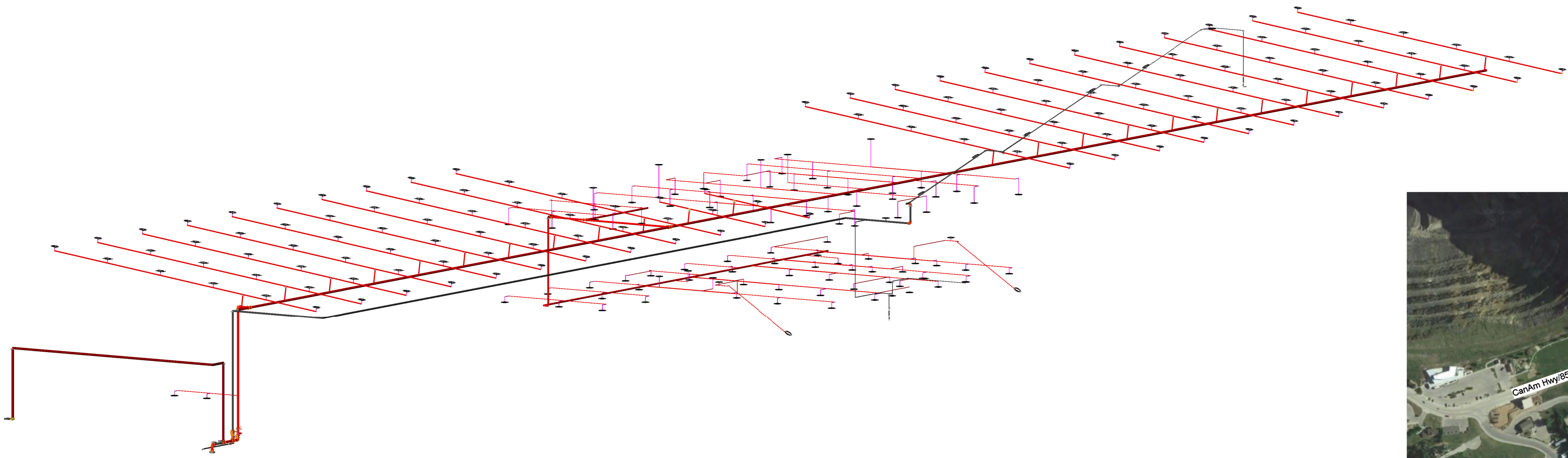




BUILDING MODEL
NOT TO SCALE



VICINITY MAP
NOT TO SCALE

BUILDING INFORMATION

NOTE:
THIS INFORMATION IS BY OTHERS
AND IS PROVIDED HERE FOR INFORMATIONAL PURPOSES ONLY.

ARCHITECT:
WILLIAMS & ASSOCIATES ARCHITECTURE, INC.
125 E. COLORADO BLVD., SUITE 2A
SPEARFISH, SD 57783
T:605.642.2009

GENERAL CONTRACTOR:
KURTZ CONSTRUCTION
1651 RAND ROAD
RAPID CITY, SD 57702
T:605.343.6665

CODES/STANDARDS:
2015 - I.B.C.
2016 - N.F.P.A. 13

OCCUPANCY CLASSIFICATION:
GROUP S-1, MODERATE HAZARD STORAGE
GROUP B, BUSINESS
GROUP F-1, FACTORY

CONSTRUCTION TYPE:
TYPE II-B

NUMBER OF STORIES: 2
BUILDING HEIGHT: 32' - 10"

GENERAL NOTES:

SYSTEM LAYOUT, DESIGN, INSTALLATION AND TESTING SHALL BE IN ACCORDANCE WITH NFPA 13 (2016 EDITION), AUTHORITY HAVING JURISDICTION, AND CONTRACT DOCUMENTS.

HANGERS SHALL BE PER NFPA #13 AND MANUFACTURER'S REQUIREMENTS.

