

FIRE SUPPRESSION GENERAL NOTES:

1. PROVIDE DETAILED DESIGN, INSTALLATION, AND TESTING FOR A NEW FIRE SPRINKLER SYSTEM TO SERVE BUILDING 13, THE BOILER PLANT, AT THE VA MEDICAL CENTER IN WICHITA, KS. THE SYSTEM IS SERVED BY EXISTING WATER MAINS NEAR THE BUILDING.
 2. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SPRINKLER WORK.
 3. PROVIDE ALL NECESSARY MATERIALS AND LABOR TO FURNISH AND INSTALL THE SYSTEM AS DESCRIBED IN THE PROJECT SPECIFICATIONS AND CONTRACT DRAWINGS.
 4. PRELIMINARY HYDRANT FLOW TEST RESULTS INDICATE A WATER SUPPLY WITH A STATIC PRESSURE OF 75 PSI AT HYDRANT #15 AND A RESIDUAL PRESSURE OF 59 PSI FLOWING 1,021 GPM AT HYDRANT #16. CONTRACTOR SHALL USE CURRENT FLOW TEST DATA FOR DESIGN AND CALCULATIONS PURPOSES.
 5. PIPE AND EQUIPMENT SIZES AND LOCATIONS SHOWN ARE FOR REFERENCE ONLY. CONTRACTOR IS RESPONSIBLE FOR ALL DETAILED HYDRAULIC CALCULATIONS, SIZING AND LOCATION OF ALL PIPING, EQUIPMENT LAYOUT, ETC.
 6. ALL REFERENCE TO THE AUTHORITY HAVING JURISDICTION (AHJ) SHALL MEAN THE DEPARTMENT OF VA REGIONAL FIRE PROTECTION ENGINEER.
 7. ALL REFERENCE TO THE ENGINEER SHALL MEAN KOFFEL ASSOCIATES, INC.
 8. ALL REFERENCE TO THE OWNER SHALL MEAN THE DEPARTMENT OF VETERANS AFFAIRS (THE VA).
 9. INSTALLATION OF THE FIRE SPRINKLER SYSTEM AND ASSOCIATED COMPONENTS SHALL BE IN ACCORDANCE WITH THE FOLLOWING:
 - VA FIRE PROTECTION DESIGN MANUAL (VAFPDM) - 2021 EDITION
 - NFPA 101®, LIFE SAFETY CODE® (LSC) - 2021 EDITION
 - NFPA 13, STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS - 2019 EDITION
 - NFPA 70, NATIONAL ELECTRICAL CODE - 2020 EDITION
 - NFPA 72, NATIONAL FIRE ALARM AND SIGNALING CODE - 2019 EDITION
 - INTERNATIONAL BUILDING CODE (IBC) - 2021 EDITION (AS AMENDED)
 - OTHER RELEVANT NFPA DOCUMENTS AND MANUFACTURER REQUIREMENTS, AS APPLICABLE.
 10. THE FOLLOWING DESIGN CRITERIA APPLIES:
 - ORDINARY HAZARD GROUP 2 (OH2): 0.20 GPM/SQ FT OVER 1,500 SQ FT (8.2 MM/MIN OVER 140 SQ M)
 - EXTRA HAZARD GROUP 1 (EH1): 0.30 GPM/SQ FT OVER 2,500 SQ FT (12.2 MM/MIN OVER 230 SQ M)
- PER VA BASE SPECIFICATIONS, BOILER PLANTS ARE CONSIDERED TO BE OH2 OCCUPANCIES. THE ENTIRE AREA OF THE BOILER PLANT SHALL BE CONSIDERED OH2 EXCEPT FOR THE GENERATOR ROOM, WHICH SHALL BE CONSIDERED EH1. SPRINKLER SPACING SHALL BE IN ACCORDANCE WITH NFPA 13 REQUIREMENTS.
11. ALL WORK SHALL BE COORDINATED WITH ALL OTHER TRADES, INCLUDING COORDINATION WITH STRUCTURAL LIMITATIONS.
 12. ALL HYDRAULIC CALCULATIONS SHALL YIELD AT LEAST A 10 PERCENT SAFETY FACTOR FOR EACH SPRINKLER DESIGN AREA, INCLUDING REQUIRED HOSE STREAMS, AS PER THE VAFPDM.
 13. ALL NEW MATERIALS SHALL BE LISTED BY UNDERWRITERS LABORATORIES, INC. (U.L.) FOR USE ON COMMERCIAL FIRE PROTECTION SYSTEMS. UNO, SPRINKLERS SHALL ALSO BE FACTORY MUTUAL (FM) APPROVED, PER SECTION 6.1.K OF THE VAFPDM.
 14. SPRINKLER TYPES SHALL BE AS DESCRIBED IN THE PROJECT SPECIFICATIONS.
 15. NEW SPRINKLERS IN AREAS WITH FINISHED CEILINGS SHALL BE LOCATED IN SUSPENDED CEILING TILES AS INDICATED ON THE DESIGN DRAWINGS. ARMOVERS AND DROPS TO INDIVIDUAL SPRINKLERS SHALL BE FIELD CUT TO ENSURE PROPER SPRINKLER PLACEMENT.
 16. NEW SPRINKLER PIPE SHALL MEET THE FOLLOWING CRITERIA:
 - PIPE SIZES 2" (50 MM) AND SMALLER: SCHEDULE 40, BLACK STEEL, MEETING ASTM A53 (TYPE E GRADE B) OR A795 (TYPE E GRADE A) SPECIFICATIONS, CONNECTED WITH THREADED FITTINGS.
 - PIPE SIZES 2½" (63 MM) AND LARGER: SCHEDULE 10, BLACK STEEL, MEETING ASTM A135 OR A795 TYPE E GRADE A SPECIFICATIONS, CONNECTED WITH LISTED GROOVED COUPLINGS.
 17. NEW PIPE FITTINGS SHALL INCLUDE:
 - THREADED FITTINGS FOR SCHEDULE 40 PIPE SHALL CONFORM TO SECTION 6.4 OF NFPA 13.
 - ROLL GROOVED FITTINGS FOR SCHEDULE 10 PIPE SHALL BE U.L. LISTED. COUPLINGS SHALL COMPLY WITH ASTM A536, AND A183 SPECIFICATIONS WITH GRADE E, TYPE A GASKETS. ALL COMPONENTS SHALL BE FROM A SINGLE MANUFACTURER.
 18. ALL NECESSARY CONNECTIONS TO THE FIRE ALARM SYSTEM SHALL BE MADE BY AND COORDINATED WITH THE FIRE ALARM CONTRACTOR. SYSTEM ACCEPTANCE TESTS SHALL BE COORDINATED WITH THE FIRE ALARM CONTRACTOR AND WITNESSED BY THE OWNER.
 19. ALL HANGERS SHALL BE U.L. LISTED FOR USE WITH FIRE SPRINKLER SYSTEMS. HANGER INSTALLATION AND SPACING SHALL BE IN ACCORDANCE WITH NFPA 13. SEISMIC BRACING OF ALL PIPING AND EQUIPMENT SHALL BE PROVIDED.
 20. ALL SPRINKLER SYSTEM PIPING AND HANGERS SHALL BE CONCEALED WHEREVER POSSIBLE. PROVIDE ACCESS PANELS FOR ALL VALVES, WHERE REQUIRED.

21. NEW FIRE SPRINKLER PIPE PENETRATIONS OF FIRE-RATED ASSEMBLIES SHALL BE SEALED WITH A U.L. CERTIFIED THROUGH-PENETRATION SYSTEM APPROPRIATE FOR THE MATERIALS INVOLVED AND THE FIRE RATING OF THE WALL PENETRATED. REFER TO ARCHITECTURAL DRAWINGS FOR WALL RATINGS.
22. ALL CONTRACTORS PREPARING BIDS FOR THE PROJECT ARE EXPECTED TO VISIT THE SITE PRIOR TO SUBMITTING BIDS.
23. CONTRACTOR SHALL BE RESPONSIBLE FOR DEVELOPMENT OF SHOP DRAWINGS, HYDRAULIC CALCULATIONS, PERMIT FEES, APPROVAL OF SHOP DRAWINGS, AND ACCEPTANCE OF THE SYSTEM BY THE AHJ.
24. PRIOR TO SUBMITTING AN APPLICATION FOR SPRINKLER PERMIT TO THE AHJ, PROVIDE TWO COPIES OF ALL SHOP DRAWINGS, HYDRAULIC CALCULATIONS (WHERE REQUIRED), AND PRODUCT DATA SHEETS TO THE OWNER FOR REVIEW AND COMMENT. PERMIT APPLICATION SHALL NOT BE MADE UNTIL SUCH TIME THAT THE ENGINEER HAS COMPLETED A REVIEW OF THE SHOP DRAWING PACKAGE.
25. UPON COMPLETION OF WORK, TESTING SHALL BE PERFORMED IN ACCORDANCE WITH VA, NFPA 13, NFPA 20, AND NFPA 25 REQUIREMENTS. ALL TESTING SHALL BE WITNESSED BY THE AHJ AND THE OWNER'S DESIGNATED REPRESENTATIVE.
26. PROVIDE AUTOMATIC AIR VENTS AT ALL HIGH POINTS IN THE SPRINKLER SYSTEM IN ACCORDANCE WITH NFPA 13 REQUIREMENTS. AIR VENTS SHALL NOT REQUIRE MANUAL DRAINING OF WATER.
27. THIS PROJECT IS PHASED. COORDINATE ALL WORK WITH PHASING AS NECESSARY. SEE ARCHITECTURAL DRAWINGS FOR PHASING INFORMATION.
28. DRAIN LOCATIONS ARE NOT INDICATED ON DRAWINGS. CONTRACTOR SHALL PROVIDE ALL DRAINS AS REQUIRED BY NFPA 13 AND THE VAFPDM. DRAINS SHALL BE PIPED TO THE EXTERIOR.
29. CONTRACTOR SHALL FIELD-COORDINATE WITH OTHER TRADES AND PROVIDE SPRINKLERS UNDER ALL OBSTRUCTIONS AND OVERHANGS AS REQUIRED BY NFPA 13, INCLUDING UNDER STAIRS. SPRINKLERS PROVIDED BELOW CEILING LEVEL IN THE BOILER ROOM AREA AND ALL AREAS WITH HIGH TEMPERATURE STEAM SHALL BE STANDARD-RESPONSE, ULTRA-HIGH TEMPERATURE RATED.
30. SPRINKLERS AT THE CEILING LEVEL IN THE BOILER PLANT AREA AND ALL AREAS WITH HIGH TEMPERATURE STEAM SHALL BE QUICK-RESPONSE, HIGH TEMPERATURE RATED.
31. GUARDS SHALL BE PROVIDED ON ALL SPRINKLERS IN AREAS WITHOUT FINISHED CEILINGS. ALL GUARDS SHALL BE APPROVED FOR USE WITH THE SELECTED SPRINKLERS.
32. PROVIDE A WALL-MOUNTED SPARE SPRINKLER CABINET IN THE EQUIPMENT ROOM NEAR THE SPRINKLER WATER RISER, ALONG WITH ALL REQUIRED SPARE SPRINKLERS.
33. INSPECTION IS REQUIRED OF ALL CONSTRUCTION DELINEATED WITHIN THE FIRE SUPPRESSION DRAWINGS AND SPECIFICATIONS. PROVIDE TESTS AND INSPECTIONS IN COMPLIANCE WITH IBC REQUIREMENTS AND THE PROJECT SPECIFICATIONS. SPECIAL INSPECTIONS MUST BE PERFORMED FOR THE SPRINKLER SYSTEM AND SEISMIC BRACING IN ACCORDANCE WITH SPECIFICATION REQUIREMENTS.
34. DO NOT PROVIDE SPRINKLERS OR PIPING IN THE AREA ENCOMPASSED BY A VERTICALLY ORIENTED CYLINDER OF SIX FEET IN DIAMETER DIRECTLY ABOVE BOILER STEAM RELEASE VENTS. SEE MECHANICAL DRAWINGS AND DETAILS FOR MORE INFORMATION REGARDING LOCATIONS OF THESE VENTS. WHILE SPRINKLERS THEMSELVES SHALL NOT BE LOCATED IN THE AREA NOTED ABOVE, SPRINKLER COVERAGE MUST STILL BE PROVIDED FOR THIS AREA.
35. DO NOT PROVIDE SPRINKLERS OR PIPING IN THE AREA DIRECTLY BELOW ROOF VENTS, INTAKES, AND OTHER SIMILAR FEATURES THAT ARE DIRECTLY OPEN TO THE EXTERIOR. WHILE SPRINKLERS THEMSELVES SHALL NOT BE LOCATED IN THE AREA NOTED ABOVE, SPRINKLER COVERAGE MUST STILL BE PROVIDED FOR THE AREA BELOW THESE ROOF OPENINGS. SEE MECHANICAL AND ARCHITECTURAL DRAWINGS FOR MORE INFORMATION.
36. SPRINKLER PIPING SIZE AND LOCATION IS FOR REFERENCE ONLY. CONTRACTOR IS RESPONSIBLE FOR APPROPRIATELY SIZING AND LAYING OUT THE SPRINKLER SYSTEM AT NO ADDITIONAL COST TO THE OWNER. A LOOPED OR GRIDDED SPRINKLER SYSTEM MAY BE NECESSARY.
37. ALL FIRE SPRINKLER VALVES AND EQUIPMENT SHALL BE CLEARLY ANNOTATED ON THE CONTRACTOR AS-BUILT DRAWINGS. TAGS SHALL BE AFFIXED TO ALL VALVES AND EQUIPMENT. THE CONTRACTOR IS REQUIRED TO PROVIDE A VALVE LIST IN A 3-RING BINDER, AND TO PLACE LAMINATED VALVE LISTS INTO PICTURE FRAMES AND ATTACH THEM TO THE WALLS IN EACH SPACE. AS-BUILT DRAWINGS INCLUDING ALL FIELD MODIFICATIONS SHALL BE PROVIDED IN REVIT AND AUTOCAD FORMAT.
38. ALL AREAS BELOW THE NEW MEZZANINE FLOORS MUST BE SPRINKLED. IF THE FIRE SUPPRESSION PIPING IS INSTALLED TIGHT TO THE STEEL, UPRIGHT SPRINKLERS WILL BE REQUIRED IN EACH STRUCTURAL BAY. 18" CLEARANCE MUST BE MAINTAINED BELOW THE SPRINKLER HEADS TO ITEMS BELOW.

