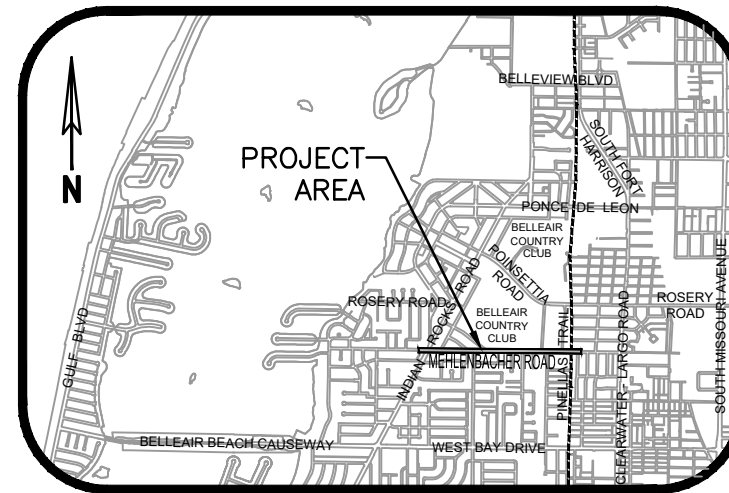


# MEHLENBACHER ROAD SUPPLEMENTARY PLAN SET BELLEAIR, FLORIDA

## INDEX OF DRAWINGS

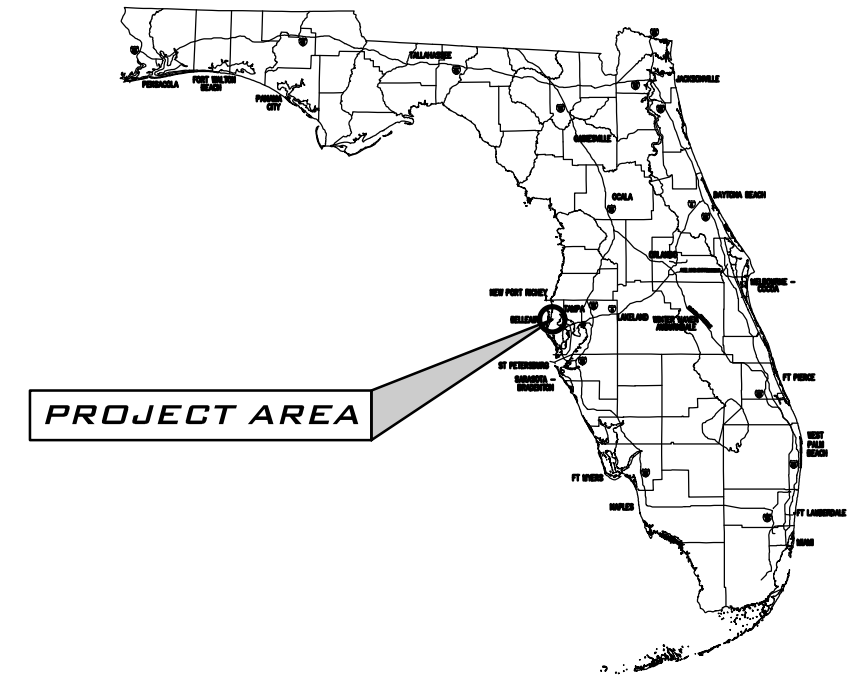
<u>DRAWING TITLE</u>	<u>SHEET NO.</u>
COVER SHEET	1
UTILITY PLAN	2-13
SPECIFICATIONS & DETAILS	14
DETAILS	15

VICINITY MAP



SECTION 28, TOWNSHIP 29 S, RANGE 15 E  
PINELLAS COUNTY, FLORIDA

LOCATION MAP



**PREPARED FOR**  
**TOWN OF BELLEAIR**  
**901 PONCE DE LEON BOULEVARD**  
**BELLEAIR, FLORIDA, 33756**

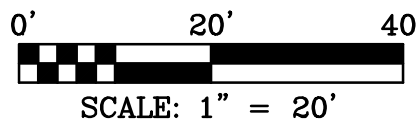


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**90% DESIGN PLANS**

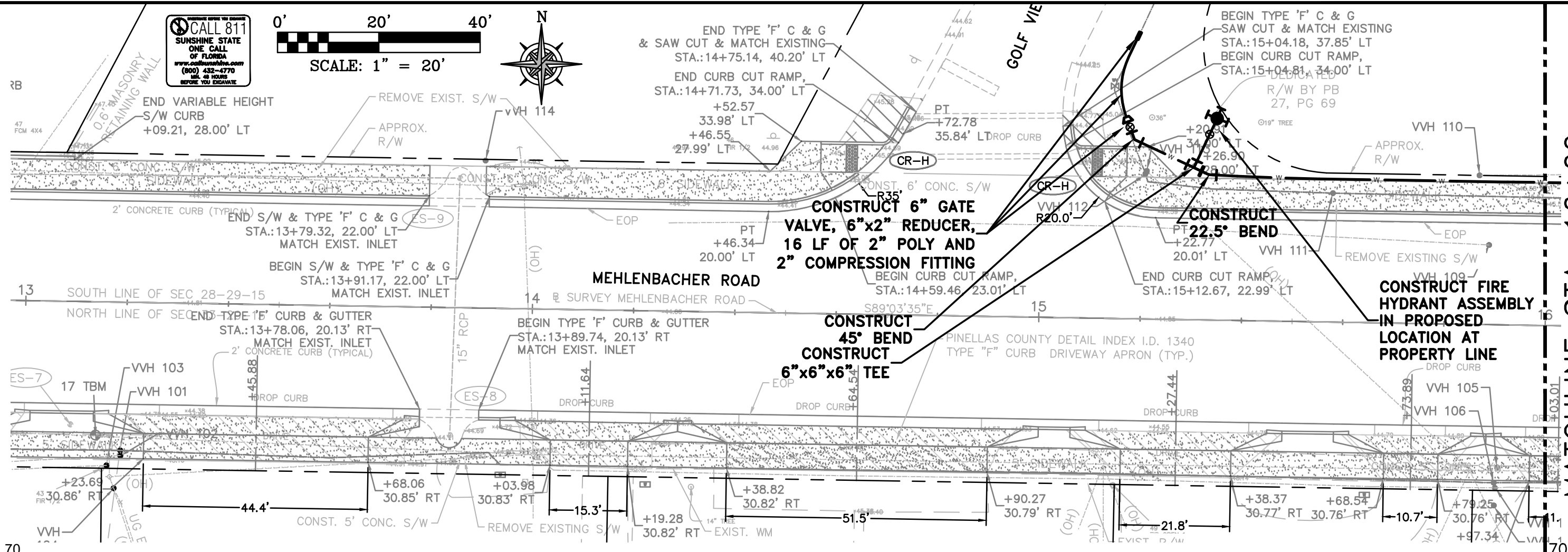
FEBRUARY, 2016  
2015-186E

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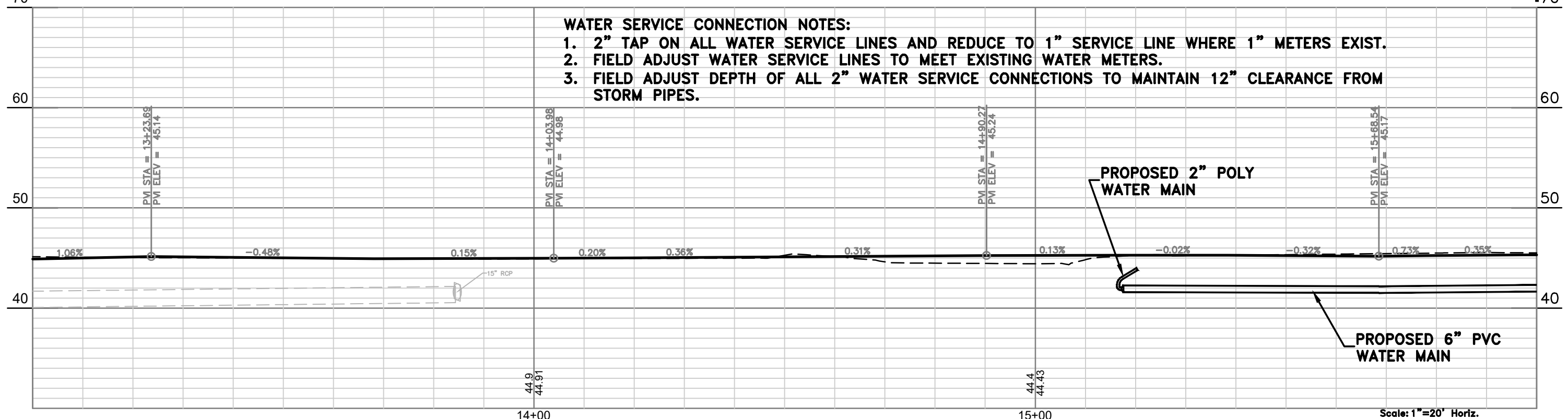
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& SAW CUT & MATCH EXISTING  
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END CURB CUT RAMP,  
STA.: 14+71.73, 34.00' LT  
+52.57  
33.98' LT  
+46.55  
27.99' LT

BEGIN TYPE 'F' C & G  
SAW CUT & MATCH EXISTING  
STA.: 15+04.18, 37.85' LT  
BEGIN CURB CUT RAMP,  
STA.: 15+04.81, 34.00' LT  
DEDICATED  
R/W BY PB  
27, PG 69



**WATER SERVICE CONNECTION NOTES:**

1. 2" TAP ON ALL WATER SERVICE LINES AND REDUCE TO 1" SERVICE LINE WHERE 1" METERS EXIST.
2. FIELD ADJUST WATER SERVICE LINES TO MEET EXISTING WATER METERS.
3. FIELD ADJUST DEPTH OF ALL 2" WATER SERVICE CONNECTIONS TO MAINTAIN 12" CLEARANCE FROM STORM PIPES.



MATCHLINE STA. 16+00

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REV.#	DATE	REVISION

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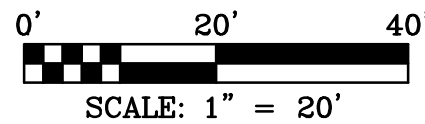
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**MEHLENBACHER ROAD  
SUPPLEMENTARY PLANS  
UTILITY PLAN STA. 13+00 TO 16+00**  
BELLEAIR FLORIDA

I, ALBERT CARRIER, HEREBY CERTIFY AS A LICENSED PROFESSIONAL ENGINEER, REGISTERED IN ACCORDANCE WITH FLORIDA STATUTE 471 (481) THAT THE ABOVE PROJECT'S SITE AND/OR CONSTRUCTION PLANS TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, WILL MEET APPLICABLE DESIGN CRITERIA SPECIFIED BY CITY MUNICIPAL ORDINANCE, STATE AND FEDERAL ESTABLISHED STANDARDS. I UNDERSTAND THAT IT IS MY RESPONSIBILITY AS THE PROJECT'S PROFESSIONAL ENGINEER TO PERFORM A QUALITY ASSURANCE REVIEW OF THESE SUBMITTED PLANS.

ALBERT P. CARRIER, P.E., 53990

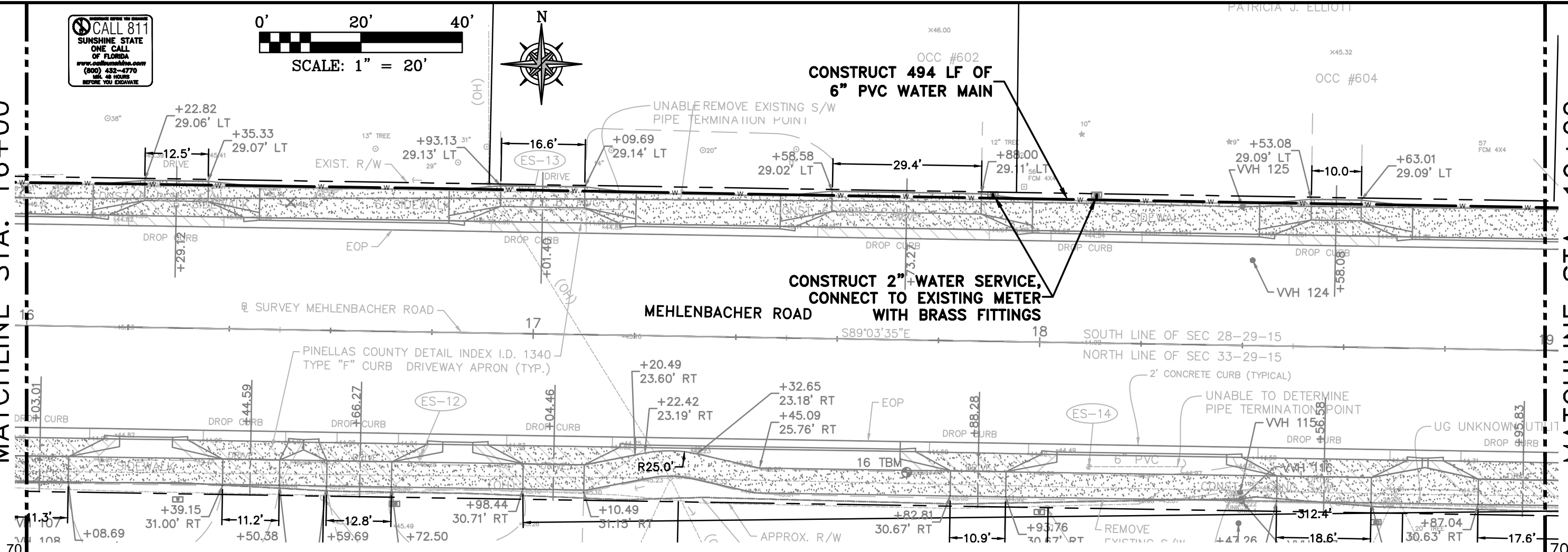
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DATE:	DECEMBER 18, 2015
SCALE:	1" = 20'
SHEET NO.	2 OF 15



PATRICIA J. ELLIOTT

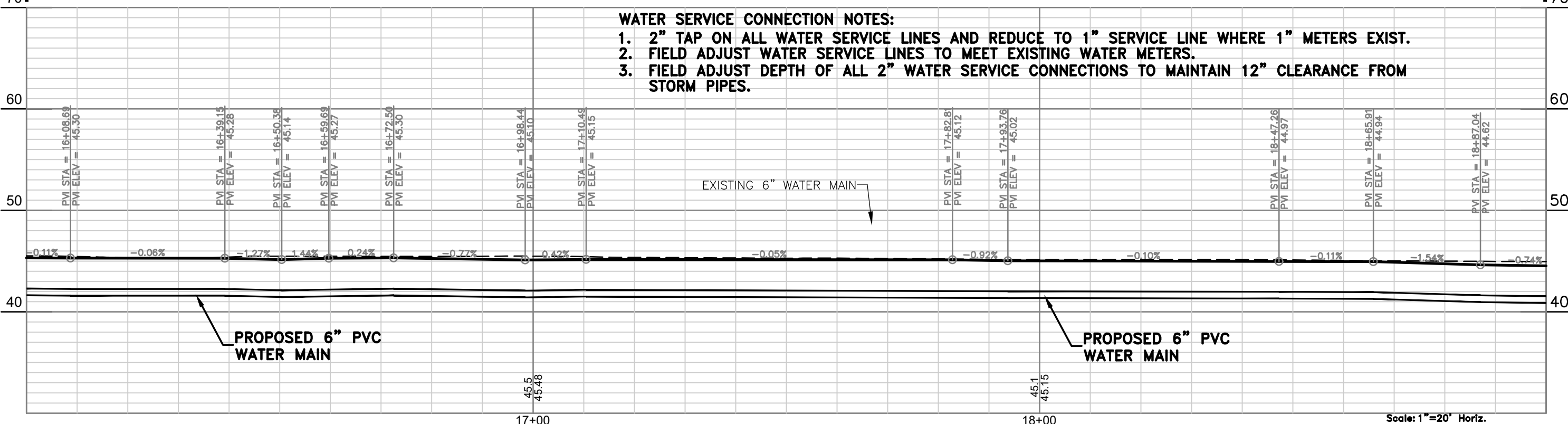
MATCHLINE STA. 16+00

MATCHLINE STA. 19+00



**WATER SERVICE CONNECTION NOTES:**

1. 2" TAP ON ALL WATER SERVICE LINES AND REDUCE TO 1" SERVICE LINE WHERE 1" METERS EXIST.
2. FIELD ADJUST WATER SERVICE LINES TO MEET EXISTING WATER METERS.
3. FIELD ADJUST DEPTH OF ALL 2" WATER SERVICE CONNECTIONS TO MAINTAIN 12" CLEARANCE FROM STORM PIPES.



