

---

---

***APPENDIX A***

AMITY TOWNSHIP  
BERKS COUNTY, PENNSYLVANIA

APPLICATION FOR SEWER SYSTEM EXTENSION

NAME OF DEVELOPMENT: \_\_\_\_\_

LOCATION: \_\_\_\_\_

DATE OF APPLICATION: \_\_\_\_\_

APPLICANT'S NAME: \_\_\_\_\_

CONTACT PERSON: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

TELEPHONE NUMBER: \_\_\_\_\_

APPLICATIONS AND PERMITS:

PaDEP Permits \_\_\_\_\_  
Treatment Plant Capacity Acquired \_\_\_\_\_  
Planning Module Approval \_\_\_\_\_  
Right-of-Way Acquisition \_\_\_\_\_

TYPE OF SYSTEM:

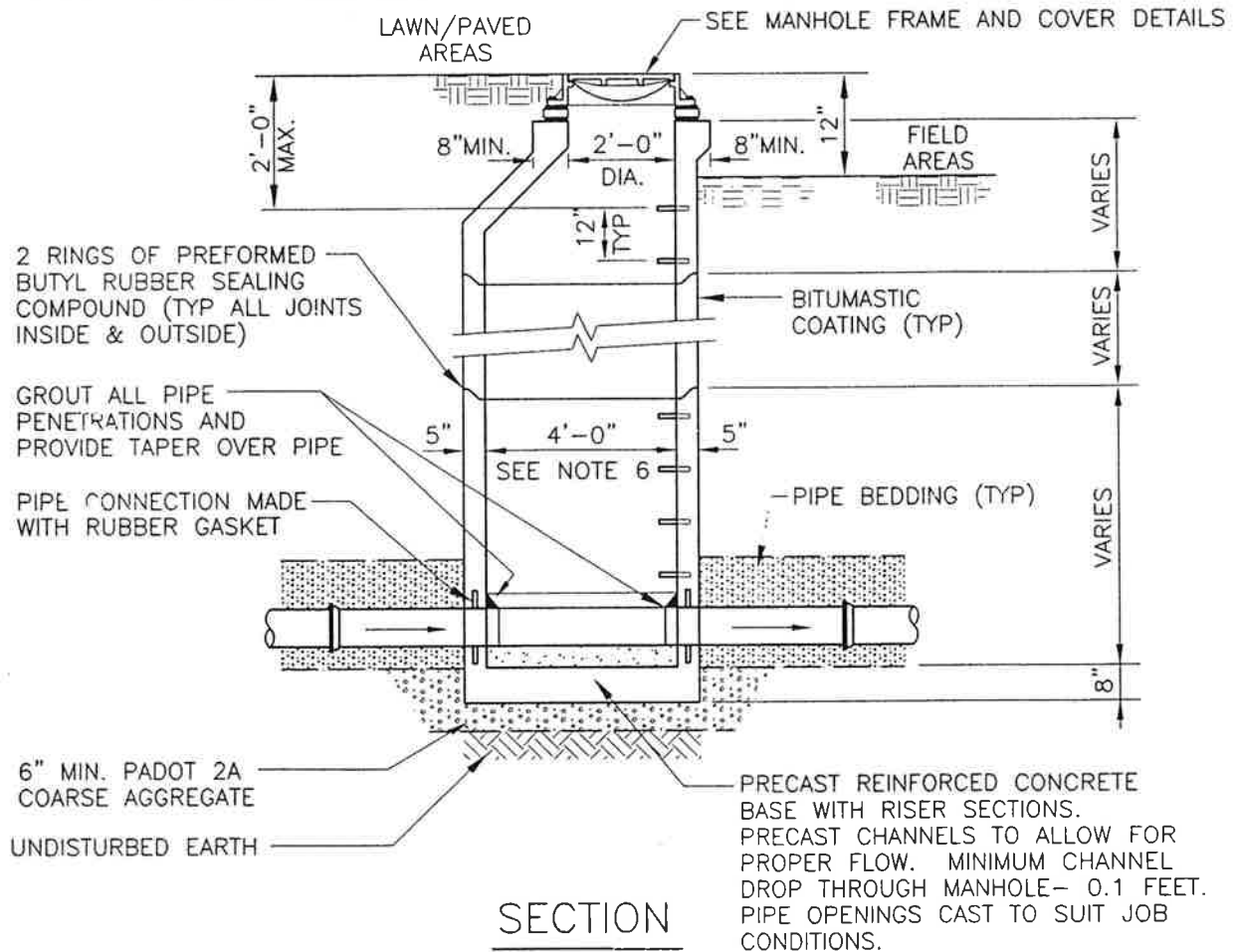
Low-Pressure Sewer System \_\_\_\_\_  
On-Lot Grinder Pump Stations \_\_\_\_\_  
Gravity Sewer System \_\_\_\_\_  
Pump Station and Force Main \_\_\_\_\_  
On-Lot Sewer System \_\_\_\_\_

SYSTEM SPECIFICS:

Total Number of Lots/Units \_\_\_\_\_  
Total Number of EDUs \_\_\_\_\_  
Total Length and Size of Gravity Sewer System \_\_\_\_\_  
Total Length of Low-Pressure Sewer System \_\_\_\_\_  
Total Length and Size of Force Main \_\_\_\_\_  
Estimate for Improvements \_\_\_\_\_  
Estimate for Inspection and Testing Fees \_\_\_\_\_

**NOTES:**

1. ADJUST TO GRADE WITH CONC GRADE RINGS (MAX. VERT. ADJUST. 6") SEE FRAME & COVER DETAILS
2. MECHANICALLY VIBRATED PRECAST CONC SHALL CONFORM TO A.S.T.M. SPEC. C-478.
3. IF INCOMING INVERT EXCEEDS OUTGOING INVERT BY GREATER THAN OR EQUAL TO 6", SEE INSIDE SPLASH/ INSIDE DROP MANHOLE DETAILS.
4. FOR MANHOLES WHERE TOP OF RIM TO INVERT DISTANCE IS LESS THAN 5'-0", USE FLAT TOP MANHOLE IN LIEU OF CONE TOP.
5. FILL ALL LIFTING HOLES WITH NON-SHRINK GROUT.
6. LARGER DIA MANHOLE REQUIRED ON INSIDE DROP AND INSIDE SPLASH CONNECTION GREATER THAN 12", SEE DETAIL 10.
7. FOR MANHOLES LOCATED WITHIN THE 100-YEAR FLOOD BOUNDARY, PROVIDE A WATERTIGHT MANHOLE FRAME AND COVER PER THE DETAILS.



**AMITY TOWNSHIP**  
 2004 WEAVERTOWN ROAD  
 DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**

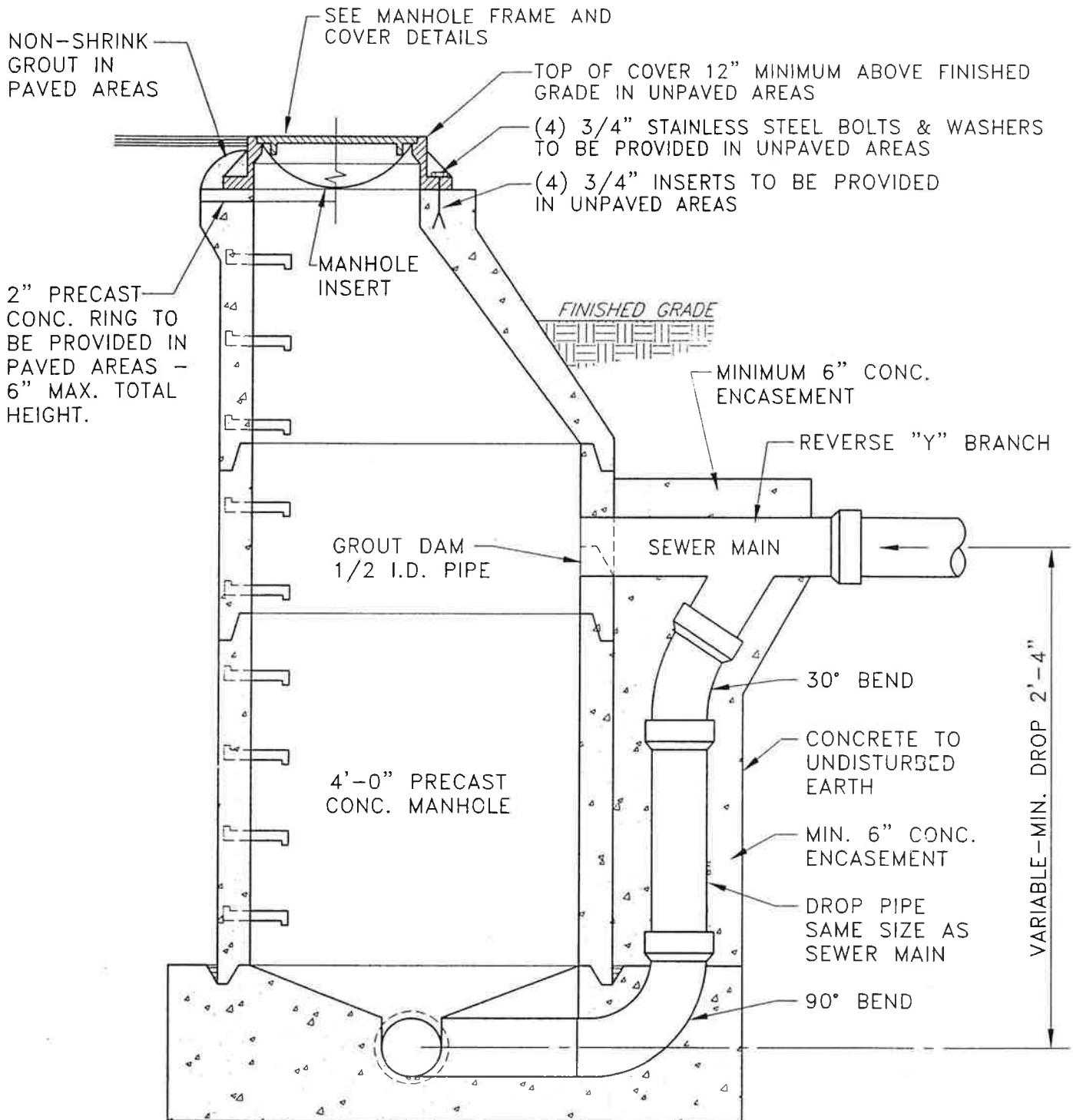
**ARRO**  
*ARRO Consulting, Inc.*

400 Washington Street, Suite 602  
 Reading, Pennsylvania 19601  
 Tel 610.374.5285

**PRECAST MANHOLE DETAIL**  
**8" THRU 24" SEWERS**

DATE: JUNE 2005

DETAIL: 1



TYPICAL SECTION

NOTE:  
 WHERE MANHOLE IS LOCATED WITHIN THE 100-YEAR FLOODWAY BOUNDARY, PROVIDE WATERTIGHT MANHOLE FRAME AND COVER PER DETAILS.

**AMITY TOWNSHIP**  
 2004 WEAVERTOWN ROAD  
 DOUGLASVILLE, PA 19518



400 Washington Street, Suite 602  
 Reading, Pennsylvania 19601  
 Tel 610.374.5285

**STANDARD DETAIL - SEWER SYSTEM**

**PRECAST MANHOLE DETAIL  
 WITH DROP CONNECTION**

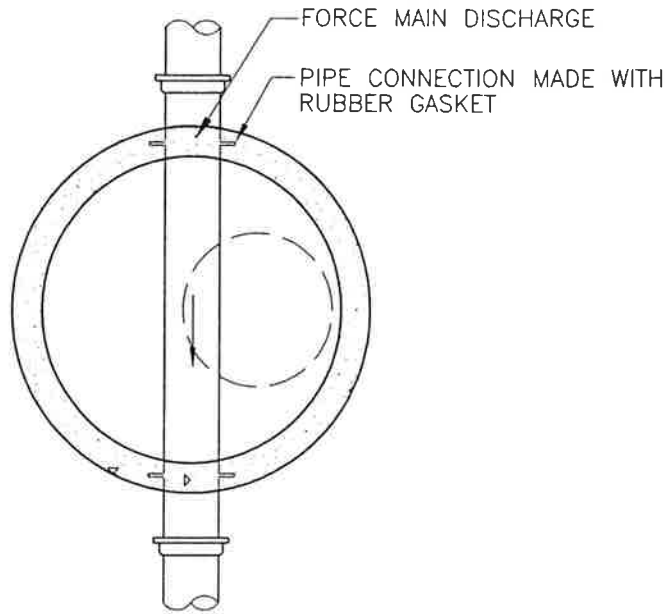
DATE: JUNE 2005

DETAIL: 2

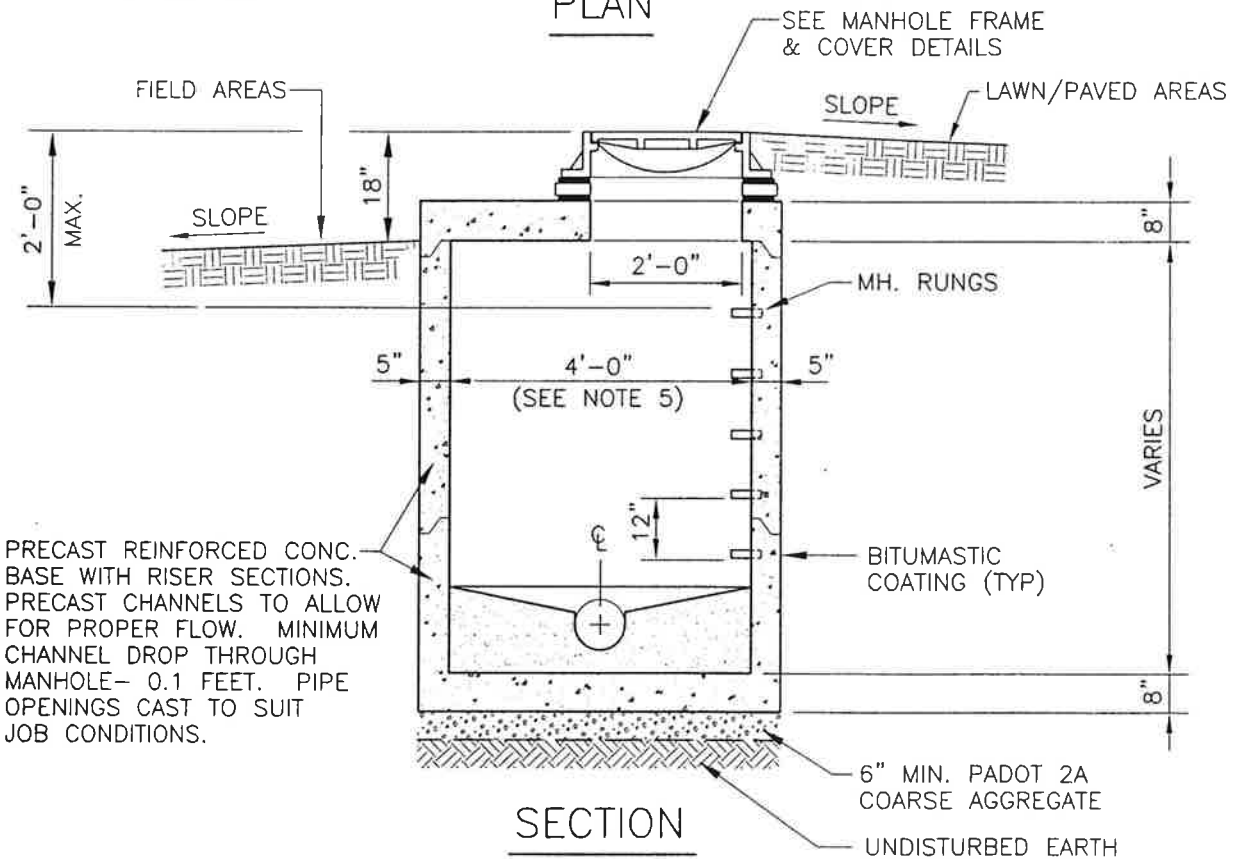
SD002.DWG

**NOTES:**

1. ADJUST TO GRADE WITH CONC. GRADE RINGS (MAX. VERT. ADJUST. 6"). SEE FRAME & COVER DETAILS.
2. MECHANICALLY VIBRATED PRECAST CONC. SHALL CONFORM TO A.S.T.M. C-478.
3. SEAL ALL JOINTS INSIDE & OUTSIDE WITH PREFORMED BUTYL RUBBER SEALING COMPOUND.
4. FILL ALL LIFTING HOLES WITH NON-SHRINK GROUT.
5. INSIDE DIAMETER DETERMINED BY PIPE SIZE & CONFIGURATION IN MANHOLE. SEE DETAIL 10.
6. WHERE MANHOLE IS LOCATED WITHIN 100-YEAR FLOODWAY BOUNDARY, PROVIDE WATERTIGHT MANHOLE FRAME AND COVER PER DETAILS.



**PLAN**



PRECAST REINFORCED CONC. BASE WITH RISER SECTIONS. PRECAST CHANNELS TO ALLOW FOR PROPER FLOW. MINIMUM CHANNEL DROP THROUGH MANHOLE- 0.1 FEET. PIPE OPENINGS CAST TO SUIT JOB CONDITIONS.

**SECTION**

**AMITY TOWNSHIP**

2004 WEAVERTOWN ROAD  
DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**

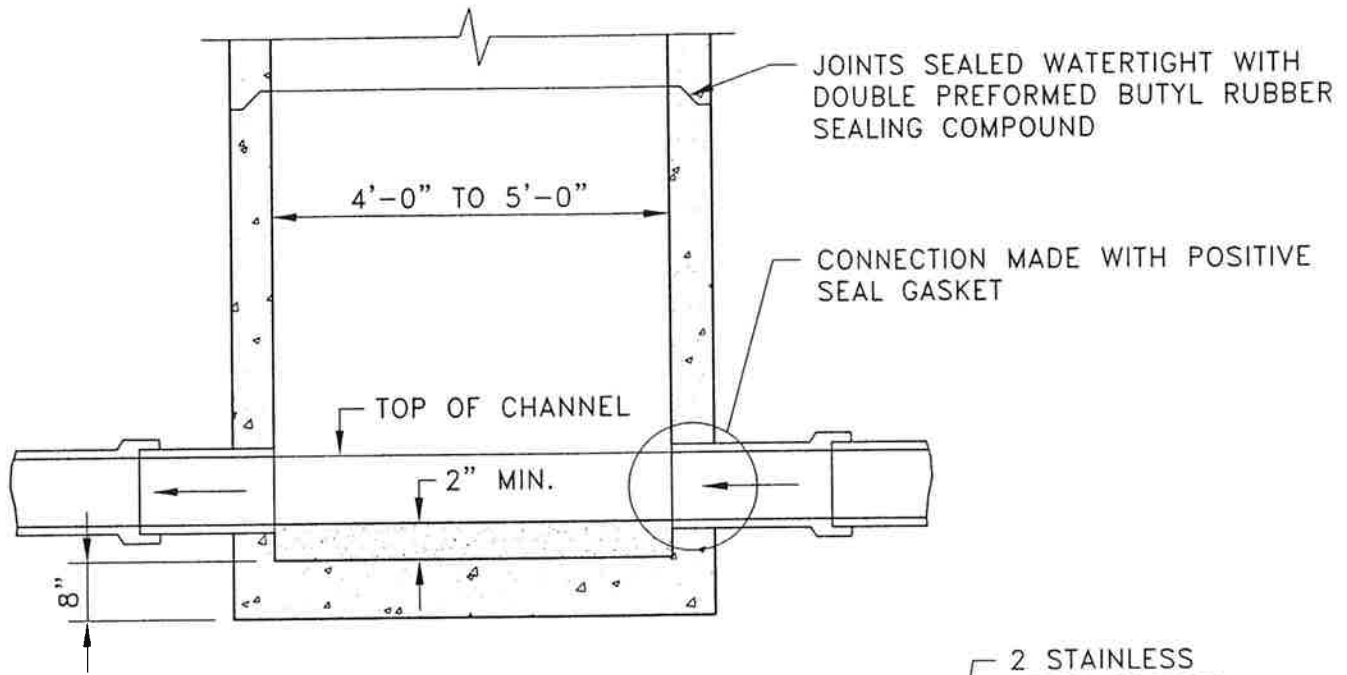


400 Washington Street, Suite 602  
Reading, Pennsylvania 19601  
Tel 610.374.5285

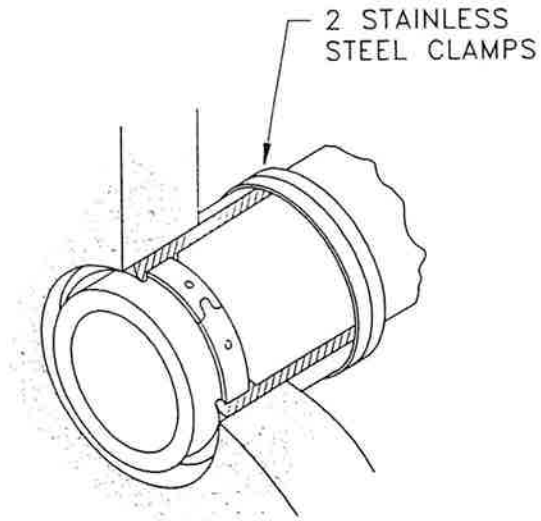
**PRECAST MANHOLE DETAIL  
WITH FORCE MAIN DISCHARGE**

DATE: JUNE 2005

DETAIL: 3



SECTION A



EXPANDED VIEW OF  
POSITIVE SEAL GASKET

SECTION B

**AMITY TOWNSHIP**  
2004 WEAVERTOWN ROAD  
DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**



400 Washington Street, Suite 602  
Reading, Pennsylvania 19601  
Tel 610.374.5285

**MANHOLE WITH PRECAST BASE  
AND POSITIVE SEAL GASKET**

DATE: JUNE 2005

DETAIL: 4

HEAVY DUTY CAST IRON FRAME AND COVER SUITABLE FOR HS25 LOADING

2" RAISED LETTER (TYP)

CONCEALED PICK HOLE (2 REQD)

(4) 7/8"Ø BOLT HOLES

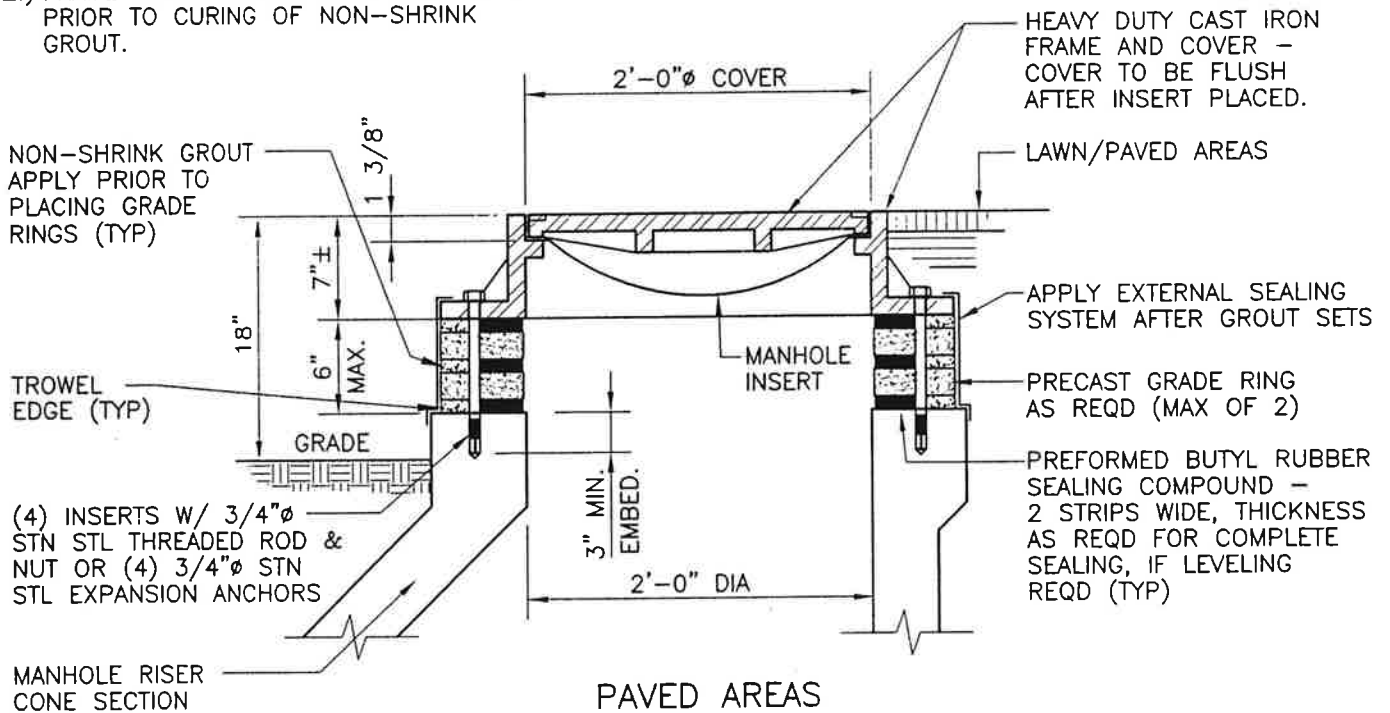
**SANITARY SEWER**

GUSSETS (MIN 6 REQD)

**NOTES:**

- 1.) ANCHOR BOLT HOLES SHALL BE DRILLED WITH A PERCUSSION OR ROTARY HAMMER DRILL UTILIZING A CARBIDE DRILL BIT. CORE DRILLING, OR ROTATIONAL ONLY DRILLING, OF ANY KIND, IS NOT ALLOWED.
- 2.) FRAME ANCHORS SHALL BE TIGHTENED PRIOR TO CURING OF NON-SHRINK GROUT.

COVER PATTERN



**AMITY TOWNSHIP**

2004 WEAVERTOWN ROAD  
DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**



400 Washington Street, Suite 602  
Reading, Pennsylvania 19601  
Tel 610.374.5285

**STANDARD MANHOLE FRAME & COVER  
WITH GRADE RINGS DETAIL**

DATE: JUNE 2005

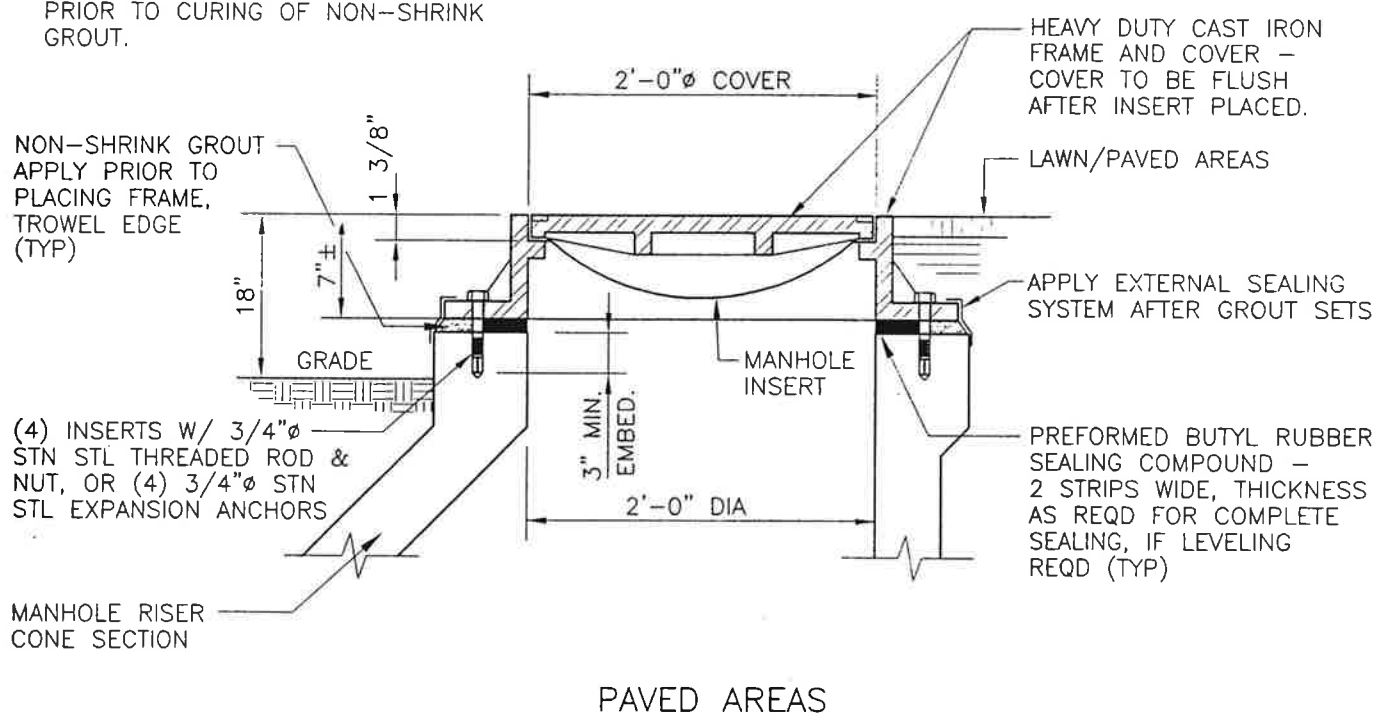
DETAIL: 5



**NOTES:**

- 1.) ANCHOR BOLT HOLES SHALL BE DRILLED WITH A PERCUSSION OR ROTARY HAMMER DRILL UTILIZING A CARBIDE DRILL BIT. CORE DRILLING, OR ROTATIONAL ONLY DRILLING, OF ANY KIND, IS NOT ALLOWED.
- 2.) FRAME ANCHORS SHALL BE TIGHTENED PRIOR TO CURING OF NON-SHRINK GROUT.

