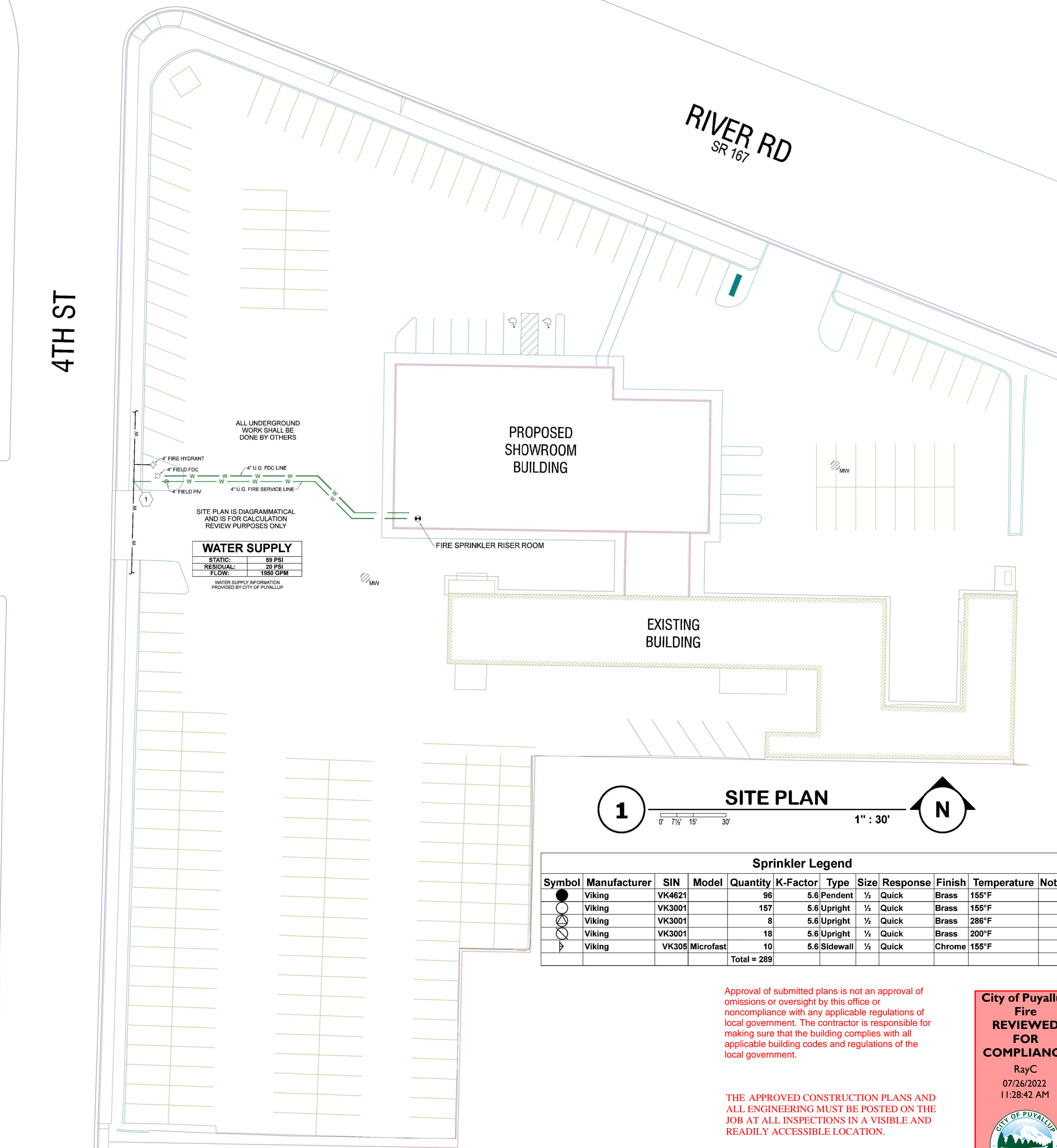


4TH ST

RIVER RD
SR 167



WATER SUPPLY

STATIC:	58 PSI
RESIDUAL:	20 PSI
FLOW:	1550 GPM

WATER SUPPLY INFORMATION PROVIDED BY CITY OF PUYALLUP

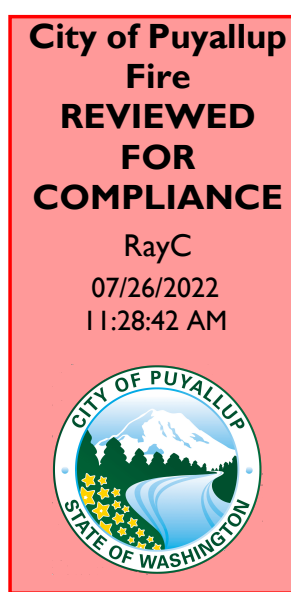


Sprinkler Legend

Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Note
●	Viking	VK4621		96	5.6	Pendent	1/2"	Quick	Brass	155°F	
○	Viking	VK3001		157	5.6	Upright	1/2"	Quick	Brass	155°F	
○	Viking	VK3001		8	5.6	Upright	1/2"	Quick	Brass	286°F	
○	Viking	VK3001		18	5.6	Upright	1/2"	Quick	Brass	200°F	
▬	Viking	VK305	Microfast	10	5.6	Sidewall	1/2"	Quick	Chrome	155°F	
				Total = 289							

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.