FIRE SUPPRESSION LEGEND:

	NEW SYSTEM PIPING		CONTROL VALVE		UPRIGHT SPRINKLER (SUBSCRIPT DENOTES INTERMEDIATE OR HIGH TEMPERATURE)		CALCULATED REMOTE AREA
	EXISTING PIPING TO REMAIN		CHECK VALVE		DRY PENDENT		SPRINKLER ZONE BOUNDARY
	POINT OF CONNECTION		OS&Y GATE VALVE		EXTENDED COVERAGE UPRIGHT SPRINKLER		HYDRAULIC REFERENCE NODE
	PIPE HANGER		BUTTERFLY VALVE		PENDENT SPRINKLER; ON DROP NIPPLE		AREA NOT PART OF SPRINKLER ZONE
	SYSTEM RISER		NON-INDICATING CONTROL VALVE		SPRINKLER GUARD; SHOWN ON UPRIGHT SPRINKLER		NON-SPRINKLERED AREA
	HOSE VALVE		PRESSURE REDUCING BACKFLOW PREVENTER; DOUBLE CHECK TYPE		UPRIGHT SPRINKLER		LOGITUDINAL SWAY BRACE
	PIPE TEE DOWN		POST-INDICATING VALVE		EXTENDED COVERAGE PENDENT SPRINKLER; ON DROP NIPPLE		4-WAY SWAY BRACE
	CONCENTRIC REDUCER		ALARM CHECK VALVE				
	ECCENTRIC REDUCER		FIRE DEPARTMENT CONNECTION				
	FLUSHING CONNECTION OR CAP						

FIRE SUPPRESSION ABBREVIATIONS

ABD	AUTOMATIC BALL DRIP
ACT	ACOUSTICAL CEILING TILE
AFF	ABOVE FINISHED FLOOR
AS	AUTOMATIC SPRINKLER
ATR	ALL THREAD ROD
BFP	BACKFLOW PREVENTER
BOB	BOTTOM OF BEAM
CB	CONCRETE BEAM
COL	COLUMN
CONC	CONCRETE
DI	DUCTILE IRON
DN	DOWN
DP	DRY PENDENT (SPRINKLER)
DS	DRY SIDEWALL (SPRINKLER)
EC	EXTENDED COVERAGE (SPRINKLER)
EXP	EXPOSED (NO CEILING)
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FHV	FIRE HOSE VALVE
FS	FLOW SWITCH
GALV	GALVANIZED
GYP	GYPNUM WALL BOARD (SHEETROCK)
HT	HIGH TEMPERATURE (SPRINKLER)
ITC	INSPECTORS TEST CONNECTION
MAX	MAXIMUM
MIN	MINIMUM
MT	METAL TILE
NIC	NOT IN CONTRACT
NS	NON-SPRINKLERED
NTS	NOT TO SCALE
OSJ	OPEN STEEL JOIST
PL	PLASTER (CEILING)
POC	POINT OF CONNECTION
PRV	PRESSURE RELIEF VALVE
QR	QUICK RESPONSE (SPRINKLER)
SCH	SCHEDULE
SPL	HIDDEN SPLINE (CEILING)
STL	STEEL
TYP	TYPICAL
TS	TAMPER SWITCH
UNO	UNLESS NOTED OTHERWISE

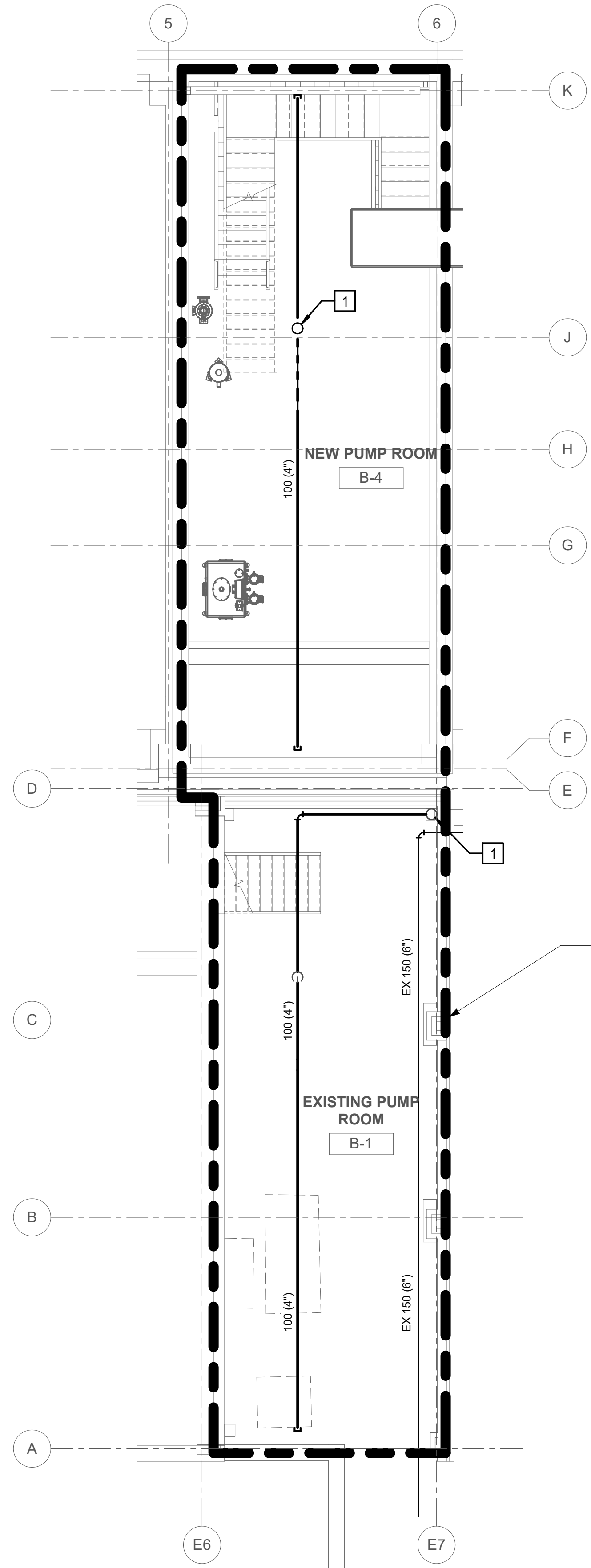
PRINTS OF THIS DRAWING SHALL NOT BE USED FOR ANY PURPOSE WHATSOEVER WITHOUT THE SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER			CONSULTANTS HAZARDOUS MATERIALS MABBETT & ASSOCIATES, INC. 105 CENTRAL STREET, STONEHAM, MA 02180 PHONE: (781)275-8050 CIVIL / STRUCTURAL PROFESSIONAL ENGINEERING CONSULTANTS, P.A. 303 SOUTH TOPEKA, WICHITA, KS 67202 PHONE: (316)262-2691 ARCHITECTURAL OCULUS INC. 1 SOUTH MEMORIAL DRIVE, SUITE 1500, SAINT LOUIS, MO 63102 PHONE: (314)367-6100		FIRE SUPPRESSION KOFFEL ASSOCIATES 8815 CENTRE PARK DRIVE, SUITE 200, COLUMBIA, MO 21045 PHONE: (410)753-2246 ELECTRONIC SECURITY MAGNA ENGINEERS 861 CORPORATE DRIVE, SUITE 210, LEXINGTON, KY 40503 PHONE: (859)309-2990 PHYSICAL SECURITY FORCE PROTECT 3210 GULF BLVD, UNIT 304, BELLEAIR BEACH, FL 33786 PHONE: (502)836-4232		ENGINEER OF RECORD Miller-Remick LLC M.E.P. & Structural Engineering A Service Disabled Veteran Owned Small Business 1010 KINGS HIGHWAY SOUTH CHERRY HILL, NEW JERSEY 08034 PHONE: (856)429-4000 FAX: (856)429-5002 MR PROJECT NO: 0499-0121		KOFFEL ASSOCIATES PROFESSIONAL ENGINEER STATE OF MISSOURI PROFESSIONAL ENGINEER No. 40485 9/30/2022		Office of Construction and Facilities Management U.S. Department of Veterans Affairs		Drawing Title FIRE SUPPRESSION NOTES, SYMBOLS, AND ABBREVIATIONS Approved: Project Director		Phase 100% BID SET		Project Title INSTALL NEW BOILERS IN BUILDING 13		Project Number 589A7-18-302 Building Number 13	
									Fully Sprinklered		Location ROBERT J. DOLE VA MEDICAL CENTER WICHITA, KANSAS		Drawing Number FX001							
									Issue Date 2021-09-03		Checked MLD		Drawn KLC							

SHEET NOTES:

1. PROVIDE SPRINKLER PROTECTION UNDER ALL STAIRS.
2. SPRINKLERS AND SPRINKLER PIPING SHALL NOT BE INSTALLED DIRECTLY ABOVE ELECTRICAL EQUIPMENT. SPRINKLERS AND PIPING INSTALLED IN ELECTRICAL EQUIPMENT AREAS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 70 CLEARANCE REQUIREMENTS. DRIP PANS AND OTHER SIMILAR FEATURES SHALL BE PROVIDED WHEN REQUIRED BY NFPA 70.
3. CONTRACTOR SHALL LOCATE AND INSTALL ALL DRAINS AS REQUIRED BY THE APPLICABLE CODES AND STANDARDS.

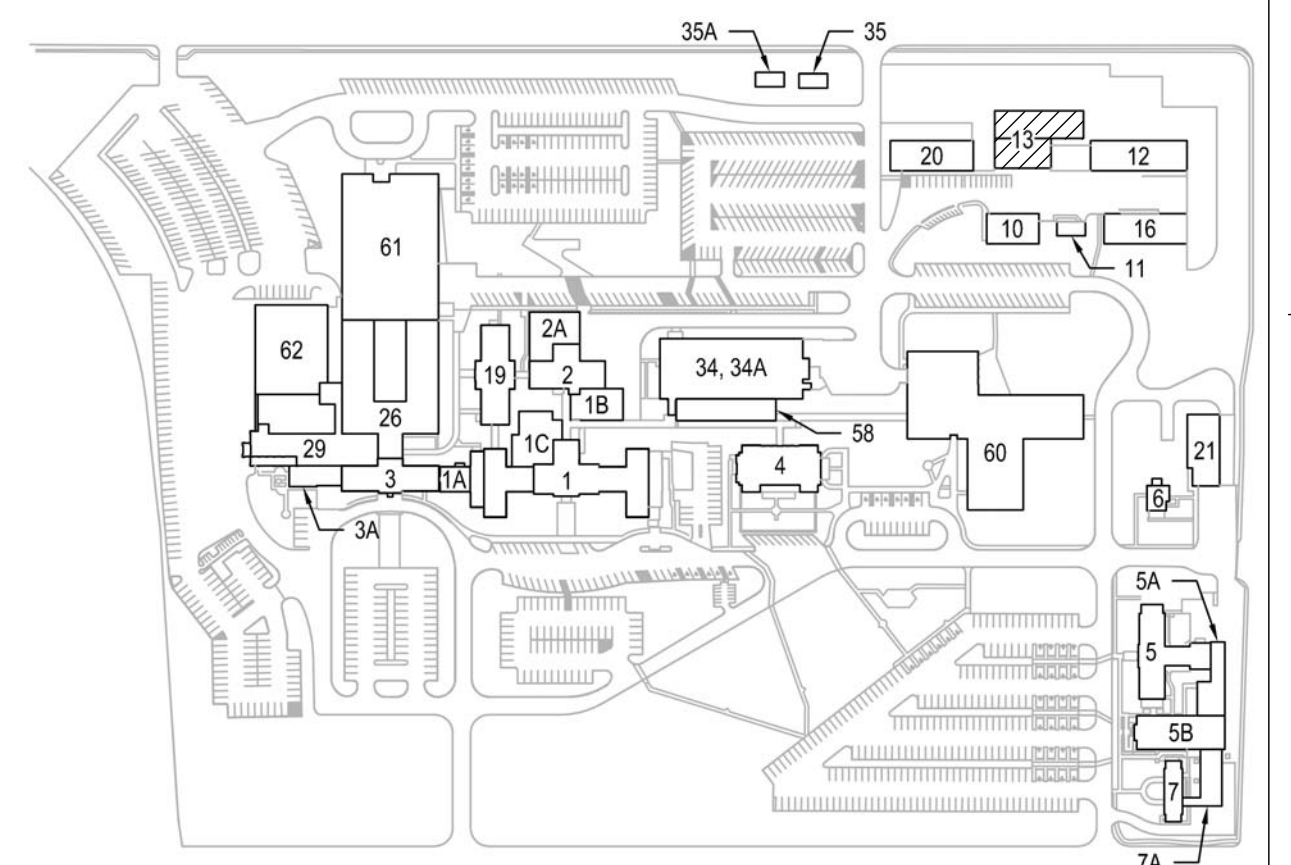
KEY NOTES:

- 1 100 (4") UP TO FLOOR ABOVE.



