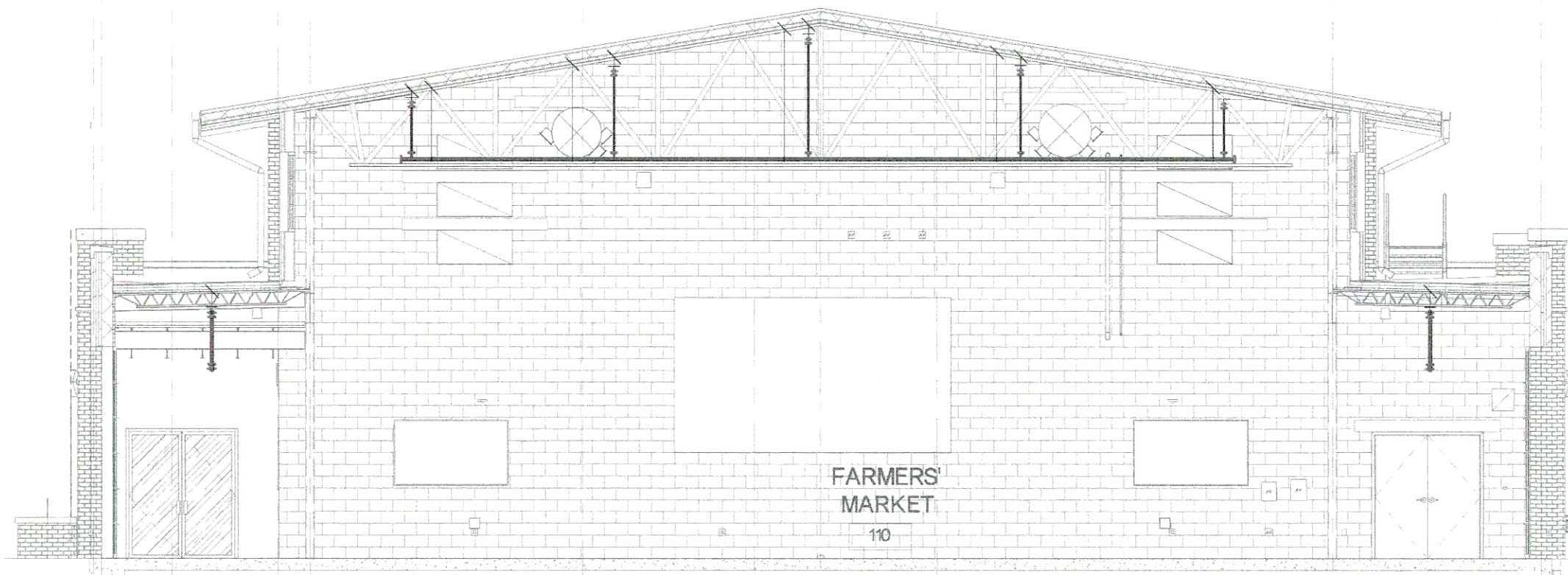
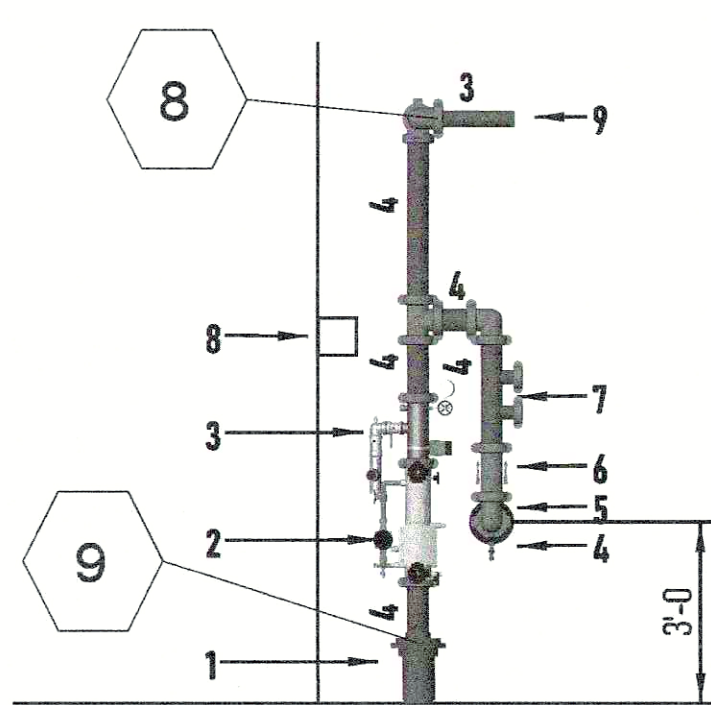


