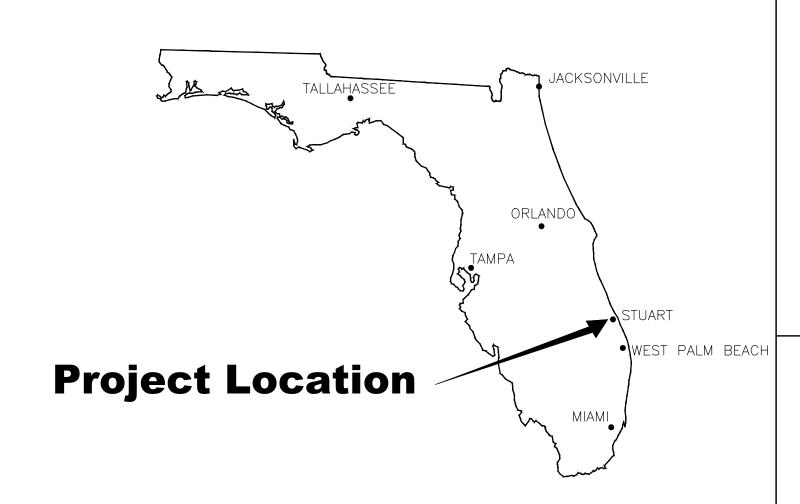


# MANATEE POCKET

# DRAINAGE IMPROVEMENTS CONSTRUCTION DRAWINGS

MARTIN COUNTY PUBLIC WORKS DEPARTMENT MARTIN COUNTY, FLORIDA



MANATEE DRAINAGE IMPE

SIGNED AND SEALED BY: TIMOTHY J.

PLAN STATUS DATE DESCRIPTION

DESIGN DRAWN CHKD TJK ALP

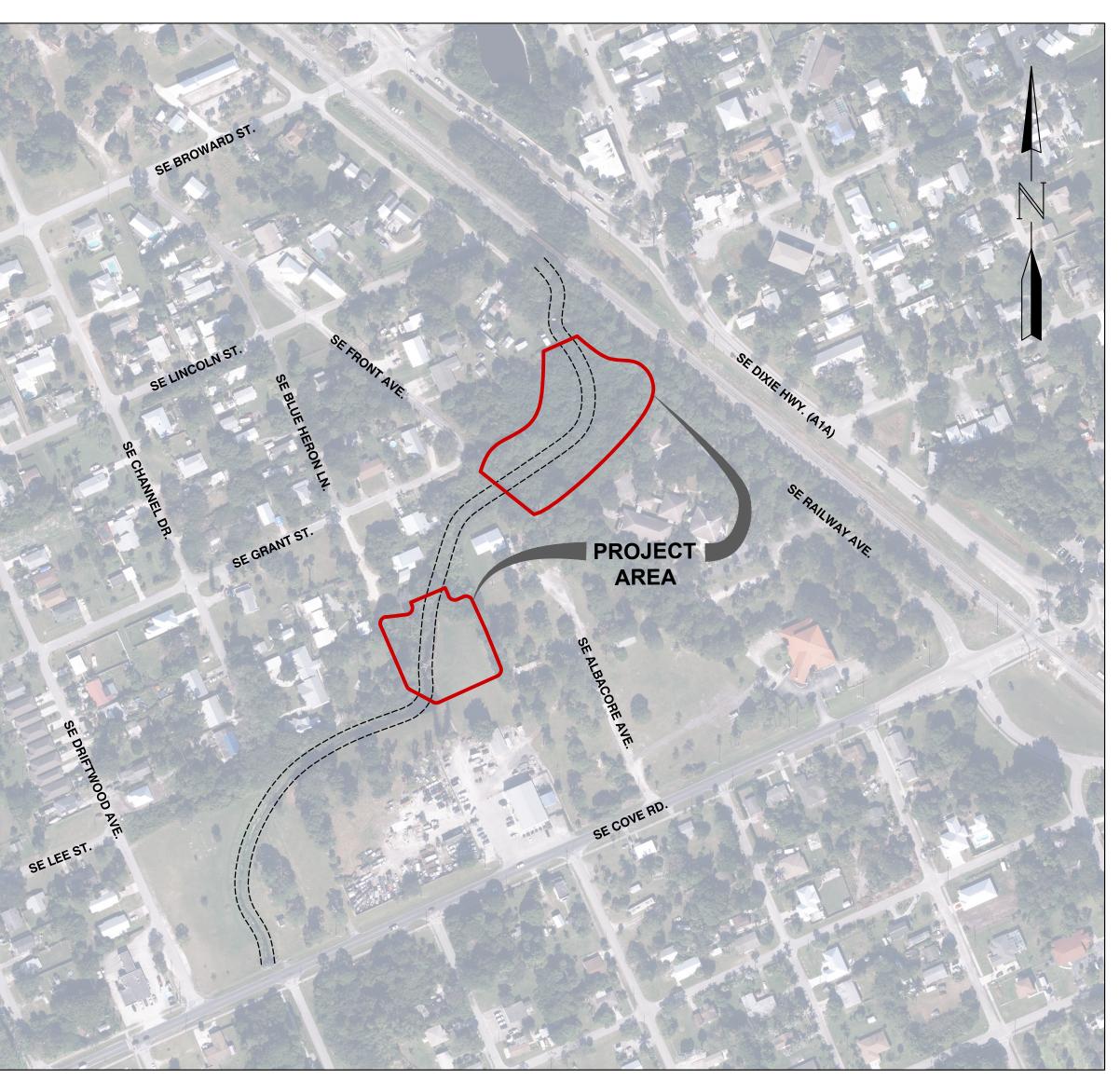
SCALE: ---JOB No. 600710.7 **DATE:** 2/7/2023

FILE NAME:

SHEET

SECTION 25 TOWNSHIP 38 RANGE 41

Shee	t List Table
Sheet Number	Sheet Title
1	COVER SHEET
2	INDEX SHEET
3	PROJECT LAYOUT
4	EXISTING SITE CONDITIONS (1)
5	EXISTING SITE CONDITIONS (2)
6	EXISTING SITE CONDITIONS (3)
7	SITE IMPROVEMENTS PLAN (1)
8	SITE IMPROVEMENTS PLAN (2)
9	GENERAL NOTES (1)
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11	GENERAL NOTES (3)



SITE LOCATION MAP NOT TO SCALE

PRELIMINARY PLANS NOT FOR CONSTRUCTION

**BOARD OF COUNTY COMMISSIONERS** 

DOUG SMITH	<b>DISTRICT 1</b>
STACEY HETHERINGTON	DISTRICT 2
HAROLD JENKINS	DISTRICT 3
SARAH HEARD	DISTRICT 4
EDWARD CIAMPI	DISTRICT 5

#### **OWNER/APPLICANT:**

TARYN KRYZDA - COUNTY ADMINISTRATOR **JAMES GORTON - PUBLIC WORKS DIRECTOR** MARTIN COUNTY PUBLIC WORKS DEPARTMENT **2401 SE MONTEREY ROAD STUART, FL 34996** 

### **CONSULTANTS**

## **SURVEYOR:**

**ENVIRONMENT & INFRASTRUCTURE, INC 550 NORTHLAKE BOULEVARD, SUITE 1000 ALTAMONTE SPRINGS, FL 32701** (407) 522-7570

## **CIVIL ENGINEER:**

**ENVIRONMENT & INFRASTRUCTURE, INC** 5015 S Florida Ave, SUITE 301 LAKELAND, FL 33813 (863) 667-2345

## NOTES:

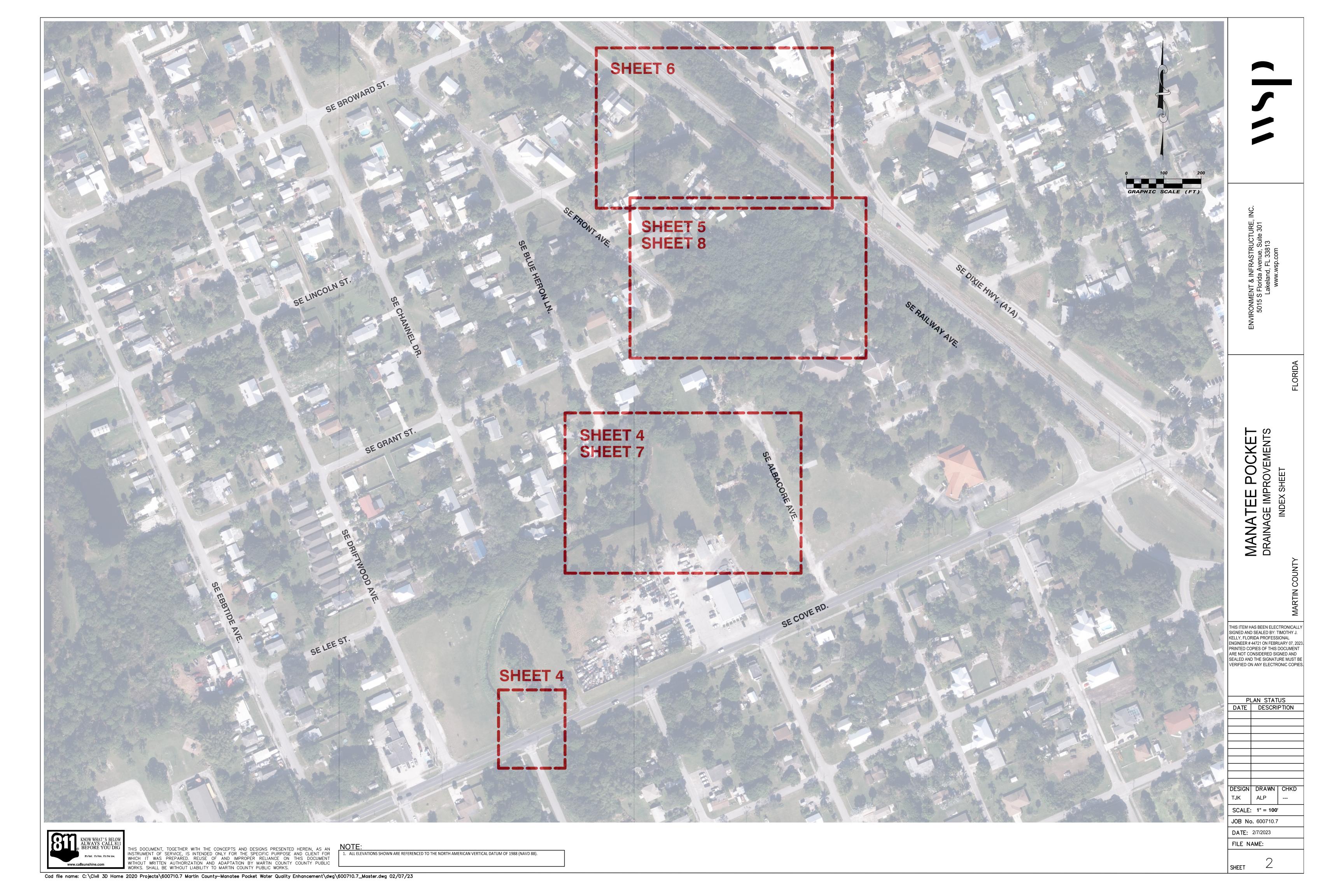
- ALL ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
- 2. THIS DOCUMENT MAY BE REPRODUCED UPON REQUEST IN AN ALTERNATIVE FORMAT BY CONTACTING THE COUNTY ADA COORDINATOR (772) 320-3131, THE COUNTY ADMINISTRATION OFFICE (772) 288-5400, FLORIDA RELAY 711, OR BY COMPLETING OUR ACCESSIBILITY FEEDBACK FORM AT WWW.MARTIN.FL.US/ACCESSIBILITY-FEEDBACK.
- 3. DATE OF LATEST FIELD SURVEY JULY 13, 2022. SURVEY PERFORMED UNDER DIRECTION OF MAX RAMOS, FLORIDA PSM NO. 6548

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY MARTIN COUNTY COUNTY PUBLIC ORKS. SHALL BE WITHOUT LIABILITY TO MARTIN COUNTY PUBLIC WORKS

NOTE:

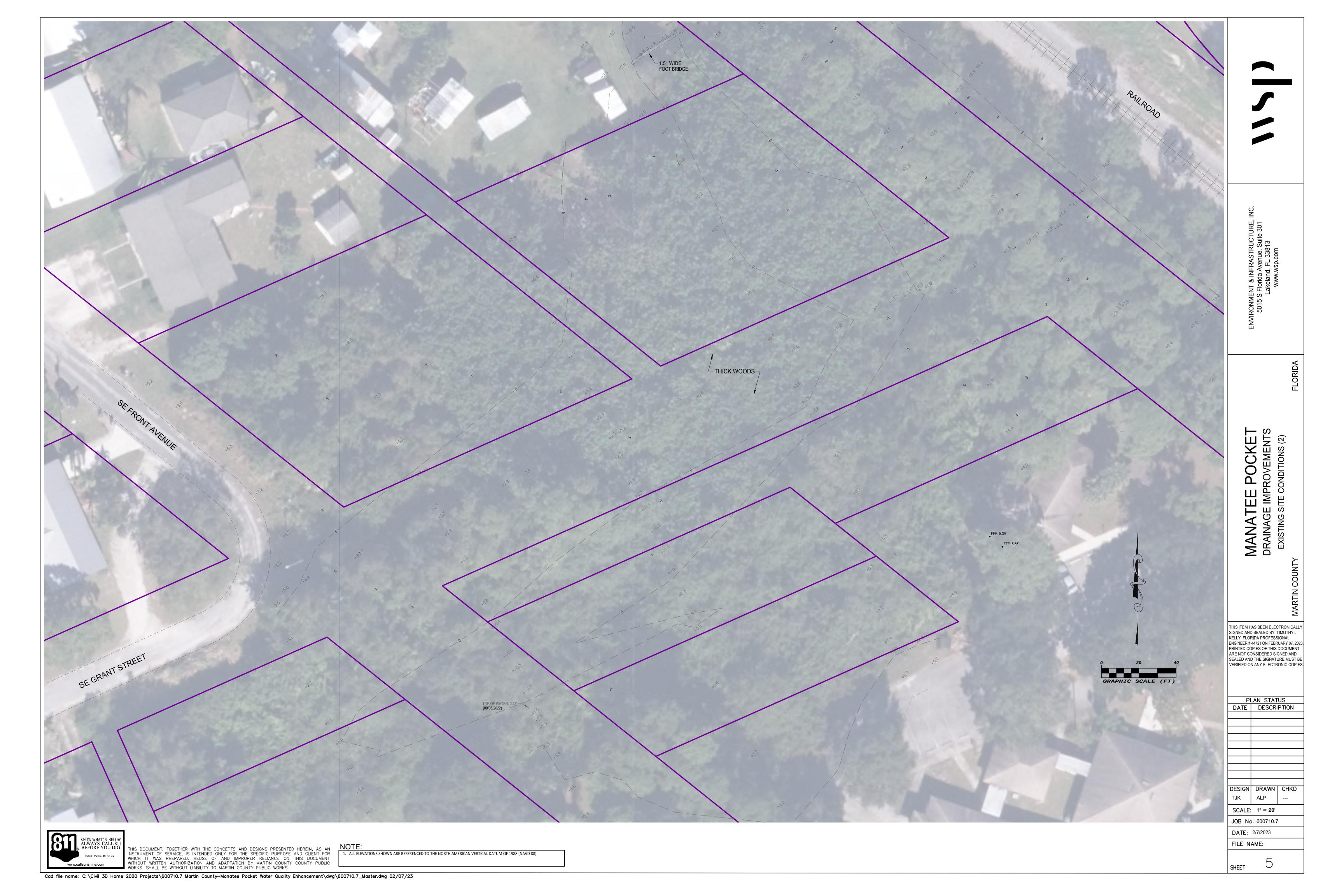
1. ALL ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

Cad file name: C:\Civil 3D Home 2020 Projects\600710.7 Martin County-Manatee Pocket Water Quality Enhancement\dwg\600710.7\_Cover-Details.dwg 02/07/23

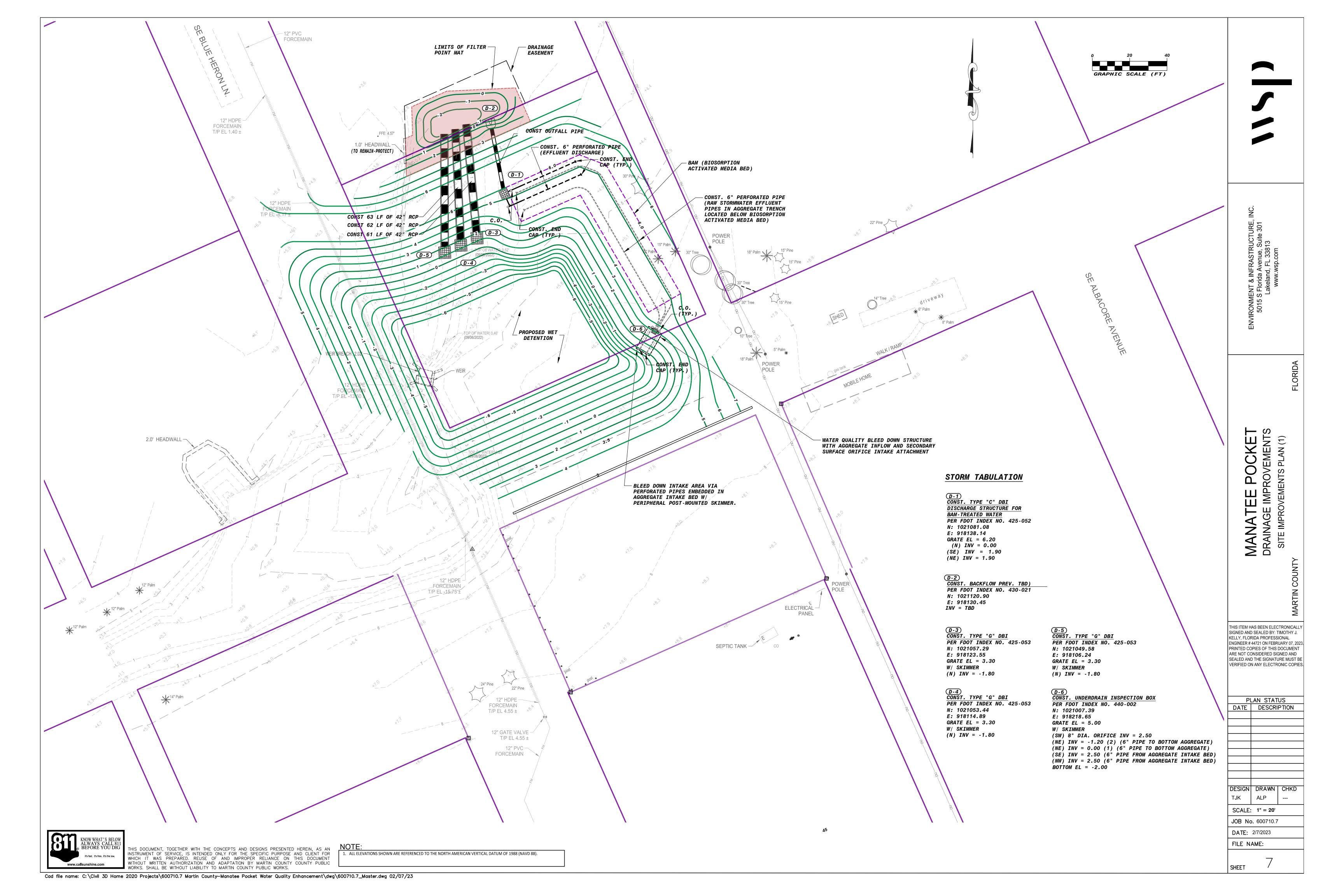


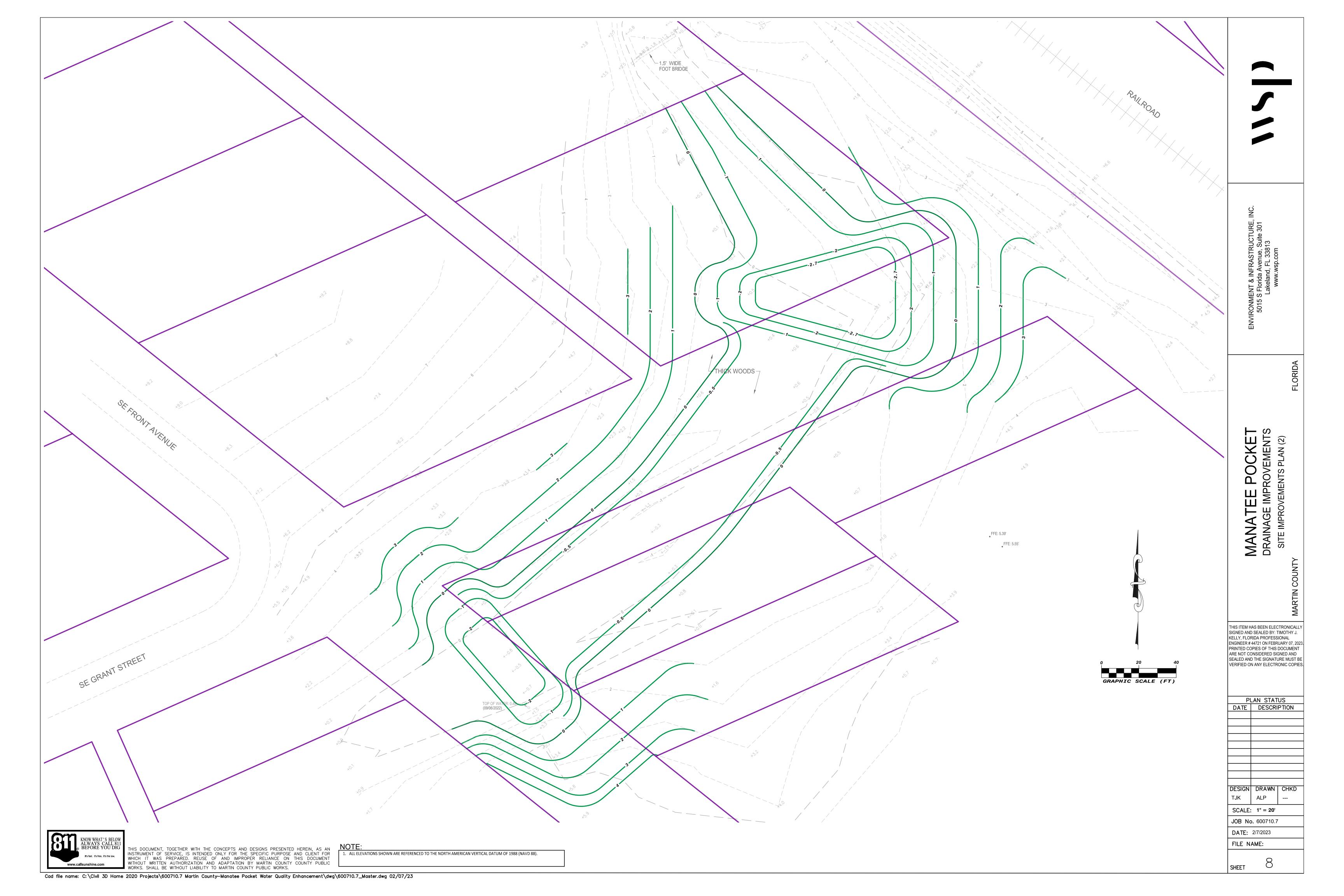












IF IN DANGER OF DAMAGE, THE PROJECT ENGINEER SHOULD NOTIFY:
NATIONAL GEODETIC SURVEY, NOAA
1315 EAST WEST HIGHWAY
SILVER SPRING, MD 20910

MARTIN COUNTY ENGINEERING DEPARTMENT COUNTY SURVEYOR 2401 SE MONTEREY ROAD STUART, FL 34996 (772) 288-5927

2. ANY PUBLIC LAND CORNER WITHIN THE LIMITS OF CONSTRUCTION SHALL BE PROTECTED. IF A CORNER MONUMENT IS IN DANGER OF BEING DESTROYED AND HAS NOT BEEN PROPERLY REFERENCED, THE CONTRACTOR SHALL NOTIFY THE COUNTY SURVEYOR WITHOUT DELAY BY TELEPHONE.

