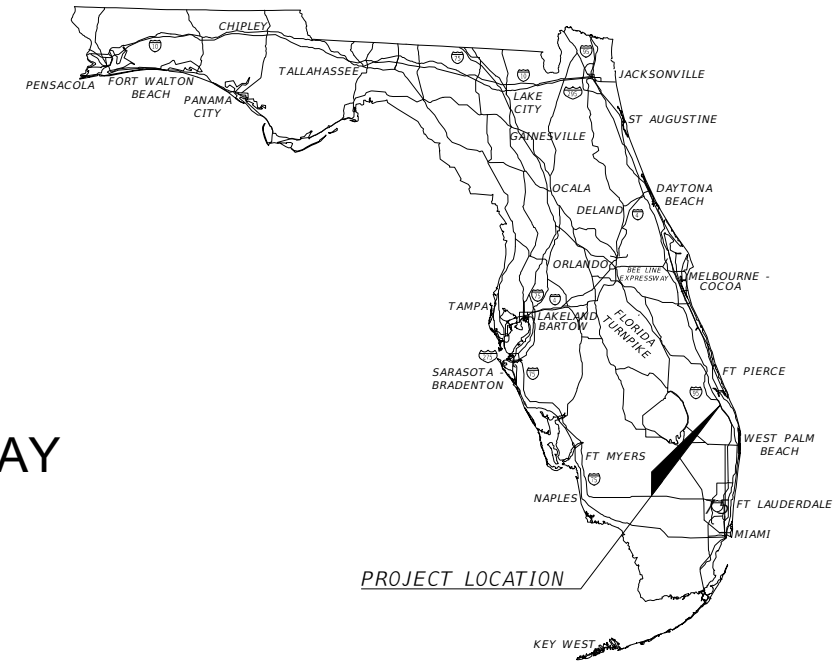


CITY OF PORT ST. LUCIE, FLORIDA  
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS  
FOR  
FLORESTA DRIVE  
FROM SOUTHBEND BOULEVARD TO ELKCAM WATERWAY  
BID # 20060011

100% DESIGN PLANS  
NOT FOR CONSTRUCTION  
02/25/2020



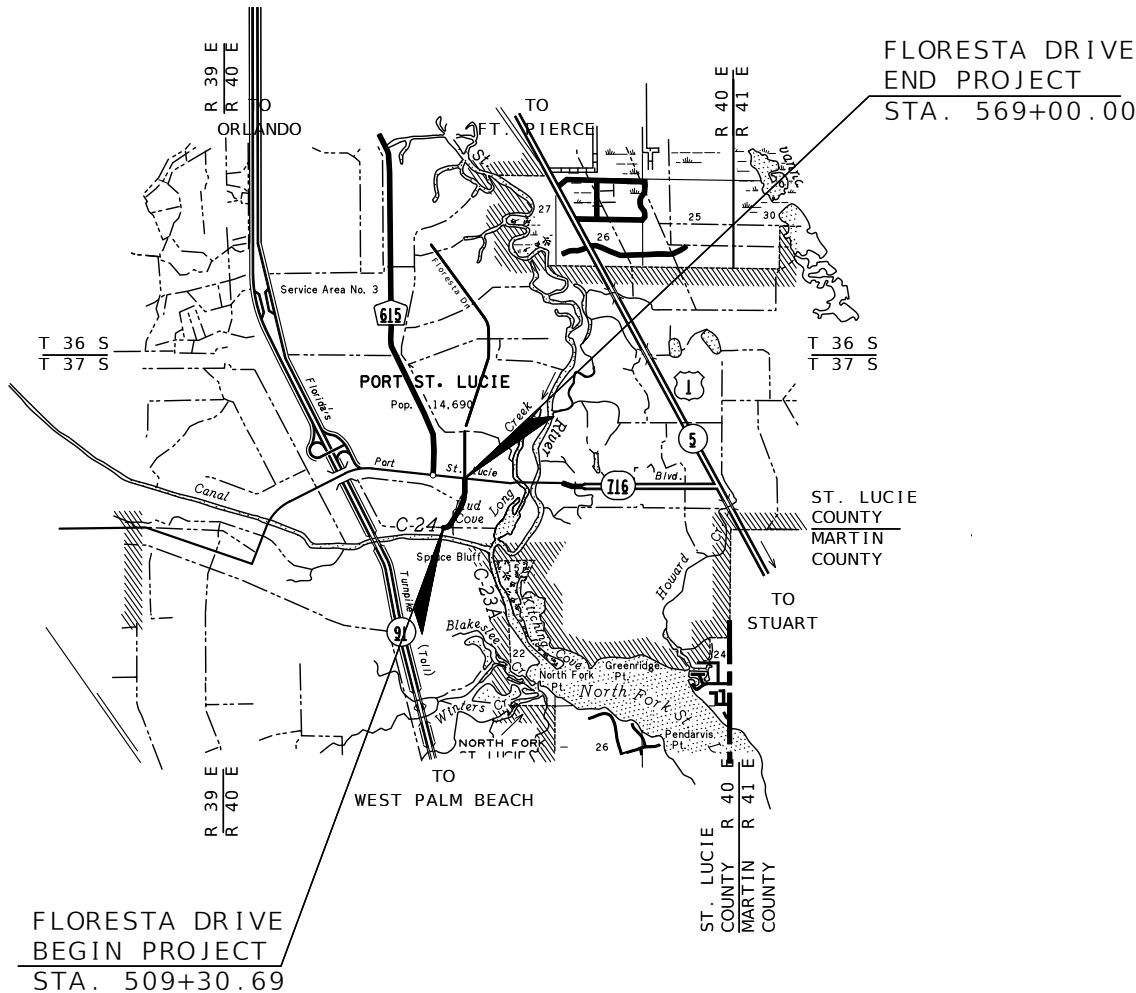
INDEX OF UTILITY PLANS

| SHEET NO. | SHEET DESCRIPTION      |
|-----------|------------------------|
| 1         | COVER                  |
| 2         | GENERAL NOTES          |
| 3         | CONFLICT(S) TABLE      |
| 4         | KEY SHEET              |
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| 6-17      | PLAN SHEETS            |
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| 23-24     | DETAILS                |

GOVERNING STANDARDS AND SPECIFICATIONS:  
FLORIDA DEPARTMENT OF TRANSPORTATION,  
DESIGN STANDARDS DATED 2008,  
AND STANDARD SPECIFICATIONS FOR ROAD AND  
BRIDGE CONSTRUCTION DATED 2007,  
AS AMENDED BY CONTRACT DOCUMENTS.

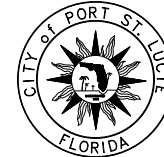
APPLICABLE DESIGN STANDARDS MODIFICATIONS: 07-01-09

For Design Standards Modifications click on "Design Standards"  
at the following web site: <http://www.dot.state.fl.us/rddesign/>



CLIENT

CITY ENGINEERING DEPARTMENT  
121 SW PORT ST. LUCIE BLVD.  
PORT ST. LUCIE, FLORIDA 34984



CITY OF PORT ST. LUCIE  
CITY COUNCIL

GREGORY J. ORAVEC  
SHANNON M. MARTIN  
STEPHANIE MORGAN  
JOHN CARVELLI  
JOLIEN CARABALLO  
RUSS BLACKBURN

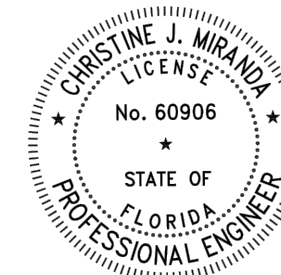
MAYOR  
VICE MAYOR  
COUNCILWOMAN  
COUNCILMAN  
COUNCILWOMAN  
CITY MANAGER

UTILITY PLANS  
ENGINEER OF RECORD:

CHRISTINE J. MIRANDA, P.E.  
P.E. NO.: 60906  
HOLTZ CONSULTING ENGINEERS, INC.  
607 SW ST. LUCIE CRESCENT, SUITE 103  
STUART, FLORIDA 34994

NOTE: THE SCALE OF THESE PLANS MAY  
HAVE CHANGED DUE TO REPRODUCTION

THIS ITEM HAS BEEN DIGITALLY  
SIGNED AND SEALED BY



ON THE DATE ADJACENT TO THE SEAL

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PLANS PREPARED BY:



HOLTZ CONSULTING ENGINEERS, INC.  
607 SW ST. LUCIE CRESCENT, SUITE 103  
STUART, FLORIDA 34994  
PH. (772) 919-4905 Cert. No. 26960

LENGTH OF PROJECT = 5969.31 LF (1.131 MI)  
CITY OF PORT ST. LUCIE PROJECT MANAGER: FRANK KNOTT

| FISCAL YEAR | SHEET NO. |
|-------------|-----------|
| 20          | 1         |

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

**GENERAL NOTES:**

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF PORT ST. LUCIE UTILITY SYSTEMS DEPARTMENT'S UTILITY STANDARDS MANUAL 2019 REVISION AND ALL APPLICABLE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION RULES AND REGULATIONS.
2. ALL TESTING MUST MEET PSLUSD TESTING REQUIREMENTS.
3. BENCHMARK DATUM USED FOR THESE PLANS IS NAVD 88 UNLESS SPECIFICALLY NOTED OTHERWISE. ALL ELEVATIONS AND DIMENSIONS ARE IN FEET REFERENCED TO NAVD 88.
4. ALL EXISTING UTILITIES DEPICTED ARE BASED ON BEST AVAILABLE INFORMATION AND IS NOT GUARANTEED TO REFLECT ACTUAL SITE CONDITIONS. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL PLAN DIMENSIONS AND SITE CONDITIONS AND IS TO NOTIFY THE CITY OF PORT ST. LUCIE AND/OR THE ENGINEER OF ANY DISCREPANCIES BETWEEN THE SITE CONDITIONS AND INFORMATION SHOWN ON THE PLANS PRIOR TO COMMENCING WORK.
5. DEWATERING SHALL BE ACCOMPLISHED IN ACCORDANCE WITH SFWMD REQUIREMENTS AND BEST MANAGEMENT PRACTICES TO MINIMIZE IMPACTS TO ADJACENT WETLANDS OR A RECEIVING BODY OF WATER.
6. ANY DAMAGE TO IRRIGATION DURING CONSTRUCTION SHALL BE FIXED IMMEDIATELY BY THE CONTRACTOR AT THEIR EXPENSE TO EXISTING CONDITIONS OR BETTER. NO WORK WILL BE DONE ON PRIVATE PROPERTY.
7. THE CONTRACTOR SHALL PROVIDE CONTINUOUS TRAFFIC ACCESS TO ADJOINING PROPERTY ALONG THE ENTIRE LENGTH OF THE PROJECT.
8. TRAFFIC MUST BE MAINTAINED AT ALL TIMES IN ACCORDANCE WITH THE U.S. DEPARTMENT OF TRANSPORTATION "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES", AND THE FLORIDA DEPARTMENT OF TRANSPORTATION "DESIGN STANDARDS" DATED JANUARY 2008. THE CONTRACTOR SHALL FURNISH, ERECT, AND MAINTAIN ALL NECESSARY TRAFFIC CONTROL AND SAFETY DEVICES.
9. IT IS NOT THE INTENT OF THESE PLANS TO SHOW ALL TEMPORARY EROSION CONTROL, TEMPORARY DRAINAGE, AND INCIDENTAL CONSTRUCTION NECESSARY TO PREVENT EROSION. THE CONTRACTOR IS TO PROVIDE EROSION CONTROL / SEDIMENTATION BARRIERS (SYNTHETIC BALES OR SILTATION CURTAINS) TO PREVENT SILTATION OF ADJACENT PROPERTY, STREETS, STORM SEWERS AND WATERWAYS. CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL DISTURBED AREAS TO EXISTING CONDITIONS OR BETTER.
10. THE MINIMUM SEPARATION BETWEEN PSLUSD MAINS AND OTHER UTILITIES, AS MEASURED FROM THE OUTSIDE OF EACH PIPE SHALL BE AS FOLLOWS:
  - a. WATER MAINS SHALL BE LOCATED A MINIMUM OF 10' FROM A STORM SEWER, A GRAVITY SEWER, A FORCE MAIN, AND A RECLAIMED MAIN. THE VERTICAL SEPARATION SHALL BE AT LEAST 18" WITH THE WATER MAIN CROSSING OVER THE OTHER PIPES.
  - b. ALL PSLUSD PIPES SHALL HAVE A MINIMUM HORIZONTAL SEPARATION OF 5' FROM ALL OTHER UNDERGROUND UTILITIES INCLUDING LIGHT POLES AND A VERTICAL SEPARATION OF AT LEAST 18" INCLUDING FOOTERS.
  - c. WHEN A GRAVITY SEWER, FORCE MAIN, OR RECLAIMED WATER MAIN IS TO BE INSTALLED PARALLEL TO A DRAINAGE PIPE, AND MINIMUM HORIZONTAL SEPARATION OF 10' IS DESIRED. A GREATER SEPARATION MAY BE REQUIRED FOR DRAINAGE PIPES LARGER THAN 48" IN DIAMETER.
11. ALL MATERIALS USED IN CONSTRUCTION SHALL BE ON THE PSLUSD QUALIFIED PRODUCTS LIST (QPL).
12. CONTRACTOR SHALL PROVIDE CONTINUITY OF SERVICE TO EXISTING CUSTOMERS. TEMPORARY SHUT-DOWN OF WATER OR SEWER SERVICES DUE TO CONSTRUCTION SHALL BE MINIMIZED AND SHALL NOT CAUSE UNDUE BURDEN TO PROPERTY OWNER. CONTRACTOR SHALL NOTIFY PROPERTY OWNER A MINIMUM OF 2 WEEKS IN ADVANCE TO GIVE NOTICE IF THE PROPERTY OWNER IS SCHEDULED TO TEMPORARILY LOSE WATER AND/OR SEWER SERVICES DUE TO CONSTRUCTION.
13. AS-BUILTS SHALL BE PREPARED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF FLORIDA AND SIGNED AND SEALED ACCORDING TO STATE REQUIREMENTS. THE SURVEYOR SHALL SHOW ACTUAL LOCATION AND ELEVATION (REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988, NAVD 88) OF ALL PRESSURE MAINS AT 100-FOOT INTERVALS, TEES, WYES, CROSSES, BENDS, REDUCERS, SLEEVES, TERMINAL ENDS, CORPORATION STOPS, VALVES, FIRE HYDRANTS, RESTRAINTS, SLEEVES, CONNECTION POINTS, ETC. AND ANYWHERE COVER IS LESS THAN 36" OR MORE THAN 60". AS-BUILTS SHALL COMPLY WITH ALL OTHER PSLUSD STANDARDS AND REQUIREMENTS.
14. FINAL AS-BUILTS TO BE SHALL BE SUBMITTED AS A SINGLE PDF FILE OF THE FULL SET OF AS-BUILTS, ONE SIGNED AND SEALED BOUND 24"x36" PAPER SET, ONE AUTOCAD DWG FILE WITH ALL REFERENCE FILES, LINE-TYPES, FONTS, ETC. BOUND TO THE DWG FILE IN STATE PLANE COORDINATES. WHEN POSSIBLE, USE THE "ETRANSMIT" COMMAND AND INCLUDE PLOT STYLES AND FONTS.

**PIPE, FITTINGS, VALVES, AND APPURTENANCES:**

1. THE USE OF DUCTILE IRON PIPE (DIP) IS NOT PERMITTED FOR UNDERGROUND PIPE INSTALLATION EXCEPT IN THE LIMITED SPECIAL CIRCUMSTANCES WHERE PVC AND HDPE DO NOT MEET THE DESIGN REQUIREMENTS.
2. ALL WATER AND WASTEWATER PRESSURE MAINS SHALL BE CONSTRUCTED OF C900 PVC UNLESS DEPICTED OTHERWISE ON THE DRAWINGS. C900 PVC PIPE INSTALLATION SHALL CONFORM TO THE FOLLOWING STANDARDS:
  - a. PVC MUST MEET REQUIREMENTS AS SET FORTH IN AWWA C900 AND POTABLE WATER PIPE MUST BEAR THE NATIONAL SANITATION FOUNDATION SEAL. PROVISIONS MUST BE MADE FOR CONTRACTION AND EXPANSION AT EACH JOINT WITH A RUBBER RING AND INTEGRAL THICKENED BELL AS PART OF EACH JOINT. PIPE AND FITTING MUST BE ASSEMBLED WITH A NONTOXIC LUBRICANT.
  - b. WATER MAINS AND SERVICES SHALL BE BLUE IN COLOR. WASTEWATER MAINS AND SERVICES SHALL BE GREEN IN COLOR.
  - c. THE DIMENSION RATIO (DR) AND PRESSURE CLASS SHALL BE DR-18 PRESSURE CLASS 235.
  - d. CONNECTIONS FOR PIPE 2" OR GREATER IN DIAMETER SHALL BE RUBBER COMPRESSION RING-TYPE. PIPE SHALL BE EXTRUDED WITH INTEGRAL THICKENED WALL BELLS WITHOUT INCREASE IN THE DR. RUBBER RING GASKETS SHALL CONSIST OF SYNTHETIC COMPOUNDS MEETING THE REQUIREMENTS OF ASTM DESIGNATION D869 AND SUITABLE FOR THE DESIGNATED SERVICE.
  - e. ALL FITTINGS SHALL BE DUCTILE IRON AND CONFORM TO AWWA/ANSI C153/A21.53.06 WITH A MINIMUM PRESSURE RATING OF 350 PSI.
  - f. DUCTILE IRON FITTINGS FOR WATER MAINS SHALL RECEIVE AN EXTERIOR ASPHALTIC COATING AS SPECIFIED IN ANSI/AWWA C151/A21.51 AND HAVE AN INTERIOR LINED WITH CEMENT MORTAR AND SEALED WITH A COAT OF ASPHALTIC MATERIAL IN ACCORDANCE WITH ANSI/AWWA C104/A21.4.
  - g. DUCTILE IRON FITTINGS FOR WASTEWATER MAINS SHALL HAVE A BITUMINOUS EXTERIOR COATING AND HAVE AN INTERIOR LINED WITH CEMENT MORTAR AND EPOXY IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
3. ALL LOW-PRESSURE MAINS SHALL BE CONSTRUCTED OF PVC SDR-21 UNLESS DEPICTED OTHERWISE ON THE DRAWINGS. PVC SDR-21 PIPE INSTALLATION SHALL CONFORM TO THE FOLLOWING STANDARDS:
  - a. PVC SDR-21 SHALL MEET ALL REQUIREMENTS AS SET FORTH IN ASTM D2241 WITH A PRESSURE RATING OF 200 PSI.


- b. FITTINGS SHALL BE MANUFACTURED IN ONE PIECE OF INJECTION-MOLDED PVC MEETING ASTM D-1784, CLASS 200.
- c. PIPE SHALL HAVE PUSH-ON TYPE JOINTS WITH INTEGRAL WALL BELL. BELL SHALL BE A GASKET JOINT CONFORMING TO ASTM D-3139 WITH GASKETS CONFORMING TO ASTM F477. PUSH JOINT OR MECHANICAL JOINT DUCTILE IRON FITTINGS MEETING AWWA C153 MAY BE ALLOWED AS AN ALTERNATIVE WHEN PVC SIZES ARE NOT AVAILABLE IF APPROVED BY PSLUSD.
4. ALL UTILITY MAINS SHALL HAVE A MINIMUM COVER OF 36" AND A MAXIMUM COVER OF 72".
5. UNDERGROUND PRESSURE PIPING SYSTEMS SHALL BE SECURELY ANCHORED BY ACCEPTABLE MEANS AT ALL TEES, PLUGS, CAPS, BENDS AND VALVES, AND AT ALL OTHER FITTINGS OR LOCATIONS WHERE UNBALANCED FORCES EXIST OR AS DIRECTED BY PSLUSD OR THE ENGINEER. THE CRITERIA FOR ESTABLISHING REQUIRED PIPE RESTRAINT LENGTHS ARE SPECIFIED IN THE STANDARD DETAILS.
6. PIPELINE JOINT DEFLECTIONS SHALL NOT EXCEED WHAT IS RECOMMENDED IN THE UNI-BELL HANDBOOK OF PVC PIPE OR 75% OF THE MANUFACTURER'S MAXIMUM ALLOWABLE DEFLECTION, WHICHEVER IS MORE STRINGENT.
7. GATE VALVES 2" AND LARGER SHALL BE GRAY OR DUCTILE IRON BODY, CONFORMING TO AWWA C509 OR C515, WITH MECHANICAL JOINTS OR FLANGED ENDS, AND SHALL BE EQUIPPED WITH A 2" SQUARE GRAY OR DUCTILE IRON WRENCH NUT. GATE VALVES SHALL BE RESILIENT WEDGE TYPE WITH THE WEDGE CONSTRUCTED OF DUCTILE OR GRAY IRON FULLY ENCAPSULATED WITH EPDM RUBBER INCLUDING THE GLIDE PATH. GATE VALVES SHALL BE RATED FOR 250 PSI WORKING PRESSURE, HAVE ALL STAINLESS-STEEL BOLTS, NUTS, AND WASHERS, AND HAVE AN EXTERIOR AND INTERIOR COATING THAT MATCHES THE RESPECTIVE PIPELINE.
8. BALL VALVES SHALL BE USED ON ALL WATER AND LOW-PRESSURE SERVICE LINES 1/2" TO 2" IN SIZE, HAVE A CAST BRONZE OR STAINLESS-STEEL BODY, BRONZE TEE HEAD, STEM WITH CHECK, FULL ROUND WAY OPENING AND PROVISIONS FOR LOCKING IN A CLOSED POSITION. BALL VALVES SHALL BE DESIGNED TO FULLY OPEN BY A 90-DEGREE TURN OF THE OPERATING HANDLE AND SHALL BE FULL PORT DESIGN WITH BI-DIRECTIONAL SEALING RATED FOR 150 PSI MINIMUM WORKING PRESSURE.

