

University of South Carolina – Columbia, SC Campus
707 Catawba St -Fire Protection Upgrades
Proj No. H27-Z409 50003813-3
Addendum #2

ADDENDUM NUMBER 2

PARTICULARS

1.01 DATE: Mar 12, 2001

1.02 PROJECT: Fire Protection Upgrades – 707 Catawba St Student Center
Fire Sprinkler Retrofit in Existing Building

1.03 PROJECT NUMBER: H24-9577-AC

1.04 OWNER: Univ of South Carolina

1.05 A/E: MILES ENGINEERING ASSOCIATES, LLC

TO: ALL BID DOCUMENT HOLDERS OF RECORD

2.01 THIS ADDENDUM FORMS A PART OF THE CONTRACT DOCUMENTS AND MODIFIES THE BIDDING DOCUMENTS DATED 15 FEB WITH AMENDMENTS AND ADDITIONS NOTED BELOW.

2.02 ACKNOWLEDGE RECEIPT OF THIS ADDENDUM IN THE SPACE PROVIDED IN THE BID FORM. FAILURE TO DO SO MAY DISQUALIFY THE BIDDER.

2.03 THIS ADDENDUM CONSISTS OF 4 PAGES AND FIVE REVISED DRAWING PAGE ATTACHMENTS, AND REVISED SE 310.

CHANGES TO THE PROJECT MANUAL

(Italics represent actual excerpts of the project manual. Strikethroughs represent deletions. Underlining represents an addition)

3.01 SE and OSE Documents

A. SE-310– See the attached SE 310 Revised 03-12-2021. Bid opening changed to 03 25 2021 at 2:00 PM

B. SE-330– See the attached revised SE 330 Revised 03 15 2021.

University of South Carolina – Columbia, SC Campus
707 Catawba St -Fire Protection Upgrades
Proj No. H27-Z409 50003813-3
Addendum #2

3.02 DRAWINGS

<u>Addendum Sheet #</u>	<u>Original Drawing #</u>	<u>Description of Revisions</u>
ADFS-0.2	FS-0.2	See tagged dwg revisions
ADFS-1.0	FS-1.0	See tagged dwg revisions
ADFS-1.1	FS-1.1	See tagged dwg revisions
ADFS-2.0	FS-2.0	See tagged dwg revisions
ADFS-2.1	FS-2.1	See tagged dwg revisions

QUESTIONS AND ANSWERS

***Q1.** Is it acceptable to use detecto-wire in lieu of heat detectors inside the storage vaults?*

A1. Yes, that is the contractors option. All parts of the detection system must be installed in full compliance with NFPA 72, NFPA 70, UL listing conditions, and manufacturers recommendations.

***Q2.** For the two factory-built film storage vaults, is it acceptable to route the dry piping above the ceiling/roof of these vaults, and use special dry-type pendant sprinkler heads in the vault, each sprinkler head supplied by a separate drop through the ceiling?*

A2. Yes, this is acceptable if each drop penetration through the vault ceiling/roof annular space is sealed in accordance with the vault manufacturer's recommendations.

***Q3.** In the 2-story library area, is it acceptable to route all the piping exposed?*

A3. Yes, it is acceptable to run all piping exposed in this area. All such exposed piping in this area, and exposed piping all other areas of the project, must be primed and painted a color in accordance with the paint manufacturer's recommendations, and a color specified by the architect.

***Q4.** In the 2-story library area, is it required to protect the interstitial spaces between the ceilings and the floor/roof decking?*

A4. Yes, these areas contain combustible framing and must be protected as per NFPA 13. See details and notes on Dwg Sheets ADFS-1.0 and ADFS 1.1

***Q5.** In the Phase 1 Work on dwg sheet ADFS-1.0, see the CPE Theatre, Theatre Work Room, Multipurpose Room, SVAD Studio 1, SVAD C/R, Theatre Entry and Art Exhibit, Restrooms and adjacent Corridor areas. In all these areas the roof supports are bar joist girders at 25'*

University of South Carolina – Columbia, SC Campus
707 Catawba St -Fire Protection Upgrades
Proj No. H27-Z409 50003813-3
Addendum #2

OC, and 8" Z-purlins at 5' OC. Is it acceptable to hang sprinkler piping from the Z-purlins?

A5. No, the roof Z-purlins are incapable of supporting any fire sprinkler system loads whatsoever. It is expected that the main lines in these areas will be routed adjacent to the north and south CMU walls of this area, where the mains may be supported with brackets attached to these CMU walls, as well as the bar joist girders that are 25' OC. The branch lines in the CPE Theatre area may be supported by intermediate trapeze-type members that span the 25' between the bar joist girders, as well as the bar joist girders themselves. Sprinkler contractor must coordinate with the general contractor to identify the location and loading of these trapeze-type members, to determine the necessary panel point modifications to the bar joist girders. General contractor will provide modifications (panel points) as necessary to the existing bar joist girders, and sprinkler contractor will provide and install the trapeze-type members. It is expected that:

- * the trapeze members that span the 25' from girder to girder will be will be 3" dia sched 40 steel pipe
- *there will be 9 total such trapeze hangers required in the CPE Theatre area, 3 in each bay
- * all piping and heads in the CPE Theatre area must be above the bottom chord of the existing bar joist girders
- * there will be 6 total such trapeze hangers required in the Theatre Work Room, Multipurpose Room, SVAD Studio 1, SVAD C/R, Theatre Entry and Art Exhibit, Restrooms and adjacent Corridor areas, 3 in each bay.
- * all this must be coordinated with the GC very early on

Q6. *Is a hose station required at the CPE Theatre?*

A6. Yes, a 1-1/2" hose connection is required, supplied from the overhead sprinkler system, with no piping supplying the hose station (including the drop) to be less than 1-1/2". Provide hose cabinet with 100' of 1-1/2" hose and adjustable fog nozzle at the location shown on Dwg Sheet ADFS-1.0.

Q7. *Is it acceptable to place the 3 preaction dry systems valves and trim at the point where the bulk main enters 707 Catawba from 350 Wayne?*

A7. Yes. The 3 preaction dry systems valves and trim may be placed in the corridor between the film storage vault and the SVAD STUDIO 15 on the system side of the building entrance control valve on a dropdown loop shown on Dwg Sheet ADFS-1.0. But for purposes of bidding, these 3 preaction dry systems valves and trim are still to be considered phase 2 work.

Q8. **What is the location of the dry preaction system control panels?** It is expected that the dry system control panels will be adjacent to the film storage vault entrances on the adjacent CMU walls.

University of South Carolina – Columbia, SC Campus
707 Catawba St -Fire Protection Upgrades
Proj No. H27-Z409 50003813-3
Addendum #2

ATTACHMENTS

DWGS: ADFS-0.2, ADFS-1.0, ADFS-1.1, ADFS-2.0, ADFS-2.1
Reflected ceiling diagram A7.1 is attached for information only

SE and OSE Revised Documents: SE 310 and SE 330

END OF ADDENDUM NUMBER TWO

SE-310 Revised 3-12-2021

INVITATION FOR DESIGN-BID-BUILD CONSTRUCTION SERVICES

AGENCY: University of South Carolina

PROJECT NAME: FIRE SPRINKLERS – 707 CATAWBA

PROJECT NUMBER: H27-Z409 50003381-3 CONSTRUCTION COST RANGE: \$185,000 to \$205,000 N/A

PROJECT LOCATION: 707 Catawba Street, Columbia, South Carolina 29201

DESCRIPTION OF PROJECT/SERVICES: Sprinkler installation at existing office/warehouse building on campus. The Work is required to be constructed in phases as per the plans and specifications. Small & Minority Business participation highly encouraged.

BID/SUBMITTAL DUE DATE: 3/25/2021 TIME: 2:00pm NUMBER OF COPIES: 1

PROJECT DELIVERY METHOD: Design-Bid-Build

AGENCY PROJECT COORDINATOR: Hatice Hikmet

EMAIL: hikmeth@mailbox.sc.edu TELEPHONE: 803-777-9994

DOCUMENTS MAY BE OBTAINED FROM: http://purchasing.sc.edu (see Facilities Construction Solicitations & Awards)

BID SECURITY IS REQUIRED IN AN AMOUNT NOT LESS THAN 5% OF THE BASE BID.

PERFORMANCE AND LABOR & MATERIAL PAYMENT BONDS: The successful Contactor will be required to provide Performance and Labor and Material Payment Bonds, each in the amount of 100% of the Contract Price.

DOCUMENT DEPOSIT AMOUNT: \$ N/A IS DEPOSIT REFUNDABLE Yes No N/A

Bidders must obtain Bidding Documents/Plans from the above listed source(s) to be listed as an official plan holder. Bidders that rely on copies obtained from any other source do so at their own risk. All written communications with official plan holders & bidders will be via email or website posting.

Agency **WILL NOT** accept Bids sent via email.

All questions & correspondence concerning this Invitation shall be addressed to the A/E.

A/E NAME: Miles Engineering Associates, LLC

A/E CONTACT: John Miles, PE

EMAIL: jmiles@milesengr.com TELEPHONE: 803-786-2596

PRE-BID CONFERENCE: Yes No MANDATORY ATTENDANCE: Yes No

PRE-BID DATE: 3/3/2021 TIME: 11:00am

PRE-BID PLACE: Conference Call (800) 753-1965 / Access Code 777-7162. Site visit 03-04-2021 from 9am to 10am at 707 Catawba. Use of attendee provided face mask is mandatory. Six-foot social distancing rules fully apply.

BID OPENING PLACE: Conference Call (800) 753-1965 / Access Code 777- 7162

BID DELIVERY ADDRESSES:

HAND-DELIVERY:

Attn: Hatice Hikmet (bid enclosed H27-Z409 50003381-3)
1600 Hampton Street, Suite 606
Columbia, South Carolina 29208

MAIL SERVICE:

Attn: Hatice Hikmet (bid enclosed H27-Z409 50003381-3)
1600 Hampton Street, Suite 606
Columbia, South Carolina 29208

IS PROJECT WITHIN AGENCY CONSTRUCTION CERTIFICATION? (Agency **MUST** check one) Yes No

APPROVED BY: _____ DATE: _____
 (OSE Project Manager)

SE-330 LUMP SUM BID FORM

Bidders shall submit bids on only Bid Form SE-330.

BID SUBMITTED BY:

(Bidder's Name)

BID SUBMITTED TO: University of South Carolina

(Agency's Name)

FOR: PROJECT NAME: FIRE SPRINKLERS

PROJECT NUMBER: H27-Z409 50003381-3

OFFER

- § 1. In response to the Invitation for Construction Services and in compliance with the Instructions to Bidders for the above-named Project, the undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into a Contract with the Agency on the terms included in the Bidding Documents, and to perform all Work as specified or indicated in the Bidding Documents, for the prices and within the time frames indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.
- § 2. Pursuant to SC Code § 11-35-3030(1), Bidder has submitted Bid Security as follows in the amount and form required by the Bidding Documents:
- Bid Bond with Power of Attorney Electronic Bid Bond Cashier's Check
- (Bidder check one)
- § 3. Bidder acknowledges the receipt of the following Addenda to the Bidding Documents and has incorporated the effects of said Addenda into this Bid:
- (Bidder, check all that apply. Note, there may be more boxes than actual addenda. Do not check boxes that do not apply)
- ADDENDA:** #1 #2 #3 #4 #5
- § 4. Bidder accepts all terms and conditions of the Invitation for Bids, including, without limitation, those dealing with the disposition of Bid Security. Bidder agrees that this Bid, including all Bid Alternates, if any, may not be revoked or withdrawn after the opening of bids, and shall remain open for acceptance for a period of **60** Days following the Bid Date, or for such longer period of time that Bidder may agree to in writing upon request of the Agency.
- § 5. Bidder herewith offers to provide all labor, materials, equipment, tools of trades and labor, accessories, appliances, warranties and guarantees, and to pay all royalties, fees, permits, licenses and applicable taxes necessary to complete the following items of construction work:

SE-330
LUMP SUM BID FORM

Bidders shall submit bids on only Bid Form SE-330.

§ 6.1 **BASE BID WORK** (as indicated in the Bidding Documents and generally described as follows): Sprinkler installation at existing office/warehousebuilding on campus. The work is required to be constructed in phases as per the plans and specifications. Project to be bid in 2 phases.

\$ _____, which sum is hereafter called the Base Bid.

(Bidder to insert Base Bid Amount on line above)

SE-330
LUMP SUM BID FORM

Bidders shall submit bids on only Bid Form SE-330.

§ 6.2 BID ALTERNATES as indicated in the Bidding Documents and generally described as follows:

ALTERNATE # 1 (Brief Description): Phase 1 - See ADFS-1.0

ADD TO or DEDUCT FROM BASE BID: \$ _____

(Bidder to mark appropriate box to clearly indicate the price adjustment offered for each Alternate)

ALTERNATE # 2 (Brief Description): Phase 2 - See ADFS-1.0 and ADFS-1.1

ADD TO or DEDUCT FROM BASE BID: \$ _____

(Bidder to mark appropriate box to clearly indicate the price adjustment offered for each Alternate)

ALTERNATE # 3 (Brief Description): NA

ADD TO or DEDUCT FROM BASE BID: \$ _____

(Bidder to mark appropriate box to clearly indicate the price adjustment offered for each Alternate)

§ 6.3 UNIT PRICES:

BIDDER offers for the Agency’s consideration and use, the following UNIT PRICES. The UNIT PRICES offered by BIDDER indicate the amount to be added to or deducted from the CONTRACT SUM for each item-unit combination. UNIT PRICES include all costs to the Agency, including those for materials, labor, equipment, tools of trades and labor, fees, taxes, insurance, bonding, overhead, profit, etc. The Agency reserves the right to include or not to include any of the following UNIT PRICES in the Contract and to negotiate the UNIT PRICES with BIDDER prior to including in the Contract.

