PIPE IDENTIFICATION

3" METALLIC LOCATOR TAPE SHALL BE BURIED IN THE WATER MAIN TRENCH 18" DIRECTLY ABOVE THE WATER MAIN. A CONTINUOUS COPPER DETECTOR WIRE SHALL BE ATTACHED AS SHOWN ON THE WATER DETAIL SHEET. WIRE CONNECTIONS (SPLICES) SHALL BE DONE WITH WIRE NUT AND GREASE FILLED PROTECTIVE CAP.

ALL PIPE AND PIPE FITTINGS SHALL BE COLOR CODED OR MARKED IN ACCORDANCE WITH SUB— PARAGRAPH 62-555.320(21)(b)3, F.A.C., USING BLUE AS A PREDOMINANT COLOR. (UNDERGROUND PLASTIC PIPE SHALL BE SOLID—WALL BLUE PIPE, SHALL HAVE A CO—EXTRUDED BLUE EXTERNAL SKIN OR SHALL BE WHITE OR BLACK PIPE WITH BLUE STRIPES INCORPORATED INTO, OR APPLIED TO, THE PIPE WALL; AND UNDERGROUND METAL OR CONCRETE PIPE SHALL HAVE BLUE STRIPES APPLIED TO THE PIPE WALL. PIPE STRIPED DURING MANUFACTURING OF THE PIPE SHALL HAVE CONTINUOUS STRIPES THAT RUN PARALLEL TO THE AXIS OF THE PIPE, THAT ARE LOCATED AT NO GREATER THAN 90—DEGREE INTERVALS AROUND THE PIPE, AND THAT WILL REMAIN INTACT DURING AND AFTER INSTALLATION OF THE PIPE. IF TAPE OR PAINT IS USED TO STRIPE PIPE DURING INSTALLATION OF THE PIPE, THE TAPE OR PAINT SHALL BE APPLIED IN A CONTINUOUS LINE THAT RUNS PARALLEL TO THE AXIS OF THE PIPE AND THAT IS LOCATED ALONG THE TOP OF THE PIPE; FOR PIPE WITH AN INTERNAL DIAMETER OF 24 INCHES OR GREATER, TAPE OR PAINT SHALL BE APPLIED IN CONTINUOUS LINES ALONG EACH SIDE OF THE PIPE AS WELL AS ALONG THE TOP OF THE PIPE. ABOVE GROUND PIPE SHALL BE PAINTED BLUE OR SHALL BE COLOR CODED OR MARKED LINE UNDERGROUND PIPE.) RHINO TRIVIEW FLEXMARKING POST SHALL BE PLACED ON ALL TRANSMISSION MAINS AT 500 FEET.

DISINFECTION AND TESTING

ALL PIPE SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA STANDARD C651.86.

PVC WATER MAINS SHALL BE INSTALLED; PRESSURE AND LEAK TESTED IN ACCORDANCE WITH AWWA C605 AND DUCTILE IRON WATER MAINS IN ACCORDANCE WITH AWWA C600, [62-555.320(21)(B) 1 AND 62-555.330, F.A.C]. ALL INSTALLATION, TESTING AND FIELD PROCEDURES MUST BE PROVIDED AND MUST CONFORM TO THE APPLICABLE AWWA STANDARDS.

THE CONTRACTOR SHALL PROVIDE AT HIS OWN EXPENSE ALL NECESSARY TEST PUMPING EQUIPMENT, WATER, WATER METERS, PRESSURE GAUGES AND OTHER EQUIPMENT, MATERIAL AND FACILITIES REQUIRED FOR ALL HYDROSTATIC AND LEAKAGE TESTING. CONTRACTOR SHALL CONTACT THE ENGINEER, OWNER/OPERATOR AND CITY IN WRITTEN FORM, FORTY EIGHT (48) HOURS IN ADVANCE OF PROPOSED TESTING. THE CONTRACTOR SHALL PERFORM SATISFACTORY PRETESTING PRIOR TO NOTIFICATION.

THE WATER SYSTEM SHALL BE SOAK TESTED 24 HOURS @150 PSI AND TESTED FOR LEAKAGE AT 150 PSI FOR TWO (2) HOURS, WITH ALLOWABLE LEAKAGE IN ACCORDANCE WITH ABOVE STANDARDS.

CONTRACTOR SHALL OBTAIN A COPY OF THE FDEP WATER SYSTEM PERMIT AND PULL BACTERIOLOGICAL TEST SAMPLES FROM THE SAMPLE POINTS SPECIFIED IN THAT PERMIT. CONTINUITY TEST SHALL BE PERFORMED ON WIRE BY CONTRACTOR.

CONNECTIONS TO EXISTING WATER MAINS

PRIOR TO THE CONNECTION TO ANY EXISTING MAIN, THE PROPOSED WATER MAIN SHALL BE DISINFECTED, HAVE ENGINEER APPROVED PRESSURE TESTING AND HAVE FDEP CLEARANCE. REFER TO FDEP PERMIT FOR ANY ADDITIONAL REQUIREMENTS.

ASBUILT DRAWINGS

THE CONTRACTOR SHALL PROVIDE VERTICAL AND HORIZONTAL "ASBUILT" INFORMATION RELATIVE TO ALL CONSTRUCTED UTILITIES AND STRUCTURES. THREE SETS SHALL BE PROVIDED FOR REVIEW. ONCE APPROVED BY THE UTILITY, ONE REPRODUCIBLE SET SHALL BE PROVIDED.

AS-BUILT INFORMATION FOR THE WATER SYSTEM SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:

- 1. LOCATION OF ALL VALVES, FITTINGS, HYDRANTS AND SERVICES HORIZONTAL AND VERTICAL.
- 2. LOCATION OF THE WATER MAIN TIED WITH COORDINATES FOR THE SUBDIVISION.
- 3. CERTIFICATION AS TO THE SYSTEM MEETING THE MINIMUM COVER REQUIREMENTS.
- 4. HORIZONTAL AND VERTICAL DATA FOR ANY CONSTRUCTION WHICH DEVIATES FROM THE APPROVED ENGINEERING PLANS.

