

SPECIFICATIONS & NOTES

FIELD ENGINEERING

- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL SURVEYING SERVICES REQUIRED. THIS SHALL INCLUDE ALL STAKEOUT BOTH HORIZONTAL AND VERTICAL.
- MAINTAIN A COMPLETE, ACCURATE LOG OF ALL FIELD NOTES.
- ON COMPLETION OF PROJECT, PREPARE A RECORD DRAWING SHOWING LOCATION AND ELEVATION FOR ALL IMPROVEMENTS.
- TESTING LABORATORY TO MEET RECOMMENDED REQUIREMENTS FOR INDEPENDENT LABORATORY QUALIFICATIONS, LATEST EDITION AS PUBLISHED BY AMERICAN COUNCIL OF INDEPENDENT LABORATORIES AND MEET BASIC REQUIREMENTS OF ASTM E 320 STANDARDS FOR TESTING FOR CONCRETE AND STEEL AS USED IN CONSTRUCTION.
- TESTING REQUIREMENTS SHALL BE IN ACCORDANCE WITH ACCEPTABLE STANDARDS; ASTM, FDOT, OR OTHER RECOGNIZED AUTHORITIES AND AS SPECIFIED.
- CONTRACTOR IS RESPONSIBLE FOR OBTAINING REQUIRED TEMPORARY ELECTRICAL SERVICE, AND PROVIDING WATER AS REQUIRED FOR CONSTRUCTION AND LANDSCAPING MAINTENANCE UNTIL SUCH TIME THE OWNER ACCEPTS THE PROJECT AS COMPLETE IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
- CONTRACTOR TO PROVIDE BARRIERS AS REQUIRED TO PREVENT PUBLIC ENTRY TO CONSTRUCTION AREAS AND PROTECT EXISTING FACILITIES AND ADJACENT PROPERTIES FROM DAMAGE FROM CONSTRUCTION OPERATIONS. THE REQUIRED BARRIERS AND DEVICES SHALL BE CREATED PRIOR TO CREATION OF ANY HAZARDOUS CONDITION. CONTRACTORS SHALL PAY ALL COSTS OF BARRIERS AND SAFETY CONTROL DEVICES.
- CONTRACTOR SHALL PROVIDE TO THE OWNER'S ENGINEER SHOP DRAWINGS AND ENGINEER SHALL BE GIVEN ONE WEEK FOR RETURN OF REVIEWED SHOP DRAWINGS TO CONTRACTOR.
- CONTRACTOR SHALL COORDINATE AND GIVE PROPER NOTIFICATIONS TO ALL INSPECTION AGENCIES PRIOR TO START OF CONSTRUCTION.
- UPON SUBSTANTIAL COMPLETION OF PROJECT, CONTRACTOR SHALL PROVIDE DIGITAL CONSTRUCTION AS BUILT DRAWINGS IN AUTOCAD FORMAT UNLESS OTHERWISE INSTRUCTED BY ENGINEER THAT ARE LEGIBLY MARKED SHOWING ACTUAL CONSTRUCTED FACILITIES INCLUDING PIPE HORIZONTAL LOCATIONS SHOWING ANY DEVIATIONS FROM THE PLANS AND ALL FITTINGS INCLUDING VALVES AND FITTINGS BASED ON TWO MEASUREMENTS FROM A PERMANENT SURFACE. REFERENCE SUCH AS MANHOLES, CATCH BASINS, POWER POLES, CURBS, OR SIDEWALKS.
- AS PART OF THE CLOSE OUT DOCUMENTS, CONTRACTOR SHALL PROVIDE TO OWNER ALL MANUALS, WARRANTIES, AND MAINTENANCE MANUALS.

