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NOTES FOR SANITARY STRUCTURES

1. ALL MANHOLES SHALL BE BRICK, PRECAST CONCRETE OR FIBERGLASS REINFORCED POLYESTER (FRP), UNLESS OTHERWISE SHOWN OR APPROVED BY THE ENGINEER.
2. ALL PIPE STUBS FROM PRECAST MANHOLES, FOR FUTURE CONNECTIONS, SHALL BE INSTALLED WITH REMOVABLE WATERTIGHT PLUGS, PLACED FROM WITHIN THE MANHOLE.
3. ALL TYPE I CONE SECTIONS SHALL BE CONCENTRIC WITH RING CASTING CENTERED IN STRUCTURE, UNLESS OTHERWISE SHOWN OR DIRECTED BY THE ENGINEER.
4. THE CONE SECTION OF TYPE I PRECAST MANHOLE SHALL BE PRECAST.
5. NO PIPE SHALL BE IN THE MANHOLE CONE SECTION.
6. ALL MANHOLES WITH SLAB TOP SHALL BE TYPE II, SEE STANDARD DETAIL-TYPE II MANHOLE TOP SLAB.
7. A DROP MANHOLE SHALL BE REQUIRED WHEN THE INVERT OF ANY INCOMING PIPE IS 24" OR MORE ABOVE THE INVERT OF THE MANHOLE. ALL DROP PIPE SHALL BE ON THE OUTSIDE OF THE MANHOLE.
8. PRIOR TO PRECASTING STRUCTURES THE PRECASTER SHALL SUBMIT SITE SPECIFIC INDIVIDUAL SHOP DRAWINGS FOR APPROVAL. SHOP DRAWINGS SUBMITTED FOR NONSTANDARD STRUCTURES OR STRUCTURES THAT DEVIATE FROM THE STANDARD DETAILS MUST BE DESIGNED AND CERTIFIED BY A REGISTERED FLORIDA PROFESSIONAL ENGINEER.
9. PRECAST MANHOLES SHALL CONSIST OF A MINIMUM NUMBER OF SECTIONS, AS APPROVED BY THE ENGINEER.
10. ALL PRECAST STRUCTURES SHALL HAVE AN INTEGRAL FLOOR AND BASE RISER SECTION, SEE STANDARD DETAIL-TYPE I AND II MANHOLE BASE AND WALL.
11. SEE STANDARD DETAIL-PRECAST STRUCTURE JOINT ASSEMBLY AND STRUCTURE SEALING.
12. ALL EXPOSED EDGES TO HAVE A 3/4" CHAMFER.
13. FOR THE APPLICABLE RING AND COVER, SEE STANDARD DETAIL-MANHOLE RING AND COVER CASTING.
14. PRECAST BASE SECTION SHALL BE INSTALLED ON A CONCRETE MAT WITHIN 2 HOURS OF PLACEMENT OF THE MAT.
15. ALL BRICK SHALL BE CLAY BRICK AND SHALL HAVE A MINIMUM 3/4" CEMENT PLASTER ON ALL SURFACES.
16. BENCH SHALL SLOPE @ 1:12 MINIMUM.
17. PRIOR TO MANUFACTURING OF FRP MANHOLE, MANUFACTURER SHALL SUBMIT SIGNED AND SEALED SHOP DRAWINGS FOR THE DESIGN OF INVERT AND BENCH AREA, PIPE CONNECTIONS, FABRICATION DETAILS AND INSTALLATION METHODS FOR APPROVAL.
18. ADDITIONAL REINFORCEMENT IS REQUIRED IN ALL TYPE II MANHOLE WALLS WITH OPENINGS FOR PIPES. THE VERTICAL AND HORIZONTAL WALL REINFORCEMENT DISPLACED DUE TO OPENINGS SHALL BE REPLACED WITH ADDITIONAL REINFORCEMENT BARS ABOVE, BELOW, AND ON BOTH SIDES OF OPENINGS, EQUAL IN AREA TO THOSE DISPLACED. REPLACEMENT REINFORCEMENT SHALL BE PLACED WITH 3" CLEARANCE TO THE EDGES OF OPENINGS.
19. FRP MANHOLE INVERT AND BENCH SHALL BE CONCRETE.
20. FRP STIFFENING RIBS ARE REQUIRED AT 10' DEPTH OR MORE.

CITY STANDARDS

REVISIONS

BY DATE

ENGINEERING AND CAPITAL IMPROVEMENT DEPARTMENT CITY OF ST. PETERSBURG

SANITARY STRUCTURE NOTES

APPROVED BY:   

DATE:   OCT. 2019

DWG. No.   S30-1
FLG x FLG EXTENSION, 5" MIN. LENGTH, FOR 10" THRU 24" SEWERS

3" CLEAR, MIN.

"COLLAR BEAM" FOR 10" THRU 24" SEWERS, SEE NOTE 7 BELOW

"COLLAR BEAM" FOR 4" THRU 8" SEWERS

FLG x PE "RISER", 16" MIN. LENGTH

MJ x MJ BEND SEE NOTE 6, BELOW

HEAVY DUTY ACCESS, SEE NOTE 5, BELOW

BLIND FLANGE, DOME TYPE

FINISHED GRADE

GATE VALVE

MJ WYE BRANCH

TYPICAL PROFILE VIEW

#4 @ 12" OC, EACHWAY

COLLAR BEAM DETAIL

STUB PIPE CHART

<table>
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<tr>
<th>F.M. SIZE</th>
<th>MIN. LENGTH</th>
<th>MAX. LENGTH</th>
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<td>30&quot;</td>
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</tbody>
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NOTES:

1. ALL PIPE THAT IS PART OF THIS ASSEMBLY SHALL BE DUCTILE IRON. FITTING'S SHALL BE STANDARD TYPE LISTED IN ANSI/AWWA C-110.
2. PIG LAUNCHER SHALL BE SAME SIZE OF THE FORCE MAIN BEING FLUSHED OR CLEANED.
3. H=HARNESSED JOINT. (MECHANICAL JOINT W/ D.I. RETAINER GLAND)
4. VALVE AND VALVE BOX REQUIRED IF NONE EXISTS BETWEEN PIG LAUNCHER AND PRESSURE SOURCE.
5. HEAVY DUTY, DOUBLE DOOR ACCESS SHALL BE U.S.F. FABRICATION, INC., MODEL: "AHD 48 x 72", OR EQUAL. ASSEMBLY MAY BE GALVANIZED OR ALUMINUM W/ H20 TRAFFIC LOADING, W/ RECESSED STAPLE FOR PAD LOCK.
6. FOR 10" THRU 24" SEWERS THIS PIECE SHALL BE A 45° BEND.
7. ROTATE THE COLLAR BEAM 90° FROM THAT FOR 4" THRU 8" SEWERS. SEE ADDITIONAL CONDITIONS AS SHOWN IN THE TYPICAL PROFILE VIEW, ABOVE.

