# RECLAIMED EXHIBITS

<table>
<thead>
<tr>
<th>Exhibit No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>R-1A</td>
<td>RECLAIMED WATER METER ASSEMBLY- COMMERCIAL 1 INCH AND LESS</td>
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<tr>
<td>R-1B</td>
<td>RECLAIMED WATER METER ASSEMBLY- COMMERCIAL 1-1/2 INCH &amp; 2 INCH METERS</td>
</tr>
<tr>
<td>R-1C</td>
<td>RECLAIMED WATER METER ASSEMBLY- 3, 4 AND 6-INCH METERS (NON-TELEMETRY)</td>
</tr>
<tr>
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<td>RECLAIMED WATER METER ASSEMBLY-GOLF COURSE OR 4-INCH AND LARGER COMMERCIAL CONNECTION W/TELEMETRY</td>
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<tr>
<td>R-1E</td>
<td>RECLAIMED WATER METER ASSEMBLY-GOLF COURSE &amp; COMMERCIAL, 4-INCH AND GREATER DETAILS &amp; NOTES</td>
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<td>RESIDENTIAL SERVICE LAYOUT</td>
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<td>R-2B</td>
<td>RESIDENTIAL SINGLE RECLAIMED WATER SERVICE</td>
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<td>R-2C</td>
<td>RESIDENTIAL DUAL RECLAIMED WATER SERVICE (NEAR SIDE ONLY)</td>
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<td>R-2D</td>
<td>RESIDENTIAL RECLAIMED WATER SERVICE INSTALLATION (METER BOX OVER MAIN)</td>
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<tr>
<td>R-2E</td>
<td>RESIDENTIAL RECLAIMED WATER SERVICE INSTALLATION (NEAR SIDE)</td>
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<tr>
<td>R-2F</td>
<td>RESIDENTIAL RECLAIMED WATER SERVICE INSTALLATION (FAR SIDE)</td>
</tr>
<tr>
<td>R-3</td>
<td>RECLAIMED WATER ADVISORY SIGN</td>
</tr>
<tr>
<td>R-4A</td>
<td>2&quot; BLOW-OFF ASSEMBLY</td>
</tr>
<tr>
<td>R-4B</td>
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<td>RESTRAINED JOINT-STANDARD</td>
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<td>R-5B</td>
<td>RESTRAINED JOINT FOR PVC C-900 PIPE (4&quot; TO 12&quot;)</td>
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<td>R-6A</td>
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<td>R-6B</td>
<td>AUTOMATIC AIR RELEASE VALVE ASSEMBLY- STANDARD</td>
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<tr>
<td>R-6C</td>
<td>AUTOMATIC AIR RELEASE VALVE ASSEMBLY- OFFSET</td>
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<tr>
<td>R-6D</td>
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<tr>
<td>R-6E</td>
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<td>R-7</td>
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<td>R-8</td>
<td>VALVE BOX AND MARKER INSTALLATION (FOR PAVED AREAS)</td>
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<td>HOSE BIBB CONNECTION ASSEMBLY</td>
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<td>R-13A</td>
<td>GATE VALVE AND TRACER WIRE (PAVED AND NON-PAVED AREAS)</td>
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<td>R-13B</td>
<td>VALVE EXTENSION FOR GATE VALVES</td>
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<td>R-14</td>
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<td>R-15</td>
<td>TRENCH DETAIL - BACKFILL AND COMPACTION</td>
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</tbody>
</table>

### LISTING OF RECLAIMED WATER EXHIBITS

- R-1A
- R-1B
- R-1C
- R-1D
- R-1E
- R-2A
- R-2B
- R-2C
- R-2D
- R-2E
- R-2F
- R-3
- R-4A
- R-4B
- R-5A
- R-5B
- R-6A
- R-6B
- R-6C
- R-6D
- R-6E
- R-7
- R-8
- R-9
- R-10
- R-11
- R-12
- R-13A
- R-13B
- R-14
- R-15

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**HILLSBOROUGH COUNTY, FLORIDA**

**3/2020**

**SCALE: N.T.S.**
METER & METER BOX SHALL COMPLY WITH SPECIFICATION 339001, PART 2.11

NOTES:

1. TEMPORARY IDENTIFICATION: EACH SERVICE SHALL TERMINATE AT A METER VALVE WHICH SHALL BE BURIED 6 INCHES, ± 1 INCH, BELOW FINAL GRADE AND SHALL BE CLEARLY MARKED WITH A 2 INCH x 2 INCH x 18 INCH STAKE WITH THE TOP PAINTED PURPLE IN ACCORDANCE WITH SPECIFICATION 339001, PART 2.11.