ALL ELECTRICAL WIRING, INSTALLATION, AND TERMINATIONS SHALL BE BY OTHER THAN RAPID FIRE PROTECTION, INC.

ALL UNDERGROUND WORK IS BY OTHERS. INSTALLING CONTRACTOR TO TEST, FLUSH, AND CERTIFY UNDERGROUND INSTALLATION. A COPY OF THE UNDERGROUND TEST CERTIFICATE SHALL BE PROVIDED TO RAPID FIRE PROTECTION, INC. PRIOR TO ANY CONNECTION TO THE ABOVEGROUND PIPING.

ANY PENETRATIONS THROUGH FIRE RATED ASSEMBLIES, SHALL BE FIRE STOPPED WITH LISTED MATERIALS.

BUILDING OWNER IS RESPONSIBLE FOR MAINTAINING AREAS SERVED BY WET PIPE SYSTEMS AT OR ABOVE 40° F.

SYSTEMS HAVE BEEN HYDRAULICALLY DESIGNED PER NFPA 13 USING THE AREA/DENSITY METHOD. ANY AND ALL AREA MODIFIERS HAVE BEEN APPLIED BASED ON CEILING HEIGHT AND OR SLOPE AND SYSTEM TYPE.

AREAS SUCH AS OFFICES, CONFERENCES ROOMS, BATHROOMS, CORRIDORS, AND SIMILAR AREAS WITH LOW QUANTITIES AND COMBUSTIBILITY OF CONTENTS AND FIRES WITH RELATIVELY LOW RATES OF HEAT RELEASE, HAVE BEEN SPACED AND DESIGNED FOR LIGHT HAZARD OCCUPANCIES.

AREAS SUCH AS STORAGE ROOMS, MECHANICAL ROOMS, PORTE COCHERES, AND SIMILAR AREAS WITH LOW COMBUSTIBILITY AND THE QUANTITY OF COMBUSTIBLES IS MODERATE, (STOCKPILES NOT EXCEEDING 8 ft) AND FIRES WITH MODERATE RATES OF HEAT RELEASE, HAVE BEEN SPACED AND DESIGNED FOR ORDINARY HAZARD (GROUP I) OCCUPANCIES.

MATERIAL:

PIPING 1"- 2" SHALL BE SCHEDULE 40 WITH THREADED ENDS
PIPING 2½" AND LARGER TO BE SCHEDULE 10 WITH ROLL GROOVED ENDS

FITTINGS 1"-2" TO BE CLASS 125 DUCTILE IRON THREADED
FITTINGS 2½" AND LARGER TO BE DUCTILE IRON GROOVED E'S AND TEE'S.

DRAWING LEGEND:

- HYDRAULIC REFERENCE POINT
- FINISHED FLOOR CENTERLINE OF PIPE
- TOP OF STRUCTURE CENTERLINE OF PIPE
- HANGER ASSEMBLIES
- 2 X 2 LIGHT
- 2 X 4 LIGHT
- 2 X 2 SUPPLY AIR DIFFUSER
- 2 X 2 RETURN AIR DIFFUSER
- ORDINARY GROUP I HAZARD
- ORDINARY GROUP II HAZARD
- WET PIPE (SCH 10/40, BLK.)
- DRY PIPE (SCH 10/40, GALV.)

