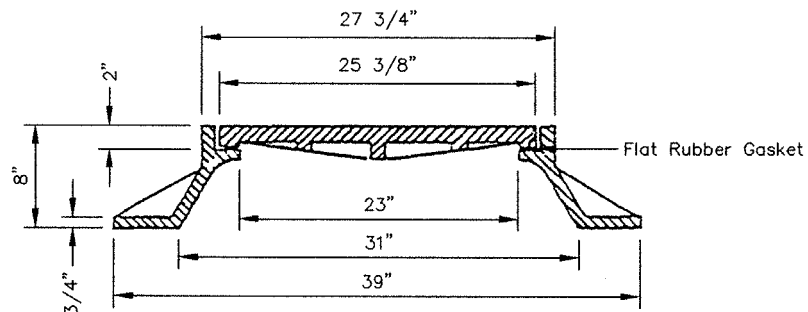


(2) Non-Penetrating Pick Holes (Typ.) Except As Otherwise Shown On The Plans (See Note)

PLAN



SECTION A-A

MANHOLE FRAME & COVER

NOTES:

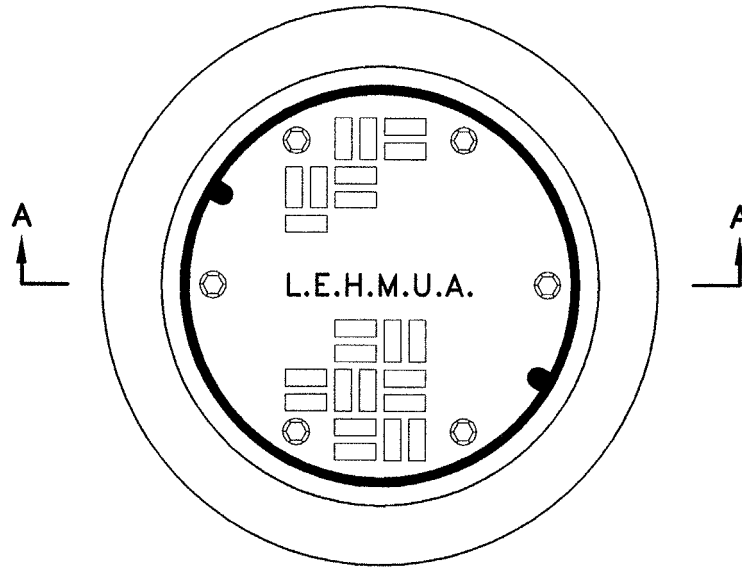
1. All Terminal (End-Of-Line) Manholes Shall Be Vented Using Penetrating Type Pick Holes.
2. Castings Shall Be Fully Coated Inside And Outside With Coal Tar Pitch Varnish.
3. Bearing Surface Of Frame And Cover Shall Be Machined.
4. Cover Shall Be Supplied With 1-1/2" High Block Lettering, Raised.
5. Campbell Foundry Pattern No. 1202B Or Equal.

LITTLE EGG HARBOR MUNICIPAL UTILITIES AUTHORITY
 P.O. BOX 660
 LITTLE EGG HARBOR, NEW JERSEY 08087
 PHONE : (609) 296-1168

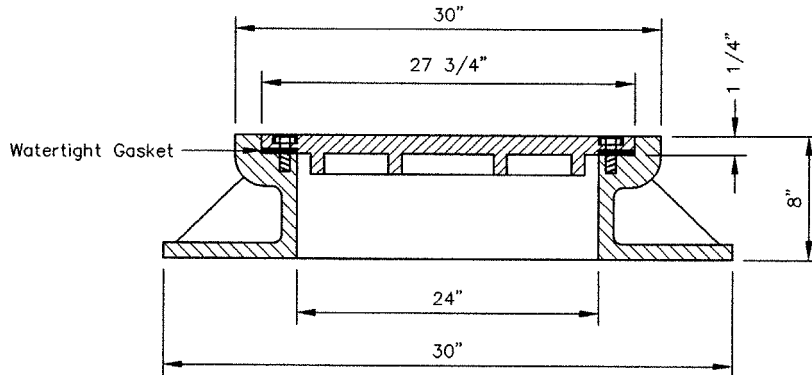


REMINGTON, VERNICK & VENA GA 278110
ENGINEERS
 9 Allen Street • Toms River, New Jersey 08753 • (732) 286-9220

SCALE: N.T.S.	DATE: JULY 1997	DRAWN BY: JB	CHK'D. BY: ABD	JOB No.: 1517-L-019 CAD FILE: S-PLATE1	PLATE No. 1
------------------	--------------------	-----------------	-------------------	-------------------------------------------	----------------



PLAN



SECTION A-A

WATERTIGHT MANHOLE FRAME & COVER

NOTE:

1. Watertight Frames And Covers Shall Be Used In All Easement Areas And At Grade Elevations 10' And Less. The Unit Shall Be Equal To Campbell Foundry Pattern No. 1502.

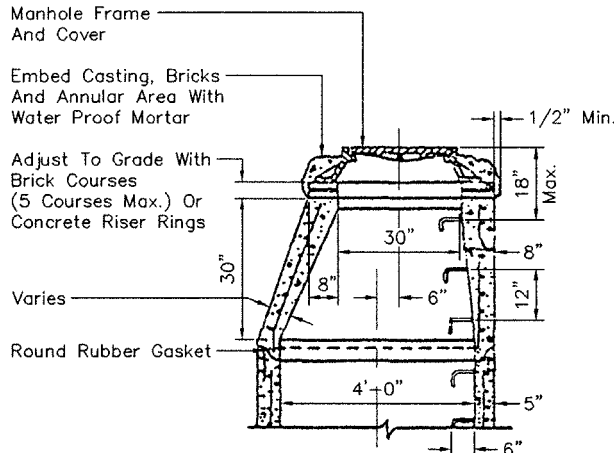
LITTLE EGG HARBOR MUNICIPAL UTILITIES AUTHORITY
 P.O. BOX 660
 LITTLE EGG HARBOR, NEW JERSEY 08087
 PHONE : (609) 296-1168



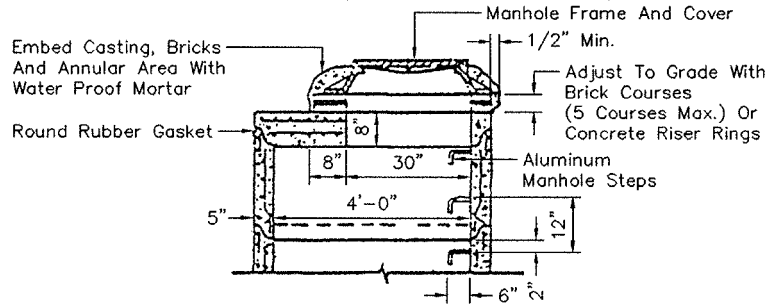
REMINGTON, VERNICK & VENA GA 278110
ENGINEERS

9 Allen Street • Toms River, New Jersey 08753 • (732) 286-9220

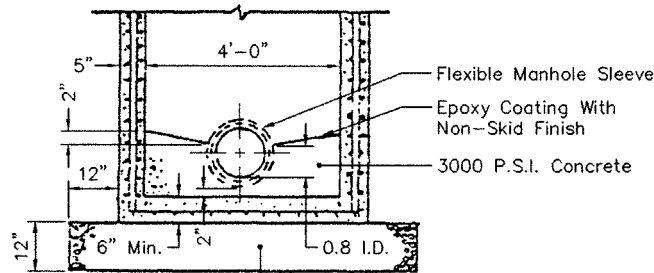
SCALE: N.T.S.	DATE: JULY 1997	DRAWN BY: JB	CHK'D. BY: ABD	JOB No.: 1517-L-019	PLATE No.: 2
				CAD FILE: S-PLATE2	



CONE TOP (ALTERNATE "A")



SLAB TOP (ALTERNATE "B")



BASE SECTION

Crushed Stone (Choked) Conforming To N.J.D.O.T. #57 Coarse Aggregate (If And Where Directed)

MANHOLE FRAME & COVER

NOTES:

1. Short Sections Of Main Shall Be Used At Manholes.
2. Exterior Surface Shall Be Painted With Two Coats Of Coal Tar Epoxy. Interior Surface Shall Be Coated With White Epoxy.
3. All Construction Shall Meet Standard Specifications, The Latest Revisions.
4. All Construction Shall Be In Accordance With The Latest O.S.H.A. Standards.
5. Precast Reinforced Concrete Manhole Sections Shall Conform To The Requirements Of ASTM C478.
6. All Precast Sections Shall Have A Minimum Ultimate Compressive Strength Of 4000 P.S.I.
7. Joints Of The Manhole Sections Shall Be Formed Using A Round Rubber Gasket And When Assembled Shall Be Self-Centering And Make A Uniform Watertight Joint.
8. Slab Tops Are To Be Used When There Is Sufficient Elevation Difference To Make All The Changes In Section.

