UNIVERSITY OF KENTUCKY
Purchasing Division

INVITATION FOR BIDS

CCK-2516-21
ADDENDUM # 4
01/13/2021

ATTENTION: This is not an order. Read all instructions, terms and conditions carefully.

IMPORTANT: BID AND ADDENDUM MUST BE RECEIVED BY 01-22-21 @ 3:00 P.M. LEXINGTON, KY TIME

Bidder must acknowledge receipt of this and any addendum as stated in the Invitation for Bids.

1. Please refer to and incorporate within the offer, the attached documents for Addendum #4.

   - Addendum #4 documents from Turner Construction Company and GBBN Architects Inc.

2. Clarification on Public Bid Openings: In accordance with COVID-19 response, this solicitation will be opened publicly via Zoom only. Visit the Purchasing Division Bid and Opportunities website (https://purchasing.uky.edu/bid-and-proposal-opportunities) to access the Zoom link. The Zoom link will be provided with the respective bid prior to the bid opening date and time.

OFFICIAL APPROVAL
UNIVERSITY OF KENTUCKY

_____

Procurement Manager / (859) 323-5405

SIGNATURE

_____

_____

Typed or Printed Name

University of Kentucky
Purchasing Division
322 Peterson Service Building
Lexington, KY 40506-0005

An Equal Opportunity University

UK 5th Floor Paitent Room Fit Out
ADDENDUM No. 4
CCK-2516-21
01/12/2021

Item No. 01 Re: Form of Proposal TC-183, Doors and Hardware, Attachment B, remove item 16.c. from this contractors scope of work.

14.c. ~~This contractor shall furnish hardware for ICU/CUU ENTRANCES as shown on the Contract Documents and in accordance with specification sections 08 4243, 08 087100, and 08 7100.1.~~

~~i. ICU/CUU Entrances and glazing are provided by TC-181 General Trades contractor. TC-183 Doors and Hardware contactor shall coordinate hardware With TC-181 General Trades to ensure a complete working system and deliveries as to not delay the installation of the doors.~~ (ADD #4)

Item No. 02 Re: Form of Proposal TC-185, Tiling, Attachment B, remove item 19. from this contractors scope of work.

19) ~~This contractor shall provide STONE FLOORING (COMPLETE) as shown on the Contract Documents and in accordance with specification section 09 6340. This work includes all stone flooring within the three (3) new public elevators.~~ (ADD #4)

Item No. 03 Re: Form of Proposal TC-186, Flooring, Attachment B, Revise Lump Sum Proposal to this contractors scope of work to include:

ALTERNATE No. 1

Provide an add for labor and material to install resilient flooring and stair treads from the 4th floor transfer level to the basement in each Stairs 04 and 05
ADD $_____

Breakout:
Material $_____
Labor $_____

(ADD #4)

Item No. 04 Re: Form of Proposal TC-186, Flooring, Attachment B, Add item 19.a. to this contractors scope of work.

19.a. The following was applied to the 5th floor concrete by TC-180 Preconstruction Demolition scope to clean off parts of existing roof membrane that were remaining from the original build: USG DUROCK™ BRAND LSP™ LIQUID SURFACE PROFILER. (ADD #4)

Item No. 05 Re: Form of Proposal TC-182, Architectural Woodwork, Attachment B, Revise Lump Sum Proposal to this contractors scope of work to include:

ALTERNATE No. 2

Provide a deduct for material to use owner provided wall protection per description in Specification 01 2300.
DEDUCT $_____

ALTERNATE No. 3

Provide an add for material to fabricate, deliver, and install all 12-3100-A002 Solid Surface Countertops, Backsplashes, and Sidesplashes.
ADD $_____

ALTERNATE No. 4

Provide an add for labor and any material needed to install owner provided casework as detailed in item 27 below and specifications 12 3100 and 12 3216.

ADD $_____

Breakout:

Material $_____

Labor $_____

(ADD #4)

Item No. 06 Re: Form of Proposal TC-182, Architectural Woodwork, Attachment B, remove item 27. from this contractors scope of work.

27) ~~This contractor shall receive and install MODULAR METAL CASEWORK OR PLASTIC-LAMINATE-CLAD CASEWORK (includes furnished counter tops, etc) as shown on the Contract Documents and in accordance with section 12 3100 or 12 3216. Currently the owner is receiving quotes from vendors for both spec sections (12 3100 and 12 3216). The Owner will choose only one vendor meaning only one spec section will apply.~~

~~a. Refer to article 2.2.A of specification section 12 3100 for clarity of work and as follows.~~

~~b. If casework base cabinets (12 3100 or 12 3216) are present, then countertop is by Owner's Vendor, either laminate or solid surface. Respective to 12 3100 or 12 3216 scope of counter tops, vendor will furnish four foot countertop wall cleats in open base cabinet wall areas for counter attachment to TC-182. This contractor to include epoxy (Solid Surfacing) welded seaming of Vendor counter tops. This contractor to provide tips, adhesive, and adhesive gun.~~

~~c. The owner's vendor will deliver material to a Pavilion A shell space (figure Pavilion A basement location for bidding purposes) and unpack or un-wrap each component. TC-182 is to verify with owner's vendor that all materials are of correct specification and to the shop drawing with installing contractor ensuring free of defects or damage. With acknowledgement from TC-182 that materials are complete, TC-182 becomes responsible the remainder of the work – this includes: protection of received materials, delivery to the project floors, room shake-out, assemble, installation including any additional "filler" trim, adjustment of doors, drawers, etc.~~

~~d. This contractor is to include installation of Vendor sloping tops and Metal Foot Rail at charting stations.~~

~~e. This contractor is to provide all fasteners necessary to install section 12 3100 and all items within this scope of work.~~

~~f. This contractor shall provide all sealants as required with the installation of this scope of work.~~

~~g. This contractor shall provide all required in wall blocking (section 06 1050). This includes top and bottom of wall cabinets. In addition to the hanging rail, attach each wall unit with fastener(s) at the bottom (required).~~

~~h. This contractor to furnish, install, maintain, secure, and remove temporary protection (Masonite type material) at charting station base cabinets until Corian countertops are installed. Purpose is to prevent excessive dirt and dust from entering the cabinets. Provide RAM Board or Builder Board like protection to Corian tops~~ (ADD #4)

Item No. 07 Re: Form of Proposal TC-187, Painting, Attachment B, Add item 23. to this contractors scope of work.

23) This contractor is to include repainting the walls of stairwells 04 and 05 from the 5th floor landing to the basement including the transfer landing on the 4th floor. (ADD #4)

Item No. 08 Re: Form of Proposal TC-188, Fire Protection, Attachment B, Revise item 40.a. to this contractors scope of work.

40.a) This Trade Contractor shall also include an additional forty (40) hours of BIM coordination to be used at the Owner/CM's discretion. (ADD #4)

Item No. 09 Re: Form of Proposal TC-189, Plumbing and Mechanical, Attachment B, Add item 25.g. to this contractors scope of work.

23.g) Refer to Attachment Q for AHUs shop drawings (ADD #4)

Item No. 10 Revise General Requirements Item 68.D. to include the following items:

68.D. TC-189 Plumbing and Mechanical shall provide an additional urinal, sink, and toilet. Contractor shall include all piping necessary to install and tie these into the existing system. Contractor shall include an additional instantaneous water heater for the additional sink similar to LavAdvantage SPEX8208T (ADD #4).

Item No. 11 Add “Attachment Q AHU Shop Drawings Reviewed” to the bid manual for contractors reference.

Item No. 12 Revise Attachment A, Additional Provisions, Add Attachment Q AHU Shop Drawings Reviewed Under item C.

Item No. 13 GBBN Architects Addendum No. 04 – include all work scope items, clarifications, etc. as detailed consistent with your trade contract work scope document.

Attachment "A"
ADDITIONAL PROVISIONS

A. GENERAL

Attachment A – Additional Provisions and Attachment B – (Technical) Scope of Work go together to define the requirements of this Subcontract. Attachment A is a more of a general Summary of the Contract Documents, Price, etc., while Attachment B is the Trade Specific (technical) Scope of Work.

The Additional Provisions and Scope of Work is intended to be general in nature. The intention is to have this Subcontractor perform all related work shown on the Contract Documents other than those items specifically indicated below to be excluded. The Additional Provisions and Scope of Work takes precedence over the Drawings & Specifications in the event of a conflict in trade assignment or responsibility. By accepting this contract, the Subcontractor is verifying that the plans and specifications clearly identify the Subcontractor's work.

The terms "Sub-contractor", "Trade contractor" & "Contractor" will be used interchangeably throughout the contract documents. A Sub-contractor, Trade contractor or contractor has a contract with Turner Construction Company, the Construction Manager. This Trade Contractor is responsible for all contract documents (specifications, drawings and scope of work).

B. CONTRACT DOCUMENTS

- Contract Drawings – Interventional Services Project # 2402.9 as prepared by GBBN Architects, dated October 27th, 2020.
- Project Manual, prepared by Turner Construction & GBBN Architects. – Volumes One (1) through Four (4) 5th Floor Patient Room Fit Out
- Addendum #__ dated _____ prepared by Turner

C. ADDITIONAL CONTRACT DOCUMENTS

- **Attachment "B" – Trade Contractor ___ Scope of Work**
- **Project General Requirements**
- Contract Document List - Refer to drawing TS
- **Attachment "C"** Project Safety Program dated April 30th, 2020
- **Attachment "D"** 5th Floor Outage Request Log
- **Attachment "E"** Accounting Procedures
- **Attachment "F"** Percentage Markup Sheet
- **Attachment "G"** Project Schedule
- **Attachment "H"** BIM Coordination Scope
- **Attachment "K"** CCIP Manual dated August 25th, 2020
- **Attachment "L"** Lean Subcontract Exhibit
- **Attachment "M"** PPE Standards COVID19
- **Attachment "N"** Zero Tolerance Policy
- **Attachment "P"** Delivery Schedule
- **Attachment "Q"** AHU Shop Drawings Reviewed (ADD #4)
- **Sketches** SK101-108
- **Project General Conditions**
- **Project Special Conditions**
- Note: The General Building Permit will be provided by the others (architect). Obtain all other required permits; submit copies to the Construction Manager.
- Note: This Trade Contractor is required to sign Turner form 36 subcontract agreement included in the scope of work manual, which takes precedence over the General & Special Conditions
- All "Additional Contract Documents" have either been provided to Subcontractor, or are attached to this contract. Signature of Contract by Subcontractor indicates receipt and acceptance of these documents as part of the Contract.

D. CONSTRUCTION SCHEDULE

- Refer to Project Milestone schedule (ATTACHMENT "G") included in project manual.

- Shift work, multiple mobilizations, and out of sequence work will be required. It is imperative that all milestones be met. The Bidders shall include all necessary costs, including, but not limited to, premium time, shift work, out of sequence work, etc. to meet these milestones.
- Due to the critical nature of the schedule, the Trade Contactor must supply the Construction Manager a detailed plan for his production on the project within 20 calendar days of Contract Award. Please note that this plan must be compatible and complimentary to the Project Schedule. Plan shall include the following items:
    A. Starting, peak, and final manpower requirements, including subcontractors. Include production rates if requested
    B. Shift work plan.
    C. Number of Foremen
    D. Anticipated lead times and permit approval.
    E. The Trade Contractor shall work with the Construction Manager and Contractors in "Pull Planning" and the 6-week look-ahead schedule, including manpower information, on a weekly basis. Compliance is a prerequisite for payment.

E. WORK INCLUDED

Refer to Attachment "B" – Scope of Work

F. SPECIAL REQUIREMENTS

- Sales/Use Tax Status: Refer to "Instruction to Bidders" of Bid Manual for details. This project is taxable, all applicable taxes in your bid.
- Prevailing Wage: N/A, not required.
- Insurance Program: This Project shall utilize a Contractor Controlled Insurance Program ("CCIP"). Refer to attachment D of Bid Manual for details, instructions, etc.
- Retainage: If job is Kentucky (any job) – Retainage Conditions shall be in accordance with the "Fairness in Construction Act" of 2007. Namely, Retainage for all Subcontractors shall be 10% until both the Project and the Subcontractor achieves 50% completion. At that point, retainage for all Subcontractors shall be reduced to 5% of Total Contract Value.
- E&O Insurance: N/A
- Builders Risk: (policy by Turner). Refer to Project General Requirements document for details including responsibility for deductible. Any such event occurring upon the Work site, covered under Builder's Risk policy and for which a claim is filed, the causing subcontractor shall be held responsible to incur the deductible cost of this policy in its entirety for said occurrence.
- Application for Payment: Unless otherwise directed or authorized, in writing, by Contractor, all Applications for Payment and all supporting documents (including but not limited to lien waivers, sworn statements, and the like) for Subcontractor and its sub-subcontractors and suppliers, shall be in electronic format and shall be submitted to Contractor using the Textura-CPM™ payment management system. Subcontractor shall be responsible for the fees and costs owed associated with Subcontractor's use of the Textura-CPM™ payment management system. Subcontractor shall include a similar provision in its sub-subcontracts and purchase orders. Fees to Subcontractors are calculated as 0.22% (22 basis points) of contract value, with a minimum fee of $50 and a maximum fee of $3,750. Fees to Subcontractors' sub-subcontractors and suppliers are a fixed fee of $100 per sub-subcontractor or supplier contract.
- Turner Accelerated Payment Program - The attached KENTUCKY Rider - Accelerated Payment Program amends and supplements your Agreement with Turner and provides you the opportunity to enroll in the Program through Textura CPM and receive accelerated payments from Turner on your invoices. Formal enrollment into the Program can then be accomplished via the Textura CPM system. Additional information and Program benefits are included in the attached Turner Accelerated Payment Program summary. You may be contacted by a representative from Turner or Textura who can provide additional information on the Program and answer questions you may have or you may call Textura at 1-866-TEXTURA (839-8872) with any questions.
- OSHA 30 Hour Certification: All subcontractors must have completed an OSHA 30 hour class. One person must be certified for all contracts under $5M, and two people must be certified for contracts over $5M. The 30 hour certified person(s) must be on-site 100% of the time. This OSHA 30 hour certification must be updated through Turner's 1.5 hour Safety Update Training every two years through Turner University.

ADDITIONAL PROVISIONS

- Stormwater Compliance: If this project is required to obtain an NPDES permit per the EPA, all subcontractors working on the site will be required to attend the Turner Stormwater Subcontractor Orientation and Pre-Plan meeting prior to beginning work, and weekly coordination meetings. Furthermore, Subcontractors involved in earth moving/disturbing activities (excavation, foundation or utility trenching/excavation, grading, landscaping, paving, on site batch plant) or those responsible for installing or maintaining BMP's will be required to take the online Turner Stormwater Subcontractor Short Course Intro into Erosion and Sediment Control prior to attending the preconstruction meeting. The person or persons taking this online course must have a regular presence on the project. All subcontractors must comply with the requirements of the Stormwater Permit.
- Asbestos/ Lead Awareness: **N/A**
- Waste Tracking Requirements: Subcontractor who includes removal of waste from the project site ("dumpsters") as part of their scope of work, will submit all waste data using TurnerTracker account (monthly cost paid by subcontractor or their waste hauler). Data must be entered into the Online Waste Tracking system by the fifth (5th) day of the month following the invoice period. Subcontractor shall make every effort to maximize percentage of material recycled.

  All Subcontractors shall comply with the project Construction Waste Plan. This may include sorting your construction waste and placing it in appropriate dumpsters (either co-mingled or site-sorted) per the project CWP. All subcontractors are required to recycle to the maximum extent possible per the terms of the Subcontract Agreement
- MBE/WBE participation: Refer to MBE/WBE Participation Goals document for details regarding the project inclusion program and/or goals for the University of Kentucky.
- No-Idling Standard: Trade partner agrees to comply with Turner's No-Idling Standard. All trade partner vehicles within the project site fence (including, but not limited to, transportation and construction equipment, delivery trucks and personal or company trucks) shall not idle. The only allowable exceptions to the standard are as follows:
  1. Ambient air temperature exceeds 85°F or falls below 32°F (or as defined by local or regional temperature limits, whichever is stricter)
  2. Engine idling is required for the function of auxiliary equipment (i.e. cranes, concrete pumps, etc.)
- **Additional Subcontract Agreement Article Pertaining to Harassment**

  This agreement includes and acknowledges the addition of the following Article as if inserted immediately following the Ethics and Compliance Article of this agreement as follows:

  New Article XV: Harassment

  It is the goal of Contractor to promote a work environment at the Project that is free from harassment of any kind. Contractor has ZERO TOLERANCE for harassment, including harassment on the basis of race, sex, gender, gender identity, gender expression, transgender status, sexual orientation, pregnancy, childbirth and other pregnancy-related conditions, color, national origin, ancestry, age, religious creed, citizenship, marital status (including registered domestic partners), parental status, physical disability, mental disability, medical condition, genetic information, military or veteran status (including protected veteran status), or any other characteristic or status protected by law. Subcontractor agrees to be bound by the Policy Statement on Harassment referenced in Article XXII below, and any violation or suspected violation of such policy by Subcontractor or any of its officers, agents, servants, employees, subcontractors or suppliers shall be considered as Subcontractor's failure to perform its obligations under the terms and conditions of this Agreement. Such failure shall be considered adequate and justifiable grounds for Contractor to effectuate its rights and remedies under the provisions of Article XI of this Agreement. Subcontractor shall actively promote a harassment-free work environment among its officers, agents, servants, employees, subcontractors, and suppliers.

G. WORK EXCLUDED

Refer to Attachment "B" – Scope of Work

H. ALTERNATE PRICES

Refer to Attachment "B" – Scope of Work for Description of Alternate

Attachment "A"
ADDITIONAL PROVISIONS

I. ALLOWANCES

Refer to Attachment "B" – Scope of Work for Description of Allowances. Contract Prices INCLUDES Allowances

J. UNIT PRICES

Refer to Attachment "B" – Scope of Work for Description of Unit Prices

K. CONTRACT PRICE SUMMARY

Base Bid Amount	$
Adjustments	
CONTRACT TOTAL	**$**

By execution of this Agreement, Subcontractor agrees that Subcontractor's proposal, including all quantities, terms, and conditions, is Null and Void. This Subcontract Agreement details the terms of the Agreement, and shall be the primary reference point for clarifications of issues during course of project.

END OF ADDITIONAL PROVISIONS

Attachments:

- Attachment B - Scope of Work for this Subcontract Agreement

Attachment "B"

SCOPE OF WORK
TC-182 – ARCHITECTURAL WOODWORK

UNIVERSITY OF KENTUCKY
CAPITAL CONSTRUCTION PROCUREMENT SECTION
FORM OF PROPOSAL **TC-182 ARCHITECTURAL WOODWORK**

Project No. 2402.9 Project Title: 5th Floor Fit Out

Purchasing Officer: Matt Spalding

NOTE: The following Form of Proposal shall be followed exactly in submitting a proposal for this work. If this copy is lost, an additional copy will be furnished upon written request to the authority issuing Contract Documents.

This Proposal is submitted by: _____

(NAME AND ADDRESS OF BIDDER)

Date: _____ _____

Telephone: _____ _____

TO: BID CLERK
UNIVERSITY OF KENTUCKY
CAPITAL CONSTRUCTION

PROCUREMENT
RM. 322 SERVICE BUILDING
LEXINGTON, KY. 40506-0005

INVITATION TO BID: CCK-2516-21

BID OPENING DATE: January 22nd, 2021 (ADD #2)

TIME: 3:00 P.M. E.D.T.

The Bidder, in compliance with your Invitation for Bids for the above referenced Project, having carefully examined the site of the Work, the Drawings and complete Contract Documents as defined in Article I of the General Conditions, as well as the Specifications affecting the work as prepared by the Consultant, hereby proposes to furnish all labor, materials, supplies and services required to construct the Project in accordance with the Contract Documents, within the time set forth therein, and at the price stated below without qualification. Bidder understands that successful bidder will enter into a contract with Turner Construction Company utilizing Turner's Subcontract Agreement Form 36 without modification.

The Bidder hereby acknowledges receipt of the following Addenda:

ADDENDUM NO._____ DATED _____

ADDENDUM NO._____ DATED _____

ADDENDUM NO. _____ DATED _____

ADDENDUM NO._____ DATED _____

(Here insert the number and date of any Addenda issued and received. If none has been issued and received, the word NONE should be inserted.)

NOTE: IN ADDITION TO THE SPECIFIC TRADE FORM OF PROPOSAL EACH SUBCONTRACTOR MUST ALSO SUBMIT FORMS FOUND IN THE SUPPLEMENTAL FORM OF PROPOSAL SECTION.

Attachment "B"

SCOPE OF WORK
TC-182 – ARCHITECTURAL WOODWORK

FORM OF PROPOSAL

AUTHENTICATION OF BID AND STATEMENT OF NON-COLLUSION AND NON-CONFLICT OF INTEREST
I hereby certify:

1. That I am the Bidder (if the Bidder is an individual), a partner in the Bidder (if the Bidder is a partnership), or an officer or employee of the bidding corporation having authority to sign on its behalf (if the Bidder is a corporation);

2. That the submitted Bid or Bids covering Capital Construction Procurement Section Invitation No. **CCK-2516-21** have been arrived at by the Bidder independently and have been submitted without collusion with, and without any agreement, understanding or planned common course of action with, any other contractor, vendor of materials, supplies, equipment or services described in the Invitation to Bid, designed to limit independent bidding or competition; as prohibited by provision KRS 45A.325;

3. That the contents of the Bid or Bids have not been communicated by the Bidder or its employees or agents to any person not an employee or agent of the Bidder or its surety on any bond furnished with the Bid or Bids and will not be communicated to any such person prior to the official opening of the Bid or Bids;

4. That the Bidder is legally entitled to enter into the contracts with the University of Kentucky and Turner Construction Company and is not in violation of any prohibited conflict of interest, including those prohibited by the provisions of KRS 164.390, and 45A.330 to 45A.340 and 45A.455;

5. This offer is good for 60 calendar days from the date this Bid is opened. In submitting the above, it is expressly agreed that upon proper acceptance by the Capital Construction Procurement Section of any or all items Bid above, a contract shall thereby be created with respect to the items accepted;

6. That I have fully informed myself regarding and affirm the accuracy of all statements made in this Form of Proposal including Bid Amount.

7. Unless otherwise exempted by KRS 45.590, the Bidder intends to comply in full with all requirements of the Kentucky Civil Rights Act and to submit data required by the Kentucky Equal Employment Act upon being designated the successful contractor.

8. That the bidding contractor and all subcontractors to be employed do not and will not maintain any facilities they provide for employees in a segregated manner and they are in full compliance with provisions of 41 CFR 60-1.8 that prohibits the maintaining of segregated facilities.

9. In accordance with KRS45A.110(2), the undersigned hereby swears under penalty of perjury that he/she has not knowingly violated any provision of the campaign finance laws of the Commonwealth of Kentucky and that the award of a contract to the bidder will not violate any provision of the campaign finance laws of the Commonwealth of Kentucky.

READ CAREFULLY - SIGN IN SPACE BELOW - FAILURE TO SIGN INVALIDATES BID

SIGNED BY_____ TITLE_____

PRINT NAME_____ FIRM_____

ADDRESS_____ AREA CODE & PHONE _____

_____ FAX_____

CITY STATE ZIP CODE

DATE_____ EMAIL_____

Attachment "B"

SCOPE OF WORK
TC-182 – ARCHITECTURAL WOODWORK

LUMP SUM PROPOSAL

The Bidder agrees to furnish all labor, materials, supplies and services required to complete the Work, for the above referenced Project, for the Capital Construction Procurement Section, University of Kentucky, as described in the Specifications and Contract Documents and shown on the Drawings enumerated below and as modified by the Addenda listed above.

TC-182 ARCHITECTURAL WOODWORK

FOR THE LUMP SUM OF_____
(USE WORDS)

_____DOLLARS AND_____CENTS.
(USE WORDS) (USE WORDS)

($_____) **BIDDER MUST TURN IN BID BREAKOUT SHEET WITH THIS FORM OF PROPOSAL**
(USE FIGURES)

ALTERNATE No. 2

Provide a deduct for material to use owner provided wall protection per description in Specification 01 2300.

DEDUCT $_____

ALTERNATE No. 3

Provide an add for material to fabricate, deliver, and install all 12-3100-A002 Solid Surface Countertops, Backsplashes, and Sidesplashes.

ADD $_____

ALTERNATE No. 4

Provide an add for labor and any material needed to install owner provided casework as detailed in item 27 below and specifications 12 3100 and 12 3216.

ADD $_____

Breakout:
Material $_____
Labor $_____

(ADD #4)

Current Experience Modification Rating _____

OSHA Incident Rates: Recordable _____ Date of Proposal_____

THE FOLLOWING ITEMS ARE HEREWITH ENCLOSED AS REQUIRED BY KRS 45A.185:

1. Bid Bond or Certified Check in an amount not less than five percent (5%) of total Bid.
2. Authentication of Bid and Statement of Non-Collusion and Non-Conflict of Interest.
3. VENDOR NUMBER: It is imperative that you furnish your Federal Employer Identification Number in the space provided below. Failure to do so may delay the processing of purchase orders issued to your firm.

_____
(Nine Digit Number)

Attachment "B"

SCOPE OF WORK
TC-182 – ARCHITECTURAL WOODWORK

4. Form of Proposal Supplemental Information

5. TC-_____ Bid Breakout sheet (from Attachment 'B')

SUPERINTENDENT

In accordance with Article 17 of the General Conditions a full-time superintendent will be required on this project. Below, please list the superintendent your firm will employ on this project. The successful Bidder will be required to furnish a resume of the superintendent's qualifications and or past projects.

List the Superintendent's Name _____

Attachment "B"

SCOPE OF WORK
TC-182 – ARCHITECTURAL WOODWORK

UNIVERSITY OF KENTUCKY
CAPITAL CONSTRUCTION PROCUREMENT SECTION
FORM OF PROPOSAL

UNIT PRICES

NOTE: Unit Prices shall include the furnishing of all labor, materials, supplies and services and shall include all items of cost, overhead and profit for the Contractor and any subcontractor involved, and shall be used uniformly without modifications for either additions or deductions. The Unit Prices as established shall be used to determine the equitable adjustment of the Contract Price in connection with changes, deletions or extra work performed under the Contract and the "Rules of Measurement" set forth in the General Conditions shall govern.

All Bidders will be required to complete and submit the following information with the bid. The information requested in this submittal is required to assist the University in determining contractor responsibility to complete the project being bid.

KY FAIRNESS ACT: UNIT PRICES SHALL BE SUBJECT TO REVIEW / ADJUSTMENT AT TIME OF BID REVIEW / AWARD BASED ON "NET COST" CONCEPT. PROVIDE DETAIL BREAKDOWN 24 HOURS AFTER BID.

HOURLY RATES: **UNIT PRICE**

Classification	Base rate	Fringes	Burden (Ins/taxes/other)	(if) (Pier Diems)	(SUM) (ST)	(SUM) (T&1/2)	(SUM) (DT)	OH/P % (5%)

Attachment "B"

SCOPE OF WORK
TC-182 – ARCHITECTURAL WOODWORK

BID BREAKOUT

Fill in the following breakdown of costs included in your base bid. Each item is to include labor, material & equipment. These will not be considered unit prices nor will the numbers listed here limit obligations required in the bid documents. It will be used only to aid in verifying completeness of the bids.

DESCRIPTION OF WORK	COST INCLUDED IN BID
Mobilizations/Engineering, Shop Drawings and Submittals, Safety	$ _____
Wall Blocking/Rough Carpentry	$ _____
Architectural Woodwork	$ _____
Solid Surface Fabrications	$ _____
Wall Protection – Wood Handrails and Crashrails	$ _____
Wall Protection – all remaining in spec less above	$ _____
Stainless Steel Counters	$ _____
~~Modular Metal Casework~~	~~$ _____~~ (ADD#4)
Owner Furnished Equipment	$ _____
Associated Sealants	$ _____
General Work Requirements	$ _____
Remaining work not listed above, Overhead & Profit (not to exceed 10% proposal)	$ _____
TOTAL BID AMOUNT (SHOULD MATCH PROPOSAL)	$ _____
Cost of Performance and Payment Bond ***DO NOT INCLUDE THIS COST IN YOUR BID***	$ _____

Attachment "B"

SCOPE OF WORK
TC-182 – ARCHITECTURAL WOODWORK

Attachment A – Additional Provisions and Attachment B – (Technical) Scope of Work go together to define the requirements of this Subcontract. Attachment A is a more of a general Summary of the Contract Documents, Price, etc., while Attachment B is the Trade Specific (technical) Scope of Work.

The work of this Agreement shall include, but not be limited to, all labor, materials, apparatus, hoisting, rigging, tools, equipment, plant, supplies, accessories, samples, submittals, shop drawings, certifications, engineering, layout, transportation, storage, supervision, temporary construction, special services, contributions, insurance, taxes (unless specifically excluded by the Contract Documents), compliance with all governing agencies (city, county, state, federal and others as may be required), permits, fees, all other services and facilities and other items necessary for the performance of the **Fire Protection Work** as shown, detailed and/or implied in the contract documents outlined in the General Scope of Work.

The Scope of Work Document is being provided for your use as a general guideline. Please note, this Document is not all-inclusive. It is this Subcontractor's responsibility to provide a complete bid, including all work for this trade indicated on ALL of the contract documents (include plans, specifications, Bid Manual, etc.). It is this Subcontractor's responsibility for the entire scope of this Bid Package and coordination between all trades.

E) WORK INCLUDED - SCOPE-SPECIFIC ITEMS

1) Trade Specifications Specifically Included, but not limited to the following:

a) **DIVISION 00 – PROCUREMENT & CONTRACTING REQUIREMENTS (ALL SECTIONS)**
DIVISION 01 – GENERAL REQUIREMENTS (ALL SECTIONS)

DIVISION 6	**WOODS, PLASTICS AND COMPOSITES**
SECTION 06 1050	MISCELLANEOUS ROUGH CARPENTRY
SECTION 06 4000	ARCHITECTURAL WOODWORK
SECTION 06 6116	SOLID SURFACING FABRICATIONS
DIVISION 7	**THERMAL & MOISTURE PROTECTION**
SECTION 07 8110	APPLIED FIREPROOFING – PATCHING (PARTIAL)
SECTION 07 8400	FIRESTOPPING (PARTIAL)
SECTION 07 9200	JOINT SEALANTS
DIVISION 9	**FINISHES**
SECTION 09 0600.1	SCHEDULE OF FINISHES
SECTION 09 0600.2	MATERIAL AND COLOR SCHEDULE
SECTION 09 7700	SPECIAL WALL SURFACES
SECTION 09 7700.1	SPECIAL WALL PROTECTION SCHEDULE
DIVISION 10	**SPECIALTIES**
SECTION 10 2600	WALL PROTECTION
DIVISIN 12	**FURNISHINGS**
~~SECTION 12 3100~~	~~MODULAR METAL CASEWORK (PARTIAL)~~ (ADD #4)
SECTION 12 3113	STAINLESS STEEL COUNTERS
~~SECTION 12 3216~~	~~MANUFACTURED PLASTIC-LAMINATE-CLAD CASEWORK~~ (ADD #4)
DIVISIN 13	**SPECIAL CONSTRUCTION**
SECTION 13 4275	INTEGRATED INTERIOR ASSEMBLIES

b) This Trade Contractor is also responsible for trade specifications not specifically listed above but required by reference in the listed specifications or as required to perform the scope of work described herein, as well as the Division 0 and Division 1 specifications and the use of the Construction Documents as a whole.

c) Subcontractor includes all work indicated in specification, unless this scope of work specifically and clearly excludes a portion of a specification.

2) Contract Price is LUMP SUM. There shall be NO additional labor and material escalations allowed
3) Examination of Site – Subcontractor warrants that they have sufficiently reviewed the project site to inform themselves of all items about existing site that are relevant to their work, and the cost of their work.
4) Include protection all adjacent structures during performance of this work. Plan for protection of adjacent structures must be part of the overall plan submitted for approval prior to start of work
5) **SITE LOGISTICS:** Refer to the Site Logistics plans included in the Contract Documents. Delivery trucks are to be scheduled with Turner at least one (1) week in advance. See Attachment P for delivery days/times.
6) Subcontractor change order requests shall be provided with sufficient detail (as acceptable to Turner) to allow for satisfactory review. Subcontractor shall be allowed a maximum mark up for overhead and profit per the markup provisions included in the Subcontract Agreement, or as clarified in Contract Documents above
7) Subcontractor understands that **time is of the essence** in the prosecution of Work under this agreement.
8) Verify layout provided by others. Where this subcontractor is performing work using layout provided by others, this subcontractor shall perform sufficient verification of that layout to reasonably ascertain the validity of that layout. Any deficiencies (or suspected deficiencies found) shall be reported to Turner immediately to allow corrections as needed before start of work by this subcontractor.
9) All Subcontractors must be licensed as required by local, State, or Federal jurisdiction required for work of this trade in this project location
10) This Subcontractor will comply with Turner's corporate safety policy and comply with Site Specific Safety Plan that will include but is not limited to 100% tie-off above 6 feet, 100% Safety Glasses, High Visibility Vests or High Vis style T-Shirts with reflective strips, 100% glove policy, Ladders Last Policy and Nothing Hits the Ground. If you are unfamiliar with any of these policies please ask to see the policy prior to submitting your bid. Failure to be familiar with these policies will not exclude you from complying with them.
11) **Refer to Project General Work Requirements**" in volume one of the project manual. Any costs for work scope items listed in this section shall be included in your lump sum bid. Some work items are listed for specific trade contractors and they shall include those costs in their respective total lump sum bid price.
12) Condoc keynote legend will dictate your scope of work unless noted otherwise.
13) This Trade Contractor shall participate in the construction of on-site **mock-ups** as specified and indicated by the documents and/or noted elsewhere. This shall include providing of materials required for this trade contract scope of work, coordinating with other trade contractors with regard to sequencing of installations and protection of materials etc..., furnishing shop drawings and /or setting drawings and so on. Materials for in place or interim mock-ups shall be secured in advance of normal procurement to allow for ALL trade contractor installations, owner/designer and user reviews and evaluations, meetings, approvals and directive if applicable. Mockups are understood to start with arrangement of wall rough-in through complete room finishes.
14) This contractor shall provide **MISCELLANEOUS ROUGH CARPENTRY** (PARTIAL) as shown on the Contract Documents and in accordance with section 06 1050 which includes but not limited to:
    a. All wood and metal blocking required for attachment of work in your scope.
    b. This contractor is to provide all Blocking required (whether explicitly shown on the Contract Documents or not) for the installation of items in this scope of work.
15) This contractor shall provide **ARCHITECTURAL WOODWORK** (COMPLETE) as shown on the Contract Documents and in accordance with section 06 4000.
16) This contractor shall provide **SOLID SURFACING FABRICATIONS** (COMPLETE) as shown on the Contract Documents and in accordance with section 06 6116.

Attachment "B"

SCOPE OF WORK
TC-182 – ARCHITECTURAL WOODWORK

17) This contractor shall provide **APPLIED FIREPROOFING** (PATCHING) (as related to this scope of work) as shown on the Contract Documents and in accordance with section 07 8116.

18) This contractor shall provide **FIRESTOPPING** (PATCHING**)** (as related to this scope of work) as shown on the Contract Documents and in accordance with section 07 8400.

19) ALL trade contractors shall provide **JOINT SEALANTS** (as related to this scope of work) as shown on the Contract Documents and in accordance with section 07 9200.

    a. Note specification section 01 2500 for clarification of owner furnished and installed items, Provide sealants for owner furnished items installed by this trade contractor.

    b. Include sealants indicated on documents as applicable for this scope of work to contiguous surfaces.

    c. Specifically this contractor to seal all Midmark, or Plastic laminate-clad casework cabinets and all owner furnished/owner installed items in patient rooms (example ORI furniture and staff cabinets) and all owner installed PPE cabinets in corridors.

20) ALL trade contractors shall coordinate/incorporate the **SCHEDULE FOR FINISHES** (as related to this scope of work) into their scope of work as shown on the Contract Documents and in accordance with section 09 0600.1.

21) ALL trade contractors shall coordinate/incorporate the **MATERIAL & COLOR SCHEDULE** (as related to this scope of work) into their scope of work as shown on the Contract Documents and in accordance with section 09 0600.2.

22) ALL trade contractors shall coordinate/incorporate the **ROOM FINISH SCHEDULES** into their scope of work as shown on the Contract Documents.

23) This contractor shall provide **SPECIAL WALL SURFACES** (COMPLETE) as shown on the Contract Documents and in accordance with section 09 7700 and 09 7700.1 (Schedule). This includes all blocking required for installation.

24) This contractor shall provide **WALL PROTECTION** (COMPLETE) as shown on the Contract Documents and in accordance with section 10 2600. This contractor is to include caulking the edges of all metal corner guards with clear silicone caulk.

    a. All CG-2 corner guards are to be from the floor to specified height in documents. Wall base will terminate to this.