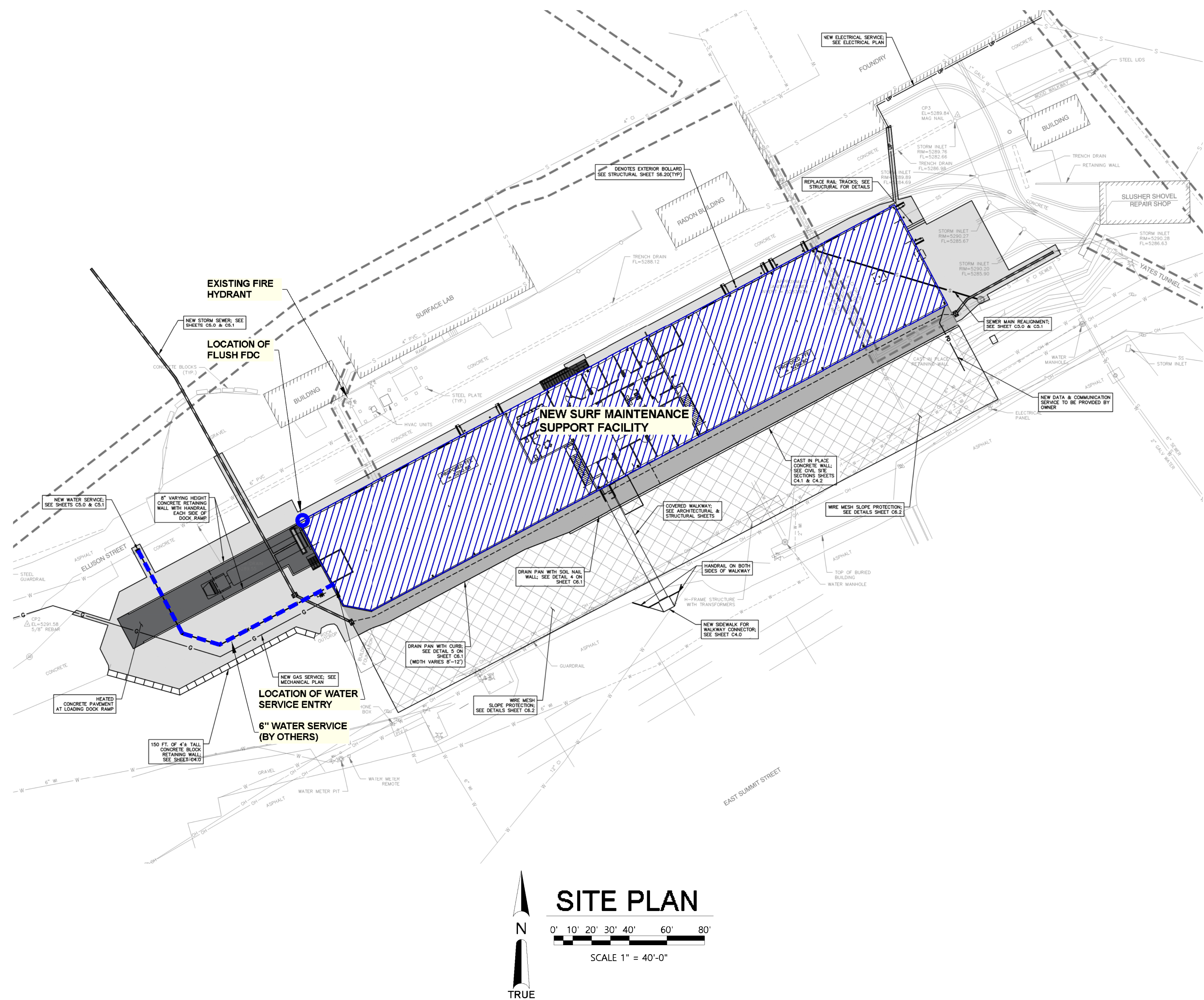
SHEET INDEX:

- SHEET FP-1 COVER SHEET / SITE PLAN / NOTES / DETAILS
- SHEET FP-2 UPPER LEVEL FIRE SPRINKLER PLAN / RISER DETAIL
- SHEET FP-3 UPPER & LOWER LEVEL FIRE SPRINKLER PLAN / SECTION

