Author

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FIRE PROTECTION GENERAL NOTES:

1. PRIOR TO SUBMITTING BID, VISIT THE JOB SITE AND BECOME FULLY ACQUAINTED WITH THE EXISTING CONDITIONS OF THE PROJECT. REVIEW THE GENERAL NOTES, SPECIFICATIONS AND OTHER DRAWINGS FOR ADDITIONAL REQUIREMENTS WHICH MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT, ENGINEER AND/OR OWNER OF CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
2. SYSTEM DESIGN, INSTALLATION AND MATERIALS SHALL BE IN ACCORDANCE WITH APPLICABLE NFPA STANDARDS. SYSTEM SHALL ALSO MEET ALL APPLICABLE BUILDING CODES, FIRE CODES AND THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION AND INSURANCE CARRIER. VERIFY REQUIREMENTS PRIOR TO BID SUBMITTAL.
3. INFORMATION ON CONTRACT DOCUMENTS IS GENERAL INFORMATION AND FOR BID PURPOSES ONLY. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE FINAL SYSTEM DESIGN AND LAYOUT OF ALL COMPONENTS. COORDINATION WITH ALL OTHER TRADES, AND SYSTEM CALCULATIONS REQUIRED FOR APPROVAL BY THE AUTHORITY HAVING JURISDICTION, ENGINEER, AND OWNER'S INSURER.
4. THE CONTRACTOR SHALL FOLLOW THE ENGINEER OF RECORD'S SYSTEM DESIGN AND LAYOUT OF ALL COMPONENTS EXCEPT WHERE MODIFICATION TO THE DESIGN IS NECESSARY. MODIFICATIONS SHALL BE REFLECTED IN THE CONTRACTOR'S SHOP DRAWINGS AND CALCULATIONS.
5. DEVIATIONS FROM ENGINEER'S DESIGN WILL NOT BE CONSIDERED UNLESS A FORMALLY SUBMITTED RFI IS RECEIVED AND APPROVED.
6. THE CONTRACTOR SHALL PROVIDE ALL EQUIPMENT AND LABOR REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM AS INDICATED IN THE DRAWINGS AND SPECIFICATIONS.
7. WHERE EXISTING SYSTEMS ARE PRESENT, CONTRACTOR SHALL MODIFY, RELOCATE AND/OR PROVIDE ADDITIONAL EQUIPMENT AS REQUIRED FOR SCOPE OF WORK AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. COORDINATE WITH WALLS, CEILINGS, LIGHTS, DIFFUSERS, STRUCTURE, OBSTRUCTIONS, ETC. IN AREAS AFFECTED BY SCOPE OF WORK. NEW EQUIPMENT SHALL BE COMPATIBLE WITH EXISTING SYSTEMS. CONTRACTOR SHALL REMOVE ALL ABANDONED EQUIPMENT, COORDINATE SYSTEM MODIFICATIONS TO MINIMIZE SYSTEM IMPAIRMENT, AND PROVIDE FIRE WATCH AND/OR INTERIM FIRE PROTECTION MEASURES WHERE REQUIRED BY THE AUTHORITY HAVING JURISDICTION, INSURANCE CARRIER OR OWNER.
8. PROVIDE ADDITIONAL MATERIALS AND LABOR REQUIRED DUE TO LACK OF COORDINATION OR TO MEET AUTHORITY HAVING JURISDICTION AND INSURANCE CARRIER REQUIREMENTS AT NO ADDITIONAL COST TO THE OWNER.
9. FORWARD COMPLETED CERTIFICATE OF COMPLETION AND CONTRACTOR MATERIAL TEST CERTIFICATES TO THE OWNER.
10. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

FIRE PROTECTION GENERAL DEMOLITION NOTES:

