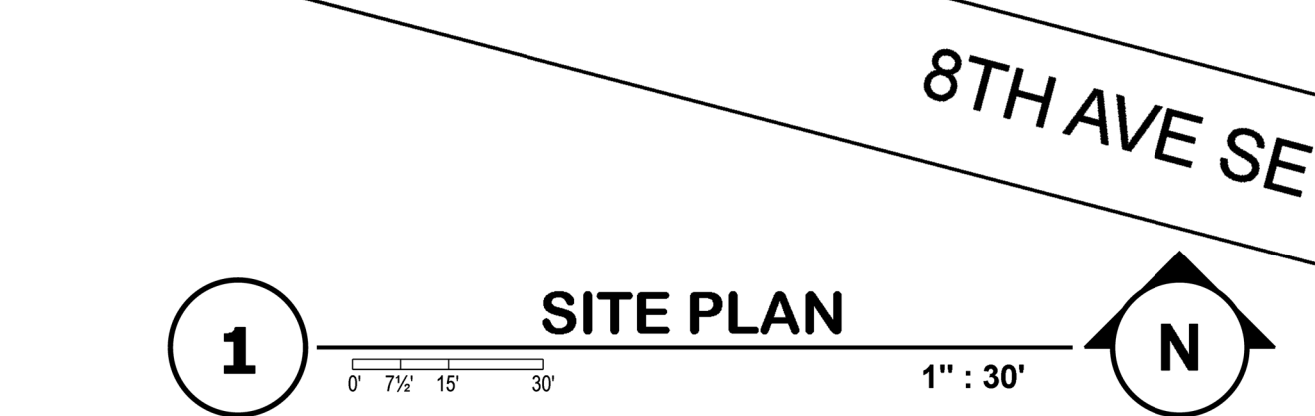


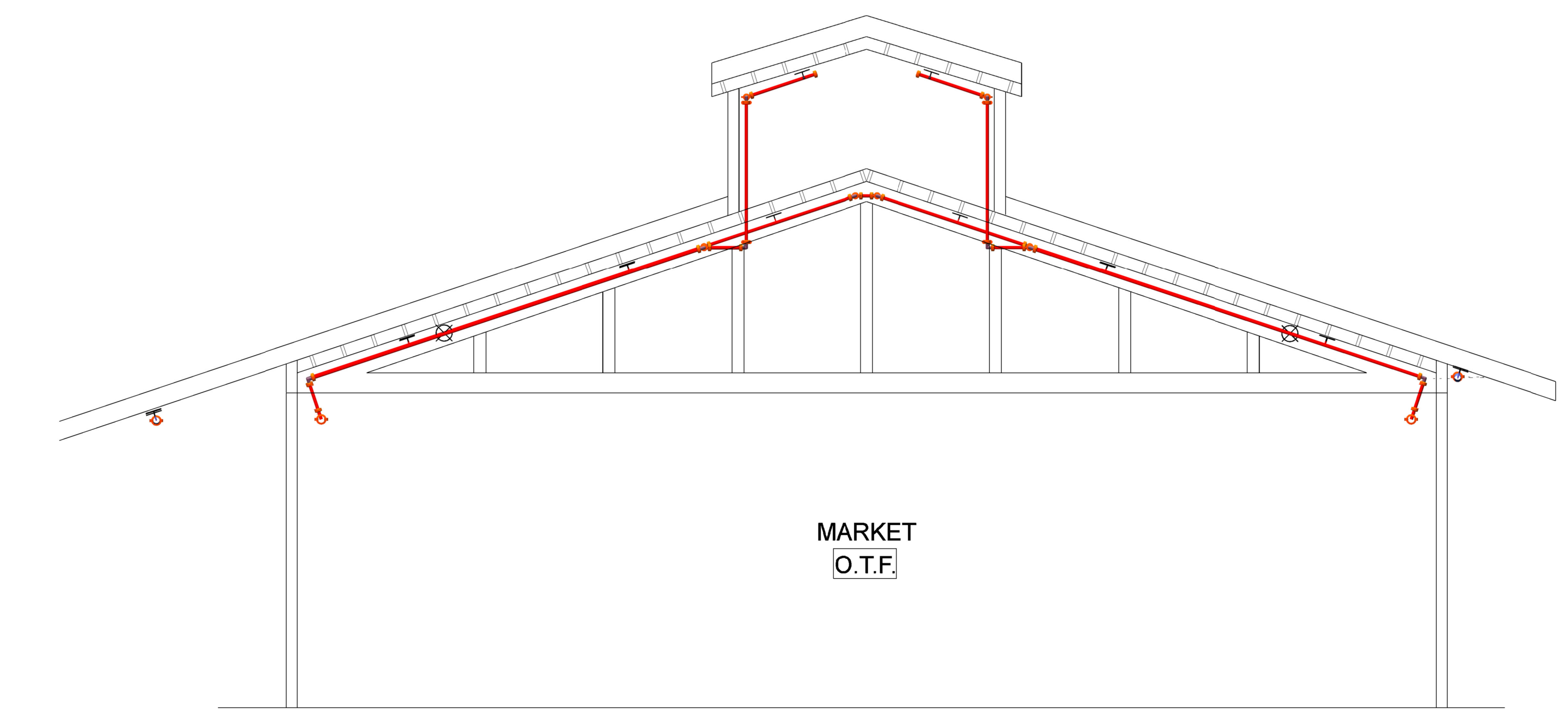
**City of Puyallup Fire REVIEWED FOR COMPLIANCE**  
 DDrake  
 02/02/2022  
 8:22:34 AM

Approval of submitted plans is not an approval of omissions or oversight by this office or noncompliance with any applicable regulations of local government. The contractor is responsible for making sure that the building complies with all applicable building codes and regulations of the local government.