SPRINKLER ZONE 1
1170 SQ M (12,600 SQ FT)

1 BASEMENT PLAN - FIRE SUPPRESSION
FX101 / 3/16" = 1'-0"



KEYPLAN

PRINTS OF THIS DRAWING SHALL NOT BE USED FOR ANY PURPOSE WHATSOEVER WITHOUT THE SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER

NO.	DESCRIPTION	DATE

CONSULTANTS

<p>HAZARDOUS MATERIALS MABBETT & ASSOCIATES, INC. 105 CENTRAL STREET, STONEHAM, MA 02180 PHONE: (781)275-8050</p>	<p>FIRE SUPPRESSION KOFFEL ASSOCIATES 8815 CENTRE PARK DRIVE, SUITE 200, COLUMBIA, MD 21045 PHONE: (410)753-2246</p>
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ENGINEER OF RECORD

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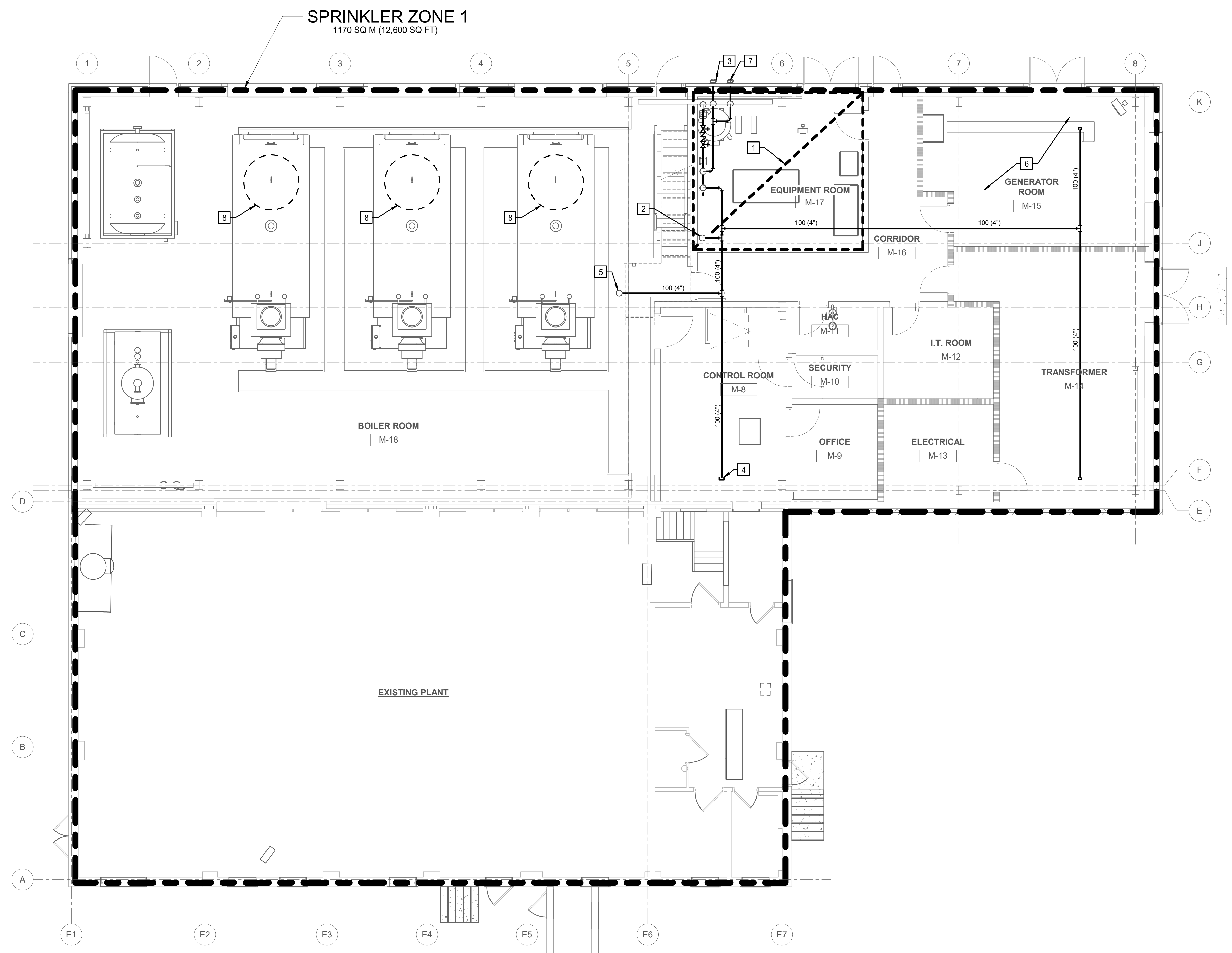
Office of Construction and Facilities Management
U.S. Department of Veterans Affairs

Drawing Title FIRE SUPPRESSION NEW WORK PLAN TUNNEL & BSMT LEVELS
Approved: Project Director

Phase 100% BID SET
FULLY SPRINKLERED

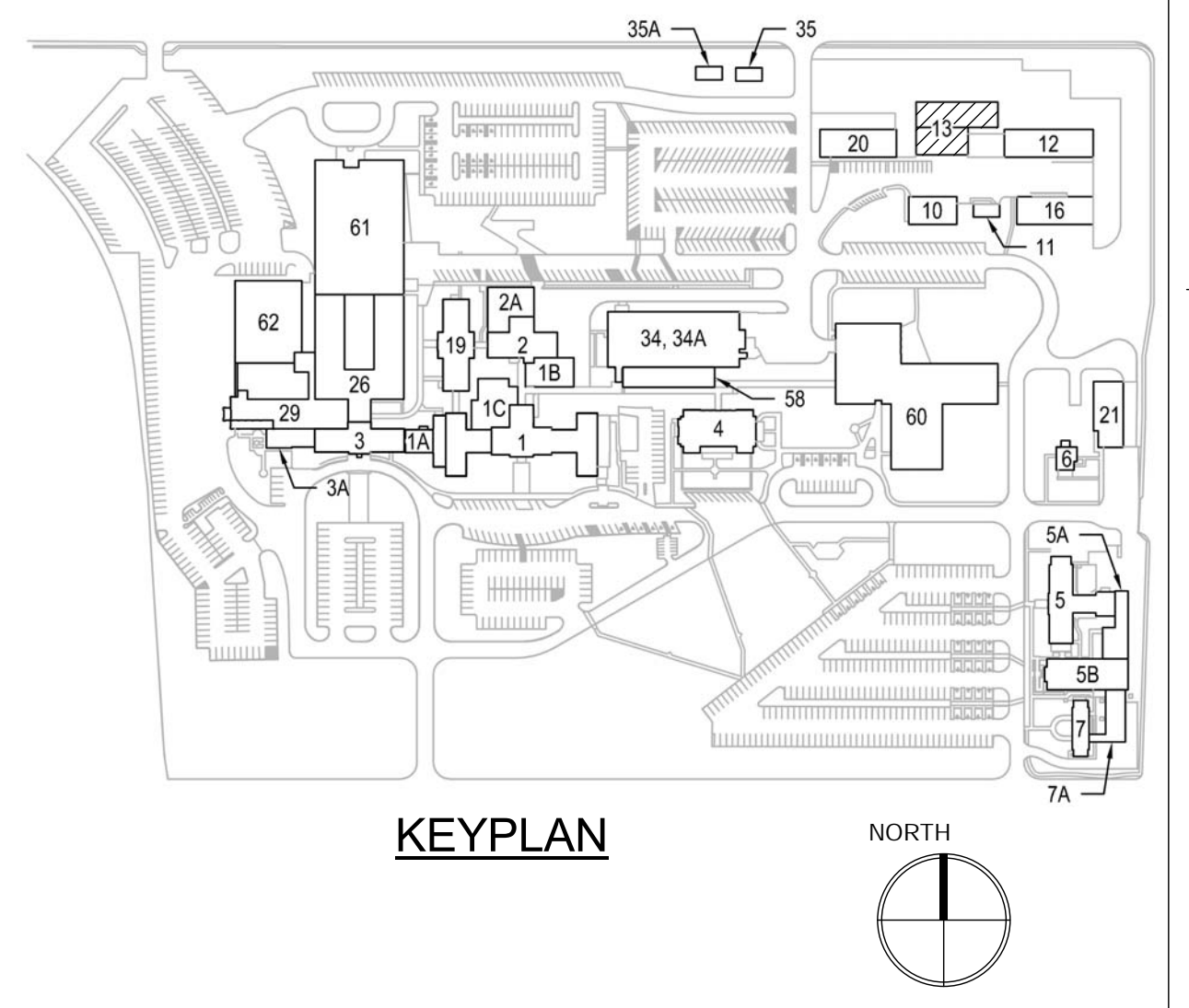
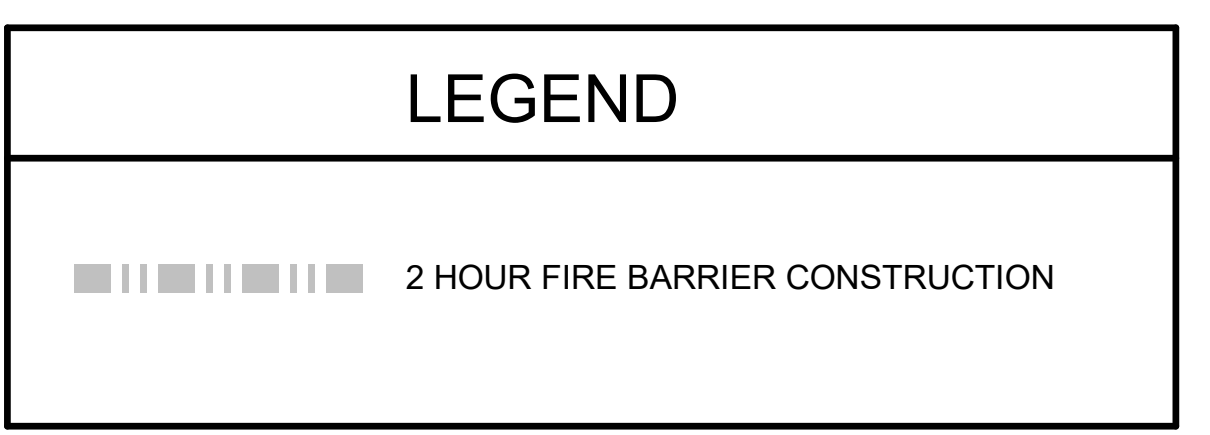
Project Title INSTALL NEW BOILERS IN BUILDING 13	Project Number 589A7-18-302
Location ROBERT J. DOLE VA MEDICAL CENTER WICHITA, KANSAS	Building Number 13
Issue Date 2021-09-03	Checked MLD
Drawn KLC	Drawing Number FX101

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- SHEET NOTES:**
1. PROVIDE SPRINKLER PROTECTION UNDER ALL STAIRS.
 2. SPRINKLERS AND SPRINKLER PIPING SHALL NOT BE INSTALLED DIRECTLY ABOVE ELECTRICAL EQUIPMENT. SPRINKLERS AND PIPING INSTALLED IN ELECTRICAL EQUIPMENT AREAS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 70 CLEARANCE REQUIREMENTS. DRIP PANS AND OTHER SIMILAR FEATURES SHALL BE PROVIDED WHEN REQUIRED BY NFPA 70.
 3. CONTRACTOR SHALL LOCATE AND INSTALL ALL DRAINS AS REQUIRED BY THE APPLICABLE CODES AND STANDARDS.