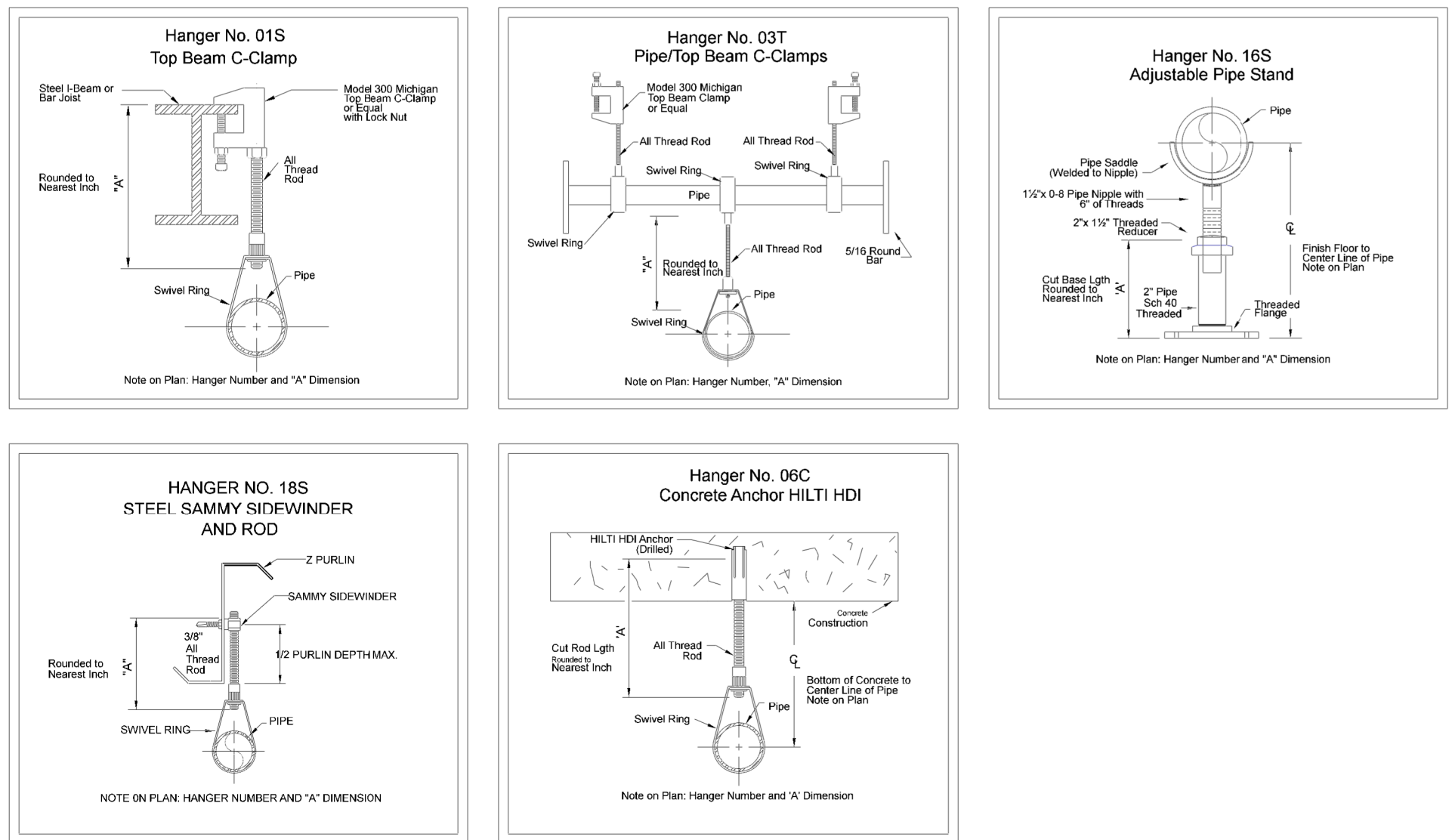
AREA OF COVERAGE PER SYSTEM

TOTAL SQUARE FOOTAGE: 29,950 SQ. FT.

- WET SYSTEM: 29,345 SQ. FT.
- DRY SYSTEM: 605 SQ. FT.



SITE PLAN
SCALE 1" = 40'-0"



HANGAR DETAILS
NOT TO SCALE

RAPID FIRE PROTECTION, INC. IS NOT RESPONSIBLE FOR ANY UNDERGROUND WORK.

