330P02				

Detail Drawings for Connecting to Public Sewer Previous Method Typically for Use by Property Owner or Their Contractors to Connect To Pressure Sewer

These drawings are generally used for connecting an individual property to an existing Low Pressure sewer system. These drawings depict the previous method for making these connections. Note that this previous method is still acceptable; however, the current method is more consistent with the equipment now available.

BARNES



ROCK COVER

BRASS LOCK - SHIPPED LOOSE FOR FIELD INSTALLATION

POLYPROPYLENE HARNESSES USED FOR LIFTING POD AND FOR BALL VALVE ACTUATION

IP68, WATER PROOF CONNECTOR, POLYAMIDE BODY

BALL-TYPE SHUT-OFF VALVE, BRONZE BODY & SST BALL

SELECT FROM ONE OF THREE POSSIBLE INLET LOCATIONS (REQUIRES 5" HOLE SAW)

REMOVABLE POD-ALLOWS ACCESS TO BALL-VALVE FOR MAINTENANCE WITHOUT CONFINED SPACE ENTRY

1-1/4" FLEXIBLE DISCHARGE - SS

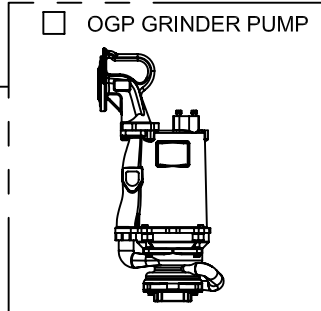
CHECK VALVE, 1-1/4", CAST IRON WITH BRONZE SEAT - (DIAPHRAGM REPLACEABLE FROM TOP SIDE)

PRE-FORMED EPOXY-COATED REBAR (FACTORY INSTALLED)

ESPS-150E, PRESSURE LEVEL CONTROL

INTEGRATED DISCHARGE WITH ANTI-SIPHON

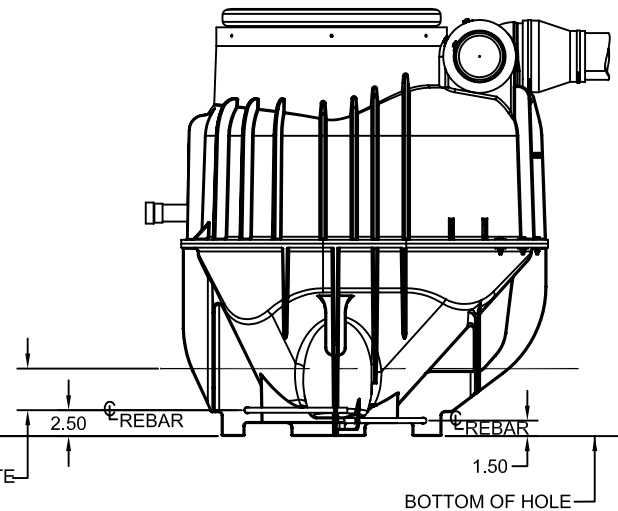
OGP GRINDER PUMP



NOTES:

1. ALL DIMENSIONS ARE $\pm 1/4"$ UNLESS OTHERWISE SPECIFIED

4.00 MINIMUM CONCRETE ABOVE REBAR



BASE SECTION CONCRETE ANCHOR REQUIRED



PUMPS & SYSTEMS



**FRANCONIA TOWNSHIP STANDARD DETAIL
SIMPLEX, ECO TRAN SYSTEM, OGP
GRINDER PUMP**

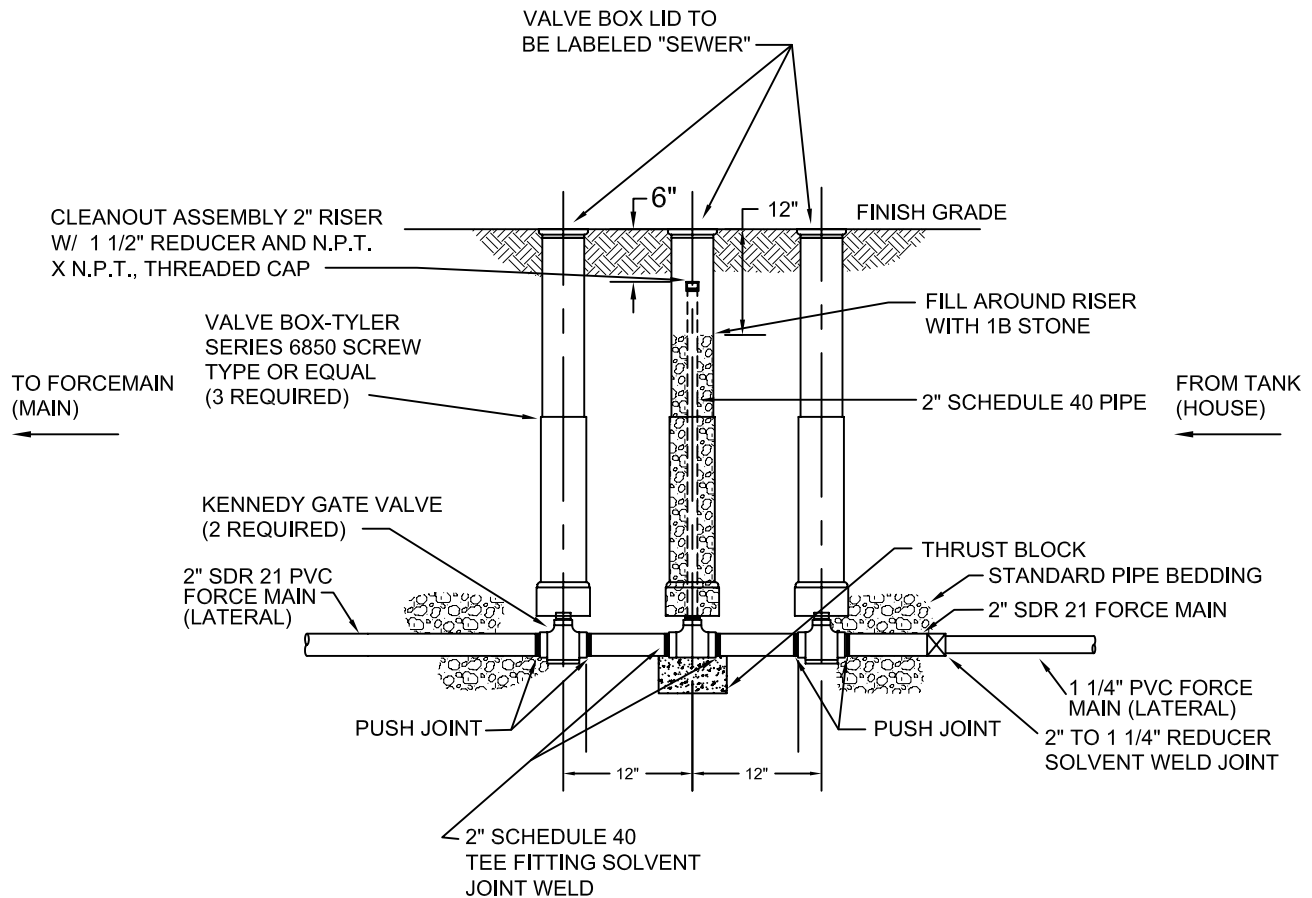


DATE

4-4-07

NOT TO SCALE

SN621



FRANCONIA TOWNSHIP STANDARD DETAIL
 CLEANOUT DETAIL FOR PRESSURE LATERALS

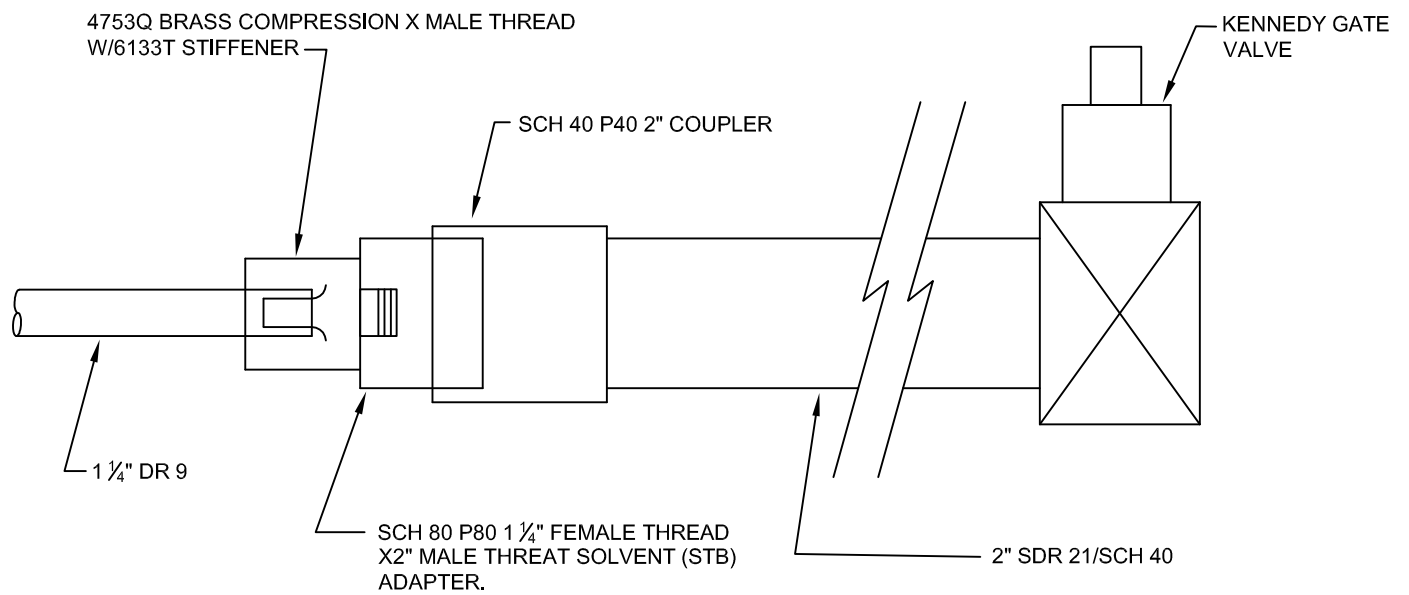


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4-4-07

NOT TO SCALE

SN623



NOTE:
 FITTINGS AS MANUFACTURED BY A.Y. MCDONALD
 MFG. CO., SPEARS MFG. CO. OR APPROVED EQUAL.

FRANCONIA TOWNSHIP STANDARD DETAIL
 1 1/4" TO 2" PRESSURE LATERAL FITTINGS DETAIL

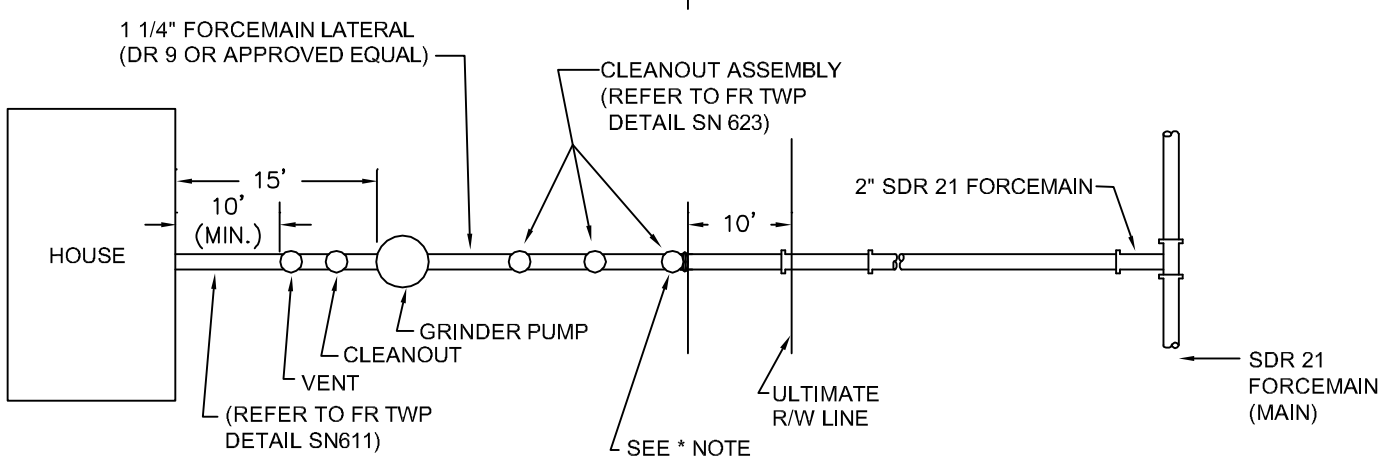
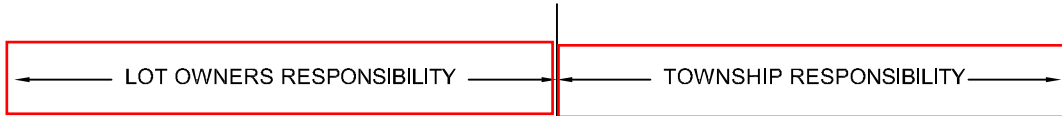


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7-2012

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SN628



* NOTE: THE FIRST VALVE IS TO BE INSTALLED ALONG WITH FORCEMAIN (MAIN) A THRUST BLOCK WILL NEED TO BE PLACED BEHIND THIS VALVE. VALVE WILL NEED TO BE SHUT OFF UNTIL BUILDING/ HOUSE IS TIED INTO SYSTEM. THE REMAINDER OF THE CLEANOUT ASSEMBLY IS TO BE SUPPLIED AND INSTALLED BY THE PLUMBER INSTALLING THE PRESSURE LATERAL TO THE GRINDER PUMP. MAINTENANCE OF THE LATERAL BELONGS TO THE LOT BEING SERVICED, BEGINNING AT THE FIRST VALVE.

FRANCONIA TOWNSHIP STANDARD DETAIL
 TYPICAL PLAN VIEW OF BUILDING/HOUSE WITH GRINDER PUMP

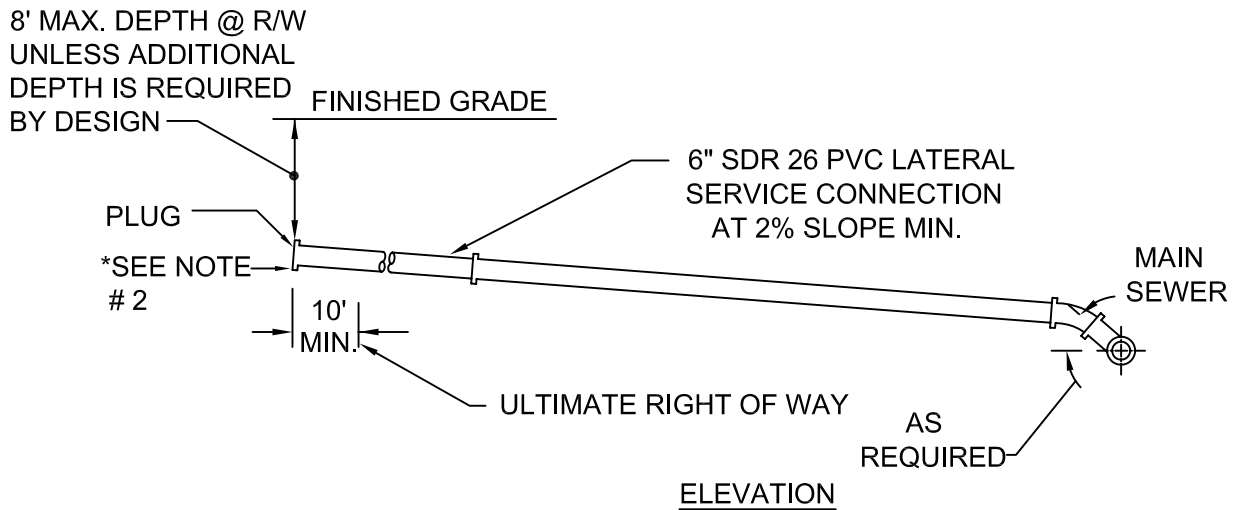
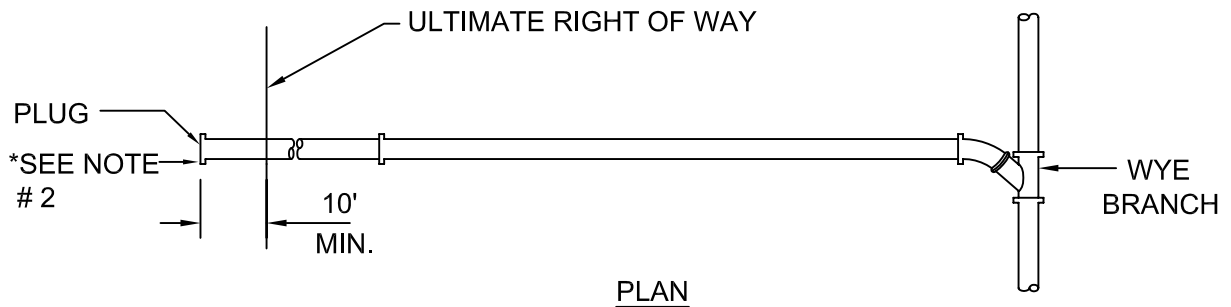


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Detail Drawings for Connecting to Public Sewer

Typically for Use by Property Owner or Their Contractors to Connect New Construction to Sewer

These drawings are generally used for connecting new construction to an existing sewer system. These drawings depict the methods to be used to tap into existing sewer mains where no stub currently exists. These drawings, along with those provided in the above sections (connecting existing properties to public sewer), provide the full extent of connecting new construction.



NOTE:

1. 6" LATERAL TO BE EXTENDED 10 FT BEYOND ULT. R/W
2. SET 2"X 4" OAK STAKE TO EXTEND 48" ABOVE FINISHED GRADE. PAINT TOP OF STAKE GREEN, WITH LOT # WRITTEN ON STAKE.

