# ROADWAY AND RELATED CONSTRUCTION:

1100 ENVIRONMENTAL
   - 1105: Median Soil: Composition and Depth
   - 1111: Tree Protection

1150 STORMWATER TREATMENT AND CONTROL

1200 DRAINAGE AND DRAINAGE STRUCTURES
   - 1250: Storm Sewer Cover
   - 1255: P.C.E.D Curb Inlets (Types RC-3, 4 and 5)
   - 1260: P.C.E.D. J5 & J6 Curb Inlets
   - 1265: Filter Fabric Wrap and Grout at Structures
   - 1281: Underdrain Inspection Manhole Type 1
   - 1282: Underdrain Inspection Manhole Type 2
   - 1290: Roadside Underdrain Installation
   - 1291: Pavement Cuts, Excavation & Restoration

1300 CURBS, DRIVEWAYS, PAVEMENT AND SIDEWALKS
   - 1305: Curb and Gutter Type A and Header Curb
   - 1315: Valley Gutter and Transition
   - 1340: Concrete Driveway Apron
   - 1345: Residential Driveway/Sidewalk Paver Detail
   - 1353: Sidewalks through Existing Driveways
   - 1357: Guidelines for Sidewalk Alignment
   - 1360: P.C.E.D. Type “A” and “B” Handicap Ramp Detail
   - 1365: P.C.E.D. Trail Intersection Crossing Detail
   - 1380: Traffic Sign Installation Into Concrete

1400 BARRIERS, BARRICADED AND FENCES
   - 1406: Barricade with Reflectors

1500 MISCELLANEOUS

1700 TRAFFIC
   - 1700: Concrete Square CCTV Camera Pole
   - 1705: CCTV Mounting Detail
   - 1710: Electronic Route Marker Detail
   - 1720: VVDS Installation Details
   - 1725: Mast Arm Conduit Entrance Detail
UTILITIES:

GENERAL DETAILS:
PCU GD 1: Trench Backfill Detail (See 1291)
PCU GD 2: Main Clearances Detail
PCU GD 3: Tracer Wire Layout Detail
PCU GD 3a: Tracer Wire Installation Detail
PCU GD 4: Valve Box/Tracer Wire Installation Detail
PCU GD 5: Concrete Valve Box and Collar Detail
PCU GD 6: Reverse Deadman Restraint Detail
PCU GD 7: Bollard Detail
PCU GD 8: Jack and Bore Under Roadway Detail
PCU GD 9: Jack and Bore Under Railway Detail
PCU GD 10: Fusible PVC/HDPE Pipe Connections Detail
PCU GD 10a: Fusible PVC/HDPE Pipe Connections Detail
PCU GD 11: Pressure Main Restrained Joint Detail
PCU GD 12: CUL-DE-SAC-Potable Water Detail
PCU GD 13: Typical Pressure Offset Relocation Detail
PCU GD 14: Automatic Flushing Assembly Detail

RECLAIM WATER DETAILS:
PCU RD 1: 1" Reclaimed Service Connection (Non-metered) Detail
PCU RD 2: 1½" or 2" Reclaimed Service Connection (Non-metered) Detail
PCU RD 3: 1½" or 2 Metered Reclaimed Water Service Detail
PCU RD 4: Reclaimed Water Flushing Assembly Detail
PCU RD 5: CUL-DE-SAC Layout - Reclaimed Water Detail
PCU RD 6: 2" Offset Air Release Assembly for Reclaimed Water (Below Ground) Detail

SANITARY SEWER DETAILS:
PCU SD 1: Manhole Construction Notes
PCU SD 1a: Standard Manhole (Pre-cast) Detail
PCU SD 1b: Inside Drop Manhole Connection Detail
PCU SD 1c: Outside Drop Manhole Connection Detail
PCU SD 1d: Doghouse Air Release Valve Manhole Detail
PCU SD 2: Sewer Air Release/Air Vacuum Valve in Manhole (12" Pipe or Less) Detail
PCU SD 3: Offset Air Release Assembly for 4"-12" and Larger Sanitary Sewer (Above Ground) Detail
PCU SD 4: Sewer Service Connection and Clean-Out Detail
PCU SD 5: Depth Limitations of Sanitary Sewer Pipe Detail

WATER DETAILS:
PCU WD 1: Temporary Sampling Point Detail
PCU WD 2: 2" Permanent Water Blow-Off Detail
PCU WD 3: ¾" or 1" Potable Water Service Connection Detail
PCU WD 4: 1½" or 2" Potable Water Service Connection Detail
PCU WD 5: Typical Fire Hydrant Locations Detail
PCU WD 6: Fire Hydrant Assembly Detail
PCU WD 7: Parallel Fire Hydrant Detail
PCU WD 8: Water Quality Sampling Detail

PINELLAS COUNTY
STANDARD DETAILS
INDEX SHEET 2 OF 2
NOTES:
1. 6" FINISH SOIL LAYER SHALL COMPLY WITH SECTION 162 OF F.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION.
2. REMOVE UNSUITABLE MATERIAL (EXISTING PAVEMENTS, ROADWAY BASE, LIMEROCK, MILLINGS AND OTHER DEBRIS), TO A MAXIMUM DEPTH OF 18" BELOW FINISHED GRADE IN MEDIAN AREAS. MEDIAN FILL SOIL, FOR AREAS THAT ARE EXCAVATED, SHALL BE NATIVE SITE SOILS APPROVED BY THE ENGINEER. IN THE ABSENCE OF SUFFICIENT NATIVE SITE SOILS, REPLACEMENT FILL SHALL BE SUITABLE FOR PLANT GROWTH AND APPROVED BY THE ENGINEER. EXCAVATION AND REPLACEMENT SOIL SHALL BE INCLUDED IN PAY ITEM FOR "EXCAVATION OF UNSUITABLE MATERIAL."
3. DO NOT DISTURB EXISTING MEDIAN SOILS EXCEPT TO REMOVE EXISTING UNSUITABLE MATERIALS LISTED IN NOTE NO. 2, OR TO CONSTRUCT PROPOSED IMPROVEMENTS.
4. GROUND SURFACE ELEVATION OF MEDIAN SHALL BE AS SHOWN ON APPROVED PLANS.
1. No tree shall be removed unless specifically tagged for removal by the engineer.
2. The contractor shall take special care not to damage trees that are to remain.
3. Roots greater than 1" diameter shall not be cut unless otherwise approved by the engineer.
4. All root pruning shall be performed by an ISA certified arborist in accordance with ANSI-A300 standards.
5. Stockpiled materials or unnecessary vehicular traffic shall not be allowed over any tree roots system.
6. Barrier shall be constructed when called for on plans or as directed by the engineer. Barriers shall be maintained in place until removal is directed by the engineer.
7. Cost of all tree barricades shall be included in pay item 800-9004 (clearing & grubbing).
8. Substitution for wooden (1" x 2" min.) beams with other materials require pre-approval by the county engineer.

** REQUIRED DISTANCES FROM TREE TRUNK **

* 2/3 the drip line or 6 feet, whichever is greater.
**Drip line for pines/conifers and cabbage palms or 6 feet, whichever is greater.

2/3 OF THE DRIP LINE FOR HARDWOODS
FULL DRIP LINE FOR PINES

1" X 2" (MIN)
2" X 2" (TYP.)

3'-0" (TYP.)

2/3 of the drip line for hardwoods
Full drip line for pines

BARRIER

PINELLAS COUNTY

TREE PROTECTION

DETAIL INDEX I.D.: 1111

DATE: FEB/2016

REVISION:
NOTES:
1. THIS COVER IS NOT TO BE USED FOR SANITARY SEWER MANHOLES.
2. THIS COVER MAY BE USED WITH FRAME TYPE I, II OR III AS DETAILED IN F.D.O.T. INDEX No. 201.
   TYPE I SHALL BE USED UNLESS OTHERWISE SPECIFIED IN THE PLANS.
3. MATERIALS AND FABRICATION SHALL CONFORM TO SECTION 425 OF THE FLORIDA DEPARTMENT OF
   TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
4. COVERS FOR UNDERDRAIN CLEANOUTS SHALL BE LABELED UNDERDRAIN AND NOT STORM SEWER.

PINELLAS COUNTY
STORM SEWER COVER
NOTES:
1. SECTIONS 'A'-'A' AND 'B'-'B' ARE ON SHEET 2 OF 4.
2. SECTIONS 'C'-'C', 'D'-'D', AND 'E'-'E' ON THIS SHEET SHOW TRANSITION FOR PINELLAS COUNTY
   TYPE 'A' CURB AND GUTTER (PC INDEX 1305).
3. TRANSITION FOR TYPE 'F' CURB IS ON SHEET 4 OF 4.
4. SECTION 'F'-'F' IS ON SHEET 3 OF 4.
5. RC-4 IS SYMMETRICAL ABOUT THE CENTERLINE.
6. RC-5 IS CONSTRUCTED WITHOUT WINGS.

PLAN VIEW

SECTION C-C

SECTION D-D

SECTION E-E

PINELLAS COUNTY

P.C.E.D. CURB INLET (TYPES RC-3, 4, AND 5)

SHEET 1 OF 4
NOTES:
1. RC-4 IS SYMMETRICAL ABOUT THE CENTERLINE.
2. RC-5 IS CONSTRUCTED WITHOUT WINGS.

USF 1286-BJ SLAB TYPE
RING AND COVER

SECTION A-A

(A Varies)

SECTION B-B

(PINELLAS COUNTY)

P.C.E.D. CURB INLET (TYPES RC-3, 4, AND 5)
SHEET 2 OF 4
1. RC-4 IS SYMMETRICAL ABOUT THE CENTERLINE.
2. RC-5 IS CONSTRUCTED WITHOUT WINGS.

SECTION F-F

ADDITIONAL # 5 BAR ALONG ENTIRE LENGTH OF NOSING

NOSING DETAIL

KEY DETAIL

PINELLAS COUNTY

P.C.E.D. CURB INLET (TYPES RC-3, 4, AND 5)
SHEET 3 OF 4
1. THESE INLETS FOR USE WITH PINELLAS COUNTY AND WITH F.D.O.T. TYPE 'A' CURB AND GUTTER, AND WITH TYPE 'F' CURB (FOR USE WITH TYPE 'F', SEE DETAILS FOR TYPE 'F' CURB TRANSITION).

2. CENTERLINES OF INLETS SHOULD BE LOCATED AT PROPERTY LINES UNLESS OTHERWISE APPROVED.

3. COVER FOR ALL REINFORCING STEEL SHALL BE 2" MINIMUM.

4. SUGGESTED MAXIMUM INLET DESIGN FLOWS FOR 0.4% PROFILE GRADE AND 1/4"/FT. CROSS SLOPE.
   - RC-3: 4.5 CFS (3'-6" WIDTH) / 5.5 CFS (5'-0" WIDTH)
   - RC-4: 6.5 CFS (3'-6" WIDTH) / 7.5 CFS (5'-0" WIDTH)
   - RC-5: 3 CFS (3'-6" WIDTH) / 4 CFS (5'-0" WIDTH)

5. INLETS SHALL BE CONSTRUCTED OF REINFORCED CONCRETE, AND MAY BE EITHER PRECAST OR Poured IN PLACE.

6. CONCRETE SHALL BE CLASS II, WITH Fe' = 3400 PSI (MIN.). (Fe' = 4000 PSI (MIN.) FOR TOP SLAB).

7. REINFORCING STEEL SHALL BE GRADE 60, DEFORMED, AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A 615 (GRADE 60 TOP SLAB.)


9. UNLESS OTHERWISE NOTED, ALL EXPOSED EDGES AND CORNERS OF CONCRETE SHALL HAVE A 3/4" CHAMFER.

10. F.D.O.T. TYPE 'J' BOTTOM MAY BE USED WITH 'RC-3', 'RC-4' AND 'RC-5' INLETS. IN SUCH CASES THE STRUCTURE BOTTOM MAY BE ROTATED AS DIRECTED BY ENGINEER IN ORDER TO FACILITATE CONNECTIONS BETWEEN THE STRUCTURE WALLS AND STORM SEWER PIPES.