THE APPROVED CONSTRUCTION PLANS AND ALL ENGINEERING MUST BE POSTED ON THE JOB AT ALL INSPECTIONS IN A VISIBLE AND READILY ACCESSIBLE LOCATION.

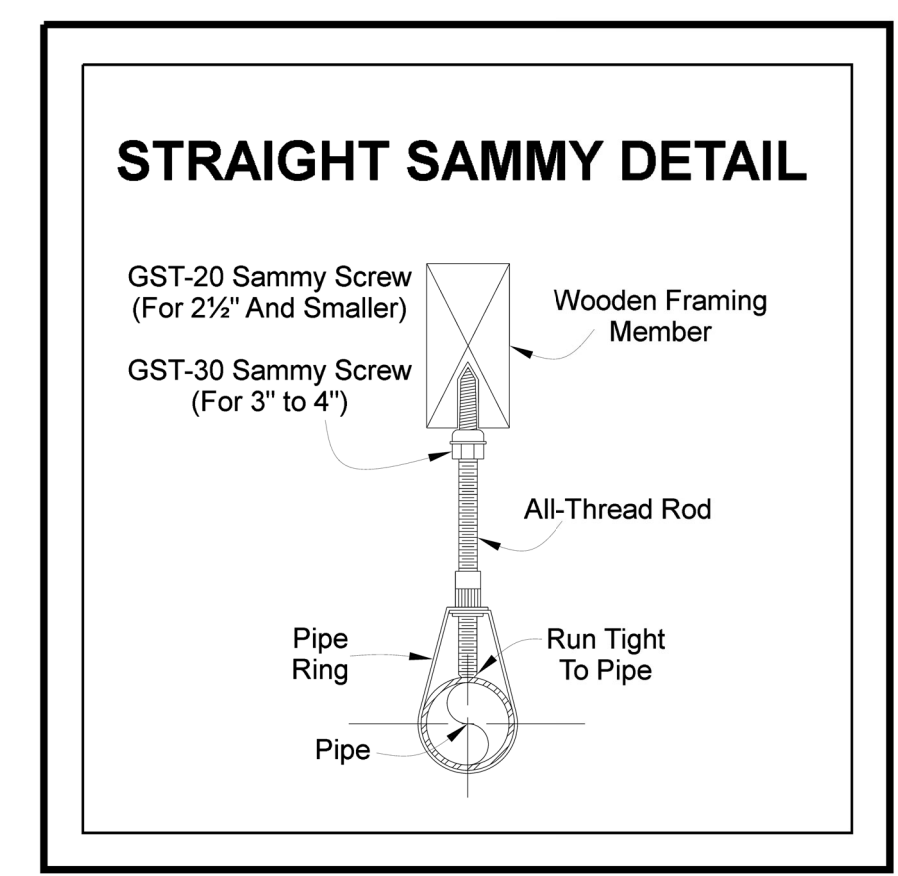


Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Note
⊙	Viking	VK3001		27	5.6	Upright	1/2"	Quick	Brass	155°F	DRY SYS
⊙	Viking	VK3001		58	5.6	Upright	1/2"	Quick	Brass	155°F	
⊙	Viking	VK3021		31	5.6	Pendent	1/2"	Quick	Chrome	155°F	
⊙	Viking	VK3051		8	5.6	Sidewall	1/2"	Quick	Chrome	155°F	OH DOOR
⊙	Viking	VK176		5	5.6	Pendent	1"	Quick	Chrome	200°F	
				<b>Total = 129</b>							