5. UTILITY LOCATES ON SYSTEMS INSTALLED UNDER THIS CONTRACT SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR/DEVELOPER UNTIL ASBUILT DRAWINGS ARE REVIEWED AND APPROVED BY THE UTILITY.

SANITARY SEWER NOTES

1. ALL PRESSURE PIPE UNDER ROADWAY SHALL BE DIP EXTENDING 5' FROM EDGE OF PAVEMENT.

MAINS AND MANHOLES

1. ALL GRAVITY SANITARY SEWER MAINS, LATERALS, AND APPURTENANCES SHALL BE CONSTRUCTED OF SDR26 PVC PIPE MEETING ASTM 3034, AND SHALL HAVE A MINIMUM COVER OF THREE (3) FEET.

2. WHERE REQUIRED, MAINS SHALL BE CLASS 150 DUCTILE IRON PIPE (DIP) MEETING AWWA C150 AND C151. MAINS SHALL BE 60 MIL EPOXY COATED WITH POLYETHYLENE WRAP CONFORMING TO AWWA C105.

3. ALL PVC PIPE SHALL BEAR THE NSF-DW SEAL.

FLOW PREVENTION TECHNICIAN AS APPROVED BY THE CONTROL OF THE CONTR

5. ALL SANITARY MANHOLES SHALL BE PRECAST CONCRETE WITH A MINIMUM WALL THICKNESS OF FIVE (5) INCHES FOR INSIDE DIAMETER OF FOUR (4) FEET.

6. MANHOLES SHALL MEET ASTM C-478. RING AND COVER SHALL BE TRAFFIC BEARING H-20 CLASS 30 MEETING ASTM A-48.

7. INTERIOR AND EXTERIOR WALLS OF ALL MANHOLES SHALL HAVE A MINIMUM OF TWO (2) 8 MIL COATS OF AN APPROVED PROTECTIVE COAL TAR EPOXY.

8. ALL MAINS NOT LOCATED UNDER PAVEMENT SHALL BE MARKED BY A 3" METALLIC LOCATOR TAPE AND TRACER WIRE 18" ABOVE THE CENTERLINE OF PIPE. DROP MANHOLE IF INVERT DIFFERENCE IS GREATER THAN OR EQUAL TO TWO (2) FEET. 3" METALLIC LOCATOR TAPE SHALL BE BURIED IN THE WATER MAIN TRENCH 18" DIRECTLY ABOVE THE WATER MAIN. A CONTINUOUS COPPER DETECTOR WIRE SHALL BE ATTACHED AS SHOWN ON THE WATER DETAIL SHEET.

9. LINING IS REQUIRED OF ALL MANHOLES WITH AN INCOMING SLOPE GREATER THAN 5%. ANY MANHOLE WITH FORCE MAIN TIE IN MUST BE LINED. SEE CITY OF CLERMONT APPROVED PRODUCT LIST.

10. NO DROP SHALL BE GREATER THAN 15 FEET.

LATERALS

1. ALL SERVICE LATERALS AND FITTINGS SHALL BE A MINIMUM OF 6" IN DIAMETER.

2. ALL LATERALS SHALL TERMINATE WITH A 4" CLEAN—OUT AT THE PROPERTY LINE, AND AT A DEPTH TO FINAL GRADE OF 3 FEET. SEE DETAILS FOR LOCATION.

3. THE END OF EACH SERVICE CONNECTION SHALL BE MARKED WITH A 2"x2"x2" ABOVE GRADE WOODEN STAKE OR APPROVED MARKER AND CURB MARKED WITH A '5'.

FORCEMAINS

1. FORCEMAINS SHALL BE CLASS 350 EPOXY 401 LINED DIP. DIP PIPE SHALL HAVE INTEGRAL BELL PUSH ON TYPE JOINTS CONFORMING TO ASTM D3139.

2. ALL FITTINGS SHALL BE MECHANICAL JOINT DUCTILE IRON WITH 250 PSI MINIMUM PRESSURE RATING. SUITABLE COUPLINGS COMPLYING WITH ASTM SPECIFICATIONS ARE REQUIRED FOR JOINING DISSIMILAR MATERIALS.

3. 3" METALLIC LOCATOR TAPE SHALL BE BURIED IN THE WATER MAIN TRENCH 18" DIRECTLY ABOVE THE WATER MAIN. A CONTINUOUS COPPER DETECTOR WIRE SHALL BE ATTACHED AS SHOWN ON THE WATER

