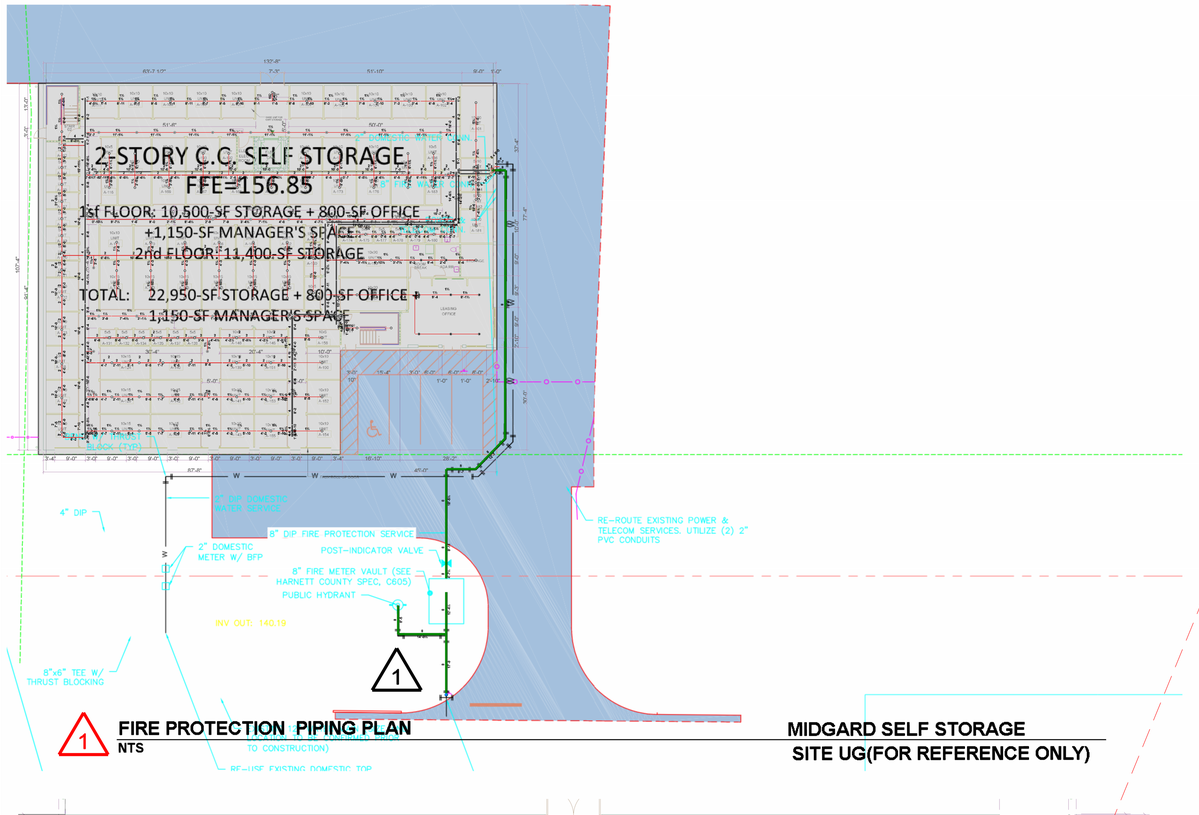
