STANDARD DETAILS

QUEEN ANNE'S COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS

January 1998
(as amended October 2011)
NOTES

1. Disks will be provided by County.
2. Disk must be established by registered Professional Land Surveyor.
3. Tie sheets shall be provided for each monument showing Maryland State Plane Grid northing and easting in feet (NAD 83) and elevation in feet (NAVD 88).
4. In subdivisions, monuments should constitute some of the subdivision’s property lines control points.
5. Install disks at, or 1 inch below, grade.

Sanitary District Detail
Benchmark
NOTES:
1. USE 8" BY 8" BY 16" SOLID CONCRETE BLOCK AS THRUST BLOCK.
2. ALL THRUST BLOCKS TO BE CARRIED TO UNDISTURBED EARTH.
3. VALVE BOXES TO BE TWO PIECE AND TO HAVE AN ADJUSTMENT RANGE OF AT LEAST 12 INCHES.
4. OPERATING NUT TO BE 2 INCH SQUARE WITH STAINLESS STEEL BOLT.
5. VALVE TO BE RESILIENT WEDGE SEAT.
6. TRACER WIRE TO BE UNCOATED COPPER.

8 GUAGE TRACER WIRE TO BE WITHIN 4 INCHES OF TOP OF VALVE BOX. WIRE IS TO BE OUTSIDE OF BOTTOM SECTION, AND INSIDE OF TOP SECTION.
**Type 1 Bedding**
(Typical of Pressure Mains)

**Type 3 Bedding**
(Typical of Vacuum & Gravity Sewer)

**Concrete Encasement**

**Note:**
1. When encasing PVC pipe, encased length to be covered with polyethylene film first.
2. When encasing, all exposed sides to be supported with wooden forms when backfilling.
3. Tracer wire to be uncoated copper.

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**Sanitary District Detail**

Pipe Bedding and Concrete Encasement
NOTES:

1. PVC OR HDPE MAINS MUST TRANSITION TO A 20 FOOT LENGTH OF CLASS 50 DUCTILE IRON WHICH WILL BE ENCASED.
2. DEFLECT WATER MAIN IF POSSIBLE OR UTILIZE FITTINGS AS CONDITIONS DICTATE.
3. NO ENCASEMENT IS NECESSARY IF SEWER MAIN IS VACUUM BUT 1 FOOT SEPARATION MUST BE MAINTAINED.
4. THE FOUR PIPE JOINTS SHOWN MUST BE RESTRAINED.
5. TRACER WIRE TO BE UNCOATED COPPER.
NOTES:
1. All concrete to be 3000 p.s.i.
2. Buttress dimensions shown are minimum. Dimensions are based upon soil bearing pressure of 3000 p.s.i. and static water pressure of 150 p.s.i. Where pressure exceeds 150 p.s.i. or where soil bearing pressure is less than 3000 p.s.i., special buttress design is required.
3. All exposed sides to be supported with wooden forms when backfilling.

Sanitary District Detail
Buttress
Caps & Horizontal Bends
1. All concrete to be 3000 p.s.i. (mix no. 1)
2. Buttress dimensions shown are minimum. Dimensions are based on soil bearing pressure of 3000 p.s.f. and static water pressure of 150 p.s.i. Where pressure exceeds 150 p.s.i. or where soil bearing pressure is less than 3000 p.s.f., special buttress design is required.
3. All exposed sides to be supported with wooden forms when backfilling.

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Sanitary District Detail
Buttress Tees
NOTES:
1. Carry all bearing surfaces to solid ground.
2. This detail to be used for horizontal 1/4 bends and Class 150 pipe only.
3. All concrete to be 3000 p.s.i.
4. All exposed sides to be supported with wooden forms when backfilling.