4. ALL MAINS SHALL HAVE A MINIMUM COVER OF THREE (3) FEET.

5. ALL CONNECTIONS TO EXISTING SEWER FORCEMAINS SHALL BE ACCOMPLISHED WITH A WET TAP AND RESTRAINTS

6. PROVIDE JOINT RESTRAINT AS SHOWN ON THE WATER DETAIL SHEET.

7. AIR RELEASE AND VACUUM VALVE PRODUCTS SHALL ADHERE TO CITY OF CLERMONT APPROVED PRODUCT LIST.

1. SEWAGE COLLECTION SYSTEM

- A. ALL GRAVITY SEWER MAINS REQUIRE LOW PRESSURE AIR TESTING IN ACCORDANCE WITH THE LATEST UNI-BELL STANDARD FOR LOW PRESSURE AIR TESTS. AIR TESTS, AS A MINIMUM, SHALL CONFORM TO THE TEST PROCEEDURES DESRIBED IN ASTM SPECIFICATIONS, ASTM F1417 FOR PLASTIC PIPE.
- B. ALL SEWER MAINS AND LATERALS SHALL BE VIDEO INSPECTED BY A CITY APPROVED VENDOR.
- C. ALL MANHOLES SHALL BE INSPECTED FOR INFILTRATION, ALIGNMENT, FLOW CHANNEL CONSTRUCTION AND COAL TAR EPOXY PAINT THROUGHOUT.
- D. HYDRO-STATIC TESTS CONSISTING OF A HYDROSTATIC PRESSURE TEST AND HYDROSTATIC LEAKAGE TEST SHALL BE CONDUCTED ON ALL NEWLY INSTALLED SEWER FORCE MAIN SYSTEM PRESSURE PIPES AND APPURTENANCES IN ACCORDANCE WITH AWWA C600 OR M23 AS APPLICABLE. THE PRESSURE SHALL BE 150 PSI FOR TWO (2) HOURS.
- E. DEFLECTION TESTS ARE REQUIRED FOR ALL FLEXIBLE PIPE. TESTS SHALL BE PERFORMED WITHOUT MECHANICAL PULLING DEVICES.

TEMPORARY JUMPER CONNECTION NOTES

A TEMPORARY JUMPER CONNECTION IS REQUIRED AT ALL CONNECTIONS BETWEEN EXISTING ACTIVE WATER MAINS AND PROPOSED NEW WATER MAIN IMPROVEMENTS. THE DETAIL PROVIDED IS TO BE USED FOR FILLING ANY NEW WATER MAIN OF ANY SIZE FROM EXISTING ACTIVE WATER MAINS AND FOR FLUSHING OF NEW MAINS UP TO 8" DIAMETER (2.5 FPS MINIMUM VELOCITY) AND FOR TAKING BACTERIOLOGICAL SAMPLES FROM ANY NEW WATER MAIN OF ANY SIZE. THE JUMPER CONNECTION SHALL BE MAINTAINED UNTIL AFTER FILLING, FLUSHING, TESTING AND DISINFECTING OF THE NEW MAIN HAS BEEN SUCCESSFULLY COMPLETED AND CLEARANCE FOR USE HAS BEEN OBTAINED FROM THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP) AND OTHER PERTINENT AGENCIES HAS BEEN RECEIVED BY THE CITY OF CLERMONT. THIS JUMPER CONNECTION SHALL ALSO BE USED TO MAINTAIN A MINIMUM LEVEL OF DISINFECTION AND UNTIL THE FDEP CLEARANCE LETTER IS OBTAINED AND THE LINES ARE PLACED INTO SERVICE.

ADEQUATE RESTRAINTS SHALL BE PROVIDED TEMPORARILY, AS REQUIRED.

PIPE AND FITTINGS USED FOR CONNECTING THE NEW PIPE TO THE EXISTING PIPE SHALL BE DISINFECTED PRIOR TO INSTALLATION IN ACCORDANCE WITH AWWA C651, 1992 EDITION. THE TAPPING SLEEVE AND THE EXTERIOR OF THE MAIN TO BE TAPPED SHALL BE DISINFECTED BY SPRAYING OR SWABBING PER SECTION II

FLUSHING OF ALL WATER MAINS SAHLL BE DONE THROUGH THE TIE—IN VALVE UNDER CONTROLLED CONDITIONS BY THE CITY ONLY. FULL BORE FLUSH IS REQUIRED. THE FOLLOWING PROCEEDURES SHALL BE FOLLOWED:

A. THE TIE-IN VALVES SHALL BE OPERATED ONLY BY THE CITY AND PRESSURE TESTED IN THE PRESENCE OF THE CITY AND ENGINEER TO VERIFY WATER TIGHTNESS PRIOR TO TIE-IN. VALVES WHICH ARE NOT WATERTIGHT SHALL BE REPLACED OR A NEW VALVE INSTALLED IMMEDIATELY ADJACENT TO THE LEAKING

B. THE TEMPORARY JUMPER CONNECTION SHALL BE CONSTRUCTED AS DETAILED. THE JUMPER CONNECTION SHALL BE USED TO FILL THE NEW WATER MAIN, FOR PROVIDING WATER FOR BACTERIOLOGICAL SAMPLING OF THE NEW MAIN AS REQUIRED BY THE FDEP PERMIT AND FOR MAINTAINING CHLORINE RESIDUALS IN THE

FLUSHING SHALL NOT BE ATTEMPTED DURING PEAK DEMAND HOURS OF THE EXISTING WATER MAIN.
 ALL DOWNSTREAM VALVES IN THE NEW SYSTEM MUST BE OPEN PRIOR TO THE CITY OPENING THE TIE—IN VALVE.
 PROVIDE FOR AND MONITOR THE PRESSURE AT THE TIE—IN POINT. THE PRESSURE IN THE EXISTING MAIN MUST NOT DROP BELOW 35 PSI.
 TIE—IN VALVE SHALL BE OPENED BY THE CITY A FEW TURNS ONLY, ENSURING A PRESSURE DROP

C. THE TIE-IN VALVE SHALL BE LOCKED CLOSED BY THE CITY UNTIL THE FLUSHING BEGINS.

ACROSS THE VALVE IS ALWAYS GREATER THAN 10 PSI.

D. THE TIE—IN VALVE SHALL BE OPENED ONLY BY THE CITY FOR FLUSHING OF THE NEW MAIN. THE PROCEEDURE SHALL BE DONE BY THE CITY AND OBSERVED BY THE ENGINEER.