FRANCONIA TOWNSHIP STANDARD DETAIL
SERVICE LATERAL

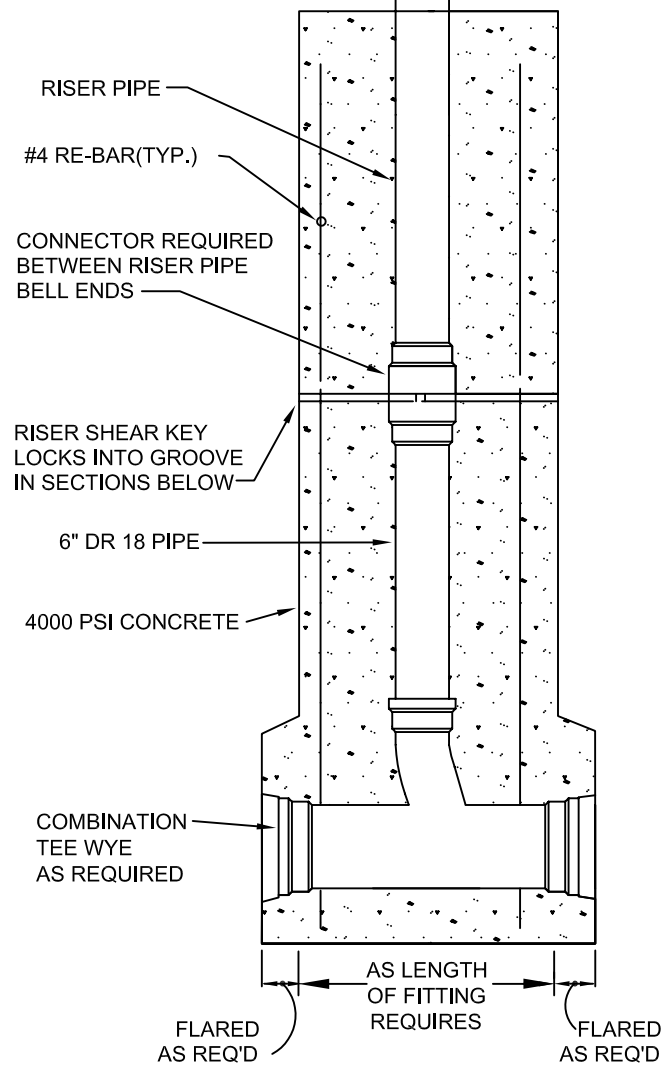
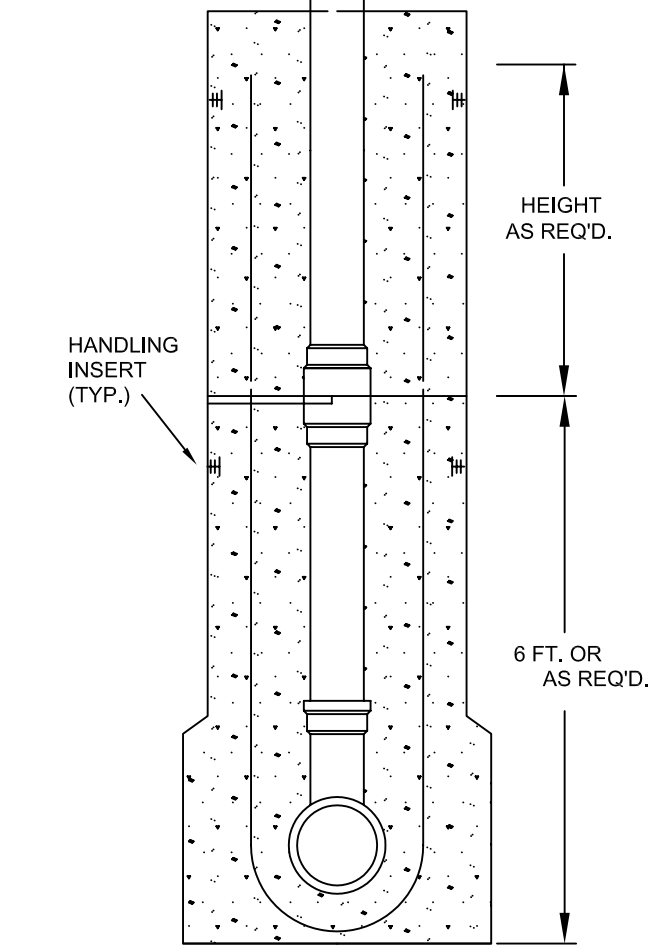
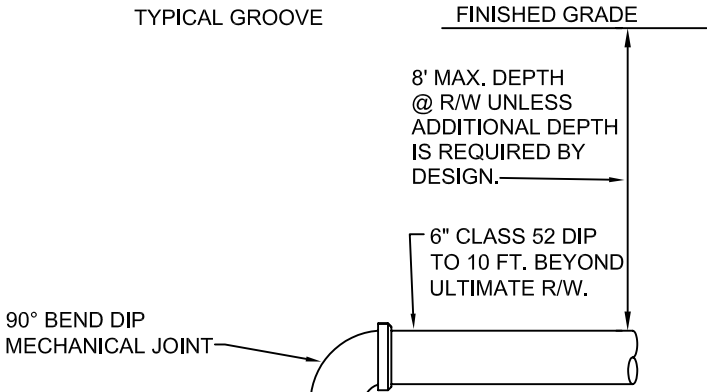
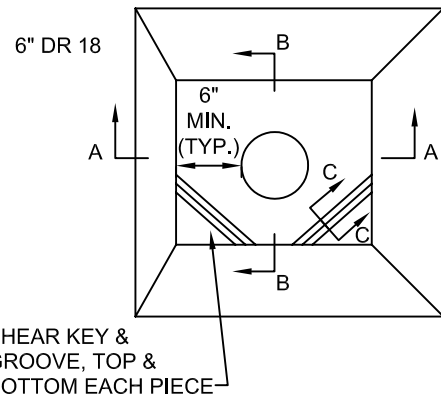
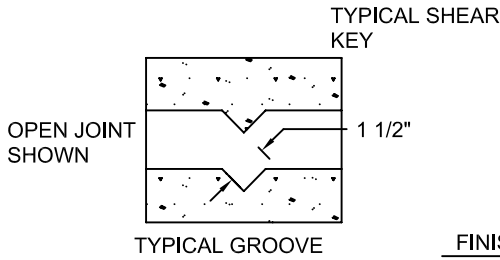


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SN610

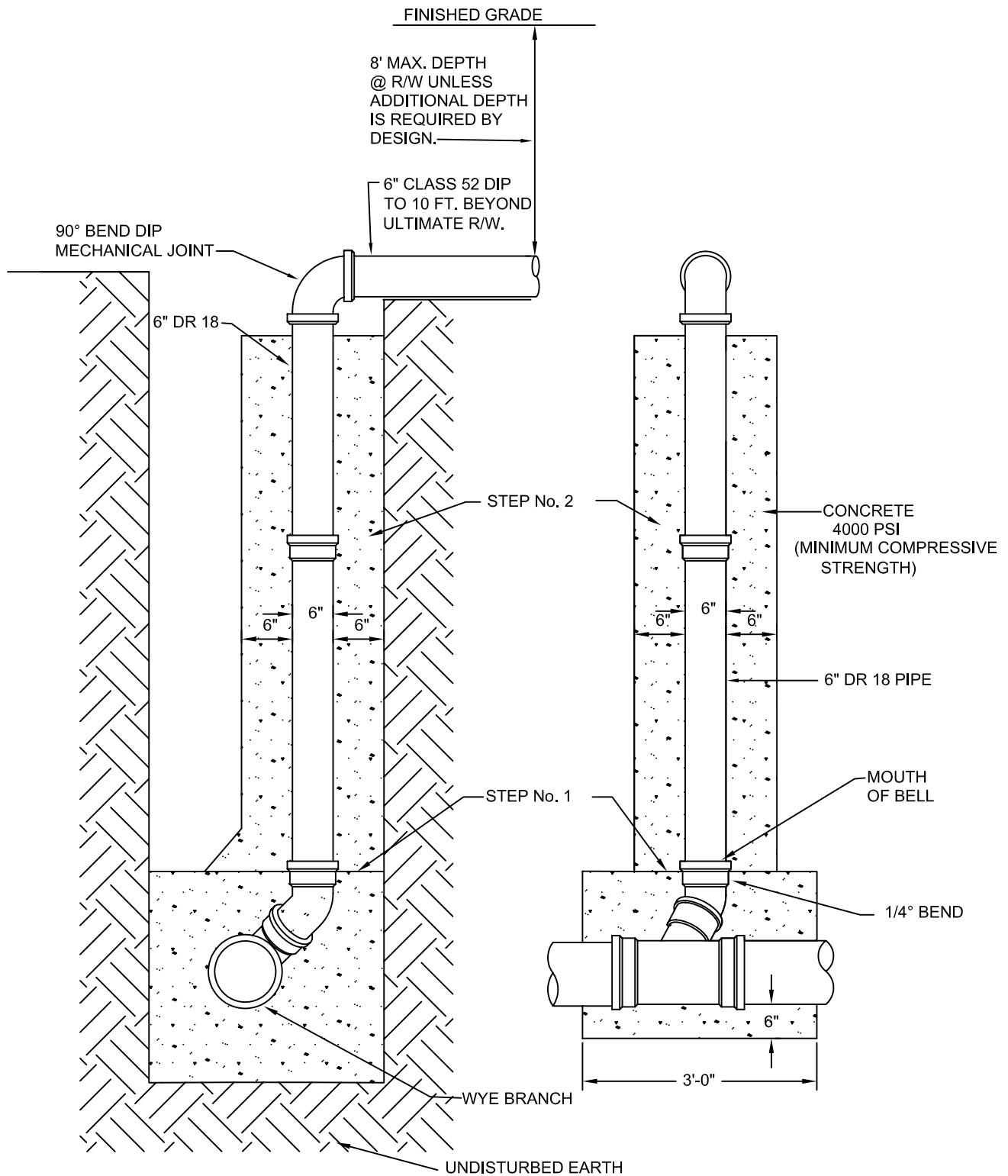


NOTE:
AS MANUFACTURED BY ATLANTIC CONCRETE PRODUCTS INC. OR APPROVED EQUAL.

FRANCONIA TOWNSHIP STANDARD DETAIL
PRECAST FOR DEEP CUT LATERAL CONNECTION



DATE	4-4-07	NOT TO SCALE	SN614
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METHOD OF CONSTRUCTION
 ONCE WYE HAS BEEN INSTALLED, INSERT 6" 45° BEND.
 AND POUR CONCRETE TO 1" BELOW MOUTH OF BELL
 PERMIT CONCRETE TO SET UP FOR A PERIOD OF 24
 HOURS BEFORE INSERTION OF RISER PIPE, AND
 CONCRETE ENCASEMENT.

FRANCONIA TOWNSHIP STANDARD DETAIL
DEEP CUT LATERAL

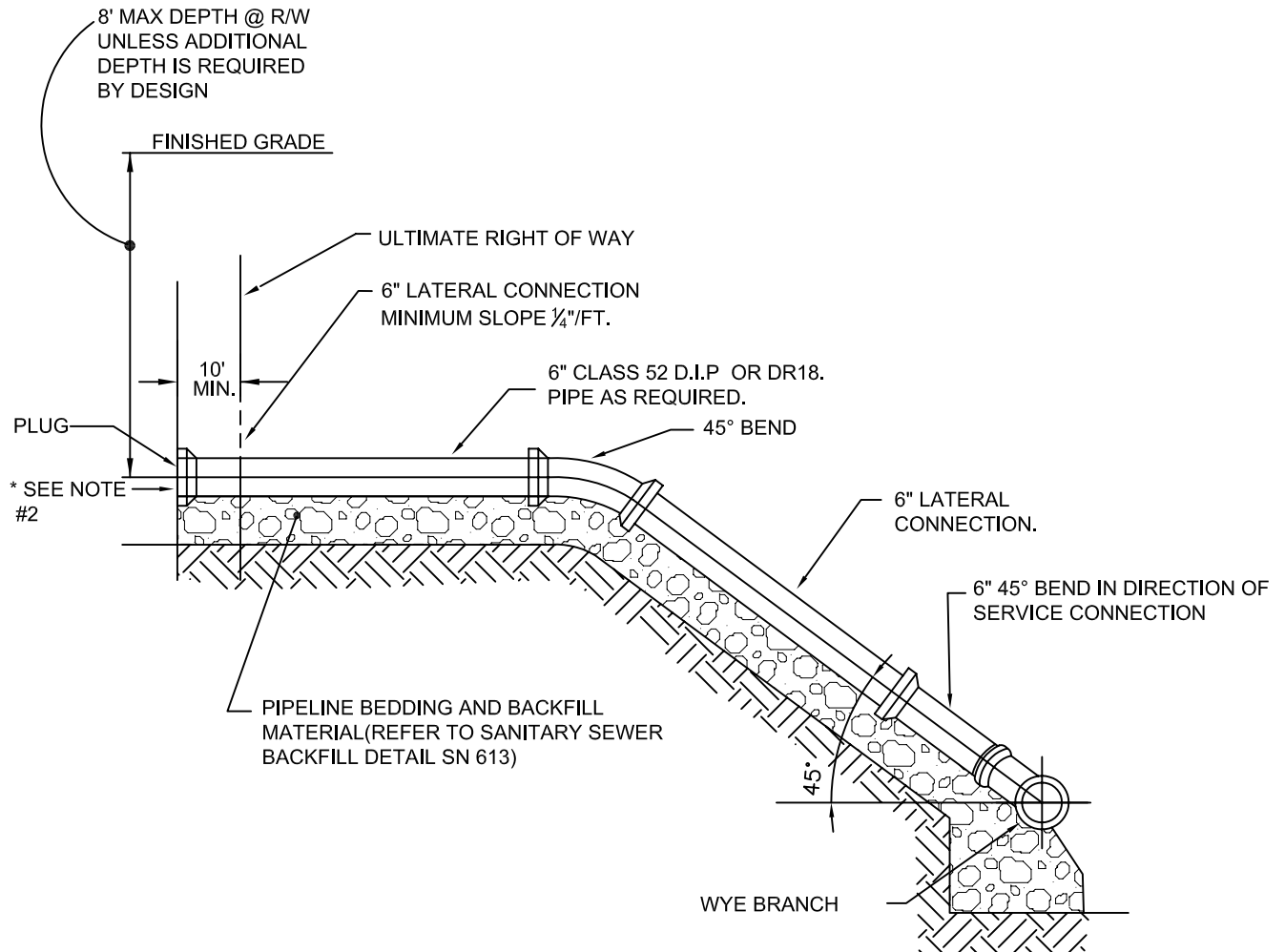


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4-4-07

NOT TO SCALE

SN615



ELEVATION

NOTE:

1. 6" LATERAL TO BE EXTENDED 10 FT BEYOND ULT. R/W
2. SET 2"X 4" OAK STAKE TO EXTEND 48" ABOVE FINISHED GRADE. PAINT TOP OF STAKE GREEN, WITH LOT # WRITTEN ON STAKE.

FRANCONIA TOWNSHIP STANDARD DETAIL
DEEP CUT LATERAL CONNECTION

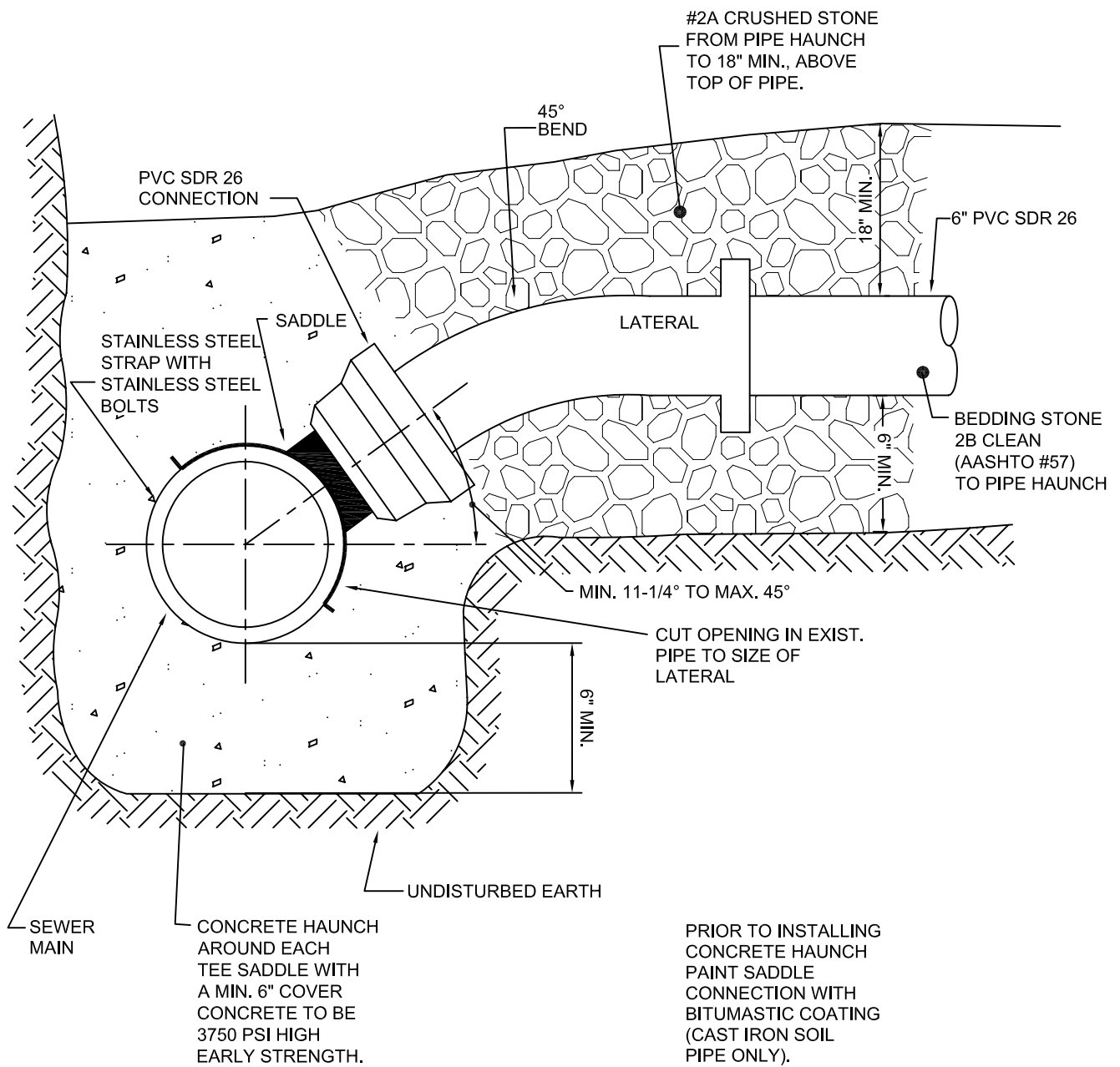


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NOT TO SCALE

SN616



NOTE: SEALTITE SEWER PIPE SADDLE, MANUFACTURED BY GENECO OR APPROVED EQUAL.

FRANCONIA TOWNSHIP STANDARD DETAIL
 SADDLE CONNECTION
 (TIE-IN TO EXISTING SEWER)



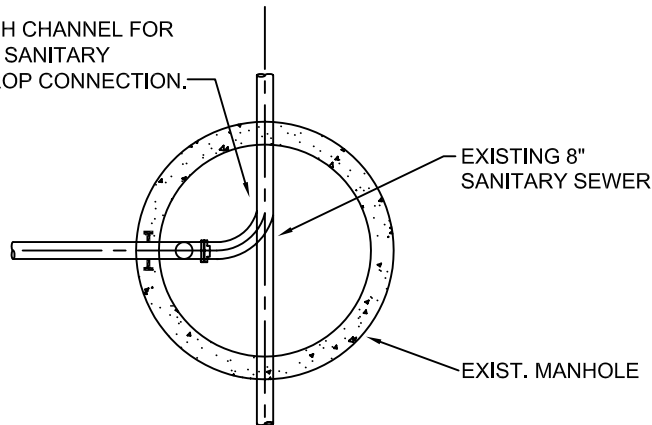
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4-4-07

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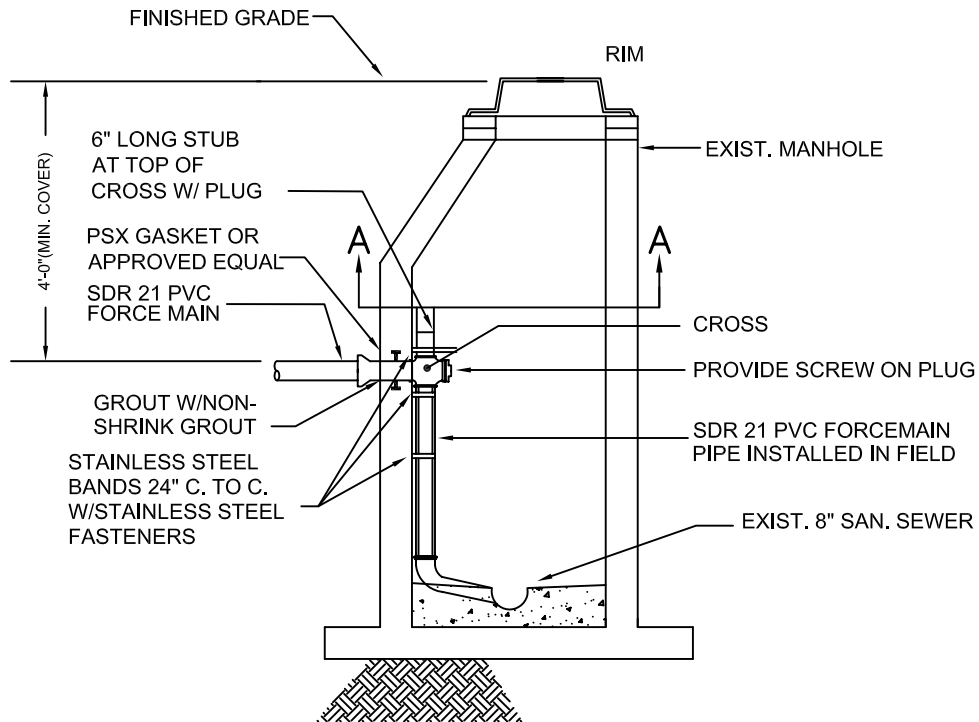
SN618

MODIFY EXISTING BENCH CHANNEL FOR PROPOSED SDR 21 PVC SANITARY SEWER FORCE MAIN DROP CONNECTION.



NOTE:
COREDRILL OPENING IN EXISTING MANHOLE WALL, AT ONE (1) LOCATION, EQUAL TO PROPOSED SANITARY SEWER OUTSIDE DIAMETER PLUS 2". INSTALL A PSX GASKET (AS MANUFACTURED BY PRESS SEAL GASKET CORP. OR APPROVED EQUAL) OPENING SHALL BE WATERTIGHT. USE NON SHRINK GROUT AS REQUIRED.