2. PERMANENT IDENTIFICATION: WHEN THE ROADWAY IS COMPLETE, INSTALL A PERMANENT MARKER (DAS TYPE) ON THE ROADWAY CURB TO IDENTIFY THE LOCATION OF THE METER VALVE AND SERVICE CONNECTION.

3. ALL PIPING, TUBING AND ADAPTERS TO BE DEVELOPER INSTALLED.
SECTION "A-A"

NOTES:

1. TEMPORARY IDENTIFICATION: EACH SERVICE SHALL TERMINATE AT A CURB STOP WHICH SHALL BE BURIED 6 INCHES, ± 1 INCH, BELOW FINAL GRADE AND SHALL BE CLEARLY MARKED WITH A 2 INCH x 2 INCH x 18 INCH STAKE WITH THE TOP PAINTED PURPLE IN ACCORDANCE WITH SPECIFICATION 339001, PART 2.11.

2. PERMANENT IDENTIFICATION: WHEN THE ROADWAY IS COMPLETE, INSTALL A PERMANENT MARKER (DAS TYPE MARKER) ON THE ROADWAY CURB TO IDENTIFY THE LOCATION OF THE METER VALVE AND SERVICE CONNECTION.

3. ALL PIPING, TUBING AND ADAPTERS TO BE DEVELOPER INSTALLED.
NOTES:

1. ALL PIPE SHALL BE DUCTILE IRON CLASS 53, CEMENT LINED WITH FLANGE FITTINGS FOR ABOVE GROUND USE. UNDERGROUND PIPE SHALL BE CLASS 50 DUCTILE IRON WITH RESTRAINED JOINTS. (REFER TO DETAIL FOR LIMITS).

2. CONCRETE SLAB AND BOLLARD POSTS SHALL COMPLY WITH MINIMUM DIMENSIONS AS SHOWN IN DETAIL. IF LENGTH OF SLAB EXCEEDS 10 FEET AN ADDITIONAL 2 BOLLARDS SHALL BE ADDED IN THE MIDDLE FOR PROTECTION.

3. CONCRETE SLAB SHALL BE REINFORCED WITH 6x6-W1.4 x W1.4 WELDED WIRE FABRIC AND SHALL BE TYPE 1, PORTLAND CEMENT WITH A MINIMUM 28-DAY STRENGTH OF 3000psi.

3, 4 AND 6-INCH (NON-TELEMETRY) RECLAIMED WATER METER ASSEMBLY

HILLSBOROUGH COUNTY, FLORIDA

3/2020

SCALE: N.T.S.
### Flow Meter and Pipe Sizes

<table>
<thead>
<tr>
<th>Meter Size (In.)</th>
<th>Max Flow Rate (GPM)</th>
<th>Pipe Size &quot;A&quot; (Dia, In.)</th>
<th>Pipe Size &quot;B&quot; (Dia, In.)</th>
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<tbody>
<tr>
<td>4</td>
<td>400</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>900</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>8</td>
<td>1500</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>10</td>
<td>2500</td>
<td>12</td>
<td>10</td>
</tr>
</tbody>
</table>

### General Notes

1. Power Supply Details Not Shown. Contractor Responsible for Connecting Instrumentation and Electrical Requirements.

2. Meter Size Requirement Provided by County.

3. Contact County for Control Panel Specs.

4. Fencing to be 6' Wood Privacy Fence Around Meter Slab. Install 4' Lockable Gate on One End & Hedge Around Remaining 3 Sides. Gate Lock to Be County Standard Master Lock.

