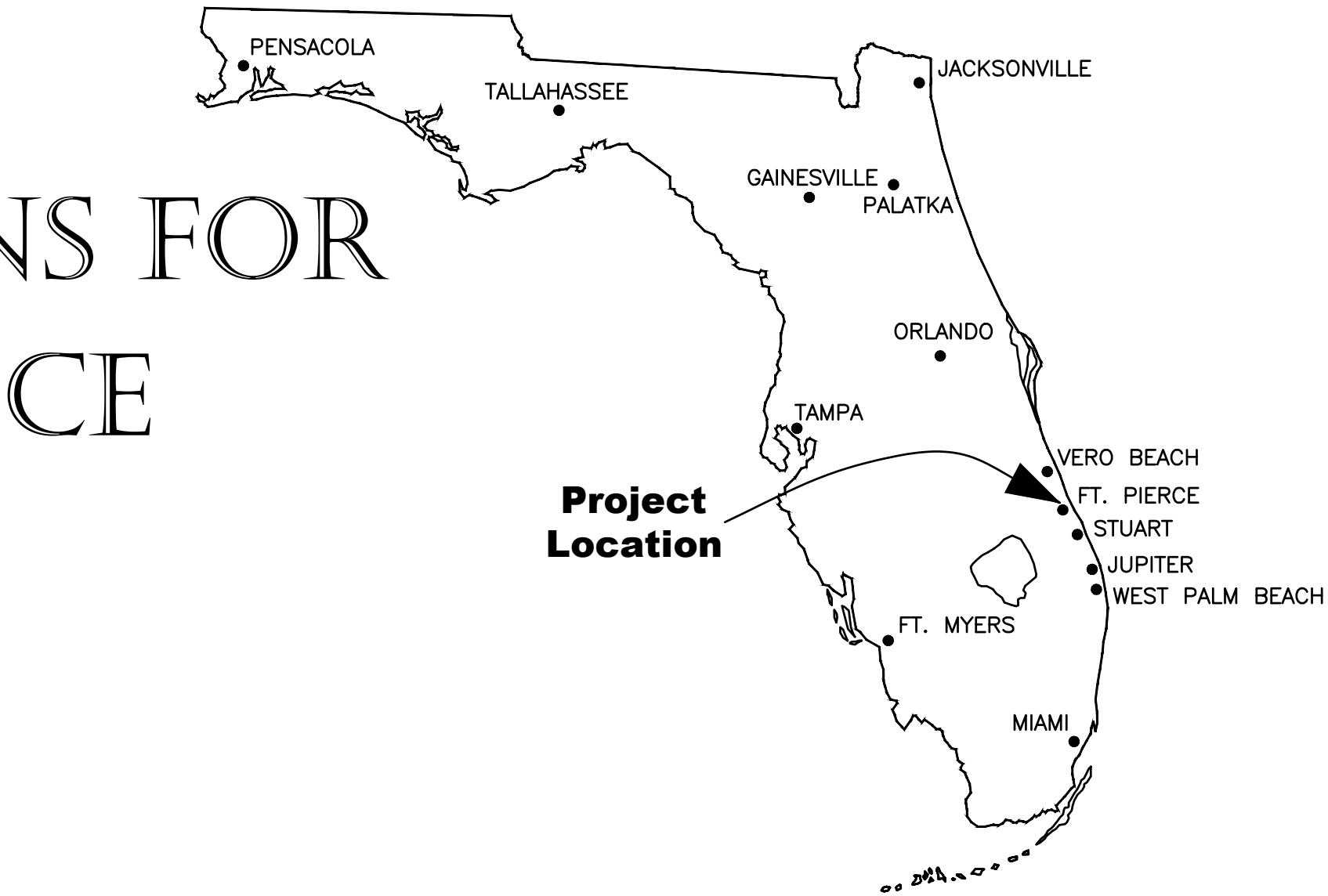


CONSTRUCTION PLANS & SPECIFICATIONS FOR
3700 OKEECHOBEE ROAD, FORT PIERCE
ST. LUCIE COUNTY, FLORIDA
SECTIONS 17, TOWNSHIP 35S, RANGE 40E



THESE PLANS HAVE BEEN PREPARED IN ACCORDANCE WITH AND ARE GOVERNED BY THE STATE OF FLORIDA, DEPARTMENT OF TRANSPORTATION, DESIGN STANDARDS, FY 2025–26.

GOVERNING SPECIFICATIONS:
FDOT STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION, FY 2025–26.

THE FLORIDA DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION, FY 2025–26.

THE MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION AND MAINTENANCE FOR STREETS AND HIGHWAYS (GREENBOOK), 2023.

THE FEDERAL HIGHWAY ADMINISTRATION (FHWA) MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.), 11TH EDITION, DECEMBER 2023.

AND THE CITY OF FORT PIERCE LAND DEVELOPMENT REGULATIONS, LATEST EDITION AND FORT PIERCE UTILITY AUTHORITY (FPUA).

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VICINITY MAP
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JUNE 2025

REV 2 - 02/02/26 - REVISED PER SLC DRC & MINOR SITE PLAN COMMENTS

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Drawing Name: S:\Shared_Folders\GEP_projects\2024\24-035-3700_Okeechobee\Design\24-035_General_Notes.dwg Layout Name: 2-2 Date: 6/27/2024 10:24 AM Plotted By: dan m - Giangrande Engineering & Planning

SUPPLEMENTAL CONDITIONS

SCOPE OF WORK: THE CONTRACTOR SHALL FURNISH ALL MATERIALS, LABOR, EQUIPMENT, TOOLS, SUPERVISION, TRANSPORTATION AND INCIDENTALS NECESSARY TO CONSTRUCT THE PAVING, DRAINAGE, UTILITIES AND ASSOCIATED IMPROVEMENTS, IN ACCORDANCE WITH THE PROVISIONS OF THESE SUPPLEMENTAL CONDITIONS, SPECIFICATIONS AND THE DRAWINGS, ENTITLED, "CONSTRUCTION PLANS & SPECIFICATIONS FOR "3700 OKEECHOBEE RD", PREPARED BY GIANGRANDE ENGINEERING AND PLANNING, LLC, 710 SE OCEAN BLVD., STUART, FLORIDA 34994, (772) 888-9076. IT IS THE OBJECTIVE OF THESE DOCUMENTS TO ASSURE THE TOTAL COMPLETION OF THE WORK REQUIRED TO PROVIDE PAVING, GRADING, AND DRAINAGE IMPROVEMENTS FOR THE "3700 OKEECHOBEE RD."

PERMITS AND LICENSES: CONSTRUCTION PERMITS FOR CERTAIN ELEMENTS OF THE PROJECT WORK ARE REQUIRED, AND THE DESIGN AND CONSTRUCTION REQUIREMENTS OF THE PROJECT REFLECT CONSTRAINTS AND CONDITIONS IMPOSED BY THESE PERMITS. THESE INCLUDE CONSTRUCTION PERMITS FROM THE SAINT LUCIE COUNTY, AND FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION.

THE CONTRACTOR SHALL PERFORM HIS WORK AND SHALL CONSTRUCT THE PROJECT IN ACCORDANCE WITH THE REQUIREMENTS OF THESE "DESIGN" PERMITS AND APPROVALS, COPIES OF WHICH ARE AVAILABLE FOR REVIEW AND USE FROM THE ENGINEER, UPON REQUEST. THE CONTRACTOR SHALL SECURE ALL WORK PERMITS, APPROVALS AND LICENSES REQUIRED TO PERFORM THE WORK, AND HE SHALL PERFORM THE WORK IN STRICT ACCORDANCE WITH THOSE PERMITS, APPROVALS AND LICENSES.

REFERENCE TO OTHER DOCUMENTS: FOR BREVITY, REFERENCE MAY BE MADE TO OTHER SPECIFICATIONS OR DOCUMENTS WHICH WILL BE USED TO SPECIFY OR CONTROL THE MATERIALS PLACED IN THE WORK, THE CONSTRUCTION METHODS TO BE USED, THE TOLERANCES THAT WILL BE ACCEPTABLE, AND CONTRACTUAL OR LEGAL OBLIGATIONS. THE SPECIFICATIONS OR DOCUMENTS SHALL INCLUDE:

- "STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT," THE LATEST EDITION, PREPARED BY THE ENGINEER'S JOINT CONTRACT DOCUMENTS COMMITTEE AND PUBLISHED BY THE NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS. REFERENCE SHALL BE MADE: "GENERAL CONDITIONS."
- "FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2023-2024," PUBLISHED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION. REFERENCE SHALL BE MADE: "FDOT SPECIFICATIONS."
- "STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION, 2023-2024" PUBLISHED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION. REFERENCE SHALL BE MADE "FDOT INDEX" OR "FDOT STANDARDS."
- "AMERICAN SOCIETY FOR TESTING AND MATERIALS SPECIFICATIONS", LATEST EDITION REFERENCE SHALL BE MADE: "ASTM."
- "ST LUCIE COUNTY MINIMUM CONSTRUCTION STANDARDS", LATEST EDITION. REFERENCE SHALL BE MADE AS "COUNTY CODE" OR "COUNTY STANDARDS" OR "COUNTY SPECIFICATIONS."
- "FORT PIERCE UTILITY AUTHORITY DESIGN AND CONSTRUCTION STANDARDS FOR WATER AND WASTEWATER SYSTEMS", LATEST EDITION. REFERENCE SHALL BE MADE AS "FPUA CODE" OR "FPUA STANDARDS" OR "FPUA SPECIFICATIONS".

BY REFERENCE, THE DOCUMENTS CITED ABOVE ARE MADE PART OF THESE SUPPLEMENTAL CONDITIONS AND SPECIFICATIONS. THE CONTRACTOR SHALL HAVE COPIES OF EACH IN HIS POSSESSION FOR USE THROUGHOUT THE BIDDING AND CONSTRUCTION OF THIS PROJECT WORK AND/OR BE FAMILIAR WITH THE APPLICABLE SECTIONS OF EACH DOCUMENT AND BE ABLE TO VERIFY THAT ALL MATERIALS AND CONSTRUCTION METHODS ARE CONFORMANCE WITH THESE DOCUMENTS AND SPECIFICATIONS.

ADDITIONALLY, THE WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL OTHER APPLICABLE LOCAL, REGIONAL, STATE AND FEDERAL LAWS, REGULATIONS AND CODES. ESPECIALLY OSHA STANDARD 29 CFR, SECTION 1926.650 SUBPART P, WHICH IS PART OF THE TRENCH SAFETY ACT AS PART OF LAWS OF FLORIDA, CHAPTER 90-96.

CONTRACT ISSUES

GENERAL CONDITIONS: UNLESS OTHERWISE STATED IN THESE SUPPLEMENTAL CONDITIONS, THE PROVISIONS OF THE STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT," REFERENCED ABOVE, SHALL BE USED TO GOVERN ALL ISSUES ADDRESSED IN THOSE GENERAL CONDITIONS FOR THIS PROJECT.

OWNER-ENGINEER RELATIONSHIP: ANY AGREEMENT BETWEEN OWNER AND ENGINEER SHALL NOT BE CONSTRUED TO PROVIDE ANY OBLIGATION FROM THE ENGINEER TO ANY THIRD PARTIES INCLUDING, BUT NOT LIMITED TO, ARCHITECTS, OTHER ENGINEERS, ANY CONTRACTORS (GENERAL OR SUB), NOR TO ANY SUCCESSORS TO THE OWNER. THE RIGHTS UNDER ANY AGREEMENT BETWEEN OWNER AND ENGINEER INURE ONLY TO THOSE TWO PARTIES.

ERRORS OR OMISSIONS IN THE DRAWINGS OR SPECIFICATIONS: PRIOR TO INITIATION OF THE WORK, THE CONTRACTOR SHALL CHECK DIMENSIONS, GRADES, ELEVATIONS AND THE SUMMARY OF ESTIMATED QUANTITIES SHOWN ON THE DRAWINGS TO ASSURE HIMSELF THAT THEY ARE CORRECT AND THAT THE WORK CAN BE ACCOMPLISHED AS INTENDED. THE CONTRACTOR SHALL TAKE NO ADVANTAGE OF ANY APPARENT ERROR OR OMISSION WHICH HE MIGHT DISCOVER, BUT SHALL IMMEDIATELY NOTIFY THE ENGINEER OF SUCH DISCOVERY. WHO WILL THEN MAKE SUCH CORRECTIONS AND INTERPRETATIONS AS HE DEEMS NECESSARY FOR REFLECTING THE ACTUAL SPIRIT AND INTENT OF THE DRAWINGS AND SPECIFICATIONS.

BOUNDARY AND TOPOGRAPHIC SURVEY INFORMATION WAS PROVIDED BY COMPASS SURVEYING, (561) 640-4800.

HORIZONTAL AND VERTICAL CONTROL: THE CONTRACTOR SHALL CONSTRUCT THE REQUIRED IMPROVEMENTS IN THE LOCATIONS SHOWN ON THE DRAWINGS, AND SHALL USE AS HORIZONTAL CONTROL POINTS THE EXISTING PROPERTY CORNERS AS SHOWN ON THE PLAN SHEET. THE HORIZONTAL CONTROL POINTS WERE PROVIDED BY COMPASS SURVEYING, (561) 640-4800. AS VERTICAL CONTROL, BENCHMARKS SHALL BE PROVIDED AT THE SITE, FOR USE IN ESTABLISHING THE NECESSARY ELEVATIONS AND GRADES AT THE LOCATIONS SHOWN ON THE PLANS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL CONTROL POINTS AND TO RE-ESTABLISH SAID POINTS AS NECESSARY. REMAINING HORIZONTAL AND VERTICAL CONTROL WORK SHALL BE PERFORMED BY THE CONTRACTOR IN ACCORDANCE WITH THE PLANS AND DETAILS.

WRITTEN DIMENSIONS ARE PROVIDED FOR CLARITY. WHERE WRITTEN AND SCALED DIMENSIONS CONFLICT, WRITTEN DIMENSIONS SHALL GOVERN.

COORDINATION OF WORK WITH OTHERS: THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE WORK OR IMPROVEMENTS OF OTHERS WITH REGARD TO NEW CONSTRUCTION, OR FOR THE NEED OF REMOVAL, RELOCATION OR ALTERATION OF EXISTING IRRIGATION AND DRAINAGE FACILITIES. THIS INCLUDES, BUT IS NOT LIMITED TO, THE OWNER, HIS CONTRACTORS, SUBCONTRACTORS OR AGENTS.

THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE PUBLIC AGENCIES PRIOR TO COMMENCING THE WORK WITHIN THEIR JURISDICTION.

SHOP DRAWINGS: ONE DIGITAL COPY OF SIGNED SHOP DRAWINGS AND SIGNED AND SEALED DESIGN DATA SHALL BE SUBMITTED PRIOR TO ORDERING MATERIALS. ALLOW 10 WORK DAYS TURNAROUND FOR SUBMITTALS.

STANDARDS FOR QUALITY AND WORKMANSHIP: ALL MATERIALS, EQUIPMENT AND SUPPLIES FURNISHED BY THE CONTRACTOR FOR PERMANENT INCORPORATION IN THE WORK SHALL BE NEW AND OF THE QUALITY STANDARDS SPECIFIED. WORKMANSHIP SHALL BE FIRST-CLASS AND THE FINISHED PRODUCT EQUAL TO THE BEST ACCEPTED STANDARDS OF THE TRADE FOR THE CATEGORY OF WORK PERFORMED.

TEMPORARY UTILITIES: ALL ARRANGEMENTS AND COSTS FOR TEMPORARY POWER, WATER AND WASTEWATER FACILITIES DURING CONSTRUCTION SHALL BE RESPONSIBILITY OF THE CONTRACTOR.

OBSERVING THE WORK: THE PROGRESS AND QUALITY OF THE WORK WILL BE OBSERVED BY THE OWNER'S ENGINEER OR ENGINEER'S APPOINTED EMPLOYEE. NO OBSERVER IS AUTHORIZED TO CHANGE ANY PROVISIONS OF THE SPECIFICATIONS WITHOUT WRITTEN AUTHORIZATION OF THE OWNER'S ENGINEER, NOR SHALL THE PRESENCE NOR THE ABSENCE OF AN OBSERVER RELIEVE THE CONTRACTOR FROM ANY REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS.

THE CONTRACTOR SHALL GIVE THE ENGINEER A MINIMUM OF 48 HOURS NOTICE PRIOR TO REQUIRED INSPECTIONS, AND SHALL SUPPLY ALL EQUIPMENT NECESSARY TO PROPERLY TEST AND INSPECT THE COMPLETED WORK.

IN ADDITION TO THE REQUIREMENTS PREVIOUSLY REFERENCED, THE FOLLOWING MINIMUM CONSTRUCTION CONTROL CHECKPOINTS SHALL BE ADHERED TO, AND THE CONTRACTOR SHALL NOTIFY THE OWNERS REPRESENTATIVE FOR OBSERVATION:

- PRIOR TO ANY DEVIATION FROM THE DRAWINGS.
- PRIOR TO ANY BACKFILLING TRENCHES CONTAINING HYDRAULIC CONDUITS, SO THAT JOINTING MAY BE INSPECTED;

- PRIOR TO TESTING OF ALL HYDRAULIC CONDUITS.
- PRIOR TO PLACEMENT OF ROADWAY BASE MATERIAL, CONCRETE OR ASPHALTIC CONCRETE.
- UPON COMPLETION OF CONSTRUCTION FOR FINAL INSPECTION WITH THE CONTRACTOR OR HIS REPRESENTATIVE.

TESTING: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE INDEPENDENT TESTING LABORATORY DESIGNATED BY THE OWNER. THE TESTING AND RETESTING NECESSARY TO ASSURE THAT THE WORK HAS BEEN PERFORMED IN STRICT COMPLIANCE WITH THE SPECIFICATIONS. COST FOR THE INITIAL TESTING SHALL BE BORNE BY THE OWNER. ANY RETESTS REQUIRED DUE TO FAILURE TO MEET THE MINIMUM REQUIREMENTS SHALL BE PERFORMED AT THE EXPENSE OF THE CONTRACTOR. THE NAME OF OWNER'S TESTING LABORATORY SHALL BE SUPPLIED AT THE PRECONSTRUCTION MEETING.

EXISTING UTILITIES AND STRUCTURES: EXISTING UTILITIES, STRUCTURES AND FACILITIES SHOWN ON THE DRAWINGS WERE LOCATED AS ACCURATELY AS POSSIBLE FROM THE RECORDS EXAMINED. NO GUARANTEE IS MADE THAT ALL EXISTING FACILITIES ARE SHOWN OR THAT THOSE SHOWN ARE ENTIRELY ACCURATE. THE CONTRACTOR SHALL ASSURE HIMSELF OF THE ACTUAL LOCATION OF THE UTILITIES, STRUCTURES OR FACILITIES PRIOR TO PERFORMANCE OF ANY WORK IN THE VICINITY. THE UTILITY COMPANIES OR UTILITY AGENCIES WILL CO-OPERATE WITH THE CONTRACTOR IN LOCATING UNDERGROUND UTILITIES THAT MAY BE SUBJECT TO DAMAGE OR INTERRUPTION OF SERVICES DURING THE CONTRACTOR'S OPERATIONS. PRIOR TO START OF THE WORK, THE CONTRACTOR SHALL REQUEST THAT EACH UTILITY AGENCY ADVISE HIM OF THE LOCATION OF THEIR FACILITIES IN THE VICINITY. THE OWNER WILL ASSUME NO LIABILITY FOR DAMAGES SUSTAINED OR COSTS INCURRED BECAUSE OF THE CONTRACTOR'S OPERATION IN THE VICINITY OF EXISTING UTILITIES OR STRUCTURES, OR TO THE TEMPORARY BRACING AND SHORING OF SAME. IN THE EVENT THAT IT IS NECESSARY TO SHORE, BRACE OR SWING A UTILITY, THE UTILITY COMPANY OR DEPARTMENT AFFECTED SHALL BE CONTACTED AND THEIR PERMISSION SECURED AS TO THE METHOD USED FOR ANY SUCH WORK.

THE CONTRACTOR IS TO USE CAUTION WHEN WORKING IN OR AROUND AREAS OF OVERHEAD TRANSMISSION LINES AND UNDERGROUND UTILITIES.

THE CONTRACTOR SHALL NOTIFY UTILITY OWNER THROUGH SUNSHINE STATE ONE CALL OF FLORIDA (800-432-4770) AND UTILITY OWNERS LISTED BELOW AT LEAST TWO BUSINESS DAYS (OR 10 DAYS IF ON THE JOB SITE).

RESTORATION OF DAMAGED STRUCTURES OR UTILITIES: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR, REBUILD OR RESTORE TO ITS FORMER CONDITION, ANY AND ALL PORTIONS OF EXISTING UTILITIES, STRUCTURES, EQUIPMENT, APPURTENANCES OR FACILITIES. OTHER THAN THOSE TO BE PAID FOR UNDER THIS CONTRACT, WHICH MAY BE DISTURBED OR DAMAGED DUE TO THIS CONSTRUCTION OPERATION, AT NO COST TO THE OWNER.

FINAL CLEANUP: UPON COMPLETION OF THE WORK BUT BEFORE FINAL PAYMENT WILL BE MADE, THE CONTRACTOR SHALL CLEAR AND REMOVE FROM THE PROJECT AREA, ALL FALSE WORK, EQUIPMENT, SURPLUS AND DISCARDED MATERIALS, RUBBISH AND TEMPORARY STRUCTURES WHICH RESULT FROM THE WORK UNDER THIS AGREEMENT, AND SHALL RESTORE IN AN ACCEPTABLE MANNER ALL PROPERTY WHICH HAS BEEN DAMAGED DURING THE EXECUTION OF THE WORK.

TECHNICAL SPECIFICATIONS

MATERIALS, CONSTRUCTION METHODS, TESTING AND TOLERANCES FOR ALL WORK SHALL BE IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS, AND WITH THE SPECIFICATIONS REFERENCED UNDER THE "SUPPLEMENTAL CONDITIONS," IN THE EVENT OF CONFLICT, THE MORE STRINGENT PROVISION SHALL APPLY.

- MOBILIZATION/DEMOLITION:** THE WORK SPECIFIED IN THIS SECTION CONSISTS OF THE PREPARATORY WORK AND OPERATIONS IN MOBILIZING FOR BEGINNING WORK ON THE PROJECT, INCLUDING, BUT NOT LIMITED TO, THOSE OPERATIONS NECESSARY FOR THE MOVEMENT OF PERSONNEL, EQUIPMENT, SUPPLIES, AND INCIDENTALS TO THE PROJECT SITE, AND FOR THE ESTABLISHMENT OF TEMPORARY OFFICES, BUILDINGS, SAFETY EQUIPMENT AND FIRST AID SUPPLIES, SANITARY AND OTHER FACILITIES, AS REQUIRED BY THESE SPECIFICATIONS, THE SPECIAL PROVISIONS, AND STATE AND LOCAL LAWS AND REGULATIONS. ALL COSTS FOR BONDS, PERMITS AND ANY REQUIRED INSURANCE, AND ANY OTHER PRECONSTRUCTION EXPENSE NECESSARY FOR THE START OF THE WORK, AS WELL AS THE COST OF THE REMOVAL OF THE ABOVE ITEMS, SHALL ALSO BE INCLUDED IN THIS SECTION.
- CONSTRUCTION SURVEYING:** THE CONTRACTOR SHALL CONSTRUCT THE REQUIRED IMPROVEMENTS AT THE LOCATIONS SHOWN ON THE PLANS, AS OUTLINED IN THE "SUPPLEMENTAL CONDITIONS." THE OWNER SHALL PROVIDE BASIC REFERENCE POINTS FOR HORIZONTAL CONTROL, AND BENCHMARKS IN THE VICINITY OF THE WORK. ALL OTHER CONSTRUCTION STAKING FOR BOTH HORIZONTAL AND VERTICAL CONTROL, NEEDED BY THE CONTRACTOR FOR CONTROL OF HIS WORK SHALL BE PERFORMED BY THE CONTRACTOR.
- DRAINAGE IMPROVEMENTS:** THE CONTRACTOR SHALL PROVIDE ALL THE MATERIALS AND LABOR NECESSARY TO COMPLETE THE PROJECT WORK FOR THE DRAINAGE IMPROVEMENTS AT THE LOCATION, SIZE AND TYPE SHOWN ON THE PLANS FOR THE FOLLOWING ITEMS IN ACCORDANCE WITH FDOT SPECIFICATIONS, INCLUDED IN THE UNIT COSTS FOR EACH ITEM SHALL BE THE COSTS ASSOCIATED WITH THE DESIGN AND CONSTRUCTION, BY THE CONTRACTOR, TO COMPLY WITH THE TRENCH SAFETY ACT, LAWS OF FLORIDA, CHAPTER 90-96.

BACKFILL AND COMPACTION OF TRENCHING FOR CULVERT INSTALLATION UNDER THIS SECTION SHALL BE IN ACCORDANCE WITH SECTION 125-8.3, FDOT SPECIFICATIONS. DENSITY TESTS SHALL BE PROVIDED AT THE FOLLOWING VERTICAL LOCATIONS:

- TWO TESTS* AT SPRINGLINE (ONE EACH SIDE OF THE PIPE);
- ONE TEST* AT ONE-FOOT ABOVE PIPE; AND
- ONE TEST* AT ONE-FOOT BELOW SUBGRADE OR FINISH GRADE.
- *DENSITY OF AT LEAST 100% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T -99, METHOD C.

THE MINIMUM NUMBER OF HORIZONTAL TEST LOCATIONS IS TWO PER CULVERT INSTALLATION, ONE PER 100 LINEAL FEET OF PIPE AND/OR ONE PER 20 FEET OF PAVEMENT CROSSING WHICHEVER IS GREATER. ADDITIONAL TESTS MAY BE REQUIRED AT MORE FREQUENT INTERVALS IF DEEMED NECESSARY BY THE ENGINEER.