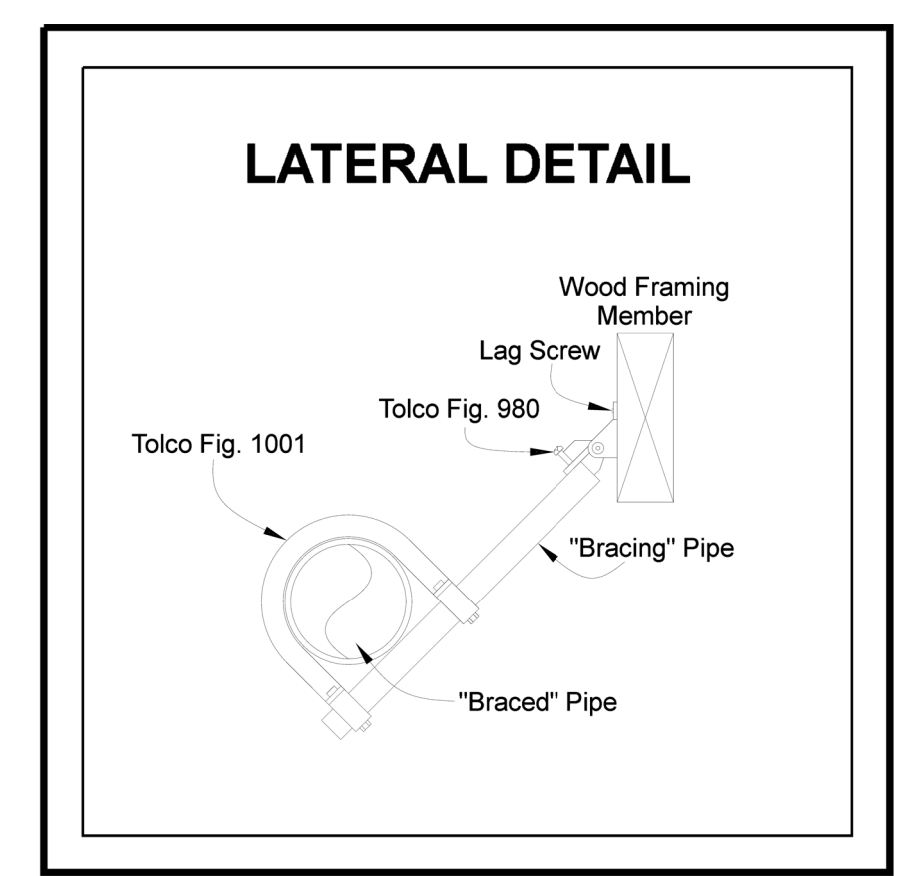


**7 LATERAL SECTION CUT**  
 1/4"=1'-0"

1. ALL WORK PER NFPA 13 2016 AND CITY OF PUYALLUP STANDARDS.
2. EMERALD FIRE TO DESIGN AND INSTALL NEW WET AND DRY SPRINKLER SYSTEM.
3. ALL THREADED PIPING SHALL BE SCHEDULE 40 BLACK STEEL AND ALL GROOVED PIPING SHALL BE SCHEDULE 10 BLACK STEEL.
4. ALL SPRINKLERS IN LIGHT HAZARD AREAS SHALL BE SPACED AT 225 FT<sup>2</sup> AND ALL SPRINKLERS IN ORDINARY HAZARD AREAS OR PROTECTING AREAS OPEN TO STRUCTURE SHALL BE SPACED AT 130FT<sup>2</sup>.
5. MAINS FOR DRY SYSTEM SHALL SLOPE 1/4" EVERY 10'-0" BACK TO SUPPLY FOR DRAINING PURPOSES.
6. BRANCHLINES FOR DRY SYSTEM SHALL SLOPE 1/2" EVERY 10'-0" BACK TO SUPPLY FOR DRAINING PURPOSES.
7. VOID ABOVE CEILING IS LIGHT HAZARD OCCUPANCIES. DUE TO EXPOSED COMBUSTIBLE CONSTRUCTION, UPRIGHT SPRINKLERS IN THESE AREAS SHALL NOT EXCEED 130 SQ.FT. SPACING.
8. ALL TESTING AND INSPECTIONS PER NFPA 13 2016.