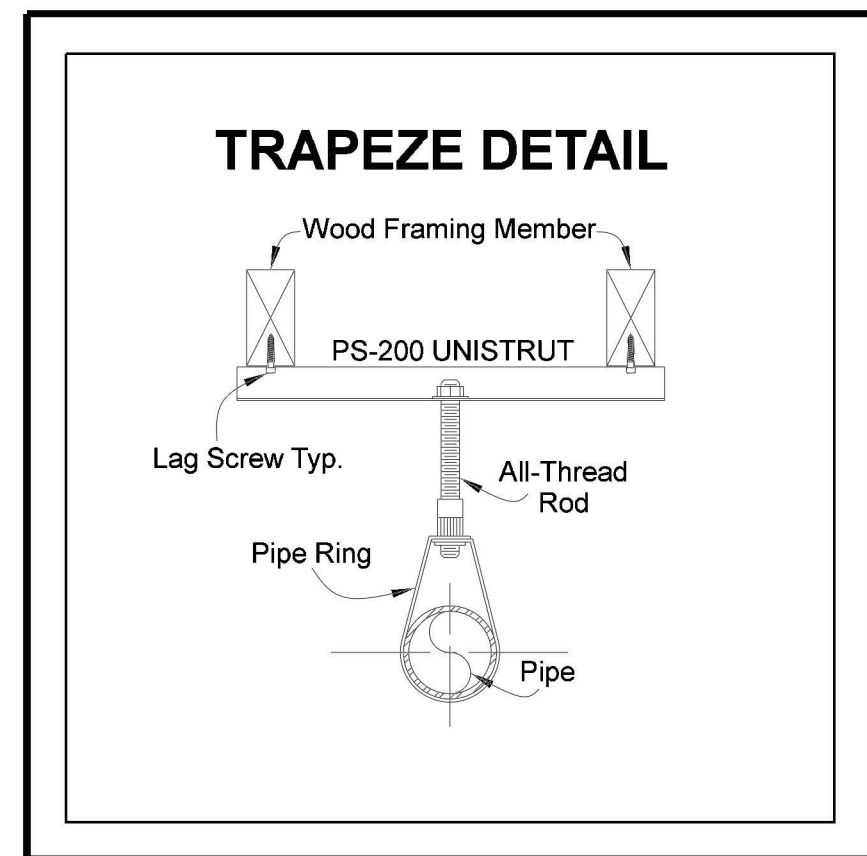
THE APPROVED CONSTRUCTION PLANS AND ALL ENGINEERING MUST BE POSTED ON THE JOB AT ALL INSPECTIONS IN A VISIBLE AND READILY ACCESSIBLE LOCATION.



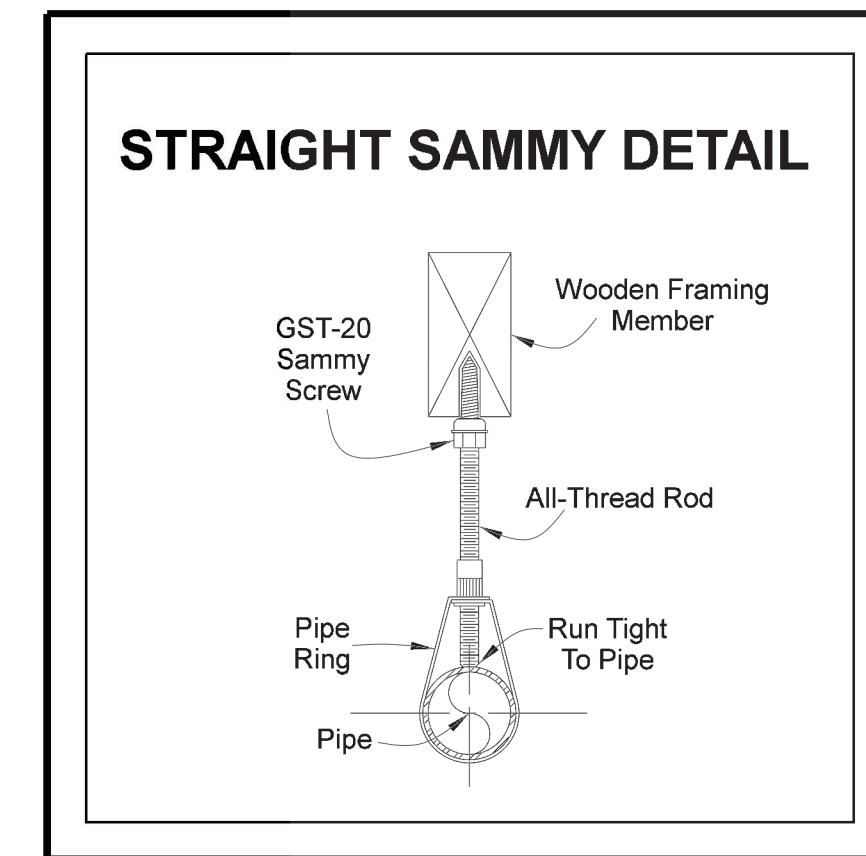
See Permit Conditions

- CONSTRUCTION NOTES**
1. ALL WORK PER NFPA 13 2016 AND CITY OF PUYALLUP STANDARDS.
 2. EMERALD FIRE TO DESIGN AND INSTALL NEW WET SPRINKLER SYSTEM FOR EXISTING BUILDING WITH SHOWROOM AREA RENOVATION.
 3. PENDENT SPRINKLERS IN LIGHT HAZARD AREAS SHALL NOT EXCEED 225 SQFT. SPACING PENDENT SPRINKLERS IN ORDINARY HAZARD AREAS SHALL NOT EXCEED 130 SQFT. SPACING.
 4. ALL BUILDING CONSTRUCTION CONSISTS OF COMBUSTIBLE FRAMING MEMBERS LESS THAN 3FT. ON CENTER AND THEREFORE UPRIGHT SPRINKLERS SHALL NOT EXCEED 130 SQFT.
 5. CLEARANCE SHALL BE PROVIDED AROUND ALL PIPING EXTENDING THROUGH WALLS, FLOORS, PLATFORMS, AND FOUNDATIONS, INCLUDING DRAINS, FIRE DEPARTMENT CONNECTIONS, AND OTHER AUXILIARY PIPING.
 6. ALL GROOVED PIPING SHALL BE SCHEDULE 10 BLACK STEEL AND ALL THREADED PIPING SHALL BE SCHEDULE 40 BLACK STEEL.
 7. ALL TESTING AND INSPECTIONS PER NFPA 13 2016.