- CULVERTS:** CONSTRUCTION METHODS FOR DRAINAGE CULVERTS SHALL CONFORM TO THE REQUIREMENTS OF SECTIONS 125 AND 430, FDOT SPECIFICATIONS. PIPE MATERIAL AS SPECIFIED ON THE PLANS.
 - DRAINAGE STRUCTURES:** PRE-CAST CONCRETE CATCH BASINS SHALL MEET THE REQUIREMENTS OF ASTM SPECIFICATIONS C-478 AND FOOT STANDARD SPECIFICATION 425. CONCRETE FOR PRE-CAST BASINS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS. SHOP DRAWINGS ARE REQUIRED.
 - FENCING AND GATES:** THE CONTRACTOR SHALL FURNISH AND CONSTRUCT CHAIN-LINK FENCE AND GATES IN ACCORDANCE WITH FPL CHAIN LINK FENCE SPECIFICATIONS AND DETAILS. MATERIALS AND LOCATION OF FENCE ARE INDICATED ON THE PLANS.
 - EROSION AND POLLUTION CONTROL:** THE CONTRACTOR SHALL TAKE SUFFICIENT PRECAUTIONS TO PREVENT WATER POLLUTION WITH AQUATIC WEEDS, FUELS, OILS, BITUMINOUS, CALCIUM CHLORIDE OR OTHER HARMFUL MATERIALS. ALSO, THEY 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 CONTRACTOR'S EXPENSE. DUE TO UNANTICIPATED CONDITIONS, THE ENGINEER MAY DIRECT THE USE OF CONTROL FEATURES OR METHODS OTHER THAN THOSE INCLUDED IN THE ORIGINAL CONTRACT. IN SUCH EVENT THIS ADDITIONAL WORK WILL BE PAID FOR AS UNFORESEEABLE WORK.
- SEDIMENT BARRIERS SHALL BE PLACED PRIOR TO ANY WORK ON THE SITE. SEDIMENT BARRIERS SHALL BE PLACED AS DEPICTED AS SHOWN ON THE CONSTRUCTION PLANS.
 - WETLAND AND WETLAND BUFFER AREAS ARE TO REMAIN UNDISTURBED. VEHICLE AND CONSTRUCTION EQUIPMENT TRAFFIC IS PROHIBITED WITHIN THESE AREAS.
 - DAMAGED TURBIDITY CONTROLS SHALL BE REPAIRED PROMPTLY AND BEFORE ANY SUBSEQUENT RAINFALL.
 - TURBIDITY CONTROLS SHALL REMAIN IN PLACE AND MAINTAINED AND REMOVED ONLY AFTER UPLAND CONSTRUCTION AREAS HAVE BEEN STABILIZED AS APPROVED BY THE ENGINEER OF RECORD
 - CONTRACTOR SHALL COMPLY WITH NPDES AND EPA DISCHARGE ELIMINATION PERMIT, IN PARTICULAR SEDIMENT AND EROSION CONTROLS AND STORM WATER MANAGEMENT MEASURES SHALL BE STRICTLY FOLLOWED.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREPARATION AND IMPLEMENTATION OF THE NPDES AND RELATED STORM WATER PLAN FOR THE DURATION OF THE PROJECT. UPON COMPLETION THE CONTRACTOR SHALL REMOVE ALL TEMPORARY STORM WATER MANAGEMENT MEASURES AND SHALL DISPOSE OF THEM AS REQUIRED.

- DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASES FOR AT LEAST 21 DAYS SHALL BE STABILIZED WITH SEED & MULCH NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY IN THOSE AREAS. THE SEEDING SHALL FOLLOWING TYPICAL CONSTRUCTION PRACTICES TO INSURE A YEAR ROUND STABILIZED AREA.
- CONTRACTOR SHALL COMPLY WITH SPILL PREVENTION, CONTROL AND COUNTER MEASURES (SPEC) REQUIREMENTS PURSUANT TO EPA RULES AND REGULATIONS.
- ALL CONSTRUCTION WASTE MATERIAL, INCLUDING BUT NOT LIMITED TO THE EXISTING BARB WIRE FENCING AND POSTS, SHALL BE COLLECTED AND STORED IN A SECURED METAL DUMPSTER RENTED / LEASED FROM A LOCAL WASTE MANAGEMENT COMPANY. THE DUMPSTER SHALL MEET ALL LOCAL AND STATE SOLID WASTE MANAGEMENT REGULATIONS. ALL PERSONNEL SHALL BE INSTRUCTED REGARDING THE CORRECT PROCEDURES FOR WASTE DISPOSAL. NOTICES STATING THESE PRACTICES SHALL BE POSTED IN THE OFFICE TRAILER / CONSTRUCTION TRAILER AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.
- ALL SANITARY WASTE SHALL BE COLLECTED FROM THE PORTABLE UNITS AT A MINIMUM OF ONCE PER WEEK BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.
- TRUCKS / EQUIPMENT IMPORTING OR EXPORTING FILL SHALL COVER THEIR LOADS WITH A TARPAULIN TO AVOID UNNECESSARY GENERATION OF DUST.
- ALL HAZARDOUS WATER MATERIAL SHALL BE DISPOSED OF AS PER LOCAL / STATE REGULATIONS OR AS RECOMMENDED BY THE MANUFACTURER. SITE PERSONNEL SHALL BE INSTRUCTED IN THESE PRACTICES AND THE CONTRACTOR IS RESPONSIBLE TO FOLLOW THESE PRACTICES.
- DRIVEWAY ACCESS SHALL BE CONSTRUCTED PER FDOT INDEX 106 TO MINIMIZE THE VEHICLES TRACKED SEDIMENTS TRANSPORTED OFFSITE.
- THE GENERAL CONTRACTOR'S SITE SUPERINTENDENT SHALL SELECT INDIVIDUALS, TYPICALLY THREE, WHO WILL BE RESPONSIBLE FOR INSPECTIONS, MAINTENANCE AND REPAIR ACTIVITIES AND FILLING OUT OF INSPECTION REPORTS. PERSONNEL SELECTED SH ALL RECEIVE PROPER TRAINING, AT THE CONTRACTORS EXPENSE, PRIOR TO SITE CONSTRUCTION COMMENCEMENT.
- ALL EROSION AND SEDIMENTATION CONTROLS SHALL BE INSPECTED EVERY 7 DAYS OR WITHIN 24 HOURS OF A STORM OF 0.5 INCHES OR MORE IN RAINFALL. ALL CONTROLS MUST BE IN PROPER ORDER AS REQUIRED UNTIL SITE COMPLETION.
- SILT FENCE SHALL BE INSPECTED FOR TEARS, DEPTH OF SEDIMENT, AND TO INSURE THE FENCE IS SECURELY FASTENED TO THE POSTS AND ALSO THAT POSTS ARE FIRMLY IN PLACE. SEDIMENT SHALL BE REMOVED IF THE DEPTH OF SEDIMENT IS GREATER THAN ONE-THIRD THE HEIGHT OF THE SILT FENCE.
- THE INSPECTOR SHALL RECORD ANY DAMAGES OR DEFICIENCIES IN THE TURBIDITY CONTROLS IN THE REPORT FORM FOR THIS PURPOSE. A COPY OF ALL RECORDING AND REPORTS SHALL BE FORWARDED TO THE ENGINEER FOR REVIEW.

GENERAL SEQUENCE OF MAJOR EROSION AND POLLUTION CONTROL EVENTS:

- INSTALL EROSION CONTROL AT LOCATIONS SHOWN ON THE CONSTRUCTION PLANS.
- COMMENCE SITE CONSTRUCTION ACTIVITIES.
- AS PROPOSED DRAINAGE IS CONSTRUCTED, INSTALL SILT FENCE AND/OR TURBIDITY CONTROL MEASURES AT EACH.
- INSTALL TEMPORARY SEED AND MULCH IN AREAS WHERE CONSTRUCTION TEMPORARILY CEASES FOR AT LEAST 21 DAYS, NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITIES IN THAT AREA.
- INSTALL PERMANENT SEED/MULCH OR APPROVED STABILIZATION METHOD AND/OR PLANTING IN AREAS WHERE CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITIES.
- REMOVE ACCUMULATED SEDIMENT.
- REMOVED TEMPORARY POLLUTION PREVENTION MEASURES AFTER ALL CONSTRUCTION ON SITE HAS BEEN COMPLETED AND DISPOSED OF MATERIALS ACCORDING TO APPLICABLE FDEP REGULATIONS AND/OR LOCAL GOVERNMENTAL CODES, ETC.
- RECORD DRAWINGS:** AFTER COMPLETION OF THE CONTRACT WORK, BUT PRIOR TO SUBMITTAL OF THE REQUEST FOR FINAL PAYMENT, THE CONTRACTOR SHALL PROVIDE FINAL RECORD DRAWINGS TO THE OWNER OF THE IMPROVEMENTS. THE RECORD DRAWINGS SHALL ALSO BE SUBMITTED DIGITALLY IN AUTOCAD / DWG FORMAT. THE RECORD DRAWINGS SHALL BE PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF ST. LUCIE COUNTY, AND FDEP, AND SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:

THE FINAL LOCATION, BY REFERENCE TO AT LEAST TWO COMPLETED VISIBLE IMPROVEMENTS OR OTHER PERMANENT POINTS, OF ALL PAVING AND DRAINAGE ELEMENTS, AND SHALL INCLUDE ELEVATIONS OF PERTINENT POINTS IN THE PAVEMENT AND DRAINAGE IMPROVEMENTS, ALL REVISIONS TO THE ORIGINAL PLANS, VERIFICATION OF ALL DESIGN DIMENSIONS, ELEVATIONS, PIPE SLOPES, PIPE LENGTHS, INLETS AND CONTROL STRUCTURES LOCATION AND ELEVATIONS AND ALL OTHER INFORMATION NECESSARY TO HORIZONTALLY AND VERTICALLY LOCATE AND OPERATE THE IMPROVEMENTS CONSTRUCTED UNDER THIS CONTRACT.

DRAWINGS SHALL INCLUDE:

- INDICATION OF ANY CHANGES OR VERIFICATIONS GET MARKED
- INDICATION OF ALL "PROPOSED" OR "CONSTRUCTS"
- CHANGES TO LOCATIONS OF PIPE, VALVES, FITTINGS OR MANHOLES, ETC.
- DETAIL BOX OF ANY SUBSTANTIAL CHANGES
- ALL ELEVATIONS FOR MANHOLES AND LIFT STATIONS
- ALL GRADES AND FOOTAGE ON SANITARY RUNS

THE CONTRACTOR SHALL PROVIDE RECORD DRAWING PRINTS AND ONE COPY OF CERTIFIED FIELD NOTES TO THE OWNER THAT ARE SIGNED AND SEALED BY A FLORIDA REGISTERED LAND SURVEYOR. PAYMENT FOR THE RECORD DRAWINGS SHALL BE ON A LUMP SUM BASIS.

DEWATERING:

CONSTRUCTION DEWATERING MAY REQUIRE A PERMIT FROM SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD). IF DEWATERING IS TO TAKE PLACE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A DEWATERING PERMIT FOR HIS WORK.

GENERAL NOTES

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leo@gep.llc

LEO GIANGRANDE, P.E.

PROJECT #: 24-035

G-2

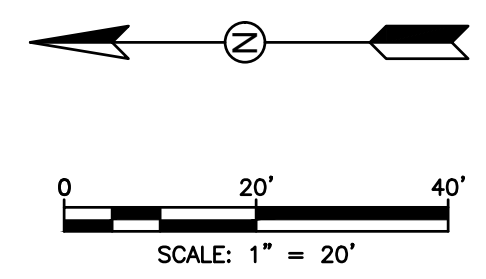
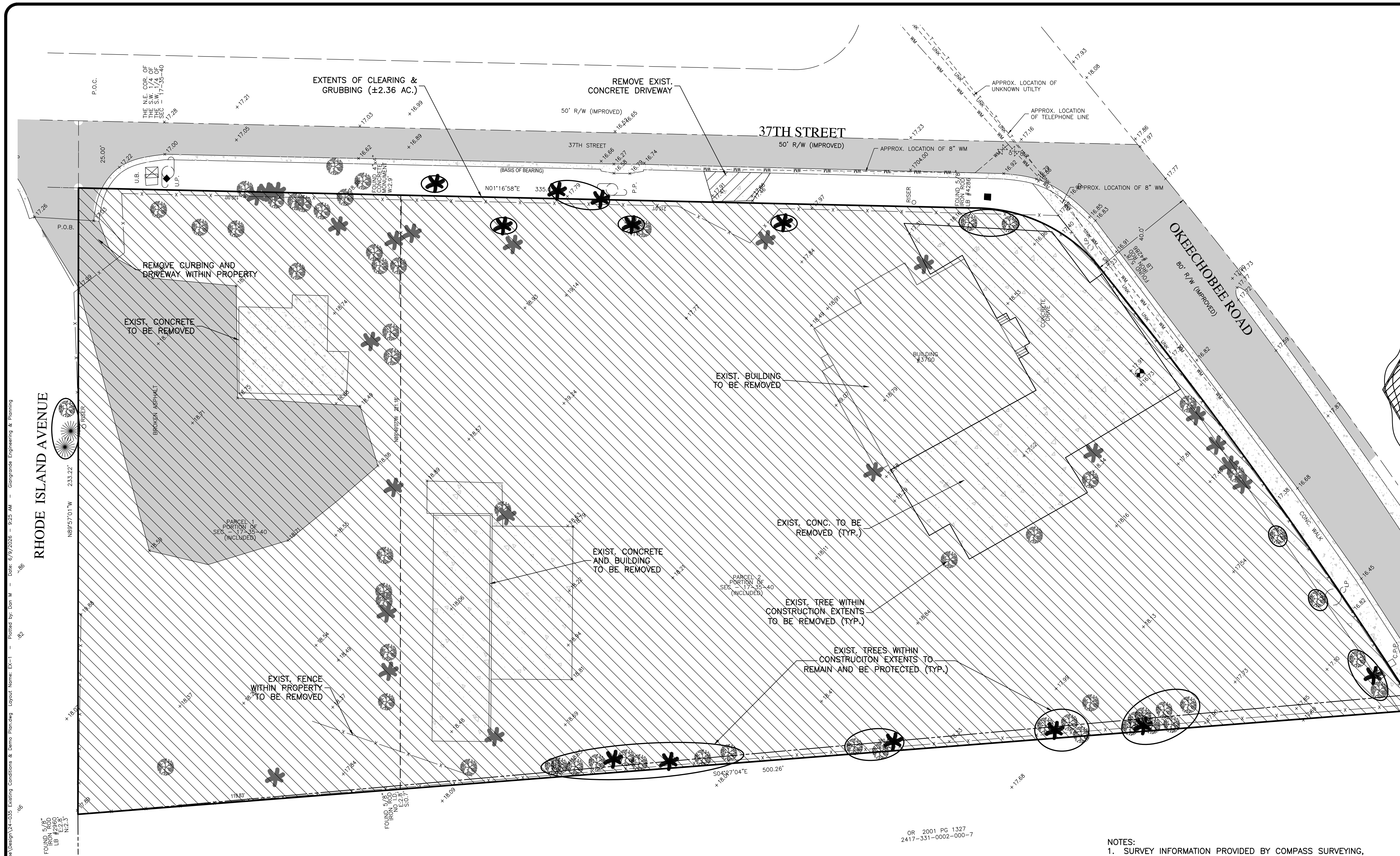
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License No: 66387

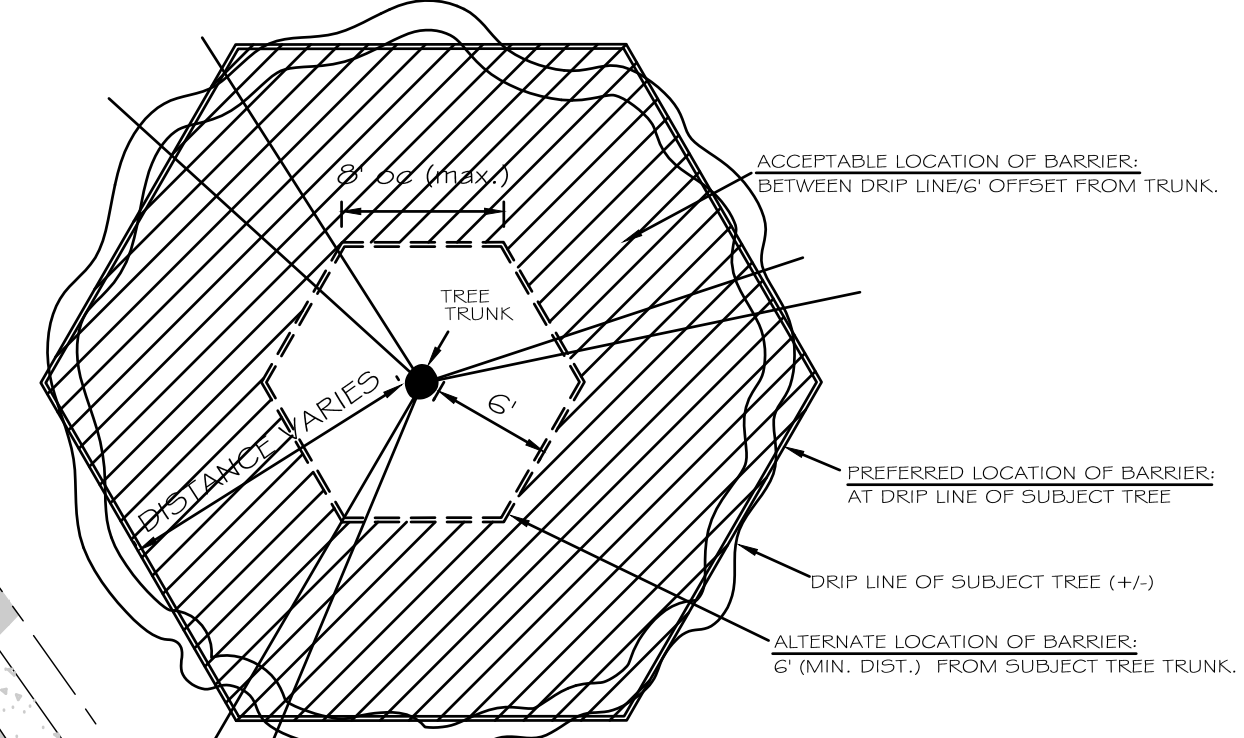
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Date: 11/26/2024
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Drawn By: DCM
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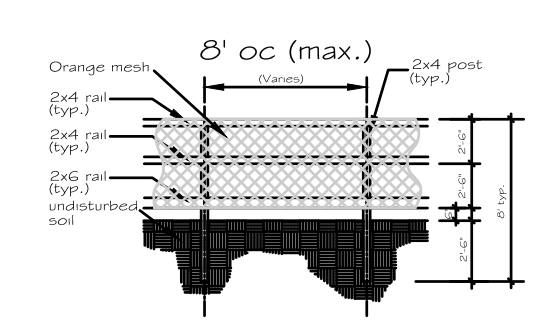
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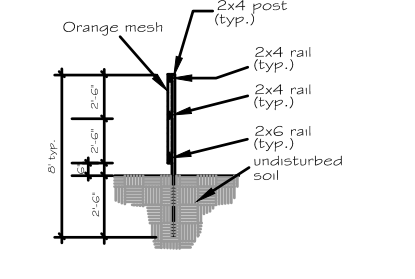
TREE PROTECTION DETAIL



BARRICADE PLAN
N.T.S.



BARRICADE ELEVATION
N.T.S.



BARRICADE SECTION
N.T.S.

- BARRICADE NOTES:**
1. TREE PROTECTION BARRICADE TO BE ERECTED PRIOR TO COMMENCEMENT OF ANY WORK.
 2. NO CONSTRUCTION WITHIN BARRICADE WITHOUT OWNER APPROVAL.
 3. EXCAVATION (IF APPROVED BY OWNER) WITHIN TREE PROTECTION AREAS IS LIMITED TO HAND TOOLS (NO MACHINERY).

LEGEND

- | | |
|--|----------------------------|
| | EXIST. CLEARING & GRUBBING |
| | EXIST. CONCRETE |
| | EXIST. WATER LINE |
| | EXIST. TELEPHONE |
| | EXIST. FENCE |
| | EXIST. BOUNDARY |
| | EXIST. R.O.W. |
| | EXIST. CENTERLINE |
| | EXIST. PINE TREE |
| | EXIST. OAK TREE |

- NOTES:**
1. SURVEY INFORMATION PROVIDED BY COMPASS SURVEYING, (561) 640-4800.
 2. ELEVATIONS REFERENCE NAVD88.
 3. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS AND NOTIFY ENGINEER AND/OR OWNER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
 4. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF SITE PREPARATION DEBRIS ON A REGULAR BASIS TO PREVENT LARGE STOCKPILES FROM FORMING AT THE SITE.
 5. SHOULD UNSUITABLE MATERIAL BE ENCOUNTERED DURING SITE PREPARATION, CONTRACTOR SHALL INFORM THE ENGINEER AND/OR OWNER PRIOR TO REMOVING MATERIAL.
 6. ALL ORGANIC AND NON-FREE DRAINING SOILS SHALL BE REMOVED FROM THE BOTTOM OF THE PROPOSED RETENTION AREA.
 7. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO SITE PREPARATION ACTIVITIES.
 8. ALL AREAS DISTURBED IN THE RIGHT OF WAY SHALL BE RETURNED TO ORIGINAL CONDITION OR BETTER.
 9. CLEARED AREAS SHALL BE SODDED OR OTHER APPROVED STABILIZATION METHOD INSTALLED WITHIN 30 DAYS OF VEGETATION REMOVAL.

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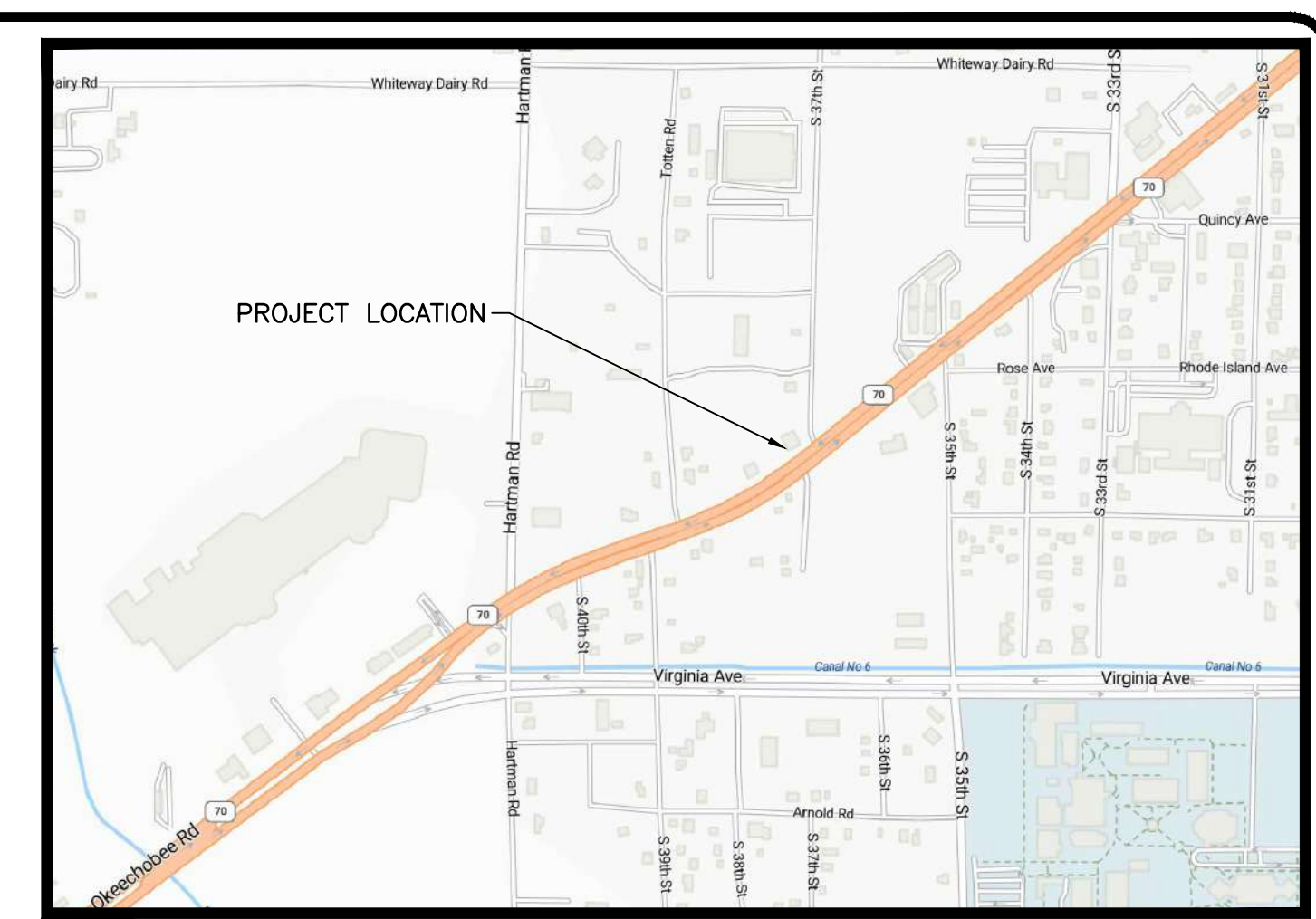
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EXISTING CONDITIONS & DEMO PLAN

