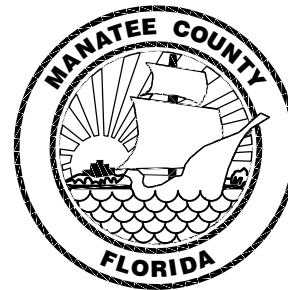


# CLEARVIEW MANOR WATERLINE IMPROVEMENTS

PREPARED FOR:  
**MANATEE COUNTY**



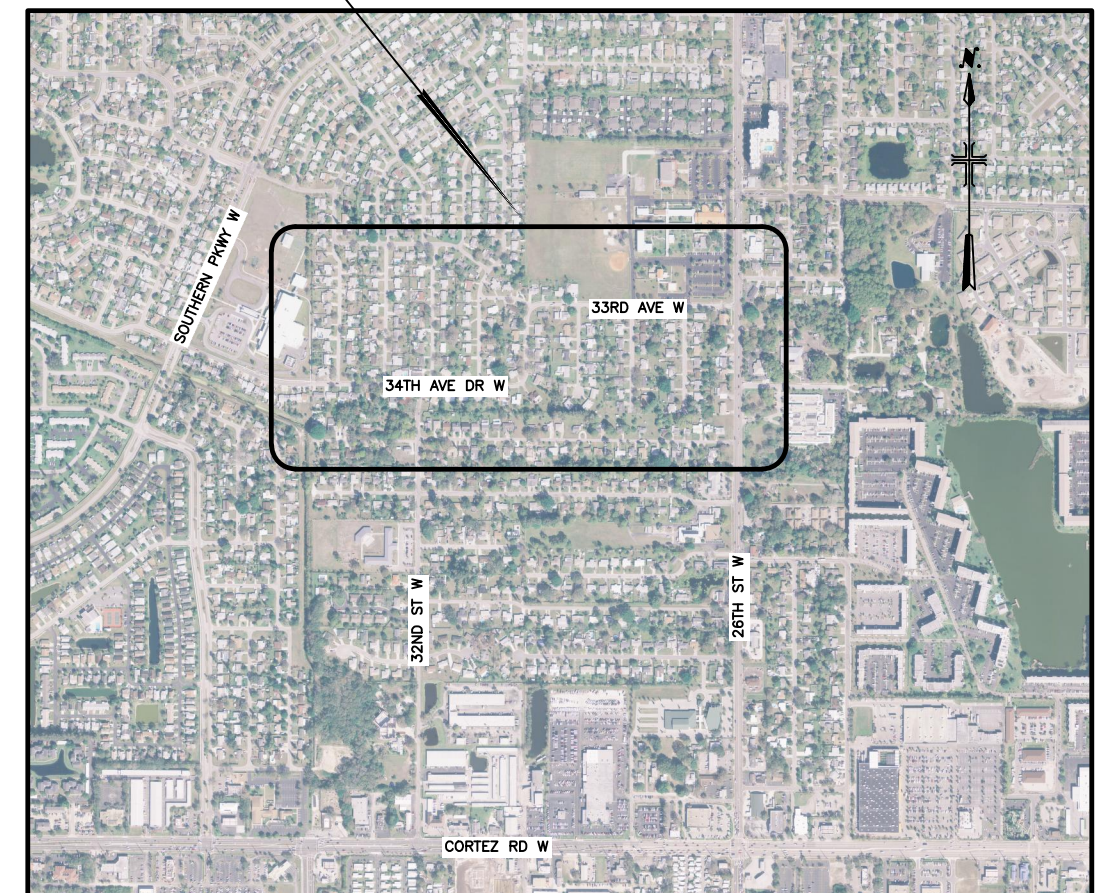
## BRADENTON, FLORIDA

**MARCH 2010**

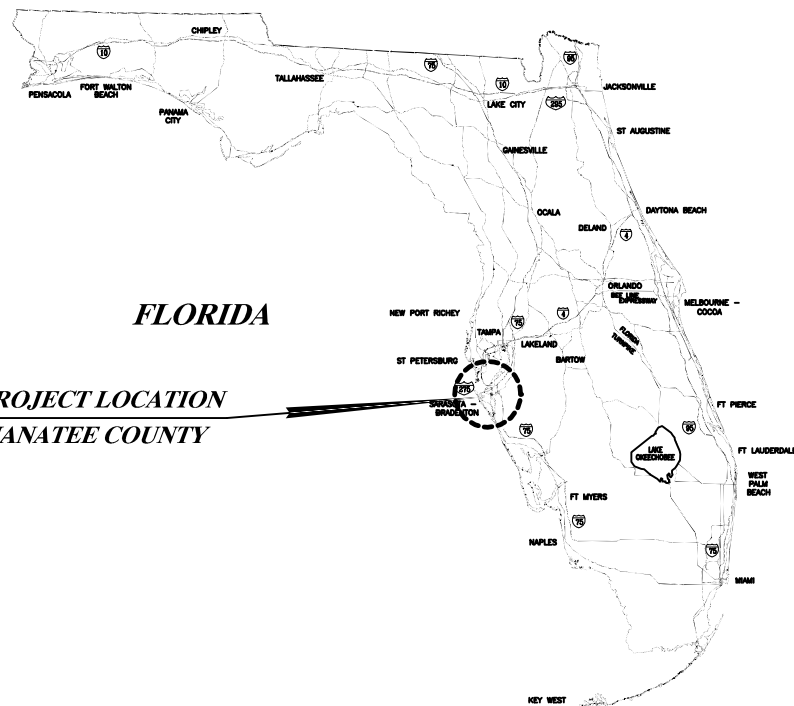
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### PROJECT LOCATION



VICINITY MAP  
NOT TO SCALE



PROJECT LOCATION  
MANATEE COUNTY

48 HOURS BEFORE DIGGING  
CALL SUNSHINE  
FOR FREE  
1 800 432 4770  
UNDERGROUND UTILITIES NOTIFICATION  
CENTER OF FLORIDA

PREPARED BY:

MALCOLM  
PIRNIE

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MAITLAND, FLORIDA 32751

**BID SET**

**GENERAL NOTES:**

1. THE INFORMATION PROVIDED IN THESE DRAWINGS IS SOLELY TO ASSIST THE CONTRACTOR IN ASSESSING THE NATURE AND EXTENT OF CONDITIONS THAT MIGHT BE ENCOUNTERED DURING THE COURSE OF THE WORK. THE BIDDERS ARE DIRECTED, PRIOR TO BIDDING, TO CONDUCT WHATEVER INVESTIGATIONS THEY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSIONS REGARDING THE ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED, AND UPON WHICH THEIR BIDS WILL BE BASED.
2. THE CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION STAKING TO INCLUDE HORIZONTAL AND VERTICAL CONTROL FOR ALIGNMENT OF WORK. ALL SURVEY WORK TO ESTABLISH THE HORIZONTAL AND VERTICAL CONTROL SHALL BE UNDER THE GUIDANCE AND DIRECT SUPERVISION OF A REGISTERED PROFESSIONAL SURVEYOR AND MAPPER.
3. RIGHTS-OF-WAY AND PROPERTY LINES SHOWN IN THESE DRAWINGS ARE BASED ON PROPERTY APPRAISERS MAPS MALCOLM PIRNIE, INC. DOES NOT PURPORT TO THE ACCURACY OF THE INFORMATION. CONTRACTOR SHALL UTILIZE A REGISTERED LAND SURVEYING FIRM TO ESTABLISH RIGHT OF WAY, PROPERTY, & EASEMENT LINES PRIOR TO CONSTRUCTION ACTIVITIES.
4. FIELD CONDITIONS MAY NECESSITATE ALIGNMENT AND GRADE DEVIATION OF THE PROPOSED UTILITIES TO AVOID OBSTACLES, AS DIRECTED BY THE ENGINEER.
5. USE TEMPORARY SHEETING OR TRENCH BOXES TO MINIMIZE THE SIZE OF THE EXCAVATIONS AND TO PROTECT ADJACENT EXISTING ROADWAYS, UTILITIES AND OTHER FACILITIES. THERE SHALL BE NO ADDITIONAL COST TO THE OWNER UNLESS THE CONTRACTOR IS DIRECTED TO LEAVE THE SHEETING IN PLACE. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED SHEETING AND TRENCH SHORING, AS REQUIRED, TO MINIMIZE TRENCH WIDTH AND PROTECT EXISTING UTILITIES THAT ARE INTENDED TO REMAIN IN SERVICE.
6. ALL TREES, SHRUBS, ETC., OUTSIDE CONSTRUCTION LIMITS SHALL BE PROTECTED. NO TREES LARGER THAN FOUR INCHES (4") IN DIAMETER AT BREAST HEIGHT SHALL BE DESTROYED WITHOUT PRIOR APPROVAL OF THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF DAMAGED TREES WITH TREES OF SIMILAR QUANTITIES AND SPECIES, SIZED AT THE DIRECTION OF ENGINEER AT NO COST. PROTECTION OF OTHER FLORA AND FAUNA ON THE CONSTRUCTION SITE WILL BE AT THE COST AND THE RESPONSIBILITY OF THE CONTRACTOR.
7. EXISTING SPRINKLER/IRRIGATION SYSTEMS ARE NOT SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL TAKE PRECAUTIONARY MEASURES TO PREVENT DAMAGE TO EXISTING FACILITIES AND SHALL BE RESPONSIBLE FOR THE REPAIR OF ALL SUCH DAMAGE AT NO ADDITIONAL COST TO THE OWNER.
8. EXISTING UTILITY SERVICE LATERALS ARE NOT SHOWN ON THE DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD LOCATE ALL SERVICE LATERALS PRIOR TO CONSTRUCTION. UTILITY SERVICES SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
9. THE CONTRACTOR SHALL PROVIDE AT LEAST FORTY EIGHT (48) HOURS NOTICE TO EXISTING UTILITY COMPANIES IN ORDER TO ALLOW FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES IN ADVANCE OF CONSTRUCTION. THE CONTRACTOR SHALL CONTACT THE INDIVIDUAL UTILITY COMPANIES AND/OR "SUNSHINE STATE ONE CALL" 48 HOURS PRIOR TO OPERATIONS AT 1-800-432-4770.
10. TRENCHES AND CASINGS SHALL BE MAINTAINED FREE OF WATER BY APPROVED DEWATERING TECHNIQUES AT ALL TIMES DURING PIPE INSTALLATION.
11. THE CONTRACTOR SHALL COORDINATE WITH ELECTRIC COMPANY AND OTHER OVERHEAD UTILITIES TO OBTAIN SUPPORT FOR UTILITY POLES WHERE CONSTRUCTION MAY CAUSE THE POLE TO LOSE ITS SUPPORT.
12. IF IT IS NECESSARY TO SHORE, BRACE OR SWING A UTILITY, CONTACT THE UTILITY COMPANY OR DEPARTMENT AFFECTED AND OBTAIN THEIR PERMISSION REGARDING THE METHOD TO USE FOR SUCH WORK. ALL COSTS RELATED TO SERVICE, MAINTENANCE, INTERRUPTION, REPAIR, RELOCATION AND RESTORATION ARE TO BE INCLUDED IN THE CONTRACTOR'S BID. ANY DELAY OR INCONVENIENCE CAUSED TO THE CONTRACTOR BY THE VARIOUS UTILITIES SHALL BE INCIDENTAL TO THE CONTRACT, AND NO EXTRA COMPENSATION SHALL BE PAID. CONTRACTOR IS ADVISED TO REFERENCE ASCE SUBSURFACE UTILITY ENGINEERING STANDARD.
13. UNLESS OTHERWISE SPECIFIED, THE CONTRACTOR SHALL REPLACE ALL EXISTING PAVEMENT, STABILIZED EARTH, CURBS, DRIVEWAYS, SIDEWALKS, DRAINAGE CULVERTS, LANDSCAPING, FENCES, MAILBOXES, IRRIGATION SYSTEMS, ROADWAY/TRAFFIC SIGNS, AND OTHER ITEMS DISTURBED BY CONSTRUCTION TO A CONDITION EQUAL TO OR BETTER THAN PRE-CONSTRUCTION CONDITIONS. CONTRACTOR SHALL REPAINT/RESTRIPE ALL RESURFACED PAVEMENT TO MATCH PRE-CONSTRUCTION CONDITIONS.
14. ALL SIDEWALK THAT BECOMES UNDERMINED OR DAMAGED MUST BE REMOVED AND REPLACED. SIDEWALKS ARE TO BE RECONSTRUCTED WITHIN TWO (2) WEEKS AFTER REMOVAL UNLESS OTHERWISE APPROVED BY THE ENGINEER. WHEN EXISTING SIDEWALK IS REMOVED, IT IS TO BE REMOVED TO THE NEAREST JOINT. ALL SIDEWALK RECONSTRUCTION SHALL BE HANDICAP ACCESSIBLE AND SHALL MEET OR EXCEED THE MOST RECENT ADA AND FLORIDA ACCESSIBILITY STANDARDS. SEE DETAIL SHEETS FOR SIDEWALK DETAIL.
15. CONTRACTOR SHALL MAINTAIN PEDESTRIAN AND VEHICULAR TRAFFIC PER MANATEE COUNTY AND FLORIDA DEPARTMENT OF TRANSPORTATION REQUIREMENTS. CONTRACTOR SHALL PROVIDE ALL WARNING SIGNALS, SIGNS, LIGHTS, AND FLAG MEN AS REQUIRED BY FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN STANDARDS ON TRAFFIC CONTROL & SAFE PRACTICES, (FDOT INDEX SERIES 600 - 650), TO ENSURE SAFE PASSAGE OF VEHICULAR AND PEDESTRIAN TRAFFIC DURING CONSTRUCTION ACTIVITIES.
16. CONTRACTOR SHALL COMPLY WITH THE "TRENCH SAFETY ACT", CHAPTER 90-96, FLORIDA STATUTES.
17. CONTRACTOR SHALL END PAVEMENT OVERLAY OUTSIDE OF INTERSECTING ROADS AND DRIVEWAYS.
18. ALL STORM SEWER PIPES, CATCH BASINS, OR MANHOLES THAT BECOME UNDERMINED OR DAMAGED SHALL BE REMOVED AND REPLACED TO COUNTY APPROVED STANDARDS, AT NO ADDITIONAL COST.
19. TRAFFIC MAINTENANCE FOR DIRECTIONAL DRILL OR JACK AND BORING ROAD CROSSING SHALL COMPLY WITH THE LATEST FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN STANDARDS.
20. CONTRACTOR SHALL USE EXTREME CAUTION AROUND ALL BURIED AND AERIAL ELECTRICAL FACILITIES.
21. AREAS DISTURBED BY WATER MAIN INSTALLATION SHALL BE RESTORED TO THEIR ORIGINAL CONDITIONS. GRASSED AREAS SHALL BE RESTORED WITH SOD PER MANATEE COUNTY. TYPE OF SOD SHALL MATCH EXISTING.
22. ALL TRIMMING UNDERTAKEN ON A TREE PROTECTED BY THE PROVISION OF THE LAND DEVELOPMENT CODE SHALL BE IN ACCORDANCE WITH THE AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) A-300 PRUNING STANDARDS AND ADMINISTERED BY A CERTIFIED ARBORIST.
23. DURING LAND ALTERATION AND CONSTRUCTION ACTIVITIES, WITHIN THE DRIPLINE OF A TREE REMAINING ON SITE, UNLESS OTHERWISE APPROVED BY THE COUNTY: IT SHALL BE UNLAWFUL TO REMOVE VEGETATION, EXCEPT BY HAND, BY GRUBBING OR TO PLACE SOIL DEPOSITS, DEBRIS, SOLVENTS, CONSTRUCTION MATERIAL, MACHINERY OR OTHER EQUIPMENT OF ANY KIND WITHIN THE DRIPLINE OF A TREE TO REMAIN ON THE SITE.
24. AVOID INSTALLATION WITHIN THE DRIP LINE OF ALL TREES. USE CAUTION AROUND TREES BY HAND DIGGING OR ROOT PRUNING WITH GUIDANCE FROM A CERTIFIED ARBORIST.

**PROJECT NOTES:**

1. ALL WORK PERFORMED SHALL BE IN FULL COMPLIANCE WITH THE REQUIREMENTS OF MANATEE COUNTY, ENGINEER, FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION/HRS, FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) AND ALL OTHER AGENCIES WHICH MAY EXERT JURISDICTION. WHEN CONFLICTS OCCUR BETWEEN REQUIREMENTS SHOWN ON THESE DRAWINGS/SPECIFICATIONS AND REGULATORY CRITERIA, THE MORE STRINGENT REQUIREMENT SHALL PREVAIL. THE CONTRACTOR SHALL VERBALLY BRING ANY CONFLICT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY, FOLLOWED BY AN OFFICIAL WRITTEN NOTIFICATION WITHIN 24 HOURS.
2. ALL INFORMATION REGARDING EXISTING CONDITIONS SHOWN ON THESE CONSTRUCTION DRAWINGS HAS BEEN FURNISHED TO THE ENGINEER BY, MANATEE COUNTY AS-BUILT DRAWINGS FOR THE AREA.
3. DETERMINING THE ACTUAL LOCATION OF ANY EXISTING UTILITIES IS THE CONTRACTOR'S RESPONSIBILITY. BEFORE COMMENCING WORK, IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES WHICH MAY HAVE BURIED OR AERIAL UTILITIES WITHIN OR NEAR THE CONSTRUCTION AREA. (PROVIDE 48 HOURS MINIMUM NOTICE TO ALL UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION). THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE OWNER AND ENGINEER ASSUME NO LIABILITY FOR ANY DAMAGES SUSTAINED OR COSTS INCURRED BECAUSE OF THE CONTRACTOR'S OPERATIONS IN THE VICINITY OF EXISTING UTILITIES OR STRUCTURES, NOR FOR TEMPORARY BRACING AND SHORING OF SAME. SCHEDULE AND EXECUTE ALL WORK INVOLVING EXISTING UTILITIES IN ORDER TO MINIMIZE INTERRUPTION OF SERVICES. WHENEVER SUCH INTERRUPTION IS NECESSARY FOR COMPLETION OF THE WORK, NOTIFY THE ENGINEER AND THE OWNER AT LEAST 48 HOURS IN ADVANCE. ALL WORK TO REPAIR/RESTORE UTILITY SERVICE SHALL BE PERFORMED AS REQUIRED BY THE APPROPRIATE UTILITY. IF IT IS NECESSARY TO SHORE, BRACE, OR SWING A UTILITY, CONTACT THE UTILITY COMPANY OR DEPARTMENT AFFECTED AND OBTAIN THEIR PERMISSION REGARDING THE METHOD TO USE FOR SUCH WORK. ALL COSTS RELATED TO SERVICE, MAINTENANCE, INTERRUPTION, REPAIR, RELOCATION AND RESTORATION ARE TO BE INCLUDED IN THE CONTRACTOR'S BID. ANY DELAY OR INCONVENIENCE CAUSED TO THE CONTRACTOR BY THE VARIOUS UTILITIES SHALL BE INCIDENTAL TO THE CONTRACT, AND NO EXTRA COMPENSATION SHALL BE PAID.
4. THE ENGINEER HAS SECURED THE FOLLOWING PERMITS FOR THE PROJECT:
  - A. FDEP/MANATEE COUNTY HEALTH DEPARTMENT GENERAL PERMIT FOR CONSTRUCTION OF WATER MAIN EXTENSION FOR PWSs.
  - B. FDEP GENERIC PERMIT FOR STORMWATER DISCHARGE.

THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND PAYING FOR ALL OTHER PERMITS WHICH MAY BE REQUIRED THAT PERTAIN TO HIS CONTRACTED WORK. SUCH PERMITS SHALL BE OBTAINED BY THE CONTRACTOR PRIOR TO THE CONTRACTOR BEGINNING WORK ON THE PORTION OF THE PROJECT REQUIRING SAID PERMITS. AS THIS PROJECT IS LOCATED WITHIN BOTH MANATEE COUNTY AND CITY OF BRADENTON, A RIGHT-OF-AWAY PERMIT WILL BE REQUIRED TO BE OBTAINED FROM BOTH THE COUNTY AND CITY FOR THE SPECIFIC PIPE SEGMENT IN EACH JURISDICTION.
5. THE CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION STAKING TO INCLUDE HORIZONTAL AND VERTICAL CONTROL FOR ALIGNMENT OF WORK. ALL SURVEY WORK TO ESTABLISH THE HORIZONTAL AND VERTICAL CONTROL SHALL BE UNDER THE GUIDANCE AND DIRECT SUPERVISION OF A FLORIDA REGISTERED PROFESSIONAL SURVEYOR AND MAPPER, PER FLORIDA ADMINISTRATIVE CODE, CHAPTER 61G17-6, "MINIMUM TECHNICAL STANDARDS."
6. ALL TREES, SHRUBS, ETC., ALONG THE LINES OF CONSTRUCTION SHALL BE PROTECTED WHERE POSSIBLE UNLESS NOTED OTHERWISE ON THE DRAWINGS. NO TREES LARGER THAN THREE INCHES (3") IN DIAMETER SHALL BE DESTROYED WITHOUT PRIOR APPROVAL OF THE ENGINEER AND OWNER.
7. RESTORE ALL PRIVATE AND PUBLIC PROPERTY AFFECTED BY THIS WORK TO A CONDITION EQUAL TO OR BETTER THAN EXISTED BEFORE COMMENCING CONSTRUCTION WORK, UNLESS SPECIFICALLY EXEMPTED BY THE DRAWINGS. RESTORATION WORK INCLUDES, BUT IS NOT LIMITED TO PAVEMENT, BASE, SUBGRADE, CONCRETE CURBS, THERMOPLASTIC TRAFFIC MARKINGS, SIDEWALKS, STORM WATER PIPE, ETC. ALL RESTORATION WORK SHALL BE PER FDOT STANDARDS AND SPECIFICATIONS AND FDOT PERMIT REQUIREMENTS. IF THERE IS A CONFLICT WITH FDOT REQUIREMENTS AND THE CONTRACT DOCUMENTS, THE MORE STRINGENT REQUIREMENT SHALL GOVERN. IF ADDITIONAL TOPOGRAPHY OR ANY OTHER INFORMATION IS NECESSARY FOR THE CONTRACTOR TO RECONSTRUCT ALL FACILITIES TO PRE CONSTRUCTION GRADES AND DIMENSIONS, THE ACQUISITION OF SUCH ADDITIONAL INFORMATION SHALL BE THE CONTRACTOR'S RESPONSIBILITY, AND AT HIS EXPENSE. RECONSTRUCT ALL FACILITIES TO PRECONSTRUCTION GRADES AND DIMENSIONS, UNLESS OTHERWISE NOTED. WATER, FERTILIZE AND SUPPLY ALL ITEMS AND CARE NECESSARY TO MAINTAIN THE HEALTH OF ALL NEW VEGETATION AND VEGETATION REMOVED AND REPLACED, AT NO EXPENSE TO THE OWNER, IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
8. THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC MAINTENANCE IN ACCORDANCE WITH THE SPECIFICATIONS, U.S. DEPARTMENT OF TRANSPORTATION'S "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES," FLORIDA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS AND OTHER GOVERNING AGENCY'S SPECIFICATIONS. IN THE EVENT OF A CONFLICT, THE MORE STRINGENT SPECIFICATION OR REQUIREMENT SHALL GOVERN. PROVIDE ALL NECESSARY BARRICADES, WARNING SIGNS, DELINEATORS, FLAGMEN, PILOT CARS, ETC., REQUIRED FOR TRAFFIC CONTROL AND/OR MAINTENANCE.
9. PROVIDE ANY TEMPORARY CONTROLS AND/OR STRUCTURES REQUIRED TO MAINTAIN SUITABLE AND SAFE WORKING CONDITIONS AT ALL TIMES. SUCH ITEMS SHALL BE REMOVED ONCE THAT PORTION OF WORK HAS BEEN COMPLETED.
10. STORE CONSTRUCTION EQUIPMENT AND MATERIALS ONLY IN THOSE AREAS APPROVED BY THE OWNER. SECURITY OF CONSTRUCTION EQUIPMENT AND MATERIALS IS THE RESPONSIBILITY OF THE CONTRACTOR. PUBLIC RIGHTS-OF-WAY MAY NOT BE UTILIZED FOR STORAGE OF EQUIPMENT OR MATERIALS WITHOUT PRIOR WRITTEN APPROVAL FROM THE ENTITY WHICH OWNS THE RIGHT-OF-WAY.

11. UPON COMPLETION OF THE PROJECT, PROVIDE A AS-BUILT SURVEY OF ALL IMPROVEMENTS IN AUTOCAD 2000 FORMAT. THE AS-BUILT SURVEY MUST BE PREPARED BY A FLORIDA REGISTERED SURVEYOR AND MAPPER IN ACCORDANCE WITH THE STATE OF FLORIDA ADMINISTRATIVE CODE, CHAPTER 61G17-6, "MINIMUM TECHNICAL STANDARDS". AS A MINIMUM, AS-BUILT DRAWINGS FOR PIPELINE CONSTRUCTION SHALL SHOW CONSTRUCTED HORIZONTAL AND VERTICAL LOCATIONS OF ALL BENDS, FITTINGS AND VALVES, AND ELEVATIONS AT ALL LOCATIONS WHERE PROPOSED DESIGN ELEVATIONS ARE SHOWN ON THE DRAWINGS. THE AS-BUILT SURVEY SHALL BE TIED INTO THE STATE PLANE COORDINATE SYSTEM.
12. THE STATIONS FOR PROPOSED WATER MAIN ARE APPROXIMATE.
13. SPECIAL EMPHASIS ON EXCAVATION SAFETY AND TRENCH CONSTRUCTION:
  - A. OSHA'S EXCAVATION SAFETY STANDARDS 29, CFR PART 1926.650-652 SUBPART P, AS WELL AS FLORIDA'S TRENCH SAFETY ACT (FLORIDA STATUTE 90-96) ARE CONSIDERED AS COMPLIMENTARY TO THESE CONTRACT DOCUMENTS. IF THERE IS ANY DUPLICATION, REDUNDANCY OR CONFLICT BETWEEN THE STIPULATIONS OF THESE CONTRACT DOCUMENTS AND THOSE STANDARDS, THE MOST STRINGENT REQUIREMENT SHALL GOVERN. THE CONTRACTOR SHALL ALSO COMPLETE THE FLORIDA TRENCH SAFETY ACT STATEMENT PROVIDED IN THE CONTRACT DOCUMENTS.
  - B. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT EXCAVATIONS DO NOT ENDANGER WORKMEN, EXISTING STRUCTURES, UTILITIES, OR OTHER FACILITIES. IF SUCH CONDITIONS OCCUR WHICH MAY ENDANGER WORKMEN, EXISTING STRUCTURES, UTILITIES, OR OTHER FACILITIES, IMMEDIATELY INSTALL AND MAINTAIN ADEQUATE SHEETING AND BRACING PER OSHA SPECIFICATIONS. CEASE ALL WORK UNTIL THE SHEETING AND BRACING HAS BEEN PROPERLY AND COMPLETELY INSTALLED. INSTALL THE SHEETING AND BRACING IN A MANNER THAT WILL ALLOW REMOVAL WITHOUT INJURING OR ENDANGERING WORKMEN, THE WORK, ADJACENT STRUCTURES, AND THE LIKE. PROMPTLY AND COMPLETELY FILL ALL VOIDS CAUSED BY THE WITHDRAWAL OF SHEETING WITH SAND AND COMPACT TO A DEGREE EQUAL TO THE SURROUNDING SOIL. REMOVE THE SHEETING AS THE WORK PROGRESSES OR, AT THE DISCRETION OF THE ENGINEER, CUT THE SHEETING OFF BELOW FINISHED GRADE AND LEAVE IN PLACE.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND RELOCATING ALL INFORMATION AND TRAFFIC SIGNS TEMPORARILY DURING CONSTRUCTION. SIGN SHALL BE VISIBLE TO MOTORIZED VEHICLES. REPOSITION SIGNS IN PRE-CONSTRUCTION LOCATION IMMEDIATELY AFTER CONSTRUCTION IS COMPLETED.
15. THE CONTRACTOR SHALL MAINTAIN ACCESS TO PRIVATE PROPERTY AT ALL TIMES.
16. ALL AFFECTED GRASSED AREAS SHALL BE RESTORED WITH THE APPLICATION OF ARGENTINE BAHIA SOD OR IDENTICAL SOD AS IN PRE-CONSTRUCTION. ANY SOD LAID ON A INCLINE SHALL BE PROPERLY PINNED.

**BID SET**

**MALCOLM PIRNIE**  
 CERTIFICATE OF AUTHORIZATION NO. 67  
 INDEPENDENT ENVIRONMENTAL ENGINEERS,  
 SCIENTISTS & CONSULTANTS  
 2301 MAITLAND CENTER PARKWAY  
 MAITLAND, FLORIDA 32751

REVISIONS			
NO.	BY	DATE	REMARKS

DES VAH  
 DWN SC  
 CKD VAH



MANATEE COUNTY  
**CLEARVIEW MANOR  
 WATERLINE IMPROVEMENTS**

**GENERAL NOTES & PROJECT NOTES**

NO SCALE

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 MALCOLM PIRNIE, INC.  
 DATE MARCH 2010  
 G2 SHEET \_\_\_\_ OF \_\_\_\_  
 CAD REF. NO. \_\_\_\_\_

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**EROSION CONTROL NOTES:**

- NO UNAUTHORIZED DISTURBANCE OF EXISTING WETLANDS WILL BE PERMITTED. TEMPORARILY INSTALL SILT FENCES, BARRIERS OR HAY BALES IMMEDIATELY ADJACENT TO AND UPLAND FROM ALL EXISTING WETLANDS PRIOR TO CONSTRUCTION ACTIVITIES WHICH MIGHT IMPACT THE WETLANDS. REMOVE ALL WETLAND PROTECTION MEASURES AFTER THE PROJECT HAS BEEN ACCEPTED BY THE OWNER. PERFORM THIS WORK AT NO EXPENSE TO THE OWNER AND COMPLY WITH FLORIDA DEPARTMENT OF TRANSPORTATION'S "ROADWAY AND TRAFFIC DESIGN STANDARDS", INDEX No. 102, LATEST EDITION.
- ALL CONSTRUCTION ACTIVITIES SHALL INCORPORATE BEST MANAGEMENT PRACTICES TO CONTROL EROSION, SEDIMENTATION, AND THE POTENTIAL FOR DOWNSTREAM WATER QUALITY DEGRADATION. CONSTRUCTION PRACTICES INCLUDE:
  - CONSTRUCT TEMPORARY SEDIMENTATION BASINS OR EARTHEN BERMS AT DOWN-GRADIENT ENDS OF NEWLY GRADED AREAS TO PROVIDE FOR SEDIMENT AND TURBIDITY REMOVAL.
  - LIMIT SITE CLEARING TO THOSE AREAS REQUIRED FOR A PARTICULAR PHASE OF CONSTRUCTION. EXISTING TREES AND VEGETATION TO REMAIN WHEREVER POSSIBLE.
  - TURBIDITY BARRIERS, HAY BALES AND OTHER EROSION CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL CONSTRUCTION ACTIVITIES ARE COMPLETE AND THE POTENTIAL FOR EROSION IS ELIMINATED.
- SEED AND MULCH (LAKE, DITCH AND SWALE BANKS) AS SOON AS POSSIBLE AFTER CONSTRUCTION IN ORDER TO STABILIZE THE SLOPES AND MINIMIZE EROSION. IN AREAS DELINEATED AS "WETLANDS," REVEGETATE IN ACCORDANCE WITH PERMIT CONDITIONS.
- DO NOT EMPLOY SILT FENCES IN A MANNER TO CAUSE THEM TO ACT AS A DAM ACROSS PERMANENTLY FLOWING WATERCOURSES. USE SILT FENCES AT UPLAND LOCATIONS, AND TURBIDITY BARRIERS IN PERMANENT WATER BODIES, REGARDLESS OF WATER DEPTH.
- TURBIDITY BARRIERS FOR STREAMS AND CREEKS MAY BE EITHER FLOATING OR STAKED TYPE, OR ANY COMBINATION OF TYPES THAT WILL SUIT SITE CONDITIONS, AND MEET EROSION CONTROL AND WATER QUALITY REQUIREMENTS. INSTALL POSTS IN STAKED TURBIDITY BARRIERS IN THE VERTICAL POSITION UNLESS OTHERWISE NOTED.