<u>No.</u>	<u>ITEM</u>	<u>UNIT OF MEASURE</u>	<u>ADD</u>	<u>DEDUCT</u>
<u>1.</u>	<u>NA</u>	_____	<u>\$</u> _____	<u>\$</u> _____
<u>2.</u>	_____	_____	<u>\$</u> _____	<u>\$</u> _____
<u>3.</u>	_____	_____	<u>\$</u> _____	<u>\$</u> _____
<u>4.</u>	_____	_____	<u>\$</u> _____	<u>\$</u> _____
<u>5.</u>	_____	_____	<u>\$</u> _____	<u>\$</u> _____
<u>6.</u>	_____	_____	<u>\$</u> _____	<u>\$</u> _____

**SE-330
LUMP SUM BID FORM**

§ 7. LISTING OF PROPOSED SUBCONTRACTORS PURSUANT TO SECTION 3020(b)(i), CHAPTER 35, TITLE 11 OF THE SOUTH CAROLINA CODE OF LAWS, AS AMENDED
(See Instructions on the following page BF-2A)

Bidder shall use the below-listed Subcontractors in the performance of the Subcontractor Classification work listed:

(A) SUBCONTRACTOR LICENSE CLASSIFICATION or SUBCLASSIFICATION NAME <i>(Completed by Agency)</i>	(B) LICENSE CLASSIFICATION or SUBCLASSIFICATION ABBREVIATION <i>(Completed by Agency)</i>	(C) SUBCONTRACTOR and/or PRIME CONTRACTOR <i>(Required - must be completed by Bidder)</i>	(D) SUBCONTRACTOR'S and/or PRIME CONTRACTOR'S SC LICENSE NUMBER <i>(Requested, but not Required)</i>
BASE BID			
ALTERNATE #1			
ALTERNATE #2			
ALTERNATE #3			

If a Bid Alternate is accepted, Subcontractors listed for the Bid Alternate shall be used for the work of both the Alternate and the Base Bid work.

SE-330 LUMP SUM BID FORM

INSTRUCTIONS FOR SUBCONTRACTOR LISTING

1. Section 7 of the Bid Form sets forth an Agency-developed list of subcontractor license classifications or subclassifications for which Bidder is required to identify the entity (subcontractor(s) and/or himself) Bidder will use to perform this work.
 - a. **Columns A & B:** The Agency fills out these columns to identify the subcontractor license classification/subclassification and related license abbreviation for which the Bidder must list either a subcontractor or himself as the entity that will perform this work. In Column A, the subcontractor license classification/subclassification is identified by name and in Column B, the related contractor license abbreviation (per Title 40 of the SC Code of Laws) is listed. Abbreviations of licenses can be found at: <https://lcr.sc.gov/clb/PDFFiles/CLBClassificationAbbreviations.pdf>. If the Agency has not identified a subcontractor license classification/subclassification, the Bidder does not list a subcontractor.
 - b. **Columns C and D:** In these columns, the Bidder identifies the subcontractors it will use for the work of each license listed by the Agency in Columns A & B. Bidder must identify only the subcontractor(s) who will perform the work and no others. Bidders must make sure that their identification of each subcontractor is clear and unambiguous. A listing that could be any number of different entities may be cause for rejection of the bid as non-responsive. For example, a listing of M&M without additional information may be problematic if there are multiple different licensed contractors in South Carolina whose names start with M&M.
2. **Subcontractor Defined:** For purposes of subcontractor listing, a subcontractor is an entity who will perform work or render service to the prime contractor to or about the construction site pursuant to a contract with the prime contractor. Bidder should not identify sub-subcontractors in the spaces provided on the bid form but only those entities with which Bidder will contract directly. Likewise, do not identify material suppliers, manufacturers, and fabricators that will not perform physical work at the site of the project but will only supply materials or equipment to the Bidder or proposed subcontractor(s).
3. **Subcontractor Qualifications:** Bidder must only list subcontractors who possess a South Carolina contractor's license that includes the license classification and/or subclassification identified by the Agency in Columns A & B. The subcontractor license must also be within the appropriate license group for the work. If Bidder lists a subcontractor who is not qualified to perform the work, the Bidder will be rejected as non-responsive.
4. **Use of Own forces:** If, under the terms of the Bidding Documents and SC Contractor Licensing laws, Bidder is qualified to perform the work of a listed subcontractor classification or subclassification and Bidder does not intend to subcontract such work but to use Bidder's own employees to perform such work, the Bidder must insert itself in the space provided.
5. **Use of Multiple Subcontractors:**
 - a. If Bidder intends to use multiple subcontractors to perform the work of a single license classification/subclassification, Bidder must insert the name of each subcontractor Bidder will use, preferably separating the name of each by the word "and". If Bidder intends to use both his own employees to perform a part of the work of a single license classification/subclassification and to use one or more subcontractors to perform the remaining work, Bidder must insert itself and each subcontractor, preferably separating them with the word "and". Bidder must use each entity listed for the work of a single license classification/subclassification in the performance of that work.
 - b. **Optional Listing Prohibited:** Bidder may not list multiple subcontractors for a license classification/subclassification in a form that provides the Bidder the option, after bid opening or award, to choose one or more but not all the listed subcontractors to perform the work for which they are listed. A listing, which on its face requires subsequent explanation to determine whether it is an optional listing, is non-responsive. If Bidder intends to use multiple entities to perform the work for a single listing, Bidder must clearly set forth on the bid form such intent. Bidder may accomplish this by simply inserting the word "and" between the names of each entity listed. Agency will reject as non-responsive a listing that contains the names of multiple subcontractors separated by a blank space, the word "or", a virgule (that is a /), or any separator that the Agency may reasonably interpret as an optional listing.
6. If Bidder is awarded the contract, Bidder must, except with the approval of the Agency for good cause shown, use the listed entities to perform the work for which they are listed.
7. If Bidder is awarded the contract, Bidder will not be allowed to substitute another entity as subcontractor in place of a subcontractor listed in Section 7 of the Bid except for one or more of the reasons allowed by the SC Code of Laws.
8. Bidder's failure to identify an entity (subcontractor or himself) to perform the work of a subcontractor listed in Columns A & B will render the Bid non-responsive.

SE-330 LUMP SUM BID FORM

§ 8. LIST OF MANUFACTURERS, MATERIAL SUPPLIERS, AND SUBCONTRACTORS OTHER THAN SUBCONTRACTORS LISTED IN SECTION 7 ABOVE (*FOR INFORMATION ONLY*):

Pursuant to instructions in the Invitation for Construction Services, if any, Bidder will provide to Agency upon the Agency's request and within 24 hours of such request, a listing of manufacturers, material suppliers, and subcontractors, other than those listed in Section 7 above, that Bidder intends to use on the project. Bidder acknowledges and agrees that this list is provided for purposes of determining responsibility and not pursuant to the subcontractor listing requirements of SC Code § 11-35-3020(b)(i).

§ 9. TIME OF CONTRACT PERFORMANCE AND LIQUIDATED DAMAGES

a) CONTRACT TIME

Bidder agrees that the Date of Commencement of the Work shall be established in a Notice to Proceed to be issued by the Agency. Bidder agrees to substantially complete the Work within 150 Calendar Days from the Date of Commencement, subject to adjustments as provided in the Contract Documents.

b) LIQUIDATED DAMAGES

Bidder further agrees that from the compensation to be paid, the Agency shall retain as Liquidated Damages the amount of \$ 250.00 for each Calendar Day the actual construction time required to achieve Substantial Completion exceeds the specified or adjusted time for Substantial Completion as provided in the Contract Documents. This amount is intended by the parties as the predetermined measure of compensation for actual damages, not as a penalty for nonperformance.

§ 10. AGREEMENTS

- a) Bidder agrees that this bid is subject to the requirements of the laws of the State of South Carolina.
- b) Bidder agrees that at any time prior to the issuance of the Notice to Proceed for this Project, this Project may be canceled for the convenience of, and without cost to, the State.
- c) Bidder agrees that neither the State of South Carolina nor any of its agencies, employees or agents shall be responsible for any bid preparation costs, or any costs or charges of any type, should all bids be rejected or the Project canceled for any reason prior to the issuance of the Notice to Proceed.

§ 11. ELECTRONIC BID BOND

By signing below, the Principal is affirming that the identified electronic bid bond has been executed and that the Principal and Surety are firmly bound unto the State of South Carolina under the terms and conditions of the AIA Document A310, Bid Bond, included in the Bidding Documents.

ELECTRONIC BID BOND NUMBER: _____

SIGNATURE AND TITLE: _____

**SE-330
LUMP SUM BID FORM**

CONTRACTOR'S CLASSIFICATIONS AND SUBCLASSIFICATIONS WITH LIMITATION

SC Contractor's License Number(s): _____

Classification(s) & Limits: _____

Subclassification(s) & Limits: _____

By signing this Bid, the person signing reaffirms all representation and certification made by both the person signing and the Bidder, including without limitation, those appearing in Article 2 of the SCOSE Version of the AIA Document A701, Instructions to Bidders, is expressly incorporated by reference.

BIDDER'S LEGAL NAME: _____

ADDRESS: _____

TELEPHONE: _____

EMAIL: _____

SIGNATURE: _____ **DATE:** _____

PRINT NAME: _____

TITLE: _____

FIRE PROTECTION LEGEND			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	SPRINKLER MAIN (w/ BRANCHES)		STANDPIPE w/FIRE DEPT. VALVE
	SPRINKLER BRANCH (w/ SPRINKLER)		PUMP TEST HEADER
	UNDERGROUND FIRE MAIN		WATER MOTOR GONG / ELECTRIC BELL
	FIRE EXTINGUISHER		FIRE HOSE RACK
	FIRE HOSE CABINET		SIDEWALL SPRINKLER
	RISER DOWN (ELBOW)		UPRIGHT SPRINKLER
	RISER UP (ELBOW)		PENDANT SPRINKLER
	RISER OR DROP		WET SYSTEM RISER
	DRY SYSTEM RISER		DELUGE VALVE RISER
	POST INDICATOR VALVE		PREACTION VALVE RISER
	VALVE IN ROADWAY BOX		CONCENTRIC REDUCER
	REDUCED PRESSURE ZONE BFP		ECCENTRIC REDUCER
	DOUBLE CHECK VALVE BFP		CAP ON END OF PIPE
	VALVE IN RISE		PLUGGED TEE
	ANGLE VALVE		PIPE HANGER
	CHECK VALVE		ALARM VALVE RISER SYMBOL RISER NUMBER = 'X'
	SHUT-OFF VALVE - DISK		HYDRAULIC NOTE POINT
	SHUT-OFF VALVE - BUTTERFLY		
	PRESSURE REDUCING VALVE		
	SHUT-OFF VALVE - PIV		
	UNION		
	FLOW SWITCH		
	PRESSURE GAUGE WITH GAUGE COCK		
	2-WAY WALL STEMMED CONN.		
	2-WAY POST STEMMED CONN.		

NOTE: THIS IS A STANDARD LEGEND. ALL ITEMS SHOWN ABOVE MAY NOT APPEAR ON DRAWINGS.

FIRE PROTECTION ABBREVIATIONS			
ABBREVIATION/DEFINITION	ABBREVIATION/DEFINITION	ABBREVIATION/DEFINITION	ABBREVIATION/DEFINITION
A/C	ABOVE CEILING	FS	FLOW SWITCH
AF	ABOVE FINISHED FLOOR	FLR	FLOOR
AFG	ABOVE FINISHED GRADE	FHC	FIRE HOSE CABINET
B/F	BELOW FLOOR	FHR	FIRE HOSE RACK
BFP	BACKFLOW PREVENTER	FCA	FLOOR CONTROL ASSEMBLY
BLDG	BUILDING	IE	INVERT ELEVATION
BDP	BOTTOM OF PIPE	LDC	LOCATION
CI	CAST IRON	MIN	MINIMUM
CL	CENTER LINE	NIC	NOT IN CONTRACT
CONT	CONTINUATION	PS	LOW AIR PRESSURE SWITCH
CONTR	CONTRACTOR	RPZ-BFP	REDUCED PRESSURE ZONE BFP
DR	DRAIN	SPR	SPRINKLER
DN	DOWN	SP/FV	STAND PIPE / FIRE DEPT. VALVE
DCV-BFP	DOUBLE CHECK VALVE BFP	TS	TAMPER SWITCH
DWGS	DRAWINGS	VMG	WATER MOTOR GONG
DI	DUCTILE IRON		
EL	ELEVATION		

NOTE: THESE ARE STANDARD ABBREVIATIONS. ALL ABBREVIATIONS SHOWN ABOVE MAY NOT APPEAR ON DRAWINGS.

