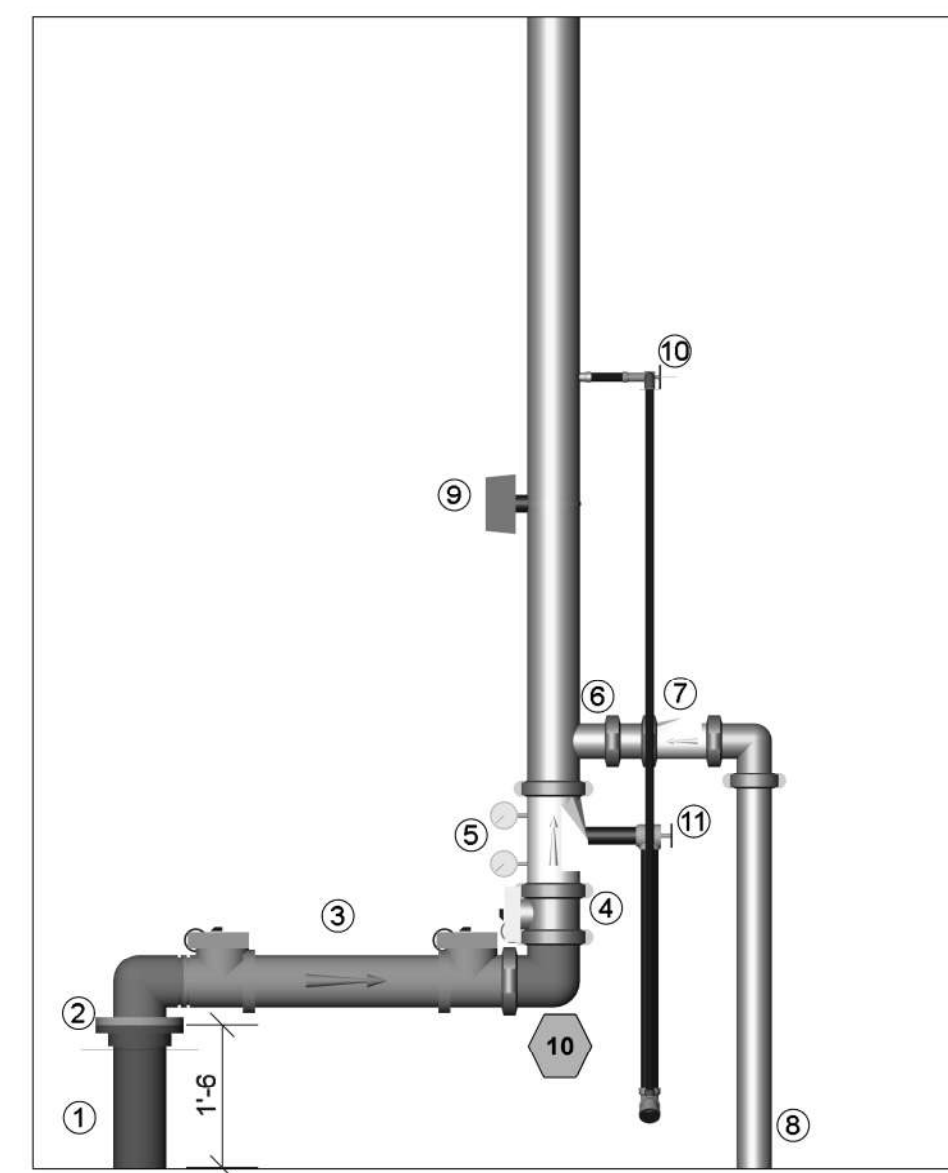


# GENERAL NOTES:

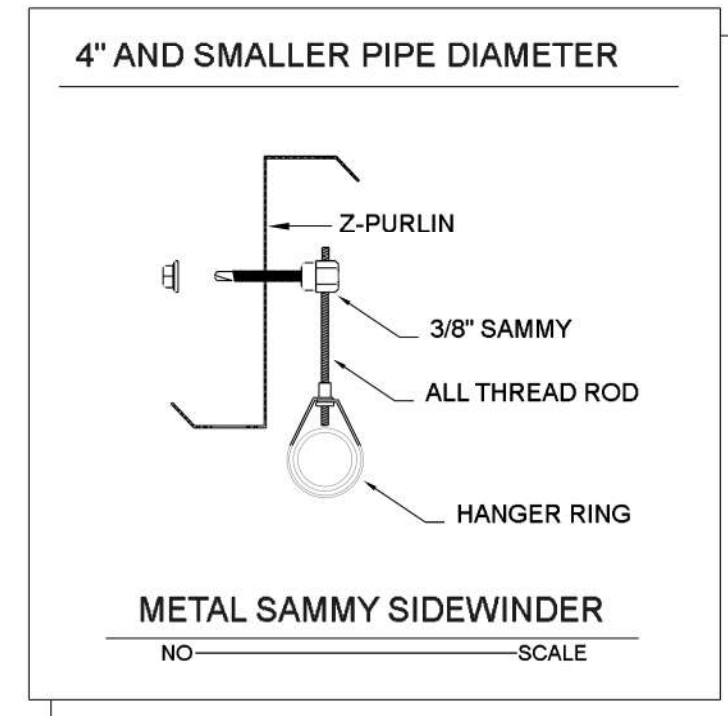
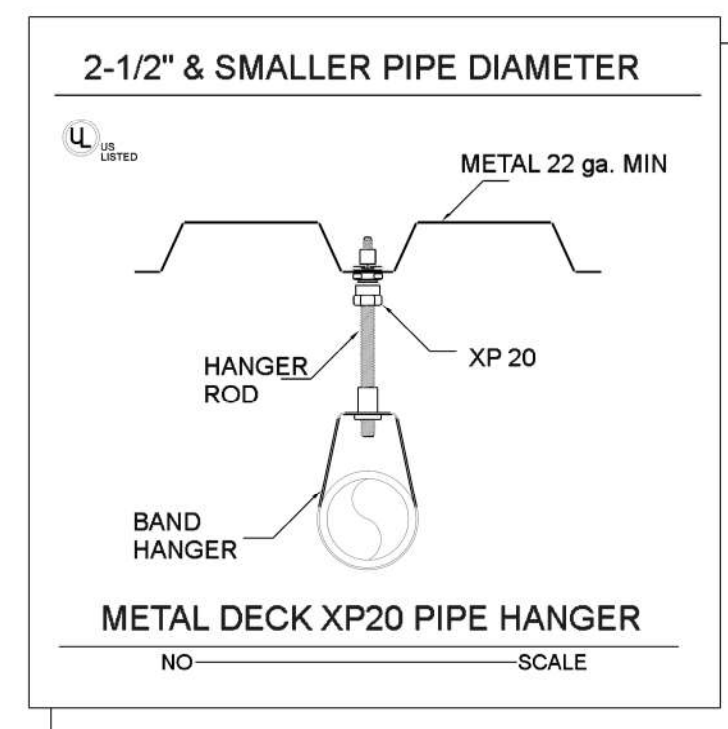
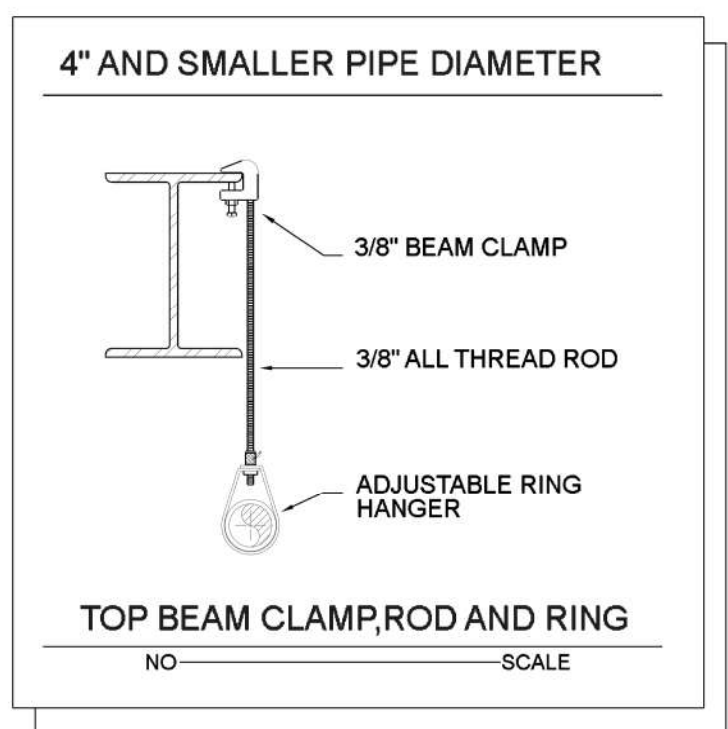
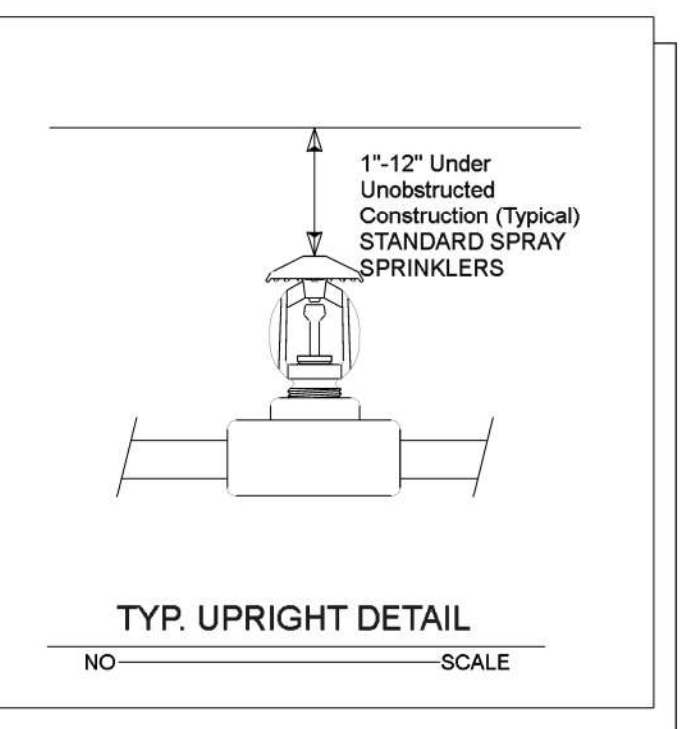
- MATERIALS AND INSTALLATION SHALL COMPLY WITH APPLICABLE NFPA CODES (NFPA 13 2013 EDITION), STATE BUILDING CODE, LOCAL AUTHORITY HAVING JURISDICTION, AND INSURANCE UNDERWRITER'S REQUIREMENTS.
