SEWER EXHIBITS

S-1A  CONFLICT MANHOLE-TYPE "A" WASTEWATER AND STORMWATER PIPES
S-1B  CONFLICT MANHOLE-TYPE "B" WASTEWATER AND STORMWATER PIPES
S-2A  TYPICAL PVC SANITARY SEWER NEW CONNECTION w/CLEAN-OUT
S-2B  CLEAN-OUT DETAIL w/VALVE BOX COVER
S-3A  STANDARD 48" PRECAST MANHOLE FOR SEWERS 16" OR LESS IN DIA. (SECTION VIEW)
S-3B  STANDARD 48" PRECAST MANHOLE FOR SEWERS 16" OR LESS IN DIA. (PLAN VIEW)
S-3C  STANDARD 60" PRECAST MANHOLE FOR SEWERS >16" DIA OR >15 FT DEEP
S-3D  STANDARD NOTES PRECAST MANHOLES
S-3E  SANITARY RING AND COVER
S-4   TYPICAL DROP MANHOLE-OUTSIDE (GRAVITY TO GRAVITY)
S-5   CASING DETAILS - JACK AND BORE
S-6   DITCH BOTTOM CLEARANCE AND CONCRETE PROTECTIVE SLAB
S-7   BORING FOR UTILITIES
S-8A  RESTRAINED JOINT-STANDARD
S-8B  RESTRAINED JOINT FOR PVC C-900 PIPE (4" TO 12")
S-9A  VALVE AND TRACER WIRE (PAVED OR NON-PAVED AREAS)
S-9B  VALVE EXTENSION FOR PLUG VALVES W/ SHEAR PIN
S-10  CONCRETE VALVE PAD FOR UNPAVED AREAS
S-11  VALVE BOX AND MARKER INSTALLATION FOR PAVED AREAS
S-12A AUTOMATIC AIR RELEASE VALVE ASSEMBLY - STANDARD
S-12B AUTOMATIC AIR RELEASE VALVE ASSEMBLY - OFFSET
S-12C AUTOMATIC AIR RELEASE VALVE ASSEMBLY - OFFSET (NOT IN SERVICE)
S-12D AIR RELEASE RING AND COVER
S-13A STANDARD DUPLEX PUMP STATION MINIMUM SITE DIMENSIONS
S-13B IN-FILL GRINDER PUMP STATION MINIMUM SITE DIMENSIONS
S-14A TURNAROUND DETAIL LAYOUT "A" (WHEN REQUIRED)
S-14B TURNAROUND DETAIL LAYOUT "B" (WHEN REQUIRED)
S-15  TRENCH DETAIL - BACKFILL AND COMPACTION
STORM WATER M.H. FRAME AND COVER LABELED "STORM WATER"

S.S. FULL CIRCLE REPAIR CLAMP OR PVC COUPLING

PVC GRAVITY MAIN (TO NEAREST JOINT)

CUT STORM DRAIN PIPE FOR A CLEAR OPENING AROUND STEEL CASING

P.V.C. PIPE, 1 JOINT 18-20 FT.

STORM DRAIN

12 IN MIN.

STORM WATER M.H. FRAME AND COVER LABELED "STORM WATER"

STEEL CASING

LINK SEAL

PVC GRAVITY MAIN (TO NEAREST JOINT)

NOTE:

1. NO PIPE JOINT SHOULD BE INSIDE CONCRETE STRUCTURE.

2. MAINTAIN 12-INCH MINIMUM CLEARANCE BETWEEN STORM DRAIN PIPE FLOW CHANNEL AND BOTTOM OF STEEL CASING.
CONFLICT MANHOLE - TYPE 'B'
WASTEWATER AND STORMWATER PIPES
HILLSBOROUGH COUNTY, FLORIDA

DIMENSIONS

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
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<tr>
<td>4'-0&quot;</td>
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<td>15&quot;</td>
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<td>18&quot;</td>
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<td>4'-2&quot;</td>
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<td>6'-0&quot;</td>
<td>5'-6&quot;</td>
<td>3'-6&quot;</td>
<td>36&quot;</td>
</tr>
</tbody>
</table>
TYPICAL PVC SANITARY SEWER
NEW CONNECTION W/CLEANOUT
HILLSBOROUGH COUNTY, FLORIDA

