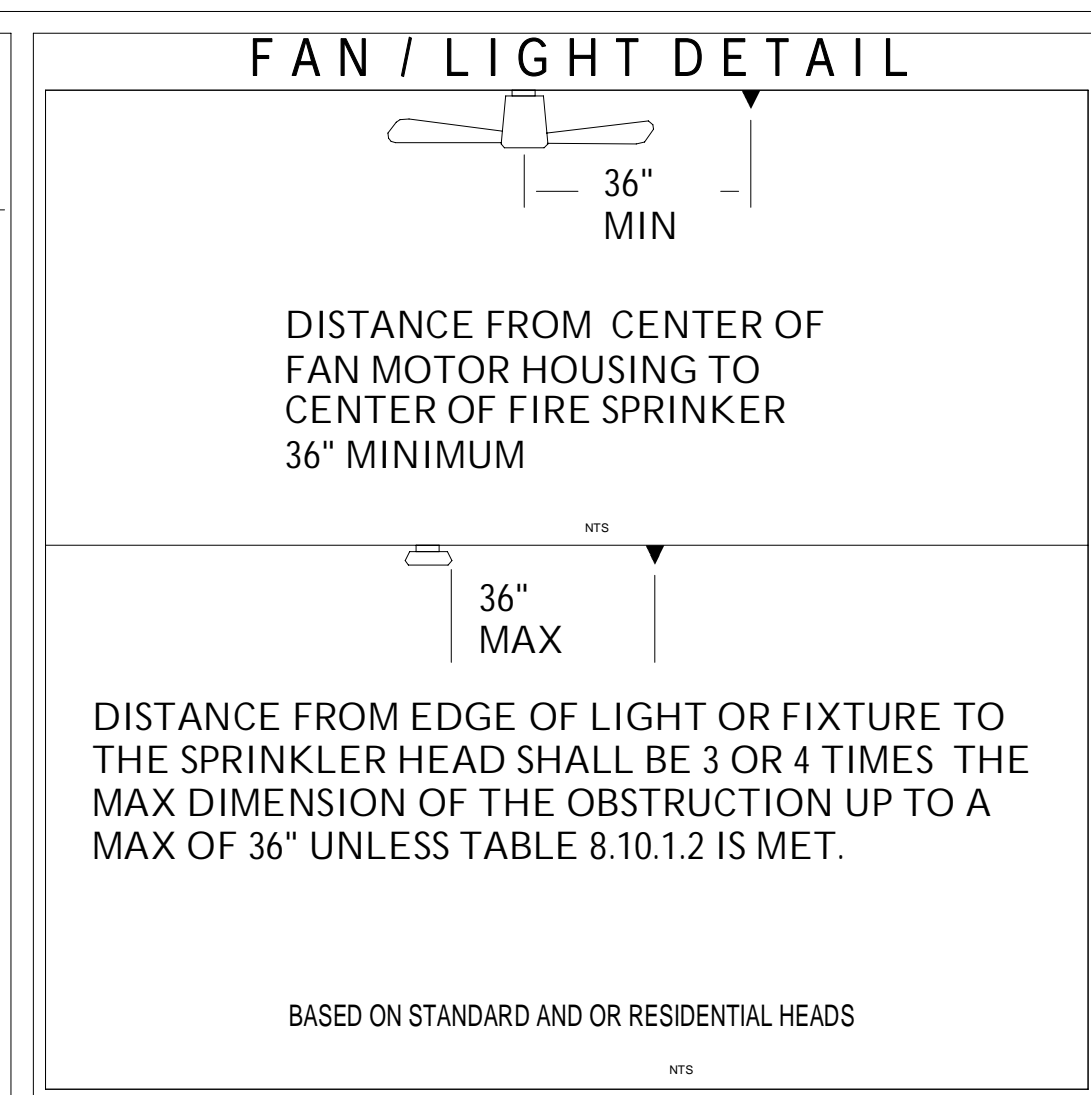


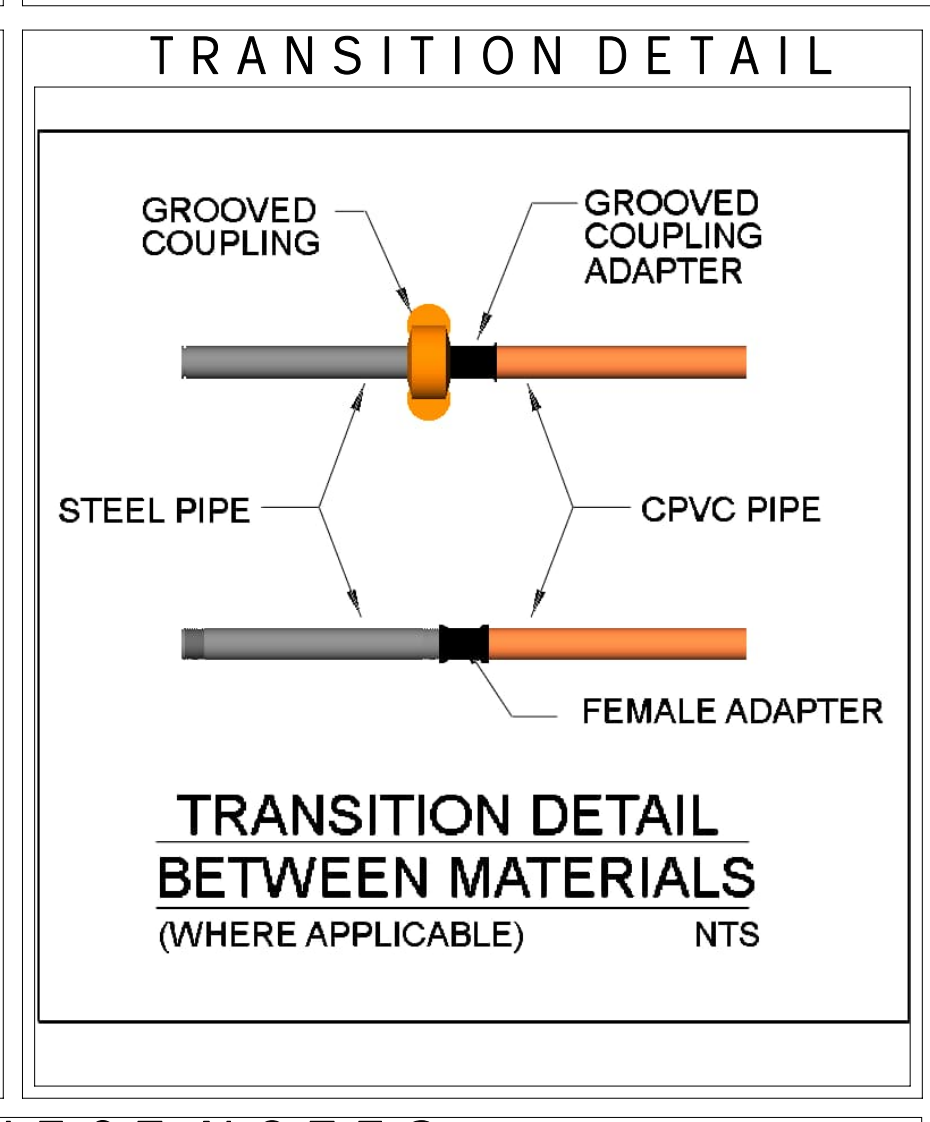
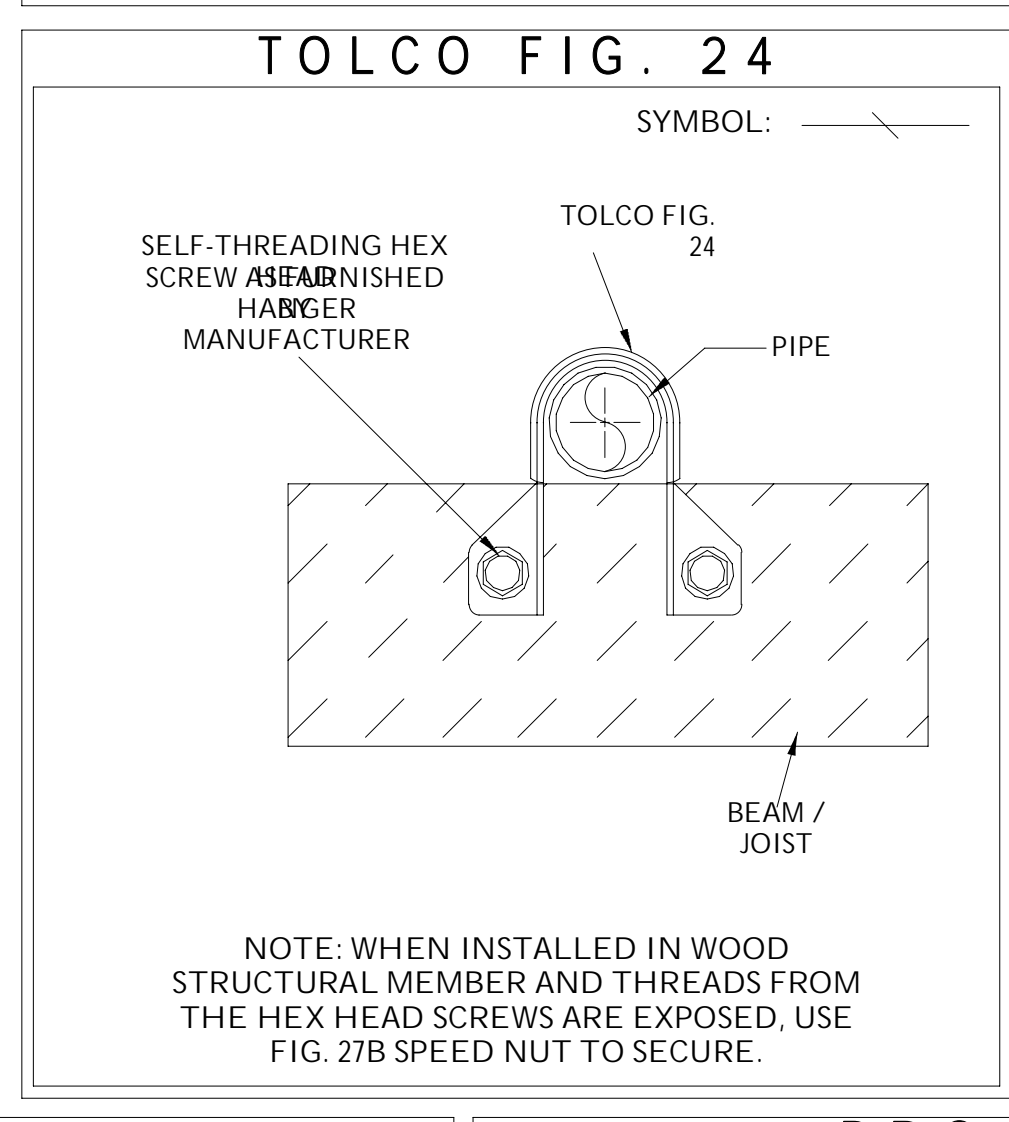
