

# MCC AUTOMOTIVE INSTITUTE

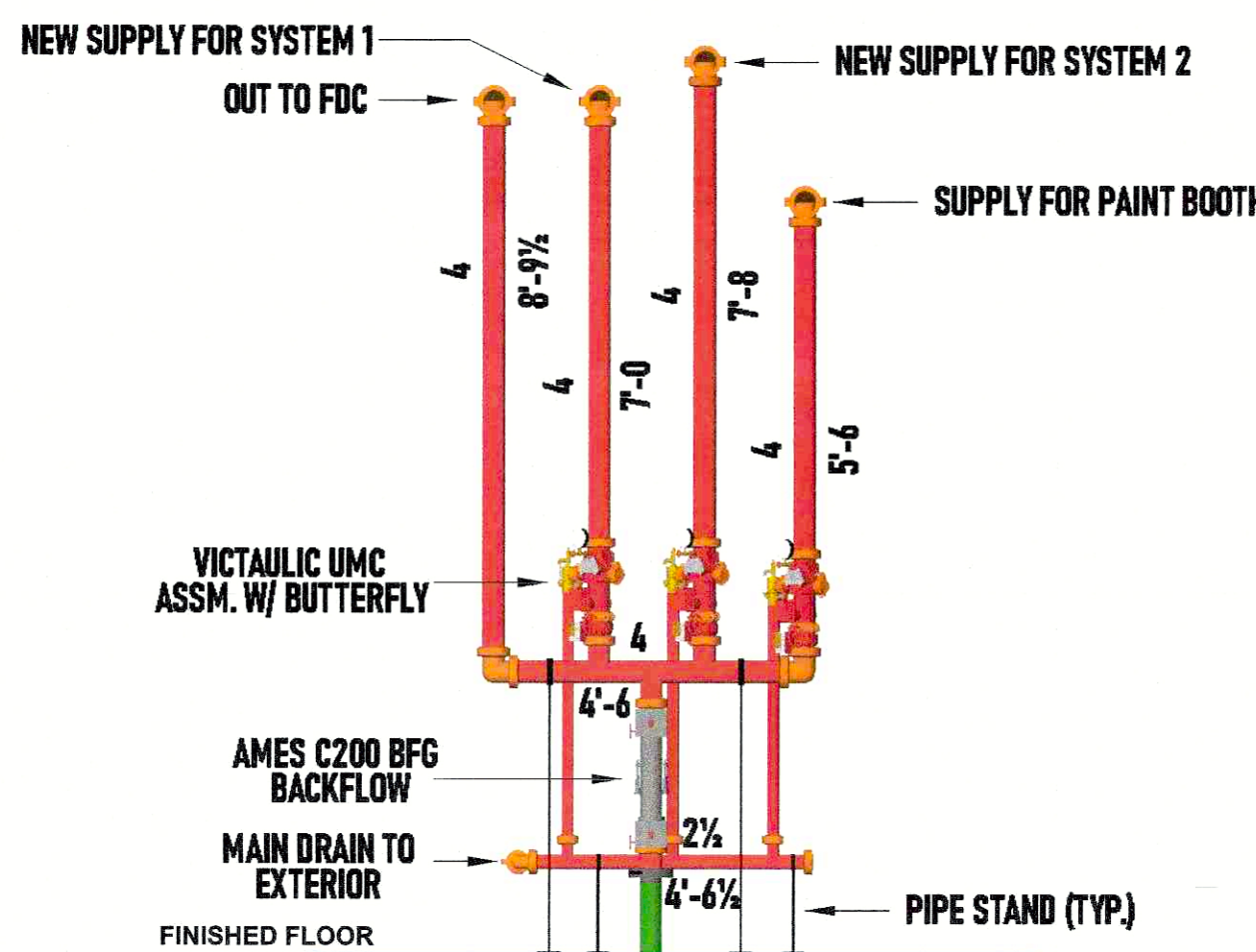
## METROPOLITAN COMMUNITY COLLEGE - LONGVIEW

500 SW LONGVIEW RD.  
LEE'S SUMMIT, MO 64081

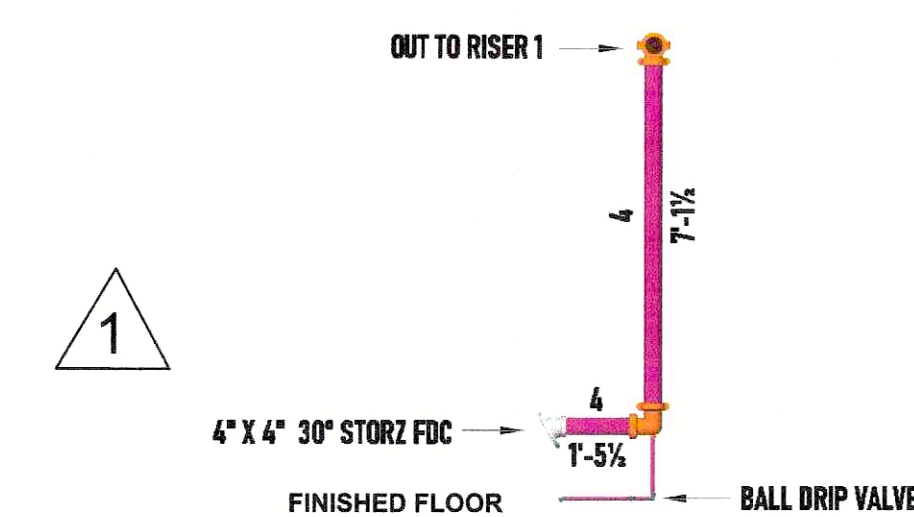
## METROPOLITAN COMMUNITY COLLEGE - LONGVIEW

RELEASED FOR CONSTRUCTION  
As Noted on Plan Review

Lee's Summit Fire Department  
Lee's Summit, Missouri  
02/07/2025

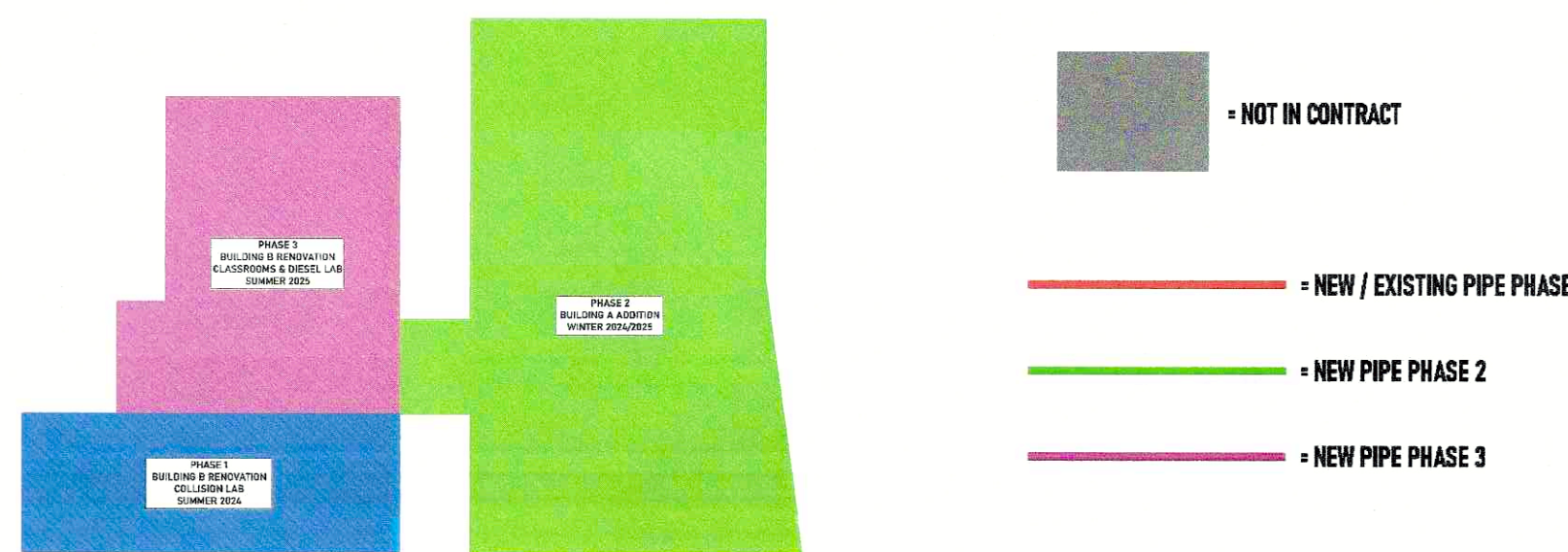


**RISER 1 DETAIL**  
SCALE: 1/4" = 1'-0"

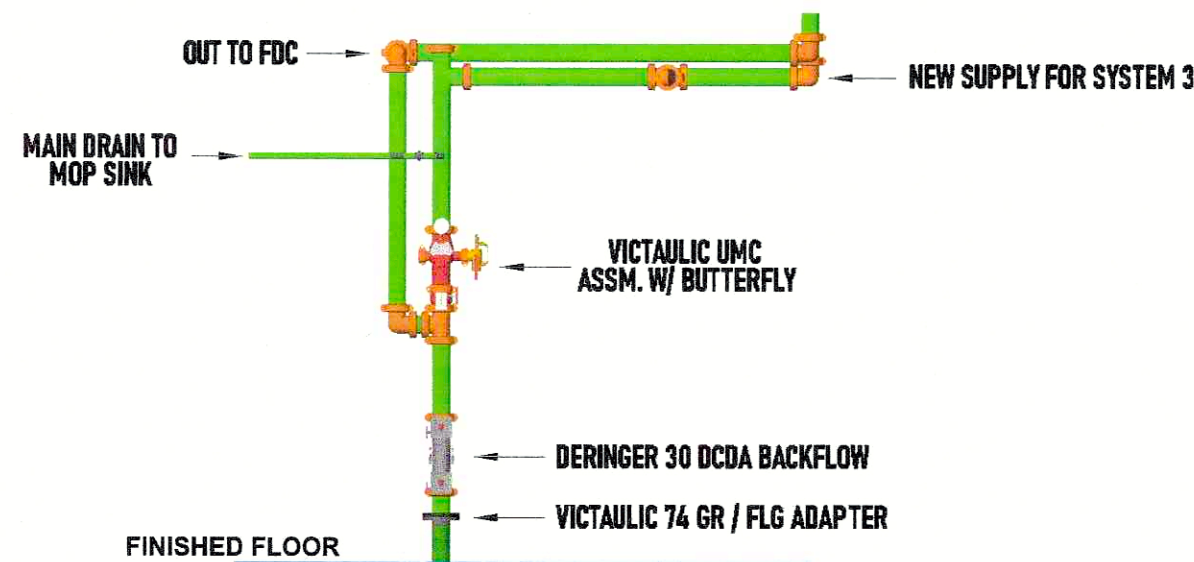


**FDC 1 DETAIL**  
SCALE: 1/4" = 1'-0"

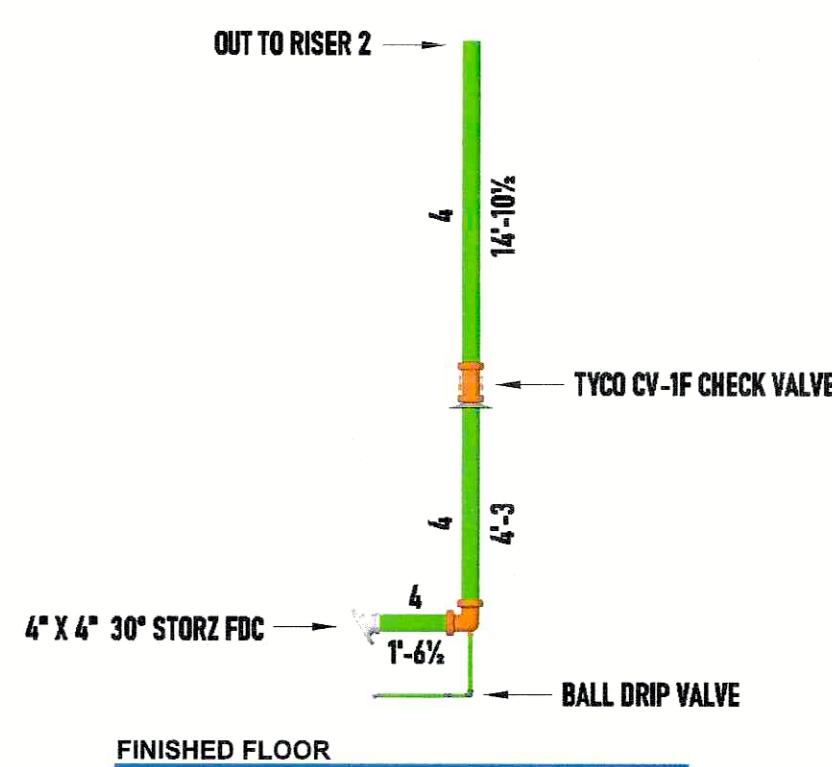
- THE SYSTEMS SHALL CONFORM WITH THE REQUIREMENTS OF NFPA 13, 2016.
- ALL THREADED PIPING / PIPING 2" & SMALLER SHALL BE SCHEDULE 40, BLACK STEEL. ALL GROOVED PIPING 2 1/2" AND LARGER SHALL BE SCHEDULE 10, BLACK STEEL.