NOTES:
1. CENTER A DOUBLE WYE FITTING ON THE LOT LINE.
2. INVERT OF SERVICE LATERAL SHALL NOT ENTER SEWER BELOW SPRING LINE.
3. THE TOP OF THE CLEANOUT SHALL TERMINATE 30 TO 40 INCHES ABOVE DESIGN GRADE UNTIL CONNECTION TO A STRUCTURE IS MADE.
4. ALL LATERALS SHALL BE CONSTRUCTED OF SDR 26 PVC.
5. ALL LATERAL LOCATIONS SHALL BE MARKED WITH AN "S" SAW CUT INTO THE TOP OF CURB.
6. CLEANOUTS SHALL NOT BE INSTALLED IN CONCRETE (NO DRIVEWAYS OR SIDEWALKS).

SPECIFICATION 333006

Exhibit No. S-2A
VALVE BOX COVER MARKED C/O OR SEWER, CAST IRON, 5-INCH MIN INSIDE DIAMETER

4-INCH PVC CLEAN-OUT THREADED PLUG (RECESSED) w/INVERTED 2-INCH KEY PLUG

FINISHED GRADE (UNPAVED)

1. ALL PIPING AND FITTINGS TO BE PVC SDR 26
2. CLEANOUT SHALL NOT BE INSTALLED IN CONCRETE
ACCESS RING & COVER PER APP. B LABELED "SANITARY SEWER"

TOP OF SOD

FACE CONCRETE GRADE RINGS WITH ACID RESISTANT COATING OR EPOXY MORTAR

8-INCH

2'-0"

FINISHED THROAT ID IS 2' MIN.

3-INCH MINIMUM 12-INCH NOMINAL 18-INCH MAX. 12-INCH MAX. FOR NEW CONST.

5-INCH WALL (MIN.)

PRECAST REINFORCED CONCRETE CONCENTRIC CONE SECTION KEYED TO LOWER WALL

PRECAST REINFORCED CONCRETE SECTIONS AS REQUIRED. KEYED TO ABUTTING SECTIONS.

FLEXIBLE PIPE CONNECTOR

SLOPE BENCH 1/2-INCH PER FOOT. USE ACID RESISTANT COATING ON BENCH & CHANNELS

PIPE SHALL NOT BE IN CONSTRUCTION JOINT OF MANHOLE SEE NOTE 5 ON EXHIBIT S-3D

SEE EXHIBIT S-3B

6-INCH SHELF MIN.

MINIMUM 6-INCH OF CRUSHED STONE

NOTE:
ALL STANDARD MANHOLE NOTES APPLY. REFER TO EXHIBIT No. S-3D. THIS DETAIL APPLIES TO MANHOLES WITH DEPTHS OF 5 FT TO 15 FT. IF DEPTH TO INVERT IS LESS THAN 5 FT, DESIGN EXCEPTION APPROVAL BY PUBLIC UTILITIES DEPARTMENT IS REQUIRED

STANDARD 48" PRECAST MANHOLE FOR SEWERS 16" OR LESS IN DIA
HILLSBOROUGH COUNTY, FLORIDA
UNREINFORCED CONCRETE BENCH WITH TROWEL FINISH. (4000 PSI, TYPE II CEMENT) PLASTER FINISH WITH ACID RESISTANT POLYMER OR EPOXY MORTAR.

INVERT OF SECONDARY ENTRY SHALL BE "A" ABOVE INVERT OF FLOW THRU PIPE

"A" | FLOW THRU PIPE SIZE
---|------------------
4"  | 8"
5"  | 10"
6"  | 12"
8"  | 16"

NOTE:
ALL STANDARD MANHOLE NOTES APPLY. REFER TO EXHIBIT No. S-3D.
FACE CONCRETE GRADE RINGS WITH ACID RESISTANT COATING OR EPOXY MORTAR

PRECAST REINFORCED CONCENTRIC CONCRETE CONE SECTION. KEYED TO LOWER WALL.