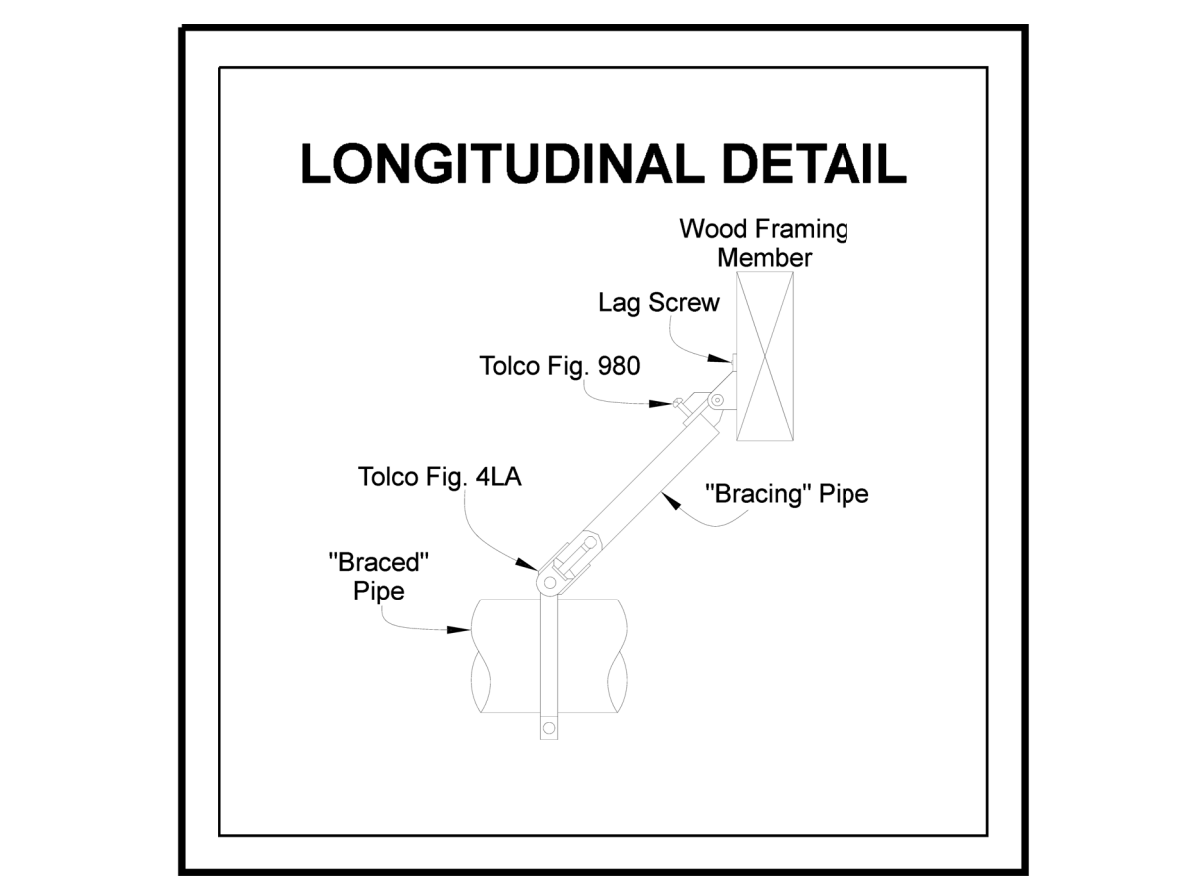
**2 HANGER DETAIL**  
 NTS



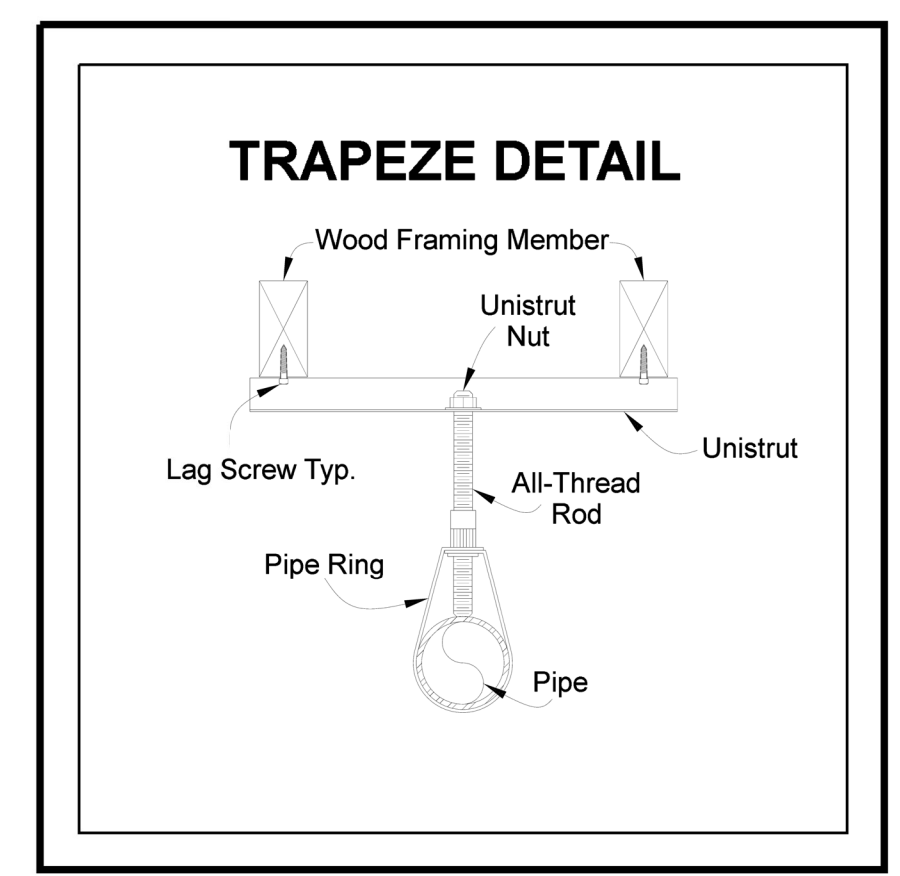
**4 LATERAL BRACE**  
 NTS

Span of Trapeze	Pipe Size										
	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"	6"	8"
1 ft. 6 in.	0.08	0.09	0.09	0.09	0.10	0.11	0.12	0.13	0.15	0.18	0.24
2 ft. 0 in.	0.08	0.09	0.09	0.10	0.11	0.12	0.13	0.15	0.18	0.22	0.30
2 ft. 6 in.	0.11	0.12	0.12	0.13	0.13	0.15	0.16	0.18	0.20	0.24	0.32
3 ft. 0 in.	0.11	0.12	0.12	0.13	0.15	0.16	0.18	0.20	0.24	0.29	0.40
3 ft. 6 in.	0.14	0.14	0.15	0.16	0.17	0.18	0.20	0.21	0.25	0.30	0.40
4 ft. 0 in.	0.14	0.15	0.15	0.16	0.18	0.18	0.21	0.22	0.25	0.30	0.36
4 ft. 6 in.	0.17	0.17	0.18	0.19	0.20	0.22	0.24	0.26	0.31	0.36	0.48
5 ft. 0 in.	0.17	0.18	0.18	0.20	0.22	0.25	0.27	0.30	0.36	0.43	0.60
5 ft. 6 in.	0.22	0.23	0.24	0.25	0.27	0.29	0.32	0.34	0.41	0.48	0.64