GENERAL NOTE
*ALL SPRINKLER SYSTEMS SHALL CONFORM WITH THE REQUIREMENTS OF NFPA
*ALL SECTIONS OF TRAPPED PIPING TO HAVE AUXILIARY DRAINS WHERE REQUIRED PER NFPA
*ALL HANGER TO BE INSTALLED PER REQUIREMENTS OF NFPA
*PENETRATIONS THROUGH FIRE RATED WALL SHALL BE FIRE CAULKED AS REQUIRED PER CONTRACT
*THE OWNER SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE HEAT TO PREVENT
WATER FILLED PIPE FROM FREEZING
*AMERICAN FIRE SPRINKLER CORP. IS NOT CONTRACTED TO PROVIDE THE ALARM WIRING TO THE
CENTRAL STATION ALARM SYSTEM
*THREADED PIPING 1" - 2" SHALL BE SCH 40 BLACK STEEL WITH DUCTILE THREADED FITTINGS
*GROOVED PIPING 1" - 2" SHALL BE SCH 40 BLACK STEEL WITH VICTAULIC GROOVED FITTINGS
*GROOVED PIPING 2 1/2" - 4" SHALL BE SCH 40 BLACK STEEL WITH VICTAULIC GROOVED FITTINGS
*SYSTEM PIPE SHALL BE SIZED PER HYDRAULIC CALCULATION
*COORDINATION ONGOING, SPRINKLERS FOR OBSTRUCTIONS TO BE ADDED AS NEEDED

BUILDING CODE ANALYSIS
*BUILDING USE: MARKET
*CONSTRUCTION TYPE: I-B
*OCCUPANCY GROUP IS: A3 - ASSEMBLY
B - BUSINESS
S2 - STORAGE
*TOTAL FLOOR AREA: 16,495 SF
FIRE PROTECTION CODE ANALYSIS
*SYSTEM DESIGN IS BASED ON 2018 IBC, NFPA 13 2016
*SPRINKLER DESIGN DEMANDS SHALL BE AS FOLLOWS
*ALL SPACES ARE LIGHT HAZARD UNLESS NOTED OTHERWISE ON DRAWINGS
*LIGHT HAZARD: 0.10 GPM/SF OVER 1500 SQ. FT. + 100 GPM HOSE ALLOWANCE
*ORDINARY HAZARD GROUP 1: 0.15 GPM/SF OVER 1500 SQ. FT. + 250 GPM HOSE ALLOWANCE
*ORDINARY HAZARD GROUP 2: 0.20 GPM/SF OVER 1500 SQ. FT. + 250 GPM HOSE ALLOWANCE
*DESIGN AREAS UTILIZE QUICK RESPONSE SPRINKLER AREA REDUCTION IN ACCORDANCE WITH NFPA 13

