

CITY OF WINTER GARDEN - GENERAL NOTES:

- ALL UTILITY SYSTEMS AND IMPROVEMENTS CONSTRUCTED IN THE CITY OF WINTER GARDEN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE MANUAL OF STANDARDS AND SPECIFICATIONS FOR UTILITY CONSTRUCTION FOR THE CITY OF WINTER GARDEN, TO BE REFERENCED AS MSS/CWG. THE LATEST EDITION AT THE TIME PERMITS ARE APPROVED SHALL BE EFFECTIVE FOR THE DURATION OF THE SUBJECT WORK OR PROJECT DEVELOPMENT.
- THE CITY OF WINTER GARDEN GENERAL NOTES AND DETAILS ARE PROVIDED FOR THE CONVENIENCE OF FIELD PERSONNEL. THEY DO NOT INCLUDE ALL REQUIREMENTS OF THE MSS/CWG. THE CONTRACTOR SHALL REFER TO THE FULL TEXT OF THE MSS/CWG FOR FURTHER DETAIL AND CLARITY WHEN NEEDED. THE WEBSITE FOR THE MSS/CWG IS: <http://www.cwgd.com/files/forms/pubserv/Utility%20Specifications.pdf>
- ANY REQUEST FOR VARIANCE OR NONCOMPLIANCE FROM THE MSS/CWG NOTED ABOVE MUST BE APPROVED BY THE CITY ENGINEER OR UTILITIES DIRECTOR.
- THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN EXCAVATING IN CLOSE PROXIMITY TO WATER, WASTEWATER, RECLAIMED WATER, AND OTHER UTILITY SYSTEMS. THE CONTRACTOR SHALL COORDINATE UTILITY LOCATIONS WITH RESPECTIVE UTILITY OWNERS AND CALL "SUNSHINE ONE CALL", 1-800-432-4770 A MINIMUM OF 72 HOURS IN ADVANCE.
- CONTRACTOR'S DAMAGE OF WINTER GARDEN UTILITY SYSTEM: THE CONTRACTOR SHALL IMMEDIATELY NOTIFY AND REPORT DAMAGE TO THE CITY OF WINTER GARDEN UTILITY DIVISION, (NO MESSAGE) PHONE # 407-656-4100.
- IMMEDIATE REPAIR OF DAMAGED UTILITY SYSTEM: THE CONTRACTOR SHALL IMMEDIATELY REPAIR ANY DAMAGE TO THE CITY OF WINTER GARDEN UTILITY SYSTEM AS REQUIRED BY THE UTILITY OWNER AT CONTRACTOR'S COST. IN CASE OF UNRESPONSIVE ACTION BY THE CONTRACTOR, THE CITY RESERVES THE RIGHT TO REPAIR DAMAGE. THE CONTRACTOR SHALL REIMBURSE THE CITY OF WINTER GARDEN OF ALL REPAIR COST.
- ADVANCE NOTIFICATION OF CONSTRUCTION: THE CONTRACTOR SHALL NOTIFY THE CITY OF WINTER GARDEN, UTILITY DIVISION, PH # 407-656-4100, AT LEAST SEVEN (7) CALENDAR DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITY.
- ADVANCE NOTIFICATION OF UTILITY CONNECTION: THE CONTRACTOR SHALL NOTIFY THE CITY OF WINTER GARDEN AT LEAST SEVEN CALENDAR DAYS IN ADVANCE TO SCHEDULE CONNECTIONS TO UTILITY SYSTEM.
- UTILITY VALVE OPERATION: ONLY CITY OF WINTER GARDEN UTILITY PERSONNEL SHALL OPERATE VALVES AND HYDRANTS. THE CONTRACTOR, WHEN NEEDED, SHALL CALL THE CITY TO REQUEST VALVE OPERATIONS AT LEAST TWO (2) DAYS IN ADVANCE OF CONSTRUCTION WORK.
- OPERATIONS INVOLVING WATER OR WASTEWATER FACILITIES INCLUDING PUMPING STATIONS: THE CONTRACTOR SHALL ADVISE AT LEAST TWO (2) WEEKS IN ADVANCE OF ANY CONSTRUCTION ACTIVITY THAT MAY REQUIRE THE DISCONTINUATION OF SERVICE OR OPERATION OF A FACILITY. THE CITY WILL PROVIDE PERSONNEL TO OPERATE THE CITY FACILITIES.
- REQUIRED TESTING BY CONTRACTOR: THE CONTRACTOR SHALL NOTIFY THE CITY OF WINTER GARDEN AT LEAST TWO (2) DAYS PRIOR TO SAMPLING ACTIVITIES FOR PURPOSE OF TESTING AS REQUIRED BY THE CITY. THE CONTRACTOR SHALL NOT TEST OR SAMPLE WITHOUT OBSERVATION BY CITY INSPECTION PERSONNEL.
- TEMPORARY OR CONSTRUCTION WATER SERVICE CONNECTIONS PROVIDED BY FIRE HYDRANT CONNECTION: THE CITY WILL PROVIDE METER ON FIRE HYDRANT. THE CONTRACTOR SHALL PROVIDE NON-REFUNDABLE ACCOUNT INITIATION FEE, A REFUNDABLE SECURITY DEPOSIT FOR THE METER APPARATUS, AND PAY ALL COST FOR WATER USED.
- ALL AS-BUILT MEASUREMENTS & ELEVATIONS ARE TO BE MADE BY A LICENSED LAND SURVEYOR.

CWG - WASTEWATER SYSTEM NOTES:

- SANITARY SEWER MAINS AND SERVICES SHALL BE PVC SDR-26 (MINIMUM). FITTINGS SHALL BE SDR-26. DUCTILE IRON IS NOT APPROVED FOR SANITARY SEWERS.
- ALL SERVICES SHALL BE 6" (MINIMUM) DIAMETER AND TERMINATE AT THE PROPERTY LINE WITH 6" CLEAN OUT (36" TO 48" DEEP AT LOT LINE).
- MAGNETIC TAPE MUST BE PLACED 2' ABOVE THE TOP OF PIPE FOR THE ENTIRE LENGTH OF ALL MAINS AND SERVICES.
- ALL SANITARY MANHOLES SHALL BE PAINTED INSIDE AND OUT WITH "BITUMASTIC SUPER SERVICE BLACK", BY KOPPERS OR APPROVED EQUAL. MANHOLES RECEIVING FLOW FROM FORCE MAINS SHALL BE LINED WITH FIBERGLASS OR HOPE AT THE PRECASTER'S FACILITY.
- ALL PIPE CONNECTIONS TO PRE-CAST MANHOLES SHALL BE MADE USING A FLEXIBLE EPDM RUBBER BOOT AND STAINLESS STEEL STRAP OR CAST IN BOOT BY A-LOK, Z-LOK, OR EQUAL.
- CONNECTIONS MADE TO EXISTING MANHOLES SHALL BE CORE BORED WITH A MINIMUM 6" BORE AND CONNECTION SEALED WITH FLEXIBLE BOOT AND STAINLESS STEEL CLAMP.
- DEAD END MANHOLES SHALL HAVE A MINIMUM OF 5 FEET OF COVER FROM FINISHED GRADE TO OUTLET PIPE INVERT.
- ALL PRECAST SEWER MANHOLES SHALL HAVE A 4 FOOT MINIMUM HIGH BARREL CONE SECTIONS SHALL BE 3 FOOT MINIMUM. CONCRETE DONUTS FOR EXTENDING ARE ACCEPTABLE TO RAISE MANHOLES UP TO 1 FOOT MAXIMUM.
- THE CONTRACTOR SHALL PROVIDE AND INSTALL BALLCENTRIC PLUG VALVES IN CITY-OWNED FORCE MAINS AT 1000-FOOT MAXIMUM SPACING BETWEEN VALVES. VALVES SHALL BE LOCATED AT ALL TEES AND CROSSES.
- THE CONTRACTOR SHALL CUT AN "S" INTO CONCRETE CURB LOCATED INSIDE OF A PAINTED GREEN SQUARE BOX IN FRONT OF EACH SERVICE LOCATION.
- THE CONTRACTOR SHALL PROVIDE TV INSPECTION OF ALL SANITARY SEWER MAINS AFTER SYSTEM IS COMPLETED, THOROUGHLY CLEANED, DRAINED, AND FULLY VISIBLE. TV INSPECTION SHALL BE PERFORMED IN ACCORDANCE WITH SPECIFICATIONS. FAULTY INSPECTION DUE TO POOR CONDITIONS WILL REQUIRE REINSPECTION BY CONTRACTOR. NOTE: THIS REQUIREMENT IS ONLY APPLICABLE TO THE NEW GRAVITY LINE.
- THE CONTRACTOR SHALL PROVIDE A (WARRANTY) TV INSPECTION AT THE TWO-YEAR IN-SERVICE MILESTONE FOR EACH SYSTEM. [NOT APPLICABLE FOR THIS PROJECT.]

- THE CONTRACTOR SHALL PROVIDE SANITARY SEWER TESTING, EXFILTRATION, OR AIR, AS DESCRIBED BELOW AND SUBMIT CERTIFIED RESULTS TO THE CITY ENGINEER.
 - DEFLECTION TESTING
 - TESTING IS REQUIRED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS TO PERMIT STABILIZATION OF THE SOIL-PIPE SYSTEM.
 - TESTING REQUIREMENTS SPECIFY:
 - NO PIPE SHALL EXCEED A DEFLECTION OF 5%
 - USING RIGID BALL AND MANDREL FOR THE DEFLECTION TEST WITH A DIAMETER NOT LESS THAN 95% OF THE BASE INSIDE DIAMETER OR AVERAGE INSIDE DIAMETER OF THE PIPE DEPENDING ON THE ASTM SPECIFICATION, INCLUDING THE APPENDIX, TO WHICH THE PIPE IS MANUFACTURED.
 - PERFORMING THE TEST WITHOUT MECHANICAL PULLING DEVICES.
 - LEAKAGE TESTING
 - LEAKAGE REQUIREMENTS SPECIFY:
 - THE LEAKAGE EXFILTRATION OR INFILTRATION DOES NOT EXCEED 200 GALLONS PER INCH OF PIPE DIAMETER PER MILE PER DAY FOR ANY SECTION OF THE SYSTEM
 - EXFILTRATION OR INFILTRATION TESTS BE PERFORMED WITH A MINIMUM POSITIVE HEAD OF 7 FEET
 - AIR TESTS, AS A MINIMUM, CONFORM TO THE TEST PROCEDURE DESCRIBED IN ASTM C-828 FOR CLAY PIPE, ASTM C-924 FOR CONCRETE PIPE, ASTM F-1417 FOR PLASTIC PIPE, AND FOR OTHER MATERIALS APPROPRIATE TEST PROCEDURES.

- GRAVITY SEWERS DEPTHS SHALL NOT EXCEED 18 FEET.
- THE DESIGN ENGINEER SHALL PROVIDE A MINIMUM OF ONE FOOT OF FREEBOARD BETWEEN THE LOWEST FINISHED FLOOR ELEVATION AND THE TOP ELEVATION OF THE WET WELL.
- ALL PENETRATIONS INTO CONCRETE STRUCTURES SHALL BE PRE-CAST OR CORE-DRILLED.
- WARRANTY - ALL MATERIALS & EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR SHALL BE WARRANTED FOR A PERIOD OF FIVE YEARS FROM THE DATE OF SUBSTANTIAL COMPLETION THEREOF AGAINST DEFECTIVE MATERIALS, DESIGN, AND WORKMANSHIP. UPON RECEIPT OF NOTICE FROM THE CITY OF FAILURE OF ANY PART OF THE WARRANTED EQUIPMENT OR MATERIALS DURING THE WARRANTY PERIOD, THE AFFECTED PART, PARTS, OR MATERIALS SHALL BE PROMPTLY REPLACED BY THE CONTRACTOR WITH NEW PARTS OR MATERIALS AT NO EXPENSE TO THE CITY. IN THE EVENT THE CONTRACTOR FAILS TO MAKE THE NECESSARY REPLACEMENT OR REPAIRS IMMEDIATELY AFTER NOTIFICATION, THE CITY MAY ACCOMPLISH THE WORK AT THE EXPENSE OF THE CONTRACTOR.

CLOSED CIRCUIT TELEVISION (CCTV) INSPECTION OF SEWER LINES:

GENERAL:

- ALL NEW SANITARY SEWER LINES, PRIVATE OR CITY MAINTAINED, IN THE CITY OF WINTER GARDEN'S SERVICE AREA SHALL BE INSPECTED BY CLOSED CIRCUIT TV INSPECTION BY THE CITY CONTRACTOR WITH A CITY INSPECTOR PRESENT PRIOR TO BEING ACCEPTED BY THE CITY.

REQUIREMENTS PRIOR TO INSPECTION RELEASE:

- ALL ELEMENTS OF THE SEWER SYSTEM MUST BE INSTALLED AND BE COMPLETELY FINISHED, INCLUDING MAIN SEWER LINES, LATERALS, CLEAN OUTS, AND MANHOLES PRIOR TO CCTV INSPECTION.
- ALL SEWER LINES SHALL BE COMPLETELY CLEANED OUT OF ALL DEBRIS, SAND, WATER, ETC. PRIOR TO THE CCTV INSPECTION. ANY OBJECT OR MATTER THAT PREVENTS CCTV INSPECTION FROM VIEWING CONDITION OF PIPELINE IS CONSIDERED AN OBSTRUCTION REQUIRING ADDITIONAL CLEANING. WHEN CCTV IS OBSTRUCTED, INSPECTION SHALL BE TERMINATED. THE CONTRACTOR SHALL CLEAN THE SEWER SYSTEM COMPLETELY, AND RESCHEDULE CCTV RE-INSPECTION WITH THE CITY.
- A HYDRAULIC SEWER CLEANER SHALL NOT BE USED DURING THE CCTV INSPECTION. IF LINES ARE FOUND TO BE OBTURED BY WATER OR DEBRIS DURING THE CCTV INSPECTION, THE INSPECTION SHALL BE TERMINATED AND RESCHEDULED TO A TIME WHEN SEWER CLEANING IS COMPLETE.
- WHEN A SEWER LINE IS UNDER A PAVED AREA, THE AREA SHALL BE COMPACTED AND PRIMED BEFORE THE SYSTEM SHALL BE RELEASED FOR TV INSPECTION.

TELEVISION EQUIPMENT MINIMUM REQUIREMENTS:

- THE CLOSED CIRCUIT TV CAMERA SHALL PRODUCE A CLEAR COLOR PICTURE ON THE MONITOR AND ON THE DVD RECORDING. THE CAMERA SHALL BE ABLE TO SHOW DETAIL TO THE POINT THAT ALL JOINTS AND ANY DEFECTS MAY BE READILY SEEN AT THE TIME OF THE INSPECTION.
- REFER TO APPENDIX B OF THE REFERENCED STANDARDS FOR SPECIFICATIONS OF CLOSED CIRCUIT TELEVISION INSPECTION EQUIPMENT.
- THE VIDEO RECORDER SHALL PRODUCE A NO NOISE STILL PICTURE, AND PROVIDE BOTH AUDIO AND VIDEO DURING THE INSPECTION.
- A MEASURING DEVICE, APPROVED BY THE CITY, TO CHECK THE GRADE OF THE PIPE DURING THE INSPECTION SHALL BE REQUIRED. GAUGE DEPTH 0" TO 2" MIN. WITH 1/2" MARKINGS.
- AUDIO OF THE INSPECTION SHALL BE SIMULTANEOUSLY RECORDED ON DVD DISC. THE AUDIO SHALL CONSIST OF ORDINARY DESCRIPTION AND COMMENTARY. A TAPE WILL BE GIVEN TO THE INSPECTOR ON SITE AT THE END OF THE DAY.

PROCEDURE FOR TELEVISION:

- THE CITY'S ENGINEERING INSPECTION DIVISION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS' NOTICE PRIOR TO THE TIME PLANNED FOR THE TV INSPECTION TO COMMENCE. A DEFINITE TIME AND DATE WILL BE AGREED UPON BY THE CONTRACTOR AND INSPECTOR AT THAT TIME.
- NO INSPECTION SHALL COMMENCE WITHOUT THE PRESENCE OF THE INSPECTOR, EXCEPT WHEN PRIOR ARRANGEMENTS HAVE BEEN MADE BETWEEN THE CONTRACTOR, INSPECTOR, AND THE CITY. TV INSPECTION SHALL BE PERFORMED BY THE CONTRACTOR AT THE EXPENSE OF THE CONTRACTOR.
- ALL CCTV INSPECTIONS SHALL COMMENCE UPSTREAM OF THE SYSTEM TO PREVENT FOREIGN SUBSTANCES FROM ENTERING A SECTION PREVIOUSLY TELEVIEWED. THE CAMERA SHALL BE STARTED FROM THE DOWNSTREAM MANHOLE AND PROCEED UPSTREAM IN A DIRECTION OPPOSING THE NORMAL FLOW IN THE LINE. THIS PROCEDURE WILL ALLOW FOR THE VIEWING OF THE SERVICE LATERALS.
- BEFORE THE CAMERA IS PLACED IN THE SEWER LINE, WATER WITH YELLOW OR ORANGE DYE SHALL BE PUT INTO THE UPSTREAM MANHOLE OF THE SECTION BEING TELEVIEWED. CAMERA WILL HAVE A GAUGE SHOWING 1/2" MARKS FROM 1/2" TO 2-1/2". THIS WILL ENABLE THE CAMERA TO DETECT ANY CHANGES IN GRADE THAT MAY BE PRESENT IN THE SYSTEM.
- THE CCTV AND DVD RECORDER SHALL BE TURNED ON BEFORE THE CAMERA IS PLACED IN THE MANHOLE FOR INSPECTION AND SHALL NOT BE TURNED OFF UNTIL THE CAMERA IS REMOVED FROM THE MANHOLE. THE CAMERA SHALL BE MOVED THROUGH THE LINE UNDER THE CONTROL OF THE CCTV CAMERA OPERATOR. THE CAMERA SHALL BE DRAWN THROUGH THE LINE AT A RATE NOT TO EXCEED THIRTY (30) FEET PER MINUTE AND SHALL STOP AT ALL SERVICE CONNECTIONS AND PIPE JOINTS IN THE PIPELINE.
- A DVD RECORDING SHALL BE MADE OF THE ENTIRE SYSTEM BEING TELEVIEWED. THIS SHALL BECOME THE PROPERTY OF THE CITY UPON COMPLETION OF THE TV INSPECTION (NOT A COPY). THE TAPE(S) SHALL BE LABELED IN SUCH A MANNER THAT STATES THE PROJECT NAME, DATE OF INSPECTION, AND LINE SECTION ACCORDING TO CONSTRUCTION PLANS CONTAINED ON EACH TAPE. A WRITTEN REPORT SHALL ACCOMPANY THE DVD DISC.

REFERENCE NOTES:

- THE EXISTING TOPOGRAPHIC AND UTILITY INFORMATION DEPICTED IN THE CONTRACT DOCUMENTS WAS OBTAINED FROM FIELD SURVEYS AND DOCUMENTED ON A TOPOGRAPHIC SURVEY BY SOUTHEASTERN SURVEYING, DATED 5/15/2014 AND REVISED 5/29/2014, AND IS MADE A PART OF THE CONSTRUCTION DOCUMENTS BY REFERENCE.