**GENERAL NOTES FOR UTILITY CONSTRUCTION**

- UNDER NO CIRCUMSTANCES SHALL PIPE BE LAID IN A WET TRENCH OR STRUCTURES BE CONSTRUCTED IN A WET EXCAVATION. DEWATERING SHALL BE INCLUDED IN THE CONTRACTOR'S BID PRICE.
- THE PIPE SHALL BE INSTALLED TO THE GRADE AND ELEVATIONS SHOWN ON THE CONSTRUCTION DRAWINGS. CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE DURING PIPELINE CONSTRUCTION.
- IF NECESSARY, USE TEMPORARY SHEETING OR TRENCH BOXES TO MINIMIZE THE SIZE OF THE EXCAVATIONS AND TO PROTECT ADJACENT EXISTING ROADWAYS, UTILITIES AND OTHER FACILITIES. THERE SHALL BE NO ADDITIONAL COST TO THE OWNER UNLESS THE CONTRACTOR IS DIRECTED TO LEAVE THE SHEETING IN PLACE.
- BACKFILL ALL TRENCHES AT THE END OF EACH DAYS WORK. NO TRENCH SHALL BE LEFT OPEN OVERNIGHT. THE ENDS OF ALL PIPE SHALL BE PLUGGED AT THE CLOSE OF EACH DAYS WORK.
- ALL WATER MAIN PIPE, FITTINGS, VALVES, AND FIRE HYDRANTS SHALL BE IN CONFORMANCE WITH APPLICABLE AMERICAN WATER WORKS ASSOCIATION (AWWA) STANDARDS, AND THE FLORIDA GOVERNMENTAL UTILITY AUTHORITY STANDARDS. ALL PACKING AND JOINTING MATERIALS USED IN THE JOINTS OF WATER MAIN PIPE SHALL BE IN CONFORMANCE WITH APPLICABLE AWWA STANDARDS.
- PRIOR TO CONNECTION TO ACTIVE MAINS AND BEFORE BEING PLACED IN SERVICE, ALL PRESSURE PIPELINES SHALL BE PRESSURE TESTED AND LEAK TESTED IN ACCORDANCE WITH AWWA STANDARD C600 AND THE CONTRACT DOCUMENTS. AFTER PASSING PRESSURE AND LEAKAGE TESTS, ALL PRESSURE PIPELINES SHALL BE FLUSHED. WATER MAINS SHALL BE PIGGED BEFORE THEY ARE FLUSHED.
- PRIOR TO CONNECTION TO ACTIVE MAINS, ALL WATER MAINS SHALL ALSO BE DISINFECTED IN ACCORDANCE WITH AWWA STANDARD C651, RULE 62-555.345 FLORIDA ADMINISTRATIVE CODE, AND THE CONTRACT DOCUMENTS.
- NO PIPELINE SHALL BE ACTIVELY CONNECTED TO ANY ACTIVE PIPELINE UNTIL THE NEW LINE HAS BEEN CLEARED FOR SERVICE BY FDEP/HR.
- A LIST OF UTILITY COMPANIES THAT HAVE BEEN CONTACTED IS LOCATED ON THE DRAWINGS AND IS IN NO WAY INTENDED TO LIMIT THE UTILITY COMPANIES THE CONTRACTOR SHOULD CALL. SUNSHINE STATE (800-432-4770) SHOULD BE CALLED FOR ALL LOCATION WORK.
- INSTALL AIR RELEASE VALVES AT ALL HIGH POINTS, REGARDLESS OF WHETHER THEY ARE CALLED FOR ON THE DRAWINGS. COORDINATE ADDITIONAL LOCATIONS W/ENGINEER.
- PERFORM SURFACE RESTORATION IMMEDIATELY FOLLOWING PIPELINE INSTALLATION, INCLUDING ROADWAY, DRIVEWAY, LANDSCAPING, GRASSING OR OTHER. RESHAPE DITCHES TO EXISTING CONTOURS. GRASSING SHALL BE WHERE EXISTING GRASS HAS BEEN DAMAGED BY CONSTRUCTION.
- WHERE PIPES CANNOT BE INSTALLED WITH A MINIMUM EARTH COVER OF 30 INCHES, CONTACT THE ENGINEER FOR DIRECTION.
- ENCASE ALL DUCTILE IRON PIPE, FITTINGS AND VALVES IN POLYETHYLENE PER ANSI/AWWA C105/A21.5 FOR A MINIMUM 20 FEET PERPENDICULAR DISTANCE ON EACH SIDE OF ANY CROSSINGS OF A GAS MAIN; AND ON ANY PORTION OF THE DUCTILE IRON PIPELINE LAID PARALLEL TO AND WITHIN 10 FEET OF ANY GAS MAIN; AND WHERE SHOWN ON THE DRAWINGS.
- WHEN WATER MAIN CROSSES A GAS MAIN, MAINTAIN A MINIMUM 12-INCH VERTICAL SEPARATION BETWEEN THE TWO PIPES. PLACE COMPACTED CLEAN SAND BEDDING BETWEEN THE TWO PIPES. CENTER A 20 FOOT SECTION OF WATER MAIN UNDER THE GAS MAIN.
- NO MACHINE EXCAVATION SHALL BE PERFORMED WITHIN 5 FEET OF A GAS MAIN.
- ALL PROJECT COMPONENTS THAT WILL COME INTO CONTACT WITH POTABLE WATER SHALL BE IN CONFORMANCE WITH AMERICAN NATIONAL STANDARDS INSTITUTE/NSF INTERNATIONAL STANDARD 61.
- THE CONTRACTOR SHALL RESTORE ALL DRIVEWAY OPEN CUTS WITHIN 24 HOURS WITH ALL WEATHER SURFACE UNTIL FINAL RESTORATION IS COMPLETE.
- THE CONTRACTOR SHALL RESTORE DIRT DRIVEWAYS WITHIN 24 HOURS WITH BETTER OR SAME TYPE OF BASE MATERIAL.

**UTILITY CONTACT INFORMATION**

CONTRACTOR SHALL CONTACT THE FOLLOWING AGENCIES PRIOR TO CONSTRUCTION:

- BRIGHT HOUSE NETWORKS**  
5413 E. STATE ROAD 84  
BRADENTON, FL 34208  
TOM WRIGHT  
(941) 748-3816
- TECO/PEOPLES GAS CO.**  
8261 VICO COURT  
SARASOTA, FL 34240  
DAN SHANAHAN  
(941) 332-4030
- VERIZON FLORIDA**  
1701 RINGLING BOULEVARD  
SARASOTA, FL 34236  
(941) 906-6707
- FLORIDA POWER & LIGHT**  
303 HASTINGS ROAD  
ST. AUGUSTINE, FL 32084  
TRACY STERN  
(800) 868-9554

**WATER MAIN NOTES (RAW & POTABLE):**

- MECHANICAL RESTRAINTS SHALL BE PROVIDED AT ALL BENDS UNLESS NOTED OTHERWISE ON PLANS. THE MINIMUM LINEAR FEET RESTRAINED ON BOTH SIDES OF FITTINGS AND VALVES SHALL BE AS SHOWN IN THE RESTRAINED JOINT TABLE ON THESE DRAWINGS.
- CONTRACTOR TO LOCATE UTILITY CONFLICTS AND PROVIDE FITTINGS AND RESTRAINTS AS NECESSARY AHEAD OF PIPELAYING OPERATIONS.
- THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS TO PREVENT PVC PIPE CUTTINGS/FILINGS FROM ENTRY THE PIPING AND SHALL FULLY FLUSH AND DRY THE PIPING SYSTEM PRIOR TO PLACING IT INTO SERVICE.
- THE CONTRACTOR SHALL MAKE ALL PROVISIONS FOR DRAINING ALL WATER/TESTING FLUIDS FROM AND SHALL DRY ALL PIPING SYSTEMS PRIOR TO TURNING OVER THE SYSTEM TO THE OWNER.

**SYMBOL LEGEND**

⊙ BRASS DISC	⊗ SEWER AIR RELEASE VALVE	⊙ STORM DRAIN MH
⊙ MAIL & CAP	⊙ MAIL BOX	← GUY
⊙ CONC MONUMENT	⊕ SOIL BORING (TBJHA)	⊙ GUY POLE
⊕ CHISELED X	⊙ CONC SIGNAL POLE	CLF CHAIN-LINK FENCE
⊕ BENCH MARK	⊙ SIGNAL PULL BOX	WDF WOOD FENCE
⊕ HUB & TACK	⊙ TRAFFIC BOX	-OTL- OVERHEAD TELEPHONE LINE
⊕ IP FIND	⊙ TELEPHONE BOX	-OPL- OVERHEAD POWER LINE
△ PERM. CONTROL POINT	⊙ TELEPHONE MARKER	-G- GAS MAIN
⊙ MAIL	⊙ TELEPHONE POLE	-T- TELEPHONE CABLE
● IRSET	⊙ TCI CABLE MARKER	-FO- FIBER OPTICS CABLE
⊕ IR FIND	⊙ POWER POLE	-ROW- RIGHT-OF-WAY
⊙ FIRE HYDRANT	⊙ ELECTRIC BOX	⊙ SILT FENCE
⊙ SPIGOT	⊙ FPL MH	⊙ EDGE OF PAVEMENT
⊙ SPRINKLER	⊙ CONC POLE	⊙ GATE VALVE
⊙ METER VAULT	⊙ CONC LAMP POLE	⊙ PLUG VALVE
⊙ WATER AIR RELEASE VALVE	⊙ LAMP POLE	⊙ REDUCER
⊙ WATER METER	⊙ GAS MARKER	⊙ TEZ
⊙ WATER VALVE	⊙ GAS METER	⊙ BEND
⊙ CLEAN OUT PLUG	⊙ GAS VALVE	⊙ FIRE HYDRANT ASSEMBLY
⊙ SAN SEWER MH	⊙ CATCH BASIN	23.96 EXISTING SPOT ELEVATION
⊙ SAN VALVE	⊙ CATCH BASIN MH	▨ DIRT DRIVEWAY REPLACEMENT
		▨ CONCRETE DRIVEWAY REPLACEMENT
		▨ ASPHALT DRIVEWAY REPLACEMENT

**BID SET**

**MALCOLM PIRNIE**  
CERTIFICATE OF AUTHORIZATION NO. 67  
INDEPENDENT ENVIRONMENTAL ENGINEERS,  
SCIENTISTS & CONSULTANTS  
2301 MAITLAND CENTER PARKWAY  
MAITLAND, FLORIDA 32751

REVISIONS			
NO.	BY	DATE	REMARKS

DES VAH  
DWN SC  
CKD VAH



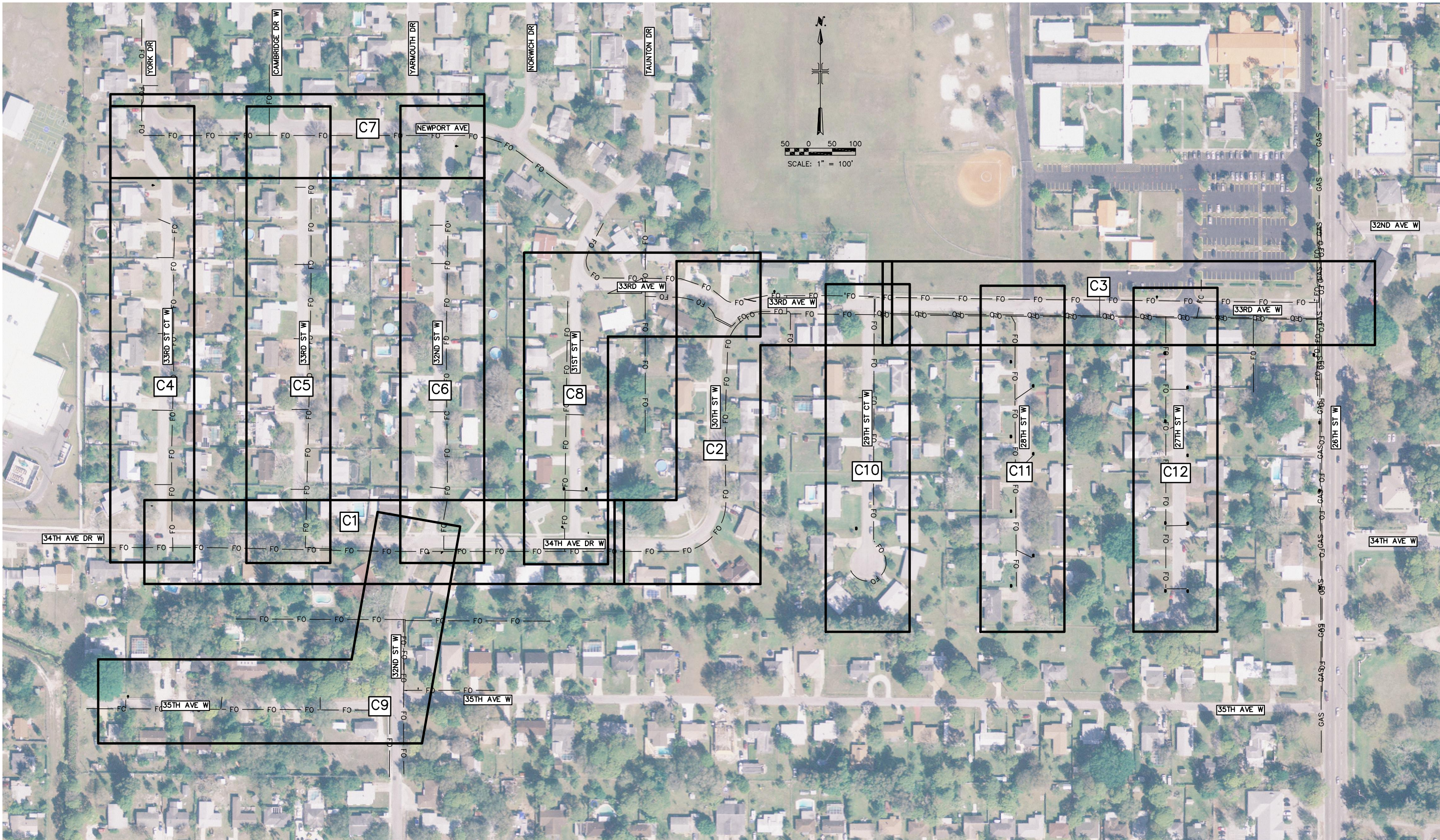
MANATEE COUNTY  
**CLEARVIEW MANOR  
WATERLINE IMPROVEMENTS**

**MISCELLANEOUS NOTES  
& SYMBOL LEGEND**

NO SCALE

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DATE MARCH 2010  
G3 SHEET \_\_\_\_ OF \_\_\_\_  
CAD REF. NO. \_\_\_\_\_

User: CORNELL Spec: PIRNIE STANDARD File: I:\ACAD\PROJ\0132 - Manatee County\0132005-Clearview Manor\Design\0132005-G2-C3.DWG Scale: 1:1 Date: 03/18/2010 Time: 08:25 Layout: G3



NOTE:  
 1. C1 REFERS TO SHEET NUMBER TO VIEW FOR DETAIL OF WATERLINE.

BID SET

**MALCOLM PIRNIE**  
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 INDEPENDENT ENVIRONMENTAL ENGINEERS,  
 SCIENTISTS & CONSULTANTS  
 2301 MAITLAND CENTER PARKWAY  
 MAITLAND, FLORIDA 32751

VICTOR A. HURLBURT  
 FLORIDA P.E. NO. 33836

REVISIONS			
NO.	BY	DATE	REMARKS

DES SC  
 DWN SC  
 CKD VAH



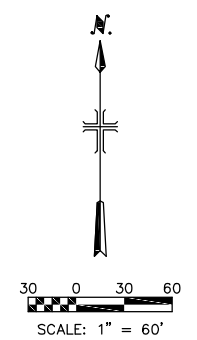
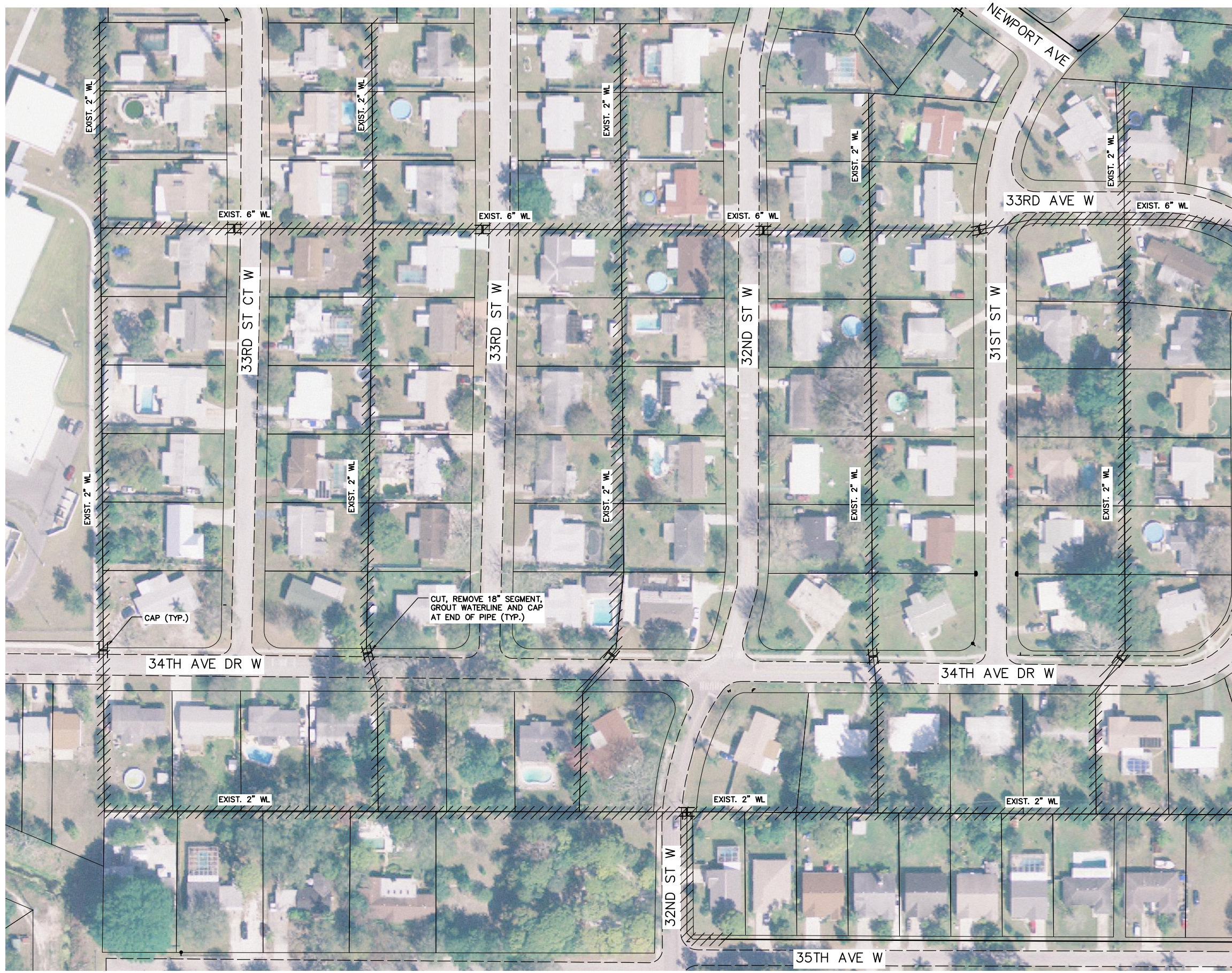
MANATEE COUNTY  
**CLEARVIEW MANOR  
 WATERLINE IMPROVEMENTS**


**KEY MAP**

SCALE: 1" = 100'

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 DATE MARCH 2010  
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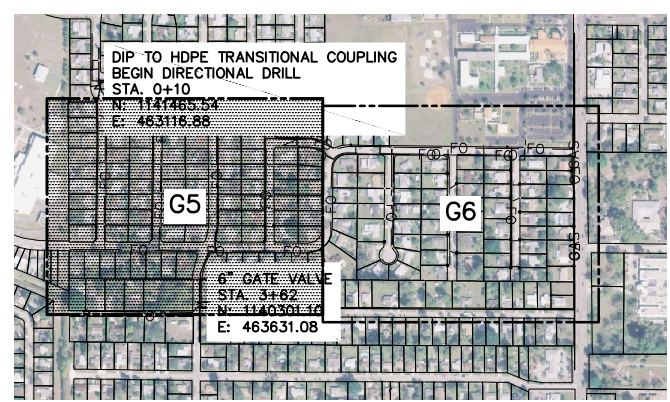
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- NOTE:
1. ABANDONMENT IN PLACE AND GROUTING OF THE EXISTING WATERLINE SHALL NOT BE PERFORMED UNTIL CONTRACTOR HAS INSTALLED AND CONFIRMED THAT ALL NEW WATER SERVICES TO THE RESIDENCES ARE FUNCTIONAL AND ACTIVE.
  2. CONTRACTOR SHALL DISCONNECT ALL EXISTING WATER METER SERVICES TO EACH RESIDENCE AND HAND DELIVER THE OLD WATER METERS TO THE COUNTY.
  3. CONTRACTOR IS RESPONSIBLE TO DEVELOP AN ACTION PLAN TO ABANDON IN PLACE AND GROUT THE EXISTING WATERLINE PIPING ONLY AFTER THE REQUIREMENTS OF NOTE 1 ABOVE ARE MET.
  4.  SECTIONS OF EXISTING WATERLINE TO BE ABANDONED IN PLACE AND GROUTED.

FOR CONTINUATION SEE SHEET G5

48 HOURS BEFORE DIGGING  
**CALL SUNSHINE**  
 TOLL FREE  
**1 800 432 4770**  
 UNDERGROUND UTILITIES MARKING  
 CENTER OF FLORIDA



KEY MAP

BID SET

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**MALCOLM PIRNIE**  
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 MAITLAND, FLORIDA 32751

VICTOR A. HURLBURT  
 FLORIDA P.E. NO. 33836

REVISIONS			
NO.	BY	DATE	REMARKS

DES  
 DWN SC  
 CKD VAH



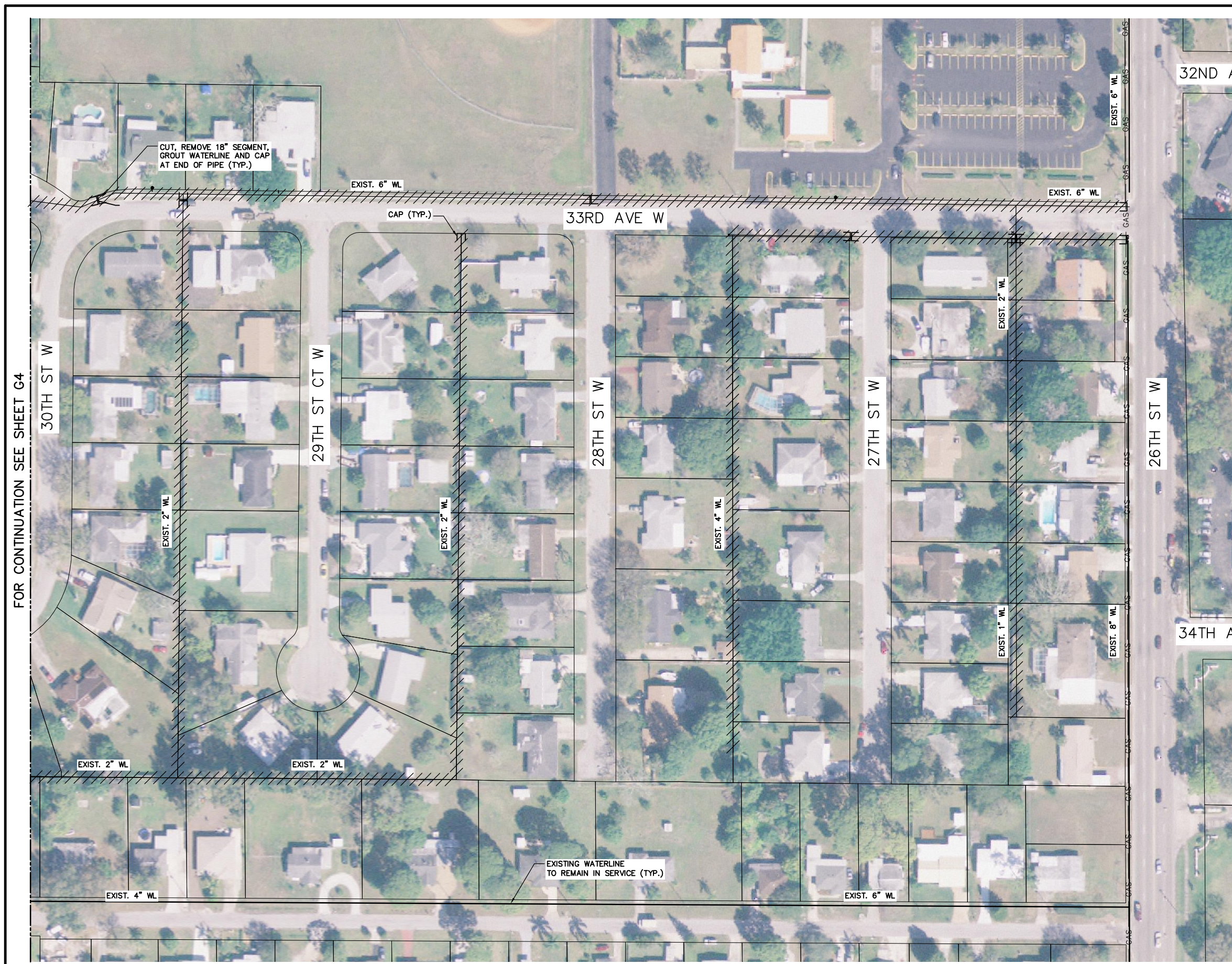
MANATEE COUNTY  
**CLEARVIEW MANOR  
 WATERLINE IMPROVEMENTS**

**DEMOLITION PLAN 1**

SCALE: 1" = 60'

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 CAD REF. NO. \_\_\_\_\_

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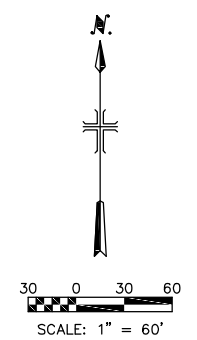


32ND AVE W

33RD AVE W

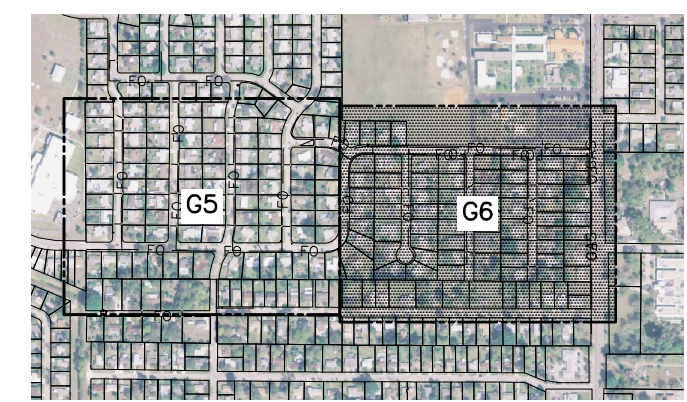
34TH AVE W

FOR CONTINUATION SEE SHEET G4



- NOTE:
1. ABANDONMENT IN PLACE AND GROUTING OF THE EXISTING WATERLINE SHALL NOT BE PERFORMED UNTIL CONTRACTOR HAS INSTALLED AND CONFIRMED THAT ALL NEW WATER SERVICES TO THE RESIDENCES ARE FUNCTIONAL AND ACTIVE.
  2. CONTRACTOR SHALL DISCONNECT ALL EXISTING WATER METER SERVICES TO EACH RESIDENCE AND HAND DELIVER THE OLD WATER METERS TO THE COUNTY.
  3. CONTRACTOR IS RESPONSIBLE TO DEVELOP AN ACTION PLAN TO ABANDON IN PLACE AND GROUT THE EXISTING WATERLINE PIPING ONLY AFTER THE REQUIREMENTS OF NOTE 1 ABOVE ARE MET.
  4. SECTION OF EXISTING WATERLINE TO BE ABANDONED IN PLACE AND GROUTED.