1. COORDINATE ALL DEMOLITION WITH WHAT IS SHOWN ON ARCHITECTURAL PLANS. NOTIFY ARCHITECT OF ANY DISCREPANCIES.
2. COORDINATE NEW WORK AND DEMOLITION WITH OTHER DISCIPLINES AND EXISTING CONDITIONS PRIOR TO CONSTRUCTION.
3. PRIOR TO SUBMITTING BID, VISIT THE JOB SITE AND BECOME FULLY ACQUAINTED WITH THE EXISTING CONDITIONS OF THE PROJECT. REVIEW GENERAL NOTES, SPECIFICATIONS AND OTHER DRAWINGS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT, ENGINEER OR OWNER, AS DEFINED IN BID DOCUMENTS, OF CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID. ADDITIONAL COMPENSATION WILL NOT BE PAID FOR LACK OF SUCH DETERMINATION, FAMILIARIZATION, AND/OR ALLOWANCE.
4. EXISTING CONDITIONS WERE TAKEN FROM ORIGINAL DRAWINGS AND SITE VISITS AND MAY NOT REFLECT EXACT "AS-BUILT" CONDITIONS. FIELD VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING FINAL BIDS. COORDINATE NEW WORK AND DEMOLITION WITH OTHER DISCIPLINES AND EXISTING CONDITIONS PRIOR TO CONSTRUCTION.
5. OWNER RETAINS RIGHTS OF SALVAGE FOR EQUIPMENT AND FIXTURES TO BE REMOVED. COORDINATE WITH THE OWNER THE EQUIPMENT AND FIXTURES TO BE SALVAGED AND THE LOCATION FOR STORAGE. AVOID DAMAGE TO EQUIPMENT DURING DEMOLITION WORK AND DURING TRANSPORT TO OWNER'S DESIGNATED STORAGE LOCATION. PROPERLY DISPOSE OF MATERIALS THAT ARE REMOVED AND ARE NOT REQUESTED TO BE SALVAGED BY THE OWNER.
6. REMOVE ITEMS SHOWN HEAVY LINED AND/OR CROSSHATCHED AND/OR NOTED TO BE REMOVED.
7. EQUIPMENT TO BE REMOVED SHALL BE KEPT FOR REINSTALLATION DURING THE CONSTRUCTION PHASE WHEN POSSIBLE AND/OR INDICATED ON THE DRAWINGS. AVOID DAMAGING EXISTING SURFACES AND EQUIPMENT TO REMAIN FOR NEW INSTALLATION. REPAIR ANY DAMAGE CAUSED DURING WORK AT NO EXTRA COST TO THE OWNER.
8. SEAL PENETRATIONS THROUGH FLOORS, WALLS, CEILINGS AND ROOFS WHERE COMPONENTS ARE REMOVED AND WHERE THE EXISTING PENETRATION IS NOT USED FOR THE NEW INSTALLATION. REPAIR DAMAGED SURFACES TO MATCH ADJACENT AREAS OR AS INDICATED ON THE ARCHITECTURAL DRAWINGS.
9. PERFORM ALL WORK ACCORDING TO THE PHASING SCHEDULE FOR THIS PROJECT. PROVIDE ALL TEMPORARY DESIGN AND/OR CONFIGURATIONS THAT MEET APPLICABLE CODE REQUIREMENTS AS NECESSARY TO CONFORM TO THE REQUIRED CONSTRUCTION PHASING OF THE PROJECT.
10. ONLY THE PORTIONS OF THE BUILDING AFFECTED BY THE SCOPE OF THE PROJECT HAVE BEEN SHOWN. INFORMATION SHOWN AS EXISTING TO REMAIN IS NOT BEING MODIFIED AS A PART OF THIS PROJECT.
11. ALL WORK SHALL BE PERFORMED SO AS TO NOT INTERRUPT SERVICE. THE CONTRACTOR SHALL PROPERLY NOTIFY THE BUILDING OWNER, LANDLORD, THE LEASER AND ADJACENT TENANTS AS APPLICABLE A MINIMUM OF 48 HOURS IN ADVANCE BEFORE PROCEEDING WITH THIS WORK.
12. REMOVE ALL UNUSED AND DEMOLISHED EQUIPMENT AND ASSOCIATED MATERIALS FROM SITE. ABANDONING UNUSED PORTIONS WILL NOT BE ACCEPTABLE.
13. SYSTEM(S) NOT ASSOCIATED WITH THE DEMOLITION SHALL BE LEFT IN SERVICE AS APPLICABLE.
14. INSPECT EXISTING EQUIPMENT TO REMAIN TO VERIFY THAT EQUIPMENT IS OPERATING PROPERLY. NOTIFY OWNER OF DAMAGED AND/OR MALFUNCTIONING COMPONENTS.
15. ALL SYSTEMS TO BE LEFT IN SERVICE PRIOR TO THE END OF EACH WORKDAY.

FIRE PROTECTION SYMBOLS

THIS IS A MASTER LEGEND AND NOT ALL SYMBOLS OR ABBREVIATIONS ARE USED.

ABBREVIATIONS V2.02

AFF	ABOVE FINISHED FLOOR	NIC	NOT IN CONTRACT
AFG	ABOVE FINISHED GRADE	OC	ON CENTER
CD	CANDELA	PIV	POST INDICATOR VALVE
DI	DUCTILE IRON	PROVIDE	FURNISH AND INSTALL
ESFR	EARLY SUPPRESSION FAST RESPONSE	PRV	PRESSURE REDUCING VALVE
ETR	EXISTING TO REMAIN	RD	RETURN DUCT
FHC	FIRE HOSE CABINET	REV	REVISION
FP	FIRE PROTECTION	SD	SUPPLY DUCT
GC	CONTRACTOR	SF	SQUARE FEET
GPM	GALLONS PER MINUTE	TYP	TYPICAL
JB/J-BOX	JUNCTION BOX	UNO	UNLESS NOTES OTHERWISE
MAX	MAXIMUM	V	VOLT(S)
MIN	MINIMUM	W	WATTS
N/A	NOT APPLICABLE	WP	WEATHERPROOF

ANNOTATION

- (1) FIRE PROTECTION PLAN NOTE CALLOUT
- CONNECTION POINT OF NEW WORK TO EXISTING
- (1 / F1) DETAIL REFERENCE UPPER NUMBER INDICATES DETAIL NUMBER LOWER NUMBER INDICATES SHEET NUMBER
- (1 / F1) SECTION CUT DESIGNATION
- DEDICATED EQUIPMENT ACCESS TILE
- ACCESS PANEL

FIRE ALARM

- FACP FIRE ALARM CONTROL PANEL/UNIT
- FACP RECESSED FIRE ALARM CONTROL PANEL/UNIT
- FAAP FIRE ALARM ANNUNCIATOR PANEL
- FAAP RECESSED FIRE ALARM ANNUNCIATOR PANEL
- AMP AMPLIFIER PANEL
- RPS REMOTE POWER SUPPLY
- RT REMOTE TEST STATION WITH INDICATING LIGHT
- RL REMOTE INDICATING LIGHT
- PS PRESSURE SWITCH LOW/HIGH
- FS WATERFLOW ALARM SWITCH
- VT CONTROL VALVE TAMPER SWITCH
- DH MAGNETIC DOOR HOLD OPEN DEVICE
- CM CONTROL MODULE
- MM MONITOR MODULE
- K FIRE DEPARTMENT KEY BOX
- PULL STATION
- F FIREFIGHTER'S PHONE JACK
- HEAT DETECTOR (E INDICATES ELEVATOR RECALL)
- SMOKE DETECTOR (E INDICATES ELEVATOR RECALL)
- SINGLE STATION SMOKE DETECTOR
- PROJECTED BEAM SMOKE DETECTOR
- RD DUCT MOUNTED SMOKE DETECTOR (SD=SUPPLY/RD=RETURN)
- CO CARBON MONOXIDE DETECTOR
- AREA OF REFUGE 2-WAY COMMUNICATION SYSTEM
- #W WALL MOUNTED AUDIBLE NOTIFICATION APPLIANCE #W INDICATES WATTAGE (VOICE EVACUATION SYSTEMS ONLY)
- ## WALL MOUNTED VISIBLE NOTIFICATION APPLIANCE ## INDICATES CANDELA
- #W ## WALL MOUNTED AUDIBLE/VISIBLE NOTIFICATION APPLIANCE ## INDICATES CANDELA #W INDICATES WATTAGE (VOICE EVACUATION SYSTEMS ONLY)
- #W CEILING MOUNTED AUDIBLE NOTIFICATION APPLIANCE #W INDICATES WATTAGE (VOICE EVACUATION SYSTEMS ONLY)
- ## CEILING MOUNTED VISIBLE NOTIFICATION APPLIANCE ## INDICATES CANDELA
- #W ## CEILING MOUNTED AUDIBLE/VISIBLE NOTIFICATION APPLIANCE ## INDICATES CANDELA #W INDICATES WATTAGE (VOICE EVACUATION SYSTEMS ONLY)
- END OF LINE RESISTOR
- ABORT SWITCH
- BELL