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NOTE:
1. CLOSE ENDS OF CASING PIPE AND FILL ANNULAR SPACE BETWEEN CARRIER AND CASING PIPE WITH SAND OR PROVIDE OTHER POSITIVE MEANS TO PREVENT CARRIER PIPE FLOATATION.
2. TRACER WIRE TO BE UNCOATED COPPER.
NOTES:

1. CONTRACTOR IS TO MAINTAIN TRENCH TO COUNTY SATISFACTION THROUGHOUT LENGTH OF CONTRACT OR UNTIL PERMANENTLY PAVED.
2. DETAIL APPLIES AS PERMANENT REPAIR OF SHOULDER AREAS.
3. BACKFILL TO BE NATIVE MATERIAL IF SUITABLE OR SELECT IF SO DIRECTED BY COUNTY OR BY SPECIFICATION.
4. BACKFILL TO BE COMPACTED IN 6 INCH LIFTS.
5. BACKFILL TO BE WELL TAMMED TO SPRINGLINE OF PIPE.
6. PROVIDE AN UNCOATED, 8 GAUGE COPPER WIRE BENEATH ALL PVC, HDPE, & PE PIPE.
NOTES:
1. CONTRACTOR IS TO MAINTAIN CR-6 IN TRENCH TO COUNTY SATISFACTION THROUGHOUT LENGTH OF CONTRACT OR UNTIL PERMANENTLY PAVED.
2. BACKFILL TO BE SELECT MATERIAL, OR IF DIRECTED BY COUNTY, NATIVE MATERIAL.
3. BACKFILL TO BE PLACED IN 6 INCH LIFTS WITH EACH LIFT COMPACTED TO AT LEAST 90%.
4. BACKFILL TO BE WELL TAMPED TO SPRINGLINE OF PIPE.
5. PAVEMENT TO BE TRIPLE SURFACE TREATMENT IN ACCORDANCE WITH COUNTY ROADS SPECS.
6. FINISH TRENCH GRADE SHALL MATCH EXISTING CROSS SLOPE.
7. PROVIDE AN UNCOATED, 8 GAUGE COPPER WIRE BENEATH ALL PVC, HDPE, & PE PIPE.
General Notes

1. Two weeks prior to the intended start of construction, the Contractor shall notify the Sanitary District and shall schedule a pre construction meeting (410-643-3535).

2. All materials and methods of construction shall be in accordance with the 1998 edition of "Specifications for Construction of Sewer Collection, Sewer Transmission, and Water Distribution Lines" available from the Sanitary District.

3. Two days prior to initiating construction, Contractor to contact Miss Utility (1-800-441-8305) and the Sanitary District and submit all cut sheets and an approximate schedule of work.

4. The Owner, via the Contractor, shall provide one division valve key and one fire hydrant wrench for every five, or fraction thereof, water division valves or fire hydrants placed in the project. One meter pit key shall be provided for every ten, or fraction thereof, meter pits placed in the project.

5. No water construction may begin until site is excavated to subgrade.

6. Refer to Sanitary District Specifications for allowable water main and service lateral materials.

Testing Requirements

1. A pressure test shall be applied prior to any service taps being installed. A test pressure of 150 psi shall be sustained for 15 minutes at no loss in order to pass.

2. A leak test shall be applied after all service taps are installed. A test pressure of 70 psi shall be sustained for 24 hours with an allowable loss as specified in the Sanitary District specifications.

3. After passing the leak test, the mains shall be disinfected by having an initial free chlorine residual of 50 ppm at the start of the test and having in excess of 25 ppm of free chlorine after 24 hours.

4. Upon passing the disinfection Contractor to arrange for sampling and bacteriological testing by an approved, lab after disinfection and flushing.
SPECFICATIONS
CAST IRON - SLIDING TYPE
MIN. T.S. 30,000 P.S.I.
TOP SECTION 16"
BOTTOM SECTION 18"
BOXES ADJUSTABLE 34" TO 46"
TOP SECTION 16"
BOTTOM SECTION 30"
MIN. WT. PER BOX - 100 LBS.