E. AFTER FLUSHING, THE TIE-IN VALVE SHALL BE CLOSED AND LOCKED IN THE CLOSE POSITION BY THE CITY. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION DEMONSTRATING THAT THE RPZ BACK FLOW PREVENTION DEVICE HAS BEEN TESTED WITHIN ONE YEAR AT THE TIME OF INSTALLATION, AND IS IN GOOD WORKING ORDER AT THE TIME OF INSTALLATION. THE TEST SHALL BE PERFORMED BY A CERTIFIED BACK FLOW PREVENTION TECHNICIAN AS APPROVED BY THE CITY OF CLERMONT CROSS—CONNECTION CONTROL PROCEDUM.

EXCEPT AS REQUIRED TO FLUSH LINES TIE—IN VALVE SHALL REMAIN CLOSED AND SHALL BE LOCKED IN THE CLOSE POSITION BY THE CITY. THE TIE—IN VALVE SHALL REMAIN LOCKED CLOSED UNTIL THE NEW SYSTEM HAS BEEN CLEARED FOR USE BY FDEP AND ALL OTHER AGENCIES. UPON RECEIPT OF CLEARANCE FOR USE FROM FDEP AND ALL OTHER AGENCIES, THE CONTRACTOR SHALL REMOVE THE TEMPORARY JUMPER CONNECTION. THE CORPORATION STOPS ARE TO BE CLOSED AND PLUGGED WITH 2" BRASS PLUGS. THERE BE NO LEAKAGE.

ALL INSTALLATION AND MAINTENANCE OF THE TEMPORARY JUMPER CONNECTION AND ASSOCIATED BACK FLOW PREVENTION DEVICE, FITTINGS, VALVES, ETC., SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

WATER METERS SHALL BE PAID FOR AT THE CITY HALL AND SHALL BE DELIVERED TO THE JOB SITE BY THE UTILITIES DEPARTMENT.

FIRE HYDRANTS

FIRE HYDRANTS SHALL CONFORM TO THE LATEST EDITION OF AWWA C502.85 AND SHALL BE FURNISHED COMPLETE WITH WRENCH AND OTHER APPURTENANCES. MANUFACTURER'S CERTIFICATION OF COMPLIANCE WITH AWWA C502 AND TESTS LISTED THEREIN WILL BE REQUIRED. ALL HYDRANTS SHALL BE BREAKAWAY TYPE, WITH THE BREAKAWAY SECTION LOCATED SLIGHTLY ABOVE THE FINISH GROUND LINE. HYDRANTS SHALL CONTAIN TWO, TWO AND ONE—HALF INCH (2-1/2") HOSE CONNECTIONS, AND ONE, FOUR AND ONE—HALF INCH (4-1/2") STEAMER CONNECTION WITH NATIONAL STANDARD FIRE HOSE COUPLING SCREW THREADS, FIVE AND ONE—QUARTER INCH (5-1/4") VALVE OPENING, SIX INCH (6") DIAMETER MECHANICAL JOINT INLET, ONE AND ONE—HALF INCH (1-1/2") PENTAGON OPERATING NUT. SHALL OPEN COUNTERCLOCKWISE. HYDRANT MUST BE PAINTED AT FACTORY BY THE MANUFACTURER AND SHALL BE PAINTED IN CONFORMANCE WITH CITY OF CLERMONT REQUIREMENTS (COLORS BASED ON DELIVERED FIRE FLOW). HYDRANTS SHALL BE MUELLER CENTRON (TRAFFIC MODEL A—423) NO SUBSTITUTE. FIRE HYDRANTS TO BE THE BREAK AWAY TYPE WITH A CAST IRON DUCTILE IRON MECHANICAL JOINT HYDRANT TEE, WITH RESILIENT SEAT AND MECHANICAL JOINT GATE VALVE.

FIRE HYDRANTS CONT.

1. BLUE PAVEMENT REFLECTORS SHALL BE PLACED IN THE CENTERLINE OF THE DRIVING LANE CLOSEST TO AND DIRECTLY IN FRONT OF EACH FIRE HYDRANT.

2. A POST-CONSTRUCTION FIRE FLOW TEST SHALL BE CONDUCTED. HYDRANTS SHALL DELIVER THE REQUIRED GPM PER THE CITY OF CLERMONT LAND DEVELOPMENT REGULATIONS WITH A RESIDUAL PRESSURE OF 20 PSI. CONTRACTOR SHALL NOTIFY CITY OF CLERMONT ENGINEERING DEPARTMENT WHEN HYDRANTS ARE READY TO BE FLOW TESTED. FOR FIRE HYDRANTS LOCATED WITHIN THE CITY OF CLERMONT, CONNECTED TO THE CITY OF CLERMONT'S WATER SYSTEM, AND/OR LOCATED WITHIN CLERMONT FIRE DEPARTMENT'S PROTECTION AREA, THIS TEST SHALL BE CONDUCTED BY CITY OF CLERMONT PERSONNEL. THIS TEST SHALL BE PROVIDED BY THE CONTRACTOR FOR LOCATIONS NOT INCLUDED ABOVE. THIS TEST MAY BE WITNESSED BY THE OWNER/OPERATOR IF REQUESTED AT TIME OF NOTIFICATION THAT HYDRANTS ARE READY FOR FLOW TEST.

3. IF A PERMIT FOR THE WATER SYSTEM IS REQUIRED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP), THE SYSTEM SHALL BE ACCEPTED AND APPROVED BY DEP PRIOR TO BEING PRESSURIZED OFF OF THE CITY SYSTEM AND PRIOR TO ANY FLOW TESTS BEING CONDUCTED.

