FINAL ENGINEERING PLAN

UNIVERSAL NORTH CAMPUS P830 IMPROVEMENTS

ORANGE COUNTY, FLORIDA

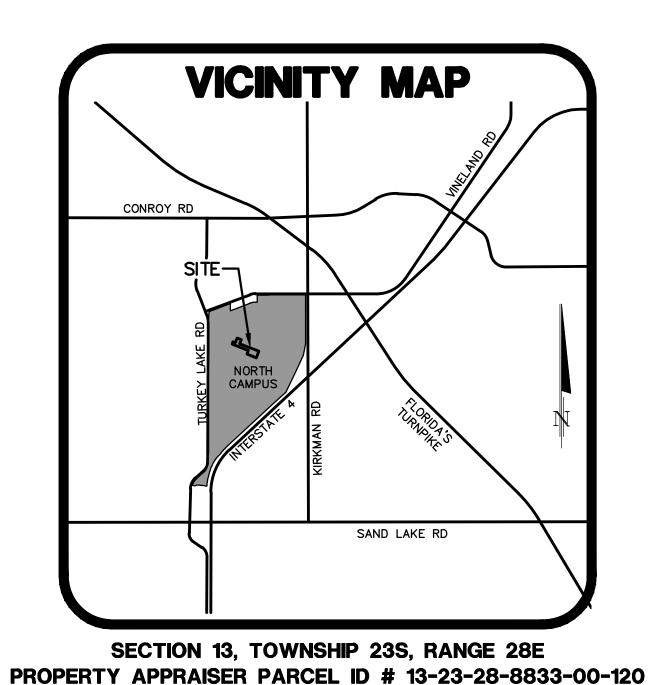
PREPARED FOR

UNIVERSAL CREATIVE

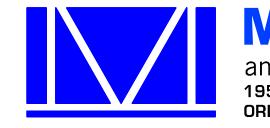
8523 COMMODITY CIRCLE, SUITE 300 ORLANDO, FLORIDA 32819

321.318.5082

ATTN: JOHNNIE LOY, AIA, NCARB



DECEMBER 16, 2024



McIntosh Associates

an 4/A company
1950 SUMMIT PARK DRIVE, SUITE 600
407.644.4068

PLANNERS SURVEYORS

ENGINEERS

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COVER SHEET

NOTES & DETAILS

EXISTING CONDITIONS PLAN

EROSION AND SEDIMENTATION CONTROL PLAN

SITE DRAINAGE IMPROVEMENTS

HORIZONTAL GEOMETRY NOTES:

- 1. CONTRACTOR SHALL STAKE ALL IMPROVEMENTS USING THE COORDINATES PROVIDED IN THESE PLANS. CONTRACTOR SHALL CONFIRM WITH THE ENGINEER THAT THE PLANS ARE CURRENT PRIOR TO CONSTRUCTION. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO COMPLETELY STAKE AND CHECK ALL IMPROVEMENTS TO ENSURE ADEQUATE POSITIONING. BOTH HORIZONTAL AND VERTICAL PRIOR TO THE INSTALLATION OF ANY IMPROVEMENT.
- 2. THE FEATURES AND LINEWORK SHOWN HEREON ARE RELATIVE TO FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, 1983 NORTH AMERICAN DATUM, 2011

VERTICAL DATUM AND BENCHMARKS:

DATE: RECEIVED 12/2/24

- 1. BOUNDARY/HORIZONTAL CONTROL BASED ON THE FOLLOWING: SURVEYOR: JMR SITE
 DRAWING NO.(S): X-6727024 (RECEIVED FROM FOSTER CONANT)
 DATE: RECEIVED 12/2/24 REVISION DATE:
- 2. EXISTING TOPOGRAPHY AND CONTOURS BASED ON THE FOLLOWING: SURVEYOR: JMR SITE DRAWING NO.: X-6727024 (RECEIVED FROM FOSTER CONANT)
- ELEVATIONS SHOWN HEREON ARE BASED ON ORANGE COUNTY BENCHMARK #L807013. BEING A 2-1/2" DISK IN THE CENTERLINE OF A HEADWALL ON THE EAST SIDE OF JOHN YOUNG PARKWAY, ±900' SOUTH OF COMMERCE PARK DRIVE; ELEVATION 84.685 FEET (NAVD88 DATUM PER ORANGE COUNTY ENGINEERING DEPARTMENT) AND NATIONAL GEODETIC SURVEY MONUMENT DESIGNATION "RTE 528+RTE 423" PID "AK7237", BEING A 3-INCH ALUMINUM DISK (NO STAMPING REPORTED) ON NORTHEAST CORNER OF NORTHERN BRIDGE RUB-RAIL (FOR WESTBOUND SR 528) OVER SR 423, ABOUT 10.3 FT (3.1 M) WEST OF NORTHEAST CORNER OF RUB-RAIL, AND ABOUT 144 FT (43.9 M) EAST OF CENTERLINE DF GRASS MEDIAN STRIP OF SR 423. T24S, R29E, SECTION 4. ELEVATION BEING 110.07
- 3. SITE BENCHMARK: #2002 PKND T-2 DESCRIPTION: NAIL AND DISK IN PAVEMENT
- ELEVATION: 110.62 (NAVD88) 4. SITE BENCHMARK: #2005 PKND T-5 DESCRIPTION: NAIL "AND DISK "TRAV PT" LOCATION: N=1505683.307, E=505557.064

ELEVATION: 110.04 (NAVD88)

5. BENCHMARK LOCATION AND ELEVATION ARE AS REPRESENTED BY SURVEYOR AT THE TIME OF THE SURVEY. CONTRACTOR SHALL VERIFY ITS CORRECTNESS AT TIME OF

GENERAL SITE NOTES:

- 1. ALL FDOT STANDARD PLANS AND DESIGN INDICES ARE HEREBY INCORPORATED AS PLAN REFERENCES HEREIN. CONTRACTOR IS RESPONSIBLE FOR OBTAINING COMPLETE COPIES OF ALL APPLICABLE INDEX DRAWINGS AND CONSTRUCTING ALL WORKS IN CONFORMANCE WITH THE FDOT DESIGN STANDARDS, LATEST EDITION.
- 2. CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING PROPER TRAFFIC MAINTENANCE AND CONTROLS IN ACCORDANCE WITH REGULATORY STANDARDS. WHERE A TRAFFIC MAINTENANCE PLAN IS REQUIRED, THE CONTRACTOR SHALL HAVE THE PLAN PREPARED BY AN FDOT CERTIFIED DESIGNER AND SUBMIT THE PLAN FOR APPROVAL
- 3. CONTRACTOR SHALL COMPLY WITH OSHA SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION, STANDARDS 29 C.F.R., 1926, SUBPART P, EXCAVATION, AND ALL SUBSEQUENT REVISIONS OR UPDATES ADOPTED BY THE DEPARTMENT OF LABOR AND EMPLOYMENT SECURITY AND WITH SECTION 553.62, FLORIDA STATUTES.
- 4. NO EXISTING MATERIAL SHALL BE USED IN NEW CONSTRUCTION UNLESS SHOWN ON PLANS AND APPROVED BY THE OWNER AND BY THE ENGINEER DURING THE SHOP DRAWING
- 5. PRIOR TO COMMENCEMENT, CONTRACTOR SHALL PROVIDE DONALD W. McINTOSH ASSOCIATES, INC. WITH THE CONSTRUCTION SCHEDULE FOR VARIOUS SITE WORK ELEMENTS SO THAT PERIODIC SITE VISITS MAY BE COORDINATED TO ENSURE TIMELY CERTIFICATION OF COMPLETION TO AGENCIES AND AVOID DELAYS IN ISSUANCE OF CERTIFICATES OF OCCUPANCY/COMPLETION.
- 6. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SECURE THE PROJECT SITE DURING CONSTRUCTION, TO PREVENT TRESPASSING OF UNAUTHORIZED PEDESTRIANS AND/OR VEHICLES IN ALL WORK AREAS. THE CONTRACTOR SHALL POST SIGNS. CONSTRUCT BARRIERS OR IMPLEMENT OTHER METHODS NECESSARY TO CONTROL ACCESS. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR TRESPASSING ON THE CONSTRUCTION SITE OR DAMAGES TO ANY WORK RELATED THERETO.
- 7. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SURVEY MONUMENTATION. DISTURBED MONUMENTATION SHALL BE RESTORED BY A FLORIDA-LICENSED LAND SURVEYOR SELECTED BY THE OWNER AT CONTRACTOR'S EXPENSE.
- 8. ANY DIFFERING SITE CONDITIONS FROM THOSE WHICH ARE REPRESENTED HEREIN, WHETHER ABOVE, ON OR BELOW THE SURFACE OF THE GROUND, SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER AND OWNER IN WRITING PRIOR TO INITIATING ANY CONSTRUCTION IN THE AREA IMPACTED BY THE CONFLICT. NO CLAIM FOR EXPENSES INCURRED BY THE CONTRACTOR DUE TO DIFFERING SITE CONDITIONS WILL BE ALLOWED IF CONTRACTOR FAILS TO PROVIDE THE REQUIRED WRITTEN NOTIFICATION OF SUCH CONDITIONS FOR REVIEW BY THE ENGINEER AND OWNER.
- CONTRACTOR SHALL INSTRUCT THE GEOTECHNICAL TESTING LABORATORY PROVIDING CONSTRUCTION TESTING TO PROVIDE DONALD W. McINTOSH ASSOCIATES, INC. WITH COPIES OF ALL SITE-WORK TEST REPORTS AS THEY ARE GENERATED. CONTRACTOR SHALL MAINTAIN THE RESPONSIBILITY OF CONSTRUCTING THE PROJECT IN STRICT ACCORDANCE WITH THE PROJECT PLANS, SPECIFICATIONS AND REQUIREMENTS. RECEIPT OF COPIES OF GEOTECHNICAL REPORTS BY DONALD W. McINTOSH ASSOCIATES, INC. IN NO WAY OBLIGATES DONALD W. McINTOSH ASSOCIATES, INC. TO ANY REVIEW, COMMENTS OR ACTIONS
- 10. ALL WORK SHALL BE OPEN TO AND SUBJECT TO INSPECTION BY AUTHORIZED PERSONNEL OF THE CITY, COUNTY, OWNER, INVOLVED UTILITY COMPANIES, PROJECT ENGINEER AND REGULATORY AGENCIES.
- 11. ALL RECOMMENDATIONS AND REQUIREMENTS OF INSPECTION PERSONNEL OTHER THAN THE OWNER'S SHALL BE REPORTED TO PROJECT ENGINEER AND OWNER PRIOR TO IMPLEMENTATION. COMPENSATION WILL NOT BE ALLOWED FOR WORK WHICH IS NOT AUTHORIZED BY PROJECT ENGINEER AND OWNER.