- KEY NOTES:**
- 1 REFER TO FX401 FOR WORK IN THIS AREA.
 - 2 100 (4") DOWN TO NEW PUMP ROOM.
 - 3 100x65x65 (4"x2-1/2"x2-1/2") BACKFLOW TEST HEADER. PROVIDE SIGNAGE ALONG EXTERIOR WALL THAT READS 'BACKFLOW TEST ABOVE TEST HEADER.'
 - 4 PROVIDE TEMPORARY CAP FOR PHASING. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL PHASING INFORMATION.
 - 5 100 (4") SPRINKLER MAIN UP. REFER TO DRAWING FX121 FOR CONTINUATION.
 - 6 GENERATOR ROOM SHALL BE DESIGNED AS AN EXTRA HAZARD GROUP 1 OCCUPANCY.
 - 7 100x65x65 (4"x2-1/2"x2-1/2") FDC HEADER. PROVIDE SIGNAGE ALONG EXTERIOR WALL THAT READS 'FDC ABOVE HEADER.'
 - 8 PROVIDE PROPER SPACING FROM STEAM TEST VALVES IN THIS AREA PER NFPA 13.



2 FIRST FLOOR PLAN - FIRE SUPPRESSION (PHASE 2)
 FX111.02 3/16" = 1'-0"

PRINTS OF THIS DRAWING SHALL NOT BE USED FOR ANY PURPOSE WHATSOEVER WITHOUT THE SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER

NO.	DESCRIPTION	DATE

CONSULTANTS

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ENGINEER OF RECORD

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 MR PROJECT NO: 0499-0121



Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: **FIRE SUPPRESSION NEW WORK PLAN SHOP & MAIN LEVELS (PHASE 2)**

Approved: Project Director

Phase: **100% BID SET**

FULLY SPRINKLERED

Project Title: **INSTALL NEW BOILERS IN BUILDING 13**

Location: **ROBERT J. DOLE VA MEDICAL CENTER WICHITA, KANSAS**

Issue Date: 2021-09-03

Checked: MLD

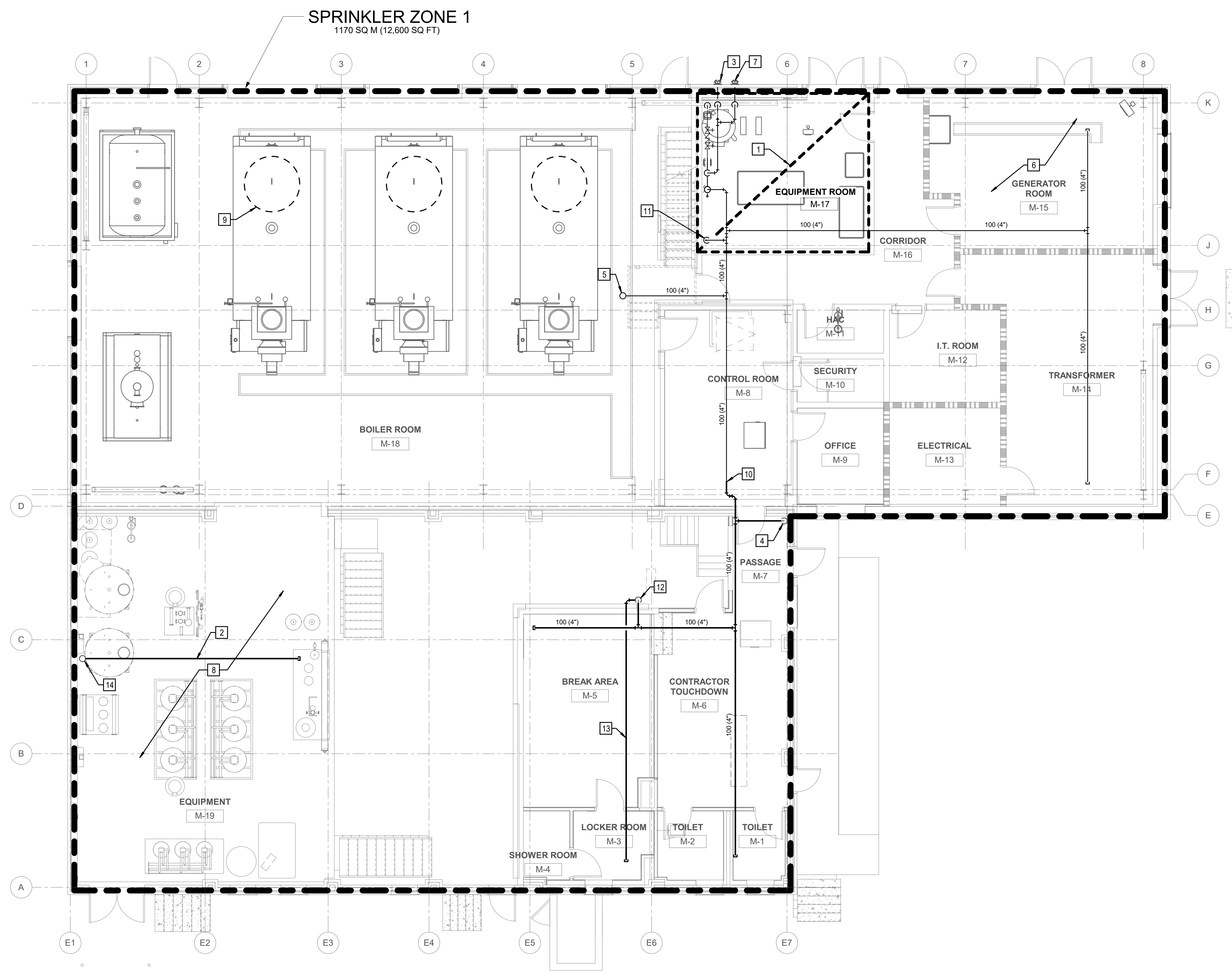
Drawn: KLC

Project Number: **589A7-18-302**

Building Number: **13**

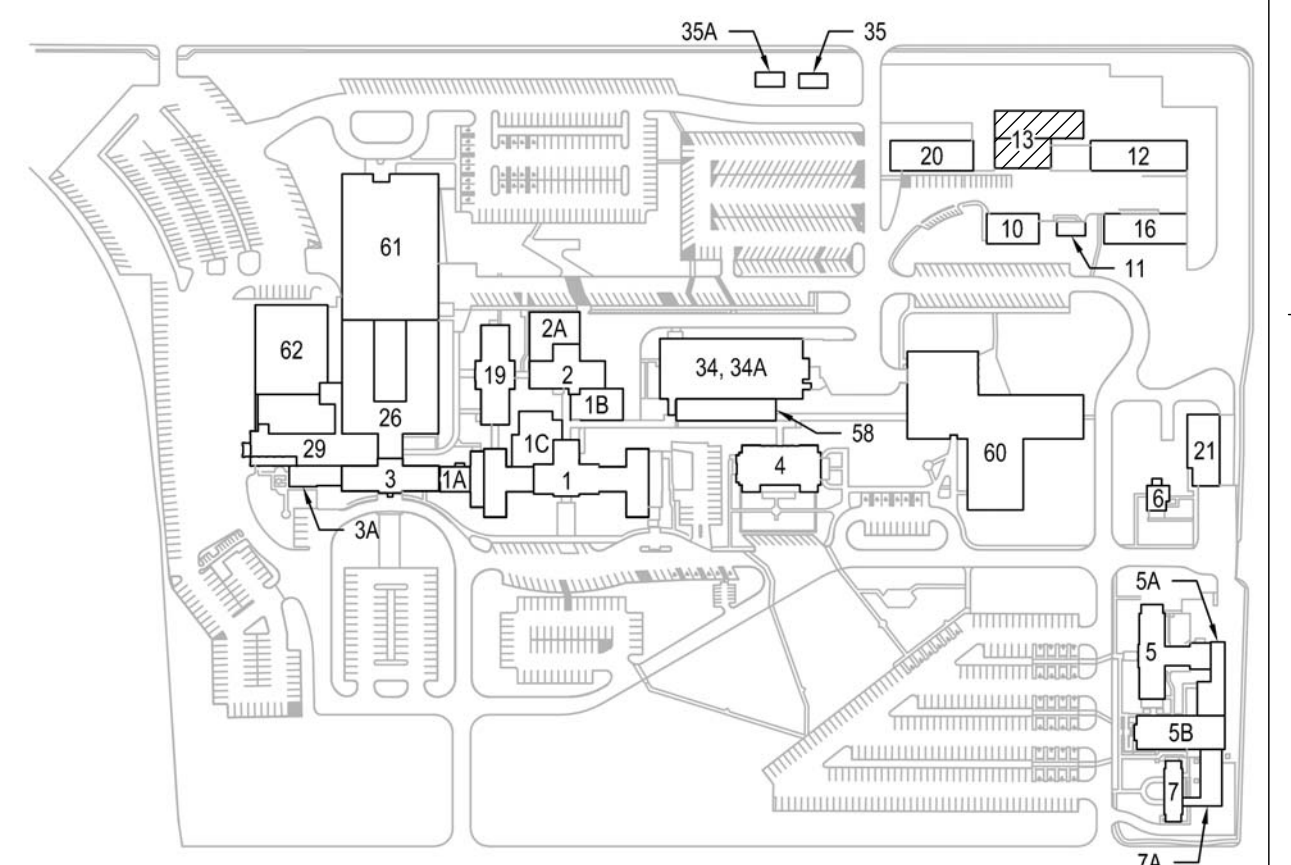
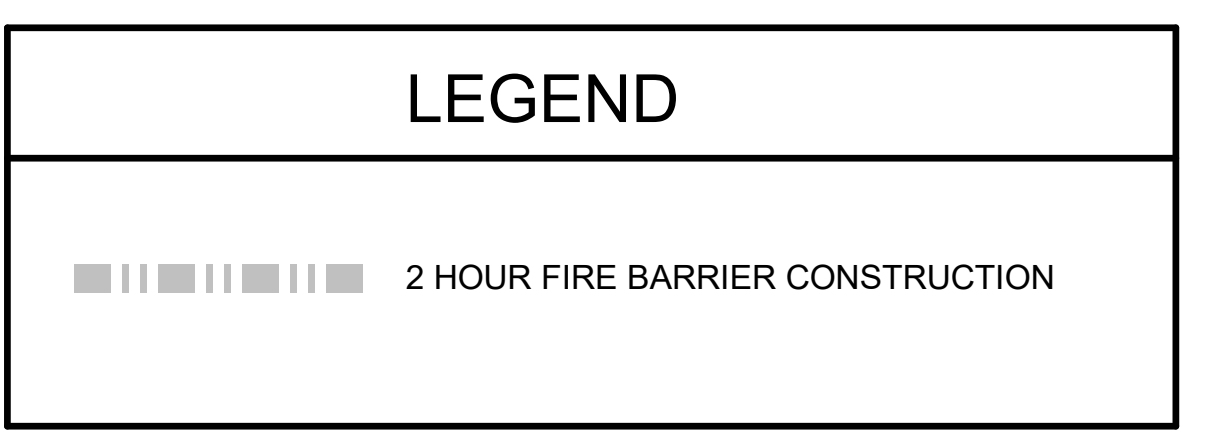
Drawing Number: **FX111.02**

three inches = one foot
 one and one half inches = one foot
 one inch = one foot
 three quarters inch = one foot
 one half inch = one foot
 one quarter inch = one foot
 three eighths inch = one foot
 one eighth inch = one foot
 one sixteenth inch = one foot



- SHEET NOTES:**
1. PROVIDE SPRINKLER PROTECTION UNDER ALL STAIRS.
 2. SPRINKLERS AND SPRINKLER PIPING SHALL NOT BE INSTALLED DIRECTLY ABOVE ELECTRICAL EQUIPMENT. SPRINKLERS AND PIPING INSTALLED IN ELECTRICAL EQUIPMENT AREAS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 70 CLEARANCE REQUIREMENTS. DRIP PANS AND OTHER SIMILAR FEATURES SHALL BE PROVIDED WHEN REQUIRED BY NFPA 70.
 3. CONTRACTOR SHALL LOCATE AND INSTALL ALL DRAINS AS REQUIRED BY THE APPLICABLE CODES AND STANDARDS.