COVER PATTERN



**AMITY TOWNSHIP**

2004 WEAVERTOWN ROAD  
DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**



400 Washington Street, Suite 602  
Reading, Pennsylvania 19601  
Tel 610.374.5285

**STANDARD MANHOLE FRAME & COVER  
WITHOUT GRADE RINGS DETAIL**

DATE: JUNE 2005

DETAIL: 6

SD006.DWG



HEAVY DUTY CAST IRON FRAME AND COVER, WATERTIGHT, SUITABLE FOR HS25 LOADING

2" RAISED LETTER (TYP)

CONCEALED PICK HOLE (2 REQD)

**SANITARY SEWER**

(4) 7/8" Ø BOLT HOLES

GUSSETS (MIN 6 REQD)

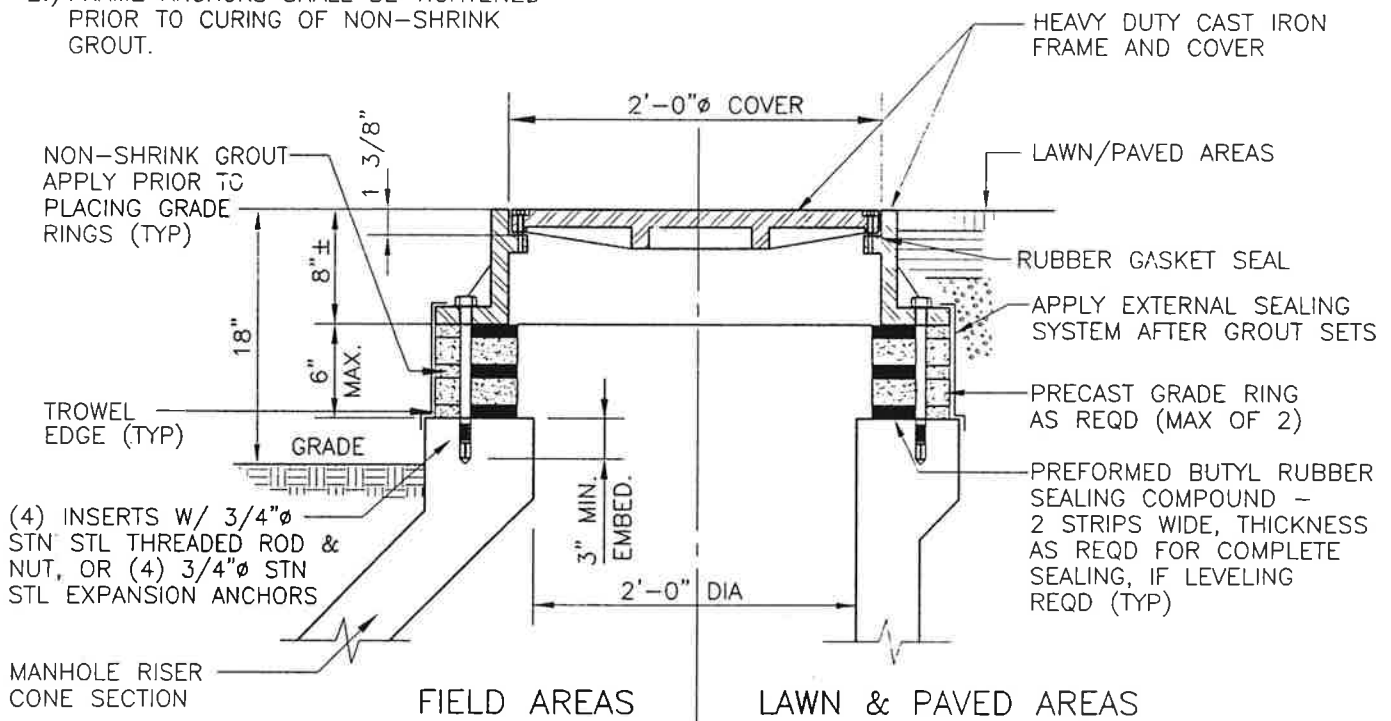
1/2" STAINLESS STEEL CAP SCREW WITH WASHER AND RUBBER GASKET (4 REQ'D.)

**NOTES:**

1.) ANCHOR BOLT HOLES SHALL BE DRILLED WITH A PERCUSSION OR ROTARY HAMMER DRILL UTILIZING A CARBIDE DRILL BIT. CORE DRILLING, OR ROTATIONAL ONLY DRILLING, OF ANY KIND, IS NOT ALLOWED.

COVER PATTERN

2.) FRAME ANCHORS SHALL BE TIGHTENED PRIOR TO CURING OF NON-SHRINK GROUT.



**NOTE:** PROVIDE WATERTIGHT MANHOLE FRAME & COVER IN SWALES, GUTTERS, FLOOD PRONE AREAS & ALL AREAS OUTSIDE OF ROADWAYS.

**AMITY TOWNSHIP**

2004 WEAVERTOWN ROAD  
DOUGLASVILLE, PA 19518



400 Washington Street, Suite 602  
Reading, Pennsylvania 19601  
Tel 610.374.5285

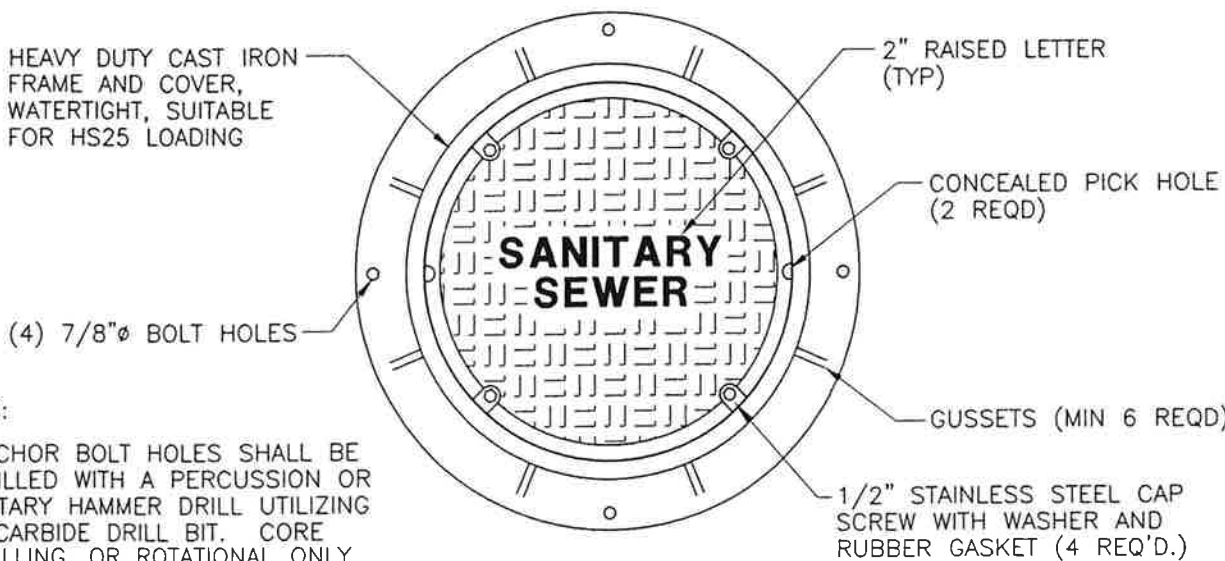
**STANDARD DETAIL - SEWER SYSTEM**

**WATERTIGHT MANHOLE FRAME & COVER  
WITH GRADE RINGS DETAIL**

DATE: JUNE 2005

DETAIL: 7

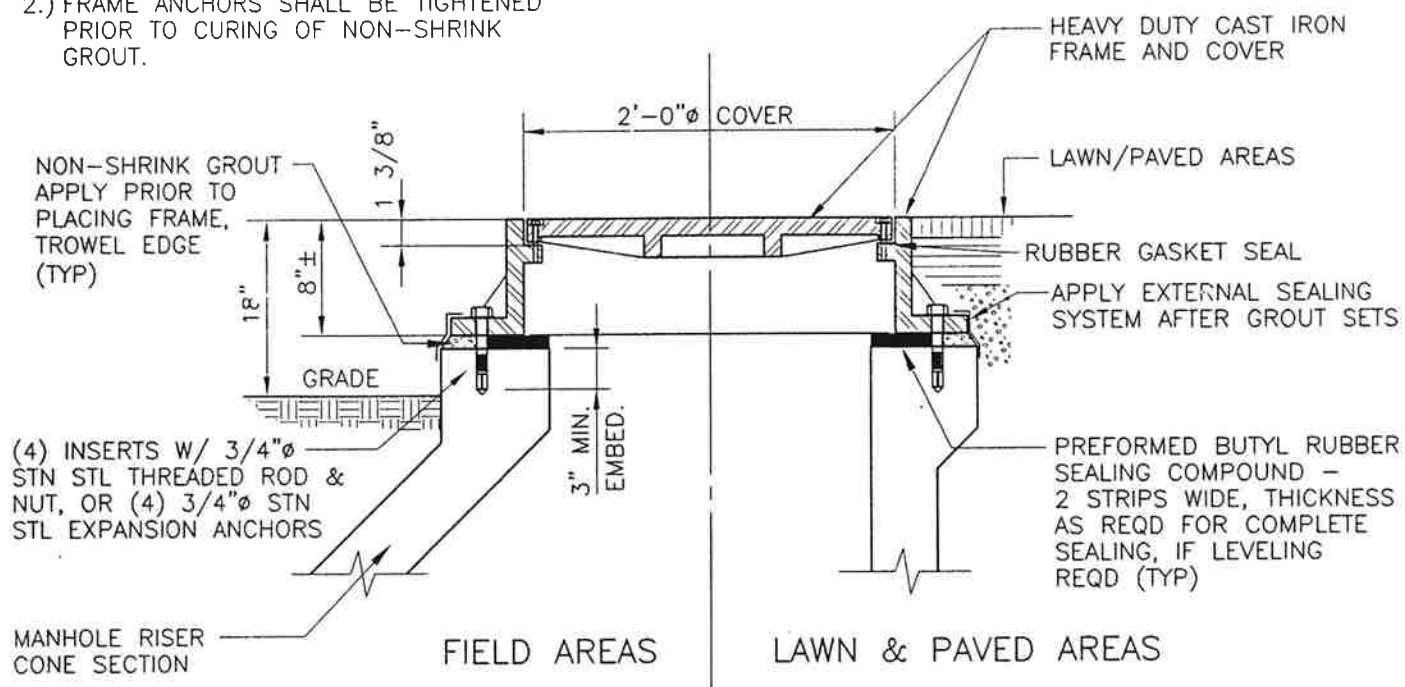
SD007.DWG



**NOTES:**

- 1.) ANCHOR BOLT HOLES SHALL BE DRILLED WITH A PERCUSSION OR ROTARY HAMMER DRILL UTILIZING A CARBIDE DRILL BIT. CORE DRILLING, OR ROTATIONAL ONLY DRILLING, OF ANY KIND, IS NOT ALLOWED.
- 2.) FRAME ANCHORS SHALL BE TIGHTENED PRIOR TO CURING OF NON-SHRINK GROUT.

COVER PATTERN



**NOTE:** PROVIDE WATERTIGHT MANHOLE FRAME & COVER IN SWALES, GUTTERS, FLOOD PRONE AREAS & ALL AREAS OUTSIDE OF ROADWAYS.

**AMITY TOWNSHIP**

2004 WEAVERTOWN ROAD  
DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**



400 Washington Street, Suite 602  
Reading, Pennsylvania 19601  
Tel 610.374.5285

**WATERTIGHT MANHOLE FRAME & COVER  
WITHOUT GRADE RINGS DETAIL**

DATE: JUNE 2005

DETAIL: 8

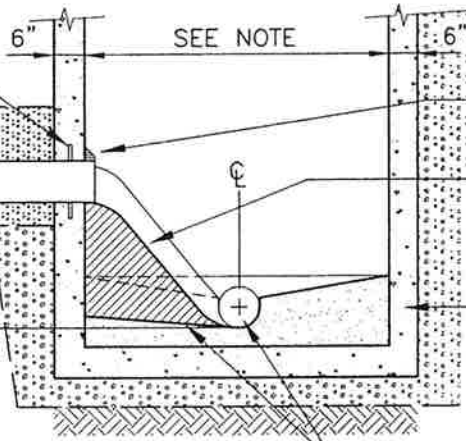
SD008.DWG

PIPE CONNECTION MADE WITH RUBBER GASKET

PIPE BEDDING (TYP)

SEWER

INSIDE SPLASH WHEN GREATER THAN OR EQUAL TO 6" BUT LESS THAN OR EQUAL TO 2'-0"



NOTE:  
MANHOLE DIAMETER SHALL BE 4' WHEN SPLASH IS 6" TO 1'-0" AND 5' WHEN SPLASH IS 1'-0" TO 2'-0".

GROUT ALL PIPE PENETRATIONS AND PROVIDE TAPER OVER PIPE

SPLASH CHANNEL FORMED INTO PRECAST CHANNEL WITH NON-SHRINK GROUT

PRECAST REINFORCED CONCRETE BASE WITH RISER SECTIONS. SEE PRECAST MANHOLE DETAILS.

PRECAST CHANNELS TO ALLOW FOR PROPER FLOW. SEE PRECAST CHANNEL DETAILS.

### SECTION INSIDE SPLASH

PIPE CONNECTION MADE WITH RUBBER GASKET

FLEXIBLE PIPE COUPLING

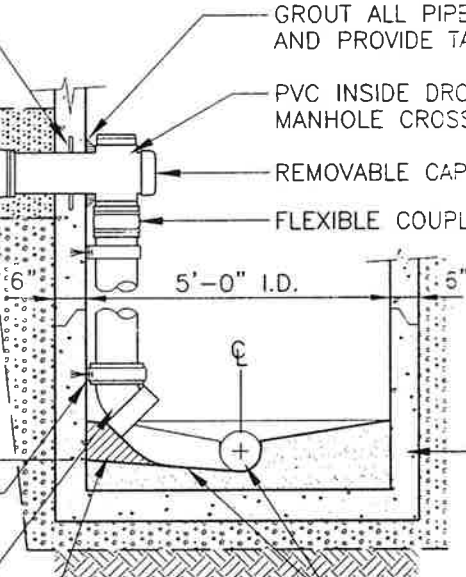
SEWER

INSIDE DROP WHEN GREATER THAN 2'-0"

2" WIDE x 1/16" THK STN STL STRAPS & STN STL ANCHORS W/ MAX EMBEDMENT OF 3" AT 18" MAX SPACINGS (TYP) - ALSO PROVIDE STRAP SPECIFICALLY FOR 45° BEND

45° PVC ELBOW

SPLASH CHANNEL FORMED INTO PRECAST CHANNEL WITH NON-SHRINK GROUT



GROUT ALL PIPE PENETRATIONS AND PROVIDE TAPER OVER PIPE

PVC INSIDE DROP MANHOLE CROSS

REMOVABLE CAP

FLEXIBLE COUPLING

PRECAST REINFORCED CONCRETE BASE WITH RISER SECTIONS. SEE PRECAST MANHOLE DETAILS.

PRECAST CHANNELS TO ALLOW FOR PROPER FLOW. SEE PRECAST CHANNEL DETAILS.

### SECTION INSIDE DROP

## AMITY TOWNSHIP

2004 WEAVERTOWN ROAD  
DOUGLASVILLE, PA 19518

### STANDARD DETAIL - SEWER SYSTEM



400 Washington Street, Suite 602  
Reading, Pennsylvania 19601  
Tel 610.374.5285

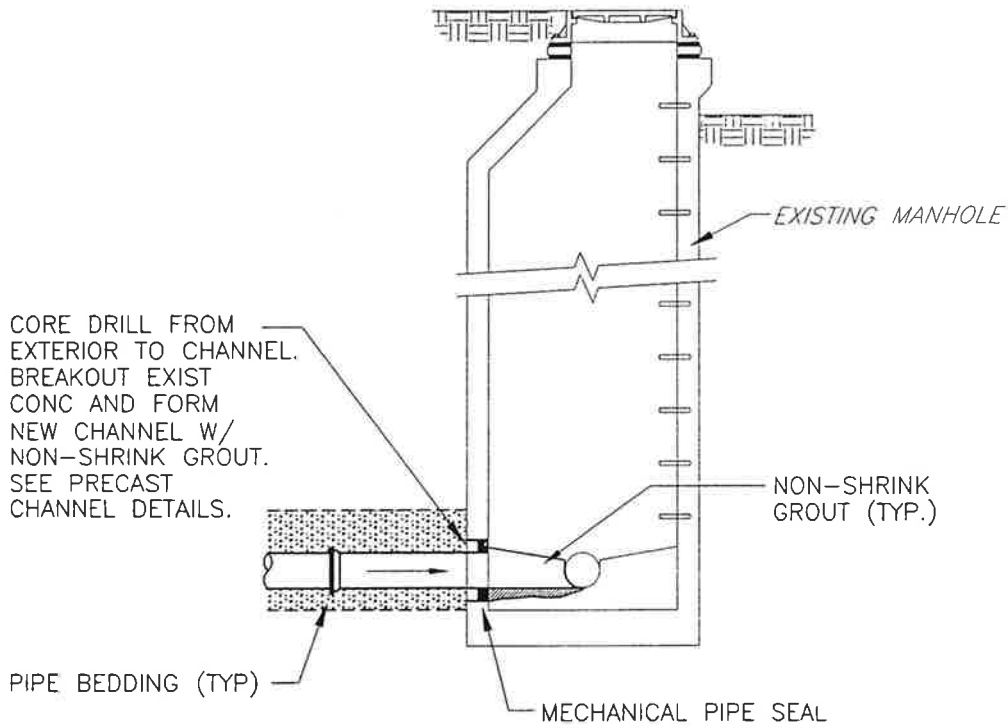
# INSIDE SPLASH/INSIDE DROP (8"-10") MANHOLE DETAILS

DATE:

JUNE 2005

DETAIL:

10



SECTION

**NOTE:** CROWN ELEVATION OF NEW PIPE SHALL MATCH OR BE HIGHER THAN CROWN ELEVATION OF EXISTING OUTGOING PIPE.

**AMITY TOWNSHIP**  
 2004 WEAVERTOWN ROAD  
 DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**

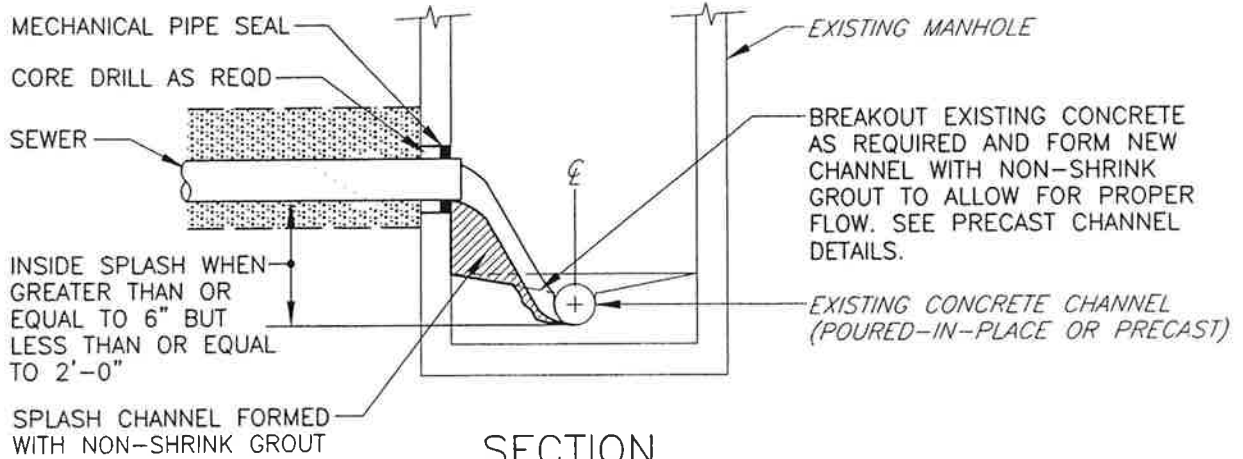


400 Washington Street, Suite 602  
 Reading, Pennsylvania 19601  
 Tel 610.374.5285

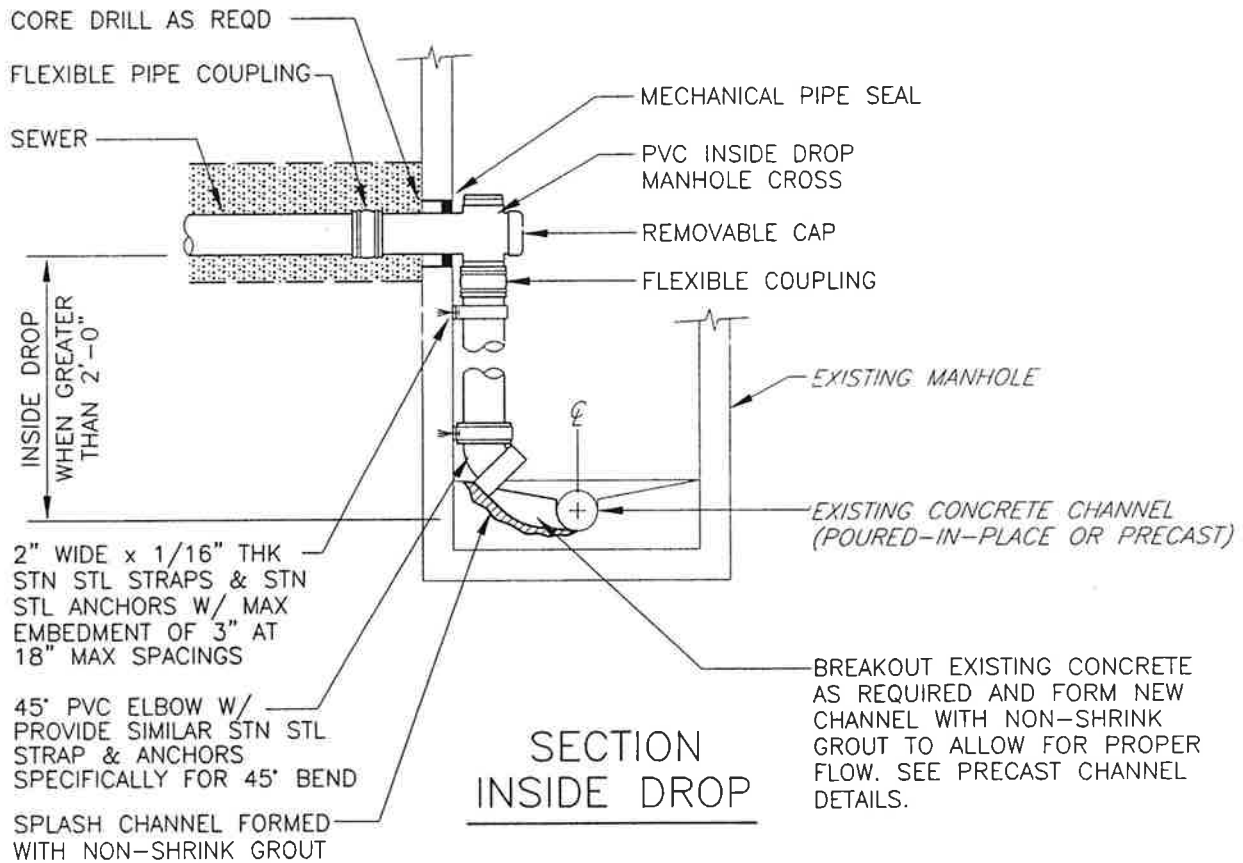
**GRAVITY SEWER CONNECTION  
 TO EXISTING MANHOLE DETAIL**

DATE:  
 JUNE 2005

DETAIL:  
 11



**SECTION  
INSIDE SPLASH**



**SECTION  
INSIDE DROP**

(\*) BY SPECIAL EXCEPTION ONLY, IN 4 FT DIA MANHOLES

**AMITY TOWNSHIP**

2004 WEAVERTOWN ROAD  
DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**



400 Washington Street, Suite 602  
Reading, Pennsylvania 19601  
Tel 610.374.5285

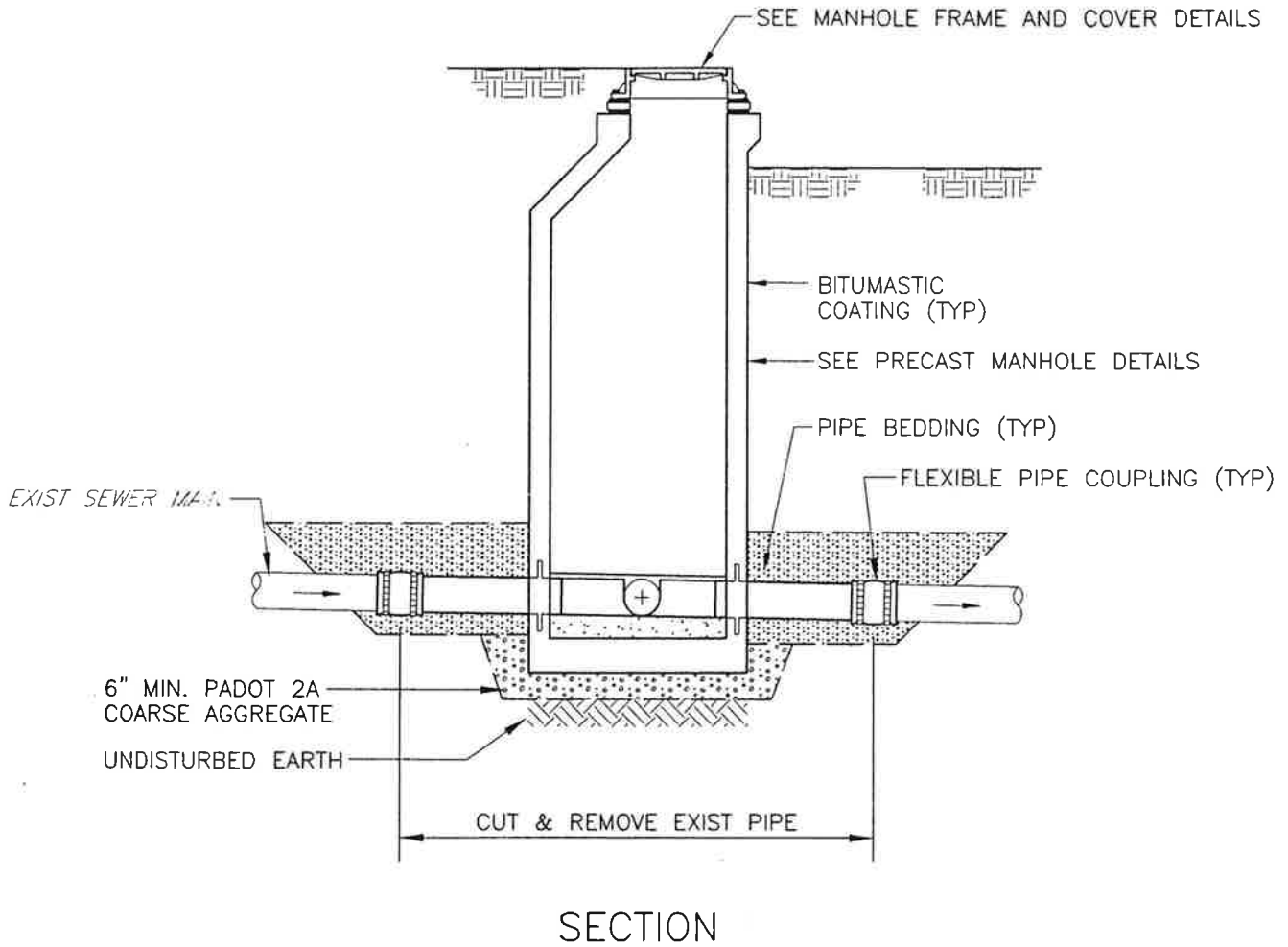
INSIDE SPLASH/DROP 8"-10" CONNECTION  
TO EXISTING MH (BY SPECIAL EXCEPTION\*)

DATE: JUNE 2005

DETAIL: 12

**NOTES:**

1. INSTALL MANHOLE ON EXISTING SEWER MAIN AS FOLLOWS:
  - A. BYPASS FLOW
  - B. CUT EXISTING PIPE
  - C. INSTALL MANHOLE W/ PRECAST BASE, AS SHOWN ON DETAIL.
  