5-INCH WALL (MIN.)

FLEXIBLE PIPE CONNECTOR

PIPE SHALL NOT BE IN CONSTRUCTION JOINT OF MANHOLE SEE NOTE 4 ON EXHIBIT S-3D

8-INCH

SECTION VIEW

NOTE:
ALL STANDARD MANHOLE NOTES APPLY. REFER TO EXHIBIT S-3D. DETAIL APPLIES TO MANHOLES WITH DEPTHS GREATER THAN 15 FEET.

STANDARD 60" PRECAST MANHOLE FOR SEWERS >16" IN DIA OR >15' DEEP
HILLSBOROUGH COUNTY, FLORIDA

3/2020
SCALE: N.T.S.
NOTES:

1. PRECAST MANHOLE SECTIONS & BASES SHALL BE MANUFACTURED IN ACCORDANCE WITH LATEST EDITION OF ASTM C476 WITH 4000 P.S.I., TYPE II CEMENT (ASTM C150) OR POLYMER CONCRETE (AS APPROVED BY THE COUNTY).

2. CONCRETE PLACED IN MANHOLE INVERTS SHALL HAVE A MINIMUM 28 DAY COMpressive STRENGTH OF 4000 P.S.I. AND SHALL UTILIZE TYPE II CEMENT.

3. LIFT HOLES THROUGH PRECAST STRUCTURES ARE NOT PERMITTED.

4. ALL PIPE PENETRATIONS SHALL BE PRECAST OR CORE-DRILLED. THE PERIMETER OF A PENETRATION SHALL NOT BE CLOSER THAN 12 INCHES TO A BARREL SECTION JOINT.

5. FLEXIBLE PIPE CONNECTORS (ASTM C293) SHALL BE USED AT ALL PIPE PENETRATIONS.

6. JOINT CONTACT SURFACES SHALL BE SEALED USING A RUBBER GASKET PER THE MANUFACTURER'S RECOMMENDATION. GASKETS SHALL BE 1/2 INCH THICK WITH WIDTH AT LEAST 1/2 THE WALL THICKNESS. BUTYL AND MASTIC SEALANTS ARE NOT ACCEPTABLE.

7. THE INTERIOR OF THE GRADE RINGS SHALL BE PLASTERED WITH AN ACID RESISTANT COATING, OR EPOXY MORTAR, WHEN CONCRETE RINGS ARE USED.

8. THE MANHOLE COVER SHALL BE EQUIPPED WITH AN INFLOW PROTECTOR AND SHALL COMPLY WITH SPECIFICATION 333001, PART 3.3.8 AND THE APPROVED PRODUCTS LIST IN APP. B.

9. BOTTOM BARREL AND BASE OF MANHOLE TO BE MONOLITHICALLY CAST.


11. AN OUTSIDE DROP CONNECTION SHALL BE REQUIRED FOR ALL INFLUENT LINES WHICH HAVE AN INVERT 2-FOOT OR MORE ABOVE THE MANHOLE INVERT.

12. FOR NONSTANDARD MANHOLES, THE ENGINEER OF RECORD SHALL DESIGN ALL MANHOLE REINFORCEMENT STEEL AND JOINT DETAILS AND SHALL SUBMIT CALCULATIONS TO THE COUNTY FOR REVIEW.

13. PRECAST OR CORE-DRILLED PENETRATION DIAMETERS SHALL BE PER MANUFACTURER SPECIFICATIONS OR AS FOLLOWS: 12 INCH FOR 8 INCH DIAMETER PIPE. 14 INCH TO 16 INCH FOR 10 INCH DIAMETER PIPE. 16 INCH FOR 12 INCH DIAMETER PIPE.

14. MATERIALS OF CONSTRUCTION, PLACEMENT, AND COMPACTION REQUIREMENTS FOR BEDDING MATERIALS SHALL BE PER COUNTY SPECIFICATIONS.