4. FIRE HYDRANTS AND FIRE PROTECTION APPLIANCES SHALL BE KEPT ACCESSIBLE TO THE FIRE DEPARTMENT AT ALL TIMES. THE FOLLOWING CLEARANCES SHALL BE MAINTAINED FOR ALL FIRE HYDRANTS AND FIRE PROTECTION APPLIANCES. CLEARANCE OF SEVEN AND ONE—HALF FEET (7'-6") IN FRONT OF AND TO THE SIDES OF A FIRE HYDRANT, WITH A FOUR FOOT (4') CLEARANCE TO THE REAR OF THE HYDRANT. CLEARANCES OF SEVEN AND ONE—HALF FEET (7'-6") IN FRONT OF AND TO THE SIDES OF THE APPLIANCES. NO PERSON SHALL PLACE OR KEEP ANY POST, FENCE, VEHICLE, GROWTH, VEGETATION, TRASH OR STORAGE OF OTHER MATERIALS THAT WOULD OBSTRUCT A FIRE HYDRANT OR FIRE PROTECTION APPLIANCE AND HINDER OR PREVENT ITS IMMEDIATE USE BY FIRE DEPARTMENT PERSONNEL. SUCH FIRE HYDRANT OR FIRE PROTECTION APPLIANCE SHALL BE KEPT READILY VISIBLE AT ALL TIMES.

5. FIRE HYDRANTS SHALL NOT BE LOCATED CLOSER THAN THREE (3) FEET TO OR MORE THAN TWENTY (20) FEET FROM THE EDGE OF A STREET, DRIVE OR OTHER ACCESSWAY. UNLESS OTHERWISE REQUESTED BY THE FIRE OFFICIAL, THE 4-1/2" CONNECTION SHALL FACE THE NEAREST ROADWAY, OR IF LOCATED WITHIN A COMPLEX PARKING AREA, SHALL FACE THE NEAREST TRAFFIC WAY. NO HYDRANT SHALL BE INSTALLED WHERE PEDESTRIAN OR VEHICULAR TRAFFIC WOULD INTERFERE WITH THE USE OF THE HYDRANT. THE STANDARD FIRE HYDRANT APPROVED FOR USE IN THE CITY IS MUELLER MODEL A-423. THE CITY'S STANDARD FIRE HYDRANT DETAIL AND NOTES ARE AVAILABLE FROM THE CITY ENGINEER'S OFFICE AND MUST BE INCLUDED IN THE SITE PLANS. ALL FIRE HYDRANTS AND MAINS, INCLUDING THOSE PRIVATELY OWNED, THAT ARE CONNECTED TO THE CITY'S POTABLE WATER SYSTEM, SHALL CONFORM TO CITY STANDARDS.

6. A MINIMUM NUMBER OF FIRE HYDRANTS SHALL BE PROVIDED AND/OR AVAILABLE TO PROVIDE EQUAL TO OR GREATER THAN THE NEEDED FIRE FLOW FOR ALL BUILDINGS ON THE SITE BASED ON THE FOLLOWING CREDITS: HYDRANT(S) WITHIN 300 FEET OF THE BUILDING, 1,000 GPM CREDIT; HYDRANT(S) 301 TO 600 FEET, 670 GPM CREDIT; HYDRANT(S) 601 TO 1,000 FEET, 250 GPM CREDIT.

7. FIRE HYDRANTS THAT HAVE NOT BEEN TESTED AND PLACED INTO SERVICE MUST BE CLEARLY MARKED AS 'OUT OF SERVICE' USING INDUSTRY ACCEPTED METHODS (BAGGING, TAGGING, ETC).

CONNECTIONS TO CITY WATER MAINS

ALL DOUBLE DETECTOR CHECK VALVE ASSEMBLIES (DDCV) INSTALLED TO ISOLATE A PRIVATE FIRE SYSTEM SUPPLYING FIRE HYDRANTS FROM THE CITY'S POTABLE WATER SYSTEM SHALL HAVE TAMPER SWITCH DEVICES INSTALLED ON THE DDCV ASSEMBLY VALVES WHENEVER ANY AUTOMATIC FIRE SPRINKLER SYSTEM IS INSTALLED BEYOND THE DDCV. THESE TAMPER SWITCHES SHALL BE CONNECTED TO THE BUILDING FIRE ALARM SYSTEM FOR ALL INDIVIDUAL BUILDINGS PROTECTED BY A FIRE SPRINKLER SYSTEM.

FIRE DEPARTMENT CONNECTIONS

ANY FIRE DEPARTMENT CONNECTION SIAMESE (FDC) FOR FIRE SPRINKLER OR STANDPIPE SYSTEMS MUST BE WITHIN 100 FEET OF A FIRE HYDRANT. THE FDC MAY BE INSTALLED DIRECTLY ON THE DOUBLE DETECTOR CHECK VALVE BACK FLOW PREVENTOR AS LONG AS THE REQUIREMENT TO BE WITHIN 100 FEET OF A FIRE HYDRANT IS COMPLIED WITH. FIRE DEPARTMENT CONNECTIONS SHALL BE IDENTIFIED BY A SIGN THAT STATES, "NO PARKING FIRE DEPARTMENT CONNECTION" AND SHALL BE DESIGNED IN ACCORDANCE WITH FDOT STANDARDS FOR INFORMATION SIGNAGE. THE LOCATION OF ANY FDC MUST BE SHOWN ON THE SITE PLANS

DEDICATED FIRE MAINS

1. THE "POINT OF SERVICE" FOR ANY FIRE MAIN MUST BE CALLED OUT ON THE UTILITY SHEET OF THE SITE PLANS. THIS IS THE POINT WHERE A WATER LINE BECOMES DEDICATED TO ONLY FIRE PROTECTION, SUCH AS SUPPLYING ONLY A FIRE HYDRANT OR FIRE SPRINKLER SYSTEM, AND THERE IS NO POTABLE WATER SUPPLY COMING OFF OF THE WATER LINE BEYOND THIS POINT.

2. LABEL DEDICATED FIRE MAINS AT "FL" ON THE SUBMITTED PLANS.

2. LABEL DEDICATED FIRE MAINS AT FL. ON THE SUBMITTED PLANS.
3. FIRE MAINS WILL BE SEPARATELY PERMITTED AND INSPECTED BY THE CITY FIRE DEPARTMENT.