25) This contractor shall receive, shake-out and install (set) **OWNER EQUIPMENT** as shown on the Contract Documents and in accordance with sections of this scope of work and/or specification section 01 2500 for clarification of owner furnished and installed items.

26) This contractor shall provide **STAINLESS STEEL COUNTERS** (COMPLETE) as shown on the Contract Documents and in accordance with section 12 3113.

~~27) This contractor shall receive and install **MODULAR METAL CASEWORK OR PLASTIC LAMINATE-CLAD CASEWORK** (includes furnished counter tops, etc) as shown on the Contract Documents and in accordance with section 12 3100 or 12 3216. Currently the owner is receiving quotes from vendors for both spec sections (12 3100 and 12 3216). The Owner will choose only one vendor meaning only one spec section will apply.~~

~~a. Refer to article 2.2.A of specification section 12 3100 for clarity of work and as follows.~~

~~b. If casework base cabinets (12 3100 or 12 3216) are present, then countertop is by Owner's Vendor, either laminate or solid surface. Respective to 12 3100 or 12 3216 scope of counter tops, vendor will furnish four foot countertop wall cleats in open base cabinet wall areas for counter attachment to TC-182. This contractor to include epoxy (Solid Surfacing) welded seaming of Vendor counter tops. This contractor to provide tips, adhesive, and adhesive gun.~~

~~c. The owner's vendor will deliver material to a Pavilion A shell space (figure Pavilion A basement location for bidding purposes) and unpack or un-wrap each component. TC-182 is to verify with owner's vendor that all materials are of correct specification and to the shop drawing with installing contractor ensuring free of defects or damage. With acknowledgement from TC-182 that materials are complete, TC-182 becomes responsible the remainder of the work - this includes: protection of received materials, delivery to the project~~

~~floors, room shake-out, assemble, installation including any additional "filler" trim, adjustment of doors, drawers, etc.~~

~~d. This contractor is to include installation of Vendor sloping tops and Metal Foot Rail at charting stations.~~

~~e. This contractor is to provide all fasteners necessary to install section 12 3100 and all items within this scope of work.~~

~~f. This contractor shall provide all sealants as required with the installation of this scope of work.~~

~~g. This contractor shall provide all required in-wall blocking (section 06 1050). This includes top and bottom of wall cabinets. In addition to the hanging rail, attach each wall unit with fastener(s) at the bottom (required).~~

~~h. This contractor to furnish, install, maintain, secure, and remove temporary protection (Masonite type material) at charting station base cabinets until Corian countertops are installed. Purpose is to prevent excessive dirt and dust from entering the cabinets. Provide RAM Board or Builder Board like protection to Corian tops~~ (ADD #4)

28) Provide removable panels shown on documents or required in accordance with documents for MEP rough-in or access. Provide all "Architectural Woodwork" cut-ins.

29) Provide and install grommets every 24 inches or as written in the project specifications on every counter, work station top, etc. (including 12 3100 or 12 3216 provided materials). This includes appropriate hole and grommet cover, color to be coordinated with Construction Manager, at locations coordinated with Project Superintendent.

F. CONSTRUCTION SCHEDULE

Contract Price is based on the project schedule included in the bid manual and as clarified within these Additional Provisions.

G. WORK EXCLUDED

This Scope of Work shall exclude the following

1) Payment & Performance Bond

H. ALTERNATE PRICES

Alternates shall be complete for providing only the Work with no other credits. All alternate prices are to be priced as stand-alone alternates. Any number of alternates, or no alternates, may be accepted as part of this Work.
Indicate Add/Deduct Price on the BID FORM

2) Wall Protection: Reference specification section 01 2300.3.1.C – TC-182 shall review material during pre-bid walk through. TC-182 will be responsible to transport off-site, install any necessary final finishes to the product per section 06 4000, and transport back to site as needed for installation.

3) Solid Surface Fabrications: Reference specification section 01 2300.3.1.A – TC-182 would provide and install solid surface counter tops, back splashes, and sidesplashes for spec section 12 3100 or spec section 12 3216 and necessary cleating to support counter tops. Base cabinets and upper cabinets would still be by vendor.

4) Install Owner Provided Casework

I. ALLOWANCES

The following Allowances **are to be included in the base bid**:

1) None

The above allowances are to be included in the base bid/Subcontract Price. All overhead and profit related to the Work performed under each Allowance is to be included in the Base Bid/Subcontract Price. Only direct Labor and

Material costs authorized in writing by the Construction Manager after approval by the Owner are to be charged to the Allowance. Progress Payments will be made against Allowance expenditures, based on approved monthly invoices & writing Allowance Authorization from the Construction Manager/Owner. Any unused funds remaining in these allowances will be credited back to the Project.

J. UNIT PRICES

The following unit prices are applicable for changes in the Work. The unit prices are for Work complete and in place and include all costs such as material, labor, equipment, freight, taxes, insurance, fringe benefits, and overhead and profit. Also include costs for coordination with other trades work where applicable. In the event the unit prices quoted exceed industry standards or fair market value, the Turner reserves the right to request pricing for changes at cost plus allowable mark-up for overhead and profit or a lump-sum under the terms of the Agreement

1) Labor Rates - Submit detailed labor rates to Turner Project Manager for approval. Detail shall show all fringes, benefits, taxes, insurance, markups, and any other add-ons to allow verification of rate.
   - See "Form of Proposal" (Bid Form) for bid day information. The apparent low bidder will submit detailed breakdown with-in 24 hours after bid day.
2) Equipment Rates – Submit detailed rates for equipment that may be used on project, and may be part of change order pricing.

END OF TECHNICAL SCOPE OF WORK

Attachment "B"
SCOPE OF WORK
TC-182 – ARCHITECTURAL WOODWORK

FORM OF PROPOSAL
SUPPLEMENTAL INFORMATION

THE FOLLOWING INFORMATION PERTAINS TO ALL TRADE CONTRACTORS

NOTE: MUST BE SUBMITTED WITH THE BID SUBMITTAL.
Failure to comply will result in rejection of Bidder's Proposal.

Contractor Report of Prior Violations of
Chapters 136,139, 141, 337, 338, 341, and 342

Pursuant to KRS 45A.485, the Contractor shall, prior to the award of a Contract, reveal final determinations of any violations of the provisions of KRS Chapters 136, 139, 141, 337, 338, 341, and 342 by the Contractor that have occurred in the previous five (5) year period.

This statute also requires for the duration of the Contract established, the Contractor be in continuous compliance with the provisions of Chapters 136, 139, 141, 337, 338, 341, and 342 that apply to the Contractor's operations. The Contractor's failure to reveal a final determination of a violation of KRS Chapters 136, 139, 141, 337, 338, 341, and 342, or failure to comply with any of the above cited statutes for the duration of the Contract shall be grounds for the cancellation of the Contract, and the disqualification from eligibility for future contracts for a period of two (2) years.

The Contractor, by signing and submitting a Bid on this Invitation, agrees as required by KRS 45A.485 to submit final determinations of any violations of the provisions of KRS Chapters 136, 139, 141, 337, 338, 341, and 342 that have occurred in the previous five (5) years prior to the award of a Contract and agrees to remain in continuous compliance with the provisions of these statutes during the duration of any contract that may be established. Final determinations of any violations of these statutes, must be provided to the University by the successful Contractor prior to the award of a Contract.

BUSINESS CLASSIFICATION

Please complete this form which is necessary for the University of Kentucky vendor database.
Mark only one classification. Refer to "Definitions" for assistance in determining correct classification.

(01)____Small Business

(02)____Large Business

(03)____Disadvantaged Small Business

(04)____Disadvantaged Large Business

(05)____Woman-Owned Small Business

(06)____Woman-Owned Large Business

(07)____Disadvantaged Woman-Owned Small Business

(08)____Disadvantaged Woman-Owned Large Business

(09)____Other

Attachment "B"

SCOPE OF WORK
TC-182 – ARCHITECTURAL WOODWORK

DEFINITIONS

(01) SMALL BUSINESS: A business concern that is organized for profit, is independently owned and operated, is not dominant in the field of operations in which it is bidding, and meets the size standards as prescribed in the Code of Federal Regulations, Title 13, Part 121. Consult your local or district Small Business Administration (SBA) office if further clarification is needed.

(02) LARGE BUSINESS: A business concern that exceeds the small business size code standards established by SBA.

(03) DISADVANTAGED SMALL BUSINESS: A business concern (a) that is at least 51 percent owned by one or more socially and economically disadvantaged individuals (as defined below), or a publicly owned business, having at least 51 percent of its stock owned by one or more socially and economically disadvantaged individuals; and (b) has its management and daily business operations controlled by one or more such individuals. Socially and economically disadvantaged individuals include Black Americans, Hispanic Americans, Native Americans, Asian-Pacific Americans and other minorities or individuals found to be disadvantaged by the SBA.

(04) DISADVANTAGED LARGE BUSINESS: A concern that meets the definition of socially and economically disadvantaged individuals, but which is not a small business by the SBA's size standards.

(05) WOMAN-OWNED SMALL BUSINESS: A small business that is at least 51 percent owned by a woman or women who also control and operate it. "Control" in this context means exercising the power to make policy decisions. "Operate" means actively involved in the day to day management.

(06) WOMAN-OWNED LARGE BUSINESS: A concern that meets the definition of woman owned and operated, but which is not a small business by the SBA's standards.

(07) DISADVANTAGED, WOMAN-OWNED SMALL BUSINESS: A concern that meets the definition of both (03) and (05) above.

(08) DISADVANTAGED, WOMAN OWNED LARGE BUSINESS: A concern that meets the definition of both (04) and (06) above.

(09) OTHER: A concern that does not meet any of the above definitions.

BIDDER'S QUALIFICATIONS

The Commonwealth of Kentucky Model Procurement Code (KRS 45A.080) requires contracts to be awarded, "to the responsive and responsible bidder whose bid offers the best value" to the University of Kentucky. In order to determine if the Bidder has the experience, qualifications, resources and necessary attributes to provide the quality workmanship, materials and management required by the plans and specifications, the Bidder may be required to complete and submit the information requested on the University of Kentucky Contractor Bidder Determination of Responsibility questionnaire. Failure to provide the information requested on the questionnaire or failure to provide any additional submittals or information that may be requested to make this determination may be grounds for a declaration of nonresponsibility with respect to the Bidder. A copy of the Contractor Determination of Responsibility questionnaire is available upon request to all Bidders.

Attachment "B"

SCOPE OF WORK
TC-182 – ARCHITECTURAL WOODWORK

TIME LIMIT FOR EXECUTION OF CONTRACT DOCUMENTS

It is further agreed, that in the event this Proposal is accepted by the Owner and the undersigned shall fail to execute the Contract and furnish satisfactory Payment and Performance Bond within ten (10) consecutive calendar days from the date of notification of the award of the Contract, the Owner may at his option, determine that the undersigned has abandoned the Contract and thereupon, the Proposal shall become null and void and the Bid guarantee, check or Bid bond which accompanied it shall be forfeited and become the property of the Owner as liquidated damages for each failure and no protest pursuant to such action will be made. If the Undersigned shall execute the Contract, and furnish satisfactory Payment Bond and Performance Bond, it is understood that the Bid Guarantee or Bid Bond will be returned to the undersigned by the Owner.

IDENTIFICATION OF MINORITY SUBCONTRACTORS AND MATERIAL SUPPLIERS

Participation of Minority and Women owned Contractors and businesses.

The University of Kentucky encourages and supports the participation of minority and women owned businesses. Goal is 10% MBE/WBE

1. Minority and Women Subcontractors

_____

_____

_____

_____

2. Minority and Women Material Suppliers

_____

_____

_____

_____

This proposal includes _____% certified MBE participation

This proposal includes _____% certified WBE participation

If your firm has no minority or women owned subcontractors or suppliers, it is required that you complete the list of minority and/or women owned businesses below. List the names of firms that were solicited to bid the project and describe why they were not successful (i.e. not low bid, did not respond, etc).

Attachment "B"

SCOPE OF WORK
TC-182 – ARCHITECTURAL WOODWORK

RECORD OF MBE/WBE SOLICITATION

_____ Certifies that the following
BIDDER'S NAME

Minority/Women-Owned firms were contacted to solicit pricing as subcontractors/suppliers for Invitation to Bid No. _____ The following firms were not selected for use on this project for the reasons stated in the **RESULT** column.

This list of Minority or Women owned firms is to be executed and submitted as a part of the Bidder's Proposal. Failure to comply will result in rejection of Bidder's Proposal.

FIRM NAME	MBE/WBE	WORK ITEMS SOLICITED	RESULT: NO RESPONSE OR NOT LOW BIDDER

_____
Signature Date

_____
Title

Attachment "B"

SCOPE OF WORK
TC-182 – ARCHITECTURAL WOODWORK

LIST OF MATERIALS AND EQUIPMENT

The apparent low bidder will be required to furnish this information within 24 hours of bid submittal. Failure to comply will result in rejection of Bidder's Proposal.

Each item listed under the different phases of construction must be clearly identified so that the Owner will definitely know what the Bidder proposes to furnish.

The use of a manufacturer's or dealer's name only, or stating "as per Plans and Specifications," will not be considered as sufficient identification.

Where more than one "Make" or "Brand" is listed for any one item, the Owner has the right to select the one to be used.

CONTRACTOR NAME & ADDRESS: _____
_____
_____
_____

TRADE CONTRACT: TC- _____ **SCOPE OF WORK: _____**
(INSERT NUMBER) **(INSERT NAME OF TRADE CONTRACT)**

The information requested in this submittal is required to assist the University in determining contractor responsibility to complete the project being bid.

ITEM	MATERIALS AND EQUIPMENT	BRAND OR MANUFACTURER

Attachment "B"

SCOPE OF WORK
TC-182 – ARCHITECTURAL WOODWORK

PRIMARY LIST OF PROPOSED SUBCONTRACTORS

The apparent low bidder will be required to furnish this information within 24 hours of bid submittal. Failure to comply will result in rejection of Bidder's Proposal.

All subcontractors are subject to the approval of the Capital Construction Procurement Section and Capital Project Management Division, University of Kentucky, Lexington, KY.

If certain branches of the Work are to be done by the Prime Contractor, so state.

CONTRACTOR NAME & ADDRESS: _____
_____
_____

TRADE CONTRACT: TC - _____ SCOPE OF WORK:_____
(INSERT NUMBER) (INSERT NAME OF BID CATEGORY)

DIVISION OF WORK	NAME AND ADDRESS OF SUBCONTRACTOR

Attachment "B"

SCOPE OF WORK
TC-183 – DOORS AND HARDWARE

UNIVERSITY OF KENTUCKY
CAPITAL CONSTRUCTION PROCUREMENT SECTION
FORM OF PROPOSAL **TC-183 DOORS AND HARDWARE**

Project No. 2402.9 Project Title: 5th Floor Fit Out

Purchasing Officer: Matt Spalding

NOTE: The following Form of Proposal shall be followed exactly in submitting a proposal for this work. If this copy is lost, an additional copy will be furnished upon written request to the authority issuing Contract Documents.

This Proposal is submitted by: _____

(NAME AND ADDRESS OF BIDDER)

Date: _____ _____

Telephone: _____ _____

TO: BID CLERK
UNIVERSITY OF KENTUCKY
CAPITAL CONSTRUCTION

PROCUREMENT
RM. 322 SERVICE BUILDING
LEXINGTON, KY. 40506-0005

INVITATION TO BID: CCK-2516-21

BID OPENING DATE: January 22nd, 2021 (ADD #2)

TIME: 3:00 P.M. E.D.T.

The Bidder, in compliance with your Invitation for Bids for the above referenced Project, having carefully examined the site of the Work, the Drawings and complete Contract Documents as defined in Article I of the General Conditions, as well as the Specifications affecting the work as prepared by the Consultant, hereby proposes to furnish all labor, materials, supplies and services required to construct the Project in accordance with the Contract Documents, within the time set forth therein, and at the price stated below without qualification. Bidder understands that successful bidder will enter into a contract with Turner Construction Company utilizing Turner's Subcontract Agreement Form 36 without modification.

The Bidder hereby acknowledges receipt of the following Addenda:

ADDENDUM NO._____ DATED _____

ADDENDUM NO._____ DATED _____

ADDENDUM NO. _____ DATED _____

ADDENDUM NO._____ DATED _____

(Here insert the number and date of any Addenda issued and received. If none has been issued and received, the word NONE should be inserted.)

NOTE: IN ADDITION TO THE SPECIFIC TRADE FORM OF PROPOSAL EACH SUBCONTRACTOR MUST ALSO SUBMIT FORMS FOUND IN THE SUPPLEMENTAL FORM OF PROPOSAL SECTION.

Attachment "B"

SCOPE OF WORK
TC-183 – DOORS AND HARDWARE

FORM OF PROPOSAL

AUTHENTICATION OF BID AND STATEMENT OF NON-COLLUSION AND NON-CONFLICT OF INTEREST
I hereby certify:

1. That I am the Bidder (if the Bidder is an individual), a partner in the Bidder (if the Bidder is a partnership), or an officer or employee of the bidding corporation having authority to sign on its behalf (if the Bidder is a corporation);

2. That the submitted Bid or Bids covering Capital Construction Procurement Section Invitation No. **CCK-2516-21** have been arrived at by the Bidder independently and have been submitted without collusion with, and without any agreement, understanding or planned common course of action with, any other contractor, vendor of materials, supplies, equipment or services described in the Invitation to Bid, designed to limit independent bidding or competition; as prohibited by provision KRS 45A.325;

3. That the contents of the Bid or Bids have not been communicated by the Bidder or its employees or agents to any person not an employee or agent of the Bidder or its surety on any bond furnished with the Bid or Bids and will not be communicated to any such person prior to the official opening of the Bid or Bids;

4. That the Bidder is legally entitled to enter into the contracts with the University of Kentucky and Turner Construction Company and is not in violation of any prohibited conflict of interest, including those prohibited by the provisions of KRS 164.390, and 45A.330 to 45A.340 and 45A.455;

5. This offer is good for 60 calendar days from the date this Bid is opened. In submitting the above, it is expressly agreed that upon proper acceptance by the Capital Construction Procurement Section of any or all items Bid above, a contract shall thereby be created with respect to the items accepted;

6. That I have fully informed myself regarding and affirm the accuracy of all statements made in this Form of Proposal including Bid Amount.

7. Unless otherwise exempted by KRS 45.590, the Bidder intends to comply in full with all requirements of the Kentucky Civil Rights Act and to submit data required by the Kentucky Equal Employment Act upon being designated the successful contractor.

8. That the bidding contractor and all subcontractors to be employed do not and will not maintain any facilities they provide for employees in a segregated manner and they are in full compliance with provisions of 41 CFR 60-1.8 that prohibits the maintaining of segregated facilities.

9. In accordance with KRS45A.110(2), the undersigned hereby swears under penalty of perjury that he/she has not knowingly violated any provision of the campaign finance laws of the Commonwealth of Kentucky and that the award of a contract to the bidder will not violate any provision of the campaign finance laws of the Commonwealth of Kentucky.

READ CAREFULLY - SIGN IN SPACE BELOW - FAILURE TO SIGN INVALIDATES BID

SIGNED BY_____ TITLE_____

PRINT NAME_____ FIRM_____

ADDRESS_____ AREA CODE & PHONE _____

_____ FAX_____

CITY STATE ZIP CODE

DATE_____ EMAIL_____

Attachment "B"

SCOPE OF WORK
TC-183 – DOORS AND HARDWARE

LUMP SUM PROPOSAL

The Bidder agrees to furnish all labor, materials, supplies and services required to complete the Work, for the above referenced Project, for the Capital Construction Procurement Section, University of Kentucky, as described in the Specifications and Contract Documents and shown on the Drawings enumerated below and as modified by the Addenda listed above.

TC-183 DOORS AND HARDWARE

FOR THE LUMP SUM OF_____
(USE WORDS)

_____DOLLARS AND_____CENTS.
(USE WORDS) (USE WORDS)

($_____) **BIDDER MUST TURN IN BID BREAKOUT SHEET WITH THIS FORM OF PROPOSAL**
(USE FIGURES)

ALTERNATES – NONE

Current Experience Modification Rating _____

OSHA Incident Rates: **Recordable** _____ **Date of Proposal**_____

THE FOLLOWING ITEMS ARE HEREWITH ENCLOSED AS REQUIRED BY KRS 45A.185:

1. Bid Bond or Certified Check in an amount not less than five percent (5%) of total Bid.
2. Authentication of Bid and Statement of Non-Collusion and Non-Conflict of Interest.
3. VENDOR NUMBER: It is imperative that you furnish your Federal Employer Identification Number in the space provided below. Failure to do so may delay the processing of purchase orders issued to your firm.

   _____
   (Nine Digit Number)
4. Form of Proposal Supplemental Information
5. TC-_____ Bid Breakout sheet (from Attachment 'B')

SUPERINTENDENT

In accordance with Article 17 of the General Conditions a full-time superintendent will be required on this project. Below, please list the superintendent your firm will employ on this project. The successful Bidder will be required to furnish a resume of the superintendent's qualifications and or past projects.

List the Superintendent's Name _____

Attachment "B"

SCOPE OF WORK
TC-183 – DOORS AND HARDWARE

UNIVERSITY OF KENTUCKY
CAPITAL CONSTRUCTION PROCUREMENT SECTION
FORM OF PROPOSAL

UNIT PRICES

NOTE: Unit Prices shall include the furnishing of all labor, materials, supplies and services and shall include all items of cost, overhead and profit for the Contractor and any subcontractor involved, and shall be used uniformly without modifications for either additions or deductions. The Unit Prices as established shall be used to determine the equitable adjustment of the Contract Price in connection with changes, deletions or extra work performed under the Contract and the "Rules of Measurement" set forth in the General Conditions shall govern.

All Bidders will be required to complete and submit the following information with the bid. The information requested in this submittal is required to assist the University in determining contractor responsibility to complete the project being bid.

KY FAIRNESS ACT: UNIT PRICES SHALL BE SUBJECT TO REVIEW / ADJUSTMENT AT TIME OF BID REVIEW / AWARD BASED ON "NET COST" CONCEPT. PROVIDE DETAIL BREAKDOWN 24 HOURS AFTER BID.

HOURLY RATES: **UNIT PRICE**

Classification	Base rate	Fringes	Burden (Ins/taxes/other)	(if) (Pier Diems)	(SUM) (ST)	(SUM) (T&1/2)	(SUM) (DT)	OH/P % (5%)

Attachment "B"

SCOPE OF WORK
TC-183 – DOORS AND HARDWARE

BID BREAKOUT

Fill in the following breakdown of costs included in your base bid. Each item is to include labor, material & equipment. These will not be considered unit prices nor will the numbers listed here limit obligations required in the bid documents. It will be used only to aid in verifying completeness of the bids.

DESCRIPTION OF WORK	COST INCLUDED IN BID
Engineering & Layout, Shop Drawings and Submittals, Coordination Drawings	$
Qualifies Hardware Consultant	$
SECTION 08 1100 HOLLOW METAL DOORS & FRAMES	$
SECTION 08 2100 WOOD DOORS	$
SECTION 08 7100 HARDWARE	$
SECTION 08 8000 GLAZING (including integral blinds)	$
Door Frame Repair Allowance	$ 7,500
General Work Requirements	$
Remaining work not listed above, Overhead & Profit (not to exceed 10% proposal)	$
TOTAL BID AMOUNT (SHOULD MATCH PROPOSAL)	$
Cost of Performance and Payment Bond ***DO NOT INCLUDE THIS COST IN YOUR BID***	$

SCOPE OF WORK
TC-183 – DOORS AND HARDWARE

Attachment A – Additional Provisions and Attachment B – (Technical) Scope of Work go together to define the requirements of this Subcontract. Attachment A is a more of a general Summary of the Contract Documents, Price, etc., while Attachment B is the Trade Specific (technical) Scope of Work.

The work of this Agreement shall include, but not be limited to, all labor, materials, apparatus, hoisting, rigging, tools, equipment, plant, supplies, accessories, samples, submittals, shop drawings, certifications, engineering, layout, transportation, storage, supervision, temporary construction, special services, contributions, insurance, taxes (unless specifically excluded by the Contract Documents), compliance with all governing agencies (city, county, state, federal and others as may be required), permits, fees, all other services and facilities and other items necessary for the performance of the **Doors and Hardware Work** as shown, detailed and/or implied in the contract documents outlined in the General Scope of Work.

The Scope of Work Document is being provided for your use as a general guideline. Please note, this Document is not all-inclusive. It is this Subcontractor's responsibility to provide a complete bid, including all work for this trade indicated on ALL of the contract documents (include plans, specifications, Bid Manual, etc.). It is this Subcontractor's responsibility for the entire scope of this Bid Package and coordination between all trades.

E) WORK INCLUDED - SCOPE-SPECIFIC ITEMS

1) Trade Specifications Specifically Included, but not limited to the following:

a) **DIVISION 00 – PROCUREMENT & CONTRACTING REQUIREMENTS (ALL SECTIONS)**
DIVISION 01 – GENERAL REQUIREMENTS (ALL SECTIONS)

DIVISION 8	**OPENINGS**
SECTION 08 1100	HOLLOW METAL DOORS & FRAMES
SECTION 08 1400	WOOD DOORS
SECTION 08 4243	ICU/CCU ENTRANCES (PARTIAL)
SECTION 08 7100	DOOR HARDWARE
SECTION 08 7100.1	DOOR HARDWARE SETS – 5th Floors
SECTION 08 7100.2	ELECTRIFIED HARDWARE DEVICE OPERATIONS SCHEDULE
SECTION 08 7100.3	SAMPLE WIRE DIAGRAMS
SECTION 08 8000	GLAZING (PARTIAL)

b) This Trade Contractor is also responsible for trade specifications not specifically listed above but required by reference in the listed specifications or as required to perform the scope of work described herein, as well as the Division 0 and Division 1 specifications and the use of the Construction Documents as a whole.

c) Subcontractor includes all work indicated in specification, unless this scope of work specifically and clearly excludes a portion of a specification.

2) Contract Price is LUMP SUM. There shall be NO additional labor and material escalations allowed

3) Examination of Site – Subcontractor warrants that they have sufficiently reviewed the project site to inform themselves of all items about existing site that are relevant to their work, and the cost of their work.

4) Include protection all adjacent structures during performance of this work. Plan for protection of adjacent structures must be part of the overall plan submitted for approval prior to start of work

5) **SITE LOGISTICS:** Refer to the Site Logistics plans included in the Contract Documents. Delivery trucks are to be scheduled with Turner at least one (1) week in advance. See Attachment P for delivery days/times.

6) Subcontractor change order requests shall be provided with sufficient detail (as acceptable to Turner) to allow for satisfactory review. Subcontractor shall be allowed a maximum mark up for overhead and profit per the markup provisions included in the Subcontract Agreement, or as clarified in Contract Documents above

7) Subcontractor understands that **time is of the essence** in the prosecution of Work under this agreement.

SCOPE OF WORK
TC-183 – DOORS AND HARDWARE

8) Verify layout provided by others. Where this subcontractor is performing work using layout provided by others, this subcontractor shall perform sufficient verification of that layout to reasonably ascertain the validity of that layout. Any deficiencies (or suspected deficiencies found) shall be reported to Turner immediately to allow corrections as needed before start of work by this subcontractor.
9) All Subcontractors must be licensed as required by local, State, or Federal jurisdiction required for work of this trade in this project location
10) This Subcontractor will comply with Turner's corporate safety policy and comply with Site Specific Safety Plan that will include but is not limited to 100% tie-off above 6 feet, 100% Safety Glasses, High Visibility Vests or High Vis style T-Shirts with reflective strips, 100% glove policy, Ladders Last Policy and Nothing Hits the Ground. If you are unfamiliar with any of these policies please ask to see the policy prior to submitting your bid. Failure to be familiar with these policies will not exclude you from complying with them.
11) **Refer to Project General Work Requirements**" in volume one of the project manual. Any costs for work scope items listed in this section shall be included in your lump sum bid. Some work items are listed for specific trade contractors and they shall include those costs in their respective total lump sum bid price.
12) Condoc keynote legend will dictate your scope of work unless noted otherwise.
13) This Trade Contractor shall participate in the construction of on-site **mock-ups** as specified (Specification Section 01 4000) and indicated by the documents and/or noted elsewhere. This shall include providing of materials required for this trade contract scope of work, coordinating with other trade contractors with regard to sequencing of installations and protection of materials etc..., furnishing shop drawings and /or setting drawings and so on. Materials for in place or interim mock-ups shall be secured in advance of normal procurement to allow for ALL trade contractor installations, owner/designer and user reviews and evaluations, meetings, approvals and directive if applicable. Mockups are understood to start with arrangement of wall rough-in through complete room finishes. At a minimum, a mockup for each type of Patient Room will be constructed.
14) This contractor shall furnish **HOLLOW METAL FRAMES** (FOB jobsite) as shown on the Contract Documents and in accordance with specification section 08 1100
    a. **Storage** of door frames will not be allowed on the project site. Contractor to ship frames at direction of construction manager for immediate installation by the TC-184 Drywall and Ceilings contractor. This TC-183 Doors and Hardware contractor shall estimate no more than ten (10) frames will be in one delivery.
15) This contractor shall furnish **WOOD DOORS** (with PRE-INSTALLED HARDWARE*) as shown on the Contract Documents and in accordance with specification section 08 2100.
    a. Undercutting of doors will be required - coordinate the exact dimension with Turner Project Superintendent.
    b. This contractor is to provide a shim pack for all door openings (shipped loose with each door package). Provide shims appropriate for each type of hinge for use by TC-181 General Trades installation in the field.
    c. Include door protection on entire lower half of door. Protection must be sufficient to protect door from carts and other material moving through opening. Continuous protection shall be such to allow door operation after hanging door.
    d. **Storage** of wood doors will not be allowed on the project site. Contractor to ship doors at direction of construction manager for immediate installation by the TC-181 General Trades contractor. This TC-183 Doors and Hardware contractor shall estimate no more than ten (10) doors will be in one delivery.
16) This contractor shall furnish and install **FINISH HARDWARE** as shown on the Contract Documents and in accordance with specification section 08 7100. The intent is that the hardware be installed on the doors before they are shipped to the project site. This hardware shall be protected during transportation.
    a. **Pre-install door hardware** in accordance with the hardware specifications but given the following exceptions/conditions: All hardware (closer arm & cover & frame shoe, floor closers, frame strike plates, wall & floor stops, weather stripping, thresholds, floor plates, door bottoms, wall/door mags, frame silencers) attached to the walls, floor or frame is packaged "loose" with each door. Hinges are pre-installed on door. Inspect door and hardware, address manufactures errors & omissions before shipping FOB jobsite. Cylinders are pre-installed in hardware before shipping. Contractor will be charged all costs for any hardware not listed above that comes "loose" to be installed on the project.

b. **Pre-installed door hardware** means that all wiring is installed and connected to the hardware for all secure, and non-secure doors. The intent of the pre-installed hardware is for the door/hardware assembly to be installed without having to remove the pre-installed hardware for any "future installation."

~~c. This contractor shall furnish hardware for **ICU/CUU ENTRANCES** as shown on the Contract Documents and in accordance with specification sections 08 4243, 08 087100, and 08 7100.1.~~

~~i. ICU/CUU Entrances and glazing are provided by TC-181 General Trades contractor. TC-183 Doors and Hardware contactor shall coordinate hardware With TC-181 General Trades to ensure a complete working system and deliveries as to not delay the installation of the doors.~~ (ADD #4)

17) This contractor shall furnish **ELECTRIFIED HARDWARE DEVICE OPERATIONS SCHEDULE**.

a. Provide a **qualified hardware consultant** to take the lead role in the final coordination of the sequence of operation for each electrified door and all required tie-ins and interfaces by the various technology disciplines. These disciplines shall include, but are not be limited to, fire alarm, HVAC controls, access controls, etc. This consultant shall prepare sequence of operations, schematics, wiring diagrams etc. Consultant shall attend and run meetings (at the jobsite in Lexington, KY) with the owner's staff, security consultant, jobsite electricians and technology contractors, etc. to work through all details and expectations of the final operation.

b. All electrified doors (as part of the hardware set) are to include an electrified termination box to be installed above ceiling of each door. Each termination box is to include a sticker on the front cover detailing the wiring layout of each opening. The purpose is to provide a "clean" connection point for all systems for each opening.

c. This contractor should expect to lead multiple onsite meetings over the first half of the project in order to coordinate the doors, hardware and keying information for this project. This is very important to the project and a high level of involvement is expected.

d. This contractor is also to include costs to "troubleshoot" door and hardware problems/issues at the end of the project. Hardware consultant is to act as a resource to solve door opening issues. Contractor shall include traveling to the project site to troubleshoot if needed.

18) Contractor shall provide **wiring diagrams** for all electrified doors. Contractor shall coordinate these with the contract drawings and specs. Contractor shall inform the construction manager if there is conflicting information between the contract documents. Contractor to include in their pricing the more expensive of the options if conflicts are not resolved.

19) Provide ten (10) Yale keyway cores for access panel doors. Coordinate with construction manager for specific keying information

20) Provide fifteen (15) ea. temporary construction cores (compatible with Yale) with five (5) keyed separately from the total (two separate keyways needed). Turn over to the construction manager with a total of thirty (30) keys (2 for each lock)

21) This contractor shall furnish and install in wood doors the **GLAZING** as shown on the Contract Documents and in accordance with specification section **08 8000 GLAZING**. This contractor to include any associated trim and/or stops to finish the doors. Contractor shall protect pre-installed glazing for transportation to the project site. The intent is that the doors are delivered to the project with glazing already installed.

a. This contractor to furnish and install the **INTEGRAL BLINDS** in wood doors as shown on the Contract Documents and in accordance with specification section **08 8000 GLAZING.** Blinds and glass to be installed and protected on doors prior to shipping to project.

b. This contractor to furnish **INTEGRAL BLINDS** in hollow metal frames as shown on the contract documents and in accordance with the specification section **08 8000 GLAZING**. Blinds to be shipped to the project and installed in the hollow metal frames separately by TC-181 General Trades contractor. This contractor is to coordinate with TC-181 General Trades to ensure timely deliveries as not to delay installation.

F. CONSTRUCTION SCHEDULE

SCOPE OF WORK
TC-183 – DOORS AND HARDWARE

Contract Price is based on the project schedule included in the bid manual and as clarified within these Additional Provisions.

G. WORK EXCLUDED

This Scope of Work shall exclude the following

1) Field install of doors and frames
2) Providing ICU/CCU entrances (except hardware as described above).

H. ALTERNATE PRICES

Alternates shall be complete for providing only the Work with no other credits. All alternate prices are to be priced as stand-alone alternates. Any number of alternates, or no alternates, may be accepted as part of this Work.
Indicate Add/Deduct Price on the BID FORM

1) None

I. ALLOWANCES

The following Allowances **are to be included in the base bid**:

1) Door Frame Repair Allowance $ 7,500

The above allowances are to be included in the base bid/Subcontract Price. All overhead and profit related to the Work performed under each Allowance is to be included in the Base Bid/Subcontract Price. Only direct Labor and Material costs authorized in writing by the Construction Manager after approval by the Owner are to be charged to the Allowance. Progress Payments will be made against Allowance expenditures, based on approved monthly invoices & writing Allowance Authorization from the Construction Manager/Owner. Any unused funds remaining in these allowances will be credited back to the Project.

J. UNIT PRICES

The following unit prices are applicable for changes in the Work. The unit prices are for Work complete and in place and include all costs such as material, labor, equipment, freight, taxes, insurance, fringe benefits, and overhead and profit. Also include costs for coordination with other trades work where applicable. In the event the unit prices quoted exceed industry standards or fair market value, the Turner reserves the right to request pricing for changes at cost plus allowable mark-up for overhead and profit or a lump-sum under the terms of the Agreement

1) Labor Rates - Submit detailed labor rates to Turner Project Manager for approval. Detail shall show all fringes, benefits, taxes, insurance, markups, and any other add-ons to allow verification of rate.
   - See "Form of Proposal" (Bid Form) for bid day information. The apparent low bidder will submit detailed breakdown with-in 24 hours after bid day.
2) Equipment Rates – Submit detailed rates for equipment that may be used on project, and may be part of change order pricing.

END OF TECHNICAL SCOPE OF WORK

Attachment "B"
SCOPE OF WORK
TC-183 – DOORS AND HARDWARE

FORM OF PROPOSAL
SUPPLEMENTAL INFORMATION

THE FOLLOWING INFORMATION PERTAINS TO ALL TRADE CONTRACTORS

NOTE: MUST BE SUBMITTED WITH THE BID SUBMITTAL.
Failure to comply will result in rejection of Bidder's Proposal.

Contractor Report of Prior Violations of
Chapters 136,139, 141, 337, 338, 341, and 342

Pursuant to KRS 45A.485, the Contractor shall, prior to the award of a Contract, reveal final determinations of any violations of the provisions of KRS Chapters 136, 139, 141, 337, 338, 341, and 342 by the Contractor that have occurred in the previous five (5) year period.