SECTION A-A



FRANCONIA TOWNSHIP STANDARD DETAIL
FORCE MAIN CONNECTION TO EXISTING
SANITARY SEWER (PROPOSED INSIDE DROP)

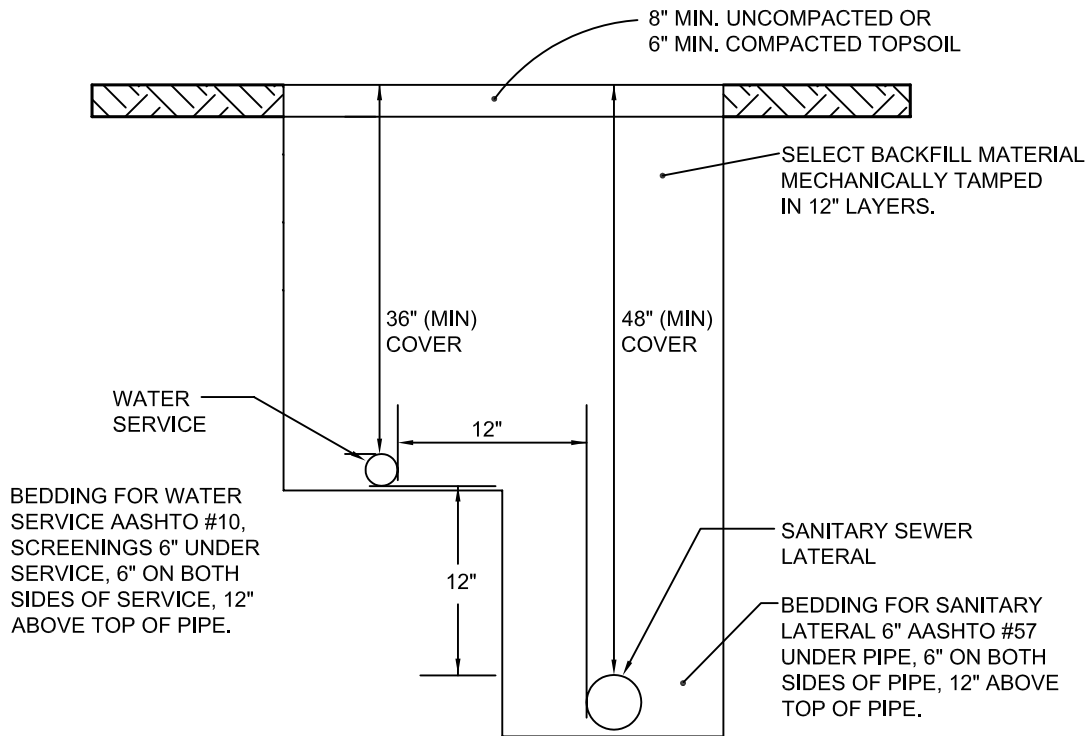


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4-4-07

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SN619



FRANCONIA TOWNSHIP STANDARD DETAIL
ON LOT SEWER LATERAL/
WATER SERVICE SEPARATION DETAIL

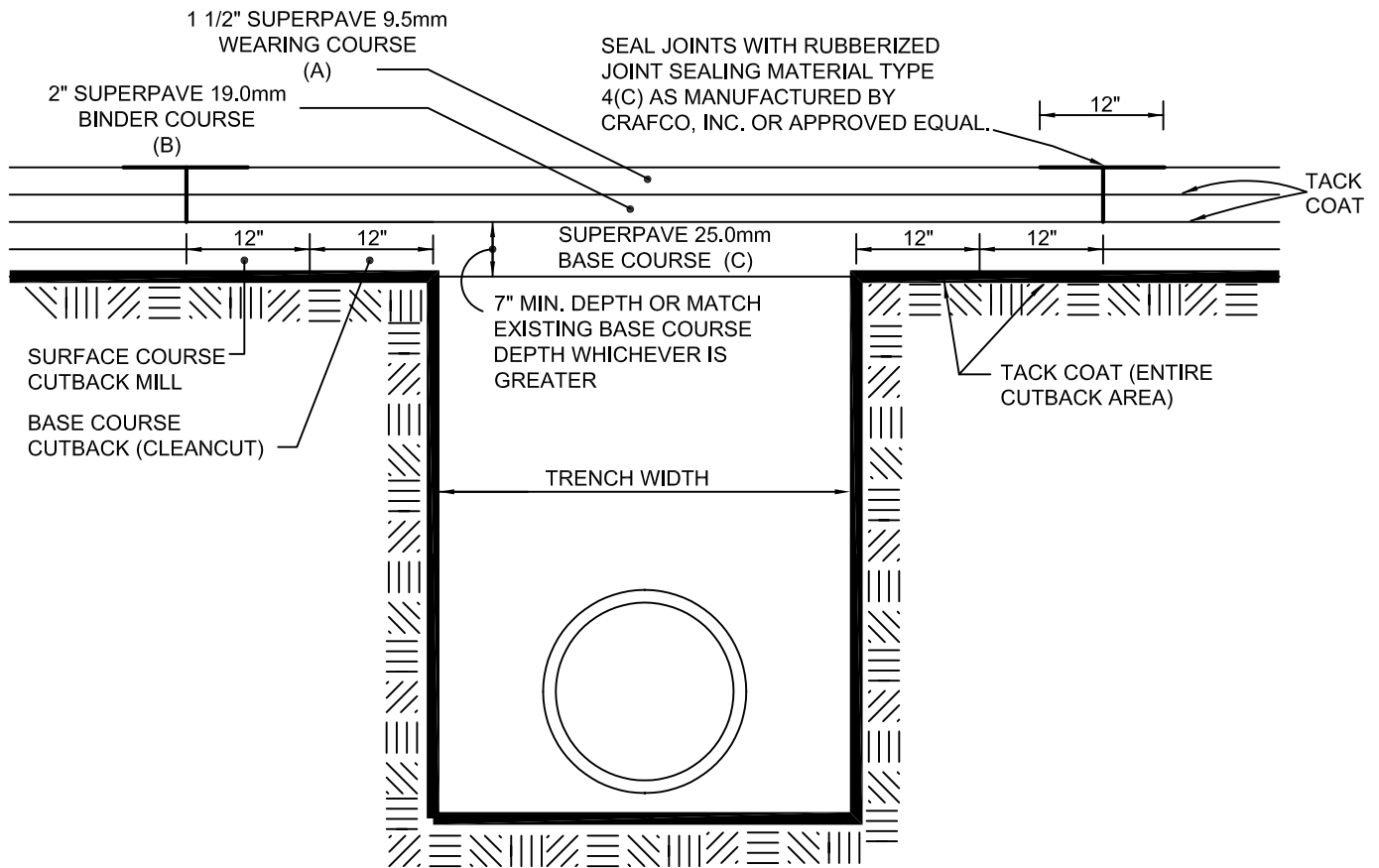


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4-4-07

NOT TO SCALE

SN627



- A. 1 1/2" DEPTH SUPERPAVE ASPHALT MIXTURE DESIGN, HMA WEARING COURSE, PG 64-22, 0.0 TO 0.3 MILLION ESALs, 9.5mm MIX, SRL H
- B. 2" DEPTH SUPERPAVE ASPHALT MIXTURE DESIGN, HMA BINDER COURSE, PG 64-22, 0.0 TO 0.3 MILLION ESALs, 19.0mm MIX.
- C. 7" DEPTH (OR MATCH EXISTING BASE COURSE DEPTH WHICHEVER IS GREATER) SUPERPAVE ASPHALT MIXTURE DESIGN, HMA BASE COURSE, PG 64-22, 0.0 TO 0.3 MILLION ESALs, 25.0mm MIX.

FRANCONIA TOWNSHIP STANDARD DETAIL
 PERMANENT ROAD RESTORATION WITHIN TOWNSHIP ROADS

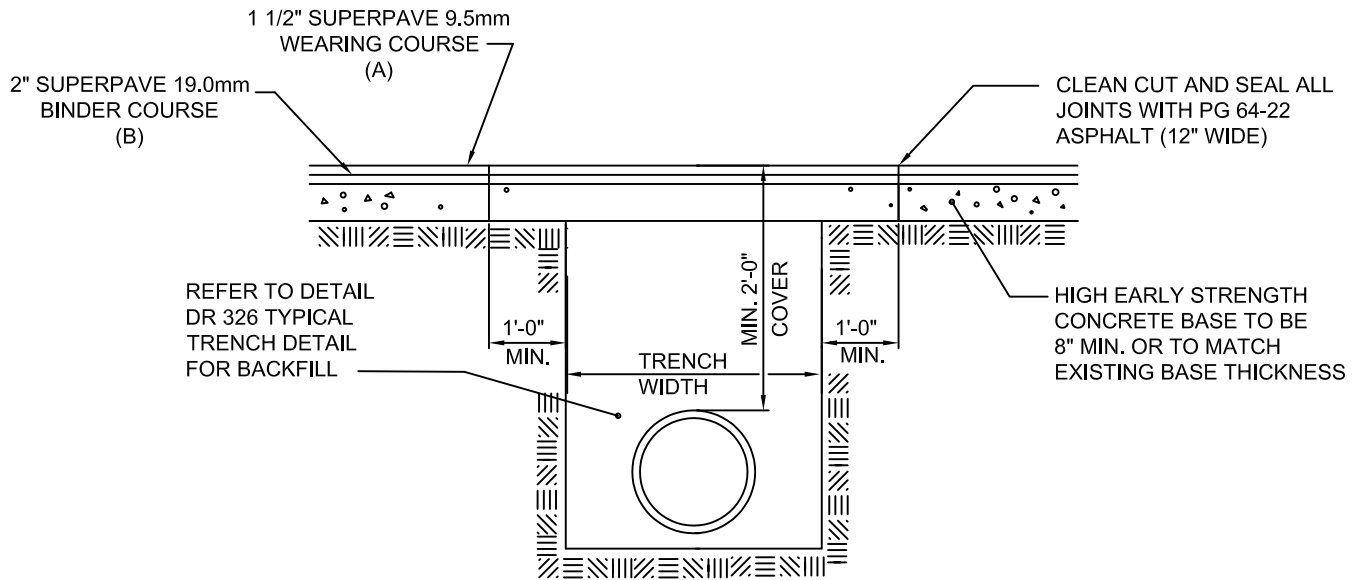


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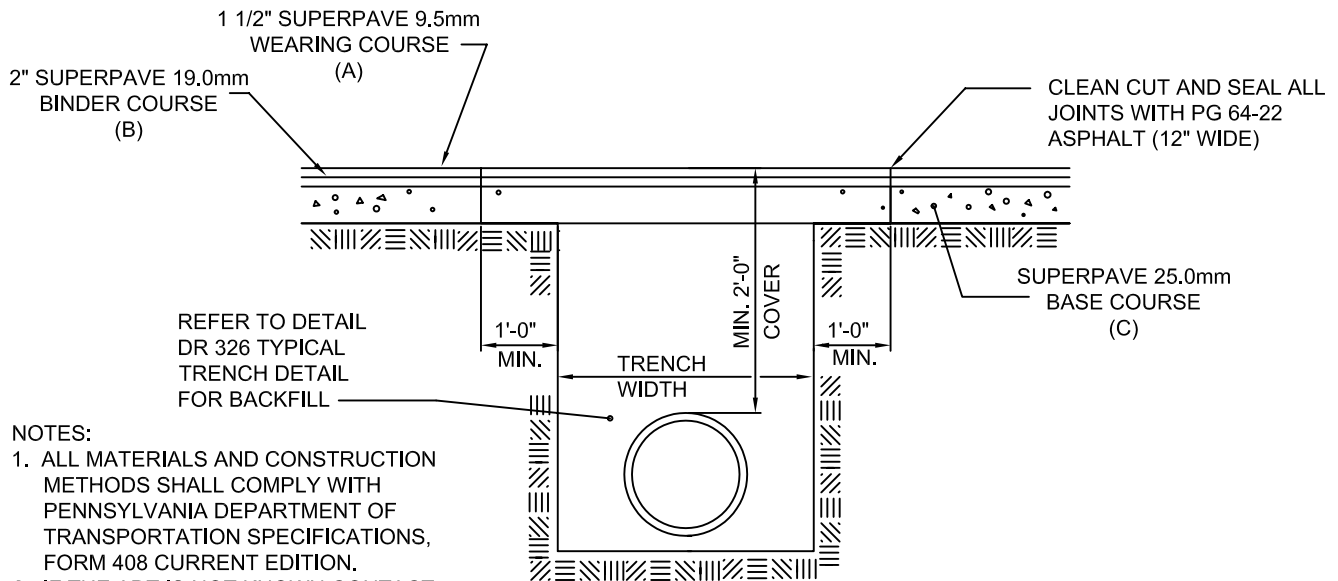
9-15-06

NOT TO SCALE

RD102



CONCRETE BASE COURSE



NOTES:

1. ALL MATERIALS AND CONSTRUCTION METHODS SHALL COMPLY WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, FORM 408 CURRENT EDITION.
2. IF THE ADT IS NOT KNOWN CONTACT THE PENNDOT MAINTENANCE MANAGER FOR THE ROAD RATING.

SUPERPAVE BASE COURSE

- (A) 1 1/2" DEPTH SUPERPAVE ASPHALT MIXTURE DESIGN, HMA WEARING COURSE, PG 64-22, 3.0 TO 30.0 MILLION ESALs, 9.5mm MIX, SRL H
- (B) 2" DEPTH SUPERPAVE ASPHALT MIXTURE DESIGN, HMA BINDER COURSE, PG 64-22, 3.0 TO 30.0 MILLION ESALs, 19.0mm MIX.
- (C) 7" MINIMUM DEPTH (OR MATCH EXISTING BASE COURSE DEPTH WHICHEVER IS GREATER) SUPERPAVE ASPHALT MIXTURE DESIGN, HMA BASE COURSE, PG 64-22, 3.0 TO 30.0 MILLION ESALs, 25.0mm MIX.

FRANCONIA TOWNSHIP STANDARD DETAIL
STATE HIGHWAY PERMANENT RESTORATION DETAILS



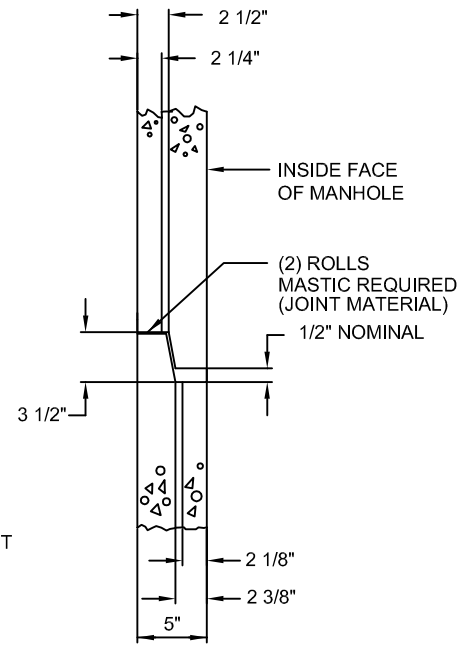
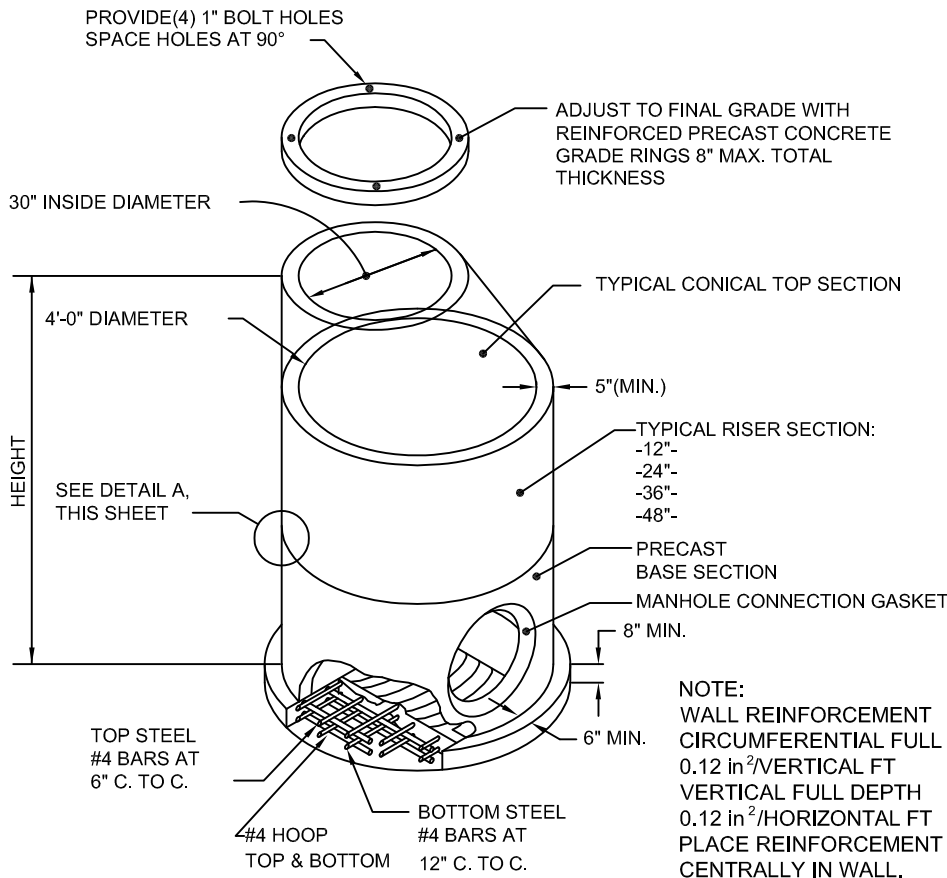
DATE 9-15-06

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RD103

Detail Drawings for Sewer Main Construction
Typically for Use by Developers or Sewer Main
Extension Contractors

These drawings are generally not used for connecting an individual property to an existing public sewer system.

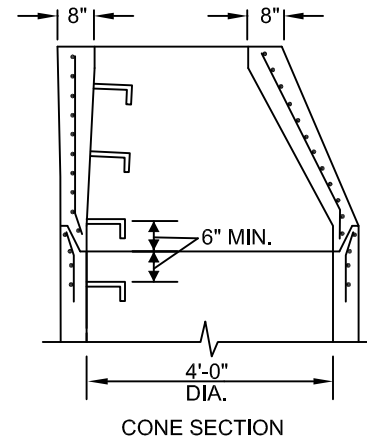


DETAIL A

NOTE:
WALL REINFORCEMENT
CIRCUMFERENTIAL FULL DEPTH
0.12 in²/VERTICAL FT
VERTICAL FULL DEPTH
0.12 in²/HORIZONTAL FT
PLACE REINFORCEMENT MESH
CENTRALLY IN WALL.

NOTES

- 1) CONSTRUCT IN ACCORDANCE WITH PENNDOT PUBLICATION 408 CURRENT EDITION SECTION 714 AND ASTM C-478M-90. STANDARD SPECIFICATION FOR PRECAST REINFORCED CONCRETE MANHOLE SECTIONS AND PENNDOT RC STANDARDS CURRENT EDITION AND AS MODIFIED HEREIN.
- 2) DESIGN FOR HS-25 LIVE LOADING.
- 3) MINIMUM CONCRETE COMPRESSIVE STRENGTH:
CAST IN PLACE 4000 PSI
PRECAST 4000 PSI
- 4) PROVIDE STEEL REINFORCEMENT IN ACCORDANCE WITH ASTM A185, STEEL WELDED WIRE FABRIC ASTM A663/A663M & A675/A675M, PLAIN BILLET STEEL BARS OR ASTM A615/A615M, DEFORMED BILLET STEEL BARS. PROVIDE MINIMUM YIELD STRENGTH OF 400 MPa (60,000 PSI).
- 5) CLEAR COVER FOR STEEL:
WALLS: CAST-IN-PLACE 50 (2")
PRECAST 40 (1 1/2")
FOOTINGS: CAST-IN-PLACE 60 (2 1/2") TOP BARS
80 (3") BOTTOM BARS
50 (2") SIDE COVER
PRECAST 50 (2") TOP BARS
40 (1 1/2") BOTTOM BARS
40 (1 1/2") SIDE COVER
SLABS: CAST-IN-PLACE 50 (2") TOP & BOTTOM BARS
- 6) MANHOLE COATINGS: EXTERIOR COATING; COOPER BLACK NO. 760 TOP SERVICE BLACK AS MANUFACTURED BY COOPERS CREEK CHEMICAL CORP. OR APPROVED EQUAL AT LEAST THREE (3) COATS SHALL BE APPLIED GIVING A TOTAL DRY FILM THICKNESS OF A MINIMUM 32.0 MILS. INTERIOR COATING: SHERWIN-WILLIAMS MACROPOXY 646 NSF, MILL WHITE MANHOLE COATING OR APPROVED EQUAL. AT LEAST TWO (2) COATS SHALL BE APPLIED GIVING A TOTAL DRY FILM THICKNESS OF A MINIMUM 10-14 MILS.
- 7) FLOW CHANNEL TO BE PRECAST INTO MANHOLE BASE.
- 8) MANHOLE CONNECTION GASKETS: A-LOK AS MANUFACTURED BY A-LOK PRODUCTS, INC. (SPEC. ASTM C-923) OR APPROVED EQUAL.
- 9) MANHOLES THAT EXCEED 5 FEET IN DEPTH SHALL BE CONSTRUCTED WITH STEPS. REFER TO FRANCONIA TOWNSHIP DETAIL SN617 FOR SPEC. OF STEPS.