- FITTINGS FOR 1" THRU 1 1/2" SHALL BE DUTILE IRON THREADED OR ARE TO BE GROOVED WITH STANDARD TAKE-OUTS OR WELDED OUTLETS AS INDICATED ON THE DRAWING. FITTINGS FOR 2" AND LARGER ARE TO BE GROOVED WITH FIRELOCK TAKE-OUTS OR WELDED OUTLETS AS INDICATED ON THE DRAWING. ALL WELDS ARE TO BE SHOP WELDED.
- PIPE LENGTHS ON DRAWING ARE SHOWN AS CUT LENGTH DIMENSIONS.
- ALL SECTIONS OF TRAPPED PIPING SHALL HAVE AUXILIARY DRAINS WHERE REQUIRED. PER NFPA 13.
- ALL HANGERS ARE TO BE IN CONFORMANCE WITH NFPA 13.
- PENETRATIONS THRU FIRE WALLS SHALL BE FIRE CAULKED AS REQUIRED.
- THE OWNER SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE HEAT TO PREVENT THE WATER IN THE PIPING FROM FREEZING.
- AMERICAN FIRE SPRINKLER CORP. IS NOT CONTRACTED TO PROVIDE THE ALARM WIRING OR THE CENTRAL STATION ALARM SYSTEM.