2. DOGHOUSE MANHOLES MAY BE USED ONLY BY SPECIAL EXCEPTION FROM THE AUTHORITY.



**AMITY TOWNSHIP**  
2004 WEAVERTOWN ROAD  
DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**



400 Washington Street, Suite 602  
Reading, Pennsylvania 19601  
Tel 610.374.5285

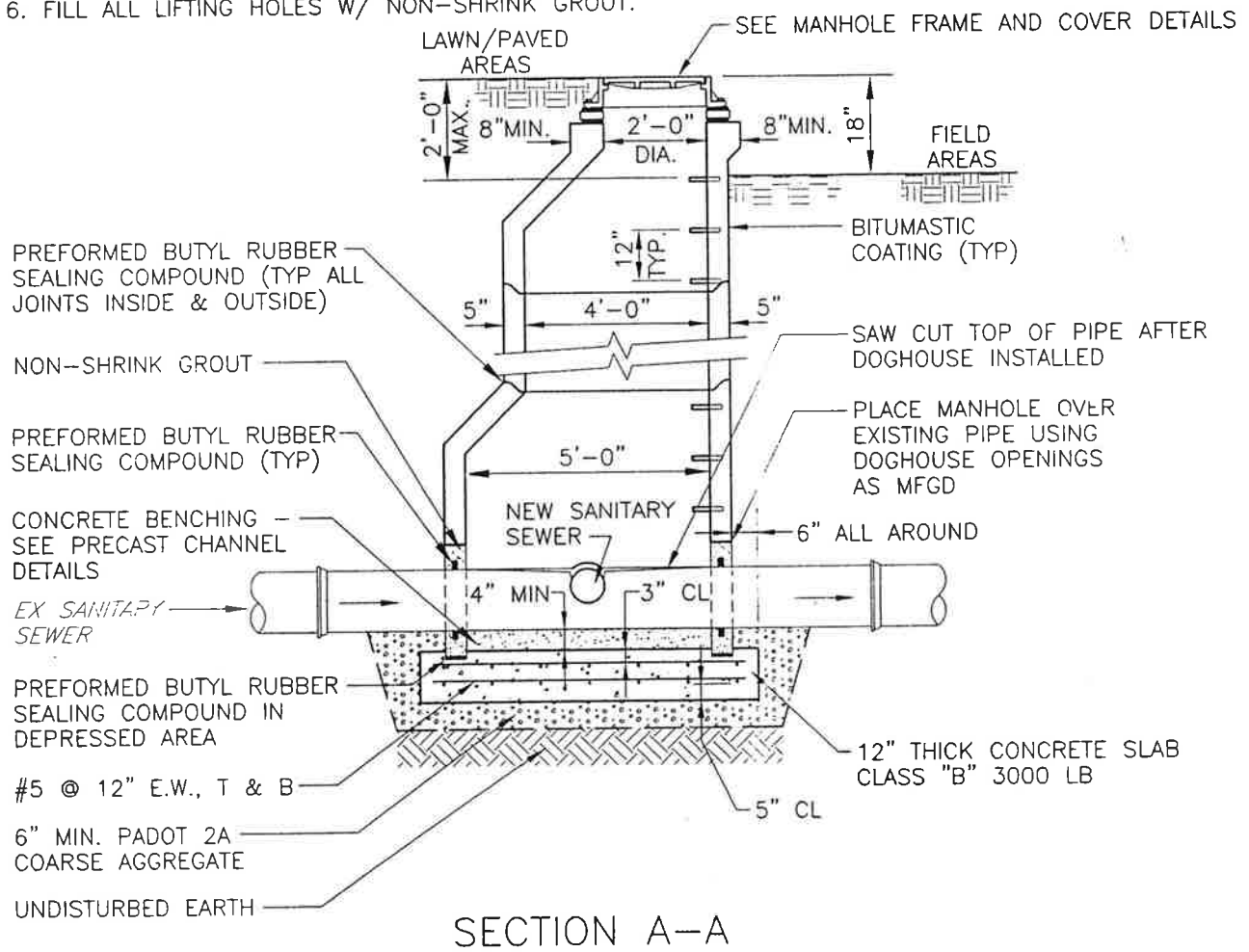
**NEW MANHOLE  
ON EXISTING MAIN DETAIL**

DATE:  
JUNE 2005

DETAIL:  
13

**NOTES:**

1. INSTALL MANHOLES ON EXISTING LINES BY BYPASSING FLOW, CUTTING PIPE & INSTALLING MANHOLE WITH PRECAST BASE. DOGHOUSE MANHOLES, AS SHOWN IN THIS DETAIL, MAY BE USED ONLY BY SPECIAL EXCEPTION FROM THE AUTHORITY.
2. ADJUST TO GRADE WITH CONC GRADE RINGS (MAX. VERT. ADJUST. 6"). SEE MANHOLE FRAME & COVER DETAILS.
3. MECHANICALLY VIBRATED PRECAST CONC SHALL CONFORM TO A.S.T.M. SPEC. C-478.
4. IF INCOMING INVERT EXCEEDS OUTGOING INVERT BY GREATER THAN OR EQUAL TO 6", SEE INSIDE SPLASH/INSIDE DROP MANHOLE DETAILS.
5. FOR MANHOLES WHERE TOP OF RIM TO INVERT DISTANCE IS LESS THAN 5'-0", USE FLAT TOP MANHOLE IN LIEU OF CONE TOP.
6. FILL ALL LIFTING HOLES W/ NON-SHRINK GROUT.



**AMITY TOWNSHIP**

2004 WEAVERTOWN ROAD  
DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**



400 Washington Street, Suite 602  
Reading, Pennsylvania 19601  
Tel 610 374 5285

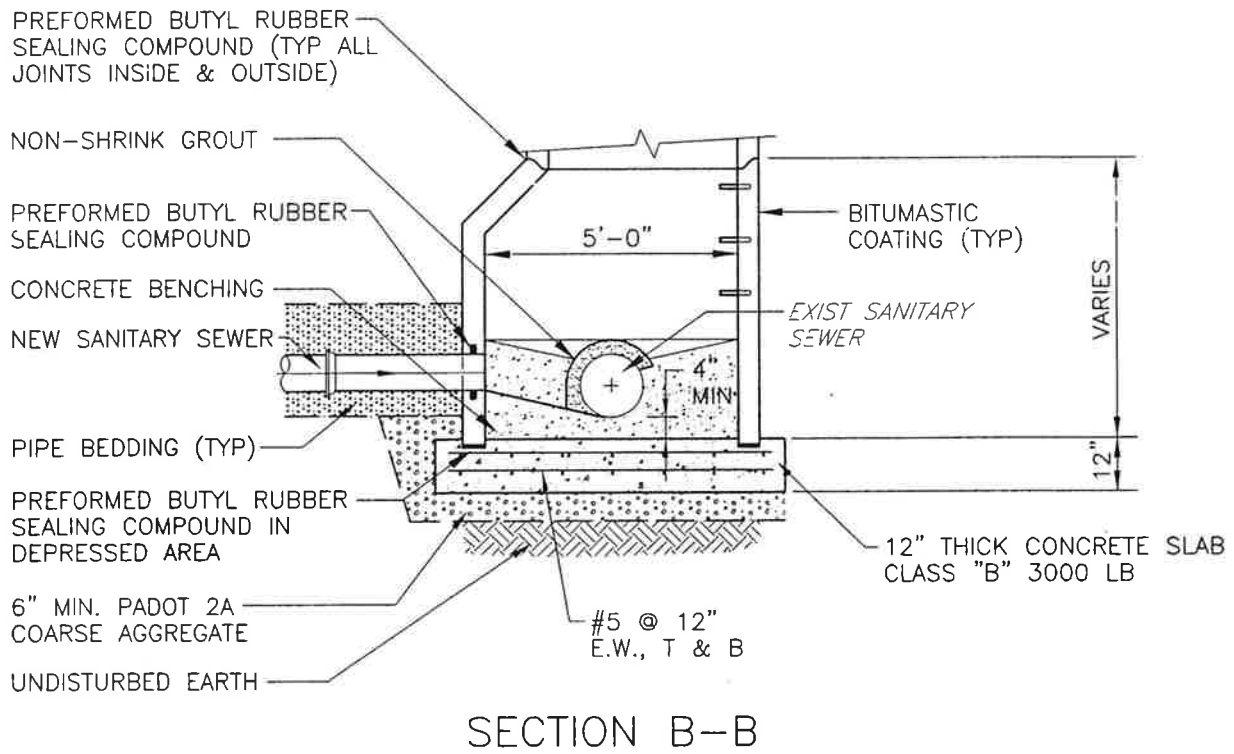
**PRECAST DOGHOUSE MANHOLE DETAIL  
(BY SPECIAL EXCEPTION ONLY)**

DATE: JUNE 2005

DETAIL: 144

NOTES:

1. INSTALL MANHOLES ON EXISTING LINES BY BYPASSING FLOW, CUTTING PIPE & INSTALLING MANHOLE WITH PRECAST BASE. DOGHOUSE MANHOLES, AS SHOWN IN THIS DETAIL, MAY BE USED ONLY BY SPECIAL EXCEPTION FROM THE AUTHORITY.
2. ADJUST TO GRADE WITH CONC GRADE RINGS (MAX. VERT. ADJUST. 6"). SEE MANHOLE FRAME & COVER DETAILS.
3. MECHANICALLY VIBRATED PRECAST CONC SHALL CONFORM TO A.S.T.M. SPEC. C-478.
4. IF INCOMING INVERT EXCEEDS OUTGOING INVERT BY GREATER THAN OR EQUAL TO 6", SEE INSIDE SPLASH/INSIDE DROP MANHOLE DETAILS.
5. FOR MANHOLES WHERE TOP OF RIM TO INVERT DISTANCE IS LESS THAN 5'-0", USE FLAT TOP MANHOLE IN LIEU OF CONE TOP.
6. FILL ALL LIFTING HOLES W/ NON-SHRINK GROUT.



**AMITY TOWNSHIP**

2004 WEAVERTOWN ROAD  
DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**



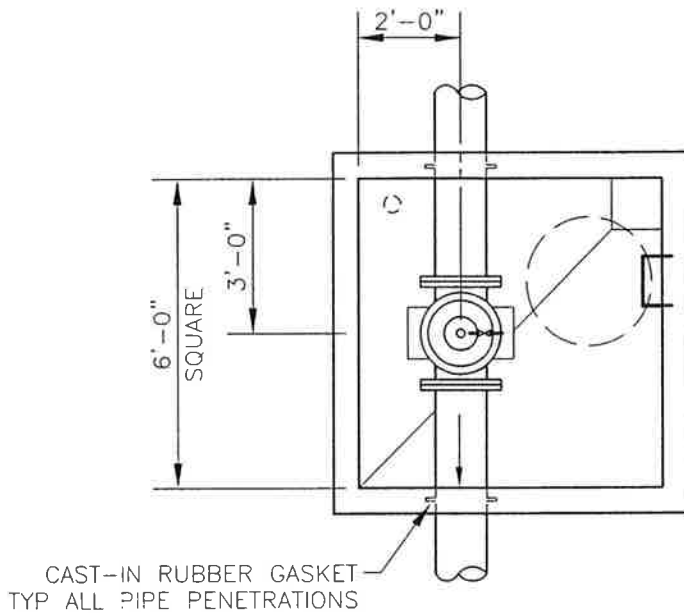
400 Washington Street, Suite 602  
Reading, Pennsylvania 19601  
Tel 610.374.5285

**PRECAST DOGHOUSE BOTTOM DETAIL  
(BY SPECIAL EXCEPTION ONLY)**

DATE: JUNE 2005

DETAIL: 14B

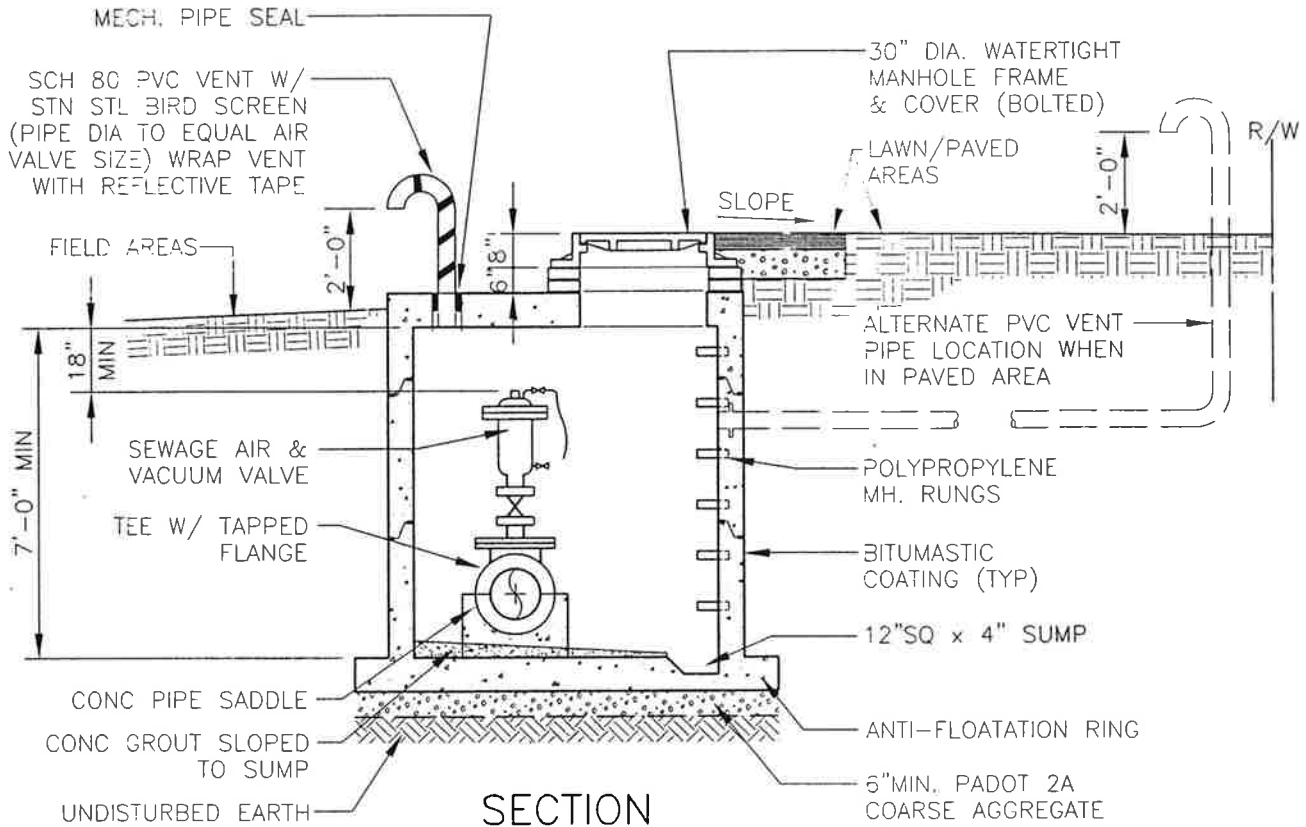




**PLAN**

**NOTES:**

1. ADJUST TO GRADE WITH CONC. GRADE RINGS (MAX. VERT. ADJUST. 6"). SEE FRAME & COVER DETAILS.
2. MECHANICALLY VIBRATED PRECAST CONC. SHALL CONFORM TO A.S.T.M. C-478.
3. SEAL ALL JOINTS INSIDE & OUTSIDE WITH PREFORMED BUTYL RUBBER SEALING COMPOUND.
4. FILL ALL LIFTING HOLES WITH NON-SHRINK GROUT.
5. ALL EXPOSED INTERIOR CONC SURFACES (I.E. FLOOR, SUMP, SADDLE) TO RECEIVE CORROSION RESISTANT EPOXY COATING.
6. WHERE VALVE VAULT IS LOCATED WITHIN THE 100-YEAR FLOOD BOUNDARY, THE TOP OF THE CONCRETE SLAB SHOULD BE A MINIMUM OF 6" ABOVE FLOODWAY.



**SECTION**

**AMITY TOWNSHIP**

2004 WEAVERTOWN ROAD  
DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**

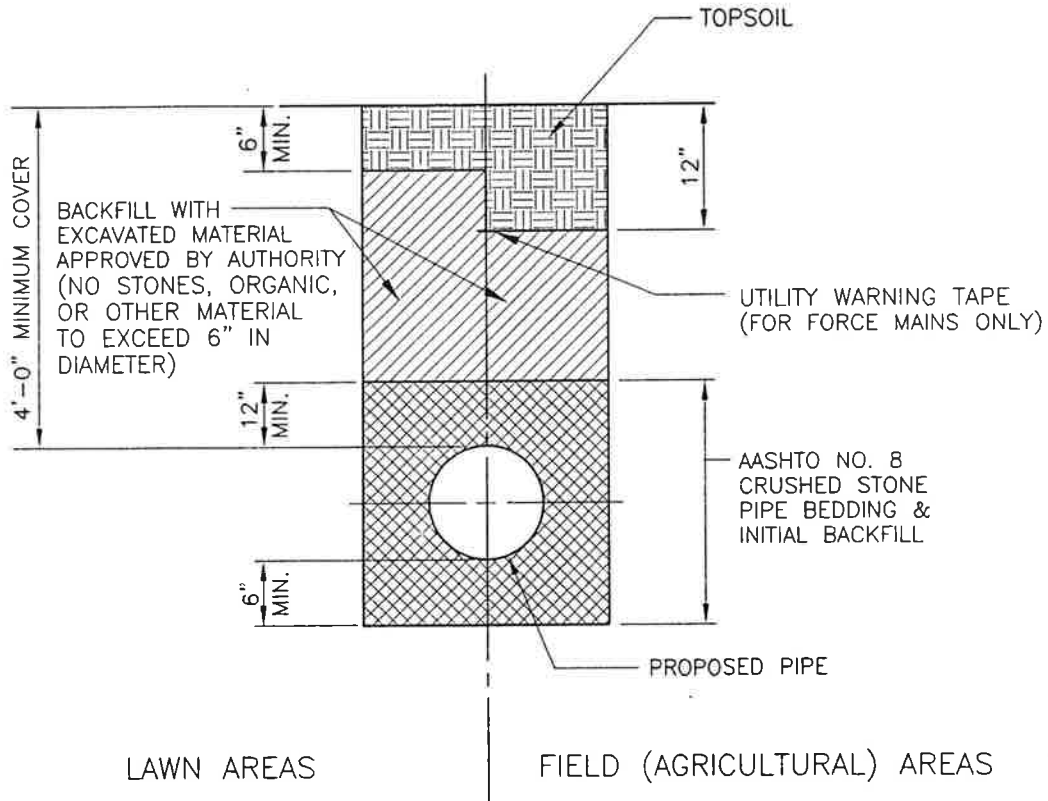


400 Washington Street, Suite 602  
Reading, Pennsylvania 19601  
Tel 610.374.5285

**AIR VALVE VAULT DETAIL  
(FORCE MAIN ONLY)**

DATE: JUNE 2005

DETAIL: 15



**AMITY TOWNSHIP**  
 2004 WEAVERTOWN ROAD  
 DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**

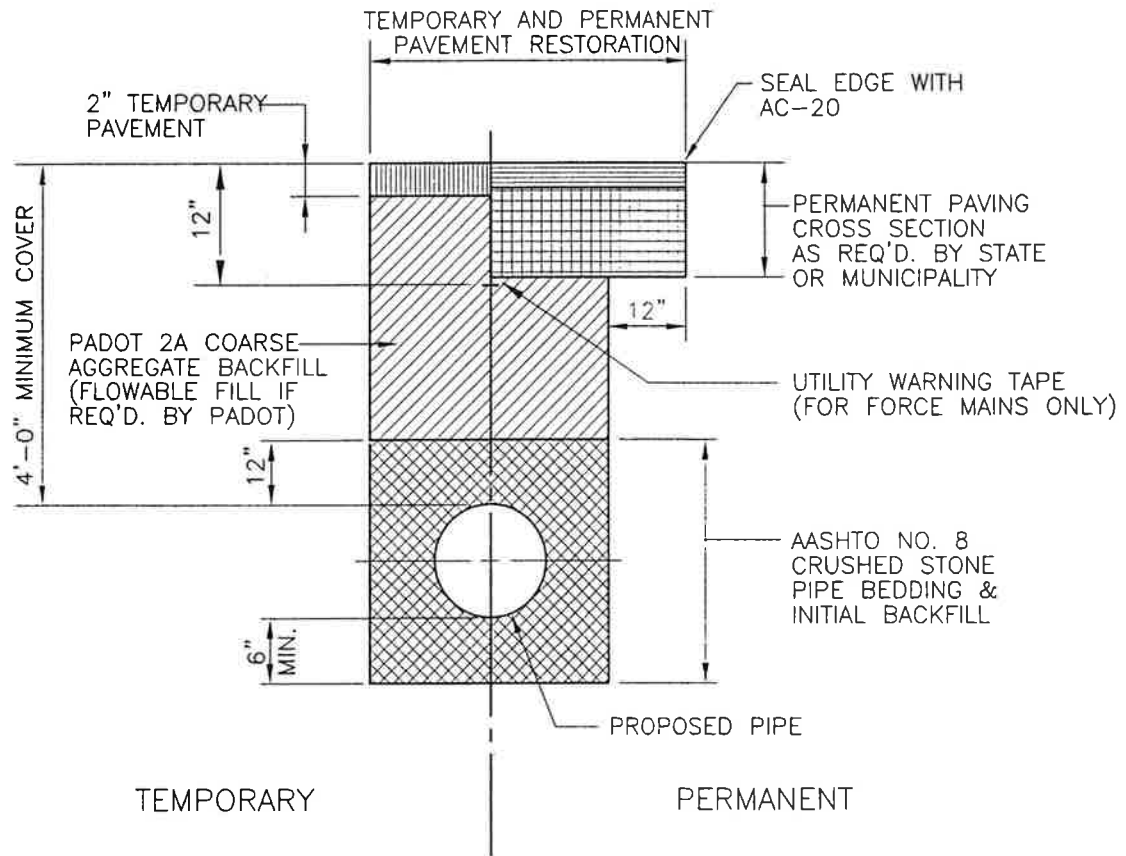


400 Washington Street, Suite 602  
 Reading, Pennsylvania 19601  
 Tel 610.374.5285

TRENCH RESTORATION  
 LAWN/FIELD AREAS

DATE:  
 JUNE 2005

DETAIL:  
 16



(TYPICAL FOR STATE HIGHWAYS, BOROUGH & TOWNSHIP ROADS, SHOULDERS & DRIVEWAYS)

NOTE:  
ALL WORK ON STATE ROADS IS TO BE PERFORMED  
IN ACCORDANCE WITH PADOT PUBLICATION 408.