This statute also requires for the duration of the Contract established, the Contractor be in continuous compliance with the provisions of Chapters 136, 139, 141, 337, 338, 341, and 342 that apply to the Contractor's operations. The Contractor's failure to reveal a final determination of a violation of KRS Chapters 136, 139, 141, 337, 338, 341, and 342, or failure to comply with any of the above cited statutes for the duration of the Contract shall be grounds for the cancellation of the Contract, and the disqualification from eligibility for future contracts for a period of two (2) years.

The Contractor, by signing and submitting a Bid on this Invitation, agrees as required by KRS 45A.485 to submit final determinations of any violations of the provisions of KRS Chapters 136, 139, 141, 337, 338, 341, and 342 that have occurred in the previous five (5) years prior to the award of a Contract and agrees to remain in continuous compliance with the provisions of these statutes during the duration of any contract that may be established. Final determinations of any violations of these statutes, must be provided to the University by the successful Contractor prior to the award of a Contract.

BUSINESS CLASSIFICATION

Please complete this form which is necessary for the University of Kentucky vendor database.
Mark only one classification. Refer to "Definitions" for assistance in determining correct classification.

(01)____Small Business

(02)____Large Business

(03)____Disadvantaged Small Business

(04)____Disadvantaged Large Business

(05)____Woman-Owned Small Business

(06)____Woman-Owned Large Business

(07)____Disadvantaged Woman-Owned Small Business

(08)____Disadvantaged Woman-Owned Large Business

(09)____Other

Attachment "B"

SCOPE OF WORK
TC-183 – DOORS AND HARDWARE

DEFINITIONS

(01) SMALL BUSINESS: A business concern that is organized for profit, is independently owned and operated, is not dominant in the field of operations in which it is bidding, and meets the size standards as prescribed in the Code of Federal Regulations, Title 13, Part 121. Consult your local or district Small Business Administration (SBA) office if further clarification is needed.

(02) LARGE BUSINESS: A business concern that exceeds the small business size code standards established by SBA.

(03) DISADVANTAGED SMALL BUSINESS: A business concern (a) that is at least 51 percent owned by one or more socially and economically disadvantaged individuals (as defined below), or a publicly owned business, having at least 51 percent of its stock owned by one or more socially and economically disadvantaged individuals; and (b) has its management and daily business operations controlled by one or more such individuals. Socially and economically disadvantaged individuals include Black Americans, Hispanic Americans, Native Americans, Asian-Pacific Americans and other minorities or individuals found to be disadvantaged by the SBA.

(04) DISADVANTAGED LARGE BUSINESS: A concern that meets the definition of socially and economically disadvantaged individuals, but which is not a small business by the SBA's size standards.

(05) WOMAN-OWNED SMALL BUSINESS: A small business that is at least 51 percent owned by a woman or women who also control and operate it. "Control" in this context means exercising the power to make policy decisions. "Operate" means actively involved in the day to day management.

(06) WOMAN-OWNED LARGE BUSINESS: A concern that meets the definition of woman owned and operated, but which is not a small business by the SBA's standards.

(07) DISADVANTAGED, WOMAN-OWNED SMALL BUSINESS: A concern that meets the definition of both (03) and (05) above.

(08) DISADVANTAGED, WOMAN OWNED LARGE BUSINESS: A concern that meets the definition of both (04) and (06) above.

(09) OTHER: A concern that does not meet any of the above definitions.

BIDDER'S QUALIFICATIONS

The Commonwealth of Kentucky Model Procurement Code (KRS 45A.080) requires contracts to be awarded, "to the responsive and responsible bidder whose bid offers the best value" to the University of Kentucky. In order to determine if the Bidder has the experience, qualifications, resources and necessary attributes to provide the quality workmanship, materials and management required by the plans and specifications, the Bidder may be required to complete and submit the information requested on the University of Kentucky Contractor Bidder Determination of Responsibility questionnaire. Failure to provide the information requested on the questionnaire or failure to provide any additional submittals or information that may be requested to make this determination may be grounds for a declaration of nonresponsibility with respect to the Bidder. A copy of the Contractor Determination of Responsibility questionnaire is available upon request to all Bidders.

Attachment "B"

SCOPE OF WORK
TC-183 – DOORS AND HARDWARE

TIME LIMIT FOR EXECUTION OF CONTRACT DOCUMENTS

It is further agreed, that in the event this Proposal is accepted by the Owner and the undersigned shall fail to execute the Contract and furnish satisfactory Payment and Performance Bond within ten (10) consecutive calendar days from the date of notification of the award of the Contract, the Owner may at his option, determine that the undersigned has abandoned the Contract and thereupon, the Proposal shall become null and void and the Bid guarantee, check or Bid bond which accompanied it shall be forfeited and become the property of the Owner as liquidated damages for each failure and no protest pursuant to such action will be made. If the Undersigned shall execute the Contract, and furnish satisfactory Payment Bond and Performance Bond, it is understood that the Bid Guarantee or Bid Bond will be returned to the undersigned by the Owner.

IDENTIFICATION OF MINORITY SUBCONTRACTORS AND MATERIAL SUPPLIERS

Participation of Minority and Women owned Contractors and businesses.

The University of Kentucky encourages and supports the participation of minority and women owned businesses. Goal is 10% MBE/WBE

1. Minority and Women Subcontractors

_____

_____

_____

_____

2. Minority and Women Material Suppliers

_____

_____

_____

_____

This proposal includes _____% certified MBE participation

This proposal includes _____% certified WBE participation

If your firm has no minority or women owned subcontractors or suppliers, it is required that you complete the list of minority and/or women owned businesses below. List the names of firms that were solicited to bid the project and describe why they were not successful (i.e. not low bid, did not respond, etc).

Attachment "B"

SCOPE OF WORK
TC-183 – DOORS AND HARDWARE

RECORD OF MBE/WBE SOLICITATION

_____ Certifies that the following
BIDDER'S NAME

Minority/Women-Owned firms were contacted to solicit pricing as subcontractors/suppliers for Invitation to Bid No. _____ The following firms were not selected for use on this project for the reasons stated in the **RESULT** column.

This list of Minority or Women owned firms is to be executed and submitted as a part of the Bidder's Proposal. Failure to comply will result in rejection of Bidder's Proposal.

FIRM NAME	MBE/WBE	WORK ITEMS SOLICITED	RESULT: NO RESPONSE OR NOT LOW BIDDER

_____
Signature Date

_____
Title

Attachment "B"
SCOPE OF WORK
TC-183 – DOORS AND HARDWARE

LIST OF MATERIALS AND EQUIPMENT

The apparent low bidder will be required to furnish this information within 24 hours of bid submittal. Failure to comply will result in rejection of Bidder's Proposal.

Each item listed under the different phases of construction must be clearly identified so that the Owner will definitely know what the Bidder proposes to furnish.

The use of a manufacturer's or dealer's name only, or stating "as per Plans and Specifications," will not be considered as sufficient identification.

Where more than one "Make" or "Brand" is listed for any one item, the Owner has the right to select the one to be used.

CONTRACTOR NAME & ADDRESS: _____
_____
_____
_____

TRADE CONTRACT: TC- _____ **SCOPE OF WORK: _____**
(INSERT NUMBER) **(INSERT NAME OF TRADE CONTRACT)**

The information requested in this submittal is required to assist the University in determining contractor responsibility to complete the project being bid.

ITEM	MATERIALS AND EQUIPMENT	BRAND OR MANUFACTURER

Attachment "B"

SCOPE OF WORK
TC-183 – DOORS AND HARDWARE

PRIMARY LIST OF PROPOSED SUBCONTRACTORS

The apparent low bidder will be required to furnish this information within 24 hours of bid submittal. Failure to comply will result in rejection of Bidder's Proposal.

All subcontractors are subject to the approval of the Capital Construction Procurement Section and Capital Project Management Division, University of Kentucky, Lexington, KY.

If certain branches of the Work are to be done by the Prime Contractor, so state.

CONTRACTOR NAME & ADDRESS: _____
_____
_____

TRADE CONTRACT: TC - _____ SCOPE OF WORK:_____
(INSERT NUMBER) (INSERT NAME OF BID CATEGORY)

DIVISION OF WORK	NAME AND ADDRESS OF SUBCONTRACTOR

Attachment "B"

SCOPE OF WORK
TC-185 – TILING

UNIVERSITY OF KENTUCKY
CAPITAL CONSTRUCTION PROCUREMENT SECTION
FORM OF PROPOSAL **TC-185 TILING**

Project No. 2402.9 Project Title: 5th Floor Fit Out

Purchasing Officer: Matt Spalding

NOTE: The following Form of Proposal shall be followed exactly in submitting a proposal for this work. If this copy is lost, an additional copy will be furnished upon written request to the authority issuing Contract Documents.

This Proposal is submitted by: _____

(NAME AND ADDRESS OF BIDDER)

Date: _____ _____

Telephone: _____ _____

TO: BID CLERK
UNIVERSITY OF KENTUCKY
CAPITAL CONSTRUCTION

PROCUREMENT
RM. 322 SERVICE BUILDING
LEXINGTON, KY. 40506-0005

INVITATION TO BID: CCK-2516-21

BID OPENING DATE: January 22nd, 2021 (ADD #2)

TIME: 3:00 P.M. E.D.T.

The Bidder, in compliance with your Invitation for Bids for the above referenced Project, having carefully examined the site of the Work, the Drawings and complete Contract Documents as defined in Article I of the General Conditions, as well as the Specifications affecting the work as prepared by the Consultant, hereby proposes to furnish all labor, materials, supplies and services required to construct the Project in accordance with the Contract Documents, within the time set forth therein, and at the price stated below without qualification. Bidder understands that successful bidder will enter into a contract with Turner Construction Company utilizing Turner's Subcontract Agreement Form 36 without modification.

The Bidder hereby acknowledges receipt of the following Addenda:

ADDENDUM NO._____ DATED _____

ADDENDUM NO._____ DATED _____

ADDENDUM NO. _____ DATED _____

ADDENDUM NO._____ DATED _____

(Here insert the number and date of any Addenda issued and received. If none has been issued and received, the word NONE should be inserted.)

NOTE: IN ADDITION TO THE SPECIFIC TRADE FORM OF PROPOSAL EACH SUBCONTRACTOR MUST ALSO SUBMIT FORMS FOUND IN THE SUPPLEMENTAL FORM OF PROPOSAL SECTION.

Attachment "B"

SCOPE OF WORK
TC-185 – TILING

FORM OF PROPOSAL

AUTHENTICATION OF BID AND STATEMENT OF NON-COLLUSION AND NON-CONFLICT OF INTEREST
I hereby certify:

1. That I am the Bidder (if the Bidder is an individual), a partner in the Bidder (if the Bidder is a partnership), or an officer or employee of the bidding corporation having authority to sign on its behalf (if the Bidder is a corporation);

2. That the submitted Bid or Bids covering Capital Construction Procurement Section Invitation No. **CCK-2516-21** have been arrived at by the Bidder independently and have been submitted without collusion with, and without any agreement, understanding or planned common course of action with, any other contractor, vendor of materials, supplies, equipment or services described in the Invitation to Bid, designed to limit independent bidding or competition; as prohibited by provision KRS 45A.325;

3. That the contents of the Bid or Bids have not been communicated by the Bidder or its employees or agents to any person not an employee or agent of the Bidder or its surety on any bond furnished with the Bid or Bids and will not be communicated to any such person prior to the official opening of the Bid or Bids;

4. That the Bidder is legally entitled to enter into the contracts with the University of Kentucky and Turner Construction Company and is not in violation of any prohibited conflict of interest, including those prohibited by the provisions of KRS 164.390, and 45A.330 to 45A.340 and 45A.455;

5. This offer is good for 60 calendar days from the date this Bid is opened. In submitting the above, it is expressly agreed that upon proper acceptance by the Capital Construction Procurement Section of any or all items Bid above, a contract shall thereby be created with respect to the items accepted;

6. That I have fully informed myself regarding and affirm the accuracy of all statements made in this Form of Proposal including Bid Amount.

7. Unless otherwise exempted by KRS 45.590, the Bidder intends to comply in full with all requirements of the Kentucky Civil Rights Act and to submit data required by the Kentucky Equal Employment Act upon being designated the successful contractor.

8. That the bidding contractor and all subcontractors to be employed do not and will not maintain any facilities they provide for employees in a segregated manner and they are in full compliance with provisions of 41 CFR 60-1.8 that prohibits the maintaining of segregated facilities.

9. In accordance with KRS45A.110(2), the undersigned hereby swears under penalty of perjury that he/she has not knowingly violated any provision of the campaign finance laws of the Commonwealth of Kentucky and that the award of a contract to the bidder will not violate any provision of the campaign finance laws of the Commonwealth of Kentucky.

READ CAREFULLY - SIGN IN SPACE BELOW - FAILURE TO SIGN INVALIDATES BID

SIGNED BY_____ TITLE_____

PRINT NAME_____ FIRM_____

ADDRESS_____ AREA CODE & PHONE _____

_____ FAX_____

CITY STATE ZIP CODE

DATE_____ EMAIL_____

Attachment "B"

SCOPE OF WORK
TC-185 – TILING

LUMP SUM PROPOSAL

The Bidder agrees to furnish all labor, materials, supplies and services required to complete the Work, for the above referenced Project, for the Capital Construction Procurement Section, University of Kentucky, as described in the Specifications and Contract Documents and shown on the Drawings enumerated below and as modified by the Addenda listed above.

TC-185 TILING

FOR THE LUMP SUM OF_____
(USE WORDS)

_____DOLLARS AND_____CENTS.
(USE WORDS) (USE WORDS)

($_____) **BIDDER MUST TURN IN BID BREAKOUT SHEET WITH THIS FORM OF PROPOSAL**
(USE FIGURES)

ALTERNATES – NONE

Current Experience Modification Rating _____

OSHA Incident Rates: **Recordable** _____ **Date of Proposal**_____

THE FOLLOWING ITEMS ARE HEREWITH ENCLOSED AS REQUIRED BY KRS 45A.185:

1. Bid Bond or Certified Check in an amount not less than five percent (5%) of total Bid.
2. Authentication of Bid and Statement of Non-Collusion and Non-Conflict of Interest.
3. VENDOR NUMBER: It is imperative that you furnish your Federal Employer Identification Number in the space provided below. Failure to do so may delay the processing of purchase orders issued to your firm.

   _____
   (Nine Digit Number)
4. Form of Proposal Supplemental Information
5. TC-_____ Bid Breakout sheet (from Attachment 'B')

SUPERINTENDENT

In accordance with Article 17 of the General Conditions a full-time superintendent will be required on this project. Below, please list the superintendent your firm will employ on this project. The successful Bidder will be required to furnish a resume of the superintendent's qualifications and or past projects.

List the Superintendent's Name _____

Attachment "B"

SCOPE OF WORK
TC-185 – TILING

UNIVERSITY OF KENTUCKY
CAPITAL CONSTRUCTION PROCUREMENT SECTION
FORM OF PROPOSAL

UNIT PRICES

NOTE: Unit Prices shall include the furnishing of all labor, materials, supplies and services and shall include all items of cost, overhead and profit for the Contractor and any subcontractor involved, and shall be used uniformly without modifications for either additions or deductions. The Unit Prices as established shall be used to determine the equitable adjustment of the Contract Price in connection with changes, deletions or extra work performed under the Contract and the "Rules of Measurement" set forth in the General Conditions shall govern.

All Bidders will be required to complete and submit the following information with the bid. The information requested in this submittal is required to assist the University in determining contractor responsibility to complete the project being bid.

KY FAIRNESS ACT: UNIT PRICES SHALL BE SUBJECT TO REVIEW / ADJUSTMENT AT TIME OF BID REVIEW / AWARD BASED ON "NET COST" CONCEPT. PROVIDE DETAIL BREAKDOWN 24 HOURS AFTER BID.

HOURLY RATES: **UNIT PRICE**

Classification	Base rate	Fringes	Burden (Ins/taxes/other)	(if) (Pier Diems)	(SUM) (ST)	(SUM) (T&1/2)	(SUM) (DT)	OH/P % (5%)

Attachment "B"

SCOPE OF WORK
TC-185 – TILING

BID BREAKOUT

Fill in the following breakdown of costs included in your base bid. Each item is to include labor, material & equipment. These will not be considered unit prices nor will the numbers listed here limit obligations required in the bid documents. It will be used only to aid in verifying completeness of the bids.

DESCRIPTION OF WORK	COST INCLUDED IN BID
Engineering & layout, Shop drawings and submittals, Safety	$ _____
Stone Facing	$ _____
Stone Base	$ _____
Tiling	$ _____
Accessories	$ _____
Floor Preparation	$ _____
Concrete Flooring Repair	$ _____
Protection of Flooring and Finish Work	$ _____
General Work Requirements	$ _____
Remaining work not listed above, Overhead & Profit (not to exceed 10% proposal)	$ _____
TOTAL BID AMOUNT (SHOULD MATCH PROPOSAL)	$ _____
Cost of Performance and Payment Bond ***DO NOT INCLUDE THIS COST IN YOUR BID***	$ _____

Attachment "B"

SCOPE OF WORK
TC-185 – TILING

Attachment A – Additional Provisions and Attachment B – (Technical) Scope of Work go together to define the requirements of this Subcontract. Attachment A is a more of a general Summary of the Contract Documents, Price, etc., while Attachment B is the Trade Specific (technical) Scope of Work.

The work of this Agreement shall include, but not be limited to, all labor, materials, apparatus, hoisting, rigging, tools, equipment, plant, supplies, accessories, samples, submittals, shop drawings, certifications, engineering, layout, transportation, storage, supervision, temporary construction, special services, contributions, insurance, taxes (unless specifically excluded by the Contract Documents), compliance with all governing agencies (city, county, state, federal and others as may be required), permits, fees, all other services and facilities and other items necessary for the performance of the **Fire Protection Work** as shown, detailed and/or implied in the contract documents outlined in the General Scope of Work.

The Scope of Work Document is being provided for your use as a general guideline. Please note, this Document is not all-inclusive. It is this Subcontractor's responsibility to provide a complete bid, including all work for this trade indicated on ALL of the contract documents (include plans, specifications, Bid Manual, etc.). It is this Subcontractor's responsibility for the entire scope of this Bid Package and coordination between all trades.

E) WORK INCLUDED - SCOPE-SPECIFIC ITEMS

1) Trade Specifications Specifically Included, but not limited to the following:

a) **DIVISION 00 – PROCUREMENT & CONTRACTING REQUIREMENTS (ALL SECTIONS)**
DIVISION 01 – GENERAL REQUIREMENTS (ALL SECTIONS)
DIVISION 02 – EXISTING CONDITIONS (ALL SECTIONS)

DIVISION 7	**THERMAL & MOISTURE PROTECTION**
SECTION 07 9200	JOINT SEALANTS

DIVISION 9	**FINISHES**
SECTION 09 0160	CONCRETE FLOORING REPAIR
SECTION 09 0600.1	SCHEDULE FOR FINISHES
SECTION 09 0600.2	MATERIAL & COLOR SCHEDULE
SECTION 09 3000	TILING
~~SECTION 09 6340~~	~~STONE FLOORING~~ (ADD #4)
SECTION 09 7500	STONE FACING

b) This Trade Contractor is also responsible for trade specifications not specifically listed above but required by reference in the listed specifications or as required to perform the scope of work described herein, as well as the Division 0 and Division 1 specifications and the use of the Construction Documents as a whole.

c) Subcontractor includes all work indicated in specification, unless this scope of work specifically and clearly excludes a portion of a specification.

2) Contract Price is LUMP SUM. There shall be NO additional labor and material escalations allowed

3) Examination of Site – Subcontractor warrants that they have sufficiently reviewed the project site to inform themselves of all items about existing site that are relevant to their work, and the cost of their work.

4) Include protection all adjacent structures during performance of this work. Plan for protection of adjacent structures must be part of the overall plan submitted for approval prior to start of work

5) **SITE LOGISTICS:** Refer to the Site Logistics plans included in the Contract Documents. Delivery trucks are to be scheduled with Turner at least one (1) week in advance. See Attachment P for delivery days/times.

6) Subcontractor change order requests shall be provided with sufficient detail (as acceptable to Turner) to allow for satisfactory review. Subcontractor shall be allowed a maximum mark up for overhead and profit per the markup provisions included in the Subcontract Agreement, or as clarified in Contract Documents above

Attachment "B"

SCOPE OF WORK
TC-185 – TILING

7) Subcontractor understands that **time is of the essence** in the prosecution of Work under this agreement.
8) Verify layout provided by others. Where this subcontractor is performing work using layout provided by others, this subcontractor shall perform sufficient verification of that layout to reasonably ascertain the validity of that layout. Any deficiencies (or suspected deficiencies found) shall be reported to Turner immediately to allow corrections as needed before start of work by this subcontractor.
9) All Subcontractors must be licensed as required by local, State, or Federal jurisdiction required for work of this trade in this project location
10) This Subcontractor will comply with Turner's corporate safety policy and comply with Site Specific Safety Plan that will include but is not limited to 100% tie-off above 6 feet, 100% Safety Glasses, High Visibility Vests or High Vis style T-Shirts with reflective strips, 100% glove policy, Ladders Last Policy and Nothing Hits the Ground. If you are unfamiliar with any of these policies please ask to see the policy prior to submitting your bid. Failure to be familiar with these policies will not exclude you from complying with them.
11) **Refer to Project General Work Requirements**" in volume one of the project manual. Any costs for work scope items listed in this section shall be included in your lump sum bid. Some work items are listed for specific trade contractors and they shall include those costs in their respective total lump sum bid price.
12) Condoc keynote legend will dictate your scope of work unless noted otherwise.
13) This Trade Contractor shall participate in the construction of on-site **mock-ups** as specified and indicated by the documents and/or noted elsewhere. This shall include providing of materials required for this trade contract scope of work, coordinating with other trade contractors with regard to sequencing of installations and protection of materials etc..., furnishing shop drawings and /or setting drawings and so on. Materials for in place or interim mock-ups shall be secured in advance of normal procurement to allow for ALL trade contractor installations, owner/designer and user reviews and evaluations, meetings, approvals and directive if applicable. Mockups are understood to start with arrangement of wall rough-in through complete room finishes.
14) This contractor shall provide **JOINT SEALANTS** as required for this scope of work and as shown on the Contract Documents and in accordance with specification section 07 9200.
    a. Provide sealant at perimeter of top of stone and stone base.
15) This contractor shall provide **CONCRETE FLOORING REPAIR** as required for this scope of work and as shown on the Contract Documents and in accordance with specification section 09 0160.
16) Refer to **SCHEDULE FOR FINISHES** Specification Section 09 0600.1, **MATERIAL & COLOR SCHEDULE** Specification Section 09 0600.2. Include and coordinate the Room Finish Schedules within the project drawings into this work scope.
17) This contractor shall prepare floors prior to flooring installation in accordance with Specification 09 0160 **CONCRETE FLOORING REPAIR**. Remove all dust, dirt and debris prior to installation. Provide leveling if needed. Any additional floor prep required is part of this contract work. All concrete slabs currently exist and will be available for inspection by the flooring contractors prior to bidding. Pre-bid tours will be scheduled and announced.
    a. This contractor will be responsible to install finish flooring to within ¾" maximum (max. gap below bottom of door allowed) at all door locations. Any floor preparation/floating required to meet this dimension is to be included.
18) This contractor shall provide **TILING** (COMPLETE) as required for this scope of work and as shown on the Contract Documents and in accordance with specification section 09 3000.
    a. Backer Boards are provided by the Gypsum Wall Board and Ceiling Contractor (TC-078).
    b. This contractor to include waterproofing membranes for tiling as specified in section 09 3000. Testing will have to include coordinating with occupied spaces below.
    c. This Trade Contractor to provide own means of disposal of grout off-site. No dumping of grout, or grout water mixture will be allowed on-site. This would include washing of any grout buckets, etc…

19) ~~This contractor shall provide **STONE FLOORING** (COMPLETE) as shown on the Contract Documents and in accordance with specification section 09 6340. This work includes all stone flooring within the three (3) new public elevators.~~ (ADD #4)

20) This contractor shall provide **STONE FACING** (COMPLETE) as shown on the Contract Documents and in accordance with specification section 09 7500.

    a. This contractor to provide own means of disposal of grout off-site. No dumping of grout, or grout water mixture will be allowed on-site. This would include washing of any grout buckets, etc…

    b. This contractor to include **thirty (30) additional hours** (above & beyond base work scope) of stone repair including required materials and proper tools to be used at the discretion and approval of the Construction Manager.

21) The following were applied to the horizontal concrete surfaces. L&M =- Dress & Seal WB-30 Curing compound, BASF – KURE 1315 curing compound, Maximum Plus – Mineral oil form release. Any compatibility problems or adjustments in products, procedures inc. removal of previously placed products is the responsibility of the TC-080 contractor.

22) This contractor shall provide **grouting** of floor in front of elevator entries for flooring areas under this scope of work. Grouting defined as between edge of placed concrete slab and adjacent elevator door sill.

23) This contractor shall provide all **floor protection** required. Craft paper is not acceptable. Product shall be similar to "Ramboard Commercial" floor protection – min. 40 mil. At a minimum provide, **maintain** and remove (including any glue residue) when directed protection over all flooring. Protection shall be cut and taped to fit areas.

    a. Provide labor and material to install Masonite on your installed materials at lobby tile areas. Installation to include taped seams and edges; maintain and remove (along with tape residue) at the direction of the Construction Manager.

24) This contractor shall provide any **supplemental heat** required to install the flooring or raise the surfaces to the temperature required by the specifications and the manufactures recommendations.

25) Coordinate flooring transitions with TC-186 Flooring (soft flooring) contractor.

26) This contractor will coordinate with all MEP and other contractors as required for openings, holes, etc. needed in materials in this work scope. This contractor to include costs to provide all required "opening" in materials.

27) This contractor is to include **sixty (60) additional hours** (above & beyond base work scope) of tiling repair including required materials and proper tools to be used at the discretion and approval of the Construction Manager.

F. CONSTRUCTION SCHEDULE

Contract Price is based on the project schedule included in the bid manual and as clarified within these Additional Provisions.

G. WORK EXCLUDED

This Scope of Work shall exclude the following

1) Payment & Performance Bond
2) Tile Backer Boards are provided by the TC-184 Drywall and Ceilings contractor
3) TC-186 Flooring Scope

H. ALTERNATE PRICES

Alternates shall be complete for providing only the Work with no other credits. All alternate prices are to be priced as stand-alone alternates. Any number of alternates, or no alternates, may be accepted as part of this Work.
Indicate Add/Deduct Price on the BID FORM

1) None

I. ALLOWANCES

Attachment "B"
SCOPE OF WORK
TC-185 – TILING

The following Allowances **are to be included in the base bid**:

1) None

The above allowances are to be included in the base bid/Subcontract Price. All overhead and profit related to the Work performed under each Allowance is to be included in the Base Bid/Subcontract Price. Only direct Labor and Material costs authorized in writing by the Construction Manager after approval by the Owner are to be charged to the Allowance. Progress Payments will be made against Allowance expenditures, based on approved monthly invoices & writing Allowance Authorization from the Construction Manager/Owner. Any unused funds remaining in these allowances will be credited back to the Project.

J. UNIT PRICES

The following unit prices are applicable for changes in the Work. The unit prices are for Work complete and in place and include all costs such as material, labor, equipment, freight, taxes, insurance, fringe benefits, and overhead and profit. Also include costs for coordination with other trades work where applicable. In the event the unit prices quoted exceed industry standards or fair market value, the Turner reserves the right to request pricing for changes at cost plus allowable mark-up for overhead and profit or a lump-sum under the terms of the Agreement

1) Labor Rates - Submit detailed labor rates to Turner Project Manager for approval. Detail shall show all fringes, benefits, taxes, insurance, markups, and any other add-ons to allow verification of rate.
   - See "Form of Proposal" (Bid Form) for bid day information. The apparent low bidder will submit detailed breakdown with-in 24 hours after bid day.
2) Equipment Rates – Submit detailed rates for equipment that may be used on project, and may be part of change order pricing.

END OF TECHNICAL SCOPE OF WORK

Attachment "B"
SCOPE OF WORK
TC-185 – TILING

FORM OF PROPOSAL
SUPPLEMENTAL INFORMATION

THE FOLLOWING INFORMATION PERTAINS TO ALL TRADE CONTRACTORS

NOTE: MUST BE SUBMITTED WITH THE BID SUBMITTAL.
Failure to comply will result in rejection of Bidder's Proposal.

Contractor Report of Prior Violations of
Chapters 136,139, 141, 337, 338, 341, and 342

Pursuant to KRS 45A.485, the Contractor shall, prior to the award of a Contract, reveal final determinations of any violations of the provisions of KRS Chapters 136, 139, 141, 337, 338, 341, and 342 by the Contractor that have occurred in the previous five (5) year period.

This statute also requires for the duration of the Contract established, the Contractor be in continuous compliance with the provisions of Chapters 136, 139, 141, 337, 338, 341, and 342 that apply to the Contractor's operations. The Contractor's failure to reveal a final determination of a violation of KRS Chapters 136, 139, 141, 337, 338, 341, and 342, or failure to comply with any of the above cited statutes for the duration of the Contract shall be grounds for the cancellation of the Contract, and the disqualification from eligibility for future contracts for a period of two (2) years.

The Contractor, by signing and submitting a Bid on this Invitation, agrees as required by KRS 45A.485 to submit final determinations of any violations of the provisions of KRS Chapters 136, 139, 141, 337, 338, 341, and 342 that have occurred in the previous five (5) years prior to the award of a Contract and agrees to remain in continuous compliance with the provisions of these statutes during the duration of any contract that may be established. Final determinations of any violations of these statutes, must be provided to the University by the successful Contractor prior to the award of a Contract.

BUSINESS CLASSIFICATION

Please complete this form which is necessary for the University of Kentucky vendor database.
Mark only one classification. Refer to "Definitions" for assistance in determining correct classification.

(01)____Small Business

(02)____Large Business

(03)____Disadvantaged Small Business

(04)____Disadvantaged Large Business

(05)____Woman-Owned Small Business

(06)____Woman-Owned Large Business

(07)____Disadvantaged Woman-Owned Small Business

(08)____Disadvantaged Woman-Owned Large Business

(09)____Other

Attachment "B"

SCOPE OF WORK
TC-185 – TILING

DEFINITIONS

(01) SMALL BUSINESS: A business concern that is organized for profit, is independently owned and operated, is not dominant in the field of operations in which it is bidding, and meets the size standards as prescribed in the Code of Federal Regulations, Title 13, Part 121. Consult your local or district Small Business Administration (SBA) office if further clarification is needed.

(02) LARGE BUSINESS: A business concern that exceeds the small business size code standards established by SBA.

(03) DISADVANTAGED SMALL BUSINESS: A business concern (a) that is at least 51 percent owned by one or more socially and economically disadvantaged individuals (as defined below), or a publicly owned business, having at least 51 percent of its stock owned by one or more socially and economically disadvantaged individuals; and (b) has its management and daily business operations controlled by one or more such individuals. Socially and economically disadvantaged individuals include Black Americans, Hispanic Americans, Native Americans, Asian-Pacific Americans and other minorities or individuals found to be disadvantaged by the SBA.

(04) DISADVANTAGED LARGE BUSINESS: A concern that meets the definition of socially and economically disadvantaged individuals, but which is not a small business by the SBA's size standards.

(05) WOMAN-OWNED SMALL BUSINESS: A small business that is at least 51 percent owned by a woman or women who also control and operate it. "Control" in this context means exercising the power to make policy decisions. "Operate" means actively involved in the day to day management.

(06) WOMAN-OWNED LARGE BUSINESS: A concern that meets the definition of woman owned and operated, but which is not a small business by the SBA's standards.

(07) DISADVANTAGED, WOMAN-OWNED SMALL BUSINESS: A concern that meets the definition of both (03) and (05) above.

(08) DISADVANTAGED, WOMAN OWNED LARGE BUSINESS: A concern that meets the definition of both (04) and (06) above.

(09) OTHER: A concern that does not meet any of the above definitions.

BIDDER'S QUALIFICATIONS

The Commonwealth of Kentucky Model Procurement Code (KRS 45A.080) requires contracts to be awarded, "to the responsive and responsible bidder whose bid offers the best value" to the University of Kentucky. In order to determine if the Bidder has the experience, qualifications, resources and necessary attributes to provide the quality workmanship, materials and management required by the plans and specifications, the Bidder may be required to complete and submit the information requested on the University of Kentucky Contractor Bidder Determination of Responsibility questionnaire. Failure to provide the information requested on the questionnaire or failure to provide any additional submittals or information that may be requested to make this determination may be grounds for a declaration of nonresponsibility with respect to the Bidder. A copy of the Contractor Determination of Responsibility questionnaire is available upon request to all Bidders.

Attachment "B"
SCOPE OF WORK
TC-185 – TILING

TIME LIMIT FOR EXECUTION OF CONTRACT DOCUMENTS

It is further agreed, that in the event this Proposal is accepted by the Owner and the undersigned shall fail to execute the Contract and furnish satisfactory Payment and Performance Bond within ten (10) consecutive calendar days from the date of notification of the award of the Contract, the Owner may at his option, determine that the undersigned has abandoned the Contract and thereupon, the Proposal shall become null and void and the Bid guarantee, check or Bid bond which accompanied it shall be forfeited and become the property of the Owner as liquidated damages for each failure and no protest pursuant to such action will be made. If the Undersigned shall execute the Contract, and furnish satisfactory Payment Bond and Performance Bond, it is understood that the Bid Guarantee or Bid Bond will be returned to the undersigned by the Owner.

IDENTIFICATION OF MINORITY SUBCONTRACTORS AND MATERIAL SUPPLIERS

Participation of Minority and Women owned Contractors and businesses.

The University of Kentucky encourages and supports the participation of minority and women owned businesses. Goal is 10% MBE/WBE

1. Minority and Women Subcontractors

_____

_____

_____

_____

2. Minority and Women Material Suppliers

_____

_____

_____

_____

This proposal includes _____% certified MBE participation

This proposal includes _____% certified WBE participation

If your firm has no minority or women owned subcontractors or suppliers, it is required that you complete the list of minority and/or women owned businesses below. List the names of firms that were solicited to bid the project and describe why they were not successful (i.e. not low bid, did not respond, etc).

Attachment "B"
SCOPE OF WORK
TC-185 – TILING

RECORD OF MBE/WBE SOLICITATION

_____ Certifies that the following
BIDDER'S NAME

Minority/Women-Owned firms were contacted to solicit pricing as subcontractors/suppliers for Invitation to Bid No. _____ The following firms were not selected for use on this project for the reasons stated in the **RESULT** column.

This list of Minority or Women owned firms is to be executed and submitted as a part of the Bidder's Proposal. Failure to comply will result in rejection of Bidder's Proposal.

FIRM NAME	**MBE/WBE**	**WORK ITEMS SOLICITED**	**RESULT: NO RESPONSE OR NOT LOW BIDDER**

_____
Signature Date

_____
Title

Attachment "B"
SCOPE OF WORK
TC-185 – TILING

LIST OF MATERIALS AND EQUIPMENT

The apparent low bidder will be required to furnish this information within 24 hours of bid submittal. Failure to comply will result in rejection of Bidder's Proposal.

Each item listed under the different phases of construction must be clearly identified so that the Owner will definitely know what the Bidder proposes to furnish.

The use of a manufacturer's or dealer's name only, or stating "as per Plans and Specifications," will not be considered as sufficient identification.

Where more than one "Make" or "Brand" is listed for any one item, the Owner has the right to select the one to be used.

CONTRACTOR NAME & ADDRESS: _____
_____
_____
_____

TRADE CONTRACT: TC- _____ **SCOPE OF WORK: _____**
(INSERT NUMBER) **(INSERT NAME OF TRADE CONTRACT)**

The information requested in this submittal is required to assist the University in determining contractor responsibility to complete the project being bid.

ITEM	MATERIALS AND EQUIPMENT	BRAND OR MANUFACTURER

Attachment "B"
SCOPE OF WORK
TC-185 – TILING

PRIMARY LIST OF PROPOSED SUBCONTRACTORS

The apparent low bidder will be required to furnish this information within 24 hours of bid submittal. Failure to comply will result in rejection of Bidder's Proposal.

All subcontractors are subject to the approval of the Capital Construction Procurement Section and Capital Project Management Division, University of Kentucky, Lexington, KY.

If certain branches of the Work are to be done by the Prime Contractor, so state.