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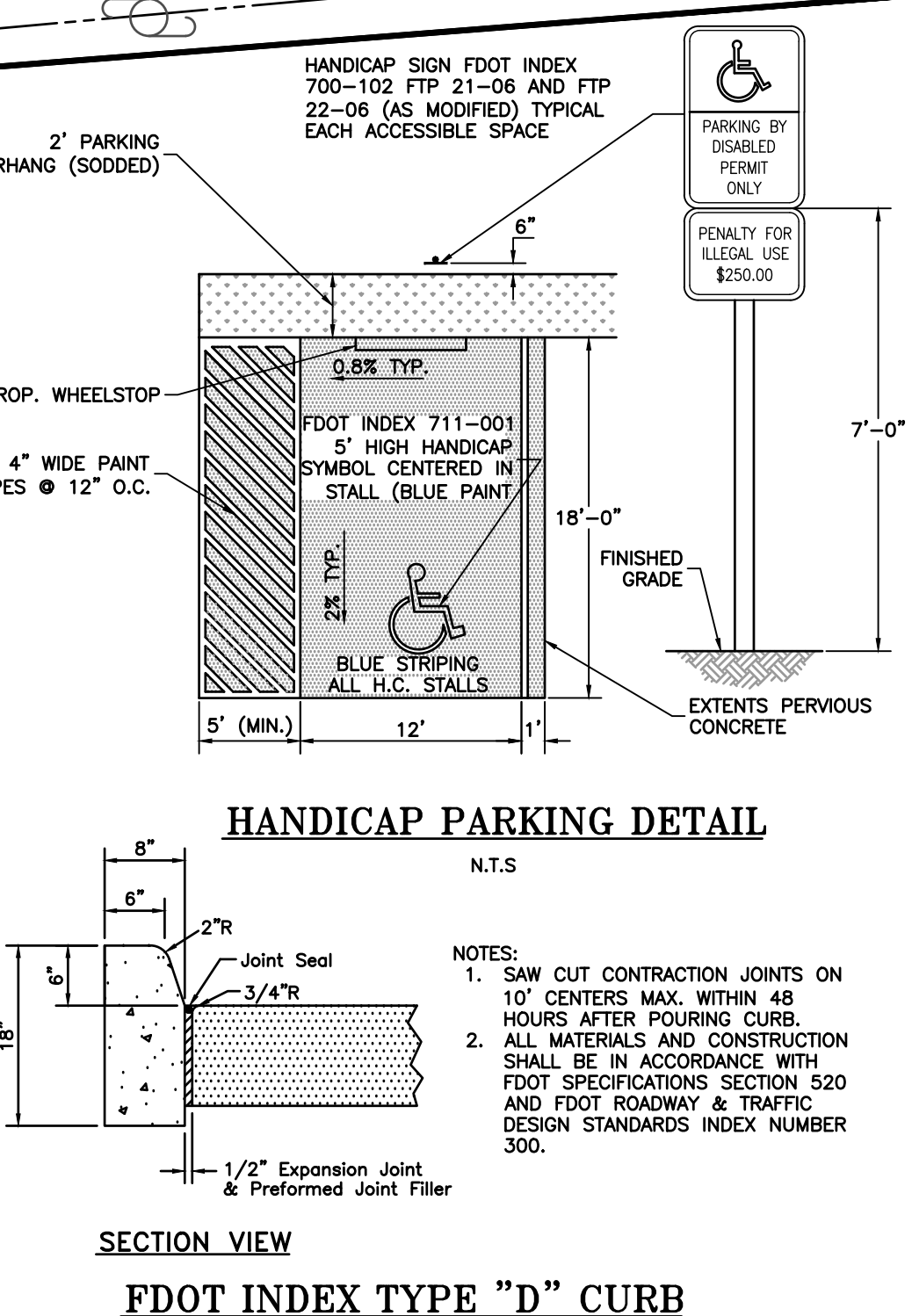
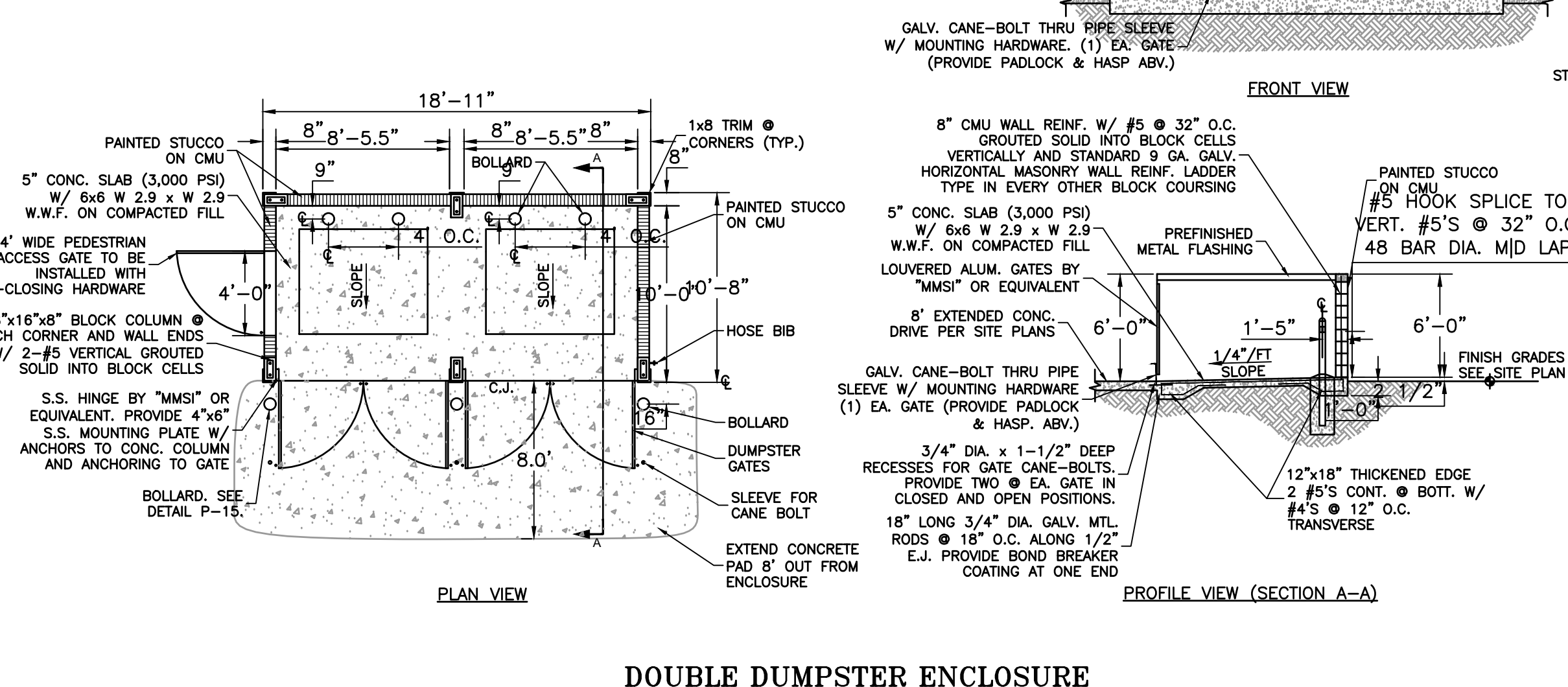
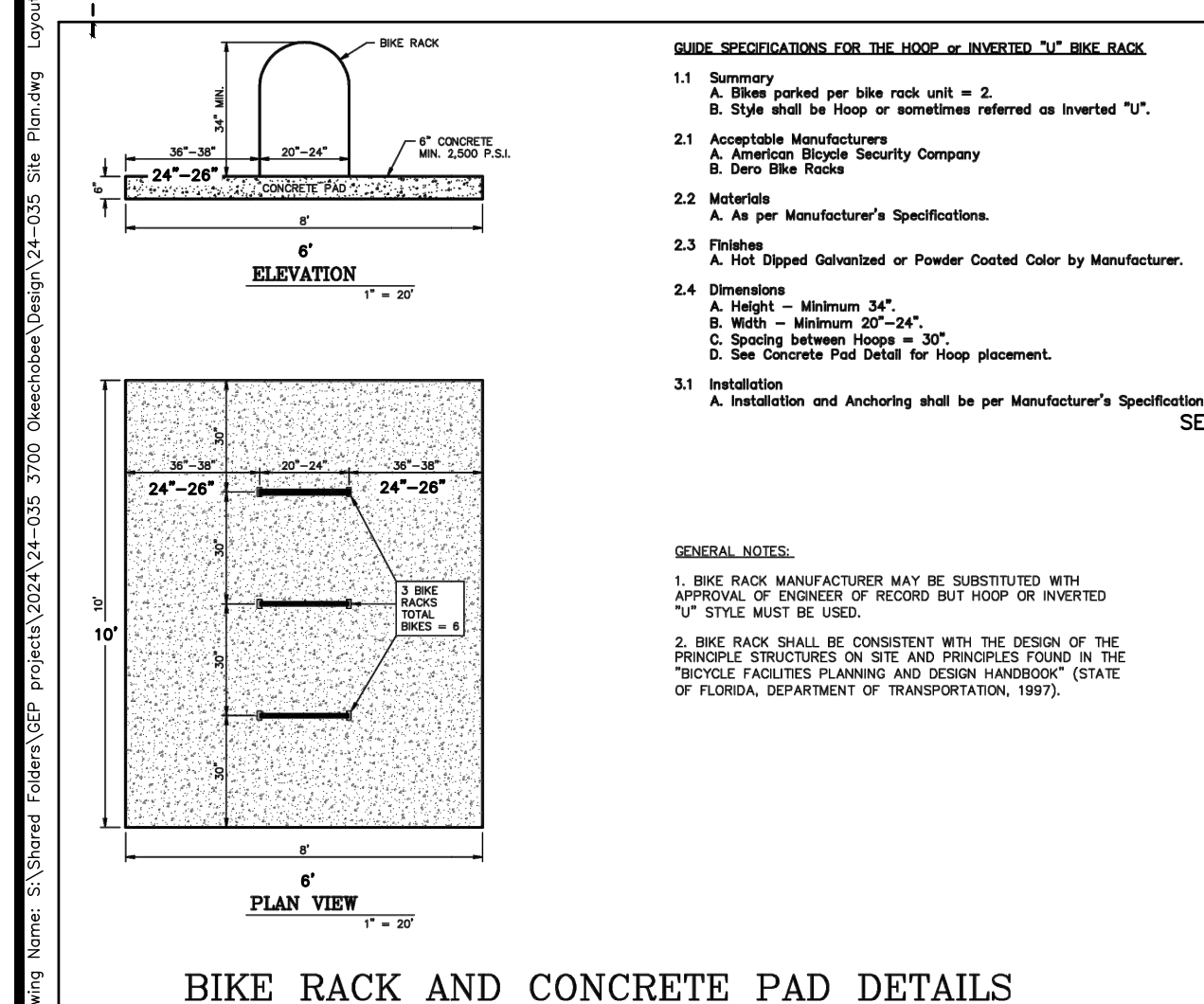
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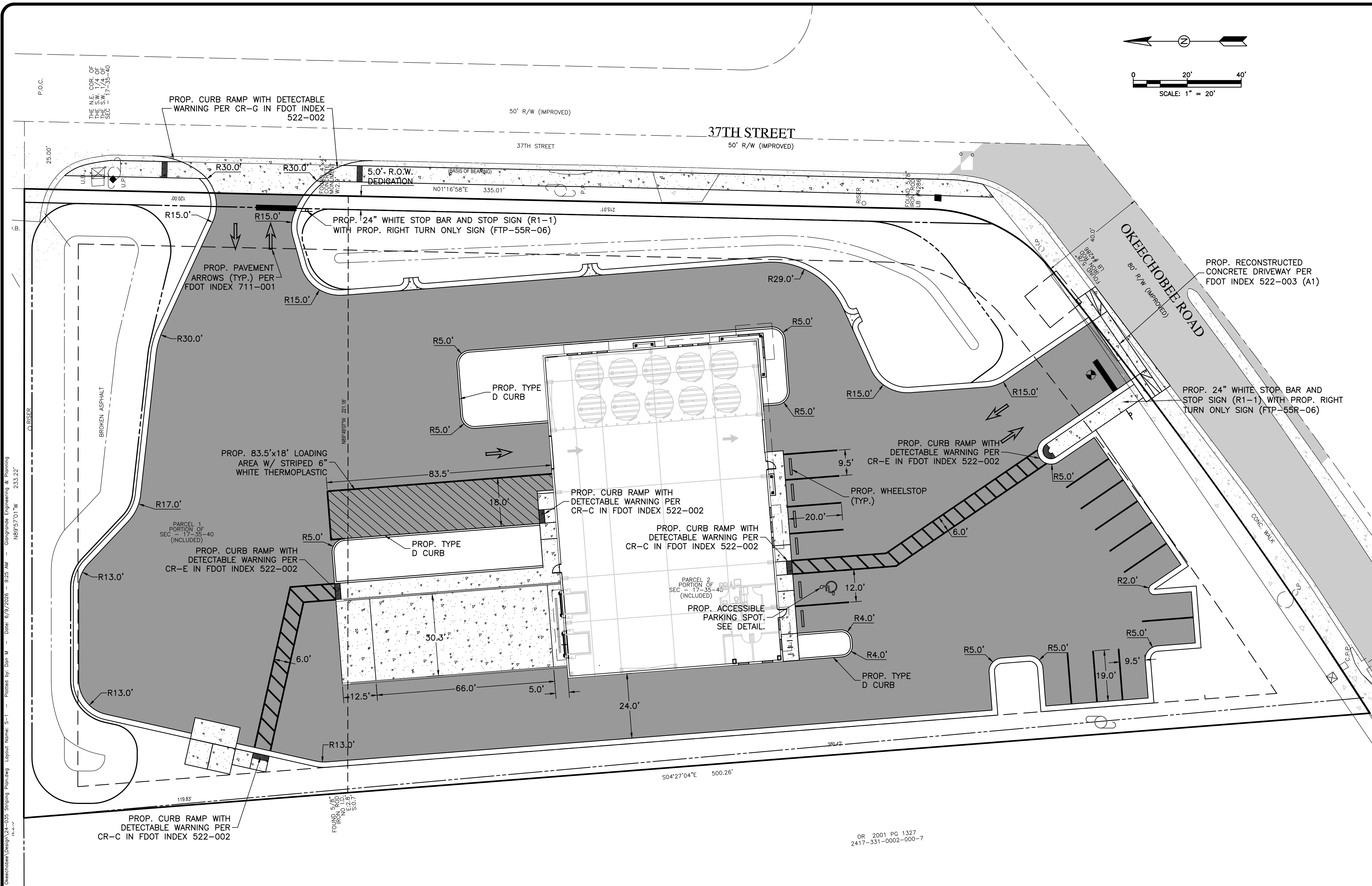
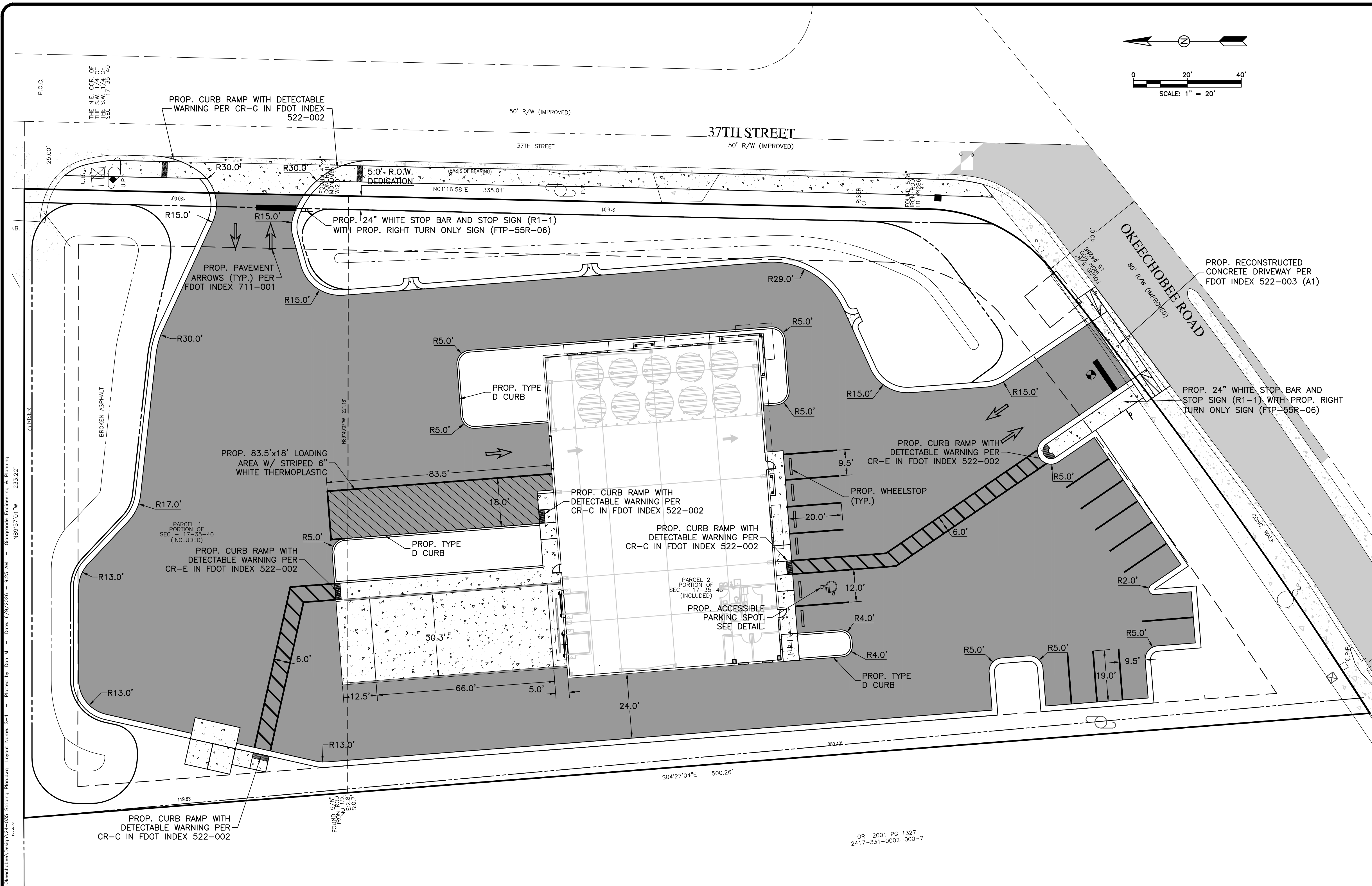
PROJECT #: 24-035
EX-1



LOCATION MAP
N.T.S.

</





- LEGEND**
- PROP. ASPHALT
 - PROP. CONCRETE
 - EXIST. CONCRETE
 - PROP. TOP OF BANK
 - PROP. TOE OF SLOPE
 - PROP. EDGE OF PAVEMENT
 - PROP. BOUNDARY
 - PROP. EASEMENT
 - EXIST. CENTERLINE

NOTE:
ALL STRIPING WITHIN THE RIGHT
OF WAY SHALL BE THERMOPLASTIC

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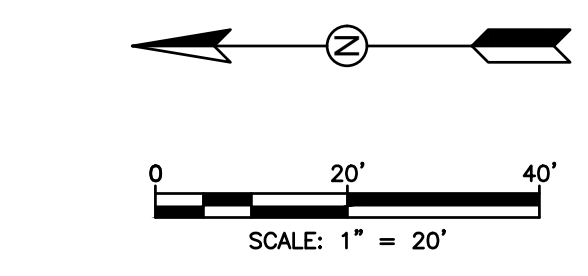
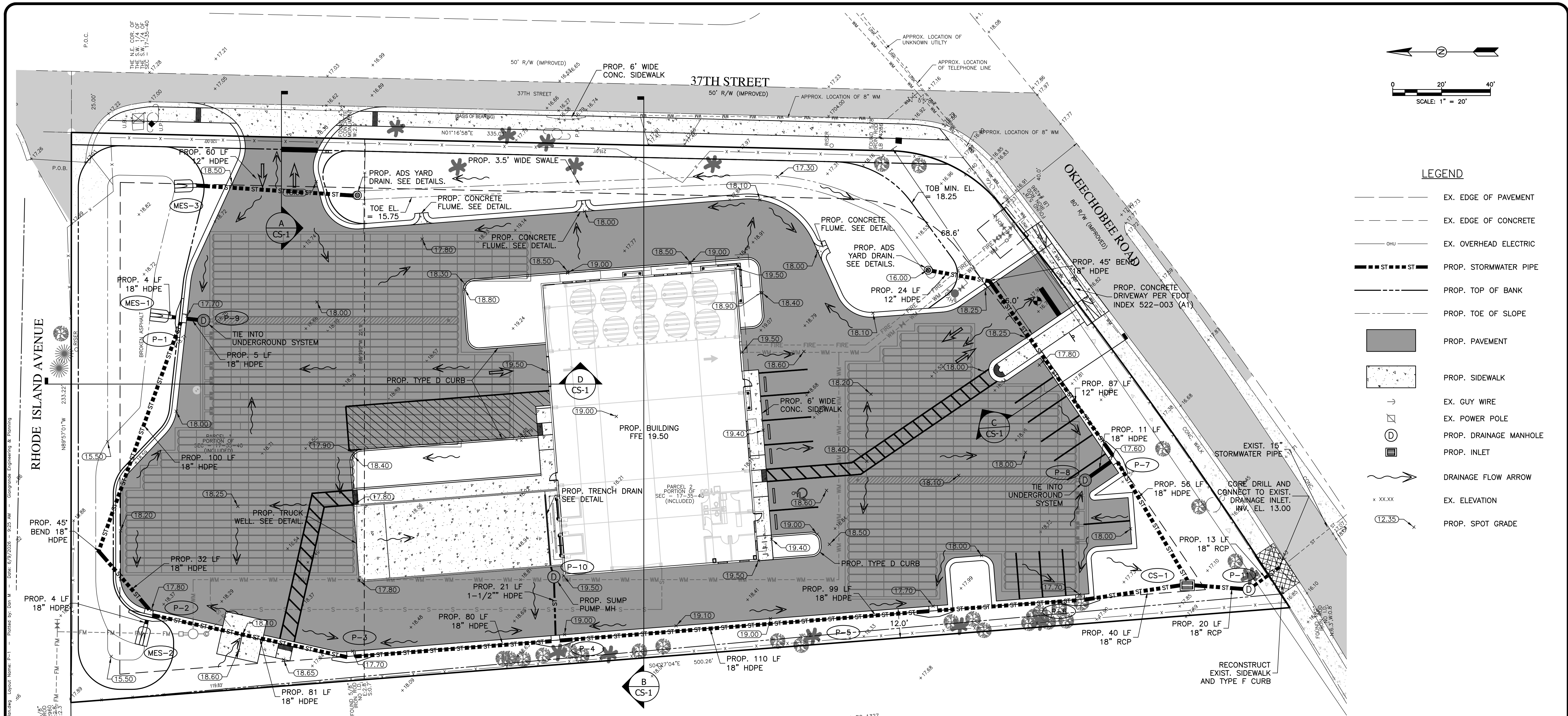
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STRIPING PLAN

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LEO GIANGRANDE, P.E.
License No: 66387

PROJECT #: 24-035
ST-1



LEGEND

- EX. EDGE OF PAVEMENT
- EX. EDGE OF CONCRETE
- EX. OVERHEAD ELECTRIC
- PROP. STORMWATER PIPE
- PROP. TOP OF BANK
- PROP. TOE OF SLOPE
- PROP. PAVEMENT
- PROP. SIDEWALK
- EX. GUY WIRE
- EX. POWER POLE
- PROP. DRAINAGE MANHOLE
- PROP. INLET
- DRAINAGE FLOW ARROW
- EX. ELEVATION
- PROP. SPOT GRADE

- NOTES:
- ELEVATIONS REFERENCE NAVD88.
 - FILL MATERIAL SHALL BE INORGANIC (CLASSIFIED AS SP/GW) CONTAINING NOT MORE THAN 5 PERCENT (BY WEIGHT) FIBROUS ORGANIC MATERIALS. FILL MATERIAL HAVING SILT/CLAY-SIZE FINES CONTENTS GREATER THAN 5 PERCENT SHALL NOT BE USED, INCLUDING CYCLONE SAND MATERIAL. THE FILL SHALL BE PLACED IN MAXIMUM 12-INCH THICK LIFTS. EACH LIFT SHALL BE COMPACTED TO A MINIMUM DENSITY OF 98 PERCENT OF MODIFIED PROCTOR MAXIMUM DRY DENSITY (AASHTO T-180).
 - CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF SITE PREPARATION DEBRIS ON A REGULAR BASIS TO PREVENT LARGE STOCKPILES FROM FORMING AT THE SITE.
 - SHOULD UNSUITABLE MATERIAL BE ENCOUNTERED DURING SITE PREPARATION, THE CONTRACTOR SHALL INFORM THE ENGINEER PRIOR TO REMOVING MATERIAL.
 - EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO SITE PREPARATION ACTIVITIES.
 - ALL AREAS DISTURBED IN THE RIGHT OF WAY SHALL BE RETURNED TO ORIGINAL CONDITION OR BETTER.
 - CONTRACTOR TO ENSURE MINIMUM OF 12" NON-ORGANIC FREE DRAINING MATERIAL WITHIN THE BOTTOM OF THE DRY RETENTION POND. THIS CAN BE ACCOMPLISHED VIA SOIL REPLACEMENT, SOIL MIXING, OR OTHER APPROVED METHOD.