48 HOURS BEFORE DIGGING  
 CALL SUNSHINE  
 TOLL FREE  
 1 800 432 4770  
UNDERGROUND UTILITIES NOTIFICATION CENTER OF FLORIDA



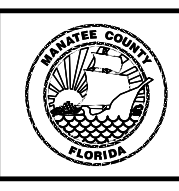
KEY MAP

BID SET

**MALCOLM PIRNIE**  
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 SCIENTISTS & CONSULTANTS  
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 MAITLAND, FLORIDA 32751

REVISIONS			
NO.	BY	DATE	REMARKS

DES  
 DWN SC  
 CKD VAH



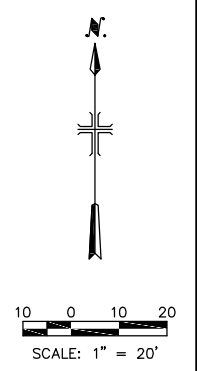
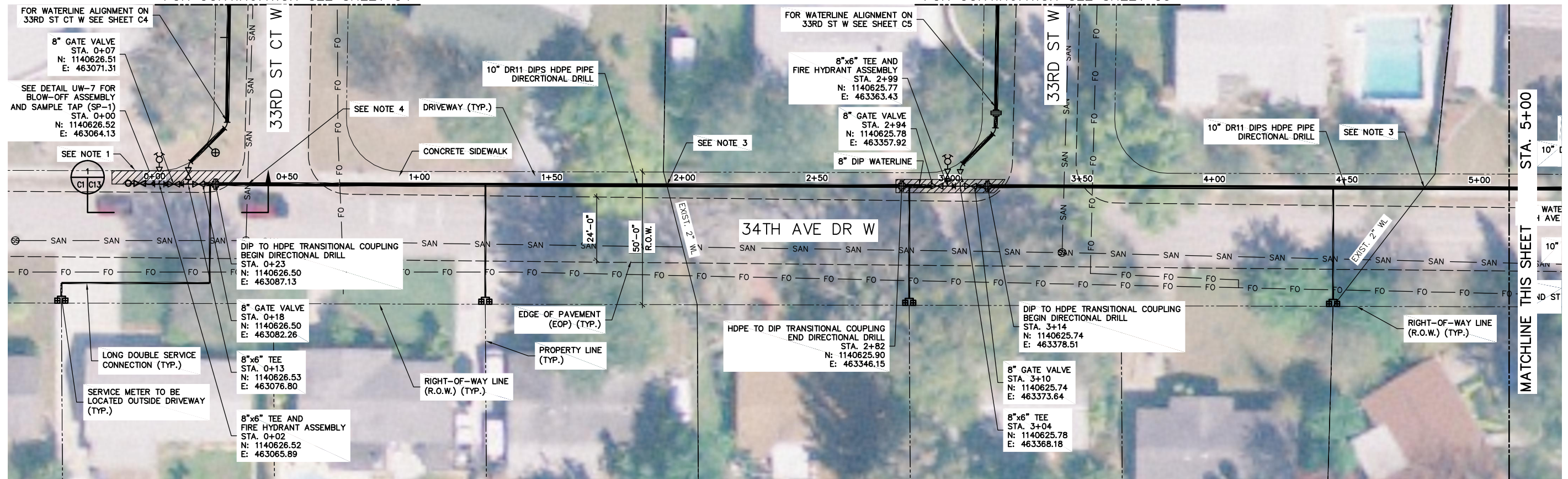
MANATEE COUNTY  
**CLEARVIEW MANOR**  
**WATERLINE IMPROVEMENTS**

**DEMOLITION PLAN 2**  
 SCALE: 1" = 60'

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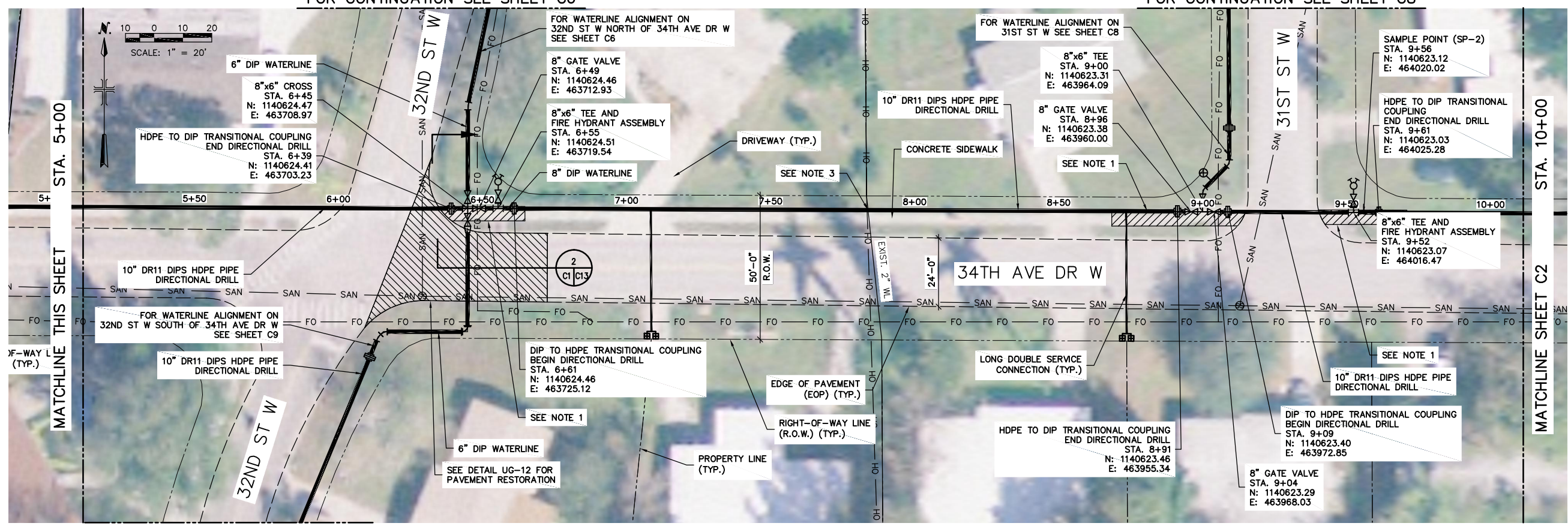
FOR CONTINUATION SEE SHEET C5



48 HOURS BEFORE DIGGING  
CALL SUNSHINE  
TOLL FREE  
1 800 432 4770  
UNDERGROUND UTILITIES NOTIFICATION  
CENTER OF FLORIDA

FOR CONTINUATION SEE SHEET C6

FOR CONTINUATION SEE SHEET C8



- NOTES:
1. REMOVE CONCRETE SIDEWALK FOR INSTALLATION OF PIPING AND APPURTENANCES FOR OPEN CUT AND DIRECTIONAL DRILLING. REPLACE SIDEWALK AT COMPLETION OF PIPING WORK.
  2. THE SPECIFIC LOCATION AND DEPTH OF THE EXISTING WATER SERVICES AT THE INDIVIDUAL RESIDENCES ARE NOT KNOWN AND ARE NOT SHOWN ON THE DRAWINGS. THE CONTRACTOR IS RESPONSIBLE TO LOCATE THE EXISTING WATER SERVICE AT EACH RESIDENCE AND PERFORM THE INSTALLATION OF THE WATER SERVICE ON THE PRIVATE PROPERTY STARTING AT THE APPROXIMATE EDGE OF THE HOUSE FOUNDATION TO THE CONNECTION POINT AT THE NEW WATERLINE. THE COUNTY WILL ASSIST THE CONTRACTOR WITH LOCATING THE RESIDENTIAL POINT OF CONNECTION AND DETERMINING AN ACCEPTABLE ROUTING ON THE PRIVATE PROPERTY, WITH APPROVAL BY THE HOMEOWNER, AT THE CONNECTION POINT AT THE NEW WATERLINE WITHIN THE ROADWAY RIGHT-OF-WAY.
  3. INSTALL NEW WATERLINE TO AVOID EXISTING WATERLINE.
  4. CONTRACTOR SHALL CONFIRM LOCATION OF EXISTING SANITARY SEWER PRIOR TO DIRECTIONAL DRILLING.
  5. LAND SURVEYING AND UTILITY LOCATE ACTIVITIES WERE NOT PERFORMED DURING THE DESIGN PHASE OF THIS PROJECT. IN LIEU OF THESE ACTIVITIES, COUNTY GIS INFORMATION WAS USED FOR THE ROADWAY RIGHT-OF-WAY LINES AND PROPERTY LINES WERE USED AS AN OVERLAY ON AN AERIAL PHOTOGRAPH. THE COUNTY'S WATER AND WASTEWATER ATLAS INFORMATION WAS USED TO PROVIDE THE GENERAL LOCATION OF THE EXISTING BURIED WATER AND WASTEWATER UTILITIES. IN ADDITION, THE VARIOUS UTILITY COMPANIES LISTED ON DRAWING G-2 WERE CONTACTED. THE INFORMATION RECEIVED FROM THE UTILITY COMPANIES WAS ADDED TO THE CONTRACT DRAWINGS TO INDICATE ONLY THE GENERAL LOCATION OF THE EXISTING BURIED UTILITIES WITHIN THE PROPOSED ROUTE OF THE WATERLINE ALIGNMENT. THE ACCURACY OF THE VARIOUS UTILITY LOCATIONS SHOWN ON THE DRAWINGS HAS NOT BEEN FIELD VERIFIED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES AND/OR SUNSHINE TO LOCATE ALL EXISTING BURIED UTILITIES IN THE ALIGNMENT OF THE PROPOSED WATERLINE PRIOR TO COMMENCING WORK ACTIVITIES. THE CENTERLINE OF THE WATERLINE CAN BE RELOCATED SLIGHTLY TO ACCOMMODATE EXISTING UTILITIES AFTER NOTIFICATION OF THE NECESSARY CHANGES TO THE OWNER.

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 SCIENTISTS & CONSULTANTS  
 2301 MATLAND CENTER PARKWAY  
 MATLAND, FLORIDA 32751

REVISIONS			
NO.	BY	DATE	REMARKS

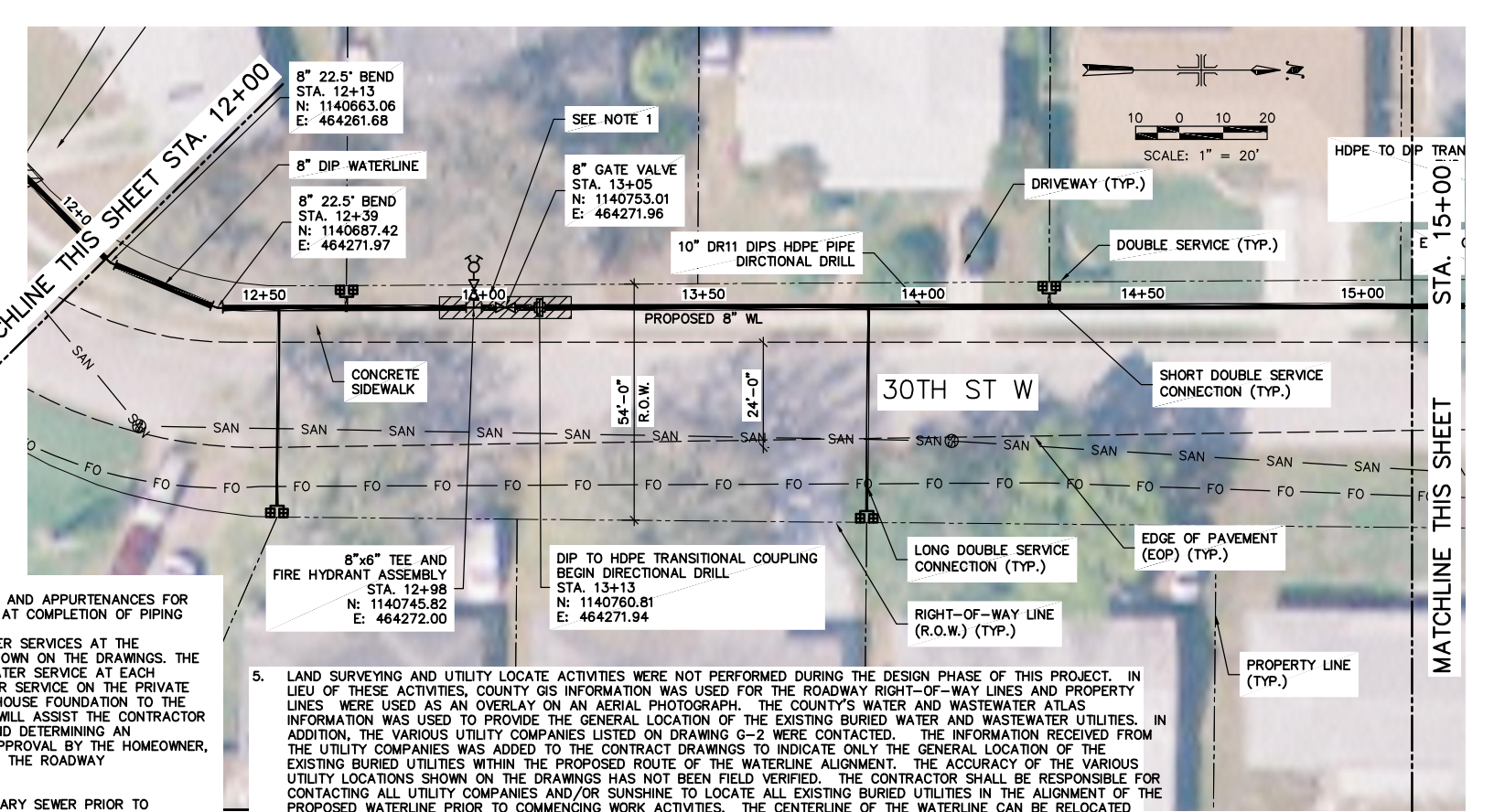
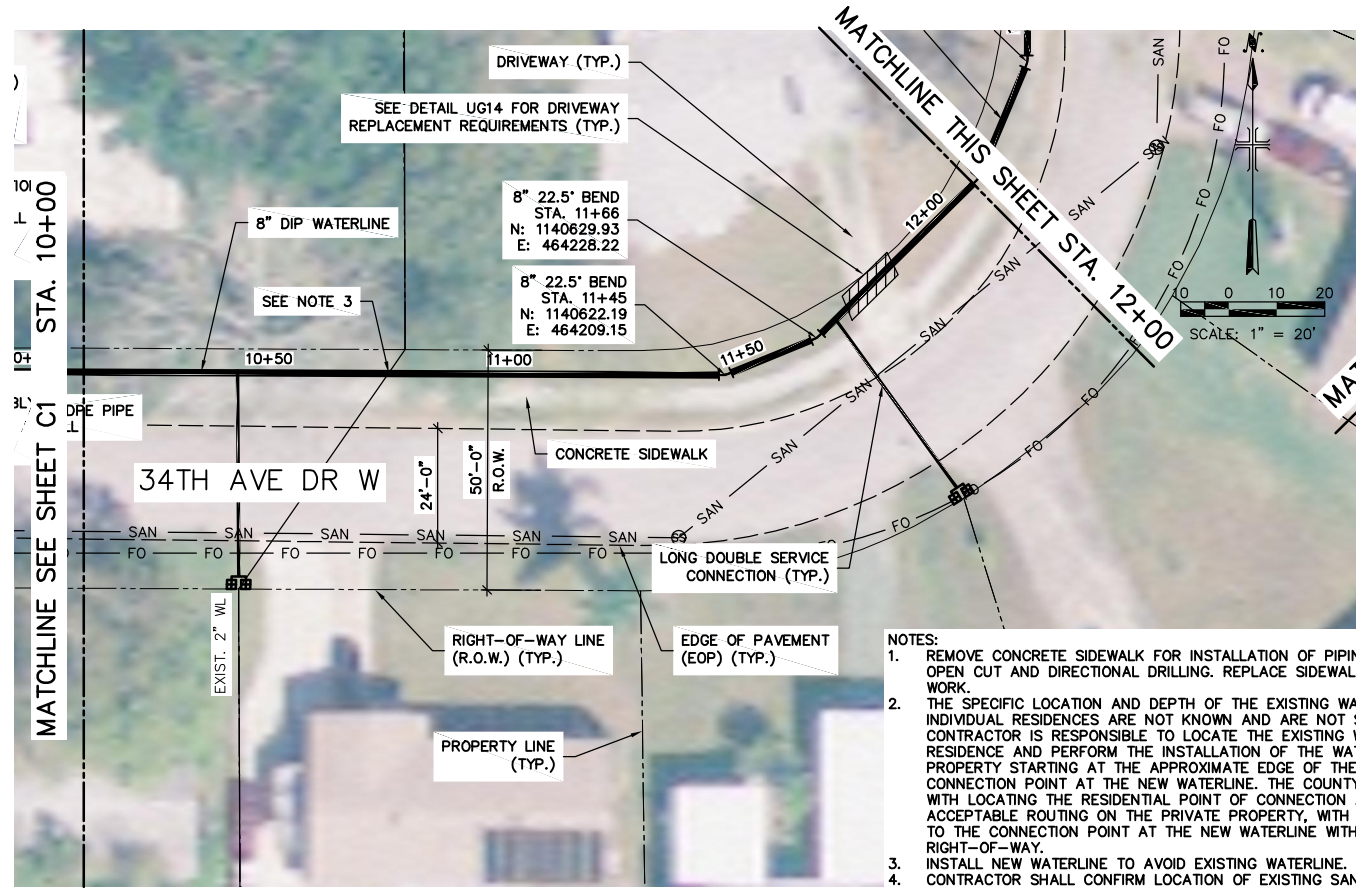
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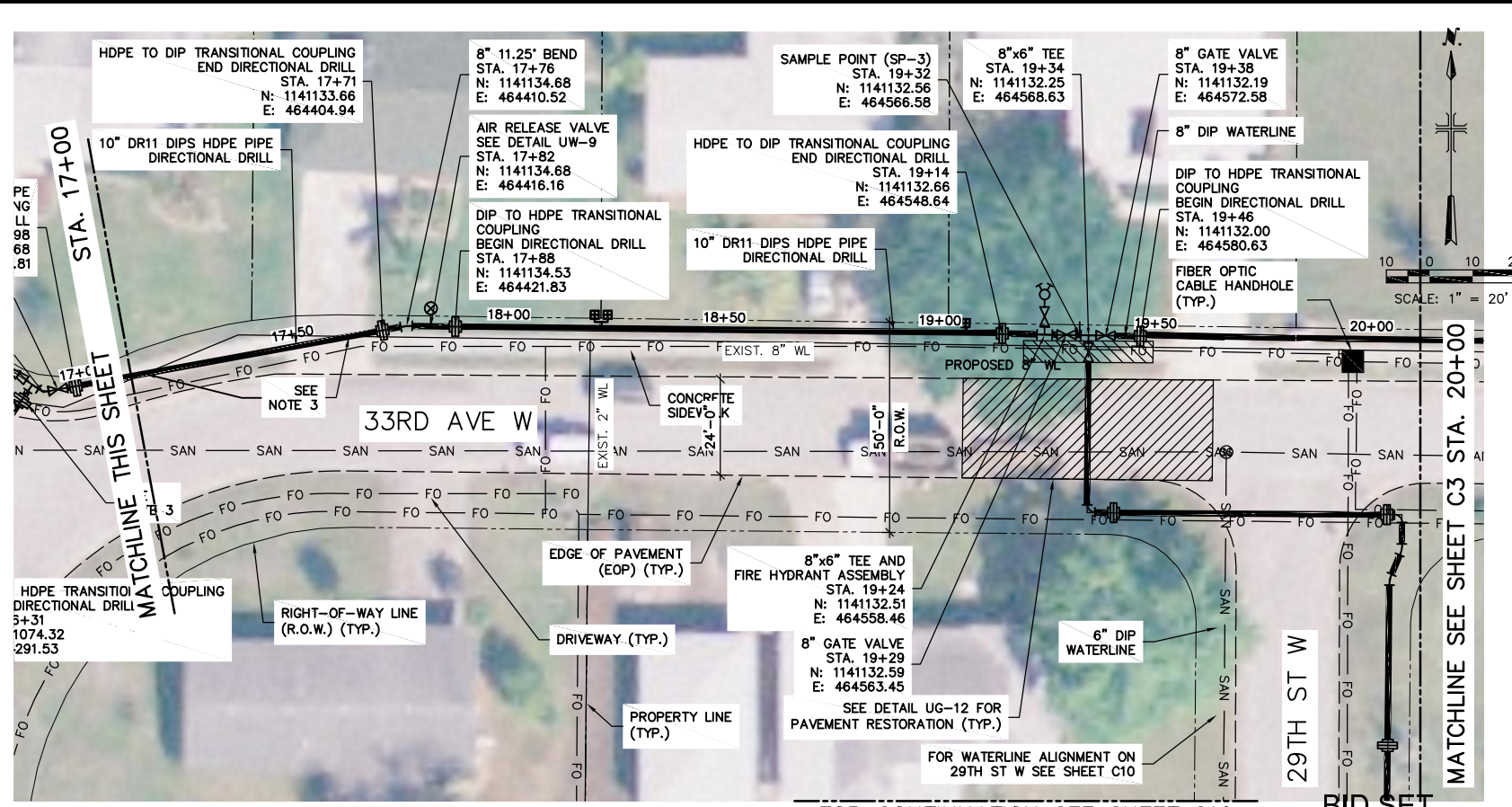
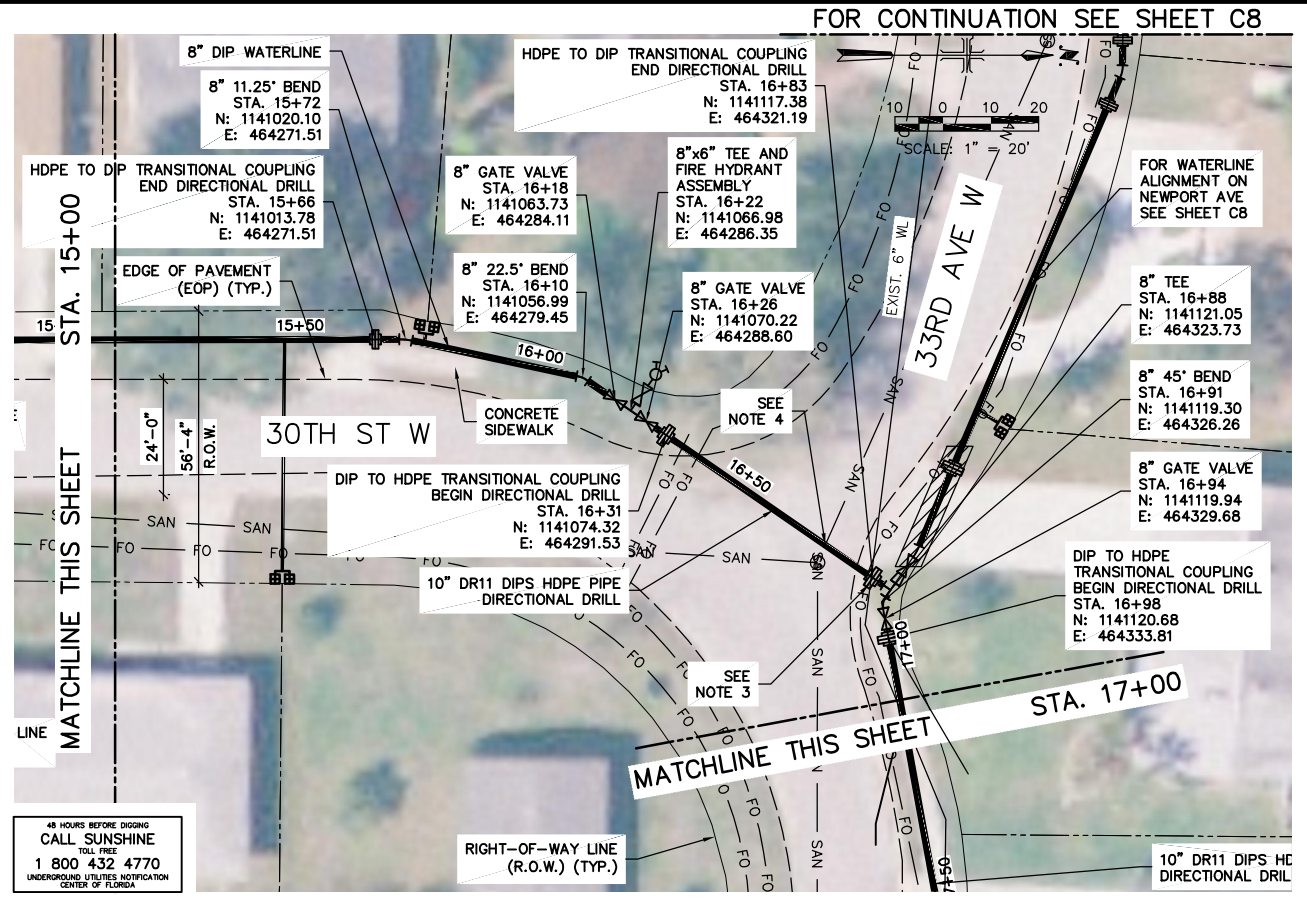
MANATEE COUNTY  
**CLEARVIEW MANOR  
 WATERLINE IMPROVEMENTS**

**SITE PLAN  
 34TH AVE DR W STA. 0+00 TO 10+00**  
 SCALE: 1" = 20'

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 DATE MARCH 2010  
 C1 SHEET OF  
 CAD REF. NO.



- NOTES:
- REMOVE CONCRETE SIDEWALK FOR INSTALLATION OF PIPING AND APPURTENANCES FOR OPEN CUT AND DIRECTIONAL DRILLING. REPLACE SIDEWALK AT COMPLETION OF PIPING WORK.
  - THE SPECIFIC LOCATION AND DEPTH OF THE EXISTING WATER SERVICES AT THE INDIVIDUAL RESIDENCES ARE NOT KNOWN AND ARE NOT SHOWN ON THE DRAWINGS. THE CONTRACTOR IS RESPONSIBLE TO LOCATE THE EXISTING WATER SERVICE AT EACH RESIDENCE AND PERFORM THE INSTALLATION OF THE WATER SERVICE ON THE PRIVATE PROPERTY STARTING AT THE APPROXIMATE EDGE OF THE HOUSE FOUNDATION TO THE CONNECTION POINT AT THE NEW WATERLINE. THE COUNTY WILL ASSIST THE CONTRACTOR WITH LOCATING THE RESIDENTIAL POINT OF CONNECTION AND DETERMINING AN ACCEPTABLE ROUTING ON THE PRIVATE PROPERTY, WITH APPROVAL BY THE HOMEOWNER, TO THE CONNECTION POINT AT THE NEW WATERLINE WITHIN THE ROADWAY RIGHT-OF-WAY.
  - INSTALL NEW WATERLINE TO AVOID EXISTING WATERLINE.
  - CONTRACTOR SHALL CONFIRM LOCATION OF EXISTING SANITARY SEWER PRIOR TO DIRECTIONAL DRILLING.
  - LAND SURVEYING AND UTILITY LOCATE ACTIVITIES WERE NOT PERFORMED DURING THE DESIGN PHASE OF THIS PROJECT. IN LIEU OF THESE ACTIVITIES, COUNTY GIS INFORMATION WAS USED FOR THE ROADWAY RIGHT-OF-WAY LINES AND PROPERTY LINES. THESE WERE USED AS AN OVERLAY ON AN AERIAL PHOTOGRAPH. THE COUNTY'S WATER AND WASTEWATER ATLAS INFORMATION WAS USED TO PROVIDE THE GENERAL LOCATION OF THE EXISTING BURIED WATER AND WASTEWATER UTILITIES. IN ADDITION, THE VARIOUS UTILITY COMPANIES LISTED ON DRAWING G-2 WERE CONTACTED. THE INFORMATION RECEIVED FROM THE UTILITY COMPANIES WAS ADDED TO THE CONTRACT DRAWINGS TO INDICATE ONLY THE GENERAL LOCATION OF THE EXISTING BURIED UTILITIES WITHIN THE PROPOSED ROUTE OF THE WATERLINE ALIGNMENT. THE ACCURACY OF THE VARIOUS UTILITY LOCATIONS SHOWN ON THE DRAWINGS HAS NOT BEEN FIELD VERIFIED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES AND/OR SUNSHINE TO LOCATE ALL EXISTING BURIED UTILITIES IN THE ALIGNMENT OF THE PROPOSED WATERLINE PRIOR TO COMMENCING WORK ACTIVITIES. THE CENTERLINE OF THE WATERLINE CAN BE RELOCATED SLIGHTLY TO ACCOMMODATE EXISTING UTILITIES AFTER NOTIFICATION OF THE NECESSARY CHANGES THE OWNER.



48 HOURS BEFORE DIGGING  
CALL SUNSHINE  
TOLL FREE  
1 800 432 4770  
UNDERGROUND UTILITIES NOTIFICATION  
CENTER OF FLORIDA

REVISIONS			
NO.	BY	DATE	REMARKS



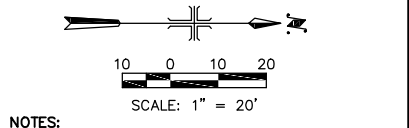
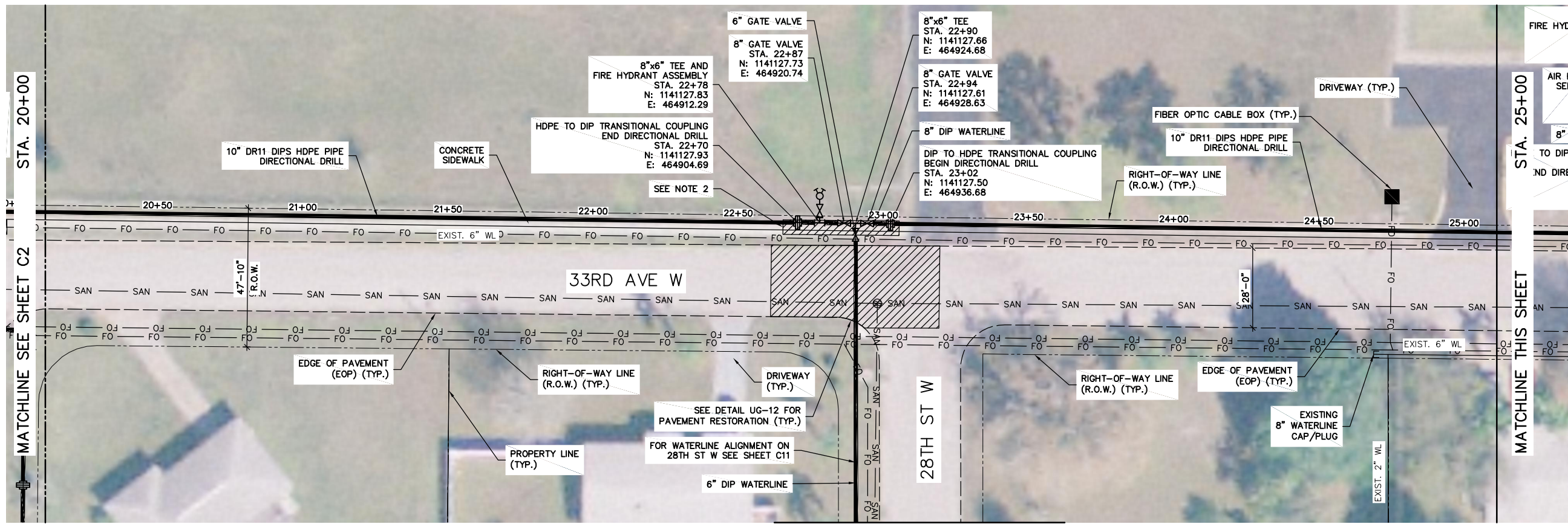
MANATEE COUNTY  
**CLEARVIEW MANOR  
WATERLINE IMPROVEMENTS**

**SITE PLAN**  
**34TH AVE DR W STA. 10+00 TO 20+00**  
SCALE: 1" = 20'

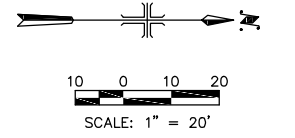
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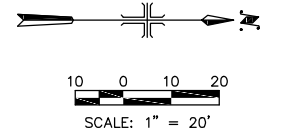
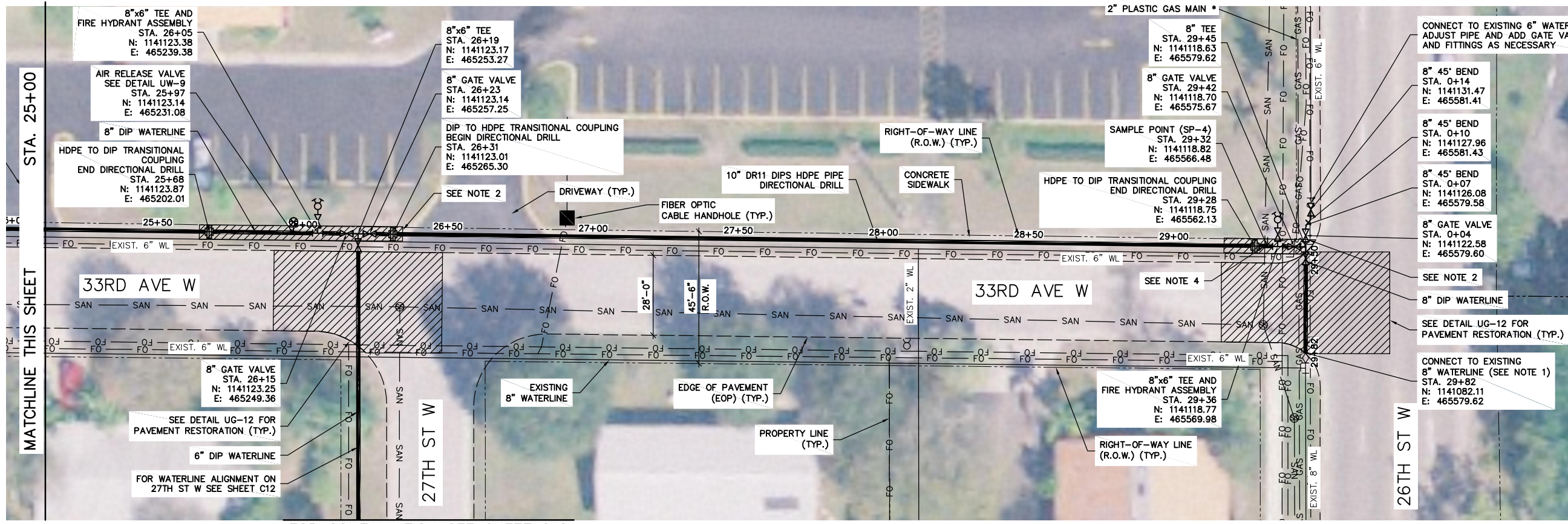




- NOTES:
- CONNECT TO EXISTING 8" WATERLINE AT EXISTING PLUG VALVE.
  - REMOVE CONCRETE SIDEWALK FOR INSTALLATION OF DIRECTIONAL DRILLING. REPLACE SIDEWALK AT COMPLETION OF PIPING WORK.
  - THE SPECIFIC LOCATION AND DEPTH OF THE EXISTING WATER SERVICES AT THE INDIVIDUAL RESIDENCES ARE NOT KNOWN AND ARE NOT SHOWN ON THE DRAWINGS. THE CONTRACTOR IS RESPONSIBLE TO LOCATE THE EXISTING WATER SERVICE AT EACH RESIDENCE AND PERFORM THE INSTALLATION OF THE WATER SERVICE ON THE PRIVATE PROPERTY STARTING AT THE APPROXIMATE EDGE OF THE HOUSE FOUNDATION TO THE CONNECTION POINT AT THE NEW WATERLINE. THE COUNTY WILL ASSIST THE CONTRACTOR WITH LOCATING THE RESIDENTIAL POINT OF CONNECTION AND DETERMINING AN ACCEPTABLE ROUTING ON THE PRIVATE PROPERTY, WITH APPROVAL BY THE HOMEOWNER, TO THE CONNECTION POINT AT THE NEW WATERLINE WITHIN THE ROADWAY RIGHT-OF-WAY.
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FOR CONTINUATION SEE SHEET C11