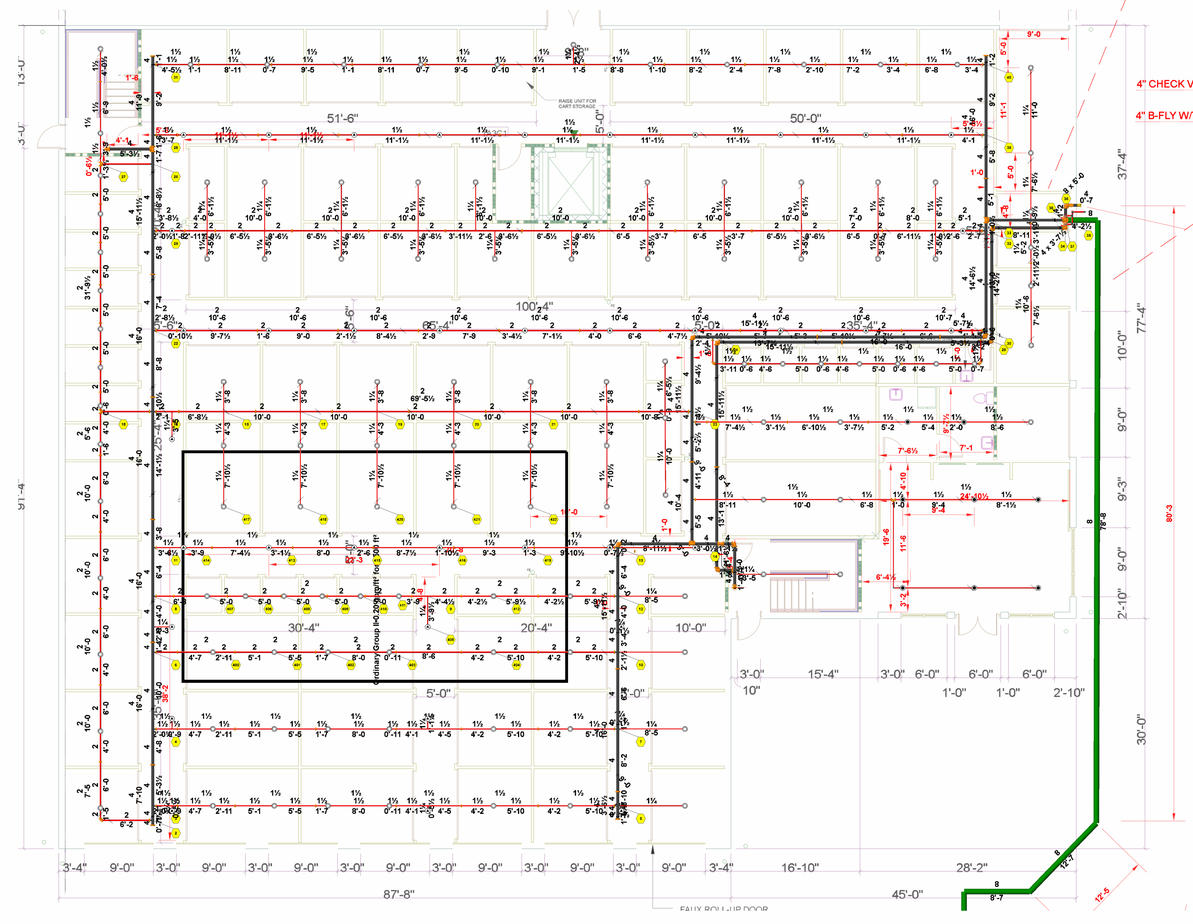