11. INLET SHOWN IS TYPE 'RC-3' (SINGLE WING). TYPE 'RC-4' (DOUBLE WING) IS THE SAME AS 'RC-3', EXCEPT THAT IT IS SYMMETRICAL ABOUT CENTERLINE OF BOX, AND RC-5 IS THE SAME, EXCEPT THAT IT IS CONSTRUCTED WITHOUT WINGS.

12. SECTIONS 'C'-C' AND 'D'-D' ON THIS SHEET SHOW TRANSITION FOR TYPE 'F' CURB.
1. COVER FOR ALL REINFORCING STEEL SHALL BE 2" MINIMUM.
2. INLETS SHALL BE CONSTRUCTED OF REINFORCED CONCRETE, AND MAY BE EITHER PRECAST OR POURED IN PLACE.
3. CONCRETE SHALL BE CLASS II, WITH $f' = 3400$ PSI (MIN). CONCRETE SHALL BE IN ACCORDANCE WITH SECTION 346 OF F.D.O.T.'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
4. REINFORCING STEEL SHALL BE GRADE 60, DEFORMED, AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A 615.
5. UNLESS OTHERWISE NOTED, ALL EXPOSED EDGES AND CORNERS OF CONCRETE SHALL HAVE A $\frac{3}{4}$" CHAMBER.
6. SEE F.D.O.T. INDEX 211 FOR GRATE INFORMATION.
NOTES:
1. MANHOLE COVER & FRAME TO BE F.D.O.T. INDEX No. 201, TYPE III.
2. CONTRACTOR TO SUBMIT SHOP DRAWING TO THE ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION.
3. J5 DESIGNATES A SINGLE WING INLET.
4. J6 DESIGNATES A DOUBLE WING INLET.

No. 4 BARS @ 6" O.C.
(16) No. 4 BARS @ 8" O.C.
(MAX) TYP.
2" COVER (TYP)

3'-0" INLET TOP
1'-6"
1'-9"

6½"
5½"
2'-0" MANHOLE ACCESS

2" RADIUS

1'-6"
1½"
10½"
107"

2" COVER (TYP)

No. 4 STIRRUPS @ 8" O.C.

CONSTRUCTION JOINT PERMITTED

INLET BOX OR RISER

INLET TOP:
No. 4 TOP BARS @ 6" O.C.
No. 4 BOTTOM BARS @ 6" O.C.

SECTION A-A
N.T.S.

PINELLAS COUNTY
P.C.E.D. J5 & J6 CURB INLETS- SHEET 2 OF 2
(MODIFIED F.D.O.T. J5 & J6 CURB INLETS)
1. Grout to consist of 3:1 sand-cement mixture or any class concrete.
2. For all structures, unless excluded by special detail, bricks shall not be used in this area, unless they are covered with 4" thick (min.) concrete above the bricks.

Masonry seal

Pipe to be placed in approximate center of opening.

SOIL COMPACTED TO DENSITY REQUIRED IN SECTION 125 OF F.D.O.T. STANDARD SPECIFICATIONS DESCRIBED AS BEDDING ZONE.

Filter fabric wrap required on grouted pipe to structure joint.

PINELLAS COUNTY
FILTER FABRIC WRAP AND GROUT AT STRUCTURES

DETAIL INDEX I.D.: 1265
DATE: FEB/2016
IVAN J. FERNANDEZ, P.E.
REVISION:
1. This manhole shall be constructed of precast concrete.
2. Construction methods and materials shall conform to Section 425 of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction.
3. Lifting holes shall be located as needed.
4. No inverts shall be poured.
5. 2" clearance cover for reinforcing steel.
6. Opening around underdrain pipe shall be grout-filled.

**KEY DETAIL**

**SECTION B-B**

- 2" cover
- 6" OC
- Keyway

**SECTION A-A**

- 2" cover
- #4 bars at 6" OC
- Key

**SECTION A-A**

- Top slab
- 24"
- Keyway

**SECTION B-B**

- Bottom unit
- 3'-0"
- Key

**PLAN VIEW**

- Top slab
- FDOT Type 1 frame (Index No. 201) with cover (See PC No. 1250)
- 24"
- Key

**PINELLAS COUNTY**

UNDERDRAIN INSPECTION MANHOLE TYPE 1
1. Construction methods and materials shall conform to Section 425 of the Florida Department of Transportation Standard Specification for Road and Bridge Construction.

2. Opening around underdrain pipe shall be grout-filled.

3. Manhole covers shall comply with PC No. 1250.

4. When authorized by the engineer and at no additional expense to the county, F.D.O.T. Index No. 200 Manhole Type P (Alternate A), may be used in place of a county underdrain inspection manhole.

5. Except as otherwise noted on the plans, frame for manhole covers shall be F.D.O.T. Index No. 201 Type I.

6. Minimum wall thickness: 4⅛" for prefab and 6" for poured in place.

7. For poured in place construction, dowels may be used in lieu of joint key and grouting. Dowels shall extend a minimum of 6" into adjacent sections.

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**Notes:**

- **Adjustment Allowance Between Frame & Structure:**
  - 4" adjustment

- **Dowel Location (See Note #7):**
  - Varies
  - #4@8" EW

- **Joint Dimensions:**
  1. 1" prior to placement of upper section
  2. ⅝" maximum after final settlement of upper section
  3. 1½" wide (4⅛" wall)
     - 2" wide (6" wall)

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**Plan View**

(See FDOT Index No. 200)

**Section A-A**

**Joint Detail**
NOTES:
1. ALL VALUES EXCEPT A.O.S. AND ELONGATION ARE MINIMUM AVERAGE ROLL VALUES IN THE WEAKEST PRINCIPAL DIRECTION. VALUES FOR A.O.S. AND ELONGATION ARE MAXIMUM AVERAGE ROLL VALUES.
2. FOR ADDITIONAL NOTES SEE F.D.O.T. STANDARD INDEX NO. 286.
3. PAYMENT FOR UNDERDRAIN (L.F.) SHALL BE FOR THE COMPLETED ASSEMBLY, NOT FOR INDIVIDUAL COMPONENTS REGARDLESS IF THEY EXIST IN THE BID SUBMITTAL SHEETS.
4. PVC PIPE SHALL CONFORM TO EITHER ASTM F758 OR ASTM D3034. EXCEPT THAT THE PIPE AND ARRANGEMENT OF PERFORATIONS SHALL CONFORM TO THE PERFORATION DETAIL ON THIS SHEET.
5. AGGREGATE SHALL BE AS SPECIFIED IN THE F.D.O.T. STANDARD SPECIFICATIONS, SECTION 901. AND SHALL BE SIZE 57.
6. DIAMETER OF PERFORATIONS SHALL BE \frac{3/8}{3/4}".
7. MAXIMUM ALLOWABLE BEND SHALL BE 22½°, WITH A STRAIGHT 2' MINIMUM PIPE SEPARATION BETWEEN BENDS.
8. DO NOT USE PERFORATED PVC PIPE OR AGGREGATE UNDERNEATH ROADWAYS.
9. SEE PLANS FOR EXACT DIMENSIONS. DIMENSIONS LESS THAN 24" REQUIRES COUNTY APPROVAL.

SECTION VIEW

STANDARD CRITERIA | UNIT | TEST METHOD | VALUE
--- | --- | --- | ---
Permittivity | sec⁻¹ | ASTM-D-4491 | 0.2
A.O.S. | U.S. Sieve # | ASTM-D-4751 | 100+
Elongation | % | ASTM-D-4632 | 50
Grab Tensile Strength | N | ASTM-D-4632 | 1100
Sewn Strength | N | ASTM-D-4884 | 990
Puncture | N | ASTM-D-4833 | 400
Trapezoidal Tear | N | ASTM-D-4533 | 400
U.V. Resistance | AT 500 Hrs. | ASTM-D-4355 | 50%

PERFORATION DETAIL

FOUR PERFORATIONS EVERY 3½" (\(\frac{3}{4}\)±) ALONG LENGTH OF PIPE (LOCATED AND LAID DOWNWARD AS SHOWN)
NOTES:
1. MILLING AND RESURFACING LIMITS: 3' - 0" FOR RESIDENTIAL ROADWAYS; 25' - 0" FOR ALL OTHER TYPES OF ROADWAYS. SHALL INCLUDE ENTIRE LANE WIDTH.
2. BACKFILL FOR TRENCH SHALL BE PLACED IN 6" COMPACTED LAYERS TO 100% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T-99. (EXCAVATABLE FLOWABLE FILL OPTION IS SUBJECT TO COUNTY ENGINEER'S APPROVAL). TEST REPORTS ARE REQUIRED AND SHALL BE SUBMITTED TO PINELLAS COUNTY.
3. BASE MATERIAL SHALL BE LIME ROCK OR CRUSHED CONCRETE (MIN. LBR 100) AND SHALL BE PLACED IN 6" COMPACTED LAYERS TO 98% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180 (MODIFIED) (TEST REPORTS ARE REQUIRED AND SHALL BE SUBMITTED TO PINELLAS COUNTY).
4. AS AN ALTERNATIVE TO COMPACTED BASE AND IN WET AREAS, FULL-LIFT ASPHALTIC CONCRETE, FINE TRAFFIC LEVEL C TYPES SP9.5 OR 12.5, SHALL BE PLACED IN 2" COMPACTED LAYERS WITH A MINIMUM THICKNESS EQUAL TO THE EXISTING BASE (6" MIN.).
5. ASPHALTIC CONCRETE PAVEMENT JOINTS SHALL BE SAW-CUT AND ALL SURFACES TACK COATED.
6. ASPHALT SURFACE SHALL BE CONSISTENT WITH EXISTING GRADE. IN ACCORDANCE WITH PINELLAS COUNTY SPECIFICATIONS, THE FOLLOWING ROADWAY CLASSIFICATION TYPE/THICKNESS ARE REQUIRED: ARTERIAL-3" MIN. TYPE SP-12.5 FINE TRAFFIC LEVEL "C"; COLLECTOR-2" MIN. TYPE SP-12.5 FINE TRAFFIC LEVEL "C"; RESIDENTIAL-1½" MIN. TYPE SP-9.5 TRAFFIC LEVEL "C" (TEST REPORTS ARE REQUIRED AND SHALL BE SUBMITTED TO PINELLAS COUNTY).
7. OVERLAY OF CONSTRUCTION SCARS TO PAVEMENT AND TRENCH SHALL BE REQUIRED AS DIRECTED BY THE COUNTY ENGINEER.
8. EXCAVATION SHALL COMPLY WITH THE TRENCH SAFETY ACT REQUIREMENTS.
9. INSTALL DRY COMPACTABLE MATERIAL AROUND THE PIPE.
10. ALL MATERIAL, WORK AND TESTING SHALL MEET PINELLAS COUNTY STANDARD SPECIFICATIONS.
11. CONTRACTOR SHALL RESTORE PAVEMENT TO MATCH THE GRADES THAT EXISTED PRIOR TO CONSTRUCTION. ANY ADDITIONAL SURVEY NECESSARY TO ENSURE THAT THIS REQUIREMENT IS MET SHALL BE PERFORMED AT THE CONTRACTOR'S EXPENSE.

PINELLAS COUNTY
PAVEMENT CUTS, EXCAVATION AND RESTORATION

DETAIL INDEX I.D.: 1291
DATE: FEB/2016
REVISION:

[Diagram showing asphalt pavement replacement, trench backfill, and proposed pavement details]
NOTE:
1. \( \frac{3}{8} \)" EXPANSION JOINT EVERY 500', BETWEEN CURB SECTIONS, AT RADII, END OF POUR AND STRUCTURES. (FALSE JOINTS EVERY 10', LONGITUDINALLY. SEE SECTION 520 OF THE F.D.O.T. STANDARD SPECIFICATIONS.)

**PROFILE VIEW OF HEADER CURB**

**PROFILE VIEW OF CURB & GUTTER**

**PINELLAS COUNTY**

CURB AND GUTTER TYPE A
AND HEADER CURB

DETAIL INDEX I.D.: 1305

DATE: FEB/2016
NOTES:
1. SURFACE OF PAVEMENT SHALL BE \( \frac{3}{8} \)" ABOVE LIP OF GUTTER.
2. \( \frac{3}{8} \)" EXPANSION JOINT (AS SHOWN) AND CENTERLINE OF SIDE STREET, WITH (SAWCUT) FALSE JOINTS EVERY 10', LONGITUDINALLY. (SEE SECTION 620 OF THE F.D.O.T. STANDARD SPECIFICATIONS).