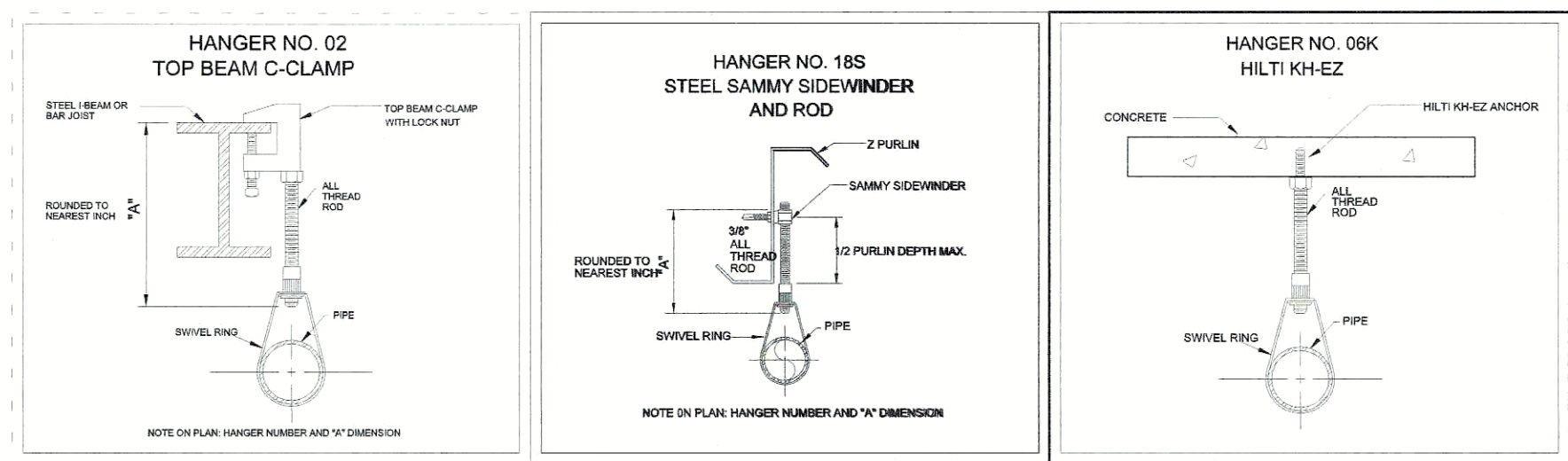
PHASING PLAN



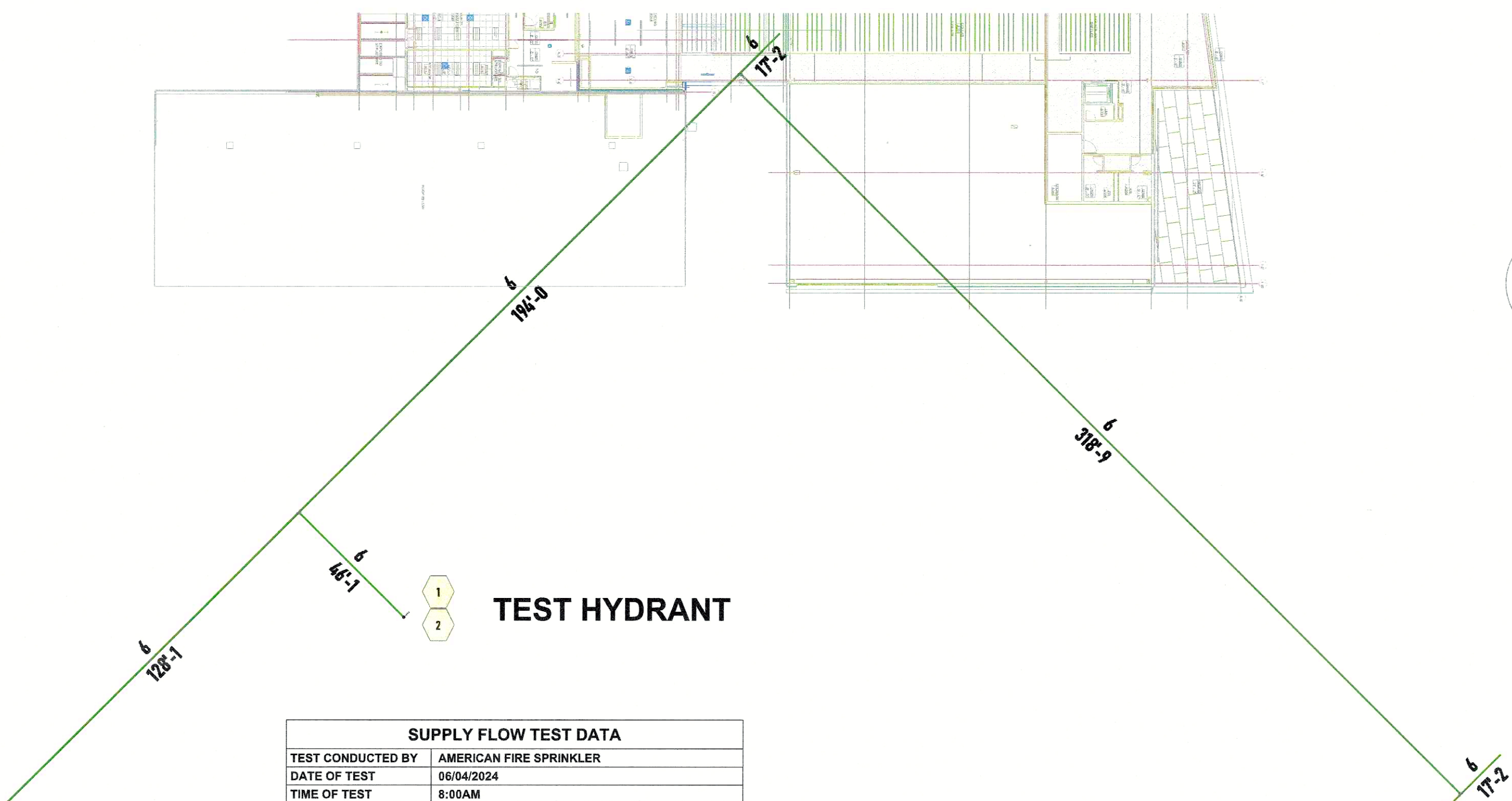