CITY STANDARDS

"PIG" LAUNCHER ACCESS DETAIL

ENGINEERING AND CAPITAL IMPROVEMENT DEPARTMENT
CITY OF ST. PETERSBURG

APPROVED BY: Brigham Fremman

DATE: OCT. 2019
DWG. No: S30-2
**TYPICAL SECTION**

- FINISHED GRADE
- CASING SPACER, SEE NOTE 1
- STEEL CASING, SEE NOTE 6
- CARRIER PIPE
- SYMMETRICAL ABOUT C

**TYPICAL PLAN VIEWS**

*APPLICABLE AT ROADWAYS, ALLEYS AND DRIVEWAYS*

---

### SCHEDULE

<table>
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<tr>
<th>CARRIER PIPE TYPE</th>
<th>CARRIER PIPE DIA-ID</th>
<th>STEEL CASING DIA-OD</th>
<th>MIN CASING WALL THICKNESS</th>
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<td></td>
<td>6&quot; 16&quot;</td>
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<td>48&quot; 58&quot;</td>
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**NOTES:**

1. CARRIER PIPE SHALL BE CENTERED AND SUPPORTED INSIDE THE STEEL CASING BY MANUFACTURED CASING SPACERS EQUAL TO CASCADE MODEL "CCS" OR "THE BOOSTER" BY PIPELINE SEAL AND INSULATOR INC.
2. SPACER SUPPORTS SHALL BE FASTENED TO THE BARREL OF THE CARRIER PIPE BEHIND EACH JOINT AND 12" FROM THE END OF THE CASING, AN ADDITIONAL SUPPORT SHALL BE INSTALLED AT THE CENTER OF EACH PVC PIPE.
3. THE ENDS OF THE CASING PIPE SHALL BE SEALED WITH AN 8" SOLID BRICK & MORTOR BULKHEAD PER CITY SPECIFICATIONS.
4. ALL CARRIER PIPE JOINTS SHALL BE HARNESSED JOINTS AS PER SPECIFICATIONS.
5. MINIMUM CASING WALL THICKNESS IS BASED ON 3'-6" COVER (AT EP OR CURB GUTTER LINE) OVER CASING PIPE. LESSER COVER, REQUIRES A CALCULATION BY A REGISTERED ENGINEER TO INDICATE WALL THICKNESS IS ADEQUATE.

---

### CITY STANDARDS

**JACK AND BORE DETAIL**

- ENGINEERING AND CAPITAL IMPROVEMENT DEPARTMENT
- CITY OF ST. PETERSBURG

**APPROVED BY:**

**DATE:** OCT. 2019

**DWG. No.** S30-3
NOTES:
1. ENCASE WYE IN CONCRETE, IF ORDERED. 18" E/W OF LATERAL AND 6" ON ALL SIDES.
2. SADDLE WYE MAY BE USED FOR INSTALLING LATERAL ON AN EXISTING PIPE. SADDLE SHALL BE PVC WITH S.S. STRAPS AND A FLEXIBLE GASKET. HOLE SHALL BE DRILLED.
3. ALL SERVICES FOR FUTURE USE IN NON-VEHICULAR AREAS SHALL HAVE A WITNESS POST. WITNESS POST SHALL BE 4" DIAMETER PVC PIPE FILLED WITH CONCRETE. 4' TO 5' OF THE PIPE SHALL BE EXPOSED AND WRAPPED WITH GREEN TAPE, OR 1" DIAMETER GALVANIZED PIPE, PROTRUDING 1' ABOVE FINISHED GRADE, AS DIRECTED BY THE ENGINEER.
4. ALL DEVELOPMENT AND REDEVELOPMENT SHALL HAVE A SANITARY CLEAN OUT AT THE PROPERTY LINE.
5. SEE STANDARD DETAIL-SANITARY SEWER CLEAN OUT FOR NON TRAFFIC AREAS.
6. SEE STANDARD DETAIL-SANITARY SEWER CLEAN OUT FOR TRAFFIC AREAS.
7. EITHER CLEAN OUT TYPE MAY BE USED IN TYPE I OR TYPE II APPLICATIONS.

CITY STANDARDS

HOUSE SERVICE
CONNECTIONS DETAIL

ENGINEERING AND CAPITAL IMPROVEMENT DEPARTMENT
CITY of ST. PETERSBURG

REVISIONS

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APPROVED BY:

DIRECTOR

DATE: OCT. 2019

SCALE: N.T.S.

DWG. No.
S30-4
EXISTING OR PROP. GRAVITY SEWER PIPE (8" MIN).

SIDEWALK

FLOW

FLOW

EXISTING OR PROP. SEWER LATERAL

FUTURE DOMESTIC CONNECTION (BY OTHERS)

PROPERTY LINES, ULTIMATE R/W LINES AND/OR UTILITY EASEMENT LINES

CONCRETE BOX & LID TO BE INSTALLED IN ISOLATED CONCRETE SIDEWALK WITH EXPANSION JOINTS. FOR BOX LOCATED IN GRASS AREAS

EXISTING GRADE

SEWERS LESS THAN 7 DEPTH

CLEAN-OUT (THREADED PLUG)

RISER PIPE

6" SEWER LATERAL MIN. OR LARGER AS REQ'D

SLOPE PIPE DOWNWARD MIN. SLOPE 1/8/FT.

45° BEND

WYE

45° BEND, ROTATED AS REQ'D

EXISTING OR PROP. GRAVITY SEWER PIPE (8" MIN).

APPROVED WATERTIGHT PLUG. PLUG TO BE REMOVED FOR FUTURE DOMESTIC CONNECTION WITH PVC "HARD COUPLING", BY OTHERS

CITY STANDARDS

GRAVITY SEWER SERVICE LATERAL FOR "SHALLOW" SEwers

ENGINEERING AND CAPITAL IMPROVEMENT DEPARTMENT
CITY OF ST. PETERSBURG

REVISIONS

BY DATE

APPROVED BY:

DATE: OCT. 2019

DWG. No.

S30-5
CONCRETE BOX & LID TO BE INSTALLED IN ISOLATED CONCRETE SIDEWALK WITH EXPANSION JOINTS.

CLEAN-OUT (THREAD PLUG)

RISE PIPE

FLOW

6" SEWER LATERAL MIN. OR LARGER AS REQ'D

SLOPE PIPE DOWNWARD MIN. SLOPE 1/8/FT.

45° BEND, ROTATED AS REQ'D

90° BEND

TEE, ROTATED AS REQ'D

EXISTING OR PROP. GRAVITY SEWER PIPE (8" MIN).

APPROVED WATERTIGHT PLUG. PLUG TO BE REMOVED FOR FUTURE DOMESTIC CONNECTION WITH PVC "HARD COUPLING", BY OTHERS

SECTION A

N.T.S.

CITY STANDARDS

GRAVITY SEWER SERVICE LATERAL FOR "DEEP" SEWERS

ENGINEERING AND CAPITAL IMPROVEMENT DEPARTMENT
CITY OF ST. PETERSBURG

APPROVED BY: 

DATE: OCT. 2019

S30-6
CAST IRON FRAME AND COVER EQUAL TO U.S. FOUNDRY #USF 7621

SEE NOTE 2

2'-6" DIA.

