

FOREST TER GROUP HOME

217 SE FOREST TER

LAKE CITY, FL 32025

DESIGN CRITERIA

WET PIPE SPRINKLER LAYOUT TO BE PER NFPA 13D (2016 EDITION), FLORIDA STATUTES, AND THE AUTHORITY HAVING JURISDICTION (AHJ).

RESIDENTIAL HAZARD: A DENSITY OF 0.05 GPM PER SQUARE FOOT FOR ALL SPRINKLERS WITHIN A COMPARTMENT, UP TO A MAXIMUM OF TWO SPRINKLERS, THAT REQUIRE THE GREATEST HYDRAULIC DEMAND WITH MAXIMUM SPACING BETWEEN HEADS & BRANCH LINES TO BE IN ACCORDANCE WITH THE SPRINKLER HEAD'S LISTING.

MATERIAL NOTES

- ONLY UL LISTED SPRINKLER HEADS SHALL BE INSTALLED THROUGHOUT THE SYSTEMS.
- ALL THREADED PIPING 1 1/2" & SMALLER SHALL BE ANSI SCH 40, ASTM A-135 BLACK STEEL.
- ALL THREADED FITTINGS 1 1/2" & SMALLER SHALL BE ASME B16.3 DUCTILE IRON.
- ALL THREADED PIPES & FITTINGS SHALL HAVE THREADS CUT TO ANSI/ASME B1.20.1 PIPE THREAD, GENERAL PURPOSE.
- ALL 1 1/2"-4" GROOVED PIPING SHALL BE ANSI SCH 10, ASTM A-135 BLACK STEEL.
- ALL 1 1/2"-4" TEES, ELBOWS, REDUCERS & CAPS SHALL BE MALLEABLE IRON ASTM A-47, OR DUCTILE IRON ASTM A-536. FINISH TO BE FACTORY PAINTED.
- THE COMPONENTS OF HANGER ASSEMBLIES THAT ARE DIRECTLY ATTACHED TO THE PIPE OR TO THE BUILDING SHALL BE UL LISTED FOR FIRE PROTECTION USE.
- ALL WELDED OUTLETS SHALL BE ANSI B16.1 FORGED STEEL PER NFPA AND UL LISTED FOR WORKING PRESSURES TO 300 PSI.
- ALL CPVC SPRINKLER PIPES & FITTINGS SHALL BE TYCO BLAZEMASTER (SEE TABLE FOR WEIGHTS, DIMENSIONS, ETC)

GENERAL NOTES

- THE SYSTEM LAYOUT AND INSTALLATION SHALL BE IN ACCORDANCE WITH NFPA 13 (2016 EDITION), FLORIDA STATUTES & THE AUTHORITY HAVING JURISDICTION (AHJ).
- OBTAIN & ADHERE TO ALL PERMITS, LICENSES, AND ALL GOVERNMENT REQUIREMENTS PRIOR TO FABRICATION & INSTALLATION.
- NOT ALL PIPING, VALVES & APPURTENANCES ARE SHOWN ON PLANS. REFER TO PIPING & RISER DIAGRAMS, DETAILS & SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- INSPECTORS TEST CONNECTIONS SHALL BE PROVIDED FOR THE SYSTEM SO THAT THE WATER FLOW SWITCH MAY BE TESTED. CONNECTIONS SHALL HAVE A MINIMUM OF 1/2" OUTLET AND DRAIN VALVE IN AN ACCESSIBLE LOCATION PIPED TO AN APPROVED LOCATION.
- ALL VALVES ON THE FIRE PROTECTION SYSTEM TO BE ELECTRICALLY SUPERVISED. TYPE & EXACT LOCATION OF FLOW & SUPERVISORY SWITCHES SHALL BE ACCOMPLISHED THROUGH VARIOUS RESPONSIBLE TRADES.
- PROVIDE A PERMANENTLY ATTACHED NAME TAG STATING THE REQUIRED DESIGN CRITERIA FOR EACH HYDRAULICALLY DESIGNED SYSTEM.
- ALL SPRINKLER HEADS INSTALLED IN CEILINGS SHALL BE LOCATED A MINIMUM OF 4" AWAY FROM ANY WALLS, CEILING HEIGHT CHANGES, OR ANY OTHER VERTICAL INTERSECTING STRUCTURAL SURFACE.
- PROVIDE SPRINKLERS BELOW EXPOSED DUCTWORK, CATWALKS & MEZZANINES WIDER THAN 48".
- PROVIDE ADDITIONAL OFFSETS OR FITTINGS REQUIRED FOR PROPER INSTALLATION, COORDINATION WITH OTHER TRADES, AND/OR TO MAINTAIN PROPER CLEARANCES. VERIFY STRUCTURAL, MECHANICAL, ELECTRICAL INSTALLATIONS TO AVOID OBSTRUCTIONS OR INTERFERENCE WITH FIRE PROTECTION PIPE ROUTING.
- FIRE STOP ALL PENETRATIONS OF SMOKE & FIRE WALLS. FIRE STOPPING SHALL BE OF A U.L. LISTED ASSEMBLY.
- SPRINKLER HEADS ARE TO BE COORDINATED WITH ALL DIFFUSERS, LIGHTING FIXTURES, CEILING SYSTEMS & STRUCTURAL SYSTEMS.
- FIRE PROTECTION SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD. NO FABRICATION OR INSTALLATION SHALL BE PERMITTED UNTIL FIRE PROTECTION SHOP DRAWINGS & SUBMITTALS HAVE BEEN APPROVED.
- THE ENTIRE SYSTEM SHALL BE FLUSHED & HYDROSTATICALLY TESTED FOR TWO HOURS AT 200 PSI IN ACCORDANCE WITH NFPA 13 & NFPA 24.
- FIRE SPRINKLER SYSTEM SHALL BE DESIGNED FOR A MAXIMUM WORKING PRESSURE OF 175 PSI.
- A SUPPLY OF SPARE SPRINKLERS OF EACH TYPE & TEMPERATURE RATING SPRINKLER HEAD USED IN THE BUILDING INCLUDING A SPECIAL WRENCH FOR EACH TYPE SHALL BE KEPT IN A CABINET LOCATED WHERE THE TEMPERATURE WILL AT NO TIME EXCEED 100-DEG F.
- ALL SPRINKLER PIPE AND FITTINGS SHALL BE INSTALLED SO THAT THE SYSTEM CAN BE DRAINED TO MEET NFPA 13 REQUIREMENTS.
- ALL CONTROL, DRAIN & TEST CONNECTION VALVES SHALL BE PROVIDED WITH PERMANENTLY MARKED WEATHERPROOF OR RIGID PLASTIC IDENTIFICATION SIGNS. THE SIGNS SHALL BE SECURED WITH CORROSION RESISTANT WIRE, CHAIN, OR OTHER APPROVED MEANS.
- IF SYSTEM PRESSURE EXCEEDS 100 PSI, ALL ARMOVERS LONGER THAN ONE FOOT SHALL HAVE A HANGER.
- SPRINKLERS SHALL NOT BE REQUIRED IN ATTICS, WITH OR WITHOUT STORAGE, IN ACCORDANCE WITH NFPA 13D SECTION 8.3.5