- 1. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR(S) TO ENSURE THAT ALL REQUIRED PERMITS ARE OBTAINED AND ARE IN HAND AT THE JOB SITE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. CONTRACTOR SHALL ABIDE BY ALL CONDITIONS CONTAINED THEREIN. PERMITS MAY INCLUDE (BUT NOT NECESSARILY LIMITED TO) WATER MANAGEMENT DISTRICT WATER USE PERMIT FOR CONSTRUCTION DEWATERING WATER MANAGEMENT DISTRICT ENVIRONMENTAL RESOURCE PERMIT (ERP) LOCAL UNDERGROUND UTILITIES FDEP NPDES STORMWATER DISCHARGE
- 2. IF THE CONTRACTOR PROPOSES TO DISCHARGE DEWATERING EFFLUENT OFF-SITE, HE SHALL COMPLY WITH THE FDEP'S GENERIC PERMIT FOR DISCHARGE OF PRODUCED GROUNDWATER FROM ANY NON-CONTAMINATED SITE ACTIVITY. PERMIT REQUIREMENTS CAN BE OBTAINED FROM FDEP AT (407) 893-3985 OR THROUGH THE FDEP BUSINESS PORTAL A WWW.FDEPPORTAL.COM. THIS PERMIT IS INDEPENDENT OF AND IN ADDITION TO WATER MANAGEMENT DISTRICTS' PERMITS FOR CONSTRUCTION DEWATERING.
- 3. CONTRACTOR SHALL REVIEW ALL PERMITS PRIOR TO CONSTRUCTION FOR ANY CHANGES TO THE DESIGN INCLUDED THEREIN. NOTIFY PROJECT ENGINEER AND OWNER OF ANY REQUIRED

CHANGES PRIOR TO CONSTRUCTION. **UTILITIES NOTES:**

- 1. THE LOCATIONS OF EXISTING UTILITIES AND STORM DRAINAGE SHOWN ON THE PLANS HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. ENGINEER ASSUMES NO RESPONSIBILITY FOR INACCURACY. PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY, IT SHALL BE CONTRACTOR'S RESPONSIBILITY TO MAKE ARRANGEMENTS FOR FIELD LOCATIONS AND FOR ANY RELOCATIONS OF THE VARIOUS EXISTING UTILITIES WITH THE UTILITY OWNERS, WHICH SHALL BE DONE IN A TIMELY FASHION TO MINIMIZE IMPACT ON THE CONSTRUCTION SCHEDULE. ANY DELAY OR INCONVENIENCE CAUSED THE CONTRACTOR BY THE RELOCATION F THE VARIOUS UTILITIES SHALL BE INCIDENTAL TO THE CONTRACT AND NO EXTRA COMPENSATION WILL BE ALLOWED.
- 2. FLORIDA STATUTE 556 MANDATES THAT NOT LESS THAN TWO FULL BUSINESS DAYS BEFORE BEGINNING ANY EXCAVATION OR DEMOLITION THAT IS NOT BENEATH WATERS OF THE STATE, DEMOLITION THAT IS BENEATH WATERS OF THE STATE, AN EXCAVATOR SHALL NOTIFY SUNSHINE STATE ONE CALL OF FLORIDA, INC. (811) OF PLANNED EXCAVATION OR
- 3. IMMEDIATELY AT ONSET OF CONSTRUCTION, CONTRACTOR SHALL FIELD VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING UTILITIES CRITICAL TO COMPLETING THE PROJECT (INCLUDING WATER, SEWER, POWER, TELEPHONE, GAS, AND CABLE TV) AND SHALL EVALUATE POTENTIAL CONFLICTS. ALL SUCH CONFLICTS SHALL BE REPORTED TO THE PROJECT ENGINEER AND OWNER IMMEDIATELY UPON DISCOVERY
- 4. CONTRACTOR SHALL NOTIFY ALL APPROPRIATE UTILITY COMPANIES OF THE PROPOSED START OF WORK IN ACCORDANCE WITH THEIR STANDARD REQUIREMENTS; INCLUDING BUT NOT LIMITED TO WATER, SEWER, POWER, TELEPHONE, GAS AND CABLE TV COMPANIES.

NECESSARY TO PROVIDE PROTECTION.

AS SHOWN IN THE PLANS.

DEMOLITION ACTIVITIES.

1. CONTRACTOR SHALL PROTECT THE SITE AND ALL ADJACENT PROPERTIES FROM DAMAGE BY SEDIMENTATION OR OTHER POTENTIAL CONSTRUCTION RELATED CAUSES.

FLORIDA EROSION AND SEDIMENT CONTROL MANUAL AT ALL PROJECT CONNECTIONS TO PUBLIC OR PRIVATE ROADWAYS THAT ARE TO BE USED BY CONSTRUCTION TRAFFIC.

- 2. CONTRACTOR SHALL PROVIDE A SOIL TRACKING PREVENTION DEVICE CONFORMING TO THE
- 3. DURING CONSTRUCTION, THE CONTRACTOR SHALL TAKE ALL REASONABLE MEASURES TO ENSURE AGAINST POLLUTING, SILTING, OR DISTURBING TO SUCH AN EXTENT AS TO CAUSE AN INCREASE IN TURBIDITY TO THE EXISTING DRAINAGE SYSTEM AND ADJACENT WATER BODIES AND WETLANDS. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL PERMIT REQUIREMENTS RELATED TO SUCH MEASURES. METHODS MAY INCLUDE, BUT ARE NOT LIMITED TO, CONSTRUCTION OF TEMPORARY EROSION CONTROL STRUCTURES SUCH AS SEDIMENT BASINS, SEDIMENT CHECKS, SILT BARRIERS, OR SILT SCREENS, ANY MEASURES SHOWN OR DETAILED IN THESE DRAWINGS SHALL BE CONSIDERED MINIMUMS AND SHALL NOT RELIEVE CONTRACTOR OF THE RESPONSIBILITY TO IMPLEMENT ANY MEASURES
- 4. THE SILT FENCE LOCATION DEPICTED IN THE PLANS IS FOR INFORMATIONAL PURPOSES ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND INSTALLATION OF SILT FENCE AND RELATED FROSION AND SILITATION CONTROL MEASURES IN COMPLIANCE WITH FDEP/NPDES REQUIREMENTS AND REGULATIONS. CONTRACTOR SHALL COORDINATE THE LOCATION AND INSTALLATION OF EROSION/SILTATION CONTROL FACILITIES TO PROTECT ADJACENT PROPERTIES AND ENVIRONMENTAL AREAS, AND ACCOMMODATE FINAL GRADING

NPDES NOTES:

BEFORE INITIATING CONSTRUCTION.