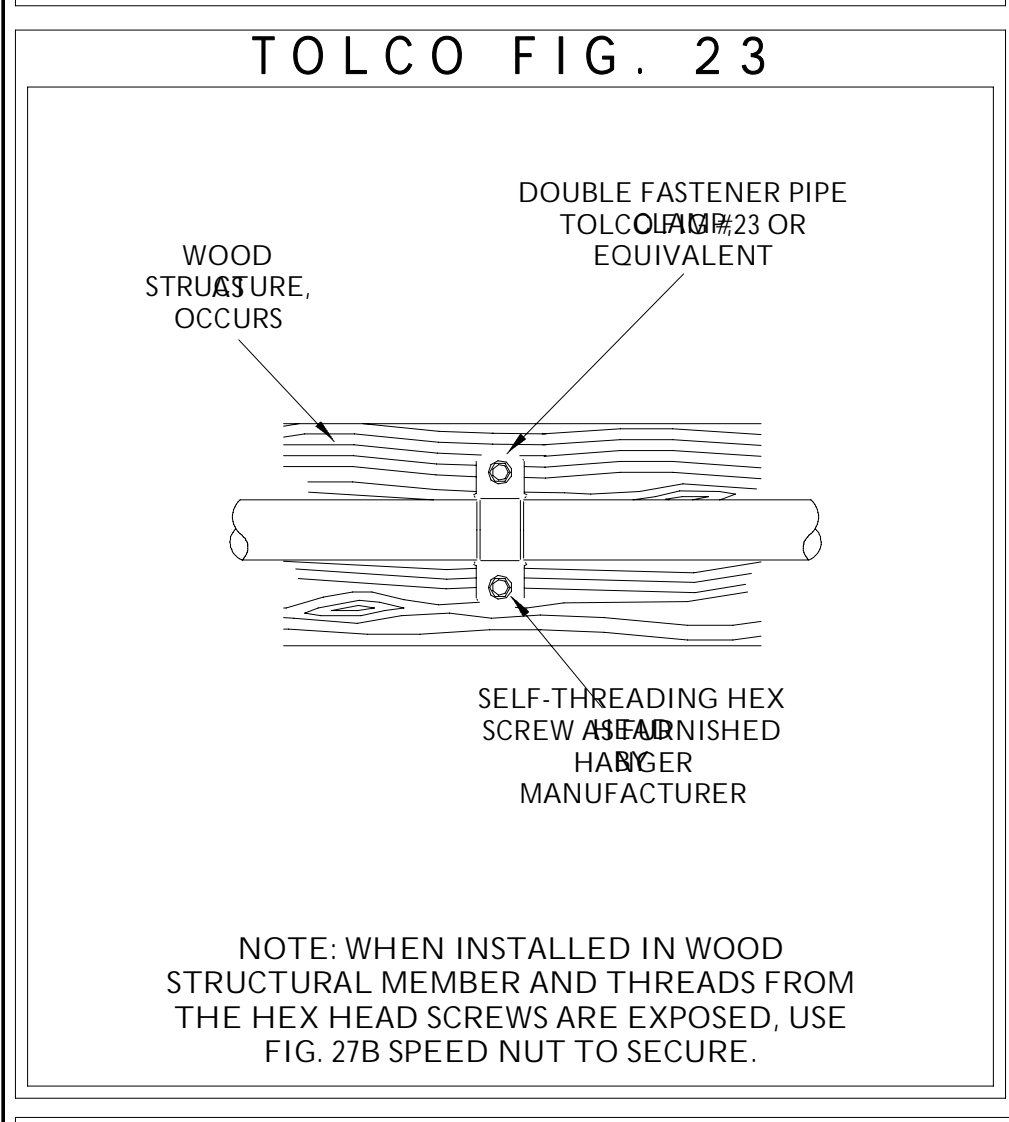
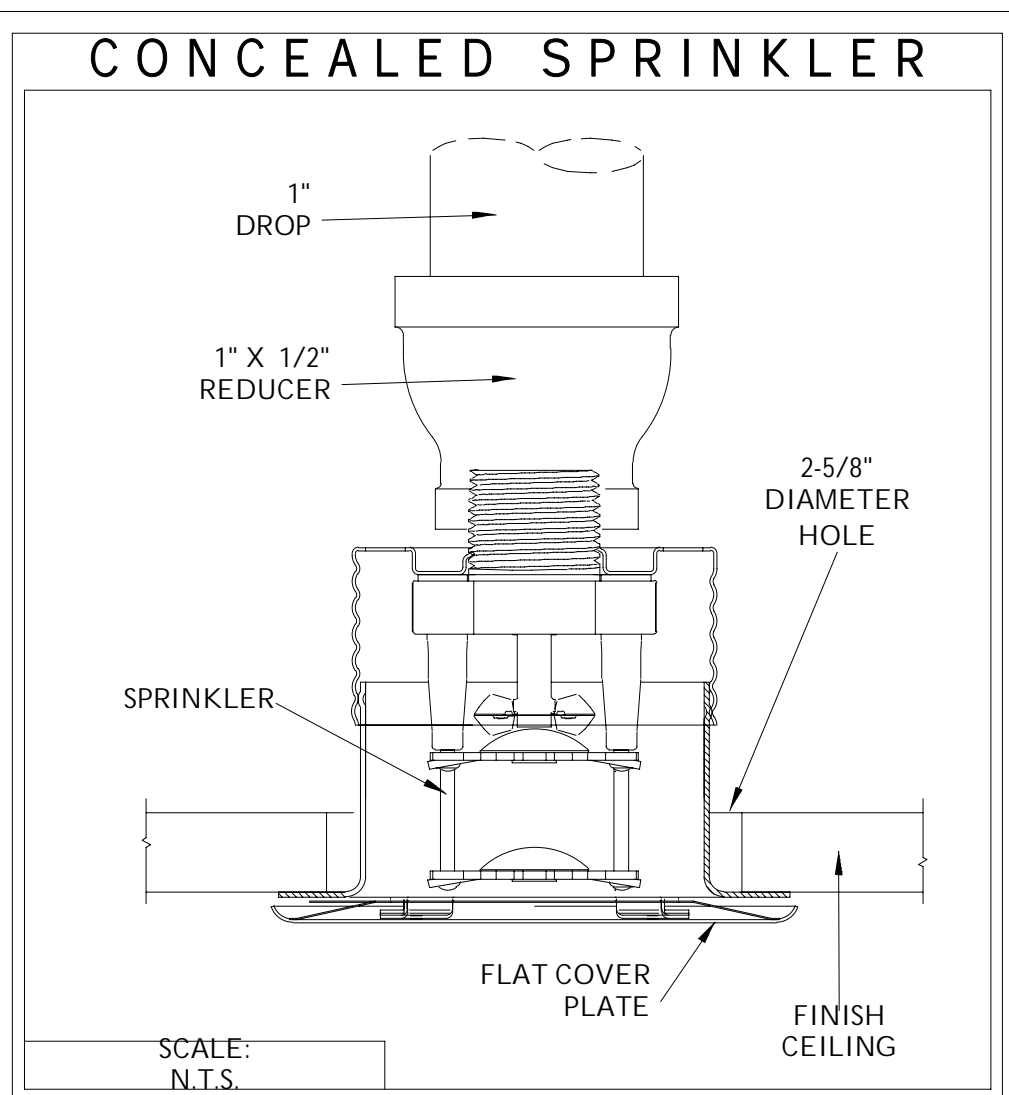
HANGER CHART