A. SCOPE

- 1) THE AREA OF WORK SHALL BE FULLY SPRINKLED IN ACCORDANCE WITH NFPA 13 2016. THE ENTIRE FIRE PROTECTION SYSTEM SHALL MEET, AS A MINIMUM, ALL FEDERAL, STATE, AND LOCAL CODES AND ORDINANCES, AND MUST BE APPROVED BY THE LOCAL AND STATE FIRE MARSHAL. DESIGN CRITERIA LISTED ON FSSES AND WITHIN THESE DWGS IS THE MINIMUM CRITERIA ACCEPTABLE.
- 2) REFER TO THE FIRE PROTECTION SPECIFICATIONS FOR ADDITIONAL INFORMATION REGARDING THE FIRE PROTECTION SYSTEM. DRAWINGS AND SPECIFICATIONS ARE COMPLIMENTARY; WORK CALLED FOR IN EITHER THE DRAWINGS OR SPECIFICATIONS SHALL BE TREATED AS IF CALLED FOR BY BOTH. WORK SPECIFIED IN THESE DRAWINGS AND SPECIFICATIONS MAY EXCEED THE MINIMUM REQUIREMENTS OF LISTED CODES AND STANDARDS.
- 3) IT IS THE RESPONSIBILITY OF THE FIRE SPRINKLER CONTRACTOR TO INSTALL ALL FIRE SPRINKLER PIPING AND EQUIPMENT, AS REQUIRED.
- 4) SIZING AND LOCATION OF ALL PIPES AND ALL SPRINKLER ACCESSORIES SHALL BE THE RESPONSIBILITY OF THE SPRINKLER CONTRACTOR. ANY PIPING SHOWN ON THE FS DRAWINGS IS SCHEMATIC IN NATURE AND SHOULD NOT BE USED TO DETERMINE CUT LENGTHS OR FINAL LOCATIONS. FS DRAWINGS DO NOT SHOW PIPE ROUTING OFFSETS, RISERS, OR DROPS NECESSARY TO AVOID OBSTRUCTIONS.
- 5) THE SPRINKLER SYSTEM WITHIN THE BUILDING MUST BE MONITORED BY THE FIRE ALARM PANEL. ALL TAMPER SWITCHES, WATERFLOW INDICATORS, ALARM PRESSURE SWITCHES, AND OUTSIDE ALARM BELL SHALL BE INSTALLED BY THE SPRINKLER CONTRACTOR. WIRING TO THE ALARM SYSTEM SHALL BE BY THE FIRE ALARMS SYSTEMS CONTRACTOR.
- 6) SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE LOCATION OF SPRINKLER PIPING WITH ALL EQUIPMENT, APPLIANCES, DEVICES, AND STRUCTURES. CONTRACTOR IS RESPONSIBLE FOR BEING AWARE OF THE LOCATION OF HVAC DUCTS, DIFFUSERS, ELECTRICAL LIGHTING, PANELS, AND CEILING HEIGHTS. PENETRATION OR CUTTING OF STRUCTURAL MATERIALS IS NOT ALLOWED.
- 7) CONTRACTOR SHALL IMMEDIATELY CONTACT THE FP ENGINEER IF DISCREPANCIES ARE FOUND IN THE FS DRAWINGS OR SPECIFICATIONS. CONTRACTOR SHALL CONTACT THE FP ENGINEER IMMEDIATELY IF DISCREPANCIES ARE FOUND BETWEEN THE CONTRACT DOCUMENTS AND EXISTING CONDITIONS, OR BETWEEN THE CONTRACT DOCUMENTS AND REQUIREMENTS OF SPECIFIED CODES OR AUTHORITIES HAVING JURISDICTION. WHERE CONFLICTS OCCUR BETWEEN THE DRAWINGS, SPECIFICATIONS, OR CODES, THE CONTRACTOR SHALL BY DEFAULT FOLLOW THE MOST RESTRICTIVE REQUIREMENT. DRAWINGS AND SPECIFICATIONS ARE COMPLIMENTARY; WORK CALLED FOR IN EITHER THE DRAWINGS OR SPECIFICATIONS SHALL BE TREATED AS IF CALLED FOR BY BOTH.
- 8) IT IS NOT THE INTENT OF THESE PLANS AND SPECIFICATIONS TO PROVIDE A COMPLETE DETAILED DESCRIPTION OF THE APPARATUS, MATERIALS, EQUIPMENT, ETC. WHICH IS REQUIRED TO MAKE A COMPLETE AND FUNCTIONAL INSTALLATION OF THIS SPECIFIC FIRE PROTECTION SYSTEM. IT SHALL BE THE RESPONSIBILITY OF THE SPRINKLER CONTRACTOR TO PROVIDE ALL REQUIRED MATERIAL AND EQUIPMENT AND PERFORM ALL WORK REQUIRED TO INSTALL A COMPLETE AND APPROVED INSTALLATION.

B. MATERIALS

- 1) FOR WET SYSTEMS PIPING: ALL SPRINKLER PIPING 1/2" DIAMETER AND LESS SHALL BE MINIMUM SCHEDULE 40 BLACK STEEL WITH THREADED FITTINGS. ALL SPRINKLER PIPING GREATER THAN 1/2" DIAMETER SHALL BE MINIMUM SCHEDULE 10 BLACK STEEL.
- 2) ALL DRAIN LINE PIPING MUST BE GALVANIZED STEEL.
- 3) IN A.T. CEILING AREAS, SPRINKLER HEADS SHALL BE QUICK RESPONSE, RECESSED PENDANT AND OF A COLOR AND FINISH SUITABLE TO THE ARCHITECT. ~~IN AT HARD CEILING, SPRINKLER HEADS SHALL BE QUICK RESPONSE, CONCEALED PENDANT AND OF A COLOR AND FINISH SUITABLE TO THE ARCHITECT.~~

C. INSTALLATION

- 1) ALL PENETRATIONS OF RATED ASSEMBLIES SHALL BE FIRE STOPPED WITH AN APPROVED ASSEMBLY AS PRESCRIBED IN THE INTERNATIONAL BUILDING CODE. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF FIRE-RATED ASSEMBLIES.
- 2) ALL INSPECTOR'S TEST CONNECTIONS AND LOW POINT DRAINS SHALL BE PER NFPA 13 (UNLESS OTHERWISE NOTED) AND SHALL BE DISPLAYED ON THE SHOP DRAWINGS. MAIN DRAIN AND TEST PIPING SHALL BE ROUTED TO THE EXTERIOR OF THE BUILDING. PROVIDE CONCRETE SPLASH BLOCKS FOR ALL DRAINS AND TEST CONNECTIONS.
- 3) AUXILIARY DRAINS AND INSPECTOR'S TEST CONNECTIONS SHALL BE LOCATED TIGHT AGAINST THE PERIMETER WALLS.
- 4) SPRINKLER PROTECTION MUST BE PROVIDED IN THE ELECTRICAL EQUIPMENT ROOMS. THE BRANCH LINE SUPPLYING THE SPRINKLERS TO THESE ROOMS ARE THE ONLY SPRINKLER PIPING PERMITTED TO ENTER THESE SPACES FROM FINISHED FLOOR TO THE ROOF DECK. SPRINKLER MAINS, CROSS MAINS, BRANCH LINES SUPPLYING OTHER ROOMS, AUXILIARY DRAINS, AND INSPECTOR'S TEST CONNECTIONS SHALL BE ROUTED AROUND THESE LOCATIONS.
- 5) ~~IN PH 1 WORK, PIPING SHALL BE RUN CONCEALED IN ALL HALLWAY FINISHED CEILING AREAS, UNLESS NOTED OTHERWISE ON THESE DRAWINGS. SPRINKLER SUBCONTRACTOR IS RESPONSIBLE FOR PAINTING OF EXPOSED PIPING IN ALL AREAS, INCLUDING MECHANICAL ROOMS AND STORAGE ROOM AREAS. PIPING MUST BE PREPARED, PRIMED, AND PAINTED A COLOR ACCEPTABLE TO THE ARCHITECT, IN ACCORDANCE WITH THE PAINT MANUFACTURER'S RECOMMENDATIONS. IN AREAS WHERE THE EXPOSED STRUCTURE IS PAINTED, THE SPRINKLER PIPING SHALL BE PAINTED TO MATCH THE STRUCTURE.~~
- 6) FOR AREAS WITH LAY-IN CEILING TILES, ALL HEADS SHALL BE PLACED IN THE CENTER OF THE TILE. PROTECT CEILING MEMBRANE WITH TRIM RING, OR FLEX CONNECTIONS, AS PER SEISMIC REQUIREMENTS.
- 7) PROVIDE FREEZE-PROTECTION FOR WET PIPING IN ALL AREAS SUBJECT TO TEMPERATURES LESS THAN 40 DEGREES F.

D. HANGERS AND BRACING

- 1) WHERE REQUIRED BY THE BUILDING CODE, BUILDING OFFICIAL, OR OTHER AUTHORITIES HAVING JURISDICTION, PROVIDE RIGID SEISMIC BRACING IN CONFORMANCE WITH NFPA 13, THE IBC, PROJECT SPECIFICATIONS, AND THE DETAILS ON THESE FS SHEETS.
- 2) CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND INSTALLING ALL NECESSARY BRACING MEMBERS, TRAPEZE MEMBERS, AND REINFORCEMENT MEMBERS. ONLY RIGID BRACING IS ALLOWED, CABLE BRACING IS NOT PERMITTED. EXCEPTION: CABLE IS ACCEPTABLE FOR BRANCH LINE END RESTRAINTS.
- 3) SHOW ALL BRACING LOCATIONS AND DETAILS ON THE SHOP DRAWINGS. INCLUDE CALCULATIONS TO VERIFY SIZING OF SWAY BRACING PROVIDED. ALLOWABLE BRACE LOADS SHALL BE BASED ON A 30-44 DEG ANGLE RANGE.

E. ACCEPTANCE TESTING

- 1) CONTRACTOR SHALL THOROUGHLY FLUSH THE SUPPLY MAIN AT MAXIMUM FLOW CAPACITY BEFORE CONNECTING EXISTING SYSTEM SUPPLY TO THE NEW FIRE SPRINKLER SYSTEM RISER. CONNECT FLUSHING APPARATUS TO THE SPRINKLER RISER MANIFOLD BEFORE INSTALLING THE NEW RISER. PROVIDE TEMPORARY PIPING OF DIAMETER AT LEAST AS LARGE AS THE MANIFOLD, TO CARRY THE FLUSHING WATER THROUGH AN OPEN PIPE END TO THE EXTERIOR OF THE BUILDING. FLUSH UNTIL WATER RUNS CLEAR. PROVIDE PHOTOGRAPHS OF THE FLUSHING APPARATUS AND THE ACTUAL FLUSHING FLOW TO THE FP ENGINEER.
- 2) AT THE COMPLETION OF SYSTEMS TESTING, THE SPRINKLER CONTRACTOR SHALL COMPLETE AND PROVIDE TO THE FP ENGINEER A CONTRACTOR'S MATERIAL AND TEST CERTIFICATE PER NFPA 13 FOR ABOVEGROUND SPRINKLER PIPING SYSTEMS.
- 3) THE COMPLETELY ASSEMBLED ABOVEGROUND FIRE SPRINKLER SYSTEM SHALL BE TESTED FOR 2 HOURS AT 200 PSI, AND THERE SHALL BE NO LOSS OF PRESSURE OR VISIBLE LEAKAGE FOR THE DURATION OF THE TEST.

F. PRE-ACTION SYSTEMS

- 1) FIRE SPRINKLER CONTRACTOR IS TO PROVIDE COMPLETE AND SEPARATE DOUBLE INTERLOCK PRE-ACTION SYSTEMS IN THE 3 VAULTS AS SHOWN, INCLUDING ALL COMPONENTS OF THE DELUGE VALVE ELECTRONIC ACTIVATION SYSTEM-INCLUDING INSIDE VAULT SMOKE DETECTORS, ELECTRICAL PANELS, CONDUIT AND WIRING. POWER TO THE PANELS WILL BE PROVIDED BY THE ELECTR CONTRACTOR. CONTACT ALARM DESIGNER FOR POWER SUPPLIES AND INTERFACES WITH THE BLDG FIRE ALARM SYSTEM.
- 2) PROVIDE NITROGEN-BASED CORROSION CONTROL FOR ALL PRE-ACTION DRY SYSTEMS PIPING.
- 3) PROVIDE INTERNALLY AND EXTERNALLY GALVANIZED PIPING AND FITTINGS FOR ALL PRE-ACTION DRY SYSTEMS PIPING.
- 4) PROVIDE SRKLR GUARDS FOR ALL HEADS LESS THAN 7' ABOVE F.F.

G. SPECIAL INSTRUCTIONS

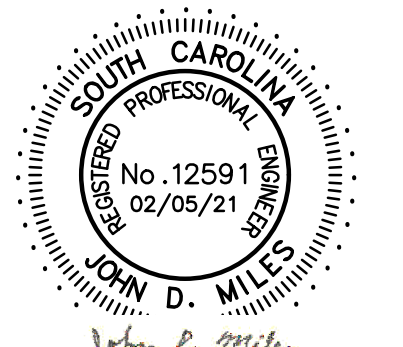
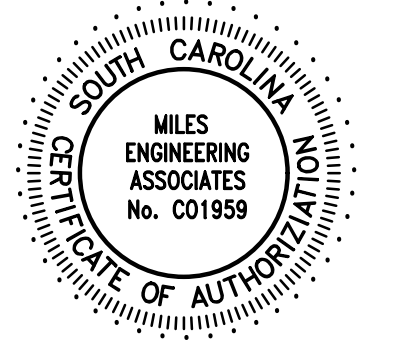
- 1) IN GYPSUM BOARD CEILINGS, SPRINKLERS SHALL BE LOCATED TO AVOID SURFACE MOUNTED LIGHTS AND OTHER OBSTRUCTIONS. TWO-PIECE EXTENDED ESCUTCHEONS ARE NOT ACCEPTABLE.
- 2) AREA OF CLOSETS AND OTHER SMALL ROOMS SHALL BE INCLUDED IN DESIGN CALCULATIONS IF DESIGN AREA LESS THAN 1500 SF IS UTILIZED FOR WET SYSTEMS. SPRINKLER PROTECT ALL BATHROOMS AND CLOSETS.
- 3) ~~IN PH 1 WORK, PIPING TO BE CONCEALED IN ALL HALLWAY FINISHED CEILING AREAS, AND IN THE FRONT MAIN ENTRY DISPLAY AREA USE OF STEEL SUPPORTS IS ACCEPTABLE. EXPOSED PIPING IS ACCEPTABLE IN THE OFFICES AND STORAGE AREAS. USE SIBEVALLS TO AVOID EXPOSED PIPING IN ROOMS WITH DECORATIVE CEILING MOLDING. PRIME AND PAINT ALL EXPOSED PIPING AS PER PROJECT SPECIFICATIONS AND PAINT MANUF INSTRUCTIONS.~~
- 4) FIRE SPRINKLER WORK BEGINS AT THE EXISTING RISER HEADER AT WAYNE ST. SEE DETAIL AT SHT FS 1.0
- 5) PROVIDE HEAD GUARDS FOR ALL SPRKLR LESS THAN 7' ABOVE THE FLOOR.