- 1. THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY HAS AUTHORIZED THE STATE OF FLORIDA TO ADMINISTER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES). CONTRACTOR IS ADVISED THAT OPERATORS ARE REQUIRED TO FILE WITH FDEP A NOTICE OF INTENT TO USE THE GENERIC PERMIT FOR STORMWATER DISCHARGE FROM CONSTRUCTION ACTIVITIES THAT DISTURB ONE OR MORE ACRES OF LAND. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO SUBMIT THE NOTICE OF INTENT (NOI) TO FDEP WITH A COPY TO THE OWNER, THE PROJECT ENGINEER AND THE CITY AT LEAST 48 HOURS
- 2. AS REQUIRED BY THE GENERIC PERMIT, CONTRACTOR SHALL PREPARE A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) PURSUANT TO ALL REQUIREMENTS OF THE GENERIC
- 3. PURSUANT TO THE NPDES, CONTRACTOR SHALL MAINTAIN RECORDS OF DATES WHEN MAJOR GRADING ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE AND SHALL INITIATE STABILIZATION MEASURES WITHIN 7 DAYS AFTER SUCH TEMPORARY OR PERMANENT CESSATION OF CONSTRUCTION ACTIVITY. STABILIZATION REQUIREMENTS (SODDING WHERE SHOWN ON THE PLANS, SEEDING AND MULCHING ELSEWHERE) APPLY TO ALL AREAS DISTURBED BY CONSTRUCTION, ON-SITE AND OFF-SITE.
- 4. CONTRACTOR SHALL PROVIDE INSPECTIONS BY QUALIFIED PERSONNEL OF ALL POINTS OF OFF-SITE DISCHARGE, DISTURBED AREAS NOT YET FINALLY STABILIZED, STORAGE AREAS EXPOSED TO RAINFALL, STRUCTURAL CONTROLS AND VEHICULAR ACCESS LOCATIONS. INSPECTIONS SHALL BE MADE AT LEAST ONCE (CITY OF ORLANDO: A DAY) EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A RAINFALL EVENT THAT IS 0.5
- (CITY OF ORLANDO: ALL SEDIMENTATION CONTROL AND BMP's SHALL PREVENT STORMWATER RUNOFF WITH TURBIDITY GREATER THAN 29 NTU'S FROM LEAVING THE
- 6. CONTRACTOR SHALL MAINTAIN A COPY OF THE SWPPP AT THE SITE OR THE LOCATION DESIGNATED IN THE NOI FROM THE DATE OF PROJECT INITIATION TO THE DATE OF FINAL
- . CONTRACTOR SHALL AMEND THE SWPPP WHENEVER THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION OR MAINTENANCE THAT MAY HAVE A SIGNIFICANT EFFECT ON THE POTENTIAL FOR OFF-SITE DISCHARGE OF POLLUTANTS, INCLUDING THE ADDITION OF OR CHANGE IN LOCATION OF DISCHARGE POINTS AND REVISION TO CONTROLS WHICH MAY HAVE
- 8. CONTRACTOR SHALL REMAIN RESPONSIBLE FOR OPERATION AND MAINTENANCE OF POLLUTION PROTECTION MEASURES UNTIL CONSTRUCTION HAS BEEN COMPLETED IN SUBSTANTIAL CONFORMANCE WITH THE CONTRACT PLANS, CERTIFIED AS SUCH BY THE ENGINEER AND ACCEPTED BY THE CITY, WHETHER OR NOT CONTRACTOR HAS SUBMITTED A NOTICE OF TERMINATION (NOT) TO FDEP.

AS-BUILT/RECORD DRAWINGS NOTES:

- 1. CONTRACTOR SHALL FURNISH OWNER WITH ACCURATE RECORD DRAWINGS SHOWING AS-CONSTRUCTED HORIZONTAL AND VERTICAL DIMENSIONING OF THE WORK. THE SUBMITTED COPY OF THE RECORD DRAWINGS WILL NOT BE RETURNED. THE RECORD DRAWING SHALL BE CERTIFIED BY THE CONTRACTOR AS CORRECT. ALL INFORMATION WHICH IS UNCHANGED AND CURRENT SHALL BE NOTED BY CHECKING OFF OR CIRCLING. ALL REVISED INFORMATION SHALL BE CROSSED THROUGH AND NEW DATA ADDED. ADDITIONAL REQUIREMENTS ARE NOTED IN PAVING, GRADING AND DRAINAGE AND WATER AND SEWER
- CONTRACTOR SHALL FURNISH OWNER WITH AN AS-BUILT SURVEY OF THE COMPLETED PROJECT MEETING ALL REQUIREMENTS OF THE CITY OF ORLANDO ENGINEERING STANDARDS MANUAL, SECTION 5.03. THE AS-BUILT RECORDS SHALL DEPICT ALL UTILITIES WITHIN THE PROJECT LIMITS, INCLUDING BUT NOT LIMITED TO SANITARY SEWERS, FORCE MAINS, LIFT STATIONS, STORM DRAINS, WATER MAINS, FIRE MAINS, RECLAIMED WATER MAINS, GAS MAINS, ELECTRIC AND COMMUNICATIONS DUCT BANKS, ETC. PROFILE VIEWS OF ALL CITY OWNED FACILITIES SHALL BE INCLUDED.
- 2. AS-BUILT DRAWINGS AND/OR RECORD DRAWINGS, AS REQUIRED BY THESE NOTES, SHALL SHOW LOCATIONS OF IMPROVEMENTS BY DIMENSIONING AND/OR ACCURATE PLOTTING. THEY SHALL NOT PROVIDE LOCATIONS SOLELY BY COORDINATE POINTS. ALL FACILITIES WHICH ARE OUT OF DESIGN POSITION BY FIVE (5) FEET OR MORE SHALL BE REDRAWN IN AS-CONSTRUCTED LOCATIONS.
- . CONTRACTOR SHALL PROVIDE ACCURATE AS-BUILT DIMENSIONS AND ELEVATIONS OF THE STORMWATER MANAGEMENT AREAS IMMEDIATELY AFTER FINAL GRADING AND PRIOR TO GRASSING THE SLOPES. AT A MINIMUM. CONTRACTOR SHALL PROVIDE TWO TYPICAL AS-BUILT CROSS-SECTIONS ACROSS EACH "SIDE" OF EACH POND. CONTRACTOR SHAL OBTAIN ENGINEER'S APPROVAL PRIOR TO GRASSING. IF ANY MODIFICATIONS ARE NEEDED, ADDITIONAL AS-BUILTS SHALL BE FURNISHED.
- 4. CONTRACTOR SHALL MAINTAIN A SET OF RECORD DRAWINGS MARKED UP WITH HORIZONTAL AND VERTICAL AS—BUILT INFORMATION ON LOCATION OF WATER MAINS, FITTINGS, AND WATER SERVICES LOCATED FROM CENTERLINE OF NEAREST FIRE HYDRANT OR NEAREST