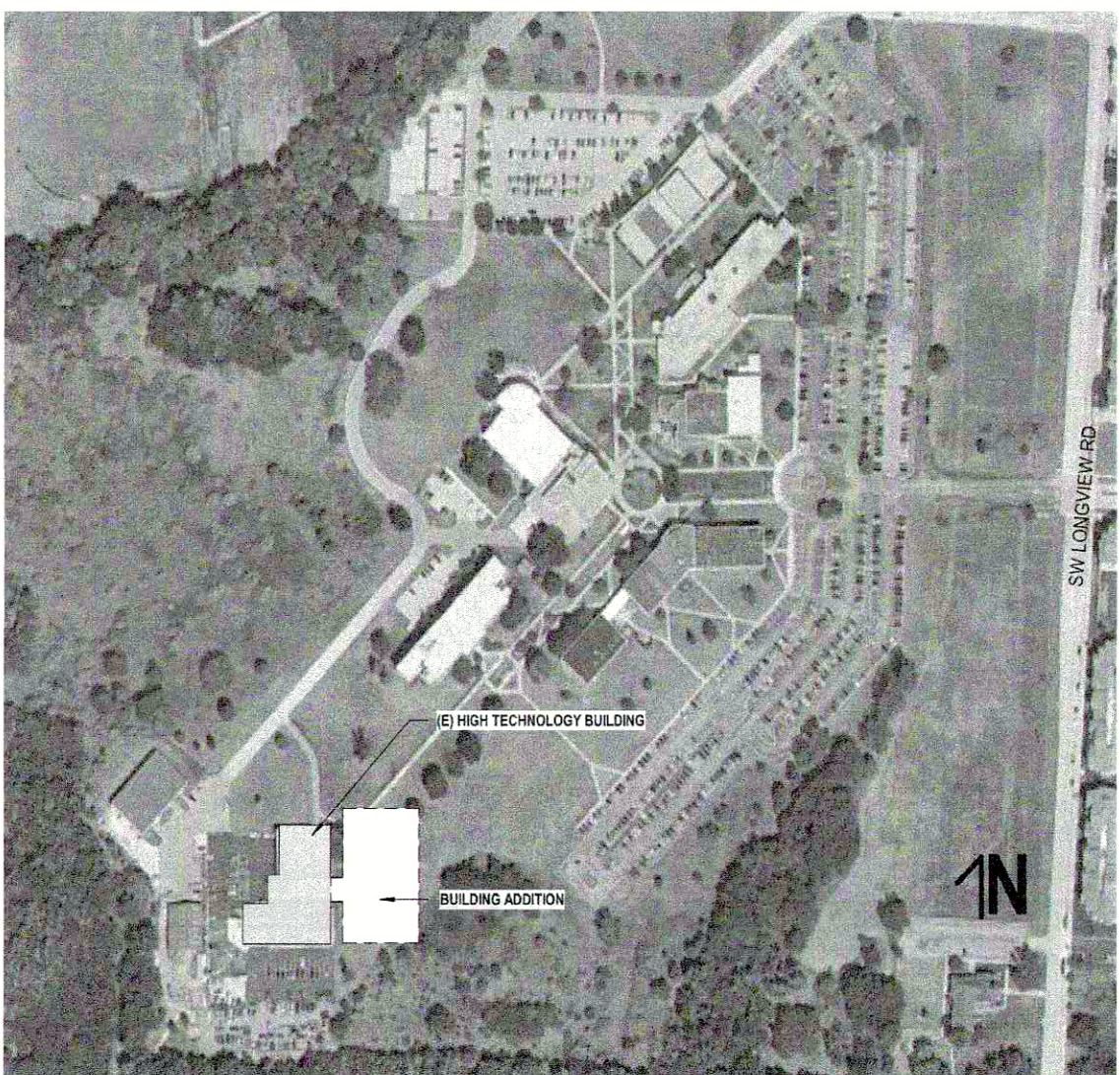
**RISER 2 DETAIL**  
SCALE: 1/4" = 1'-0"