CALL OUTS

ENLARGED PLAN CALLOUT

NOT IN SCOPE

LINETYPE LEGEND

THROUGHOUT THE DRAWINGS DIFFERENT LINETYPES ARE USED IN COMBINATION WITH THE SYMBOLS TO INDICATE THE STATUS OF ITEMS AS EXISTING, TO BE DEMOLISHED, TO BE INCLUDED AS PART OF NEW WORK AND/OR ITEMS WHICH ARE ANTICIPATED TO BE PROVIDED IN THE FUTURE. THE STATUS OF ITEMS USING THESE LINETYPES ARE RELATIVE TO THE VIEW IN WHICH THEY APPEAR. PHASING SHOWN IN DRAWINGS IS NOT INTENDED TO FULLY DESCRIBE ALL NECESSARY CONSTRUCTION PHASING, WHICH IS DETERMINED BY THE CONTRACTOR AS PART OF THEIR RESPONSIBILITIES. ANY SUCH PHASES DESCRIBED IN THE CONSTRUCTION DOCUMENTS ARE GENERAL AND ONLY INTENDED TO INDICATE A BROAD ORDER FOR THE SAKE OF DESCRIBING THE PROJECT. THE FOLLOWING LINETYPES MAY BE USED ON ANY DEVICE, EQUIPMENT, NOTE, LINE, SHAPE, ETC.

EXISTING	NEW
DEMOLISH — — — —	FUTURE - - - - - - - - - - - - - -

STANDARD MOUNTING HEIGHTS

AUDIBLE APPLIANCE (TOP OF APPLIANCE)	90"
FIRE ALARM ANNUNCIATOR PANEL (TOP OF DISPLAY)	60"
FIRE ALARM BELL (EXTERIOR) (CENTERLINE)	120"
FIRE ALARM CONTROL PANEL/UNIT (TOP OF DISPLAY)	60"
PULL STATION (TOP OF DEVICE)	48"
VISIBLE APPLIANCE (CENTERLINE)	84"

INSTALL DEVICES AT THE MOUNTING HEIGHTS SHOWN ABOVE UNO IN THE CONSTRUCTION DOCUMENTS. MOUNTING HEIGHTS LISTED ABOVE, OR ELSEWHERE IN THE CONSTRUCTION DOCUMENTS, ARE AFF OR AFG, UNO. ALL DEVICES SHALL BE INSTALLED IN COMPLIANCE WITH CURRENT ADA AND LOCAL REQUIREMENTS.

PGAV ARCHITECTS
PECKHAM GUYTON ALBERS & VIETS, INC.
1900 W 47th Place, #300, Westwood, KS 66205
(913) 362-6500
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STEVEN CRAIG DRYDEN — LICENSED — 12239 — STANDARD — PROFESSIONAL ENGINEER — KANSAS

02/24/2022

HENDERSON ENGINEERS
8345 LENEXA DRIVE, SUITE 300
LENEXA, KANSAS 66214
TEL 913.742.5000 FAX 913.742.5001
WWW.HENDERSONENGINEERS.COM
2150005033
EXPIRES 10/31/2022

#	DATE	DESCRIPTION

UNIVERSITY HOUSE

PITTSBURG STATE UNIVERSITY
PITTSBURG KANSAS
Building Number: 38500-0230

CONSTRUCTION DOCUMENTS

Original Size: 1 1/2" Drawing may have been reduced.
0" 1" 2"

FIRE ALARM GENERAL NOTES AND LEGEND

DATE: 01-28-2022
DRAWN: Author
CHECKED: Checker
PGAV # 53458-00
CLIENT # A-014445
SHEET #
FA000

STEVE. DRYDEN

FIRE ALARM PLAN NOTES:

F1 HATCHED AREA NOT IN SCOPE OF WORK

F2 NEW SMOKE DETECTOR TO BE PROVIDED AND INSTALLED IN ACCORDANCE WITH IBC - 2018 AND NFPA 72. THE NEW SMOKE DETECTORS ARE TO BE CONNECTED TO THE NEW COMBINED FIRE/SECURITY SYSTEM. SMOKE DETECTORS IN SLEEPING AREAS SHALL BE PROVIDED WITH SOUNDER BASE TO COMPLY WITH NFPA 72 LOW FREQUENCY ALARM SIGNAL OUTPUT.

F3 DEMOLISH EXISTING PUBLIC FIRE ALARM AND SECURITY PANEL. PROVIDE NEW COMBINED FIRE ALARM SECURITY PANEL AND CONNECT PANEL TO FIBER CABLE TO PROVIDE REMOTE ANNUNCIATION. RECONNECT DEVICES THAT ARE EXISTING TO REMAIN.

F4 EXISTING SMOKE DETECTOR TO BE DEMOLISHED. NEW SMOKE DETECTOR TO BE PROVIDED AND INSTALLED IN ACCORDANCE WITH IRC - 2018 AND NFPA 72. THE NEW SMOKE DETECTORS ARE TO BE CONNECTED TO THE NEW COMBINED FIRE/SECURITY SYSTEM. THE SMOKE DETECTOR SHALL BE PROVIDED WITH SOUNDER BASE TO COMPLY WITH NFPA 72 LOW FREQUENCY ALARM SIGNAL OUTPUT.