TABLE 9.1.2.1 HANGER ROD SIZE				NFPA 13 TABLE 9.2.2.1 DISTANCE BETWEEN HANGERS								
PIPE SIZE	DIAM. OF ROD	PIPE SIZE	DIAM. OF ROD	NOMINAL PIPE SIZE (IN)	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4+
UP TO AND INCLUDING 4"	3/8"	6" AND 8"	1/2"	STEEL PIPE	N/A	12'-0"	12'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"
FIG. A9.2.3.4 DISTANCE FROM SPRINKLER TO HANGER				THREADED LIGHTWALL	N/A	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	N/A
FIG. A9.2.3.5 UNSUPPORTED ARMOVER				COPPER TUBE	8'-0"	8'-0"	10'-0"	10'-0"	12'-0"	12'-0"	15'-0"	15'-0"
FIG. A9.2.3.5.2 UNSUPPORTED ARMOVER > 100 P.S.I.				CPVC	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"	9'-0"	10'-0"	N/A



FLOW TEST

Heritage flow test
 Static 51
 Residual 47
 Pilot reading 46
 Hydrant location 1943 River fall dr 450 ft
 Coefficient .088
 Gpm 902
 Meter size is 1 inch
 Underground to house is 1 inch
 Underground to main is 1 inch
 6 inch main size



SPARE SPRINKLERS

A LIST OF THE SPRINKLERS INSTALLED IN THE PROPERTY SHALL BE POSTED IN THE SPRINKLER CABINET.

THE LIST SHALL INCLUDE:

- SPRINKLER IDENTIFICATION
- NUMBER
- GENERAL DESCRIPTION
- QUANTITY OF EACH SPRINKLER ISSUE OR REVISION DATE OF THE LIST

TOTAL HEADS	MINIMUM SPARE HEADS
<300	6
300-1000	12
>1000	24

- ### KEY NFPA 13D NOTES:
- THE INSTALLER SHALL PROVIDE TO THE OWNER/OCCUPANT INSTRUCTIONS ON INSPECTING, TESTING, AND MAINTAINING THE SYSTEM.
 - ANY SPRINKLERS THAT HAVE BEEN PAINTED OUTSIDE OF THE FACTORY SHALL BE REPLACED WITH A NEW LISTED SPRINKLER
 - PAINING AND ORNAMENTAL FINISHES. SPRINKLERS SHALL NOT BE PAINTED OR ENAMELED UNLESS APPLIED BY THE MANUFACTURER AND THE SPRINKLER HAS BEEN LISTED WITH SUCH FINISHES.

- ### PROJECT NOTES:
- 13D SYSTEM
 - ALL CONCEALED PIPING TO BE CPVC, RISER AND EXPOSED PIPING TO BE SCH 40 STEEL OR EQUAL
 - R OCCUPANCY
 - 2 HEAD CALC IN MOST DEMANDING AREA
 - 16' X 16' SPACING FOR PENDENTS, 14 X 14 FOR UPRIGHTS
 13 GPM @ 7 PSI PER HEAD FOR PENDENTS
 14 GPM @ 7 PSI PER HEAD FOR UPRIGHTS

NFPA 13D CALC NOTES:

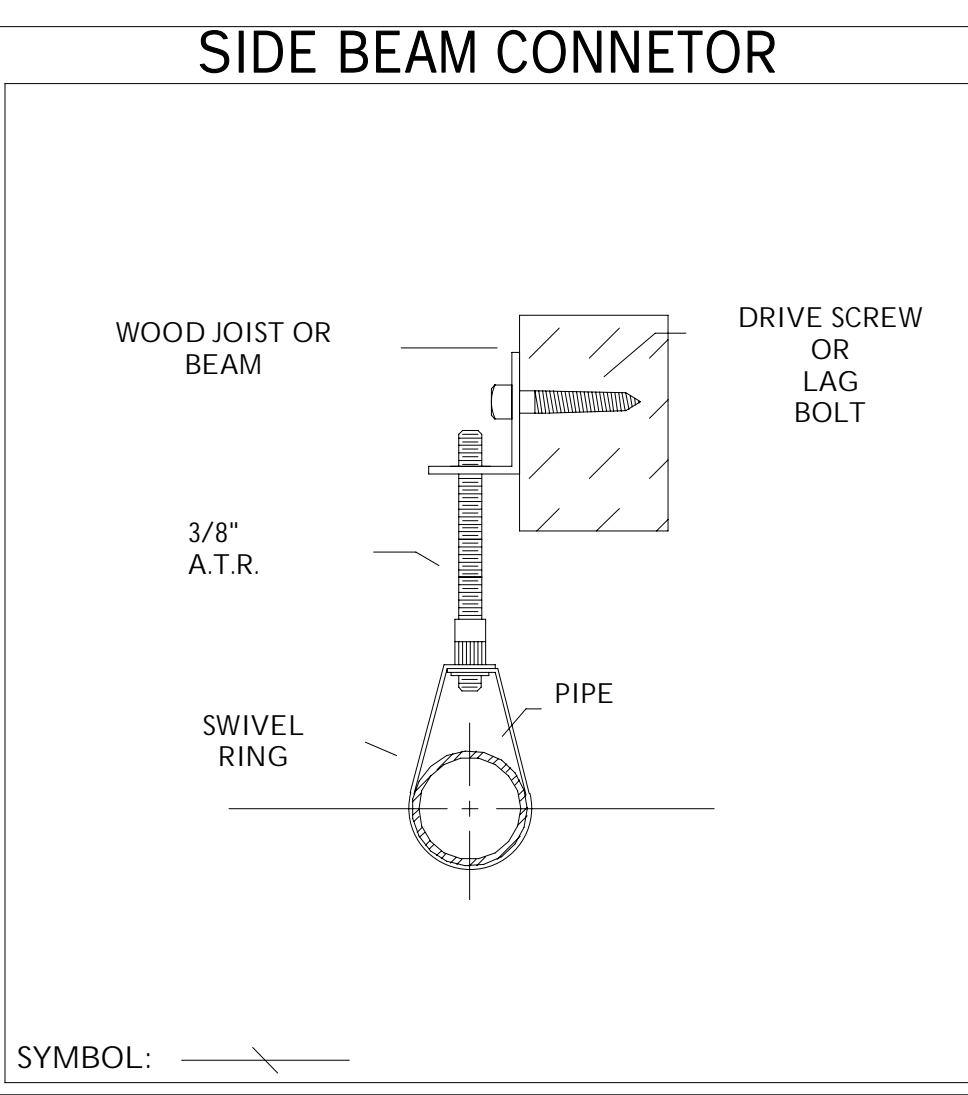
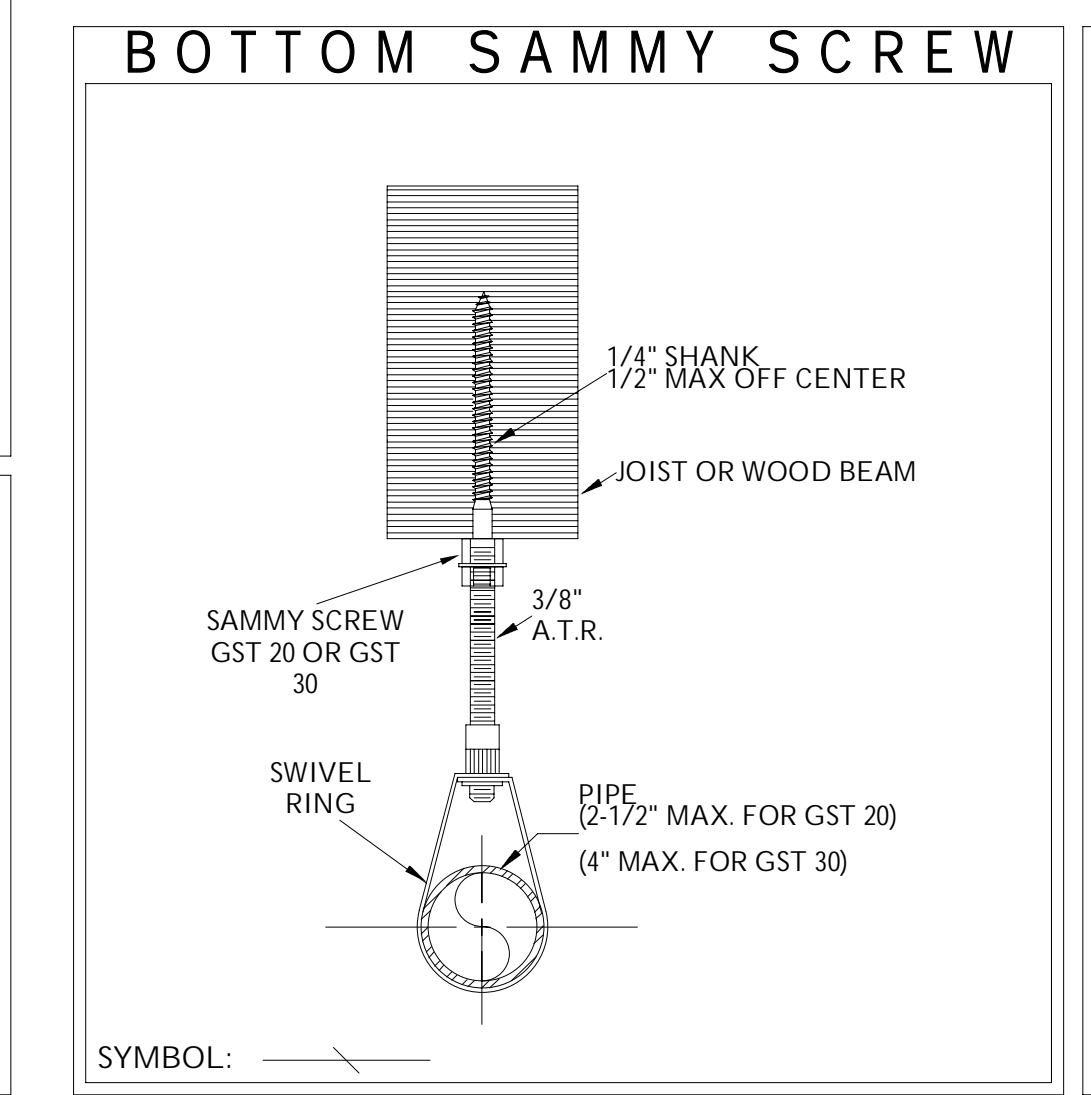
NFPA 13D 10.2.1 FOR EACH OF THE FOLLOWING SITUATIONS, THE NUMBER OF SPRINKLERS IN THE DESIGN AREA SHALL BE ALL OF THE SPRINKLERS WITHIN A COMPARTMENT, UP TO A MAXIMUM OF TWO SPRINKLERS, THAT REQUIRE THE GREATEST HYDRAULIC DEMAND