6" x 6" WYE

INVERT OF PIPE

PLUG END, SLIP x SLIP
SET WYE ON COMPACTED BASE MATERIAL

6" x 45°, BEND

TYPICAL SECTION VIEW

PVC ADAPTER
SLIP x THREAD

FRAME AND COVER SECTION
SECTION VIEW

PLUG
SECTION VIEW

PLUG
PLAN VIEW

COVER
PLAN VIEW

(2) PENETRATING PICKHOLES
MACHINED SURFACE

1-3/4" RAISED LETTER

NOTES:
1. THIS SANITARY CLEAN OUT IS TO BE USED IN ALL TRAFFIC AREAS, INCLUDING THE PARKWAY FROM CURB TO PROPERTY LINE OR SIDEWALK
2. IN ASPHALTIC PAVEMENT AREAS CONCRETE COLLAR SHALL BE LOWERED 3" FROM GRADE TO ALLOW FOR THE ASPHALT TO BE AROUND COLLAR. COLLAR IS 5" THICK IN THESE AREAS.
3. PLUG SHALL CONFORM TO THE SPECIFICATIONS AND SHALL HAVE A GASKET.
4. WYE SHALL CONFORM TO ASTM D-3034, & NSF STANDARD #14.

CITY STANDARDS

SANITARY SEWER CLEAN OUT
FOR TRAFFIC AREAS DETAIL

ENGINEERING AND CAPITAL IMPROVEMENT DEPARTMENT
CITY OF ST. PETERSBURG

APPROVED BY:

DIRECTOR

DATE: OCT. 2019

DWG. No. S30-7
FINISHED GRADE

REFER TO S30-9 FOR CONCRETE BOX

COUNTERSUNK PVC PLUG

PVC ADAPTER

6"x 45° BEND

PLUG END, SLIP x SLIP

TYPICAL SECTION VIEW

AS SHOWN ON PLANS

INVERT OF PIPE

6"x 6"x 6" WYE, MIN.

NOTES:
1. THIS SANITARY CLEAN OUT IS TO BE USED IN SODDED AREAS ONLY THAT ARE NOT ACCESSIBLE TO VEHICULAR TRAFFIC.
2. PLUG SHALL CONFORM TO THE SPECIFICATIONS AND SHALL HAVE A GASKET.
3. WYE SHALL CONFORM TO ASTM D-3034, & NSF STANDARD #14.

CITY STANDARDS

SANITARY SEWER CLEAN OUT FOR NON TRAFFIC AREAS DETAIL

APPROVED BY:

DIRECTOR

DATE: OCT. 2019

DWG. No. S30-8
CAST IRON LID TO BE A MODIFIED VERSION OF USF No. 7715 (OR EQUIVALENT) WITHOUT BOLT HOLES, MARKED "SEWER" AND A.D.A. COMPLIANT FOR USE IN SIDEWALKS. LID WT. APPROX. 55 LBS
NOTES:
1. SEE GENERAL NOTES, STANDARD DETAIL-SANITARY MANHOLE NOTES.
2. FLEXIBLE WATERTIGHT CONNECTORS SHALL BE "KWIK SEAL" OR "PSX: POSITIVE SEAL GASKET SYSTEM" AS MANUFACTURED BY THE PRESS SEAL GASKET CORPORATION, OR APPROVED EQUAL, OR "KOR-N-SEAL" I CONNECTORS FOR PIPE SIZES UPTO 15" AND "KOR-N-SEAL" II CONNECTORS FOR PIPE SIZES 18" TO 30", AS MANUFACTURED BY THE NPC INC., OR APPROVED EQUAL.

CITY STANDARDS

SANITARY PRECAST MANHOLE TYPE I DETAIL

ENGINEERING AND CAPITAL IMPROVEMENT DEPARTMENT
CITY OF ST. PETERSBURG

APPROVED BY:

DIRECTOR

DATE:
S30-10
FINISHED GRADE
MANHOLE ACCESS-SEE STANDARD
DETAIL-MANHOLE RING AND COVER CASTING

3/4" PLASTER COATING
BRICK COURSES WITH

2' MIN.

6" MIN. WALL HEIGHT
6" MAX.

ACCESS DIA.

22° MAX.

WT-WALL THICKNESS-SEE
STANDARD DETAIL-TYPE I AND
II MANHOLE BASE AND WALL

BRICK DAM TO 1/2 DEPTH OF
PIPE DIAMETER

LATERAL SEWER PIPE
DROP PIPE SAME DIAMETER AS
LATERAL SEWER

CROWN OF DROP PIPE TO MATCH OR BE ABOVE CROWN
OF TRUNK SEWER

90° BEND

CONCRETE DROP ENCASEMENT

BASE SLAB-SEE STANDARD
DETAIL-TYPE I AND II MANHOLE
BASE AND WALL

COMPACTED SUBGRADE, OR 4"
CONCRETE MAT, OR 6" COARSE
AGGREGATE, AS ORDERED

TYPICAL SECTION VIEW

FLEXIBLE WATERTIGHT CONNECTOR SEE
NOTE 2 BELOW

FLOW
R=24" MIN.

BASE PLATE-SEE STANDARD
DETAIL-TYPE I AND II MANHOLE
BASE AND WALL

WALL REINFORCEMENT-SEE
STANDARD DETAIL-TYPE I AND
II MANHOLE BASE AND WALL

FLEXIBLE WATERTIGHT CONNECTOR SEE
NOTE 2 BELOW

PLAN VIEW

TYPICAL SECTION VIEW

SCHEDULE

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<th>DIA. INSIDE</th>
<th>ACCESS DIA.</th>
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<td>4&quot;</td>
<td>24&quot;</td>
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<tr>
<td>21&quot; TO 30&quot;</td>
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NOTES:
1. SEE GENERAL NOTES, STANDARD DETAIL-SANITARY MANHOLE NOTES.
2. FLEXIBLE WATERTIGHT CONNECTORS SHALL BE "KWIK SEAL" OR "PSX: POSITIVE SEAL GASKET SYSTEM" AS
MANUFACTURED BY THE PRESS SEAL GASKET CORPORATION, OR APPROVED EQUAL, OR "KOR-N-SEAL" I
CONNECTORS FOR PIPE SIZES UPTO 15" AND "KOR-N-SEAL" II CONNECTORS FOR PIPE SIZES 18" TO 30", AS
MANUFACTURED BY THE NPC INC., OR APPROVED EQUAL.

CITY STANDARDS

SANITARY PRECAST DROP
MANHOLE TYPE I DETAIL

ENGINEERING AND CAPITAL
IMPROVEMENT DEPARTMENT
CITY of ST. PETERSBURG

APPROVED BY:

DATE: OCT. 2019

DIRECTOR

SCALE: N.T.S.