- KEY NOTES:**
- 1 REFER TO FX401 FOR WORK IN THIS AREA.
 - 2 SPRINKLER PIPING BELOW RAISED FLOOR.
 - 3 100x65x65 (4"x2-1/2"x2-1/2") BACKFLOW TEST HEADER. PROVIDE SIGNAGE ALONG EXTERIOR WALL THAT READS 'BACKFLOW TEST' ABOVE TEST HEADER.
 - 4 100 (4") SPRINKLER MAIN DOWN. REFER TO DRAWING FX101 FOR CONTINUATION.
 - 5 100 (4") SPRINKLER MAIN UP. REFER TO DRAWING FX121 FOR CONTINUATION.
 - 6 GENERATOR ROOM SHALL BE DESIGNED AS AN EXTRA HAZARD GROUP 1 OCCUPANCY.
 - 7 100x65x65 (4"x2-1/2"x2-1/2") FDC HEADER. PROVIDE SIGNAGE ALONG EXTERIOR WALL THAT READS 'FDC' ABOVE HEADER.
 - 8 PROVIDE SPRINKLERS UNDER RAISED FLOOR AREAS.
 - 9 PROVIDE PROPER SPACING FROM STEAM TEST VALVES IN THIS AREA PER NFPA 13.
 - 10 REMOVE TEMPORARY CAP INSTALLED UNDER PHASE 2 AND CONNECT TO NEW PIPING INSTALLED UNDER PHASE 3 (EXISTING BOILER RENOVATION). REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL PHASING INFORMATION.
 - 11 100 (4") DOWN TO NEW PUMP ROOM.
 - 12 SPRINKLER PIPING DOWN TO STORAGE ROOM AREA BELOW.
 - 13 PROVIDE SPRINKLERS IN STORAGE ROOM AREA.
 - 14 100 (4") SPRINKLER PIPING MAIN UP TO FLOOR ABOVE AND DOWN TO RAISED FLOOR AREA.



1 FIRST FLOOR PLAN - FIRE SUPPRESSION (PHASE 3)
 FX111.03 3/16" = 1'-0"

PRINTS OF THIS DRAWING SHALL NOT BE USED FOR ANY PURPOSE WHATSOEVER WITHOUT THE SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER

NO.	DESCRIPTION	DATE

CONSULTANTS

<p>HAZARDOUS MATERIALS MABBETT & ASSOCIATES, INC. 105 CENTRAL STREET, STONEHAM, MA 02180 PHONE: (781)275-8050</p> <p>CIVIL / STRUCTURAL PROFESSIONAL ENGINEERING CONSULTANTS, P.A. 303 SOUTH TOPEKA, WICHITA, KS 67202 PHONE: (316)262-2691</p> <p>ARCHITECTURAL OCULUS INC. 1 SOUTH MEMORIAL DRIVE, SUITE 1500, SAINT LOUIS, MO 63102 PHONE: (314)367-8100</p>	<p>FIRE SUPPRESSION KOFFEL ASSOCIATES 8815 CENTRE PARK DRIVE, SUITE 200, COLUMBIA, MD 21045 PHONE: (410)753-2246</p> <p>ELECTRONIC SECURITY MAGNA ENGINEERS 861 CORPORATE DRIVE, SUITE 210, LEXINGTON, KY 40503 PHONE: (859)309-2990</p> <p>PHYSICAL SECURITY FORCE PROTECT 3210 GULF BLVD, UNIT 304, BELLEAIR BEACH, FL 33786 PHONE: (502)836-4232</p>
---	---

ENGINEER OF RECORD

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 M.E.P. & Structural Engineering
 A Service Disabled Veteran Owned Small Business
 1010 KINGS HIGHWAY SOUTH
 CHERRY HILL, NEW JERSEY 08034
 PHONE: (856)429-4000
 FAX: (856)429-5002
 MR PROJECT NO: 0499-0121



Drawing Title
**FIRE SUPPRESSION NEW WORK PLAN
 SHOP & MAIN LEVELS (PHASE 3)**

Approved: Project Director

Phase
100% BID SET

FULLY SPRINKLERED

Project Title
**INSTALL NEW BOILERS IN
 BUILDING 13**

Location
 ROBERT J. DOLE VA MEDICAL CENTER
 WICHITA, KANSAS

Issue Date
 2021-09-03

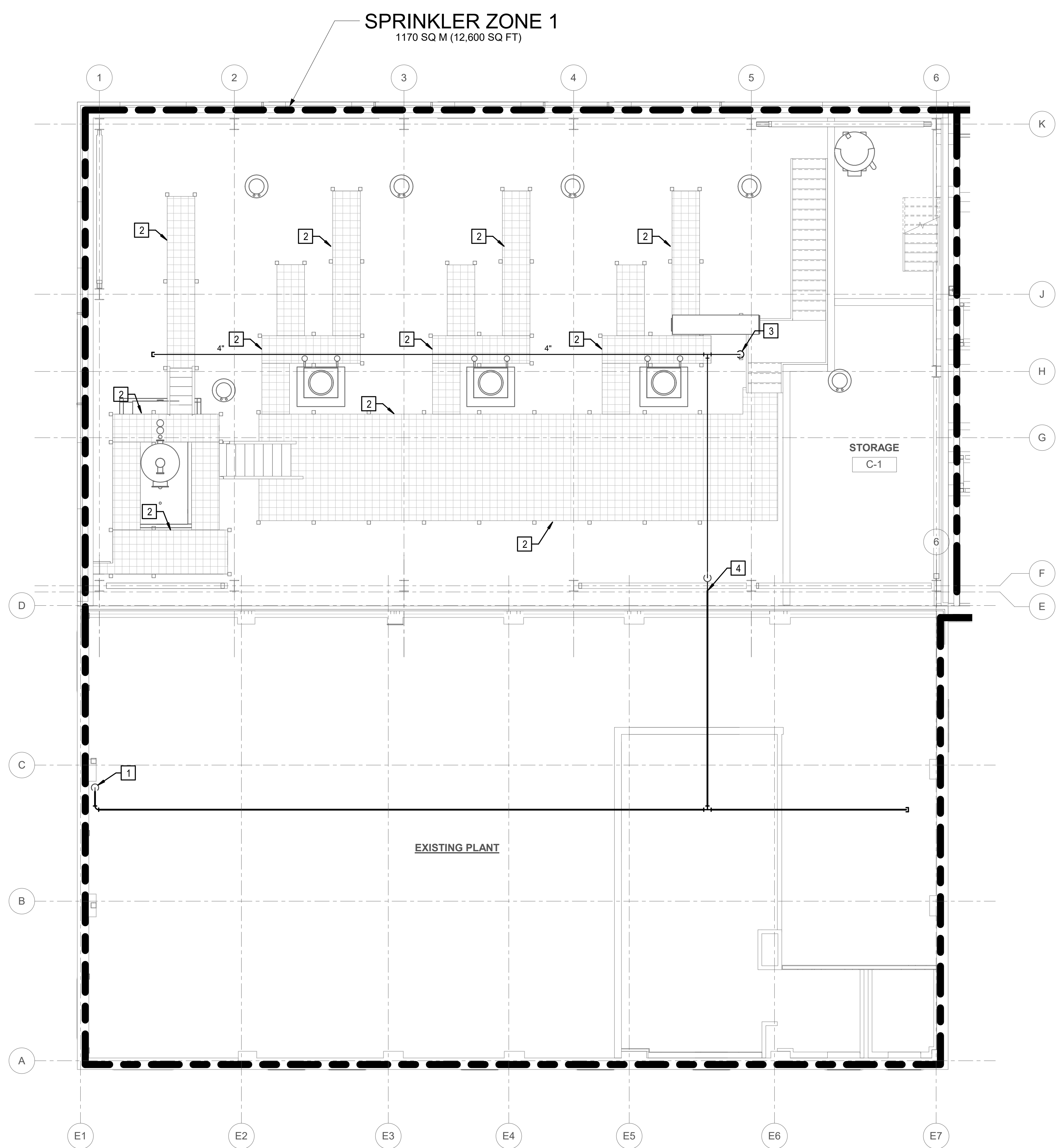
Checked
 MLD

Drawn
 KLC

Project Number
 589A7-18-302

Building Number
 13

Drawing Number
FX111.03



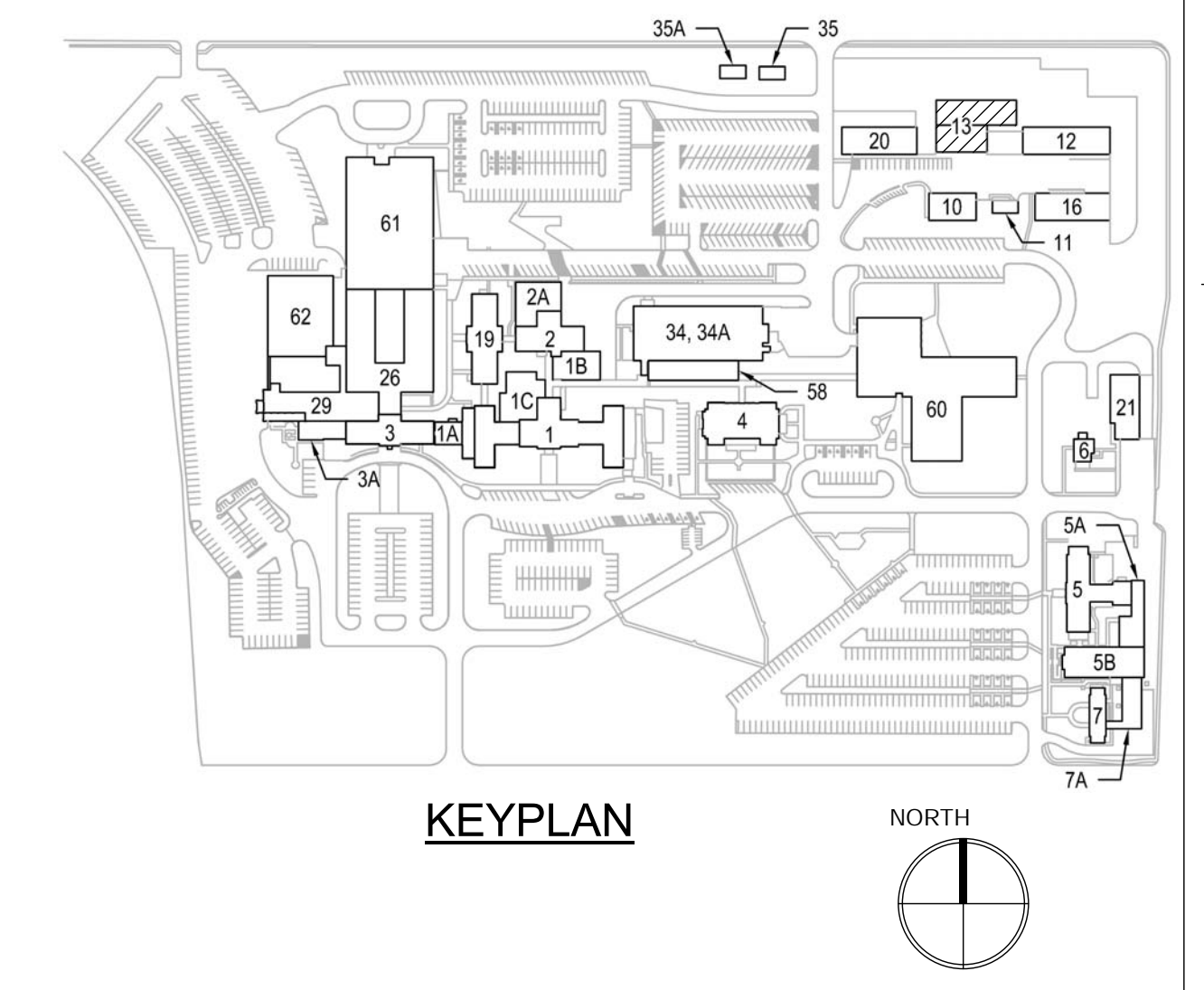
SHEET NOTES:

1. PROVIDE SPRINKLER PROTECTION UNDER ALL STAIRS.
2. SPRINKLERS AND SPRINKLER PIPING SHALL NOT BE INSTALLED DIRECTLY ABOVE ELECTRICAL EQUIPMENT. SPRINKLERS AND PIPING INSTALLED IN ELECTRICAL EQUIPMENT AREAS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 70 CLEARANCE REQUIREMENTS. DRIF PANS AND OTHER SIMILAR FEATURES SHALL BE PROVIDED WHEN REQUIRED BY NFPA 70.
3. CONTRACTOR SHALL LOCATE AND INSTALL ALL DRAINS AS REQUIRED BY THE APPLICABLE CODES AND STANDARDS.