**EARTHWORK, EXCAVATION, BACKFILL, AND COMPACTION**

1. FILL AND BACKFILL MATERIAL SHALL BE CLEAN, FINE EARTH, GRANULAR SHELL, OR SAND, FREE OF VEGETATION OR ORGANIC MATERIAL.
2. THE MINIMUM WIDTH OF THE EXCAVATION/TRENCH SHALL BE EQUAL TO THE OUTSIDE DIAMETER OF THE PIPE, PLUS THE MINIMUM NECESSARY TO OBTAIN PROPER UTILITY FACILITY EXCAVATION BACKFILL AND COMPACTION REQUIREMENTS. THE MAXIMUM WIDTH OF THE TRENCH, MEASURED AT THE TOP OF THE PIPE, SHALL NOT EXCEED THE OUTSIDE PIPE DIAMETER PLUS 2', UNLESS OTHERWISE SHOWN ON THE DRAWING DETAILS OR APPROVED BY THE ENGINEER.
3. BACKFILL SHALL BE COMPACTED IN LAYERS NOT EXCEEDING 12" (UN-COMPACTED THICKNESS) PER LIFT. COMPACTION OF EACH LIFT SHALL BE EQUAL TO 98% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180.
4. DENSITY TESTS SHALL BE MADE BY A TESTING LABORATORY SELECTED BY PSLUSD AND THE ENGINEER. IF ANY TEST RESULTS ARE UNSATISFACTORY TO PSLUSD OR THE ENGINEER, THE CONTRACTOR SHALL RE-EXCAVATE, RE-COMPACT THE BACKFILL, AND RETEST, AT THEIR EXPENSE, UNTIL THE DESIRED COMPACTION IS OBTAINED. ALL COSTS ASSOCIATED WITH ADDITIONAL TESTING REQUIRED TO VERIFY THAT ALL SPECIFICATIONS HAVE BEEN MET SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
5. ALL DENSITY TESTING SHALL BE COMPLETED WITH A NUCLEAR DENSITY GAUGE OR DRIVE CYLINDER METHOD PER ASTM D-2397.
6. DENSITY TESTS SHALL BE MADE ON EACH INDIVIDUAL SECTION OF TRENCH BACKFILLED AND COMPACTED DURING EACH WORK DAY'S PRODUCTION OR EVERY 200', WHICHEVER IS LESS. AT LEAST THREE DENSITY TESTS SHALL BE TAKEN UNDER EACH ROADWAY CUT, PER LIFT OF BACKFILL.

**INSPECTIONS AND TESTING**

1. ALL WORK THAT HAS BEEN REJECTED OR CONDEMNED SHALL BE REPAIRED, OR IF IT CANNOT BE SATISFACTORILY REPAIRED, SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
2. PSLUSD SHALL HAVE THE RIGHT TO REQUIRE ADDITIONAL INSPECTIONS, CERTIFICATIONS AND/OR TESTING TO CONFIRM THAT THE DEFICIENT WORK HAS BEEN CORRECTED.
3. A TEMPORARY JUMPER CONNECTION IS REQUIRED BETWEEN AN EXISTING ACTIVE WATER MAIN AND A NEWLY CONSTRUCTED MAIN UNTIL A CLEARANCE IS OBTAINED FROM PSLUSD. THE TEMPORARY CONNECTION SHALL BE USED AT POINT(S) OF FILLING IN ACCORDANCE WITH THE STANDARD DETAILS FOR POTABLE AND NON-POTABLE WATER JUMPER CONNECTIONS.
4. FLUSHING SHALL BE CONDUCTED TO CLEAN MAINS AND REMOVE ALL FOREIGN MATTER. FOR WATER MAINS, FLUSHING SHALL BE CONDUCTED PRIOR TO DISINFECTION. FLUSHING VELOCITIES SHALL BE AT LEAST 2.5 FEET PER SECOND. CONTRACTOR SHALL PAY PSLUSD FOR ALL FLUSHING WATER USED.
5. HYDROSTATIC TESTING SHALL BE PERFORMED FOR A PERIOD OF NOT LESS THAN 2 HOURS AT 150 PSI PRESSURE FOR WATER AND FORCE MAINS AND AT 100 PSI FOR LOW-PRESSURE MAINS. THE GAUGE USED DURING THE HYDROSTATIC PRESSURE TEST SHALL READ IN 2-POUND INCREMENTS AND SHALL BE A MAXIMUM OF 250 PSI.
6. DISINFECTION OF WATER MAINS SHALL COMPLY WITH AWWA C651. CHEMICALS USED TO DISINFECT SHALL BE EITHER SODIUM HYPOCHLORITE OR CALCIUM HYPOCHLORITE.
7. BACTERIOLOGICAL TESTING ON WATER MAINS SHALL NOT BEGIN UNTIL AFTER THE PRESSURE TEST HAS PASSED. THE CONTRACTOR SHALL INSTALL SAMPLING POINTS REQUIRED TO TAKE ALL NECESSARY WATER SAMPLES AT LOCATIONS DESIGNATED IN THE APPROVED PLANS AND SUBMIT SAMPLING PLAN TO ENGINEER AND PSLUSD FOR APPROVAL PRIOR TO SAMPLING. THE MAXIMUM LENGTH OF LINE TO BE TESTED AS ONE SECTION WILL BE EQUAL TO OR LESS THAN 2,500'.
8. BACTERIOLOGICAL TEST REPORTS SHALL INCLUDE THE DATE ISSUED, PROJECT NAME, TESTING LABORATORY NAME, ADDRESS, TELEPHONE NUMBER, STATE CERTIFICATION, TIME AND DATE OF WATER SAMPLE COLLECTION, NAME OF PERSONS COLLECTION SAMPLES, TEST LOCATIONS, COLIFORM BACTERIA TEST RESULTS FOR EACH OUTLET TESTED, CERTIFICATION THAT THE WATER CONFORMS TO BACTERIAL STANDARDS, AND BACTERIOLOGIST'S SIGNATURE AND AUTHORITY.
9. BACTERIOLOGICAL SAMPLING POINT SHALL BE LOCATED AT THE POINT OF CONNECTION TO EXISTING WATERMAIN, AT ALL DEAD ENDS, AND NO MORE THAN 1,200 FEET APART.

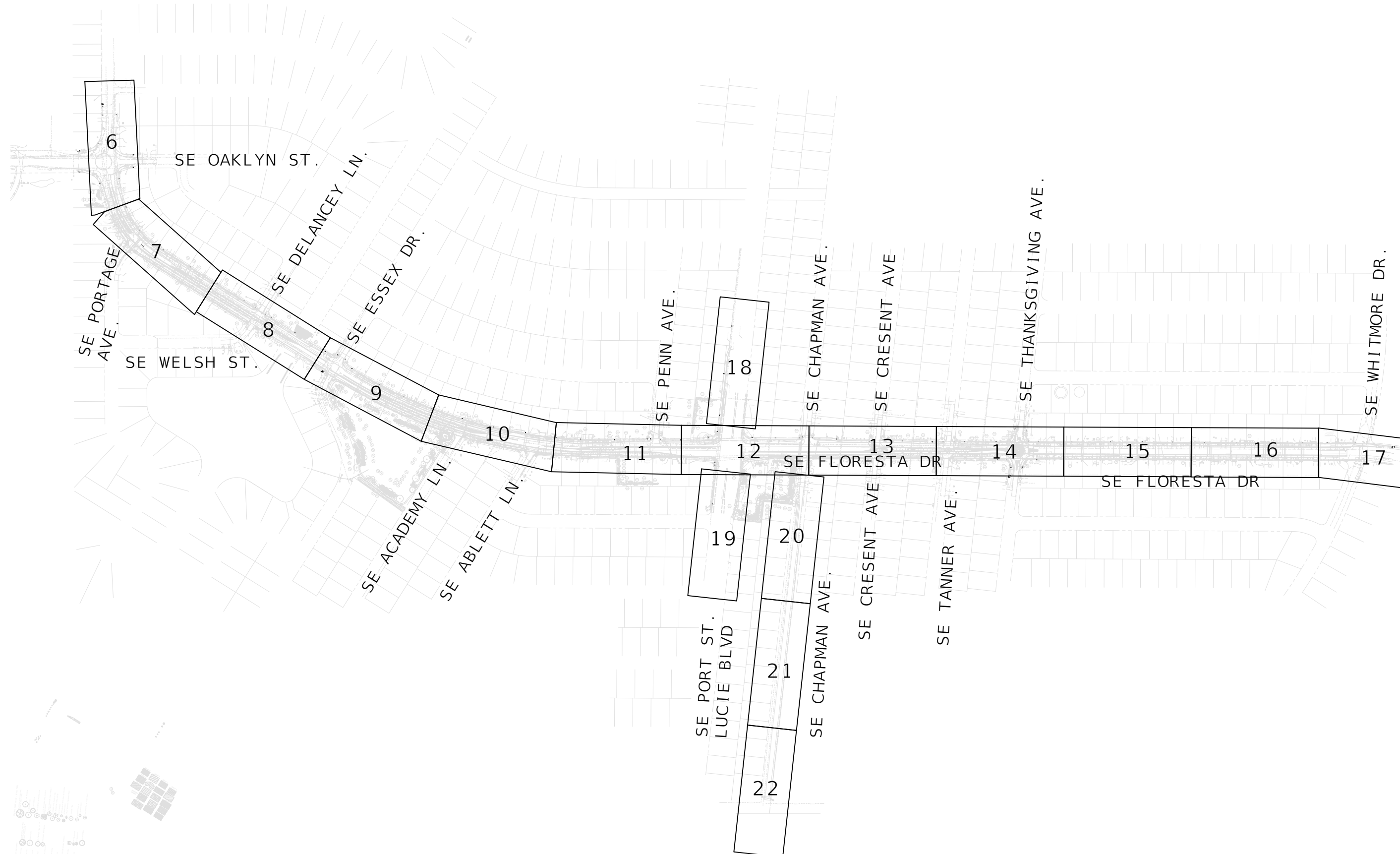
| REVISIONS |             |      |  |  CITY OF PORT ST. LUCIE<br>121 S.W. PORT ST. LUCIE BLVD.<br>PORT ST. LUCIE, FL 34984 | ROAD NO.  | COUNTY               | SHEET NO. |
|-----------|-------------|------|--|---|-----------|----------------------|-----------|
| DATE      | DESCRIPTION | DATE | DESCRIPTION  |   |           |                      |           |
| ---       | ---         | ---  | ---  | FLORESTA DRIVE  | ST. LUCIE | <b>GENERAL NOTES</b> | 2         |
|           |             |      | CHRISTINE J. MIRANDA, P.E.<br>P.E. LICENSE NUMBER 60906<br>HOLTZ CONSULTING ENGINEERS, INC.<br>607 SW ST. LUCIE CRESCENT, SUITE 103<br>STUART, FLORIDA 34994<br>CERTIFICATE OF AUTHORIZATION 26960 |   |           |                      |           |

| Conflict Table |          |                   |            |                     |                     |                 |     |                         |      |
|----------------|----------|-------------------|------------|---------------------|---------------------|-----------------|-----|-------------------------|------|
| Conflict No.   | Sht. No. | Utility Pipe      |            |                     | Conflict Pipe       |                 |     | Vertical Speration (ft) |      |
|                |          | No. Dia & Service | Elev. (FT) | Conflict Resolution | Nom. Dia. & Service | Elev. (FT)      |     |                         |      |
| 7-1            | 7        | 3" PVC LPFM       | BOP        | 5.65                | OVER                | Ex. 15" STORM   | TOP | 4.75                    | 0.9  |
| 7-2            | 7        | 6" PVC WM         | TOP        | 2.78                | UNDER               | 8" YARD DRAIN   | BOP | 3.78                    | 1    |
| 7-3            | 7        | 6" PVC WM         | TOP        | 0.1                 | UNDER               | 14"x23" STORM   | BOP | 3.29                    | 3.19 |
| 7-4            | 7        | 6" PVC WM         | TOP        | 0.1                 | UNDER               | 3" PVC LPFM     | BOP | 4.5                     | 4.4  |
| 7-5            | 7        | 6" PVC WM         | TOP        | 2.66                | UNDER               | 8" YARD DRAIN   | BOP | 3.66                    | 1    |
| 7-6            | 7        | 6" PVC WM         | BOP        | 2.16                | OVER                | 16" WM          | TOP | 0.38                    | 1.78 |
| 7-7            | 7        | 6" PVC WM         | TOP        | 2.78                | UNDER               | 8" YARD DRAIN   | BOP | 4.03                    | 1.25 |
| 7-8            | 7        | 6" PVC WM         | TOP        | 2.78                | UNDER               | 8" YARD DRAIN   | BOP | 4.41                    | 1.63 |
| 7-9            | 7        | 16" WM            | TOP        | 3.28                | UNDER               | 18" STORM       | BOP | 4.28                    | 1    |
| 8-1            | 8        | 2.5" PVC LPFM     | BOP        | 5.95                | OVER                | 12" YARD DRAIN  | TOP | 5.39                    | 0.56 |
| 8-2            | 8        | Ex. 2" LPFM       | BOP        | 5.58                | OVER                | 24" STORM       | TOP | 5.08                    | 0.5  |
| 8-3            | 8        | Ex. 6" WM         | BOP        | 5.62                | OVER                | 24" STORM       | TOP | 5.04                    | 0.58 |
| 8-4            | 8        | 6" PVC WM         | BOP        | 5.62                | OVER                | 2" LPFM         | TOP | 4.5                     | 1.12 |
| 8-5            | 8        | 16" WM            | TOP        | 4.47                | UNDER               | 18" STORM       | BOP | 5.47                    | 1    |
| 9-1            | 9        | Ex. 16" WM        | TOP        | 3.95                | UNDER               | 18" STORM       | BOP | 4.95                    | 1    |
| 9-2            | 9        | 3" PVC LPFM       | TOP        | 4.85                | UNDER               | Ex. 8" WM       | BOP | 5.35                    | 0.5  |
| 9-3            | 9        | 16" PVC WM        | TOP        | 3.68                | UNDER               | 12" YARD DRAIN  | BOP | 4.9                     | 1.22 |
| 9-4            | 9        | 3" PVC LPFM       | BOP        | 5.85                | OVER                | 24" STORM       | TOP | 2.1                     | 3.75 |
| 9-5            | 9        | 16" PVC WM        | TOP        | 3.68                | UNDER               | 12" YARD DRAIN  | BOP | 4.69                    | 1.01 |
| 9-6            | 9        | 16" PVC WM        | TOP        | 3.68                | UNDER               | 12" YARD DRAIN  | BOP | 4.68                    | 1    |
| 9-7            | 9        | 3" PVC LPFM       | BOP        | 4.75                | OVER                | 30" STORM       | TOP | 2.6                     | 2.15 |
| 10-1           | 10       | 3" PVC LPFM       | BOP        | 4.05                | OVER                | 24"x38" STORM   | TOP | 2.9                     | 1.15 |
| 10-2           | 10       | 6" PVC WM         | BOP        | 3.5                 | OVER                | 24"x38" STORM   | TOP | 3                       | 0.5  |
| 10-3           | 10       | 6" PVC WM         | TOP        | 2.75                | UNDER               | 3" PVC LPFM     | BOP | 3.75                    | 1    |
| 10-4           | 10       | 16" PVC WM        | TOP        | 0.46                | UNDER               | 12" YARD DRAIN  | BOP | 3                       | 2.54 |
| 10-5           | 10       | 3" PVC LPFM       | BOP        | 3.75                | OVER                | 12" YARD DRAIN  | TOP | 3                       | 0.75 |
| 10-6           | 10       | 16" PVC WM        | TOP        | 0.46                | UNDER               | 24" STORM       | BOP | 1.46                    | 1    |
| 10-7           | 10       | Ex. 6" WM         | BOP        | 4.09                | N/A                 | 24"x38" STORM   | TOP | 3.53                    | 0.56 |
| 10-8           | 10       | 4" PVC LPFM       | TOP        | 3.59                | UNDER               | Ex. 6" WM       | BOP | 4.09                    | 0.5  |
| 11-1           | 11       | 3" PVC LPFM       | BOP        | 6.25                | OVER                | 24" STORM       | TOP | 5.79                    | 0.46 |
| 11-2           | 11       | Ex. 3" LPFM       | TOP        | 3.92                | N/A                 | 18" STORM       | BOP | 5                       | 1.08 |
| 11-3           | 11       | Ex. 6" WM         | TOP        | 3.92                | UNDER               | 18" STORM       | BOP | 4.92                    | 1    |
| 11-4           | 11       | Ex. 16" WM        | TOP        | 3.75                | UNDER               | 18" STORM       | BOP | 4.75                    | 1    |
| 12-1           | 12       | 12" PVC WM        | TOP        | 4                   | UNDER               | 18" STORM       | BOP | 5                       | 1    |
| 12-2           | 12       | 4" PVC LPFM       | BOP        | 6.42                | OVER                | 18" STORM       | TOP | 6.2                     | 0.22 |
| 12-3           | 12       | 8" PVC WM         | BOP        | 6.05                | OVER                | 36" STORM       | TOP | 5.1                     | 0.95 |
| 12-4           | 12       | 8" PVC WM         | BOP        | 6.05                | OVER                | 6" GAS          | TOP | 5.84                    | 0.21 |
| 12-5           | 12       | 8" PVC WM         | BOP        | 6.05                | OVER                | 4" PVC LPFM     | TOP | 5.55                    | 0.5  |
| 12-6           | 12       | Ex. 2" LPFM       | BOP        | 6.11                | N/A                 | 36" STORM       | TOP | 5.15                    | 0.96 |
| 12-7           | 12       | Ex. 2" LPFM       | BOP        | 6.11                | OVER                | 6" GAS          | TOP | 5.84                    | 0.27 |
| 12-8           | 12       | Ex. 8" FM         | BOP        | 5.65                | OVER                | 36" STORM       | TOP | 5.15                    | 0.5  |
| 12-9           | 12       | 4" PVC LPFM       | BOP        | 6.11                | OVER                | Ex. 8" FM       | TOP | 5.45                    | 0.66 |
| 13-1           | 13       | Ex. 12" WM        | BOP        | 7                   | OVER                | 36" STORM       | TOP | 6.5                     | 0.5  |
| 13-2           | 13       | Ex. 8" FM         | BOP        | 6.5                 | OVER                | 36" STORM       | TOP | 6                       | 0.5  |
| 13-3           | 13       | 6" PVC LPFM       | BOP        | 7.5                 | OVER                | 36" STORM       | TOP | 5.2                     | 2.3  |
| 13-4           | 13       | 6" PVC LPFM       | BOP        | 8.52                | OVER                | Ex. 6" WM       | TOP | 7.95                    | 0.57 |
| 13-5           | 13       | 6" PVC LPFM       | BOP        | 8.5                 | OVER                | EX. 3" PVC LPFM | TOP | 6.34                    | 2.16 |
| 13-6           | 13       | 4" PVC WM         | BOP        | 7.22                | OVER                | 36" STORM       | TOP | 6.72                    | 0.5  |
| 13-7           | 13       | 2.5" PVC LPFM     | BOP        | 7.25                | OVER                | 36" STORM       | TOP | 6.75                    | 0.5  |
| 14-1           | 14       | Ex. 2.5" LPFM     | BOP        | 7.56                | OVER                | 30" STORM       | TOP | 7.06                    | 0.5  |
| 14-2           | 14       | Ex. 6" WM         | BOP        | 7.65                | OVER                | 30" STORM       | TOP | 7.15                    | 0.5  |

| Conflict Table |          |                   |            |                     |                     |                 |     |                         |          |
|----------------|----------|-------------------|------------|---------------------|---------------------|-----------------|-----|-------------------------|----------|
| Conflict No.   | Sht. No. | Utility Pipe      |            |                     | Conflict Pipe       |                 |     | Vertical Speration (ft) |          |
|                |          | No. Dia & Service | Elev. (FT) | Conflict Resolution | Nom. Dia. & Service | Elev. (FT)      |     |                         |          |
| 14-3           | 14       | 12" PVC WM        | TOP        | 3.76                | UNDER               | 30" STORM       | BOP | 4.76                    | 1        |
| 14-4           | 14       | Ex. 8" FM         | TOP        | 5.07                | UNDER               | 18" STORM       | BOP | 6.07                    | 1        |
| 14-5           | 14       | 4" PVC LPFM       | TOP        | 6.49                | UNDER               | Ex. 6" WM       | BOP | 6.99                    | 0.5      |
| 14-6           | 14       | 12" PVC WM        | BOP        | 7.7                 | OVER                | 12" YARD DRAIN  | TOP | 6.76                    | 0.94     |
| 14-7           | 14       | 12" PVC WM        | BOP        | 7.7                 | OVER                | Ex. 8" FM       | TOP | 5.4                     | 2.3      |
| 14-8           | 14       | 4" PVC LPFM       | BOP        | 8.67                | OVER                | Ex. 6" WM       | TOP | 7.47                    | 1.2      |
| 14-9           | 14       | 12" PVC WM        | BOP        | 7.7                 | OVER                | EX. 3" PVC LPFM | TOP | 5.9                     | 1.8      |
| 14-10          | 14       | Ex. 3" LPFM       | BOP        | 8.75                | OVER                | 30" STORM       | TOP | 7.64                    | 1.11     |
| 14-11          | 14       | Ex. 8" FM         | BOP        | 8.33                | OVER                | 30" STORM       | TOP | 7.64                    | 0.69     |
| 14-12          | 14       | 2.5" PVC LPFM     | BOP        | 7.78                | OVER                | 12" YARD DRAIN  | TOP | 7.4                     | 0.38     |
| 15-1           | 15       | 12" PVC WM        | TOP        | 5.79                | UNDER               | 12" YARD DRAIN  | BOP | 6.79                    | 1        |
| 15-2           | 15       | 12" PVC WM        | TOP        | 5.77                | UNDER               | 12" YARD DRAIN  | BOP | 6.77                    | 1        |
| 15-3           | 15       | 2.5" PVC LPFM     | TOP        | 6.39                | UNDER               | 12" YARD DRAIN  | BOP | 6.89                    | 0.5      |
| 15-4           | 15       | 2.5" PVC LPFM     | BOP        | 7.9                 | OVER                | 12" YARD DRAIN  | TOP | 7.29                    | 0.61     |
| 15-5           | 15       | 2.5" PVC LPFM     | BOP        | 7.9                 | OVER                | 12" YARD DRAIN  | TOP | 6.92                    | 0.98     |
| 15-6           | 15       | 6" PVC WM         | TOP        | 5.9                 | UNDER               | 12" YARD DRAIN  | BOP | 6.9                     | 1        |
| 15-7           | 15       | 2.5" PVC LPFM     | BOP        | 7.9                 | OVER                | 12" YARD DRAIN  | TOP | 7.29                    | 0.61     |
| 15-8           | 15       | 2.5" PVC LPFM     | BOP        | 8.37                | OVER                | 12" YARD DRAIN  | TOP | 7.87                    | 0.5      |
| 15-9           | 15       | 2.5" PVC LPFM     | TOP        | 6.07                | UNDER               | 12" YARD DRAIN  | BOP | 6.57                    | 0.5      |
| 16-1           | 16       | 6" PVC WM         | TOP        | 4.35                | UNDER               | 12" YARD DRAIN  | BOP | 6.93                    | 2.58     |
| 16-2           | 16       | 12" PVC WM        | TOP        | 4.35                | UNDER               | 12" YARD DRAIN  | BOP | 5.8                     | 1.45     |
| 16-3           | 16       | 12" PVC WM        | TOP        | 4.35                | UNDER               | 12" YARD DRAIN  | BOP | 5.87                    | 1.52     |
| 16-4           | 16       | 12" PVC WM        | TOP        | 4.35                | UNDER               | 12" YARD DRAIN  | BOP | 5.35                    | 1        |
| 16-5           | 16       | 12" PVC WM        | BOP        | 6.18                | OVER                | 12" YARD DRAIN  | TOP | 5.35                    | 0.83     |
| 16-6           | 16       | 12" PVC WM        | BOP        | 6.18                | OVER                | 12" YARD DRAIN  | TOP | 5.29                    | 0.89     |
| 16-7           | 16       | 2.5" PVC LPFM     | BOP        | 7.27                | OVER                | 12" YARD DRAIN  | TOP | 5.96                    | 1.311667 |
| 17-1           | 17       | Ex. 8" WM         | BOP        | 6.13                | N/A                 | 30" STORM       | TOP | 5.38                    | 0.75     |
| 17-2           | 17       | 12" PVC WM        | TOP        | 1.74                | UNDER               | 30" STORM       | BOP | 2.74                    | 1        |
| 18-1           | 18       | Ex. 24" WM        | TOP        | 3.84                | UNDER               | 18" STORM       | BOP | 4.84                    | 1        |
| 20-1           | 20       | Ex. 8" WM         | TOP        | 3.9                 | UNDER               | 18" STORM       | BOP | 4.9                     | 1        |
| 20-2           | 20       | Ex. 2" LPFM       | BOP        | 6.11                | N/A                 | 18" STORM       | TOP | 3.1                     | 3.01     |
| 22-1           | 22       | Ex. 2.5" LPFM     | TOP        | -0.55               | UNDER               | 18" STORM       | BOP | 0.45                    | 1        |
| 22-2           | 22       | Ex. 8" WM         | TOP        | -0.45               | UNDER               | 18" STORM       | BOP | 0.55                    | 1        |


|           |             |      |             |  |   |   |                          |           |
|-----------|-------------|------|-------------|--|---|---|--------------------------|-----------|
| REVISIONS |             |      |             | CHRISTINE J. MIRANDA, P.E.<br>P.E. LICENSE NUMBER 60906<br>HOLTZ CONSULTING ENGINEERS, INC.<br>607 SW ST. LUCIE CRESCENT, SUITE 103<br>STUART, FLORIDA 34994<br>CERTIFICATE OF AUTHORIZATION 26960 |  CITY OF PORT ST. LUCIE<br>121 S.W. PORT ST. LUCIE BLVD.<br>PORT ST. LUCIE, FL 34984 | ROAD NO. COUNTY<br>FLORESTA DRIVE ST. LUCIE | <b>CONFLICT(S) TABLE</b> | SHEET NO. |
| DATE      | DESCRIPTION | DATE | DESCRIPTION |  |   |   |                          | 3         |
| ---       | ---         | ---  | ---         |  |   |   |                          | ---       |