PAVING. GRADING & DRAINAGE NOTES:

- SITE GRADING, PAVING AND DRAINAGE MATERIALS AND CONSTRUCTION SHALL CONFORM TO FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AND TO CITY OF ORLANDO STANDARD SPECIFICATIONS, LATEST EDITION, INSOFAR AS THEY APPLY TO THE DESIGN SHOWN HEREIN. FOR SOIL CEMENT BASE, MATERIALS AND CONSTRUCTION SHALL CONFORM TO FDOT STANDARD SPECIFICATIONS, 2000 EDITION). WHERE SUCH SPECIFICATIONS DIFFER, THE MORE STRINGENT SHALL NORMALLY APPLY, SUBJECT TO THE DETERMINATION OF THE PROJECT ENGINEER.
- DRAINAGE MANHOLES AND INLETS (NOT INCLUDING CONTROL STRUCTURES) IN THE PLANS ARE IDENTIFIED BY TOP TYPE ONLY. CONTRACTOR SHALL PROVIDE STANDARD DITCH BOTTOM INLET, J OR P STRUCTURE BOTTOMS, SIZED AS REQUIRED TO ACCOMMODATE PIPE WHICH CLEARLY REPRESENT SUCH DATA.
- 3. THE CONTRACTOR IS RESPONSIBLE FOR SETTING ALL INLET GRATES IN PAVEMENT AREAS PLUMB AND TRUE TO LINE AND GRADE. GRATES SHALL BE FREE OF NOISE AND RATTLE WHEN SUBJECT TO VEHICULAR TRAFFIC.
- 4. THE CONTRACTOR IS RESPONSIBLE FOR ASSURING THAT ALL INLETS IN PAVEMENT AREAS ARE PROPERLY ALIGNED WITH THE PAVEMENT FLOW LINES/CENTERLINES (AS APPLICABLE) TO THE CORRECT GRADE PER THE APPROVED PLANS. AREAS OF PONDING AROUND INLETS ARE NOT ACCEPTABLE.
- 5. PIPE LENGTHS SHOWN REPRESENT SCALED DISTANCES BETWEEN CENTERLINES OF DRAINAGE STRUCTURES AND FROM INVERTS OF ENDWALLS AND/OR MITERED END SECTIONS. BIDDERS SHALL ADJUST FOR PIPE LENGTHS WHEN BIDDING MITERED END SECTIONS.
- 6. SEE DETAIL ON THIS SHEET FOR REQUIREMENTS AT CROSSINGS OF STORM DRAINS AND
- 7. NEW PIPES SHALL BE CONNECTED TO EXISTING PIPES AT AN EXISTING FACTORY MADE JOINT. REMOVE PARTIAL PIPES IF AND AS NEEDED.
- 8. ELEVATIONS OF GRASSED AREAS ARE GIVEN AT FINISHED GRADE (TOP OF SOD OR SEEDED
- 9. RETAINING WALL (WHEN REQUIRED) ARE DESIGNED BY PROJECT STRUCTURAL ENGINEER.
- IO. CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING AND DISPOSING OF ALL WASTE MATERIALS CONSISTENT WITH ALL RULES AND REGULATIONS APPLICABLE TO THE SPECIFIC MATERIAL
- 11. CONTRACTOR IS RESPONSIBLE FOR GRADING ALL PAVEMENTS TO DRAIN POSITIVELY. INTERSECTIONS SHALL BE TRANSITIONED TO PROVIDE SMOOTH DRIVING SURFACE WHILE MAINTAINING POSITIVE DRAINAGE. SHOULD AREAS OF POOR DRAINAGE BE OBSERVED. CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO PLACEMENT OF CURBS OR PAVEMENT COURSES, SO THAT RECOMMENDATIONS FOR CORRECTION MAY BE MADE.
- 12. CONTRACTOR SHALL NOT COMPACT, STABILIZE, OR CONSTRUCT BASE COURSE WITHIN LANDSCAPE ISLANDS, TRACTS OR MEDIANS. WHERE SUCH TREATMENT DOES OCCUR, IT SHALL BE REMOVED AND REPLACED WITH SUITABLE PLANTING SOILS ACCEPTABLE TO OWNER'S LANDSCAPE ARCHITECT.
- 13. CONTRACTOR SHALL PROVIDE FOR POSITIVE DRAINAGE OF ROADWAY FROM SUBGRADE THROUGH FINAL LIFT OF ASPHALT. STRUCTURE BASES SHALL BE FABRICATED IN ACCORDANCE WITH FDOT STANDARD INDEX 425-001. TEMPORARY DRAINS FOR SUBGRADE AND BASE. AS NOTED IN THE INDEX THE COST OF ALL APPURTENANCES WILL BE CONSIDERED INCIDENTAL TO THE PRICE OF THE STRUCTURE.
- 14. PAVEMENT GRADES OVER HANDICAPPED PARKING SPACES SHALL NOT EXCEED 2% IN ANY
- 15. ALL OFF-SITE DISTURBED AREAS SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITION,
- 16. ALL DISTURBED FDOT, CITY AND COUNTY RIGHTS OF WAY SHALL BE RESTORED. SOD SHALL BE PLACED FROM EDGE OF PAVEMENT TO THE LIMITS OF CONSTRUCTION AND ALL AREAS SHALL MATCH OR EXCEED PRE-CONSTRUCTION CONDITIONS.
- 17. ENGINEER RESERVES THE RIGHT TO WITHHOLD RECOMMENDATION FOR PAYMENT FOR ANY ROADWORK WHICH HAS NOT BEEN TESTED BY A FLORIDA-REGISTERED GEOTECHNICAL ENGINEER AND REPORTED TO CONFORM TO PROJECT SPECIFICATIONS.
- 18. CONTRACTOR SHALL COORDINATE WITH PROJECT ENGINEER FOR PRE-POUR OBSERVATION PRIOR TO ANY SIDEWALK AND/OR CURB RAMP POURS.

