NFPA 13 - OBSTRUCTION CODES:

Table 8.6.5.2.2 Suspended or Floor-Mounted Obstructions in Light Hazard Occupancies Only (SSU/SSP)

Horizontal Distance (*A*)	Minimum Vertical Distance Below Deflector (*B*) [in. (mm)]
6 in. (150 mm) or less	3 (75)
More than 6 in. (150 mm) to 9 in. (225 mm)	4 (100)
More than 9 in. (225 mm) to 12 in. (300 mm)	6 (150)
More than 12 in. (300 mm) to 15 in. (375 mm)	8 (200)
More than 15 in. (375 mm) to 18 in. (400 mm)	9½ (240)
More than 18 in. (400 mm) to 24 in. (600 mm)	12½ (315)
More than 24 in. (600 mm) to 30 in. (750 mm)	15½ (395)
More than 30 in. (750 mm)	18 (450)

For SI units, 1 in. = 25.4 mm.
Note: For *A* and *B*, refer to Figure 8.6.5.2.2.

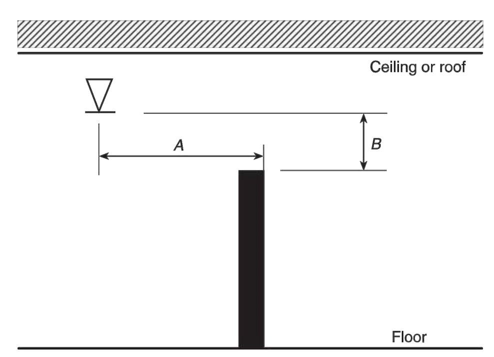


FIGURE 8.6.5.2.2 Suspended or Floor-Mounted Obstruction in Light Hazard Occupancies Only (SSU/SSP).

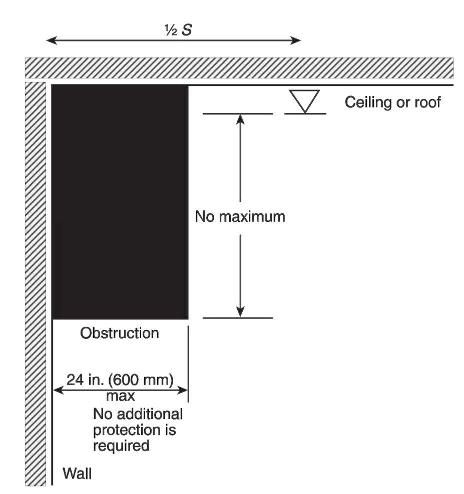
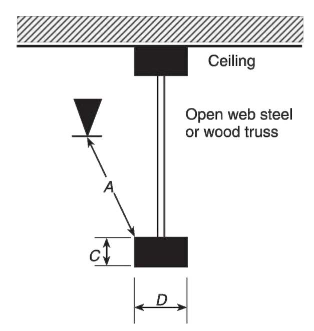


FIGURE 8.6.5.1.2(c) Obstructions Against Walls (SSU/SSP).



Elevation View of Truss
(Obstruction in horizontal orientation)
A ≥ 3C or 3D
A ≤ 24 in. (600 mm)
(Use dimension C or D, whichever is greater)

FIGURE 8.6.5.2.1.3(b) Minimum Distance from an Obstruction in the Horizontal Orientation (SSU/SSP).

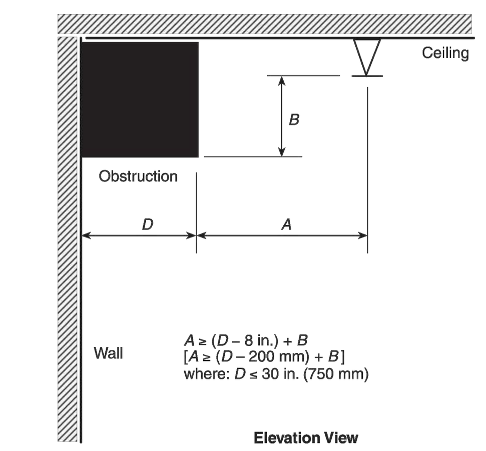


FIGURE 8.6.5.1.2(b) Obstruction Against Wall (SSU/SSP).

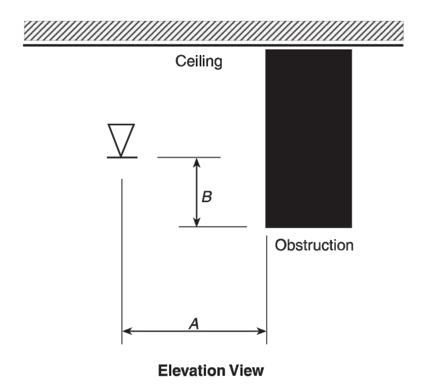


FIGURE 8.6.5.1.2(a) Positioning of Sprinkler to Avoid Obstruction to Discharge (SSU/SSP).