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|-----------|-------------|------|-------------|
| DATE      | DESCRIPTION | DATE | DESCRIPTION |
| ---       | ---         | ---  | ---         |

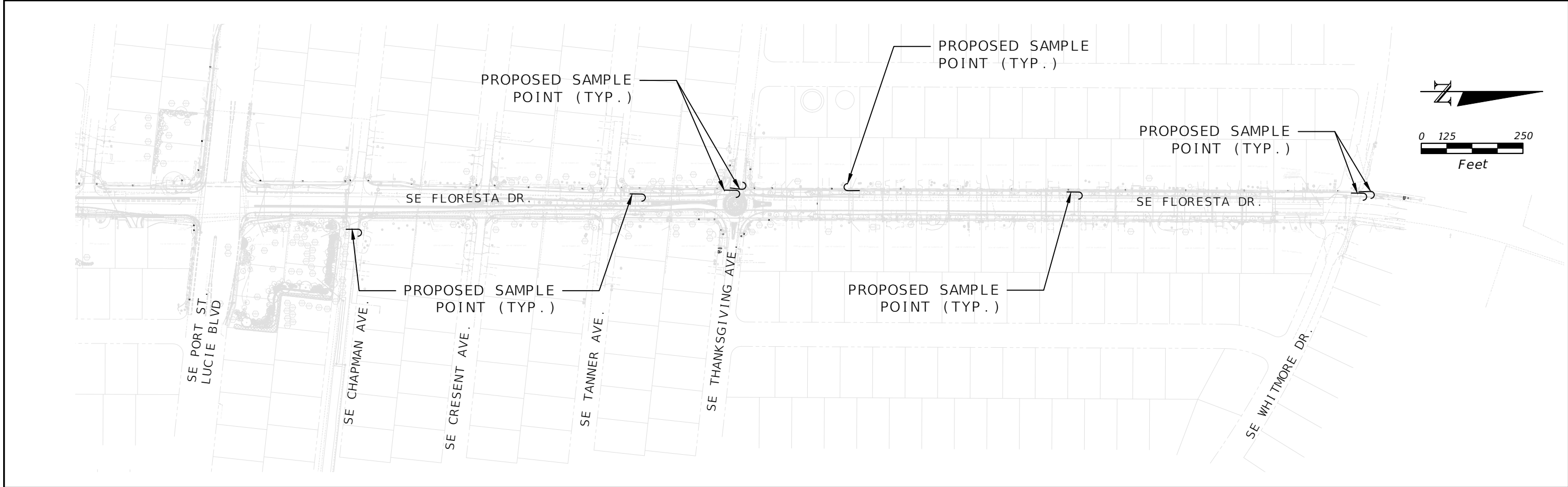
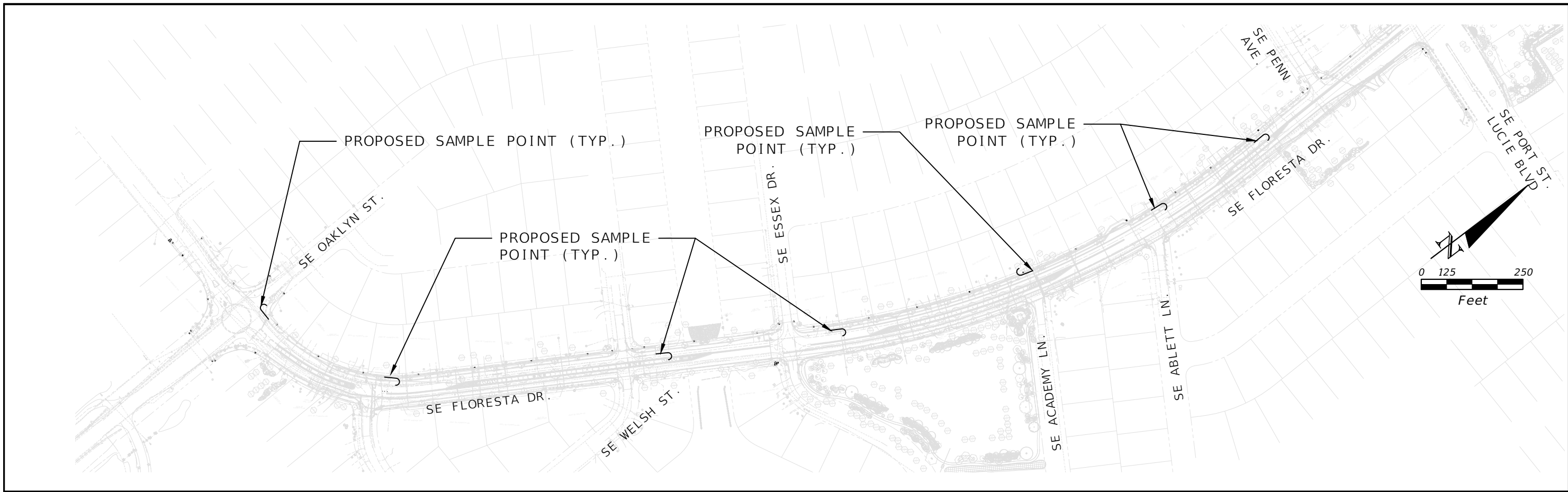
CHRISTINE J. MIRANDA, P.E.  
P.E. LICENSE NUMBER 60906  
HOLTZ CONSULTING ENGINEERS, INC.  
607 SW ST. LUCIE CRESCENT, SUITE 103  
STUART, FLORIDA 34994  
CERTIFICATE OF AUTHORIZATION 26960

|   |           |
|---|-----------|
|  CITY OF PORT ST. LUCIE<br>121 S.W. PORT ST. LUCIE BLVD.<br>PORT ST. LUCIE, FL 34984 |           |
| ROAD NO.  | COUNTY    |
| FLORESTA DRIVE  | ST. LUCIE |

**KEY SHEET**


SHEET NO.  
4

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| DATE      | DESCRIPTION | DATE | DESCRIPTION |
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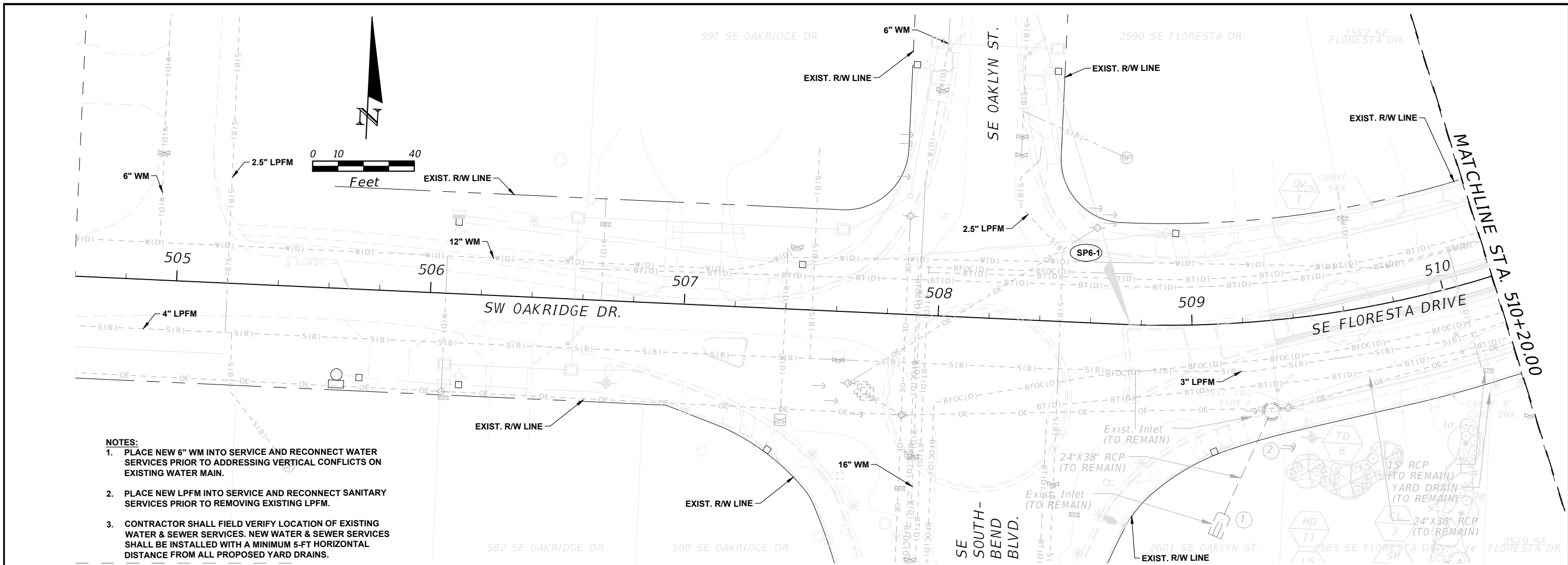
CHRISTINE J. MIRANDA, P.E.  
 P.E. LICENSE NUMBER 60906  
 HOLTZ CONSULTING ENGINEERS, INC.  
 607 SW ST. LUCIE CRESCENT, SUITE 103  
 STUART, FLORIDA 34994  
 CERTIFICATE OF AUTHORIZATION 26960

|   |           |
|---|-----------|
|  CITY OF PORT ST. LUCIE<br>121 S.W. PORT ST. LUCIE BLVD.<br>PORT ST. LUCIE, FL 34984 |           |
| ROAD NO.  | COUNTY    |
| FLORESTA DRIVE  | ST. LUCIE |

**SAMPLE POINT LOCATION**

SHEET NO.  
5


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- NOTES:**
1. PLACE NEW 6" WM INTO SERVICE AND RECONNECT WATER SERVICES PRIOR TO ADDRESSING VERTICAL CONFLICTS ON EXISTING WATER MAIN.
  2. PLACE NEW LPFM INTO SERVICE AND RECONNECT SANITARY SERVICES PRIOR TO REMOVING EXISTING LPFM.
  3. CONTRACTOR SHALL FIELD VERIFY LOCATION OF EXISTING WATER & SEWER SERVICES. NEW WATER & SEWER SERVICES SHALL BE INSTALLED WITH A MINIMUM 5-FT HORIZONTAL DISTANCE FROM ALL PROPOSED YARD DRAINS.

| REVISIONS |             |      |             |
|-----------|-------------|------|-------------|
| DATE      | DESCRIPTION | DATE | DESCRIPTION |
|           |             |      |             |

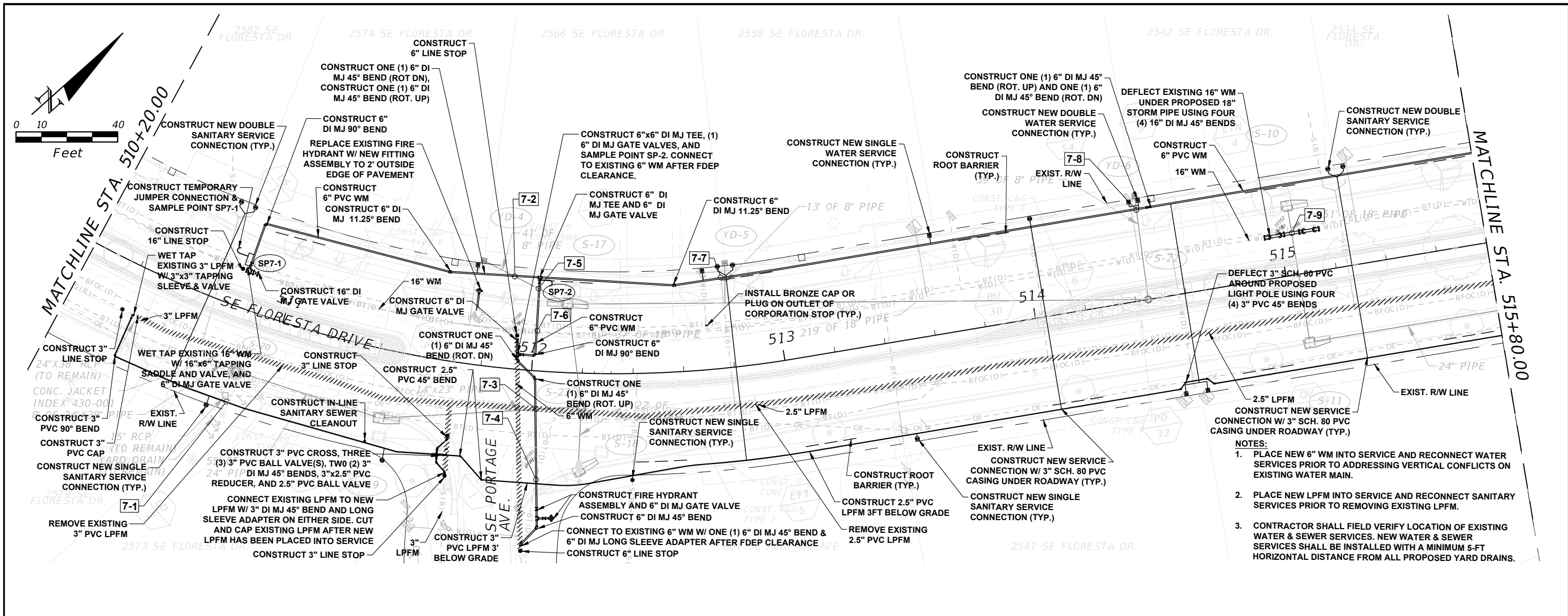
CHRISTINE J. MIRANDA, P.E.  
P.E. LICENSE NUMBER 60906  
HOLTZ CONSULTING ENGINEERS, INC.  
607 SW ST. LUCIE CRESCENT, SUITE 103  
STUART, FLORIDA 34994  
CERTIFICATE OF AUTHORIZATION 26960

|   |           |
|---|-----------|
|  CITY OF PORT ST. LUCIE<br>121 S.W. PORT ST. LUCIE BLVD.<br>PORT ST. LUCIE, FL 34984 |           |
| ROAD NO.  | COUNTY    |
| FLORESTA DRIVE  | ST. LUCIE |

PLAN

SHEET NO.  
6

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- NOTES:**
1. PLACE NEW 6" WM INTO SERVICE AND RECONNECT WATER SERVICES PRIOR TO ADDRESSING VERTICAL CONFLICTS ON EXISTING WATER MAIN.
  2. PLACE NEW LPFM INTO SERVICE AND RECONNECT SANITARY SERVICES PRIOR TO REMOVING EXISTING LPFM.
  3. CONTRACTOR SHALL FIELD VERIFY LOCATION OF EXISTING WATER & SEWER SERVICES. NEW WATER & SEWER SERVICES SHALL BE INSTALLED WITH A MINIMUM 5-FT HORIZONTAL DISTANCE FROM ALL PROPOSED YARD DRAINS.

| Conflict Table |          |                   |            |      |                     |                     |            |      |                          |
|----------------|----------|-------------------|------------|------|---------------------|---------------------|------------|------|--------------------------|
| Conflict No.   | Sht. No. | Utility Pipe      |            |      | Conflict Resolution | Conflict Pipe       |            |      | Vertical Separation (ft) |
|                |          | No. Dia & Service | Elev. (FT) |      |                     | Nom. Dia. & Service | Elev. (FT) |      |                          |
| 7-1            | 7        | 3" PVC LPFM       | BOP        | 5.65 | OVER                | Ex. 15" STORM       | TOP        | 4.75 | 0.9                      |
| 7-2            | 7        | 6" PVC WM         | TOP        | 2.78 | UNDER               | 8" YARD DRAIN       | BOP        | 3.78 | 1                        |
| 7-3            | 7        | 6" PVC WM         | TOP        | 0.1  | UNDER               | 14"x23" STORM       | BOP        | 3.29 | 3.19                     |
| 7-4            | 7        | 6" PVC WM         | TOP        | 0.1  | UNDER               | 3" PVC LPFM         | BOP        | 4.5  | 4.4                      |
| 7-5            | 7        | 6" PVC WM         | TOP        | 2.66 | UNDER               | 8" YARD DRAIN       | BOP        | 3.66 | 1                        |
| 7-6            | 7        | 6" PVC WM         | BOP        | 2.16 | OVER                | 16" WM              | TOP        | 0.38 | 1.78                     |
| 7-7            | 7        | 6" PVC WM         | TOP        | 2.78 | UNDER               | 8" YARD DRAIN       | BOP        | 4.03 | 1.25                     |
| 7-8            | 7        | 6" PVC WM         | TOP        | 2.78 | UNDER               | 8" YARD DRAIN       | BOP        | 4.41 | 1.63                     |
| 7-9            | 7        | 16" WM            | TOP        | 3.28 | UNDER               | 18" STORM           | BOP        | 4.28 | 1                        |

| REVISIONS |             |      |             |
|-----------|-------------|------|-------------|
| DATE      | DESCRIPTION | DATE | DESCRIPTION |
|           |             |      |             |

CHRISTINE J. MIRANDA, P.E.  
P.E. LICENSE NUMBER 60906  
HOLTZ CONSULTING ENGINEERS, INC.  
607 SW ST. LUCIE CRESCENT, SUITE 103  
STUART, FLORIDA 34994  
CERTIFICATE OF AUTHORIZATION 26960

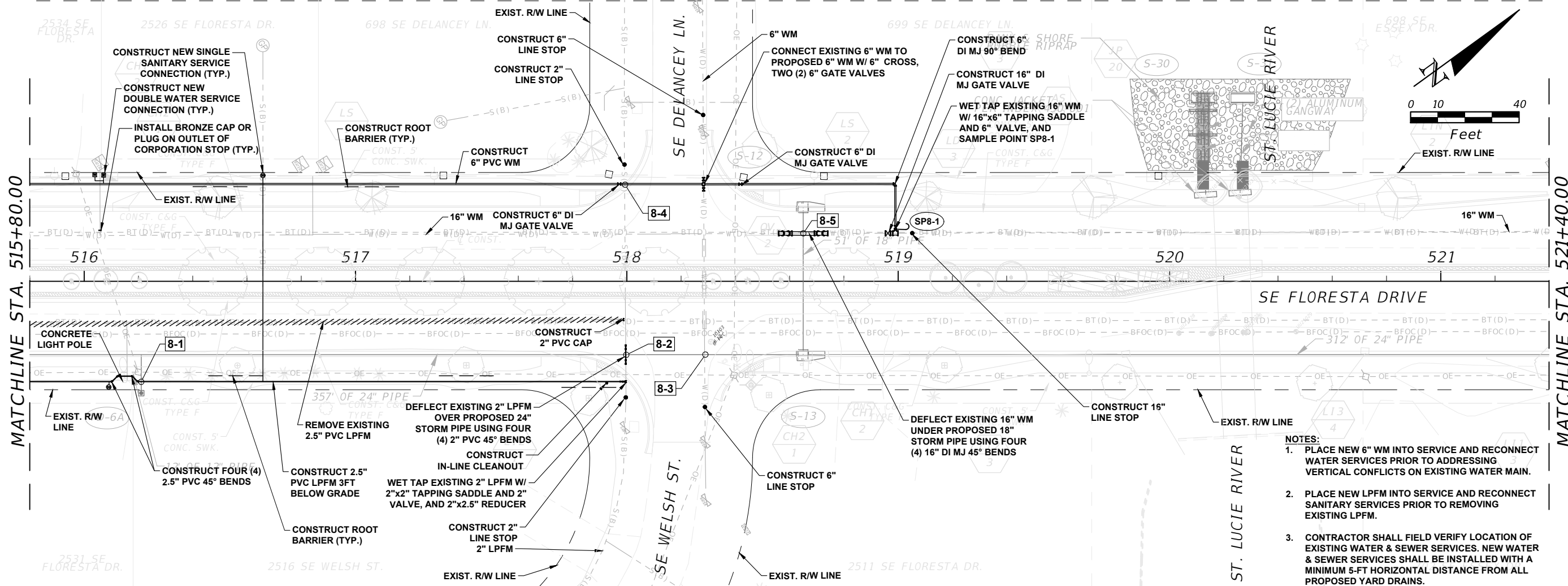
 CITY OF PORT ST. LUCIE  
121 S.W. PORT ST. LUCIE BLVD.  
PORT ST. LUCIE, FL 34984

|                |           |
|----------------|-----------|
| ROAD NO.       | COUNTY    |
| FLORESTA DRIVE | ST. LUCIE |