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**Reclaimed Water Meter Assembly**

**Golf Course or 4" and Larger Commercial Connection w/Telemetry**

**Hillsborough County, Florida**

**Scale: N.T.S.**

**Exhibit No. R-1D**

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**Flow Meter and Pipe Sizes**

<table>
<thead>
<tr>
<th>Meter Size (In.)</th>
<th>Max Flow Rate (GPM)</th>
<th>Pipe Size &quot;A&quot; (Dia, In.)</th>
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<tr>
<td>6</td>
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<td>8</td>
<td>6</td>
</tr>
<tr>
<td>8</td>
<td>1500</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>10</td>
<td>2500</td>
<td>12</td>
<td>10</td>
</tr>
</tbody>
</table>
NOTES:

1. USE SS MOUNTING HARDWARE. USE WASHERS AND SPLIT-LOCK WASHERS UNDER ALL NUTS.
2. COMPONENTS DESIGNATED WITH * ARE SUPPLIED BY INSTRUMENT MANUFACTURER.
3. CONNECT MSC TO TJB WITH WATERTIGHT CORD GRIP.
4. SECURE FLOAT SWITCH CABLE TO CHANNEL WITH SS ADJUSTABLE WORM CLAMPS, AS REQUIRED.
5. LOCATE CHANNEL IN POND WITHIN 3 FT OF SHORELINE.

General Notes:

1. ALL PIPE SHALL BE DUCTILE IRON CLASS 53, CEMENT LINED WITH FLANGE FITTINGS FOR ABOVE GROUND USE. UNDERGROUND PIPE SHALL BE CLASS 50 DUCTILE IRON WITH RESTRAINED JOINTS. (REFER TO DETAIL FOR LIMITS).
2. METERS TO COMPLY WITH PRE-APPROVED METERS IN APPENDIX B. METER SHALL BE SUPPLIED WITH REMOTE MOUNT TRANSMITTER TO PRODUCE A 4-20MA SIGNAL PROPORTIONAL TO FLOW.
3. CONCRETE METER SLAB SHALL EXTEND BEYOND LIMITS OF FENCING AS SHOWN ON THE DRAWINGS.
4. CONCRETE METER SLAB SHALL COMPLY WITH MINIMUM DIMENSIONS AS SHOWN IN THE DETAILS.
5. CONCRETE SLAB SHALL BE REINFORCED WITH 6X6-W1.4 X W1.4 AND SHALL BE TYPE 1, PORTLAND CEMENT WITH A MINIMUM 28-DAY STRENGTH OF 3000PSI.
6. CONTACT UTILITY PLANNING TEAM OF THE HILLSBOROUGH COUNTY PUD FOR ADDITIONAL INFORMATION REGARDING CONSTRUCTION REQUIREMENTS, PIPE SIZES, CONTROL VALVE SIZE, METER REQUIREMENTS, AND ELECTRICAL AND INSTRUMENTATION EQUIPMENT AND CONDUITS.
7. PROVIDE MOUNTING RACK AND SUNSHIELD FOR PLC CONTROL PANELS AND FLOW TRANSMITTER. MOUNTING RACK SHALL CONSIST OF AT LEAST TWO VERTICAL MEMBERS, ALUMINUM OR STAINLESS STEEL.
8. TERMINATE FILL LINE ABOVE HIGH WATER LEVEL OF POND. PROVIDE RIP RAP AS NECESSARY TO PREVENT EROSION.
9. LEVEL DEVICES SHALL BE SUITABLE FOR APPLICATION AND APPROVED BY COUNTY.
10. GATE VALVES 10 INCHES AND LARGER SHALL BE INSTALLED IN THE HORIZONTAL POSITION. ALL GATE VALVES SHALL HAVE HAND WHEEL OPERATORS.
TYPICAL SINGLE SERVICE (NEAR SIDE)
1-INCH HDPE TUBING

1-INCH HDPE SERVICE LINE (FAR SIDE)

TYPICAL SINGLE SERVICE (FAR SIDE)

TYPICAL FAR SIDE DOUBLE SERVICE

1-INCH HDPE TUBING
3-INCH PVC OR HDPE SLEEVE (PURPLE)

STORM STRUCTURE

RECLAIMED WATER MAIN

(2) 1-INCH HDPE SERVICE LINES (FAR SIDE)

METER TO BE BETWEEN 4’ & 6’ FROM BACK OF CURB.