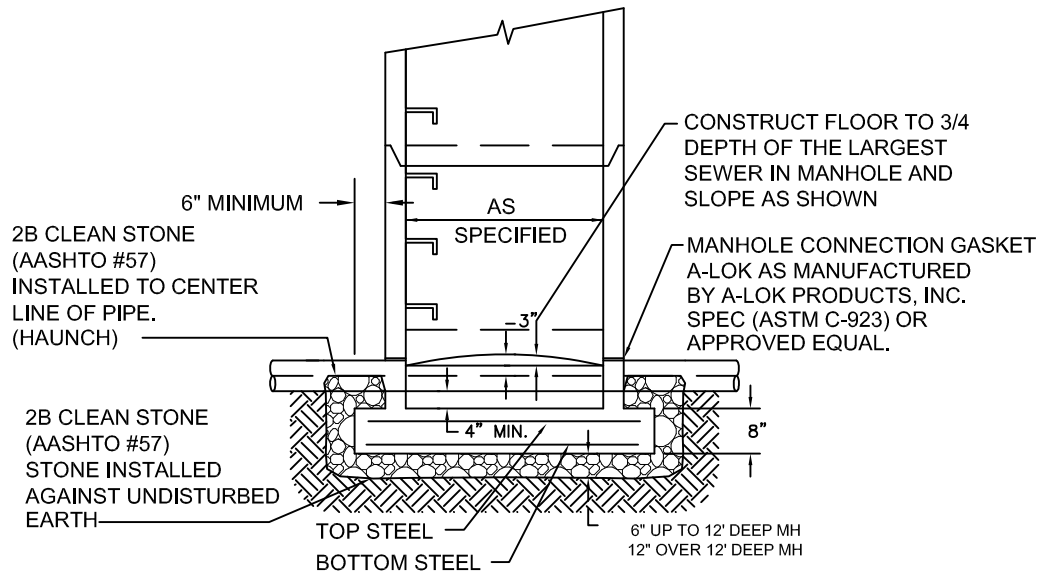
FRANCONIA TOWNSHIP STANDARD DETAIL
PRECAST SANITARY MANHOLE



DATE 7-2012

NOT TO SCALE

SN600



PRECAST MANHOLE HEIGHT	TOP STEEL REQUIREMENTS	BOTTOM STEEL REQUIREMENTS
0'-0" TO 30'-0"	NO. 4 BARS AT 6" C TO C OR 0.33 in ² /FT WWF 6" MAXIMUM SPACING	NO. 4 BARS AT 12" C TO C OR 0.16 in ² /FT WWF 6" MAXIMUM SPACING
>30'-0" TO 60'-0"	NO. 5 BARS AT 6" C TO C OR 0.56 in ² /FT WWF 6" MAXIMUM SPACING	NO. 4 BARS AT 6" C TO C OR 0.27 in ² /FT WWF 6" MAXIMUM SPACING

NOTES:

- 1) CONSTRUCT IN ACCORDANCE WITH PENNDOT PUBLICATION 408 CURRENT EDITION SECTION 714, ASTM C-478M-90 STANDARD SPECIFICATION FOR PRECAST REINFORCED CONCRETE MANHOLE SECTIONS AND PENNDOT RC STANDARDS CURRENT EDITION.
- 2) MINIMUM STRENGTH OF CONCRETE
 CAST-IN-PLACE 4000 PSI(MIN.)
 PRECAST 4000 PSI(MIN.)
- 3) PROVIDE STEEL REINFORCEMENT MEETING THE REQUIREMENTS OF PENNDOT PUBLICATION 408 CURRENT EDITION SEC. 709. REINFORCE PER PENNDOT 408 CURRENT EDITION AND RC STANDARD RC-39M SHEETS 1 THROUGH 5.

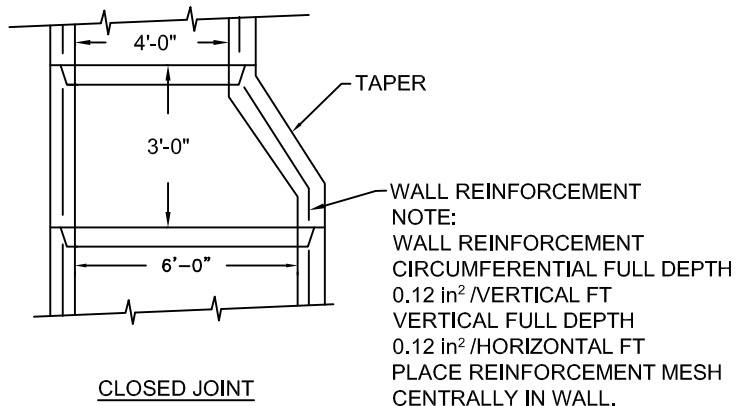
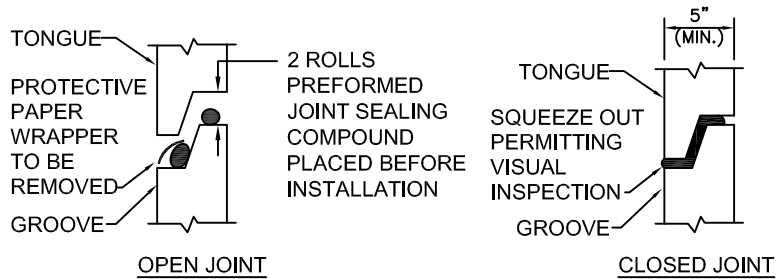
FRANCONIA TOWNSHIP STANDARD DETAIL
PRECAST MANHOLE BASE



DATE 7-2012

NOT TO SCALE

SN601



NOTE:
 1) RISER AND CONE SECTIONS TO BE ADEQUATELY REINFORCED IN ACCORDANCE WITH ASTM SPECIFICATION C-478M-90, STANDARD SPECIFICATION FOR PRECAST REINFORCED CONCRETE MANHOLE SECTIONS

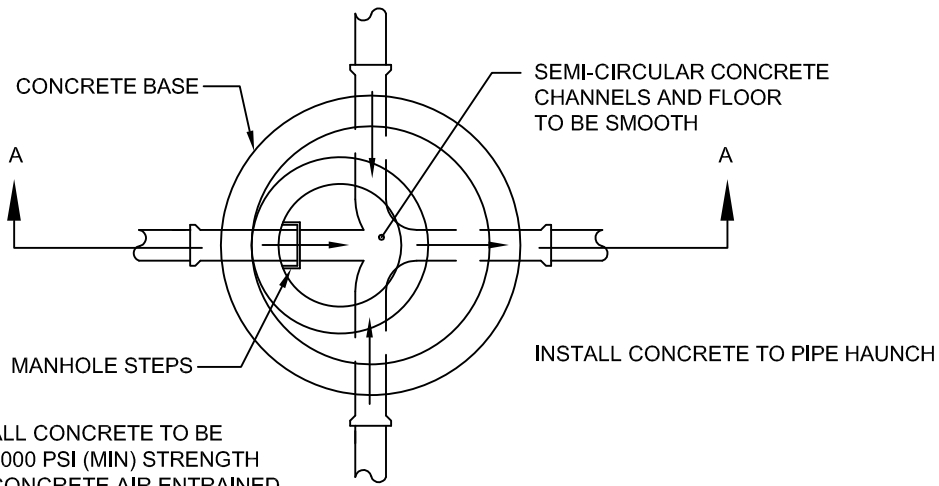
FRANCONIA TOWNSHIP STANDARD DETAIL
PRE-CAST MANHOLE JOINTS AND TRANSITION DETAILS



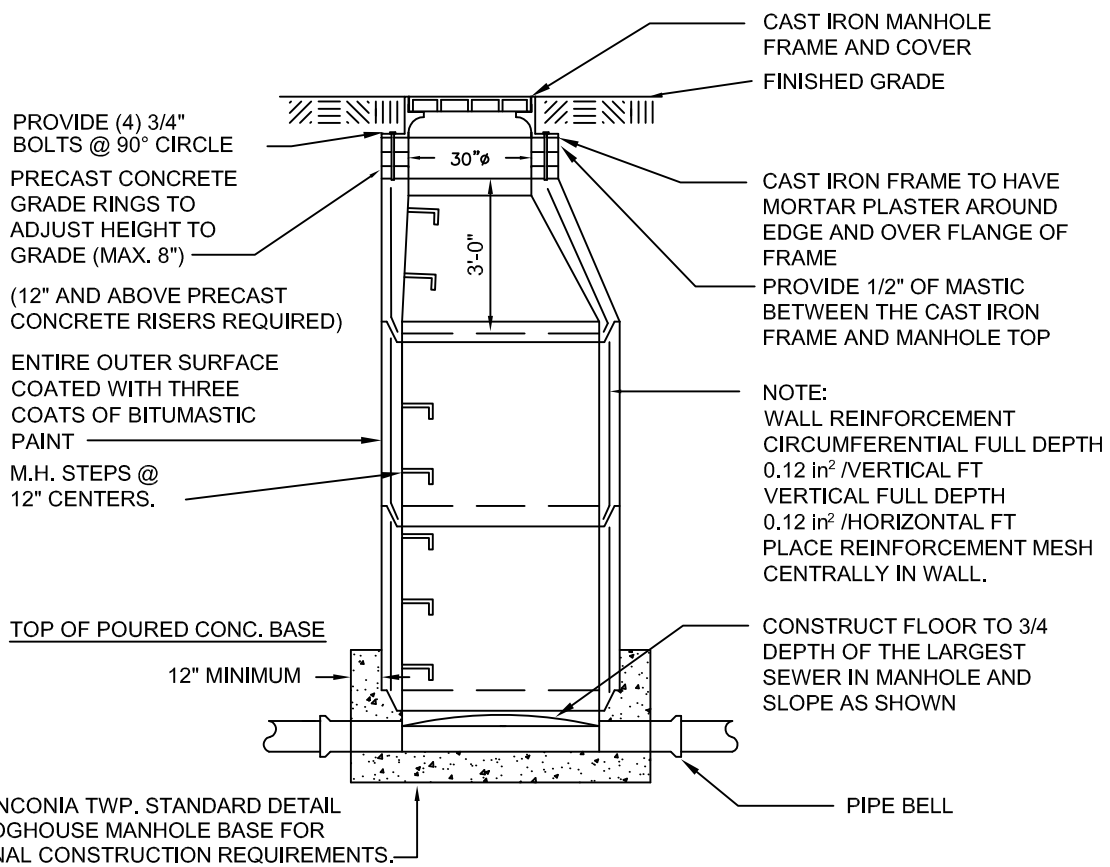
DATE 7-2012

NOT TO SCALE

SN602

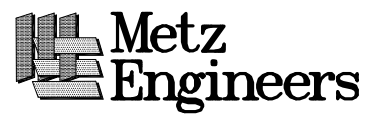


ALL CONCRETE TO BE
4000 PSI (MIN) STRENGTH
CONCRETE AIR ENTRAINED
4" SLUMP (MAX.)

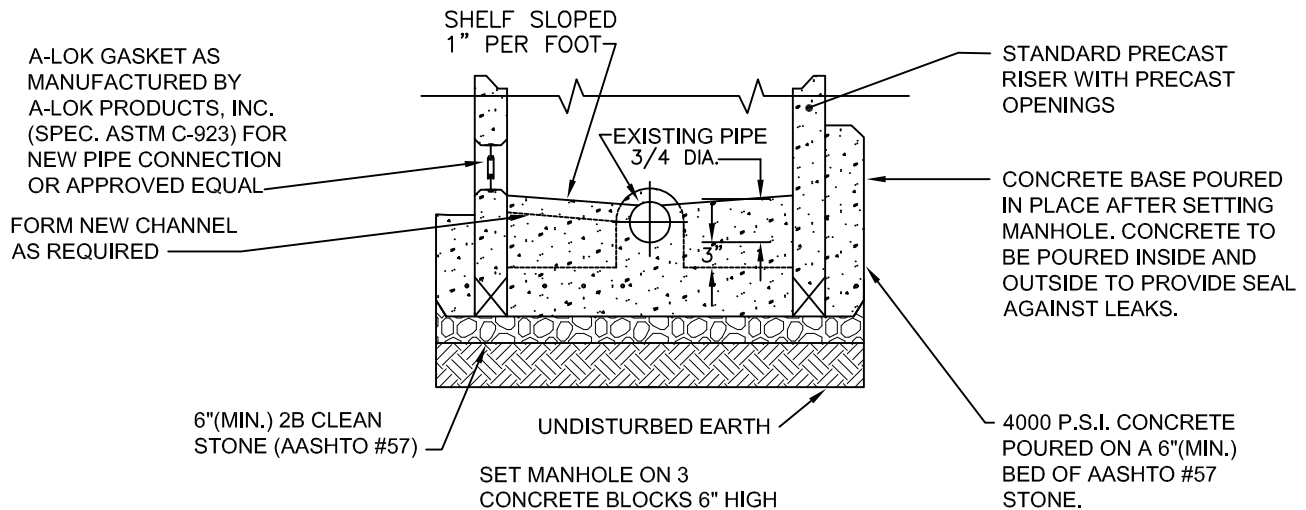
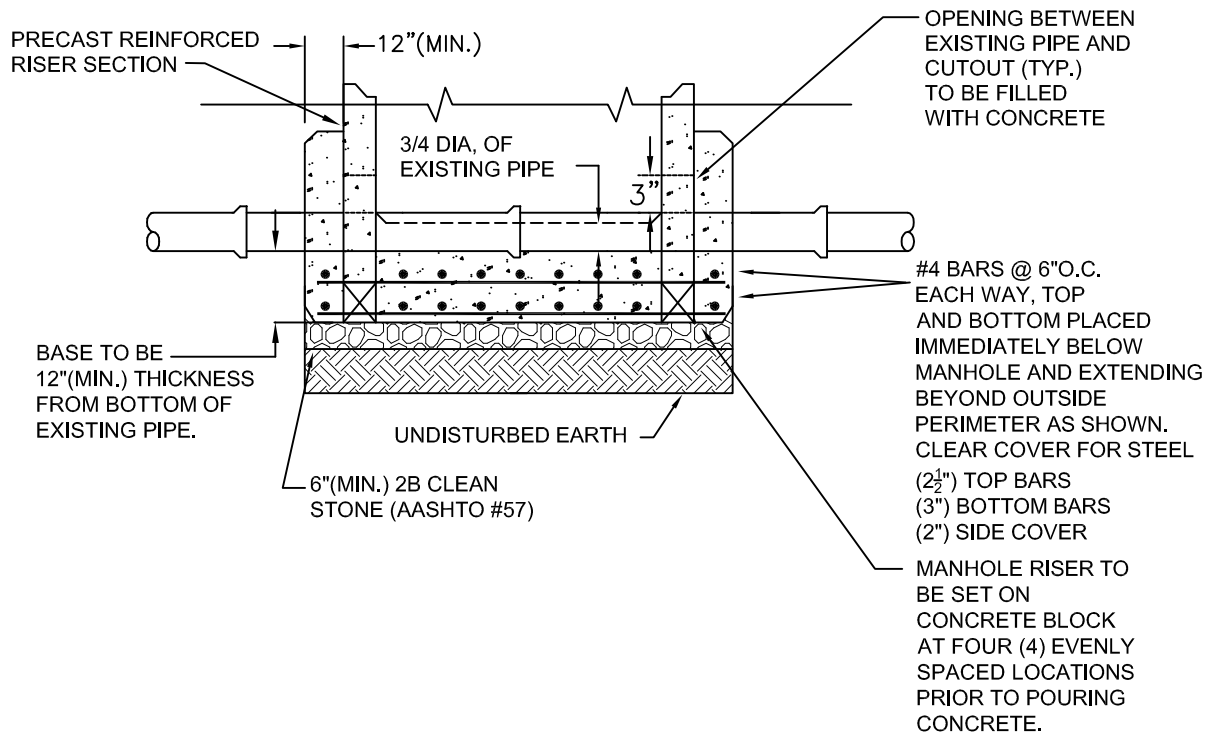


NOTE:
1. STEEL TEMPLATE TO BE SUPPLIED BY MANHOLE MFR. IN ORDER TO FORM PROPER RECESS IN CONCRETE.
2. RISER TO BE MULTIPLE LENGTHS OF 1'-0", IN ORDER TO SUIT VARIATIONS IN ELEVATION.

FRANCONIA TOWNSHIP STANDARD DETAIL
PRECAST MANHOLE WITH POURED CONCRETE BASE



DATE	7-2012	NOT TO SCALE	SN603
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NOTE:

1. EXISTING PIPE TO REMAIN UNTIL SATISFACTORY COMPLETION OF MANHOLE TESTING
2. REMOVE CROWN OF EXISTING PIPE FLUSH WITH CONCRETE SHELF.
3. NEW CHANNEL MUST BE FORMED FOR NEW PIPE.
4. NEW PIPE CANNOT BE MADE ACTIVE UNTIL NEW CHANNEL IS FORMED AND EXISTING PIPE CROWN IS REMOVED.
5. COAT INTERIOR OF NEW BASE CHANNEL, SHELF AND ALL EXPOSED CONCRETE WITH SHERWIN-WILLIAMS MACROPOXY 646 NSF, MILL WHITE OR APPROVED EQUAL. AT LEAST 2 COATS GIVING A DRY FILM THICKNESS OF 10-14 MILS.

FRANCONIA TOWNSHIP STANDARD DETAIL
DOGHOUSE MANHOLE BASE DETAIL



DATE

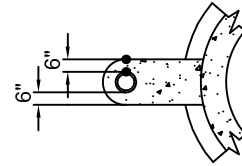
7-2012

NOT TO SCALE

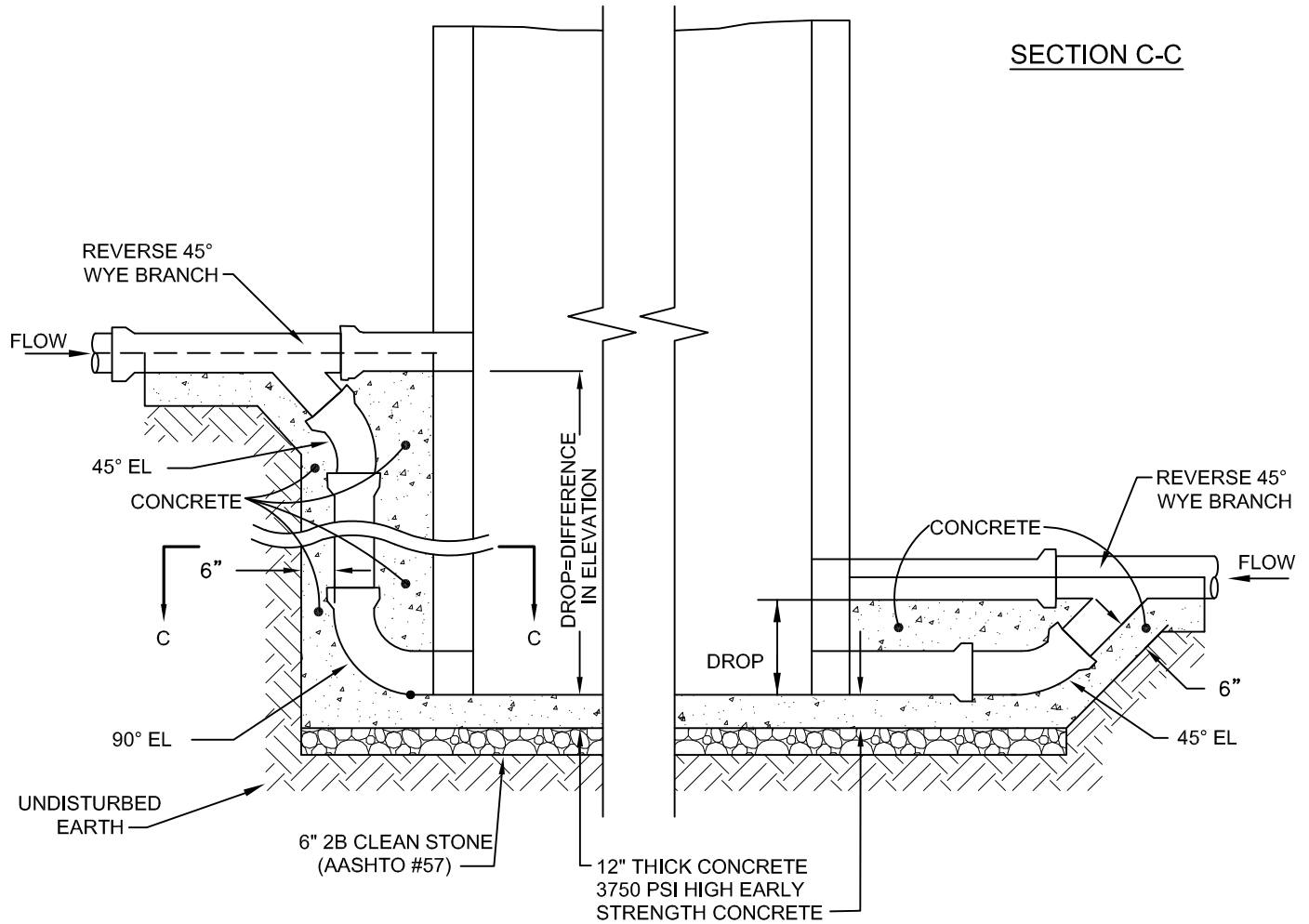
SN604

NOTES:

- 1) IN LIEU OF BELLS, PROVIDE MECH. JOINTS WHERE D.I. PIPE IS SPECIFIED.
- 2) FOR POURED BASE REINFORCEMENT REFER TO DETAIL #SN604.



