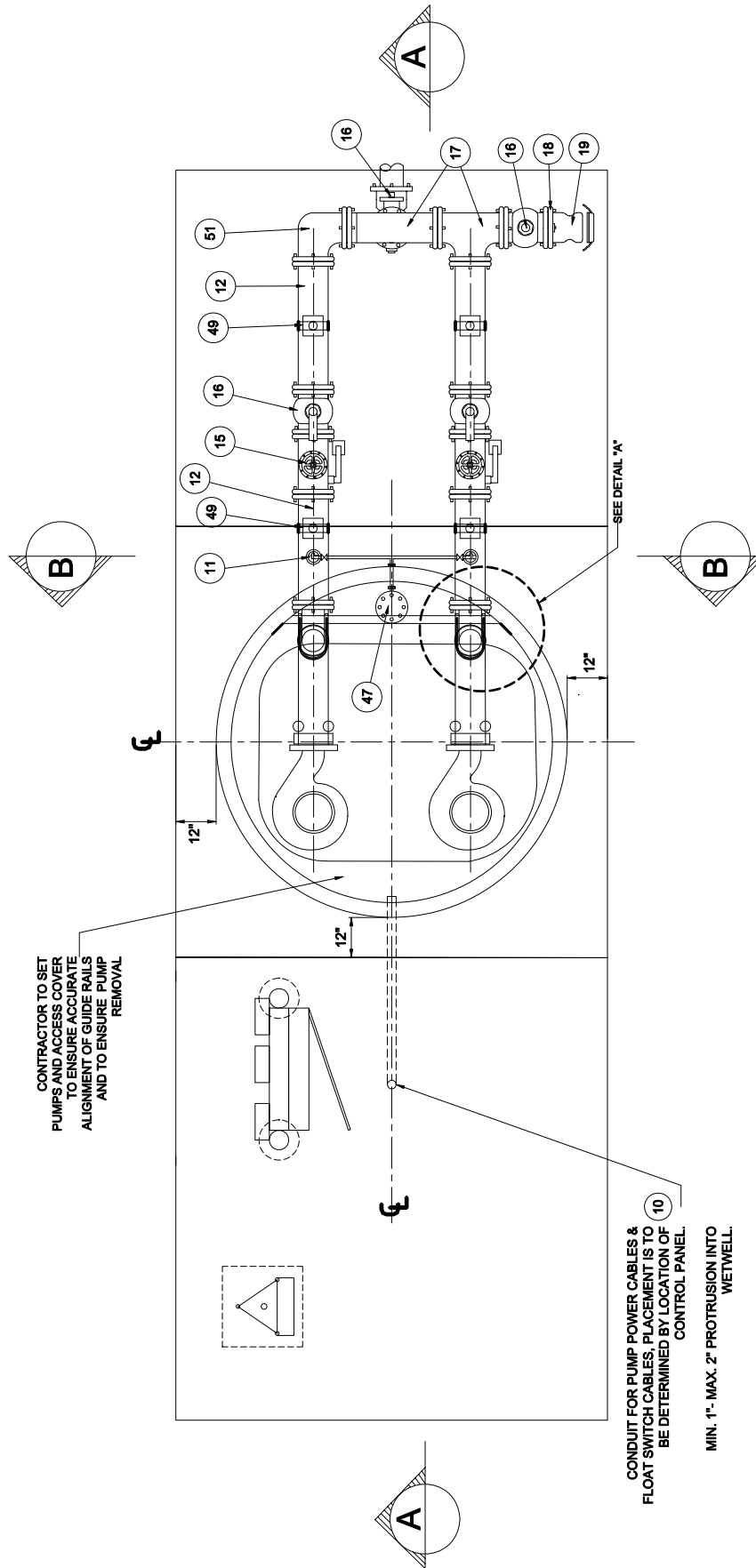


ISSUE DATE JANUARY 1st, 2008

# SECTION 5F LIFT STATION /W ABOVE GROUND VALVES







**PLAN-PIPING--WET WELL**

**PIPING PLAN ABOVE  
GROUND VALVE L. S.  
CHARLOTTE COUNTY UTILITIES**

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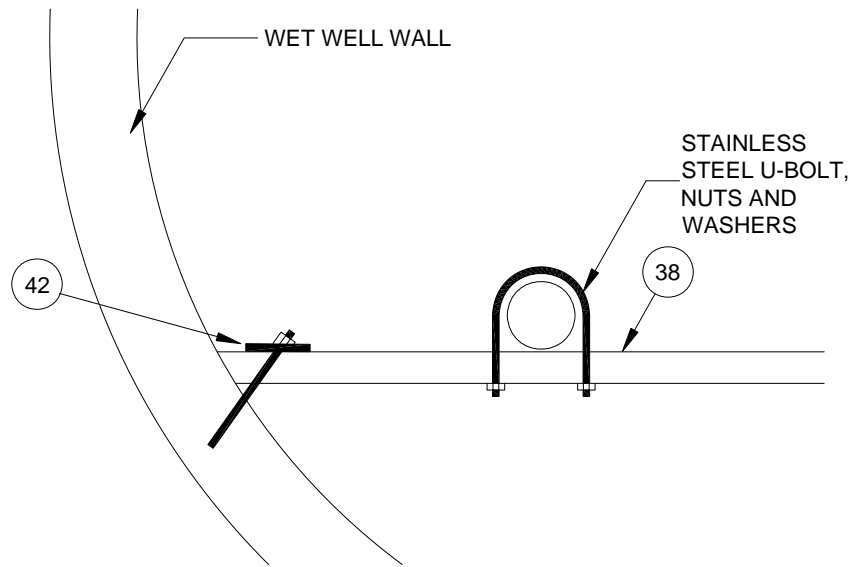
NUMBER: S-27-AGVLS