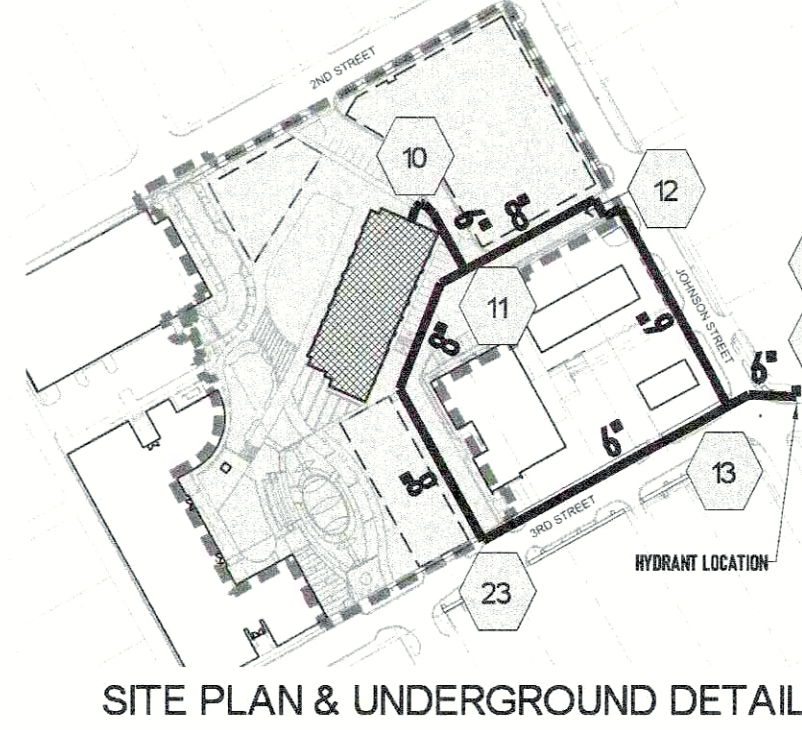


B SECTION DETAIL
SCALE: 1/8" = 1'-0"