## AMITY TOWNSHIP

2004 WEAVERTOWN ROAD  
DOUGLASVILLE, PA 19518

### STANDARD DETAIL - SEWER SYSTEM

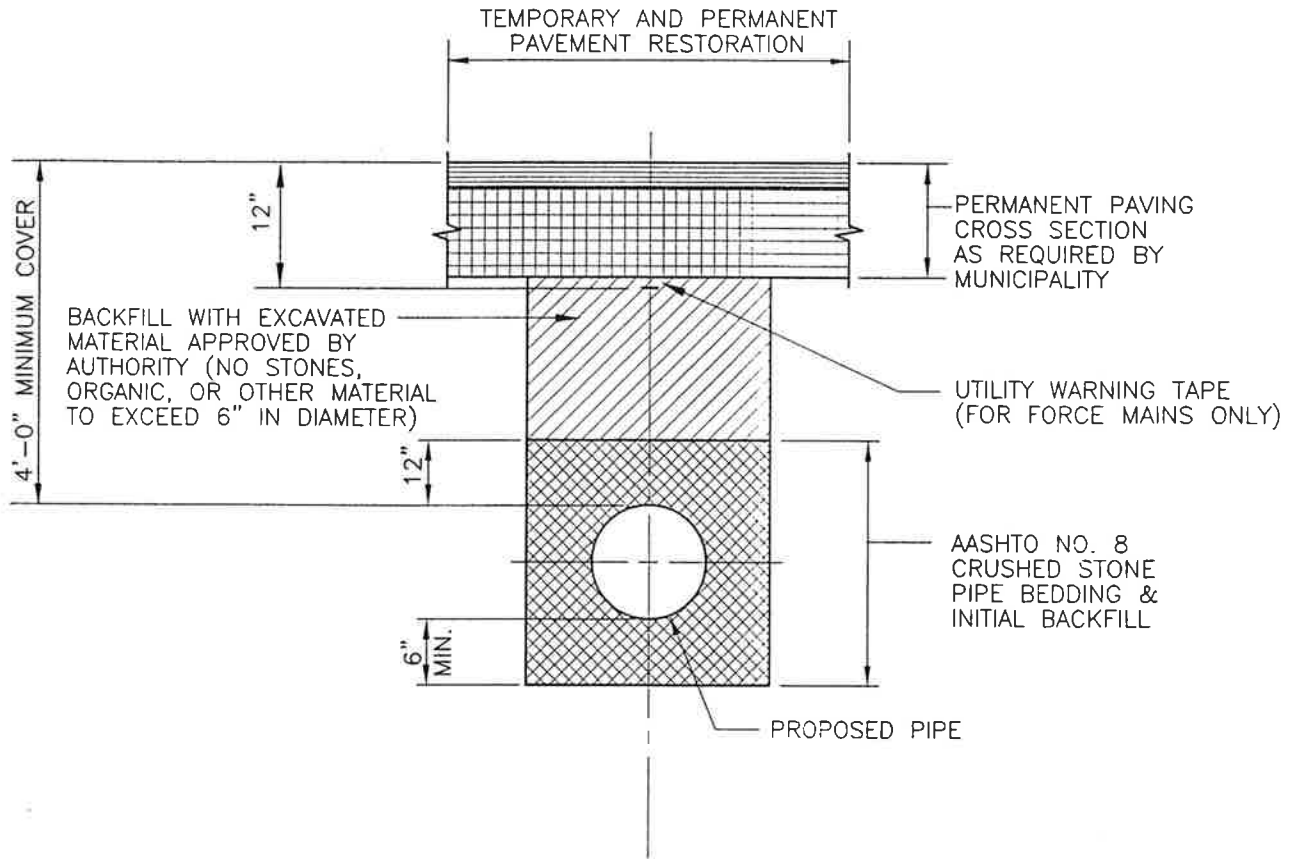


400 Washington Street, Suite 602  
Reading, Pennsylvania 19601  
Tel 610.374.5285

TRENCH RESTORATION  
EXISTING PAVED AREAS

DATE:  
JUNE 2005

DETAIL:  
17



**AMITY TOWNSHIP**

2004 WEAVERTOWN ROAD  
DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**

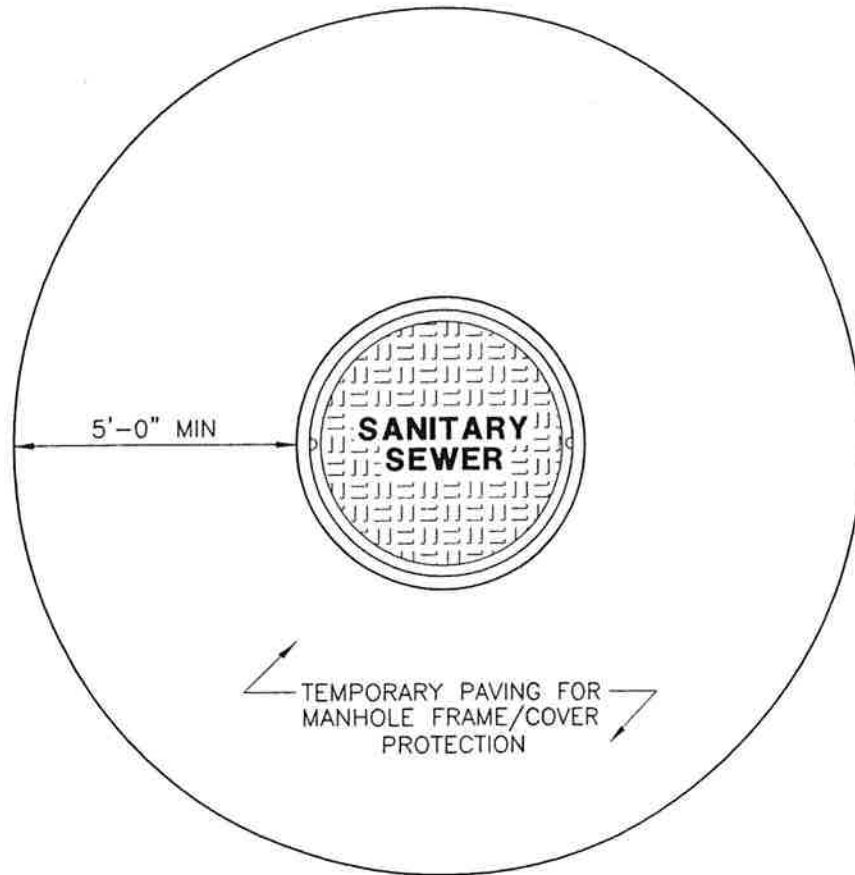


400 Washington Street, Suite 602  
Reading, Pennsylvania 19601  
Tel 610.374.5285

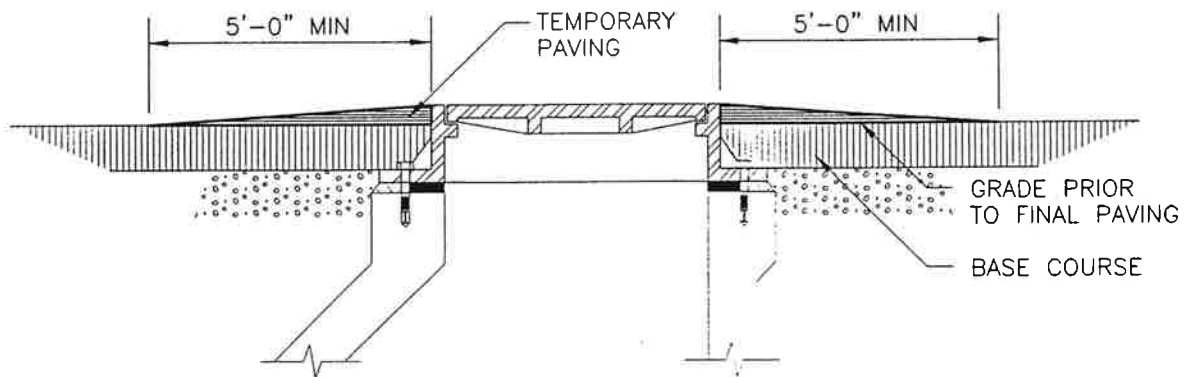
**TRENCH RESTORATION  
NEW ROADWAYS**

DATE: JUNE 2005

DETAIL: 18



PLAN



SECTION

**AMITY TOWNSHIP**

2004 WEAVERTOWN ROAD  
DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**



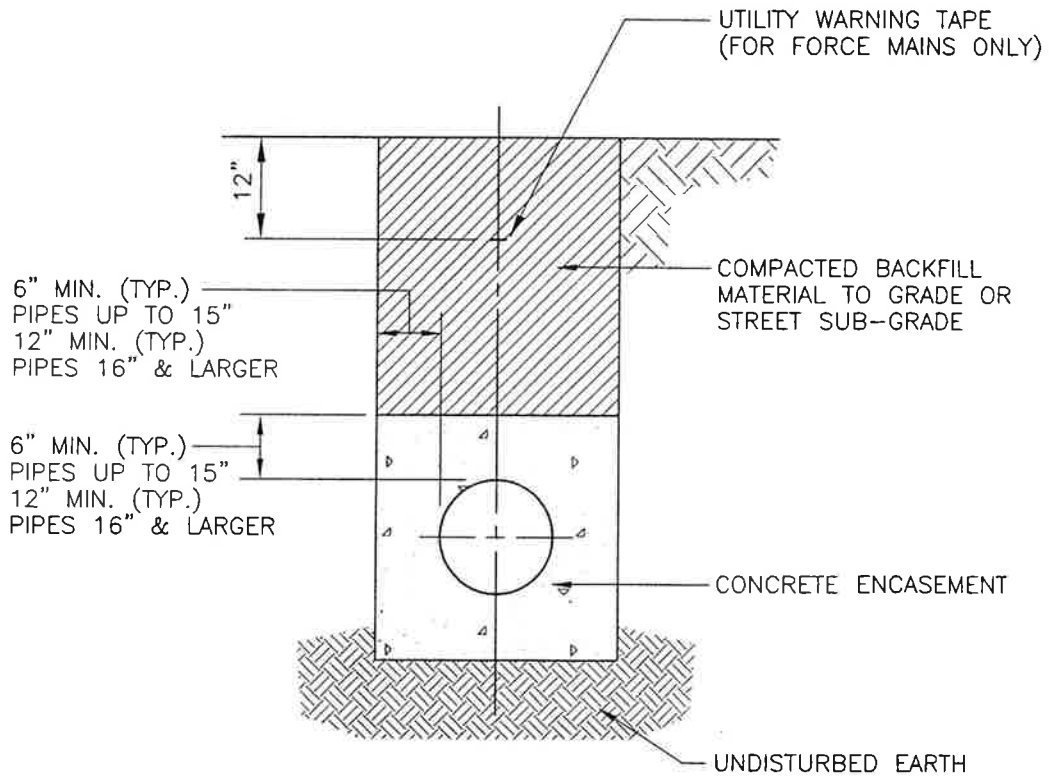
400 Washington Street, Suite 602  
Reading, Pennsylvania 19601  
Tel 610,374,5285

MANHOLE FRAME & COVER PROTECTION  
DETAIL PRIOR TO FINAL PAVING

DATE: JUNE 2002

DETAIL: 19

SS019\_DWG



**AMITY TOWNSHIP**

2004 WEAVERTOWN ROAD  
DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**

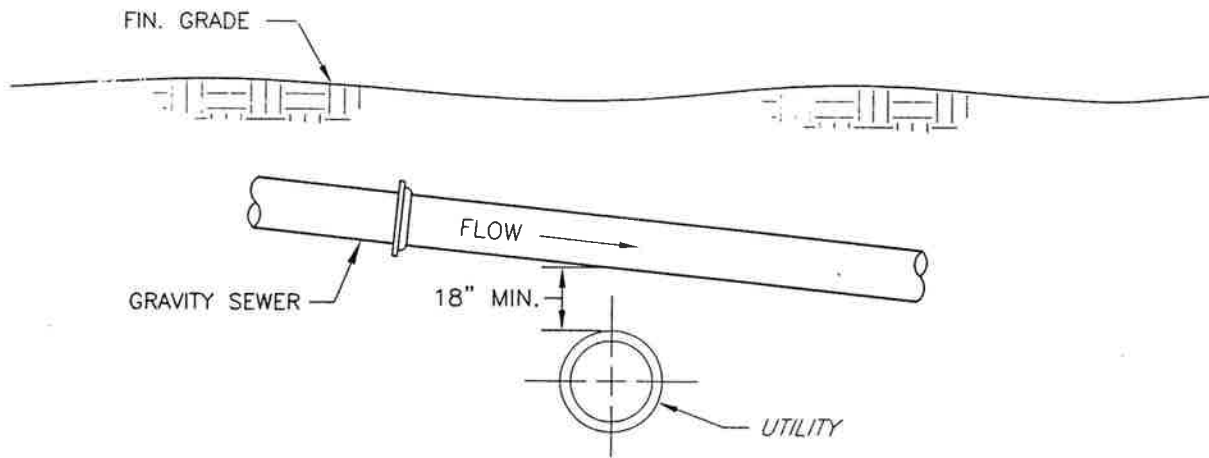
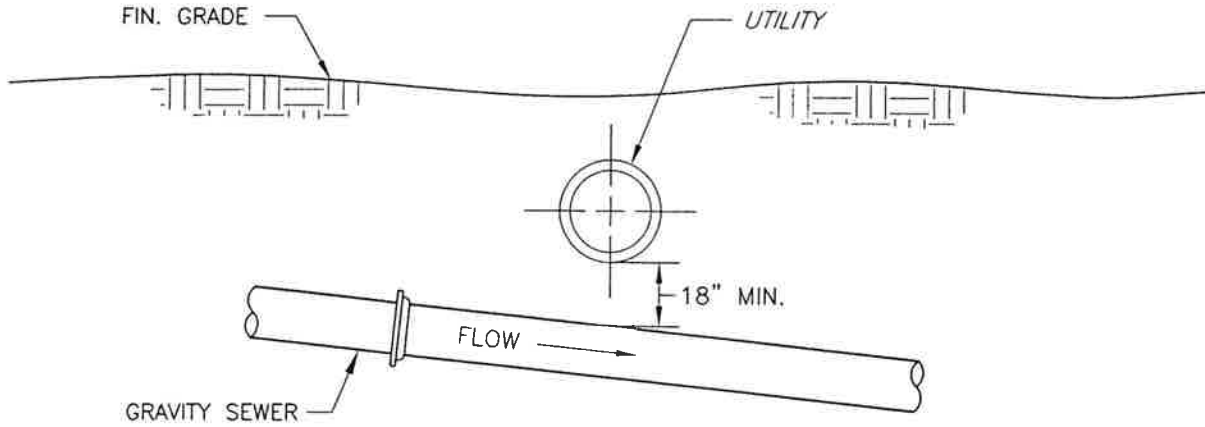


400 Washington Street, Suite 602  
Reading, Pennsylvania 19601  
Tel 610.374.5285

**CONCRETE ENCASEMENT DETAIL**

DATE: JUNE 2005

DETAIL: 20



NOTE: MAINTAIN SLOPE OF PROPOSED SEWER AT ALL CROSSINGS.

## AMITY TOWNSHIP

2004 WEAVERTOWN ROAD  
DOUGLASVILLE, PA 19518

### STANDARD DETAIL - SEWER SYSTEM

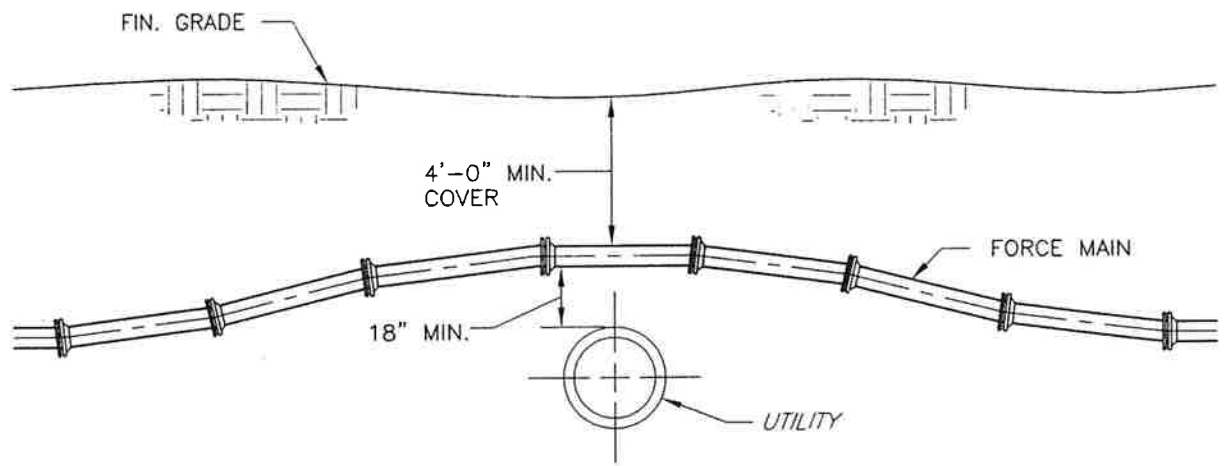
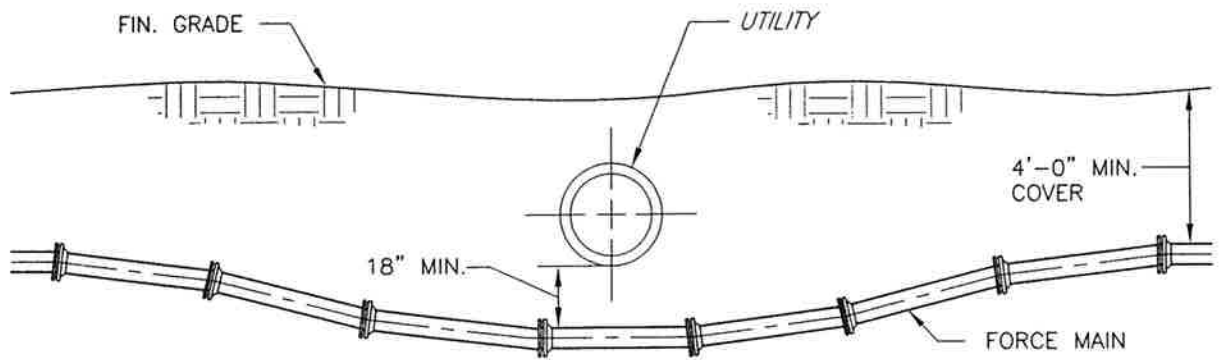


400 Washington Street, Suite 602  
Reading, Pennsylvania 19601  
Tel 610.374.5285

## GRAVITY SEWER CROSSING UTILITIES DETAIL

DATE:  
JUNE 2005

DETAIL:  
21



**AMITY TOWNSHIP**

2004 WEAVERTOWN ROAD  
DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**



400 Washington Street, Suite 602  
Reading, Pennsylvania 19601  
Tel 610.374.5285

**FORCE MAIN CROSSING UTILITY DETAIL  
(USING DEFLECTING JOINTS)**

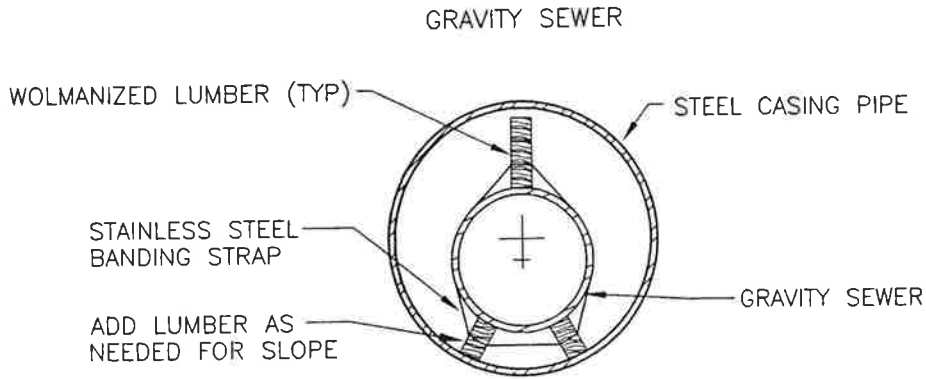
DATE: JUNE 2005

DETAIL: 22

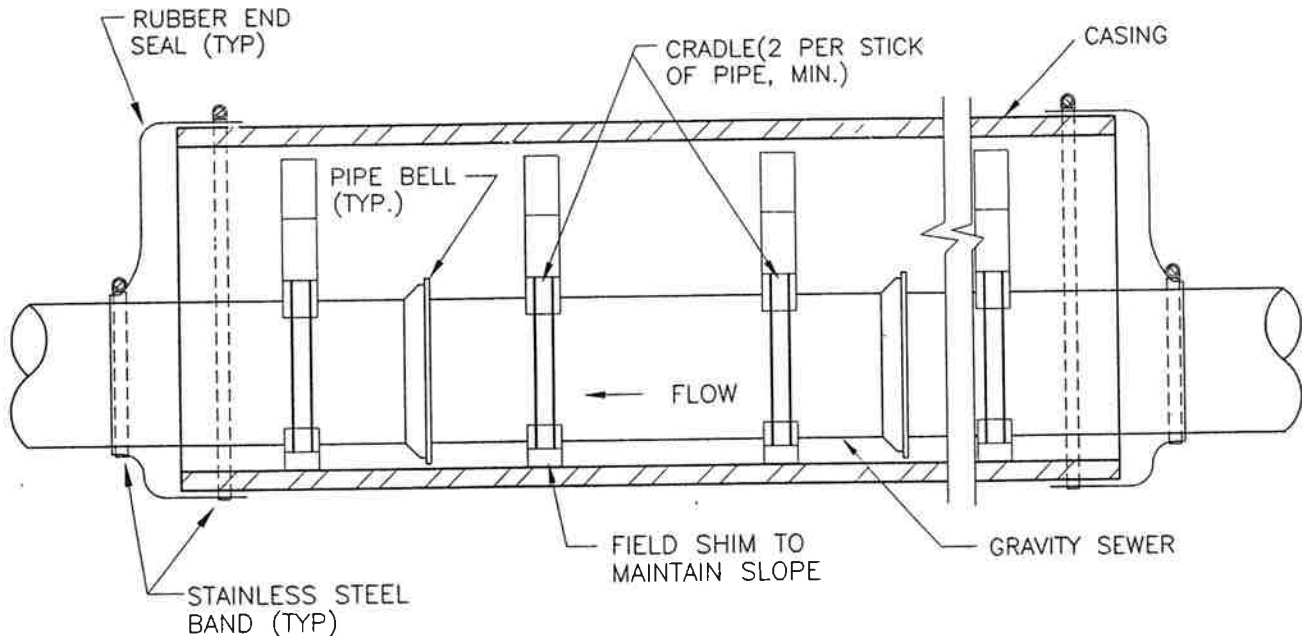
SD022.DWG



NOTE:  
 FILL VOID BETWEEN CARRIER PIPE  
 AND CASING WITH CLEAN NATURAL  
 SAND, OR 1/4" STONE CHIPS



SECTION



ELEVATION

**AMITY TOWNSHIP**  
 2004 WEAVERTOWN ROAD  
 DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**



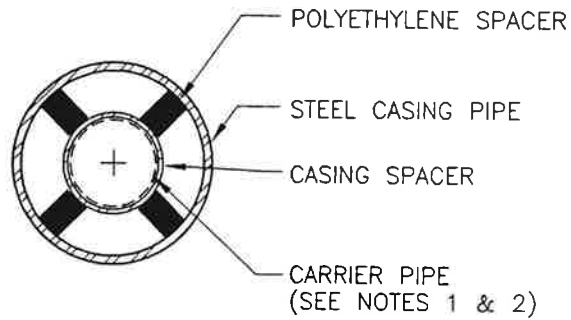
400 Washington Street, Suite 602  
 Reading, Pennsylvania 19601  
 Tel 610,374,5285

**CASING CRADLE DETAIL – GRAVITY SEWER  
 INSTALLATION VIA BORING/JACKING**

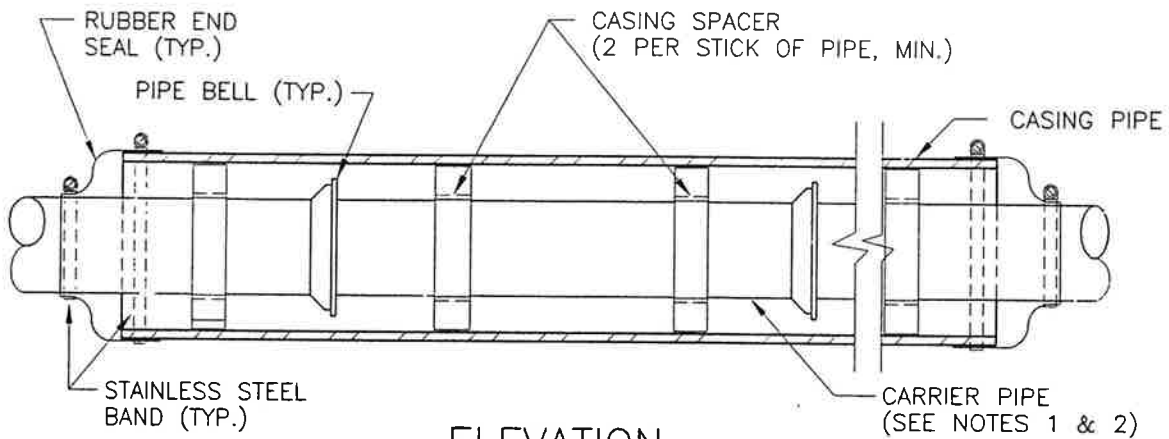
DATE:  
 JUNE 2005

DETAIL:  
 23

SD023.DWG



SECTION



ELEVATION

NOTES:

- 1) FORCE MAIN PIPE SHALL BE RESTRAINED JOINT PIPE.
- 2) GRAVITY SEWER PERMITTED ONLY WHEN INSTALLATION IS BY OPEN CUT. OTHERWISE, SEE GRAVITY SEWER INSTALLATION VIA BORING/JACKING DETAIL.

**AMITY TOWNSHIP**

2004 WEAVERTOWN ROAD  
DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**

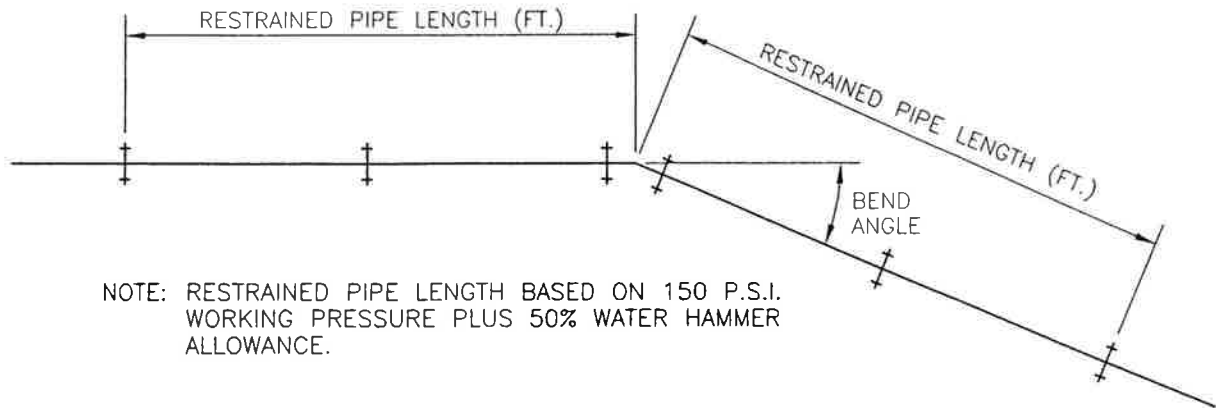


400 Washington Street, Suite 602  
Reading, Pennsylvania 19601  
Tel 610.374.5285

**CASING CRADLE DETAIL  
(OPEN CUT OR FORCE MAIN)**

DATE: JUNE 2005

DETAIL: 24



NOTE: RESTRAINED PIPE LENGTH BASED ON 150 P.S.I. WORKING PRESSURE PLUS 50% WATER HAMMER ALLOWANCE.

HORIZONTAL RESTRAINED PIPE LENGTH SCHEDULE (DUCTILE IRON PIPE)				
PIPE DIAMETER	HORIZONTAL ELBOW DEFLECTION ANGLE			
	90°	45°	22 1/2°	11 1/4°
4"	19'	8'	4'	2'
6"	27'	11'	7'	3'
8"	35'	14'	8'	4'
10"	42'	17'	8'	5'
12"	49'	20'	10'	5'

\* ADD 12% TO LENGTH IF PIPE IS POLYETHYLENE ENCASED.

VERTICAL RESTRAINED PIPE LENGTH SCHEDULE (DUCTILE IRON PIPE)			
PIPE DIAMETER	VERTICAL ELBOW DEFLECTION ANGLE		
	45°	22 1/2°	11 1/4°
4"	20'	10'	5'
6"	28'	14'	7'
8"	37'	18'	9'
10"	44'	21'	11'
12"	52'	25'	12'

\* ADD 12% TO LENGTH IF PIPE IS POLYETHYLENE ENCASED.

NOTE: FOR PIPE SIZES GREATER THAN 12", SUBMIT ENGINEERING CALCULATIONS TO VERIFY PROPOSED RESTRAINED PIPE LENGTHS.

**AMITY TOWNSHIP**  
 2004 WEAVERTOWN ROAD  
 DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**



400 Washington Street, Suite 602  
 Reading, Pennsylvania 19601  
 Tel 610.374.5285

**RESTRAINED PIPE LENGTH SCHEDULE  
 (DUCTILE IRON PIPE)**

DATE: JUNE 2005

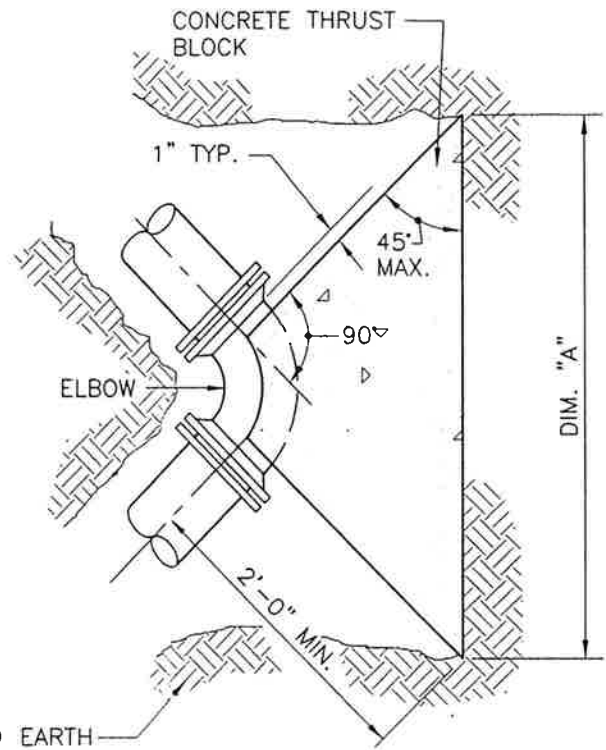
DETAIL: 25

THRUST BLOCK DIMENSION SCHEDULE -- ELBOWS(\*)  
(DUCTILE IRON PIPE)

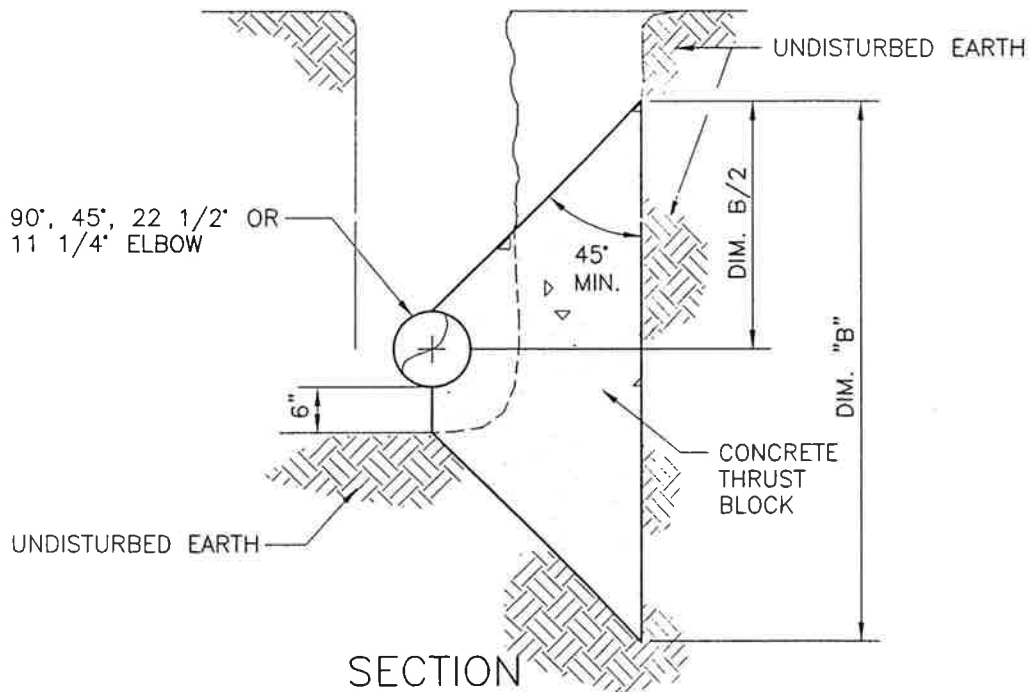
PIPE DIAM.	DIM.	ELBOW DEFLECTION ANGLE			
		11 1/4°	22 1/2°	45°	90°
4"	A	12"	18"	24"	24"
	B	12"	12"	12"	18"
6"	A	18"	24"	30"	42"
	B	12"	18"	24"	30"
8"	A	24"	24"	42"	60"
	B	12"	24"	30"	36"
12"	A	30"	42"	54"	90"
	B	24"	30"	36"	48"

(\*) THRUST BLOCK DESIGN BASED ON THE MINIMUM SOIL HORIZONTAL BEARING STRENGTH OF 3000 PSF AND 150 PSI WORKING PRESSURE PLUS 50% WATER HAMMER ALLOWANCE.