8.6.6 Clearance to Storage (Standard Pendent and Upright Spray Sprinklers).

8.6.6.1 The clearance between the deflector and the top of storage shall be 18 in. (450 mm) or greater.

8.6.6.2 The 18 in. (450 mm) dimension shall not limit the height of shelving on a wall or shelving against a wall in accordance with 8.6.6, 8.7.6, 8.8.6, and Section 8.9.

8.6.6.2.1 Where shelving is installed on a wall and is not directly below sprinklers, the shelves, including storage thereon, shall be permitted to extend above the level of a plane located 18 in. (450 mm) below ceiling sprinkler deflectors.

8.6.6.2.2 Shelving, and any storage thereon, directly below the sprinklers shall not extend above a plane located 18 in. (450 mm) below the ceiling sprinkler deflectors.

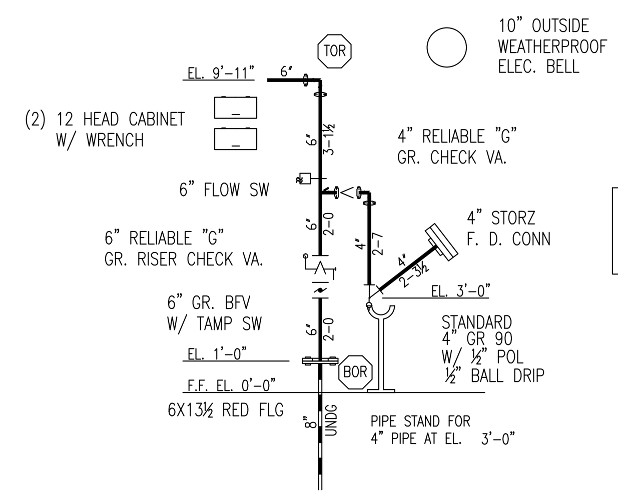
8.6.6.3 Where other standards specify greater clearance to storage minimums, they shall be followed.

Table 8.6.5.1.2 Positioning of Sprinklers to Avoid Obstructions to Discharge [Standard Spray Upright/Standard Spray Pendent (SSU/SSP)]

Distance from Sprinklers to Side of Obstruction (*A*)	Maximum Allowable Distance of Deflector Above Bottom of Obstruction (*B*) [in. (mm)]
Less than 1 ft (300 mm)	0 (0)
1 ft (300 mm) to less than 1 ft 6 in. (450 mm)	2½ (65)
1 ft 6 in. (450 mm) to less than 2 ft (600 mm)	3½ (90)
2 ft (600 mm) to less than 2 ft 6 in. (750 mm)	5½ (140)
2 ft 6 (750 mm) in. to less than 3 ft (900 mm)	7½ (190)
3 ft (900 mm) to less than 3 ft 6 in. (1.1 m)	9½ (240)
3 ft 6 in. (1.1 m) to less than 4 ft (1.2 m)	12 (300)
4 ft (1.2 m) to less than 4 ft 6 in. (1.4 m)	14 (350)
4 ft 6 in. (1.4 m) to less than 5 ft (1.5 m)	16½ (420)
5 ft (1.5 m) to less than 5 ft 6 in. (1.7 m)	18 (450)
5 ft 6 in. (1.7 m) to less than 6 ft (1.8 m)	20 (510)
6 ft (1.8 m) to less than 6 ft 6 in. (2.0 m)	24 (600)
6 ft 6 in. (2.0 m) to less than 7 ft (2.1 m)	30 (750)
7 ft (2.1 m) to less than 7 ft 6 in. (2.3 m)	35 (875)

For SI units, 1 in. = 25.4 mm; 1 ft = 0.3048 m.
Note: For *A* and *B*, refer to Figure 8.6.5.1.2(a).

THIS AREA IS SHOWN FOR CALCULATION PURPOSES ONLY



ALL RISER COMPONENTS ARE EXISTING TO REMAIN. THE RISER IS SHOWN FOR CALCULATION PURPOSES ONLY.