3. GRADES SHOWN ARE FINISHED GRADES, UNLESS OTHERWISE NOTED.

- 4. B.M. DATUM IS NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD—'88).
  5. THE LOCATION OF THE UTILITIES SHOWN IN THE PLANS ARE APPROXIMATE ONLY. THE EXACT LOCATION SHALL BE DETERMINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. IN ADDITION, THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY IF "OTHER" UTILITIES (NOT SHOWN IN THE PLANS) EXIST WITHIN THE AREA OF CONSTRUCTION. SHOULD THERE BE UTILITY CONFLICTS, THE CONTRACTOR SHALL INFORM THE ENGINEER AND NOTIFY THE RESPECTIVE UTILITY OWNERS TO RESOLVE UTILITY CONFLICTS AND ADJUSTMENTS, AS REQUIRED.
- 6. THE CONTRACTOR IS TO USE CAUTION WHEN WORKING IN OR AROUND AREAS OF OVERHEAD TRANSMISSION LINES AND UNDERGROUND UTILITIES.
- 7. UTILITY LOCATIONS MAY BE DETERMINED BY CALLING SUNSHINE ONE CALL (DIAL 811) AND THE SPECIFIC UTILITY COMPANIES.
- 8. THE APPROPRIATE UTILITY COMPANY SHALL BE NOTIFIED BY THE CONTRACTOR 48 HOURS IN ADVANCE OF ANY EXCAVATION INVOLVING ITS UTILITIES SO THAT A COMPANY REPRESENTATIVE CAN BE PRESENT.
- 9. STATION AND OFFSETS REFER TO CENTERLINE OF CONSTRUCTION UNLESS OTHERWISE NOTED.
- 10. ONE DIGITAL COPY OF SIGNED SHOP DRAWINGS AND SIGNED AND SEALED DESIGN DATA SHALL BE SUBMITTED TO MARTIN COUNTY ENGINEERING DEPARTMENT PRIOR TO ORDERING MATERIALS. ALLOW 10 WORK DAYS TURNAROUND FOR SUBMITTALS.
- 11. PRIOR TO FINAL PAVING/GRADING, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FINAL ADJUSTMENT OF ALL MANHOLES, CATCH BASINS/INLETS, HYDRANTS, VALVE BOX COVERS, GRATES, CLEANOUTS, AND UTILITY APPURTENANCES, ETC., WITHIN THE AREA OF THE PROPOSED WORK, WHETHER THEY WERE CONSTRUCTED AS PART OF THE PROJECT OR WERE EXISTING PRIOR TO HIS WORK. SAID ADJUSTMENTS SHALL CONFORM TO THE FINISHED GRADE, SLOPE, PITCH AND CROWN OF THE SURROUNDING AREA, AS INDICATED ON THE PLANS AND AS CONSTRUCTED IN THE FIELD, WHETHER PAVED OR UNPAVED AND SHALL BE INCIDENTAL TO THE CONTRACT AND WILL NOT BE PAID FOR AS AN INDIVIDUAL LINE ITEM.
- 12. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE FLORIDA DEPARTMENT OF TRANSPORTATION "2019-20 STANDARD PLANS AND "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" (2019) UNLESS OTHERWISE DIRECTED BY A MARTIN COUNTY REPRESENTATIVE.
- 13. "INDEX" REFERS TO FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION, FY2019-20.
- 14. AT THE END OF EACH WORK PERIOD, ANY DROP-OFF IN THE AREA ADJACENT TO THE TRAVEL WAY SHALL BE BACKFILLED IN ACCORDANCE WITH STANDARD INDEX 600 OR SHALL BE OTHERWISE PROTECTED WITH TEMPORARY BARRIER WALL AT THE CONTRACTOR'S EXPENSE.
- 15. EROSION AND POLLUTION CONTROL: THE CONTRACTOR SHALL TAKE SUFFICIENT PRECAUTIONS TO PREVENT WATER POLLUTION WITH AQUATIC WEEDS, FUELS, OILS, BITUMENS, CALCIUM CHLORIDE OR OTHER HARMFUL MATERIALS. ALSO, HE SHALL CONDUCT AND SCHEDULE HIS OPERATIONS SO AS TO AVOID POLLUTION OR SILTATION OF WATER BODIES OR TO INTERFERE WITH INDIGENOUS WILDLIFE. THE INSTALLATION OF TEMPORARY EROSION AND POLLUTION CONTROL FEATURES SHALL BE COORDINATED WITH THE CONSTRUCTION OF THE PERMANENT EROSION CONTROL FEATURES TO THE EXTENT NECESSARY TO ASSURE ECONOMICAL, EFFECTIVE AND CONTINUOUS CONTROL OF EROSION AND WATER POLLUTION THROUGHOUT THE LIFE OF THE CONTRACT. ANY EROSION OR SHOALING SHALL BE CORRECTED BY THE CONTRACTOR AT HIS EXPENSE. SOD SHALL BE PROVIDED AS SHOWN ON THE PLANS. INCLUDING BUT NOT LIMITED TO. ALL DISTURBED AREAS, UTILITY CONSTRUCTION, SLOPES AND AREAS ASSOCIATED WITH THE DRY RETENTION AREAS AND SWALES. ALL CONSTRUCTION METHODS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 570, DOT SPECIFICATIONS, FOR ARGENTINE BAHIA SOD AND SHALL INCLUDE WATERING UNTIL FINAL ACCEPTANCE OF THE PROJECT.
- WATER POLLUTION AND TURBIDITY CONTROL SHALL BE REQUIRED BY THE CONTRACTOR IN ACCORDANCE WITH THE DEPARTMENT OF ENVIRONMENTAL PROTECTION STANDARDS, LOCAL REGULATIONS AND SECTION 104, FDOT REQUIREMENTS INCLUDING BUT NOT LIMITED TO ONE OR MORE OF THE FOLLOWING OPTIONS; SHEET PILE OR EARTH COFFERDAM, HAY BALES, SEDIMENT BASIN, SILT FENCE OR TURBIDITY BARRIER. EXCAVATED MATERIAL SHALL NOT BE DEPOSITED IN CANALS, PRESERVE AREAS OR IN A POSITION CLOSE ENOUGH THERETO, TO BE WASHED AWAY BY HIGH WATER OR
- 16. THE CONTRACTOR SHALL OBTAIN AN NPDES PERMIT AS "OPERATOR" AND SHALL BE RESPONSIBLE FOR ALL COSTS AND FEES AND IMPLEMENTING THE MEASURES, INCLUDING CONSTRUCTION, INSPECTION AND REPORTING REQUIRED BY THE NPDES PERMIT.
- CONTRACTOR SHALL BE RESPONSIBLE TO MEET ALL REQUIREMENTS OF THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD), MARTIN COUNTY, U.S. ARMY CORPS OR ENGINEERS, AND ANY OTHER REGULATORY AGENCIES AT NO EXTRA COST TO THE CONTRACT.
- THE CONTRACTOR IS RESPONSIBLE TO CLEAN AND MAINTAIN THE WORK AREA IN GOOD CONDITION AND CONTROL AIRBORNE DUST DUE TO THE CONSTRUCTION ACTIVITIES. THIS ITEM IS INCIDENTAL TO THE CONTRACT AND SHALL NOT BE PAID FOR SEPARATELY.
- 17. SOME HORIZONTAL & VERTICAL CONTROL POINTS ARE LOCATED WITHIN THE LIMITS OF CONSTRUCTION. CONTRACTOR SHALL REESTABLISH CONTROL POINTS AS NEEDED AT NO COST TO THE PROJECT.
- 18. ALL NEW PAVEMENT CONNECTIONS TO EXISTING PAVEMENT WILL BE MADE WITH A STRAIGHT SAW CUT OF THE EXISTING PAVEMENT.
- 19. THE CONTRACTOR IS TO MAINTAIN AND KEEP STREET NAME IDENTIFICATION VISIBLE DURING CONSTRUCTION OPERATIONS, IN ORDER TO FACILITATE EMERGENCY VEHICLE
- 20. EXISTING MAILBOXES WITHIN CONSTRUCTION LIMITS SHALL BE REMOVED/REPLACED AS NECESSARY TO AVOID DELAY IN MAIL DELIVERY AND SHALL BE INCIDENTAL TO THE CONTRACT.
- 21. THE CONTRACTOR WILL RESTRICT THE USE OF EQUIPMENT AND THE STORAGE OF MATERIALS TO AREAS WITHIN THE LIMITS OF CONSTRUCTION AS NOTED ON THE PLAN SHEETS. ANY OFF—SITE STORAGE AREAS WILL REQUIRE PRIOR REVIEW BY THE ENGINEER.

- 22. THE CONTRACTOR SHALL MAINTAIN A LOG OF ALL ACTIVITIES AT SITE. RECORD DRAWINGS SHALL BE COMPILED AT SUBMISSION OF EVERY PAY REQUEST FOR THE WORK COMPLETED FOR THAT PERIOD. AT THE END OF THE PROJECT, BEFORE SUBSTANTIAL COMPLETION CERTIFICATE IS ISSUED, THE CONTRACTOR SHALL PROVIDE A FULL SET OF AS—BUILT DRAWINGS PREPARED AND SIGNED/SEALED BY A REGISTERED PROFESSIONAL SURVEYOR OF THE STATE OF FLORIDA. THIS EFFORT SHALL BE INCIDENTAL TO THE OTHER PAY ITEMS IN THE CONTRACT AND SHALL NOT BE PAID FOR SEPARATELY.
- 23. MAINTENANCE OF TRAFFIC:

   MAINTENANCE OF TRAFFIC (M.O.T.) SHALL CONFORM TO FDOT TRAFFIC CONTROL THROUGH WORK ZONES REQUIREMENTS PER INDEX SERIES 600 AS APPICABLE.
- LANE CLOSURES SHALL BE LIMITED TO BETWEEN THE HOURS OF 9:00AM TO 3:30PM, AND 7:00PM TO 6:00AM.
- ACCESS TO ALL PROPERTIES MUST BE MAINTAINED AT ALL TIMES THROUGHOUT CONSTRUCTION.
- A M.O.T. PLAN SHALL BE SUBMITTED BY THE CONTRACTOR AND ACCEPTED BY THE MARTIN COUNTY PUBLIC WORKS DEPARTMENT PRIOR TO BEGINNING ANY WORK.
- THE MARTIN COUNTY ENGINEERING TRAFFIC DIVISION (772-288-5527) IS TO BE NOTIFIED AT LEAST 14 DAYS IN ADVANCE OF ANY CONSTRUCTION.
- PAYMENT FOR ALL WORK AND COSTS ASSOCIATED WITH MAINTENANCE OF TRAFFIC WILL BE MADE UNDER PAY ITEM 102-1 MAINTENANCE OF TRAFFIC LUMP SUM.
- 24. ALL WORK MUST BE PERFORMED ENTIRELY WITHIN AND FROM THE RIGHT-OF-WAY.
  25. THE CONTRACTOR SHALL NOT BRING ANY HAZARDOUS MATERIALS ONTO THE PROJECT.
  SHOULD THE CONTRACTOR REQUIRE SUCH FOR PERFORMING THE CONTRACTED WORK, THE
  CONTRACTOR SHALL REQUEST, IN WRITING, PERMISSION FROM THE PROJECT ENGINEER. THE
  CONTRACTOR SHALL PROVIDE A COPY OF THE REQUEST TO THE COUNTY ENGINEER. THE
  CONTRACTOR SHALL PROVIDE THE COUNTY ENGINEER WITH A COPY OF THE MATERIAL SAFETY
  DATA SHEET (MSDS) FOR EACH HAZARDOUS MATERIAL PROPOSED FOR USE, AND PROVIDE A
  DESCRIPTION OF THE SPECIFIC MANNER IN WHICH THE MATERIAL WILL BE USED. THE
  PROJECT ENGINEER SHALL COORDINATE WITH THE COUNTY ENGINEER PRIOR TO ISSUING
  WRITTEN APPROVAL TO THE CONTRACTOR. BECAUSE STATE LAW DOES NOT TREAT
  PETROLEUM PRODUCTS THAT ARE PROPERLY CONTAINERIZED AS HAZARDOUS MATERIALS,
  SUCH PRODUCTS DO NOT REQUIRE AN MSDS SUBMITTAL. ALL BULK PETROLEUM PRODUCTS
  STORED ON SITE SHALL REQUIRE PROPER STORAGE WHICH INCLUDES SECONDARY
  CONTAINMENT.
- 26. THE CONTRACTOR SHALL USE DILIGENT CAUTION TO COMPLETE ALL WORK WITHIN THE MARTIN COUNTY RIGHT OF WAY AND ON MARTIN COUNTY OWNED PROPERTY AS DESCRIBED AND INDICATED ON THE DRAWINGS. IN NO CASE SHALL THE CONTRACTOR ENCROACH ON PRIVATELY OWNED PROPERTY.
- 27. A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) WILL BE REQUIRED TO ADDRESS WATER QUALITY AND EROSION CONTROL DURING CONSTRUCTION. IN ADDITION, THE CONTRACTOR WILL BE REQUIRED TO USE BEST MANAGEMENT PRACTICES AND COMPLY WITH THE MOST RECENT EDITION OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (SECTION 104) TO ENSURE THAT NO ADVERSE IMPACTS WILL OCCUR TO WETLANDS ADJACENT TO THE PROJECT CORRIDOR.
- 28. THE CONTRACTOR SHALL COORDINATE SELECTION AND REVIEW OF ANY PROPOSED STAGING AREAS ASSOCIATED WITH THIS PROJECT WITH MARTIN COUNTY PROJECT MANAGER, AT (772) 320-3177
- 29. WHEN ENCOUNTERING OR EXPOSING ANY ABNORMAL CONDITION INDICATING THE PRESENCE OF A HAZARDOUS OR TOXIC WASTE, OR CONTAMINANTS, CEASE OPERATIONS IMMEDIATELY IN THE VICINITY AND NOTIFY THE MARTIN COUNTY ENGINEER. THE PRESENCE OF TANKS OR BARRELS; DISCOLORED EARTH, METAL, WOOD, GROUND WATER, ETC.; VISIBLE FUMES; ABNORMAL ODORS; EXCESSIVELY HOT EARTH; SMOKE; OR OTHER CONDITIONS THAT APPEAR ABNORMAL MAY INDICATE HAZARDOUS OR TOXIC WASTES OR CONTAMINANTS AND MUST BE TREATED WITH EXTREME CAUTION.