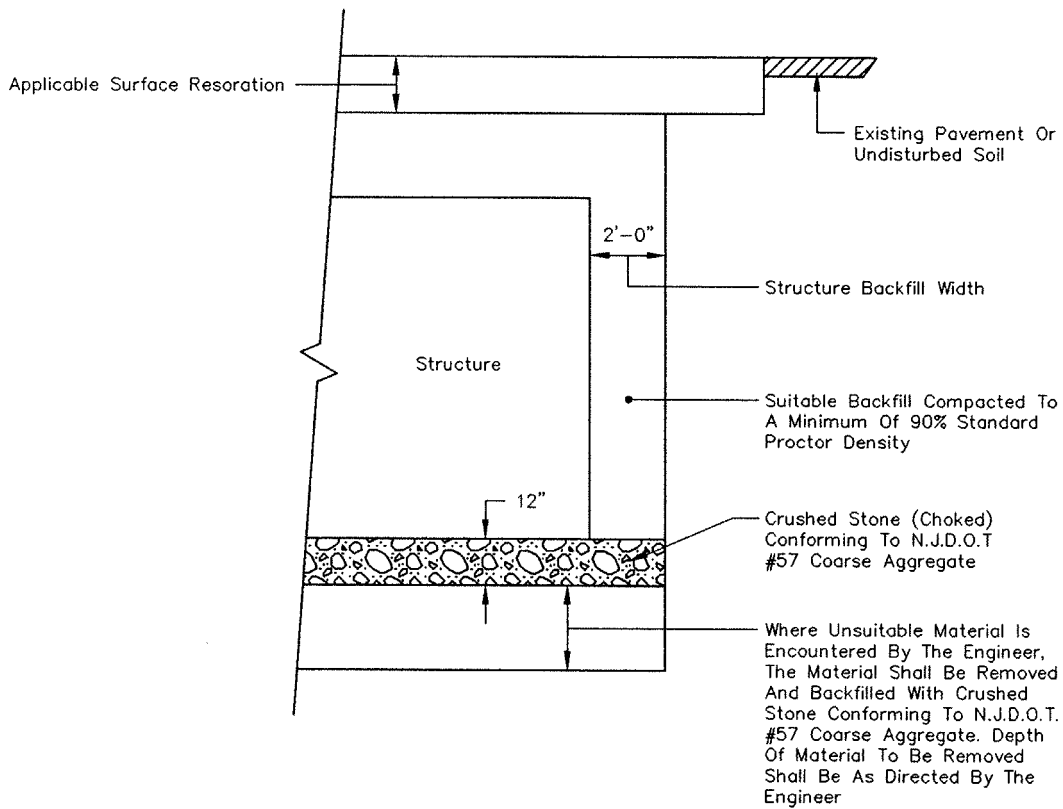
LITTLE EGG HARBOR MUNICIPAL UTILITIES AUTHORITY
 P.O. BOX 660
 LITTLE EGG HARBOR, NEW JERSEY 08087
 PHONE : (609) 296-1168



REMINGTON, VERNICK & VENA
ENGINEERS
 9 Allen Street • Toms River, New Jersey 08753 • (732) 288-9220

GA 278110

SCALE: N.T.S.	DATE: JULY 1997	DRAWN BY: JB	CHK'D. BY: ABD	JOB No.: 1517-L-019	PLATE No. 3
				CAD FILE: S-PLATE3	



TYPICAL STRUCTURE BACKFILL DETAIL

LITTLE EGG HARBOR MUNICIPAL UTILITIES AUTHORITY
 P.O. BOX 660
 LITTLE EGG HARBOR, NEW JERSEY 08087
 PHONE : (609) 296-1168

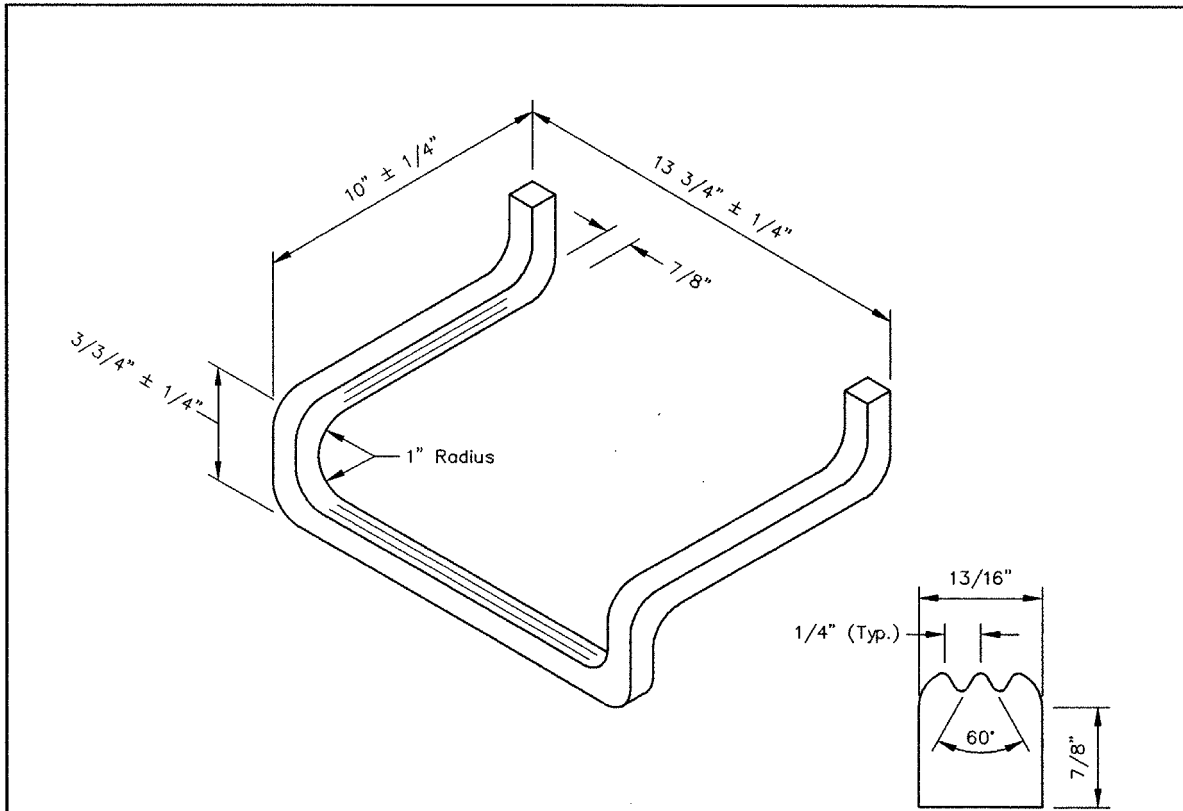


REMINGTON, VERNICK & VENA
 ENGINEERS

GA 278110

9 Allen Street • Toms River, New Jersey 08753 • (732) 266-9220

SCALE: N.T.S.	DATE: JULY 1997	DRAWN BY: JB	CHK'D. BY: ABD	JOB No.: 1517-L-019	PLATE No. 4
				CAD FILE: S-PLATE4	



ALUMINUM MANHOLE STEP

NOTES:

1. Aluminum Manhole Steps Shall Be Extruded Alum. 6061-T6 Alloy Drop Front Design Or Approved Equal.
2. The Portion To Be Embedded In The Manhole Shall Be Coated With Coal Tar Pitch Or Other Approved Material And Shall Be In Accordance With The Latest O.S.H.A. Standard.
3. Manholes Up To 15 Feet Shall Have Embedded Aluminum Manhole Steps. For Depths Greater Than 15 Feet, An Aluminum Ladder Shall Be Bolted To The Structure Wall By Means Of Anchor Bolts.

