

**WATER MAIN CONSTRUCTION NOTES**

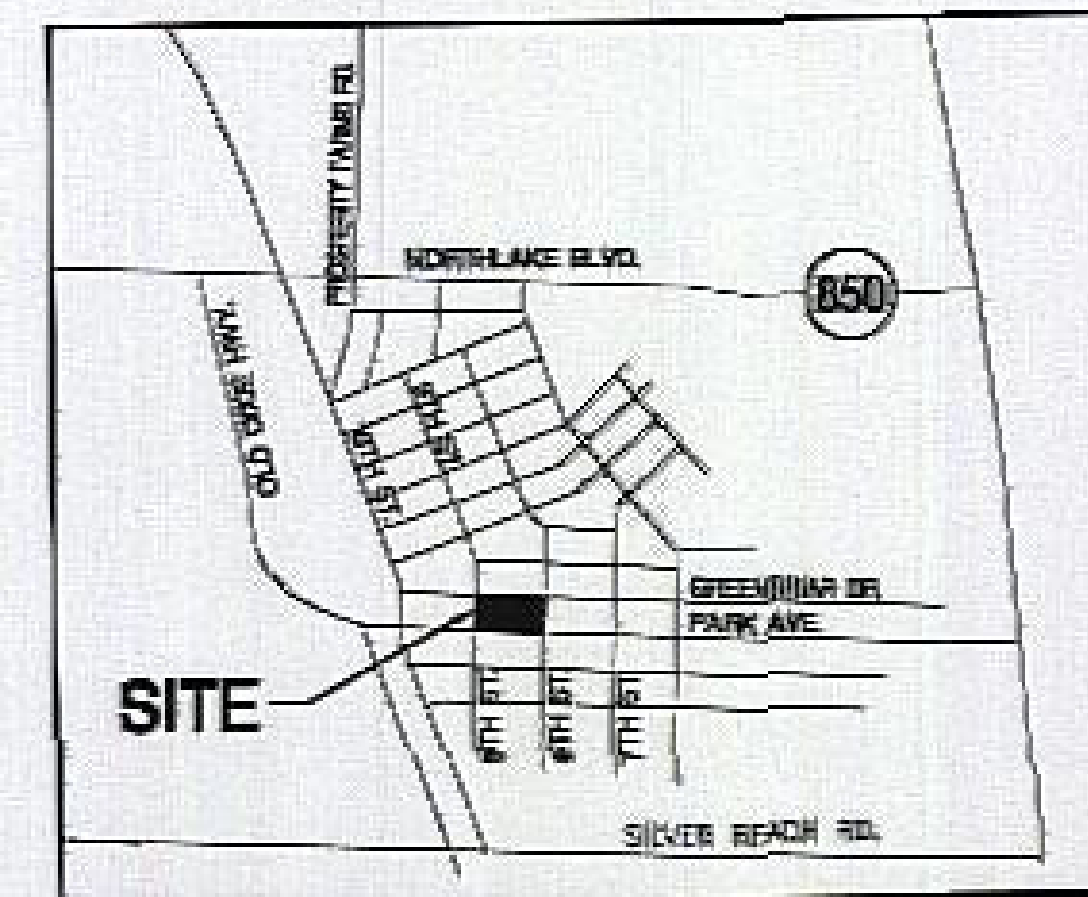
1. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE LOCATION OF THE EXISTING UTILITIES AND SHALL EXERCISE EXTREME CAUTION WHILE WORKING IN AREAS NEAR EXISTING AND NEW ON-SITE/OFF-SITE STRUCTURES AND UTILITIES. THE CONTRACTOR SHALL BEHOLD RESPONSIBILITY FOR ALL NEW STRUCTURES AND/OR UTILITIES.
2. CONTRACTOR SHALL MINIMIZE ANY INTERRUPTION OF EXISTING WATER SERVICE DURING CONSTRUCTION ACTIVITIES.
3. ALL NEW AND/OR RELOCATED WATER MAIN, PIPES, FITTINGS, VALVES AND FIRE HYDRANTS SHALL BE CONSTRUCTED BY WELDERS AND PLACED IN SERVICE IN FULL ACCORDANCE WITH APPLICABLE AMERICAN WATER WORKS ASSOCIATION (AWWA) STANDARDS AND THE MANUFACTURER'S RECOMMENDED PROCEDURES. ALL PIPE AND FITTINGS SHALL CONTAIN NO MORE THAN EIGHT (8%) PERCENT LEAD.
4. TO THE KNOWLEDGE OF THE ENGINEER, THE WATER MAIN TO BE CONSTRUCTED FROM THESE PLANS WILL NOT BE INSTALLED WHERE EXISTING UNDESIRABLE PORTALS OF GROUNDWATER CONTAMINATION BY DRAINING COMPOUNDS EXIST.
5. FIRE HYDRANT BRANS AND WATER SYSTEM FILLING DEVICES SHALL NOT BE DIRECTLY CONNECTED TO ANY SANITARY OR STORM SEWER.
6. THE WATER MAIN SHALL BE INSTALLED WITH A CONTINUOUS AND UNIFORM PIPE BEDDING, WITH NO ROCK OR STUMPS LARGER THAN TWO (2") IN SIZE IN DANGER ZONE WITHIN SIX (6") INCHES OF THE PIPE BARREL. PIPE SHALL BE SUPPORTED AT 12" HIGHER LITS AND COMPACTED TO 95 PERCENT OF ITS MAXIMUM DRY WEIGHT TO A DEPTH ABOVE THE PIPE TO ADEQUATELY SUPPORT AND PROTECT THE PIPE.
7. ALL TEST, WELDS, JOINTS AND INSURANCE IN NEW AND/OR RELOCATED WATER MAINS SHALL BE PROVIDED WITH REACTION BLOCKING OR RESTRICTED JOINTS TO PREVENT MOVEMENT.
