

**CONTRACT PLANS COMPONENTS**

- ROADWAY PLANS
- SIGNING AND PAVEMENT MARKING PLANS
- SIGNALIZATION PLANS
- UTILITY PLANS

**INDEX OF ROADWAY PLANS**

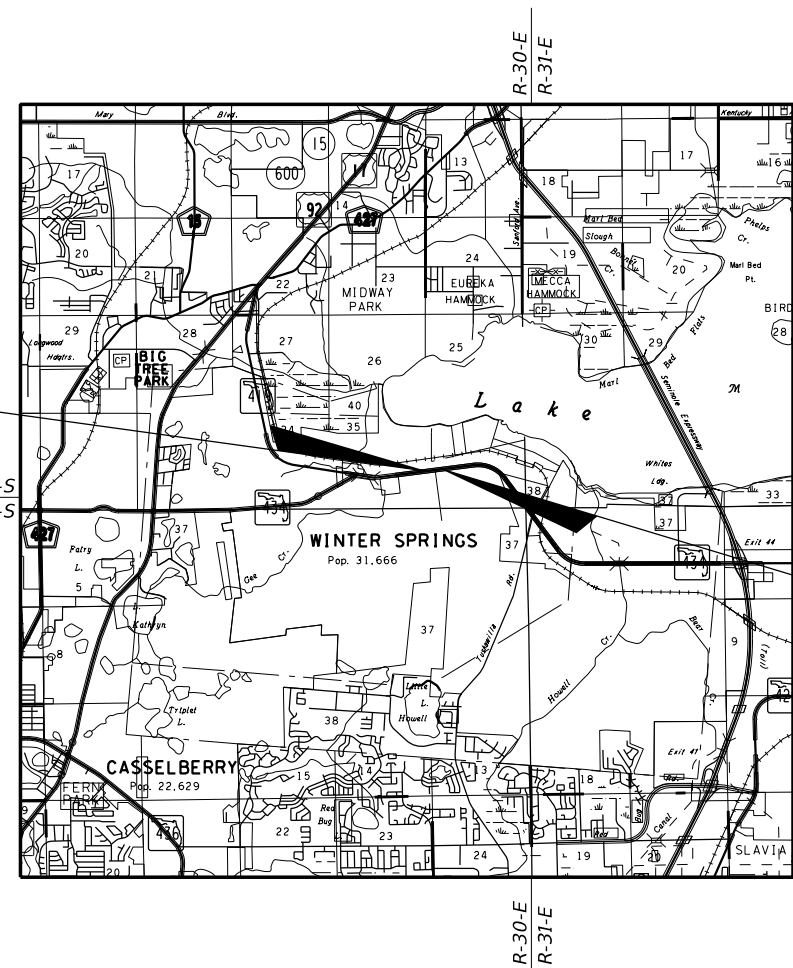
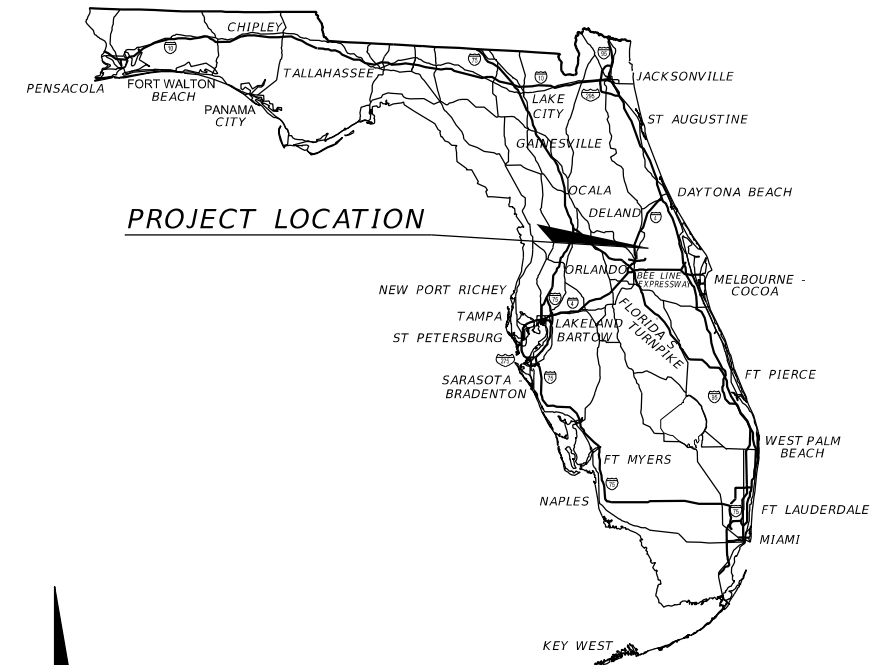
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**STATE OF FLORIDA**  
**DEPARTMENT OF TRANSPORTATION**

**CONTRACT PLANS**

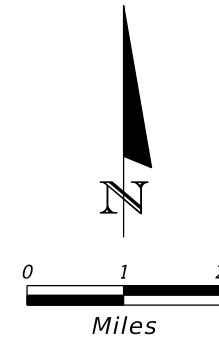
**FINANCIAL PROJECT ID 432642-1-58-01**  
**FEDERAL AID PROJECT NO. D519-083-B**  
**SEMINOLE COUNTY (77070002)**  
**STATE ROAD NO. 434 / WINDING HOLLOW BLVD.**

**INTERSECTION IMPROVEMENTS**  
**ITB 01-24-01 PH**



BEGIN PROJECT  
STATION 515+60.00  
M.P. 0.496

END PROJECT  
STATION 522+22.24  
M.P. 0.621



**FINAL PLANS**  
**MAY 14, 2024**

**GOVERNING STANDARD PLANS:**

Florida Department of Transportation, FY 2024-25 Standard Plans for Road and Bridge Construction and applicable Interim Revisions (IRs)

Standard Plans for Road Construction and associated IRs are available at the following website: <http://www.fdot.gov/Design/Standardplans>

**GOVERNING STANDARD SPECIFICATIONS:**

Florida Department of Transportation, FY 2024-25, Standard Specifications for Road and Bridge Construction at the following website: <http://www.fdot.gov/programmanagement/Implemented/SpecBooks>

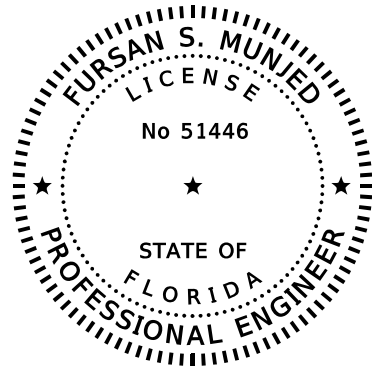
**ROADWAY PLANS**  
**ENGINEER OF RECORD:**

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P.E. NO. 51446  
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301 WEST STATE ROAD 434  
SUITE 309  
WINTER SPRINGS, FL 32708  
407-992-9160  
CONTRACT NO.: AQX80  
VENDOR NO.: F260806410-001

INTERIM CITY OF WINTER SPRINGS CITY MANAGER: PHILIP HURSH, P.E.

| FISCAL YEAR | SHEET NO. |
|-------------|-----------|
| 24          | 1         |

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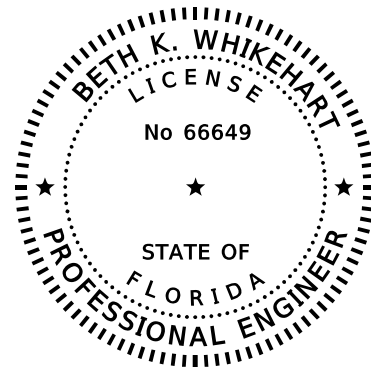
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FURSAN S. MUNJED, P.E. NO. 51446

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004 F.A.C.

| SHEET NO. | DESCRIPTION                    |
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| 1         | KEY SHEET                      |
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| 33-34A    | TEMPORARY TRAFFIC CONTROL PLAN |
| 35-38     | UTILITY ADJUSTMENTS            |
| SQ-1-SQ-7 | SUMMARY OF QUANTITIES          |



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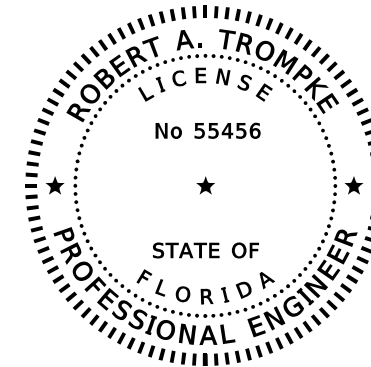
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BETH K. WHIKEHART P.E. NO. 66649

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| SHEET NO. | DESCRIPTION                          |
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| 1A        | SIGNATURE SHEET                      |
| 4         | DRAINAGE DETAILS                     |
| 5         | SUMMARY OF DRAINAGE STRUCTURES       |
| 17-19     | DRAINAGE STRUCTURES                  |
| 30-31     | STORMWATER POLLUTION PREVENTION PLAN |
| 32        | EROSION CONTROL PLAN                 |



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INTERTEK PSI ORLANDO  
1748 33RD STREET  
ORLANDO FLORIDA 32839  
(407) 304-5560  
ROBERT A. TROMPKE, P.E. NO. 55456

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| SHEET NO. | SHEET DESCRIPTION   |
|-----------|---------------------|
| 1A        | SIGNATURE SHEET     |
| 21-22     | ROADWAY SOIL SURVEY |

REVISIONS

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

ENGINEER OF RECORD:  
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WINTER SPRINGS, FLORIDA 32708



CITY OF WINTER SPRINGS  
FLORIDA

| ROAD   | FINANCIAL PROJECT ID |
|--------|----------------------|
| SR 434 | 432642-1-58-01       |

SIGNATURE SHEET

SHEET NO.  
1A

# SUMMARY OF ROADWAY PAY ITEMS

| ITEM NUMBER | DESCRIPTION  | UNIT | QUANTITY TOTAL |       |
|-------------|--|------|----------------|-------|
|             |  |      | PLANS          | FINAL |
| 101-1       | MOBILIZATION   | LS   | 1              |       |
| 102-1       | MAINTENANCE OF TRAFFIC   | LS   | 1              |       |
| 102-14      | TRAFFIC CONTROL OFFICER  | HR   | 28             |       |
| 102-60      | WORK ZONE SIGN   | ED   | 4845           |       |
| 102-71-13   | TEMPORARY BARRIER, F&I, LOW PROFILE, CONCRETE                          | LF   | 564            |       |
| 102-74-1    | CHANNELIZING DEVICE- TYPES I, II, DI, VP, DRUM, OR LCD                 | ED   | 4035           |       |
| 102-74-8    | CHANNELIZING DEVICE- PEDESTRIAN LCD (LONGITUDINAL CHANNELIZING DEVICE) | FD   | 17100          |       |
| 102-76      | ARROW BOARD / ADVANCE WARNING ARROW PANEL                              | ED   | 285            |       |
| 102-99      | PORTABLE CHANGEABLE MESSAGE SIGN, TEMPORARY                            | ED   | 299            |       |
| 102-104     | TEMPORARY SIGNALIZATION AND MAINTENANCE, INTERSECTION                  | ED   | 285            |       |
| 102-107-1   | TEMPORARY TRAFFIC DETECTION AND MAINTENANCE, INTERSECTION              | ED   | 285            |       |
| 104-1       | ARTIFICIAL COVERINGS / ROLLED EROSION CONTROL PRODUCTS                 | SY   | 5              |       |
| 104-10-3    | SEDIMENT BARRIER   | LF   | 526            |       |
| 104-12      | STAKED TURBIDITY BARRIER   | LF   | 163            |       |
| 104-18      | INLET PROTECTION   | EA   | 3              |       |
| 110-1-1     | CLEARING AND GRUBBING (0.22 ACRES)                                     | LS   | 1              |       |
| 110-4-10    | REMOVAL OF EXISTING CONCRETE   | SY   | 551            |       |
| 120-1       | REGULAR EXCAVATION   | CY   | 362            |       |
| 120-6       | EMBANKMENT   | CY   | 99             |       |
| 160-4       | TYPE B STABILIZATION   | SY   | 727            |       |
| 285-709     | BASE GROUP 9 (TYPE B-12.5)   | SY   | 570            |       |
| 327-70-6    | MILLING EXISTING ASPHALT PAVEMENT (1.5" AVERAGE DEPTH)                 | SY   | 655            |       |
| 334-1-13    | TYPE SP ASPHALTIC CONCRETE, TRAFFIC C                                  | TN   | 62.7           |       |
| 337-7-83    | ASPHALT CONC. FRICTION COURSE, TRAFFIC C, FC-12.5, PG76-22 (1.5")      | TN   | 101.1          |       |
| 425-1-311   | INLETS CURB (TYPE P-1) (<10')  | EA   | 1              |       |
| 425-1-321   | INLETS CURB (TYPE P-2) (<10')  | EA   | 1              |       |
| 425-2-43    | MANHOLES, P-7, PARTIAL   | EA   | 3              |       |
| 425-11      | MODIFY EXISTING DRAINAGE STRUCTURE                                     | EA   | 1              |       |
| 430-175-118 | CONCRETE PIPE CULVERT (SS) (CLASS III) (18")                           | LF   | 24             |       |
| 440-1-20    | UNDERDRAIN, TYPE II  | LF   | 437            |       |
| 440-73-2    | UNDERDRAIN OUTLET PIPE, 6"   | LF   | 24             |       |
| 520-1-10    | CONCRETE CURB & GUTTER, TYPE F   | LF   | 576            |       |
| 522-1       | CONCRETE SIDEWALK AND DRIVEWAYS, 4" THICK                              | SY   | 317            |       |
| 522-2       | CONCRETE SIDEWALK AND DRIVEWAYS, 6" THICK                              | SY   | 85             |       |
| 527-2       | DETECTABLE WARNINGS  | SF   | 20             |       |
| 550-10-220  | FENCING, TYPE B, 5.1-6.0', STANDARD                                    | LF   | 194            |       |
| 570-1-2     | PERFORMANCE TURF (SOD)   | SY   | 538            |       |

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

ENGINEER OF RECORD:  
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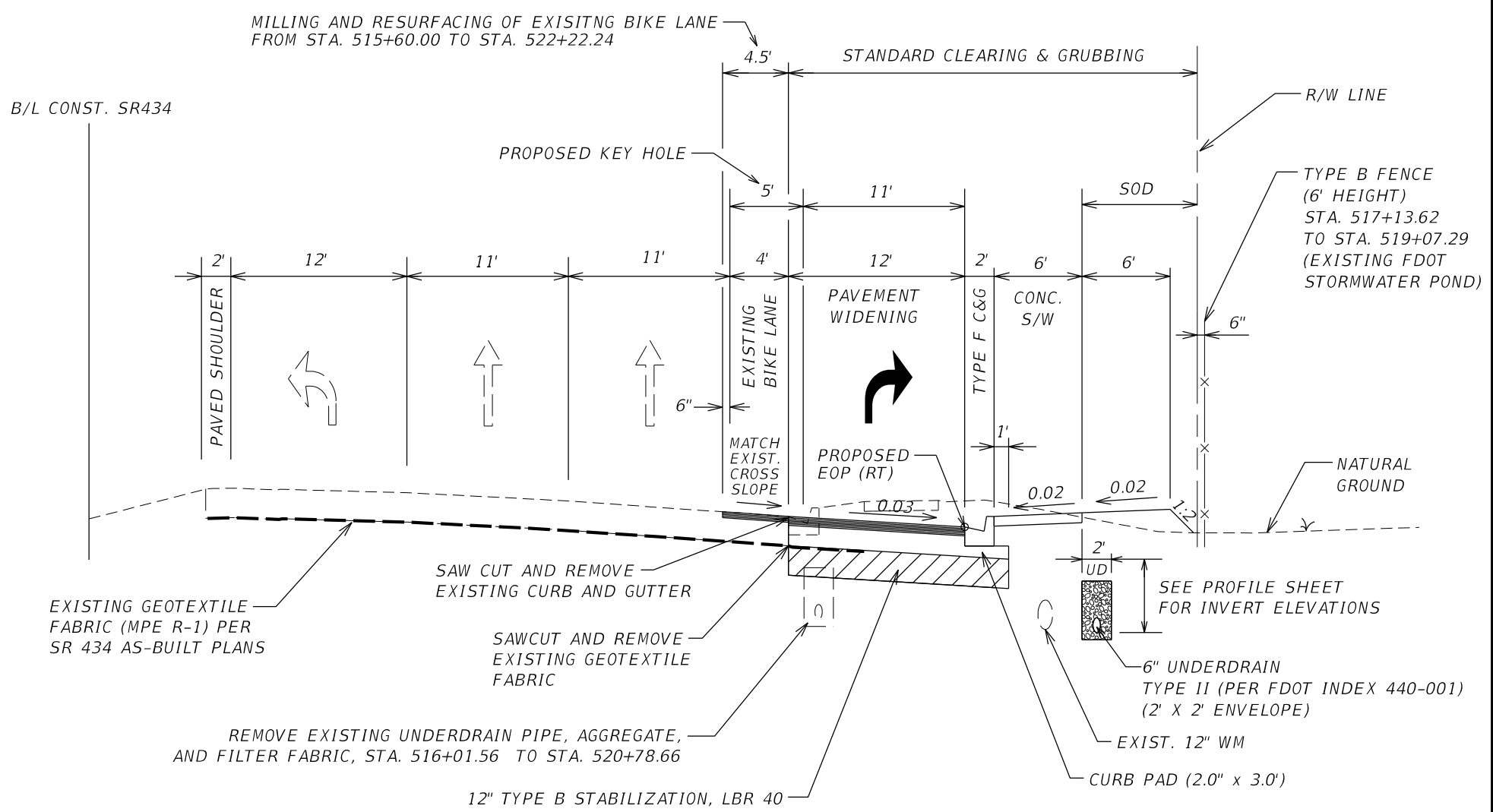
CITY OF WINTER SPRINGS  
 FLORIDA

| ROAD   | FINANCIAL PROJECT ID |
|--------|----------------------|
| SR 434 | 432642-1-58-01       |

SUMMARY OF PAY ITEMS

SHEET NO.  
**2**

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**TYPICAL SECTION**  
 STA. 517+10.40 TO STA. 521+45.75

PAVEMENT DESIGN  
 BIKE LANE (MILLING AND RESURFACING)

---

MILL 1.5" UNIFORM MILLING DEPTH AND  
 RESURFACE WITH 1.5" FC-12.5 FRICTION COURSE, TRAFFIC C (PG 76-22)

---

PAVEMENT DESIGN  
 RIGHT TURN LANE (PAVEMENT WIDENING)

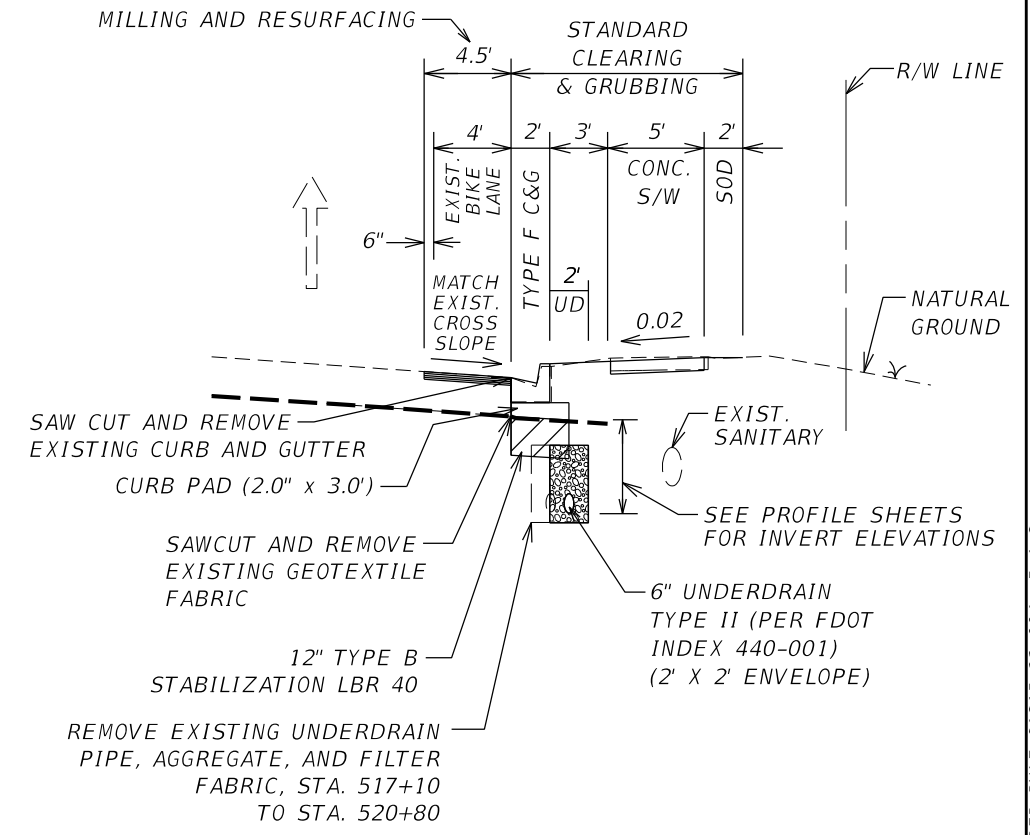
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BASE GROUP 9, TYPE B-12.5 ONLY, (6")  
 2.0" TYPE SP STRUCTURAL COURSE TRAFFIC C  
 1.5" FC-12.5 FRICTION COURSE, TRAFFIC C (PG 76-22)

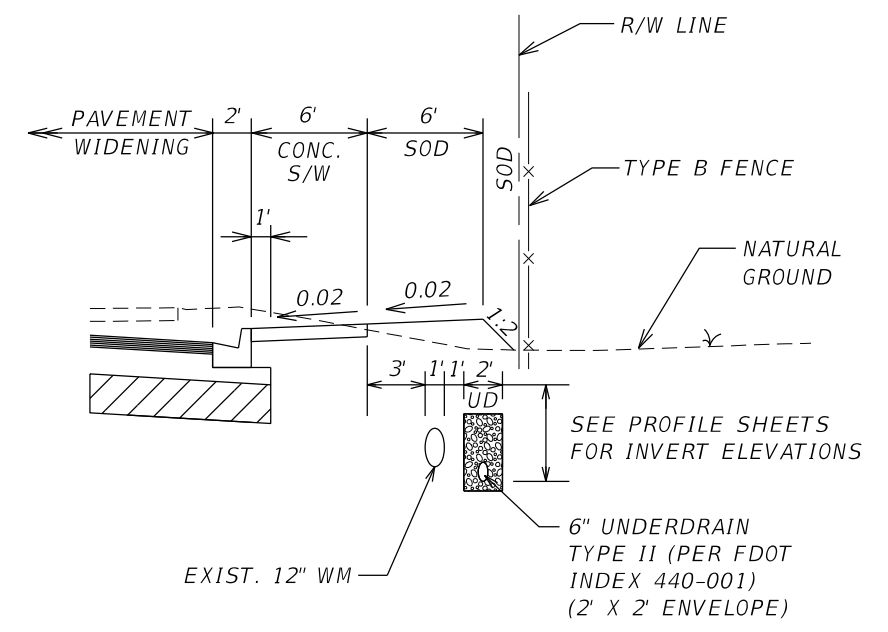
**TRAFFIC DATA**

|                        |                      |                     |
|------------------------|----------------------|---------------------|
| CURRENT YEAR           | = 2023 AADT = 36,900 |                     |
| ESTIMATED OPENING YEAR | = 2025 AADT = 37,600 |                     |
| ESTIMATED DESIGN YEAR  | = 2045 AADT = 45,900 |                     |
| K = 9.00%              | D = 51.30%           | T = 2.80% (24 HOUR) |
| DESIGN HOUR T          | = 1.40%              |                     |
| DESIGN SPEED           | = 45 M.P.H.          |                     |

NOTE: THE PAVEMENT DESIGN FOR THE REMOVAL OF VALLEY GUTTER SHALL MATCH PAVEMENT DESIGN FOR WIDENING.



**UNDERDRAIN LOCATION**  
 STA. 516+08.66 TO STA. 516+96.20



**UNDERDRAIN LOCATION**  
 STA. 517+28.54 TO STA. 520+75.82

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

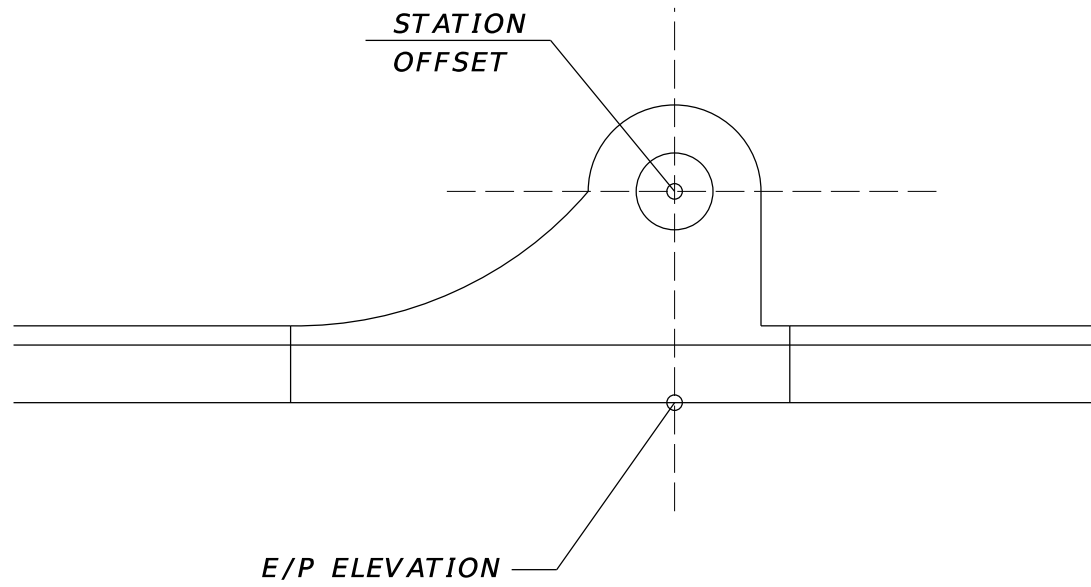
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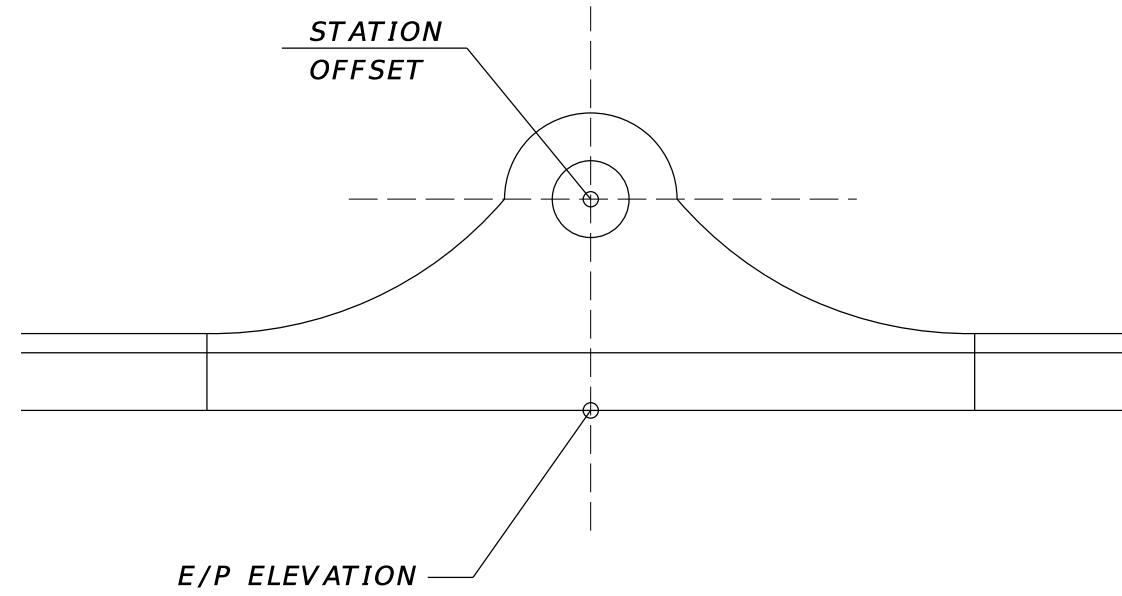
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|-----------------------------------|----------------------|
| CITY OF WINTER SPRINGS<br>FLORIDA |                      |
| ROAD                              | FINANCIAL PROJECT ID |
| SR 434                            | 432642-1-58-01       |

|                 |  |
|-----------------|--|
| TYPICAL SECTION |  |
| SHEET NO.<br>3  |  |

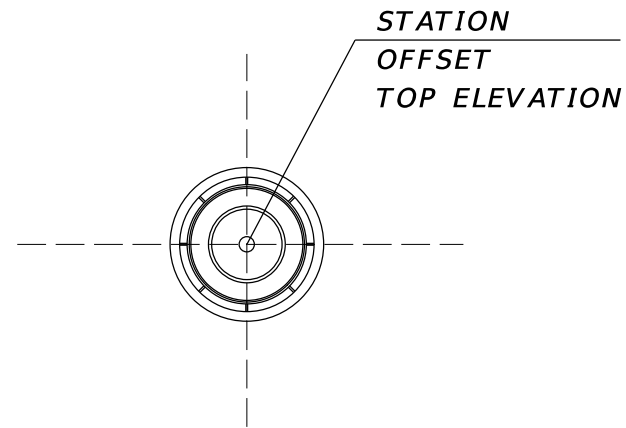
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**TYPE P-1 CURB INLET**  
NOT TO SCALE



**TYPE P-2 CURB INLET**  
NOT TO SCALE



**MANHOLE**  
NOT TO SCALE

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

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FLORIDA

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| SR 434 | 432642-1-58-01       |

DRAINAGE DETAILS

SHEET NO.  
4

### SUMMARY OF DRAINAGE STRUCTURES

| QUANTITY     | STR. NO. | STATION        | OFFSET | SIDE | DESCRIPTION         | BARRELS | SIZE    | CURB INLET                   |            | MODIFY EXISTING DRAINAGE STRUCTURE | MANHOLE TOP TYPE 7 PARTIAL | REMARKS  |
|--------------|----------|----------------|--------|------|---------------------|---------|---------|------------------------------|------------|------------------------------------|----------------------------|--|
|              |          |                |        |      |                     |         |         | PIPES (CLASS III)<br>18" RCP | P-1 (<10') |                                    |                            |  |
| P            | S-100    | 515+98.81      | 54.12  | RT   | EXISTING CURB INLET | 1       | 29"x45" |                              |            | 1                                  |                            | CONNECT UNDERDRAIN OUTLET PIPE, EAST SIDE  |
| F            |          |                |        |      |                     |         |         |                              |            |                                    |                            |  |
| P            | S-101    | 518+38.89      | 55.05  | RT   | EXISTING MANHOLE    | 1       | 48"     |                              |            |                                    | 1                          | CONSTRUCT MANHOLE TOP TYPE 7   |
| F            |          |                |        |      |                     |         |         |                              |            |                                    |                            |  |
| P            | S-102    | 519+00.17      | 54.82  | RT   | EXISTING CURB INLET | 1       | 48"     |                              |            |                                    | 1                          | REMOVE EXISTING CURB INLET TOP AND CONSTRUCT A NEW MANHOLE TOP TYPE 7<br>CONNECT 18" RCP, SOUTH SIDE, PLUG UNDERDRAIN HOLE WEST SIDE           |
| F            |          |                |        |      |                     |         |         |                              |            |                                    |                            |  |
| P            | S-103    | 519+00.17      | 66.40  | RT   | CURB INLET, PIPE    | 1       | 18"     | 12                           | 1          |                                    |                            |  |
| F            |          |                |        |      |                     |         |         |                              |            |                                    |                            |  |
| P            | S-104    | 520+79.67      | 54.69  | RT   | EXISTING CURB INLET | 1       | 48"     |                              |            |                                    | 1                          | REMOVE EXISTING CURB INLET TOP AND CONSTRUCT A NEW MANHOLE TOP TYPE 7<br>CONNECT UNDERDRAIN PIPE, EAST SIDE. CONNECT 18" RCP, SOUTH EAST SIDE. |
| F            |          |                |        |      |                     |         |         |                              |            |                                    |                            |  |
| P            | S-105    | 520+84.40      | 66.39  | RT   | CURB INLET, PIPE    | 1       | 18"     | 12                           |            |                                    | 1                          | CONNECT TO UNDERDRAIN PIPE, WEST SIDE  |
| F            |          |                |        |      |                     |         |         |                              |            |                                    |                            |  |
| F            |          |                |        |      |                     |         |         |                              |            |                                    |                            |  |
| P            |          |                |        |      |                     |         |         |                              |            |                                    |                            |  |
| F            |          |                |        |      |                     |         |         |                              |            |                                    |                            |  |
| P            |          |                |        |      |                     |         |         |                              |            |                                    |                            |  |
| F            |          |                |        |      |                     |         |         |                              |            |                                    |                            |  |
| P            |          |                |        |      |                     |         |         |                              |            |                                    |                            |  |
| F            |          |                |        |      |                     |         |         |                              |            |                                    |                            |  |
| P            |          |                |        |      |                     |         |         |                              |            |                                    |                            |  |
| F            |          |                |        |      |                     |         |         |                              |            |                                    |                            |  |
| P            |          |                |        |      |                     |         |         |                              |            |                                    |                            |  |
| F            |          |                |        |      |                     |         |         |                              |            |                                    |                            |  |
| P            |          |                |        |      |                     |         |         |                              |            |                                    |                            |  |
| F            |          |                |        |      |                     |         |         |                              |            |                                    |                            |  |
| P            |          |                |        |      |                     |         |         |                              |            |                                    |                            |  |
| F            |          |                |        |      |                     |         |         |                              |            |                                    |                            |  |
| P            |          |                |        |      |                     |         |         |                              |            |                                    |                            |  |
| F            |          |                |        |      |                     |         |         |                              |            |                                    |                            |  |
| P            |          |                |        |      |                     |         |         |                              |            |                                    |                            |  |
| F            |          |                |        |      |                     |         |         |                              |            |                                    |                            |  |
| P            |          |                |        |      |                     |         |         |                              |            |                                    |                            |  |
| F            |          |                |        |      |                     |         |         |                              |            |                                    |                            |  |
| P            |          |                |        |      |                     |         |         |                              |            |                                    |                            |  |
| F            |          |                |        |      |                     |         |         |                              |            |                                    |                            |  |
| P            |          |                |        |      |                     |         |         |                              |            |                                    |                            |  |
| F            |          |                |        |      |                     |         |         |                              |            |                                    |                            |  |
| P            |          |                |        |      |                     |         |         |                              |            |                                    |                            |  |
| F            |          |                |        |      |                     |         |         |                              |            |                                    |                            |  |
| SHEET TOTALS |          | PLAN QUANTITY  |        | 24   | 1                   | 1       | 1       | 3                            |            |                                    |                            |  |
|              |          | FINAL QUANTITY |        |      |                     |         |         |                              |            |                                    |                            |  |
| GRAND TOTALS |          | PLAN QUANTITY  |        | 24   | 1                   | 1       | 1       | 3                            |            |                                    |                            |  |
|              |          | FINAL QUANTITY |        |      |                     |         |         |                              |            |                                    |                            |  |

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

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CITY OF WINTER SPRINGS  
FLORIDA

|        |                      |
|--------|----------------------|
| ROAD   | FINANCIAL PROJECT ID |
| SR 434 | 432642-1-58-01       |

SUMMARY OF  
DRAINAGE STRUCTURES

SHEET NO.  
**5**

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# GENERAL NOTES

1. GRADES SHOWN ARE FINISHED GRADES.
2. ALL EXISTING DRAINAGE STRUCTURES WITHIN CONSTRUCTION LIMITS SHALL REMAIN, UNLESS OTHERWISE DIRECTED.
3. PUBLIC LAND CORNERS WITHIN THE LIMITS OF CONSTRUCTION SHALL BE PROTECTED. IF A CORNER MONUMENT IS IN DANGER OF BEING DESTROYED OR DISTURBED, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND THE CITY, WITHOUT DELAY, BY TELEPHONE. THE CONTRACTOR SHALL PROVIDE WRITTEN FOLLOW UP CONFIRMATION WITHIN 48 HOURS OF TELEPHONE NOTIFICATION.
4. TEMPORARY DRAINAGE SHALL BE PROVIDED DURING CONSTRUCTION TO ELIMINATE ANY FLOODING OF PRIVATE PROPERTY.
5. BENCHMARK ELEVATIONS SHOWN ON THE PLANS ARE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 1988).
6. ALL SHOP DRAWINGS MUST BE APPROVED BY CITY OF WINTER SPRINGS PRIOR TO FABRICATION.
7. PRIOR TO CONSTRUCTION, ALL EXISTING UTILITIES, PUBLIC OR PRIVATE, SHALL BE LOCATED BY THE CONTRACTOR IN AREAS OF CONSTRUCTION AND OWNERS OF SAID UTILITIES NOTIFIED PRIOR TO COMMENCING WORK.
8. ALL EXISTING AND PROPOSED SEWER LINES AND INLETS WITHIN THE CONSTRUCTION LIMITS SHALL BE CLEANED OF DEBRIS AND ERODED MATERIALS AT LAST STAGES OF CONSTRUCTION.
9. ANY DRAINAGE PROBLEMS, CREATED BY CONSTRUCTION OR EXISTING BEFORE CONSTRUCTION, THAT ARE NOT ALLEVIATED SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
10. ALL SURVEY CORNERS INDICATED ON THE PLANS SHALL BE REFERENCED AND CERTIFIED BY A REGISTERED PROFESSIONAL LAND SURVEYOR PRIOR TO COMMENCEMENT OF CONSTRUCTION. ALL CORNERS DESTROYED OR OBLITERATED BY CONSTRUCTION SHALL BE RESET AND SO CERTIFIED BY THE LAND SURVEYOR PRIOR TO COMPLETION OF THE PROJECT.
11. "INLET EL" FOR CURB INLETS REFERS TO THE EDGE OF PAVEMENT ELEVATION AS MEASURED AT THE CENTERLINE OF THE INLET. UNLESS OTHERWISE NOTED IN THE PLANS.
12. THE CONTRACTOR IS TO SAWCUT EXISTING PAVEMENT TO A NEAT EDGE IN ALL AREAS WHERE TIEING INTO EXISTING PAVEMENT WITH PROPOSED PAVEMENT. IN AREAS WHERE THE TIE IN IS AT THE R/W LINE (ie. DRIVEWAYS) THE CONTRACTOR SHALL TAKE EXTRA CARE TO STAY WITHIN THE PROPOSED R/W.
13. ALL PERSONAL PROPERTY WITHIN THE RIGHT-OF-WAY NOT RELOCATED BY THE PROPERTY OWNER SHALL BE REMOVED BY THE CONTRACTOR AS NECESSARY TO CONSTRUCT THE PROJECT IN ACCORDANCE WITH THE PLANS. PAYMENT WILL BE INCLUDED IN CLEARING & GRUBBING. THE RIGHT-OF-WAY INCLUDING ANY PRIVATE PROPERTY WITHIN THE RIGHT-OF-WAY SHALL BE RESTORED TO EXISTING OR BETTER CONDITIONS.
14. THE DISPOSAL OF EXCESS EARTHWORK MATERIALS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. APPROVALS OF DISPOSAL SITES SHALL BE OBTAINED FROM CITY OF WINTER SPRINGS PRIOR TO DISPOSAL.
15. THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES IS BASED ON AVAILABLE RECORDS AND SURVEYS BUT IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR SHALL MAKE HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO AND IS RESPONSIBLE FOR COORDINATING UTILITY RELOCATION WITH PROJECT CONSTRUCTION. PRIOR TO ORDERING DRAINAGE STRUCTURES, THE CONTRACTOR SHALL DETERMINE IF DRAINAGE/UTILITY CONFLICTS EXIST. INFORMATION ON CONFLICTS IS TO BE SUBMITTED TO THE ENGINEER AS SOON AS POSSIBLE AFTER DISCOVERY FOR RESOLUTION.
16. UTILITIES ARE TO BE ADJUSTED BY OTHERS OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL COORDINATE ALL THE REQUIRED UTILITY ADJUSTMENTS DIRECTLY WITH THE UTILITY OWNERS.
17. THE CONTRACTOR SHALL PROVIDE AS-BUILT SURVEY BASED ON FDOT STANDARDS.
18. ALL PAVEMENT OFFSETS SHOWN ARE TO PROPOSED BASELINE OF CONSTRUCTION; ALL RADII AND DIMENSIONS ARE TO PROPOSED EDGE OF PAVEMENT.
19. DRIVEWAY LOCATIONS AND WIDTHS SHOWN ARE APPROXIMATE AND MAY BE ADJUSTED AS NECESSARY AS DIRECTED BY THE ENGINEER.
20. THE CONTRACTOR SHALL NOTIFY ALL GAS UTILITY COMPANIES A MINIMUM OF TWO WORKING DAYS PRIOR TO EXCAVATION.
21. ALL DRAINAGE PIPES SHALL BE REINFORCED CONCRETE PIPE, CLASS III, UNLESS OTHERWISE NOTED.
22. MEASUREMENT OF DRAINAGE PIPE FOR PAYMENT SHALL BE DETERMINED FROM ACTUAL LENGTHS INSTALLED.
23. ALL MANHOLE COVERS SHALL INCLUDE THE FDOT LOGO AND BE IDENTIFIED AS "SANITARY", "STORM", OR "WATER", AS APPROPRIATE.
24. ALL INLET/MANHOLE - PIPE JOINTS SHALL BE FILLED WITH NON-SHRINK GROUT, COVERED WITH AN ASPHALTIC MASTIC COATING, AND WRAPPED WITH A FILTER FABRIC MATERIAL.
25. ALL CURB INLETS, DITCH BOTTOM INLETS, AND MANHOLES SHALL HAVE TRAFFIC BEARING FRAMES AND COVERS OR GRATES MEETING HS-20 LOADING REQUIREMENTS.
26. CHANGES OF PIPE INVERTS NOT EXCEEDING PLUS OR MINUS 1'-0" WILL NOT BE CONSIDERED AS A BASIS FOR ADDITIONAL COMPENSATION FOR THE PERTINENT PIPE BID ITEM OR FOR MODIFICATION OF PRECAST STRUCTURES.
27. ALL (P.R.M.'s) IRONS AND MONUMENTS SHOWN ON PLANS OR FOUND, SHALL BE PRESERVED. THOSE SHOWN IN PROPOSED PAVEMENT SHALL BE PROTECTED WITH A CAST IRON VALVE BOX.
28. PRIOR TO BEGINNING ANY CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT TO CITY OF WINTER SPRINGS A SET OF FIELD NOTES VERIFYING THE BENCHMARK ELEVATIONS SHOWN ON THE PROJECT LAYOUT SHEET AND PLAN AND PROFILE SHEETS, AND/OR A SET OF FIELD NOTES FOR ALL ADDITIONAL BENCHMARK PROPOSED TO BE USED IN CONSTRUCTING THE PROJECT WITH THEIR LOCATION, DESCRIPTION AND ELEVATION, BASED ON SEMINOLE COUNTY DATUM. VERTICAL INFORMATION SHOWN REFERS TO SEMINOLE COUNTY CONTROL POINT BEING A 5" x 5" CONCRETE MONUMENT WITH A 3.5" BRASS DISK STAMPED "GPS 900-23/MOSS", 35.00 FEET NORTH OF CENTERLINE OF STATE ROAD 434 AND 97.00 FEET WEST OF THE CENTER LINE OF MOSS ROAD; NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) ELEVATION = 49.198. ALL SUBMITTALS ALL BE SIGNED AND SEALED BY A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF FLORIDA.
29. WITHIN 21 CALENDAR DAYS AFTER NOTICE TO PROCEED, THE CONTRACTOR SHALL STAKE THE RIGHT-OF-WAY AT 50 FEET INTERVALS AND AT RIGHT-OF-WAY BREAKS WITH STATIONING SHOWN ON THE STAKES. NO INVOICE FOR PAYMENT WILL BE PROCESSED UNTIL THE RIGHT-OF-WAY HAS BEEN STAKED TO THE SATISFACTION OF THE ENGINEER. PAYMENT IS INCLUDED IN THE BID PRICE FOR ITEM NO. 101-1.
30. THE CONTRACTOR SHALL FIELD VERIFY THE DIMENSIONS (INCLUDING STRUCTURE BOTTOM SIZE, SLABS, REDUCERS, RISERS, ETC.) OF THE EXISTING DRAINAGE STRUCTURES WHICH ARE BEING MODIFIED TO ADD ADDITIONAL DRAINAGE PIPES, AND PROVIDE THE INFORMATION TO THE ENGINEER FOR REVIEW. IN THE EVENT THAT THE PROPOSED PIPES CONFLICT WITH THE EXISTING DRAINAGE STRUCTURES CONFIGURATION, THE ENGINEER WILL MODIFY THE DESIGN ACCORDINGLY. THE CONTRACTOR SHALL ALLOW A PERIOD OF TWO WEEKS AFTER THE INFORMATION HAS BEEN PROVIDED TO THE ENGINEER FOR DESIGN MODIFICATIONS. THIS WORK SHALL BE PERFORMED PRIOR TO THE APPROVAL OF DRAINAGE STRUCTURE SHOP DRAWINGS.
31. ANY U.S.C. OR G.S. MONUMENTS WITHIN THE CONSTRUCTION LIMITS SHALL BE PROTECTED. IF IN DANGER OF DAMAGE, THE CONTRACTOR SHALL NOTIFY BOTH THE PROJECT ENGINEER AND:
 

STATE GEODETIC ADVISOR, RONNIE TAYLOR  
SUITE 309  
3900 COMMONWEALTH BOULEVARD  
TALLAHASSEE, FL  
(850) 488-2427
32. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION WITH ALL ADJACENT PROJECTS.
33. CONTRACTOR SHALL CALL SUNSHINE STATE ONE-CALL OF FLORIDA, INC. (1-800-432-4770) PRIOR TO ANY EXCAVATION WORK AND SHALL COMPLY WITH FLORIDA STATUTE 556.
34. THE CONTRACTOR SHALL ADHERE TO FDOT INSPECTION REQUIREMENTS INCLUDING STORM SYSTEM VIDEO INSPECTION.
35. VIBRATORY ROLLING SHALL NOT BE USED FOR THIS PROJECT. ROLLERS SHALL BE USED IN STATIC MODE ONLY.
36. AT LEAST ONE WEEK PRIOR TO THE START OF WORK, THE CONTRACTOR SHALL NOTIFY:
 

Transit Service Coordination

Start Work Notification

Jeffery Pearsall, Manager of Transportation (407) 254-6108 jpearsall@golynx.com  
Bruce Detweiler, Manager of Service Planning (407) 254-6136 bdetweiler@golynx.com  
Jennifer Hall, Project Manager (407) 254-6110 jhall@golynx.com

Lane Closure Notifications

Jeffery Pearsall, Manager of Transportation (407) 254-6108 jpearsall@golynx.com  
Rey Quinones, Manager of Transportation (407) 254-6223 rquinones@golynx.com  
Bruce Detweiler, Manager of Service Planning (407) 254-6136 bdetweiler@golynx.com

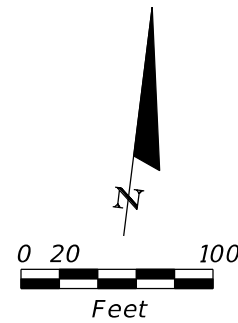
Bus Shelter Coordination

Jennifer Hall, Project Manager (407) 254-6110 jhall@golynx.com  
Cliff Satter, Service Planner (407) 254-6133 csatter@golynx.com  
Jeff Reine, Senior Project Manager (407) 254-6046 jreine@golynx.com

| <u>UTILITY OWNERS:</u> |                                     |                     |
|------------------------|-------------------------------------|---------------------|
| DERIUS HOLDEN          | CITY OF WINTER SPRINGS              | (407) 327-1800 x588 |
| CUSTOMER SERVICE       | DUKE ENERGY - DISTRIBUTION          | (407) 629-1010      |
| COLIN DUNN             | FLORIDA PUBLIC UTILITIES            | (386) 785-4554      |
| KIRBY SPENCER          | AT&T/DISTRIBUTION                   | (386) 281-6957      |
| JOHN BROWN             | SEMINOLE COUNTY TRAFFIC ENGINEERING | (407) 655-5644      |
| REX ANDERSON           | CHARTER COMMUNICATIONS              | (407) 215-5716      |
| JAMES MOSLEY           | UNITI FIBER LLC                     | (251) 654-8216      |
| MCI INVESTIGATIONS     | MCI                                 | (800) 624-9675 x2   |
| ZAYO FL RELOCATIONS    | ZAYO GROUP                          | (866) 364-6033      |
| GREG HUNT              | WOW                                 | (303) 927-4994      |

| REVISIONS |    |             |      |    |             | ENGINEER OF RECORD:<br>FURSAN S. MUNJED, P.E.<br>PROFESSIONAL ENGINEER CERTIFICATE NO. 51446<br>PEGASUS ENGINEERING, LLC<br>301 WEST STATE ROAD 434, SUITE 309<br>WINTER SPRINGS, FLORIDA 32708 |  | CITY OF WINTER SPRINGS<br>FLORIDA |                      | GENERAL NOTES | SHEET<br>NO.<br><br>6 |
|-----------|----|-------------|------|----|-------------|---|---|-----------------------------------|----------------------|---------------|-----------------------|
| DATE      | BY | DESCRIPTION | DATE | BY | DESCRIPTION |   |   | ROAD                              | FINANCIAL PROJECT ID |               |                       |
|           |    |             |      |    |             |   | SR 434  | 432642-1-58-01                    |                      |               |                       |

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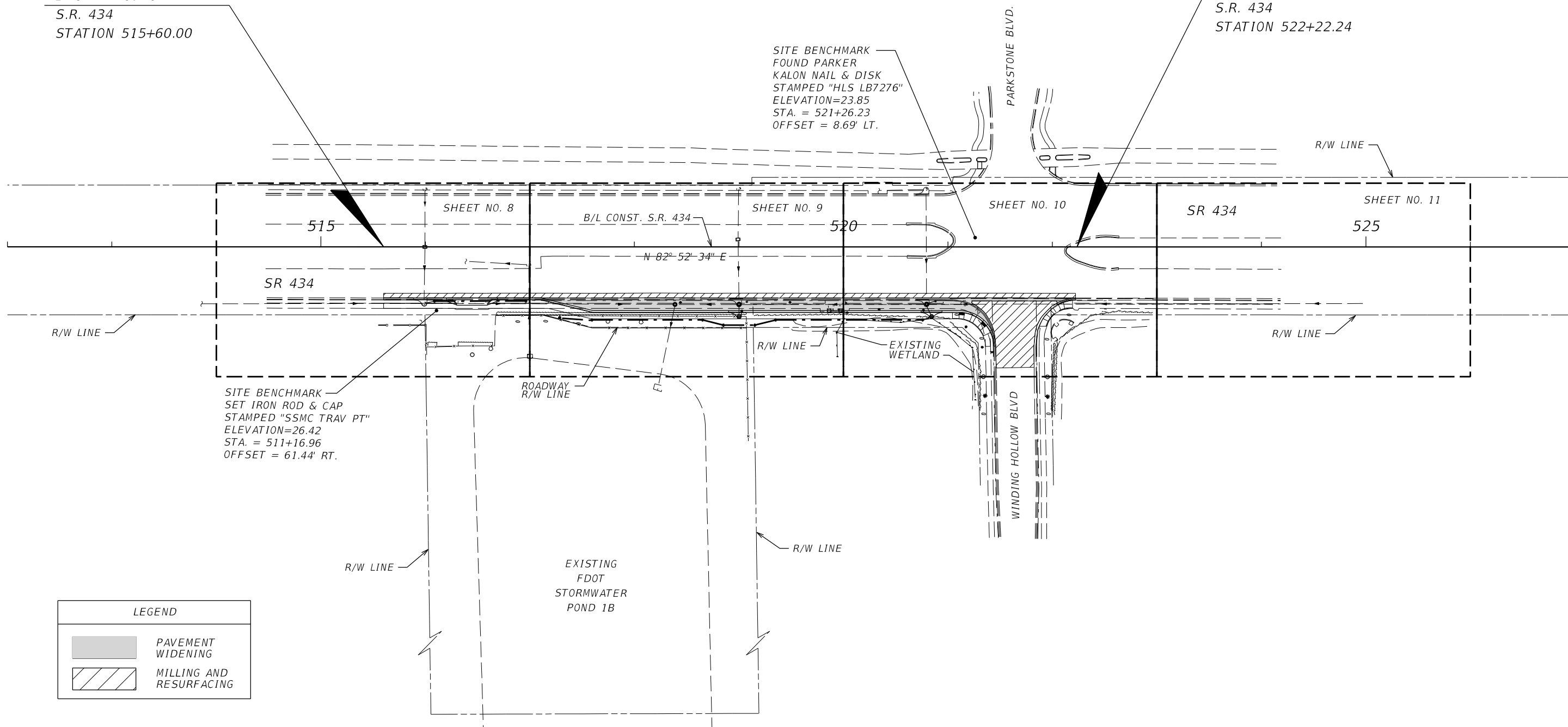


BEGIN PROJECT  
S.R. 434  
STATION 515+60.00

END PROJECT  
S.R. 434  
STATION 522+22.24

SITE BENCHMARK  
FOUND PARKER  
KALON NAIL & DISK  
STAMPED "HLS LB7276"  
ELEVATION=23.85  
STA. = 521+26.23  
OFFSET = 8.69' LT.

SITE BENCHMARK  
SET IRON ROD & CAP  
STAMPED "SSMC TRAV PT"  
ELEVATION=26.42  
STA. = 511+16.96  
OFFSET = 61.44' RT.



| LEGEND |                         |
|--------|-------------------------|
|        | PAVEMENT WIDENING       |
|        | MILLING AND RESURFACING |

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

ENGINEER OF RECORD:  
FURSAN S. MUNJED, P.E.  
PROFESSIONAL ENGINEER CERTIFICATE NO. 51446  
PEGASUS ENGINEERING, LLC  
301 WEST STATE ROAD 434, SUITE 309  
WINTER SPRINGS, FLORIDA 32708



CITY OF WINTER SPRINGS  
FLORIDA

|        |                      |
|--------|----------------------|
| ROAD   | FINANCIAL PROJECT ID |
| SR 434 | 432642-1-58-01       |

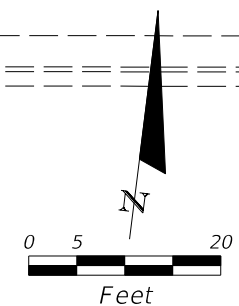
PROJECT LAYOUT SHEET

SHEET NO.  
7

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R/W LINE



SR 434

BEGIN PROJECT  
S.R. 434  
STATION 515+60.00  
MATCH EXISTING

EXIST. EOP

EXISTING  
GRASSED  
MEDIAN

B/L CONST. S.R. 434

514

515

516

517

SR 434

SAWCUT AND REMOVE EXIST.  
TYPE F CURB AND GUTTER.  
CONST. NEW TYPE F CURB  
AND GUTTER

515+60.00  
44.38 RT

515+88.68  
48.91 RT

MATCH EXIST.  
SIDEWALK

516+01.50  
48.93 RT

CONST. 8 LF OF  
UNDERDRAIN  
OUTLET PIPE  
CONST. UNDERDRAIN  
CLEANOUT

516+20.35  
48.91 RT

CONST. UNDERDRAIN  
CLEANOUT

6" UNDERDRAIN (TYPE II)  
PER FDOT INDEX 440-001

EXIST. UNDERDRAIN  
(TO BE REMOVED)

516+68.97  
48.86 RT

36" RCP

EXIST. S/W  
(TO REMAIN)

R/W LINE

515+60.00  
58.88 RT

516+08.66  
51.90 RT

516+27.08  
58.89 RT

DRIVEWAY NO. 1

516+29.59  
59.88 RT

516+62.09  
58.86 RT

516+96.20  
51.90 RT

REMOVE EXISTING SIDEWALK  
AND CONST. NEW CONC. S/W

RECONSTRUCT EXIST.  
DRIVEWAY (6" CONCRETE)

M-13

EXISTING  
FDOT  
STORMWATER  
POND 1B

| LEGEND |                         |
|--------|-------------------------|
|        | MILLING AND RESURFACING |

REVISIONS

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

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 301 WEST STATE ROAD 434, SUITE 309  
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CITY OF WINTER SPRINGS  
 FLORIDA

| ROAD   | FINANCIAL PROJECT ID |
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| SR 434 | 432642-1-58-01       |

PLAN SHEET

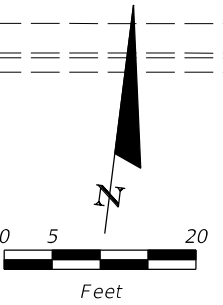
SHEET NO.

8

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R/W LINE

SR 434



517 518 519 520

B/L CONST. S.R. 434

N 82° 52' 34" E

SR 434

SAWCUT AND REMOVE EXIST. TYPE F CURB AND GUTTER.

BACK OF S/W 517+59.45 68.92 RT

517+60.40 60.92 RT

EXISTING UNDERDRAIN (TO BE REMOVED)

CONST. 12 LF OF 18" RCP

CONST. TYPE F CURB AND GUTTER

EXISTING UNDERDRAIN (TO BE REMOVED)

517+10.40 48.82 RT MATCH EXIST.

29" X 45" RCPE

S-101

S-102

517+13.62 65.60 RT

517+28.54 67.79 RT

517+59.45 69.92 RT

517+59.42 77.50 RT

CONST. 6' CONC. SIDEWALK

REMOVE EXISTING FENCE

CONST. TYPE B FENCE

6" UNDERDRAIN (TYPE II) (PER FDOT INDEX 440-001)

518+65.17 69.91 RT

518+85.17 74.91 RT

S-103

END NEW FENCE CONNECT TO EXIST. FENCE STA.= 519+07.29 OFF.= 77.50 RT

519+15.17 74.90 RT

519+13.81 77.00 RT

CONST. 6' CONC. SIDEWALK

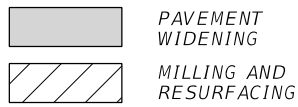
519+35.17 69.90 RT

R/W LINE

WETLAND LINE WL-1

WL-2

LEGEND



PAVEMENT WIDENING  
MILLING AND RESURFACING

EXISTING FDOT STORMWATER POND 1B

REVISIONS

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

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CITY OF WINTER SPRINGS  
 FLORIDA

|        |                      |
|--------|----------------------|
| ROAD   | FINANCIAL PROJECT ID |
| SR 434 | 432642-1-58-01       |

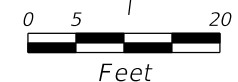
PLAN SHEET

SHEET NO.