  MAKE EVERY EFFORT TO MINIMIZE THE SPREAD OF CONTAMINATION INTO UNCONTAMINATED AREAS. IMMEDIATELY PROVIDE FOR THE HEALTH AND SAFETY OF ALL WORKERS AT THE JOB SITE AND MAKE PROVISIONS NECESSARY FOR THE HEALTH AND SAFETY OF THE PUBLIC THAT MAY BE EXPOSED TO ANY POTENTIALLY HAZARDOUS CONDITIONS. PROVISIONS SHALL MEET ALL APPLICABLE LOCAL, STATE, AND FEDERAL LAWS, RULES, REGULATIONS OR CODES COVERING HAZARDOUS CONDITIONS AND WILL BE IN A MANNER COMMENSURATE WITH THE GRAVITY OF THE CONDITIONS.

THE LAP MARTIN COUNTY ENGINEER AND/OR CONTRACTOR WILL COORDINATE AND MOBILIZE A QUALIFIED CONTAMINATION ASSESSMENT/REMEDIATION (CAR) CONTRACTOR. QUALIFICATIONS OF SUCH CAR CONTRACTOR SHALL INCLUDE, BUT NOT BE LIMITED TO: EXPERIENCE AND PERSONNEL TO PREPARE CONTAMINATION ASSESSMENT PLANS, CONDUCT CONTAMINATION ASSESSMENTS, PREPARE SITE ASSESSMENT REPORTS, REMEDIATION PLANS, IMPLEMENT REMEDIAL ACTION PLANS, RISK BASED CORRECTIVE ACTIONS, STORAGE TANKS SYSTEM REMOVAL, HIGHWAY SPILL RESPONSE AS WELL AS EXPERIENCE WITH INFRASTRUCTURE/CONSTRUCTION ACTIVITIES WITHIN (POTENTIALLY) CONTAMINATED AREAS SPECIFIC TO TRANSPORTATION SYSTEMS.

ALL THE WORK PERFORMED BY THE CAR CONTRACTOR SHALL BE PERFORMED IN COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS GOVERNING WORKER SAFETY AND ENVIRONMENTAL REGULATIONS. THIS IS TO INCLUDE OCCUPATIONAL EXPOSURE TO CONTAMINATED SOILS, GROUNDWATER, WASTES AND ATMOSPHERE DURING THE CONSTRUCTION OF ALL FEATURES INCLUDED IN THE CONSTRUCTION PLANS. IN ADDITION, THE CAR CONTRACTOR MUST BE STAFFED WITH FLORIDA LICENSED TECHNICAL PROFESSIONALS (GEOLOGISTS AND ENGINEERS) WHO WILL BE INVOLVED WITH THE PROJECT AND KNOWLEDGEABLE OF THE WORK ACTIVITIES CONDUCTED WITHIN THE IDENTIFIED CONTAMINATED AREAS AND WHO WOULD SIGN AND SEAL PROJECT REPORTS AS REQUIRED FOR SUBMITTAL TO THE APPROPRIATE ENVIRONMENTAL REGULATORY AGENCIES.

THE LAP MARTIN COUNTY ENGINEER WILL IMMEDIATELY NOTIFY THE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) DISTRICT IV CONTAMINATION IMPACT COORDINATOR (DCIC) AT (954) 777-4286 AFTER ENCOUNTERING THE UNIDENTIFIED AREAS OF CONTAMINATION. PRELIMINARY INVESTIGATION BY THE CATEROLOGICAL STORY ADDITIONAL TORSE AND RECESSARY FOR SITE SECURITY AND

THE STEPS NECESSARY UNDER APPLICABLE LAWS, RULES, AND REGULATIONS FOR ADDITIONAL ASSESSMENT AND/OR REMEDIATION WORK TO RESOLVE THE CONTAMINATION ISSUE. FOLLOWING COMPLETION OF THE PROJECT, THE CAR CONTRACTOR SHALL BE REQUIRED TO PROVIDE COPIES OF ALL REPORTS SUBMITTED TO REGULATORY AGENCIES, WASTE MATERIAL PROFILES, MANIFESTS AND/OR DISPOSAL RECEIPTS FOR THE HANDLING OF ALL CONTAMINATED MEDIA INCLUDING BUT NOT LIMITED TO GROUND WATER, WASTE WATER, SOILS, SOLID WASTES, SLUDGE, HAZARDOUS WASTES, AIR MONITORING RECORDS AND SAMPLE RESULTS FOR ALL MATERIALS TESTED AND ANALYZED TO THE LAP MARTIN COUNTY ENGINEER AND THE FDOT DCIC.

30. COORDINATE AND NOTIFY THE UTILITY PROVIDERS OF ALL WORK IN ACCORDANCE WITH THE SPECIFICATIONS. UTILITIES THAT MAY BE AFFECTED INCLUDE:

AT&T	MARK GUTIERREZ	(772) 460-4443
COMCAST	RICK JOHNSON	(561) 402-4513
FLORIDA POWER & LIGHT	ROB MORRIS	(772) 223-4215
MARTIN COUNTY TRAFFIC	DAMIEN BONO	(772) 288-5528
MARTIN COUNTY UTILITIES	STEVE VANDERLUIS	(772) 221–1437

IRONMENT & INFRASTRUCTURE, IN 5015 S Florida Avenue, Suite 301 Lakeland, FL 33813

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MANATEE POCKET
DRAINAGE IMPROVEMENTS

THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY: TIMOTHY J. KELLY, FLORIDA PROFESSIONAL ENGINEER # 44721 ON FEBRUARY 07, 2023. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

PLAN STATUS			
DATE	DESCRIPTION		
DESIGN	DRAWN	CHKD	
TJK	ALP		
SCALE:			
JOB No. 600710.7			
DATE: 2/7/2023			
FILE NAME:			

SHEET

KNOW WHAT'S BELOW ALWAYS CALL 81's BEFORE YOU DIG

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NOTE:
1. ALL ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

- 1. THE CONTRACTOR SHALL GIVE THE COUNTY AT LEAST 48 HOURS NOTICE PRIOR TO REQUESTING REQUIRED CONSTRUCTION OBSERVATIONS AND SHALL SUPPLY ALL EQUIPMENT NECESSARY TO PROPERLY TEST AND INSPECT THE COMPLETED WORK.
- 2. THE CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIALS FOR A PERIOD OF ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION, DURING WHICH TIME ALL FAULTY CONSTRUCTION AND/OR MATERIALS SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING ABOVE-GROUND, UNDERGROUND, AND ON THE SURFACE STRUCTURES AND UTILITIES AGAINST THE CONSTRUCTION OPERATION THAT MAY CAUSE DAMAGE TO SAID FACILITY.
- 4. THE CONTRACTOR SHALL GIVE ADEQUATE NOTIFICATION TO ALL AFFECTED UTILITY OWNERS FOR REMOVAL, RELOCATION AND ALTERATION OF THEIR EXISTING FACILITIES.
- 5. STREET OR HIGHWAY RESTORATION WORK IS TO BE DONE AS PER THE LOCAL OR STATE AGENCY HAVING JURISDICTION.
- 6. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE RULES AND REGULATIONS OF THE STATE, COUNTY AND CITY AUTHORITIES REGARDING CLOSING OR RESTRICTING THE USE OF PUBLIC STREETS OR HIGHWAYS.
- 7. TRAFFIC CONTROL ON ALL CITY, COUNTY AND STATE HIGHWAY RIGHTS-OF-WAY SHALL MEET THE REQUIREMENTS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (U.S. DOT/FHA) AND THE REQUIREMENTS OF THE STATE AND ANY LOCAL AGENCY HAVING JURISDICTION.
- 8. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND THE COUNTY IMMEDIATELY WHEN A CONFLICT BETWEEN THE DRAWINGS AND ACTUAL CONDITIONS IS DISCOVERED DURING THE COURSE OF CONSTRUCTION.
- 9. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE PRIOR TO BIDDING THE WORK AND TO PERFORM SUCH TESTS, STUDIES AND SURVEYS AS HE DEEMS NECESSARY TO SATISFY HIMSELF AS TO ACTUAL SURFACE AND SUBSURFACE CONDITIONS EXISTING AT THE SITE. ACTUAL CONDITIONS THAT DIFFER FROM THOSE SHOWN ON DRAWINGS SHALL NOT CONSTITUTE A BASIS FOR ADDITIONAL PAYMENT.
- 10. ALL ELEVATIONS REFER TO N.A.V.D. 1988 DATUM, UNLESS OTHERWISE NOTED.
- 11. ALL CONSTRUCTION DEWATERING (WELL POINTS, SUMPS ETC.) WILL REQUIRE A DEWATERING PERMIT FROM THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT. THIS SHALL BE OBTAINED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
- 12. ANY CHANGES DUE TO FIELD CONDITIONS OR ANY OTHER DEVIATIONS FROM THE APPROVED DRAWINGS MUST BE APPROVED BY THE ENGINEER AND THE GOVERNING AUTHORITY HAVING JURISDICTION PRIOR TO BEING CONSTRUCTED.
- 13. THE CONTRACTOR SHALL NOTIFY ALL UTILITY OWNERS HAVING FACILITIES IN THE AREA WITHIN AND ADJACENT TO THE PROPOSED CONSTRUCTION AT LEAST FORTY—EIGHT (48) HOURS PRIOR TO BEGINNING CONSTRUCTION.
- 14. THE CONTRACTOR SHALL HAVE AVAILABLE AT THE JOB SITE AT ALL TIMES: ONE (1) SET OF "APPROVED" CONSTRUCTION DRAWINGS, ONE (1) COPY OF THE APPLICABLE UTILITY COMPANY'S "MINIMUM DESIGN AND CONSTRUCTION STANDARDS", ONE (1) COPY OF ALL CONTRACT DOCUMENTS AND, ONE (1) COPY OF ALL APPLICABLE LOCAL, STATE AND FEDERAL PERMITS REQUIRED FOR CONSTRUCTION.
- 15. THE CONTRACTOR SHALL PROVIDE A QUALIFIED SUPERINTENDENT TO REMAIN AT THE JOB SITE AT ALL TIMES WHEN WORK IS BEING PERFORMED. THE SUPERINTENDENT SHALL BE PRESENT AT ALL SCHEDULED CONSTRUCTION OBSERVATION MEETINGS.
- 16. THE CONTRACTOR SHALL OBTAIN AN NPDES PERMIT AS "OPERATOR" AND SHALL BE RESPONSIBLE FOR ALL COSTS AND FEES AND IMPLEMENTING THE MEASURES, INCLUDING CONSTRUCTION, INSPECTION AND REPORTING REQUIRED BY THE NPDES PERMIT

CONTRACTOR SHALL BE RESPONSIBLE TO MEET ALL APPLICABLE REQUIREMENTS OF THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD), MARTIN COUNTY, U.S. ARMY CORPS OF ENGINEERS, AND ANY OTHER REGULATORY AGENCIES AT NO EXTRA COST TO THE CONTRACT.

THE CONTRACTOR IS RESPONSIBLE TO CLEAN AND MAINTAIN THE WORK AREA IN GOOD CONDITION AND CONTROL AIRBORNE DUST DUE TO THE CONSTRUCTION ACTIVITIES. THIS ITEM IS INCIDENTAL TO THE CONTRACT AND SHALL NOT BE PAID FOR SEPARATELY.