\* CAUTION  
WATERLINE CROSSES 2"  
PLASTIC GAS MAIN

48 HOURS BEFORE DIGGING  
CALL SUNSHINE  
TOLL FREE  
1 800 432 4770  
UNDERGROUND UTILITIES NOTIFICATION  
CENTER OF FLORIDA

FOR CONTINUATION SEE SHEET C12

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**MALCOLM PIRNIE**  
CERTIFICATE OF AUTHORIZATION NO. 67  
INDEPENDENT ENVIRONMENTAL ENGINEERS,  
SCIENTISTS & CONSULTANTS  
2301 MATLAND CENTER PARKWAY  
MATLAND, FLORIDA 32751

REVISIONS			
NO.	BY	DATE	REMARKS

VICTOR A. HURLBURT  
FLORIDA P.E. NO. 33836

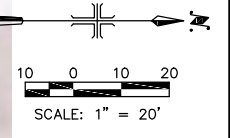
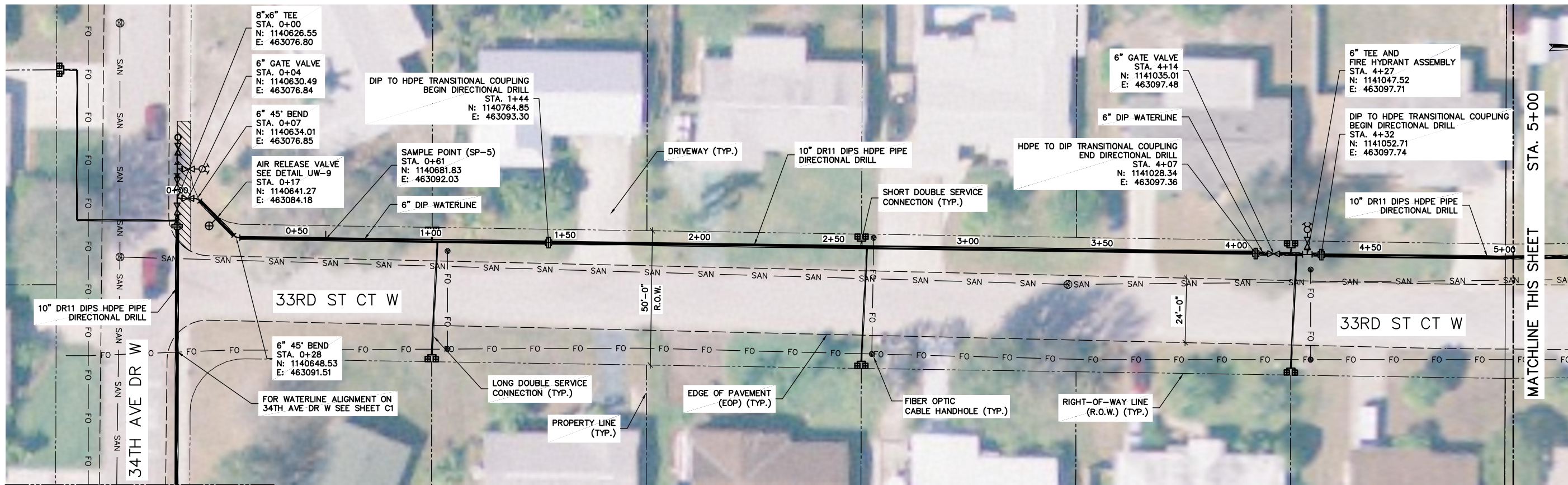
DES: \_\_\_\_\_  
DWN: \_\_\_\_\_  
CKD: ###

MANATEE COUNTY  
**CLEARVIEW MANOR  
WATERLINE IMPROVEMENTS**

**SITE PLAN  
33RD AVE W STA. 20+00 TO 29+71**  
SCALE: 1" = 20'

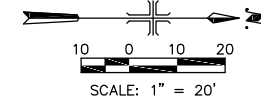
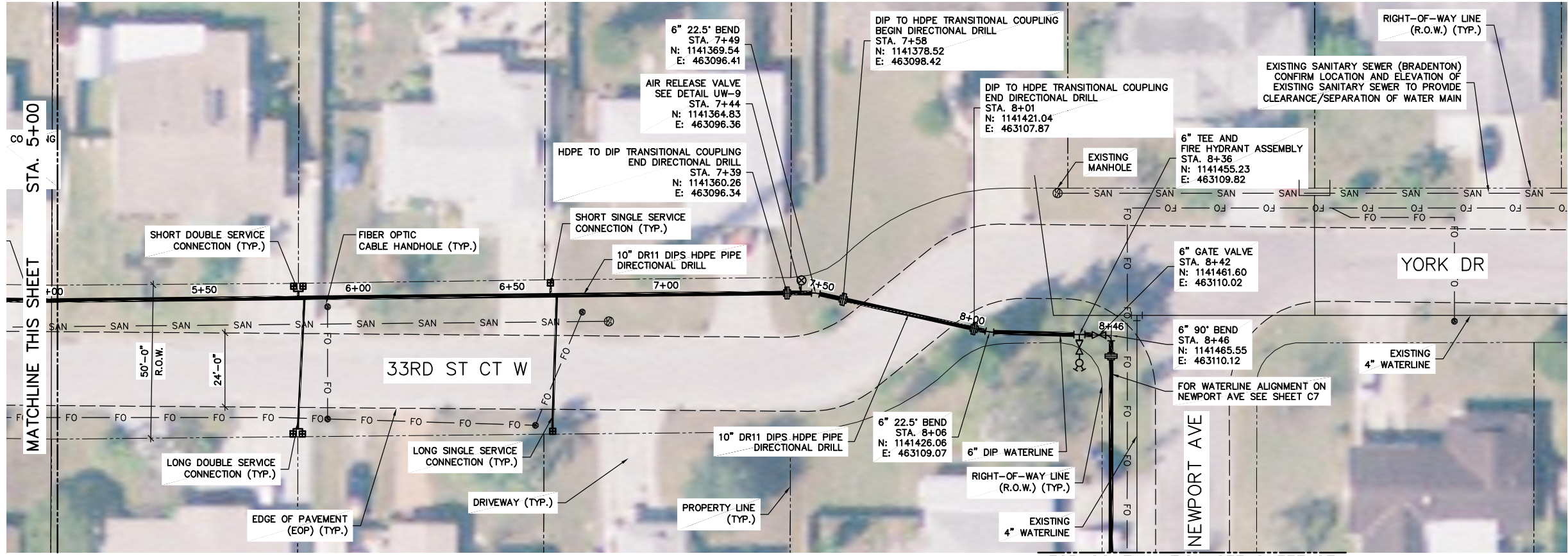
BID SET

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DATE: MARCH 2010  
C3 SHEET \_\_\_\_ OF \_\_\_\_  
CAD REF. NO. \_\_\_\_\_



FOR CONTINUATION SEE SHEET C1

MATCHLINE THIS SHEET STA. 5+00



**NOTE:**

- THE SPECIFIC LOCATION AND DEPTH OF THE EXISTING WATER SERVICES AT THE INDIVIDUAL RESIDENCES ARE NOT KNOWN AND ARE NOT SHOWN ON THE DRAWINGS. THE CONTRACTOR IS RESPONSIBLE TO LOCATE THE EXISTING WATER SERVICE AT EACH RESIDENCE AND PERFORM THE INSTALLATION OF THE WATER SERVICE ON THE PRIVATE PROPERTY STARTING AT THE APPROXIMATE EDGE OF THE HOUSE FOUNDATION TO THE CONNECTION POINT AT THE NEW WATERLINE. THE COUNTY WILL ASSIST THE CONTRACTOR WITH LOCATING THE RESIDENTIAL POINT OF CONNECTION AND DETERMINING AN ACCEPTABLE ROUTING ON THE PRIVATE PROPERTY, WITH APPROVAL BY THE HOMEOWNER, TO THE CONNECTION POINT AT THE NEW WATERLINE WITHIN THE ROADWAY RIGHT-OF-WAY.
- REMOVE CONCRETE SIDEWALK FOR INSTALLATION OF DIRECTIONAL DRILLING. REPLACE SIDEWALK AT COMPLETION OF PIPING WORK.
- INSTALL NEW WATERLINE TO AVOID EXISTING WATERLINE.
- CONTRACTOR SHALL CONFIRM LOCATION OF EXISTING SANITARY SEWER PRIOR TO DIRECTIONAL DRILLING.
- LAND SURVEYING AND UTILITY LOCATE ACTIVITIES WERE NOT PERFORMED DURING THE DESIGN PHASE OF THIS PROJECT. IN LIEU OF THESE ACTIVITIES, COUNTY GIS INFORMATION WAS USED FOR THE ROADWAY RIGHT-OF-WAY LINES AND PROPERTY LINES. THESE WERE USED AS AN OVERLAY ON AN AERIAL PHOTOGRAPH. THE COUNTY'S WATER AND WASTEWATER ATLAS INFORMATION WAS USED TO PROVIDE THE GENERAL LOCATION OF THE EXISTING BURIED WATER AND WASTEWATER UTILITIES. IN ADDITION, THE VARIOUS UTILITY COMPANIES LISTED ON DRAWING G-2 WERE CONTACTED. THE INFORMATION RECEIVED FROM THE UTILITY COMPANIES WAS ADDED TO THE CONTRACT DRAWINGS TO INDICATE ONLY THE GENERAL LOCATION OF THE EXISTING BURIED UTILITIES WITHIN THE PROPOSED ROUTE OF THE WATERLINE ALIGNMENT. THE ACCURACY OF THE VARIOUS UTILITY LOCATIONS SHOWN ON THE DRAWINGS HAS NOT BEEN FIELD VERIFIED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES AND/OR SUNSHINE TO LOCATE ALL EXISTING BURIED UTILITIES IN THE ALIGNMENT OF THE PROPOSED WATERLINE PRIOR TO COMMENCING WORK ACTIVITIES. THE CENTERLINE OF THE WATERLINE CAN BE RELOCATED SLIGHTLY TO ACCOMMODATE EXISTING UTILITIES AFTER NOTIFICATION OF THE NECESSARY CHANGES THE OWNER.

48 HOURS BEFORE DIGGING  
CALL SUNSHINE  
TOLL FREE  
1 800 432 4770  
UNDERGROUND UTILITIES NOTIFICATION  
CENTER OF FLORIDA

FOR CONTINUATION SEE SHEET C7

**MALCOLM PIRNIE**  
CERTIFICATE OF AUTHORIZATION NO. 67  
INDEPENDENT ENVIRONMENTAL ENGINEERS,  
SCIENTISTS & CONSULTANTS  
2301 MATLAND CENTER PARKWAY  
MATLAND, FLORIDA 32751

REVISIONS			
NO.	BY	DATE	REMARKS

VICTOR A. HURLBURT  
FLORIDA P.E. NO. 33836



MANATEE COUNTY  
**CLEARVIEW MANOR  
WATERLINE IMPROVEMENTS**

**SITE PLAN  
33RD ST CT W**  
SCALE: 1" = 20'

**BID SET**  
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DATE MARCH 2010  
C4 SHEET OF  
CAD REF. NO.

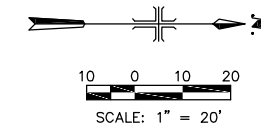
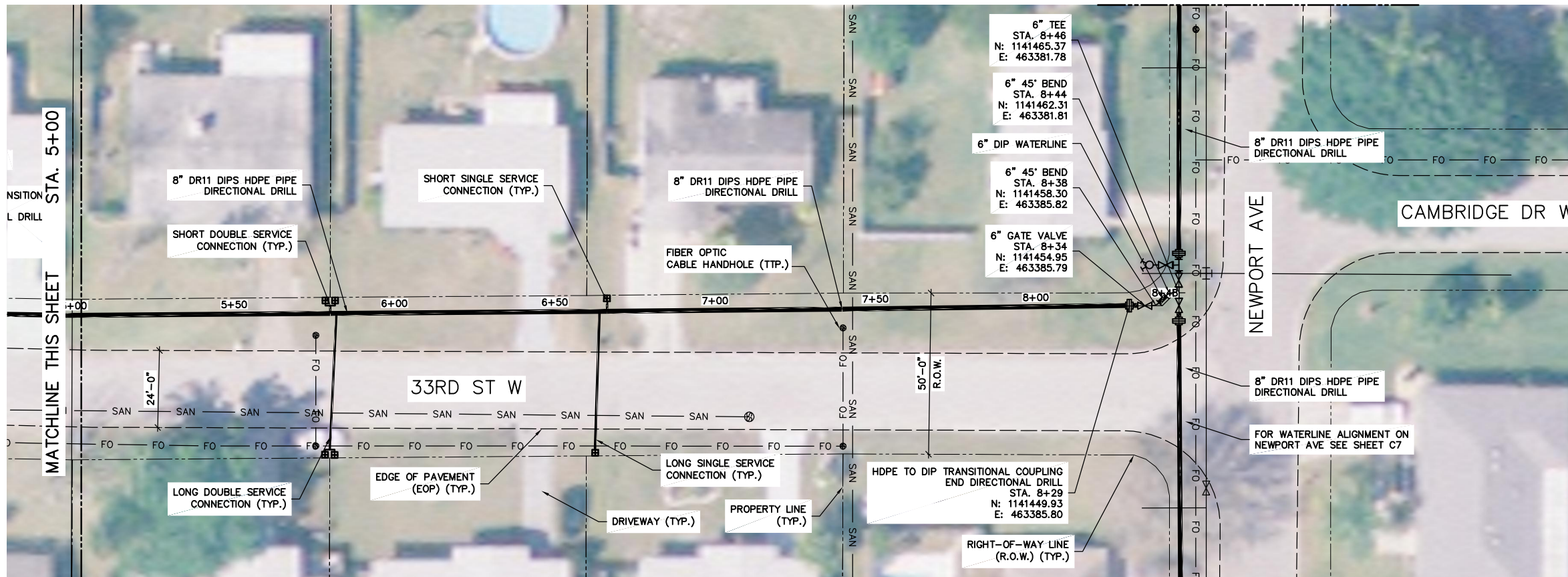
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FOR CONTINUATION SEE SHEET C1



FOR CONTINUATION SEE SHEET C1

FOR CONTINUATION SEE SHEET C7



**NOTE:**

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CALL SUNSHINE  
TOLL FREE  
1 800 432 4770  
UNDERGROUND UTILITIES NOTIFICATION  
CENTER OF FLORIDA

BID SET

FOR CONTINUATION SEE SHEET C7

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SCIENTISTS & CONSULTANTS  
2301 MATLAND CENTER PARKWAY  
MATLAND, FLORIDA 32751

REVISIONS			
NO.	BY	DATE	REMARKS

DES VAH  
DWN SC  
CKD VAH

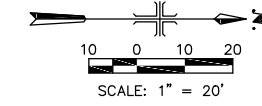
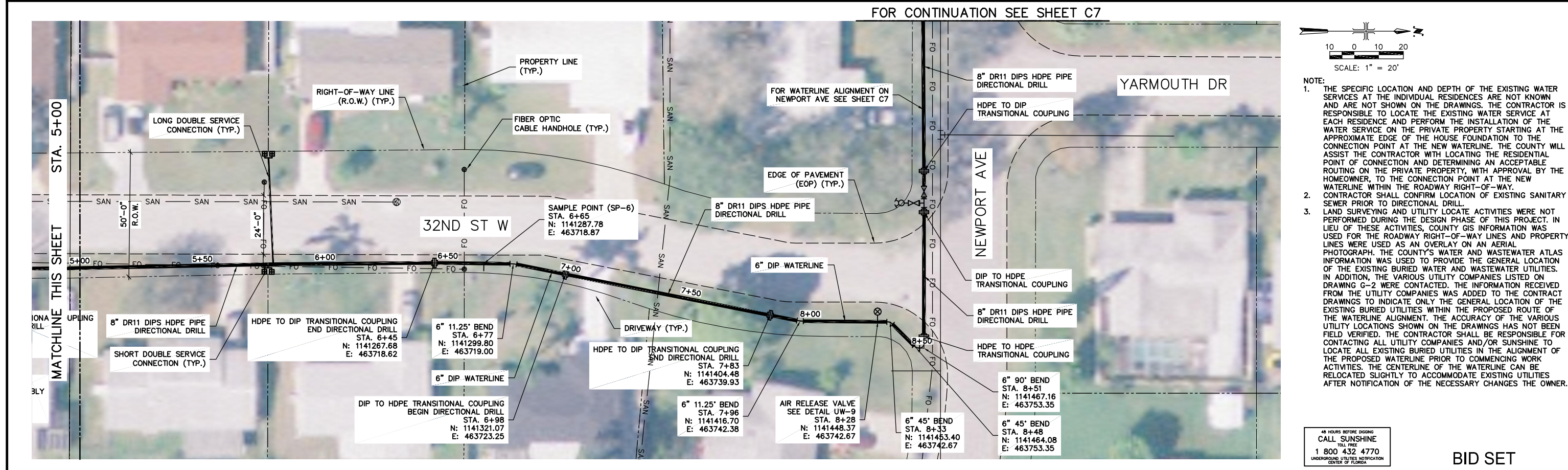
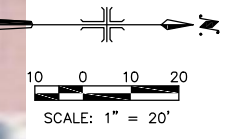
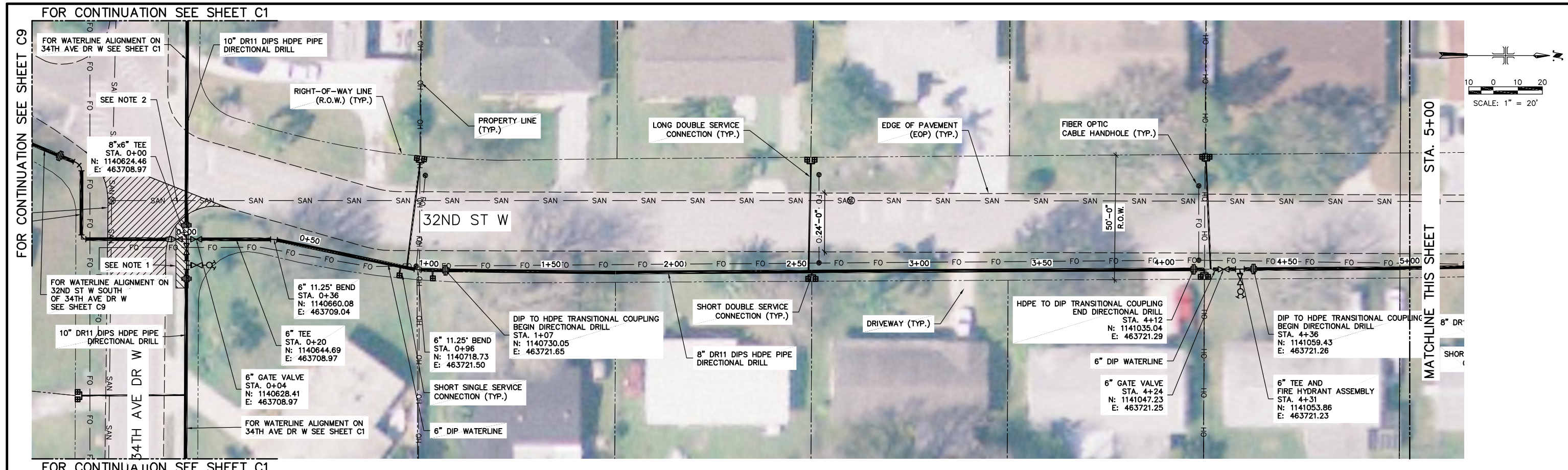
MANATEE COUNTY  
**CLEARVIEW MANOR  
WATERLINE IMPROVEMENTS**

**SITE PLAN  
33RD ST W**  
SCALE: 1" = 20'

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DATE MARCH 2010  
C5 SHEET OF  
CAD REF. NO.

XREFS: 2006 aerial.dwg \site plan.dwg IMAGES:None User:CORNEJO Spec:PIRNIE STANDARD Title: \CAD\PRO\0132 - Manatee County\0132005-Clearview Manor\SITE PLAN 2.DWG Scale:1:1 Date:05/14/2009 Time:09:56 Layout:C1 (2)

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48 HOURS BEFORE DIGGING  
 CALL SUNSHINE  
 TOLL FREE  
 1 800 432 4770  
 UNDERGROUND UTILITIES NOTIFICATION  
 CENTER OF FLORIDA

**MALCOLM PIRNIE**

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 INDEPENDENT ENVIRONMENTAL ENGINEERS,  
 SCIENTISTS & CONSULTANTS  
 2301 MATLAND CENTER PARKWAY  
 MATLAND, FLORIDA 32751

REVISIONS			
NO.	BY	DATE	REMARKS

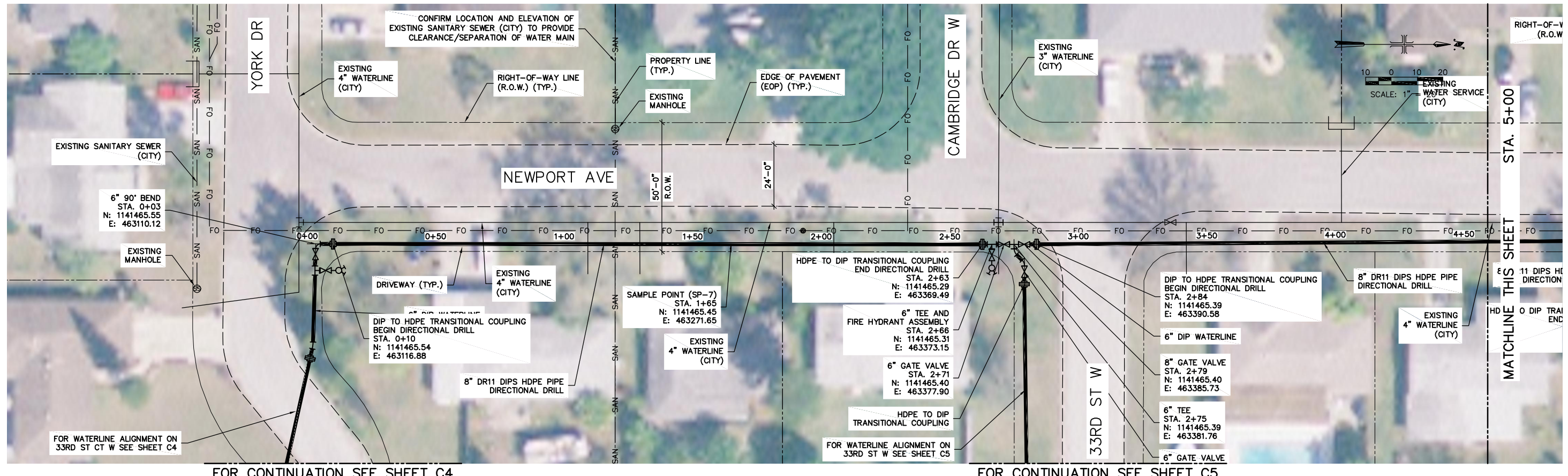
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 DWN: \_\_\_\_\_  
 CKD: ###



MANATEE COUNTY  
**CLEARVIEW MANOR  
 WATERLINE IMPROVEMENTS**

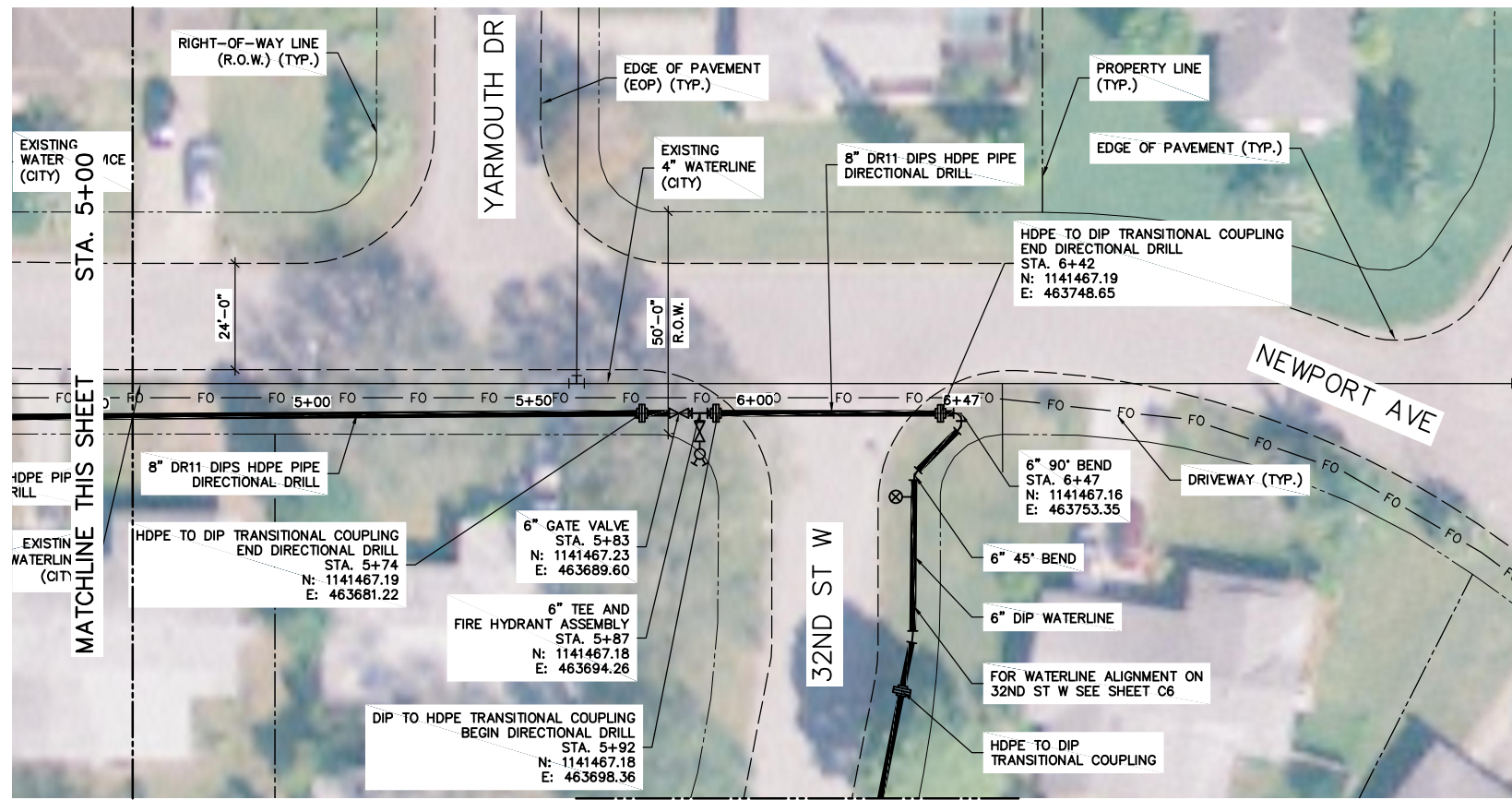
**SITE PLAN  
 32ND ST W**  
 SCALE: 1" = 20'

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 DATE MARCH 2010  
 C6 SHEET \_\_\_\_ OF \_\_\_\_  
 CAD REF. NO. \_\_\_\_\_

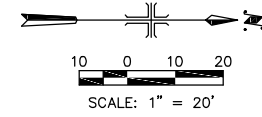


FOR CONTINUATION SEE SHEET C4

FOR CONTINUATION SEE SHEET C5



FOR CONTINUATION SEE SHEET C6



- NOTE:**
1. THE SPECIFIC LOCATION AND DEPTH OF THE EXISTING WATER SERVICES AT THE INDIVIDUAL RESIDENCES ARE NOT KNOWN AND ARE NOT SHOWN ON THE DRAWINGS. THE CONTRACTOR IS RESPONSIBLE TO LOCATE THE EXISTING WATER SERVICE AT EACH RESIDENCE AND PERFORM THE INSTALLATION OF THE WATER SERVICE ON THE PRIVATE PROPERTY STARTING AT THE APPROXIMATE EDGE OF THE HOUSE FOUNDATION TO THE CONNECTION POINT AT THE NEW WATERLINE. THE COUNTY WILL ASSIST THE CONTRACTOR WITH LOCATING THE RESIDENTIAL POINT OF CONNECTION AND DETERMINING AN ACCEPTABLE ROUTING ON THE PRIVATE PROPERTY, WITH APPROVAL BY THE HOMEOWNER, TO THE CONNECTION POINT AT THE NEW WATERLINE WITHIN THE ROADWAY RIGHT-OF-WAY.
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  3. DIRECTIONAL DRILLING ON THIS SHEET IS TO BE PERFORMED AT 5'-0" BELOW GRADE TO ENSURE VERTICAL SEPARATION FROM CITY'S EXISTING AC WATER MAIN.
  4. CONTRACTOR SHALL PROVIDE ADEQUATE CLEARANCE BETWEEN EXISTING SANITARY SEWER AND PROPOSED WATER SERVICES.