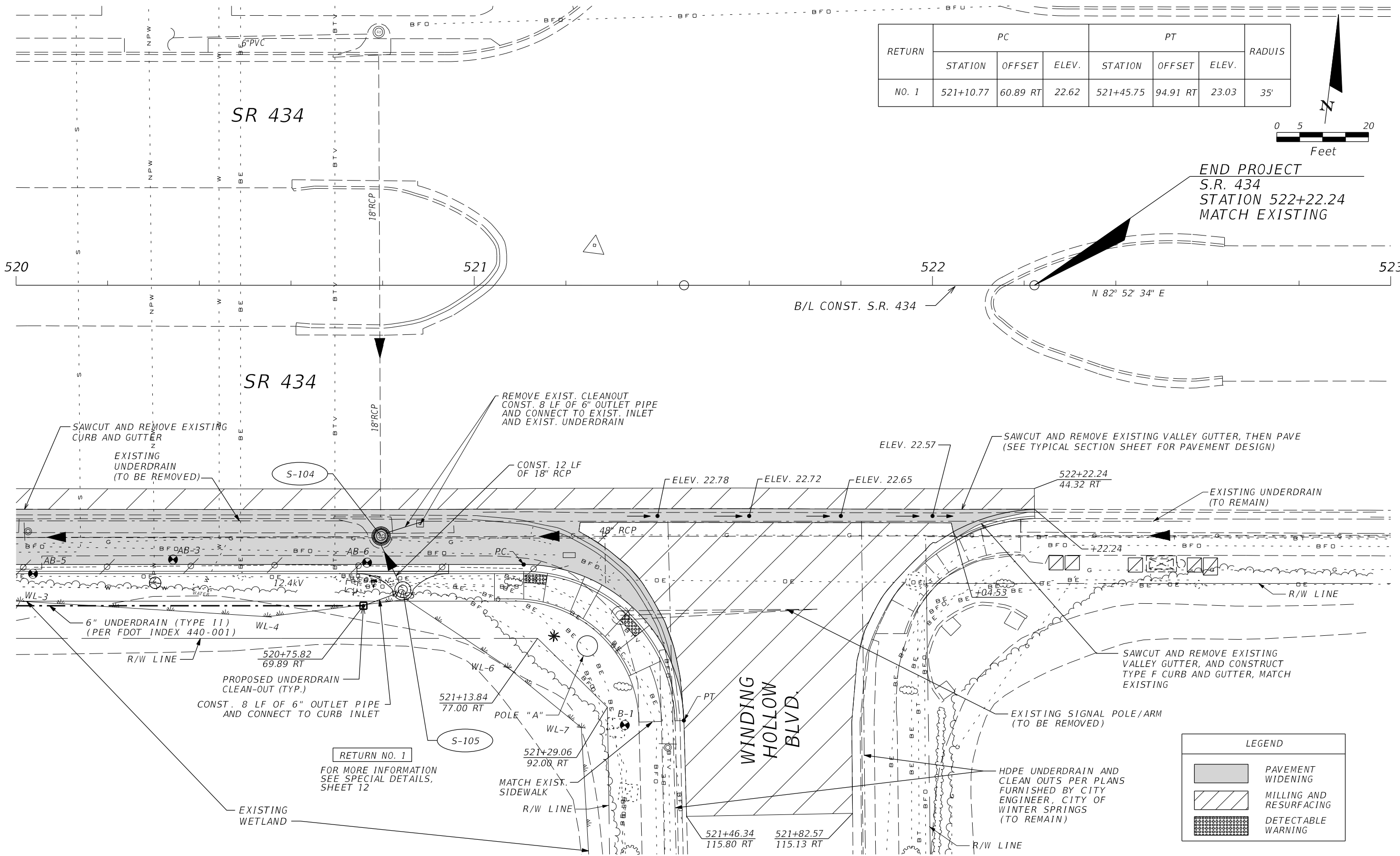
9

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| RETURN | PC        |          |       | PT        |          |       | RADIUS |
|--------|-----------|----------|-------|-----------|----------|-------|--------|
|        | STATION   | OFFSET   | ELEV. | STATION   | OFFSET   | ELEV. |        |
| NO. 1  | 521+10.77 | 60.89 RT | 22.62 | 521+45.75 | 94.91 RT | 23.03 | 35'    |



END PROJECT  
S.R. 434  
STATION 522+22.24  
MATCH EXISTING



| LEGEND |                         |
|--------|-------------------------|
|        | PAVEMENT WIDENING       |
|        | MILLING AND RESURFACING |
|        | DETECTABLE WARNING      |

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

ENGINEER OF RECORD:  
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301 WEST STATE ROAD 434, SUITE 309  
WINTER SPRINGS, FLORIDA 32708



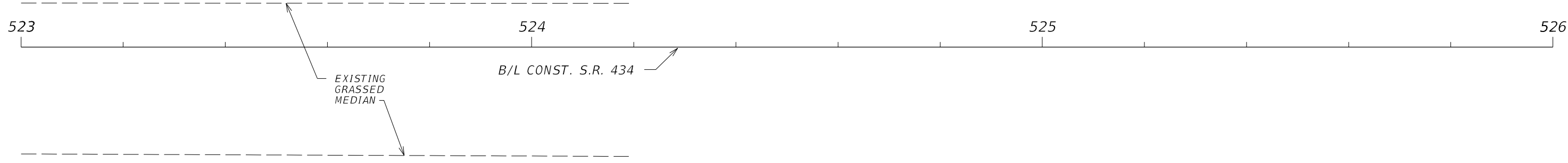
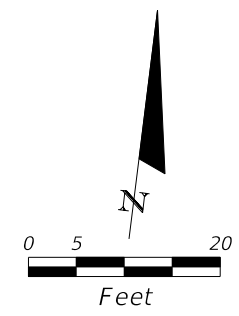
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|-----------------------------------|----------------------|
| CITY OF WINTER SPRINGS<br>FLORIDA |                      |
| ROAD                              | FINANCIAL PROJECT ID |
| SR 434                            | 432642-1-58-01       |

PLAN SHEET

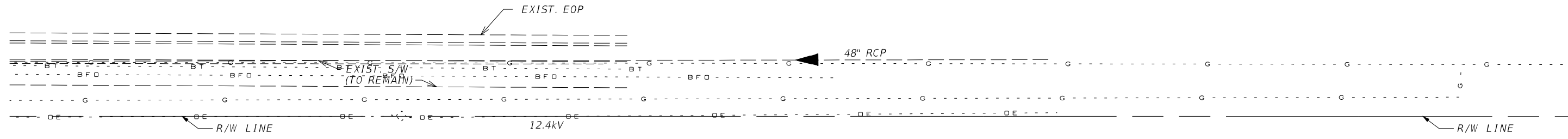
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10

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SR 434



SR 434



REVISIONS

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

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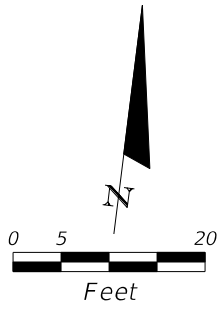
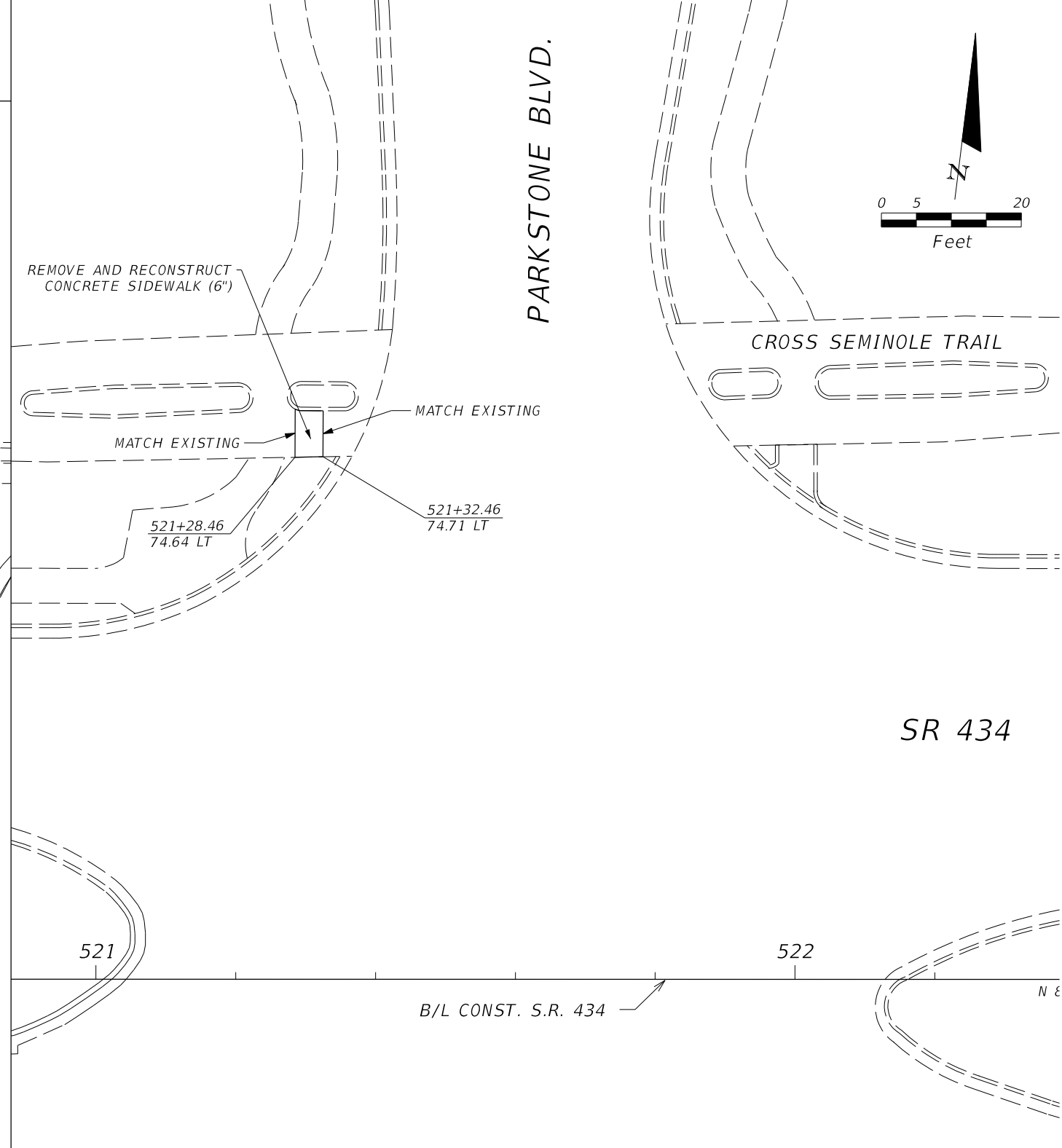
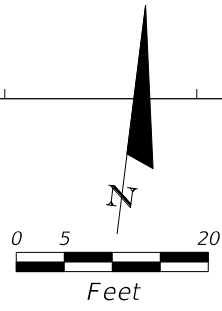
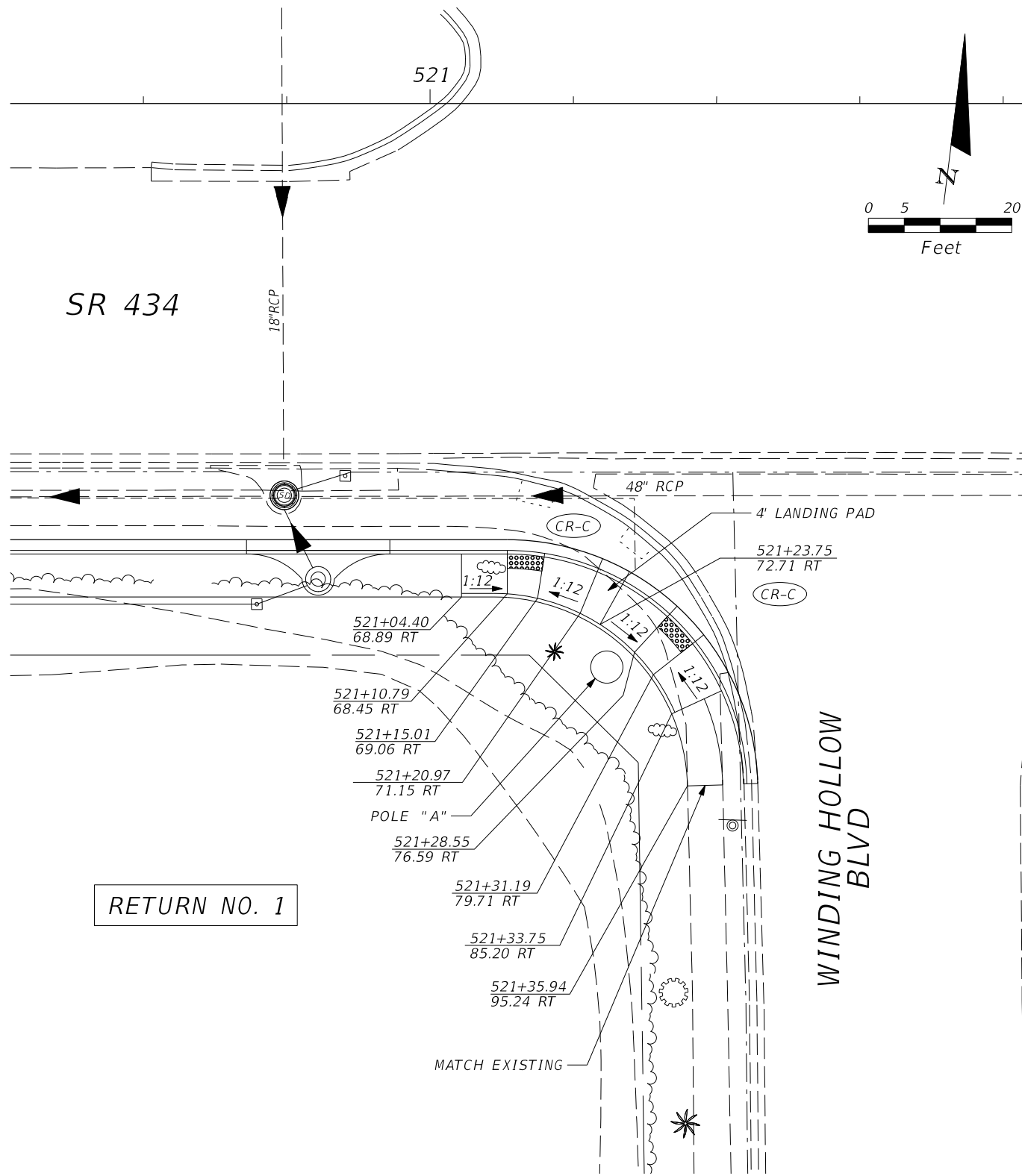
CITY OF WINTER SPRINGS  
 FLORIDA

| ROAD   | FINANCIAL PROJECT ID |
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| SR 434 | 432642-1-58-01       |

PLAN SHEET

SHEET NO.  
 11

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RETURN NO. 1

SOUTHWEST RETURN DETAIL

NORTHWEST SIDEWALK DETAIL

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

ENGINEER OF RECORD:  
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 301 WEST STATE ROAD 434, SUITE 309  
 WINTER SPRINGS, FLORIDA 32708



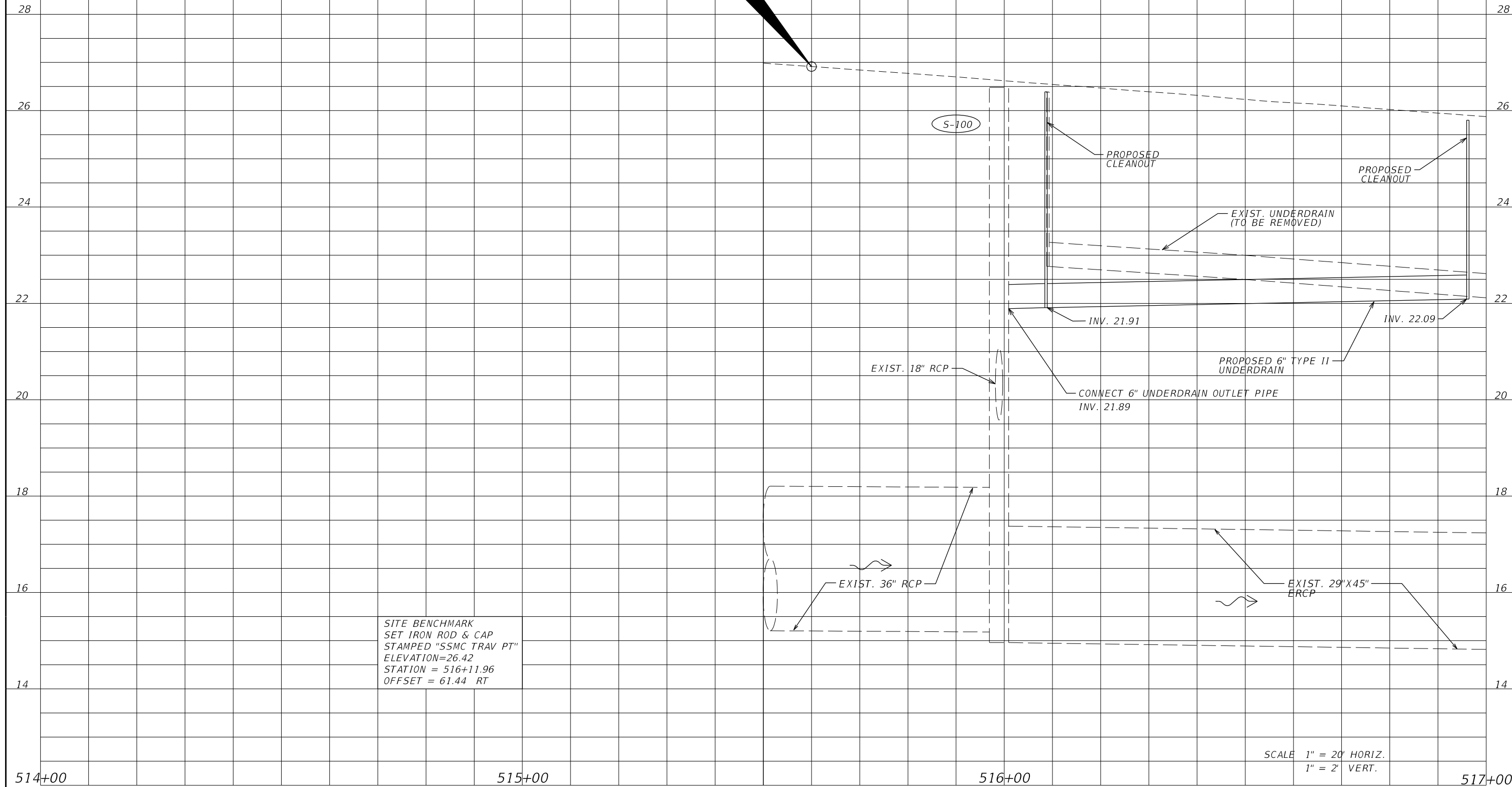
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|-----------------------------------|----------------------|
| CITY OF WINTER SPRINGS<br>FLORIDA |                      |
| ROAD                              | FINANCIAL PROJECT ID |
| SR 434                            | 432642-1-58-01       |

**SPECIAL DETAILS**

SHEET NO.  
**12**

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BEGIN PROJECT  
 SR 434  
 STA. 515+60.00  
 MATCH EXISTING



SITE BENCHMARK  
 SET IRON ROD & CAP  
 STAMPED "SSMC TRAV PT"  
 ELEVATION=26.42  
 STATION = 516+11.96  
 OFFSET = 61.44 RT

SCALE 1" = 20' HORIZ.  
 1" = 2' VERT.

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

ENGINEER OF RECORD:  
 FURSAN S. MUNJED, P.E.  
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 301 WEST STATE ROAD 434, SUITE 309  
 WINTER SPRINGS, FLORIDA 32708



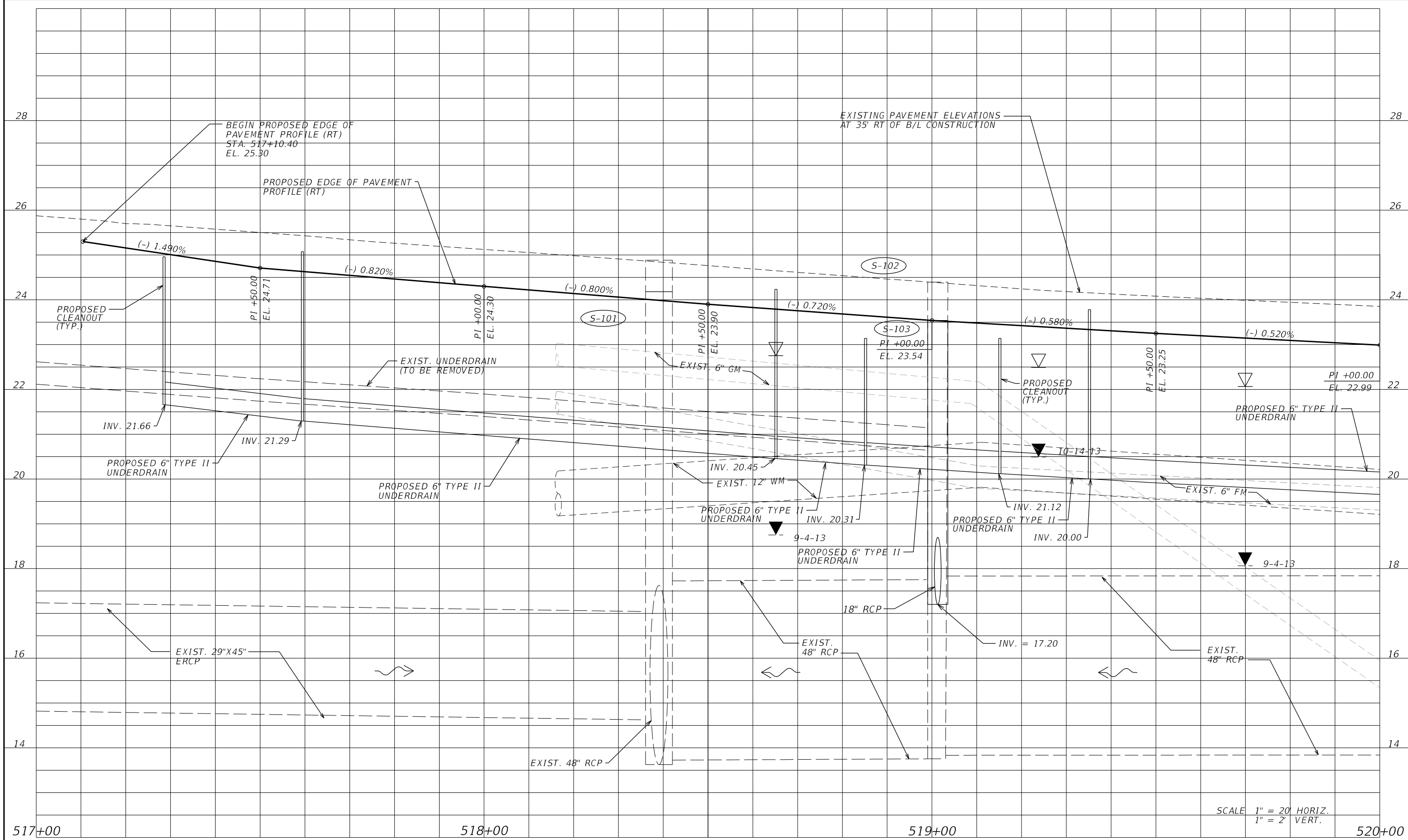
CITY OF WINTER SPRINGS  
 FLORIDA

|        |                      |
|--------|----------------------|
| ROAD   | FINANCIAL PROJECT ID |
| SR 434 | 432642-1-58-01       |

PROFILE SHEET

SHEET NO.  
 13

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

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 301 WEST STATE ROAD 434, SUITE 309  
 WINTER SPRINGS, FLORIDA 32708



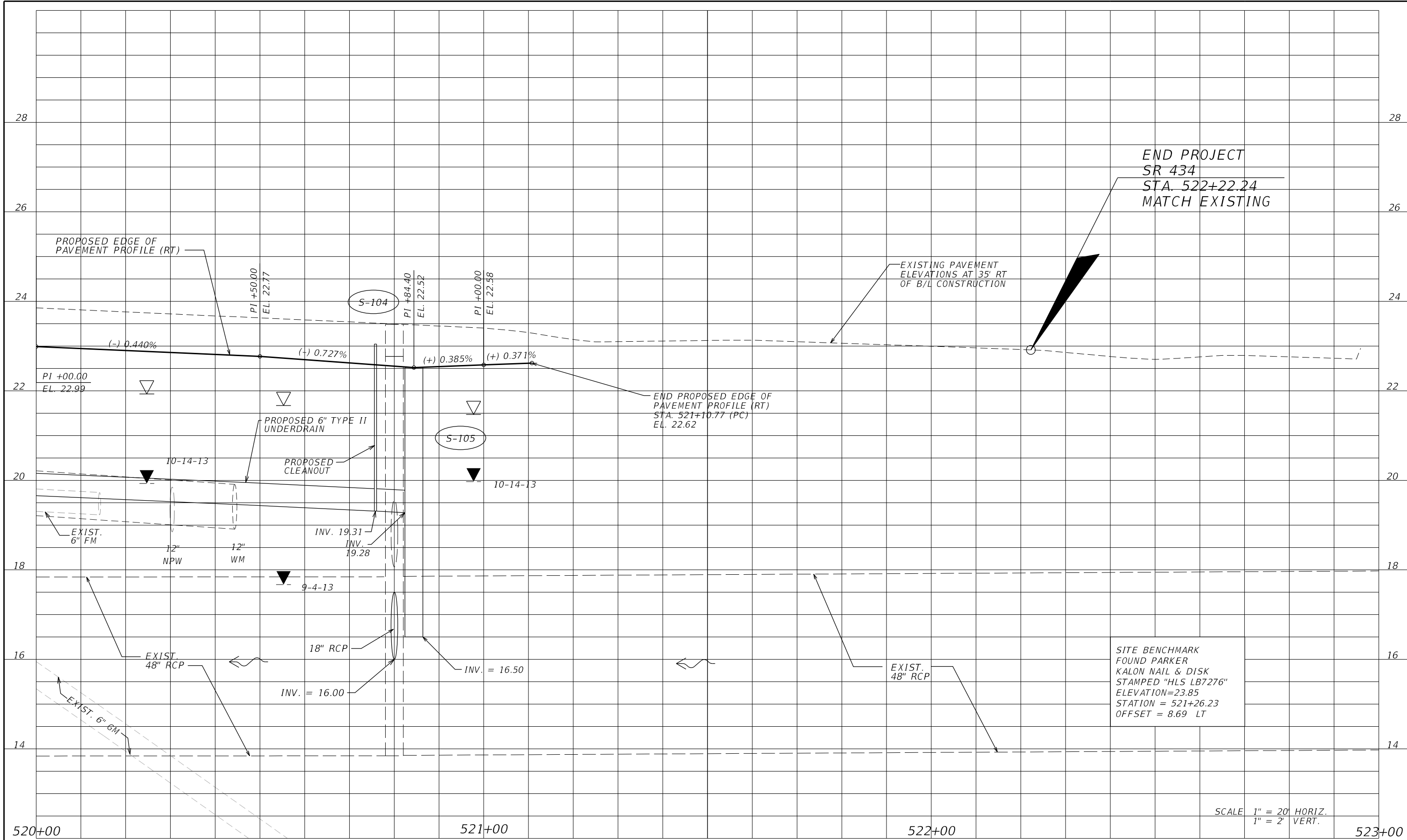
CITY OF WINTER SPRINGS  
 FLORIDA

|        |                      |
|--------|----------------------|
| ROAD   | FINANCIAL PROJECT ID |
| SR 434 | 432642-1-58-01       |

PROFILE SHEET

SHEET NO.  
**14**

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



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

ENGINEER OF RECORD:  
**FURSAN S. MUNJED, P.E.**  
 PROFESSIONAL ENGINEER CERTIFICATE NO. 51446  
 PEGASUS ENGINEERING, LLC  
 301 WEST STATE ROAD 434, SUITE 309  
 WINTER SPRINGS, FLORIDA 32708



CITY OF WINTER SPRINGS  
 FLORIDA

|        |                      |
|--------|----------------------|
| ROAD   | FINANCIAL PROJECT ID |
| SR 434 | 432642-1-58-01       |

PROFILE SHEET

SHEET NO.  
**15**

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





SCALE 1" = 20' HORIZ.  
1" = 2' VERT.

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

ENGINEER OF RECORD:  
**FURSAN S. MUNJED, P.E.**  
 PROFESSIONAL ENGINEER CERTIFICATE NO. 51446  
 PEGASUS ENGINEERING, LLC  
 301 WEST STATE ROAD 434, SUITE 309  
 WINTER SPRINGS, FLORIDA 32708



CITY OF WINTER SPRINGS  
 FLORIDA

|        |                      |
|--------|----------------------|
| ROAD   | FINANCIAL PROJECT ID |
| SR 434 | 432642-1-58-01       |

PROFILE SHEET

SHEET NO.  
**16**

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

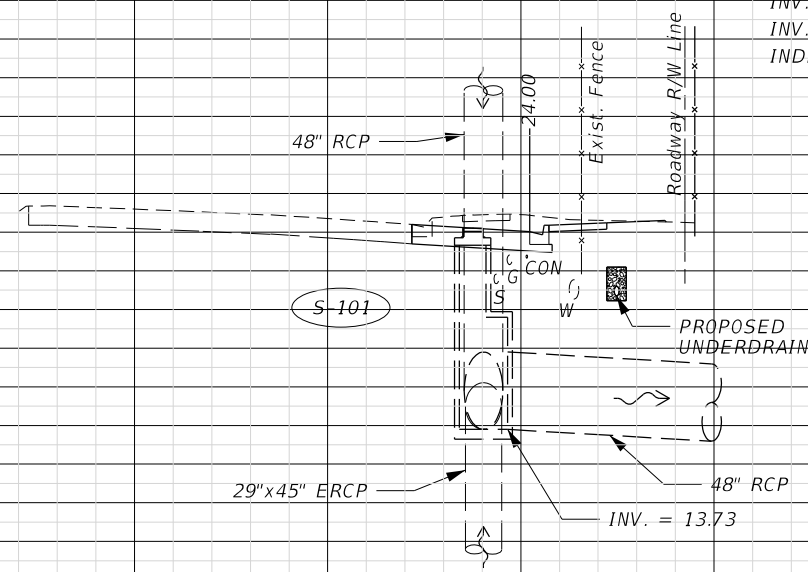
36  
34  
32  
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28  
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4

R/W Line

BLCONST.

S-101

CONSTRUCT MANHOLE TOP TYPE 7 - PARTIAL  
 STATION= 518+38.89  
 OFFSET= 55.05' RT  
 EXISTING TOP ELEV.= 24.88  
 PROPOSED TOP ELEV.= 24.18 (TO MATCH FINISHED PAVEMENT ELEV.)  
 INV. ELEV. = 13.76 E (EXISTING)  
 INV. ELEV. = 14.83 W (EXISTING)  
 INV. ELEV. = 13.73 S (EXISTING)  
 INDEX NO. 425-010, 425-001

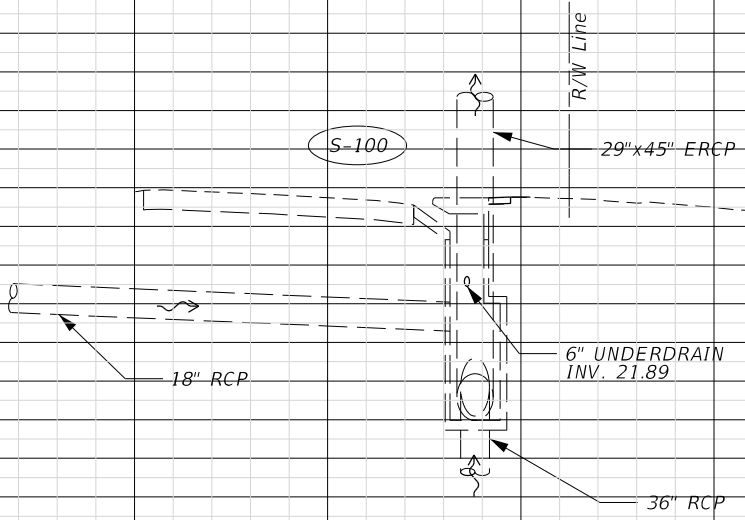


S-101  
518+38.89

BLCONST.

S-100

MODIFY EXISTING CURB INLET  
 STATION= 515+98.81  
 OFFSET= 54.12' RT  
 EXISTING TOP ELEV.= 26.48  
 INV. ELEV. = 19.58 N (EXISTING)  
 INV. ELEV. = 14.96 E (EXISTING)  
 INV. ELEV. = 15.18 W (EXISTING)  
 TOP OF WATER = 19.58  
 FULL OF WATER AND DEBRIS  
 UNABLE TO VERIFY PIPE MATERIAL  
 INV. ELEV. = 21.89 E (PROPOSED 6" UNDERDRAIN)  
 INDEX NO. 440-001



S-100  
515+98.81

SCALE  
 1" = 20' Horizontal  
 1" = 10' Vertical

100 80 60 40 20 0 20 40 60 80 100

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

ENGINEER OF RECORD:  
 BETH K. WHIKEHART, P.E.  
 PROFESSIONAL ENGINEER CERTIFICATE NO. 66649  
 PEGASUS ENGINEERING, LLC  
 301 WEST STATE ROAD 434, SUITE 309  
 WINTER SPRINGS, FLORIDA 32708



CITY OF WINTER SPRINGS  
 FLORIDA  
 ROAD: SR 434  
 FINANCIAL PROJECT ID: 432642-1-58-01

DRAINAGE STRUCTURES  
 SHEET NO. 17

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

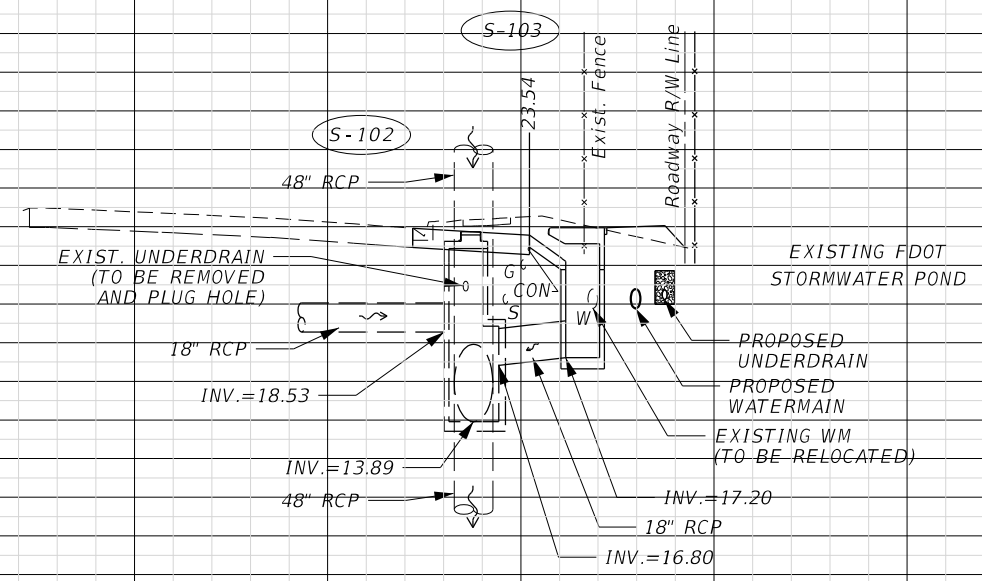
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**S-103**  
 CONSTRUCT TYPE P-1 CURB INLET  
 STATION = 519+00.17  
 OFFSET = 66.40' RT  
 E/P ELEV. = 23.54  
 INV. ELEV. = 17.20 N  
 INDEX NO. 425-010, 425-021

BLCNST.

R/W Line



**S-102**  
 MODIFY EXISTING CURB INLET  
 REMOVE EXISTING CURB INLET TOP  
 CONSTRUCT MANHOLE TOP TYPE 7 - PARTIAL  
 STATION = 519+00.17  
 OFFSET = 54.82' RT  
 EXISTING TOP ELEV. = 24.39  
 PROPOSED TOP ELEV. = 23.72 (TO MATCH FINISHED PAVEMENT ELEV.)  
 INV. ELEV. = 18.53 N (EXISTING)  
 INV. ELEV. = 14.16 E (EXISTING)  
 INV. ELEV. = 13.89 W (EXISTING)  
 INV. ELEV. = 16.80 S (PROPOSED)  
 INDEX NO. 425-010, 425-001

**S-102**  
**S-103**  
 519+00.17

SCALE  
 1" = 20' Horizontal  
 1" = 10' Vertical

100 80 60 40 20 0 20 40 60 80 100

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

ENGINEER OF RECORD:  
 BETH K. WHIKEHART, P.E.  
 PROFESSIONAL ENGINEER CERTIFICATE NO. 66649  
 PEGASUS ENGINEERING, LLC  
 301 WEST STATE ROAD 434, SUITE 309  
 WINTER SPRINGS, FLORIDA 32708



CITY OF WINTER SPRINGS  
 FLORIDA  
 ROAD: SR 434  
 FINANCIAL PROJECT ID: 432642-1-58-01

DRAINAGE STRUCTURES  
 SHEET NO. 18

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

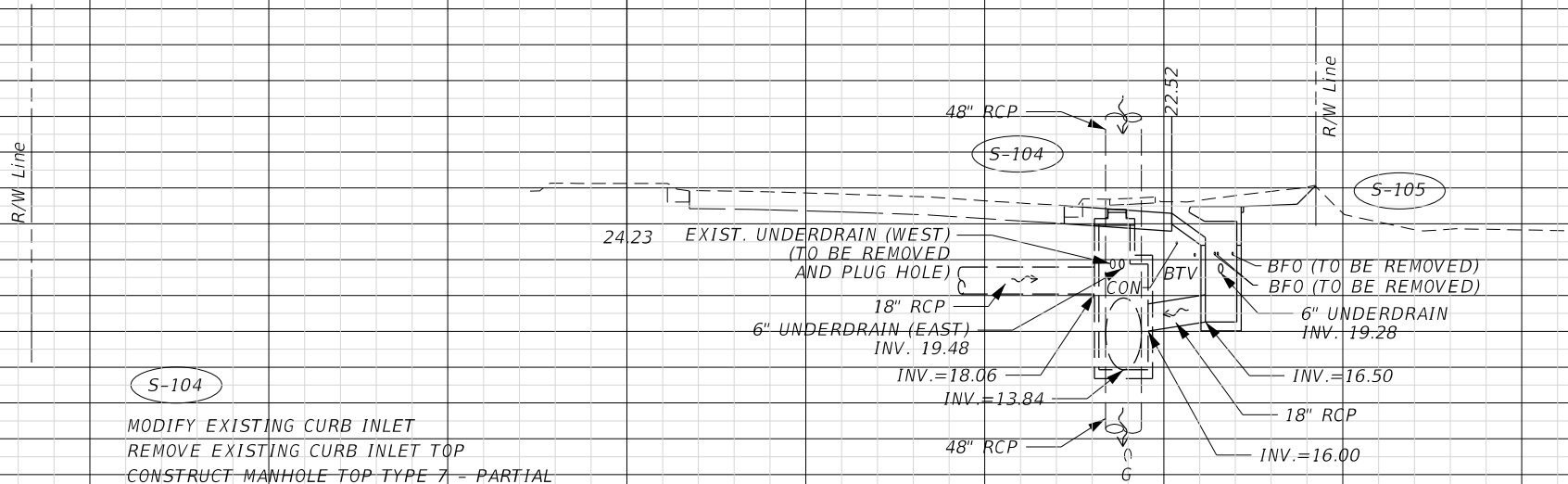
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S-105

CONSTRUCT TYPE P-2 CURB INLET  
 STATION = 520+84.40  
 OFFSET = 66.39' RT  
 E/P ELEV. = 22.52  
 INV. ELEV. = 16.50 NW  
 6" UNDERDRAIN INV. ELEV. = 19.28 (WEST)  
 INDEX NO. 425-010, 425-020, 440-001

BLCONST.



S-104

MODIFY EXISTING CURB INLET  
 REMOVE EXISTING CURB INLET TOP  
 CONSTRUCT MANHOLE TOP TYPE 7 - PARTIAL  
 STATION = 520+79.67  
 OFFSET = 54.69 RT  
 EXISTING TOP ELEV. = 23.48  
 PROPOSED TOP ELEV. = 22.77 (TO MATCH FINISHED PAVEMENT ELEVATION)  
 INV. ELEV. = 13.84 W (EXISTING)  
 INV. ELEV. = 18.06 N (EXISTING)  
 INV. ELEV. = 13.85 E (EXISTING)  
 INV. ELEV. = 16.00 SE (PROPOSED)  
 INDEX NO. 425-010, 425-001

S-104  
520+79.67

S-105  
520+84.40

SCALE  
 1" = 20' Horizontal  
 1" = 10' Vertical

100 80 60 40 20 0 20 40 60 80 100

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

ENGINEER OF RECORD:  
 BETH K. WHIKEHART, P.E.  
 PROFESSIONAL ENGINEER CERTIFICATE NO. 66649  
 PEGASUS ENGINEERING, LLC  
 301 WEST STATE ROAD 434, SUITE 309  
 WINTER SPRINGS, FLORIDA 32708



CITY OF WINTER SPRINGS  
 FLORIDA  
 ROAD: SR 434  
 FINANCIAL PROJECT ID: 432642-1-58-01

DRAINAGE STRUCTURES  
 SHEET NO. 19

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

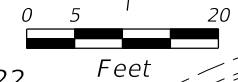
SR 434

520

521

522

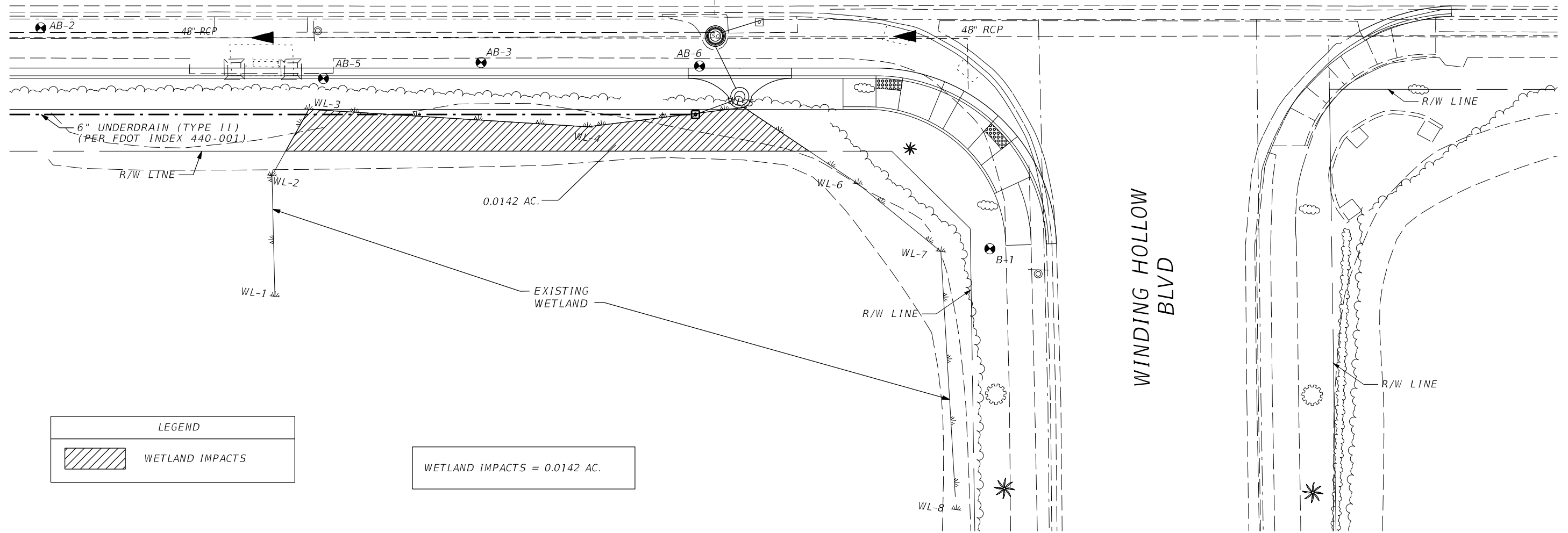
B/L CONST. S.R. 434



N 82° 52' 34" E

SR 434

END PROJECT  
S.R. 434  
STATION 522+22.24  
MATCH EXISTING



| LEGEND |                 |
|--------|-----------------|
|        | WETLAND IMPACTS |

WETLAND IMPACTS = 0.0142 AC.

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

FOR  
INFORMATIONAL  
PURPOSES  
ONLY



|                                   |                      |
|-----------------------------------|----------------------|
| CITY OF WINTER SPRINGS<br>FLORIDA |                      |
| ROAD                              | FINANCIAL PROJECT ID |
| SR 434                            | 432642-1-58-01       |

|                 |  |
|-----------------|--|
| WETLAND IMPACTS |  |
| SHEET NO.       |  |
| 20              |  |

STATE OF FLORIDA  
DEPARTMENT OF TRANSPORTATION  
MATERIALS AND RESEARCH

DATE OF SURVEY : SEPTEMBER 2013  
SURVEY MADE BY : PSI  
SUBMITTED BY : ROBERT A. TROMPKE, P.E.

FINANCIAL PROJECT ID : 432642-1-58-01  
CROSS SECTION SOIL SURVEY FOR THE DESIGN OF ROADS

DISTRICT : 5  
ROAD NO. : SR 434  
COUNTY : SEMINOLE

SECTION : 38  
TOWNSHIP : 20 SOUTH  
RANGE : 30 EAST

SR 434 AND WINDING HOLLOW BOULEVARD

BASELINE BEGINS STA. : 517+10.40      BASELINE ENDS STA. : 522+22.24

| STRATUM NO. | ORGANIC CONTENT |           | MOISTURE CONTENT |                  | SIEVE ANALYSIS RESULTS<br>% PASS |                   |                   |                   |                    |                    | ATTERBERG LIMITS |              |               | DESCRIPTION | CORROSION TEST RESULTS |              |                    |               |             | SUBSTRUCTURE ENVIRONMENTAL CLASSIFICATION |          |       |
|-------------|-----------------|-----------|------------------|------------------|----------------------------------|-------------------|-------------------|-------------------|--------------------|--------------------|------------------|--------------|---------------|-------------|------------------------|--------------|--------------------|---------------|-------------|---|----------|-------|
|             | No. OF TESTS    | % ORGANIC | No. OF TESTS     | MOISTURE CONTENT | No. OF TESTS                     | % PASSING 10 MESH | % PASSING 40 MESH | % PASSING 60 MESH | % PASSING 100 MESH | % PASSING 200 MESH | No. OF TESTS     | LIQUID LIMIT | PLASTIC INDEX |             | AASHTO GROUP           | No. OF TESTS | RESISTIVITY OHM-CM | CHLORIDES PPM | SULFATE PPM | pH  | CONCRETE | STEEL |
| 1           | 6               | 2-3       | 4                | 12-25            | 6                                | -                 | -                 | -                 | -                  | 5-10               | -                | -            | -             | A-3         | -                      | -            | -                  | -             | -           | -   | -        | -     |

EMBANKMENT AND SUBGRADE MATERIAL

STRATA BOUNDARIES ARE APPROXIMATE, MAKE FINAL CHECK AFTER GRADING  
 ▼ WATER TABLE ENCOUNTERED AT TIME OF SURVEY  
 ⊗ ESTIMATED NORMAL SEASONAL HIGH WATER LEVEL AT TIME OF SURVEY.  
 GNE GROUNDWATER LEVEL NOT ENCOUNTERED AT TIME OF SURVEY.

NOTES:

- (1) STRATA BOUNDARIES ARE APPROXIMATE AND REPRESENT SOIL STRATA AT EACH TEST HOLE LOCATION ONLY. ANY STRATUM CONNECTING LINES SHOWN ARE FOR ESTIMATING EARTHWORK ONLY AND DO NOT INDICATE ACTUAL STRATUM LIMITS. SUBSURFACE VARIATIONS BETWEEN BORINGS SHOULD BE ANTICIPATED AS INDICATED IN SECTION 2-4. FOR FURTHER DETAILS SEE SECTION 120-3.
- (2) IF THE SYMBOL "-" IS PRESENT, IT REPRESENTS UNMEASURED SOIL PARAMETERS.
- (3) THE MATERIAL FROM STRATA NO. 1 IS SELECT (S) MATERIAL AND APPEARS SATISFACTORY FOR USE IN THE EMBANKMENT WHEN UTILIZED IN ACCORDANCE WITH INDEX NO. 120-001.
- (4) THE SYMBOL "NP" REPRESENTS NON-PLASTIC.

REVISIONS

| Date | By | Description | Date | By | Description |
|------|----|-------------|------|----|-------------|
|      |    |             |      |    |             |

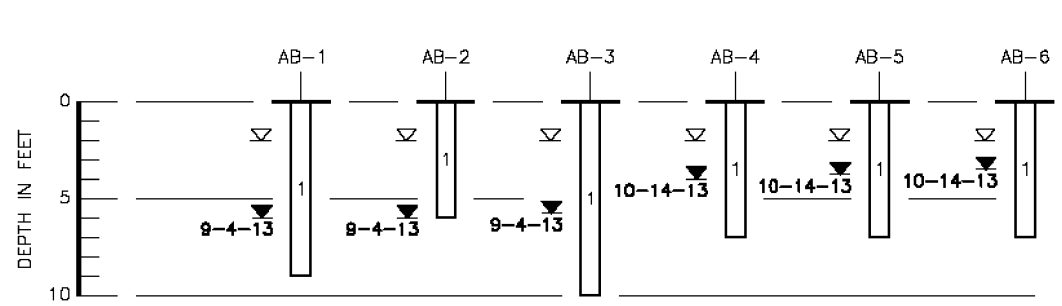
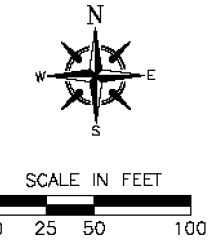
*Professional Service Industries, Inc.*  
1748 33RD STREET  
ORLANDO, FL. 32839  
  
ROBERT A. TROMPKE, P.E. No. 55456

| STATE OF FLORIDA<br>DEPARTMENT OF TRANSPORTATION |          |                      |
|--|----------|----------------------|
| ROAD NO.   | COUNTY   | FINANCIAL PROJECT ID |
| 434  | SEMINOLE | 432642-1-58-01       |

ROADWAY SOIL SURVEY  
TURN LANE AND MAST ARM SIGNAL POLE  
STATE ROAD 434 AND WINDING HOLLOW BOULEVARD  
WINTER SPRINGS, SEMINOLE COUNTY, FLORIDA

SHEET NO.  
**21**

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



- LEGEND**
- 1 Gray-brown fine SAND to fine sand with silt, trace organics, (A-3)
  - (A-3) A.A.S.H.T.O. soil classification group symbol
  - ▼ 9-4-13 Depth to groundwater level in feet with date of reading
  - ▽ Estimated normal seasonal high water table
  - Approximate location of auger boring

| REVISIONS |    |             |      |    |             |
|-----------|----|-------------|------|----|-------------|
| Date      | By | Description | Date | By | Description |
|           |    |             |      |    |             |

**Professional Service Industries, Inc.**  
 174B 33RD STREET  
 ORLANDO, FL. 32839

ROBERT A. TROMPKE, P.E. No. 55456

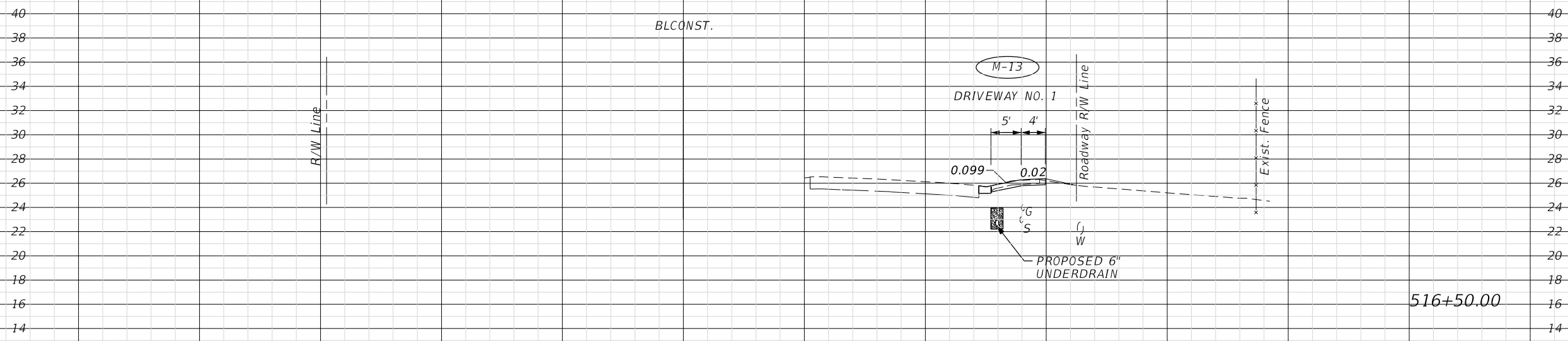
|  |          |                      |
|--|----------|----------------------|
| STATE OF FLORIDA<br>DEPARTMENT OF TRANSPORTATION |          |                      |
| ROAD NO.   | COUNTY   | FINANCIAL PROJECT ID |
| 434  | SEMINOLE | 432642-1-58-01       |

ROADWAY AUGER BORING PROFILES  
 TURN LANE AND MAST ARM SIGNAL POLE  
 STATE ROAD 434 AND WINDING HOLLOW BOULEVARD  
 WINTER SPRINGS, SEMINOLE COUNTY, FLORIDA

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.

| Regular |   | Exc. |   | Embankment |   |
|---------|---|------|---|------------|---|
| A       | V | A    | V | A          | V |



SCALE  
 1" = 20' Horizontal  
 1" = 10' Vertical

BEGIN PROJECT  
 STA. 515+60.00

|   |   |   |   |
|---|---|---|---|
| 2 |   | 1 |   |
| 1 | 3 | 0 | 1 |
| 1 | 1 | 0 | 0 |

100 80 60 40 20 0 20 40 60 80 100 120

REVISIONS

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

ENGINEER OF RECORD:  
 FURSAN S. MUNJED, P.E.  
 PROFESSIONAL ENGINEER CERTIFICATE NO. 51446  
 PEGASUS ENGINEERING, LLC  
 301 WEST STATE ROAD 434, SUITE 309  
 WINTER SPRINGS, FLORIDA 32708



CITY OF WINTER SPRINGS  
 FLORIDA  
 ROAD: SR 434  
 FINANCIAL PROJECT ID: 432642-1-58-01

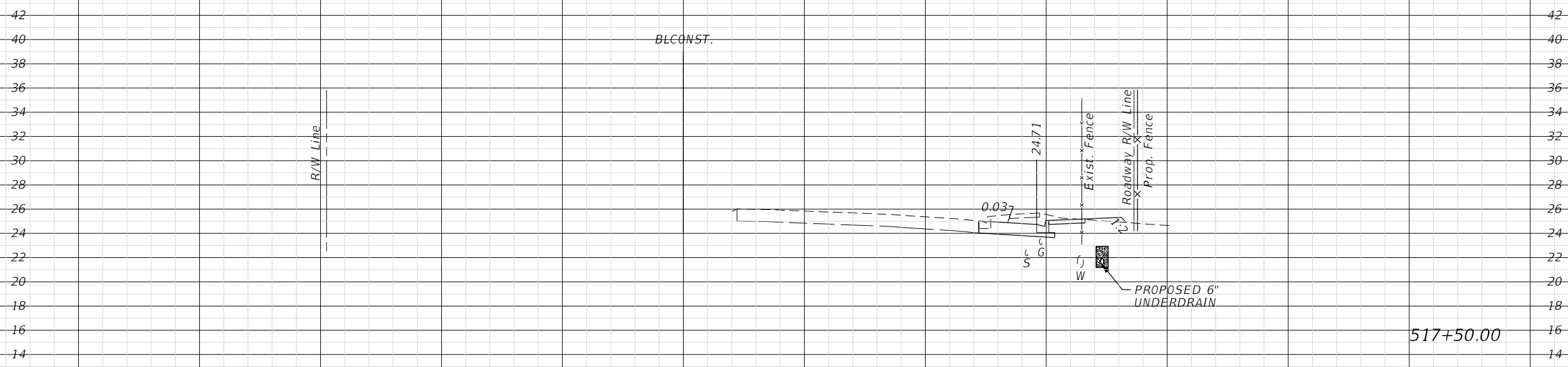
CROSS SECTIONS

SHEET NO.  
 23

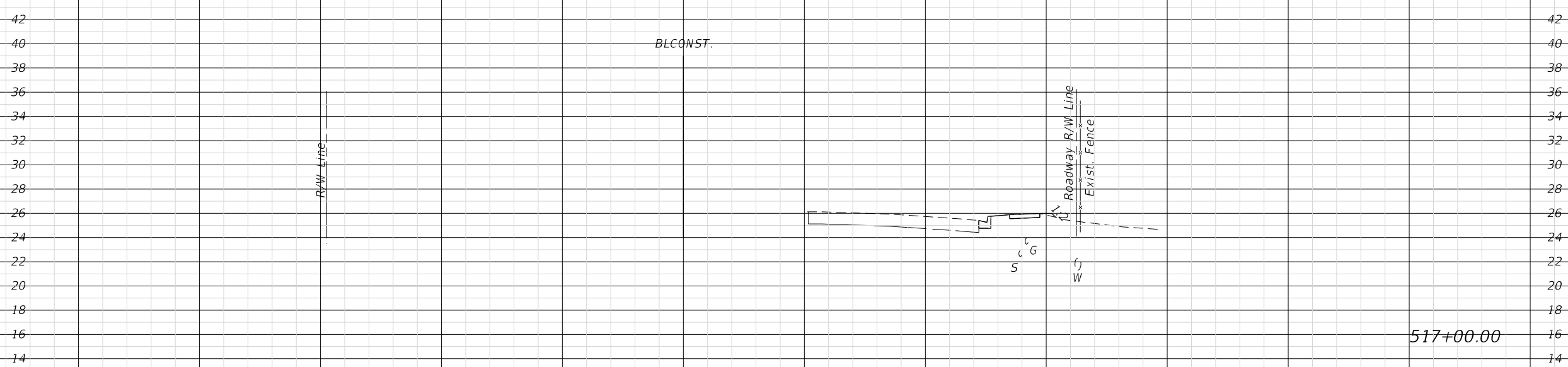
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



| Regular |   | Exc. |   | Embankment |   |
|---------|---|------|---|------------|---|
| A       | V | A    | V | A          | V |



|    |    |   |   |
|----|----|---|---|
| 19 |    | 1 |   |
|    | 18 |   | 2 |



|   |   |   |   |
|---|---|---|---|
| 0 |   | 1 |   |
|   | 2 |   | 2 |

SCALE  
 1" = 20' Horizontal  
 1" = 10' Vertical

100 80 60 40 20 0 20 40 60 80 100 120

REVISIONS

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

ENGINEER OF RECORD:  
 FURSAN S. MUNJED, P.E.  
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 PEGASUS ENGINEERING, LLC  
 301 WEST STATE ROAD 434, SUITE 309  
 WINTER SPRINGS, FLORIDA 32708



CITY OF WINTER SPRINGS  
 FLORIDA

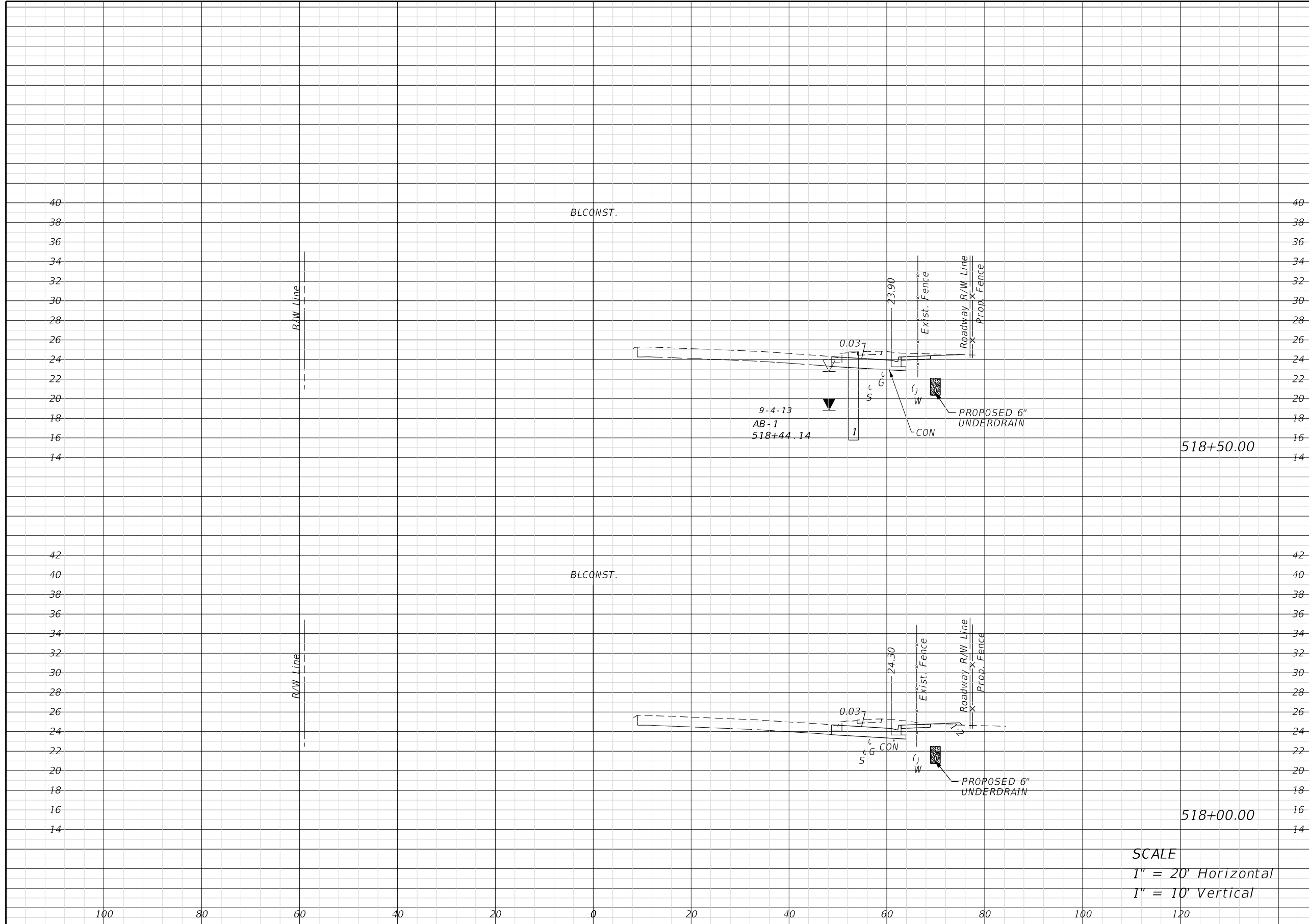
| ROAD   | FINANCIAL PROJECT ID |
|--------|----------------------|
| SR 434 | 432642-1-58-01       |

CROSS SECTIONS

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.

| Regular |   | Exc. |   | Embankment |   |
|---------|---|------|---|------------|---|
| A       | V | A    | V | A          | V |

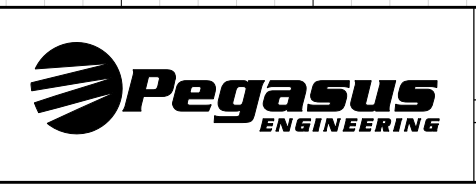


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| 25 | 0 | 0 | 0 |
| 46 | 1 | 1 | 1 |
| 24 | 1 | 1 | 1 |
| 40 | 2 | 2 | 2 |

SCALE  
 1" = 20' Horizontal  
 1" = 10' Vertical

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

ENGINEER OF RECORD:  
**FURSAN S. MUNJED, P.E.**  
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 PEGASUS ENGINEERING, LLC  
 301 WEST STATE ROAD 434, SUITE 309  
 WINTER SPRINGS, FLORIDA 32708



CITY OF WINTER SPRINGS  
 FLORIDA

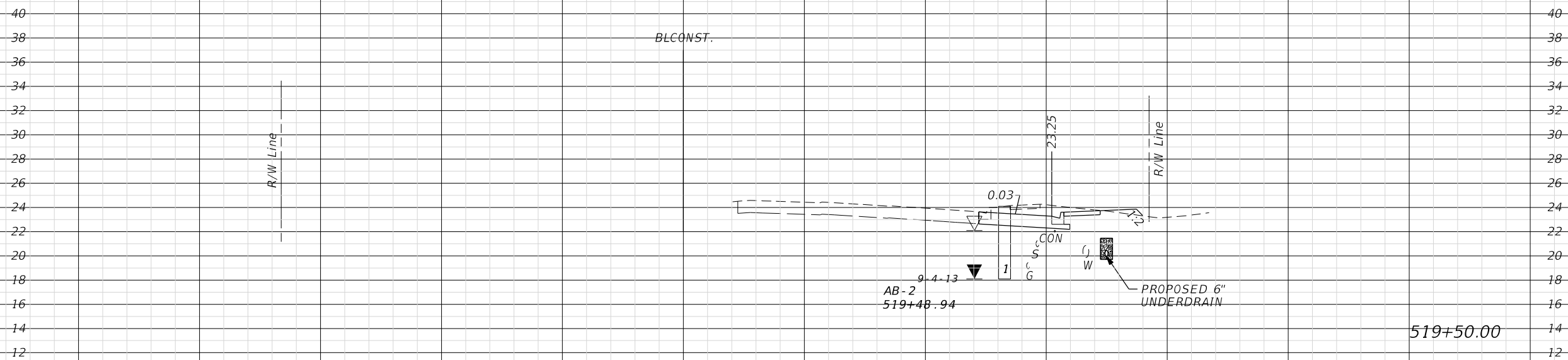
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| ROAD   | FINANCIAL PROJECT ID |
| SR 434 | 432642-1-58-01       |

CROSS SECTIONS

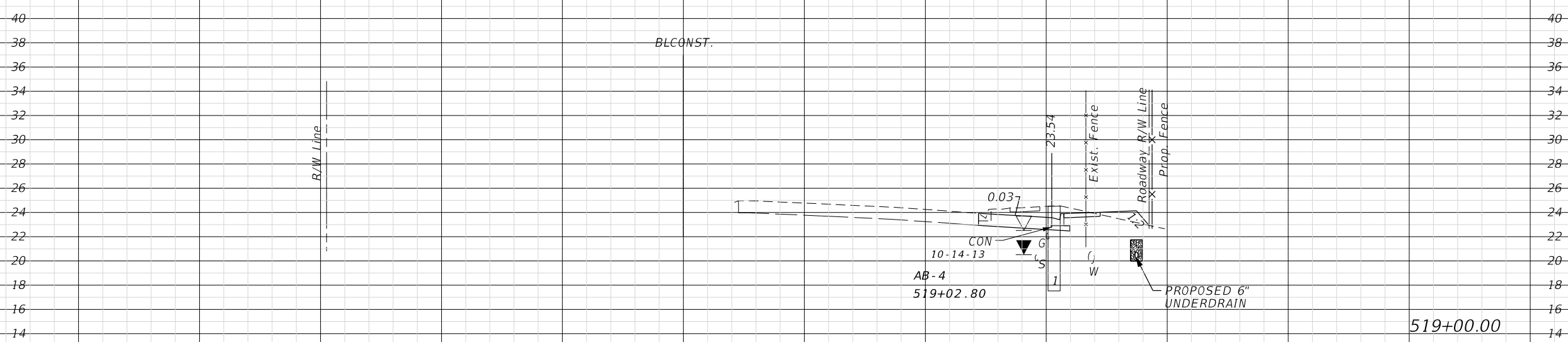
SHEET NO.  
 25

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

| Regular |   | Exc. |   | Embankment |   |
|---------|---|------|---|------------|---|
| A       | V | A    | V | A          | V |



|    |    |   |   |
|----|----|---|---|
| 24 |    | 1 |   |
|    | 45 |   | 5 |



|    |    |   |   |
|----|----|---|---|
| 24 |    | 4 |   |
|    | 46 |   | 4 |

SCALE  
 1" = 20' Horizontal  
 1" = 10' Vertical

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

ENGINEER OF RECORD:  
**FURSAN S. MUNJED, P.E.**  
 PROFESSIONAL ENGINEER CERTIFICATE NO. 51446  
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 301 WEST STATE ROAD 434, SUITE 309  
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CITY OF WINTER SPRINGS  
 FLORIDA

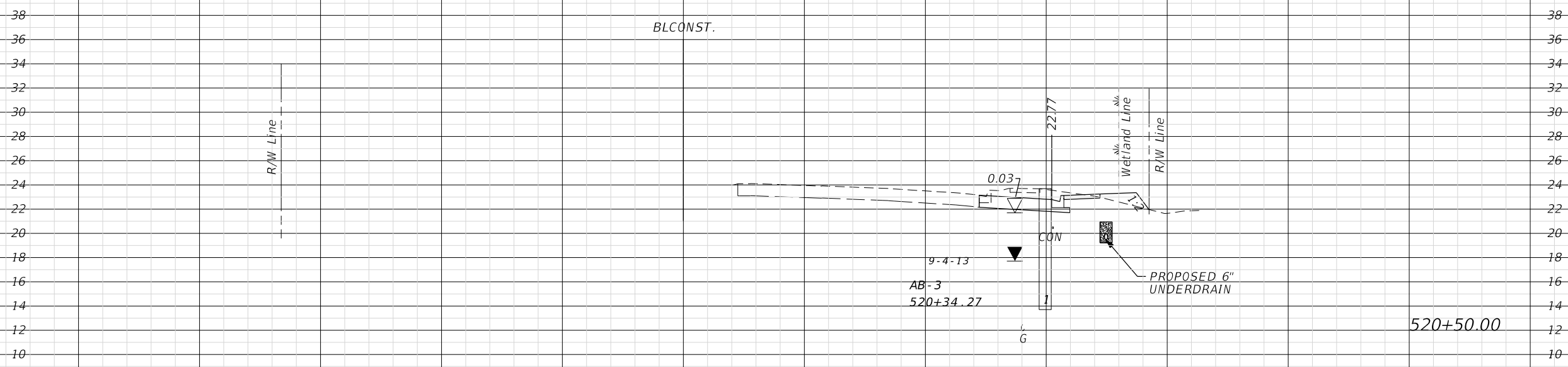
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|--------|----------------------|
| ROAD   | FINANCIAL PROJECT ID |
| SR 434 | 432642-1-58-01       |

CROSS SECTIONS

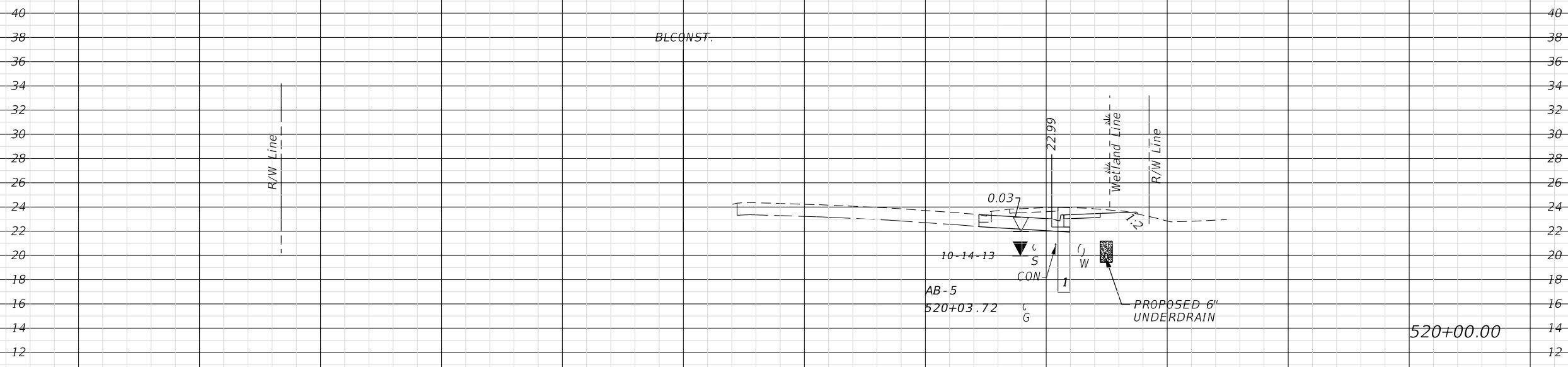
SHEET NO.  
 26

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| Regular |   | Exc. |   | Embankment |   |
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| 23 | 5 | 5 |
| 45 |   |   |



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| 25 | 0 | 1 |
| 46 |   |   |

SCALE  
 1" = 20' Horizontal  
 1" = 10' Vertical

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ENGINEER OF RECORD:  
 FURSAN S. MUNJED, P.E.  
 PROFESSIONAL ENGINEER CERTIFICATE NO. 51446  
 PEGASUS ENGINEERING, LLC  
 301 WEST STATE ROAD 434, SUITE 309  
 WINTER SPRINGS, FLORIDA 32708



CITY OF WINTER SPRINGS  
 FLORIDA

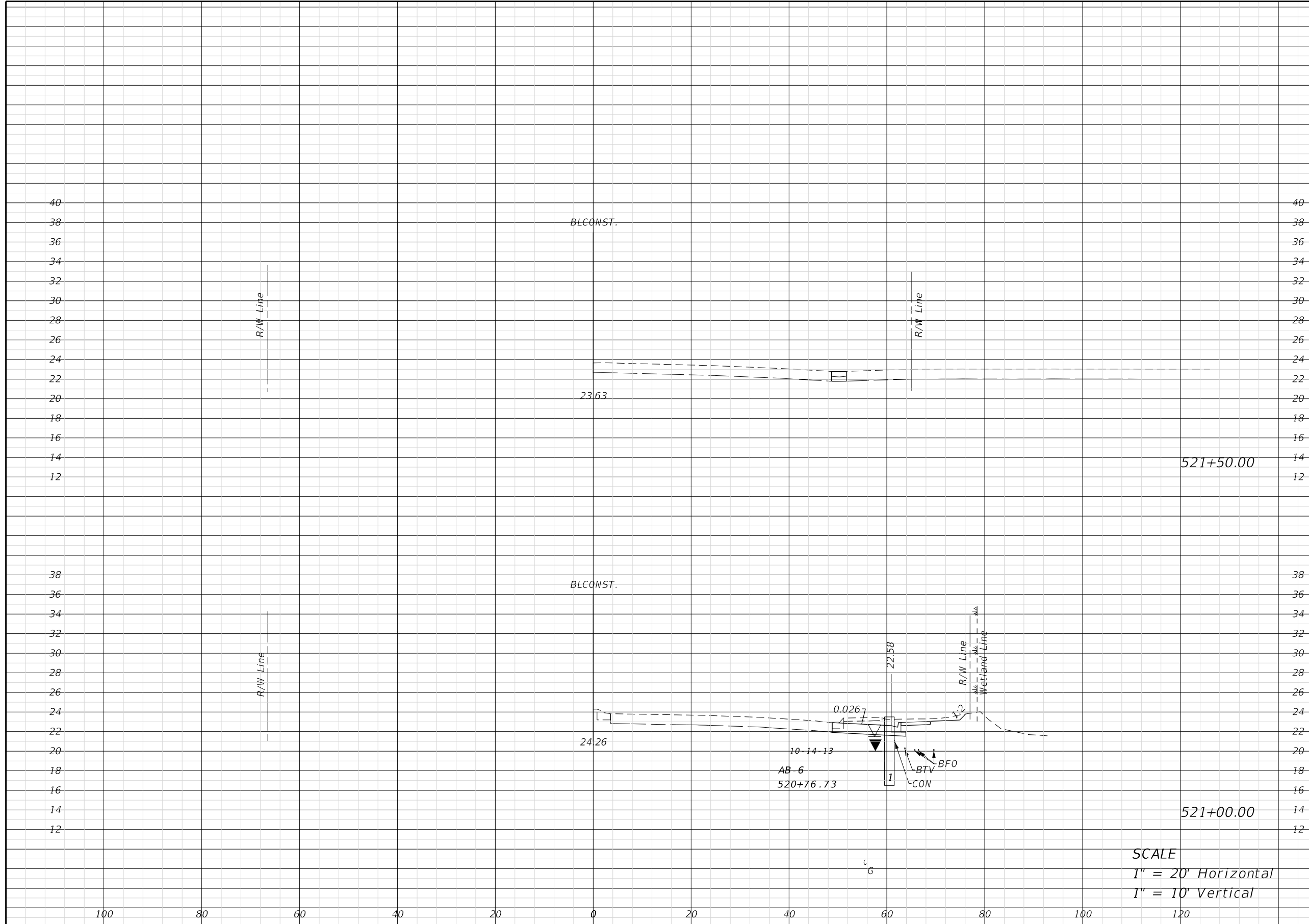
| ROAD   | FINANCIAL PROJECT ID |
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| SR 434 | 432642-1-58-01       |

CROSS SECTIONS

SHEET NO.  
 27

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

| Regular |   | Exc. |   | Embankment |   |
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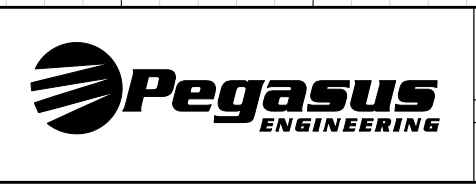


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| 24 |    | 0 |  | 0 |   |
|    | 44 |   |  |   | 5 |

SCALE  
 1" = 20' Horizontal  
 1" = 10' Vertical

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| DATE      | BY | DESCRIPTION | DATE | BY | DESCRIPTION |
|           |    |             |      |    |             |

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 FLORIDA

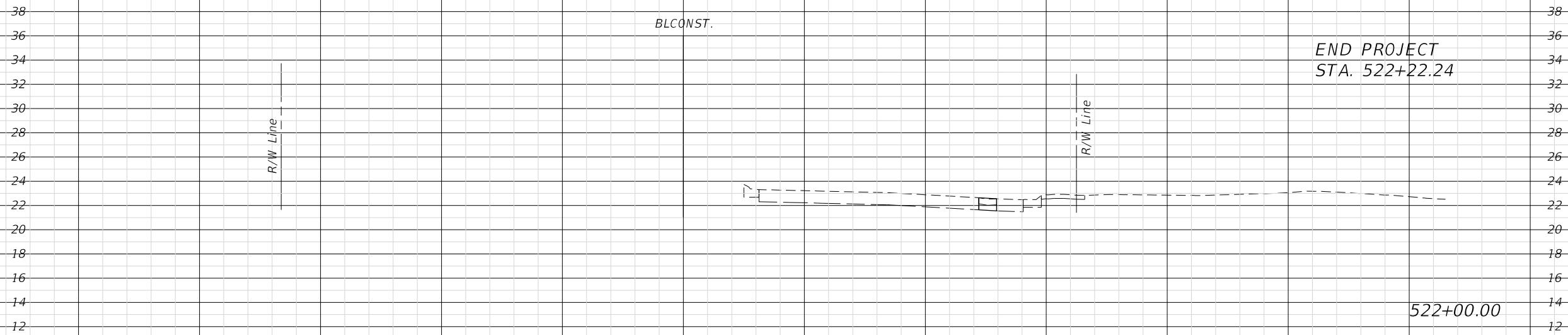
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| ROAD   | FINANCIAL PROJECT ID |
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CROSS SECTIONS

SHEET NO.  
 28

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| Regular |   | Exc. |   | Embankment |   |
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END PROJECT  
STA. 522+22.24

SCALE  
1" = 20' Horizontal  
1" = 10' Vertical

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CROSS SECTIONS

SHEET NO.  
29

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

THE FOLLOWING NARRATIVE OF THE STORMWATER POLLUTION PREVENTION PLAN CONTAINS REFERENCES TO THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, THE STANDARD PLANS, AND OTHER SHEETS OF THESE CONSTRUCTION PLANS. THE FIRST SHEET OF THE CONSTRUCTION PLANS (CALLED THE KEY SHEET) CONTAINS AN INDEX TO THE OTHER SHEETS. THE COMPLETE STORMWATER POLLUTION PREVENTION PLAN INCLUDES SEVERAL ITEMS: THIS NARRATIVE DESCRIPTION, THE DOCUMENTS REFERENCED IN THIS NARRATIVE, THE CONTRACTOR'S APPROVED SEDIMENT AND EROSION CONTROL PLAN REQUIRED BY SPECIFICATION SECTION 104, AND REPORTS OF INSPECTIONS MADE DURING CONSTRUCTION.