NOTE:
1. SLEEVE SHALL BE EXTENDED 24 INCHES PAST ANY PAVED SURFACE WITHIN DEDICATED R/W.
2. EACH SERVICE SHALL TERMINATE AT A METER VALVE WHICH SHALL BE BURIED 6 INCHES, ± 1 INCH, BELOW FINAL GRADE AND SHALL BE CLEARLY MARKED WITH A 2-INCH x 2-INCH x 18-INCH STAKE WITH THE TOP PAINTED PURPLE AND MARKED WITH THE LOT NUMBER SERVED.
3. STATIONING NOT REQUIRED IF SERVICE IS LOCATED ON LOT LINE.
4. 18-INCH MIN. SPACING BETWEEN SERVICE TAPS ON RECLAIMED WATER MAIN SHALL BE MAINTAINED.
NOTES:

1. NO SERVICE LINE SHALL TERMINATE UNDER A DRIVEWAY.

2. TEMPORARY IDENTIFICATION: EACH SERVICE SHALL TERMINATE AT A METER VALVE WHICH SHALL BE BURIED 6 INCHES, ± 1 INCH, BELOW FINAL GRADE AND SHALL BE CLEARLY MARKED WITH A 2-INCH x 2-INCH x 18-INCH STAKE WITH THE TOP PAINTED PURPLE AND MARKED WITH THE LOT NUMBER SERVED.

SECTION "A-A"

RESIDENTIAL SINGLE RECLAIMED WATER SERVICE

HILLSBOROUGH COUNTY, FLORIDA

3/2020

SCALE: N.T.S.
NOTES:
1. NO SERVICE LINE SHALL TERMINATE UNDER A DRIVEWAY.
2. TEMPORARY IDENTIFICATION: EACH SERVICE SHALL TERMINATE AT A METER VALVE WHICH SHALL BE BURIED 6 INCHES, ± 1 INCH, BELOW FINAL GRADE AND SHALL BE CLEARLY MARKED WITH A 2 INCH x 2 INCH x 18 INCH STAKE WITH THE TOP PAINTED PURPLE AND MARKED WITH THE LOT NUMBER SERVED.
NOTE:

1. CAST BRONZE COMPRESSION FITTING CONNECTIONS SHALL BE USED & INSTALLED IN ACCORDANCE WITH COUNTY SPECIFICATIONS.

2. METER AND METER BOX SUPPLIED BY HILLSBOROUGH COUNTY.

3. REDUCE HDPE AT THE METER WITH A BRASS REDUCER.

4. NO SERVICE LINE SHALL TERMINATE UNDER A DRIVEWAY.

5. EACH SERVICE SHALL TERMINATE AT A METER VALVE WHICH SHALL BE BURIED 6 INCHES, ± 1 INCH, BELOW FINAL GRADE AND SHALL BE CLEARLY MARKED WITH A 2-INCH x 2-INCH x 18-INCH STAKE WITH THE TOP PAINTED PURPLE AND MARKED WITH THE LOT NUMBER SERVED.
NOTE:

1. CAST BRONZE COMPRESSION FITTING CONNECTIONS SHALL BE USED & INSTALLED IN ACCORDANCE WITH COUNTY SPECIFICATIONS.

2. METER SUPPLIED BY HILLSBOROUGH COUNTY.

3. REDUCE HDPE AT THE METER WITH A BRASS REDUCER.

4. NO SERVICE LINE SHALL TERMINATE UNDER A DRIVEWAY.

5. EACH SERVICE SHALL TERMINATE AT A METER VALVE WHICH SHALL BE BURIED 6 INCHES, ± 1 INCH, BELOW FINAL GRADE AND SHALL BE CLEARLY MARKED WITH A 2-INCH x 2-INCH x 18-INCH STAKE WITH THE TOP PAINTED PURPLE AND MARKED WITH THE LOT NUMBER SERVED.