KEY NOTES:

- 1 100 (4") SPRINKLER MAIN DOWN TO FLOOR BELOW.
- 2 PROVIDE SPRINKLER PROTECTION UNDER CATWALKS GREATER THAN 4 FEET WIDE IN TWO DIRECTIONS, IN ACCORDANCE WITH NFPA 13 SPRINKLER OBSTRUCTION REQUIREMENTS.
- 3 SPRINKLER PIPE DOWN. REFER TO DRAWING FX111 FOR CONTINUATION.
- 4 REMOVE TEMPORARY CAP INSTALLED UNDER PHASE 2 AND CONNECT TO NEW PIPING INSTALLED UNDER PHASE 3 (EXISTING BOILER RENOVATION). REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL PHASING INFORMATION.

1 CATWALK PLAN - FIRE SUPPRESSION (PHASE 3)
FX121.03 3/16" = 1'-0"



PRINTS OF THIS DRAWING SHALL NOT BE USED FOR ANY PURPOSE WHATSOEVER WITHOUT THE SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER

NO.	DESCRIPTION	DATE

CONSULTANTS

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ENGINEER OF RECORD

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MR PROJECT NO: 0499-0121



Office of Construction and Facilities Management
U.S. Department of Veterans Affairs

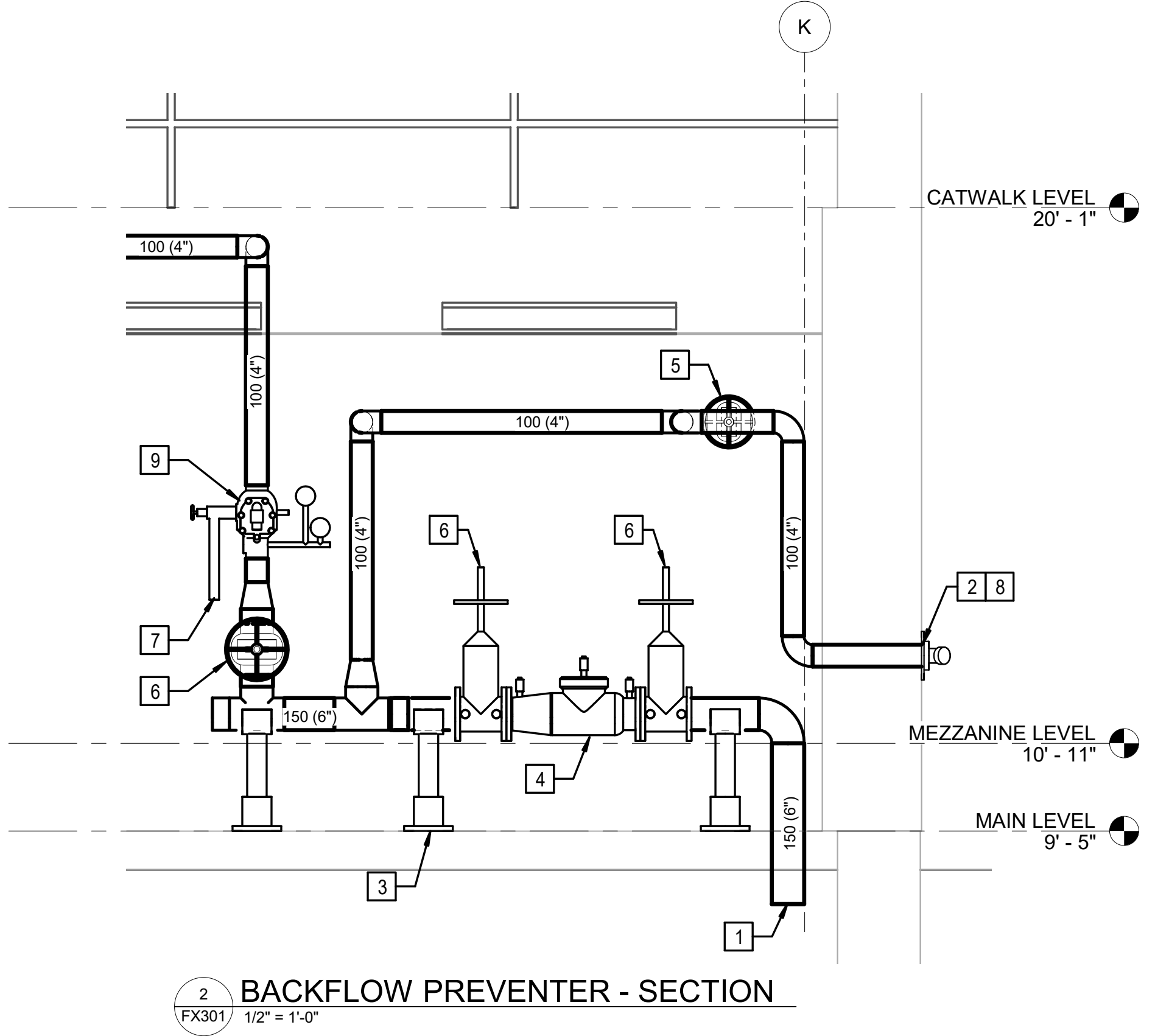
Drawing Title FIRE SUPPRESSION NEW WORK CATWALK PLAN (PHASE 3)
Approved: Project Director

Phase 100% BID SET
FULLY SPRINKLERED

Project Title INSTALL NEW BOILERS IN BUILDING 13
Location ROBERT J. DOLE VA MEDICAL CENTER WICHITA, KANSAS
Issue Date 2021-09-03
Checked MLD
Drawn KLC

Project Number 589A7-18-302
Building Number 13
Drawing Number FX121.03

three inches = one foot
 one and one half inches = one foot
 one inch = one foot
 three quarters inch = one foot
 one half inch = one foot
 three eighths inch = one foot
 one quarter inch = one foot
 one eighth inch = one foot



- KEY NOTES:**
- 1 150 (6") INCOMING WATER. REFER TO CIVL DRAWINGS FOR CONTINUATION.
 - 2 100x65x65 (4"x2-1/2"x2-1/2") BACKFLOW PREVENTER TEST HEADER. PROVIDE SIGNAGE ALONG EXTERIOR WALL THAT READS 'BACKFLOW PREVENTER TEST' ABOVE TEST HEADER.
 - 3 PIPE STAND (TYP).
 - 4 150 (6") AMES MODEL COLT SERIES 2000SS DOUBLE CHECK BACKFLOW PREVENTER ASSEMBLY, OR APPROVED EQUAL, INSTALLED IN HORIZONTAL WITH OS&Y VALVES WITH SUPERVISORY SWITCHES.
 - 5 OS&Y VALVE (NC) WITH SUPERVISORY SWITCH FOR BACKFLOW PREVENTER TEST HEADER. INCLUDE CHAIN OPERATOR MECHANISM AND CHAIN.
 - 6 OS&Y VALVE WITH SUPERVISORY SWITCH.
 - 7 50 (2") MAIN DRAIN TO EXTERIOR.
 - 8 100x65x65 (4"x2-1/2"x2-1/2") FDC ADJACENT TO BFP TEST HEADER. PROVIDE SIGNAGE ALONG EXTERIOR WALL THAT READS 'FDC' ABOVE HEADER.
 - 9 CHECK VALVE, PRESSURE GAUGE, TRIM, TEST AND DRAIN ASSEMBLY, AND FLOW SWITCH.

2 BACKFLOW PREVENTER - SECTION
 FX301 1/2" = 1'-0"

PRINTS OF THIS DRAWING SHALL NOT BE USED FOR ANY PURPOSE WHATSOEVER WITHOUT THE SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER

NO.	DESCRIPTION	DATE

CONSULTANTS	
HAZARDOUS MATERIALS MABBETT & ASSOCIATES, INC. 105 CENTRAL STREET, STONEHAM, MA 02180 PHONE: (781)275-8050	FIRE SUPPRESSION KOFFEL ASSOCIATES 8815 CENTRE PARK DRIVE, SUITE 200, COLUMBIA, MD 21045 PHONE: (410)753-2246
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ENGINEER OF RECORD

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 MR PROJECT NO: 0499-0121



Office of Construction and Facilities Management

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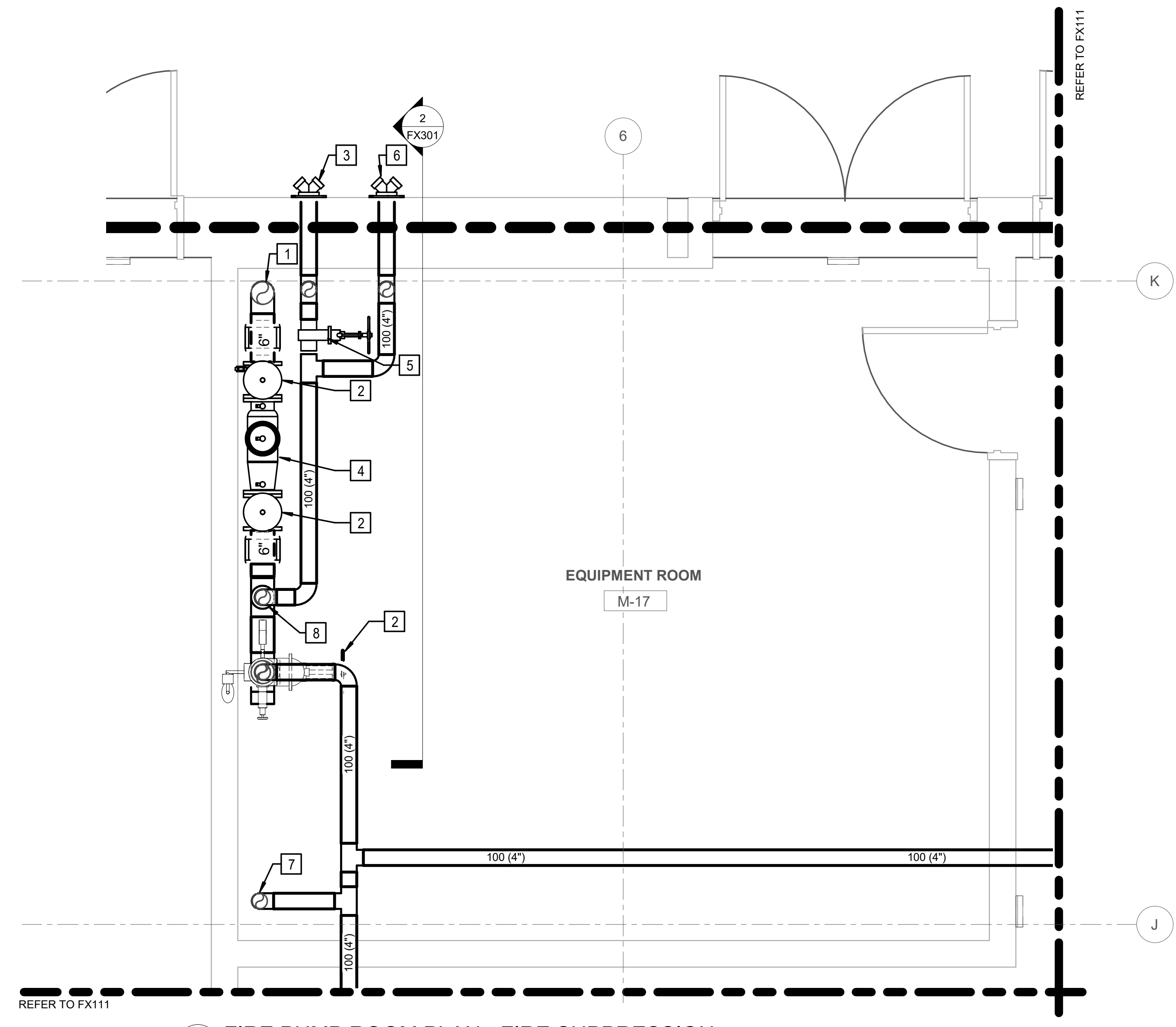
Drawing Title FIRE SUPPRESSION SECTIONS
Approved: Project Director

Phase 100% BID SET
FULLY SPRINKLERED

Project Title INSTALL NEW BOILERS IN BUILDING 13		
Location ROBERT J. DOLE VA MEDICAL CENTER WICHITA, KANSAS		
Issue Date 2021-09-03	Checked MLD	Drawn KLC

Project Number 589A7-18-302
Building Number 13
Drawing Number FX301

three inches = one foot
 one and one half inches = one foot
 one inch = one foot
 three quarters inch = one foot
 one half inch = one foot
 three eighths inch = one foot
 one quarter inch = one foot
 one eighth inch = one foot
 one eighth inch = one foot



- KEY NOTES:**
- 1 150 (6") INCOMING WATER. REFER TO CIVL DRAWINGS FOR CONTINUATION.
 - 2 150 (6") OS&Y CONTROL VALVE WITH SUPERVISORY SWITCH.
 - 3 100x65x65 (4"x2-1/2"x2-1/2") BACKFLOW PREVENTER TEST HEADER. PROVIDE SIGNAGE ALONG EXTERIOR WALL THAT READS 'BACKFLOW PREVENTER TEST' ABOVE TEST HEADER.
 - 4 150 (6") AMES MODEL COLT SERIES 2000SS DOUBLE CHECK BACKFLOW PREVENTER ASSEMBLY. OR APPROVED EQUAL INSTALLED IN VERTICAL (FLOW UP) WITH OS&Y VALVES WITH SUPERVISORY SWITCHES, OR APPROVED EQUAL.
 - 5 OS&Y VALVE (NO) WITH SUPERVISORY SWITCH FOR BACKFLOW PREVENTER TEST HEADER. INCLUDE CHAIN OPERATOR MECHANISM AND CHAIN.
 - 6 100x65x65 (4"x2-1/2"x2-1/2") FDC HEADER. PROVIDE SIGNAGE ALONG EXTERIOR WALL THAT READS 'FDC' ABOVE HEADER.
 - 7 100 (4") SPRINKLER MAIN DOWN TO NEW PUMP ROOM.
 - 8 100 (4") TO FDC AND BACKFLOW PREVENTER TEST HEADER.