1.0 SITE DESCRIPTION:

1.A. NATURE OF CONSTRUCTION ACTIVITY:

THE PROJECT CONSISTS OF THE ADDITION OF A 400 FOOT EASTBOUND RIGHT TURN LANE ALONG SR 434 AT WINDING HOLLOW BLVD. IN SEMINOLE COUNTY. THE PROJECT ALSO INCLUDES SIDEWALK, S&PM, SIGNALIZATION, AND UTILITY IMPROVEMENTS.

TOTAL DISTANCE OF APPROXIMATELY 700 FEET

1.B. SEQUENCE OF MAJOR SOIL DISTURBING ACTIVITIES:

IN THE SEDIMENT AND EROSION CONTROL PLAN, PROVIDE A DETAILED SEQUENCE OF CONSTRUCTION FOR ALL CONSTRUCTION ACTIVITIES. FOLLOW THE SEQUENCE OF MAJOR ACTIVITIES DESCRIBED BELOW, UNLESS A SEQUENCE IS PROPOSED THAT IS EQUAL OR BETTER AT CONTROLLING EROSION AND TRAPPING SEDIMENT AND IS APPROVED BY THE ENGINEER. FOR EACH CONSTRUCTION PHASE, INSTALL PERIMETER CONTROLS AFTER CLEARING AND GRUBBING NECESSARY FOR INSTALLATION OF CONTROLS BUT BEFORE BEGINNING OTHER WORK FOR THE CONSTRUCTION PHASE. REMOVE PERIMETER CONTROLS ONLY AFTER ALL UPSTREAM AREAS ARE STABILIZED.

CONSTRUCTION PHASING IS DETAILED IN THE CONSTRUCTION PLANS.

1.C. AREA ESTIMATES:

TOTAL SITE AREA: 0.51 ACRES

TOTAL AREA TO BE DISTURBED: 0.33 ACRES

1.D. RUNOFF DATA:

RUNOFF COEFFICIENTS:

BEFORE: 0.62  
DURING: 0.86  
AFTER: 0.78

SOILS DATA: THE RESULTS OF THE SOIL BORINGS ALONG THE ROADWAY ARE SHOWN IN THE ROADWAY SOIL SURVEY SHEET(S).

OUTFALL INFORMATION:

THERE IS 1 OUTFALL

#1 DESCRIPTION: FDOT POND 1B

LOCATION: LATITUDE 28°42'15" N / LONGITUDE 81°16'56" W.  
EST. DRAINAGE AREA SIZE: 13.1 ACRES.  
RECEIVING WATER NAME: GEE CREEK.

I.E. SITE MAP:

THE CONSTRUCTION PLANS ARE BEING USED AS THE SITE MAPS. THE LOCATION OF THE REQUIRED INFORMATION IS DESCRIBED BELOW. THE SHEET NUMBERS FOR THE PLAN SHEETS REFERENCED ARE IDENTIFIED ON THE KEY SHEET OF THESE CONSTRUCTION PLANS.

\* APPROXIMATE SLOPES: THE SLOPES OF THE SITE CAN BE SEEN IN THE CROSS SECTION SHEETS.

\* AREAS OF SOIL DISTURBANCE: THE AREAS TO BE DISTURBED ARE INDICATED ON THE PLAN SHEETS AND THE CROSS SECTION SHEETS. ANY AREAS WHERE PERMANENT FEATURES ARE SHOWN TO BE CONSTRUCTED ABOVE OR BELOW GROUND WILL BE DISTURBED.

\* AREAS NOT TO BE DISTURBED: SHOWN IN THE CONSTRUCTION PLANS.

\* LOCATIONS OF TEMPORARY CONTROLS: THESE ARE SHOWN ON THE EROSION CONTROL SHEET. TABLES PROVIDING SUMMARIES OF TEMPORARY EROSION AND SEDIMENT CONTROL ITEMS ARE PROVIDED IN THE SUMMARY OF QUANTITY SHEETS.

\* LOCATIONS OF PERMANENT CONTROLS: THE STORM DRAIN SYSTEM IS THE PRIMARY PERMANENT STORMWATER MANAGEMENT CONTROLS. THE LOCATION OF SOD IS SHOWN ON THE TYPICAL SECTION.

\* AREAS TO BE STABILIZED: TEMPORARY STABILIZATION PRACTICES ARE SHOWN IN THE SAME LOCATION AS THE TEMPORARY CONTROLS MENTIONED ABOVE. PERMANENT STABILIZATION IS SHOWN ON THE TYPICAL SECTION SHEETS AND THE PLAN SHEETS.

\* SURFACE WATERS: NONE.

\* DISCHARGE POINTS TO SURFACE WATERS: NONE.

1.F. RECEIVING WATERS:

SEE ITEM 1.D FOR THE OUTFALL LOCATIONS AND RECEIVING WATER NAMES. THERE IS ONE WETLAND AREA ON THE PROJECT SITE.

2.0 CONTROLS:

2.A. EROSION AND SEDIMENT CONTROLS:

IN THE SEDIMENT AND EROSION CONTROL PLAN, DESCRIBE THE PROPOSED STABILIZATION AND STRUCTURAL PRACTICES BASED ON THE CONTRACTOR'S PROPOSED TEMPORARY TRAFFIC CONTROL (TTC) PLAN. THE FOLLOWING RECOMMENDED GUIDELINES ARE BASED ON THE TEMPORARY TRAFFIC CONTROL PLAN OUTLINED IN THE CONSTRUCTION PLANS. WHEN FOLLOWING THE TEMPORARY TRAFFIC CONTROL PLAN OUTLINED IN THESE CONSTRUCTION PLANS, THE CONTRACTOR MAY CHOOSE TO ACCEPT THE FOLLOWING GUIDELINES OR MODIFY THEM IN THE SEDIMENT AND EROSION CONTROL PLAN, SUBJECT TO APPROVAL BY THE ENGINEER. AS WORK PROGRESSES, MODIFY THE PLAN TO ADAPT TO SEASONAL VARIATIONS, CHANGES IN CONSTRUCTION ACTIVITIES, AND THE NEED FOR BETTER PRACTICES.

FOR EACH CONSTRUCTION PHASE, INSTALL PERIMETER CONTROLS AFTER CLEARING AND GRUBBING NECESSARY FOR INSTALLATION OF CONTROLS BUT BEFORE BEGINNING OTHER WORK FOR THE CONSTRUCTION PHASE. REMOVE PERIMETER CONTROLS ONLY AFTER ALL UPSTREAM AREAS ARE STABILIZED.

2.A.1 STABILIZATION PRACTICES:

IN THE SEDIMENT AND EROSION CONTROL PLAN, DESCRIBE THE STABILIZATION PRACTICES PROPOSED TO CONTROL EROSION. INITIATE ALL STABILIZATION MEASURES AS SOON AS PRACTICAL, BUT IN NO CASE MORE THAN 7 DAYS AFTER CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. THE STABILIZATION PRACTICES SHALL INCLUDE AT LEAST THE FOLLOWING, UNLESS OTHERWISE APPROVED BY THE ENGINEER.

TEMPORARY:

\* ARTIFICIAL COVERINGS IN ACCORDANCE WITH SPECIFICATION SECTION 104.

\* TURF AND SOD IN ACCORDANCE WITH SPECIFICATION SECTION 104.

PERMANENT:

\* ASPHALT OR CONCRETE SURFACE.

\* SOD IN ACCORDANCE WITH SPECIFICATION SECTION 570.

2.A.2 STRUCTURAL PRACTICES:

IN THE SEDIMENT AND EROSION CONTROL PLAN, DESCRIBE THE PROPOSED STRUCTURAL PRACTICES TO CONTROL OR TRAP SEDIMENT AND OTHERWISE PREVENT THE DISCHARGE OF POLLUTANTS FROM EXPOSED AREAS OF THE SITE. SEDIMENT CONTROLS SHALL BE IN PLACE BEFORE DISTURBING SOIL UPSTREAM OF THE CONTROL. THE STRUCTURAL PRACTICES SHALL INCLUDE AT LEAST THE FOLLOWING, UNLESS OTHERWISE APPROVED BY THE ENGINEER:

TEMPORARY:

\* SEDIMENT BARRIERS IN ACCORDANCE WITH DESIGN SPECIFICATION SECTION 104, AND FDEP EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEWER MANUAL.

\* INLET PROTECTION IN ACCORDANCE WITH FDEP EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEWER MANUAL, AND LOCATIONS LISTED IN THE PLANS.

PERMANENT:

\* STORMSEWER SYSTEM.

\* SOD.

2.B STORMWATER MANAGEMENT:

MAINTAIN EXISTING STORMSEWER SYSTEMS.  
DESILT STORMSEWER SYSTEMS FOLLOWING CONSTRUCTION ACTIVITIES

REVISIONS

| DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION |
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|      |    |             |      |    |             |

ENGINEER OF RECORD:  
BETH K. WHIKEHART, P.E.  
PROFESSIONAL ENGINEER CERTIFICATE NO. 66649  
PEGASUS ENGINEERING, LLC  
301 WEST STATE ROAD 434, SUITE 309  
WINTER SPRINGS, FLORIDA 32708



CITY OF WINTER SPRINGS  
FLORIDA

| ROAD   | FINANCIAL PROJECT ID |
|--------|----------------------|
| SR 434 | 432642-1-58-01       |

STORMWATER POLLUTION  
PREVENTION PLAN

SHEET  
NO.

30

2.C OTHER CONTROLS:

2.C.1 WASTE DISPOSAL:

IN THE SEDIMENT AND EROSION CONTROL PLAN, DESCRIBE THE PROPOSED METHODS TO PREVENT THE DISCHARGE OF SOLID MATERIALS, INCLUDING BUILDING MATERIALS, TO WATERS OF THE UNITED STATES. THE PROPOSED METHODS SHALL INCLUDE AT LEAST THE FOLLOWING, UNLESS OTHERWISE APPROVED BY THE ENGINEER:

- \* PROVIDING LITTER CONTROL AND COLLECTION WITHIN THE PROJECT SITE DURING CONSTRUCTION ACTIVITIES.
- \* DISPOSING OF ALL FERTILIZER OR OTHER CHEMICAL CONTAINERS ACCORDING TO EPA'S STANDARD PRACTICES AS DETAILED BY THE MANUFACTURER.
- \* DISPOSING OF SOLID MATERIALS INCLUDING BUILDING AND CONSTRUCTION MATERIALS OFF THE PROJECT SITE BUT NOT IN SURFACE WATERS, OR WETLANDS.

2.C.2 OFF-SITE VEHICLE TRACKING & DUST CONTROL:

IN THE SEDIMENT AND EROSION CONTROL PLAN, DESCRIBE THE PROPOSED METHODS FOR MINIMIZING OFFSITE VEHICLE TRACKING OF SEDIMENTS AND GENERATING DUST. INCLUDE IN THE PROPOSED METHODS AT LEAST THE FOLLOWING, UNLESS OTHERWISE APPROVED BY THE ENGINEER:

- \* COVERING LOADED HAUL TRUCKS WITH TARPULINS.
- \* REMOVING EXCESS DIRT FROM ROADS DAILY.
- \* STABILIZING CONSTRUCTION ENTRANCES ACCORDING TO THE FDEP EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEWER MANUAL.
- \* USING ROADWAY SWEEPERS DURING DUST GENERATING ACTIVITIES SUCH AS EXCAVATION AND MILLING OPERATIONS.

2.C.3 STATE AND LOCAL REGULATIONS FOR WASTE DISPOSAL, SANITARY SEWER, OR SEPTIC TANK REGULATIONS:

IN THE SPECIFICATION SECTION 104, EROSION CONTROL PLAN, DESCRIBE THE PROPOSED PROCEDURES TO COMPLY WITH APPLICABLE STATE AND LOCAL REGULATIONS FOR WASTE DISPOSAL, AND SANITARY SEWER OR SEPTIC SYSTEMS.

- \* IF APPLICABLE, ALL SANITARY WASTE MATERIAL SHALL BE REMOVED WITH VAC TRUCKS.

2.C.4 FERTILIZERS AND PESTICIDES:

IN THE SEDIMENT AND EROSION CONTROL PLAN, DESCRIBE THE PROCEDURES FOR APPLYING FERTILIZERS AND PESTICIDES. THE PROPOSED PROCEDURES SHALL COMPLY WITH APPLICABLE SUBSECTIONS OF SECTION 982 OF THE SPECIFICATIONS.

2.C.5 TOXIC SUBSTANCES:

IN THE SEDIMENT AND EROSION CONTROL PLAN, PROVIDE A LIST OF TOXIC SUBSTANCES THAT ARE LIKELY TO BE USED ON THE JOB AND PROVIDE A PLAN ADDRESSING THE GENERATION, APPLICATION, MIGRATION, STORAGE, AND DISPOSAL OF THESE SUBSTANCES.

2.D.4 APPROVED STATE AND LOCAL PLANS AND PERMITS:

- \* ST. JOHNS RIVER WATER MANAGEMENT ENVIRONMENTAL RESOURCE PERMIT NO. 22353-8, DATED AUGUST 7, 2019.
- \* GENERAL PERMIT FOR CONSTRUCTION OF WATER MAIN EXTENSIONS, PERMIT NO. 0125715-090 DSGP, DATED 01/25/2024.
- \* CONTRACTOR SHALL OBTAIN A FDEP NPDES PERMIT AS NEEDED FOR CONSTRUCTION.

3.0 MAINTENANCE:

- IN THE SEDIMENT AND EROSION CONTROL PLAN, PROVIDE A PLAN FOR MAINTAINING ALL EROSION AND SEDIMENT CONTROLS THROUGHOUT CONSTRUCTION. THE MAINTENANCE PLAN SHALL AT A MINIMUM, COMPLY WITH THE FOLLOWING:
- \* SILT FENCE: MAINTAIN PER SPECIFICATION SECTION 104. ANTICIPATE REPLACING SILT FENCE ON 12 MONTH INTERVALS.
  - \* SEDIMENT BARRIERS : REMOVE SEDIMENT AS PER MANUFACTURER'S RECOMMENDATIONS OR WHEN WATER PONDS IN UNACCEPTABLE AMOUNTS OR AREAS.

4.0 INSPECTIONS:

QUALIFIED PERSONNEL SHALL INSPECT THE FOLLOWING ITEMS AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.50 INCH OR GREATER.

TO COMPLY, INSTALL AND MAINTAIN RAIN GAUGES AND RECORD THE DAILY RAINFALL. WHERE SITES HAVE BEEN PERMANENTLY STABILIZED, CONDUCT INSPECTIONS AT LEAST ONCE EVERY MONTH. ALSO INSPECT THAT CONTROLS INSTALLED IN THE FIELD AGREE WITH THE LATEST STORMWATER POLLUTION PREVENTION PLAN. INSPECTIONS SHOULD INCLUDE:

- \* POINTS OF DISCHARGE TO WATERS OF THE UNITED STATES.
- \* POINTS OF DISCHARGE TO MUNICIPAL SEPARATE STORM DRAIN SYSTEMS.
- \* DISTURBED AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED.
- \* AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION.
- \* STRUCTURAL CONTROLS.
- \* STORMWATER MANAGEMENT SYSTEMS.
- \* LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE.

INITIATE REPAIRS IMMEDIATELY WHEN INSPECTIONS INDICATE THAT ITEMS ARE NOT IN GOOD WORKING ORDER.

IF INSPECTIONS INDICATE THAT THE INSTALLED STABILIZATION AND STRUCTURAL PRACTICES ARE NOT SUFFICIENT TO MINIMIZE EROSION, RETAIN SEDIMENT, AND PREVENT DISCHARGING POLLUTANTS, PROVIDE ADDITIONAL MEASURES, AS APPROVED BY THE ENGINEER.

5.0 NON-STORMWATER DISCHARGES:

IN THE SPECIFICATION SECTION 104 EROSION CONTROL PLAN, IDENTIFY ALL ANTICIPATED NON-STORMWATER DISCHARGES (EXCEPT FLOWS FROM FIRE FIGHTING ACTIVITIES). DESCRIBE THE PROPOSED MEASURES TO PREVENT POLLUTION OF THESE NON-STORMWATER DISCHARGES. IF CONTAMINATED SOIL OR GROUNDWATER IS ENCOUNTERED, CONTACT DISTRICT HAZARDOUS MATERIALS COORDINATOR, (PHONE 386-943-5411).

- \* POTENTIAL FOR POTABLE WATER ON LAND DISCHARGES DUE TO WATER MAIN RELOCATION ACTIVITIES.

REVISIONS

| DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION |
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ENGINEER OF RECORD:  
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| SR 434 | 432642-1-58-01       |

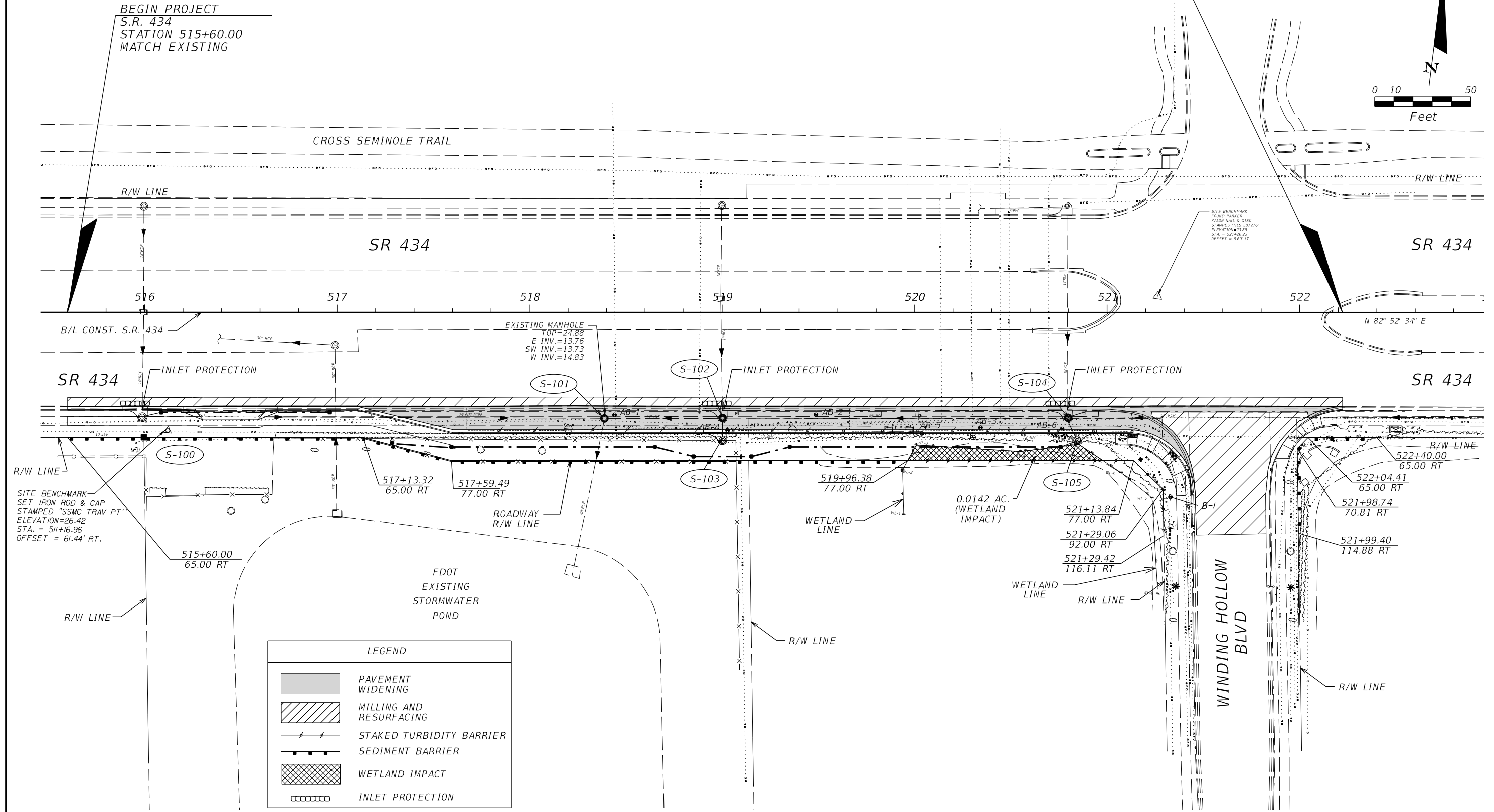
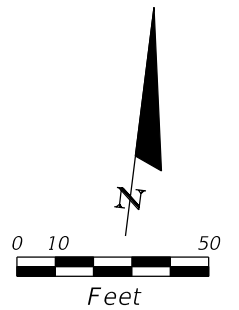
STORMWATER POLLUTION  
 PREVENTION PLAN

SHEET  
 NO.  
**31**



END PROJECT  
S.R. 434  
STATION 522+22.24  
MATCH EXISTING

BEGIN PROJECT  
S.R. 434  
STATION 515+60.00  
MATCH EXISTING



| LEGEND |                          |
|--------|--------------------------|
|        | PAVEMENT WIDENING        |
|        | MILLING AND RESURFACING  |
|        | STAKED TURBIDITY BARRIER |
|        | SEDIMENT BARRIER         |
|        | WETLAND IMPACT           |
|        | INLET PROTECTION         |

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| DATE      | BY | DESCRIPTION | DATE | BY | DESCRIPTION |
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| CITY OF WINTER SPRINGS<br>FLORIDA |                      |
| ROAD                              | FINANCIAL PROJECT ID |
| SR 434                            | 432642-1-58-01       |

EROSION CONTROL PLAN

SHEET NO.  
32

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

**TEMPORARY TRAFFIC CONTROL PLANS GENERAL NOTES**

- EXISTING STREET NAME SIGNS SHALL REMAIN VISIBLE DURING THE DURATION OF CONSTRUCTION OPERATIONS IN ORDER TO FACILITATE EMERGENCY VEHICLE TRAFFIC.
- THE CONTRACTOR WILL BE REQUIRED TO SUBMIT A WRITTEN PLAN TO THE ENGINEER WHICH DETAILS EACH ACTIVITY INVOLVED IN THE LANE CLOSURE. THE PLAN SHALL INCLUDE BACK-UP PLANS FOR ACTIVITIES CRITICAL TO RE-OPENING THE LANES TO TRAFFIC. THE BACK-UP PLAN SHALL INCLUDE THE ACTIVITIES OF ALL SUBCONTRACTORS' OPERATIONS AS WELL AS THE PRIME CONTRACTOR'S. NO LANE CLOSURE WILL BE ALLOWED WITHOUT A PLAN TO ACHIEVE RE-OPENING. AN EXAMPLE OF AN ACCEPTABLE BACK-UP PLAN WOULD INCLUDE THE CONTRACTOR CHOOSING TO HAVE TEMPORARY TAPE ON HAND.
- IF EXISTING SIGNS SHOWN IN THE PLANS TO BE RELOCATED ARE DAMAGED BEYOND USE, AS DETERMINED BY THE ENGINEER, THEY SHALL BE REPLACED AT THE CONTRACTOR EXPENSE (TO CURRENT STANDARDS).
- TTCP POSTED SPEED LIMIT SHALL BE 45 MPH.

**LANE CLOSURE NOTES**

- TRAFFIC CONTROL SHALL BE MAINTAINED IN ACCORDANCE WITH FDOT STANDARD INDEX PLANS, INDEX 102-600 SERIES.
- LANE CLOSURES WILL NOT BE PERMITTED BETWEEN THE HOURS OF 7:00 AM TO 9:00 PM.
- THE CONTRACTOR MUST PROVIDE NOTIFICATION TO LAW ENFORCEMENT AGENCIES, LOCAL FIRE DEPARTMENTS, AND EMERGENCY MEDICAL SERVICES FOR LANE CLOSURES IN EXCESS OF TWO (2) HOURS IN DURATION.
- ALL LANE CLOSURES REQUESTS MUST INCLUDE CONSIDERATION FOR SPECIAL EVENTS SUCH AS MAJOR COMMUNITY EVENTS, SPORTING EVENTS, AND CONCERTS.
- A MINIMUM OF ONE WEEK IN ADVANCE NOTIFICATION OF ANY PROPOSED LANE CLOSURE EXCEEDING TWO HOURS IN DURATION MUST BE PROVIDED TO THE LOCAL OPERATIONS CENTER AND DISTRICT PUBLIC INFORMATION OFFICE. TWO WEEK NOTIFICATION IS RECOMMENDED. THIS NOTIFICATION WILL BE PROVIDED BY THE SAME RESPONSIBLE PARTIES IDENTIFIED TO NOTIFY LAW ENFORCEMENT/FIRE/EMS ABOVE.
- WORK ACTIVITIES WITH LANE CLOSURES WILL BE MONITORED. IF IN THE OPINION OF THE ENGINEER, THE LANE CLOSURE IS CREATING UNDO TRAFFIC DELAY AND CONGESTION, HE/SHE MAY SUSPEND THE WORK AND/OR MODIFY THE LANE CLOSURE TIME.
- THE CITY MAY DIRECT ADDITIONAL DAYS WHEN NO LANE CLOSURES OR DETOURS MAY BE PERMITTED. THE CONTRACTOR WILL BE PROVIDED NO LESS THAN 7 DAYS NOTICE OF THESE EVENTS, AND THEY SHALL BE AT NO ADDITIONAL COST OR TIME TO THE CITY.
- ALL LANES MUST BE REOPENED TO NORMAL TRAFFIC WITHIN 12 HOURS OF AN EVACUATION NOTICE FOR A HURRICANE OR ANY OTHER DESIGNATED EMERGENCY EVENT AND SHALL REMAIN OPEN FOR THE DURATION OF THE EVENT AS DIRECTED BY THE ENGINEER.
- ALL LANES SHALL BE OPEN TO TRAFFIC WHEN WORK IS NOT ACTIVELY IN PROGRESS.
- NO COMPLETE ROAD CLOSURES ARE PERMITTED.

**TEMPORARY TRAFFIC CONTROL PLANS**

- SEE STANDARD PLANS INDEX 102-120, 102-600, 102-601, 102-602, 102-613, 102-615 AND 102-660.

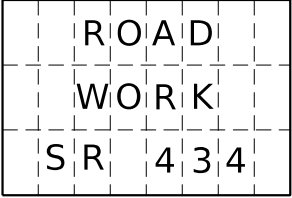
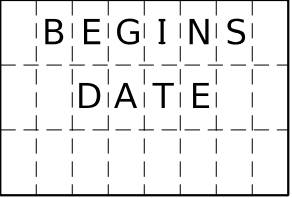
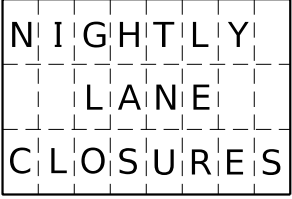
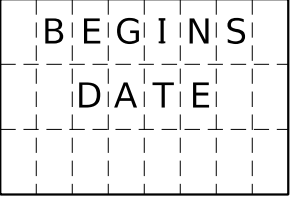
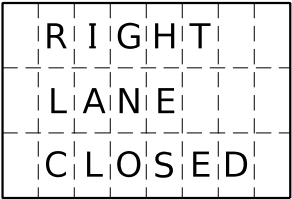
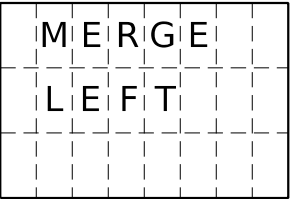
**PHASING PLAN**

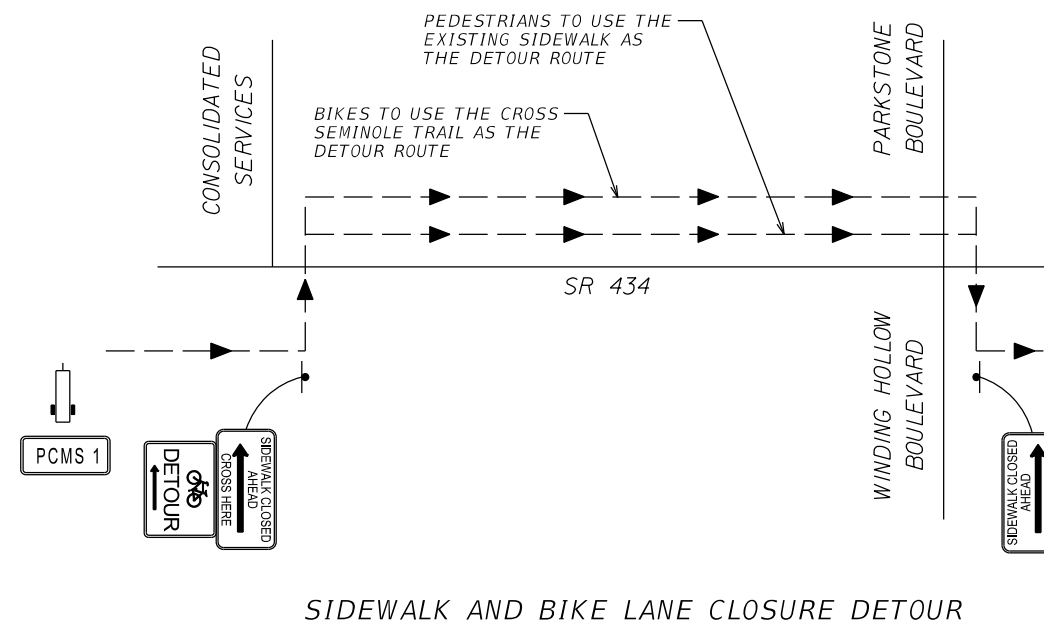
**PHASE I**

- INSTALL LOW PROFILE BARRIER WALL AS SHOWN ON SHEET 34.
- CONSTRUCT UTILITY IMPROVEMENTS.
- CONSTRUCT DRAINAGE IMPROVEMENTS.
- CONSTRUCT WIDENING IMPROVEMENTS EXCEPT FRICTION COURSE. CONSTRUCT SIDEWALK IMPROVEMENTS.
- CONSTRUCT SIGNALIZATION IMPROVEMENTS.

**PHASE II**

- REMOVE LOW PROFILE BARRIER WALL.
- OPEN RIGHT TURN LANE TO TRAFFIC.
- MILL AND RESURFACE BIKE LANE AND SIDE STREET BY UTILIZING LANE CLOSURES..
- CONSTRUCT FRICTION COURSE AND FINAL PAVEMENT MARKINGS BY UTILIZING LANE CLOSURES..

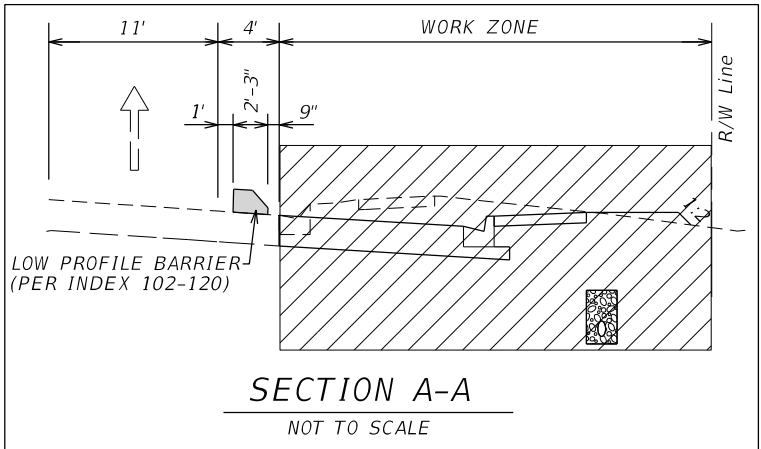
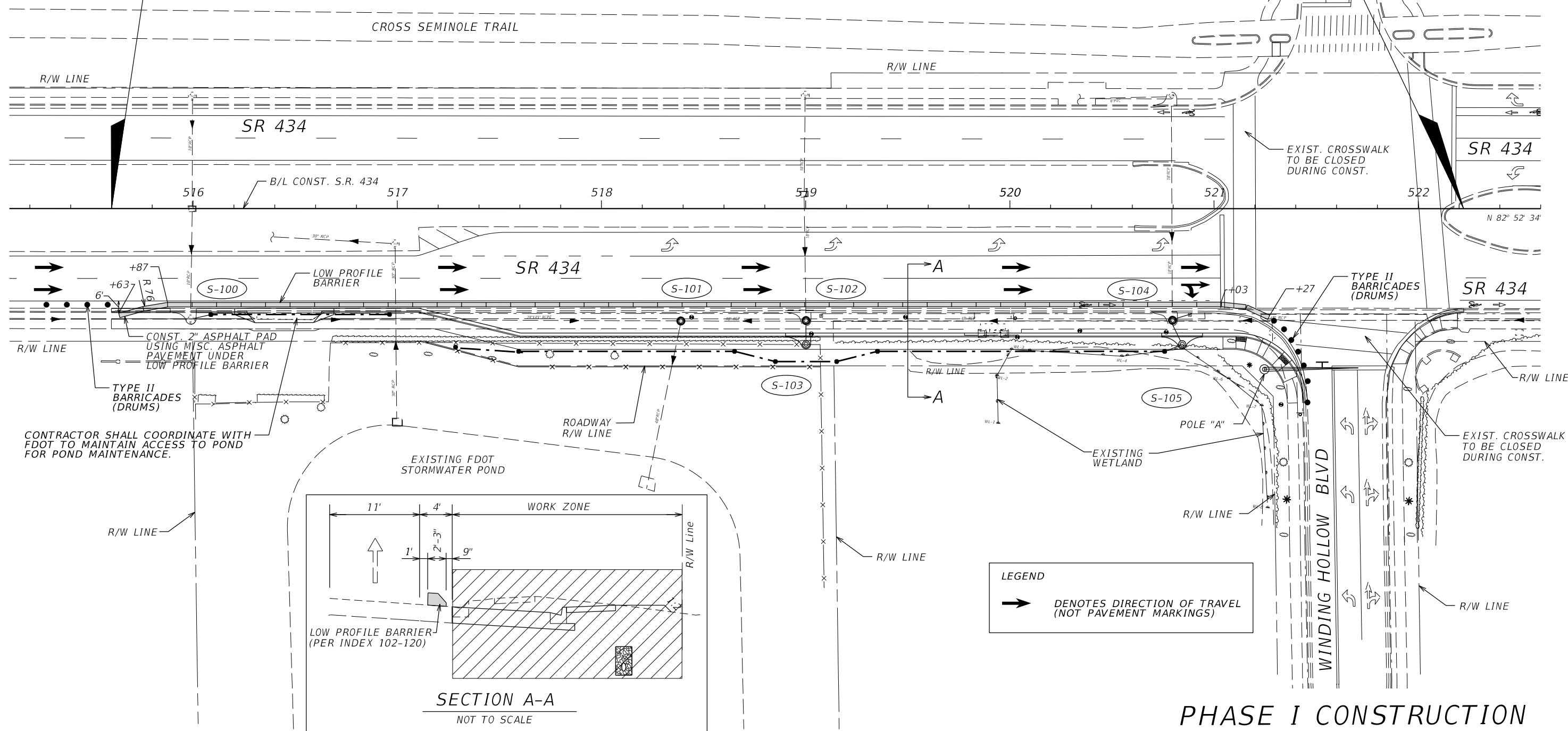
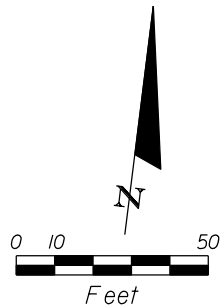
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|--|---|---|
| <b>PCMS 1</b>  | <b>PORTABLE CHANGEABLE MESSAGE SIGNS</b><br>PRIOR TO AND DURING CONSTRUCTION                      |   |
| TO BE INSTALLED<br>14 DAYS PRIOR TO<br>CONSTRUCTION      | MESSAGE 1<br>  | MESSAGE 2<br>  |
|  | MESSAGE 1<br>  | MESSAGE 2<br>  |
| TO BE INSTALLED<br>7 DAYS IN ADVANCE<br>OF LANE CLOSURES | MESSAGE 1<br> | MESSAGE 2<br> |
|  | TO BE INSTALLED<br>DURING CONSTRUCTION<br>(DURING LANE CLOSURES)                                  |   |



|                  |    |             |      |    |  |   |                                   |        |                                       |                      |    |
|------------------|----|-------------|------|----|--|---|-----------------------------------|--------|---------------------------------------|----------------------|----|
| <b>REVISIONS</b> |    |             |      |    | <b>ENGINEER OF RECORD:</b><br>FURSAN S. MUNJED, P.E.<br>PROFESSIONAL ENGINEER CERTIFICATE NO. 51446<br>PEGASUS ENGINEERING, LLC<br>301 WEST STATE ROAD 434, SUITE 309<br>WINTER SPRINGS, FLORIDA 32708 |  | CITY OF WINTER SPRINGS<br>FLORIDA |        | <b>TEMPORARY TRAFFIC CONTROL PLAN</b> | SHEET NO.            |    |
| DATE             | BY | DESCRIPTION | DATE | BY |  |   | DESCRIPTION                       | ROAD   |                                       | FINANCIAL PROJECT ID | 33 |
|                  |    |             |      |    |  |   |                                   | SR 434 |                                       | 432642-1-58-01       |    |

END PROJECT  
S.R. 434  
STATION 522+22.24  
MATCH EXISTING

BEGIN PROJECT  
S.R. 434  
STATION 515+60.00  
MATCH EXISTING



LEGEND  
➔ DENOTES DIRECTION OF TRAVEL (NOT PAVEMENT MARKINGS)

PHASE I CONSTRUCTION

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

ENGINEER OF RECORD:  
FURSAN S. MUNJED, P.E.  
PROFESSIONAL ENGINEER CERTIFICATE NO. 51446  
PEGASUS ENGINEERING, LLC  
301 WEST STATE ROAD 434, SUITE 309  
WINTER SPRINGS, FLORIDA 32708



|                                   |                      |
|-----------------------------------|----------------------|
| CITY OF WINTER SPRINGS<br>FLORIDA |                      |
| ROAD                              | FINANCIAL PROJECT ID |
| SR 434                            | 432642-1-58-01       |

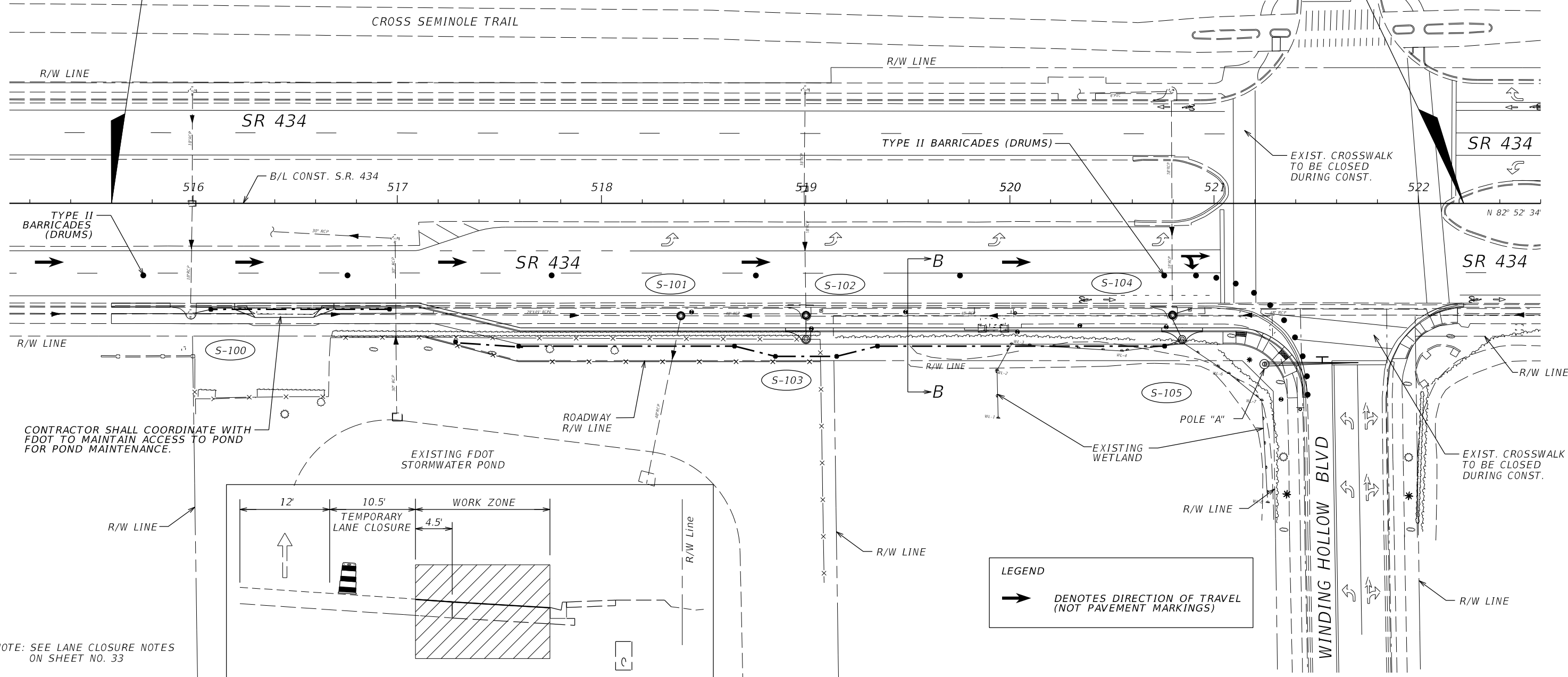
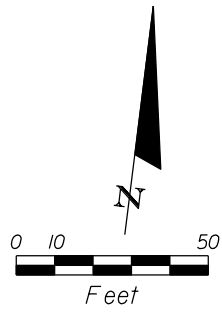
TEMPORARY TRAFFIC  
CONTROL PLAN  
PHASE I

SHEET  
NO.  
34

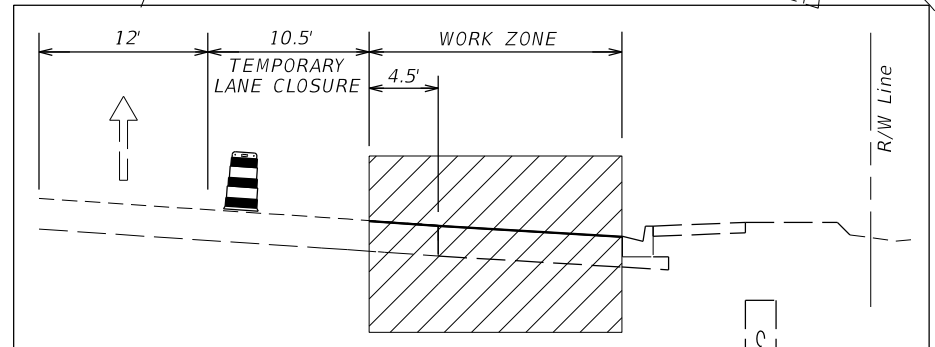
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

END PROJECT  
S.R. 434  
STATION 522+22.24  
MATCH EXISTING

BEGIN PROJECT  
S.R. 434  
STATION 515+60.00  
MATCH EXISTING



CONTRACTOR SHALL COORDINATE WITH FDOT TO MAINTAIN ACCESS TO POND FOR POND MAINTENANCE.



NOTE: SEE LANE CLOSURE NOTES ON SHEET NO. 33

**LEGEND**  
➔ DENOTES DIRECTION OF TRAVEL (NOT PAVEMENT MARKINGS)

PHASE II CONSTRUCTION

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

ENGINEER OF RECORD:  
FURSAN S. MUNJED, P.E.  
PROFESSIONAL ENGINEER CERTIFICATE NO. 51446  
PEGASUS ENGINEERING, LLC  
301 WEST STATE ROAD 434, SUITE 309  
WINTER SPRINGS, FLORIDA 32708



|                                   |                      |
|-----------------------------------|----------------------|
| CITY OF WINTER SPRINGS<br>FLORIDA |                      |
| ROAD                              | FINANCIAL PROJECT ID |
| SR 434                            | 432642-1-58-01       |

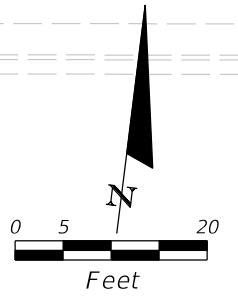
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|---|-----------|
| TEMPORARY TRAFFIC<br>CONTROL PLAN<br>PHASE II | SHEET NO. |
|   | 34A       |

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R/W LINE

SR 434

BEGIN PROJECT  
S.R. 434  
STATION 515+60.00  
MATCH EXISTING



514

515

516

517

B/L CONST. S.R. 434

SR 434  
EXISTING 6" SCW GM  
(FLORIDA PUBLIC UTILITIES)  
(TO REMAIN)

EXIST. 864 OFOC  
(VERIZON/MCI)  
(TO REMAIN)

EXISTING OE & OTV  
(TO REMAIN)  
(DUKE ENERGY) (D)  
(CHARTER)

EXISTING 6" SCW GM  
(FLORIDA PUBLIC UTILITIES)  
(TO REMAIN)

EXISTING 12, 144 & 215 OFOC  
(AT&T FLORIDA)  
(TO BE REMOVED)

EXISTING 200pr OT  
(AT&T FLORIDA)  
(TO REMAIN)

EXISTING FM (CITY)  
(TO REMAIN)

PROPOSED 4" FLEX PIPE  
WITH FOC (TBD)  
(AT&T FLORIDA)

PROPOSED HANDHOLE  
30"x60"x30"  
(VERIZON/MCI)

PROPOSED 1-2" HDPE  
TO RELOCATE FIBER  
(VERIZON/MCI)

EXISTING  
FDOT  
STORMWATER  
POND 1B

NOTE: ALL EXISTING AND PROPOSED OVERHEAD ELECTRIC LINES ARE 12.47KV.

REVISIONS

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

ENGINEER OF RECORD:  
FURSAN S. MUNJED, P.E.  
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PEGASUS ENGINEERING, LLC  
301 WEST STATE ROAD 434, SUITE 309  
WINTER SPRINGS, FLORIDA 32708



CITY OF WINTER SPRINGS  
FLORIDA

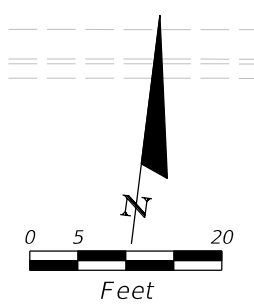
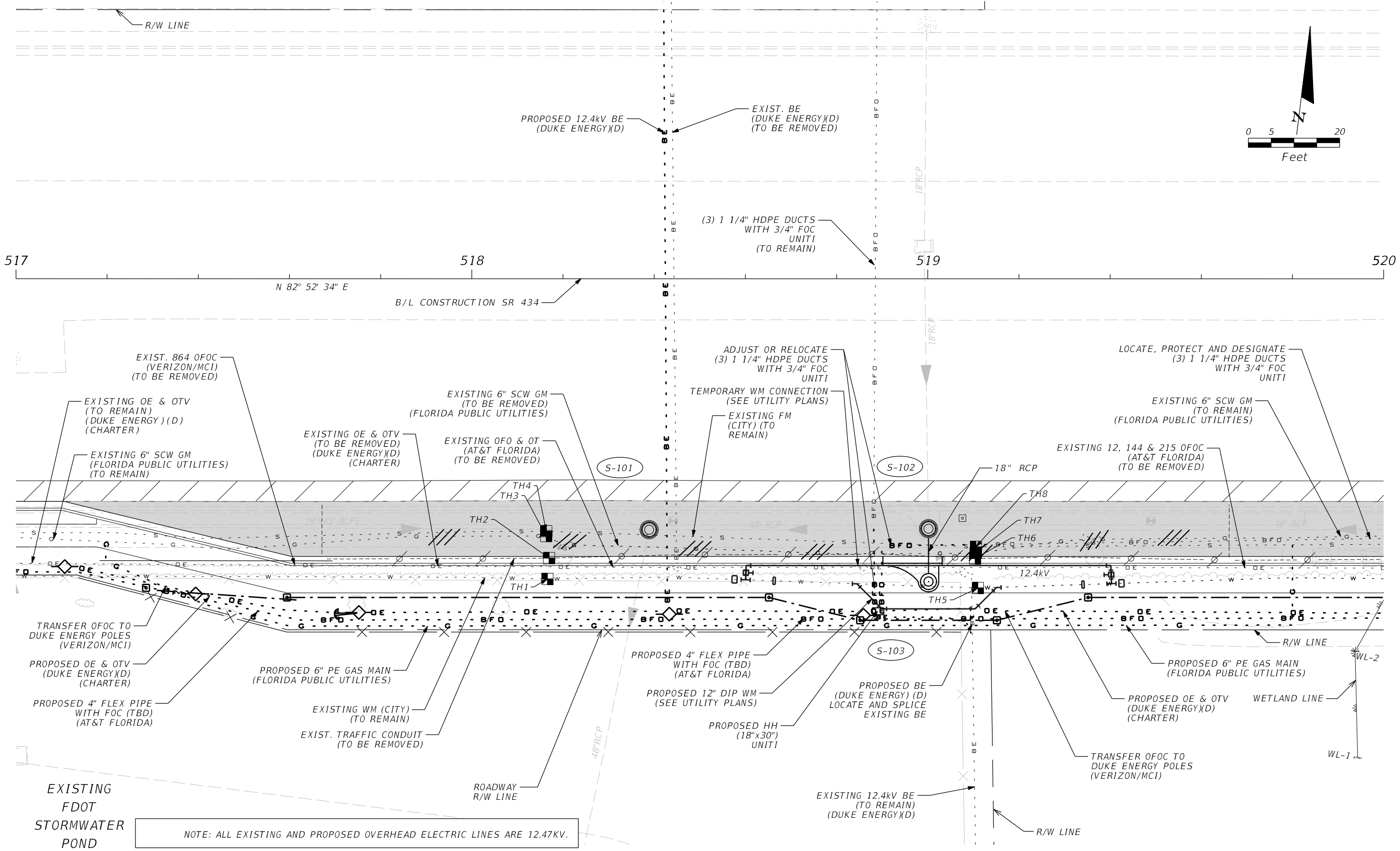
ROAD: SR 434  
FINANCIAL PROJECT ID: 432642-1-58-01

UTILITY ADJUSTMENTS

SHEET NO.

35

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NOTE: ALL EXISTING AND PROPOSED OVERHEAD ELECTRIC LINES ARE 12.47KV.

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

ENGINEER OF RECORD:  
**FURSAN S. MUNJED, P.E.**  
 PROFESSIONAL ENGINEER CERTIFICATE NO. 51446  
 PEGASUS ENGINEERING, LLC  
 301 WEST STATE ROAD 434, SUITE 309  
 WINTER SPRINGS, FLORIDA 32708



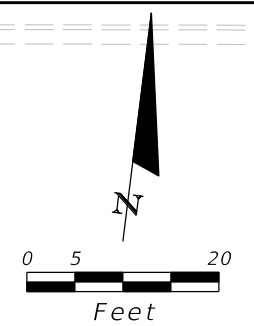
CITY OF WINTER SPRINGS  
 FLORIDA

|        |                      |
|--------|----------------------|
| ROAD   | FINANCIAL PROJECT ID |
| SR 434 | 432642-1-58-01       |

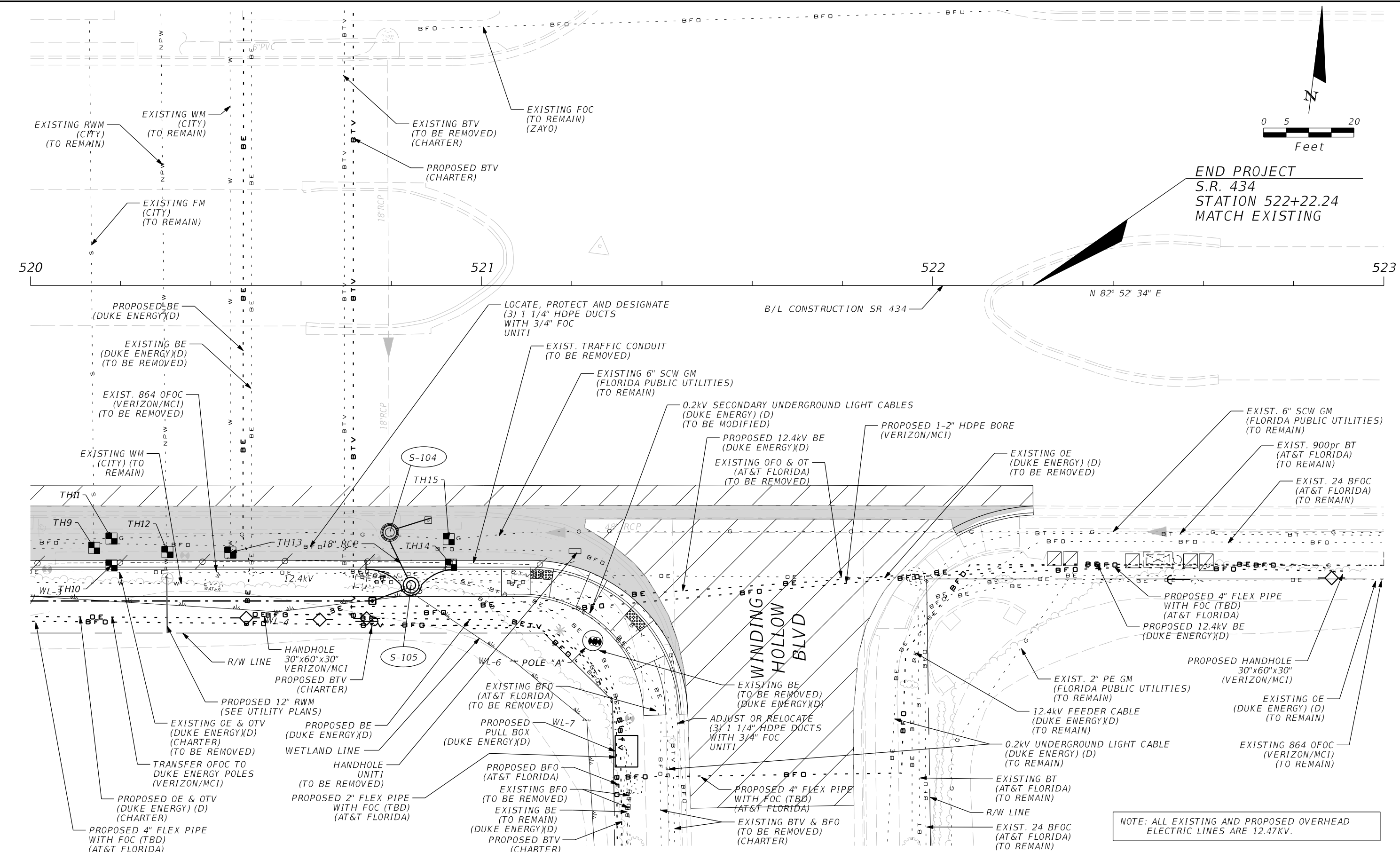
UTILITY ADJUSTMENTS

SHEET NO.  
**36**

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END PROJECT  
S.R. 434  
STATION 522+22.24  
MATCH EXISTING



REVISIONS

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

ENGINEER OF RECORD:  
FURSAN S. MUNJED, P.E.  
PROFESSIONAL ENGINEER CERTIFICATE NO. 51446  
PEGASUS ENGINEERING, LLC  
301 WEST STATE ROAD 434, SUITE 309  
WINTER SPRINGS, FLORIDA 32708



|                                   |                      |
|-----------------------------------|----------------------|
| CITY OF WINTER SPRINGS<br>FLORIDA |                      |
| ROAD                              | FINANCIAL PROJECT ID |
| SR 434                            | 432642-1-58-01       |

UTILITY ADJUSTMENTS

SHEET NO.  
37

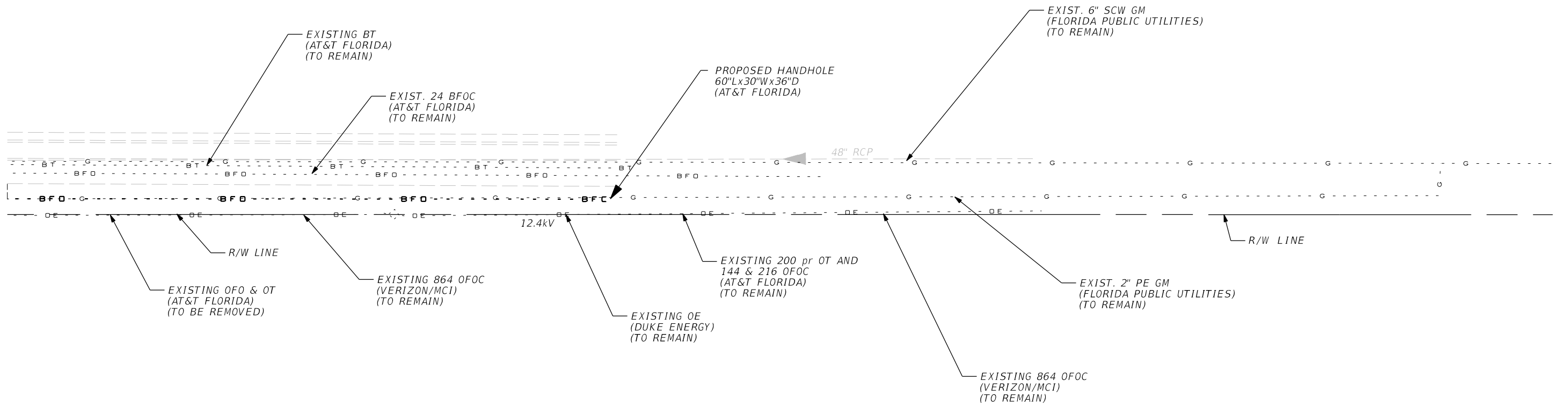
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

SR 434

523 524 525 526

B/L CONSTRUCTION SR 434

SR 434



REVISIONS

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

ENGINEER OF RECORD:  
**FURSAN S. MUNJED, P.E.**  
 PROFESSIONAL ENGINEER CERTIFICATE NO. 51446  
 PEGASUS ENGINEERING, LLC  
 301 WEST STATE ROAD 434, SUITE 309  
 WINTER SPRINGS, FLORIDA 32708



CITY OF WINTER SPRINGS  
 FLORIDA

| ROAD   | FINANCIAL PROJECT ID |
|--------|----------------------|
| SR 434 | 432642-1-58-01       |

UTILITY ADJUSTMENTS

SHEET NO.