ORANGE COUNTY PRIVATE FORCE MAIN NOTES:

- MAGNETIC TAPE MUST BE PLACED 2' ABOVE THE TOP OF THE PIPE FOR THE ENTIRE LENGTH OF ALL FORCE MAIN LINES.
- PRIVATE MANHOLE RECEIVING FLOW FROM PRIVATE FORCE MAIN SHALL BE LINED WITH FIBERGLASS OR HDPE AT THE PRECASTER'S FACILITY.
- ALL CONNECTIONS TO PRIVATE MANHOLES SHALL CONFORM TO THE CITY OF WINTER GARDEN STANDARDS AND SPECIFICATIONS.
- THE CONTRACTOR SHALL PROVIDE AND INSTALL BALLCENTRIC PLUG VALVES AT ALL TEES AND CROSSES IN FORCE MAIN.
- HYDROSTATIC TESTS SHALL BE CONDUCTED FOR FORCE MAIN, PRESSURE PIPES, JOINTS, AND VALVES FOR ALLOWABLE LIMITS OF PRESSURE AND LEAKAGE.
- REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- SCH 80 PVC FORCE MAIN SHALL BE IN ACCORDANCE WITH ASTM STANDARDS D1785, D2241 AND D2467.

ABBREVIATION LEGEND (ALL SHEETS)

AC	ACRE	MSS/CWG	THE MANUAL OF STANDARDS AND SPECIFICATIONS, CITY OF WINTER GARDEN
BLDG	BENTLEY ARCHITECTS + ENGINEERS, INC.	NIC	NOT IN CONTRACT
CL	BUILDING	NO.	NUMBER
CONSTR.	CENTER LINE	N.T.S.	NOT TO SCALE
CW	CONSTRUCT	O.C.	ON CENTER
CWG	CONDENSING UNIT	OD	OUTSIDE DIAMETER
CWL	CITY OF WINTER GARDEN	OHE	OVERHEAD ELECTRIC
DCVA	CONTROL WATER LEVEL	PFH	PROPOSED FIRE HYDRANT
DRYWELL	DOUBLE CHECK VALVE ASSEMBLY	P/L	PROPERTY LINE
EW	DRYWELL	PVC	POLYVINYL CHLORIDE
ELEVATION	ELEVATION	PWS	POTABLE WATER SERVICE
ENGR	ENGINEER OF RECORD	R	RADIUS
EP	EDGE OF PAVEMENT	ROW	RIGHT OF WAY
E/S	EDGE OF SLAB	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
EX.	EXISTING	RPZ	REDUCED PRESSURE ZONE
FC	FACE OF CURB	SAN.	SANITARY
FDC	FIRE DEPARTMENT CONNECTION	SF	SQUARE FEET
FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION	S.S.	SANITARY SEWER
FDEP	FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION	S.W.	SIDEWALK
FF	FINISHED FLOOR ELEVATION	TBR	TO BE REMOVED
FM	FIRE MAIN	TH	TEST HOLE
GV	GATE VALVE	TQS	TOP OF SIDEWALK
HC	HANDICAPPED	TV	TREATMENT VOLUME
HP	HEAT PUMP	TV	TYPICAL
INV.	INVERT	WGU	WINTER GARDEN UTILITIES
LF	LINEAR FEET		
LOC	LIMITS OF CONSTRUCTION		

CITY OF WINTER GARDEN HORIZONTAL AND VERTICAL SEPARATION TABLE

PROPOSED UTILITY	POTABLE WATER		RECLAIMED WATER		SANITARY SEWER (GRAVITY)		SANITARY SEWER (FORCEMAIN)		STORM WATER		ACCEPTABLE VARIANCES
	HORIZ.	VERT.	HORIZ.	VERT.	HORIZ.	VERT.	HORIZ.	VERT.	HORIZ.	VERT.	
POTABLE WATER	-	-	3'	12"	6'	12"	6'	12"	3'	6" A 12" B	SEE GENERAL NOTES: NO. 4 & 5
RECLAIMED WATER	3'	12"	-	-	3'	6" A 12" B	3'	12"	-	-	
SANITARY SEWER (GRAVITY)	6'	12"	3'	6" A 12" B	-	-	-	-	-	-	
SANITARY SEWER (FORCEMAIN)	6'	12"	3'	12"	-	-	-	-	-	-	

GENERAL NOTES:

- THE TABLE REPRESENTS THE MINIMUM SEPARATION REQUIREMENTS AS DESCRIBED IN F.D.E.P. RULES OF THE FLORIDA ADMINISTRATION CODE (F.A.C.), THESE SEPARATION REQUIREMENTS SHALL APPLY BETWEEN NEWLY PROPOSED UTILITY LINES AND EXISTING OR PROPOSED UTILITY LINES AND EXISTING OR PROPOSED UTILITY LINES.
- FOR THE PURPOSE OF THIS TABLE, RECLAIMED WATER SHALL MEAN UNRESTRICTED PUBLIC ACCESS REUSE WATER AS DEFINED BY F.A.C. 162-610, CHAPTER III. OTHER TYPES OF RECLAIMED WATER ARE CONSIDERED RAW SEWAGE AND SEPARATIONS LISTED FOR SANITARY SEWER SHALL APPLY.
- ALL SEPARATION DISTANCES ARE FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE UNLESS OTHERWISE SPECIFIED. CRITERION PRODUCING GREATER CLEARANCE SHALL BE USED.
 - A - DENOTES POTABLE WATER ABOVE RECLAIMED WATER, SANITARY SEWER OR STORM WATER; OR RECLAIMED WATER ABOVE SANITARY SEWER.
 - B - DENOTES POTABLE WATER BELOW RECLAIMED WATER, SANITARY SEWER OR STORM WATER; OR RECLAIMED WATER BELOW SANITARY SEWER.
- UTILITY SEPARATION - VERTICAL CLEARANCE MITIGATION
 - WHERE WATER AND GRAVITY SANITARY SEWER MAINS CROSS WITH LESS THAN REQUIRED VERTICAL CLEARANCE OR THE SEWER MAIN IS ABOVE THE WATER MAIN, THE SANITARY SEWER WILL BE 20 FEET OF EITHER:
 - DUCTILE IRON PIPE, CENTERED ON THE POINT OF CROSSING, OR;
 - CONCRETE ENCASED VITRIFIED CLAY, OR;
 - PVC PIPE UPGRADED TO WATER MAIN STANDARDS AND PRESSURE TESTED.
 - WHERE WATER MAINS AND STORM SEWER PIPES CROSS WITH LESS THAN REQUIRED VERTICAL CLEARANCE, THE WATER MAIN SHALL BE 20 FEET OF DUCTILE IRON PIPE CENTERED ON THE POINT OF CROSSING.
- SEPARATION REQUIREMENTS BETWEEN FORCE MAINS AND POTABLE WATER MAINS MUST BE MAINTAINED UNLESS APPROVED IN ADVANCE BY THE DEPARTMENT.
- UTILITY SEPARATION - HORIZONTAL SEPARATION MITIGATION
 - WHEN A WATER MAIN PARALLELS A GRAVITY SANITARY SEWER MAIN, A SEPARATION (MEASURED EDGE TO EDGE) OF AT LEAST SIX FEET SHOULD BE MAINTAINED, WHERE THIS SEPARATION IS NOT MET, ONE OF THE FOLLOWING MUST OCCUR.
 - THE WATER MAIN IS LAID IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF LOCATED ON ONE SIDE OF THE SEWER AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 6 INCHES ABOVE THE TOP OF THE SEWER, OR;
 - IF BOTH SANITARY SEWER AND POTABLE WATER MAINS ARE PROPOSED AND THE ABOVE (1) IS NOT MET, THE SANITARY SEWER PIPES SHALL BE UPGRADED TO THE EQUIVALENT PIPE MATERIAL AS THE WATER MAIN AND PRESSURE TESTED.
 - IF THE SANITARY SEWER IS EXISTING AND THE POTABLE WATER MAIN IS PROPOSED, THE WATER MAIN SHALL, AT A MINIMUM, BE UPGRADED TO DUCTILE IRON PIPE, CONSTRUCTED IN SEPARATE TRENCHES, LAD AT A HIGHER ELEVATION THAN THE SANITARY SEWER, AND UTILIZE STAGGERED JOINTS.
 - SEPARATION REQUIREMENTS BETWEEN FORCE MAINS AND POTABLE WATER MAINS MUST BE MAINTAINED UNLESS APPROVED IN ADVANCE BY THE DEPARTMENT.
- NO WATER PIPE SHALL PASS THROUGH OR COME IN CONTACT WITH ANY PART OF A SANITARY OR STORM WATER MANHOLE OR STRUCTURE.

GENERAL UTILITY NOTES:

- INSTALL VALVE BOXES WITH ALL VALVES. VALVE BOXES UNDER THE PAVEMENTS SHALL HAVE TRAFFIC BEARING COVERS AND CONCRETE COLLARS.
- ALL SANITARY SEWER AND WATER LINE CONSTRUCTION SHALL CONFORM TO THE LATEST STANDARDS AND SPECIFICATIONS OF THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION. THIS PROJECT IS DESIGNED WITH NO PHYSICAL CONNECTIONS BETWEEN PUBLIC OR PRIVATE POTABLE WATER SUPPLY SYSTEM AND A SEWER OR FORCE MAIN AND WITH NO WATER PIPES PASSING THROUGH OR COMING INTO CONTACT WITH ANY PART OF A SEWER MANHOLE.
- THE CONTRACTOR SHALL CONFORM TO THE LATEST OSHA STANDARDS RELATING TO TRENCH EXCAVATION.
- THE CONTRACTOR SHALL CALL 811 TO NOTIFY THE LOCAL UTILITY COMPANIES TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION FOR LINE LOCATION.
- ALL CONSTRUCTION MATERIALS AND METHODS FOR FORCE MAIN SYSTEMS SHALL BE IN CONFORMANCE WITH THE CITY OF WINTER GARDEN'S MOST RECENT DESIGN STANDARDS AND APPROVED MATERIALS MANUAL: <http://www.cwgd.com/files/historic/Design%20Standards%206%20Guidelines%20Manual.pdf>
- ALL PRESSURIZED MAIN FITTINGS SHALL BE MECHANICAL JOINT WITH RESTRAINED JOINT GLANDS; A SUFFICIENT LENGTH OF THE PIPE CONNECTED TO THE FITTINGS SHALL BE MECHANICALLY RESTRAINED TO PROVIDE REACTION AS SPECIFIED IN THE RESTRAINED JOINT STANDARD. IN THE CONSTRUCTION DETAILS, CALCULATIONS FOR THE REQUIRED RESTRAINT LENGTH MUST BE PROVIDED IF THE SPECIFIED RESTRAINT LENGTH, SOIL TYPE, OR DEPTH OF COVER, DIFFERS FROM THOSE PROVIDED ON THESE DETAILS.
- ALL PIPES ARE TO BE COLOR-CODED:
 - GREEN (WASTEWATER)
 - BLUE (WATER)
 - PURPLE (REUSE WATER)

BY		DESCRIPTION		DATE		NO.		CITY OF WINTER GARDEN DRC COMMENTS	
SIR				1		1			
				2		2			
				3		3			
				4		4			
				5		5			
				6		6			
				7		7			
				8		8			
				9		9			

SCALE: AS NOTED
 DRAWN BY: ECD
 CHECKED BY: MCV
 PROJECT NO.: 2012.01.11
 DATE: 11/17/2014
 ISSUED FOR: PRELIMINARY PERMITTING BIDDING FINAL CONSTRUCTION RECORD DWG

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BENTLEY ARCHITECTS + ENGINEERS, INC.

**WEST ORANGE SOCCER FIELD
 ORANGE COUNTY, FLORIDA
 FOR
 CITY OF WINTER GARDEN
 GENERAL NOTES AND ABBREVIATIONS**

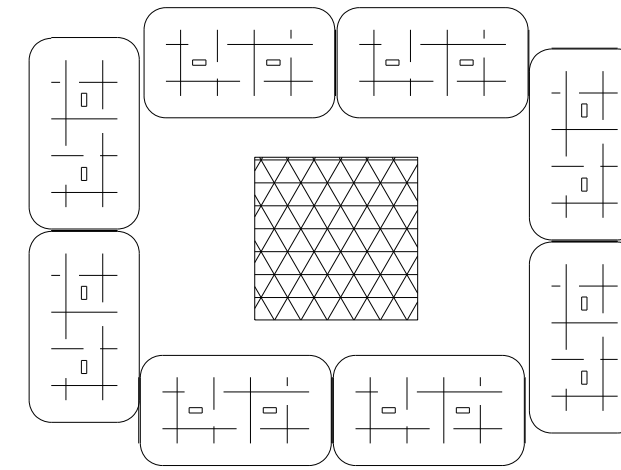
C-002

GENERAL PROJECT EROSION AND SEDIMENT CONTROL NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS, PERMITS, AND REGULATIONS CONTROLLING POLLUTION OF THE ENVIRONMENT.
2. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING, MONITORING, AND REPAIRING EROSION CONTROL MEASURES DURING THE ENTIRE CONSTRUCTION PROCESS TO PREVENT OFF-SITE DISCHARGE OF SEDIMENTS OR DISCHARGE OF SEDIMENTS INTO ON-SITE ENVIRONMENTALLY SENSITIVE AREAS. THIS INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING:
 - A. PLACE STRAW, MULCH, OR GRAVEL (EXCLUDING LIMESTONE) MATERIAL ON THE GROUND IN AREAS SUBJECT TO CONSTRUCTION TRAFFIC ENTERING OR EXITING THE SITE TO PREVENT EXCESSIVE QUANTITIES OF SEDIMENT BEING TRANSPORTED OFF-SITE.
 - B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF OFF-SITE SEDIMENTATION DUE TO HIS CONSTRUCTION ACTIVITIES IF THE OFF-SITE SEDIMENTATION IS DEEMED EXCESSIVE BY THE PROJECT ENGINEER OR LOCAL WATER MANAGEMENT DISTRICT. THE AREAS OF SEDIMENTATION REMOVAL SHALL INCLUDE BUT ARE NOT LIMITED TO PUBLIC RIGHTS OF WAY, STORM SEWERS, AND WATER BODIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING FOR AND OBTAINING ALL STATE, FEDERAL, OR LOCAL PERMITS REQUIRED FOR THE REMOVAL OF OFF-SITE SEDIMENTATION DUE TO HIS OR HIS SUBCONTRACTOR'S WORK FORCE.
3. THE CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR ALL EROSION PROTECTION COSTS, INCLUDING ANY COSTS ASSOCIATED WITH COMPLIANCE ISSUES AND THE ENFORCEMENT ACTIONS.
4. THE CONTRACTOR IS REQUIRED TO MEET ALL REQUIREMENTS INCLUDING MONITORING AND REPORTING OF THE EPA-NPDES STORMWATER GENERAL PERMIT AND MEET ALL THE CONDITIONS AND MINIMUM STANDARDS.
5. STORM DRAINAGE DISCHARGE PROTECTION - PROTECT PIPE OR DITCH DISCHARGES AS NECESSARY TO PREVENT SEDIMENTATION AND/OR EROSION. OFF-SITE DISCHARGE POINTS SHALL BE INSPECTED DAILY FOR POSSIBLE SEDIMENT BUILDUP, TRANSPORT, OR EROSION. ANY SEDIMENT BUILDUP OR TRANSPORT OFF-SITE SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REMEDY.
6. INLET AND MANHOLE PROTECTION - ALL ON-SITE AND OFF-SITE STRUCTURES SHALL BE PROTECTED FROM SEDIMENT INTAKE UNTIL PROJECT IS COMPLETE. DURING ON-SITE GRADING OPERATIONS THE GRADE ADJACENT TO INLETS AND MANHOLES SHALL NOT BE HIGHER THAN THE INLET GRATE ELEVATION OR MANHOLE TOP. SYNTHETIC BALES SHALL BE INSTALLED AROUND INLETS AND MANHOLES. INLET AND MANHOLE PROTECTION SHALL BE IN ACCORDANCE WITH THESE CONSTRUCTION DOCUMENTS AND THE FDOT STANDARD INDEX.
7. DURING CONSTRUCTION, NO DIRECT DISCHARGE OF STORMWATER RUNOFF TO DOWNSTREAM RECEIVING WATER BODIES SHALL BE ALLOWED. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING WATER QUALITY, AND SHALL ROUTE DISCHARGE WATER IN SUCH A MANNER TO ADEQUATELY REMOVE TURBIDITY AND SILT PRIOR TO RUNOFF FROM THE SITE.
8. THE EROSION CONTROL MEASURES SHOWN HEREIN ARE A MINIMUM. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL EROSION CONTROL MEASURES FOR THE DURATION OF THE PROJECT. THE CONTRACTOR IS ALSO RESPONSIBLE FOR IMPLEMENTING ADDITIONAL MEASURES AS DEEMED NECESSARY BY SITE CONDITIONS AND THE WATER MANAGEMENT DISTRICT.
9. ALL MEASURES TAKEN BY THE CONTRACTOR TO CONTROL EROSION SHALL BE IN ACCORDANCE WITH CURRENT STANDARDS AND SPECIFICATIONS OF THE FLORIDA DEPARTMENT OF TRANSPORTATION, THE DEPARTMENT OF ENVIRONMENTAL PROTECTION, THE SOUTH FLORIDA WATER MANGEMENT DISTRICT, AND THESE CONSTRUCTION DOCUMENTS.
10. SILT FENCE SHALL BE INSTALLED ALONG THE LIMITS OF CLEARING AND GRUBBING. THE LIMITS OF CLEARING AND GRUBBING HAVE BEEN ESTABLISHED TYPICALLY AT 15 FEET OUTWARD FROM THE TOP OF SLOPE OR LIMITS OF WORK. REFER TO PLAN SHEETS FOR DETAILED LOCATIONS OF THE SILT FENCE.
11. THE CONTRACTOR SHALL PREPARE AND SUBMIT A NOI (NOTICE OF INTENT) AND NOT (NOTICE OF TERMINATION) TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP) FOR NPDES PERMITTING. THE CONTRACTOR CAN CONTACT THE LOCAL FDEP STORMWATER DIVISION OR VISIT THE FDEP WEBSITE (WWW.DEP.STATE.FL.US/WATER/STORMWATER/NPDES) FOR FORMS AND ADDITIONAL INFORMATION.
12. NO SOIL OUTSIDE OF PROJECT LIMITS OF SILT FENCE SHALL BE DISTURBED.
13. THE CONTRACTOR SHALL DESILT ALL FINAL ON-SITE STORM SEWERS AND ALL OFF-SITE RECEIVING STORM SEWERS AND OUTFALL DITCHES/CANALS UPON COMPLETION OF ALL EARTHWORK ACTIVITIES, EARTH STABILIZATION, AND PRIOR TO FINAL INSPECTION. FINAL APPROVAL OF CONSTRUCTION COMPLETION WILL BE WITHHELD UNTIL SAID STORM SEWERS AND DITCHES/CANALS ARE DESILTED. DESILTING OF OFF-SITE STORM SEWERS SHALL NOT RESULT IN THE DISPLACEMENT OF SILT FURTHER DOWNSTREAM.
14. THE EROSION CONTROL MEASURES SHOWN HEREIN ARE A MINIMUM. SHOULD LOCAL REGULATORY AGENCIES REQUIRE IMPLEMENTATION OF ADDITIONAL MEASURES DUE TO UNANTICIPATED OR UNFORSEEN CONDITIONS, THE CONTRACTOR SHALL INSTALL SUCH MEASURES AS NECESSARY TO MEET THE REQUIREMENTS OF THE LOCAL AGENCY. LOCAL AGENCIES HAVING JURISDICTION INCLUDE THE SOUTH FLORIDA WATER MANGEMENT DISTRICT, ORANGE COUNTY, AND THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION.
15. MAINTENANCE
 - 15A. THE EROSION AND SEDIMENTATION DEVICES WILL BE MAINTAINED. IF THE POSITIONS OF THE DEVICES ARE ALTERED DUE TO CONSTRUCTION ACTIVITIES, HEAVY RAINFALL, OR ANY OTHER EVENTS, THE DEVICES WILL BE RETURNED TO THEIR ORIGINAL CONDITION AND PLAN POSITION. EROSION CONTROL DEVICES THAT ARE DAMAGED OR ARE NO LONGER EFFECTIVE DUE TO DEGRADATION WILL BE REPLACED IN KIND. MAINTENANCE WILL BE PERFORMED UNTIL THE THREAT OF EROSION IS ELIMINATED OR PERMANENT EROSION CONTROL MEASURES ARE IN PLACE.
16. INSPECTIONS
 - 16A. QUALIFIED PERSONNEL SHALL INSPECT THE FOLLOWING ITEMS WITHIN 24 HOURS AFTER A RAINFALL TOTAL OF 0.5 INCHES OR AT LEAST EVERY 7 CALENDAR DAYS AND DAILY DURING THE WET SEASON OR DURING PERIODS OF PROLONGED RAINFALL EVENTS. TO COMPLY, THE CONTRACTOR SHALL INSTALL AND MAINTAIN RAIN GAGES AND RECORD THE DAILY RAINFALL WHERE THE SITE HAS BEEN PERMANENTLY STABILIZED. INSPECTIONS SHALL BE CONDUCTED AT LEAST ONCE EVERY MONTH. INSPECTION OF THE CONTROLS INSTALLED IN THE FIELD WILL OCCUR TO ENSURE THAT THE CONTROLS AGREE WITH THE LATEST STORMWATER POLLUTION PREVENTION PLAN.
 - 16A-1. POINTS OF DISCHARGE TO MUNICIPAL SEPARATE STORM SEWER SYSTEMS
 - 16A-2. DISTURBED AREAS OF THE SITE THAT HAVE NOT BEEN STABILIZED
 - 16A-3. AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION
 - 16A-4. STRUCTURAL CONTROLS
 - 16A-5. STORMWATER MANAGEMENT SYSTEMS
 - 16A-6. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE
 - 16A-7. STABILIZATION CONTROLS
 - 16B. REPAIRS SHALL BE INITIATED WITHIN 24 HOURS OF INSPECTIONS THAT INDICATE ITEMS ARE NOT IN GOOD WORKING ORDER
 - 16C. IF INSPECTIONS INDICATE THAT THE STABILIZATION AND STRUCTURAL PRACTICES ARE NOT SUFFICIENT TO MINIMIZE EROSION, RETAIN SEDIMENT, AND PREVENT DISCHARGING POLLUTANTS, ADDITIONAL MEASURES WILL BE PROVIDED.