- ALL MATERIALS AND EQUIPMENT SHALL BE NEW, UL LISTED FOR THE INTENDED USE AND SHALL BE INSTALLED IN FULL COMPLIANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- ALL NEW SPRINKLER PIPE 1" AND SMALLER IS SCHEDULE-40 BLACK STEEL WITH THREADED ENDS AND FITTINGS. ALL NEW SPRINKLER PIPE 1 1/4" AND LARGER IS SCHEDULE-10 BLACK STEEL WITH GROOVED ENDS AND FITTINGS.
- SPRINKLER HEAD SPACING IS BASED ON THE NFPA STANDARDS FOR ORDINARY HAZARD OCCUPANCIES ALLOWING A MAXIMUM HEAD SPACING OF 130 S.F. PER HEAD.
- LOCATIONS OF PIPING AS SHOWN ON THE DRAWINGS ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD.
- SCOPE OF WORK IS TO INSTALL A NEW ONE RISER SPRINKLER SYSTEM FOR NEW SHELL BUILDING.
- THE WATER TEST INFORMATION HAS BEEN PROVIDED BY J&D SPRINKLER DATED 2/6/2024 INDICATES THE FOLLOWING...  
 STATIC: 52 PSI  
 RESIDUAL: 36 PSI  
 FLOW: 840 GPM