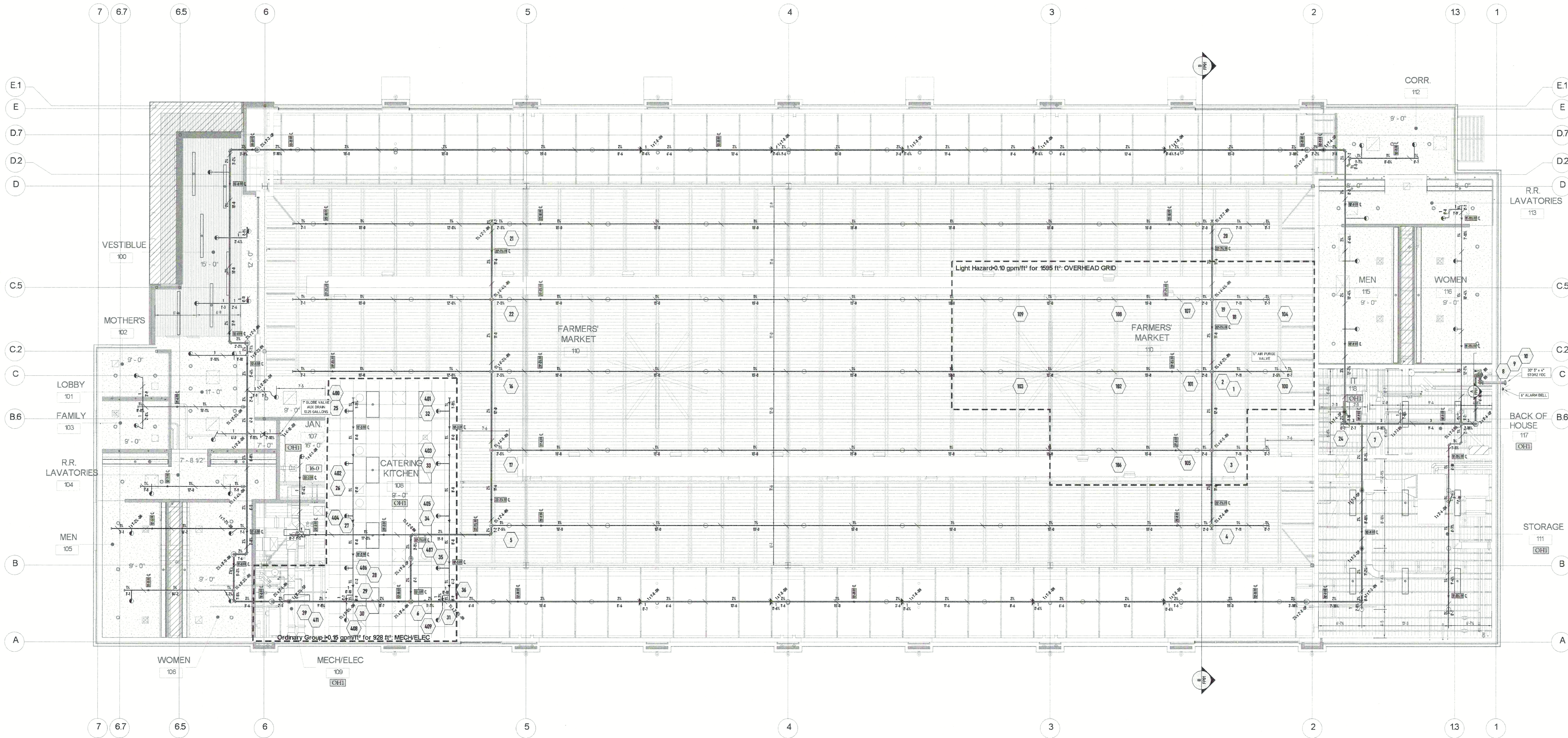


A RISER DETAIL
SCALE: N.T.S.

9. OUT TO SYSTEM
8. SPARE SPRINKLER BOX
7. (2) CAPPED 2 1/2" OUTLETS FOR FORWARD FLOW TESTING
6. 4" CHECK VALVE
5. TO 30° ANGLE 5"x4" STORZ FDC
4. 1/2" BALL DRIP VALVE
3. 4" AGF RISER MANIFOLD, INCLUDES
 - WATER ALARM
 - INSPECTORS TEST
 - WATER GAUGES
 - 2" SYSTEM DRAIN
 - RELIEF VALVE
2. 4" DERRINGER 30 DOUBLE CHECK DETECTOR BACKFLOW DEVICE
1. 6" FIRE SERVICE IN (BY OTHERS)

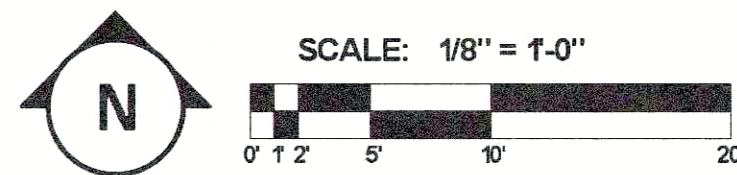


Supply Flow Test Data	
Test Conducted By	City of Lee's Summit
Test Witnessed By	Ryan McCormick
Date of Test	5/12/2024
Time of Test	2:00pm
Location	SE 3rd St & SE Johnson St
Static Pressure	80.000
Residual Pressure	73.000
Flow	2000.00