INSTALLING CONTRACTOR TO TEST, FLUSH, AND CERTIFY UNDERGROUND INSTALLATION.

A COPY OF THE COMPLETED UNDERGROUND TEST CERTIFICATE MUST BE SUPPLIED TO RAPID FIRE PROTECTION, INC. AND THE AUTHORITY HAVING JURISDICTION, PRIOR TO ANY CONNECTION BEING MADE TO THE ABOVEGROUND SYSTEM

Fire Flow Test Data									
Test Conducted By		West Plains Engineering							
Date of Test		1/24/2020							
Location		100 FT from Building							
Static Pressure		65.000							
Residual Pressure		60.000							
Flow		1200.00							
Outside Hose Flow		100.00							
Hydrant Elevation		2'-0"							

SPRINKLER LEGEND

All Levels											
Symbol	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temp.	Coverage	Esc.
	V2704	V27	21	5.6	Upright	½	Quick	Brass	200°F	15' x 15'	None
	V2708	V27	84	5.6	Pendent	½	Quick	Chrome	200°F	15' x 15'	S.R.
	V3402	V34	138	8	Upright	¾	Quick	Brass	200°F	130 SQFT	None
			Total = 243								

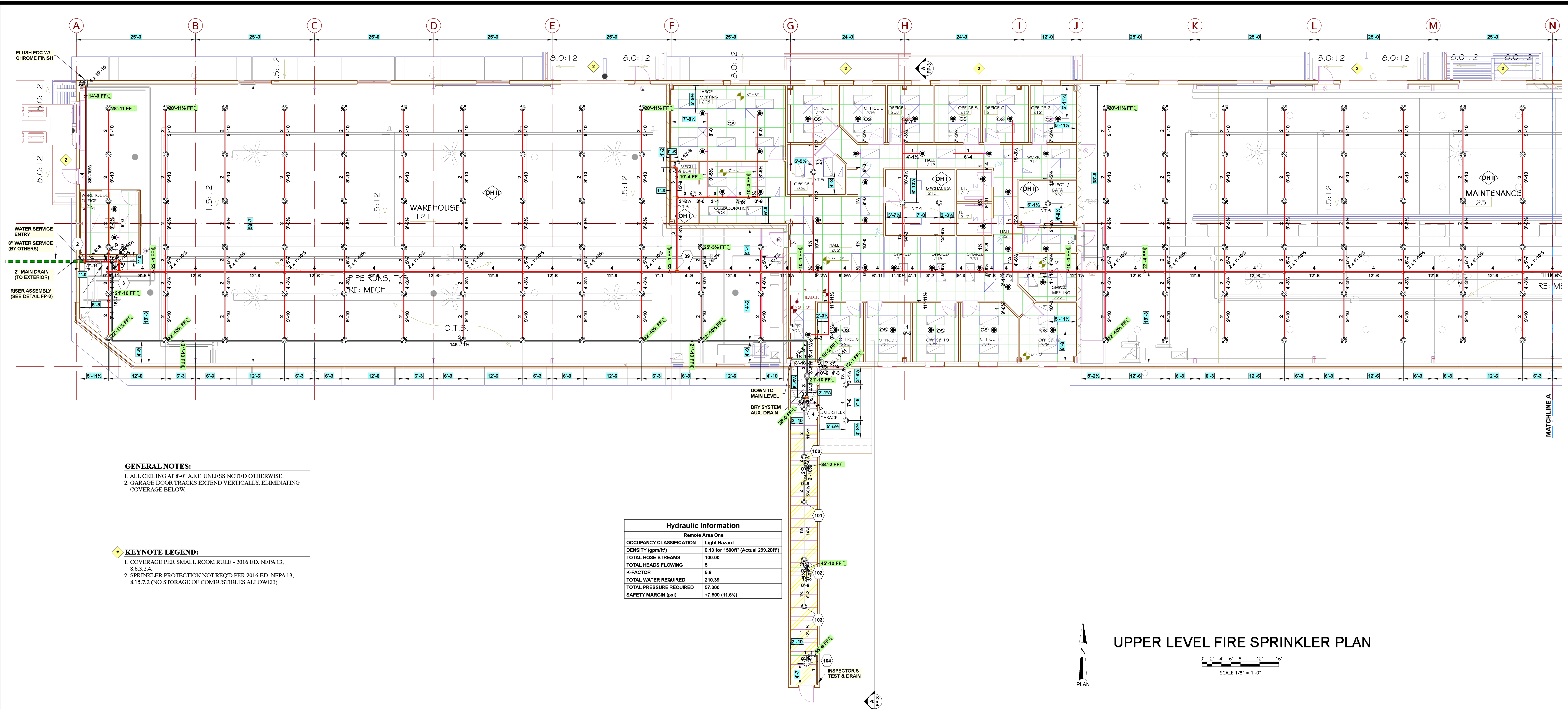
THIS SEAL IS LIMITED ONLY TO THE ABOVEGROUND FIRE SUPPRESSION PORTION OF THE WORK CONTAINED IN THESE DOCUMENTS. ALL BACKGROUND DRAWINGS, DETAILS, ANALYSIS, AND DESIGN CONCEPTS PREVIOUSLY SEALED ON THE CONSTRUCTION DOCUMENTS ARE EXCLUDED.