**PROPOSED 6" PVC WATER MAIN**

**PROPOSED 6" PVC WATER MAIN**

Scale: 1"=20' Horiz.  
1"=10' Vert.

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**MEHLENBACHER ROAD  
SUPPLEMENTARY PLANS  
UTILITY PLAN STA. 16+00 TO 19+00**  
BELLEAIR FLORIDA

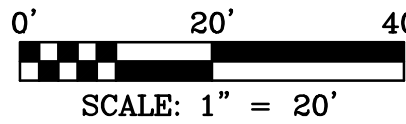
I, ALBERT CARRIER, HEREBY CERTIFY AS A LICENSED PROFESSIONAL ENGINEER, REGISTERED IN ACCORDANCE WITH FLORIDA STATUTE 471 (481) THAT THE ABOVE PROJECT'S SITE AND/OR CONSTRUCTION PLANS, TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, WILL MEET APPLICABLE DESIGN CRITERIA SPECIFIED BY CITY MUNICIPAL ORDINANCE, STATE AND FEDERAL ESTABLISHED STANDARDS. I UNDERSTAND THAT IT IS MY RESPONSIBILITY AS THE PROJECT'S PROFESSIONAL ENGINEER TO PERFORM A QUALITY ASSURANCE REVIEW OF THESE SUBMITTED PLANS.

ALBERT P. CARRIER, P.E., 53990

WORK ORDER NO.	2015-186E
DATE:	DECEMBER 18, 2015
SCALE:	1" = 20'
SHEET NO.	3 OF 15

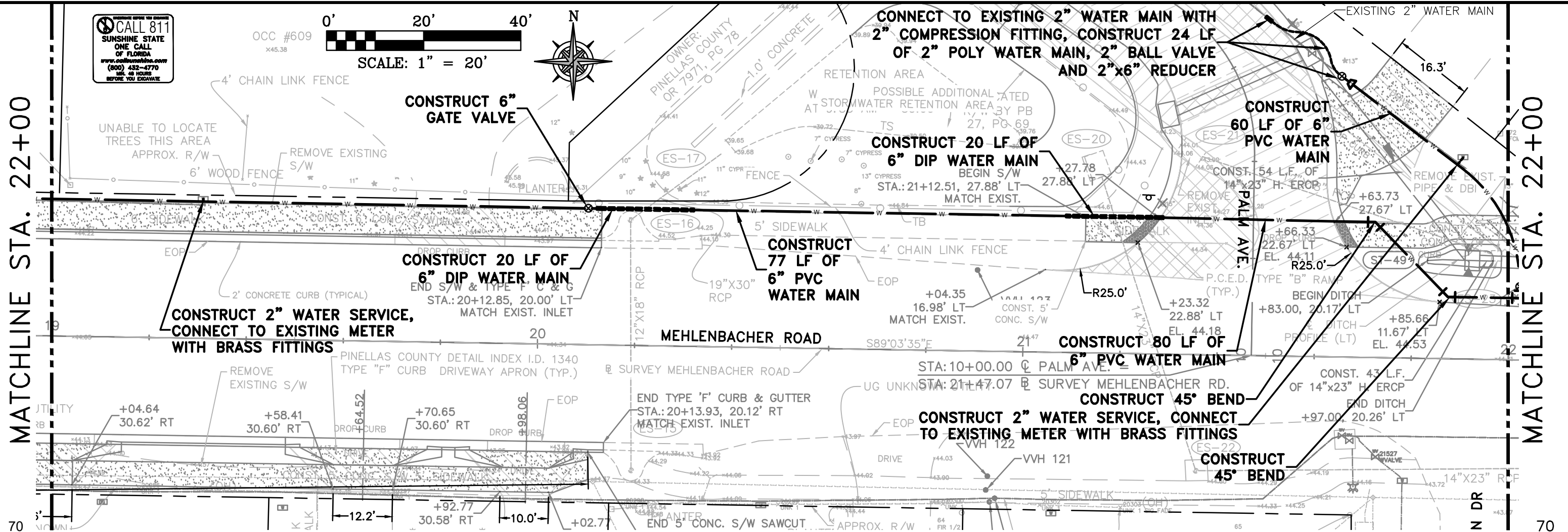
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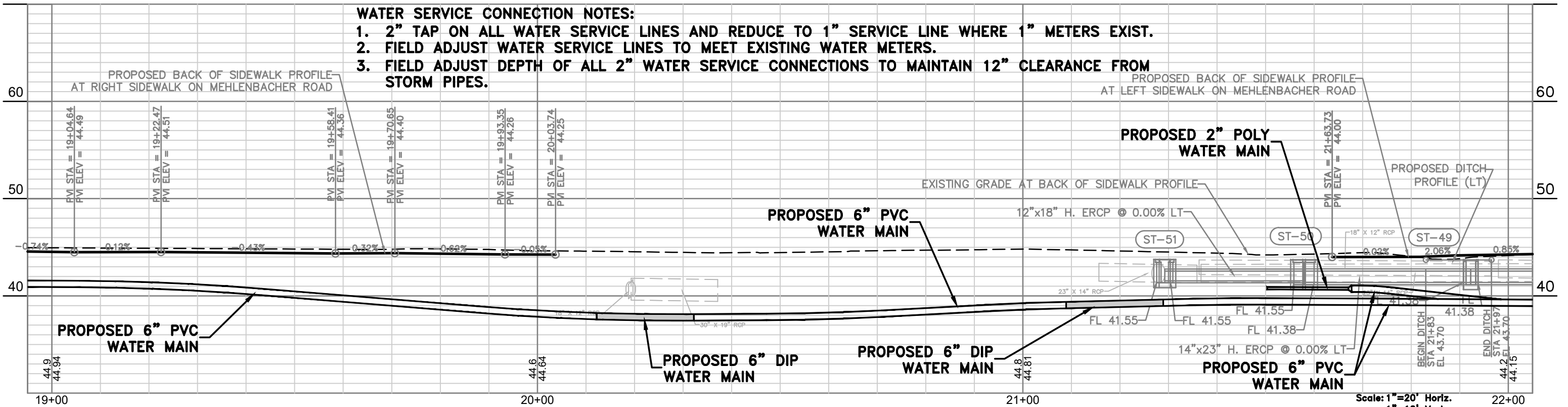
MATCHLINE STA. 22+00

MATCHLINE STA. 22+00



**WATER SERVICE CONNECTION NOTES:**

1. 2" TAP ON ALL WATER SERVICE LINES AND REDUCE TO 1" SERVICE LINE WHERE 1" METERS EXIST.
2. FIELD ADJUST WATER SERVICE LINES TO MEET EXISTING WATER METERS.
3. FIELD ADJUST DEPTH OF ALL 2" WATER SERVICE CONNECTIONS TO MAINTAIN 12" CLEARANCE FROM STORM PIPES.



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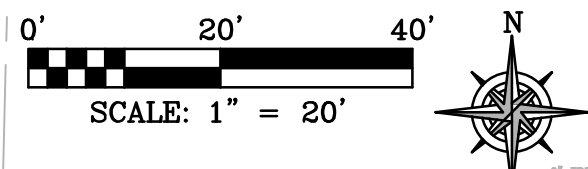
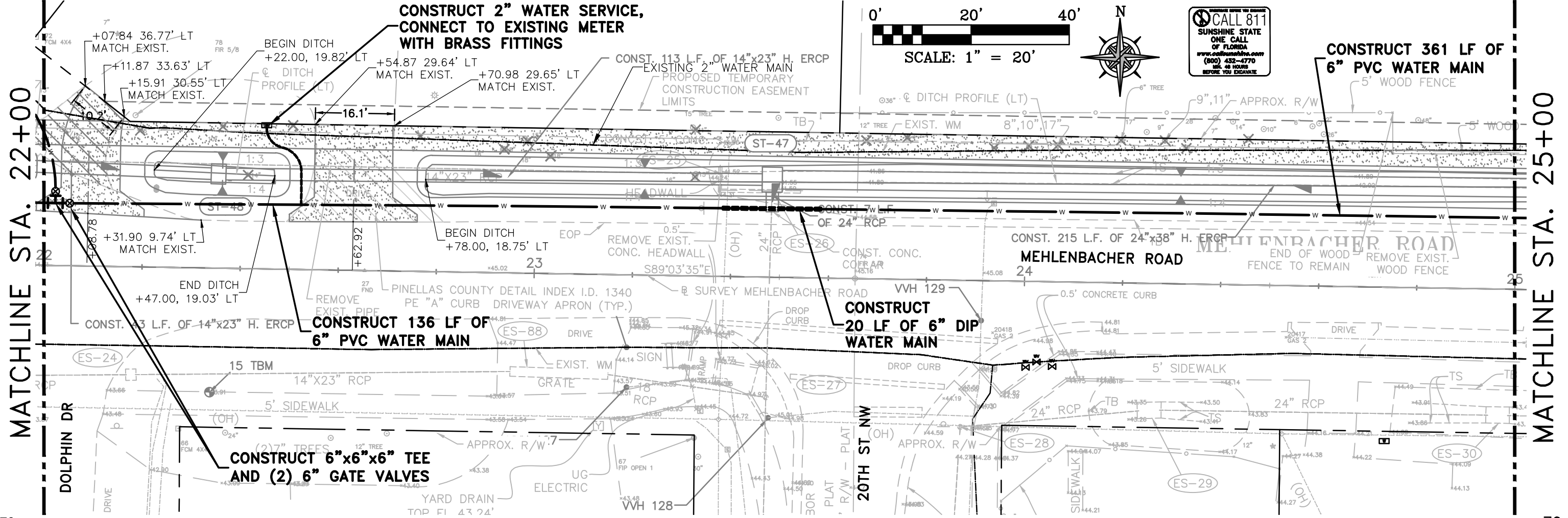
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**MEHLENBACHER ROAD  
 SUPPLEMENTARY PLANS  
 UTILITY PLAN STA. 19+00 TO 22+00**  
 BELLEAIR FLORIDA

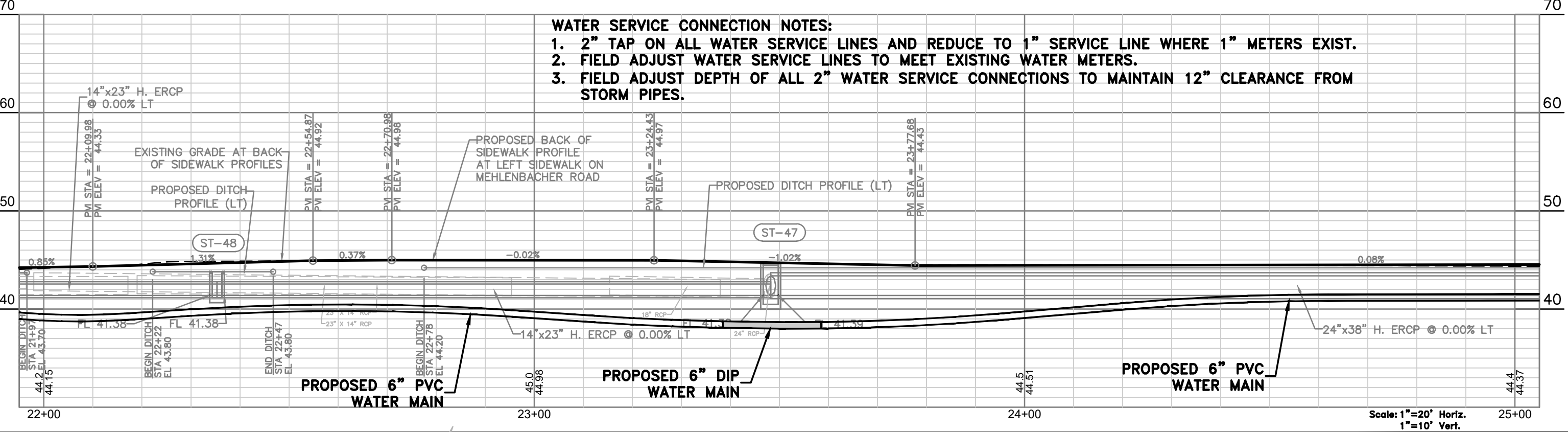
I, ALBERT CARRIER, HEREBY CERTIFY AS A LICENSED PROFESSIONAL ENGINEER, REGISTERED IN ACCORDANCE WITH FLORIDA STATUTE 471 (481) THAT THE ABOVE PROJECT'S SITE AND/OR CONSTRUCTION PLANS TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, WILL MEET APPLICABLE DESIGN CRITERIA SPECIFIED BY CITY MUNICIPAL, ORDINANCE, STATE AND FEDERAL ESTABLISHED STANDARDS. I UNDERSTAND THAT IT IS MY RESPONSIBILITY AS THE PROJECT'S PROFESSIONAL ENGINEER TO PERFORM A QUALITY ASSURANCE REVIEW OF THESE SUBMITTED PLANS.

ALBERT P. CARRIER, P.E., 53990

WORK ORDER NO.	2015-186E
DATE:	DECEMBER 18, 2015
SCALE:	1" = 20'
SHEET NO.	4 OF 15



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**WATER SERVICE CONNECTION NOTES:**

1. 2" TAP ON ALL WATER SERVICE LINES AND REDUCE TO 1" SERVICE LINE WHERE 1" METERS EXIST.
2. FIELD ADJUST WATER SERVICE LINES TO MEET EXISTING WATER METERS.
3. FIELD ADJUST DEPTH OF ALL 2" WATER SERVICE CONNECTIONS TO MAINTAIN 12" CLEARANCE FROM STORM PIPES.

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**MEHLENBACHER ROAD**  
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 UTILITY PLAN STA. 22+00 TO 25+00  
 BELLEAIR FLORIDA

I, ALBERT CARRIER, HEREBY CERTIFY AS A LICENSED PROFESSIONAL ENGINEER, REGISTERED IN ACCORDANCE WITH FLORIDA STATUTE 471 (481) THAT THE ABOVE PROJECT'S SITE AND/OR CONSTRUCTION PLANS, TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, WILL MEET APPLICABLE DESIGN CRITERIA SPECIFIED BY CITY MUNICIPAL ORDINANCE, STATE AND FEDERAL ESTABLISHED STANDARDS. I UNDERSTAND THAT IT IS MY RESPONSIBILITY AS THE PROJECT'S PROFESSIONAL ENGINEER TO PERFORM A QUALITY ASSURANCE REVIEW OF THESE SUBMITTED PLANS.