SITework

- CONTRACTOR WILL LOCATE AND VERIFY EXISTING CABLES, DUCTS, CONDUIT, PIPELINE, ETC. IN ADVANCE OF ANY PROPOSED CONSTRUCTION. CONTRACTOR WILL NOTIFY ALL AFFECTED UTILITIES, ENGINEER, AND OWNER AT LEAST 48 HOURS IN ADVANCE OF THE CONSTRUCTION NEAR THESE EXISTING UTILITIES.
- CONTRACTOR WILL NOTIFY ENGINEER OF ANY SUBSTANTIAL CHANGES THAT WOULD REQUIRE A DEVIATION IN THE PLANS.
- CONTRACTOR WILL REPAIR ANY DAMAGE DONE TO EXISTING UTILITIES AT NO ADDITIONAL EXPENSE TO THE OWNER OR ENGINEER.
- CONTRACTOR TO OBTAIN A COPY OF THE GEOTECHNICAL REPORT FROM OWNER OR ENGINEER TO CONSTRUCT EARTHWORKS IN ACCORDANCE WITH THE GEOTECHNICAL RECOMMENDATIONS.
- CONTRACTOR SHALL PROVIDE FILL MATERIAL THAT CONSIST OF CLEAN GRANULAR MATERIAL FREE OF ROOTS, TIMBERS, LARGE ROCKS AND OTHER DELETERIOUS SUBSTANCES. FILL WILL BE TAKEN FROM ON-SITE PILES FIRST, AND IF REQUIRED, ADDITIONAL FILL WILL BE SUPPLIED FROM AN OFF-SITE BORROW.
- CONTRACTOR SHALL PROVIDE SUFFICIENT PROTECTION FOR TRENCHING AND EARTHWORK ACTIVITIES BY PROVIDING PROPER SHORING AND BRACING TO PREVENT DAMAGE OR SHIFTING OF EARTHWORKS.
- CONTRACTOR SHALL PROVIDE GRADING THAT IS CONSISTENT OF BRINGING THE GROUND ELEVATIONS TO THE LEVELS, GRADES, AND ELEVATIONS CALLED FOR IN THE PLANS. THIS MAY INCLUDE TAPERING OR TRANSITIONING EXISTING GROUND ELEVATIONS OUTSIDE OF THE PROJECT LIMITS SHOWN ON THE PLANS.
- FINE GRADING SHALL CONSIST OF ELIMINATING UNEVEN AREAS AND LOW SPOTS, REMOVING DEBRIS, ROOTS, BRANCHES, STONES IN EXCESS OF HALF INCH IN SIZE SUCH THAT THE FINE GRADING HAS A FINISHED APPEARANCE THAT IS PLEASING TO THE EYE.
- WHEN ACCEPTABLE MATERIAL IS ENCOUNTERED IN THE TRENCH, THE BOTTOM SHALL BE EXCAVATED AND GRADED TO THE DEPTH REQUIRED SO AS TO PROVIDE A UNIFORM AND CONTINUOUS BEARING AND SUPPORT FOR THE PIPE ON SOLID AND UNDISTURBED GROUND AT EVERY POINT BETWEEN BELL HOLES, EXCEPT THAT IT WILL BE PERMISSIBLE TO DISTURB AND OTHERWISE DAMAGE THE FINISHED SURFACE OVER A MAX LENGTH OF 18" NEAR THE MIDDLE OF EACH LENGTH OF PIPE BY THE WITHDRAWAL OF PIPE SLINGS OR OTHER LIFTING TACKLE.
- BELL HOLES SHALL BE PROVIDED AT EACH JOINT TO PERMIT THE JOINT TO BE MADE PROPERLY.
- IF MUCK OR OTHER DELETERIOUS MATERIAL IS ENCOUNTERED IN THE TRENCH, IT SHALL BE COMPLETELY REMOVED FOR THE WIDTH OF THE TRENCH AT THE PIPE AND TO A DEPTH WHERE ACCEPTABLE MATERIAL IS ENCOUNTERED. AFTER REMOVAL OF ALL MUCK OR DELETERIOUS MATERIAL, THE TRENCH SHALL BE BACKFILLED WITH BEDDING MATERIAL TO THE BOTTOM OF PIPE GRADE.
- EXCAVATION FOR FOUNDATIONS SHALL BE TO THE BOTTOM ELEVATIONS SHOWN ON THE PLANS, AND 12" BEYOND THE HORIZONTAL LIMITS OF THE FOUNDATIONS IN ALL DIRECTIONS. EXCAVATION SIDE SLOPES SHALL BE SUCH THAT THE SOIL WILL BE SELF SUPPORTING BUT SHALL NOT BE STEEPER THAN 1:1.