- 17. SOME HORIZONTAL & VERTICAL CONTROL POINTS ARE LOCATED WITHIN THE LIMITS OF CONSTRUCTION. CONTRACTOR SHALL REESTABLISH CONTROL POINTS AS NEEDED AT NO COST TO THE PROJECT.
- 18. ALL NEW PAVEMENT CONNECTIONS TO EXISTING PAVEMENT WILL BE MADE WITH A STRAIGHT SAW CUT OF THE EXISTING PAVEMENT.
- 19. THE CONTRACTOR IS TO MAINTAIN AND KEEP STREET NAME IDENTIFICATION VISIBLE DURING CONSTRUCTION OPERATIONS, IN ORDER TO FACILITATE EMERGENCY VEHICLE TRAFFIC.
- 20. EXISTING MAILBOXES WITHIN CONSTRUCTION LIMITS SHALL BE RELOCATED/REPLACED AS NECESSARY TO AVOID DELAY IN MAIL DELIVERY AND SHALL BE INCIDENTAL TO THE CONTRACT. MAILBOXES MUST BE CAPABLE OF RECEIVING MAIL AT ALL TIMES.
- 21. IF SUSPECTED CONTAMINATED OR HAZARDOUS MATERIAL IS FOUND ON THE PROJECT OR ENCOUNTERED DURING CONSTRUCTION THE CONTRACTOR SHALL CEASE OPERATIONS IN THAT AREA. IMMEDIATELY NOTIFY THE MARTIN COUNTY PROJECT MANAGER AND THE MARTIN COUNTY UTILITIES AND SOLID WASTE DEPARTMENT (772-288-5772) AND PROTECT THE IMMEDIATE AREA OF SUSPECT CONTAMINATED OR HAZARDOUS MATERIAL FROM FURTHER ACCESS. THE UTILITIES AND SOLID WASTE DEPARTMENT WILL ARRANGE FOR THE INVESTIGATION, IDENTIFICATION AND/OR REMOVAL/REMEDIATION OF THE MATERIAL IN QUESTION AS NEEDED.
- 22. ALL EXISTING BURIED CULVERTS TO BE DE—SILTED (CLEANED).
- 23. LENGTHS OF PIPE AS NOTED ARE INTENDED TO BE TOTAL LENGTHS, INCLUDING MITERED ENDS, AS
- 24. ALL STOP SIGNS, STREET SIGNS AND INTERNATIONAL SIGNS ARE TO BE RESET/REPLACED.

THE CONTRACTOR SHALL VERIFY THE SIZES OF ALL EXISTING STRUCTURES THAT ARE TO REMAIN PRIOR TO ORDERING MATERIALS AND/OR CONSTRUCTION.

SEDIMENTATION AND EROSION CONTROL:

PRIOR TO AND DURING CONSTRUCTION, THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN ALL SEDIMENTATION AND EROSION CONTROL MEASURES REQUIRED TO RETAIN SEDIMENT ON SITE AND TO PREVENT VIOLATIONS OF STATE WATER QUALITY STANDARDS. SEDIMENTATION AND EROSION CONTROL FEATURES MAY INCLUDE, BUT ARE NOT LIMITED TO, SILT FENCES, SILTATION BARRIERS, GEOTEXTILE FILTER BARRIERS, TURBIDITY SCREENS AND SEDIMENTATION BASINS. CONSTRUCTION AND MAINTENANCE OF SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH SECTION 104 OF THE STANDARD SPECIFICATIONS.

THE CONTRACTOR SHALL INSTALL, CONSTRUCT, AND MAINTAIN ALL REQUIRED SEDIMENTATION AND EROSION CONTROL FOR THE DURATION OF CONSTRUCTION.

STABILIZATION MEASURES, INCLUDING BUT NOT LIMITED TO, SODDING OR SEEDING AND MULCHING, SHALL BE INITIATED FOR SEDIMENTATION AND EROSION CONTROL ON ALL DISTURBED AREAS AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN SEVEN (7) DAYS AFTER CONSTRUCTION ACTIVITY HAS CEASED. THE CONTRACTOR SHALL INSPECT ALL SEDIMENTATION AND EROSION CONTROL MEASURES DAILY DURING CONSTRUCTION. ANY DEFICIENCIES SHALL BE IMMEDIATELY CORRECTED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY OFF SITE WATER QUALITY IMPACTS OR OTHER ADVERSE IMPACTS DUE TO SEDIMENTATION AND EROSION FROM THE PROJECT SITE DURING CONSTRUCTION.

#### CLEARING AND GRUBBING:

ALL TREES, BRUSH, STUMPS, ROOTS, GRASS, WEEDS, RUBBISH AND ALL OTHER OBSTRUCTIONS RESTING ON OR LYING WITHIN 12" BELOW FINISHED GRADE OR SUBGRADE SHALL BE COMPLETELY REMOVED FOR THE FULL WIDTH OF ALL ROAD RIGHT-OF-WAYS, ROAD EASEMENTS, SWALES, UTILITY EASEMENTS AND DRAINAGE EASEMENTS. ALL WORK SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS. CLEANING AND GRUBBING AREAS TO BE INSPECTED AND APPROVED PRIOR TO ANY FILL OR CONSTRUCTION WORK. ALL MATERIAL FROM CLEARING AND GRUBBING SHALL BE REMOVED AND LEGALLY DISPOSED OF.

#### BURNING:

NOT ALLOWED.

#### EXCAVATION:

THE CONTRACTOR SHALL PERFORM ALL EXCAVATION NECESSARY TO ACCOMPLISH THE CONSTRUCTION INDICATED ON THE DRAWINGS. EXCAVATION SHALL BE UNCLASSIFIED REGARDLESS OF MATERIAL ENCOUNTERED. ALL EXCAVATED MATERIAL NOT REQUIRED FOR FILL OR EMBANKMENT, SHALL BE REMOVED FROM THE SITE, AS DIRECTED BY THE OWNER, OR HIS REPRESENTATIVE. THE CONTRACTOR SHALL DO ALL SHORING NECESSARY TO PERFORM AND PROTECT THE EXCAVATION, AND AS NECESSARY FOR THE SAFETY OF THE WORKERS AND ANY EXISTING FACILITIES IN ACCORDANCE WITH THE STATE OF FLORIDA

"TRENCH SAFETY ACT". WHEREVER EXCAVATIONS ARE MADE BELOW THE GRADES INDICATED ON THE DRAWINGS, CLEAN FIRM MATERIAL APPROVED BY THE ENGINEER SHALL BE USED TO RESTORE THE AREA TO THE PROPER GRADE, AND SHALL BE COMPACTED IN ACCORDANCE WITH THE REQUIREMENTS FOR COMPACTION INCLUDED IN THESE SPECIFICATIONS.

#### UNSUITABLE MATERIAL:

WHERE MUCK, ROCK, CLAY, ORGANIC MATERIAL OR OTHER DELETERIOUS MATERIAL WITHIN THE LIMITS OF CONSTRUCTION IS, IN THE OPINION OF THE ENGINEER, UNSUITABLE IN ITS ORIGINAL POSITION, THE CONTRACTOR SHALL EXCAVATE SUCH MATERIAL, AND BACKFILL THE EXCAVATED AREA WITH SUITABLE MATERIAL, WHICH SHALL BE COMPACTED AND SHAPED TO CONFORM TO THE REQUIRED SECTION. BACKFILL MATERIAL AND COMPACTION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS INCLUDED IN THESE SPECIFICATIONS.

#### STRUCTURAL FILL:

1. THIS WORK SHALL CONSIST OF FURNISHING AND PLACING THE MATERIALS REQUIRED FOR FILL OR EMBANKMENT FOR THE CONSTRUCTION AS SHOWN ON THE DRAWINGS. THE MATERIAL USED FOR EMBANKMENT SHALL BE CLEAN UNIFORM FREE DRAINING GRANULAR SOIL CONSISTING OF SAND, GRAVEL, OR A MIXTURE THEREOF, AND/OR OTHER SUITABLE MATERIAL APPROVED BY THE ENGINEER. IF THE MATERIALS ARE OF A VARIABLE QUALITY, THE CONTRACTOR SHALL PLAN HIS OPERATIONS SO THAT THE UPPER TWO FEET OF THE FILL IS CONSTRUCTED OF SELECTED MATERIALS AS APPROVED AND DIRECTED BY THE ENGINEER.

PRIOR TO PLACING ANY FILL, THE SURFACE TO RECEIVE THE FILL, THE FLORIDA DEPARTMENT OF TRANSPORTATION. SHALL BE PLOWED OR SCARIFIED. FILL SHALL BE PLACED IN SUCCESSIVE UNIFORM LAYERS TWELVE INCHES (12"), MEASURED LOOSE, STORM INLETS AND MANHOLES SHALL BE CONSTRUCTED IN GENERAL OR AS APPROVED BY THE ENGINEER. EACH LAYER WILL THEN BE COMPACTED BY AN APPROVED METHOD IN ACCORDANCE WITH THE REQUIREMENTS FOR COMPACTION INCLUDED IN THESE SPECIFICATIONS. THE COMPACTION SHALL BE VERIFIED THROUGH TESTING AS INDICATED IN THE TESTING SPECIFICATIONS.

#### BACKFILL:

ALL BACKFILL MATERIAL SHALL BE CLEAN, UNIFORM, FREE DRAINING SOIL AND FREE OF LUMBER, TRASH OR OTHER DEBRIS, AND SHALL BE THOROUGHLY COMPACTED IN LAYERS NOT TO EXCEED TWELVE INCHES (12"), MEASURED LOOSE AND BROUGHT TO AN ELEVATION ABOVE THE FINISHED GRADE, SUFFICIENT TO ALLOW FOR SETTLEMENT. PRIOR TO PLACING BACKFILL, THE AREAS AROUND STRUCTURES UPON WHICH THE BACKFILL IS TO BE PLACED, SHALL BE CLEANED OF ALL TRASH AND DEBRIS OF ANY NATURE. SHEETING AND BRACING ALLOWED TO BE LEFT IN PLACE SHALL BE CUT OFF A MINIMUM OF 2.5 FEET BELOW FINISHED GRADE. COMPACTION FOR EACH LIFT SHALL BE EQUAL TO 100% OF MAXIMUM DENISTY AS DETERMINED BY AASHTO T-180.

### GRADING:

THE CONTRACTOR SHALL PERFORM ALL NECESSARY GRADING TO ACHIEVE THE FINISHED GRADING AS PER THE DRAWINGS. ALL WORKMANSHIP SHALL BE IN ACCORDANCE WITH THESE SPECIFICATIONS. COMPACTION:

ALL AREAS TO BE COMPACTED SHALL BE MOISTENED AND COMPACTED BY TAMPING OR USE OF VIBRATORY ROLLERS, VIBRATORY PLATE COMPACTORS OR ANY OTHER METHOD APPROVED BY THE ENGINEER IN EQUIPMENT MAY AFFECT ADJACENT STRUCTURES, COMPACTION SHALL BE PERFORMED USING OTHER EQUIPMENT THAT WILL SATISFY THE DENSITY REQUIREMENTS WITHOUT DAMAGING EXISTING STRUCTURES. THE FOR REVIEW OF SHOP DRAWINGS. CONTRACTOR SHALL INSPECT ALL COMPACTED AREAS PRIOR TO FURTHER CONSTRUCTION OPERATIONS, TO ENSURE THAT SATISFACTORY CULVERT PIPES: COMPACTION HAS BEEN OBTAINED. ALL EMBANKMENT, INCLUDING BACKFILL AND EMBANKMENT ADJACENT TO STRUCTURES, SHALL BE COMPACTED TO A DENSITY OF NOT LESS THAN 100 PERCENT (100%) OF THE MAXIMUM DENSITY, AS DETERMINED BY AASHTO T-180.

THE CONTRACTOR SHALL PAY PARTICULAR ATTENTION TO COMPACTION IN AREAS AROUND STRUCTURES AND OTHER FEATURES WHERE ACCESS BY SELF PROPELLED VIBRATORY COMPACTORS MAY BE DIFFICULT.

BACKFILL AND COMPACTION WITHIN PIPE TRENCHES SHALL BE IN ACCORDANCE WITH THE TYPICAL TRENCH DETAIL SHOWN ON THE DRAWINGS. FOR NON-FLEXIBLE PIPE MATERIALS, ALL BACKFILL SHALL BE COMPACTED TO NOT LESS THAN 100 PERCENT (100%) OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180. FOR FLEXIBLE PIPE MATERIALS, ALL BACKFILL SHALL BE COMPACTED TO NOT LESS THAN 98 PERCENT (98%) OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180.

IF IN THE ENGINEER'S OPINION, DENSITY TESTS ARE REQUIRED, SUCH TESTS SHALL BE MADE AS DIRECTED BY THE ENGINEER AT THE EXPENSE OF THE CONTRACTOR. THE TESTING LABORATORY SHALL FORWARD COPIES OF ALL TEST REPORTS TO THE ENGINEER, CONTRACTOR, AND OWNER.