SECTION C-C



TYPE A

TYPE B

**TYPE B DROP
MAX. DROP**

- 8" SEWER 3'-6"
- 10" SEWER 3'-9"
- 12" SEWER 4'-6"
- 15" SEWER 4'-6"

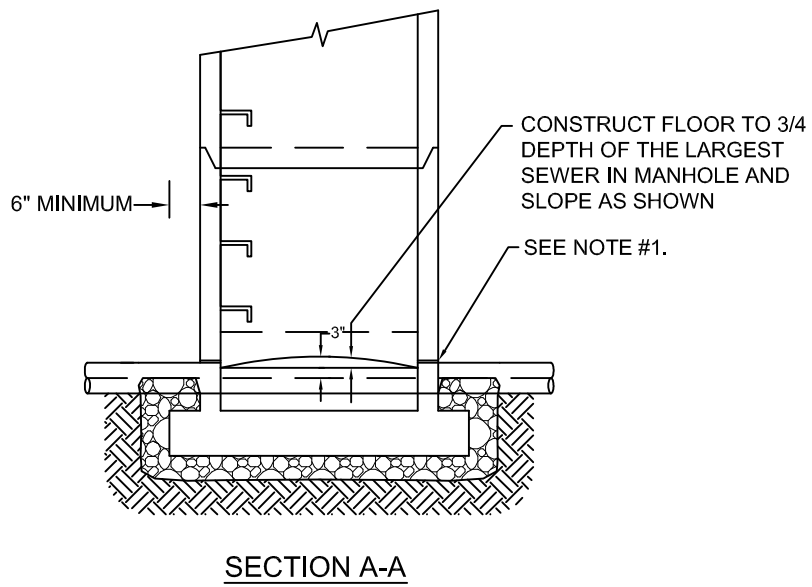
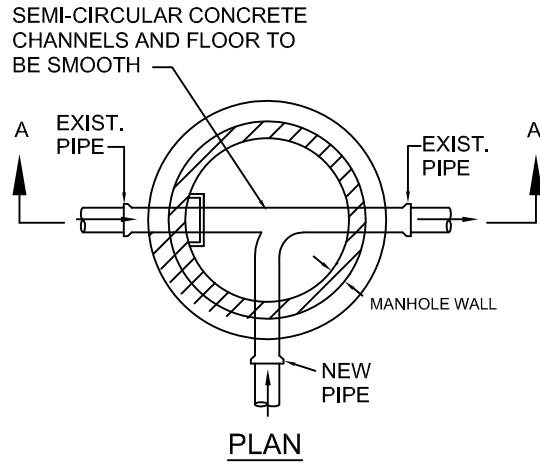
**FRANCONIA TOWNSHIP STANDARD DETAIL
DROP MANHOLE**



DATE 7-2012

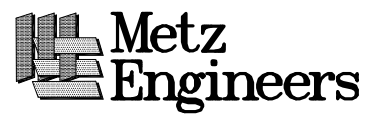
NOT TO SCALE

SN605



- NOTES:**
- 1) CORE DRILL HOLE INTO EXISTING MANHOLE WALL.
 - 2) IF PVC OR D.I.P., INSTALL PSX: POSITIVE SEAL GASKET (PRESS-SEAL GASKET CORP.) OR APPROVED EQUAL.
 - 3) RESHAPE AND OR RECONSTRUCT EXISTING CHANNEL FOR NEW FLOW PATTERN.

FRANCONIA TOWNSHIP STANDARD DETAIL
CONNECTION TO EXISTING MANHOLE

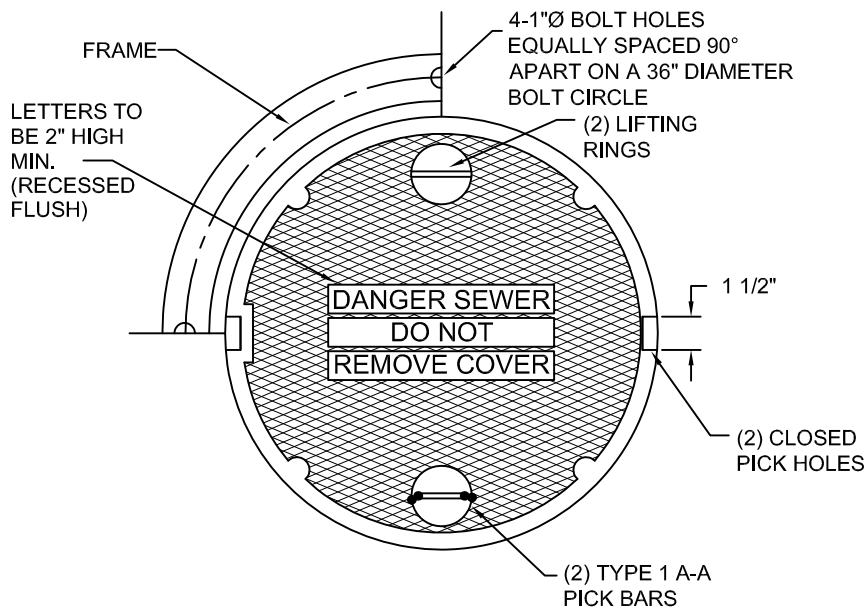


DATE

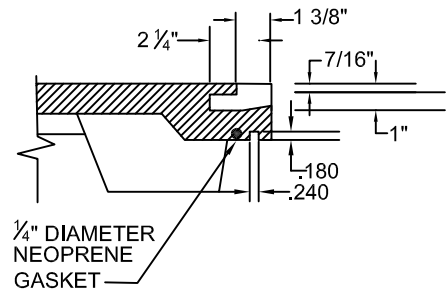
7-2012

NOT TO SCALE

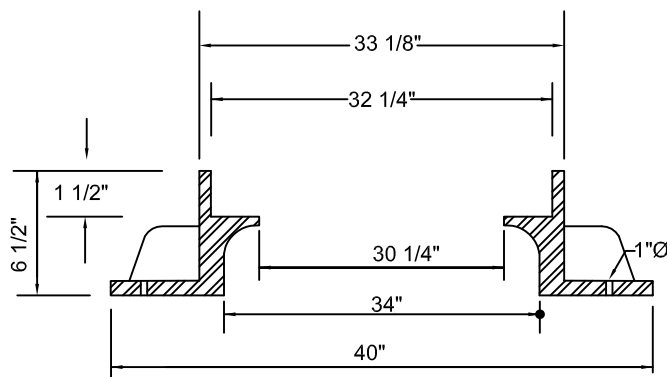
SN606



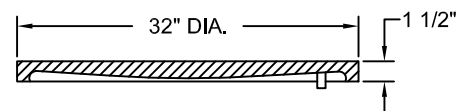
PLAN



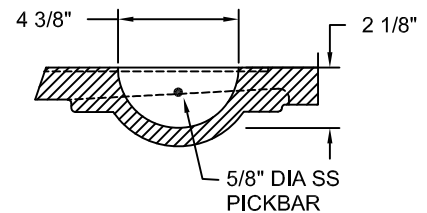
PICKHOLE
&
GASKET



SECTION



COVER SECTION



STATIONARY MANHOLE

PICKBAR
DETAIL

APPROXIMATE WEIGHT 375 LBS.

NOTES

1. PROVIDE MANHOLE FRAMES AND COVERS MEETING THE REQUIREMENTS OF PENNDOT PUBLICATION 408, CURRENT EDITION, SECTION 605.2(b). AND AS MODIFIED HEREIN: DESIGN MANHOLE FRAME, COVER AND GRADE ADJUSTMENT RINGS FOR PHL 93 (HS25) LIVE LOAD.
2. PROVIDE MANHOLE FRAMES AND COVERS SUPPLIED BY EAST JORDAN IRON WORKS (FRAME 1322 Z, COVER 1480 AGS WITH GASKET) OR APPROVED EQUAL.
3. ALL FRAMES TO BE BOLTED DOWN.
4. ALL COVERS REQUIRED TO BE GASKETED.
5. ALL MANHOLES SHALL BE EQUIPPED WITH A WATER TIGHT INSERT (DISH) "NO FLOW" AS MANUFACTURED BY SEALING SYSTEMS INC. OR APPROVED EQUAL.
6. COAT STRUCTURAL STEEL AND CAST IRON FRAMES AND COVERS WITH BITUMINOUS PAINT. AS AN ALTERNATIVE TO BITUMINOUS PAINT, HOT DIP GALVANIZE STRUCTURAL STEEL FRAMES AND COVERS IN ACCORDANCE WITH PENNDOT PUB. 408 SECTION 1105.02(S) CURRENT EDITION.

FRANCONIA TOWNSHIP STANDARD DETAIL
30" CAST IRON MANHOLE FRAME AND COVER

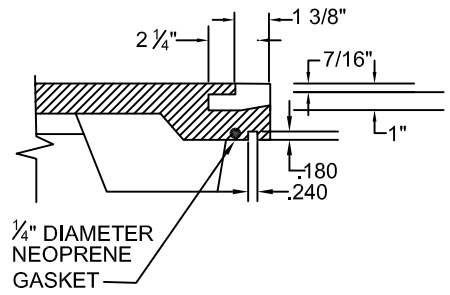
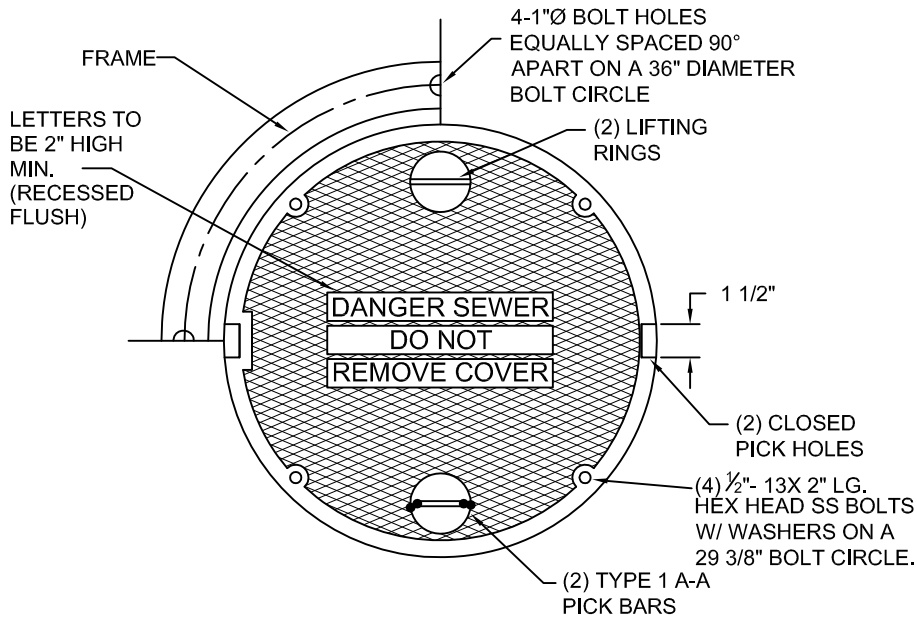


DATE

7-2012

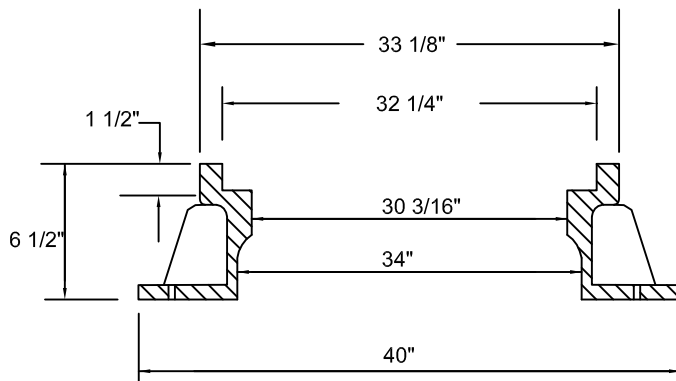
NOT TO SCALE

SN607

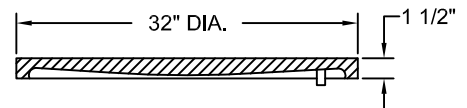


PICKHOLE
DETAIL

PLAN



SECTION

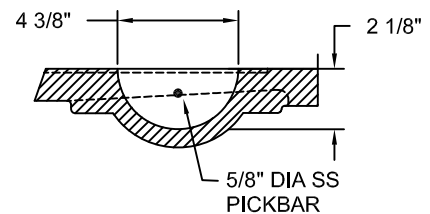


COVER SECTION

CASTING TO BE SUPPLIED WITH BOLTED COVER
AND MACHINED BEARING SURFACE.
APPROXIMATE WEIGHT 375 LBS.

NOTES

1. PROVIDE MANHOLE FRAMES AND COVERS MEETING THE REQUIREMENTS OF PENNDOT PUBLICATION 408, CURRENT EDITION, SECTION 605.2(b) AND AS MODIFIED HEREIN: DESIGN MANHOLE FRAME, COVER AND GRADE ADJUSTMENT RINGS FOR PHL 93 (HS25) LIVE LOAD.
2. PROVIDE MANHOLE FRAMES AND COVERS SUPPLIED BY EAST JORDAN IRON WORKS (FRAME 1322 Z, COVER 1480 AGS WITH GASKET) OR APPROVED EQUAL.
3. ALL FRAMES TO BE BOLTED DOWN.
4. ALL COVERS REQUIRED TO BE GASKETED.
5. ALL MANHOLES SHALL BE EQUIPPED WITH A WATER TIGHT INSERT (DISH) "NO FLOW" AS MANUFACTURED BY SEALING SYSTEMS INC. OR APPROVED EQUAL.
6. COAT STRUCTURAL STEEL AND CAST IRON FRAMES AND COVERS WITH BITUMINOUS PAINT. AS AN ALTERNATIVE TO BITUMINOUS PAINT, HOT DIP GALVANIZE STRUCTURAL STEEL FRAMES AND COVERS IN ACCORDANCE WITH PENNDOT PUB. 408, SECTION 1105.02(S) CURRENT EDITION.



PICKBAR
DETAIL

FRANCONIA TOWNSHIP STANDARD DETAIL
CAST IRON WATERTIGHT MANHOLE FRAME AND COVER

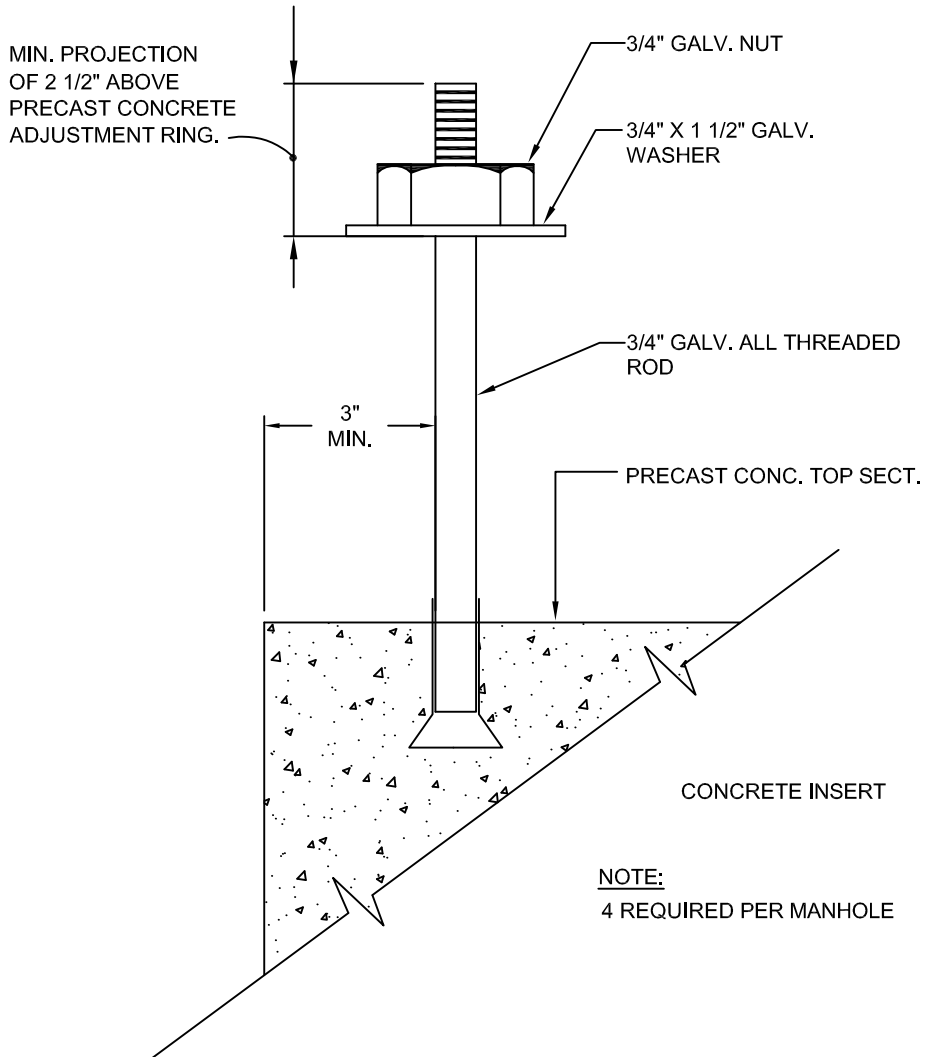


DATE

7-2012

NOT TO SCALE

SN608



FRANCONIA TOWNSHIP STANDARD DETAIL
ANCHOR BOLT DETAIL

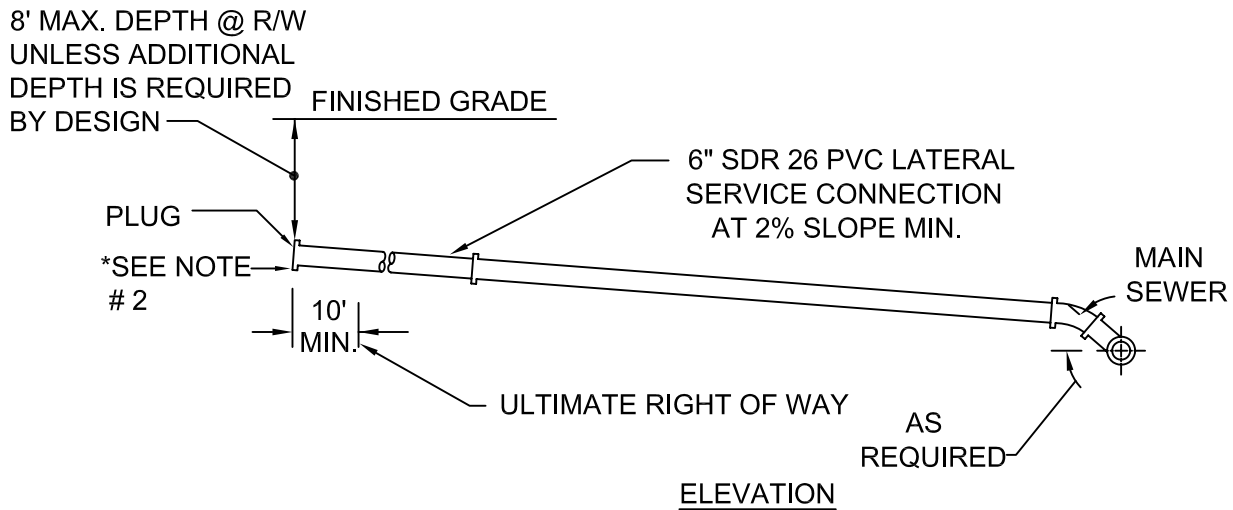
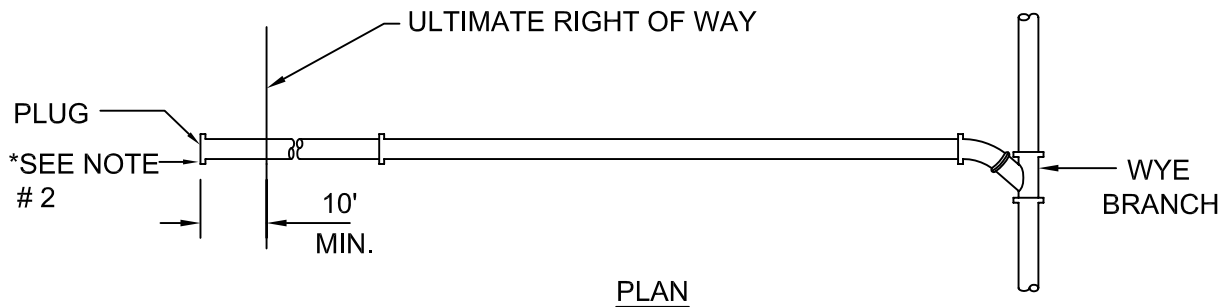


DATE

7-2012

NOT TO SCALE

SN609



NOTE:

1. 6" LATERAL TO BE EXTENDED 10 FT BEYOND ULT. R/W
2. SET 2"X 4" OAK STAKE TO EXTEND 48" ABOVE FINISHED GRADE. PAINT TOP OF STAKE GREEN, WITH LOT # WRITTEN ON STAKE.