owner
UNIVERSITY OF SOUTH CAROLINA

project name
707 CATAWBA FIRE PROTECTION UPGRADES

project number
H27-Z409 50003813-3

seals/signature

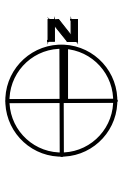


issued for
BID

date
FEB 05, 2021

number	item	date
1	ADDENDUM 2	3/15/2021

key plan



sheet title
FIRE SPRINKLER NOTES

sheet number

ADFS 0.2

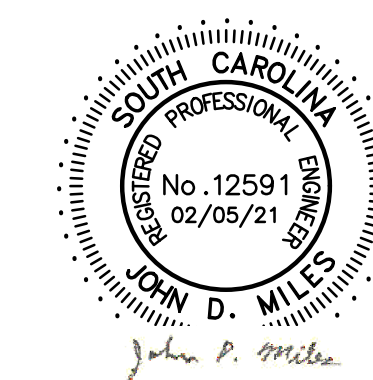
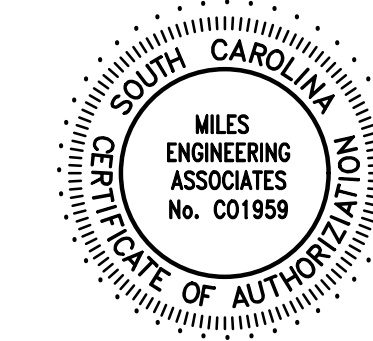
drawn by **JDM**
checked by **JDM**

owner
UNIVERSITY OF SOUTH CAROLINA

project name
707 CATAWBA
FIRE PROTECTION UPGRADES

project number
H27-Z409 50003813-3

seals/signature



issued for
BID
date
FEB 05, 2021

number	item	date
1	ADDENDUM 2	3/15/2021

key plan

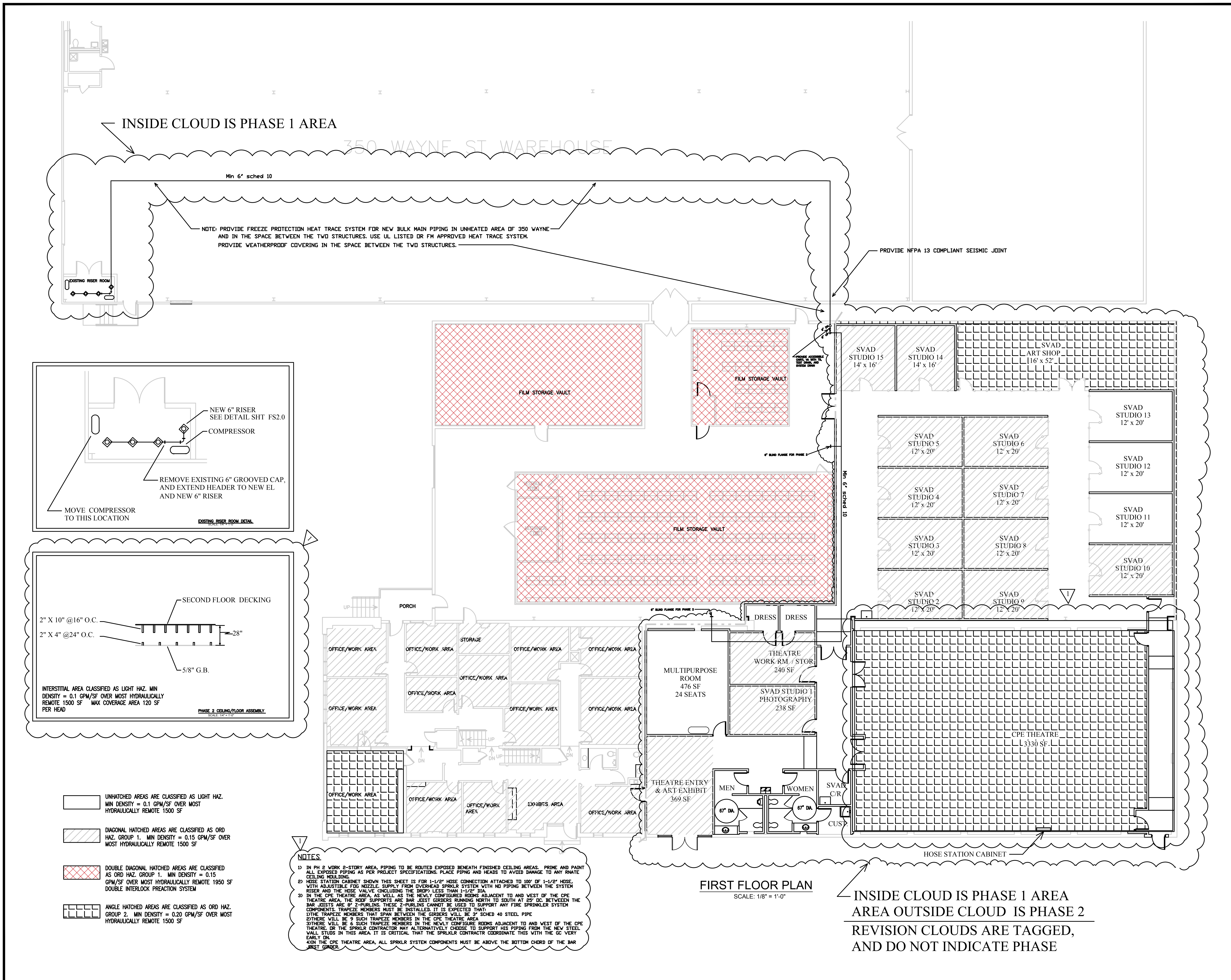


sheet title
FIRE SPRINKLER
FIRST FLOOR PLAN

sheet number

ADFS 1.0

drawn by JDM
checked by JDM



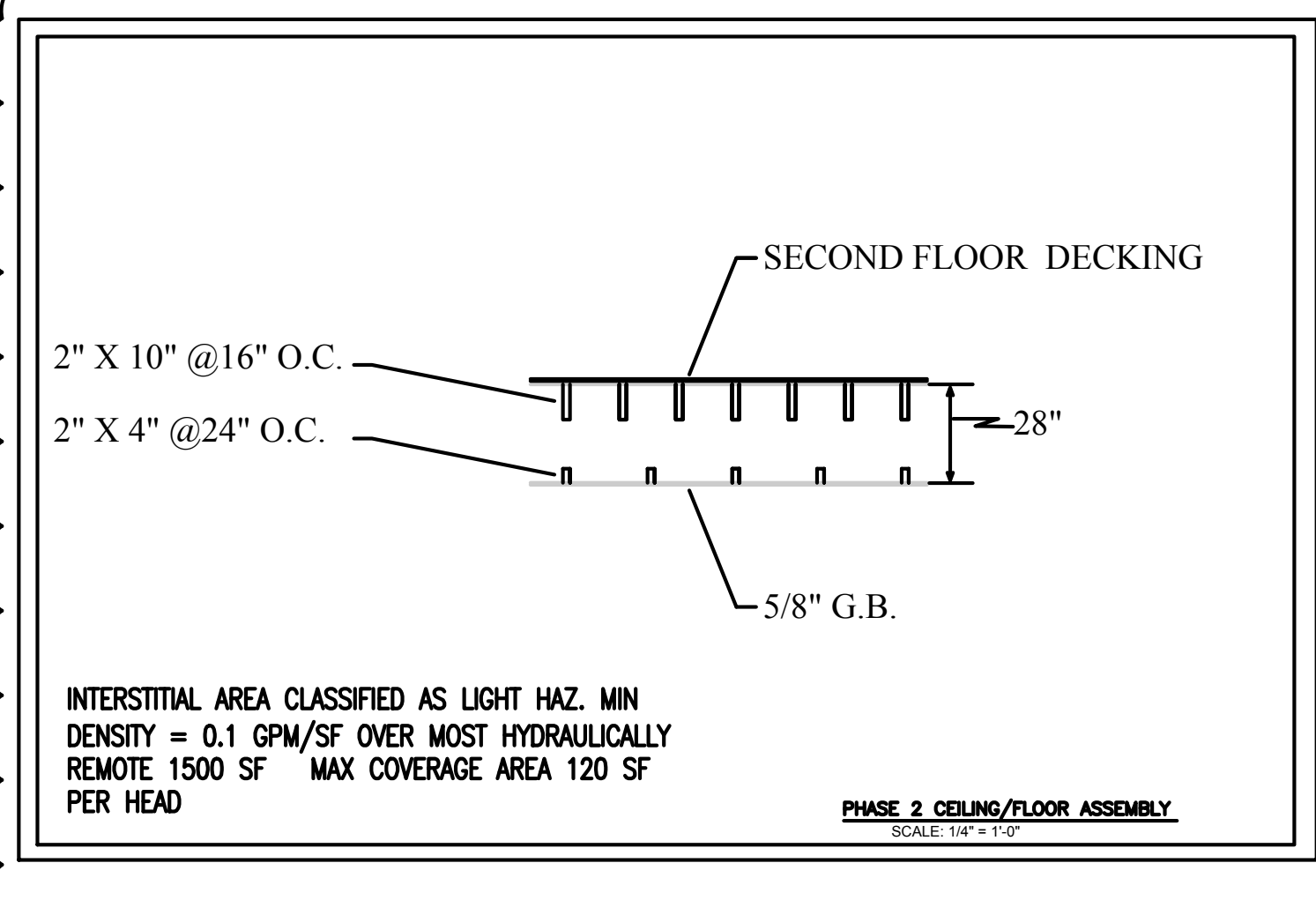
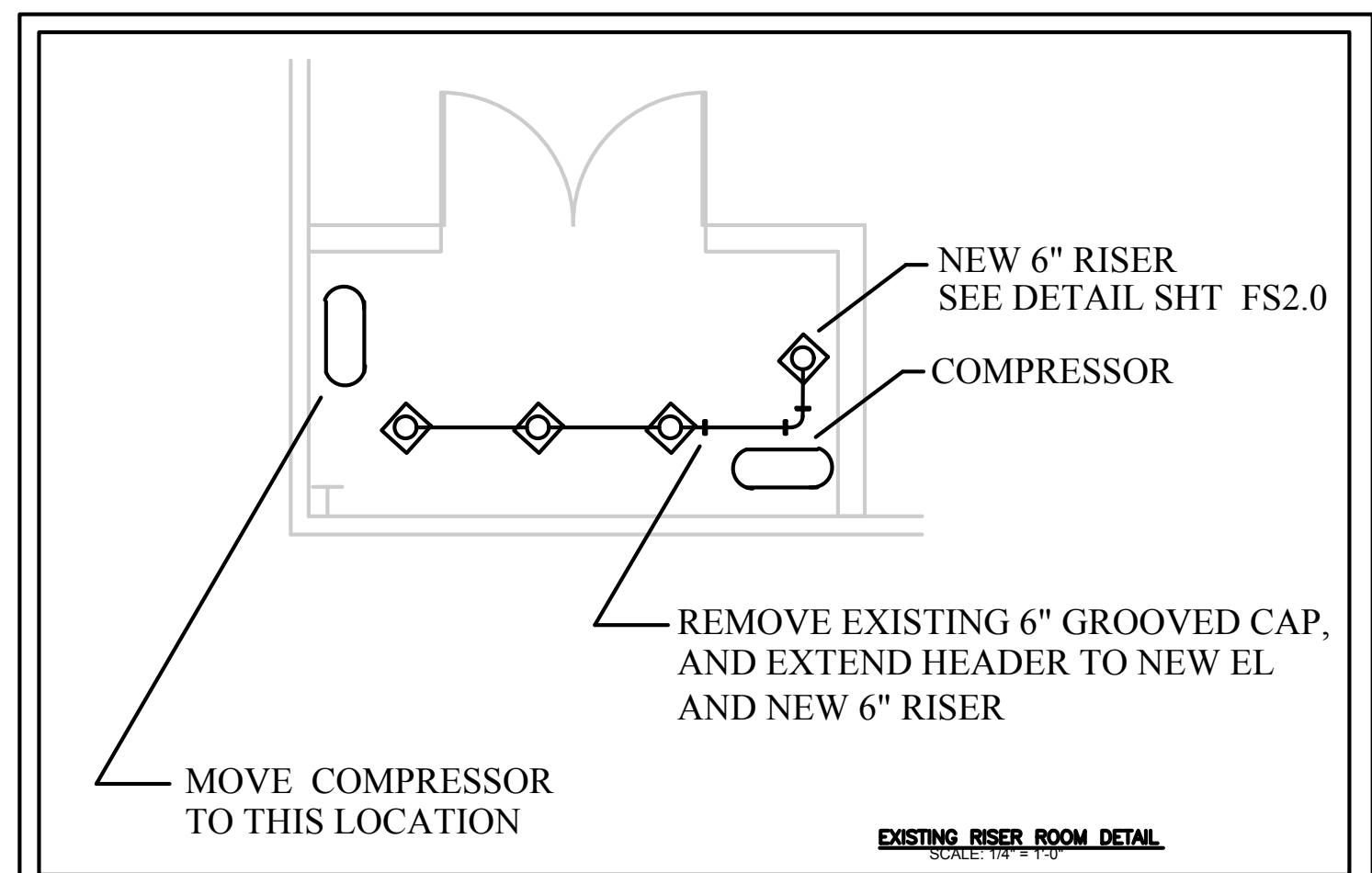
INSIDE CLOUD IS PHASE 1 AREA

350 WAYNE ST WAREHOUSE

Min 6" sched 10

NOTE: PROVIDE FREEZE PROTECTION HEAT TRACE SYSTEM FOR NEW BULK MAIN PIPING IN UNHEATED AREA OF 350 WAYNE AND IN THE SPACE BETWEEN THE TWO STRUCTURES. USE UL LISTED DR FM APPROVED HEAT TRACE SYSTEM. PROVIDE WEATHERPROOF COVERING IN THE SPACE BETWEEN THE TWO STRUCTURES.