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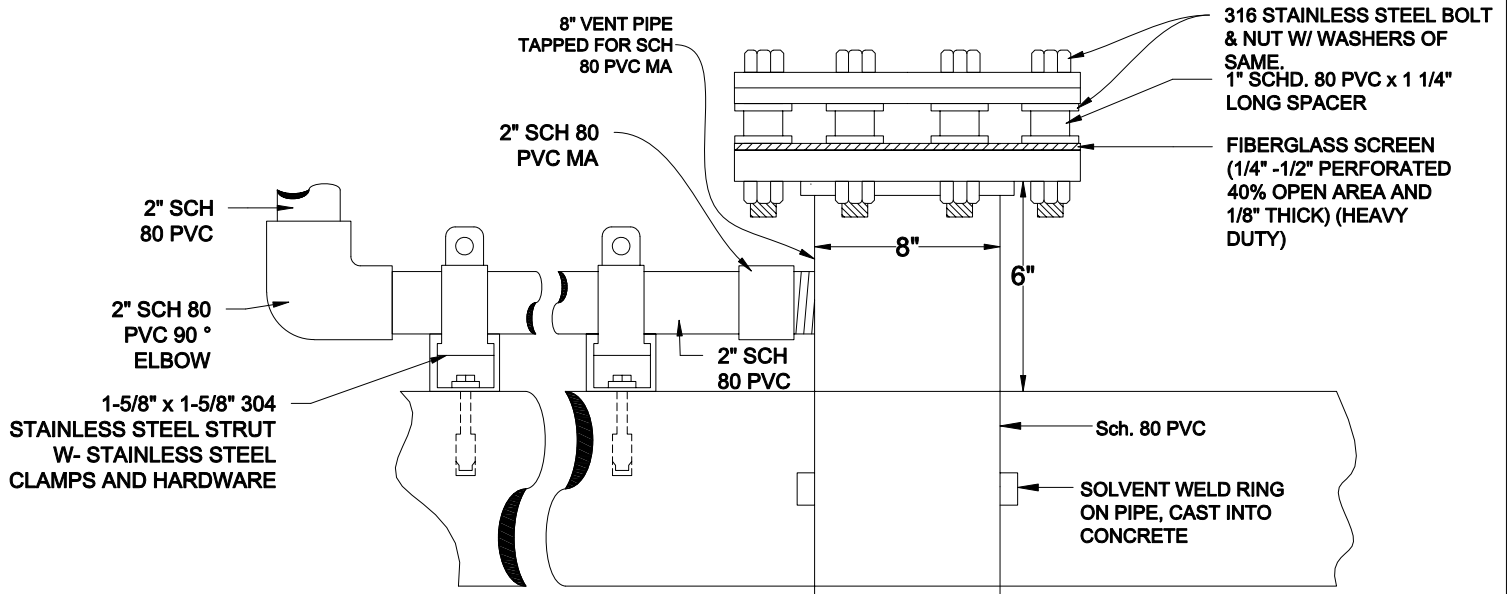
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**DETAIL "A"**



**DETAIL "B"**

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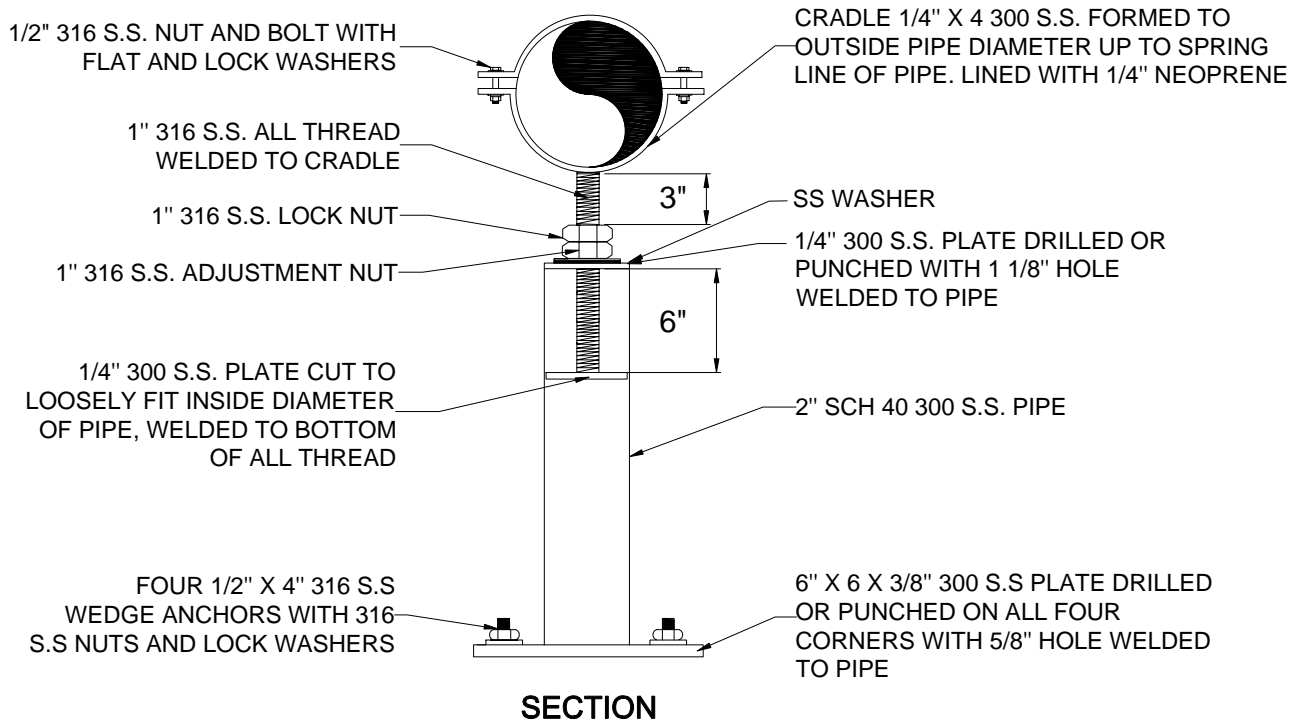
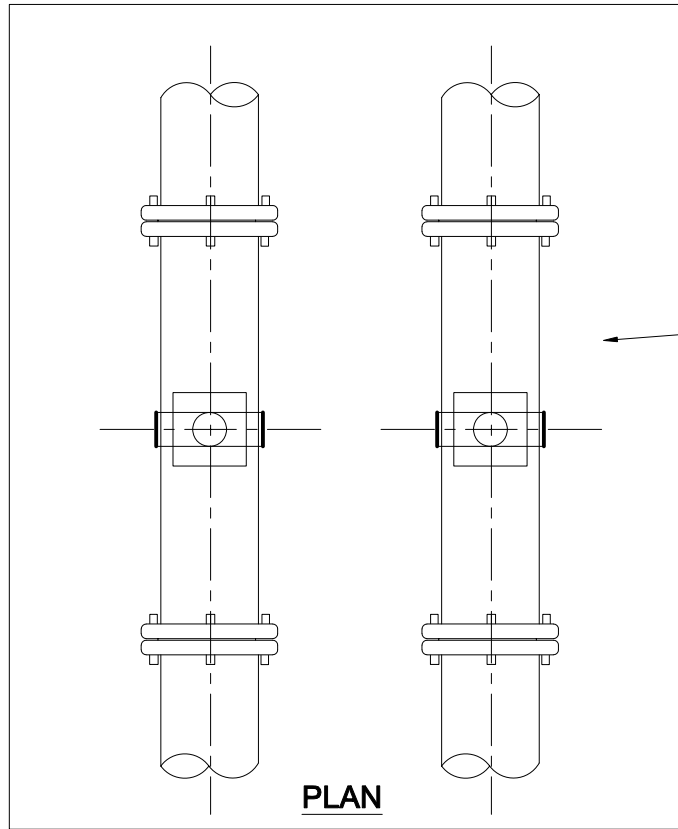
**LIFT STATION DETAIL A & B**