F5 EXISTING NOTIFICATION APPLIANCES TO REMAIN. RECONNECT APPLIANCES TO NEW COMBINED FIRE ALARM SECURITY PANEL.

F6 DEMOLISH EXISTING FIRE ALARM AND SECURITY PANELS.

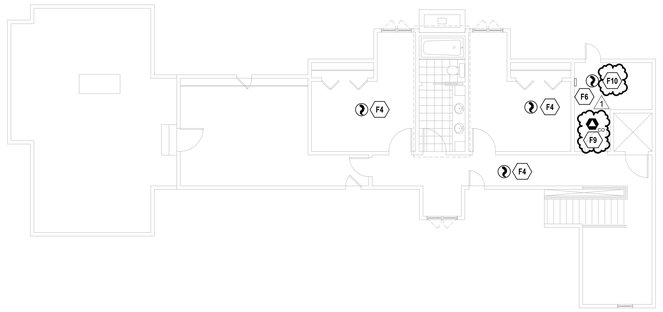
F7 VISUAL NOTIFICATION SHALL BE A MINIMUM OF 177 CANDELA FOR SLEEPING AREAS IN ACCORDANCE WITH NFPA 72

F8 DEMOLISH EXISTING COMBINATION SMOKE DETECTOR VISUAL NOTIFICATION APPLIANCE. PROVIDE NEW STROBE APPLIANCE AT A MINIMUM OF 177 CANDELA FOR SLEEPING AREAS IN ACCORDANCE WITH NFPA 72

F9 DEMOLISH EXISTING CARBON MONOXIDE DETECTOR.

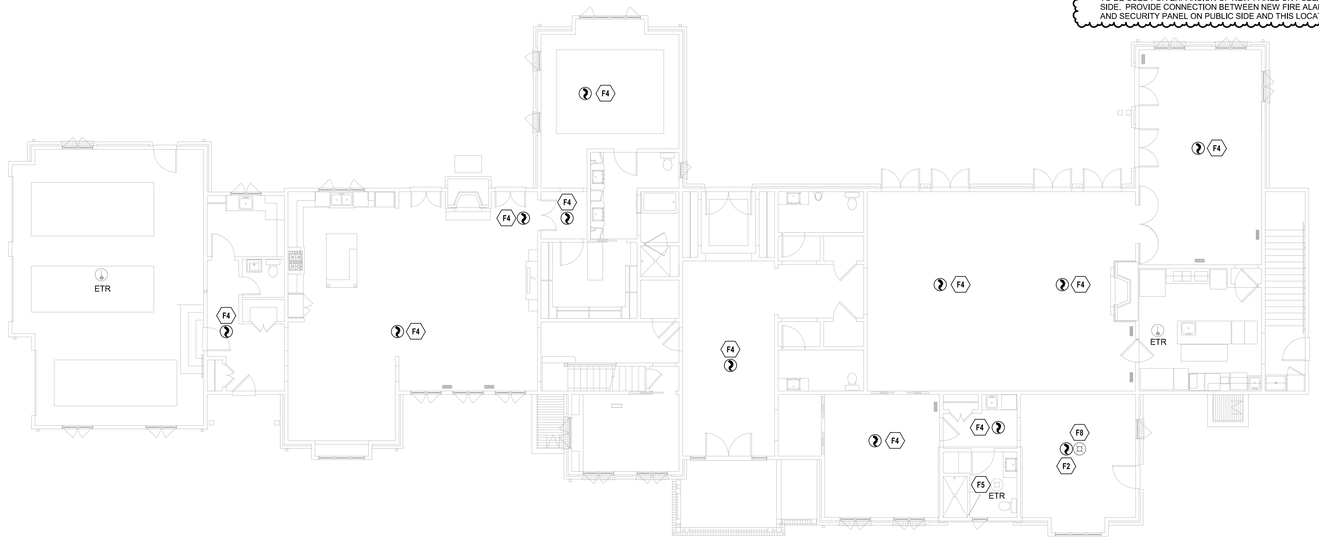
F10 PROVIDE NEW COMBINATION SMOKE AND CARBON MONOXIDE DETECTOR.

F11 DEMOLISH EXISTING FIRE ALARM AND SECURITY PANEL EXCEPT FOR ELECTRICAL BOX. EXISTING ELECTRICAL BOX TO BE USED FOR EXPANSION OF NEW PANEL ON PUBLIC SIDE. PROVIDE CONNECTION BETWEEN NEW FIRE ALARM AND SECURITY PANEL ON PUBLIC SIDE AND THIS LOCATION.



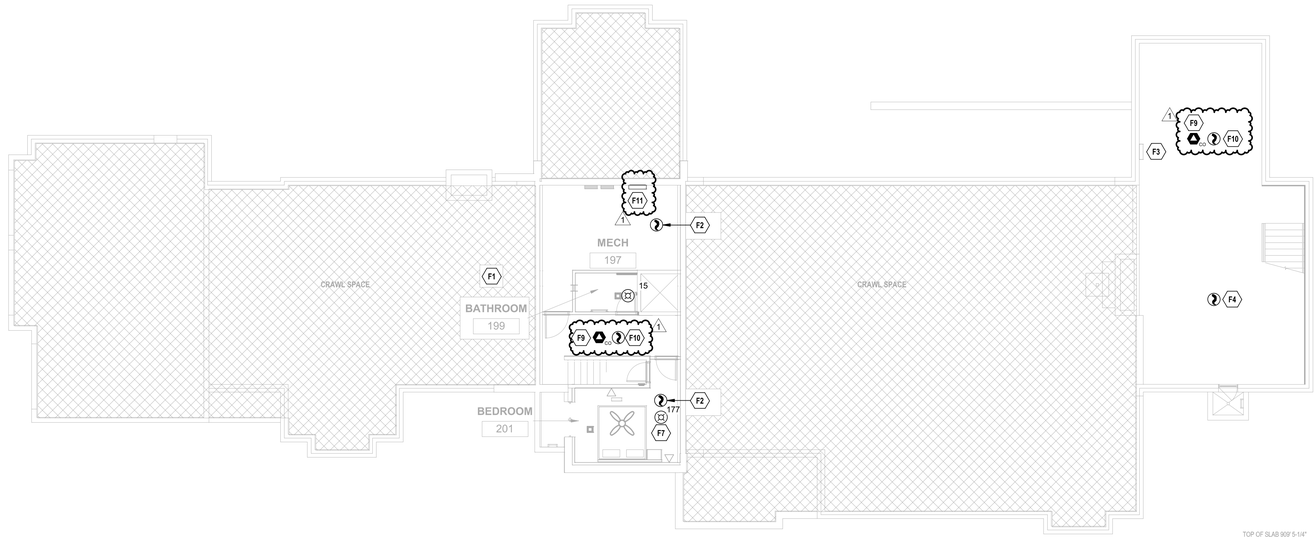
3 FIRE ALARM SECOND FLOOR RCP
1/8" = 1'-0"