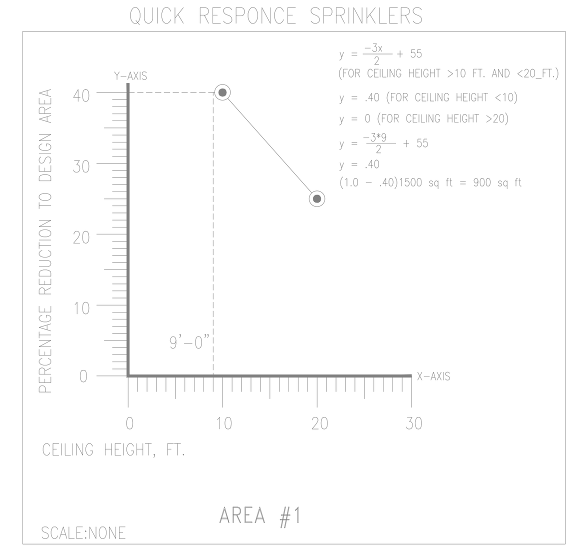
EXISTING RISER DETAIL

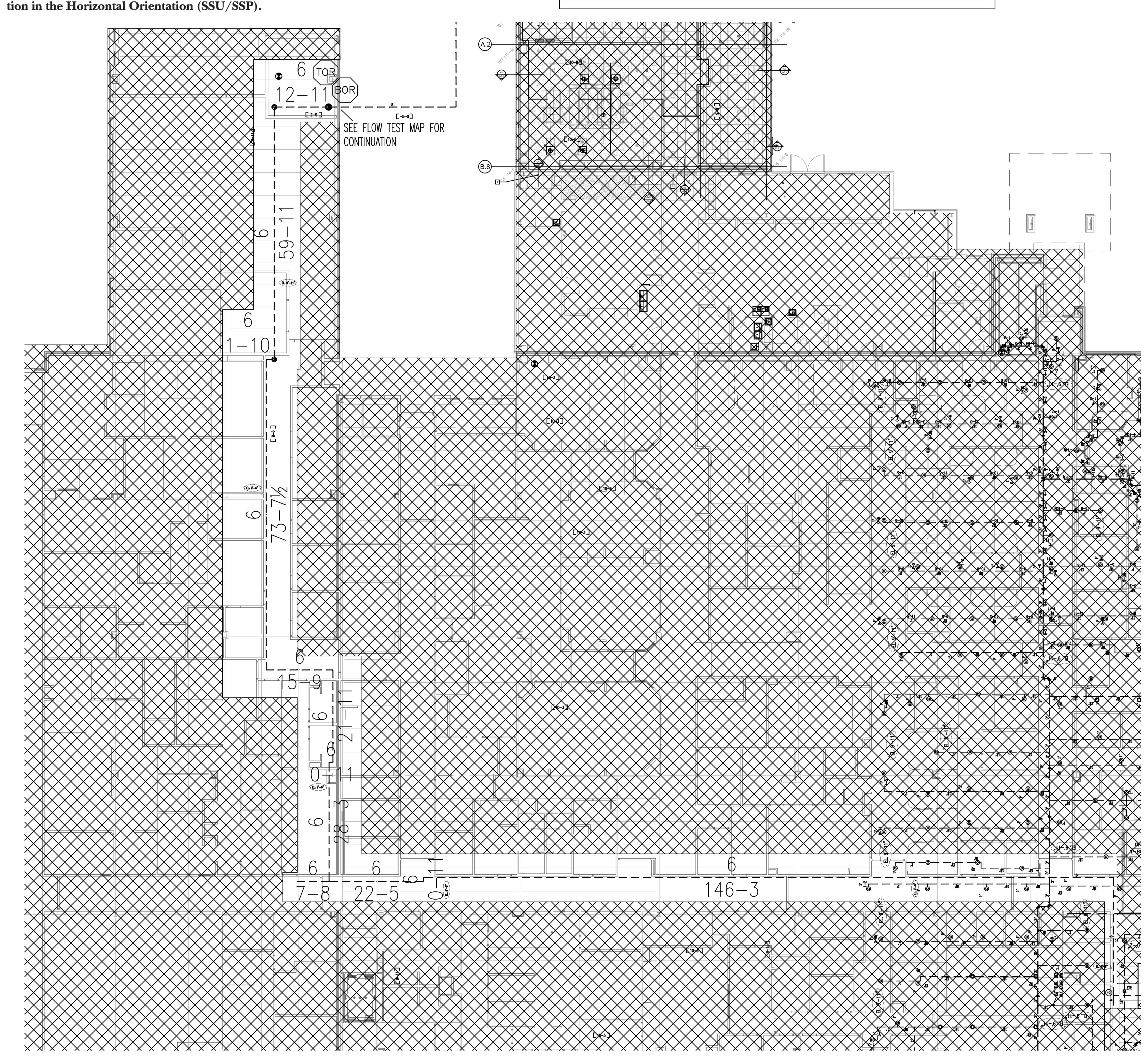
SCALE 1/4"=1'-0"

HYDRAULIC SYSTEM
THIS BUILDING IS PROTECTED BY A HYDRAULICALLY DESIGNED AUTOMATIC SPRINKLER SYSTEM

DESIGN AREA:	AREA #1
LOCATION:	ED EXPANSION
NO. OF SPRINKLERS:	10
SPRINKLER TYPE:	V2708 & V3802
ORIFICE:	1/2"
K-FACTOR:	5.6
BASIS FOR DESIGN:	
1. DENSITY	.10
2. DESIGNED AREA OF DISCHARGE	1163 SQ.FT.
SYSTEM DEMAND:	
1. GPM DISCHARGE:	319.105 GPM
2. RESIDUAL PRESSURE AT THE BASE OF THE RISER	47.80 PSI
3. HOSE STREAMS	150 GPM
4. RESIDUAL PRESSURE AT POINT CONNECTION	53.432 PSI