- BACKFILL SHALL NOT BE PLACED AGAINST WALLS UNTIL A MINIMUM CONCRETE COMPRESSIVE STRENGTH OF 1,500 PSI IS ACHIEVED.
- STOCKPILE AND/OR REMOVAL OF EXCESS EXCAVATED MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- TRENCH BACKFILL UNDER PAVEMENT AREAS WITH SELECT MATERIAL AROUND AND UNDER HAUNCHES OF PIPE AND UP TO THE BOTTOM OF THE PAVEMENT SUBBASE MATERIAL PLACED IN 6" LIFTS AND COMPACTED TO NOT LESS THAN 98% OF THE MAXIMUM DENSITY AS DETERMINED BY FM 1-1 180.
- TRENCH BACKFILL IN AREAS OUTSIDE PAVEMENT TO ONE FOOT ABOVE THE CROWN OF THE PIPE TO NOT LESS THAN 95% OF THE MAXIMUM DENSITY AS DETERMINED BY FM 1-1 180. ABOVE THE ONE FOOT OF PIPE CROWN, CONTRACTOR PROVIDE DENSITY EQUAL TO OR GREATER THAN THE SOIL ADJACENT TO THE PIPE TRENCH TO FINAL GRADE.
- COMPACTION REQUIREMENTS FOR DITCHES AND SWALES TO BE FILLED SHALL BE CLEAN GRANULAR FILL PLACED AND COMPACTED IN 12" LIFTS TO 98% MAXIMUM FM 1-1 180 DENSITY.
- CONTRACTOR WILL BE RESPONSIBLE TO OBTAIN ALL NECESSARY PERMITS AND APPROVALS ASSOCIATED WITH DEMANDING.
- LIMEROCK BASE MATERIAL SHALL MEET THE REQUIREMENTS OF SECTION 911 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION LATEST EDITION AVERAGE LBR VALUE OF NOT LESS THAN 80.
- ONSITE ASPHALTIC CONCRETE MATERIALS S-1, S-2, AND S-3 SHALL MEET THE REQUIREMENTS OF FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION & CONSISTENT WITH THE LATEST SUPERPAVE SPECIFICATION & FOUND LATEST FDOT SPECIFICATIONS FOR ROAD AND BRIDGE. ASPHALTIC CONCRETE IN PUBLIC RIGHT-OF-WAY SHALL MEET THE LATEST FDOT STANDARD SPECIFICATION LATEST EDITION FOR MATERIALS AND QUANTITIES.
- SUBGRADE SHALL BE PREPARED, STABILIZED, GRADED, AND COMPACTED TO AN AVERAGE LBR OF 40 WITH A 98% MAXIMUM DENSITY PER FM 1-1 180.
- PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH SECTION 711 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION LATEST EDITION.
- CONCRETE UNLESS OTHERWISE SPECIFIED SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3,000 PSI SHALL BE PLACED IN ACCORDANCE WITH ACI 308.1R-08 AND ACI 307.1R-08 LATEST EDITIONS.
- CONCRETE REINFORCEMENT SHALL BE PROVIDED BY BILLY STEEL GRADE 60 IN ACCORDANCE WITH THE ASTM A615-A LATEST EDITION, WELDED FABRIC STEEL SHALL BE IN ACCORDANCE WITH ASTM A765 LATEST EDITION, AND WELDING ELECTRODES SHALL BE LOW HYDROGEN, E70 SERIES.
- REINFORCED UNIT MASONRY SYSTEM SHALL BE ASTM C90, GRADE N-1 TYPE 1 NORMAL WITH COMPRESSIVE STRENGTH OF F_m = 1,800 PSI WITH TYPE S 1,800 PSI MORTARS ABOVE GRADE AND TYPE M (2,500 PSI BELOW GRADES). REINFORCED MASONRY WILL BE LAD IN A RUNNING BOND CONFIGURATION UNLESS OTHERWISE NOTED.
- GROUT FILL FOR MASONRY SHALL BE 3,000 PSI AT 28 DAYS PREMIXED IN ACCORDANCE WITH ASTM C476 OR ASTM C94.