0 4' 8' 12'
SCALE: 1/8"=1'-0"



2 FIRE ALARM FIRST FLOOR RCP - OVERALL
1/8" = 1'-0"

0 4' 8' 12'
SCALE: 1/8"=1'-0"



1 FIRE ALARM BASEMENT RCP
1/8" = 1'-0"

0 4' 8' 12'
SCALE: 1/8"=1'-0"

PGAV ARCHITECTS
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02/24/2022

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EXPIRES 12/31/2022

1 02.24.22 Addendum 1
DATE DESCRIPTION

UNIVERSITY HOUSE

PITTSBURG STATE UNIVERSITY
PITTSBURG KANSAS
Building Number: 38500-0230

CONSTRUCTION DOCUMENTS

Original Size: 1 1/2" Drawing may have been reduced.
0" 1"

FIRE ALARM PLAN

DATE: 01-28-2022
DRAWN: Author
CHECKED: Checker
PGAV # 53458-00
CLIENT # A-014445
SHEET #
FA101

Author
STEVE. DRYDEN

Author

Division 28: FIRE ALARM SYSTEM

1. GENERAL INSTRUCTIONS

A. GENERAL REQUIREMENTS

All requirements under Division 01 (General Requirements) and the general and supplementary conditions of these specifications apply to this section and division. Where the requirements of this section and division exceed those of Division 01 (General Requirements), this section and division take precedence. Become thoroughly familiar with all its contents as to requirements that affect this division, section, or both. Work required under this division includes all material, equipment, appliances, transportation, services, and labor required to complete the entire system as required by the drawings and specifications, or reasonably inferred to be necessary to facilitate the function of each system as implied by the design and the equipment specified.

The specifications and drawings for the project are complementary, and any portion of work described in one shall be provided as if described in both. In the event of discrepancies, notify the Engineer and request clarification prior to proceeding with the work involved.

Drawings are graphic representations of the work upon which the contract is based. They show the materials and their relationship to one another, including sizes, shapes, locations, and connections. They convey the scope of work, indicating the intended general arrangement of the systems without showing all of the exact details as to elevations, offsets, control lines, and other installation requirements. Use the drawings as a guide when laying out the work and to verify that materials and equipment will fit into the designated spaces, and which when installed per manufacturers' requirements, will ensure a complete, coordinated, satisfactory, and properly operating system.

Installation of devices shall be performed or supervised by a National Institute for Certification of Engineering Technologies (NICET) Level 2 or higher fire alarm technician. Submit copies of the certification for employees through shop drawing submittals.

B. DEFINITIONS

Division: References contained in this specification follow the numbering system defined in the Construction Specifications Institute (CSI) MasterFormat 2004 Edition. Specification Divisions 01 through 13 provided with this project may reference the CSI MasterFormat 1995 Edition. The corresponding division references between the 2004 Edition and 1995 Edition are as follows:

	2004 Edition	1995 Edition
1.	Division 21 – Fire Suppression	Division 15
2.	Division 22 – Plumbing	Division 15
3.	Division 23 – HVAC	Division 15
4.	Division 26 – Electrical	Division 16
5.	Division 27 – Communications	Division 16
6.	Division 28 – Electronic Safety and Security	Division 16

Furnish: "to supply and deliver to the project site, ready for unloading, unpacking, assembly, installation and similar operations."

Install: "to perform all operations at the project site including, but not limited to, the actual unloading, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, testing, commissioning, starting up and similar operations, complete, and ready for the intended use."

Provide: "to furnish and install, complete and ready for the intended use."

Furnished by Owner (or Owner-Furnished) or Furnished by Others: "an item furnished by the Owner or under other divisions or contracts, and installed under the requirements of this division, complete and ready for the intended use, including all items and services incidental to the work necessary for proper installation and operation. Include the installation under the warranty required by this division."

Engineer: Where referenced in this division, "Engineer" is the Engineer of Record and the Design Professional for the work under this division, and is a consultant to, and an authorized representative of the Architect, as defined in the General and/or Supplementary Conditions. When used in this division, Engineer means increased involvement by and obligations to the Engineer, in addition to involvement by and obligations to the Architect.

AHJ: The local code and/or inspection agency (Authority) Having Jurisdiction over the work.

NRTL: Nationally recognized testing laboratory, as defined and listed by OSHA in 29 CFR 1910.7 (e.g., UL, ETL, CSA), and acceptable to the AHJ over this project. Nationally recognized testing laboratories and standards listed are used only to represent the characteristics required and are not intended to restrict the use of other NRTLs that are acceptable to the AHJ and standards that meet the specified criteria.

The terms "approved equal", "equivalent", or "equal" are used synonymously and shall mean "accepted by or acceptable to the Engineer as equivalent to the item or manufacturer specified". The term "approved" shall mean labeled, listed, or both, by an NRTL, and acceptable to the AHJ over this project.

C. PREBID SITE VISIT

Prior to submitting bid, visit the site of the proposed work and become fully informed as to the conditions under which the work is to be done. Failure to comply with this requirement shall not be considered sufficient justification to request or obtain extra compensation over and above the contract price.

D. SCOPE OF WORK

The scope of work in this section includes fire alarm control panels, automatic smoke detectors, fire alarm notification appliances, auxiliary fire alarm equipment, and battery stand-by power.