PROVIDE NFPA 13 COMPLIANT SEISMIC JOINT



- UNHATCHED AREAS ARE CLASSIFIED AS LIGHT HAZ. MIN DENSITY = 0.1 GPM/SF OVER MOST HYDRAULICALLY REMOTE 1500 SF
- DIAGONAL HATCHED AREAS ARE CLASSIFIED AS ORD HAZ. GROUP 1. MIN DENSITY = 0.15 GPM/SF OVER MOST HYDRAULICALLY REMOTE 1500 SF
- DOUBLE DIAGONAL HATCHED AREAS ARE CLASSIFIED AS ORD HAZ. GROUP 1. MIN DENSITY = 0.15 GPM/SF OVER MOST HYDRAULICALLY REMOTE 1950 SF DOUBLE INTERLOCK PREACTION SYSTEM
- ANGLE HATCHED AREAS ARE CLASSIFIED AS ORD HAZ. GROUP 2. MIN DENSITY = 0.20 GPM/SF OVER MOST HYDRAULICALLY REMOTE 1500 SF

- NOTES
- IN PH 2 WORK 2-STORY AREA, PIPING TO BE ROUTED EXPOSED BENEATH FINISHED CEILING AREAS. PRIME AND PAINT ALL EXPOSED PIPING AS PER PROJECT SPECIFICATIONS. PLACE PIPING AND HEADS TO AVOID DAMAGE TO ANY RIMATE CEILING MOLDING.
 - HOSE STATION CABINET SHOWN THIS SHEET IS FOR 1-1/2" HOSE CONNECTION ATTACHED TO 100' OF 1-1/2" HOSE, WITH ADJUSTIBLE FOG NOZZLE. SUPPLY FROM OVERHEAD SPRINKLR SYSTEM WITH HD PIPING BETWEEN THE SYSTEM RISER AND THE HOSE VALVE (INCLUDING THE DROP), LESS THAN 1-1/2" DIA.
 - IN THE CPE THEATRE AREA, AS WELL AS THE NEWLY CONFIGURED ROOMS ADJACENT TO AND WEST OF THE CPE THEATRE AREA, THE ROOF SUPPORTS ARE BAR JOIST GIRDERS RUNNING NORTH TO SOUTH AT 25' OC BETWEEN THE BAR JOISTS ARE 9" Z-PURLINS. THESE Z-PURLINS CANNOT BE USED TO SUPPORT ANY FIRE SPRINKLER SYSTEM COMPONENTS. TRAPEZE MEMBERS MUST BE INSTALLED. IT IS EXPECTED THAT THE TRAPEZE MEMBERS THAT SPAN BETWEEN THE GIRDERS WILL BE 3" SCHED 40 STEEL PIPE.
 - THERE WILL BE 9 SUCH TRAPEZE MEMBERS IN THE CPE THEATRE AREA.
 - SYTHERE WILL BE 6 SUCH TRAPEZE MEMBERS IN THE NEWLY CONFIGURED ROOMS ADJACENT TO AND WEST OF THE CPE THEATRE. OR THE SPRINKLR CONTRACTOR MAY ALTERNATIVELY CHOOSE TO SUPPORT HIS PIPING FROM THE NEW STEEL WALL STUDS IN THIS AREA. IT IS CRITICAL THAT THE SPRINKLR CONTRACTOR COORDINATE THIS WITH THE GC VERY EARLY. DN.
 - DN THE CPE THEATRE AREA, ALL SPRINKLR SYSTEM COMPONENTS MUST BE ABOVE THE BOTTOM CHORD OF THE BAR JOIST GIRDERS.

FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"

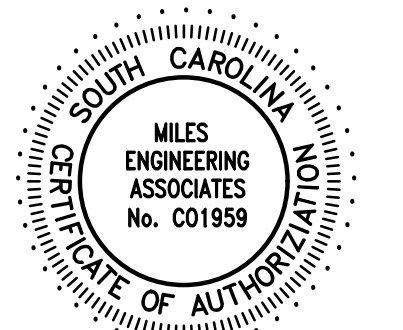
INSIDE CLOUD IS PHASE 1 AREA
AREA OUTSIDE CLOUD IS PHASE 2
REVISION CLOUDS ARE TAGGED,
AND DO NOT INDICATE PHASE

owner
 UNIVERSITY OF SOUTH CAROLINA

project name
 707 CATAWBA
 FIRE PROTECTION UPGRADES

project number
 H27-Z409 50003813-3

seals/signature



issued for
 BID

date
 FEB 05, 2021

number	item	date
1	ADDENDUM 2	3/15/2021

key plan

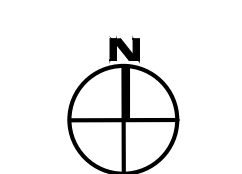


AREA ON THIS DWG IS PHASE 2

- UNHATCHED AREAS ARE CLASSIFIED AS LIGHT HAZ.
MIN DENSITY = 0.1 GPM/SF OVER MOST
HYDRAULICALLY REMOTE 1500 SF
- DIAGONAL HATCHED AREAS ARE CLASSIFIED AS ORD
HAZ. GROUP 1. MIN DENSITY = 0.15 GPM/SF OVER
MOST HYDRAULICALLY REMOTE 1500 SF

SECOND FLOOR PLAN
 SCALE: 1/8" = 1'-0"

NOTE.
 1) IN PH 2 WORK 2-STORY AREA, PIPING TO BE ROUTED EXPOSED BENEATH FINISHED CEILING AREAS. PRIME AND PAINT ALL EXPOSED PIPING AS PER PROJECT SPECIFICATIONS. PLACE PIPING AND HEADS TO AVOID DAMAGE TO ANY RMATE CEILING MOLDING.

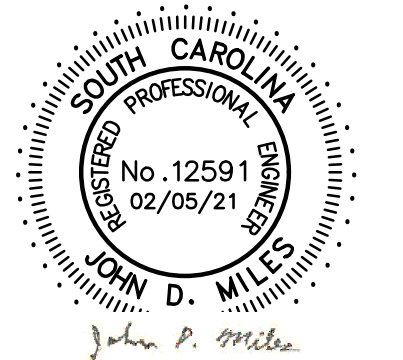
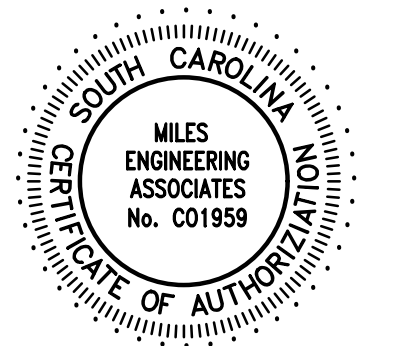


sheet title
 FIRE SPRINKLER
 SECOND FLOOR PLAN

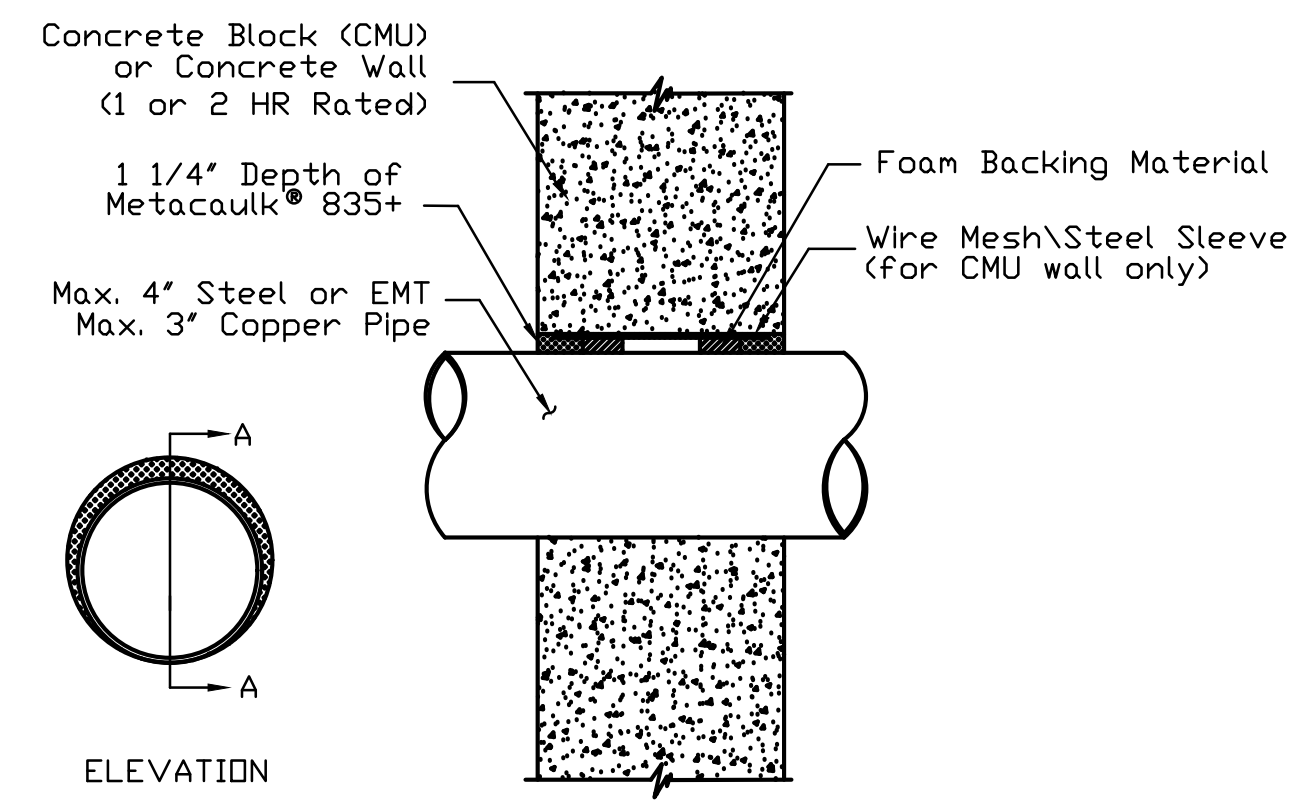
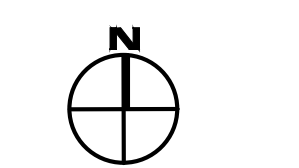
sheet number