48 HOURS BEFORE DIGGING  
**CALL SUNSHINE**  
 TOLL FREE  
 1 800 432 4770  
 UNDERGROUND UTILITY IDENTIFICATION  
 CENTER OF FLORIDA

XREFS: \\2006 aerial.dwg \site plan.dwg IMAGES:None User:CORNEJO Spec:PIRNE STANDARD File: \\CAD\PROJ\0132 - Manatee County\0132005-Clearview Manor\SITE PLAN\_2.DWG Scale:1:1 Date: 05/14/2009 Time:09:42 Layout:C7b

**MALCOLM PIRNIE**  
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 SCIENTISTS & CONSULTANTS  
 2301 MATLAND CENTER PARKWAY  
 MATLAND, FLORIDA 32751

REVISIONS			
NO.	BY	DATE	REMARKS

DES \_\_\_\_\_  
 DWN \_\_\_\_\_  
 CKD ###

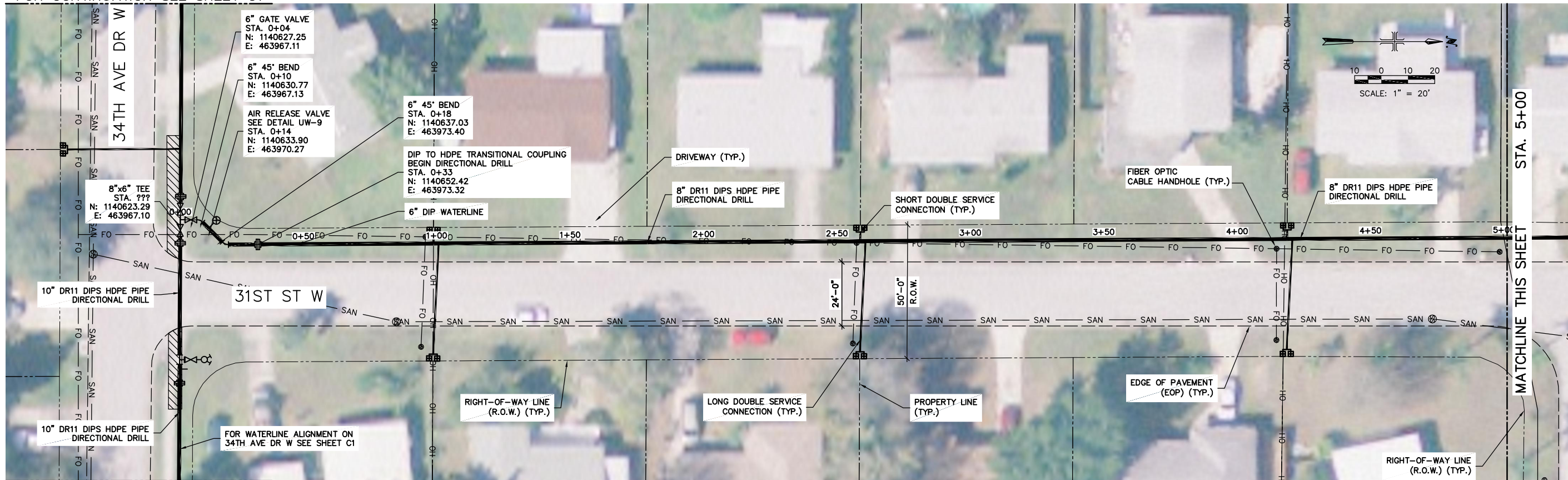


MANATEE COUNTY  
**CLEARVIEW MANOR  
 WATERLINE IMPROVEMENTS**

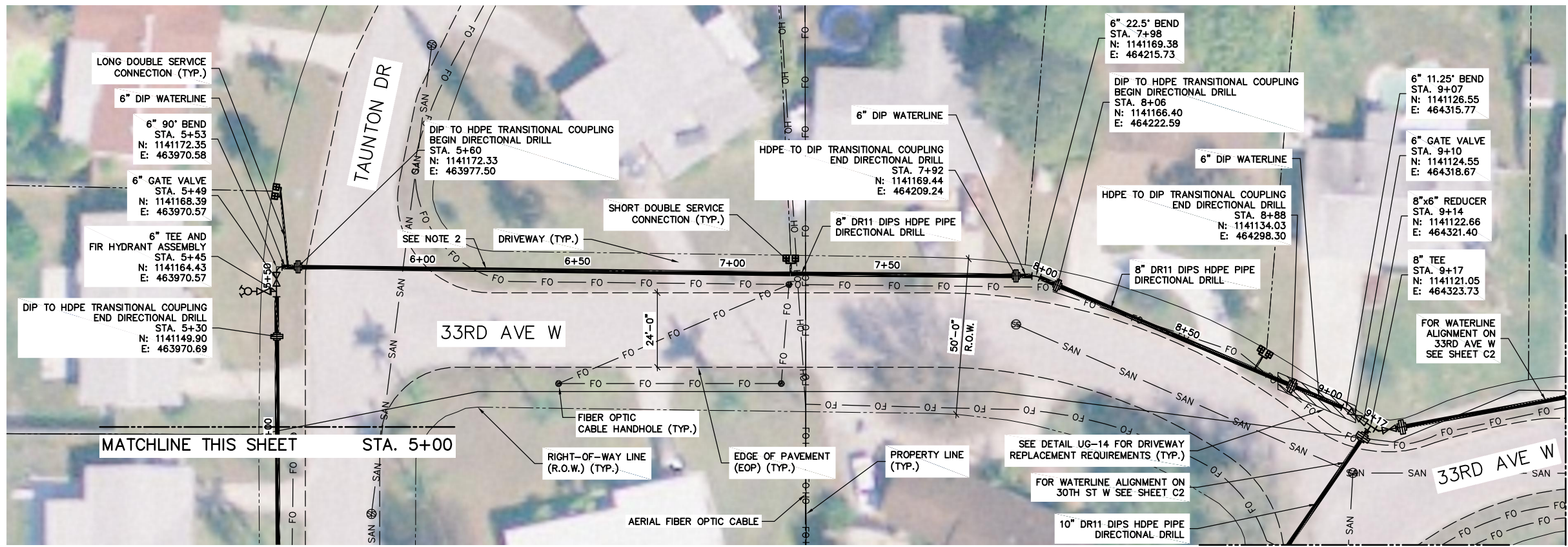
**SITE PLAN  
 NEWPORT AVE**  
 SCALE: 1" = 20'

**BID SET**  
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 DATE MARCH 2010  
 C7 SHEET \_\_\_\_ OF \_\_\_\_  
 CAD REF. NO. \_\_\_\_\_

FOR CONTINUATION SEE SHEET C1



FOR CONTINUATION SEE SHEET C1



NOTE:

1. THE SPECIFIC LOCATION AND DEPTH OF THE EXISTING WATER SERVICES AT THE INDIVIDUAL RESIDENCES ARE NOT KNOWN AND ARE NOT SHOWN ON THE DRAWINGS. THE CONTRACTOR IS RESPONSIBLE TO LOCATE THE EXISTING WATER SERVICE AT EACH RESIDENCE AND PERFORM THE INSTALLATION OF THE WATER SERVICE ON THE PRIVATE PROPERTY STARTING AT THE APPROXIMATE EDGE OF THE HOUSE FOUNDATION TO THE CONNECTION POINT AT THE NEW WATERLINE. THE COUNTY WILL ASSIST THE CONTRACTOR WITH LOCATING THE RESIDENTIAL POINT OF CONNECTION AND DETERMINING AN ACCEPTABLE ROUTING ON THE PRIVATE PROPERTY, WITH APPROVAL BY THE HOMEOWNER, TO THE CONNECTION POINT AT THE NEW WATERLINE WITHIN THE ROADWAY RIGHT-OF-WAY.
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TOLL FREE  
1 800 432 4770  
UNDERGROUND UTILITIES NOTIFICATION  
CENTER OF FLORIDA

XREFS: 2006 aerial.dwg \site plan.dwg IMAGES:None User:CORNEJO Spec:PIRNIE STANDARD File: \CAD\PRO\0132 - Manatee County\0132005-Clearview Manor\SITE PLAN 2.DWG Scale:1:1 Date:05/14/2009 Time:09:56 Layout:C1 (2)

**MALCOLM PIRNIE**  
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SCIENTISTS & CONSULTANTS  
2301 MATLAND CENTER PARKWAY  
MATLAND, FLORIDA 32751

REVISIONS			
NO.	BY	DATE	REMARKS

DES - VAH  
DWN - SC  
CKD - VAH



MANATEE COUNTY  
**CLEARVIEW MANOR  
WATERLINE IMPROVEMENTS**

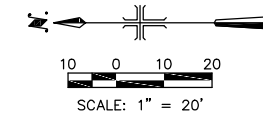
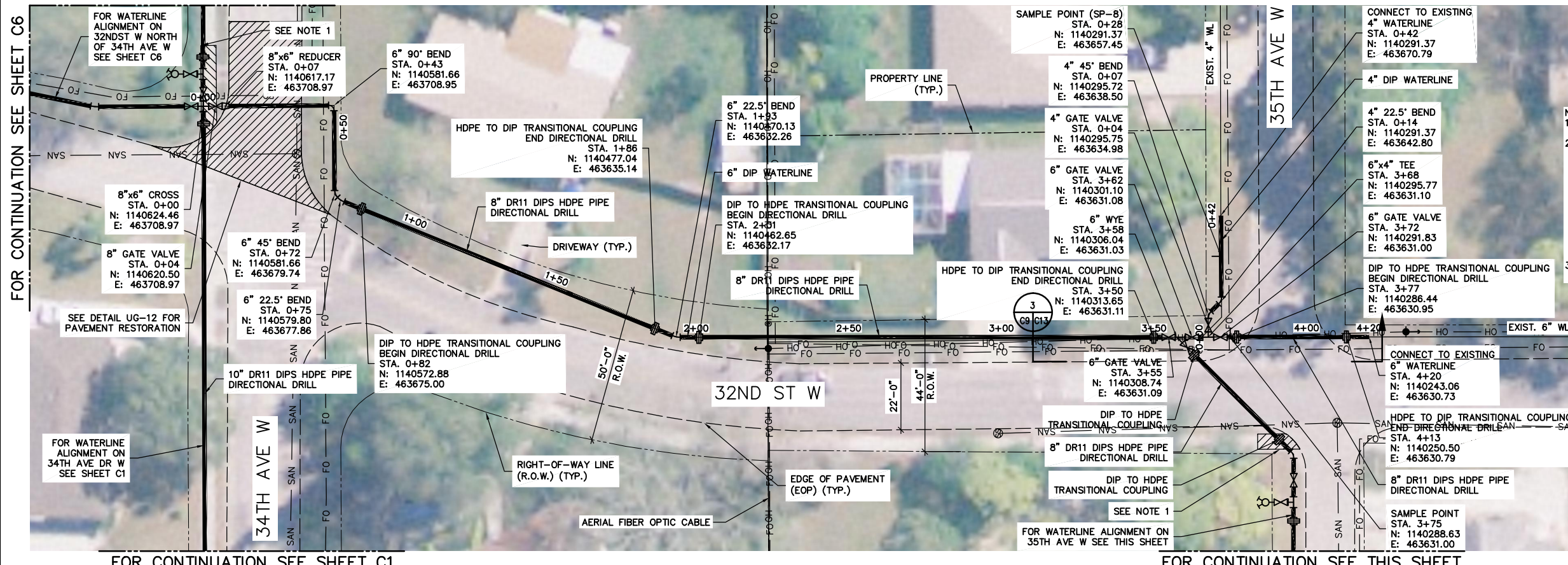
**SITE PLAN  
31ST ST W & 33RD AVE W**  
SCALE: 1" = 20'

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DATE MARCH 2010  
C8 SHEET OF  
CAD REF. NO.

BID SET

FOR CONTINUATION SEE SHEET C1

FOR CONTINUATION SEE SHEET C6



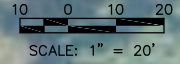
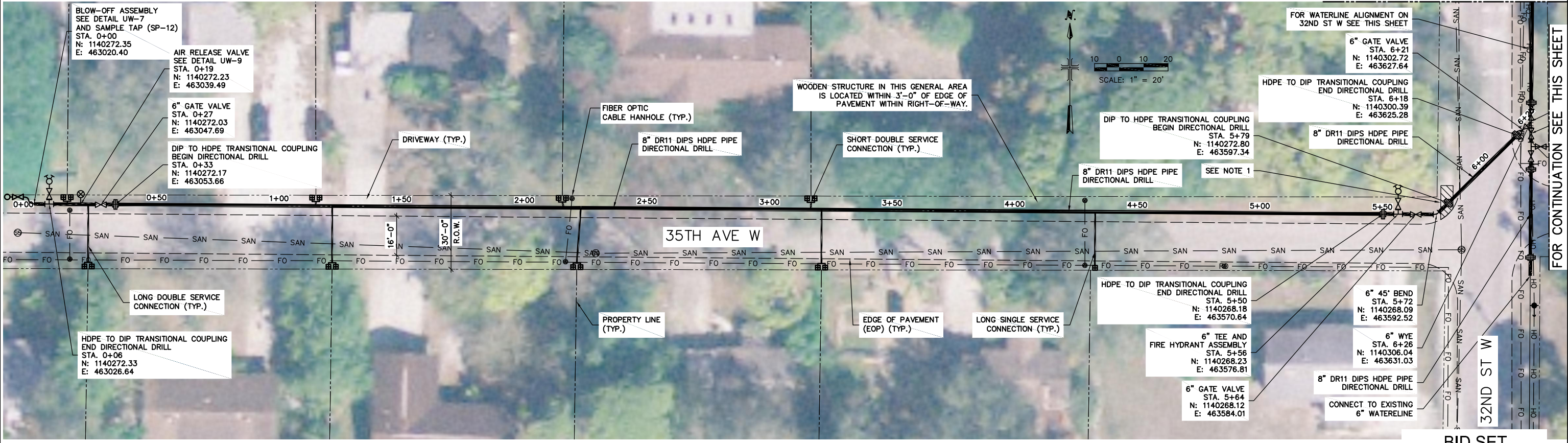
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TOLL FREE  
1 800 432 4770  
UNDERGROUND UTILITIES NOTIFICATION  
CENTER OF FLORIDA

FOR CONTINUATION SEE SHEET C1

FOR CONTINUATION SEE THIS SHEET

FOR CONTINUATION SEE THIS SHEET



- FOR WATERLINE ALIGNMENT ON 32ND ST W SEE THIS SHEET
- 6" GATE VALVE STA. 6+21 N: 1140302.72 E: 463627.64
  - HDPE TO DIP TRANSITIONAL COUPLING END DIRECTIONAL DRILL STA. 6+18 N: 1140300.39 E: 463625.28
  - 8" DR11 DIPS HDPE PIPE DIRECTIONAL DRILL
  - DIP TO HDPE TRANSITIONAL COUPLING BEGIN DIRECTIONAL DRILL STA. 5+79 N: 1140272.80 E: 463597.34
  - 8" DR11 DIPS HDPE PIPE DIRECTIONAL DRILL
  - SEE NOTE 1
  - HDPE TO DIP TRANSITIONAL COUPLING END DIRECTIONAL DRILL STA. 5+50 N: 1140268.09 E: 463570.64
  - 6" 45' BEND STA. 5+72 N: 1140268.09 E: 463592.52
  - 6" TEE AND FIRE HYDRANT ASSEMBLY STA. 5+56 N: 1140268.23 E: 463576.81
  - 6" GATE VALVE STA. 5+64 N: 1140268.12 E: 463584.01
  - 8" DR11 DIPS HDPE PIPE DIRECTIONAL DRILL
  - CONNECT TO EXISTING 6" WATERLINE
  - 6" 45' BEND STA. 6+26 N: 1140306.04 E: 463631.03

BID SET

XREFS: 2006 aerial.dwg \site plan.dwg IMAGES:None User:cmr\j Spec:PIRNE STANDARD File:\ACAD\PROJ\A013200\SITE PLAN 2.DWG Scale:1:1 Date:05/12/2009 Time:14:33 Layout:C1

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INDEPENDENT ENVIRONMENTAL ENGINEERS,  
SCIENTISTS & CONSULTANTS  
2301 MATLAND CENTER PARKWAY  
MATLAND, FLORIDA 32751

REVISIONS			
NO.	BY	DATE	REMARKS

VICTOR A. HURLBURT  
FLORIDA P.E. NO. 33836

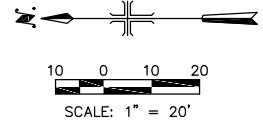
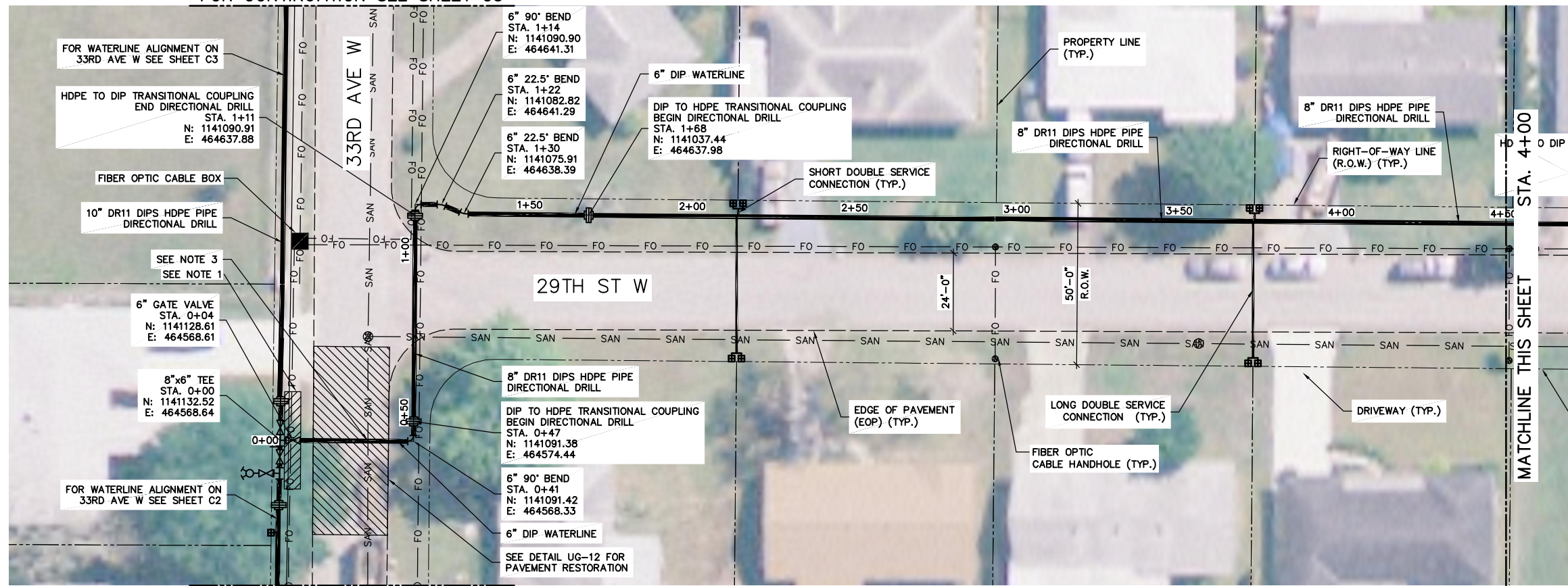
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DWN: SC  
CKD: VAH

MANATEE COUNTY  
**CLEARVIEW MANOR  
WATERLINE IMPROVEMENTS**

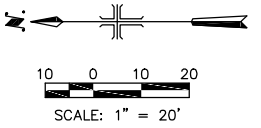
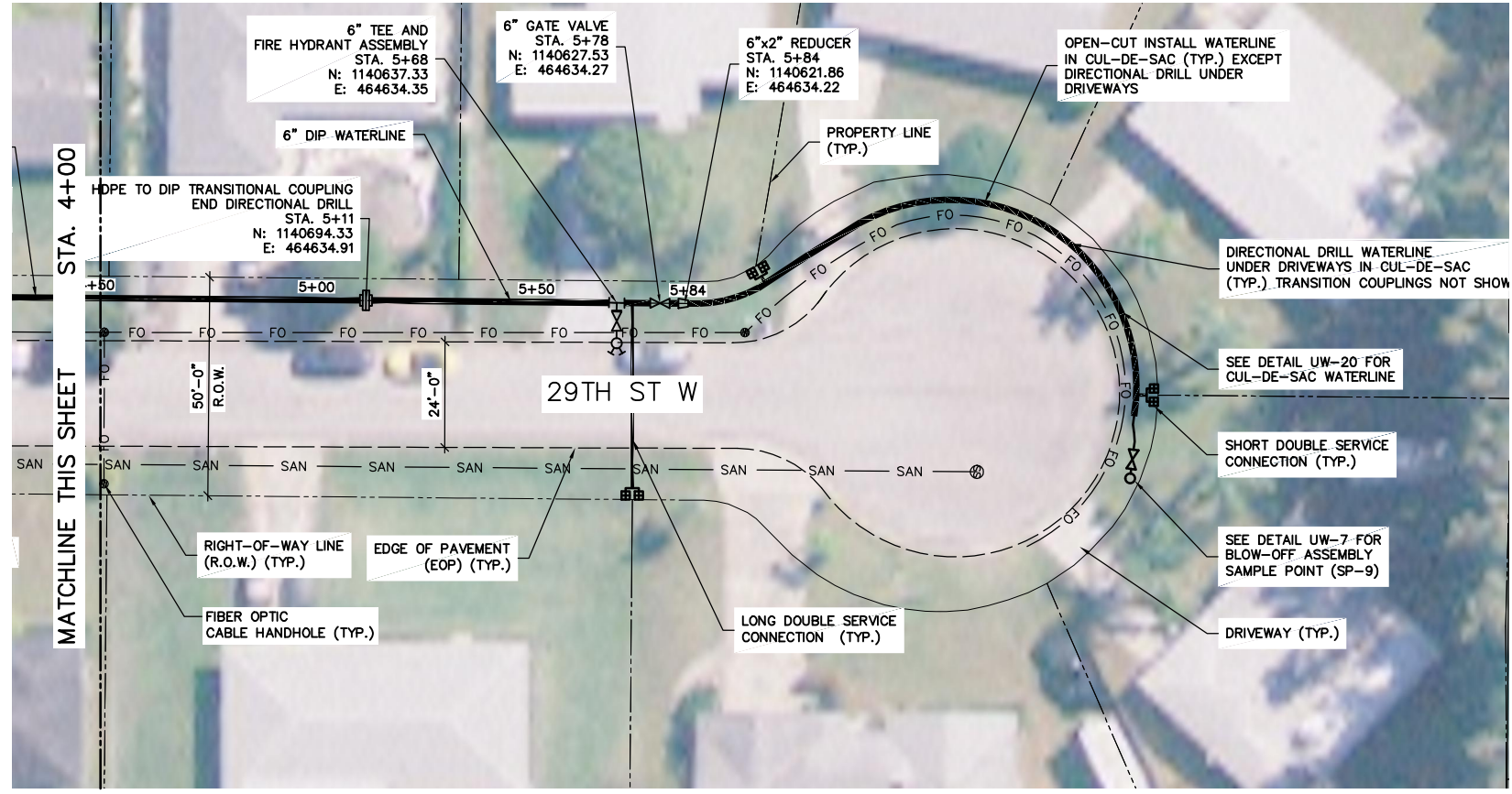
**SITE PLAN  
32ND ST W AND 35TH AVE W**  
SCALE: 1" = 20'

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FOR CONTINUATION SEE SHEET C3



FOR CONTINUATION SEE SHEET C2



- NOTE:**
1. REMOVE CONCRETE SIDEWALK FOR INSTALLATION OF DIRECTIONAL DRILLING. REPLACE SIDEWALK AT COMPLETION OF PIPING WORK.
  2. THE SPECIFIC LOCATION AND DEPTH OF THE EXISTING WATER SERVICES AT THE INDIVIDUAL RESIDENCES ARE NOT KNOWN AND ARE NOT SHOWN ON THE DRAWINGS. THE CONTRACTOR IS RESPONSIBLE TO LOCATE THE EXISTING WATER SERVICE AT EACH RESIDENCE AND PERFORM THE INSTALLATION OF THE WATER SERVICE ON THE PRIVATE PROPERTY STARTING AT THE APPROXIMATE EDGE OF THE HOUSE FOUNDATION TO THE CONNECTION POINT AT THE NEW WATERLINE. THE COUNTY WILL ASSIST THE CONTRACTOR WITH LOCATING THE RESIDENTIAL POINT OF CONNECTION AND DETERMINING AN ACCEPTABLE ROUTING ON THE PRIVATE PROPERTY, WITH APPROVAL BY THE HOMEOWNER, TO THE CONNECTION POINT AT THE NEW WATERLINE WITHIN THE ROADWAY RIGHT-OF-WAY.
  3. CONTRACTOR SHALL CONFIRM LOCATION OF EXISTING SANITARY SEWER PRIOR TO DIRECTIONAL DRILLING.
  4. LAND SURVEYING AND UTILITY LOCATE ACTIVITIES WERE NOT PERFORMED DURING THE DESIGN PHASE OF THIS PROJECT. IN LIEU OF THESE ACTIVITIES, COUNTY GIS INFORMATION WAS USED FOR THE ROADWAY RIGHT-OF-WAY LINES AND PROPERTY LINES WERE USED AS AN OVERLAY ON AN AERIAL PHOTOGRAPH. THE COUNTY'S WATER AND WASTEWATER ATLAS INFORMATION WAS USED TO PROVIDE THE GENERAL LOCATION OF THE EXISTING BURIED WATER AND WASTEWATER UTILITIES. IN ADDITION, THE VARIOUS UTILITY COMPANIES LISTED ON DRAWING G-2 WERE CONTACTED. THE INFORMATION RECEIVED FROM THE UTILITY COMPANIES WAS ADDED TO THE CONTRACT DRAWINGS TO INDICATE ONLY THE GENERAL LOCATION OF THE EXISTING BURIED UTILITIES WITHIN THE PROPOSED ROUTE OF THE WATERLINE ALIGNMENT. THE ACCURACY OF THE VARIOUS UTILITY LOCATIONS SHOWN ON THE DRAWINGS HAS NOT BEEN FIELD VERIFIED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES AND/OR SUNSHINE TO LOCATE ALL EXISTING BURIED UTILITIES IN THE ALIGNMENT OF THE PROPOSED WATERLINE PRIOR TO COMMENCING WORK ACTIVITIES. THE CENTERLINE OF THE WATERLINE CAN BE RELOCATED SLIGHTLY TO ACCOMMODATE EXISTING UTILITIES AFTER NOTIFICATION OF THE NECESSARY CHANGES THE OWNER.

48 HOURS BEFORE DIGGING  
**CALL SUNSHINE**  
 TOLL FREE  
 1 800 432 4770  
 UNDERGROUND UTILITIES NOTIFICATION  
 CENTER OF FLORIDA

XREFS: \\2006 aerial.dwg \site plan.dwg IMAGES:None  
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**MALCOLM PIRNIE**  
 CERTIFICATE OF AUTHORIZATION NO. 67  
 INDEPENDENT ENVIRONMENTAL ENGINEERS,  
 SCIENTISTS & CONSULTANTS  
 2301 MATLAND CENTER PARKWAY  
 MATLAND, FLORIDA 32751

REVISIONS			
NO.	BY	DATE	REMARKS

DES - VAH  
 DWN - SC  
 CKD - VAH



MANATEE COUNTY  
**CLEARVIEW MANOR  
 WATERLINE IMPROVEMENTS**

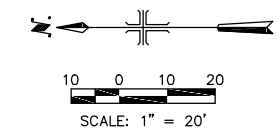
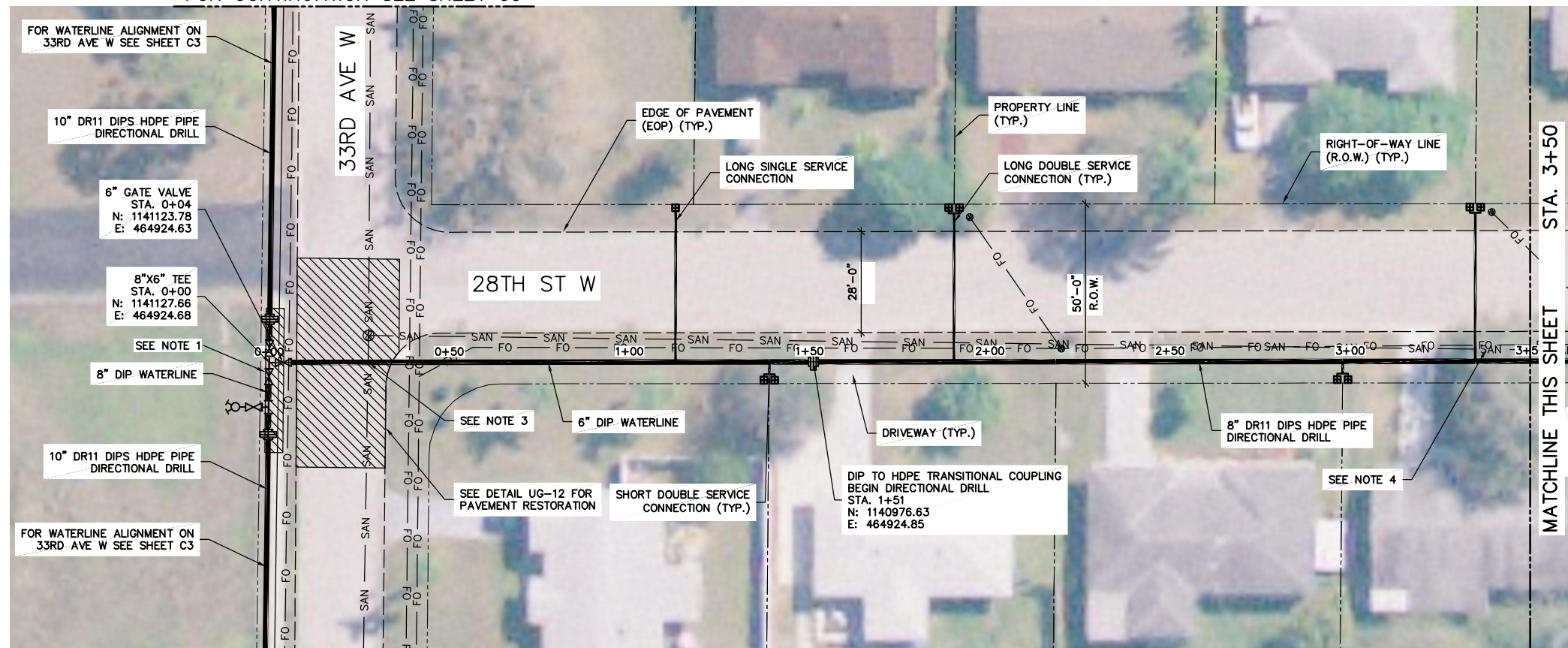
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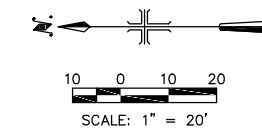
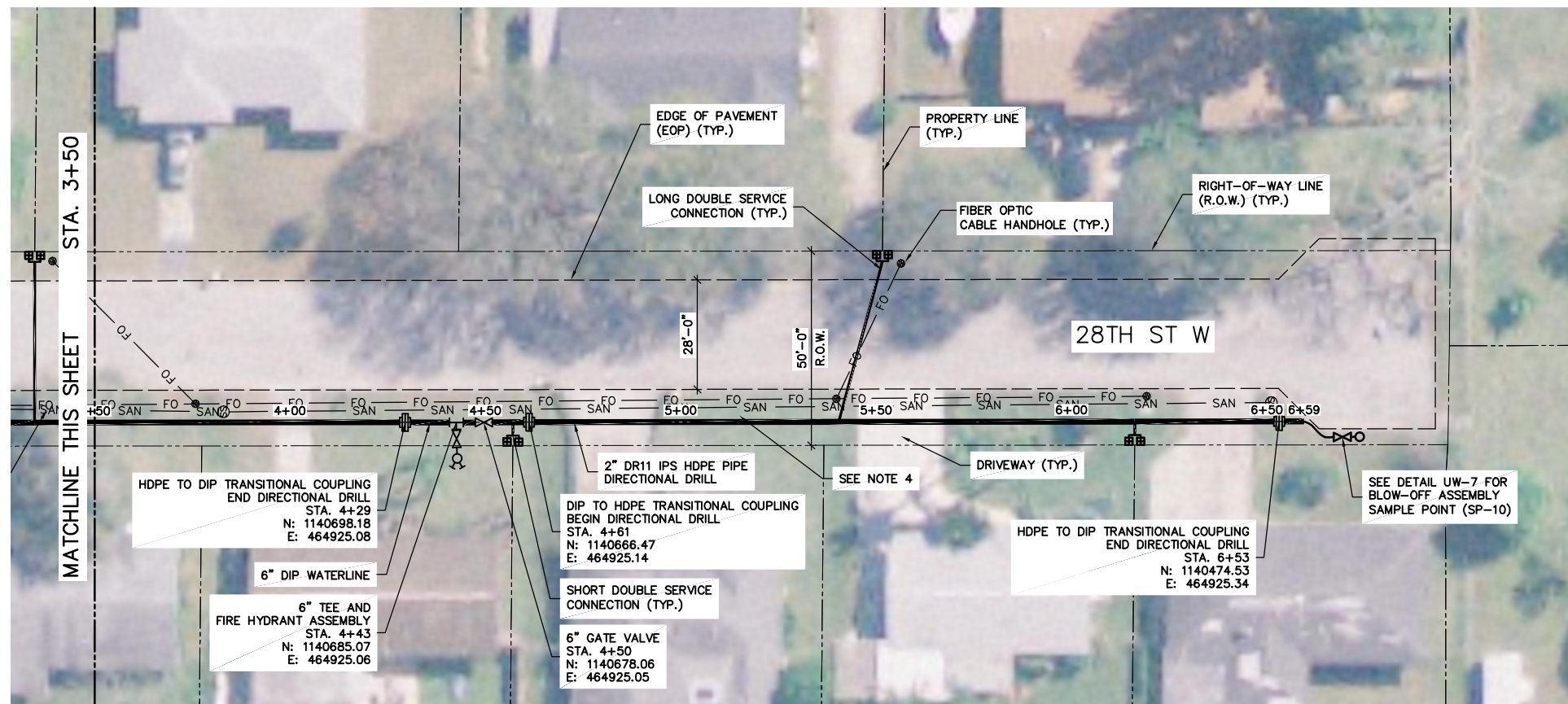
**SITE PLAN  
 29TH ST W**  
 SCALE: 1" = 20'



FOR CONTINUATION SEE SHEET C3



FOR CONTINUATION SEE SHEET C3



- NOTE:
- REMOVE CONCRETE SIDEWALK FOR INSTALLATION OF DIRECTIONAL DRILLING. REPLACE SIDEWALK AT COMPLETION OF PIPING WORK.
  - THE SPECIFIC LOCATION AND DEPTH OF THE EXISTING WATER SERVICES AT THE INDIVIDUAL RESIDENCES ARE NOT KNOWN AND ARE NOT SHOWN ON THE DRAWINGS. THE CONTRACTOR IS RESPONSIBLE TO LOCATE THE EXISTING WATER SERVICE AT EACH RESIDENCE AND PERFORM THE INSTALLATION OF THE WATER SERVICE ON THE PRIVATE PROPERTY STARTING AT THE APPROXIMATE EDGE OF THE HOUSE FOUNDATION TO THE CONNECTION POINT AT THE NEW WATERLINE. THE COUNTY WILL ASSIST THE CONTRACTOR WITH LOCATING THE RESIDENTIAL POINT OF CONNECTION AND DETERMINING AN ACCEPTABLE ROUTING ON THE PRIVATE PROPERTY, WITH APPROVAL BY THE HOMEOWNER, TO THE CONNECTION POINT AT THE NEW WATERLINE WITHIN THE ROADWAY RIGHT-OF-WAY.
  - CONTRACTOR SHALL CONFIRM LOCATION OF EXISTING SANITARY SEWER PRIOR TO DIRECTIONAL DRILLING.
  - CONTRACTOR SHALL PROVIDE SEPARATION DISTANCE BETWEEN EXISTING SANITARY SEWER AND PROPOSED WATERLINE.
  - LAND SURVEYING AND UTILITY LOCATE ACTIVITIES WERE NOT PERFORMED DURING THE DESIGN PHASE OF THIS PROJECT. IN LIEU OF THESE ACTIVITIES, COUNTY GIS INFORMATION WAS USED FOR THE ROADWAY RIGHT-OF-WAY LINES AND PROPERTY LINES WERE USED AS AN OVERLAY ON AN AERIAL PHOTOGRAPH. THE COUNTY'S WATER AND WASTEWATER ATLAS INFORMATION WAS USED TO PROVIDE THE GENERAL LOCATION OF THE EXISTING BURIED WATER AND WASTEWATER UTILITIES. IN ADDITION, THE VARIOUS UTILITY COMPANIES LISTED ON DRAWING G-2 WERE CONTACTED. THE INFORMATION RECEIVED FROM THE UTILITY COMPANIES WAS ADDED TO THE CONTRACT DRAWINGS TO INDICATE ONLY THE GENERAL LOCATION OF THE EXISTING BURIED UTILITIES WITHIN THE PROPOSED ROUTE OF THE WATERLINE ALIGNMENT. THE ACCURACY OF THE VARIOUS UTILITY LOCATIONS SHOWN ON THE DRAWINGS HAS NOT BEEN FIELD VERIFIED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES AND/OR SUNSHINE TO LOCATE ALL EXISTING BURIED UTILITIES IN THE ALIGNMENT OF THE PROPOSED WATERLINE PRIOR TO COMMENCING WORK ACTIVITIES. THE CENTERLINE OF THE WATERLINE CAN BE RELOCATED SLIGHTLY TO ACCOMMODATE EXISTING UTILITIES AFTER NOTIFICATION OF THE NECESSARY CHANGES THE OWNER.