E. CODES AND STANDARDS

Provide an integrated fire alarm system, which meets the current versions of NFPA 70, National Electrical Code; NFPA 72, National Fire Alarm Code, IBC - 2018, IRC - 2018; and all local building and fire codes. All fire alarm equipment shall be Underwriters Laboratory (UL) approved for the type and class of service performed.

F. SYSTEM DESCRIPTION

The fire alarm system shall be a non-coded manual and automatic fire alarm system with connections to a remote supervising station. The Fire Alarm Control panel shall be a combination Fire alarm and Security panel.

G. COORDINATION

Coordinate work with that of other trades so that the various components of the systems are installed at the proper time, will fit the available space, and will allow proper service access to those items requiring maintenance. Components installed without regard to the above shall be relocated at no additional cost to the Owner.

H. SUBMITTALS

Upon being awarded a contract, submit to the Architect for approval, six (6) copies of manufacturer's shop drawings for equipment to be furnished under this contract, items requiring coordination between contractors, and sheet metal ductwork fabrication drawings. Before submitting shop drawings and material lists, verify that equipment submitted is mutually compatible and suitable for the intended use, and will fit the available space and allow ample room for maintenance. Highlight, mark, list or indicate the materials, performance criteria and accessories that are being proposed. Submit shop drawings as early as required to support the project schedule. Allow for two weeks Engineer review time plus mailing time plus a duplication of this time for resubmittal if required.

Submittals and shop drawings shall not contain the firm name, logo, seal, or signature of the Engineer. They shall not be copies of the work product of the Engineer. If the Contractor desires to use elements of such product, refer to paragraph "Electronic Drawing Files" for procedures to be used.

The checking and subsequent approval of such shop drawings by the Engineer shall not relieve the Contractor from responsibility for errors in dimensions, details, size of members, quantities, omissions of components or fittings; coordination of electrical requirements; or for coordinating items with actual building conditions. Proceed with the procurement and installation of equipment only after receiving approved shop drawings relative to each item.

Submit a detailed sequence of operation. Pre-printed, generic material will not be accepted and will be rejected. Highlight, mark, list or indicate the materials, performance criteria and accessories that are being proposed.

Submit drawings showing fire alarm floor plans and a full building riser diagram. Fire alarm floor plans and riser diagram shall show fire alarm control panel, all fire alarm initiating devices and notification appliances. Show typical wiring diagrams of control panel/s, and each device and wiring connections required. Show all interfaces to other systems, such as temperature control systems, and security systems.

Where required by the AHJ, Contractor is responsible for obtaining a professional engineer or NICET stamp and signature on their shop drawing submittal. The Engineer is not responsible and will not provide this.

Shop drawings shall be produced using Computer Aided Design. Hand drawn documents will not be reviewed or approved.

Shop drawing scale shall match the Engineer's drawings where possible. Scale shall not be less than 3/32" = 1'-0".

Submit a bill of material and manufacturers product data for all devices and equipment.

Refer to Division 01 for acceptance of electronic submittals for this project. For electronic submittals, Contractor shall submit the documents in accordance with the procedures specified in Division 01. Contractor shall notify the Architect and Engineer that the shop drawings have been posted. If electronic submittal procedures are not defined in Division 01, Contractor shall include the website, user name and password information needed to access the submittals. For submittals sent by e-mail, Contractor shall copy the designated representatives of the Architect and Engineer. Contractor shall allow the Engineer review time as specified above in the construction schedule. Contractor shall submit only the documents required to purchase the materials and/or equipment in the electronic submittal and shall clearly indicate the materials, performance criteria and accessories being proposed. General product catalog data not specifically noted to be part of the specified product will be rejected and returned without review.

I. ELECTRONIC DRAWINGS

In preparation of shop drawings or record drawings, Contractor may, at his option, obtain electronic drawing files in AutoCAD or DXF format on CD-ROM disk, DVD disk, flash drive, or direct download, as desired, from the Engineer for a fee of $200 for a drawing set up to 12 sheets and $15 per sheet for each additional sheet. Contact the Architect for written authorization and Engineer for the necessary release agreement form and to specify shipping method and drawing format. In addition to payment, written authorization from the Architect and release agreement from the Engineer must be received before electronic drawing files will be sent.

J. RECORD DRAWINGS (AS-BUILT DRAWINGS)

During progress of the work in this division, Contractor shall maintain an accurate record of all changes made during the installation of the system. Upon completion of the work, accurately transfer all record information to three identical sets of the approved shop drawings. Insert one set into each copy of the manual described below.

See Division 01 and General Conditions for additional information.

K. QUALIFICATIONS

The manufacturer shall be a company specializing in manufacturing the products specified in this section with minimum three years documented experience. The installer shall be a company specializing in installing the products specified in this section with minimum three years documented experience, be a bonded and licensed contractor and merchant of electronic automated fire alarm systems, and employ full-time factory-trained installers and technicians. The equipment manufacturer's service department shall be fully stocked in standard parts and components and engaged in the maintenance of fire alarm systems. On-the-premises service shall be available within 4 hours of notification, 7 days a week, 24 hours a day. Furnish service and maintenance of fire alarm system for one year from date of substantial completion.

L. WARRANTIES

Warrant each system and each element thereof against all defects due to faulty workmanship, design, or material for a period of 12 months from date of Substantial Completion, unless specific items are noted to carry a longer warranty in the construction documents or manufacturer's standard warranty exceeds 12 months. Remedy all defects, occurring within the warranty period(s), as stated in the General Conditions and Division 01.

All corrective software modifications made during warranty periods shall be updated on all user documentation and on user and manufacturer archived software disks.

Warranties shall include labor and material, including travel expenses. Make repairs or replacements without any additional costs to the Owner, and to the satisfaction of the Owner, Architect, and Engineer.

Perform the remedial work promptly, upon written notice from the Engineer or Owner.

At the time of Substantial Completion, deliver to the Owner all warranties, in writing and properly executed, including term limits for warranties extending beyond the one year period and any actions the Owner must take in order to maintain warranty status. Each warranty instrument shall be addressed to the Owner and state the commencement date and term.