1 FIRE PUMP ROOM PLAN - FIRE SUPPRESSION
 FX401 1/2" = 1'-0"

PRINTS OF THIS DRAWING SHALL NOT BE USED FOR ANY PURPOSE WHATSOEVER WITHOUT THE SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER

NO.	DESCRIPTION	DATE

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<p>CIVIL / STRUCTURAL PROFESSIONAL ENGINEERING CONSULTANTS, P.A. 303 SOUTH TOPEKA, WICHITA, KS 67202 PHONE: (316)262-2691</p>	<p>ELECTRONIC SECURITY MAGNA ENGINEERS 861 CORPORATE DRIVE, SUITE 210, LEXINGTON, KY 40503 PHONE: (859)309-2990</p>
<p>ARCHITECTURAL OCULUS INC. 1 SOUTH MEMORIAL DRIVE, SUITE 1500, SAINT LOUIS, MO 63102 PHONE: (314)367-6100</p>	<p>PHYSICAL SECURITY FORCE PROTECT 3210 GULF BLVD, UNIT 304, BELLAIR BEACH, FL 33786 PHONE: (502)836-4232</p>

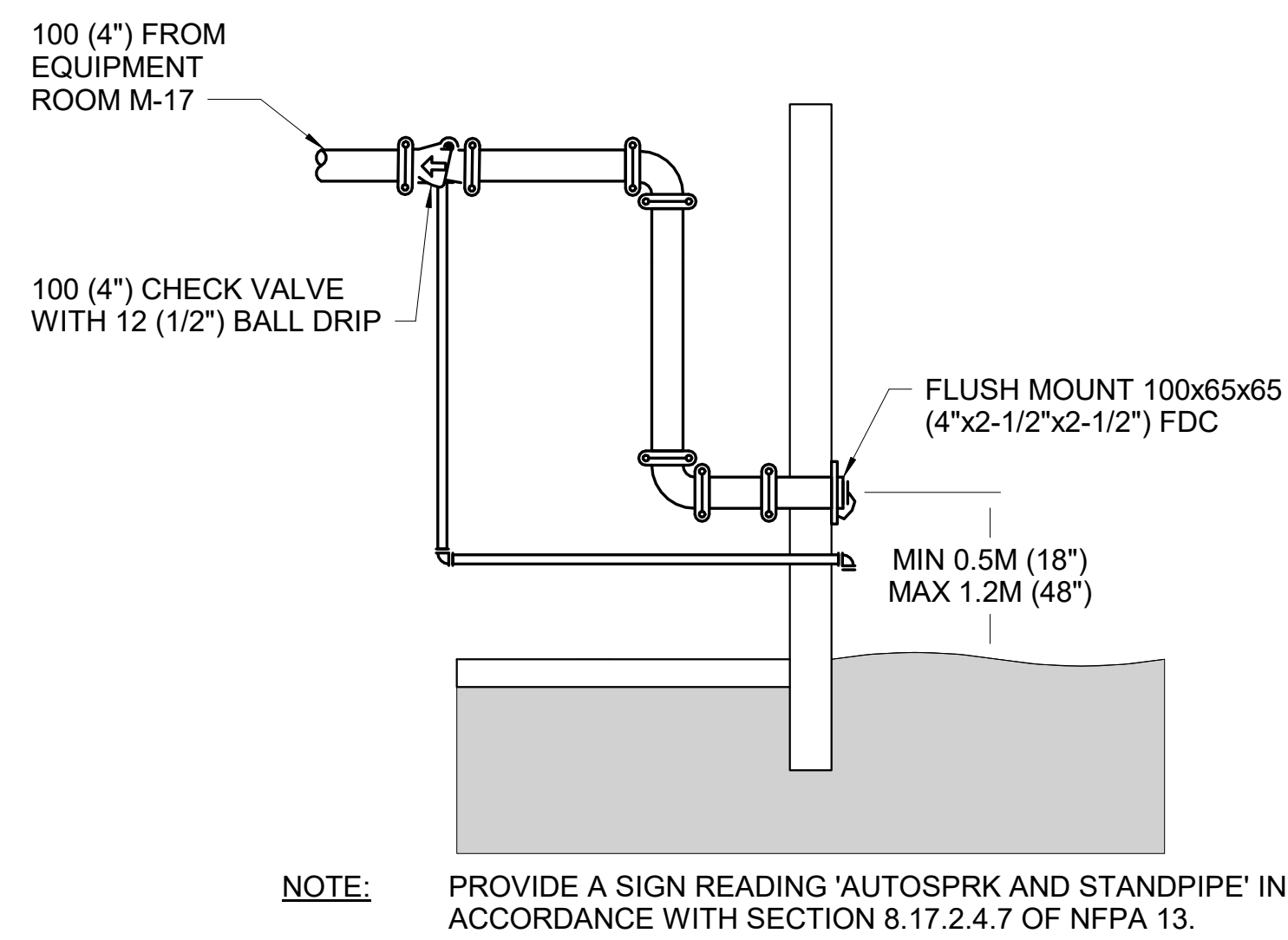
ENGINEER OF RECORD

<p>Miller-Remick LLC M.E.P. & Structural Engineering A Service Disabled Veteran Owned Small Business 1010 KINGS HIGHWAY SOUTH CHERRY HILL, NEW JERSEY 08034 PHONE: (856)429-4000 FAX: (856)429-5002 MR PROJECT NO: 0499-0121</p>	<p>KOFFEL ASSOCIATES PROFESSIONAL ENGINEER STATE OF MARYLAND PROFESSIONAL ENGINEER No. 40485 9/3/2022</p>
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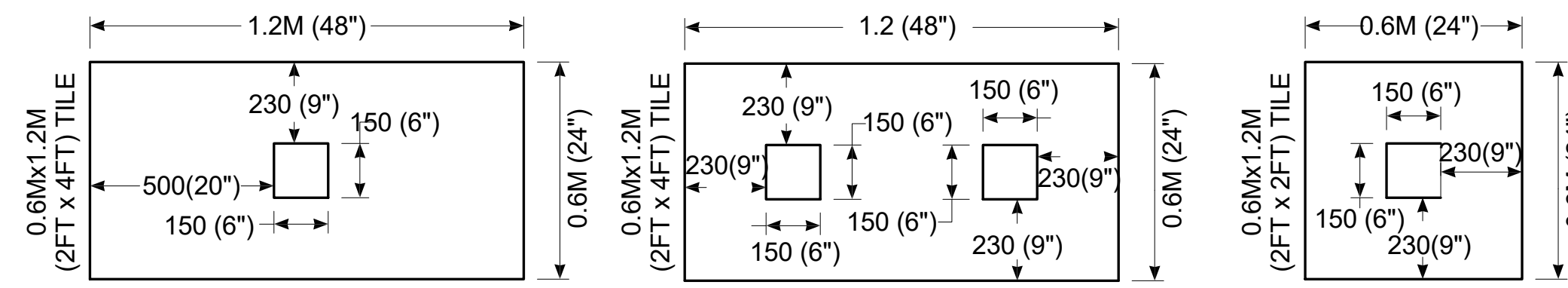
Office of Construction and Facilities Management
 VA U.S. Department of Veterans Affairs

<p>Drawing Title FIRE SUPPRESSION ENLARGED PLANS</p>	<p>Phase 100% BID SET</p>
<p>Approved: Project Director</p>	<p>FULLY SPRINKLERED</p>

<p>Project Title INSTALL NEW BOILERS IN BUILDING 13</p>	<p>Project Number 589A7-18-302</p>
<p>Location ROBERT J. DOLE VA MEDICAL CENTER WICHITA, KANSAS</p>	<p>Building Number 13</p>
<p>Issue Date 2021-09-03</p>	<p>Checked MLD</p>
<p>Drawn KLC</p>	<p>Drawing Number FX401</p>

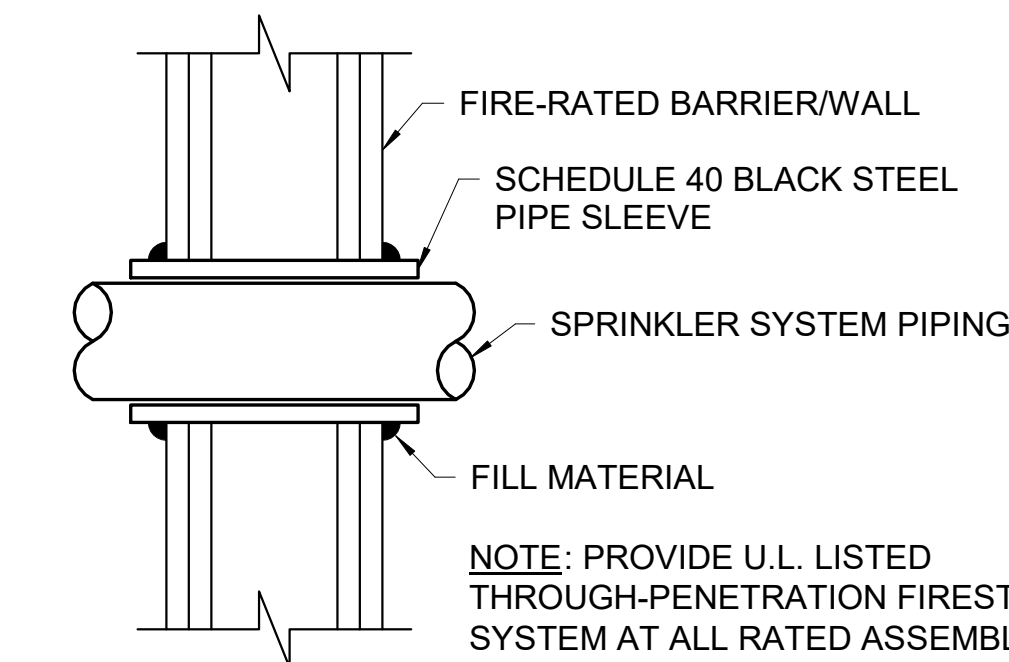


1 FIRE DEPARTMENT CONNECTION DETAIL
FX501 NOT TO SCALE



NOTE:
TYPICAL ACOUSTIC CEILING PANEL.
LOCATE SPRINKLER WITHIN AREA
INDICATED.

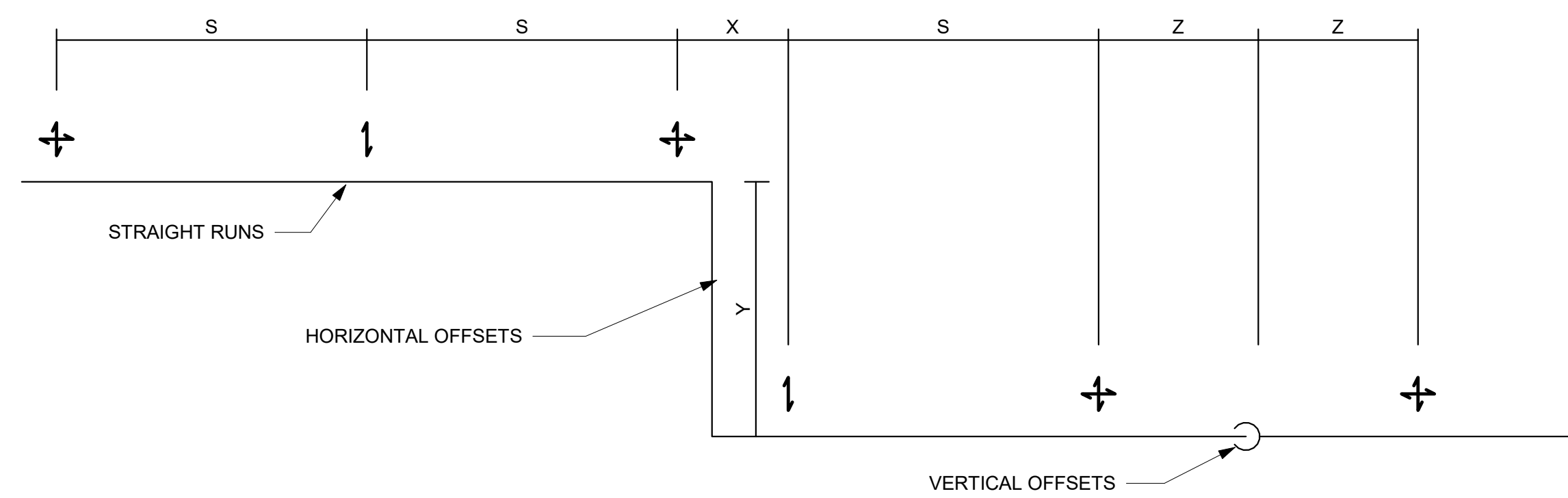
2 SPRINKLER PLACEMENT DETAIL
FX501 NOT TO SCALE



THROUGH PENETRANT: ONE PIPE INSTALLED
CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP
SYSTEM. PIPE TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF
WALL ASSEMBLY.

