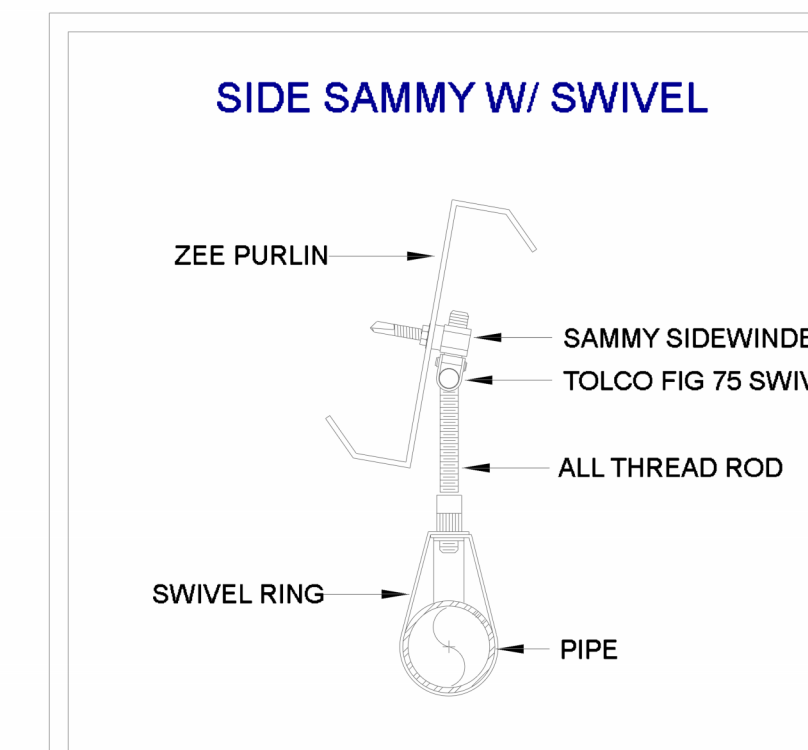
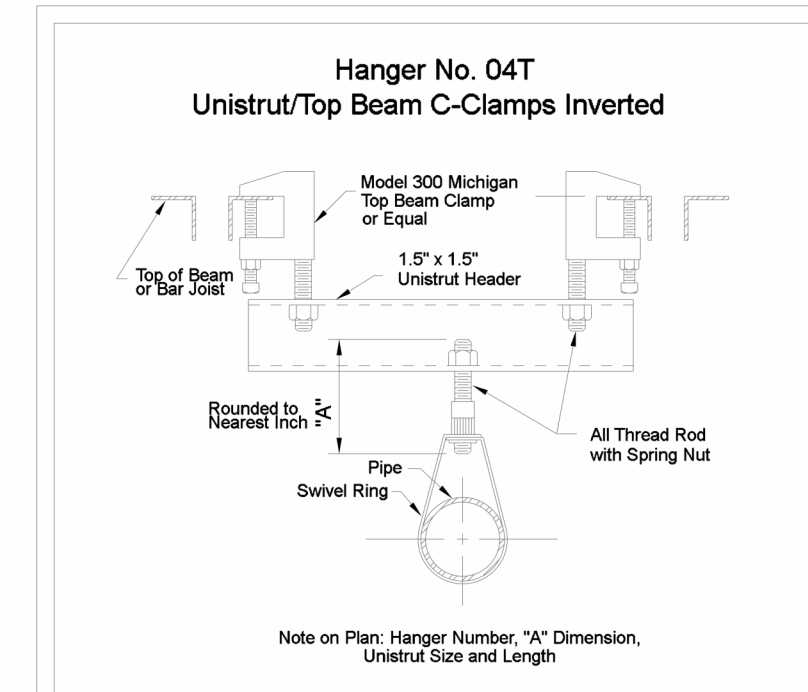