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CALL SUNSHINE  
TOLL FREE  
1 800 432 4770  
UNDERGROUND UTILITY IDENTIFICATION  
CENTER OF FLORIDA

BID SET

XREFS: 2006 aerial.dwg \site plan.dwg IMAGES:None User:CORNEJO Spec:Pirnie STANDARD Title: \CAD\PRO\0132 - Manatee County\0132005-Clearview Manor\SITE PLAN 2.DWG Scale: 1:1 Date: 05/14/2009 Time: 09:56 Layout: C1 (2)

**MALCOLM PIRNIE**  
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DES VAH  
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CKD VAH

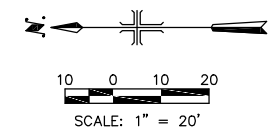
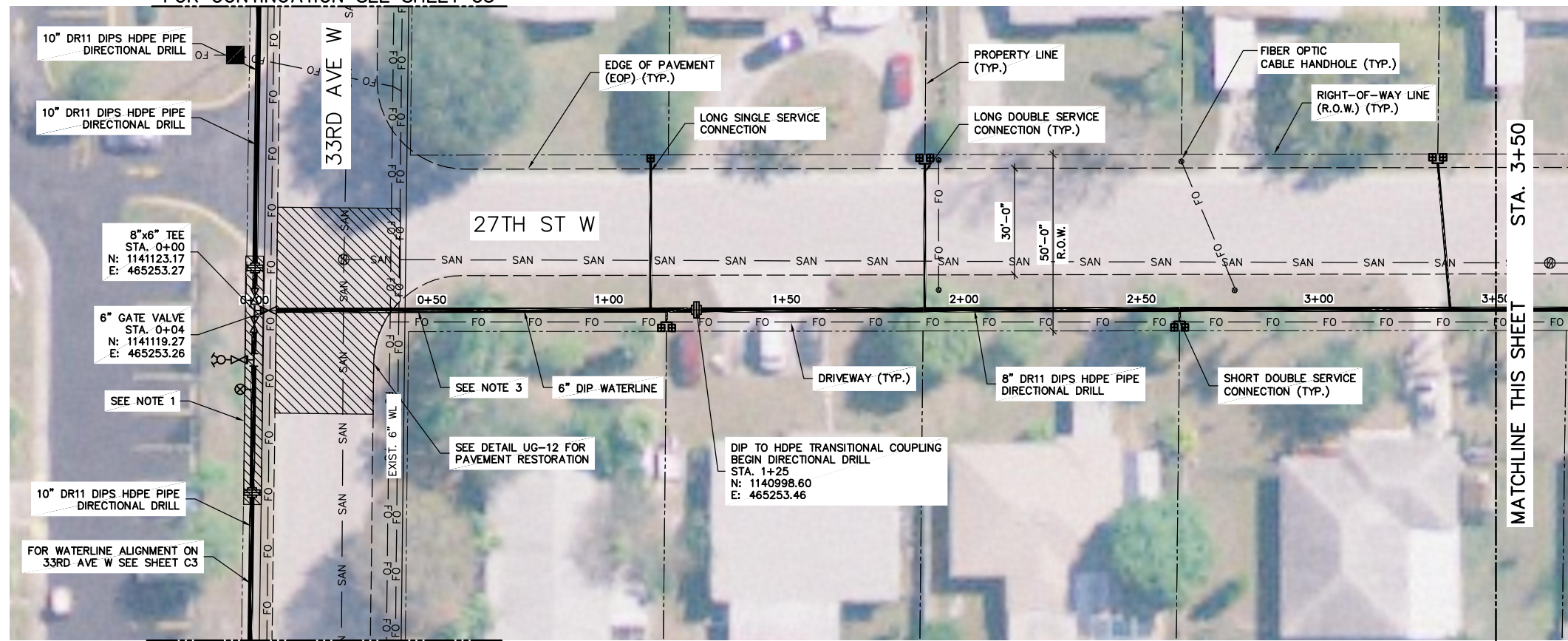


MANATEE COUNTY  
**CLEARVIEW MANOR  
WATERLINE IMPROVEMENTS**

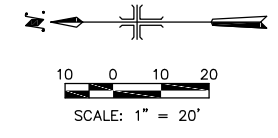
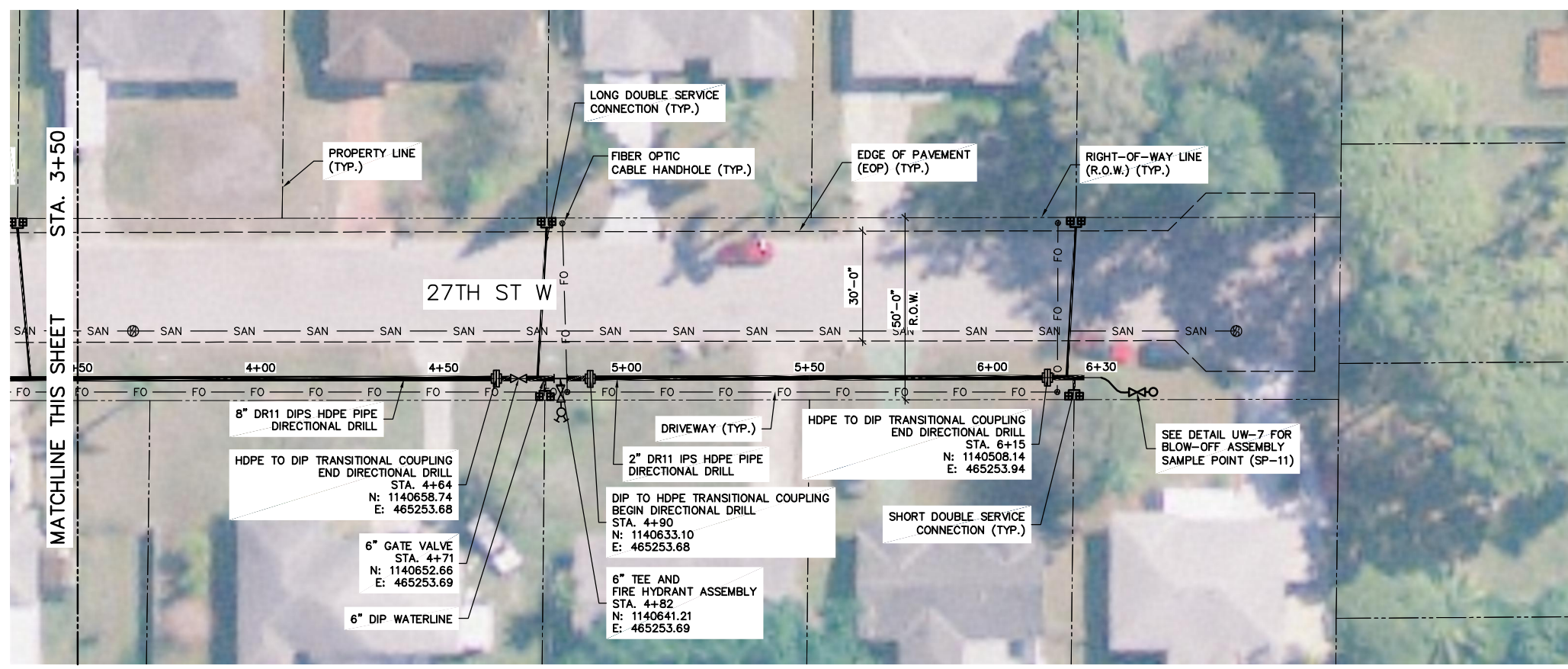
**SITE PLAN  
28TH ST W**  
SCALE: 1" = 20'

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C11 SHEET OF  
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FOR CONTINUATION SEE SHEET C3



- NOTE:
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1 800 432 4770  
UNDERGROUND UTILITIES NOTIFICATION  
CENTER OF FLORIDA

BID SET

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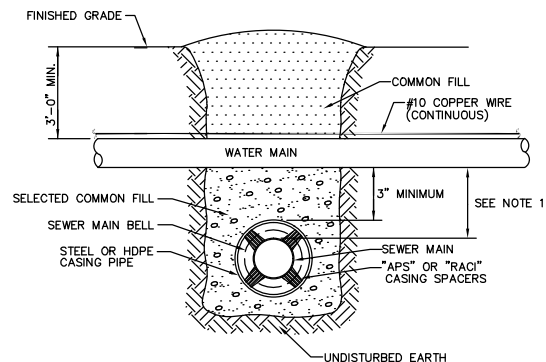
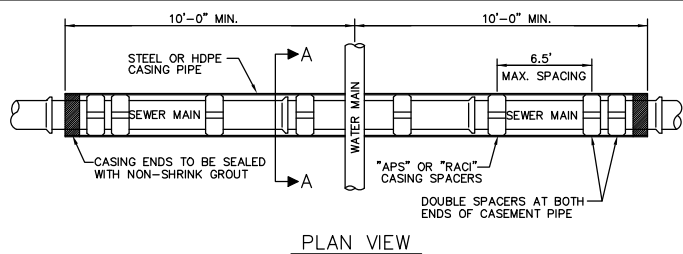


MANATEE COUNTY  
**CLEARVIEW MANOR  
WATERLINE IMPROVEMENTS**

**SITE PLAN  
27TH ST W**  
SCALE: 1" = 20'

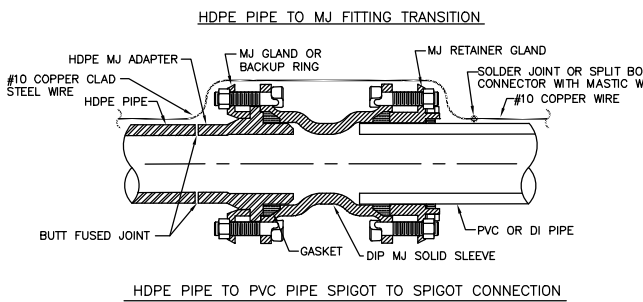
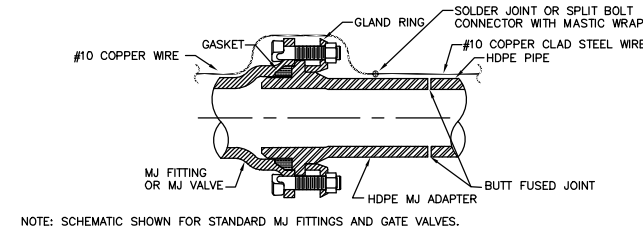
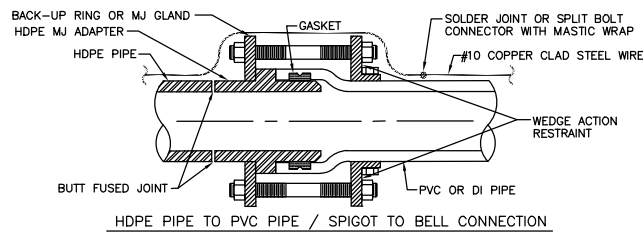
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CAD REF. NO. \_\_\_\_\_

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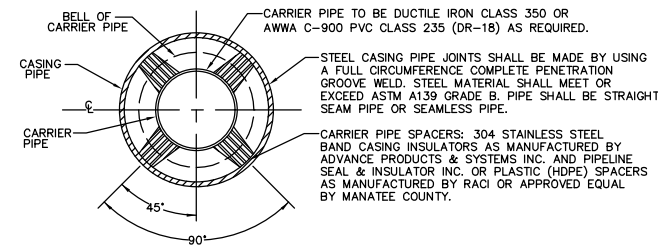
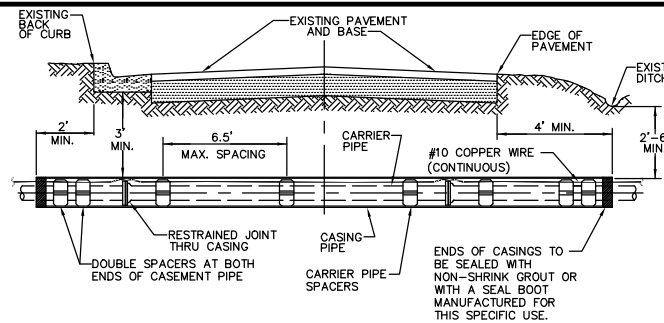
- NOTE:
- WHERE CLEARANCE IS LESS THAN 18", SEWER MAIN SHALL BE ENCASED AS DETAILED. FOR VERTICAL CLEARANCE OF 18" OR GREATER NO CASEMENT IS REQUIRED.
  - NEW WATER MAIN AND SEWER MAIN PIPE SECTIONS ARE TO BE CENTERED AT THE CROSSING POINT REGARDLESS OF THE VERTICAL CLEARANCE.
  - REFER TO STANDARD DETAIL UG-3 FOR ADDITIONAL CASING AND SPACER DETAILS.

### UG-2 TYPICAL WATER/SEWER CROSSING



- NOTE:
- ONE # 10 GAUGE EXTRA HIGH STRENGTH COPPER CLAD STEEL TRACER WIRE SHALL BE PULLED AND SECURED TO THE PIPE FOR PIPELINES THAT ARE INSTALLED BY TRENCHLESS HORIZONTAL DIRECTIONAL DRILLING METHOD. IN NON-DIRECTIONAL BORE (TRENCHES AND BORE & JACK) APPLICATIONS, A # 10 GAUGE SOLID INSULATED COPPER WIRE SHALL BE ATTACHED TO THE PIPE. TRACER WIRES SHALL HAVE A MINIMUM 30-MILS OF POLYETHYLENE INSULATION.

### UG-6 HDPE TO PVC OR DIP PIPE ADAPTER



CARRIER SIZE & MINIMUM CASING SIZE									
CARRIER	4"	6"	8"	10"	12"	14"	16"	18"	20"
CASING	12"	14"	18"	20"	24"	30"	30"	36"	36"
CASING / WALL THICKNESS	0.188	0.188	0.250	0.250	0.344	0.406	0.406	0.406	0.406

- NOTE:
- THE ENGINEER OF RECORD MAY SELECT LARGER CASING DIAMETERS.
  - FOR JACK & BORE SPECIFICATIONS UNDER STATE ROADS AND RAILROADS REFER TO THE F.D.O.T. UTILITY ACCOMMODATION MANUAL, LATEST EDITION.

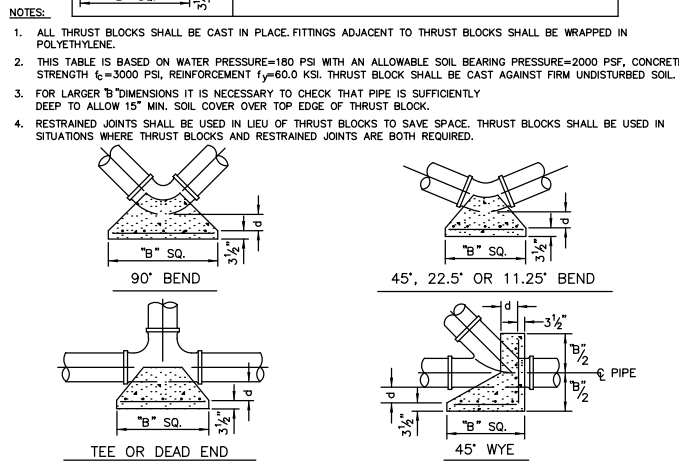
### UG-3 JACK & BORE CROSSING

PIPE SIZE (IN.)	THRUST BLOCK DIMENSIONS B ft. x d inches											
	90° BEND		45° BEND		22.5° BEND		11.25° BEND		DEAD END & TEE		45° WYE	
	B	d	B	d	B	d	B	d	B	d	B	d
4	1.5	3/2	1.1	3/2	0.8	3/2	0.6	3/2	1.3	3/2	1.1	3/2
6	2.2	5/4	1.6	3/4	1.2	3/2	0.8	3/2	1.9	4/2	1.6	3/4
8	2.9	7	2.1	5	1.5	3/2	1.1	3/2	2.4	5/4	2.0	4/4
10	3.5	8 1/2	2.6	6 1/4	1.9	4 1/2	1.3	3/2	3.0	7/4	2.5	6
12	4.2	10	3.1	7 1/2	2.2	5 1/4	1.6	3/4	3.5	8 1/2	3.0	7/4
14	4.9	11 3/4	3.6	8 3/4	2.6	6 1/4	1.8	4 1/4	4.1	9 3/4	3.4	8 1/4
16	5.5	13 1/4	4.1	9 3/4	2.9	7	2.1	5	4.7	11 1/4	3.9	9 1/4
18	6.2	15	4.6	11	3.3	8	2.3	5 1/2	5.2	12 1/2	4.4	10 1/2
20	6.9	16 1/2	5.0	12	3.6	8 3/4	2.6	6 1/4	5.8	14	4.9	11 3/4
24	8.2	19 3/4	6.0	14 1/2	4.3	10 1/4	3.1	7 1/2	6.9	16 1/2	5.8	14
30	10.1	24 1/4	7.5	18	5.3	12 3/4	3.8	9	8.5	20 1/2	7.2	17 1/4
36	12.1	29	8.9	21 1/4	6.4	15 1/4	4.5	10 3/4	10.2	24 1/2	8.6	20 3/4

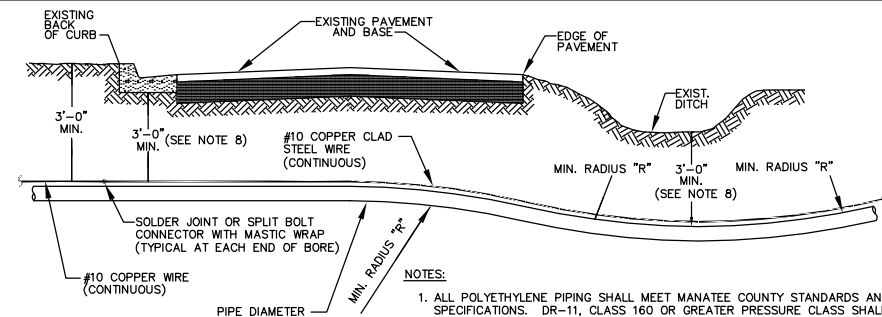
REINFORCEMENT MAT SCHEDULE

FOR DIM. 'B' BETWEEN 5.75' & 12.5' USE #4 @ 8" EACH WAY

FOR DIM. 'B' LESS THAN 5.75' USE #3 @ 8" EACH WAY



### UG-7 CONCRETE THRUST BLOCKS



PIPE DIAMETER "D" IN INCHES	MIN. RADIUS FOR PE PIPE IN FEET	
	MIN. RADIUS "R" FOR DR-11	MIN. RADIUS "R" FOR DR-9
2	4	5.5
3	6	8.3
4	8	11.0
6	12	16.5
8	16	22.0
10	20	27.5
12	24	33.0
16	32	44.0
18	36	49.5
20	40	55.0

- NOTE:
- ALL POLYETHYLENE PIPING SHALL MEET MANATEE COUNTY STANDARDS AND SPECIFICATIONS. DR-11, CLASS 160 OR GREATER PRESSURE CLASS SHALL BE USED FOR POTABLE, RECLAIMED WATER OR SANITARY FORCE MAINS. DR-9 MAY BE REQUIRED BASED ON THE ENGINEERS CALCULATIONS. SEE NOTE #2.
  - THE ENGINEER SHALL SUBMIT CALCULATIONS FOR THE MAXIMUM PULLING LENGTH, TOTAL PULL FORCE AND THE ALLOWABLE TENSILE LOAD, IN ACCORDANCE WITH AWWA M55 & ASTM F1804. DESIGN SHALL ALSO BE IN ACCORDANCE WITH ASTM F1962.
  - THE PIPE STRING SHALL BE ATTACHED TO THE BACKREAMER THROUGH A "WEAK-LINK" DEVICE TO ENSURE THAT THE PULLING FORCE DOES NOT EXCEED THE PIPE'S ALLOWABLE TENSILE LOAD RATING.
  - ONE # 10 GAUGE EXTRA HIGH STRENGTH COPPER CLAD STEEL TRACER WIRE SHALL BE PULLED AND SECURED TO THE PIPE FOR PIPELINES THAT ARE INSTALLED BY TRENCHLESS HORIZONTAL DIRECTIONAL DRILLING METHOD. IN TRENCHLESS/NON-DIRECTIONAL BORE APPLICATIONS, A # 10 GAUGE SOLID INSULATED COPPER WIRE SHALL BE ATTACHED TO THE PIPE. TRACER WIRES SHALL HAVE A MINIMUM 30-MILS OF POLYETHYLENE INSULATION.
  - COLOR CODED BLUE (PANTONE 522 C) FOR RECLAIMED WATER MAINS.
  - COLOR CODED PURPLE (PANTONE 522 C) FOR RECLAIMED WATER MAINS.
  - COLOR CODED GREEN FOR SANITARY FORCE MAINS.
  - PIPE DEPTHS MAY NEED TO BE DEEPER TO AVOID FRACKINGS. PIPE ALIGNMENT SHALL BE AS SHOWN ON THE CONSTRUCTION DRAWINGS.
  - FDOT CRITERIA SHALL BE MET FOR PIPES UNDER STATE ROADS.

### UG-4 DIRECTIONAL BORE ROADWAY CROSSING

### REQUIRED LENGTH OF RESTRAINED JOINT PIPE FOR DIP (POLY-WRAPPED)

MAIN PIPE SIZE	HORIZ. BENDS			TEES				REDUCERS				PLUGS	VALVES
	90°	45°	22.5°	SIZE		LENGTH		SIZE		LENGTH			
36	142	59	28	36	30	24	18	12	10	8	6	453	227
30	124	51	25	30	24	18	12	10	8	6	4	391	196
24	106	44	21	24	18	12	10	8	6	4	2	327	164
20	92	38	18	20	16	12	10	8	6	4	1	280	140
16	77	32	15	16	12	10	8	6	4	3	1	231	116
12	61	25	12	12	10	8	6	4	3	2	1	181	91
10	52	22	10	10	8	6	4	3	2	1	1	153	77
8	44	18	8	8	6	4	3	2	1	1	1	128	64
6	34	14	7	6	4	3	2	1	1	1	1	98	49
4	24	10	5	4	3	2	1	1	1	1	1	69	35

### REQUIRED LENGTH OF RESTRAINED JOINT PIPE FOR DIP (NON-WRAPPED)

MAIN PIPE SIZE	HORIZ. BENDS			TEES				REDUCERS				PLUGS	VALVES
	90°	45°	22.5°	SIZE		LENGTH		SIZE		LENGTH			
36	100	42	20	36	30	24	18	12	10	8	6	188	94
30	88	37	18	30	24	18	12	10	8	6	4	162	81
24	75	31	15	24	18	12	10	8	6	4	3	135	68
20	65	27	13	20	16	12	10	8	6	4	2	116	58
16	54	22	11	16	12	10	8	6	4	3	1	96	48
12	43	18	8	12	10	8	6	4	3	2	1	75	38
10	37	15	7	10	8	6	4	3	2	1	1	63	32
8	30	13	6	8	6	4	3	2	1	1	1	53	27
6	24	10	5	6	4	3	2	1	1	1	1	41	21
4	17	7	3	4	3	2	1	1	1	1	1	29	15

- NOTE:
- SEE "RESTRAINED LENGTHS FOR PVC PIPE" DETAIL FOR NOTES 1 THROUGH 8 THAT ARE ALSO APPLICABLE TO RESTRAINED LENGTHS FOR DIP.

### UG-9 RESTRAINED LENGTH FOR DIP

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 MAITLAND, FLORIDA 32751

REVISIONS			
NO.	BY	DATE	REMARKS

DES VAH  
 DWN SC  
 CKD VAH

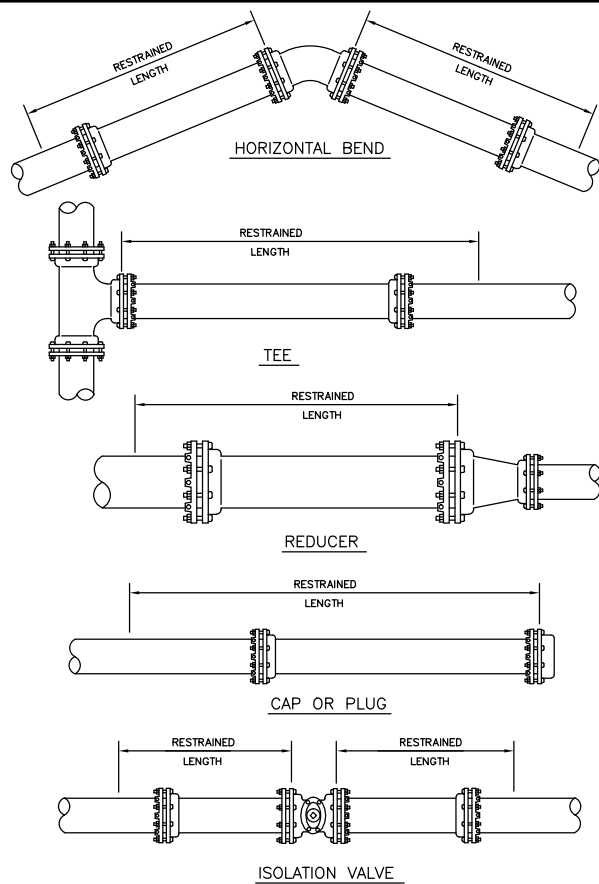


MANATEE COUNTY  
**CLEARVIEW MANOR**  
**WATERLINE IMPROVEMENTS**

MANATEE COUNTY UTILITY STANDARDS  
**GENERAL CONSTRUCTION DETAILS 1**  
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 CD1 SHEET \_\_\_\_ OF \_\_\_\_  
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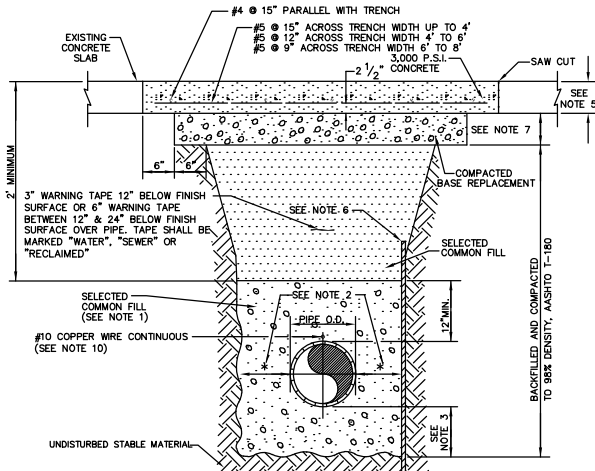
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UG-10 RESTRAINED LENGTHS FOR PIPE

NOTES:

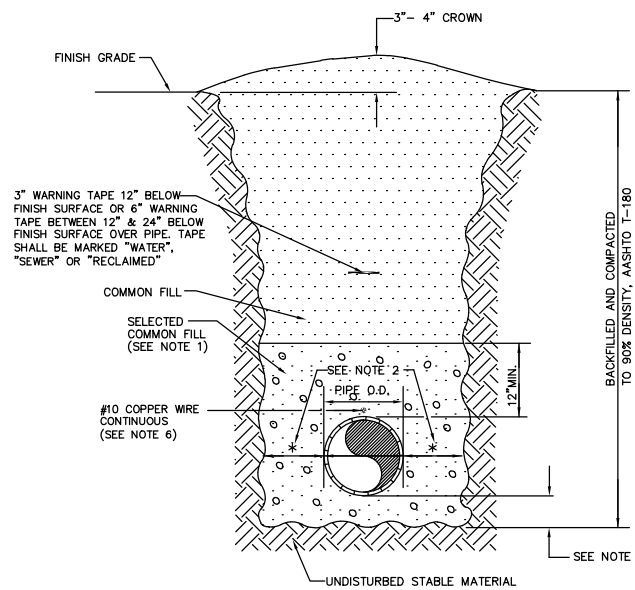
- 1.) USE OF TYPE A-2 AND A-3 PIPE BEDDING TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
- 2.) 10" MAX. FOR PIPE DIAMETER LESS THAN 24"; 12" MAX. FOR PIPE DIAMETER 24" AND LESS THAN 42"; 24" MAX. FOR PIPE DIAMETER 42" AND OVER.
- 3.) 4" MAX. FOR PIPE 16" DIAMETER & LESS; 6" MAX. FOR PIPE 18" TO 36" DIAMETER; AND 9" MAX. FOR PIPE 42" DIAMETER AND LARGER.
- 4.) PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
- 5.) THICKNESS TO MATCH EXISTING OR BE 8" MINIMUM, WHICHEVER IS GREATER.
- 6.) SHEETING ORDERED LEFT IN PLACE TO BE CUT OFF 24" BELOW FINISHED GRADE OR 12" BELOW SUBGRADE.
- 7.) BASE SHALL BE 8" MINIMUM THICKNESS CRUSHED CONCRETE. SAND ASPHALT BASE WILL BE AN ACCEPTABLE ALTERNATIVE.
- 8.) BACKFILL AASHTO M-145 SHALL BE PLACED IN LAYERS NOT TO EXCEED 6 INCHES. EACH LAYER SHALL BE THOROUGHLY TAMPED AND/OR ROLLED TO 98% AASHTO T-180 DENSITY.
- 9.) TEMPORARY PATCHES WILL BE INSTALLED TO PROVIDE A SMOOTH ALL WEATHER SURFACE AT ALL TIME. PERMANENT REPLACEMENT TO BE MADE AS SOON AS POSSIBLE.
- 10.) TRACER WIRE NOT REQUIRED FOR GRAVITY SEWERS.
- 11.) NOTES 5.) THRU 10.) ARE MINIMUM REQUIREMENTS. REFER TO MANATEE COUNTY HIGHWAY AND TRAFFIC STANDARDS FOR ADDITIONAL REQUIREMENTS.