FOR PIPE SIZES GREATER THAN 12", SUBMIT ENGINEERING CALCULATIONS TO VERIFY PROPOSED THRUST BLOCK SIZES.



PLAN



SECTION

**AMITY TOWNSHIP**

2004 WEAVERTOWN ROAD  
DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**



400 Washington Street, Suite 602  
Reading, Pennsylvania 19601  
Tel 610.374.5285

**HORIZONTAL & VERTICAL UP RESTRAINT  
THRUST BLOCKING DETAIL -- ELBOWS (DIP)**

DATE: JUNE 2005

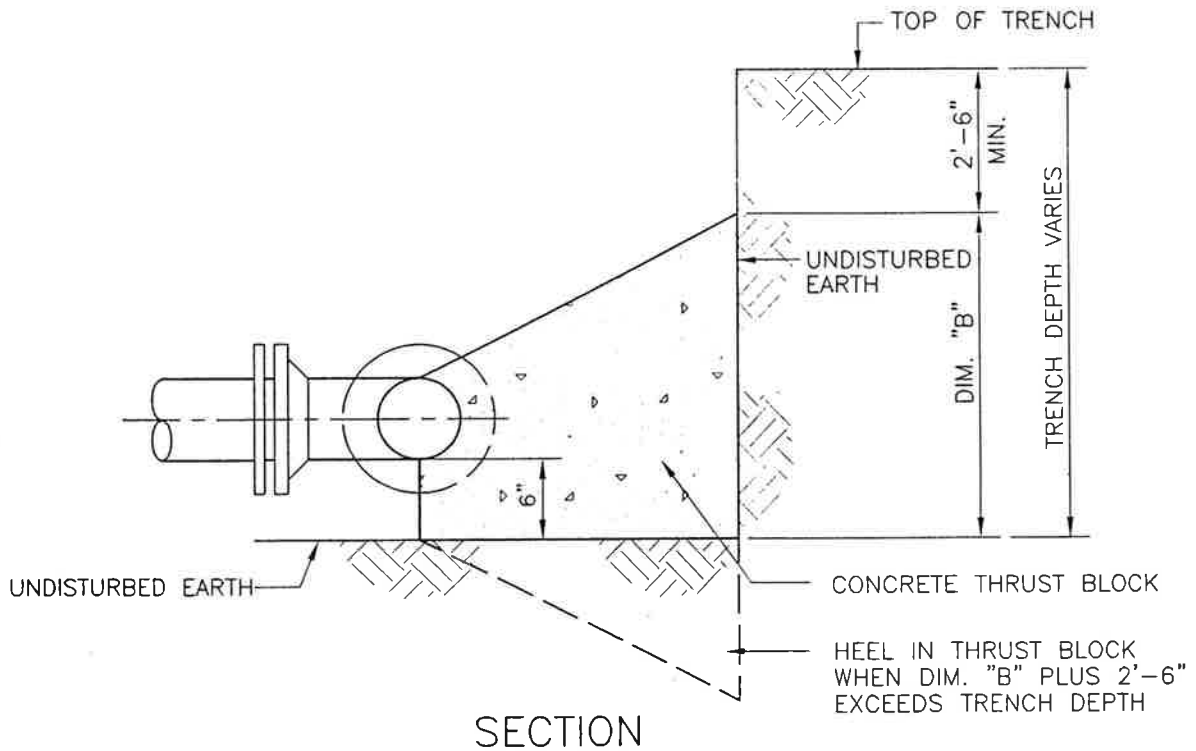
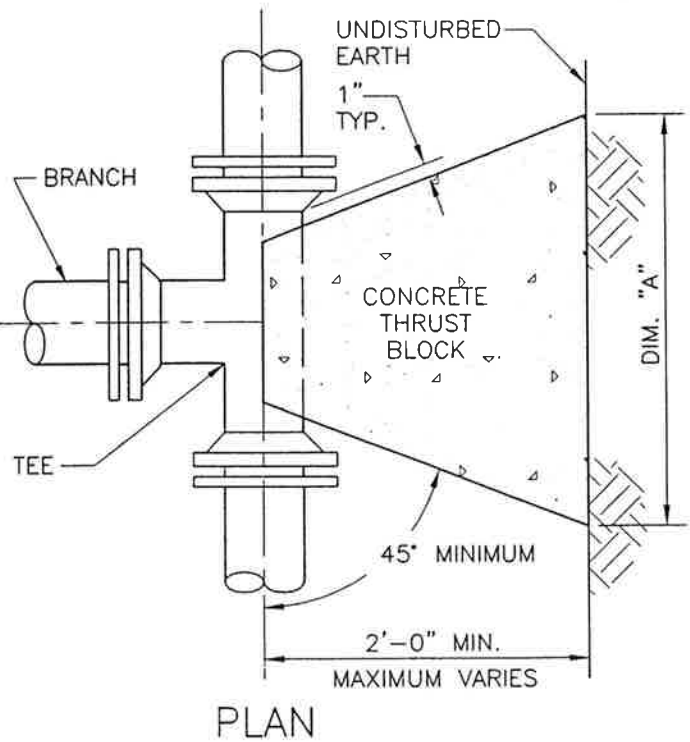
DETAIL: 26

THRUST BLOCK DIMENSION SCHEDULE - ELBOWS(\*)  
(DUCTILE IRON PIPE)

DIM.	BRANCH SIZE			
	4"	6"	8"	12"
A	36"	42"	60"	96"
B	18"	24"	30"	42"

(\*) THRUST BLOCK DESIGN BASED ON THE MINIMUM SOIL HORIZONTAL BEARING STRENGTH OF 3000 PSF AND 150 PSI WORKING PRESSURE PLUS 50% WATER HAMMER ALLOWANCE.

FOR PIPE SIZES GREATER THAN 12", SUBMIT ENGINEERING CALCULATIONS TO VERIFY PROPOSED THRUST BLOCK SIZES.



**AMITY TOWNSHIP**

2004 WEAVERTOWN ROAD  
DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**



400 Washington Street, Suite 602  
Reading, Pennsylvania 19601  
Tel 610.374.5285

**HORIZONTAL RESTRAINT  
THRUST BLOCKING DETAIL - TEES (DIP)**

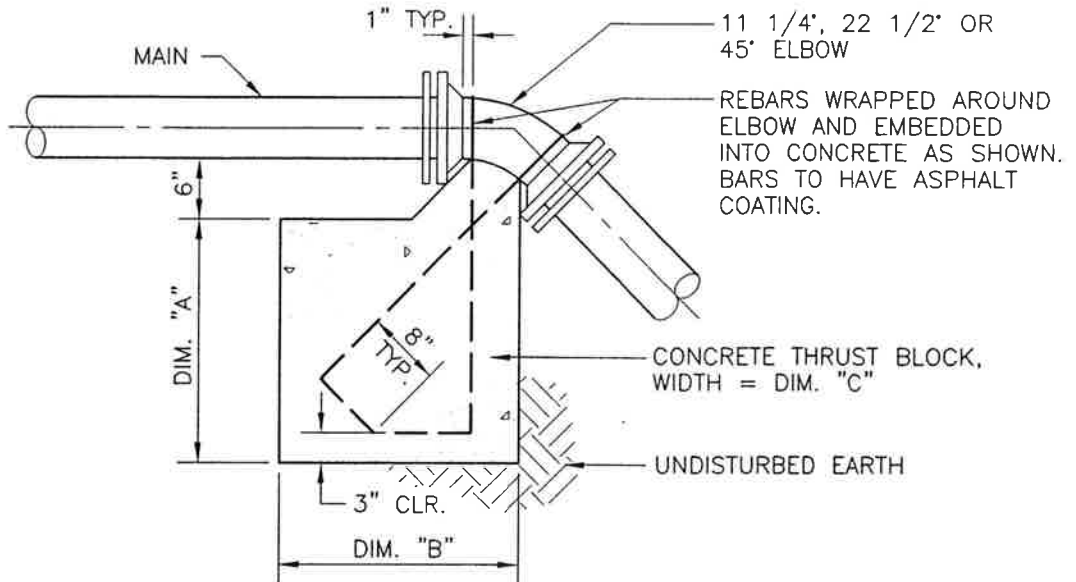
DATE:  
JUNE 2002

DETAIL:  
27

THRUST BLOCK DIMENSION SCHEDULE – VERTICAL ELBOWS(*) (DUCTILE IRON PIPE)									
DIM.	6"-11 1/4'	8"-11 1/4'	12"-11 1/4'	6"-22 1/2'	8"-22 1/2'	12"-22 1/2'	6"-45'	8"-45'	12"-45'
A	12"	18"	36"	18"	36"	54"	36"	48"	54"
B	18"	24"	36"	24"	36"	48"	36"	48"	54"
C	18"	24"	24"	24"	24"	30"	24"	30"	48"
REBAR	#4	#4	#6	#4	#4	#6	#4	#4	#6

(\*) THRUST BLOCK DESIGN BASED ON THE MINIMUM SOIL HORIZONTAL BEARING STRENGTH OF 3000 PSF AND 150 PSI WORKING PRESSURE PLUS 50% WATER HAMMER ALLOWANCE.

FOR PIPE SIZES GREATER THAN 12", SUBMIT ENGINEERING CALCULATIONS TO VERIFY PROPOSED THRUST BLOCK SIZES.



SECTION

**AMITY TOWNSHIP**  
 2004 WEAVERTOWN ROAD  
 DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**



400 Washington Street, Suite 602  
 Reading, Pennsylvania 19601  
 Tel 610.374.5285

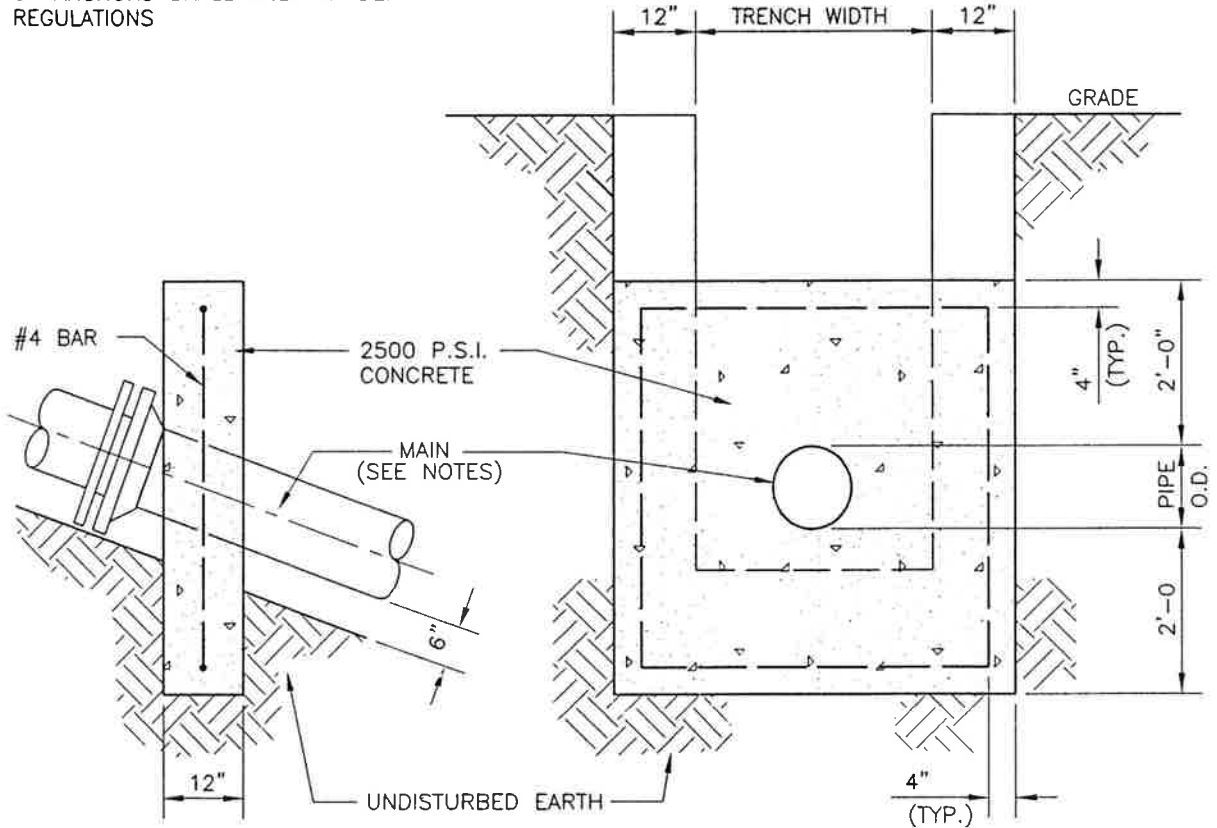
**VERTICAL DOWN RESTRAINT  
 THRUST BLOCKING DETAIL – ELBOWS (DIP)**

DATE: JUNE 2005

DETAIL: 28

NOTES:

- 1) USE DUCTILE IRON PIPE AT ANCHOR LOCATIONS OR WRAP PVC PIPE WITH 1/2" THICK NEOPRENE AT ANCHOR
- 2) CENTERLINE TO CENTERLINE SPACINGS OF ANCHORS SHALL MEET PA DEP REGULATIONS



SIDE ELEVATION

FRONT ELEVATION

**AMITY TOWNSHIP**  
 2004 WEAVERTOWN ROAD  
 DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**

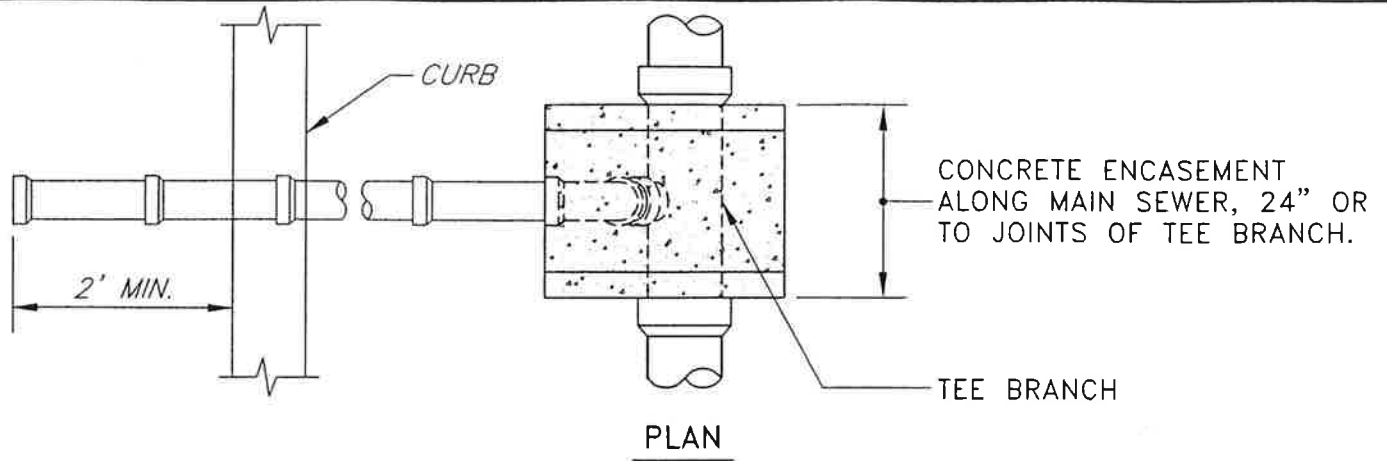
**CONCRETE ANCHOR DETAIL**



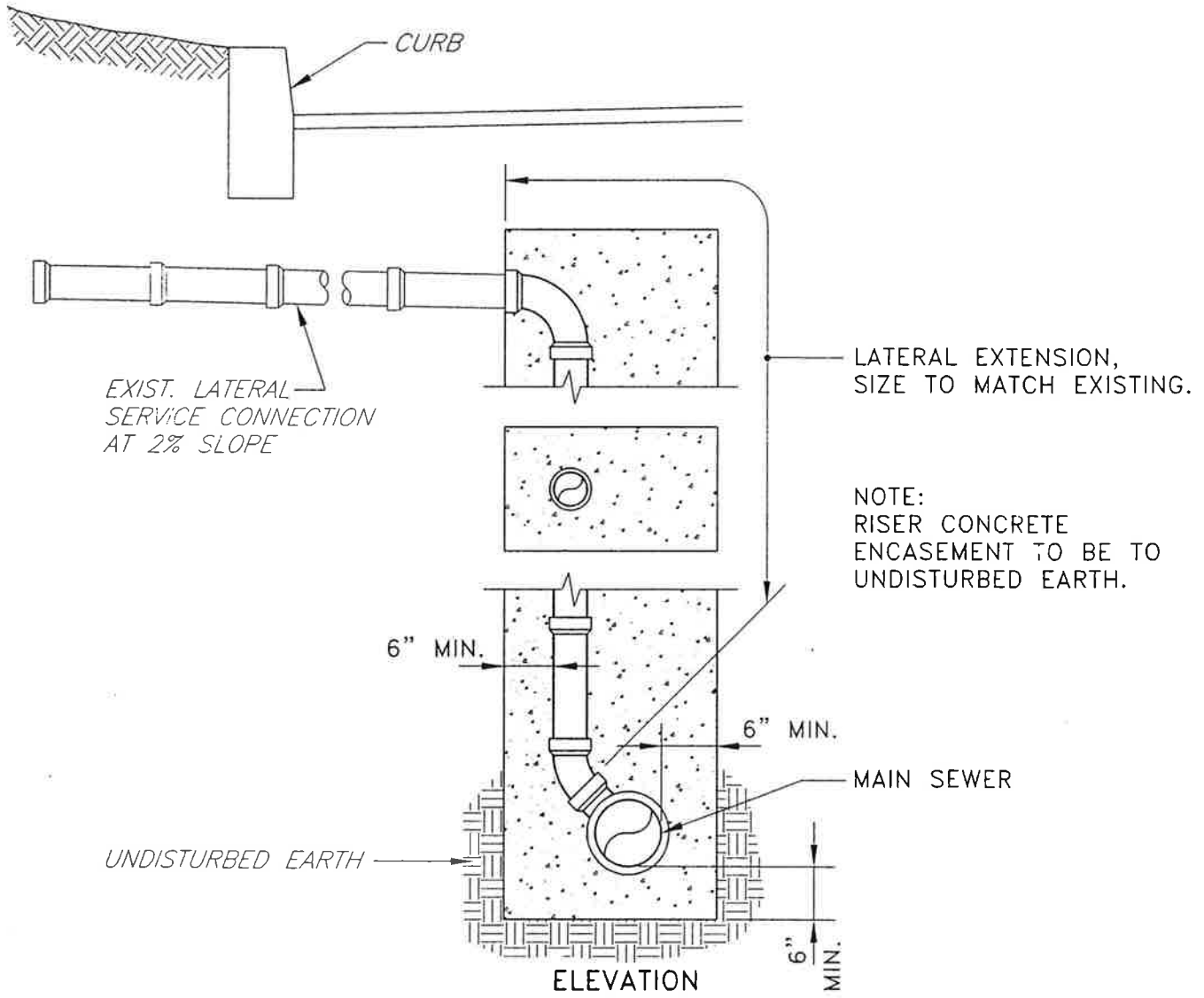
400 Washington Street, Suite 602  
 Reading, Pennsylvania 19601  
 Tel 610.374.5285

DATE: JUNE 2005

DETAIL: 29



PLAN



ELEVATION

**AMITY TOWNSHIP**

2004 WEAVERTOWN ROAD  
DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**



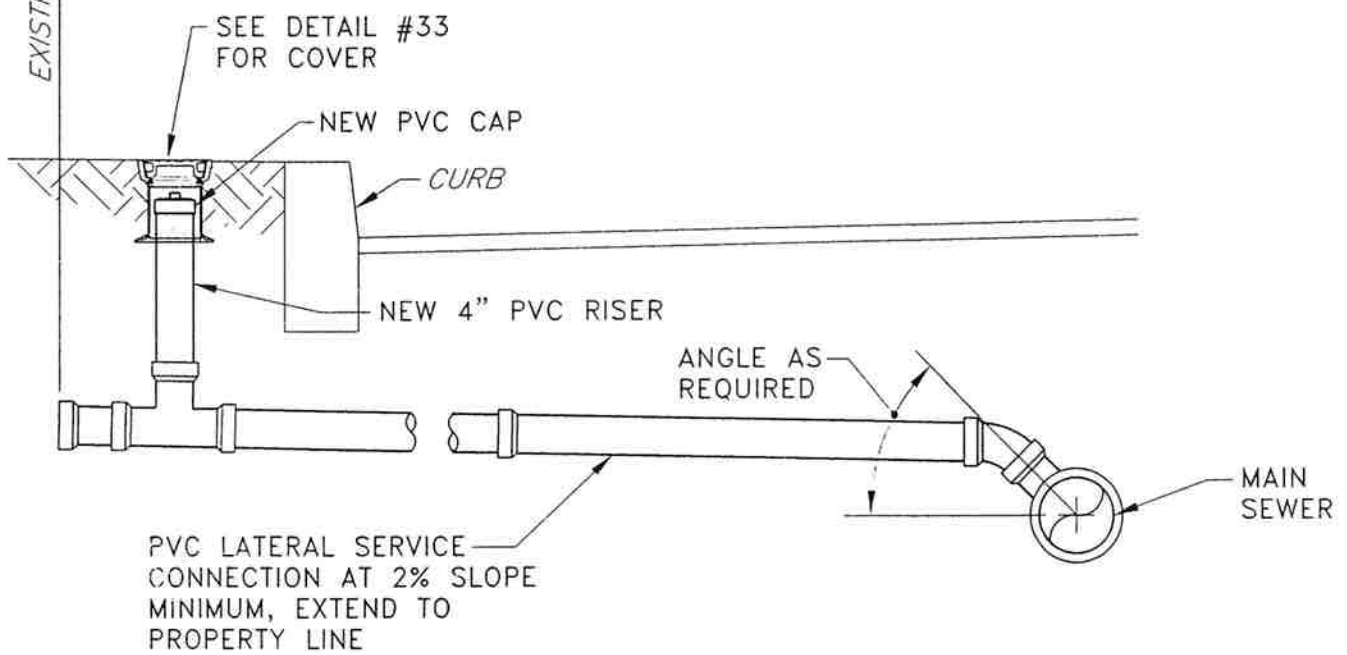
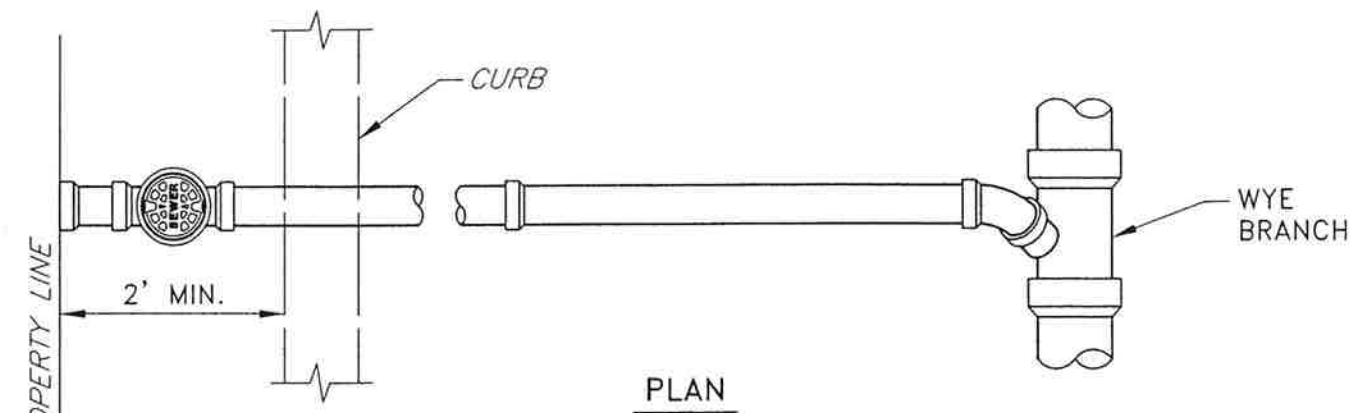
400 Washington Street, Suite 602  
Reading, Pennsylvania 19601  
Tel 610.374.5285

**EXISTING LATERAL EXTENSION**

DATE: JUNE 2005

DETAIL: 30





ELEVATION

NOTES:

- 1) REPAIRS - LATERAL SIZE TO MATCH EXISTING HOUSE LATERAL.
- 2) NEW CONSTRUCTION - 6" SERVICE LATERALS.
- 3) PROVIDE CLEANOUTS EVERY 70' ON LATERALS.
- 4) CONTRACTOR TO PROVIDE TREATED 2x4 OR MARKING TAPE TO GRADE TO LOCATE END OF LATERALS.