DRAINAGE STRUCTURE TABLE				
STRUCTURE NO.	GRATE EL.	INVERTS	BOTTOM	DESCRIPTION
P-1	17.70	13.45	11.45	TYPE 6 CURB INLET
P-2	17.80	13.45	11.45	TYPE 6 CURB INLET
P-3	17.70	13.45	11.45	TYPE 6 CURB INLET
P-4	19.00	13.45	11.45	TYPE 6 CURB INLET
P-5	17.70	13.45	11.45	TYPE 6 CURB INLET
P-6	17.70	13.45	11.45	TYPE 6 CURB INLET
P-7	17.60	13.45	11.45	TYPE 6 CURB INLET
P-8	17.70	13.95	11.95	STORM MANHOLE
P-9	17.80	13.10	14.10	STORM MANHOLE
P-10	19.45	16.44	14.44	STORM MANHOLE
P-11	17.20	13.40	11.40	STORM MANHOLE
MES-1		15.50		MITERED END SECTION
MES-2		15.50		MITERED END SECTION
MES-3		15.50		MITERED END SECTION
CS-1	18.50	13.50	11.50	TYPE E CONTROL STRUCTURE - SEE DETAIL

DATE

BY

REVISIONS

Date: 11/26/2024

Scale: 1:20

Design By: JS

Drawn By: DCM

Check By: JS

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ST LUCIE COUNTY, FL

PAVING, GRADING, & DRAINAGE PLAN

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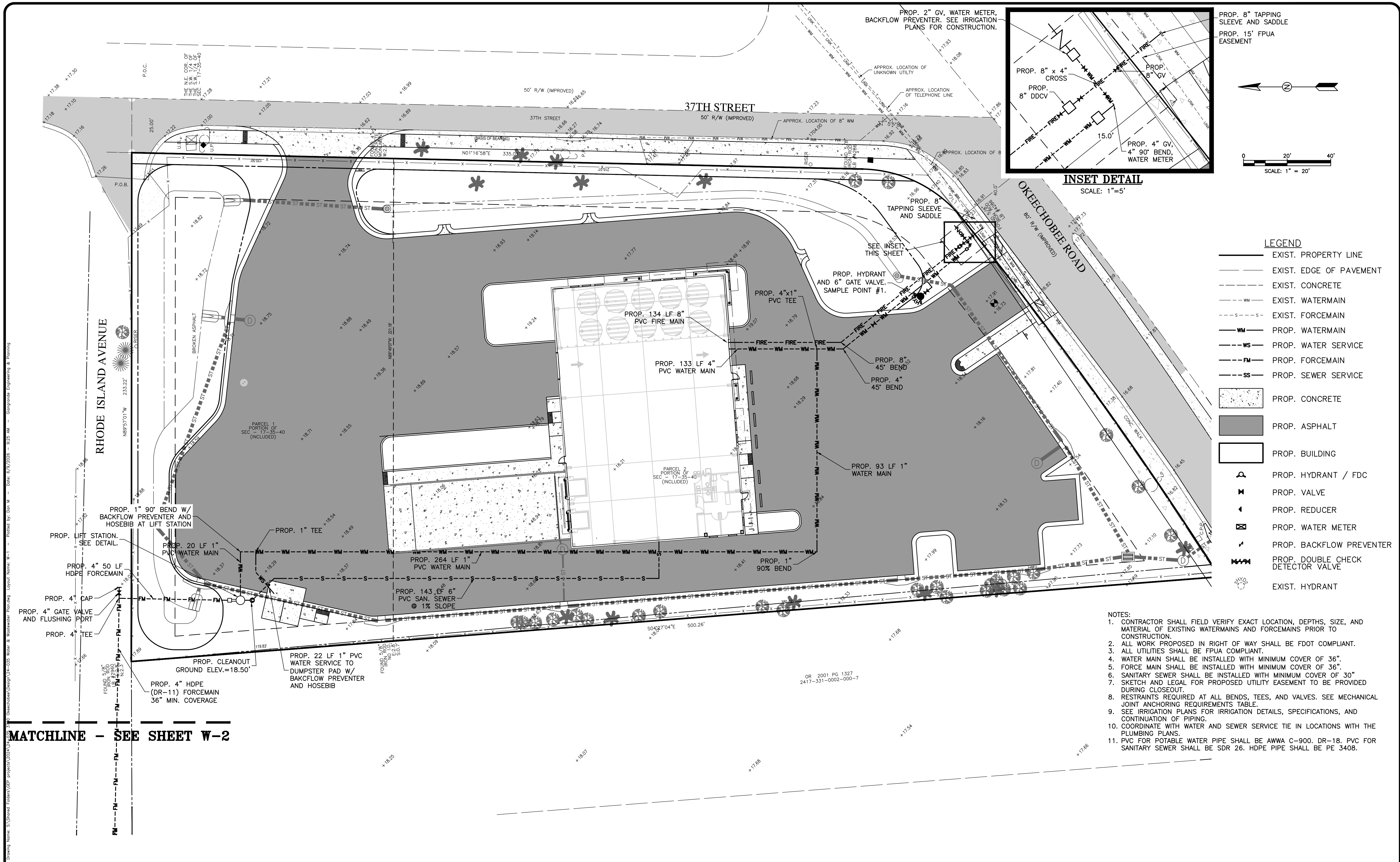
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PROJECT #: 24-035

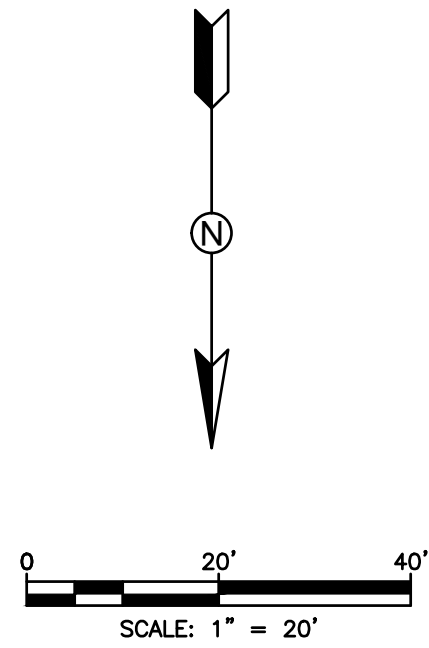
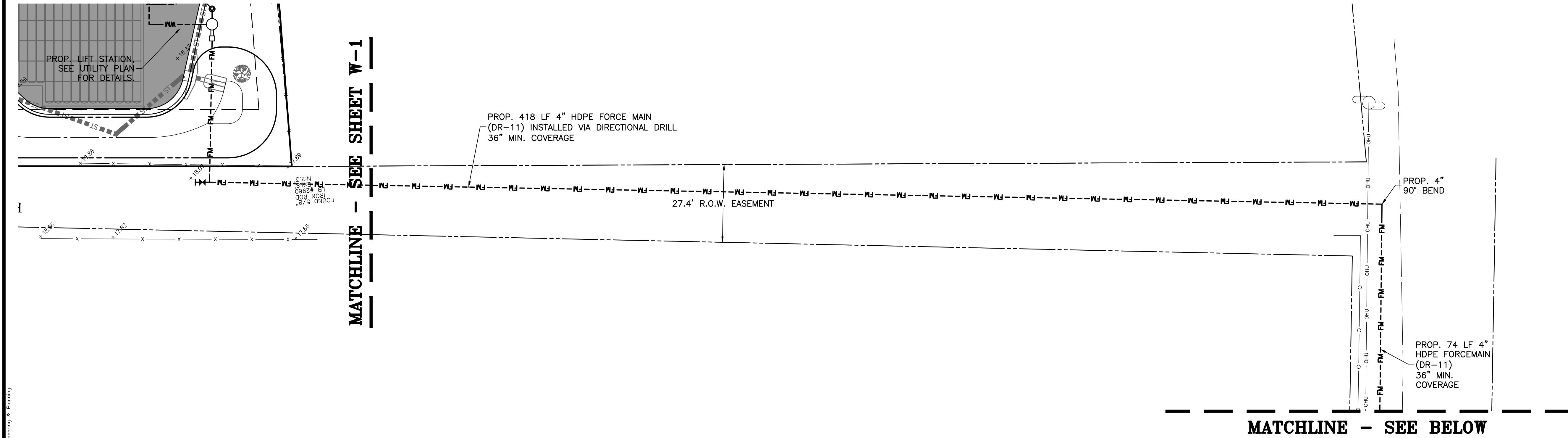
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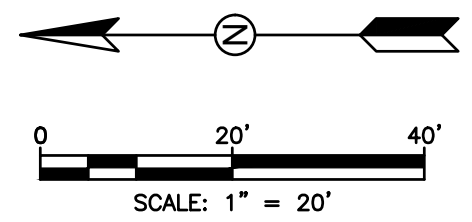
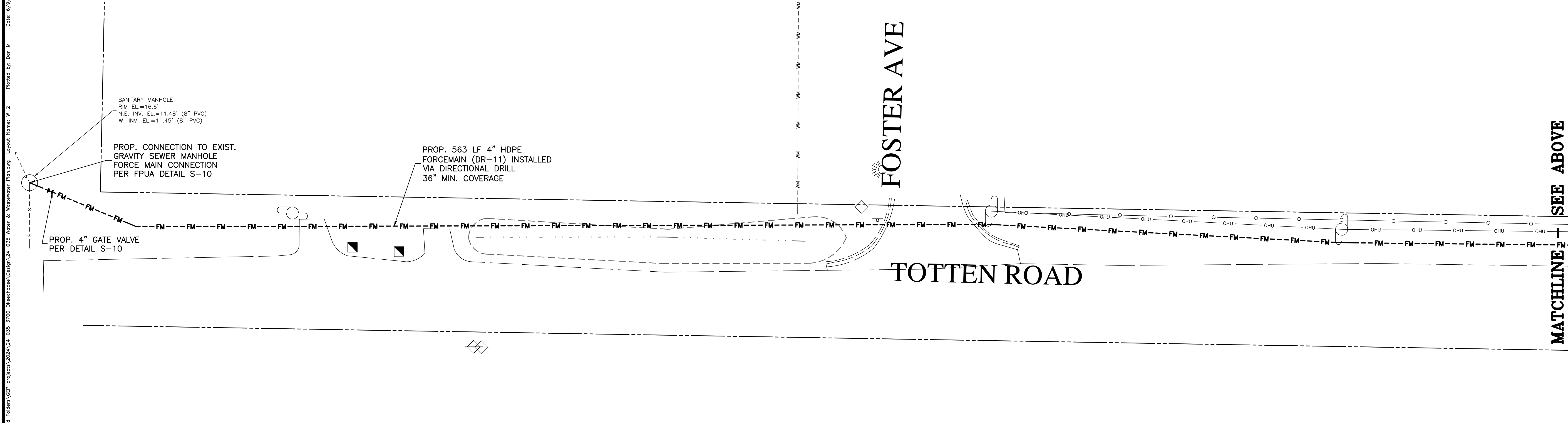
MATCHLINE - SEE SHEET W-2

DATE		BY	REVISIONS	Date: 11/26/2024 Scale: 1"=20' Design By: JS Drawn By: DCM Check By: JS	3700 OKEECHOBEE RD FORT PIERCE 34947 ST LUCIE COUNTY, FL	WATER & WASTEWATER PLAN	GIANGRANDE ENGINEERING AND PLANNING 710 SE OCEAN BLVD. STUART, FLORIDA 34994 PH. (772) 888-9076 leo@gep.llc	LEO GIANGRANDE, P.E. Cert. No. 30901 License No: 66387	PROJECT #: 24-035 W-1
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- NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION, DEPTH, SIZE, AND MATERIAL OF EXISTING WATER MAINS AND FORCE MAINS AND MANHOLES PRIOR TO CONSTRUCTION.
 2. ALL UTILITIES SHALL BE FPUA COMPLIANT.
 3. FORCE MAIN SHALL BE INSTALLED WITH MINIMUM COVER OF 36".
 4. HDPE PIPE SHALL BE PE 3408.



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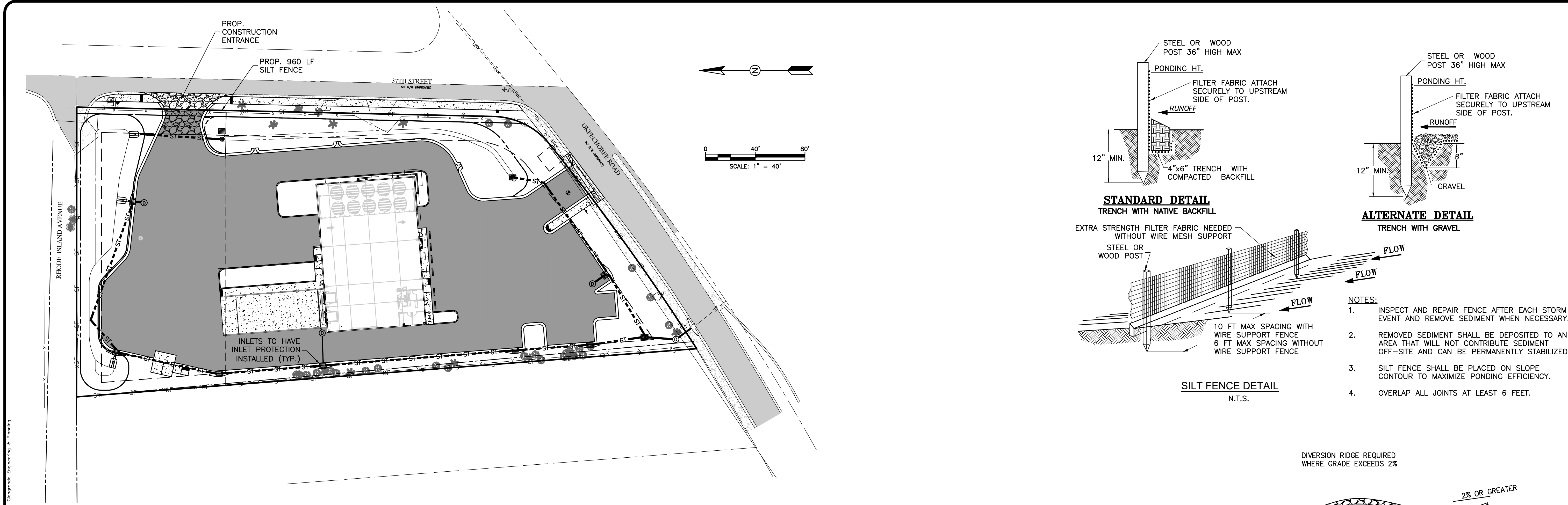
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WATER & WASTEWATER PLAN

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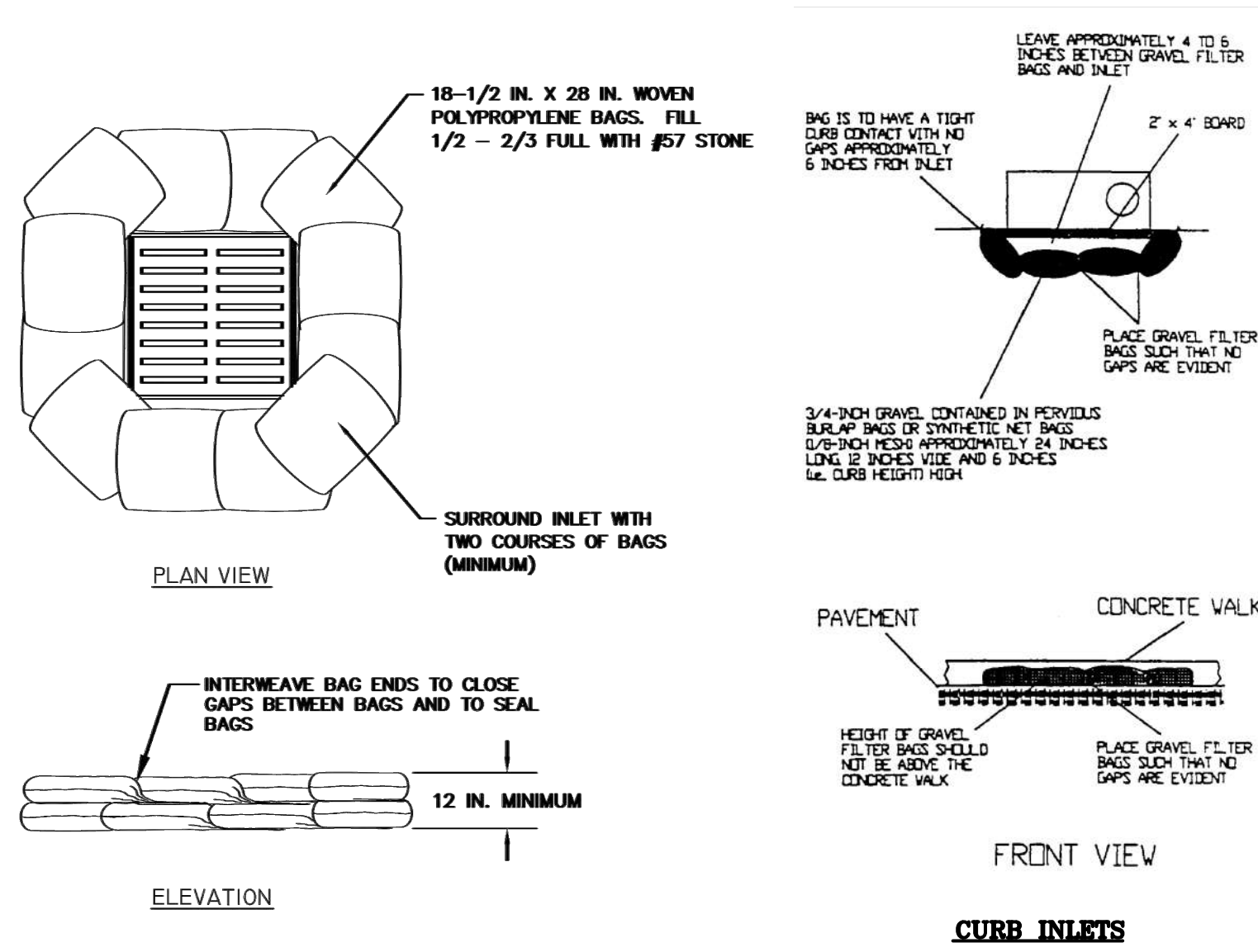
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PROJECT #: 24-035
W-2

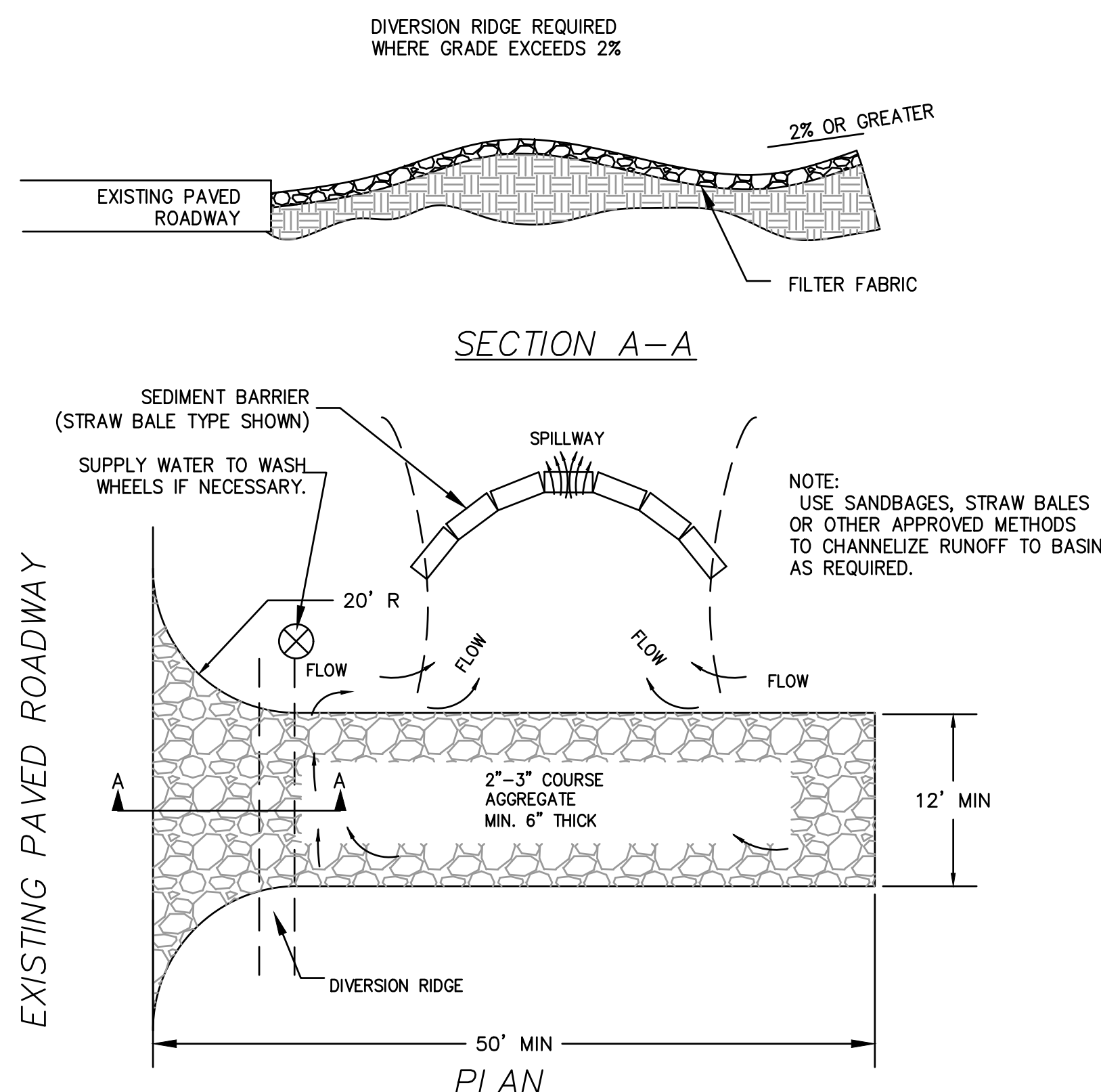


- EROSION CONTROL NOTES:**
1. THIS PROJECT IS SUBJECT TO ALL RELATED ENVIRONMENTAL REQUIREMENTS WHICH INCLUDE A "CONTROL OF EROSION AND SEDIMENTATION PLAN". THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING NECESSARY AND ADEQUATE MEASURES FOR PROPER CONTROL OF EROSION DUE TO SEDIMENTATION RUNOFF FROM THE SITE PRIOR TO CONSTRUCTION OPERATIONS IN A PARTICULAR AREA. ALL SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO START OF CONSTRUCTION. FIELD ADJUSTMENTS WITH RESPECT TO LOCATIONS AND DIMENSIONS MAY BE DIRECTED BY THE ENGINEER AS REQUIRED.
 2. EROSION CONTROL MEASURES SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RAIN EVENT FOR DAMAGE AND GENERAL EFFECTIVENESS. ANY DAMAGED OR INEFFECTIVE CONTROLS SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR.
 3. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED, IF DEEMED NECESSARY, BY THE ON-SITE INSPECTOR.
 4. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. TEMPORARY AND PERMANENT MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
 5. ALL TEMPORARY SEDIMENT CONTROL DEVICES SHALL BE LEFT IN PLACE AND MAINTAINED UNTIL THE AREA HAS BEEN COMPLETELY STABILIZED WITH PERMANENT VEGETATION.
 6. ALL CONSTRUCTION EXITS SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ON TO ANY PUBLIC RIGHT-OF-WAY. THIS SHALL REQUIRE PERIODIC TOP DRESSING WITH STONE, AS CONDITIONS REQUIRE. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED ON TO PUBLIC RIGHT-OF-WAY OR INTO STORM DRAINS SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR.
 7. TURBIDITY SCREENS OR EQUIVALENT SHALL BE PROPERLY EMPLOYED AND MAINTAINED AS NECESSARY DURING CONSTRUCTION ACTIVITIES SO THAT TURBIDITY LEVELS DO NOT EXCEED 29 NTU'S ABOVE NATURAL BACKGROUND 50 FEET DOWNSTREAM OF POINT OF DISCHARGE. IF TURBIDITY LEVELS EXCEED THESE LIMITS, PROJECT ACTIVITIES SHALL IMMEDIATELY CEASE, AND WORK SHALL NOT RESUME UNTIL TURBIDITY LEVELS DROP TO WITHIN THESE LIMITS.
 8. CONTRACTOR SHALL SOD GRASS AREAS DAMAGED DURING CONSTRUCTION AT NO ADDITIONAL COST TO OWNER.
 9. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE ENVIRONMENTAL PROTECTION AGENCY (EPA) AND THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES).
 10. SEDIMENT BARRIERS SHALL BE PLACED PRIOR TO ANY WORK ON THE SITE. SEDIMENT BARRIERS SHALL BE PLACED AS DEPICTED AS SHOWN ON THESE CONSTRUCTION PLANS.
 11. DAMAGED TURBIDITY CONTROLS SHALL BE REPAIRED PROMPTLY AND BEFORE ANY SUBSEQUENT RAINFALL.
 12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREPARATION AND IMPLEMENTATION OF THE NPDES AND RELATED STORM WATER PLAN FOR THE DURATION OF THE PROJECT. UPON COMPLETION THE CONTRACTOR SHALL REMOVE ALL TEMPORARY STORM WATER MANAGEMENT MEASURES AND SHALL DISPOSE OF THEM AS REQUIRED.
 13. CONTRACTOR SHALL COMPLY WITH SPILL PREVENTION, CONTROL AND COUNTER MEASURES (SPEC) REQUIREMENTS PURSUANT TO EPA RULES AND REGULATIONS.
 14. ALL CONSTRUCTION WASTE MATERIAL SHALL BE COLLECTED AND STORED IN A SECURED METAL DUMPSTER RENTED / LEASED FROM A LOCAL WASTE MANAGEMENT COMPANY. THE DUMPSTER SHALL MEET ALL LOCAL AND STATE SOLID WASTE MANAGEMENT REGULATIONS. ALL PERSONNEL SHALL BE INSTRUCTED REGARDING THE CORRECT PROCEDURES FOR WASTE DISPOSAL. NOTICES STATING THESE PRACTICES SHALL BE POSTED IN THE OFFICE TRAILER / CONSTRUCTION TRAILER AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.
 15. ALL SANITARY WASTE SHALL BE COLLECTED FROM THE PORTABLE UNITS AT A MINIMUM OF ONCE PER WEEK BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.
 16. TRUCKS / EQUIPMENT IMPORTING OR EXPORTING FILL SHALL COVER THEIR LOADS WITH A TARPULIN TO AVOID UNNECESSARY GENERATION OF DUST.