PINELLAS COUNTY Curb & GUTTER TYPE A (PW NO. 1305)
GUTTER FLOW LINE
PINELLAS COUNTY CURB & GUTTER TYPE A (PW NO. 1305)
RADIUS
(AS SHOWN ON PLANS)
\( 2'-0" \)
\( 2'-0" \)
\( \frac{1}{8} " \) EXPANSION JOINT
CONFIGURATION FOR DIRECTION OF FLOW TO SUIT FIELD CONDITIONS
PLAN VIEW

PLAN VIEW

VALELY GUTTER
TRANSITION (MONOLITHIC POUR)
( TO BE PAID AS VALLEY GUTTER )

VALLEY GUTTER
SECTION A-A

PINELLAS COUNTY

VALLEY GUTTER AND TRANSITION
1. Concrete driveway aprons and sidewalk crossings shall be constructed of concrete pavement (3000 PSI), 6" thick reinforced with 6" x 6" #10/#10 welded wire fabric, (2" minimum cover from the bottom.)

2. Fiber reinforced concrete 3000 PSI (Min.) may be used in place of the requirements of No. 1 above.

3. Construction of apron/driveway cross slopes and sidewalk cross slope through the driveway shall comply with F.D.O.T. Index No. 515 for ADA requirements.

4. Remove tree roots within 10" of proposed grade.

5. When there is existing sidewalk crossing the proposed driveway, it must be removed to the nearest joint beyond the driveway.

6. Sidewalks adjacent to lot property lines shall not have a cross slope greater than 2% per F.D.O.T. Index 310.

7. Corner lots involving handicap ramps shall be in accordance with F.D.O.T. Index 304 for sidewalk and ramp construction.

**NOTES:**

**PLAN AND PROFILE VIEW**

**TYPE "A" CURB DRIVEWAY APRON**

**TYPE "F" CURB DRIVEWAY APRON**

(*) See FDOT Index No. 515 for dimensions

**J O I N T D E T A I L**

**P I N E L L A S C O U N T Y**

CONCRETE DRIVEWAY APRON

**DETAIL INDEX I.D.:**

**DATE:** FEB/2016

**REVISION:**
Interlocking paving units shall generally be installed in accordance with manufacturer’s requirements. Minimum Paver Thickness: 2-3/8” (Concrete), 2-1/4” (Clay Brick).

4. Granular Base shall be in accordance with manufacturer’s requirements (6” min.). Granular base shall be Limerock (LBR 100) or Crushed Concrete (Graded Aggregate) compacted to at least 98% modified Proctor Density (ASTM D1557).

5. Coloring or dye shall be uniform throughout each concrete paver unit. Dipped or externally colored paver units are unacceptable.

6. Curb will need to be constructed along the roadway edge of pavement at the driveway. As an alternate, on streets without curbing, a minimum 12-inch width is acceptable (per Pinellas County Standard Details Index 1305). A minimum of 6-inch wide and 6-inch deep concrete edge restraint band is required along each side of the driveway to contain the architectural pavers, on top of soil compacted to 98% modified Proctor density (ASTM D1557). All concrete shall meet FDOT specifications for Class I Concrete.

7. Final finished surface shall be of uniform elevation or slope.

8. Subgrade shall be free of clay, organics, or other materials which will allow future settlement and compacted to 98% AASHTO T-180-57 or ASTM D1557.

9. Polymeric sand or other joint filling material, as approved by the County Engineer, shall be installed between pavers. Joint sand shall meet the grading requirements of ASTM C144 or CSA-A179. Bedding sand may be used for joint sand. Joint width shall not exceed 1/8”.

10. The cross slope on any required pedestrian path crossing a driveway and/or drive apron cannot exceed 2%.

11. Sand Bedding material shall be a clean, non-plastic bedding and joint sand, free from deleterious or foreign matter, natural or manufactured from crushed rock, and shall meet the grading requirements of ASTM C33 or CSA23.1-FA1. Do not use joint sand for bedding. Sand bedding should be placed to an even thickness of 1-inch. Do not use the sand to fill depressions in the granular base.

12. In accordance with the 2010 ADA (Americans with Disabilities Act) Standards for Accessible Design (403, 405, 406) the surface texture of pavers shall be vibration free with a limit of 1/4” or less rise not more than every 30 inches. Pavers shall be installed in a tight uniform configuration that provides a smooth surface for wheelchair users.

13. Pavers shall not impede drainage or result in any ponding of water. Existing drainage flows shall not be altered.

14. Alternate edge treatments may be submitted for approval to the county by the property owner.

**NOTES:**

- Interlocking paving units shall generally be installed in accordance with manufacturer’s requirements.
- Minimum Paver Thickness: 2-3/8” (Concrete), 2-1/4” (Clay Brick).
- Granular Base shall be in accordance with manufacturer’s requirements (6” min.). Granular base shall be Limerock (LBR 100) or Crushed Concrete (Graded Aggregate) compacted to at least 98% modified Proctor Density (ASTM D1557).
- Coloring or dye shall be uniform throughout each concrete paver unit. Dipped or externally colored paver units are unacceptable.
- Curb will need to be constructed along the roadway edge of pavement at the driveway. As an alternate, on streets without curbing, a minimum 12-inch width is acceptable (per Pinellas County Standard Details Index 1305). A minimum of 6-inch wide and 6-inch deep concrete edge restraint band is required along each side of the driveway to contain the architectural pavers, on top of soil compacted to 98% modified Proctor density (ASTM D1557). All concrete shall meet FDOT specifications for Class I Concrete.
- Final finished surface shall be of uniform elevation or slope.
- Subgrade shall be free of clay, organics, or other materials which will allow future settlement and compacted to 98% AASHTO T-180-57 or ASTM D1557.
- Polymeric sand or other joint filling material, as approved by the County Engineer, shall be installed between pavers. Joint sand shall meet the grading requirements of ASTM C144 or CSA-A179. Bedding sand may be used for joint sand. Joint width shall not exceed 1/8”.
- The cross slope on any required pedestrian path crossing a driveway and/or drive apron cannot exceed 2%.
- Sand Bedding material shall be a clean, non-plastic bedding and joint sand, free from deleterious or foreign matter, natural or manufactured from crushed rock, and shall meet the grading requirements of ASTM C33 or CSA23.1-FA1. Do not use joint sand for bedding. Sand bedding should be placed to an even thickness of 1-inch. Do not use the sand to fill depressions in the granular base.
- In accordance with the 2010 ADA (Americans with Disabilities Act) Standards for Accessible Design (403, 405, 406) the surface texture of pavers shall be vibration free with a limit of 1/4” or less rise not more than every 30 inches. Pavers shall be installed in a tight uniform configuration that provides a smooth surface for wheelchair users.
- Pavers shall not impede drainage or result in any ponding of water. Existing drainage flows shall not be altered.
- Alternate edge treatments may be submitted for approval to the county by the property owner.
NOTES:
1. SEE PLANS FOR LIMITS OF SIDEWALKS AT ALL DRIVEWAYS.
2. PLACE ½" EXPANSION JOINT WHERE CONCRETE ABUTS CONCRETE CURBS, SIDEWALKS DRIVEWAYS.
3. SIDEWALK SHALL COMPLY WITH F.D.O.T. INDEX No. 515 AND PINELLAS COUNTY ORDINANCES.
   (SEE INDEX No. 1340)
4. REMOVE TREE ROOTS WITHIN 10" OF PROPOSED GRADE.
5. SIDEWALKS ALONG RURAL CROSS SECTION ROADWAYS WHERE VEHICLES CAN CROSS THE SIDEWALK SHALL 
   BE 6" THICK.

SECTION A-A

SECTION B-B

EDGE OF PAVEMENT 
(OR BACK OF CURB) 

SAWCUT BACK 2' MIN 
ACROSS EXISTING ASPHALT 
DRIVeway & EXTEND 
SIDEWALK (AS SHOWN) 

PROPOSED (5' MIN) 
CONCRETE SIDEWALK 
(4" THICK) 

PLAN VIEW 

SAWCUT BACK 2' (MIN) 
ACROSS EXISTING ASPHALT 
DRIVeway AND EXTEND 
SIDEWALK (AS SHOWN) 

EXISTING DIRT OR ASPHALT 
DRIVeway GRADE (SEE 
NOTE #3) 

6" THICK CEMENT 
CONCRETE SIDEWALK 

EXISTING DIRT OR 
ASPHALT DRIVEWAY 

6"X6" #10/#10 WELDED WIRE  
REINFORCEMENT 2" MINIMUM 
COVER 

6"X6" #10/#10 WELDED WIRE 
REINFORCEMENT 

EXPANSION JOINT

PINELLAS COUNTY

SIDEWALK THROUGH EXISTING 
DRIVEWAYS

DETAIL INDEX I.D.: 

1353

DATE: 
FEB/2016

REVISION: 

IVAN J. FERNANDEZ, P.E.
1. Adjust sidewalk to avoid obstructions, as shown, or as directed by the engineer, in accordance with F.D.O.T. Manual of Uniform Minimum Standards for Design, Construction, and Maintenance for Streets and Highways - Latest Edition ("Florida Green Book").

2. Construction of sidewalks shall meet ADA requirements as specified in F.D.O.T. Index Nos. 515 and 304.

3. Power poles shall be moved when possible.

4. Trees shall be pruned by an ISA certified arborist in accordance with ANSI-A300 guidelines to maintain vertical clearance: 9 ft. for sidewalks and 18 ft. for roads.

5. Maximum lateral deflection shall be 5:1.

6. Remove tree roots within 10' of proposed grade.

7. Contraction joints shall meet F.D.O.T. Index No. 310.

8. Any necessary pruning shall be performed by an ISA certified arborist in accordance with ANSI-A300 standards.

---

**Plan View**

- Edge of box may not be installed within the first 6" off the edge of sidewalk.
- Water meter/valve cast iron in sidewalk.
- Edge of pavement or back of curb (see plans)
- Tree trunk
- Contraction joint (Typ.)
- R/W or sidewalk easement line

**Notes:**

- This minimum dimension may need adjustment based on the diameter, health and species of the tree. Adjustments require pre-approval of the county engineer.

**Centered on vertical obstruction—sidewalk shall be 6" thick along this length (5'-0" Min.)**

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**Guidelines for Sidewalk Alignment**

- **PINELLAS COUNTY**
- **Detail Index I.D.: 1357**
- **Date: FEB/2016**
- **Ivan J. Fernandez, P.E.**
- **Revision:**
NOTE:
1. 6" THICK w/6x6 10/10 WWM REINFORCED CLASS I (3000 PSI) CONCRETE RAMP (TYP. FOR TYPE A & B).

EXISTING/PROPOSED
S/W 5' (TYP.)
WIDTH VARIES

18" (TYP.)
2' CURB TRANSITION (TYP.)

SAWCUT EXISTING CURB AND MATCH FLOW LINE (TYP.)

REPLACE CURB WITH DROP CURB PAID FOR AS PCED TYPE A CURB SAWCUT PAVEMENT PRIOR TO REMOVAL OF EXISTING CURB.

EXISTED/PROPOSED
S/W 5' (TYP.)
WIDTH VARIES

DETECTABLE WARNING SURFACE, PER FDOT INDEX 304 GENERAL NOTES

SAWCUT PAVEMENT PRIOR TO RAMP INSTALLATION

P.C.E.D. TYPE "A" AND "B" HANDICAP RAMP DETAIL

N.T.S.

PINELLAS COUNTY

DATE: FEB/2016

REVISION:
NOTES:

1. WARNING SIGNS W11-1, W16-9P, W16-7P SHALL BE IN ACCORDANCE WITH THE MUTCD, SEC. 1A-12, COLOR CODE "F"-FLUORESCENT YELLOW-GREEN.

2. NOTE: TRAILS NETWORK WITHIN A PARK MAY REQUIRE MIRROR IMAGE CONSTRUCTION OF THIS DETAIL. THE CONTRACTOR SHALL CONFIRM THE ORIENTATION EACH TRAIL CROSSING WITH THE COUNTY PRIOR TO THE INSTALLATION AND STRIPING OF THE TRAIL CROSSINGS.