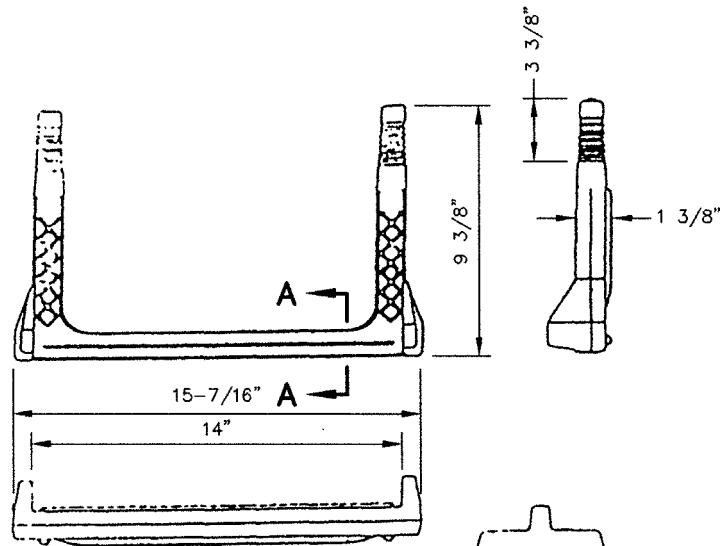
LITTLE EGG HARBOR MUNICIPAL UTILITIES AUTHORITY
 P.O. BOX 660
 LITTLE EGG HARBOR, NEW JERSEY 08087
 PHONE : (609) 296-1168



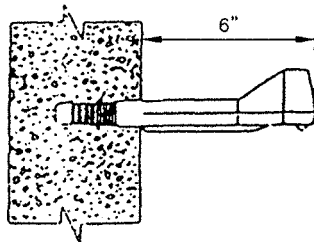
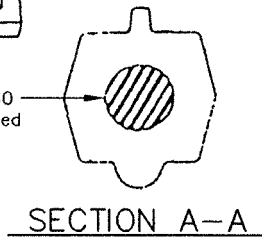
REMINGTON, VERNICK & VENA GA 278110
ENGINEERS

9 Allen Street • Toms River, New Jersey 08753 • (732) 286-8220

SCALE: N.T.S.	DATE: JULY 1997	DRAWN BY: JB	CHK'D. BY: ABD	JOB No.: 1517-L-019 CAD FILE: S-PLATE6	PLATE No. 6
------------------	--------------------	-----------------	-------------------	-------------------------------------------	----------------



1/2"Ø Grade 60
Rebar Reinforced



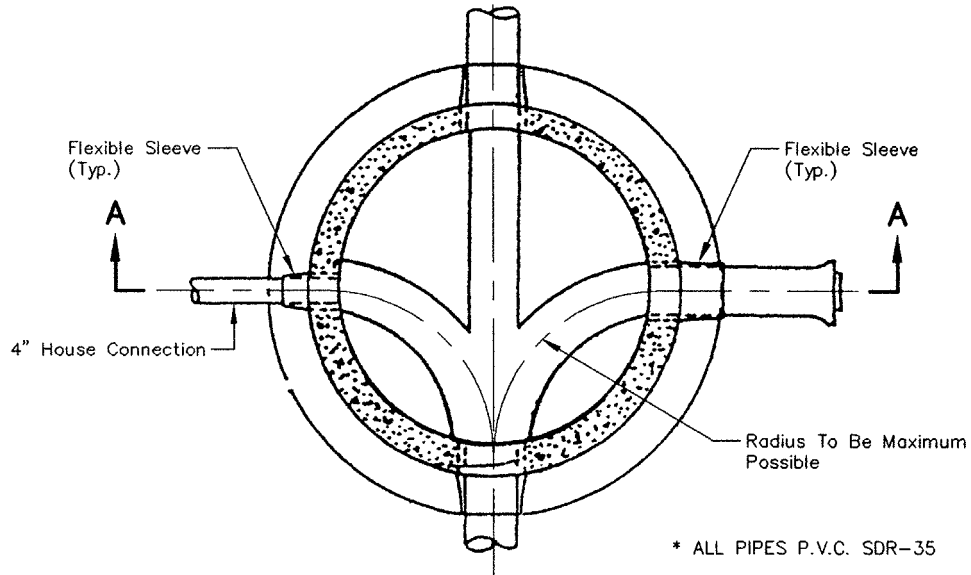
COPOLYMER POLYPROPYLENE
MANHOLE STEP (PLASTIC)

LITTLE EGG HARBOR MUNICIPAL UTILITIES AUTHORITY
P.O. BOX 660
LITTLE EGG HARBOR, NEW JERSEY 08087
PHONE : (609) 296-1168



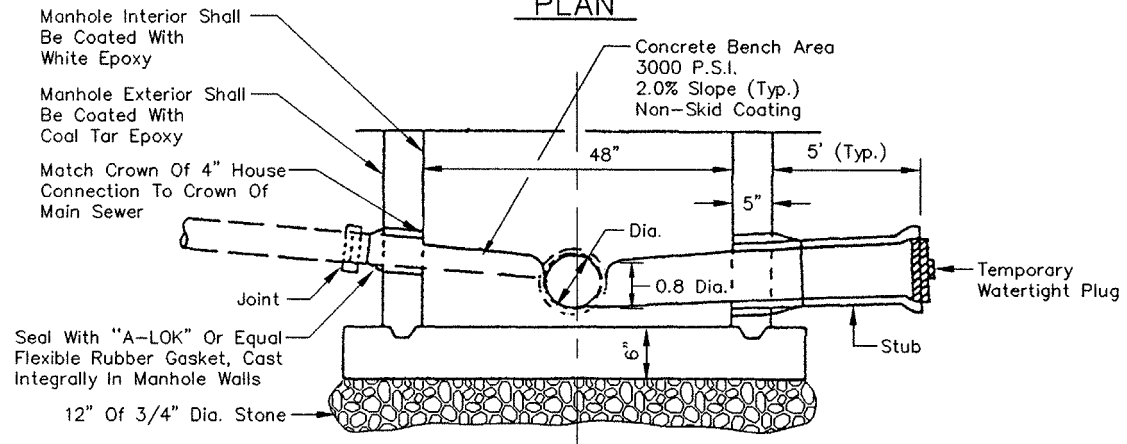
REMINGTON, VERNICK & VENA GA 278110
ENGINEERS
9 Allen Street • Toms River, New Jersey 08753 • (732) 286-9220

SCALE: N.T.S.	DATE: JULY 1997	DRAWN BY: JB	CHK'D. BY: ABD	JOB No.: 1517-L-019	PLATE No.: 7
				CAD FILE: S-PLATE7	



* ALL PIPES P.V.C. SDR-35

PLAN



SECTION A-A

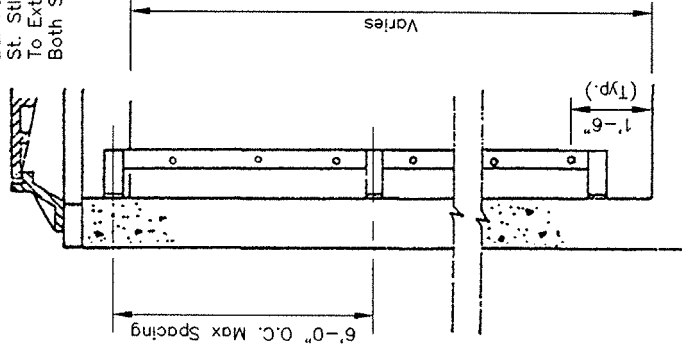
MANHOLE WITH STUB AND 4" SERVICE CONNECTION

NOTE:

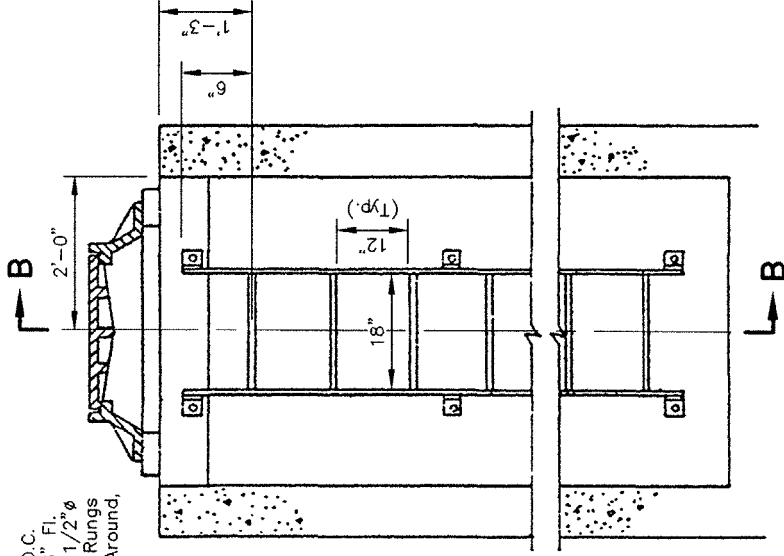
1. House Connections Shall Only Be Permitted To The Sewer Main Except In Culdesacs, House Connections (Maximum Of Two) Shall Be Permitted To The Terminal (End Of Line) Manhole Provided That The Hole Is Precast Into The Manhole Or Cored By Machine.