UG-13 TRENCH WITH CONCRETE PAVEMENT SURFACE TYPE A-1 PIPE BEDDING

NOTES:

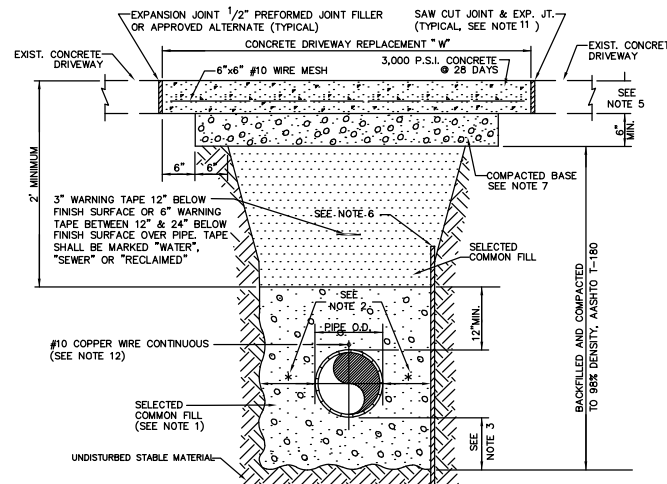
- 1.) USE OF TYPE A-2 AND A-3 PIPE BEDDING TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
- 2.) 10" MAX. FOR PIPE DIAMETER LESS THAN 24"; 12" MAX. FOR PIPE DIAMETER 24" AND LESS THAN 42"; 24" MAX. FOR PIPE DIAMETER 42" AND OVER.
- 3.) 4" MAX. FOR PIPE 16" DIAMETER & LESS; 6" MAX. FOR PIPE 18" TO 36" DIAMETER; AND 9" MAX. FOR PIPE 42" DIAMETER AND LARGER.
- 4.) PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
- 5.) BACKFILL AASHTO M-145 SHALL BE PLACED IN LAYERS NOT TO EXCEED 6 INCHES FOR SELECTED COMMON FILL AND NOT TO EXCEED 12 INCHES FOR COMMON FILL. EACH LAYER SHALL BE THOROUGHLY TAMPED AND/OR ROLLED TO 98% AASHTO T-180 DENSITY.
- 6.) TRACER WIRE NOT REQUIRED FOR GRAVITY SEWERS.



UG-11 TRENCH WITH UNIMPROVED SURFACE TYPE A-1 PIPE BEDDING

NOTES:

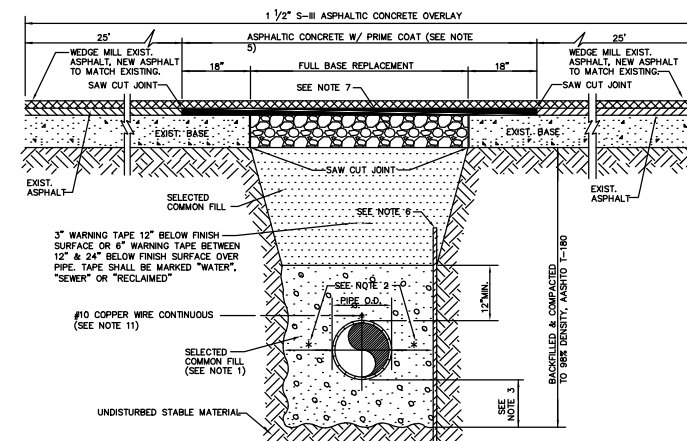
- 1.) USE OF TYPE A-2 AND A-3 PIPE BEDDING TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
- 2.) 10" MAX. FOR PIPE DIAMETER LESS THAN 24"; 12" MAX. FOR PIPE DIAMETER 24" AND LESS THAN 42"; 24" MAX. FOR PIPE DIAMETER 42" AND OVER.
- 3.) 4" MAX. FOR PIPE 16" DIAMETER & LESS; 6" MAX. FOR PIPE 18" TO 36" DIAMETER; AND 9" MAX. FOR PIPE 42" DIAMETER AND LARGER.
- 4.) PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
- 5.) THICKNESS TO MATCH EXISTING OR BE 6" MINIMUM, WHICHEVER IS GREATER.
- 6.) SHEETING ORDERED LEFT IN PLACE TO BE CUT OFF 24" BELOW FINISHED GRADE OR 12" BELOW SUBGRADE.
- 7.) BASE SHALL BE COMPACTED 6" MINIMUM THICKNESS OF APPROVED MATERIAL.
- 8.) BACKFILL AASHTO M-145 SHALL BE PLACED IN LAYERS NOT TO EXCEED 6 INCHES. EACH LAYER SHALL BE THOROUGHLY TAMPED AND/OR ROLLED TO 98% AASHTO T-180 DENSITY.
- 9.) DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST ADOPTED CONSTRUCTION STANDARDS OF THE MANATEE COUNTY TRANSPORTATION DEPARTMENT.
- 10.) IF THE DRIVEWAY IS 12' OR WIDER, SAWCUT AN EXPANSION JOINT ALONG THE CENTER OF THE DRIVEWAY (3/16" WIDE AND 1/2" DEEP) AFTER THE CONCRETE HAS SET.
- 11.) IF THERE IS AN EXISTING EXPANSION JOINT WITHIN 3' OF THE PROPOSED JOINT, EXTEND DRIVEWAY REPLACEMENT TO THE EXISTING JOINT.
- 12.) TRACER WIRE NOT REQUIRED FOR GRAVITY SEWERS.



UG-14 TRENCH WITH CONCRETE DRIVEWAY SURFACE TYPE A-1 PIPE BEDDING

NOTES:

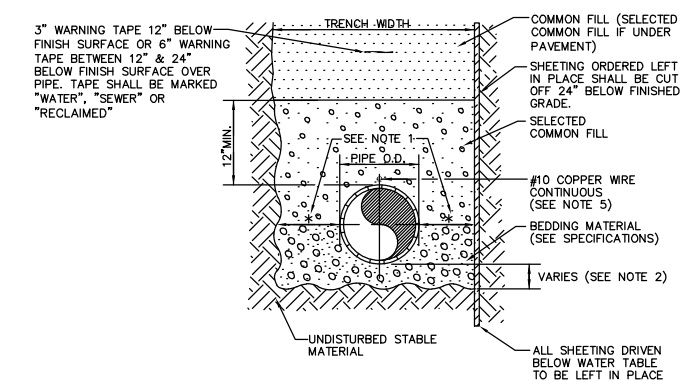
- 1.) USE OF TYPE A-2 AND A-3 PIPE BEDDING TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
- 2.) 10" MAX. FOR PIPE DIAMETERS LESS THAN 24"; 12" MAX. FOR PIPE DIAMETER 24" AND LESS THAN 42"; 24" MAX. FOR PIPE DIAMETER 42" AND OVER.
- 3.) 4" MAX. FOR PIPE 16" DIAMETER & LESS; 6" MAX. FOR PIPE 18" TO 36" DIAMETER; AND 9" MAX. FOR PIPE 42" DIAMETER AND LARGER.
- 4.) PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
- 5.) ASPHALTIC CONCRETE FRICTION COURSE WITH PRIME COAT SHALL BE THE SAME DEPTH AND TYPE AS EXISTING OR A MINIMUM OF ONE INCH, WHICHEVER IS GREATER.
- 6.) SHEETING ORDERED LEFT IN PLACE TO BE CUT OFF 24" BELOW FINISHED GRADE OR 12" BELOW SUBGRADE.
- 7.) BASE SHALL BE 8" MINIMUM THICKNESS CRUSHED CONCRETE. SAND ASPHALT BASE WILL BE AN ACCEPTABLE ALTERNATIVE.
- 8.) BACKFILL AASHTO M-145 SHALL BE PLACED IN LAYERS NOT TO EXCEED 6 INCHES. EACH LAYER SHALL BE THOROUGHLY TAMPED AND/OR ROLLED TO 98% AASHTO T-180 DENSITY.
- 9.) TEMPORARY PATCHES WILL BE INSTALLED TO PROVIDE A SMOOTH ALL WEATHER SURFACE AT ALL TIME. PERMANENT REPLACEMENT TO BE MADE AS SOON AS POSSIBLE.
- 10.) RESTORE SIGNAGE & MARKING WITH THERMOPLASTIC PER FDOT STANDARDS, LATEST EDITION.
- 11.) TRACER WIRE NOT REQUIRED FOR GRAVITY SEWERS.
- 12.) NOTES 5.) THRU 11.) ARE MINIMUM REQUIREMENTS. REFER TO MANATEE COUNTY HIGHWAY AND TRAFFIC STANDARDS FOR ADDITIONAL REQUIREMENTS.



UG-12 TRENCH WITH ASPHALT PAVEMENT SURFACE TYPE A-1 PIPE BEDDING

NOTES:

- 1.) 10" MAX. FOR PIPE DIAMETER LESS THAN 24"; 12" MAX. FOR PIPE DIAMETER 24" AND LESS THAN 42"; 24" MAX. FOR PIPE DIAMETER 42" AND OVER.
- 2.) 4" MAX. FOR PIPE 16" DIAMETER AND LESS; 6" MAX. FOR PIPE DIAMETER 18" TO 36" AND 9" MAX. FOR PIPE DIAMETER 42" AND OVER.
- 3.) PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- 4.) BACKFILL AASHTO M-145 SHALL BE PLACED IN LAYERS NOT TO EXCEED 6 INCHES. EACH LAYER SHALL BE THOROUGHLY TAMPED AND/OR ROLLED TO 98% AASHTO T-180 DENSITY.
- 5.) TRACER WIRE NOT REQUIRED FOR GRAVITY SEWERS.



UG-15 TRENCH WITH TYPE A-2 PIPE BEDDING

NO.	BY	DATE	REVISIONS	REMARKS

DES VAH  
DWN SC  
CKD VAH



MANATEE COUNTY  
CLEARVIEW MANOR  
WATERLINE IMPROVEMENTS

MANATEE COUNTY UTILITY STANDARDS  
GENERAL CONSTRUCTION DETAILS 2

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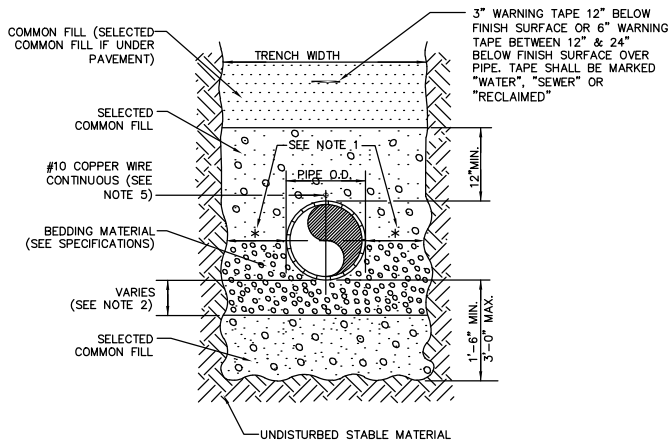
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**MALCOLM PIRNIE**  
CERTIFICATE OF AUTHORIZATION NO. 67  
INDEPENDENT ENVIRONMENTAL ENGINEERS,  
SCIENTISTS & CONSULTANTS  
2301 MAITLAND CENTER PARKWAY  
MAITLAND, FLORIDA 32751

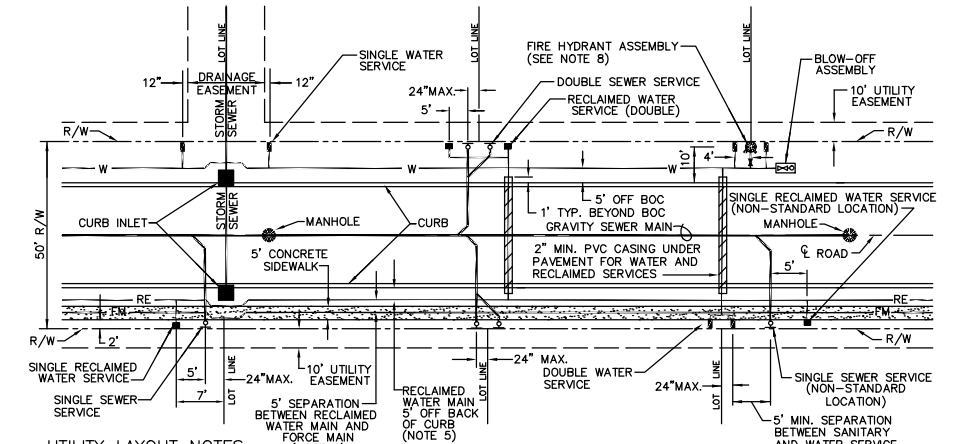
VICTOR A. HURLBURT  
FLORIDA P.E. NO. 33836

**NOTES:**

- 1.) 10" MAX. FOR PIPE DIAMETER LESS THAN 24"; 12" MAX. FOR PIPE DIAMETER 24" AND LESS THAN 42"; 24" MAX. FOR PIPE DIAMETER 42" AND OVER.
- 2.) 4" MAX. FOR PIPE 16" DIAMETER & LESS; 6" MAX. FOR PIPE 18" TO 36" DIAMETER; AND 9" MAX FOR PIPE 42" DIAMETER AND LARGER.
- 3.) PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
- 4.) BACKFILL AASHTO M-145 SHALL BE PLACED IN LAYERS NOT TO EXCEED 6 INCHES. EACH LAYER SHALL BE THOROUGHLY TAMPED AND/OR ROLLED TO 98% AASHTO T-180 DENSITY.
- 5.) TRACER WIRE NOT REQUIRED FOR GRAVITY SEWERS.



UG-16 TRENCH WITH TYPE A-3 PIPE BEDDING



**UTILITY LAYOUT NOTES:**

1. 5' WIDE SIDEWALK TO BE LOCATED 2' OFF RIGHT-OF-WAY LINE (4' SEPARATION FROM SIDEWALK TO BACK OF CURB). SEE PLAN FOR SIDEWALK LOCATION.
2. WATER SERVICES TO BE 24" MAX. OFF LOT LINE, 12" MAX. AT DRAINAGE EASEMENTS. SANITARY CLEAN-OUTS TO BE 12" OFF RIGHT-OF-WAY LINE AND 24" MAX. OFF LOT LINE, 12" MAX. AT DRAINAGE EASEMENTS. RECLAIMED WATER SERVICES TO BE 7" MAX. OFF LOT LINE (5' AWAY FROM SANITARY SERVICES), 6" MAX. AT DRAINAGE EASEMENTS.
3. POTABLE WATER MAIN TO BE 5' OFF BACK OF CURB, ON OPPOSITE SIDE OF ROAD FROM SIDEWALK.
4. SEWER MAIN TO BE ALONG CENTERLINE OF ROADWAY, EXCEPT IN CURVES, AND SHALL IN NO CASE BE CLOSER THAN 10' AWAY FROM POTABLE WATER MAINS AND 5' AWAY FROM RECLAIMED WATER MAINS. MANHOLE COVERS SHALL BE IN CENTERLINE OF ROADWAY, OR CENTER OF TRAVELED LANE.
5. RECLAIMED WATER MAIN TO BE 5' OFF BACK OF CURB (OPPOSITE SIDE OF ROAD FROM POTABLE WATER MAIN), EXCEPT WHEN INSTALLED ON SAME SIDE OF ROAD AND PARALLEL TO FORCE MAIN, IN WHICH CASE RECLAIMED WATER MAIN TO BE 3' OFF BACK OF CURB. 10' UTILITY EASEMENT SHALL BE IN THE FRONT OF THE LOTS IN LEU OF THE BACK OF THE LOTS.
6. FORCE MAIN TO BE 5' OFF BACK OF CURB (OPPOSITE SIDE OF ROAD FROM POTABLE WATER MAIN), EXCEPT WHEN INSTALLED ON SAME SIDE OF ROAD AND PARALLEL TO RECLAIMED WATER MAIN, IN WHICH CASE FORCE MAIN TO BE 8' OFF BACK OF CURB.
7. POTABLE WATER, RECLAIMED WATER AND FORCE MAINS TO DEFLECT BEHIND AND NOT TOUCH CURB INLETS. MAXIMUM OBTAINABLE SEPARATION OF POTABLE WATER, RECLAIMED WATER AND FORCE MAINS TO CURB INLETS SHALL BE PROVIDED WHILE MAINTAINING ALL OTHER SETBACK REQUIREMENTS.
8. FIRE HYDRANTS TO BE 10' OFF BACK OF CURB, ON SAME SIDE OF ROAD AS WATER MAIN, AT LOT LINES (TYPICALLY AT PROPERTY CORNERS WHERE WATER SERVICES ARE LOCATED).
9. PVC CASINGS FOR WATER AND RECLAIMED WATER SERVICE ROADWAY CROSSINGS TO HAVE 36" MINIMUM COVER.
10. THE MINIMUM SETBACKS FOR FORCE MAINS, POTABLE & RECLAIMED WATER MAINS FROM THE BACK OF CURB AND SETBACKS FROM THE R/W LINE FOR A 50' R/W SHALL ALSO BE MAINTAINED FOR ALL OTHER R/W WIDTHS.

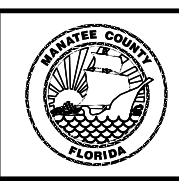
UG-17 UTILITY LAYOUT FOR 50' RW

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 2301 MAITLAND CENTER PARKWAY  
 MAITLAND, FLORIDA 32751

REVISIONS			
NO.	BY	DATE	REMARKS

DES VAH  
 DWN SC  
 CKD VAH

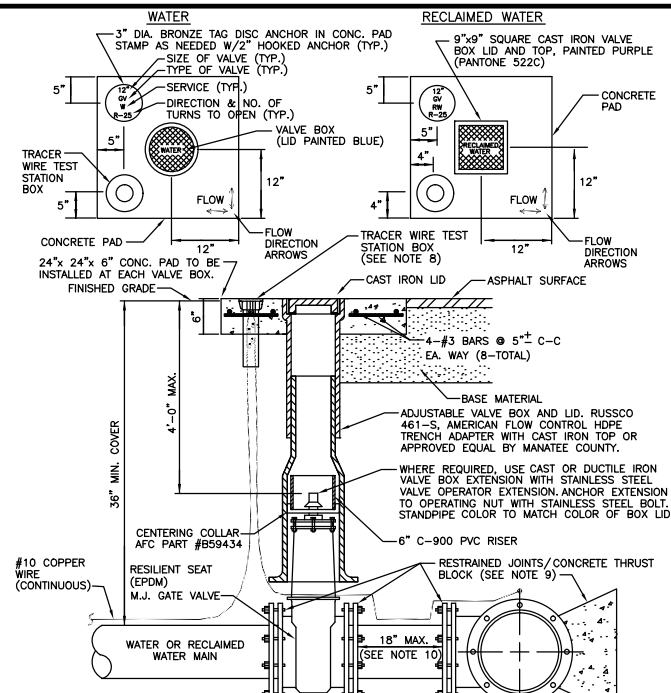


MANATEE COUNTY  
**CLEARVIEW MANOR  
 WATERLINE IMPROVEMENTS**

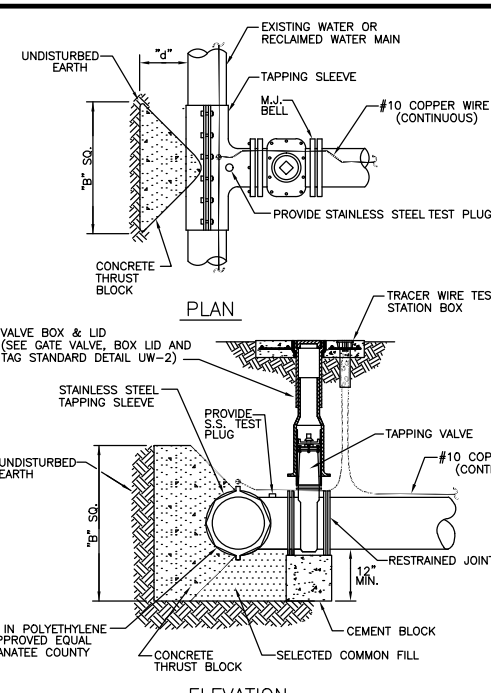
**MANATEE COUNTY UTILITY STANDARDS  
 GENERAL CONSTRUCTION DETAILS 3**  
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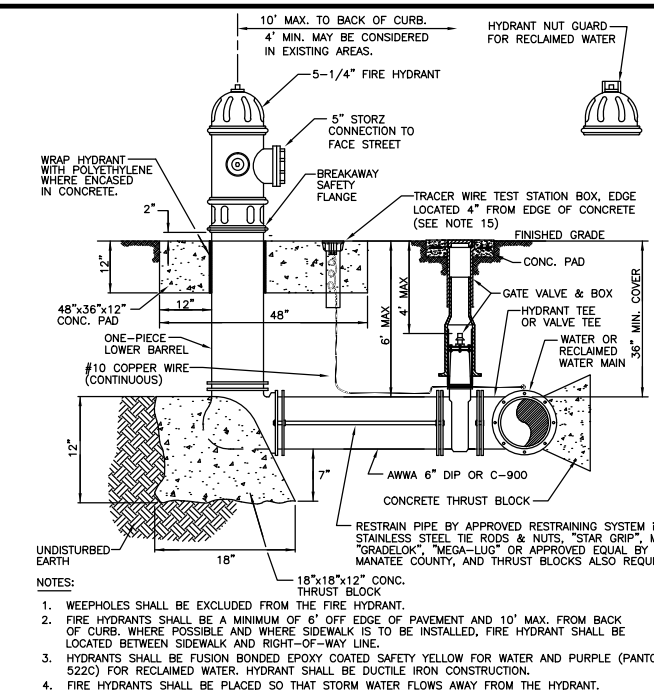
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- NOTES:**
- "WV" or "RWV" to be impressed into the newly-poured concrete curb, along with distance in feet to the valve. If no curb, install a blue disc with "WV" or purple disc with "RWV" and a 1/8"x1" galvanized steel screw in the edge of pavement with the footage from the disc to the valve.
  - All existing and proposed valve boxes shall be adjusted to finished grades as determined in the field.
  - Water valves shall not be placed in handicapped ramps.
  - Precast concrete pads & thrust blocks shall not be used.
  - All exposed edges of concrete shall be chamfered 1/2".
  - For valves 14" and larger, use butterfly valves.
  - "FLOW" and "FLOW DIRECTION" arrows to be impressed into newly poured concrete pad.
  - Tracer wire test station box is not required in valve box pad if the gate valve is located within 200 feet of a water service, blow-off, backflow preventer or fire hydrant that has a tracer wire box. A tracer wire box is required in the concrete pad at all gate valves at connections to existing mains.
  - Concrete thrust block is also required unless restrained joint length is treated as a plug shown in standard detail UW-8.
  - Should there be an obstacle/conflict in installing the valve, the engineer of record may propose a reverse tap, etc. and separate approval shall be obtained from Manatee County.



- NOTES:**
- NO CUTS SHALL BE MADE BEFORE:
    - A 60 MINUTE TEST OF 180 PSI FOR WATER OR 150 PSI FOR SEWER IS MADE.
    - ALL FITTINGS TO BE WRAPPED WITH 20 MIL VISQUEEN AT THRUST BLOCK.
    - ALL TAPS ON CONCRETE WATER MAINS AND LARGER THAN 12" ARE TO BE MADE BY A MANATEE COUNTY APPROVED TAPPING COMPANY. ALL MATERIALS TO BE SUPPLIED BY THE CONTRACTOR.
  - ALL TAPS MUST BE OF A SMALLER SIZE THAN THE MAIN BEING TAPPED & PLACED NO CLOSER THAN 30" OR A DISTANCE EQUAL TO (1) MAIN PIPE DIAMETER PLUS (2) TAP PIPE DIAMETERS (WHICHEVER IS LARGER) FROM A JOINT OR FITTING.
  - CONTRACTOR TO SUPPLY A DRY HOLE FOR TAPPING CREW TO WORK IN AND A BACK-HOE TO LOWER TAPPING MACHINE INTO THE HOLE.
  - THRUST BLOCK IS REQUIRED AND INCLUDED IN EVERY TAP. SEE CONCRETE THRUST BLOCK DETAIL FOR DIMENSIONS "b" & "d".
  - TRACER WIRE TEST STATION BOX IS REQUIRED AT CONNECTIONS TO EXISTING MAINS.

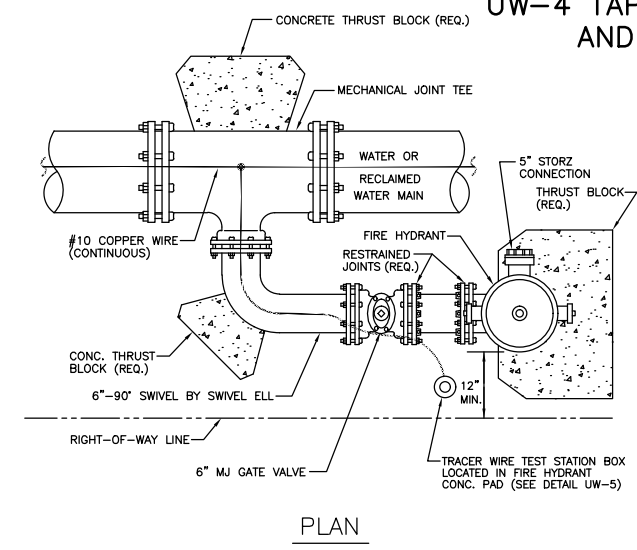


- NOTES:**
- WEEPHOLES SHALL BE EXCLUDED FROM THE FIRE HYDRANT.
  - FIRE HYDRANTS SHALL BE A MINIMUM OF 6' OFF EDGE OF PAVEMENT AND 10' MAX. FROM BACK OF CURB. WHERE POSSIBLE AND WHERE SIDEWALK IS TO BE INSTALLED, FIRE HYDRANT SHALL BE LOCATED BETWEEN SIDEWALK AND RIGHT-OF-WAY LINE.
  - HYDRANTS SHALL BE FUSION BONDED EPOXY COATED SAFETY YELLOW FOR WATER AND PURPLE (PANTONE 522C) FOR RECLAIMED WATER. HYDRANT SHALL BE DUCTILE IRON CONSTRUCTION.
  - FIRE HYDRANTS SHALL BE PLACED SO THAT STORM WATER FLOWS AWAY FROM THE HYDRANT.
  - FIRE HYDRANTS SHALL BE CONSTRUCTED WITH "GROUND LINE" SET TO FINISHED GRADES AS ESTABLISHED IN THE FIELD. NORMAL BURY IS 3 FEET OF COVER FOR ALL WATER LINES.
  - FIRE HYDRANTS MAY BE CONSTRUCTED WITH "GRADELOK" OFFSET FITTING.
  - RAISED REFLECTIVE PAVEMENT MARKER (BLUE) FOR POTABLE WATER (PURPLE) FOR RECLAIMED WATER SHALL BE INSTALLED AT CENTERLINE OF PAVEMENT ADJACENT TO EACH HYDRANT.
  - PRECAST CONCRETE THRUST BLOCKS & PADS SHALL NOT BE USED.
  - ALL EXPOSED EDGES OF CONCRETE SHALL HAVE 1/2" CHAMFER.
  - FIRE HYDRANT VALVE SHALL BE FASTENED DIRECTLY TO TEE.
  - IN-LINE VALVES SHOULD BE LOCATED AT HYDRANT TEES.
  - HYDRANTS SHALL BE LOCATED ON SAME SIDE OF ROAD AS WATER MAIN UNLESS APPROVED BY M.C.U.O.D.
  - THERE MUST BE A CLEARANCE OF 7 1/2 FEET FROM FRONT AND BOTH SIDES, AND FOUR FEET TO THE REAR OF THE HYDRANT, TO ABOVE GRADE OBSTRUCTIONS INCLUDING POSTS, FENCES, TREES, ETC., PER THE FLORIDA FIRE PREVENTION CODE.
  - SEE GATE VALVE, BOX AND LID STANDARD DETAIL UW-2.
  - SHOULD THE FIRE HYDRANT'S CONCRETE PAD OVERLAP THE SIDEWALK; THE TRACER WIRE TEST STATION BOX SHALL NOT BE LOCATED WITHIN THE SIDEWALK.

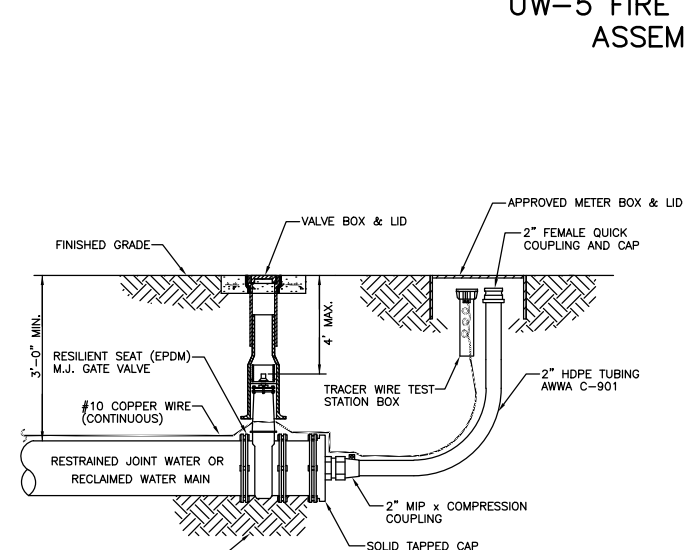
**UW-2 GATE VALVE, BOX, LID AND TAG**

**UW-4 TAPPING SLEEVE AND VALVE**

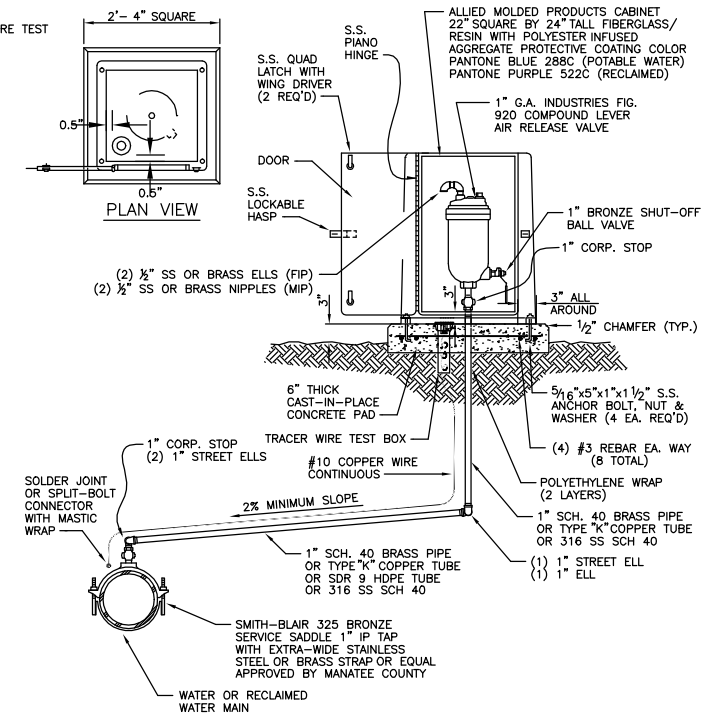
**UW-5 FIRE HYDRANT ASSEMBLY**



- NOTE:**
- THIS DETAIL FOR USE ONLY WHEN THE WATER MAIN IS LOCATED TOO CLOSE TO THE RIGHT-OF-WAY LINE TO USE THE FIRE HYDRANT ASSEMBLY DETAIL.
  - SEE GATE VALVE, BOX AND LID STANDARD DETAIL UW-2.



- NOTES:**
- SEE GATE VALVE, BOX AND LID STANDARD DETAIL UW-2.
  - SEE MANATEE COUNTY PUBLIC WORKS UTILITY CONSTRUCTION STANDARD SPECIFICATIONS.



- NOTES:**
- AIR RELEASE VALVES TO BE INSTALLED AT HIGH POINTS ALONG WATER MAINS WHERE SPECIFICALLY INDICATED ON THE PLAN.
  - ARV VENT ORIFICE TO BE SIZED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION FOR WATER MAIN SIZE.
  - ALL INCIDENTAL FITTINGS AND HARDWARE TO BE STAINLESS STEEL.
  - ALL PIPE THREADS TO BE SEALED AIR TIGHT.
  - VENT PIPE TO BE LAID ACCURATELY ON SLOPE, WITHOUT HIGH OR LOW POINTS.