## SYMBOLS:

- DENOTES A HYDRAULIC CALCULATION POINT OF REFERENCE
- DENOTES A HYDRAULIC REMOTE AREA
- DENOTES NEW SPRINKLER PIPE
- DENOTES UNDERGROUND PIPE
- DENOTES PIPE CENTERLINE ELEVATION AFF
- DENOTES PIPE CENTERLINE BELOW TOP OF STEEL



- ### RISER LEGEND
- 6" RUN-IN BY OTHERS
  - 6" GRV-SPLIT FLANGE
  - 6" WILKINS 375ASTDA BACKFLOW
  - 6" BUTTERFLY CONTROL VALVE W/TAMPER
  - VIKING EZ RISER CHECK VALVE
  - 4" GRV OUTLET
  - 4" SWING CHECK VALVE
  - OUT TO YARD FDC
  - FLOW SWITCH
  - TEST & DRAIN ASSMBLY
  - 2" MAIN DRAIN



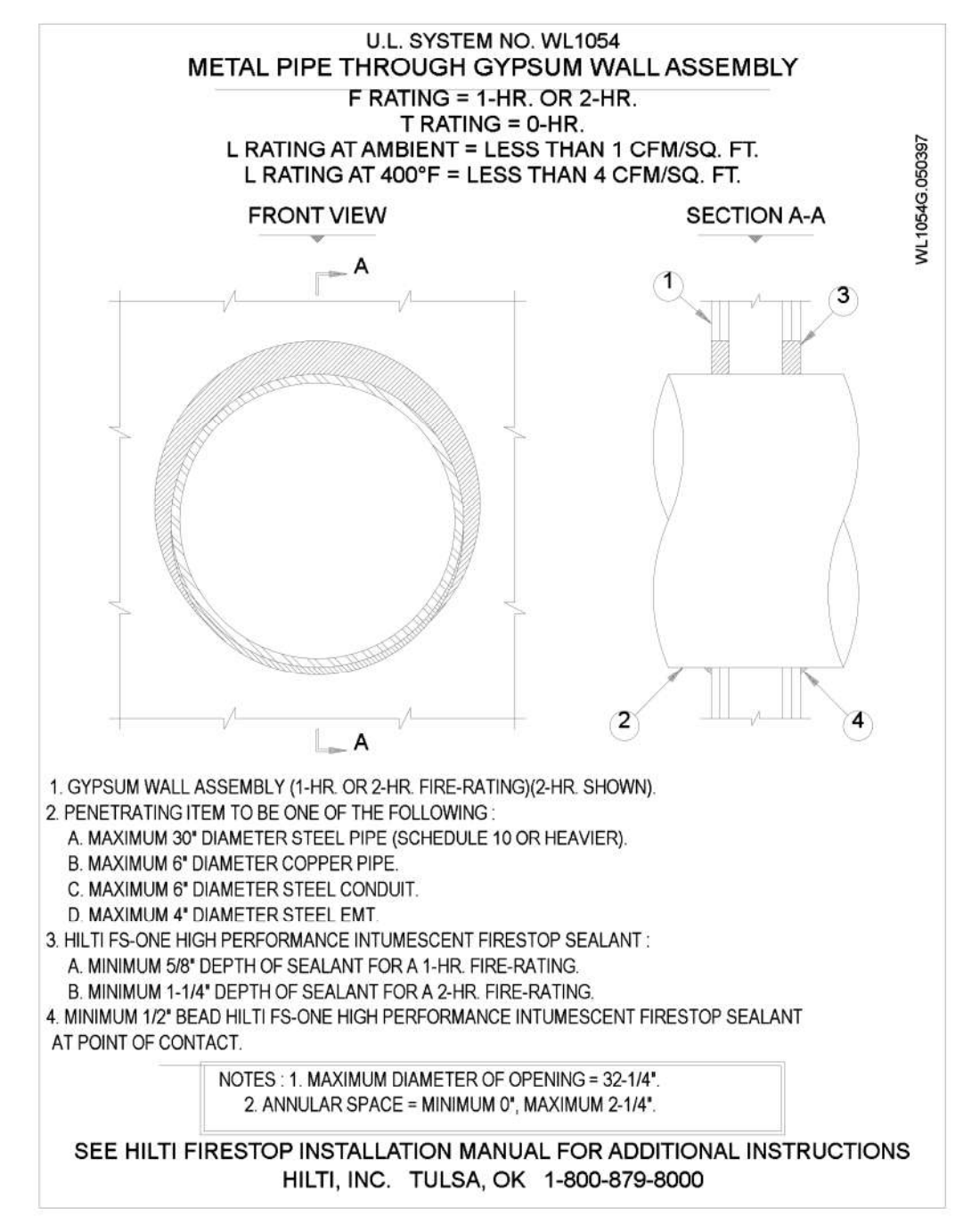
### HANGER INSTALLATION REQUIREMENTS

NOMINAL PIPE SIZE	MAXIMUM DISTANCE BETWEEN HANGERS									
	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	6"	
BLAZEMASTER CPVC	5' 6"	6' 0"	6' 6"	7' 0"	8' 0"	9' 0"	10' 0"	N/A	N/A	
THREADABLE LIGHTWALL	N/A	12' 0"	12' 0"	12' 0"	12' 0"	12' 0"	12' 0"	N/A	N/A	
STEEL PIPE (10' 40')	N/A	12' 0"	12' 0"	15' 0"	15' 0"	15' 0"	15' 0"	15' 0"	15' 0"	

100 PSI STATIC PRESSURE ON SYSTEM REQUIRES UP-LIFT RESTRAINT WITHIN 12 INCHES HORIZONTALLY OF HEAD FOR ARM-OVERS AND END OF BRANCH LINE  
 THE UNSUPPORTED LENGTH BETWEEN THE END SPRINKLER AND THE LAST HANGER ON THE LINE SHALL NOT EXCEED 36' FOR 1" PIPE, 48' FOR 1 1/4" PIPE AND 60' FOR 1 1/2" PIPE OR LARGER  
 THE CUMULATIVE HORIZONTAL LENGTH OF AN UNSUPPORTED ARM/OVER TO A SPRINKLER, SPRINKLER DROP, OR SPRING-UP SHALL NOT EXCEED 24'

### TRAPEZE INSTALLATION REQUIREMENTS

SPAN OF TRAPEZE (Schedule 10)	NOMINAL PIPE SIZE SUPPORTED							