Heritage Retreat Care Home

- ### SPRINKLER HEAD LOCATION EXCEPTIONS:
- SPRINKLERS ARE NOT REQUIRED IN BATHROOMS NOT EXCEEDING 55 SF
 - SPRINKLERS ARE NOT REQUIRED IN CLOTHES CLOSETS, LINEN CLOSETS, AND PANTRIES WHERE THE SPACES DOES NOT EXCEED 24 SF AND THE LEAST DIMENSION IS LESS THAN OR EQUAL TO 3'
 - SPRINKLERS ARE NOT REQUIRED IN ANY PORCHES, BALCONIES, CARPORTS, AND STAIRS THAT ARE OPEN AND ATTACHED. HOWEVER, THE IFC HAS SPECIFIC REQUIREMENTS - REFER TO IFC NOTE.
 - SPRINKLERS SHALL NOT BE REQUIRED IN ATTICS, PENTHOUSE EQUIPMENT ROOMS, ELEVATOR MACHINE ROOMS, CONCEALED SPACES DEDICATED EXCLUSIVELY TO AND CONTAINING ONLY DWELLING UNIT VENTILATION EQUIPMENT, CRAWL SPACES, FLOOR/CEILING SPACES, NONCOMBUSTIBLE ELEVATOR SHAFTS WHERE THE ELEVATOR CARS COMPLY WITH ANSI A17.1, SAFETY CODE FOR ELEVATORS AND ESCALATORS, AND OTHER CONCEALED SPACES THAT ARE NOT USED OR INTENDED FOR LIVING PURPOSES OR STORAGE AND DO NOT CONTAIN FUEL-FIRED EQUIPMENT.
 - WHEN FUEL-FIRED EQUIPMENT IS PRESENT, AT LEAST ONE QUICK-RESPONSE INTERMEDIATE TEMPERATURE SPRINKLER SHALL BE INSTALLED ABOVE THE EQUIPMENT.
 - SPRINKLERS SHALL NOT BE REQUIRED IN CLOSETS (REGARDLESS OF SIZE) ON EXTERIOR BALCONIES AND EXTERIOR BREZEWAYS/CORRIDORS, REGARDLESS OF SIZE, AS LONG AS THE CLOSET DOES NOT HAVE DOORS OR UNPROTECTED PENETRATIONS DIRECTLY INTO THE DWELLING UNIT.

- ### GENERAL NOTES:
- THE SPRINKLER SYSTEM DESIGNED AS SHOWN ON THESE DRAWINGS SHALL CONFORM TO NFPA 13D 2019, AND THE LOCAL FIRE DEPT.
 - ALL NEW EQUIPMENT TO BE UL/FM LISTED
 - CPVC PIPE TO BE SDR 135, ASTM F-442
 - CPVC FITTINGS TO BE SCD, 40, ASTM F-437
 - RESIDENTIAL SPRINKLERS SHALL BE SPACED PER PLAN AND HYDRAULIC CALCULATIONS.
 - PIPE HANGERS FOR CPVC TO BE DOUBLE FASTENER STRAP TYPE, MAXIMUM SPACING 6FT. ALL END HEADS SHALL BE HUNG 12" FROM HEAD.
 - ALL UNDERGROUND PIPING TO BE PROVIDED AND INSTALLED BY OTHERS.

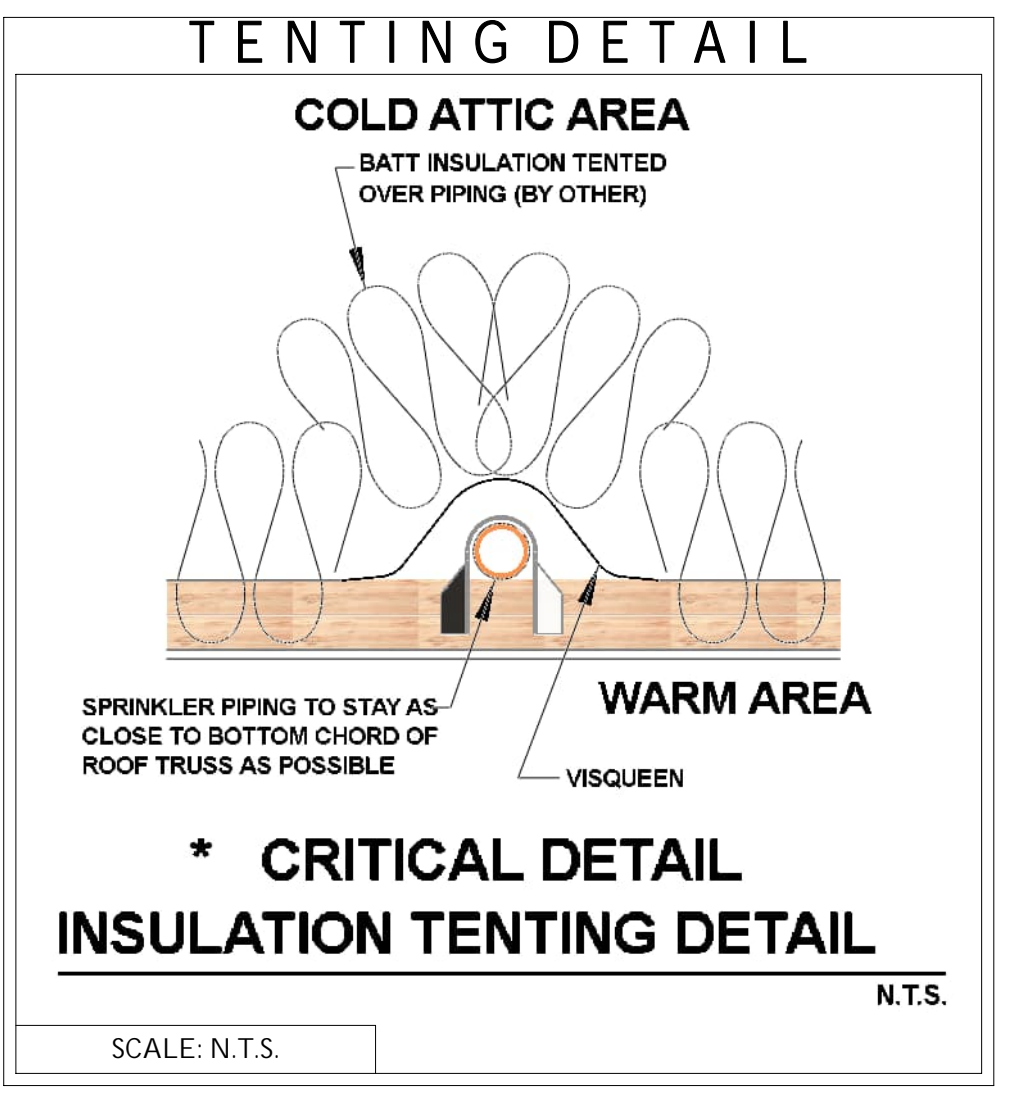
DETAIL PLAN



PIPE TYPES INFORMATION

PIPE TYPE	NPS	NOMINAL INSIDE DIA. (IN)
SCHEDULE 10	8"	8.249
	6"	6.357
	4"	4.310
	3"	3.334
	2"	2.205
EDDYFLOW	2 1/2"	2.705
	2"	2.203
	1 1/2"	1.728
	1 1/4"	1.530
	2"	2.123
EDDYTHREAD 40	1 1/2"	1.654
	1 1/4"	1.418
	1"	1.083
	2"	2.003
	1 1/2"	1.598
CPVC	1 1/4"	1.394
	1"	1.101

SCALE: N.T.S.