**UW-6 FIRE HYDRANT WITH LOCKED 90° BEND**

**UW-7 2" BLOW-OFF ASSEMBLY FOR 10" MAINS AND SMALLER**

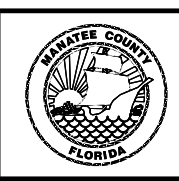
**UW-9 ABOVE GROUND AIR RELEASE ASSEMBLY FOR 12" AND SMALLER WATER MAINS BID SET**

**MALCOLM PIRNIE**  
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 2301 MAITLAND CENTER PARKWAY  
 MAITLAND, FLORIDA 32751

REVISIONS			
NO.	BY	DATE	REMARKS

DES - VAH  
 DWN - SC  
 CKD - VAH

VICTOR A. HURLBURT  
 FLORIDA P.E. NO. 33836

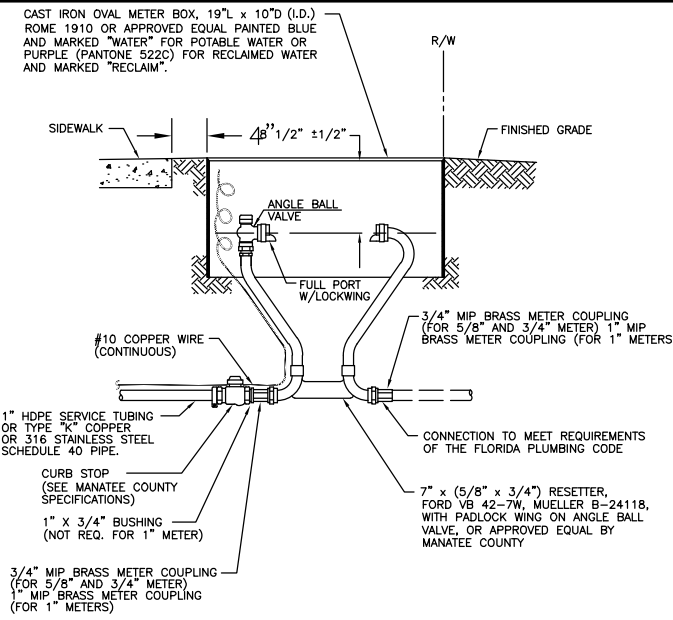


MANATEE COUNTY  
**CLEARVIEW MANOR**  
**WATERLINE IMPROVEMENTS**

**MANATEE COUNTY UTILITY STANDARDS**  
**WATER DISTRIBUTION SYSTEM DETAILS 1**  
 N.T.S.

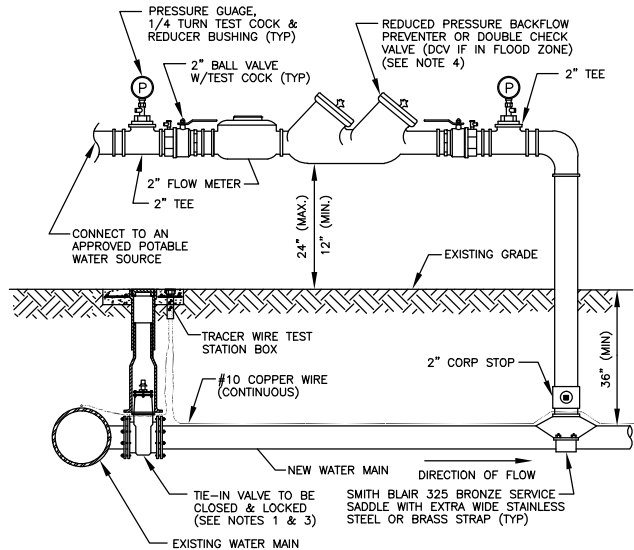
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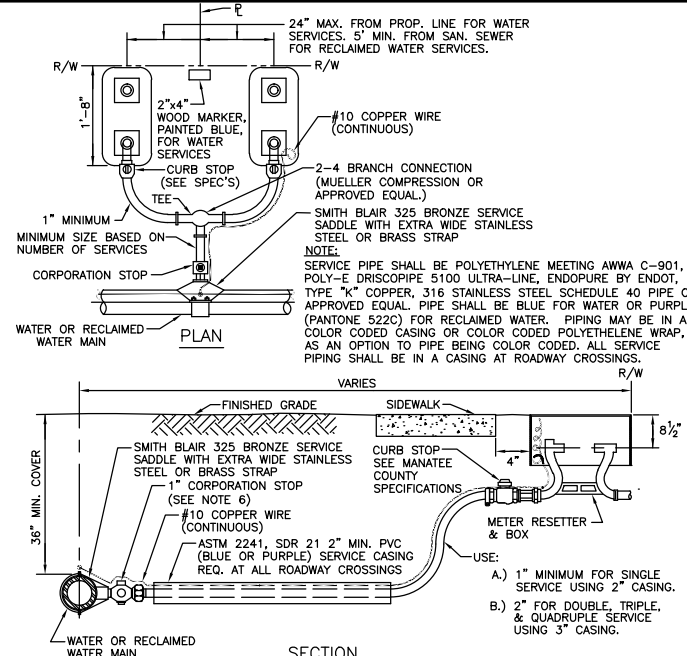
- NOTES:**
- FORD 40 SERIES RESETTERS VB43 AND VB44 OR EQUAL FOR 3/4" OR 1" METERS ALSO ALLOWED.
  - METER BOX AND RESETTER ARE TO BE INSTALLED BY THE INFRASTRUCTURE CONTRACTOR AND SHALL NOT BE SET IN DRAINAGE SWALES, SIDEWALKS OR DRIVEWAYS.
  - SEE TYPICAL SERVICE CONNECTION STANDARD DETAIL UW-19.
  - RESETTER IS NOT REQUIRED ON EXISTING SERVICE LINE REPLACEMENT THAT INITIALLY DID NOT HAVE A RESETTER, UNLESS THE EXISTING SERVICE LINE IS TO BE RELOCATED.
  - WHEN THE DISTANCE BETWEEN THE EDGE OF THE SIDEWALK AND THE R/W IS ONE FOOT (CUL-DE-SAC W/ MEDIAN) A 10 FOOT PUBLIC UTILITY EASEMENT SHALL BE LOCATED IN THE FRONT OF THE LOTS, ADJACENT TO THE R/W.

### UW-17 METER BOX ASSEMBLY FOR 5/8" x 3/4", 3/4" & 1" METERS



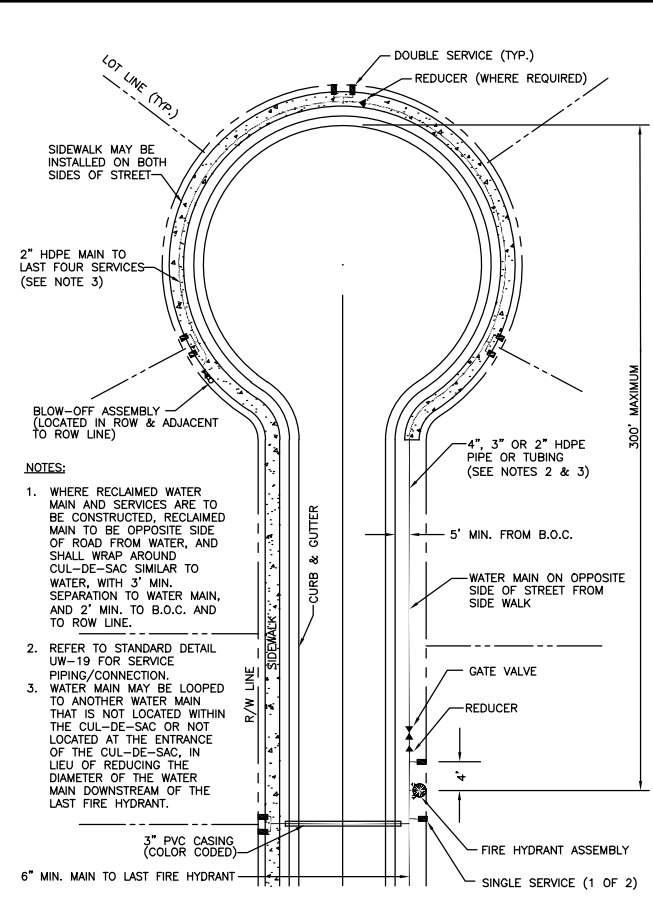
- NOTES:**
- FOR TIE-IN VALVE, SEE DETAIL UW-4 FOR TAPPING SLEEVE VALVE, DETAIL UW-2 FOR GATE VALVE AND DETAIL UW-3 FOR BUTTERFLY VALVE.
  - CORPORATION STOP CONNECTIONS TO WATER MAINS SHALL BE AT A SUFFICIENT DISTANCE FROM NEW TAPPING SLEEVE & VALVE (TIE-IN VALVE). ALL CORPORATION STOP TAPS SHALL BE PLACED NO CLOSER THAN 30" OR A DISTANCE EQUAL TO (1) MAIN PIPE DIAMETER PLUS (2) TAP DIAMETERS (WHICHEVER IS LARGER) FROM THE NEW TIE-IN VALVE (TAPPING VALVE & SLEEVE). A CROSS MAY BE INSTALLED IF THE EXISTING WATER MAIN IS NOT LARGER THAN THE NEW WATER MAIN.
  - IF THE EXISTING WATER MAIN IS LOCATED UNDER PAVEMENT OR CLOSE TO THE ROADWAY, BOTH JUMPER CORPORATION STOPS MAY CONNECT TO THE NEW WATER MAIN LOCATED OUTSIDE OF THE PAVEMENT. AN ADDITIONAL GATE VALVE OR BUTTERFLY VALVE SHALL BE INSTALLED AND THE VALVE MAY BE LOCATED AT THE ROW LINE. PIPING AND APPURTENANCES BETWEEN THE EXISTING MAIN AND ISOLATION VALVE AND JUMPER SHALL BE DISINFECTED BY SPRAYING OR SWABBING.
  - BACKFLOW PREVENTER SHALL BE STRUCTURALLY SUPPORTED.
  - SEE DETAIL UW-22 FOR ADDITIONAL JUMPER CONNECTION NOTES.

### UW-21 TEMPORARY JUMPER CONNECTION



- NOTES:**
- ALL SERVICE TAPS TO BE LOCATED IN THE FIELD. TAPS SHALL BE NO CLOSER THAN 2'-0" STAGGERED INTERVALS OR WITHIN 2'-0" FROM BELL OR SPIGOT ENDS.
  - METER BOXES & RESETTERS ARE TO BE INSTALLED BY THE INFRASTRUCTURE CONTRACTOR AND SHALL NOT BE SET IN DRAINAGE SWALES, SIDEWALKS OR DRIVEWAYS.
  - "WM" OR "RWM" TO BE IMPRESSED INTO THE NEWLY POURED CONCRETE CURB ALONG WITH DISTANCE IN FEET TO THE METER. IF NO CURB, INSTALL A BLUE DISC WITH "WM" OR A PURPLE DISC WITH "RWM" AND A 1/8" x 1" GALVANIZED STEEL SCREW IN THE EDGE OF PAVEMENT WITH THE DISTANCE (IN FEET) FROM THE DISC TO THE METER.
  - #10 COPPER WIRE SHALL BE INSTALLED WITH WATER AND RECLAIMED MAIN AND ALL SERVICES. SERVICE WIRE SHALL BE CONNECTED TO THE TRACER WIRE ALONG THE MAIN.
  - WATER AND RECLAIMED WATER SERVICE LINES TO BE 5' MINIMUM FROM SEWER SERVICE PIPES.
  - FOR 2" SERVICES REPLACE CORPORATION STOP WITH 2" RESILIENT WEDGE GATE VALVE W/BOX, LID & TAG. SEE STANDARD DETAIL UW-2. MJ GATE VALVE IN DETAIL UW-2 SHALL BE SUBSTITUTED WITH THREADED FIP GATE VALVE AND BRASS NIPPLE. CENTERING COLLAR NOT REQUIRED ON 2" GATE VALVES.
  - WHEN THE DISTANCE BETWEEN THE EDGE OF THE SIDEWALK AND THE R/W IS ONE FOOT (CUL-DE-SAC W/ MEDIAN) A 10 FOOT PUBLIC UTILITY EASEMENT SHALL BE LOCATED IN THE FRONT OF THE LOTS, ADJACENT TO THE R/W.

### UW-19 TYPICAL SERVICE CONNECTION



### UW-20 CUL-DE-SAC MAINS

- A temporary jumper connection is required at all connections between existing active potable water mains and proposed new water main improvements with the following exceptions:
  - Projects that include a permanent backflow preventer at the right-of-way which is adjacent to the existing water main;
  - Projects that include new water mains that are less than or equal to 18 linear feet in length; or
  - Other proposed cases that are approved by Manatee County and the construction drawings specifically state that a temporary jumper connection is not required.
- A temporary jumper shall be used and be connected to an approved potable water source (e.g., existing fire hydrant, existing main, existing service tap or tank truck, etc.) as shown in the standard temporary jumper detail UW-21. A temporary jumper shall be used for filling any new water main of any size, for flushing of new mains up to 6 inches in diameter (3.0 fpm minimum velocity, preferably 3.5 fpm) and for disinfection of any new main of any size. Water mains with a pipe diameter greater than or equal to 6 inches shall be pigged in lieu of preliminary flushing. The jumper connection shall be maintained until after the filling, flushing, testing and disinfection of the new main has been successfully completed and clearance for use from the Florida Department of Environmental Protection (FDEP) or the Florida Department of Health (FDOH) has been obtained.
- Locations and orientation of jumpers associated with connections to existing water mains that are located under the roadway pavement shall be approved on a case-by-case basis.
- Pipe and fittings used for connecting the new pipe to the existing pipe shall be disinfected prior to installation in accordance with AWWA C651, latest edition. Unless approved otherwise, the tapping sleeve, and exterior of the existing main to be tapped, piping within the jumper, and new piping shown on standard temporary jumper detail UW-21 shall be disinfected by spraying or swabbing per Section 4.6 of AWWA C651. Unless approved otherwise, the remainder of the new main shall be disinfected in accordance with Section 4.4.3.3 of AWWA C651. The use of tablets is prohibited.
- A separate and successful hydrostatic test on the new system shall occur between the tie-in valve and the closest downstream gate valve or butterfly valve before performing a hydrostatic test on the remainder of the newly-constructed water main. The tie-in valve and the closest downstream gate valve or butterfly valve shall be closed during the hydrostatic test of the remainder of the newly constructed water main.
- The jumper shall include a flow meter to ensure that the flow from the supply source is at a constant measured rate while chlorinating the new main. The chlorine concentration shall be measured at regular intervals to ensure that it is fed at a constant rate of not less than 25 milligrams per liter (mg/L) of free chlorine.
- After preliminary flushing (watermains with diameters less than 6 inches) and pigging (watermains with diameters greater than or equal to 6 inches) of the new water main, a minimum feed concentration of 25 mg/L of free chlorine is required. The chlorinated water shall be retained in the main for at least 24 hours and all portions of the main shall have a residual of not less than 10 mg/L of free chlorine at the end of this 24-hour period. The Contractor shall provide the Inspector documentation that the aforementioned concentrations have been achieved. Final flushing of the mains shall occur prior to performing bacteriological evaluations and the total chlorine residual in the mains shall be no more than 4.0 mg/L in any bacteriological sample. If the chlorine residual exceeds 4.0 mg/L, a sample shall be obtained at the test cock located upstream of the backflow preventer, to ensure that the total chlorine residual of the new main does not exceed the residual of the existing system.
- The jumper connection shall also be used to maintain a minimum pressure of 20 psi in the new mains continuously after disinfection and until FDEP/FDOH clearance letter is obtained.
- All temporary backflow devices or "jumpers" utilized during pipeline construction must show certification that they have been tested annually according to the Florida Building Code, Plumbing Section, Chapter 3, Section 312.9.1, 312.9.2, Chapter 6, Section 608, and Resolution R87-125. Annual certification must be valid at time of installation and provided to the Manatee County Inspector upon request.
- Except as required to flush lines greater than 6 inches in diameter, the lockable tie-in valve shall remain closed and shall be locked in the closed position by Manatee County. The tie-in valve shall remain closed and locked until the new system has been cleared for use by the FDEP/FDOH and all other pertinent agencies.
- After receipt of clearance for use by FDEP/FDOH, Manatee County, and all other pertinent agencies, the Contractor shall remove the temporary jumper connection. The corporation stops are to be closed and plugged with 2-inch brass or PVC stops.
- All installation and maintenance of the temporary jumper connection and associated backflow prevention device, flow meter, fittings, valves, etc., shall be the responsibility of the Contractor.
- If the water main to receive final flushing is greater than 6 inches in diameter or such length that a full pipe flush at the minimum velocity cannot be accomplished, the following procedure shall be utilized:
  - Check the pressure on the upstream side of the jumper to ensure that there is adequate pressure on the existing system.
  - Open downstream valves in the new system prior to flush.
  - Partially open the tie-in valve and maintain a lower pressure on the downstream side of the jumper than the pressure on the upstream side of the jumper while flushing/pigging the new water main.
  - Manatee County personnel shall operate the tie-in valve to ensure that a pressure differential is maintained.
  - Close tie-in valve and then close all downstream valves in the new system.
- The tie-in valve shall remain closed if the potable water source is a tank truck.

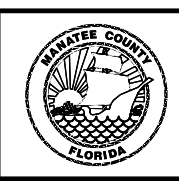
### UW-22 TEMPORARY JUMPER CONNECTION NOTES BID SET

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NO.	BY	DATE	REMARKS

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 CKD - VAH

VICTOR A. HURLBURT  
 FLORIDA P.E. NO. 33836



MANATEE COUNTY  
**CLEARVIEW MANOR**  
 WATERLINE IMPROVEMENTS

MANATEE COUNTY UTILITY STANDARDS  
 WATER DISTRIBUTION SYSTEM DETAILS 2  
 N.T.S.

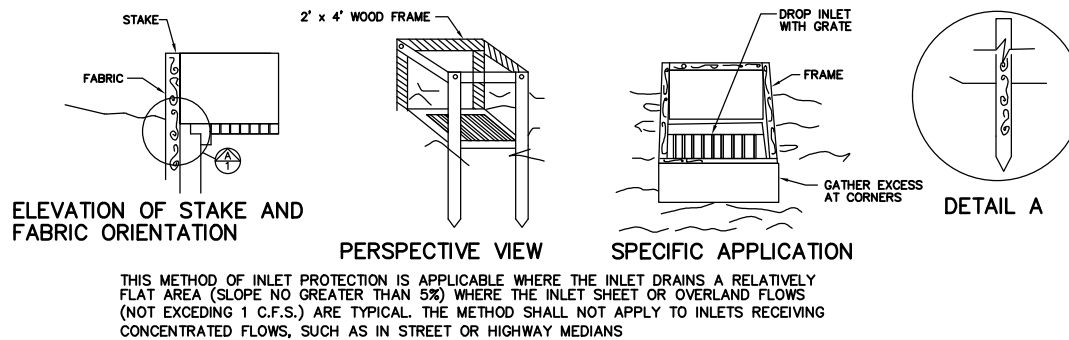
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**EROSION CONTROL NOTES**

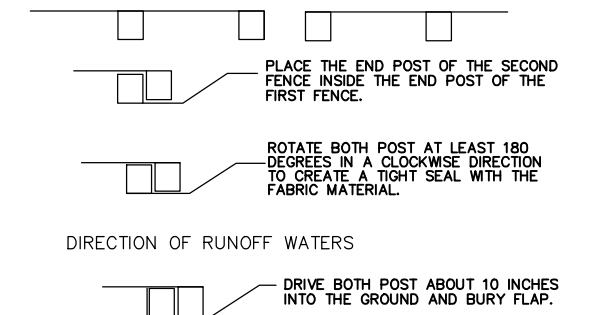
- ALL CONSTRUCTION ACTIVITIES SHALL INCORPORATE BEST MANAGEMENT PRACTICES TO CONTROL EROSION, SEDIMENTATION, AND THE POTENTIAL FOR DOWNSTREAM WATER QUALITY DEGRADATION. CONSTRUCTION PRACTICES INCLUDE:
  - CONSTRUCT TEMPORARY SEDIMENTATION BASINS OR EARTHEN BERMS AT DOWNGRADIENT ENDS OF NEWLY GRADED AREAS TO PROVIDE FOR SEDIMENT AND TURBIDITY REMOVAL.
  - LIMIT SITE CLEARING TO THOSE AREAS REQUIRED FOR A PARTICULAR PHASE OF CONSTRUCTION. EXISTING TREES AND VEGETATION TO REMAIN WHEREVER POSSIBLE.
  - TURBIDITY BARRIERS, HAY BALES AND OTHER EROSION CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL CONSTRUCTION ACTIVITIES ARE COMPLETE AND THE POTENTIAL FOR EROSION IS ELIMINATED.
- SOLID SOD DITCH AND SWALE BANKS AS SOON AS POSSIBLE AFTER CONSTRUCTION IN ORDER TO STABILIZE THE SLOPES AND MINIMIZE EROSION. IN AREAS DELINEATED AS "WETLANDS," REVEGETATE IN ACCORDANCE WITH PERMIT CONDITIONS.
- DO NOT EMPLOY SILT FENCES IN A MANNER TO CAUSE THEM TO ACT AS A DAM ACROSS PERMANENTLY FLOWING WATERCOURSES. USE SILT FENCES AT UPLAND LOCATIONS, AND TURBIDITY BARRIERS IN PERMANENT WATER BODIES, REGARDLESS OF WATER DEPTH.
- TURBIDITY BARRIERS FOR WATER BODIES MAY BE EITHER FLOATING OR STAKED TYPE, OR ANY COMBINATION OF TYPES THAT WILL SUIT SITE CONDITIONS, AND MEET EROSION CONTROL AND WATER QUALITY REQUIREMENTS. INSTALL POSTS IN STAKED TURBIDITY BARRIERS IN THE VERTICAL POSITION UNLESS OTHERWISE NOTED.
- TURBIDITY IN ALL WATER BODIES TO BE CONTROLLED TO PREVENT VIOLATION OF WATER QUALITY PURSUANT TO RULE 62-302.510(5)(r), FLORIDA ADMINISTRATIVE CODE. TURBIDITY SHALL NOT EXCEED 29 NEPHELOMETRIC TURBIDITY UNITS ABOVE NATURAL BACKGROUND CONDITIONS.
- FOR EROSION CONTROL DETAILS, REFER TO FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) "ROADWAY AND TRAFFIC DESIGN STANDARDS":
  - TRASH RETAINER AND SEDIMENT BASIN -- INDEX NO. 101
  - BAILED HAY OR STRAW BARRIERS AND SILT FENCES -- INDEX NO. 102 (ALSO SHOWN THIS SHEET).
  - TURBIDITY BARRIERS -- INDEX NO. 103.

ADDITIONALLY, COMPLY WITH FDOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION," SECTION 104 - PREVENTION, CONTROL, AND ABATEMENT OF EROSION AND WATER POLLUTION.
- MAINTENANCE
  - INSPECT SILT BARRIERS IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST ONCE A DAY DURING PERIODS OF PROLONGED RAINFALL. MAKE NEEDED REPAIRS IMMEDIATELY.
  - SHOULD THE FABRIC ON A SILT BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND IF THE BARRIER IS STILL NEEDED, REPLACE THE FABRIC IMMEDIATELY.
  - REMOVE SEDIMENT DEPOSITS AFTER EACH STORM EVENT.
  - ANY SEDIMENT DEPOSITS IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, AND PREPARED FOR SEEDING OR SODDING.

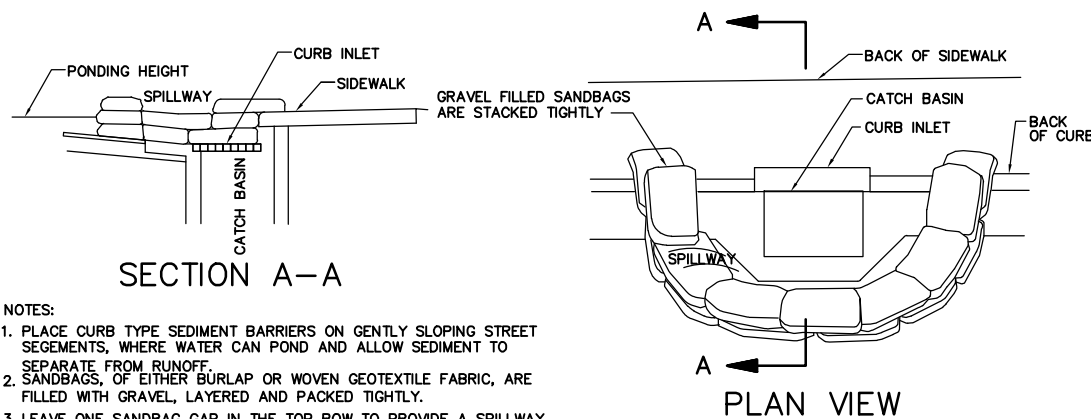


**FILTER FABRIC DROP INLET SEDIMENT FILTER**

- NOTES:
- INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
  - REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.
  - SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.

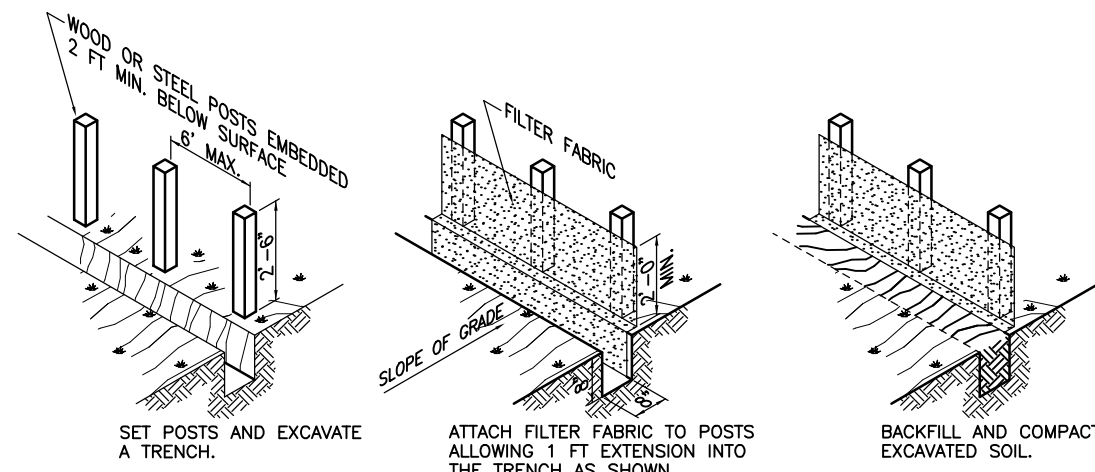


**ATTACHING TWO SILT FENCES**



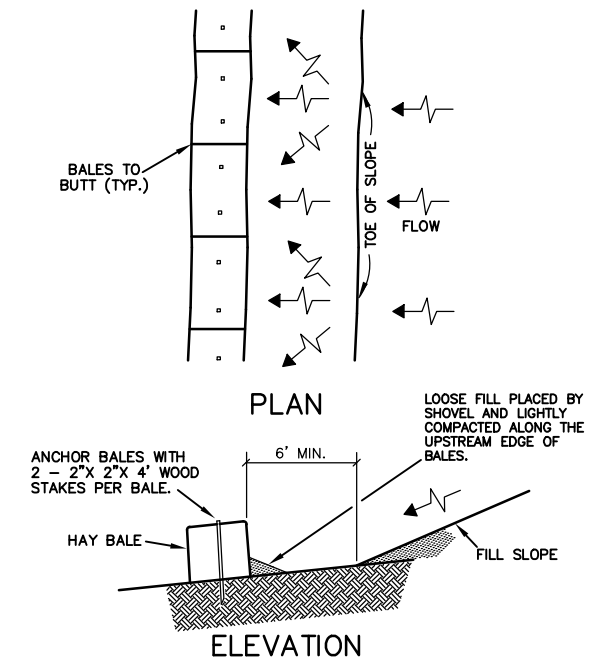
- NOTES:
- PLACE CURB TYPE SEDIMENT BARRIERS ON GENTLY SLOPING STREET SEGEMENTS, WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE FROM RUNOFF.
  - SANDBAGS, OF EITHER BURLAP OR WOVEN GEOTEXTILE FABRIC, ARE FILLED WITH GRAVEL, LAYERED AND PACKED TIGHTLY.
  - LEAVE ONE SANDBAG GAP IN THE TOP ROW TO PROVIDE A SPILLWAY FOR OVERFLOW
  - INSPECT BARRIERS AND REMOVED SEDIMENT AFTER EACH STORM EVENT. SEDIMENT AND GRAVEL MUST BE REMOVED FROM THE TRAVELED WAY IMMEDIATELY.

**CURB INLET SEDIMENT BARRIER**



- NOTE:
- MATERIALS, CONSTRUCTION METHODS AND MAINTENANCE SHALL BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS & DESIGN STANDARDS, CURRENT EDITION.

**SILT FENCE DETAIL**



- NOTE: TO BE USED AT SELECTED SITES WHERE THE NATURAL GROUND SLOPES AWAY FROM THE TOE OF SLOPE.

**HAY BALE BARRIER DETAIL**  
 (AT CONTRACTOR'S OPTION, HAY BALE BARRIERS MAY BE USED IN PLACE OF SILT FENCE.)

**BID SET**

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MANATEE COUNTY  
**CLEARVIEW MANOR WATERLINE IMPROVEMENTS**

**CIVIL DETAILS 1**

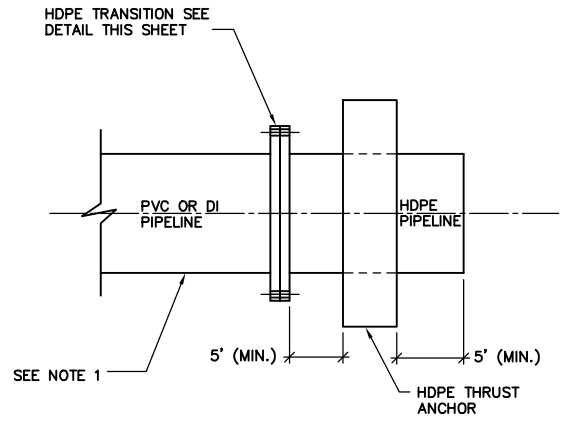
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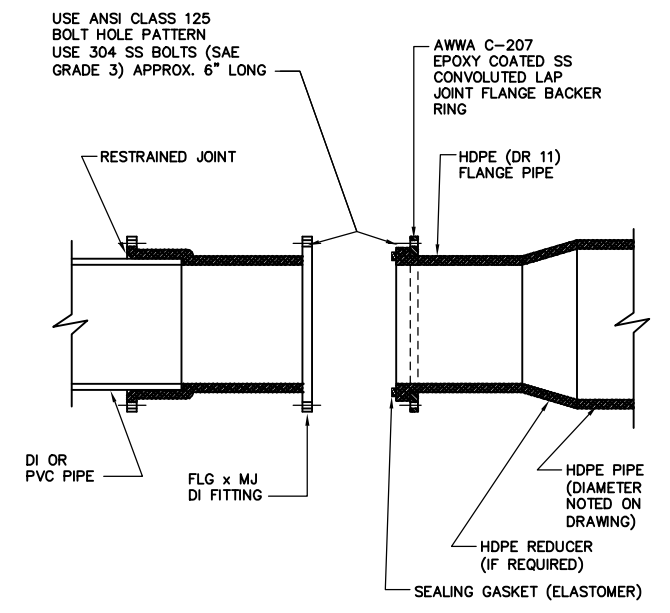
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**PLAN VIEW**

- NOTES:
1. RESTRAIN CONNECTION PIPELINE A MINIMUM LENGTH AS REQUIRED FOR RESTRAINING THE SAME NOMINALLY SIZED DEAD END.
  2. THE HDPE THRUST ANCHOR AND HDPE TRANSITION MUST BE INSTALLED ON BOTH SIDES OF THE CROSSING.

**TYPICAL HDPE DIRECTIONAL DRILL CONNECTION**  
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**HDPE TRANSITION DETAIL**  
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MANATEE COUNTY  
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**CIVIL DETAILS 2**

NO SCALE

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