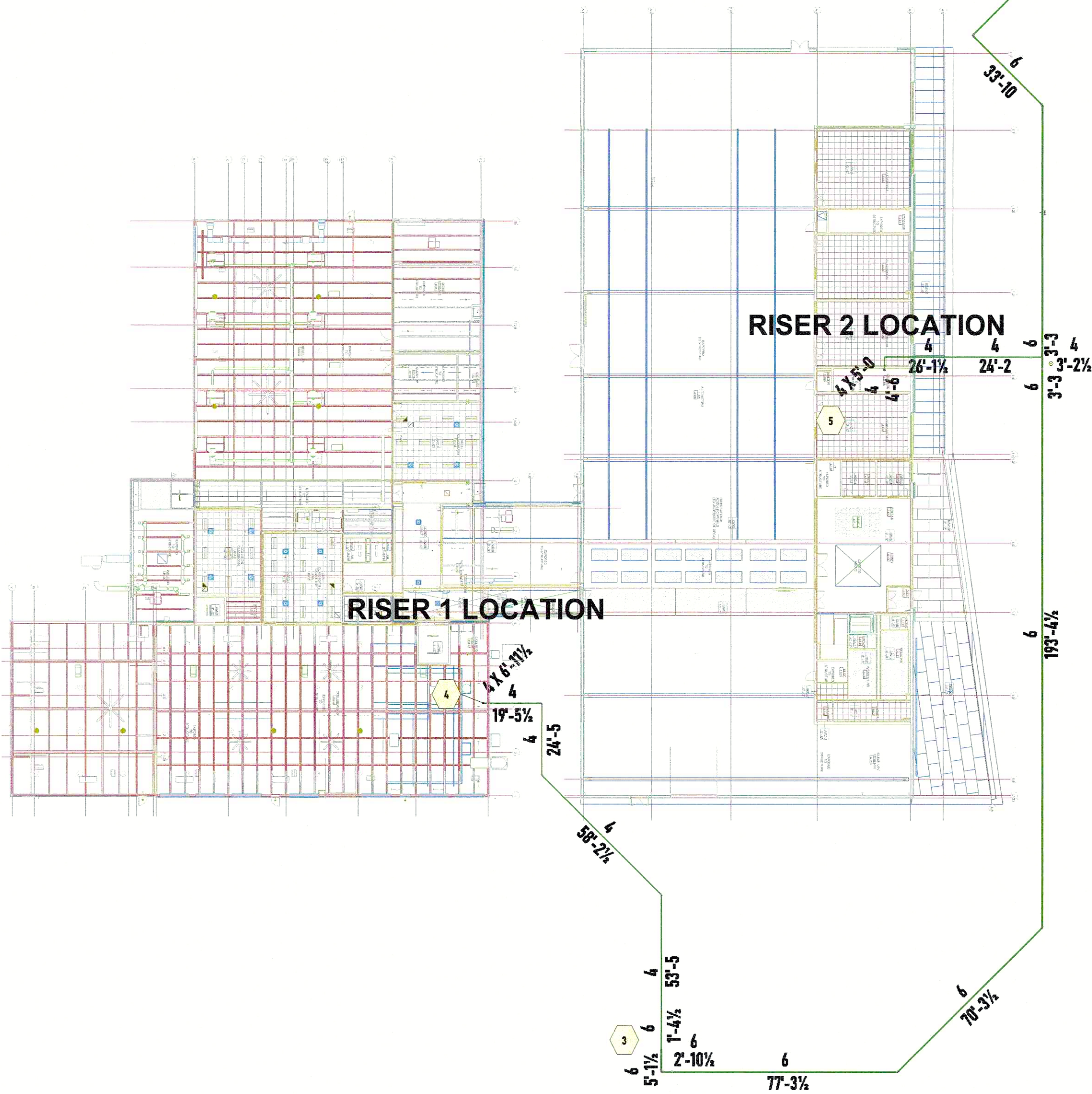
**FDC 2 DETAIL**  
SCALE: 1/4" = 1'-0"



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"	6"
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



SUPPLY FLOW TEST DATA	
TEST CONDUCTED BY	AMERICAN FIRE SPRINKLER
DATE OF TEST	06/04/2024
TIME OF TEST	8:55AM
STATIC PRESSURE	96.000
RESIDUAL PRESSURE	62.000
FLOW	1682.00
OUTSIDE HOSE FLOW	230.00
TEST WITNESSED BY	JIMMY SALAMON
LOCATION	500 SW LONGVIEW RD, LEE'S SUMMIT, MO 64081



UNDERGROUND REFERENCE  
NOT TO SCALE

MCC AUTOMOTIVE INSTITUTE

500 SW LONGVIEW RD.  
LEE'S SUMMIT, MO 64081









PE STAMP:

AMERICAN  
FIRE SPRINKLER  
OFFICE: 6750 W. 47TH TERR. MISSION, KS 66203  
MAIL: P.O. BOX 919, LEE'S SUMMIT, MO 64081  
FIRE PROTECTION SYSTEMS - CONSULTANTS - DESIGN  
FABRICATION - SALES - SERVICE

PAY ITEM: SPR  
REVIEWING AUTHORITY: OWNER / CITY  
HEADS THIS SHEET: N/A  
HEADS THIS JOB: 640  
DRAWN BY: ALEC MOBLEY  
DATE: 06-28-2024  
REVISION DATE: 01-30-2025  
SCALE: AS SHOWN  
CONTRACT #: 4352CK  
DWG #: FP01

SHEET: 1 OF 3



SPRINKLER LEGEND - LEVEL 1									
SYMBOL	QUANTITY	MANUFACTURER	SW	K-FACTOR	TYPE	SIZE	FINISH	TEMPERATURE	NOTE
	103	VIKING	VC300	5.6	UPRIGHT	%	BRASS	200°F	
	91	VIKING	VW421	5.6	CONCEALABLE PENDENT	%	BRASS	200°F	
	4	VIKING	VC335	5.6	HORIZONTAL SIDEWALL	%	BRASS	200°F	EXISTING TO REMAIN
	4	VIKING	VC335	5.6	HORIZONTAL SIDEWALL	%	BRASS	200°F	
	24	GENIECO	VC300	5.6	UPRIGHT	%	BRASS	200°F	EXISTING TO REMAIN
	24	GENIECO	VC300	5.6	UPRIGHT	%	BRASS	200°F	ON SPRING
	17	VIKING	VC324	11.2	PENDENT	%	BRASS	200°F	
	TOTAL	291							