S30-11
MANHOLE ACCESS - SEE STANDARD DETAIL - MANHOLE RING AND COVER CASTING

FINISHED GRADE

MANHOLE ACCESS - SEE STANDARD DETAIL - MANHOLE RING AND COVER CASTING

BRICK COURSES WITH 3/4" PLASTER COATING

3/4" PLASTER COATING

BASE REINFORCEMENT - SEE SCHEDULE BELOW

BT-BASE THICKNESS SEE SCHEDULE BELOW

DIAMETER - INSIDE

COMPACTED SUBGRADE, OR 4" CONCRETE MAT, OR 6" COARSE AGGREGATE, AS ORDERED

LATERAL SEWER PIPE

SEE NOTE 4

ANTI-FLOTATION LIP - SEE SCHEDULE BELOW

WT-WALL THICKNESS, SEE ABOVE NOTATION

R = 24" MIN

SCHEDULE

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<th>DIA. INSIDE</th>
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<th>BASE DIA. W/ 8&quot; WALL</th>
<th>BASE DIA. W/ 12&quot; WALL</th>
<th>H MAX.</th>
<th>BT MIN.</th>
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<td>8&quot;</td>
<td>6&quot;</td>
<td>#6 @ 12&quot; EW</td>
</tr>
<tr>
<td>21&quot; TO 30&quot;</td>
<td>5&quot;</td>
<td>32&quot;</td>
<td>7'-4&quot;</td>
<td>8'-0&quot;</td>
<td>8'</td>
<td>8&quot;</td>
<td>6&quot;</td>
<td>#6 @ 9&quot; EW</td>
</tr>
</tbody>
</table>

NOTES:
1. FOR GENERAL NOTES SEE, STANDARD DETAIL - SANITARY MANHOLE NOTES.
2. NO INLET PIPE SHALL BE INSTALLED IN THE CONE SECTION.
3. BRICK SHALL BE SOLID CLAY.
4. GROUTING RING CONNECTORS SHALL BE "WS SERIES" WATER STOP GROUTING RING AS MANUFACTURED BY THE PRESS-SEAL GASKET CORPORATION, OR APPROVED EQUAL.

CITY STANDARDS

SANITARY BRICK MANHOLE TYPE I DETAIL

ENGINEERING AND CAPITAL IMPROVEMENT DEPARTMENT CITY OF ST. PETERSBURG

APPROVED BY: ____________________________ DATE: OCT. 2019

DIRECTOR

SCALE: N.T.S.

DWG. No. S30-12
MANHOLE ACCESS-SEE STANDARD DETAIL-MANHOLE RING AND COVER CASTING

FINISHED GRADE

BRICK COURSES WITH 3/4" PLASTER COATING

8"-WT W/MAXIMUM COVER

12"-WT W/O MAXIMUM COVER

6" TO BACK OF BELL, TYP.

LATERAL SEWER PIPE

SEE NOTE 4

MANHOLE RING AND COVER CASTING

TOP SLAB-SEE STANDARD DETAIL-TYPE II MANHOLE TOP SLAB

3/4" PLASTER COATING

BASE REINFORCEMENT-SEE SCHEDULE BELOW

BT-BASE THICKNESS SEE SCHEDULE BELOW

DIAMETER-INSIDE

COMPACTED SUBGRADE, OR 4" CONCRETE MAT, OR 6" COARSE AGGREGATE, AS ORDERED

TYPICAL SECTION VIEW

PLAN VIEW

ANTI-FLOTATION LIP-SEE SCHEDULE BELOW

WT-WALL THICKNESS, SEE ABOVE NOTATION

R=24" MIN

SCHEDULE

<table>
<thead>
<tr>
<th>PIPE SIZES</th>
<th>DIA. INSIDE</th>
<th>ACCESS DIA.</th>
<th>BASE DIA. W/ 8&quot; WALL</th>
<th>BASE DIA. W/ 12&quot; WALL</th>
<th>H MAX.</th>
<th>BT MIN.</th>
<th>ANTI- FLOAT. LIP</th>
<th>BASE REINFORCEMENT</th>
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<tr>
<td>8&quot; TO 18&quot;</td>
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<td>24&quot;</td>
<td>6'-4&quot;</td>
<td>7'-0&quot;</td>
<td>6'</td>
<td>8&quot;</td>
<td>6&quot;</td>
<td>#6 @ 12&quot; EW</td>
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<td>21&quot; TO 30&quot;</td>
<td>5'</td>
<td>32&quot;</td>
<td>7'-4&quot;</td>
<td>8'-0&quot;</td>
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<td>8&quot;</td>
<td>6&quot;</td>
<td>#6 @ 9&quot; EW</td>
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</tbody>
</table>

NOTES:
1. FOR GENERAL NOTES SEE, STANDARD DETAIL-SANITARY MANHOLE NOTES.
2. NO INLET PIPE SHALL BE INSTALLED IN THE CONE SECTION.
3. BRICK SHALL BE SOLID CLAY.
4. GROUTING RING CONNECTORS SHALL BE "WS SERIES" WATER STOP GROUTING RING AS MANUFACTURED BY THE PRESS-SEAL GASKET CORPORATION, OR APPROVED EQUAL.

CITY STANDARDS

SANITARY BRICK MANHOLE TYPE II DETAIL

ENGINEERING AND CAPITAL IMPROVEMENT DEPARTMENT
CITY OF ST. PETERSBURG

APPROVED BY:          DATE: OCT. 2019

DIRECTOR

DWG. No. S30-13
**PLAN VIEW**

**TYPICAL SECTION VIEW**

**SCHEDULE**

<table>
<thead>
<tr>
<th>TYPE</th>
<th>DIAMETER</th>
<th>WT WALL THICKNESS</th>
<th>TOP SLAB THICKNESS</th>
<th>ACCESS DIAMETER</th>
<th>MAIN REINFORCEMENT</th>
<th>ADDITIONAL REINFORCEMENT</th>
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<tr>
<td>PRECAST 4'</td>
<td>6&quot;</td>
<td>8&quot;</td>
<td>24&quot;</td>
<td>#6 @ 12&quot; EW</td>
<td>2-#8 @ 3&quot; OC</td>
<td></td>
</tr>
<tr>
<td>5'</td>
<td>8&quot;</td>
<td>8&quot;</td>
<td>32&quot;</td>
<td>#6 @ 12&quot; EW</td>
<td>2-#8 @ 3&quot; OC</td>
<td></td>
</tr>
<tr>
<td>6'</td>
<td>8&quot;</td>
<td>8&quot;</td>
<td>32&quot;</td>
<td>#6 @ 12&quot; EW</td>
<td>2-#8 @ 3&quot; OC</td>
<td></td>
</tr>
<tr>
<td>7'</td>
<td>8&quot;</td>
<td>8&quot;</td>
<td>32&quot;</td>
<td>#6 @ 10&quot; EW</td>
<td>2-#8 @ 3&quot; OC</td>
<td></td>
</tr>
<tr>
<td>8'</td>
<td>8&quot;</td>
<td>8&quot;</td>
<td>32&quot;</td>
<td>#6 @ 10&quot; EW</td>
<td>2-#8 @ 3&quot; OC</td>
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<tr>
<td>BRICK 4'</td>
<td>8&quot;</td>
<td>8&quot;</td>
<td>24&quot;</td>
<td>#6 @ 12&quot; EW</td>
<td>2-#8 @ 3&quot; OC</td>
<td></td>
</tr>
<tr>
<td>5'</td>
<td>8&quot;</td>
<td>8&quot;</td>
<td>32&quot;</td>
<td>#6 @ 12&quot; EW</td>
<td>2-#8 @ 3&quot; OC</td>
<td></td>
</tr>
<tr>
<td>6' (3)</td>
<td>8&quot;</td>
<td>8&quot;</td>
<td>32&quot;</td>
<td>#6 @ 12&quot; EW</td>
<td>2-#8 @ 3&quot; OC</td>
<td></td>
</tr>
<tr>
<td>6' (3)</td>
<td>12&quot;</td>
<td>8&quot;</td>
<td>32&quot;</td>
<td>#6 @ 10&quot; EW</td>
<td>2-#8 @ 3&quot; OC</td>
<td></td>
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**NOTES:**
1. FOR GENERAL NOTES, SEE STANDARD DETAIL-SANITARY STRUCTURE NOTES.
2. OPENING SHALL BE CENTERED IN TOP SLAB, UNLESS OTHERWISE NOTED, OR SHOWN.
3. SEE BRICK MANHOLE DETAIL FOR OTHER CONDITIONS.