RESIDENTIAL RECLAIMED WATER SERVICE INSTALLATION (NEAR SIDE)

HILLSBOROUGH COUNTY, FLORIDA

3/2020

SCALE: N.T.S.
NOTE:

1. CAST BRONZE COMPRESSION FITTING CONNECTIONS SHALL BE USED & INSTALLED IN ACCORDANCE WITH COUNTY SPECIFICATIONS.

2. METER SUPPLIED BY HILLSBOROUGH COUNTY.

3. REDUCE HDPE AT THE METER WITH A BRASS REDUCER.

4. NO SERVICE LINE SHALL TERMINATE UNDER A DRIVEWAY.

5. EACH SERVICE SHALL TERMINATE AT A METER VALVE WHICH SHALL BE BURIED 6 INCHES, ± 1 INCH, BELOW FINAL GRADE AND SHALL BE CLEARLY MARKED WITH A 2-INCH x 2-INCH x 18-INCH STAKE WITH THE TOP PAINTED PURPLE AND MARKED WITH THE LOT NUMBER SERVED.
Hillsborough County Florida

RECLAIMED WATER
USED FOR IRRIGATION

DO NOT DRINK
NO BEBER

RECLAIMED WATER
ADVISORY SIGN
HILLSBOROUGH COUNTY, FLORIDA

3/2020
SCALE: N.T.S.
NOTES:
1. ALL BRASS/STAINLESS PIPE AND FITTINGS SHALL BE THREADED SCH. 40.
2. CAM-LOCK MALE ADAPTER & DUST CAP SHALL BE STAINLESS STEEL/THREADED.
3. ACTUAL LENGTH OF BLOWOFF PIPING TO BE DETERMINED IN THE FIELD.
4. DEFLECT OR INSTALL FITTINGS AS REQUIRED TO MAINTAIN COVER AND TO SET BLOW-OFF ASSEMBLY PLUMB.
5. EXTENSION OF VALVE BOX SHALL BE SET SO AS TO RESERVE 1/2 OF THE ADJUSTMENT LENGTH FOR FUTURE USE.
6. A FULL SIZE IN-LINE VALVE MAY BE USED AT PROJECT PHASE LINES. THE VALVE MAY REQUIRE RELOCATION, IF THE VALVE FALLS WITHIN CONCRETE IN THE NEXT PHASE.

HILLSBOROUGH COUNTY, FLORIDA

SCALE: N.T.S.

3/2020
BLOW-OFF ASSEMBLY
AT CUL-DE-SAC
HILLSBOROUGH COUNTY, FLORIDA

3/2020
SCALE: N.T.S.
**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 SPECIFIED BY THE PUD DEPARTMENT.
3. ALL INTERNALLY RESTRAINED JOINTS SHALL BE MARKED RED.

**MINIMUM DESIGN CRITERIA BEDDING**

TYPE: 3  
DESIGN PRESSURE: 150 PSI.  
SAFETY FACTOR: 1.5  
DEPTH OF COVER: 3.0 FT.

**MINIMUM FOOTAGE OF PIPE RESTRAINT**

<table>
<thead>
<tr>
<th>PIPE SIZE (INCHES)</th>
<th>11-1/4&quot;</th>
<th>22-1/2&quot;</th>
<th>45°</th>
<th>90°</th>
<th>TEE</th>
<th>DEAD END PLUG</th>
<th>REDUCER</th>
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<tbody>
<tr>
<td>H-B</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
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</tr>
<tr>
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<tr>
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<td></td>
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<tr>
<td>VD-B</td>
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</tbody>
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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
RECLAIMED WATER DISTRIBUTION MAIN

3 IN DEPTH (MIN.) OF 1/4 IN AGGREGATE

90° BEND

2 INCH QUICK COUPLING MALE ADAPTER (CAMLOCK) W/ 2 INCH CAP - STAINLESS

2 INCH CURB STOP BRASS, LOCKABLE

90 DEG. BEND

3 IN DEPTH (MIN.) OF 1/4 IN AGGREGATE

UNION WITHIN 12" OF GRADE

TAPPING SADDLE

TRAFFIC BEARING WATER METER BOX & COVER (AASHTO H-20)