WORK ORDER NO.	2015-186E
DATE:	DECEMBER 18, 2015
SCALE:	1" = 20'
SHEET NO.	5 OF 15

MATCHLINE STA. 25+00

MATCHLINE STA. 28+00

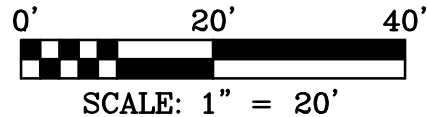
REMOVE EXISTING FIRE HYDRANT (BEHIND BACK OF SIDEWALK) AND CONSTRUCT FIRE HYDRANT ASSEMBLY IN PROPOSED LOCATION AT PROPERTY LINE

RESTRAIN EXISTING 6" WATER MAIN, CONSTRUCT 6" LINE STOP, CONNECT TO EXISTING 6" PVC WATER MAIN, CONSTRUCT 6" GATE VALVE

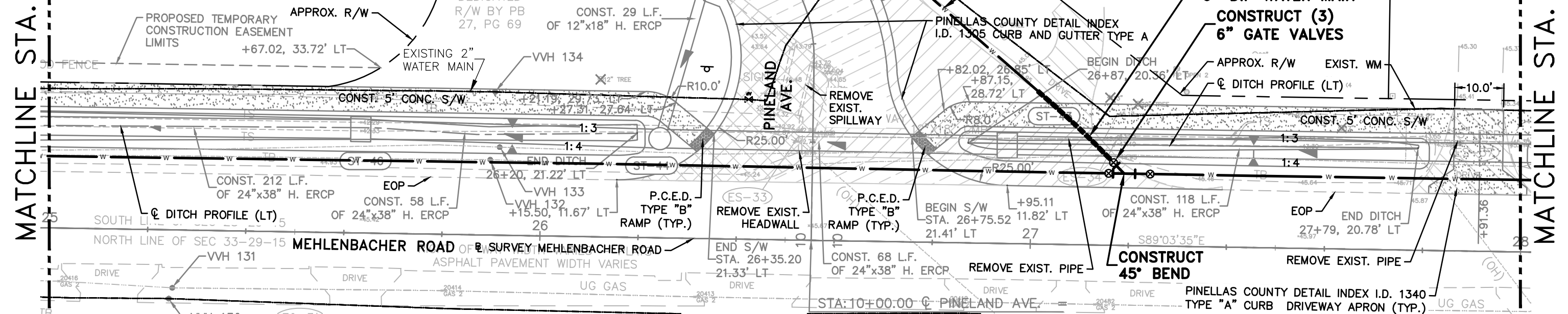
CONSTRUCT 6"x6"x6" TEE  
RELOCATE EXISTING WATER METER, CONSTRUCT 2" WATER SERVICE, CONNECT TO EXISTING METER WITH BRASS FITTINGS

CONSTRUCT 80 LF OF 6" PVC WATER MAIN

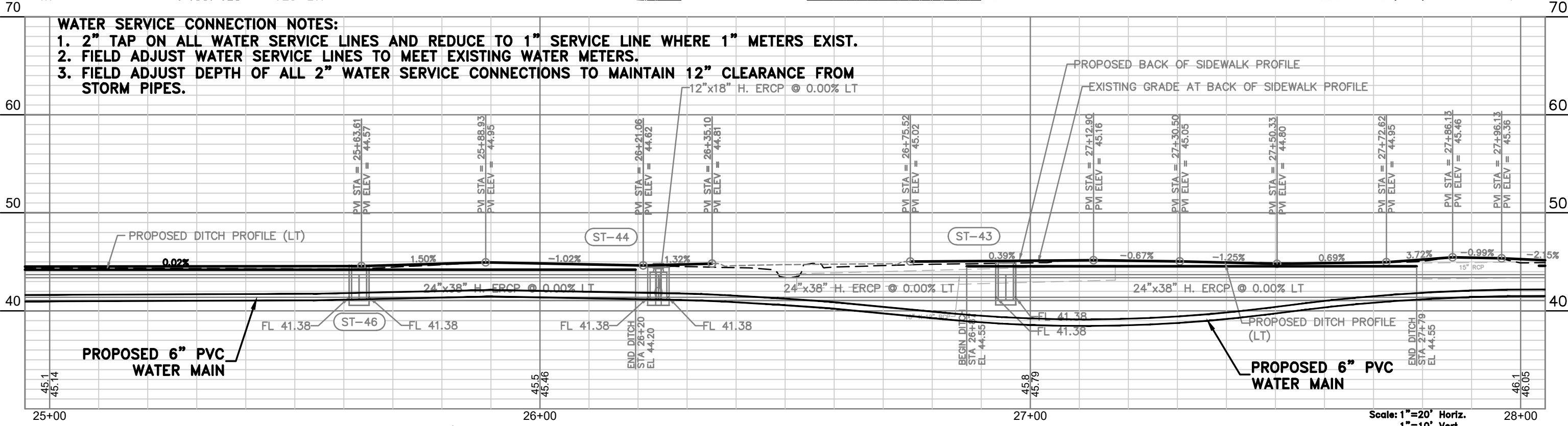
CONSTRUCT 20 LF OF 6" DIP WATER MAIN  
CONSTRUCT (3) 6" GATE VALVES



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JAMES STARCHE  
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  2. FIELD ADJUST WATER SERVICE LINES TO MEET EXISTING WATER METERS.
  3. FIELD ADJUST DEPTH OF ALL 2" WATER SERVICE CONNECTIONS TO MAINTAIN 12" CLEARANCE FROM STORM PIPES.



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UTILITY PLAN STA. 25+00 TO 28+00**

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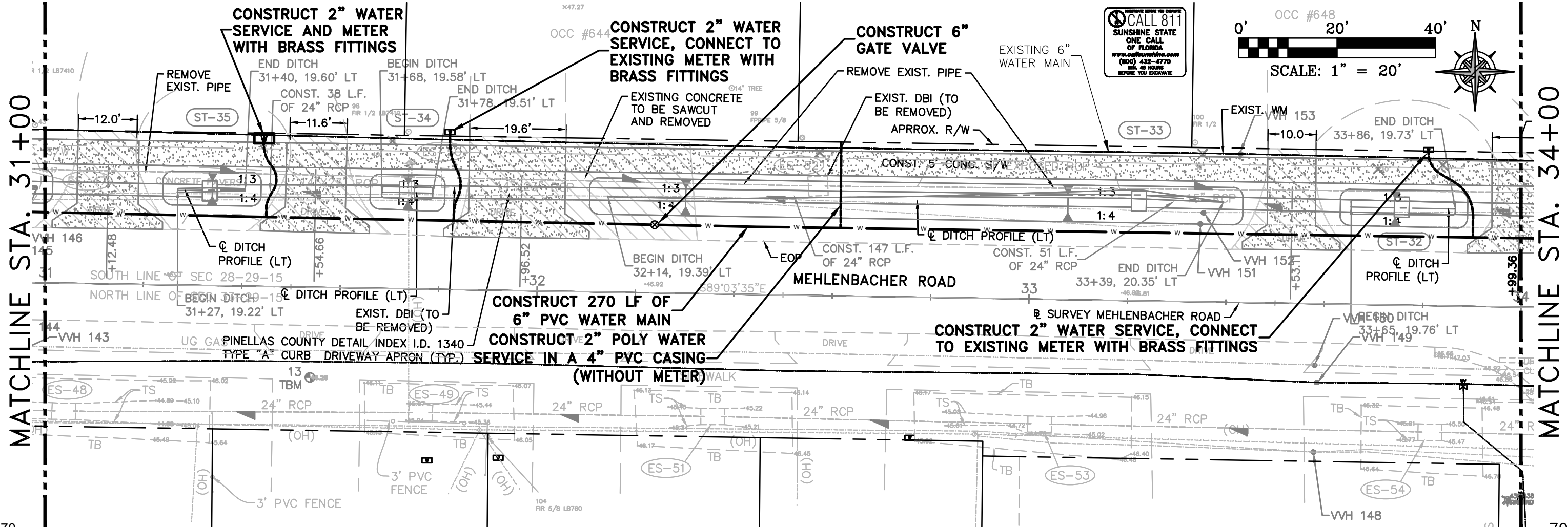
ALBERT P. CARRIER, P.E., 53990

WORK ORDER NO.	2015-186E
DATE:	DECEMBER 18, 2015
SCALE:	1" = 20'
SHEET NO.	6 OF 15

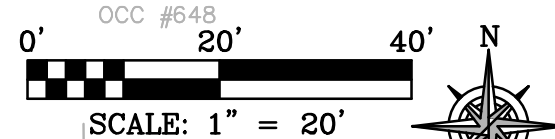


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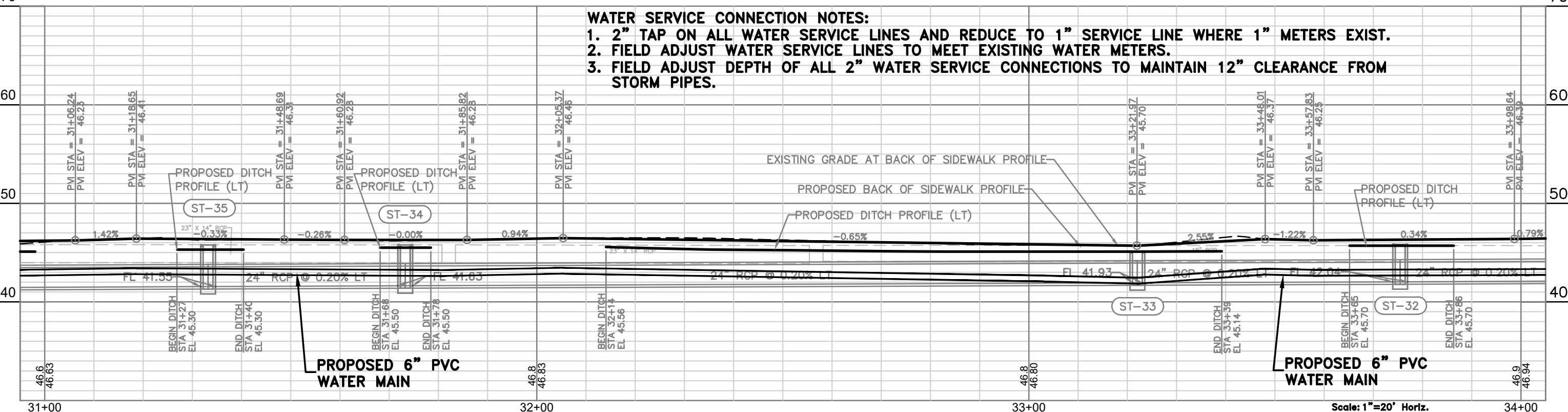
MATCHLINE STA. 34+00



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  - FIELD ADJUST WATER SERVICE LINES TO MEET EXISTING WATER METERS.
  - FIELD ADJUST DEPTH OF ALL 2" WATER SERVICE CONNECTIONS TO MAINTAIN 12" CLEARANCE FROM STORM PIPES.



Scale: 1"=20' Horiz.  
 1"=10' Vert.

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**MEHLENBACHER ROAD  
 SUPPLEMENTARY PLANS  
 UTILITY PLAN STA. 31+00 TO 34+00**  
 BELLEAIR FLORIDA

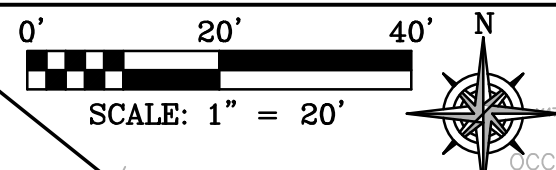
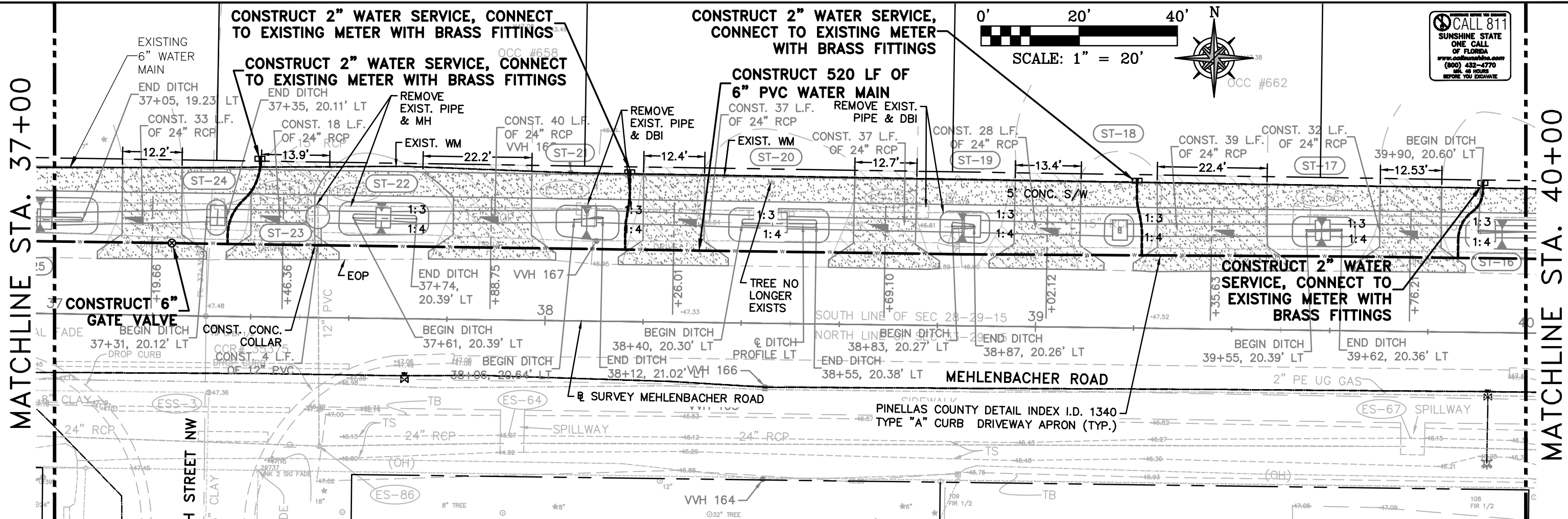
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ALBERT P. CARRIER, P.E., 53990

WORK ORDER NO.	2015-188E
DATE:	DECEMBER 18, 2015
SCALE:	1" = 20'
SHEET NO.	8 OF 15

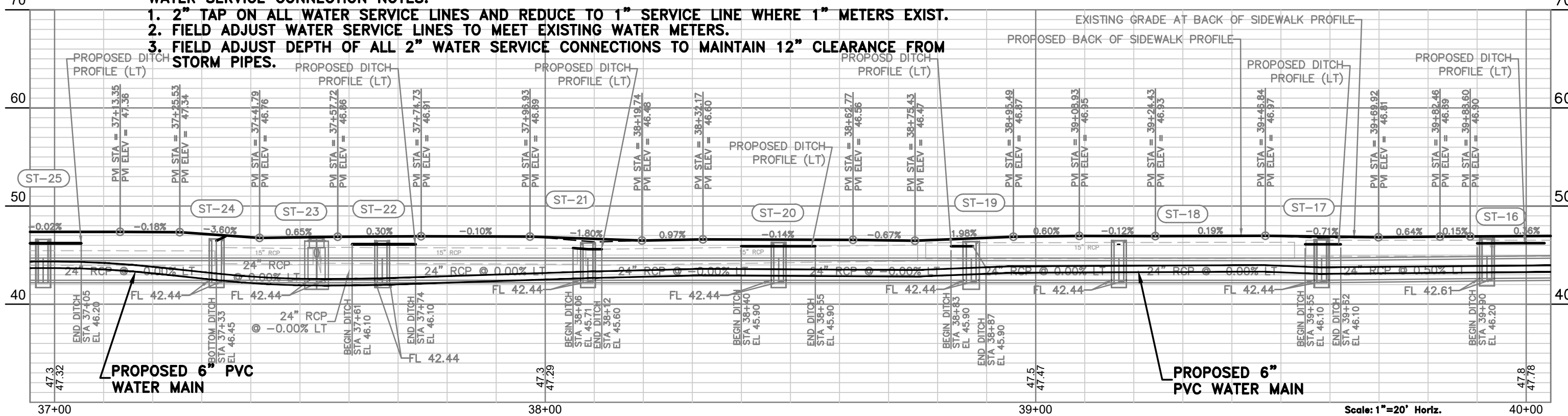






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  2. FIELD ADJUST WATER SERVICE LINES TO MEET EXISTING WATER METERS.
  3. FIELD ADJUST DEPTH OF ALL 2" WATER SERVICE CONNECTIONS TO MAINTAIN 12" CLEARANCE FROM STORM PIPES.