**CITY STANDARDS**

**TYPE II MANHOLE TOP SLAB DETAIL**

APPROVED BY: [Signature]

DATE: OCT. 2019

DWG. No. S30-15
**PLAN VIEW**

**TYPICAL SECTION VIEW**

**KEY WAY DETAIL**

---

**SCHEDULE**

<table>
<thead>
<tr>
<th>DIAMETER</th>
<th>WT WALL THICKNESS</th>
<th>INTERMEDIATE SLAB THICKNESS</th>
<th>MAIN REINFORCEMENT</th>
<th>ADDITIONAL REINFORCEMENT</th>
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<tr>
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<td>8&quot;</td>
<td>8&quot;</td>
<td>#6 @ 12&quot; EW</td>
<td>2-#8 @ 3&quot; OC</td>
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<tr>
<td>7'</td>
<td>8&quot;</td>
<td>8&quot;</td>
<td>#6 @ 12&quot; EW</td>
<td>2-#8 @ 3&quot; OC</td>
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<tr>
<td>8'</td>
<td>8&quot;</td>
<td>8&quot;</td>
<td>#6 @ 12&quot; EW</td>
<td>2-#8 @ 3&quot; OC</td>
</tr>
</tbody>
</table>

**NOTES:**
1. FOR USE WITH MANHOLES DEEPER THAN 10', FROM RIM TO INVERT.
2. FOR GENERAL NOTES, SEE STANDARD DETAIL-SANITARY STRUCTURE NOTES.
3. OPENING SHALL BE CENTERED IN TOP SLAB, UNLESS OTHERWISE NOTED, OR SHOWN.
4. NOT ALLOWED WITH BRICK MANHOLES.

---

**CITY STANDARDS**

**TYPE II MANHOLE RISER**

**INTERMEDIATE SLAB DETAIL**

---

**REVIEWS**

<table>
<thead>
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<th>BY</th>
<th>DATE</th>
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**ENGINEERING AND CAPITAL IMPROVEMENT DEPARTMENT**

CITY OF ST. PETERSBURG

**APPROVED BY:**

**DATE:** OCT. 2019

**SCALE:** N.T.S.
PLAN VIEW

TYPICAL SECTION

<table>
<thead>
<tr>
<th>DIAMETER INSIDE</th>
<th>BASE DIAMETER</th>
<th>WT WALL THICKNESS</th>
<th>WALL REINFORCEMENT</th>
<th>BASE SLAB THICKNESS</th>
<th>BASE SLAB REINFORCEMENT</th>
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</thead>
<tbody>
<tr>
<td>4' (3)</td>
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<td>#6 @ 12&quot; EW</td>
</tr>
<tr>
<td>5' (3)</td>
<td>6'-4&quot;</td>
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<td>8&quot;</td>
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<td>6'</td>
<td>7'-4&quot;</td>
<td>8&quot;</td>
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<td>8&quot;</td>
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<td>8'-4&quot;</td>
<td>8&quot;</td>
<td>#4 @ 12&quot; EW</td>
<td>8&quot;</td>
<td>#6 @ 12&quot; EW</td>
</tr>
<tr>
<td>8'</td>
<td>9'-4&quot;</td>
<td>8&quot;</td>
<td>#4 @ 12&quot; EW</td>
<td>10&quot;</td>
<td>#6 @ 12&quot; EW</td>
</tr>
</tbody>
</table>

NOTES:
1. FOR GENERAL NOTES, SEE STANDARD DETAIL-SANITARY STRUCTURE NOTES.
2. OPTIONAL WALL REINFORCEMENT MAY BE WELDED WIRE AS PER ASTM C-478 OR ASTM C-76, CLASS III, B WALL, WITH WHERE THE REINFORCEMENT CAGE IN THE CENTER 1/3 OF THE WALL.
3. MAXIMUM SIZE ALLOWED FOR TYPE I MANHOLE 6', 7', AND 8' DIAMETER SHALL BE TYPE II MANHOLE.
4. ADD 2 #4 REINFORCING BARS AT 3" CENTERS AT THE TOP AND SIDES OF ALL WALL OPENINGS.

CITY STANDARDS

TYPE I AND II MANHOLE
BASE AND WALL DETAIL

ENGINEERING AND CAPITAL
IMPROVEMENT DEPARTMENT
CITY OF ST. PETERSBURG

APPROVED BY:     DATE:     OCT. 2019

DIRECTOR

SCALE: N.T.S.

S30-17
NO ADJUSTMENT BRICK ALLOWED, SET RIM TO GRADE WITH GROUT

TOP SLAB-SEE STANDARD DETAIL-TYPE II
MANHOLE TOP SLAB

4' DIAMETER PRECAST MANHOLE, WALL IS 6" THICK, WITH #6 REINFORCEMENT AT 6" OC/EW

SEE ENLARGED VIEW BELOW

30" OF #57 STONE, TAMPED IN PLACE
BASE FOOTING RING, 8"x20" WITH 3 #6 REBAR @ 8" OC/EW

FINISHED GRADE

MANHOLE ACCESS-SEE STANDARD DETAIL-MANHOLE RING AND COVER CASTING
12" MIN. 18" MIN.

TYPICAL SECTION VIEW

#57 STONE, TAMPED IN PLACE

4" ID
6'-4" OD

MANHOLE PLAN VIEW

COMPACTED SUBGRADE, OR 6" COARSE ANALYZE, AS ORDERED. PLACEMENT AS SHOWN UNDER BASE FOOTER RING

BACKFLUSHING ATTACHMENTS

2" BRONZE GATE VALVE
2" CORPORATE STOP
DOUBLE STRAP SADDLE (STAINLESS STEEL)

FORCE MAIN

ENLARGED VALVE VIEW
(SEE NOTE 1)

NOTES:
1. SEWAGE AIR/VACUUM VALVE TO BE SERIES 401 SAVV, MODEL 401, WITH BACKFLUSHING ATTACHMENTS AS MANUFACTURED BY THE APCO WILLAMETTE VALVE AND PRIMER CORPORATION OR APPROVED EQUAL, INCLUDING HEIGHT OF UNIT WITH BACKFLUSHING ATTACHMENTS.
2. PRECAST MANHOLE SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF DOT-SSRB 425.
4. ONE COAT OF 100% PURE-FUSED CALCIUM ALUMINATE CEMENTITIOUS LINING SHALL BE APPLIED TO THE INTERIOR SURFACES OF ALL STRUCTURES, WITH A FINAL DRY THICKNESS OF 1/2" MINIMUM.
5. IF THE AIR/VACUUM VALVE DOES NOT FIT IN THESE STRUCTURES, USE A REMOTE TYPE UNIT. SEE STANDARD DETAIL-SEWAGE AIR/VACUUM VALVE AND UTILITY VAULT.
6. ALL PVC PIPE TO HAVE THREADED CONNECTIONS AND COLOR CODED GREEN.