ADFS 1.1

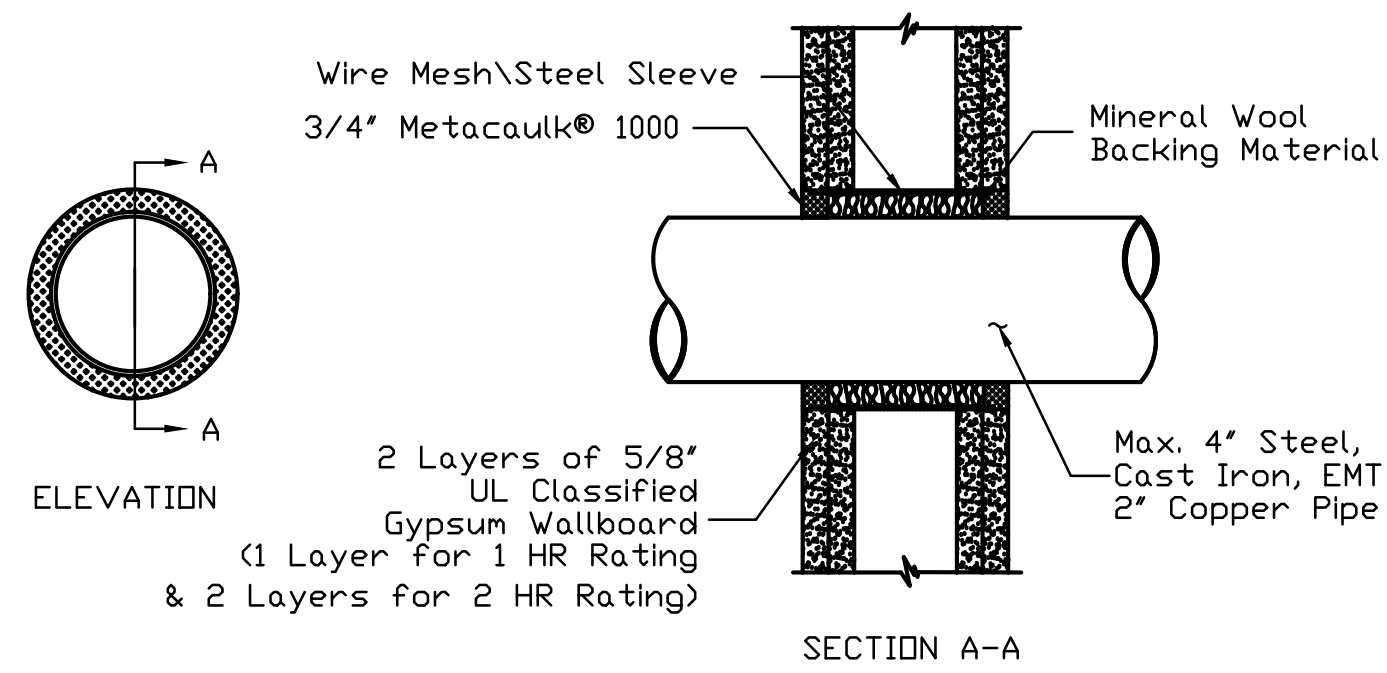
drawn by JDM
 checked by JDM



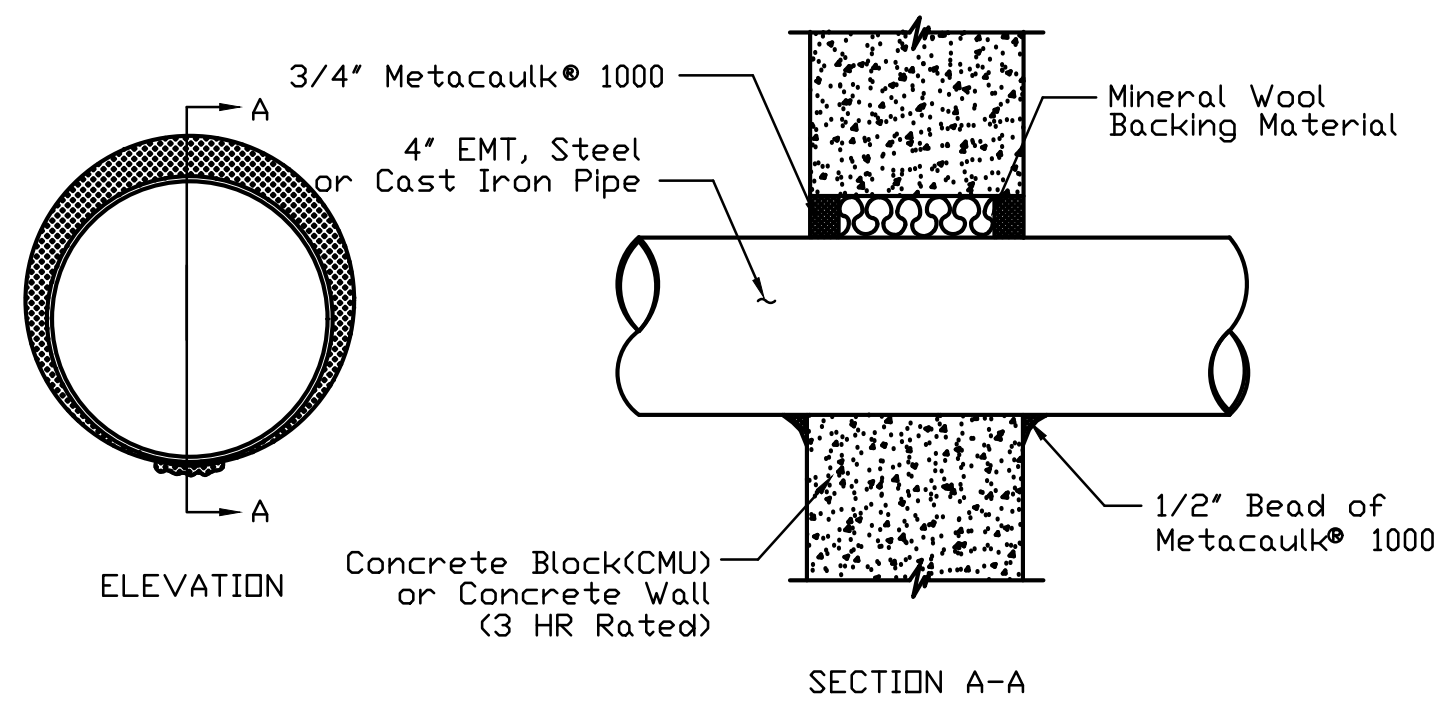
number	item	date
1	ADDENDUM 2	3/15/2021



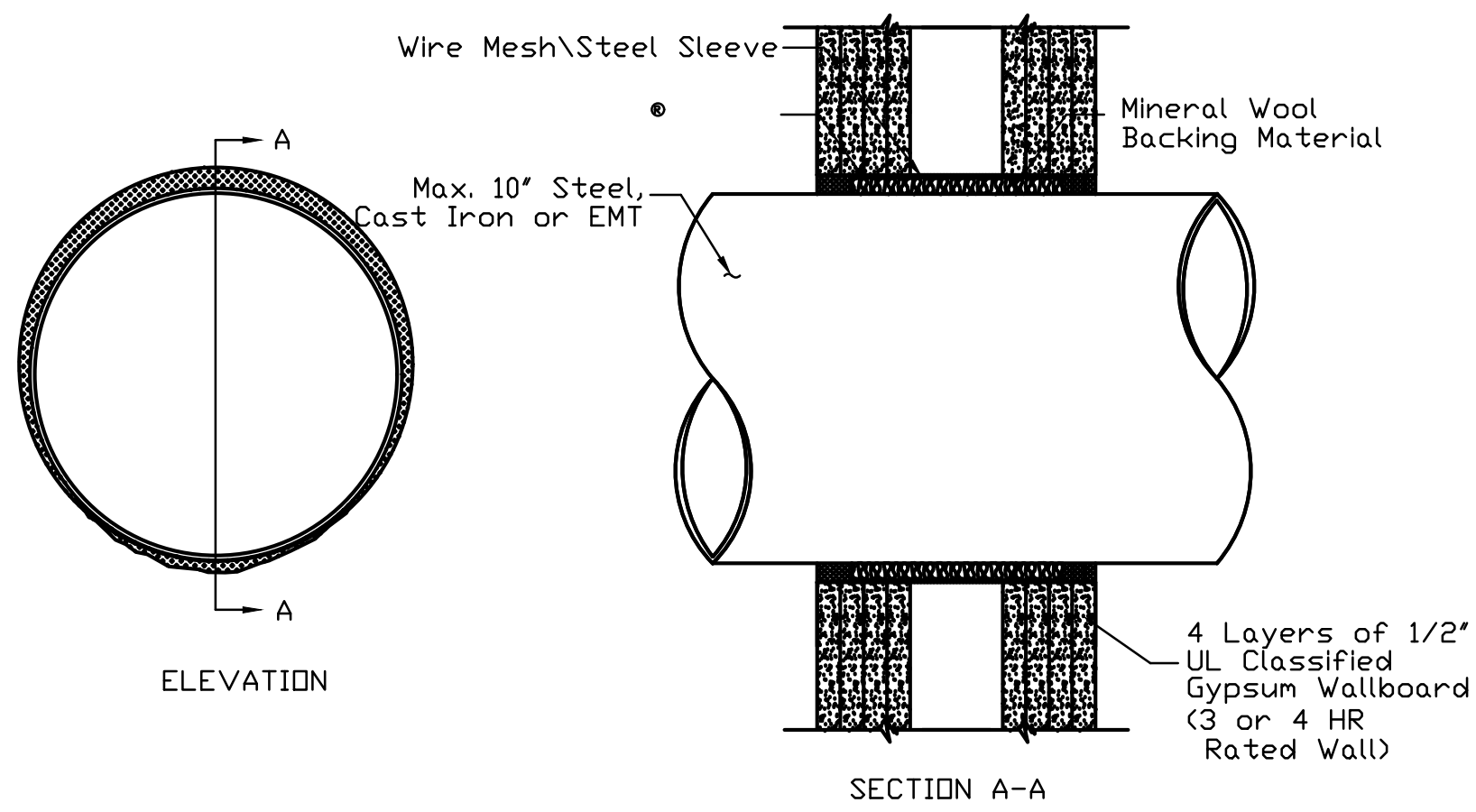
UL FILE NO. CAJ1247



UL FILE NO. WL1099



UL FILE NO. CAJ1296

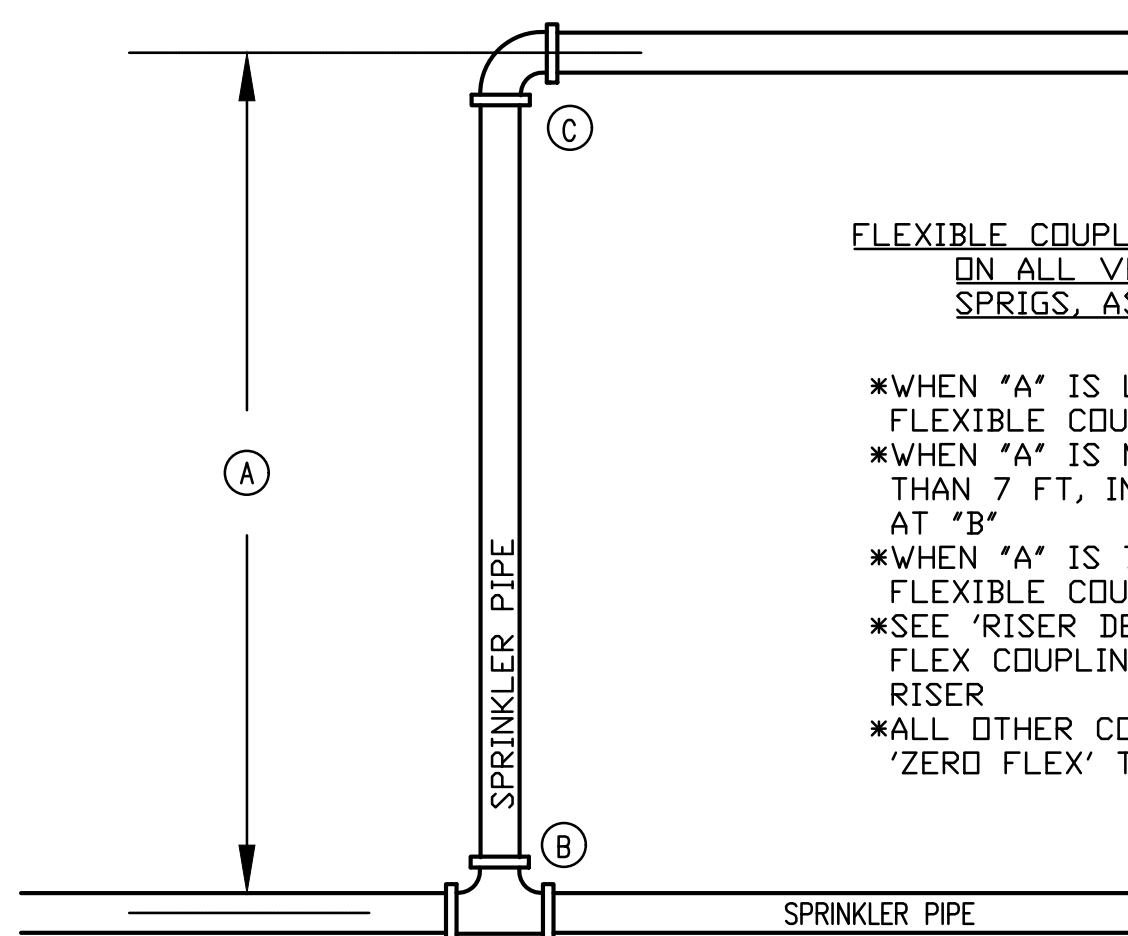


UL FILE NO. WL1159

FIRESTOPPING DETAILS
NOT TO SCALE

Note: Provide flexible fittings within 12" each side of all penetrations of masonry or concrete walls.

SEISMIC BRACING DETAILS
NOT TO SCALE - CONTRACTOR TO CALCULATE PER NFPA 13



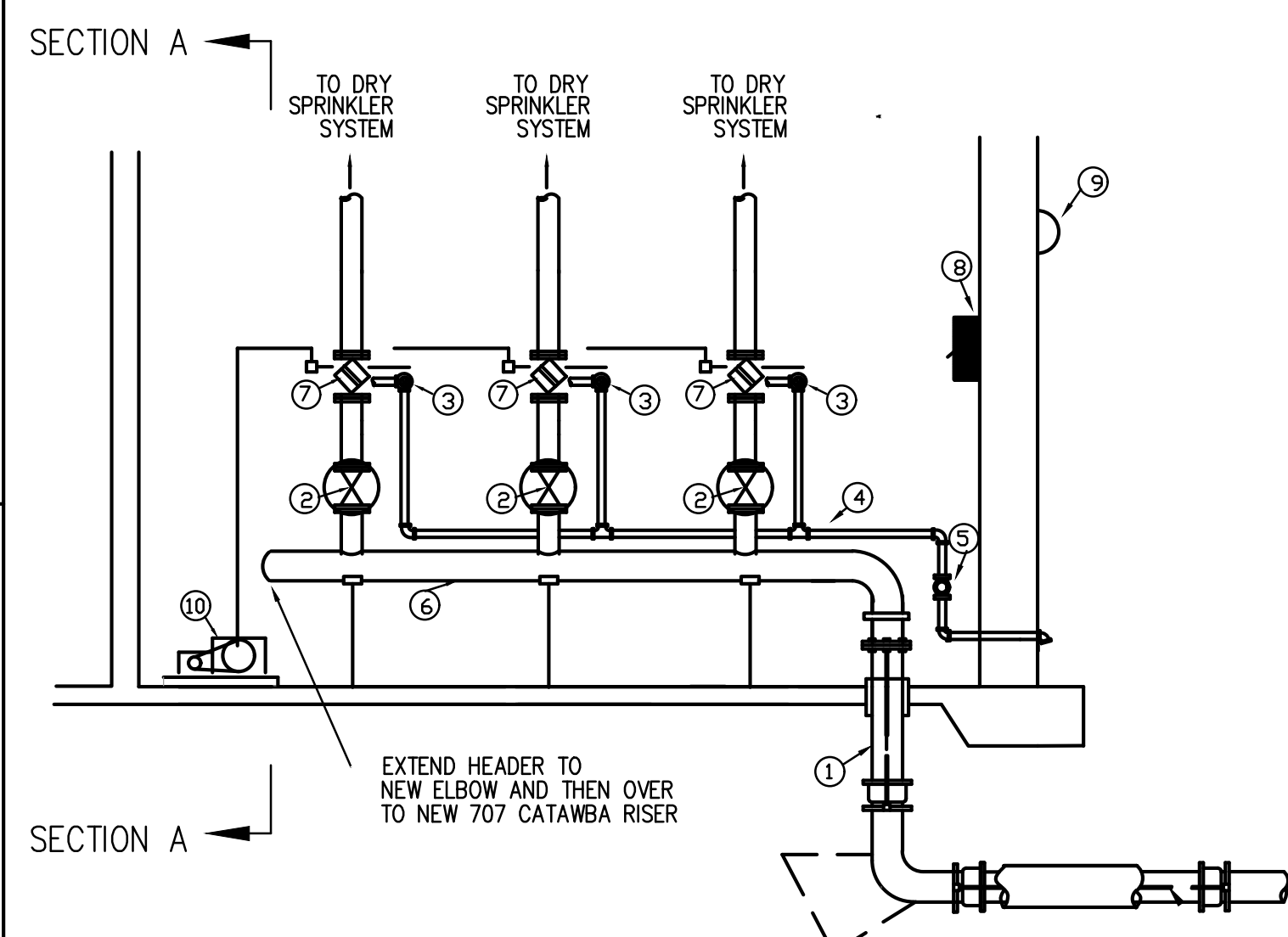
FLEXIBLE COUPLINGS FOR RISERS
NOT TO SCALE

FLEXIBLE COUPLINGS ARE TO BE INSTALLED ON ALL VERTICAL PIPES OTHER THAN SPRIGS, AS FOLLOWS:

- *WHEN "A" IS LESS THAN 3 FT, NO FLEXIBLE COUPLING IS REQUIRED
- *WHEN "A" IS MORE THAN 3 FT BUT LESS THAN 7 FT, INSTALL A FLEXIBLE COUPLING AT "B"
- *WHEN "A" IS 7 FT OR GREATER, INSTALL FLEXIBLE COUPLINGS AT "B" AND "C"
- *SEE "RISER DETAIL" ON THIS SHEET FOR FLEX COUPLING LOCATIONS ON THE MAIN RISER
- *ALL OTHER COUPLINGS SHALL BE RIGID OR "ZERO FLEX" TYPE

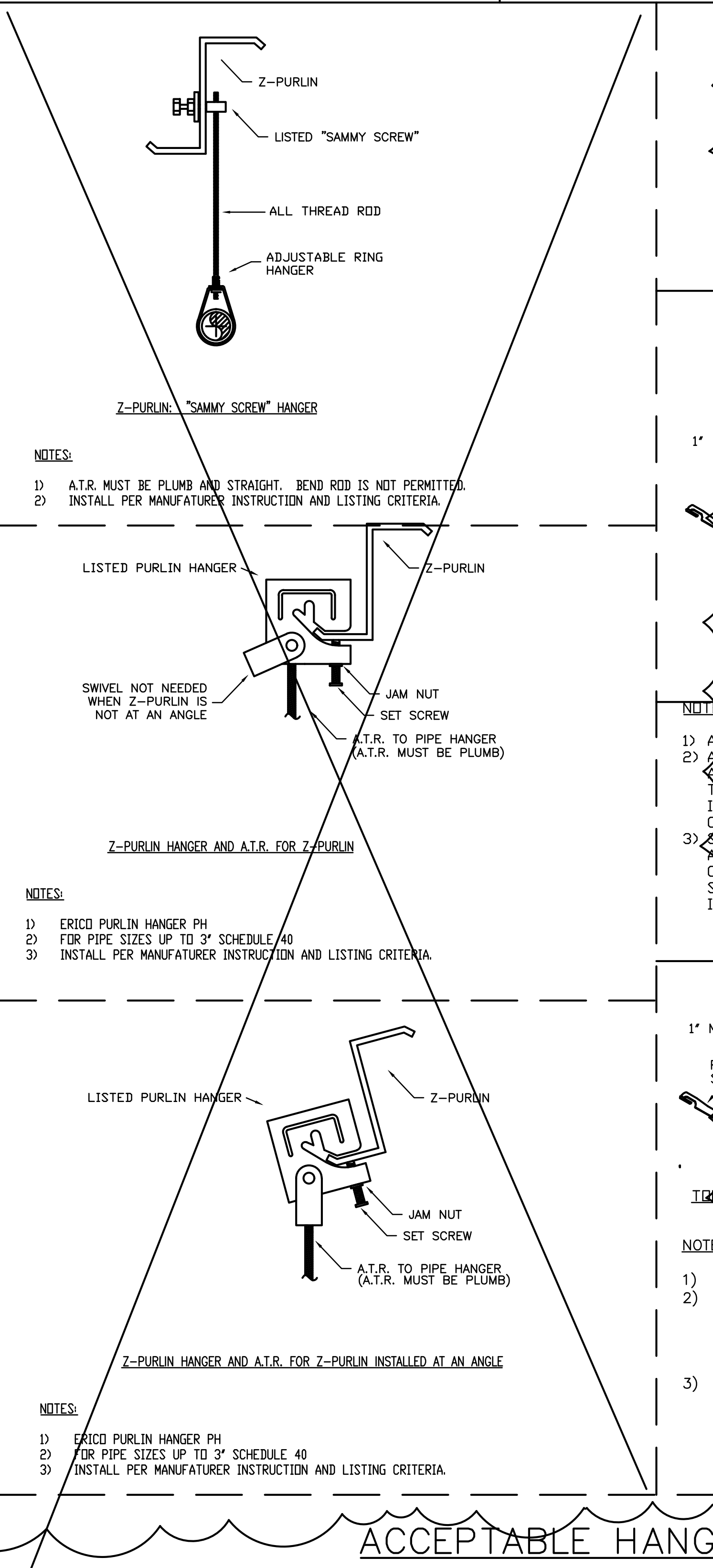
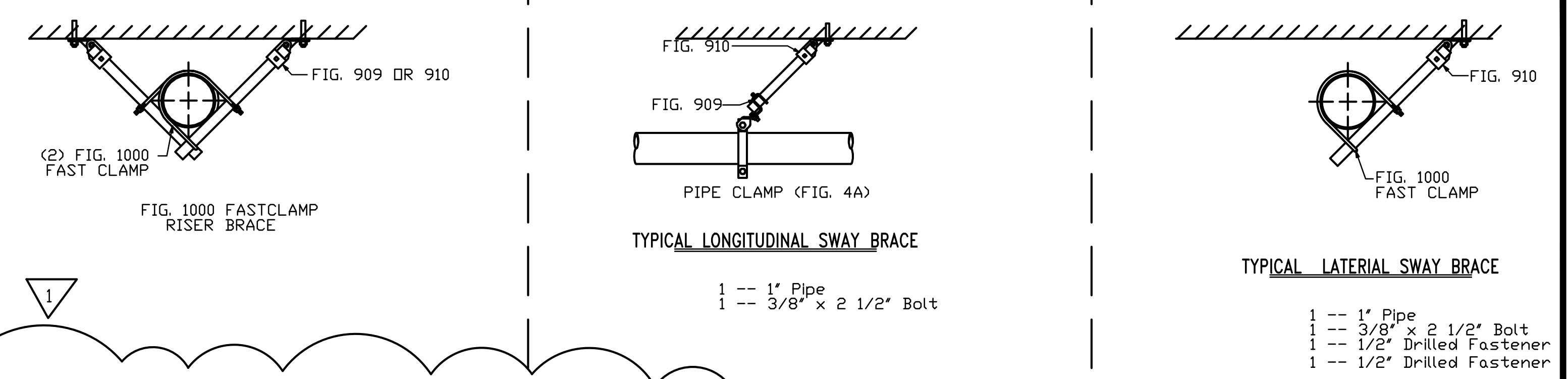
EXISTING RISER ELEVATION - KEY PLAN

- 6" LEAD-IN FROM MAIN WATER SUPPLY
- LISTED OS&Y VALVE w/TAMPER SWITCH
- MAIN DRAIN VALVE
- MAIN DRAIN
- SIGHT GLASS
- 6" RISER MANIFOLD
- DRY PIPE VALVE w/QUICK OPENING DEVICE AND/OR ANTI-FLOODING DEVICE (IF REQUIRED BY NFPA 13) w/AN AUTOMATIC AIR MAINTENANCE DEVICE w/A PRESSURE TYPE WATERFLOW SWITCH & LOW AIR PRESSURE ALARM SWITCH.
- SPARE SPRINKLER CABINET- WITH WRENCHES-ADD HEADS CABINET AND HEADS AS NECESSARY TO ACCOMMODATE NEW AS 707 CATAWBA SYSTEM
- ELECTRIC BELL
- SINGLE STAGE AIR COMPRESSOR w/AN AUTOMATIC START KIT-BASE MOUNTED - SIZE H.P. AS REQUIRED. ELECTRICAL SUPPLY IS SIZED FOR MAX. 2 H.P., 208V., 1Ø.



EXISTING RISER ELEVATION 350 WAYNE RISER ROOM
NOT TO SCALE

SECTION A - NEW RISER ELEVATION 350 WAYNE TO SUPPLY 707 CATAWBA
NOT TO SCALE



ACCEPTABLE HANGER DETAILS
NOT TO SCALE

NEW RISER ELEVATION - KEY PLAN

- WATERFLOW INDICATOR [FS]
- WATER PRESSURE GAGE
- MAIN DRAIN & TEST VALVE
- MAIN DRAIN - FLOW TEST LINE -TO OUTSIDE
- SIGHT GLASS
- WAVER CHECK VALVE
- O.S.&Y. GATE VALVE w/TAMPER SWITCH [TS]
- ELECTRIC BELL FLOW ALARM
- MINIMUM 6" LEAD-IN FROM MAIN WATER SUPPLY
- SPARE SPRINKLER CABINET-PAINTED

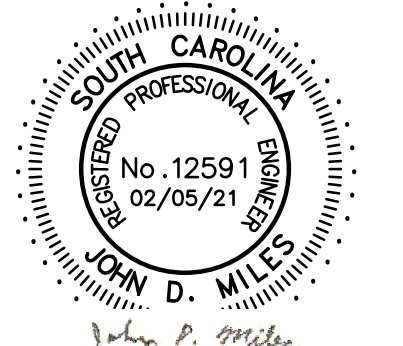
NOTE: PROVIDE FREEZE PROTECTION HEAT TRACE SYSTEM FOR NEW BULK MAIN PIPING IN UNHEATED AREA OF 350 WAYNE USE UL LISTED OR FM APPROVED HEAT TRACE SYSTEM SUCH AS RAYCHEM/TYCO X-L OR APPROVED EQUAL

owner
UNIVERSITY OF SOUTH CAROLINA

project name
**707 CATAWBA
FIRE PROTECTION UPGRADES**

project number
H27-Z409 50003813-3

seals/signature

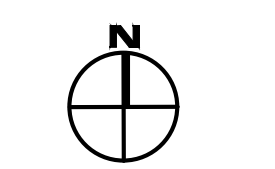


issued for
BID

date
FEB 05, 2021

number	item	date
1	ADDENDUM 2	3/15/2021

key plan

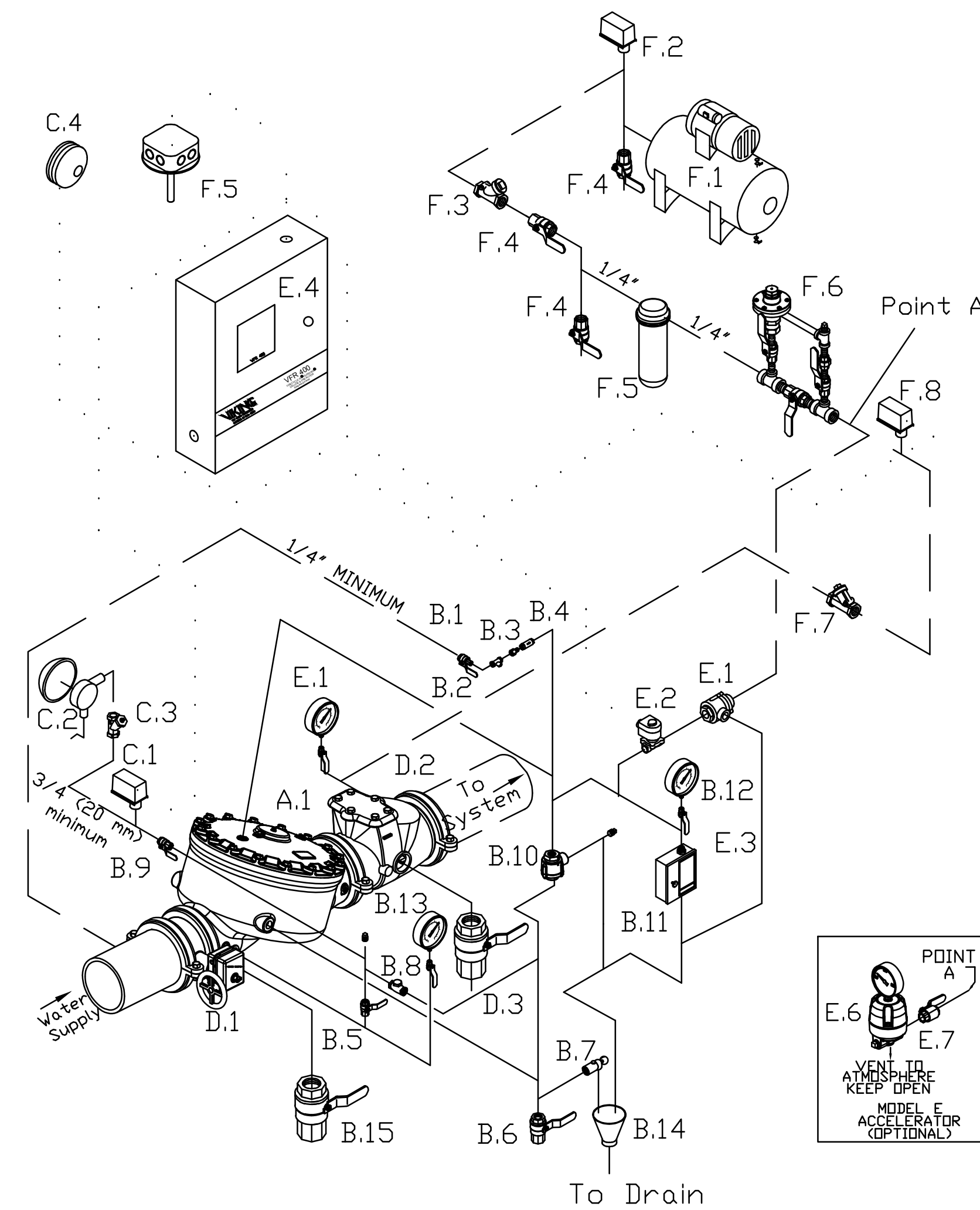


sheet title
**FIRE SPRINKLER
VAULTS FIRE SYSTEM DETAILS**

sheet number

ADFS 2.1

drawn by JDM
checked by JDM



— Dashed lines indicate pipe required but not listed in "System Components" Table.
..... Dotted lines indicate electrical detection system wiring required but not listed in "System Components" Table.