17. ALL HAZARDOUS WATER MATERIAL SHALL BE DISPOSED OF AS PER LOCAL / STATE REGULATIONS OR AS RECOMMENDED BY THE MANUFACTURER. SITE PERSONNEL SHALL BE INSTRUCTED IN THESE PRACTICES AND THE CONTRACTOR IS RESPONSIBLE TO FOLLOW THESE PRACTICES.
18. THE GENERAL CONTRACTOR'S SITE SUPERINTENDENT SHALL SELECT INDIVIDUALS, TYPICALLY THREE, WHO WILL BE RESPONSIBLE FOR INSPECTIONS, MAINTENANCE AND REPAIR ACTIVITIES AND FILLING OUT OF INSPECTION REPORTS. PERSONNEL SELECTED SHALL BE RECEIVE PROPER TRAINING, AT THE CONTRACTORS EXPENSE, PRIOR TO SITE CONSTRUCTION COMMENCEMENT.
19. ALL EROSION AND SEDIMENTATION CONTROLS SHALL BE INSPECTED EVERY 7 DAYS OR WITHIN 24 HOURS OF A STORM OF 0.5 INCHES OR MORE IN RAINFALL. ALL CONTROLS MUST BE IN PROPER ORDER AS REQUIRED UNTIL SITE COMPLETION.
20. SILT FENCE SHALL BE INSPECTED FOR TEARS, DEPTH OF SEDIMENT, AND TO INSURE THE FENCE IS SECURELY FASTENED TO THE POSTS AND ALSO THAT POSTS ARE FIRMLY IN PLACE. SEDIMENT SHALL BE REMOVED IF THE DEPTH OF SEDIMENT IS GREATER THAN ONE-THIRD THE HEIGHT OF THE SILT FENCE.
21. THE INSPECTOR SHALL RECORD ANY DAMAGES OR DEFICIENCIES IN THE TURBIDITY CONTROLS IN THE REPORT FORM FOR THIS PURPOSE. A COPY OF ALL RECORDING AND REPORTS SHALL BE FORWARDED TO THE ENGINEER FOR REVIEW.
22. THE REQUIREMENTS LISTED ABOVE AND DETAILS PRESENTED ON THIS SHEET SHALL BE CONSIDERED MINIMUM REQUIREMENTS AND THE CONTRACTOR SHALL USE WHATEVER METHODS THE CONTRACTOR DEEMS NECESSARY TO PREVENT EROSION AND SILTATION AS MAY BE REQUIRED FOR THE PROJECT.
23. PROPERTY CORNERS SHALL BE LOCATED BY A LICENSED LAND SURVEYOR AND CLEARLY MARKED IN THE FIELD PRIOR TO THE ENGINEERING DEPARTMENT'S PRE-CONSTRUCTION MEETING FOR SITE DEVELOPMENT.
24. AUTHORIZATION TO INSTALL EROSION CONTROL DEVICES AND PRESERVE BARRICADES WILL BE GRANTED AT THE PRE-CONSTRUCTION MEETING. THE AUTHORIZATION SHALL BE POSTED ON THE SITE, IN THE PERMIT BOX, ITS LOCATION SHOWN ELSEWHERE ON THIS PAGE.
25. NO ADDITIONAL LAND CLEARING SHALL COMMENCE UNTIL A SATISFACTORY INSPECTION OF THE REQUIRED EROSION CONTROL BARRICADES HAS BEEN OBTAINED.
26. ALL CONSTRUCTION BARRICADES AND SILT FENCES WILL REMAIN IN PLACE AND BE MONITORED FOR COMPLIANCE BY PERMIT HOLDER DURING THE PERMITTED DEVELOPMENT ACTIVITIES.
27. PRIOR TO SCHEDULING A FINAL ENVIRONMENTAL INSPECTION FOR THE INFRASTRUCTURE, ALL BARRICADES AND EROSION CONTROL DEVICES SHALL BE REMOVED AND DISPOSED BY THE CONTRACTOR.
28. LOCATIONS OF ANY MATERIALS TO BE TEMPORARILY STOCKPILED TO INCLUDE LAND CLEARING DEBRIS OR EXCAVATED MATERIALS SHALL BE PER THE ENGINEER.
29. THE CONTRACTOR SHALL PROVIDE A PLAN TO MINIMIZE DUST AND AIR POLLUTION DURING LAND CLEARING.
30. ALL AREAS DISTURBED IN THE RIGHT OF WAY SHALL BE RETURNED TO ORIGINAL CONDITION OR BETTER.
31. CLEARED AREAS SHALL BE SODDED OR OTHER APPROVED STABILIZATION METHOD INSTALLED WITHIN 30 DAYS OF VEGETATION REMOVAL.
32. CONTRACTOR MUST USE SITE STABILIZATION METHODS, SUCH AS, BUT NOT LIMITED TO, SEEDING WETTING, AND MULCHING WHICH MINIMIZE AIRBORNE DUST AND PARTICULATE EMISSIONS GENERATED BY CONSTRUCTION ACTIVITY. SUCH METHODS SHALL BE COMPLETED PROGRESSIVELY AND ACTIVELY MAINTAINED AS VEGETATION REMOVAL OCCURS WITHIN A GIVEN AREA OF A SITE. AT THE PRE-CONSTRUCTION MEETING, THE CONTRACTOR SHALL INFORM THE COUNTY WHICH VEGETATION REMOVAL METHODS WILL BE CONDUCTED AND THE PLAN TO MINIMIZE AIRBORNE DUST AND PARTICULATE EMISSIONS.

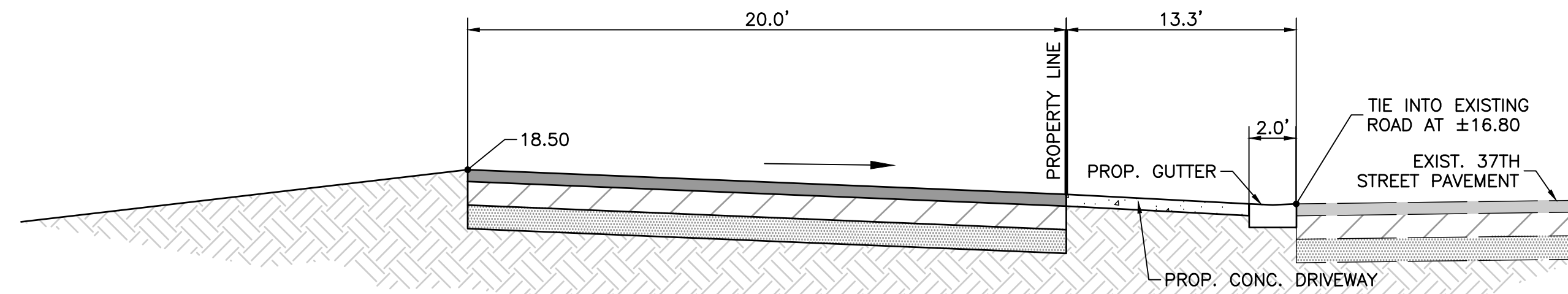


- GRAVEL FILTER BAGS INLET PROTECTION DETAIL**
- NOTES:**
1. STONE FILL BAGS SHALL BE WOVEN POLYPROPYLENE BAGS WITH APPROXIMATE DIMENSIONS OF 18-1/2 INCHES BY 28 INCHES.
 2. THE BAGS SHALL BE FILLED 1/2 TO 2/3 FULL WITH FDOT NO. 57 STONE. TIE THE ENDS OF FILLED BAGS USING EITHER DRAW STRINGS OR WIRE TIES.
 3. INTERWEAVE THE LOOSE ENDS OF THE BAGS SO THAT THE GAPS BETWEEN BAGS ARE FILLED AND THE ENDS OF THE BAGS ARE SEALED.
 4. COMPLETELY SURROUND THE INLET WITH A MINIMUM OF TWO (2) ROWS OF BAGS TO A MINIMUM OF 12 INCHES IN HEIGHT.



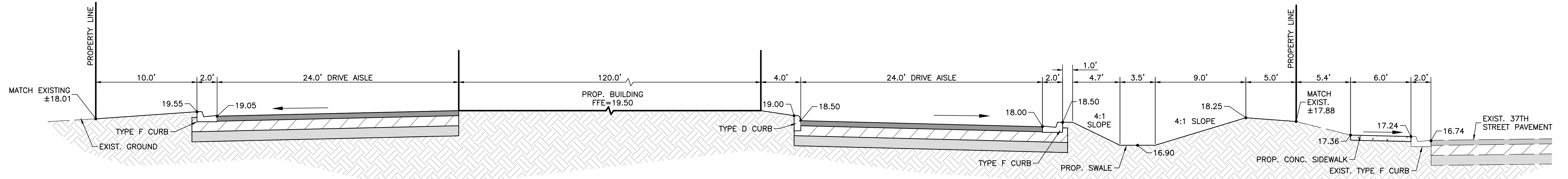
- TEMPORARY GRAVEL CONSTRUCTION ENTRANCE**
- NOTES:**
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING. REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
 2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
 3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

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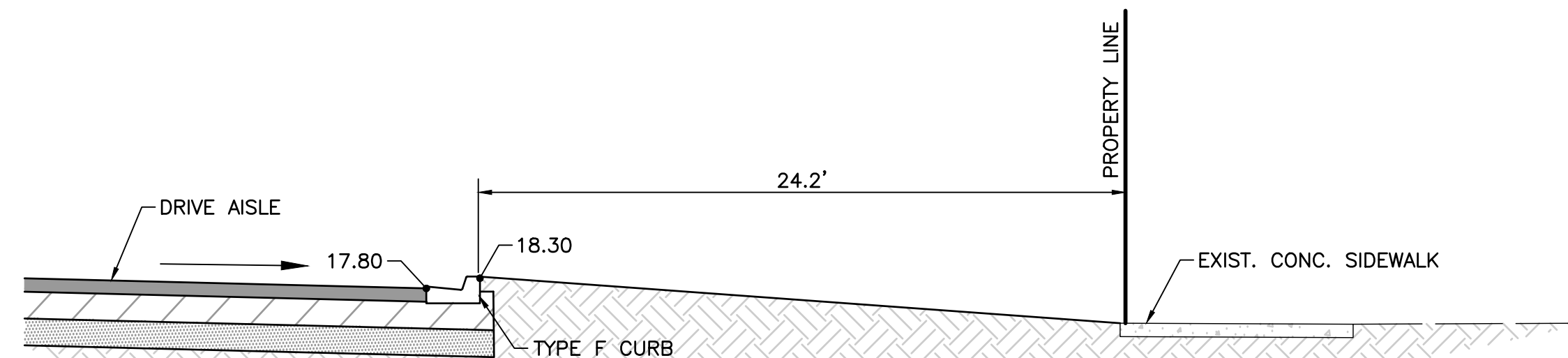
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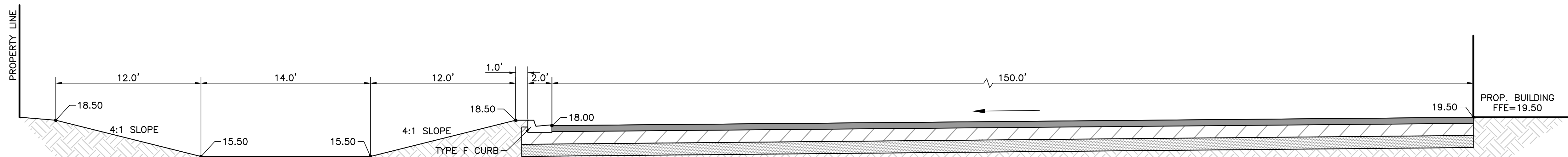
SECTION B-B

SCALE: 1"=5'



SECTION C-C

SCALE: 1"=5'



SECTION D-D

SCALE: 1"=5'

DATE	BY	REVISIONS

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Design By: JS
Drawn By: DCM
Check By: JS

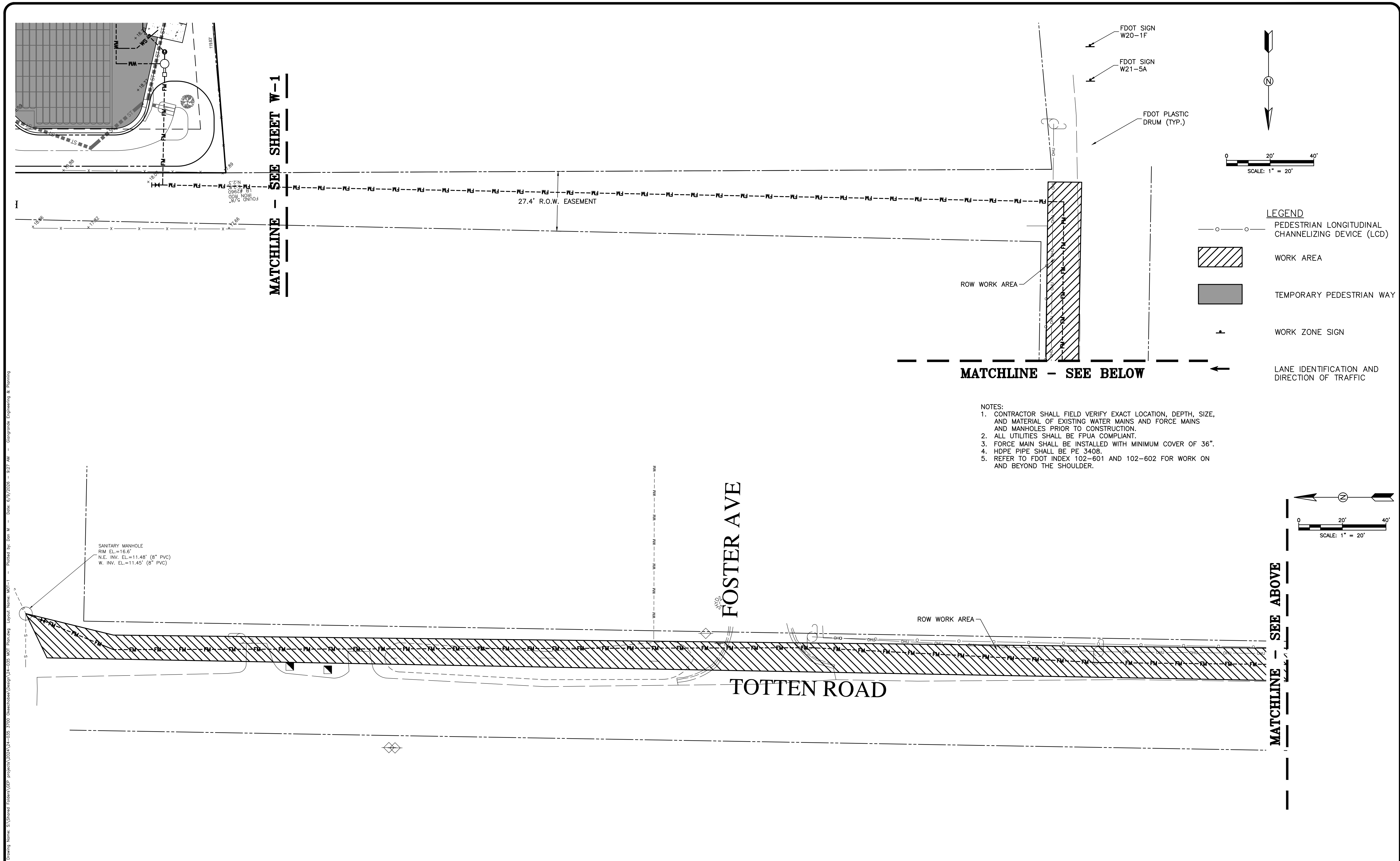
3700 OKEECHOBEE RD
FORT PIERCE 34947
ST LUCIE COUNTY, FL

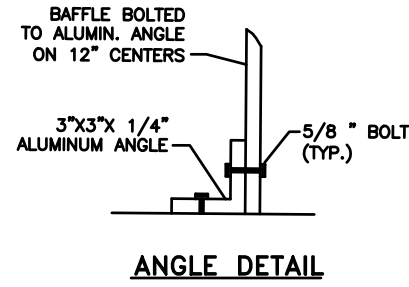
CROSS SECTIONS

GIANGRANDE ENGINEERING AND PLANNING
710 SE OCEAN BLVD.
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PH. (772) 888-9076
leo@gep.llc
Cert. No. 30901

LEO GIANGRANDE, P.E.
License No: 66387

PROJECT #: 24-035
C-1





BAFFLE DETAIL



N.T.S

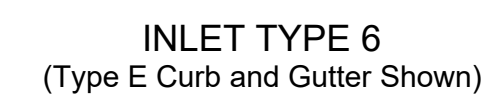


N.T.S

1. Saw cut contraction joints on 10' centers max. within 48 hours after pouring curb.
2. All materials and construction shall be in accordance with FDOT Specifications Section 520 and FDOT Roadway & Traffic Design Standards index number 300.

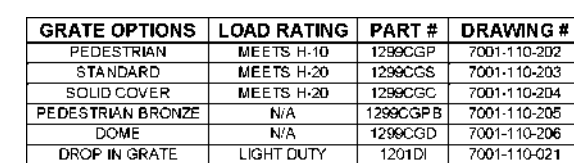


CONTRACTION JOINTS



(TYPE E CURB AND GUTTER SHOWN)

N.T.S



GRATE OPTIONS	LOAD RATING	PART #	DRAWING #
PEDESTRIAN	MEETS H-10	1296CGP	7001-110-202
STANDARD	MEETS H-20	1296CGS	7001-110-203
SOLID COVER	MEETS H-20	1296CGC	7001-110-204
PEDESTRIAN BRONZE	N/A	1296CGPB	7001-110-205
DOME	N/A	1296CGD	7001-110-206
DROP IN GRATE	LIGHT DUTY	1201DI	7001-110-021

ADS
Nyloplast

TITLE			
12 IN DRAIN BASIN QUICK SPEC INSTALLATION DETAIL			
DWG NO	2005-110-189	REV	E

* LIBERTY SUMP PUMP MODEL
LEH102M2-2 1 HP, 230 V, 1
PHASE, 200 GPM, 53' TDH, 36"x72"
FIBERGLASS BASIN, 36" BLANK
COVER, GUIDE RAIL.



36"x72" SUMP STRUCTURE & PUMP*
TOP EL. 19.45
INV. EL. 13.65

1-1/2" SUMP DISCHARGE AWWA
C900 PVC OR HDPE PIPING.
SEE PLAN FOR CONTINUATION.

Date: 11/26/2024
Scale: N/A
Design By: JS
Drawn By: DCM
Check By: JS

DETAILS



LEO GIANGRANDE, P.E.

PROJECT #: 24-035

D-1

ASPHALT INSTALLATION

DRAIN BASIN

ROAD & HIGHWAY

INLINE DRAIN

ASPHALT ABOVE CONCRETE SLAB

4" MIN ON 12" < 24"
6" MIN ON 30" & 36"

18" MIN WIDTH GUIDELINE

STRUCTURE SIZE		1/2"20 GRATE OPTIONS			
12"	N/A	STANDARD	SOLID	2X2 R&H	N/A
15"	N/A	STANDARD	SOLID	2X2 R&H	N/A
18"	N/A	STANDARD	SOLID	2X2 R&H	2X3 R&H
24"	N/A	STANDARD	SOLID	2X2 R&H	2X3 R&H
30"	PEDESTRIAN	STANDARD	SOLID	2X2 R&H	2X3 R&H
36"	PEDESTRIAN	STANDARD	SOLID	2X2 R&H	2X3 R&H

- 1 - THE BACKFILL MATERIAL SHALL BE CRUSHED STONE OR OTHER GRANULAR MATERIAL MEETING THE REQUIREMENTS OF CLASS I, CLASS II, OR CLASS III MATERIAL AS DEFINED IN ASTM D2221. BEDDING & BACKFILL FOR SURFACE DRAINAGE INLETS SHALL BE PLACED & COMPACTED UNIFORMLY IN ACCORDANCE WITH ASTM D3231.
- 2 - **TRAFFIC LOADS:** CONCRETE SLAB DIMENSIONS ARE FOR GUIDELINE PURPOSES ONLY. ACTUAL CONCRETE SLAB MUST BE DESIGNED TAKING INTO CONSIDERATION LOCAL SOIL CONDITIONS, TRAFFIC LOADING, & OTHER APPLICABLE DESIGN FACTORS.
- 3 - 36" DRAIN BASIN REQUIRES 30"X30" REDUCING CONE. REDUCING CONE REQUIREMENTS MINIMUM 2.25FT FROM GRADE TO TOP OF PIPE.

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DESIGNED BY	DATE	REVISED BY	DATE	PROJECT NO.	DATE
DRN-011	4-16-06	ENR	06-12-06		
DWG SIZE	A	SCALE	1:30	SHEET	1 OF 1
DWG NO.					7001-110-188

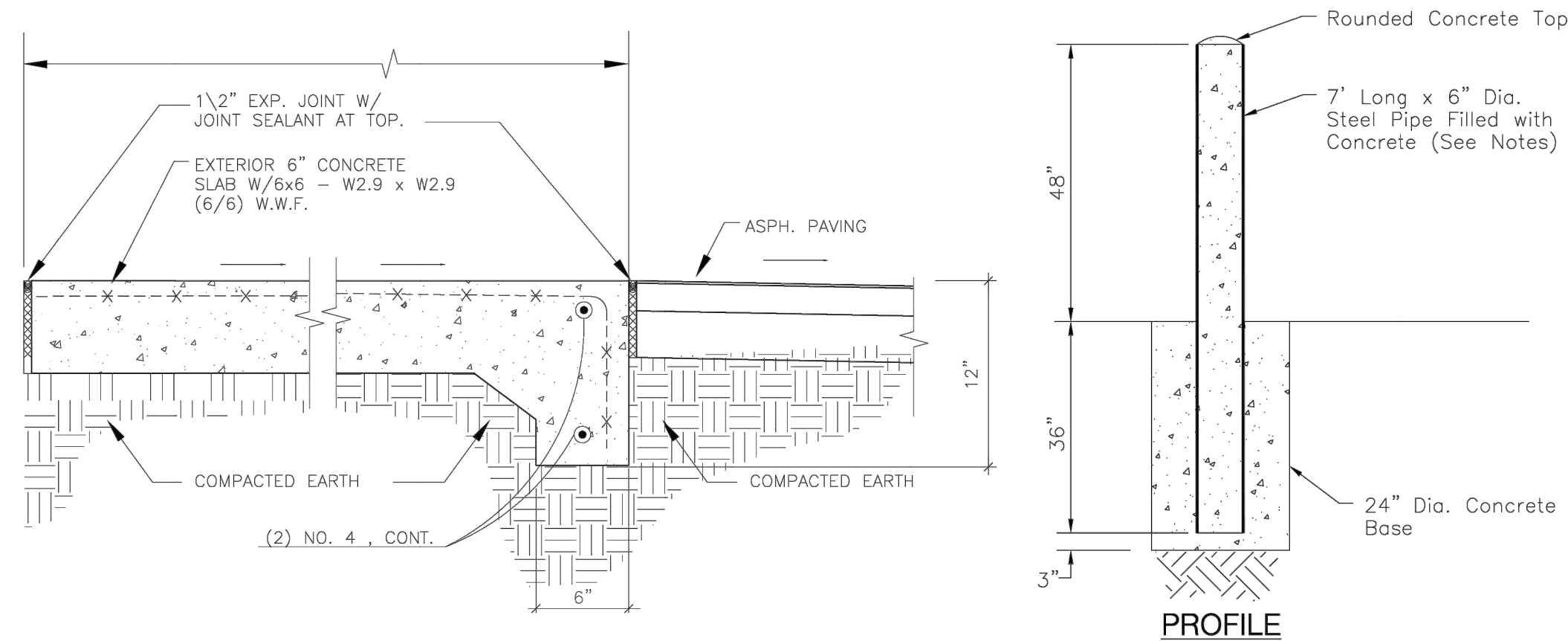
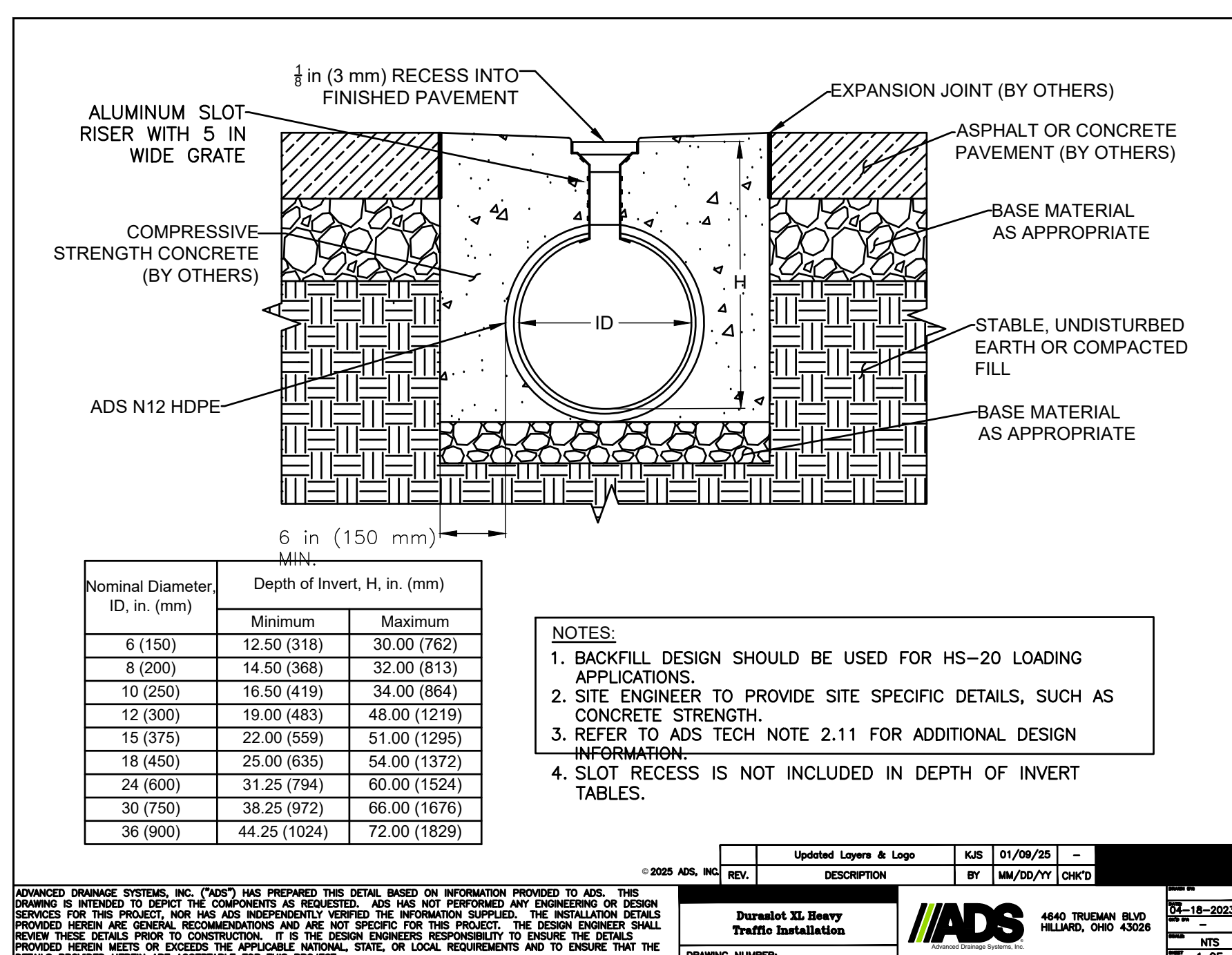
NYLOPLAST
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3150 VERONA AVE
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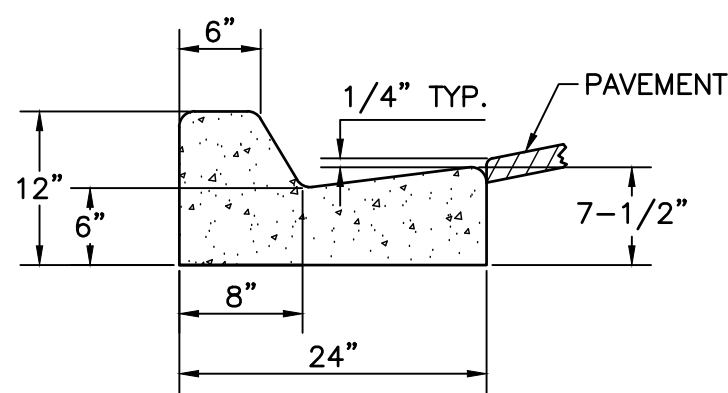
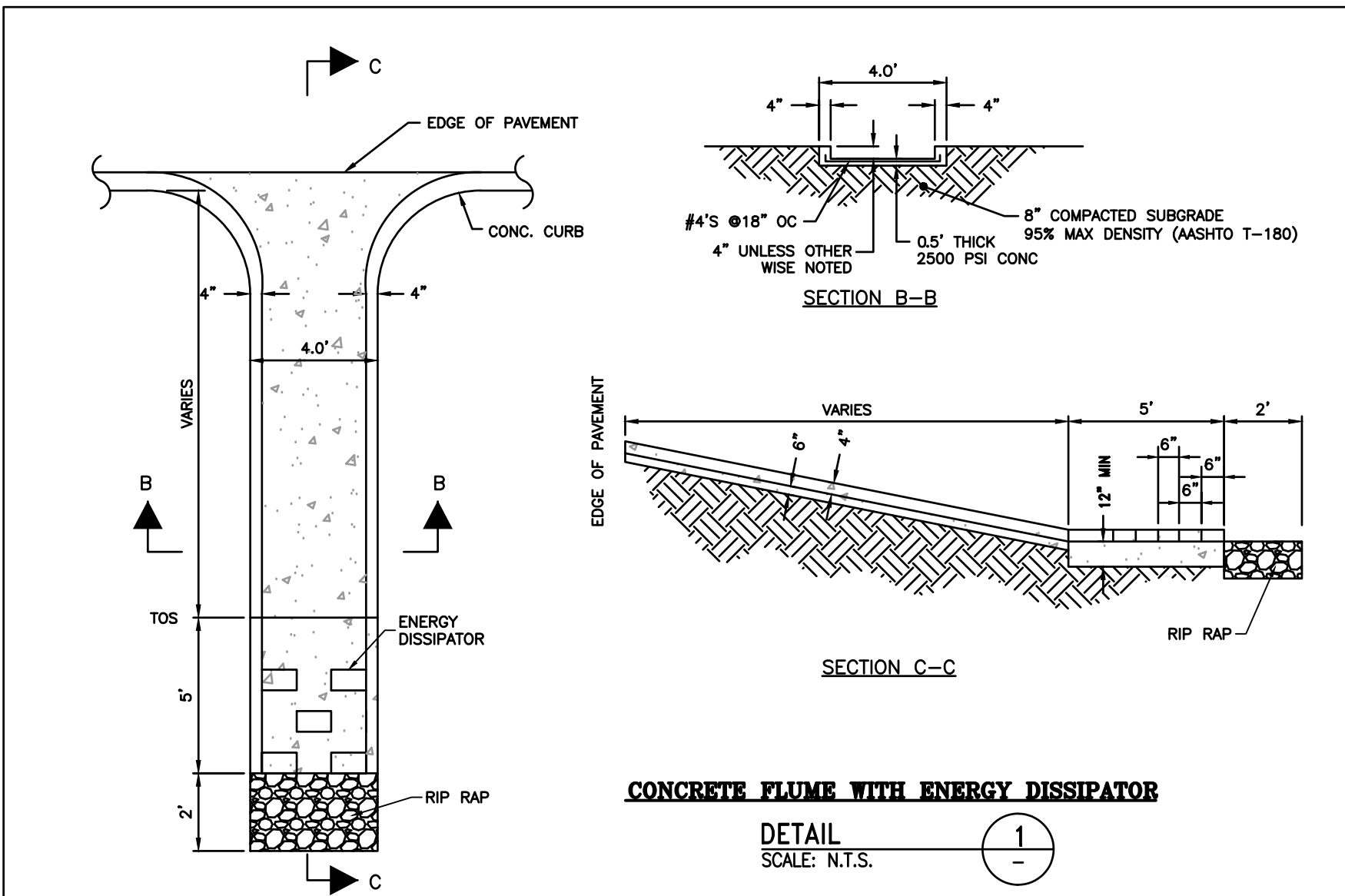
TITLE

