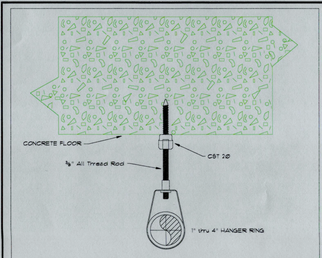
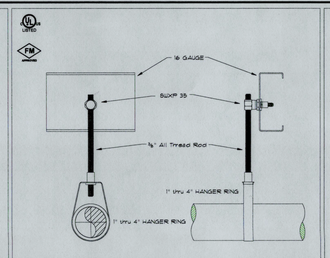
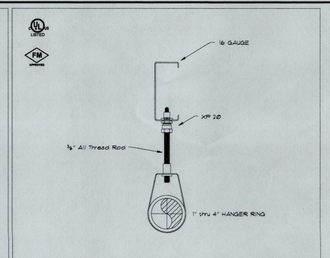


SAMMY CST 20 HANGER DETAIL
(PIPE SIZES 1" thru 4")



SAMMY SWXP 35 HANGER DETAIL
(PIPE SIZES 1" thru 4")



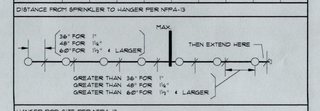
SAMMY XP 20 HANGER DETAIL
(PIPE SIZES 1" thru 4")

HANGER SPACING CHART

MAXIMUM DISTANCE BETWEEN HANGERS (FT.-IN.) PER NFPA-13

PIPE SIZE	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	6"
STEEL PIPE	N/A	12-Ø	12-Ø	15-Ø	15-Ø	15-Ø	15-Ø	15-Ø	15-Ø
THREADED LIGHTWALL	N/A	12-Ø	12-Ø	12-Ø	12-Ø	12-Ø	12-Ø	N/A	N/A
COPPER	8-Ø	8-Ø	10-Ø	10-Ø	12-Ø	12-Ø	12-Ø	15-Ø	15-Ø
CPVC	5-6	6-Ø	6-6	7-Ø	8-Ø	9-Ø	10-Ø	N/A	N/A

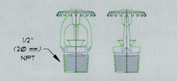
DISTANCE FROM SPRINKLER TO HANGER PER NFPA-13



HANGER ROD SIZE PER NFPA-13

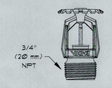
PIPE SIZE	DIAM. OF ROD	PIPE SIZE	DIAM. OF ROD
UP TO AND INCLUDING 4"	3/8"	6" AND 8"	1/2"

NOTE: IF PRESSURE EXCEEDS 250 PSI, PROVIDE HANGER FOR ANY OVERS (TO PENDENT HEAD) EXCEEDING 1'-0"



WHERE INSTALLED IN STORAGE UNITS

- SERIES VK300, K=5.6, 1/2" NPT, QR UPRIGHT, SIN VK300
- MAXIMUM SPACING = 10' X 10'
- MINIMUM SPACING BETWEEN SPRINKLERS = 6'-0"
- MAXIMUM DISTANCE OFF WALL = 5'-0"
- SPRINKLER DEMAND = 20 gpm @ 7.0 psi