UNLESS OTHERWISE SPECIFIED OR INDICATED, ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 3000 PSI. ALL WORK SHALL COMPLY WITH THE CURRENT EDITION OF THE AMERICAN CONCRETE INSTITUTE (ACI) BUILDING CODE AND APPLICABLE BUILDING CODES HAVING JURISDICTION IN THE AREA.

#### CONCRETE SIDEWALK:

CONCRETE SIDEWALK SHALL BE CONSTRUCTED TO THE DEPTH AND LIMITS SHOWN ON THE DRAWINGS IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, UNLESS OTHERWISE SPECIFIED OR INDICATED. ALL CONCRETE FOR SIDEWALK CONSTRUCTION SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF AT 28 DAYS OF 3000 PSI. CONTRACTION JOINTS SHALL BE SAW CUT AT 5' SPACING OR AS SHOWN ON THE DRAWING. SIDEWALKS WILL HAVE A "BROOM FINISH".

## CURING:

WHITE PIGMENTED CURING COMPOUND IN ACCORDANCE WITH SECTION 925 OF THE STANDARD SPECIFICATIONS SHALL BE APPLIED TO ALL EXPOSED CONCRETE IMMEDIATELY UPON "FINISHING" OF CONCRETE OR IMMEDIATELY AFTER REMOVAL OF FORMS. CURING COMPOUND SHALL BE APPLIED IN ACCORDANCE WITH SECTION 520 OF THE STANDARD

#### GENERAL

JOINTS MAY BE FORMED IN THE PLASTIC CONCRETE OR SAWED AFTER THE CONCRETE HAS HARDENED AND SHALL BE TO A DEPTH OF 1/4 THE THICKNESS OF PAVEMENT. FORMED JOINTS MAY BE CONSTRUCTED BY DEPRESSING AN APPROVED TOOL INTO THE PLASTIC MATERIAL. SAWING OF JOINTS SHALL BEGIN AS SOON AS THE PAVEMENT HAS HARDENED SUFFICIENTLY TO PERMIT SAWING WITHOUT EXCESSIVE RAVELING AND BEFORE UNCONTROLLED CRACKING OCCURS.

#### CONSTRUCTION JOINTS

ALL LONGITUDINAL JOINTS MAY BE CONSTRUCTION JOINTS AT THE CONTRACTOR'S OPTION. TRANSVERSE CONSTRUCTION JOINTS SHALL BE INSTALLED WHENEVER THE PLACING OF CONCRETE IS SUSPENDED A SUFFICIENT LENGTH OF TIME THAT THE CONCRETE MAY BEGIN TO

### DRAINAGE SPECIFICATIONS:

## GENERAL

STORM SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH SECTION 430 AND RELATED SECTIONS OF THE "STANDARD SPECIFICATIONS" OF

ACCORDANCE WITH SECTION 425 OF THE "STANDARD SPECIFICATIONS" ALL REINFORCING STEEL TO BE ASTM A 615-72 GRADE 40 FYP = 40,000 PSI, AND SHALL BE HANDLED AND PLACED IN ACCORDANCE WITH ACI 318-71.

ALL INLETS, MANHOLES, AND PIPE SHALL BE PROTECTED DURING CONSTRUCTION TO PREVENT SILTATION IN THE DRAINAGE SYSTEM BY USE OF TEMPORARY PLUGS, PLYWOOD OR PLASTIC COVERS OR USE OF GEOTEXTILE FILTER FABRIC. THE ENTIRE DRAINAGE SYSTEM SHALL BE CLEANED OF ALL DEBRIS PRIOR TO FINAL INSPECTION AND CERTIFICATION.

#### PRECAST INLETS AND MANHOLES:

ALL STORM DRAINAGE INLETS AND MANHOLES SHALL BE PRECAST REINFORCED CONCRETE IN ACCORDANCE WITH SECTION 425 OF THE "STANDARD SPECIFICATIONS" AND THE DETAILS SHOWN ON THE DRAWINGS. TYPE II PORTLAND CEMENT SHALL BE USED IN THE CONCRETE MIX. CONCRETE FOR PRECAST STRUCTURES SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 4000 PSI.

ORDER TO OBTAIN THE REQUIRED DENSITY. WHERE USE OF VIBRATORY MANUFACTURER'S SHOP DRAWINGS FOR PRECAST DRAINAGE INLETS AND MANHOLES SHALL BE REVIEWED BY THE ENGINEER. THE CONTRACTOR SHALL ALLOW THE ENGINEER A MINIMUM OF FIVE (5) WORKING DAYS

REINFORCED CONCRETE PIPE (RCP) SHALL BE IN ACCORDANCE WITH SECTION 941 OF THE "STANDARD SPECIFICATIONS"

THE CONTRACTOR SHALL COMPLETELY WRAP ALL PIPE JOINTS AND ALL PIPE CONNECTIONS INTO STRUCTURES WITH GEOTEXTILE FILTER FABRIC. FILTER FABRIC TO BE SECURED AROUND PIPE WITH BANDS SUITABLE FOR THE PIPE MATERIAL USED.

#### DISTURBED AREAS:

ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE SODDED AS SPECIFIED BELOW:

WITHIN THE LIMITS DELINEATED ON THE DRAWINGS, THE CONTRACTOR SHALL, AFTER FINAL GRADING AND CLEANUP, ESTABLISH A STAND OF GRASS BY FURNISHING AND PLACING SOD IN ACCORDANCE WITH SECTION 570 OF THE STANDARD SPECIFICATIONS. THE CONTRACTOR SHALL WATER THE SODDED AREA TO MAINTAIN MOISTURE LEVELS FOR OPTIMUM GROWTH TO ASSURE A HEALTHY STAND OF GRASS. SOD SHALL BE BAHIA GRASS SOD UNLESS OTHERWISE SPECIFIED.

#### RECORD DRAWINGS:

THE CONTRACTOR SHALL MAINTAIN RECORD DRAWINGS ON THE PROJECT SITE AT ALL TIMES WHICH SHALL BE ANNOTATED BY THE CONTRACTOR DEPICTING ANY CHANGES MADE IN THE FIELD WHICH DIFFER FROM THE APPROVED CONSTRUCTION DRAWINGS. UPON COMPLETION OF CONSTRUCTION, BUT PRIOR TO FINAL INSPECTION AND CERTIFICATION, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A REPRODUCIBLE MYLAR COPY AND AT LEAST THREE (3) BLUE LINE OR BLACK LINE COPIES OF THE RECORD DRAWINGS. THE RECORD DRAWINGS SHALL BE AT THE SAME SCALE AS THE APPROVED CONSTRUCTION DRAWINGS AND SHALL ACCURATELY DEPICT THE HORIZONTAL AND VERTICAL LOCATION OF ALL FACILITIES INCLUDING BUT NOT LIMITED TO:

#### A. CULVERTS INCLUDING PIPE INVERT ELEVATIONS B. INLETS, MANHOLES, AND OTHER STRUCTURES INCLUDING DIMENSIONS, TOP, BOTTOM AND PIPE INVERT ELEVATIONS C. PAVEMENT FINISH GRADES

D. PIPE AND UTILITY CROSSING INCLUDING ELEVATIONS AND HORIZONTAL AND VERTICAL CLEARANCE BETWEEN FACILITIES.

THE RECORD DRAWINGS SHALL BE PREPARED AND CERTIFIED BY A PROFESSIONAL SURVEYOR AND MAPPER LICENSED BY THE STATE OF FLORIDA.

#### CONSTRUCTION OBSERVATION:

MINIMUM CONSTRUCTION OBSERVATION CHECKPOINTS

I. EROSION AND SEDIMENT CONTROL, PRIOR TO BEGINNING CONSTRUCTION

II. CLEARING AND GRUBBING PRIOR TO PLACEMENT OF FILL OR BEGINNING CONSTRUCTION

#### III. DRAINAGE

- A. ALL MATERIALS B. DURING LAYING OF PIPE AND PRIOR TO BACKFILLING PIPE
- TRENCHES. C. COMPLETION OF ALL DRAINAGE STRUCTURES AND PIPE LAYING (PRIOR TO BACKFILL).
- D. CONSTRUCTION AND STABILIZATION OF SWALES AND STORMWATER RETENTION / DETENTION AREAS E. SODDING WHERE EROSION IS EVIDENT OR WHERE DRAWINGS SO
- F. INSPECTOR MUST SEE ALL CONFLICT CROSSING IF NOT PIPE WILL BE DUG UP SO SEPARATION MAY BE SEEN

#### IV. UTILITIES - N/A

A. COMPLETION OF FORMING FOR PAVEMENT, CURBING, SIDEWALK, RETAINING WALLS AND ALL OTHER CONCRETE STRUCTURES PRIOR TO PLACEMENT OF CONCRETE INCLUDING SOIL COMPACTION, SOIL CONDITION (DRY / WET) AND SOIL ELEVATION B. PLACING OF ALL CONCRETE

C. APPLICATION OF APPROVED MOISTURE BARRIER

#### VI. PAVEMENT

A. LINE AND GRADE

B. SUB-GRADE (PRIOR TO PLACING BASE MATERIAL)

C. BASE (PRIOR TO PRIMING AND SAND SEAL) D. BASE (AFTER PRIMING, SAND SEAL AND BEFORE PLACING ASPHALT)

E. ASPHALT OR CONCRETE (WHILE PAVING IS IN PROGRESS)

## VII. TESTING

A. SUB-GRADE B. BASE

C. SURFACE COURSE D. COMPACTION

VIII. FINAL PROJECT OBSERVATION THE ENGINEER SHALL BE NOTIFIED AT LEAST 48 HOURS PRIOR TO ANY SCHEDULED FIELD OBSERVATIONS.

#### CLEAN-UP:

THE CONTRACTOR MUST PROVIDE CLEAN-UP OF EXCESS CONSTRUCTION MATERIAL UPON COMPLETION OF THE PROJECT. THE SITE MUST BE LEFT IN A NEAT, CLEAN, GRADED CONDITION.

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THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY: TIMOTHY J. KELLY, FLORIDA PROFESSIONAL ENGINEER # 44721 ON FEBRUARY 07, 2023. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

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SCALE: ---JOB No. 600710.7

FILE NAME:

**DATE:** 2/7/2023

SHEET

Cad file name: C:\Civil 3D Home 2020 Projects\600710.7 Martin County-Manatee Pocket Water Quality Enhancement\dwg\600710.7\_Cover-Details.dwg 02/07/23

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I. ALL ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

WORKS. SHALL BE WITHOUT LIABILITY TO MARTIN COUNTY PUBLIC WORKS.

I. ALL CONNECTIONS TO EXISTING MAINS SHALL BE OBSERVED BY THE DEPARTMENT. VALVES ON EXISTING MAINS SHALL BE OPERATED BY DEPARTMENT PERSONNEL OR UNDER THEIR DIRECT SUPERVISION. TAPPING SLEEVE AND VALVE SHALL BE PRESSURE TESTED PRIOR TO TAPPING. IF SERVICE MUST BE CUT OFF TO EXISTING CUSTOMERS, THE DEPARTMENT MUST HAVE THREE DAYS NOTICE TO MAKE NECESSARY NOTIFICATIONS. THE CONTRACTOR MAY BE REQUIRED TO ASSIST IN NOTIFICATIONS. IN THIS EVENT, CONTRACTOR SHALL BE READY TO PROCEED WITH AS MUCH MATERIAL PREASSEMBLED AS POSSIBLE AT THE SITE TO MINIMIZE THE LENGTH OF SERVICE INTERRUPTION. THE DEPARTMENT WILL POSTPONE A SERVICE CUT OFF IF THE CONTRACTOR IS NOT READY TO PROCEED ON SCHEDULE. SUCH CONNECTIONS SHALL BE MADE AT NIGHT TO MINIMIZE EFFECTS UNLESS OTHERWISE AUTHORIZED BY THE DEPARTMENT. NO CUSTOMER SHOULD BE WITHOUT SERVICE FOR MORE THAN FOUR HOURS.

LOCAL CHLORINATION WILL BE REQUIRED FOR ALL PIPE AND FITTINGS USED TO COMPLETE CONNECTIONS WITH POTABLE WATER.