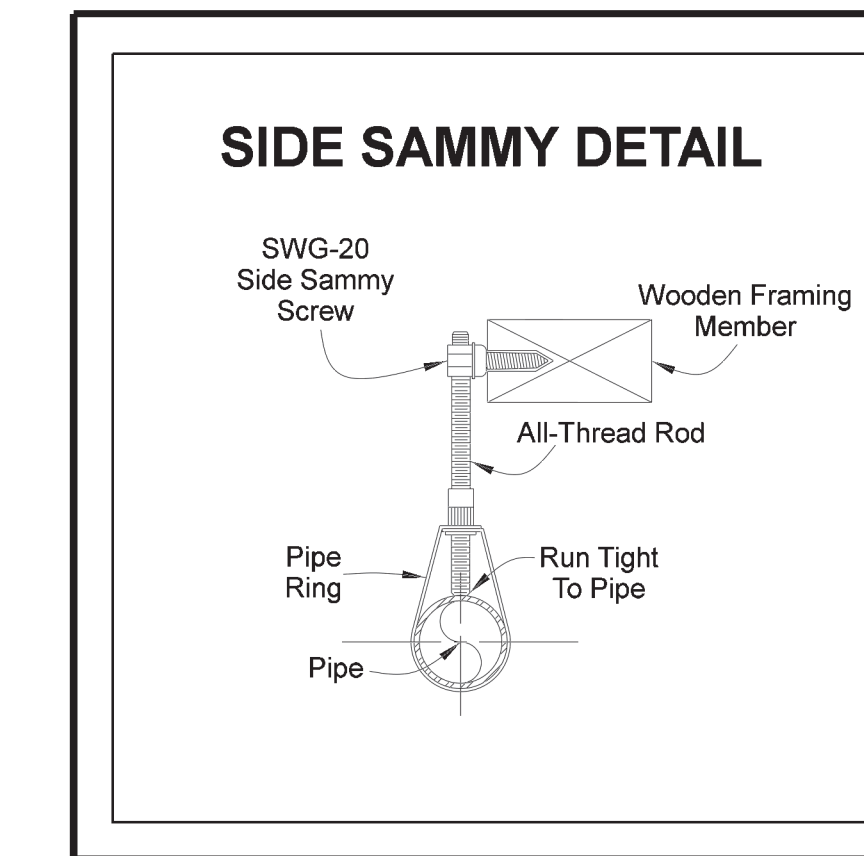
UNISTRUT SECTION MODULUS
4" SCHEDULE 10/40 AND SMALLER: PS-200 UNISTRUT



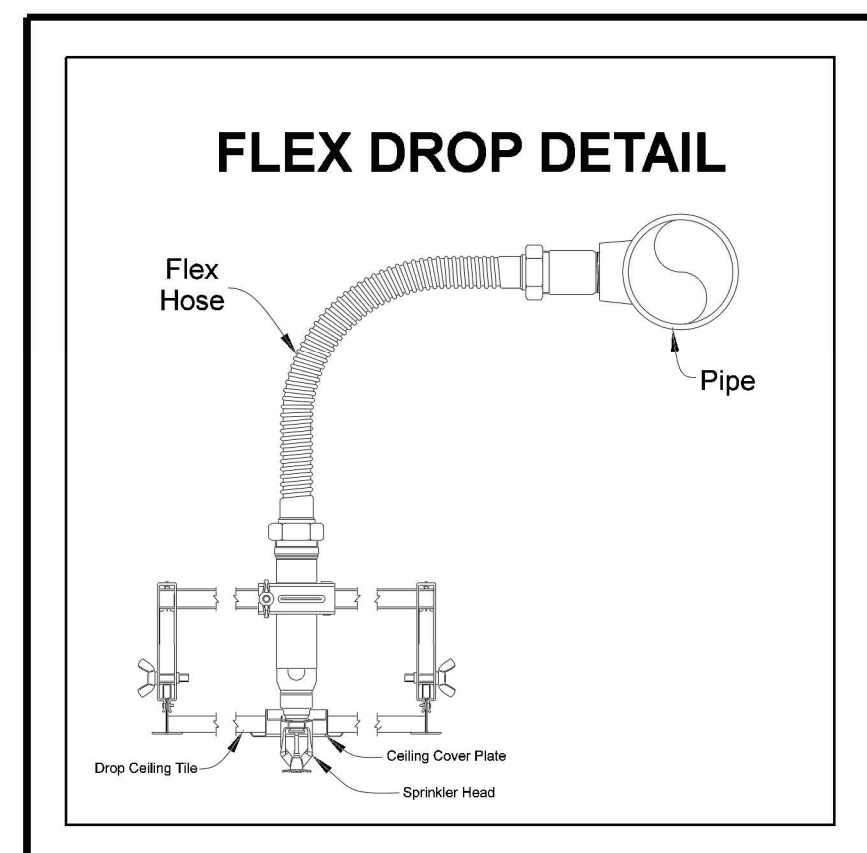
2 TRAPEZE HANGER
NTS



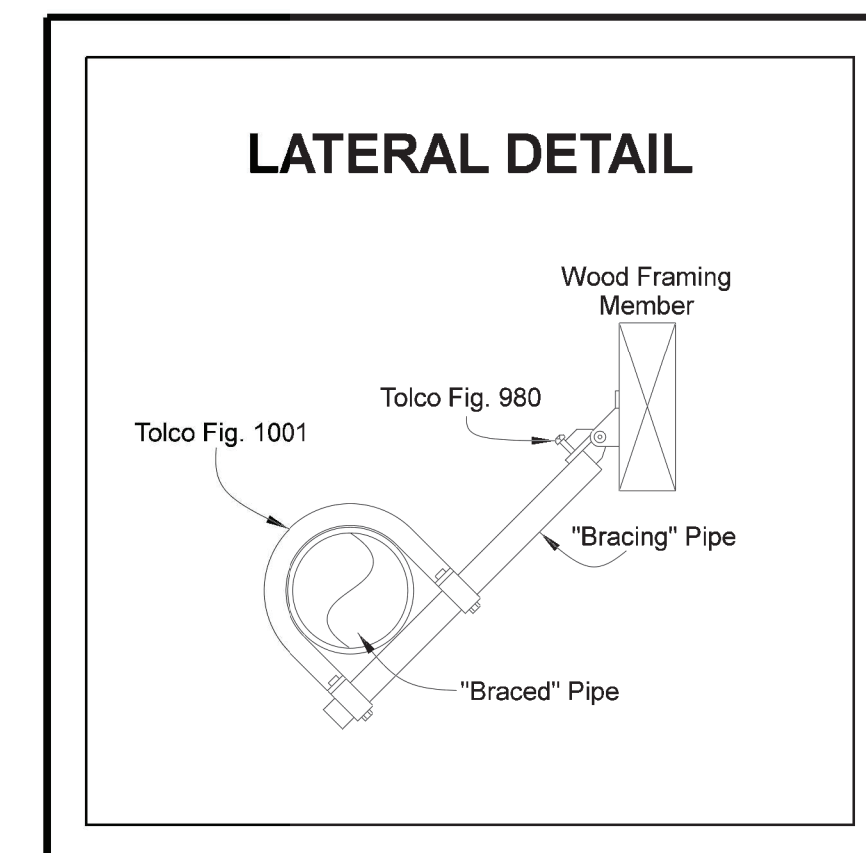
3 STRAIGHT SAMMY
NTS



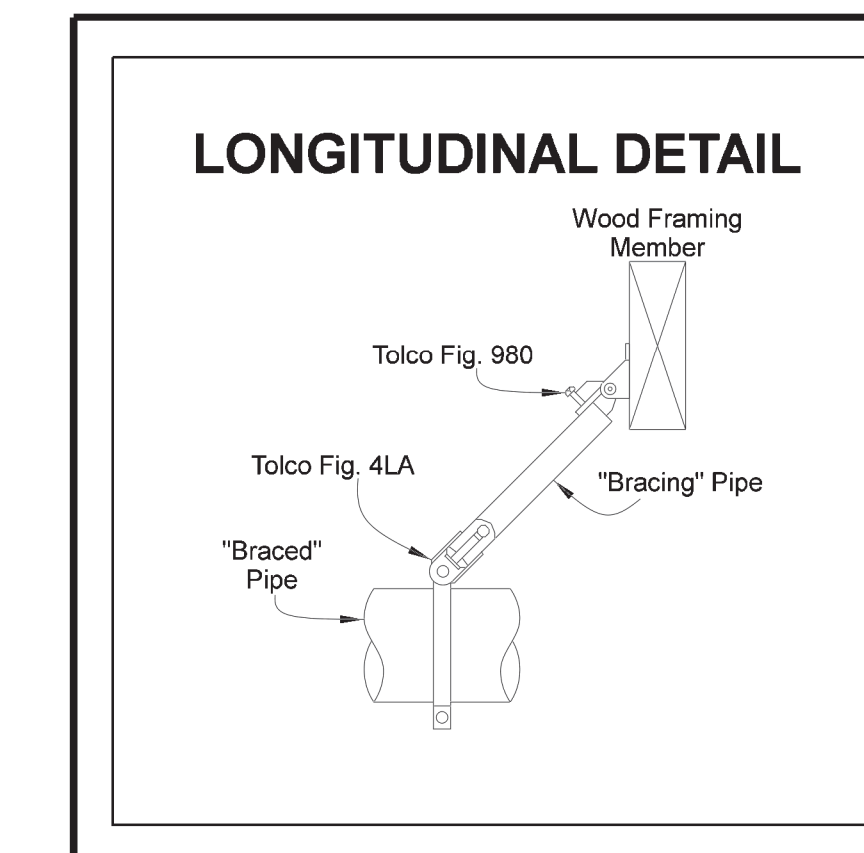
4 SIDE SAMMY
NTS