WHERE INSTALLED IN STORAGE UNITS

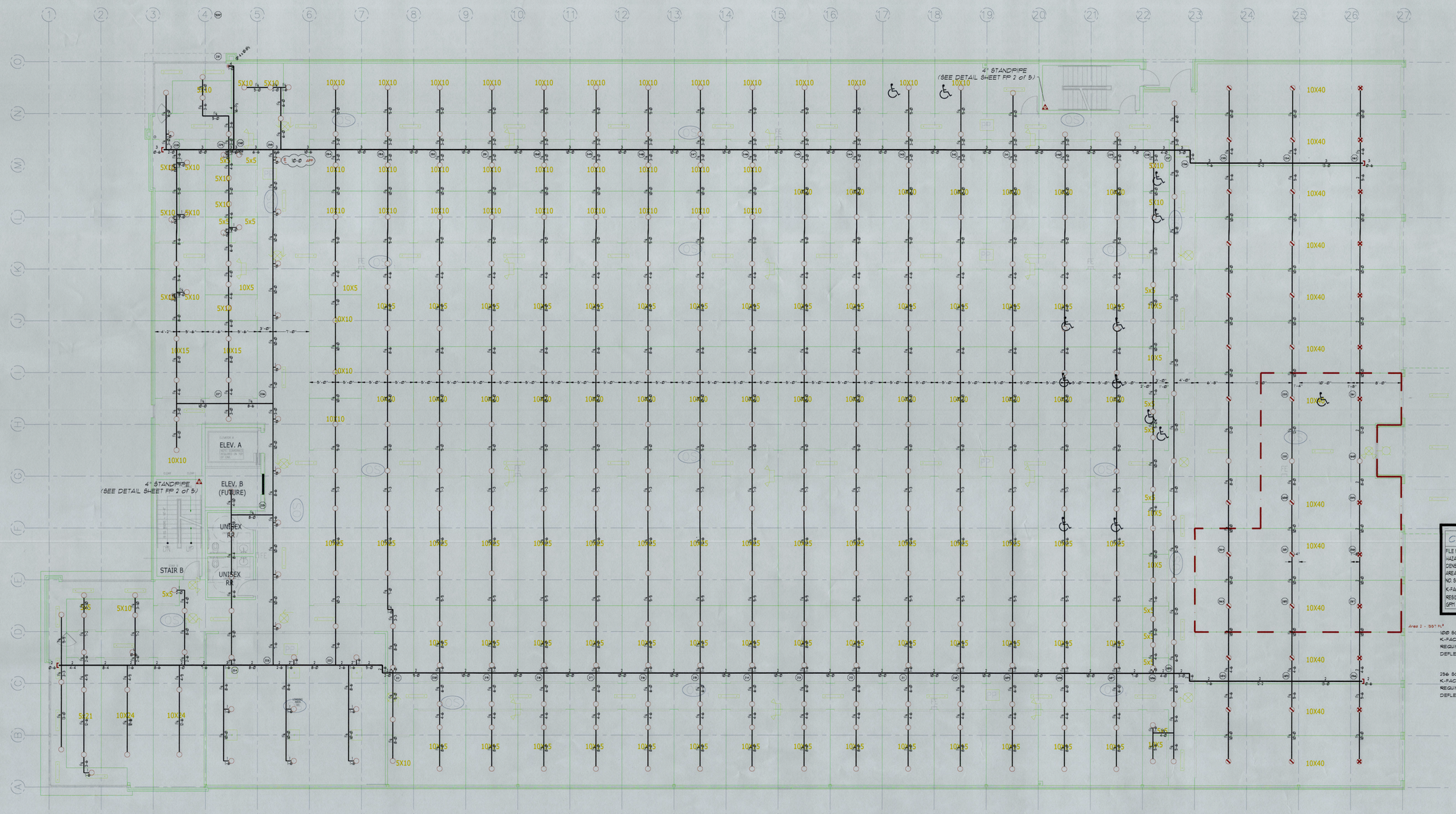
- SERIES VK532, K=5.6, 1/2" NPT, QR UPRIGHT, SIN VK532
- MAXIMUM SPACING = 16' X 16'
- MINIMUM SPACING BETWEEN SPRINKLERS = 8'-0"
- MAXIMUM DISTANCE OFF WALL = 8'-0"
- SPRINKLER DEMAND = 51 gpm @ 20.7 psi

1. Valve Not Smaller than 3/4"
2. Nipple
3. Cap or Plug

(at least one shall be brass)

Auxiliary Drain

ALL PIPING TO BE INSTALLED @ 10'-0" AFF THIS LEVEL - U.N.O.



CALCULATION AREA # 2	
FILE NAME :	LAKEVIEW STORAGE - AREA 2
HAZARD :	ORDINARY HAZARD GRP II
DENSITY/DESIGN AREA :	.20 gpm / 557 sq. ft.
AREA PER SPRINKLER :	VARIES sq. ft.
NO. SPRINKLERS :	12
K-FACTOR :	5.6 & 1.12 Hose Allowance 250 gpm
RESIDUAL PSI REQ. @ BOR :	13.86 psi
GPM REQ. @ BOR:	667.125 gpm

Area 2 - 557 ft.²

SAFETY FACTOR 15.46 PSI 17.4 %

1200 SQ. FT. - VIKING (VK300) QR UPRIGHT
K-FACTOR = 5.6
REQUIRED SPRINKLER HEAD DEMAND = 20 gpm @ 7 psi
DEFLECTOR DISTANCE = 12" B.T.O.S.

256 SQ. FT. - VIKING (VK532) EC/QREC UPRIGHT
K-FACTOR = 1.2
REQUIRED SPRINKLER HEAD DEMAND = 51 gpm @ 20.7 psi
DEFLECTOR DISTANCE = 12" B.T.O.S.

ALL PIPING TO BE INSTALLED @ 10'-0" AFF THIS LEVEL - U.N.O.

LAKEVIEW SELF STORAGE LEVEL TWO SPRINKLER PLAN

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

TOTAL LEVEL TWO FLOOR AREA = 33,284 sq. ft.

STATE OF MISSOURI — TOM R. HAMPTON — PROFESSIONAL ENGINEER

SUBMITTAL DRAWING

GENERAL NOTES

1. ALL ELECTRICAL WIRING BY OTHERS.
2. ALL UNDERGROUND PIPE INSTALLED BY OTHERS
3. FIRE SPRINKLER SYSTEM SHALL BE MONITORED IN AN APPROVED MANNER. MONITORING OF SYSTEM IS THE RESPONSIBILITY OF THE OWNER.
4. FIRE FINE IS TO PROVIDE ALL NECESSARY SIGNS FOR IDENTIFYING DEVICES & HYDRAULIC DATA.
5. OWNER TO MAINTAIN ADEQUATE HEAT WHERE WET SYSTEM PIPING IS INSTALLED.