3. OFFSET DISTANCES FOR SIGNS SHALL BE IN ACCORDANCE WITH FDOT DESIGN STANDARDS AND/OR DIMENSIONS PROVIDED IN THE CONSTRUCTION PLANS.
NOTES:
1. ALL BOLLARDS CONSTRUCTED WITHIN THE CONCRETE BOLLARD ASSEMBLY ARE PAID FOR UNDER CONCRETE BOLLARD STRIP ASSEMBLY.
2. ALL BOLLARDS CONSTRUCTED OUTSIDE OF THE CONCRETE BOLLARD STRIP ASSEMBLY ARE PAID FOR UNDER A SEPARATE PAY ITEM UNLESS OTHERWISE NOTED.

DETAIL "C"
NOT TO SCALE

DETAIL "D"
NOT TO SCALE
1. All construction and materials shall conform to U.S. Department of Transportation, Federal Highway Administration Manual on Uniform Control Devices.
2. Trail to have the typical signing and pavement markings as designated on these plans. Refer to Pay Item 719-12.
3. All signage to be erected along trail is to be offset 4' from edge of pavement to nearest edge of sign and 7' from the proposed grade to the bottom of the sign.
4. 6' wide 3MTM pressure sensitive, high-intensity grade red reflective sheeting, to be placed on all bollards. 2' wide high-intensity grade green reflective sheeting, to be placed on removable bollard. Overlap ends of sheeting by 1/2" minimum.
5. All bollards constructed within the concrete bollard assembly are paid for under concrete bollard strip assembly.
6. All bollards constructed outside of the concrete bollard strip assembly are paid for under a separate pay item unless otherwise noted.

---

**Notes:**

3" P.V.C. coupling shall be machined for a slip-fit. Uniform inside Ø in order to allow the coupling to be solvent welded at the position shown. The outside Ø shall be machined to allow the coupling to slide freely within the 4" P.V.C. pipe embedded in concrete as shown in the removable bollard detail.

**SLOT AND COUPLING DETAIL**

**NOT TO SCALE**

- 6" wide red reflective tape
- 6" wide green reflective tape
- 3"Ø nominal size x 4'-6" long, sch. 40, hot-dipped galvanized steel pipe, painted. Contractor shall use durable reflective paint designed for application on PVC and/or steel components. Specifications of proposed paint shall be submitted to the county for review and approval prior to commencement of painting operations. Contractor should prepare surface according to manufacturer's direction.

**PERMANENT BOLLARD DETAIL "F"**

**NOT TO SCALE**

- 3/8" ø x 1'-0" long galvanized steel rod through pipe.
- ¼" asphaltic concrete surface
- 4" min. asphaltic concrete base course

**REMOVABLE BOLLARD DETAIL "E"**

**NOT TO SCALE**

- 2'-6" long galvanized steel single smooth link chain bolted to inside of 3"Ø nominal pipe with a ¼"ø x 1/2" long stainless steel carriage bolt, washer and nut. Run ¼"ø galvanized steel rod through the end of the chain link.

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**PINELLAS COUNTY**

**P.C.E.D. TRAIL INTERSECTION CROSSING DETAIL - SHEET 3 OF 5**

---

**DATE:** FEB/2016

**IVAN J. FERNANDEZ, P.E.**

---

**DETAIL INDEX I.D.: 1365-SHT.3**

---

**REVISION:**
PROPOSED WARNING STRIP
5' WIDE X 6" DEEP (MIN.)
6" CLASS I CONCRETE
w/6X6-10/10 W.W.F.,
PLACE ON COMPACTED SUBGRADE IN
ACCORDANCE WITH PINELLAS COUNTY
SPECIFICATION 350-0201

PROPOSED ASPHALT
TRAIL (SEE DETAIL)

WARNING STRIP DETAIL "G"
(SEE PLANS FOR LOCATION)

PROPOSED DETECTABLE WARNING
STRIP 24" WIDE X 6" DEEP (MIN.)
6" CLASS I CONCRETE
w/6X6-10/10 W.W.F.,
PLACE ON COMPACTED SUBGRADE
IN ACCORDANCE WITH PINELLAS
COUNTY SPECIFICATION 350-0201

PROPOSED ASPHALT
TRAIL (SEE DETAIL)

PROPOSED 36" VALLEY GUTTER
w/36" TRANSITION
PCED INDEX 1315

TRUNCATED DOME
(TYPE AND COLOR)
AS PER PINELLAS COUNTY
SPECIFICATION 522

DETECTABLE WARNING
STRIP DETAIL "H"
NOT TO SCALE

PINELLAS COUNTY
P.C.E.D. TRAIL INTERSECTION
CROSSING DETAIL - SHEET 4 OF 5
PAVEMENT MESSAGE DIMENSIONS
ALL MARKINGS ARE WHITE
NOT TO SCALE

PINELLAS COUNTY
P.C.E.D. TRAIL INTERSECTION
CROSSING DETAIL - SHEET 5 OF 5

DETAII INDEX I.D.: 1365-SHT.5
DATE: FEB/2016
IVAN JI FERNANDZ, P.E.
REVISION:
NOTE:
1. THE USE OF ALUMINUM SLEEVES SHALL BE APPLICABLE FOR ALL CASES WHERE A SIGN POST IS PLACED IN CONCRETE (I.E., SIDEWALKS, ETC.). WHEN PLACED IN A CONCRETE MEDIAN OR TRAFFIC SEPARATOR, IT SHALL BE CENTERED 6' FROM NOSE END, UNLESS OTHERWISE SPECIFIED IN THE PLANS.

3" O.D. ALUMINUM SLEEVE

SECTION A-A

TOP VIEW
MEDIAN NOSE
N.T.S.

2½" O.D. THIN WALL GALVANIZED STEEL PIPE

SIGN POST TO BE WEDGED WITH REBAR (½" DIA. X 6" LONG) INTO ALUMINUM SLEEVE

CONCRETE

3" O.D. ALUMINUM SLEEVE

PINELLAS COUNTY
TRAFFIC SIGN INSTALLATION INTO CONCRETE
NOTES:
1. STRIPES SHALL BE WHITE AND ORANGE FOR TEMPORARY BARRICADE DURING CONSTRUCTION PHASE AND WHITE AND RED FOR PERMANENT BARRICADE WITH A MATERIAL THAT HAS A HIGH INTENSITY AND SMOOTH SEALED OUTER SURFACE. USE ONLY PRESSURE TREATED POSTS (ASTM D-1760 PRESSURE TREATMENT OF TIMBER PRODUCTS).
2. USE ONLY GALVANIZED COATED HARDWARE.
3. THE SPACING OF REFLECTORS SHALL ALIGN WITH BARRICADE POSTS.
4. REFLECTOR PANEL AND POST ASSEMBLY SHALL COMPLY WITH F.D.O.T. INDEX No.17349 FOR CASE 2 AND SECTION 994 OF F.D.O.T. SPECIFICATIONS.

BARRICADE TYPE 3

2"x10" (TYP.) BOARD

2' A

20"

POSTS

STRIPED @ 45°

REFLECTOR CASE 2

BARRICADE WITH REFLECTORS

SECTION A-A

WOOD POST
CONCRETE SQUARE CCTV CAMERA POLE

CCTV CAMERA

2" ENTRY POINT

CONCRETE SQUARE POLE AS PER "CONCRETE SQUARE CCTV CAMERA POLE DATA TABLE"

COMPOSITE CABLE IN CONDUIT (INSIDE POLE)

HAND HOLE 180 DEGREES FROM ENTRY POINT

#2 AWG TIN-PLATED BARE SOLID COPPER WIRE

GROUND LINE

2" ENTRY POINTS AT 16" AND 22" ABOVE GRADE

GROUND ROD (REFER TO FDOT INDEX 18102 FOR PROPER INSTALLATION OF GROUNDING ARRAY)

CONDUIT HOLES ARE TO BE 30" BELOW GRADE AND AT 0 DEGREES AND 180 DEGREES IN CIRCUMFERENCE

PROVIDE CLASS NS CONCRETE

2" CONDUIT

POLE EXPOSED HEIGHT (MAXIMUM 47'-0"

POLE LENGTH (MAXIMUM 57'-0"

POLE EMBEDMENT MINIMUM 10'-0"

PINELLAS COUNTY

CONCRETE SQUARE CCTV CAMERA POLE

SHEET 1 OF 2

1700 - SH. 1

FEB/2016

DATE:

Ivan J. Fernandez, P.E.

REVISION:
CONCRETE SQUARE CCTV CAMERA POLE DATA TABLE

<table>
<thead>
<tr>
<th>EXPOSED POLE LENGTH (ft)</th>
<th>GRADE SLOPE</th>
<th>POLE TIP WIDTH (in)</th>
<th>POLE TAPER (in/ft)</th>
<th>EMBEDMENT DEPTH (ft)</th>
<th>TOTAL POLE LENGTH (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>47</td>
<td>Flat</td>
<td>8.5</td>
<td>0.162</td>
<td>10</td>
<td>57</td>
</tr>
</tbody>
</table>

NOTES:
1. ALL POLES SHALL BE FULLY EMBEDDED IN CLASS NS CONCRETE.
2. WORK THIS SHEET WITH FDOT INDEX 17725 STANDARD TYPE P-IV POLE DESIGN ONLY.
3. ONLY ATTACHMENT ALLOWED ON POLES IS THE CCTV CAMERA.
NOTES:

1. ALL MOUNTING HARDWARE AND BRACKET SHALL BE PROVIDED BY PINELLAS COUNTY.

2. THE CONTRACTOR SHALL MOUNT THE "J HOOK" BRACKET AS HIGH AS POSSIBLE BUT SO THAT IT STILL SITS FIRMLY IN THE MOUNTING HARDWARE BRACKET. THE ATTACHMENT SHALL BE INSPECTED BY THE ENGINEER BEFORE THE CCTV CAMERA IS INSTALLED.

3. THE CONTRACTOR SHALL FIELD DRILL A HOLE IN THE MAST ARM OF A MINIMUM DIAMETER TO ACCOMMODATE THE CCTV COMPOSITE CABLE.

4. THE CONTRACTOR SHALL COLD GALVANIZE THE DRILLED HOLE AND PLACE A WEATHER-TIGHT GROMMIT IN THE HOLE PRIOR TO RUNNING THE CCTV COMPOSITE CABLE INTO THE ARM.

5. THE CONTRACTOR SHALL TOUCH UP THE MAST ARM PAINT DUE TO SCRATCHES OR CHIPS DURING THE INSTALLATION OF THE CCTV CAMERA AND COMPOSITE CABLE.

NOTES:
1. FOR MORE INFORMATION ON THE ELECTRONIC ROUTE MARKER (ERM), SEE SECTION 630 IN THE TECHNICAL
   SPECIFICATIONS AND THE GENERAL NOTES.

2. THE CONTRACTOR SHALL INSTALL THE ERM BEFORE PLACING THE CONCRETE APRON AROUND THE FIBER OPTIC PULL
   BOX OR SPLICE VAULT. HOWEVER, THE ERM SHALL NOT BE PLACED WITHIN THE CONCRETE APRON.

3. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR THE ERM AS SHOWN ON THIS SHEET, TECHNICAL
   SPECIFICATIONS SECTION 630, AND THE GENERAL NOTES.

4. THE CONTRACTOR SHALL ALSO INSTALL STANDARD ROUTE MARKERS (SRM) AT THE MIDPOINT OF THE CONDUIT RUN
   BETWEEN THE FIBER OPTIC PULL BOXES AND/OR SPLICE VAULTS. ROUTE MARKERS SHALL NOT BE INSTALLED IN
   DRIVEWAYS OR SIDEWALKS.

5. THE COST FOR THE ERMS SHALL BE PAID FOR UNDER PAY ITEMS 630–2 FOR CONDUIT.

6. THE TRACER WIRE FOR ALL CONDUIT LOCATING SHALL BE SPLICED TOGETHER IN ONE CONTINUOUS LENGTH.
FIELD OF VIEW

MOUNTING BRACKET

STAINLESS STEEL BANDING
(BAND ON BOTH SIDES OF MOUNTING BRACKET)

MAST ARM

CAMERA CABLE
NOTE: DO NOT TWIST CABLES

ATTACH DRIP LOOP TO MOUNTING BRACKET VIA CLIP

FEED CABLE THROUGH DRILLED WIRE ENTRANCE HOLE

VVDS ATTACHMENT FOR MAST ARMS
N.T.S.