AREA OF REDUCTION TAKEN FOR QUICK RESPONCE SPRINKLERS





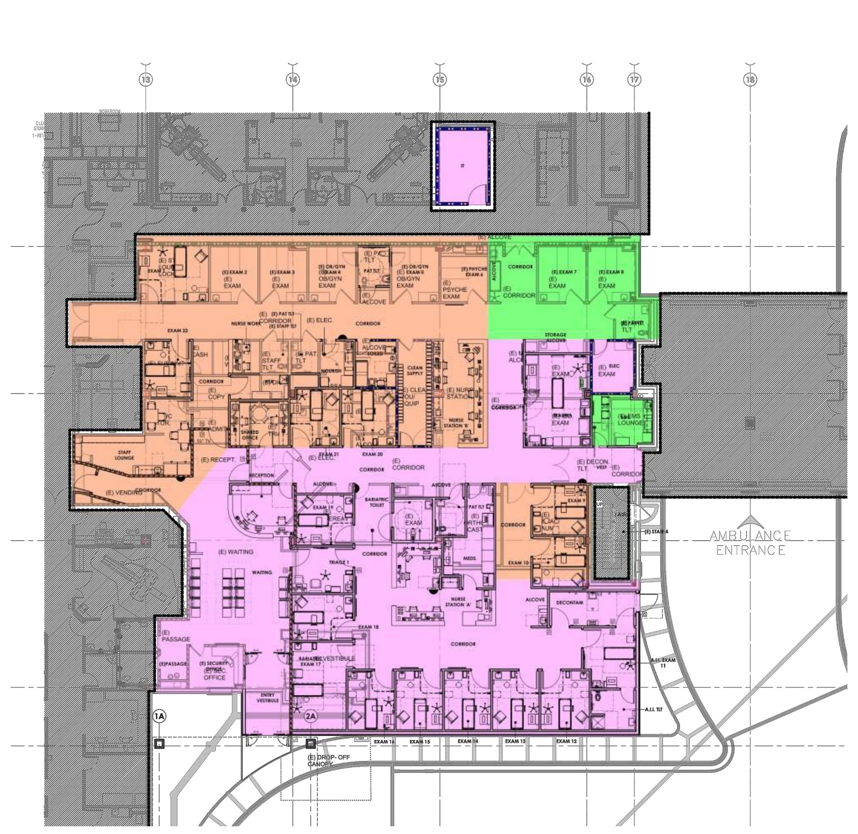
1ST FLOOR PARTIAL PLAN - HYDRAULIC NODES

N.T.S.

NORTH

SCOPE OF WORK:

- PROJECT IS TO BE PHASED WITH 3 TOTAL PHASES
- J.F.S. WILL CUT AND CAP THE OLD VESTIBULE FOR DEMO. (DEMO AND REMOVAL BY OTHERS)
- J.F.S. WILL PROVIDE TEMPORARY FIRE SPRINKLER PROTECTION WITHIN EACH PHASE BY TURNING THE EXISTING FIRE SPRINKLER HEADS TO UPRIGHTS DURING CONSTRUCTION.
- J.F.S. WILL MODIFY SPRINKLER HEADS IN NEW TENANT IMPROVEMENT AREA FOR EACH PHASE PER DRAWING AE181 (WHERE NEW WALLS AND CEILINGS ARE BEING INSTALLED ONLY).
- WITHIN PHASE 1, J.F.S. WILL TIE INTO EXISTING 4" SPRINKLER MAIN AND EXTEND SYSTEM INTO NEW ADDITION AND INSTALL A NEW SPRINKLER SYSTEM.



PHASING PLAN

N.T.S.

NORTH

PHASE 1
PHASE 2
PHASE 3

HANGER SPACING TABLE

NOMINAL PIPE SIZE	¾"	1"	1¼"	1½"	2"	2½"	3"	3½"	4"
STEEL PIPE EXCEPT THREADED LIGHTWALL	N/A	12-0	12-0	15-0	15-0	15-0	15-0	15-0	15-0