GENERAL PROJECT EROSION AND SEDIMENT CONTROL NOTES CONT'D:

17. NON-STORMWATER DISCHARGES
 - 17A. NON-STORMWATER DISCHARGE ASSOCIATED WILL BE RETAINED ON-SITE. WELL POINT DISCHARGES SHALL BE DIRECTED INTO SEDIMENT BASINS, ON-SITE STORM INLETS, OR MANHOLES.
 - 17B. DISCHARGE WATER FROM DEWATERING AND WELL POINTS MUST BE CLEAN PRIOR TO DISCHARGING INTO STORM SEWER OR STORMWATER MANAGEMENT SYSTEMS. IF THE CONTRACTOR ENCOUNTERS CONTAMINATED GROUND WATER DURING DEWATERING, THE WATER WILL NEED TO BE TREATED PRIOR TO DISCHARGE. ALL DEWATERING DISCHARGES MUST MEET STATE WATER QUALITY STANDARDS.
- EROSION AND SEDIMENT CONTROL PLAN NOTES:**
1. SITE DESCRIPTION
 - 1A. DESCRIPTION OF CONSTRUCTION ACTIVITY: CONSTRUCTION INCLUDES THE INSTALLATION OF A NEW SANITARY SEWER LINE, TWO NEW LIFT STATIONS, AND A NEW SANITARY MANHOLE.
 - 1B. SEQUENCE OF MAJOR SOIL DISTURBING ACTIVITIES:
 - PHASE 1: PERIMETER EROSION CONTROLS WILL BE INSTALLED PRIOR TO THE START OF ANY CLEARING AND GRUBBING ACTIVITIES. STABILIZE ALL AREAS TO BE LEFT UNDISTURBED FOR A PERIOD OF 7 DAYS OR MORE.
 - PHASE 2: CLEARING AND GRUBBING, LOCATION AND EXCAVATION OF EXISTING FACILITIES.
 - PHASE 3: GRADING, CONSTRUCTION OF SANITARY SEWER AND LIFT STATIONS (REFER TO PHASING PLAN).
 - 1C. SITE MAP:
 - 1C-1. DRAINAGE PATTERNS: REFER TO TOPOGRAPHIC SURVEY AND SITE PLANS
 - 1C-2. APPROXIMATE SLOPES: REFER TO TOPOGRAPHIC SURVEY AND SITE PLANS AND CROSS SECTIONS
 - 1C-3. AREAS OF SOIL DISTURBANCE: REFER TO SITE PLANS
 - 1C-4. AREAS THAT ARE NOT TO BE DISTURBED: REFER TO SITE PLANS
 - 1D. RECEIVING WATERS: WETLAND
 - 1E. SITE LOCATION: 150 Windermere Road, Winter Garden, FL 34787
 - 1F. AREA ESTIMATES:
 - TOTAL AREA OWNED: 336.74 AC.
 - PROJECT LIMITS (LIMITS OF AREA TO BE DISTURBED): 0.396 AC.
 2. CONTROLS
 - 2A. EROSION AND SEDIMENT CONTROLS:
 - AS WORK PROGRESSES, MODIFICATIONS WILL BE REQUIRED TO ADAPT TO SEASONAL VARIATIONS, CHANGES IN CONSTRUCTION ACTIVITY, AND THE NEED FOR BETTER PRACTICES.
 - 2A-1. STABILIZATION PRACTICES SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE FOLLOWING:
 - TEMPORARY - SEED AND MULCH, AND SOD IN ACCORDANCE WITH FDOT SPECIFICATION SECTION 104.
 - PERMANENT - SOD TO BE IN ACCORDANCE WITH FDOT SPECIFICATION SECTION 570.
 - 2A-2. IMPLEMENTATION OF STABILIZATION PRACTICES WILL BE BASED ON THE STATUS AND PROGRESS OF THE WORK.
 - TEMPORARY - MULCH AND SEEDING MAY BE USED TO STABILIZE ALL AREAS WITH SLOPES LESS THAN 4:1 (H:V) THAT ARE BROUGHT TO FINAL GRADE, PREPARED AND AWAITING PLANTING OF FINAL PLANT MATERIAL.
 - PERMANENT - SOD WILL BE REQUIRED FOR ALL AREAS BROUGHT TO FINAL GRADE AND PREPARED FOR PERMANENT STABILIZATION.
 - 2B. STORMWATER MANAGEMENT: AN EXISTING STORMWATER MANAGEMENT SYSTEM IS IN PLACE AND WILL NOT BE MODIFIED BY THIS PROJECT.
 - 2C. OTHER CONTROLS
 - 2C-1. WASTE DISPOSAL: WASTE DISPOSAL: CONTRACTOR SHALL DISPOSE OF WASTE AND DEBRIS OFF SITE. EXCAVATION MATERIAL SHALL NOT BE STOCK PILED ON SITE UNPROTECTED FROM RAINFALL AND RUNOFF.
 - 2C-2. OFFSITE VEHICLE TRACKING AND GENERATION OF DUST SHALL BE CONTROLLED BY THE FOLLOWING METHODS: UTILIZATION OF EXISTING PAVED ROADS AND COVERING LOADED HAUL TRUCKS WITH TARPAULINS. REMOVING EXCESS DIRT FROM ROADS DAILY.
 - 2C-3. APPLICATION OF FERTILIZERS AND PESTICIDES SHALL BE IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF FDOT STANDARD 570 AND 577 OF THE SPECIFICATIONS.
 - 2C-4. TOXIC SUBSTANCES - NO TOXIC SUBSTANCES SHALL BE USED.
 - 2D. STATE AND LOCAL PLANS AND PERMITS:
 - NO STATE AND LOCAL PERMITS NEED TO BE OBTAINED FOR EROSION & SEDIMENT CONTROL



NOTES FOR SYNTHETIC HAY BALES

IN UNPAVED AREAS, SYNTHETIC HAY BALES SHALL BE TRENCHED 3" TO 4" AND ANCHORED WITH 2-1"x2" (OR 1" DIA.) x 4' WOOD STAKES.

ADJACENT BALES SHALL BE BUTTED FIRMLY TOGETHER. UNAVOIDABLE GAPS SHALL BE PLUGGED WITH HAY OR STRAW.

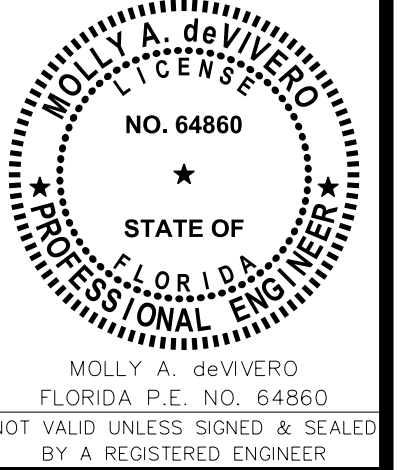
STORMWATER INLET PROTECTION DETAIL AND NOTES

N.T.S.

NO.	DATE	DESCRIPTION	BY
1	01/21/2015	CITY OF WINTER GARDEN DRC COMMENTS	SMR
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SCALE: AS NOTED
 DRAWN BY: ECD
 PROJ. MANAGER: MAV
 PROJ. # 2012.01.1
 DATE: 11/17/2014

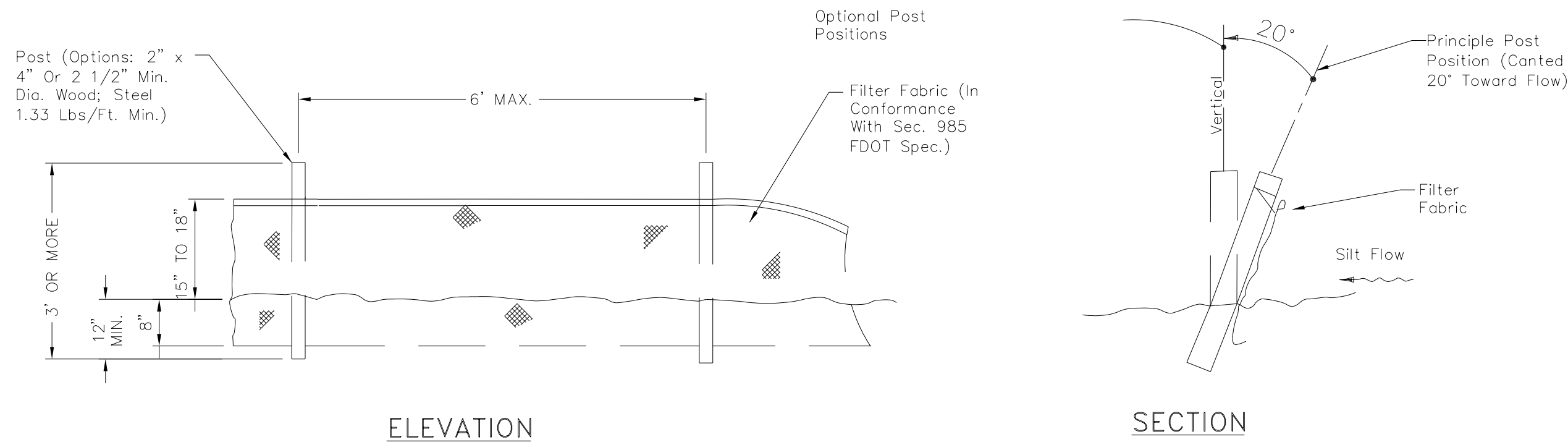
ISSUED FOR: PRELIMINARY BIDDING FINAL CONSTRUCTION RECORD DWG



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 BPE CA NO.: 0006698

WEST ORANGE SOCCER FIELD
 ORANGE COUNTY, FLORIDA
 FOR
 CITY OF WINTER GARDEN
 EROSION & SEDIMENT CONTROL NOTES & DETAILS

C-004

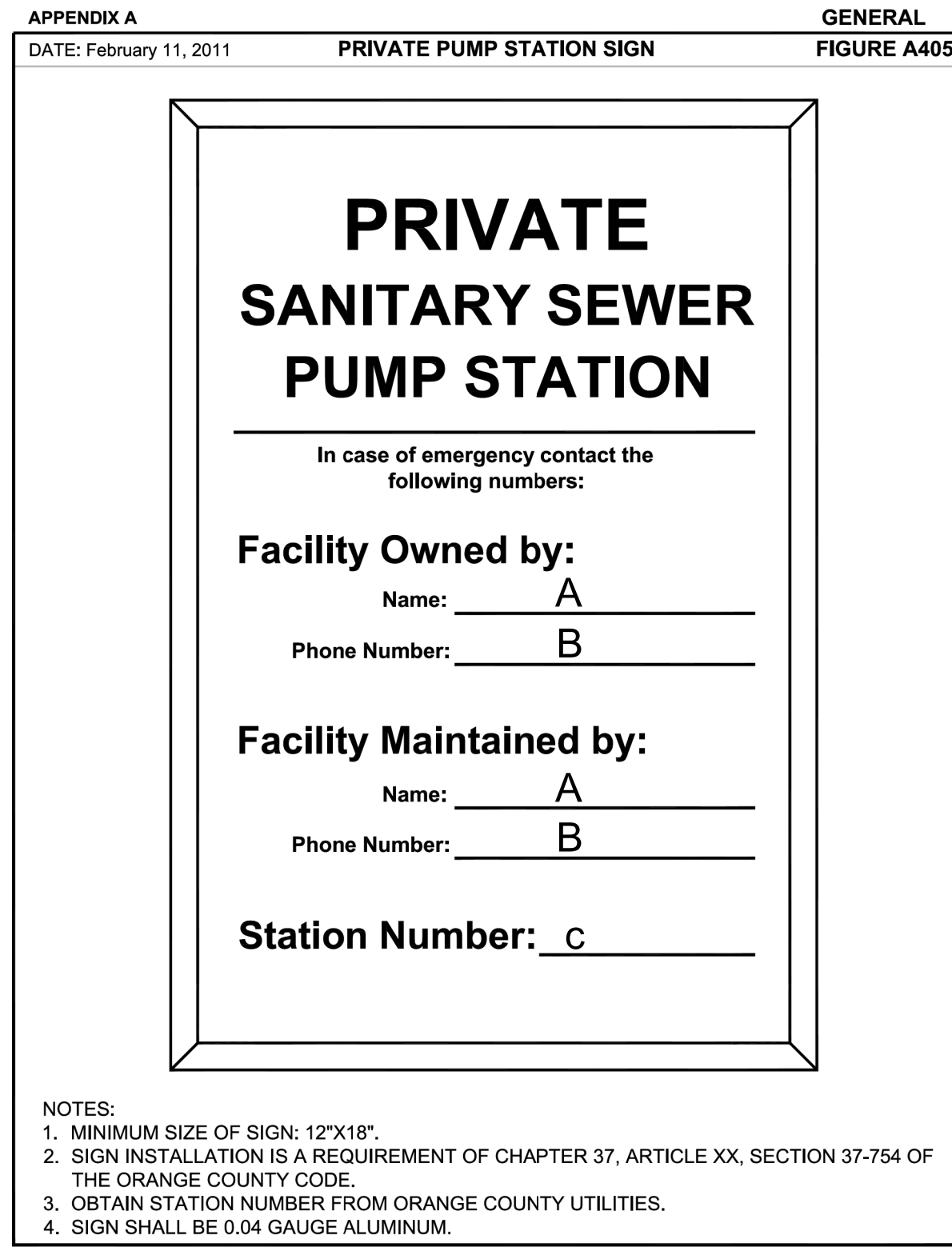
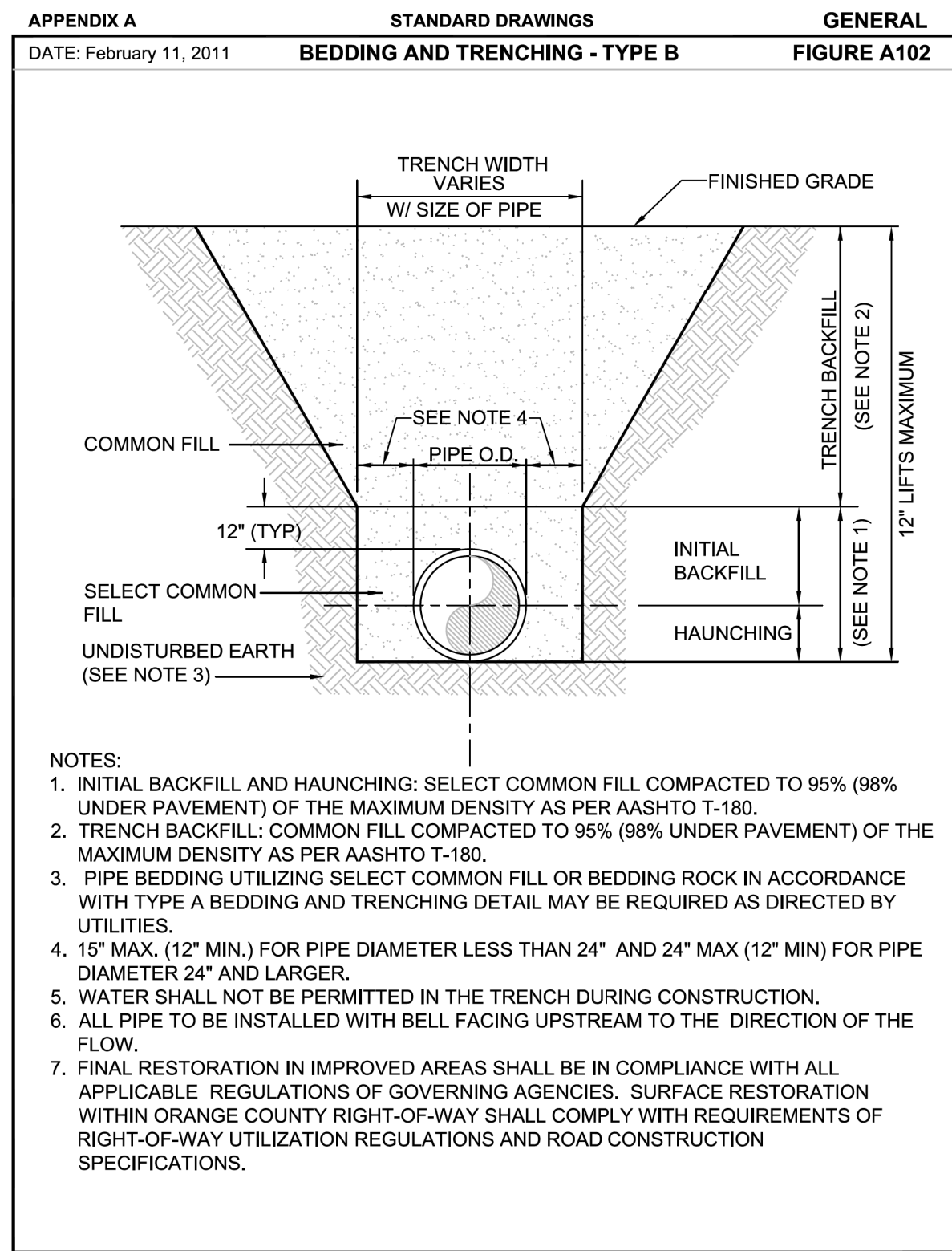
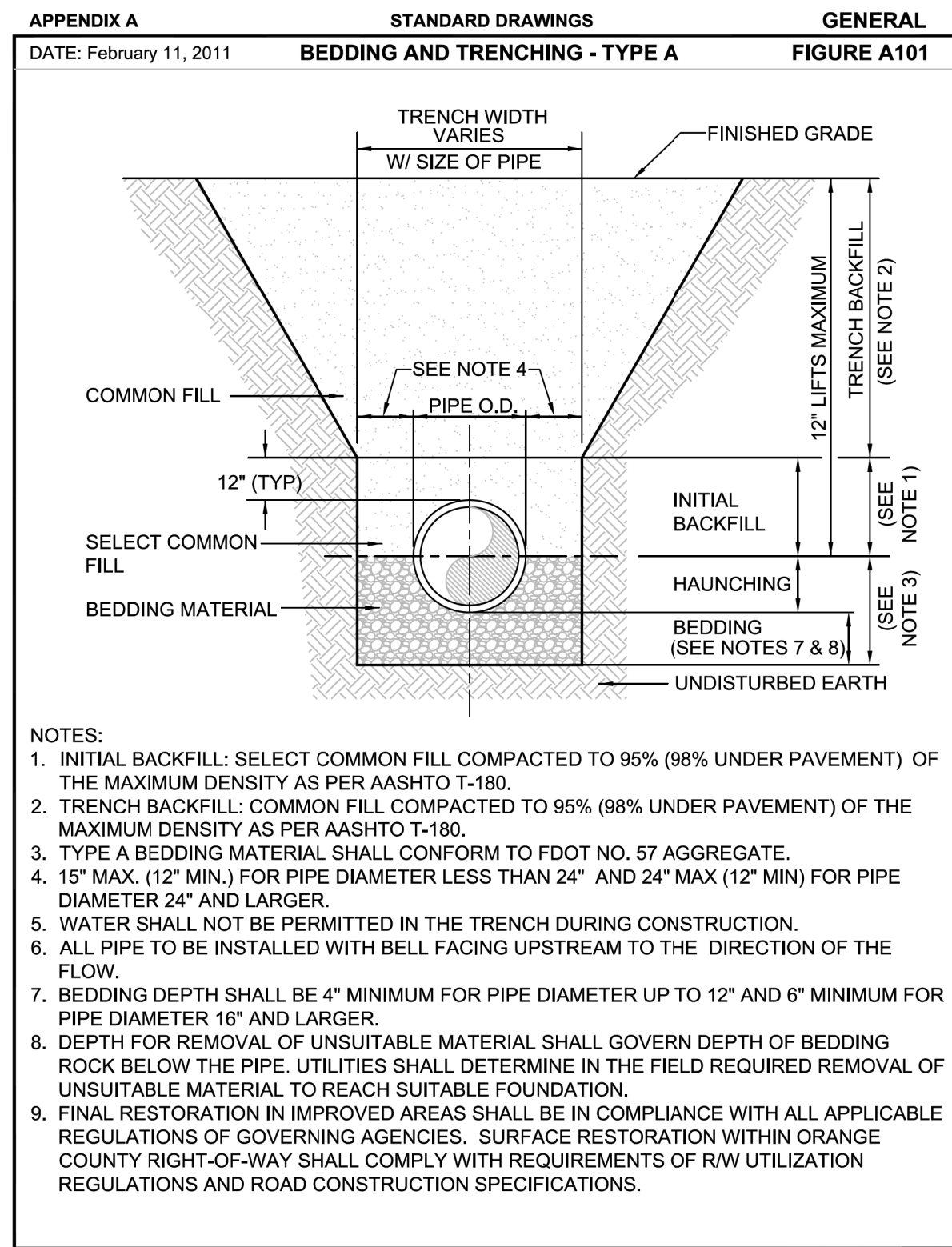