Scale: 1"=20' Horiz.  
 1"=10' Vert.

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**MEHLENBACHER ROAD  
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 UTILITY PLAN STA. 37+00 TO 40+00**  
 BELLEAIR FLORIDA

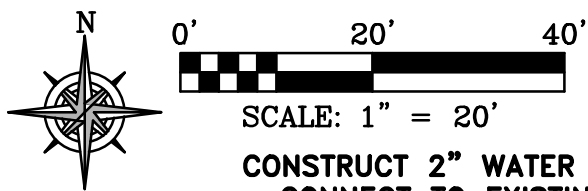
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ALBERT P. CARRIER, P.E., 53990

WORK ORDER NO.	2015-186E
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SHEET NO.	10 OF 15

MATCHLINE STA. 40+00

MATCHLINE STA. 43+00



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CONSTRUCT 6"x6"x6" TEE, 10 LF OF 6" PVC WATER MAIN, 2"x6" REDUCER, 2" BALL VALVE AND CONNECT TO EXISTING 2" WATER MAIN WITH 2" COMPRESSION FITTING

CONSTRUCT 2" WATER SERVICE, CONNECT TO EXISTING METER WITH BRASS FITTINGS

REMOVE EXISTING FIRE HYDRANT, CONSTRUCT FIRE HYDRANT ASSEMBLY AT PROPERTY LINE

CONSTRUCT (2) 6"x6"x6" TEES, (4) 6" GATE VALVES, 10 LF OF 6" DIP WATER MAIN

CONSTRUCT 6"x6"x6" TEE, 6"x2" REDUCER, 2" BALL VALVE, 40 LF OF 2" POLY WATER MAIN, CONNECT TO EXISTING 2" WATER MAIN WITH 2" COMPRESSION FITTING

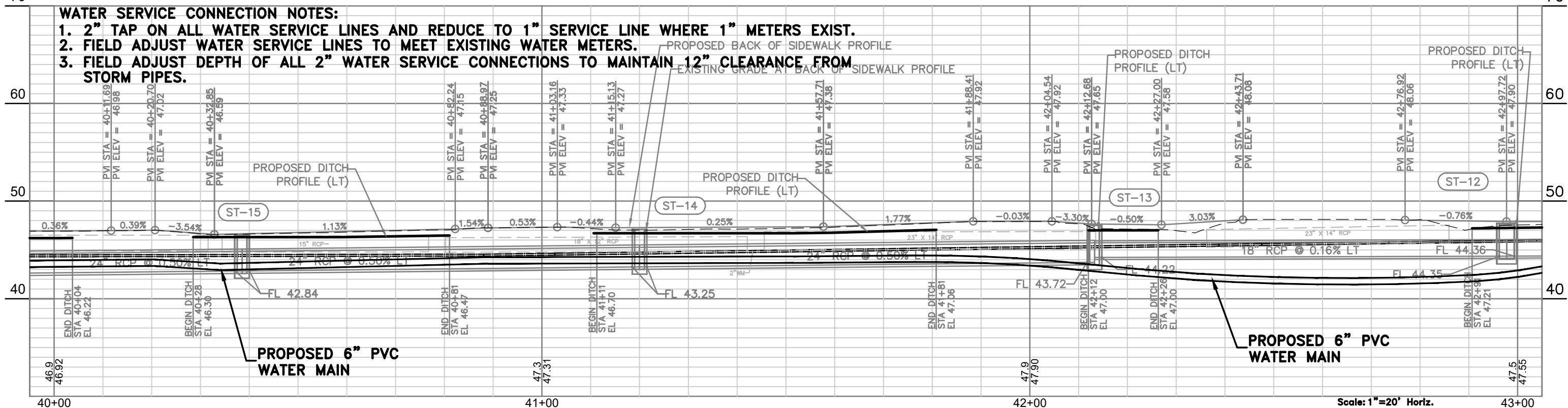
CONSTRUCT 6" PVC WATER MAIN

MEHLENBACHER ROAD

CONSTRUCT 6" PVC WATER MAIN

WATER SERVICE CONNECTION NOTES:

- 1. 2" TAP ON ALL WATER SERVICE LINES AND REDUCE TO 1" SERVICE LINE WHERE 1" METERS EXIST.
- 2. FIELD ADJUST WATER SERVICE LINES TO MEET EXISTING WATER METERS.
- 3. FIELD ADJUST DEPTH OF ALL 2" WATER SERVICE CONNECTIONS TO MAINTAIN 12" CLEARANCE FROM STORM PIPES.



PROPOSED 6" PVC WATER MAIN

PROPOSED 6" PVC WATER MAIN

Scale: 1"=20' Horiz.  
1"=10' Vert.

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LICENSED BUSINESS NUMBER 107

**MEHLENBACHER ROAD  
SUPPLEMENTARY PLANS  
UTILITY PLAN STA. 40+00 TO 43+00**  
BELLEAIR FLORIDA

I, ALBERT CARRIER, HEREBY CERTIFY AS A LICENSED PROFESSIONAL ENGINEER, REGISTERED IN ACCORDANCE WITH FLORIDA STATUTE 471 (481) THAT THE ABOVE PROJECT'S SITE AND/OR CONSTRUCTION PLANS, TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, WILL MEET APPLICABLE DESIGN CRITERIA SPECIFIED BY CITY MUNICIPAL, ORGANIZATION, STATE AND FEDERAL ESTABLISHED STANDARDS. I UNDERSTAND THAT IT IS MY RESPONSIBILITY AS THE PROJECT'S PROFESSIONAL ENGINEER TO PERFORM A QUALITY ASSURANCE REVIEW OF THESE SUBMITTED PLANS.

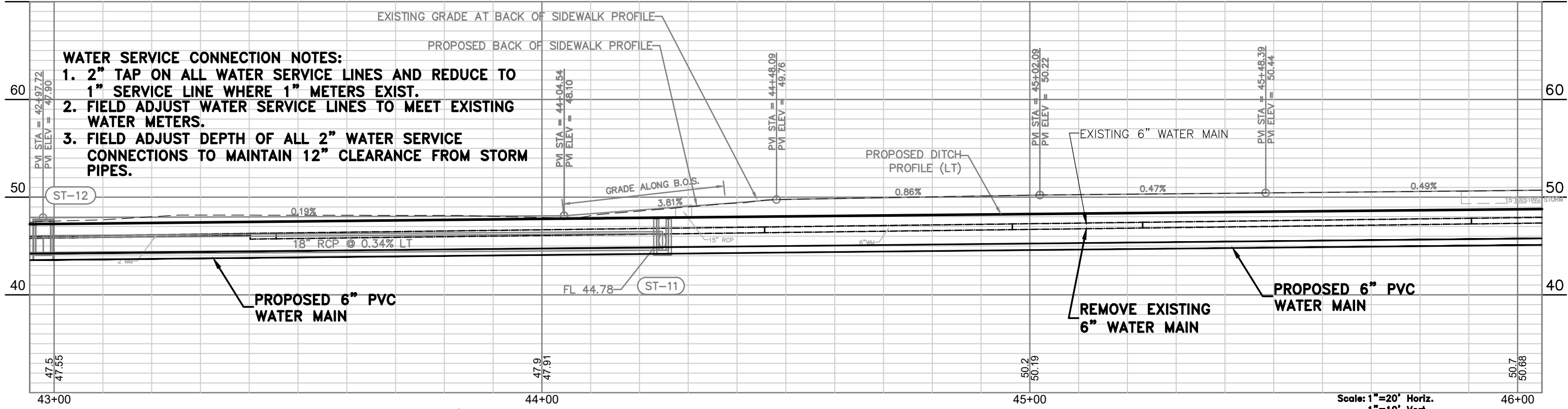
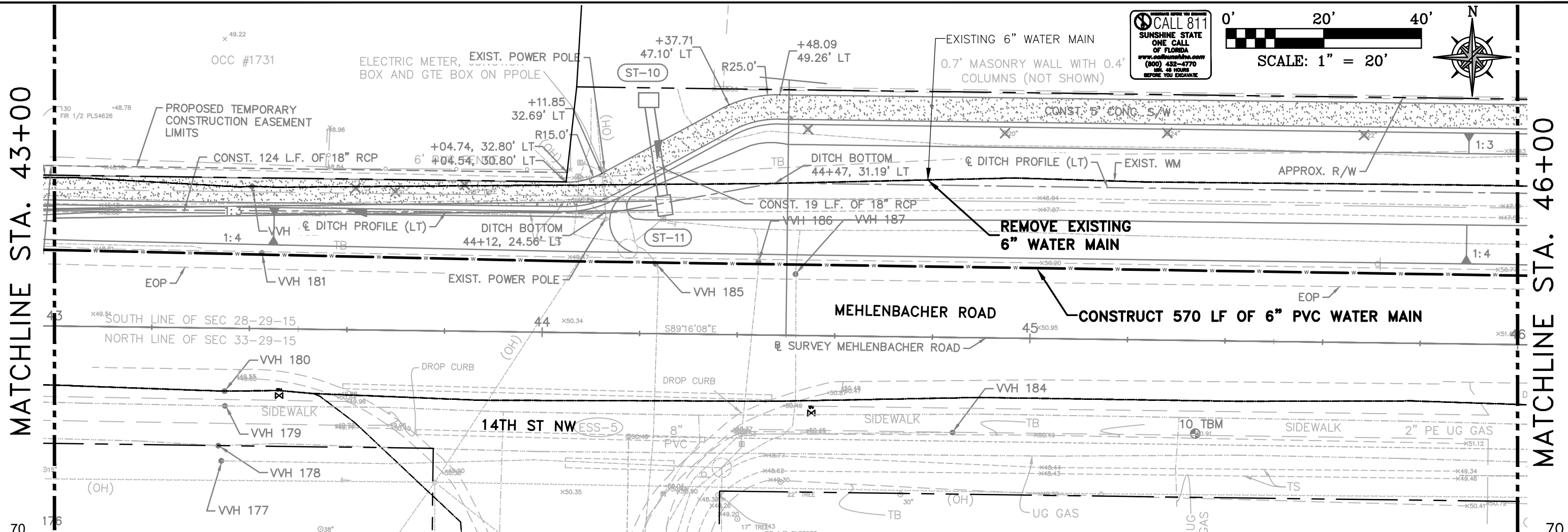
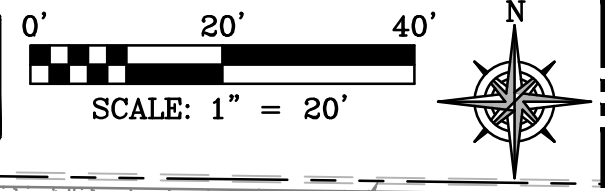
ALBERT P. CARRIER, P.E., 53990

WORK ORDER NO.	2015-186E
DATE	DECEMBER 18, 2015
SCALE	1" = 20'
SHEET NO.	11 OF 15

MATCHLINE STA. 43+00

MATCHLINE STA. 46+00

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- WATER SERVICE CONNECTION NOTES:**
1. 2" TAP ON ALL WATER SERVICE LINES AND REDUCE TO 1" SERVICE LINE WHERE 1" METERS EXIST.
  2. FIELD ADJUST WATER SERVICE LINES TO MEET EXISTING WATER METERS.
  3. FIELD ADJUST DEPTH OF ALL 2" WATER SERVICE CONNECTIONS TO MAINTAIN 12" CLEARANCE FROM STORM PIPES.

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BY:	BAB
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**MEHLENBACHER ROAD  
SUPPLEMENTARY PLANS  
UTILITY PLAN STA. 43+00 TO 46+00**

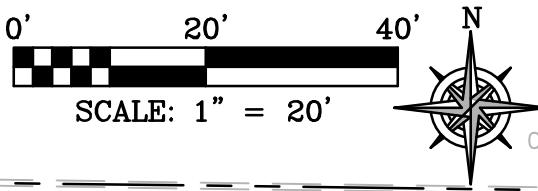
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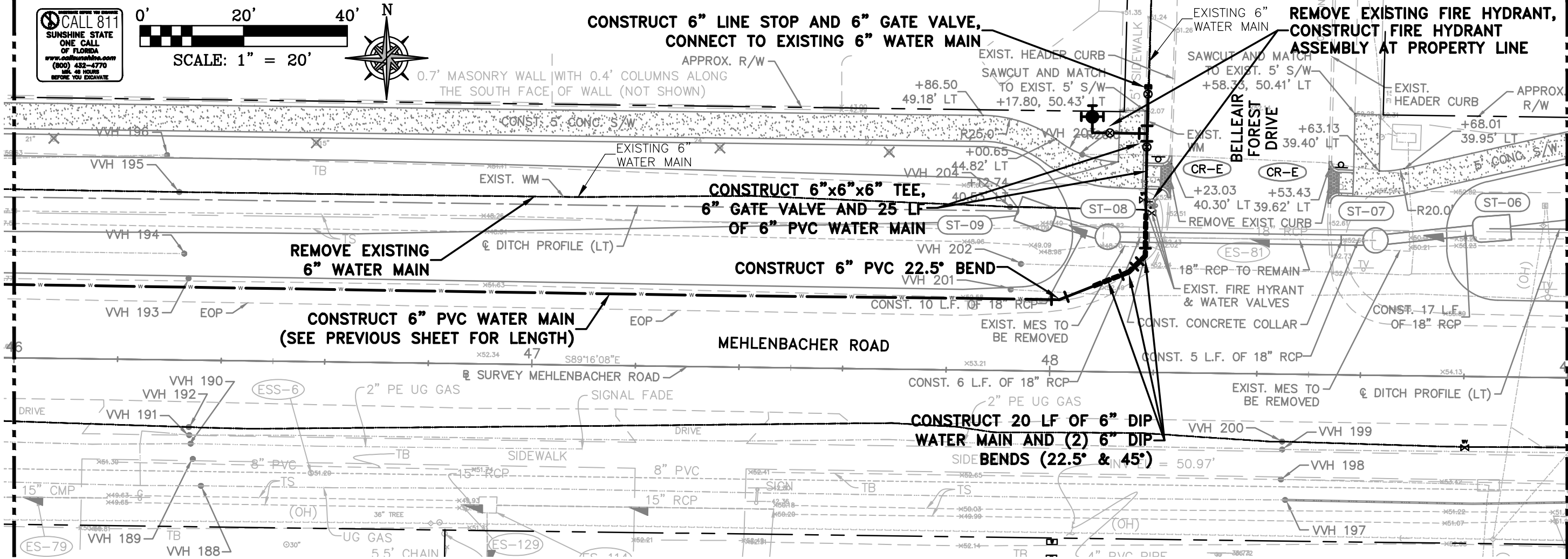