6 ft. 0 in.	0.22	0.24	0.24	0.26	0.29	0.33	0.36	0.40	0.48	0.58	0.80
6 ft. 6 in.	0.23	0.29	0.30	0.31	0.34	0.37	0.40	0.43	0.51	0.59	0.80
7 ft. 0 in.	0.23	0.29	0.30	0.33	0.37	0.41	0.45	0.49	0.60	0.72	1.00
7 ft. 6 in.	0.33	0.35	0.36	0.38	0.41	0.44	0.48	0.51	0.61	0.71	0.97
8 ft. 0 in.	0.34	0.35	0.36	0.39	0.44	0.49	0.54	0.59	0.72	0.87	1.20
8 ft. 6 in.	0.39	0.40	0.41	0.44	0.47	0.52	0.55	0.60	0.71	0.83	1.13
9 ft. 0 in.	0.39	0.41	0.43	0.46	0.51	0.58	0.63	0.69	0.84	1.01	1.41
9 ft. 6 in.	0.44	0.46	0.47	0.50	0.54	0.59	0.63	0.68	0.81	0.95	1.29
10 ft. 0 in.	0.45	0.47	0.49	0.52	0.59	0.65	0.72	0.79	0.96	1.16	1.61
	0.50	0.52	0.53	0.56	0.61	0.66	0.71	0.77	0.92	1.07	1.45
	0.50	0.53	0.55	0.59	0.66	0.74	0.81	0.89	1.08	1.30	1.81
	0.55	0.58	0.59	0.63	0.68	0.74	0.79	0.85	1.02	1.19	1.61
	0.55	0.59	0.61	0.65	0.74	0.82	0.90	0.99	1.20	1.44	2.01