NOTES FOR SILT FENCES

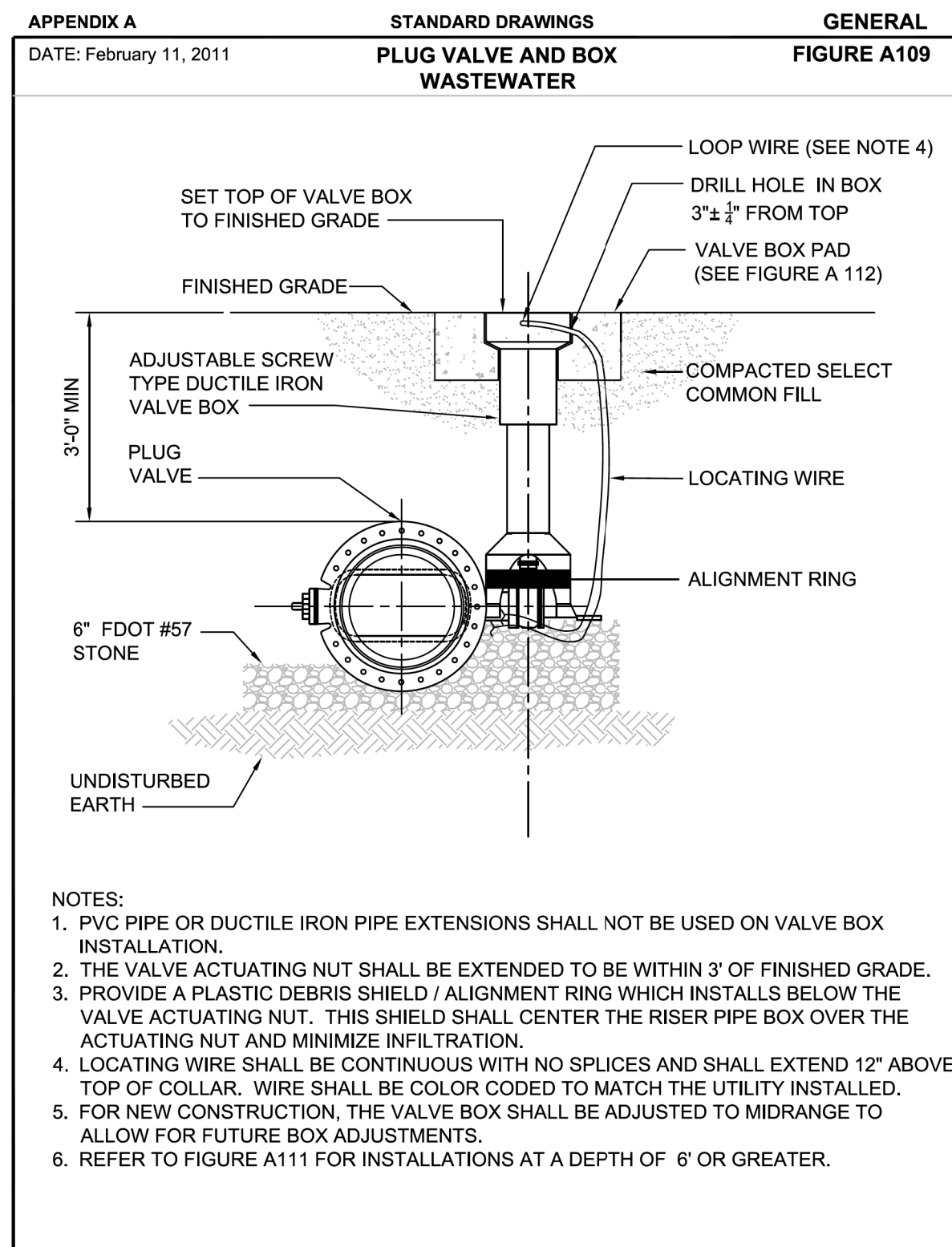
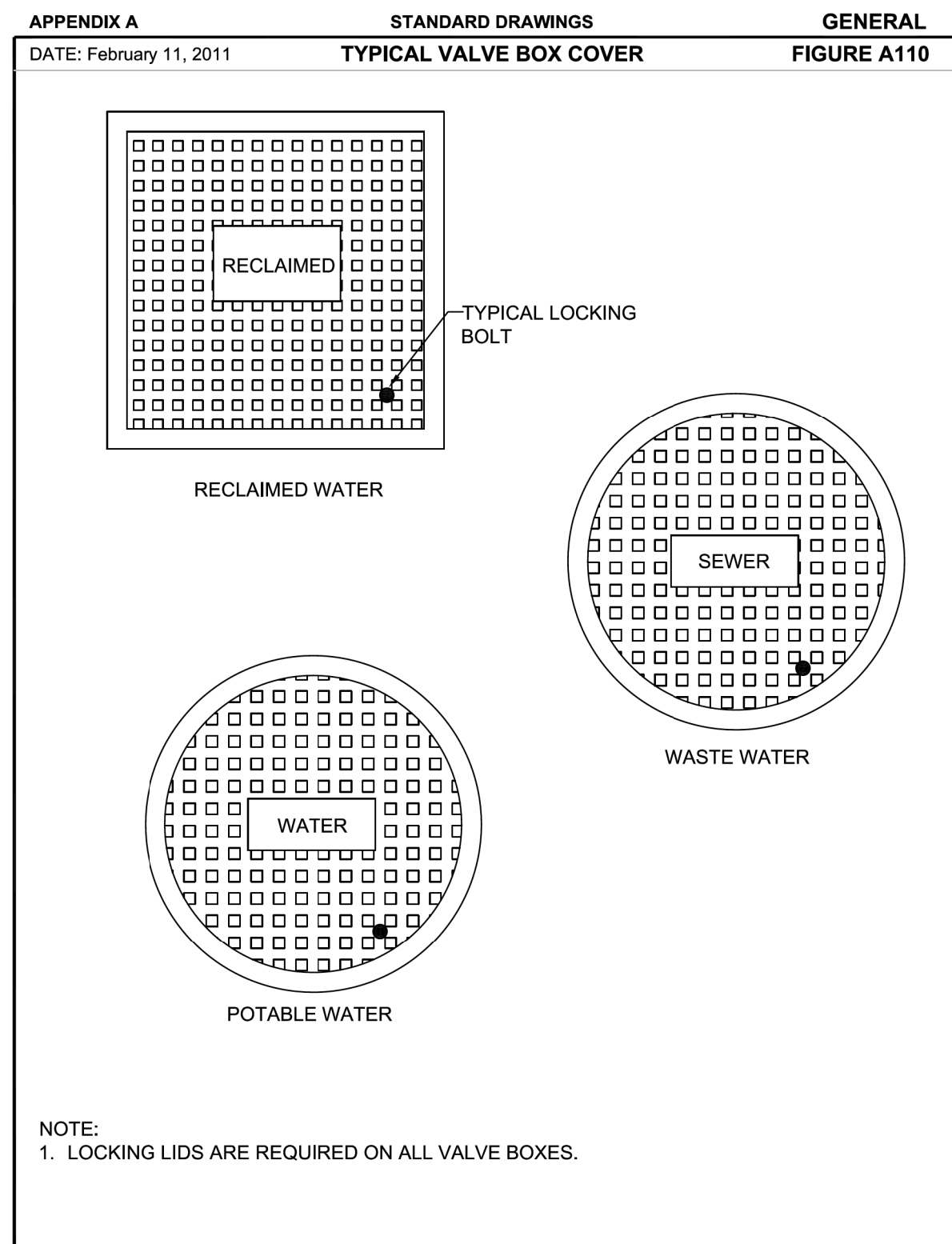
1. TYPE III FENCE TO BE USED AT MOST LOCATIONS. WHERE USED IN DITCHES, THE SPACING FOR TYPE III SILT FENCE SHALL BE IN ACCORDANCE WITH CHART 1, SHEET 1, FDOT INDEX 102.
2. TYPE IV SILT FENCE TO BE USED WHERE LARGE SEDIMENT LOADS ARE ANTICIPATED. SUGGESTED USE IS WHERE FILL SLOPE IS 1:2 OR STEEPER AND LENGTH OF SLOPE EXCEEDS 25 FEET. AVOID USE WHERE THE DETAINED WATER MAY BACK INTO TRAVEL LANES OR OFF THE RIGHT OF WAY.
3. DO NOT CONSTRUCT SILT FENCES ACROSS PERMANENT FLOWING WATERCOURSES. SILT FENCES ARE TO BE AT UPLAND LOCATIONS AND TURBIDITY BARRIERS USED AT PERMANENT BODIES OF WATER.
4. WHERE USED AS SLOPE PROTECTION, SILT FENCE IS TO BE CONSTRUCTED ON 0% LONGITUDINAL GRADE TO AVOID CHANNELIZING RUNOFF ALONG THE LENGTH OF THE FENCE.
5. SILT FENCE TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR STAKED SILT FENCE. (LF).

SILT FENCE DETAIL AND NOTES

N.T.S.



- A: ORANGE COUNTY PARKS AND RECREATION
- B: CONTRACTOR TO COORDINATE TELEPHONE NUMBER WITH ORANGE COUNTY PARKS AND RECREATION PRIOR TO SIGN FABRICATION
- C: OFFICE/RESTROOM LIFT STATION WO #1
CONCESSION/RESTROOM LIFT STATION WO #2



NO.	DATE	DESCRIPTION
1	07/27/2015	CITY OF WINTER GARDEN DRC COMMENTS
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ISSUED FOR: PRELIMINARY PERMITTING BIDDING FINAL CONSTRUCTION RECORD DWG