- 2. THE CONTRACTOR SHALL HAVE AVAILABLE AT THE JOB SITE AT ALL TIMES ONE COPY OF MARTIN COUNTY UTILITIES MINIMUM DESIGN AND CONSTRUCTION STANDARDS, ONE COPY OF THE CONTRACT DOCUMENTS, INCLUDING PLANS, SPECIFICATIONS AND SPECIAL PROVISIONS, AND COPIES OF ANY REQUIRED CONSTRUCTION PERMITS.
- 3. THE CONTRACTOR SHALL CONTACT ALL CONCERNED UTILITIES AT LEAST 48 HOURS IN ADVANCE OF CONSTRUCTION OPERATIONS
- 4. THE LOCATION AND SIZE OF ALL EXISTING UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE AND ARE BASED ON THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITIES BY ELECTRONIC METHOD AND BY HAND EXCAVATION IN COORDINATION WITH ALL UTILITY COMPANIES PRIOR TO BEGINNING ANY CONSTRUCTION OPERATIONS. ANY AND ALL CONFLICTS OF EXISTING UTILITIES WITH PROPOSED IMPROVEMENTS SHALL BE RESOLVED BY THE ENGINEER AND DEPARTMENT PRIOR TO BEGINNING ANY CONSTRUCTION OPERATIONS. THIS WORK BY THE CONTRACTOR SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
- 5. LOCATION OF PROPOSED FACILITIES WILL BE STAKED BY CONTRACTOR. CONTRACTOR MUST GIVE 48 HOURS NOTICE TO THE DEPARTMENT IN ADVANCE OF LAYOUT.
- 6. PROJECT SUPERINTENDENT: THE CONTRACTOR SHALL PROVIDE A QUALIFIED SUPERINTENDENT TO REMAIN ON THE JOB SITE AT ALL TIMES WHEN WORK IS BEING PERFORMED. THE SUPERINTENDENT SHALL BE PRESENT AT THE PRE-CONSTRUCTION MEETINGS. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT BY LETTER PRIOR TO THE PRE-CONSTRUCTION MEETING APPOINTING THE SUPERINTENDENT FOR THIS PROJECT INCLUDING A FORMAL RESUME SHOWING QUALIFICATIONS. IN THE EVENT THE SUPERINTENDENT WILL NOT BE PRESENT FOR ANY PERIOD OF TIME DURING CONTRACT WORK THE CONTRACTOR SHALL PROVIDE 48 HOURS NOTICE IN WRITING TO THE DEPARTMENT, INCLUDING THE APPOINTMENT OF A QUALIFIED REPLACEMENT SUPERINTENDENT WHO WILL BE PRESENT DURING THE CONSTRUCTION. WORK SHALL NOT BE ALLOWED TO PROCEED UNLESS THE ASSIGNED SUPERINTENDENT IS PRESENT.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE HIS COMPLETE FAMILIARITY WITH THE PROJECT SITE AND COMPONENTS TO INCLUDE SUBSURFACE CONDITIONS OF SOIL AND GROUNDWATER TABLE.

WARNING: EXACT LOCATION OF UNDERGROUND UTILITIES IS NOT KNOWN NOR IS THIS DRAWING TO BE CONSTRUED AS DEPICTING THE LOCATION OF ALL UNDERGROUND UTILITIES OR STRUCTURES. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINATION OF LOCATION PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR IS RESPONSIBLE, THEREFORE, FOR ALL DAMAGE AND REPAIR COSTS.

- 8. DENSITY TESTS OF TRENCH BACKFILL MATERIAL SHALL BE REQUIRED AT INTERVALS OF NOT MORE THAN 500 FEET. DENSITY TESTS OF PAVEMENT OPEN-CUT AREAS INCLUDING ROADS, TURNLANES, AND DRIVES SHALL BE REQUIRED AT EACH OPEN-CUT AT INTERVALS OF NOT MORE THAN 50 FEET. ALL TESTS SHALL COMMENCE AT THE TOP OF CONDUIT AND EVERY 12 INCHES TO THE FINISH GRADE. COMPACTION SHALL BE IN ACCORDANCE WITH MARTIN COUNTY UTILITIES CONSTRUCTION STANDARDS "TYPICAL TRENCH DETAIL" AND "FLEXIBLE PAVEMENT REPLACEMENT DETAIL". FLORIDA BEARING TESTS FOR THE STABILITY OF EXISTING SUBSOIL SHALL BE TAKEN AT INTERVALS OF NOT MORE THAN 500 FEET, AND CLOSER AS MIGHT BE NECESSARY IN THE EVENT OF VARIATIONS IN THE STRATA. A CERTIFIED COPY OF THE TESTS SHALL BE PROVIDED TO THE DEPARTMENT AND THE FLORIDA DEPARTMENT OF TRANSPORTATION OR MARTIN COUNTY ENGINEERING DEPARTMENT DEPENDING ON JURISDICTION. CONTRACTORS BID PRICE SHALL INCLUDE PAYMENT FOR ALL TESTS CONDUCTED BY AN INDEPENDENT TESTING LAB.
- 9. ANY LANDSCAPING DISTURBED, UNLESS OTHERWISE SHOWN ON THE PLANS, SHALL BE REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE DEPARTMENT AT THE CONTRACTORS EXPENSE.
- 10. ANY WALK, CURB AND GUTTER OR PAVEMENT DISTURBED, UNLESS OTHERWISE SHOWN ON PLANS, SHALL BE REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE. ALL CONSTRUCTION SHALL MEET ADA REQUIREMENTS.
- 11. ALL SOD IS TO BE PLACED FOR THE FULL WIDTH DISTURBED AT THE PER LINEAR FOOT UNIT PRICE FOR SOD. SOD SHALL BE REPLACED TO MATCH EXISTING KIND UNLESS OTHERWISE SHOWN ON PLANS.
- 12. CONTRACTOR SHALL PROVIDE PROPER BENDS TO MAINTAIN REQUIRED DEPTH AND ALIGNMENT OF PIPE. COST OF BENDS NOT DESIGNATED ON PLANS SHALL BE INCLUDED WITH THE UNIT PRICE FOR PIPE.
- 13. ANY TREES AND/OR SCRUB OR OTHER VEGETATION NOT TO BE REPLACED SHALL BE REMOVED FROM THE PROJECT AT THE CONTRACTOR'S EXPENSE.
- 14. ALL RUBBLE AND UNSUITABLE MATERIAL MUST BE REMOVED FROM THE PROJECT AND DISPOSED OF PROPERLY BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
- 15. MAILBOXES MUST BE CAPABLE OF RECEIVING MAIL AT ALL TIMES.
- 16. DEFLECT PIPE AS NECESSARY TO OBTAIN THE REQUIRED ALIGNMENT. USE APPROPRIATE FITTINGS WHEN DEFLECTION EXCEEDS 75% OF MANUFACTURER'S RECOMMENDED MAXIMUM DEFLECTION.
- 17. ALL FITTINGS SHALL BE MECHANICALLY RESTRAINED. REFER TO MARTIN COUNTY UTILITIES DEPARTMENT MINIMUM DESIGN & CONSTRUCTION STANDARDS (LATEST EDITION, JUNE 2002).
- 18. ALL CONSTRUCTION DEWATERING (WELL POINTS, SUMPS, ETC.) WILL REQUIRE A DEWATERING PERMIT FROM SOUTH FLORIDA WATER MANAGEMENT DISTRICT. THIS SHALL BE OBTAINED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE PRIOR TO BEGINNING OF CONSTRUCTION.
- 19. THE "TRENCH SAFETY ACT" SHALL BE INCORPORATED INTO THIS CONTRACT AS ENACTED BY THE LEGISLATURE OF THE STATE OF FLORIDA TO BE IN EFFECT AS OF OCTOBER 1, 1990.

### GENERAL NOTES (Cont.):

23. MAXIMUM LENGTH OF WATER MAIN AND FORCE MAIN PRESSURE TEST SHALL BE 1500 FEET. WATER SOURCE FOR FLUSHING, FILLING AND PRESSURE TESTING THE WATER MAIN SHALL BE FROM A TREATED SOURCE APPROVED BY THE DEPARTMENT.

24. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION AND RESTORATION (IF DAMAGED) OF ALL EXISTING STRUCTURES WITHIN THE CONSTRUCTION LIMITS OF THE PROJECT, INCLUDING BUT NOT LIMITED TO WALLS, FENCES, POWER POLES, MAIL BOXES, DRAINAGE PIPES AND STRUCTURES, ETC..

25. THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING WATER SERVICES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL PROTECT THE EXISTING WATER SERVICES FROM DAMAGE AND REPAIR ANY BREAKS IMMEDIATELY.

26. "RECORD DRAWINGS" SHALL INCLUDE FURNISHING MARTIN COUNTY UTILITIES DEPARTMENT WITH ALL INFORMATION NECESSARY FOR A COMPLETE SET OF RECORD DRAWINGS AS STIPULATED IN THE MARTIN COUNTY UTILITIES DEPARTMENT MINIMUM DESIGN AND CONSTRUCTION STANDARDS (DATED NOVEMBER, 2004).

27. MECHANICALLY RESTRAIN THREE (3) FULL LENGTHS EACH SIDE OF ALL BENDS AND AS INSTRUCTED IN MARTIN COUNTY UTILITIES DEPARTMENT SPECIFICATIONS. MECHANICAL RESTRAINTS SHALL BE EITHER MEG-A-LUG, TYLER OR UNIFLANGE. THE CONTRACTORS BID PRICE FOR PIPE, GATE VALVES AND FITTINGS SHALL INCLUDE MECHANICAL RESTRAINT.

28. THE CONTRACTOR SHALL PROTECT EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL SUPPORT UTILITIES AND SHORE TRENCH AS REQUIRED TO PROTECT AND MAINTAIN EXISTING UTILITIES. THE CONTRACTOR SHALL NOTIFY EACH UTILITY PRIOR TO ATTEMPTING TO SUPPORT THEIR FACILITIES. IF THE UTILITY REQUIRES THAT ONLY THEIR CREWS SHALL BE ALLOWED TO SUPPORT THEIR FACILITIES, THEN IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO COORDINATE WORK AND PAY THE UTILITY FOR THEIR EXPENSES IF REQUIRED. ALL COSTS FOR THIS WORK SHALL BE AT THE CONTRACTORS EXPENSE AND INCLUDED IN THE CONTRACTORS BID PRICE.

- 29. ALL PRESSURE TESTS SHALL BE IN ACCORDANCE WITH AWWA STANDARDS
- 30. AIR RELEASE VALVE VAULT COVERS SHALL BE CONSTRUCTED PER DETAIL "STANDARD ALUMINUM COVER" AS SHOWN IN THE DEPARTMENTS MINIMUM DESIGN AND CONSTRUCTION STANDARDS. MINIMUM COVER SIZE TO MATCH VAULT INSIDE WALL DIMENSIONS.
- 31. ALL WATER SERVICES SHALL BE MECHANICALLY PUSHED UNDER PAVEMENT.

32. VALVE STEM RISER SHALL BE REQUIRED WHERE OPERATING NUT DEPTH EXCEEDS 4 FEET. THE RISER SHALL BE BOLTED TO THE VALVE NUT. METHOD AND MATERIALS SHALL BE APPROVED BY THE DEPARTMENT. COST FOR THIS WORK SHALL BE INCLUDED IN THE CONTRACTORS BID UNIT PRICE FOR GATE VALVES.

33. THE CONTRACTOR SHALL CLEAN MAINS USING APPROVED POLYURETHANE PIG(S). TEMPORARY CLEANING STATIONS SHALL BE CONSTRUCTED BY THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE A CLEANING PLAN SHOWING METHOD OF FILLING AND CLEANING MAINS PRIOR TO START OF CONSTRUCTION. THE CLEANING PLAN SHALL BE APPROVED BY THE DEPARTMENT PRIOR TO CONSTRUCTION. ALL COSTS FOR FILLING AND CLEANING SHALL BE AT THE CONTRACTORS EXPENSE.

34. A FLORIDA DEPARTMENT OF TRANSPORTATION PERMIT IS REQUIRED FOR ALL WORK WITHIN THE STATE RIGHT-OF-WAY. A COPY OF THIS PERMIT MUST BE MAINTAINED ON THE PROJECT SITE AT ALL TIMES DURING CONSTRUCTION.

35. THE CONTRACTOR SHALL INSTALL TESTING POINTS FOR PRESSURE TESTING MAINS. THE CONTRACTOR SHALL INSTALL AND REMOVE AND PLUG CORP. STOPS PER MARTIN COUNTY UTILITIES STANDARDS "SAMPLE POINT DETAIL". THE LOCATION OF TEST POINTS SHALL BE APPROVED BY THE DEPARTMENT.

36. WATER MAIN DISINFECTION SHALL BE IN ACCORDANCE WITH CURRENT AWWA, BULLETIN C-651.

37. WATER MAINS AND APPURTENANCES SHALL BE IN ACCORDANCE WITH CURRENT AWWA AND NSF STANDARDS.

38. MINIMUM COVER TO FINISHED GRADE OVER WATER MAINS SHALL BE 30 INCHES UP TO 8" DIAMETER; 10" OR LARGER SHALL HAVE 36" COVER OR GREATER TO PROVIDE A MINIMUM 18" COVER OVER OPERATING NUT OF GATE VALVES.