MATERIAL SPECIFICATIONS (PAVING AND DRAINAGE):

- STORM DRAINS SHALL BE HIGH DENSITY POLYPROPYLENE (HP) PIPE IN LIEU OF REINFORCED CONCRETE PIPE. HP STORM PIPE, 12 INCH THROUGH 60 INCH, SHALL HAVE A SMOOTH INTERIOR AND ANNULAR EXTERIOR CORRUGATIONS AND SHALL MEET ASTM F2881 OR AASHTO M330. PIPES SHALL BE JOINED USING A BELL AND SPIGOT JOINT. JOINTS SHALL BE WATERTIGHT ACCORDING TO THE REQUIREMENTS OF ASTM D3212. GASKETS SHALL MEET THE REQUIREMENTS OF ASTM F477. GASKETS SHALL BE INSTALLED BY THE PIPE MANUFACTURER AND COVERED WITH A REMOVABLE PLASTIC WRAP TO ENSURE THE GASKET IS FREE FROM DEBRIS. A JOINT LUBRICANT AVAILABLE FROM THE MANUFACTURER SHALL BE USED ON THE GASKET AND BELL DURING ASSEMBLY. EXTERIOR BELL WRAPS SHALL BE INSTALLED BY THE MANUFACTURER. ALL HP PIPES SHALL BE INSTALLED, LASER PROFILED AND VIDEOED IN ACCORDANCE WITH FDOT STANDARD SPECIFICATIONS.
- ALL TYPE "P" STRUCTURE BOTTOMS SHALL BE ROUND UNLESS OTHERWISE SPECIFIED AND SHALL HAVE 4 FOOT DIAMETER.
- ALL CONCRETE CURBS, SIDEWALKS, INLET TOPS, ETC. SHALL BE 3000 PSI MINIMUM, UNLESS OTHERWISE SPECIFIED.

- 4. YARD DRAINS SHALL BE NYLOPLAST INLINE DRAINS AND DRAIN BASINS AS APPLICABLE WITH CAST IRON GRATES AND WATERTIGHT ADAPTER CONNECTIONS (OR APPROVED EQUAL).
- 5. YARD DRAIN PIPING: PVC CONFORMING TO ASTM D3034, SDR35 SHALL BE USED FOR ALL PIPE RUNS IN WHICH ANY PART LIES UNDER PAVED AREAS. SAID PVC OR HEAVY DUTY CORRUGATED POLYETHYLENE MAY BE USED FOR ALL OTHER RUNS. MATERIAL SELECTION

ENGINEERS CERTIFICATION NOTES:

- I. THESE DRAWINGS MAY SHOW ELECTRICAL, GAS, TELEPHONE, FIBRE MAINS, IRRIGATION, ETC. UTILITIES AND ARE SHOWN FOR REFERENCE ONLY TO ASSIST WITH THEIR GENERAL LOCATIONS RELATIVE TO THE CIVIL WORKS. THE CIVIL ENGINEER'S SIGNATURE AND CERTIFICATION ON THESE PLANS DO NOT COVER THOSE DISCIPLINES OF WORK. FOR THOSE IMPROVEMENTS, THE CONTRACTOR SHALL COORDINATE WITH THE APPROPRIATE UTILITY PROVIDER FOR DESIGN PLANS, SPECIFICATIONS AND DIRECTIONS.
- 2. THESE DRAWINGS MAY SHOW FIRE MAINS, FIRE DEPARTMENT CONNECTIONS (FDC), FIRE SYSTEM BACKFLOW PREVENTERS, ETC. EXTENDING PAST THE FIRE SPRINKLER SYSTEM POINT OF CONNECTION (POC). THESE IMPROVEMENTS ARE SHOWN FOR GENERAL LOCATIONS THE CIVIL ENGINEER'S SIGNATURE AND CERTIFICATION DOES NOT COVER THOSE DISCIPLINES OF WORK. FOR THOSE IMPROVEMENTS, SEE PROJECT FIRE SPRINKLER DESIGNER'S PLANS AND SPECIFICATIONS.
- 3 RETAINING WALLS IF SHOWN ON THESE PLANS ARE FOR GENERAL LOCATION TOP OF WALL ELEVATIONS AND TOE OF WALL GROUND ELEVATIONS. THE CIVIL ENGINEERS CERTIFICATION ON THESE PLANS DO NOT COVER THE WALL DESIGN. FOR THOSE IMPROVEMENTS, THE CONTRACTOR SHALL COORDINATE WITH THE WALL STRUCTURAL ENGINEER AND THEIR DESIGN PLANS AND SPECIFICATIONS.