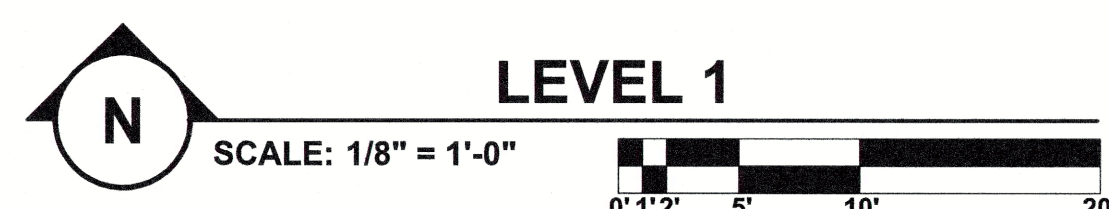
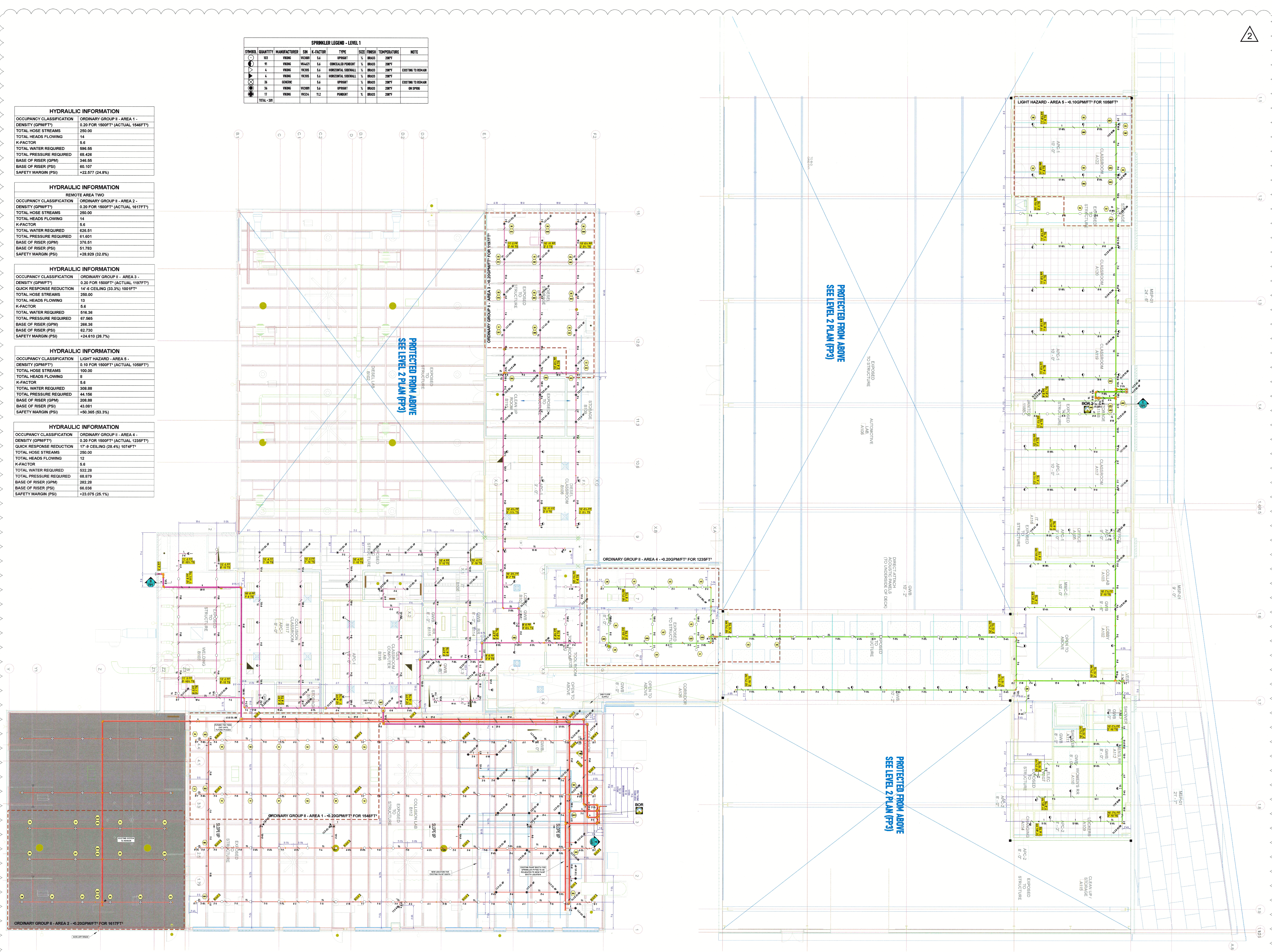
HYDRAULIC INFORMATION	
OCCUPANCY CLASSIFICATION	ORDINARY GROUP II - AREA 1 -
DENSITY (GPM/FT)	0.20 FOR 1500FT <sup>3</sup> (ACTUAL 1546FT <sup>3</sup> )
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	14
K-FACTOR	5.6
TOTAL WATER REQUIRED	596.55
TOTAL PRESSURE REQUIRED	68.426
BASE OF RISER (GPM)	346.55
BASE OF RISER (PSI)	60.107
SAFETY MARGIN (PSI)	+22.577 (24.8%)












HYDRAULIC INFORMATION	
REMOTE AREA TWO	
OCCUPANCY CLASSIFICATION	ORDINARY GROUP II - AREA 2 -
DENSITY (GPM)	0.20 FOR 1500FT <sup>3</sup> (ACTUAL 1617FT <sup>3</sup> )
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	14
K-FACTOR	5.6
TOTAL WATER REQUIRED	626.51
TOTAL PRESSURE REQUIRED	61.601
BASE OF RISER (GPM)	376.51
BASE OF RISER (PSI)	51.783
SAFETY MARGIN (PSI)	+28.929 (32.0%)

HYDRAULIC INFORMATION	
OCCUPANCY CLASSIFICATION	ORDINARY GROUP II - AREA 3.
DENSITY (GPM/FT <sup>3</sup> )	0.20 FOR 1500FT <sup>2</sup> (ACTUAL 1197FT <sup>2</sup> )
QUICK RESPONSE REDUCTION	1% S CEILING (33.3%) 1001FT <sup>2</sup>
TOTAL NOSE STREAMS	250.0
TOTAL HEADS FLOWING	13
K-FACTOR	5.6
TOTAL WATER REQUIRED	516.36
TOTAL PRESSURE REQUIRED	67.565
BASE OF RISER (GPM)	268.36
BASE OF RISER (PSI)	62.730
SAFETY MARGIN (PSI)	+24.610 (26.7%)