15. FLOW CHANNELS SHALL BE CONSTRUCTED TO DIRECT INFLUENT INTO THE FLOW STREAM.

16. PROPERLY SHAPED SPILLWAYS SHALL BE CONSTRUCTED BETWEENPIPES WITH DIFFERENT INVERT ELEVATIONS TO PROVIDE FOR SMOOTH FLOWS.
NOTE:
ALL STANDARD MANHOLE NOTES AND DETAILS
APPLY. REFER TO EXHIBITS S-3A THROUGH S-3D

SECTION VIEW

TYPICAL DROP MANHOLE - OUTSIDE
FOR GRAVITY INTO GRAVITY
HILLSBOROUGH COUNTY, FLORIDA

3/2020
SCALE: N.T.S.
### NOTES:

1. VERTICAL DIMENSIONS TYPICAL FOR CASINGS
2. WITH CURB: 6’ STATE & 2’ COUNTY ROADS MINIMUM
   WITHOUT CURB: 8’ STATE & 4’ COUNTY ROADS MINIMUM
3. STEEL CASING PIPE SHALL CONFORM TO THE
   REQUIREMENTS OF AWWA C-200 AND ASTM A-139,
   GRADE B.
4. WHEN CASING IS INSTALLED WITHOUT BENEFIT OF A
   PROTECTIVE COATING, AND SAID CASING IS NOT
   CATHODICALLY PROTECTED, THE WALL THICKNESS
   SHOWN SHALL BE INCREASED TO THE NEAREST
   STANDARD SIZE WHICH IS A MINIMUM OF 0.063"
   GREATER THAN THE THICKNESS SHOWN EXCEPT FOR
   DIAMETERS LESS THAN 12.75”.
5. FOR REFERENCE ONLY.

### MINIMUM CASING SIZE AND THICKNESS

<table>
<thead>
<tr>
<th>Type</th>
<th>D.I.P.-M.J.</th>
<th>D.I.P.-P.O.</th>
<th>PVC</th>
<th>PVC FUSIBLE</th>
<th>STEEL CASING PIPE (D2)</th>
<th>WALL THICKNESS (T) ROADS</th>
<th>WALL THICKNESS (T) R.R.</th>
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<tbody>
<tr>
<td></td>
<td>4”</td>
<td>6”</td>
<td>8”</td>
<td>10”</td>
<td>12”</td>
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<td>18”</td>
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<td>26”</td>
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<table>
<thead>
<tr>
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<th>188&quot;</th>
<th>250&quot;</th>
<th>250&quot;</th>
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<th>250&quot;</th>
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<th>500&quot;</th>
<th>500&quot;</th>
<th>500&quot;</th>
<th>500&quot;</th>
<th>500&quot;</th>
</tr>
</thead>
</table>

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| WALL THICKNESS (T) R.R. | 188" | 188" | 219" | 250" | 281" | 312" | 406" | 406" | 406" | 406" | 469" | 469" | 562" | 625" | 719" | 781" | 875" |
|------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|

---

**Casing Details**

**Jack & Bore**

Hillsborough County, Florida

3/2020

Scale: N.T.S.
RESTRAINED JOINT PIPE TO EXTEND A MINIMUM OF 1 FULL PIPE LENGTH BEYOND LAST OFFSET FITTING

MIN. 4'-0" COVER

MIN. 2'-0" COVER ON SLAB

MIN. 6" COVER ON SLAB

MIN. 6" COVER

MIN. 6" CLEARANCE

MIN. 4'-0" COVER

11.25°/22.5°/45°BEND

DITCH BOTTOM CLEARANCE DETAIL

FINISHED GRADE

CONCRETE SLAB

CONCRETE SLAB

MIN. 6" COVER

MIN. 6" CLEARANCE

12" O.D. OF PIPE

12"

O.D. OF PIPE

CONCRETE SLAB

COMPACTED BACKFILL

NOTE: SLAB CONCRETE SHALL HAVE A MINIMUM OF 28 DAY COMpressive STRENGTH OF 3000 psi (min).
TRUNK DIAMETER MEASUREMENT TO BE MADE 4-1/2 FT. ABOVE EXIST GRADE.