LOCATION OF PUBLIC WATER SYSTEM MAINS IN ACCORDANCE WITH F.A.C. RULE 62-555.314 (SEPARATIONS SHOWN FOR "WATER" MAINS ALSO APPLY TO SEPARATIONS BETWEEN RECLAIMED WATER (2) MAINS AND OTHER PIPES)

Other Pipe	Horizontal Separation	Crossings (1)	Joint Spacing @ Crossings (Full Joint Centered)
Storm Sewer, Stormwater Force Main, Reclaimed Water (2)	Water Main 3 ft. minimum	Water Main 12 inches is the minimum, except for storm sewer, then 6 inches is the minimum and 12 inches is preferred	Alternate 3 ft. minimum Water Main
Vacuum Sanitary Sewer	Water Main 10 ft. preferred 3 ft. minimum	Water Main minimum 12 inches preferred 6 inches minimum	Alternate 3 ft. minimum Water Main
Gravity or Pressure Sanitary Sewer, Sanitary Sewer Force Main, Reclaimed Water (4)	Water Main 10 ft. preferred 6 ft. minimum (3)	Water Main 12 inches is the minimum, except for gravity sewer, then 6 inches is the minimum and 12 inches is preferred	Alternate 6 ft. minimum Water Main
On-Site Sewage Treatment & Disposal System	10 ft. minimum		

(1) Water main should cross above other pipe. When water main must be below other pipe, the minimum separation is 12 inches.

(2) Reclaimed water regulated under Part III of Chapter 62-610, F.A.C.

(3) 3 ft. for gravity sanitary sewer where the bottom of the water main is laid at least 6 inches above the top of the gravity sewer. (4) Reclaimed water not regulated under Part III of Chapter 62-610, F.A.C.

(5) Plans are designed in conformance with these requirements. Contractor shall construct facilities in conformance with the plans. Should Contractor observe variations from these requirements, Engineer shall be notified immediately.



1950 SUMMIT PARK DRIVE, SUITE 600 ORLANDO, FL 32810 407.644.4068

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DOCUMENT CHANGES Issue Description Issue Date 12/16/24 Project No Designed CWG / JTT | Checked By JTT