SITE CONSTRUCTION NOTES

- ALL CURB RADIUS TO BE 3 FEET AND AT BACK OF CURB, UNLESS OTHERWISE NOTED.
- ALL DIMENSIONS SHOWN ARE TO THE BACK OF CURB, UNLESS OTHERWISE NOTED.
- CONCRETE SIDEWALK RAMPS SHALL BE INSTALLED ACCORDING TO F.D.O.T. INDEX 304 OR A.D.A. STANDARDS, WHICHEVER IS MORE RESTRICTIVE. THIS SHALL INCLUDE, BUT NOT LIMITED TO, THE INSTALLATION OF DETECTABLE WARNING SURFACES. COLOR REQUIREMENTS FOR THE DETECTABLE WARNING SURFACES SHALL PROVIDE A DARK-ON-LIGHT OR LIGHT-ON-DARK CONTRAST BETWEEN THE DETECTABLE WARNING SURFACE AND THE ADJACENT WALKING SURFACE PER F.D.O.T. AND A.D.A. STANDARDS.
- ALL STRUCTURES, PIPE AND OTHER CONSTRUCTION IN THE DEPARTMENT RIGHT-OF-WAY SHALL BE PERFORMED TO THE LATEST APPLICABLE FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN STANDARDS AND SPECIFICATIONS.

UTILITIES NOTES WATER AND SEWER LINES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ORANGE CITY UTILITY STANDARDS LATEST EDITION & VOLUSIA COUNTY UTILITY DETAILS. CONSTRUCTION MATERIALS SHALL BE IN ACCORDANCE WITH ORANGE CITY QUALIFIED PRODUCTS LIST. REFER TO UTILITY PLAN AND DETAIL SHEETS FOR PROJECT REFERENCE SPECIFICATIONS & DETAILS. FOR ALL DETAILS NOT INCLUDED WITHIN THIS PLAN, CONTRACTOR SHALL REFER TO THE ABOVE REFERENCED DOCUMENTS.

FDOT NOTES:

- MOT SETUP MUST BE SUPERVISED BY A CERTIFIED PERSON.
- TEST RESULTS ARE REQUIRED UPON REQUEST.
- THE ENGINEER'S CERTIFICATION ALONG WITH AS-BUILTS, IF REQUIRED, MUST BE SUBMITTED WITHIN 30 DAYS FROM COMPLETION OF THE PROJECT.
- FDOT OFFICE TO BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO ANY WORK WITHIN THE RIGHT-OF-WAY OR LANE CLOSURES.
- ALL DISTURBED AREAS TO BE SOODED.
- CONCRETE SIDEWALKS AND RAMPS WITHIN THE RIGHT-OF-WAY SHALL BE INSTALLED PER F.D.O.T. INDEXES 522-001 & 522-002. THIS SHALL INCLUDE, BUT NOT LIMITED TO, THE INSTALLATION OF DETECTABLE WARNING SURFACES AT RAMPS. COLOR REQUIREMENTS FOR THE DETECTABLE WARNING SURFACES SHALL PROVIDE A DARK-ON-LIGHT OR LIGHT-ON-DARK CONTRAST BETWEEN THE DETECTABLE WARNING SURFACE AND THE ADJACENT WALKING SURFACE PER F.D.O.T. AND A.D.A. STANDARDS.