OBSTRUCTIONS TO RESIDENTIAL PENDENT SPRINKLERS

TABLE 8.2.5.3.2 POSITIONING OF SPRINKLERS	MAXIMUM ALLOWABLE DISTANCE OF DEFLECTOR ABOVE BOTTOM OF OBSTRUCTION (IN.) (B)
LESS THAN 1 FT	0
1 FT TO LESS THAN 1 FT 6 IN	1
1 FT 6 IN. TO LESS THAN 2 FT	1
2 FT TO LESS THAN 2 FT 6 IN.	1
2 FT 6 IN. TO LESS THAN 3 FT	1
3 FT TO LESS THAN 3 FT 6 IN.	3
3 FT 6 IN. TO LESS THAN 4 FT	3
4 FT TO LESS THAN 4 FT 6 IN.	5
4 FT 6 IN. TO LESS THAN 5 FT	7
5 FT TO LESS THAN 5 FT 6 IN.	7
5 FT 6 IN. TO LESS THAN 6 FT	9
6 FT TO LESS THAN 6 FT 6 IN.	7
6 FT 6 IN. TO LESS THAN 7 FT	11
7 FT AND GREATER	14

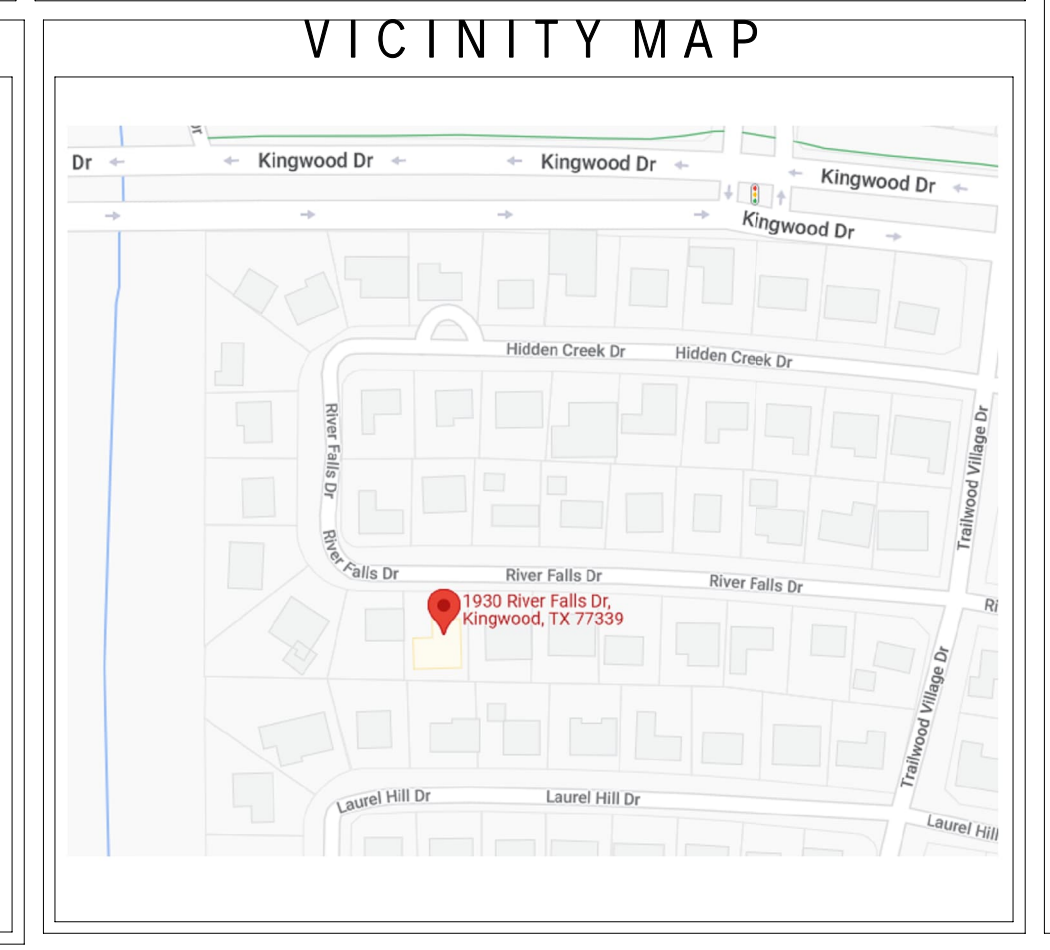
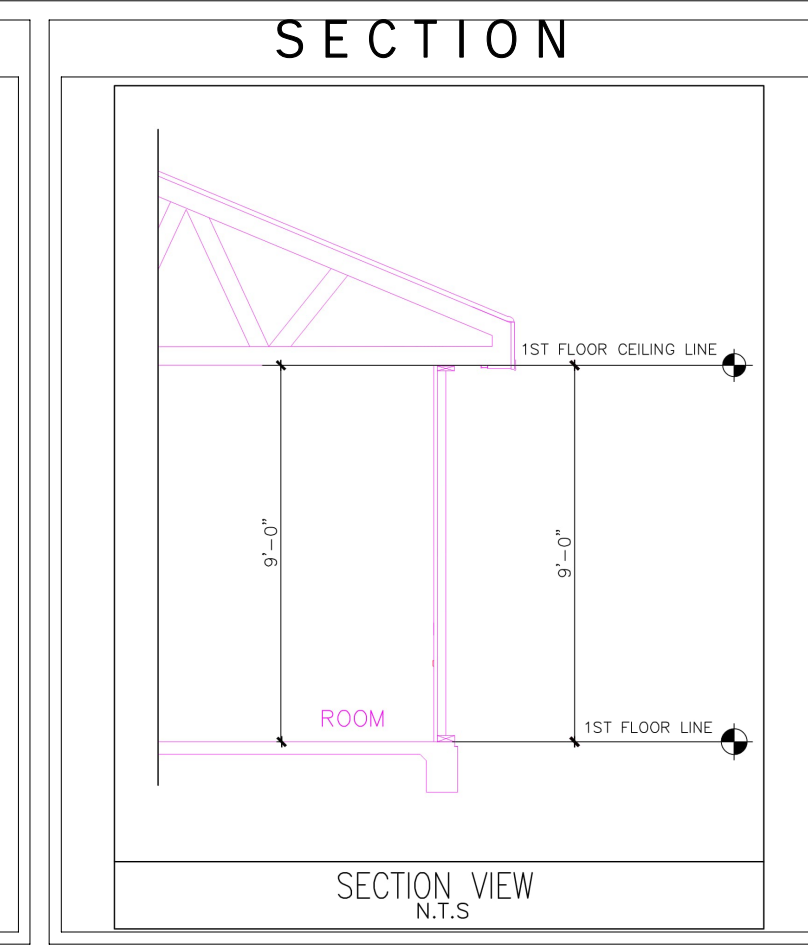
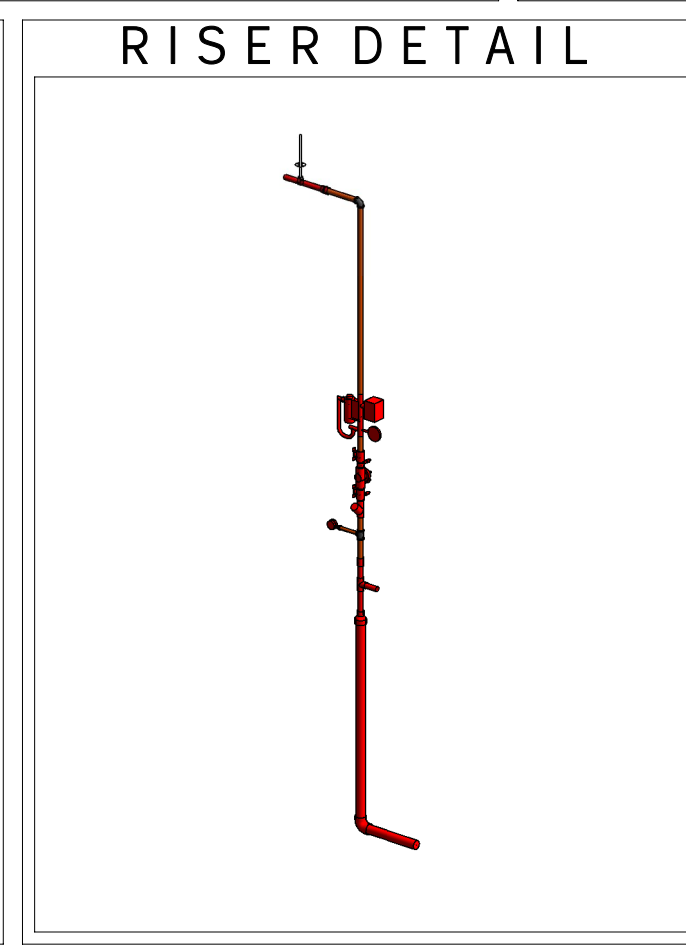
FOR SI UNITS, 1 IN. = 25.4 MM; 1 FT = 0.3048 M.
 NOTE: FOR (A) AND (B), REFER TO FIGURE 8.6.5.1.2 (A)

FIGURE 8.2.5.3.2 POSITIONING OF SPRINKLERS TO AVOID OBSTRUCTIONS TO DISCHARGE (SSU/SSP)

FIGURE 8.2.5.3.3 (A) OBSTRUCTIONS AGAINST WALLS (SSU/SSP).