DRAIN BASIN, INLINE DRAIN, & ROAD & HIGHWAY
(1/2"20 TRAFFIC LOAD) ASPHALT INSTALLATION DETAIL

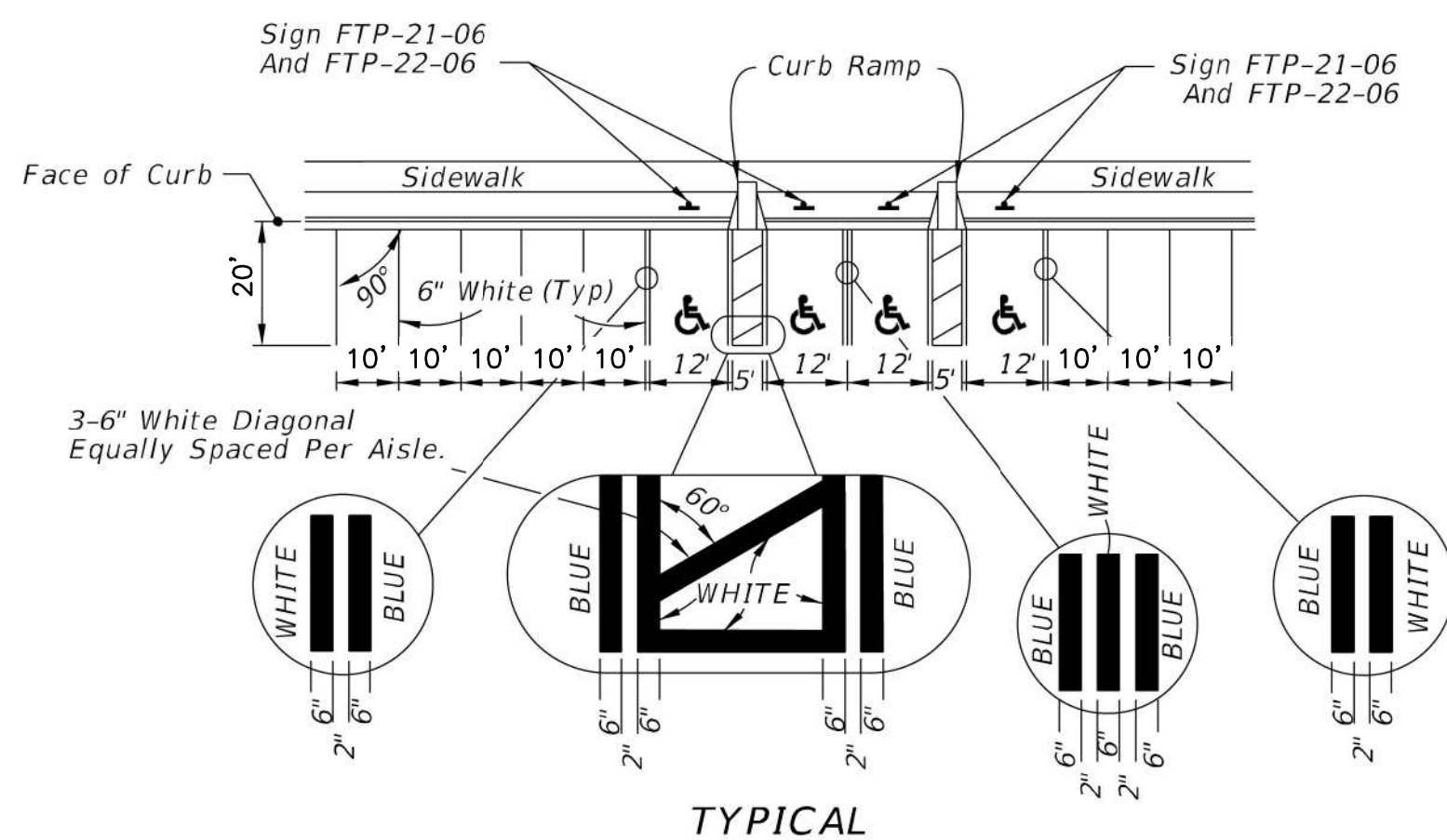
3150 VERONA AVE
BURFORD, GA 30518
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FAX (770) 832-2480
www.nyloplast-usa.com



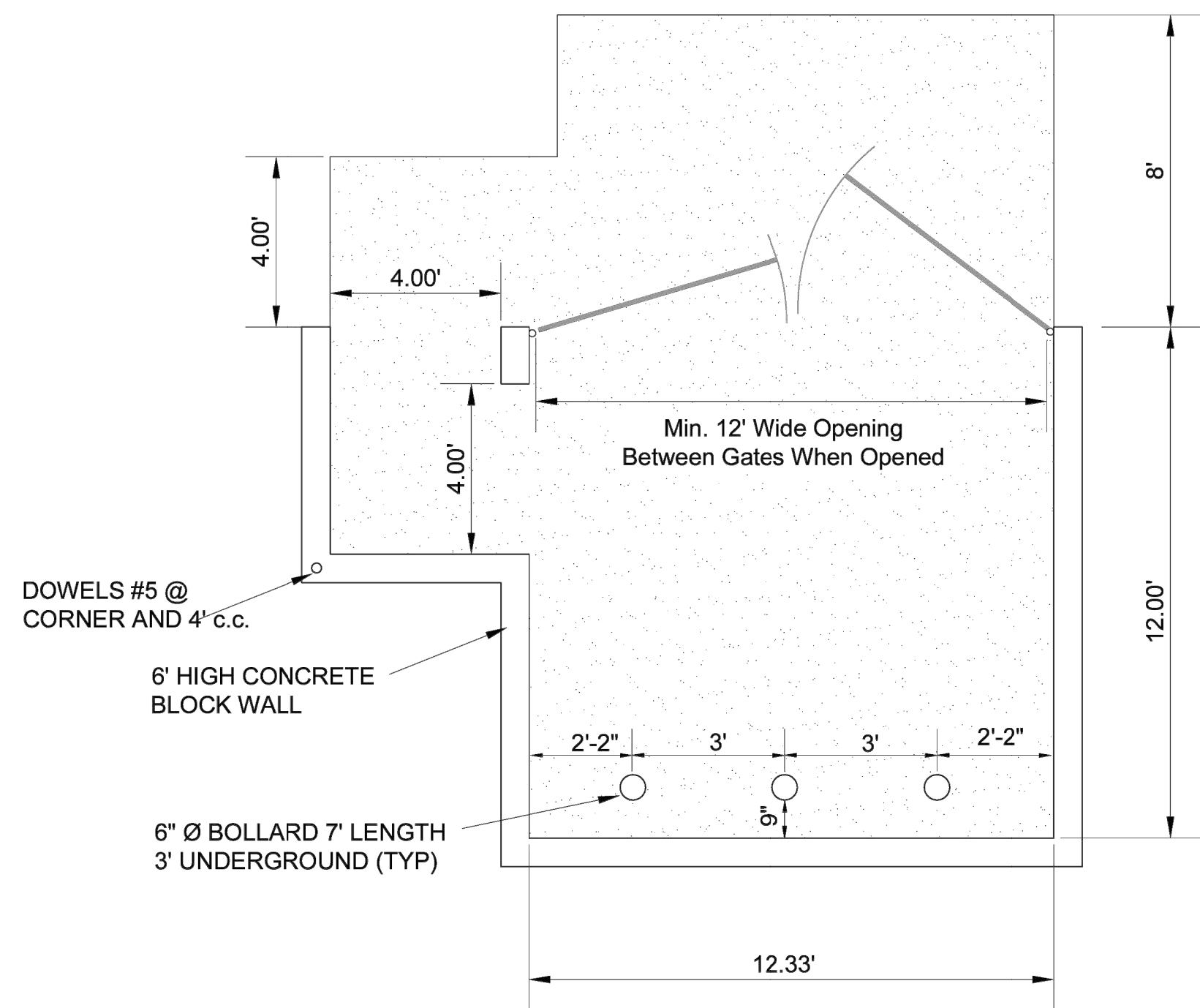
- NOTES:**
1. The minimum wall thickness of the pipe shall be 0.188".
 2. All posts shall have 2 coats of primer and 2 coats of Yellow top coat, unless otherwise noted.
 3. The primer coat shall meet the requirements of FDOT 971-5.
 4. All concrete shall be FDOT class 1.



N.T.S



N.T.S



N.T.S

DATE	BY	REVISIONS

Date: 11/26/2024
Scale: N/A
Design By: JS
Drawn By: DCM
Check By: JS

3700 OKEECHOBEE RD
FORT PIERCE 34947
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DETAILS

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LEO GIANGRANDE, P.E.

PROJECT #: 24-035

D-2

Cert. No. 30901

License No: 66387

Drawing Name: S:\Shared_Folders\GEP_projects\24-035_3700_Okeechobee\Design\24-035_Details\GEP - 24-035 - 3700_Okeechobee_Engineering & Planning Date: 6/27/2024 - 9:31 AM -

FORT PIERCE UTILITIES AUTHORITY
WATER DISTRIBUTION NOTES

1. ALL CONSTRUCTION MATERIAL, INSTALLATION AND TESTING SHALL CONFORM TO THE STANDARD SPECIFICATIONS OF THE FORT PIERCE UTILITIES AUTHORITY.
2. WATER MAINS WHERE SPECIFIED AS POLYVINYL CHLORIDE (PVC) SHALL CONFORM TO AWWA C-900 OR C-905, PRESSURE CLASS 150, DR (18). WATER MAINS WHERE SPECIFIED AS POLYETHYLENE (PE) SHALL CONFORM TO AWWA C-901 OR C-906, STANDARD CODE DESIGNATION PE3408, PIPE CLASS 200, DIMENSION RATIO (DR) 17 FOR DIRECT BURY, (DR) 11 FOR DIRECTIONAL BORING, AND (DR) 9 FOR 2 INCH AND SMALLER PIPELINES.
3. WATER MAIN, WHERE SPECIFIED AS DUCTILE IRON PIPE, SHALL CONFORM TO ANSI/AWWA C151/A21.51 AND SHALL BE PRESSURE CLASS 250 (MINIMUM).
4. POLYVINYL CHLORIDE WATER MAIN SHALL BE BLUE IN COLOR OR WHITE IN COLOR WITH BLUE STRIPES. THE USE OF IDENTIFICATION TAPE ATTACHED TO THE TOP OF THE PIPE MAY BE USED IN LIEU OF MARKING ON THE PIPE. ALSO DIP PIPE SHALL REQUIRE THE USE OF IDENTIFICATION TAPE AND THIN WIRE.
5. FITTINGS SHALL BE DUCTILE IRON CONFORMING TO ANSI/AWWA C-110/A21.10, CLASS 250 MIN., CEMENT LINED AND FACTORY COATED.
6. GATE VALVES SHALL BE MUELLER RESILIENT SEAT, KENNEY KEN-SEAL, AMERICAN OR APPROVED EQUAL. VALVES SHALL CONFORM TO AWWA C-509.
7. WATER LINES SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH FPUA DESIGN AND CONSTRUCTION STANDARDS. THE CONTRACTOR SHALL SUBMIT CERTIFIED DENSITY TESTS AS REQUIRED BY FPUA ENGINEERING AND THE CITY, COUNTY, FDOT, IN CASES WHERE PAVED AREAS FALL WITHIN THE JURISDICTION OF LOCAL OR STATE AGENCIES. THE COMPACTION REQUIREMENTS SHALL NOT BE LESS THAN THE MINIMUM REQUIRED BY THE APPROPRIATE RESPONSIBLE AGENCY.
8. NO FIELD CHANGES OR DEVIATIONS FROM THE DESIGN SHALL BE MADE WITHOUT PRIOR APPROVAL OF THE FPUA ENGINEER AND CITY/COUNTY/FDOT ENGINEER.
9. THE CONTRACTOR SHALL NOTIFY FPUA ENGINEERING AND CITY/COUNTY/FDOT ENGINEERING 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.
10. A PRE-CONSTRUCTION CONFERENCE BETWEEN THE ENGINEER, THE CONTRACTOR, FPUA, AND CITY/COUNTY/FDOT ENGINEER SHALL BE MANDATORY PRIOR TO COMMENCEMENT OF CONSTRUCTION.
11. TRAFFIC CONTROL, BARRICADES, ETC., SHALL BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS AND APPROVED BY THE CITY ENGINEER.
12. MINIMUM COVER SHALL BE 36 INCHES EXCEPT AS APPROVED BY THE UTILITIES ENGINEER AND CITY/COUNTY/FDOT ENGINEER. PIPES WITH COVER LESS THAN 30 INCHES SHALL BE CONSTRUCTED OF DUCTILE IRON OR IN PVC CASING.
13. DISTURBED AREAS SHALL BE RESTORED IN CONFORMANCE WITH THE APPLICABLE GOVERNING AGENCY REQUIREMENTS.
14. EXISTING UTILITIES AND DRAINAGE SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION AND PROTECTED BY THE CONTRACTOR.
15. WATER MAINS SHALL BE TESTED AND DISINFECTED IN ACCORDANCE WITH THE APPLICABLE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION AND AWWA C-651 FOR DISINFECTION.

WATER DISTRIBUTION		G-1 NOTES	
DATE: 06/27/2024	REVISION: 01	DESIGNED BY: J.S.	APPROVED BY: J.S.
DRAWN BY: J.S.	CHECKED BY: J.S.	DATE: 06/27/2024	SCALE: N.T.S.
PROJECT: 24-035		SHEET: 1 OF 2	
FPUA COMMUNITY PROJECT		FT. PIERCE UTILITIES AUTHORITY	

FORT PIERCE UTILITIES AUTHORITY
WATER DISTRIBUTION NOTES
CONTINUED

16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EXISTING UTILITIES AND DRAINAGE.
17. THE CONTRACTOR SHALL FURNISH RECORD DRAWING INFORMATION TO THE ENGINEER INCLUDING LOCATIONS OF VALVES, FITTINGS, SERVICE CONNECTIONS, BLOWOFFS, AIR RELEASE VALVES, AND ANY OTHER PERTINENT INFORMATION NECESSARY TO LOCATE ITEMS CONSTRUCTED UNDER THIS PROJECT, AS REQUIRED BY THE UTILITIES ENGINEER.
18. THE CONTRACTOR SHALL TAP EXISTING LINES UNDER THE SUPERVISION OF THE FORT PIERCE UTILITIES AUTHORITY ONLY AFTER TESTING AND DISINFECTION HAS BEEN COMPLETED AND APPROVED ON THE TAPPING VALVE AND SLEEVE.
19. WATER MAIN SHALL BE MARKED BY THE USE OF CONTINUOUS 1/2 GAUGE THIN MULTI STRANDED WIRE (BLUE IN COLOR) AND IDENTIFICATION TAPE WITH "WATER" MARKED ON TAPE, PERMANENTLY ATTACHED TO THE TOP OF THE WATER MAIN IN ACCORDANCE WITH THE FORT PIERCE UTILITIES AUTHORITY SPECIFICATIONS.
20. SERVICE TAPS SHALL BE PLACED APPROXIMATELY TEN FEET AWAY FROM GATE VALVES, AS SHOWN, FOR TESTING. FOLLOWING TESTING AND STERILIZATION OF WATER LINE, CONTRACTOR SHALL PLACE A BRASS PLUG IN CORPORATION STOPS AND CURB STOPS SHALL BE REMOVED FROM TESTING LOCATIONS.
21. MECHANICAL RESTRAINTS TO BE USED ON ALL FITTINGS AND PLACED IN ACCORDANCE WITH MANUFACTURER'S OR ENGINEER'S RECOMMENDATIONS (WHICHEVER IS MORE STRINGENT) AND FPUA REQUIREMENTS.
22. ALL MAINS SHALL BE TESTED AT A MINIMUM OF 150 PSI. TESTING METHODS SHALL CONFORM TO AWWA C-800, - 2 HR MINIMUM TEST.
$$L = \frac{50(D)^2}{148,000} \times \frac{1}{2}$$
$$L = \text{LEAKAGE IN GPH}$$
$$S = \text{LENGTH OF PIPE IN FEET}$$
$$D = \text{PIPE DIAMETER IN INCHES}$$
$$P = \text{TESTING PRESSURE IN PSI}$$
23. PRIOR TO ANY TESTING, ALL MAINS 6" IN DIA. AND LARGER SHALL HAVE A SWAB PASSED THRU THE ENTIRE LENGTH OF THE LINE. NOTE: SWAB SHOULD BE PLACED IN 1st JOINT OF NEW LINE. END OF MAIN SHOULD BE "TURNED UP" AT 45X AND EXTENDED SO THAT SWABBING AND A FULL BORE FLUSH CAN BE ACCOMPLISHED. BLOW-OFF ASST CAN THEN BE PLACED, WHERE LINES BRANCH, SWABS WILL BE PLACED IN BRANCH LINES AND SEQUENTIALLY SWABBED AND FLUSHED.
24. A MINIMUM SIX FEET AND PREFERABLY TEN FEET HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN THE WATER MAIN AND ANY WASTEWATER LINES. 6 INCHES MINIMUM VERTICAL SEPARATION IF WATER MAIN IS OVER WASTEWATER AND 12 INCHES IF WATER MAIN IS UNDER SHALL BE MAINTAINED BETWEEN THE WATER MAIN AND ANY WASTEWATER LINES. THE DISTANCE SHALL BE MEASURED FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE OR STRUCTURE. WHERE THIS MINIMUM SEPARATION CANNOT BE MAINTAINED, THE CROSSING SHALL BE ARRANGED SO THAT THE WASTEWATER PIPE JOINTS AND THE WATER MAIN PIPE JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING, AND THE WATER MAIN SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE (DIP) AT THE CROSSING. SUFFICIENT LENGTHS OF DIP MUST BE USED TO PROVIDE A MINIMUM SEPARATION OF 10 FEET BETWEEN ANY TWO JOINTS. ALL JOINTS ON THE WATER MAIN WITHIN 20 FEET OF THE CROSSING MUST BE MECHANICALLY RESTRAINED. A MINIMUM VERTICAL CLEARANCE OF 6 INCHES MUST BE MAINTAINED AT ALL CROSSINGS.
25. WHERE A WATER MAIN IS TO BE INSTALLED BELOW A STORM DRAIN PIPE, A MINIMUM OF 6 INCHES OF VERTICAL CLEARANCE BETWEEN PIPES SHALL BE CONSTRUCTED OF DIP AT THE CROSSING, AND SHALL BE MECHANICALLY RESTRAINED WITHIN 20 FEET OF THE CROSSING.
26. CONTRACTOR SHALL COMPLY WITH FLORIDA TRENCH SAFETY ACT REQUIREMENTS.

WATER DISTRIBUTION		G-1 NOTES	
DATE: 06/27/2024	REVISION: 01	DESIGNED BY: J.S.	APPROVED BY: J.S.
DRAWN BY: J.S.	CHECKED BY: J.S.	DATE: 06/27/2024	SCALE: N.T.S.
PROJECT: 24-035		SHEET: 2 OF 2	
FPUA COMMUNITY PROJECT		FT. PIERCE UTILITIES AUTHORITY	