CONTRACTOR NAME & ADDRESS: _____
_____
_____

TRADE CONTRACT: TC - _____ SCOPE OF WORK:_____
(INSERT NUMBER) (INSERT NAME OF BID CATEGORY)

DIVISION OF WORK	NAME AND ADDRESS OF SUBCONTRACTOR

Attachment "B"

SCOPE OF WORK
TC-186 - FLOORING

UNIVERSITY OF KENTUCKY
CAPITAL CONSTRUCTION PROCUREMENT SECTION
FORM OF PROPOSAL **TC-186 FLOORING**

Project No. 2402.9 Project Title: 5th Floor Fit Out

Purchasing Officer: Matt Spalding

NOTE: The following Form of Proposal shall be followed exactly in submitting a proposal for this work. If this copy is lost, an additional copy will be furnished upon written request to the authority issuing Contract Documents.

This Proposal is submitted by: _____

(NAME AND ADDRESS OF BIDDER)

Date: _____ _____

Telephone: _____ _____

TO: BID CLERK
UNIVERSITY OF KENTUCKY
CAPITAL CONSTRUCTION

PROCUREMENT
RM. 322 SERVICE BUILDING
LEXINGTON, KY. 40506-0005

INVITATION TO BID: CCK-2516-21

BID OPENING DATE: January 22nd, 2021 (ADD #2)

TIME: 3:00 P.M. E.D.T.

The Bidder, in compliance with your Invitation for Bids for the above referenced Project, having carefully examined the site of the Work, the Drawings and complete Contract Documents as defined in Article I of the General Conditions, as well as the Specifications affecting the work as prepared by the Consultant, hereby proposes to furnish all labor, materials, supplies and services required to construct the Project in accordance with the Contract Documents, within the time set forth therein, and at the price stated below without qualification. Bidder understands that successful bidder will enter into a contract with Turner Construction Company utilizing Turner's Subcontract Agreement Form 36 without modification.

The Bidder hereby acknowledges receipt of the following Addenda:

ADDENDUM NO._____ DATED _____

ADDENDUM NO._____ DATED _____

ADDENDUM NO. _____ DATED _____

ADDENDUM NO._____ DATED _____

(Here insert the number and date of any Addenda issued and received. If none has been issued and received, the word NONE should be inserted.)

NOTE: IN ADDITION TO THE SPECIFIC TRADE FORM OF PROPOSAL EACH SUBCONTRACTOR MUST ALSO SUBMIT FORMS FOUND IN THE SUPPLEMENTAL FORM OF PROPOSAL SECTION.

Attachment "B"

SCOPE OF WORK
TC-186 - FLOORING

FORM OF PROPOSAL

AUTHENTICATION OF BID AND STATEMENT OF NON-COLLUSION AND NON-CONFLICT OF INTEREST
I hereby certify:

1. That I am the Bidder (if the Bidder is an individual), a partner in the Bidder (if the Bidder is a partnership), or an officer or employee of the bidding corporation having authority to sign on its behalf (if the Bidder is a corporation);

2. That the submitted Bid or Bids covering Capital Construction Procurement Section Invitation No. **CCK-2516-21** have been arrived at by the Bidder independently and have been submitted without collusion with, and without any agreement, understanding or planned common course of action with, any other contractor, vendor of materials, supplies, equipment or services described in the Invitation to Bid, designed to limit independent bidding or competition; as prohibited by provision KRS 45A.325;

3. That the contents of the Bid or Bids have not been communicated by the Bidder or its employees or agents to any person not an employee or agent of the Bidder or its surety on any bond furnished with the Bid or Bids and will not be communicated to any such person prior to the official opening of the Bid or Bids;

4. That the Bidder is legally entitled to enter into the contracts with the University of Kentucky and Turner Construction Company and is not in violation of any prohibited conflict of interest, including those prohibited by the provisions of KRS 164.390, and 45A.330 to 45A.340 and 45A.455;

5. This offer is good for 60 calendar days from the date this Bid is opened. In submitting the above, it is expressly agreed that upon proper acceptance by the Capital Construction Procurement Section of any or all items Bid above, a contract shall thereby be created with respect to the items accepted;

6. That I have fully informed myself regarding and affirm the accuracy of all statements made in this Form of Proposal including Bid Amount.

7. Unless otherwise exempted by KRS 45.590, the Bidder intends to comply in full with all requirements of the Kentucky Civil Rights Act and to submit data required by the Kentucky Equal Employment Act upon being designated the successful contractor.

8. That the bidding contractor and all subcontractors to be employed do not and will not maintain any facilities they provide for employees in a segregated manner and they are in full compliance with provisions of 41 CFR 60-1.8 that prohibits the maintaining of segregated facilities.

9. In accordance with KRS45A.110(2), the undersigned hereby swears under penalty of perjury that he/she has not knowingly violated any provision of the campaign finance laws of the Commonwealth of Kentucky and that the award of a contract to the bidder will not violate any provision of the campaign finance laws of the Commonwealth of Kentucky.

READ CAREFULLY - SIGN IN SPACE BELOW - FAILURE TO SIGN INVALIDATES BID

SIGNED BY_____ TITLE_____

PRINT NAME_____ FIRM_____

ADDRESS_____ AREA CODE & PHONE _____

_____ FAX_____

CITY STATE ZIP CODE

DATE_____ EMAIL_____

Attachment "B"

SCOPE OF WORK
TC-186 - FLOORING

LUMP SUM PROPOSAL

The Bidder agrees to furnish all labor, materials, supplies and services required to complete the Work, for the above referenced Project, for the Capital Construction Procurement Section, University of Kentucky, as described in the Specifications and Contract Documents and shown on the Drawings enumerated below and as modified by the Addenda listed above.

TC-186 FLOORING

FOR THE LUMP SUM OF_____
(USE WORDS)

_____DOLLARS AND_____CENTS.
(USE WORDS) (USE WORDS)

($_____) **BIDDER MUST TURN IN BID BREAKOUT SHEET WITH THIS FORM OF PROPOSAL**
(USE FIGURES)

ALTERNATE No. 1

Provide an add for labor and material to install resilient flooring and stair treads from the 4th floor transfer level to the basement in each Stairs 04 and 05

ADD $_____

Breakout:

Material $_____

Labor $_____

(ADD #4)

Current Experience Modification Rating _____

OSHA Incident Rates: Recordable _____ Date of Proposal_____

THE FOLLOWING ITEMS ARE HEREWITH ENCLOSED AS REQUIRED BY KRS 45A.185:

1. Bid Bond or Certified Check in an amount not less than five percent (5%) of total Bid.
2. Authentication of Bid and Statement of Non-Collusion and Non-Conflict of Interest.
3. VENDOR NUMBER: It is imperative that you furnish your Federal Employer Identification Number in the space provided below. Failure to do so may delay the processing of purchase orders issued to your firm.

_____
(Nine Digit Number)

4. Form of Proposal Supplemental Information
5. TC-_____ Bid Breakout sheet (from Attachment 'B')

SUPERINTENDENT

In accordance with Article 17 of the General Conditions a full-time superintendent will be required on this project. Below, please list the superintendent your firm will employ on this project. The successful Bidder will be required to furnish a resume of the superintendent's qualifications and or past projects.

List the Superintendent's Name _____

Attachment "B"

SCOPE OF WORK
TC-186 - FLOORING

UNIVERSITY OF KENTUCKY
CAPITAL CONSTRUCTION PROCUREMENT SECTION
FORM OF PROPOSAL

UNIT PRICES

NOTE: Unit Prices shall include the furnishing of all labor, materials, supplies and services and shall include all items of cost, overhead and profit for the Contractor and any subcontractor involved, and shall be used uniformly without modifications for either additions or deductions. The Unit Prices as established shall be used to determine the equitable adjustment of the Contract Price in connection with changes, deletions or extra work performed under the Contract and the "Rules of Measurement" set forth in the General Conditions shall govern.

All Bidders will be required to complete and submit the following information with the bid. The information requested in this submittal is required to assist the University in determining contractor responsibility to complete the project being bid.

KY FAIRNESS ACT: UNIT PRICES SHALL BE SUBJECT TO REVIEW / ADJUSTMENT AT TIME OF BID REVIEW / AWARD BASED ON "NET COST" CONCEPT. PROVIDE DETAIL BREAKDOWN 24 HOURS AFTER BID.

HOURLY RATES: **UNIT PRICE**

Classification	Base rate	Fringes	Burden (Ins/taxes/other)	(if) (Pier Diems)	(SUM) (ST)	(SUM) (T&1/2)	(SUM) (DT)	OH/P % (5%)

Attachment "B"

SCOPE OF WORK
TC-186 - FLOORING

BID BREAKOUT

Fill in the following breakdown of costs included in your base bid. Each item is to include labor, material & equipment. These will not be considered unit prices nor will the numbers listed here limit obligations required in the bid documents. It will be used only to aid in verifying completeness of the bids.

DESCRIPTION OF WORK	COST INCLUDED IN BID
Engineering & layout, Shop drawings and submittals, Safety	$ _____
Vinyl Enhanced Tile	$ _____
Rubber Sheet Flooring	$ _____
Rubber Stair Treads	$ _____
Vinyl Sheet Flooring	$ _____
Accessories	$ _____
All Base (non-stone/tile)	$ _____
Floor Preparation	$ _____
Concrete Flooring Repair	$ _____
Protection of Flooring and Finish Work	$ _____
General Work Requirements	$ _____
Remaining work not listed above, Overhead & Profit (not to exceed 10% proposal)	$ _____
TOTAL BID AMOUNT (SHOULD MATCH PROPOSAL)	$ _____
Cost of Performance and Payment Bond ***DO NOT INCLUDE THIS COST IN YOUR BID***	$ _____

Attachment "B"

SCOPE OF WORK
TC-186 - FLOORING

Attachment A – Additional Provisions and Attachment B – (Technical) Scope of Work go together to define the requirements of this Subcontract. Attachment A is a more of a general Summary of the Contract Documents, Price, etc., while Attachment B is the Trade Specific (technical) Scope of Work.

The work of this Agreement shall include, but not be limited to, all labor, materials, apparatus, hoisting, rigging, tools, equipment, plant, supplies, accessories, samples, submittals, shop drawings, certifications, engineering, layout, transportation, storage, supervision, temporary construction, special services, contributions, insurance, taxes (unless specifically excluded by the Contract Documents), compliance with all governing agencies (city, county, state, federal and others as may be required), permits, fees, all other services and facilities and other items necessary for the performance of the **Fire Protection Work** as shown, detailed and/or implied in the contract documents outlined in the General Scope of Work.

The Scope of Work Document is being provided for your use as a general guideline. Please note, this Document is not all-inclusive. It is this Subcontractor's responsibility to provide a complete bid, including all work for this trade indicated on ALL of the contract documents (include plans, specifications, Bid Manual, etc.). It is this Subcontractor's responsibility for the entire scope of this Bid Package and coordination between all trades.

E) WORK INCLUDED - SCOPE-SPECIFIC ITEMS

1) Trade Specifications Specifically Included, but not limited to the following:

a) **DIVISION 00 – PROCUREMENT & CONTRACTING REQUIREMENTS (ALL SECTIONS)**
DIVISION 01 – GENERAL REQUIREMENTS (ALL SECTIONS)
DIVISION 02 – EXISTING CONDITIONS (ALL SECTIONS)

DIVISION 7	**THERMAL & MOISTURE PROTECTION**
SECTION 07 9200	JOINT SEALANTS

DIVISION 9	**FINISHES**
SECTION 09 0160	CONCRETE FLOORING REPAIR
SECTION 09 0600.1	SCHEDULE FOR FINISHES
SECTION 09 0600.2	MATERIAL & COLOR SCHEDULE
SECTION 09 6500	RESILIENT FLOORING

b) This Trade Contractor is also responsible for trade specifications not specifically listed above but required by reference in the listed specifications or as required to perform the scope of work described herein, as well as the Division 0 and Division 1 specifications and the use of the Construction Documents as a whole.

c) Subcontractor includes all work indicated in specification, unless this scope of work specifically and clearly excludes a portion of a specification.

2) Contract Price is LUMP SUM. There shall be NO additional labor and material escalations allowed

3) Examination of Site – Subcontractor warrants that they have sufficiently reviewed the project site to inform themselves of all items about existing site that are relevant to their work, and the cost of their work.

4) Include protection all adjacent structures during performance of this work. Plan for protection of adjacent structures must be part of the overall plan submitted for approval prior to start of work

5) **SITE LOGISTICS:** Refer to the Site Logistics plans included in the Contract Documents. Delivery trucks are to be scheduled with Turner at least one (1) week in advance. See Attachment P for delivery days/times.

6) Subcontractor change order requests shall be provided with sufficient detail (as acceptable to Turner) to allow for satisfactory review. Subcontractor shall be allowed a maximum mark up for overhead and profit per the markup provisions included in the Subcontract Agreement, or as clarified in Contract Documents above

7) Subcontractor understands that **time is of the essence** in the prosecution of Work under this agreement.

Attachment "B"

SCOPE OF WORK
TC-186 - FLOORING

8) Verify layout provided by others. Where this subcontractor is performing work using layout provided by others, this subcontractor shall perform sufficient verification of that layout to reasonably ascertain the validity of that layout. Any deficiencies (or suspected deficiencies found) shall be reported to Turner immediately to allow corrections as needed before start of work by this subcontractor.

9) All Subcontractors must be licensed as required by local, State, or Federal jurisdiction required for work of this trade in this project location

10) This Subcontractor will comply with Turner's corporate safety policy and comply with Site Specific Safety Plan that will include but is not limited to 100% tie-off above 6 feet, 100% Safety Glasses, High Visibility Vests or High Vis style T-Shirts with reflective strips, 100% glove policy, Ladders Last Policy and Nothing Hits the Ground. If you are unfamiliar with any of these policies please ask to see the policy prior to submitting your bid. Failure to be familiar with these policies will not exclude you from complying with them.

11) **Refer to Project General Work Requirements**" in volume one of the project manual. Any costs for work scope items listed in this section shall be included in your lump sum bid. Some work items are listed for specific trade contractors and they shall include those costs in their respective total lump sum bid price.

12) Condoc keynote legend will dictate your scope of work unless noted otherwise.

13) This Trade Contractor shall participate in the construction of on-site **mock-ups** as specified and indicated by the documents and/or noted elsewhere. This shall include providing of materials required for this trade contract scope of work, coordinating with other trade contractors with regard to sequencing of installations and protection of materials etc..., furnishing shop drawings and /or setting drawings and so on. Materials for in place or interim mock-ups shall be secured in advance of normal procurement to allow for ALL trade contractor installations, owner/designer and user reviews and evaluations, meetings, approvals and directive if applicable. Mockups are understood to start with arrangement of wall rough-in through complete room finishes.

14) This contractor shall provide **JOINT SEALANTS** as required for this scope of work and as shown on the Contract Documents and in accordance with specification section 07 9200.

    a. Provide sealant at perimeter of top of integral cove base

    b. Provide sealant of matching color at the bottom of door frames, specified by Architect, where flooring is installed.

15) This contractor shall provide **CONCRETE FLOORING REPAIR** as required for this scope of work and as shown on the Contract Documents and in accordance with specification section 09 0160.

    a. This includes grinding and prep of previous temporary handrail angles at perimeter and shafts.

16) Refer to **SCHEDULE FOR FINISHES** Specification Section 09 0600.1, **MATERIAL & COLOR SCHEDULE** Specification Section 09 0600.2. Include and coordinate the Room Finish Schedule within the project drawings into this work scope.

17) This contractor shall prepare floors prior to flooring installation in accordance with Specification 09 0160 **CONCRETE FLOORING REPAIR**. Remove all dust, dirt and debris prior to installation. Provide leveling if needed. Any additional floor prep required is part of this contract work. All concrete slabs currently exist and will be available for inspection by the flooring contractors prior to bidding. Pre-bid tours will be scheduled and announced.

    a. This contractor will be responsible to install finish flooring to within ¾" maximum (max. gap below bottom of door allowed) at all door locations. Any floor preparation/floating required to meet this dimension is to be included.

    b. This contractor is to level all soft flooring to hard tile transitions in all restrooms, including patient restrooms. REFERENCE DETAIL 2/i200

18) This contractor shall provide **RESILIENT FLOORING** (COMPLETE) as required for this scope of work and as shown on the Contract Documents and in accordance with specification section 09 6500. This contractor to include field trimming of rubber base at owner furnished and installed items.

    a. Spray-Lock 6500 in high traffic areas including hospital corridors and patient rooms.

    b. This contractor shall provide and install stair treads and landings on stair 04 and stair 05 starting at the **6th floor** landing down to the intermediate landing between levels 4 and 5 (i.e. treads from level 6 to

intermediate and landings at level 5 to intermediate). Note that Stair 01 and Stair 02 already have treads and landings installed.

19) The following were applied to the horizontal concrete surfaces. L&M =- Dress & Seal WB-30 Curing compound, BASF – KURE 1315 curing compound, Maximum Plus – Mineral oil form release. Any compatibility problems or adjustments in products, procedures inc. removal of previously placed products is the responsibility of the TC-186 contractor.

    a. The following was applied to the 5th floor concrete by TC-180 Preconstruction Demolition scope to clean off parts of existing roof membrane that were remaining from the original build: USG DUROCK™ BRAND LSP™ LIQUID SURFACE PROFILER. (ADD #4)

20) This contractor shall provide **grouting** of floor in front of elevator entries for flooring areas under this scope of work. Grouting defined as between edge of placed concrete slab and adjacent elevator door sill.

21) This contractor shall provide all **floor protection** required. Craft paper is not acceptable. Product shall be similar to "Ramboard Commercial" floor protection – min. 40 mil. At a minimum provide, **maintain** and remove (including any glue residue) when directed protection over all flooring. Protection shall be cut and taped to fit areas.

    a. In addition, Provide and Install Masonite floor protection in the corridors and a pathway into each patient room and core tower rooms. Installation to include taped seams and edges to be maintained and removed (along with tape residue) at the direction of the Construction Manager.

22) This contractor shall provide any **supplemental heat** required to install the flooring or raise the surfaces to the temperature required by the specifications and the manufactures recommendations.

23) Coordinate flooring transitions with TC-185 TILE trade contractor.

24) This Trade Contractor is to include **100 additional hours** (above & beyond base work scope) of floor preparation including the **120 bags of material** and proper tools to be used at the discretion and approval of the Construction Manager.

25) This Trade Contractor to include **replacing existing VPI tile** on the 3rd floor Patient elevator lobby area. Match existing material. Approx. 450sqft of flooring replacement. Include all necessary equipment and materials to remove existing glue if required.

26) This contractor shall take **special care and attention** to the floor preparation and during the installation of the adhesive for the flooring. No re-troweling of the flooring adhesive will be allowed. This contractor will be required to replace any flooring that becomes of sub-standard quality due to floor preparation. This contractor shall participate in a pre-flooring installation meeting with the CM, Owner, and Design team. The flooring manufacturing rep(s) will be required at this meeting to discuss flooring installation procedures, sequence, construction protection, and any other pertinent details to the flooring installation. **The preference for this floor tile installation is to utilize manufacture approved spray adhesive products.**

F. CONSTRUCTION SCHEDULE

Contract Price is based on the project schedule included in the bid manual and as clarified within these Additional Provisions.

G. WORK EXCLUDED

This Scope of Work shall exclude the following

1) Payment & Performance Bond
2) Tiling (Ceramic & Stone) and stone base by the TC-185 Tiling contractor

H. ALTERNATE PRICES

Alternates shall be complete for providing only the Work with no other credits. All alternate prices are to be priced as stand-alone alternates. Any number of alternates, or no alternates, may be accepted as part of this Work.
Indicate Add/Deduct Price on the BID FORM

Attachment "B"
SCOPE OF WORK
TC-186 - FLOORING

1) Resilient Flooring on Treads in Stair 04 & Stair 05: Reference Specification section 01 2300.3.1.B for requirements.

I. ALLOWANCES

The following Allowances **are to be included in the base bid**:

1) None

The above allowances are to be included in the base bid/Subcontract Price. All overhead and profit related to the Work performed under each Allowance is to be included in the Base Bid/Subcontract Price. Only direct Labor and Material costs authorized in writing by the Construction Manager after approval by the Owner are to be charged to the Allowance. Progress Payments will be made against Allowance expenditures, based on approved monthly invoices & writing Allowance Authorization from the Construction Manager/Owner. Any unused funds remaining in these allowances will be credited back to the Project.

J. UNIT PRICES

The following unit prices are applicable for changes in the Work. The unit prices are for Work complete and in place and include all costs such as material, labor, equipment, freight, taxes, insurance, fringe benefits, and overhead and profit. Also include costs for coordination with other trades work where applicable. In the event the unit prices quoted exceed industry standards or fair market value, the Turner reserves the right to request pricing for changes at cost plus allowable mark-up for overhead and profit or a lump-sum under the terms of the Agreement

1) Labor Rates - Submit detailed labor rates to Turner Project Manager for approval. Detail shall show all fringes, benefits, taxes, insurance, markups, and any other add-ons to allow verification of rate.
   - See "Form of Proposal" (Bid Form) for bid day information. The apparent low bidder will submit detailed breakdown with-in 24 hours after bid day.
2) Equipment Rates – Submit detailed rates for equipment that may be used on project, and may be part of change order pricing.

END OF TECHNICAL SCOPE OF WORK

Attachment "B"
SCOPE OF WORK
TC-186 - FLOORING

FORM OF PROPOSAL
SUPPLEMENTAL INFORMATION

THE FOLLOWING INFORMATION PERTAINS TO ALL TRADE CONTRACTORS

NOTE: MUST BE SUBMITTED WITH THE BID SUBMITTAL.
Failure to comply will result in rejection of Bidder's Proposal.

Contractor Report of Prior Violations of
Chapters 136,139, 141, 337, 338, 341, and 342

Pursuant to KRS 45A.485, the Contractor shall, prior to the award of a Contract, reveal final determinations of any violations of the provisions of KRS Chapters 136, 139, 141, 337, 338, 341, and 342 by the Contractor that have occurred in the previous five (5) year period.

This statute also requires for the duration of the Contract established, the Contractor be in continuous compliance with the provisions of Chapters 136, 139, 141, 337, 338, 341, and 342 that apply to the Contractor's operations. The Contractor's failure to reveal a final determination of a violation of KRS Chapters 136, 139, 141, 337, 338, 341, and 342, or failure to comply with any of the above cited statutes for the duration of the Contract shall be grounds for the cancellation of the Contract, and the disqualification from eligibility for future contracts for a period of two (2) years.

The Contractor, by signing and submitting a Bid on this Invitation, agrees as required by KRS 45A.485 to submit final determinations of any violations of the provisions of KRS Chapters 136, 139, 141, 337, 338, 341, and 342 that have occurred in the previous five (5) years prior to the award of a Contract and agrees to remain in continuous compliance with the provisions of these statutes during the duration of any contract that may be established. Final determinations of any violations of these statutes, must be provided to the University by the successful Contractor prior to the award of a Contract.

BUSINESS CLASSIFICATION

Please complete this form which is necessary for the University of Kentucky vendor database.
Mark only one classification. Refer to "Definitions" for assistance in determining correct classification.

(01)____Small Business

(02)____Large Business

(03)____Disadvantaged Small Business

(04)____Disadvantaged Large Business

(05)____Woman-Owned Small Business

(06)____Woman-Owned Large Business

(07)____Disadvantaged Woman-Owned Small Business

(08)____Disadvantaged Woman-Owned Large Business

(09)____Other

Attachment "B"

SCOPE OF WORK
TC-186 - FLOORING

DEFINITIONS

(01) SMALL BUSINESS: A business concern that is organized for profit, is independently owned and operated, is not dominant in the field of operations in which it is bidding, and meets the size standards as prescribed in the Code of Federal Regulations, Title 13, Part 121. Consult your local or district Small Business Administration (SBA) office if further clarification is needed.

(02) LARGE BUSINESS: A business concern that exceeds the small business size code standards established by SBA.

(03) DISADVANTAGED SMALL BUSINESS: A business concern (a) that is at least 51 percent owned by one or more socially and economically disadvantaged individuals (as defined below), or a publicly owned business, having at least 51 percent of its stock owned by one or more socially and economically disadvantaged individuals; and (b) has its management and daily business operations controlled by one or more such individuals. Socially and economically disadvantaged individuals include Black Americans, Hispanic Americans, Native Americans, Asian-Pacific Americans and other minorities or individuals found to be disadvantaged by the SBA.

(04) DISADVANTAGED LARGE BUSINESS: A concern that meets the definition of socially and economically disadvantaged individuals, but which is not a small business by the SBA's size standards.

(05) WOMAN-OWNED SMALL BUSINESS: A small business that is at least 51 percent owned by a woman or women who also control and operate it. "Control" in this context means exercising the power to make policy decisions. "Operate" means actively involved in the day to day management.

(06) WOMAN-OWNED LARGE BUSINESS: A concern that meets the definition of woman owned and operated, but which is not a small business by the SBA's standards.

(07) DISADVANTAGED, WOMAN-OWNED SMALL BUSINESS: A concern that meets the definition of both (03) and (05) above.

(08) DISADVANTAGED, WOMAN OWNED LARGE BUSINESS: A concern that meets the definition of both (04) and (06) above.

(09) OTHER: A concern that does not meet any of the above definitions.

BIDDER'S QUALIFICATIONS

The Commonwealth of Kentucky Model Procurement Code (KRS 45A.080) requires contracts to be awarded, "to the responsive and responsible bidder whose bid offers the best value" to the University of Kentucky. In order to determine if the Bidder has the experience, qualifications, resources and necessary attributes to provide the quality workmanship, materials and management required by the plans and specifications, the Bidder may be required to complete and submit the information requested on the University of Kentucky Contractor Bidder Determination of Responsibility questionnaire. Failure to provide the information requested on the questionnaire or failure to provide any additional submittals or information that may be requested to make this determination may be grounds for a declaration of nonresponsibility with respect to the Bidder. A copy of the Contractor Determination of Responsibility questionnaire is available upon request to all Bidders.

Attachment "B"

SCOPE OF WORK
TC-186 - FLOORING

TIME LIMIT FOR EXECUTION OF CONTRACT DOCUMENTS

It is further agreed, that in the event this Proposal is accepted by the Owner and the undersigned shall fail to execute the Contract and furnish satisfactory Payment and Performance Bond within ten (10) consecutive calendar days from the date of notification of the award of the Contract, the Owner may at his option, determine that the undersigned has abandoned the Contract and thereupon, the Proposal shall become null and void and the Bid guarantee, check or Bid bond which accompanied it shall be forfeited and become the property of the Owner as liquidated damages for each failure and no protest pursuant to such action will be made. If the Undersigned shall execute the Contract, and furnish satisfactory Payment Bond and Performance Bond, it is understood that the Bid Guarantee or Bid Bond will be returned to the undersigned by the Owner.

IDENTIFICATION OF MINORITY SUBCONTRACTORS AND MATERIAL SUPPLIERS

Participation of Minority and Women owned Contractors and businesses.

The University of Kentucky encourages and supports the participation of minority and women owned businesses. Goal is 10% MBE/WBE

1. Minority and Women Subcontractors

_____

_____

_____

_____

2. Minority and Women Material Suppliers

_____

_____

_____

_____

This proposal includes _____% certified MBE participation

This proposal includes _____% certified WBE participation

If your firm has no minority or women owned subcontractors or suppliers, it is required that you complete the list of minority and/or women owned businesses below. List the names of firms that were solicited to bid the project and describe why they were not successful (i.e. not low bid, did not respond, etc).

Attachment "B"
SCOPE OF WORK
TC-186 - FLOORING

RECORD OF MBE/WBE SOLICITATION

_____ Certifies that the following
BIDDER'S NAME

Minority/Women-Owned firms were contacted to solicit pricing as subcontractors/suppliers for Invitation to Bid No. _____ The following firms were not selected for use on this project for the reasons stated in the **RESULT** column.

This list of Minority or Women owned firms is to be executed and submitted as a part of the Bidder's Proposal. Failure to comply will result in rejection of Bidder's Proposal.

FIRM NAME	**MBE/WBE**	**WORK ITEMS SOLICITED**	**RESULT: NO RESPONSE OR NOT LOW BIDDER**

_____
Signature Date

_____
Title

Attachment "B"
SCOPE OF WORK
TC-186 - FLOORING

LIST OF MATERIALS AND EQUIPMENT

The apparent low bidder will be required to furnish this information within 24 hours of bid submittal. Failure to comply will result in rejection of Bidder's Proposal.

Each item listed under the different phases of construction must be clearly identified so that the Owner will definitely know what the Bidder proposes to furnish.

The use of a manufacturer's or dealer's name only, or stating "as per Plans and Specifications," will not be considered as sufficient identification.

Where more than one "Make" or "Brand" is listed for any one item, the Owner has the right to select the one to be used.

CONTRACTOR NAME & ADDRESS: _____
_____
_____
_____

TRADE CONTRACT: TC- _____ **SCOPE OF WORK: _____**
(INSERT NUMBER) **(INSERT NAME OF TRADE CONTRACT)**

The information requested in this submittal is required to assist the University in determining contractor responsibility to complete the project being bid.

ITEM	MATERIALS AND EQUIPMENT	BRAND OR MANUFACTURER

Attachment "B"
SCOPE OF WORK
TC-186 - FLOORING

PRIMARY LIST OF PROPOSED SUBCONTRACTORS

The apparent low bidder will be required to furnish this information within 24 hours of bid submittal. Failure to comply will result in rejection of Bidder's Proposal.

All subcontractors are subject to the approval of the Capital Construction Procurement Section and Capital Project Management Division, University of Kentucky, Lexington, KY.

If certain branches of the Work are to be done by the Prime Contractor, so state.

CONTRACTOR NAME & ADDRESS: _____
_____
_____

TRADE CONTRACT: TC - _____ SCOPE OF WORK:_____
(INSERT NUMBER) (INSERT NAME OF BID CATEGORY)

DIVISION OF WORK	NAME AND ADDRESS OF SUBCONTRACTOR

Attachment "B"

SCOPE OF WORK
TC-187 PAINTING

UNIVERSITY OF KENTUCKY
CAPITAL CONSTRUCTION PROCUREMENT SECTION
FORM OF PROPOSAL **TC-187 PAINTING**

Project No. 2402.9 Project Title: 5th Floor Fit Out

Purchasing Officer: Matt Spalding

NOTE: The following Form of Proposal shall be followed exactly in submitting a proposal for this work. If this copy is lost, an additional copy will be furnished upon written request to the authority issuing Contract Documents.

This Proposal is submitted by: _____

(NAME AND ADDRESS OF BIDDER)

Date: _____ _____

Telephone: _____ _____

TO: BID CLERK
UNIVERSITY OF KENTUCKY
CAPITAL CONSTRUCTION

PROCUREMENT
RM. 322 SERVICE BUILDING
LEXINGTON, KY. 40506-0005

INVITATION TO BID: CCK-2516-21

BID OPENING DATE: January 22nd, 2021 (ADD #2)

TIME: 3:00 P.M. E.D.T.

The Bidder, in compliance with your Invitation for Bids for the above referenced Project, having carefully examined the site of the Work, the Drawings and complete Contract Documents as defined in Article I of the General Conditions, as well as the Specifications affecting the work as prepared by the Consultant, hereby proposes to furnish all labor, materials, supplies and services required to construct the Project in accordance with the Contract Documents, within the time set forth therein, and at the price stated below without qualification. Bidder understands that successful bidder will enter into a contract with Turner Construction Company utilizing Turner's Subcontract Agreement Form 36 without modification.

The Bidder hereby acknowledges receipt of the following Addenda:

ADDENDUM NO._____ DATED _____

ADDENDUM NO._____ DATED _____

ADDENDUM NO. _____ DATED _____

ADDENDUM NO._____ DATED _____

(Here insert the number and date of any Addenda issued and received. If none has been issued and received, the word NONE should be inserted.)

NOTE: IN ADDITION TO THE SPECIFIC TRADE FORM OF PROPOSAL EACH SUBCONTRACTOR MUST ALSO SUBMIT FORMS FOUND IN THE SUPPLEMENTAL FORM OF PROPOSAL SECTION.

Attachment "B"

SCOPE OF WORK
TC-187 PAINTING

FORM OF PROPOSAL

AUTHENTICATION OF BID AND STATEMENT OF NON-COLLUSION AND NON-CONFLICT OF INTEREST
I hereby certify:

1. That I am the Bidder (if the Bidder is an individual), a partner in the Bidder (if the Bidder is a partnership), or an officer or employee of the bidding corporation having authority to sign on its behalf (if the Bidder is a corporation);

2. That the submitted Bid or Bids covering Capital Construction Procurement Section Invitation No. **CCK-2516-21** have been arrived at by the Bidder independently and have been submitted without collusion with, and without any agreement, understanding or planned common course of action with, any other contractor, vendor of materials, supplies, equipment or services described in the Invitation to Bid, designed to limit independent bidding or competition; as prohibited by provision KRS 45A.325;

3. That the contents of the Bid or Bids have not been communicated by the Bidder or its employees or agents to any person not an employee or agent of the Bidder or its surety on any bond furnished with the Bid or Bids and will not be communicated to any such person prior to the official opening of the Bid or Bids;

4. That the Bidder is legally entitled to enter into the contracts with the University of Kentucky and Turner Construction Company and is not in violation of any prohibited conflict of interest, including those prohibited by the provisions of KRS 164.390, and 45A.330 to 45A.340 and 45A.455;

5. This offer is good for 60 calendar days from the date this Bid is opened. In submitting the above, it is expressly agreed that upon proper acceptance by the Capital Construction Procurement Section of any or all items Bid above, a contract shall thereby be created with respect to the items accepted;

6. That I have fully informed myself regarding and affirm the accuracy of all statements made in this Form of Proposal including Bid Amount.

7. Unless otherwise exempted by KRS 45.590, the Bidder intends to comply in full with all requirements of the Kentucky Civil Rights Act and to submit data required by the Kentucky Equal Employment Act upon being designated the successful contractor.

8. That the bidding contractor and all subcontractors to be employed do not and will not maintain any facilities they provide for employees in a segregated manner and they are in full compliance with provisions of 41 CFR 60-1.8 that prohibits the maintaining of segregated facilities.

9. In accordance with KRS45A.110(2), the undersigned hereby swears under penalty of perjury that he/she has not knowingly violated any provision of the campaign finance laws of the Commonwealth of Kentucky and that the award of a contract to the bidder will not violate any provision of the campaign finance laws of the Commonwealth of Kentucky.

READ CAREFULLY - SIGN IN SPACE BELOW - FAILURE TO SIGN INVALIDATES BID

SIGNED BY_____ TITLE_____

PRINT NAME_____ FIRM_____

ADDRESS_____ AREA CODE & PHONE _____

_____ FAX_____

CITY STATE ZIP CODE

DATE_____ EMAIL_____

Attachment "B"

SCOPE OF WORK
TC-187 PAINTING

LUMP SUM PROPOSAL

The Bidder agrees to furnish all labor, materials, supplies and services required to complete the Work, for the above referenced Project, for the Capital Construction Procurement Section, University of Kentucky, as described in the Specifications and Contract Documents and shown on the Drawings enumerated below and as modified by the Addenda listed above.

TC-187 PAINTING

FOR THE LUMP SUM OF_____
(USE WORDS)

_____DOLLARS AND_____CENTS.
(USE WORDS) (USE WORDS)

($_____) **BIDDER MUST TURN IN BID BREAKOUT SHEET WITH THIS FORM OF PROPOSAL**
(USE FIGURES)

ALTERNATES – NONE

Current Experience Modification Rating _____

OSHA Incident Rates: **Recordable** _____ **Date of Proposal**_____

THE FOLLOWING ITEMS ARE HEREWITH ENCLOSED AS REQUIRED BY KRS 45A.185:

1. Bid Bond or Certified Check in an amount not less than five percent (5%) of total Bid.
2. Authentication of Bid and Statement of Non-Collusion and Non-Conflict of Interest.
3. VENDOR NUMBER: It is imperative that you furnish your Federal Employer Identification Number in the space provided below. Failure to do so may delay the processing of purchase orders issued to your firm.

   _____
   (Nine Digit Number)
4. Form of Proposal Supplemental Information
5. TC-_____ Bid Breakout sheet (from Attachment 'B')

SUPERINTENDENT

In accordance with Article 17 of the General Conditions a full-time superintendent will be required on this project. Below, please list the superintendent your firm will employ on this project. The successful Bidder will be required to furnish a resume of the superintendent's qualifications and or past projects.

List the Superintendent's Name _____

Attachment "B"

SCOPE OF WORK
TC-187 PAINTING

UNIVERSITY OF KENTUCKY
CAPITAL CONSTRUCTION PROCUREMENT SECTION
FORM OF PROPOSAL

UNIT PRICES

NOTE: Unit Prices shall include the furnishing of all labor, materials, supplies and services and shall include all items of cost, overhead and profit for the Contractor and any subcontractor involved, and shall be used uniformly without modifications for either additions or deductions. The Unit Prices as established shall be used to determine the equitable adjustment of the Contract Price in connection with changes, deletions or extra work performed under the Contract and the "Rules of Measurement" set forth in the General Conditions shall govern.

All Bidders will be required to complete and submit the following information with the bid. The information requested in this submittal is required to assist the University in determining contractor responsibility to complete the project being bid.