NOTES:
1. THE CONTRACTOR SHALL FIELD DRILL A HOLE IN THE MAST ARM OF MINIMUM SIZE TO ACCOMMODATE THE VIDS CABLE.

2. THE CONTRACTOR SHALL COLD GALVANIZE THE DRILLED HOLE AND PLACE A WEATHER-TIGHT GROMMIT IN THE HOLE PRIOR TO RUNNING THE VIDS CABLE INTO THE ARM.

3. THE CONTRACTOR SHALL TOUCH UP THE MAST ARM PAINT DUE TO SCRATCHES OR CHIPS DURING THE INSTALLATION OF THE VIDS CAMERA AND CABLE.

4. THE COST FOR LABOR AND MATERIALS FOR TOUCH UP AND GROMMITS SHALL BE INCLUDED UNDER THE VIDS PAY ITEM 660-4-32.
NOTES:
1. THE CONTRACTOR SHALL USE EXISTING UNDERGROUND CONDUIT TO FEED CABLE & CONDUCTORS INTO THE MAST ARM UPRIGHT. THIS DETAIL MAY BE USED IN THE EVENT THERE ARE NO EXISTING CONDUITS.

2. THE CONTRACTOR SHALL DRILL INTO THE MAST ARM STRUCTURE GROUT PAD AND FEED THE GALVANIZED STEEL CONDUIT INTO THE MAST ARM. THE DRILLED GROUT PAD SHALL BE SEALED AROUND THE CONDUIT.

3. ANY HIGH VOLTAGE CONDUCTORS SHALL BE IN A SEPARATE CONDUIT AND PULL BOXES WHERE NECESSARY.
SEE INDEX NO. 1291

PINELLAS COUNTY

TRENCH BACKFILL
DETAIL

DETAIL INDEX I.D.: PCU GD 1
DATE: FEB/2016
KEVIN BECOTTE, P.E.
REVISION:
### PIPE CLEARANCE AND CROSSINGS

<table>
<thead>
<tr>
<th>PIPE</th>
<th>HORIZONTAL SEPARATION</th>
<th>CROSSINGS (1)</th>
<th>JOINT SPACING @ CROSSINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>VACUUM-TYPE SANITARY SEWER, STORM SEWER,</td>
<td>3 FT. MINIMUM</td>
<td>12 INCHES IS THE MINIMUM, EXCEPT FOR STORM SEWER, THEN 6 INCHES IS THE MINIMUM AND 12 INCHES IS PREFERRED</td>
<td>(FULL JOINT CENTERED, ALTERNATE 3 FT. MINIMUM FROM ALL JOINTS)</td>
</tr>
<tr>
<td>STORMWATER FORCE MAIN, RECLAIMED WATER (2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GRAVITY OR PRESSURE SANITARY SEWER,</td>
<td>10 FT. PREFERRED</td>
<td>12 INCHES IS THE MINIMUM, EXCEPT FOR GRAVITY SEWER, THEN 6 INCHES IS THE MINIMUM AND 12 INCHES IS PREFERRED</td>
<td>(FULL JOINT CENTERED, ALTERNATE 6 FT. MINIMUM FROM ALL JOINTS)</td>
</tr>
<tr>
<td>SANITARY SEWER FORCE MAIN,</td>
<td>6 FT. MINIMUM (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RECLAIMED WATER (4)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ON-SITE SEWAGE TREATMENT &amp; DISPOSAL</td>
<td>10 FT. MINIMUM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SYSTEM</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### NOTES: (IN ACCORDANCE WITH F.A.C. RULE 62-555.314)

1. POTABLE WATER MAIN SHOULD CROSS ABOVE OTHER PIPE. WHEN POTABLE WATER MAIN MUST BE BELOW OTHER PIPE, THE MINIMUM SEPARATION IS 12 INCHES.
2. RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
3. 3 FT. FOR GRAVITY SANITARY SEWER WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST 6 INCHES ABOVE THE TOP OF THE GRAVITY SANITARY SEWER.
4. RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
5. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST APPROVED MATERIALS SPECIFICATIONS MANUAL.
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.

2. IF STREET IS A SHORT CUL-DE-SAC, LOCATOR WIRE IS TO RUN FROM MAIN VALVE TO BLOW-OFF VALVE BOX.

NOTES:

BEGIN WIRE
WIRE IN BOX
BEGIN WIRE

PERMANENT BLOW OFF
END WIRE IN VALVE
BOX

BEGIN WIRE
BEGIN WIRE
BEGIN WIRE
BEGIN WIRE

DISCONNECTED VALVE
w/BOX (TYPICAL)

PERMANENT BLOW OFF
END WIRE IN VALVE
BOX

EXISTING MAIN
PROPOSED MAIN

DUMMY WIRE BOX
(AS DIRECTED BY ENGINEER)

---

PINELLAS COUNTY
TRACER WIRE LAYOUT
DETAIL

DETAIL INDEX I.D.:  
PCU GD 3

DATE:  
FEB/2016

KEVIN BECOTTE, P.E.

REVISION:  
---
NOTES:
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. USE 2-#14 GAUGE (MINIMUM), SOLID CORE COPPER WIRE WITH COLOR CODED INSULATION PER SERVICE.
3. THERE SHALL BE SUFFICIENT SLACK IN TRACER WIRE TO EXTEND A MIN. OF 12" ABOVE VALVE BOX.
4. WIRE IS TO CONTINUE THROUGH TEES ON MAIN LINE WHERE NO VALVES EXIST.
5. ATTACH WIRE TO TOP CENTER LINE OF MAIN USING DUCT TAPE OR APPROVED EQUAL @ 5'- 0' INTERVALS.
6. DUMMY BOXES ARE TO CONSIST OF A TOP SECTION OF A VALVE BOX ASSEMBLY ENCASED IN A CONCRETE VALVE BOX COLLAR PER P.C.U. APPROVED STANDARD DETAIL.

REFER TO P.C.U. APPROVED STANDARD DETAIL FOR VALVE BOX/TRACER WIRE INSTALLATION

12" MIN.

2-#14 GAUGE SOLID CORE COPPER WIRES

VINYL DUCT TAPE OR APPROVED EQUAL

TAPPING SLEEVE OR TEE

PINELLAS COUNTY
TRACER WIRE INSTALLATION DETAIL

DETAIL INDEX I.D.: PCU GD 3a
DATE: FEB/2016
KEVIN BECOTTE, P.E.
REVISION:
NOTES:
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. FILTER FABRIC REQUIRED ON VALVES WHEN PIPE LINE HAS 5' OR MORE OF COVER.
   VALVE KEY EXTENSION REQUIRED ON VALVES WITH OPERATOR NUT OVER 3' DEEP.
   COLOR CODED POLY WRAP REQUIRED ON ALL BURIED VALVES AND FITTINGS.

LOCK RING 6" PVC(SDR.35) OR APPROVED EQUAL 1"-3" WIDE BAND w/3" SECTION CUT OUT.
2 REQUIRED FOR EACH VALVE BOX

JOINT RESTRAINERS

DUCT TAPE

FILTER FABRIC VALVE DRAPE SECURED TO PVC RISER

12" MIN.

1" TO 1 1/2" NOTCH IN LINE w/PIPE DIRECTION (UP TO 4 REQUIRED)

2-#14 GAUGE SOLID COPPER STRAND WIRES

LOAD FROM VALVE BOX IS NOT TO BE TRANSFERRED TO RISER

6" C-900 OR D.I.P. VALVE BOX RISER COLOR CODED PER SERVICE RISER REQUIRED (EVEN IF VALVE DEPTH DOES NOT REQUIRE IT.) IN ORDER TO KEEP TRACER WIRE AWAY FROM VALVE OPERATION NUT.

PINELLAS COUNTY
VALVE BOX/TRACER WIRE INSTALLATION DETAIL

DETAIL INDEX I.D.: PCU GD 4
DATE: FEB/2016
KEVIN BOCOTTE, P.E.
REVISION:

1.- ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2.- FILTER FABRIC REQUIRED ON VALVES WHEN PIPE LINE HAS 5' OR MORE OF COVER.
   VALVE KEY EXTENSION REQUIRED ON VALVES WITH OPERATOR NUT OVER 3' DEEP.
   COLOR CODED POLY WRAP REQUIRED ON ALL BURIED VALVES AND FITTINGS.

LOCK RING 6" PVC(SDR.35) OR APPROVED EQUAL 1"-3" WIDE BAND w/3" SECTION CUT OUT.
2 REQUIRED FOR EACH VALVE BOX

JOINT RESTRAINERS

DUCT TAPE

FILTER FABRIC VALVE DRAPE SECURED TO PVC RISER

12" MIN.

1" TO 1 1/2" NOTCH IN LINE w/PIPE DIRECTION (UP TO 4 REQUIRED)

2-#14 GAUGE SOLID COPPER STRAND WIRES

LOAD FROM VALVE BOX IS NOT TO BE TRANSFERRED TO RISER

6" C-900 OR D.I.P. VALVE BOX RISER COLOR CODED PER SERVICE RISER REQUIRED (EVEN IF VALVE DEPTH DOES NOT REQUIRE IT.) IN ORDER TO KEEP TRACER WIRE AWAY FROM VALVE OPERATION NUT.

PINELLAS COUNTY
VALVE BOX/TRACER WIRE INSTALLATION DETAIL

DETAIL INDEX I.D.: PCU GD 4
DATE: FEB/2016
KEVIN BOCOTTE, P.E.
REVISION:
NOTES
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. IF VALVE IS LOCATED WITHIN A SIDEWALK CONCRETE COLLAR MAY BE ELIMINATED AND DISK SET FLUSH DIRECTLY IN SIDEWALK.
3. BRONZE DISK REQUIRED: FOR ALL VALVES, AND DUMMY BOXES.
4. THE 24" x 24" x 6" THICK CONCRETE VALVE BOX COLLAR CAN BE INSTALLED BELOW THE FRICTION COARSE AND THE BRONZE DISK ANCHORED IN A NEAR-BY CURB OR SIDEWALK.
5. ALL VALVES/BOXES SHALL BE LOCATED BY MEANS OF A PERPENDICULAR 6" x 2' BLUE STRIPE ACROSS THE CURB. THE DISTANCE FROM THE BACK OF THE CURB TO THE VALVE SHALL BE STENCILLED ON THE CURB WITH NUMBERS FOUR INCHES HIGH, PAINTED BLUE, BY THE CONTRACTOR.

SECTION A-A

PINELLAS COUNTY
CONCRETE VALVE BOX AND COLLAR DETAIL

DETAIL INDEX I.D.: PCU GD 5
DATE: FEB/2016
KEVIN BECOTTE, P.E.
REVISION:
NOTES:
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST APPROVED MATERIAL SPECIFICATION MANUAL.
2. FITTING CONNECTION TO EXISTING PIPE AND REVERSE DEADMAN MUST BE PART OF ONE INTEGRAL JOINT OF PIPE.
3. REVERSE DEADMAN FOR 16" AND LARGER PIPES SHALL BE DESIGNED BY ENGINEER.

UNDISTURBED SOIL

EXISTING PRESSURE MAIN

ROD OR WORK CONCRETE AROUND JOINT RESTRAINT

JOINT RESTRAINT

3' MIN.

PLAN

MIN. SPEC. COVER

8"-12"

3' MIN.

18"

PROFILE

3000 P.S.I. CONCRETE WITH MAX. 4" SLUMP AND MIN. 72 HR. CURE TIME

PINELLAS COUNTY

REVERSE DEADMAN RESTRAINT DETAIL

DETAIL INDEX I.D.: PCU GD 6

DATE: FEB/2016

KEVIN BECOTTE, P.E.

REVISION:
NOTE:
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST APPROVED MATERIAL SPECIFICATION MANUAL.