2 INCH BRASS PIPE & FITTINGS (TYPICAL)

2 INCH CORPORATION STOP

FINISHED GRADE

2 IN TO 6 INCH

HILLSBOROUGH COUNTY, FLORIDA

AIR RELEASE VALVE-MANUAL

3/2020

SCALE: N.T.S.
NOTES:

1. THE MINIMUM DEPTH OF THE ENTIRE PROPOSED RECLAIMED WATER MAIN SHALL BE INCREASED AS SHOWN TO ENSURE THE VALVE VAULT FOR AN AUTOMATIC ARV CAN BE INSTALLED FLUSH WITH THE PROPOSED GRADE.

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

3. SEE APPENDIX B FOR APPROVED PRODUCTS.
NOTE:

1. THE MINIMUM DEPTH OF THE ENTIRE PROPOSED RECLAIMED WATER 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 A FLOTATION CALCULATION TO THE COUNTY. VAULT SHALL BE TRAFFIC BEARING (H-20).

3. SEE APPENDIX B FOR APPROVED PRODUCTS.
NOTE:

1. THE MINIMUM DEPTH OF THE ENTIRE PROPOSED RECLAIMED WATER 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 DECREASED 10 INCHES.

2. ENGINEER SHALL SUBMIT A FLOTATION CALCULATION TO THE COUNTY. VAULTS SHALL BE TRAFFIC BEARING (H-20).

3. SEE APPENDIX B FOR APPROVED PRODUCTS.
CONCRETE VALVE PAD
(FOR UNPAVED AREAS)
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 1.4 x W 1.4

3. CONCRETE VALVE PAD SHALL BE Poured IN PLACE AND SHALL BE SET 1 INCH ABOVE FINISHED GRADE
VALVE BOX AND MARKER INSTALLATION FOR PAVED AREAS

HILLSBOROUGH COUNTY, FLORIDA

3/2020

SCALE: N.T.S.

EXAMPLE "A"

4-INCH x 4-INCH x 18-INCH (MIN.) PRECAST POST WITH 3-1/2-INCH DIAMETER BRONZE SURVEY MARKER DISC SET IN GROUT AS SHOWN.

EXAMPLE "B"

NOTE:
BRONZE IDENTIFICATION DISC SHALL BE REQUIRED FOR ALL VALVES.
NOTE:
1. ALL LETTERING SHALL BE CAPITALIZED AND AT LEAST ONE INCH IN HEIGHT.
2. "DO NOT DRINK" SYMBOL SHALL APPEAR IN BETWEEN "RECLAIMED WATER" LETTERING.
3. REMAINDER OF OPEN SURFACE SHALL BE CROSS HATCHED TO REDUCE SLIPPING ACCIDENTS.
4. COLOR OF BOX AND LID SHALL BE PANTONE 522C.
5. A METAL REINFORCED PICK HOLE SHALL BE CENTERED ON THE LIFTING SIDE OF THE LID.
6. THE OPTION OF HAVING LOCKING TABS TO PREVENT "FLOATING" SHALL BE BY REQUEST ONLY.
7. SEE APPENDIX B FOR PRE-APPROVED BOXES.
8. LID THICKNESS TO BE 1.5 INCH MIN.

<table>
<thead>
<tr>
<th>DIMENSION *</th>
<th>SINGLE</th>
<th>DUAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>11 1/8&quot;</td>
<td>14 5/8&quot;</td>
</tr>
<tr>
<td>B</td>
<td>18&quot;</td>
<td>16 5/8&quot;</td>
</tr>
<tr>
<td>C</td>
<td>12&quot;</td>
<td>12&quot;</td>
</tr>
</tbody>
</table>

* ALL DIMENSIONS ± 1/8"
3/4" CAM LOCK RUBBER HOSE UNIT
3/4" MALE NIPPLE (BRASS) (STANDARD NOZZLE SIZE)
1 1/2" CENTER PUNCH CLAMPS (STAINLESS STEEL)
NY-GLASS CAM/GROOVE 3/4" COUPLING (PART E)
NY-GLASS CAM/GROOVE 3/4" COUPLING (PART B)
3/4" FULL PORT VALVE T580 (BRASS)
3/4" x 2" NIPPLE (GALVANIZED)
3/4" CURB STOP
3/4" x 90° ELBOW (GALVANIZED)