**PLAN**

SHEET NO.  
7

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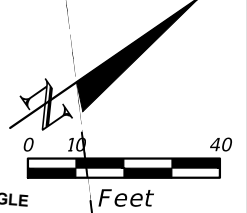
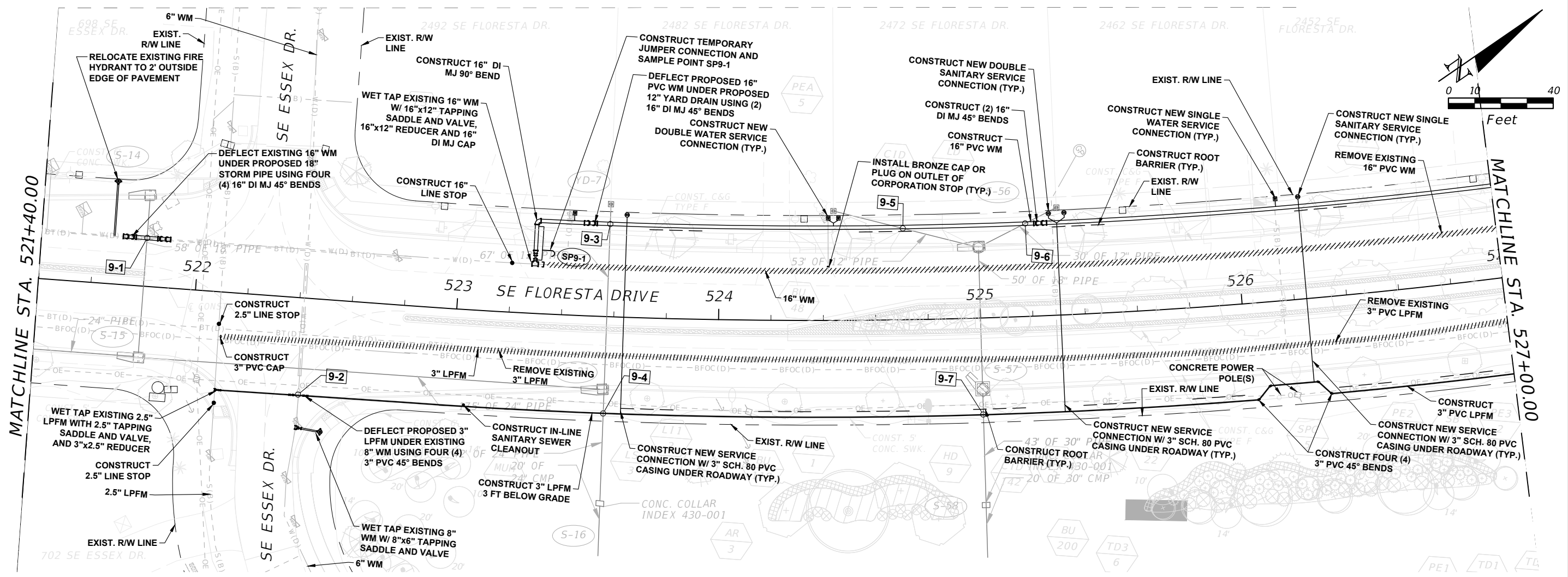
- NOTES:**
1. PLACE NEW 6" WM INTO SERVICE AND RECONNECT WATER SERVICES PRIOR TO ADDRESSING VERTICAL CONFLICTS ON EXISTING WATER MAIN.
  2. PLACE NEW LPFM INTO SERVICE AND RECONNECT SANITARY SERVICES PRIOR TO REMOVING EXISTING LPFM.
  3. CONTRACTOR SHALL FIELD VERIFY LOCATION OF EXISTING WATER & SEWER SERVICES. NEW WATER & SEWER SERVICES SHALL BE INSTALLED WITH A MINIMUM 5-FT HORIZONTAL DISTANCE FROM ALL PROPOSED YARD DRAINS.

| Conflict Table |          |                   |            |      |                     |                     |            |      |                        |
|----------------|----------|-------------------|------------|------|---------------------|---------------------|------------|------|------------------------|
| Conflict No.   | Sht. No. | Utility Pipe      |            |      | Conflict Resolution | Conflict Pipe       |            |      | Vertical Spertion (ft) |
|                |          | No. Dia & Service | Elev. (FT) |      |                     | Nom. Dia. & Service | Elev. (FT) |      |                        |
| 8-1            | 8        | 2.5" PVC LPFM     | BOP        | 5.95 | OVER                | 12" YARD DRAIN      | TOP        | 5.39 | 0.56                   |
| 8-2            | 8        | Ex. 2" LPFM       | BOP        | 5.58 | OVER                | 24" STORM           | TOP        | 5.08 | 0.5                    |
| 8-3            | 8        | Ex. 6" WM         | BOP        | 5.62 | OVER                | 24" STORM           | TOP        | 5.04 | 0.58                   |
| 8-4            | 8        | 6" PVC WM         | BOP        | 5.62 | OVER                | 2" LPFM             | TOP        | 4.5  | 1.12                   |
| 8-5            | 8        | 16" WM            | TOP        | 4.47 | UNDER               | 18" STORM           | BOP        | 5.47 | 1                      |

| REVISIONS |             |      |             | CHRISTINE J. MIRANDA, P.E.<br>P.E. LICENSE NUMBER 60906<br>HOLTZ CONSULTING ENGINEERS, INC.<br>607 SW ST. LUCIE CRESCENT, SUITE 103<br>STUART, FLORIDA 34994<br>CERTIFICATE OF AUTHORIZATION 26960 |  CITY OF PORT ST. LUCIE<br>121 S.W. PORT ST. LUCIE BLVD.<br>PORT ST. LUCIE, FL 34984 | ROAD NO. FLORESTA DRIVE<br>COUNTY ST. LUCIE | <b>PLAN</b> | SHEET NO.<br><br>8 |
|-----------|-------------|------|-------------|--|---|---|-------------|--------------------|
| DATE      | DESCRIPTION | DATE | DESCRIPTION |  |   |   |             |                    |
|           |             |      |             |  |   |   |             |                    |

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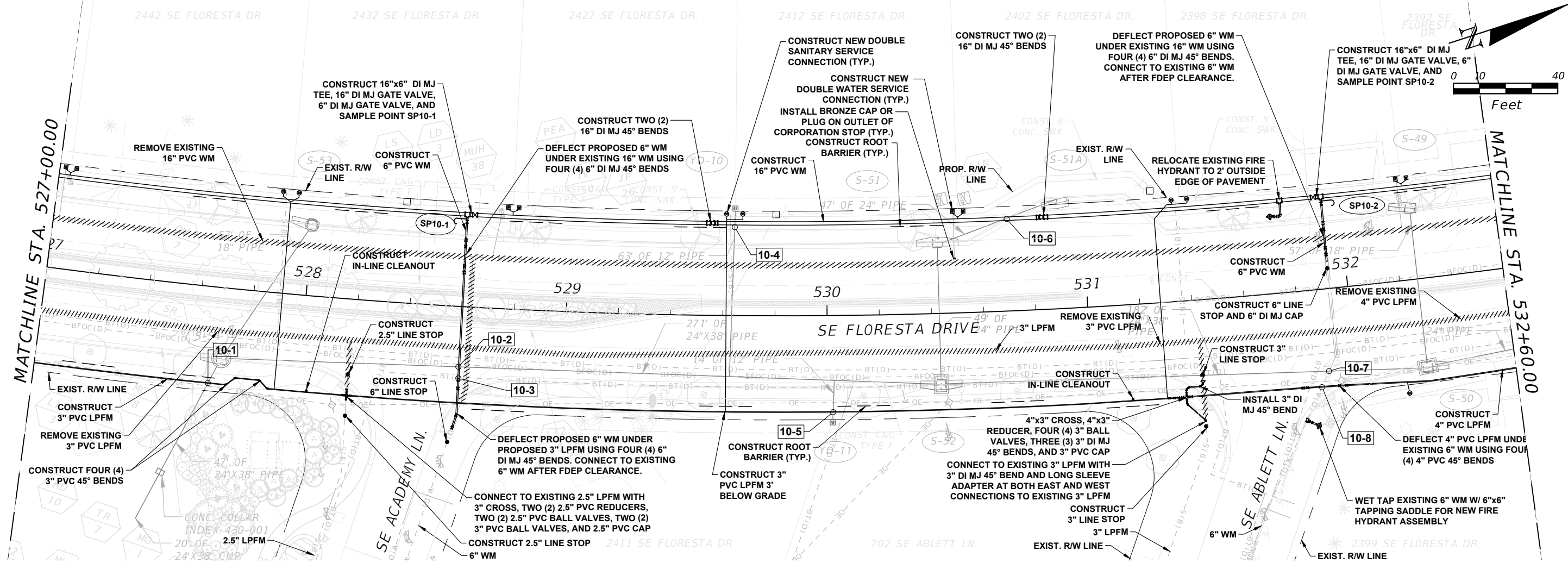




| Conflict Table |          |                   |            |      |                     |                     |            |      |                          |
|----------------|----------|-------------------|------------|------|---------------------|---------------------|------------|------|--------------------------|
| Conflict No.   | Sht. No. | Utility Pipe      |            |      | Conflict Resolution | Conflict Pipe       |            |      | Vertical Separation (ft) |
|                |          | No. Dia & Service | Elev. (FT) |      |                     | Nom. Dia. & Service | Elev. (FT) |      |                          |
| 9-1            | 9        | Ex. 16" WM        | TOP        | 3.95 | UNDER               | 18" STORM           | BOP        | 4.95 | 1                        |
| 9-2            | 9        | 3" PVC LPFM       | TOP        | 4.85 | UNDER               | Ex. 8" WM           | BOP        | 5.35 | 0.5                      |
| 9-3            | 9        | 16" PVC WM        | TOP        | 3.68 | UNDER               | 12" YARD DRAIN      | BOP        | 4.9  | 1.22                     |
| 9-4            | 9        | 3" PVC LPFM       | BOP        | 5.85 | OVER                | 24" STORM           | TOP        | 2.1  | 3.75                     |
| 9-5            | 9        | 16" PVC WM        | TOP        | 3.68 | UNDER               | 12" YARD DRAIN      | BOP        | 4.69 | 1.01                     |
| 9-6            | 9        | 16" PVC WM        | TOP        | 3.68 | UNDER               | 12" YARD DRAIN      | BOP        | 4.68 | 1                        |
| 9-7            | 9        | 3" PVC LPFM       | BOP        | 4.75 | OVER                | 30" STORM           | TOP        | 2.6  | 2.15                     |

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|-----------|-------------|------|-------------|--|---|---|------------------------|
| DATE      | DESCRIPTION | DATE | DESCRIPTION |  |   |   |                        |
|           |             |      |             |  |   |   |                        |


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| Conflict Table |          |                   |            |                     |                     |               |                          |  |  |
|----------------|----------|-------------------|------------|---------------------|---------------------|---------------|--------------------------|--|--|
| Conflict No.   | Sht. No. | Utility Pipe      |            |                     |                     | Conflict Pipe |                          |  |  |
|                |          | No. Dia & Service | Elev. (FT) | Conflict Resolution | Nom. Dia. & Service | Elev. (FT)    | Vertical Separation (ft) |  |  |
| 10-1           | 10       | 3" PVC LPFM       | BOP 4.05   | OVER                | 24"x38" STORM       | TOP 2.9       | 1.15                     |  |  |
| 10-2           | 10       | 6" PVC WM         | BOP 3.5    | OVER                | 24"x38" STORM       | TOP 3         | 0.5                      |  |  |
| 10-3           | 10       | 6" PVC WM         | TOP 2.75   | UNDER               | 3" PVC LPFM         | BOP 3.75      | 1                        |  |  |
| 10-4           | 10       | 16" PVC WM        | TOP 0.46   | UNDER               | 12" YARD DRAIN      | BOP 3         | 2.54                     |  |  |
| 10-5           | 10       | 3" PVC LPFM       | BOP 3.75   | OVER                | 12" YARD DRAIN      | TOP 3         | 0.75                     |  |  |
| 10-6           | 10       | 16" PVC WM        | TOP 0.46   | UNDER               | 24" STORM           | BOP 1.46      | 1                        |  |  |
| 10-7           | 10       | Ex. 6" WM         | BOP 4.09   | N/A                 | 24"x38" STORM       | TOP 3.53      | 0.56                     |  |  |
| 10-8           | 10       | 4" PVC LPFM       | TOP 3.59   | UNDER               | Ex. 6" WM           | BOP 4.09      | 0.5                      |  |  |

| REVISIONS |             |      |             |
|-----------|-------------|------|-------------|
| DATE      | DESCRIPTION | DATE | DESCRIPTION |
|           |             |      |             |

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HOLTZ CONSULTING ENGINEERS, INC.  
607 SW ST. LUCIE CRESCENT, SUITE 103  
STUART, FLORIDA 34994  
CERTIFICATE OF AUTHORIZATION 26960

 CITY OF PORT ST. LUCIE  
121 S.W. PORT ST. LUCIE BLVD.  
PORT ST. LUCIE, FL 34984

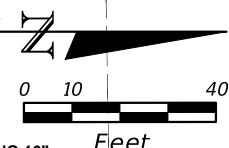
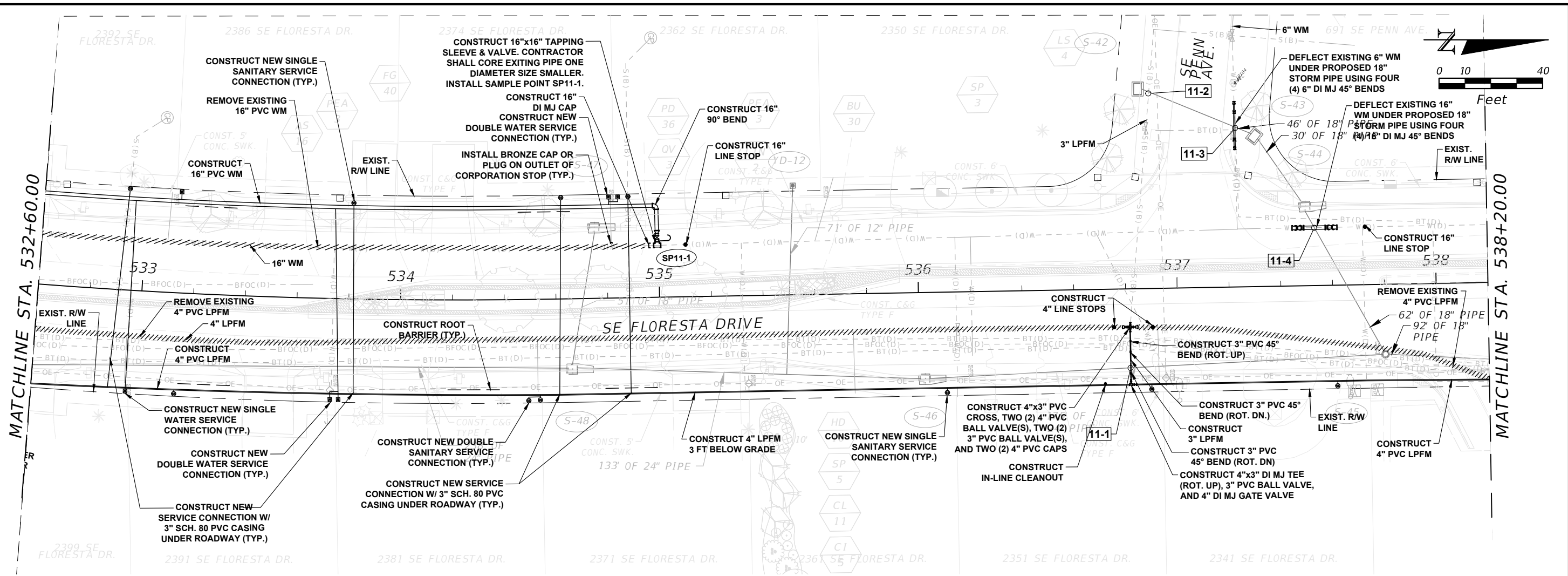
ROAD NO. COUNTY

FLORESTA DRIVE ST. LUCIE

**PLAN**

SHEET NO.  
**10**


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| Conflict Table |          |                   |            |                     |                     |               |                          |      |      |
|----------------|----------|-------------------|------------|---------------------|---------------------|---------------|--------------------------|------|------|
| Conflict No.   | Sht. No. | Utility Pipe      |            |                     |                     | Conflict Pipe |                          |      |      |
|                |          | No. Dia & Service | Elev. (FT) | Conflict Resolution | Nom. Dia. & Service | Elev. (FT)    | Vertical Separation (ft) |      |      |
| 11-1           | 11       | 3" PVC LPFM       | BOP        | 6.25                | OVER                | 24" STORM     | TOP                      | 5.79 | 0.46 |
| 11-2           | 11       | Ex. 3" LPFM       | TOP        | 3.92                | N/A                 | 18" STORM     | BOP                      | 5    | 1.08 |
| 11-3           | 11       | Ex. 6" WM         | TOP        | 3.92                | UNDER               | 18" STORM     | BOP                      | 4.92 | 1    |
| 11-4           | 11       | Ex. 16" WM        | TOP        | 3.75                | UNDER               | 18" STORM     | BOP                      | 4.75 | 1    |

| REVISIONS |             |      |             |
|-----------|-------------|------|-------------|
| DATE      | DESCRIPTION | DATE | DESCRIPTION |
|           |             |      |             |

CHRISTINE J. MIRANDA, P.E.  
P.E. LICENSE NUMBER 60906  
HOLTZ CONSULTING ENGINEERS, INC.  
607 SW ST. LUCIE CRESCENT, SUITE 103  
STUART, FLORIDA 34994  
CERTIFICATE OF AUTHORIZATION 26960

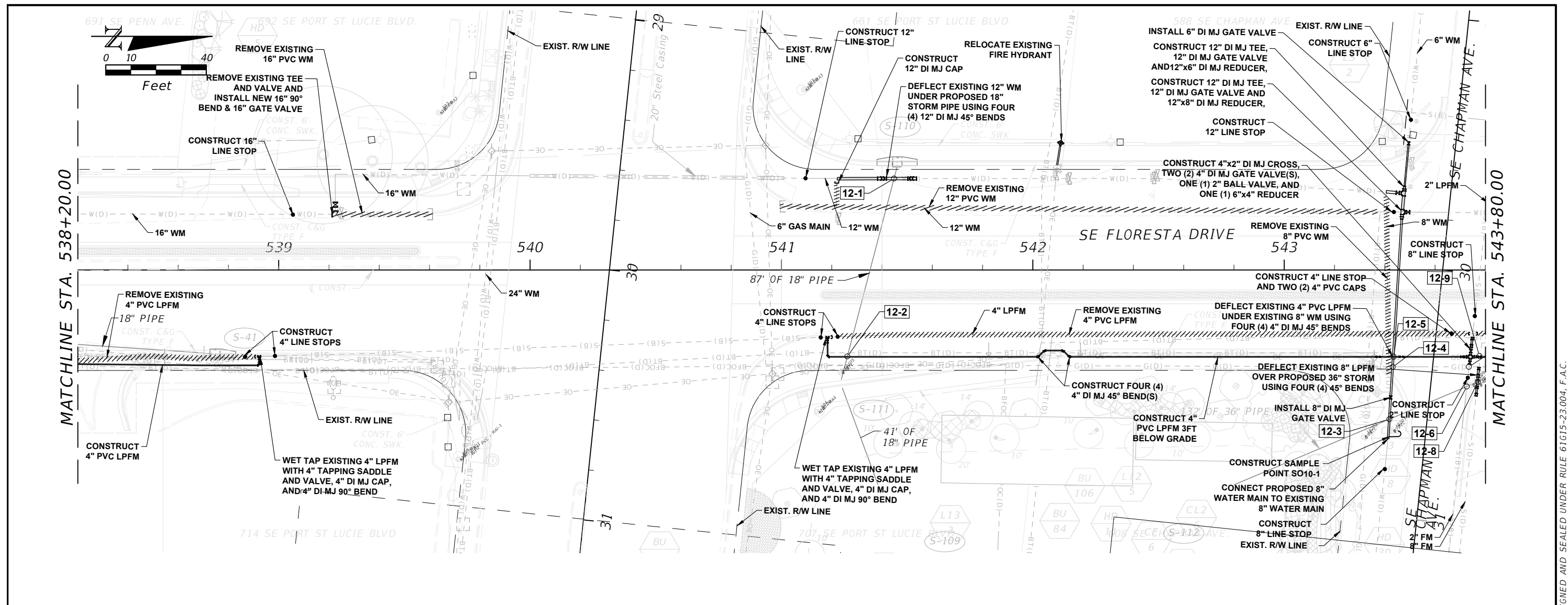
 CITY OF PORT ST. LUCIE  
121 S.W. PORT ST. LUCIE BLVD.  
PORT ST. LUCIE, FL 34984

ROAD NO. COUNTY  
**FLORESTA DRIVE** **ST. LUCIE**

PLAN

SHEET NO.  
**11**

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



Conflict Table

| Conflict No. | Sht. No. | Utility Pipe      |            |                     | Conflict Pipe       |            |      | Vertical Separation (ft) |
|--------------|----------|-------------------|------------|---------------------|---------------------|------------|------|--------------------------|
|              |          | No. Dia & Service | Elev. (FT) | Conflict Resolution | Nom. Dia. & Service | Elev. (FT) |      |                          |
| 12-1         | 12       | 12" PVC WM        | TOP 4      | UNDER               | 18" STORM           | BOP 5      | 1    |                          |
| 12-2         | 12       | 4" PVC LPFM       | BOP 6.42   | OVER                | 18" STORM           | TOP 6.2    | 0.22 |                          |
| 12-3         | 12       | 8" PVC WM         | BOP 6.05   | OVER                | 36" STORM           | TOP 5.1    | 0.95 |                          |
| 12-4         | 12       | 8" PVC WM         | BOP 6.05   | OVER                | 6" GAS              | TOP 5.84   | 0.21 |                          |
| 12-5         | 12       | 8" PVC WM         | BOP 6.05   | OVER                | 4" PVC LPFM         | TOP 5.55   | 0.5  |                          |
| 12-6         | 12       | Ex. 2" LPFM       | BOP 6.11   | N/A                 | 36" STORM           | TOP 5.15   | 0.96 |                          |
| 12-7         | 12       | Ex. 2" LPFM       | BOP 6.11   | OVER                | 6" GAS              | TOP 5.84   | 0.27 |                          |
| 12-8         | 12       | Ex. 8" FM         | BOP 5.65   | OVER                | 36" STORM           | TOP 5.15   | 0.5  |                          |
| 12-9         | 12       | 4" PVC LPFM       | BOP 6.11   | OVER                | Ex. 8" FM           | TOP 5.45   | 0.66 |                          |

| REVISIONS |             |      |             |
|-----------|-------------|------|-------------|
| DATE      | DESCRIPTION | DATE | DESCRIPTION |
|           |             |      |             |