**CONSTRUCT 6" LINE STOP AND 6" GATE VALVE,  
CONNECT TO EXISTING 6" WATER MAIN**

**REMOVE EXISTING FIRE HYDRANT,  
CONSTRUCT FIRE HYDRANT  
ASSEMBLY AT PROPERTY LINE**

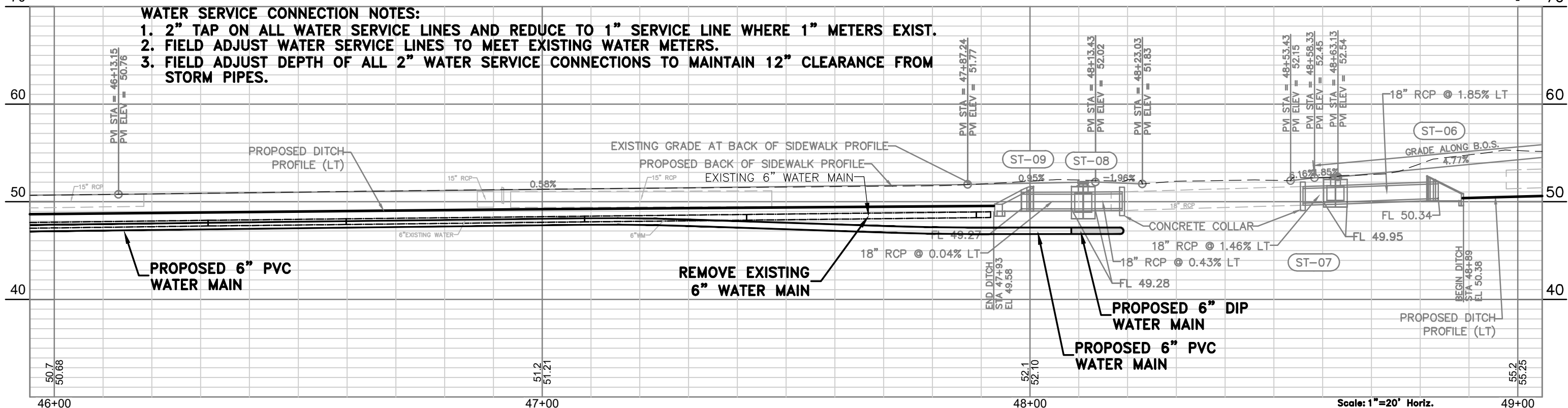
MATCHLINE STA. 46+00

MATCHLINE STA. 49+00



**WATER SERVICE CONNECTION NOTES:**

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Scale: 1"=20' Horiz.  
1"=10' Vert.

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DESIGN:	APC
DRAWN:	DES
BY:	
CHECKED:	BAB

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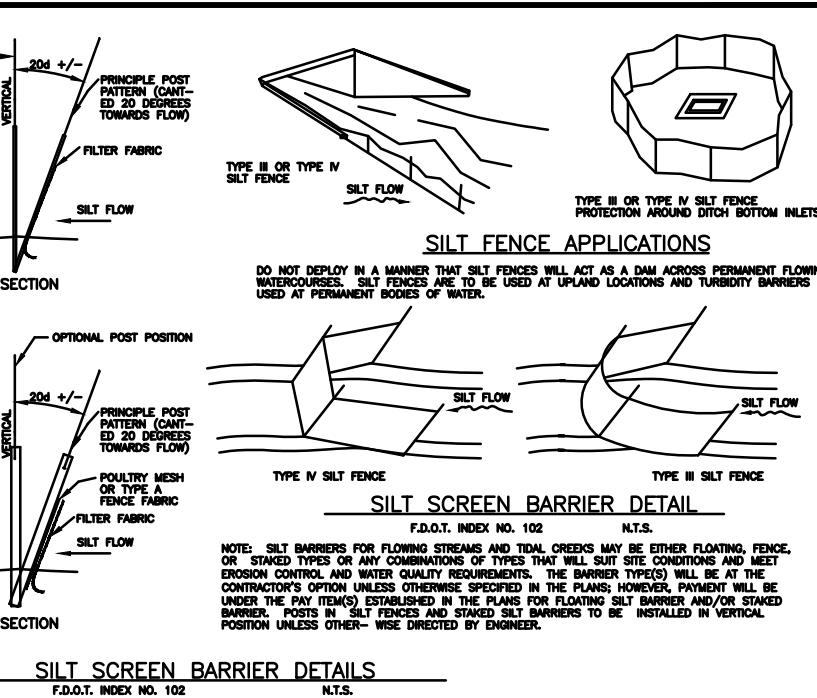
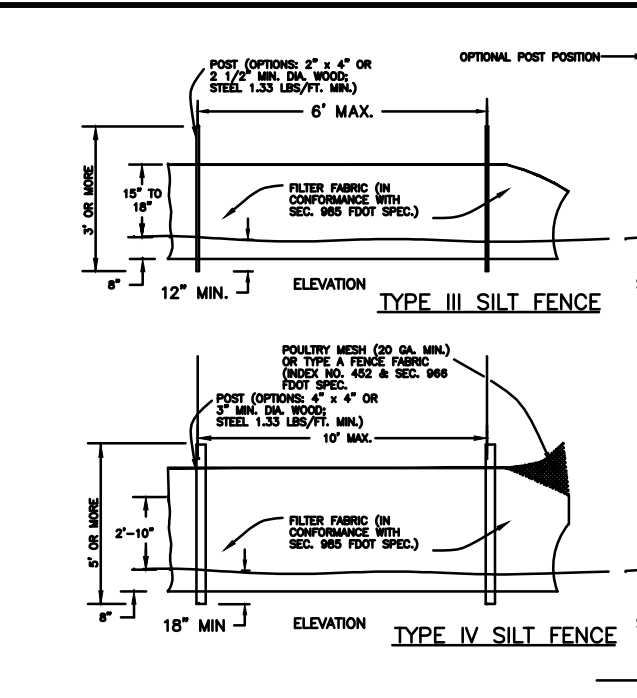
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SHEET NO.	13 OF 15

- GENERAL CONSTRUCTION NOTES**
- ALL RIGHT-OF-WAY INSTALLATIONS WILL BE IN ACCORDANCE WITH PRACTICES REFERENCED IN THE STATE OF FLORIDA UTILITIES ACCOMMODATIONS MANUAL.
  - ALL DESIGN AND CONSTRUCTION MUST CONFORM TO THE MINIMUM STANDARDS SET DOWN IN PINELLAS COUNTY LAND DEVELOPMENT, ZONING AND/OR RELATED ORDINANCES, AND MINIMUM TESTING FREQUENCY REQUIREMENTS.
  - LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS, AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES AFFECTING THIS WORK PRIOR TO CONSTRUCTION.
  - THE CONTRACTOR SHALL CHECK THE PLANS FOR CONFLICTS AND DISCREPANCIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE OWNER'S ENGINEER OF ANY CONFLICTS OR DISCREPANCIES BEFORE PERFORMING ANY WORK IN THE AFFECTED AREA.
  - THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN AREAS OF BURIED UTILITIES, AND SHALL PROVIDE AT LEAST 48 HOURS NOTICE TO THE VARIOUS UTILITY COMPANIES, IN ORDER TO PERMIT MARKING THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES, IN ADVANCE OF CONSTRUCTION, BY CALLING "SUNSHINE" AT 1-800-432-4770. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL UTILITIES NOT INCLUDED IN THE "SUNSHINE" PROGRAM.
  - THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO EXISTING FACILITIES, ABOVE OR BELOW GROUND, THAT MAY OCCUR AS A RESULT OF THE WORK PERFORMED BY THE CONTRACTOR.
  - ALL UNDERGROUND UTILITIES MUST BE IN PLACE AND TESTED OR INSPECTED PRIOR TO BASE AND SURFACE CONSTRUCTION.
  - IT IS THE CONTRACTOR'S RESPONSIBILITY TO BECOME FAMILIAR WITH THE PERMIT AND INSPECTION REQUIREMENTS OF THE VARIOUS GOVERNMENTAL AGENCIES. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION, AND SCHEDULE INSPECTIONS ACCORDING TO AGENCY INSTRUCTIONS.
  - THE CONTRACTOR SHALL SUBMIT FOR APPROVAL TO THE OWNER'S ENGINEER, SHOP DRAWINGS ON ALL PRECAST AND MANUFACTURED ITEMS WHICH ARE FROM THIS SITE. FAILURE TO OBTAIN APPROVAL BEFORE INSTALLATION MAY RESULT IN REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE. ALL SHOP DRAWINGS ARE TO BE REVIEWED AND APPROVED BY THE CONTRACTOR PRIOR TO SUBMITTAL TO THE OWNER'S ENGINEER.
  - AT LEAST THREE (3) WORKING DAYS PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND APPROPRIATE AGENCIES, AND SUPPLY THEM WITH ALL REQUIRED SHOP DRAWINGS, THE CONTRACTOR'S NAME, STARTING DATE, PROJECTED SCHEDULE, AND OTHER INFORMATION AS REQUIRED. ANY WORK PERFORMED PRIOR TO NOTIFYING THE ENGINEER, OR WITHOUT AN ENGINEER INSPECTOR PRESENT, MAY BE SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.
  - BACKFILL MATERIAL SHALL BE SOLIDLY TAMPED AROUND PIPES IN 6" LAYERS UP TO A LEVEL OF AT LEAST ONE FOOT ABOVE THE TOP OF THE PIPE. IN AREAS TO BE PAVED, BACKFILL SHALL BE COMPACTED TO 100% MAXIMUM DENSITY AS DETERMINED BY AASHTO T-99.
  - SITE WORK CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF AT LEAST 3,000 P.S.I. IN 28 DAYS, UNLESS OTHERWISE NOTED.
  - ALL PRIVATE AND PUBLIC PROPERTY AFFECTED BY THIS WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN EXISTING CONDITIONS UNLESS SPECIFICALLY EXEMPTED BY THE PLANS. ADDITIONAL COSTS ARE INCIDENTAL TO OTHER CONSTRUCTION AND NO EXTRA COMPENSATION IS TO BE ALLOWED.
  - ALL DISTURBED AREAS WHICH ARE NOT TO BE SOODED, ARE TO BE SEEDED AND MULCHED TO DOT STANDARDS, AND MAINTAINED UNTIL A SATISFACTORY STAND OF GRASS, ACCEPTABLE TO THE REGULATORY AGENCY AND ENGINEER OF RECORD, HAVE BEEN OBTAINED. ANY WASHOUTS, REGRADING, RESEEDING, AND GRASSING WORK, AND OTHER EROSION WORK REQUIRED, WILL BE PERFORMED BY THE CONTRACTOR, UNTIL THE SYSTEM IS ACCEPTED FOR MAINTENANCE, BY THE REGULATORY AGENCY AND ENGINEER OF RECORD.
  - THE SOILS ENGINEER IS TO SUPPLY THE ENGINEER WITH A PHOTOCOPIY OF ALL COMPACTION TESTS, AND ASHLETT TESTS. THE SOILS ENGINEER IS TO CERTIFY TO THE ENGINEER OF RECORD, IN WRITING, THAT ALL TESTING REQUIREMENTS, REQUIRED BY THE LOCAL REGULATORY AGENCY AND THE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT), FOR THE IMPROVEMENTS, AS REQUIRED BY THE ENGINEERING CONSTRUCTION DRAWINGS, HAVE BEEN SATISFIED.
  - THE CONTRACTOR SHALL MAINTAIN A COPY OF THE APPROVED PLANS AND PERMITS AT THE CONSTRUCTION SITE.
  - THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR MEANS AND METHODS FOR CONSTRUCTION SITE SAFETY.
  - ALL SODDING, SEEDING AND MULCHING SHALL INCLUDE WATERING AND FERTILIZATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THESE AREAS UNTIL THE PROJECT IS COMPLETED AND ACCEPTED BY THE OWNER.
  - SAFE PEDESTRIAN TRAFFIC IS TO BE MAINTAINED AT ALL TIMES.
  - SIGNS AND BARRICADES SHALL BE IN ACCORDANCE WITH THE US DEPARTMENT OF TRANSPORTATION'S "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND THE FLORIDA DEPARTMENT OF TRANSPORTATION'S "DESIGN STANDARDS" INDEXES 600 THROUGH 670 (LATEST EDITIONS).
  - ANY SIDEWALK WHICH BECOMES UNDERMINED MUST BE REMOVED AND REPLACED. SIDEWALKS ARE TO BE RECONSTRUCTED WITHIN THREE (3) DAYS AFTER REMOVAL. WHEN EXISTING SIDEWALK IS REMOVED, IT IS TO BE REMOVED TO THE NEAREST JOINT.
  - PLACE EXPANSION JOINTS WHERE 4" AND 6" CONCRETE ABUT.
  - PLACE EXPANSION JOINT BETWEEN BACK-OF-CURB AND CONCRETE DRIVEWAY.
  - SAW CUT EXISTING EDGE-OF-PAVEMENT PRIOR TO REMOVAL OF CURB AND PLACEMENT OF ASPHALT.
  - COMPACTION FOR PIPE BACKFILL SHALL COMPLY WITH AASHTO T-99 (100 %).
  - DISTURBED AREA WITHIN THE RIGHT-OF-WAY WILL BE COMPACTED TO 100% OF MAXIMUM DENSITY AND SOODED.
  - DO NOT DISTURB EXISTING UNDERDRAIN OR STORM SYSTEMS. IF FILTRATION BED IS DISTURBED, CONTACT THE AREA INSPECTOR WITH THE CITY HIGHWAY DEPARTMENT FOR ASSISTANCE.
  - COORDINATE THE CUTTING OF DRIVEWAYS WITH OWNER PRIOR TO CUT. ALL DRIVEWAYS WILL BE IN PASSABLE CONDITION AT END OF WORK DAY.
  - CONCRETE DRIVEWAYS PERMITTED TO BE CUT ARE TO BE RESTORED WITH 6" OF 3000 PSI CONCRETE WITH 2" X 4" 10 GAUGE WIRE REINFORCING FABRIC. PLACE 1/2" EXPANSION JOINT BETWEEN BACK OF CURB AND NEW DRIVE. ANY PORTION OF DRIVEWAY AT OR NEAR CUTS THAT BECOMES UNDERMINED WILL BE REMOVED PRIOR TO CONCRETE BEING PLACED. EXISTING CRACKS IN DRIVEWAYS ARE TO BE DOCUMENTED AS PRE-EXISTING OR THAT SECTION REPLACED AT THE CITY HIGHWAY DEPARTMENT'S OPTION. AREA BENEATH PATCH TO BE MECHANICALLY TAMPED PRIOR TO PLACING CONCRETE. MINIMUM REPAIR WIDTH TO BE 5" WITH NO SECTION LEFT SMALLER THAN 5".
  - ASPHALT DRIVES PERMITTED TO BE CUT ARE TO BE RESTORED UTILIZING THE SAME MATERIAL AS EXISTING BASE WITH MINIMUM 6" THICKNESS, COMPACTED AND PRIMED. ASPHALT IS TO MATCH EXISTING THICKNESS WITH A MINIMUM OF 1 1/2" THICKNESS. ASPHALT TO BE PC-3 OR ALTERNATE APPROVED BY THE COUNTY HIGHWAY DEPARTMENT PRIOR TO USE. ASPHALT IS TO BE COMPACTED TO ACHIEVE DENSITY REQUIREMENTS FOR PC-3. RECEIPTS AND DELIVERY TICKETS SHOULD REFLECT SUPPLIER AND HIS CERTIFICATION AS TO TYPE OF ASPHALT SUPPLIED.
  - TYPE OF SOD USED TO RESTORE OWNER-MAINTAINED AREA IN RIGHT OF WAY SHALL BE COORDINATED WITH OWNER.
  - NO STOCKPILING OF MATERIAL IN ROADWAY OR ON SIDEWALK; ALL DIRT AND DEBRIS WILL BE REMOVED FROM JOB SITE DAILY. ROADS AND SIDEWALK TO BE SWEEP DAILY AS PART OF DAILY CLEAN-UP.
  - ANY PORTION OF THE ROADWAY THAT SUSTAINS EXCESSIVE CONSTRUCTION RELATED DAMAGE, IN THE OPINION OF THE COUNTY HIGHWAY DEPARTMENT, SHALL BE REPAIRED AT CONTRACTOR EXPENSE IN A MANNER SPECIFIED BY THE COUNTY HIGHWAY DEPARTMENT.
  - THE PERMITTEE'S ATTENTION IS DIRECTED TO THE PROVISIONS OF THE TRENCH SAFETY ACT (FLORIDA STATUTES, SECTION 353.60 ET. SEQ.) AND THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION EXCAVATION SAFETY STANDARDS (29 C.F.R. SECTION 1926.850, SUBPART P) WHICH SHALL APPLY TO CONSTRUCTION, OPERATION AND MAINTENANCE PURSUANT TO THIS PERMIT.
  - NOTIFY PROPERTY OWNERS REGARDING SPRINKLER SYSTEM, PLANTS AND MAIL BOXES THAT WILL BE DISTURBED DURING CONSTRUCTION PRIOR TO STARTING WORK.
  - PRIOR TO COMMENCEMENT OF WORK AND/OR PRIOR TO START OF RESTORATION, COORDINATE THROUGH A "WALK-THROUGH" WITH THE COUNTY HIGHWAY DEPARTMENT REPRESENTATIVE TO ENSURE MUTUAL AGREEMENT REGARDING SUCH MATTERS AS EXTENT OF ROADWAY TO BE OVERLAD AFTER PATCHING, THE EXTENT OF DRIVEWAY REPLACEMENT - ESPECIALLY CONCRETE, ETC.
  - THE CONTRACTOR SHALL PROVIDE AND MAINTAIN A SAFE AND EASILY ACCESSIBLE PAVED OR UNPAVED PATHWAY FOR PEDESTRIAN TRAFFIC THROUGH THE WORK ZONE FOR THE DURATION OF THE CONSTRUCTION PROJECT. IF THE PATHWAY LIES ALONG A DESIGNATED SCHOOL-WALKING ROUTE THEN THE CONTRACTOR MUST PROVIDE ADEQUATE SUPERVISION AND/OR GUIDANCE TO SCHOOL AGED STUDENTS AS THEY TRAVERSE THRU THE WORK ZONE.