# GENERAL NOTES

- IFP SCOPE OF WORK: INSTALL FIRE PROTECTION THRU OUT NEW METAL FRAMED 2 STORY STRUCTURE PER NFPA 13,2019 ED.
- CONTRACT EXCLUSIONS: ELECTRIC WIRING, FIRE ALARM DETECTION SYSTEMS, PAINTING OF PIPE.
- 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
- ALL NEW SPRINKLER PIPING TO BE 1" TO 2" SCHEDULE 40 BLACK. PER ASTM A795/A795M. ALL PIPING JOINED WITH C.I SCRWVD 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
- ALL MATERIALS AND INSTALLATION TO BE IN ACCORDANCE WITH NFPA 13, 2019 EDITION.
- 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.
- HANGERS ARE INSTALLED ACCORDING TO NFPA 13, 2019 EDITION. INSTALL HANGER WITHIN 1'-0" OF DROP SYSTEM PSI EXCEEDS 100 PSI.
- EXCLUSION: SEISMIC BRACING, FIRE ALARM, WIRING OF ANY KIND, AND PAINTING.



## HANGERS

STATE FIRE MARSHAL RULES AND REGULATIONS FOR MODIFICATION OF EXISTING SPRINKLER SYSTEMS

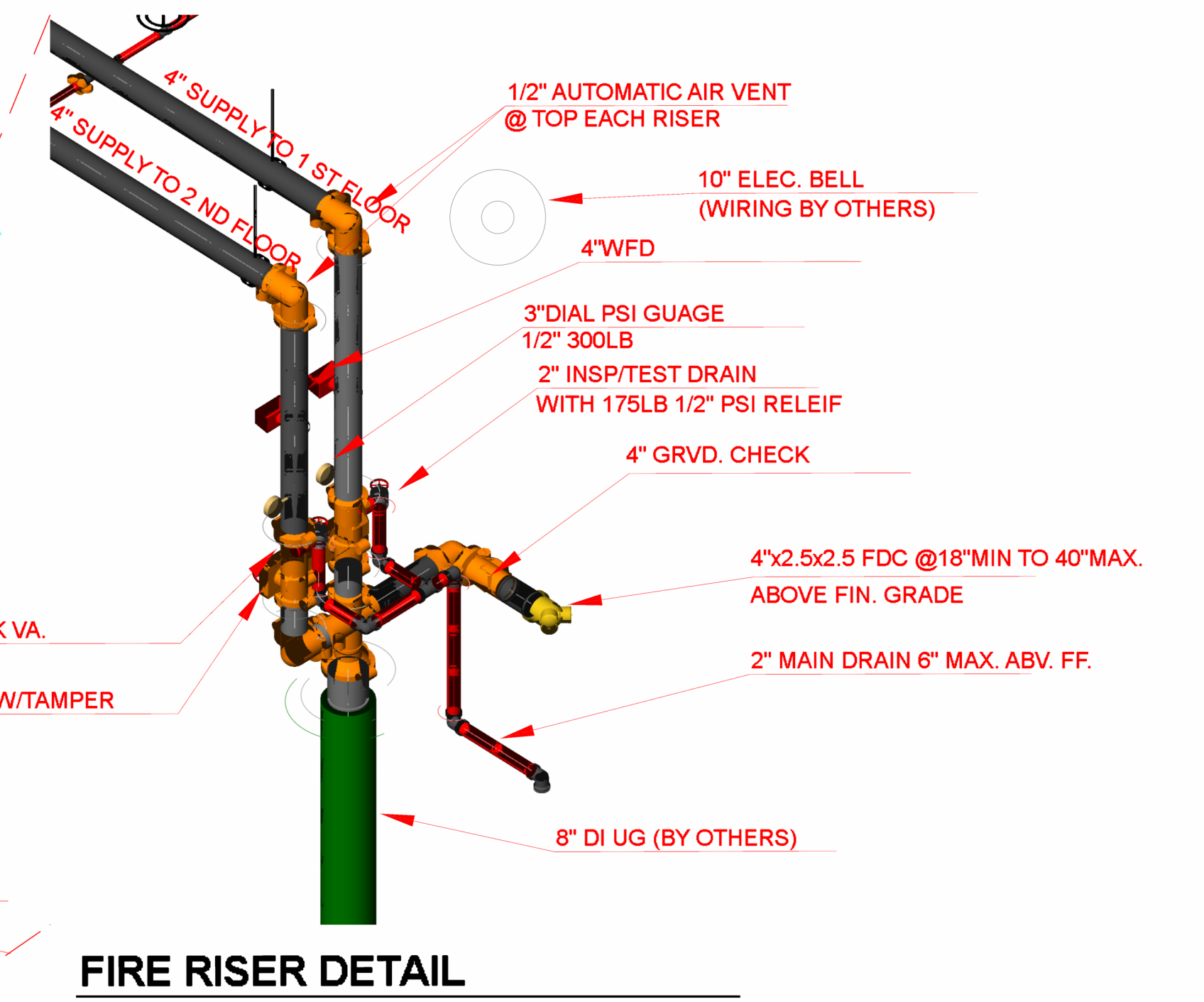
- One additional sprinkler may be added to an original installation location if the additional sprinkler is in a remotely located or non-communicating compartment from the existing or relocated sprinkler.
- Two sprinklers may be added to an existing branch line if the additional sprinklers are in remotely 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: I12B 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