**CHARLOTTE COUNTY UTILITIES**

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## SUPPORT CRADLE DETAIL "C"

(TYP. OF 2 @ 4'-6" C/C)

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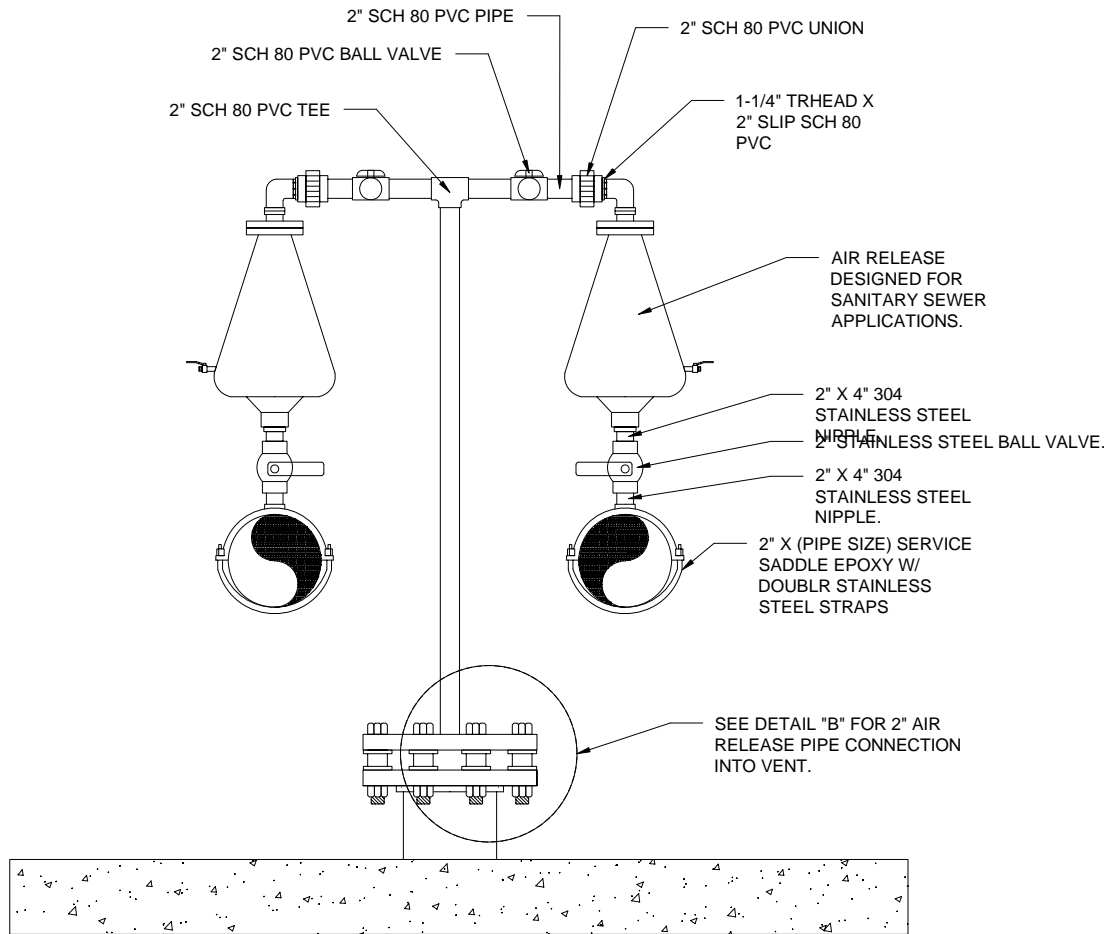
# PIPE SUPPORT DETAIL