TYLER PIPE 5 1/4" SHAFT
SLIP TYPE 6855 SERIES

PLAN VIEW
SECTION A-A

SECTION THROUGH TOP
HALF OF VALVE BOX

SECTION THROUGH BOTTOM
HALF OF VALVE BOX

NOTE: VALVE BOXES REQUIRING
MORE THAN 3 SECTIONS
SHALL BE INSTALLED WITH
6-INCH PVC SLEEVE TO
MAINTAIN ALIGNMENT

Sanitary District Detail
Water
Valve Box & Cover
NOTES:
1. SEE METER DETAIL FOR SPECIFICS ON ITS INSTALLATION.
2. TRACER WIRE TO BE UNCOATED COPPER
3. SERVICE LINE TO BE A MINIMUM OF 30 INCHES DEEP BETWEEN METER PIT AND STRUCTURE.
4. SERVICE LINE ALLOWED TO SHALLOW 3 FEET FROM STRUCTURE FOUNDATION.
5. SERVICE TO ENTER FOUNDATION NO LESS THAN 14 INCHES DEEP.
6. TRACER WIRE TO BE TAPED TO SERVICE LINE IMMEDIATELY ADJACENT TO FOUNDATION.
COPPER PIPE OUTLET
MUELLER H-15009
OR FORD F1001-4
CORPORATION STOP ASSEMBLY

WATER MAIN

8 GUAGE TRACER WIRE

FINISHED GRADE

CARSON WATER HV-20B
30 x 36
POLYETHYLENE METER Pit

11' SDR 7 POLYETHYLENE TUBING
WITH SCHEDULE 40 CAP GLUED
BOTH ENDS

PACK JOINT COUPLINGS
FORD C16-44
1' MIP INLET THREADS

FORD B113-444
1' BALL VALVE

3/4' SCHEDULE 40 CROSS BAR
WITH SCHEDULE 40 CAP GLUED
BOTH ENDS

NYLON TIES

1' MIP OUTLET THREADS

8 GUAGE TRACER WIRE

6' STONE BEDDING

18 INCH RISER

FORD HHA31-444
1' ANGLE CHECK

NOTES:
1. METER TO BE PURCHASED FROM SANITARY DISTRICT AND INSTALLED BY OWNER.
2. METER TO BE 1" SENSUS WATER METER WITH TOUCHREAD REMOTE.
3. STAINLESS STEEL STIFFENERS SHALL BE INSTALLED AT ALL TRANSITION POINTS.
4. TRACER WIRE TO BE UNCOATED COPPER.
5. TRACER WIRE TO METER PIT TO BE SECURED TO MAIN TRACER WIRE VIA SPLIT BUG CONNECTION.
6. NOTE THESE METER PITS ARE NOT TRAFFIC BEARING AND CANNOT BE USED IN PAVED AREAS.

DATE 1-98
REVISION 8-2-01
SCALE NTS
DRAWN BY CADD
APPROVED BY AQ
FILE dl-wtr-meter

Sanitary District Detail
Water – 1-inch
Residential Water Service
NOTES:
1. METER TO BE PURCHASED FROM SANITARY DISTRICT AND INSTALLED BY OWNER.
2. METER TO BE 3/4" X 5/8" SENSUS WATER METER WITH TOUCHREAD REMOTE WITH AN INTEGRATED SINGLE PORT MODEL 520R RADIO READ TOUCHPAD
3. STAINLESS STEEL STIFFENERS SHALL BE INSTALLED AT ALL TRANSITION POINTS.
4. TRACER WIRE TO BE UNCOATED COPPER
5. TRACER WIRE TO METER PIT TO BE SECURED TO MAIN TRACER WIRE VIA SPLIT BUG CONNECTION.
Copper Pipe Outlet
Mueller H-15009
Corporation Stop Assembly

2" SDR 7 Polyethylene Tubing

With Schedule 40 Cap Glued
3/4" Schedule 40 Cross Bar
2" SDR 7 Polyethylene Tube

Stainless Steel Full Circle
Double-Bolt Strap and Saddle
Powerseal Model 3412 AS, or Approved Equal

Water Main

8 Gauge Tracer Wire

SETTER DIMENSIONS

If 1 1/2" meter is to be used, then A = 17'.
If 2" meter is to be used, then A = 19'.