CITY STANDARDS

REVISIONS
BY DATE

ENGINEERING AND CAPITAL IMPROVEMENT DEPARTMENT
CITY OF ST. PETERSBURG

SCALE: N.T.S.

SEWAGE AIR/VACUUM VALVE AND MANHOLE DETAIL
FOR TRAFFIC AREAS

APPROVED BY: DATE: OCT. 2019

DIOR

DWG. No.

S30-18
NOTE: A MINIMUM OF 8" SHALL BE REQUIRED BETWEEN FRP STUBOUTS.

SEWER MAIN PIPE, SEE STANDARD DETAIL-FIBERGLASS MANHOLE SCHEDULES

CROWN OF LATERAL SEWER TO MATCH OR BE ABOVE CROWN OF TRUNK SEWER

PIPE CONNECTION-SEE STANDARD DETAIL-FIBERGLASS MANHOLE SCHEDULES

LATERAL SEWER PIPE

2-4"x 1-5/8" CHANNEL SUPPORTS ATTACHED TO THE BOTTOM AND SIDE WALLS, FOR DEPTHS GREATER THAN 10'

COMPACTED SUBGRADE, OR 4" CONCRETE MAT, OR 6" COURSE AGGREGATE, AS ORDERED

TYPICAL SECTION VIEW

BASE WIDTH TYP.

2-1/2" ANTI-FLOTATION FLANGE

ANCHOR BOLT, FOR SIZES AND QUANTITY-SEE STANDARD DETAIL-FIBERGLASS MANHOLE SCHEDULES

WT-SEE STANDARD DETAIL-FIBERGLASS MANHOLE SCHEDULES

PIPE CONNECTION, TYPICAL-SEE STANDARD DETAIL-FIBERGLASS MANHOLE SCHEDULES

TYPICAL PLAN VIEW

NOTES:
1. SEE GENERAL NOTES, STANDARD DETAIL-SANITARY STRUCTURE NOTES AND TECHNICAL SPECIFICATIONS.
2. MANHOLE SHALL BE CAST IN ONE PIECE, i.e. BOTTOM, WALL, TOP, NECK, AND ANTI-FLOTATION FLANGE.
3. BENCH AND INVERT'S SHALL BE CAST AFTER MANHOLE HAS BEEN SET AND ACCEPTED.

CITY STANDARDS

SANITARY FIBERGLASS MANHOLE DETAIL

ENGINEERING AND CAPITAL IMPROVEMENT DEPARTMENT
CITY OF ST. PETERSBURG

APPROVED BY: [Signature]
DATE: OCT. 2019
DWG. No. S30-19
SHALL BE REQUIRED BETWEEN FRP STUBOUTS. USE BASE WIDTH

FRP OR PVC STUBOUT, TYP.

OPTION: UPTO 5 PRECAST CONCRETE GRADE RINGS W/ 3/4" PLASTER COATING, TYPE E RING ONLY

WT-SEE STANDARD DETAIL-FIBERGLASS MANHOLE SCHEDULES

SEWER MAIN PIPE, SEE STANDARD DETAIL-FIBERGLASS MANHOLE SCHEDULES

BENCH SLOPE

SEWAGE PIPE MEDIAN TYP.

BASE WIDTH TYP.

PIPE CONNECTION, TYPICAL-SEE STANDARD DETAIL-FIBERGLASS MANHOLE SCHEDULES

ANCHOR BOLT, FOR SIZES AND QUANTITY-SEE STANDARD DETAIL-FIBERGLASS MANHOLE SCHEDULES

CAST-IN-PLACE BASE-SEE STANDARD DETAIL-FIBERGLASS MANHOLE SCHEDULES

2-1/2" ANTI-FLOTATION FLANGE

MAIN SEWER PIPE, TYP.

CROWN OF DROP SEWER TO MATCH OR BE ABOVE CROWN OF TRUNK SEWER

DROP PIPE SAME DIAMETER AS LATERAL SEWER

NOTE: A MINIMUM OF 8" SHALL BE REQUIRED BETWEEN FRP STUBOUTS. USE LARGER MANHOLE IF REQUIRED

DROP PIPE SUPPORT-FIELD CAST-IN PLACE. USE #4 REBAR @ 6" OC/EW

LATERAL SEWER PIPE

DROP PIPE SAME DIAMETER AS LATERAL SEWER

R=24" MIN.

LATERAL SEWER PIPE

FROM RING AND COVER BASE DETAIL-SEE STANDARD DETAIL-FIBERGLASS MANHOLE SCHEDULES S30-21

BRICK DAM TO 1/2 DEPTH OF PIPE DIAMETER

LATERAL SEWER PIPE

ENCASE DROP PIPE AND FITTINGS IN FIBERGLASS LAMINATE, MIN. 1/2" THICK, SEE NOTE 2

CROWN OF DROP SEWER TO MATCH OR BE ABOVE CROWN OF TRUNK SEWER

DROP PIPE SAME DIAMETER AS LATERAL SEWER

SPRING LINE OF 90° BEND

DROP PIPE SUPPORT-FIELD CAST-IN PLACE. USE #4 REBAR @ 6" OC/EW

2-4"x 1-5/8" CHANNEL SUPPORTS ATTACHED TO THE BOTTOM AND SIDE WALLS, FOR DEPTHS GREATER THAN 10'

NOTES:
1. SEE GENERAL NOTES, STANDARD DETAIL-SANITARY STRUCTURE NOTES AND TECHNICAL SPECIFICATIONS.
2. MANHOLE SHALL BE CAST IN ONE PIECE, i.e. BOTTOM, WALL, TOP, NECK, ANTI-FLOTATION FLANGE, AND DROP PIPE AND FITTING.
3. BENCH AND INVERTS SHALL BE CAST AFTER MANHOLE HAS BEEN SET AND ACCEPTED.

CITY STANDARDS

S30-20

SANITARY FIBERGLASS DROP MANHOLE DETAIL

ENGINEERING AND CAPITAL IMPROVEMENT DEPARTMENT
CITY OF ST. PETERSBURG

APPROVED BY:

DATE: OCT. 2019

DWG. No. S30-20

N.T.S.
SEWER PIPE
FRP OR PVC STUBOUT

PIECE CONNECTION DETAIL
ANCHOR CONNECTION DETAIL

RING AND COVER FRAME ASSEMBLY, SEE SCHEDULE BELOW
FLEXIBLE SEALANT, USE "FLEX-SEAL UTILITY SEALANT" MFG. BY
SEALING SYSTEM, OR APPROVED EQUAL.
UPTO 5 BRICK COURSES
UPTO 5 BRICK COURSES OR PRECAST
CONCRETE GRADE RINGS, SEE NOTE 5
FILL GAP WITH NON-SHRINK GROUT, USE "MASTER 713", MFG. BY MASTER
BUILDERS OR "SONOGROUT", MFG. BY SONNBORN
CONCRETE BENCH TO SUPPORT BRICK
BRICKS AND GRADE RINGS TO HAVE A MINIMUM 3/4" PLASTER COATING

NOTES:
1. MODULAR SEALS ARE "LINK SEAL", AS MANUFACTURED BY PIPELINE SEAL & INSULATOR, INC. OR APPROVED EQUAL.
MODULAR SEALS SHALL HAVE 316 GRADE STAINLESS STEEL HARDWARE.
2. FLEXIBLE CONNECTORS ARE "KOR-N-SEAL", AS MANUFACTURED BY NPC INC. OR APPROVED EQUAL. FLEXIBLE
CONNECTORS SHALL HAVE 316 GRADE STAINLESS STEEL HARDWARE.
3. MANHOLES WITH INVERT DEPTHS GREATER THAN 20', PIPE CONNECTIONS SHALL BE WITH MODULAR SEALS, AS
DESCRIBED ABOVE.
4. GUSSETS ARE REQUIRED WITH ALL MODULAR SEAL APPLICATIONS AND FORCE MAINS.
5. PRECAST GRADE RINGS, FOR TYPE E RING AND COVER ONLY, ARE 8" WIDE x 2" THICK, AS MANUFACTURED BY
ATLANTIC CONCRETE PRODUCTS, INC. OR APPROVED EQUAL. SHALL MEET ASTM C-478 REQUIREMENTS.