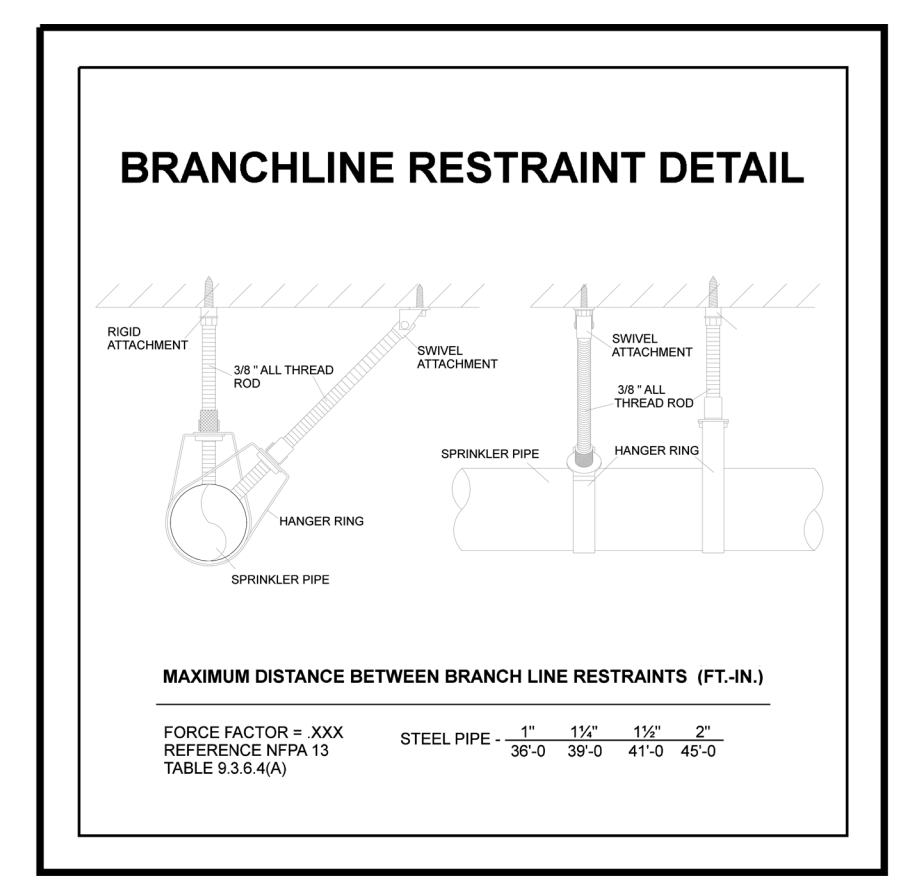
**3 TRAPEZE DETAIL**  
 NTS



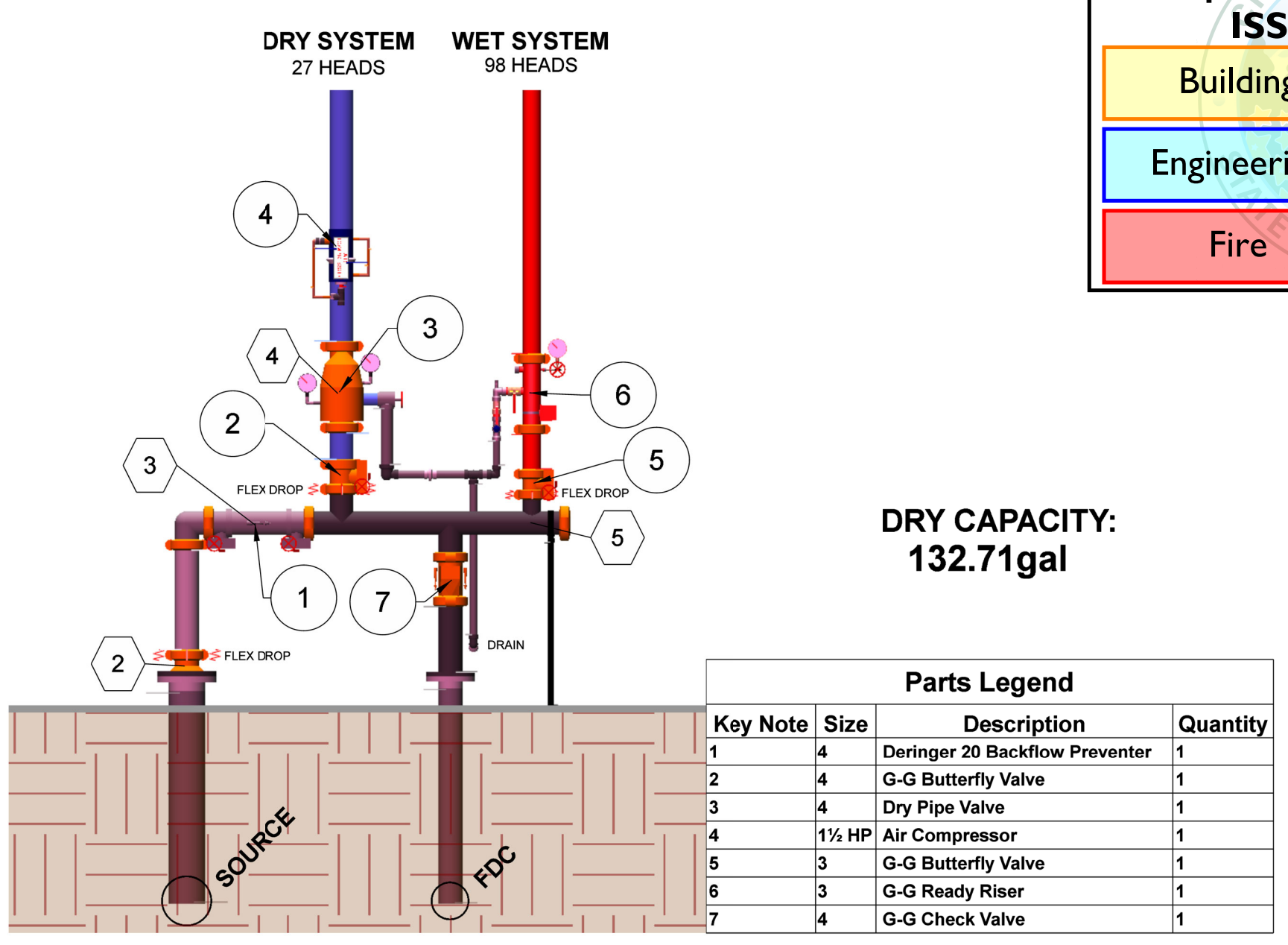
**5 LONGITUDINAL BRACE**  
 NTS



**3 TRAPEZE DETAIL**  
 NTS

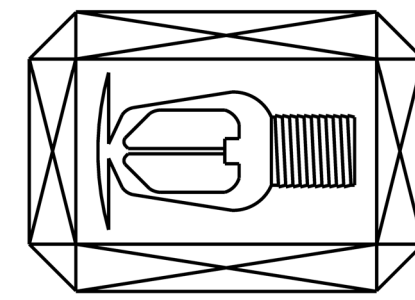


**6 BRANCHLINE RESTRAINT**  
 NTS



**8 RISER DETAIL**  
 NTS

**EMERALD FIRE**  
 FIRE SPRINKLER SPECIALISTS  
 11021 CRAMER RD. NW  
 GIG HARBOR, WA 98329  
 (253)-857-2056  
 EMERFL980MR



0" 1" 2"  
 SHEET SIZE IS TRUE SCALE WHEN ABOVE LINE MEASURES AS NOTED

REVISIONS:

1	XXXXXX
2	XXXXXXXXXX
3	

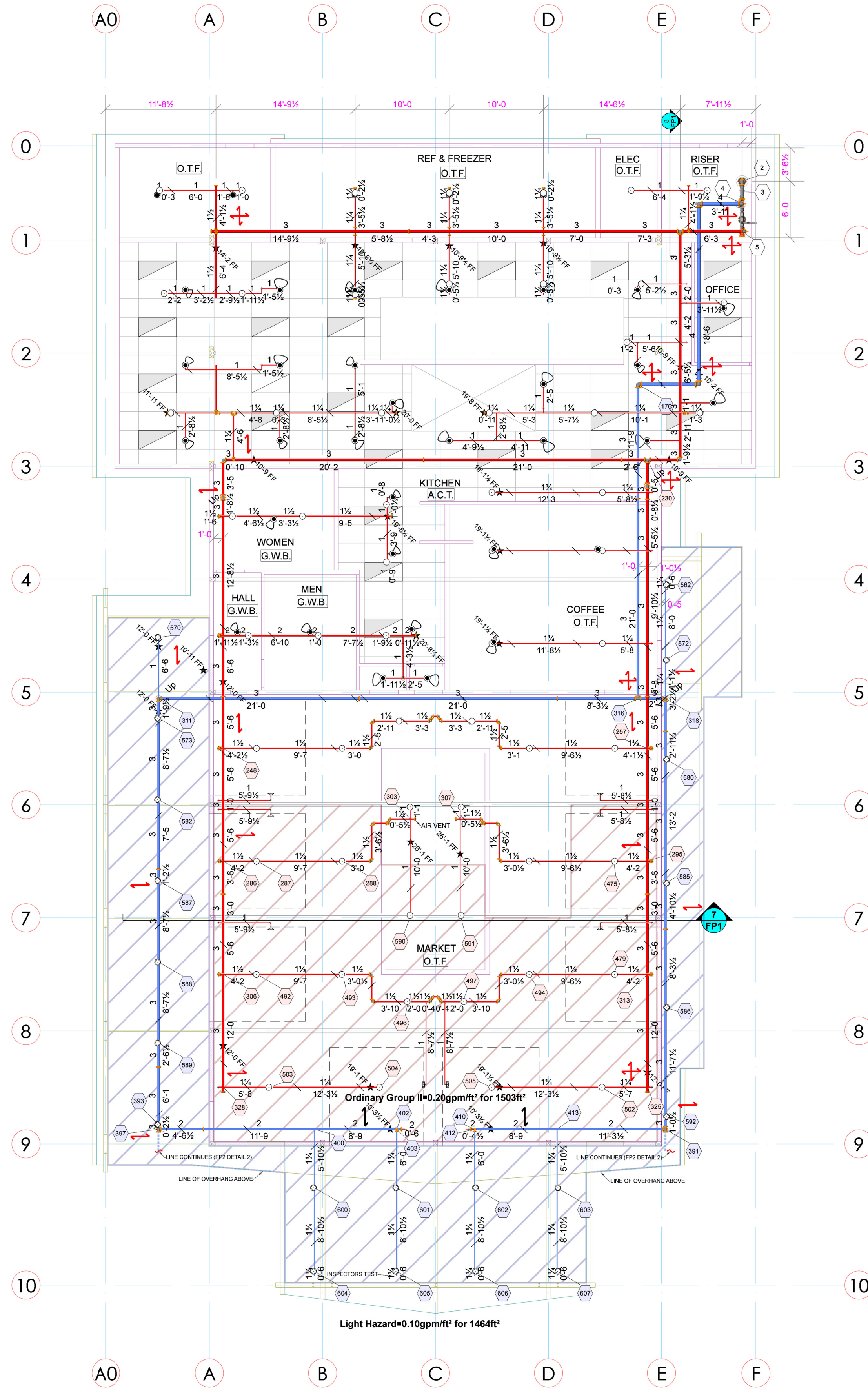
GATEWAY STEP BY STEP  
 3303 8TH AVE SE  
 PUYALLUP, WA 98372

FIRE SPRINKLER PLAN, NOTES, & DETAILS

JOB NAME: \_\_\_\_\_  
 SHEET NAME: \_\_\_\_\_

DRAWN BY: KG/MH  
 DATE: 12-30-2021  
 JOB #: 2210130  
 SHEET NO.: FP1

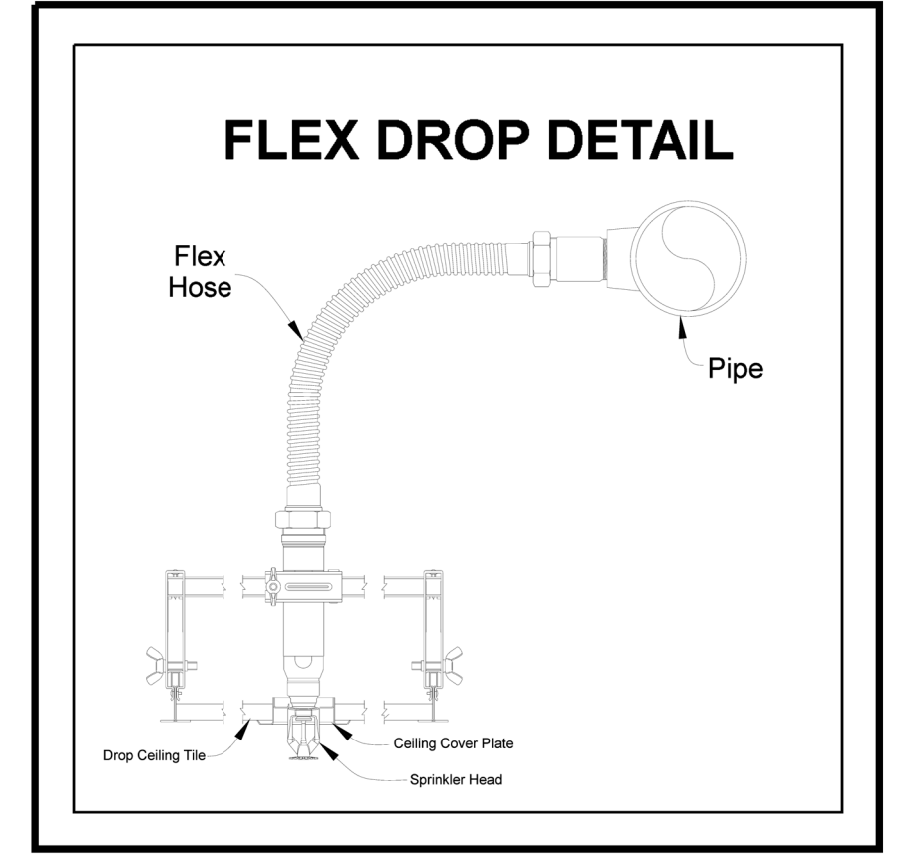
STAMP



**1 FIRE PROTECTION PLAN**  
MAIN FLOOR  
1/8"=1'-0"

Sprinkler Legend											
Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Note
○	Viking	VK3001		27	5.6	Upright	1/2"	Quick	Brass	155°F	DRY SYS
○	Viking	VK3001		58	5.6	Upright	1/2"	Quick	Brass	155°F	
○	Viking	VK3021		31	5.6	Pendent	1/2"	Quick	Chrome	155°F	
○	Viking	VK3051		8	5.6	Sidewall	1/2"	Quick	Chrome	155°F	OH DOOR
○	Viking	VK176		5	5.6	Pendent	1"	Quick	Chrome	200°F	
				Total = 129							