FILL MATERIAL: SEALANT - FILL MATERIAL (NOT SHOWN)
APPLIED WITHIN THE ANNULUS. FLUSH WITH BOTH SURFACES
OF WALL. BEAD OF FILL MATERIAL SHALL ALSO BE APPLIED
AT THE PIPE/WALL INTERFACE.

3 THROUGH WALL PENETRATION DETAIL
FX501 NOT TO SCALE



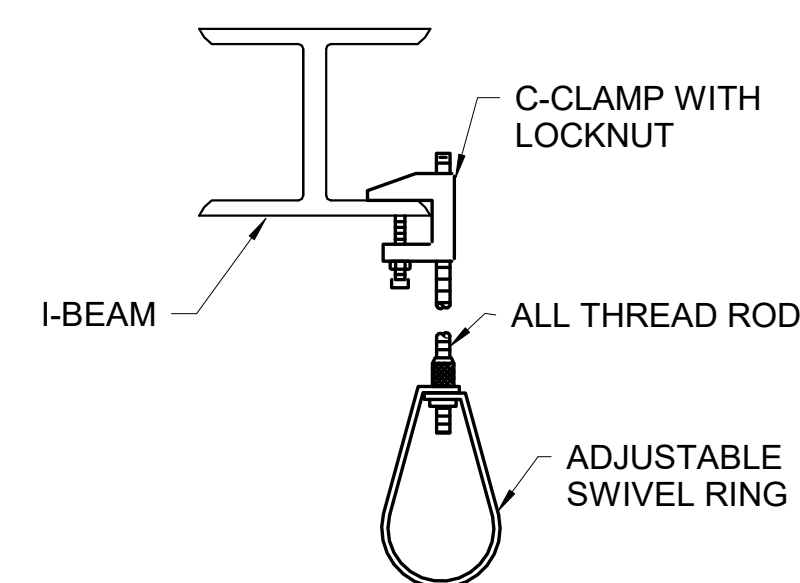
SWAY BRACING PATTERN FOR SINGLE HANGER PIPING
PLAN VIEW

- = LONGITUDINAL SWAY BRACE
- = 4-WAY (TRANSVERSE & LONGITUDINAL) SWAY BRACE
- = TRANSVERSE (LATERAL) SWAY BRACE

BRACED COMPONENT DESCRIPTION	MAX. "S"	MAX. "X" + "Y"
65 (2 1/2") AND LARGER	12M (40')	12M (40')
TRAPEZE SUPPORTED EQUIPMENT	12M (40')	12M (40')

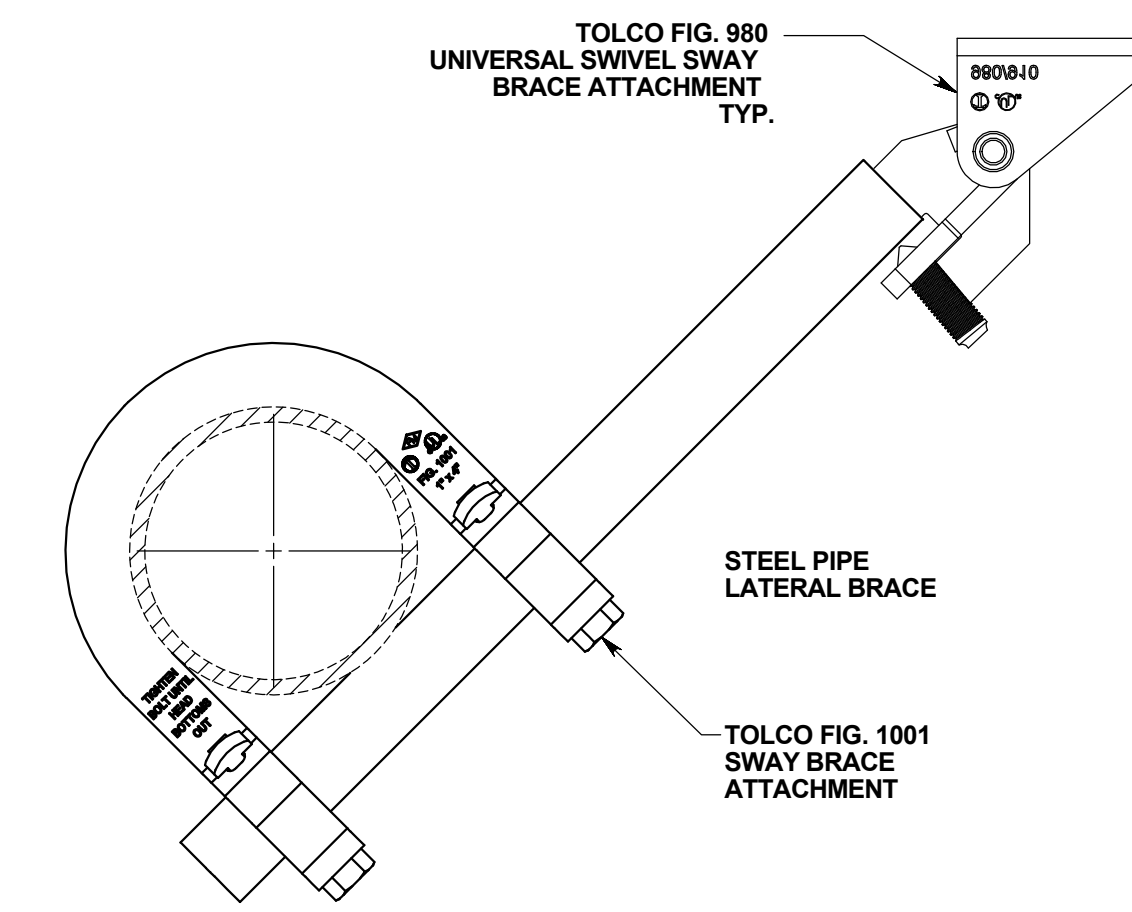
4 SWAY BRACING SPACING
FX501 NOT TO SCALE

- HANGER NOTES:
1. MAXIMUM UNSUPPORTED ARMOVER LENGTH SHALL NOT BE GREATER THAN 0.6M (24"), WHERE SYSTEM PRESSURES EXCEED 100 PSI, MAXIMUM UNSUPPORTED LENGTH SHALL NOT EXCEED 12".
 2. MIN $\frac{1}{8}$ " ALL THREAD ROD FOR PIPE DIAMETERS 4" AND SMALLER.
 3. DO NOT SUPPORT SPRINKLER PIPE FROM BOTTOM CHORDS OF BAR JOIST OR FROM ROOF DECKING.
 4. WHERE TRAPEZE HANGERS ARE USED, THEY SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 13, SECTION 9.1.1.6.

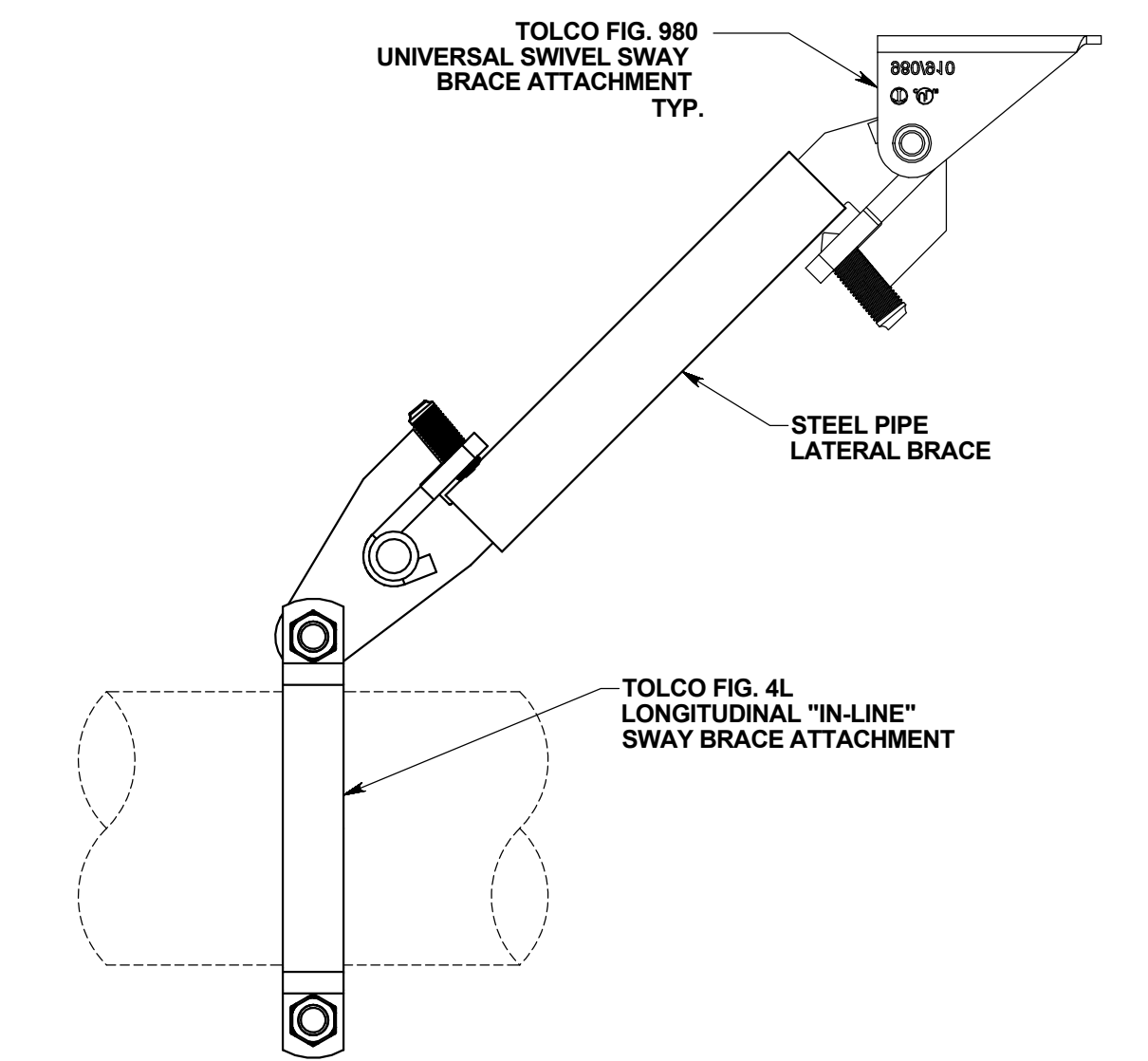


DIAMETER	MAX DISTANCE BETWEEN HANGERS			
	25(1")	3.6M (12'-0")	50(2")	4.6M (15'-0")
32(1-1/4")	3.6M (12'-0")	65 (2-1/2")	4.6M (15'-0")	
40(1-1/2")	4.6M(15'-0")	≥ 75(3")	4.6M (15'-0")	

5 TYPICAL HANGER PLACEMENT DETAIL
FX501 NOT TO SCALE



6 LATERAL SWAY BRACE
FX501 NOT TO SCALE



7 LOGITUDINAL SWAY BRACE
FX501 NOT TO SCALE

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CONSULTANTS

HAZARDOUS MATERIALS	FIRE SUPPRESSION	ELECTRONIC SECURITY	PHYSICAL SECURITY
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KOFFEL ASSOCIATES
PROFESSIONAL ENGINEER

STATE OF MARYLAND
MICHAEL DRAPER, P.E.
PROFESSIONAL ENGINEER
No. 40485
9/3/2022

Office of
Construction
and Facilities
Management
VA U.S. Department
of Veterans Affairs

Drawing Title
FIRE SUPPRESSION DETAILS

Approved: Project Director

Phase
100% BID SET

FULLY SPRINKLERED

Project Title
INSTALL NEW BOILERS IN
BUILDING 13

Location ROBERT J. DOLE VA MEDICAL CENTER
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