FORT PIERCE UTILITIES AUTHORITY WASTEWATER CONSTRUCTION NOTES

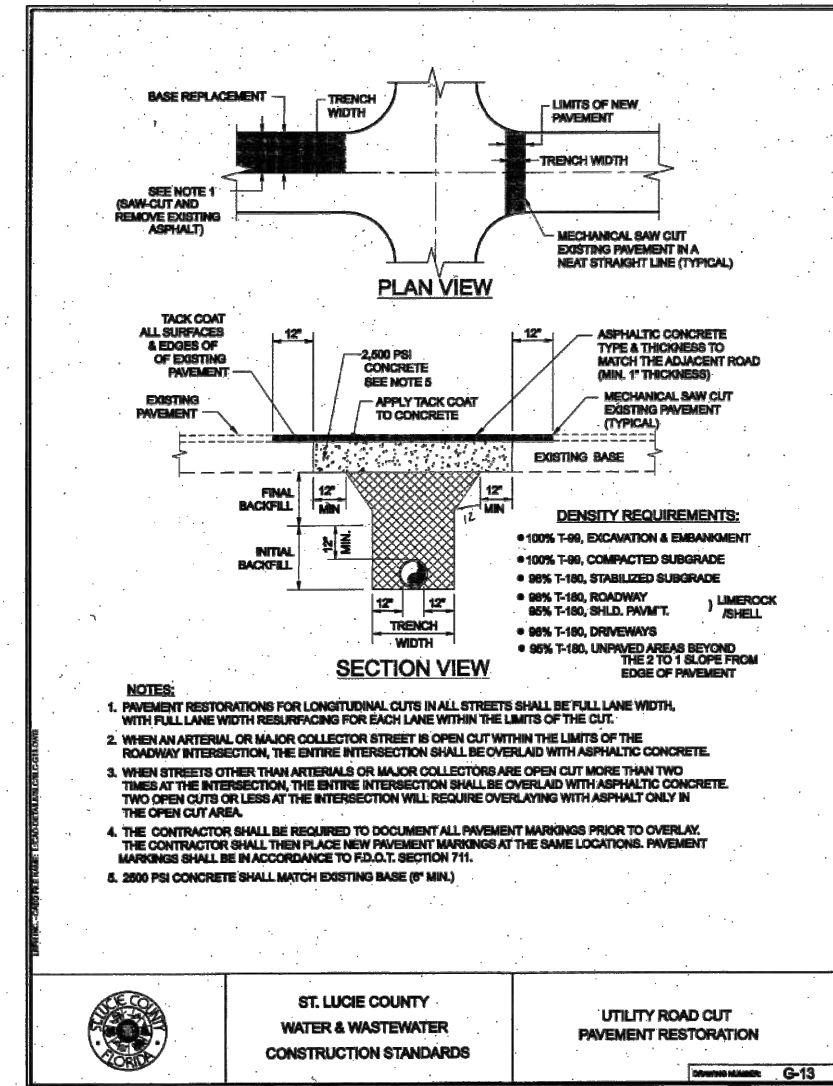
1. ALL CONSTRUCTION MATERIAL, INSTALLATION AND TESTING SHALL CONFORM TO THE STANDARD SPECIFICATIONS OF THE FORT PIERCE UTILITIES AUTHORITY.
2. GRAVITY SEWER MAIN SHALL BE POLYVINYL CHLORIDE (PVC) 20, GREEN OR WHITE IN COLOR. GRAVITY SEWER MAIN SHALL HAVE LOCATOR TAPE WITH "SEWER" MARKED ON TAPE AND SHALL CONFORM TO ASTM D-3034.
3. THE MANHOLE BASE SHALL BE SET ON A FIRM, DRY AND STABLE OR COMPACTED BASE FOUNDATION. IF NECESSARY, THE CONTRACTOR SHALL UTILIZE ROCK TO PROVIDE A FIRM AND SUITABLE MANHOLE BASE FOUNDATION.
4. WASTEWATER LINES SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH FPUA DESIGN AND CONSTRUCTION STANDARDS. THE CONTRACTOR SHALL SUBMIT CERTIFIED DENSITY TESTS AS REQUIRED BY FPUA ENGINEERING AND THE CITY ENGINEERING DEPARTMENT. IN CASES WHERE PAVED AREAS FALL WITHIN THE JURISDICTION OF LOCAL OR STATE AGENCIES, THE COMPACTION REQUIREMENTS SHALL NOT BE LESS THAN THE MINIMUM REQUIRED BY THE APPROPRIATE RESPONSIBLE AGENCY.
5. A 1% MINIMUM SLOPE SHALL BE MAINTAINED ON ALL SANITARY SERVICE LATERALS.
6. THE CONTRACTOR SHALL FURNISH RECORD DRAWING INFORMATION TO THE ENGINEER CONSISTING OF PIPE SIZES, LOCATION OF SERVICE TEE WYES, DIAMETER OF SERVICES, LOCATION OF ANY FITTINGS, FINAL RIM AND INVERT ELEVATION OF ALL MANHOLES AND ANY OTHER PERTINENT INFORMATION NECESSARY TO LOCATE ITEMS CONSTRUCTED UNDER THIS PROJECT.
7. MAINTAIN SIX FEET AND PREFERABLY 10 FEET HORIZONTAL DISTANCE BETWEEN WATER MAINS AND SEWER MAINS AS A MINIMUM.
8. WASTEWATER FORCE MAINS, WASTEWATER COLLECTION LINES, AND STORM SEWERS SHOULD CROSS UNDER WATER MAINS WHENEVER POSSIBLE. A MINIMUM VERTICAL DISTANCE OF 12 INCHES BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE SHALL BE PROVIDED WHENEVER POSSIBLE. WHERE THIS MINIMUM SEPARATION CANNOT BE MAINTAINED, THE CROSSING SHALL BE ARRANGED SO THAT THE WASTEWATER PIPE JOINTS AND THE WATER PIPE JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING, AND THE WATER MAIN SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE (DIP) AT THE CROSSING. SUFFICIENT LENGTHS OF DIP MUST BE USED TO PROVIDE A MINIMUM SEPARATION OF 10 FEET BETWEEN ANY TWO JOINTS. ALL JOINTS ON THE WATER MAIN WITHIN 20 FEET OF THE CROSSING MUST BE MECHANICALLY RESTRAINED. A MINIMUM VERTICAL CLEARANCE OF 6 INCHES MUST BE MAINTAINED AT ALL CROSSINGS.
9. A PRE-CONSTRUCTION CONFERENCE BETWEEN THE ENGINEER, THE CONTRACTOR, AND FPUA/CITY/COUNTY/FDOT SHALL BE MANDATORY PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
10. NO FIELD CHANGES OR DEVIATIONS FROM THE DESIGN SHALL BE MADE WITHOUT PRIOR APPROVAL FPUA/CITY/COUNTY/FDOT ENGINEER.
11. TRAFFIC CONTROL, BARRICADES, ETC. SHALL BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS.
12. CONTRACTOR SHALL NOTIFY FORT PIERCE UTILITIES AUTHORITY 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.
13. WASTEWATER FORCE MAIN SHALL BE POLYVINYL CHLORIDE CONFORMING TO AWWA C-900, AND SHALL BE CLASS 150, DR-18.
14. WASTEWATER FORCE MAIN SHALL BE GREEN IN COLOR.
15. FITTINGS SHALL BE DUCTILE IRON, CONFORMING TO ANSI/AWWA C-110/A21.10 CLASS 250 MIN. AND INTERIOR EPOXY COATED.
16. WASTEWATER FORCE MAIN SHALL BE MARKED BY THE USE OF CONTINUOUS 1/2 GAUGE THIN WIRE (GREEN IN COLOR) PERMANENTLY ATTACHED TO THE TOP OF THE FORCE MAIN WITH LOCATOR TAPE (GREEN IN COLOR) MARKED "SEWER" ON TAPE IN ACCORDANCE WITH FPUA SPECIFICATIONS.
17. MINIMUM COVER SHALL BE 36 INCHES. PIPES WITH COVER LESS THAN 30 INCHES SHALL REQUIRE PRIOR APPROVAL OF THE UTILITIES ENGINEER AND SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE.
18. EACH SERVICE LATERAL WILL BE MARKED WITH A LOCATOR BALL AS MANUFACTURED BY SM CORPORATION, OR APPROVED EQUAL AS REQUIRED BY FPUA ENGINEER.
19. ALL MANHOLES SHALL HAVE SEWER RAIN GUARDS INSTALLED AS REQUIRED BY FPUA ENGINEER.
20. THE CONTRACTOR SHALL COMPLY WITH THE FLORIDA TRENCH SAFETY ACT REQUIREMENTS.

WASTEWATER CONSTRUCTION NOTES FPUA REQUIREMENTS		G-2 CONSTRUCTION NOTES	
DATE: 06/27/2024	REVISION: 01	DESIGNED BY: J.S.	APPROVED BY: J.S.
DRAWN BY: J.S.	CHECKED BY: J.S.	DATE: 06/27/2024	SCALE: N.T.S.
PROJECT: 24-035		SHEET: 1 OF 1	
FPUA COMMUNITY PROJECT		FT. PIERCE UTILITIES AUTHORITY	

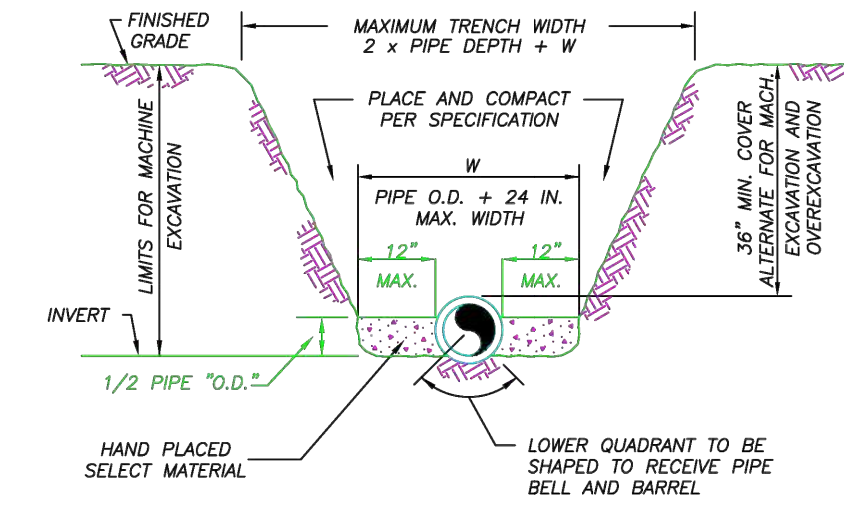
STANDARD SEPARATION STATEMENT FOR
WATER / SEWER CONFLICTS

1. SANITARY SEWER, FORCE MAINS, AND STORM SEWERS SHOULD CROSS UNDER WATER MAINS WHENEVER POSSIBLE. SANITARY SEWER, FORCE MAINS AND STORM SEWERS CROSSING UNDER WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 6 INCHES, PREFERABLY 12 INCHES BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE WHEN ABOVE, AND AT LEAST 12 INCHES OF SEPARATION WHEN THE WATER MAIN IS BELOW.
- WHERE SANITARY SEWER, FORCE MAINS, STORM SEWERS MUST CROSS A WATER MAIN WITH LESS THAN 6 INCHES VERTICAL SEPARATION, BOTH THE SEWER AND WATER MAIN SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE (DIP) EQUIDISTANT FROM THE POINT OF CROSSING (PIPES CENTERED ON THE CROSSING). AT SUCH CROSSINGS PIPES SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORMWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART II OF CHAPTER 62-610, F.A.C., AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY OR PRESSURE TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART II OF CHAPTER 62-610, F.A.C.
- WHERE A NEW PIPE CONFLICTS WITH AN EXISTING PIPE WITH LESS THAN 6 INCHES VERTICAL CLEARANCE, THE NEW PIPE SHALL BE CONSTRUCTED OF DIP (EXCEPT STORM SEWERS) AND NEW PIPES SHALL BE ARRANGED TO MEET THE CROSSING REQUIREMENTS ABOVE.
2. A MINIMUM 3-FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN ANY TYPE OF STORM SEWER AND WATER MAIN IN PARALLEL INSTALLATIONS WHENEVER POSSIBLE.
- A MINIMUM 3-FOOT, AND PREFERABLY 10-FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN VACUUM TYPE SANITARY SEWER AND WATER MAIN IN PARALLEL INSTALLATIONS WHENEVER POSSIBLE.
- A MINIMUM 10-FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN "ON-SITE" SEWAGE TREATMENT AND DISPOSAL SYSTEM AND WATER MAIN IN PARALLEL INSTALLATIONS WHENEVER POSSIBLE.
- A MINIMUM 6-FOOT, AND PREFERABLY 10-FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN GRAVITY OR PRESSURE TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER AND WATER MAIN IN PARALLEL INSTALLATIONS WHENEVER POSSIBLE. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY-TYPE SANITARY SEWERS SHALL BE REDUCED TO 3 FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER.
- IN CASES WHERE IT IS NOT POSSIBLE TO MAINTAIN A 10-FOOT HORIZONTAL SEPARATION, THE WATER MAIN MUST BE LAID IN A SEPARATE TRENCH OR ON A UNDISTURBED EARTH SHELF LOCATED ON ONE SIDE OF THE SEWER OR FORCE MAIN AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 6 INCHES ABOVE THE TOP OF THE SEWER.
- WHERE IT IS NOT POSSIBLE TO MAINTAIN A VERTICAL DISTANCE OF 6 INCHES IN PARALLEL INSTALLATIONS, THE WATER MAIN SHALL BE CONSTRUCTED OF DIP AND THE SEWER OR THE FORCE MAIN SHALL BE CONSTRUCTED OF DIP (EXCEPT STORM SEWER) WITH A MINIMUM VERTICAL DISTANCE OF 6 INCHES. THE WATER MAIN SHOULD ALWAYS BE ABOVE THE SEWER. JOINTS ON THE WATER MAIN SHALL BE LOCATED AS FAR APART AS POSSIBLE FROM JOINTS ON THE SEWER OR FORCE MAIN (STAGGERED JOINTS).
3. ALL DIP SHALL BE PRESSURE CLASS 250 MIN. ADEQUATE PROTECTIVE MEASURES AGAINST CORROSION SHALL BE USED AS DETERMINED BY THE DESIGN ENGINEER.

STANDARD SEPARATION STATEMENT FOR WATER/SEWER CONFLICTS		G-3 WATER/SEWER CONFLICT	
DATE: 06/27/2024	REVISION: 01	DESIGNED BY: J.S.	APPROVED BY: J.S.
DRAWN BY: J.S.	CHECKED BY: J.S.	DATE: 06/27/2024	SCALE: N.T.S.
PROJECT: 24-035		SHEET: 1 OF 1	
FPUA COMMUNITY PROJECT		FT. PIERCE UTILITIES AUTHORITY	



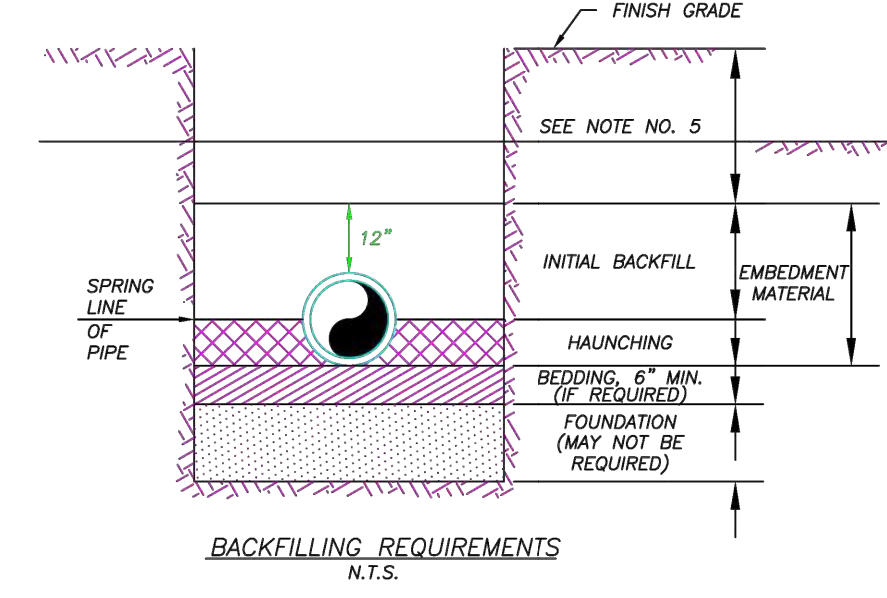
PAVEMENT RESTORATION (COUNTY)		R-2	
DATE: 06/27/2024	REVISION: 01	DESIGNED BY: J.S.	APPROVED BY: J.S.
DRAWN BY: J.S.	CHECKED BY: J.S.	DATE: 06/27/2024	SCALE: N.T.S.
PROJECT: 24-035		SHEET: 1 OF 1	
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- NOTES:
- 1) THE CONTRACTOR SHALL COMPLY WITH REQUIREMENTS OF THE FLORIDA TRENCH SAFETY ACT.
 - 2) INITIAL BACKFILL SHALL BE HAND PLACED TO 12" ABOVE THE PIPE. BACKFILL SHALL BE MECHANICALLY TAMPED TO A MINIMUM OF 100% OF MAX. DENSITY AS DETERMINED BY AASHTO METHOD T-99.

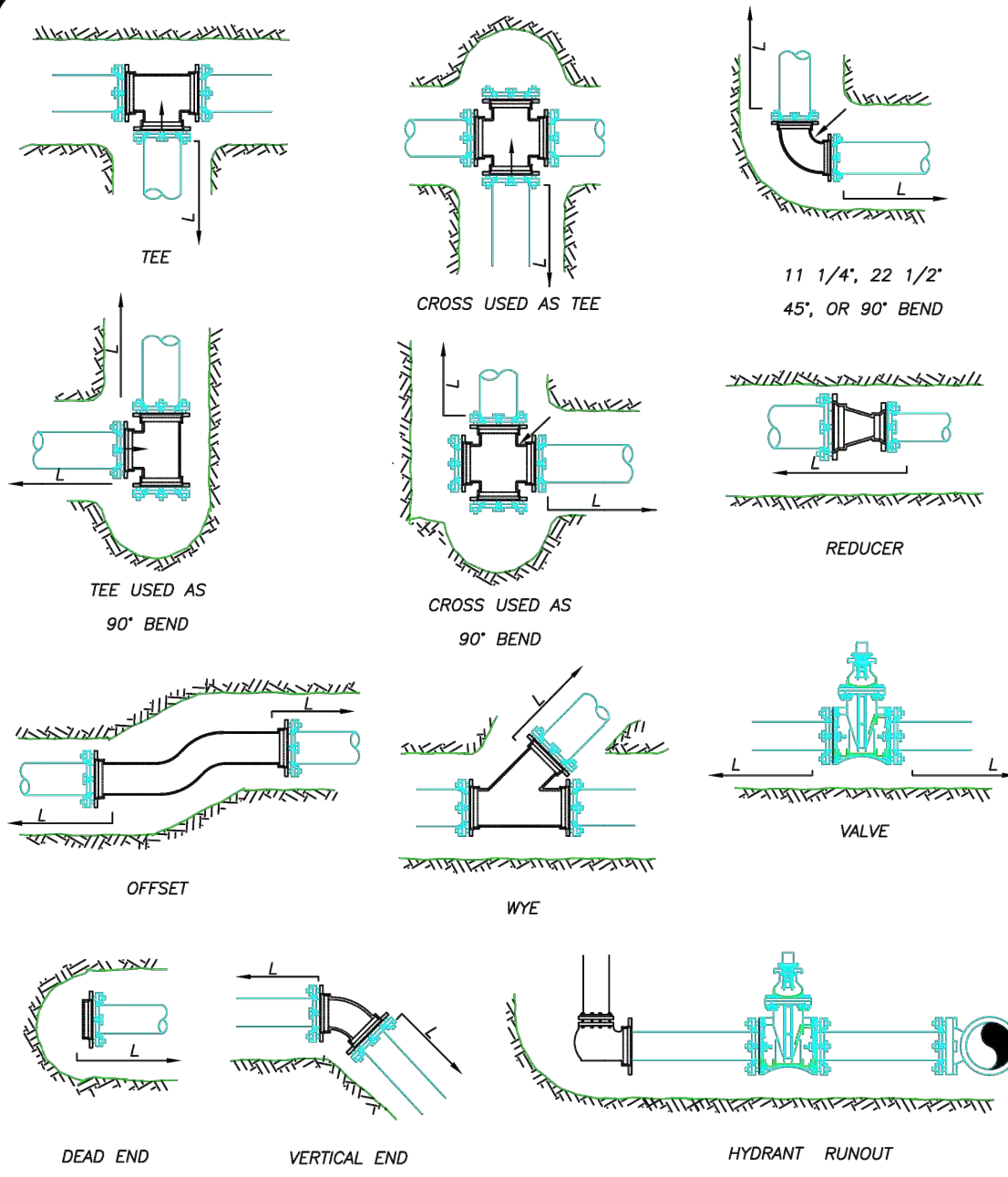
TYPICAL TRENCH DETAIL
N.T.S.

TYPICAL TRENCH DETAIL		M-1	
DATE: 06/27/2024	REVISION: 01	DESIGNED BY: J.S.	APPROVED BY: J.S.
DRAWN BY: J.S.	CHECKED BY: J.S.	DATE: 06/27/2024	SCALE: N.T.S.
PROJECT: 24-035		SHEET: 1 OF 1	
FPUA COMMUNITY PROJECT		FT. PIERCE UTILITIES AUTHORITY	



- NOTES:
- 1) IN CERTAIN SOIL CONDITIONS A FOUNDATION MAY BE REQUIRED.
 - 2) BEDDING IS REQUIRED PRIMARILY TO BRING THE TRENCH BOTTOM UP TO GRADE. BEDDING MATERIALS SHALL PROVIDE A UNIFORM AND ADEQUATE LONGITUDINAL SUPPORT UNDER THE PIPE.
 - 3) HAUNCHING MATERIAL SHALL BE HAND PLACED TO THE SPRINGLINE OF THE PIPE. MATERIAL SHALL BE CONSOLIDATED UNDER THE PIPE AND HAND TAMPED TO PROVIDE ADEQUATE SIDE SUPPORT.
 - 4) INITIAL BACKFILL MATERIAL SHALL BE HAND PLACED TO 12" ABOVE THE TOP OF THE PIPE. THE SOIL SHALL BE COMPACTED TO 100% MAX. DENSITY (AASHTO T-99) TO A POINT 30" BELOW PROPOSED PROFILE GRADE OR EXISTING GRADE. THE FINAL 30" OF BACKFILL SHALL BE COMPACTED TO 98% OF MAX. DENSITY AS PER AASHTO T-160.
 - 5) DENSITY TEST SHALL BE PERFORMED AT AREAS DETERMINED BY THE UTILITIES ENGINEER OR PERMIT AGENCY HAVING JURISDICTION, AT THE CONTRACTORS EXPENSE.
 - 7) CONTRACTOR TO COMPLY WITH ALL FEDERAL, STATE AND LOCAL TRENCH SAFETY REGULATIONS.

BACKFILLING REQUIREMENTS		M-2	
DATE: 06/27/2024	REVISION: 01	DESIGNED BY: J.S.	APPROVED BY: J.S.
DRAWN BY: J.S.	CHECKED BY: J.S.	DATE: 06/27/2024	SCALE: N.T.S.
PROJECT: 24-035		SHEET: 1 OF 1	
FPUA COMMUNITY PROJECT		FT. PIERCE UTILITIES AUTHORITY	



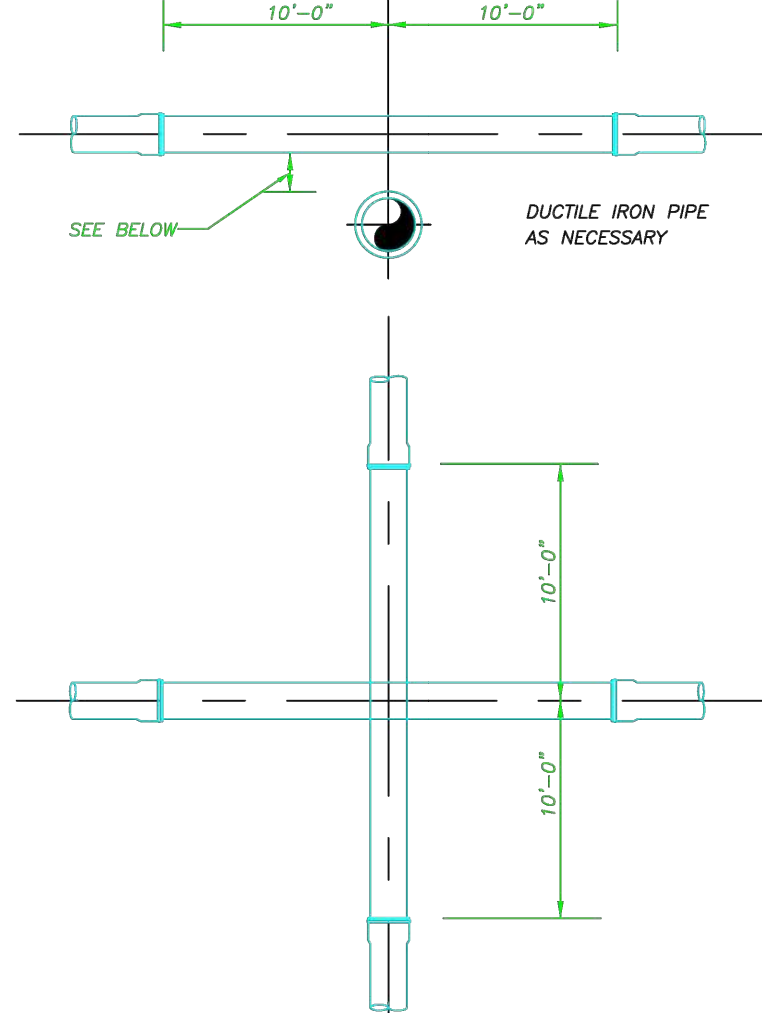
MECHANICAL JOINT ANCHORING REQUIREMENTS
N.T.S.

MECHANICAL JOINT ANCHORING REQUIREMENTS		M-3	
DATE: 06/27/2024	REVISION: 01	DESIGNED BY: J.S.	APPROVED BY: J.S.
DRAWN BY: J.S.	CHECKED BY: J.S.	DATE: 06/27/2024	SCALE: N.T.S.
PROJECT: 24-035		SHEET: 1 OF 1	
FPUA COMMUNITY PROJECT		FT. PIERCE UTILITIES AUTHORITY	

MECHANICAL JOINT RESTRAINT NOTES

- NOTES:
- 1) THE ENGINEER SHALL BE RESPONSIBLE FOR DETERMINING THE REQUIRED LENGTH TO BE RESTRAINED BASED UPON THE PROJECT AREA SOIL TYPE, PROPOSED TRENCH CONDITIONS AND DEPTH, PRESSURE OF 150 PSI, AND A SAFETY FACTOR OF TWO (2). A DRAWING OF EVERY TYPICAL FITTING ASSEMBLY WITHIN THE PROJECT SHALL BE SUBMITTED WHICH REFLECTS THE RESTRAINT DETAIL PROPOSED FOR USE, INCLUDING LENGTH OF PIPE RESTRAINT.
 - 2) REQUIRED RESTRAINED LENGTH CALCULATIONS SHALL ALSO CONSIDER THE CONDITIONS OF OTHER BENDS OR FITTINGS THAT WILL BE LOCATED WITHIN THE CALCULATED RESTRAINED LENGTH (L) OF THE BEND OR FITTING IN QUESTION.
 - 3) EVERY JOINT OR FITTING MUST BE RESTRAINED ON BOTH SIDES OF THE BEND AND FOR TEES ALONG THE BEND ALSO.

MECHANICAL JOINT RESTRAINT NOTES		M-4	
DATE: 06/27/2024	REVISION: 01	DESIGNED BY: J.S.	APPROVED BY: J.S.
DRAWN BY: J.S.	CHECKED BY: J.S.	DATE: 06/27/2024	SCALE: N.T.S.
PROJECT: 24-035		SHEET: 1 OF 1	
FPUA COMMUNITY PROJECT		FT. PIERCE UTILITIES AUTHORITY	



- NOTE:
- PLEASE REFER TO FORT PIERCE UTILITIES STANDARD SEPARATION STATEMENT FOR WATER / SEWER CONFLICTS.

UTILITY CROSSING DETAIL
N.T.S.