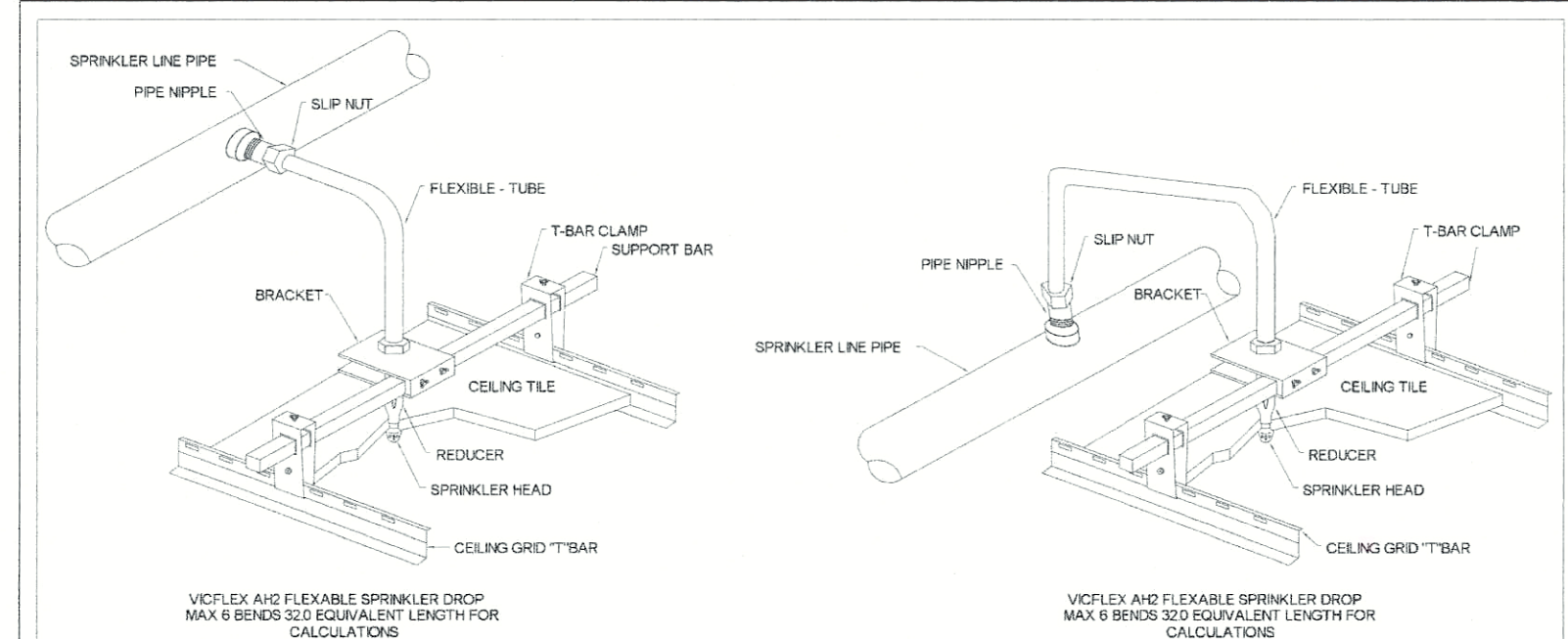
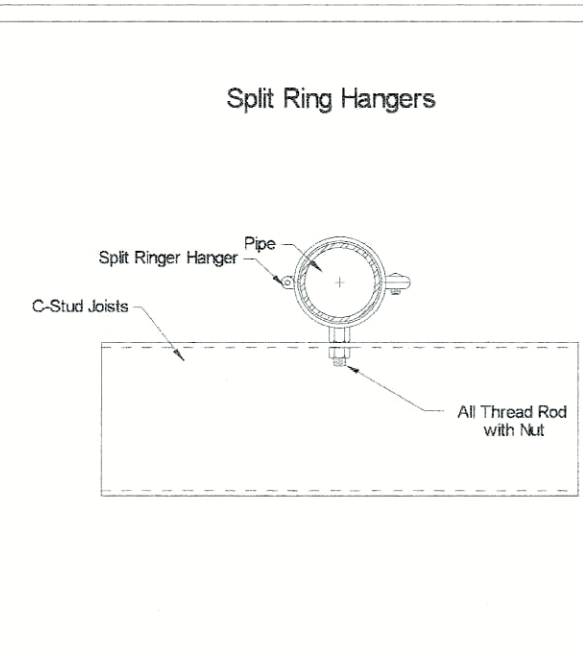
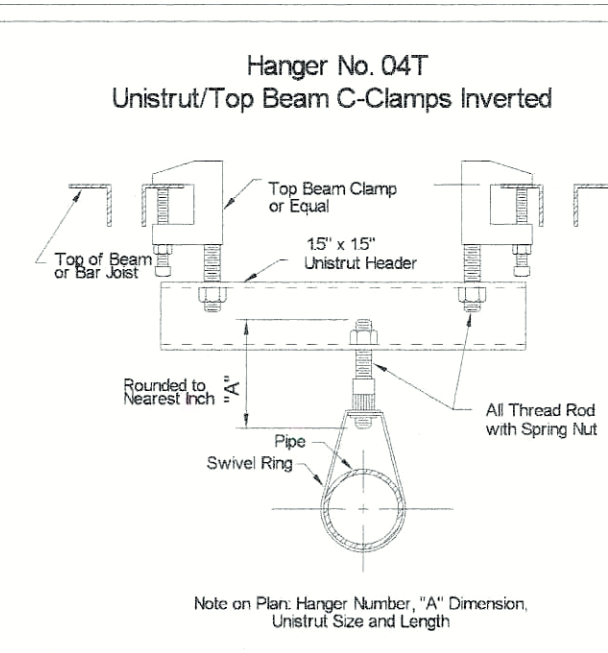
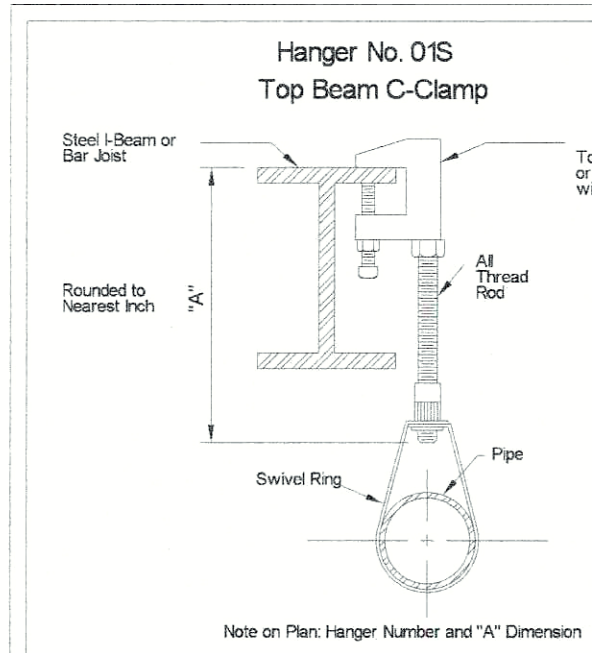