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HOLTZ CONSULTING ENGINEERS, INC.  
607 SW ST. LUCIE CRESCENT, SUITE 103  
STUART, FLORIDA 34994  
CERTIFICATE OF AUTHORIZATION 26960

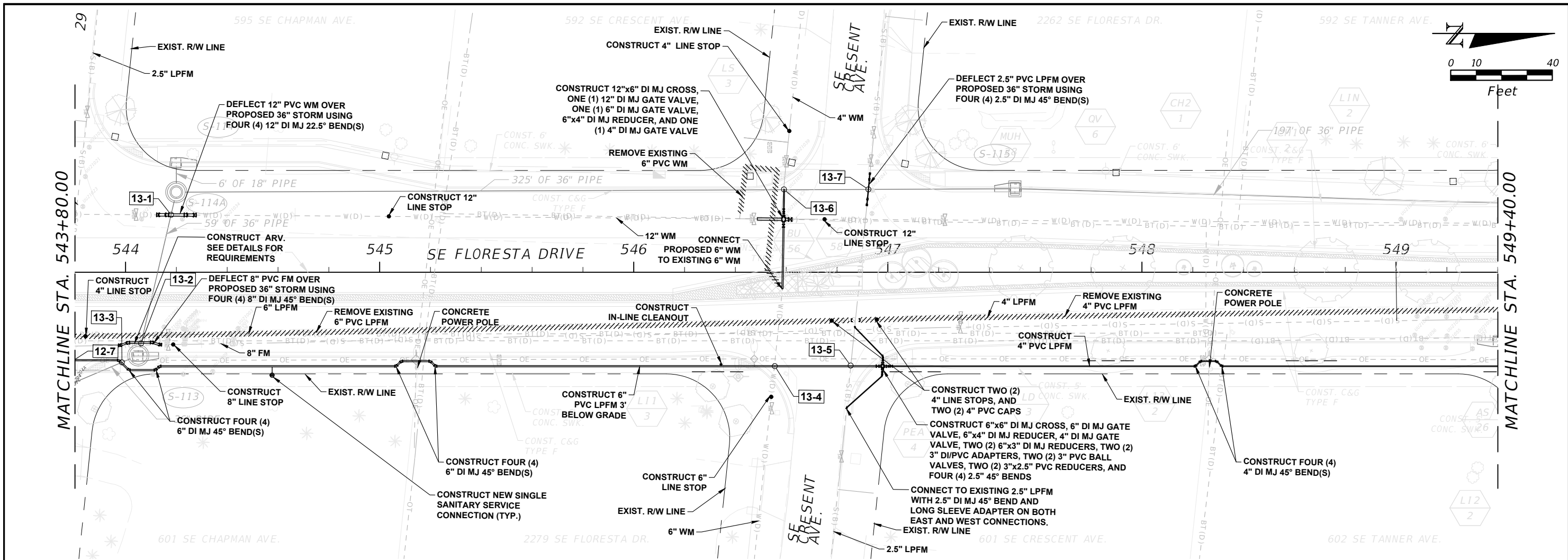
CITY OF PORT ST. LUCIE  
121 S.W. PORT ST. LUCIE BLVD.  
PORT ST. LUCIE, FL 34984

ROAD NO. FLORESTA DRIVE COUNTY ST. LUCIE

PLAN

SHEET NO. 12


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| Conflict Table |          |                   |            |      |                     |                     |            |      |                          |
|----------------|----------|-------------------|------------|------|---------------------|---------------------|------------|------|--------------------------|
| Conflict No.   | Sht. No. | Utility Pipe      |            |      | Conflict Resolution | Conflict Pipe       |            |      | Vertical Separation (ft) |
|                |          | No. Dia & Service | Elev. (FT) |      |                     | Nom. Dia. & Service | Elev. (FT) |      |                          |
| 13-1           | 13       | Ex. 12" WM        | BOP        | 7    | OVER                | 36" STORM           | TOP        | 6.5  | 0.5                      |
| 13-2           | 13       | Ex. 8" FM         | BOP        | 6.5  | OVER                | 36" STORM           | TOP        | 6    | 0.5                      |
| 13-3           | 13       | 6" PVC LPFM       | BOP        | 7.5  | OVER                | 36" STORM           | TOP        | 5.2  | 2.3                      |
| 13-4           | 13       | 6" PVC LPFM       | BOP        | 8.52 | OVER                | Ex. 6" WM           | TOP        | 7.95 | 0.57                     |
| 13-5           | 13       | 6" PVC LPFM       | BOP        | 8.5  | OVER                | EX. 3" PVC LPFM     | TOP        | 6.34 | 2.16                     |
| 13-6           | 13       | 4" PVC WM         | BOP        | 7.22 | OVER                | 36" STORM           | TOP        | 6.72 | 0.5                      |
| 13-7           | 13       | 2.5" PVC LPFM     | BOP        | 7.25 | OVER                | 36" STORM           | TOP        | 6.75 | 0.5                      |

| REVISIONS |             |      |             |
|-----------|-------------|------|-------------|
| DATE      | DESCRIPTION | DATE | DESCRIPTION |
|           |             |      |             |

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607 SW ST. LUCIE CRESCENT, SUITE 103  
STUART, FLORIDA 34994  
CERTIFICATE OF AUTHORIZATION 26960

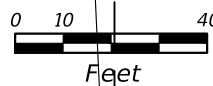
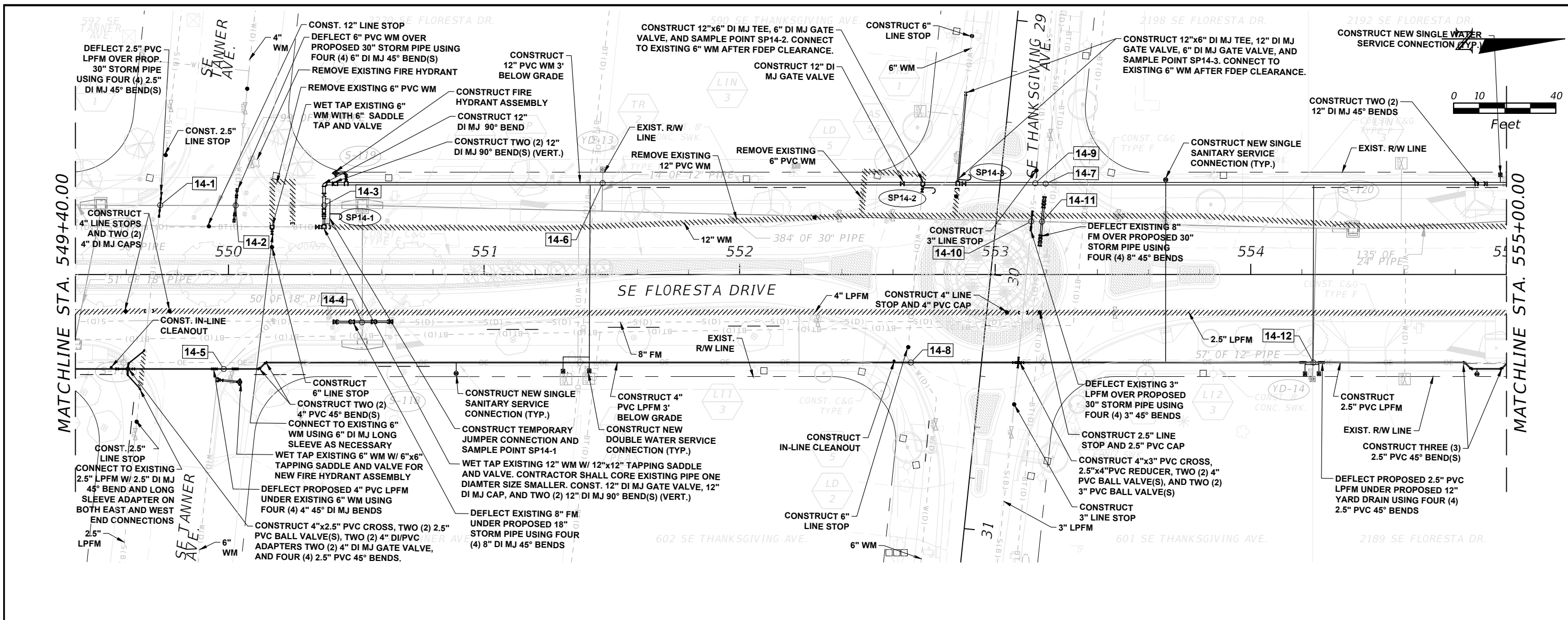
 CITY OF PORT ST. LUCIE  
121 S.W. PORT ST. LUCIE BLVD.  
PORT ST. LUCIE, FL 34984

|                |           |
|----------------|-----------|
| ROAD NO.       | COUNTY    |
| FLORESTA DRIVE | ST. LUCIE |

PLAN

SHEET NO.  
13


THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



| Conflict Table |          |                   |            |      |                     |                     |            |      |                          |
|----------------|----------|-------------------|------------|------|---------------------|---------------------|------------|------|--------------------------|
| Conflict No.   | Sht. No. | Utility Pipe      |            |      | Conflict Resolution | Conflict Pipe       |            |      | Vertical Separation (ft) |
|                |          | No. Dia & Service | Elev. (FT) |      |                     | Nom. Dia. & Service | Elev. (FT) |      |                          |
| 14-1           | 14       | Ex. 2.5" LPFM     | BOP        | 7.56 | OVER                | 30" STORM           | TOP        | 7.06 | 0.5                      |
| 14-2           | 14       | Ex. 6" WM         | BOP        | 7.65 | OVER                | 30" STORM           | TOP        | 7.15 | 0.5                      |
| 14-3           | 14       | 12" PVC WM        | TOP        | 3.76 | UNDER               | 30" STORM           | BOP        | 4.76 | 1                        |
| 14-4           | 14       | Ex. 8" FM         | TOP        | 5.07 | UNDER               | 18" STORM           | BOP        | 6.07 | 1                        |
| 14-5           | 14       | 4" PVC LPFM       | TOP        | 6.49 | UNDER               | Ex. 6" WM           | BOP        | 6.99 | 0.5                      |
| 14-6           | 14       | 12" PVC WM        | BOP        | 7.7  | OVER                | 12" YARD DRAIN      | TOP        | 6.76 | 0.94                     |
| 14-7           | 14       | 12" PVC WM        | BOP        | 7.7  | OVER                | Ex. 8" FM           | TOP        | 5.4  | 2.3                      |
| 14-8           | 14       | 4" PVC LPFM       | BOP        | 8.67 | OVER                | Ex. 6" WM           | TOP        | 7.47 | 1.2                      |
| 14-9           | 14       | 12" PVC WM        | BOP        | 7.7  | OVER                | EX. 3" PVC LPFM     | TOP        | 5.9  | 1.8                      |
| 14-10          | 14       | Ex. 3" LPFM       | BOP        | 8.75 | OVER                | 30" STORM           | TOP        | 7.64 | 1.11                     |
| 14-11          | 14       | Ex. 8" FM         | BOP        | 8.33 | OVER                | 30" STORM           | TOP        | 7.64 | 0.69                     |
| 14-12          | 14       | 2.5" PVC LPFM     | BOP        | 7.78 | OVER                | 12" YARD DRAIN      | TOP        | 7.4  | 0.38                     |

| REVISIONS |             |      |             |
|-----------|-------------|------|-------------|
| DATE      | DESCRIPTION | DATE | DESCRIPTION |
|           |             |      |             |

CHRISTINE J. MIRANDA, P.E.  
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607 SW ST. LUCIE CRESCENT, SUITE 103  
STUART, FLORIDA 34994  
CERTIFICATE OF AUTHORIZATION 26960

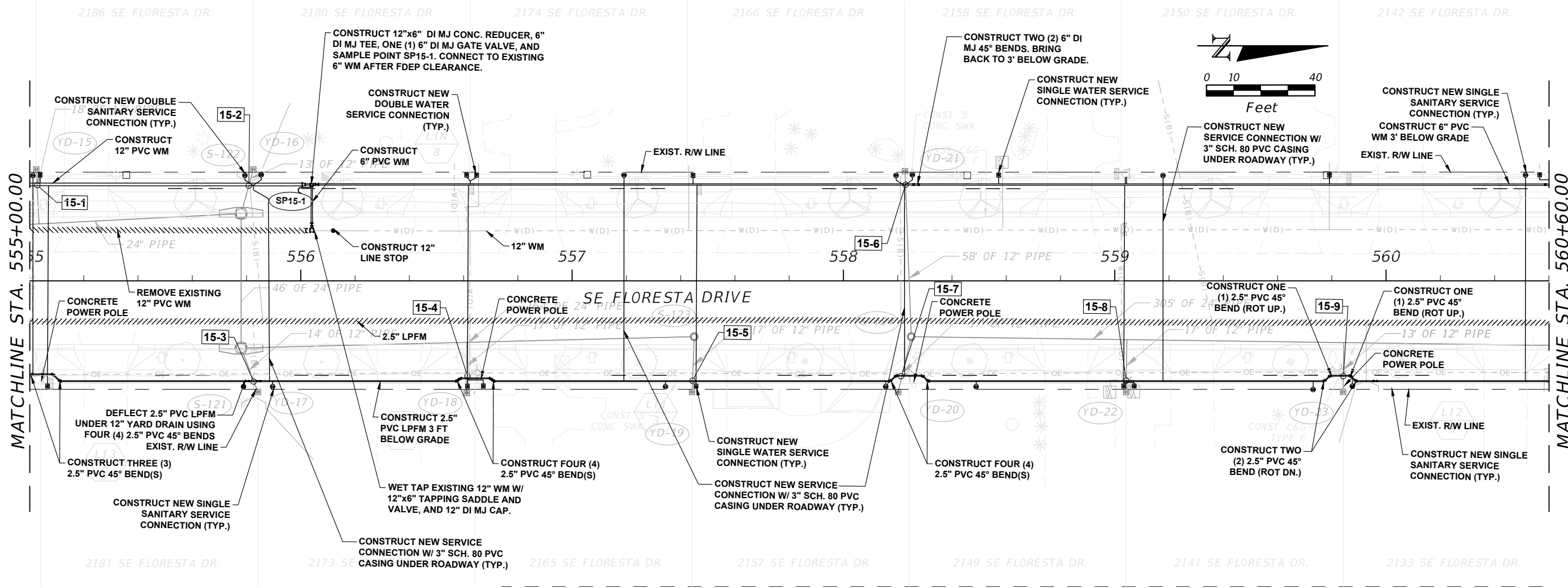
 CITY OF PORT ST. LUCIE  
121 S.W. PORT ST. LUCIE BLVD.  
PORT ST. LUCIE, FL 34984

ROAD NO. COUNTY  
**FLORESTA DRIVE** **ST. LUCIE**

**PLAN**

SHEET NO.  
**14**


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| Conflict Table |          |                   |            |      |                     |                     |            |      |                          |
|----------------|----------|-------------------|------------|------|---------------------|---------------------|------------|------|--------------------------|
| Conflict No.   | Sht. No. | Utility Pipe      |            |      | Conflict Resolution | Conflict Pipe       |            |      | Vertical Separation (ft) |
|                |          | No. Dia & Service | Elev. (FT) |      |                     | Nom. Dia. & Service | Elev. (FT) |      |                          |
| 15-1           | 15       | 12" PVC WM        | TOP        | 5.79 | UNDER               | 12" YARD DRAIN      | BOP        | 6.79 | 1                        |
| 15-2           | 15       | 12" PVC WM        | TOP        | 5.77 | UNDER               | 12" YARD DRAIN      | BOP        | 6.77 | 1                        |
| 15-3           | 15       | 2.5" PVC LPFM     | TOP        | 6.39 | UNDER               | 12" YARD DRAIN      | BOP        | 6.89 | 0.5                      |
| 15-4           | 15       | 2.5" PVC LPFM     | BOP        | 7.9  | OVER                | 12" YARD DRAIN      | TOP        | 7.29 | 0.61                     |
| 15-5           | 15       | 2.5" PVC LPFM     | BOP        | 7.9  | OVER                | 12" YARD DRAIN      | TOP        | 6.92 | 0.98                     |
| 15-6           | 15       | 6" PVC WM         | TOP        | 5.9  | UNDER               | 12" YARD DRAIN      | BOP        | 6.9  | 1                        |
| 15-7           | 15       | 2.5" PVC LPFM     | BOP        | 7.9  | OVER                | 12" YARD DRAIN      | TOP        | 7.29 | 0.61                     |
| 15-8           | 15       | 2.5" PVC LPFM     | BOP        | 8.37 | OVER                | 12" YARD DRAIN      | TOP        | 7.87 | 0.5                      |
| 15-9           | 15       | 2.5" PVC LPFM     | TOP        | 6.07 | UNDER               | 12" YARD DRAIN      | BOP        | 6.57 | 0.5                      |

| REVISIONS |             |      |             |
|-----------|-------------|------|-------------|
| DATE      | DESCRIPTION | DATE | DESCRIPTION |
|           |             |      |             |

CHRISTINE J. MIRANDA, P.E.  
P.E. LICENSE NUMBER 60906  
HOLTZ CONSULTING ENGINEERS, INC.  
607 SW ST. LUCIE CRESCENT, SUITE 103  
STUART, FLORIDA 34994  
CERTIFICATE OF AUTHORIZATION 26960

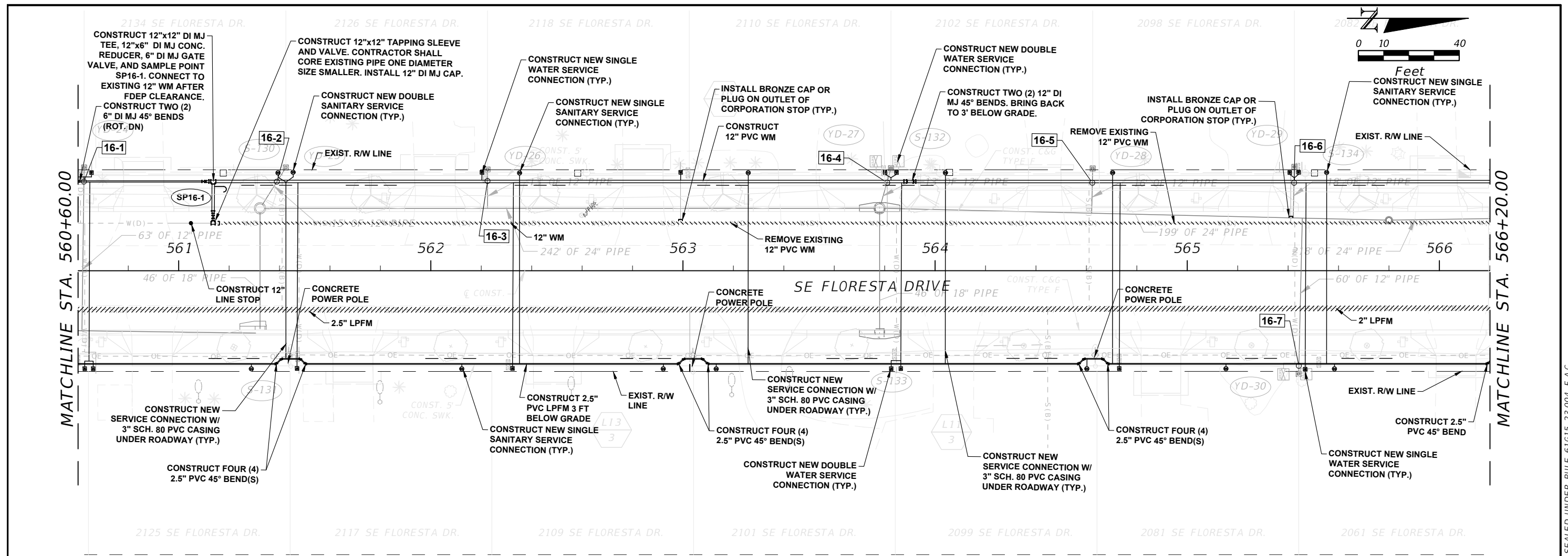
 CITY OF PORT ST. LUCIE  
121 S.W. PORT ST. LUCIE BLVD.  
PORT ST. LUCIE, FL 34984

|                |           |
|----------------|-----------|
| ROAD NO.       | COUNTY    |
| FLORESTA DRIVE | ST. LUCIE |

PLAN

SHEET NO.  
15


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| Conflict Table |          |                   |            |      |                     |                     |            |      |                          |
|----------------|----------|-------------------|------------|------|---------------------|---------------------|------------|------|--------------------------|
| Conflict No.   | Sht. No. | Utility Pipe      |            |      | Conflict Resolution | Conflict Pipe       |            |      | Vertical Separation (ft) |
|                |          | No. Dia & Service | Elev. (FT) |      |                     | Nom. Dia. & Service | Elev. (FT) |      |                          |
| 16-1           | 16       | 6" PVC WM         | TOP        | 4.35 | UNDER               | 12" YARD DRAIN      | BOP        | 6.93 | 2.58                     |
| 16-2           | 16       | 12" PVC WM        | TOP        | 4.35 | UNDER               | 12" YARD DRAIN      | BOP        | 5.8  | 1.45                     |
| 16-3           | 16       | 12" PVC WM        | TOP        | 4.35 | UNDER               | 12" YARD DRAIN      | BOP        | 5.87 | 1.52                     |
| 16-4           | 16       | 12" PVC WM        | TOP        | 4.35 | UNDER               | 12" YARD DRAIN      | BOP        | 5.35 | 1                        |
| 16-5           | 16       | 12" PVC WM        | BOP        | 6.18 | OVER                | 12" YARD DRAIN      | TOP        | 5.35 | 0.83                     |
| 16-6           | 16       | 12" PVC WM        | BOP        | 6.18 | OVER                | 12" YARD DRAIN      | TOP        | 5.29 | 0.89                     |
| 16-7           | 16       | 2.5" PVC LPFM     | BOP        | 7.27 | OVER                | 12" YARD DRAIN      | TOP        | 5.96 | 1.311667                 |

| REVISIONS |             |      |             |
|-----------|-------------|------|-------------|
| DATE      | DESCRIPTION | DATE | DESCRIPTION |
|           |             |      |             |