PROJECT DATA

PROJECT NAME	HCA - LEE'S SUMMIT MEDICAL CENTER - EMERGENCY DEPARTMENT EXPANSION
ADDRESS	2100 SE BLUE PKWAY
	LEE'S SUMMIT, MO 64063
BRIEF PROJECT DESCRIPTION	THIS PROJECT INCLUDES THE FOLLOWING COMPONENT: •LEVEL 1: - NEW CONSTRUCTION AND RENOVATION TO EXPAND THE EXISTING ED DEPARTMENT WITH ADDITIONAL EXAM ROOMS AND STAFF SUPPORT SPACES. MAJOR AND MINOR RENOVATION OF EXISTING SPACES TO ALLOW FOR A COHESIVE LOOK THROUGH OUT THE EMERGENCY DEPARTMENT.
PROJECT SCOPE AREAS (GROSS)	LEVEL 1: - EMERGENCY DEPARTMENT 11,990 SF RENOVATION
TOTAL PROJECT AREA (GROSS)	**11,990 (SF)**
CONSTRUCTION TYPE (HOSPITAL)	I-A
Fire Sprinklers	Full Per NFPA 13
Fire Alarms	Provided
Emergency Lighting	Provided

Fire Resistance Rating Requirements for Building Elements

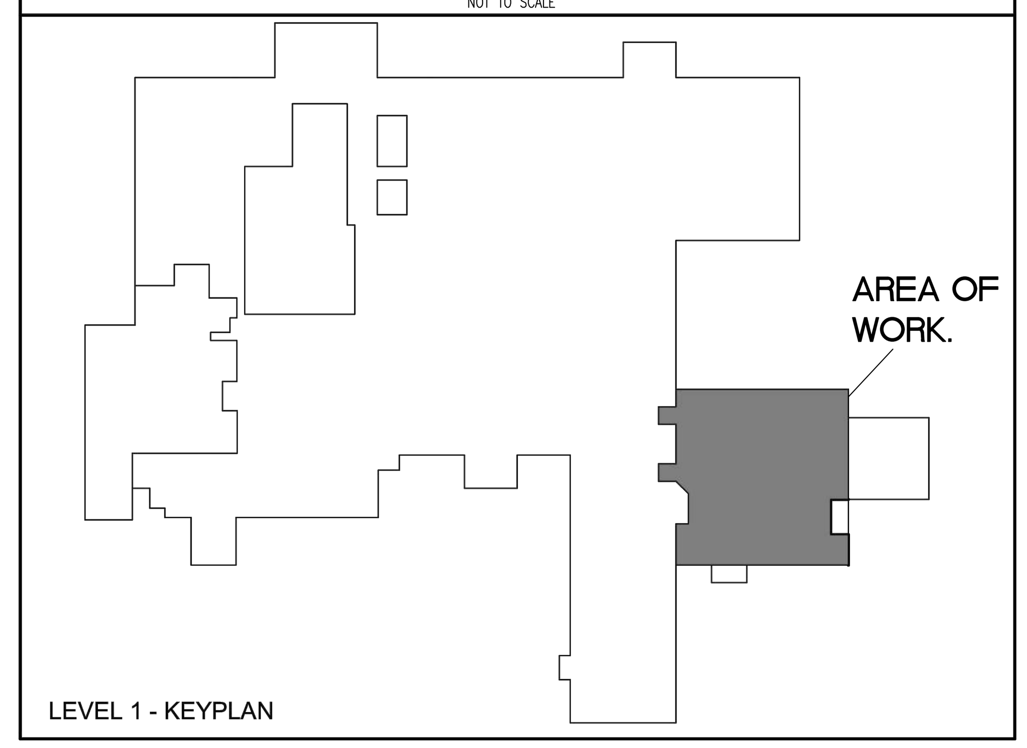
Building Element	TYPE I-A CONSTRUCTION (HOSPITAL)	
Primary Structural Frame	3a,b	Hours
Bearing walls: Exterior	3	Hours
Bearing walls: Interior	3a	Hours
Nonbearing walls and partitions: Exterior	Varies by distance from property line. See IBC table 602.	
Nonbearing walls and partitions: Interior	0	Hours
Floor construction and associated secondary members	2	Hours
Roof construction and associated secondary members	1 1/2b	Hours

a. Roof Supports: Ffire-resistance ratings of primary structural frame and bearing walls are permitted to be reduce by 1 hour where supporting roof only. b. Except in Group F-1, H, M and S-1 occupancies, fire protection of structural members shall not be required, including protection of roof framing and decking where every part of the roof construction is 20 feet or more above any floor immediately below. Fire-retardant-treated wood members shall be allowed to be used for such unprotected members. c. In all occupancies, heavy timber complying with section 2304.11 shall be allowed where 1-hour or less fire-resistance rating is required.

Governing Codes (Local)	**Life Safety, Building Code, & Accessibility Review - City of Lee's Summit, MO**
	2018 International Building Code.
	2017 National Electrical Code.
	2018 International Mechanical Code.
	2018 International Plumbing Code.
	2018 Fuel Gas Code.
	2018 International Fire Code.
	ICC/ANSI A117.1-2009, Accessible and Usable Buildings and Facilities
Governing Codes (Jurisdictional)	**Missouri Dept. of Health and Senior Services**
	2014 Guidelines for Design and Construction of Health Care Facilities
	The following 2012 National Fire Codes (NFPA)
	a. NFPA 70 National Electrical Code
	b. NFPA 101 Life Safety Code
	c. 2012 Supplements

KEY PLAN

NOT TO SCALE



LEVEL 1 - KEYPLAN

NOTE:

THE DRAWING INDICATES A "SCHEMATIC LAYOUT" OF THE SPRINKLER HEADS AND SHOWS THE INTENT OF THE DESIGN. EXACT LOCATIONS SHALL BE COORDINATED WITH OTHER TRADES, FIELD VERIFIED, AND INSTALLED TO MEET NFPA 13 COVERAGE REQUIREMENTS FOR THE SPACE.