SCALE: AS NOTED
DRAWN BY: ECD
PROJECT MANAGER: MAY
PROJECT # 2012.011.1
DATE: 1/17/2014

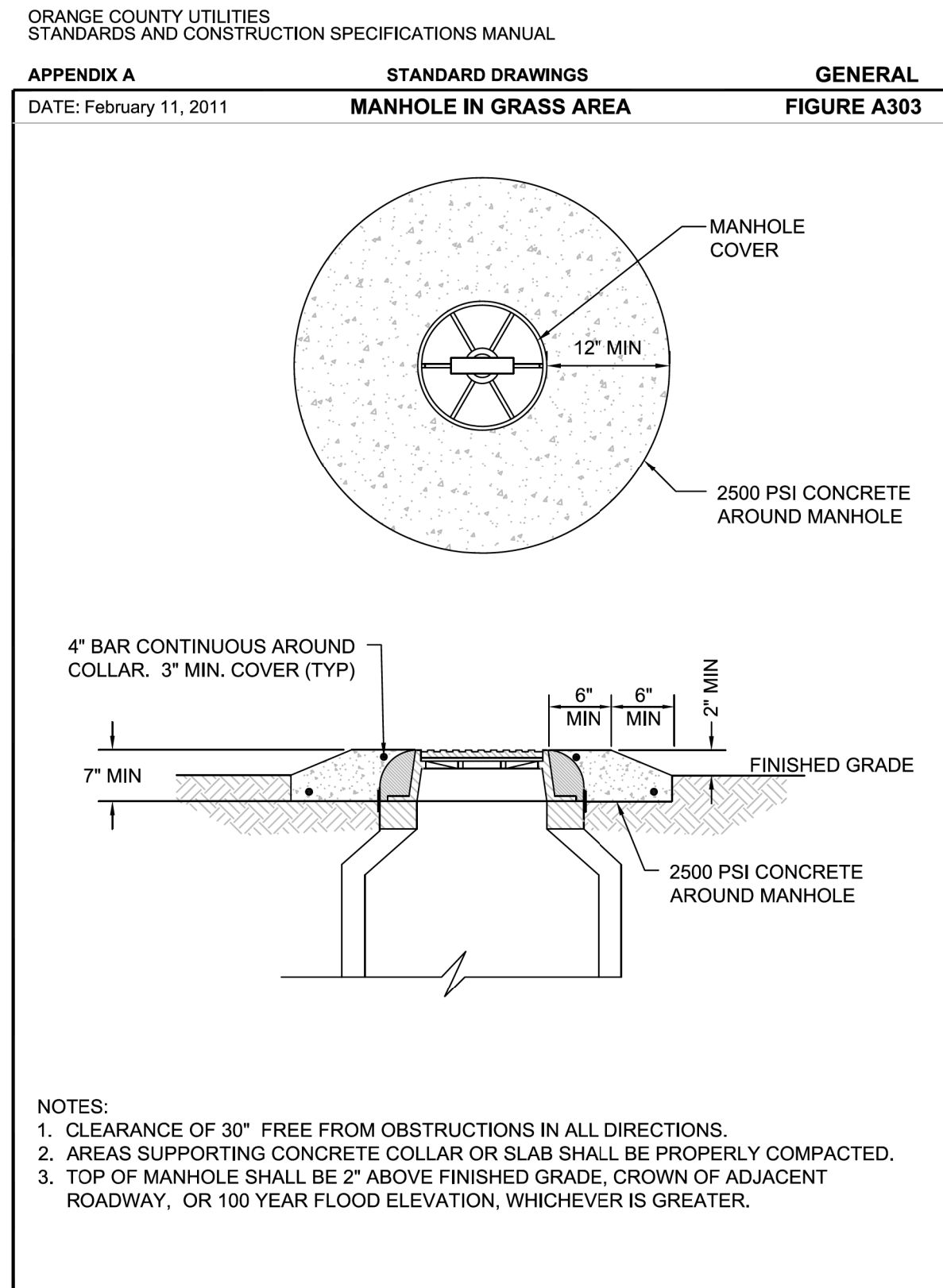
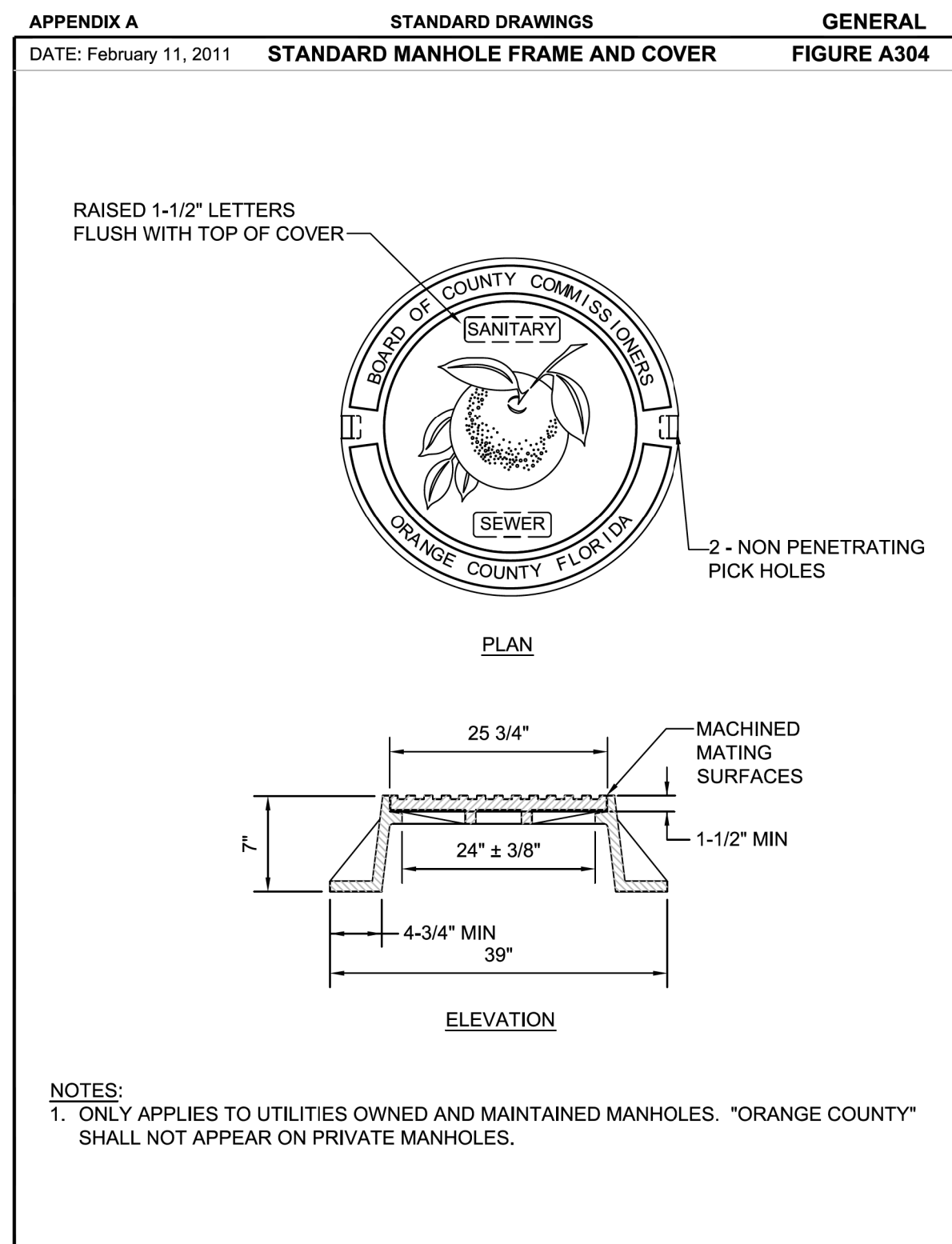
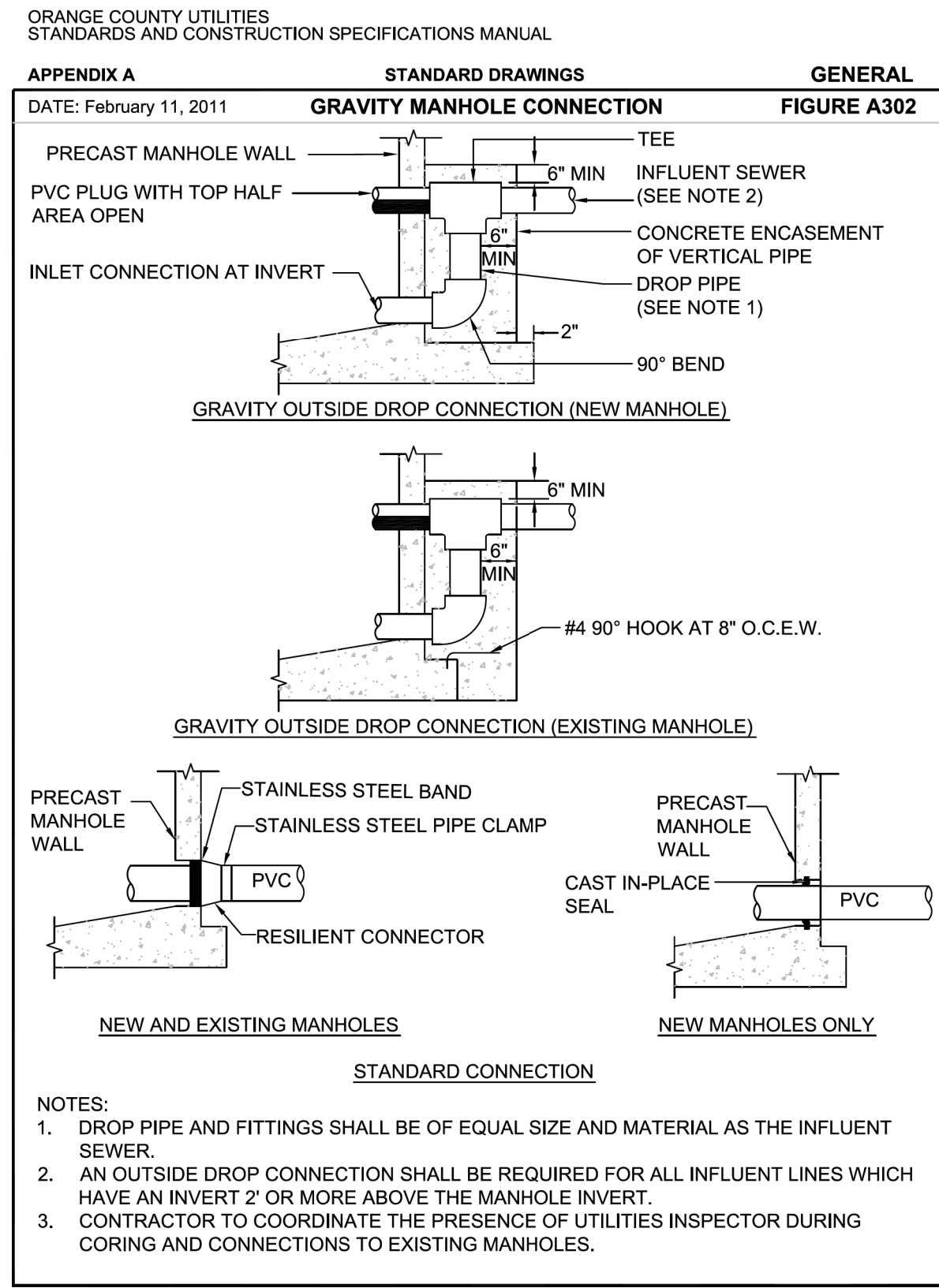
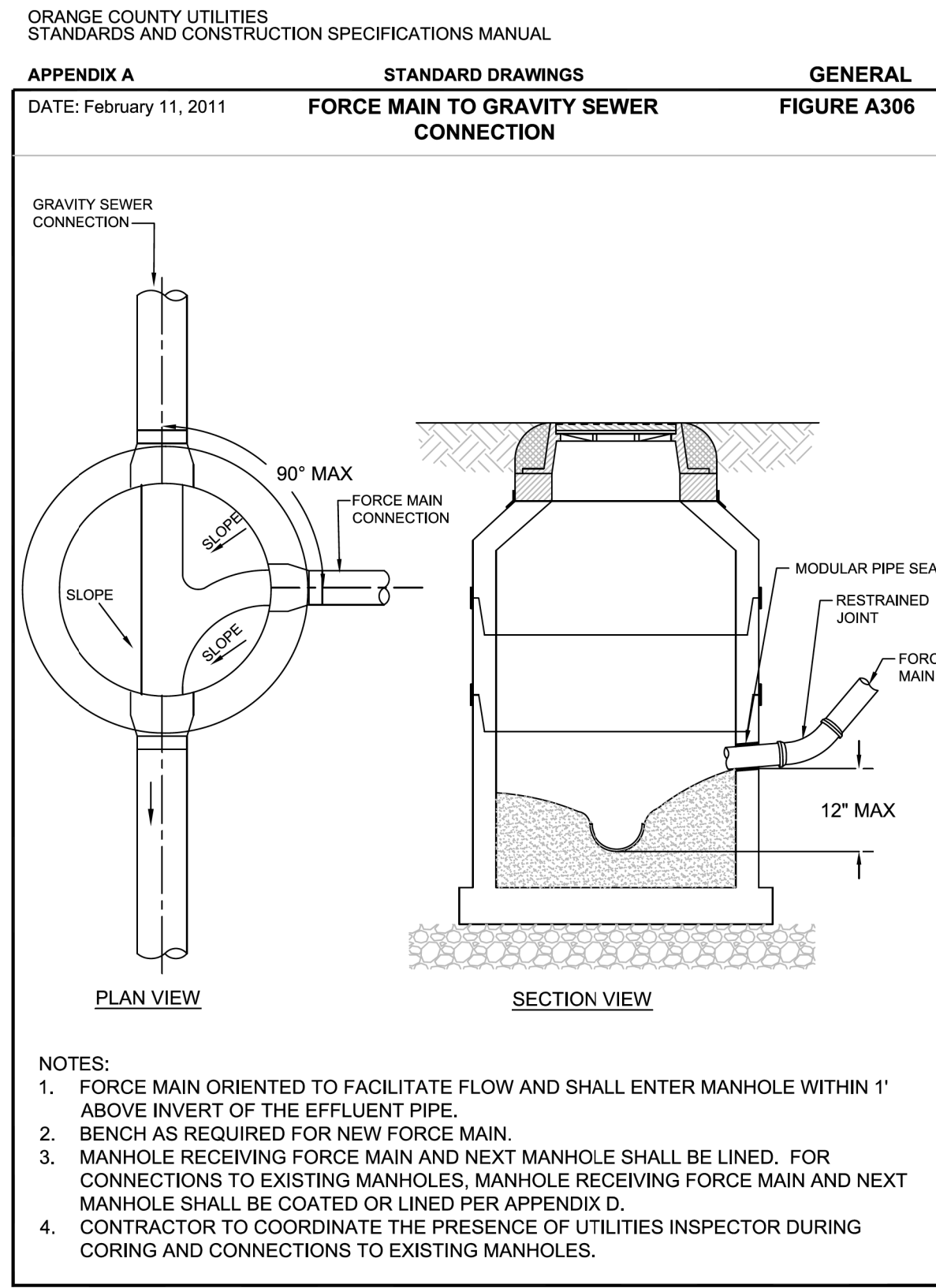
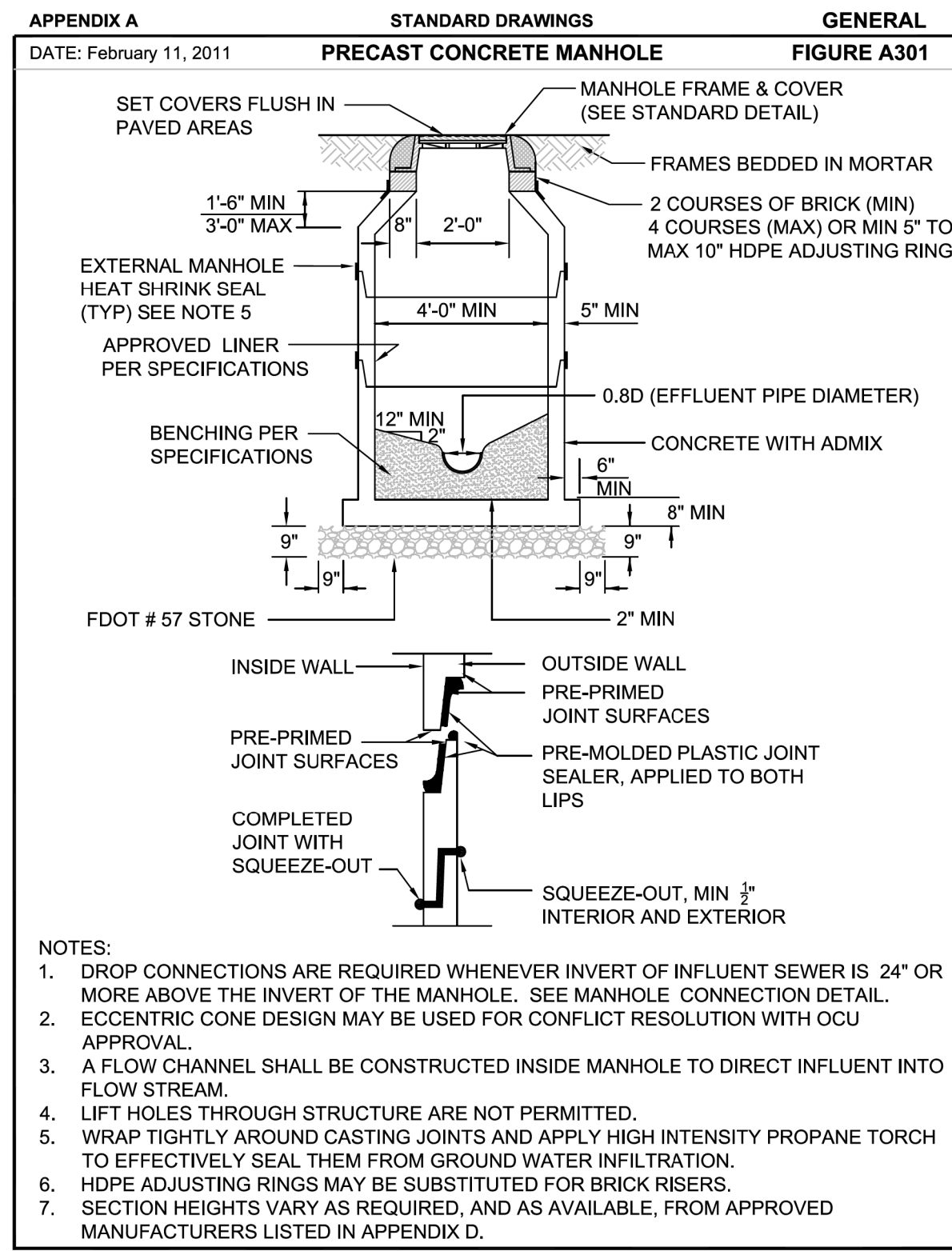
MOLLY A. DEVVERO
FLORIDA P.E. NO. 64860
STATE OF FLORIDA
PROFESSIONAL ENGINEER

NOT VALID UNLESS SIGNED & SEALED BY A REGISTERED ENGINEER

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BPE CA NO. - 0000588

WEST ORANGE SOCCER FIELD
ORANGE COUNTY, FLORIDA
FOR
CITY OF WINTER GARDEN
SITE DETAILS (1 OF 2)

C-005



NO.	DATE	DESCRIPTION
1	07/27/2015	CITY OF WINTER GARDEN DRG COMMENTS
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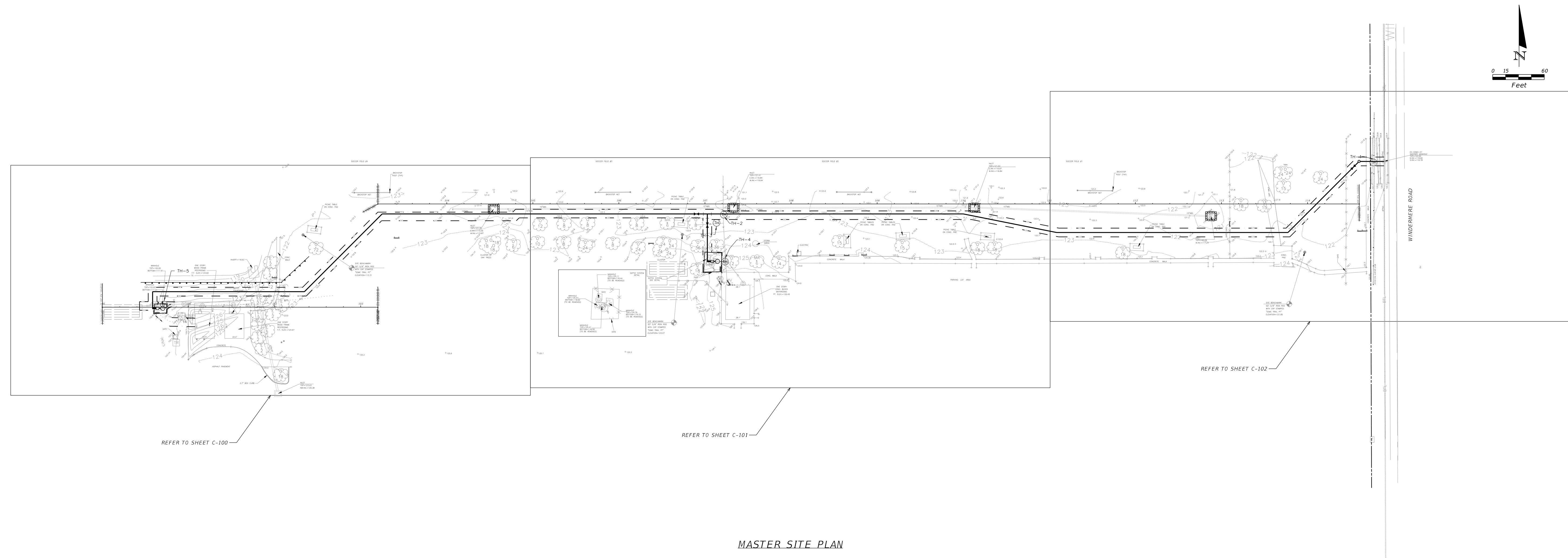
SCALE: AS NOTED
DRAWN BY: ECD
CHECKED BY: MAY
PROJECT NO.: 2012.011.1
DATE: 11/17/2014
ISSUED FOR: PRELIMINARY [] PERMITTING [] BIDDING [] FINAL [] CONSTRUCTION [] RECORD DWG []

MOLLY A. DEVIERO
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BPE CA NO. - 0005868
BPAID CA NO. - 140302023

WEST ORANGE SOCCER FIELD
ORANGE COUNTY, FLORIDA
FOR
CITY OF WINTER GARDEN
SITE DETAILS (2 OF 2)