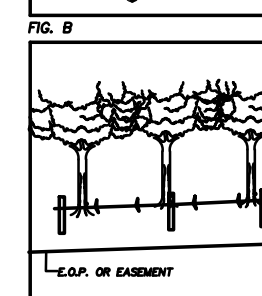
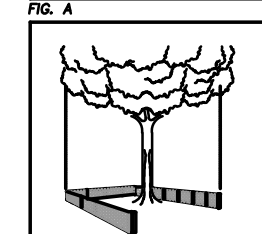
- WATER SYSTEM NOTES**
- ALL WATER MAINS SHALL HAVE A MINIMUM OF 36 INCHES OF COVER.
  - ALL WATER SYSTEM WORK SHALL CONFORM WITH LOCAL REGULATORY STANDARDS AND SPECIFICATIONS.
  - ALL DUCTILE IRON PIPE SHALL BE CLASS 52 IN ACCORDANCE WITH ANSI A 21.50 (AWWA C 150) AND ANSI A 21.31 (AWWA C 151) AND PIPE SHALL RECEIVE EXTERIOR BITUMINOUS COATING IN ACCORDANCE WITH ANSI A 21.6, A 21.8 OR A 21.51 AND SHALL BE MORTAR LINED, STANDARD THICKNESS, AND BITUMINOUS SEALED IN ACCORDANCE WITH ANSI A (AWWA C 104-71).
  - ALL FITTINGS LARGER THAN 2" SHALL BE DUCTILE IRON CLASS 53 IN ACCORDANCE WITH ANSI A 21.51 WITH A PRESSURE RATING OF 350 PSI. JOINTS SHALL BE MECHANICAL JOINTS IN ACCORDANCE WITH ANSI C-111. FITTINGS SHALL BE CEMENT MORTAR LINED AND COATED IN ACCORDANCE WITH ANSI A C-104.
  - ALL PVC WATER MAINS 4" THROUGH 12" SHALL BE IN ACCORDANCE WITH ANSI C-900. PVC SHALL BE CLASS 150 AND MEET THE REQUIREMENTS OF SDR 18 IN ACCORDANCE WITH ASTM D-2241.
  - WATER MAIN PIPING OF LESS THAN 4" SHALL BE PER PVC SDR28.
  - ALL FITTINGS 2" AND SMALLER SHALL BE PVC SDR28 WITH PUSH ON JOINTS.
  - ALL GATE VALVES 2" OR LARGER SHALL BE RESILIENT SEAT OR RESILIENT WEDGE MEETING THE REQUIREMENTS OF ANSI C509.
  - ALL FIRE HYDRANTS SHALL MEET THE REQUIREMENTS OF ANSI C502 AND SHALL BE APPROVED BY THE LOCAL UTILITY AND FIRE MARSHAL.
  - THE CONTRACTOR IS TO INSTALL TEMPORARY BLOW-OFFS AT THE END OF WATER SERVICE LATERALS TO ASSURE ADEQUATE FLUSHING AND DISINFECT.
  - THRUST BLOCKING SHALL BE PROVIDED AT ALL FITTINGS AND HYDRANTS AS SHOWN ON DETAILS.
  - MATERIALS AND CONSTRUCTION METHODS FOR WATER DISTRIBUTION SYSTEM SHALL BE IN ACCORDANCE WITH THE LOCAL REGULATORY AGENCY CODES.
  - THE IRRIGATION SYSTEM SHALL HAVE COLOR CODED PIPING AND LABELING ON THE PIPE TO INSURE DIFFERENTIATION FROM POTABLE WATER PIPING.
- WATER SYSTEM TESTING AND INSPECTION REQUIREMENTS**
- THE PERMIT HOLDER SHALL MAKE THE APPLICABLE TESTS PRESCRIBED IN SECTIONS 312.2 THROUGH 312.9 OF THE 2004 FLORIDA BUILDING CODES, AS UPDATED, TO DETERMINE COMPLIANCE WITH THE PROVISIONS OF THIS CODE. THE PERMIT HOLDER SHALL GIVE REASONABLE ADVANCE NOTICE TO THE CODE OFFICIAL WHEN THE PLUMBING WORK IS READY FOR TESTS. THE EQUIPMENT, MATERIAL, POWER AND LABOR NECESSARY FOR THE INSPECTION AND TEST SHALL BE FURNISHED BY THE PERMIT HOLDER, AND THE PERMIT HOLDER SHALL BE RESPONSIBLE FOR DETERMINING THAT THE WORK WILL WITHSTAND THE TEST PRESSURE PRESCRIBED IN THE ABOVE MENTIONED SECTIONS. ALL PLUMBING SYSTEM PIPING SHALL BE TESTED WITH EITHER WATER OR, FOR PIPING SYSTEMS OTHER THAN PLASTIC, BY AIR. AFTER THE PLUMBING FIXTURES HAVE BEEN SET AND THEIR TRAPS FILLED WITH WATER, THE ENTIRE DRAINAGE SYSTEM SHALL BE SUBMITTED TO FINAL TESTS. THE CODE OFFICIAL SHALL REQUIRE THE REMOVAL OF ANY CLEANOUTS IF NECESSARY TO ASCERTAIN WHETHER THE PRESSURE HAS REACHED ALL PARTS OF THE SYSTEM.
  - ALL COMPONENTS OF THE WATER SYSTEM, INCLUDING FITTINGS, HYDRANTS, CONNECTIONS, AND VALVES SHALL REMAIN UNCOVERED UNTIL PROPERLY PRESSURE TESTED AND ACCEPTED BY THE OWNER'S ENGINEER AND THE CODE OFFICIAL. CONTRACTOR TO NOTIFY OWNER'S ENGINEER AND CODE OFFICIAL 48 HOURS IN ADVANCE OF PERFORMING TESTS.
- HORIZONTAL SEPARATION BETWEEN UNDERGROUND WATER MAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR SEWER FORCE MAINS AND RECLAIMED WATER PIPELINES.**
- NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST FIVE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART II OF CHAPTER 62-610, F.A.C.
  - NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST FIVE FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER.
  - NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST FIVE FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY-OR VACUUM-TYPE SANITARY SEWER OR STORM SEWER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR AT LEAST 12 INCHES BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
  - NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST TEN FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND ALL PARTS OF ANY EXISTING OR PROPOSED "ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM" AS DEFINED IN SECTION 381.008(2), F.S., AND RULE 64E-6.002, F.A.C.
- VERTICAL SEPARATION BETWEEN UNDERGROUND WATER MAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCE MAINS, AND RECLAIMED WATER PIPELINES.**
- NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED GRAVITY-OR VACUUM-TYPE SANITARY SEWER OR STORM SEWER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR AT LEAST 12 INCHES BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
  - NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
  - AT THE UTILITY CROSSINGS DESCRIBED IN PARAGRAPHS (A) AND (B) ABOVE, 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. ALTERNATIVELY, AT SUCH CROSSINGS, THE PIPES SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORMWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART II OF CHAPTER 62-610, F.A.C., AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY-OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART II OF CHAPTER 62-610, F.A.C.
- SANITARY SEWER NOTES**
- ALL SANITARY SEWER MAINS & LATERALS SHALL HAVE A MINIMUM OF 36 INCHES OF COVER.
  - ALL SANITARY SEWER MAINS & SERVICE LATERALS SHALL BE CONSTRUCTED OF POLYVINYL CHLORIDE PIPE, SDR 35 OR AS OTHERWISE INDICATED ON THE CONSTRUCTION DRAWINGS.
  - ALL SANITARY SEWER WORK SHALL CONFORM WITH LOCAL REGULATORY STANDARDS AND SPECIFICATIONS.
  - PRIOR TO COMMENCING WORK WHICH REQUIRES CONNECTING NEW WORK TO EXISTING LINES OR APPURTENANCES, THE CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF EXISTING CONNECTION POINT AND NOTIFY OWNER'S ENGINEER OF ANY CONFLICTS OR DISCREPANCIES.
  - PVC PIPE AND FITTINGS SHALL CONFORM TO ASTM SPECIFICATIONS DESIGNATION D-3034-77C. MA SDR 35 INSTALLATION OF SDR 35 PIPE SHALL BE IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF ASTM SPECIFICATION SECTION D2321. ALL SANITARY SEWER PIPELINES SHALL BE SOLID GREEN IN COLOR.
  - ALL PVC FORCE MAINS SHALL BE CLASS 200, SDR 21, COLOR GREEN, WITH A GREEN MAGNETIC TAPE A MINIMUM OF 2" WIDE, PLACED 1 FOOT BELOW THE PROPOSED GRADE. THE PRINTING ON THE MAGNETIC TAPE SHOULD READ "FORCEMAIN".
  - ALL DUCTILE IRON PIPE SHALL BE CLASS 52 IN ACCORDANCE WITH ANSI A 21.50 (AWWA C 150) AND ANSI A21.51 (AWWA C 151). DUCTILE IRON PIPE SHALL RECEIVE INTERIOR AND EXTERIOR BITUMINOUS COATING IN ACCORDANCE WITH ANSI A 21.6, A 21.8, OR A 21.51.
  - ALL SANITARY SEWER GRAVITY MAINS OR SANITARY SEWER FORCE MAINS THAT REQUIRE D.I.P. ARE TO BE POLY-LINED OR EPOXY LINED.
  - ALL SANITARY SEWER COVERS SHALL BE TRAFFIC RATED FOR H-20 LOADING.



- SANITARY SEWER TESTING AND INSPECTION REQUIREMENTS**
- ALL GRAVITY SEWER PIPING SHALL BE SUBJECT TO A TELEVISION INSPECTION BY THE OWNER'S CONTRACTOR. CONTRACTOR TO NOTIFY THE ENGINEER 48 HOURS IN ADVANCE TO SCHEDULE INSPECTION.
  - THE CONTRACTOR SHALL PERFORM AN INFILTRATION TEST ON ALL GRAVITY SEWERS INSTALLED IN ACCORDANCE WITH THE REGULATORY AGENCY HAVING JURISDICTION. MAXIMUM ALLOWABLE LEAKAGE RATE: 200 GPD PER INCH PIPE DIAMETER PER MILE. TEST RESULTS ARE TO BE SUBMITTED TO THE REGULATORY AGENCY FOR APPROVAL. COORDINATION AND NOTIFICATION OF ALL PARTIES IS THE CONTRACTOR'S RESPONSIBILITY.
  - ALL FORCE MAINS SHALL BE SUBJECT TO A HYDROSTATIC PRESSURE TEST IN ACCORDANCE WITH THE REGULATORY AGENCY HAVING JURISDICTION. SAID TESTS ARE TO BE CERTIFIED BY THE ENGINEER OF RECORD AND SUBMITTED TO THE REGULATORY AGENCY FOR APPROVAL. COORDINATION AND NOTIFICATION OF ALL PARTIES IS THE CONTRACTOR'S RESPONSIBILITY.
- NOTICE TO ALL CONTRACTORS AND DEVELOPERS**
- THE DOMESTIC WATER SYSTEM AND THE STORM DRAIN FILTER SYSTEM FOR THIS PROJECT MUST BE INSPECTED BY OUR OFFICE IN ORDER THAT THEY BE CERTIFIED TO THE APPROPRIATE GOVERNMENTAL AGENCY. IT IS, THEREFORE, URGENT THAT OUR OFFICE BE NOTIFIED AT LEAST 24 HOURS PRIOR TO BACKFILLING OVER THESE FACILITIES. FAILURE TO DO SO WILL RESULT IN THESE FACILITIES HAVING TO BE UNCOVERED AND INSPECTED BEFORE A CERTIFICATE OF OCCUPANCY IS ISSUED. YOUR CERTIFICATE OF OCCUPANCY WILL BE WITHHELD UNTIL THE MATTER IS RESOLVED.
- DEUEL & ASSOCIATES (727) 822-4151