KY FAIRNESS ACT: UNIT PRICES SHALL BE SUBJECT TO REVIEW / ADJUSTMENT AT TIME OF BID REVIEW / AWARD BASED ON "NET COST" CONCEPT. PROVIDE DETAIL BREAKDOWN 24 HOURS AFTER BID.

HOURLY RATES: **UNIT PRICE**

Classification	Base rate	Fringes	Burden (Ins/taxes/other)	(if) (Pier Diems)	(SUM) (ST)	(SUM) (T&1/2)	(SUM) (DT)	OH/P % (5%)

Attachment "B"

SCOPE OF WORK
TC-187 PAINTING

BID BREAKOUT

Fill in the following breakdown of costs included in your base bid. Each item is to include labor, material & equipment. These will not be considered unit prices nor will the numbers listed here limit obligations required in the bid documents. It will be used only to aid in verifying completeness of the bids.

DESCRIPTION OF WORK	COST INCLUDED IN BID
Engineering & Layout, Permits and Fees, Shop Drawings and Submittal	$ _____
Painting	$ _____
Traffic Coatings	$ _____
Joint Sealants	$ _____
Flooring Treatment / Concrete Floor Sealer	$ _____
Safety and Housekeeping	$ _____
General Work Requirements	$ _____
Remaining work not listed above, Overhead & Profit (not to exceed 10% proposal)	$ _____
TOTAL BID AMOUNT (SHOULD MATCH PROPOSAL)	$ _____
Cost of Performance and Payment Bond ***DO NOT INCLUDE THIS COST IN YOUR BID***	$ _____

Attachment "B"

SCOPE OF WORK
TC-187 PAINTING

Attachment A – Additional Provisions and Attachment B – (Technical) Scope of Work go together to define the requirements of this Subcontract. Attachment A is a more of a general Summary of the Contract Documents, Price, etc., while Attachment B is the Trade Specific (technical) Scope of Work.

The work of this Agreement shall include, but not be limited to, all labor, materials, apparatus, hoisting, rigging, tools, equipment, plant, supplies, accessories, samples, submittals, shop drawings, certifications, engineering, layout, transportation, storage, supervision, temporary construction, special services, contributions, insurance, taxes (unless specifically excluded by the Contract Documents), compliance with all governing agencies (city, county, state, federal and others as may be required), permits, fees, all other services and facilities and other items necessary for the performance of the **Fire Protection Work** as shown, detailed and/or implied in the contract documents outlined in the General Scope of Work.

The Scope of Work Document is being provided for your use as a general guideline. Please note, this Document is not all-inclusive. It is this Subcontractor's responsibility to provide a complete bid, including all work for this trade indicated on ALL of the contract documents (include plans, specifications, Bid Manual, etc.). It is this Subcontractor's responsibility for the entire scope of this Bid Package and coordination between all trades.

E) WORK INCLUDED - SCOPE-SPECIFIC ITEMS

1) Trade Specifications Specifically Included, but not limited to the following:

a) **DIVISION 00 – PROCUREMENT & CONTRACTING REQUIREMENTS (ALL SECTIONS)**
DIVISION 01 – GENERAL REQUIREMENTS (ALL SECTIONS)
DIVISION 02 – EXISTING CONDITIONS (ALL SECTIONS)

DIVISION 7	**THERMAL & MOISTURE PROTECTION**
SECTION 07 1800	TRAFFIC COATINGS
SECTION 07 9200	JOINT SEALANTS

DIVISION 9	**FINISHES**
SECTION 09 0600.1	SCHEDULE FOR FINISHES
SECTION 09 0600.2	MATERIAL & COLOR SCHEDULE
SECTION 09 6100	FLOORING TREATMENT
SECTION 09 9100	PAINTING

b) This Trade Contractor is also responsible for trade specifications not specifically listed above but required by reference in the listed specifications or as required to perform the scope of work described herein, as well as the Division 0 and Division 1 specifications and the use of the Construction Documents as a whole.

c) Subcontractor includes all work indicated in specification, unless this scope of work specifically and clearly excludes a portion of a specification.

2) Contract Price is LUMP SUM. There shall be NO additional labor and material escalations allowed

3) Examination of Site – Subcontractor warrants that they have sufficiently reviewed the project site to inform themselves of all items about existing site that are relevant to their work, and the cost of their work.

4) Include protection all adjacent structures during performance of this work. Plan for protection of adjacent structures must be part of the overall plan submitted for approval prior to start of work

5) **SITE LOGISTICS:** Refer to the Site Logistics plans included in the Contract Documents. Delivery trucks are to be scheduled with Turner at least one (1) week in advance. See Attachment P for delivery days/times.

6) Subcontractor change order requests shall be provided with sufficient detail (as acceptable to Turner) to allow for satisfactory review. Subcontractor shall be allowed a maximum mark up for overhead and profit per the markup provisions included in the Subcontract Agreement, or as clarified in Contract Documents above

7) Subcontractor understands that **time is of the essence** in the prosecution of Work under this agreement.

Attachment "B"
SCOPE OF WORK
TC-187 PAINTING

8) Verify layout provided by others. Where this subcontractor is performing work using layout provided by others, this subcontractor shall perform sufficient verification of that layout to reasonably ascertain the validity of that layout. Any deficiencies (or suspected deficiencies found) shall be reported to Turner immediately to allow corrections as needed before start of work by this subcontractor.
9) All Subcontractors must be licensed as required by local, State, or Federal jurisdiction required for work of this trade in this project location
10) This Subcontractor will comply with Turner's corporate safety policy and comply with Site Specific Safety Plan that will include but is not limited to 100% tie-off above 6 feet, 100% Safety Glasses, High Visibility Vests or High Vis style T-Shirts with reflective strips, 100% glove policy, Ladders Last Policy and Nothing Hits the Ground. If you are unfamiliar with any of these policies please ask to see the policy prior to submitting your bid. Failure to be familiar with these policies will not exclude you from complying with them.
11) **Refer to Project General Work Requirements**" in volume one of the project manual. Any costs for work scope items listed in this section shall be included in your lump sum bid. Some work items are listed for specific trade contractors and they shall include those costs in their respective total lump sum bid price.
12) Condoc keynote legend will dictate your scope of work unless noted otherwise.
13) This Trade Contractor shall participate in the construction of on-site **mock-ups** as specified and indicated by the documents and/or noted elsewhere. This shall include providing of materials required for this trade contract scope of work, coordinating with other trade contractors with regard to sequencing of installations and protection of materials etc..., furnishing shop drawings and /or setting drawings and so on. Materials for in place or interim mock-ups shall be secured in advance of normal procurement to allow for ALL trade contractor installations, owner/designer and user reviews and evaluations, meetings, approvals and directive if applicable. Mockups are understood to start with arrangement of wall rough-in through complete room finishes.
14) This contractor shall provide **JOINT SEALANTS (**partial) as required for this scope of work and as shown on the Contract Documents and in accordance with specification section 07 9200 which includes but not limited to:
    a. ALL Hollow Metal frames (including but not limited to Door frames, HM windows, View windows (AKA Borrowed Lights), Access doors and any other item (excluding casework) requiring caulk/sealant.
    b. Include caulking/ sealing of the bottoms of hollow metal door frames to finished flooring.
    c. Include caulking of all elevator door frames to interior finish elements.
    d. Caulking/ sealing of aluminum openings is by the TC-181 General Trades contractor.
    e. Include the caulking of the interior elements, i.e. GWB and window sills to the inside face of the exterior window systems or other building envelope systems.
    f. See specification section 01 2500 for clarification of owner furnished and installed items.
15) Refer to Schedule for Finishes Specification 09 0600.1, Material and Color Schedule Specification 09 0600.2. Include and coordinate the Room Finish Schedule within the project drawings into this work scope.
16) This contractor shall provide **FLOORING TREATMENT** (COMPLETE) as required for this scope of work and as shown on the Contract Documents and in accordance with specification section 09 6100. Include any floor preparation required to provide smooth, "divot" (hole) free hole. Floor preparation to be completed prior to final seal.
    a. This contractor to include re-installation of clear sealer at all Electrical, IDF, and EIDF closets concrete floors after completion of construction in these areas. Include proper floor preparation as required by manufacturer.
17) This contractor shall provide **ALL INTERIOR PAINTING** (COMPLETE) as required for this scope of work and as shown on the Contract Documents and in accordance with specification section 09 9100 which includes but not limited to:
    a. TC-183 Doors and Hardware will preinstall the hardware on doors. This contractor TC-187 Painting is to include "cutting-in painting" for unfinished doors i.e. hollow metal doors, etc.

b. Ceilings may or may not be fully installed prior to prime or 1st paint coat installations on wall partitions.

c. Pay particular attention to overspray of MEP specialty items, especially CAT6A data cable and med gas lines. Replacement at the expense of this contractor may be required if deemed "unacceptable" by UK and CNS standards.

18) Include preparation of surfaces to receive finish. Painting a wall indicates acceptance of the wall finish.

19) Assume the **final coat of paint** will be installed after the adjacent finishes and elements are in place, including but not limited to: flooring, floor base, ceiling grid, ceiling tiles, finished doors and hardware, casework and millwork, plumbing fixtures, Owner Furnished Equipment (sharps containers, glove dispensers, etc.) light fixtures, light switch and receptacle covers, toilet accessories, marker boards, etc. This may include masking of finished installed items.

20) This contractor is responsible for protecting its work and surrounding work from overspray, (i.e.: light fixtures, sprinkler heads, mechanical/electrical equipment, etc.). Any overspray must be removed by this contractor to the satisfaction of Turner Construction.

21) This contractor shall include **TRAFFIC COATINGS (COMPLETE)** as required for this scope of work and as shown on the Contract Documents and in accordance with specification section 07 1800 which includes but not limited to:

a. Include installation of traffic coatings at two (2) new HVAC air handling units (AHU's) and associated equipment housekeeping pads as shown on the project drawings (M203B and M203D). This contractor is to "tie-in" the new concrete 6" pads to the existing epoxy floor coating. **Assume approximately 400 lf. Use product similar to Sikafloor 203.**

22) This contractor is to include **150 additional hours** (above & beyond base work scope) of drywall finish touch-up with the necessary finishing materials and tools to be used at the discretion and approval of the Construction Manager.

23) This contractor is to include repainting the walls of stairwells 04 and 05 from the 5th floor landing to the basement including the transfer landing on the 4th floor. (ADD #4)

F. CONSTRUCTION SCHEDULE

Contract Price is based on the project schedule included in the bid manual and as clarified within these Additional Provisions.

G. WORK EXCLUDED

This Scope of Work shall exclude the following

1) Payment & Performance Bond
2) Caulking of Plumbing Fixtures, Casework / Millwork to Walls..
3) Caulking of aluminum doors and openings.

H. ALTERNATE PRICES

Alternates shall be complete for providing only the Work with no other credits. All alternate prices are to be priced as stand-alone alternates. Any number of alternates, or no alternates, may be accepted as part of this Work.
Indicate Add/Deduct Price on the BID FORM

1) None

I. ALLOWANCES

The following Allowances **are to be included in the base bid**:

1) None

The above allowances are to be included in the base bid/Subcontract Price. All overhead and profit related to the Work performed under each Allowance is to be included in the Base Bid/Subcontract Price. Only direct Labor and

Material costs authorized in writing by the Construction Manager after approval by the Owner are to be charged to the Allowance. Progress Payments will be made against Allowance expenditures, based on approved monthly invoices & writing Allowance Authorization from the Construction Manager/Owner. Any unused funds remaining in these allowances will be credited back to the Project.

J. UNIT PRICES

The following unit prices are applicable for changes in the Work. The unit prices are for Work complete and in place and include all costs such as material, labor, equipment, freight, taxes, insurance, fringe benefits, and overhead and profit. Also include costs for coordination with other trades work where applicable. In the event the unit prices quoted exceed industry standards or fair market value, the Turner reserves the right to request pricing for changes at cost plus allowable mark-up for overhead and profit or a lump-sum under the terms of the Agreement

1) Labor Rates - Submit detailed labor rates to Turner Project Manager for approval. Detail shall show all fringes, benefits, taxes, insurance, markups, and any other add-ons to allow verification of rate.
   - See "Form of Proposal" (Bid Form) for bid day information. The apparent low bidder will submit detailed breakdown with-in 24 hours after bid day.
2) Equipment Rates – Submit detailed rates for equipment that may be used on project, and may be part of change order pricing.

END OF TECHNICAL SCOPE OF WORK

Attachment "B"
SCOPE OF WORK
TC-187 PAINTING

FORM OF PROPOSAL
SUPPLEMENTAL INFORMATION

THE FOLLOWING INFORMATION PERTAINS TO ALL TRADE CONTRACTORS

NOTE: MUST BE SUBMITTED WITH THE BID SUBMITTAL.
Failure to comply will result in rejection of Bidder's Proposal.

Contractor Report of Prior Violations of
Chapters 136,139, 141, 337, 338, 341, and 342

Pursuant to KRS 45A.485, the Contractor shall, prior to the award of a Contract, reveal final determinations of any violations of the provisions of KRS Chapters 136, 139, 141, 337, 338, 341, and 342 by the Contractor that have occurred in the previous five (5) year period.

This statute also requires for the duration of the Contract established, the Contractor be in continuous compliance with the provisions of Chapters 136, 139, 141, 337, 338, 341, and 342 that apply to the Contractor's operations. The Contractor's failure to reveal a final determination of a violation of KRS Chapters 136, 139, 141, 337, 338, 341, and 342, or failure to comply with any of the above cited statutes for the duration of the Contract shall be grounds for the cancellation of the Contract, and the disqualification from eligibility for future contracts for a period of two (2) years.

The Contractor, by signing and submitting a Bid on this Invitation, agrees as required by KRS 45A.485 to submit final determinations of any violations of the provisions of KRS Chapters 136, 139, 141, 337, 338, 341, and 342 that have occurred in the previous five (5) years prior to the award of a Contract and agrees to remain in continuous compliance with the provisions of these statutes during the duration of any contract that may be established. Final determinations of any violations of these statutes, must be provided to the University by the successful Contractor prior to the award of a Contract.

BUSINESS CLASSIFICATION

Please complete this form which is necessary for the University of Kentucky vendor database.
Mark only one classification. Refer to "Definitions" for assistance in determining correct classification.

(01)____Small Business

(02)____Large Business

(03)____Disadvantaged Small Business

(04)____Disadvantaged Large Business

(05)____Woman-Owned Small Business

(06)____Woman-Owned Large Business

(07)____Disadvantaged Woman-Owned Small Business

(08)____Disadvantaged Woman-Owned Large Business

(09)____Other

Attachment "B"

SCOPE OF WORK
TC-187 PAINTING

DEFINITIONS

(01) SMALL BUSINESS: A business concern that is organized for profit, is independently owned and operated, is not dominant in the field of operations in which it is bidding, and meets the size standards as prescribed in the Code of Federal Regulations, Title 13, Part 121. Consult your local or district Small Business Administration (SBA) office if further clarification is needed.

(02) LARGE BUSINESS: A business concern that exceeds the small business size code standards established by SBA.

(03) DISADVANTAGED SMALL BUSINESS: A business concern (a) that is at least 51 percent owned by one or more socially and economically disadvantaged individuals (as defined below), or a publicly owned business, having at least 51 percent of its stock owned by one or more socially and economically disadvantaged individuals; and (b) has its management and daily business operations controlled by one or more such individuals. Socially and economically disadvantaged individuals include Black Americans, Hispanic Americans, Native Americans, Asian-Pacific Americans and other minorities or individuals found to be disadvantaged by the SBA.

(04) DISADVANTAGED LARGE BUSINESS: A concern that meets the definition of socially and economically disadvantaged individuals, but which is not a small business by the SBA's size standards.

(05) WOMAN-OWNED SMALL BUSINESS: A small business that is at least 51 percent owned by a woman or women who also control and operate it. "Control" in this context means exercising the power to make policy decisions. "Operate" means actively involved in the day to day management.

(06) WOMAN-OWNED LARGE BUSINESS: A concern that meets the definition of woman owned and operated, but which is not a small business by the SBA's standards.

(07) DISADVANTAGED, WOMAN-OWNED SMALL BUSINESS: A concern that meets the definition of both (03) and (05) above.

(08) DISADVANTAGED, WOMAN OWNED LARGE BUSINESS: A concern that meets the definition of both (04) and (06) above.

(09) OTHER: A concern that does not meet any of the above definitions.

BIDDER'S QUALIFICATIONS

The Commonwealth of Kentucky Model Procurement Code (KRS 45A.080) requires contracts to be awarded, "to the responsive and responsible bidder whose bid offers the best value" to the University of Kentucky. In order to determine if the Bidder has the experience, qualifications, resources and necessary attributes to provide the quality workmanship, materials and management required by the plans and specifications, the Bidder may be required to complete and submit the information requested on the University of Kentucky Contractor Bidder Determination of Responsibility questionnaire. Failure to provide the information requested on the questionnaire or failure to provide any additional submittals or information that may be requested to make this determination may be grounds for a declaration of nonresponsibility with respect to the Bidder. A copy of the Contractor Determination of Responsibility questionnaire is available upon request to all Bidders.

Attachment "B"
SCOPE OF WORK
TC-187 PAINTING

TIME LIMIT FOR EXECUTION OF CONTRACT DOCUMENTS

It is further agreed, that in the event this Proposal is accepted by the Owner and the undersigned shall fail to execute the Contract and furnish satisfactory Payment and Performance Bond within ten (10) consecutive calendar days from the date of notification of the award of the Contract, the Owner may at his option, determine that the undersigned has abandoned the Contract and thereupon, the Proposal shall become null and void and the Bid guarantee, check or Bid bond which accompanied it shall be forfeited and become the property of the Owner as liquidated damages for each failure and no protest pursuant to such action will be made. If the Undersigned shall execute the Contract, and furnish satisfactory Payment Bond and Performance Bond, it is understood that the Bid Guarantee or Bid Bond will be returned to the undersigned by the Owner.

IDENTIFICATION OF MINORITY SUBCONTRACTORS AND MATERIAL SUPPLIERS

Participation of Minority and Women owned Contractors and businesses.

The University of Kentucky encourages and supports the participation of minority and women owned businesses. Goal is 10% MBE/WBE

1. Minority and Women Subcontractors

_____

_____

_____

_____

2. Minority and Women Material Suppliers

_____

_____

_____

_____

This proposal includes _____% certified MBE participation

This proposal includes _____% certified WBE participation

If your firm has no minority or women owned subcontractors or suppliers, it is required that you complete the list of minority and/or women owned businesses below. List the names of firms that were solicited to bid the project and describe why they were not successful (i.e. not low bid, did not respond, etc).

Attachment "B"
SCOPE OF WORK
TC-187 PAINTING

RECORD OF MBE/WBE SOLICITATION

_____ Certifies that the following
BIDDER'S NAME

Minority/Women-Owned firms were contacted to solicit pricing as subcontractors/suppliers for Invitation to Bid No. _____ The following firms were not selected for use on this project for the reasons stated in the **RESULT** column.

This list of Minority or Women owned firms is to be executed and submitted as a part of the Bidder's Proposal. Failure to comply will result in rejection of Bidder's Proposal.

FIRM NAME	**MBE/WBE**	**WORK ITEMS SOLICITED**	**RESULT: NO RESPONSE OR NOT LOW BIDDER**

_____
Signature Date

_____
Title

Attachment "B"
SCOPE OF WORK
TC-187 PAINTING

LIST OF MATERIALS AND EQUIPMENT

The apparent low bidder will be required to furnish this information within 24 hours of bid submittal. Failure to comply will result in rejection of Bidder's Proposal.

Each item listed under the different phases of construction must be clearly identified so that the Owner will definitely know what the Bidder proposes to furnish.

The use of a manufacturer's or dealer's name only, or stating "as per Plans and Specifications," will not be considered as sufficient identification.

Where more than one "Make" or "Brand" is listed for any one item, the Owner has the right to select the one to be used.

CONTRACTOR NAME & ADDRESS: _____
_____
_____
_____

TRADE CONTRACT: TC- _____ **SCOPE OF WORK: _____**
(INSERT NUMBER) **(INSERT NAME OF TRADE CONTRACT)**

The information requested in this submittal is required to assist the University in determining contractor responsibility to complete the project being bid.

ITEM	MATERIALS AND EQUIPMENT	BRAND OR MANUFACTURER

Attachment "B"
SCOPE OF WORK
TC-187 PAINTING

PRIMARY LIST OF PROPOSED SUBCONTRACTORS

The apparent low bidder will be required to furnish this information within 24 hours of bid submittal. Failure to comply will result in rejection of Bidder's Proposal.

All subcontractors are subject to the approval of the Capital Construction Procurement Section and Capital Project Management Division, University of Kentucky, Lexington, KY.

If certain branches of the Work are to be done by the Prime Contractor, so state.

CONTRACTOR NAME & ADDRESS: _____
_____
_____

TRADE CONTRACT: TC - _____ SCOPE OF WORK:_____
(INSERT NUMBER) (INSERT NAME OF BID CATEGORY)

DIVISION OF WORK	NAME AND ADDRESS OF SUBCONTRACTOR

Attachment "B"

SCOPE OF WORK
TC-188 – Fire Protection

UNIVERSITY OF KENTUCKY
CAPITAL CONSTRUCTION PROCUREMENT SECTION
FORM OF PROPOSAL **TC-188 FIRE PROTECTION**

Project No. 2402.9 Project Title: 5th Floor Fit Out

Purchasing Officer: Matt Spalding

NOTE: The following Form of Proposal shall be followed exactly in submitting a proposal for this work. If this copy is lost, an additional copy will be furnished upon written request to the authority issuing Contract Documents.

This Proposal is submitted by: _____

(NAME AND ADDRESS OF BIDDER)

Date: _____ _____

Telephone: _____ _____

TO: BID CLERK
UNIVERSITY OF KENTUCKY
CAPITAL CONSTRUCTION

PROCUREMENT
RM. 322 SERVICE BUILDING
LEXINGTON, KY. 40506-0005

INVITATION TO BID: CCK-2516-21

BID OPENING DATE: January 22nd, 2021 (ADD #2)

TIME: 3:00 P.M. E.D.T.

The Bidder, in compliance with your Invitation for Bids for the above referenced Project, having carefully examined the site of the Work, the Drawings and complete Contract Documents as defined in Article I of the General Conditions, as well as the Specifications affecting the work as prepared by the Consultant, hereby proposes to furnish all labor, materials, supplies and services required to construct the Project in accordance with the Contract Documents, within the time set forth therein, and at the price stated below without qualification. Bidder understands that successful bidder will enter into a contract with Turner Construction Company utilizing Turner's Subcontract Agreement Form 36 without modification.

The Bidder hereby acknowledges receipt of the following Addenda:

ADDENDUM NO._____ DATED _____

ADDENDUM NO._____ DATED _____

ADDENDUM NO. _____ DATED _____

ADDENDUM NO._____ DATED _____

(Here insert the number and date of any Addenda issued and received. If none has been issued and received, the word NONE should be inserted.)

NOTE: IN ADDITION TO THE SPECIFIC TRADE FORM OF PROPOSAL EACH SUBCONTRACTOR MUST ALSO SUBMIT FORMS FOUND IN THE SUPPLEMENTAL FORM OF PROPOSAL SECTION.

Attachment "B"

SCOPE OF WORK
TC-188 – Fire Protection

FORM OF PROPOSAL

AUTHENTICATION OF BID AND STATEMENT OF NON-COLLUSION AND NON-CONFLICT OF INTEREST
I hereby certify:

1. That I am the Bidder (if the Bidder is an individual), a partner in the Bidder (if the Bidder is a partnership), or an officer or employee of the bidding corporation having authority to sign on its behalf (if the Bidder is a corporation);

2. That the submitted Bid or Bids covering Capital Construction Procurement Section Invitation No. **CCK-2516-21** have been arrived at by the Bidder independently and have been submitted without collusion with, and without any agreement, understanding or planned common course of action with, any other contractor, vendor of materials, supplies, equipment or services described in the Invitation to Bid, designed to limit independent bidding or competition; as prohibited by provision KRS 45A.325;

3. That the contents of the Bid or Bids have not been communicated by the Bidder or its employees or agents to any person not an employee or agent of the Bidder or its surety on any bond furnished with the Bid or Bids and will not be communicated to any such person prior to the official opening of the Bid or Bids;

4. That the Bidder is legally entitled to enter into the contracts with the University of Kentucky and Turner Construction Company and is not in violation of any prohibited conflict of interest, including those prohibited by the provisions of KRS 164.390, and 45A.330 to 45A.340 and 45A.455;

5. This offer is good for 60 calendar days from the date this Bid is opened. In submitting the above, it is expressly agreed that upon proper acceptance by the Capital Construction Procurement Section of any or all items Bid above, a contract shall thereby be created with respect to the items accepted;

6. That I have fully informed myself regarding and affirm the accuracy of all statements made in this Form of Proposal including Bid Amount.

7. Unless otherwise exempted by KRS 45.590, the Bidder intends to comply in full with all requirements of the Kentucky Civil Rights Act and to submit data required by the Kentucky Equal Employment Act upon being designated the successful contractor.

8. That the bidding contractor and all subcontractors to be employed do not and will not maintain any facilities they provide for employees in a segregated manner and they are in full compliance with provisions of 41 CFR 60-1.8 that prohibits the maintaining of segregated facilities.

9. In accordance with KRS45A.110(2), the undersigned hereby swears under penalty of perjury that he/she has not knowingly violated any provision of the campaign finance laws of the Commonwealth of Kentucky and that the award of a contract to the bidder will not violate any provision of the campaign finance laws of the Commonwealth of Kentucky.

READ CAREFULLY - SIGN IN SPACE BELOW - FAILURE TO SIGN INVALIDATES BID

SIGNED BY_____ TITLE_____

PRINT NAME_____ FIRM_____

ADDRESS_____ AREA CODE & PHONE _____

_____ FAX_____

CITY STATE ZIP CODE

DATE_____ EMAIL_____

Attachment "B"

SCOPE OF WORK
TC-188 – Fire Protection

LUMP SUM PROPOSAL

The Bidder agrees to furnish all labor, materials, supplies and services required to complete the Work, for the above referenced Project, for the Capital Construction Procurement Section, University of Kentucky, as described in the Specifications and Contract Documents and shown on the Drawings enumerated below and as modified by the Addenda listed above.

TC-188 FIRE PROTECTION

FOR THE LUMP SUM OF_____
(USE WORDS)

_____DOLLARS AND_____CENTS.
(USE WORDS) (USE WORDS)

($_____) **BIDDER MUST TURN IN BID BREAKOUT SHEET WITH THIS FORM OF PROPOSAL**
(USE FIGURES)

ALTERNATES – NONE

Current Experience Modification Rating _____

OSHA Incident Rates: **Recordable** _____ **Date of Proposal**_____

THE FOLLOWING ITEMS ARE HEREWITH ENCLOSED AS REQUIRED BY KRS 45A.185:

1. Bid Bond or Certified Check in an amount not less than five percent (5%) of total Bid.
2. Authentication of Bid and Statement of Non-Collusion and Non-Conflict of Interest.
3. VENDOR NUMBER: It is imperative that you furnish your Federal Employer Identification Number in the space provided below. Failure to do so may delay the processing of purchase orders issued to your firm.

   _____
   (Nine Digit Number)
4. Form of Proposal Supplemental Information
5. TC-_____ Bid Breakout sheet (from Attachment 'B')

SUPERINTENDENT

In accordance with Article 17 of the General Conditions a full-time superintendent will be required on this project. Below, please list the superintendent your firm will employ on this project. The successful Bidder will be required to furnish a resume of the superintendent's qualifications and or past projects.

List the Superintendent's Name _____

Attachment "B"

SCOPE OF WORK
TC-188 – Fire Protection

UNIVERSITY OF KENTUCKY
CAPITAL CONSTRUCTION PROCUREMENT SECTION
FORM OF PROPOSAL

UNIT PRICES

NOTE: Unit Prices shall include the furnishing of all labor, materials, supplies and services and shall include all items of cost, overhead and profit for the Contractor and any subcontractor involved, and shall be used uniformly without modifications for either additions or deductions. The Unit Prices as established shall be used to determine the equitable adjustment of the Contract Price in connection with changes, deletions or extra work performed under the Contract and the "Rules of Measurement" set forth in the General Conditions shall govern.

All Bidders will be required to complete and submit the following information with the bid. The information requested in this submittal is required to assist the University in determining contractor responsibility to complete the project being bid.

KY FAIRNESS ACT: UNIT PRICES SHALL BE SUBJECT TO REVIEW / ADJUSTMENT AT TIME OF BID REVIEW / AWARD BASED ON "NET COST" CONCEPT. PROVIDE DETAIL BREAKDOWN 24 HOURS AFTER BID.

HOURLY RATES: **UNIT PRICE**

Classification	Base rate	Fringes	Burden (Ins/taxes/other)	(if) (Pier Diems)	(SUM) (ST)	(SUM) (T&1/2)	(SUM) (DT)	OH/P % (5%)

Attachment "B"

SCOPE OF WORK
TC-188 – Fire Protection

BID BREAKOUT

Fill in the following breakdown of costs included in your base bid. Each item is to include labor, material & equipment. These will not be considered unit prices nor will the numbers listed here limit obligations required in the bid documents. It will be used only to aid in verifying completeness of the bids.

DESCRIPTION OF WORK	COST INCLUDED IN BID
Engineering & Layout	$
Shop Drawings & Submittals	$
Permits & Fees	$
Mobilizations	$
Modifications & Outage Work	$
Temporary Installations	$
Fire Protection Piping (Wet)	$
MEP Coordination/BIM	$
BIM 3-D Server Allowance	$ 7,500
Alterations Allowance	$ 5,000
Fire-stopping	$
General Work Requirements	$
Remaining work not listed above, Overhead & Profit (not to exceed 10% proposal)	$

TOTAL BID AMOUNT (SHOULD MATCH PROPOSAL) $

Cost of Performance and Payment Bond $
DO NOT INCLUDE THIS COST IN YOUR BID

Attachment "B"

SCOPE OF WORK
TC-188 – Fire Protection

Attachment A – Additional Provisions and Attachment B – (Technical) Scope of Work go together to define the requirements of this Subcontract. Attachment A is a more of a general Summary of the Contract Documents, Price, etc., while Attachment B is the Trade Specific (technical) Scope of Work.

The work of this Agreement shall include, but not be limited to, all labor, materials, apparatus, hoisting, rigging, tools, equipment, plant, supplies, accessories, samples, submittals, shop drawings, certifications, engineering, layout, transportation, storage, supervision, temporary construction, special services, contributions, insurance, taxes (unless specifically excluded by the Contract Documents), compliance with all governing agencies (city, county, state, federal and others as may be required), permits, fees, all other services and facilities and other items necessary for the performance of the **Fire Protection Work** as shown, detailed and/or implied in the contract documents outlined in the General Scope of Work.

The Scope of Work Document is being provided for your use as a general guideline. Please note, this Document is not all-inclusive. It is this Subcontractor's responsibility to provide a complete bid, including all work for this trade indicated on ALL of the contract documents (include plans, specifications, Bid Manual, etc.). It is this Subcontractor's responsibility for the entire scope of this Bid Package and coordination between all trades.

E) WORK INCLUDED - SCOPE-SPECIFIC ITEMS

1) Trade Specifications Specifically Included, but not limited to the following:

a) **DIVISION 00 – PROCUREMENT & CONTRACTING REQUIREMENTS (ALL SECTIONS)**
DIVISION 01 – GENERAL REQUIREMENTS (ALL SECTIONS)
DIVISION 02 – EXISTING CONDITIONS (ALL SECTIONS)

DIVISION 7	**THERMAL AND MOISTURE PROTECTION**
SECTION 07 8110	APPLIED FIREPROOFING (for patching work)
SECTION 07 8400	FIRE STOPPING
SECTION 07 9200	JOINT SEALANTS (Partial)

DIVISION 13	**SPECIAL CONSTRUCTION**

DIVISION 20	**GENERAL MECHANICAL REQUIREMENTS**
SECTION 20 0000	GENERAL MECHANICAL REQUIREMENTS
SECTION 20 0553	MECHANICAL SYSTEMS IDENTIFICATION
SECTION 20 0573	MECHANICAL SYSTEMS FIRESTOPPING
SECTION 20 0800	COMMISSIONING OF MECHANCIAL

DIVISION 21	**FIRE SUPRESSION (ALL SECTIONS)**

DIVISION 23	**HVAC**
SECTION 23 0550	VIBRATION ISOLATION

DIVISION 28	**ELECTRONIC SAFETY AND SECURITY**
SECTION 28 3116	MULTIPLEXED FIRE DETECTION & ALARM SYS. (coord. with this work scope)

b) This Trade Contractor is also responsible for trade specifications not specifically listed above but required by reference in the listed specifications or as required to perform the scope of work described herein, as well as the Division 0 and Division 1 specifications and the use of the Construction Documents as a whole.

c) Subcontractor includes all work indicated in specification, unless this scope of work specifically and clearly excludes a portion of a specification.

Attachment "B"

SCOPE OF WORK
TC-188 – Fire Protection

2) Contract Price is LUMP SUM. There shall be NO additional labor and material escalations allowed
3) Examination of Site – Subcontractor warrants that they have sufficiently reviewed the project site to inform themselves of all items about existing site that are relevant to their work, and the cost of their work.
4) Include protection all adjacent structures during performance of this work. Plan for protection of adjacent structures must be part of the overall plan submitted for approval prior to start of work
5) **SITE LOGISTICS:** Refer to the Site Logistics plans included in the Contract Documents. Delivery trucks are to be scheduled with Turner at least one (1) week in advance. See Attachment P for delivery days/times.
6) Subcontractor change order requests shall be provided with sufficient detail (as acceptable to Turner) to allow for satisfactory review. Subcontractor shall be allowed a maximum mark up for overhead and profit per the markup provisions included in the Subcontract Agreement, or as clarified in Contract Documents above
7) Subcontractor understands that **time is of the essence** in the prosecution of Work under this agreement.
8) Verify layout provided by others. Where this subcontractor is performing work using layout provided by others, this subcontractor shall perform sufficient verification of that layout to reasonably ascertain the validity of that layout. Any deficiencies (or suspected deficiencies found) shall be reported to Turner immediately to allow corrections as needed before start of work by this subcontractor.
9) All Subcontractors must be licensed as required by local, State, or Federal jurisdiction required for work of this trade in this project location
10) This Subcontractor will comply with Turner's corporate safety policy and comply with Site Specific Safety Plan that will include but is not limited to 100% tie-off above 6 feet, 100% Safety Glasses, High Visibility Vests or High Vis style T-Shirts with reflective strips, 100% glove policy, Ladders Last Policy and Nothing Hits the Ground. If you are unfamiliar with any of these policies please ask to see the policy prior to submitting your bid. Failure to be familiar with these policies will not exclude you from complying with them.
11) **Refer to Project General Work Requirements**" in volume one of the project manual. Any costs for work scope items listed in this section shall be included in your lump sum bid. Some work items are listed for specific trade contractors and they shall include those costs in their respective total lump sum bid price.
12) Condoc keynote legend will dictate your scope of work unless noted otherwise.
13) This Trade Contractor shall participate in the construction of on-site **mock-ups** as specified (Specification Section 01 4000) and indicated by the documents and/or noted elsewhere. This shall include providing of materials required for this trade contract scope of work, coordinating with other trade contractors with regard to sequencing of installations and protection of materials etc..., furnishing shop drawings and /or setting drawings and so on. Materials for in place or interim mock-ups shall be secured in advance of normal procurement to allow for ALL trade contractor installations, owner/designer and user reviews and evaluations, meetings, approvals and directive if applicable. Mockups are understood to start with arrangement of wall rough-in through complete room finishes. At a minimum, a mockup for each type of Patient Room will be constructed.
14) Label and identify all piping and components associated with this contract fire protection as required.
15) This Trade Contractor is responsible for the removal of plugs or caps (installed by others), including final connection and any transition fittings as needed.
16) This Trade Contractor shall include all materials, labor, tools, and equipment required to install complete and functioning **interior fire protection systems**, including all structures, piping and fixtures indicated.
    a) Provide complete all wet, dry, and pre-action fire protection systems including all equipment and piping required for this project.
    b) Provide all work shown in and connections to existing facilities, including demolition and renovation work. This work must be coordinated with the Owner through Turner Construction.
    c) Provide fire department valve cabinets and fire hose cabinets.
    d) Final drop of mains, sprinkler head installation and trim-out, etc. is not to be performed until the ceiling installation is complete in each area. If this Trade Contractor chooses to install drops/heads prior to ceiling being installed they shall be responsible for all costs to adjust, relocate and/or remove drops/heads. All sprinkler heads shall be centered in both directions in each acoustic ceiling tile unless otherwise approved. The acoustic ceiling installer shall cut all ceiling tiles.

e) This contractor to include necessary sprinkler coverage under all ductwork 4' and larger. Including areas on the 3rd floor mechanical room where new AHU's and ductwork are installed for this project. Review mechanical drawings for estimated locations.

f) This contractor to Include electrical work, and coordination with the Electrical / Fire Alarm Contractor as required. Include all flow switches, supervised valves, and all other alarm system components required for the fire protection system that are compatible with the fire alarm system.

g) The Fire Protection Contractor shall provide and install all electrical and control devices including internal wiring, devices, fusing, integral disconnect switches and motor starters required for this Bid Package **that are not readily shown but are required for a fully functioning system**. The control panels/devices provided shall accommodate the Building Fire Alarm System provided by others. This Contractor shall provide all approved and corrected wiring diagrams to the Construction Manager for distribution. Wiring on the equipment side of factory furnished equipment panels, whether integral with equipment or separate, shall be the responsibility of this Contractor unless noted otherwise in the drawings or specifications.

h) Accommodate the portion of Security Systems provided by others.

i) Install escutcheons at ALL penetrations where piping is exposed to view, which is to include storage rooms, electrical/mechanical closets, etc.

j) Extended sprinkler head coverage will NOT be allowed unless pre-approved by the project design team.