LITTLE EGG HARBOR MUNICIPAL UTILITIES AUTHORITY P.O. BOX 660 LITTLE EGG HARBOR, NEW JERSEY 08087 PHONE : (609) 296-1168		REMINGTON, VERNICK & VENA ENGINEERS <i>9 Allen Street • Toms River, New Jersey 08753 • (732) 286-9220</i>				GA 278110
		SCALE: N.T.S.	DATE: JULY 1997	DRAWN BY: JB	CHK'D. BY: ABD	JOB No.: 1517-L-019 CAD FILE: S-PLATE8

Rungs— $3/4"$ ϕ x 19" Lg. x 12" O.C.
 Rails & Brackets— $2 \times 1/2"$ x $3/8"$ Fl.
 Bar Fastened To Concrete With $1/2"$ ϕ
 St. Stl. Bolts And Exp. Shields. Rungs
 To Extend Thru Rails, Weld All Around,
 Both Sides.



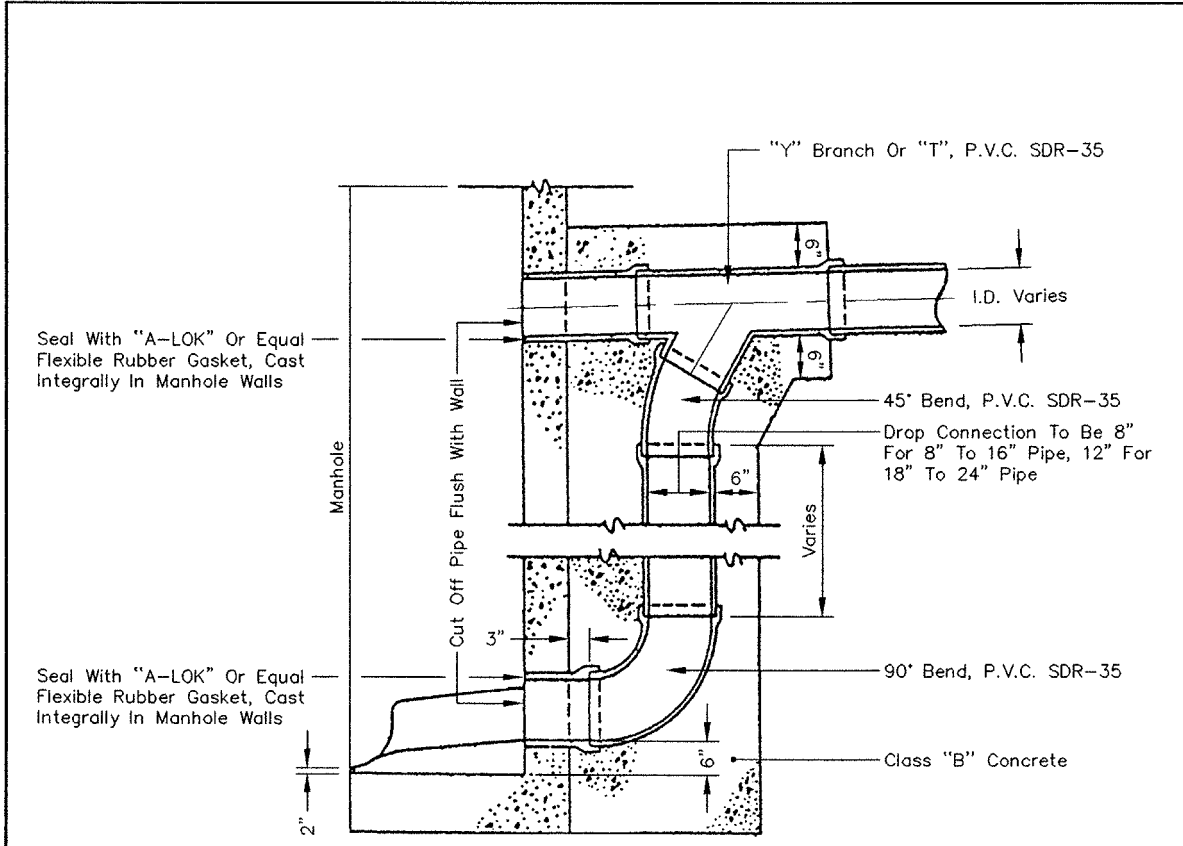
SECTION B-B



SECTION VIEW

ALUMINUM LADDER

RV REMINGTON, VERNICK & VENA <small>ENGINEERS</small> <small>9 Allen Street • Penn. Bldg. New Jersey 08765 • (732) 286-9220</small>		<small>OK 28810</small> <small>PLATE No.</small> 9
<small>LITTLE EGG HARBOR MUNICIPAL UTILITIES AUTHORITY</small> <small>P.O. BOX 660</small> <small>LITTLE EGG HARBOR, NEW JERSEY 08087</small> <small>PHONE : (609) 296-1168</small>	<small>SCALE</small> N.T.S.	<small>DATE</small> JULY 1997
<small>DRWN BY</small> JB	<small>CHKD BY</small> ABD	<small>JOB No.</small> 1517-L-019
<small>OUR FILES-PLATE9</small>		



Seal With "A-LOK" Or Equal Flexible Rubber Gasket, Cast Integrally In Manhole Walls

Seal With "A-LOK" Or Equal Flexible Rubber Gasket, Cast Integrally In Manhole Walls

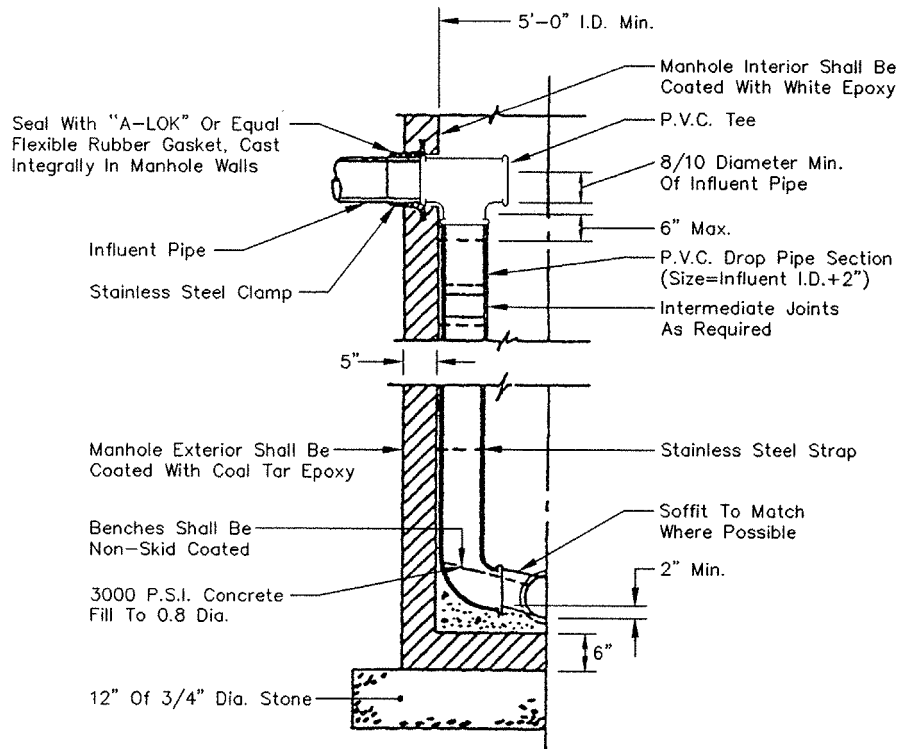
SECTION

TYPICAL DROP MANHOLE

NOTES:

1. All Drop Manholes Shall Be Internally Lined With A White Epoxy Coating. The Coating Shall Be Applied In A Minimum Of Two (2) Coats And Have A Total Thickness Of 16 mils. Benches Shall Be Non-Skid.
2. Inside Drop Manholes (Internally Lined) Shall Only Be Permitted Where "Inside Drop Manholes" Is Specifically Stated At The Manhole On The Utility Plan. All Other Drop Manholes Shall Be Outside Drop Manholes.
3. Manhole Exterior Shall Be Coated With Coal Tar Epoxy.