NOTES:
1. METER TO BE PURCHASED FROM SANITARY DISTRICT AND INSTALLED BY OWNER.
2. METER TO BE 1-1/2" or 2" SENSUS WATER METER WITH TOUCH READ REMOTE.
3. STAINLESS STEEL STIFFENERS SHALL BE INSTALLED AT ALL TRANSITION POINTS.
4. TRACER WIRE TO BE UNCOATED COPPER
5. TRACER WIRE TO METER PIT TO BE SECURED TO MAIN TRACER WIRE VIA SPLIT BUG CONNECTION.
6. DETAIL AS SHOWN IS A 2" SERVICE WITH 1-1/2" METER - SHOULD A 2" METER BE DESIRED
   ALL FITTINGS SHOULD BE UP-SIZED TO 2".

Sanitary District Detail
Water
1 1/2" & 2" Water Service
1. ALL METER VAULTS TO BE 6 INCH PRECAST REINFORCED CONCRETE DESIGNED FOR H-20 LOADING.
2. ALL FRAME & COVERS, AND METERS, SHALL BE TO COUNTY STANDARD
3. WATER METERS SHALL BE FURNISHED AND INSTALLED BY DEVELOPER.
4. INCREASE VAULT LENGTH TO 8 FEET FOR 6 INCH AND 8 INCH SERVICES.
5. TRACER WIRE TO BE UNCOATED COPPER.
NOTES:
1. METER TO BE PURCHASED FROM SANITARY DISTRICT AND INSTALLED BY OWNER.
2. METER TO BE 1" SENSUS WATER METER WITH TOUCHREAD REMOTE.
3. REFER TO "RESIDENTIAL WATER SERVICE" DETAIL FOR MORE INFORMATION ON THE METER PIT ASSEMBLIES.
NOTES:
1. MAINTAIN 3.5 FOOT OF COVER THROUGH ROADSIDE DITCH. IF UNABLE TO MAINTAIN ADEQUATE COVER, ROTATE THE MECHANICAL JOINT HYDRANT TEE AND UTILIZE APPROPRIATE FITTINGS. AS A LAST RESORT, ENCASE THE 6 INCH SERVICE LINE WITH CONCRETE IF COVER IS INADEQUATE.
2. TRACER WIRE TO BE UNCOATED COPPER.
NOTES:

1. MAINTAIN 3.5 FOOT OF COVER THROUGH ROADSIDE DITCH. IF UNABLE TO MAINTAIN ADEQUATE COVER, ROTATE THE MECHANICAL JOINT HYDRANT TEE AND UTILIZE APPROPRIATE FITTINGS. AS A LAST RESORT, ENCASE THE 6 INCH SERVICE LINE WITH CONCRETE IF COVER IS INADEQUATE.

2. ECLIPSE MODEL 2 OR APPROVED EQUAL.

3. TRACER WIRE TO BE UNCOATED COPPER.
General Notes

1. Two weeks prior to the intended start of construction, the Contractor shall notify the Sanitary District and shall schedule a pre construction meeting (410-643-3535).

2. All materials and methods of construction shall be in accordance with the 1998 edition of "Specifications for Construction of Sewer Collection, Sewer Transmission, and Water Distribution Lines" available from the Sanitary District.

3. Two days prior to initiating construction, Contractor to contact Miss Utility (1-800-441-8305) and the Sanitary District and submit all cut sheets and an approximate schedule of work.

4. The Owner, via the Contractor, shall provide one division valve key for every five, or fraction thereof, division valves placed in the project.

5. No sewer construction may begin until site is excavated to subgrade.

6. All vacuum mains shall be schedule 40 non cellular core, solvent weld, PVC. Refer to Sanitary Specification for other material requirements.

Testing Requirements

1. Vacuum Sewer – A two hour vacuum sewer test will be conducted daily by 3:00 p.m. Once a test has been satisfied, the trench is to be back filled by close of day. A vacuum cart is available for rent from the Sanitary District at a rate of $100 per two hour test. Contractor must provide all necessary fittings for connection. Vacuum of 24 inches mercury shall be maintained with a maximum allowable loss of 1% per hour.

2. Vacuum Sewer Final – A four hour vacuum test shall be conducted once all construction is complete and utility trenches have been permanently stabilized. A vacuum cart is available for rent from the Sanitary District at a rate of $200 per four hour test. Contractor must provide all necessary fittings for connection. Vacuum of 24 inches shall be maintained with a maximum loss of 1% per hour.