<table>
<thead>
<tr>
<th>M.H. DIA.</th>
<th>MAX. PIPE DIA.</th>
<th>ACCS. DIA.</th>
<th>RING/COVER TYPE</th>
<th>MAX. DEPTH</th>
<th>WT WALL THKNESS</th>
<th>BASE WIDTH E/W</th>
<th>BT BASE THKNESS</th>
<th>BASE REINF.</th>
<th>TYPICAL BOLT DIA.</th>
<th>MINIMUM EMBEDMENT LENGTH</th>
<th>ANCHORS PER MH DIA.</th>
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</thead>
<tbody>
<tr>
<td>4' 18&quot;</td>
<td>24&quot;</td>
<td></td>
<td>E</td>
<td>10'</td>
<td>0.318&quot;</td>
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<td>1/2&quot;</td>
<td>3-1/2&quot;</td>
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<tr>
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<td>5' TO 10'</td>
<td>5/8&quot;</td>
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<td>B</td>
<td></td>
<td>25'</td>
<td>0.50&quot;</td>
<td>7'</td>
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<td>8'</td>
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<td>3/4&quot;</td>
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CITY STANDARDS
FIBERGLASS MANHOLE SCHEDULES DETAIL

ENGINEERING AND CAPITAL IMPROVEMENT DEPARTMENT
CITY OF ST. PETERSBURG

REVISIONS

BY DATE

APPROVED BY:

DIRECTOR

SCALE: N.T.S.

DATE: OCT. 2019

DWG. No. S30-21
CITY STANDARDS

SANITARY MANHOLE
COVER CASTING DETAIL

ENGINEERING AND CAPITAL
IMPROVEMENT DEPARTMENT
CITY OF ST. PETERSBURG

APPROVED BY:

DATE: OCT. 2019

DWG. No. S30-22
INCOMING PIPE(S)
BEVEL END, ABOVE BENCH

PLAN
"TYPE I OR II MANHOLE
SEE DETAIL "A" BELOW"

PLAN
"TYPE III MANHOLE,
CATCH BASIN, OR GRATE INLET
SEE DETAIL "B" BELOW"

PLAN
"TYPE IV MANHOLE
SEE DETAIL "B" BELOW"

CHANNELIZATION DETAIL
N
1. SMOOTH FLOW CHANNELS COMPOSED OF CONCRETE, OR BRICK AND MORTAR SHALL BE CONSTRUCTED IN THE BOTTOMS OF ALL STRUCTURES AS SHOWN.
2. WT=WALL THICKNESS OF STRUCTURE, D=DIAMETER OF ROUND PIPE, AND R=RISE OF ELLIPTICAL PIPE OR BOX CULVERT.

CITY STANDARDS

ACCESS STRUCTURE
CHANNELIZATION DETAIL

REVISIONS

BY DATE

ENGINEERING AND CAPITAL IMPROVEMENT DEPARTMENT
CITY OF ST. PETERSBURG

APPROVED BY:

DIRECTOR

DATE: OCT. 2019

DWG. No. S30-23
NOTES:
1. JOINTS SHALL CONFORM TO ASTM C443.
2. A LAYER OF PREFORMED JOINT SEALING COMPOUND SUCH AS "RAM-NEK" SHALL BE INSTALLED AT ALL PRECAST STRUCTURE JOINTS AND STRUCTURE TOPS FOR TOP SLAB PRIOR TO ASSEMBLY.
4. ONE COAT OF 100% PURE-FUSED CALCIUM ALUMINATE CEMENTITIOUS LINING SHALL BE APPLIED TO THE INTERIOR SURFACES OF ALL STRUCTURES, WITH A FINAL DRY THICKNESS OF 1/2" MINIMUM. IF LINER IS APPLIED PRIOR TO ASSEMBLY, THE LINER SHALL COVER THE KEY WAYS, FROM THE EXTERIOR TO THE INTERIOR OF THE STRUCTURE, IN ADDITION TO THOSE LIMITS DESCRIBED ABOVE.
5. RESTORATION OF THE PROTECTIVE SEALER AND LINER DUE TO CONNECTIONS TO EXISTING STRUCTURES, MADE BY APPROVED METHODS, SHALL MATCH THE EXISTING MATERIALS THAT ARE DISTURBED AND OR DAMAGED, AT NO ADDITIONAL COST TO THE CITY.
6. FLEXIBLE WATERTIGHT CONNECTORS SHALL BE "KWIK SEAL" OR "PSX: POSITIVE SEAL GASKET SYSTEM" AS MANUFACTURED BY THE PRESS SEAL GASKET CORPORATION, OR APPROVED EQUAL, OR "KOR-N-SEAL" I CONNECTORS FOR PIPE SIZES UP TO 15" AND "KOR-N-SEAL" II CONNECTORS FOR PIPE SIZES 18" TO 30", AS MANUFACTURED BY THE NPC INC., OR APPROVED EQUAL.
7. FOR ADDITIONAL NOTES, SEE STANDARD DETAIL-SANITARY STRUCTURE NOTES.

CITY STANDARDS

SANITARY PRECAST STRUCTURE JOINT ASSEMBLY AND STRUCTURE SEALING DETAIL

ENGINEERING AND CAPITAL IMPROVEMENT DEPARTMENT
CITY OF ST. PETERSBURG

APPROVED BY: [Signature]

DATE: OCT. 2019

DWG. No. S30-40
2" SCHEDULE 80 PVC, CONSTRUCT WITH SLOPE @ 1/8" PER FOOT MIN. UP FROM FORCE MAIN

ths DVAMI

SEE TYPICAL PLAN VIEW BELOW

2" CORP. STOP
SWING CONNECTION

FINISHED GRADE
SEE NOTE 6

MIN. 6" OF #57 STONE, COMPACTED

TYPICAL SECTION VIEW

MINIMUM CLEARANCES:
A @ 12" TO SIDEWALK
B @ 3' TO DRIVEWAY OR ALLEY
-DO NOT PLACE IN THE FRONT OF A RESIDENCE

TYPICAL SITE PLAN VIEW

NOTES:
1. SEWAGE AIR/VACUUM VALVE TO BE SERIES 401 SAVV, MODEL 401, WITH BACKFLUSHING ATTACHMENTS AS MANUFACTURED BY THE APCO WILLAMETTE VALVE AND PRIMER CORPORATION OR APPROVED EQUAL.