<p>LITTLE EGG HARBOR MUNICIPAL UTILITIES AUTHORITY P.O. BOX 660 LITTLE EGG HARBOR, NEW JERSEY 08087 PHONE : (609) 296-1168</p>		<p>REMINGTON, VERNICK & VENA GA 278110 ENGINEERS <i>9 Allen Street • Toms River, New Jersey 08753 • (732) 286-9220</i></p>			
SCALE:	DATE:	DRAWN BY:	CHK'D. BY:	JOB No.:	PLATE No.
N.T.S.	JULY 1997	JB	ABD	1517-L-019	10
CAD FILE: S-PLATE10					



SPECIAL DROP CONNECTION

NOTES:

1. The First Joint Below The Influent Pipe Shall Be A Rubber Gasket Or Friction-Type Joint For Ease Of Removal. All Other Joints Shall Be Solvent Cement Joints.
2. First Stainless Steel Strap To Be Placed Within A Maximum Distance Of 6" Below Inlet Pipe Invert. Second Strap Shall Be Within 6" (Max.) Above First Intermediate Joint. Remaining Straps Shall Be A Maximum Of 3'-0" On Center And Within 6" Below Any Required Intermediate Joints. The Upper P.V.C. Drop Section Shall Be Installed To Allow For Future Removal Without Removing The Remaining Sections.
3. DROP MANHOLE Shall Have An Inside DIAMETER OF 5 FEET.

LITTLE EGG HARBOR MUNICIPAL UTILITIES AUTHORITY
 P.O. BOX 660
 LITTLE EGG HARBOR, NEW JERSEY 08087
 PHONE : (609) 296-1168

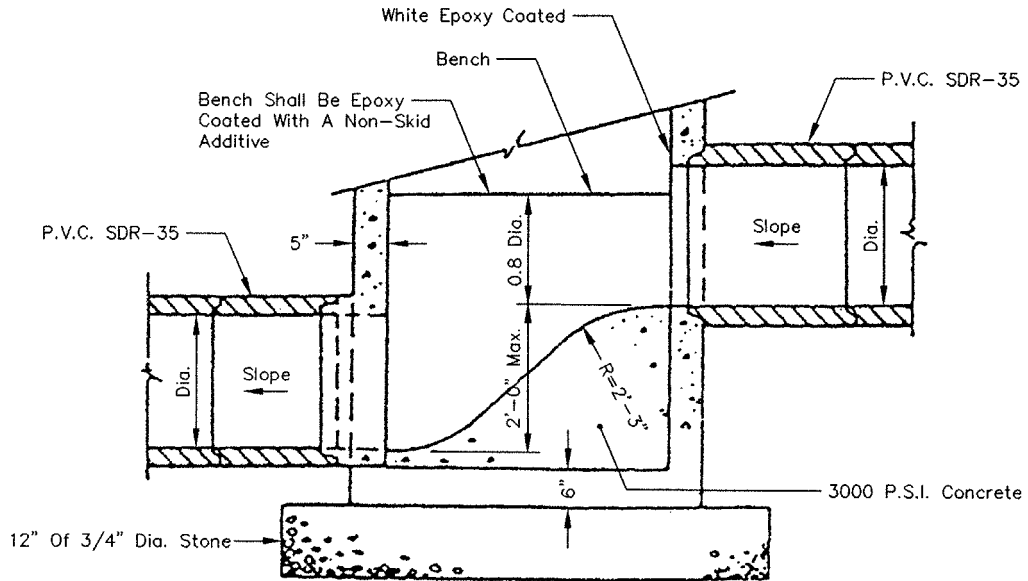


REMINGTON, VERNICK & VENA
ENGINEERS

GA 278110

9 Allen Street • Toms River, New Jersey 08753 • (732) 286-9220

SCALE: N.T.S.	DATE: JULY 1997	DRAWN BY: JB	CHK'D. BY: ABD	JOB No.: 1517-L-019	PLATE No. 11
				CAD FILE: S-PLATE11	



MANHOLE CHUTE

NOTE:

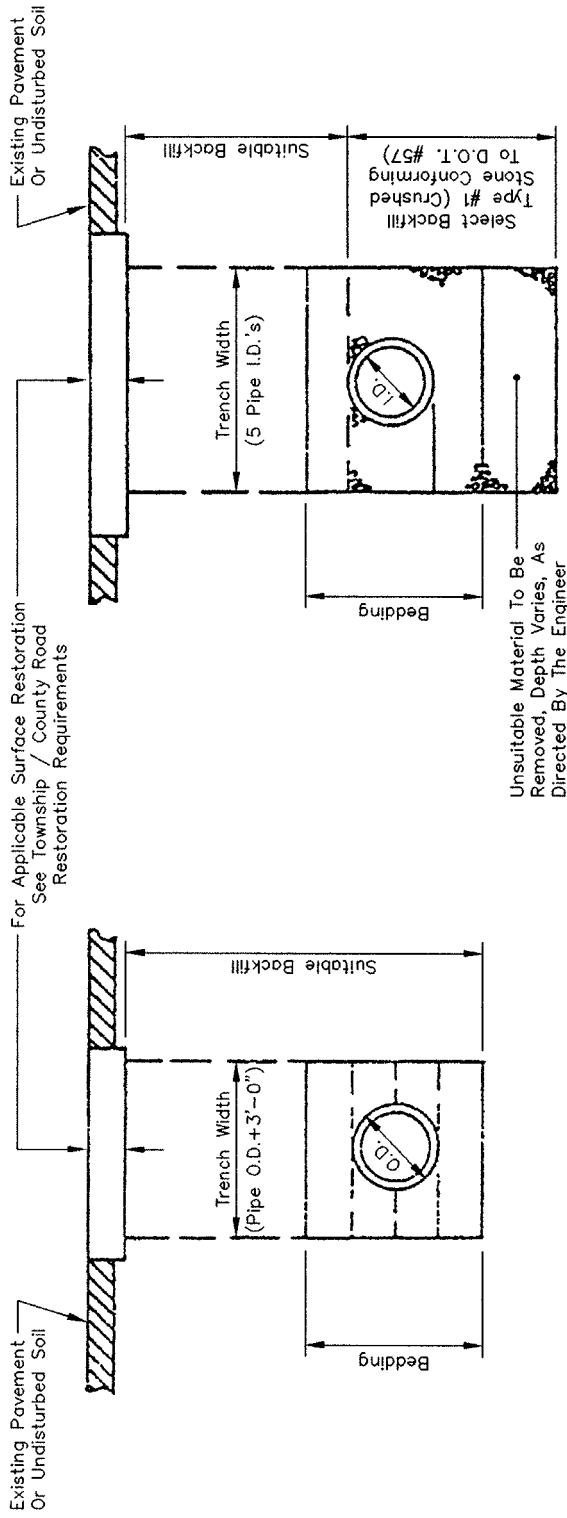
1. A Manhole Chute Shall Only Be Used When The Difference Between The Outgoing And Incoming Pipe Inverts Is Less Than 2 Feet.

LITTLE EGG HARBOR MUNICIPAL UTILITIES AUTHORITY
 P.O. BOX 660
 LITTLE EGG HARBOR, NEW JERSEY 08087
 PHONE : (609) 296-1168



REMINGTON, VERNICK & VENA GA 278110
ENGINEERS
 9 Allen Street • Toms River, New Jersey 08763 • (732) 286-9220