3. Gravity Sewer – Sewers are to be flushed and pressure tested in accordance with Sanitary District Specifications.
NOTES:
1. SEE CLEANOUT DETAIL FOR SPECIFICS ON ITS INSTALLATION.
2. TRACER WIRE TO BE UNCOATED COPPER
3. SERVICE LINE TO BE A MINIMUM OF 12 INCHES DEEP AT FOUNDATION.
4. TRACER WIRE TO BE TAPE TO SERVICE LINE IMMEDIATELY ADJACENT TO FOUNDATION.
5. PLACE CLEANOUT IMMEDIATELY ADJACENT TO HOUSE, 3 TO 5 FEET FROM FOUNDATION.
Right of Way and Traffic Bearing Areas

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Notes:
1. Right of Way clean outs are also necessary at the edge of any easements.
2. Traffic Bearing Areas are defined as being in, or within 3 feet of, any paving, driveways, or any other area where vehicular traffic is likely.
3. Tracer wire to be uncoated copper.
NOTE: 1. VENT TO BE LOCATED 20 LINEAR FEET FROM VALVE PIT.
2. VENT AND CLEANOUT TO BE OF THE SAME DIAMETER AS THE SEWER LATERAL.
3. VENT TO BE LOCATED AT LEAST 10 FEET AWAY FROM ANY DOORS, WINDOWS OR FOUNDATION VENTS.
4. INVERT OF VENT TO BE BELOW LOWEST FLOOR ELEVATION.
5. NOT TO BE USED AT RIGHT OF WAY. REFER TO VENT AT RIGHT OF WAY DETAIL.
6. TRACER WIRE TO BE UNCOATED COPPER.
VENT INLET USING DWV 90' PVC ELLS. CONNECTION TO TO RISER SHOULD BE GLUED.

BAR SCREEN STAINLESS (TWO 1/4' BOLTS) STEEL

VENT INVERT OF VENT

SOLVENT WELD

8' MIN/12' MAX. FROM GROUND

45° STREET ELL SCH 40 PVC

UNDISTURBED EARTH OR COMPACTED BACKFILL

PLACE VENT ON SIDE OF TRENCH TO UNDISTURBED EARTH TO FURTHER SUPPORT THE VERTICAL SECTION OF THE VENT.

8 GAUGE TRACER WIRE

45° STREET ELL SCH 40 PVC

SCH 40 PVC PIPE (SOLVENT WELD)

SCH 40 PVC 45° VERT. WYE BRANCH

SCH 40 PVC 45° VERT. WYE BRANCH OR WYE/1/8 BEND DWV COMBINATION

FLOWS

NOTE: 1. VENT TO BE LOCATED 20 LINEAR FEET FROM VALVE PIT.
      2. VENT AND CLEANOUT TO BE OF THE SAME DIAMETER AS THE SEWER LATERAL.
      3. VENT TO BE LOCATED AT LEAST 10 FEET AWAY FROM ANY DOORS, WINDOWS OR FOUNDATION VENTS.
      4. INVERT OF VENT TO BE ABOVE ANTICIPATED STORMWATER LEVEL BUT BELOW LOWEST FLOOR ELEVATION.
      5. REFER TO 'GRAVITY SEWER CLEANOUT' DETAIL FOR SPECIFICATION ON FRAME & COVER.
Sanitary District Detail
Gravity Sewer
Precast Manhole

Riser Sections furnished in
2 ft, 3 ft, or 4 ft Lengths such
that number of seams is minimal

Concrete to be 4000 psi and
manufactured per ASTM Spec C-478-72

No. 4 Rebar @ 16" O.C.
each way, minimum

Standard Manhole Steps furnished
in Aluminum or Plastic Coated Steel

A-Lock Rubber Seal Gasket

Brick or Concrete Benchwalls

Precast Monolithic Base
w/ two foot minimum riser

Concrete Grade Rings
w/ Butyl Rubber Seals
Between All Joints
Minimum of 2, Maximum of 4

O-Ring Joint
Flexible Gasket
ASTM C-361

Mortar Seal
Finish

5"

5"

5"

5"

48"

15"

24"

8"