RAPID FIRE PROTECTION
1530 SAMCO RD.
RAPID CITY, SD. 57702
605-348-2342

SURF Maintenance Support Facility
630 E. Summit Street
Lead, SD 57754

FIRE SPRINKLER PLAN

PERMIT NO.	
CONTRACT NO.	5497
APPROVAL	Lead AHJ
DRAWN BY	Becky Stewart
SUBMITTED	09/30/20
PLOTTED	09/30/20



GENERAL NOTES:

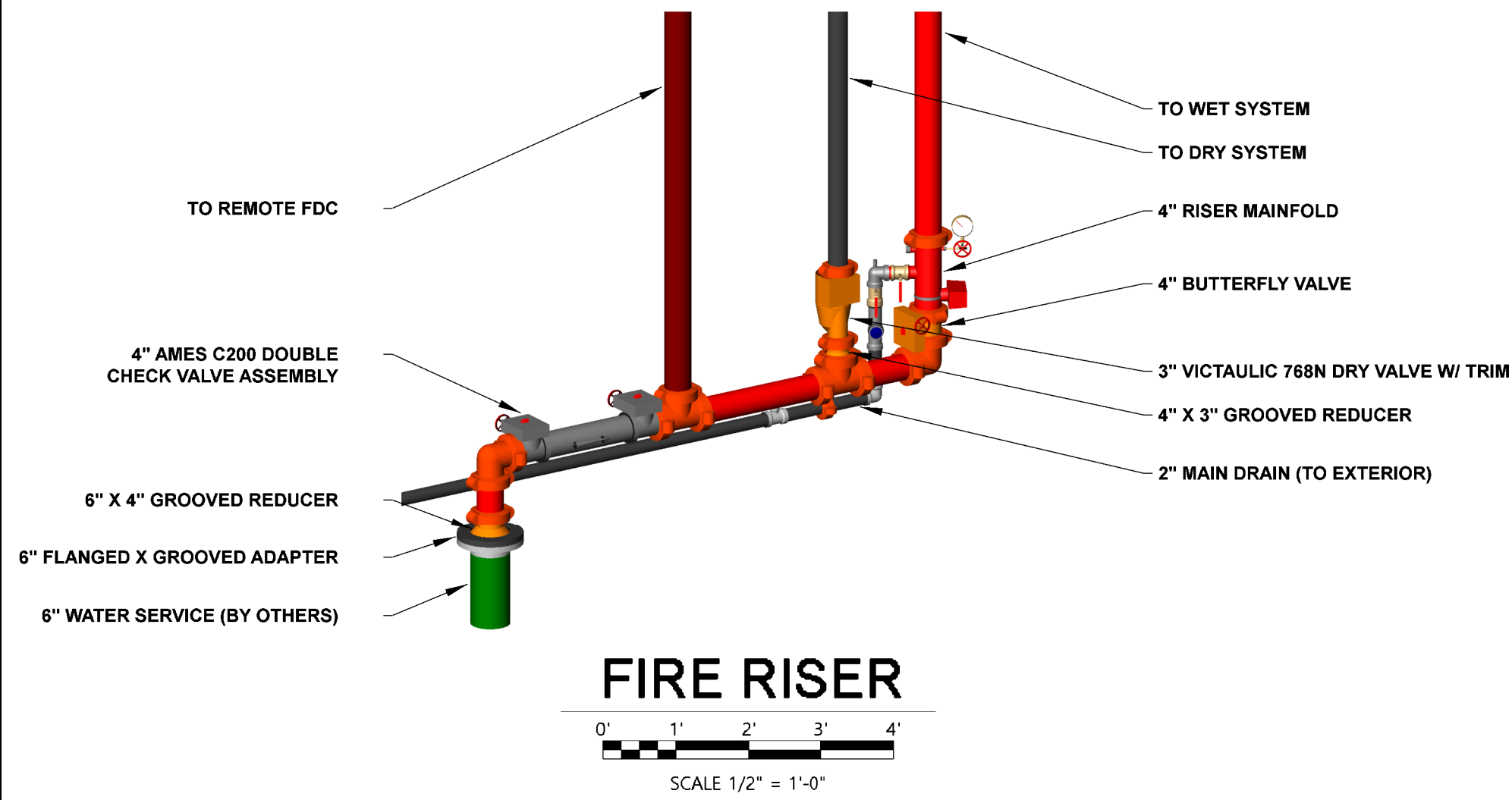
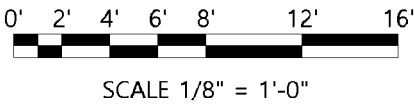
- 1. ALL CEILING AT 8'-0" A.F.F. UNLESS NOTED OTHERWISE.
- 2. GARAGE DOOR TRACKS EXTEND VERTICALLY; ELIMINATING COVERAGE BELOW.

KEYNOTE LEGEND:

- 1. COVERAGE PER SMALL ROOM RULE - 2016 ED. NFPA 13, 8.6.3.2.4.
- 2. SPRINKLER PROTECTION NOT REQ'D PER 2016 ED. NFPA 13, 8.15.7.2 (NO STORAGE OF COMBUSTIBLES ALLOWED)

Hydraulic Information	
Remote Area One	
OCCUPANCY CLASSIFICATION	Light Hazard
DENSITY (gpm/ft²)	0.10 for 1500ft² (Actual 289,281ft²)
TOTAL HOSE STREAMS	100.00
TOTAL HEADS FLOWING	5
K-FACTOR	5.6
TOTAL WATER REQUIRED	210.39
TOTAL PRESSURE REQUIRED	97.300
SAFETY MARGIN (psi)	+7.500 (11.6%)

UPPER LEVEL FIRE SPRINKLER PLAN





FOREMAN'S NOTES:

- PENDENT HEADS TO BE INSTALLED CENTER OF TILE
- INSTALL ALL UPRIGHT HEADS BETWEEN 1" TO 12" FROM DECK

DATE	REVISIONS DESCRIPTION	BY

SPRINKLER LEGEND											
All Levels											
Symbol	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temp.	Coverage	Esc.
	V2704	V27	21	5.6	Upright	1/2"	Quick	Brass	200°F	15' x 15'	None
	V2708	V27	84	5.6	Pendent	1/2"	Quick	Chrome	200°F	15' x 15'	S.R.
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Total = 243											

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FP - 2