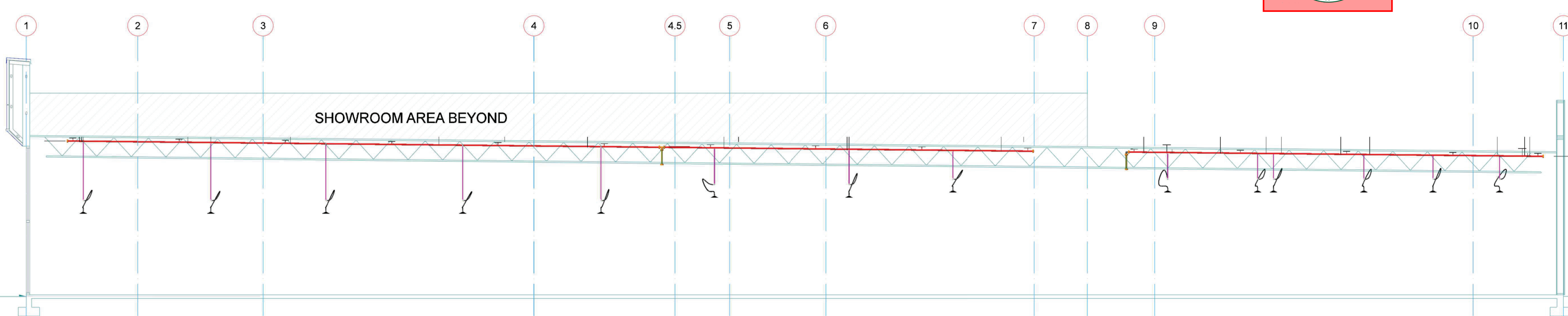
5 FLEX DROP
NTS



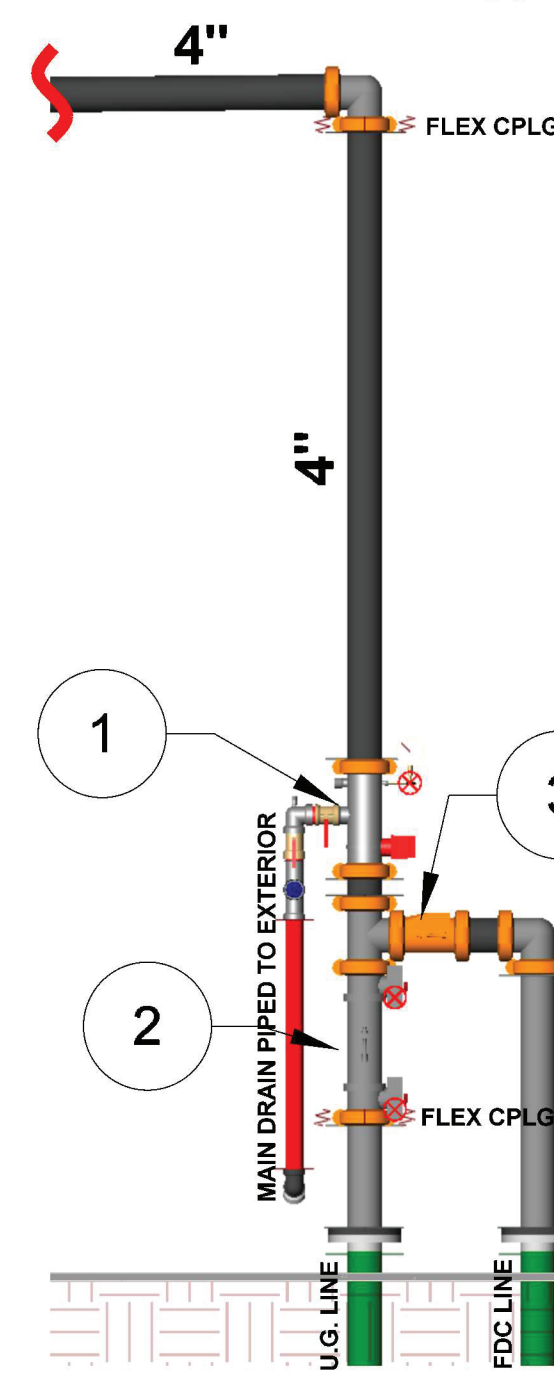
6 LATERAL BRACE
NTS



7 LONGITUDINAL BRACE
NTS



8 SECTION CUT
0 2 4' 1/8" = 1'-0"



9 RISER DETAIL
NTS

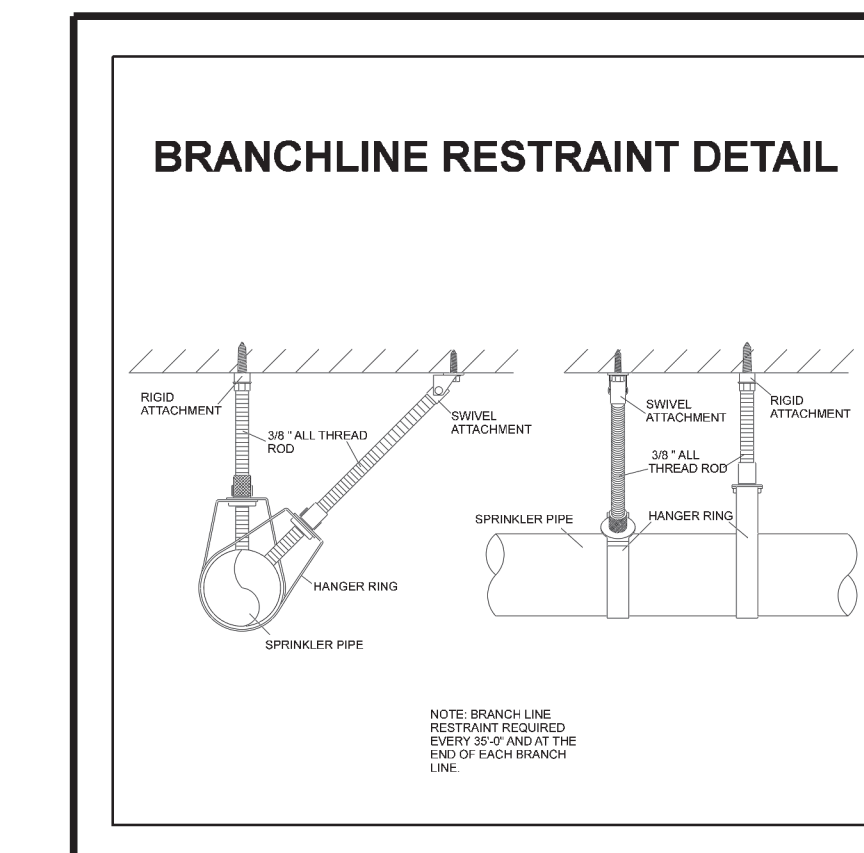
City of Puyallup Development & Permitting Services ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

TOTAL WET SYSTEM AREA:
19,297 SQFT.

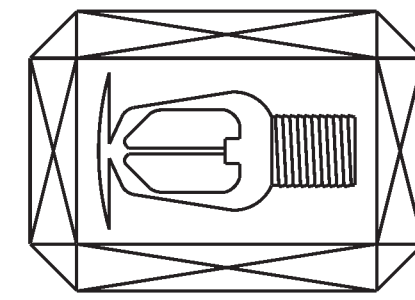
Parts Legend

Key Note	Size	Description	Quantity
1	4"	G-G Ready Riser w/ Trim	1
2	4"	G-G Deringer 20 Backflow Preventer	1
3	4"	G-G Check Valve	1



10 BRANCLINE RESTRAINT
NTS

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:

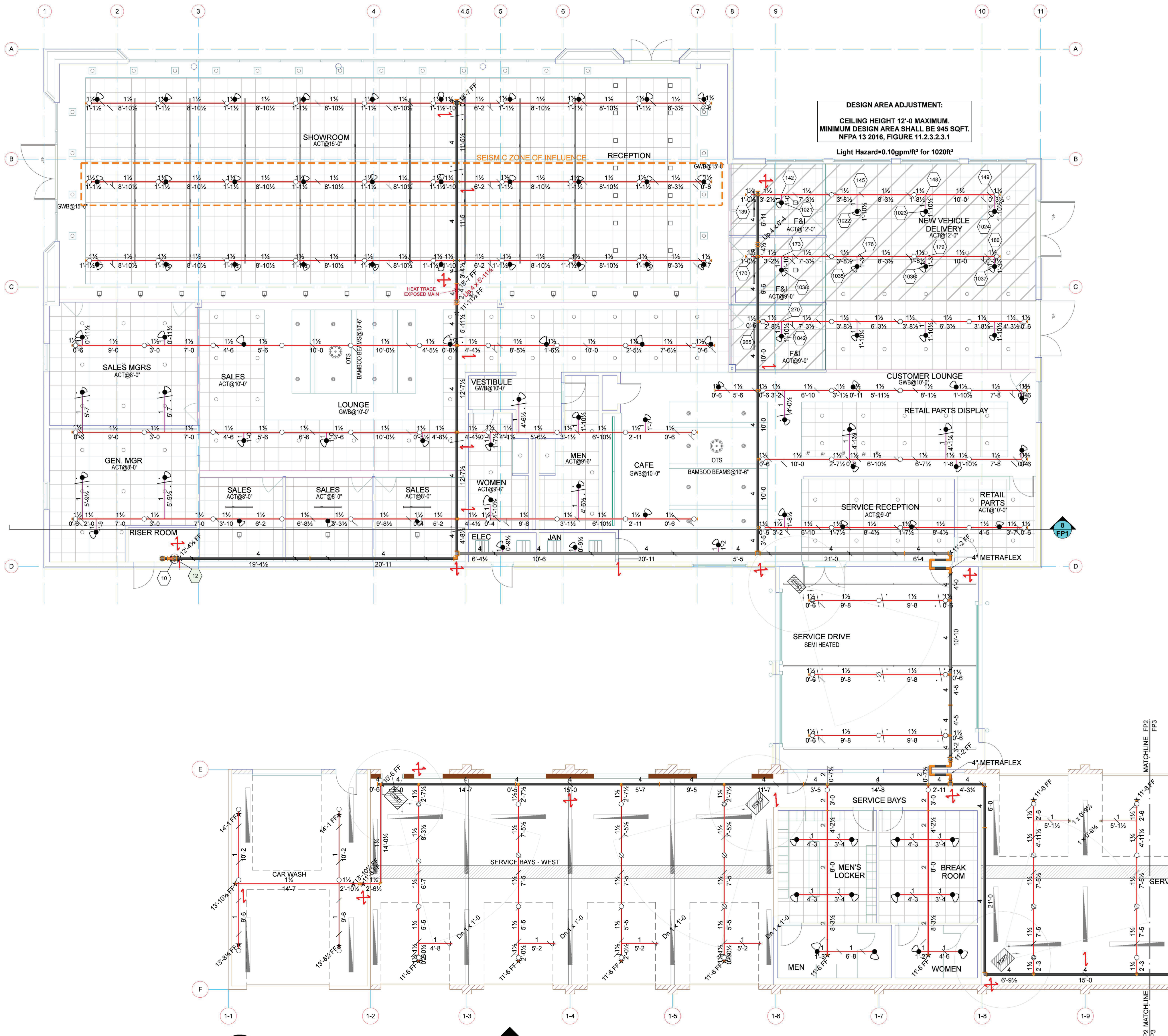
1	xxxxxxx
2	xxxxxxxxxxxx
3	

LARSON JEEP
300 RIVER ROAD
PUYALLUP, WA 98371

SITE PLAN, NOTES, & DETAILS

JOB NAME:
DRAWN BY: KG/MH
DATE: 06/22/22
JOB #: 2220029
SHEET NO.: FP1

WASHINGTON STATE
FIRE PROTECTIVE ENGINEER
Michael Todd Hallgren
7223-0107-C Level 3
Emerald Fire, LLC
EMERAF1980MR
6-22-22

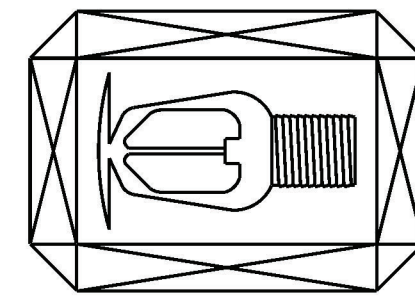


DESIGN AREA ADJUSTMENT:
 CEILING HEIGHT 12'-0" MAXIMUM.
 MINIMUM DESIGN AREA SHALL BE 945 SQFT.
 NFPA 13 2016, FIGURE 11.2.3.3.1
 Light Hazard=0.10gpm/ft² for 1020ft²

Hydraulic Information	
OCCUPANCY CLASSIFICATION	Light Hazard
DENSITY (gpm/ft ²)	0.10 for 945ft ² (Actual 1020ft ²)
TOTAL HOSE STREAMS	100.00
DRY CAPACITY	0.00gal
TOTAL HEADS FLOWING	9
K-FACTOR	5.6
TOTAL WATER REQUIRED	314.21
TOTAL PRESSURE REQUIRED	45.014
BASE of RISER (gpm)	314.21
BASE of RISER (psi)	45.014
SAFETY MARGIN (psi)	+12.655 (21.9%)

SYMBOL LEGEND	
	SYSTEM PIPE
	PIPE HANGER
	BRANCHLINE RESTRAINT
	TRAPEZE PIPE HANGER
	LATERAL BRACE
	LONGITUDINAL BRACE
	FLEX DROP
	HYDRAULIC NODE
	ELEVATION

EMERALD FIRE
 FIRE SPRINKLER SPECIALISTS
 11021 CRAWMER RD. NW
 GIG HARBOR, WA 98529
 (253)-857-2056
 EMERFL980MR



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

REVISIONS:	
1	xxxxxxx xxxxxxxxxxxx
2	
3	

TABLE 9.3.6.4(a) MAXIMUM SPACING (FT) (M) OF STEEL PIPE RESTRAINTS

PIPE (IN.) (MM)	SEISMIC COEFFICIENT, C _p			
	C _p ≤ 0.50	0.5 < C _p ≤ 0.71	0.71 < C _p ≤ 1.40	C _p ≥ 1.40
½ (15)	34 (10.3)	29 (8.8)	20 (6.1)	18 (5.5)
¾ (20)	38 (11.6)	32 (9.7)	23 (7.0)	20 (6.1)
1 (25)	43 (13.1)	36 (11)	26 (7.9)	22 (6.7)
1¼ (32)	46 (14.0)	39 (11.9)	27 (8.2)	24 (7.3)
1½ (40)	49 (14.9)	41 (12.5)	29 (8.8)	25 (7.6)
2 (50)	53 (16.1)	45 (13.7)	31 (9.4)	27 (8.2)