	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	6"
1 FT. 6 IN.	1"	1"	1"	1"	1"	1"	1-1/4"	1-1/4"
2 FT. 0 IN.	1"	1"	1"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	2"
3 FT. 0 IN.	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/2"	1-1/2"	1-1/2"	2"
4 FT. 0 IN.	1-1/2"	1-1/2"	1-1/2"	1-1/2"	2"	2"	2"	2-1/2"
5 FT. 0 IN.	2"	2"	2"	2"	2"	2"	2-1/2"	2-1/2"
6 FT. 0 IN.	2"	2"	2"	2"	2"	2-1/2"	2-1/2"	3"
7 FT. 0 IN.	2"	2"	2"	2-1/2"	2-1/2"	2-1/2"	2-1/2"	3"
8 FT. 0 IN.	2-1/2"	2-1/2"	2-1/2"	2-1/2"	2-1/2"	2-1/2"	2-1/2"	3"
9 FT. 0 IN.	2-1/2"	2-1/2"	2-1/2"	2-1/2"	2-1/2"	2-1/2"	3"	4"
10 FT. 0 IN.	2-1/2"	2-1/2"	2-1/2"	2-1/2"	2-1/2"	3"	3"	4"



## Sprinkler Design Data

Project Name:	HARBOR FREIGHT TOOLS	System:	WET
Project Street Address:	46 SHRIJI LN, ERWIN NC	Sys. Sq. Ft.:	15,632
Suite:	-	Floor#:	-
Designed By:	J&D SPRINKLER CO	Phone:	919-553-2356
Occupancy:	MERCHANTILE	Hazard:	ORDINARY GRP II
		Ceiling Height:	VARIES
		Total Bldg. Hgt.:	22'-0

## Design Summary

Design Method	Design Area #	Location	Type of System	Hazard Class	Criteria From	Design Area	Sprinkler Spacing	Density	K-factor	Hose Allowance	# Design Sprinklers	Special Application Spk.	Requirement @ BASE	G.P.M. Req'd	P.S.I. Req'd	Requirement @ TEST	GPM Required	PSI Required	Safety factor @ Test	Dry Sys. Volume (gal)
CALCULATED	1	-	WET	ORDINARY GRP II	NFPA13 2013 ED	1500 S.F.	130 S.F. MAX	.20	5.6	250 GPM	13	-		329.08	30.630		579.08	41.467	2.493	-