McIntosh **ASSOCIATES** an 🚜 company

P830 UNIVERS

DOCUMENT CHANGES

Description Issue Description Issue Date 12/16/24

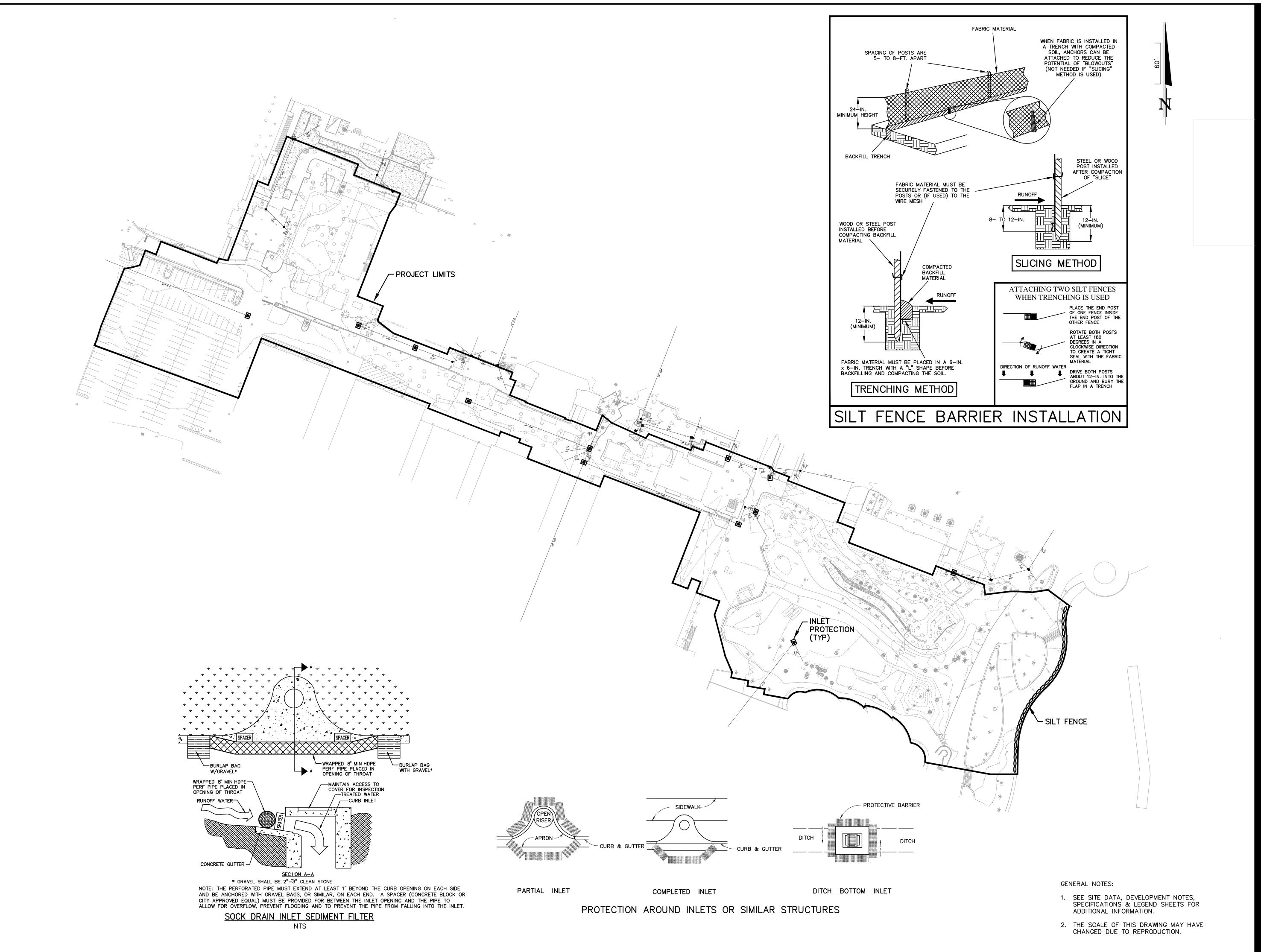
Drawing Title

EXISTING CONDITIONS PLAN

GENERAL NOTES:

SEE SITE DATA, DEVELOPMENT NOTES, SPECIFICATIONS & LEGEND SHEETS FOR ADDITIONAL INFORMATION.

THE SCALE OF THIS DRAWING MAY HAVE CHANGED DUE TO REPRODUCTION.





an **2,7/4** company 1950 SUMMIT PARK DRIVE, SUITE 600 ORLANDO, FL 32810 407.644.4068

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UNIVERSAL NORTH CAMPUS

DOCUMENT CHANGES

Description

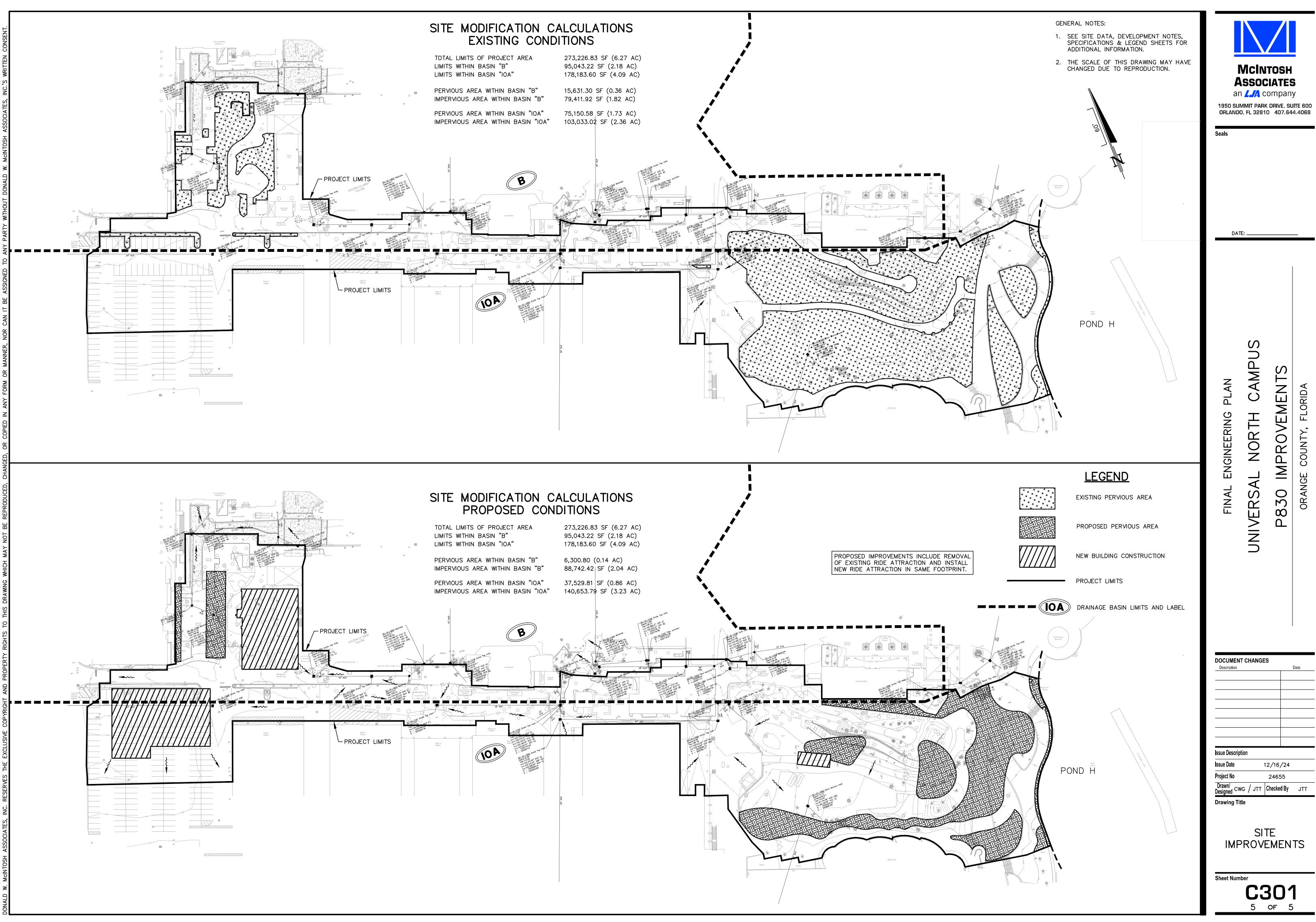
Date

| Same Description | Date |

Drawn/ CWG / JTT Checked By JTT
Drawing Title

EROSION AND SEDIMENTATION CONTROL PLAN

C101



McIntosh **ASSOCIATES** an 🚜 company

UNIVERS ∞

DOCUMENT CHANGES

12/16/24

Drawn/ Designed CWG / JTT Checked By JTT

Drawing Title

SITE **IMPROVEMENTS**