38



Southeastern Surveying & Mapping Corp.  
6500 All American Boulevard  
Orlando, Florida 32810  
Ph.(407) 292-8580  
Fax (407) 292-0141  
WWW.SOUTHEASTERSURVEYING.COM



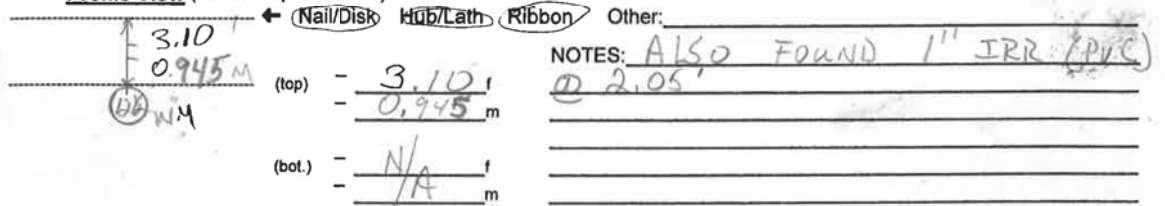
Southeastern's Utility Division

Date 2/6/2014  
Time N/A AM / PM  
Sheet 1 of 15

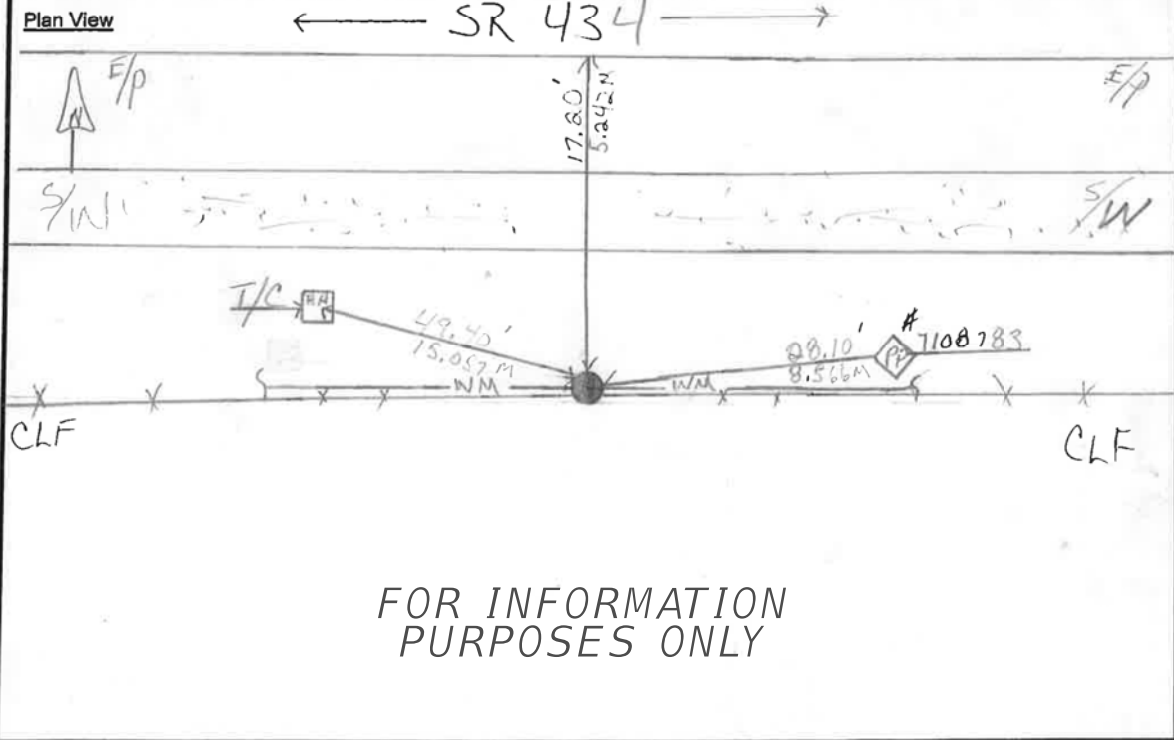
**TEST HOLE DATA REPORT**

Project Name: WSC SR 434 @ Winding Hollow Blvd. County: SEMINOLE  
Test Hole Location: SR 4343 @ Winding Hollow Dr. SW Corner  
SSMC Job # 57255 W.O.# 90977 Client: Pegasus Eng.  
Fin.Mgmt.# N/A Contract # N/A Task W.O.# N/A Field Bk.# N/A  
Name of Utility Co.: CITY OF WINTER SPRINGS Crew Initials: PERA - MONI - ROTH Test Hole # 1  
(Project Units) Feet  Metric   
(Method Of Location) Station: N/A + Offset: N/A f N/A m  
(Utility Notes) Size (OD) 12 1/2" @ 0.311 m Line Type: WM Material: DIP  
Utility Condition: Good  Fair  Poor  Other:

**Profile View (Manual Depth of Cover)**



Vertical Datum Used: CAICE or EFB Point ID: (for cadd tech. & EFB use only)  
Grade Elev.:  Utility Elev.:  (Weather) Rainy  Dry   
(Soil Condition) Hard  Soft  Wet  Dry  Loam  Sand  Dirt  Clay  Rocky  (Ground Cover) Asphalt  Concrete  Dirt  Other



FOR INFORMATION PURPOSES ONLY

(See back for Legend, Line Types, Materials, etc.) Report Reviewed By: [Signature] Date 2-10-14

Southeastern Surveying & Mapping Corp.  
6500 All American Boulevard  
Orlando, Florida 32810  
Ph.(407) 292-8580  
Fax (407) 292-0141  
WWW.SOUTHEASTERSURVEYING.COM



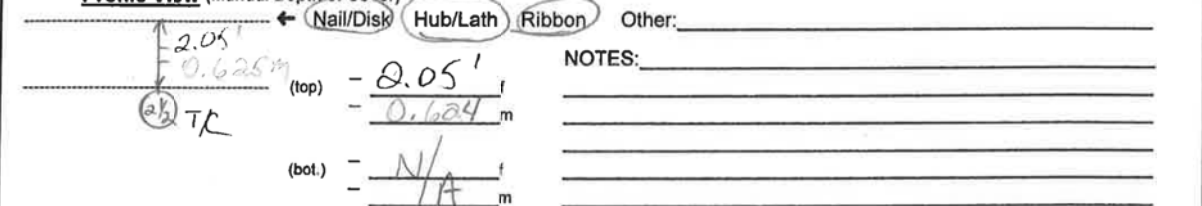
Southeastern's Utility Division

Date 2/6/2014  
Time N/A AM / PM  
Sheet 2 of 15

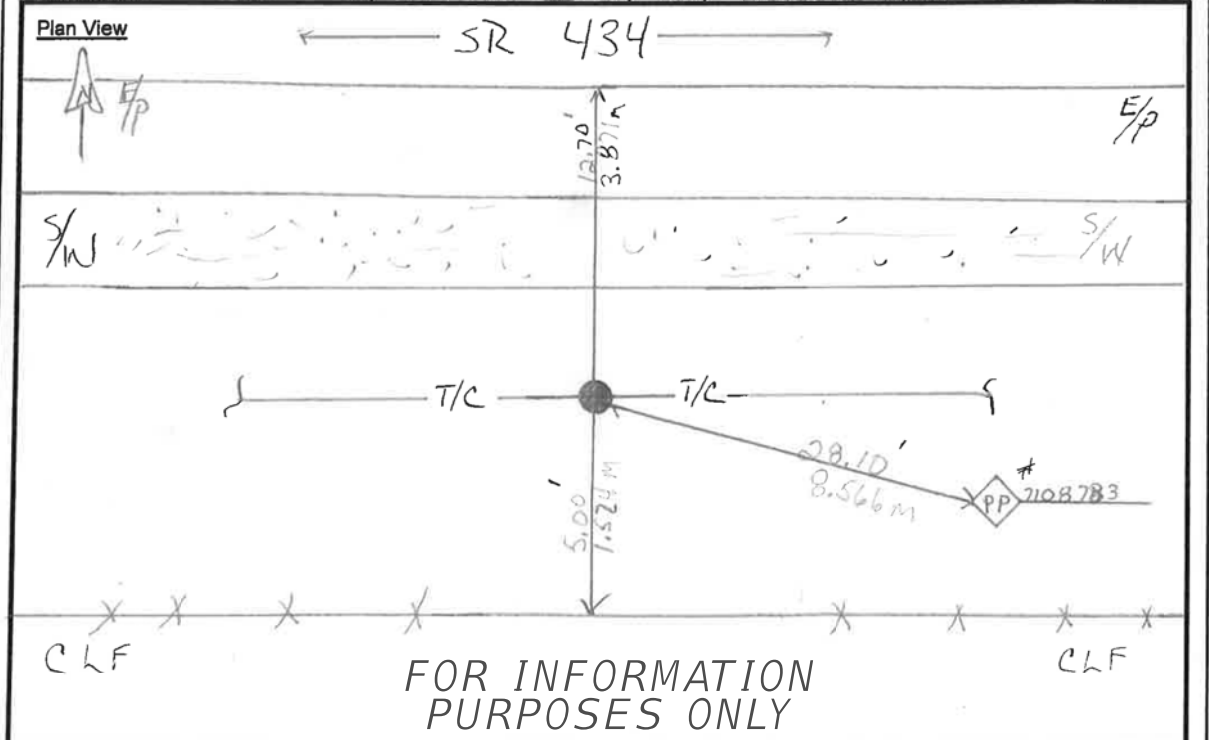
**TEST HOLE DATA REPORT**

Project Name: WSC SR 434 @ Winding Hollow Blvd. County: SEMINOLE  
Test Hole Location: SR 4343 @ Winding Hollow Dr. SW Corner  
SSMC Job # 57255 W.O.# 90977 Client: Pegasus Eng.  
Fin.Mgmt.# N/A Contract # N/A Task W.O.# N/A Field Bk.# N/A  
Name of Utility Co.: SEMINOLE COUNTY TRAFFIC ENGINEERING Crew Initials: PERA - MONI - ROTH Test Hole # 2  
(Project Units) Feet  Metric   
(Method Of Location) Station: N/A + Offset: N/A f N/A m  
(Utility Notes) Size (OD) 2 1/2" @ 0.064 m Line Type: T/C (E.O.C.) Material: PVC  
Utility Condition: Good  Fair  Poor  Other:

**Profile View (Manual Depth of Cover)**



Vertical Datum Used: CAICE or EFB Point ID: (for cadd tech. & EFB use only)  
Grade Elev.:  Utility Elev.:  (Weather) Rainy  Dry   
(Soil Condition) Hard  Soft  Wet  Dry  Loam  Sand  Dirt  Clay  Rocky  (Ground Cover) Asphalt  Concrete  Dirt  Other



FOR INFORMATION PURPOSES ONLY

(See back for Legend, Line Types, Materials, etc.) Report Reviewed By: [Signature] Date 2-10-14

REVISIONS

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

CITY OF WINTER SPRINGS  
FLORIDA  
ROAD: SR 434 FINANCIAL PROJECT ID: 432642-1-58-01

SUBSURFACE UTILITY INFORMATION

SHEET NO. 39

Southeastern Surveying & Mapping Corp.  
6500 All American Boulevard  
Orlando, Florida 32810  
Ph.(407) 292-8580  
Fax (407) 292-0141  
WWW.SOUTHEASTERNSURVEYING.COM



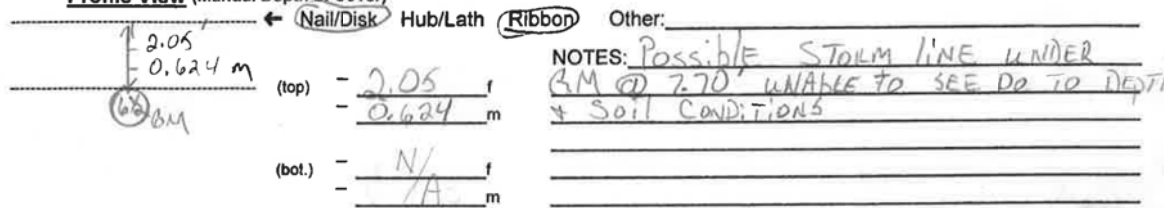
Southeastern's Utility Division

Date 2/6/2014  
Time N/A AM / PM  
Sheet 3 of 15

**TEST HOLE DATA REPORT**

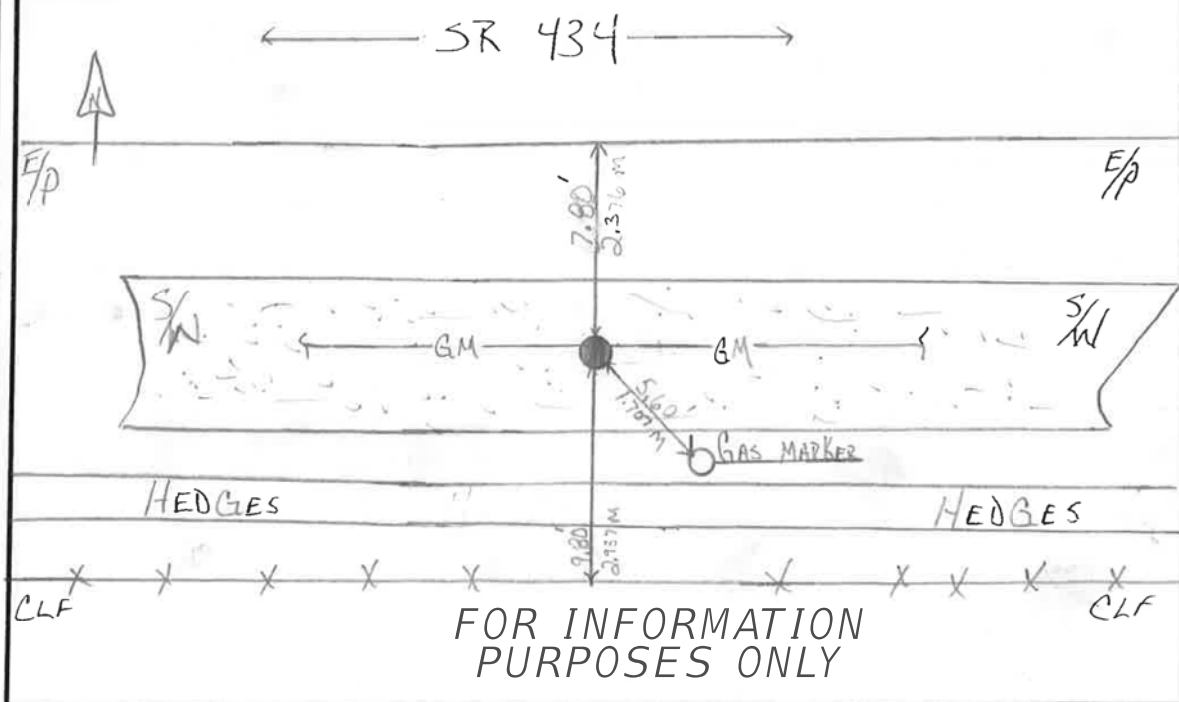
Project Name: WSC SR 434 @ Winding Hollow Blvd. County: SEMINOLE  
Test Hole Location: SR 4343 @ Winding Hollow Dr. SW Corner  
SSMC Job # 57255 W.O.# 90977 Client: Pegasus Eng.  
Fin.Mgmt.# N/A Contract # \_\_\_\_\_ Task W.O.# N/A Field Bk.# N/A  
Name of Utility Co.: FL Public UTILITIES Crew Initials: PELA-MONI-ROTH Test Hole # 3  
(Project Units) Feet  Metric \_\_\_\_\_  
(Method Of Location) Station: \_\_\_\_\_ N/A + \_\_\_\_\_ Offset: N/A f N/A m  
(Utility Notes) Size (OD) 6 1/2" f 0.161 m Line Type: GM Material: COATED STEEL  
Utility Condition: Good  Fair \_\_\_\_\_ Poor Other: \_\_\_\_\_

**Profile View (Manual Depth of Cover)**



Vertical Datum Used: \_\_\_\_\_ CAICE or EFB Point ID: \_\_\_\_\_ (for cadd tech. & EFB use only)  
Grade Elev.: \_\_\_\_\_ Utility Elev.: \_\_\_\_\_ (Weather)  Rainy  Dry  
(Soil Condition) Hard  Soft  Wet  Dry  Loam  Sand  Dirt  Clay  Rocky (Ground Cover) Asphalt  Concrete  Dirt  Other \_\_\_\_\_

**Plan View**



(See back for Legend, Line Types, Materials, etc.)

Report Reviewed By: \_\_\_\_\_ Date: 2-10-14

Southeastern Surveying & Mapping Corp.  
6500 All American Boulevard  
Orlando, Florida 32810  
Ph.(407) 292-8580  
Fax (407) 292-0141  
WWW.SOUTHEASTERNSURVEYING.COM



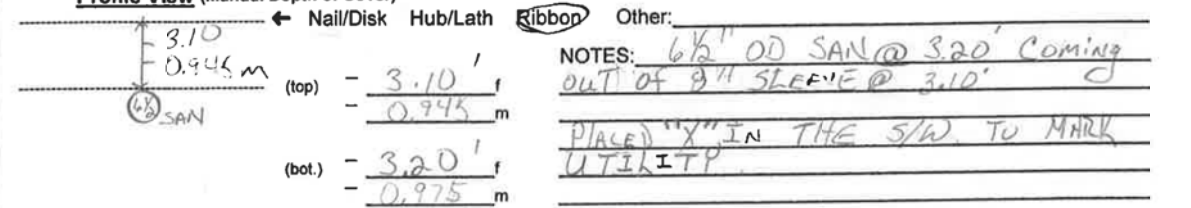
Southeastern's Utility Division

Date 2/6/2014  
Time N/A AM / PM  
Sheet 4 of 15

**TEST HOLE DATA REPORT**

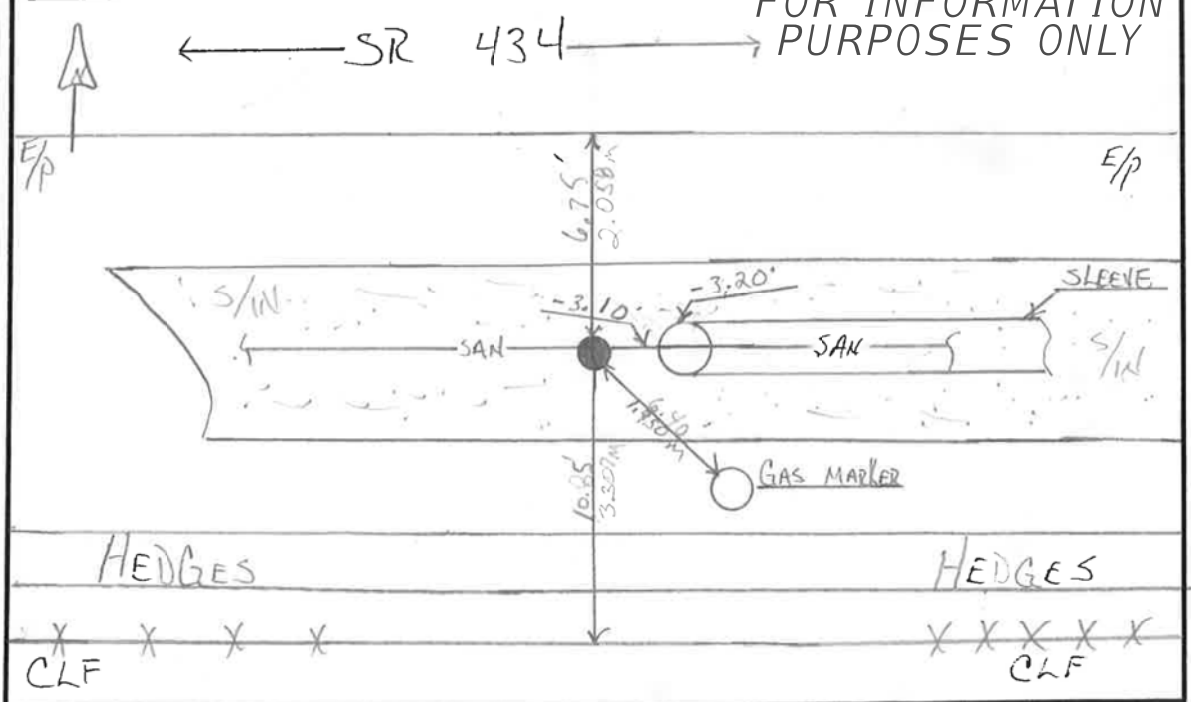
Project Name: WSC SR 434 @ Winding Hollow Blvd. County: SEMINOLE  
Test Hole Location: SR 4343 @ Winding Hollow Dr. SW Corner  
SSMC Job # 57255 W.O.# 90977 Client: Pegasus Eng.  
Fin.Mgmt.# N/A Contract # \_\_\_\_\_ Task W.O.# N/A Field Bk.# N/A  
Name of Utility Co.: CITY OF WINTER SPRINGS Crew Initials: PELA-MONI-ROTH Test Hole # 4  
(Project Units) Feet  Metric \_\_\_\_\_  
(Method Of Location) Station: \_\_\_\_\_ N/A + \_\_\_\_\_ Offset: N/A f N/A m  
(Utility Notes) Size (OD) 6 1/2" f 0.161 m Line Type: SAN Material: DIP  
Utility Condition: Good  Fair \_\_\_\_\_ Poor Other: \_\_\_\_\_

**Profile View (Manual Depth of Cover)**



Vertical Datum Used: \_\_\_\_\_ CAICE or EFB Point ID: \_\_\_\_\_ (for cadd tech. & EFB use only)  
Grade Elev.: \_\_\_\_\_ Utility Elev.: \_\_\_\_\_ (Weather)  Rainy  Dry  
(Soil Condition) Hard  Soft  Wet  Dry  Loam  Sand  Dirt  Clay  Rocky (Ground Cover) Asphalt  Concrete  Dirt  Other \_\_\_\_\_

**Plan View**



(See back for Legend, Line Types, Materials, etc.)

Report Reviewed By: \_\_\_\_\_ Date: 2-10-14

REVISIONS

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

CITY OF WINTER SPRINGS  
FLORIDA  
ROAD: SR 434 FINANCIAL PROJECT ID: 432642-1-58-01

SUBSURFACE UTILITY INFORMATION

SHEET NO. 40

Southeastern Surveying & Mapping Corp.  
6500 All American Boulevard  
Orlando, Florida 32810  
Ph.(407) 292-8580  
Fax (407) 292-0141  
WWW.SOUTHEASTERNSURVEYING.COM



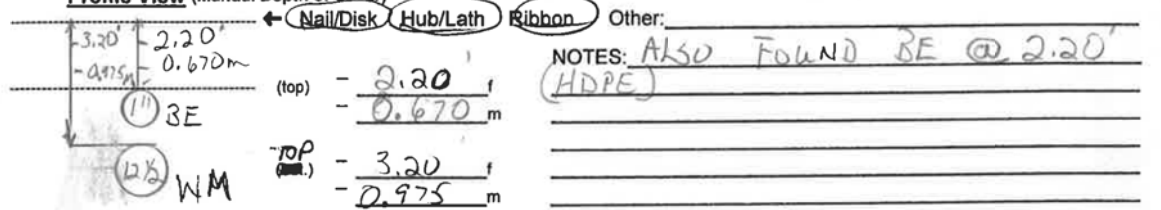
Southeastern's Utility Division

Date 2, 6, 2014  
Time N/A AM / PM  
Sheet 5 of 15

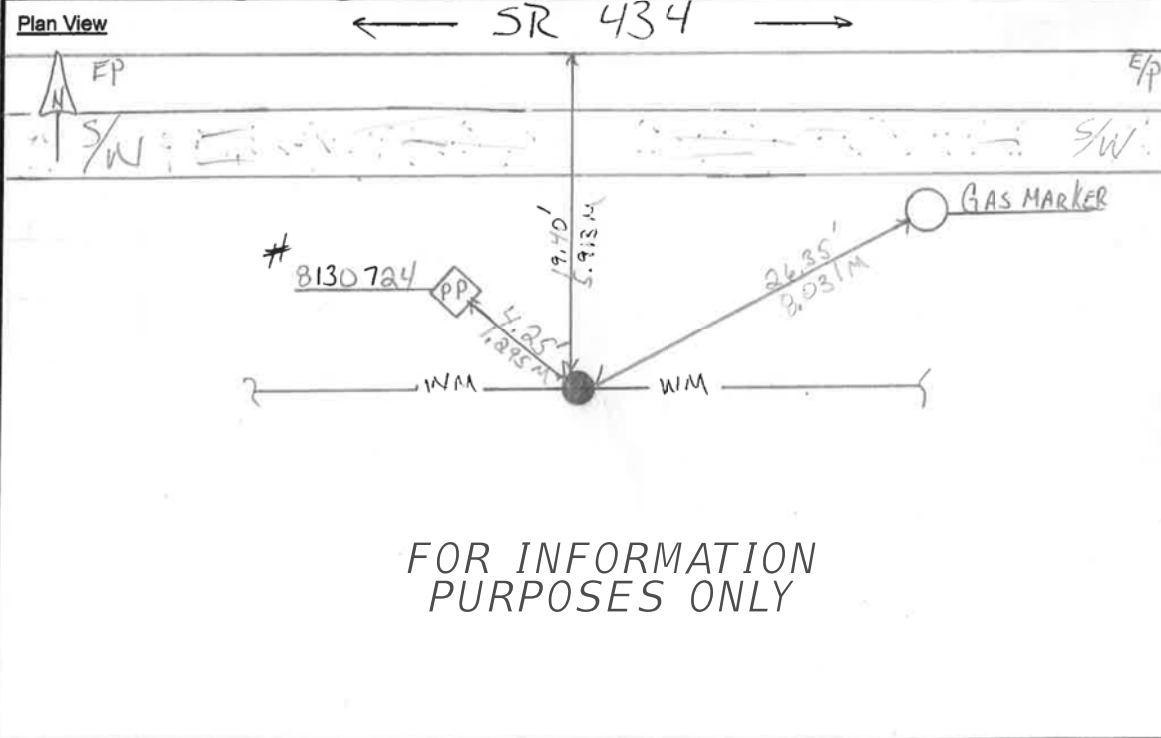
**TEST HOLE DATA REPORT**

Project Name: WSC SR 434 @ Winding Hollow Blvd. County: SEMINOLE  
Test Hole Location: SR 4343 @ Winding Hollow Dr. SW Corner  
SSMC Job # 57255 W.O.# 90977 Client: Pegasus Eng.  
Fin.Mgmt.# N/A Contract # \_\_\_\_\_ Task W.O.# N/A Field Bk.# N/A  
Name of Utility Co.: CITY OF WINTER SPRINGS Crew Initials: PELA-MON-I-ROTH Test Hole # 5  
(Project Units) Feet  Metric \_\_\_\_\_  
(Method Of Location) Station: N/A + \_\_\_\_\_ Offset: N/A f N/A m  
(Utility Notes) Size (OD) 12 1/2" x 0.311 m Line Type: WM Material: DIP  
Utility Condition: Good  Fair \_\_\_\_\_ Poor Other: \_\_\_\_\_

**Profile View (Manual Depth of Cover)**



Vertical Datum Used: \_\_\_\_\_ CAICE or EFB Point ID: \_\_\_\_\_ (for cadd tech. & EFB use only)  
Grade Elev.: \_\_\_\_\_ Utility Elev.: \_\_\_\_\_ (Weather) Rainy  Dry   
(Soil Condition) Hard  Soft  Wet  Dry  Loam  Sand  Dirt  Clay  Rocky  (Ground Cover) Asphalt  Concrete  Dirt  Other \_\_\_\_\_



FOR INFORMATION PURPOSES ONLY

(See back for Legend, Line Types, Materials, etc.) Report Reviewed By: \_\_\_\_\_ Date: 2-10-14

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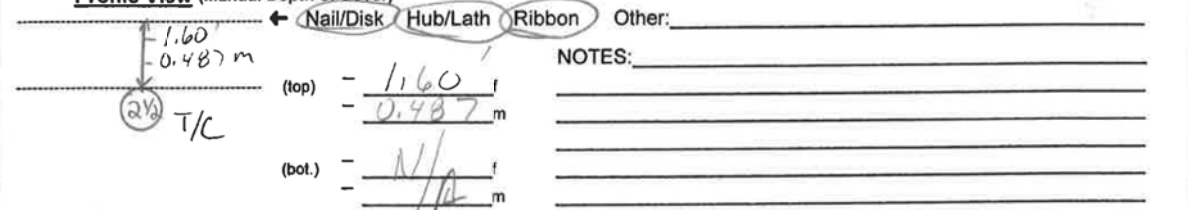
Southeastern's Utility Division

Date 2, 6, 2014  
Time N/A AM / PM  
Sheet 6 of 15

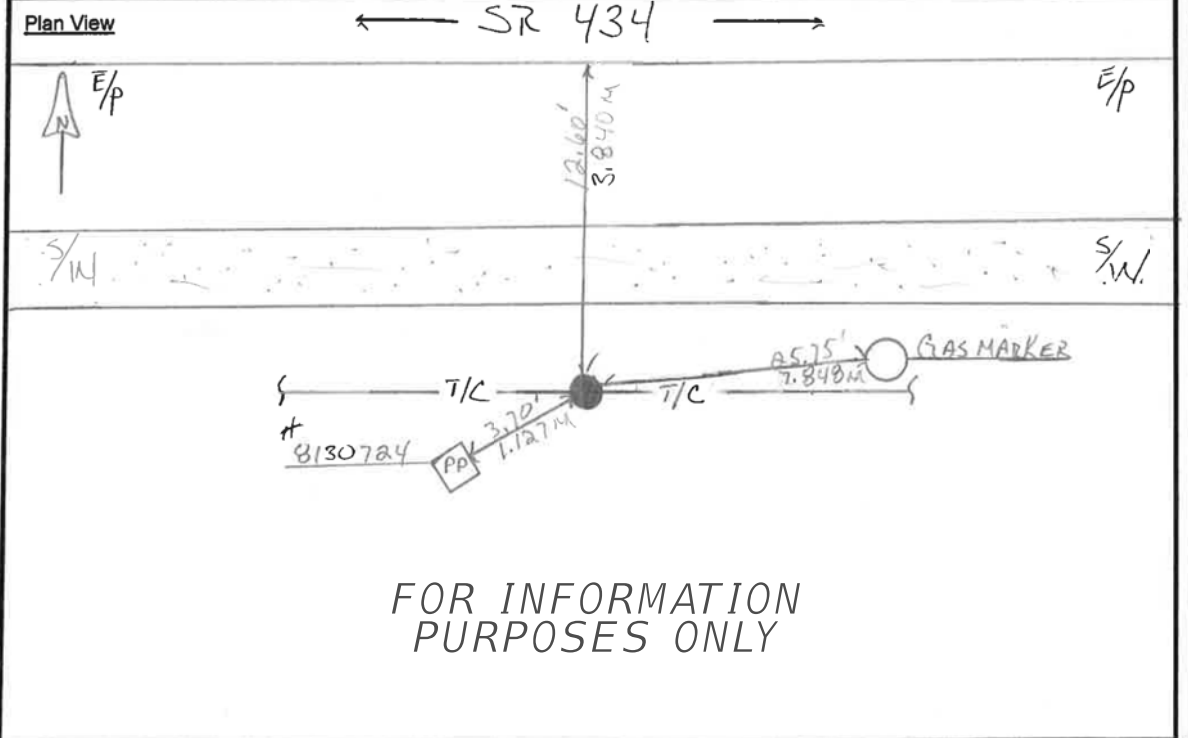
**TEST HOLE DATA REPORT**

Project Name: WSC SR 434 @ Winding Hollow Blvd. County: SEMINOLE  
Test Hole Location: SR 4343 @ Winding Hollow Dr. SW Corner  
SSMC Job # 57255 W.O.# 90977 Client: Pegasus Eng.  
Fin.Mgmt.# N/A Contract # \_\_\_\_\_ Task W.O.# N/A Field Bk.# N/A  
Name of Utility Co.: SEMINOLE COUNTY TRAFFIC ENGINEER Crew Initials: PELA-MON-I-ROTH Test Hole # 6  
(Project Units) Feet  Metric \_\_\_\_\_  
(Method Of Location) Station: N/A + \_\_\_\_\_ Offset: N/A f N/A m  
(Utility Notes) Size (OD) 2 1/2" x 0.064 m Line Type: T/C (F.O.C.) Material: PVC  
Utility Condition: Good  Fair \_\_\_\_\_ Poor Other: \_\_\_\_\_

**Profile View (Manual Depth of Cover)**



Vertical Datum Used: \_\_\_\_\_ CAICE or EFB Point ID: \_\_\_\_\_ (for cadd tech. & EFB use only)  
Grade Elev.: \_\_\_\_\_ Utility Elev.: \_\_\_\_\_ (Weather) Rainy  Dry   
(Soil Condition) Hard  Soft  Wet  Dry  Loam  Sand  Dirt  Clay  Rocky  (Ground Cover) Asphalt  Concrete  Dirt  Other \_\_\_\_\_



FOR INFORMATION PURPOSES ONLY

(See back for Legend, Line Types, Materials, etc.) Report Reviewed By: \_\_\_\_\_ Date: 2-10-14

REVISIONS

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

CITY OF WINTER SPRINGS  
FLORIDA  
ROAD: SR 434 FINANCIAL PROJECT ID: 432642-1-58-01

SUBSURFACE UTILITY INFORMATION

SHEET NO. 41

Southeastern Surveying & Mapping Corp.  
6500 All American Boulevard  
Orlando, Florida 32810  
Ph.(407) 292-8580  
Fax (407) 292-0141  
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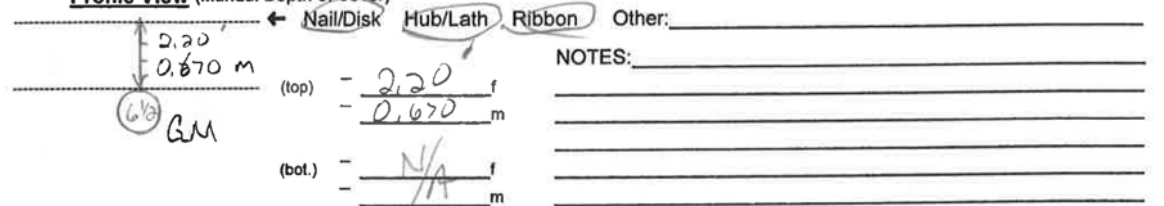
Southeastern's Utility Division

Date 2/6/2014  
Time N/A AM / PM  
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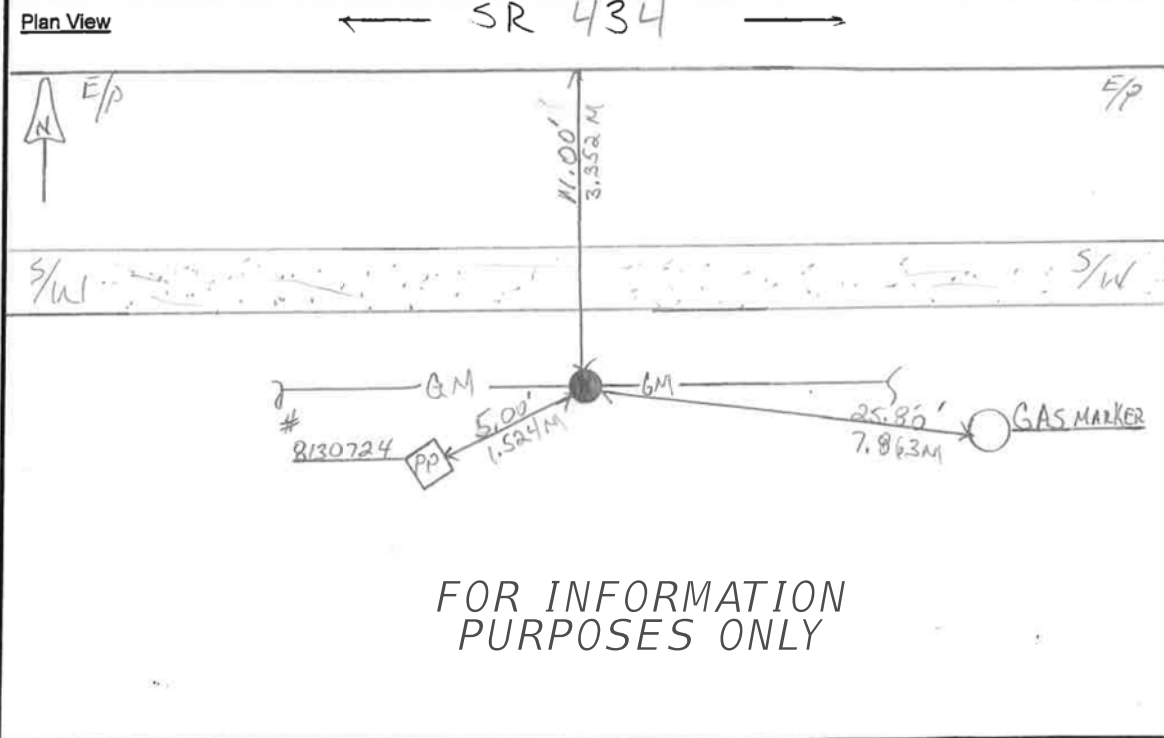
**TEST HOLE DATA REPORT**

Project Name: WSC SR 434 @ Winding Hollow Blvd. County: SEMINOLE  
Test Hole Location: SR 4343 @ Winding Hollow Dr. SW Corner  
SSMC Job # 57255 W.O.# 90977 Client: Pegasus Eng.  
Fin.Mgmt.# N/A Contract # \_\_\_\_\_ Task W.O.# N/A Field Bk.# N/A  
Name of Utility Co.: FL PUBLIC UTILITIES Crew Initials: PELA-MONI-ROTH Test Hole # 7  
(Project Units) Feet  Metric \_\_\_\_\_  
(Method Of Location) Station: N/A + \_\_\_\_\_ Offset: N/A f N/A m  
(Utility Notes) Size (OD) 6 1/2" f 0.161 m Line Type: GM Material: COATED STEEL  
Utility Condition: Good  Fair \_\_\_\_\_ Poor \_\_\_\_\_ Other: \_\_\_\_\_

**Profile View (Manual Depth of Cover)**



Vertical Datum Used: \_\_\_\_\_ CAICE or EFB Point ID: \_\_\_\_\_ (for cadd tech. & EFB use only)  
Grade Elev.: \_\_\_\_\_ Utility Elev.: \_\_\_\_\_ (Weather) Rainy  Dry \_\_\_\_\_  
(Soil Condition) Hard  Soft \_\_\_\_\_ Wet \_\_\_\_\_ Dry \_\_\_\_\_ Loam \_\_\_\_\_ Sand \_\_\_\_\_ Dirt \_\_\_\_\_ Clay \_\_\_\_\_ Rocky \_\_\_\_\_ (Ground Cover) Asphalt \_\_\_\_\_ Concrete \_\_\_\_\_ Dirt \_\_\_\_\_ Other \_\_\_\_\_



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(See back for Legend, Line Types, Materials, etc.) Report Reviewed By: \_\_\_\_\_ Date: 2-10-14

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Orlando, Florida 32810  
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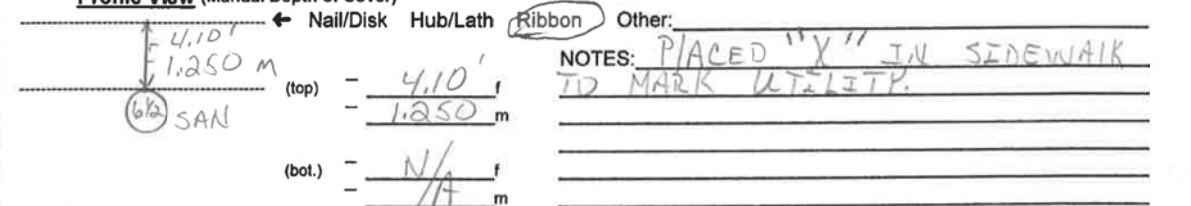
Southeastern's Utility Division

Date 2/6/2014  
Time N/A AM / PM  
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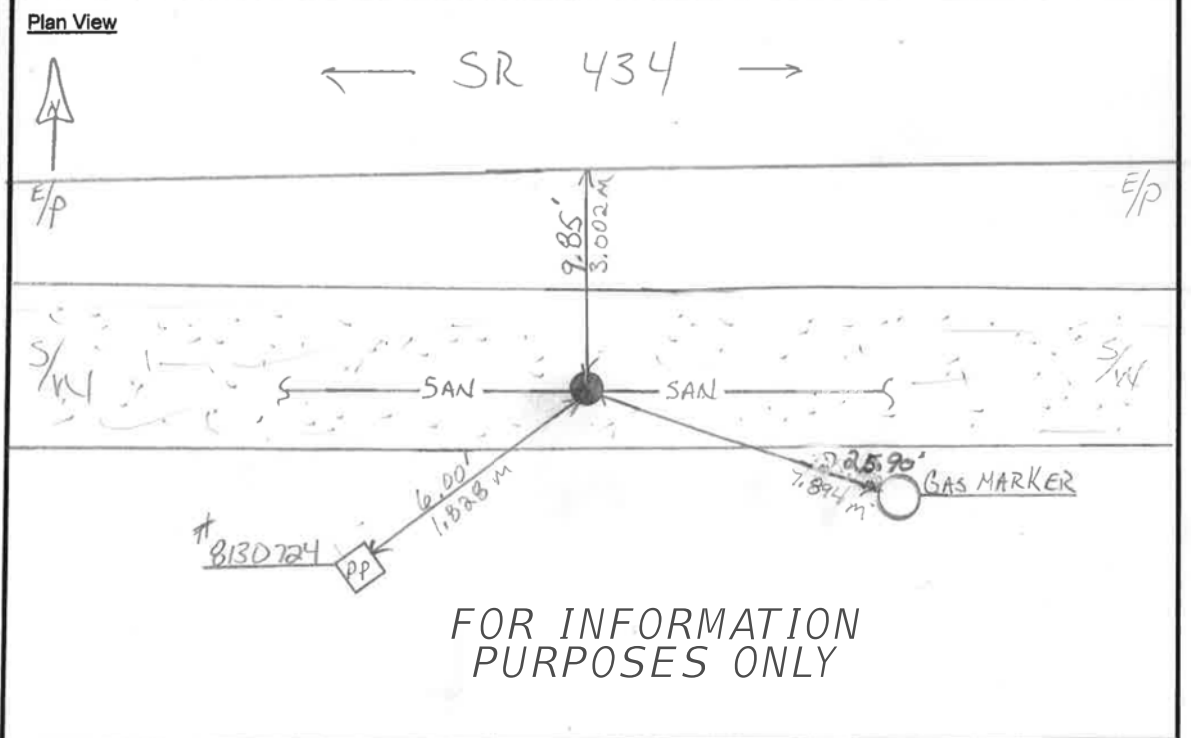
**TEST HOLE DATA REPORT**

Project Name: WSC SR 434 @ Winding Hollow Blvd. County: SEMINOLE  
Test Hole Location: SR 4343 @ Winding Hollow Dr. SW Corner  
SSMC Job # 57255 W.O.# 90977 Client: Pegasus Eng.  
Fin.Mgmt.# N/A Contract # \_\_\_\_\_ Task W.O.# N/A Field Bk.# N/A  
Name of Utility Co.: CITY OF WINTER SPRINGS Crew Initials: PELA-MONI-ROTH Test Hole # 8  
(Project Units) Feet  Metric \_\_\_\_\_  
(Method Of Location) Station: N/A + \_\_\_\_\_ Offset: N/A f N/A m  
(Utility Notes) Size (OD) 6 1/2" f 0.161 m Line Type: SAN Material: DIP  
Utility Condition: Good  Fair \_\_\_\_\_ Poor \_\_\_\_\_ Other: \_\_\_\_\_

**Profile View (Manual Depth of Cover)**



Vertical Datum Used: \_\_\_\_\_ CAICE or EFB Point ID: \_\_\_\_\_ (for cadd tech. & EFB use only)  
Grade Elev.: \_\_\_\_\_ Utility Elev.: \_\_\_\_\_ (Weather) Rainy  Dry \_\_\_\_\_  
(Soil Condition) Hard  Soft \_\_\_\_\_ Wet \_\_\_\_\_ Dry \_\_\_\_\_ Loam \_\_\_\_\_ Sand \_\_\_\_\_ Dirt \_\_\_\_\_ Clay \_\_\_\_\_ Rocky \_\_\_\_\_ (Ground Cover) Asphalt \_\_\_\_\_ Concrete \_\_\_\_\_ Dirt \_\_\_\_\_ Other \_\_\_\_\_



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(See back for Legend, Line Types, Materials, etc.) Report Reviewed By: \_\_\_\_\_ Date: 2-10-14

REVISIONS

| DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION |
|------|----|-------------|------|----|-------------|
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CITY OF WINTER SPRINGS  
FLORIDA  
ROAD: SR 434 FINANCIAL PROJECT ID: 432642-1-58-01

SUBSURFACE UTILITY INFORMATION

SHEET NO. 42

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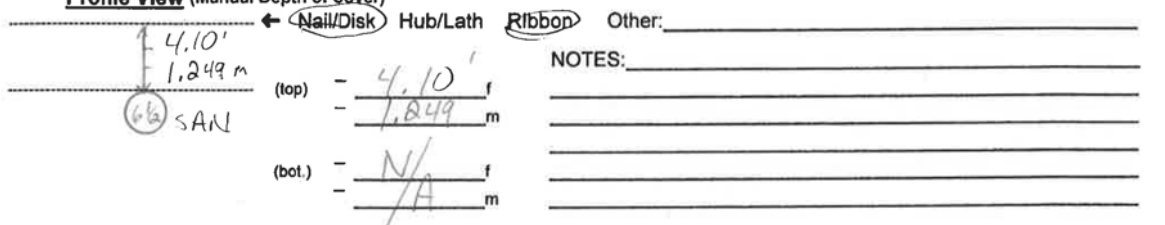
Date 2, 7, 2014  
Time N/A AM / PM  
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**TEST HOLE DATA REPORT**

Project Name: WSC SR 434 @ Winding Hollow Blvd. County: SEMINOLE  
Test Hole Location: SR 4343 @ Winding Hollow Dr. SW Corner  
SSMC Job # 57255 W.O.# 90977 Client: Pegasus Eng.  
Fin.Mgmt.# N/A Contract # \_\_\_\_\_ Task W.O.# N/A Field Bk.# N/A

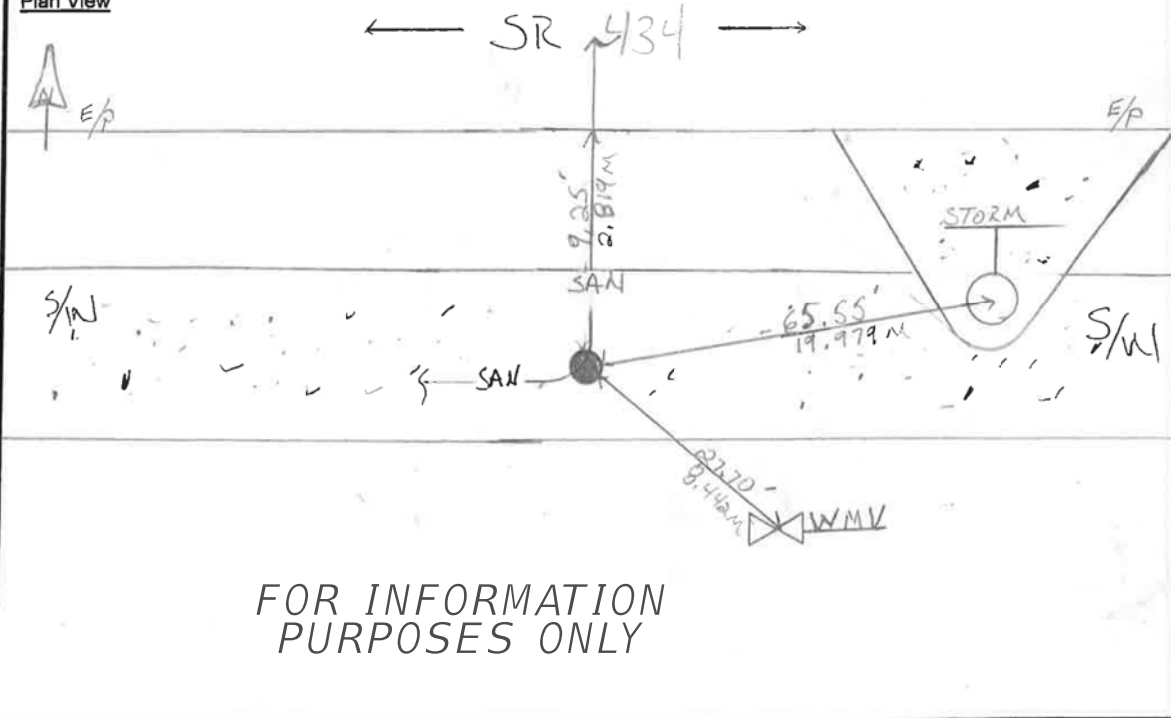
Name of Utility Co.: CITY OF WINTER SPRINGS Crew Initials: PERA-MONI-ROTH Test Hole # 9  
(Project Units) Feet  Metric \_\_\_\_\_  
(Method Of Location) Station: N/A + Offset: N/A f N/A m  
(Utility Notes) Size (OD) 6 1/2" f 0.161 m Line Type: SAN Material: DIP  
Utility Condition: Good  Fair  Poor  Other: \_\_\_\_\_

**Profile View (Manual Depth of Cover)**



Vertical Datum Used: \_\_\_\_\_ CAICE or EFB Point ID: \_\_\_\_\_ (for cadd tech. & EFB use only)  
Grade Elev.: \_\_\_\_\_ Utility Elev.: \_\_\_\_\_ (Weather)  Rainy  Dry  
(Soil Condition) Hard  Soft  Wet  Dry  Loam  Sand  Dirt  Clay  Rocky  (Ground Cover) Asphalt  Concrete  Dirt  Other \_\_\_\_\_

**Plan View**



FOR INFORMATION  
PURPOSES ONLY

(See back for Legend, Line Types, Materials, etc.)

Report Reviewed By: [Signature] Date: 2-10-14

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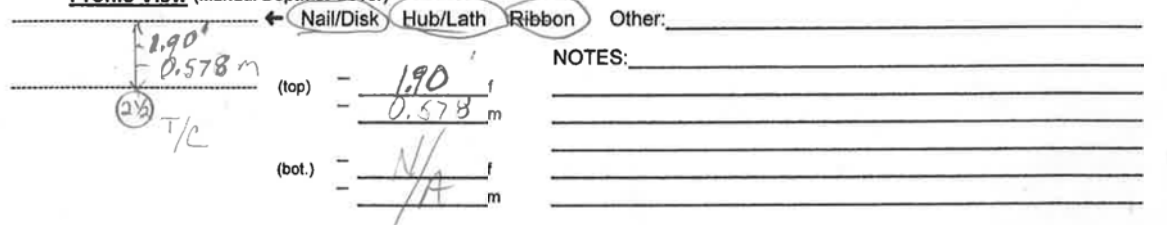
Date 2, 6, 2014  
Time N/A AM / PM  
Sheet 10 of 15

**TEST HOLE DATA REPORT**

Project Name: WSC SR 434 @ Winding Hollow Blvd. County: SEMINOLE  
Test Hole Location: SR 4343 @ Winding Hollow Dr. SW Corner  
SSMC Job # 57255 W.O.# 90977 Client: Pegasus Eng.  
Fin.Mgmt.# N/A Contract # \_\_\_\_\_ Task W.O.# N/A Field Bk.# N/A

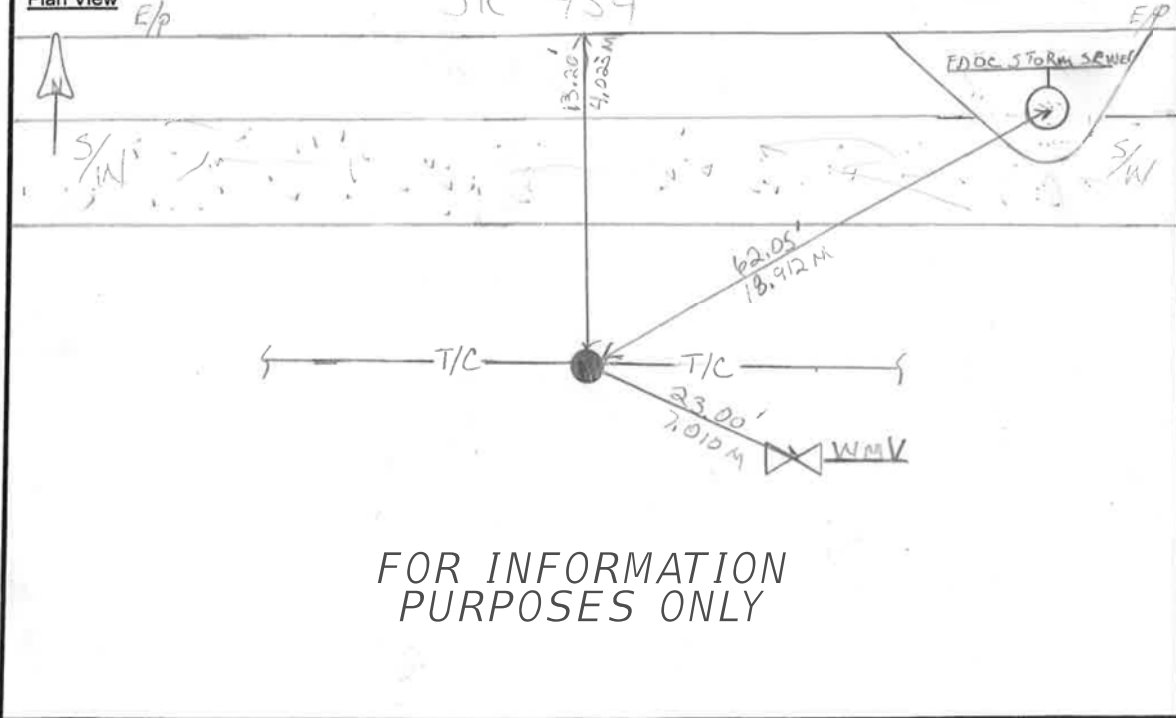
Name of Utility Co.: SEMINOLE COUNTY TRAFFIC ENGINEERS Crew Initials: PERA-MONI-ROTH Test Hole # 10  
(Project Units) Feet  Metric \_\_\_\_\_  
(Method Of Location) Station: N/A + Offset: N/A f N/A m  
(Utility Notes) Size (OD) 2 1/2" f 0.064 m Line Type: T/C (F.O.C.) Material: PVC  
Utility Condition: Good  Fair  Poor  Other: \_\_\_\_\_

**Profile View (Manual Depth of Cover)**



Vertical Datum Used: \_\_\_\_\_ CAICE or EFB Point ID: \_\_\_\_\_ (for cadd tech. & EFB use only)  
Grade Elev.: \_\_\_\_\_ Utility Elev.: \_\_\_\_\_ (Weather)  Rainy  Dry  
(Soil Condition) Hard  Soft  Wet  Dry  Loam  Sand  Dirt  Clay  Rocky  (Ground Cover) Asphalt  Concrete  Dirt  Other \_\_\_\_\_

**Plan View**



FOR INFORMATION  
PURPOSES ONLY

(See back for Legend, Line Types, Materials, etc.)

Report Reviewed By: [Signature] Date: 2-10-14

REVISIONS

| DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION |
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|      |    |             |      |    |             |

CITY OF WINTER SPRINGS  
FLORIDA  
ROAD: SR 434 FINANCIAL PROJECT ID: 432642-1-58-01

SUBSURFACE UTILITY  
INFORMATION

SHEET NO.  
**43**

Southeastern Surveying & Mapping Corp.  
6500 All American Boulevard  
Orlando, Florida 32810  
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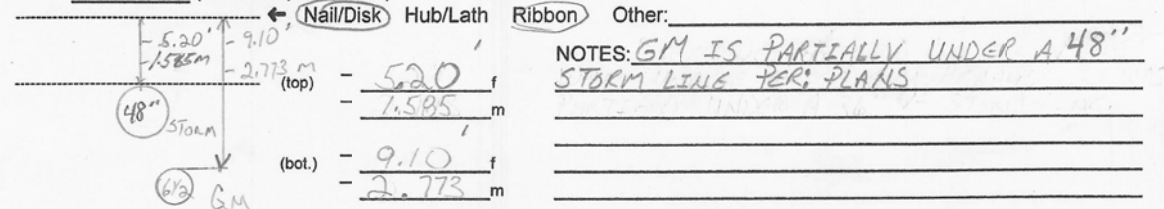
Southeastern's Utility Division

Date 2/7/2014  
Time N/A AM / PM  
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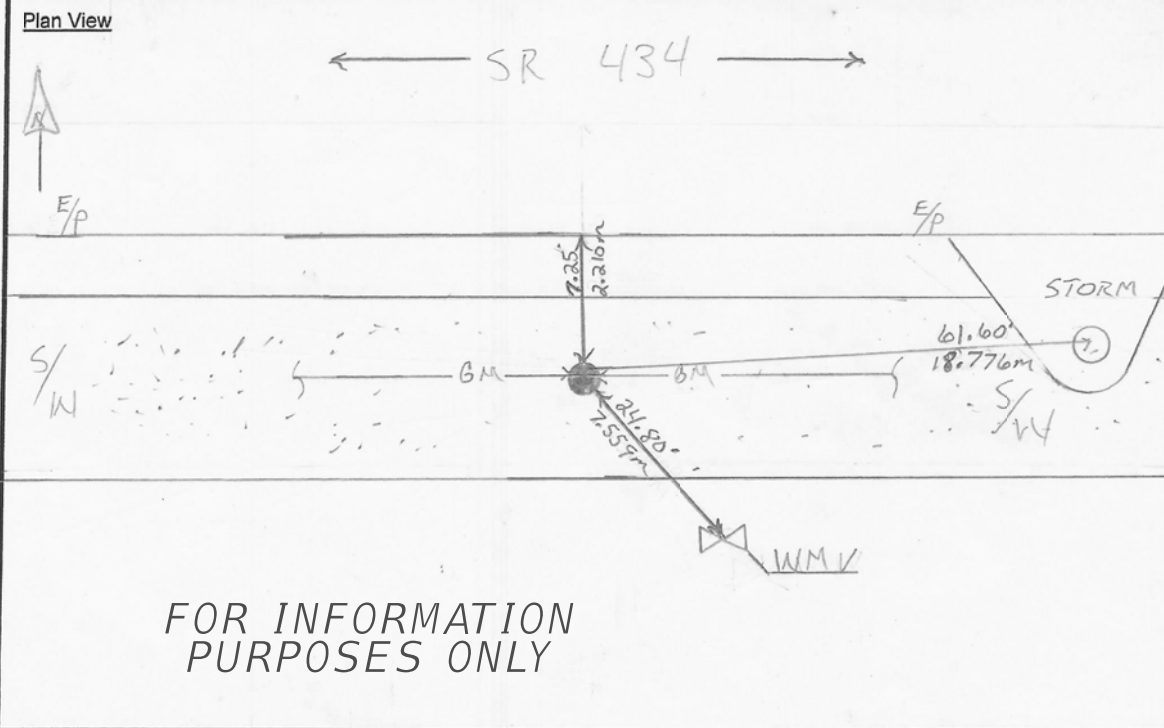
**TEST HOLE DATA REPORT**

Project Name: WSC SR 434 @ Winding Hollow Blvd. County: SEMINOLE  
Test Hole Location: SR 4343 @ Winding Hollow Dr. SW Corner  
SSMC Job # 57255 W.O.# 92056 Client: Pegasus Eng.  
Fin.Mgmt.# N/A Contract # \_\_\_\_\_ Task W.O.# N/A Field Bk.# N/A  
Name of Utility Co.: FL PUBLIC UTILITIES Crew Initials: PERA-MONE-ROTH Test Hole # 11  
(Project Units) Feet  Metric \_\_\_\_\_  
(Method Of Location) Station: N/A + \_\_\_\_\_ Offset: N/A f N/A m  
(Utility Notes) Size (OD) 6 1/2" f 0.161 m Line Type: GM Material: COATED STEEL  
Utility Condition: Good  Fair \_\_\_\_\_ Poor \_\_\_\_\_ Other: \_\_\_\_\_

**Profile View (Manual Depth of Cover)**



Vertical Datum Used: \_\_\_\_\_ CAICE or EFB Point ID: \_\_\_\_\_ (for cadd tech. & EFB use only)  
Grade Elev.: \_\_\_\_\_ Utility Elev.: \_\_\_\_\_ (Weather)  Rainy  Dry \_\_\_\_\_  
(Soil Condition) Hard  Soft  Wet  Dry \_\_\_\_\_ Loam \_\_\_\_\_ Sand \_\_\_\_\_ Dirt \_\_\_\_\_ Clay \_\_\_\_\_ Rocky \_\_\_\_\_ (Ground Cover) Asphalt \_\_\_\_\_ Concrete \_\_\_\_\_ Other \_\_\_\_\_



(See back for Legend, Line Types, Materials, etc.) Report Reviewed By: [Signature] Date: 2-10-14

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Orlando, Florida 32810  
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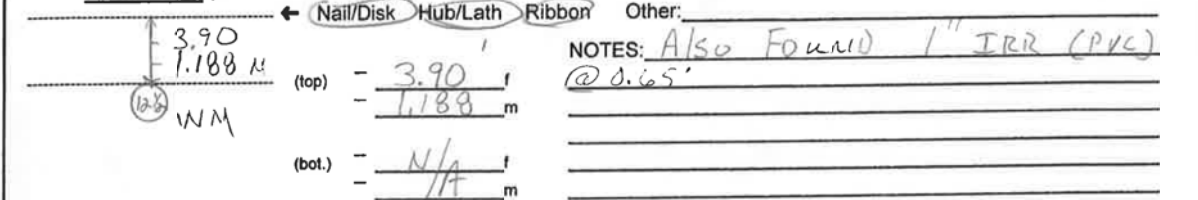
Southeastern's Utility Division

Date 2/6/2014  
Time N/A AM / PM  
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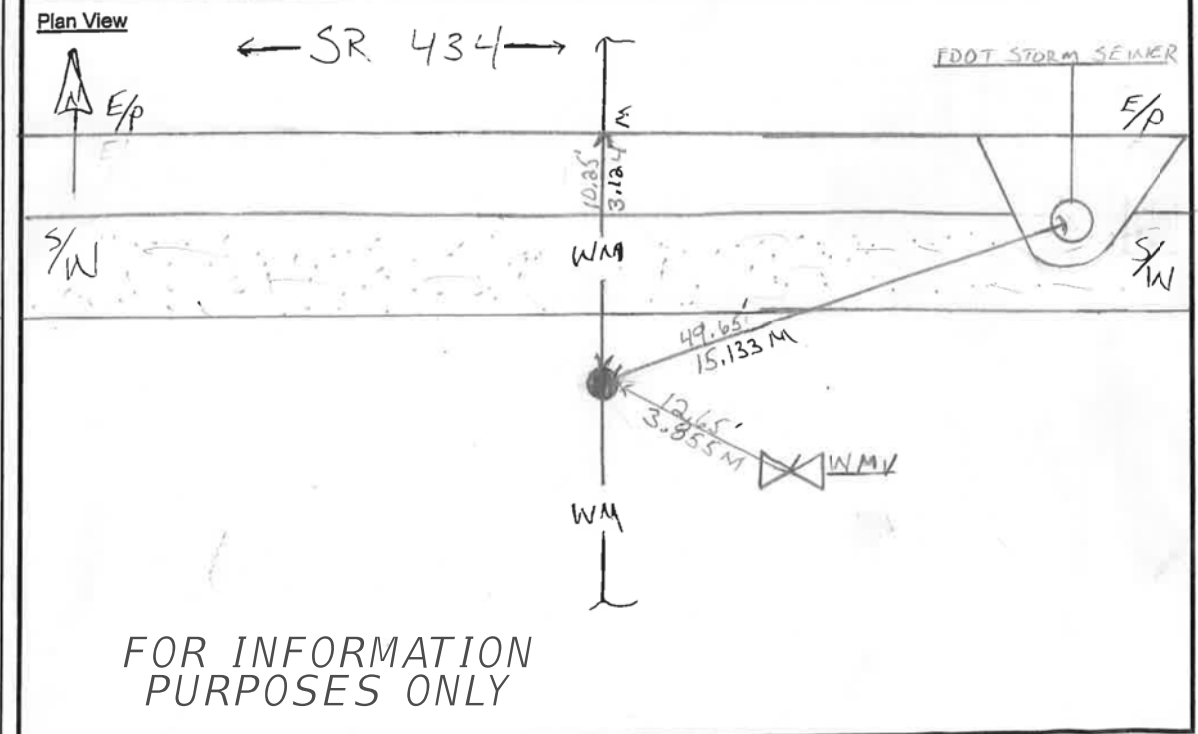
**TEST HOLE DATA REPORT**

Project Name: WSC SR 434 @ Winding Hollow Blvd. County: SEMINOLE  
Test Hole Location: SR 4343 @ Winding Hollow Dr. SW Corner  
SSMC Job # 57255 W.O.# 90977 Client: Pegasus Eng.  
Fin.Mgmt.# N/A Contract # \_\_\_\_\_ Task W.O.# N/A Field Bk.# N/A  
Name of Utility Co.: CITY OF WINTER SPRINGS Crew Initials: PERA-MONE-ROTH Test Hole # 12  
(Project Units) Feet  Metric \_\_\_\_\_  
(Method Of Location) Station: N/A + \_\_\_\_\_ Offset: N/A f N/A m  
(Utility Notes) Size (OD) 12 1/2" f 0.311 m Line Type: WMM Material: DIP  
Utility Condition: Good  Fair \_\_\_\_\_ Poor \_\_\_\_\_ Other: \_\_\_\_\_

**Profile View (Manual Depth of Cover)**



Vertical Datum Used: \_\_\_\_\_ CAICE or EFB Point ID: \_\_\_\_\_ (for cadd tech. & EFB use only)  
Grade Elev.: \_\_\_\_\_ Utility Elev.: \_\_\_\_\_ (Weather)  Rainy  Dry \_\_\_\_\_  
(Soil Condition) Hard  Soft  Wet  Dry \_\_\_\_\_ Loam \_\_\_\_\_ Sand \_\_\_\_\_ Dirt \_\_\_\_\_ Clay \_\_\_\_\_ Rocky \_\_\_\_\_ (Ground Cover) Asphalt \_\_\_\_\_ Concrete \_\_\_\_\_ Other \_\_\_\_\_



(See back for Legend, Line Types, Materials, etc.) Report Reviewed By: [Signature] Date: 2-10-14

REVISIONS

| DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION |
|------|----|-------------|------|----|-------------|
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CITY OF WINTER SPRINGS  
FLORIDA  
ROAD: SR 434 FINANCIAL PROJECT ID: 432642-1-58-01

SUBSURFACE UTILITY  
INFORMATION

SHEET NO.  
**44**

Southeastern Surveying & Mapping Corp.  
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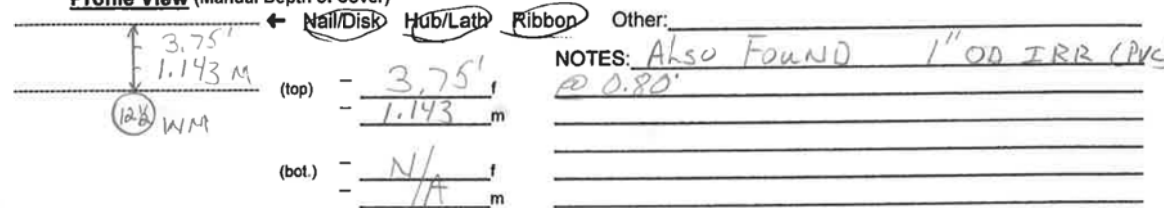
Date 2/6/2014  
Time N/A AM / PM  
Sheet 13 of 15

**TEST HOLE DATA REPORT**

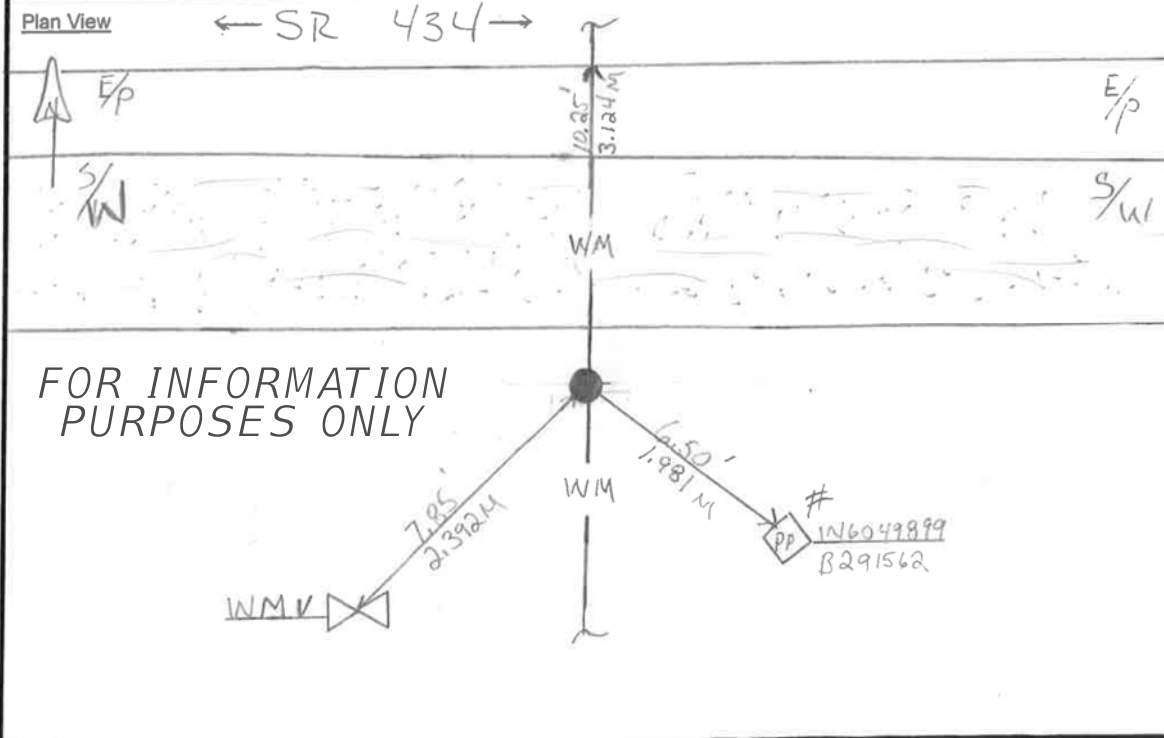
Project Name: WSC SR 434 @ Winding Hollow Blvd. County: SEMINOLE  
Test Hole Location: SR 4343 @ Winding Hollow Dr. SW Corner  
SSMC Job # 57255 W.O.# 90977 Client: Pegasus Eng.  
Fin.Mgmt.# N/A Contract # \_\_\_\_\_ Task W.O.# N/A Field Bk.# N/A

Name of Utility Co.: CITY OF WINTER SPRINGS Crew Initials: PELA-MONIZ-ROTH Test Hole # 13  
(Project Units) Feet  Metric \_\_\_\_\_  
(Method Of Location) Station: \_\_\_\_\_ Offset: N/A f N/A m  
(Utility Notes) Size (OD) 12 1/2" f 0.311 m Line Type: WM Material: DIP  
Utility Condition: Good  Fair \_\_\_\_\_ Poor Other: \_\_\_\_\_

**Profile View (Manual Depth of Cover)**



Vertical Datum Used: \_\_\_\_\_ CAICE or EFB Point ID: \_\_\_\_\_ (for cadd tech. & EFB use only)  
Grade Elev.: \_\_\_\_\_ Utility Elev.: \_\_\_\_\_ (Weather)  Rainy  Dry  
(Soil Condition)  Hard  Soft  Wet  Dry  Loam  Sand  Dirt  Clay  Rocky (Ground Cover)  Asphalt  Concrete  Dirt  Other



(See back for Legend, Line Types, Materials, etc.) Report Reviewed By: \_\_\_\_\_ Date 2-10-14

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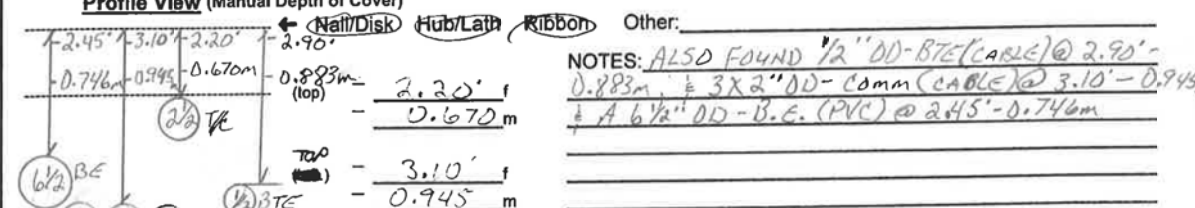
Date 2/6/2014  
Time N/A AM / PM  
Sheet 14 of 15