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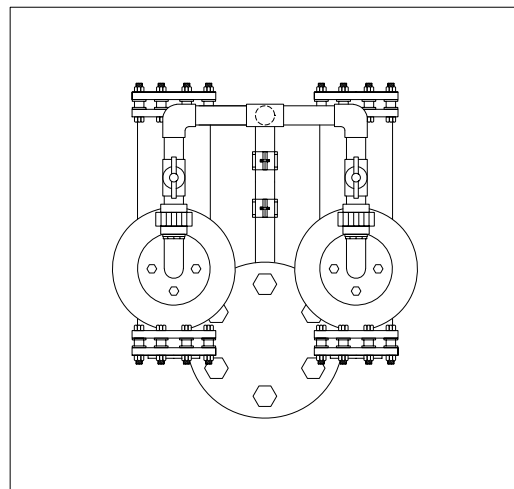
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6" AND LARGER

## SECTION B-B



4" PIPING

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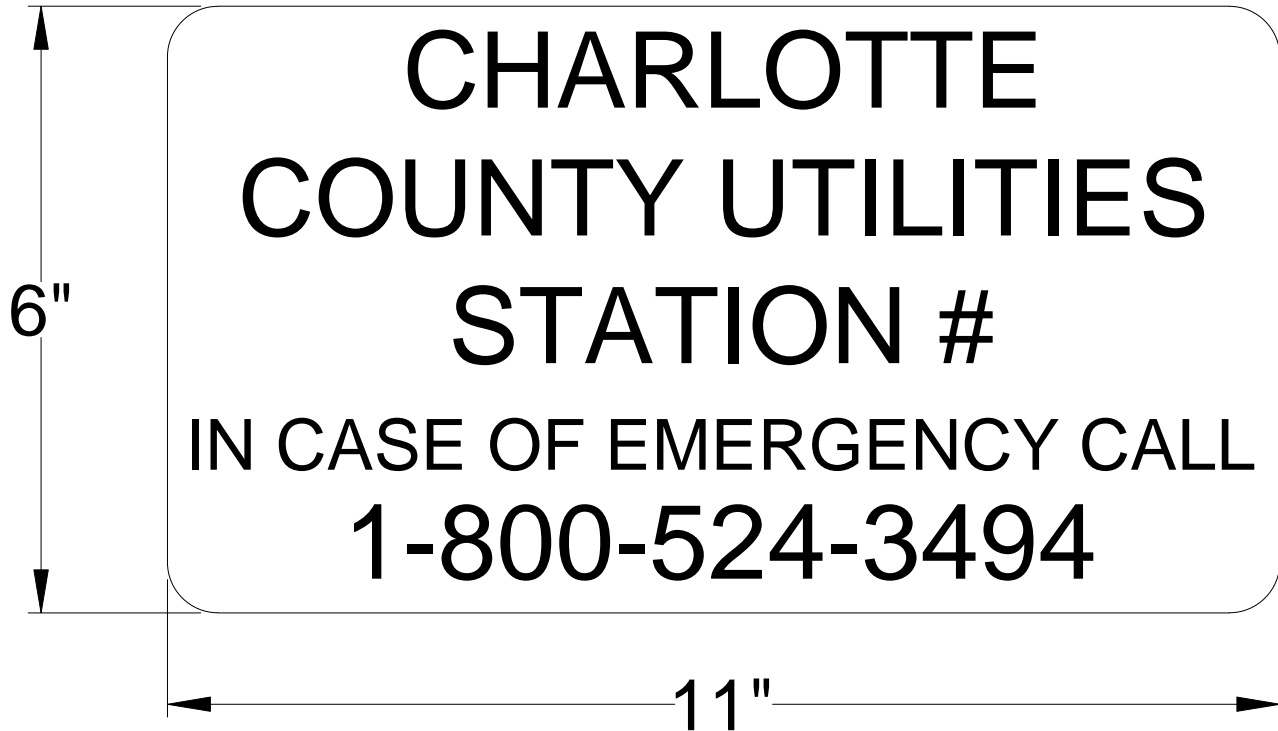
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# LIFT STATION AIR REALESE X- SECTION CHARLOTTE COUNTY UTILITIES

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# SIGN DETAIL

SIGN IS TO BE FURNISHED AND  
MOUNTED BY CCU.  
(IF NO FENCE, THEN SIGN IS TO BE  
MOUNTED ON CONTROL PANEL.)

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<b>CHARLOTTE COUNTY UTILITIES</b>		