UTILITY CROSSING DETAIL		M-5	
DATE: 06/27/2024	REVISION: 01	DESIGNED BY: J.S.	APPROVED BY: J.S.
DRAWN BY: J.S.	CHECKED BY: J.S.	DATE: 06/27/2024	SCALE: N.T.S.
PROJECT: 24-035		SHEET: 1 OF 1	
FPUA COMMUNITY PROJECT		FT. PIERCE UTILITIES AUTHORITY	

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LEO GIANGRANDE, P.E.
Cert. No. 30901
License No. 66387

PROJECT #: 24-035
D-3

PROJECT INFORMATION	
ENGINEERED PRODUCT MANAGER	ABRAHAM JAIMES 786-960-1633 ABRAHAM.JAIMES@ADSPIPE.COM
ADS SALES REP	TIM TEAHAN 561-248-5480 TIM.TEAHAN@ADSPIPE.COM
PROJECT NO.	S482153
PROJECT SITE COORDINATOR:	JAMES FARTHING 407-663-4242 JAMES.FARTHING@ADSPIPE.COM



3700 OKEECHOBEE ROAD

FORT PIERCE, FL, USA

SC-310 STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH SC-310.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE OR POLYETHYLENE COPOLYMERS.
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2922 (POLETHYLENE) OR ASTM F2418 (POLYPROPYLENE), "STANDARD SPECIFICATION FOR CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 325 LBS/FT/%. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
 - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
 - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
 - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2922 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.
- MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECH NOTE #6.32 FOR MANIFOLD SIZING GUIDANCE. DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
- ADS DOES NOT DESIGN OR PROVIDE MEMBRANE LINER SYSTEMS. TO MINIMIZE THE LEAKAGE POTENTIAL OF LINER SYSTEMS, THE MEMBRANE LINER SYSTEM SHOULD BE DESIGNED BY A KNOWLEDGEABLE GEOTEXTILE PROFESSIONAL AND INSTALLED BY A QUALIFIED CONTRACTOR.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-310 SYSTEM

- STORMTECH SC-310 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- STORMTECH SC-310 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "SC/DC STORMTECH CHAMBER INSTALLATION GUIDE".
- CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
 - STONESHOOTER LOCATED OFF THE CHAMBER BED.
 - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
 - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
- THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- MAINTAIN MINIMUM - 3" (80 mm) SPACING BETWEEN THE CHAMBER ROWS.
- EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE; AASHTO M43 #3, 357, 4, 467, 5, 56, OR 57.
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
- ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

- STORMTECH SC-310 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "SC/DC STORMTECH CHAMBER INSTALLATION GUIDE".
- THE USE OF CONSTRUCTION EQUIPMENT OVER SC-310 & SC-740 CHAMBERS IS LIMITED:
 - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
 - NO RUBBER Tired LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "SC/DC STORMTECH CHAMBER INSTALLATION GUIDE".
 - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "SC/DC STORMTECH CHAMBER INSTALLATION GUIDE".
- FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT ADS WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

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DATE	BY	REVISIONS

Date: 11/26/2024
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Drawn By: DCM
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ST LUCIE COUNTY, FL

ADS DETAILS

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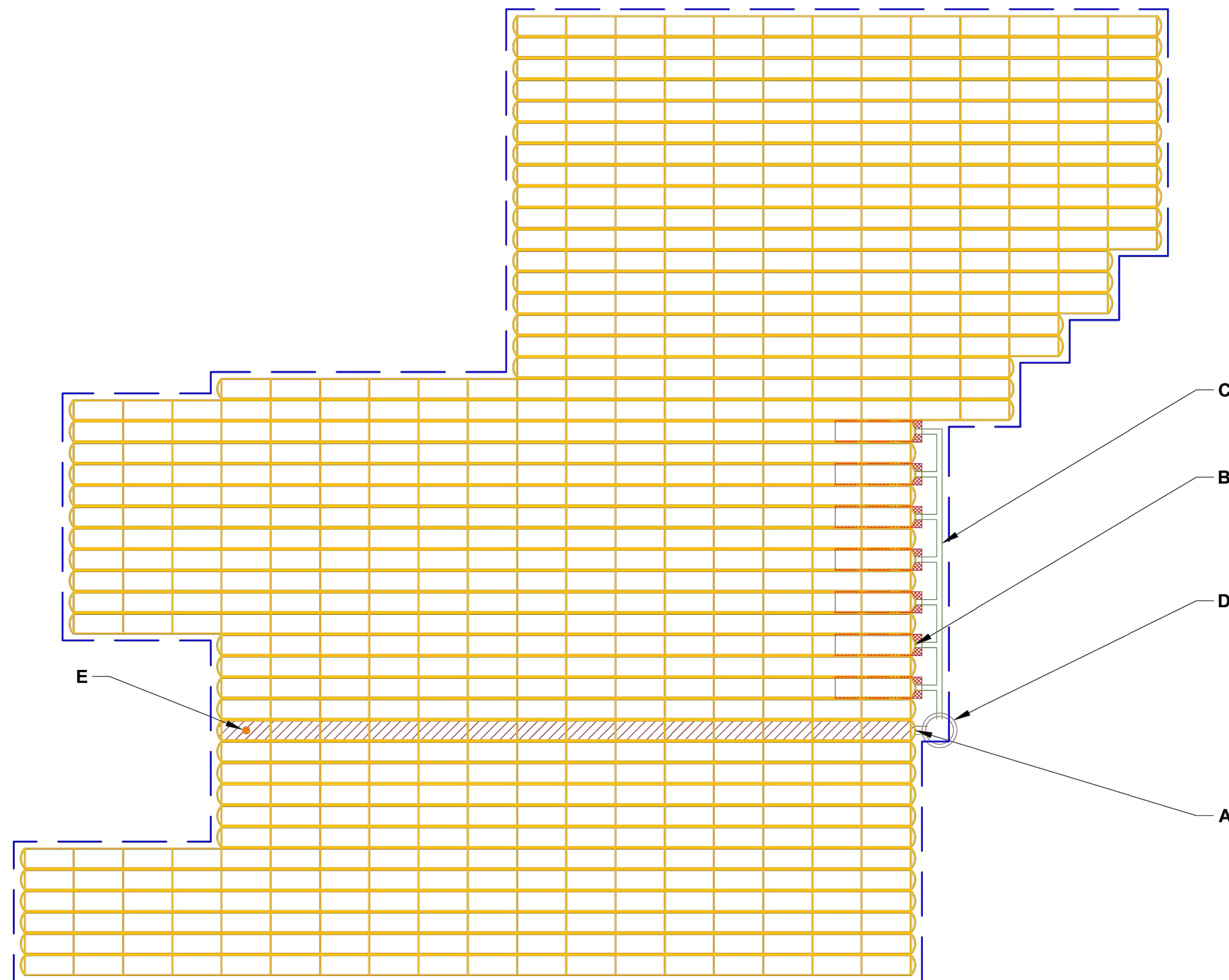
PROJECT #: 24-035

D-6

PROPOSED LAYOUT:	
NORTH BED	
664	STORMTECH SC-310 CHAMBERS
90	STORMTECH SC-310 END CAPS
6	STONE ABOVE (in)
6	STONE BELOW (in)
40	% STONE VOID
20,366	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED)
15,520	SYSTEM AREA (ft ²)
657	SYSTEM PERIMETER (ft)

PROPOSED ELEVATIONS: NORTH BED	
24.33	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED)
18.16	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC)
17.66	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC)
17.66	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT)
17.66	MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT)
16.83	TOP OF STONE
16.33	TOP OF SC-310 CHAMBER
15.29	8" TOP MANIFOLD INVERT
15.08	12" ISOLATOR ROW PLUS CONNECTION INVERT
15.00	BOTTOM OF SC-310 CHAMBER
14.50	BOTTOM OF STONE

*INVERT ABOVE BASE OF CHAMBER				
PART TYPE	ITEM ON LAYOUT	DESCRIPTION	INVERT*	MAX FLOW
PREFABRICATED EZ END CAP	A	12" BOTTOM PREFABRICATED EZ END CAP, PART#: SC310ECEZ / TYP OF ALL 12" BOTTOM CONNECTIONS AND ISOLATOR PLUS ROWS		
PRE-CORED END CAP	B	8" TOP PRE-CORED END CAP, PART#: SC310EPE08TPC / TYP OF ALL 8" TOP CONNECTIONS		
MANIFOLD	C	8" x 8" TOP MANIFOLD, MOLDED FITTINGS	3.50"	
CONCRETE STRUCTURE	D	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		2.3 CFS IN
INSPECTION PORT	E	4" SEE DETAIL		



- ISOLATOR ROW PLUS
(SEE DETAIL)
- PLACE MINIMUM 12.50' OF ADSPLUS625 WOVEN GEOTEXTILE OVER BEDDING STONE AND UNDERNEATH CHAMBER FEET FOR SCOUR PROTECTION AT ALL CHAMBER INLET ROWS
- BED LIMITS

NOTES

- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
- THE SITE DESIGN ENGINEER MUST CONSIDER THE EFFECTS OF POSSIBLE SATURATED SOILS ON NEARBY SYSTEMS, INCLUDING BUT NOT LIMITED TO, RETAINING WALLS, SLOPE CONSTRUCTION/STABILITY, OR BUILDINGS/STRUCTURES. NO FOUNDATION LOADS SHALL BE TRANSMITTED TO THE CHAMBERS.

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LEO GIANGRANDE, P.E.

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PROJECT #: 24-035

D-7

Drawing Name: S:\Shared_Folders\GEP_projects\24-035_3700_Okeechobee\Design\24-035_Detailing Layout Name: D-8 -- Plotted By: Don M -- Date: 6/27/2026 -- 8:31 AM -- Giangrande Engineering & Planning

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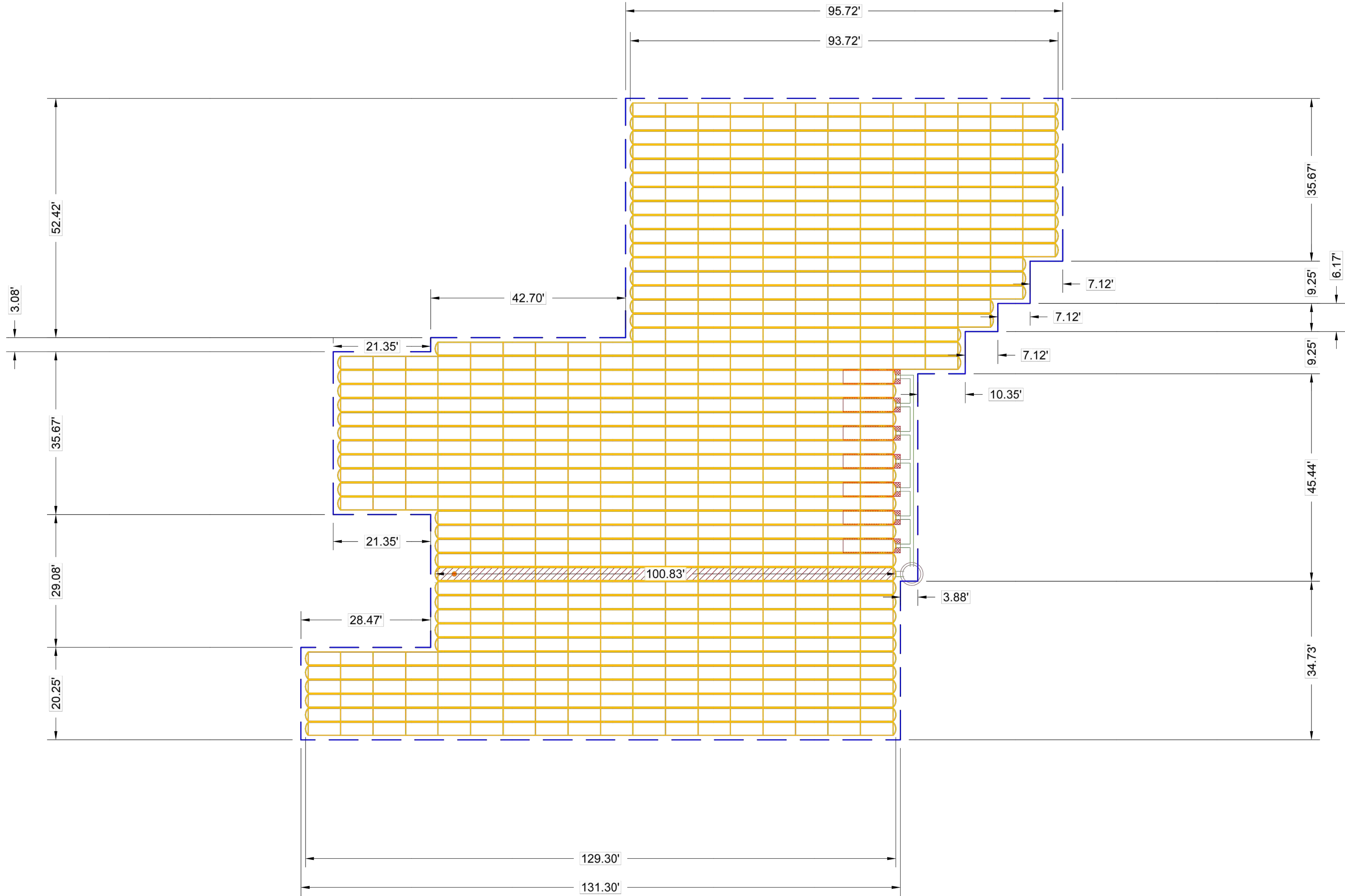
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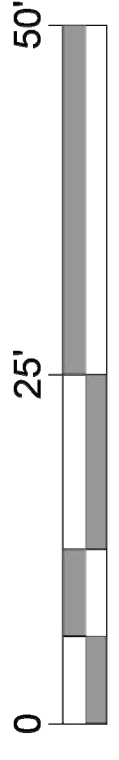
PROJECT #: 24-035
D-8





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PROJECT #: S482153
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DATE: 2/26/2026
DWN: DHC
CHK: DHC

DRAWN: DC

SHEET
3 OF 8

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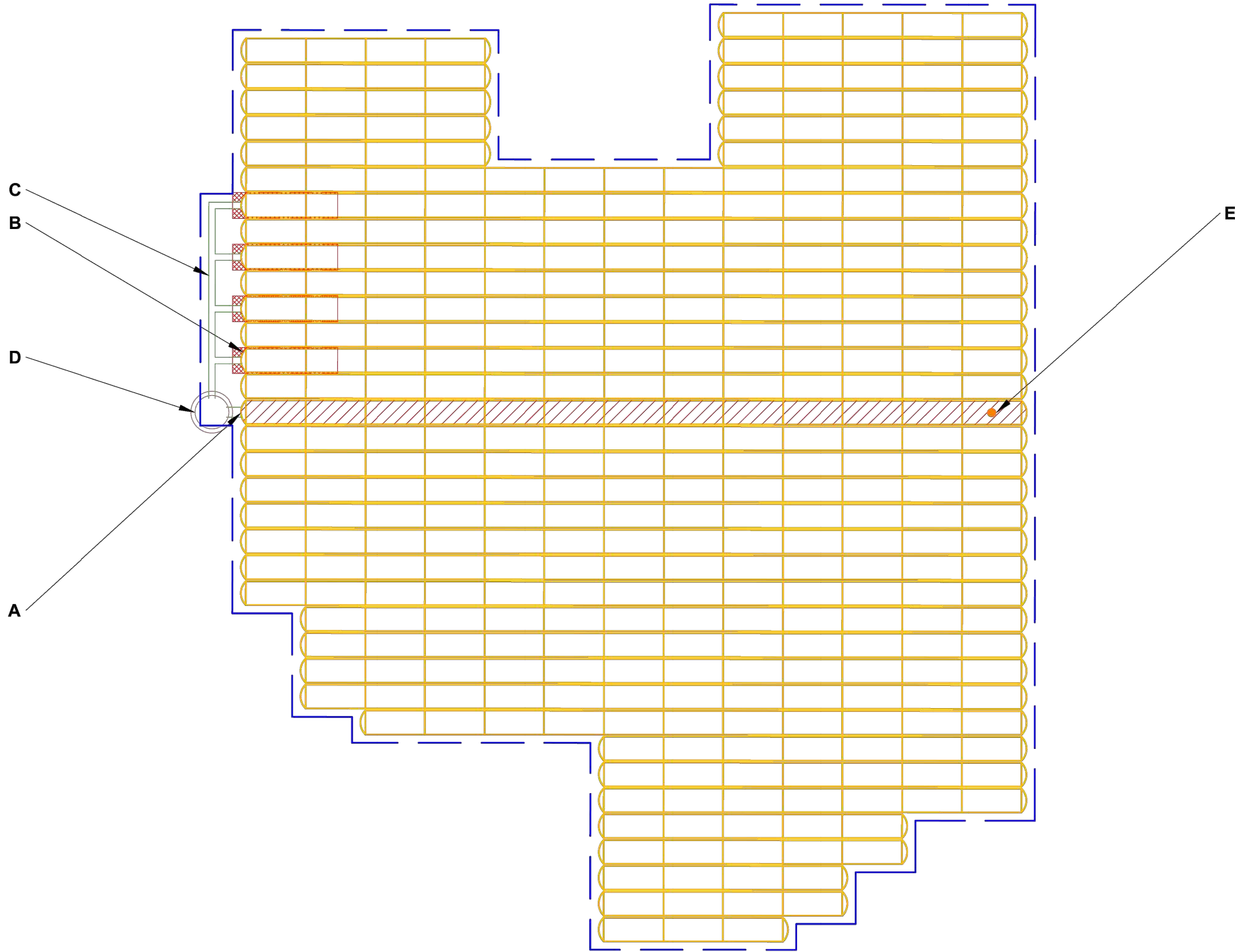
PROPOSED LAYOUT:
SOUTH BED

372	STORMTECH SC-310 CHAMBERS
82	STORMTECH SC-310 END CAPS
6	STONE ABOVE (in)
6	STONE BELOW (in)
40	% STONE VOID
11,187	INSTALLED SYSTEM VOLUME (CF) ABOVE ELEVATION 14.50 (PERIMETER STONE INCLUDED)
8,842	SYSTEM AREA (ft²)
456	SYSTEM PERIMETER (ft)

PROPOSED ELEVATIONS: SOUTH BED

24.23	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED)
18.06	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC)
17.56	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC)
17.56	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT)
17.56	MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT)
16.73	TOP OF STONE
16.23	TOP OF SC-310 CHAMBER
15.19	8" TOP MANIFOLD INVERT
14.98	12" ISOLATOR ROW PLUS CONNECTION INVERT
14.90	BOTTOM OF SC-310 CHAMBER
14.40	BOTTOM OF STONE

*INVERT ABOVE BASE OF CHAMBER				
PART TYPE	ITEM ON LAYOUT	DESCRIPTION	INVERT*	MAX FLOW
PREFABRICATED EZ END CAP	A	12" BOTTOM PREFABRICATED EZ END CAP, PART#: SC310ECEZ / TYP OF ALL 12" BOTTOM CONNECTIONS AND ISOLATOR PLUS ROWS		
PRE-CORED END CAP	B	8" TOP PRE-CORED END CAP, PART#: SC310EPE08TPC / TYP OF ALL 8" TOP CONNECTIONS		
MANIFOLD	C	8" x 8" TOP MANIFOLD, MOLDED FITTINGS	3.50"	
CONCRETE STRUCTURE	D	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		2.3 CFS IN
INSPECTION PORT	E	4" SEE DETAIL		



- ISOLATOR ROW PLUS
(SEE DETAIL)
- PLACE MINIMUM 12.50' OF ADSPLUS625 WOVEN GEOTEXTILE OVER BEDDING
STONE AND UNDERNEATH CHAMBER FEET FOR SCOUR PROTECTION AT ALL
CHAMBER INLET ROWS
- BED LIMITS

NOTES

- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.

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D-9

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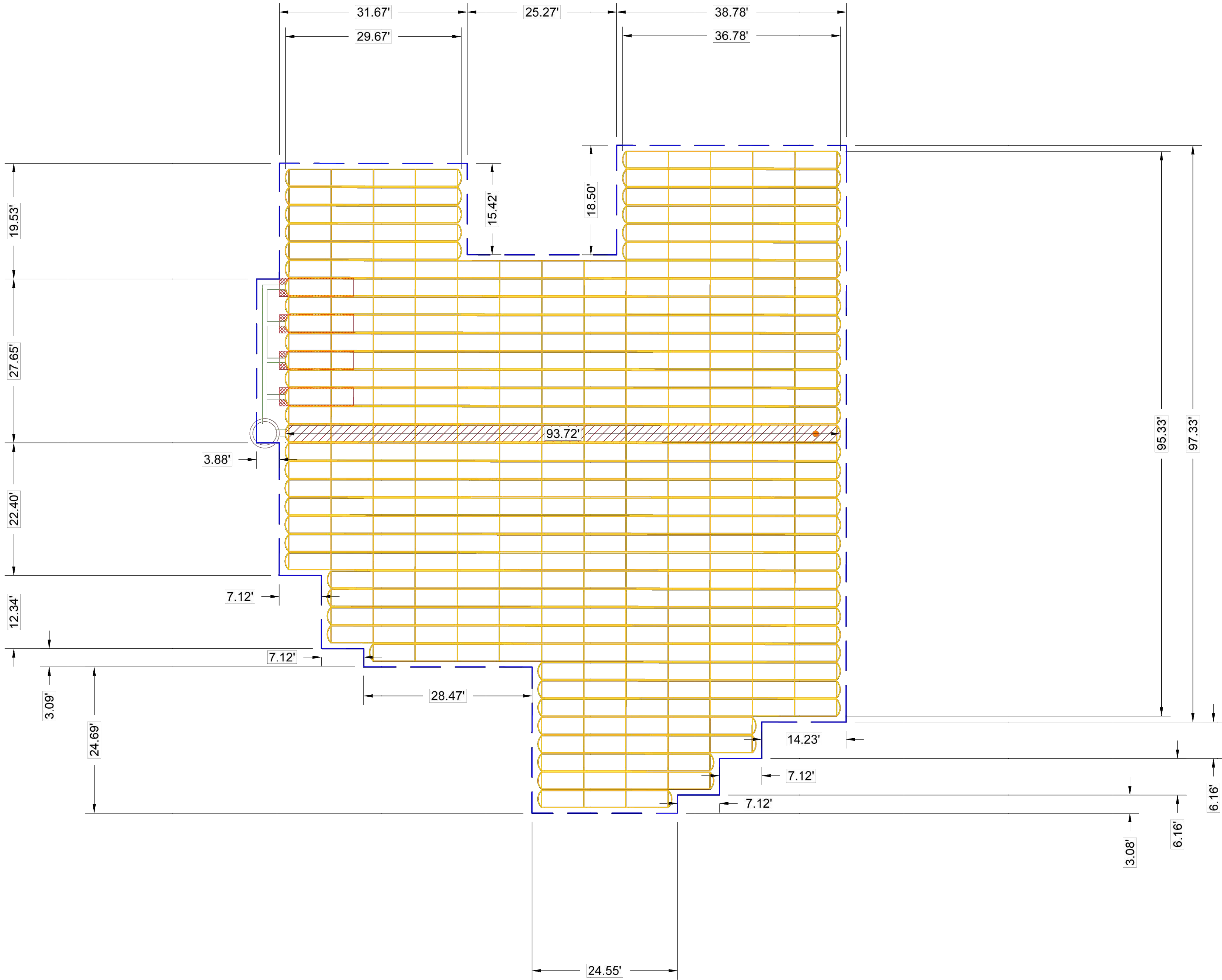
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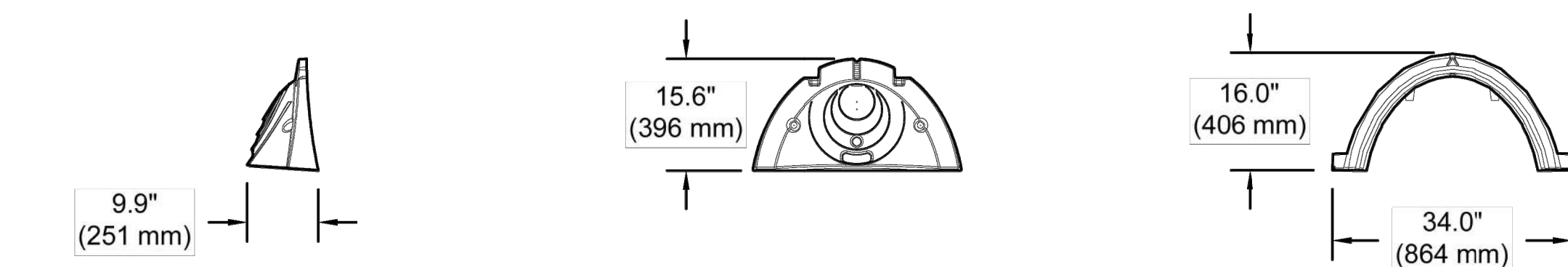
3700 OKEECHOBEE ROAD
FORT PIERCE, FL, USA
DATE: 02/26/2026
PROJECT #: S482153
CHECKED: HAK
DRAWN: DC

DATE: 2/26/2026
DWN: DHC
CHK: DHC

SHEET
5 OF 8

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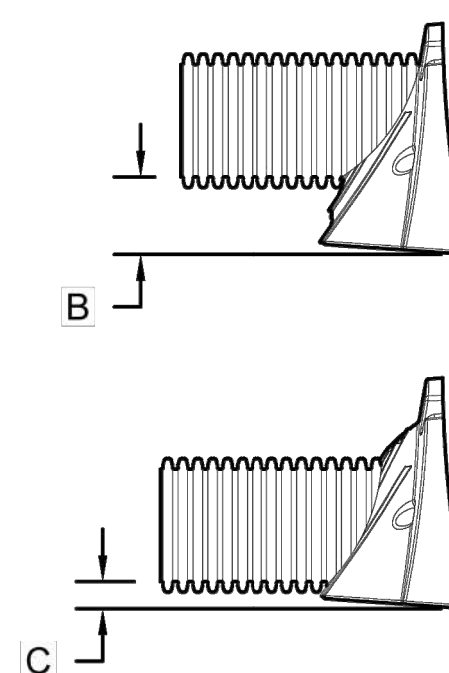
NTS



SIZE (W X H X INSTALLED LENGTH)	34.0" X 16.0" X 85.4"	(864 mm X 406 mm X 2169 mm)
CHAMBER STORAGE	14.7 CUBIC FEET	(0.42 m³)
MINIMUM INSTALLED STORAGE*	29.34 CUBIC FEET	(0.83 m³)
WEIGHT	35.0 lbs.	(16.8 kg)

*ASSUMES 6" (150 mm) ABOVE AND BELOW CHAMBER; 3" (75 mm) BETWEEN CHAMBERS

PART #	STUB	B	C
SC310EPE06TPC	6" (150 mm)	5.8" (147 mm)	---
SC310EPE06BPC		---	0.5" (13 mm)
SC310EPE08TPC	8" (200 mm)	3.5" (89 mm)	---
SC310EPE08BPC		---	0.6" (15 mm)
SC310EPE10TPC		---	---
SC310EPE10BPC	10" (250 mm)	1.4" (36 mm)	---
SC310ECEZ*	12" (300 mm)	---	0.7" (18 mm)
			0.9" (23 mm)



ALL STUBS, EXCEPT FOR THE SC310ECEZ ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

* FOR THE SC310ECEZ THE 12" (300 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 0.25" (6 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

NOTE: ALL DIMENSIONS ARE NOMINAL; PRE-CORED END CAPS END WITH "PC"

3700 OKEECHOBEE ROAD	#	FORT PIERCE, FL	DATE: 07/29/2025	DRAWN: DH	PROJECT #: S482153	CHECKED: HAK	INTENDED FOR USE IN BIDDING OR CONSTRUCTION WITHOUT THE E&C DESIGNER'S REVIEW AND APPROVAL. THIS DRAWING DOES NOT REPRESENT THE E&C DESIGNER'S INTENT OR OBLIGATION. ALL APPLICABLE LAWS, REGULATIONS, AND PROJECT REQUIREMENTS SHALL BE FOLLOWED.
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[illegible]

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Chamber System

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8 SHEET 8
OF

			Date: 11/26/2024
			Scale: N/A
			Design By: JS
			Drawn By: DCM
			Check By: JS
DATE	BY	REVISIONS	

3700 OKEECHOBEE RD
FORT PIERCE 34947
ST LUCIE COUNTY, FL

ADS DETAILS

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 PH. (772) 888-9076
 leo@gep.llc
 Cert. No. 30901

LEO GIANGRANDE, P.E.

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PROJECT #: 24-035

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