**TEST HOLE DATA REPORT**

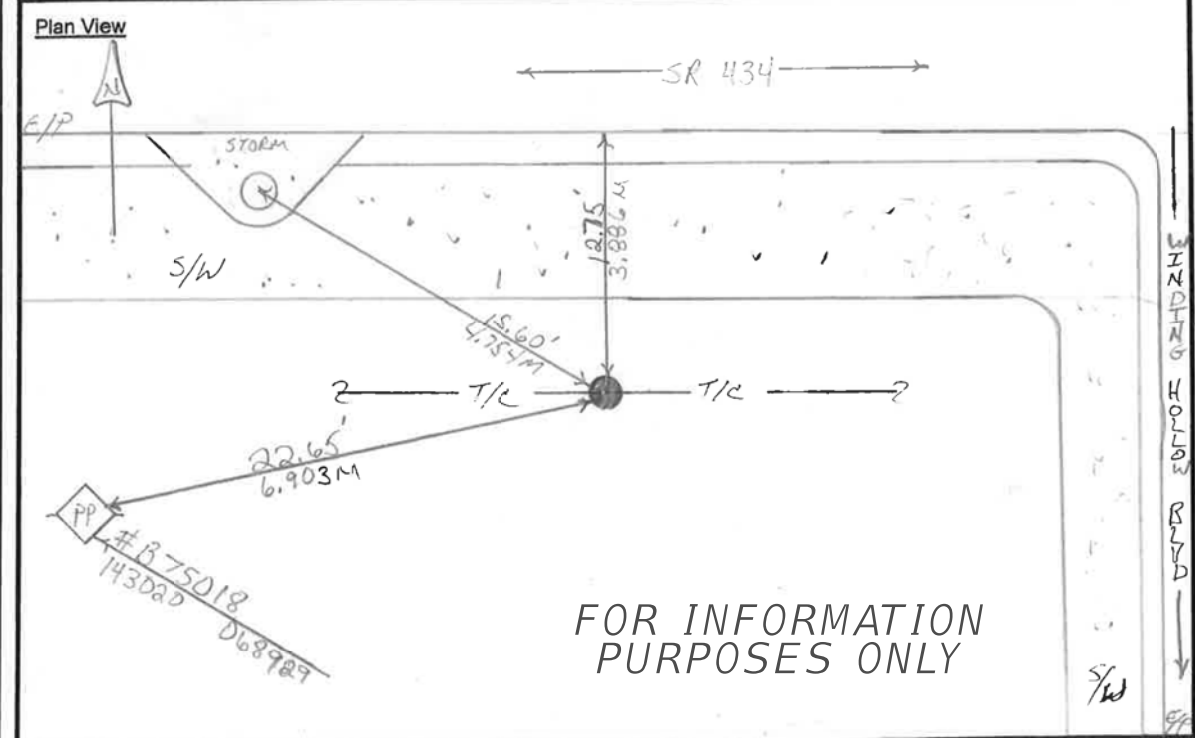
Project Name: WSC SR 434 @ Winding Hollow Blvd. County: SEMINOLE  
Test Hole Location: SR 4343 @ Winding Hollow Dr. SW Corner  
SSMC Job # 57255 W.O.# 90977 Client: Pegasus Eng.  
Fin.Mgmt.# N/A Contract # \_\_\_\_\_ Task W.O.# N/A Field Bk.# N/A

Name of Utility Co.: SEMINOLE COUNTY TRAFFIC ENGINEERING Crew Initials: PELA-MONIZ-ROTH Test Hole # 14  
(Project Units) Feet  Metric \_\_\_\_\_  
(Method Of Location) Station: \_\_\_\_\_ Offset: N/A f N/A m  
(Utility Notes) Size (OD) 2 1/2" f 0.064 m Line Type: T/C (E.O.S.) Material: PVC  
Utility Condition: Good  Fair \_\_\_\_\_ Poor Other: \_\_\_\_\_

**Profile View (Manual Depth of Cover)**



Vertical Datum Used: \_\_\_\_\_ CAICE or EFB Point ID: \_\_\_\_\_ (for cadd tech. & EFB use only)  
Grade Elev.: \_\_\_\_\_ Utility Elev.: \_\_\_\_\_ (Weather)  Rainy  Dry  
(Soil Condition)  Hard  Soft  Wet  Dry  Loam  Sand  Dirt  Clay  Rocky (Ground Cover)  Asphalt  Concrete  Dirt  Other



(See back for Legend, Line Types, Materials, etc.) Report Reviewed By: \_\_\_\_\_ Date 2-10-14

REVISIONS

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|      |    |             |      |    |             |

CITY OF WINTER SPRINGS  
FLORIDA  
ROAD: SR 434 FINANCIAL PROJECT ID: 432642-1-58-01

SUBSURFACE UTILITY INFORMATION

SHEET NO. 45

Southeastern Surveying & Mapping Corp.  
 6500 All American Boulevard  
 Orlando, Florida 32810  
 Ph.(407) 292-8580  
 Fax (407) 292-0141  
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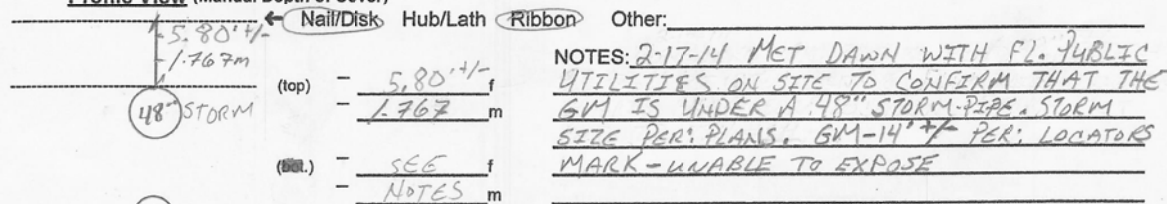
Southeastern's Utility Division

Date 2 / 7 / 2014  
 Time N/A AM / PM  
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**TEST HOLE DATA REPORT**

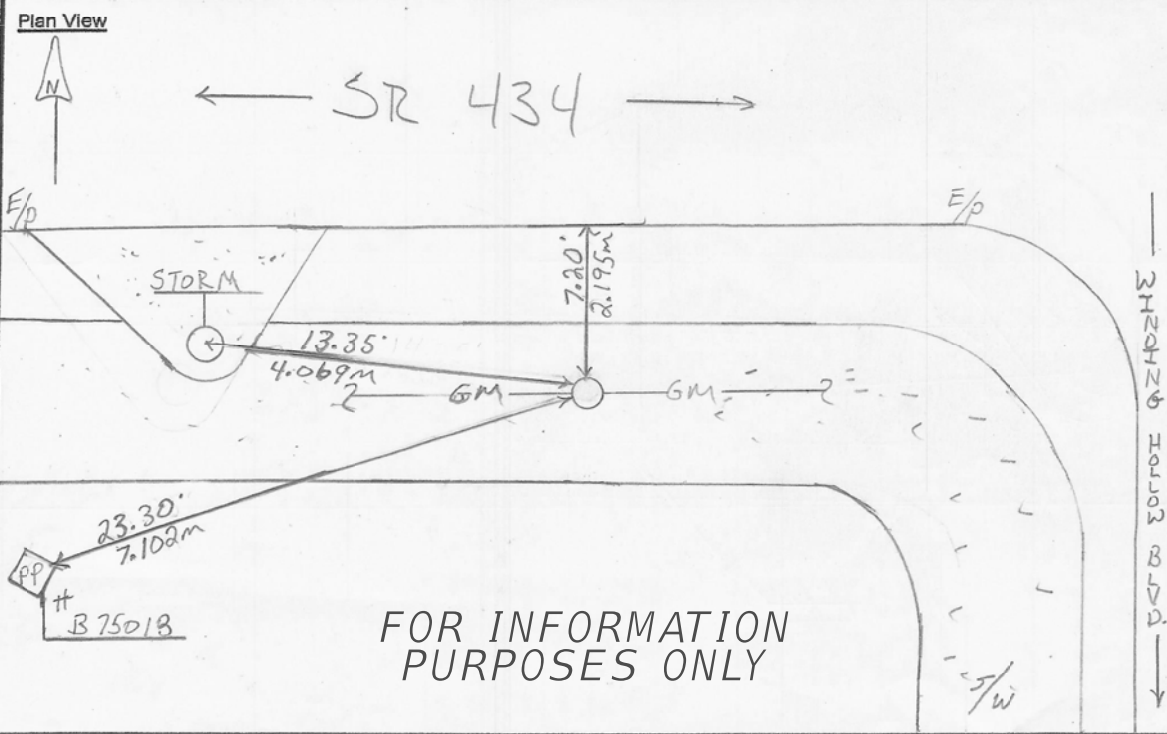
Project Name: WSC SR 434 @ Winding Hollow Blvd. County: SEMINOLE  
 Test Hole Location: SR 4343 @ Winding Hollow Dr. SW Corner  
 SSMC Job # 57255 W.O.# 92056 Client: Pegasus Eng.  
 Fin.Mgmt.# N/A Contract # \_\_\_\_\_ Task W.O.# N/A Field Bk.# N/A  
 Name of Utility Co.: FL PUBLIC UTILITIES Crew Initials: PERA-MONI-ROTH Test Hole # 15  
 (Project Units) Feet  Metric \_\_\_\_\_  
 (Method Of Location) Station: N/A + \_\_\_\_\_ Offset: N/A f N/A m  
 (Utility Notes) Size (OD) 6 1/2" f 0.161 m Line Type: GM Material: COATED STEEL  
 Utility Condition: Good Fair Poor Other SEE NOTES

**Profile View (Manual Depth of Cover)**



NOTES: 2-17-14 MET DAWN WITH FL. PUBLIC UTILITIES ON SITE TO CONFIRM THAT THE GM IS UNDER A 48" STORM PIPE. STORM SIZE PER: PLANS. GM-14" PER: LOCATORS MARK - UNABLE TO EXPOSE

Vertical Datum Used: \_\_\_\_\_ CAICE or EFB Point ID: \_\_\_\_\_ (for cadd tech. & EFB use only)  
 Grade Elev.: \_\_\_\_\_ Utility Elev.: \_\_\_\_\_ (Weather) Rainy Dry  
 (Soil Condition) Hard Soft Wei Dry Loam Sand Dir Clay Rocky (Ground Cover) Asphalt Concrete Dir Other



(See back for Legend, Line Types, Materials, etc.) Report Reviewed By: \_\_\_\_\_ Date: 2-10-14

REVISIONS

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|-----------------------------------|----------------------|-----------------------------------|------------------------|
| CITY OF WINTER SPRINGS<br>FLORIDA |                      | SUBSURFACE UTILITY<br>INFORMATION | SHEET<br>NO.<br><br>46 |
| ROAD                              | FINANCIAL PROJECT ID |                                   |                        |
| SR 434                            | 432642-1-58-01       |                                   |                        |



**INDEX OF SUMMARY OF QUANTITIES**

| SHEET NO. | SHEET DESCRIPTION                                  |
|-----------|--|
| SQ-1      | SUMMARY OF LUMP SUM ITEMS                          |
| SQ-2      | SUMMARY OF TRAFFIC CONTROL PLAN ITEMS              |
|           | SUMMARY OF TEMPORARY SIGNALIZATION & DETECTION     |
| SQ-3      | SUMMARY OF EROSION AND SEDIMENT CONTROL ITEMS      |
|           | SUMMARY OF REMOVAL ITEMS                           |
| SQ-4      | SUMMARY OF EARTHWORK                               |
| SQ-5      | SUMMARY OF PAVEMENT                                |
|           | SUMMARY OF UNDERDRAIN                              |
| SQ-6      | SUMMARY OF CURB & GUTTER AND/OR TRAFFIC SEPARATORS |
|           | SUMMARY OF SIDEWALK & DETECTABLE WARNINGS          |
| SQ-7      | SUMMARY OF FENCING                                 |
|           | SUMMARY OF PERFORMANCE TURF                        |

**PAY ITEM NOTES**

|          |   |
|----------|---|
| 440-1-20 | INCLUDES THE COST OF CLEANOUTS.   |
| 520-1-10 | TO INCLUDE THE COST OF THE ASPHALT BASE CURB PAD UNDER THE CURB AND GUTTER.                             |
| 570-1-2  | CONTRACTOR TO MATCH EXISTING SOD TYPE IN AREAS TO BE SODDED. INCLUDES THE COST OF FERTILIZER AND WATER. |

| SUMMARY OF LUMP SUM ITEMS |                      |          |   |              |                      |
|---------------------------|----------------------|----------|---|--------------|----------------------|
| PAY ITEM NO.              | PAY ITEM DESCRIPTION | QUANTITY |   | DESIGN NOTES | CONSTRUCTION REMARKS |
|                           |                      | P        | F |              |                      |
| 0101-1                    | MOBILIZATION         | 1        |   |              |                      |
|                           |                      |          |   |              |                      |
|                           |                      |          |   |              |                      |
|                           |                      |          |   |              |                      |

| REVISIONS |    |             |      |    |             | ENGINEER OF RECORD:<br>FURSAN S. MUNJED, P.E.<br>PROFESSIONAL ENGINEER CERTIFICATE NO. 51446<br>PEGASUS ENGINEERING, LLC<br>301 WEST STATE ROAD 434, SUITE 309<br>WINTER SPRINGS, FLORIDA 32708 |  | CITY OF WINTER SPRINGS<br>FLORIDA |                      | SUMMARY OF QUANTITIES | SHEET NO. |
|-----------|----|-------------|------|----|-------------|---|---|-----------------------------------|----------------------|-----------------------|-----------|
| DATE      | BY | DESCRIPTION | DATE | BY | DESCRIPTION |   |   | ROAD                              | FINANCIAL PROJECT ID |                       | SQ-1      |
|           |    |             |      |    |             |   | SR 434  | 432642-1-58-01                    |                      |                       |           |

### SUMMARY OF TEMPORARY TRAFFIC CONTROL PLAN ITEMS

| PAY ITEM NO. | PAY ITEM DESCRIPTION   | UNIT | PHASE I  |          |       | PHASE II |          |       | TOTAL |   | DESIGN NOTES | CONSTRUCTION REMARKS |
|--------------|--|------|----------|----------|-------|----------|----------|-------|-------|---|--------------|----------------------|
|              |  |      | DURATION | QUANTITY | TOTAL | DURATION | QUANTITY | TOTAL | P     | F |              |                      |
|              |  |      | DAYS     | P        | P     | DAYS     | P        | P     |       |   |              |                      |
| 0102-1       | MAINTENANCE OF TRAFFIC   | LS   |          |          | 1     |          |          |       | 1     |   | 285 DAYS     |                      |
| 102-14       | TRAFFIC CONTROL OFFICER  | HR   |          | 16       | 16    |          | 12       | 12    | 28    |   |              |                      |
| 0120-60      | WORK ZONE SIGN   | ED   | 240      | 17       | 4080  | 45       | 17       | 765   | 4845  |   |              |                      |
| 0102-71-13   | TEMPORARY BARRIER, F&I, LOW PROFILE, CONCRETE                          | LF   |          | 564      | 564   |          |          |       | 564   |   |              |                      |
| 0102-74-1    | CHANNELIZING DEVICE - TYPES I, II, DI, VP, DRUM, OR LCD                | ED   | 240      | 11       | 2640  | 45       | 31       | 1395  | 4035  |   |              |                      |
| 0102-74-8    | CHANNELIZING DEVICE- PEDESTRIAN LCD (LONGITUDINAL CHANNELIZING DEVICE) | FD   | 240      | 60       | 14400 | 45       | 60       | 2700  | 17100 |   |              |                      |
| 0102-76      | ARROW BOARD / ADVANCE WARNING ARROW PANEL                              | ED   | 240      | 1        | 240   | 45       | 1        | 45    | 285   |   |              |                      |
| 0102-99      | PORTABLE CHANGEABLE MESSAGE SIGN (TEMP.)                               | ED   | 254      | 1        | 254   | 45       | 1        | 45    | 299   |   |              |                      |
|              |  |      |          |          |       |          |          |       |       |   |              |                      |
|              |  |      |          |          |       |          |          |       |       |   |              |                      |
|              |  |      |          |          |       |          |          |       |       |   |              |                      |
|              |  |      |          |          |       |          |          |       |       |   |              |                      |
|              |  |      |          |          |       |          |          |       |       |   |              |                      |
|              |  |      |          |          |       |          |          |       |       |   |              |                      |
|              |  |      |          |          |       |          |          |       |       |   |              |                      |
|              |  |      |          |          |       |          |          |       |       |   |              |                      |
|              |  |      |          |          |       |          |          |       |       |   |              |                      |
|              |  |      |          |          |       |          |          |       |       |   |              |                      |
|              |  |      |          |          |       |          |          |       |       |   |              |                      |
|              |  |      |          |          |       |          |          |       |       |   |              |                      |
|              |  |      |          |          |       |          |          |       |       |   |              |                      |

### SUMMARY OF TEMPORARY SIGNALIZATION & DETECTION

| PHASE     | DURATION | 0102104  |     |   |           |   |   | 0102107 1  |     |   |               |   |   | DESIGN NOTES | CONSTRUCTION REMARKS |
|-----------|----------|--|-----|---|-----------|---|---|--|-----|---|---------------|---|---|--------------|----------------------|
|           |          | TEMPORARY SIGNALS & MAINTENANCE OF INTERSECTION - EACH DAY |     |   |           |   |   | TEMPORARY TRAFFIC DETECTION & MAINTENANCE OF INTERSECTION - EACH DAY |     |   |               |   |   |              |                      |
|           |          | EXISTING   |     |   | TEMPORARY |   |   | EXISTING   |     |   | TEMPORARY/NEW |   |   |              |                      |
|           |          | DAYS   | #   | P | F         | # | P | F  | #   | P | F             | # | P |              |                      |
| I         | 240      | 1  | 240 |   |           |   | 1 | 240  |     |   |               |   |   |              |                      |
| II        | 45       | 1  | 45  |   |           |   | 1 | 45   |     |   |               |   |   |              |                      |
| SUB-TOTAL |          |  | 285 |   |           |   |   | 285  |     |   |               |   |   |              |                      |
| TOTAL     |          |  | 285 |   |           |   |   | TOTAL  | 285 |   |               |   |   |              |                      |

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

**ENGINEER OF RECORD:**  
**FURSAN S. MUNJED, P.E.**  
 PROFESSIONAL ENGINEER CERTIFICATE NO. 51446  
 PEGASUS ENGINEERING, LLC  
 301 WEST STATE ROAD 434, SUITE 309  
 WINTER SPRINGS, FLORIDA 32708



CITY OF WINTER SPRINGS  
 FLORIDA

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ROAD: SR 434      FINANCIAL PROJECT ID: 432642-1-58-01

SUMMARY OF QUANTITIES

SHEET NO.  
SQ-2

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



| SUMMARY OF EARTHWORK |                                    |     |   |              |                      |
|----------------------|------------------------------------|-----|---|--------------|----------------------|
| PAY ITEM NO.         | PAY ITEM DESCRIPTION               | CY  |   | DESIGN NOTES | CONSTRUCTION REMARKS |
|                      |                                    | P   | F |              |                      |
| 0120-1               | REGULAR EXCAVATION                 | 362 |   |              |                      |
|                      |                                    |     |   |              |                      |
| 120-6                | EMBANKMENT                         | 28  |   |              |                      |
|                      | EXIST. UNDERDRAIN REMOVAL BACKFILL | 71  |   |              |                      |
|                      | EMBANKMENT TOTAL                   | 99  |   |              |                      |
|                      |                                    |     |   |              |                      |
|                      |                                    |     |   |              |                      |
|                      |                                    |     |   |              |                      |
|                      |                                    |     |   |              |                      |
|                      |                                    |     |   |              |                      |
|                      |                                    |     |   |              |                      |
|                      |                                    |     |   |              |                      |
|                      |                                    |     |   |              |                      |

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

ENGINEER OF RECORD:  
**FURSAN S. MUNJED, P.E.**  
 PROFESSIONAL ENGINEER CERTIFICATE NO. 51446  
 PEGASUS ENGINEERING, LLC  
 301 WEST STATE ROAD 434, SUITE 309  
 WINTER SPRINGS, FLORIDA 32708



CITY OF WINTER SPRINGS  
 FLORIDA

| ROAD   | FINANCIAL PROJECT ID |
|--------|----------------------|
| SR 434 | 432642-1-58-01       |

SUMMARY OF QUANTITIES

SHEET NO.  
 SQ-4

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

**SUMMARY OF PAVEMENT**

| PAY ITEM NO. | PAY ITEM DESCRIPTION  | LOCATION               |             | SIDE | AREA ID | LENGTH | WIDTH | UNIT | QUANTITY |   | TOTAL |   | DESIGN NOTES         | CONSTRUCTION REMARKS |
|--------------|---|------------------------|-------------|------|---------|--------|-------|------|----------|---|-------|---|----------------------|----------------------|
|              |   | STA. TO STA.           | DESCRIPTION |      |         |        |       |      | P        | F | P     | F |                      |                      |
|              |   |                        |             |      |         |        |       |      |          |   |       |   |                      |                      |
| 0160-4       | TYPE B STABILIZATION  | 517+10.40 TO 517+60.40 |             | RT   | 219096  |        |       | SY   | 50.77    |   | 727   |   | 50' TAPER            |                      |
|              |   | 517+60.40 TO 521+10.77 |             | RT   | 219103  |        |       |      | 586.96   |   |       |   | RIGHT TORN LANE      |                      |
|              |   | 521+10.77 TO 521+45.78 |             | RT   | 219125  |        |       |      | 48.89    |   |       |   | RETURN NO. 1         |                      |
|              |   | 521+10.77 TO 522+22.24 |             | RT   | 219155  |        |       |      | 40.41    |   |       |   | VALLEY GUTTER        |                      |
| 0285-709     | BASE GROUP 9 (TYPE B-12.5)                                      | 517+10.40 TO 517+60.40 |             | RT   | 356180  |        |       | SY   | 33.49    |   | 570   |   | 50' TAPER            |                      |
|              |   | 517+60.40 TO 521+10.77 |             | RT   | 356185  |        |       |      | 470.13   |   |       |   | RIGHT TURN LANE      |                      |
|              |   | 521+10.77 TO 521+45.78 |             | RT   | 356205  |        |       |      | 31.73    |   |       |   | RETURN NO. 1         |                      |
|              |   | 521+10.77 TO 522+22.24 |             | RT   | 356235  |        |       |      | 34.47    |   |       |   | VALLEY GUTTER        |                      |
| 0327-70-6    | MILLING EXISTING ASPHALT PAVEMENT (1.5")                        | 515+60.00 TO 522+22.24 |             | RT   | 514252  |        |       | SY   | 330.90   |   | 655   |   | SR 434               |                      |
|              |   | 521+22.83 TO 522+04.53 |             | RT   | 356272  |        |       |      | 324.13   |   |       |   | WINDING HOLLOW BLVD. |                      |
| 0334-1-13    | TYPE SP ASPHALTIC CONCRETE, TRAFFIC C (2.0")                    | 517+10.40 TO 517+60.40 |             | RT   | 446253  |        |       | TN   | 3.68     |   | 62.7  |   | 50' TAPER            |                      |
|              |   | 517+60.40 TO 521+10.77 |             | RT   | 446258  |        |       |      | 51.71    |   |       |   | RIGHT TURN LANE      |                      |
|              |   | 521+10.77 TO 521+45.78 |             | RT   | 446278  |        |       |      | 3.49     |   |       |   | RETURN NO. 1         |                      |
|              |   | 521+10.77 TO 522+22.24 |             | RT   | 446308  |        |       |      | 3.79     |   |       |   | VALLEY GUTTER        |                      |
| 0337-7-83    | ASPH. CONC. FRICTION COURSE, TRAFFIC C, FC-12.5, PG76-22 (1.5") | 517+10.40 TO 517+60.40 |             | RT   | 446328  |        |       | TN   | 2.76     |   | 101.1 |   | 50' TAPER            |                      |
|              |   | 517+60.40 TO 521+10.77 |             | RT   | 446333  |        |       |      | 38.79    |   |       |   | RIGHT TURN LANE      |                      |
|              |   | 521+10.77 TO 521+45.75 |             | RT   | 446353  |        |       |      | 2.62     |   |       |   | RETURN NO. 1         |                      |
|              |   | 521+10.77 TO 522+22.24 |             | RT   | 446383  |        |       |      | 2.84     |   |       |   | VALLEY GUTTER        |                      |
|              |   | 515+60.00 TO 522+22.24 |             | RT   | 514203  |        |       |      | 27.30    |   |       |   | SR 434 MILLING AREA  |                      |
|              |   | 521+23.00 TO 522+04.00 |             | RT   | 358205  |        |       |      | 26.74    |   |       |   | WINDING HOLLOW BLVD. |                      |

**SUMMARY OF UNDERDRAIN**

| LOCATION               | SIDE | UNDERDRAIN TYPE II |   | 6" OUTLET PIPE |   | DESIGN NOTES | CONSTRUCTION REMARKS |
|------------------------|------|--------------------|---|----------------|---|--------------|----------------------|
|                        |      | 440-1-20           |   | 0440 73 2      |   |              |                      |
|                        |      | (LF)               |   | (LF)           |   |              |                      |
| STA. TO STA.           |      | P                  | F | P              | F |              |                      |
| 516+00.77 to 516+08.66 | RT   |                    |   | 8.0            |   |              |                      |
| 516+08.66 to 516+96.20 | RT   | 88.0               |   |                |   |              |                      |
| 517+28.54 to 520+75.82 | RT   | 349.0              |   |                |   |              |                      |
| 520+75.82 to 520+82.89 | RT   |                    |   | 8.0            |   |              |                      |
| 520+80.85 to 520+88.92 | RT   |                    |   | 8.0            |   |              |                      |
| SUB-TOTAL:             |      | 437.0              |   | 24.0           |   |              |                      |
| TOTAL:                 |      | 437                |   | 24             |   |              |                      |

**REVISIONS**

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

ENGINEER OF RECORD:  
**FURSAN S. MUNJED, P.E.**  
 PROFESSIONAL ENGINEER CERTIFICATE NO. 51446  
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 301 WEST STATE ROAD 434, SUITE 309  
 WINTER SPRINGS, FLORIDA 32708



CITY OF WINTER SPRINGS  
 FLORIDA

|        |                      |
|--------|----------------------|
| ROAD   | FINANCIAL PROJECT ID |
| SR 434 | 432642-1-58-01       |

**SUMMARY OF QUANTITIES**

SHEET NO.

SQ-5

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

**SUMMARY OF CURB & GUTTER AND/OR TRAFFIC SEPARATORS**

| PAY ITEM NO. | PAY ITEM DESCRIPTION              | LOCATION               |           | SIDE | UNIT | QUANTITY     |            |        |            | TOTAL |     | DESIGN NOTES | CONSTRUCTION REMARKS |   |
|--------------|-----------------------------------|------------------------|-----------|------|------|--------------|------------|--------|------------|-------|-----|--------------|----------------------|---|
|              |                                   | STA. TO STA.           |           |      |      | GROSS LENGTH | DEDUCTIONS |        | NET LENGTH |       | P   |              |                      | F |
|              |                                   |                        |           |      |      |              | TYPE       | LENGTH | P          | F     |     |              |                      |   |
| 0520-1-10    | CONCRETE CURB AND GUTTER (TYPE F) | 515+60.00 TO 515+88.68 |           | RT   | LF   | 28.8         |            |        | 28.80      |       | 576 |              | SR 434               |   |
|              |                                   | 516+01.56              | 521+10.77 | RT   |      | 510.7        | INLETS     | 33.0   | 477.70     |       |     |              | SR 434 & TURN LANE   |   |
|              |                                   | 521+10.77 TO 521+44.25 |           | RT   |      | 51.7         |            |        | 51.7       |       |     |              | RETURN NO. 1         |   |
|              |                                   | 522+05.25 TO 522+22.24 |           | RT   |      | 17.8         |            |        | 17.8       |       |     |              | SR 434               |   |
|              |                                   |                        |           |      |      |              |            |        |            |       |     |              |                      |   |
|              |                                   |                        |           |      |      |              |            |        |            |       |     |              |                      |   |
|              |                                   |                        |           |      |      |              |            |        |            |       |     |              |                      |   |
|              |                                   |                        |           |      |      |              |            |        |            |       |     |              |                      |   |
|              |                                   |                        |           |      |      |              |            |        |            |       |     |              |                      |   |
|              |                                   |                        |           |      |      |              |            |        |            |       |     |              |                      |   |
|              |                                   |                        |           |      |      |              |            |        |            |       |     |              |                      |   |
|              |                                   |                        |           |      |      |              |            |        |            |       |     |              |                      |   |
|              |                                   |                        |           |      |      |              |            |        |            |       |     |              |                      |   |
|              |                                   |                        |           |      |      |              |            |        |            |       |     |              |                      |   |

**SUMMARY OF SIDEWALK & DETECTABLE WARNINGS**

| LOCATION<br>STA. TO STA. | SIDE | AREA ID | LENGTH | WIDTH | CONC SIDEWALK 4" |   | CONC SIDEWALK 6" |   | DETECTABLE WARNINGS |   | DESIGN NOTES   | CONSTRUCTION REMARKS |
|--------------------------|------|---------|--------|-------|------------------|---|------------------|---|---------------------|---|----------------|----------------------|
|                          |      |         |        |       | 0522 1           |   | 0522-2           |   | 0527 2              |   |                |                      |
|                          |      |         |        |       | SY               |   | SY               |   | SF                  |   |                |                      |
|                          |      |         |        |       | P                | F | P                | F | P                   | F |                |                      |
| 515+60.00 TO 516+20.35   | RT   | 451348  |        |       | 32.0             |   |                  |   |                     |   |                |                      |
| 516+68.97 TO 517+17.69   | RT   | 451368  |        |       | 27.0             |   |                  |   |                     |   |                |                      |
| 517+17.69 TO 521+04.40   | RT   |         | 386.7  | 6.0   | 257.8            |   |                  |   |                     |   |                |                      |
| 516+20.35 TO 516+68.97   | RT   | 451292  |        |       |                  |   | 45.6             |   |                     |   | Driveway No. 1 |                      |
| 521+04.40 TO 521+40.71   | RT   | 356138  |        |       |                  |   | 30.5             |   |                     |   | Return No. 1   |                      |
| 521+33.75 TO 521+40.85   | RT   | 356145  |        |       |                  |   | 6.3              |   |                     |   |                |                      |
| 521+28.46 TO 521+32.46   | LT   | 356150  |        |       |                  |   | 3.0              |   |                     |   |                |                      |
| 521+10.79 TO 521+15.92   | RT   |         | 5.1    | 2.0   |                  |   |                  |   | 10.0                |   |                |                      |
| 521+31.79 TO 521+36.65   | RT   |         | 5.2    | 2.0   |                  |   |                  |   | 10.0                |   |                |                      |
|                          |      |         |        |       |                  |   |                  |   |                     |   |                |                      |
|                          |      |         |        |       |                  |   |                  |   |                     |   |                |                      |
|                          |      |         |        |       |                  |   |                  |   |                     |   |                |                      |
|                          |      |         |        |       |                  |   |                  |   |                     |   |                |                      |
|                          |      |         |        |       |                  |   |                  |   |                     |   |                |                      |
|                          |      |         |        |       |                  |   |                  |   |                     |   |                |                      |
|                          |      |         |        |       |                  |   |                  |   |                     |   |                |                      |
|                          |      |         |        |       |                  |   |                  |   |                     |   |                |                      |
|                          |      |         |        |       |                  |   |                  |   |                     |   |                |                      |
| SUB-TOTAL:               |      |         |        |       | 316.8            |   | 85.3             |   | 20.0                |   |                |                      |
| TOTAL:                   |      |         |        |       | 317              |   | 85               |   | 20                  |   |                |                      |

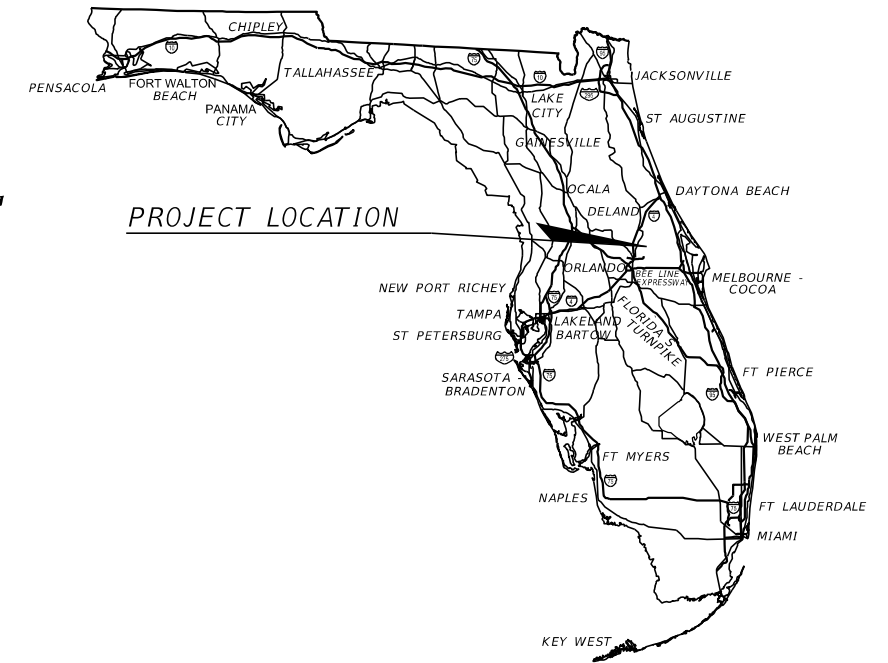
|           |    |             |      |    |  |   |                                   |        |                       |                      |      |
|-----------|----|-------------|------|----|--|---|-----------------------------------|--------|-----------------------|----------------------|------|
| REVISIONS |    |             |      |    | ENGINEER OF RECORD:<br><b>FURSAN S. MUNJED, P.E.</b><br>PROFESSIONAL ENGINEER CERTIFICATE NO. 51446<br>PEGASUS ENGINEERING, LLC<br>301 WEST STATE ROAD 434, SUITE 309<br>WINTER SPRINGS, FLORIDA 32708 |  | CITY OF WINTER SPRINGS<br>FLORIDA |        | SUMMARY OF QUANTITIES | SHEET NO.            |      |
| DATE      | BY | DESCRIPTION | DATE | BY |  |   | DESCRIPTION                       | ROAD   |                       | FINANCIAL PROJECT ID | SQ-6 |
|           |    |             |      |    |  |   |                                   | SR 434 |                       | 432642-1-58-01       |      |

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



STATE OF FLORIDA  
 DEPARTMENT OF TRANSPORTATION  
 CONTRACT PLANS  
 SIGNING & PAVEMENT MARKING PLANS

FINANCIAL PROJECT ID 432642-1-58-01  
 FEDERAL AID PROJECT NO. D519-083-B  
 SEMINOLE COUNTY (77070002)  
 STATE ROAD NO. 434/WINDING HOLLOW BOULEVARD  
 INTERSECTION IMPROVEMENTS  
 ITB 01-24-01 PH



INDEX OF SIGNING AND PAVEMENT MARKING PLANS

| SHEET NO. | SHEET DESCRIPTION                        |
|-----------|--|
| S-1       | KEY SHEET                                |
| S-1A      | SIGNATURE SHEET                          |
| S-2       | TABULATION OF QUANTITIES                 |
| S-3       | GENERAL NOTES                            |
| S-4 - S-5 | SIGNING AND PAVEMENT MARKING PLAN SHEETS |

FINAL PLANS  
 MAY 14, 2024

SIGNING AND PAVEMENT  
 MARKING PLANS  
 ENGINEER OF RECORD:

FURSAN S. MUNJED, P.E.  
 P.E. NO. 51446  
 PEGASUS ENGINEERING, LLC  
 301 WEST STATE ROAD 434  
 SUITE 309  
 WINTER SPRINGS, FL 32708  
 407-992-9160  
 CONTRACT NO.: AQX80  
 VENDOR NO.: F260806410-001

SIGNING & PAVEMENT PLANS  
 ENGINEER OF RECORD: FURSAN S. MUNJED, P.E.

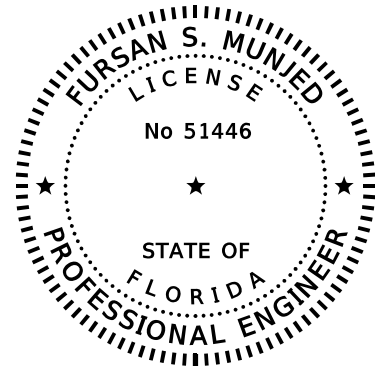
P.E. NO.: 51446

| FISCAL YEAR | SHEET NO. |
|-------------|-----------|
| 24          | S-1       |

INTERIM CITY OF WINTER SPRINGS CITY MANAGER: PHILIP HURSH, P.E.

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.





THIS DOCUMENT HAS BEEN DIGITALLY  
SIGNED AND SEALED BY

ON THE DATE ADJACENT TO THE SEAL

PRINTED COPIES OF THIS DOCUMENT ARE  
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ON ANY ELECTRONIC COPIES.

PEGASUS ENGINEERING, LLC  
301 WEST STATE ROAD 434  
SUITE 309  
WINTER SPRINGS, FL 32708  
(407) 992-9160  
FURSAN S. MUNJED P.E. NO. 51446

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE  
FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004 F.A.C.

| SHEET NO. | DESCRIPTION                              |
|-----------|--|
| S-1       | KEY SHEET                                |
| S-1A      | SIGNATURE SHEET                          |
| S-2       | TABULATION OF QUANTITIES                 |
| S-3       | GENERAL NOTES                            |
| S-4 - S-5 | SIGNING AND PAVEMENT MARKING PLAN SHEETS |

| REVISIONS |    |             |      |    |             | ENGINEER OF RECORD:<br>FURSAN S. MUNJED, P.E.<br>PROFESSIONAL ENGINEER CERTIFICATE NO. 51446<br>PEGASUS ENGINEERING, LLC<br>301 WEST STATE ROAD 434, SUITE 309<br>WINTER SPRINGS, FLORIDA 32708 |  | CITY OF WINTER SPRINGS<br>FLORIDA |                      | SIGNATURE SHEET | SHEET NO. |
|-----------|----|-------------|------|----|-------------|---|---|-----------------------------------|----------------------|-----------------|-----------|
| DATE      | BY | DESCRIPTION | DATE | BY | DESCRIPTION |   |   | ROAD                              | FINANCIAL PROJECT ID |                 | S-1A      |
|           |    |             |      |    |             |   | SR 434  | 432642-1-58-01                    |                      |                 |           |

TABULATION OF QUANTITIES

| PAY ITEM NO. | DESCRIPTION   | UNIT | SHEET NUMBERS |       |       |       |      |       |      |       |      |       |      |       |      |       | TOTAL THIS SHEET |       | GRAND TOTAL |       | REF. SHEET |
|--------------|---|------|---------------|-------|-------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------------------|-------|-------------|-------|------------|
|              |   |      | S-4           |       | S-5   |       |      |       |      |       |      |       |      |       |      |       |                  |       |             |       |            |
|              |   |      | PLAN          | FINAL | PLAN  | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN             | FINAL | PLAN        | FINAL |            |
| 700-1-50     | SINGLE POST SIGN, RELOCATE  | AS   |               |       | 1     |       |      |       |      |       |      |       |      |       |      |       | 1                |       | 1           |       |            |
| 706-1-3      | RAISED PAVEMENT MARKER, TYPE B  | EA   | 20            |       | 14    |       |      |       |      |       |      |       |      |       |      |       | 34               |       | 34          |       |            |
| 710-90       | PAINTED PAVEMENT MARKINGS - FINAL SURFACE                                   | LS   |               |       |       |       |      |       |      |       |      |       |      |       |      |       | 1                |       | 1           |       |            |
| 711-11-123   | THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK AND ROUNDABOUT     | LF   |               |       | 170   |       |      |       |      |       |      |       |      |       |      |       | 170              |       | 170         |       |            |
| 711-11-125   | THERMOPLASTIC, STANDARD, WHITE, SOLID, 24" FOR STOP LINE AND CROSSWALK      | LF   |               |       | 88    |       |      |       |      |       |      |       |      |       |      |       | 88               |       | 88          |       |            |
| 711-11-141   | THERMOPLASTIC, STANDARD, WHITE, 2-4 DOTTED GUIDELINE/6-10 GAP EXTENSION, 6" | GM   | 0.035         |       |       |       |      |       |      |       |      |       |      |       |      |       | 0.035            |       | 0.035       |       |            |
| 711-11-170   | THERMOPLASTIC, STANDARD, WHITE, ARROW                                       | EA   | 3             |       | 4     |       |      |       |      |       |      |       |      |       |      |       | 7                |       | 7           |       |            |
| 711-14-125   | THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK                   | LF   |               |       | 111   |       |      |       |      |       |      |       |      |       |      |       | 111              |       | 111         |       |            |
| 711-14-160   | THERMOPLASTIC, PREFORMED, WHITE, SOLID, MESSAGE OR SYMBOL                   | EA   | 1             |       | 1     |       |      |       |      |       |      |       |      |       |      |       | 2                |       | 2           |       |            |
| 711-14-170   | THERMOPLASTIC, PREFORMED, WHITE, SOLID, ARROW                               | EA   | 1             |       | 1     |       |      |       |      |       |      |       |      |       |      |       | 2                |       | 2           |       |            |
| 711-16-101   | THERMOPLASTIC, STANDARD, OTHER SURFACES, WHITE, SOLID, 6"                   | GM   | 0.166         |       | 0.094 |       |      |       |      |       |      |       |      |       |      |       | 0.260            |       | 0.260       |       |            |
| 711-16-201   | THERMOPLASTIC, STANDARD, OTHER SURFACES, YELLOW, SOLID, 6"                  | GM   |               |       | 0.014 |       |      |       |      |       |      |       |      |       |      |       | 0.014            |       | 0.014       |       |            |

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

ENGINEER OF RECORD:  
**FURSAN S. MUNJED, P.E.**  
 PROFESSIONAL ENGINEER CERTIFICATE NO. 51446  
 PEGASUS ENGINEERING, LLC  
 301 WEST STATE ROAD 434, SUITE 309  
 WINTER SPRINGS, FLORIDA 32708



CITY OF WINTER SPRINGS  
 FLORIDA

|        |                      |
|--------|----------------------|
| ROAD   | FINANCIAL PROJECT ID |
| SR 434 | 432642-1-58-01       |

TABULATION OF QUANTITIES

SHEET NO.  
**S-2**

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

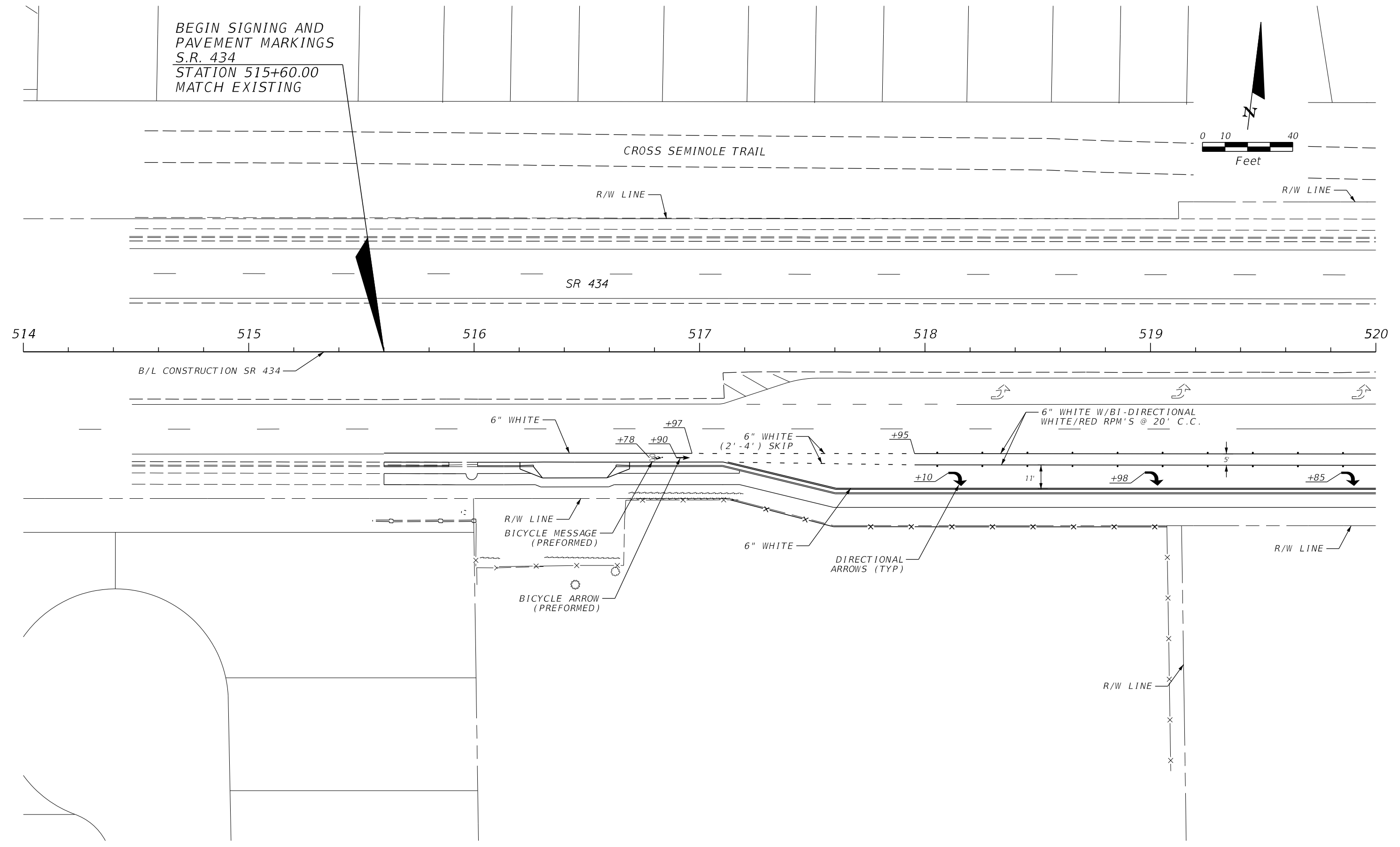
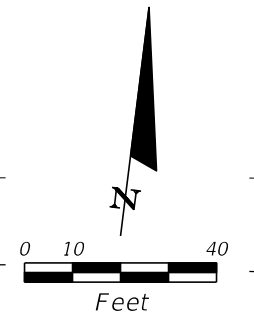
GENERAL NOTES

1. ALL SIGNS AND PAVEMENT MARKINGS ARE TO BE PLACED IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", THE "MANUAL ON STANDARD HIGHWAY SIGNS", AND THE "STANDARD PLANS", LATEST PUBLISHED EDITIONS.
2. THE BACK OF ALL FINISHED SIGN PANELS SHALL BE STENCILED WITH THE DATE OF FABRICATION, THE FABRICATOR'S INITIALS, AND THE NAME OF THE SHEETING AT THE LOWER RIGHT-HAND CORNER OF THE SIGN IN THREE INCH LETTERS.
3. THE CONTRACTOR SHALL VERIFY THE LENGTH OF SIGN COLUMN SUPPORTS IN THE FIELD PRIOR TO FABRICATION.
4. ALL SIGNS TO BE REMOVED ARE PROPERTY OF THE CITY OF WINTER SPRINGS. DISASSEMBLE SIGNS FROM THE POST AND DELIVER TO: THE CITY OF WINTER SPRINGS. PHONE: 407-327-1800
5. ALL SURFACES SHALL BE CLEANED PRIOR TO START OF INSTALLATION OF ALL PAVEMENT MARKINGS.
6. ALL SIGNS INCLUDING STOP SIGNS ON SIDE STREETS SHALL BE UNOBSTRUCTED.
7. ALL PAVEMENT MARKINGS SHALL BE LEADFREE/THERMOPLASTIC (ALKYD BASED) UNLESS OTHERWISE SPECIFIED.
8. THE PAVEMENT MARKINGS AT ALL EXISTING/PROPOSED INTERFACE LOCATIONS ARE TO MATCH IN TERMS OF ALIGNMENT.
9. DUE TO CONSTRUCTION AND TRACKING BY CONSTRUCTION VEHICLES, ADDITIONAL PAVEMENT MARKINGS AT THE BEGINNING AND END OF PROJECT SHALL BE REQUIRED. ALL DAMAGED PAVEMENT MARKINGS SHALL BE REPLACED BY THE CONTRACTOR AT HIS EXPENSE.
10. BROOMING MAY BE REQUIRED FOR INSTALLATION OF SIDESTREET STOPBARS. BROOMING SHALL BE INCIDENTAL TO ITEM 711-11-125.
11. RAISED PAVEMENT MARKERS ARE TO BE PLACED IN ACCORDANCE WITH THESE PLANS AND STANDARD PLANS INDEX NO. 706-001. CLASS "B" RPM'S SHALL BE USED ON THIS PROJECT.
12. PRIOR TO THE THERMOPLASTIC PAVEMENT MARKINGS INSTALLATION, A 30 DAY "CURE TIME" ON FRICTION COURSE IS REQUIRED. DURING "CURE TIME" PAINTED PAVEMENT MARKINGS SHALL BE USED. COST TO BE INCLUDED UNDER COORESPONDING THERMOPLASTIC PAY ITEMS.
13. THE REMOVAL OF EXISTING PAVEMENT MARKINGS SHALL ADHERE TO FDOT STANDARD SPECIFICATIONS. THE CONTRACTOR SHALL TAKE EXTREME CARE IN THE REMOVAL OF PAVEMENT MARKINGS. ANY DAMAGE CAUSED TO THE PAVEMENT SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.
14. ALL SIGNS ARE TO REMAIN UNLESS OTHERWISE NOTED.
15. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL INVENTORY ALL EXISTING STREET NAME SIGNS TO PROVIDE TO THE CITY. INVENTORY SHALL INCLUDE: CONDITION, LETTERING, LETTERING SIZES, DIMENSIONS AND COLORS.

| REVISIONS |    |             |      |    |             | ENGINEER OF RECORD:<br>FURSAN S. MUNJED, P.E.<br>PROFESSIONAL ENGINEER CERTIFICATE NO. 51446<br>PEGASUS ENGINEERING, LLC<br>301 WEST STATE ROAD 434, SUITE 309<br>WINTER SPRINGS, FLORIDA 32708 |  | CITY OF WINTER SPRINGS<br>FLORIDA |                      | GENERAL NOTES | SHEET<br>NO. |
|-----------|----|-------------|------|----|-------------|---|---|-----------------------------------|----------------------|---------------|--------------|
| DATE      | BY | DESCRIPTION | DATE | BY | DESCRIPTION |   |   | ROAD                              | FINANCIAL PROJECT ID |               | S-3          |
|           |    |             |      |    |             |   | SR 434  | 432642-1-58-01                    |                      |               |              |

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BEGIN SIGNING AND  
PAVEMENT MARKINGS  
S.R. 434  
STATION 515+60.00  
MATCH EXISTING



REVISIONS

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

ENGINEER OF RECORD:  
FURSAN S. MUNJED, P.E.  
PROFESSIONAL ENGINEER CERTIFICATE NO. 51446  
PEGASUS ENGINEERING, LLC  
301 WEST STATE ROAD 434, SUITE 309  
WINTER SPRINGS, FLORIDA 32708



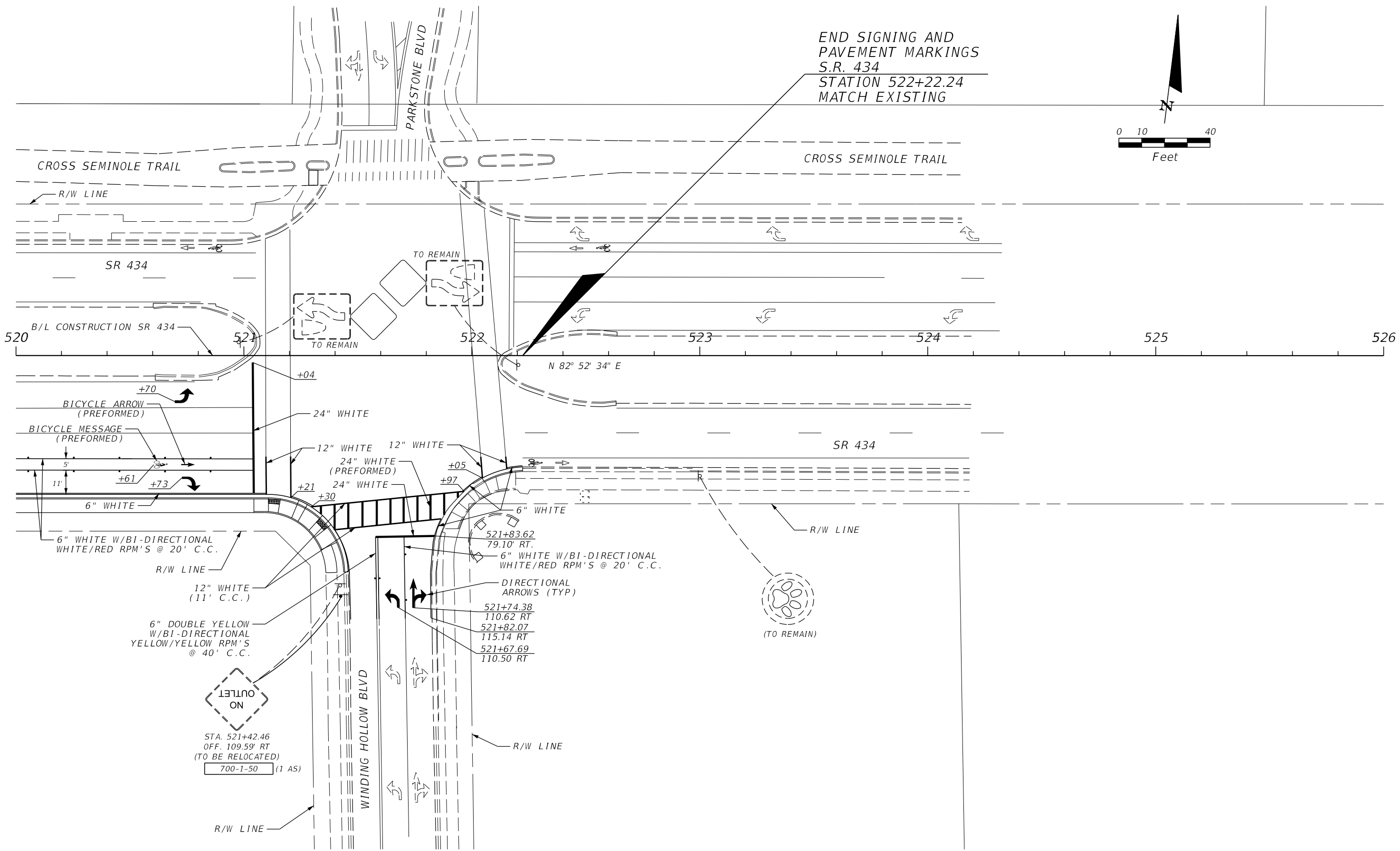
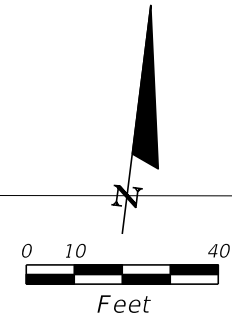
|                                   |                      |
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| CITY OF WINTER SPRINGS<br>FLORIDA |                      |
| ROAD                              | FINANCIAL PROJECT ID |
| SR 434                            | 432642-1-58-01       |

SIGNING & PAVEMENT MARKING  
PLAN SHEET

SHEET NO.  
S-4

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END SIGNING AND  
PAVEMENT MARKINGS  
S.R. 434  
STATION 522+22.24  
MATCH EXISTING



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

ENGINEER OF RECORD:  
FURSAN S. MUNJED, P.E.  
PROFESSIONAL ENGINEER CERTIFICATE NO. 51446  
PEGASUS ENGINEERING, LLC  
301 WEST STATE ROAD 434, SUITE 309  
WINTER SPRINGS, FLORIDA 32708



|                                   |                      |
|-----------------------------------|----------------------|
| CITY OF WINTER SPRINGS<br>FLORIDA |                      |
| ROAD                              | FINANCIAL PROJECT ID |
| SR 434                            | 432642-1-58-01       |

SIGNING & PAVEMENT MARKING  
PLAN SHEET

SHEET NO.  
S-5

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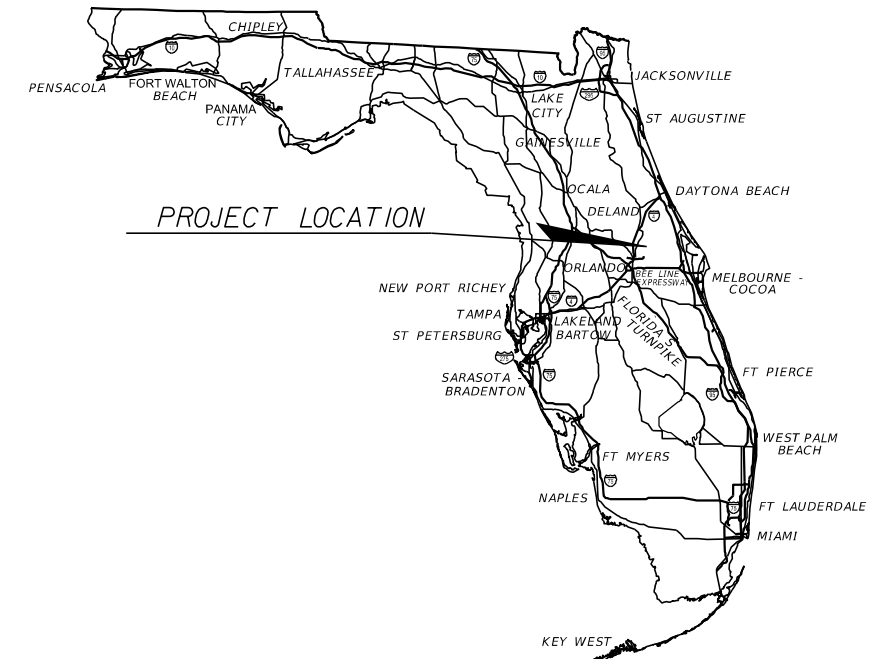
STATE OF FLORIDA  
 DEPARTMENT OF TRANSPORTATION  
 CONTRACT PLANS  
 SIGNALIZATION PLANS

FINANCIAL PROJECT ID 432642-1-58-01  
 FEDERAL AID PROJECT NO. D519-083-B  
 SEMINOLE COUNTY (77070002)

STATE ROAD NO. 434/WINDING HOLLOW BOULEVARD

INTERSECTION IMPROVEMENTS

ITB 01-24-01 PH



INDEX OF SIGNALIZATION PLANS

| SHEET NO.  | SHEET DESCRIPTION               |
|------------|---------------------------------|
| T-1        | KEY SHEET                       |
| T-1A       | SIGNATURE SHEET                 |
| T-2        | TABULATION OF QUANTITIES        |
| T-3        | GENERAL NOTES                   |
| T-4        | SIGNALIZATION PLAN SHEET        |
| T-5        | MAST ARM TABULATION             |
| T-6 - T-11 | MAST ARM STANDARD DETAIL SHEETS |
| T-12       | FOUNDATION DETAILS              |
| T-13       | TABLE OF VARIABLES              |
| T-14       | SPT BORING SHEET                |
| T-15       | COMMUNICATION PLAN              |

FINAL PLANS  
 MAY 14, 2024

SIGNALIZATION PLANS  
 ENGINEER OF RECORD:

FURSAN S. MUNJED, P.E.  
 P.E. NO. 51446  
 PEGASUS ENGINEERING, LLC  
 301 WEST STATE ROAD 434  
 SUITE 309  
 WINTER SPRINGS, FL 32708  
 407-992-9160  
 CONTRACT NO.: AQX80  
 VENDOR NO.: F260806410-001

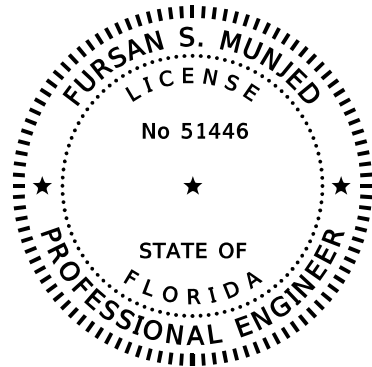
SIGNALIZATION PLANS  
 ENGINEER OF RECORD: FURSAN S. MUNJED, P.E.

P.E. NO.: 51446

| FISCAL YEAR | SHEET NO. |
|-------------|-----------|
| 24          | T-1       |

INTERIM CITY OF WINTER SPRINGS CITY MANAGER: PHILIP HURSH, P.E.

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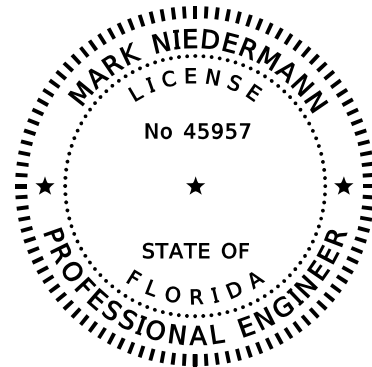
ON THE DATE ADJACENT TO THE SEAL

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PEGASUS ENGINEERING, LLC  
301 WEST STATE ROAD 434  
SUITE 309  
WINTER SPRINGS, FL 32708  
(407) 992-9160  
FURSAN S. MUNJED P.E. NO. 51446

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004 F.A.C.

| SHEET NO. | SHEET DESCRIPTION        |
|-----------|--------------------------|
| T-1       | KEY SHEET                |
| T-1A      | SIGNATURE SHEET          |
| T-2       | TABULATION OF QUANTITIES |
| T-3       | GENERAL NOTES            |
| T-4       | SIGNALIZATION PLAN SHEET |
| T-5       | MAST ARM TABULATION      |
| T-15      | COMMUNICATION PLAN       |



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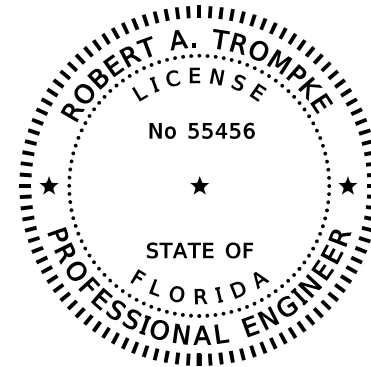
ON THE DATE ADJACENT TO THE SEAL

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FLORIDA BRIDGE & TRANSPORTATION, INC.  
633 DARTMOUTH STREET  
ORLANDO, FLORIDA 32804  
(407) 513-9709  
MARK NIEDERMANN , P.E. NO. 45957

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004 F.A.C.

| SHEET NO. | SHEET DESCRIPTION  |
|-----------|--------------------|
| T-1A      | SIGNATURE SHEET    |
| T-12      | FOUNDATION DETAILS |
| T-13      | TABLE OF VARIABLES |



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INTERTEK PSI ORLANDO  
1748 33RD STREET  
ORLANDO FLORIDA 32839  
(407) 304-5560  
ROBERT A. TROMPKE, P.E. NO. 55456

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004 F.A.C.

| SHEET NO. | SHEET DESCRIPTION |
|-----------|-------------------|
| T-1A      | SIGNATURE SHEET   |
| T-14      | SPT BORING SHEET  |

REVISIONS

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

ENGINEER OF RECORD:  
FURSAN S. MUNJED, P.E.  
PROFESSIONAL ENGINEER CERTIFICATE NO. 51446  
PEGASUS ENGINEERING, LLC  
301 WEST STATE ROAD 434, SUITE 309  
WINTER SPRINGS, FLORIDA 32708



CITY OF WINTER SPRINGS  
FLORIDA

| ROAD   | FINANCIAL PROJECT ID |
|--------|----------------------|
| SR 434 | 432642-1-58-01       |

SIGNATURE SHEET

SHEET NO.