## DRAWING LEGEND

1. FLYGT SUBMERSIBLE PUMP - TYPE \_\_\_\_\_, MODEL NO. \_\_\_\_\_, IMPELLER NO. \_\_\_\_\_, \_\_\_\_\_ VOLTS, H.P., \_\_\_\_\_ GPM @ \_\_\_\_\_ TDH, 3 PHASE WITH POWER CABLES ( 2 REQUIRED).
2. FLYGT COMPATIBLE \_\_\_\_\_" STANDARD DISCHARGE CONNECTION (2 REQ'D). ADJUST FOR PUMP TO WETWELL BOTTOM CLEARANCE AS REQUIRED BY PUMP MANUFACTURER WITH 4000 PSI TYPE II CONCRETE.
3. \_\_\_\_\_" DIAMETER SCH 40 WELDED STAINLESS STEEL PIPE TYPE 304, MUST BE WITHIN 1/4" TOLERANCE OF FITTING INTO GUIDE RAIL BRACKETS AS PER MFG. (4 REQUIRED)
4. \_\_\_\_\_" CLASS 53 D.I. EPOXY LINED PIPE, PLAIN END BY FLANGE END. (AS NEEDED)
5. PUMP POWER CABLE (FURNISHED BY MANUFACTURER) SHALL BE CONTINUOUS (NO SPLICES) FROM PUMP TO JUNCTION BOX AT PANEL (2 REQUIRED).
6. PUMP LIFTING CHAIN 3/8" TYPE 316 SS SUPPLIED WITH 3/8 CLEVIS TYPE 316 SS ON EACH END(2 REQUIRED).
7. ROTO FLOAT TYPE S LIQUID LEVEL SENSOR, EACH SENSOR CABLE SHALL BE CONTINUOUS (NO SPLICES) AND A MINIMUM OF 40 FEET IN LENGTH (5 REQUIRED).
8. LIQUID LEVEL SENSOR CABLE HOLDER TYPE 304SS WITH PUMP LIFTING CABLE RING. FURNISH WITH NOT LESS THAN 6 PRONGS.
9. \_\_\_\_\_" D.I.P.S. SDR 11 HDPE 90 DEGREE ELBOW WITH FUSED FLANGE W/ STAINLESS STEEL BACK UP RING AT SPOOL PIECE.
10. 2" CONDUIT FOR CABLES (3 REQUIRED). FROM TOP OF SWEEP TO CONTROL PANEL TO BE 316 STAINLESS STEEL & FROM TOP OF SWEEP TO INSIDE OF WETWELL TO BE PVC SCH. 80. END AT WETWELL TO BE SEALED WITH DUXSEAL. CLAMP CONDUIT TO BOTTOM STRUT OF CONTROL PANEL WITH STAINLESS STEEL CONDUIT CLAMPS. (SEE SECTION A-A OF WETWELL DETAIL.)
11. 2" FLANGED AUTOMATIC AIR-RELEASE VALVE D-020, MANUFACTURED BY A.R.I. ON LINE OR APPROVED EQUAL. WITH \_\_\_\_\_" EPOXY COATED STAINLESS STEEL STRAP SADDLE.
12. \_\_\_\_\_" x 24" LONG CLASS 53 DI EPOXY LINED PIPE FLANGE BY FLANGE.
13. \_\_\_\_\_" HDPE FUSION COUPLER (IF NEEDED)
14. \_\_\_\_\_"x \_\_\_\_\_" MJ REDUCER (IF NEEDED)
15. \_\_\_\_\_" MUELLER-A-2602-6-01-E193 OR M&H WITH FUSION BONDED EPOXY LINED "QUIET CLOSING SWING CHECK" WITH WEIGHT AND LEVER (ALL FASTENERS SHALL BE 316 SS).
16. \_\_\_\_\_" FLANGED DEZURIK SERIES 100,0600, RS26, LV PLUG VALVE (3 REQ'D).
17. \_\_\_\_\_" EPOXY LINED FLANGED TEE D.I. CLASS 53 WITH 316 SS HARDWARE.
18. \_\_\_\_\_" x \_\_\_\_\_" D.I. COMPANION FLANGE.
19. 6" ALUMINUM KAMLOK COUPLER WITH CAP AND CHAIN.
20. HALLIDAY S1R \_\_\_\_\_ ALUMINUM ACCESS COVER WITH STANDARD LOCKING BAR & FRAME OR APPROVED EQUAL. INSTALLED PER MFG. ACTUAL HATCH SIZE TO ACCOMADATE PUMPS (MIN. 36x48)
21. STATION VENT - COMPRISED OF 8" SCH 80 PVC RISER AND ONE PIECE FLANGE, 8" PVC BLANK FLANGE, AND 316 SS BOLTS, WASHERS AND NUTS (8 - 316 S.S. BOLTS & WASHERS REQUIRED). USE A 1-1/4" SCH 80 PVC SPACER AT EACH BOLT LOCATION. 1/8" THICK HEAVY FIBER GLASS SCREENING SHALL ALSO BE INSTALLED UNDER PVC SPACER. (SEE DETAIL "B" THIS PAGE).
22. \_\_\_\_\_" PVC PUSH ON 90° ELBOW RESTRAINED.
23. #5 REBAR AT 12" ON CENTER EACH WAY.
24. BITUMASTIC WRAP - MINIMUM 8" WIDE (TYPICAL)
25. UPPER GUIDE RAIL BRACKETS (2 REQUIRED) TYPE 304 SS, WITH 316 SS HARDWARE. AS PER PUMP MFG.