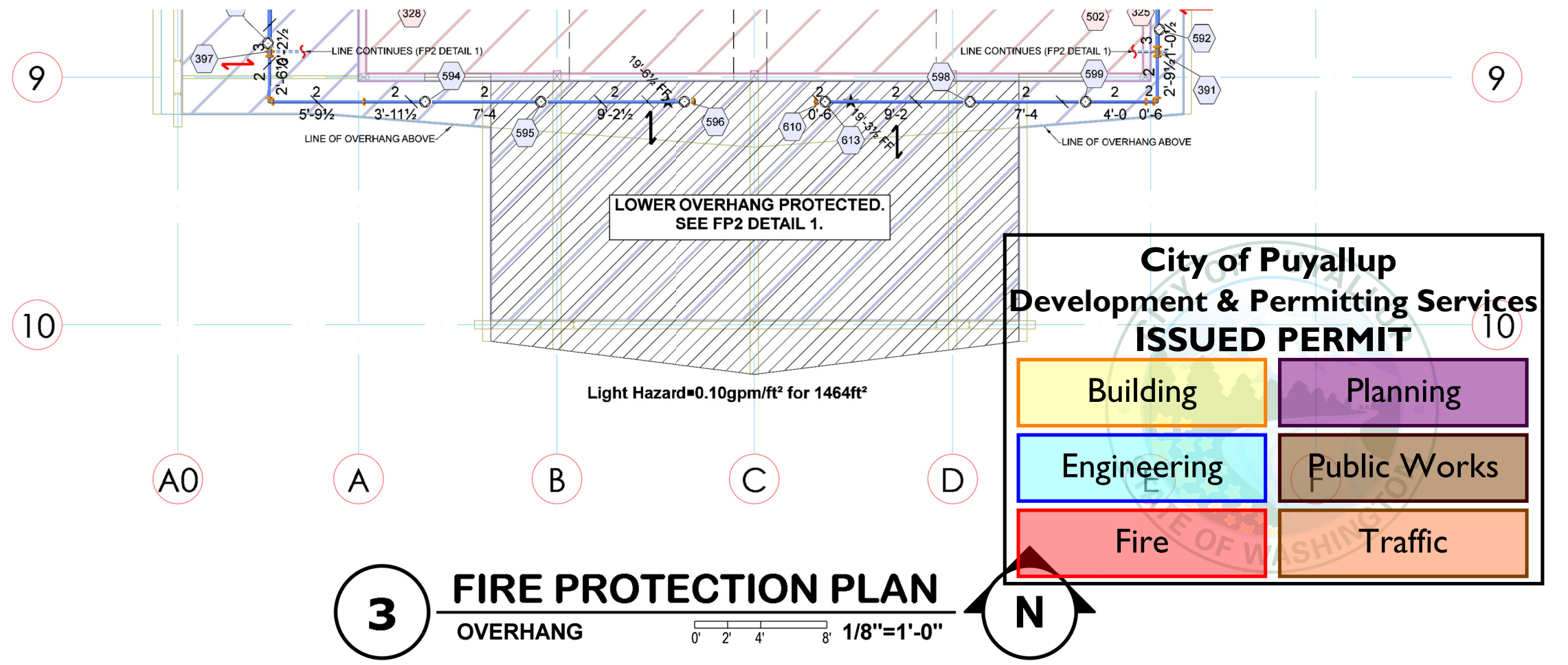
SYMBOL LEGEND	
—	SYSTEM PIPE
—/—	PIPE HANGER
—/—/—	TRAPEZE PIPE HANGER
— —	LATERAL BRACE
— — —	LONGITUDINAL BRACE
— — — —	FLEX DROP
○	HYDRAULIC NODE
★	ELEVATION



**2 FLEX DROP DETAIL**  
NTS

Hydraulic Information	
Remote Area 1 - Market	
OCCUPANCY CLASSIFICATION	Ordinary Group II
DENSITY (gpm/ft²)	0.20 for 1500ft² (Actual 1503ft²)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	15
K-FACTOR	5.6
TOTAL WATER REQUIRED	620.82
TOTAL PRESSURE REQUIRED	58.342
BASE of RISER (gpm)	370.82
BASE of RISER (psi)	56.618
SAFETY MARGIN (psi)	+14.768 (20.2%)

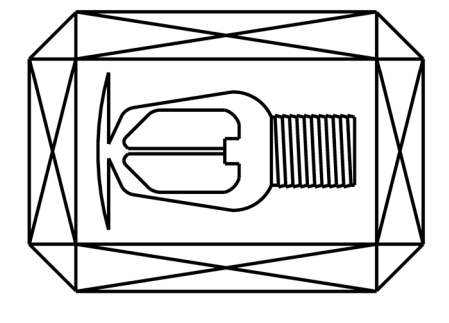
Hydraulic Information	
Remote Area 2 - Overhang	
OCCUPANCY CLASSIFICATION	Light Hazard
DENSITY (gpm/ft²)	0.10 for 1500ft² (Actual 1464ft²)
TOTAL HOSE STREAMS	100.00
DRY CAPACITY	132.71gal
TOTAL HEADS FLOWING	27
K-FACTOR	5.6
TOTAL WATER REQUIRED	606.44
TOTAL PRESSURE REQUIRED	57.302
BASE of RISER (gpm)	506.44
BASE of RISER (psi)	55.473
SAFETY MARGIN (psi)	+16.100 (21.9%)



**3 FIRE PROTECTION PLAN**  
OVERHANG  
1/8"=1'-0"

TABLE 6-2.2 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"	3 1/2"	N/A	N/A	N/A	N/A	

**EMERALD FIRE**  
FIRE SPRINKLER SPECIALISTS  
11021 CRAMER RD. NW  
GIG HARBOR, WA 98529  
(253)-857-2056  
EMERAF1980MR



0" 1" 2"  
SHEET SIZE IS TRUE  
SCALE WHEN ABOVE  
LINE MEASURES AS  
NOTED

REVISIONS:	
1	xxxxxx xxxxxxxxxxxx
2	
3	

GATEWAY STEP BY STEP  
3303 8TH AVE SE  
PUYALLUP, WA 98372

**City of Puyallup**  
Development & Permitting Services  
**ISSUED PERMIT**

Building	Planning
Engineering	Public Works
Fire	Traffic

FIRE SPRINKLER PLAN, NOTES, & DETAILS

JOB NAME:  
DRAWN BY: KG/MH  
DATE: 12-30-2021  
JOB #: 2210130  
SHEET NO.: FP2

STAMP