SPRINKLERS ARE PERMITTED TO BE RELOCATED AND RE-INSTALLED WHEN THE SPRINKLER BEING REMOVED FROM THE SYSTEM REMAINS ATTACHED TO THE ORIGINAL FITTING OR WELDED OUTLET, PROVIDED CARE HAS BEEN TAKEN TO ENSURE THE SPRINKLER HAS NOT BEEN DAMAGED. PER NFPA 13, WHEN A SPRINKLER HAS BEEN REMOVED FROM A FITTING OR WELDED OUTLET, IT SHALL NOT BE RE-INSTALLED. PROVIDE NEW SPRINKLERS AS REQUIRED.

GENERAL NOTES:

ALL FITTINGS CONFORM TO SECTION 2-4 OF NFPA PAMPHLET 13.

VALVES ON CONNECTIONS TO WATER SUPPLIES, SECTIONAL CONTROL VALVES AND OTHER VALVES IN SUPPLY PIPES TO SPRINKLERS SHALL BE SUPERVISED OPEN BY AN APPROVED METHOD.

IT IS THE OWNERS RESPONSIBILITY TO PROVIDE ADEQUATE HEAT TO KEEP THE SPRINKLER SYSTEM FROM FREEZING.

ALL ELECTRICAL WIRING OF ALARM BELLS, FLOW SWITCHES AND TAMPER SWITCHES (IF REQUIRED) TO BE DONE BY OTHERS.

THE SPRINKLER SYSTEM TO BE INSTALLED IN ACCORDANCE WITH NFPA 13.

HANGERS TO BE SPACED TO MEET NFPA REQUIREMENTS

PER NFPA 13, SECTION 8.6.3.2.4, WITHIN SMALL ROOMS AS DEFINED IN SECTION 3.3.20, SPRINKLERS SHALL BE PERMITTED TO BE LOCATED NOT MORE THAN 9 FT. FROM ANY SINGLE WALL, AND SPRINKLER SPACING LIMITATIONS OF SECTION 8.6.3 AND AREA LIMITATIONS OF TABLE 8.6.2.2.1(a) SHALL NOT BE EXCEEDED. JFS MAY MODIFY HEADS SHOWN ON THIS DRAWING TO COMPLY WITH THIS RULE.

℄ = CENTER LINE OF PIPE BELOW TOP OF STEEL

EL = CENTER LINE OF PIPE ABOVE FINISHED FLOOR

DESIGN CRITERIA:

BUILDING CODE: SEE PROJECT DATA

OCCUPANCY: SEE PROJECT DATA

TYPE OF CONSTRUCTION: SEE PROJECT DATA

AREA OF ADDITION: SEE PROJECT DATA

PER NFPA 13, 2016 EDITION:

SYSTEM TYPE: WET (EXISTING)

EXAM ROOMS, CORRIDOR, NURSES STATION
LIGHT HAZARD
0.10 GPM/ FOR 1500 SQ.FT. (REDUCED TO 1163 SQ.FT. - AREA REDUCTION FOR Q.R.)
MAXIMUM 225 S.F. SPRINKLER SPACING
100 GPM HOSE ALLOWANCE
+50 GPM HOSE FOR HYDRANT AFTER BACKFLOW

WATER FLOW DATA:

DATE: 08-29-25

STATIC: 82 PSI

RESIDUAL: 60 PSI W/2100 GPM FLOWING

LOCATION: 2100 SE BLUE PARKWAY
LEE'S SUMMIT, MO 64063

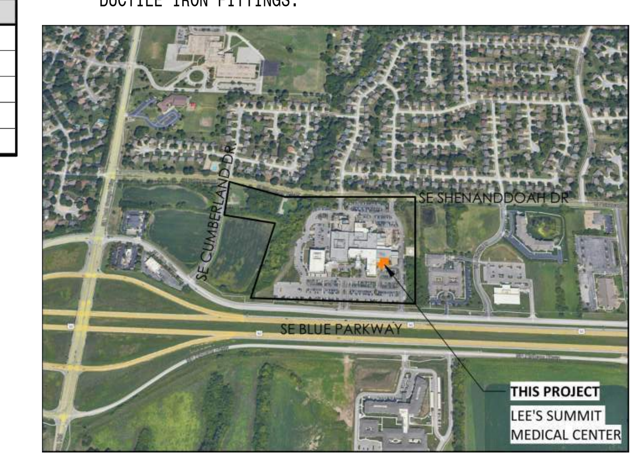
INFO FROM: LEE'S SUMMIT WATER UTILITIES

CONSTRUCTION:

STEEL BEAM CONSTRUCTION

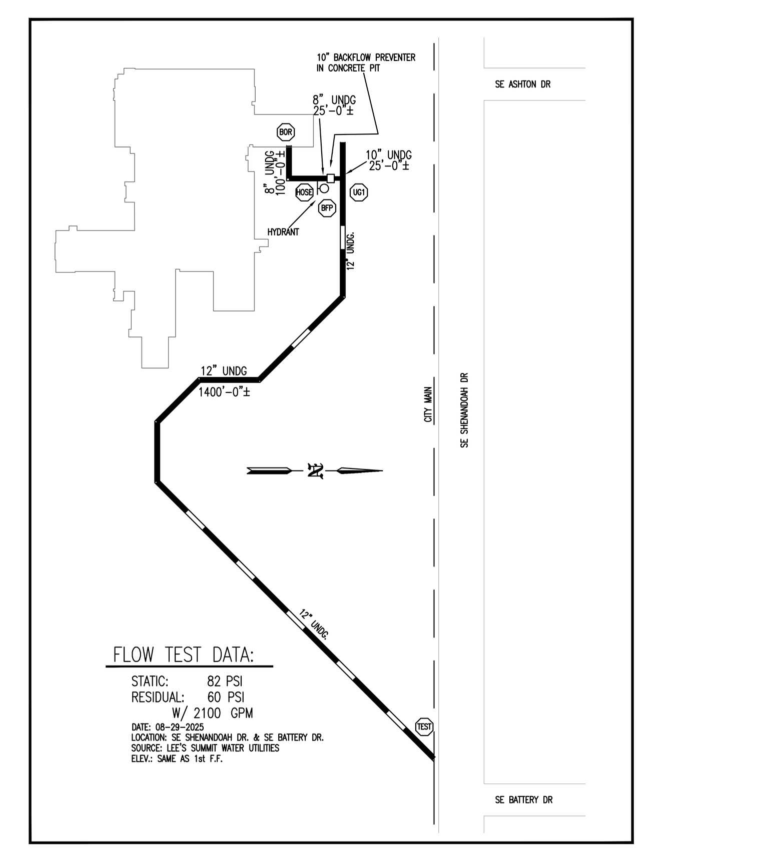
PLAN NOTES:

1. ALL CEILING HEIGHTS TO BE 9'-0" UNLESS NOTED OTHERWISE. ALL ALL SOFFITS TO BE 8'-0" UNLESS NOTED OTHERWISE.
2. SPRINKLERS WILL BE CENTERED IN CEILING TILES WHERE POSSIBLE YET NEVER ANY CLOSER THAN 6 INCHES FROM THE EDGE OF CEILING GRID.
3. ALL GROOVED PIPING IS TO BE SCH. 10 PIPE, ASTM A-795 WITH ROLLED GROOVED ENDS. FITTINGS ARE TO BE IRON GROOVED OR WELDED STEEL OUTLETS.
4. ALL THREADED PIPING IS TO BE "SCHEDULE 40" PIPE, WITH THREADED DUCTILE IRON FITTINGS.



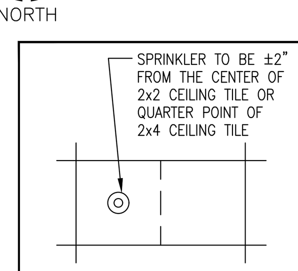
VICINITY MAP

NOT TO SCALE



UNDERGROUND PLAN

NOT TO SCALE



CENTER OF TILE
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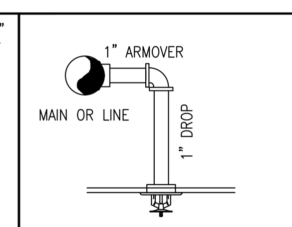

ARMOVER DETAIL
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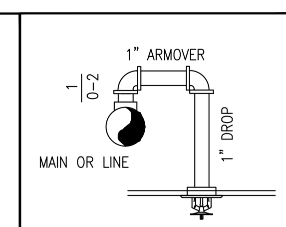

RETURN BEND DETAIL
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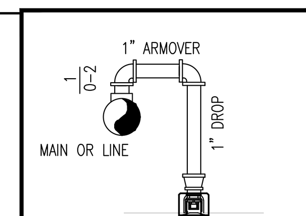

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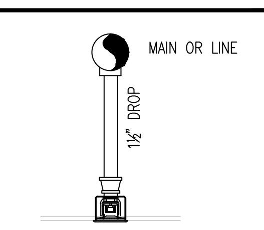