SPRINKLER DIST. TO RESIDENTIAL HEAT SOURCES

HEAT SOURCE	MINIMUM DISTANCE FROM EDGE OF SOURCE TO:	
	ORDINARY TEMPERATURE SPRINKLER	INTERMEDIATE TEMPERATURE SPRINKLER
SIDE OF OPEN OR RECESSED FIREPLACE	36"	12"
FRONT OF RECESSED FIREPLACE	60"	36"
COAL- OR WOOD-BURNING STOVE	42"	12"
KITCHEN RANGE	18"	9"
WALL OVEN	18"	9"
HOT AIR FLUES	18"	9"
UNINSULATED HEAT DUCTS	18"	9"
UNINSULATED HOT WATER PIPES	12"	6"
SIDE OF CEILING- OR WALL-MOUNTED HOT AIR DIFFUSERS	24"	12"
FRONT OF WALL-MOUNTED HOT AIR DIFFUSERS	36"	36"
HOT WATER HEATER OF FURNACE	6"	3"
0W - 250W LIGHT FIXTURE	6"	3"
250W - 499W LIGHT FIXTURE	12"	6"



OBSTRUCTIONS TO RESIDENTIAL SIDEWALL SPRINKLERS

TABLE 8.2.5.4.2(A) POSITIONING OF SPRINKLERS TO AVOID OBSTRUCTIONS TO DISCHARGE (RESIDENTIAL SIDEWALL SPRINKLERS)	MAXIMUM ALLOWABLE DISTANCE OF DEFLECTOR ABOVE BOTTOM OF OBSTRUCTION (IN.) (B)
LESS THAN 8 FT	NOT ALLOWED
8 FT TO LESS THAN 10 FT	1
10 FT TO LESS THAN 11 FT	2
11 FT TO LESS THAN 12 FT	3
12 FT TO LESS THAN 13 FT	4
13 FT TO LESS THAN 14 FT	4
14 FT TO LESS THAN 15 FT	7
15 FT TO LESS THAN 16 FT	9
16 FT TO LESS THAN 17 FT	11
17 FT OR GREATER	14

NOTE: FOR (A) AND (B), REFER TO FIGURE 8.2.5.4.2(A)

FIGURE 8.2.5.4.2(A) POSITIONING OF SPRINKLERS TO AVOID OBSTRUCTIONS TO DISCHARGE (HSW).

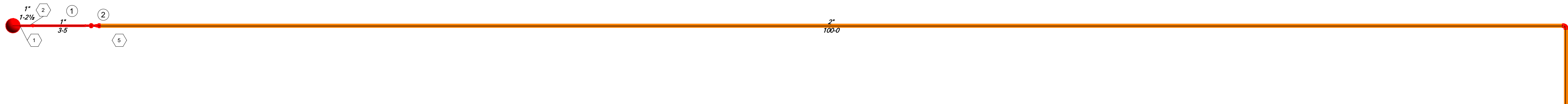
OBSTRUCTIONS TO RESIDENTIAL SIDEWALL SPRINKLERS

TABLE 8.2.5.4.2(B) POSITIONING OF SPRINKLERS TO AVOID OBSTRUCTIONS TO DISCHARGE (RESIDENTIAL SIDEWALL SPRINKLERS)	MAXIMUM ALLOWABLE DISTANCE OF DEFLECTOR ABOVE BOTTOM OF OBSTRUCTION (IN.) (B)
LESS THAN 1 FT 6 IN	0
1 FT 6 IN TO LESS THAN 3 FT	1
3 FT TO LESS THAN 4 FT 6 IN	3
4 FT 6 IN TO LESS THAN 6 FT	5
6 FT TO LESS THAN 6 FT 6 IN	7
6 FT 6 IN TO LESS THAN 7 FT	11
7 FT TO LESS THAN 7 FT 6 IN	14

NOTE: FOR (A) AND (B), REFER TO FIGURE 8.2.5.4.2(B)

FIGURE 8.2.5.4.2(B) POSITIONING OF SPRINKLERS TO AVOID OBSTRUCTIONS TO DISCHARGE (HSW).

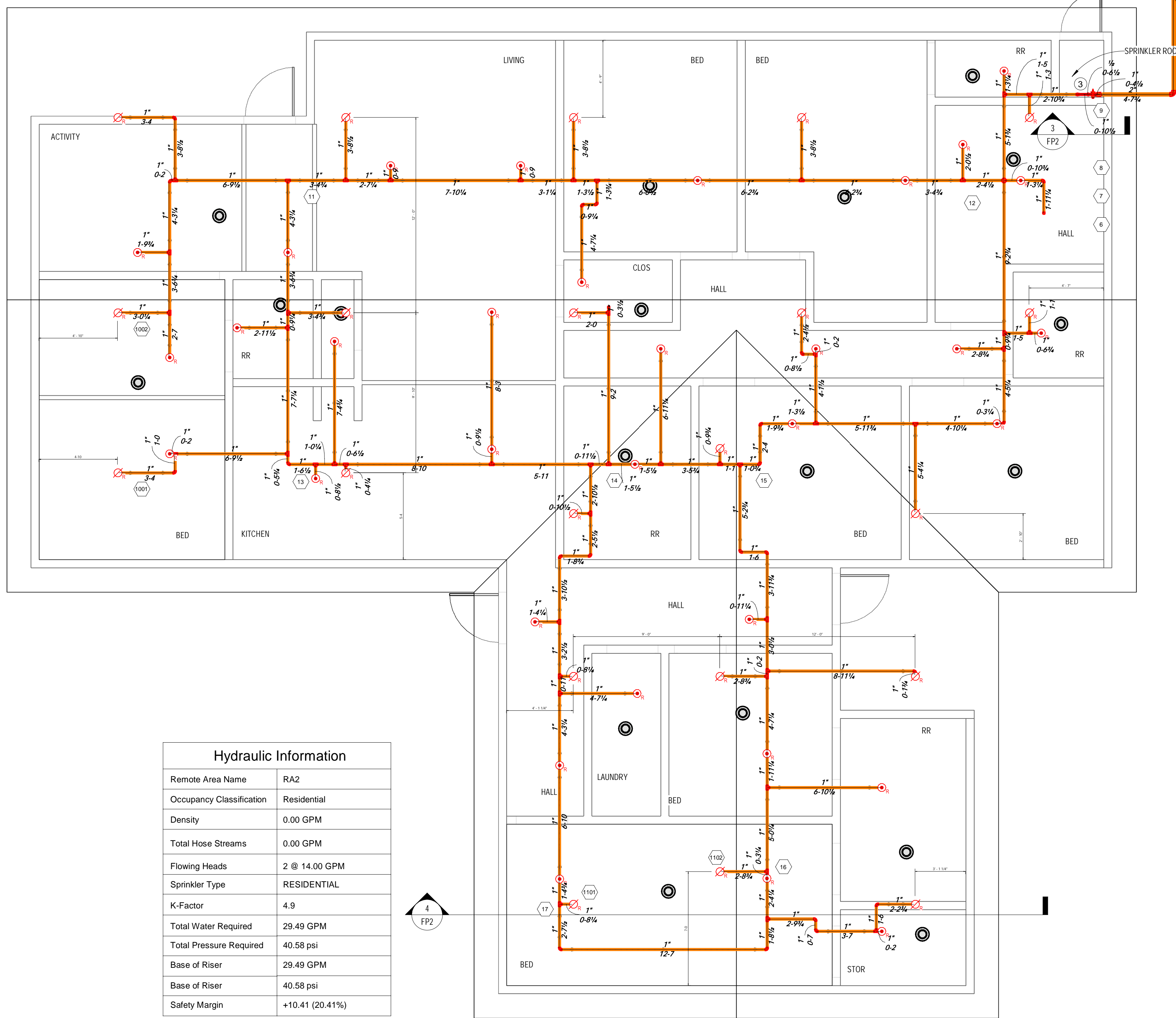
<h3>STANDARD SYMBOLS</h3>	<h3>STANDARD SYMBOLS</h3>	<h3>STANDARD SPRINKLER SYMBOLS</h3>	<h3>PLAN REVIEW STAMP</h3> <p>I HAVE REVIEWED THESE PLANS AND CERTIFY THAT THEY COMPLY WITH THE ADOPTED NFPA STANDARDS</p> <p>NEW AGE FIRE SPRINKLERS, LLC</p> <p>281-591-6345 SCR-G-2404044</p> <p>RME SIGNATURE PRINTED RME NAME: GERALD EBELING</p> <p>RME - G-1828200 DATE: 7/11/2022 7:11:45 AM</p> <p><input type="checkbox"/> AS-BUILT <input checked="" type="checkbox"/> SUBMITTAL <input type="checkbox"/> OTHER</p>	<h3>NOTICE</h3> <p>IT IS THE OWNER'S RESPONSIBILITY TO PROVIDE HEAT ADEQUATE TO PREVENT FREEZING THROUGHOUT THE PIPE SPRINKLER SYSTEM AREAS AND ALSO IN ENCLOSURES FOR DRY PIPE, BELIEVE, AND OTHER TYPES OF VALVES CONTROLLING WATER SUPPLIES TO SPRINKLER SYSTEMS.</p> <p>UNDERGROUND AND OVERHEAD TESTS TO BE WITNESSED BY:</p> <p>CONTRACT WITH: _____ ADDRESS: _____ PHONE NUMBER: _____ FAX: _____</p>	<h3>REVISIONS</h3> <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION				<h3>FIRE SPRINKLER DESIGNS BY:</h3>	<h3>FIRE SPRINKLER CONTRACTOR:</h3> <p>NEW AGE FIRE SPRINKLERS, LLC 1200 Smith Street, Suite 1600 Houston, TX 77002</p> <p>JOB NO. 1930RF DATE 11/11/2022 7:11:45 AM DESIGNER GERALD EBELING, SET APPROVED _____ SCALE AS NOTED</p>	<h3>COVER & DETAIL PLAN</h3> <p>FP1</p> <p>1 OF 2</p>
NO.	DATE	DESCRIPTION												