**AMITY TOWNSHIP**

2004 WEAVERTOWN ROAD  
DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**



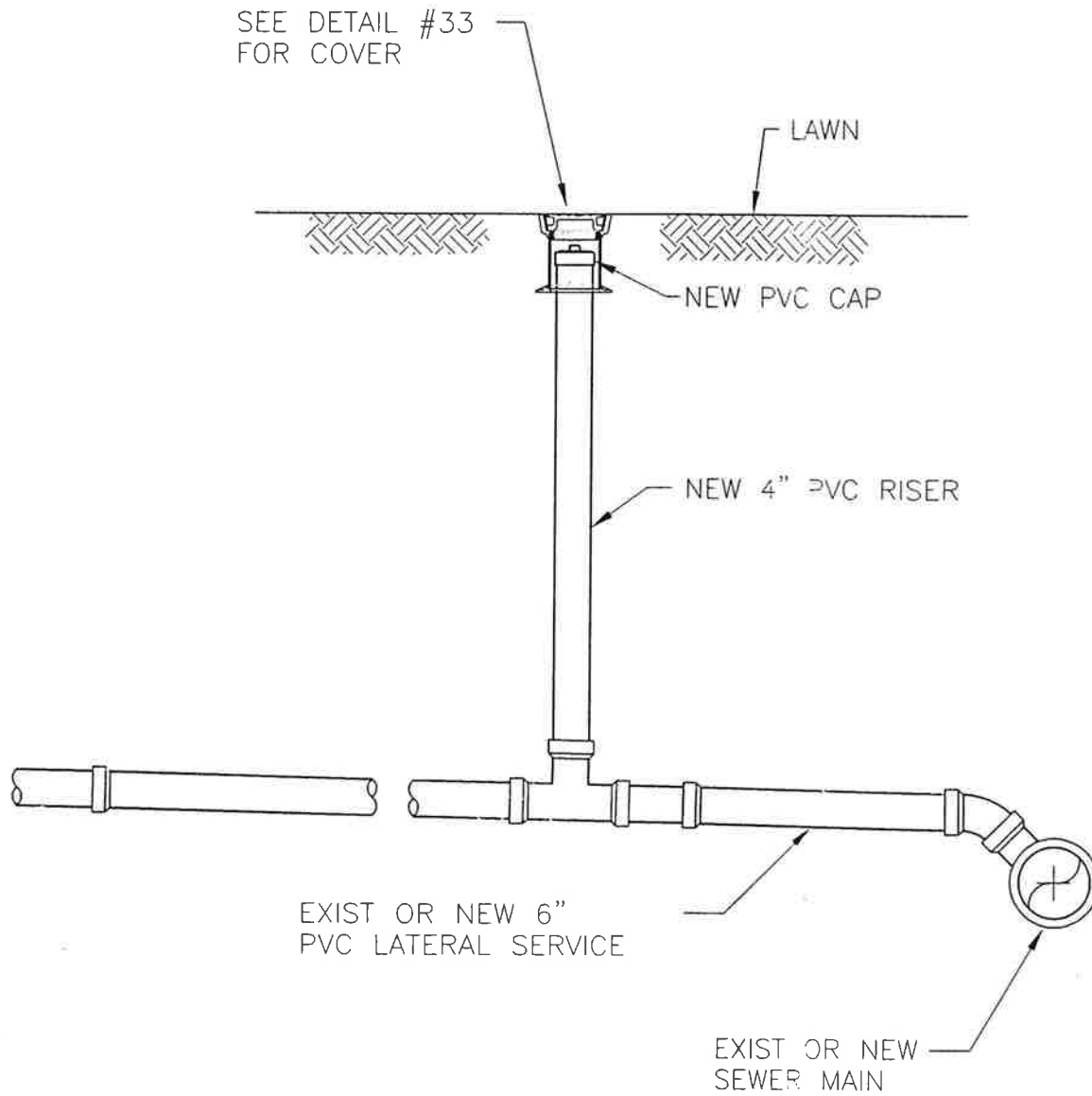
400 Washington Street, Suite 602  
Reading, Pennsylvania 19601  
Tel 610.374.5285

**LATERAL DETAIL**

DATE: JUNE 2005

DETAIL: 31

SD031.DWG



**AMITY TOWNSHIP**

2004 WEAVERTOWN ROAD  
DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**

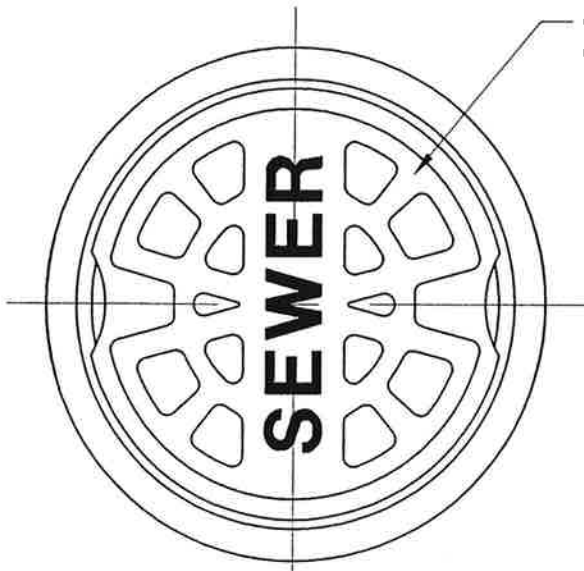


400 Washington Street, Suite 602  
Reading, Pennsylvania 19601  
Tel 610.374.5285

**INSPECTION / TEST TEE**

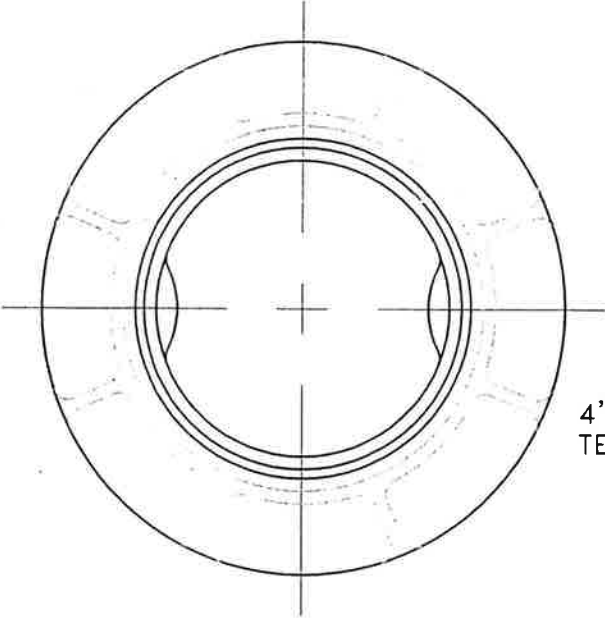
DATE: JUNE 2005

DETAIL: 32



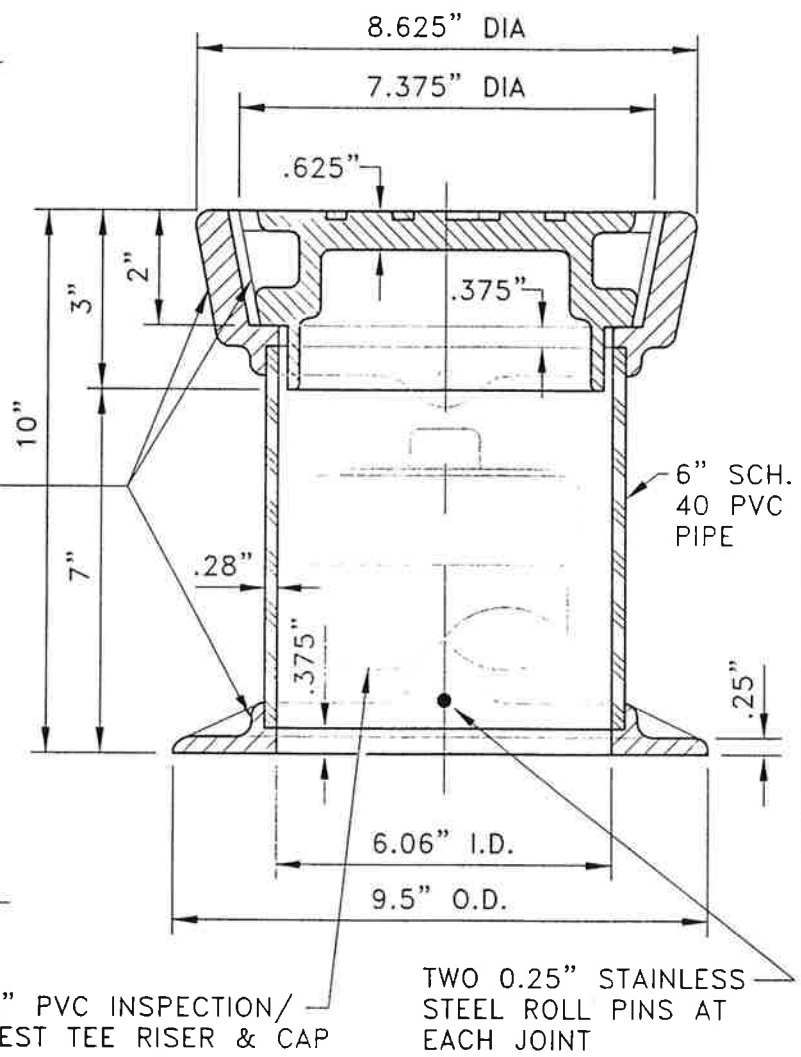
TOP VIEW

ASTM A-48 CLASS 25  
CAST IRON ASPHALT  
PAINT COATED



BOTTOM VIEW

COVER W/RISER BY  
GENECO, PART NO. CC4.



**AMITY TOWNSHIP**

2004 WEAVERTOWN ROAD  
DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**



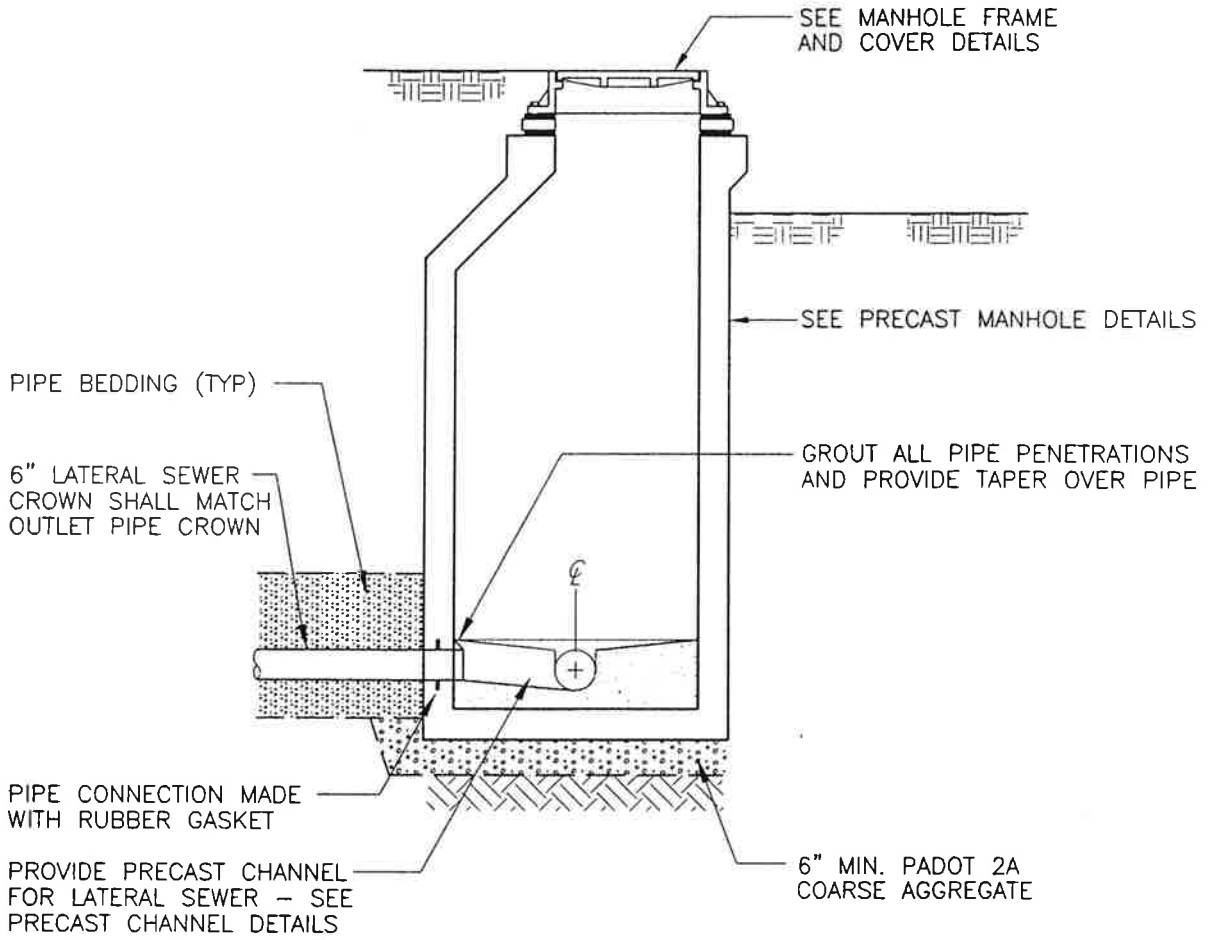
400 Washington Street, Suite 602  
Reading, Pennsylvania 19601  
Tel 610.374.5285

**COVER FOR INSPECTION / TEST  
TEE IN TRAFFIC AREA**

DATE:  
JUNE 2005

DETAIL:  
33

SD033.DWG



**AMITY TOWNSHIP**

2004 WEAVERTOWN ROAD  
DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**

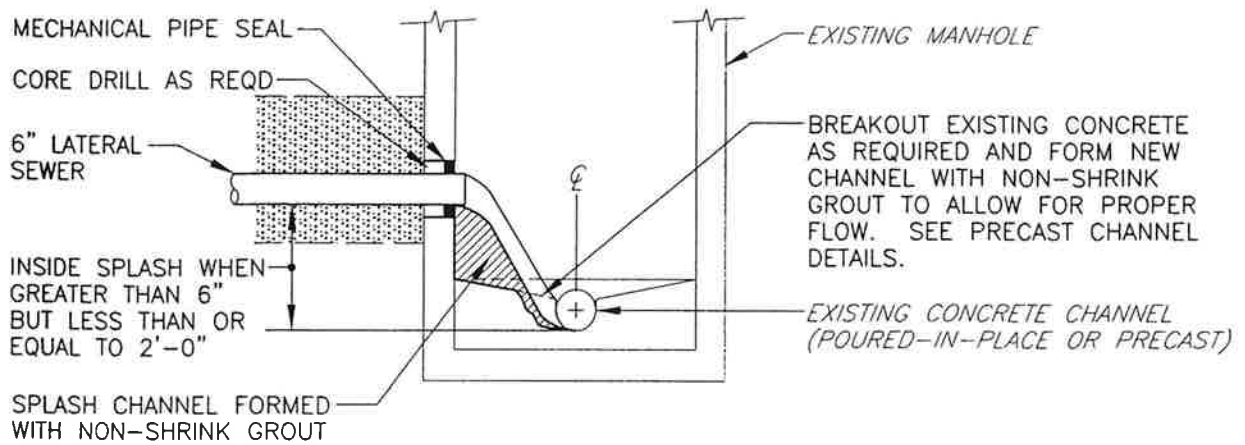


400 Washington Street, Suite 602  
Reading, Pennsylvania 19601  
Tel 610.374.5285

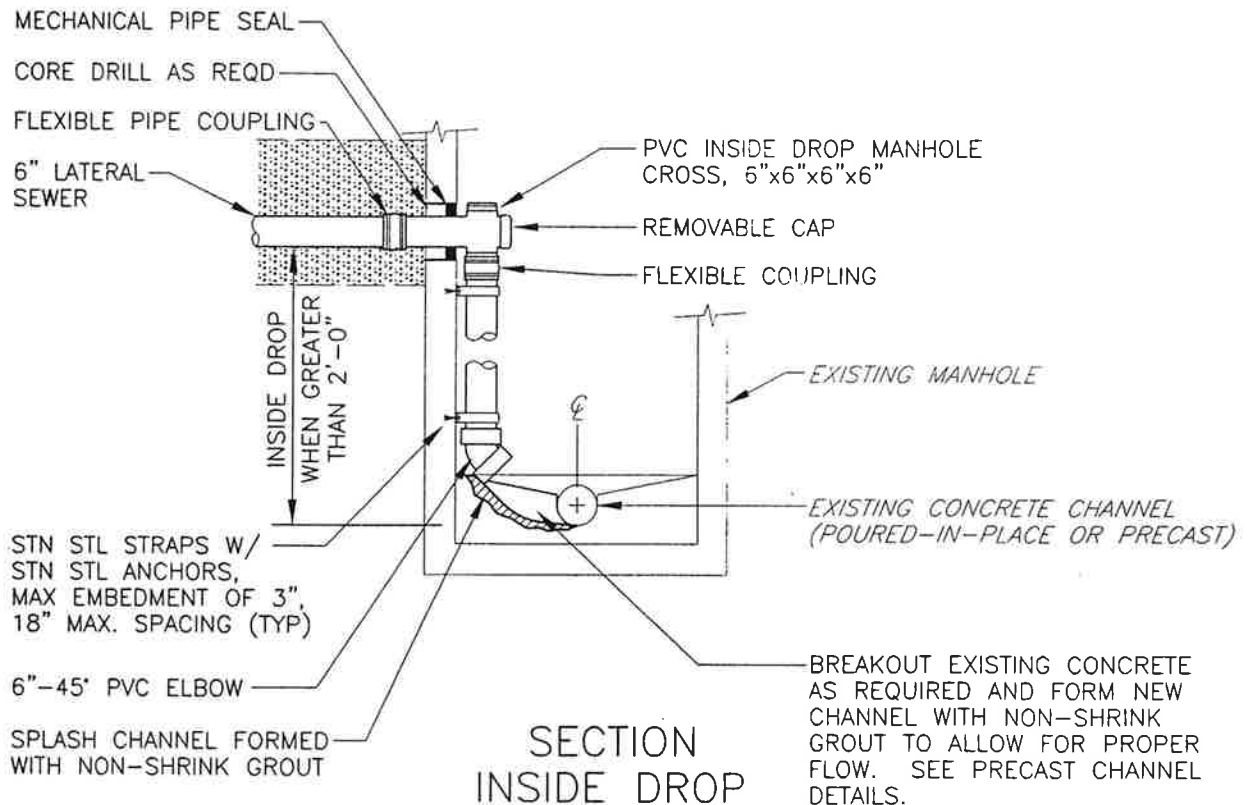
**6" LATERAL INTO NEW MANHOLE  
(BY SPECIAL EXCEPTION ONLY)**

DATE: JUNE 2005

DETAIL: 34



**SECTION  
INSIDE SPLASH**



**SECTION  
INSIDE DROP**

**AMITY TOWNSHIP**

2004 WEAVERTOWN ROAD  
DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**

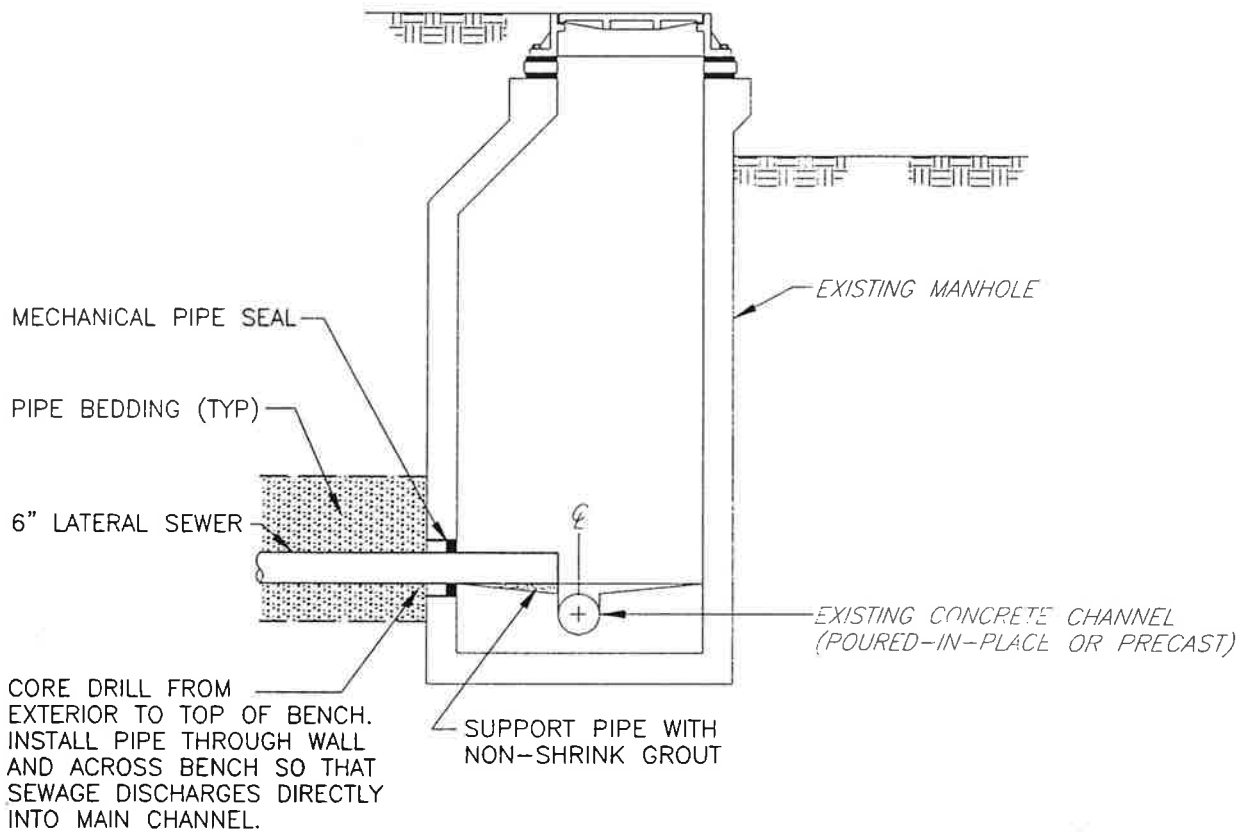


400 Washington Street, Suite 602  
Reading, Pennsylvania 19601  
Tel 610.374.5285

**INSIDE SPLASH/DROP - 6" LATERAL INTO  
EXIST. MH (BY SPECIAL EXCEPTION ONLY)**

DATE: JUNE 2005

DETAIL: 35



**AMITY TOWNSHIP**

2004 WEAVERTOWN ROAD  
DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**

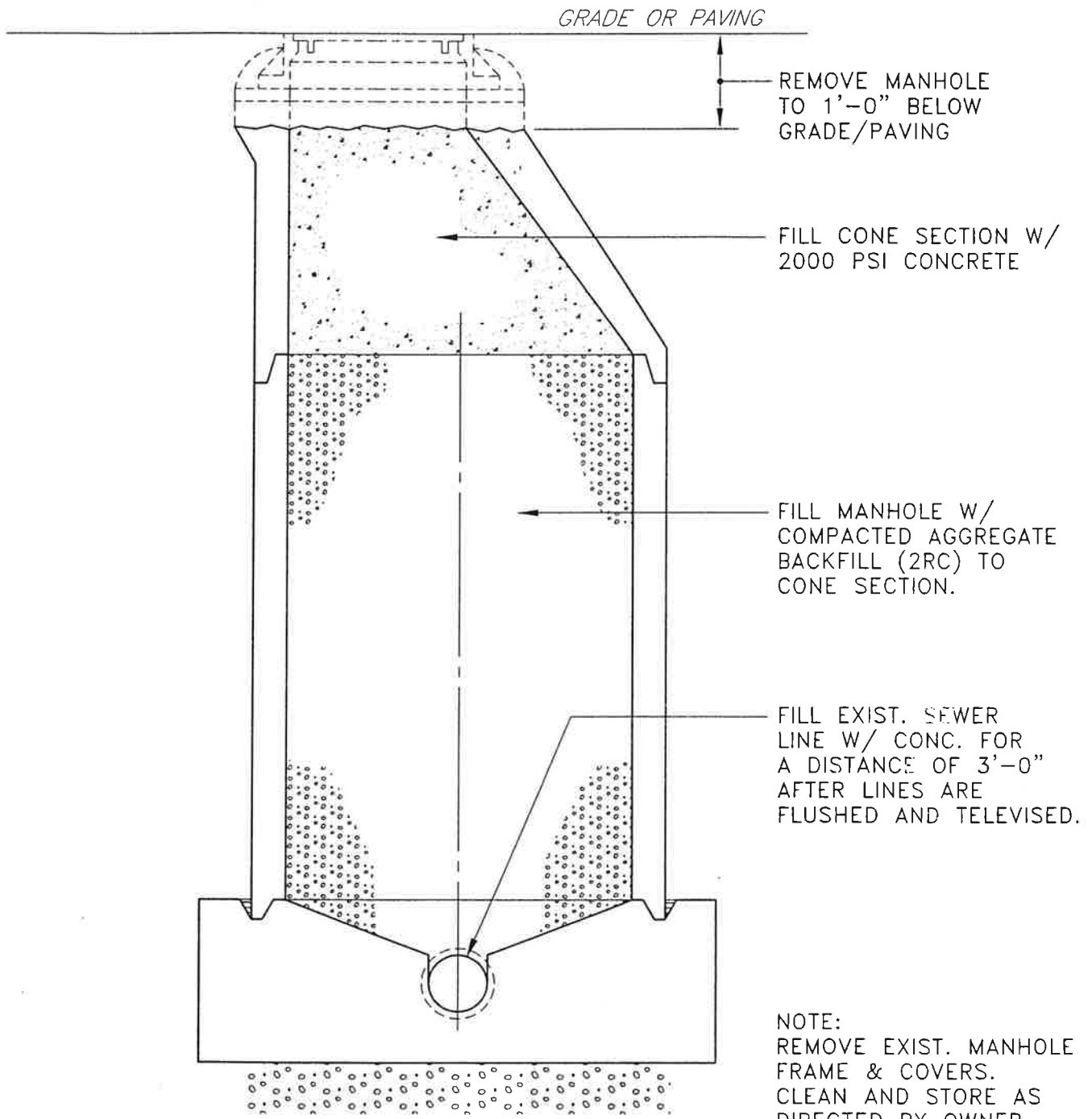


400 Washington Street, Suite 602  
Reading, Pennsylvania 19601  
Tel 610.374.5285

**6" LATERAL INTO EXISTING MANHOLE  
(BY SPECIAL EXCEPTION ONLY)**

DATE: JUNE 2005

DETAIL: 36



TYPICAL SECTION

NOTE:  
 REMOVE EXIST. MANHOLE  
 FRAME & COVERS.  
 CLEAN AND STORE AS  
 DIRECTED BY OWNER.

**AMITY TOWNSHIP**  
 2004 WEAVERTOWN ROAD  
 DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**

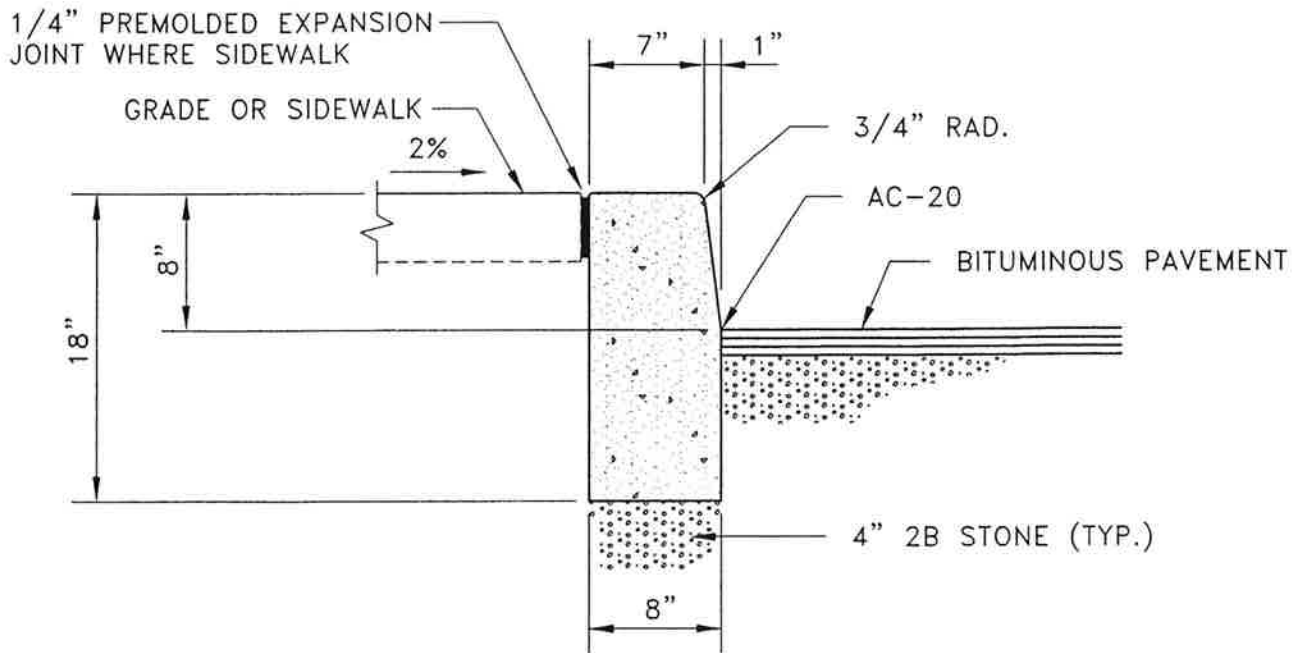


400 Washington Street, Suite 602  
 Reading, Pennsylvania 19601  
 Tel 610.374.5285

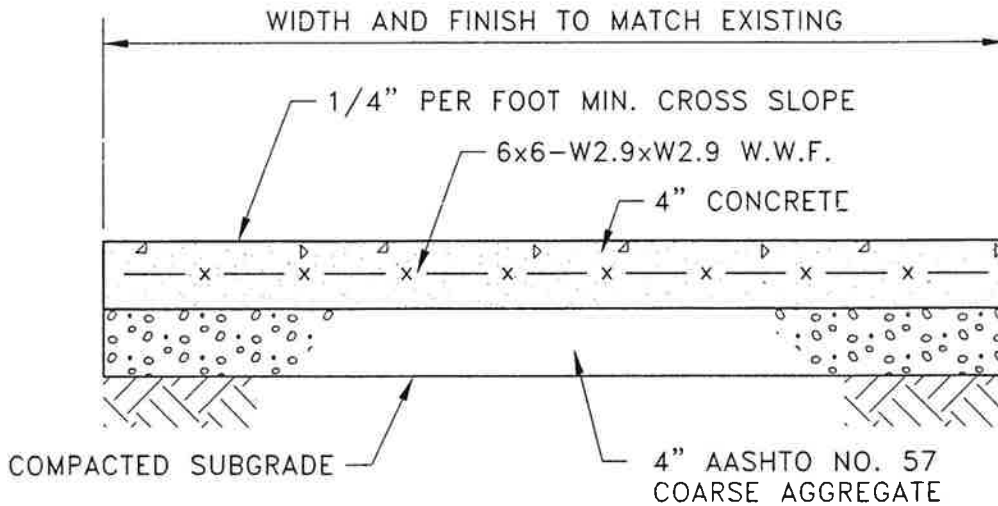
**MANHOLE ABANDONMENT DETAIL**

DATE:  
 JUNE 2005

DETAIL:  
 37



### STANDARD STRAIGHT CURB DETAIL



NOTE: PROVIDE 1/2" TOOLED CONTRACTION JOINTS AT MAXIMUM 4'-0" SPACING.  
 PROVIDE 1/2" EXPANSION JOINTS AT MAXIMUM 20'-0" SPACING.