CHRISTINE J. MIRANDA, P.E.  
P.E. LICENSE NUMBER 60906  
HOLTZ CONSULTING ENGINEERS, INC.  
607 SW ST. LUCIE CRESCENT, SUITE 103  
STUART, FLORIDA 34994  
CERTIFICATE OF AUTHORIZATION 26960

 CITY OF PORT ST. LUCIE  
121 S.W. PORT ST. LUCIE BLVD.  
PORT ST. LUCIE, FL 34984

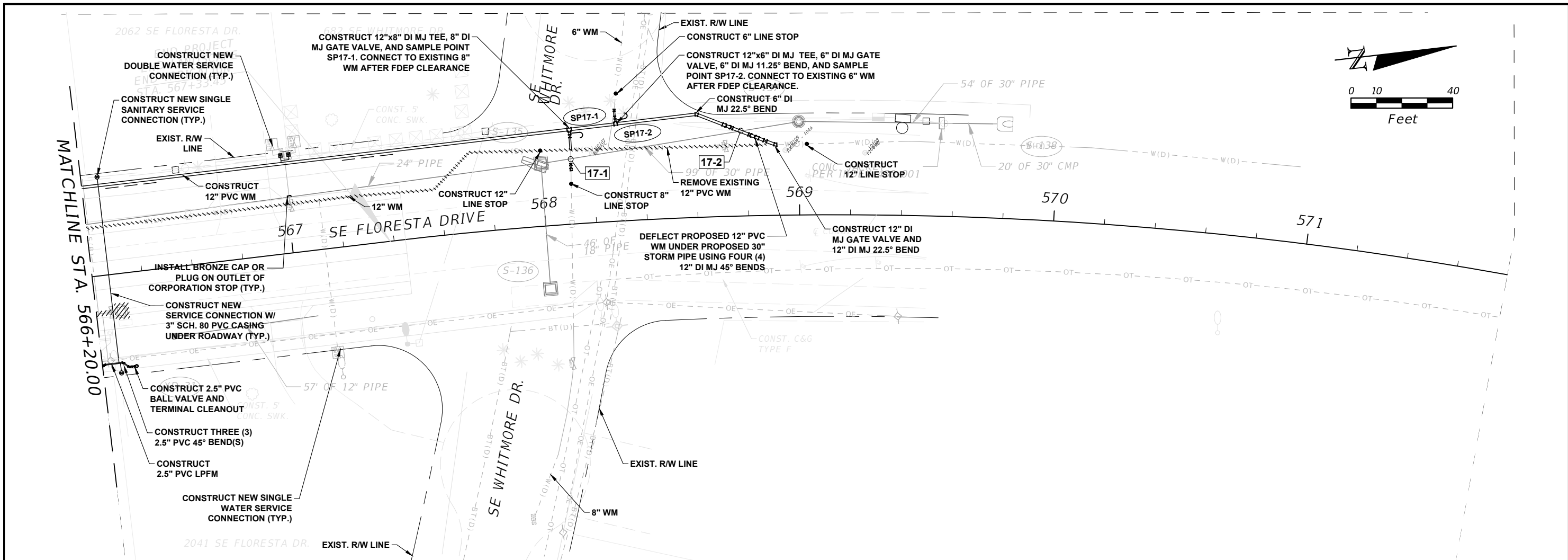
ROAD NO. COUNTY  
FLORESTA DRIVE ST. LUCIE

**PLAN**

SHEET NO.  
16

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| Conflict Table |          |                   |            |      |                     |                     |            |      |                        |
|----------------|----------|-------------------|------------|------|---------------------|---------------------|------------|------|------------------------|
| Conflict No.   | Sht. No. | Utility Pipe      |            |      | Conflict Resolution | Conflict Pipe       |            |      | Vertical Spersion (ft) |
|                |          | No. Dia & Service | Elev. (FT) |      |                     | Nom. Dia. & Service | Elev. (FT) |      |                        |
| 17-1           | 17       | Ex. 8" WM         | BOP        | 6.13 | N/A                 | 30" STORM           | TOP        | 5.38 | 0.75                   |
| 17-2           | 17       | 12" PVC WM        | TOP        | 1.74 | UNDER               | 30" STORM           | BOP        | 2.74 | 1                      |

| REVISIONS |             |      |             |
|-----------|-------------|------|-------------|
| DATE      | DESCRIPTION | DATE | DESCRIPTION |
|           |             |      |             |

CHRISTINE J. MIRANDA, P.E.  
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607 SW ST. LUCIE CRESCENT, SUITE 103  
STUART, FLORIDA 34994  
CERTIFICATE OF AUTHORIZATION 26960

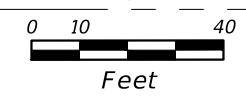
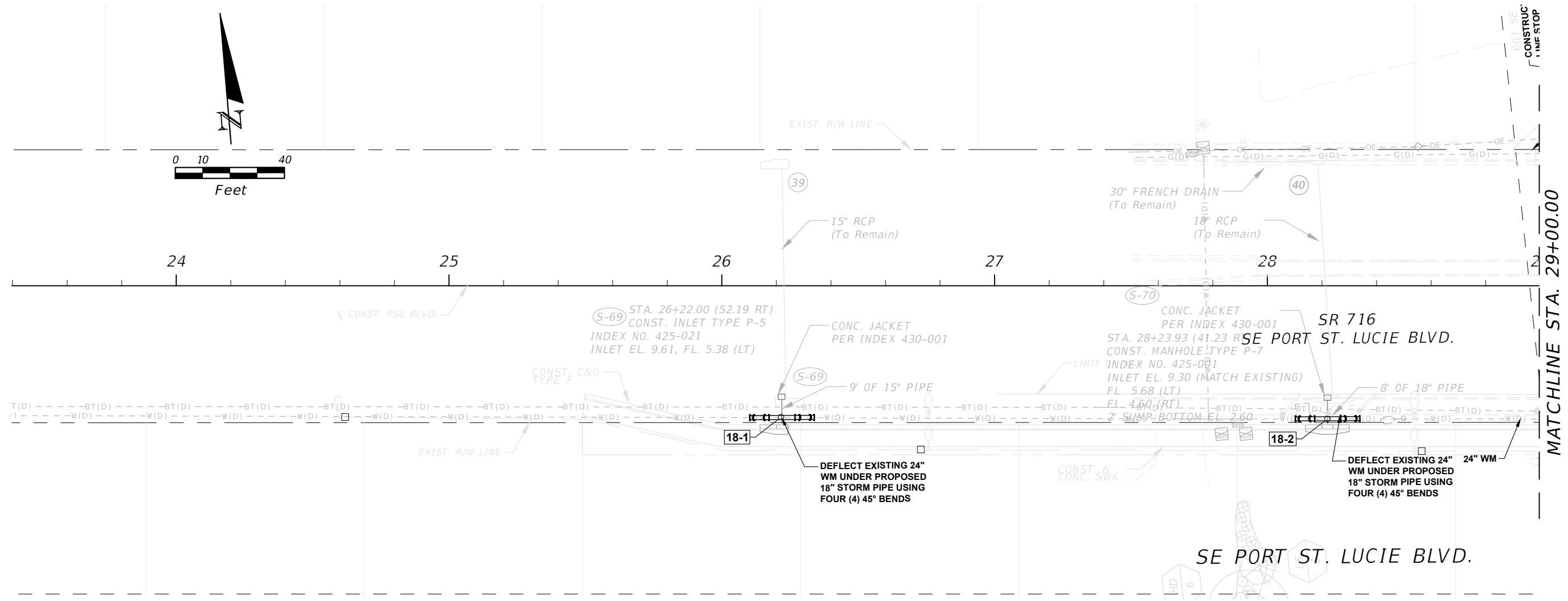
 CITY OF PORT ST. LUCIE  
121 S.W. PORT ST. LUCIE BLVD.  
PORT ST. LUCIE, FL 34984

|                |           |
|----------------|-----------|
| ROAD NO.       | COUNTY    |
| FLORESTA DRIVE | ST. LUCIE |

PLAN

SHEET NO.  
17

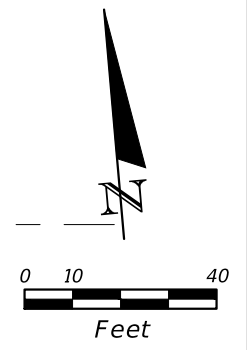
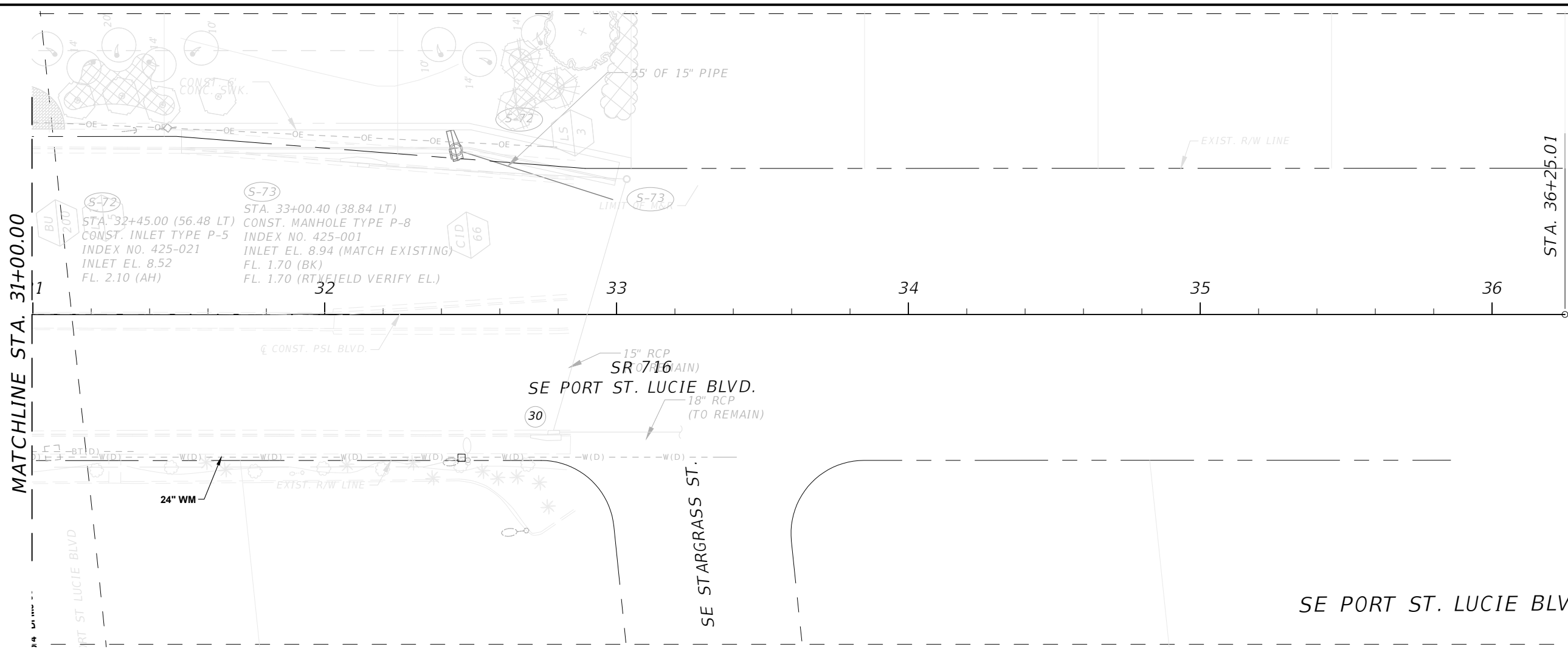
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| Conflict Table |          |                   |            |      |                     |                     |            |                          |   |
|----------------|----------|-------------------|------------|------|---------------------|---------------------|------------|--------------------------|---|
| Conflict No.   | Sht. No. | Utility Pipe      |            |      | Conflict Resolution | Conflict Pipe       |            | Vertical Separation (ft) |   |
|                |          | No. Dia & Service | Elev. (FT) |      |                     | Nom. Dia. & Service | Elev. (FT) |                          |   |
| 18-1           | 18       | Ex. 24" WM        | TOP        | 3.84 | UNDER               | 18" STORM           | BOP        | 4.84                     | 1 |
| 18-2           | 15       | Ex. 24" WM        | TOP        | 3.84 | UNDER               | 15" STORM           | BOP        | 5.38                     | 1 |

|                  |             |      |             |  |   |                         |           |           |
|------------------|-------------|------|-------------|--|---|-------------------------|-----------|-----------|
| <b>REVISIONS</b> |             |      |             | CHRISTINE J. MIRANDA, P.E.<br>P.E. LICENSE NUMBER 60906<br>HOLTZ CONSULTING ENGINEERS, INC.<br>607 SW ST. LUCIE CRESCENT, SUITE 103<br>STUART, FLORIDA 34994<br>CERTIFICATE OF AUTHORIZATION 26960 | CITY OF PORT ST. LUCIE<br>121 S.W. PORT ST. LUCIE BLVD.<br>PORT ST. LUCIE, FL 34984 | <b>SIDE STREET PLAN</b> |           | SHEET NO. |
| DATE             | DESCRIPTION | DATE | DESCRIPTION |  |   | FLORESTA DRIVE          | ST. LUCIE | 18        |


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|-----------|-------------|------|-------------|
| DATE      | DESCRIPTION | DATE | DESCRIPTION |
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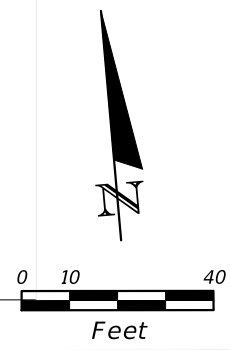
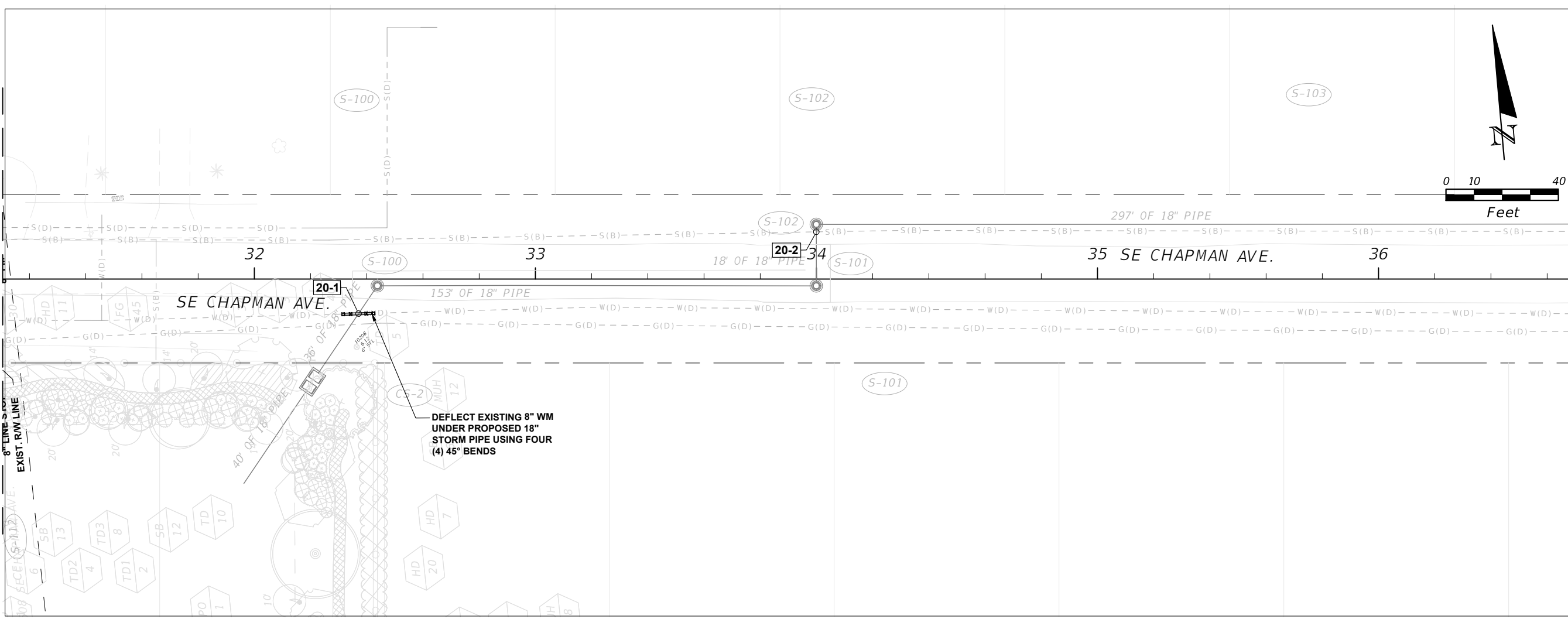
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 STUART, FLORIDA 34994  
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|---|-----------|
|  CITY OF PORT ST. LUCIE<br>121 S.W. PORT ST. LUCIE BLVD.<br>PORT ST. LUCIE, FL 34984 |           |
| ROAD NO.  | COUNTY    |
| FLORESTA DRIVE  | ST. LUCIE |

**SIDE STREET  
PLAN**

SHEET NO.  
**19**

MATCHLINE STA. 31+11.30




MATCHLINE STA. 36+69.50

DEFLECT EXISTING 8" WM UNDER PROPOSED 18" STORM PIPE USING FOUR (4) 45° BENDS

| Conflict Table |          |                   |            |      |                     |                     |            |     |                        |
|----------------|----------|-------------------|------------|------|---------------------|---------------------|------------|-----|------------------------|
| Conflict No.   | Sht. No. | Utility Pipe      |            |      | Conflict Resolution | Conflict Pipe       |            |     | Vertical Spersion (ft) |
|                |          | No. Dia & Service | Elev. (FT) |      |                     | Nom. Dia. & Service | Elev. (FT) |     |                        |
| 20-1           | 20       | Ex. 8" WM         | TOP        | 3.9  | UNDER               | 18" STORM           | BOP        | 4.9 | 3.01                   |
| 20-2           | 20       | Ex. 2" LPFM       | BOP        | 6.11 | N/A                 | 18" STORM           | TOP        | 3.1 | 1                      |

| REVISIONS |             |      |             |
|-----------|-------------|------|-------------|
| DATE      | DESCRIPTION | DATE | DESCRIPTION |
|           |             |      |             |

CHRISTINE J. MIRANDA, P.E.  
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STUART, FLORIDA 34994  
CERTIFICATE OF AUTHORIZATION 26960

 CITY OF PORT ST. LUCIE  
121 S.W. PORT ST. LUCIE BLVD.  
PORT ST. LUCIE, FL 34984

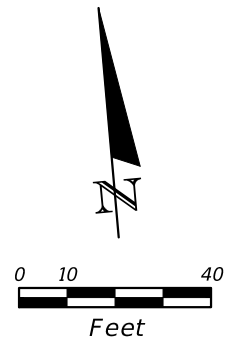
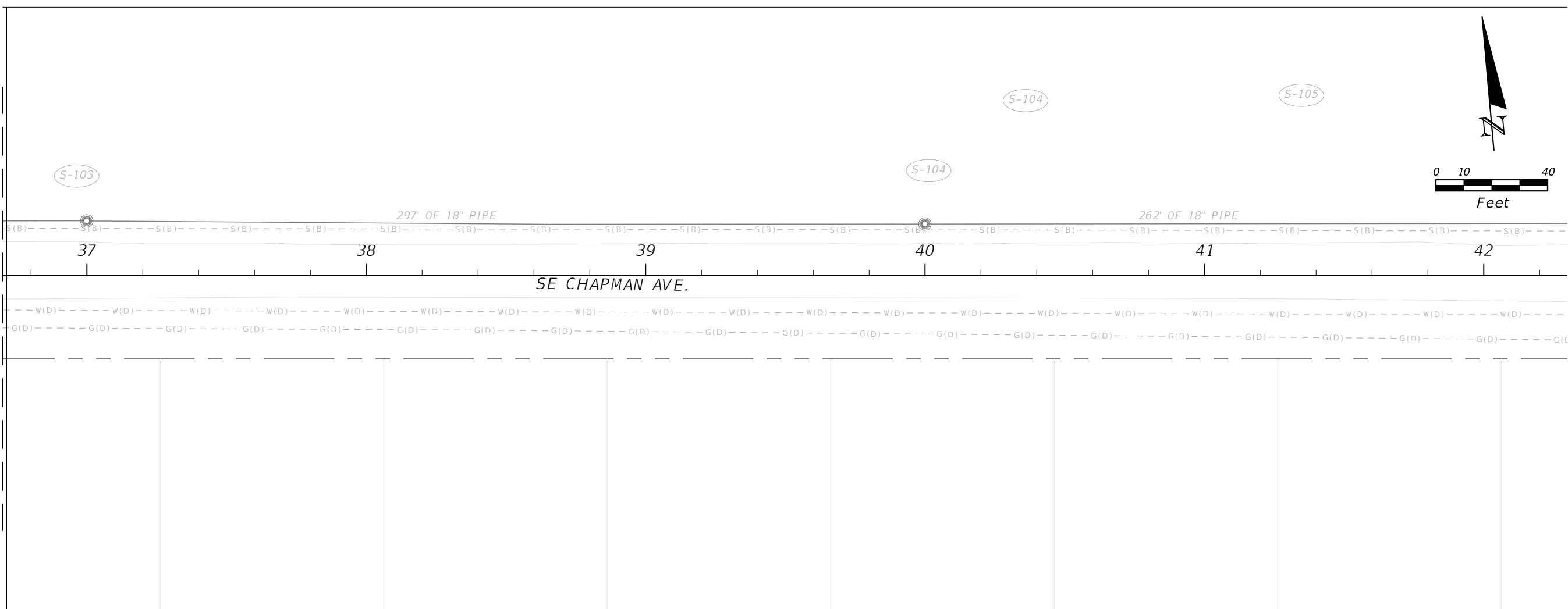
|                |           |
|----------------|-----------|
| ROAD NO.       | COUNTY    |
| FLORESTA DRIVE | ST. LUCIE |