FIRE DEPARTMENT ACCESS

FIRE DEPARTMENT ACCESS ROADS SHALL BE PROVIDED AND MAINTAINED IN ACCORDANCE WITH THE FLORIDA FIRE PREVENTION CODE AND RULES ESTABLISHED BY THE CITY OF CLERMONT FOR EVERY FACILITY, BUILDING, OR PORTION OF A BUILDING HEREAFTER CONSTRUCTED OR RELOCATED. A FIRE DEPARTMENT ACCESS ROAD SHALL EXTEND TO WITHIN 50 FEET (15 m) OF AN EXTERIOR DOOR PROVIDING ACCESS TO THE INTERIOR OF THE BUILDING. FIRE DEPARTMENT ACCESS ROADS SHALL BE PROVIDED SUCH THAT IN ANY PORTION OF THE FACILITY OR ANY PORTION OF AN EXTERIOR WALL OF THE FIRST STORY OF A BUILDING IS LOCATED NOT MORE THAN 150 FEET (46 m) FROM FIRE DEPARTMENT ACCESS ROADS AS MEASURED BY A ROUTE APPROVED BY THE LOCAL FIRE OFFICIAL AROUND THE EXTERIOR OF THE BUILDING OR FACILITY (THE DISTANCE SHALL BE PERMITTED TO BE INCREASED TO 450 FEET WHEN BUILDINGS ARE PROTECTED WITH AN APPROVED AUTOMATIC FIRE SPRINKLER SYSTEM THAT IS INSTALLED IN ACCORDANCE WITH NFPA STANDARDS).

FIRE DEPARTMENT ACCESS ROADS SHALL HAVE AN UNOBSTRUCTED WIDTH OF NOT LESS THAN 20 FEET (6.1

AN UNOBSTRUCTED VERTICAL CLEARANCE OF NOT LESS THAN 13 FEET 6 INCHES (4.1m), SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF FIRE APPARATUS (MINIMUM 32 TONS), AND SHALL BE PROVIDED WITH A SURFACE SUITABLE FOR ALL—WEATHER DRIVING CAPABILITIES. THE TURNING RADIUS OF A FIRE DEPARTMENT ACCESS ROAD SHALL BE AS APPROVED BY THE AHJ. DEAD—END FIRE DEPARTMENT ACCESS ROADS IN EXCESS OF 150 FEET (46 m) IN LENGTH SHALL BE PROVIDED WITH APPROVED PROVISIONS FOR THE TURNING AROUND OF FIRE APPARATUS. WHEN A BRIDGE IS REQUIRES TO BE USED AS PART OF FIRE DEPARTMENT ACCESS ROAD, IT SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH NATIONALLY RECOGNIZED STANDARDS. THE BRIDGE SHALL BE DESIGNED FOR A LIVE LOAD SUFFICIENT TO CARRY THE IMPOSED LOADS OF FIRE APPARATUS (MINIMUM 32 TONS). THE ANGLE OF APPROACH AND DEPARTURE FOR ANY MEANS OF FIRE DEPARTMENT ACCESS SHALL NOT EXCEED 1 FOOT DROP IN 20 FEET (0.3 m DROP IN 6 m), AND THE DESIGN LIMITATIONS OF THE FIRE APPARATUS OF THE FIRE DEPARTMENT SHALL BE SUBJECT TO APPROVAL BY THE AHJ. THE LOAD RATING OF FIRE DEPARTMENT ACCESS ROADS AND BRIDGES SERVING DETACHED ONE OR TWO—FAMILY OCCUPANSIES ONLY MAY BE DECREASED UPON APPROVAL BY THE LOCAL FIRE OFFICIAL.

THE REQUIRED WIDTH OF A FIRE DEPARTMENT ACCESS ROAD SHALL NOT BE OBSTRUCTED IN ANY MANNER, INCLUDING BY THE PARKING OF VEHICLES. MINIMUM REQUIRED WIDTHS AND CLEARANCES SHALL BE MAINTAINED AT ALL TIMES. ENTRANCES TO ROADS, TRAILS, OR OTHER ACCESSWAYS THAT HAVE BEEN CLOSED WITH GATES AND BARRIERS SHALL NOT BE OBSTRUCTED BY PARKED VEHICLES. FIRE LANE MARKINGS MUST BE INSTALLED IN ANY LOCATIONS WHERE VEHICLES MAY PARK AND BLOCK TRAFFIC WAYS OR FREE AND CLEAR ACCESS FOR FIRE AND EMERGENCY APPARATUS.

FIRE LANE MARKINGS ON THE PAVEMENT MUST BE IN DOT YELLOW OR RED AND INCLUDE A CROSSHATCH AREA THAT EXTENDS A MINIMUM OF THREE FEET OUT FROM THE CURB. ANY CURBS MUST ALSO BE PAINTED DOT YELLOW OR RED. MARKED TRAFFIC SURFACES MUST HAVE THE WORDS, FIRE LANE — NO PARKING, PAINTED ON THE SURFACE. THIS WORDING MUST REPEAT THE ENTIRE LENGTH OF THE FIRE LANE, AND BE SPACED NO MORE THAN 50 FEET APART. WORDING ON PAVED SURFACES MUST BE A MINIMUM OF 10" TALL. ANY REQUIRED FIRE LANES SHALL BE MARKED WITH SIGNS WITH THE WORDING, "NO PARKING FIRE LANE BY ORDER OF THE FIRE DEPARTMENT." SUCH SIGNS SHALL BE 12 INCHES BY 18 INCHES WITH A WHITE BACKGROUND AND RED LETTERS AND SHALL BE A MAXIMUM OF 7 FEET IN HEIGHT FROM THE ROADWAY TO THE BOTTOM PART OF THE SIGN. THE SIGNS SHALL BE WITHIN SIGHT OF THE TRAFFIC FLOW AND BE A MAXIMUM OF 50 FEET APART.