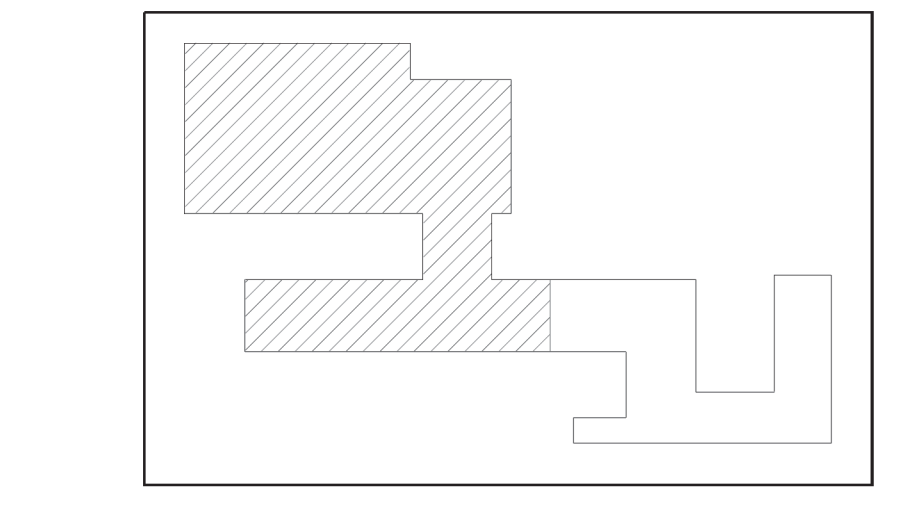
1 FIRE PROTECTION PLAN
 First Floor
 1/8"=1'-0"

Sprinkler Legend											
Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Note
	Viking	VK4621		96	5.6	Pendant	½	Quick	Brass	155°F	
	Viking	VK3001		116	5.6	Upright	½	Quick	Brass	155°F	
	Viking	VK3001		4	5.6	Upright	½	Quick	Brass	288°F	
	Viking	VK3001		9	5.6	Upright	½	Quick	Brass	200°F	
	Viking	VK305	Microfast	6	5.6	Sidewall	½	Quick	Chrome	155°F	
				Total = 231							

TABLE 6-2.2 MAXIMUM DISTANCE BETWEEN HANGERS (FT. IN.)												
NOMINAL PIPE SIZE (IN.)	¾"	1"	1¼"	1½"	2"	2½"	3"	3½"	4"	5"	6"	8"
STEEL PIPE EXCEPT THREADED	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	N/A	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	3½"	N/A	N/A	N/A	N/A