SCALE: N.T.S.	DATE: JULY 1997	DRAWN BY: JB	CHK'D BY: ABD	JOB No.: 1517-L-019	PLATE No. 12
				CAD FILE: S-PLATE12	

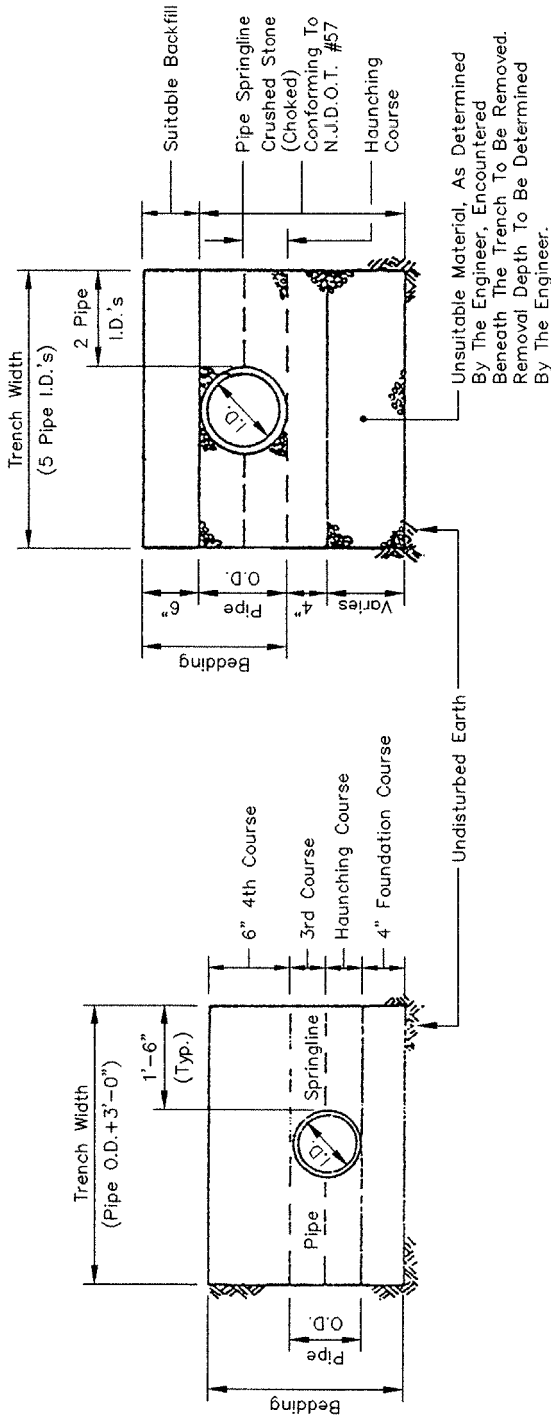


STABLE BEDDING FOUNDATION

UNSTABLE TRENCH

P.V.C. GRAVITY SEWER PIPE BACKFILL DETAILS

LITTLE EGG HARBOR MUNICIPAL UTILITIES AUTHORITY P.O. BOX 660 LITTLE EGG HARBOR, NEW JERSEY 08087 PHONE : (609) 296-1168		REMINGTON, VERNICK & VENA ENGINEERS 9 Allen Street • Toms River, New Jersey 08765 • (732) 286-9220	
SCALE:	DATE:	DRAWN BY:	CHKD. BY:
N.T.S.	JULY 1997	JB	ABD
JOB No.: 1517-L-019			PLATE No.
JOB FILE S-PLATE13			13

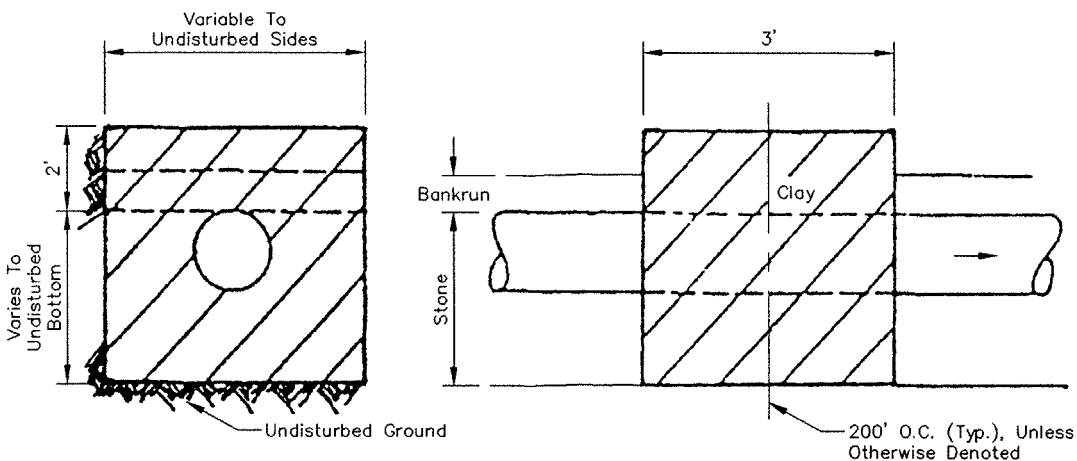


STABLE BEDDING FOUNDATION

UNSTABLE TRENCH

P.V.C. GRAVITY SEWER BEDDING DETAILS

RE ENGINEERS		REMINGTON, VERNICK & VENA <small>ENGINERS</small>	
LITTLE EGG HARBOR MUNICIPAL UTILITIES AUTHORITY P.O. BOX 660 LITTLE EGG HARBOR, NEW JERSEY 08087 PHONE : (609) 296-1168		9 Allen Street • Toms River, New Jersey 08753 • (732) 286-9220 JOB No.: 1517-L-019 CAD FILE: S-PLATE14	
SCALE: N.T.S.	DATE: JULY 1997	DRAWN BY: JB	CHECKED BY: ABD
		PLATE No. 14	



ANTI-SEEP COLLAR DETAIL

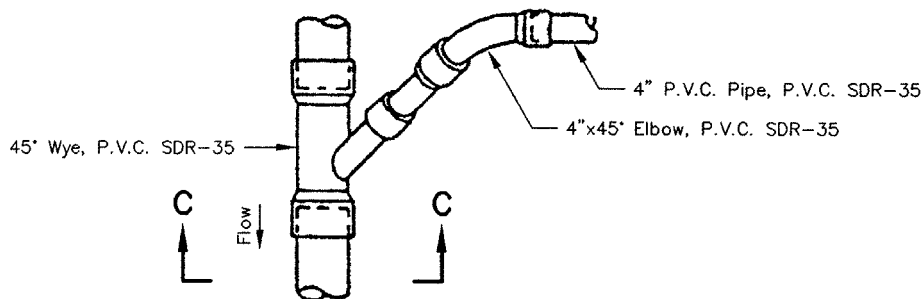
LITTLE EGG HARBOR MUNICIPAL UTILITIES AUTHORITY
 P.O. BOX 660
 LITTLE EGG HARBOR, NEW JERSEY 08087
 PHONE : (609) 296-1168



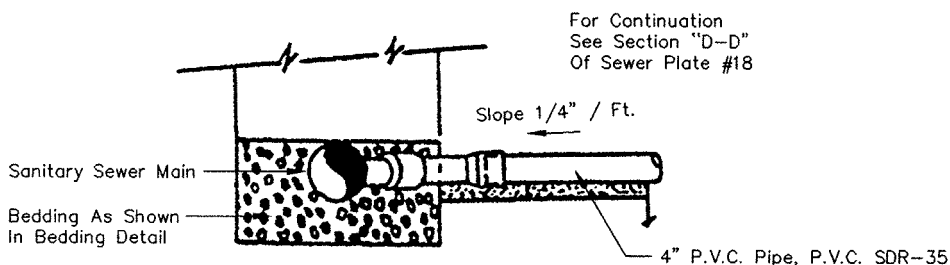
REMINGTON, VERNICK & VENA
ENGINEERS
 9 Allen Street • Toms River, New Jersey 08753 • (732) 286-9220

GA 278110

SCALE: N.T.S.	DATE: JULY 1997	DRAWN BY: JB	CHK'D. BY: ABD	JOB No.: 1517-L-019	PLATE No. 15
				CAD FILE: S-PLATE15	



SPECIAL WYE FITTING SERVICE CONNECTION



SECTIONAL ELEVATION "C-C"

NOTES:

1. All Couplings, Plugs And Caps To Be Standard For Type Of Pipe Used And Installation To Be Watertight.
2. 1/4" Per Foot Slope Governs Over Conflicts With The 3 Foot Min. Cover Dimension.
3. Cleanouts Are To Be Located Two (2) Feet From Curb In The Planter Area. Where Curbs Do Not Exist, Place Cleanout One (1) Foot Outside Of Property Line Within The R.O.W.
4. Special Wye Fitting Service Connection Shall Only Be Permitted To Maintain The Three (3) Foot Minimum Cover Dimension.
5. Cleanouts Are Required On All Service Connections.
6. The Site Contractor Shall Extend The Service Piping To The Property Line.
7. Separation Between The Water And Sanitary Sewer Service Connection Shall Be Ten (10) Feet Typical And Five (5) Feet Minimum.
8. Cleanouts Shall Never Be Installed Outside Of The R.O.W. On Private Property And Never In Concrete Or Paved Areas, Including Pavers, Interlocking Blocks, Bricks, Etc.
9. No Connection Shall Be Backfilled Until Written Approval Is Made By The Engineer Or His Representative. Violators Will Be Required To Expose The Work For Inspection Before Acceptance Of The Connection.