## FIRE RISER DETAIL

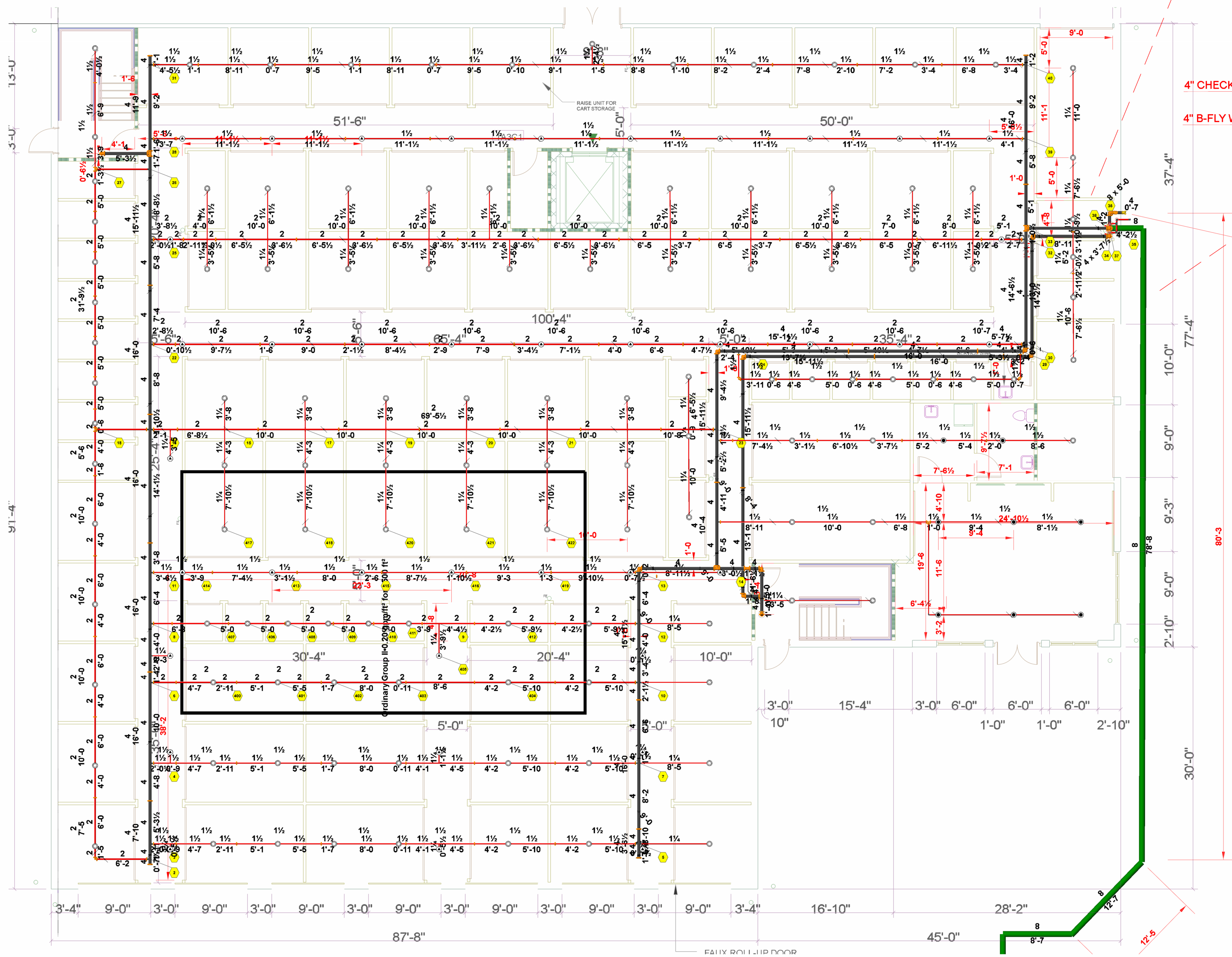
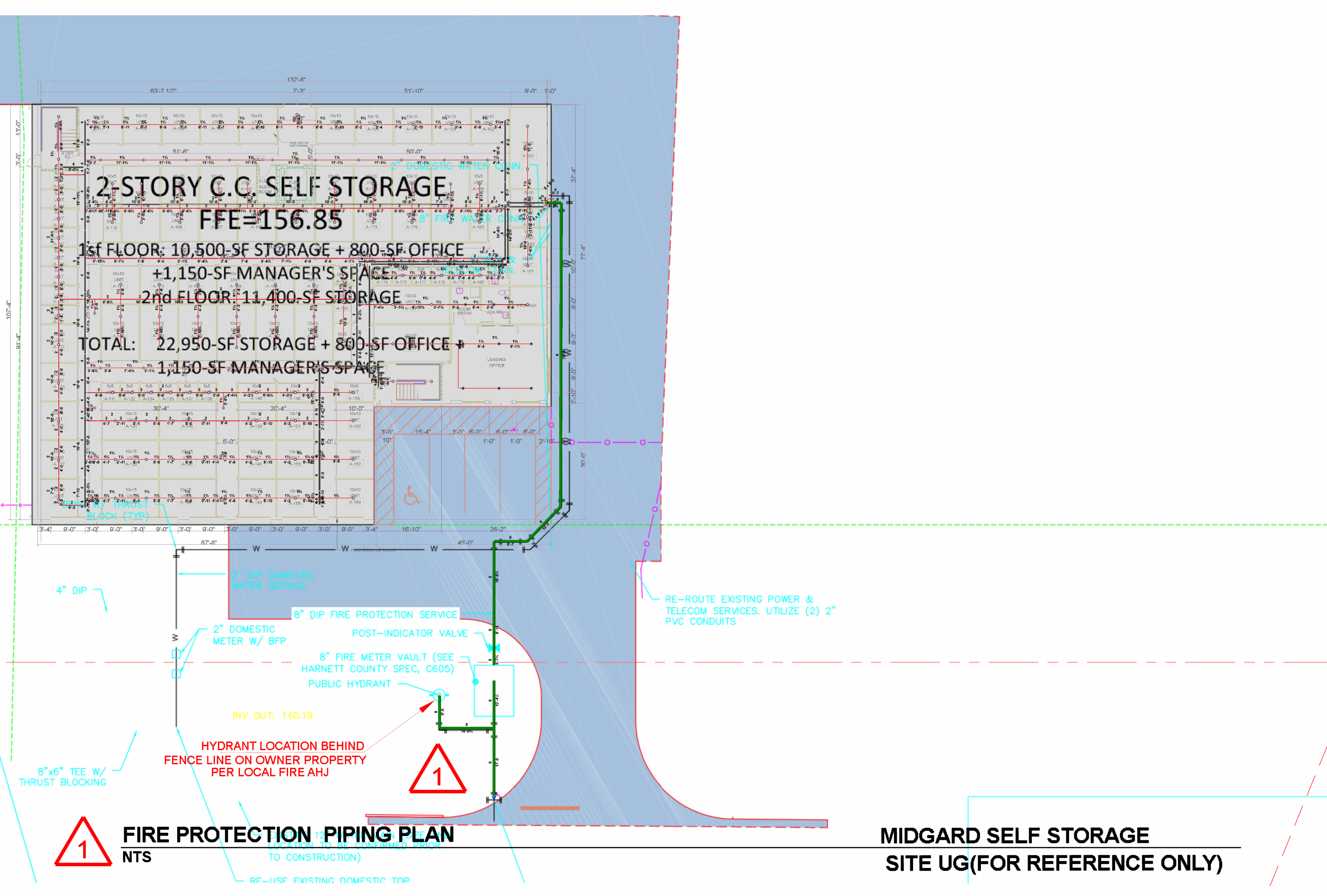
Riser Tag	
Design Basis:	Ordinary Group I
Occupancy:	336
Total Sprinklers:	23
Number of Sprinklers Calculated:	23
Number of Nozzles Calculated:	0
K-Factor:	5.6
Orifice Size:	0
Design Density:	0.20 gpm/ft <sup>2</sup>
Average Density:	0.20 gpm/ft <sup>2</sup>
Area of Application:	1800 SF (Actual 2300 SF)
Demand at Base of Riser or Point of Connection:	
Total Demand Flow (gpm):	0.00
Pressurization:	7.000
Water Supply Information At Time of Design:	
Static Pressure (psi):	60.000
Residual Pressure (psi):	29.000
Supply Flow (gpm):	897.00
Total Demand Flow (gpm):	730.20
Total Demand Pressure (psi):	27.799
Safety Margin (psi):	12.663