2. MATERIALS AND INSTALLATION

A. MANUFACTURERS

All new equipment shall be compatible with the Pittsburg State University's fire alarm standards.

B. FIRE ALARM CONTROL PANEL

The Fire Alarm Control Panel shall be UL listed under Standard 864 (Control Units for Fire-Protective Signaling Systems). Modular construction with a flush mounted enclosure.

The system shall incorporate one-way emergency Alarm via specified horns. Continuous supervision shall be provided along with specific information as to the type of failure.

Power Supply: Provide two separate and reliable power supplies. The control panel shall receive 120 Vac power via a dedicated branch circuit of the building's electrical system. Each shall have adequate capacity for the system. The fire alarm contractor shall submit battery calculations for review and approval. The calculations shall indicate each device and the load required in stand-by and alarm mode. The secondary power system shall be a battery-operated emergency power supply and charger with capacity for operating system in standby mode for 24 hours followed by alarm mode for 5 minutes.

System Supervision: Automatically detects and reports open circuits, shorts, and grounds of wiring for initiating device, signaling line, and notification appliance circuits. Alarm, supervisory and trouble signals shall be monitored in accordance with NFPA 72.

Initiating Device Circuits: Provide circuitry, which meets the performance requirements during abnormal conditions, based upon the style and class of the circuitry selected. Initiating device circuits shall be Class B.

Notification Appliance Circuits: Provide circuitry, which meets the performance requirements during abnormal conditions, based upon the style and class of the circuitry selected. Notification appliance circuits shall be Class B.

Signaling Line Circuits: Provide circuitry, which meets the performance requirements during abnormal conditions, based upon the style and class of the circuitry selected. Signaling line circuitry shall be Class B.

Auxiliary Relays: Provide sufficient SPDT auxiliary relay contacts to provide accessory functions specified.

Provide trouble acknowledge, and alarm silence switch.

The control panel shall have dedicated alarm, supervisory and trouble LED's and dedicated alarm, supervisory and trouble acknowledge switches.

Lamp Test: Manual lamp test function causes each LED to function at fire alarm control panel.

C. SEQUENCE OF OPERATIONS

Trouble Sequence of Operation: System or circuit trouble places system in trouble mode, which causes the following system operations:

1. Visible and audible trouble alarm indicated at fire alarm control panel and remote annunciator panel (if provided).
2. Trouble signal transmitted to supervising station.
3. Manual acknowledge function at fire alarm control panel silences audible trouble alarm; visible alarm is displayed until initiating failure or circuit trouble is cleared.

Supervisory Sequence of Operation: The activation of any sprinkler valve tamper switch or duct-mounted smoke detector places system in supervisory mode, which causes the following system operations:

1. Visible and audible supervisory alarm indicated by address at fire alarm control panel and remote annunciator panel (if provided).
2. Supervisory signal transmitted to supervising station.
3. Duct-mounted smoke detectors shall shutdown their respective unit upon detection of smoke and remain down until manually reset.
4. Fan-powered terminal units that are less than 2,000 cfm and are not provided with duct detection shall shutdown when its respective air handling unit is shutdown.
5. Manual acknowledge function at fire alarm control panel and remote annunciator panel silences audible supervisory alarm; visible alarm is displayed until device is returned to its normal position/supervisory condition is cleared.

Alarm Sequence of Operation: Actuation of an alarm initiating device places system in alarm mode, which causes the following system operations.

1. Audible notification appliances shall sound until silenced by the alarm silence switch at the control panel.
2. All visible alarm notification appliances shall display a continuous synchronized pattern until reset by the Alarm Reset Switch.
3. Alarm signal transmitted to supervising station.
4. The alarm LED shall flash on the control panel and remote annunciator panel until the alarm has been acknowledged at the control panel/remote annunciator panel. Once acknowledged, this same LED shall latch on and the custom label for the address in alarm shall be displayed on the alphanumeric LCD readout. A subsequent alarm received from another address after acknowledged shall flash the alarm LED on the control panel showing the new alarm information.
7. A pulsing alarm tone shall occur within the control panel until acknowledged.

D. INITIATING DEVICES

Smoke Detector (Photoelectric type): Device shall have visible indication of detector actuation and self-restoring, plug-in. Photoelectric detectors shall have sensitivity between 0.5 and 3.5 percent/foot smoke obscuration.

1 Combination Smoke and Carbon Monoxide Detectors: Smoke detector component of the detector shall be photoelectric and shall have visible indication of detector actuation; Detector complying with UL 2075 and listed for connection to fire alarm system. Detector shall include alarm contacts and trouble contacts. Detector shall send trouble alarm when nearing end-of-life, power supply problems, or internal faults. Locate, mount, and wire according to manufacturer's written instructions. Testable by introducing test carbon monoxide into the sensing cell. Test button simulates an alarm condition.

E. NOTIFICATION APPLIANCES

Alarm Horn: Surface type fire alarm horn. Sound rating: 90 dB at 10 feet.

Visible Alarm Notification Appliances (Strobes): Strobes shall be xenon or equivalent, unfiltered or clear filtered white light, intensity as indicated on drawings, flash rate range from 1 to 3 Hz, a maximum pulse duration of 0.2 sec with a maximum duty cycle of 40 percent. Strobe shall meet all requirements of the Americans with Disabilities Act.

Audible/Visible Alarm Notification Appliances (Horn/Strobes): Combination units shall provide a common enclosure for the fire alarm audible and visible alarm appliances and be UL listed for its purpose. Minimum audible level and strobe intensity shall meet all requirements for separate appliances.

G. FIRE ALARM WIRE AND CABLE

Fire Alarm Power Branch Circuits: Building wire as specified in Division 26.

All new signaling Line, Initiating Device, and Notification Appliance Circuits: Power limited fire-protective signaling cable, solid copper conductor, 300 Volts insulation, suitable for temperature, conditions and location installed. Minimum wire size for initiating device circuits, control circuits and notification appliance circuits shall be determined by calculations and manufacturer's requirements or recommendations. Wire and cable shall be twisted and shielded if recommended by the system manufacturer. Initiating, notification, and control circuits shall be sized based on 20 percent additional power consuming devices. The conductors shall meet the requirements of NEC Article 760.