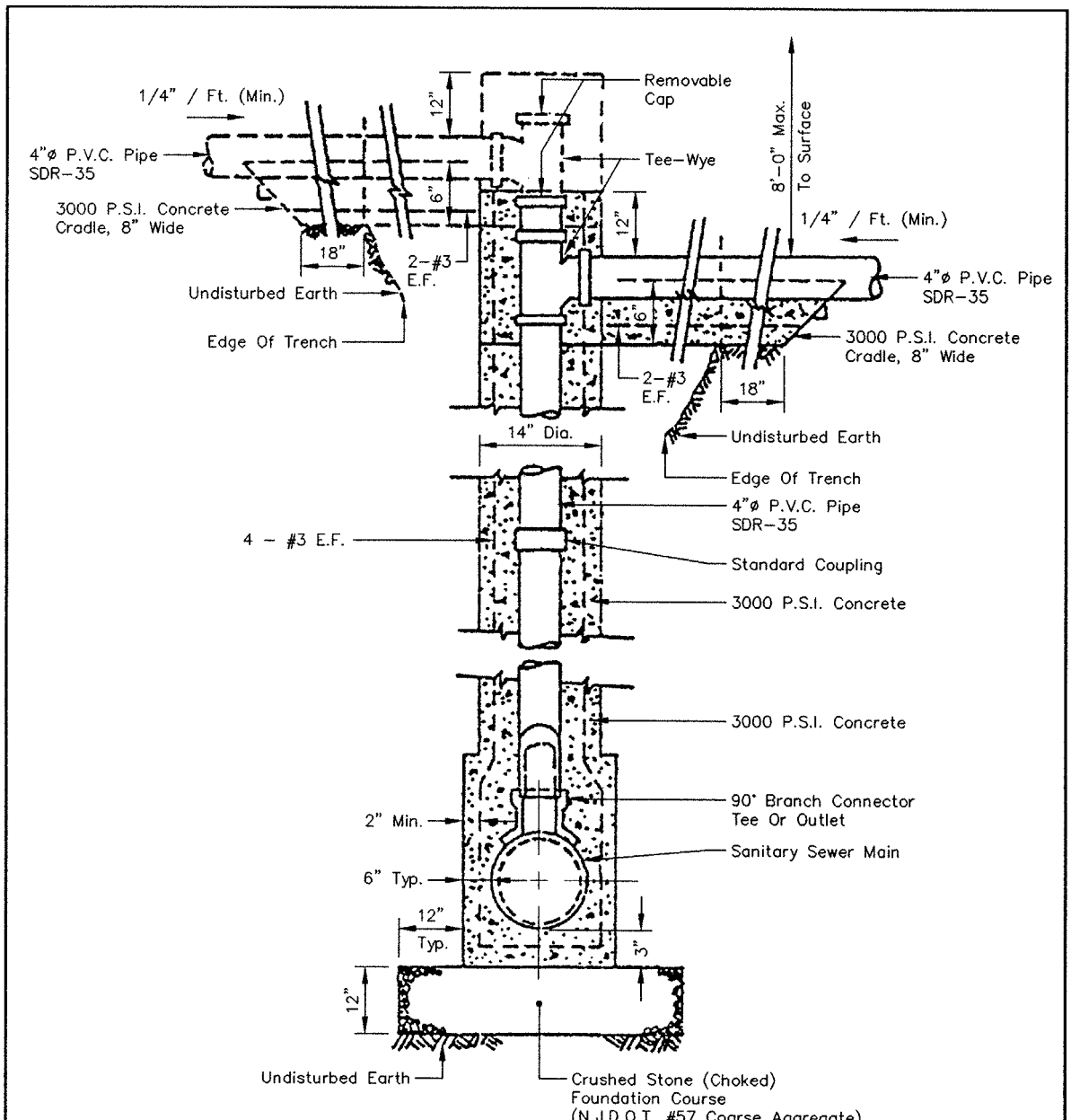
TYPICAL 4" SERVICE CONNECTION MODIFIED

LITTLE EGG HARBOR MUNICIPAL UTILITIES AUTHORITY
 P.O. BOX 660
 LITTLE EGG HARBOR, NEW JERSEY 08087
 PHONE : (609) 296-1168



REMINGTON, VERNICK & VENA GA 278110
ENGINEERS
 9 Allen Street • Toms River, New Jersey 08753 • (732) 286-9220

SCALE: N.T.S.	DATE: JULY 1997	DRAWN BY: JB	CHK'D. BY: ABD	JOB No.: 1517-L-019	PLATE No. 18
				CAD FILE S-PLATE18	



ELEVATION

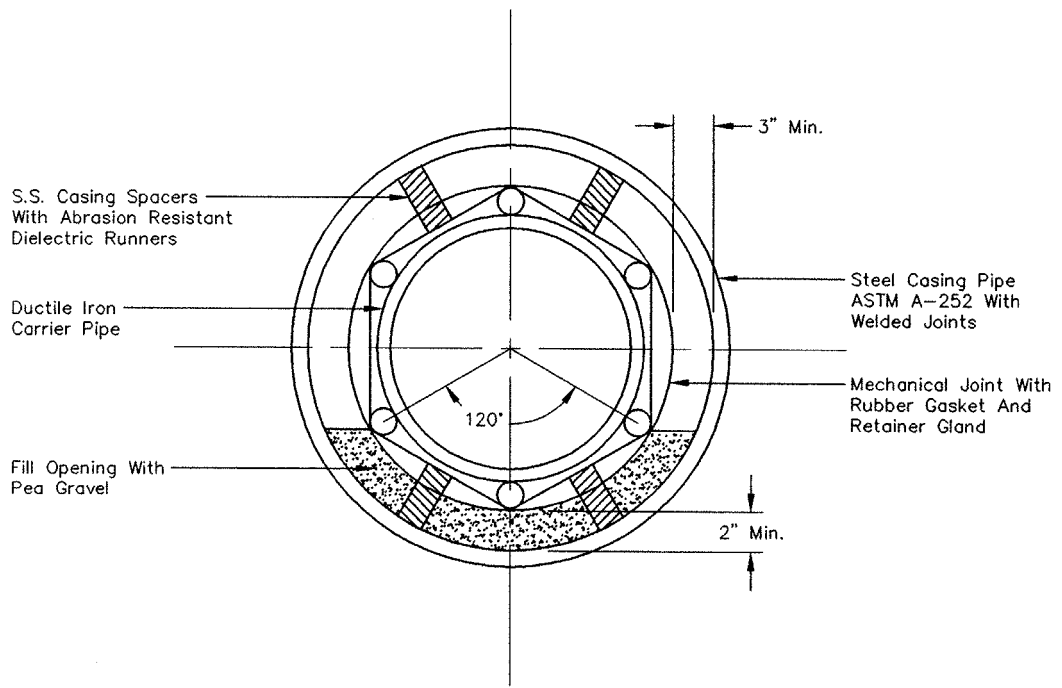
DEEP SERVICE CONNECTION

NOTE:

1. Encased Tee Section For Second House Connection Shown In Phantom.

LITTLE EGG HARBOR MUNICIPAL UTILITIES AUTHORITY P.O. BOX 660 LITTLE EGG HARBOR, NEW JERSEY 08087 PHONE : (609) 296-1168		REMINGTON, VERNICK & VENA ^{GA 278110} ENGINEERS <i>9 Allen Street - Toms River, New Jersey 08753 • (732) 286-9220</i>		JOB No.: 1517-L-019 CAD FILE: S-PLATE19	PLATE No. 19
		SCALE: N.T.S.	DATE: JULY 1997		

CASING SIZE	MIN. CASING THICKNESS WITH	
	1:4 GROUT	WITHOUT GROUT
8"-24"	3/8"	1/2"
26"-34"	1/2"	5/8"
36" & Larger	5/8"	3/4"