SHEET NO. **C-006**



MASTER SITE PLAN

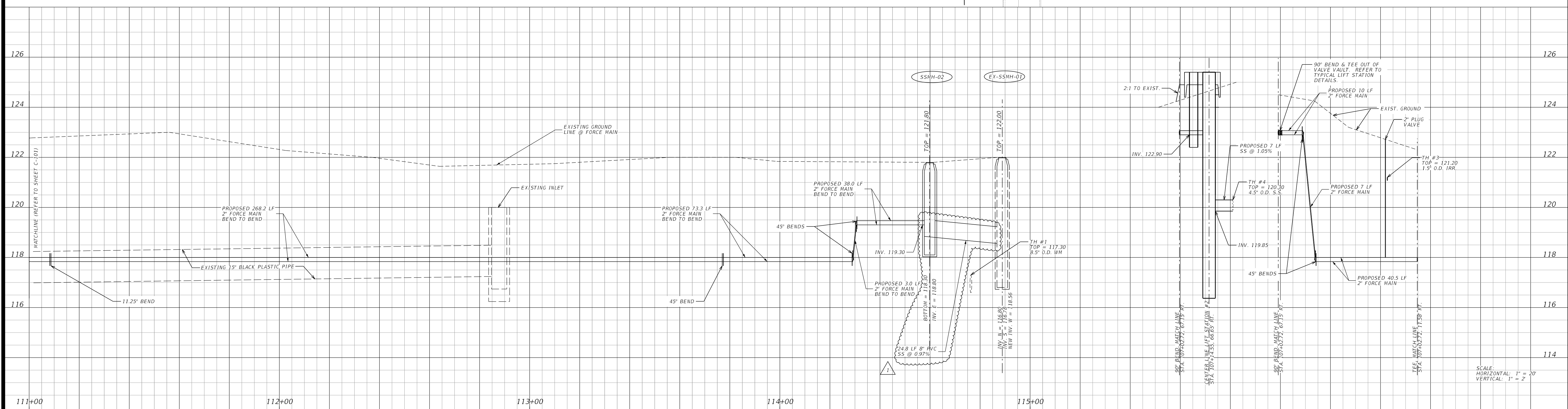
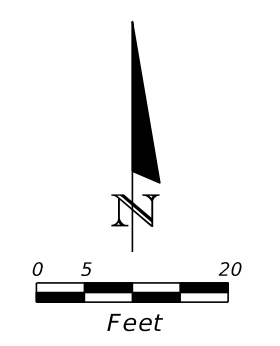
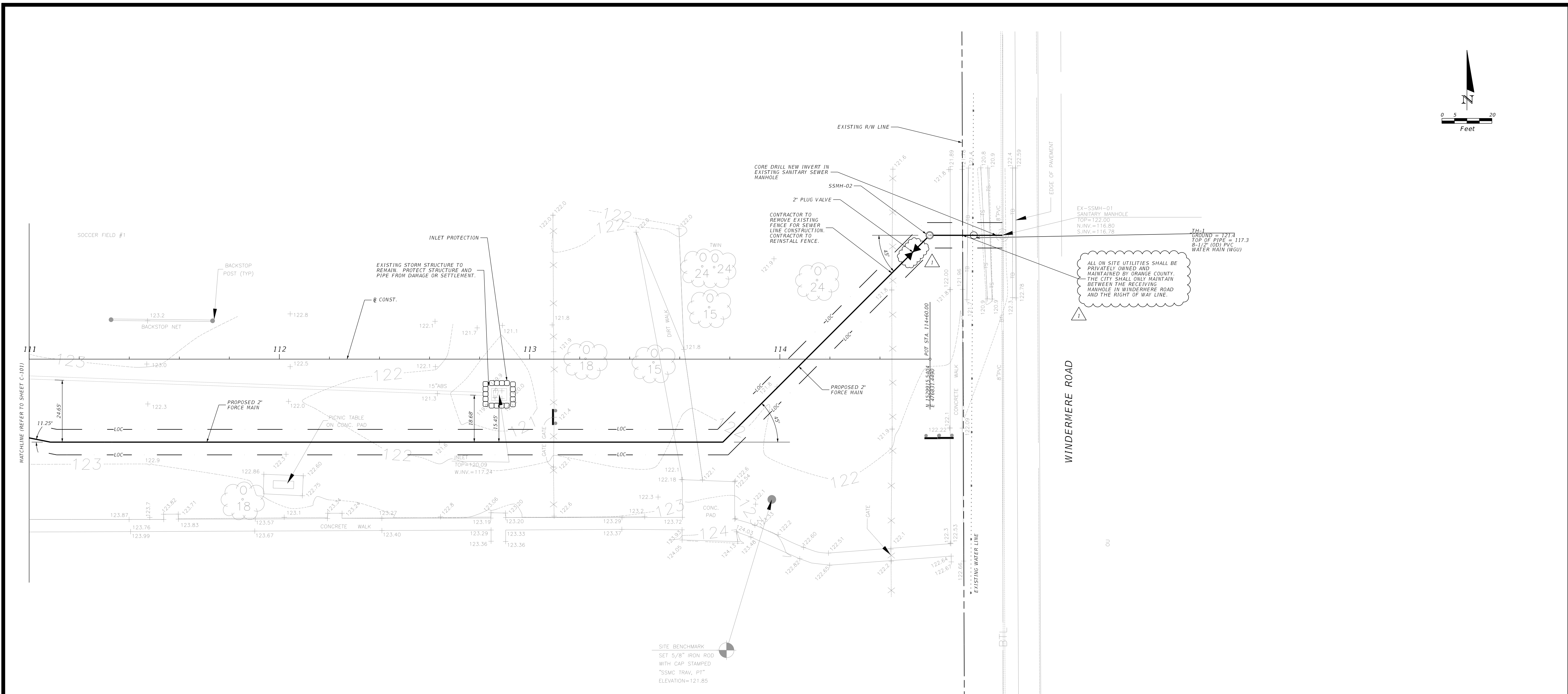
MASTER SITE PLAN NOTES:

1. CONTRACTOR SHALL NOT STAGE ANY EQUIPMENT OR MATERIALS IN EXISTING DRIVES OR SIDEWALK. PARKING DRIVES SHALL REMAIN OPEN TO TRAFFIC DURING PARK HOURS OF OPERATION.
2. CONTRACTOR SHALL OBTAIN A RIGHT OF WAY UTILIZATION PERMIT FROM THE CITY OF WINTER GARDEN FOR ALL WORK IN THE RIGHT OF WAY OF WINDERMERE ROAD.
3. MAINTENANCE OF TRAFFIC SHALL BE IN ACCORDANCE WITH FDOT 2014 STANDARD INDEX OF DRAWINGS AS APPLICABLE TO THE LOCATION AND NATURE OF THE WORK ZONE WITHIN THE RIGHT OF WAY.
4. CONTRACTOR SHALL COORDINATE WITH THE ORANGE COUNTY PROJECT MANAGER FOR STAGING AND STORAGE OF MATERIALS.
5. ACCESS TO THE PARK SHALL BE MAINTAINED BY COUNTY PERSONNEL AT ALL TIMES.
6. PARK FACILITIES WILL BE CLOSED DURING LIFT STATION CONSTRUCTION.
7. PROPOSED LIFT STATIONS ARE NOT LOCATED WITHIN 100 FT OF ANY PUBLIC OR PRIVATE DRINKING WATER SUPPLY WELLS.

LEGEND OF PLAN VIEW SYMBOLS

SURVEY (EXISTING) SYMBOLS AND ABBREVIATIONS	PROPOSED SYMBOLS AND ABBREVIATIONS
AIR CONDITIONING UNIT	BASELINE
BENCHMARK	CONST. CONSTRUCTION
BPS BLACK PLASTIC PIPE	INLET PROTECTION
BURIED ELECTRIC	SANITARY SEWER
BURIED TELEPHONE LINE	SANITARY SEWER MANHOLE
CLEAN-OUT	LIMITS OF CONSTRUCTION LINE
123 CONTOUR LINE	SILT FENCE
ELEV. ELECTRIC SERVICE METER	
ELEV.	
FENCE	
F.F. FINISHED FLOOR	
INLET	
INV.	
MANHOLE	
MITERED END SECTION	
MULTI-SUPPORT SIGN	
PVC POLYVINYL CHLORIDE PIPE	
RCP REINFORCED CONCRETE PIPE	
R/W LINE	
SS SANITARY SEWER LINE	
SSMC SOUTHEASTERN SURVEYING & MAPPING CORPORATION	
SPOT ELEVATION (TYP.)	
TOE OF SLOPE	
TOP OF BANK	
TRANSFORMER ON SLAB	
TRAVERSE POINT	
TREE, ELM XX = TRUNK DIAMETER, TYP.	
TREE, MAGNOLIA XX = TRUNK DIAMETER, TYP.	
TREE, OAK XX = TRUNK DIAMETER, TYP.	
WATER LINE	
WATER LINE	

SCALE: AS NOTED DRAWN BY: ECD PROJ. MANAGER: MAV PROJ. #: 2012.011.1 DATE: 11/17/2014	NO. DATE 1 01/21/2015 2 3 4 5 6 7 8 9	DESCRIPTION CITY OF WINTER GARDEN DRC COMMENTS	BY: SMR	PRELIMINARY <input type="checkbox"/> PERMITTING <input checked="" type="checkbox"/> BIDDING <input checked="" type="checkbox"/> FINAL <input type="checkbox"/> CONSTRUCTION <input type="checkbox"/> RECORD DWG <input type="checkbox"/>
MOLLY A. DEVIVERO FLORIDA P.E. NO. 64860 NOT VALID UNLESS SIGNED & SEALED BY A REGISTERED ENGINEER				
BENTLEY ARCHITECTS + ENGINEERS, INC. 665 WEST WARREN AVENUE, LONGWOOD, FLORIDA 32750 T 407.331.6116 F 407.331.4966 WWW.BAEO.NLINE.COM BPE CA NO.: 00006988				
WEST ORANGE SOCCER FIELD ORANGE COUNTY, FLORIDA FOR CITY OF WINTER GARDEN MASTER SITE PLAN AND LEGEND				
C-007				



BY	SMR	DESCRIPTION
NO.	DATE	CITY OF WINTER GARDEN DRC COMMENTS
1	01/21/2015	
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SCALE: AS NOTED
 DRAWN BY: ECD
 PROJ. MANAGER: MAV
 PROJ. # 2012.011.1
 DATE: 11/17/2014

ISSUED FOR: PRELIMINARY BIDDING FINAL CONSTRUCTION RECORD DWG

NO. 64860
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER
 MOLLY A. DEVIERO
 FLORIDA P.E. NO. 64860
 NOT VALID UNLESS SIGNED & SEALED BY A REGISTERED ENGINEER

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 BPE CA NO.: 00005698
 BPA&D CA NO.: AOC002023

WEST ORANGE SOCCER FIELD
 ORANGE COUNTY, FLORIDA
 FOR
 CITY OF WINTER GARDEN
 PLAN AND PROFILE SHEET (3 OF 3)

C-102

GENERAL NOTES:

- THE CONTRACTOR SHALL PROVIDE AND INSTALL PUMP STATIONS AND TANK EQUAL TO OR BETTER (MORE EFFICIENT) THAN THAT SHOWN HEREON. SUBMITTAL OF SHOP DRAWINGS SHALL BE REQUIRED. REFER TO GENERAL UTILITY NOTES FOR SHOP DRAWING SUBMITTAL REQUIREMENTS.
 - CONTRACTOR SHALL CONNECT LIFT STATION #1 TO THE EXISTING POWER SERVICE FOR THE EXISTING SEPTIC SYSTEM PUMP STATION FROM THE ELECTRICAL PANEL AT THE EXISTING OFFICE BUILDING. CONSTRUCTION SCOPE SHALL INCLUDE RUNNING NEW FEED FROM PANEL TO LIFT STATION CONTROL PANEL.
 - AVAILABLE POWER FOR LIFT STATION #1 IS 120/240 V SINGLE PHASE SERVICE.
 - CONTRACTOR SHALL CONNECT LIFT STATION #2 TO THE EXISTING POWER SERVICE FOR THE EXISTING SEPTIC SYSTEM PUMP STATION FROM THE ELECTRICAL PANEL AT THE EXISTING CONCESSION BUILDING. CONSTRUCTION SCOPE SHALL INCLUDE RUNNING NEW FEED FROM PANEL TO LIFT STATION CONTROL PANEL.
 - AVAILABLE POWER FOR LIFT STATION #2 IS 120/240 V SINGLE PHASE SERVICE.
 - PROVIDE SIGN IN ACCORDANCE WITH DETAIL ON C-005 ON THE ACCESS GATE TO BOTH LIFT STATIONS.
- DUPLIX CONTROL PANEL:
- CONTROL PANEL SHALL BE ASSEMBLED AND BUILT BY A TUV (UL508A CERTIFIED) MANUFACTURING FACILITY.
 - THE ENCLOSURE SHALL BE NEMA 4X, MINIMUM 30" HIGH X 30" WIDE X 10" DEEP FIBERGLASS WITH PADLOCKABLE DRAW LATCHES. ENCLOSURE SHALL BE SIZED TO ACCOMMODATE ALL CONTROLS FOR THE LIFT STATION.
 - THE ENCLOSURE SHALL HAVE EXTERNAL MOUNTING FEET TO ALLOW FOR WALL MOUNTING.
 - ALL HARDWARE SHALL BE STAINLESS STEEL.
 - THE FOLLOWING COMPONENTS SHALL BE MOUNTED THROUGH THE ENCLOSURE:
 - 1- EA. RED ALARM BEACON (LIGHT)
 - 1- EA. ALARM HORN
 - 1- EA. ALARM SILENCE PUSH-BUTTON
 - THE BACKPANEL SHALL BE FABRICATED FROM .125, 5052-H32 MARINE ALLOY ALUMINUM. ALL COMPONENTS SHALL BE MOUNTED BY MACHINED STAINLESS STEEL SCREWS.
 - THE FOLLOWING COMPONENTS SHALL BE MOUNTED TO BACKPANEL:
 - 2- EA. MOTOR CONTACTORS
 - 1- EA. PHASE MONITOR (SINGLE PHASE)
 - 1- EA. SILENCE RELAY
 - 1- EA. DUPLIX ALTERNATOR
 - 1- EA. MODEL BOAC5AH BATTERY BACK-UP W/ SMART CHARGER
 - 20- EA. TERMINALS FOR FIELD CONNECTIONS
 - 3- EA. GROUNDING LUGS
 - THE INNERDOOR SHALL BE FABRICATED FROM .080, 5052-H32 MARINE ALLOY ALUMINUM. THE INNERDOOR SHALL HAVE A CONTINUOUS ALUMINUM PLANO HINGE.
 - THE FOLLOWING COMPONENTS SHALL BE MOUNTED THROUGH THE INNERDOOR:
 - 1- EA. MAIN CIRCUIT BREAKER
 - 1- EA. EMERGENCY CIRCUIT BREAKER
 - 1- EA. MECHANICAL INTERLOCK FOR EMERGENCY AND MAIN BREAKERS
 - 2- EA. SHORT CIRCUIT PROTECTORS
 - 1- EA. CONTROL CIRCUIT BREAKER
 - 2- EA. SEAL FAILURE INDICATOR LIGHTS (NOT REQUIRED)
 - 1- EA. HAND-OFF-AUTO SELECTOR SWITCHES
 - 2- EA. PUMP RUN PILOT LIGHTS
 - 1- EA. POWER ON PILOT LIGHT
 - 2- EA. ELAPSE TIME METERS (NON-RESETABLE)
 - 1- EA. GFI DUPLIX CONVENIENCE OUTLET
 - ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES
 - ELECTRICIAN SHALL SEAL OFF CONDUIT RUNS
 - ELECTRICIAN TO MOUNT LIGHTNING ARRESTOR AT SWITCH DISCONNECT
 - CONTRACTOR SHALL VERIFY POWER SOURCE PRIOR TO ORDERING EQUIPMENT

COMPONENT SPECIFICATIONS:

- ALL CIRCUIT BREAKERS SHALL BE MOLDED THERMAL MAGNETIC.
- THE MECHANICAL INTERLOCK SHALL PREVENT THE NORMAL AND EMERGENCY MAIN BREAKERS BEING ENERGIZED AT THE SAME TIME.
- ALL MOTOR SHORT CIRCUIT PROTECTION DEVICES MUST PROVIDE FOR UNDERVOLTAGE RELEASE AND CLASS 10 OVERLOAD PROTECTION. VISIBLE TRIP INDICATION, TEST, AND RESET CAPABILITY MUST BE PROVIDED WITHOUT OPENING INNER DOOR.
- OPEN FRAME, ACROSS THE LINE, CONTACTORS SHALL BE RATED PER IEC STANDARDS AND PROPERLY SIZED PER THE MOTOR REQUIREMENTS. CONTACTORS SHALL PROVIDE FOR SAFE TONGUE POWER AND CONTROL TERMINALS.
- LIGHTNING ARRESTOR SHALL MEET OR EXCEED THE REQUIREMENTS OF ANSI/IEEE STD. C62.21-1984 SECTION 8.6.1.1, AND 8.7.3 SHALL BE SUPPLIED BY ELECTRICIAN AND MOUNTED ON THE BOTTOM SIDE OF THE SWITCH DISCONNECT AHEAD OF THE PUMP CONTROL PANEL.
- A GREEN PILOT LIGHT SHALL BE SUPPLIED FOR EACH MOTOR. THE PILOT LIGHT SHALL ILLUMINATE EACH TIME THE MOTOR IS CALLED TO RUN.
- EACH PUMP SHALL HAVE AN ELAPSE TIME METER TO RECORD THE ACCUMULATED RUN TIME. THE ETM SHALL BE 2" DIAMETER, NON-RESETTABLE, SIX DIGIT, TOTALLY ENCAPSULATED UNIT.
- A RED PILOT LIGHT SHALL BE SUPPLIED FOR CONTROL POWER. THE PILOT LIGHT SHALL ILLUMINATE WHEN THE CONTROL POWER IS AVAILABLE INSIDE THE CONTROL PANEL.
- RELAYS SHALL BE ICE-CUBE PLUG IN TYPE. RELAY CONTACTS SHALL BE RATED 10 AMP MINIMUM, DPDT.
- TWENTY (20) TERMINALS SHALL BE SUPPLIED FOR FIELD CONNECTIONS.
- THE TERMINALS SHALL BE RATED 25 AMPS MINIMUM.
- EACH MOTOR'S OVER-TEMPERATURE CONTACT SHALL BE CONNECTED TO THE TERMINAL STRIP AND SHALL OPEN A CONTACT TO DE-ENERGIZE THE APPROPRIATE MOTOR UPON A HIGH TEMPERATURE WITHIN THE MOTOR.
- GROUND LUGS SHALL BE SUPPLIED AND APPROPRIATELY SIZED FOR EACH MOTOR AND FOR SERVICE ENTRANCE.
- NAMEPLATES FOR THE INNERDOOR AND BACK PANEL SHALL BE OF A GRAPHIC DESIGN, SPECIFICALLY DEPICTING THE INTENT FOR EACH DEVICE.
- ALL WIRING ON THE BACKPANEL SHALL BE CONTAINED WITHIN THE WIRING DUCT.
- ALL WIRING BETWEEN THE INNERDOOR AND THE BACKPANEL SHALL BE CONTAINED WITHIN A PLASTIC SPIRAL WRAP.
- EACH WIRE SHALL HAVE A WIRE NUMBER AT EACH END TO CORRESPOND TO THE AS BUILT DRAWING FOR FIELD TROUBLESHOOTING.