### SIDEWALK DETAIL

**AMITY TOWNSHIP**  
 2004 WEAVERTOWN ROAD  
 DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**



400 Washington Street, Suite 602  
 Reading, Pennsylvania 19601  
 Tel 610.374.5285

## CURB AND SIDEWALK DETAILS

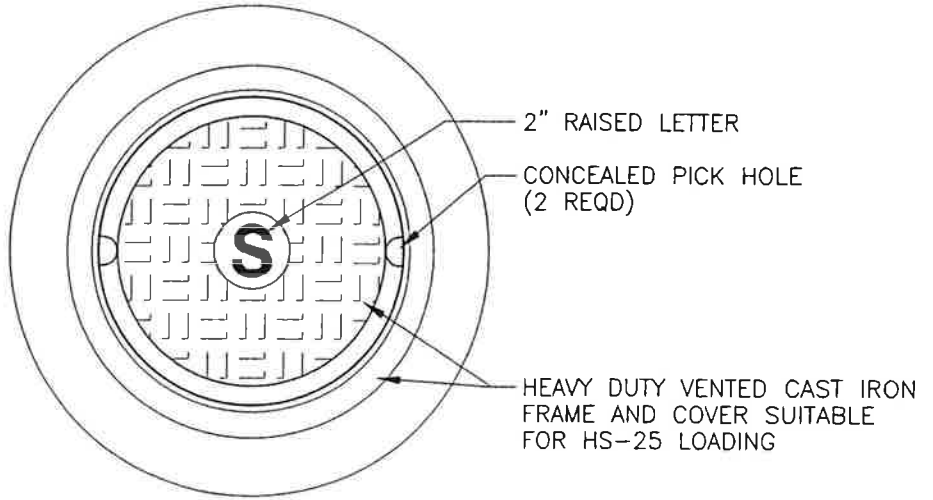
DATE: JUNE 2005

DETAIL: 38

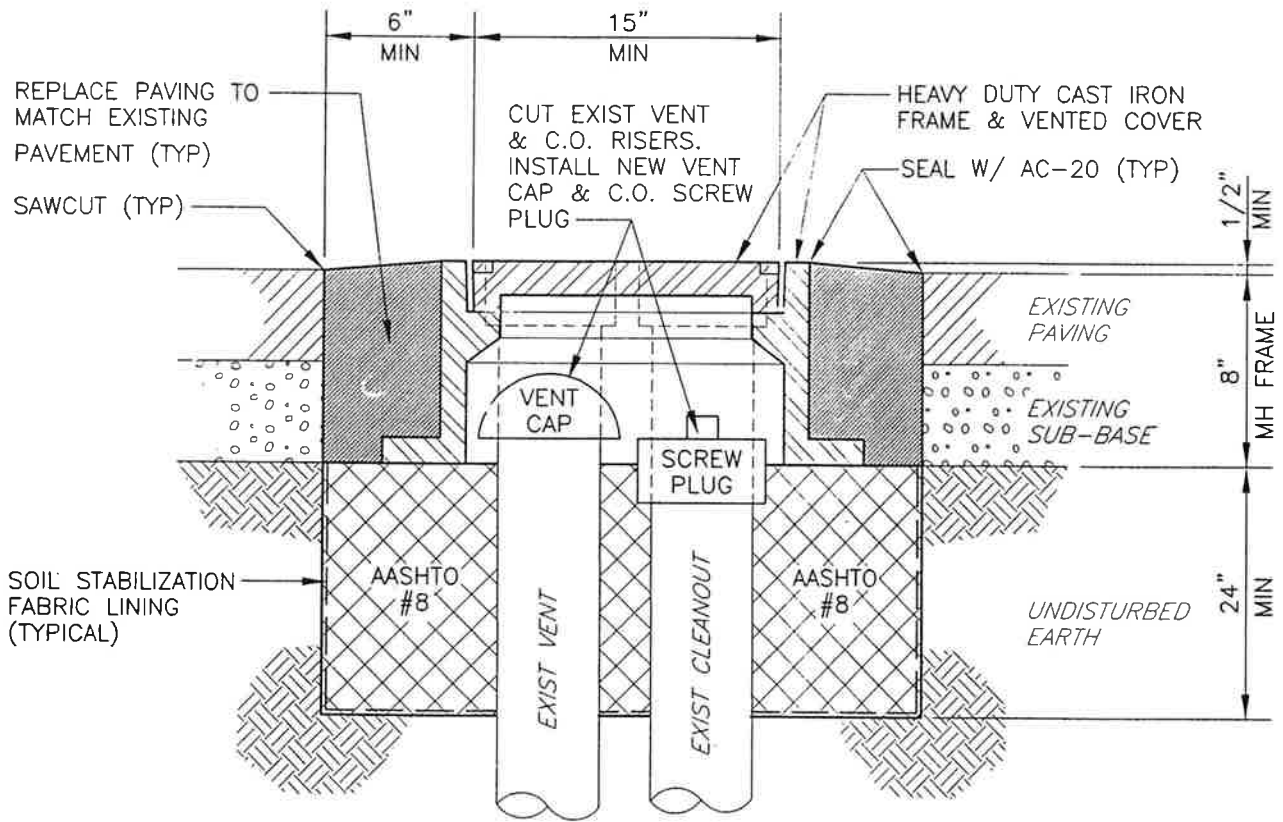


NOTES:

1. THIS DETAIL PERTAINS ONLY TO EXISTING VENTS & CLEANOUTS.
2. VENT CAP SHOULD MATCH EXISTING VENT MATERIAL.
3. EACH DRAIN WILL BE TESTED FOR DRAINAGE.



COVER PATTERN



SECTION

**AMITY TOWNSHIP**

2004 WEAVERTOWN ROAD  
DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**

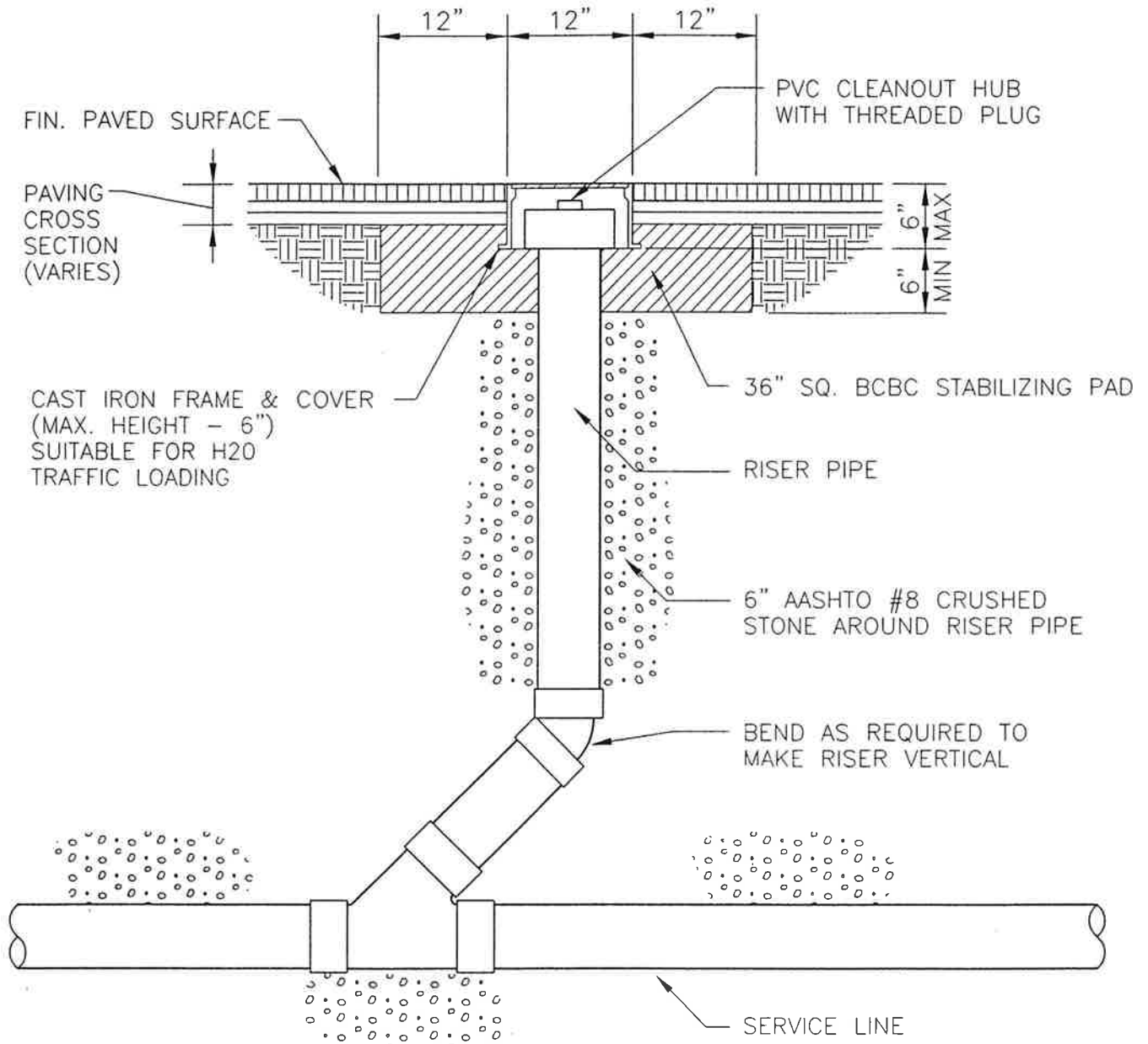


400 Washington Street, Suite 602  
Reading, Pennsylvania 19601  
Tel 610.374.5285

**EXISTING VENTS AND CLEANOUTS  
IN PAVED AREAS DETAIL**

DATE: JUNE 2005

DETAIL: 39



**AMITY TOWNSHIP**

2004 WEAVERTOWN ROAD  
DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**

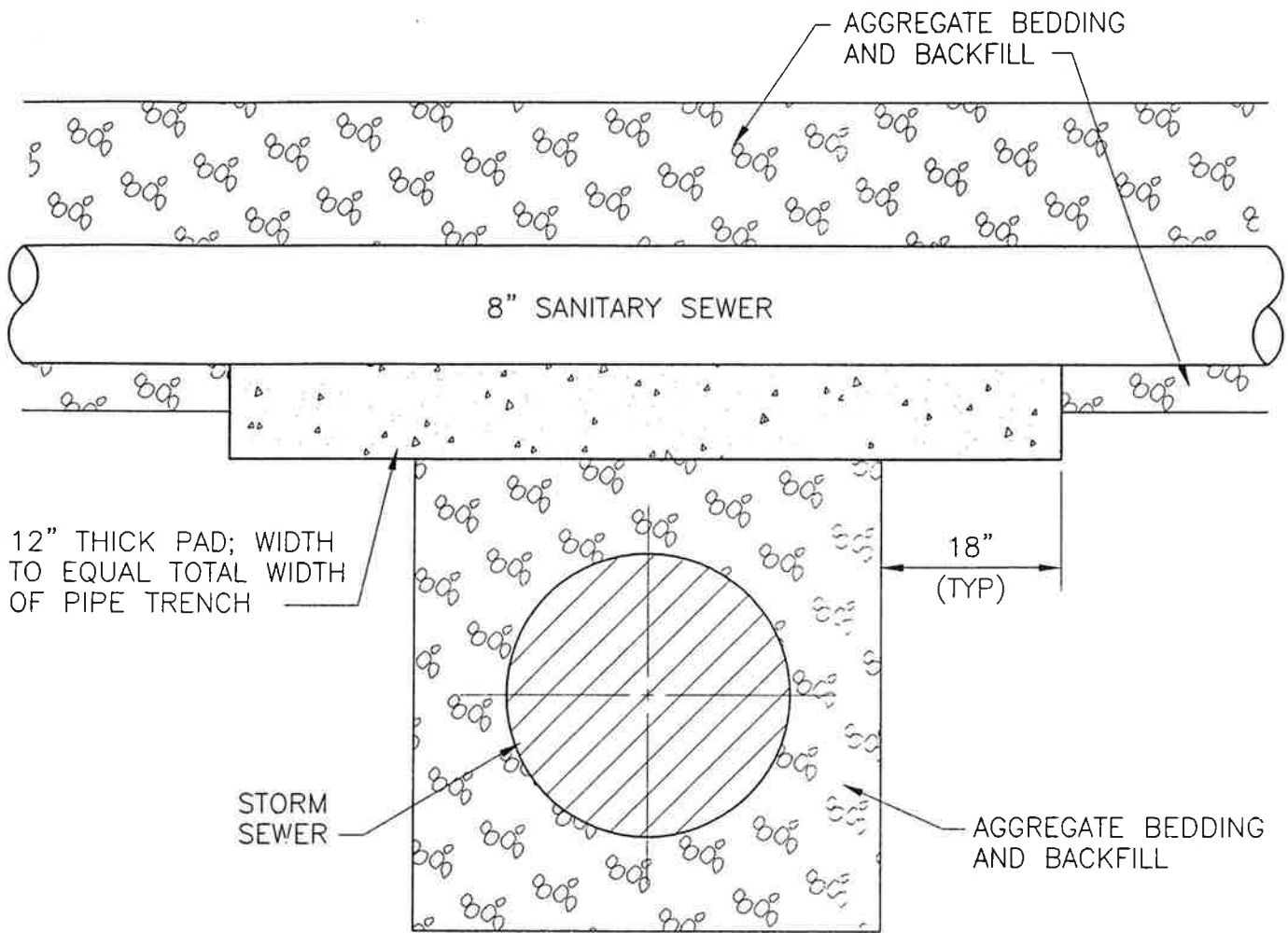


400 Washington Street, Suite 602  
Reading, Pennsylvania 19601  
Tel 610.374.5285

**NEW CLEANOUT IN PAVED AREAS DETAIL  
(BY SPECIAL EXCEPTION ONLY)**

DATE: JUNE 2005

DETAIL: 40



NOTE:  
 DETAIL IS SIMILAR FOR AREAS  
 WHERE STORM SEWER CROSSES  
 OVER SANITARY SEWER.

**AMITY TOWNSHIP**

2004 WEAVERTOWN ROAD  
 DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**

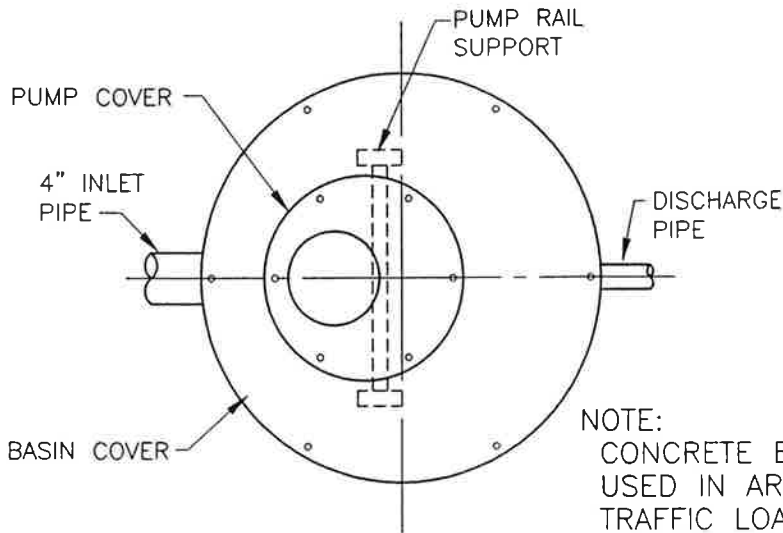


400 Washington Street, Suite 602  
 Reading, Pennsylvania 19601  
 Tel 610.374.5285

**PIPELINE CROSSING DETAIL  
 (STORM SEWER)**

DATE:  
 FEBRUARY 2005

DETAIL:  
 41

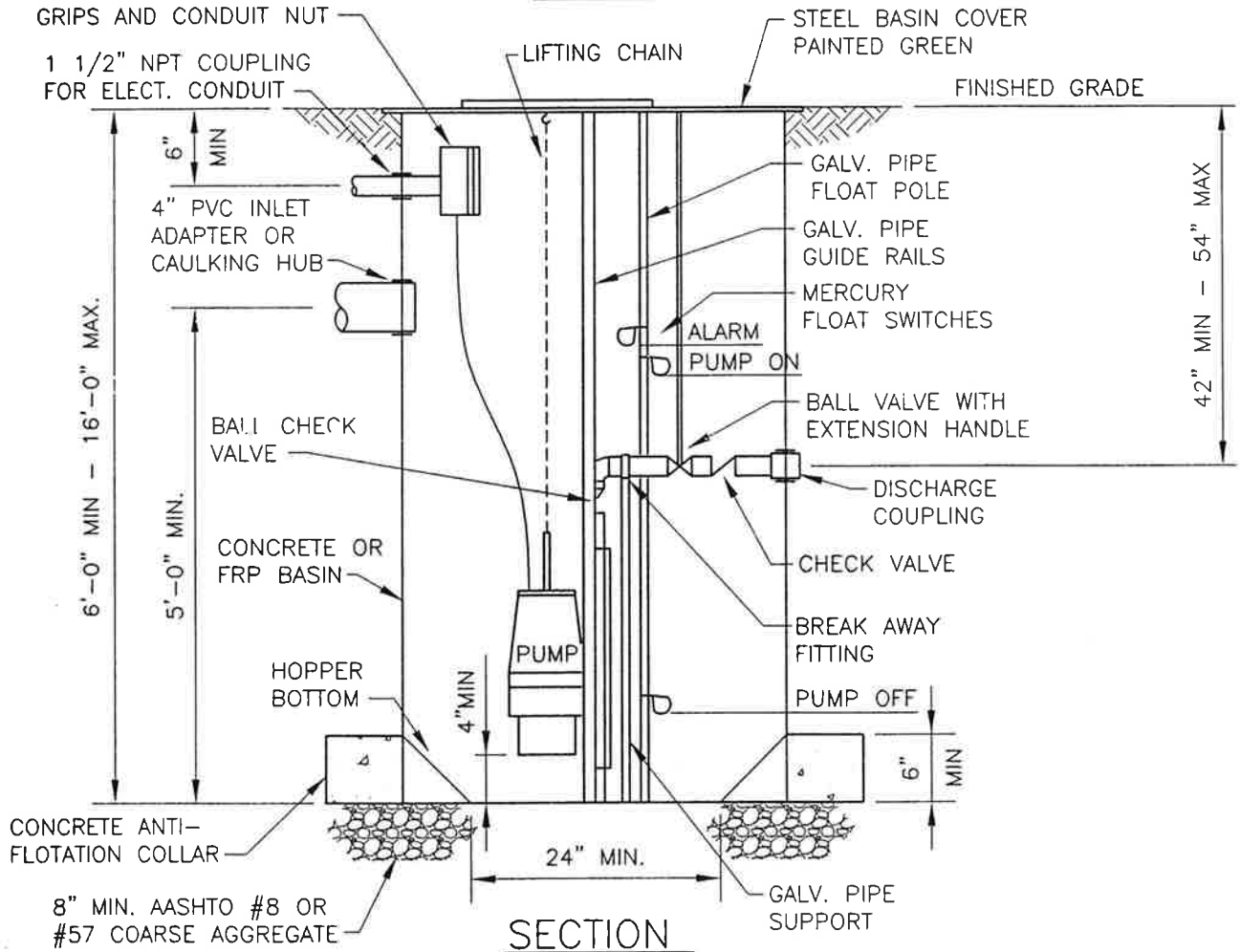


NOTE:  
CONCRETE BASINS SHALL BE USED IN AREAS SUBJECT TO TRAFFIC LOADINGS.

PLAN

5"x6"x3 1/2" MOLDED JUNCTION BOX WITH CORD GRIPS AND CONDUIT NUT

1 1/2" NPT COUPLING FOR ELECT. CONDUIT



SECTION

**AMITY TOWNSHIP**

2004 WEAVERTOWN ROAD  
DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**

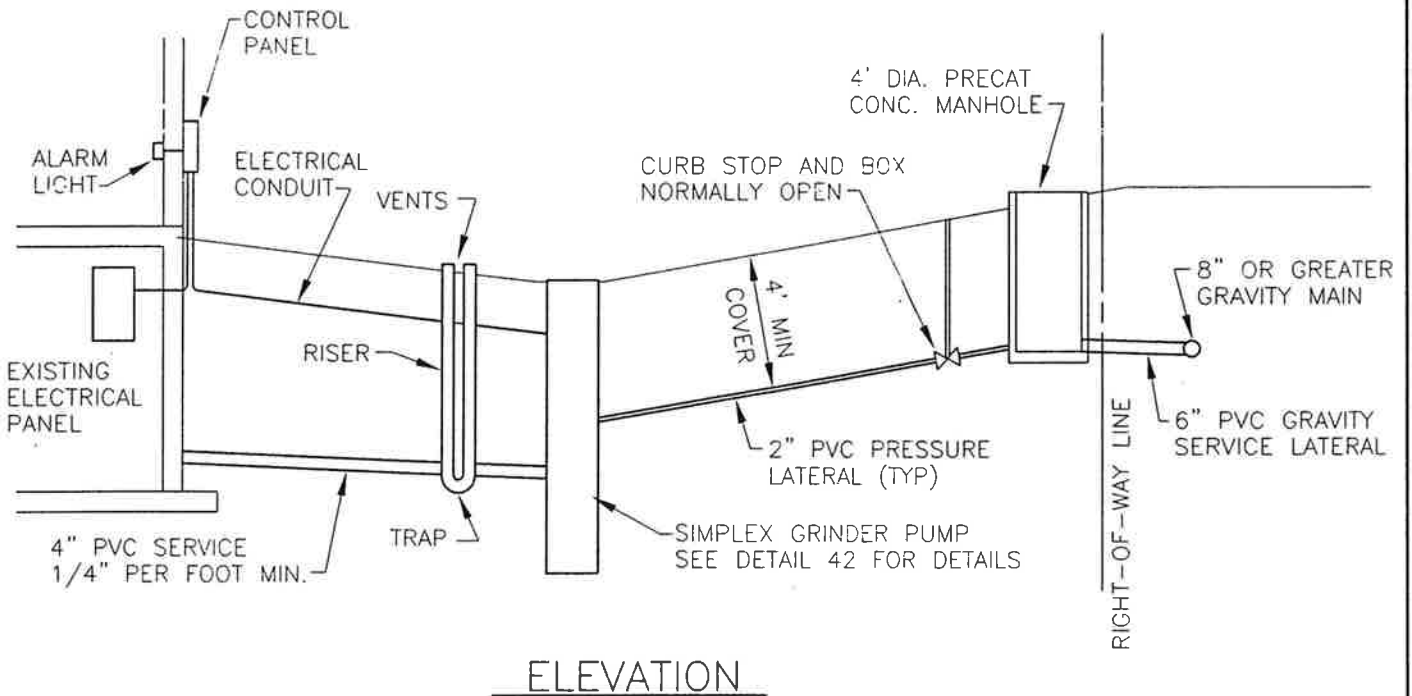
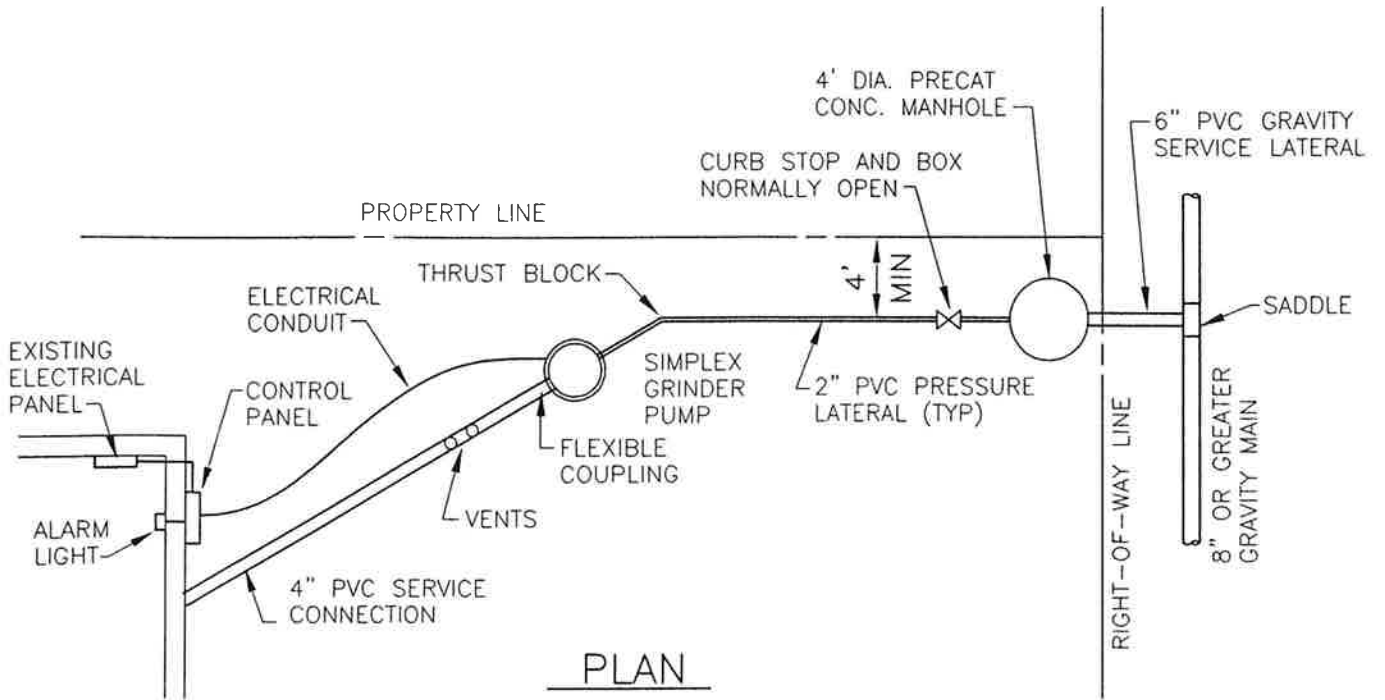