6" SCH. 40 STEEL PIPE (OR D.I.P.) FILLED WITH AND SET IN CONCRETE. (4" PIPE MAY BE UTILIZED ON BACKFLOW DEVICES 2" AND SMALLER)

TWO COATS OF PAINT (SAFETY YELLOW) IN ACCORDANCE WITH SPECIFICATION ASTM D422-05

SLOPE CONCRETE TO DRAIN

EXISTING GRADE

SLOPE CONCRETE TO DRAIN

EXISTING PAVEMENT

EXISTING BASE

UNDISTURBED SOIL

0.35 YD³ CONC. MIN. (3000 P.S.I.)

SLOPE CONCRETE TO DRAIN

EXISTING GRADE

INSTALLATION

45" (TYP.)

45" (TYP.)

HYDRANT GUARD (BOLLARD)

LAYOUT

PINELLS COUNTY

BOLLARD DETAIL

DATE: FEB/2016

KEVIN BECHTLE, P.E.

REVISION:
1. All materials shall be in accordance with the latest approved material specification manual.
2. If distance from pipe joint to end of casing is 6' or less, no spacer is required.
3. Spacer to be installed over poly wrap.
4. All pipe in Jack and Bore casing shall be D.I. pipe with all joints restrained.

**NOTES:**

- Casings are to be sealed with brick & mortar or approved method.
- Field lock at each joint in the casing.
- Tracer wires if required.
- Carrier & casing sizes:

<table>
<thead>
<tr>
<th>Carrier &amp; Casing Sizes</th>
<th>4&quot;</th>
<th>6&quot;</th>
<th>8&quot;</th>
<th>10&quot;</th>
<th>12&quot;</th>
<th>14&quot;</th>
<th>16&quot;</th>
<th>18&quot;</th>
<th>20&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Main</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Casing</td>
<td>8&quot;</td>
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<tr>
<td>Casing / Wall Thickness</td>
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<td>.188</td>
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<td>.250</td>
<td>.281</td>
<td>.344</td>
<td>.406</td>
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<td>.500</td>
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</tbody>
</table>

**SECTION A-A**

**PIÑELLAS COUNTY**

**JACK AND BORE UNDER ROADWAY DETAIL**

**DATE:**

**KEVIN BECOtte, P.E.**

**REVISION:**
NOTES:
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST APPROVED MATERIAL SPECIFICATION MANUAL.
2. IF DISTANCE FROM PIPE JOINT TO END OF CASING IS 6' OR LESS, NO SPACER IS REQUIRED.
3. CENTERLINE OF TRACKS IS DETERMINED AS CENTERLINE OF A SINGLE TRACK SET OR OUTSIDE SET OF TRACKS FOR DOUBLE SET.
4. SPACER TO BE INSTALLED OVER POLY WRAP.
5. ALL PIPE IN JACK AND BORE CASING SHALL BE D.I. PIPE WITH ALL JOINTS RESTRAINED.

SECTION A-A

<table>
<thead>
<tr>
<th>CARRIER / CASING SIZES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CARRIER / WATER MAIN</strong></td>
</tr>
<tr>
<td>Casing</td>
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<tr>
<td>Casing / Wall Thickness</td>
</tr>
</tbody>
</table>

PINELLAS COUNTY
JACK AND BORE UNDER RAILWAY DETAIL

DETAIL INDEX T.D.:
PCU GD 9

DATE: FEB/2016
REVISION:
NOTES:
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. ALL DUCTILE IRON PIPE SHALL BE RESTRAINED.
3. RIGID PIPE CONNECTING TO H.D.P.E. PIPE WILL REQUIRE ADDITIONAL RESTRAINT METHODS OF THE RIGID PIPE AS DIRECTED BY ENGINEER.

TYPICAL D.I./HDPE PIPE MECHANICAL JOINT ADAPTOR
NOT TO SCALE

TYPICAL D.I. FITTING/HDPE PIPE CONNECTION DETAIL
NOT TO SCALE

TYPICAL PVC/HDPE PIPE MECHANICAL JOINT ADAPTOR
NOT TO SCALE
NOTES:
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. ALL DUCTILE IRON PIPE SHALL BE RESTRAINED.
3. RIGID PIPE CONNECTING TO H.D.P.E. PIPE WILL REQUIRE ADDITIONAL RESTRAINT METHODS OF THE RIGID PIPE AS DIRECTED BY ENGINEER.

PROFILE VIEW
TYPICAL D.I./HDPE PIPE MECHANICAL JOINT ADAPTOR
NOT TO SCALE

PROFILE VIEW
TYPICAL D.I. FITTING/HDPE PIPE CONNECTION DETAIL
NOT TO SCALE

PINELLAS COUNTY
FUSIBLE PVC/HDPE PIPE CONNECTIONS DETAIL
NOTES:
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST
   P.C.U. APPROVED MATERIAL SPECIFICATION.
2. THIS TABLE WAS DEVELOPED USING THE FOLLOWING
   ASSUMPTIONS:
   - D.I. PIPE WITH POLY WRAP
   - SAFETY FACTOR OF 1.5 TO 1
   - TEST PRESSURE OF 150 P.S.I.
   - SOIL TYPE = S.M.
   - TYPE 3 TRENCH
   - DEPTH OF COVER = 2.5' UP TO 18" AND 3' FOR 20" AND ABOVE.
4. WHEN A TEE HAS A VALVE ON THE RUN, THE BRANCH AND
   THE RUNS SHALL BE RESTRAINED AS A 90° BEND FOR THE
   SIZE OF THE PIPE.
5. ALL BENDS, TEES, AND VALVES SHALL BE RESTRAINED ON EACH
   SIDE OF THE FITTING.
6. ALL RESTRAINED PIPE LENGTHS ARE IN FEET.
7. "F" REPRESENTS THE RESTRAINED JOINTS AT THE FITTINGS.
8. HDPE TRANSITION VALVE IS FOR STRAIGHT TIE-INS. IF A BEND
   IS USED, THE VALVE FOR THE BEND MUST BE ADDED.
9. LINE VALVES SHALL BE RESTRAINED UPSTREAM AND
   DOWNSTREAM AS A DEAD END.

<table>
<thead>
<tr>
<th>PIPE SIZE</th>
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<tbody>
<tr>
<td></td>
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<tr>
<td>2&quot;</td>
<td>F</td>
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<td>30&quot;</td>
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<tr>
<td>36&quot;</td>
<td>230</td>
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</table>

PRESSURE MAIN RESTRAINED JOINT

PINELLAS COUNTY
PRESSURE MAIN RESTRAINED JOINT DETAIL

DETAIL INDEX I.D.:
PCU GD 11

DATE: FEB/2016

KEVIN BECOTTE, P.E.

REVISION:
1. All materials shall be in accordance with the latest P.C.U. approved material specification manual.
2. No more than six (6) meter connections shall be installed between blow-off and reduction to 2" main.
3. Casings to be extended a minimum of 5' beyond E.P. or B.O.C. in accordance with P.C.U. standard details.

**NOTES:**
- Restraining main where it reduces to 2" per approved method.
- Reduce main to 2" (location may vary).
- Refer to P.C.U. standard detail for service connection.
- Permanent blow-off assembly to be installed at lot corner typical, refer to P.C.U. standard details.
- 2" casing for single service - Schedule 80.
- 3" casing for double service - Schedule 80.
- Face of main no less than 7.0' off back of curb.

**PINEILLAS COUNTY**

**CUL-DE-SAC LAYOUT - POTABLE WATER DETAIL**

**DETAIL INDEX I.D.:**

**PCU GD 12**

**DATE:**

**FEB/2016**

**KEVIN BECOTTE, P.E.**

**REVISION:**
1. All materials shall be in accordance with the latest P.C.U. approved material specification manual and technical specifications.

2. All work shown on this drawing shall be paid for under the offset pay-item for the applicable size of the existing pipe to be relocated due to conflict. No separate payment shall be made under individual pay-items unless "A" is greater than 50'.

Pipe Separation - Minimum

2-45° Bends
1- Sleeved Connection (if necessary)
1- Reversed Deadman
Concrete Cure Time = 72 Hours
Restrain all joints and Polywrap per color code.

Inlet

Profile View

Variates 10' Min.
w/sanitary sewer

CL-350 D.I.P.
w/color-coded Polywrap
20 L.F. - Minimum when conflict w/sanitary sewer

"A" less than 50'

Pinellas County
Typical Pressure Line
Offset Relocation Detail

Detail Index I.D.: PCU GD 13
Date: FEB/2016
Kevin Becotte, P.E.
Revision:
1. All materials shall be in accordance with the latest P.C.U. approved material specification manual.
1. All materials shall be in accordance with the latest P.C.U. approved material specification manual.
2. Corporation stops shall be compatible with DR 9 (C.T.S.) H.D.P.E. tubing.
3. Service saddle required for all taps except for 1" taps and smaller on D.I.P.
4. Meter only, to be furnished by P.C.U. (if required).
5. Residential size reclaim meter box shall be used for unmetered services and commercial size for metered.
6. All meter boxes located within vehicular areas shall be H-20 loading. All others shall be H-10 loading.
7. Tracer wire required on all services.
8. Tap and meter shall be installed by P.C.U. on all privately developed projects.
9. Services over 60' in length shall be up-sized to 1\".

**RECLAIMED WATER (RESIDENTIAL SIZE) SERVICE BOX w/LOCKING COVER**

- **1" SERVICE SADDLE** (w/CC threaded inlet stainless steel straps)
- **WATER TIGHT SEAL ON TRACER WIRE**
- **12" MAX. FROM MAIN**
- **PROVIDE ENOUGH SLACK FOR 12" MIN. TO EXTEND OUT OF BOX**
- **1" CURB STOP w/LOCKING WING PATTERN AND LEVER HANDLE**
- **1" H.D.P.E. (DR-9) SERVICE TUBING COLOR CODED (PURPLE: RECLAIMED) TUBING STIFFNERS REQUIRED AT FITTINGS.**
- **1" CORP. STOP**
- **WORDING & SYMBOL TO BE EMBOSSED INTO LID (RESIDENTIAL BOX ONLY)**
- **TAP TO BE MADE BETWEEN 45° & 90° OFF TOP CENTER OF MAIN AND TO BE FACING METER**

**RECLAIMED WATER DO NOT DRINK NO BEBER**

**RECLAIMED SERVICE BOX**

**PINELLAS COUNTY**

1" RECLAIMED SERVICE CONNECTION (NON-METERED) DETAIL

**DETAIL INDEX I.D.: PCU RD 1**

**DATE:** FEB/2016

**KEVIN BECOTTE, P.E.**

**REVISION:**
NOTES:
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. CORPORATION STOPS SHALL BE COMPATIBLE WITH DR 9 (C.T.S.) H.D.P.E. TUBING.
3. SERVICE SADDLE REQUIRED FOR ALL TAPS.
4. SERVICE BOXES SHALL BE PER P.C.U. APPROVED MATERIAL SPECIFICATIONS.
5. ALL SERVICE BOXES LOCATED WITHIN VEHICULAR AREAS SHALL BE H-20 LOADING. ALL OTHERS SHALL BE H-10 LOADING.
6. TRACER WIRE REQUIRED ON ALL SERVICES.
7. TAP AND METER SHALL BE INSTALLED BY P.C.U. ON ALL PRIVATELY DEVELOPED PROJECTS.
8. SERVICES OVER 60' IN LENGTH SHALL BE UP-SIZED TO 2".
9. RESIDENTIAL RECLAIMED SERVICE BOXES SHALL BE USED ON ALL RESIDENTIAL PROPERTY REGARDLESS OF THE LENGTH AND SIZE OF THE SERVICE LINE.