PUMPS:

- SUBMERSIBLE PUMPS SHALL BE FLYGT PRODUCT NO. DP 3068 LT, 10, 283 OR APPROVED EQUAL, BASED ON AVAILABILITY OF SINGLE PHASE 240 VOLT SERVICE.
- THE PUMPS SHALL BE INSTALLED IN THE H-20 LOAD RATED FIBERGLASS WETWELL UTILIZING A DUAL SLIDE RAIL SYSTEM.
- THE PUMPS SHALL BE CAPABLE OF HANDLING AND PUMPING 2.5" SOLID MATERIALS.

FASTENERS & APPURTENANCES:

- ALL FASTENERS, LIFTING CABLES, FLOAT CABLE BRACKET, HINGES, AND APPURTENANCES SHALL BE MADE OF AISI 304SS.
- A 304SS SLIDE/LATCH ASSEMBLY SHALL BE PROVIDED FOR HOLDING THE DOORS OPEN ON THE WETWELL.
- SLIDE RAILS SHALL BE MADE OF SCH.40 AISI 304SS PIPE.
- PUMP LIFTING CABLES SHALL BE MADE OF AISI 304 SS.
- PUMP LIFTING BALES SHALL BE MADE OF AISI 304 SS.

INSPECTION & TESTING:

- FOR EACH LIFT STATION FOR A TOTAL OF TWO START-UP SITE VISITS DUE TO PHASING, A FACTORY REPRESENTATIVE SHALL BE PROVIDED AND SHALL HAVE COMPLETE KNOWLEDGE OF THE PROPER OPERATION AND MAINTENANCE OF COMPLETE SYSTEM.
- MEGGER THE MOTORS. THE PUMP MOTORS SHALL BE MEGGED OUT PRIOR TO THE START-UP TO ENSURE THAT THE INSULATION OF THE PUMP MOTOR/CABLE IS INTACT.
- THE PUMP CONTROLS AND PUMPS SHALL BE CHECKED FOR MECHANICAL RELIABILITY AND PROPER OPERATION.
- THE SANITARY FORCEMAIN SHALL BE LEAKAGE TESTED AND APPROVED.

H-20 LOAD RATED WETWELL WITH LIFTING LUGS:

- THE FIBERGLASS WETWELL MUST BE H-20 LOAD RATED WITH INTEGRAL LIFTING LUGS, FIBERGLASS SLOPE IN BOTTOM OF WETWELL.
- CERTIFICATION OF THE H-20 LOAD RATING MUST BE SUPPLIED AT THE TIME OF SUBMITTALS TO ENGINEER. H-20 CERTIFICATION MUST BE SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE STATE OF FLORIDA.
- THE WETWELL SHALL BE MANUFACTURED OF FIBERGLASS REINFORCED POLYESTER (FRP) OF DEPTH AND DIAMETER AS SHOWN ON THE LIFT STATION ELEVATION DETAIL. THE WALL THICKNESS SHALL BE ADEQUATE FOR THE DEPTH OF THE WETWELL TO MAINTAIN THE H-20 LOAD RATING.
- AFTER THE WETWELL HAS BEEN INSTALLED, THE ASTM CERTIFICATION NUMBER AND SERIAL TRACKING NUMBER MUST BE VISIBLE.

EXECUTION:

INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND THE CONSTRUCTION DOCUMENTS.

DATUM NOTE:

THESE PLANS ARE BASED ON THE VERTICAL DATUM NAVD 88, REFER TO THE TOPOGRAPHIC SURVEY FOR MORE INFORMATION.

OFFICE/WEST RESTROOM WET WELL ELEVATIONS	
TOP OF WETWELL	123.50
FINISHED GRADE	123.00
PUMP OUTLET INVERT	121.00
EST. SHWT	116.90
PUMPS OFF(1)	119.50
LEAD PUMP ON (2)	119.50
LAG PUMP ON (3)	120.00
HIGH LEVEL ALARM-HLA (4)	120.50
GRAVITY SS INLET INVERT	119.43
BOTTOM OF WETWELL	117.50
WETWELL DIAMETER	60"

PUMP DATA	
PRIMARY PUMP CAPACITY	22 GPM
PRIMARY TDH	45'
PUMP MANUFACTURER	FLYGT
PUMP MODEL #	DP3068 LT 10 283
IMPELLER DIA	117 mm
R.P.H.	3325
HORSEPOWER	2.3 hp
ELECTRICAL/VOLTS/PHASE	240V/1PH
PUMP DISCHARGE SIZE	1 1/2"
SOLIDS HANDLING	2"

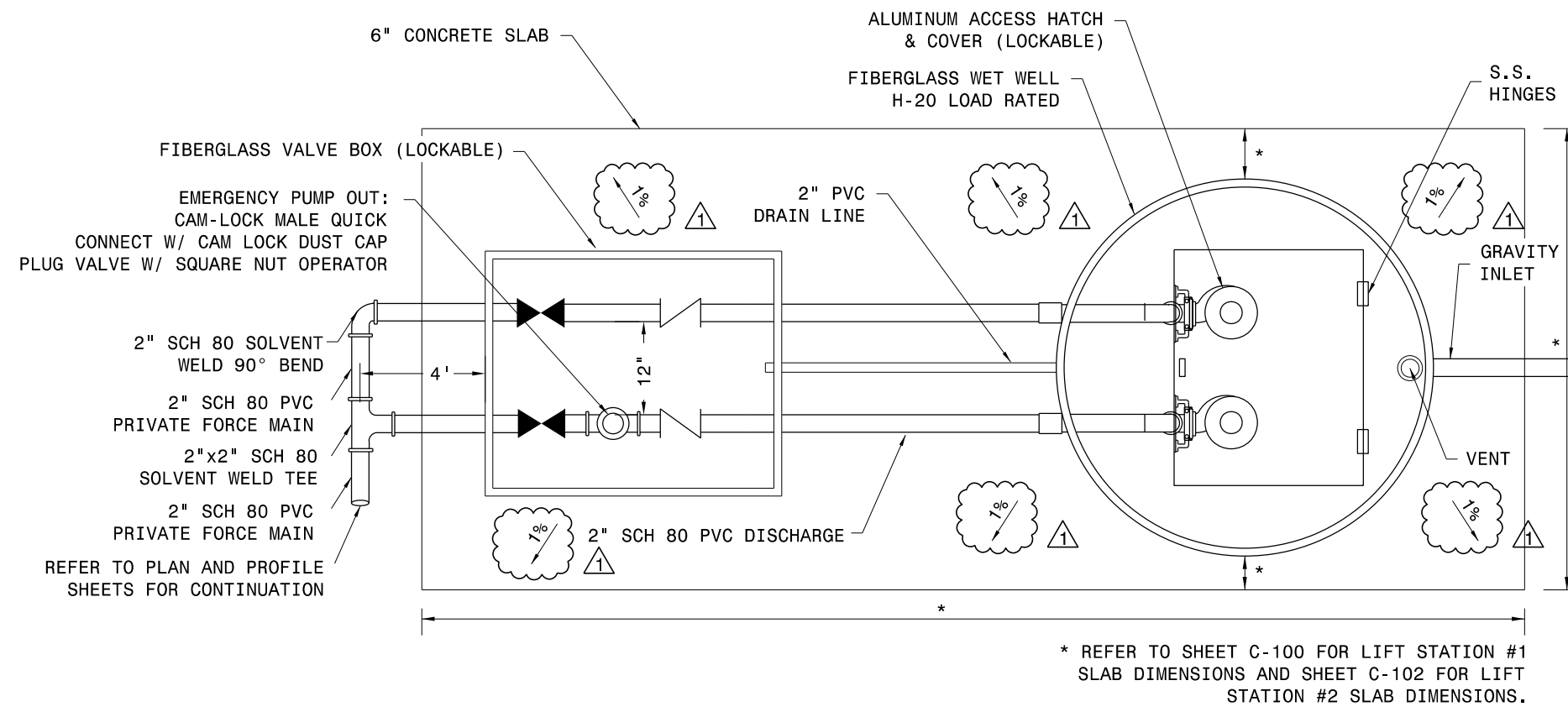
ELEVATIONS AND PUMP DATA SUMMARY FOR PUMP STATION #1

CONCESSION RESTROOM WET WELL ELEVATIONS	
TOP OF WETWELL	124.50
FINISHED GRADE	124.90
PUMP OUTLET INVERT	122.90
EST. SHWT	116.90
PUMPS OFF(1)	121.50
LEAD PUMP ON (2)	122.50
LAG PUMP ON (3)	123.00
HIGH LEVEL ALARM-HLA (4)	123.50
GRAVITY SS INLET INVERT	119.85
BOTTOM OF WETWELL	116.35
WETWELL DIAMETER	60"

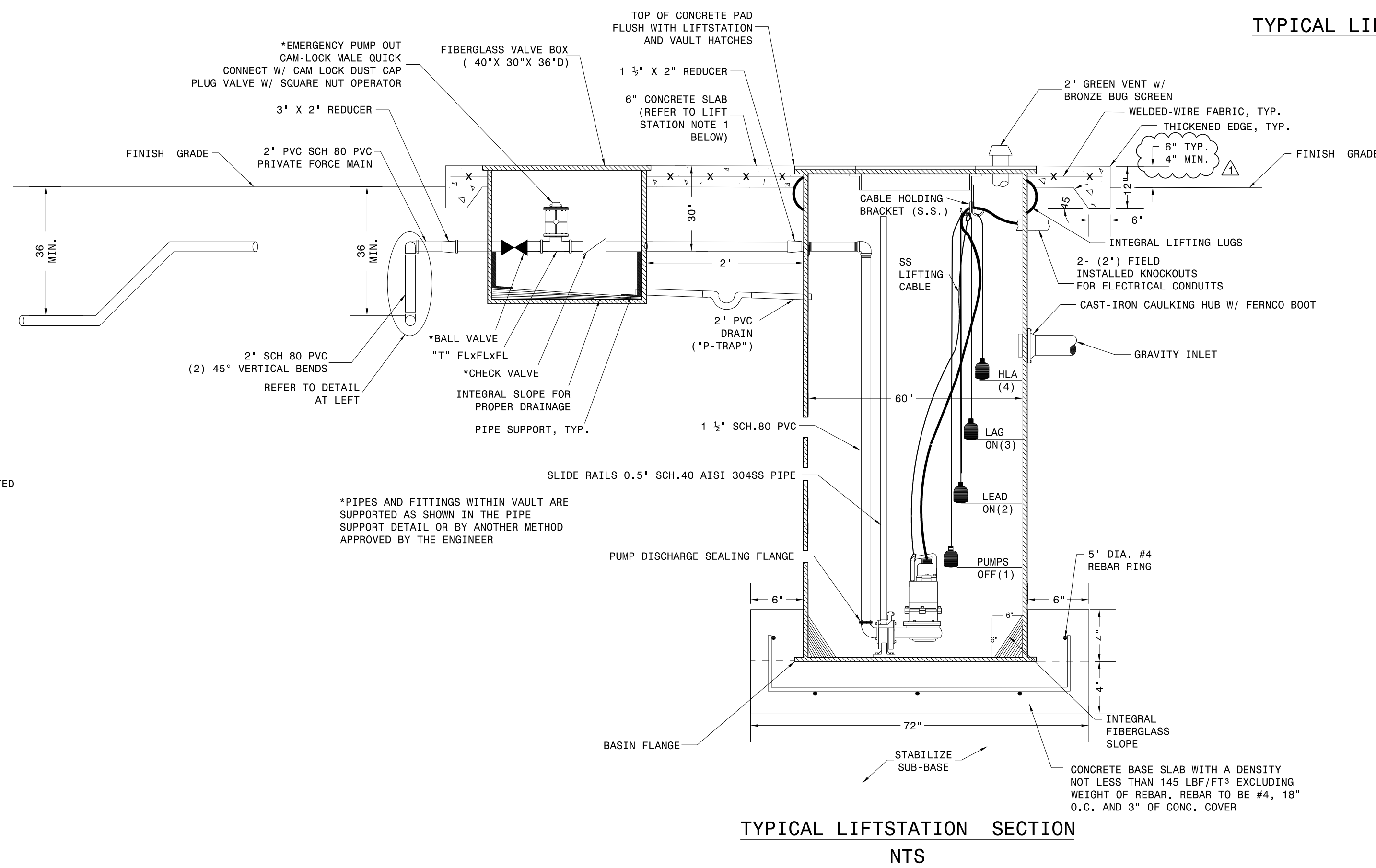
PUMP DATA	
PRIMARY PUMP CAPACITY	22 GPM
PRIMARY TDH	45'
PUMP MANUFACTURER	FLYGT
PUMP MODEL #	DP3068 LT 10 283
IMPELLER DIA	117 mm
R.P.H.	3325
HORSEPOWER	2.3 hp
ELECTRICAL/VOLTS/PHASE	240V/1PH
PUMP DISCHARGE SIZE	1 1/2"
SOLIDS HANDLING	2"

ELEVATIONS AND PUMP DATA SUMMARY FOR PUMP STATION #2

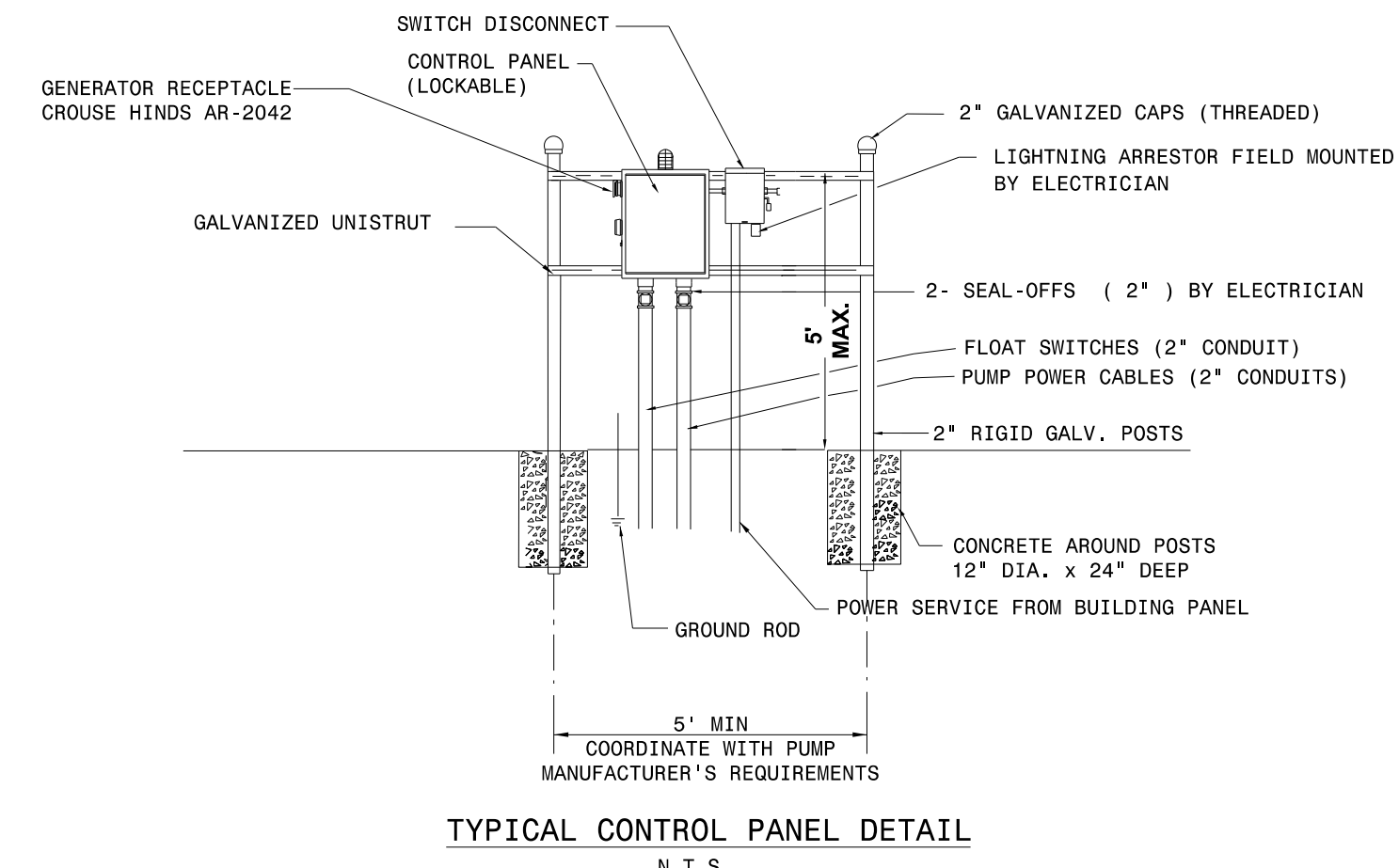
TYPICAL LIFT STATION AND LIFT STATION COMPONENTS SHOWN HEREON. REFER TO PLAN AND PROFILE SHEETS FOR LIFT STATION #1 AND #2 ACTUAL LIFT STATION AND COMPONENT LAYOUT.



TYPICAL LIFTSTATION PLAN VIEW NTS



TYPICAL LIFTSTATION SECTION NTS



TYPICAL CONTROL PANEL DETAIL N.T.S.

LIFT STATION NOTES:

- CONCRETE SLAB SHALL BE 6" THICK, 3000 PSI CONCRETE W/ 6X6 W1.4XW1.4 W/F OVER COMPACTED SUBGRADE TO A MIN. 98% OF AASHTO T99 DENSITY. W/F SHALL BE LOCATED AT MID DEPTH OF CONCRETE SLAB. REFERENCE FOOT STANDARD SPECIFICATIONS 347 AND 522. NOTE MINIMUM COMPRESSIVE STRENGTH REQUIRED DOES EXCEED THE 2500 PSI PER SPECIFICATION 347, AND THE COMPACTION FOR THE FOUNDATION DOES EXCEED THE 95% PER FOOT STANDARD SPECIFICATION 522.
- CONCRETE BASE SLAB IS TO BE CONSTRUCTED IN TWO POURS. BOTTOM SLAB IS TO BE POURED WITH REBAR AS SHOWN, ALLOWED TO CURE TO ENSURE THE LIFTSTATION WETWELL WILL NOT SINK INTO THE CONCRETE. THE WETWELL WILL THEN BE LOWERED ON TO THE SLAB WITHIN THE REBAR RING. THEN THE CONTRACTOR WILL MAKE THE SECOND POUR AND CONTRACTOR SHALL ENSURE WETWELL IS WEIGHTED DOWN TO RESIST THE BUOYANCY FORCE OF THE WET CONCRETE.