400 Washington Street, Suite 602  
Reading, Pennsylvania 19601  
Tel 610.374.5285

**SIMPLEX GRINDER PUMP DETAIL**

DATE: JUNE 2005

DETAIL: 42



## AMITY TOWNSHIP

2004 WEAVERTOWN ROAD  
DOUGLASVILLE, PA 19518

### STANDARD DETAIL - SEWER SYSTEM

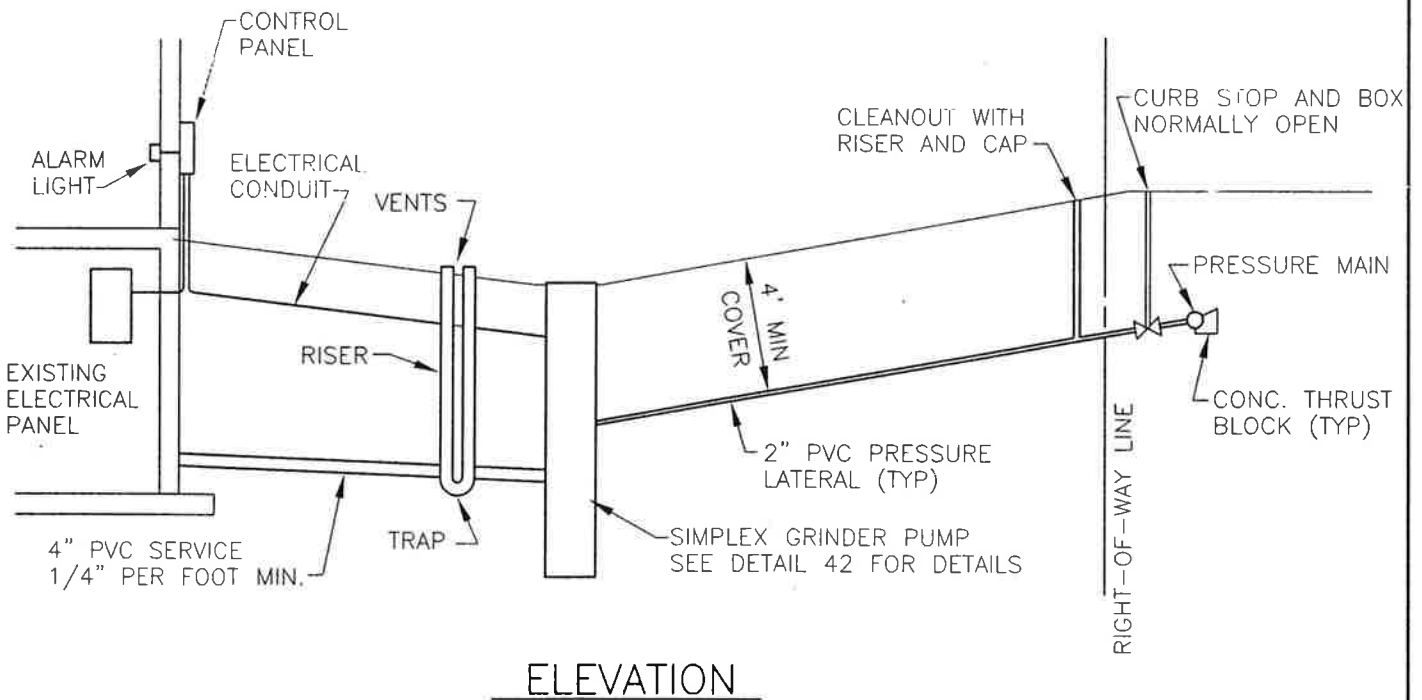
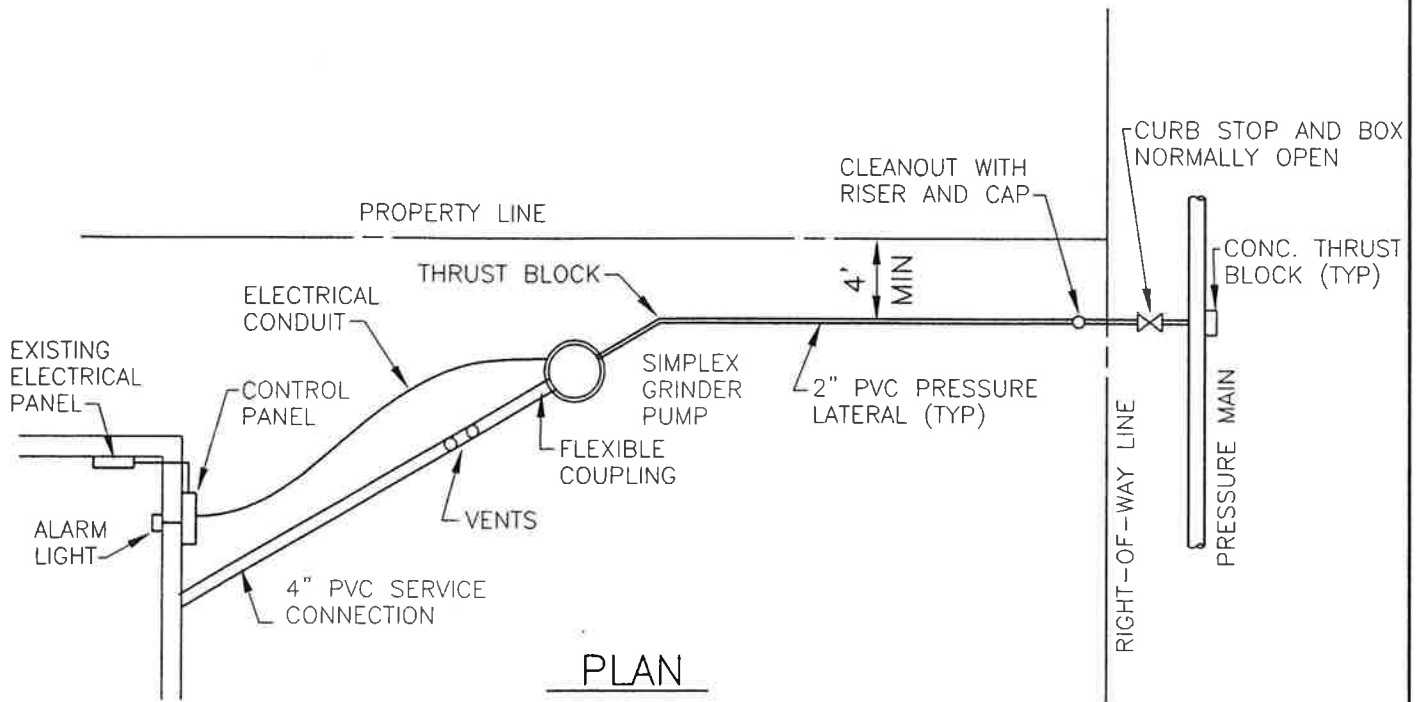


400 Washington Street, Suite 602  
Reading, Pennsylvania 19601  
Tel 610.374.5285

## PRESSURE LATERAL DETAIL DISCHARGE TO GRAVITY MAIN

DATE: JUNE 2005

DETAIL: 43



**AMITY TOWNSHIP**

2004 WEAVERTOWN ROAD  
DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**

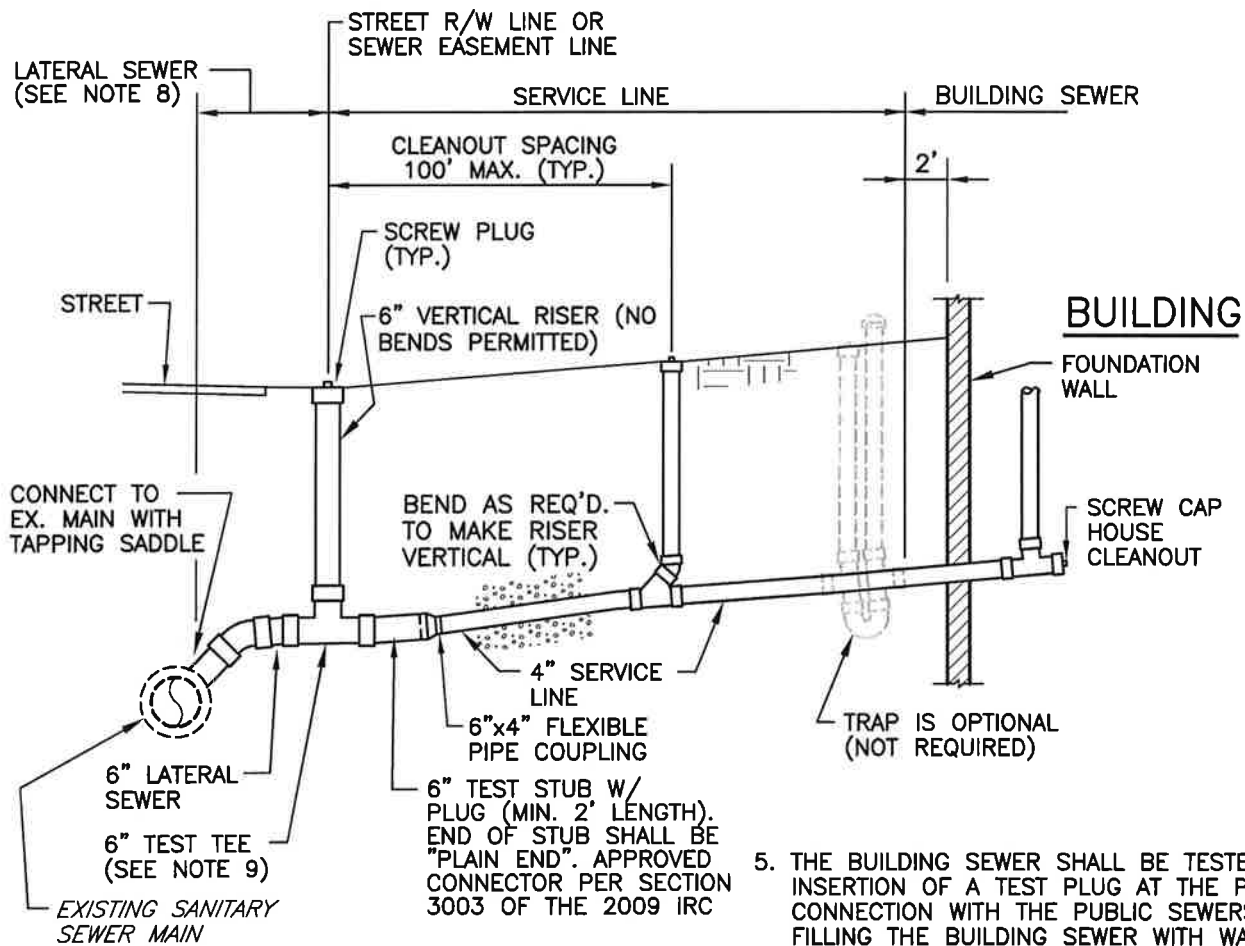


400 Washington Street, Suite 602  
Reading, Pennsylvania 19601  
Tel 610.374.5285

**PRESSURE LATERAL DETAIL  
DISCHARGE TO PRESSURE MAIN**

DATE: JUNE 2005

DETAIL: 44



**NOTES:**

1. PROVIDE 6" OF AASHTO NO. 57 (2B) STONE OR SMALLER BELOW PIPE AND 12" ABOVE PIPE (TYPICAL ENTIRE LENGTH OF LATERAL)
2. MINIMUM SLOPE: 1/4"/FT (2%) FOR 2 1/2"Ø AND LESS, AND NOT LESS THAN 1/8"/FT (1%) FOR DIAMETER OS 3" OR MORE
3. MINIMUM DEPTH OF COVER : 3 FOOT
4. PIPE MATERIALS FOR SERVICE LINES:
  - A. PVC SDR 35
  - B. CAST IRON
  - C. MATERIAL MUST MEET REQUIREMENTS OF TABLE 3002.2 OF THE 2009 IRC

5. THE BUILDING SEWER SHALL BE TESTED BY INSERTION OF A TEST PLUG AT THE POINT OF CONNECTION WITH THE PUBLIC SEWERS AND FILLING THE BUILDING SEWER WITH WATER, TESTING WITH NOT LESS THAN A 10 FOOT HEAD OF WATER AND BE ABLE TO MAINTAIN SUCH PRESSURE FOR 15 MINUTES. TEST MUST BE PERFORMED PRIOR TO BACKFILL.
6. NO SEWER SERVICE LINE VENT CAPS SHALL BE INSTALLED WITHIN A 100-YEAR FLOOD PLAIN OR WITHIN FLOOD PRONE AREAS.
7. NO VENT CAPS OR CLEANOUTS SHALL BE INSTALLED IN DRIVEWAYS OR OTHER PAVED AREAS UNLESS SPECIFICALLY APPROVED.
8. THE LATERAL SEWER SHALL BE INSTALLED TO THE EDGE OF THE SEWER EASEMENT FOR SEWERS LOCATED IN AN EASEMENT OR TO THE STREET RIGHT-OF-WAY AS A MINIMUM, OR TO SUCH POINT, AS REQUIRED, TO CLEAR STREET SIDEWALKS AND UNDERGROUND UTILITIES.
9. SET 6" TEST TEE AT 1% SLOPE TO PERMIT VERTICAL RISER INSTALLATION WITH NO BENDS.

**AMITY TOWNSHIP**

2004 WEAVERTOWN ROAD  
DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**

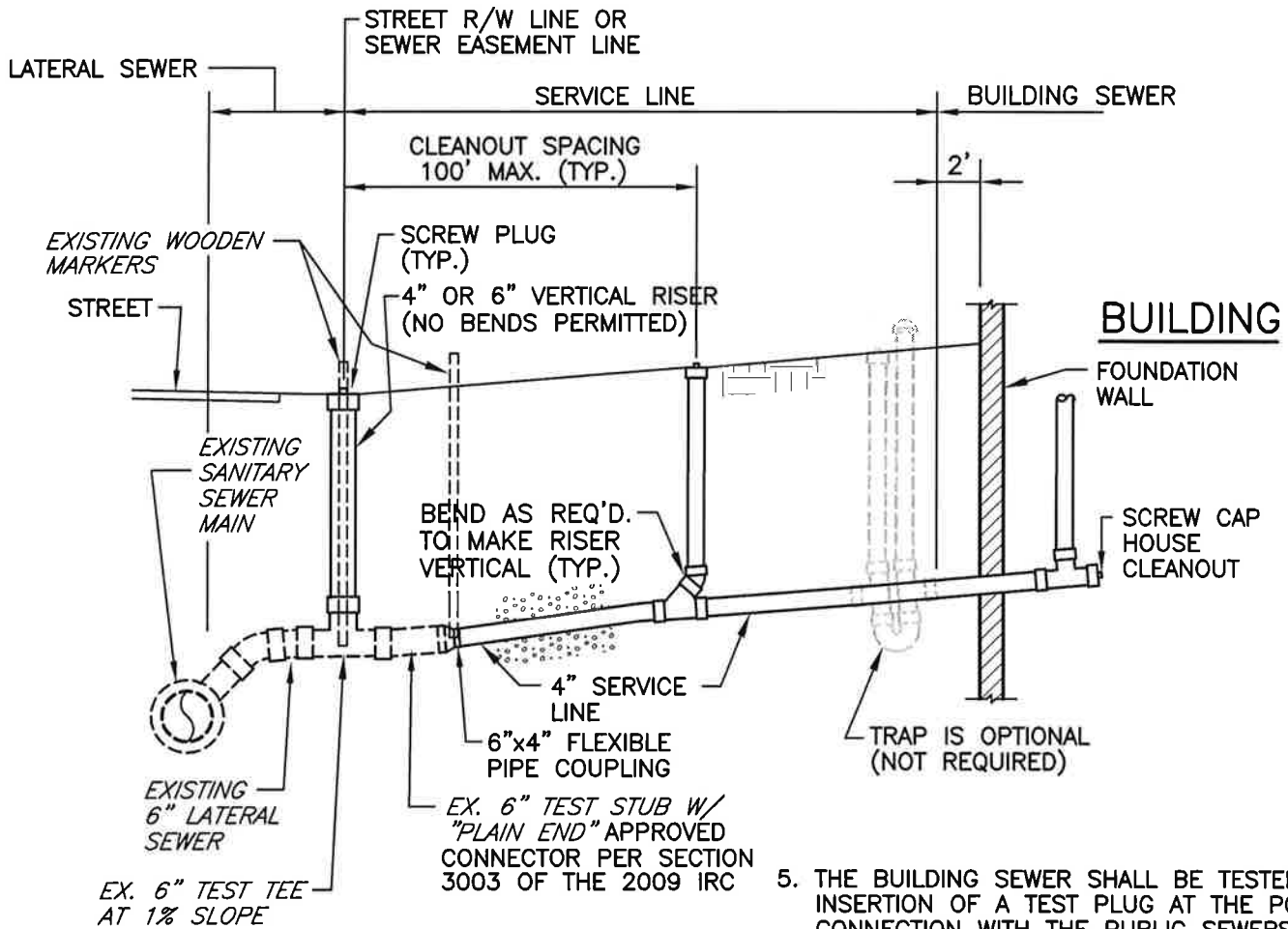


400 Washington Street, Suite 602  
Reading, Pennsylvania 19601  
Tel 610.374.5285

**SERVICE LATERAL AND HOUSE SERVICE CONNECTION TO EXISTING SEWER MAIN**

DATE: JUNE 2010

DETAIL: 45



**NOTES:**

1. PROVIDE 6" OF AASHTO NO. 57 (2B) STONE OR SMALLER BELOW PIPE AND 12" ABOVE PIPE (TYPICAL ENTIRE LENGTH OF LATERAL)
2. MINIMUM SLOPE: 1/4"/FT (2%) FOR 2 1/2"Ø AND LESS, AND NOT LESS THAN 1/8"/FT (1%) FOR DIAMETER OS 3" OR MORE
3. MINIMUM DEPTH OF COVER : 3 FOOT
4. PIPE MATERIALS FOR SERVICE LINES:
  - A. PVC SDR 35
  - B. CAST IRON
  - C. MATERIAL MUST MEET REQUIREMENTS OF TABLE 3002.2 OF THE 2009 IRC

5. THE BUILDING SEWER SHALL BE TESTED BY INSERTION OF A TEST PLUG AT THE POINT OF CONNECTION WITH THE PUBLIC SEWERS AND FILLING THE BUILDING SEWER WITH WATER, TESTING WITH NOT LESS THAN A 10 FOOT HEAD OF WATER AND BE ABLE TO MAINTAIN SUCH PRESSURE FOR 15 MINUTES. TEST MUST BE PERFORMED PRIOR TO BACKFILL.
6. NO SEWER SERVICE LINE VENT CAPS SHALL BE INSTALLED WITHIN A 100-YEAR FLOOD PLAIN OR WITHIN FLOOD PRONE AREAS.
7. NO VENT CAPS OR CLEANOUTS SHALL BE INSTALLED IN DRIVEWAYS OR OTHER PAVED AREAS UNLESS SPECIFICALLY APPROVED.
8. THE LATERAL SEWER SHALL BE INSTALLED TO THE EDGE OF THE SEWER EASEMENT FOR SEWERS LOCATED IN AN EASEMENT OR TO THE STREET RIGHT-OF-WAY AS A MINIMUM, OR TO SUCH POINT, AS REQUIRED, TO CLEAR STREET SIDEWALKS AND UNDERGROUND UTILITIES.
9. SET TEST TEE AT 1% SLOPE TO PERMIT VERTICAL RISER INSTALLATION WITH NO BENDS.

**AMITY TOWNSHIP**

2004 WEAVERTOWN ROAD  
DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**



400 Washington Street, Suite 602  
Reading, Pennsylvania 19601  
Tel 610.374.5285

**HOUSE SERVICE CONNECTION  
TO EXISTING SERVICE LATERAL**

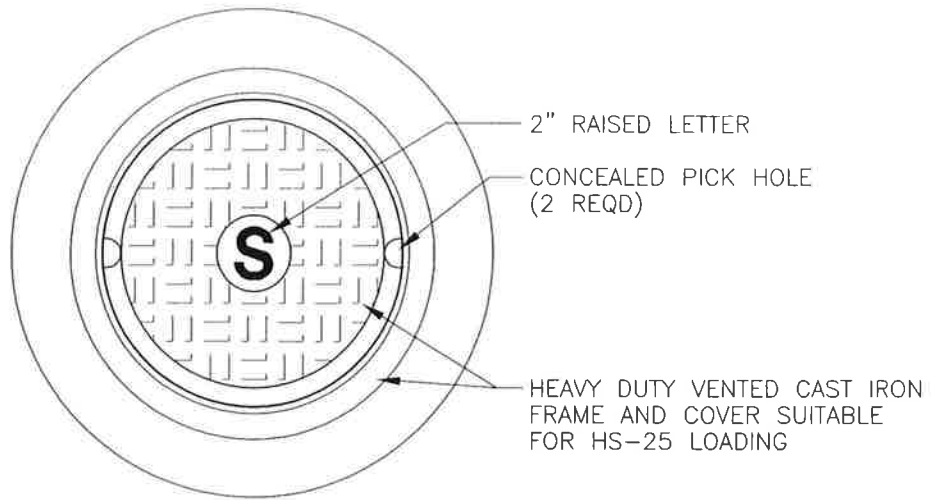
DATE: JUNE 2010

DETAIL: 46

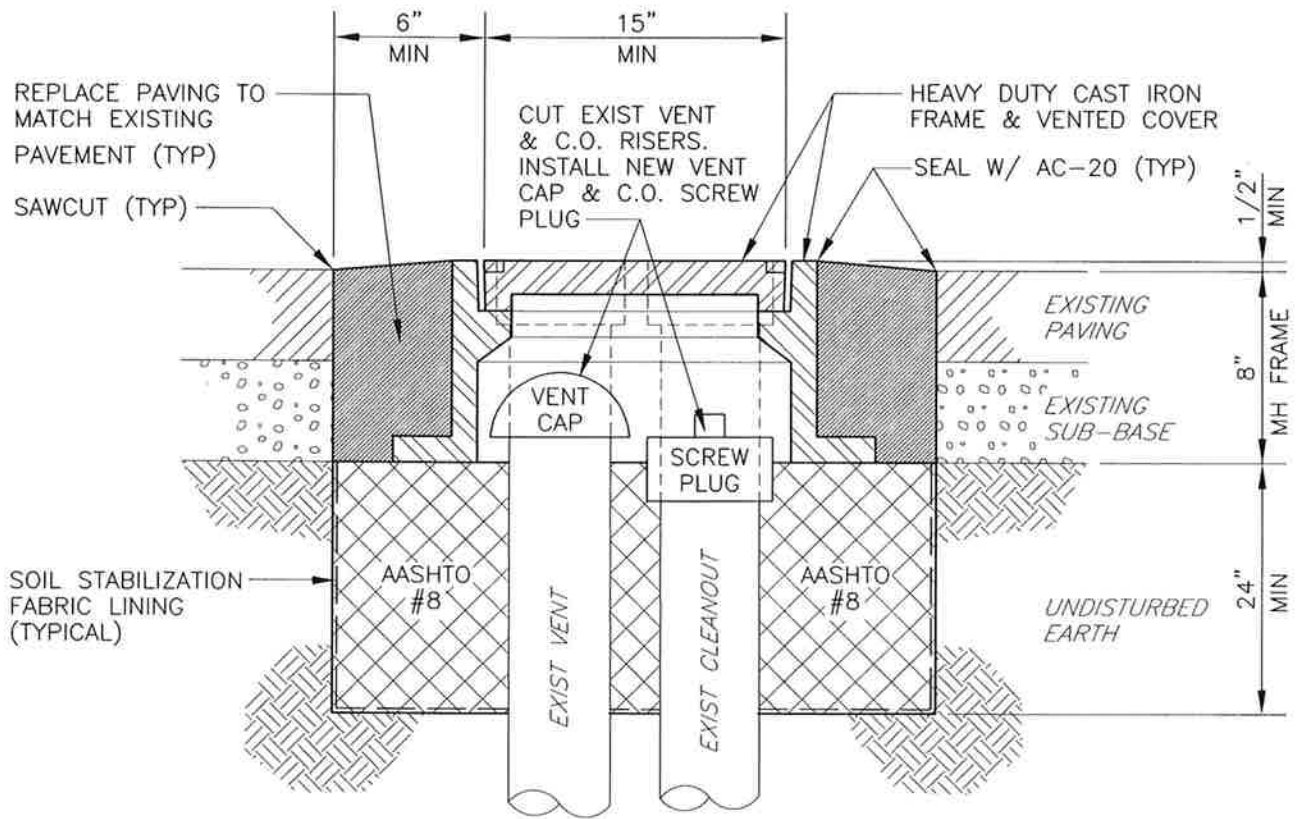


**NOTES:**

1. THIS DETAIL PERTAINS ONLY TO EXISTING VENTS & CLEANOUTS.
2. VENT CAP SHOULD MATCH EXISTING VENT MATERIAL.
3. EACH DRAIN WILL BE TESTED FOR DRAINAGE.



**COVER PATTERN**



**SECTION**

**AMITY TOWNSHIP**

2004 WEAVERTOWN ROAD  
DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**



400 Washington Street, Suite 602  
Reading, Pennsylvania 19601  
Tel 610.374.5285

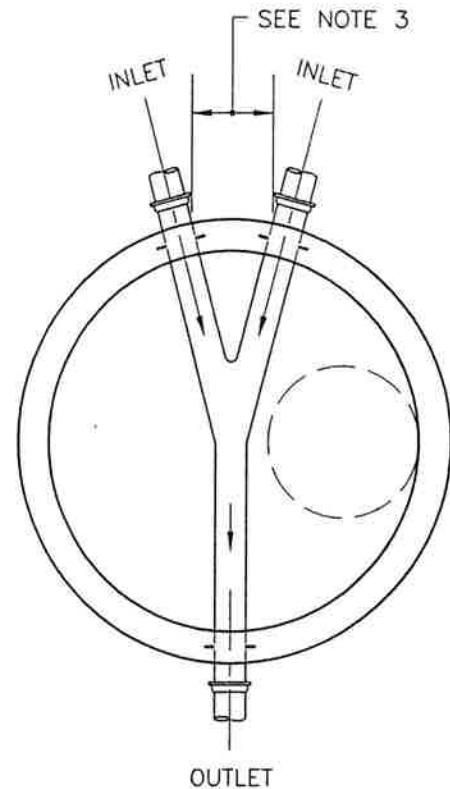
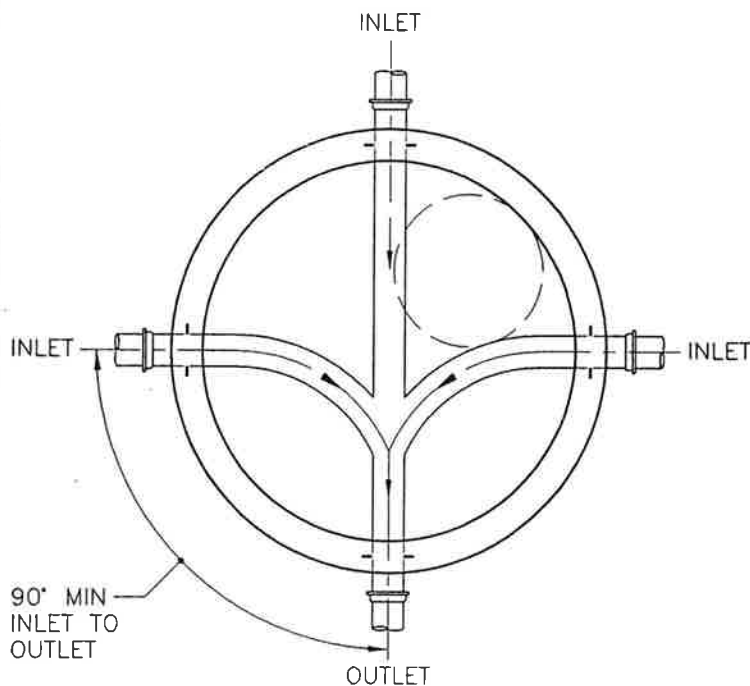
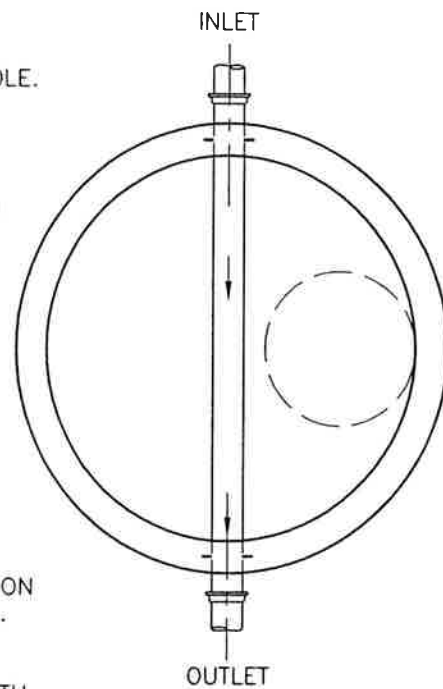
**EXISTING VENT & CLEANOUT  
IN PAVED AREA DETAIL**

DATE:  
MARCH 2006

DETAIL:  
47

NOTES:

1. THREE INLET PIPES AND ONE OUTLET PIPE MAX INTO MANHOLE.
2. NO LATERALS INTO MANHOLES, EXCEPT BY SPECIAL EXCEPTION FROM THE AUTHORITY.
3. MINIMUM 12" SEPARATION FROM EDGE OF PIPE PENETRATION TO EDGE OF PIPE PENETRATION
4. MINIMUM CHANNEL DROP THROUGH MANHOLE:  
 STRAIGHT THROUGH - 0.1 FEET  
 BEND - 0.2 FEET
5. ALL CHANNELS SHALL BE PRECAST, UNLESS OTHERWISE SPECIFICALLY NOTED OR APPROVED.
6. THESE DETAILS APPLY TO PRECAST CHANNELS IN NEW MANHOLES, AND FIELD-FORMED CHANNELS IN EXISTING MANHOLES.
7. CHANNEL BENCH AT PIPE SHALL MATCH 3/4 CROWN ELEVATION OF PIPE AND RISE 1/2" PER FOOT TO THE MANHOLE WALLS.
8. CHANNELS SHALL MATCH THE CROSS-SECTIONAL DIMENSIONS OF THE PIPES ENTERING AND EXITING THE MANHOLE. SMOOTH TRANSITIONS SHALL BE PROVIDED BETWEEN CHANGES IN PIPE SIZE.



**AMITY TOWNSHIP**

2004 WEAVERTOWN ROAD  
DOUGLASVILLE, PA 19518

**STANDARD DETAIL - SEWER SYSTEM**



400 Washington Street, Suite 602  
Reading, Pennsylvania 19601  
Tel 610.374.5285

**PRECAST CHANNEL DETAILS**

DATE:

JUNE 2005

DETAIL:

9