FIRE PROTECTION MATERIALS

1. ALL COMPONENTS TO BE UL LISTED.
2. ALL HANGERS TO BE PER NFPA-13, 2013.
3. ALL PIPE 2" AND SMALLER WITH THREADED ENDS AND BLACK THREADED FITTINGS SHALL BE BLACK SCH. 40.
4. ALL PIPE 1¼" AND LARGER GROOVED ENDS AND LISTED GROOVED FITTINGS SHALL BE BLACK SCH. 10.
5. DROPS TO BE 1" BLACK SCH. 40 AND CUT ON THE JOB FIT FINISHED HARDLID CEILINGS WHERE APPLICABLE.
6. PROVIDE APPROVED FIRESTOPPING WHERE PIPE PENETRATES FIRE RATED FLOORS, WALLS & CEILINGS.

APPLICABLE CODE REQUIREMENTS

BUILDING USE - SELF STORAGE (GROUP S-1)
BUSINESS GROUP B

TYPE OF CONSTRUCTION - TYPE IIB
2018 INTERNATIONAL BUILDING CODE (IBC)
2018 INTERNATIONAL FIRE CODE (IFC)
NFPA 13 - 2016 EDITION
BUILDING IS FULLY SPRINKLERED

DESIGN CRITERIA

DESIGN CRITERIA NOTED INDIVIDUALLY
SEE INDIVIDUAL HYDRAULIC DEMAND BLOCKS

CALCULATION AREA # X	
FILE NAME :	SAMPLE - AREA X
HAZARD :	ORDINARY HAZARD GROUP II
DENSITY/DESIGN AREA :	.20 gpm / 1,500 sq. ft.
AREA PER SPRINKLER :	VARIES sq. ft.
NO. SPRINKLERS :	20
K-FACTOR :	5.6 Hose Allowance 250 gpm
RESIDUAL PSI REQ. @ BOR :	15.00 psi
GPM REQ. @ BOR:	750.00 gpm

SYMBOLS

4'-8.00" / 4'-5" (Entry 18'-5")	CONTROL MEASUREMENT
	PIPE ELEVATION HEIGHT
10'-0" AFF	CEILING HEIGHT ELEVATION
	PIPE RISE
	PIPE DROP
10	BRANCH LINE NUMBER
101	MAIN NUMBER
	COMMON CONNECTION
	2-WAY EARTHQUAKE BRACE
	4-WAY EARTHQUAKE BRACE
	PIPE HANGER
	CAP (TURD OR GRVD)
	SYSTEM RISER

ABBREVIATIONS

BOB	Bottom of Beam
BOD	Bottom of Deck
BOP	Bottom of Pipe
BTS	Behind Top of Steel
F.H.	Fire Hose Valve
N.I.C	Not In Contract
N.C.	Not In Contract
NTS	Not to Scale
OBJ	Open Bar Joist
PRV	Pressure Regd. Valve
PVC	Polyvinyl Chloride
SP	Sprinkler
TOB	Top of Beam
TOP	Top of Pipe
TOS	Top of Steel
UON	Unless Otherwise Noted

IMPORTANT

IN LOCALITIES SUBJECT TO FREEZING CONDITIONS THE OWNER MUST MAINTAIN HEAT THROUGHOUT WET FIRE SPRINKLER SYSTEM AREAS AND IN ENCLOSURES WHERE DRY PIPE DELUGE OR OTHER VALVES CONTROLLING WATER SUPPLIES TO SPRINKLER SYSTEMS ARE LOCATED.

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SPRINKLERS/NOZZLES

SYMBOL	COUNT	ORIENTATION	FINISH	TEMP	K-FACTOR	NPT	ORIFICE	MANUFACTURER	MODEL #	ESCUTCHEON	SIN #
	355	UPRIGHT	BRASS	175	5.6	1/2"	1/2"	VIKING	MICROFAST	N/A	VK300
	13	UPRIGHT	BRASS	175	1.12	3/4"	9/16"	VIKING	EC/QREC	N/A	VK532
	26	UPRIGHT	BRASS	175	5.6	1/2"	1/2"	VIKING	MICROMATIC	N/A	VK1200

TOTAL QUANTITY OF SPRINKLERS ON SHEET: 408

SCALE: SEE PLAN
DRAWN BY: AAbdahl
CHECKED BY:
CONTRACT NO. LS-01-23
DATE: 9/10/2023

DESIGN SUBMITTAL AND REVISION DATES
1 Submitted for Approval 9/10/2023
2
3

STRICKLAND CONSTRUCTION
7201 S ROGERS ROAD SUITE B
CONTRACTOR: OLATHE, KANSAS 66062
CONTACT: KELLY BRETTGREW
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Fax: (539) 217-1167

CONTRACT:
LAKEVIEW SELF STORAGE
BUILDING A
4101 NE PORT DRIVE
LEE'S SUMMIT, MISSOURI

SHEET DESCRIPTION: HOUSEHOLD STORAGE

CONTRACT WITH: STRICKLAND CONSTRUCTION

DRAWING NO. FP - 4 of 5

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