BY: [] DATE: 01/21/2015
 DRAWN BY: [] CITY OF WINTER GARDEN COMMENTS: []
 CHECKED BY: []
 PROJECT # 2012.011.1
 DATE: 11/17/2014
 ISSUED FOR: [] PRELIMINARY [] BIDDING [] FINAL [] CONSTRUCTION [] RECORD DWG []

SCALE: AS NOTED
 DRAWN BY: []
 CHECKED BY: []
 PROJECT # 2012.011.1
 DATE: 11/17/2014
 ISSUED FOR: [] PRELIMINARY [] BIDDING [] FINAL [] CONSTRUCTION [] RECORD DWG []

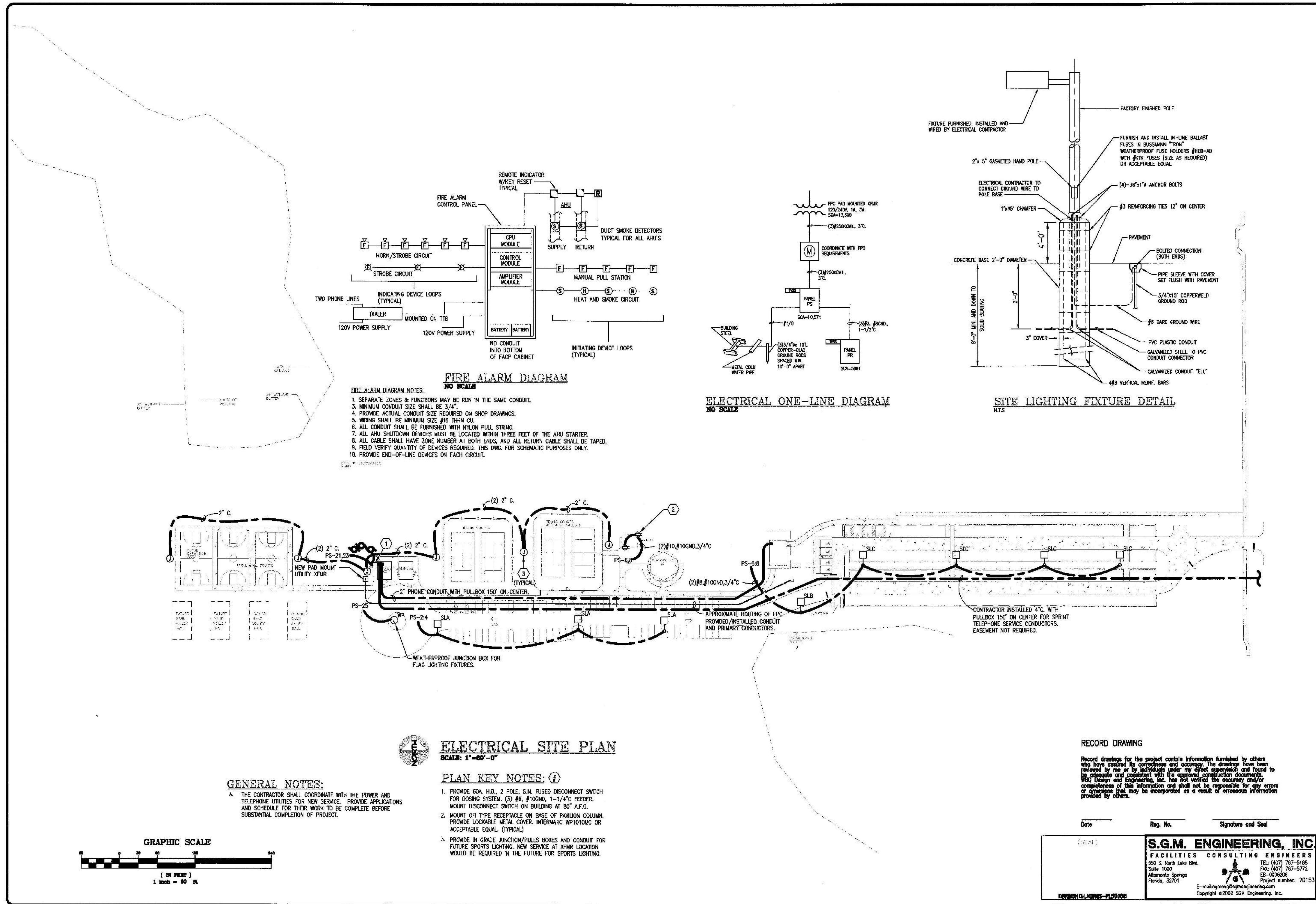
MOLLY A. DEVIVERO
 PROFESSIONAL ENGINEER
 STATE OF FLORIDA
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 FLORIDA P.E. NO. 64860
 NOT VALID UNLESS SIGNED & SEALED BY A REGISTERED ENGINEER

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 BPE/ABD CA NO.: A40020023

WEST ORANGE SOCCER FIELD
 ORANGE COUNTY, FLORIDA
 FOR
 CITY OF WINTER GARDEN
 LIFT STATION DETAILS

C-200

THIS RECORD DRAWING IS PROVIDED FOR CONTRACTOR'S USE AND REFERENCE ONLY TO DOCUMENT RECORD FIELD CONDITIONS. THE WORK DEPICTED IN THESE PLANS IS NOT IN THIS CONTRACT. THE INCLUSION OF THIS INFORMATION DOES NOT REPLACE OR RELIEVE THE CONTRACTORS OF THEIR RESPONSIBILITY TO VERIFY EXISTING FIELD CONDITIONS PRIOR TO BID AND CONSTRUCTION.



PARKS AND RECREATION DEPARTMENT
PARK PLANNING AND DESIGN
4801 W. COLONIAL DRIVE
SUITE 200, AUSTIN, TX 78746
PHONE: (407) 538-6200

NO.	DATE	DESCRIPTION
1	07/27/05	CITY OF WINTER GARDEN DRG COMMENTS
2		
3		
4		
5		
6		
7		
8		
9		

SCALE: AS NOTED
DRAWN BY: ECD
PROJECT MANAGER: MAY
DATE: 2012.01.11
ISSUED FOR: PRELIMINARY [] PERMITTING [] BIDDING [] CONSTRUCTION [] RECORD DWG []

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WEST ORANGE SOCCER FIELD
ORANGE COUNTY, FLORIDA
FOR
CITY OF WINTER GARDEN
HISTORICAL ELECTRICAL SITE PLAN
(FOR INFORMATION ONLY)

E-1

C-300

THIS RECORD DRAWING IS PROVIDED FOR CONTRACTOR'S USE AND REFERENCE ONLY TO DOCUMENT RECORD FIELD CONDITIONS. THE WORK DEPICTED IN THESE PLANS IS NOT IN THIS CONTRACT. THE INCLUSION OF THIS INFORMATION DOES NOT REPLACE OR RELIEVE THE CONTRACTORS OF THEIR RESPONSIBILITY TO VERIFY EXISTING FIELD CONDITIONS PRIOR TO BID AND CONSTRUCTION.

PANEL PS		SERVICE 120/240V-1F-3W		MINIMUM BREAKER AIC 14,000				
LOCATION	MECH. ELEC ROOM	RATING 250A MCB		MOUNTING SURFACE				
LOAD DESCRIPTION	BKR TRIP	POLES	KVA	OKT. NO.	KVA	BKR TRIP	POLES	LOAD DESCRIPTION
O - PANEL FR	60	2	5.00	11.2	1.61	20	1	L - SITE LITG
O -	-	-	5.00	3.4	1.61	20	1	L -
SPARE	20	1	0.60	5.6	1.15	20	1	L - SITE LITG
O - FIRE ALARM PANEL	20	1	0.80	7.8	1.15	20	1	L -
R - TR	20	1	0.80	9.10	0.80	20	1	O - PZON PAVILLON
R - STORAGE	20	1	0.80	11.12	0.80	20	1	O - PZON PAVILLON
R - OFFICE	20	1	1.00	13.14	0.80	20	1	O - IRRIGATION CONTROLLER
R - OFFICE	20	1	1.00	15.16	1.84	20	1	M - CU-1
L - OFFICE	20	1	1.00	17.18	1.84	20	1	M -
L - BLDG EXTERIOR	20	1	0.50	18.20	5.53	20	1	M - AH-1
M - DOSING PUMP SYSTEM	60	2	3.00	21.22	5.53	20	1	M -
M -	-	-	-	23.24	0.60	20	1	S - SPARE
L-FLAG	20	1	1.20	25.26	0.60	20	1	S - SPARE
SPACE ONLY	-	-	0.00	27.28	0.00	-	-	SPACE ONLY
SPACE ONLY	-	-	0.00	29.30	0.00	-	-	SPACE ONLY
SPACE ONLY	-	-	0.00	31.32	0.00	-	-	SPACE ONLY
SPACE ONLY	-	-	0.00	33.34	0.00	-	-	SPACE ONLY
SPACE ONLY	-	-	0.00	35.36	0.00	-	-	SPACE ONLY
SPACE ONLY	-	-	0.00	37.38	0.00	20	2	O - TYSS
SPACE ONLY	-	-	0.00	39.40	0.00	-	-	O -
SPACE ONLY	-	-	0.00	41.42	0.00	-	-	SPACE ONLY
TOTALS			12.8	11.1	12.1	11.3		
SERVES		CONN. LOAD - KVA		E.F. CALC. DEMAND - KVA		NOTES:		
LIGHTING			3.60		1.0			
RECEPTACLES - 1ST 10 KVA			0.00		0.50			
RECEPTACLES - ABOVE 10 KVA			20.74		1.00			
MECHANICAL			0.00		1.0			
EQUIPMENT			0.00		0.75			
APPLIANCE			1.80		1.0			
SPARE/SPACE			12.80		1.0			
OTHER			47.16		46.22			CALCULATED AMPS: 206

PANEL PR		SERVICE 120/240V-1F-3W		MINIMUM BREAKER AIC 10,000				
LOCATION	STORAGE	RATING 60A MCB		MOUNTING SURFACE				
LOAD DESCRIPTION	BKR TRIP	POLES	KVA	OKT. NO.	KVA	BKR TRIP	POLES	LOAD DESCRIPTION
R - STORAGE	20	1	0.80	11.2	0.80	20	1	L - RESTROOMS
R - RESTROOMS	20	1	0.80	13.4	0.80	20	1	L - BLDG EXTERIOR
SPARE	20	1	0.80	5.6	0.80	20	1	SPARE
O - HAND DRYER	20	1	2.00	7.8	0.60	20	1	SPARE
O - HAND DRYER	20	1	2.00	9.10	0.80	20	1	SPARE
SPACE ONLY	-	-	0.00	11.12	0.00	-	-	SPACE ONLY
SPACE ONLY	-	-	0.00	13.14	0.00	-	-	SPACE ONLY
SPACE ONLY	-	-	0.00	15.16	0.00	20	2	O - TYSS
SPACE ONLY	-	-	0.00	17.18	0.00	-	-	O -
				19.20				
				21.22				
				23.24				
				25.26				
				27.28				
				29.30				
				31.32				
				33.34				
				35.36				
				37.38				
				39.40				
				41.42				
TOTALS			3.4	2.8	2.0	1.5		
SERVES		CONN. LOAD - KVA		E.F. CALC. DEMAND - KVA		NOTES:		
LIGHTING			1.70		1.25			
RECEPTACLES - 1ST 10 KVA			1.60		1.0			
RECEPTACLES - ABOVE 10 KVA			0.00		0.50			
MECHANICAL			0.00		1.00			
EQUIPMENT			0.00		1.0			
APPLIANCE			0.00		0.75			
SPARE/SPACE			2.40		1.0			
OTHER			0.00		1.0			
TOTALS			5.70		6.15			CALCULATED AMPS: 26

ELECTRICAL SYMBOLS			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	2' X 4', 4 LAMP, LAY-IN FLUORESCENT TROFFER		SAME AS ABOVE; WEATHERPROOF
	2' X 4', 4 LAMPS LAY-IN FLUORESCENT TROFFER W/EMERGENCY BATT. PACK		DUPLEX RECEPTACLE WITH GROUND FAULT PROTECTION
	1' X 4', 4 LAMPS LAY-IN FLUORESCENT TROFFER		SPECIAL PURPOSE RECEPTACLE
	2 LAMP, 4' LONG FLUORESCENT STRIP LIGHT FIXTURE		JUNCTION BOX
	INCANDESCENT DOWNLIGHT, 75W, R30 LAMP, MAX.		JUNCTION BOX OR ELECTRICAL CONNECTION POINT
	SURFACE MOUNTED INCANDESCENT OR HID: INDOOR 50W, A19 LAMP OUTDOOR - 100W, MH LAMP, MAX.		TELEPHONE OUTLET
	SITE LIGHTING POLE & FIXTURE		EXTERNALLY OPERATED DISCONNECT SWITCH
	TRACK LIGHTING SYSTEM		PANELBOARD, FLUSH MOUNTED; MOUNTING HEIGHT 78" TO TOP OF CABINET
	EMERGENCY LIGHT W/BATTERY PACK		SAME AS ABOVE, SURFACE MOUNTED
	EXIT LIGHT WITH BATTERY PACK		HOMERUN TO PANEL. NUMBER OF SHORT HASH MARKS INDICATES NUMBER OF CIRCUITS. LONG HASH MARK INDICATES NEUTRAL.
	20 AMP TOGGLE SWITCH, SINGLE POLE; MOUNTING HEIGHT 48" TO TOP "3" - 3-WAY, "4" - 4-WAY, "2" - TWO POLE		ELECTRIC MOTOR EQUIPMENT
	DUPLEX RECEPTACLE OUTLET; MTG. HEIGHT +15" TO THE BOTTOM UNLESS OTHERWISE NOTED		

LIGHTING FIXTURE SCHEDULE						
TYPE	DESCRIPTION	TOTAL WATTS	LAMPS		MOUNTING	
			NO.	WATTS		
BP	INCANDESCENT EMERGENCY BATTERY PACK LIGHTING UNIT, THIN CONCEALED HEADS, HALOGEN LAMPS, WHITE FINISH, 120 VOLT, LITHONIA ELM-H OR ACCEPTABLE EQUAL	10				SURFACE
FA	FLUORESCENT INDUSTRIAL FIXTURE WITH APPERTURED REFLECTOR, 48" LENGTH, (2) TB LAMPS, ELECTRONIC BALLAST, 120 VOLT, LITHONIA LA-232-120 OR ACCEPTABLE EQUAL	75	2	32	T8	SURFACE
FB	FLUORESCENT ENCLOSED INDUSTRIAL FIXTURE, 48" LENGTH, (2) TB LAMPS, ELECTRONIC BALLAST, HIGH IMPACT ACRYLIC LENS, WET LOCATION LISTED, 120 VOLT, LITHONIA DWM-232-AR-120 OR ACCEPTABLE EQUAL	75	2	32	T8	SURFACE
SLA	HID AREA LIGHTING FIXTURE AND POLE, 400 WATT LAMP, TYPE II DISTRIBUTION, 240 VOLT, ROUND STRAIGHT ALUMINUM POLE ON A 4'-0" ABOVE GRADE CONCRETE BASE - 30' FIXTURE MOUNTING HEIGHT, DARK BRONZE FINISH ON FIXTURE AND POLE, LITHONIA KAD400M-R3-208-RP004, POLE OR ACCEPTABLE EQUAL	450	1	400	MH	POLE
SLB	HID AREA LIGHTING FIXTURE AND POLE, 400 WATT LAMP, TYPE II DISTRIBUTION, 240 VOLT, ROUND STRAIGHT ALUMINUM POLE ON A 4'-0" ABOVE GRADE CONCRETE BASE - 30' FIXTURE MOUNTING HEIGHT, DARK BRONZE FINISH ON FIXTURE AND POLE, LITHONIA KAD400M-R2-208-RP004, POLE OR ACCEPTABLE EQUAL	450	1	400	MH	POLE
SLC	HID AREA LIGHTING FIXTURE AND POLE, 400 WATT LAMP, TYPE V DISTRIBUTION, 240 VOLT, ROUND STRAIGHT ALUMINUM POLE ON A 4'-0" ABOVE GRADE CONCRETE BASE - 30' FIXTURE BRONZE FINISH ON FIXTURE AND POLE, LITHONIA KAD400M-R5-208-RP004, POLE OR ACCEPTABLE EQUAL	450	1	400	MH	POLE
WA	HID WALL MOUNTED AREA LIGHTING FIXTURE, 70 WATT METAL HALIDE LAMP, WHITE FINISH, WET LOCATION LISTED, 120 VOLT, LITHONIA TW470M-120-F-DWH OR ACCEPTABLE EQUAL	80	1	70	MH	SURFACE

NOTES:

- ALL FIXTURES 120 VOLT UNLESS OTHERWISE NOTED.
- ALL FLUORESCENT LAMPS SHALL HAVE CORRELATED COLOR TEMPERATURE OF 3000.
- ALL FLUORESCENT TUBE LAMPS SHALL HAVE MINIMUM 80 CRI.
- FINAL FIXTURE FINISHES SHALL BE SELECTED DURING SUBMITTAL PROCESS BY ARCHITECT FROM EXTENDED STANDARD COLOR CHART FOR EACH FIXTURE.

RECORD DRAWING

Record drawings for the project contain information furnished by others who have assumed its correctness and accuracy. The drawings have been reviewed by me or by individuals under my direct supervision and found to be adequate and consistent with the approved construction documents. W&E Design and Engineering, Inc. has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions that may be incorporated as a result of erroneous information provided by others.

Date: _____ Reg. No. _____ Signature and Seal _____

S.G.M. ENGINEERING, INC.
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 Altamonte Springs EB-0006208
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PARKS AND RECREATION DEPARTMENT
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 WINTER GARDEN, FLORIDA 32789
 PHONE: (407) 838-6200

SCALE: AS NOTED
 DRAWN BY: ECD
 CHECKED BY: MAY
 PROJECT NO.: 2012.011.1
 DATE: 11/17/2014
 ISSUED FOR: PERMITTING, BIDDING, CONSTRUCTION, RECORD DWG

WEST ORANGE PARK
 ORANGE COUNTY, FLORIDA
 DETAILS, SCHEDULES & ONE-LINE DIAGRAMS

Drawn By: JGL
 Checked By: DDA
 Designed By: _____
 Date: 06/10-02
 Job No.: _____
 Dwg. File: 0153-_____

E-3

NO. DATE DESCRIPTION BY SHR

1 07/27/2015 CITY OF WINTER GARDEN DRG COMMENTS

2 11/17/2014

3

4

5

6

7

8

9

STATE OF FLORIDA
 PROFESSIONAL ENGINEER
 NO. 64860
 MOLLY A. DEVERO
 FLORIDA P.E. NO. 64860
 NOT VALID UNLESS SIGNED & SEALED BY A REGISTERED ENGINEER

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 BPE CAL. NO.: 0005888

WEST ORANGE SOCCER FIELD
 ORANGE COUNTY, FLORIDA
 FOR
 CITY OF WINTER GARDEN
 HISTORICAL DETAILS, SCHEDULES & ONE-LINE DIAGRAMS
 (FOR INFORMATION ONLY)

C-301