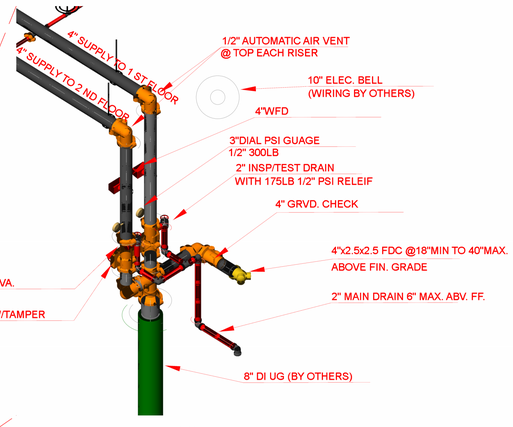
FIRE PROTECTION PIPING PLAN
NTS

MIDGARD SELF STORAGE
SITE UG(FOR REFERENCE ONLY)



FIRE PROTECTION PIPING PLAN
SCALE: 1/8" = 1'- 0"

MIDGARD SELF STORAGE
1 ST FLOOR
0' 2' 4' 8' 16'
1/8" = 1'-0"

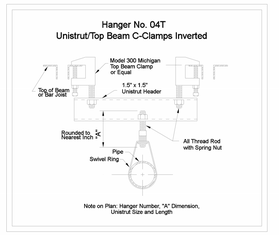


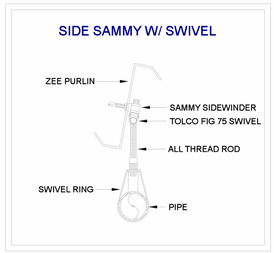
FIRE RISER DETAIL

Riser Tag	
Design Basis	
Occupancy:	Ordinary Group II
Total Sprinklers:	336
Number Of Sprinklers Calculated:	23
Number Of Nozzles Calculated:	0
K-Factor:	5.6
Orifice Size:	0
Design Density:	0.20 gpm/ft²
Average Density:	0.20 gpm/ft²
Area of Application:	1500 ft² (Actual 2300 ft²)
Demand at Base Of Riser or Point Of Connection	
Total Demand Flow(gpm):	0.00
Pressure(psi):	7.000
Water Supply Information At Time Of Design	
Static Pressure(psi):	60.000
Residual Pressure(psi):	35.000
Supply Flow(gpm):	887.00
Total Demand Flow(gpm):	720.20
Total Demand Pressure(psi):	27.799
Safety Margin(psi):	12.663

Hydraulic Information	
Remote Area 1	
OCCUPANCY CLASSIFICATION	Ordinary Group II
DENSITY (gpm/ft²)	0.20 for 1500 ft² (Actual 2300 ft²)
TOTAL HOSE STREAMS	250.00
DRY CAPACITY	0.00 gal
TOTAL HEADS FLOWING	23
K-FACTOR	5.6
TOTAL WATER REQUIRED	720.20
TOTAL PRESSURE REQUIRED	27.799
BASE of RISER (gpm)	720.20
BASE of RISER (psi)	27.799
SAFETY MARGIN (psi)	+12.663 (31.3%)

Reviewed for Fire Code Compliance
Harnett County
Leslie Jackson
08/07/2024 4:07:16 PM





HANGERS

GENERAL NOTES

1. IFP SCOPE OF WORK: INSTALL FIRE PROTECTION THRU OUT NEW METAL FRAMED 2 STORY STRUCTURE PER NFPA 13,2019 ED.

2. CONTRACT EXCLUSIONS: ELECTRIC WIRING, FIRE ALARM DETECTION SYSTEMS, PAINTING OF PIPE.

3. OUR CONTRACT IS WITH:
RELIANT
1146 CANTON ST
ROSWELL,GA. 30075

- NFPA 13 2019 EDITION
- INTERNATIONAL BUILDING CODE (I.B.C.) 2018 EDITION ANY NORTH CAROLINA AMENDMENTS 2019

4. ALL NEW SPRINKLER PIPING TO BE 1" to 2" SCHEDULE 40 BLACK. PER ASTM A795/A795M. ALL PIPING JOINED WITH C.I SCRWD FITTINGS PER ASME B16.4. 2 1/2" TO 6" TO BE SCHEDULE 10. JOINED WITH GRVD COUPLING AND FITTINGS PER NFPA 13 7.5.3. CPVC PER ASTM F442/F442M PER NFPA 13 2019 TABLE 7.3.1.1

5. ALL MATERIALS AND INSTALLATION TO BE IN ACCORDANCE WITH NFPA 13; 2019 EDITION.

6. IT IS THE OWNER'S RESPONSIBILITY TO PROVIDE SUFFICIENT HEAT, AT OR ABOVE 40 DEG F, TO PREVENT FREEZING OF THE SPRINKLER PIPING AND RELATED COMPONENTS.

7. HANGERS ARE INSTALLED ACCORDING TO NFPA 13, 2019 EDITION. INSTALL HANGER WITHIN 1'-0" OF DROP. SYSTEM PSI EXCEEDS 100 PSI.

8. EXCLUSION: SEISMIC BRACING, FIRE ALARM, WIRING OF ANY KIND, AND PAINTING.

STATE FIRE MARSHAL RULES AND REGULATIONS FOR MODIFICATION OF EXISTING SPRINKLER SYSTEMS
- One additional sprinkler may be added to an original installation location if the additional sprinkler is in a remotely located or non-communicating compartment from the existing or relocated sprinkler.
- Two sprinklers may be added to an existing branch line if the additional sprinklers are in remotely located or non-communicating compartments from the existing or relocated sprinkler.
- New branch lines added to existing cross mains shall be sized the same as the existing branch lines.
- No more than two heads shall be supplied from 1 inch pipe unless the existing system was calculated to supply more than two heads. In such case, the calculated maximum for 1 inch pipe shall take precedence.