17) This Trade Contractor is responsible for **demolition and rework of existing Fire Protection** systems as indicated on the contract drawings, including any permits or fees associated with the work indicated. This work includes, but is not limited to the following.

a) It is the intent that TC-180 Preconstruction Demolition contractor will take out the existing fire protection system on the 5th floor and cap it back at the shaft. This contractor will be responsible for all demolition and rework that is necessary outside of the 5th floor.

b) Provide rework of existing fire protection systems as required to provide a final, code-compliant system. This includes supports/hangers removed back to structure. The intent is to install back a fully coordinated system with all MEPT work.

c) This contractor is to patch back any floor, wall, ceiling, etc. locations where existing materials were modified with like materials and reinforcing as is adjacent. Appropriate temporary protection is required immediately after modification to meet safety, infection control, and/or life safety requirements.

d) This contractor to include modification of existing sprinkler piping at the existing MEP shafts (or sim.) as required in order to install the new, coordinated work per the approved BIM model. This is for the purpose to change the elevation, direction, etc. of the current piping to meet the elevations of the floor fit-outs. Coordinate exact elevations during the BIM process.

e) This contractor is to include any temporary piping, equipment, required to keep any adjacent areas live and operational during the demolition of the existing piping, controls, etc. Include any back feed piping, controls, monitoring in order for any existing area to function as normal (prior to construction work) during the construction of the new work.

f) This Contractor shall maintain the permanent standpipe(s) for use as temporary construction standpipe(s). The standpipe must remain active and ready for use at all times. Include all temporary signage and identification required to identify this system. Provide maintenance and 24/7 response for **temporary fire protection system**. This Contractor shall include accommodations to be code compliant and meet Fire Marshal requirements. Coordinate with the Fire Alarm (Integrated Technology) trade contractor.

g) Provide all temporary equipment required for the operation of any temporary building fire protection system required; permanent equipment shall not be used for temporary fire protection during construction.

18) The contract price shall not be altered for any work that could have been **reasonably inferred** from the Contract Documents. The following items are listed as examples of the intent of this statement, but is not limited to these items alone:

a) Variations to avoid interference and obstructions.

b) Providing all Fire Protection components and services usually supplied with a specific system.

c) The providing of all necessary Fire Protection equipment and appurtenances, whether shown or not, for a complete operating system in strict code compliance based on equipment and fixtures indicated on the Contract Documents.
d) Testing performed in accordance with the requirements of the Contract Documents to meet the needs of the construction schedule and to not delay the work of other trades.

19) This Trade Contractor shall furnish and install all **sleeves and blockouts** for this contract's penetrations of walls, floors, and roof. The cutting of metal deck as required to install the work shall be included. Any reinforcement of the deck that is required but not shown on the structural drawings is to be included in this work. This Trade Contractor is responsible for all curbs, thimbles, counter flashings, clamping rings, sealants, etc., required at roof penetrations of material and equipment covered by this work. This would include but not be limited to vents flashings, and any special curbs or flashing required.

    a) Per UK standards, all sleeves/blockouts shall be a minimum of 1.5" above finished floor. This work scope shall include "metal collars" (sealed) as necessary for any existing or new sleeve installations not 1.5" above the finished floor elevation (not concrete elevation). This Trade Contractor is responsible for protection of all sleeves installed for (or existing) their scope of work
    b) This contractor is to gain fire stopping inspection at the floor level PRIOR to installing the 1.5" metal collar. The installation of the metal collar and floor fire stopping shall not be in one action preventing proper fire stop inspection.

20) All **roof penetrations** are to be included in this work scope. This contractor is to include all costs to repair/tie-in/patch the existing roofing utilizing the warranty roofing contractor of record. This includes any work included in this contract. Any roof or floor protection required for the movement of workmen or equipment is to be included.

21) Include any **core drilling** required for pipe penetrations at floors and walls. These penetrations are to be in a neat and workmanlike manner. Coordinate all wall openings with the trade involved. Core drilling in areas where there is substantial slab reinforcement may be prohibited. All cores must be submitted to the Structural Engineer for review prior to coring. All floor and wall penetrations must be coordinated with the Construction Manager prior to floor or wall construction.

22) This contractor to seal all existing system installations contained in or similar to this work scope. This includes acoustically, fire, or otherwise sealing around existing piping, conduits, supports, etc. This also includes installation of the correct UL listed assemblies and labeling of existing installations through new partition walls.

23) All openings installed under this scope are the sole responsibility of this contractor to ensure that they are **water tight** prior to their end of shift. This contractor shall coordinate openings with proper trades.

24) This Trade Contractor shall provide **access doors** required for the operation and maintenance of its work, including areas where there are inaccessible ceilings or walls. This Trade Contractor shall also be responsible for any access doors which may be required at the connection to existing systems. Ceiling and wall access doors will be turned over to drywall trade contractor for installation. All access doors must meet or exceed the fire rating of contiguous construction and must be consistent with the architectural finish of the area in which they are installed. The locations of access doors must be detailed and approved prior to installation. This contractor is required to turn over a signed (by both contractors) transmittal acknowledging transmission and receipt of said access doors for installation.

25) It will be the responsibility of this contractor to pay for repair of any fireproofing destroyed during installation of this trade contractor's work.

26) This contractor is to include ALL **cutting and patching** required to install the designed work within any existing walls and ceilings. This includes any drywall finishing back to pre-demo condition. Coordinate penetrations prior to installation of final finishes. Reference division 1 specifications.

27) This Trade Contractor shall provide all **firestopping** associated with this scope of work in accordance with the contract documents, including identification per the specifications. This includes firestopping for all penetrations associated with this scope of work, including core drilled penetrations. All penetrations created by this Trade Contractor shall be coordinated with other applicable trades and performed in a neat and workmanlike manner. This Trade Contractor will provide a Firestopping Mock-up of all systems/penetration types for review and approval. Coordinate the installation of the mock-up with the construction manager.

28) Ensure that all piping that arrives to the jobsite is **covered on all ends**. Covered ends shall not be uncovered until installed in place. Include covering and capping the ends of all pipe at end of each shift daily.

29) This Trade Contractor shall provide and install any **inertia bases, concrete pads, encasement and/or curbs** required for the work of this contract not indicated on the Architectural drawings.

30) Provide **vibration isolation** as required by local building codes and the specifications.

31) All systems must meet **seismic requirements** as indicated in the specifications and drawings.

32) This Trade Contractor shall provide Concealed Heads for all fire protection heads in all rooms where heads fall in patient lift operating zones. All other locations will be per UK Standards.

33) This Trade Contractor will connect to existing piping. This contractor shall review and assume responsibility for testing and operation of these systems. Such systems include, but not limited to; Flow switches, sprinkler heads, etc.

34) This contractor shall include all costs for overtime/shift work required for existing utility outages to connect new systems installed in this contract. Submit **Attachment D Outage Log** for all expected outages within 10 days of contract award.

35) This Trade Contractor shall provide any temporary testing equipment/panels required to test all systems without disruption to existing systems. Once successfully tested and commissioned, new systems will be integrated with existing systems.

36) Provide all **permits, certification**, testing and documentation of fire protection/suppression system as required by the Contract Documents and from authorities having jurisdictions. Include all costs for all "after normal business hours" Life Safety Inspections required by the inspection agency including trades related over time exposure.

37) The equipment pre-purchased by the Owner is identified in Volume 4. This subcontractor (also referred to as "Installing Trade Contractor" for applicable equipment) is responsible for the coordination, installation, and all other miscellaneous provisions for this equipment as if it were purchased directly by this subcontractor. This includes receipt, protection, inventory, and storage until turned over to the owner. For owner furnished equipment which may have utility connection requirements, provide rough-in and final connections to the Owner furnished equipment and coordinate complete installation as required. Coordinate any plumbing work shown on documents with the appropriate subcontractor.

38) All **hydrostatic testing** of the fire protection piping and system per NFPA Standards and the requirements of the Contract Documents. Submit completed and signed NFPA test forms. Installation, testing and insulation shall be scheduled by area as sequenced by the Construction Manager, in order to not delay the progress of other trades. Testing must be done in multiple sections and multiple phases as the fire protection system coordinates with the different building areas.

    a. This contractor shall pre-test all piping with air prior to hydrostatic testing. The Construction Manager will witness these and hydrostatic tests.

39) Include **Start-up** of equipment and systems. All systems must be maintained to be turned over to the Owner in a like-new condition.

40) This Trade Contractor shall participate in the coordination process using **3-D Building Information Modeling** (**BIM**) as outlined in **Attachment "H"**, in lieu of the conventional 2-D drawing process. All costs for the BIM process for this scope of work shall be included in the base bid. Include the scheduled BIM Allowance for Vicon/Box server use and hardware/software. This allowance is not for the use of the MEP trades for their coordination. Each BIM participating Trade Contractor is responsible for updating contract and field changes in the BIM model throughout the project. All trades will need to coordinate structural support hangers. It is imperative that the coordination begin immediately after contract award to meet the schedule milestones. The details of sequencing and timing of this process will be discussed immediately after contract award. Provide required resources to coordinate, purchase, fabricate, and deliver materials to meet the schedule installation start dates. The intent is to also utilize the coordination in the 3D model to prefabricate off-site as much material as possible.

    a) This Trade Contractor shall also include an additional forty (40) hours of BIM coordination to be used at the Owner/CM's discretion. (ADD #4)

b) This Trade Contractor shall be responsible to reflect the actual location of piping where connections are to be made with **existing work** in the BIM model.

c) Include **BIM modeling "mock-ups"** for each typical patient and core rooms. This includes detailed modeling of room overhead and in-wall assemblies and coordination with Owner-furnished equipment. Include modeling of typical adjacent room wall where utilities share common wall (e.g., at back-to-back headwalls).

F. CONSTRUCTION SCHEDULE

Contract Price is based on the project schedule included in the bid manual and as clarified within these Additional Provisions.

G. WORK EXCLUDED

This Scope of Work shall exclude the following

1) Payment & Performance Bond

H. ALTERNATE PRICES

Alternates shall be complete for providing only the Work with no other credits. All alternate prices are to be priced as stand-alone alternates. Any number of alternates, or no alternates, may be accepted as part of this Work.
Indicate Add/Deduct Price on the BID FORM

1) None

I. ALLOWANCES

The following Allowances **are to be included in the base bid**:

1)	Building Imaging Model (BIM) Allowance for BIM360	$ 7,500
2)	Alterations Allowance	$ 5,000

The above allowances are to be included in the base bid/Subcontract Price. All overhead and profit related to the Work performed under each Allowance is to be included in the Base Bid/Subcontract Price. Only direct Labor and Material costs authorized in writing by the Construction Manager after approval by the Owner are to be charged to the Allowance. Progress Payments will be made against Allowance expenditures, based on approved monthly invoices & writing Allowance Authorization from the Construction Manager/Owner. Any unused funds remaining in these allowances will be credited back to the Project.

J. UNIT PRICES

The following unit prices are applicable for changes in the Work. The unit prices are for Work complete and in place and include all costs such as material, labor, equipment, freight, taxes, insurance, fringe benefits, and overhead and profit. Also include costs for coordination with other trades work where applicable. In the event the unit prices quoted exceed industry standards or fair market value, the Turner reserves the right to request pricing for changes at cost plus allowable mark-up for overhead and profit or a lump-sum under the terms of the Agreement

1) Labor Rates - Submit detailed labor rates to Turner Project Manager for approval. Detail shall show all fringes, benefits, taxes, insurance, markups, and any other add-ons to allow verification of rate.
   - See "Form of Proposal" (Bid Form) for bid day information. The apparent low bidder will submit detailed breakdown with-in 24 hours after bid day.
2) Equipment Rates – Submit detailed rates for equipment that may be used on project, and may be part of change order pricing.

END OF TECHNICAL SCOPE OF WORK

Attachment "B"
SCOPE OF WORK
TC-188 – Fire Protection

FORM OF PROPOSAL
SUPPLEMENTAL INFORMATION

THE FOLLOWING INFORMATION PERTAINS TO ALL TRADE CONTRACTORS

NOTE: MUST BE SUBMITTED WITH THE BID SUBMITTAL.
Failure to comply will result in rejection of Bidder's Proposal.

Contractor Report of Prior Violations of
Chapters 136,139, 141, 337, 338, 341, and 342

Pursuant to KRS 45A.485, the Contractor shall, prior to the award of a Contract, reveal final determinations of any violations of the provisions of KRS Chapters 136, 139, 141, 337, 338, 341, and 342 by the Contractor that have occurred in the previous five (5) year period.

This statute also requires for the duration of the Contract established, the Contractor be in continuous compliance with the provisions of Chapters 136, 139, 141, 337, 338, 341, and 342 that apply to the Contractor's operations. The Contractor's failure to reveal a final determination of a violation of KRS Chapters 136, 139, 141, 337, 338, 341, and 342, or failure to comply with any of the above cited statutes for the duration of the Contract shall be grounds for the cancellation of the Contract, and the disqualification from eligibility for future contracts for a period of two (2) years.

The Contractor, by signing and submitting a Bid on this Invitation, agrees as required by KRS 45A.485 to submit final determinations of any violations of the provisions of KRS Chapters 136, 139, 141, 337, 338, 341, and 342 that have occurred in the previous five (5) years prior to the award of a Contract and agrees to remain in continuous compliance with the provisions of these statutes during the duration of any contract that may be established. Final determinations of any violations of these statutes, must be provided to the University by the successful Contractor prior to the award of a Contract.

BUSINESS CLASSIFICATION

Please complete this form which is necessary for the University of Kentucky vendor database.
Mark only one classification. Refer to "Definitions" for assistance in determining correct classification.

(01)____Small Business

(02)____Large Business

(03)____Disadvantaged Small Business

(04)____Disadvantaged Large Business

(05)____Woman-Owned Small Business

(06)____Woman-Owned Large Business

(07)____Disadvantaged Woman-Owned Small Business

(08)____Disadvantaged Woman-Owned Large Business

(09)____Other

Attachment "B"

SCOPE OF WORK
TC-188 – Fire Protection

DEFINITIONS

(01) SMALL BUSINESS: A business concern that is organized for profit, is independently owned and operated, is not dominant in the field of operations in which it is bidding, and meets the size standards as prescribed in the Code of Federal Regulations, Title 13, Part 121. Consult your local or district Small Business Administration (SBA) office if further clarification is needed.

(02) LARGE BUSINESS: A business concern that exceeds the small business size code standards established by SBA.

(03) DISADVANTAGED SMALL BUSINESS: A business concern (a) that is at least 51 percent owned by one or more socially and economically disadvantaged individuals (as defined below), or a publicly owned business, having at least 51 percent of its stock owned by one or more socially and economically disadvantaged individuals; and (b) has its management and daily business operations controlled by one or more such individuals. Socially and economically disadvantaged individuals include Black Americans, Hispanic Americans, Native Americans, Asian-Pacific Americans and other minorities or individuals found to be disadvantaged by the SBA.

(04) DISADVANTAGED LARGE BUSINESS: A concern that meets the definition of socially and economically disadvantaged individuals, but which is not a small business by the SBA's size standards.

(05) WOMAN-OWNED SMALL BUSINESS: A small business that is at least 51 percent owned by a woman or women who also control and operate it. "Control" in this context means exercising the power to make policy decisions. "Operate" means actively involved in the day to day management.

(06) WOMAN-OWNED LARGE BUSINESS: A concern that meets the definition of woman owned and operated, but which is not a small business by the SBA's standards.

(07) DISADVANTAGED, WOMAN-OWNED SMALL BUSINESS: A concern that meets the definition of both (03) and (05) above.

(08) DISADVANTAGED, WOMAN OWNED LARGE BUSINESS: A concern that meets the definition of both (04) and (06) above.

(09) OTHER: A concern that does not meet any of the above definitions.

BIDDER'S QUALIFICATIONS

The Commonwealth of Kentucky Model Procurement Code (KRS 45A.080) requires contracts to be awarded, "to the responsive and responsible bidder whose bid offers the best value" to the University of Kentucky. In order to determine if the Bidder has the experience, qualifications, resources and necessary attributes to provide the quality workmanship, materials and management required by the plans and specifications, the Bidder may be required to complete and submit the information requested on the University of Kentucky Contractor Bidder Determination of Responsibility questionnaire. Failure to provide the information requested on the questionnaire or failure to provide any additional submittals or information that may be requested to make this determination may be grounds for a declaration of nonresponsibility with respect to the Bidder. A copy of the Contractor Determination of Responsibility questionnaire is available upon request to all Bidders.

Attachment "B"

SCOPE OF WORK
TC-188 – Fire Protection

TIME LIMIT FOR EXECUTION OF CONTRACT DOCUMENTS

It is further agreed, that in the event this Proposal is accepted by the Owner and the undersigned shall fail to execute the Contract and furnish satisfactory Payment and Performance Bond within ten (10) consecutive calendar days from the date of notification of the award of the Contract, the Owner may at his option, determine that the undersigned has abandoned the Contract and thereupon, the Proposal shall become null and void and the Bid guarantee, check or Bid bond which accompanied it shall be forfeited and become the property of the Owner as liquidated damages for each failure and no protest pursuant to such action will be made. If the Undersigned shall execute the Contract, and furnish satisfactory Payment Bond and Performance Bond, it is understood that the Bid Guarantee or Bid Bond will be returned to the undersigned by the Owner.

IDENTIFICATION OF MINORITY SUBCONTRACTORS AND MATERIAL SUPPLIERS

Participation of Minority and Women owned Contractors and businesses.

The University of Kentucky encourages and supports the participation of minority and women owned businesses. Goal is 10% MBE/WBE

1. Minority and Women Subcontractors

_____

_____

_____

_____

2. Minority and Women Material Suppliers

_____

_____

_____

_____

This proposal includes _____% certified MBE participation

This proposal includes _____% certified WBE participation

If your firm has no minority or women owned subcontractors or suppliers, it is required that you complete the list of minority and/or women owned businesses below. List the names of firms that were solicited to bid the project and describe why they were not successful (i.e. not low bid, did not respond, etc).

Attachment "B"
SCOPE OF WORK
TC-188 – Fire Protection

RECORD OF MBE/WBE SOLICITATION

_____ Certifies that the following
BIDDER'S NAME

Minority/Women-Owned firms were contacted to solicit pricing as subcontractors/suppliers for Invitation to Bid No. _____ The following firms were not selected for use on this project for the reasons stated in the **RESULT** column.

This list of Minority or Women owned firms is to be executed and submitted as a part of the Bidder's Proposal. Failure to comply will result in rejection of Bidder's Proposal.

FIRM NAME	**MBE/WBE**	**WORK ITEMS SOLICITED**	**RESULT: NO RESPONSE OR NOT LOW BIDDER**

_____
Signature Date

_____
Title

Attachment "B"
SCOPE OF WORK
TC-188 – Fire Protection

LIST OF MATERIALS AND EQUIPMENT

The apparent low bidder will be required to furnish this information within 24 hours of bid submittal. Failure to comply will result in rejection of Bidder's Proposal.

Each item listed under the different phases of construction must be clearly identified so that the Owner will definitely know what the Bidder proposes to furnish.

The use of a manufacturer's or dealer's name only, or stating "as per Plans and Specifications," will not be considered as sufficient identification.

Where more than one "Make" or "Brand" is listed for any one item, the Owner has the right to select the one to be used.

CONTRACTOR NAME & ADDRESS: _____
_____
_____
_____

TRADE CONTRACT: TC- _____ **SCOPE OF WORK: _____**
(INSERT NUMBER) **(INSERT NAME OF TRADE CONTRACT)**

The information requested in this submittal is required to assist the University in determining contractor responsibility to complete the project being bid.

ITEM	MATERIALS AND EQUIPMENT	BRAND OR MANUFACTURER

Attachment "B"
SCOPE OF WORK
TC-188 – Fire Protection

PRIMARY LIST OF PROPOSED SUBCONTRACTORS

The apparent low bidder will be required to furnish this information within 24 hours of bid submittal. Failure to comply will result in rejection of Bidder's Proposal.

All subcontractors are subject to the approval of the Capital Construction Procurement Section and Capital Project Management Division, University of Kentucky, Lexington, KY.

If certain branches of the Work are to be done by the Prime Contractor, so state.

CONTRACTOR NAME & ADDRESS: _____
_____
_____

TRADE CONTRACT: TC - _____ SCOPE OF WORK:_____
(INSERT NUMBER) (INSERT NAME OF BID CATEGORY)

DIVISION OF WORK	NAME AND ADDRESS OF SUBCONTRACTOR

Attachment "B"

SCOPE OF WORK
TC-189 – Plumbing & Mechanical

UNIVERSITY OF KENTUCKY
CAPITAL CONSTRUCTION PROCUREMENT SECTION
FORM OF PROPOSAL **TC-189 PLUMBING & MECHANICAL**

Project No. 2402.9 Project Title: UK 5th Floor Fit Out

Purchasing Officer: Matt Spalding

NOTE: The following Form of Proposal shall be followed exactly in submitting a proposal for this work. If this copy is lost, an additional copy will be furnished upon written request to the authority issuing Contract Documents.

This Proposal is submitted by: _____

(NAME AND ADDRESS OF BIDDER)

Date: _____ _____

Telephone: _____ _____

TO: BID CLERK
UNIVERSITY OF KENTUCKY
CAPITAL CONSTRUCTION

PROCUREMENT
RM. 322 SERVICE BUILDING
LEXINGTON, KY. 40506-0005

INVITATION TO BID: CCK-2516-21

BID OPENING DATE: January 22nd, 2021 (ADD #2)

TIME: 3:00 P.M. E.D.T.

The Bidder, in compliance with your Invitation for Bids for the above referenced Project, having carefully examined the site of the Work, the Drawings and complete Contract Documents as defined in Article I of the General Conditions, as well as the Specifications affecting the work as prepared by the Consultant, hereby proposes to furnish all labor, materials, supplies and services required to construct the Project in accordance with the Contract Documents, within the time set forth therein, and at the price stated below without qualification. Bidder understands that successful bidder will enter into a contract with Turner Construction Company utilizing Turner's Subcontract Agreement Form 36 without modification.

The Bidder hereby acknowledges receipt of the following Addenda:

ADDENDUM NO._____ DATED _____

ADDENDUM NO._____ DATED _____

ADDENDUM NO. _____ DATED _____

ADDENDUM NO._____ DATED _____

(Here insert the number and date of any Addenda issued and received. If none has been issued and received, the word NONE should be inserted.)

NOTE: IN ADDITION TO THE SPECIFIC TRADE FORM OF PROPOSAL EACH SUBCONTRACTOR MUST ALSO SUBMIT FORMS FOUND IN THE SUPPLEMENTAL FORM OF PROPOSAL SECTION.

Attachment "B"

SCOPE OF WORK
TC-189 – Plumbing & Mechanical

FORM OF PROPOSAL

AUTHENTICATION OF BID AND STATEMENT OF NON-COLLUSION AND NON-CONFLICT OF INTEREST
I hereby certify:

1. That I am the Bidder (if the Bidder is an individual), a partner in the Bidder (if the Bidder is a partnership), or an officer or employee of the bidding corporation having authority to sign on its behalf (if the Bidder is a corporation);

2. That the submitted Bid or Bids covering Capital Construction Procurement Section Invitation No. **CCK-2516-21** have been arrived at by the Bidder independently and have been submitted without collusion with, and without any agreement, understanding or planned common course of action with, any other contractor, vendor of materials, supplies, equipment or services described in the Invitation to Bid, designed to limit independent bidding or competition; as prohibited by provision KRS 45A.325;

3. That the contents of the Bid or Bids have not been communicated by the Bidder or its employees or agents to any person not an employee or agent of the Bidder or its surety on any bond furnished with the Bid or Bids and will not be communicated to any such person prior to the official opening of the Bid or Bids;

4. That the Bidder is legally entitled to enter into the contracts with the University of Kentucky and Turner Construction Company and is not in violation of any prohibited conflict of interest, including those prohibited by the provisions of KRS 164.390, and 45A.330 to 45A.340 and 45A.455;

5. This offer is good for 60 calendar days from the date this Bid is opened. In submitting the above, it is expressly agreed that upon proper acceptance by the Capital Construction Procurement Section of any or all items Bid above, a contract shall thereby be created with respect to the items accepted;

6. That I have fully informed myself regarding and affirm the accuracy of all statements made in this Form of Proposal including Bid Amount.

7. Unless otherwise exempted by KRS 45.590, the Bidder intends to comply in full with all requirements of the Kentucky Civil Rights Act and to submit data required by the Kentucky Equal Employment Act upon being designated the successful contractor.

8. That the bidding contractor and all subcontractors to be employed do not and will not maintain any facilities they provide for employees in a segregated manner and they are in full compliance with provisions of 41 CFR 60-1.8 that prohibits the maintaining of segregated facilities.

9. In accordance with KRS45A.110(2), the undersigned hereby swears under penalty of perjury that he/she has not knowingly violated any provision of the campaign finance laws of the Commonwealth of Kentucky and that the award of a contract to the bidder will not violate any provision of the campaign finance laws of the Commonwealth of Kentucky.

READ CAREFULLY - SIGN IN SPACE BELOW - FAILURE TO SIGN INVALIDATES BID

SIGNED BY_____ TITLE_____

PRINT NAME_____ FIRM_____

ADDRESS_____ AREA CODE & PHONE _____

_____ FAX_____

CITY STATE ZIP CODE

DATE_____ EMAIL_____

Attachment "B"

SCOPE OF WORK
TC-189 – Plumbing & Mechanical

LUMP SUM PROPOSAL

The Bidder agrees to furnish all labor, materials, supplies and services required to complete the Work, for the above referenced Project, for the Capital Construction Procurement Section, University of Kentucky, as described in the Specifications and Contract Documents and shown on the Drawings enumerated below and as modified by the Addenda listed above.

TC-189 PLUMBING & MECHANICAL

FOR THE LUMP SUM OF_____
(USE WORDS)

_____DOLLARS AND_____CENTS.
(USE WORDS) (USE WORDS)

($_____) **BIDDER MUST TURN IN BID BREAKOUT SHEET WITH THIS FORM OF PROPOSAL**
(USE FIGURES)

ALTERNATES – NONE

Current Experience Modification Rating _____

OSHA Incident Rates: **Recordable** _____ **Date of Proposal**_____

THE FOLLOWING ITEMS ARE HEREWITH ENCLOSED AS REQUIRED BY KRS 45A.185:

1. Bid Bond or Certified Check in an amount not less than five percent (5%) of total Bid.
2. Authentication of Bid and Statement of Non-Collusion and Non-Conflict of Interest.
3. VENDOR NUMBER: It is imperative that you furnish your Federal Employer Identification Number in the space provided below. Failure to do so may delay the processing of purchase orders issued to your firm.

   _____
   (Nine Digit Number)
4. Form of Proposal Supplemental Information
5. TC-_____ Bid Breakout sheet (from Attachment 'B')

SUPERINTENDENT

In accordance with Article 17 of the General Conditions a full-time superintendent will be required on this project. Below, please list the superintendent your firm will employ on this project. The successful Bidder will be required to furnish a resume of the superintendent's qualifications and or past projects.

List the Superintendent's Name _____

Attachment "B"

SCOPE OF WORK
TC-189 – Plumbing & Mechanical

UNIVERSITY OF KENTUCKY
CAPITAL CONSTRUCTION PROCUREMENT SECTION
FORM OF PROPOSAL

UNIT PRICES

NOTE: Unit Prices shall include the furnishing of all labor, materials, supplies and services and shall include all items of cost, overhead and profit for the Contractor and any subcontractor involved, and shall be used uniformly without modifications for either additions or deductions. The Unit Prices as established shall be used to determine the equitable adjustment of the Contract Price in connection with changes, deletions or extra work performed under the Contract and the "Rules of Measurement" set forth in the General Conditions shall govern.

All Bidders will be required to complete and submit the following information with the bid. The information requested in this submittal is required to assist the University in determining contractor responsibility to complete the project being bid.

KY FAIRNESS ACT: UNIT PRICES SHALL BE SUBJECT TO REVIEW / ADJUSTMENT AT TIME OF BID REVIEW / AWARD BASED ON "NET COST" CONCEPT. PROVIDE DETAIL BREAKDOWN 24 HOURS AFTER BID.

HOURLY RATES: **UNIT PRICE**

Classification	Base rate	Fringes	Burden (Ins/taxes/other)	(if) (Pier Diems)	(SUM) (ST)	(SUM) (T&1/2)	(SUM) (DT)	OH/P % (5%)

Attachment "B"

SCOPE OF WORK
TC-189 – Plumbing & Mechanical

BID BREAKOUT

DESCRIPTION OF WORK	COST INCLUDED IN BID
Engineering & Layout, Permits & Fees, Shop Drawings and Submittals	$
Demolition and Rework of Existing	$
Sanitary Piping System	$
Building Water Systems	$
Hydronic Piping System	$
Medical Gas System	$
Insulation –Piping and HVAC	$
Ductwork	$
Duct Insulation	$
Grilles, Registers and Diffusers	$
Equipment	$
Installation of Owner-Furnished Equipment	$
Temporary Installations, General Req's Items	$
Testing and Inspections	$
Test and Balance	$
Commissioning Participation	$
AHU Install - Labor, Material, Equipment, Safety, Planning for: (Receive, Transport, Rig, Lift, Assemble, Connect, Test)	$
MEP Coordination / BIM	$
HVAC Controls Instrumentation Allowance (TC-189A Directed Budget)	$ 1,056,045 (ADD #3)
BIM 3-D Server Allowance	$ 7,500
Alterations Allowance	$ 20,000
5th Floor Sanitary Relocation Allowance	$ 10,000
Existing Penetration Fire Stopping Allowance	$ 2,000
3rd Floor Mechanical Room AHU Install – Utility Relocation Allowance	$ 5,000
Controls Coordination Allowance	$ 5,000
Project BIM Coordinator Allowance	$ 50,000
Firestopping	$
Safety and Housekeeping	$
General Work Requirements	$
Remaining work not listed above, Overhead & Profit (not to exceed 10% of proposal)	$

TOTAL BID AMOUNT (SHOULD MATCH PROPOSAL) $

Cost of Performance and Payment Bond $
DO NOT INCLUDE THIS COST IN YOUR BID

Attachment "B"

SCOPE OF WORK
TC-189 – Plumbing & Mechanical

Attachment A – Additional Provisions and Attachment B – (Technical) Scope of Work go together to define the requirements of this Subcontract. Attachment A is a more of a general Summary of the Contract Documents, Price, etc, while Attachment B is the Trade Specific (technical) Scope of Work.

The work of this Agreement shall include, but not be limited to, all labor, materials, apparatus, hoisting, rigging, tools, equipment, plant, supplies, accessories, samples, submittals, shop drawings, certifications, engineering, layout, transportation, storage, supervision, temporary construction, special services, contributions, insurance, taxes (unless specifically excluded by the Contract Documents), compliance with all governing agencies (city, county, state, federal and others as may be required), permits, fees, all other services and facilities and other items necessary for the performance of the **Plumbing and Mechanical Work** as shown, detailed and/or implied in the contract documents outlined in the General Scope of Work.

The Scope of Work Document is being provided for your use as a general guideline. Please note, this Document is not all-inclusive. It is this Subcontractor's responsibility to provide a complete bid, including all work for this trade indicated on ALL of the contract documents (include plans, specifications, Bid Manual, etc.). It is this Subcontractor's responsibility for the entire scope of this Bid Package and coordination between all trades.

E. WORK INCLUDED - SCOPE-SPECIFIC ITEMS

1) Trade Specifications Specifically Included, but not limited to the following:

a) **DIVISION 00 - PROCUREMENT & CONTRACTING REQUIREMENTS (ALL SECTIONS)**
DIVISION 01 - GENERAL REQUIREMENTS (ALL SECTIONS)
DIVISION 02 – EXISTING CONDITIONS (ALL SECTIONS)

DIVISION 5	**METALS**
DIVISION 8	**OPENINGS**
SECTION 08 3100	ACCESS DOORS AND FRAMES
DIVISION 7	**THERMAL AND MOISTURE PROTECTION**
SECTION 07 1800	TRAFFIC COATINGS
SECTION 07 5400.1	THERMOPLASTIC POLYOLEFIN (TPO) ROOFING_REPAIR
SECTION 07 8110	APPLIED FIREPROOFING (for patching work)
SECTION 07 8400	FIRE STOPPING
SECTION 07 9200	JOINT SEALANTS (PARTIAL)
DIVISION 11	**EQUIPMENT**
SECTION 11 4000	FOOD SERVICE EQUIPMENT (PARTIAL)
SECTION 11 7000	MEDICAL EQUIPMENT (PARTIAL)
DIVISION 13	**SPECIAL CONSTRUCTION**
SECTION 13 4275	INTEGRATED INTERIOR ASSEMBLIES (PARTIAL)
DIVISION 20	**GENERAL MECHANICAL REQUIREMENTS (ALL SECTIONS)**
DIVISION 22	**PLUMBING (ALL SECTIONS)**
DIVISION 23	**HEATING VENTILATING & AIR CONDITIONING (ALL SECTIONS)**

b) This Trade Contractor is also responsible for trade specifications not specifically listed above but required by reference in the listed specifications or as required to perform the scope of work described herein, as well as the Division 0 and Division 1 specifications and the use of the Construction Documents as a whole.

c) Subcontractor includes all work indicated in specification, unless this scope of work specifically and clearly excludes a portion of a specification.

2) Contract Price is LUMP SUM. There shall be NO additional labor and material escalations allowed
3) **Examination of Site** – Subcontractor warrants that they have sufficiently reviewed the project site to inform themselves of all items about existing site that are relevant to their work, and the cost of their work.
4) Include protection all adjacent structures during performance of this work. Plan for protection of adjacent structures must be part of the overall plan submitted for approval prior to start of work
5) **SITE LOGISTICS**: Refer to the Site Logistics plans included in the Contract Documents. Delivery trucks are to be scheduled with Turner at least one (1) week in advance. See Attachment P for delivery days/times.
6) Subcontractor change order requests shall be provided with sufficient detail (as acceptable to Turner) to allow for satisfactory review. Subcontractor shall be allowed a maximum mark up for overhead and profit per the markup provisions included in the Subcontract Agreement, or as clarified in Contract Documents above
7) Subcontractor understands that **time is of the essence** in the prosecution of Work under this agreement.
8) **Verify layout provided by others**. Where this subcontractor is performing work using layout provided by others, this subcontractor shall perform sufficient verification of that layout to reasonably ascertain the validity of that layout. Any deficiencies (or suspected deficiencies found) shall be reported to Turner immediately to allow corrections as needed before start of work by this subcontractor.
9) All Subcontractors must be licensed as required by local, State, or Federal jurisdiction required for work of this trade in this project location
10) This Subcontractor will comply with **Turner's corporate safety policy** and comply with Site Specific Safety Plan that will include but is not limited to 100% tie-off above 6 feet, 100% Safety Glasses, High Visibility Vests or High Vis style T-Shirts with reflective strips, 100% glove policy, Ladders Last Policy and Nothing Hits the Ground. If you are unfamiliar with any of these policies please ask to see the policy prior to submitting your bid. Failure to be familiar with these policies will not exclude you from complying with them.
    a. Per safety policy (page 2), If the subcontractor's contract value is $5M or greater and/or the subcontractor will have 25 employees or more on site, including sub tiers, for more than two weeks, they must provide a **full time Safety Coordinator.**
11) **Refer to Project General Work Requirements**" in volume one of the project manual. Any costs for work scope items listed in this section shall be included in your lump sum bid. Some work items are listed for specific trade contractors and they shall include those costs in their respective total lump sum bid price.
12) Due to the size of this TC-189 Mechanical and Plumbing contractor's scope, this contractor must provide a **full time, on-site project manager.**
13) Condoc keynote legend will dictate your scope of work unless noted otherwise.
14) This Trade Contractor shall participate in the construction of on-site **mock-ups** as specified (Specification Section 01 4000) and indicated by the documents and/or noted elsewhere. This shall include providing of materials required for this trade contract scope of work, coordinating with other trade contractors with regard to sequencing of installations and protection of materials etc..., furnishing shop drawings and /or setting drawings and so on. Materials for in place or interim mock-ups shall be secured in advance of normal procurement to allow for ALL trade contractor installations, owner/designer and user reviews and evaluations, meetings, approvals and directive if applicable. Mockups are understood to start with arrangement of wall rough-in through complete room finishes. At a minimum, a mockup for each type of Patient Room will be constructed.
15) Label and identify all piping and components associated with this contract fire protection as required.
16) The contract price shall not be altered for any work that could have been **reasonably inferred** from the Contract Documents. The following items are listed as examples of the intent of this statement, but is not limited to these items alone:
    a) Variations to avoid interference and obstructions.
    b) Providing all HVAC components and services usually supplied with a specific system.

c) The providing of all necessary HVAC equipment and appurtenances, whether shown or not, for a complete operating system in strict code compliance based on equipment and fixtures indicated on the Contract Documents.

d) Testing performed in accordance with the requirements of the Contract Documents to meet the needs of the construction schedule and to not delay the work of other trades.