City of Puyallup
 Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic



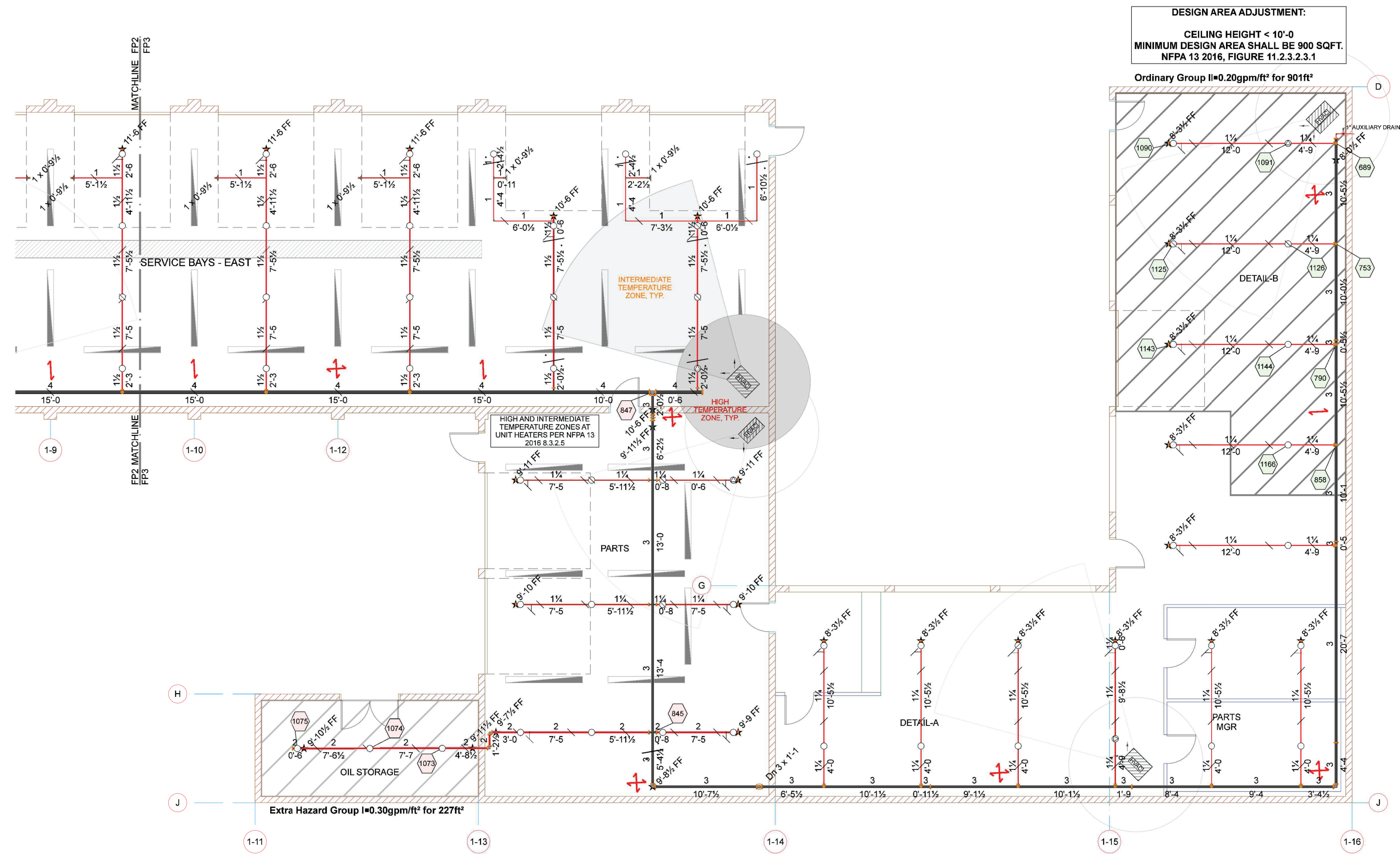
2 KEY PLAN
 NTS

LARSON JEEP
 300 RIVER ROAD
 PUYALLUP, WA 98371
 FIRE SPRINKLER PLAN, NOTES, & DETAILS

JOB NAME:	
DRAWN BY:	KG/MH
DATE:	06/22/22
JOB #:	2220029
SHEET NO.:	FP2

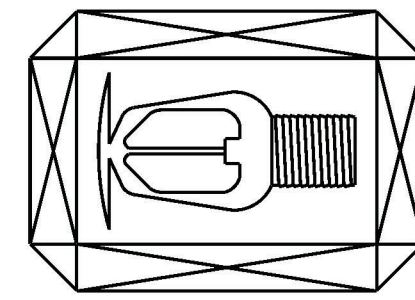
CERTIFICATE OF QUALITY
 FIRE PROTECTION SPECIALISTS
 Michael Todd Hallgren
 7223-0107-C Level 3
 Emerald Fire, LLC
 EMERFL980MR

Hydraulic Information	
OCCUPANCY CLASSIFICATION	Ordinary Group II
DENSITY (gpm/ft ²)	0.20 for 900ft ² (Actual 901ft ²)
TOTAL HOSE STREAMS	250.00
DRY CAPACITY	0.00gal
TOTAL HEADS FLOWING	7
K-FACTOR	5.6
TOTAL WATER REQUIRED	428.84
TOTAL PRESSURE REQUIRED	49.029
BASE of RISER (gpm)	428.84
BASE of RISER (psi)	49.029
SAFETY MARGIN (psi)	+7.604 (13.4%)



SYMBOL LEGEND	
	SYSTEM PIPE
	PIPE HANGER
	BRANCHLINE RESTRAINT
	TRAPEZE PIPE HANGER
	LATERAL BRACE
	LONGITUDINAL BRACE
	FLEX DROP
	HYDRAULIC NODE
	ELEVATION

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	

Hydraulic Information	
OCCUPANCY CLASSIFICATION	Extra Hazard Group I
DENSITY (gpm/ft ²)	0.30 for 2500ft ² (Actual 227ft ²)
TOTAL HOSE STREAMS	500.00
DRY CAPACITY	0.00gal
TOTAL HEADS FLOWING	3
K-FACTOR	5.6
TOTAL WATER REQUIRED	590.16
TOTAL PRESSURE REQUIRED	48.539
BASE of RISER (gpm)	590.16
BASE of RISER (psi)	48.539
SAFETY MARGIN (psi)	+6.187 (11.3%)

Sprinkler Legend											
Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Note
	Viking	VK306	Microfast	6	5.6	Sidewall	1/2"	Quick	Chrome	155°F	
	Viking	VK3001		10	5.6	Upright	1/2"	Quick	Brass	200°F	
	Viking	VK3001		44	5.6	Upright	1/2"	Quick	Brass	155°F	
	Viking	VK3001		4	5.6	Upright	1/2"	Quick	Brass	286°F	
				Total = 64							

1 FIRE PROTECTION PLAN
 First Floor
 Scale: 1/8"=1'-0"

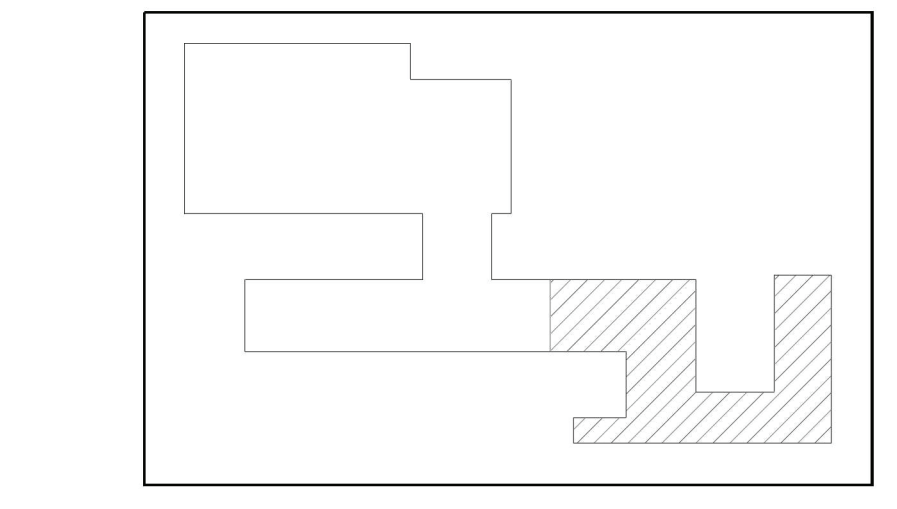
City of Puyallup
 Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

PIPE (IN.) (MM)	SEISMIC COEFFICIENT, C _p			
	C _p ≤ 0.50	0.5 < C _p ≤ 0.71	0.71 < C _p ≤ 1.40	C _p ≥ 1.40
1/2 (15)	34 (10.3)	29 (8.8)	20 (6.1)	18 (5.5)
3/4 (20)	38 (11.6)	32 (9.7)	23 (7.0)	20 (6.1)
1 (25)	43 (13.1)	36 (11)	26 (7.9)	22 (6.7)
1 1/4 (32)	46 (14.0)	39 (11.9)	27 (8.2)	24 (7.3)
1 1/2 (40)	49 (14.9)	41 (12.5)	29 (8.8)	25 (7.6)
2 (50)	53 (16.1)	45 (13.7)	31 (9.4)	27 (8.2)

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



2 KEY PLAN
 NTS

LARSON JEEP
 300 RIVER ROAD
 PUYALLUP, WA 98371

FIRE SPRINKLER PLAN, NOTES, & DETAILS

JOB NAME: _____ SHEET NAME: _____
 DRAWN BY: KG/MH
 DATE: 06/22/22
 JOB #: 2220029
 SHEET NO: **FP3**

Michael Todd Hallengren
 7223-0107-C Level 3
 Emerald Fire, LLC
 EMERAF1980MR