ASPHALTIC CONCRETE QUALITY CONTROL SPECIFICATIONS

SPECIFIC REQUIREMENTS FOR ASPHALTIC CONCRETE WEARING SURFACES ARE OUTLINED IN SECTIONS 330 AND 334 IN THE FLORIDA DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2004 EDITION. REQUIREMENTS SHALL MEET OR EXCEED THE FOLLOWING:

- IT SHALL BE THE CONTRACTOR RESPONSIBILITY TO FURNISH A 15 FOOT MANUAL AND A 15 FOOT ROLLING STRAIGHTEDGE. MAKE THEM AVAILABLE AT THE JOB SITE AT ALL TIMES DURING THE PAVING OPERATIONS FOR CHECKING JOINTS AND SURFACE IRREGULARITIES.
- OBTAIN A SMOOTH SURFACE ON ALL PAVEMENT COURSES PLACED, AND THEN STRAIGHTEDGE ALL INTERMEDIATE AND FINAL COURSES WITH A 15 FOOT ROLLING STRAIGHTEDGE.
- CONSTRUCT A PAVEMENT SURFACE WITH CROSS SLOPE IN COMPLIANCE WITH THE REQUIREMENTS OF THE CONTRACT PLANS. FURNISH A LEVEL WITH A MINIMUM LENGTH OF 4 FEET, OR A DIGITAL MEASURING DEVICE APPROVED BY THE ENGINEER, FOR THE CONTROL OF CROSS SLOPE. MAKE THE LEVEL OR MEASURING DEVICE AVAILABLE AT THE JOB SITE AT ALL TIMES FOR THE MEASUREMENT OF CROSS SLOPE DURING PAVING OPERATIONS.
- PRODUCE A FINISHED SURFACE OF UNIFORM TEXTURE AND COMPACTION WITH NO PULLED, TORN, CRUSHED OR LOOSENED PORTIONS AND FREE FROM SEGREGATION, SAND SPRAKES, SAND SPOTS, OR RUPLES. CORRECT ANY AREA THAT DOES NOT MEET THE REQUIREMENTS.
- UPON COMPLETION OF THE FINAL SURFACE OR FRICTION COURSE, PERFORM ACCEPTANCE TESTING FOR SURFACE TOLERANCE ON THE FINISHED SURFACE WITH A 15 FOOT ROLLING STRAIGHTEDGE. CORRECT ALL DEFICIENCIES IN EXCESS OF 3/16 INCH.