8"
NOTES:
1. WALLS BOTTOM AND TOP TO BE PRECAST CONCRETE. INVERT CHANNEL TO BE POURED 3000 PSI CONCRETE.
2. EXTERIOR WALLS TO HAVE TWO COATS OF WATERPROOF BITUMINOUS COMPOUND.
3. A-LOCK RUBBER GASKETS ARE TO BE USED AROUND ALL PIPE PORTS.
CONTROL BOX NOTES:
1. WARNING LIGHT SYSTEM TO BE WIRED AS A DEDICATED CIRCUIT.
2. BOX IS TO BE WEATHERPROOF AND LOCKABLE.
3. NO CONTROLS ARE TO BE LOCATED ON THE OUTSIDE OF THE CONTROL BOX.
4. PROVIDE 120 volt RECEPTACLE INSIDE OF CONTROL BOX.
5. PROVIDE CIRCUIT BREAKER INSIDE BOX TO ALLOW DISCONNECTION OF POWER AT CONTROL BOX.

NOTES:
1. INSTALLATION SHALL INCLUDE ALL ELECTRICAL WORK REQUIRED TO OPERATE THE ALARM SYSTEM.
2. ALL ALARM SYSTEM COMPONENTS SHALL BE PURCHASED FROM THE SAME MANUFACTURER TO ENSURE COMPATIBILITY.
3. CONTROL INCLUDE HANDS-OFF AUTOMATIC SWITCH, AUTO RESET FOR HIGH WATER ALARM, WEATHERPROOF FLASHING LIGHT.
4. CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND FOLLOW MANUFACTURER’S SUGGESTED INSTALLATION PROCEDURES FOR ALL COMPONENTS.
5. ALL METAL FASTENERS ARE TO BE STAINLESS STEEL.
NOTES:
1. ALL TANK SEAMS ARE TO BE TOP SEAM & WATER TIGHT.
2. CAST IRON MANHOLE FRAME AND COVERS ARE TO BE PROVIDED FOR EACH ACCESS HATCH AND CLEANOUT.
3. REFER TO CLEANOUT DETAIL FOR MORE INFORMATION.
SPECIFICATIONS
CAST IRON - SLIDING TYPE
MIN. T.S. 30,000 P.S.I.
TOP SECTION 16"
BOTTOM SECTION 18"
BOXES ADJUSTABLE 34" TO 46"
TOP SECTION 16"
BOTTOM SECTION 30"
MIN. WT. PER BOX - 100 LBS.

TYLER PIPE 5 1/4" SHAFT
SLIP TYPE 6855 SERIES

PLAN VIEW

SECTION A-A

SECTION THROUGH TOP HALF OF VALVE BOX

SECTION THROUGH BOTTOM HALF OF VALVE BOX
1. Tracer wire to be uncoated copper.
2. Wires to be mechanically connected via a split bug.

Sanitary District Detail
Vacuum Sewer
Over the Top Connection

Date 1-98
Revision 12-16-05
Scale NTS
Drawn by CADD
Approved by AQ
File dt-vs-ott
NOTES:
1. STONE BEDDING NOT SHOWN. ALL VACUUM SEWER LINES TO HAVE A MINIMUM BEDDING OF AT LEAST 6 INCHES STONE BEDDING. BEDDING TO CONSIST OF 3/4 INCH ROUND STONE.
2. MINIMUM DISTANCE BETWEEN LIFTS IS 20 FEET.
3. MAXIMUM SERIES OF LIFTS IS 5 AT 20 FOOT INTERVALS.
4. NO LIFT WITHIN 20 FOOT OF CONNECTION TO MAIN.
5. SLOPES BETWEEN LIFTS IS TO BE THE LARGER OF THE FOLLOWING:
   a. 0.2%
   b. 40% OF 6 INCH OR LARGER PIPES, OR 80% OF 4 INCH PIPE.
6. SLOPE MUST BE 0.2% FOR AT LEAST 50 FEET PRIOR TO FIRST IN SERIES OF LIFTS.
7. TRACER WIRE TO BE UNCOATED COPPER.
NOTE:
1. OFFSET CENTERLINE OF ACCESS POINT 3 INCHES TO ONE SIDE OF ACCESS POINT CHAMBER AT ALLOW EASE OF ACCESS TO FERNCO TIGHTENING NUTS.
2. TRACER WIRE TO BE UNCOATED COPPER.
4' x 4' x 4' CCA WITNESS POST
2' BURY, 2' EXPOSED