Hydraulic Information	
Remote Area OVERHEAD GRID	
OCCUPANCY CLASSIFICATION	Light Hazard
DENSITY (gpm/ft ²)	0.15 for 1500 ft ² (Actual 1595 ft ²)
TOTAL HOSE STREAMS	100.00
TOTAL HEADS FLOWING	10
K-FACTOR	5.6
TOTAL WATER REQUIRED	286.67
TOTAL PRESSURE REQUIRED	48.375
BASE OF RISER (gpm)	186.67
BASE OF RISER (psi)	48.365
SAFETY MARGIN (psi)	+30.432 (38.1%)

Hydraulic Information	
Remote Area CATERING KITCHEN	
OCCUPANCY CLASSIFICATION	Ordinary Group I
DENSITY (gpm/ft ²)	0.15 for 1500 ft ² (Actual 928 ft ²)
QUICK RESPONSE REDUCTION	9'-0" Ceiling (40.0%) 900 ft ²
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	11
K-FACTOR	5.6
TOTAL WATER REQUIRED	485.01
TOTAL PRESSURE REQUIRED	51.974
BASE OF RISER (gpm)	235.01
BASE OF RISER (psi)	51.727
SAFETY MARGIN (psi)	+27.517 (34.6%)



MAXIMUM DISTANCE BETWEEN HANGERS										
NOMINAL PIPE SIZE (IN)	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"
STEEL PIPE EXCEPT THREADED VERTICAL	14'-0"	12'-0"	12'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"



SPRINKLER LEGEND									
SYMBOL	QUANTITY	MANUFACTURER	SIN	K-FACTOR	TYPE	SIZE	FINISH	TEMPERATURE	RESPONSE
○	78	VIKING	VK3001	5.6	UPRIGHT	1/2"	BRASS	200°	QUICK
⊙	4	VIKING	VK3001	5.6	UPRIGHT	1/2"	BRASS	200°	ON SPRIG
●	1	VIKING	VK3001	5.6	UPRIGHT	1/2"	BRASS	200°	QUICK
◐	37	VIKING	VK4421	5.6	CONC. PENDENT	1/2"	WHITE	200°	QUICK
⬮	10	VIKING	VK630	8.0	EC SIDEWALL	1/2"	BRASS	175°	QUICK
TOTAL		130							

RELEASED FOR CONSTRUCTION
As Noted on Plan Review
Lee's Summit Fire Department
Lee's Summit, Missouri
06/11/2024

FIRE PROTECTION SUBMITTAL

PE STAMP: [Professional Engineer Seal]

AMERICAN FIRE SPRINKLER
OFFICE: 6920 W. 4TH TERR. MISSOURI 64063
MAIL: P.O. BOX 1000 MISSOURI 64066
867-2680
FABRICATION - SALES - SERVICE

PAY ITEM: SPR

REVIEWING AUTHORITY: OWNER / LEE'S SUMMIT, MO

ALL HEADS THIS SHEET: 130

TOTAL HEADS THIS JOB: 130

DRAWN BY: JONATHAN THOMPSON

DATE: 05-07-2024

REVISION DATE: 4353CK

CONTRACT #

DWG #

FP01

1 OF 1