PROJECT BUILDING INFO

TYPE OF USE:	1 ST FLOOR-OFFICES, 2ND FLOOR RESIDENCE
BUILDING SQ. FT.:	12,450 11,400
TYPE OF OCCUPANCY:	MIXED USE
TYPE OF CONSTRUCTION:	II2B METAL AND CONCRETE
ZONED	: B
NUMBER OF STORIES:	2
IMPROVEMENT AREA:	ENTIRE 2 STORY STRUCTURE
	1500 SQ FT ORD. HAZ.130 sq ft max. LIGHT 225 SQ FT OFFICES 15X15 MAX. RESIDENTIAL LT HAZ 256 SQ FT MAX. 16X16 MAX.
FIRE SPRINKLERS:	YES

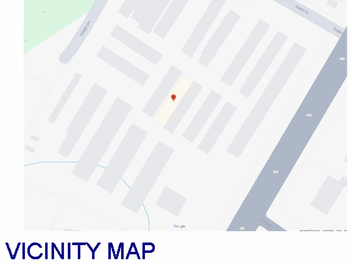
LEGEND

- EXISTING SPRINKLER
- EXISTING PIPING
- NEW BRANCHLINE PIPING

- HEAD TO BE ADDED VIA MECHANICAL TEE OR FROM NEW PIPE
- PIPE TO BE REWORKED FROM EXISTING OUTLET
- PIPE CONTINUES
- D - DEMO/REMOVE SPRINKLER
- A - ADD SPRINKLER
- NC - NO CHANGE EXISTING SPRINKLER TO REMAIN
- SRR - SMALL ROOM RULE
- / - NEW HANGER
- ★ 0'-0" - HEIGHT A.F.F.

Sprinkler Legend

Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Note
◎	Reliable	RA3624	KFR56 INT	233	5.6	Upright		Quick	Brass	212 °F	
◉	Reliable	RA3624	KFR56 INT	8	5.6	Pendent	½	Quick	Brass	212 °F	
▲	Reliable	RA3624	KFR56 INT	83	5.6	Upright	½	Quick	Brass	212 °F	
◀	Reliable	R3516	F1RES49	12	4.9	Pendent	½	Fast	White Polyester	155 °F	
				Total = 336							



VICINITY MAP

INTERNATIONAL FIRE PROTECTION INC.
POWERED BY API GROUP
6935 Oak Ridge Commerce Way
Austell,Georgia 30168
Tel.: (770) 745-4530 Fax: (770) 745-8730
WWW.IFPCO.COM

STAMP
NORTH CAROLINA STATE OF FIRE SPRINKLER CONTRACTOR
INTERNATIONAL FIRE PROTECTION INC. 2500 E. IRWIN SUITE 2 HUNTSVILLE, AL 35801 PH: 256-533-4530 FAX: 256-533-4531

MARION, SC
LITTLE ROCK, AR
PLANT CITY, FL
TIFTON, GA
ATLANTA, TN
NASHVILLE, TN
CHATTANOOGA, TN
BIRMINGHAM, AL
MOBILE, AL
MADISON, AL

ABBREVIATIONS

ACT	ACOUSTICAL CEILING TILE	N.I.C.	NOT IN CONTRACT
BFV	BUTTERFLY VALVE	N.T.S.	NOT TO SCALE
CL.	CENTER LINE	O.C.	ON CENTER
CON	CONCENTRIC	OS&Y	OUTSIDE SCREW & YOKE
CT	CENTER OF TILE	RED	REDUCER
DI	DUCTILE IRON	RN	RISER NIPPLE
GALV	GALVANIZED	SPR	SPRINKLER
GWB	GYPSUM (DRYWALL)	THD	THREADED

IMPORTANT
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NO.	DATE	REVISIONS DESCRIPTION	BY
1	07/30/2024	PER FD PLAN REVIEW COMMENTS	

Denotes Hydraulic Calculation Reference Point

DRAWN BY: D.PEOPLES
DATE: JULY 12,2024
SCALE: as noted

JOB NAME:
MIDGARD SELF STORAGE
14396 NC 210 S
SPRING LAKE, NC. 28390

SHEET NAME
FIRE PROTECTION PIPING PLAN T.I.

CONTRACT NUMBER
1041-0126884

SHEET NUMBER
FP-1 of 2

PLOT DATE: 08/05/24 FILE NAME: SPRINGLAKE FP-1 a.dwg