1½" OR 2" SERVICE SADDLE (w/I.P. THREADED INLET)
PROVIDE ENOUGH SLACK FOR 12" MIN. TO EXTEND OUT OF BOX
WATER TIGHT SEAL ON TRACER WIRE 12" MAX. FROM MAIN
1½" OR 2" CURB STOP w/LOCKING WING PATTERN AND LEVER HANDLE
1½" OR 2" DR 9 (CTS) H.D.P.E. SERVICE TUBING, (COLOR CODED PURPLE: RECLAIMED). TUBING STIFFNERS REQUIRED AT FITTINGS.
TAP TO BE MADE BETWEEN 45° & 90° OFF TOP CENTER OF MAIN AND TO BE FACING SERVICE BOX
WORDING TO BE EMBOSSED INTO LID

PINELLAS COUNTY
1½" OR 2" RECLAIMED SERVICE CONNECTION (NON-METERED) DETAIL

DETAIL INDEX I.D.:
PCU RD 2
DATE: FEB/2016
KEVIN BECOTTE, P.E.
REVISION:
NOTES:
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. CORPORATION STOPS SHALL BE COMPATIBLE WITH DR 9 (C.T.S.) H.D.P.E. TUBING.
3. SERVICE SADDLE REQUIRED FOR ALL TAPS.
4. METER ONLY, TO BE FURNISHED BY P.C.U.
5. METER BOXES SHALL BE INDUSTRIAL SIZE.
6. ALL METER BOXES LOCATED WITHIN VEHICULAR TRAVEL AREAS SHALL BE H-20 LOADING. ALL OTHERS SHALL BE H-10 LOADING.
7. TRACER WIRE REQUIRED ON ALL SERVICES.
8. TAP AND METER SHALL BE INSTALLED BY P.C.U. ON ALL PRIVATELY DEVELOPED PROJECTS.
9. SERVICES OVER 60' IN LENGTH SHALL BE UP-SIZED TO 2".
10. WORDING TO BE EMBOSSED INTO LID "RECLAIMED WATER,"

 PROVIDE ENOUGH SLACK FOR 12" MIN. TO EXTEND OUT OF BOX
WATER TIGHT SEAL ON TRACER WIRE 12" MAX. FROM MAIN

1½" OF 2" DR 9 (CTS) H.D.P.E. SERVICE TUBING, (COLOR CODED PURPLE: RECLAIMED). TUBING STIFFNERS REQUIRED AT FITTINGS.

1½" OR 2" BALL CORP. STOP
1½" OR 2" SERVICE SADDLE

TAP TO BE MADE BETWEEN 45° & 90° OFF TOP CENTER OF MAIN AND TO BE FACING METER

PINELLAS COUNTY
1½" OR 2" METERED RECLAIMED WATER SERVICE DETAIL

PCU RD 3
FEB/2016
KEVIN BECOTTE, P.E.
REVISON:
NOTES:
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. ALL BURIED JOINTS SHALL BE RESTRAINED MECHANICAL JOINTS (M.J.).

CONCRETE VALVE BOX AND COLLAR PER P.C.U. APPROVED STANDARD DETAIL

SQUARE VALVE BOX COVER LID MARKED "RECLAIMED" TOP OF VALVE BOX TO BE FLUSH WITH FINISH GRADE

REFER TO P.C.U. STANDARD DETAIL VALVE BOX/TRACER WIRE INSTALLATION DETAIL FOR ADJUSTABLE VALVE BOX

M.J. TEE OR DEAD END OF MAIN

#57 DRAINAGE STONE 6"

RECLAIMED WATER BLOW-OFF BOX INDUSTRIAL SIZE

4" FEMALE CAM-LOK DUST CAP

4" TO 6"

4" MALE TO MALE CAM-LOK

4" X 90° M.J. X M.J. BEND

P.E. X FLANGE SPOOL PIECE w/4" (NATIONAL PIPE THREAD) COMPANION FLANGE

4" M.J. GATE VALVE

LIMTS OF PAY ITEM

PINELLAS COUNTY
RECLAIMED WATER FLUSHING ASSEMBLY DETAIL

DETAIL INDEX T.B.:
PCU RD 4

DATE: FEB/2016

KEVIN BECOTTE, P.E.

REVISION:

RECLAIMED WATER FLUSHING ASSEMBLY DETAIL

LIMITS OF PAY ITEM
NOTES:
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. NO MORE THAN EIGHT (8) TO TEN (10) METER CONNECTIONS SHALL BE INSTALLED BETWEEN BLOW-OFF AND REDUCTION TO 4" MAIN.
3. CASINGS TO BE EXTENDED BEYOND E.P. OR B.O.C. IN ACCORDANCE WITH P.C.U. STANDARD DETAILS.
4. A 3' HORIZONTAL SEPARATION BETWEEN RECLAIMED AND POTABLE WATER MAINS.
1. All materials shall be in accordance with the latest P.C.U. approved material specification manual.
2. All joints to be restrained.

Notes:

Contractor shall exercise caution while mixing roadway stabilization.

Prop. reclaimed water main.
SANITARY SEWER MANHOLE CONSTRUCTION NOTES

ALL MANHOLES
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. PRECAST MANHOLE SECTIONS SHALL BE MANUFACTURED IN ACCORDANCE WITH THE LATEST EDITIONS OF ASTM C-478 WITH 4000 P.S.I., TYPE II PORTLAND CEMENT.
3. ALL RISER UNITS SHALL HAVE A MINIMUM HEIGHT OF 12" WITH THE CONCENTRIC CONE SET BETWEEN 2½" AND 14½" BELOW THE BOTTOM OF MANHOLE COVER FRAME.
4. ALL KEYED JOINTS SHALL BE SEALED WITH TWO CONTINUOUS RINGS OF FLEXIBLE JOINT SEALANT, OR APPROVED EQUAL.
5. ALL INTERIOR AND EXTERIOR MANHOLE SURFACES SHALL BE PREPARED FOR COATING AND COATED IN ACCORDANCE WITH P.C.U. STANDARD SPECIFICATIONS AND APPROVED MATERIAL SPECIFICATIONS. INSIDE COATING OF MANHOLE MAY BE ELIMINATED IF USING P.C.U. APPROVED LINING SYSTEM.
6. MANHOLE BASE AND BOTTOM SECTION SHALL BE MONOLITHICALLY CAST.
7. ALL PIPE PENETRATIONS IN MANHOLE SHALL BE PRECAST OR CORE DRILLED.
8. MANHOLE COVER SHALL BE EQUIPPED WITH AN INFLOW PROTECTOR.
9. A DROP CONNECTION IS REQUIRED WHERE THE PIPE INVERT IS GREATER THAN 2' ABOVE THE MANHOLE INVERT. FOR DROPS 2' OR LESS A FLUME SHALL BE CONSTRUCTED.
10. ALL MANHOLES 5' IN DIAMETER OR GREATER SHALL REQUIRE THE USE OF A DOUBLE RING AND COVER.
11. ALL MANHOLES WITH A DEPTH OF 14' OR GREATER SHALL BE DESIGNED FOR ANTI-FLOATATION AND SHALL REQUIRE SUBMITTAL OF CALCULATIONS.

INSIDE DROP MANHOLES
12. THERE SHALL BE NO MORE THAN 2 INSIDE DROPS PER MANHOLE.
13. WHEN USING A 90° BEND ON RISER, IT SHALL BE ROTATED BETWEEN 22½° AND 45° IN THE DIRECTION OF FLOW AND GROUTED INTO BENCH.
14. ALL FORCE MAIN CONNECTIONS REQUIRE THE USE OF A FORCE MAIN HOOD WITH INSIDE DROP BOWL.
15. ALL INSIDE DROPS SHALL BE CONSTRUCTED USING P.V.C. SDR-35 PIPE.

OUTSIDE DROP MANHOLES
16. OUTSIDE DROP PIPING SHALL BE CONSTRUCTED USING THE SAME MATERIAL AS THE MAIN LINE.

<table>
<thead>
<tr>
<th>DIA</th>
<th>FOR PIPES</th>
<th>CASTING SIZE CLEAR OPENING</th>
</tr>
</thead>
<tbody>
<tr>
<td>4'-0&quot;</td>
<td>24&quot; &amp; UNDER</td>
<td>22.375&quot;</td>
</tr>
<tr>
<td>5'-0&quot;</td>
<td>30&quot; &amp; 36&quot; ALL INSIDE DROP AND AIR RELEASE MANHOLES</td>
<td>35&quot;</td>
</tr>
<tr>
<td>6'-0&quot;</td>
<td>42&quot; &amp; OVER</td>
<td>48&quot;</td>
</tr>
</tbody>
</table>

PINELLAS COUNTY
MANHOLE CONSTRUCTION NOTES

DETAIL INDEX I.D.: PCU SD 1
DATE: FEB/2016
KEVIN BECOTTE, P.E.
REVISION:

PCU SD 1

MANHOLE CONSTRUCTION NOTES
1. All materials shall be in accordance with the latest P.C.U. Approved Materials Specification Manual.
2. Refer to P.C.U. Standard Detail on Manhole Construction Notes.
3. All riser units shall have a minimum height of 12" with the concentric cone set between 24" and 1 1/4" below the bottom of manhole cover and frame.

**Notes:**
- See Note No. 3
- Solid brick or (HDPE rings non-traffic areas only)

**Table:**

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<th>Dia.</th>
<th>For Pipes</th>
<th>Casting Size Clear Opening</th>
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<tr>
<td>5'-0&quot;</td>
<td>30&quot; &amp; 36&quot; All Inside Drop and Air Release Manholes</td>
<td>35&quot;</td>
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<tr>
<td>6'-0&quot;</td>
<td>42&quot; &amp; Over</td>
<td>48&quot;</td>
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</tbody>
</table>

**PINELLAS COUNTY**

**Standard Manhole (Pre-Cast) Detail**

**PCU SD 1a**

**Date:** FEB/2016

**KEVIN BECOTTE, P.E.**

**Revision:**
NOTES:
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. REFER TO P.C.U. STANDARD DETAIL ON MANHOLE CONSTRUCTION NOTES.
3. ALL RISER UNITS SHALL HAVE A MINIMUM HEIGHT OF 12" WITH THE CONCENTRIC CONE SET BETWEEN 3½" AND 14½" BELOW THE BOTTOM OF MANHOLE COVER AND FRAME.

PINELLAS COUNTY
INSIDE DROP MANHOLE CONNECTION DETAIL
NOTES:
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. REFER TO P.C.U. STANDARD DETAIL ON MANHOLE CONSTRUCTION NOTES.
3. ALL RISER UNITS SHALL HAVE A MINIMUM HEIGHT OF 12" WITH CONCENTRIC CONE SET BETWEEN 2½" AND 14½" BELOW THE BOTTOM OF MANHOLE COVER AND FRAME.

C.I./D.I. FRAME AND COVER
ASPHALT OR CONCRETE
MANHOLE INTERNAL CHIMNEY SEAL
GRADE

SEE NOTE No. 3

SOLID BRICK OR (H.D.P.E. RINGS NON-TRAFFIC AREA ONLY)

2' MIN.
2' MAX.
3' MIN.
3' MAX.

8" UP TO 12' DEPTH
12" OVER 12' DEPTH

8" MIN. #57 DRAINAGE STONE

PINELLAS COUNTY
OUTSIDE DROP MANHOLE CONNECTION DETAIL

DETAIL INDEX I.D.:
PCU SD 1c
DATE: FEB/2016
KEVIN BECOTTE, P.E.
REVISION:
1. All materials shall be in accordance with the latest P.C.U. approved material specification manual.
2. Precast manholes shall be used and shall be constructed to standard manhole specifications.
3. Doghouse opening may only be used when placing a new manhole over an existing line. Otherwise, the opening must be cast.
4. Openings in precast units are to be 4" minimum to 8" maximum larger than the outside diameter of the existing pipe.
5. All riser units shall have a minimum height of 12" with the concentric cone set between 2½" and 14½" below the bottom of manhole cover and frame.
1. All materials shall be in accordance with the latest P.C.U. approved material specification manual.
2. Refer to P.C.U. standard detail on manhole construction notes.
3. Sewer air release/vacuum valve shall be located at the high elevations on the force main.
4. Lid shall include hole openings to allow air release valve venting.
5. All riser units shall have a minimum height if 12” with the concentric cone set between 2½” and 14½” below the bottom of manhole cover and frame.

C.I./D.I. frame and double cover

IN-FLOW PROTECTOR

MANHOLE INTERNAL CHIMNEY SEAL

GRADE

SEE NOT No. 5

AIR RELEASE/VACUUM VALVE
(ARI MODEL SHOWN)

2" MIP X FIP BALL CORP. STOP

FORCE MAIN

3" MIN.

8" up to
12" depth
12" over
12" depth

6" 6" 6"

6" 8" 8"

8" MIN. #57 DRAINAGE STONE

2" SERVICE SADDLE (ALL FITTINGS ASSOCIATED W/AIR RELEASE ASSEMBLY SHALL BE #304 STAINLESS STEEL)

PINELLAS COUNTY

SEWER AIR RELEASE/AIR VACUUM VALVE IN MANHOLE (12" PIPE OR LESS) DETAIL

DETAIL INDEX I.D.: PCU SD 2

DATE: FEB/2016

KEVIN BECOTTE, P.E.