HYDRAULIC INFORMATION	
OCCUPANCY CLASSIFICATION	LIGHT HAZARD - AREA 5 -
DENSITY (GPM/FT)	0.10 FOR 1500FT* (ACTUAL 1058FT)
TOTAL HOSE STREAMS	100
TOTAL HEADS FLOWING	8
K-FACTOR	5.6
TOTAL WATER REQUIRED	308.88
TOTAL PRESSURE REQUIRED	44.156
BASE OF RISER (GPM)	208.88
BASE OF RISER (PSI)	43.081
SAFETY MARGIN (PSI)	+50.365 (53.3%)

HYDRAULIC INFORMATION	
OCCUPANCY CLASSIFICATION	ORDINARY GROUP II - AREA 4 -
DENSITY (GPM/FT)	0.20 (OR 1600FT <sup>3</sup> (ACTUAL: 1235FT <sup>3</sup> ))
QUICK RESPONSE REDUCTION	16.0% CEILING (28.4%) 1074FT <sup>3</sup>
TOTAL HOSE STREAMS	120
TOTAL HEADS FLOWING	25.00
K-FACTOR	5.6
TOTAL WATER REQUIRED	532.28
TOTAL PRESSURE REQUIRED	68.879
BASE OF RISER (GPM)	282.28
BASE OF RISER (PSI)	66.036
SAFETY MARGIN (PSI)	+23.075 (25.1%)

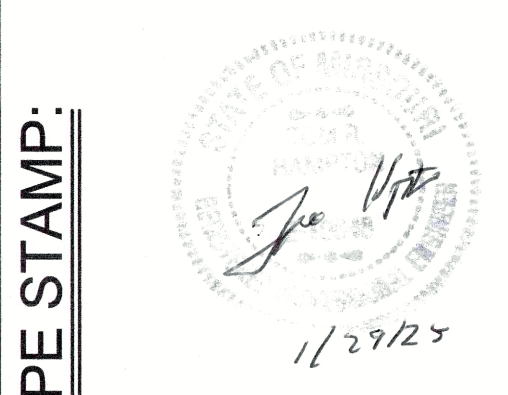


SYMBOLS		REVISIONS	
SYMBOL	DESCRIPTION	DELTA	DATE
	HYDRAULIC REFERENCE POINTS	$\frac{\Delta}{2}$	REVISED TO INCLUDE BUILDING ADDITION
	ELEV ABOVE TOP OF STEEL		
	ELEV ABOVE FINISHED FLOOR		
	ELEV ABOVE TOP OF STEEL		
	CEILING HEIGHT		
	CEILING HEIGHT		
	CEILING HEIGHT		
	CEILING HEIGHT		
	CEILING HEIGHT		
	CEILING HEIGHT		
	CEILING HEIGHT		
	CEILING HEIGHT		
	CEILING HEIGHT		
	CEILING HEIGHT		
	CEILING HEIGHT		

MCC AUTOMOTIVE INSTITUTE

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LEE'S SUMMIT, MO 64081

PE STAMP:





**AMERICAN**  
FIRE SPRINKLER  
8750 W. 47TH TERR. MISSION, KS. 66203  
P.O. BOX 958 MISSION, KS 66201-0958  
913/722-6900  
PROTECTION SYSTEMS - CONSULTANTS - DESIGN  
FABRICATION - SALES - SERVICE

PAY ITEM:	SPR
REVIEWING AUTHORITY :	OWNER / CITY
HEADS THIS SHEET:	281
HEADS THIS JOB:	640
DRAWN BY:	ALEC MOBLEY
DATE :	06-28-2024
REVISION DATE :	01-30-2025
SCALE:	AS SHOWN
CONTRACT #	4352CK
DWG #:	EDC

DWG #: **FP02**  
SHEET: 2 OF 3



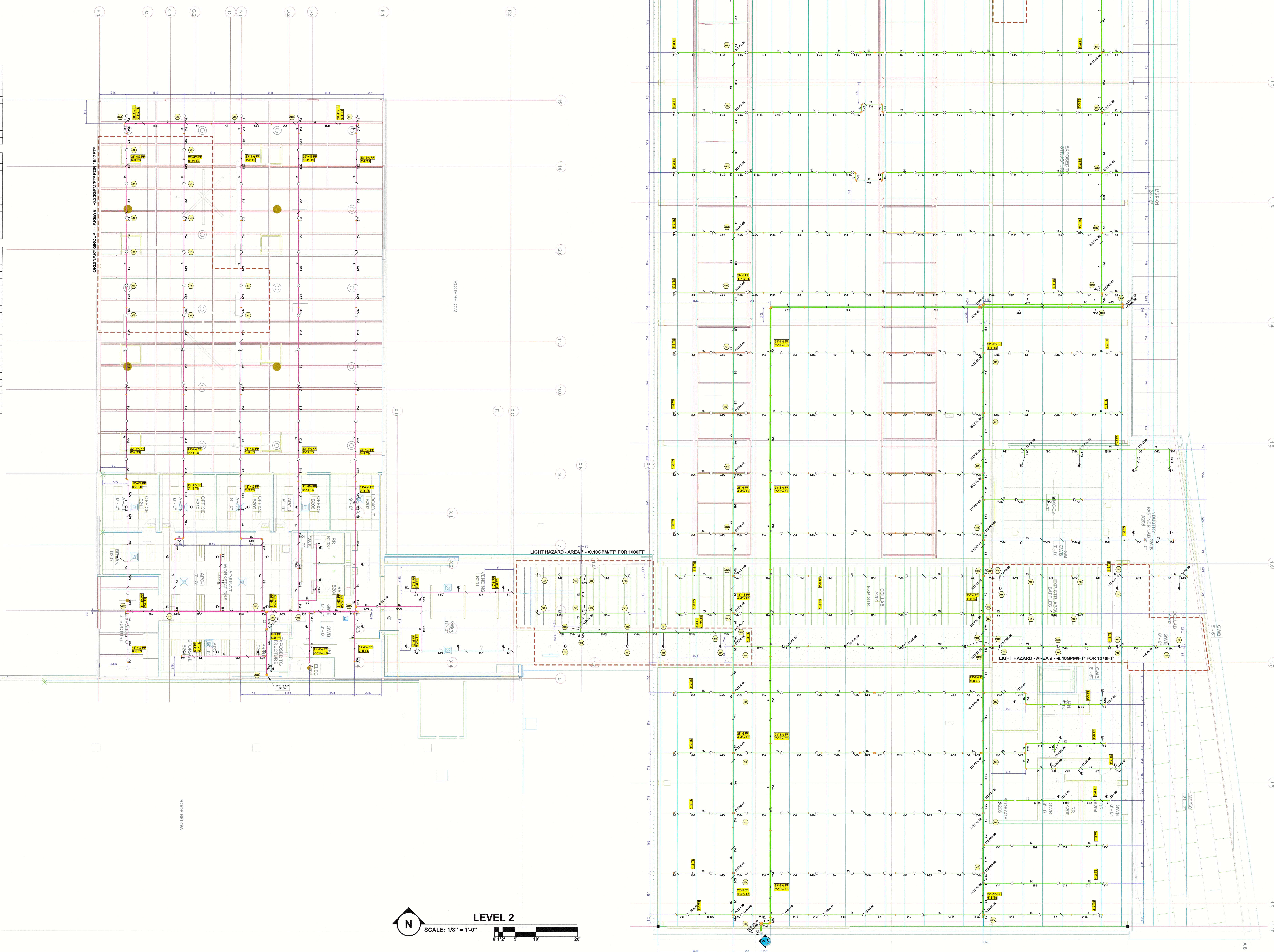
SPRINKLER LEGEND - LEVEL 2									
SYMBOL	QUANTITY	MANUFACTURER	SIN	K-FACTOR	TYPE	SIZE	FINISH	TEMPERATURE	NOTES
	297	VIKING	VK3001	5.6	UPRIGHT	%	BRASS	200°F	
	62	VIKING	VK4621	5.6	CONCEALED PENDENT	%	BRASS	200°F	
TOTAL = 359									