8. ALL NEW AND/OR RELOCATED WATER MAINS SHALL BE PRESSURE TESTED AND LEAKAGE TESTED IN ACCORDANCE WITH AWWA STANDARD C900.
9. ALL NEW AND/OR RELOCATED WATER MAINS SHALL BE INSPECTED IN ACCORDANCE WITH AWWA STANDARD C900 AND RULE 80-565.345, F.A.C.
10. ALL NEW AND/OR RELOCATED WATER MAINS SHALL BE INSTALLED AT A MINIMUM OF TEN (10') HORIZONTALLY FROM ALL SANITARY, STORM SEWERS AND FORD MAINS. ALL DISTANCES SHALL BE MEASURED FROM OUTSIDE PIPE EDGE TO OUTSIDE PIPE EDGE.
11. WHERE NEW AND/OR RELOCATED WATER MAINS CROSS SANITARY SEWERS, STORM SEWERS OR FORD MAINS, THE WATER MAIN SHALL CROSS ABOVE THESE SEWERS UNLESS OTHERWISE SPECIFIED. A MINIMUM VERTICAL SEPARATION OF 18 INCHES AS MEASURED FROM THE OUTSIDE OF EACH PIPE SHALL BE MAINTAINED. WHERE THE WATER MAIN MUST CROSS BELOW SANITARY SEWERS, PIPE CROSSINGS SHALL BE MADE AT AN ANGLE OF 45 DEGREES OR MORE. THE MINIMUM VERTICAL SEPARATION SHALL BE 18 INCHES. ALL CROSSINGS SHALL BE PROTECTED WITH NO LESS THAN TEN (10') FEET BETWEEN ANY TWO JOINTS. A MINIMUM OF TEN (10') FEET SHALL BE MAINTAINED FROM THE POINT OF CROSSING TO THE POINT OF CROSSING WITH NO LESS THAN TEN (10') FEET BETWEEN ANY TWO JOINTS. A MINIMUM OF TEN (10') FEET SHALL BE MAINTAINED FROM THE POINT OF CROSSING TO THE POINT OF CROSSING WITH NO LESS THAN TEN (10') FEET BETWEEN ANY TWO JOINTS.
12. PROPER EROSION PREVENTION MEASURES/DEVICES SHALL BE PROVIDED IN ACCORDANCE WITH RULE 80-565.360, F.A.C. AND THE AWWA MANUAL WITH RECOMMENDED PRACTICE FOR BACKFLOW PREVENTION AND CROSS-CONNECTION CONTROL.
13. ALL WATER MAINS SHALL HAVE A MINIMUM 30 INCHES OF COVER OVER THE TOP OF PIPE BARREL.
14. ALL UNDESIRABLE UTILITIES CONSTRUCTION TO BE REMOVED BY THE OWNER, SHALL MEET WITH THE LAKE PARK UTILITIES DEPARTMENT OFFICE.