Hydraulic Information	
Remote Area 1:	
OCCUPANCY CLASSIFICATION (Ordinary Group I)	
DENSITY (gpm/ft <sup>2</sup> )	0.20 for 1800 SF (Actual 2300 SF)
TOTAL HOSE STREAMS	200.00
DRY CAPACITY	0.00 gpm
TOTAL HEADS FLOWING	23
K-FACTOR	5.6
TOTAL WATER REQUIRED	170.20
TOTAL PRESSURE REQUIRED	27.799
BASE OF RISER (psi)	730.20
BASE OF RISER (psi)	27.799
SAFETY MARGIN (psi)	+12.663 (31.3%)

## 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	1/2"	Quick	Brass	212 °F	
⊙	Reliable	RA3624	KFR56 INT	8	5.6	Pendent	1/2"	Quick	Brass	212 °F	
⊙	Reliable	RA3624	KFR56 INT	83	5.6	Upright	1/2"	Quick	Brass	212 °F	
⊙	Reliable	R3516	F1RES49	12	4.9	Pendent	1/2"	Fast	White Polyester	155 °F	
				Total = 336							



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

MIDGARD SELF STORAGE  
1 ST FLOOR  
SCALE: 0 2' 4' 8' 16'



VICINITY MAP

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

STATE	ABBR.	ACT	BY	DATE	REVISIONS	DESCRIPTION
NC	CONTRACT	NOT TO SCALE		07/30/2024	PER FD PLAN REVIEW COMMENTS	
NC	NOT TO SCALE					
NC	ON CENTER					
NC	OSBY					
NC	OUTSIDE SCREW & YORE					
NC	RESEARCH					
NC	RED					
NC	SPRINKLER					
NC	SP					
NC	THD					
NC	THD					

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

**MIDGARD SELF STORAGE**  
14396 NC-210 S  
SPRING LAKE, NC. 28390

**FIRE PROTECTION PIPING PLAN T.1.**

CONTRACT NUMBER: 1041-0126884  
SHEET NUMBER: FP-1 of 2