- PINELLAS COUNTY RIGHT OF WAY NOTES**
- ALL PROPOSED WORK MUST COMPLY WITH FDOT INDEX NO.700 (LATEST EDITION).
  - ALL R.O.W. INSTALLATIONS WILL BE IN ACCORDANCE WITH PRACTICES REFERENCED IN THE STATE OF FLORIDA UTILITIES ACCOMMODATIONS MANUAL.
  - ALL DESIGN AND CONSTRUCTION MUST CONFORM TO THE MINIMUM STANDARDS SET DOWN IN PINELLAS COUNTY LAND DEVELOPMENT, ZONING AND/OR RELATED ORDINANCES, AND MINIMUM TESTING FREQUENCY REQUIREMENTS.
  - SIGNS AND BARRICADES SHALL BE IN ACCORDANCE WITH THE U.S. DEPARTMENT OF TRANSPORTATION'S "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND THE FLORIDA DEPARTMENT OF TRANSPORTATION'S "DESIGN STANDARDS" INDEXES 600 THROUGH 670 (LATEST EDITIONS).
  - INSTALLATIONS INVOLVING CONCRETE AND ASPHALT DRIVEWAY, IN GOOD CONDITION, MUST BE ACCOMPLISHED BY JACK AND BORE OR PUSHING. NO JETTING IS ALLOWED.
  - COMPACTION FOR PIPE BACKFILL SHALL COMPLY WITH AASHTO T-99(100%).
  - DISTURBED AREA WITHIN THE R.O.W. WILL BE COMPACTED TO 100% OF MAXIMUM DENSITY AND SOODED.
  - ANY PORTION OF THE ROADWAY THAT SUSTAINS EXCESSIVE CONSTRUCTION RELATED DAMAGE, IN THE OPINION OF PINELLAS COUNTY HIGHWAY DEPARTMENT, SHALL BE REPAIRED AT CONTRACTOR EXPENSE IN A MANNER SPECIFIED BY PINELLAS COUNTY HIGHWAY DEPARTMENT.
  - SAFE PEDESTRIAN TRAFFIC IS TO BE MAINTAINED AT ALL TIMES.
  - ANY SIDEWALK WHICH BECOMES UNDERMINED MUST BE REMOVED AND REPLACED. SIDEWALKS ARE TO BE RECONSTRUCTED WITHIN THREE(3) DAYS AFTER REMOVAL. WHEN EXISTING SIDEWALK IS REMOVED, IT IS TO BE REMOVED AT THE NEAREST JOINT.
  - NO STOCKPILING OF MATERIAL IN ROADWAY OR ON SIDEWALK; ALL DIRT OR DEBRIS WILL BE REMOVED FROM THE JOB SITE DAILY. ROADS AND SIDEWALKS ARE TO BE SWEEP DAILY AS PART OF DAILY CLEAN-UP.
  - PLACE EXPANSION JOINT BETWEEN BACK-OF-CURB AND CONCRETE SIDEWALK.
  - PRIOR TO COMMENCEMENT OF WORK AND/OR PRIOR TO START OF RESTORATION, COORDINATE THROUGH A "WALK-THROUGH" WITH PINELLAS COUNTY HIGHWAY DEPARTMENT REPRESENTATIVE TO ENSURE MUTUAL AGREEMENT REGARDING SUCH MATTERS AS EXTENT OF ROADWAY TO BE OVERLAD AFTER PATCHING, THE EXTENT OF DRIVEWAY REPLACEMENT - ESPECIALLY CONCRETE, ETC.
  - HANDICAP RAMPS SHALL BE INSTALLED ACCORDING TO FDOT IND.#304
  - REMOVE & REPLACE ANY EXISTING SIDEWALK WITHIN PINELLAS COUNTY R.O.W. THAT HAS BEEN DAMAGED DUE TO DEMOLITION AND PORTIONS NOT MEETING A.D.A. REQUIREMENTS.
  - A MINIMUM REQUIRED SIDEWALK SHOULDER CLEAR ZONE OF 2' FROM THE EDGE OF THE SIDEWALK WITH A MAXIMUM SLOPE OF 3/4" PER LINEAR FOOT. NO PERMANENT OBSTACLES ARE ALLOWED IN THIS AREA.

- PROTECTIVE BARRIERS ARE USED DURING LAND ALTERATION AND CONSTRUCTION ACTIVITIES TO PROTECT TREES AND NATURAL AREAS TO BE RETAINED ON A SITE.**
- PROTECTIVE BARRIERS MUST BE ERECTED AROUND TREES TO BE RETAINED WITHIN AN AREA WHERE LAND ALTERATION AND CONSTRUCTION ACTIVITIES WILL OCCUR AS WELL AS ALONG NATURAL AREAS WHERE SUCH AREAS ARE ADJACENT TO PERMITTED LAND ALTERATION AND CONSTRUCTION ACTIVITIES. A PROTECTIVE BARRIER MUST REMAIN IN PLACE UNTIL THE LAND ALTERATION AND CONSTRUCTION ACTIVITIES ARE COMPLETED OR UNTIL COMMENCEMENT OF GRADE FINISHING AND SODDING. NO GROUND DISTURBANCE MUST OCCUR WITHIN THE BARRICADED AREA.**
- TREES - TO RESTRICT ACCESS INTO THE AREA WITHIN THE DRUPLINE OF A TREE, A PHYSICAL STRUCTURE NOT LESS THAN 3 FEET IN HEIGHT, COMPRISED OF WOOD OR OTHER SUITABLE MATERIAL, IS PLACED AROUND THE TREE AT THE DRUPLINE, EXCEPT WHERE LAND ALTERATION OR CONSTRUCTION ACTIVITIES ARE APPROVED WITHIN THE DRUPLINE.
  - THE DRUPLINE OF A TREE IS THE IMAGINARY, VERTICAL LINE THAT EXTENDS DOWNWARD FROM THE OUTERMOST TIPS OF THE TREE'S BRANCHES TO THE GROUND (FIG. A.)



- BARRIER SPECIFICATIONS FOR TREES:**
- FOUR CORNER UPRIGHT STAKES OF NO LESS THAN 2"x2" LUMBER CONNECTED BY HORIZONTAL MEMBERS OF NO LESS THAN 1"x4" LUMBER; OR UPRIGHT STAKES SPACED AT 5' INTERVALS OF NO LESS 2"x2" LUMBER CONNECTED BY SILT SCREEN FABRIC(FIG. B.)
- BARRIER SPECIFICATIONS FOR NATURAL AREAS:**
- UPRIGHT STAKES OF NO LESS THAN 2"x2" LUMBER SPACED NO MORE THAN 25' APART AND CONNECTED BY TWINE FLAGGED WITH PLASTIC SURVEYING TAPE AT REGULAR INTERVALS OF 5-10' (FIG. C). OTHER METHODS OF DEMARCATION WILL BE CONSIDERED DEPENDING UPON THE CHARACTERISTICS OF THE SITE.
- WHY A BARRIER**
- TO PROTECT ALL ABOVE GROUND PORTIONS OF TREES AND OTHER SIGNIFICANT VEGETATION FROM MECHANICAL DAMAGE.
  - TO PROTECT ROOT SYSTEMS FROM COMPACTION.
  - TO PROVIDE AWARENESS OF PROTECTED AREAS TO EQUIPMENT OPERATORS.
- WHY IT WORKS**
- A TREE'S CHANCE FOR SURVIVAL IS GREATLY ENHANCED IF NO CONSTRUCTION MATERIAL, HEAVY EQUIPMENT OR STOCKPILING OF SOIL IS ALLOWED INSIDE THE BARRIER; ONLY HAND LABOR.

**TREE BARRICADE DETAIL**  
N.T.S.

DESIGN:	APC
DRAWN:	DES
CHECKED:	BAB
DATE:	REVISION

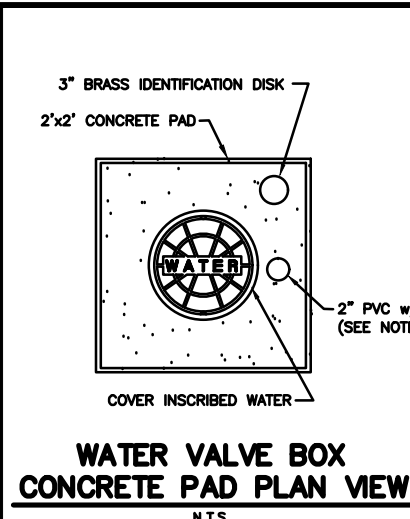
**DEUEL & ASSOCIATES**  
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LICENSED BUSINESS NUMBER 107

**MEHLENBACHER ROAD SUPPLEMENTARY PLANS SPECIFICATIONS & DETAILS**  
FLORIDA

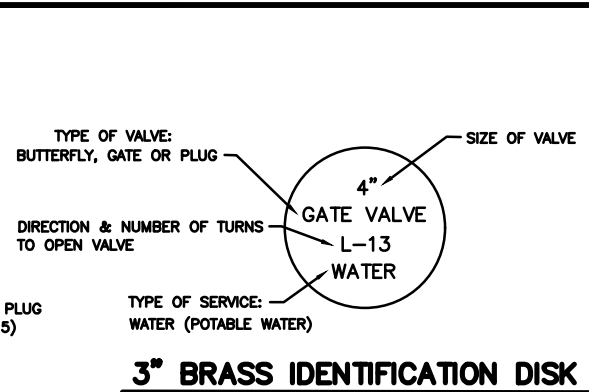
WORK ORDER NO.	2015-186E
DATE:	DECEMBER 18, 2015
SCALE:	N.T.S.
SHEET NO.	14 OF 15

ALBERT P. CARRIER, P.E., 53990



**WATER VALVE BOX CONCRETE PAD PLAN VIEW**  
N.T.S.

NOTES:  
1. EXTENSION ON VALVE BOX SHALL BE SET SO AS TO RESERVE 1/2 OF THE ADJUSTMENT LENGTH FOR FUTURE USE.  
2. OPERATING NUT SHALL BE SET SO AS TO BE WITHIN 12" TO 18" OF GRADE.  
3. INSTALL 3" BRASS IDENTIFICATION DISK IN CONCRETE.  
4. INSTALL 2" PVC WITH PLUG FOR TRACER WIRE STORAGE.  
5. LOCATOR WIRE ACCESS - 2" (WHITE OR GRAY) SCHEDULE 80 PVC, BRASS FEMALE ADAPTOR COUPLING AND 2" BRASS PLUG W/ RECESS NUT. TERMINATE INSULATED, SOLID 12 GAUGE COPPER TRACER WIRE AT TOP W/ A MINIMUM 12" OF EXTRA WIRE. CAP / PLUG TO BE FLUSH WITH CONCRETE PAD.



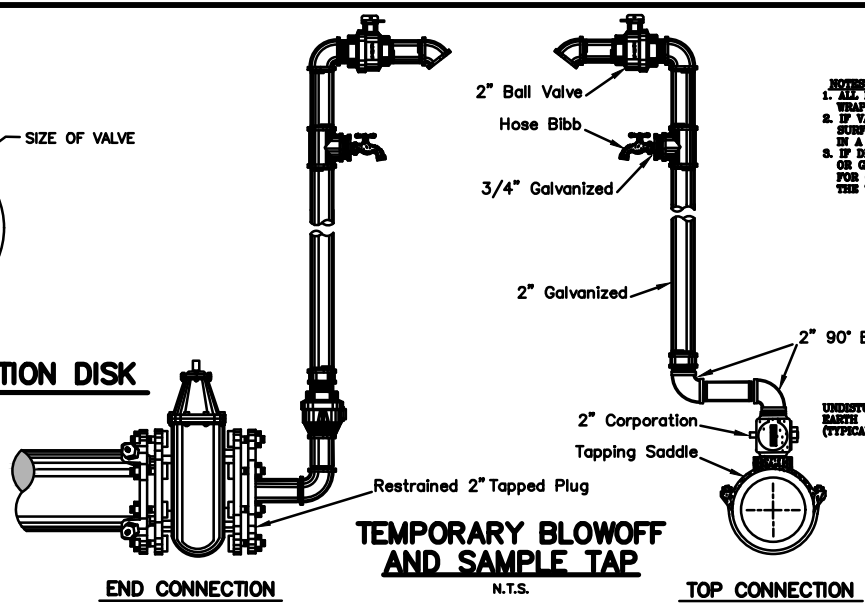
**3" BRASS IDENTIFICATION DISK**  
N.T.S.

TYPE OF VALVE:  
BUTTERFLY, GATE OR PLUG

SIZE OF VALVE  
4"

DIRECTION & NUMBER OF TURNS TO OPEN VALVE  
L-13  
WATER

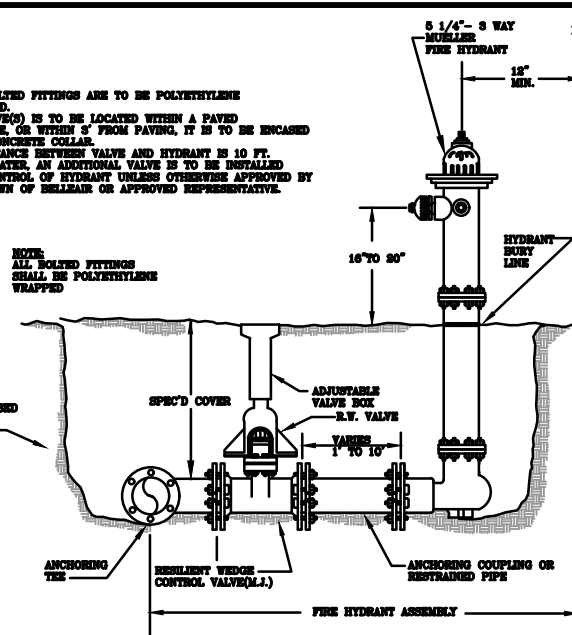
TYPE OF SERVICE:  
WATER (POTABLE WATER)



**TEMPORARY BLOWOFF AND SAMPLE TAP**  
N.T.S.

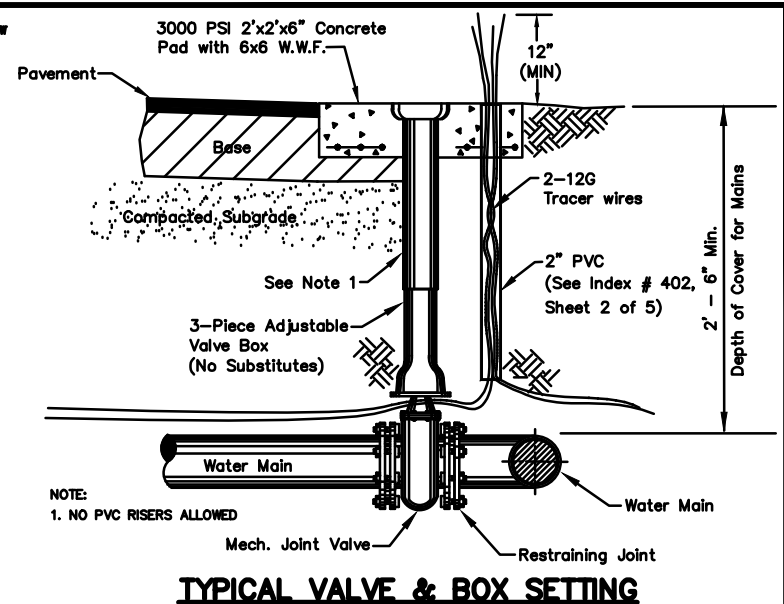
END CONNECTION

TOP CONNECTION



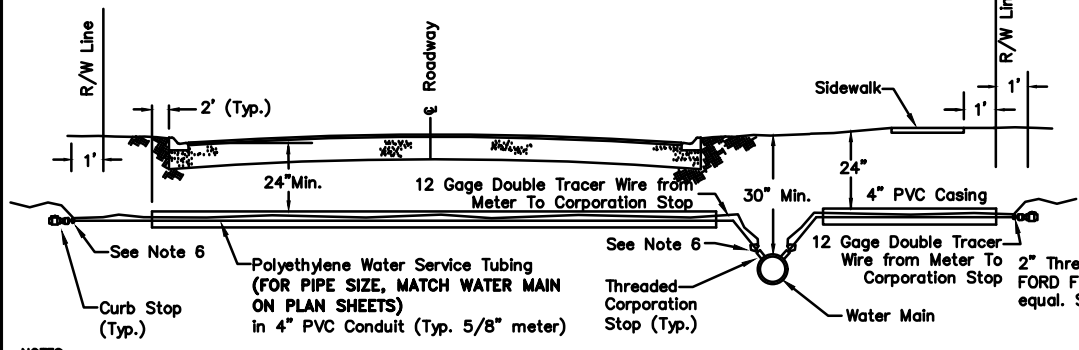
**FIRE HYDRANT ASSEMBLY STANDARD DETAIL**  
N.T.S.