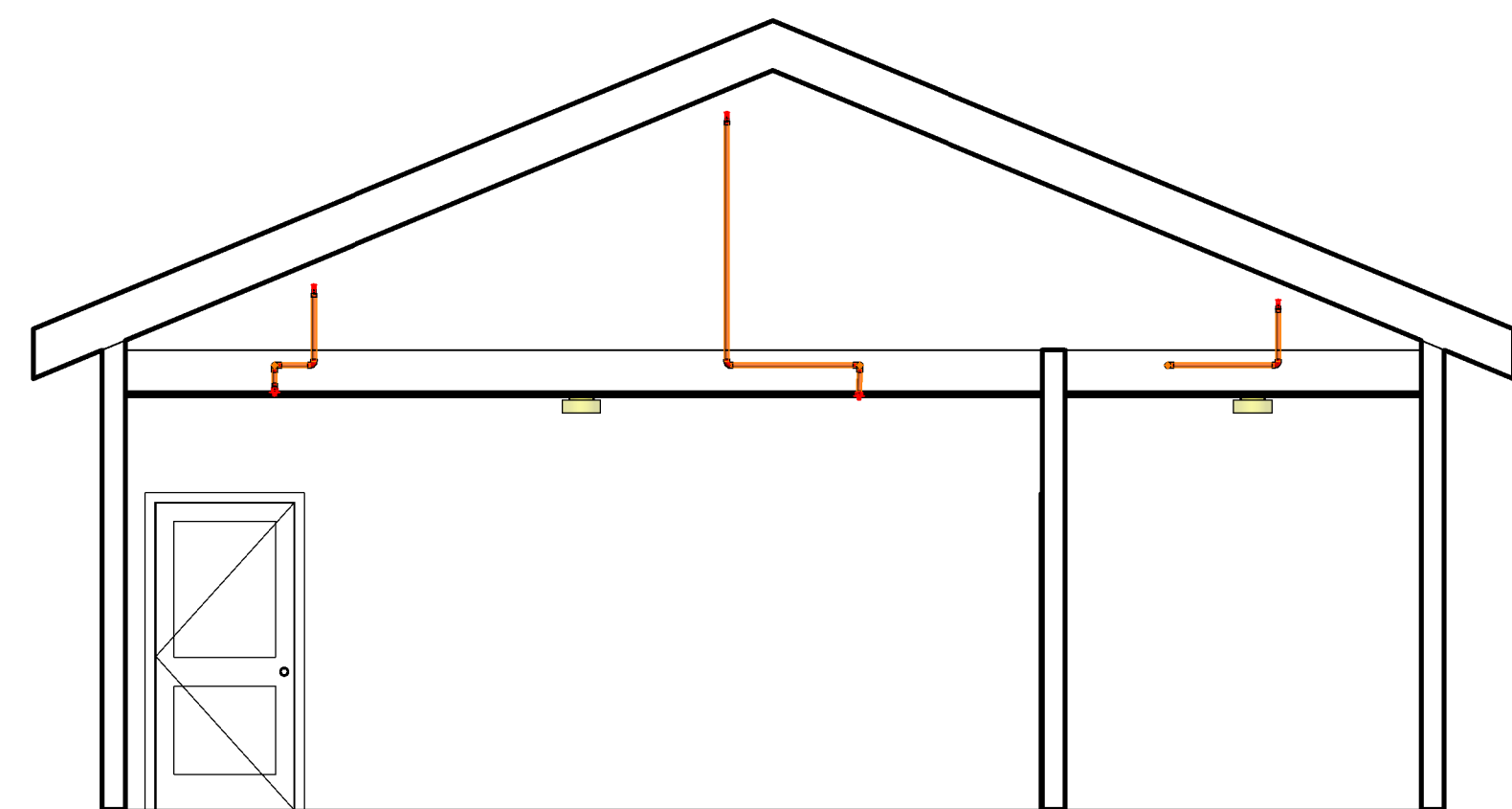
Supply Information	
Static Pressure	51.00 psi
Residual Pressure	47.00 psi
Flow	902.00 GPM
Outside Hose Flow	0.00 GPM
Conducted By	
Witnessed By	
Test Date	
Test Time	
Location	
Hydrant Numbers	
Hydrant Elevation	

UG NOTES	
Number	Text
1	1" COPPER SUPPLY
2	1" WATER METER
3	EXISTING 1" RISER
#	LEGEND ID

Hydraulic Information	
Remote Area Name	RA1
Occupancy Classification	Residential
Density	0.00 GPM
Total Hose Streams	0.00 GPM
Flowing Heads	2 @ 14.00 GPM
Sprinkler Type	RESIDENTIAL
K-Factor	4.9
Total Water Required	29.66 GPM
Total Pressure Required	36.05 psi
Base of Riser	29.66 GPM
Base of Riser	36.05 psi
Safety Margin	+14.95 (29.31%)