INSPECTION AND TESTING

- CONTRACTOR SHALL COORDINATE THE INS TO EXISTING LINES FOR MOST APPROPRIATE TIME.
- AFTER THE MAINS HAVE BEEN LAID AND BEFORE PRESSURE TESTING, EACH RUN OF PIPE SHALL BE THOROUGHLY FLUSHED SO AS TO REMOVE ALL DEBRIS AND FOREIGN MATTER FROM THE LINES. WHERE FIRE HYDRANTS OR BLOWOFFS ARE NOT AVAILABLE OR ARE OF INSUFFICIENT CAPACITY TO PERMIT ADEQUATE FLUSHING, THE WATER LINE SHALL BE OPENED AND FLUMES OR PIPING SHALL BE PROVIDED BY THE CONTRACTOR TO WASTE THE WATER TO THE NEAREST APPROVED DISPOSAL OR CONTAINMENT POINT. SUFFICIENT FLUSHING OF WATER SHALL BE INTRODUCED INTO THE MAINS TO PRODUCE A VELOCITY OF NOT LESS THAN 3 FEET PER SECOND, AND THIS RATE OF FLOW SHALL BE CONTINUED UNTIL THE DISCHARGE IS CLEAR AND NO EVIDENCE OF SILT OR FOREIGN MATTER IS VISIBLE.
- CONTRACTOR SHALL OBTAIN A COPY OF FDEP WATER AND SEWER PERMITS IN ORDER TO SATISFY THE PERMIT REQUIREMENTS FOR TESTING AND CLEARANCE.
- CONTRACTOR SHALL USE DISINFECTING AGENT SUCH AS LIQUID CHLORINE OR SODIUM HYPOCHLORITE SOLUTION. DRY HYPOCHLORITE, SIMILAR OR EQUAL TO "JIP" MAY ALSO BE USED AS THE DISINFECTING AGENT. THE DISINFECTING AGENT SHALL BE PUMPED INTO THE PIPING IN SUCH A MANNER THAT THE ENTIRE SYSTEM WILL BE FILLED WITH WATER CONTAINING A MINIMUM CHLORINE CONCENTRATION OF 50 PPM AT ANY POINT IN THE PIPING. THIS WATER SHALL BE ALLOWED TO REMAIN IN THE SYSTEM FOR A MINIMUM CONTACT PERIOD OF EIGHT HOURS BEFORE THE SYSTEM IS FLUSHED OUT.
- AFTER THE DISINFECTING AGENTS HAVE BEEN PERMITTED TO REMAIN FOR THE SPECIFIED CONTACT PERIODS, WATER LINES AND VALVES SHALL BE THOROUGHLY FLUSHED WITH POTABLE WATER UNTIL RESIDUAL CHLORINES TESTS ARE LESS THAN 1.0 PPM IN EACH INSTANCE.
- FORCE MAINS SHALL BE TESTED WITH HYDROSTATIC PRESSURE CONSISTENT WITH THE WATER LINE TESTING PROCEDURES.
- GRAVITY SEWERS SHALL BE TESTED BY MEANS OF EXFILTRATION/INFILTRATION OR VACUUM PRESSURE TESTING. CONTRACTOR SHALL COORDINATE THE REQUIRED TESTING OF THE GRAVITY LINE PER LOCAL REQUIREMENTS. CONTRACTOR SHALL CONFIRM THE VIDEO REQUIREMENTS OF THE LOCAL CODE PRIOR TO CONSTRUCTION AND SHALL PROVIDE VIDEO AS REQUIRED WITHOUT ADDITIONAL COST TO OWNER.

CITY OF ORANGE CITY PUBLIC WORKS DESIGN AND CONSTRUCTION REQUIREMENTS

- ALL CURBS, CURB & GUTTERS, CONCRETE SIDEWALKS, CURB HANDS, DETECTABLE WARNING SURFACES, SIDEWALKS, CROSSWALKS, STOP MARKINGS AND SIGNS SHALL COMPLY WITH CURRENT FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) STANDARDS TO THE FULLEST EXTENT, INCLUDING TRANSITIONS AT CURB ENDINGS.
- UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR MUST SUBMIT TO THE CITY'S DEVELOPMENT SERVICES DEPARTMENT ONE (1) SET OF AS-BUILT PLANS, SIGNED AND SEALED BY A SURVEYOR CURRENTLY REGISTERED IN THE STATE OF FLORIDA, INCLUDE A CD CONTAINING FILES IN DIGITAL FORMATS, INCLUDING AUTOCAD DWG FILES, PDFS AND PLS FILES IN COMMA SEPARATED VALUES (CSV) FORMAT.
- IN THE EVENT THAT ANY OF THE EXISTING IMPROVEMENTS WITHIN THE PUBLIC RIGHT-OF-WAY ARE DAMAGED DURING CONSTRUCTION (SUCH AS ROADWAY PAVEMENT, SIGNING/STRIPING, VEGETATION, UTILITIES, ETC.), THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ALL DAMAGES TO THE SATISFACTION OF THE JURISDICTION HAVING AUTHORITY, AND SHALL RESTORE ALL AREAS TO A CONDITION EQUAL AND/OR BETTER THAN EXISTING PRIOR TO CONSTRUCTION.