DRAWING LEGEND

4

5'-0"

5'-0"

10'-0"

DIAMETER

SEGMENT LENGTH

TOTAL LENGTH

SCH 10 FIRE SPRINKLER MAIN PIPING

1 1/2

10'-0"

10'-0"

DIAMETER

TOTAL LENGTH

SCH 40 FIRE SPRINKLER BRANCH LINE PIPING

1

10'-0"

10'-0"

DIAMETER

TOTAL LENGTH

SCH 40 FIRE SPRINKLER ARM OVER PIPING

1

10'-0"

10'-0"

DIAMETER

TOTAL LENGTH

TYCO BLAZEMASTER FIRE SPRINKLER PIPING

10'-0"

INSTALL DIMENSION

10'-0" FF

PIPE ELEVATION AFF

128

HYDRAULIC NODE

DETAIL

SHEET

SECTION DETAIL

HYDRANT FLOW MAP

HANGER DETAILS

Table 9.2.2.1(a) Maximum Distance Between Hangers (ft-in.)

	Nominal Pipe Size (in.)											
	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	5	6	8
Steel pipe except threaded lightwall	N/A	12-0	12-0	15-0	15-0	15-0	15-0	15-0	15-0	15-0	15-0	15-0
Threaded lightwall steel pipe	N/A	12-0	12-0	12-0	12-0	12-0	12-0	N/A	N/A	N/A	N/A	N/A
Copper tube	8-0	8-0	10-0	10-0	12-0	12-0	12-0	15-0	15-0	15-0	15-0	15-0
CPVC	5-6	6-0	6-6	7-0	8-0	9-0	10-0	N/A	N/A	N/A	N/A	N/A
Ductile iron pipe	N/A	N/A	N/A	N/A	N/A	N/A	15-0	N/A	15-0	N/A	15-0	15-0

TABLE D1

TABLE D1-U.S. UNITS DIMENSIONS FOR TYCO CPVC PIPE				
NOMINAL PIPE SIZE ANSI	NOMINAL O.D. INCHES	NOMINAL I.D. INCHES	EMPTY WEIGHT POUNDS/FOOT	WATER FILLED WEIGHT POUNDS/FOOT
3/4	1.050	0.874	0.168	0.428
1	1.315	1.101	0.262	0.675
1-1/4	1.660	1.394	0.418	1.079
1-1/2	1.900	1.598	0.548	1.417
2	2.375	2.003	0.859	2.224
2-1/2	2.875	2.423	1.257	3.255
3	3.500	2.950	1.867	4.829

PIPE INSULATION DETAIL

RISER DIAGRAM

RISER DIAGRAM LEGEND

- FINISHED FLOOR
- EXTERIOR WALL
- 1 1/4" UNDERGROUND CPVC SUPPLY
- 1" CHECK VALVE
- WATERFLOW SWITCH
- INSPECTORS TEST & DRAIN PIPED TO EXTERIOR
- UPRIGHT SPRINKLER
- SUPPLY TO SPRINKLER SYSTEM

HYDRAULIC ANALYSIS REPORT

GATOR FIRE EQUIPMENT COMPANY

1032 SOUTH MAIN STREET
LAKE CITY, FL 32025
PHONE 352-373-1730
FAX 352-338-1079

COMPANY LICENSE INFORMATION
Contractor 1: 802689-001-2006
Fire Alarm: EF0000394
Pre-Engineered: 80460-0001-2006

REVISIONS:	
1	xxxx/xx/xx xxxxxxxxxxxxxxxx
2	xxxx/xx/xx xxxxxxxxxxxxxxxx
3	xxxx/xx/xx xxxxxxxxxxxxxxxx
4	xxxx/xx/xx xxxxxxxxxxxxxxxx
5	xxxx/xx/xx xxxxxxxxxxxxxxxx
6	xxxx/xx/xx xxxxxxxxxxxxxxxx

FOREST TER GROUP HOME
217 SE FOREST TER
LAKE CITY, FL 32025

FIRE PROTECTION NOTES & DETAILS

JOB NAME:

DRAWN BY: RMM

DATE: 12/11/2023

JOB #: 20231009

SCALE (UNO): NTS

AHJ: COLUMBIA COUNTY

SHEET NO: FS100