CONCRETE

3" NO HUB COUPLINGS
AIRVAC SUMP BREATHER
AIRVAC SENSOR SURGE SUPPRESSOR
(BLUE 'D' MODEL)
ALL JOINTS TO BE SEALED WITH SILICONE
HOLDING TANK BOLTED TO VALVE PIT
BOTTOM WITH 5 SS NUTS, BOLTS,
WASHERS AND O-RING

COMPACTED SOILS

TOP OF PIT
8 GAUGE TRACER WIRE

COMPACTED SELECT MATERIAL FOR BACKFILL

30" AT TANK OR 30" OR 54" DEEP SUMP
10" MIN.

54"

18" AT TANK OR 30" OR 54" DEEP SUMP
36" ID. AT TOP, 36" ID. AT BOTTOM
2" OR 0.2% SLOPE
WHICHEVER IS GREATER
FOR FIRST 3 FEET

MIN. 3.75' LENGTH

EAST JORDAN IRON WORKS No. 1405A
CAST IRON FRAME & LID MARKED
'QUEEN ANNE'S COUNTY' RATED FOR
H 20 LOADING, 1 TO 3 BRICK
COURSES FOR GRADE ADJUSTMENTS

MASS CONCRETE
4'X4'X1' W/ 3# 5 REBARS LOOSED

SPIRAL WOUND, H 20 LOADING
RATED, FIBERGLASS VALVE PIT
27" I.D. AT TOP, 35" I.D. AT BOTTOM
3" GROMMET

4" CLEANDOUT

8 GAUGE TRACER WIRE

VACUUM SEWER MAIN

4" OR 6" GRAVITY SEWER WITH SLIP COUPLING
2" SENSOR LINE: SEE SECTION D-D FOR DETAIL

3" SUCTION LINE

FIBERGLASS SUMP 30" OR 54" DEEP SUMP 30"
I.D. AT TOP, 16" I.D. AT BOTTOM

FIBERGLASS SUMP 54" DEEP, TO ALLOW
CONNECTION OF DEEP GRAVITY LINES.

EACH PIT'S SUMP TO BE BEDDED
IN 1.0 CUBIC YARDS OF 3/4" WASHED STONE

LOCATE WITNESS POST IMMEDIATELY ADJACENT TO VALVE PIT AS DIRECTED BY INSPECTOR.
TRACER WIRE TO BE MECHANICALLY CONNECTED VIA A SPLIT BUG.
TRACER WIRE TO BE UNCOATED COPPER

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Sanitary District Detail
Vacuum Sewer
Valve Pit Section
NOTES:

1. THE FOLLOWING HOLES IN VALVE PIT AND SUMP TO BE FIELD CUT:
   1½" BREATHER (PIT)
   4" GRAVITY (SUMP)
   ALL REMAINING HOLES TO BE FACTORY CUT.

2. ONLY HOME OR APARTMENTS WHOSE LOWER FLOOR ELEVATIONS ARE THE SAME
   SHOULD BE CONNECTED TO A COMMON VACUUM VALVE PIT INSTALLATION.

3. REFER TO DETAIL dt-vs-vpit FOR LOCATIONS OF CROSS SECTIONS HERE SHOWN.

SECTION 'A''A'

RTM MOLDED FIBERGLASS VALVE PIT BOTTOM WITH HOLES FACTORY CUT.

SECTION 'B''B'

SHOWING UP TO 4 GRAVITY CONNECTIONS TO SUMP.

6" TO 8"

GLUE HALF OF A SLIP COUPLING IN PLACE AT 4" TO 6" FROM END OF GRAVITY LINE TO ACT AS A STOP.

10" MIN. LENGTH GRAVITY STUB WITH GLUED ON CAP.