EXAMPLE
DIVIDE 30" TRUNK DIAMETER BY 2. (30/2=15) EXCAVATION SHALL BE PROHIBITED WITHIN 15' OF THE TRUNK OR THE LIMITS OF THE DRIPLINE, WHICHERVER IS GREATER.

PROFILE VIEW

TRENCHING ZONE

NO TRENCHING ZONE

TRENCHING ZONE

AVOID BORING DIRECTLY BENEATH TREE IF AT ALL POSSIBLE

BORE UNDER TREE AT LEAST 48" DEEP

PLAN VIEW

BORE BENEATH @ 4 FT. DEPTH MIN.

DRIPLINE-VARIES

*15' (SEE EXAMPLE)
NOTES:
1. FOR LENGTH OF PIPE AND NUMBER OF JOINTS TO BE RESTRAINED SEE TABLE (THIS PAGE).
2. ONLY DUCTILE IRON FITTINGS SHALL BE USED AT JOINTS TO BE RESTRAINED UNLESS OTHERWISE APPROVED BY THE PUD DEPARTMENT.
3. ALL INTERNALLY RESTRAINED JOINTS SHALL BE MARKED IN RED.

MINIMUM DESIGN CRITERIA BEDDING
TYPE: 3
DESIGN PRESSURE: 150 PSI.
SAFETY FACTOR: 1.5
DEPTH OF COVER: 4.0 FT.

MINIMUM FOOTAGE OF PIPE RESTRAINT:

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<tr>
<th>PIPE SIZE (INCHES)</th>
<th>11-1/4°</th>
<th>22-1/2°</th>
<th>45°</th>
<th>90°</th>
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<td>H-B</td>
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<tr>
<td>VU-B</td>
<td>VU-B</td>
<td>VU-B</td>
<td>VU-B</td>
<td>VU-B</td>
</tr>
<tr>
<td>VD-B</td>
<td>VD-B</td>
<td>VD-B</td>
<td>VD-B</td>
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H-B: HORIZONTAL BEND
VU-B: VERTICAL-UP BEND
VD-B: VERTICAL-DOWN BEND
METHOD OF RESTRAINING PUSH-ON JOINT PIPE

DETAIL PUSH-ON JOINT

DETAIL M.J. JOINT

REstrained Joint
For PVC C-900 Pipe (4" To 12")
Hillsborough County, Florida
NOTES:

1. EXTENSION ON VALVE BOX SHALL BE SET SO AS TO RESERVE 1/2 OF THE ADJUSTMENT LENGTH FOR FUTURE USE.
2. OPERATING NUT SHALL BE SO AS TO BE WITHIN 12 INCHES OF GRADE. EXTENSION TO BE PROVIDED AS REQUIRED.
3. ALL NON-METALLIC PIPE SHALL REQUIRE TWO INSULATED 10 GAUGE SOLID COPPER OR COPPER CLAD STEEL CORE LOCATING WIRES TAPE WITH 2 INCH WIDE DUCT TAPE AT THE 10:00 AND 2:00 POSITIONS ON THE PIPE AT EVERY JOINT AND 4 TO 5 FEET SPACING. WIRE FOR DIRECTIONAL DRILL APPLICATIONS SHALL BE COPPER CLAD "HARD DRAWN" STEEL CORE WITH A MINIMUM BREAKING STRENGTH OF 1000 PSI.
4. LOCATING WIRES TO TERMINATE 4 INCHES ABOVE THE CONCRETE VALVE PAD AND FOLDED BACK INSIDE THE 3-INCH PVC ACCESS PIPE AND PLUGGED.
5. LOCATING WIRES SHALL BE CAPABLE OF DETECTION BY A CABLE LOCATOR AND PASS A FIELD CONDUCTIVITY TEST THAT IS WITNESSED BY THE COUNTY FROM END TO END OF WIRES.
6. SPLICES SHALL BE CAPABLE OF COMPLETE SUBMERSION.
7. NO MORE THAN ONE SPLICE BETWEEN VALVES IS ALLOWED.
NOTE: OPERATING NUT SHALL BE WITHIN 12 INCHES OF GRADE.