A 20' x 20' CROSS—HATCH AREA MUST BE INDICATED ON THE PAVEMENT IN FRONT OF AND CENTERED ON HYDRANTS ANY FIRE DEPARTMENT CONNECTIONS FOR FIRE SPRINKLER OR STANDPIPE SYSTEMS THAT ARE LOCATED ON BUILDINGS OR IN PARKING LOTS WHERE VEHICLES MAY PARK AND BLOCK CLEAR ACCESS TO THE CONNECTION. THE CROSS—HATCH AREA MUST INCLUDE WORDING AS SPECIFIED ABOVE. A SIGN INDICATING "NO PARKING FIRE DEPARTMENT CONNECTION" MUST BE INSTALLED IN THIS AREA.

THE CURB MUST BE PAINTED DOT YELLOW OR RED, FOR A LENGTH OF 30 FEET CENTERED ON ANY FIRE OR FIRE DEPARTMENT SIAMESE CONNECTIONS THAT ARE INSTALLED ALONG A PARKING LOT, DRIVE OR STREET TO PREVENT VEHICLES FROM PARKING WITHIN 15 FEET OF THE HYDRANT OR CONNECTION. WORDING MUST BE PAINTED ON CURBS IN THESE AREAS INDICATING "NO PARKING FIRE LANE" AND MUST BE A MINIMUM OF 3" TALL.

BUILDING MARKINGS

ADDRESS NUMERALS SHALL NOT BE LESS THAN THREE INCHES IN HEIGHT FOR RESIDENTIAL BUILDINGS, STRUCTURES OR PORTIONS THEREOF, AND AT LEAST SIX INCHES IN HEIGHT FOR ALL OTHER BUILDINGS, STRUCTURES OR PORTIONS THEREOF. ADDRESS NUMERALS SHALL BE ARABIC NUMERALS OR ALPHABET LETTERS, NO CURSIVE LETTERS.

COMMERCIAL BUILDINGS

"KEY LOCK BOX APPROVED BY A CITY FIRE OFFICIAL" WILL BE REQUIRED ON ALL COMMERCIAL BUILDINGS (NFPA 1, CODE CHAPTER 3-6 AS ADAPTED IN THE FLORIDA FIRE PREVENTION CODE THROUGH FLORIDA ADMINISTRATIRVE CHAPTER 4A-60.003, RULES OF THE STATE FIRE MARSHAL, AND AUTHORIZED BY FLORIDA STATUTES 633.0215, 633.025). THESE SHALL BE INSTALLED ON THE EXTERIOR WALL OF THE BUILDING WITHIN ONE FOOT OF THE LEFT SIDE OF THE MAIN PUBLIC ENTRANCE DOOR AT A HEIGHT OF SIX (6) FEET. IN THE CASE OF A MULTI-OCCUPANCY BUILDING, SUCH AS A ROW OF STORES, MULTI-OFFICE BUILDING, ETC., ONLY ONE KEY LOCK BOX PER BUILDING WILL BE REQUIRED UNLESS EXTENUATING CIRCUMSTANCES INDICATE THE NEED FOR ADDITIONAL LOCK BOXES. THIS BOX SHALL BE INSTALLED ON THE EXTERIOR WALL OF THE BUILDING WITHIN ONE FOOT OF THE LEFT END OF THE SIDE OF THE BUILDING CONTAINING THE MAIN PUBLIC ENTRANCE (AS YOU ARE FACING THE MAIN ENTRANCE) AT A HEIGHT OF SIX (6) FEET. IN THE CASE OF A MULTI-FAMILY COMPLEX, ONLY ONE KEY LOCK BOX WILL BE REQUIRED FOR THE COMPLEX UNLESS EXTENUATING CIRCUMSTANCES INDICATE THE NEED FOR ADDITIONAL KEY LOCK BOXES. THIS BOX SHALL BE LOCATED AT THE MAIN ENTRANCE TO THE CLUBHOUSE, INSTALLED AS INDICATED ABOVE FOR COMMERCIAL BUILDINGS. IF THERE IS NO CLUBHOUSE, THE BOX SHALL BE INSTALLED PER A CITY FIRE OFFICIAL. A CITY FIRE OFFICIAL MAY BE CONTACTED IF IT IS NOT POSSIBLE TO INSTALL THE BOX AT THE LOCATIONS INDICATED ABOVE. THE CITY FIRE OFFICIAL WILL MAKE A DETERMINATION AS TO THE LOCATION WHERE THE BOX WILL BE INSTALLED.

LOCK BOXES SHALL CONTAIN KEYS TO THE BUILDING (INCLUDING ENTRANCE DOORS AND ALL ELECTRICAL AND MECHANICAL ROOMS) AND ANY SYSTEMS IN THE BUILDING (SUCH AS FIRE ALARM PANELS, FIRE ALARM PULL STATIONS, SMOKE DETECTOR RESET, SPRINKLER SYSTEMS, ELEVATORS, ETC.). BOXES FOR MULTI-OCCUPANCY BUILDINGS AND MULTI-FAMILY COMPLEXES SHALL BE OF SUFFICIENT SIZE TO ACCOMMODATE KEYS FOR EACH INDIVIDUAL OCCUPANCY AND MASTER KEYS FOR EACH SEPARATE BUILDING, AS WELL AS ANY SYSTEMS IN ALL OCCUPANCIES AND BUILDINGS. ALL LOCK BOXES SHALL ALSO CONTAIN BUSINESS CARDS WITH AFTER-HOURS EMERGENCY CONTACT NUMBERS FOR EACH OCCUPANCY. THE CODE(S) FOR SILENCING AND RESETTING ANY FIRE ALARM SYSTEMS SHALL BE WRITTEN ON THE BACK OF THE BUSINESS CARD(S) FOR EACH OCCUPANCY.