17) This Trade Contractor is responsible for **demolition/rework of existing Plumbing and HVAC piping and sheet metal, etc.** Systems as indicated on the contract drawings, including any permits or fees associated with the work indicated. The intent that the TC-180 Preconstruction Demolition contractor will complete the demolition on the 5th floor. This contractor is responsible for all demolition and rework outside of the 5th floor. This work includes, but is not limited to the following.

a) Provide demolition/rework of existing plumbing, med gas, HVAC i.e. all "like" systems indicated on the contract drawings. This includes piping and duct supports/hangers, etc. Remove all items back to source and to structure.

b) This contractor is to pay particular attention on how demolition affects existing areas. This contractor shall perform the following: (1) take initial air flow (balance information) readings, etc. in existing areas prior to demolition; This contractor is to also re-balance the effect occupied areas after modifying the systems as shown via demolition drawings; and finally, this contractor is to final balance the completed systems shared with existing areas after new ductwork is tie-in, etc. Provide reports of all readings and findings coordinating data and any needed response with mechanical engineer and construction manager.

c) Provide demolition/rework of any existing HVAC control systems conduit, boxes, cabinets, JACE, etc. Coordinate relocated work with new construction. Rem3ove all items back to source and to structure.

d) This contractor is to patch back any floor, wall, ceiling, etc. locations where existing materials were removed with like materials and reinforcing as is adjacent. Appropriate temporary protection is required immediately after removal for safety.

e) Include removal of temporary AC units in electrical rooms A05E001 and A05E008. Coordinate with TC-190 Electrical and Technology on power demolition.

f) Include Demo and Rework supply air duct in shaft AM08. Include removal and reinstallation of fire smoke damper. If existing damper cannot be salvaged, contractor is to provide a new damper at no additional cost. Coordinate with TC-190 Electrical and Technology on location and routing of new conduit. See detail 2 on M205C for more details.

g) Include Demo and Rework exhaust air duct in shaft AM07. Include removal and reinstallation of fire smoke damper. If existing damper cannot be salvaged, contractor is to provide a new damper at no additional cost. Coordinate with TC-190 Electrical and Technology on location and routing of new conduit.

h) Include removal and rework of firestopping assemblies for all fire smoke dampers on the 5th floor. Contractor to bring to a proper UL assembly for its location.

i) Include demolition needed to cut back and cap sanitary pipe per note 1 on P105D.

j) Include demolition needed to cut back and cap sanitary pipe per note 1 on P205D.

k) Include removal and turnover to owner of med air compressor and tank on P303B.

18) This Trade Contractor shall include all materials, labor, tools, and equipment required to install complete and functioning **building sanitary sewer system**.

a) Provide connection(s) to existing piping previously roughed-in sanitary and vent systems. Include all new piping and any additional required rework/offsets and temporary means to install completed system. Remove all non-used existing piping back to the mains and cap. Include all test tees, sawcutting, testing, and concrete pour back, etc. as required to tie-in new piping at any ground floor areas as applicable.

b) Provide all indirect waste piping and vents as required from equipment installed under this contract and Owner-furnished medical equipment to the nearest drain (or to another location if otherwise directed).

c) Include all corrosion resistant and/or specialty plumbing systems.

d) Provide all plumbing fixtures and piping for areas included in this project, include re-testing any piping previously installed required for a complete system test for this project.

e) Include all dialysis boxes, fittings, piping and other details for complete system as shown.

19) This Trade Contractor shall include all materials, labor, tools, and equipment required to install complete and functioning **building water systems**.

a) Provide connection(s) to existing water lines as shown. Include all outage work to shut down and tie-in new water service. Install new valves on each line during day of tie-in to bring existing water lines back online as soon as possible.

b) Provide makeup water system and connection for equipment as indicated on the contract drawings.

c) Provide all related equipment, including but not limited to backflow preventers, water heaters and water softeners.

d) Provide all piping insulation.

e) Provide all water balancing as required for a complete system.

f) Provide Flushing and Chlorination of Domestic Water systems.

20) This Trade Contractor shall include all materials, labor, tools, devices, and equipment required to install complete and functioning **building medical gas systems**.

a) Provide all medical gas systems complete, including but not limited to oxygen, medical air, and medical vacuum. This includes all equipment not Owner pre-purchased.

b) Provide new medical vacuum pump and medical air compressor skids; include equipment pads. Include any rework needed for new piping to hook into existing system. Coordinate power hookups with TC-190 Electrical and Technology

c) Provide low voltage raceway and wiring for all medical gas devices and alarm panels. Coordinate and identify any line voltage required to be provided by the TC-190 Electrical and Technology contractor.

d) Provide all Alarm Panels, Alarm Wiring, Alarm Conduit, Connections, and accessories needed for complete and operational Med Gas Alarm System.

e) Provide all testing, certifications and any gases required for testing. Assume testing the system before and after headwall installation.

f) This contractor shall have ALL medical gas hook-ups at all headwalls, booms, outlets, etc. as detailed in the design documents. This includes installation of all hoses from manifold to boom or headwall. Installation of boom and headwall assemblies are by others.

i. Contractor shall make final connections after headwalls are installed. Contractor is responsible for final testing of all outlets in the headwall. (see drawings A397 and A398 for more details)

g) This contractor shall receive, assemble, and install manifolds supplied by owner's equipment vendors as required.

i. The boom manifolds shall be installed no higher than 24" above ceiling for boom installations. Coordinate with manufacturer (Stryker) and CM. Assume the manifold will arrive in multiple pieces and that it will need to be fabricated to meet the installation details.

h) This trade contractor is to coordinate, provide, and install all medical gas necessary to the Owner provided **headwall assemblies**. Contractor shall include all terminations needed to make the headwall a working assembly.

Attachment "B"

SCOPE OF WORK
TC-189 – Plumbing & Mechanical

21) This Trade Contractor shall include all materials, labor, tools, and equipment required to install a complete and functioning **hydronic piping system**.

    a) Provide low, medium and high pressure steam/return and condensate pump discharge systems, hot and chilled water supply/return piping systems, heating hot water systems, equipment, etc. Connect to existing systems as indicated on the documents.

    b) Provide a complete humidification, clean steam system as shown. This includes all manifolds, humidifiers, valves, pumps, after-coolers, piping, etc. to complete system. Coordinate condensate drains with plumbing system, provide splash guards at floor drain locations as needed.

    c) Connect to existing hydronic piping on each floor as shown. Provide all valves as necessary and needed for complete system. Provide all labor, materials and equipment for 3rd shift or weekend shut-downs and outages required for all connections to existing operational piping systems.

    d) Provide all testing, flushing and cleaning of all piping systems prior to operation. Confirm CM and Facilities Management that flushing is completed and system is ready for activation from main building systems prior to opening system valves.

    e) This contractor is to include all chemicals to bring the system back within UK standard after draining for a shut down. See "232500S01 HVAC WATER TREATEMENT" for details.

22) This Trade Contractor shall include all materials, labor, tools, and equipment required to install complete and functioning **mechanical sheetmetal systems**.

    a) This Trade Contractor shall include all materials, labor, tools, and equipment required to install a complete and functioning mechanical sheetmetal system, including, but not limited to: ductwork, ductwork specialties, insulation, hangers, vibration isolation, housekeeping pads, fire stopping, air terminal units, equipment, starters, devices, and Owner-furnished equipment installation. Maintain duct cleanliness per SMACNA "Advanced Level" guidelines.

    b) Provide all specialty ductwork and exhaust systems. This contractor to install all duct to roof locations as shown through the existing shafts/old dumb waiter riser/etc. Install all necessary fan equipment, curbs, penetrations, fans, firestopping, etc. for this work. This contractor is to cut and patch all necessary openings in existing shaft for new ductwork, etc. Coordinate with construction manager.

    c) Include all underground ductwork as shown including any connections to equipment, and all sawcutting, trenching, backfill, excavation, testing, insulation, and concrete pour back, etc. as required for new installation.

    d) Coordinate with and connect to HVAC sheetmetal systems installed previously.

    e) Furnish and install smoke and fire/smoke dampers and operators and fire caulking where shown and specified. Provide all fire and fire/smoke dampers required by code at rated wall penetrations of ductwork. Include 100% pre-testing, final testing, and inspection as required by local code authorities. Reference Life Safety drawings to identify the rated walls.

    f) This contractor shall insulate all supply diffusers.

    g) This Trade Contractor shall provide all duct leakage testing per the specifications.

    h) This contractor to provide all filter, filter housings, etc. as designed and scheduled. Coordinate sizing and fit into any existing conditions with mechanical engineer and construction manager prior to installation.

    i) Contractor is to include complete installation of Bipolar Ionization Units in ductwork. Coordinate with TC-190 Electrical and Technology contractor for power connection location and requirements.

23) **This Trade Contractor shall provide all HVAC equipment** not provided by the Owner, including but not limited to exhaust fans, smoke exhaust fans, pumps, motor starters, booster humidifiers, supply/return air terminal units and exhaust valves (including those based on Phoenix valves), heating coils for all Supply Air Terminal Units (including those for Phoenix valves), sound attenuators, etc. as indicated on the contract documents. All controls for equipment provided by this contractor shall be electric, not pneumatic. This contractor to include any chain wheel operators as detailed in the mechanical drawings and specifications, or

any valves more than 12' above finished floor elevation. This Trade contractor to confirm controls/access orientation prior to ordering.

24) This Trade Contractor shall include all materials, labor, tools, and equipment required to install a complete and functioning **HVAC Controls Instrumentation** systems including, but not limited to, all scope of work noted in Drawings and Specifications. It is the intent that this work be issued as an RFP prior to TC-189's bid. Once the appropriate contractor is decided, their pricing and information will be to TC-189's scope. Below is from the TC-189A scope of work.

a) Provide all required controls and instrumentation devices including, but not limited to: control valves, flow meters, water pressure differential taps, flow switches, thermal wells, thermal and pressure sensors, current sensors, actuators, air flow monitoring stations, control dampers, etc. as needed for a complete and operational system. Provide coordination of locations of all control devices and device wells/taps with Mechanical, Plumbing and Electrical trade contractors.

b) Coordinate and provide all required connections, components, control devices, dampers and accessories, etc. needed for a complete installation of AHU, Phoenix Valves, Terminal Units, Exhaust Fans and Fan Coil Unit Controls. This contractor shall also furnish all control programing, cabling, etc. and isolation dampers not included with the AHU purchase. Provide and install all damper actuators for all dampers at the new AHU.

c) Connect to existing systems and coordinate with systems installed in this contract. This includes, but not limited to, FSDs, Control Panels, Security Panels, VFDs, Air Valves, Terminal Boxes, etc.

d) This Contractor will provide all raceways and cables, etc. for a complete HVAC controls system, including connections to devices provided by other contractors; smoke detectors, elevators, lighting control panels, etc.

e) This contractor to provide all conduits and wire necessary for CAT6A cabling required for network communications. Termination at EIDF Closet and activation of network to be provided by TC-190 Integrated Technology contractor.

f) This contractor is to provide thirty (30) additional command points for use by the construction manager. This shall include a complete integration into the project controls system as if needed for the construction. This shall include all wiring, controllers, JACE/NAE capacity and anything required to properly tie these points into the system.

g) This contractor will provide all required BIM modeling for all controls. This includes, but is not limited to: above ceilings, access zones, and all control panels for coordination with other trades and proper access and maintenance. The intent is to BIM coordinate devices and conduit in wall at all procedure and patient rooms. Reference Attachment H for additional details

h) This contractor will provide all required technician support for all Commissioning of the HVAC, Fire Alarm, Security and Lighting Control Systems.

i) This Contractor shall provide and install all VFDs for AHUs & Exhaust Fans. This includes start-up, commissioning, and warranty. This includes all necessary accessories for a complete installation. TC-190 Electrical Contractor will install and connect power.

j) This contractor will provide complete detailed point's lists as needed for Graphics Programming by UKMC PPD. Provide all required technician/programmer time necessary for coordination of point's lists, field installation specific notes for addresses and locations, point to point testing information and other information needed for coordination of and completion of the HVAC Controls System Graphics.

k) This Contractor shall provide ALL Tridium interfaces, programming, naming conventions per UKMC PPD, etc. complete for ALL HVAC Controls, Lighting Control, and other representative systems other than the fire alarm system. UKMC PPD to create and complete graphics, this contractor to provide all nodes, interface signatures and addresses for the graphics development. Coordinate with UKMC PPD and Construction Manager to turn over complete and functioning Tridium system integration.

i. Coordinate with TC-190 (Electrical/Integrated Tech.) to provide complete operating Tridium systems. Fire alarm programming and interface to Tridium is by TC-190 Electrical.

ii. Points shall be named using the following format:

Building_Floor_RoomNumber_System_SubSystem_Component_ShortName_Function

iii. Reference instrumentation drawings for additional details regarding points list and details. The controls

iv. Contractor is to utilize the entire drawing and specification set as a whole to formulate controls sequence.

l) ~~Controls contractors contact information will be provided here in an addendum.~~ Please contact Robert Rodgers for Johnson Controls, Inc. for more information at 859-227-5514 or robert.j.rogers@jci.com (ADD #3)

25) This Trade Contractor is responsible to receive and install the **Owner Furnished Air Handler Units (AHUs)**. The units will be delivered in sections for field transport and assembly. Contractor is to include costs to unload and land sections on the loading platform (see SK-103). Units will be assembled in the 3rd Floor Mechanical Room, see drawings M203A, M203B, M203D, M204A, M204B, and M204D for location and arrangement of completed AHUs.

a) Provide all labor, materials, equipment, Crane rental, rigging, safety systems for elevated work space, elevated work training, rigging training and planning required for installation of the AHU. Provide all tools, caulking, fasteners, and spare parts necessary for complete assembly of the AHU, coordinating assembly with Manufacturer's Representative to be on site during assembly.

b) Provide all labor and materials for installation of conduits and wires both internal and external of the AHU for all power and controls wiring required for operation of the AHU, providing a single point of connection for power wiring to be connected by TC-190 Electrical and Technology contractor.

c) Provide covers for all duct openings sufficient to pressure test the assembled AHU at a pressure value determined by the Mechanical Engineer.

d) Provide a third party Test & Balance contractor to pressure test the AHU for static and deflection per specifications and manufacturers recommendations. Test plan to be submitted and approved by UK prior to testing. Coordinate with Unit Manufacturer to make any and all corrections necessary for final acceptance of the AHU. Coordinate with Air Handler Manufacturer on motor size for testing.

e) Provide all AHU condensate piping to nearest floor drain with trap fittings as required for Unit static pressure. Provide Air Gap and Funnel at floor drain to prevent spillage at floor.

f) Provide and install insulation on all piping inside of the AHU.

g) Refer to Attachment Q for AHUs shop drawings (ADD #4)

26) All JACE/NAE panels shall be located in EIDF closets and be placed on owner-furnished UPS power. No power supplies for mechanical systems shall be installed in IDF/EIDF closets.

27) This Trade Contractor shall provide **interface with Life Safety systems**, including but not limited to, Fire Alarm, Security, etc. **Provide all raceways and cables connecting HVAC Controls devices to these systems.**

28) This Trade Contractor is responsible for **power conduit and wiring to all devices included in this contract, where required for a complete operational system, but not indicated in electrical documents.** Coordinate power with TC-190 Electrical and Technology contractor which will terminate within their panels. TC-190 Electrical and Technology contractor provides circuits and breakers. This contractor shall provide all associated wiring between devices and TC-190 electrical panels.

29) This contractor is to include $2,000 for labor and materials to patch existing insulation on existing plumbing and ductwork.

30) Control valves and dampers are a priority to furnish for early installation.

31) Provide **grounding and bonding** for equipment installed in this contract. Coordinate grounding and bonding to system installed by TC-190 Electrical and Technology contractor.

32) This Trade Contractor shall furnish and install all **sleeves and blockouts for this contract** penetrations of walls, floors, and roof. The cutting of metal deck as required to install the work shall be included. Any

reinforcement of the deck that is required but not shown on the structural drawings is to be included in this work. This Trade Contractor is responsible for all curbs, thimbles, counter flashings, clamping rings, sealants, etc., required at roof penetrations of material and equipment covered by this work. This would include but not be limited to vents flashings, and any special curbs or flashing required. Removal of existing curb coverings, etc. are included in this work scope.

a) Per UK standards, all sleeves/blockouts shall be a minimum of 1.5" above finished floor. This work scope shall include "metal collars" (sealed) as necessary for any existing or new sleeve installations not 1.5" above the finished floor elevation (not concrete elevation). This Trade Contractor is responsible for protection of all sleeves installed for (or existing) their scope of work.

b) This contractor is to gain fire stopping inspection at the floor level PRIOR to installing the 1.5" metal collar. The installation of the metal collar and floor fire stopping shall not be in one action preventing proper fire stop inspection.

c) This contractor to provide 2 hour F & T rated sleeve assemblies for all floor penetrations for all piping and plumbing systems.

33) All **roof penetration attachments** are to be included in this work scope. This contractor is to include all costs to repair, tie-in, patch, demo the existing roof curbs and/or install new curbs for new roof fans. Survey all adjoining roof areas and provide any patching required prior to work scope and after completion of work scope utilizing the warranty roofing contractor of record. This includes any work included in this contract. Remove and dispose of temporary curb covers as equipment is installed. Any roof or floor protection required for the movement of workmen or equipment is to be included.

34) This Trade Contractor shall provide labor and materials to transport new **Roof Exhaust Fans** to the 13th floor roof elevation. Work scope to include disassembly and re-assembly of roof fans in order to hand carry down stairs from 14th floor elevator lobby to 13th floor roof area. Review all field conditions for pathway and size/weight of fan sections that can be transported to 13th floor.

35) Include **100 additional hours of Journeyman <u>overtime work</u>** to be used for schedule maintenance by the Construction Manager. This shall be the full overtime hours, not just the premium portion. The trade contractor must include all travel, per diem, fringes, OH&P, etc. costs (a fully loaded rate) on these hours and they are only to be used by the trade contractor at the direction and approval of the Construction Manager. These hours will be logged and usage tracked. Usage of these hours can occur during the week or on Saturdays – no Sundays are intended.

36) This Trade Contractor shall **verify framed openings** on the structural drawings are coordinated with the Mechanical Sheetmetal scope of work.

37) Include any **core drilling** required for pipe penetrations at floors and walls. These penetrations are to be in a neat and workmanlike manner. Coordinate all wall openings with the trade involved. Core drilling in areas where there is substantial slab reinforcement may be prohibited. All cores must be submitted to the Structural Engineer for review prior to coring. All floor and wall penetrations must be coordinated with the Construction Manager prior to floor or wall construction. Provide a pilot hole and investigation in every location for determining conflicts with existing systems. Provide any and all additional pilot holes required for determining alternate locations for floor penetrations.

a) This includes creating the new penetration through the precast panel for the dryer vent. This penetration is to be sealed back to a weatherproof and waterproof condition after piping is installed.

38) All openings installed under this scope are the sole responsibility of this contractor to ensure that they are **water tight** prior to their end of shift. This contractor shall coordinate openings with proper trades.

39) This Trade Contractor shall provide **access doors** required for the operation and maintenance of its work, including areas where there are inaccessible ceilings or walls. This Trade Contractor shall also be responsible for any access doors which may be required at the connection to existing systems. Ceiling and wall access doors will be turned over to TC-184 Drywall and Ceilings contractor for installation. All access doors must meet or exceed the fire rating of contiguous construction and must be consistent with the architectural finish of the area in which they are installed. The locations of access doors must be detailed and approved prior to

installation. This contractor is required to turn over a signed (by both contractors) transmittal acknowledging transmission and receipt of said access doors for installation.

40) This Trade Contractor is responsible for the **removal of plugs or caps** (installed by others), including final connection and any transition fittings as needed

41) It will be the responsibility of this contractor to pay for repair of any **fireproofing** removed, damaged or destroyed during installation of this trade contractor's work.

42) Ensure that all ductwork, piping, and equipment that arrives to the jobsite is **covered on all ends**. Covered ends shall not be uncovered until installed in place. Include covering and capping the ends of all pipe and ductwork at end of each shift daily.

43) Place engineer's **orange flagging** on all manual damper arms min. 12" below duct.

44) The intent is that this Trade Contractor shall install air terminal units in corridors as shown and locate all others similarly as much as possible to allow **accessibility for maintenance** without disturbing patients.

45) Unless otherwise indicated in the documents, provide **volume dampers** at all run-outs to the supply air outlets and return air inlets. Provide standoff bracket on manual volume dampers in round duct, to facilitate the installation of the handle outside of the insulation. Bending of volume dampers handle is not acceptable. In addition, provide volume dampers in main and branch ductwork as required for proper balancing of the system. Provide additional balancing dampers deemed necessary during the HVAC balancing process, if the system is not satisfactorily balanced to deliver design air quantities.

46) Fabricate and install **drip pans** as required for your work above all patient areas, electrical equipment, or other applicable areas.

47) **Installation, testing, and inspections** shall be scheduled by area as sequenced by the Construction Manager, in order to not delay the progress of other trades. Multiple tests, comebacks, or inspections as may be required for this coordination are to be included. This contractor shall pre-test all piping with air prior to hydrostatic testing. The Construction Manager will witness these and hydrostatic tests.

48) Coordinate grille, diffuser and exposed **equipment locations** with Architectural drawings.

49) Review and coordinate **tie-in to Plumbing systems** according to HVAC and Plumbing documents.

50) This contractor to seal **all existing** system installations contained in or similar to this work scope. This includes acoustically, fire, or otherwise sealing around existing piping, conduits, supports, etc. This also includes installation of the correct UL listed assemblies and labeling of existing installations through new partition walls.

51) The equipment **pre-purchased by the Owner** is identified in Volume 4 and division 1 specifications. This subcontractor (also referred to as "Installing Trade Contractor" for applicable equipment) is responsible for the coordination, installation, and all other miscellaneous provisions for this equipment as if it were purchased directly by this subcontractor. This includes receipt, protection, temporary weather protection, inventory, storage, and storage maintenance ((lube, rotation, etc.) until turned over to the owner. For owner furnished equipment which may have utility connection requirements, provide rough-in and final connections to the Owner furnished equipment and coordinate complete installation as required. Coordinate any plumbing and mechanical work shown on documents with the appropriate subcontractor.

52) This Contractor will closely coordinate his work with the installation of **casework**. Make provisions to adequately support piping to allow the installation of the casework to proceed unimpeded. Receive, handle, install any mechanical piping and ductwork accessories, and make all necessary connections.

53) Provide and level equipment, **supports and isolators** required to complete this scope of work. Coordinate with appropriate Trade Contractors to ensure proper installation of this work. Include any miscellaneous framing for penetrations, hangers, etc. required but not indicated on structural drawings. Provide sound and vibration isolators as required by local building codes and the specifications.

54) This Trade Contractor is required to **label and identify** all piping and components associated with this contract as required by the design documents.

55) All **concealed piping and ductwork** shall be tested and inspected prior to covering work.

Attachment "B"

SCOPE OF WORK
TC-189 – Plumbing & Mechanical

56) Provide all **motor starters** for mechanical equipment supplied by this Contractor. Wiring on equipment side of factory furnished panels, whether integral with equipment or separate, shall be the responsibility of this Trade Contractor unless specifically noted otherwise.

57) This Trade Contractor shall provide and install any **curbs and/or housekeeping pads** for all equipment, etc. contained in this work scope. This includes pads that are not shown on the contract drawings, yet required for the work of this contract. This includes concrete for any pre-purchased equipment (AHUs, etc.), including AHU inertia bases, which are to be installed by this contactor. Install traffic coating on any new curbs and pads within existing spaces.

58) The above equipment may come with **loose miscellaneous accessories** such as Thermometers, Pressure Gauges, Drain Valves, Sensors, Switches, etc. and multiple points of connection over and above what is called for in the documents. This Contractor shall provide any miscellaneous piping, wiring, testing, etc. to make the equipment fully operational.

59) This contractor shall include all costs for overtime/shift work required for utility outages to connect new systems installed in this contract to existing. Submit an **Outage Log** for all expected outages within 10 days of contract award.

60) This Trade Contractor shall provide any **temporary testing** equipment/panels required to test all systems without disruption to existing systems. Once successfully tested and commissioned, new systems will be integrated with existing systems.

61) Provide and coordinate all support and all **blocking** required for this scope of work.

62) HVAC Contractor shall support the Integrated Technology contractor to ensure a complete system and complete turn over to Owner.

63) This Contractor shall participate in **HVAC Commissioning** per the specifications.

64) Provide Testing and Balancing of all plumbing, HVAC hydronic and air systems and all other requirements of the work as specified, shown and required, including existing systems.

65) Include all costs for all "after normal business hours" Life Safety Inspections required by the inspection agency including trades related over time exposure.

66) This Trade Contractor shall participate in the coordination process using 3-D **Building Information Modeling (BIM)** as outlined in Attachment "H", in lieu of the conventional 2-D drawing process. All costs for the BIM process for this scope of work shall be included in the base bid. Include the scheduled BIM Allowance for Vicon/Box server use and hardware/software. This allowance is not for the use of the MEP trades for their coordination. Each BIM participating Trade Contractor is responsible for updating contract and field changes in the BIM model throughout the project. All trades will need to coordinate structural support hangers. It is imperative that the coordination begin immediately after contract award to meet the schedule milestones. The details of sequencing and timing of this process will be discussed immediately after contract award. Provide required resources to coordinate, purchase, fabricate, and deliver materials to meet the schedule installation start dates.

67) This Trade Contractor shall be responsible to reflect the actual location of piping and duct where connections are to be made with **existing work** in the BIM model. This contractor is to review and coordinate the existing installations that are shown to stay and coordinate these with the new work. This contractor can elect to relocate any existing utilities (where possible) to create a more efficient final installation.

68) This Contractor shall provide **BIM modeling** of all Plumbing and Mechanical Systems including coordination with Wall Framing, Backing, toilet partition supports, moveable partitions, overhead doors, projection screens, smart boards, monitors, supports for patient lifts, above-ceiling structural frame mounting for medical equipment including Medical Booms, Radiology Equipment, Unitstrut Support Systems, Boom Support Structures, etc. (reference Volume 4, Vendor Drawings and Div. 1 specs). This Trade Contractor shall also provide BIM Modeling of all in wall piping, in wall valve boxes, in wall medical gas components, coordinated with framing models. This Trade Contractor shall base the BIM models on shop drawings and coordinate with installing contractors of these materials; reasonable abstractions for space allocation of these items is acceptable. Update the BIM model based on approved shop drawings as needed.

Attachment "B"

SCOPE OF WORK
TC-189 – Plumbing & Mechanical

69) This Trade Contractor shall also include an **additional 80 hours of BIM coordination** to be used at the Owner/CM's discretion.

70) The intent is to utilize the coordination in the 3D model to prefabricate off-site as much material as possible. All materials possible will be pre-fabricated and packaged for Just-in-Time delivery at the job site and be on wheels for delivery to the area of install. No pre-packaged or loose materials to be delivered to the job site that will not be installed within 4 days of delivery.

    a. This contractor shall coordinate with the TC-184 Drywall and Ceilings contractor on the **prefab** efforts for the patient restroom toilets and shower wet walls. The intent is that TC-189 Plumbing and Mechanical will receive the studs for these walls from TC-184 Drywall and Ceilings and install a pre-fabricated assembly offsite. TC-189 Plumbing and Mechanical shall coordinate opening size for wall with TC-184 Drywall and Ceilings. This TC-189 Plumbing and Mechanical contractor will install prefabbed assembly on site with the assistance of TC-184 Drywall and Ceilings. See item 31.c in the TC-184 Drywall and Ceilings scope for more information.

71) This contractor shall maintain and remove when no longer needed **Temporary Exhaust Fans** provided by the TC-180 Preconstruction Demolition contractor in the construction areas to maintain a **negative air pressure** relative to surrounding spaces. Maintain four (4) temporary Magnehelic pressure monitors – one at each stair – coordinate locations with CM. Maintain Plenum, Ducting and Grille at each location for exhausting. Maintain inlet filter rack on fans and change filters monthly during operation of fans. Check the spaces daily to record pressures and submit checklist weekly to the Construction Manager as documentation.

    a) Contractor shall submit plan for negative air installation at post bid review meeting.

    b) Contractor will use existing exhaust ducts to supply negative air for the space. Fire dampers must be maintained and active at all times during construction.

72) This contractor shall provide labor and materials to install and maintain 3ea. 30 x 30 x 2 Merv 14 Return Inlet Filters on all Return Inlets in the 2nd Floor shell space area. Provide replacement filters on all inlets every 3 months at a minimum.

73) The permanent HVAC systems included in the Contract Documents will be used for conditioning the spaces for finishes. This contractor shall provide any resources required to meet the schedule milestones. This contractor is to include all required controls and instrumentation for preliminary operation of the new air handler, supply and return VAV boxes, and supply & exhaust phoenix valves. Provide full documentation of installation/startup of all components to be used for conditioning of the spaces. Provide 100% OSA and 100% exhaust for conditioning of spaces. Return air activation will be when directed by the construction manager (with contractor input) and the University of Kentucky**.**

    a) This Trade Contractor **shall supply and install temporary filters** and filter media as needed to support temporary operation of HVAC systems. For new AHUs provide a complete set of filters for all scheduled filter racks.

    b) In addition provide three (3) sets of 2" MERV 11 construction filters to be installed over Pre-Filters and changed on a monthly basis.

    c) Provide two additional sets of scheduled filters, one set prior to testing and balancing and one set at turnover. At time of test and balance, remove construction filters and verify if filters are still within manufacturer's pressure drop parameters, if so do not replace, continue with test and balance, and deliver two unused sets of filters to Construction Manager. Maintain temporary ventilation and dust control as required by Division 1.

    d) Cover ALL exhaust and return air grilles with filter media and replace filter media on a routine basis and/or as directed by the Construction Manager. Contractor to review filter media daily.

74) All systems must be maintained to be turned over to the Owner in a "like-new" condition.

75) Trade Contractor will provide 24/7 response for **maintenance** of all temporary HVAC and Control systems for duration of project as needed.

76) This Trade Contractor shall provide all **firestopping** associated with this scope of work in accordance with the contract documents, including identification per the specifications. This includes firestopping for all penetrations

associated with this scope of work, including core drilled penetrations and sleeves installed by others for this scope of work. Additionally, this Trade Contractor shall ensure that sleeves installed in this scope of work for future fit-out areas maintain appropriate fire ratings around the shelled areas, and that they are installed so as not to inhibit future installation of piping or other systems. All penetrations created by this Trade Contractor shall be coordinated with other applicable trades and performed in a neat and workmanlike manner. Provide a Mock-up of all anticipated firestop penetration types to be used, provide data sheets of all firestop systems in Mock-up for review and acceptance prior to work in place.

77) This Contractor shall provide an **equipment list** for all equipment installed under this scope of work, including but not limited to, description, identifier, room location, manufacturer, supplier, installing contractor and areas served, in a standard format acceptable to UK (UKMC PPD Preventative Maintenance equipment Excel format listing).

78) This contractor to include any required maintenance of the 12th floor heat pumps serving the construction manager and the owner/design team construction office areas for the duration of this contractors scope. The heat pumps are a Trane Model Number: BAYHTRL325AB and a Trane Model Number: GAM5B0C48M41SBA. Include any materials and labor to keep the system operating at the proper and usual condition.

F. CONSTRUCTION SCHEDULE

Contract Price is based on the project schedule included in the bid manual and as clarified within these Additional Provisions.

G. WORK EXCLUDED

This Scope of Work shall exclude the following

1) Payment & Performance Bond

H. ALTERNATE PRICES

1) None

Alternates shall be complete for providing only the Work with no other credits. All alternate prices are to be priced as stand-alone alternates. Any number of alternates, or no alternates, may be accepted as part of this Work.
Indicate Add/Deduct Price on the BID FORM

I. ALLOWANCES

The following Allowances **are to be included in the base bid**:

1)	HVAC Controls Instrumentation Allowance	$ 1,056,045 (ADD 3)
2)	BIM 3-D Server Allowance	$ 7,500
3)	Alterations Allowance	$ 20,000
4)	5th Floor Sanitary Relocation Allowance	$ 10,000
5)	Existing Penetration Fire Stopping Allowance	$ 2,000
6)	3rd Floor Mechanical Room AHU Install Utility Relocation Allowance	$ 5,000
7)	Relocate Existing Controls Allowance	$ 5,000
8)	Project BIM Coordinator Allowance	$ 50,000

The above allowances are to be included in the base bid/Subcontract Price. All overhead and profit related to the Work performed under each Allowance is to be included in the Base Bid/Subcontract Price. Only direct Labor and Material costs authorized in writing by the Construction Manager after approval by the Owner are to be charged to the Allowance. Progress Payments will be made against Allowance expenditures, based on approved monthly invoices & writing Allowance Authorization from the Construction Manager/Owner. Any unused funds remaining in these allowances will be credited back to the Project.

J. UNIT PRICES

Attachment "B"

SCOPE OF WORK
TC-189 – Plumbing & Mechanical

The following unit prices are applicable for changes in the Work. The unit prices are for Work complete and in place and include all costs such as material, labor, equipment, freight, taxes, insurance, fringe benefits, and overhead and profit. Also include costs for coordination with other trades work where applicable. In the event the unit prices quoted exceed industry standards or fair market value, the Turner reserves the right to request pricing for changes at cost plus allowable mark-up for overhead and profit or a lump-sum under the terms of the Agreement

1) Labor Rates - Submit detailed labor rates to Turner Project Manager for approval. Detail shall show all fringes, benefits, taxes, insurance, markups, and any other add-ons to allow verification of rate.
    - See "Form of Proposal" (Bid Form) for bid day information. The apparent low bidder will submit detailed breakdown with-in 24 hours after bid day.
2) Equipment Rates – Submit detailed rates for equipment that may be used on project, and may be part of change order pricing.

END OF TECHNICAL SCOPE OF WORK

Attachment "B"
SCOPE OF WORK
TC-189 – Plumbing & Mechanical

FORM OF PROPOSAL
SUPPLEMENTAL INFORMATION

THE FOLLOWING INFORMATION PERTAINS TO ALL TRADE CONTRACTORS

NOTE: MUST BE SUBMITTED WITH THE BID SUBMITTAL.
Failure to comply will result in rejection of Bidder's Proposal.

Contractor Report of Prior Violations of
Chapters 136,139, 141, 337, 338, 341, and 342

Pursuant to KRS 45A.485, the Contractor shall, prior to the award of a Contract, reveal final determinations of any violations of the provisions of KRS Chapters 136, 139, 141, 337, 338, 341, and 342 by the Contractor that have occurred in the previous five (5) year period.

This statute also requires for the duration of the Contract established, the Contractor be in continuous compliance with the provisions of Chapters 136, 139, 141, 337, 338, 341, and 342 that apply to the Contractor's operations. The Contractor's failure to reveal a final determination of a violation of KRS Chapters 136, 139, 141, 337, 338, 341, and 342, or failure to comply with any of the above cited statutes for the duration of the Contract shall be grounds for the cancellation of the Contract, and the disqualification from eligibility for future contracts for a period of two (2) years.

The Contractor, by signing and submitting a Bid on this Invitation, agrees as required by KRS 45A.485 to submit final determinations of any violations of the provisions of KRS Chapters 136, 139, 141, 337, 338, 341, and 342 that have occurred in the previous five (5) years prior to the award of a Contract and agrees to remain in continuous compliance with the provisions of these statutes during the duration of any contract that may be established. Final determinations of any violations of these statutes, must be provided to the University by the successful Contractor prior to the award of a Contract.

BUSINESS CLASSIFICATION

Please complete this form which is necessary for the University of Kentucky vendor database.
Mark only one classification. Refer to "Definitions" for assistance in determining correct classification.