2-INCH MALE NUT (SQ)

1-1/4-INCH SCH 40 BLACK STEEL PIPE

CUT 1-INCH EXTENSION STEM TO NEEDED LENGTH

1-INCH SCH 40 BLACK STEEL PIPE

4-INCH MAX

WELDED CONNECTION

BRASS SHEAR PIN (5/16-INCH X 2-INCH)

DRILL 5/16-INCH HOLES FOR PIN

WELDED CONNECTION

2-INCH FEMALE NUT TO FIT OVER VALVE NUT

VALVE NUT

VALVE EXTENSION FOR PLUG VALVES W/SHEAR PIN

HILLSBOROUGH COUNTY, FLORIDA
NOTES:
1. CONCRETE TO BE TYPE I GENERAL PORTLAND CEMENT WITH 3/4" TOP SIZE AGGREGATE AND SHALL DEVELOP A 28-DAY STRENGTH OF 3000 P.S.I.
2. REINFORCING STEEL SHALL BE 6x6 - W 1.4xW 1.4 W.W.F.
3. CONCRETE VALVE PAD SHALL BE POURED IN PLACE AND SHALL BE SET 1" ABOVE FINISHED GRADE

CONCRETE VALVE PAD
(FOR UNPAVED AREAS)
HILLSBOROUGH COUNTY, FLORIDA

SCALE: N.T.S.

3/2020
SPECIFICATION 333006

**EXAMPLE "A"**

- TOP FLUSH WITH FINISHED GRADE
- ASPHALT SURFACE
- 4-INCH x 4-INCH x 18-INCH LONG (MIN.) PRECAST POST WITH 3-1/2-INCH DIAMETER BRONZE SURVEY MARKER DISC SET IN GROUT AS SHOWN.
- EXAMPLE "A"
  - 3-1/2-INCH BRONZE SURVEY MARKER DISC FIELD STAMP AS REQUIRED. (SEE NOTE)
  - CONCRETE GUTTER
  - BASE
- VALVE BOX AND COVER (TYP.)
- 24-INCH x 24-INCH x 6-INCH CONCRETE COLLAR w/WWF 4X4 - W2.1xW2.1

**EXAMPLE "B"**

- NOTE:
  - BRONZE IDENTIFICATION DISC SHALL BE REQUIRED FOR ALL VALVES.
- SIZE OF VALVE
- TYPE OF VALVE
- SERVICE
- DIRECTION & NUMBER OF TURNS TO OPEN

**MARKER DISC DETAIL**

**VALVE BOX AND MARKER INSTALLATION FOR PAVED AREAS**

HILLSBOROUGH COUNTY, FLORIDA

3/2020

SCALE: N.T.S.
NOTES:
1. ADJUST DEPTH OF PROPOSED FORCE MAIN SO VALVE VAULT CAN BE INSTALLED FLUSH WITH THE PROPOSED GRADE.
2. ENGINEER SHALL SUBMIT FLOTATION CALCULATIONS TO THE COUNTY. VAULT SHALL BE TRAFFIC BEARING (H-20).
3. SEE APPENDIX B FOR APPROVED PRODUCTS.
NOTES:

1. THE MINIMUM DEPTH OF THE ENTIRE PROPOSED FORCE MAIN SHALL BE INCREASED AS SHOWN TO ENSURE THE VALVE VAULT FOR AN AUTOMATIC ARV CAN BE INSTALLED FLUSH WITH THE PROPOSED GRADE. * IF A FOSTER ADAPTER IS USED THE DEPTH OF BURY CAN BE REDUCED 10 INCHES

2. ENGINEER SHALL SUBMIT FLOTATION CALCULATIONS TO THE COUNTY. VAULT SHALL BE TRAFFIC BEARING (H-20).

3. SEE APPENDIX B FOR APPROVED PRODUCTS.
NOTES:

1. THE MINIMUM DEPTH OF THE ENTIRE PROPOSED FORCE MAIN SHALL BE INCREASED AS SHOWN TO ENSURE THE VALVE VAULT FOR AN AUTOMATIC ARV CAN BE INSTALLED FLUSH WITH THE PROPOSED GRADE. * IF A FOSTER ADAPTER IS USED THE DEPTH OF BURY CAN BE REDUCED 10 INCHES