T-1A

**TABULATION OF QUANTITIES**

| PAY ITEM NO. | DESCRIPTION  | UNIT | SHEET NUMBERS |       |      |       |      |       |      |       |      |       |      |       | TOTAL THIS SHEET |       | GRAND TOTAL |       | REF. SHEET |  |
|--------------|--|------|---------------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------------------|-------|-------------|-------|------------|--|
|              |  |      | T-4           |       | T-15 |       |      |       |      |       |      |       |      |       | PLAN             | FINAL | PLAN        | FINAL |            |  |
|              |  |      | PLAN          | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL |                  |       |             |       |            |  |
| 630-2-11     | CONDUIT (F&I), (OPEN TRENCH) (UNDERGROUND)                                   | LF   | 560           |       | 550  |       |      |       |      |       |      |       |      |       |                  |       | 1110        |       | 1110       |  |
| 630-2-12     | CONDUIT (F&I), (DIRECTIONAL BORE) (UNDERGROUND OR UNDERPAVEMENT)             | LF   | 505           |       | 150  |       |      |       |      |       |      |       |      |       |                  |       | 655         |       | 655        |  |
| 630-2-14     | CONDUIT (F&I), (ABOVE GROUND)  | LF   |               |       | 80   |       |      |       |      |       |      |       |      |       |                  |       | 80          |       | 80         |  |
| 632-7-1      | SIGNAL CABLE (NEW OR RECONSTRUCTED INTERSECTION (F&I)                        | PI   | 1             |       |      |       |      |       |      |       |      |       |      |       |                  |       | 1           |       | 1          |  |
| 632-7-6      | SIGNAL CABLE (REMOVE-INTERSECTION)   | PI   | 1             |       |      |       |      |       |      |       |      |       |      |       |                  |       | 1           |       | 1          |  |
| 633-1-121    | FIBER OPTIC CABLE (F&I) (UNDERGROUND) (12 SM)                                | LF   |               |       | 250  |       |      |       |      |       |      |       |      |       |                  |       | 250         |       | 250        |  |
| 633-1-123    | FIBER OPTIC CABLE (F&I) (UNDERGROUND) (96 SM)                                | LF   |               |       | 1150 |       |      |       |      |       |      |       |      |       |                  |       | 1150        |       | 1150       |  |
| 633-1-610    | FIBER OPTIC CABLE (REMOVE) (AERIAL) (12SM / 12MM & 72 SM)                    | LF   |               |       | 600  |       |      |       |      |       |      |       |      |       |                  |       | 600         |       | 600        |  |
| 633-2-31     | FIBER OPTIC CONNECTION (INSTALL) (SPLICE)                                    | EA   |               |       | 194  |       |      |       |      |       |      |       |      |       |                  |       | 194         |       | 194        |  |
| 633-3-11     | FIBER OPTIC CONNECTION HARDWARE (F&I) (SPLICE ENCLOSURE)                     | EA   |               |       | 2    |       |      |       |      |       |      |       |      |       |                  |       | 2           |       | 2          |  |
| 633-3-13     | FIBER OPTIC CONNECTION HARDWARE (F&I) (PRE-TERMINATED CONECTOR ASSEMBLY)     | EA   |               |       | 12   |       |      |       |      |       |      |       |      |       |                  |       | 12          |       | 12         |  |
| 635-2-11     | PULL & SPLICE BOXES (F&I) (13 X 24 STANDARD SIZE)                            | EA   | 13            |       |      |       |      |       |      |       |      |       |      |       |                  |       | 13          |       | 13         |  |
| 635-2-12     | PULL & SPLICE BOXES (F&I) (24 X 36) STANDARD SIZE)                           | EA   |               |       | 2    |       |      |       |      |       |      |       |      |       |                  |       | 2           |       | 2          |  |
| 635-2-13     | PULL & SPLICE BOXES (F&I) (48") ROUND VAULT                                  | EA   |               |       | 2    |       |      |       |      |       |      |       |      |       |                  |       | 2           |       | 2          |  |
| 646-1-11     | ALUMINUM SIGNALS POLE (F&I) (PEDESTAL)                                       | EA   | 2             |       |      |       |      |       |      |       |      |       |      |       |                  |       | 2           |       | 2          |  |
| 646-1-60     | ALUMINUM SIGNALS POLE (REMOVE)   | EA   | 1             |       |      |       |      |       |      |       |      |       |      |       |                  |       | 1           |       | 1          |  |
| 649-21-6     | STEEL MAST ARM ASSEMBLY (F&I) (150 MPH) (SINGLE 46')                         | EA   | 1             |       |      |       |      |       |      |       |      |       |      |       |                  |       | 1           |       | 1          |  |
| 649-26-3     | STEEL MAST ARM ASSEMBLY (REMOVE) (SHALLOW, BOLT ON ATTACHMENT)               | EA   | 1             |       |      |       |      |       |      |       |      |       |      |       |                  |       | 1           |       | 1          |  |
| 650-1-14     | TRAFFIC SIGNAL (F&I) (3-SECTION, 1-WAY) (STANDARD LED INDICATORS) (ALUMINUM) | AS   | 2             |       |      |       |      |       |      |       |      |       |      |       |                  |       | 2           |       | 2          |  |
| 653-1-11     | PEDESTRIAN SIGNAL (F&I) (LED-COUNTDOWN) (1 WAY)                              | AS   | 2             |       |      |       |      |       |      |       |      |       |      |       |                  |       | 2           |       | 2          |  |
| 660-2-102    | LOOP ASSEMBLY (F&I) TYPE B   | AS   | 4             |       |      |       |      |       |      |       |      |       |      |       |                  |       | 4           |       | 4          |  |
| 660-2-106    | LOOP ASSEMBLY (F&I) TYPE F   | AS   | 3             |       |      |       |      |       |      |       |      |       |      |       |                  |       | 3           |       | 3          |  |
| 663-1-112    | SIGNAL PRIORITY & PREEMPTION SYSTEM (F&I) (OPTICAL) (DETECTOR)               | EA   | 1             |       |      |       |      |       |      |       |      |       |      |       |                  |       | 1           |       | 1          |  |
| 665-1-11     | DETECTOR, PEDESTRIAN (F&I) (STANDARD)  | EA   | 2             |       |      |       |      |       |      |       |      |       |      |       |                  |       | 2           |       | 2          |  |
| 700-5-50     | INTERNALLY ILLUMINATED SIGN (RELOCATE) (STREET NAME)                         | EA   | 1             |       |      |       |      |       |      |       |      |       |      |       |                  |       | 1           |       | 1          |  |
| 715-5-31     | LUMINAIRE, ACORN, LED (F&I)  | EA   | 4             |       |      |       |      |       |      |       |      |       |      |       |                  |       | 4           |       | 4          |  |
| 715-5-51     | LUMINAIRE, ACORN (REMOVE)  | EA   | 3             |       |      |       |      |       |      |       |      |       |      |       |                  |       | 3           |       | 3          |  |

| REVISIONS |    |             |      |    |             |
|-----------|----|-------------|------|----|-------------|
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ENGINEER OF RECORD:  
**FURSAN S. MUNJED, P.E.**  
 PROFESSIONAL ENGINEER CERTIFICATE NO. 51446  
 PEGASUS ENGINEERING, LLC  
 301 WEST STATE ROAD 434, SUITE 309  
 WINTER SPRINGS, FLORIDA 32708



CITY OF WINTER SPRINGS  
 FLORIDA

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| ROAD   | FINANCIAL PROJECT ID |
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**TABULATION OF QUANTITIES**

SHEET NO.  
**T-2**

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**GENERAL**

- UNLESS OTHERWISE NOTED ALL REMOVED EQUIPMENT SHALL BE TURNED OVER TO SEMINOLE COUNTY AT 140 BUSH LOOP, SANFORD, FL, 32773 AS DIRECTED BY THE ENGINEER, EXCEPT CONCRETE POLES, WHICH SHALL BE DISPOSED OF BY THE CONTRACTOR. CONTRACTOR TO NOTIFY SEMINOLE COUNTY (CHARLES WETZEL, P.E. @ 407-665-5670) 2 BUSINESS DAYS PRIOR TO BEGINNING CONSTRUCTION.
- IT SHOULD BE NOTED THAT NO TEST BORINGS WERE MADE WHERE CONDUIT RUNS ARE TO BE INSTALLED BY JACKING, DIRECTIONAL BORING, OR TRENCHING. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE THE JOB SITE CONDITIONS BEFORE SUBMITTING BID PROPOSALS IN ACCORDANCE WITH SECTION 2-4 OF THE SPECIFICATIONS.
- THE CONTRACTOR SHALL HAND DIG THE FIRST 4 FEET AT EACH POLE LOCATION AND THE FIRST 2 FEET AT EACH PEDESTAL LOCATION TO VERIFY NO UTILITY CONFLICTS.
- THE CONTRACTOR SHALL VERIFY COLOR CODES FOR BOTH SIGNAL CABLE AND INTERCONNECT CABLE WITH SEMINOLE COUNTY BEFORE ORDERING.
- THE CONTRACTOR IS REQUIRED TO INSPECT THE INSTALLATION OF THE TRAFFIC SIGNALS IN ACCORDANCE WITH FDOT SPECIFICATION 105-8.10. THE CONTRACTOR SHALL COORDINATE THE FINAL ACCEPTANCE INSPECTION IN ACCORDANCE WITH FDOT SPECIFICATION 611-2.2 WITH THE ENGINEER AT LEAST TEN DAYS IN ADVANCE. SEMINOLE COUNTY AND FDOT TRAFFIC OPERATIONS AT (386) 943-5329 SHOULD ALSO BE CONTACTED TEN DAYS BEFORE THE INSPECTION IS TO BE PERFORMED SO THEY MAY BE PRESENT.
- THE CONTRACTOR SHALL MAINTAIN THE EXISTING TRAFFIC SIGNALS DURING THIS PROJECT.
- THE CONTRACTOR HAS THE OPTION TO USE DIRECTIONAL BORE AS THE CONDUIT INSTALLATION METHOD FOR PAY ITEM 630-2-12.
- THE LOCAL (PERMIT MANAGER/PROJECT ADMINISTRATOR) SHOULD BE INFORMED TWO BUSINESS DAYS BEFORE ANY DIRECTIONAL BORES.
- IN THE EVENT PERMANENT VEHICLE DETECTION IS DISRUPTED, PROVIDE AN ALTERNATIVE MEANS OF DETECTION TO ALL LANES APPROACHING THE INTERSECTION, SEPARATING EACH MOVEMENT WHICH PREVIOUSLY HAD DETECTION. THE TYPE OF DETECTOR SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. EQUIPMENT SHALL ONLY DETECT THE INTENDED MOVEMENT.
- FOR ADDITIONAL DETAILS OF TRAFFIC SIGNAL INSTALLATIONS FOR THIS PROJECT SEE FDOT STANDARD PLANS, DATED FY 2024-25, INDEX NOS. 659-010, 630-001, 634-001, 639-002, 653-001, 660-001, 665-001, 676-010, AND 671-001.
- THE CONTRACTOR SHALL NOTIFY ALL UTILITIES AT LEAST 48 HOURS IN ADVANCE OF ANY OPERATION THAT MAY CONFLICT WITH OVERHEAD OR UNDERGROUND UTILITIES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES PRIOR TO CONSTRUCTION.
- THE MAINTENANCE OF SIGNALS, OTHER THAN TIMINGS SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR, FROM THE TIME CONTRACT WORK BEGINS UNTIL FINAL ACCEPTANCE BY SEMINOLE COUNTY, ON A BY INTERSECTION BASIS. THE CONTRACTOR SHALL HAVE A I.M.S.A. LEVEL 2 SIGNAL TECHNICIAN ON SITE THROUGH ALL PHASES OF CONSTRUCTION AND ON CALL WITH A 2 HOUR MAXIMUM RESPONSE TIME.
- A TRAFFIC CONTROL OFFICER SHALL BE PRESENT TO DIRECT TRAFFIC WHEN THE CONTRACTOR IS WORKING ON THE SIGNAL WITHIN THE INTERSECTION.
- TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH THE FDOT STANDARD PLANS, DATED FY 2024-25. ATTENTION IS DIRECTED TO THE INDEX 102 SERIES.
- A CLEARANCE OF NO LESS THAN 17'- 6" SHALL BE MAINTAINED BETWEEN THE SIGNAL HEADS AND THE ROADWAY.
- SIGNAL CABLE AND LOOP WIRE ARE NOT TO BE IN THE SAME PULL BOX.
- LANE CLOSURES WILL BE PERMITTED ONLY DURING ACTIVE WORK PERIODS WHEN THE LANE CLOSURE IS NEEDED TO ACCOMPLISH THE WORK. NO LONG TERM LANE CLOSURES WILL BE PERMITTED. NO LANE CLOSURES WILL BE PERMITTED DURING BUSY TRAFFIC HOURS, BETWEEN THE HOURS OF 7 AM - 9 PM.
- THE CONTRACTOR SHALL VERIFY ALL ELEVATIONS AND ATTACHMENT HEIGHTS PRIOR TO ORDERING AND FABRICATION OF POLES.
- ALL VEHICLE AND PEDESTRIAN DISPLAYS, STREET IDS, LUMINAIRES AND BLANK OUT SIGNS SHALL BE L.E.D. ALL PEDESTRIAN SIGNAL HEADS SHALL BE COUNTDOWN TYPE.
- ALL INSTALLATIONS TO BE AS PER SEMINOLE COUNTY AND FDOT STANDARDS.
- ALL EQUIPMENT/MATERIALS TO BE APPROVED BY SEMINOLE COUNTY TRAFFIC ENGINEERING AND FDOT.
  - ALL SIGNAL HEADS TO BE ALUMINUM WITH TUNNEL VISORS.
  - ALL PULL BOXES TO BE 20K RATED NON-METALLIC, LOCATED A MINIMUM OF 5' FROM RADIUS AND 10' OFF EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED.
- DELAY TIMES SHALL BE SET TO 5 SECONDS.
- PRIOR TO FINAL INSPECTION, THE CONTRACTOR SHALL FURNISH SEMINOLE COUNTY AND FDOT ONE SET EACH OF CONSTRUCTION AS-BUILT PLANS.
- EXISTING LOOPS DAMAGED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR AT THEIR EXPENSE.
- ALL CABLES WILL HAVE THREE SPARE CONDUCTORS.

**PED FEATURES**

- THREE (3) SPARE CONDUCTORS ARE TO BE RUN TO THE FURTHEST PEDESTRIAN SIGNAL HEAD.
- CONTRACTOR TO ENSURE THAT A 4-FOOT X 4-FOOT FLAT LANDING AREA IS ADJACENT TO ALL DETECTORS FOR PEDESTRIAN ACCESS.

**MAST ARMS**

- IF A CONTINUOUS RUN OF SIGNAL CABLE IS NOT POSSIBLE FROM THE CABINET TO THE SIGNAL HEAD, THEN A TERMINAL BLOCK SHALL BE USED. (THIS SHALL BE VERIFIED WITH THE MAINTAINING AGENCY, AS SOME AGENCIES PREFER CONTINUOUS WIRING TO THE SIGNAL HEADS)
- SIX FEET OF ADDITIONAL SIGNAL CABLE SLACK SHALL BE WOUND AND NEATLY STORED INSIDE THE UPRIGHT AND SUPPORTED BY THE CABLE CLAMP SUCH THAT THE TERMINAL BLOCK CAN BE REMOVED FROM THE UPRIGHT TO ALLOW FOR TROUBLE SHOOTING.
- THE CABLE GRIP SHALL BE OF SUFFICIENT SIZE TO NOT COMPROMISE THE INSULATION ON THE SIGNAL CABLE.
- FOR MISCELLANEOUS STRUCTURES THAT HAVE BEEN COMPLETED AND SCHEDULED FOR ACCEPTANCE, THE CONTRACTOR SHALL CONTACT DISTRICT FIVE STRUCTURES MAINTENANCE OFFICE AT (386) 740-3463 ONE MONTH PRIOR TO COMPLETION OF PROJECT TO SCHEDULE AN INSPECTION OF STRUCTURES INCLUDING: CABLE SIGNS, CANTILEVER SIGNS, TRUSS SIGNS, HIGH MAST LIGHT POLES, ITS, DMS AND TRAFFIC SIGNAL MAST ARMS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING APPROVED SHOP DRAWINGS SHOWING THE BOLT PATTERN AND ARM ORIENTATION PRIOR TO THE PRE-DILL SHAFT MEETING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIRING A CERTIFIED DRILLED SHAFT CTQP LEVEL 1 CONSTRUCTION ENGINEERING AND INSPECTION (CEI) FIRM, AND A CONCRETE TESTING LABORATORY FOR THE PURPOSE OF INSPECTING ALL DRILLED SHAFT INSTALLATION PER FDOT STANDARDS. THE FIRM SHALL THEN SUBMIT A SIGNED AND SEALED REPORT VERIFIED BY THE P.E. IN RESPONSIBLE CHARGE OF THE DRILLED SHAFT INSPECTOR TO THE DEPARTMENT FOR APPROVAL. FAILURE TO OBTAIN THESE SERVICES PRIOR TO THE CONSTRUCTION OF THE DRILLED SHAFT(S) SHALL RESULT IN THE REJECTION OF THE DRILLED SHAFT(S).
- THE TOP OF THE TRAFFIC SIGNAL MAST ARM FOUNDATION SHOULD BE AT LEAST 6 INCHES ABOVE GRADE TO PREVENT THE ANCHOR BOLTS FROM BEING SUBMERGED IN WATER AND/OR BURIED, UNLESS IT'S ADJACENT TO AN EXISTING, OR PROPOSED SIDEWALK, THEN THE TOP OF THE FOUNDATION SHOULD BE FLUSH WITH THE SIDEWALK

**PULL BOXES**

- PULL BOXES AND COVERS SHALL BE NON-METALLIC CONSTRUCTION WITH RECESSED COVER LOGO "TRAFFIC SIGNAL" OR "FIBER OPTIC" AS APPROPRIATE.

**SIGNAL HEADS**

- ALL VEHICULAR SIGNAL HEAD ASSEMBLIES SHALL BE ALUMINUM.

**PAY ITEM NOTES**

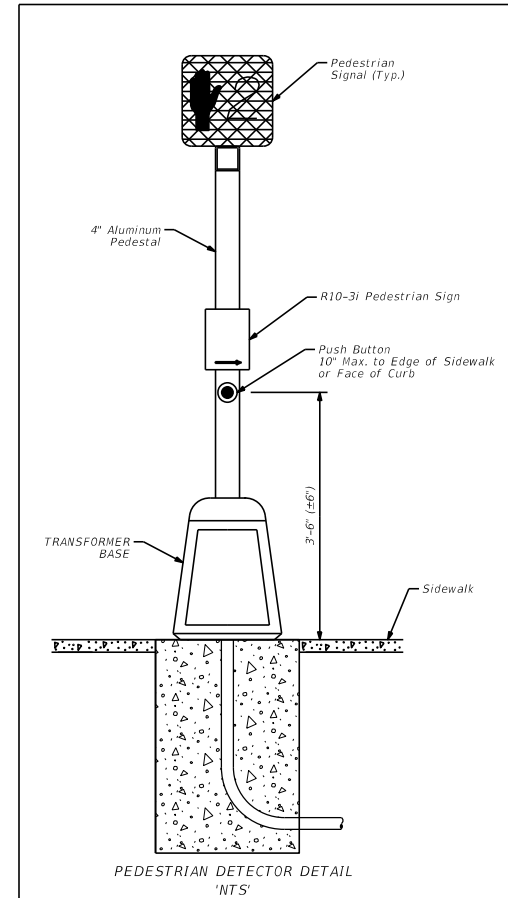
- PAY ITEM NO. 665-1-11 INCLUDES R10-3i.
- PAY ITEM NO. 632-7-1 INCLUDES NEW CABLING/WIRING IN ALL MAST ARMS FOR SIGNALS, OPTICOM DETECTORS, STREET IDS, LUMINAIRES, PEDESTRIAN DETECTORS AND ALL OTHER EQUIPEMENT/DEVICES. ALSO INCLUDES THE COST OF NEW BELDON FOR EXISTING LOOPS.

**FIELD TESTS**

- THE CONTRACTOR SHALL HAVE A QUALIFIED REPRESENTATIVE PRESENT AT ALL INSPECTIONS. FOR FDOT SIGNALS, A SIGNAL INSPECTION IS TO BE SCHEDULED WITH FDOT TRAFFIC OPERATIONS (386) 943-5318, OF TRAFFIC OPERATIONS, 10 DAYS PRIOR TO THE SIGNAL BEING PLACED IN TO OPERATION. SHOULD THE CONTRACTOR REQUEST AN INSPECTION AND THE CONTRACTOR IS NOT PREPARED FOR THE INSPECTION, THE CONTRACTOR WILL BE BACK CHARGED FOR THE CONSULTANT INSPECTOR'S TIME. THE CONTRACTOR WILL BE REQUIRED TO PROVIDE A 90 DAY WARRANTY PERIOD AS OUTLINED IN FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION DATED FY 2023-24.
- SEMINOLE COUNTY HAS UNIQUE PHASING. ALL INTERSECTIONS SHALL BE BUILT TO SEMINOLE COUNTY STANDARDS. CALL TRAFFIC SIGNAL SHOP AT 407-665-5680 FOR FURTHER INFORMATION.
- ALL SIGNAL HEADS, PEDESTRIAN HEADS AND PEDESTRIAN BUTTONS SHALL HAVE WEEP HOLES.
- THE LUMINARIES / ILLUMINATED STREET I.D.S SHALL BE L.E.D. AND POWERED FROM A SEPARATE BREAKER LOCATED IN THE BREAKER BOX; NOT THE SIGNAL CABINET. ALL PHOTOCELLS SHALL BE MOUNTED ON THE BREAKER BOX AND BE 15 AMPERE CAPACITY MINIMUM. ALL ILLUMINATED STREET I.D.S SHALL BE MOUNTED PERPENDICULAR TO THE ROADWAY. ON DIAGONAL MAST ARMS, SWIVEL BRACKETS SHOULD BE USED.

**UTILITY OWNERS:**

|                     |                                     |                     |
|---------------------|-------------------------------------|---------------------|
| DERIUS HOLDEN       | CITY OF WINTER SPRINGS              | (407) 327-1800 x588 |
| CUSTOMER SERVICE    | DUKE ENERGY - DISTRIBUTION          | (407) 629-1010      |
| COLIN DUNN          | FLORIDA PUBLIC UTILITIES            | (386) 785-4554      |
| KIRBY SPENCER       | AT&T/DISTRIBUTION                   | (386) 281-6957      |
| JOHN BROWN          | SEMINOLE COUNTY TRAFFIC ENGINEERING | (407) 655-5644      |
| REX ANDERSON        | CHARTER COMMUNICATIONS              | (407) 215-5716      |
| JAMES MOSLEY        | UNITI FIBER LLC                     | (251) 654-8216      |
| MCI INVESTIGATIONS  | MCI                                 | (800) 624-9675 x2   |
| ZAYO FL RELOCATIONS | ZAYO GROUP                          | (866) 364-6033      |
| GREG HUNT           | WOW                                 | (303) 927-4994      |



**REVISIONS**

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

ENGINEER OF RECORD:  
**FURSAN S. MUNJED, P.E.**  
 PROFESSIONAL ENGINEER CERTIFICATE NO. 51446  
 PEGASUS ENGINEERING, LLC  
 301 WEST STATE ROAD 434, SUITE 309  
 WINTER SPRINGS, FLORIDA 32708



CITY OF WINTER SPRINGS  
 FLORIDA

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| ROAD   | FINANCIAL PROJECT ID |
| SR 434 | 432642-1-58-01       |

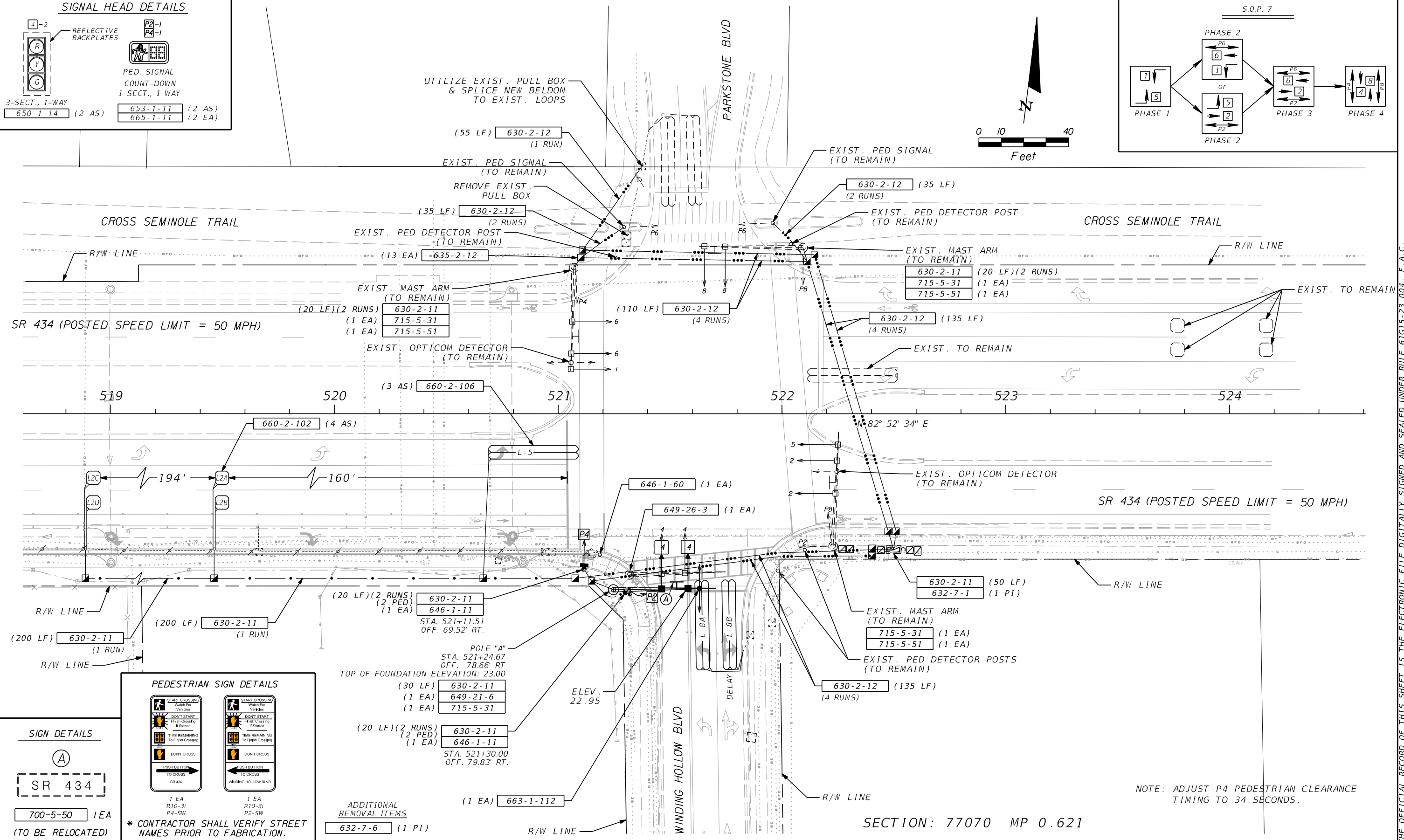
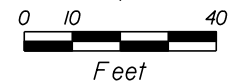
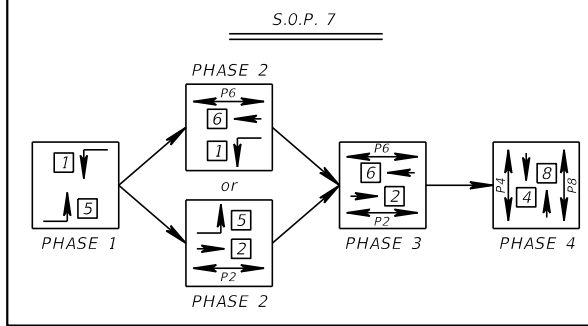
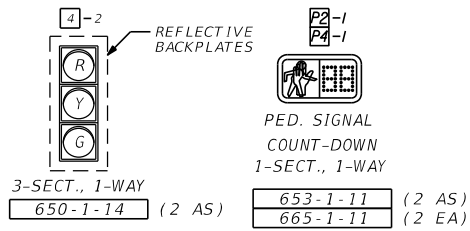
**GENERAL NOTES**

SHEET NO.

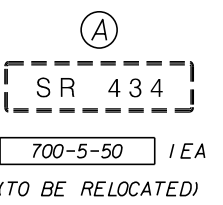
T-3

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

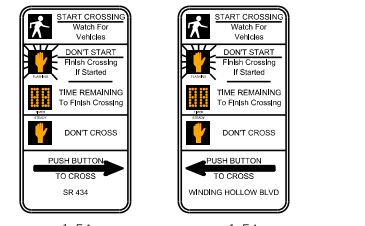
**SIGNAL HEAD DETAILS**



**SIGN DETAILS**



**PEDESTRIAN SIGN DETAILS**



\* CONTRACTOR SHALL VERIFY STREET NAMES PRIOR TO FABRICATION.

ADDITIONAL REMOVAL ITEMS  
 632-7-6 (1 PI)

**REVISIONS**

| DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION |
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|      |    |             |      |    |             |
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ENGINEER OF RECORD:  
 FURSAN S. MUNJED, P.E.  
 PROFESSIONAL ENGINEER CERTIFICATE NO. 51446  
 PEGASUS ENGINEERING, LLC  
 301 WEST STATE ROAD 434, SUITE 309  
 WINTER SPRINGS, FLORIDA 32708



CITY OF WINTER SPRINGS  
 FLORIDA

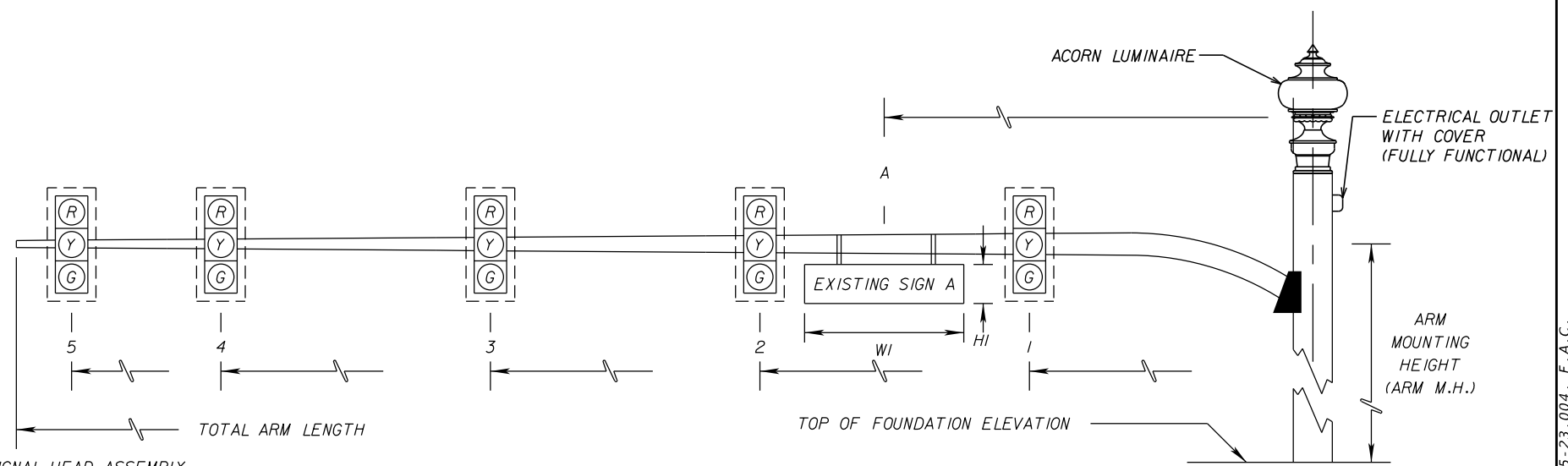
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| ROAD   | FINANCIAL PROJECT ID |
| SR 434 | 432642-1-58-01       |

**SIGNALIZATION PLAN SHEET**

SHEET NO.  
 T-4

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

| SPECIAL INSTRUCTIONS |             |              |                   |       |
|----------------------|-------------|--------------|-------------------|-------|
| ID NO.               | PED. BUTTON | PED. SIGNALS | HANDHOLE LOCATION |       |
| A                    | -           | -            | -                 | SOUTH |
|                      |             |              |                   |       |
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\* DENOTES NUMBER OF SECTIONS IN SIGNAL HEAD ASSEMBLY  
 \*\* REFER TO MAST ARM DETAIL SHEETS

| ID NO. | SHEET NO. | LOCATION BY STA.     | TOP OF FOUNDATION ELEVATION | RDWY ARM NO. | CROWN ELEV. | SIGNAL V/H | BACK PLATES Y/N | PED. SIGNAL Y/N | SIGNAL DATA        |   |      |   |   |   |   |   |   |     | TOTAL ARM LENGTH | ARM M.H. | Z BETWEEN DUAL ARMS 90/270 | SIGN DATA                                     |    |    |  |  |  |  | PAINT COLOR |       |  |
|--------|-----------|----------------------|-----------------------------|--------------|-------------|------------|-----------------|-----------------|--------------------|---|------|---|---|---|---|---|---|-----|------------------|----------|----------------------------|---|----|----|--|--|--|--|-------------|-------|--|
|        |           |                      |                             |              |             |            |                 |                 | DISTANCE FROM POLE |   |      |   |   |   |   |   |   |     |                  |          |                            | DISTANCE FROM POLE / HEIGHT AND WIDTH OF SIGN |    |    |  |  |  |  |             |       |  |
|        |           |                      |                             |              |             |            |                 |                 | 1                  | * | 2    | * | 3 | * | 4 | * | 5 | *   |                  |          |                            | A   | HI | WI |  |  |  |  |             |       |  |
| A      | T-4       | 52I+24.67, 78.66' RT | 23.00                       | 1            | 22.95       | V          | Y               | N               | 21.6               | 3 | 33.4 | 3 |   |   |   |   |   | 46' | **               | 28.3     | 2'                         | 7'  |    |    |  |  |  |  |             | BLACK |  |
|        |           |                      |                             | 2            |             |            |                 |                 |                    |   |      |   |   |   |   |   |   |     |                  |          |                            |   |    |    |  |  |  |  |             |       |  |
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FUTURE LOADINGS

|   |     |                      |       |   |       |   |   |   |      |   |      |   |      |   |  |  |  |     |    |      |    |    |  |  |  |  |  |  |  |  |  |
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| A | T-4 | 52I+24.67, 78.66' RT | 23.00 | 1 | 22.95 | V | Y | N | 19.9 | 3 | 28.9 | 3 | 37.9 | 4 |  |  |  | 46' | ** | 24.4 | 2' | 7' |  |  |  |  |  |  |  |  |  |
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| REVISIONS |    |             |      |    | ENGINEER OF RECORD:<br>FURSAN S. MUNJED, P.E.<br>PROFESSIONAL ENGINEER CERTIFICATE NO. 51446<br>PEGASUS ENGINEERING, LLC<br>301 WEST STATE ROAD 434, SUITE 309<br>WINTER SPRINGS, FLORIDA 32708 |  | CITY OF WINTER SPRINGS<br>FLORIDA |                | MAST ARM TABULATION |  | SHEET NO.<br>T-5 |
|-----------|----|-------------|------|----|---|--|-----------------------------------|----------------|---------------------|--|------------------|
| DATE      | BY | DESCRIPTION | DATE | BY |   |  | DESCRIPTION                       | ROAD           |                     |  |                  |
|           |    |             |      |    |   |  | SR 434                            | 432642-1-58-01 |                     |  |                  |

**GENERAL NOTES**

1. *These Standards are solely for use by Seminole County, Florida for mast arm installations in Seminole County.*
2. *These Standards address only the structural details of the Mast Arm and the Drilled Shaft Foundation. Users of these Standards remain responsible for verifying that the complete Mast Arm assembly (structure, foundation, signal heads, sign panels, and luminaries) meets all of the criteria and requirements of the appropriate governing agencies, including, but not limited to, providing adequate vertical & horizontal clearances, adequate sight distance, appropriate signalization, appropriate signal placement, and adequate sign panel size/positioning.*
3. *Utilities: Adequate provision shall be made for the protection and/or relocation of existing utilities. Users of these standards are cautioned to verify that there will be no interference between the utilities and the mast arm foundation.*

**ATTACHMENT OF TRAFFIC SIGNAL HEADS & ILLUMINATED SIGNS**

1. *Mast arm shop drawings shall include the attachment details.*
2. *Signal and power cables shall be completely encased in hollow tubes and hollow brackets between the mast arm and the signal head/sign.*
3. *The support brackets shall attach to the arm using metal cable. Fastening to and/or welding to the arm is prohibited.*
4. *Field drill entry holes for signal cables and power cables. Fit holes with rubber grommet.*
5. *Illuminated Signs shall be attached below the arm using a free-swinging bracket. No other attachment position or method is permitted.*

**SUBMITTAL REQUIREMENTS**

The following information shall be provided for every Mast Arm structure:

1. Mast Arm Design Calculations
2. Mast Arm Shop Drawings

**SPECIAL CONSTRUCTION REQUIREMENTS**

1. *All Construction shall comply with the Florida Department of Transportation "Standard Specifications for Road and Bridge Construction" except for method of payment.*
2. *Mast Arm Shop Drawings are required and fabrication shall not begin until the Shop Drawings are approved. Mast Arm Shop Drawings shall include the anchor rod orientation with respect to the arm(s) and the direction of traffic.*
3. *Foundation Materials:*
  - A. *Concrete: FDOT Class IV (Drilled Shaft)  
Minimum 28-Day Compressive Strength = 4,000 psi*
  - B. *Reinforcing Steel: ASTM A615, Grade 60*
4. *The top of the Drilled Shaft Foundation shall extend a minimum of one inch (1") but not more than six inches (6") above the adjacent finish ground line. The top of Drilled Shaft Foundations located within or abutting a sidewalk shall match the top of sidewalk elevation unless otherwise noted in the Mast Arm Designer's plans.*
5. *Natural Slurry shall not be relied upon to prevent caving of the soils and/or to maintain an open hole. Adequate measures shall be taken to control Artesian Water Conditions where encountered. Temporary Casing or other measures may be used. Permanent Casing is prohibited.*
6. *The Pole shall not be erected until the foundation concrete has achieved the specified 28-day compressive strength.*
7. *If the traffic signals or sign panels are not in place within two working days after the arm is erected, a 3.0 foot by 2.0 foot blank 1/8" thick aluminum sign panel shall be attached to the bottom of the arm within six feet of the arm tip and shall remain in place until the signals and signs are installed.*

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**2017-18  
STANDARD MAST ARM DRAWINGS**  
SEMINOLE COUNTY TRAFFIC ENGINEERING  
140 BUSH LOOP - SANFORD, FL 32773  
407-665-5677

**NOTES**

SHEET  
**T-6**

**MAST ARM STRUCTURAL DESIGN CRITERIA**

1. Mast Arm Structure Design shall comply with:
  - A. American Society of State Highway and Transportation Officials "LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals" (1st Edition with Interim Revisions through 2017)
  - B. Florida Department of Transportation Structures Manual (January 2017 Edition).
  - C. Fatigue shall be considered in accordance with the requirements of the Florida Department of Transportation Structures Manual (January 2017 Edition).
2. Basic Wind Speed: 150 mph
3. The Mast Arm Design Calculations shall clearly state the Foundation Reactions.
4. To ensure constructability of the drilled shaft foundations, the Mast Arm Anchor Rod Bolt Circle shall not exceed 24" without prior approval of Seminole County Traffic Engineering. An Anchor Rod Bolt Circle larger than 24" will require more stringent construction tolerances for the Drilled Shaft Construction than those in the FDOT Specifications, including more precise fabrication/placement of the reinforcing bar cage and more precise placement of the anchor rods.
5. A grout pad is required.
6. The mast arm structure details shown herein are not complete details. The details only indicate the appearance of the mast arm structure and the connection styles. The fabricator shall be responsible for the complete design and detailing of the mast arm structure. Calculations and Shop Drawings shall be signed and sealed by a professional engineer registered in the State of Florida in compliance with Florida laws and regulations.

**MAST ARM STRUCTURE REQUIREMENTS**

1. Materials:
 

*Split-lock washers and self-locking nuts are not permitted.*

  - A. Poles, Mast Arms & Backing Rings:
    - 1) Less than 3/16": ASTM A1011 Grade 50, 55, 60, or 65
    - 2) Greater than or equal to 3/16": ASTM A572 Grade 50, 55, 60, or 65
    - 3) All thicknesses: ASTM A595 Grade A (55 ksi yield) or Grade B (60 ksi yield)
  - B. Steel Plates: ASTM A36
  - C. Weld Metal: E70XX
  - D. Bolts, Nuts, and Washers:
    - 1) High Strength Bolts: ASTM F3125, Grade A325, Type 1
    - 2) Nuts: ASTM A563 DH Heavy-Hex
    - 3) Washers: ASTM F436, Type 1 (one under turned element)
  - E. Anchor Rods, Nuts, & Washers:
    - 1) Anchor Rods: ASTM F1554 Grade 55
    - 2) Nuts for Anchor Rods: ASTM A563 Grade A Heavy Hex (5 per anchor rod)
    - 3) Plate Washers: ASTM A36 (2 per anchor rod)
  - F. Threaded Bars/Studs: ASTM A36 or ASTM A307
  - G. Handhole Frame: ASTM A709 Grade 36 or ASTM A36
  - H. Handhole Cover: ASTM A1011 Grade 50, 55, 60, or 65
  - I. Aluminum Pole Caps and Nut Covers: ASTM B26 (319-F)
  - J. Stainless Steel Screws: AISI Type 316
2. Fabrication
  - A. Pole and Mast Arm Taper: Change diameter at a uniform rate of 0.14 inches per foot
  - B. Upright (Pole) splices are not allowed. Transverse welds in pole are only permitted at the base.
  - C. Arm camber shall comply with requirements shown on these Standards.
  - D. Provide bolt hole diameters as follows:
    1. Bolts (excludes Anchor Rods): Bolt diameter plus 1/16", prior to galvanizing.
    2. Anchor Rods: Anchor Rod diameter plus 1/2", prior to galvanizing.
  - E. Unless specifically shown otherwise in the Signalization Plans, face the handhole:
 

Single Arm Structures: Perpendicular to arm  
Double Arm Structures: Perpendicular to first arm
  - F. Seam weld on bottom side of arm. Seam weld under Arm 1 side of pole.
  - G. Provide "J" or "C" hook at the top of the pole for signal wiring support.
  - H. Perform all welding in accordance with Specification Article 460-6.4.
  - I. Hot Dip Galvanize and Paint after fabrication.
3. Coatings:
  - A. All Nuts, Bolts, Washers, and Threaded Bars/Studs: ASTM F2329
  - B. All other steel items: ASTM A123
  - C. Paint the entire structure after fabrication in accordance with Specification Article 649-4. Surfaces that will not be exposed after erection need not be painted.
4. Construction:
  - A. Foundation: Specification Section 455 Drilled Shaft, except for method of payment.
  - B. Install Pole vertically.
  - C. Place structural grout pad with drain between the top of the foundation and the bottom of the baseplate in accordance with Specification Article 649-7.
  - D. Attach Sign Panels and Signals centered on the elevation of the Mast Arm.
  - E. Wire Access holes shall be 1 1/2" or less in diameter.

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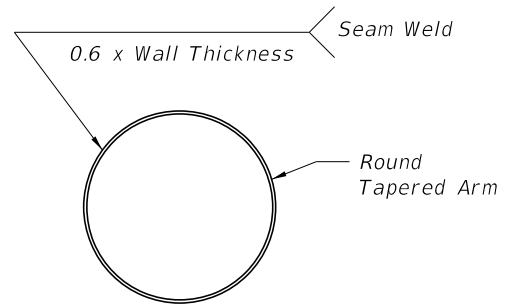


**2017-18**  
**STANDARD MAST ARM DRAWINGS**  
SEMINOLE COUNTY TRAFFIC ENGINEERING  
140 BUSH LOOP - SANFORD, FL 32773  
407-665-5677

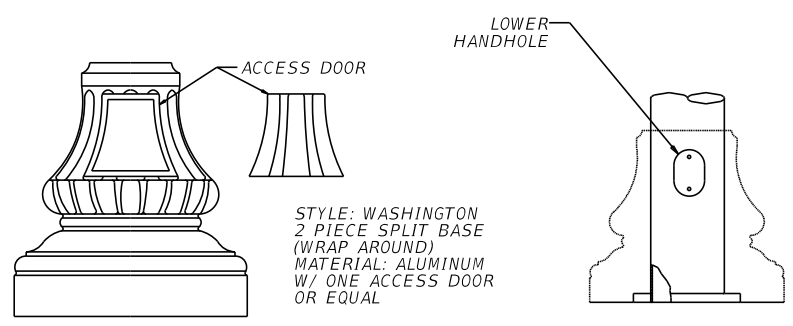
**STRUCTURAL DESIGN CRITERIA  
&  
MAST ARM STRUCTURE REQUIREMENTS**

**SPECIFICATION OF MAST ARMS**

| <i>POLE I.D.</i> | <i>POLE TYPE</i>   | <i>POLE STYLE</i> | <i>ARM STYLE</i> | <i>COLOR</i> | <i>LUMINAIRE</i> | <i>BASE</i>       | <i>BANNER</i> | <i>FIRST ARM LENGTH</i> | <i>SECOND ARM LENGTH</i> | <i>ANGLE BETWEEN ARMS</i> |
|------------------|--------------------|-------------------|------------------|--------------|------------------|-------------------|---------------|-------------------------|--------------------------|---------------------------|
| <i>POLE A</i>    | <i>POLE TYPE 5</i> | <i>FLUTED</i>     | <i>CURVED</i>    | <i>BLACK</i> | <i>ACORN</i>     | <i>DECORATIVE</i> | <i>NONE</i>   | <i>46'</i>              | <i>-</i>                 | <i>-</i>                  |
|                  |                    |                   |                  |              |                  |                   |               |                         |                          |                           |
|                  |                    |                   |                  |              |                  |                   |               |                         |                          |                           |
|                  |                    |                   |                  |              |                  |                   |               |                         |                          |                           |

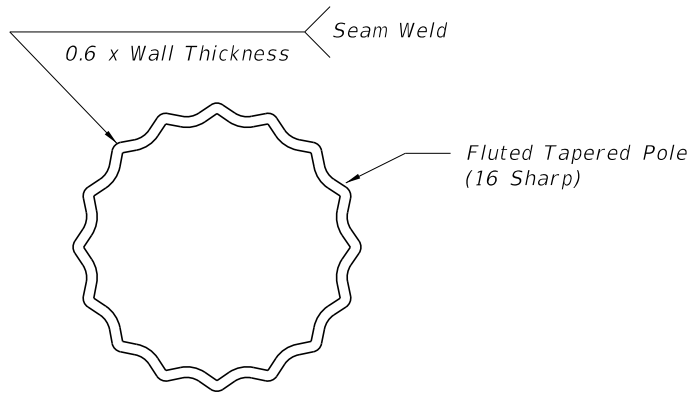


TYPICAL SECTION THROUGH ARM

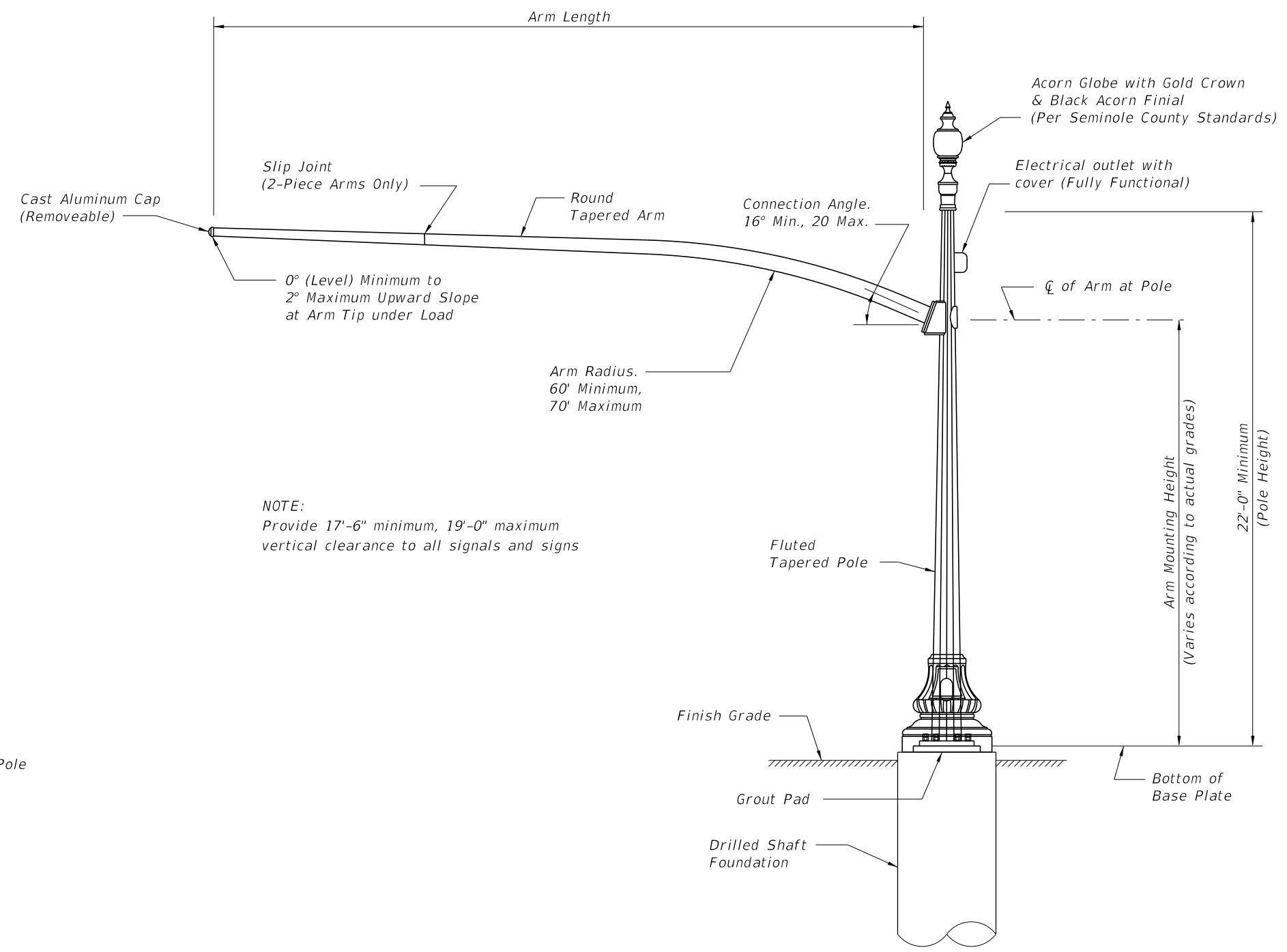


NOTE: THE DECORATIVE BASES ACCESS DOOR SHALL ALIGN WITH THE LOWER HANDHOLES BOTH VERTICALLY AND HORIZONTALLY.

ALUMINUM DECORATIVE BASE



TYPICAL SECTION THROUGH POLE



NOTE: Provide 17'-6" minimum, 19'-0" maximum vertical clearance to all signals and signs

ELEVATION - POLE TYPE 5

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**2017-18**  
**STANDARD MAST ARM DRAWINGS**  
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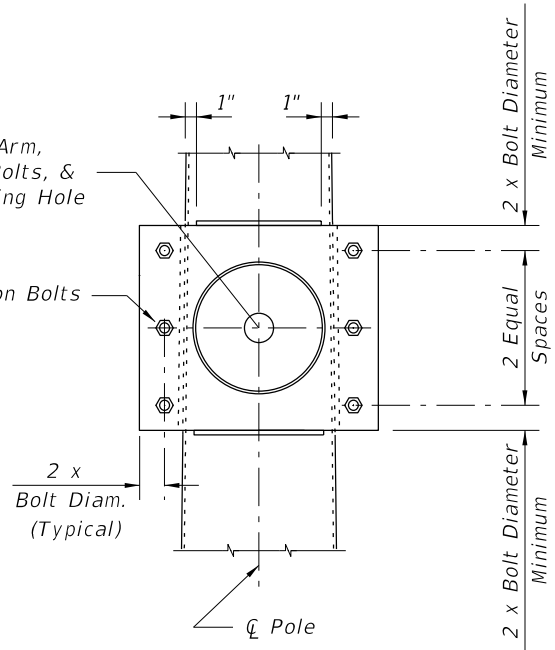
**POLE TYPE 5**  
**FLUTED POLE**  
**CURVED ARM**

SHEET  
 T-9

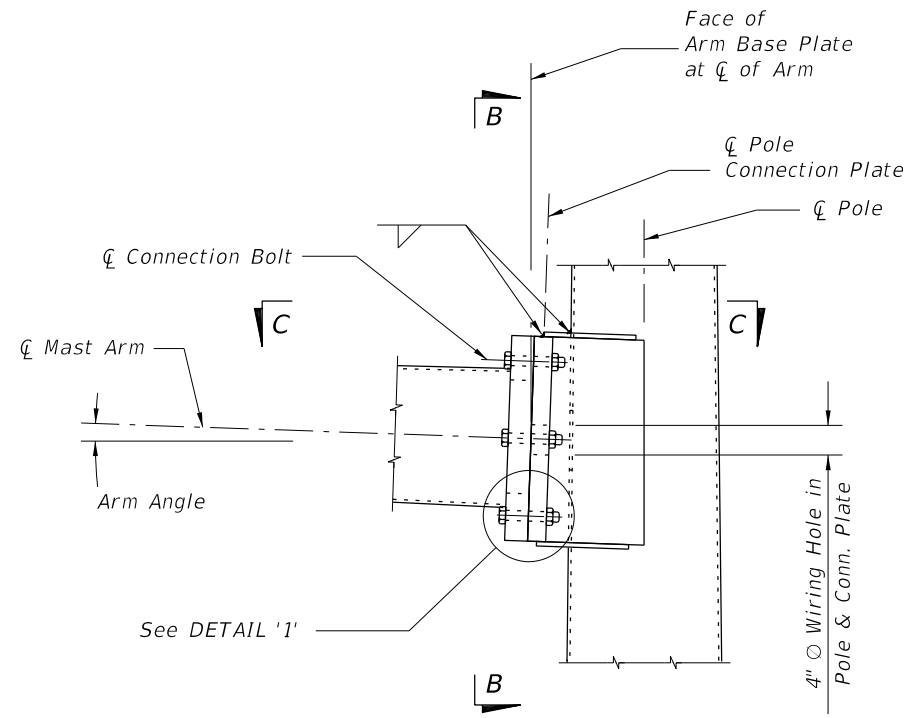
Center of Mast Arm,  
Middle Line of Bolts, &  
4" Diameter Wiring Hole

Six (6)  
Connection Bolts

2 x  
Bolt Diam.  
(Typical)

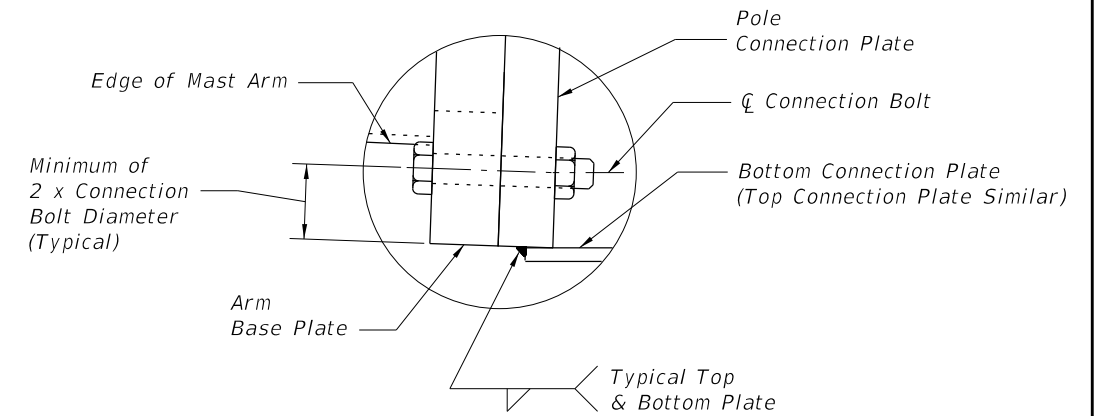


SECTION B-B

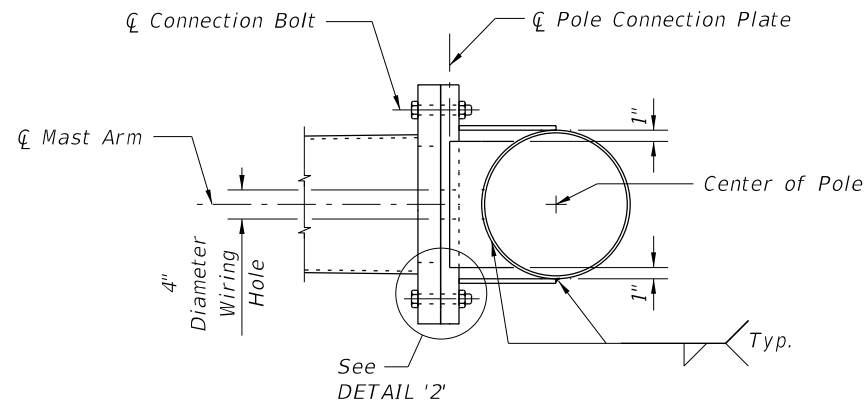


ELEVATION

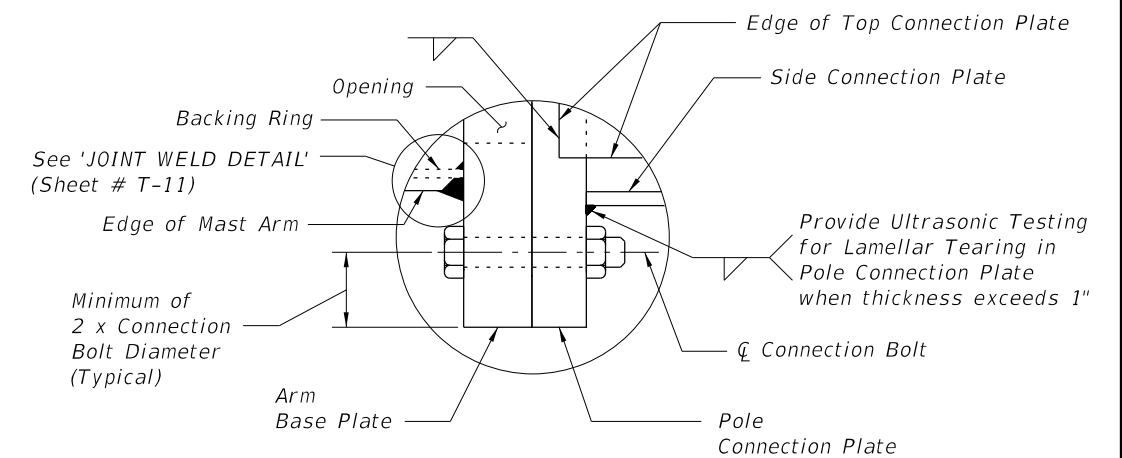
NOTE:  
Details drawn for round pole,  
Details for fluted pole similar.



DETAIL '1'



SECTION C-C



DETAIL '2'

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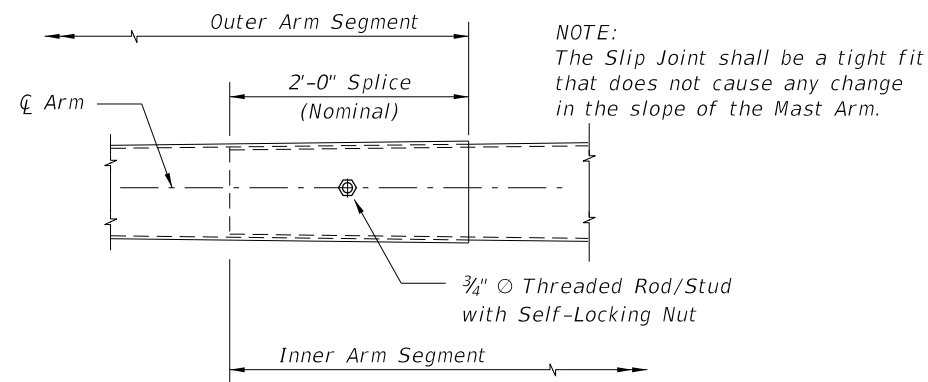
**2017-18**  
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140 BUSH LOOP - SANFORD, FL 32773  
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**ARM-TO-POLE CONNECTION**  
**SINGLE ARM**

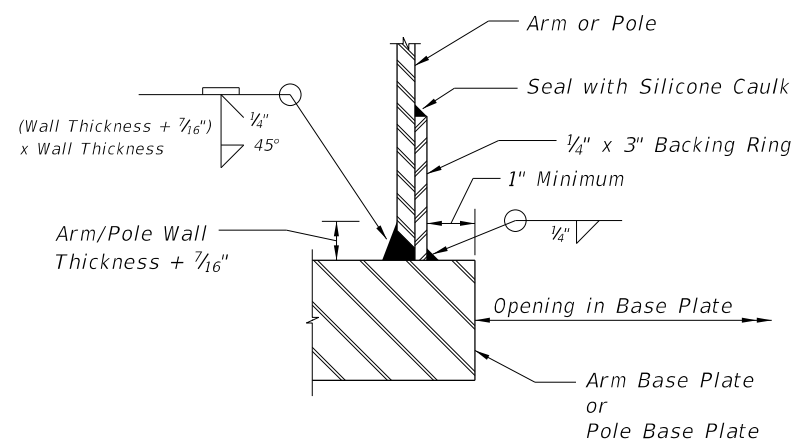
SHEET

T-10



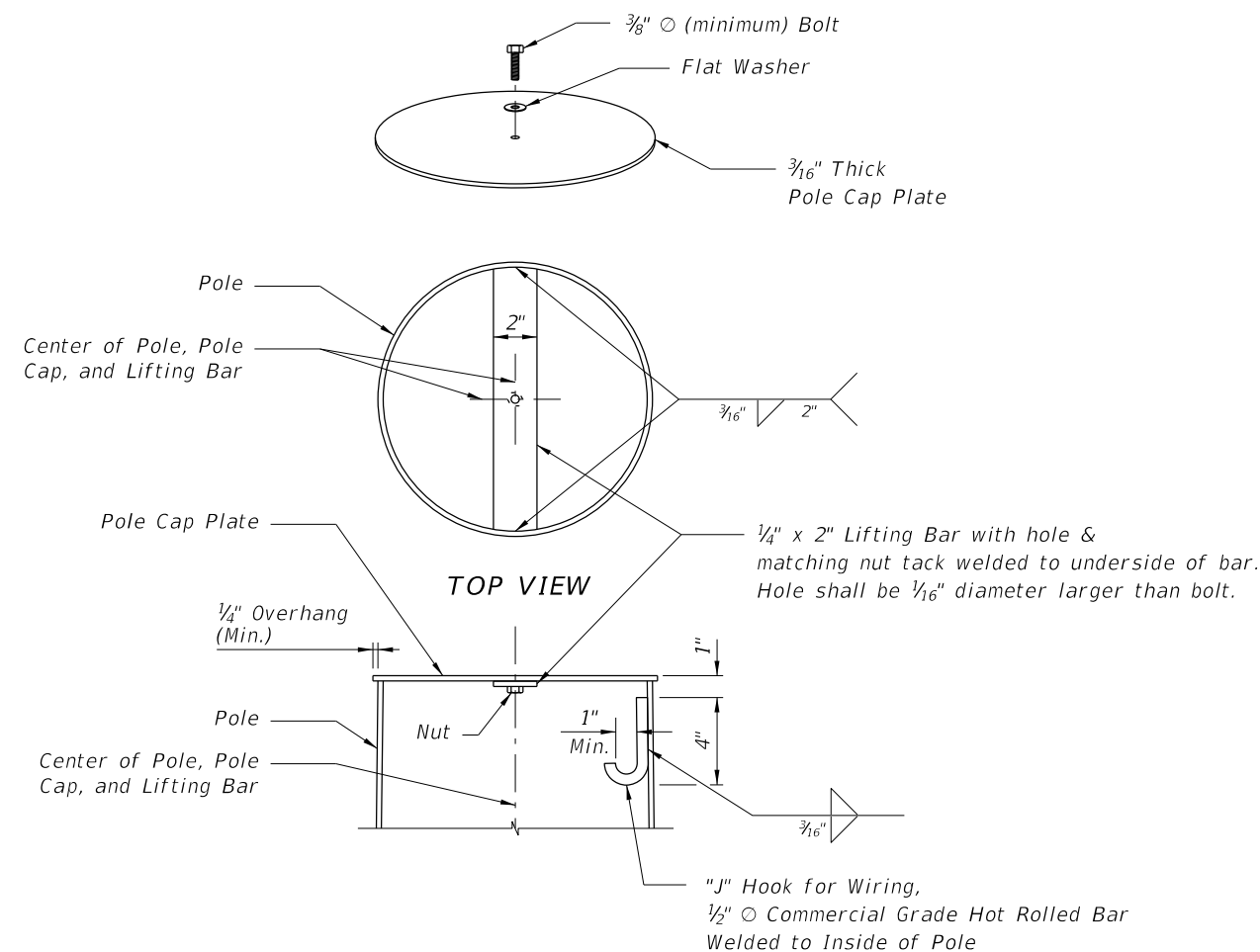


**ARM SPLICE DETAIL**

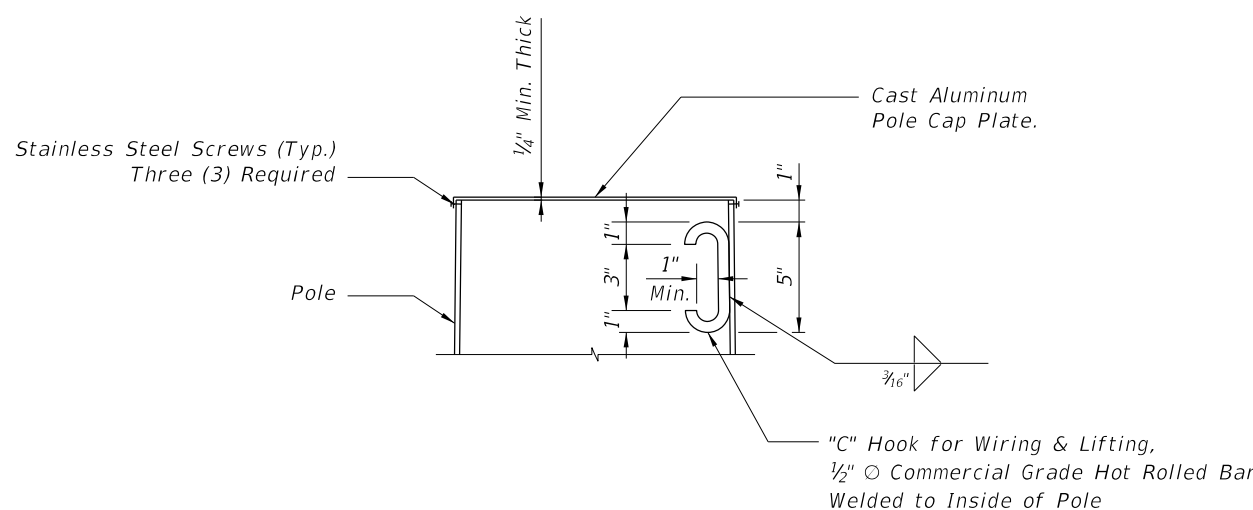


**JOINT WELD DETAIL**

Arm To Connection Plate  
&  
Pole To Base Plate



**OPTION "A"**



**OPTION "B"**

**TOP OF POLE DETAILS**

**NOTE:**  
Any combination of the details shown in the two options may be used, provided both lifting and wiring are accommodated.