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# LIFT STATION LEGEND ONE

CHARLOTTE COUNTY UTILITIES

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26. FOR GUIDE RAILS OVER 15 FT INSTALL INTERMEDIATE GUIDE RAIL BRACKETS (2 REQUIRED) TYPE 316 SS, WITH 316 SS MOUNTING HARDWARE. TO BE INSTALLED PER DETAIL "A"
27. NOT USED
28. ANCHOR BOLTS TYPE 316 SS(PER MANUFACTURERS SPECS.) 4 PER PUMP
29. \_\_\_\_\_ " CLASS 53 DI EPOXY LINED SOLID SLEEVE - RESTRAINED JOINT.
30. TONGUE AND GROOVE JOINT WITH SQUEEZE IN - SQUEEZE OUT (DOUBLE RAM-NEK) (TYP).
31. PROVIDE 12 INCHES OF COMPACTED CRUSHED STONE OR PEA GRAVEL LEVELING COURSE. COMPACT TO STABILIZE. WETWELL SHALL BE PLACED ON UNDISTURBED SUB-BASE OR 100% COMPACTED CLEAN FILL.
32. ELASTOMERIC GASKET BOOT.
33. \_\_\_\_\_ " 316 STAINLESS STEEL INSERT
34. \_\_\_\_\_ " HDPE DIPS SDR-11 FUSED 90° ELBOW
35. "LINK SEAL" MODEL S-316 FOR D.I.P.S. / CAST OR CORE BIT DRILLED HOLE, TYPE WALL SLEEVE PIPE SUPPORTS W/ S.S. BOLTS (2).
36. ALL GASKETS SHALL BE 1/8" THICK SBR AS MANUFACTURED BY: U.S. PIPE "FLANGE - TYPE" OR AMERICAN CAST IRON PIPE "TORUSEAL".
37. \_\_\_\_\_ " MJ GATE VALVE WITH RISER & VALVE BOX AS SPECIFIED BY CCU ACCEPTED MATERIALS .
38. 1-5/8"x 1-5/8" SLOTTED 12 GAUGE CHANNEL STRUT C/W TYPE 316 S.S. NUTS, BOLTS AND U-BOLT. TO BE PLACED AT 6' INTERVALS ON PIPE LONGER THAN 10 FEET. IF LESS THAN 10 FEET, THEN PLACED AT MIDPOINT OF PIPE.
39. \_\_\_\_\_ " x \_\_\_\_\_ " D.I. FLANGED REDUCER EPOXY LINED (IF REQUIRED)
40. \_\_\_\_\_ " D.I.P.S. SDR 11 HDPE WITH FUSED FLANGE W/ STAINLESS STEEL BACK UP RING, INCLUDING 316 S.S. NUTS, BOLTS & WASHERS. (USE BENDS AS NECESSARY)
41. NOT USED
42. 5/8" x 6" 316 S.S. RED HEAD WITH WASHER AND NUT. (2 REQUIRED)
43. PRECAST CONCRETE WET WELL TOP, A MIN. OF 8" THICK, REINFORCED 4000 PSI TYPE II CONCRETE WITH BROOM FINISH.
44. PRECAST CONCRETE WETWELL SHALL CONFORM TO ASTM C478, SHALL BE ACID RESISTANT CEMENT AND SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI IN 28 DAYS. BASE SHALL BE MONOLITHIC WITH BOTTOM SECTION OF OF WETWELL.
45. POLYMORPHIC RESIN OR CLACIUM ALUMINATE OR EPOXY LINING
46. 8" CONCRETE SLAB TO BE FORMED AND POURED IN PLACE. SLAB IS TO BE 3000 PSI WITH FIBER MESH AND EVEN WITH WETWELL TOP AND TO HAVE A BROOM FINISH.
47. 1" OR 2" (MATCH A.R.V. DISCHARGE) PVC SCH. 80. DISCHARGE LINE FROM A.R.V's, WITH FITTINGS. (FROM A.R.V.'S TO TOP OF WETWELL SLAB)
48. CAST PVC SCH 80 A.R.V. PIPE INTO PROPOSED SLAB, EXTEND 2" BELOW BOTTOM OF EXISTING SLAB. PROTECT FROM PLUGGING DURING LINER APPLICATION.
49. STAINLESS STEEL SUPPORT CRADLE (SEE DETAIL) (4 REQUIRED)
50. \_\_\_\_\_ " x 90° EPOXY LINED MJ BEND. (RESTRAINED JOINT AND THRUST BLOCK AS REQUIRED) (2 REQUIRED)
51. \_\_\_\_\_ " x 90° EPOXY LINED DI FLANGED BEND