**STANDARD WATER AND SEWER SEPARATION SYSTEM**

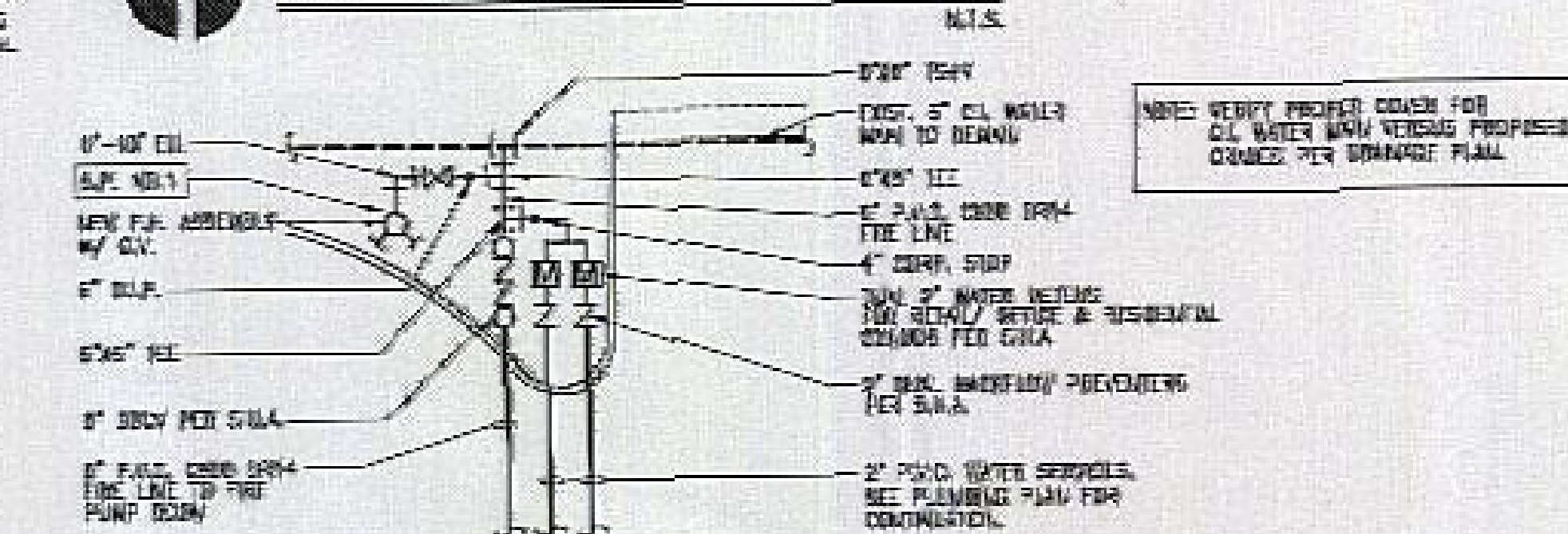
1. WATER MAINS CROSSING OVER STORM OR SANITARY SEWERS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL SEPARATION OF EIGHTEEN (18) INCHES BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE. WHERE THE MINIMUM SEPARATION CANNOT BE MAINTAINED, THE CROSSING SHALL BE ARRANGED SO THAT THE SEWER PIPE JOINTS AND WATER MAIN JOINTS ARE COLLOCATED FROM THE POINT OF CROSSING WITH NO LESS THAN TEN (10) FEET BETWEEN ANY TWO JOINTS AND BOTH PIPES SHALL BE D.I.P. WHERE THERE IS NO ALTERNATIVE TO WATER MAINS CROSSING UNDER A SEWER MAIN, THE COVERING FOR MINIMUM SEPARATION BETWEEN LOWER AND JOINTS IN THE ABOVE SHALL BE REQUIRED AND BOTH PIPES SHALL BE D.I.P. IRRESPECTIVE OF SEPARATION. D.I.P. IS NOT REQUIRED FOR STORM SEWERS.
2. MAINTAIN TEN (10) FEET HORIZONTAL DISTANCE BETWEEN WATER MAIN AND STORM OR SANITARY SEWER MAIN, AS A MINIMUM.
3. WATER MAIN CROSSING UNDER FORD MAIN SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL SEPARATION OF EIGHTEEN (18) INCHES BETWEEN THE OUTSIDE OF THE FORD MAIN AND THE OUTSIDE OF THE WATER MAIN WITH WATER MAIN CROSSING OVER THE FORD MAIN WHENEVER POSSIBLE.