**SIDE STREET  
PLAN**

SHEET NO.  
20

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MATCHLINE STA. 36+69.50

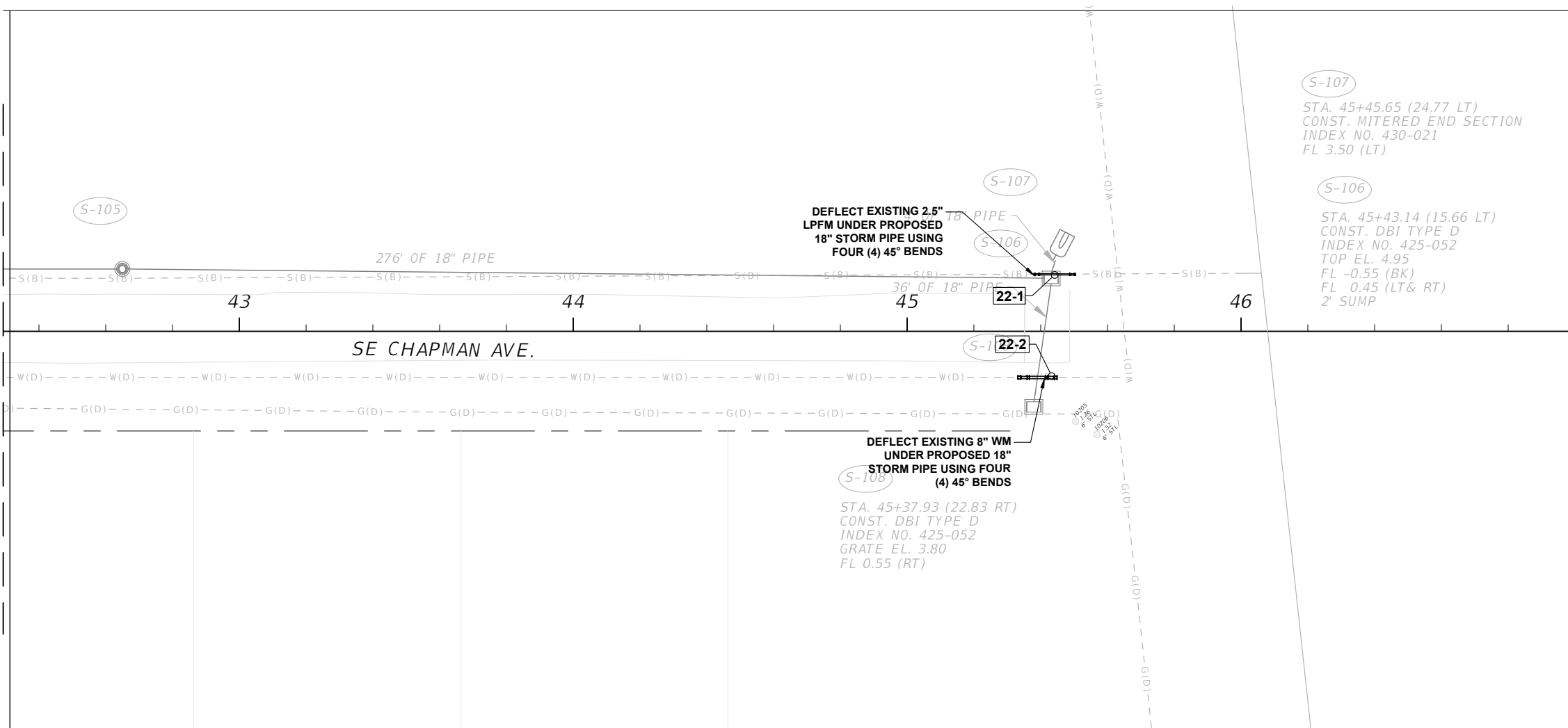


MATCHLINE STA. 42+29.00

| REVISIONS |             |      |             | CHRISTINE J. MIRANDA, P.E.<br>P.E. LICENSE NUMBER 60906<br>HOLTZ CONSULTING ENGINEERS, INC.<br>607 SW ST. LUCIE CRESCENT, SUITE 103<br>STUART, FLORIDA 34994<br>CERTIFICATE OF AUTHORIZATION 26960 | CITY OF PORT ST. LUCIE<br>121 S.W. PORT ST. LUCIE BLVD.<br>PORT ST. LUCIE, FL 34984 |        | <b>SIDE STREET<br/>PLAN</b> | SHEET<br>NO.<br><br>21 |
|-----------|-------------|------|-------------|--|---|--------|-----------------------------|------------------------|
| DATE      | DESCRIPTION | DATE | DESCRIPTION |  | ROAD NO.  | COUNTY |                             |                        |
| ---       | ---         | ---  | ---         | FLORESTA DRIVE   | ST. LUCIE   |        |                             |                        |

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

MATCHLINE STA. 42+29.00

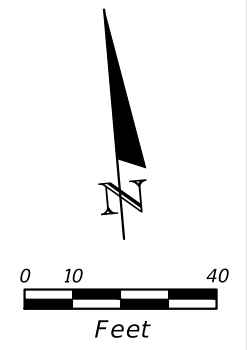


S-107  
 STA. 45+45.65 (24.77 LT)  
 CONST. MITERED END SECTION  
 INDEX NO. 430-021  
 FL 3.50 (LT)

S-106  
 STA. 45+43.14 (15.66 LT)  
 CONST. DBI TYPE D  
 INDEX NO. 425-052  
 TOP EL. 4.95  
 FL -0.55 (BK)  
 FL 0.45 (LT & RT)  
 2' SUMP

DEFLECT EXISTING 2.5" LPFM UNDER PROPOSED 18" STORM PIPE USING FOUR (4) 45° BENDS


DEFLECT EXISTING 8" WM UNDER PROPOSED 18" STORM PIPE USING FOUR (4) 45° BENDS  
 STA. 45+37.93 (22.83 RT)  
 CONST. DBI TYPE D  
 INDEX NO. 425-052  
 GRATE EL. 3.80  
 FL 0.55 (RT)



| Conflict Table |          |                   |            |       |                     |                     |            |      |                         |
|----------------|----------|-------------------|------------|-------|---------------------|---------------------|------------|------|-------------------------|
| Conflict No.   | Sht. No. | Utility Pipe      |            |       | Conflict Resolution | Conflict Pipe       |            |      | Vertical Speration (ft) |
|                |          | No. Dia & Service | Elev. (FT) |       |                     | Nom. Dia. & Service | Elev. (FT) |      |                         |
| 22-1           | 22       | Ex. 2.5" LPFM     | TOP        | -0.55 | UNDER               | 18" STORM           | BOP        | 0.45 | 1                       |
| 22-2           | 22       | Ex. 8" WM         | TOP        | -0.45 | UNDER               | 18" STORM           | BOP        | 0.55 | 1                       |

| REVISIONS |             |      |             |
|-----------|-------------|------|-------------|
| DATE      | DESCRIPTION | DATE | DESCRIPTION |
|           |             |      |             |

CHRISTINE J. MIRANDA, P.E.  
 P.E. LICENSE NUMBER 60906  
 HOLTZ CONSULTING ENGINEERS, INC.  
 607 SW ST. LUCIE CRESCENT, SUITE 103  
 STUART, FLORIDA 34994  
 CERTIFICATE OF AUTHORIZATION 26960

 CITY OF PORT ST. LUCIE  
 121 S.W. PORT ST. LUCIE BLVD.  
 PORT ST. LUCIE, FL 34984

|                |           |
|----------------|-----------|
| ROAD NO.       | COUNTY    |
| FLORESTA DRIVE | ST. LUCIE |

**SIDE STREET PLAN**

SHEET NO.  
22

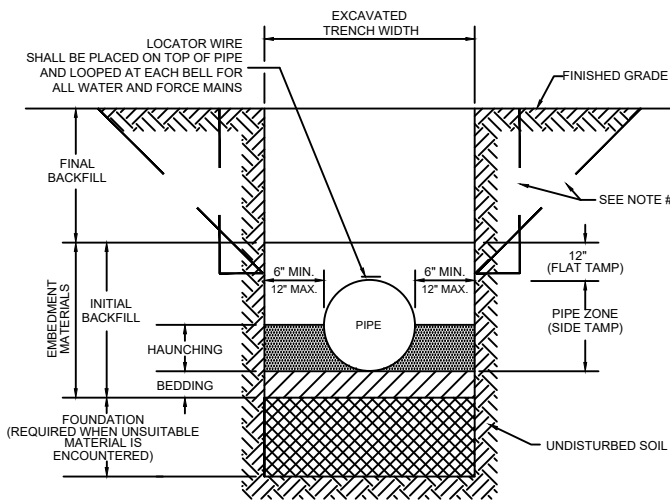
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

**MINIMUM SEPARATION BETWEEN PSLUSD FACILITIES AND OTHER UTILITIES**

| OTHER PIPE  | HORIZONTAL SEPARATION | CROSSINGS (1)   | JOINT SPACING @ CROSSINGS (FULL JOINT CENTERED) |
|---|-----------------------|-----------------|---|
| GRAVITY OR PRESSURE SANITARY SEWER, SANITARY SEWER FORCE MAIN, RECLAIMED WATER (2), (3), VACUUM SANITARY SERVICE, STORM SEWER, STORM SEWER FORCE MAIN | <br>10' MINIMUM       | <br>18' MINIMUM | <br>6' MINIMUM                                  |
| ALL OTHER FACILITIES, INCLUDING BUT NOT LIMITED TO: TELEPHONE, CABLE TV, POWER, ETC.  | <br>5' MINIMUM        | <br>18' MINIMUM | <br>3' MINIMUM                                  |
| ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM  | 10' MINIMUM           | -----           | -----   |

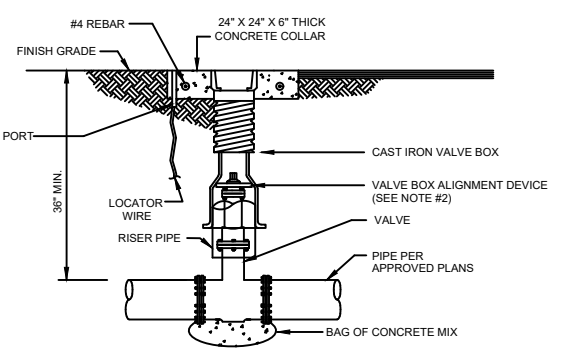
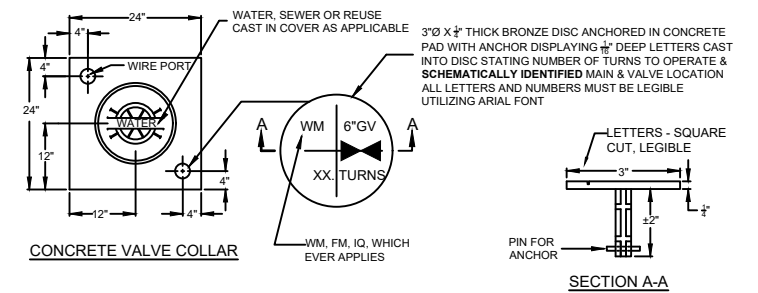
- (1) WATER MAIN SHOULD CROSS OVER OTHER PIPE. WHEN WATER MAIN MUST BE BELOW OTHER PIPE, THE MINIMUM SEPARATION IS 18".
- (2) RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
- (3) RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
- (4) A PSLUSD FACILITY INCLUDES MAINS AND STRUCTURES FOR POTABLE WATER, WASTEWATER AND RECLAIMED WATER.

**STANDARD SEPARATION REQUIREMENTS**  
NOT TO SCALE



**NOTES:**

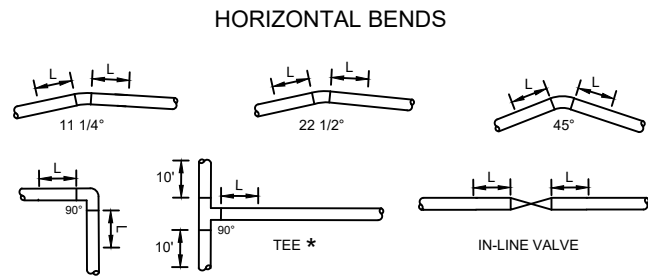
- FOR TRENCHES REQUIRING SHEETING, SHORING, STAY BRACING, TRENCH JACKS OR TRENCH BOX, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SUPPORTS.
- IF THE MAXIMUM TRENCH WIDTH MUST BE EXCEEDED, THE AREA OUTSIDE OF THE MAXIMUM EMBEDMENT SHALL BE COMPACTED TO FINAL BACKFILL REQUIREMENTS. IF THE PIPE IS INSTALLED IN A COMPACTED EMBANKMENT, THE EMBANKMENT SHALL BE IN PLACE AND COMPACTED TO 12" MIN. COVER BEFORE INSTALLATION OF PIPE.
- IF BEDDING IS REQUIRED TO BRING TRENCH BOTTOM UP TO GRADE AND PROVIDE UNIFORM AND ADEQUATE LONGITUDINAL SUPPORT UNDER THE PIPE, THEN A MINIMUM COMPACTED DEPTH OF 4 TO 6 INCHES OF SELECT EMBEDMENT MATERIAL IS REQUIRED.
- THE CONTRACTOR SHALL COMPLY WITH REQUIREMENTS OF THE FLORIDA TRENCH SAFETY ACT.
- AN APPROVED LOCATOR WIRE SHALL BE USED.
- EARTHWORK, EXCAVATION, BACKFILL AND COMPACTION SHALL BE IN ACCORDANCE WITH PSLUSD STANDARDS.



**NOTES:**

- WHEN TOP OF OPERATING NUT IS DEEPER THAN 30", A HIGH STRENGTH STEEL EXTENSION WILL BE REQUIRED TO BRING OPERATING NUT 24"-30" BELOW FINISHED GRADE. A STEEL CENTERING PLATE, WELDED TO THE EXTENSION, IS ALSO REQUIRED.
- A VALVE BOX ALIGNMENT DEVICE SHALL BE PROVIDED TO ELIMINATE SHIFTING OF THE VALVE BOX AGAINST THE OPERATING NUT.
- C900 OR SDR-26 P.V.C. RISER PIPE SHALL BE ADDED TO EXTEND THE VALVE BOX IF NEEDED.
- RPM'S SHALL NOT BE INSTALLED IN CROSSWALKS OR PEDESTRIAN WALKWAYS.
- THE TOP SIDE OF THE VALVE BOX COVER AND THE INSIDE OF TOP SECTION OF THE VALVE BOX SHALL BE PAINTED BLUE FOR WATER MAINS, GREEN FOR SEWER MAINS AND PURPLE FOR RECLAIMED WATER MAINS.

**TYPICAL VALVE BOX AND COLLAR IN UN-PAVED AREA**  
NOT TO SCALE

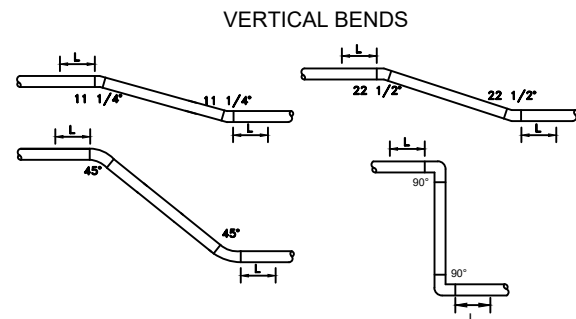


| DIAMETER | HORIZONTAL - L (FEET) |         |     |     |     | TEE* (BRANCH) | VALVES OR DEAD END |
|----------|-----------------------|---------|-----|-----|-----|---------------|--------------------|
|          | 11-1/4"               | 22-1/2" | 45° | 90° |     |               |                    |
| 4"       | 2                     | 4       | 8   | 18  | 20  | 39            |                    |
| 6"       | 3                     | 5       | 11  | 25  | 36  | 55            |                    |
| 8"       | 4                     | 7       | 14  | 33  | 52  | 72            |                    |
| 10"      | 4                     | 8       | 16  | 39  | 65  | 87            |                    |
| 12"      | 5                     | 9       | 19  | 45  | 80  | 102           |                    |
| 14"      | 5                     | 11      | 21  | 51  | 93  | 116           |                    |
| 16"      | 6                     | 12      | 24  | 57  | 107 | 131           |                    |
| 18"      | 7                     | 13      | 26  | 63  | 120 | 145           |                    |
| 20"      | 7                     | 14      | 29  | 68  | 133 | 159           |                    |
| 24"      | 8                     | 16      | 33  | 79  | 157 | 185           |                    |
| 30"      | 10                    | 19      | 39  | 93  | 192 | 222           |                    |
| 36"      | 11                    | 21      | 44  | 106 | 225 | 257           |                    |
| 42"      | 12                    | 24      | 49  | 117 | 254 | 289           |                    |
| 48"      | 13                    | 26      | 53  | 128 | 283 | 321           |                    |

**NOTES:**

- THE REQUIREMENTS SET FORTH ABOVE WERE CALCULATED FOR PVC PIPE BASED UPON THE FOLLOWING ASSUMPTIONS:
  - SOIL CONDITIONS: SILTY SAND (SM)
  - TRENCH TYPE: 3 (PIPE BEDDED IN 4" MINIMUM OF LOOSE SOIL WITH BACKFILL LIGHTLY COMPACTED)
  - MINIMUM COVER: 3 FT
  - SAFETY FACTOR: 1.5
  - TEST PRESSURE: 150 PSI
  - \* SIZE ON SIZE TEE & 5' LENGTH ALONG RUN
- IF FIELD CONDITIONS DIFFER FROM THE ABOVE, THE ENGINEER-OF-RECORD (EOR) SHALL SUBMIT CALCULATIONS BASED ON THE FIELD CONDITION FOR REVIEW AND APPROVAL OF PSLUSD.

**PIPELINE RESTRAINT REQUIREMENTS (HORIZONTAL)**  
NOT TO SCALE



| DIAMETER | VERTICAL OFFSET - L (FEET) |            |            |            |            |            |            |            |
|----------|----------------------------|------------|------------|------------|------------|------------|------------|------------|
|          | 11-1/4"                    |            | 22-1/2"    |            | 45°        |            | 90°        |            |
|          | UPPER BEND                 | LOWER BEND | UPPER BEND | LOWER BEND | UPPER BEND | LOWER BEND | UPPER BEND | LOWER BEND |
| 4"       | 4                          | 2          | 8          | 3          | 17         | 5          | 39         | 11         |
| 6"       | 6                          | 2          | 11         | 4          | 23         | 7          | 55         | 15         |
| 8"       | 8                          | 2          | 15         | 4          | 30         | 9          | 72         | 20         |
| 10"      | 9                          | 3          | 18         | 5          | 36         | 10         | 87         | 24         |
| 12"      | 11                         | 3          | 21         | 6          | 43         | 12         | 102        | 28         |
| 14"      | 12                         | 4          | 24         | 7          | 49         | 14         | 116        | 32         |
| 16"      | 13                         | 4          | 27         | 8          | 55         | 16         | 131        | 36         |
| 18"      | 15                         | 4          | 29         | 8          | 60         | 17         | 145        | 40         |
| 20"      | 16                         | 5          | 32         | 9          | 66         | 19         | 158        | 44         |
| 24"      | 19                         | 6          | 37         | 11         | 77         | 22         | 185        | 51         |
| 30"      | 22                         | 7          | 45         | 13         | 92         | 26         | 222        | 62         |
| 36"      | 26                         | 8          | 52         | 15         | 107        | 30         | 256        | 71         |
| 42"      | 29                         | 8          | 58         | 16         | 120        | 34         | 289        | 80         |
| 48"      | 32                         | 9          | 64         | 18         | 133        | 37         | 320        | 89         |

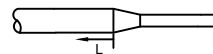
**NOTES:**

- THE REQUIREMENTS SET FORTH ABOVE WERE CALCULATED FOR PVC PIPE BASED UPON THE FOLLOWING ASSUMPTIONS:
  - SOIL CONDITIONS: SILTY SAND (SM)
  - TRENCH TYPE: 3 (PIPE BEDDED IN 4" MINIMUM OF LOOSE SOIL WITH BACKFILL LIGHTLY COMPACTED)
  - UPPER SIDE MINIMUM COVER: 3 FT
  - LOWER SIDE MINIMUM COVER: 5 FT
  - SAFETY FACTOR: 1.5
  - TEST PRESSURE: 150 PSI
- WHEN CONDITIONS DIFFER FROM THE ABOVE, THE ENGINEER-OF-RECORD (EOR) SHALL SUBMIT CALCULATIONS FOR REVIEW AND APPROVAL OF PSLUSD.
- ALL JOINTS BETWEEN UPPER AND LOWER BENDS SHALL BE RESTRAINED.

**PIPELINE RESTRAINT REQUIREMENTS (VERTICAL)**  
NOT TO SCALE

**STANDARD PIPE TRENCH CROSS SECTION**  
NOT TO SCALE

**REDUCER**

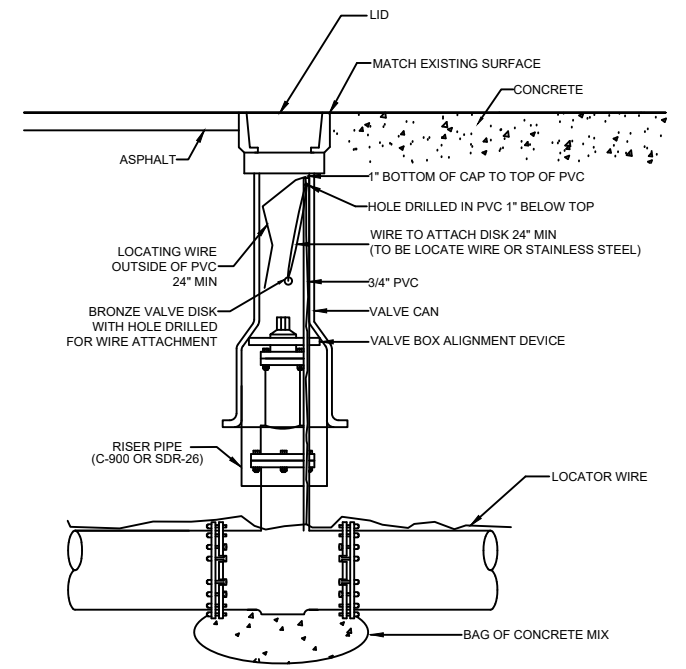


| DIAMETER | L = RETRAINED LENGTH AT LARGER SIZE OF REDUCER (FEET) |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |
|----------|---|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
|          | 4"  | 6" | 8" | 10" | 12" | 14" | 16" | 18" | 20" | 24" | 30" | 36" | 42" | 48" |  |  |
| 4"       | 29  | 52 | 71 | 89  | 105 | 121 | 136 | 151 | 179 | 217 | 253 | 285 | 318 |     |  |  |
| 6"       |   | 31 | 53 | 74  | 93  | 111 | 127 | 143 | 172 | 211 | 249 | 282 | 315 |     |  |  |
| 8"       |   |    | 29 | 54  | 76  | 96  | 114 | 131 | 163 | 204 | 243 | 277 | 310 |     |  |  |
| 10"      |   |    |    | 30  | 55  | 78  | 98  | 117 | 151 | 195 | 235 | 271 | 305 |     |  |  |
| 12"      |   |    |    |     | 30  | 56  | 79  | 100 | 137 | 184 | 228 | 263 | 299 |     |  |  |
| 14"      |   |    |    |     |     | 30  | 56  | 79  | 101 | 156 | 204 | 245 | 283 |     |  |  |
| 16"      |   |    |    |     |     |     | 30  | 56  | 101 | 156 | 204 | 245 | 283 |     |  |  |
| 18"      |   |    |    |     |     |     |     | 30  | 80  | 140 | 190 | 233 | 273 |     |  |  |
| 20"      |   |    |    |     |     |     |     |     | 56  | 121 | 175 | 221 | 263 |     |  |  |
| 24"      |   |    |    |     |     |     |     |     |     | 78  | 141 | 192 | 238 |     |  |  |
| 30"      |   |    |    |     |     |     |     |     |     |     | 78  | 140 | 194 |     |  |  |
| 36"      |   |    |    |     |     |     |     |     |     |     |     | 75  | 139 |     |  |  |
| 42"      |   |    |    |     |     |     |     |     |     |     |     |     | 75  |     |  |  |

**NOTES:**

- THE REQUIREMENTS SET FORTH ABOVE WERE CALCULATED FOR PVC PIPE BASED UPON THE FOLLOWING ASSUMPTIONS:
  - SOIL CONDITIONS: SILTY SAND (SM)
  - TRENCH TYPE: 3 (PIPE BEDDED IN 4" MINIMUM OF LOOSE SOIL WITH BACKFILL LIGHTLY COMPACTED)
  - MINIMUM COVER: 3 FT
  - SAFETY FACTOR: 1.5
  - TEST PRESSURE: 150 PSI
- IF FIELD CONDITIONS DIFFER FROM THE ABOVE, THE ENGINEER-OF-RECORD (EOR) SHALL SUBMIT CALCULATIONS BASED ON THE FIELD CONDITION FOR REVIEW AND APPROVAL OF PSLUSD.