3/4" CAM LOCK RUBBER HOSE UNIT
3/4" MALE NIPPLE (BRASS) (STANDARD NOZZLE SIZE)
1 1/2" CENTER PUNCH CLAMPS (STAINLESS STEEL)
NY-GLASS CAM/GROOVE 3/4" COUPLING (PART E)
NY-GLASS CAM/GROOVE 3/4" COUPLING (PART B)
3/4" FULL PORT VALVE T580 (BRASS)
3/4" x 2" NIPPLE (GALVANIZED)
3/4" CURB STOP
3/4" TEE (GALVANIZED)

HOSE BIBB CONNECTION ASSEMBLY

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

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(1) STEEL CASING PIPE (D2)

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<th>WALL THICKNESS (T) ROADS</th>
<th>188&quot;</th>
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(2) WALL THICKNESS (T) R.R.

| WALL THICKNESS (T) R.R. | 188" | 188" | 219" | 250" | 281" | 312" | 406" | 406" | 469" | 469" | 562" | 626" | 719" | 781" |

PRESSURE MAIN TO BE RESTRAINED
WITH MANUFACTURERS RESTRAINED
JOINTS THROUGH CASING. USE (3)
THREE SS CASING SPACERS (MIN.)
CENTERED ON EACH PIPE LENGTH.
DITCH BOTTOM CLEARANCE DETAIL

CONCRETE SLAB

NOTE: SLAB CONCRETE SHALL HAVE A MINIMUM OF 28 DAY
COMPRESSIVE STRENGTH OF 3000 psi (min).
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 WITHIN 12 INCHES OF GRADE. EXTENSION TO BE PROVIDED AS REQUIRED.
3. ALL NON-METALIC 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 POSITION 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 CONCRETE VALVE PAD AND FOLDED BACK INSIDE 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)

WELDED CONNECTION

1 INCH SCH 40
BLACK STEEL PIPE

WELDED CONNECTION

2 INCH FEMALE NUT TO
FIT OVER VALVE NUT

VALVE NUT
EXAMPLE
DIVIDE 30 INCH TRUNK DIAMETER BY 2. (30/2=15) EXCAVATION SHALL BE PROHIBITED WITHIN 15 FT OF THE TRUNK OR THE LIMITS OF THE DRIPLINE, WHICHEVER IS GREATER.

TRUNK DIAMETER MEASUREMENT TO BE MADE 4-1/2 FT. ABOVE EXIST GRADE.

DRIPLINE

EXIST. GROUND

TRENCHING ZONE

TRENCHING ZONE

NO TRENCHING ZONE

3 FT

PROFILE VIEW

AVOID BORING DIRECTLY BENEATH TREE IF AT ALL POSSIBLE

BORE UNDER TREE AT LEAST 36 INCHES DEEP

BORE BENEATH @ 3 FT. DEPTH MIN.

DRIPLINE-VARIES

EXIST. GRADE

TRENCHING ZONE

TRENCHING ZONE

PROFILE VIEW

PLAN VIEW

BORING FOR UTILITIES

HILLSBOROUGH COUNTY, FLORIDA

3/2020

SCALE: N.T.S.
STAGE 3: BACKFILL LAYERS SHALL NOT EXCEED 12 INCH LIFTS.

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

TRENCH BOTTOM SHALL BE HAND EXCAVATED TO CLEAR PIPE BELL

3 FT MIN.

TRENCH WIDTH
MIN. = 1 FT + PIPE O.D.

6 INCH PIPE BEDDING (MIN)
(AS REQUIRED)

UNDISTURBED SOIL

STAGE 1: BACKFILL LAYERS SHALL NOT EXCEED 6 INCHES OF LOOSE THICKNESS BEFORE BEING COMPACTED.

NOTES:

1. TESTING: SEE 339001, SECTION 4.12 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 339001, 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 INCHES 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.