All new wiring provided on this project shall be UL listed for the intended use.

3. EXECUTION

A. GENERAL

Install, program, and test all new equipment identified in this contract and revise existing equipment as noted.

The installation supervisor shall be on the job site during the entire installation. The installation supervisor shall maintain marked up copies of the drawings at the job site showing as-built conditions. These drawings shall be updated daily and available for Owner review.

Provide all required conduit and all associated hardware and install (pull), connect, and test all cable for a complete fire alarm system. Install all wiring in accordance with the guidelines of these specifications and documents as well as the NFPA codes and standards listed in these specifications.

B. INSTALLATION

Install all new wiring in conduit. Minimum allowable conduit size shall be 3/4 inch. Size the conduit so that conduit fill does not exceed 75 percent of NFPA 70 maximum fill requirements. Cables in vertical risers shall not exceed 50 percent of NFPA 70 maximum fill requirements. Conduit installation shall be as required by the Contractor's layout and as described in these specifications. All conduit field routing shall be acceptable to the Owner. Routing not acceptable shall be rerouted and replaced without expense to the Owner.

Conceal all wire, cable, conduit, and raceways in walls, ceiling spaces, electrical shafts, or closets in finished areas except as specifically noted otherwise. Conduit and raceways may be exposed in unfinished areas or where specifically approved by the Owner.

Except as otherwise specified or indicated on the drawings, Install all conduit parallel or perpendicular to dominant surfaces with right angle turns made of symmetrical bends or fittings. Except where prevented by the location of other work, a single conduit or a conduit group shall be centered on structural members.

Locate conduit at least six inches from hot water or steam pipes and from other hot surfaces. Conduit shall not block access to any existing equipment or fixtures.

Label all conduits and junction boxes as specified in Division 26.

Terminate all wiring at devices or panels using terminal connectors for screw type terminals. All terminal connectors for conductors shall be pre-insulated ring type or pre-insulated spade type. Pre-insulated terminal connectors shall include a vinyl sleeve, color coded to indicate conductor size. Pre-insulated terminal connectors shall include a metallic support sleeve bonded to the vinyl-insulating sleeve and designed to grip the conductor insulation.

Mount end-of-line device in box with last device or separate box adjacent to last device in circuit for conventional hardwired Class B initiating and notification appliance circuits.

Securely fasten conduit to all boxes and cabinets. Threads on metallic conduit shall project through the wall of the box to allow the bushing to butt against the end of the conduit. The locknuts both inside and outside shall then be tightened sufficiently to bond the conduit securely to the box. Conduit shall enter cabinets from the bottom and sides only.

Install ceiling mounted initiating devices in areas with exposed structure tight to underside of floor/roof deck.

Do not install smoke detectors in a direct air flow nor closer than 3 feet (1 meter) from an air supply diffuser or return air opening.

Install ceiling mounted visible and audible/visible notification appliances in areas with exposed structure to bottom of floor/roof structure or at 30 ft AFF, whichever is lower.

Install ceiling mounted visible and audible/visible notification appliances in areas with finished ceilings flush with bottom of ceiling or at 30 ft AFF, whichever is lower.

Install wall mounted visible and audible/visible notification appliances with visible element (strobe) between 80 inches and 96 inches above finished floor unless noted otherwise on drawings.

Install wall mounted audible devices with the top of the device at least 90 inches above finished floor or 6 inches below the ceiling, whichever is lower, unless noted otherwise on drawings. If combination devices are installed, they shall be installed per the visible signal device requirements.

Make conduit and wiring connections to equipment provided by others.

Provide strobe synchronization as required per NFPA 72.

C. FIELD QUALITY CONTROL

Systems shall be checked and tested in accordance with the instructions provided by the manufacturer to ensure that the system functions as required and is free of grounds, opens, and shorts. Each device shall be tested. Smoke detectors shall be tested with products of combustion.

Upon completion of the system installation and before the date of final acceptance, a factory-trained technician shall perform all necessary tests and adjustments and shall file a Letter of Certification and a Certificate of Completion (NFPA 72) with the Owner indicating that the system functions and conforms to the specifications.

Test in accordance with NFPA 72 and local fire department requirements.

D. MANUFACTURER'S FIELD SERVICES

Include services of factory trained and certified technician to supervise installation, adjustments, final connections, and system testing as performed by the Contractor's factory-trained technicians.

The equipment supplier's factory trained technician shall train the Owner's personnel in the proper use and maintenance of the system. Training sessions shall be conducted as needed, not to exceed a total of 2 sessions, with each session lasting a maximum of 4 hours each.

E. ACCEPTANCE TESTING

Upon completion of the system installation, a factory-trained technician shall perform all necessary tests and adjustments in the presence of the Owner's designated personnel.

END OF SECTION 28

PGAV ARCHITECTS
PECKHAM GUYTON ALBERS & VIETS, INC.
1900 W 47th Place, #300, Westwood, KS 66205
(913) 362-6500
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STATE OF KANSAS 12233 REGISTERED PROFESSIONAL ENGINEER

02/24/2022

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8345 LENEXA DRIVE, SUITE 300
LENEXA, KS 66214
TEL 913.742.5000 FAX 913.742.5001
WWW.HENDERSONENGINEERS.COM
2150005033
EXPIRES 10/31/2022

#	DATE	DESCRIPTION
1	02.24.22	Addendum 1

UNIVERSITY HOUSE

PITTSBURG STATE UNIVERSITY
PITTSBURG KANSAS
Building Number: 38500-0230

CONSTRUCTION DOCUMENTS

Original Size: 1 1/2" Drawing may have been reduced.
0" 1"

FIRE ALARM SPECIFICATIONS

DATE: 01-28-2022
DRAWN: Author
CHECKED: Checker
PGAV # 53458-00
CLIENT # A-014445
SHEET #
FA200

STEVE_DRYDEN