39. ALL MAINS SHALL BE TESTED FOR LEAKAGE. WATER SHALL BE SUPPLIED TO THE MAIN AND PUMPED TO THE REQUIRED 150 PSI PRESSURE. THE MAIN TESTED SHALL EITHER BE ISOLATED FROM PRESENTLY POTABLE LINES OR PROTECTED FROM LEAKAGE BY A DOUBLE VALVE ARRANGEMENT.

40. NEWLY CONSTRUCTED FIRE HYDRANTS THROUGHOUT THE PROJECT SHALL HAVE A RED "OUT OF SERVICE" DISK (JOSEPH G. POLLARD CO. OR EQUAL) ATTACHED TO 4" PUMPER NOZZLE CAP. DISK TO BE REMOVED AFTER WATER SYSTEM HAS BEEN APPROVED FOR SERVICE BY THE DEPARTMENT.

THE DEPARTMENT SHALL BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE OF ANY TESTING PROCEDURES. AFTER FLUSHING IS COMPLETED, LINE PRESSURE SHALL BE APPLIED TO THE WATER SYSTEM TO DETERMINE IF ANY MAJOR DEFECTS ARE PRESENT. THE COMPLETE WATER SYSTEM SHALL THEN BE TESTED AT A PRESSURE OF 150 PSI FOR A PERIOD OF NOT LESS THAN TWO HOURS. THE DEPARTMENT MAY, AT ITS DISCRETION, INCREASE THE PERIOD TO FOUR HOURS. MAXIMUM LENGTH OF LINE TO BE TESTED AT ONE TIME SHALL NOT EXCEED 1500 LINEAR FEET. AN OIL FILLED PRESSURE GAUGE UP TO 200 PSI AT 2 POUND INCREMENTS SHALL BE USED FOR ALL PRESSURE TESTS. NO VISIBLE MOVEMENT OF THE SYSTEM SHALL OCCUR AND LEAKAGE SHALL NOT EXCEED:

L=ND√P

WHERE:

L= LEAKAGE IN GALLONS
N= NUMBER OF JOINTS IN TEST SECTION
P= TEST PRESSURE IN PSI.
D= DIAMETER OF PIPE IN INCHES

NOTE: MARTIN COUNTY UTILITIES DEPARTMENT'S MINIMUM DESIGN AND CONSTRUCTION STANDARDS (LATEST EDITION AUGUST, 2016) ARE TO BE ADHERED TO AND WILL BE ENFORCED TO AT LEAST THESE MINIMUM STANDARDS.

MARTIN COUNTY UTLITIES 3473 SE WILLOUGHBY BLVD, STUART, FL 34994 PHONE: (772) 221-1434

#### STANDARD WATER/SEWER SEPARATION STATEMENT

62-555.314 LOCATION OF PUBLIC WATER SYSTEM MAINS. FOR THE PURPOSE OF THIS SECTION, THE PHRASE WATER MAINS SHALL MEAN MAINS, INCLUDING TREATMENT PLANT PROCESS PIPING, CONVEYING EITHER RAW, PARTIALLY TREATED, OR FINISHED DRINKING WATER; FIRE HYDRANT LEADS; AND SERVICE LINES THAT ARE UNDER THE CONTROL OF A PUBLIC WATER SYSTEM AND THAT HAVE AN INSIDE DIAMETER OF THREE INCHES OR GREATER.

(I) HORIZONTAL SEPARATION BETWEEN UNDERGROUND WATER MAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCE MAINS, RECLAIMED WATER PIPELINES, AND ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS.

(A) NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND

THE OUTSIDE OF ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610,

F.A.C.

(B) NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET, AND PREFERABLY TEN FEET, BETWEEN THE

(C) NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY- OR PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY-TYPE SANITARY SEWERS SHALL BE REDUCED TO THREE FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER.

(D) NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST TEN FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND ALL PARTS OF ANY EXISTING OR PROPOSED ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM AS DEFINED IN SECTION 381.0065(2), F.S., AND RULE 64E-6.002, F.A.C.

(2) VERTICAL SEPARATION BETWEEN UNDERGROUND WATER MAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCE MAINS, AND RECLAIMED WATER PIPELINES.

(A) NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED GRAVITY- OR VACUUM-TYPE SANITARY SEWER OR STORM SEWER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX INCHES, AND PREFERABLY I2 INCHES, ABOVE OR AT LEAST I2 INCHES BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.

(B) NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.

(C) AT THE UTILITY CROSSINGS DESCRIBED IN PARAGRAPHS (A) AND (B) ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE. ALTERNATIVELY, AT SUCH CROSSINGS, THE PIPES SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORMWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C., AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY- OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.

(3) SEPARATION BETWEEN WATER MAINS AND SANITARY OR STORM SEWER MANHOLES. (

A) NO WATER MAIN SHALL PASS THROUGH, OR COME INTO CONTACT WITH, ANY PART OF A SANITARY SEWER MANHOLE.

OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER.

(B) EFFECTIVE AUGUST 28, 2003, WATER MAINS SHALL NOT BE CONSTRUCTED OR ALTERED TO PASS THROUGH, OR COME INTO CONTACT WITH, ANY PART OF A STORM SEWER MANHOLE OR INLET STRUCTURE. WHERE IT IS NOT TECHNICALLY FEASIBLE OR ECONOMICALLY SENSIBLE TO COMPLY WITH THIS REQUIREMENT (I.E., WHERE THERE IS A CONFLICT IN THE ROUTING OF A WATER MAIN AND A STORM SEWER AND WHERE ALTERNATIVE ROUTING OF THE WATER MAIN OR THE STORM SEWER IS NOT TECHNICALLY FEASIBLE OR IS NOT ECONOMICALLY SENSIBLE), THE DEPARTMENT SHALL ALLOW EXCEPTIONS TO THIS REQUIREMENT (I.E., THE DEPARTMENT SHALL ALLOW CONSTRUCTION OF CONFLICT MANHOLES), BUT SUPPLIERS OF WATER OR PERSONS PROPOSING TO CONSTRUCT CONFLICT MANHOLES MUST FIRST OBTAIN A SPECIFIC PERMIT FROM THE DEPARTMENT IN ACCORDANCE WITH PART V OF THIS CHAPTER AND MUST PROVIDE IN THE PRELIMINARY DESIGN REPORT OR DRAWINGS, SPECIFICATIONS, AND DESIGN DATA ACCOMPANYING THEIR PERMIT APPLICATION THE FOLLOWING INFORMATION:

I. TECHNICAL OR ECONOMIC JUSTIFICATION FOR EACH CONFLICT MANHOLE.

2. A STATEMENT IDENTIFYING THE PARTY RESPONSIBLE FOR MAINTAINING EACH CONFLICT MANHOLE.

3. ASSURANCE OF COMPLIANCE WITH THE DESIGN AND CONSTRUCTION REQUIREMENTS IN SUB-SUBPARAGRAPHS A. THROUGH D. BELOW.

A. EACH WATER MAIN PASSING THROUGH A CONFLICT MANHOLE SHALL HAVE A FLEXIBLE, WATERTIGHT JOINT ON EACH SIDE OF THE MANHOLE TO ACCOMMODATE DIFFERENTIAL SETTLING BETWEEN THE MAIN AND THE MANHOLE.

B. WITHIN EACH CONFLICT MANHOLE, THE WATER MAIN PASSING THROUGH THE MANHOLE SHALL BE INSTALLED IN A WATERTIGHT CASING PIPE HAVING HIGH IMPACT STRENGTH (I.E., HAVING AN IMPACT STRENGTH AT LEAST EQUAL TO THAT OF 0.25-INCH-THICK DUCTILE IRON PIPE).

C. EACH CONFLICT MANHOLE SHALL HAVE AN ACCESS OPENING, AND SHALL BE SIZED, TO ALLOW FOR EASY CLEANING OF THE MANHOLE.

D. GRATINGS SHALL BE INSTALLED AT ALL STORM SEWER INLETS UPSTREAM OF EACH CONFLICT MANHOLE TO PREVENT LARGE OBJECTS FROM ENTERING THE MANHOLE.

(4) SEPARATION BETWEEN FIRE HYDRANT DRAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCE MAINS, RECLAIMED WATER PIPELINES, AND ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS. NEW OR RELOCATED FIRE HYDRANTS WITH UNDERGROUND DRAINS SHALL BE LOCATED SO THAT THE DRAINS ARE AT LEAST THREE FEET FROM ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.; AT LEAST THREE FEET, AND PREFERABLY TEN FEET, FROM ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER; AT LEAST SIX FEET, AND PREFERABLY TEN FEET, FROM ANY EXISTING OR PROPOSED GRAVITY-OR PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.; AND AT LEAST TEN FEET FROM ANY EXISTING OR PROPOSED ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM AS DEFINED IN SECTION 381.0065(2), F.S., AND RULE 64E-6.002, F.A.C. (5) EXCEPTIONS. WHERE IT IS NOT TECHNICALLY FEASIBLE OR ECONOMICALLY SENSIBLE TO COMPLY WITH THE REQUIREMENTS IN SUBSECTION (I) OR (2) ABOVE, THE DEPARTMENT SHALL ALLOW EXCEPTIONS TO THESE REQUIREMENTS IF SUPPLIERS OF WATER OR CONSTRUCTION PERMIT APPLICANTS PROVIDE TECHNICAL OR ECONOMIC JUSTIFICATION FOR EACH EXCEPTION AND PROVIDE ALTERNATIVE CONSTRUCTION FEATURES THAT AFFORD A SIMILAR LEVEL OF RELIABILITY AND PUBLIC HEALTH PROTECTION. ACCEPTABLE ALTERNATIVE CONSTRUCTION FEATURES INCLUDE THE FOLLOWING:

(A) WHERE AN UNDERGROUND WATER MAIN IS BEING LAID LESS THAN THE REQUIRED MINIMUM HORIZONTAL DISTANCE FROM ANOTHER PIPELINE AND WHERE AN UNDERGROUND WATER MAIN IS CROSSING ANOTHER PIPELINE AND JOINTS IN THE WATER MAIN ARE BEING LOCATED LESS THAN THE REQUIRED MINIMUM DISTANCE FROM JOINTS IN THE OTHER PIPELINE: I. USE OF PRESSURE-RATED PIPE CONFORMING TO THE AMERICAN WATER WORKS ASSOCIATION STANDARDS INCORPORATED INTO RULE 62-555.330, F.A.C., FOR THE OTHER PIPELINE IF IT IS A GRAVITY- OR VACUUM-TYPE PIPELINE; 2. USE OF WELDED, FUSED, OR OTHERWISE RESTRAINED JOINTS FOR EITHER THE WATER MAIN OR THE OTHER PIPELINE; OR 3. USE OF WATERTIGHT CASING PIPE OR CONCRETE ENCASEMENT AT LEAST FOUR INCHES THICK FOR EITHER THE WATER MAIN OR THE OTHER PIPELINE.

(B) WHERE AN UNDERGROUND WATER MAIN IS BEING LAID LESS THAN THREE FEET HORIZONTALLY FROM ANOTHER PIPELINE AND WHERE AN UNDERGROUND WATER MAIN IS CROSSING ANOTHER PIPELINE AND IS BEING LAID LESS THAN THE REQUIRED MINIMUM VERTICAL DISTANCE FROM THE OTHER PIPELINE: I. USE OF PIPE, OR CASING PIPE, HAVING HIGH IMPACT STRENGTH (I.E., HAVING AN IMPACT STRENGTH AT LEAST EQUAL TO THAT OF 0.25-INCH-THICK DUCTILE IRON PIPE) OR CONCRETE ENCASEMENT AT LEAST FOUR INCHES THICK FOR THE WATER MAIN; AND 2. USE OF PIPE, OR CASING PIPE, HAVING HIGH IMPACT STRENGTH (I.E., HAVING AN IMPACT STRENGTH AT LEAST EQUAL TO THAT OF 0.25-INCH-THICK DUCTILE IRON PIPE) OR CONCRETE ENCASEMENT AT LEAST FOUR INCHES THICK FOR THE OTHER PIPELINE IF IT IS NEW AND IS CONVEYING WASTEWATER OR RECLAIMED WATER.

RONMENT & INFRASTRUCTURE, INC 5015 S Florida Avenue, Suite 301 Lakeland, FL 33813

MANATEE POCKET
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NOTE:

1. ALL ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).