APPLICATIONS FOR THE PURCHASE OF "KEY LOCK BOX" EQUIPMENT ARE AVAILABLE FROM THE FIRE DEPARTMENT. EACH BOX TO BE INSTALLED WITHIN THE CITY OF CLERMONT WILL BE KEYED TO ACCOMMODATE CLERMONT FIRE DEPARTMENT'S LOCK BOX KEY. BUILDING OWNERS OR OCCUPANTS WILL NOT HAVE A KEY TO THE BOX. THE OWNER OR DEVELOPER SHALL NOTIFY THE FIRE DEPARTMENT (352–394–7662) AFTER THE BOX HAS BEEN INSTALLED AND ALL REQUIRED KEYS ARE AVAILABLE. A FIRE DEPARTMENT REPRESENTATIVE WILL MEET A REPRESENTATIVE OF THE BUILDING AT THE SITE TO LOCK THE KEYS IN THE BOX. WHENEVER ANY KEYS, CODES OR EMERGENCY CONTACT NUMBERS ARE CHANGED, THE FIRE DEPARTMENT SHALL BE NOTIFIED IMMEDIATELY SO A FIRE DEPARTMENT REPRESENTATIVE CAN UNLOCK THE BOX AND REPLACE THE CHANGED ITEMS.

BUILDING MATERIALS

NFPA 241 (STANDARD FOR SAFEGUARDING CONSTRUCTION, ALTERATION AND DEMOLITION OPERATIONS) AS ADAPTED IN THE FLORIDA ADMINISTRATIVE CODE (RULES OF THE STATE FIRE MARSHALL) AND THE FLORIDA FIRE PREVENTION CODE, AND AUTHORIZED BY FLORIDA STATE STATUTES, CHAPTER 633, REQUIRES THAT A WATER SUPPLY FOR FIRE PROTECTION SHALL BE MADE AVAILABLE AS SOON AS COMBUSTIBLE MATERIAL ACCUMULATES ON THE SITE AND THAT THERE SHALL BE NO DELAY IN THE INSTALLATION OF FIRE PROTECTION EQUIPMENT. THIS SECTION ALSO STATES, "WHERE UNDERGROUND WATER MAINS AND HYDRANTS ARE TO BE PROVIDED, THEY SHALL BE INSTALLED, COMPLETED AND IN SERVICE PRIOR TO CONSTRUCTION

EMERGENCY VEHICLE ACCESS CONTROL (EVAC) SYSTEM

THE CITY OF CLERMONT LAND DEVELOPMENT REGULATIONS, SECTION 110–192 (1), REQUIRES THAT ALL GATED COMMUNITIES IN THE CITY OF CLERMONT INSTALL THE "EVAC" (EMERGENCY VEHICLE ACCESS CONTROL) REMOTE GATE OPENING EQUIPMENT ON ALL ENTRY GATES. THE EVAC SYSTEM SHALL BE IN ADDITION, AND SEPARATE, FROM THE GATE OPENING SYSTEM THAT IS PROVIDED FOR THE RESIDENTS. A KEYPAD CODE ENTRY DEVICE SHALL ALSO BE INSTALLED AT EACH GATE, WITH THE ENTRY CODE SUPPLIED TO THE FIRE DEPARTMENT IN WRITING UPON INSTALLATION. THE DEVELOPER SHALL PROVIDE FIVE (5) CONTROLLERS FOR THE EVAC SYSTEM TO THE CLERMONT FIRE DEPARTMENT. FOR FURTHER REQUIREMENTS REFER TO THE CITY OF CLERMONT LAND DEVELOPMENT REGULATIONS, SECTION 110–192 (1). SECURITY ACCESS CONTROL, 800–637–5945, DISTRIBUTES THE EVAC SYSTEM. SECURITY ACCESS CONTROL MAY BE CONTACTED REGARDING ANY QUESTIONS ABOUT THE SYSTEM OR TO GET INFORMATION ON LOCAL VENDORS THAT CAN INSTALL THE SYSTEM.

NEEDED FIRE FLOW CALCULATIONS

NEEDED FIRE FLOW CALCULATIONS FOR ALL BUILDINGS ON THE SITE BASED ON THE ISO FIRE SUPPRESSION RATING SCHEDULE GUIDE FOR NEEDED FIRE FLOW CALCULATIONS SHALL BE SHOWN ON THE SITE PLANS. THE INSURANCE SERVICES OFFICE (ISO) GUIDE FOR CALCULATING THE NEEDED FIRE FLOW CAN BE FOUND ON THE ISO WEB SITE AT http://www.isomitigation.com/downloads/ppc3001.pdf. THE FIRE FLOW CALCULATIONS ARE BASED ON A NON—SPRINKLERED BUILDINGS BUILDINGS PROTECTED BY AN AUTOMATIC FIRE SPRINKLER SYSTEM ARE THEN GIVEN CREDIT BASED ON 50% OF NEEDED FIRE FLOW PLUS SPRINKLER SYSTEM REQUIREMENTS. THIS CALCULATION IS USED AS ONE OF THE FACTORS IN DETERMINING THE NUMBER OF FIRE HYDRANTS REQUIRED ON THE SITE.

A NEEDED FIRE FLOW CALCULATION WORKSHEET IS AVAILABLE IN MS EXCEL FORMAT AT THE CITY OF CLERMONT WEB SITE: www.cityofclermontfl.com, CITY DEPARTMENTS, FIRE DEPARTMENT, INSPECTIONS/PREVENTION.

GENERAL NOTES AND DETAILS REVISED 12-8-2015

SIGNATURE AND SEAL DRAWING FILE

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