**FIRE DEPARTMENT REQUIREMENTS**

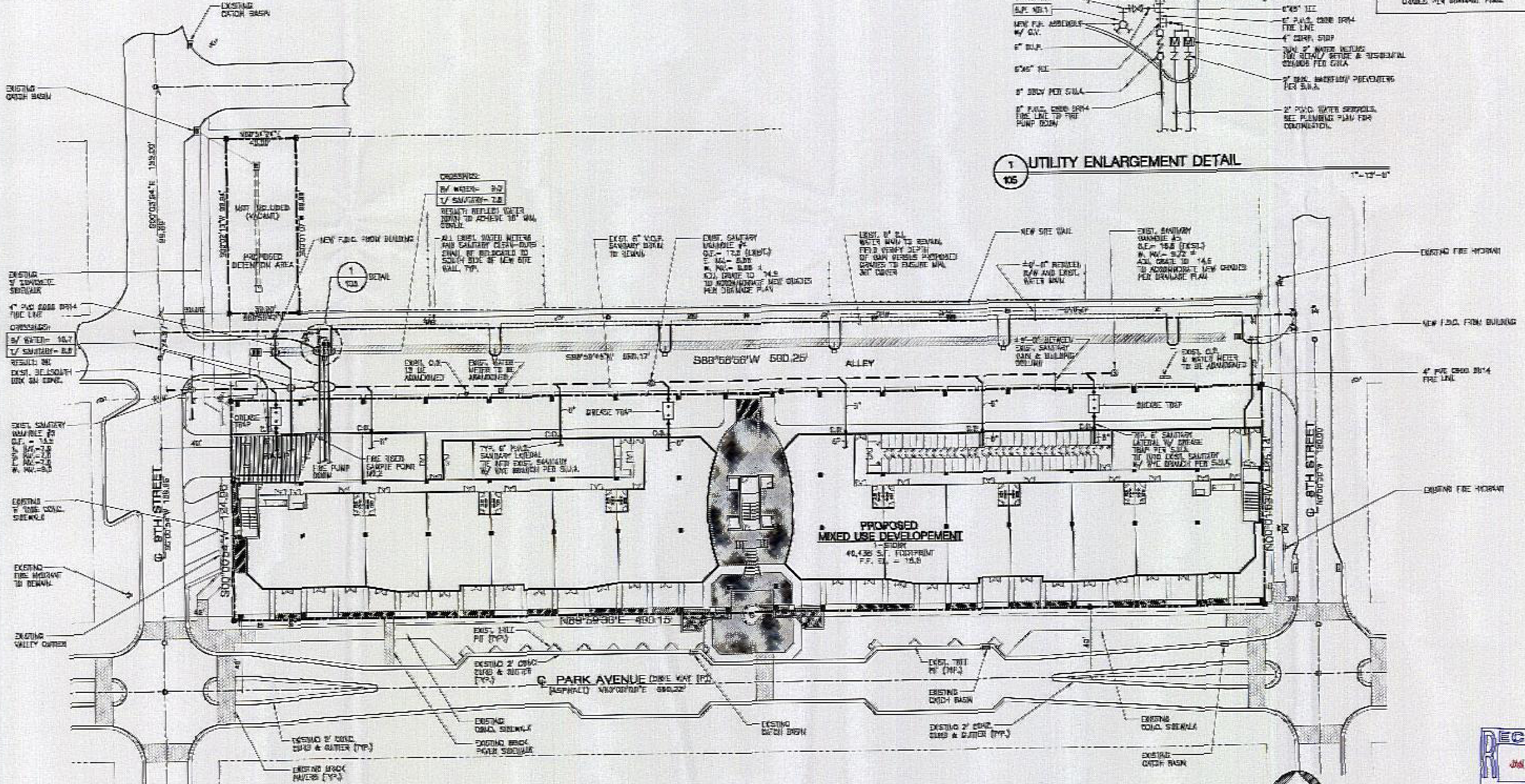
1. THIS FACILITY SHALL BE FULLY SPRINKLED AND PROTECTED PER NFPA 13, NEW EDITION 2010, NFPA 2010, NFPA 2010 WITH 2011 SUPPLEMENT, HAZ. 2010 (NFPA) TO BE PROVIDED FOR ALL AREAS OF STORAGE (WHERE APPLICABLE). THE SPRINKLER SYSTEM SHALL BE DESIGNED FOR THE MAXIMUM HEIGHT OF STORAGE BY A LICENSED FIRE SPRINKLER CONTRACTOR.
2. THE EXISTING FIRE ALARM SHALL BE UP-TO 150 FEET OF THE FIRE DEPARTMENT CONNECTION. THE EXISTING FIRE ALARM AND SPRINKLER CONTROL VALVES LOCATION SHALL BE IDENTIFIED WITH THE PROTECTION PROFESSIONAL.
3. FIRE EXTINGUISHERS SHALL BE INSTALLED PER NFPA 10.
4. THE BUILDING IS REQUIRED TO HAVE VENT AND EXHAUST ALARMS INSTALLED THROUGHOUT THE BUILDING.
5. ALL AUTOMATIC FIRE EXTINGUISHING SYSTEMS AND FIRE ALARMS SHALL BE INSTALLED BY AN APPROVED UNDERWRITER LABORATORY LISTED CERTIFIED COMPANY AND IN COMPLIANCE WITH ALL APPLICABLE APPLICABLE CODES.