2. ENGINEER SHALL SUBMIT FLOTATION CALCULATIONS TO THE COUNTY. VAULT SHALL BE TRAFFIC BEARING (H-20).

3. SEE APPENDIX B FOR APPROVED PRODUCTS.
SANITARY RING AND COVER

HILLSBOROUGH COUNTY, FLORIDA

3/2020

SCALE: N.T.S.
MINIMUM DEPTH FROM BOC TO ROW IS 13 FT PER TTM

STANDARD DUPLEX PUMP STATION
MINIMUM SITE DIMENSIONS
HILLSBOROUGH COUNTY, FLORIDA

<table>
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<th>DIAM (FT)</th>
<th>MIN. SLAB</th>
<th>MIN. PARCEL (FT)</th>
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<tr>
<td>6</td>
<td>26'-6&quot;</td>
<td>66'-6&quot; 61'</td>
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<td>28'-6&quot;</td>
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</tr>
<tr>
<td>10</td>
<td>31'</td>
<td>71'    64'</td>
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3/2020
IN-FILL GRINDER PUMP STATION
MINIMUM SITE DIMENSIONS
HILLSBOROUGH COUNTY, FLORIDA

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<th>WETWELL DIAM (FT)</th>
<th>MIN. SLAB (FT)</th>
<th>MIN. PARCEL (FT)</th>
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<tr>
<td>6</td>
<td>24' 18'</td>
<td>64' 58'</td>
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NOTE: THE DIMENSIONS ARE BASED ON THE MINIMUM PUMP STATION LAYOUT AS SHOWN IN EXHIBIT S-13A.
NOTE: THE DIMENSIONS ARE BASED ON THE MINIMUM PUMP STATION LAYOUT AS SHOWN IN EXHIBIT S-13A
STAGE 1: BACKFILL LAYERS SHALL NOT EXCEED 6 INCHES OF LOOSE THICKNESS BEFORE BEING COMPACTED.

STAGE 2: BACKFILL LAYERS SHALL NOT EXCEED 6 INCHES OF LOOSE THICKNESS BEFORE BEING COMPACTED.

STAGE 3: BACKFILL LAYERS SHALL NOT EXCEED 12" LIFTS.

NOTES:
1. TESTING: SEE 333001 or 333002, PART 4.11 FOR TESTING REQUIREMENTS.
2. BEDDING: 6 INCH BEDDING (MIN) AS REQUIRED. IN THE EVENT UNSUITABLE OR UNSTABLE SOIL IS ENCOUNTERED, REMOVE IT AND REPLACE WITH MATERIAL MEETING AASHTO SOIL CLASSIFICATION A-1, A-2, OR A-3. SEE 333001 or 333002 SECTION 4.4.
3. STAGE 1: ADEQUATE COMPACTED FILL SHALL BE PLACED ABOVE THE BEDDING MATERIAL AND BENEATH THE HAUNCHES OF THE PIPE. BACKFILL LAYERS SHALL NOT EXCEED 6 INCHES OF LOOSE THICKNESS BEFORE BEING COMPACTED.
4. STAGE 2: BACKFILL LAYERS SHALL NOT EXCEED 6 INCH OF LOOSE THICKNESS BEFORE BEING COMPACTED. COMPACTION SHALL BE 98% OF THE MAXIMUM DENSITY (AASHTO T-180/ASTM D1557) TO A POINT 1 FT ABOVE THE PIPE (OR AS STATED IN THE SPECIFICATION).
5. STAGE 3: BACKFILL LAYERS SHALL NOT EXCEED 12 INCH LIFTS. COMPACTION SHALL BE 98% OF THE MAXIMUM DENSITY (AASHTO T-180/ASTM D1557) OR AS STATED IN THE SPECIFICATION.