SECTION 'D''D'

P.V.C. SENSOR CAP

25" LONG WITH 30" DEEP HOLDING TANK OR 49" LONG WITH 54" DEEP HOLDING TANK.

2" P.V.C.

2" X 4" REDUCER COUPLING WITH INDEX REMOVED

FULLY INSERT THROUGH PIT BOTTOM TO STOP

4" P.V.C.

BEVELED END

P.V.C. SENSOR CAP

8¾" WITH 30" TANK
10¾" WITH 54" TANK

Sanitary District Detail

Vacuum Sewer Valve Pit Sections
NOTES:

1. **A** JOINT SECURED BY USE OF RESIN AND FIBERGLASS WINDINGS.

2. **B** 36' I.D. FIBERGLASS PIPING.

3. 12' AND 24' EXTENSIONS ARE SHOWN, OTHER LENGTHS ARE AVAILABLE.

4. MOLDED IN WALL STEP UP REQUIRED ON EXTENSIONS OF 2 FOOT OR GREATER AS PER AIRVAC DRAWING M-64S (6/6/91).

ONLY TO BE USED WITH PRIOR APPROVAL

Sanitary District Detail

Vaccum Sewer

Valve Pit Extension
NOTES:
1. REFER TO SPECIFICATIONS FOR CONCRETE.
2. DISTANCE TO BE DETERMINED IN FIELD BY ENGINEER.
3. IN LIEU OF THRUST BLOCKS, ALL JOINTS MAY BE RESTRAINED.
4. ENTIRE BLOWOFF SHALL BE BACKFILLED WITH SELECT MATERIAL.
5. ALL D.I. FITTINGS TO BE MECHANICAL JOINT.
NOTES:

1. RISER PIPE TO HAVE CAM-LOCK QUIK CONNECT FITTING WITH CAP.
2. RISER DIVISION VALVE TO BE STAINLESS STEEL QUARTER TURN BALL VALVE WITH STAINLESS STEEL BODY.
3. RISER PIPE TO BE STAINLESS STEEL.
EAST JORDAN IRON WORKS No. 1580
36" CAST IRON FRAME & LID MARKED
'QUEEN ANNE'S COUNTY' RATED FOR
H 20 LOADING.

FINISHED GRADE

ANCHOR BOLTS (TYP. OF 4)

-36" DIAMETER CONCRETE PIPE

CAST IRON VALVE

DROP COVER

BOX TOP

CONCRETE - 3000 PSI

ELECTROFUSION COUPLING

BRICKS

8 GAUGE TRACER WIRE
TO BE WITHIN 4 INCHES
OF TOP OF MANHOLE

NOTES:
1. DIVISION VALVES AND RISER PIPE OF SAME DIAMETER AS MAIN
2. RISER PIPE TO HAVE CAM-LOCK QUIK CONNECT FITTING WITH CAP.
3. IN-LINE DIVISION VALVES TO BE MUELLER RESILIENT WEDGE GATE VALVE,
RISER DIVISION VALVES TO BE STAINLESS STEEL QUARTER TURN BALL VALVE
WITH STAINLESS STEEL BODY.

Sanitary District Detail
Grinder Pump System
Cleanout Assembly
EAST JORDAN IRON WORKS No. 1580
36" CAST IRON FRAME & LID MARKED 'QUEEN ANNE'S COUNTY' RATED FOR H 20 LOADING.

FINISHED GRADE

ANCHOR BOLTS (TYP. OF 4)

36" DIAMETER CONCRETE PIPE

CONCRETE - 3000 PSI

8 GAUGE TRACER WIRE TO BE WITHIN 4 INCHES OF TOP OF MANHOLE

NOTES:
1. DIVISION VALVES AND RISER PIPE OF SAME DIAMETER AS MAIN
2. RISER PIPE TO HAVE CAM-LOCK QUIK CONNECT FITTING WITH CAP.
3. IN-LINE DIVISION VALVES TO BE MUELLER RESILIENT WEDGE GATE VALVE, RISER DIVISION VALVES TO BE STAINLESS STEEL QUARTER TURN BALL VALVE WITH STAINLESS STEEL BODY.

Sanitary District Detail
Grinder Pump System
End of Line Cleanout Assembly