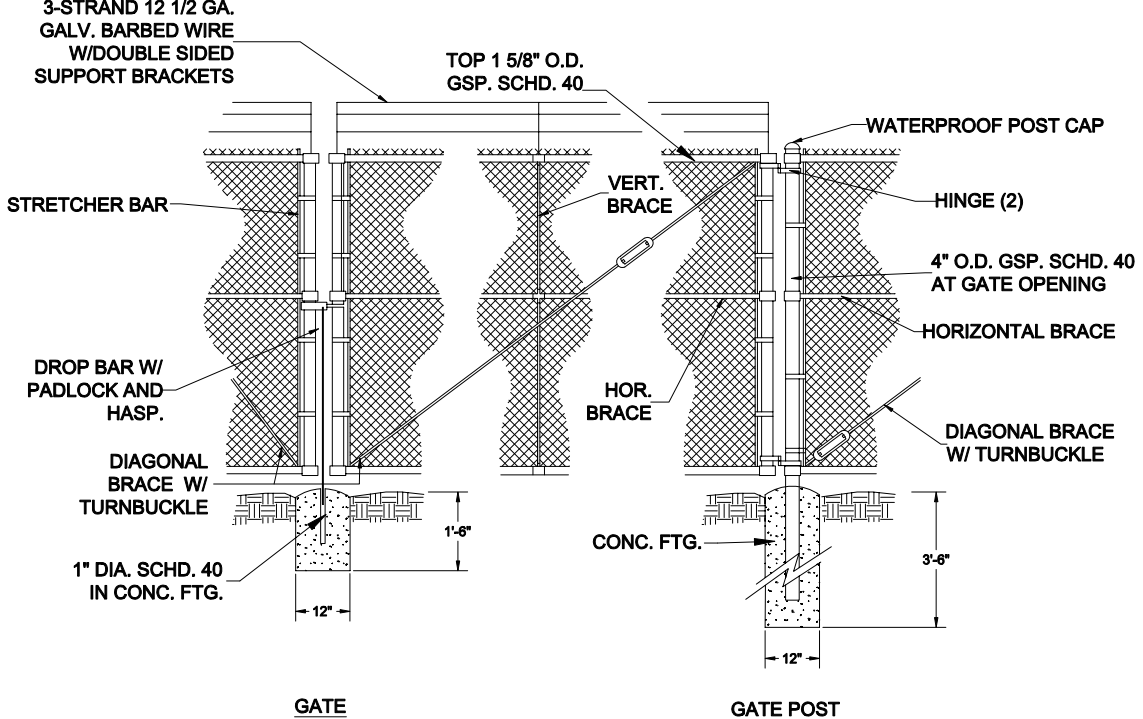
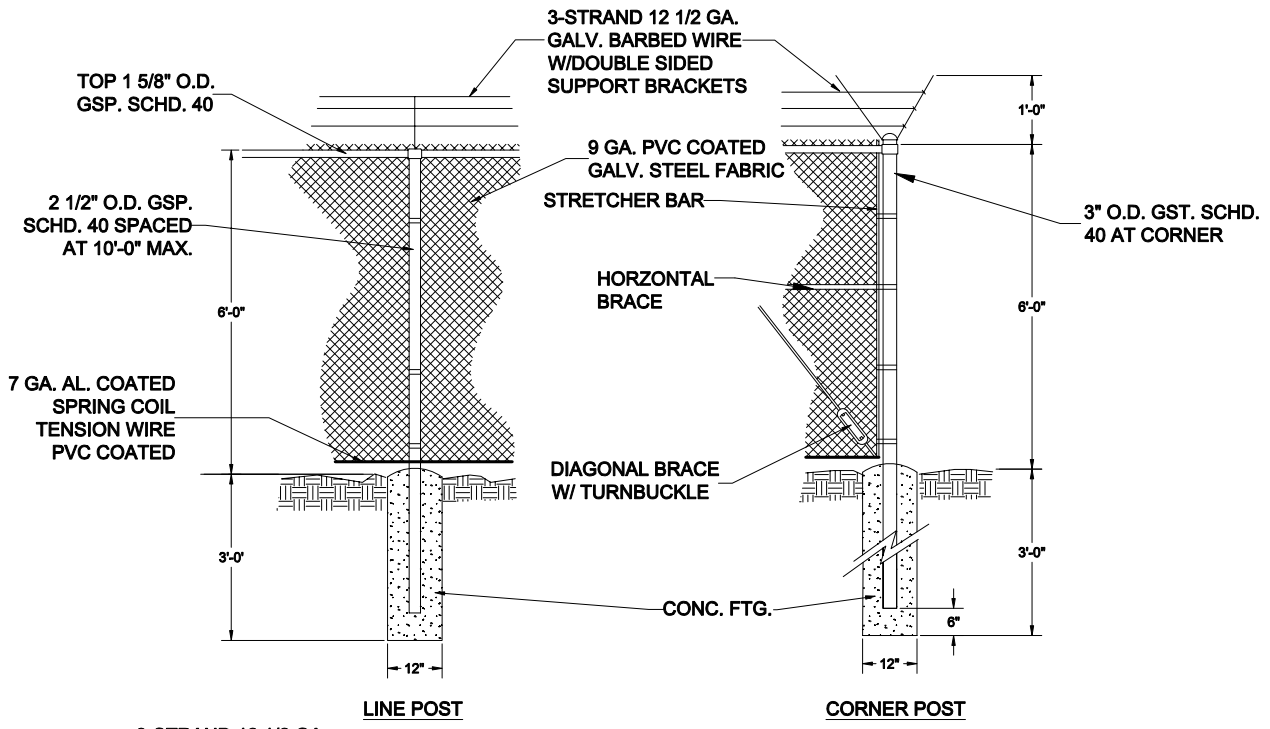
DATE: 1/1/2008	<b>LIFT STATION LEGEND TWO</b>	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN CCU APPROVAL.
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**NOTES:**

1. ALL NUTS, BOLTS, WASHERS, SET SCREWS AND THEIR FASTENERS INSIDE WET WELL AND VALVE PIT SHALL BE TYPE 316 STAINLESS STEEL.
2. ALL WET WELLS AND VALVE VAULTS SHALL BE EXFILTRATION TESTED FOR A MINIMUM OF 2 HOURS. THE TEST SHALL CONSIST OF PLUGGING ALL INLETS AND OUTLETS, THEN FILLING THE WETWELL OR VALVE VAULT WITH WATER TO THE RIM OF THE STRUCTURE. NO LEAKAGE SHALL BE ALLOWED. FILL STRUCTURE 24 HOURS PRIOR TO THE TIME OF TESTING.
3. IN THE ABSENCE OF A FENCE, ALL HATCHES, PANELS AND ENCLOSURES SHALL BE LOCKED TO PROHIBIT ENTRY OF ANIMALS AND UNAUTHORIZED PERSONS AS REQUIRED BY F.A.C. RULE 62-604.400(2)(D).
4. FINISHED GRADE OF LIFT STATION TOP MUST BE ABOVE 25 YEAR FLOOD ELEVATION AS REQUIRED BY F.A.C. RULE 62-604.400(2)(E).
5. LIFT STATION IS TO HAVE AN ACCESS DRIVE A MINIMUM OF 10' WIDE AND CONTINUOUS FROM ROAD TO ACCESS GATE. ACCESS DRIVE IS TO BE BUILT PER ENGINEER AND/OR CCU SPECIFICATIONS.
6. ALL EXPOSED NON-STAINLESS STEEL FERROUS METALS TO BE PAINTED AS SPECIFIED IN CHARLOTTE COUNTY UTILITIES GENERAL NOTES UNDER THE PROTECTIVE COATING (EXTERNAL) SECTION.
7. **EXTERIOR WET WELL WALLS:**

- A. PATCH LEAKS, CRACKS AND JOINTS WITH HYDRAULIC CEMENT, PRECO PLUG OR EQUIVALENT.
- B. ON ALL BELOW GROUND OUTSIDE CONCRETE SURFACES, APPLY THREE COATS (RED/BLACK/RED) COAL TAR EPOXY COATING WITH A MINIMUM DRY FILM THICKNESS OF 10 MILS PER COAT, FOR A TOTAL FINISH THICKNESS OF 30 MILS DRY FILM THICKNESS. COATINGS SHALL BE KOPPERS BITUMASIC NO. 300M OR APPROVED EQUAL. SUBSEQUENT COATS SHALL BE APPLIED WITHIN 48 HRS OF PREVIOUS COAT.
- C. SURFACES SHALL BE CLEAN AND DRY PRIOR TO COATING AND COATING SHALL BE APPLIED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.