6. ALL LOCAL, STATE, AND NATIONAL CODES SHALL BE COMPLIED WITH WHERE APPLICABLE.
7. THE DESIGN SHALL COMPLY WITH ALL THE REQUIREMENTS SET FORTH IN NFPA 101, 101A EDITION 2009 SAFETY CODE.
8. THIS DESIGN SHALL BE PROVIDED WITH A COPY FOR APPROVAL BY THE OFFICE CONTAINING THE NECESSARY KEYS FOR FIRE DEPARTMENT ACCESS, THE LOCATION OF WHICH WILL BE COORDINATED WITH THE FIRE DEPARTMENT.



**SITE LOCATION MAP**

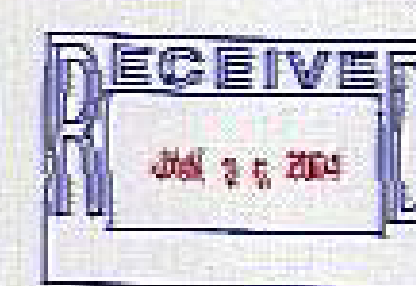


**UTILITY ENLARGEMENT DETAIL**



**PRELIMINARY SITE WATER AND SEWER UTILITIES PLAN**

SCALE: 1" = 30'-0"



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**AHRENS COMPANIES**  
DESIGN/BUILD - GENERAL CONSTRUCTION  
OFFICE (MT) 931-9900  
1481 KINCAID ROAD, LAKE PARK, FL 33403-1911

**PROPOSED MIXED USE DEVELOPMENT**  
**ONE PARK PLACE**  
PARK AVENUE  
LAKE PARK, FLORIDA

DATE: 07-14-13  
SCALE: 1" = 30'-0"  
DRAWN: JMS/RS  
CHECK: ARE  
SHEET: 105