* Deluge Valve Trim Packages contain items B.1 through B.15 and associated nipples. Accessory Package for Conventional Deluge Valve Trim contains B.2 through B.5, B.7 through B.11, and B.14.

- SYSTEM COMPONENTS**
- A. Valve
 - A.1 Deluge Valve
 - B. Deluge Valve Conventional Trim (See Deluge Valve Conventional Trim Charts)
 - B.1 Priming Valve (Normally Open)
 - B.2 Strainer
 - B.3 1/16" Restricted Orifice
 - B.4 Spring Loaded Check Valve
 - B.5 Alarm Test Valve (Normally Closed)
 - B.6 Auxiliary Drain Valve (Normally Closed)
 - B.7 Drip Check Valve
 - B.8 Drain Check Valve
 - B.9 Alarm Shut-Off Valve (Normally Open)
 - B.10 Pressure Operated Relief Valve (P.O.R.V.)
 - B.11 Emergency Release
 - B.12 Priming Pressure Water Gauge and Valve
 - B.13 Water Supply Pressure Gauge and Valve
 - B.14 Drain Cup
 - B.15 Flow Test Valve (Normally Closed)
 - C. Water Flow Alarm Equipment
 - C.1 Alarm Pressure Switch and/or
 - C.2 Water Motor Alarm (Strainer Required)
 - C.3 Strainer
 - C.4 Electric Alarm Bell
 - D. Riser
 - D.1 Water Supply Control Valve
 - D.2 Easy Riser Check Valve or rubber seated check valve
 - D.3 Sprinkler System Main Drain
 - D.4 System Pressure Gauge and Valve
 - E. Release System
 - E.1 Pneumatic Actuator
 - E.2 Solenoid Valve (Normally Closed)
 - E.3 Electric / Pneumatic Release Trim
 - E.4 System Control Panel
 - E.5 Electric Detection System Heat Detector (shown for clarity, detecting wiring also acceptable)
 - E.6 Accelerator (Optional, See Insert)
 - E.7 Accelerator Isolation Valve
 - F. Air Supply
 - F.1 Tank Mounted Air Compressor
 - F.2 Air Supervisory Pressure Switch (Compressor On/Off Control Switch)
 - F.3 Soft Seat Check Valve
 - F.4 Shut Off Valve (Indicating Ball Valve recommended)
 - F.5 Dehydrator
 - F.6 Air maintenance Device & By-Pass Trim
 - F.7 Soft Seat Swing Check Valve
 - F.8 Air Pressure Supervisory Switch

PRE-ACTION SYSTEMS NOTES

- 1) FIRE SPRINKLER CONTRACTOR IS TO PROVIDE COMPLETE AND SEPERATE DOUBLE INTERLOCK PRE-ACTION SYSTEMS IN THE 3 VAULTS AS SHOWN, INCLUDING ALL COMPONENTS OF THE DELUGE VALVE ELECTRONIC ACTIVATION SYSTEM-INCLUDING INSIDE VAULT HEAT DETECTORS, ELECTRICAL PANELS, CONDUIT AND WIRING, AND VAULT FA NOTIFICATION DEVICES. POWER TO THE PANELS WILL BE PROVIDED BY THE ELECTR CONTRACTOR, CONTACT ALARM DESIGNER FOR POWER SUPPLIES AND INTERFACES WITH THE BLDG FIRE ALARM SYSTEM.
- 2) PROVIDE NITROGEN-BASED CORROSDION CONTROL FOR ALL PRE-ACTION DRY SYSTEMS PIPING (NOT SHOWN).
- 3) PROVIDE INTERNALLY AND EXTERNALLY GALVANIZED PIPING AND FITTINGS FOR ALL PRE-ACTION DRY SYSTEMS PIPING
- 4) PROVIDE SRKLR GUARDS FOR ALL HEADS LESS THAN 7' ABOVE F.F.
- 5) PROVIDE MODULE IN EACH PREACTION PANEL THAT WILL NOTIFY THE BLDG MAIN FA PANEL AS TO WHICH VAULT SYSTEM IS IN ALARM, SO THAT INFO IS ANNUNCIATED BY THE MAIN PANEL.

consultants



Mabry Engineering Associates, Inc.
Structural Engineers
845 Bush Street
Suite 100
West Columbia, S.C. 29169
(803) 824-0000
Fax (803) 958-7600



THE LANDPLAN GROUP SOUTH
ARCHITECTS • ENGINEERS • PLANNERS
1204 SCOTT STREET
COLUMBIA, SC 29201
P. 803.256.0662
WWW.LANDPLANSOUTH.COM

owner

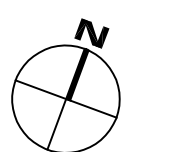
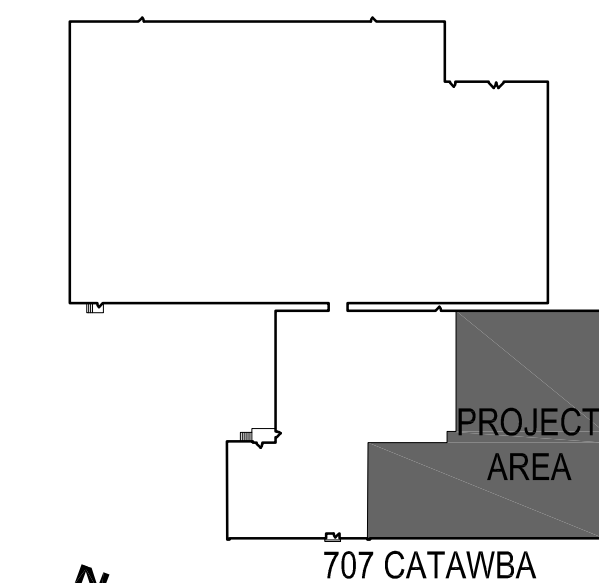


UNIVERSITY OF SOUTH CAROLINA
project name
USC 707 Catawba Upfit - CAS Art Studio
state project number
H27-6134
GMK project number
21002.01
seals/signature

issued for
CONSTRUCTION DOCUMENTS
date
MARCH 12, 2021

number	item	date

key plan

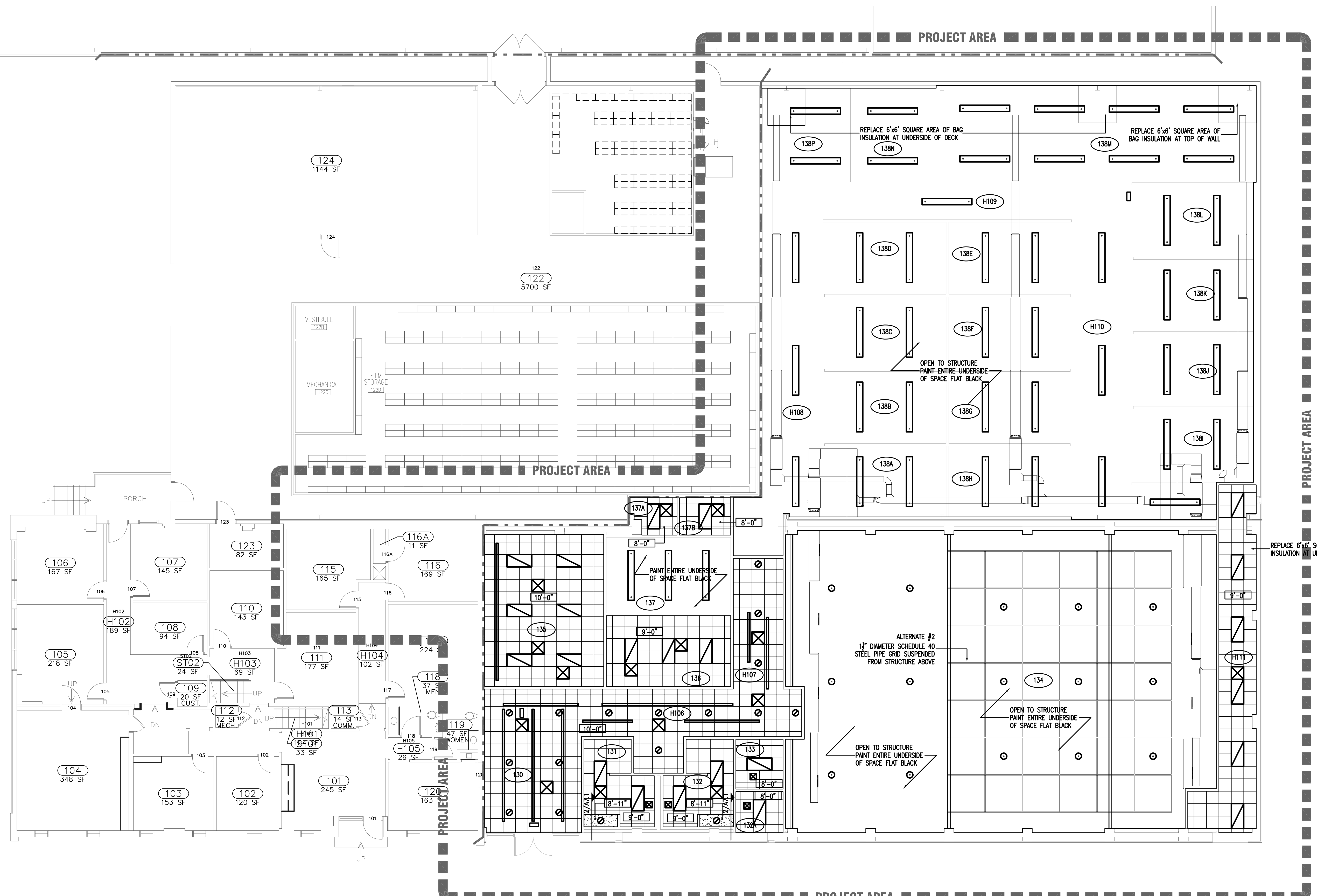


sheet title
FIRST FLOOR REFLECTED CEILING PLAN

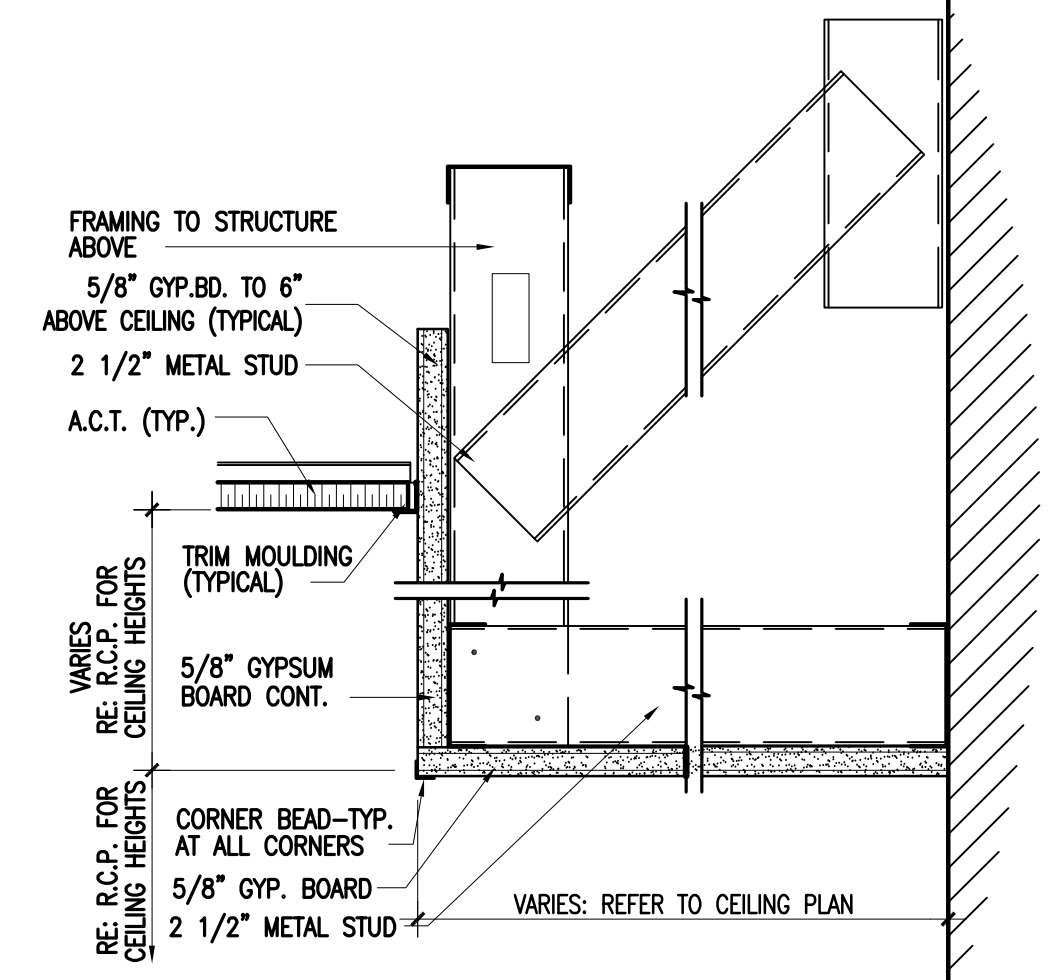
sheet number

A7.1

drawn by JKS
checked by



1 FIRST FLOOR REFLECTED CEILING PLAN
1/8" = 1'-0"



2 CEILING DETAIL
3" = 1'-0"