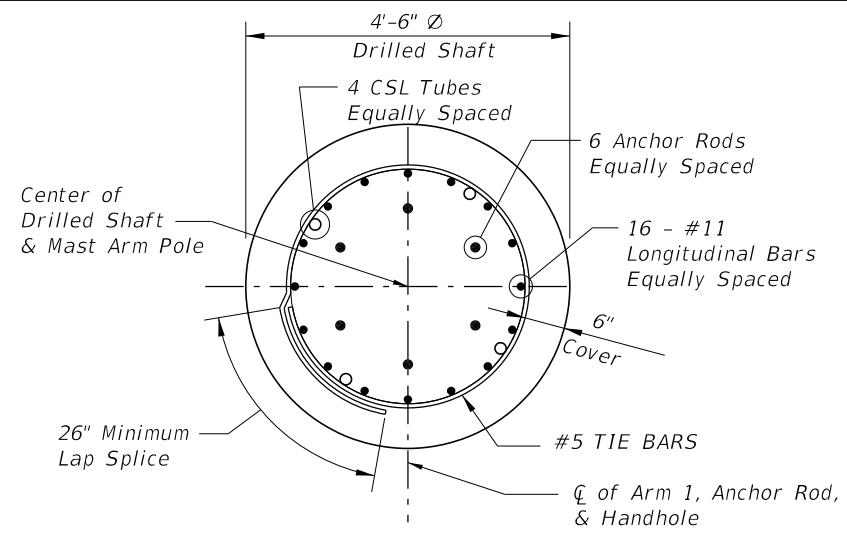
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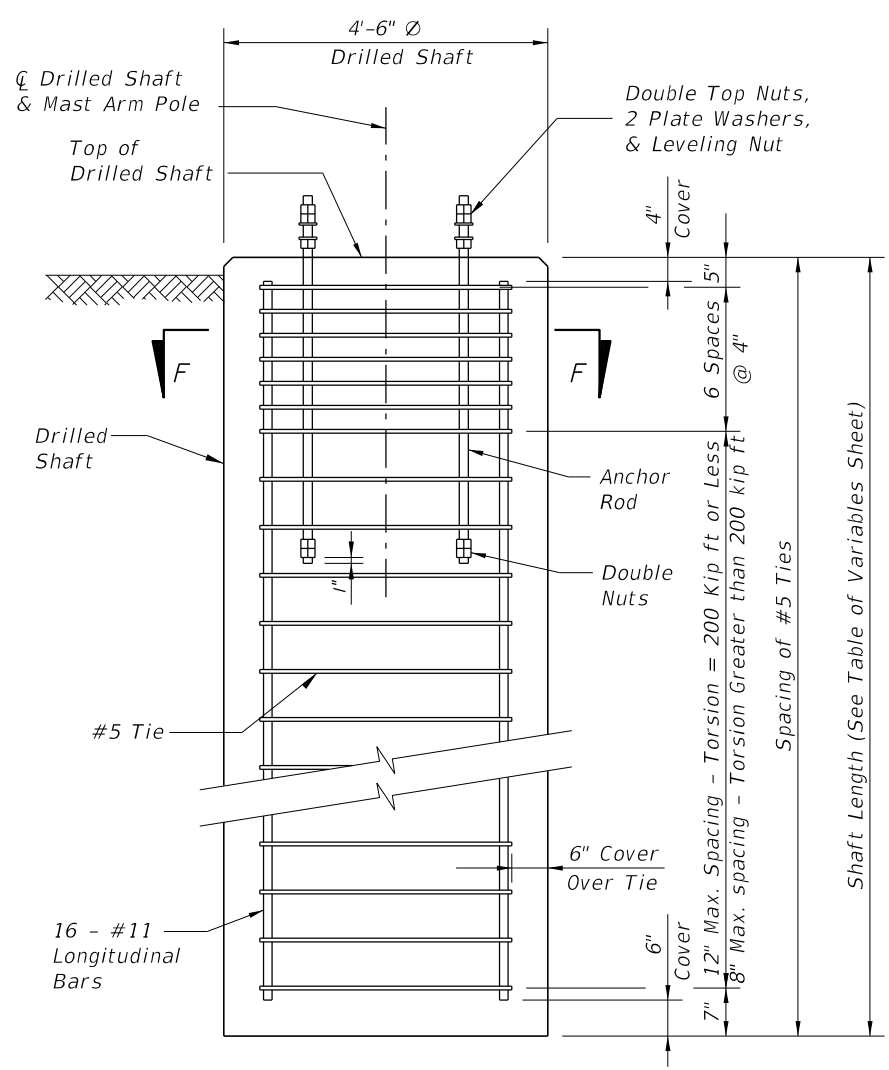
**2017-18**  
**STANDARD MAST ARM DRAWINGS**  
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140 BUSH LOOP - SANFORD, FL 32773  
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**MAST ARM DETAILS**

SHEET  
**T-11**

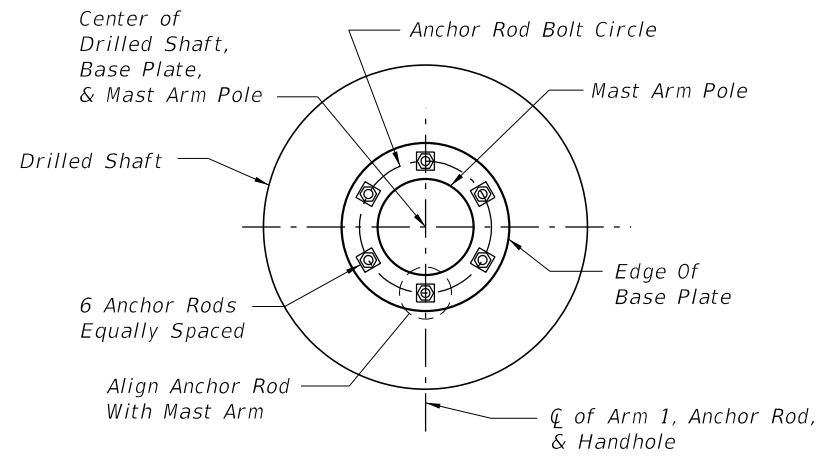


**SECTION F-F**  
(Conduits Not Shown)

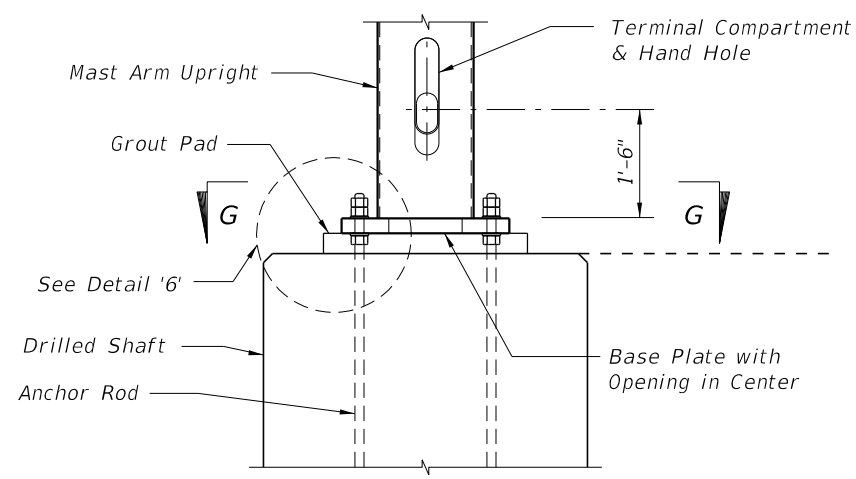


**ELEVATION - DRILLED SHAFT**  
(CSL Tubes & Conduits Not Shown)

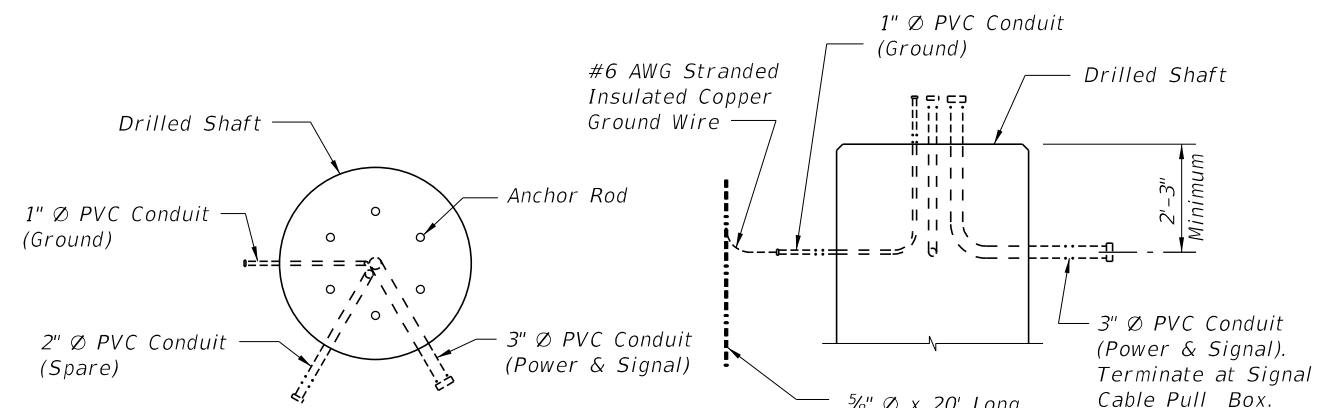
**NOTE:**  
See MAST ARM STRUCTURAL DESIGN CRITERIA, Note #4 on Sheet # T-7 for restriction on diameter of Anchor Rod Bolt Circle.



**SECTION G-G**  
(CSL Tubes, & Conduits Not Shown)



**BASE PLATE & ANCHORAGE ELEVATION**  
(Shaft Reinforcing, CSL Tubes & Conduits Not Shown)



**PLAN VIEW**

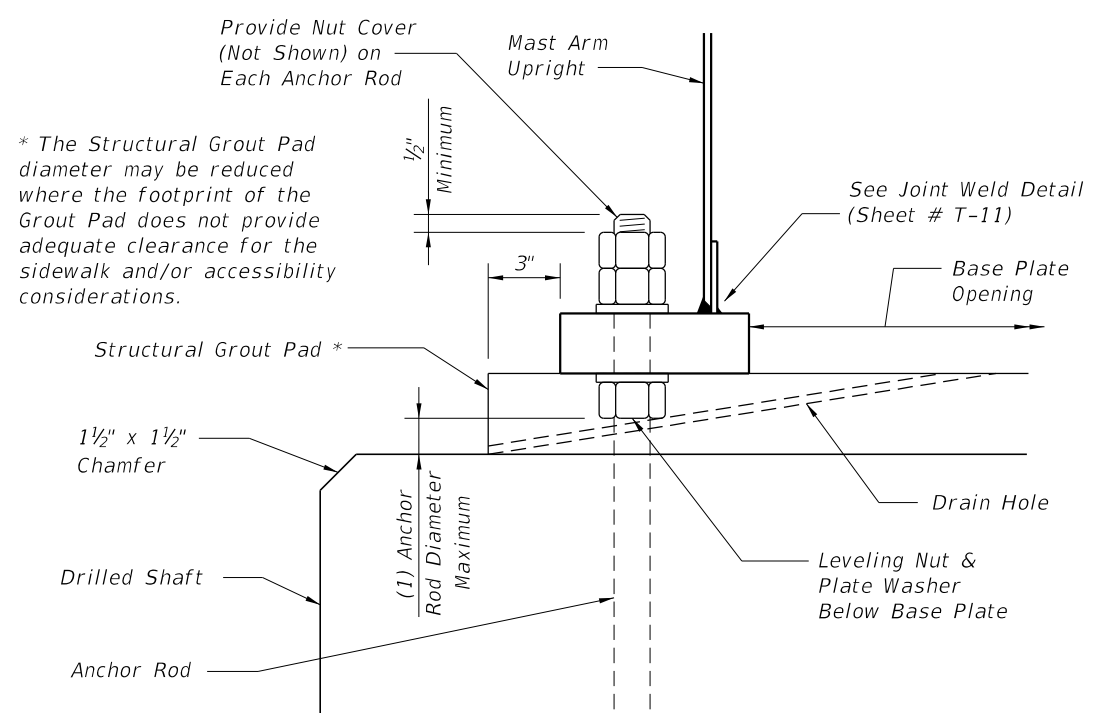
**ELEVATION**

**FOUNDATION CONDUIT DETAIL**

Conduit Notes:

1. Details shown are schematic.
2. Adjust Conduit Orientation as required to clear Anchor Rods, Drilled Shaft Reinforcing, and CSL tubes.
3. Extend Conduits to 1" below bottom of Mast Arm Handhole.

\* The Structural Grout Pad diameter may be reduced where the footprint of the Grout Pad does not provide adequate clearance for the sidewalk and/or accessibility considerations.



**DETAIL '6'**  
**PARTIAL SECTION THROUGH BASE PLATE**  
**AT CENTER OF BASE PLATE**  
(Shaft Reinforcing, CSL Tubes, & Conduits Not Shown)

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|           |    |             |
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**ENGINEER OF RECORD:**  
**MARK NIEDERMANN, P.E.**  
 PROFESSIONAL ENGINEERING CERTIFICATE NO. 45957  
 FLORIDA BRIDGE AND TRANSPORTATION, INC.  
 633 DARMOUTH STREET  
 ORLANDO, FLORIDA 32804

**FOUNDATION DETAILS**

**SHEET**  
**T-12**

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

**CUSTOM MAST ARM ASSEMBLIES DATA TABLE**

| STRUCTURE ID NUMBERS | DESIGNATION   | FIRST ARM |           | SECOND ARM |           | UF (DEG) | LL (DEG) | POLE    |           |          | DRILLED SHAFT AND REINFORCEMENT |               |                   |                      |             |                   |
|----------------------|---|-----------|-----------|------------|-----------|----------|----------|---------|-----------|----------|---------------------------------|---------------|-------------------|----------------------|-------------|-------------------|
|                      |   | ARM ID    | FAA (FT.) | ARM ID     | SAA (FT.) |          |          | POLE ID | UAA (FT.) | UB (FT.) | LENGTH (FT.)                    | DIAMETER (FT) | VERTICAL BAR SIZE | NO. OF VERTICAL BARS | NO. OF TIES | TIE SPACING (IN.) |
| POLE A               |   |           |           |            |           |          |          |         |           |          | 30.0                            | 4.5           | 11                | 16                   | 34          | 12                |
|                      | FOR MAST ARM ASSEMBLY DETAILS, SEE SHEETS T-6 THRU T-12 |           |           |            |           |          |          |         |           |          |                                 |               |                   |                      |             |                   |
|                      |   |           |           |            |           |          |          |         |           |          |                                 |               |                   |                      |             |                   |
|                      |   |           |           |            |           |          |          |         |           |          |                                 |               |                   |                      |             |                   |
|                      |   |           |           |            |           |          |          |         |           |          |                                 |               |                   |                      |             |                   |

**GENERAL NOTES:**

1. WORK THIS SHEET WITH THE SIGNAL DESIGNER'S "MAST ARM DETAILS". SEE THE OTHER SIGNALIZATION SHEETS FOR SPECIAL INSTRUCTIONS THAT INCLUDE NON-STANDARD HANDHOLE LOCATION, PAINT COLOR, TERMINAL COMPARTMENT REQUIREMENT, AND PEDESTRIAN FEATURES.
2. DESIGN WIND SPEED = 150 MPH IN ACCORDANCE WITH THE FDOT STRUCTURES MANUAL (JANUARY 2024 EDITION).
3. THE ANCHOR BOLT DESIGN MUST BE INCLUDED WITH THE MAST ARM CALCULATIONS AND SHOP DRAWINGS.

**FOUNDATION NOTES:**

1. DESIGN BASED ON BORINGS TAKEN ON 09/04/13 SEALED BY PROFESSIONAL SERVICE INDUSTRIES, INC.
2. ASSUMPTIONS AND VALUES USED IN DESIGN:  
 SOIL TYPE = COHESIONLESS (FINE SAND)  
 SOIL LAYER THICKNESS = 35 FT.  
 SOIL FRICTION ANGLE = 28 DEG.  
 SOIL UNIT WEIGHT = 27.6 PCF  
 SPT N-VALUE = 5 BLOWS/FT.  
 DESIGN WATER TABLE = 0 FT. BELOW SURFACE
3. THE FOUNDATIONS WERE DESIGNED FOR THE LRFD LOADS SHOWN BELOW. CONTACT THE ENGINEER FOR A POSSIBLE REDESIGN IF THE LOADS FROM THE MAST ARM DESIGNER EXCEED THESE ASSUMED LOADS. DO NOT CONSTRUCT THE FOUNDATIONS UNTIL THE LOADS HAVE BEEN VERIFIED.

**POLE A**

OVERTURNING MOMENT = 140.5 KIP-FT  
 TORSION = 139.1 KIP-FT  
 HORIZONTAL SHEAR (APPLIED AT TOP OF DRILLED SHAFT) = 7.0 KIPS

4. TEMPORARY CASING MUST BE ANTICIPATED DURING CONSTRUCTION DUE TO THE EXISTING VERY LOOSE SOIL CONDITIONS. THE TIP ELEVATION OF THE FOUNDATION SHOULD BE A MINIMUM OF 25 FT BELOW THE EXISTING GRADE. THE POTENTIAL FOR ARTESIAN CONDITIONS IN THE PROJECT AREA MUST BE CONSIDERED.

**FOUNDATION CAPACITY CRITERIA:**

1. THE DRILLED SHAFT MOMENT AND TORSION CAPACITIES ARE DETERMINED IN ACCORDANCE WITH THE FDOT STRUCTURES MANUAL (JANUARY 2017 EDITION) WITH PARAMETERS AND MODIFICATIONS AS LISTED HEREIN.

**2. DESIGN PARAMETERS:**

RESISTANCE FACTOR - OVERTURNING = 0.60  
 RESISTANCE FACTOR - TORSION = 0.90

**3. THE FOUNDATION CAPACITY ASSUMES THAT:**

- A) THE TOP OF THE FOUNDATION EXTENDS A MAXIMUM OF 6" ABOVE GRADE
- B) THE TOP 18" OF SOIL IS LOOSE OR DISTURBED

TO ACCOUNT FOR THESE ASSUMPTIONS, THE TOP 2'-0" OF THE SHAFT LENGTH IS CONSIDERED TO PROVIDE NO CONTRIBUTION TO THE OVERTURNING OR TORSION RESISTANCE AND THEREFORE THE SOIL WITHIN THAT LIMIT IS TOTALLY NEGLECTED.

4. TORSION RESISTANCE IS COMPUTED SOLELY FOR SKIN FRICTION. NO CONTRIBUTION FROM BOTTOM FRICTION IS CONSIDERED.

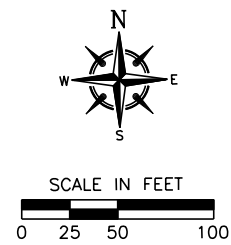
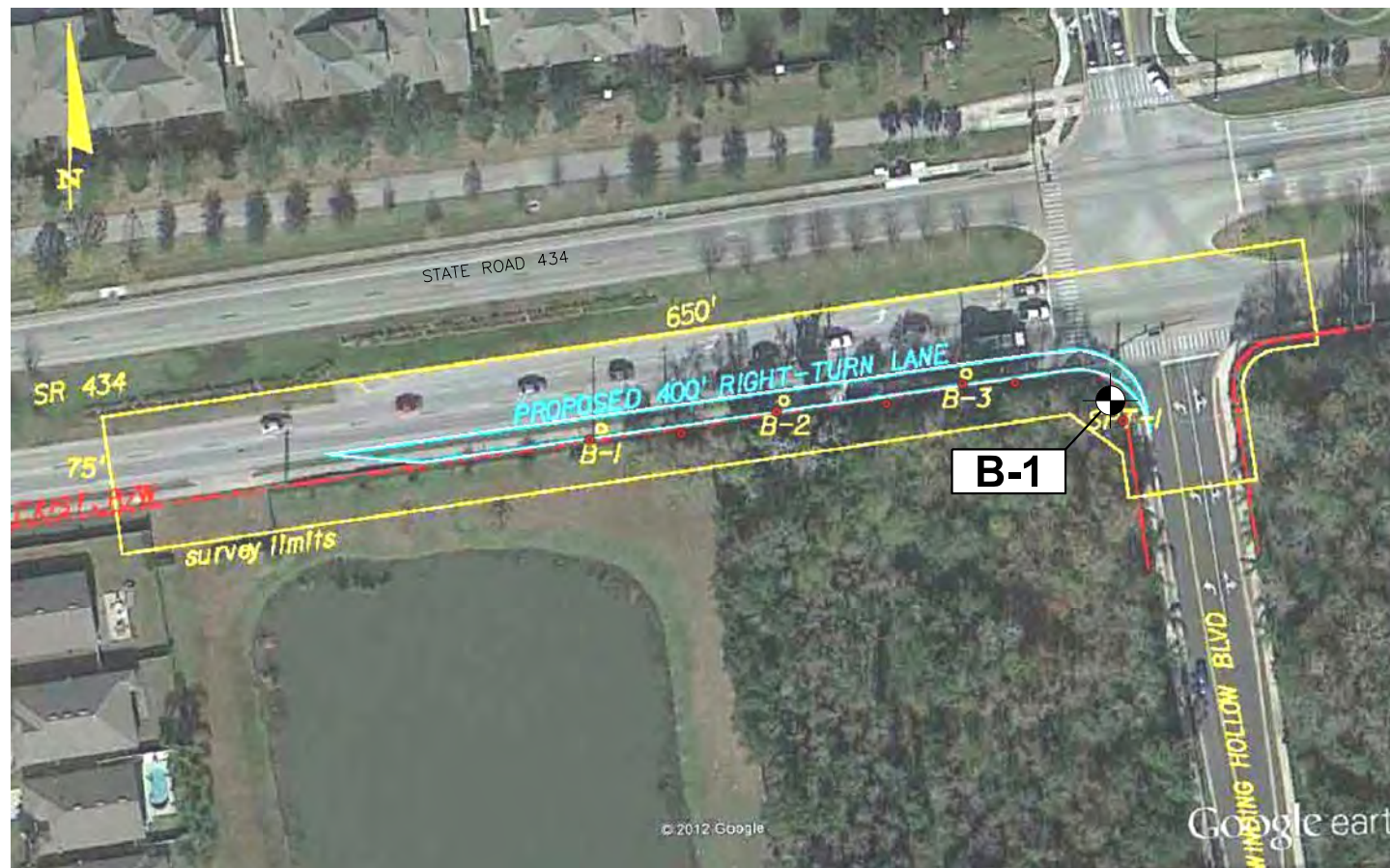
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**ENGINEER OF RECORD:**  
 MARK NIEDERMANN, P.E.  
 PROFESSIONAL ENGINEERING CERTIFICATE NO. 45957  
 FLORIDA BRIDGE AND TRANSPORTATION, INC.  
 633 DARMOUTH STREET  
 ORLANDO, FLORIDA 32804

**TABLE OF VARIABLES**

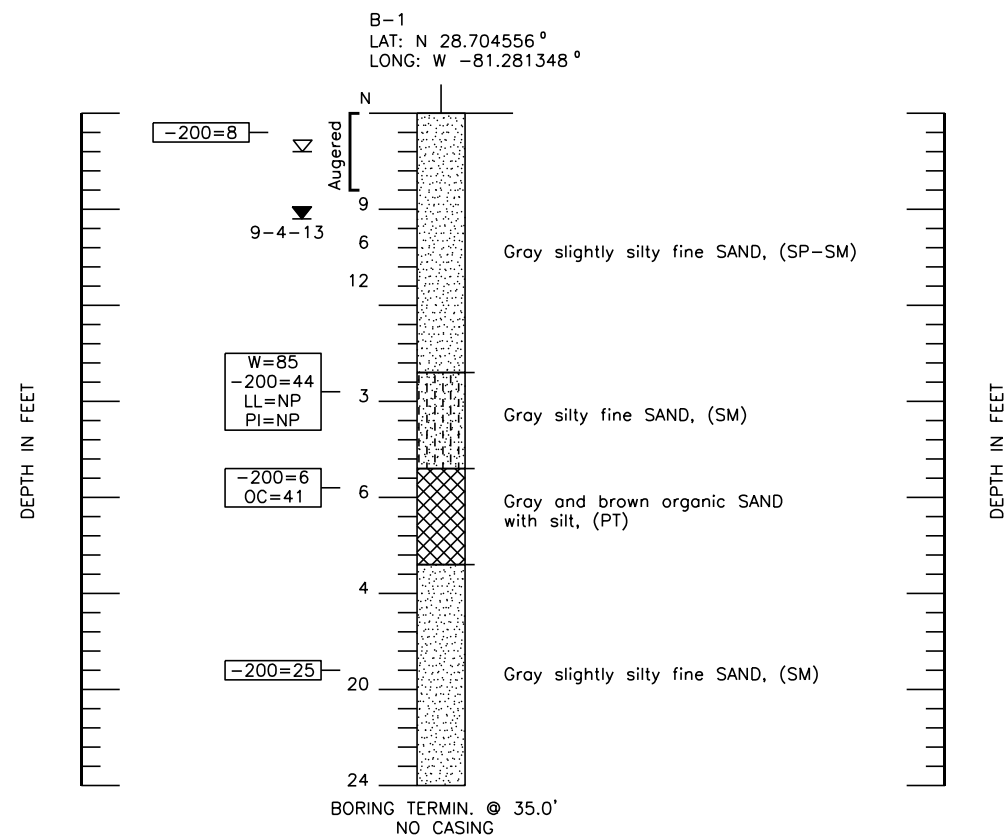
T-13



- LEGEND**
- Sand
  - Silty-Sand
  - Peat
  - (SP) Unified soil classification group symbol
  - Water table level
  - Estimated normal seasonal high water table 9-4-13
  - GSE Approximate Ground Surface Elevation
  - N Standard penetration resistance in blows per foot (18" spoon ASTM D-1586) using 140 lb safety hammer
  - W= Natural moisture content (%) (FM 1-T 265)
  - 200= Percent passing no. 200 U.S. standard sieve
  - OC= Organic content (%) (FM 1-T 267)
  - LL= Liquid limit (FM 1-T 089)
  - PI= Plasticity index (FM 1-T 090)
  - Standard Penetration Test (SPT) Boring Location

**NOTES**

1. Plan view is preliminary for showing boring locations only and may not be indicative of final plans.
2. Subsurface variations between borings should be anticipated as indicated in Section 2-4 of the Standard Specifications.
3. Based on a review of the St. Johns River Water Management District Potentiometric map of the upper Floridan Aquifer for the Project Area, the maximum potential Artesian Head Elevation in the Floridan Aquifer is estimated to be between +25 and +30 feet, NGVD. The contractor shall be prepared to handle artesian water levels from the Floridan Aquifer up to elevation +30 feet, NGVD.



| GRANULAR MATERIALS |                          |
|--------------------|--------------------------|
| Relative Density   | SPT (Safety) (Blows/ft.) |
| Very loose         | Less than 4              |
| Loose              | 4-10                     |
| Medium Dense       | 10-30                    |
| Dense              | 30-50                    |
| Very Dense         | Greater than 50          |

| SILTS AND CLAYS |                          |
|-----------------|--------------------------|
| Consistency     | SPT (Safety) (Blows/ft.) |
| Very soft       | Less than 2              |
| Soft            | 2-4                      |
| Firm            | 4-8                      |
| Stiff           | 8-15                     |
| Very stiff      | 15-30                    |
| Hard            | Greater than 30          |

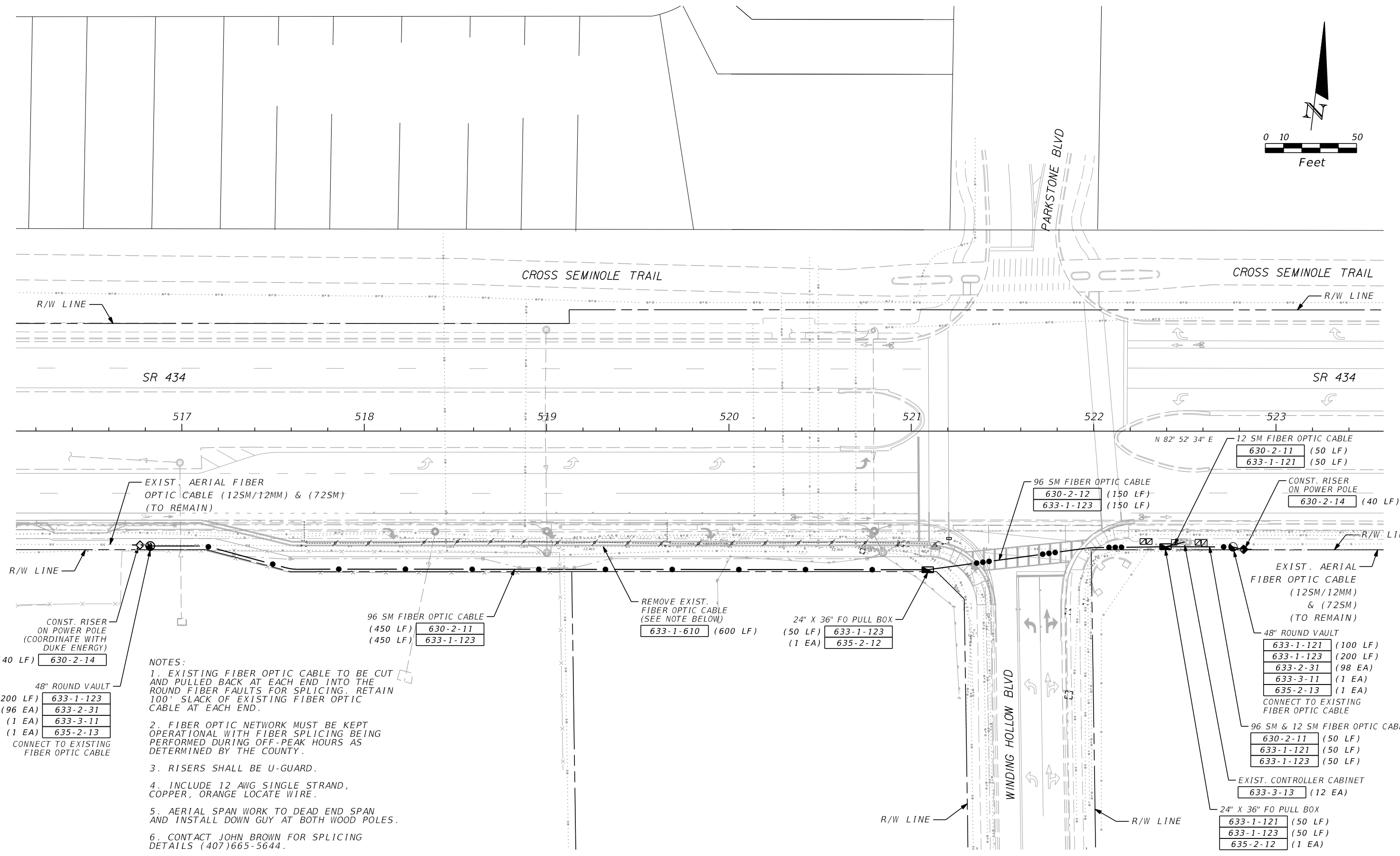
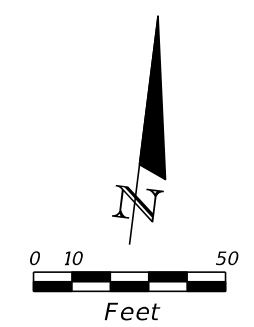
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|-----------|-------------|------|-------------|
| DATE      | DESCRIPTION | DATE | DESCRIPTION |
|           |             |      |             |

**Information To Build On**  
 Engineering • Consulting • Testing  
 1748 33RD STREET, ORLANDO, FL. 32839  
 PHONE: (407) 304-5560 • FAX: (407) 304-5561  
 ENGINEER OF RECORD: ROBERT A. TROMKE, P.E. No. 55456

|                                   |                      |
|-----------------------------------|----------------------|
| CITY OF WINTER SPRINGS<br>FLORIDA |                      |
| ROAD                              | FINANCIAL PROJECT ID |
| SR 434                            | 432642-1-58-01       |

**SPT BORING SHEET**

SHEET NO.  
**T-14**



- NOTES:**
- EXISTING FIBER OPTIC CABLE TO BE CUT AND PULLED BACK AT EACH END INTO THE ROUND FIBER FAULTS FOR SPLICING. RETAIN 100' SLACK OF EXISTING FIBER OPTIC CABLE AT EACH END.
  - FIBER OPTIC NETWORK MUST BE KEPT OPERATIONAL WITH FIBER SPLICING BEING PERFORMED DURING OFF-PEAK HOURS AS DETERMINED BY THE COUNTY.
  - RISERS SHALL BE U-GUARD.
  - INCLUDE 12 AWG SINGLE STRAND, COPPER, ORANGE LOCATE WIRE.
  - AERIAL SPAN WORK TO DEAD END SPAN AND INSTALL DOWN GUY AT BOTH WOOD POLES.
  - CONTACT JOHN BROWN FOR SPLICING DETAILS (407)665-5644.

- CONST. RISER ON POWER POLE (COORDINATE WITH DUKE ENERGY)  
(40 LF) **630-2-14**
- 48" ROUND VAULT  
(200 LF) **633-1-123**  
(96 EA) **633-2-31**  
(1 EA) **633-3-11**  
(1 EA) **635-2-13**  
CONNECT TO EXISTING FIBER OPTIC CABLE

- 96 SM FIBER OPTIC CABLE  
(450 LF) **630-2-11**  
(450 LF) **633-1-123**

- REMOVE EXIST. FIBER OPTIC CABLE (SEE NOTE BELOW)  
**633-1-610** (600 LF)
- 24" X 36" FO PULL BOX  
(50 LF) **633-1-123**  
(1 EA) **635-2-12**

- 96 SM FIBER OPTIC CABLE  
**630-2-12** (150 LF)  
**633-1-123** (150 LF)

- 12 SM FIBER OPTIC CABLE  
**630-2-11** (50 LF)  
**633-1-121** (50 LF)

- CONST. RISER ON POWER POLE  
**630-2-14** (40 LF)

- EXIST. AERIAL FIBER OPTIC CABLE (12SM/12MM) & (72SM) (TO REMAIN)
- 48" ROUND VAULT  
**633-1-121** (100 LF)  
**633-1-123** (200 LF)  
**633-2-31** (98 EA)  
**633-3-11** (1 EA)  
**635-2-13** (1 EA)  
CONNECT TO EXISTING FIBER OPTIC CABLE

- 96 SM & 12 SM FIBER OPTIC CABLE  
**630-2-11** (50 LF)  
**633-1-121** (50 LF)  
**633-1-123** (50 LF)

- EXIST. CONTROLLER CABINET  
**633-3-13** (12 EA)

- 24" X 36" FO PULL BOX  
**633-1-121** (50 LF)  
**633-1-123** (50 LF)  
**635-2-12** (1 EA)

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

ENGINEER OF RECORD:  
FURSAN S. MUNJED, P.E.  
PROFESSIONAL ENGINEER CERTIFICATE NO. 51446  
PEGASUS ENGINEERING, LLC  
301 WEST STATE ROAD 434, SUITE 309  
WINTER SPRINGS, FLORIDA 32708



CITY OF WINTER SPRINGS  
FLORIDA

|        |                      |
|--------|----------------------|
| ROAD   | FINANCIAL PROJECT ID |
| SR 434 | 432642-1-58-01       |

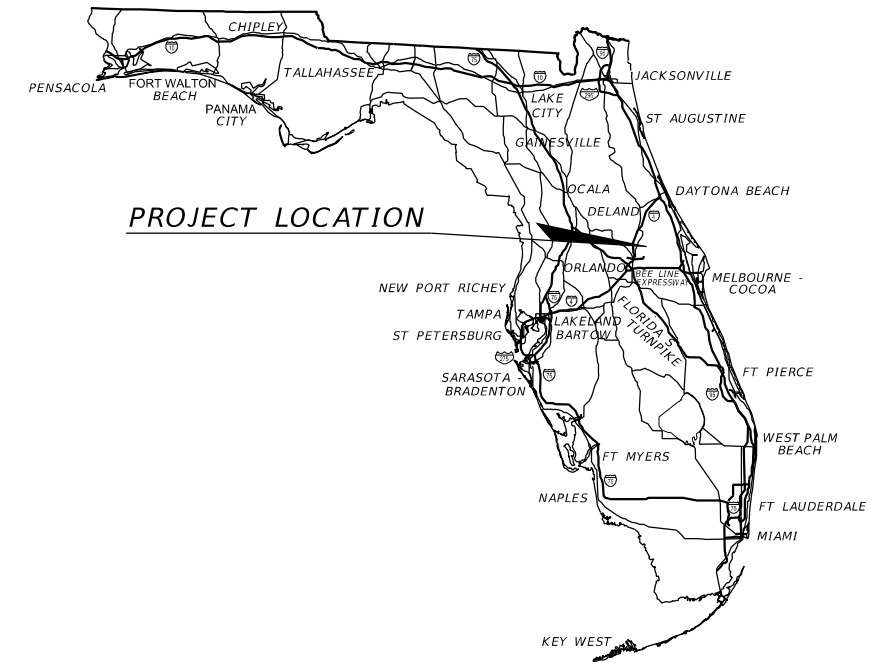
COMMUNICATION PLAN

SHEET NO.  
**T-15**

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STATE OF FLORIDA  
 DEPARTMENT OF TRANSPORTATION  
 CONTRACT PLANS  
 UTILITY PLANS

FINANCIAL PROJECT ID 432642-1-58-01  
 FEDERAL AID PROJECT NO. D519-083-B  
 SEMINOLE COUNTY (77070002)  
 STATE ROAD NO. 434 / WINDING HOLLOW BLVD.  
 INTERSECTION IMPROVEMENTS  
 ITB 01-24-01 PH



INDEX OF UTILITY PLANS

| SHEET NO.   | SHEET DESCRIPTION             |
|-------------|-------------------------------|
| U-1         | UTILITY KEY SHEET             |
| U-1A        | UTILITY SIGNATURE SHEET       |
| U-2         | UTILITY GENERAL NOTES         |
| U-3         | UTILITY OWNERS AND QUANTITIES |
| U-4 - U-5   | UTILITY PLAN SHEETS           |
| U-6 - U-7   | UTILITY DETAIL SHEETS         |
| U-8 - U-9   | UTILITY PROFILE SHEETS        |
| U-10 - U-14 | UTILITY DETAILS               |

FINAL PLANS  
 MAY 14, 2024

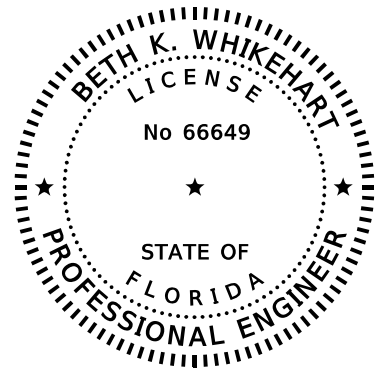
UTILITY PLANS  
 ENGINEER OF RECORD:

BETH K. WHIKEHART, P.E.  
 P.E. NO. 66649  
 PEGASUS ENGINEERING, LLC  
 301 WEST STATE ROAD 434  
 SUITE 309  
 WINTER SPRINGS, FL 32708  
 407-992-9160  
 CONTRACT NO.: AQX80  
 VENDOR NO.: F260806410-001

| FISCAL YEAR | SHEET NO. |
|-------------|-----------|
| 24          | U-1       |

INTERIM CITY OF WINTER SPRINGS CITY MANAGER: PHILIP HURSH, P.E.

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.



THIS DOCUMENT HAS BEEN DIGITALLY  
SIGNED AND SEALED BY

ON THE DATE ADJACENT TO THE SEAL

PRINTED COPIES OF THIS DOCUMENT ARE  
NOT CONSIDERED SIGNED AND SEALED  
AND THE SIGNATURE MUST BE VERIFIED  
ON ANY ELECTRONIC COPIES.

PEGASUS ENGINEERING, LLC  
301 WEST STATE ROAD 434  
SUITE 309  
WINTER SPRINGS, FL 32708  
(407) 992-9160  
BETH K. WHIKEHART P.E. NO. 66649

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE  
FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004 F.A.C.

| SHEET NO.   | DESCRIPTION                   |
|-------------|-------------------------------|
| U-1         | UTILITY KEY SHEET             |
| U-1A        | UTILITY SIGNATURE SHEET       |
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| U-10 - U-14 | UTILITY DETAILS               |

| REVISIONS |    |             |      |    |             | ENGINEER OF RECORD:<br>BETH K. WHIKEHART, P.E.<br>PROFESSIONAL ENGINEER CERTIFICATE NO. 66649<br>PEGASUS ENGINEERING, LLC<br>301 WEST STATE ROAD 434, SUITE 309<br>WINTER SPRINGS, FLORIDA 32708 |  | CITY OF WINTER SPRINGS<br>FLORIDA |                      | SIGNATURE SHEET | SHEET NO. |
|-----------|----|-------------|------|----|-------------|--|---|-----------------------------------|----------------------|-----------------|-----------|
| DATE      | BY | DESCRIPTION | DATE | BY | DESCRIPTION |  |   | ROAD                              | FINANCIAL PROJECT ID |                 | U-1A      |
|           |    |             |      |    |             |  | SR 434  | 432642-1-58-01                    |                      |                 |           |

GENERAL NOTES:

1. GENERAL UTILITY REQUIREMENTS

- 1.1. ALL UTILITY CONSTRUCTION SHALL CONFORM TO THE STANDARDS OF THE SEMINOLE COUNTY ENVIRONMENTAL SERVICE DEPARTMENT'S UTILITY ENGINEERING MANUAL, LATEST EDITION.
- 1.2. A LIST OF APPROVED MATERIALS IS SPECIFIED IN THE UTILITY ENGINEERING MANUAL.

2. EXISTING CONDITIONS

- 2.1. LOCATES OF EXISTING UTILITIES ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING EXISTING UTILITIES.
- 2.2. TEST HOLES SHALL BE BACK-FILLED IMMEDIATELY AFTER THEIR PURPOSE HAS BEEN SATISFIED.
- 2.3. THE CONTRACTOR SHALL TAKE PRECAUTIONS AGAINST DAMAGE TO EXISTING UTILITIES. THE CONTRACTOR SHALL PROVIDE ALL POSSIBLE ASSISTANCE TO THE OWNER OF DAMAGED UTILITIES IN RESTORING SERVICE.
- 2.4. THE CONTRACTOR SHALL COORDINATE WITH ALL OTHER UTILITY OWNERS FOR THE RESOLUTION OF CONFLICTS.

3. CONSTRUCTION COORDINATION

- 3.1. UTILITY WORK SHALL NOT BE PERFORMED BETWEEN 6:00 PM AND 7:00 AM OR ON WEEKENDS UNLESS OTHERWISE APPROVED IN ADVANCE BY THE UTILITIES DIRECTOR, CITY MANAGER, CITY ENGINEER, PROJECT MANAGEMENT OR SUPERVISOR.
- 3.2. CITY MAY ISSUE A "STOP WORK ORDER" IF WORK VIOLATES STANDARDS OR DEVIATES SUBSTANTIALLY FROM THE APPROVED PLAN. UTILITY WORK SHALL NOT PROCEED UNTIL CORRECTIONS HAVE BEEN MADE TO THE SATISFACTION OF THE CITY. THE CITY IS NOT LIABLE FOR COSTS INCURRED BY THE "STOP WORK ORDER".
- 3.3. ALL CONNECTIONS TO EXISTING MAINS SHALL BE MADE ONLY AFTER REVIEW AND APPROVAL BY THE CITY. REQUESTS SHALL BE MADE THROUGH THE CITY'S WEBSITE WITH A MINIMUM OF A 72 HOUR NOTICE. CONNECTIONS TO PRESSURE MAINS SHALL NOT BE SCHEDULED ON FRIDAYS.
- 3.4. CONSTRUCTION WITHIN RIGHT-OF-WAYS SHALL STRICTLY ADHERE TO THE REQUIREMENTS OF THE AGENCIES HAVING JURISDICTION OVER THE RIGHT-OF-WAY.
- 3.5. THE CONTRACTOR SHALL PERFORM WORK IN A MANNER WHICH WILL CAUSE MINIMUM INTERRUPTION OF TRAFFIC. MAINTENANCE OF TRAFFIC SHALL MEET THE REQUIREMENTS OF FDOT TEMPORARY TRAFFIC CONTROL STANDARDS.
- 3.6. THE CONTRACTOR SHALL MAINTAIN UTILITY SERVICE TO CUSTOMERS AT ALL TIMES.
- 3.7. PRIOR TO SUBSTANTIAL COMPLETION, INSPECTION THE CONTRACTOR SHALL ENSURE THAT ALL UTILITY WORK CONFORMS TO STANDARDS AND THAT ALL PREVIOUS INSPECTIONS AND TESTS ARE COMPLETED.

4. PROTECTION OF THE PUBLIC AND PROPERTY

- 4.1. EQUIPMENT, MATERIALS, OR EXCAVATIONS SHALL NOT PREVENT FREE ACCESS TO PUBLIC SERVICES.
- 4.2. OPEN EXCAVATIONS SHALL BE PROTECTED TO PREVENT INJURY TO THE PUBLIC AND DAMAGE TO THE WORK.
- 4.3. TRENCHING SHALL BE LIMITED TO 100 FEET IN LENGTH UNLESS OTHERWISE APPROVED BY THE CITY.
- 4.4. THE CONTRACTOR SHALL TAKE PROVISIONS TO MINIMIZE DAMAGE TO, BUT NOT LIMITED TO, STRUCTURES AND VEGETATION WITHIN RIGHT-OF-WAYS OR EASEMENTS AND SHALL BE RESPONSIBLE FOR REPAIR OR REPLACEMENT.
- 4.5. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO NOT CREATE PUBLIC NUISANCE, SUCH AS ENCROACHMENT, FLOODING, OR EXCESS NOISE OR DUST.

5. EARTHWORK

- 5.1. THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN SHEETING AND BRACING TO PREVENT DAMAGE TO PROPERTY OR INJURY TO PERSONS, EROSION, CAVE-INS OR EXCESSIVE TRENCH WIDTH.
- 5.2. UNSUITABLE SUBGRADES SHALL BE REMOVED AND REPLACED WITH COMPACT SELECT COMMON FILL OR BEDDING ROCK. THE BOTTOMS OF EXCAVATIONS SHALL REMAIN FIRM AND DRY.
- 5.3. THE MINIMUM WIDTH OF TRENCHES SHALL BE EQUAL TO THE OUTSIDE DIAMETER OF THE PIPE AT THE JOINT PLUS 12 INCHES. SIDE SLOPES SHALL BE AT A RATIO OF 1.5H:1.0V FOR UNSHEETED TRENCHES.
- 5.4. BEDDING FOR STRUCTURES AND PIPE SHALL CONFORM TO THE STANDARD DETAILS.
- 5.5. BACKFILL LIFTS SHALL NOT EXCEED 12 INCHES UP AT LEAST 12 INCHES ABOVE THE PIPE. COMPACTION SHALL BE IN ACCORDANCE WITH AASHTO T-180 MODIFIED PROCTOR WITH 98% DENSITY IN PAVED AND WITHIN 6 FEET OF PAVED AREAS, AND 95% FOR AREAS NOT WITHIN 6 FEET OF PAVED AREAS. CONTRACTOR IS RESPONSIBLE FOR ALL TESTS.

6. RESTORATIONS

- 6.1. RESTORATIONS SHALL COMMENCE AS SOON AS POSSIBLE AFTER INSTALLATION OF UTILITY IMPROVEMENTS. RESTORATION MATERIALS SHALL BE OF LIKE OR BETTER THAN THOSE REMOVED.

7. IDENTIFICATION AND MARKING OF UTILITIES

- 7.1. DUCTILE IRON PIPE SHALL BE LABELED WITH SELF ADHESIVE TAPE IDENTIFYING THE SERVICE OF THE PIPE.
- 7.2. LOCATING WIRES, LOCATING BALLS, WARNING TAPE, AND VALVE IDENTIFICATION TAGS SHALL BE INSTALLED PER THE STANDARD DETAILS.
- 7.3. CURBS SHALL BE ETCHED OR CUT AND PAINTED DIRECTLY ADJACENT TO VALVES, BLOW OFFS AND SERVICES.

8. UTILITIES

- 8.1. WHENEVER ANY PIPELINE IS LEFT UNATTENDED, TEMPORARY PLUGS SHALL BE INSTALLED AT ALL OPENINGS. PIPE SHALL BE KEPT CLEAN OF ALL SOIL AND FOREIGN MATERIALS.
- 8.2. SEPARATIONS BETWEEN UTILITIES SHALL BE IN ACCORDANCE WITH THE F.A.C. 62-55.314.
- 8.3. MINIMUM COVER FOR ALL WATER PIPES AND FITTINGS SHALL BE 36 INCHES.
- 8.4. ALL CHANGES IN ALIGNMENT SHALL BE MADE WITH FITTINGS. PIPE DEFLECTION AT JOINTS IS NOT PERMITTED UNLESS OTHERWISE APPROVED BY THE CITY.
- 8.5. PIPE SHALL BE RESTRAINED FOR LENGTHS AS CALCULATED AND SHOWN ON THE PIPE RESTRAINT TABLE.
- 8.6. HDPE PIPE JOINTING SHALL BE BY BUTT-FUSION, JOINTING TO FITTINGS OR OTHER PIPE MATERIALS SHALL UTILIZE BUTT-FUSED MECHANICAL JOINT ADAPTORS.
- 8.7. POLYETHYLENE ENCASEMENT OF DIP SHALL BE INSTALLED IN CORROSIVE SOILS OR AS DIRECTED BY THE CITY.

1. POTABLE PIPE AND FITTINGS

- 1.1. PVC POTABLE WATER PIPE SHALL BE BLUE IN COLOR CONFORMING TO AWWA C900, AND SHALL BE DR18 FOR PIPES 4 TO 24 INCHES IN DIAMETER, DR21/25 FOR PIPES 30 INCHES AND LARGER, AND DR14 FOR ALL FIRE LINE PIPE.
- 1.2. DUCTILE IRON POTABLE WATER PIPE SHALL CONFORM TO ANSI/AWWA C151/A21.51, AND SHALL BE PRESSURE CLASSES 350 FOR PIPES 4 TO 12 INCHES IN DIAMETER, 250 FOR PIPES 14 TO 24 INCHES IN DIAMETER, AND 200 FOR PIPES 30 TO 64 INCHES IN DIAMETER.
- 1.3. HDPE POTABLE WATER PIPE SHALL BE BLACK IN COLOR WITH BLUE STRIPES, CONFORMING TO AWWA C906 AND ASTM D714, AND SHALL HAVE AN EXTERIOR DIAMETER EQUAL TO DUCTILE IRON PIPE OF THE SAME SIZE WITH A MINIMUM DR11 AND PRESSURE RATING OF 200 PSIG.
- 1.4. DUCTILE IRON PIPE OR FITTINGS SHALL HAVE A STANDARD CEMENT-MORTAR LINING WITH SEAL COAT. EXTERIOR SHALL BE COATED WITH A SHOP ASPHALTIC COATING FOR BELOW GRADE APPLICATIONS, OR A RUST INHIBITIVE PRIMER OR FUSION COATED EPOXY FOR EXPOSED APPLICATIONS.

2. POTABLE WATER VALVES

- 2.1. POTABLE WATER VALVES SHALL BE RESILIENT WEDGE GATE VALVES. BUTTERFLY VALVES ARE NOT PERMITTED UNLESS OTHERWISE APPROVED BY THE CITY.
- 2.2. VALVES SHALL BE FULLY SUPPORTED BY BEDDING STONE AS SHOWN ON THE STANDARD DETAILS.

3. POTABLE WET TAPS

- 3.1. WET TAPS SHALL NOT BE MADE WITHIN 3 FEET OF THE BACK OF THE BELL OR THE SPIGOT INSERTION LINE.
- 3.2. ALL TAPPING SLEEVES SHALL BE PRESSURE TESTED AT 150 PSI FOR 15 MINUTES PRIOR TO TAPPING OPERATIONS.

4. HYDRANTS

- 4.1. PUBLIC HYDRANTS SHALL BE INSTALLED WITH A HYDRANT SECURITY DEVICE / CHECK VALVE.
- 4.2. DRY BARREL HYDRANTS SHALL HAVE THEIR DRAINS OMITTED OR PERMANENTLY PLUGGED.
- 4.3. HYDRANTS SHALL BE COATED TO COLORS AS SPECIFIED BY CITY STAFF.

5. POTABLE MASTER METER ASSEMBLIES

- 5.1. SERVICE MAIN FROM THE POINT OF CONNECTION TO THE MASTER METER ASSEMBLY SHALL BE DUCTILE IRON PIPE.
- 5.2. MASTER METER ASSEMBLIES SHALL BE CONSTRUCTED WITH PRE AND POST METER STRAIGHT PIPE LENGTH AS REQUIRED BY THE METER MANUFACTURER.
- 5.3. ASSEMBLIES SHALL HAVE BACKFLOW DEVICE OF TYPE SPECIFIED BY THE CITY.

6. POTABLE SERVICES

- 6.1. POTABLE WATER SERVICES UP TO 2 INCHES SHALL BE MADE WITH SADDLES. DIRECT TAPPING IS NOT PERMITTED.
- 6.2. SERVICE TAPS SHALL NOT BE WITHIN 2 FEET OF THE BACK OF THE BELL OR THE SPIGOT INSERTION LINE OR 18 INCHES OF OTHER SERVICE TAPS.
- 6.3. LONG SIDE SERVICES, OR SERVICES UNDER ROAD/DRIVEWAYS, SHALL BE INSTALLED IN A SLEEVE WITH END SEALS.
- 6.4. LOCATE WIRE SHALL BE RUN WITH ALL SERVICES, SPLICED TO THE LOCATE WIRE ON THE MAIN WITH APPROVED MATERIAL. ON SERVICES WITH SLEEVES, RUN LOCATE WIRE IN OR WITH SLEEVES.
- 6.5. SERVICE TUBING SHALL BE SDR-9 PE 3408/4710 AND BLUE IN COLOR, CONTINUOUS FROM TAP TO METER BOX.

7. POTABLE WATER MAIN CLEANING AND FLUSHING

- 7.1. ALL POTABLE WATER SYSTEMS SHALL BE CLEANED AND FLUSHED AT THE DIRECTION OF CITY STAFF.
- 7.2. THE CONTRACTOR SHALL SUBMIT TO THE CITY A FLUSHING OR PIGGING PLAN PRIOR TO CLEANING OPERATIONS.
- 7.3. FLUSHED WATER SHALL BE DISCHARGED IN A MANNER AND LOCATION AS APPROVED BY THE CITY.

8. POTABLE WATER MAIN HYDROSTATIC (PRESSURE) AND LEAKAGE TESTING

- 8.1. SERVICES AND HYDRANTS INSTALLED SHALL BE PRESSURE TESTED AT THE SAME TIME AS THE SYSTEM.
- 8.2. ENSURE ALL ENTRAINED AIR IS BLED FROM THE SYSTEM PRIOR TO TESTING.
- 8.3. FOR PVC OR DUCTILE IRON PIPE, A TESTING PRESSURE OF 150 PSIG SHALL BE APPLIED AND MAINTAINED FOR 20 MINUTES TO ALLOW INITIAL INSPECTION OF LEAKS, THEN HELD FOR A PERIOD OF 2 HOURS WITHIN PLUS OR MINUS 5 PSIG OF THE TESTING PRESSURE. ALLOWABLE MAKE UP WATER VOLUME SHALL NOT EXCEED CALCULATION SPECIFIED IN AWWA C600/C605. FIRE LINES SHALL BE TESTED UNDER DIRECTION OF THE FIRE DEPARTMENT.
- 8.4. HDPE PIPE SHALL BE TESTED AS SPECIFIED IN THE UTILITIES ENGINEERING MANUAL.

9. POTABLE WATER MAIN DISINFECTION

- 9.1. ALL POTABLE WATER SYSTEMS SHALL BE DISINFECTED TO A INITIAL RESIDUAL OF 50 mg/L, AND SHALL NOT DROP BELOW A RESIDUAL OF 25 mg/L FOR 24 HOURS THROUGHOUT THE ENTIRE SYSTEM.
- 9.2. THE CONTRACTOR SHALL SUBMIT A SAMPLING PLAN CONFORMING TO FDEP REQUIREMENTS, AT MINIMUM SAMPLES SHALL BE EVERY 1,200 FEET, AT THE ENDS OF LINES, FROM EACH BRANCH GREATER THAN A PIPE LENGTH, AND AT ALL POINTS OF CONNECTION TO EXISTING MAINS. SAMPLES SHALL NOT BE COLLECTED FROM HYDRANTS.

REVISIONS

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

ENGINEER OF RECORD:  
**BETH K. WHIKEHART, P.E.**  
 PROFESSIONAL ENGINEER CERTIFICATE NO. 66649  
 PEGASUS ENGINEERING, LLC  
 301 WEST STATE ROAD 434, SUITE 309  
 WINTER SPRINGS, FLORIDA 32708



CITY OF WINTER SPRINGS  
 FLORIDA

| ROAD   | FINANCIAL PROJECT ID |
|--------|----------------------|
| SR 434 | 432642-1-58-01       |

UTILITY NOTES

SHEET NO.

U-2



UTILITY OWNERS:

|                     |                                     |                     |
|---------------------|-------------------------------------|---------------------|
| DERIUS HOLDEN       | CITY OF WINTER SPRINGS              | (407) 327-1800 x588 |
| CUSTOMER SERVICE    | DUKE ENERGY - DISTRIBUTION          | (407) 629-1010      |
| COLIN DUNN          | FLORIDA PUBLIC UTILITIES            | (386) 785-4554      |
| KIRBY SPENCER       | AT&T/DISTRIBUTION                   | (386) 281-6957      |
| JOHN BROWN          | SEMINOLE COUNTY TRAFFIC ENGINEERING | (407) 655-5644      |
| REX ANDERSON        | CHARTER COMMUNICATIONS              | (407) 215-5716      |
| JAMES MOSLEY        | UNITI FIBER LLC                     | (251) 654-8216      |
| MCI INVESTIGATIONS  | MCI                                 | (800) 624-9675 x2   |
| ZAYO FL RELOCATIONS | ZAYO GROUP                          | (866) 364-6033      |
| JOHN BROWN          | SEMINOLE COUNTY TRAFFIC             | (407) 665-5644      |
| GREG HUNT           | WOW                                 | (303) 927-4994      |

| <u>UTILITY QUANTITIES</u>         |   |      |          |
|-----------------------------------|---|------|----------|
| PAY ITEM                          | DESCRIPTION                                 | UNIT | QUANTITY |
| <b>WATER MAIN ITEMS</b>           |   |      |          |
| U1                                | 12" DIP Water Main                          | LF   | 35       |
| U2                                | 12" DIP Water Main (Temporary)              | LF   | 87       |
| U3                                | Water Main Fittings                         | TN   | 1        |
| U4                                | 12"x12" Wet Tap Connection                  | EA   | 2        |
| U5                                | 12" Linestops                               | EA   | 2        |
| U6                                | Water Main Clearance                        | EA   | 2        |
| U7                                | Remove Existing Water Main                  | LF   | 32       |
| <b>RECLAIMED WATER MAIN ITEMS</b> |   |      |          |
| U8                                | 12" DIP Reclaimed Water Main                | LF   | 13       |
| U9                                | Connection to Existing Reclaimed Water Main | EA   | 1        |
| U10                               | Pipe Cap                                    | EA   | 1        |
|                                   |   |      |          |
|                                   |   |      |          |

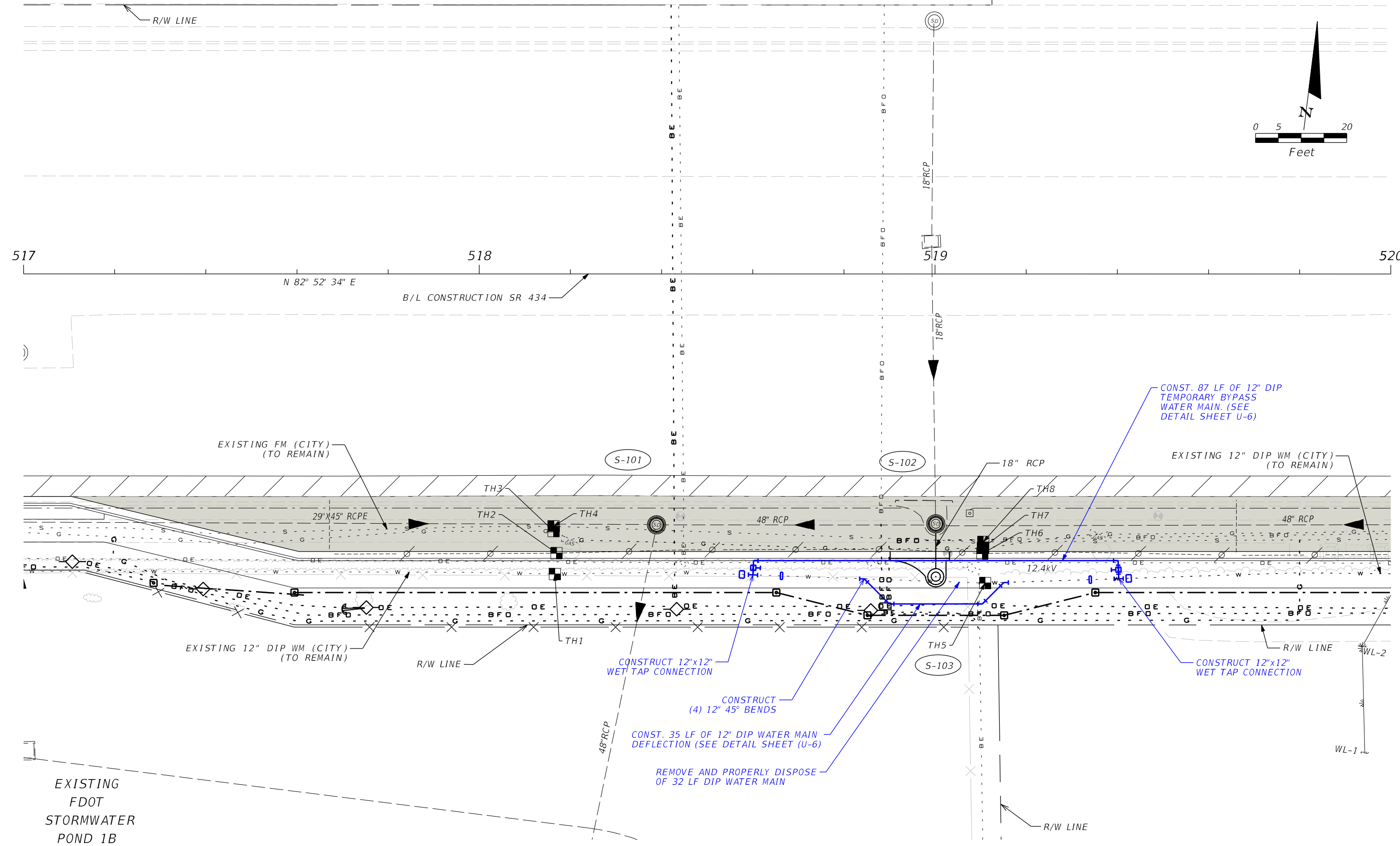
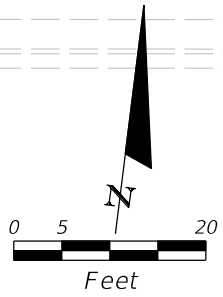
PAY ITEM NOTES

- U1 - PAY ITEM SHALL INCLUDE ALL TRENCHING, BEDDING, BACKFILL, BRACING AND SUPPORT. THIS PAY ITEM SHALL ALSO INCLUDE RESTRAINING THE EXISTING WATER MAIN AND DEWATERING NECESSARY FOR CONSTRUCTION.
- U2 - PAY ITEM SHALL INCLUDE ALL TRENCHING AND PIPE SUPPORT. PAY ITEM SHALL ALSO INCLUDE REMOVAL OF THE TEMPORARY PIPE AND PROPER DISPOSAL OF THE PIPE, FITTINGS, AND OTHER APPURTUNANCES NEEDED FOR THE TEMPORARY BYPASS POTABLE WATER SUPPLY LINE. THIS PAY ITEM SHALL ALSO INCLUDE RESTRAINING THE EXISTING WATER MAIN AND DEWATERING NECESSARY FOR CONSTRUCTION..
- U6 - PAY ITEM SHALL INCLUDE ALL SAMPLE PORTS, SAMPLING, LAB ANALYSIS, AND ANY OTHER ITEMS REQUIRED TO OBTAIN FDEP CLEARANCE FOR THE TEMPORARY BYPASS WATER MAIN AND THE PERMANENT WATER MAIN DEFLECTION.
- U7 - PAY ITEM INCLUDES REMOVAL AND DISPOSAL OF THE EXISTING DUCTILE IRON WATER MAIN AT AN APPROVED DISPOSAL SITE.
- U8 - PAY ITEM SHALL INCLUDE PRESSURE TESTING THE INSTALLED RECLAIMED WATER MAIN SEGMENT.
- U9 - PAY ITEM SHALL INCLUDE RESTRAINT OF THE RECLAIMED WATER MAIN AT THE PROPOSED CONNECTION POINT.

LINETYPE LEGEND

- DE - - - - - OVERHEAD ELECTRIC
- BE - - - - - UNDERGROUND ELECTRIC
- BFO - - - - - FIBER OPTIC
- X-X-X-X- FENCE
- G - - - - - GAS MAIN
- NPW - - - - - RECLAIMED WATER MAIN
- S - - - - - SANITARY SEWER
- == == == == STORM SEWER
- BT - - - - - TELEPHONE
- BTv - - - - - TELEVISION
- w - - - - - WATER MAIN
- — — — R/W LINE

| <u>REVISIONS</u> |    |             |      |    | ENGINEER OF RECORD:<br>BETH K. WHIKEHART, P.E.<br>PROFESSIONAL ENGINEER CERTIFICATE NO. 66649<br>PEGASUS ENGINEERING, LLC<br>301 WEST STATE ROAD 434, SUITE 309<br>WINTER SPRINGS, FLORIDA 32708 |  | CITY OF WINTER SPRINGS<br>FLORIDA |                | UTILITY OWNERS<br>AND QUANTITIES | SHEET<br>NO.         |
|------------------|----|-------------|------|----|--|---|-----------------------------------|----------------|----------------------------------|----------------------|
| DATE             | BY | DESCRIPTION | DATE | BY |  |   | DESCRIPTION                       | ROAD           |                                  | FINANCIAL PROJECT ID |
|                  |    |             |      |    |  |   | SR 434                            | 432642-1-58-01 |                                  |                      |



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

ENGINEER OF RECORD:  
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 PEGASUS ENGINEERING, LLC  
 301 WEST STATE ROAD 434, SUITE 309  
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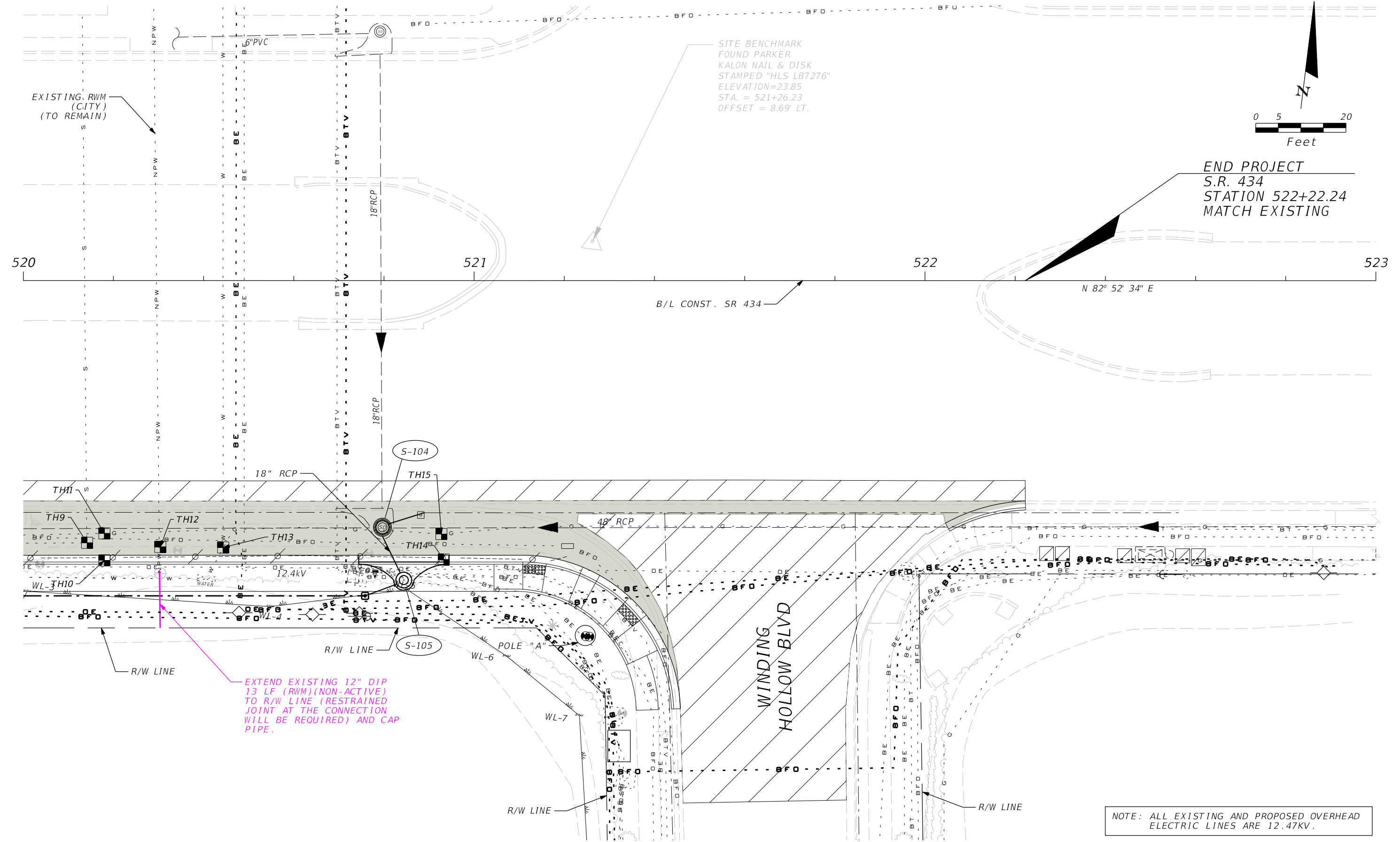
CITY OF WINTER SPRINGS  
 FLORIDA

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| SR 434 | 432642-1-58-01       |

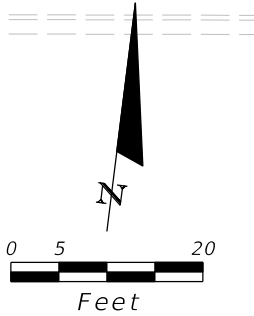
UTILITY PLAN SHEET

SHEET NO.  
**U-4**

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



SITE BENCHMARK  
 FOUND PARKER  
 KALON NAIL & DISK  
 STAMPED "HLS LB7276"  
 ELEVATION=23.85  
 STA. = 521+26.23  
 OFFSET = 8.69' LT.



END PROJECT  
 S.R. 434  
 STATION 522+22.24  
 MATCH EXISTING

EXTEND EXISTING 12" DIP  
 13 LF (RWM) (NON-ACTIVE)  
 TO R/W LINE (RESTRAINED  
 JOINT AT THE CONNECTION  
 WILL BE REQUIRED) AND CAP  
 PIPE.