FRANCONIA TOWNSHIP STANDARD DETAIL
SERVICE LATERAL



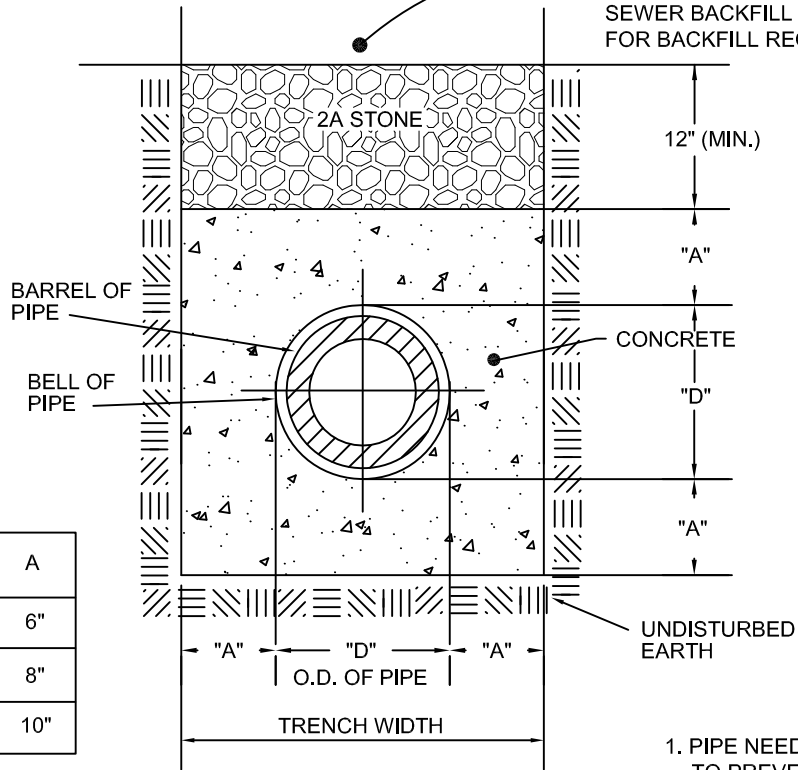
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4-4-07

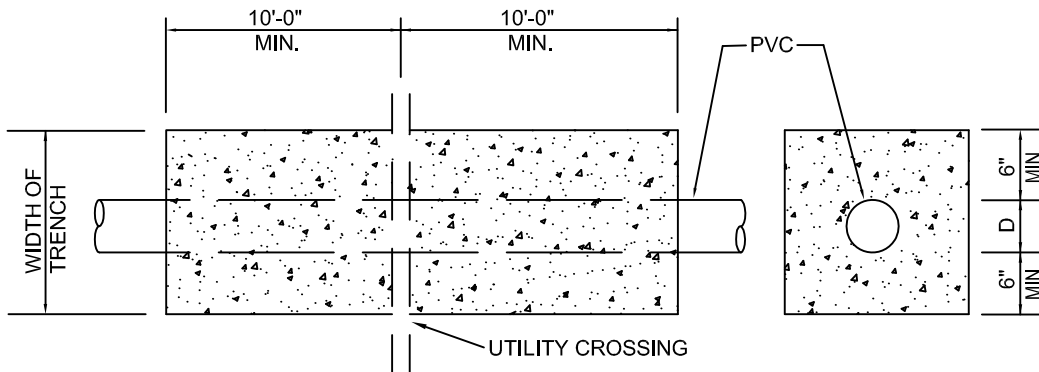
NOT TO SCALE

SN610

REFER TO FRANCONIA TOWNSHIP
STANDARD DETAIL "SANITARY
SEWER BACKFILL DETAIL" SN613
FOR BACKFILL REQUIREMENTS.



1. PIPE NEEDS TO BE SECURED TO PREVENT FLOATATION. PRIOR TO CONCRETE POUR.
2. 3750 PSI HIGH EARLY STRENGTH CONCRETE.



FRANCONIA TOWNSHIP STANDARD DETAIL
CONCRETE ENCASEMENT DETAIL

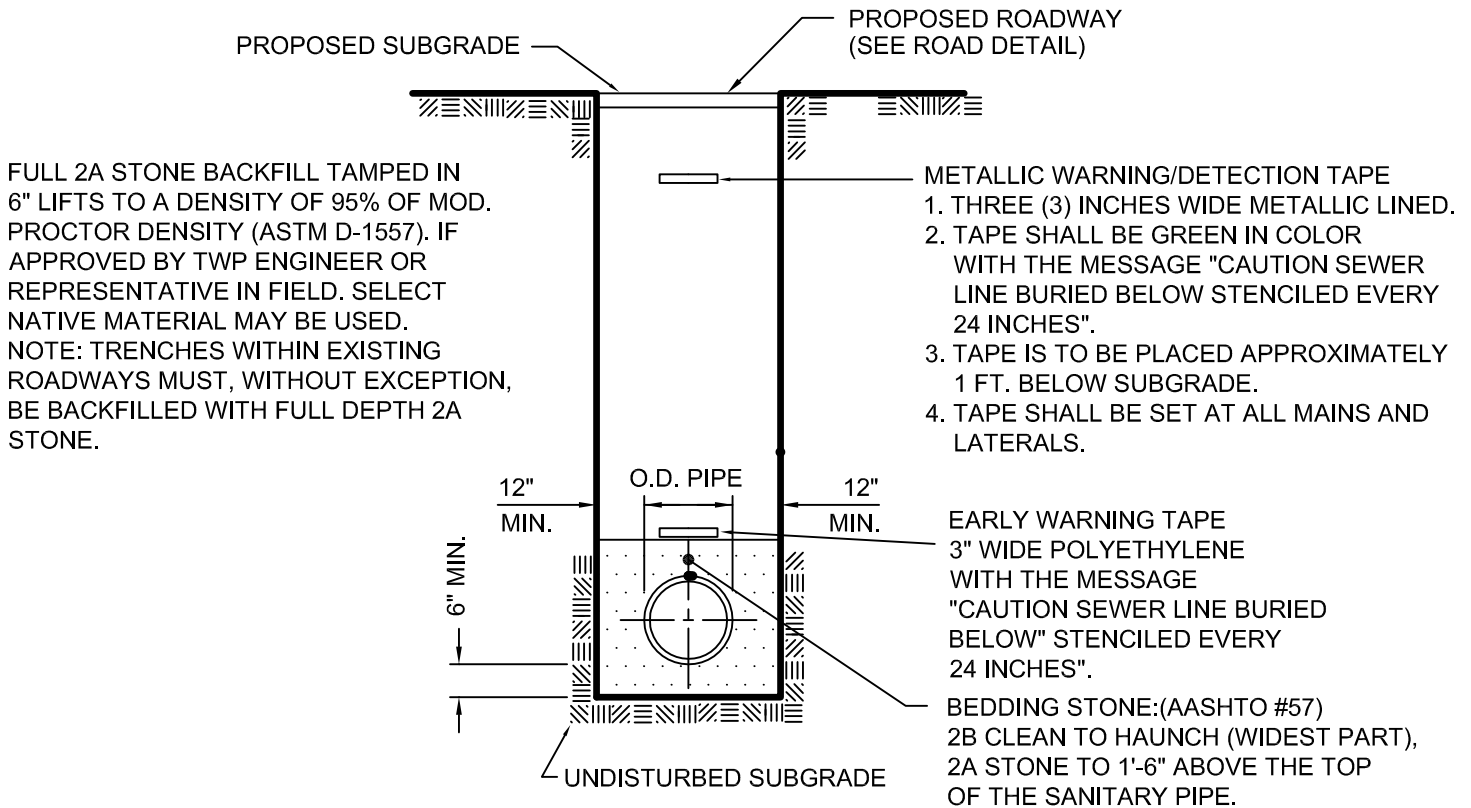


DATE

7-2012

NOT TO SCALE

SN612



FRANCONIA TOWNSHIP STANDARD DETAIL
SANITARY SEWER BACKFILL DETAIL

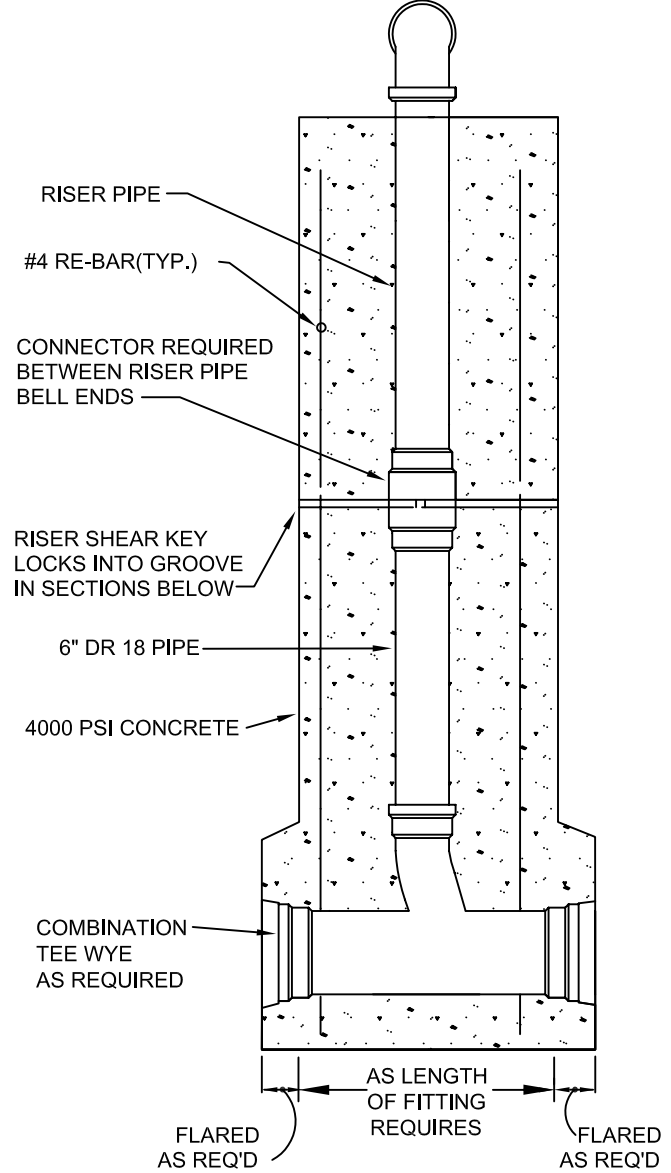
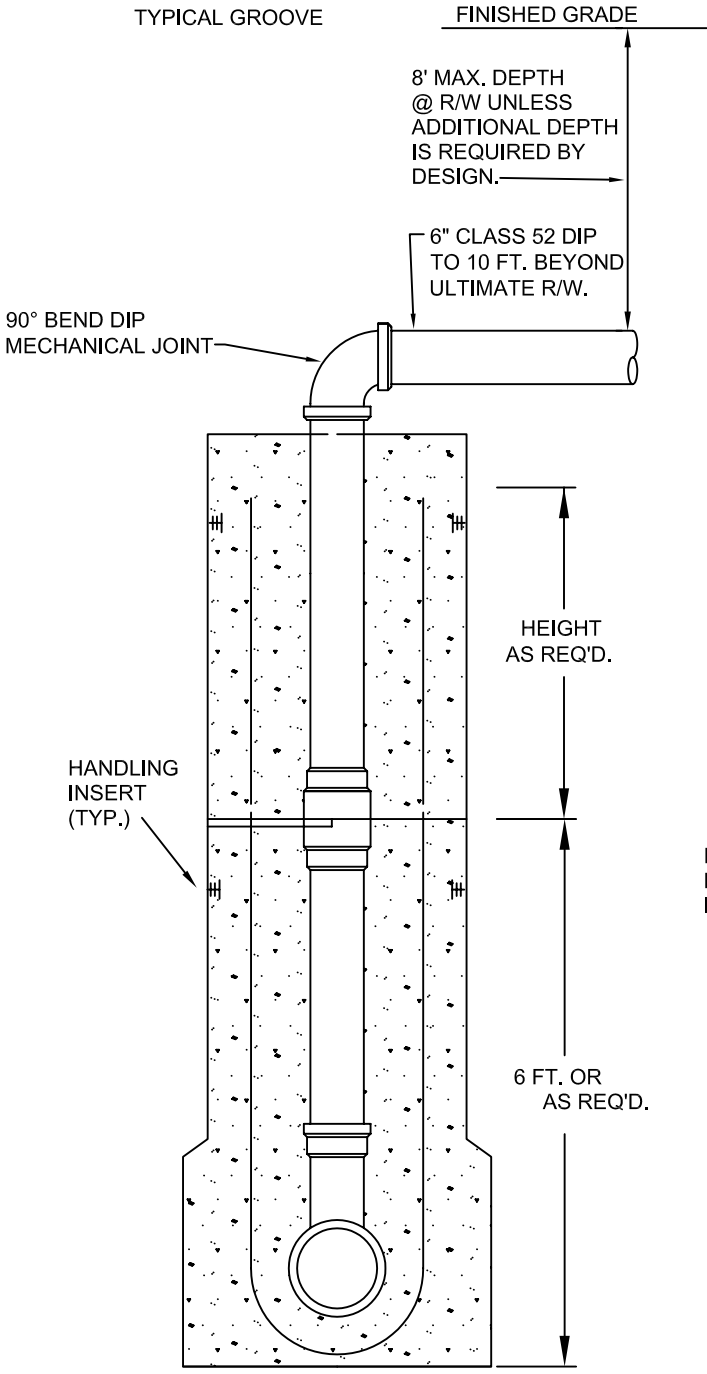
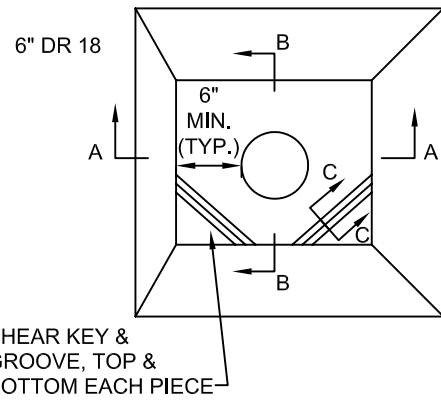
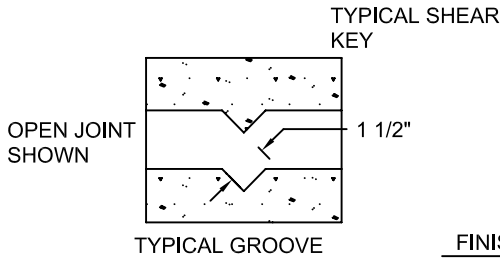


DATE

7-2012

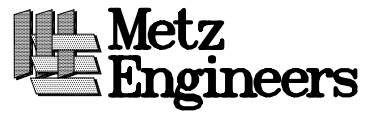
NOT TO SCALE

SN613



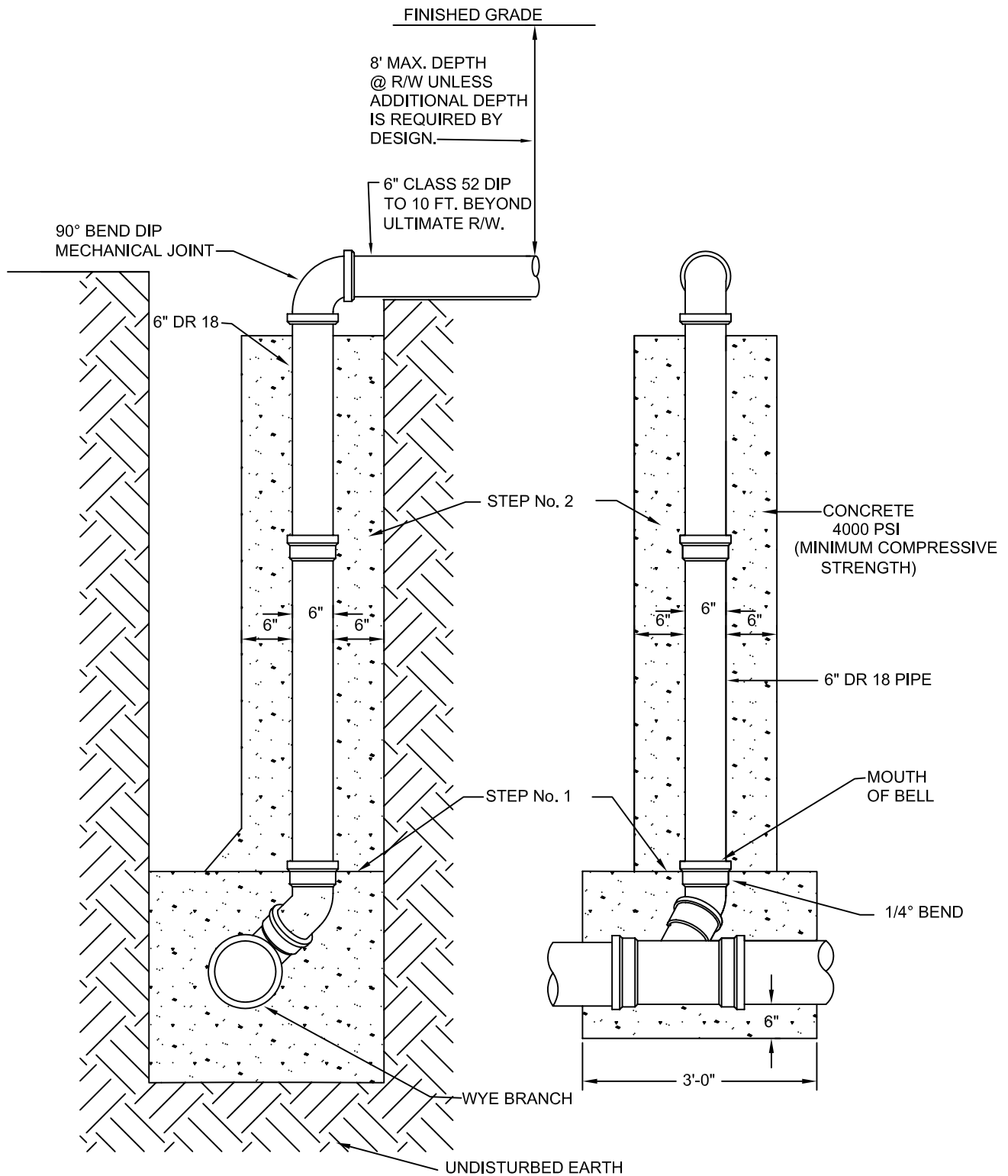
NOTE:
AS MANUFACTURED BY ATLANTIC CONCRETE PRODUCTS INC. OR APPROVED EQUAL.

FRANCONIA TOWNSHIP STANDARD DETAIL
PRECAST FOR DEEP CUT LATERAL CONNECTION



DATE	4-4-07	NOT TO SCALE	SN614
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DATE: 4/11/07



METHOD OF CONSTRUCTION
 ONCE WYE HAS BEEN INSTALLED, INSERT 6" 45° BEND.
 AND POUR CONCRETE TO 1" BELOW MOUTH OF BELL
 PERMIT CONCRETE TO SET UP FOR A PERIOD OF 24
 HOURS BEFORE INSERTION OF RISER PIPE, AND
 CONCRETE ENCASEMENT.