REVISION:
NOTES:
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. SUPPORT/RESTRAINT MECHANISM FOR AIR RELEASE/AIR VACUUM VALVE SHALL REQUIRE APPROVAL BY COUNTY ENGINEER PRIOR TO INSTALLATION.

PINELLAS COUNTY
OFFSET AIR RELEASE ASSEMBLY
FOR 4"-12" AND LARGER SANITARY SEWER (ABOVE GROUND) DETAIL

DETAIL INDEX I.D.: PCU SD 3
DATE: FEB/2016
REVISION:
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. SERVICE CONNECTIONS MAY NOT HAVE BEEN SHOWN ON PLAN/PPROFILE SHEETS. SERVICE CONNECTION LOCATIONS SHALL BE DETERMINED IN THE FIELD AND CONNECTIONS CONSTRUCTED ACCORDANCE WITH P.C.U. APPROVED TECHNICAL SPECIFICATIONS, MATERIALS MANUAL & THESE DETAILS. FOR NEW DEVELOPMENT, THE SERVICE CONNECTION SHALL BE CONSTRUCTED IN THE CENTER OF THE LOT.
3. MINIMUM DEPTH UNDER ROADWAY 42" MINIMUM DEPTH AT PROPERTY LINE 36" (OR AS REQUIRED FOR SERVICE).
4. SERVICE LINES SHALL BE A MIN. OF 6" TO ALL RESIDENCES.
5. NO DOUBLE WYE UNITS SHALL BE PERMITTED ON SERVICE LINE. ALL RESIDENCES SHALL BE SERVED BY A SINGLE SERVICE.
6. RISERS SHALL BE INSTALLED ON ALL WYES (BOTH PRESENT & FUTURE SERVICES).
7. RISERS SHALL PREFERABLY FOLLOW SLOPE OF BANK TO REQUIRED DEPTH.
8. THE TRACER WIRE SHALL START AT THE CLEAN-OUT AND RUN ALONG THE SEWER SERVICE TO THE MAIN AND BACK TO THE CLEAN-OUT AS ONE CONTINUOUS WIRE.

SERVICE CONNECTION - DETAIL

SCALE: NONE

CLEAN-OUT DETAIL

SCALE: NONE

PINELLAS COUNTY
SEWER SERVICE CONNECTION AND CLEAN-OUT DETAIL

DETAIL INDEX I.D.: PCU SD 4
DATE: FEB/2016
KEVIN BECOTTE, P.E.
REVISION:
NOTE:
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.

GRADE

D-3034 P.V.C. PIPE

4' MIN.
6' MAX.

GRADE

D.I. CL-350 PIPE OR
C-900/C-905 P.V.C. PIPE

ALL DEPTHS GREATER THAN 8'
OR LESS THAN 4'
1. All materials shall be in accordance with the latest P.C.U. approved material specification manual.
2. Location of sample point Bibb shall not be within limits of roadway but routed to roadway shoulder (non-traffic area).
3. Contractor shall utilize service line connections, where possible.
4. When utilizing temporary sample point as a service connection, then a tracer wire is required.
5. Sample points to be abandoned after use shall be fitted with a \( \frac{3}{4} \)" CC x F.I.P. Corp. Stop.
6. Remove all pipe and above ground fittings and plug Corp. Stop with \( \frac{3}{8} \)" plug.

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**PINELLAS COUNTY**

TEMPORARY SAMPLING POINT DETAIL

DETAIL INDEX I.D.: PCU WD 1

DATE: FEB/2016

KEVIN BECOTTE, P.E.

REVISION:
NOTES:
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. A VALVE KEY EXTENSION SHALL BE REQUIRED ON VALVES WITH OPERATOR NUT OVER 3' DEEP.
3. INSTALL AND REMOVE TEMP. FLUSHING AND SAMPLING ASSEMBLY AT 2" COUPLING.
4. INSTALL 2" BRASS PLUG UPON CLEARANCE OF THE P.C. HEALTH DEPARTMENT.
5. RESTRAIN 2" PIPE UP TO VALVE

TEMPORARY FLUSHING & SAMPLING ASSEMBLY

CONCRETE VALVE BOX COLLAR
PER P.C.U. STANDARD DETAIL

REFER TO P.C.U. STANDARD DETAIL FOR VALVE BOX INSTALLATION

SEE RESTRAINED JOINT TABLE FOR RESTRAINED LENGTH.

JOINT RESTRAINT

2" MALE ADAPTER

2" R.W. GATE VALVE

2" GATE VALVE

SILL COCK

2" GALV. PIPE

36" MIN.

48" MAX.

60" MAX.

60" MAX.

6" MIN.

6" MIN.

4"-6"

P.C.U. APPROVED METER BOX

#57 DRAINAGE STONE
6" MIN. DEPTH

2" COUPLING, BRASS

2" NIPPLE, BRASS

2" NIPPLE, BRASS

2" x 90° ELBOW, BRASS

18"-24" 2" NIPPLE, BRASS

2" PERMANENT WATER BLOW-OFF
DETAIL

PINELLAS COUNTY

DETAIL INDEX I.D.:
PCU WD 2

DATE: FEB/2016

KEVIN BECOTTE, P.E.

REVISION:
1. All materials shall be in accordance with the latest P.C.U. approved material specification manual.

2. Corporation stops shall be compatible with DR 9 (C.T.S.) H.D.P.E. tubing.


4. Meter only to be furnished by P.C.U.

5. Meter boxes shall be residential size.

6. All meter boxes located within vehicular travel areas shall be H-20 loading. All others shall be H-10 loading.

7. Tracer wire required on all services.

8. Services over 60' in length shall be up-sized to 1".

9. Tap and meter shall be installed by P.C.U. on all privately developed projects.

10. Meters with dual checks shall utilize a meter box with offset mouse holes.

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Pinellas County

3/4" or 1" Potable Water Service Connection Detail

Detail Index I.D.:
PCU WD 3

Date: FEB/2016

Kevin Becotte, P.E.

Revision:
NOTES:
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. CORPORATION STOPS SHALL BE COMPATIBLE WITH DR 9 (C.T.S.) H.D.P.E. TUBING.
3. SERVICE SADDLE REQUIRED FOR ALL TAPS.
4. METER ONLY, TO BE FURNISHED BY P.C.U.
5. METER BOXES SHALL BE INDUSTRIAL SIZE.
6. ALL METER BOXES LOCATED WITHIN VEHICULAR TRAVEL AREAS SHALL BE H-20 LOADING.
   ALL OTHERS SHALL BE H-10 LOADING.
7. TRACER WIRE REQUIRED ON ALL SERVICES.
8. SERVICES OVER 60' IN LENGTH SHALL BE UP-SIZED TO 2''.
9. TAP AND METER SHALL BE INSTALLED BY P.C.U. ON ALL PRIVATELY DEVELOPED PROJECTS.

R/W OR EASEMENT LINE

PROVIDE ENOUGH SLACK FOR
12'' MIN. TO EXTEND OUT OF
BOX

WATER TIGHT SEAL
ON TRACER WIRE
12'' MAX. FROM MAIN

1 1/2'' OR 2'' BALL CORP. STOP

1 1/2'' OR 2'' SERVICE SADDLE

TAP TO BE MADE BETWEEN 45° &
90° OFF TOP CENTER OF MAIN
AND TO BE FACING METER

1 1/2'' OR 2'' DR 9 (CTS) H.D.P.E.
SERVICE TUBING, (BLUE:
POTABLE). TUBING STIFFENERS
REQUIRED AT FITTINGS.

1 1/2'' OR 2'' METER VALVE
ASSEMBLY COMPATIBLE
W/EXISTING OR SUPPLIED
METER WITH LOCKING WING

POLY. SERVICE
2''-4'' BRASS NIPPLE

2''-4'' BRASS NIPPLE

PINELLAS COUNTY

1 1/2'' OR 2'' POTABLE WATER SERVICE CONNECTION
DETAIL

DETAIL INDEX I.D.: PCU WD 4
DATE: FEB/2016
KEVIN BECOTTE, P.E.
REVISION:
NOTES:
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. MATERIAL SPECIFICATION MANUAL.
2. HYDRANTS TO BE SET PARALLEL TO CURVE AT P.T. OR P.C. 1' MIN. FROM R/W LINE.

PINELLAS COUNTY
TYPICAL FIRE HYDRANT LOCATIONS DETAIL

DATE: FEB/2016
KEVIN BECOTTE, P.E.
REVISION:
1. All materials shall be in accordance with the latest P.C.U. approved material specification manual.
2. All bolted fittings shall be polyethylene wrapped, color coded per service.
3. Valve box(es) shall have a concrete collar per P.C.U. approved standard detail.
4. If fire hydrant is installed within an off-street vehicular area, and is located within 10 ft. or less of a vehicular use area, guard posts (bollards) shall be installed per P.C.U. approved standard detail unless otherwise approved by the Director of Pinellas County Utilities Engineering or their authorized representative.
5. If distance between valve and hydrant is 10 ft. or greater, an additional valve shall be installed for control of hydrant unless otherwise approved by the Director of Pinellas County Utilities Engineering or their authorized representative.
6. Hydrant shall be installed plumb.
7. Hydrant shall be painted upon installation per P.C.U. approved material specifications.
8. All chains shall be removed after installation.

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**Mechanical Joint or Anchoring Tee**

**Undisturbed Earth (Typ.)**

**Concrete Collar Per P.C.U. Approved Standard Detail**

**Adjustable Valve Box**

**Spec'd Cover**

**Fire Hydrant Assembly**

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**PINELLAS COUNTY**

**FIRE HYDRANT ASSEMBLY DETAIL**

**Detail Index I.D.:** PCU WD 6

**Date:** FEB/2016

**Kevin Becotte, P.E.**

**Revision:**
1. All materials shall be in accordance with the latest P.C.U. approved material specification manual.
2. All bolted fittings shall be polyethylene wrapped, color coded per service.
3. Valve box(es) shall have a concrete collar per P.C.U. approved standard detail.
4. Hydrant shall be installed plumb.
5. Hydrant shall be painted after installation per P.C.U. approved material specification manual.
6. Tee may be rotated to obtain proper bury on fire hydrant.
7. Anchoring elbow may be switched (long vs. short end) and rotated to set fire hydrant in opposite direction.
8. Anchoring couplings may be replaced with restrained pipe.
9. All chains shall be removed after installation.
10. If fire hydrant is installed within an off-street vehicular area, and is located within 10 ft. or less of a vehicular use area, guard posts (bollards) shall be installed per P.C.U. approved standard detail unless otherwise approved by the director of P.C.U. engineering or their representative.
NOTE:
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH P.C.U. APPROVED MATERIALS SPECIFICATION MANUAL.
2. ¾"x2"x8? TAPPING SADDLE AND ¾" CORPORATION VALVE INSTALLED AT 224°.
3. ATTACH ¾" POLY VINYL TUBING.
4. PEA GRAVEL FOR STABILITY AND EYEBOLT FOR TUBING.
5. ¾" TO ½" COMPRESSION VALVE CAPABLE TO CONNECT WITH TUBING.
6. ½" STAINLESS STEEL GOOSE NECK FOR SAMPLING.
7. COVER ASSEMBLY WITH STAINLESS HINGES AND LOCK CAPABILITY.
8. BRASS SAMPLE I.D. TAG (ROUND OR SQUARE).

PVC CAP

STAINLESS STEEL EYE BOLT

CUP PVC PIPE ON HALF AND REATTACH USING STAINLESS STEEL HINGE AND LOCKING DEVICE

SWING ACCESS

SAMPLE TUBING

STATION I.D. TAG

½" TO ¼" VALVE

6" PVC
(C-900)
PIPE

36" ABOVE GROUND

EXISTING GRADE

DRAINAGE STONE

¼" POLYTUBING

¼" CORPORATION STOP

EXISTING WATER MAIN

PINELLAS COUNTY
WATER QUALITY
SAMPLING STATION DETAIL

DETAIL INDEX I.D.:
PCU WD 8
DATE: FEB/2016
KEVIN BEGOTTE, P.E.