NOTE: ALL EXISTING AND PROPOSED OVERHEAD  
 ELECTRIC LINES ARE 12.47KV.

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

ENGINEER OF RECORD:  
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 301 WEST STATE ROAD 434, SUITE 309  
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CITY OF WINTER SPRINGS  
 FLORIDA

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| SR 434 | 432642-1-58-01       |

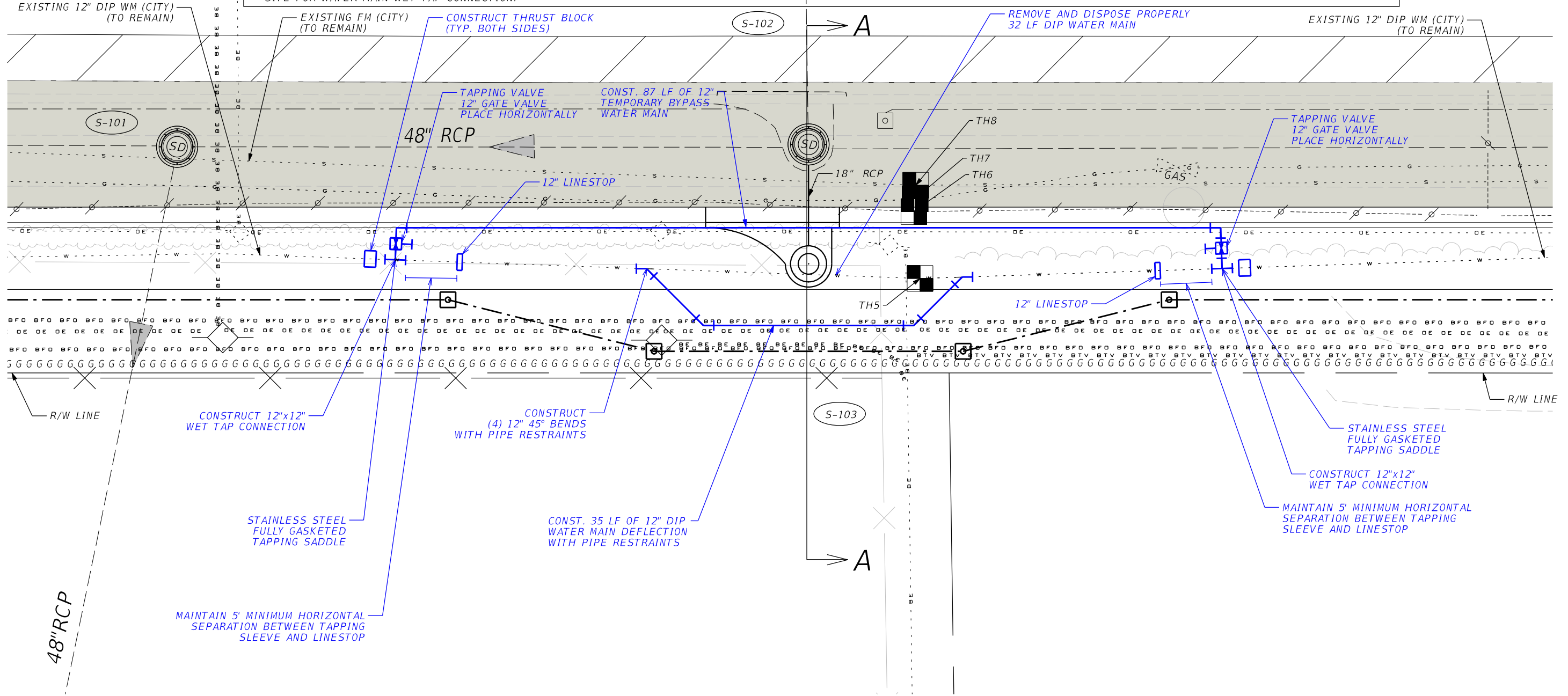
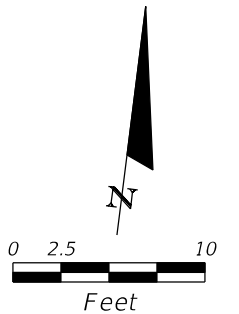
UTILITY PLAN SHEET

SHEET NO.  
**U-5**

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**WATER MAIN DEFLECTION CONSTRUCTION SEQUENCE**

- 1) CONTRACTOR SHALL SUBMIT A WATER MAIN DEFLECTION PLAN INCLUDING TEMPORARY BYPASS METHODS TO THE CITY FOR APPROVAL A MINIMUM OF 14 DAYS PRIOR TO IMPLEMENTATION. CONTRACTOR SHALL COORDINATE AND OBTAIN SHOP DRAWING APPROVAL PRIOR TO ORDERING WATER MAIN DEFLECTION COMPONENTS.
- 2) CONTRACTOR SHALL MAINTAIN POTABLE WATER SERVICE TO THE CUSTOMERS AT ALL TIMES.
- 3) EXPOSE THE EXISTING 12" WATER MAIN OUTSIDE OF THE TWO (2) WET TAP CONNECTIONS FOR THE TEMPORARY BYPASS WATER MAIN.
- 4) POUR THRUST BLOCKS ON THE EXISTING WATER MAIN TO RESTRAIN THE PIPE. SEE DETAIL ON SHEET U-10.
- 5) CONSTRUCT THE 12-INCH TEMPORARY BYPASS WATER MAIN INCLUDING TEMPORARY PIPE RESTRAINTS ABOVE GROUND AND CAP THE WATER MAIN ON BOTH ENDS. TEMPORARY PIPING MATERIAL MAY BE: DR 18 PVC, DR 11 HDPE OR PC150 DIP AND RESTRAINED.
- 6) DISINFECT, PRESSURE TEST, AND SAMPLE THE TEMPORARY BYPASS WATER MAIN TO VERIFY THAT FDEP REQUIREMENTS ARE MET.
- 7) INSTALL TWO (2) TAPPING SLEEVES (HORIZONTALLY) AND VALVES. CONNECT THE TEMPORARY BYPASS PIPE TO THE EXISTING 12-INCH WATER MAIN VIA A WET TAP CONNECTION. CONTRACTOR SHALL COORDINATE WITH THE CITY OF WINTER SPRINGS UTILITY REPRESENTATIVES TO BE ON SITE FOR WATER MAIN WET TAP CONNECTION.
- 8) INSTALL TWO (2) 12-INCH LINESSTOPS IN BETWEEN THE WET TAP SADDLE AND NEW CONFLICT DEFLECTION (ON THE EAST AND WEST SIDES). MAINTAIN A MINIMUM SEPARATION OF 5 FEET FROM THE TAPPING SADDLE.
- 9) POUR A CONCRETE CRADLE UNDER BOTH LINESSTOPS TO PREVENT MOVEMENT.
- 10) CONSTRUCT THE PERMANENT 12-INCH DIP PIPE DEFLECTION WITH RESTRAINTS AND CAP BOTH ENDS.
- 11) DISINFECT, PRESSURE TEST, AND SAMPLE THE PERMANENT 12-INCH DIP WATER MAIN AND OBTAIN FDEP CLEARANCE.
- 12) CUT THE EXISTING DIP WATER MAIN AND CONNECT THE PERMANENT PIPE DEFLECTION. RESTRAIN CONFLICT DEFLECTION AND EXISTING WATER MAIN.
- 13) REMOVE TWO (2) LINE STOPS. CONTRACTOR SHALL COORDINATE WITH THE CITY OF WINTER SPRINGS UTILITY REPRESENTATIVES TO BE ON SITE FOR REMOVAL OF LINE STOPS.
- 14) CLOSE TAPPING VALVES AND REMOVE THE TEMPORARY BYPASS WATER MAIN.
- 15) PERMANENTLY ABANDON THE HORIZONTALLY-PLACED TAPPING VALVES AND ADD PERMANENT RESTRAINTS AT DEAD ENDS (TO BE INSPECTED BY THE CITY BEFORE FILLING THE TRENCH).



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ENGINEER OF RECORD:  
**BETH K. WHIKEHART, P.E.**  
 PROFESSIONAL ENGINEER CERTIFICATE NO. 66649  
 PEGASUS ENGINEERING, LLC  
 301 WEST STATE ROAD 434, SUITE 309  
 WINTER SPRINGS, FLORIDA 32708



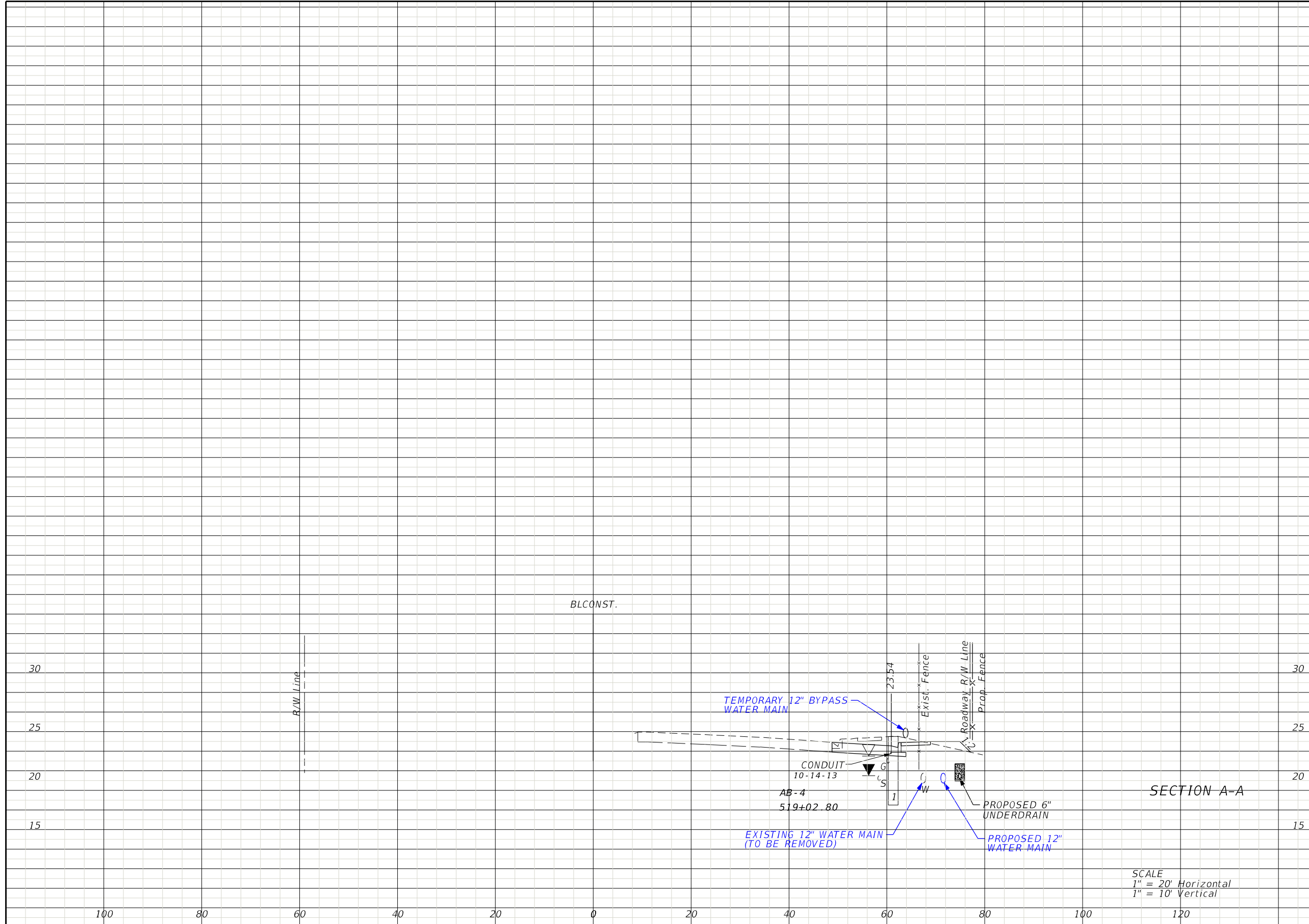
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| CITY OF WINTER SPRINGS<br>FLORIDA |                      |
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UTILITY DETAIL SHEET

SHEET NO.  
**U-6**

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| Regular Exc. |   | Embankment |   |
|--------------|---|------------|---|
| A            | V | A          | V |



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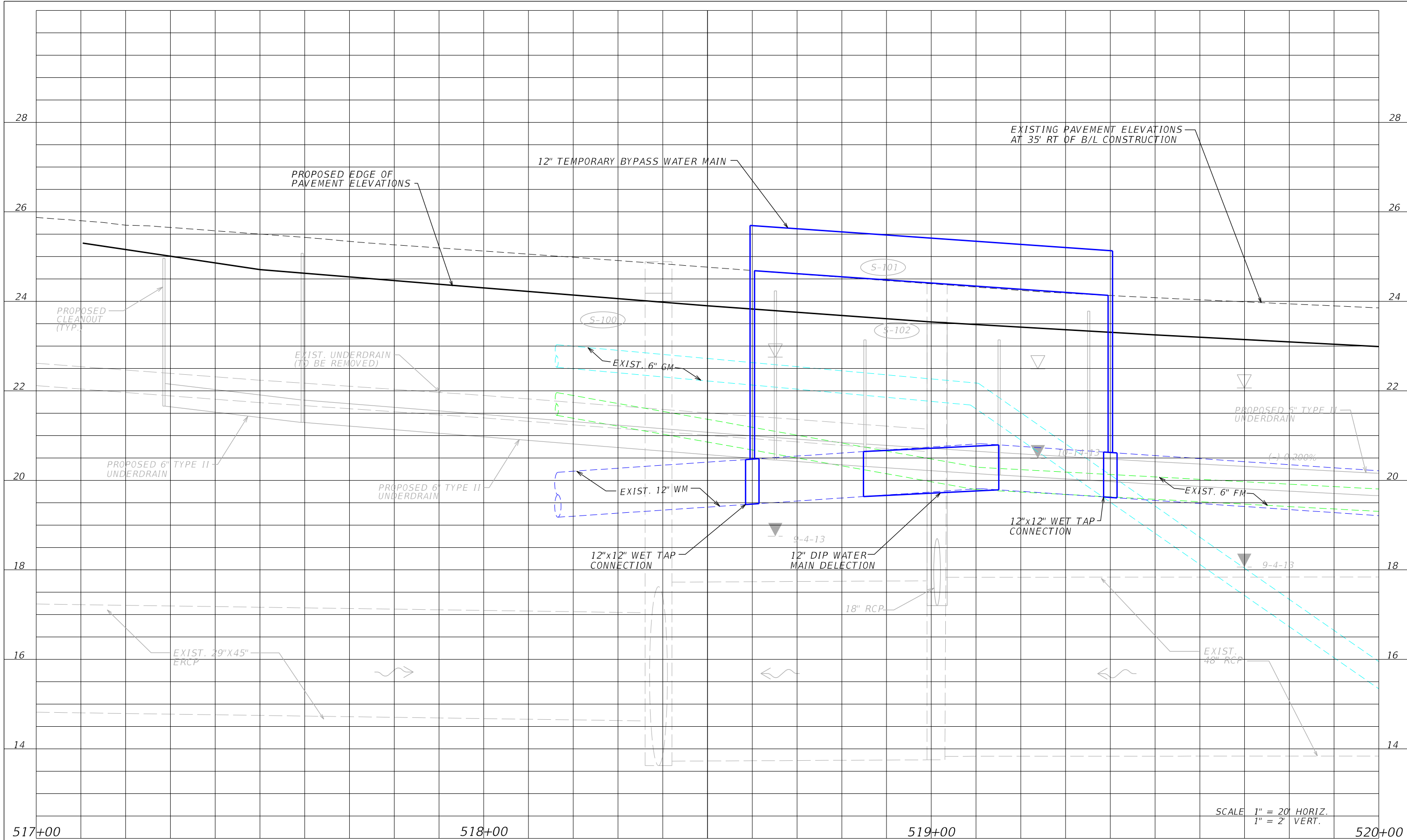
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 FLORIDA

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UTILITY DETAIL SHEET

SHEET NO.  
 U-7

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SCALE 1" = 20' HORIZ.  
1" = 2' VERT.

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 WINTER SPRINGS, FLORIDA 32708



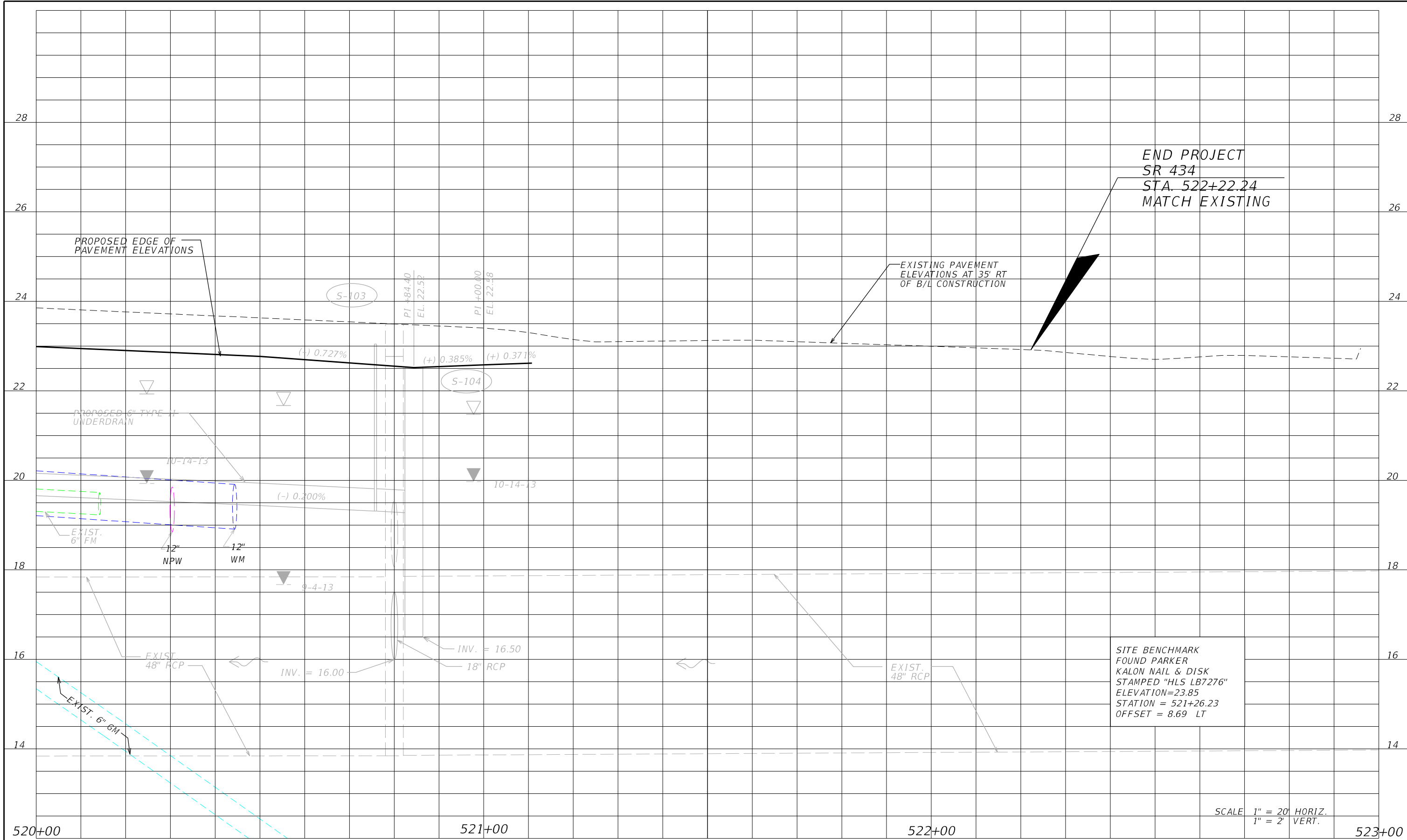
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 FLORIDA

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UTILITY PROFILE SHEET

SHEET NO.  
**U-8**

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 FLORIDA

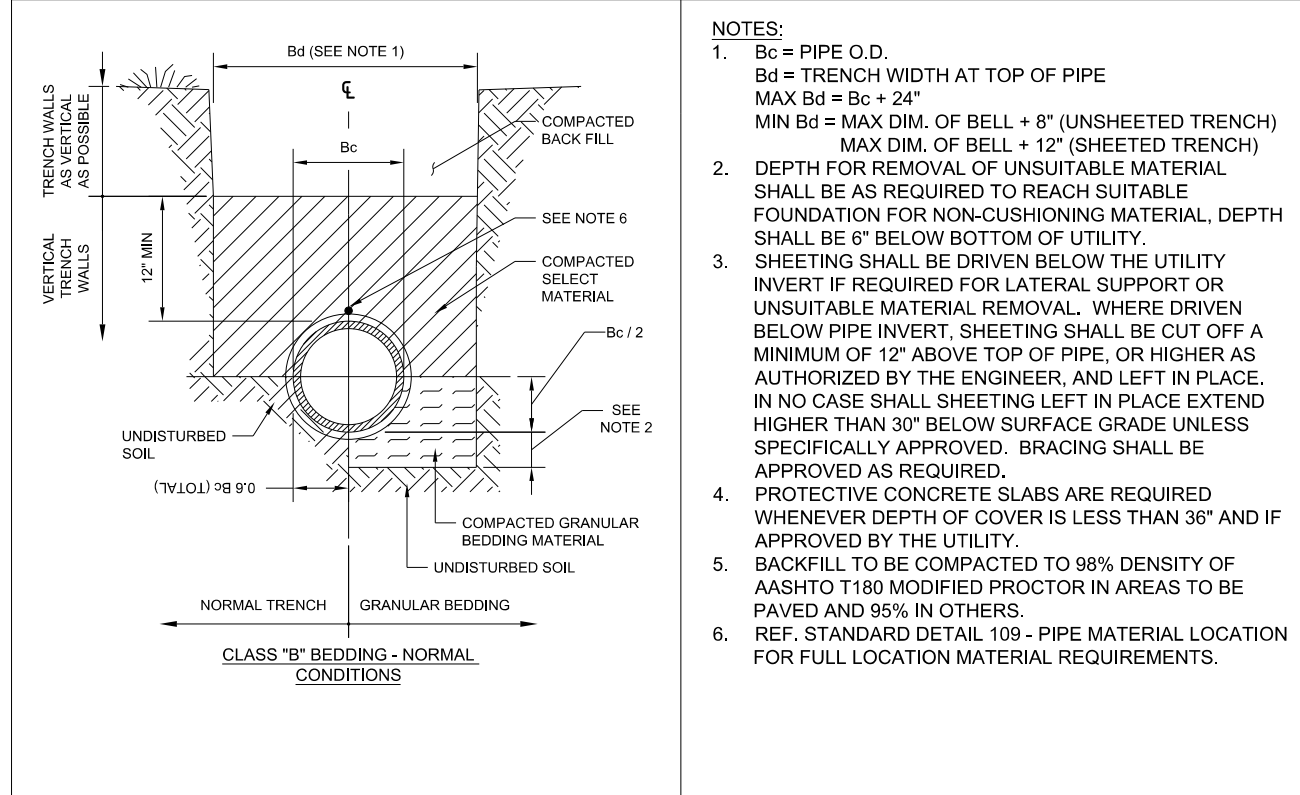
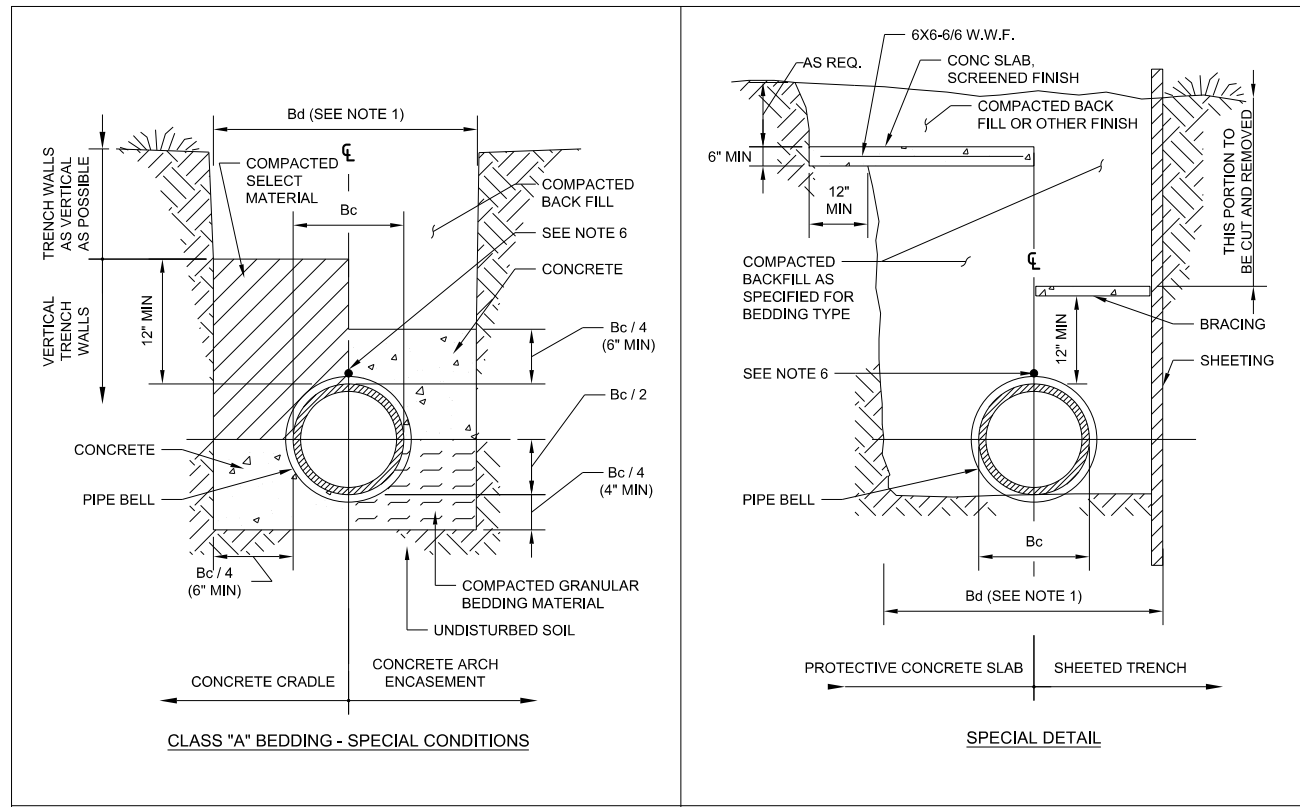
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UTILITY PROFILE SHEET

SHEET NO.  
**U-9**

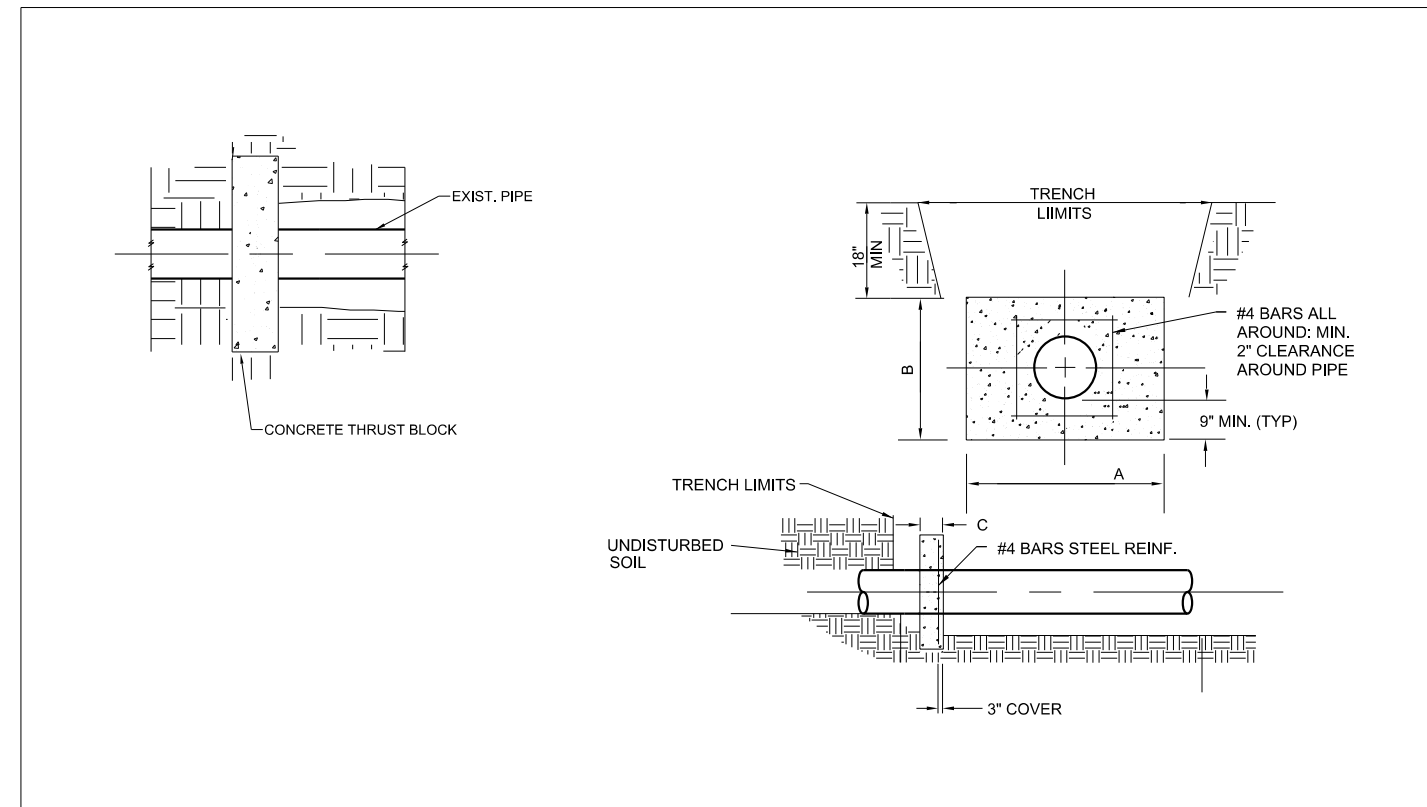
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# 101 - TRENCHING BEDDING



- NOTES:**
1. Bc = PIPE O.D.  
Bd = TRENCH WIDTH AT TOP OF PIPE  
MAX Bd = Bc + 24"  
MIN Bd = MAX DIM. OF BELL + 8" (UNSHEETED TRENCH)  
MAX DIM. OF BELL + 12" (SHEETED TRENCH)
  2. DEPTH FOR REMOVAL OF UNSUITABLE MATERIAL SHALL BE AS REQUIRED TO REACH SUITABLE FOUNDATION FOR NON-CUSHIONING MATERIAL, DEPTH SHALL BE 6" BELOW BOTTOM OF UTILITY.
  3. SHEETING SHALL BE DRIVEN BELOW THE UTILITY INVERT IF REQUIRED FOR LATERAL SUPPORT OR UNSUITABLE MATERIAL REMOVAL. WHERE DRIVEN BELOW PIPE INVERT, SHEETING SHALL BE CUT OFF A MINIMUM OF 12" ABOVE TOP OF PIPE, OR HIGHER AS AUTHORIZED BY THE ENGINEER, AND LEFT IN PLACE. IN NO CASE SHALL SHEETING LEFT IN PLACE EXTEND HIGHER THAN 30" BELOW SURFACE GRADE UNLESS SPECIFICALLY APPROVED. BRACING SHALL BE APPROVED AS REQUIRED.
  4. PROTECTIVE CONCRETE SLABS ARE REQUIRED WHENEVER DEPTH OF COVER IS LESS THAN 36" AND IF APPROVED BY THE UTILITY.
  5. BACKFILL TO BE COMPACTED TO 98% DENSITY OF AASHTO T180 MODIFIED PROCTOR IN AREAS TO BE PAVED AND 95% IN OTHERS.
  6. REF. STANDARD DETAIL 109 - PIPE MATERIAL LOCATION FOR FULL LOCATION MATERIAL REQUIREMENTS.

# THRUST BLOCK



| SCHEDULE OF DIMENSIONS AND MATERIALS  |            |    |    |
|---|------------|----|----|
| PIPE SIZE (INCHES)  | DIMENSIONS |    |    |
|   | A          | B  | C  |
| 12  | 36         | 36 | 12 |
|   |            |    |    |
|   |            |    |    |
|   |            |    |    |
| NOTE: THRUST BLOCK AREAS COMPUTED ON BASIS OF 2,000 LBS. PER SQ. FT. SOIL RESISTANCE BEARING. |            |    |    |

- NOTES:**
1. ADDITIONAL REINFORCEMENT SHALL BE AS SPECIFIED BY THE ENGINEER, AND APPROVED BY THE CITY.
  2. MINIMUM COMPRESSIVE STRENGTH FOR CONCRETE SHALL BE 2500 PSI.
  3. BEDDING, BACKFILL, AND COMPACTION SHALL BE AS SPECIFIED ELSEWHERE IN THE STANDARD DRAWINGS AND SPECIFICATIONS.
  4. ALL FORM BOARDS SHALL BE REMOVED PRIOR TO BACKFILL.
  5. NO ALLOWANCE SHALL BE MADE FOR FRICTION BETWEEN THE PIPE WALL AND THE THRUST COLLAR.
  6. DESIGN PRESSURE: 150 PSI FOR POTABLE & RECLAIM AND 100 PSI FOR FORCE MAINS.
  7. FOR RESTRAINING THE THRUST COLLAR ON PVC & DIP PIPE, USE ACCEPTABLE RESTRAINING DEVICES AS DESIGNATED IN LDC AS WELL AS ALONG WITH OTHER REQUIREMENTS ON THIS DRAWING.

| REVISIONS |    |             |      |    |             |
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 FLORIDA**

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**UTILITY DETAILS**

**SHEET NO.**  
**U-10**

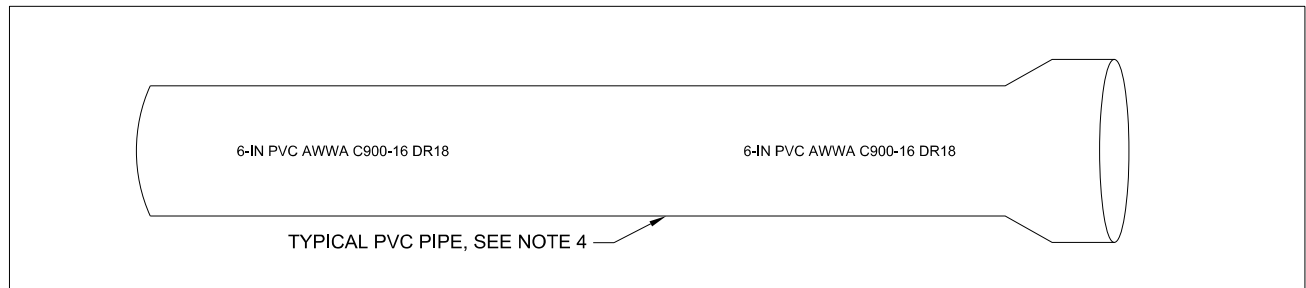
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# 105 - PIPE SEPARATION

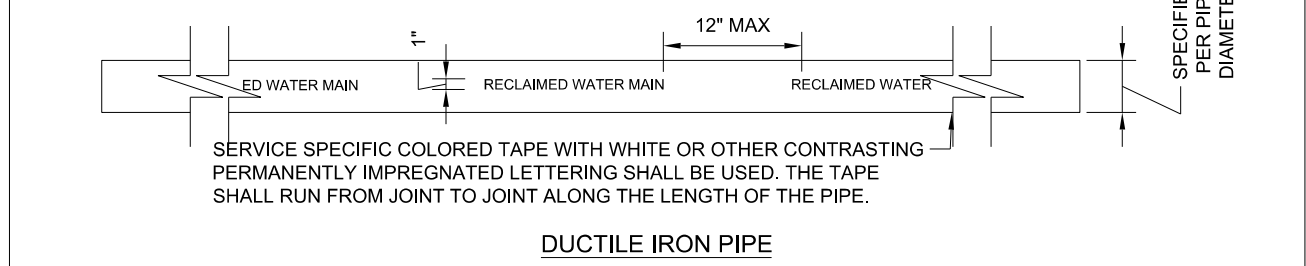
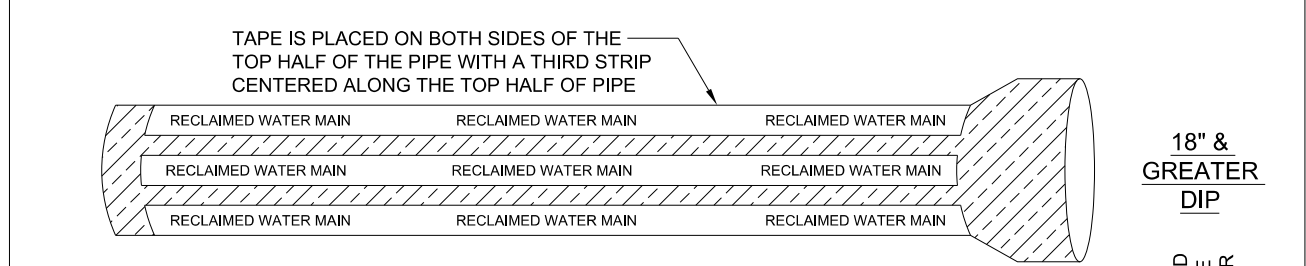
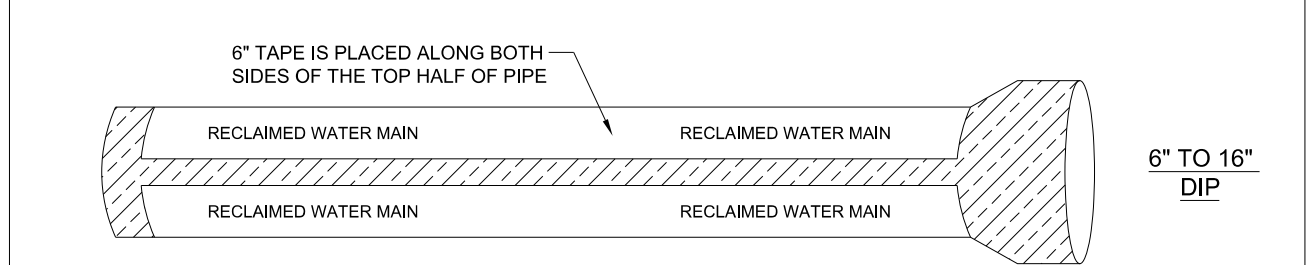
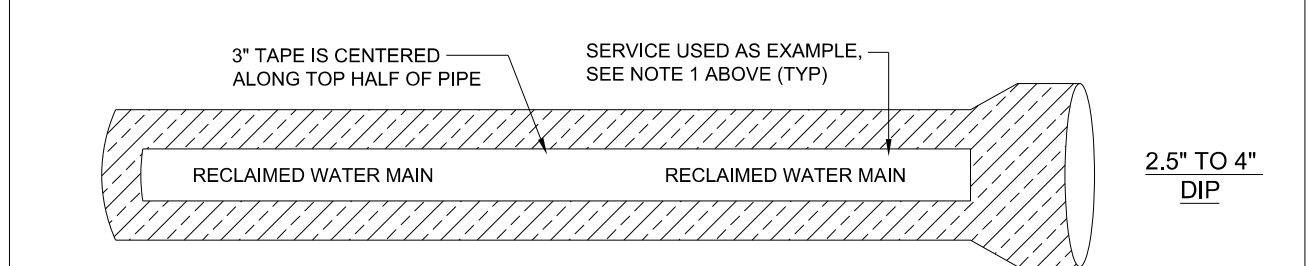
# 108 - PIPE IDENTIFICATION

| OTHER MAIN   | HORIZONTAL SEPARATION | CROSSING <sup>[1]</sup> | JOINT SPACING <sup>[2]</sup> |
|--|-----------------------|-------------------------|------------------------------|
| STORM SEWER,<br>STORMWATER FORCE MAIN,<br>RECLAIMED WATER <sup>[3]</sup>   |                       |                         |                              |
| VACUUM SANITARY SEWER  |                       |                         |                              |
| GRAVITY SANITARY SEWER,<br>PRESSURE SANITARY<br>SEWER, SANITARY SEWER<br>FORCE MAIN, RECLAIMED<br>WATER <sup>[4]</sup> |                       |                         |                              |
| ON-SITE SEWAGE<br>TREATMENT & DISPOSAL<br>SYSTEM   | 10' MIN.              | --                      | --                           |



- NOTES:**
- PIPE MARKING SHALL CONFORM TO THE REQUIREMENTS TO AWWA C900.
  - MARKING SHALL BE OF CONTRASTING COLOR AND REMAIN LEGIBLE AFTER NORMAL HANDLING, STORAGE AND INSTALLATION.
  - THE PIPE SHALL BE INSTALLED SUCH THAT LETTERING IS ORIENTATED AT THE TOP OF THE PIPE.
  - REF. UTILITY ENGINEERING MANUAL, FOR PVC PIPE COLORS.

## PVC PIPE



- NOTES:**
- WATER MAIN SHOULD CROSS ABOVE ANY OTHER PIPE. WHEN WATER MAIN MUST BE BELOW ANOTHER PIPE, THE MINIMUM SEPARATION BETWEEN OUTSIDE OF WATER MAIN AND OUTSIDE OF OTHER PIPE IS 12".
  - AT ALL UTILITY CROSSINGS ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE. SEE ALTERNATIVE ARRANGEMENTS.
  - RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610 F.A.C.
  - RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610 F.A.C.
  - FOR STORM SEWER: 12" PREFERRED, 6" MIN
  - FOR GRAVITY SANITARY SEWER WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST 6" ABOVE THE TOP OF THE GRAVITY SANITARY SEWER MAIN HORIZONTAL SEPARATION SHALL BE 3' MIN.
  - FOR GRAVITY SANITARY SEWER: 12" PREFERRED, 6" MIN.
  - NO WATER PIPE SHALL PASS THROUGH OR BE CONSTRUCTED TOUCHING ANY PART OF A SANITARY OR STORM WATER MANHOLE OR STRUCTURE.
  - PROP. OR RELOCATED FIRE HYDRANTS WITH UNDERGROUND DRAINS MUST BE AT LEAST 10 FEET FROM ANY EXISTING OR PROP. "ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM" AS DEFINED IN SECTION 381.0065 (2), F.S., AND RULE 64E-6.002, F.A.C.
  - WHERE IT IS NOT POSSIBLE TO MEET THE SEPARATION REQUIREMENTS, THE FOLLOWING ALTERNATIVE CONSTRUCTION VARIANCES ARE ACCEPTABLE ONLY WITH THE EXPRESSED WRITTEN CONSENT OF THE UTILITIES ENGINEERING DIVISION:
    - WHERE A WATER MAIN IS BEING LAID LESS THAN THE REQUIRED MINIMUM HORIZONTAL DISTANCE AND/OR WHERE A WATER MAIN CROSSING HAS LESS THAN THE MINIMUM REQUIRED DISTANCE BETWEEN JOINTS:
      - USE OF PRESSURE RATED PIPE CONFORMING TO AWWA STANDARDS, FOR A GRAVITY OR VACUUM TYPE PIPE LINE.
      - USE OF WELDED, FUSED OR OTHERWISE RESTRAINED JOINTS FOR EITHER PIPE.
      - USE OF WATERTIGHT CASING PIPE OR CONCRETE ENCASMENT AT LEAST 6" PREFERRED, 4" MIN. THICK FOR EITHER PIPE. REFERENCE DETAIL 107.
    - WHERE A WATER MAIN IS BEING LAID LESS THAN 3 FEET HORIZONTALLY FROM ANOTHER PIPE LINE AND/OR WHERE A WATER MAIN IS BEING LAID WITH LESS THAN THE REQUIRED MINIMUM VERTICAL SEPARATION:
      - USE OF PIPE OR CASING PIPE, HAVING HIGH IMPACT STRENGTH (AT LEAST EQUAL TO 0.25" THICK D.I.P.), OR CONCRETE ENCASMENT AT 6" PREFERRED, 4" MIN. THICK FOR THE WATER MAIN AND THE OTHER PIPE LINE IF THE OTHER PIPE LINE CONVEYS WASTEWATER OR RECLAIMED WATER. REFERENCE DETAIL 107.
  - FOR PIPE CROSSING CONFLICTS REFERENCE DETAIL 106. CONFLICTS SHALL NOT BE RESOLVED BY DEFLECTING PIPE JOINTS.
  - THIS DETAIL IS PROVIDED FOR CONVENIENCE. REFERENCE FAC 62-555.314 FOR FULL REQUIREMENTS.

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 FLORIDA

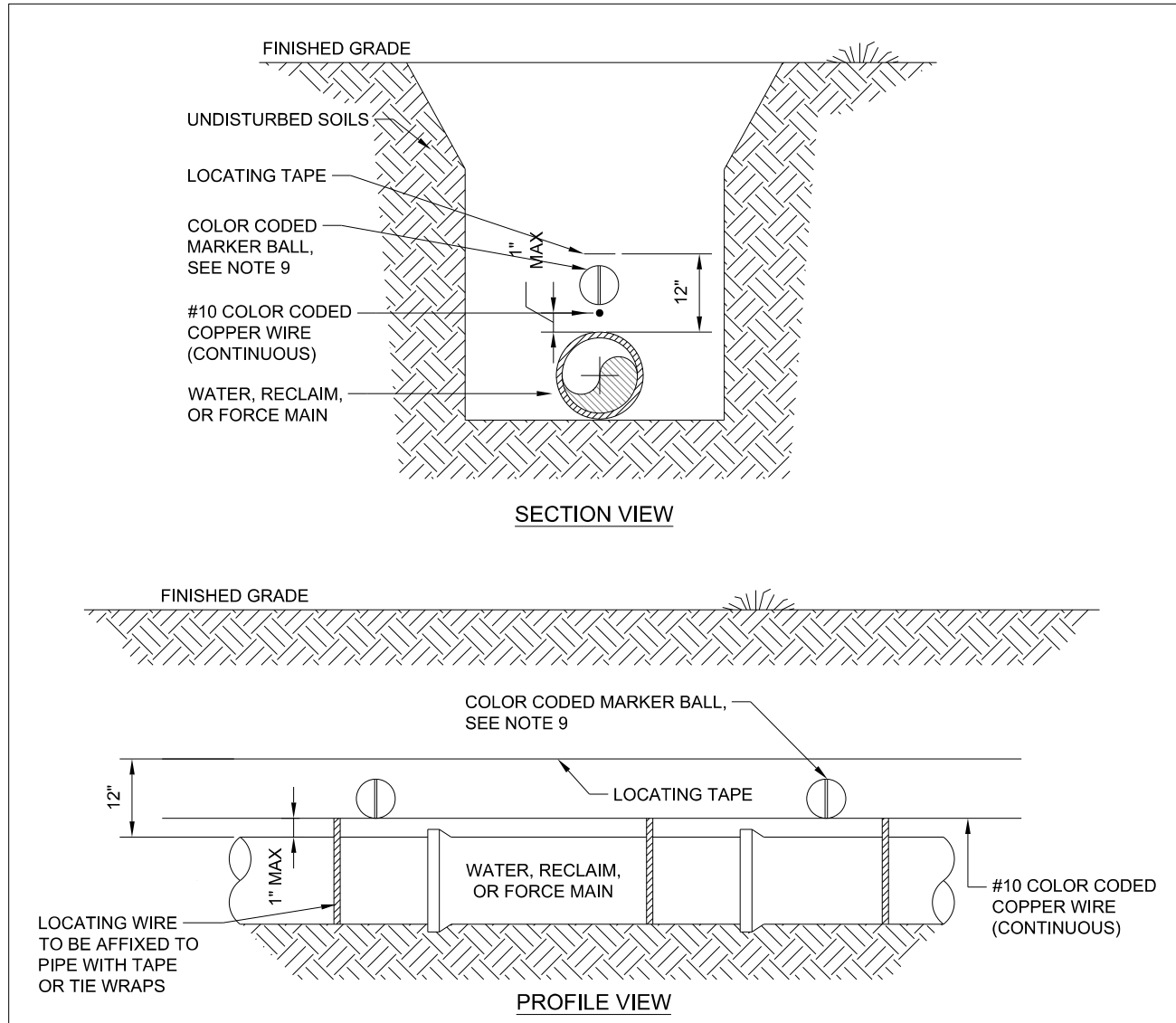
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UTILITY DETAILS

SHEET NO.  
**U-11**

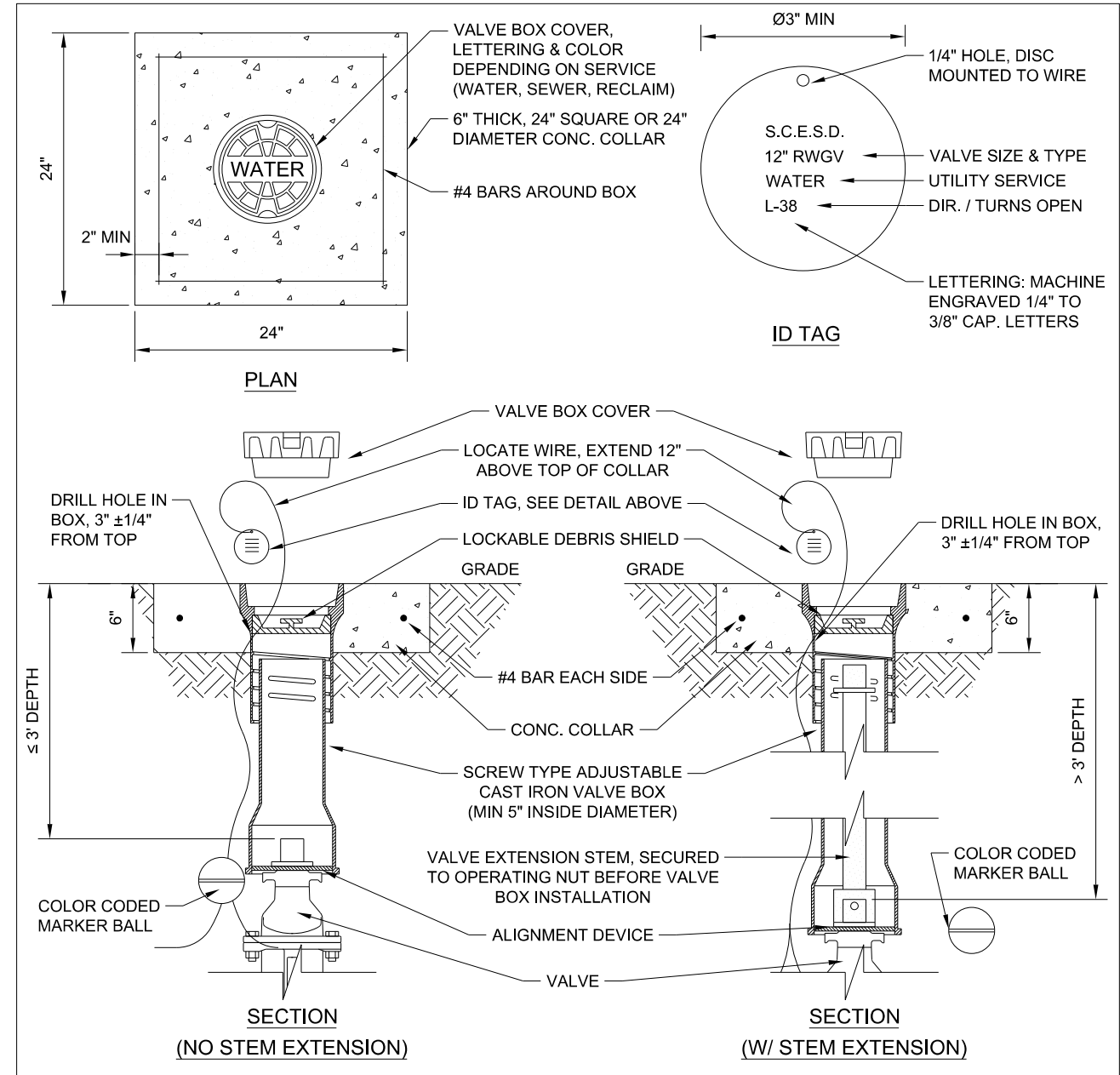
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# 109 - PIPE MATERIAL LOCATION



- NOTES:**
1. REF. UTILITY ENGINEERING MANUAL, FOR REQUIRED COLORS AND TEXT FOR ALL LOCATE MATERIALS.
  2. LOCATING WIRE SHALL BE CONTINUOUS, COLOR CODED, INSULATED, 10 GAUGE SOLID CORE COPPER, AND SUITABLE FOR DETECTION WITH LOCATION EQUIPMENT.
  3. LOCATING WIRE SHALL BE BURIED DIRECTLY ABOVE THE CENTERLINE OF THE PIPE, AFFIXED TO THE PIPE WITH TAPE OR TIE WRAPS.
  4. LOCATING WIRE SHALL TERMINATE PER DETAILS 111 AND/OR 110.
  5. LOCATING WIRE IS NOT REQUIRED FOR GRAVITY SEWER
  6. LOCATE TAPE SHALL BE MINIMUM WIDTH OF 4" FOR PIPES UP TO 12" IN DIAMETER, 6" FOR PIPES 14" AND GREATER, PLASTIC AND METALIZED FOIL, COLOR CODED WITH TEXT APPROPRIATE FOR SERVICE, AND SUITABLE FOR DETECTION WITH LOCATION EQUIPMENT.
  7. LOCATING TAPE SHALL BE BURIED 12 INCHES DIRECTLY ABOVE THE CENTERLINE OF THE PIPE, WITH PRINTED SIDE UP FOR VISUAL IDENTIFICATION.
  8. MARKER BALLS SHALL BE 4 INCHES IN DIAMETER, COLOR CODED, AND A PASSIVE DEVICE CAPABLE OF REFLECTING A SPECIFICALLY DESIGNATED REPULSE FREQUENCY TUNED TO THE UTILITY BEING USED.
  9. MARKER BALLS SHALL BE BURIED DIRECTLY ABOVE THE CENTERLINE OF THE PIPE, UNLESS MARKER BALL DEPTH IS GREATER THAN 6' BELOW FINISHED GRADE, IN WHICH CASE THE MARKER BALL SHALL BE SET AT 18" TO 24" BELOW FINISHED GRADE. SPACING SHALL BE EVERY 100 LINEAR FEET AND AT EVERY BEND, TEE, REDUCER AND VALVE. MARKER BALLS SHALL BE INDICATED ON RECORD DRAWINGS AS "E.M.B."

# 112 - VALVE BOX



- NOTES:**
1. VALVE COVER SHALL BE ROUND AND MARKED AND COATED FOR RESPECTIVE UTILITY SERVICE
  2. VALVE COVERS SHALL BE LOCKABLE TYPE WHEN IN PAVED AREAS.
  3. VALVE BOXES SHALL NOT BE LOCATED IN STREET CURBS.
  4. VALVE BOX AND COLLAR TOP SHALL BE SET TO FINISHED GRADE.
  5. ANY VALVE OPERATING NUT DEEPER THAN 3' FROM FINAL GRADE WILL REQUIRE A VALVE NUT EXTENSION, MECHANICALLY FASTENED TO THE VALVE OPERATING NUT, WITH TOP OF EXTENSION SET WITHIN 3' OF FINAL GRADE.
  6. VALVE BOX DEBRIS SHIELD SHALL BE LOCKABLE, COLOR CODED TO SERVICE AND INCLUDE ATTACHED LOCATING COIL.
  7. VALVE BOXES SHALL BE ADJUSTED TO MIDRANGE TO ALLOW FUTURE VALVE ADJUSTMENTS. PVC OR DUCTILE IRON PIPE SHALL NOT BE USED AS VALVE BOX EXTENSION.
  8. VALVE BOX ALIGNMENT DEVICE SHALL BE INSTALLED BELOW OPERATING NUT.
  9. LOCATE WIRES SHALL BE CONTINUOUS WITH NO SPLICES, EXTEND A MINIMUM OF 12" ABOVE TOP OF COLLAR, AND BE COLOR CODED TO MATCH THE RESPECTIVE UTILITY SERVICE.

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 FLORIDA

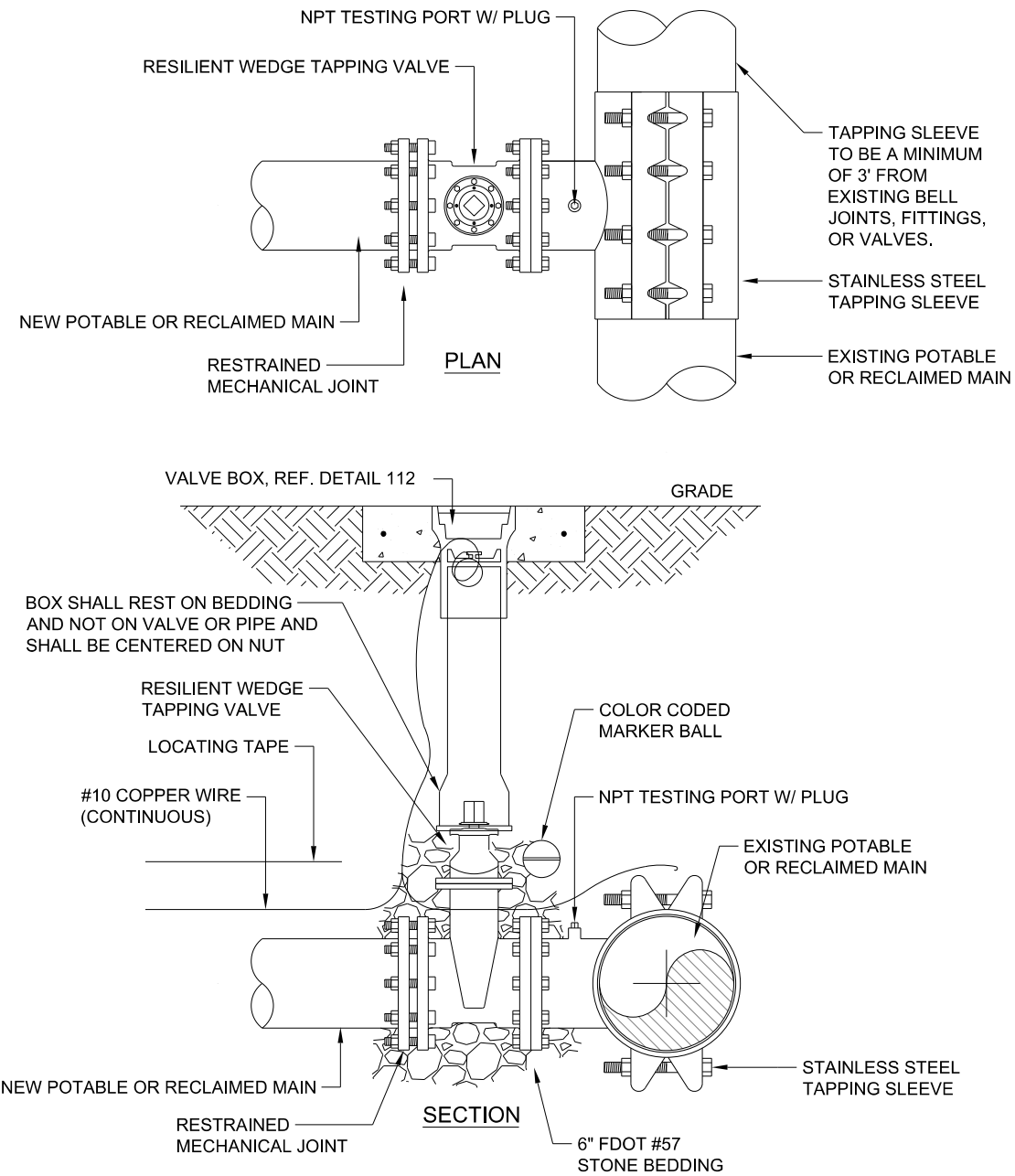
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UTILITY DETAILS

SHEET NO.  
**U-12**

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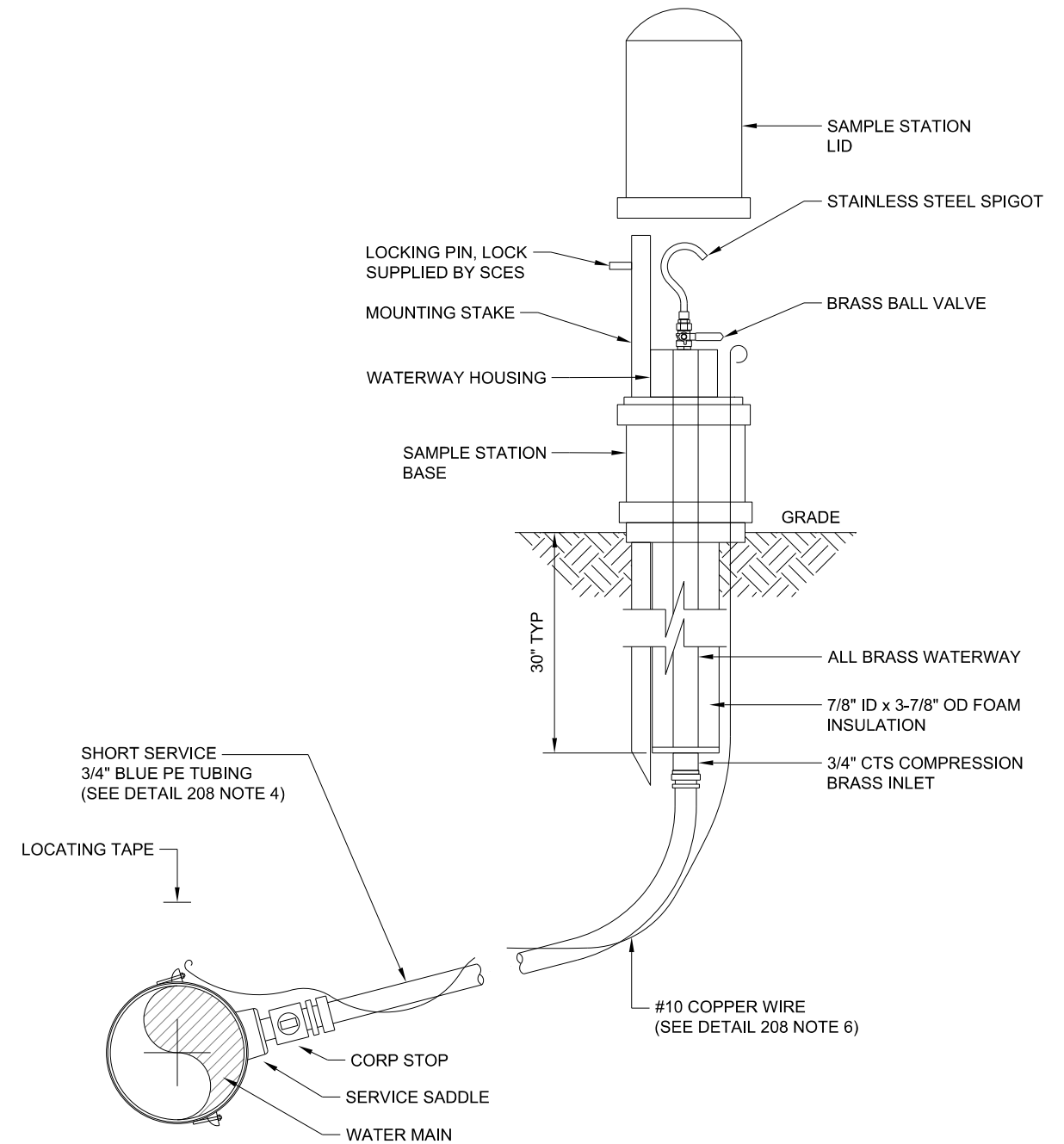
# 204 - STANDARD WET TAP



**NOTES:**

1. THIS DETAIL IS INCOMPLETE WITHOUT ACCOMPANYING DETAIL AND .
2. TAPPING SLEEVE AND VALVE SHALL BE INSTALLED AND TESTED UNDER WITNESS OF A REPRESENTATIVE FROM THE CITY.
3. TAPPING SLEEVE SHALL BE INSTALLED TO EXISTING MAIN PER MANUFACTURES INSTRUCTIONS, ALL HARDWARE TO BE TORQUED TO MANUFACTURES SPECIFICATIONS.
4. TAPPING SLEEVE AND VALVE SHALL BE PRESSURE TESTED IN ACCORDANCE TO THE UTILITY ENGINEERING MANUAL (150 PSI FOR 15 MINUTES FOR POTABLE AND RECLAIM WATER MAINS) PRIOR TO TAPPING EXISTING MAIN.
5. VALVE EXTENSION STEM REQUIRED IF TOP OF VALVE OPERATING NUT IS GREATER THAN 3' FROM FINISHED GRADE.
6. REF. STANDARD DETAIL FOR FULL MATERIAL LOCATION REQUIREMENTS.

# 221 - SAMPLE POINT STATION



**NOTES:**

1. SAMPLE POINT STATIONS SHALL BE LOCATED AT ALL INTERCONNECTS.
2. REFERENCE DETAIL FOR SERVICE MATERIALS.

**REVISIONS**

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**UTILITY DETAILS**

SHEET NO.  
**U-13**

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# RESTRAINED JOINT TABLE

| MINIMUM LENGTH OF RESTRAINED PIPE<br>TO BE INSTALLED ON EACH SIDE OF FITTING |                           |
|--|---------------------------|
| FITTINGS   | PIPE DIAMETER<br>(INCHES) |
|  |                           |
| 90° BEND   | 58                        |
| 45° BEND   | 20                        |
| 22 ½° BEND   | 12                        |
| 11 ½° BEND   | 6                         |
| PLUG OR BRANCH OF TEE  | 84                        |
| DEAD ENDS  | 105                       |

**NOTES:**

1. INSTALL FULL LENGTH JOINTS WITH TOTAL NUMBER OF JOINTS EQUAL TO OR GREATER THAN SHOWN IN THE TABLE AND FOR THE TOTAL EQUIVALENT LENGTH REQUIRED.
2. WHERE TWO OR MORE FITTINGS ARE TOGETHER USE FITTINGS WHICH YIELD THE GREATEST NUMBER OF RESTRAINED JOINTS.
3. CONTRACTOR SHALL SUBMIT FOR REVIEW AND COMMENT, DRAWINGS FOR RESTRAINED JOINT SYSTEM. ENGINEER APPROVED SHOP DRAWINGS TO BE SUBMITTED TO THE CITY.
4. RESTRAINING WATER MAIN SCHEDULE WAS COMPLETED BY THE ENGINEER BASED ON ALL DESIGN CONSIDERATIONS INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

TYPE OF PIPE: Ductile Iron  
 WORKING PRESSURE: 150 PSI  
 SOIL DESIGNATION: SP  
 DEPTH OF COVER: 3 Feet  
 LAYING CONDITION: Type 3 Trench  
 FACTOR OF SAFETY: 2.5:1

5. FOR HDPE, PVC OR PIPE ENCASED IN POLYETHYLENE, INCREASE THE GIVEN VALUE BY A FACTOR OF 1.25.
6. IF THE CONTRACTOR CHOOSES TO USE THRUST BLOCKS IN LIEU OF RESTRAINED JOINTS, THE CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL THE THRUST BLOCK DESIGN SHOP DRAWINGS.

RESTRAINED JOINT TABLE

SEM. CO. MAY 2013  
110

REVISIONS

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

**ENGINEER OF RECORD:**  
**BETH K. WHIKEHART, P.E.**  
 PROFESSIONAL ENGINEER CERTIFICATE NO. 66649  
 PEGASUS ENGINEERING, LLC  
 301 WEST STATE ROAD 434, SUITE 309  
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CITY OF WINTER SPRINGS  
FLORIDA

| ROAD   | FINANCIAL PROJECT ID |
|--------|----------------------|
| SR 434 | 432642-1-58-01       |

UTILITY DETAILS

SHEET NO.

U-14