FRANCONIA TOWNSHIP STANDARD DETAIL
DEEP CUT LATERAL

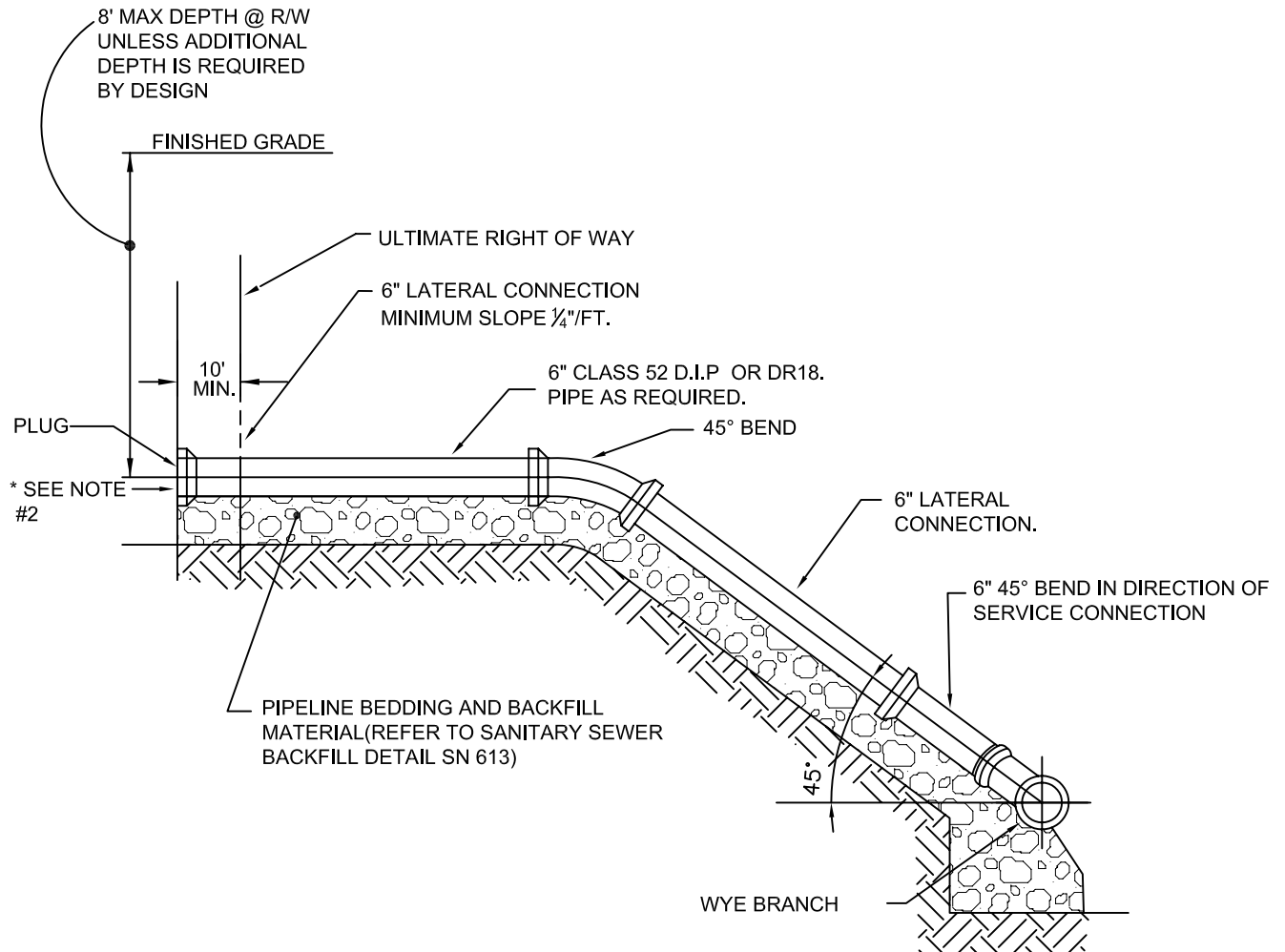


DATE

4-4-07

NOT TO SCALE

SN615



ELEVATION

NOTE:

1. 6" LATERAL TO BE EXTENDED 10 FT BEYOND ULT. R/W
2. SET 2"X 4" OAK STAKE TO EXTEND 48" ABOVE FINISHED GRADE. PAINT TOP OF STAKE GREEN, WITH LOT # WRITTEN ON STAKE.

FRANCONIA TOWNSHIP STANDARD DETAIL
DEEP CUT LATERAL CONNECTION

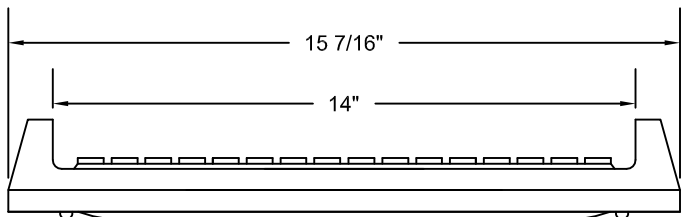
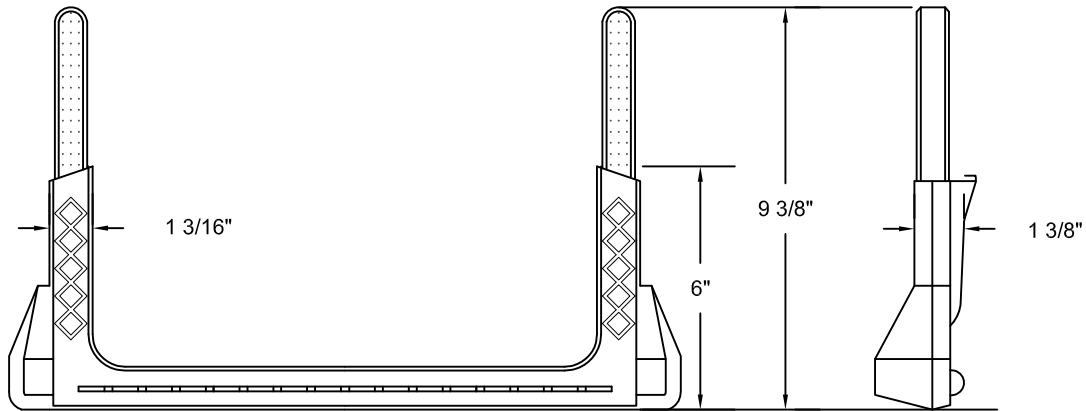


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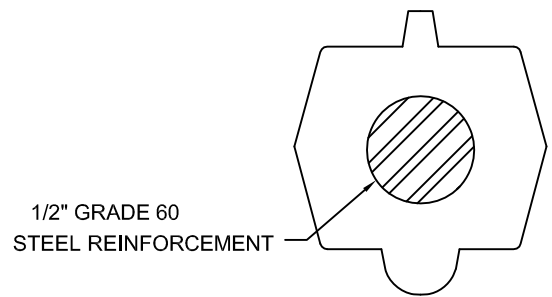
4-4-07

NOT TO SCALE

SN616



COPOLMER POLYPROPYLENE PLASTIC
STEP PS 2-B



COPOLYMER POLYPROPYLENE MANHOLE STEP (ASTM C-478)

PLASTIC

MANHOLE STEPS ARE TO BE MADE OF COPOLYMER POLYPROPYLENE.

THE COPOLYMER POLYPROPYLENE TO CONFORM TO A.S.T.M. D-4141-95B PPO344B33534Z02
(THE PREVIOUS STANDARD OF A.S.T.M. D-4101-92B, WAS REPLACED BY D-4101-95B.

STEEL REINFORCING BAR

THE STEEL TO BE USED IN MANUFACTURING OF THIS PRODUCT TO BE A DEFORMED 1/2" REINFORCING ROD.
THIS MATERIAL TO BE GRADE 60 AND CONFORM TO ALL THE REQUIREMENTS OF ASTM A-615.

FRANCONIA TOWNSHIP STANDARD DETAIL
COPOLYMER POLYPROPYLENE MANHOLE STEP

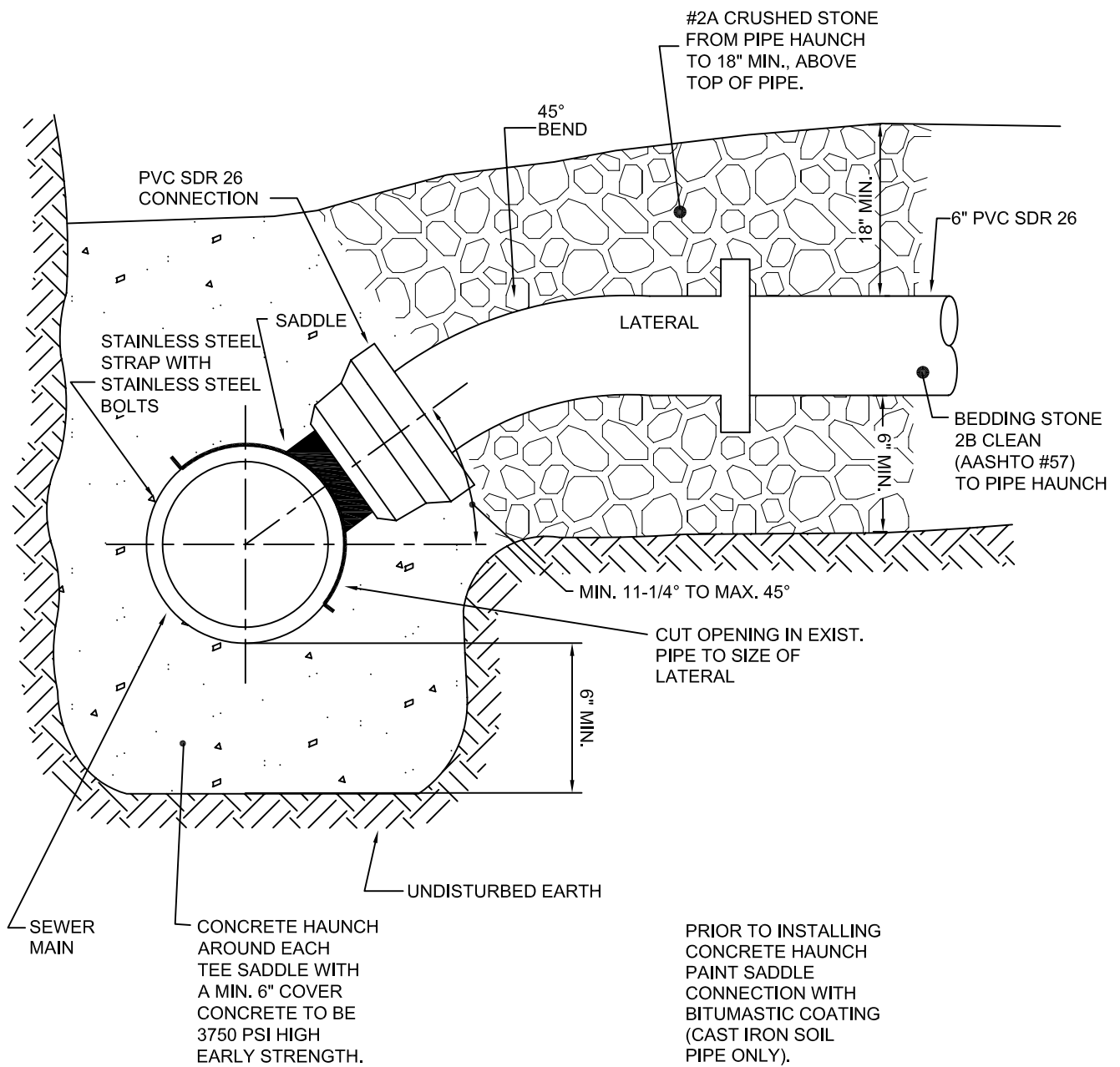


DATE

7-2012

NOT TO SCALE

SN617



NOTE: SEALTITE SEWER PIPE SADDLE, MANUFACTURED BY GENECO OR APPROVED EQUAL.

FRANCONIA TOWNSHIP STANDARD DETAIL
 SADDLE CONNECTION
 (TIE-IN TO EXISTING SEWER)



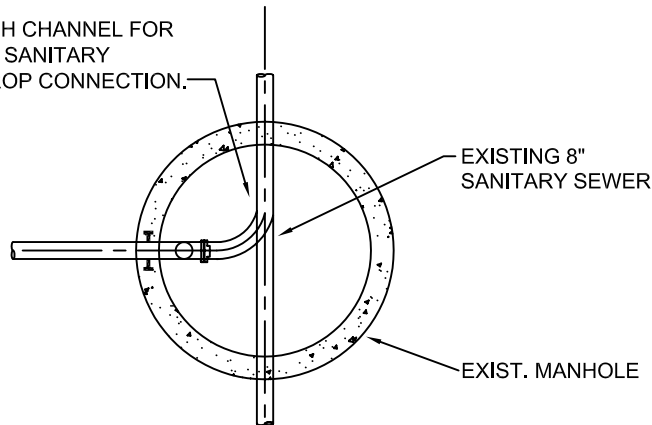
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4-4-07

NOT TO SCALE

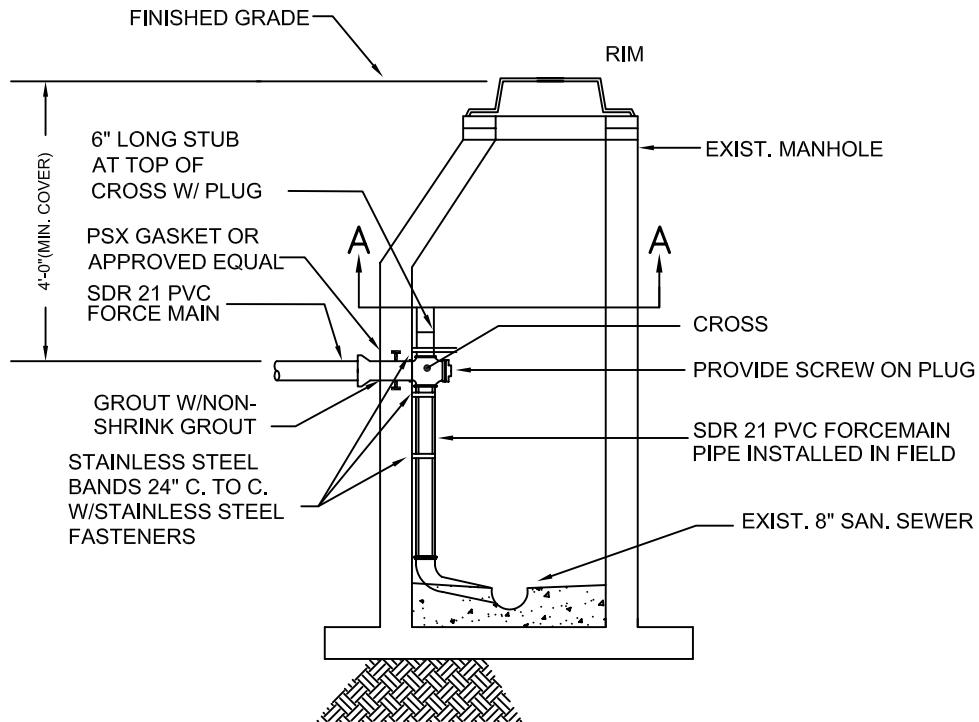
SN618

MODIFY EXISTING BENCH CHANNEL FOR PROPOSED SDR 21 PVC SANITARY SEWER FORCE MAIN DROP CONNECTION.



NOTE:
COREDRILL OPENING IN EXISTING MANHOLE WALL, AT ONE (1) LOCATION, EQUAL TO PROPOSED SANITARY SEWER OUTSIDE DIAMETER PLUS 2". INSTALL A PSX GASKET (AS MANUFACTURED BY PRESS SEAL GASKET CORP. OR APPROVED EQUAL) OPENING SHALL BE WATERTIGHT. USE NON SHRINK GROUT AS REQUIRED.

SECTION A-A



FRANCONIA TOWNSHIP STANDARD DETAIL
FORCE MAIN CONNECTION TO EXISTING
SANITARY SEWER (PROPOSED INSIDE DROP)



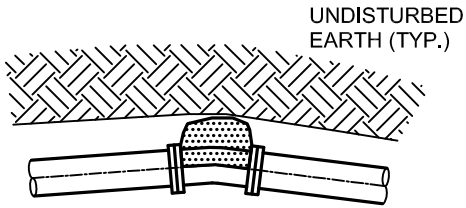
DATE

4-4-07

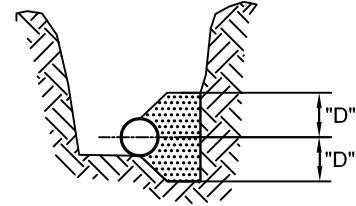
NOT TO SCALE

SN619

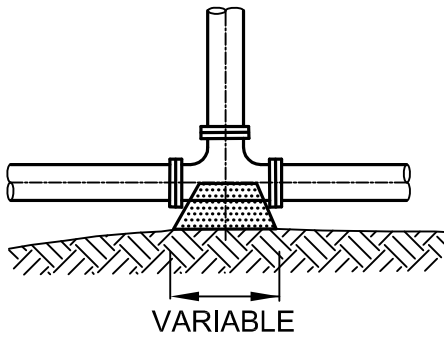
90° TO TANGENT
OF PIPE



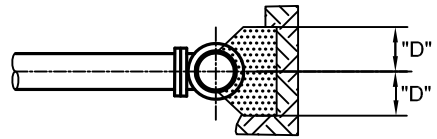
3,750 P.S.I. HIGH EARLY
STRENGTH CONCRETE



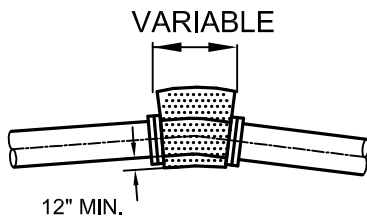
HORIZONTAL BENDS



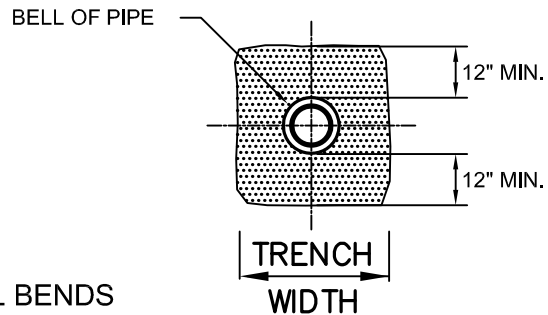
3,750 P.S.I. HIGH EARLY
STRENGTH CONCRETE



HORIZONTAL TEES



3,750 P.S.I. HIGH EARLY
STRENGTH CONCRETE



VERTICAL BENDS

NOTES:

1. THRUST BLOCKS MUST BEAR AGAINST UNDISTURBED EARTH.
2. SIZE OF THRUST BLOCKS TO BE DETERMINED INDIVIDUALLY AT TIME OF CONSTRUCTION.
3. HARNESS OR RESTRAIN PIPE IF ORDERED.
4. "D" IS EQUAL TO DIAMETER OF PIPE.