## Water Supply Information

Tested by	J&D SPRINKLER CO	Date/Time	2/6/2024 @ 1:45PM	Pressure Hydrant	-
Hydrant Elevation	-	Flow Hydrant # 1	-	Flow Hydrant #2	-
Static (PSI)	52	Residual (PSI)	36	Flow (gpm)	840

Copy of Water Test Data Included with Calculation is required

HARBOR FREIGHT TOOLS  
 46 SHRIJI LN  
 ERWIN, NC

J & D SPRINKLER CO. INC.  
 315 W. MAIN ST., CLAYTON, NC 27520  
 PHONE: (919)553-2356 FAX: (919) 359-0622

SHEET TITLE:  
 NOTES/DETAILS

This fire sprinkler planning and design drawing has been prepared by J & D Sprinkler Co. as a licensed fire sprinkler contractor under Article 2 of Chapter 87 of the General Statutes for a & D Sprinkler's exclusive work performed in reliance on this drawing pursuant to G.S. § 55B-15(a)(2). Installation work or any other work on this drawing or any copy thereof is strictly prohibited.  
 c. 2013 J & D Sprinkler Co., Inc.

J&D SPRINKLER CO. INC.  
 DANA GRAHAM  
 NC # 16269FS CERT # 71075  
 NICET LEVEL III  
 JASON GRAHAM  
 NC # 16269FS CERT # 121842  
 NICET LEVEL III

REVISION:  
 NO. DATE

Date:  
 4/24/2024

Scale:  
 1/8" = 1'-0"