DATE: 1/1/2008	<b>LIFT STATION NOTES</b>  <b>CHARLOTTE COUNTY UTILITIES</b>	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN CCU APPROVAL.
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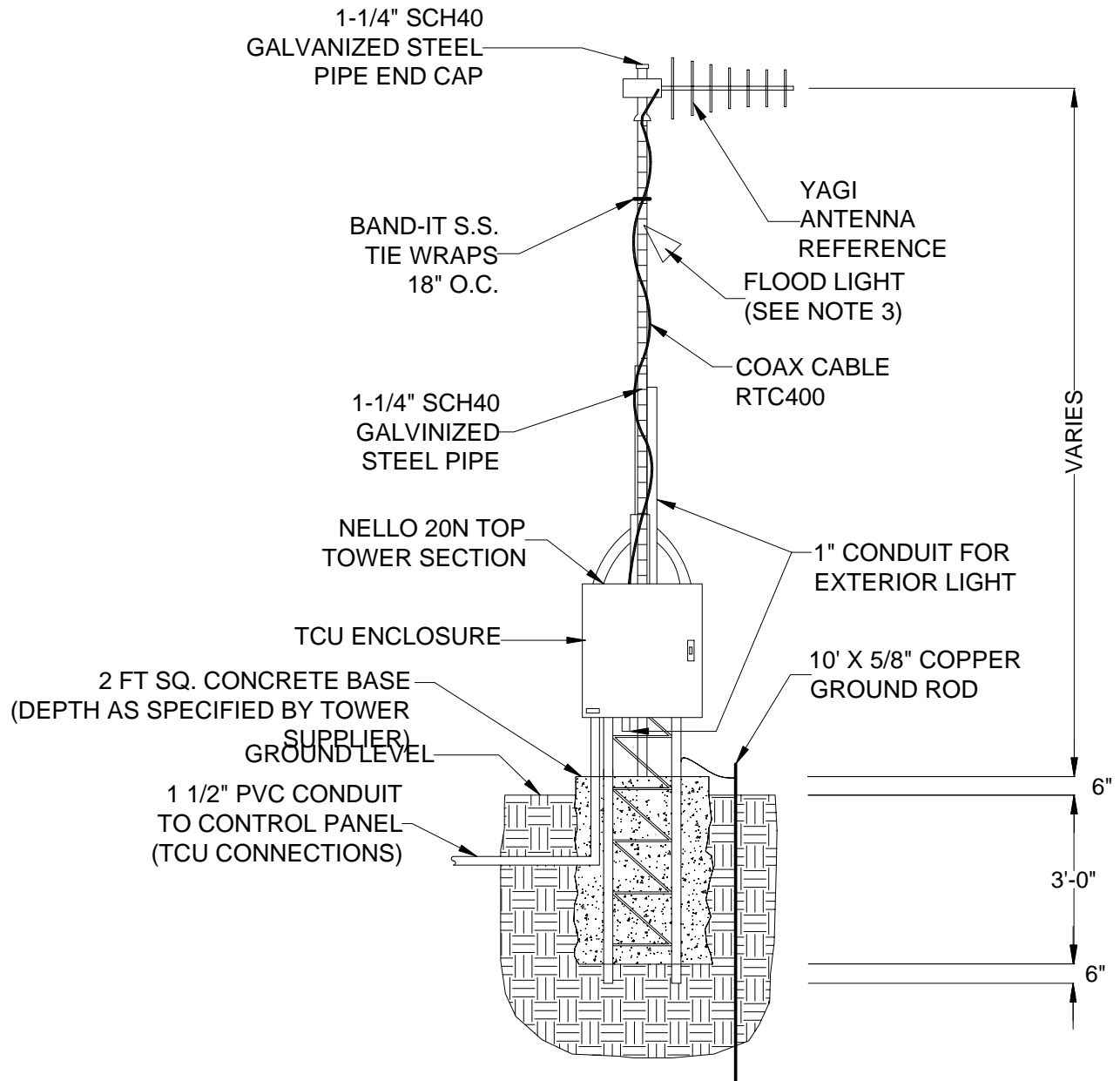
- NOTES:**
1. DOUBLE GATE TO BE 12'-0" CLEAR OPENING OR AS SPECIFIED.
  2. PVC COATED GALVANIZED STEEL WOVEN WIRE FABRIC TO BE STRETCHED TAUT W/STRETCHER BARS AND STRAPS AND FASTENED TOP & BOTTOM AND AT POSTS WITH GALV. PVC COATED PIG RING TIES. AS TO COMPLY WITH ASTM-392, CLASS II.
  3. GATE TO BE SECURED OPEN WITH GATE STOP SET IN CONCRETE.
  4. ALL HARDWARE, PIPE AND ACCESSORIES TO COMPLY TO ASTM 1-120,123,153 AND TO BE PVC COATED AND MATCH IN COLOR.
  5. COLOR OF FENCING SHALL BE BLACK. UNLESS APPROVED OTHERWISE.

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# LIFT STATION FENCE DETAIL

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**TCU ANTENNA  
GENERAL NOTES:**

1. POSITION OF CONTROL PANEL TO BE DETERMINED BY C.C.U. ENGINEER.
2. TCU AS SHOWN SHALL BE SUPPLIED AND INSTALLED BY DATA FLOW INC.
3. WEATHER-PROOF 300W QUARTZ FLOOD LIGHT. 120V GE QHF-300 SUITABLE FOR MOUNTING TO TCU ANTENNA MAST. (TYP OF 2) 1-1/2" CONDUIT TO CONTROL PANEL, 2 #12 & 1 #12 GND.

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**TCU ANTENNA**

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