FRANCONIA TOWNSHIP STANDARD DETAIL TYPICAL THRUST BLOCKS

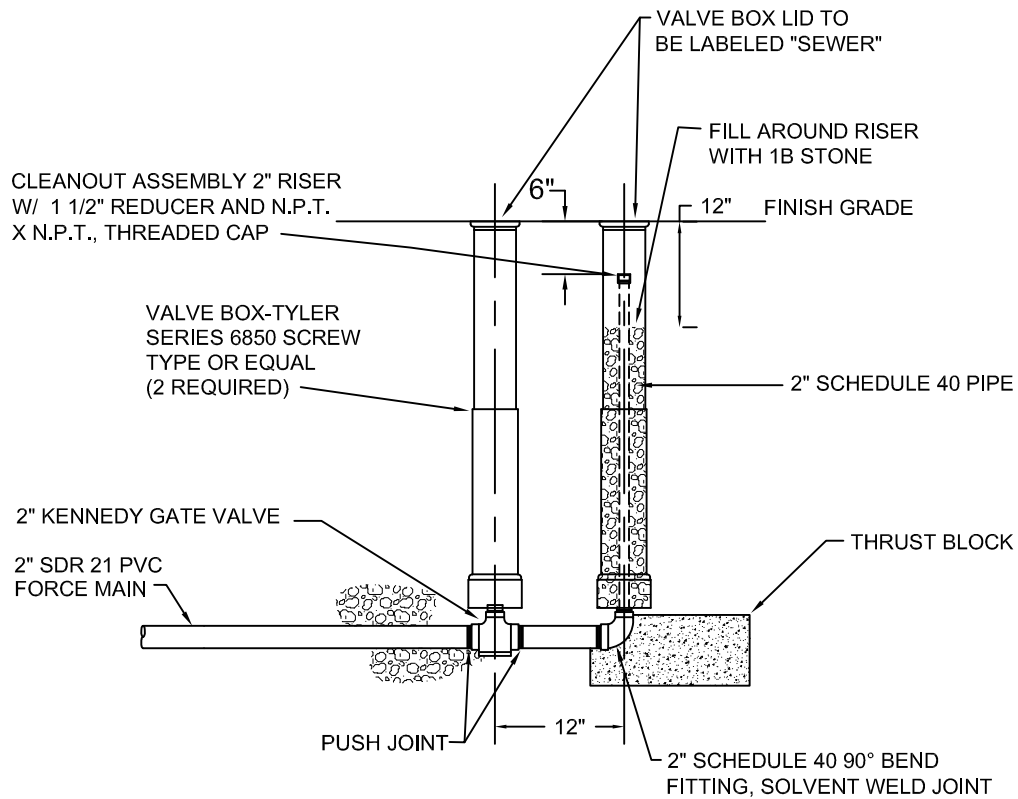
 Metz
Engineers

DATE

7-2012

NOT TO SCALE

SN620



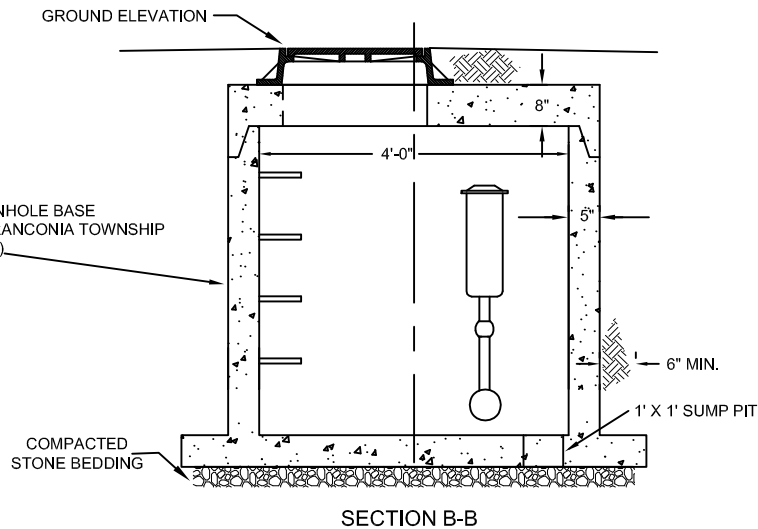
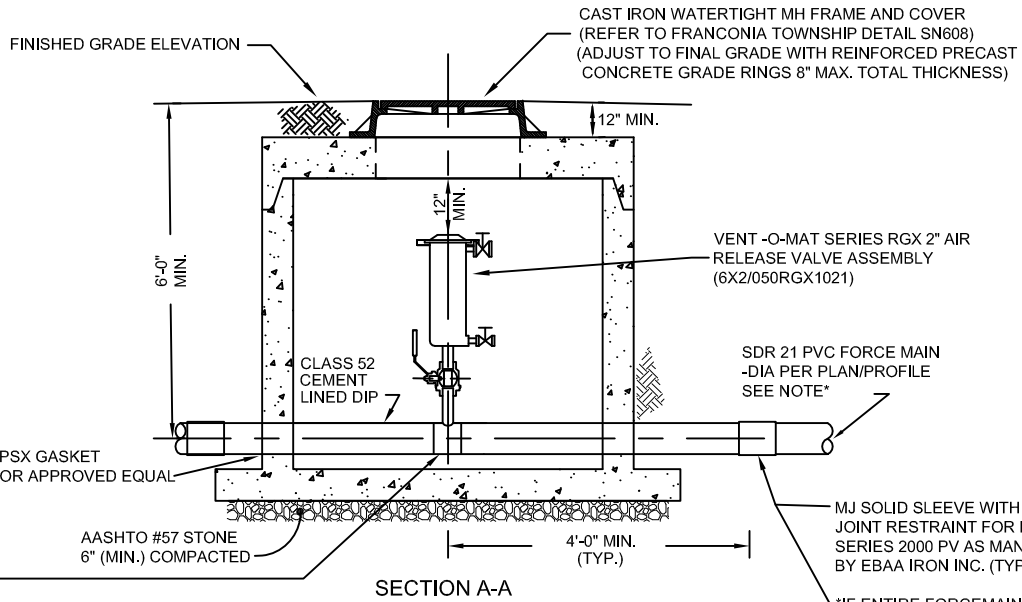
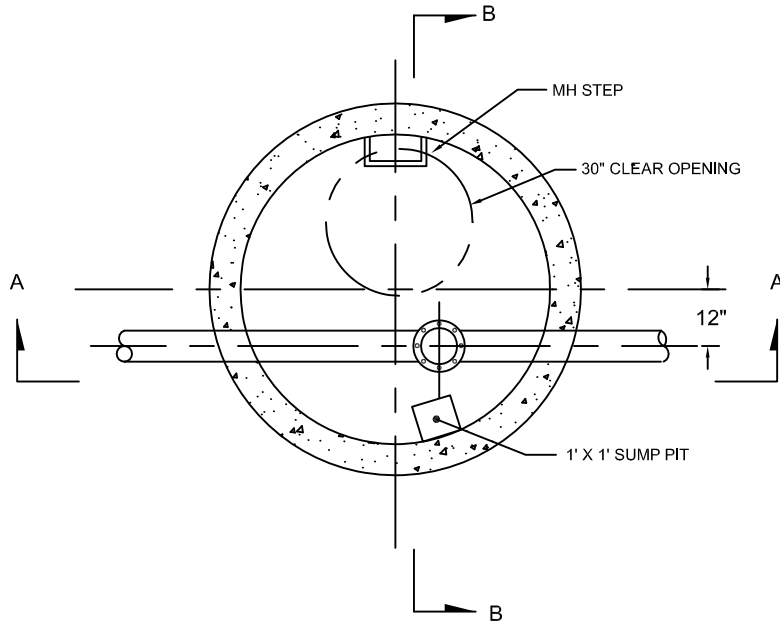
**FRANCONIA TOWNSHIP STANDARD DETAIL
 TERMINAL PRESSURE SEWER CLEANOUT**



DATE 7-2012

NOT TO SCALE

SN622



*IF ENTIRE FORCEMAIN IS DESIGNED AS DIP USE THE FOLLOWING: MJ SOLID SLEEVE WITH MECHANICAL JOINT RESTRAINT FOR DIP MEGALUG SERIES 1100 AS MANUFACTURED BY EBAA IRON INC. (TYP)

FRANCONIA TOWNSHIP STANDARD DETAIL
IN-LINE AIR VALVE CHAMBER FOR 3"-6" FORCEMAIN

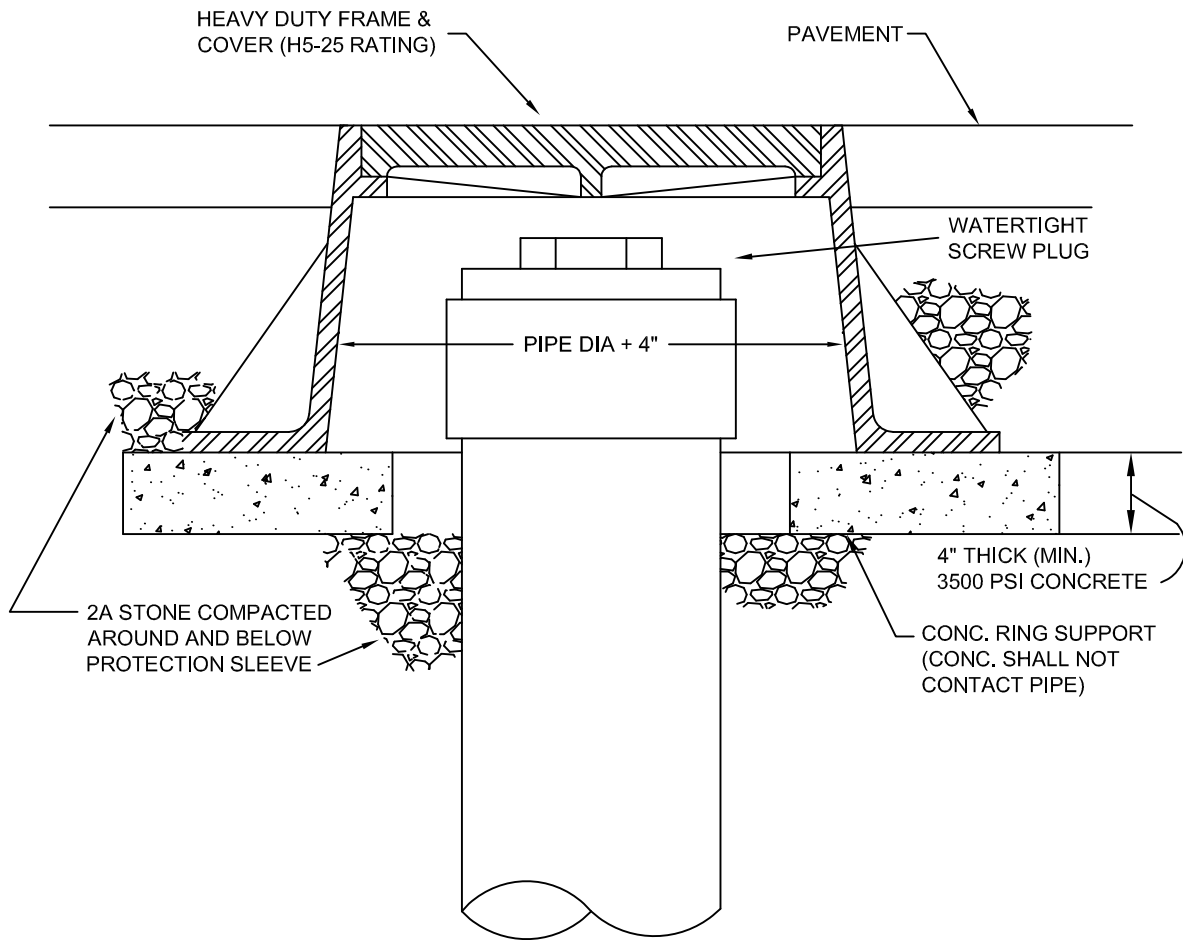


DATE

7-2012

NOT TO SCALE

SN625



NOTES:

1. FRAME AND COVER SHALL BE EAST JORDAN IRON WORKS, INC. MODEL V-8502 OR APPROVED EQUAL.
2. CLEAN-OUT PROTECTION SLEEVES ARE TO BE INSTALLED FOR CLEAN-OUTS LOCATED IN PAVED AREAS, OR LESS THAN 3 FEET FROM A PAVED AREA.

FRANCONIA TOWNSHIP STANDARD DETAIL
 CLEAN OUT PROTECTION SLEEVE
 (FOR USE IN OR NEAR PAVED AREAS)

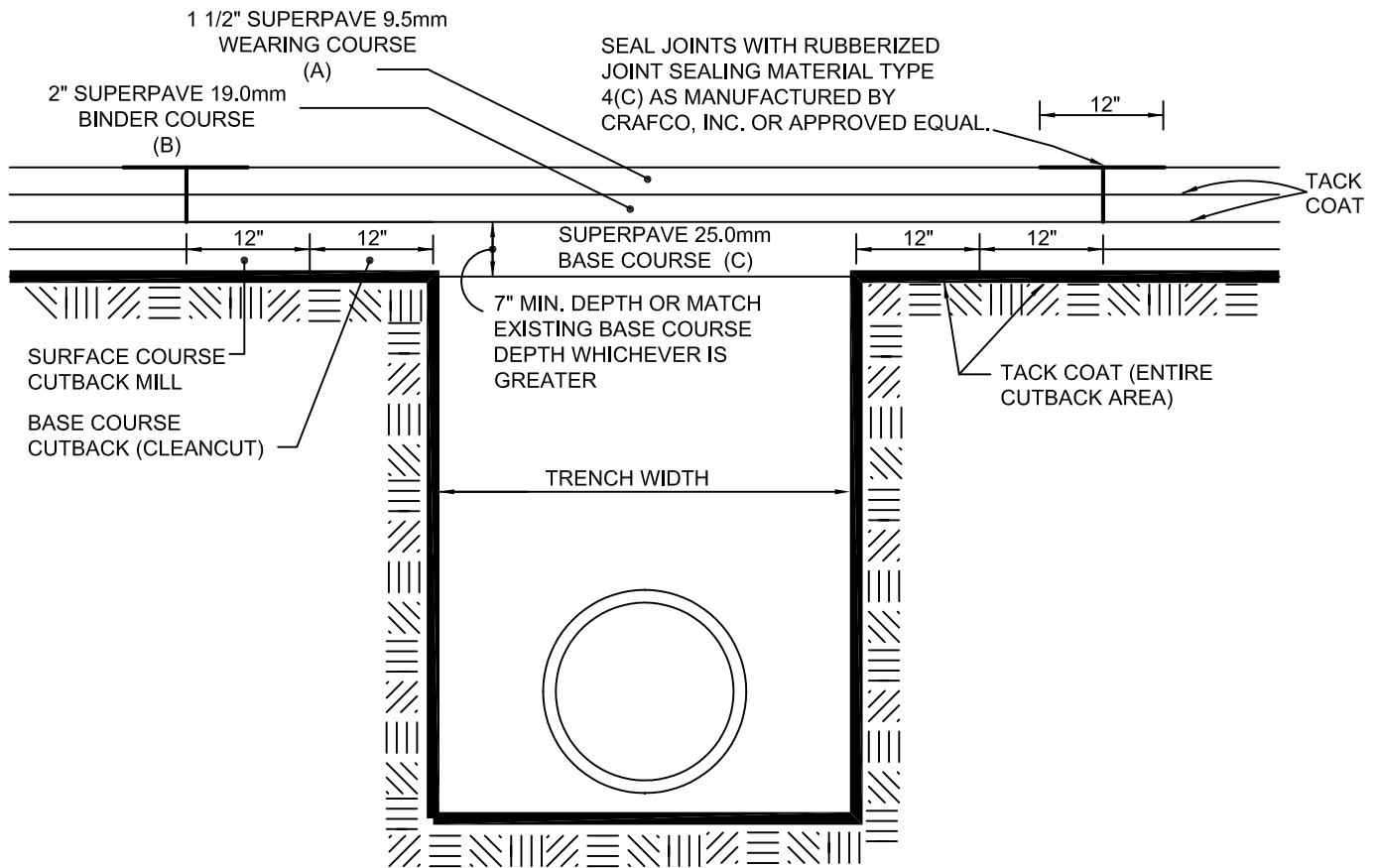


DATE

7-2012

NOT TO SCALE

SN626



- A. 1 1/2" DEPTH SUPERPAVE ASPHALT MIXTURE DESIGN, HMA WEARING COURSE, PG 64-22, 0.0 TO 0.3 MILLION ESALs, 9.5mm MIX, SRL H
- B. 2" DEPTH SUPERPAVE ASPHALT MIXTURE DESIGN, HMA BINDER COURSE, PG 64-22, 0.0 TO 0.3 MILLION ESALs, 19.0mm MIX.
- C. 7" DEPTH (OR MATCH EXISTING BASE COURSE DEPTH WHICHEVER IS GREATER) SUPERPAVE ASPHALT MIXTURE DESIGN, HMA BASE COURSE, PG 64-22, 0.0 TO 0.3 MILLION ESALs, 25.0mm MIX.

FRANCONIA TOWNSHIP STANDARD DETAIL
 PERMANENT ROAD RESTORATION WITHIN TOWNSHIP ROADS

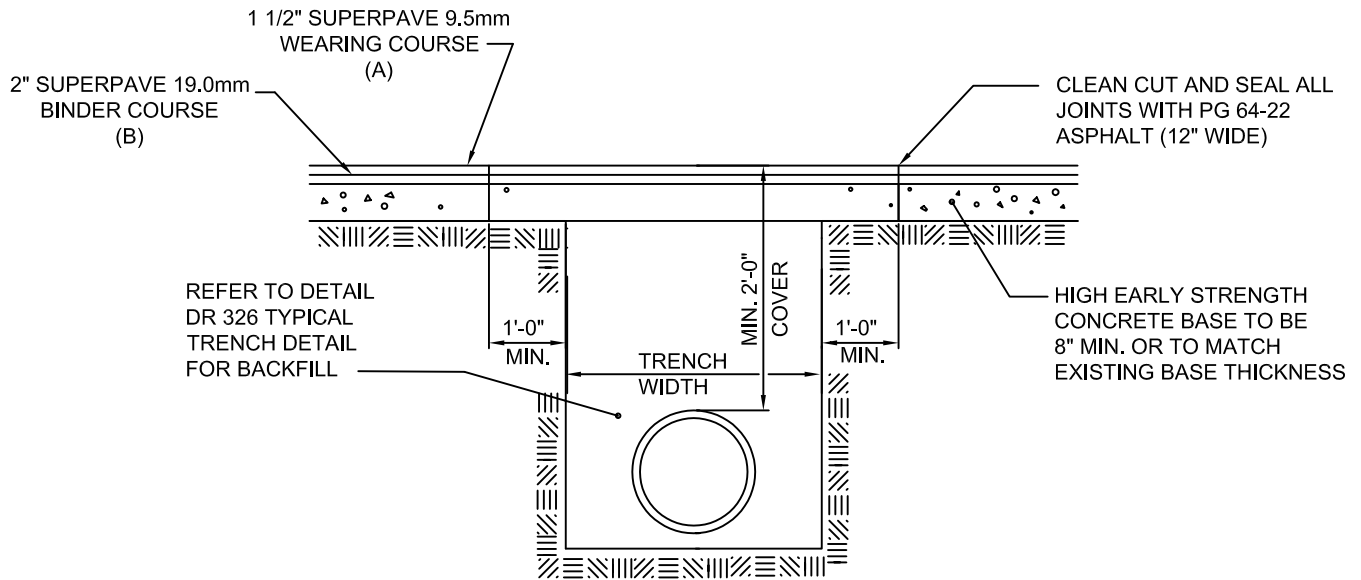


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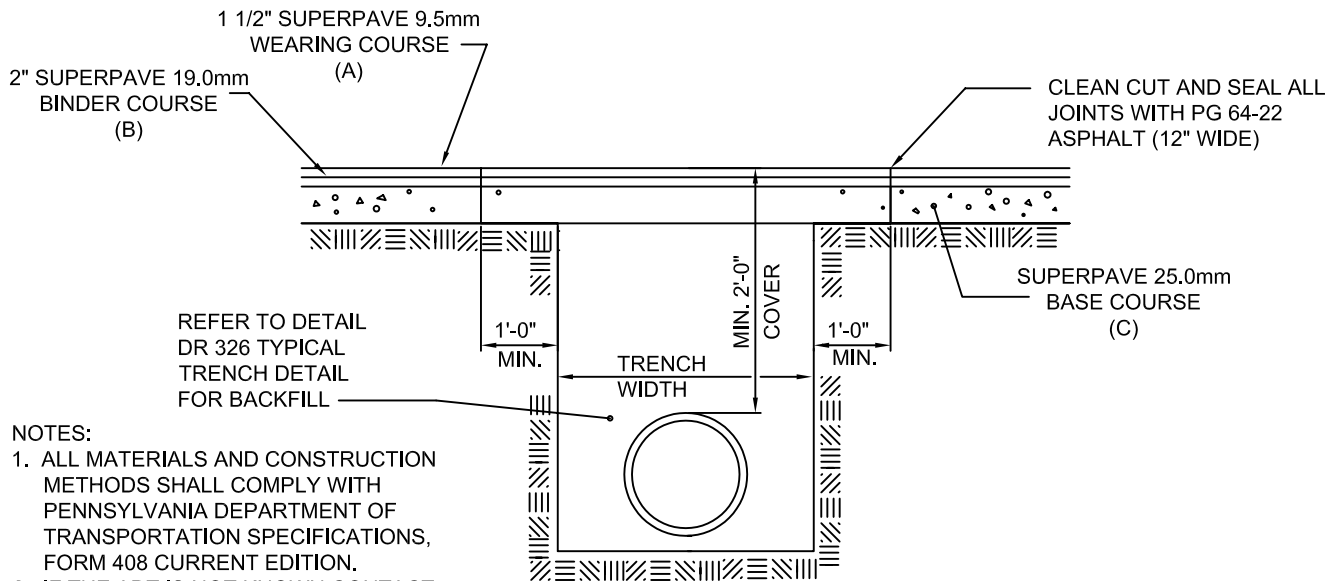
9-15-06

NOT TO SCALE

RD102



CONCRETE BASE COURSE



NOTES:

1. ALL MATERIALS AND CONSTRUCTION METHODS SHALL COMPLY WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, FORM 408 CURRENT EDITION.
2. IF THE ADT IS NOT KNOWN CONTACT THE PENNDOT MAINTENANCE MANAGER FOR THE ROAD RATING.

SUPERPAVE BASE COURSE

- (A) 1 1/2" DEPTH SUPERPAVE ASPHALT MIXTURE DESIGN, HMA WEARING COURSE, PG 64-22, 3.0 TO 30.0 MILLION ESALs, 9.5mm MIX, SRL H
- (B) 2" DEPTH SUPERPAVE ASPHALT MIXTURE DESIGN, HMA BINDER COURSE, PG 64-22, 3.0 TO 30.0 MILLION ESALs, 19.0mm MIX.
- (C) 7" MINIMUM DEPTH (OR MATCH EXISTING BASE COURSE DEPTH WHICHEVER IS GREATER) SUPERPAVE ASPHALT MIXTURE DESIGN, HMA BASE COURSE, PG 64-22, 3.0 TO 30.0 MILLION ESALs, 25.0mm MIX.

FRANCONIA TOWNSHIP STANDARD DETAIL
STATE HIGHWAY PERMANENT RESTORATION DETAILS



DATE

9-15-06

NOT TO SCALE

RD103