2. UTILITY VAULT TO BE CATALOG NO. UV3048-42 WITH FRAME WITH SPRING LOADED COVER AS MANUFACTURED BY OLDCASTLE PRECAST, INC. OR APPROVED EQUAL. COVER TO BE LETTERED "CITY OF ST. PETERSBURG, FLORIDA" AND "SANITARY SEWER VALVE" GALVANIZED AFTER FABRICATION.

3. ONE COAT OF PROTECTIVE SEALER SHALL BE APPLIED TO THE EXTERIOR OF ALL PRECAST VAULTS. THE EXTERIOR COATING SHALL COVER FROM THE BOTTOM OF THE BASE UPTO THE TOP EDGE. THE CONTRACTOR SHALL TOUCH UP THOSE PLACES DISTURBED DURING ASSEMBLY AND THOSE CAST-IN-PLACE STRUCTURES PRIOR TO ACCEPTANCE AND BACK FILLING. THE SEALER SHALL BE COAL TAR EPOXY SUCH AS "CARBOLINE" 300-M OR APPROVED EQUAL, WITH A DRY FILM THICKNESS OF 9 mils.

4. ONE COAT OF 100% PURE-FUSED CALCIUM ALUMINATE CEMENTITIOUS LINING SHALL BE APPLIED TO THE INTERIOR SURFACES OF ALL STRUCTURES, WITH A FINAL DRY THICKNESS OF 1/2" MINIMUM.

5. CONCRETE SUPPORT BLOCK, WITH BUILDING FELT OR EQUAL TO PREVENT BOND BETWEEN FITTING AND CONCRETE SUPPORT BLOCK.

6. SET TOP FLUSH IF IT OCCURS IN SIDEWALK OR 1-1/2" ABOVE FINISHED GRADE IF IN SODDED AREAS.

7. ALL PVC PIPE TO HAVE THREADED CONNECTIONS AND COLOR CODED GREEN.

CITY STANDARDS

SEWAGE AIR/VACUUM VALVE
AND UTILITY VAULT DETAIL
FOR NON TRAFFIC AREAS

APPROVED BY:

DATE: OCT. 2019

S30-41

ENGINEERING AND CAPITAL IMPROVEMENT DEPARTMENT
CITY OF ST. PETERSBURG

REVISIONS

BY DATE

SCALE: N.T.S.

DIRECTOR
NOTES:
1. THE SPACE BETWEEN PIPE ENDS SHALL NOT EXCEED 1-INCH. PIPE ENDS SHALL BE EVEN AND CLEAN.
2. THE NOMINAL DIAMETER OF THE PROPOSED PIPE SHALL BE EQUAL TO THE NOMINAL DIAMETER OF THE EXISTING PIPE.
3. FLEX-SEAL ADJUSTABLE REPAIR CLAMP SHALL BE MANUFACTURED BY THE MISSION RUBBER COMPANY, OR APPROVED EQUAL.
4. FOR APPLICATIONS OF 24" DIAMETER AND LARGER, USE 316 SERIES, WIDE, T-BOLT CLAMPS.
NOTES:
1. PROVIDE NEW HDPE LINER TO CONNECT TO THE EXISTING HDPE LINER. NEW HDPE LINER SHALL MATCH THE OUTSIDE DIAMETER AND THICKNESS OF EXISTING HDPE LINER AND SHALL HAVE A THICKNESS NOT LESS THAN SDR 21.
2. THE "HOST PIPE" SHALL BE TRIMMED SQUARE AT IT'S NEW END. NO ROUGH OR JAGGED ENDS OR LOOSE PIECES WILL BE ALLOWED.
3. JOINT SEALER OF THE ANNULAR SPACE SHALL BE PACKED WITH BRICK, MORTAR, AND "RAM-NEK" PRE-FORMED JOINT SEALER TO THE LIMITS AS SHOWN ABOVE. TRIM SEALER OFF AT THE EDGE OF THE HOST PIPE. "RAM-NEK" SHALL BE AS MANUFACTURED BY THE K.T. SNYDER COMPANY, INC. OR APPROVED EQUAL.
4. S.S. STEEL UNIVERSAL CLAMP COUPLING SHALL BE SERIES "JCM 132", 316 GRADE, 24" LONG, AS MANUFACTURED BY JCM INDUSTRIES, INC. OR EQUAL.
5. S.S. STEEL STIFFENERS SHALL BE SERIES "JCM 231" HDPE PIPE STIFFENERS, 316 GRADE, 12" WIDTH, AS MANUFACTURED BY JCM INDUSTRIES, INC. OR EQUAL.
6. THE CONCRETE ENCASEMENT SHALL BE CAST ON UNDISTURBED SOIL. IF SOIL IS DISTURBED, THE CONTRACTOR SHALL COMPACT THE SOIL TO 95% OF THE SOILS DENSITY.

CITY STANDARDS

HDPE LINER REPAIR
CONNECTION DETAIL

ENGINEERING AND CAPITAL IMPROVEMENT DEPARTMENT
CITY OF ST. PETERSBURG

APPROVED BY:

DATE: OCT. 2019

DWG. No.

S30-51
SEE DETAIL VIEW, BELOW

316 SERIES STAINLESS STEEL CLAMPS, SEE NOTE 4 BELOW

COUPLING TO BE CENTERED BETWEEN PIPE ENDS

FLEX-SEAL ADJUSTABLE REPAIR COUPLING, SERIES MR-ARC WITH 316 S.S. SHEAR RINGS, SEE NOTE 3

EXISTING CIPP OR PVC LINED SANITARY SEWER

EXISTING CLAY PIPE

EXISTING LINER

QUICK SETTING EXPoxy MASTIC OVER THE END OF EXIST PIPE/LINER, TYP.

SECTION A-A

DETAIL VIEW

NOTES:
1. THE SPACE BETWEEN PIPE ENDS SHALL NOT EXCEED 1-INCH. PIPE ENDS SHALL BE EVEN AND CLEAN.
2. THE NOMINAL DIAMETER OF THE PROPOSED PIPE SHALL BE EQUAL TO NOMINAL DIAMETER OF THE EXISTING PIPE.
3. FLEX-SEAL ADJUSTABLE REPAIR CLAMP SHALL BE MANUFACTURED BY THE MISSION RUBBER COMPANY, OR APPROVED EQUAL.
4. FOR APPLICATIONS OF 24" DIAMETER AND LARGER, USE 316 SERIES, WIDE, T-BOLT CLAMPS.
5. THE GRAVEL BEDDING SHALL BE PLACED ON UNDISTURBED SOIL. IF SOIL IS DISTURBED, THE CONTRACTOR SHALL COMPACT THE SOIL TO 95% OF THE SOILS DENSITY. LIMEROCK FOR BEDDING SHALL NOT BE ALLOWED.

CITY STANDARDS

LINED SANITARY SEWER PIPE CONNECTION DETAIL

ENGINEERING AND CAPITAL IMPROVEMENT DEPARTMENT
CITY OF ST. PETERSBURG

APPROVED BY:

DATE: OCT. 2019

DWG. No. S30-52