HYDRAULIC INFORMATION	
OCCUPANCY CLASSIFICATION	ORDINARY GROUP II - AREA 6 -
DENSITY (GPM/FT <sup>2</sup> )	0.20 FOR 1500FT <sup>2</sup> (ACTUAL 1517FT <sup>2</sup> )
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	14
K-FACTOR	5.6
TOTAL WATER REQUIRED	577.08
TOTAL PRESSURE REQUIRED	75.858
BASE OF RISER (GPM)	327.08
BASE OF RISER (PSI)	68.456
SAFETY MARGIN (PSI)	+15.443 (16.9%)

HYDRAULIC INFORMATION	
OCCUPANCY CLASSIFICATION	LIGHT HAZARD - AREA 7 -
DENSITY (GPM/FT²)	0.10 FOR 1500FT² (ACTUAL 1000FT²)
QUICK RESPONSE REDUCTION	12.0° CEILING (36.3%) 956FT²
TOTAL HOSE STREAMS	100-00
TOTAL HEADS FLOWING	10
K-FACTOR	5.6
TOTAL WATER REQUIRED	294.79
TOTAL PRESSURE REQUIRED	47.529
BASE OF RISER (GPM)	194.79
BASE OF RISER (PSI)	46.741
SAFETY MARGIN (PSI)	+47.115 (49.8%)

HYDRAULIC INFORMATION	
OCCUPANCY CLASSIFICATION	ORDINARY GROUP II - AREA 8 -
DENSITY (GPM/FT <sup>3</sup> )	0.20 FOR 1500FT <sup>3</sup> (ACTUAL 1542FT <sup>3</sup> )
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	13
K-FACTOR	5.6
TOTAL WATER REQUIRED	622.58
TOTAL PRESSURE REQUIRED	77.728
BASE OF RISER (GPM)	372.58
BASE OF RISER (PSI)	71.658
SAFETY MARGIN (PSI)	+13.315 (14.7%)

HYDRAULIC INFORMATION	
OCCUPANCY CLASSIFICATION	LIGHT HAZARD - AREA 9 -
DENSITY (GPM/FT)	0.10 FOR 1500FT <sup>2</sup> (ACTUAL 1076FT <sup>2</sup> )
TOTAL HOSE STREAMS	100.00
TOTAL HEADS FLOWING	10
K-FACTOR	5.6
TOTAL WATER REQUIRED	360.06
TOTAL PRESSURE REQUIRED	55.852
BASE OF RISER (GPM)	260.06
BASE OF RISER (PSI)	53.591
SAFETY MARGIN (PSI)	+38.185 (40.6%)

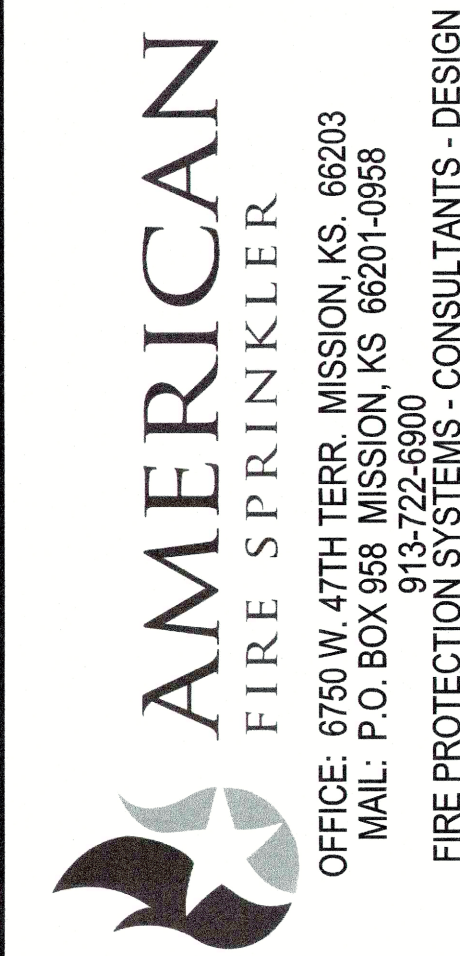


SYMBOLS		REVISONS	
SYMBOL	DESCRIPTION	DELTA	DATE
○	HYPERBOLIC STRESS POINTS	/2\	1-30-28
	ELEV. BELOW TOP OF STEEL		
	ELEV. ABOVE FINISHED FLOOR		
	ELEV. OF TOP OF STEEL		
(0,0)	ORIGIN OF COORDINATES		
	DENOTES HANGER LOCATION		
○	RISE UP OR DOWN		

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LEE'S SUMMIT, MO 64081

PE STAMP:



PAY ITEM:	S
REVIEWING AUTHORITY :	
OWNER / C	
HEADS THIS SHEET:	
HEADS THIS JOB:	
DRAWN BY:	ALEC MOBI
DATE :	06-28-2
REVISION DATE :	01-30-2
SCALE:	AS SHC
CONTRACT #	435
DWG #:	

FP3