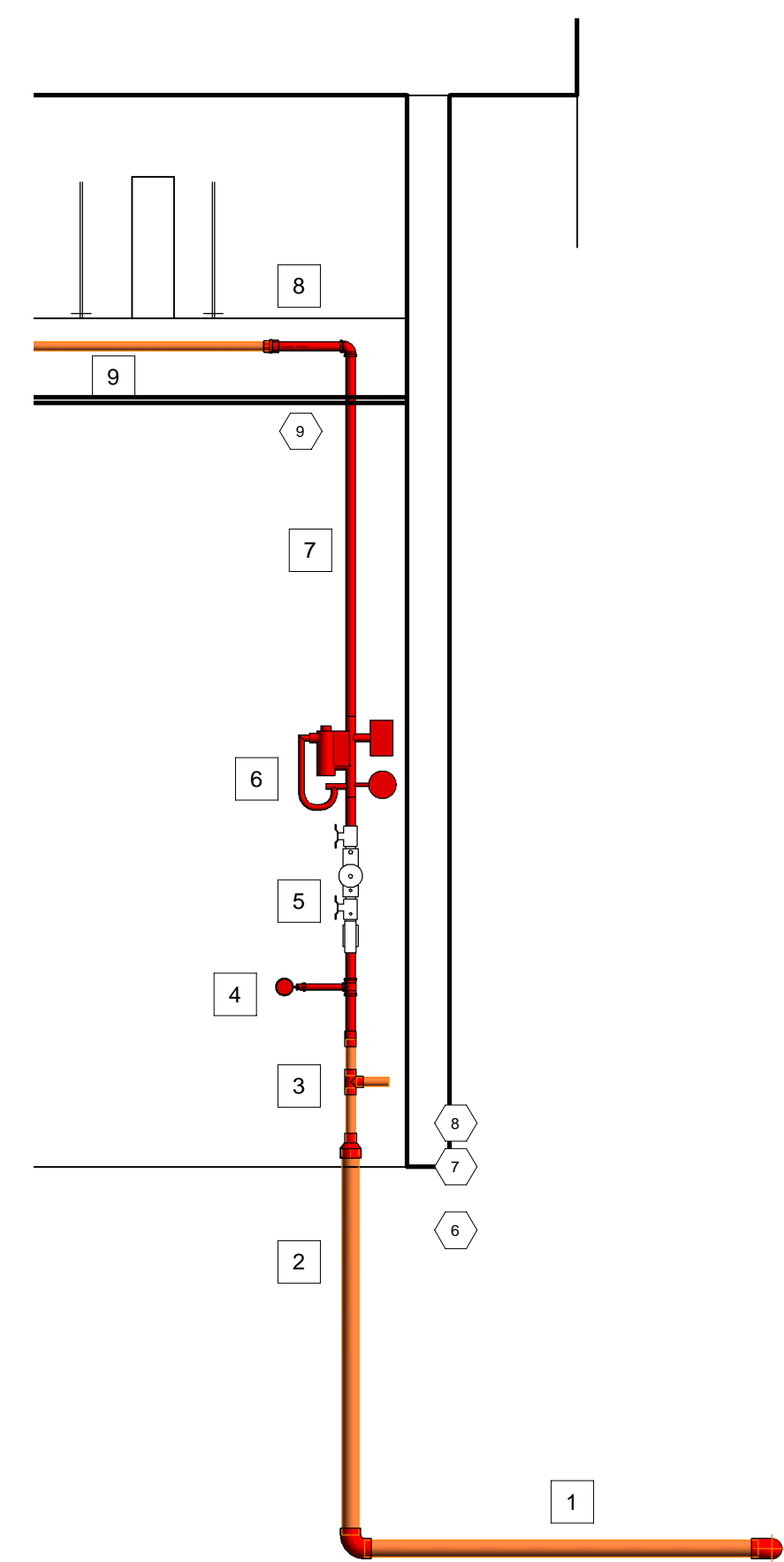
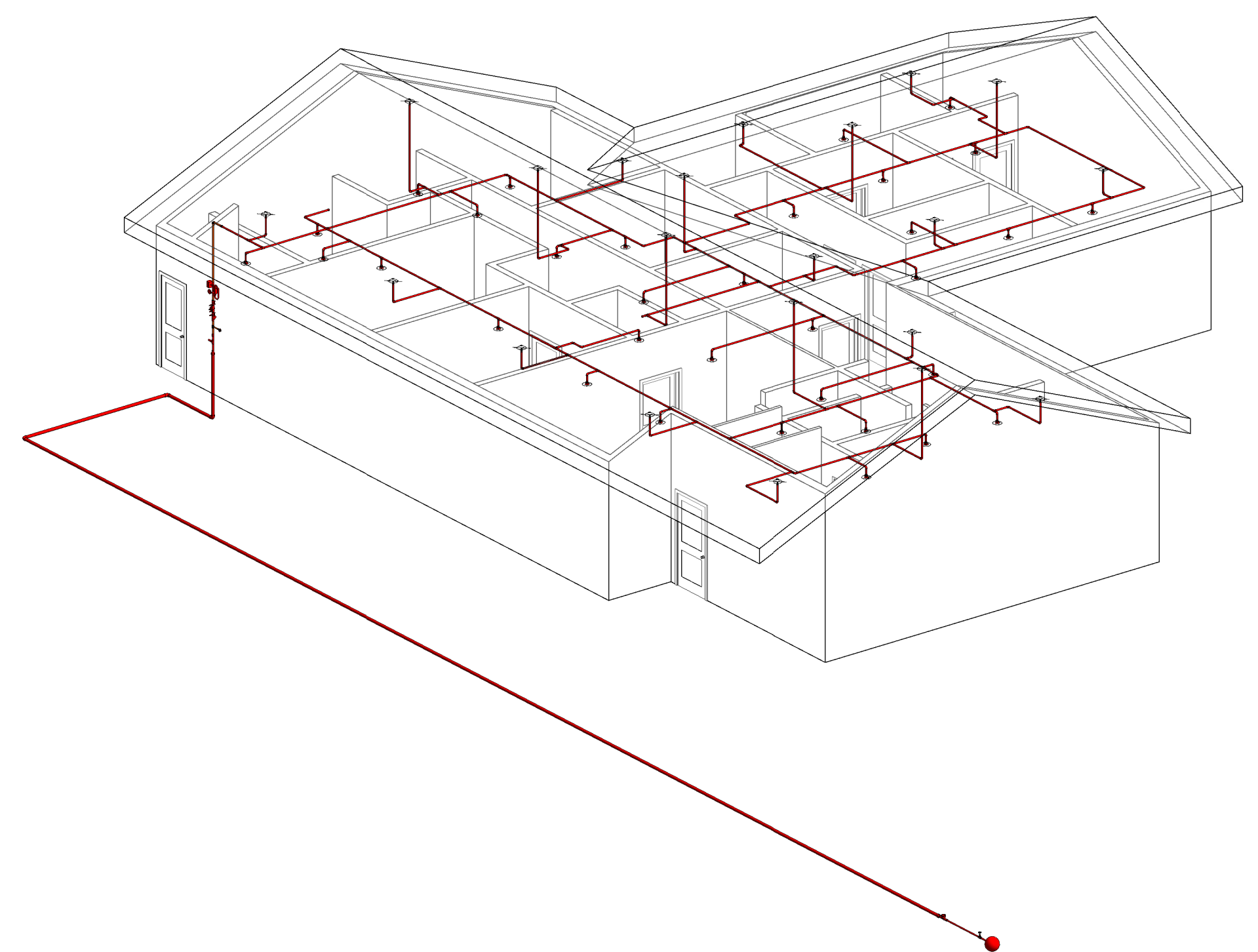
Hydraulic Information	
Remote Area Name	RA2
Occupancy Classification	Residential
Density	0.00 GPM
Total Hose Streams	0.00 GPM
Flowing Heads	2 @ 14.00 GPM
Sprinkler Type	RESIDENTIAL
K-Factor	4.9
Total Water Required	29.49 GPM
Total Pressure Required	40.58 psi
Base of Riser	29.49 GPM
Base of Riser	40.58 psi
Safety Margin	+10.41 (20.41%)



4 BUILDING SECTION
1/4" = 1'-0"

1 Level 1
1/4" = 1'-0"

2 3D ISO DETAIL



3 EXISTING RISER DETAIL
1/2" = 1'-0"

SPRINKLERS STORES LIST

SYMBOL	COUNT	THREAD SIZE	FINISH	DESCRIPTION	TEMP	K-FACTOR	RTI	SIN	MANUF
R	33	1/2"	WHITE	RESIDENTIAL PENDANT SPRINKLER	155 °F	4.9	QR	NA	EXISTING
R	21	1/2"	BRASS	RESIDENTIAL UPRIGHT SPRINKLER	175 °F	4.9	QR	VK467	VIKING

Grand total: 54

SPRINKLER RISER LEGEND	
Number	Text
1	2" CPVC SUPPLY LINE - EXISTING
2	2" CPVC STUB-IN
3	DOMESTIC CONNECTION (BY OTHERS)
4	PSI GAUGE - SUPPLY SIDE
5	1" WATTS 007 BACKFLOW
6	RES-RISER
7	1" BLACK STEEL RISER
8	STEEL TO CPVC ADAPTER
9	EXISTING 1" CPVC PIPING SYSTEM
#	LEGEND ID

STANDARD SYMBOLS	STANDARD SYMBOLS	STANDARD SPRINKLER SYMBOLS	PLAN REVIEW STAMP
# - HYD NODE POINT	GLOBE UMC RISER	RESIDENTIAL PENDENT	I HAVE REVIEWED THESE PLANS AND CERTIFY THAT THEY COMPLY WITH THE ADOPTED NFPA STANDARDS. NEW AGE FIRE SPRINKLERS, LLC 281-591-6345 SCR-G-2404044 RME SIGNATURE PRINTED RME NAME: GERALD EBELING RME - G-182800 DATE: 11/11/2022 7:18:38 AM <input type="checkbox"/> AS-BUILT <input checked="" type="checkbox"/> SUBMITTAL <input type="checkbox"/> OTHER
FIRE DEPT. CONNECTION	BUTTERFLY VALVE	EXTENDED COVERAGE PENDENT	
CPVC FP PIPE	CHECK VALVE	UPRIGHT	
STEEL FP PIPING	O.S.&Y. GATE VALVE	SEMI RECESSED PENDENT	
UNDERGROUND FP PIPING	BACKFLOW PREVENTER	CONCEALED PENDENT	NOTICE IT IS THE OWNER'S RESPONSIBILITY TO PROVIDE HEAT AND QUOTE TO PREVENT FREEZING THROUGHOUT WET PIPE SPRINKLER SYSTEM AREAS, AND ALSO IN ENCLOSURES FOR DRY PIPE, DELUGE AND OTHER TYPES OF VALVES CONTROLLING WATER SUPPLIES TO SPRINKLER SYSTEMS. UNDERGROUND AND OVERHEAD TESTS TO BE WITNESSED BY: CONTRACT WITH: _____ ADDRESS: _____ PHONE NUMBER: _____ FAX: _____
		DRY PENDENT	
		HORIZONTAL SIDEWALL	
		VERTICAL SIDEWALL	

REVISIONS	DATE

FIRE SPRINKLER DESIGNS BY:	FIRE SPRINKLER CONTRACTOR:
3D FIRE DESIGN, LLC GERALD W. EBELING, SET NICET LEVEL IV # 105930	NEW AGE FIRE SPRINKLERS, LLC 1200 Smith Street, Suite 1600 Houston, TX 77002 LICENSE NO.: _____ Heritage Retreat Care Home 1930 River Falls Drive Kingwood, TX 77339

JOB NO.	DATE	DESIGNER	APPROVED	SCALE
1930RF	11/11/2022 7:18:38 AM	GERALD EBELING, SET		AS NOTED

COVER & DETAIL PLAN
FP2 2 OF 2