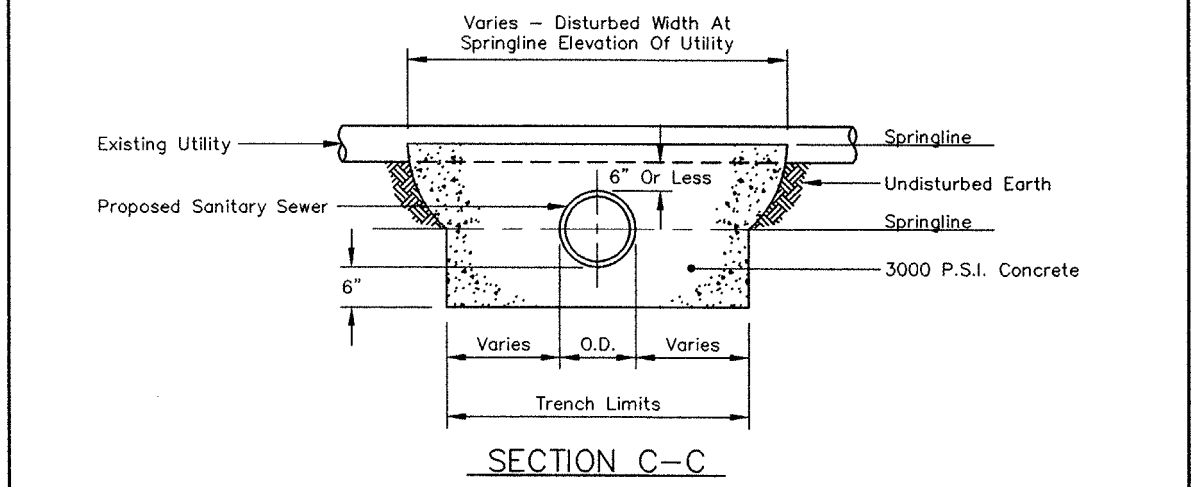
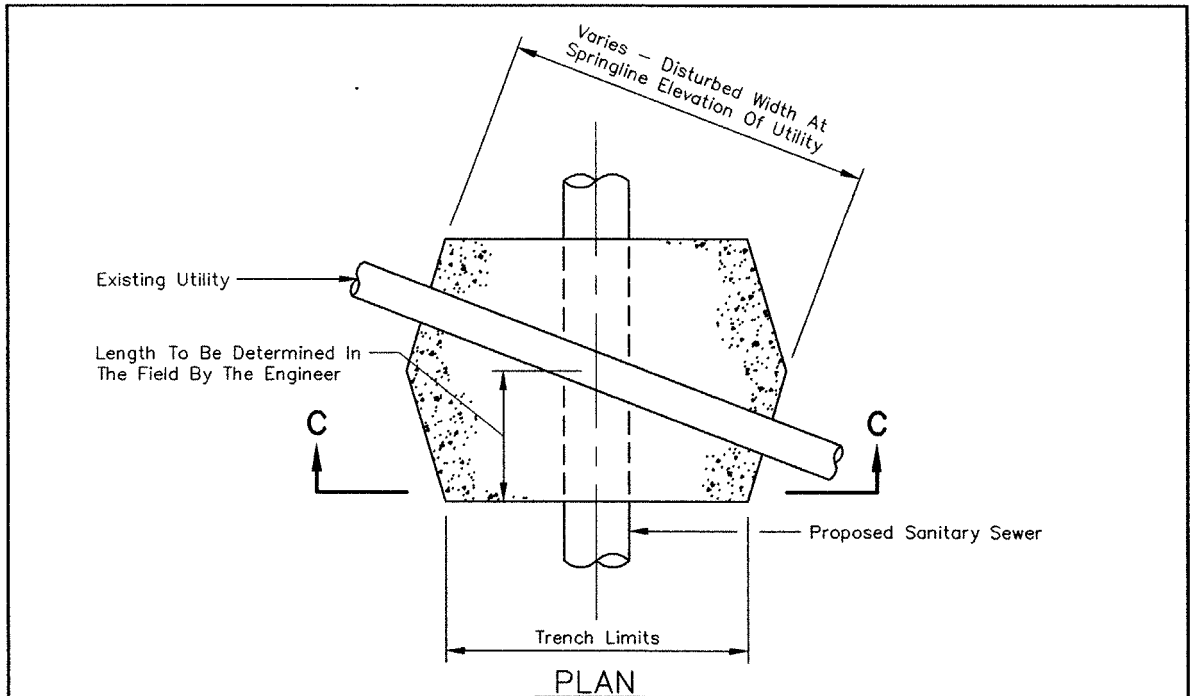


CARRIER PIPE IN DRIVEN STEEL CASING

NOTES:

1. Install Rubber Pull-On End Seals With S.S. Bands At Each End Of The Casing Pipe.
2. A 1.0 Foot Thick Masonry Bulkhead Shall Be Constructed At Each End Of The Casing Pipe.
3. Restrain D.I.P. Carrier Pipe To Steel Casing With Steel Bars Welded To Casing and 3/4" Rods.

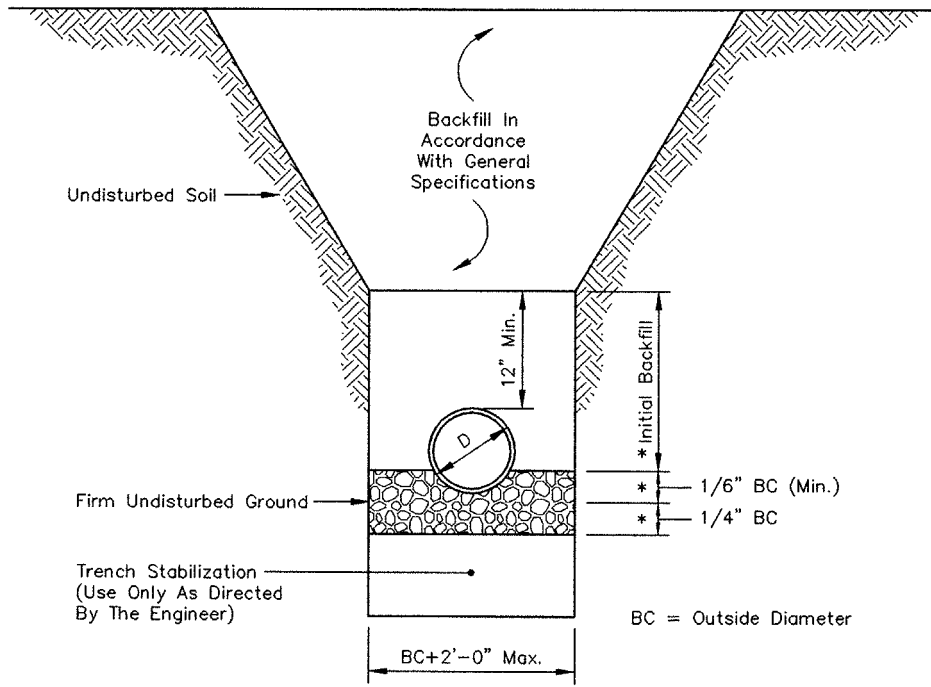
<p>LITTLE EGG HARBOR MUNICIPAL UTILITIES AUTHORITY P.O. BOX 660 LITTLE EGG HARBOR, NEW JERSEY 08087 PHONE : (609) 296-1168</p>		<p>REMINGTON, VERNICK & VENA <small>CA 278110</small> ENGINEERS <i>9 Allen Street • Toms River, New Jersey 08753 • (732) 286-9220</i></p>
<p>SCALE: N.T.S.</p>	<p>DATE: JULY 1997</p>	<p>DRAWN BY: JB CHK'D. BY: ABD</p>
<p>JOB No.: 1517-L-019 CAD FILE: S-PLATE20</p>		<p>PLATE No. 20</p>



CONCRETE CRADLE DETAIL

NOTE:
 Where Gravity Sewers Cross Under Or Over An Existing Sanitary Sewer, Storm Drain Or Other Utility Other Than Water And Where The Minimum Distance Between Them Is 6" Or Less, The Engineer May Elect To Construct A Concrete Cradle To The Springline Of The Upper Pipe. The Width Of The Cradle Shall Be Equal To The Actual Excavated Width Of The Trench (6" Below The Lower Pipe) And Varies To The Disturbed Trench Width At The Springline Of The Upper Pipe. The Length Varies And Is To Be Determined In The Field By The Engineer. Water And Sewer Shall Have An 18" Clearance.

LITTLE EGG HARBOR MUNICIPAL UTILITIES AUTHORITY P.O. BOX 660 LITTLE EGG HARBOR, NEW JERSEY 08087 PHONE : (609) 296-1168		REMINGTON, VERNICK & VENA <small>GA 278110</small> ENGINEERS <i>9 Allen Street • Toms River, New Jersey 08763 • (732) 286-9220</i>				JOB No.: 1517-L-019 CAD FILE: S-PLATE21	PLATE No. 21
		SCALE: N.T.S.	DATE: JULY 1997	DRAWN BY: JB	CHK'D. BY: ABD		



* Initial Backfill And Bedding Material Shall Be Soil Aggregate Designation I-8 Conforming To The Requirements Of Article 901.09, Table 901-2 Of The Standard Specifications, 1983 Supplement Or Stone Crushings To Conform With A.A.S.H.T.O. Designation M-43-54 (1974) (A.S.T.M. Designation D448-54), Size No. 8, 1/8" To 3/8" (2.36 mm To 9.25 mm) Clean, Free Flowing And Shall Meet All A.S.T.M. C-33 Specifications For Quality And Soundness.

Install Class 52 D.I.P. When Depth Of Installation Exceeds 20' From Grade To Invert.

SDR-35 P.V.C. SANITARY SEWER TRENCH DETAIL

LITTLE EGG HARBOR MUNICIPAL UTILITIES AUTHORITY P.O. BOX 660 LITTLE EGG HARBOR, NEW JERSEY 08087 PHONE : (609) 296-1168		REMINGTON, VERNICK & VENA <small>GA 278110</small> ENGINEERS <i>9 Allen Street • Toms River, New Jersey 08753 • (732) 286-9220</i>		JOB No.: 1517-L-019 CAD FILE: S-PLATE22	PLATE No. 22
		SCALE: N.T.S.	DATE: JULY 1997		