Job Number:  
 F24084

Drawn By:  
 MWL

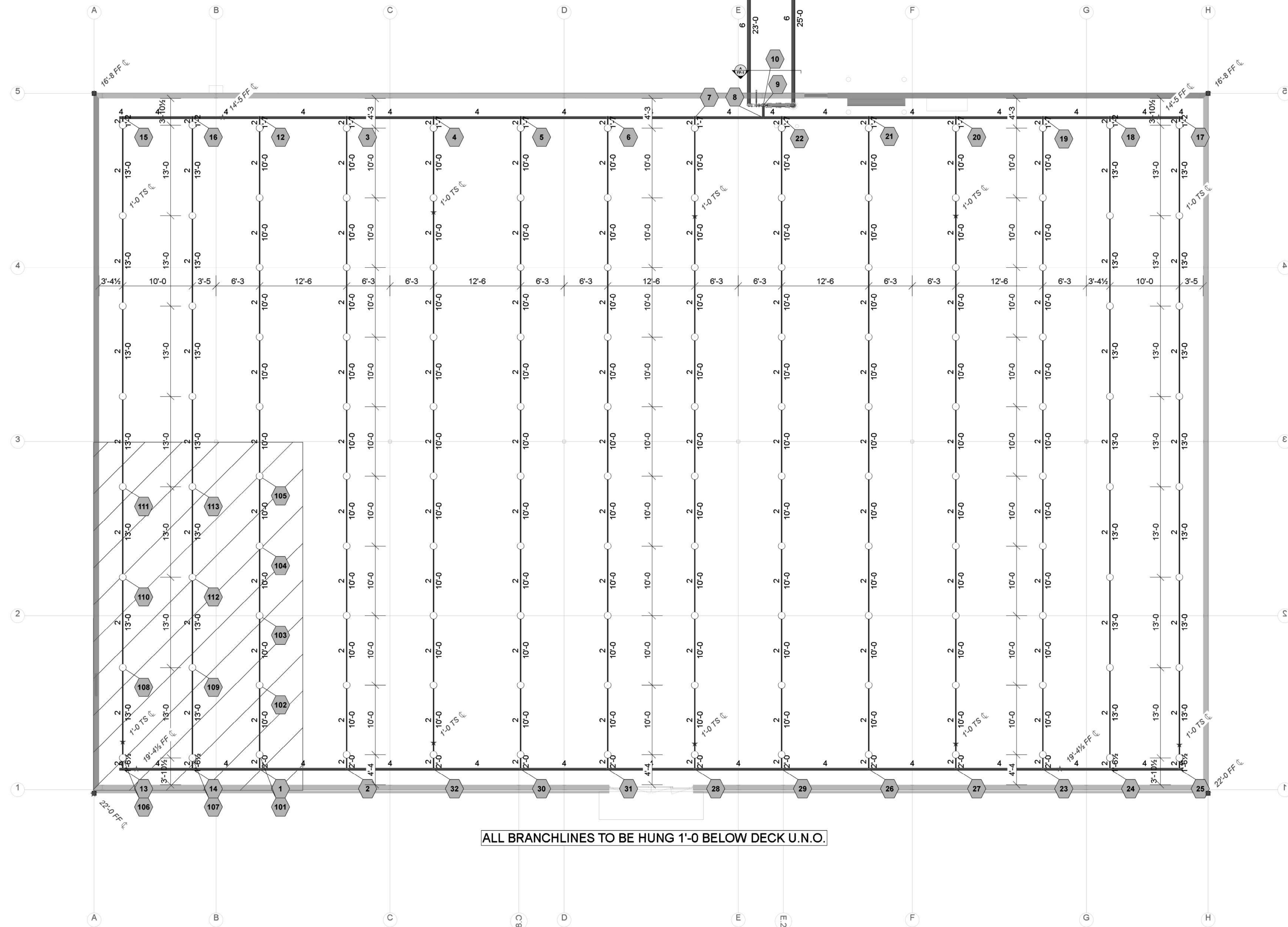
Sheet Number  
 FP-1

Supply Flow Test Data	
Test Conducted By	J&D SPRINKLER CO
Test Witnessed By	FARRIN DUNN/TRAVIS CURRY
Date of Test	2/6/2024
Time of Test	1:45PM
Location	46 SHRIJI LN
Static Pressure	52.000
Residual Pressure:	36.000
Flow	840.00

**SYMBOLS:**

- XX DENOTES A HYDRAULIC CALCULATION POINT OF REFERENCE
- DENOTES A HYDRAULIC REMOTE AREA
- DENOTES NEW SPRINKLER PIPE
- - - DENOTES UNDERGROUND PIPE
- \*'-0" FF Ⓢ DENOTES PIPE CENTERLINE ELEVATION AFF
- \*'-0" TS Ⓢ DENOTES PIPE CENTERLINE BELOW TOP OF STEEL

NEW SUPPLY TAP 11  
 FDC (BY OTHERS) 6 145'-0"  
 138'-7"



ALL BRANCHLINES TO BE HUNG 1'-0" BELOW DECK U.N.O.

Hydraulic Information	
Remote Area 1	
OCCUPANCY CLASSIFICATION	Ordinary Group II
DENSITY (gpm/ft <sup>2</sup> )	0.20 for 1500ft <sup>2</sup> (Actual 1502ft <sup>2</sup> )
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	13
K-FACTOR	5.6
TOTAL WATER REQUIRED	579.08
TOTAL PRESSURE REQUIRED	41.467
BASE OF RISER (gpm)	329.08
BASE OF RISER (psi)	30.630
SAFETY MARGIN (psi)	+2.493 (5.7%)
Ordinary Group II=0.20gpm/ft <sup>2</sup> for 1502ft <sup>2</sup>	

Sprinkler Legend											
Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Note
○	Victaulic	V2704	FL-QR	132	5.6	Upright	1/2"	Quick	Brass	200°F	
				Total =	132						

Plan North  
 PIPING PLAN  
 1/8"=1'-0"

HARBOR FREIGHT TOOLS

46 SHRIJI LN  
 ERWIN, NC

**J & D SPRINKLER CO. INC.**  
 315 W. MAIN ST., CLAYTON, NC 27520  
 PHONE: (919)553-2356 FAX: (919) 359-0622

SHEET TITLE:  
 PIPING PLAN

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DANA GRAHAM

NC # 16269FS CERT # 71075  
 NICET LEVEL III

JASON GRAHAM

NC # 15269FS CERT # 121842  
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Sheet Number  
 FP-2