STRIPING NOTES

- TYPICAL PARKING SPACE SHALL BE STRIPED WITH A 4" WHITE STRIPE.
- SEE DETAILS FOR HANDICAP PARKING.
- LOADING ZONE SHALL BE MARKED WITH 12" WHITE STRIPES AT 5' CENTERS ON A 45° ANGLE, UNLESS OTHERWISE NOTED.
- TYPICAL STOP BAR SHALL BE 24" WIDE WHITE STRIPE.
- ALL OFF-SITE PAVEMENT MARKING SHALL BE WHITE THERMOPLASTIC STYLE PAINT.
- ALL ON-SITE PAVEMENT MARKING SHALL BE WHITE REFLECTIVE PAINT.
- ALL PAVEMENT MARKING, STRIPING, AND SIGNAGE SHALL BE IN ACCORDANCE WITH LATEST APPLICABLE FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN STANDARDS AND SPECIFICATIONS.

UTILITY CONSTRUCTION NOTES

- CONTRACTOR TO TIE INTO EXISTING WATER AND SEWER SERVICES AS SPECIFIED ON PLANS.
- CONTRACTOR TO COORDINATE WITH ALL UTILITY COMPANIES FOR EXACT LOCATION OF UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
- ON-SITE POTABLE WATER DISTRIBUTION SYSTEM WILL BE PRIVATELY OWNED AND MAINTAINED.

NOTE TO CONTRACTORS:

- BEFORE BEGINNING SITE WORK, THE CONTRACTOR IS REQUIRED TO FIELD VERIFY THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES AND OTHER FEATURES. THE CONTRACTOR MAY CONSULT THE UTILITIES OWNER'S RECORD DRAWINGS, BUT THE UTILITY OWNER AND THE ENGINEER DO NOT GUARANTEE, BY IMPLICATION OR OTHERWISE, THE ACCURACY OF THE UTILITY OWNER'S RECORD DRAWINGS. THE SITE CONTRACTOR SHALL BE FINANCIALLY RESPONSIBLE FOR ANY MODIFICATION REQUIRED, OTHER THAN SHOWN ON PLANS.
- CONTRACTOR TO COORDINATE WITH LOCAL WATER PROVIDER FOR INSTALLATION OF WATER METER.

SLOPE CRITERIA FOR WALKWAYS AND PLAZA SURFACES:

ARCHITECTURAL REQUIREMENTS FOR PLAZA ELEVATIONS ARE BASED UPON POSITIVE DRAINAGE, AND ACCESSIBLE ROUTE REQUIREMENTS INCLUDING THE FOLLOWING:

- ALL PAVED AREAS SURFACE SHALL BE CONTINUOUSLY SLOPED TOWARD DRAINAGE COLLECTION DEVICES, SO THAT DRAINAGE SURFACES DRY UNIFORMLY, WITHOUT BIRDBATHS OR TRAPPED PULPING. MINIMUM POSITIVE SLOPE FOR DRAINAGE IN ALL AREAS (NO DEAD LEAF REGIONS).
- DETECTABLE WARNING SURFACES WALKWAYS AND VEHICULAR WAYS AND NO RAISED CURB EXISTS, PROVIDE A DETECTABLE WARNING SURFACE PER FLORIDA BUILDING CODE 11.4-29-2 AND ICC/ANSI A-117.3, SECTION 705. ALSO PROVIDE DETECTABLE WARNING SURFACE AT ALL CURB RAMPS, PER FLORIDA BUILDING CODE SECTION 11-4.7.7 AND SECTION 11-4.29.2. THE DETECTABLE WARNING SHALL EXTEND THE FULL WIDTH AND DEPTH OF THE CURB RAMP. DETECTABLE WARNING SURFACES SHALL HAVE CONTRASTING COLOR PER ICC/ANSI A-117.1 SECTION 705.3, AND SHALL UTILIZE TRUNCATED DOMES COMPLYING WITH ICC/ANSI A117.1 SECTION 705.5.
- SLOPE IN DIRECTION OF TRAVEL SHALL BE 1 IN 20 OR LESS, UNLESS THE SURFACE IS TREATED AS A RAMP.
- SLOPE IN DIRECTION OF TRAVEL ON RAMPS MAY VARY FROM 1 IN 20 TO 1 IN 12. THERE SHALL BE NO PAVED SURFACES SLOPED MORE 1 IN 12.
- TRAVEL DISTANCE ALONG RAMPS SHALL NOT EXCEED 6' HORIZONTALLY, NOR SHALL IT RISE MORE THAN 6" VERTICALLY FROM ADJACENT GRADES, UNLESS THE RAMP IS EQUIPPED WITH GRASPING RAILS ON BOTH SIDES. NO SUCH CONDITIONS ARE ANTICIPATED.
- CROSS SLOPE (PERPENDICULAR TO DIRECTION OF TRAVEL) ON WALKWAYS AND RAMPS SHALL NOT EXCEED 1 IN 50 (I.E. 2% MAX).
- CHANGE IN DIRECTION ALONG A RAMP OR WALKWAY SURFACE: PROVIDE A 5X5' TURNING SPACE WITH A CROSS SLOPE IN BOTH DIRECTIONS LESS THAN 1 IN 20. PROVIDE 1% MIN TO 2% MAX SURFACE SLOPE FOR DRAINAGE. SLOPE IN GENERAL DIRECTION OF SURROUNDING PAVEMENT.
- WALKWAYS ALONG THE FRONT OF STOREFRONT ENTRANCES SHALL HAVE A CROSS SLOPE (PERPENDICULAR TO THE DIRECTION OF TRAVEL - PARALLEL TO STOREFRONT) THAT IS 1 IN 50 OR LESS (I.E. 2% MAX). A 6"-0" WIDE REGION ALONG ALL STOREFRONT ENTRY SYSTEMS HAS BEEN DEFINED AS THE WALKWAY, WITH A MAX FALL IN THE CROSS SLOPE DIRECTION OF 0.11 FEET IN 6'-0" (I.E. 01.83%).
- CHANGES IN LEVEL: CHANGES IN LEVEL UP TO 1/4" MAY BE VERTICAL AND WITHOUT EDGE TREATMENT. CHANGES IN LEVEL BETWEEN 1/4" AND 1/2" SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1 VERTICAL TO 2 HORIZONTAL. LEVEL CHANGES GREATER THAN 1/2" SHALL BE TREATED AS A RAMP (FL. BLDG. CODE 11-4.5.2)
- CHANGES IN LEVEL AT DOOR THRESHOLDS: ALL DOORS SHALL HAVE ROLL-THROUGH THRESHOLDS THAT MEET THE ABOVE REQUIREMENT FOR CHANGES IN LEVEL. DOOR THRESHOLDS SHALL BE RECESSED 1/4" MAX INTO CONCRETE SLAB (FOR WATERPROOFING). ALL THRESHOLDS SHALL TAPER DOWN AT THE OUTSIDE EDGE, TO MEET THE EXTERIOR SLAB WITH LESS THAN A 1/4" HIGH BUMP. THE HIGHEST BUMP IN THE THRESHOLD SHALL NOT EXCEED 1/2", AND SHALL SLOPE 1 VERTICAL TO 2 HORIZONTAL.

THE ABOVE SLOPE REQUIREMENTS SHALL BE MET IN ALL WALKWAY AREAS, REGARDLESS OF WHETHER ARCHITECTURAL SPOT ELEVATIONS ARE PROVIDED THAT INDICATE THE REQUIRED ELEVATIONS. WHERE ERRORS OR DISCREPANCIES IN DESIGN DATA EXIST (WHETHER SUCH INFORMATION IS OBTAINED FROM ARCHITECTURAL OR CIVIL DRAWINGS), THE ABOVE CRITERIA SHALL BE MET, TO ENSURE CODE COMPLIANCE. ALL DISCREPANCIES SHALL BE COORDINATED WITH THE ARCHITECT OR CIVIL ENGINEER PRIOR TO CONSTRUCTION.

NO.	REVISIONS	DATE	APPR.
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SPECIFICATIONS

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SEAL

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CADIAZZ, LLC
CERTIFICATION OF AUTHORIZATION # 28509

SHEET NUMBER

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