DROP DETAIL
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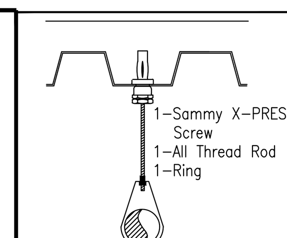
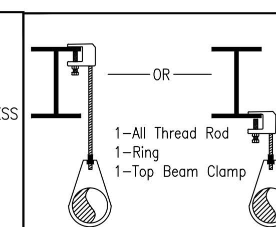
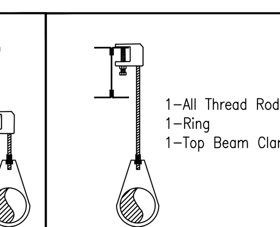


SAMMY X-PRESS HANGER
NO SCALE



TYPICAL BEAM HANGER
NO SCALE



TYPICAL JOIST HANGER
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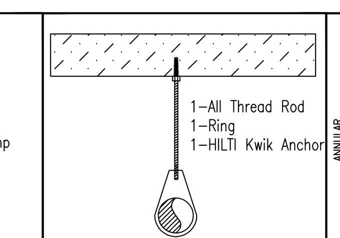
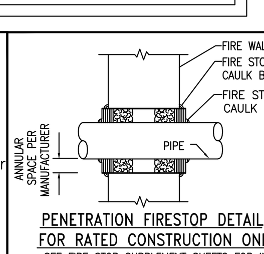


TYPICAL HANGER
NO SCALE



PENETRATION FIRESTOP DETAIL
FOR RATED CONSTRUCTION ONLY
SEE FIRE STOP SUPPLEMENT SHEETS FOR INFO
TYP. FIRESTOP DETAIL
NO SCALE

SPRINKLER RELOCATION LEGEND

SYMBOL	DESCRIPTION
SYMBOL R	RELOCATED SPRINKLER FROM EXISTING OUTLET
SYMBOL C	CHANGED EXISTING SPRINKLER FROM S.R. TO Q.R.
SYMBOL A	ADDED SPRINKLER FROM EXISTING SPRINKLER SYSTEM
SYMBOL	NEW SPRINKLER BEING INSTALLED FROM NEW SYSTEM

LEGEND

SYMBOL	DESCRIPTION
	FIRE SPRINKLER STANDPIPE
	POINT OF CONNECTION
	NEW SPRINKLER LINE
	EXISTING SPRINKLER LINE
	HANGER LOCATION
	PIPE END CAP

SPRINKLER LEGEND

SYMBOL	SPRINKLER TYPE	SIN #	FINISH	TEMP.	ORIFICE	K-FACTOR	COUNT
◉	VICTAULIC Q.R. SEMI-RECESSED PENDENT	V2708	CHROME	155°	1/2"	5.6 K	76
●	VICTAULIC Q.R. CONCEALED PENDENT	V3802	WHITE	155°	1/2"	5.6 K	10
⊗	VICTAULIC Q.R. UPRIGHT	V2708	CHROME	155°	1/2"	5.6 K	00
						TOTAL THIS SHEET	86
						TOTAL THIS JOB	86

REVISIONS:

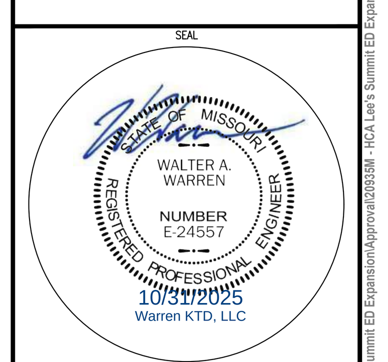
NO.	DATE	DESCRIPTION
△	-	-

JAYHAWK FIRE SPRINKLER CO., INC.
12030 S. Hedge Lane Terrace
Olathe, Kansas 66061
PHONE: (913) 422-3770
FAX: 1-(913)-777-0036

CONTRACT WITH:
JEDUNN CONSTRUCTION
1001 LOCUST STREET
KANSAS CITY, MISSOURI 64106

HCA LEES SUMMIT MEDICAL CENTER
EMERGENCY DEPARTMENT EXPANSION
2100 SE BLUE PARKWAY
LEES SUMMIT, MISSOURI 64063

SEAL



JFS CONTRACT NO.	20935M		
DRAWN BY:	TJA	CHECKED BY:	SB
PROJECT MANGER:	CA		
PLOT TYPE:	APPROVAL		
ISSUE DATE:	10/29/2025	PLOT DATE:	10/31/2025

DRAWING NUMBER
FP-1
FIRE PROTECTION NOTES AND DETAILS COVER SHEET

SHEET: 1 OF 2

30x42 T:\JOB FILE (on T drive)\20900 - 20999\20935M HCA Lee's Summit ED Expansion\Approval\20935M - HCA Lee's Summit ED Expansion (Approval).dwg Oct 31, 2025 - 1:18pm