**PIPELINE RESTRAINT REQUIREMENTS (REDUCER)**  
NOT TO SCALE



**TYPICAL VALVE BOX IN PAVED AREA**  
NOT TO SCALE

| REVISIONS |             |      |             |
|-----------|-------------|------|-------------|
| DATE      | DESCRIPTION | DATE | DESCRIPTION |
| ---       | ---         | ---  | ---         |

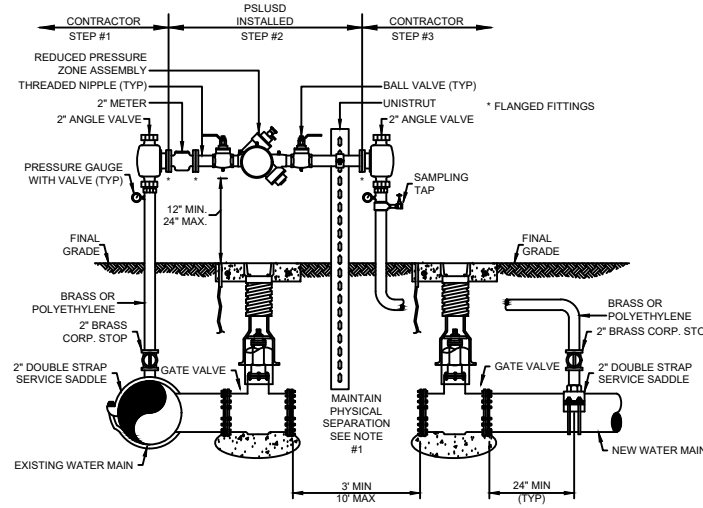
CHRISTINE J. MIRANDA, P.E.  
P.E. LICENSE NUMBER 60906  
HOLTZ CONSULTING ENGINEERS, INC.  
607 SW ST. LUCIE CRESCENT, SUITE 103  
STUART, FLORIDA 34994  
CERTIFICATE OF AUTHORIZATION 26960

|                |   |
|----------------|---|
|                | CITY OF PORT ST. LUCIE<br>121 S.W. PORT ST. LUCIE BLVD.<br>PORT ST. LUCIE, FL 34984 |
| ROAD NO.       | COUNTY  |
| FLORESTA DRIVE | ST. LUCIE   |

|                |  |
|----------------|--|
| <b>DETAILS</b> |  |
| 23             |  |

|           |    |
|-----------|----|
| SHEET NO. | 23 |
|-----------|----|

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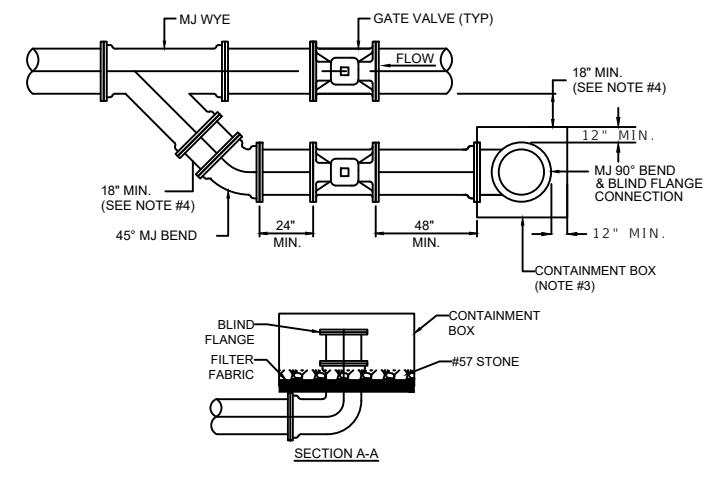


**FOR 2" JUMPER CONNECTIONS UP TO 8" PIPE**

**TEMPORARY JUMPER CONNECTION**  
NOT TO SCALE

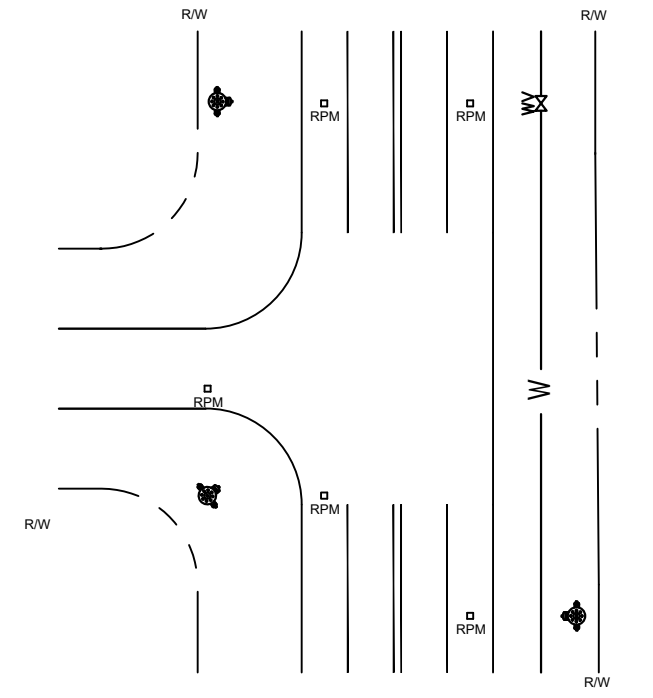
- NOTES:
1. A TEMPORARY JUMPER CONNECTION SHALL BE PROVIDED IN ACCORDANCE WITH THIS DETAIL WHEN AN EXISTING PSLUSD WATER MAIN WILL BE USED FOR FILLING, FLUSHING OR PIGGING A NEWLY CONSTRUCTED POTABLE WATER, WASTEWATER FORCE MAIN OR RECLAIMED WATER MAIN. A DIRECT CONNECTION SHALL NOT BE MADE UNDER ANY CIRCUMSTANCES. THE SIZE OF THE JUMPER CONNECTION SHALL BE SPECIFIED BY THE ENGINEER-OF-RECORD (EOR) BASED ON VELOCITY REQUIRED TO FLUSH THE MAIN.
  2. THE CONTRACTOR SHALL CONTACT THE PSLUSD REGARDING SCHEDULING OF REQUIRED INSPECTIONS RELATING TO THE CONNECTION. PSLUSD INSPECTIONS ARE SPECIFICALLY REQUIRED FOR TIE-INS OR WET TAPS TO EXISTING MAINS, JUMPER INSTALLATION, FLUSHING, PIGGING, PRESSURE TESTING, DISINFECTION, SAMPLING, PLUGGING OF SAMPLING POINTS AND PERMANENT CONNECTION OF THE NEW MAIN. THE CONTRACTOR SHALL FOLLOW ALL PROCEDURES STRICTLY IN ACCORDANCE WITH THE PSLUSD UTILITY STANDARDS MANUAL.
  3. THE TEMPORARY JUMPER ASSEMBLY (FLANGE TO FLANGE) WILL BE SUPPLIED, INSTALLED AND TESTED BY THE PSLUSD, IN COORDINATION WITH THE EOR AND CONTRACTOR. OTHER MATERIALS AND INSTALLATION REQUIRED FOR THE CONNECTION ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL DISINFECT THE PIPE AND FITTINGS USED TO MAKE THE CONNECTION BY SPRAYING AND SWABBING WITH CHLORINE AS NECESSARY. A SUPPORT SHALL BE PROVIDED FOR THE ASSEMBLY AS NECESSARY. THE UNDERGROUND FITTINGS SHALL BE RESTRAINED MECHANICAL JOINT TYPE. ALL MATERIALS SHALL BE PER THE PSLUSD APPROVED QUALIFIED PRODUCTS LIST. THE JUMPER CONNECTION SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL THE ASSEMBLY IS REMOVED BY THE PSLUSD. THE VALVES SHALL BE OPERATED BY PSLUSD PERSONNEL ONLY.
  4. ALL NEW WATER MAINS SHALL BE DOUBLE-PIGGED, FLUSHED, PRESSURE TESTED AND DISINFECTED. NEW MAIN SHALL NOT BE PLACED INTO SERVICE UNTIL THE BACTERIOLOGICAL TEST RESULTS ARE SATISFACTORY AND A WRITTEN APPROVAL HAS BEEN OBTAINED FROM THE PSLUSD.
  5. PIGGING AND FLUSHING SHALL BE PERFORMED BY THE CONTRACTOR IN THE PRESENCE OF A PSLUSD INSPECTOR. WATER MAINS SHALL BE PRESSURE TESTED AFTER FLUSHING AND PRIOR TO DISINFECTION. ALL VALVES SHALL REMAIN CLOSED DURING THE PRESSURE TEST AND WILL NOT BE OPENED UNTIL THE RESULTS OF PRESSURE TESTING AND BACTERIOLOGICAL TESTING ARE SATISFACTORY AND THE SYSTEM HAS BEEN ACCEPTED FOR OPERATION BY THE PSLUSD. ALL VALVES SHALL BE CLOSED BY PSLUSD PERSONNEL AFTER FLUSHING AND SHALL REMAIN CLOSED DURING THE PRESSURE TEST.
  6. DISINFECTION OF POTABLE WATER MAINS SHALL BE CONDUCTED IN ACCORDANCE WITH AWWA C651. A MINIMUM PRESSURE OF 20 PSI SHALL BE MAINTAINED IN THE NEW MAIN AFTER DISINFECTION.
  7. CONNECTION TO EXISTING WATER MAINS SHALL NOT BE MADE PRIOR TO BACTERIOLOGICAL CLEARANCE.
  8. UPON WRITTEN APPROVAL, THE SAMPLING POINTS SHALL BE REMOVED AND PLUGGED BY THE CONTRACTOR. THE CONTRACTOR SHALL MAKE THE PERMANENT CONNECTION IN THE PRESENCE OF A PSLUSD INSPECTOR. THE PIPE AND FITTINGS FOR CONNECTION SHALL BE DISINFECTED BY SPRAYING AND SWABBING WITH CHLORINE.
  9. THE JUMPER ASSEMBLY (FLANGE TO FLANGE) WILL BE REMOVED BY THE PSLUSD IN COORDINATION WITH THE CONTRACTOR. THE CONTRACTOR SHALL REMOVE THE REST OF THE JUMPER CONNECTION PIPING AND PLUG THE CORPORATION STOP VALVES.

**TEMPORARY JUMPER CONNECTION**  
NOT TO SCALE



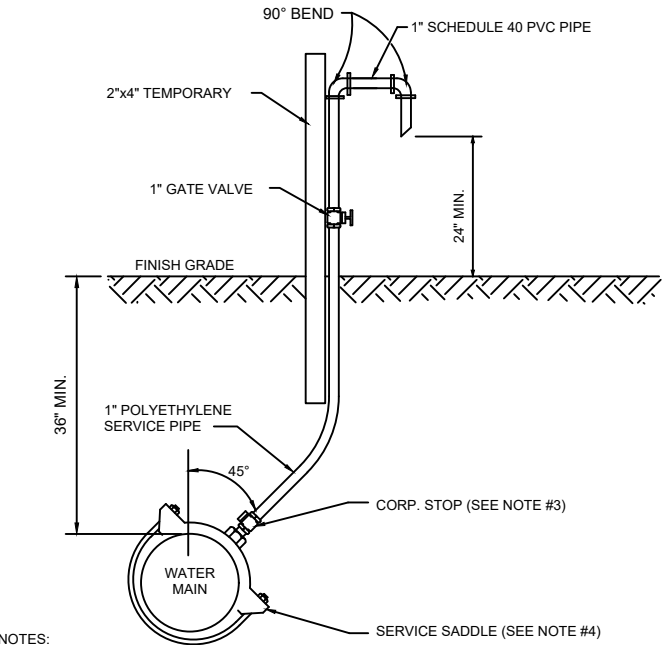
- NOTES:
1. THE ABOVE DETAIL IS FOR A TYPICAL PIG LAUNCHING / RECOVERY STATION. THE ENGINEER-OF-RECORD SHALL SUBMIT DRAWING DETAILS FOR THE PIG LAUNCHING STATION WITH DIMENSIONS FOR THE CONTAINMENT BOX, PIPE SIZES & LENGTH, AND SPECIFICATIONS FOR ALL COMPONENTS AND FITTINGS.
  2. PIG RECOVERY STATION WILL BE REVERSE TO FLOW.
  3. CONTAINMENT BOX SIZE VARIES TO ALLOW ACCESSIBILITY TO BOLTS OF PLUG. PER QUALIFIED PRODUCT LIST.
  4. VARIES WITH MAIN SIZE IN ORDER TO OFFSET CONTAINMENT BOX FROM MAIN LINE.
  5. THE BOTTOM OF CONTAINMENT BOX SHALL BE COVERED WITH 8 INCHES OF #57 STONE OVER FILTER FABRIC.
  6. ALL FITTINGS BELOW-GROUND SHALL BE MECHANICAL JOINT.

**PIG LAUNCHING/RECOVERY STATION**  
NOT TO SCALE



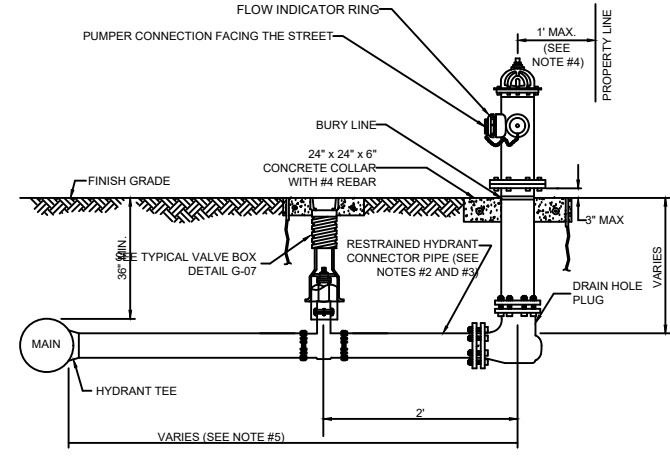
- NOTES:
1. MARKER COLOR IS BLUE. PLACE IN CENTER OF THE LANE CLOSEST TO THE HYDRANT.
  2. IF HYDRANT IS LOCATED WITHIN THE RADIUS OF AN INTERSECTION PLACE A MARKER ON EACH ROADWAY IN THE CENTER LANES CLOSEST TO THE HYDRANT.
  3. MARKER IS PLACED PERPENDICULAR (90 DEGREES) TO THE HYDRANT.

**FIRE HYDRANT REFLECTIVE PAVEMENT MARKER PLACEMENT GUIDELINE**  
NOT TO SCALE



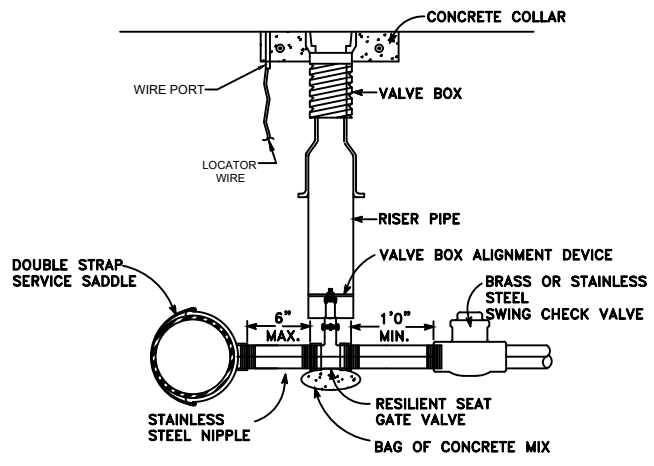
- NOTES:
1. SAMPLING POINTS SHALL BE LOCATED AS SHOWN ON PLANS APPROVED BY PSLUSD AND AS REQUIRED BY FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION. A SAMPLE POINT MAP (SINGLE SHEET PDF) SHALL BE SUBMITTED TO PSLUSD FOR REVIEW PRIOR TO DISINFECTION.
  2. THE EXCAVATED HOLE FOR THIS INSTALLATION SHALL BE BACKFILLED TO FINISHED GRADE PRIOR TO DISCHARGING ANY WATER ON THE GROUND.
  3. AFTER BACTERIOLOGICAL CLEARANCE IS RECEIVED, THE CONTRACTOR SHALL TURN CORPORATION STOP OFF, REMOVE TUBING AND PLUG CORPORATION STOP WITH BRASS PLUG/CAP.
  4. NO DIRECT TAPS SHALL BE PERMITTED.

**WATER SAMPLING POINT**  
NOT TO SCALE



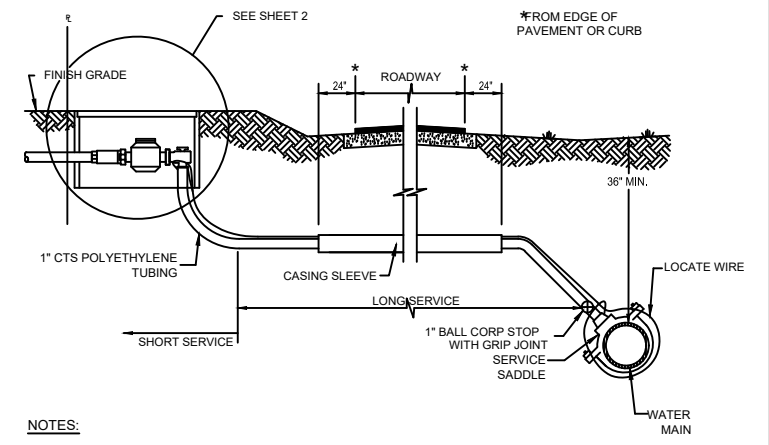
- NOTES:
1. HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH ANSI/AWWA C600. THE HYDRANTS SHALL BE PAINTED BY THE MANUFACTURER WITH 2 COATS (MIN.).
  2. VERTICAL BENDS MAY BE NECESSARY TO OBTAIN COVER UNDER SWALES OR AT HYDRANT LOCATION. VERTICAL BENDS OR OFFSETS ARE INCLUDED IN HYDRANT ASSEMBLY. ALL BENDS MUST BE RESTRAINED.
  3. CONNECTOR PIPE AND ANY REQUIRED VERTICAL BENDS SHALL HAVE AN ANCHORING FEATURE ON BOTH ENDS SO THAT WHEN USED WITH M.J. SPLIT GLANDS, A RESTRAINED JOINT IS PROVIDED.
  4. WHEN INSTALLED WITH SIDEWALK OR CURB, PROVIDE MIN. 2 FOOT CLEARANCE TO ANY PORTION OF THE HYDRANT, UTILIZING THE SIDE LOT EASEMENT IF NECESSARY.
  5. A GATE VALVE SHALL BE INSTALLED WITHIN 2 FEET OF THE FIRE HYDRANT. IF DISTANCE FROM THE WATER MAIN TO THE FIRE HYDRANT IS GREATER THAN 20 FEET, A SECOND GATE VALVE SHALL BE INSTALLED WITHIN 2 FEET OF THE MAIN.
  6. ANY DEVIATIONS FROM THE CRITERIA ABOVE REQUIRE A WRITTEN RECOMMENDATION FROM THE ENGINEER-OF-RECORD AND WRITTEN APPROVAL BY PSLUSD.

**FIRE HYDRANT ASSEMBLY**  
NOT TO SCALE



- NOTES:
1. THIS DETAIL SHALL BE USED IN CONJUNCTION WITH DETAIL G-07 FOR TYPICAL BOX VALVE.

**GRINDER SYSTEM SERVICE LINE TAP TO MAIN LINE**  
NOT TO SCALE



- NOTES:
1. SUCCESSIVE TAPS INTO THE WATER MAIN SHALL BE A MINIMUM OF 18" ON CENTER.
  2. ALL SERVICES REQUIRE 36" MINIMUM COVER AT ALL POINTS ALONG SERVICE.
  3. 1"0 SERVICES REQUIRE A 2" MINIMUM I.D. CASING PIPE. CASING PIPE SHALL BE SCHEDULE 40 PVC OR POLYETHYLENE.
  4. TRACE WIRE TO BE INSTALLED AS PER THIS DETAIL.
  5. METERS SHALL BE LOCATED IMMEDIATELY OUTSIDE THE PROPERTY LINE IN THE RIGHT-OF-WAY UNLESS OTHERWISE DIRECTED BY PSLUSD (SEE SHEET 2).

**RESIDENTIAL WATER SERVICE CONNECTION**  
NOT TO SCALE

| REVISIONS |             |      |             |
|-----------|-------------|------|-------------|
| DATE      | DESCRIPTION | DATE | DESCRIPTION |
| ---       | ---         | ---  | ---         |

CHRISTINE J. MIRANDA, P.E.  
P.E. LICENSE NUMBER 60906  
HOLTZ CONSULTING ENGINEERS, INC.  
607 SW ST. LUCIE CRESCENT, SUITE 103  
STUART, FLORIDA 34994  
CERTIFICATE OF AUTHORIZATION 26960

|   |           |
|---|-----------|
| CITY OF PORT ST. LUCIE<br>121 S.W. PORT ST. LUCIE BLVD.<br>PORT ST. LUCIE, FL 34984 |           |
| ROAD NO.  | COUNTY    |
| FLORESTA DRIVE  | ST. LUCIE |

**DETAILS**

SHEET NO.  
24

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.