NOTES:  
1. ALL BOLTED FITTINGS ARE TO BE POLYETHYLENE WRAPPED.  
2. IF VALVES ARE TO BE LOCATED WITHIN A PAVED SURFACE OR WITHIN 5' FROM PAVING, IT IS TO BE ENCASED IN A CONCRETE COLLAR.  
3. IF SPACING BETWEEN VALVE AND HYDRANT IS 10 FT. OR GREATER, AN ADDITIONAL VALVE IS TO BE INSTALLED FOR CONTROL OF HYDRANT UNLESS OTHERWISE APPROVED BY THE TOWN OF BELLEAIR OR APPROVED REPRESENTATIVE.



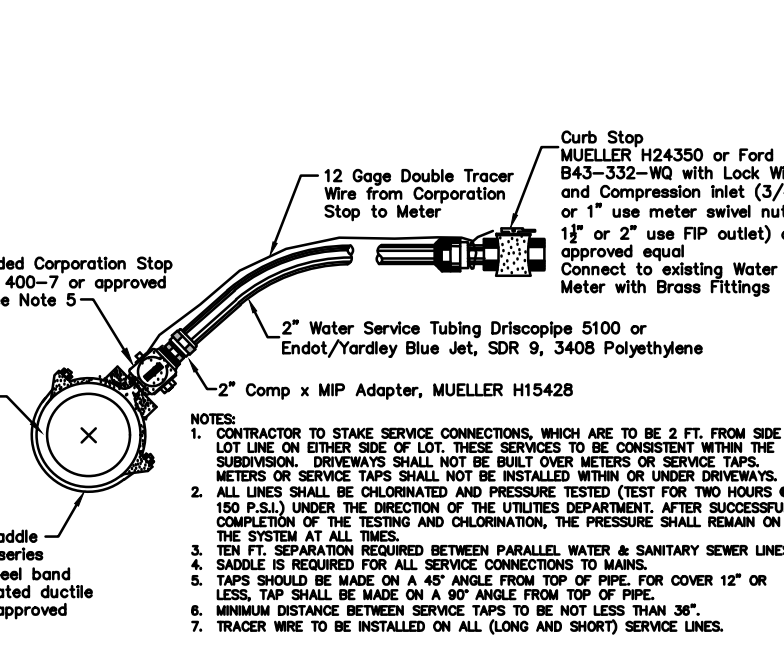
**TYPICAL VALVE & BOX SETTING**  
N.T.S.

NOTE:  
1. NO PVC RISERS ALLOWED



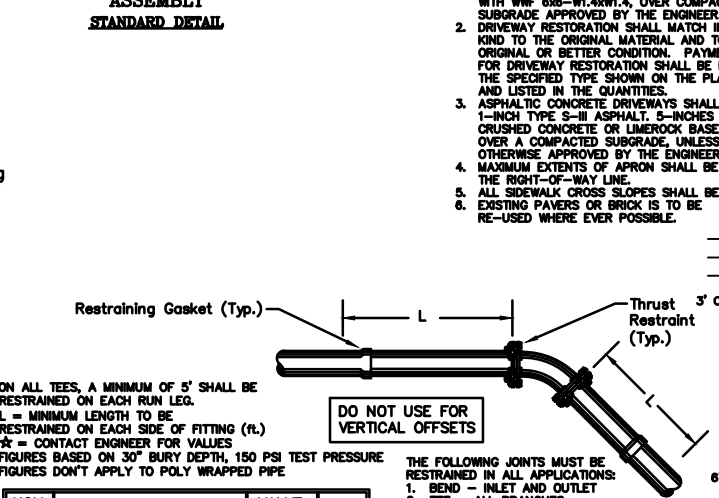
**WATER MAIN SERVICE LINES TYPICAL SECTION**  
N.T.S.

NOTES:  
1. 4" PVC CASING SHALL EXTEND TO CUSTOMER SIDE OF SIDEWALK.  
2. PVC CONDUIT TO BE MIN. 18" BELOW THE SURFACE MEASURED FROM TOP OF FACE OF CURB.  
3. WATER MAINS TO BE MIN. 30" BELOW GRADE AND APPROX. 4' BACK OF CURB.  
4. CURB STOP TO BE LOCATED APPROX. 1 FOOT BACK OF RIGHT-OF-WAY.  
5. SERVICE LINE TO BE MIN. 12" AND MAX. 18" BELOW GRADE.  
6. CONNECT 12 GAGE TRACER WIRE WITH THE WRAPS AT CORPORATION STOP AND AT CURB STOP. PROVIDE 1 FOOT MINIMUM EXCESS LENGTH OF TRACER WIRE IN METER BOX.



**WATER MAIN SERVICE CONNECTION DETAIL**  
N.T.S.

NOTES:  
1. CONTRACTOR TO STAKE SERVICE CONNECTIONS, WHICH ARE TO BE 2 FT. FROM SIDE LOT LINE ON EITHER SIDE OF LOT. THESE SERVICES TO BE CONSISTENT WITHIN THE SUBDIVISION. DRIVEWAYS SHALL NOT BE BUILT OVER METERS OR SERVICE TAPS. METERS OR SERVICE TAPS SHALL NOT BE INSTALLED WITHIN OR UNDER DRIVEWAYS.  
2. ALL LINES SHALL BE CHLORINATED AND PRESSURE TESTED (TEST FOR TWO HOURS @ 150 P.S.I.) UNDER THE DIRECTION OF THE UTILITIES DEPARTMENT. AFTER SUCCESSFUL COMPLETION OF THE TESTING AND CHLORINATION, THE PRESSURE SHALL REMAIN ON THE SYSTEM AT ALL TIMES.  
3. TEN FT. SEPARATION REQUIRED BETWEEN PARALLEL WATER & SANITARY SEWER LINES.  
4. SADDLE IS REQUIRED FOR ALL SERVICE CONNECTIONS TO MAINS.  
5. TAPS SHOULD BE MADE ON A 45° ANGLE FROM TOP OF PIPE. FOR COVER 12" OR LESS, TAP SHALL BE MADE ON A 90° ANGLE FROM TOP OF PIPE.  
6. MINIMUM DISTANCE BETWEEN SERVICE TAPS TO BE NOT LESS THAN 36".  
7. TRACER WIRE TO BE INSTALLED ON ALL (LONG AND SHORT) SERVICE LINES.

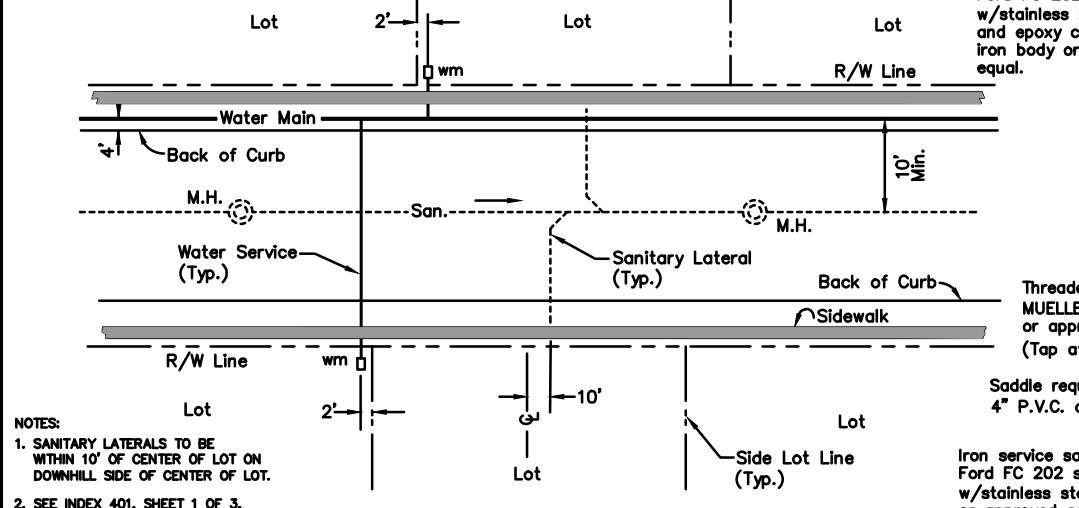
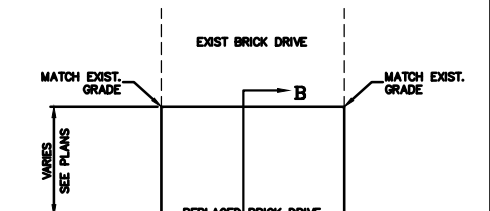
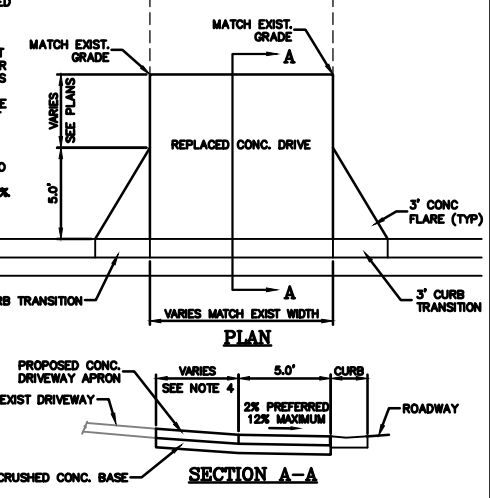


**PIPE THRUST RESTRAINING**  
N.T.S.

ON ALL TEES, A MINIMUM OF 5' SHALL BE RESTRAINED ON EACH RUN LEG.  
L = MINIMUM LENGTH TO BE RESTRAINED ON EACH SIDE OF FITTING (ft.)  
★ = CONTACT ENGINEER FOR VALUES  
FIGURES BASED ON 30" BURY DEPTH, 150 PSI TEST PRESSURE  
FIGURES DON'T APPLY TO POLY WRAPPED PIPE

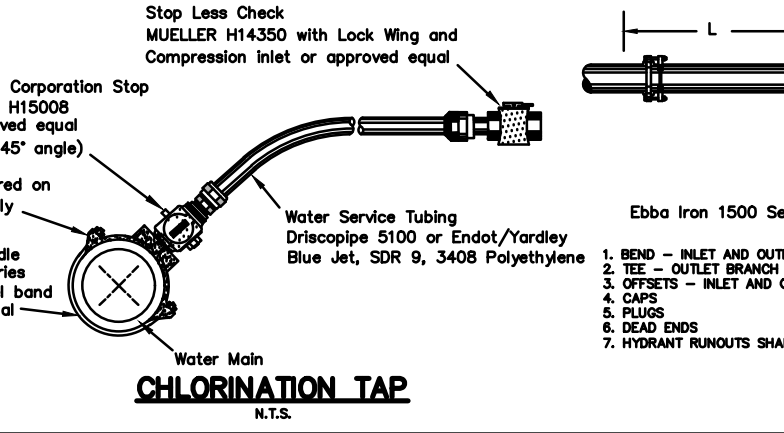
NOM. PIPE SIZE	ELBOWS (deg.)	VALVE TEES BRANCH	DEAD END
4"	2 3 7 17 18 30	90	30
6"	2 5 10 23 30 42	90	42
8"	3 6 12 30 42 54	90	54
**12"	4 8 17 42 ★ 76	90	76
16"	5 10 22 53 ★ 97	90	97
20"	6 13 26 63 ★ 117	90	117

\*\*USE 12" SPECIFICATIONS FOR 10" NOM. PIPE

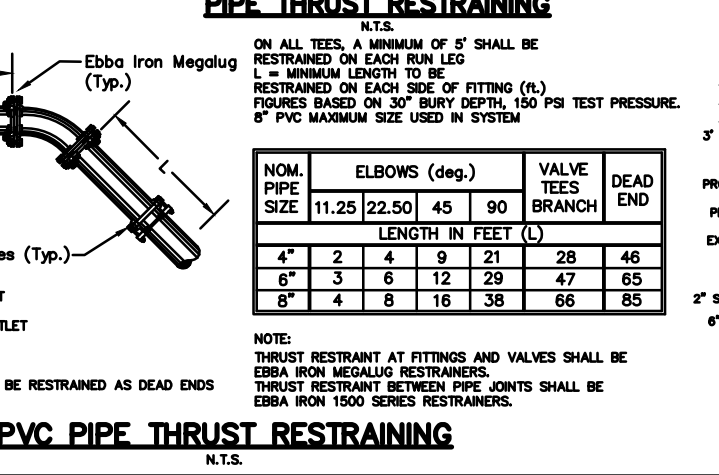


**WATER METER SERVICE LOCATIONS**  
N.T.S.

NOTES:  
1. SANITARY LATERALS TO BE WITHIN 10' OF CENTER OF LOT ON DOWNHILL SIDE OF CENTER OF LOT.  
2. SEE INDEX 401, SHEET 1 OF 3, NOTE 2 REGARDING WATER METER AND SERVICE TAP LOCATIONS UNDER DRIVEWAYS.



**CHLORINATION TAP**  
N.T.S.



**PVC PIPE THRUST RESTRAINING**  
N.T.S.

NOTE:  
THRUST RESTRAINT AT FITTINGS AND VALVES SHALL BE EBBA IRON MEGALUG RESTRAINERS.  
THRUST RESTRAINT BETWEEN PIPE JOINTS SHALL BE EBBA IRON 1500 SERIES RESTRAINERS.

NOM. PIPE SIZE	ELBOWS (deg.)	VALVE TEES BRANCH	DEAD END
4"	2 4 9 21 28 46	90	46
6"	3 6 12 29 47 65	90	65
8"	4 8 16 38 66 85	90	85

DESIGN:	APC
DRAWN:	DES
CHECKED:	BAB

**DEUEL & ASSOCIATES**  
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CERTIFICATE OF AUTHORIZATION NUMBER 26320  
LICENSED BUSINESS NUMBER 107

**MEHLENBACHER ROAD SUPPLEMENTARY PLANS DETAILS**  
BELLEAIR FLORIDA

I, ALBERT CARRIER, HEREBY CERTIFY AS A LICENSED PROFESSIONAL ENGINEER, REGISTERED IN ACCORDANCE WITH FLORIDA STATUTE 471 (481) THAT THE ABOVE PROJECT'S SITE AND/OR CONSTRUCTION PLANS, TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, WILL MEET APPLICABLE DESIGN CRITERIA SPECIFIED BY CITY MUNICIPAL, ORGANIC, STATE AND FEDERAL ESTABLISHED STANDARDS. I UNDERSTAND THAT IT IS MY RESPONSIBILITY AS THE PROJECT'S PROFESSIONAL ENGINEER TO PERFORM A QUALITY ASSURANCE REVIEW OF THESE SUBMITTED PLANS.

ALBERT P. CARRIER, P.E., 53990

WORK ORDER NO. 2015-188E  
DATE: DECEMBER 18, 2015  
SCALE: NTS  
SHEET NO. 15 OF 15

Jul 01, 2020 11:58am X:\CAD Projects\Projects\2015-188E-Mehlenbacher Rd - W\replacement plans\Engineering\Acad\2015-188E.dwg