(01)____Small Business

(02)____Large Business

(03)____Disadvantaged Small Business

(04)____Disadvantaged Large Business

(05)____Woman-Owned Small Business

(06)____Woman-Owned Large Business

(07)____Disadvantaged Woman-Owned Small Business

(08)____Disadvantaged Woman-Owned Large Business

(09)____Other

Attachment "B"

SCOPE OF WORK
TC-189 – Plumbing & Mechanical

DEFINITIONS

(01) SMALL BUSINESS: A business concern that is organized for profit, is independently owned and operated, is not dominant in the field of operations in which it is bidding, and meets the size standards as prescribed in the Code of Federal Regulations, Title 13, Part 121. Consult your local or district Small Business Administration (SBA) office if further clarification is needed.

(02) LARGE BUSINESS: A business concern that exceeds the small business size code standards established by SBA.

(03) DISADVANTAGED SMALL BUSINESS: A business concern (a) that is at least 51 percent owned by one or more socially and economically disadvantaged individuals (as defined below), or a publicly owned business, having at least 51 percent of its stock owned by one or more socially and economically disadvantaged individuals; and (b) has its management and daily business operations controlled by one or more such individuals. Socially and economically disadvantaged individuals include Black Americans, Hispanic Americans, Native Americans, Asian-Pacific Americans and other minorities or individuals found to be disadvantaged by the SBA.

(04) DISADVANTAGED LARGE BUSINESS: A concern that meets the definition of socially and economically disadvantaged individuals, but which is not a small business by the SBA's size standards.

(05) WOMAN-OWNED SMALL BUSINESS: A small business that is at least 51 percent owned by a woman or women who also control and operate it. "Control" in this context means exercising the power to make policy decisions. "Operate" means actively involved in the day to day management.

(06) WOMAN-OWNED LARGE BUSINESS: A concern that meets the definition of woman owned and operated, but which is not a small business by the SBA's standards.

(07) DISADVANTAGED, WOMAN-OWNED SMALL BUSINESS: A concern that meets the definition of both (03) and (05) above.

(08) DISADVANTAGED, WOMAN OWNED LARGE BUSINESS: A concern that meets the definition of both (04) and (06) above.

(09) OTHER: A concern that does not meet any of the above definitions.

BIDDER'S QUALIFICATIONS

The Commonwealth of Kentucky Model Procurement Code (KRS 45A.080) requires contracts to be awarded, "to the responsive and responsible bidder whose bid offers the best value" to the University of Kentucky. In order to determine if the Bidder has the experience, qualifications, resources and necessary attributes to provide the quality workmanship, materials and management required by the plans and specifications, the Bidder may be required to complete and submit the information requested on the University of Kentucky Contractor Bidder Determination of Responsibility questionnaire. Failure to provide the information requested on the questionnaire or failure to provide any additional submittals or information that may be requested to make this determination may be grounds for a declaration of nonresponsibility with respect to the Bidder. A copy of the Contractor Determination of Responsibility questionnaire is available upon request to all Bidders.

Attachment "B"

SCOPE OF WORK
TC-189 – Plumbing & Mechanical

TIME LIMIT FOR EXECUTION OF CONTRACT DOCUMENTS

It is further agreed, that in the event this Proposal is accepted by the Owner and the undersigned shall fail to execute the Contract and furnish satisfactory Payment and Performance Bond within ten (10) consecutive calendar days from the date of notification of the award of the Contract, the Owner may at his option, determine that the undersigned has abandoned the Contract and thereupon, the Proposal shall become null and void and the Bid guarantee, check or Bid bond which accompanied it shall be forfeited and become the property of the Owner as liquidated damages for each failure and no protest pursuant to such action will be made. If the Undersigned shall execute the Contract, and furnish satisfactory Payment Bond and Performance Bond, it is understood that the Bid Guarantee or Bid Bond will be returned to the undersigned by the Owner.

IDENTIFICATION OF MINORITY SUBCONTRACTORS AND MATERIAL SUPPLIERS

Participation of Minority and Women owned Contractors and businesses.

The University of Kentucky encourages and supports the participation of minority and women owned businesses. Goal is 10% MBE/WBE

1. Minority and Women Subcontractors

_____

_____

_____

_____

2. Minority and Women Material Suppliers

_____

_____

_____

_____

This proposal includes _____% certified MBE participation

This proposal includes _____% certified WBE participation

If your firm has no minority or women owned subcontractors or suppliers, it is required that you complete the list of minority and/or women owned businesses below. List the names of firms that were solicited to bid the project and describe why they were not successful (i.e. not low bid, did not respond, etc).

Attachment "B"

SCOPE OF WORK
TC-189 – Plumbing & Mechanical

RECORD OF MBE/WBE SOLICITATION

_____ Certifies that the following
BIDDER'S NAME

Minority/Women-Owned firms were contacted to solicit pricing as subcontractors/suppliers for Invitation to Bid No. _____ The following firms were not selected for use on this project for the reasons stated in the **RESULT** column.

This list of Minority or Women owned firms is to be executed and submitted as a part of the Bidder's Proposal. Failure to comply will result in rejection of Bidder's Proposal.

FIRM NAME	MBE/WBE	WORK ITEMS SOLICITED	RESULT: NO RESPONSE OR NOT LOW BIDDER

_____
Signature Date

_____
Title

Attachment "B"

SCOPE OF WORK

TC-189 – Plumbing & Mechanical

LIST OF MATERIALS AND EQUIPMENT

The apparent low bidder will be required to furnish this information within 24 hours of bid submittal. Failure to comply will result in rejection of Bidder's Proposal.

Each item listed under the different phases of construction must be clearly identified so that the Owner will definitely know what the Bidder proposes to furnish.

The use of a manufacturer's or dealer's name only, or stating "as per Plans and Specifications," will not be considered as sufficient identification.

Where more than one "Make" or "Brand" is listed for any one item, the Owner has the right to select the one to be used.

CONTRACTOR NAME & ADDRESS: _____
_____
_____
_____

TRADE CONTRACT: TC- _____ **SCOPE OF WORK: _____**
(INSERT NUMBER) **(INSERT NAME OF TRADE CONTRACT)**

The information requested in this submittal is required to assist the University in determining contractor responsibility to complete the project being bid.

ITEM	MATERIALS AND EQUIPMENT	BRAND OR MANUFACTURER

Attachment "B"
SCOPE OF WORK
TC-189 – Plumbing & Mechanical

PRIMARY LIST OF PROPOSED SUBCONTRACTORS

The apparent low bidder will be required to furnish this information within 24 hours of bid submittal. Failure to comply will result in rejection of Bidder's Proposal.

All subcontractors are subject to the approval of the Capital Construction Procurement Section and Capital Project Management Division, University of Kentucky, Lexington, KY.

If certain branches of the Work are to be done by the Prime Contractor, so state.

CONTRACTOR NAME & ADDRESS: _____
_____
_____

TRADE CONTRACT: TC - _____ SCOPE OF WORK:_____
(INSERT NUMBER) (INSERT NAME OF BID CATEGORY)

DIVISION OF WORK	NAME AND ADDRESS OF SUBCONTRACTOR

GENERAL WORK REQUIREMENTS

1. All Trade Contractors shall provide full time supervision while its forces are working on this Project. The Trade Contractors' jobsite supervision shall be experienced in his trade and be capable and have authority to make decisions regarding costs, manpower, and schedule. The Trade Contractors shall obtain the approval of the Construction Manager of his job management personnel prior to their assignment to the Project. Trade Contractors' supervision and management personnel shall not be changed without prior approval of the Owner or Construction Manager.

   A. Onsite project supervision shall have minimum 5 years of active hospital construction experience. Resume's will be due after low bid is determined.

2. **TC-181 General Trades** Contractor will be responsible for all dewatering and/or snow removal required. This would apply to areas outside of the building that are to be used for "staging", material stocking, and other deliveries. This would also apply to the offsite parking, landing platform, any stair towers, and project walkways.

3. Work hour details for this Project's existing areas:

   A. Assume ALL work contained in this work scope that occurs in occupied areas shall be performed AFTER normal working hours (off shift work hours).

   B. 5th Floor construction area – 7:00am to 3:30 pm Monday to Friday. Special work hours and off shift hours will be determined for noise making activities such as core drilling, drilling of anchors and shot pin installs. The noise making activities shall be scheduled for Night or Weekend work.

4. All contractors shall review the documents to understand what work is included in this **5th Floor** Project. Ask specific questions with any clarifications needed.

5. **Storage** of bulk amounts of materials and equipment is restricted due to limited space on the jobsite and within the limitations of the staging area. This project will be utilizing "Just-in-Time" delivery and "Kit-of-Parts" prefabrication. Trade Contractors must schedule and cycle no more material than can be installed in-place **within a 3 day or less period**. Moving of materials stored inside the staging areas will be necessary and the Trade Contractors shall promptly respond to any request from the Construction Manager to move material. Trade Contractors shall include required costs for off-site storage and any additional handling of materials involved with offsite storage.

   A. All pallets brought to site must be on wheels. Pallets brought to site without wheels will be refused and sent back at the contractor's expense.

   B. All drywall deliveries will be staged on drywall carts. Stacking of drywall will not be allowed. Plan for adequate drywall carts to accommodate this.

   C. All long building materials (studs, conduit, pipe, etc.) shall be stored on a sortable material cart. These carts must be mobile. Provide enough carts so that each crew has a minimum of one. Each crew shall also have a minimum of one working cart for small materials and material fabrication. Carts shall employ "nothing hits the ground" mentality.

6. **Fuel storage** on site is NOT allowed and fueling procedures must comply with applicable regulations, Project Safety Plan and receive the Construction Managers approval. No gasoline or diesel powered equipment will be operated inside enclosed building areas. There will be no fuel storage permitted inside the building.

7. **Access to/from the existing Hospital** by the public, ambulances, and hospital staff is to be maintained at all times. Fire department access must also be maintained around the hospital during construction. It shall be the responsibility of the Trade Contractors to ensure that all road entrances, exits, fire lanes, building entrances, loading docks, etc. are not blocked by the progress of its work, its deliverymen or contractors in their employ. This is inclusive of providing temporary access and protection including, but not limited to temporary walks, overhead protection, barricades, signage, etc. Temporary provisions are to be in accordance with UK standards. This access and protection shall be to the satisfaction of the Construction Manager.

8. The Cooper/University/Hospital Dr, entrance/exit will be used as the main **construction entrance/exit**. No construction traffic is permitted to enter through the North/South/West sides of UK Medical Center buildings, or through the UK Emergency Department parking/walkways/drives, or VA hospitals and parking garages. Construction delivery entrance on the East side of the Pavilion A will be limited to those areas designated accordingly.

9. Trade Contractors are to provide all **street permits**, bonds, police details, flagman, off-duty police, street/lane closure permits, traffic control, and barricades as required to complete the work. This includes deliveries of material. Roadways and driveways may not be blocked without prior approval. Furnish copies of all permits to the Construction Manager.

10. All **deliveries requiring a crane** will require an approved lifting plan per Turner's safety plan and must be approved by Turner and UKMC. A UK lifting plan must also be submitted to the construction manager to gain approval from UKMC. Allow four (4) weeks minimum prior to the crane arriving onsite to gain these approvals.

11. Trade Contractors shall not order or **consign** materials for the project in the name of the Owner, Architect or Turner. Turner Reserves the right to reject all such shipments received in this manner. Deliveries must be coordinated with the Construction Manager a minimum of (1) week prior to receipt on site. Any material deliveries without notice will be given access on an "as available" basis. Also reference Turner's standard subcontractor contract 36 article VI.

12. Trade Contractors are responsible to **protect** all adjacent properties and structures, including lawn and planting areas as required to execute the work. Trade Contractors will be responsible for immediately replacing/repairing any damage to existing utilities, existing structures, lawn and planting beds in or outside of the building limits caused by the trade contractor's workforce.

13. It is the responsibility of the Trade Contractors to contact the local **utility locating** service and have all utilities located prior to mobilizing heavy equipment used for lifting or hoisting. The Trade Contractors should also contact the Owner (UK), through the Construction Manager, and have all UK owned utilities located as well.

14. This project is in and around an existing hospital & University. **Utilities or services**, including pavement to the Owner's facilities (and surrounding facilities) must be protected and maintained 100% of the time when possible (as determined by the Owner, Consultant, or Construction Manager). All costs associated with the work required to maintain service shall be the responsibility of the Trade Contractor performing the associated work. Trade Contractors are responsible to immediately repair any utility damaged or disrupted during the course of its work whether the utility be known or unknown. If the utility is unknown, the Trade Contractor(s) making the repair will be compensated for the work. If the utility is known, the Trade Contractor(s) is responsible and liable for any and all costs of repairs. Failure to immediately repair damaged utilities per the requirements of the utility Owner will result in the work being performed by others at the Trade Contractor's expense. Repair work shall begin immediately and be continuous (24/7) until the service is restored. All costs associated with this work to repair known utilities are the responsibility of the Trade Contractor. If unknown utilities are discovered, they must be reported to the Construction Manager in writing who will in turn investigate with the assistance of the Engineer and Owner.

15. All Trade Contractors must submit an **Outage Request** Log for all anticipated utility outages within 10 days of Contract Award. Submit individual Outage Requests a minimum of 3 weeks prior to the requested outage. Major outages may require more coordination, and must be submitted 6- 8 weeks in advance. Trade Contractors should coordinate with each other to avoid duplicating Outage requests. Include the costs for premium labor for cut-ins, switchovers and other operations requiring interruption to the daily operation of the Project Site as well as the Owner's adjacent facilities. (See 5th Floor Outage Request Log)

16. It is the responsibility of each Trade Contractor to make certain that all of its Work performed under the Construction Contract is in accordance with all applicable laws, statutes, ordinances, codes, and regulations. Trade Contractors shall give all notices and comply with all laws, ordinances, rules, regulations, and orders of any public authority with jurisdiction over the performance of the Work. Contractor shall promptly pay all fees, taxes, deposits, charges, penalties, or interest that may be claimed against or paid by Owner/Construction Manager due to any failure to comply with any such laws, statutes, ordinances, codes, or regulations (including those pertaining to permits, licenses, or notices). This shall include any and all professional engineering fees required.

17. Trade Contractors must provide all necessary fasteners, **supports**, and attachments for the installation of their own work. Trade Contractors must submit to the Construction Manager for approval by the A/E, the means and methods in which they plan on attaching hanger/supports to concrete decks.

18. Trade Contractors must provide any and all **fire stopping, fire proofing,** and/or joint sealants required for the scope of their work (Unless otherwise noted) including but not limited to penetrations, slab edge conditions, adjoining surfaces, etc. To the satisfaction of the governing authority, the drawings, and specifications.

A. All trade contractors completing fire stopping work shall include all necessary **repair and replacement of destructive testing** by the inspection agency performing inspections required in the 2012 HBC code section 1705.16. This includes any labor, new materials and equipment to re-install the fire stopping to meet code and UK compliance.

B. All trade contractors shall provide a permanent self-adhesive label at both sides of each fire stop penetration with detailed information on manufacturer, model, type and application of Fire Stopping at that specific location. Labels are to be Red with White Lettering.

C. An in-place mock-up of each type of floor and wall penetration Firestop is required to demonstrate materials and quality. Do not proceed with the work until the mock ups have been approved. This is required of each Trade Contractor installing firestopping.

19. Trade Contractors are responsible for the layout and installation of all **"Core Drilling"** required for its work, including Controlled Access Zones (CAZ) below. Provide sleeve (core drilling) installation drawings for approval. Include in these drawings size, quantity and location of all sleeves. The installation of the sleeves and penetrations shall be **coordinated** with the other contractors. No core drilling of concrete beams and/or pan joist will be permitted. Trade Contractors will be responsible for any coring, cutting, patching, or supports required for the installation of its work. Sleeves shall be cored upon the approval of the Structural Engineer. Any and all unused sleeves shall be dowelled and concrete in-filled by the Trade Contractor not requiring the penetration; this includes any "spalled" concrete necessary repair as a result of penetration(s).

A. All cores will be over the existing 3rd floor mechanical and 4th floor electrical rooms. All water and debris must be completely contained. Core drill machine shall be Hilti DD-WMS 100 or similar contained unit.

B. All materials that are installed through these holes shall utilize a double clamp system. These clamps shall remain in place until material is connected and supported from below.

20. Trade Contractors shall be responsible for the **restoration/repair** of any existing finishes that become damaged during the course of work including but not limited to: existing fireproofing/fire stopping material; drywall patching, paint/primer of walls and block, chair rail, doors, ceiling tile, plants and planting beds, paint/primer touch up of steel and/or patching of any concrete as the result of the attachment of the clips, hangers, supports, and any other similar items required by the performance of the Work.

21. Trade Contractors must employ the proper trades and provide composite crews if necessary to perform this Scope of Work and to avoid jurisdictional disputes.

22. Trade Contractors will comply with all requirements of the Contract Documents as to **Contract Close-Out**, including, but not limited to, Operation and Maintenance data, system training, and project record documents. **O&M Manuals**, training schedules and preliminary as-built drawings are due to the CM prior to 70% trade contractor complete progress billing. The Trade Contractor will be required to submit a form that certifies that all systems, equipment, firestopping comments and incorporated products furnished by the Trade Contractor are complete and operational for the purpose for which the system or product were intended. Each Trade Contractor is responsible to video all start up and training. This video must be of "professional quality" (no cell phone videos) and submitted to the Construction Manager in proper format as part of the Contract Closeout Documents.

23. Trade Contractors shall maintain, at the site of the Work, **as-built drawings**, which will be updated on a weekly basis showing actual installation and all changes in the Work. These drawings will be legibly identified as "Record Documents", with changes noted in a legible, concise and explanatory manner in red ink. The Record Documents are subject to review by the Construction Manager on a weekly basis. Any contractor not keeping a current record of the changes made to its Work on the Record Documents will be subject to having Progress Payments withheld until all changes are brought current to the satisfaction of the Construction Manager. Final As-Built Record Documents must be submitted to the Construction Manager in electronic format. As-built drawings and photos shall be reviewed by the Construction Manager prior to covering the work.

24. Trade Contractors are responsible to survey and inspect all **substrate work** performed by others prior to starting its own work. Any and all discrepancies, out of tolerance work, or otherwise unacceptable work must be reported the Construction Manager in writing prior to the start of work. The start of work indicates acceptance of the substrate material.

25. Each Trade Contractors acknowledges that his Work must be **coordinated** with the work of other trades and further agrees to coordinate his shop drawings, details, and submittals with those of other trades to ensure proper installation of all materials in accordance with the Project Schedule.

26. Each Trade Contractor shall **protect** his own Work and materials adjacent to his work until accepted by the Architect, Engineer, Construction Manager and the Owner. Trade Contractors shall be responsible for replacing, repairing, or the expense to repair, any damage caused by the performance of their Contract Work. In the event damages occur to existing work and is unidentifiable to a specific trade, all repairs and replacement costs will be distributed equally to all trades working in that area.

27. Each Trade Contractors, upon notice, shall correct all **deficiencies** in a timely manner before proceeding with the next sequence of Work. Trade Contractors shall be financially liable for any delays to the Project or other contractors due to their deficiencies or the untimely correction of their deficiencies.

28. Each Trade Contractor requiring temporary protection or **temporary** heat to complete its work in accordance with the Plans, Specifications and Project Schedule is required to provide the protection and/or heating.

29. The **existing 110V power** outlets will be available for use. Each Trade Contractor is required to provide its own temporary power (generators - tentatively not applicable) and lighting if additional is needed beyond the temporary power onsite. Consumption costs are by the Owner. All trades are responsible to provide their own power for welders. They are not permitted to be run on the temporary power provided for the work of this bid package(s). At no time shall the noise generated by generators be overwhelming or disruptive to University operations. Generators shall be placed to minimize noise and exhaust impacts.

    A. **TC-190 Electrical and Technology** contractor will provide and maintain temporary electric power stations and temporary lighting per their work scope. (ADD #3)

30. The Fire Alarm contractor (via **TC-190 Electrical and Technology**) will be responsible to provide, protect, and remove (when no longer required) **heat sensors** and protection of existing **smoke detectors** for all the work, material transport, and material storage areas associated with this project meeting UK requirements. All construction and staging areas will require heat detectors during construction as per UK standards, heat detectors will be installed on service loop to move as construction develops. Installation will start within 10 days of contract award. Detectors will need to be monitored by building management system. No T-Tap connection to existing system is allowed. (ADD #3)

31. Each trade contractor is to provide their own **drinking water**.

32. Obtain any and all required licenses including a **Contractor's license** fee for doing business in the locale. Provide copies of the license to the Construction Manager.

33. Upon request, Trade Contractors must provide the Construction Manager with field copies of lat**est referenced standards**.

34. This project will utilize a **LEAN scheduling** approach to fully-develop this project's scheduling details. All contractors will be required to participate in reverse-phase, pull-planning scheduling secessions to develop and schedule the construction work. Superintendents and key foreman will be required to participate in these secessions. Participants are expected to come prepared with work scopes broken down into components knowing their scope details, manpower requirements, and expected durations.

35. Each Trade Contractor shall submit a **submittal schedule** to The Construction Manager within 10 days of Contract award. Submittal submission must begin within 15 days of Contract award or sooner if required to maintain the Project Schedule. Schedule shall include material lead times. Please note that all submittals must be sent to Turner Construction's Pavilion A jobsite office for review. Include the costs for any postage required. Submittals will be in accordance with the Special Conditions Article 8.

36. All Trade Contractors' superintendents and foremen are required to have **cell phones** compatible for reception in in and around the project areas for daily contact. All Trade Contractors are required to have at **least one (1) iPad**. iPads will be used for review of electronic drawings and other project information in the field along with electronic punchlists and project execution via Autodesk BIM 360.

37. The Contract Price shall be based on a normal forty (40) hour workweek unless otherwise specified i.e. first shift but may be staggered, Monday - Friday. All work to be performed for tie-ins to existing utilities/services shall be figured at a rate outside the normal (40) hour workweek. All tie-in work shall be scheduled with written approval and coordinated with Turner's Superintendent. Unless Turner's Project Superintendent issues written instruction/agreement otherwise, if the a contractor works beyond the eight (8) hours per day, five (5) days per week normal work period, he shall bear all added costs. Trade Contractors shall notify Turner's Project Superintendent by 12:00 PM (noon) 2-days before the requested overtime to allow

time to make proper arrangements. Overhead and profit markup shall not be permitted on **premium time** costs or on shift work premiums.

38. **Office and storage trailer(s)** will not be permitted onsite due to site limitations. **Offices and break area** will be located on the 2nd floor (see SK-102). There are ten (10) existing offices in this space built to the specifications below. These will be assigned to contractors and their subs on a need basis by the CM.

A. **TC-184 Drywall & Ceilings** contractor will furnish and install two (2) additional contractor offices on 2nd floor for the prime bid contractors, including doors with lockable hardware at no cost to the contractors. Maximum size to be 12'x12'. Locations need to be coordinated with construction manager to avoid existing MEP systems. This contractor shall remove when no longer required all construction offices on 2nd floor. Reference SK-102 for details.

B. **TC-190 Electrical and Technology** contractor shall include temporary lighting and two (2) power receptacles for all new offices. This contractor shall include maintenance and demo after no longer needed of all temporary lighting, power, and technology. (ADD #3)

C. **TC-190 Electrical and Technology** contractor shall coordinate with UK IT to provide wireless access points inside the construction break area. There is currently one installed. Assume four (4) more wireless access points will be needed to cover office area. (ADD #3)

D. It is intended that workmen could gather on level 2 in a generalized open space for lunch and break area provisions.

E. **TC-181 General Trades** to include cleaning of the break area three times per week. This shall include a wipe down of all touchable surfaces in the area.

F. **TC-181 General Trades** shall provide and maintain thirty (30) plastic folding tables and seventy (70) folding chairs for general use of all site personnel.

G. **TC-181 General Trades** shall provide, maintain, and clean two (2) 25 cubic foot refrigerators for general use of the trade contractors.

H. **TC-181 General Trades** shall provide, maintain, and clean two (2) 2 cubic foot microwaves for general use of the trade contractors

I. **TC-189 Plumbing and Mechanical** shall remove the existing slop sink tied in next to the restrooms and replace it with a similar product. Contractor to maintain sink for the duration of their contract. It is the intent that this be used for a clean out basin. Contractor is to install straining material to reduce stoppage of sink. If sink does become stopped, it is this contractor's responsibility to clear it.

39. The Trade Contractors must attend all **required meetings** as follows:

A. The **Weekly Work Plan meeting** for overall job coordination. Attendance is mandatory for all Trade Contractor superintendents and foreman. All attendees must have the authority to make decisions and commitments.

B. The **Weekly Six Week Look Ahead Planning meeting** for overall job coordination. Attendance is mandatory for all Trade Contractor Project Managers. All attendees must have the authority to make decisions and commitments.

C. The **Monthly Project Safety Meeting**. Additional supplemental meetings will be held due to incidents, field safety violations, etc. by this or other trade contractors / tiered subcontractors.

D. The **Monthly Trade Review Meeting**. The project manager, superintendent, and foreman for each crew/trade are required to be in attendance. These meetings are to discuss current schedule, issues, manpower, and address any other questions or concerns. These meetings will start in the same month as your start of work and will continue until determined otherwise by the construction manager.

E. The **Monthly Safety Committee Meeting**. Each Trade Contractor will have the responsibility to provide an individual to attend the Monthly Safety Committee Meeting. This individual should be considered a competent employee that is able to represent the Trade Contractors' scope of work by having at least 5 years in the trade. The purpose of this meeting is to provide an opportunity to disseminate project safety related information and to receive the helpful feedback from the tradesmen in the field.

F. The **Daily Stand-Up meetings**. Attendance is mandatory for all Trade Contractor superintendents and/or foreman. These meetings are currently held at 1:00 pm, but are subject to change.

G. The **Reverse Phase Schedule meetings (Pull Plan)**. Attendance is mandatory for all applicable Trade Contractors. Those trade contractors project managers and superintendents are required to attend. These will be held at the Construction Manager's discretion.

H. The **Morning Stretch and Flex**. All persons on the project must be in attendance to work that day. Anyone coming in after the stretch and flex has the potential to be removed from site.

I. The **Pre Task Plan (PTP) meeting**. Each trade contractor is responsible for holding these meetings each day after the stretch and flex. The trade contractor's superintendent and/or foreman will be responsible for running this meeting. Each trade contractor is responsible to ensure their sub tier contractors participate in a PTP meeting for the day.

J. The **Utility Outage Planning meeting**. All superintendents and foreman **needing outages** are required to attend this meeting.

K. Separate mechanical and electrical coordination meetings will be held on the jobsite as often as required to facilitate progress of the work.

L. **Quality Assurance / Quality Control meeting** (QA/QC): The construction manager intends to hold a once a month QA/QC meeting. This meeting may be selective with trade contractor project managers, superintendents, and foreman invites for focus on topic. The intent is to limit the meeting to one hour. The option of several meetings is possible with small groups on differing divisions of work. Trade contractors will be required to provide a specific **quality control plan** for said division of work. We can focus of QA/QC in the specifications, manufacturer's data, mock-up, sign-off sheets, applicable testing and jurisdiction authorities, inspections, deficiency list, special care and protection, peer reviews, sequencing of work and turnover, etc.

M. The **Job Hazard Analysis (JHA) meeting**. This meeting will be before the start of the trade contractors work. No work will start before this meeting. This meeting will require the trade contractor's safety person, the project manager, the superintendent, and any foreman that will be on that project. All JHAs will be complete prior to this meeting and sent in to Turner for review.

N. The **Pre-Start Work meeting**. The purpose of this meeting is to review the drawings and specs with the trade contractors project manager, superintendent, and foreman to ensure that the project will be completed according to specifications. Sub tier contractors (including material suppliers) may be required to attend. It will be the responsibility of the trade contractor to ensure the attendance of all required persons from any sub tier contractor needed.

O. Any Meeting as required by the Owner, Architect, or Construction Manager

40. While working on-site, Trade Contractors shall fill out Construction Manager's **Daily Construction Report (DCR)** form & labor utilization form. These forms are to be delivered to the jobsite (Turner Superintendent interacting with Trade Contractor) office by no later than 10:00 am the following business day. Failure to perform this duty shall result in delay of payment until all reports have been received. The daily report may be available via electronic format for completion of same.

41. Each contractor will be responsible for the **security** of his own stored material, job office, equipment, tools, etc.

42. **Project signs or advertisements** of any nature, including job offices shall not be installed on the jobsite or structure without preapproval of Construction Manager and the Owner. In general, identification lettering of company offices shall be six inches or less; location(s) still must be preapproved by the construction manager and the owner.

43. All Trade Contractors shall include work made necessary by field conditions that may not be shown in the Contract Documents but that are apparent during an inspection of the construction site. Trade Contractors must **familiarize** themselves with the jobsite prior to starting work.

44. PROJECT MANAGEMENT SOFTWARE (eCommunications)

A. All Trade Contractors will be required to have an Internet connection, a working email address (checked daily) and utilize E-Communications, the University of Kentucky's web based project management system.

B. All Trade Contractors will be required to utilize E-Communication as required by the University and the Construction Manager. This shall include, but not be limited to: RFI's, daily communication, submittal tracking, etc.

C. Communication forwarded via E-Communication will be binding as if sent via traditional methods.

D. ALL Trade Contractors will be required to submit initial and ALL "later" approved submittals and shop drawings as a scanned electronic file for E-Communication. Exceptions will be at the Construction Manager's and Owner's discretion. The file format will be at the discretion of the Owner and the Construction Manager. If a Trade Contractor fails to comply with this provision, they will be responsible for all costs incurred by the Construction Manager to have said drawings and submittals scanned. Refer to Special Conditions for additional detail. Reference General Conditions for number of "copies".

45. CLEAN UP

A. Trade Contractors are responsible to perform clean up on a **continuous basis**. This cleaning shall at no time be less than once per day. Each and every work area must have all trash, debris & scrap removed and properly disposed of, all materials neatly stacked and the floor broom swept on a daily basis. Each Trade Contractor is required to maintain sufficient brooms, shovels, and sweeping compound on site to keep his work area clean. If daily cleanup and rubbish removal are not performed to the satisfaction of Turner Construction, cleanup and rubbish removal will be performed by others and all costs will be backcharged to the at fault Trade Contractor's contract. Cleanup operations shall not 'wait' until end of the week. Trade Contractors will include all costs for daily cleanup in the contract price.

B. At no time shall the streets, building, or areas that surround the work be in a disorderly or dirty condition.

C. All private and public paved roadways, parking areas, service roads, etc., are to be kept free of mud, debris, etc., resulting from equipment or vehicles performing the work of this Contract, in compliance with local city Ordinances. All Trade Contractors are responsible to include in their contract price dust and mud control, traffic control and roadway cleaning. All Trade Contractors are responsible to clean streets of any debris or spillage of any material as a result of the performance of their work as directed by Turner Construction. Scraping streets 'clean' with a backhoe is not acceptable debris control. All street cleaning conducted must be swept clean in addition to scraping up of large debris. All paved areas are to be kept "broom clean" at all times. Failure to do so may result in serious fines imposed on each violating Trade contractor. Any charges directed at Turner Construction by others, due to the fact that this procedure is not being implemented, will be backcharged to the offending Trade Contractor. Dust control measures shall be provided by all trade contractors as necessary for their work.

D. Burning of trash is NOT permitted.

E. Dumpsters will be provided for general construction debris ONLY in accordance with scopes of work and these general requirements. Locations for construction debris will be coordinated with Turner Construction. All crating materials must be disassembled and/or flattened prior to placement in dumpsters. All demolished items must be removed in dumpsters or trucks provided by the contractor removing the items. Any materials that require special care and/or disposal shall remain the contractor's obligation to dispose of.

F. Trash receptacles will be furnished for trash & refuse throughout the building and site as outlined in the specific scopes of work and these general requirements. These receptacles are not for construction debris, packing materials, cartons, pallets, scrap, etc.

G. It is the responsibility of the Trade Contractors to coordinate the clean-up effort, including removal of non-identifiable items such as lunch wrappers, cans, plastic bottles, etc.

H. Each Trade Contractor shall include providing **2%** of their and their sub contractor's onsite work force hours for contribution to a composite cleanup crew for general building cleaning. Work clean-up shall be scheduled and directed with man-hours recorded by the Construction Manager. This clean-up is unidentifiable and broom sweeping. Each Trade Contractor is still responsible for trash and debris associated with their work. Each Trade Contractor is responsible for transporting (including all necessary equipment) their trash and debris to an onsite ground level dumpster provided by others. Each Trade Contractor is responsible to clean-up their debris surround the dumpster.

I. All Trade Contractors are required to perform a final cleaning of its work and the jobsite.

J. Cleanup will be conducted on this jobsite in the following manner:

1. It is each Trade Contractor's responsibility to place refuse and debris resulting from their direct operations in the refuse containers ("Mobile trash carts") and emptied into the site dumpster.

46. **TC-181 General Trades** contractor shall provide **two (2)** Dumpster at all times and all required quantity of "pulls" for entire project for general construction debris from commencement of work through completion and /or as listed below:

A. This includes selective demolition. Dumpsters will be located at the Loading Platform on the east side of the PAV A Building (SK-103). Dumpsters to be emptied on a consistent and regular basis to support the construction operations. Coordinate with construction manager.

47. INSPECTIONS

A. The Trade Contractors shall coordinate, in a timely manner, all city, county, state, or other inspections as required for the completion of its Work in accordance with the Project Schedule. The trade contractor understands that multiple inspections (i.e. in-wall, above ceiling, etc.) may be required per area to maintain project schedule. The contractor shall schedule these inspections in a timely manner with no added cost to the construction manager or owner.

B. The Trade Contractors shall cooperate with and include the costs of all labor and materials required to assist the Owner's testing/inspection agency with inspections and gathering of samples and assistance in access to the specific locations of tests/inspections, and demonstrations. Initial costs for testing laboratory shall be by others if so noted in documents. Costs for re-test due to noncompliance shall be borne by the offending Trade Contractor. A minimum of 24 hour notice must be given to the testing agency for testing required during normal working hours. If testing is required on weekends, 48 hour notice is required.

C. Coordinate with the Owner's Testing/Inspection Agency as required by the specifications.

D. The Trade Contractors will cooperate with and demonstrate system operation and safety compliance with the local building and fire inspectors as needed and required for building occupancy. All associated costs, inclusive of after-hours inspections, are the responsibility of the Trade Contractor installing the system.

48. All demolished items specified to be **salvaged** must be removed and secured without damage. The Trade Contractors must coordinate and deliver to the Owner per the Construction Manager's direction. Multiple handling may be required and must be performed at no additional cost.

49. INFECTION CONTROL:

A. Trade Contractors must comply with the Owner's infection control requirements as follows:

1. Infection control for any healthcare construction project requires coordination among all parties—the Construction Manager, Trade Contractors, and Owners. Accurate, timely, written communication is critical to the process, and it is essential that no phase of the construction process proceed until the agreed upon measures are in place, regardless of assigned responsibility.

B. IC Measures to be taken by Trade Contractors:

1. The Trade Contractors must notify the Construction Manager in writing at least three weeks prior to the start of any work that generates dust that could migrate to the existing hospital facility or its air intakes. These activities, include, but are not limited to: demolition saw cutting, sanding, etc. This notification is required for the hospital to properly prepare and take the applicable infection control measures not assigned in this document. The notification will include the method of demolition/construction, time frame (start date and time and duration), and times of active demolition/construction. Water must be used during the demolition/construction process to control the dust generated.

C. IC Measures to be Taken by Owner:

1. The owner's representatives—including Infection Control, Hospital Safety, Facilities Planning, and other interested parties—may implement additional infection control precautions, if deemed necessary, based on method of demolition and other known risks and hazards.

D. Infection Control Maintenance:

1. **TC-181 General Trades** contractor shall provide a **full-time person (10-hour work days/week = 50 hrs./wk.)** who will perform full-time **Infection Control and Clean Up Manager** duties. This person shall monitor, clean, and maintain infection control procedures surrounding the project areas. This person is to maintain cleanliness expected in a hospital environment. This person shall be trained in infection control procedures and be certified to operate the telescoping forklift (lull). This person will be working in and around the active hospital. Professional behavior is required at all times. This person will be full time for **66 weeks** total for bidding purposes.

    a) The duties will be as directed by Construction Manager. The infection control's duties will include, but are not be limited to: infection control work and maintenance of I.C. barricades, coordination with hospital; Sweeping/mopping/maintenance of any areas of the hospital affected by any construction within the Pavilion A, H, and HA medical campus as directed by the construction manager.

    b) This person may perform cleanup/IC work due to other construction onsite or at the owner's request.

    c) This person is to have ZERO line work responsibilities. Their main duty is to keep the Ground floor to 2nd floor travel paths, barriers, stairs, elevators, etc. fully clean of construction debris and dust, etc.

    d) This person will also assist in managing the composite cleanup-crew and management of the trash removal on this project.

    e) This person will be responsible to work continuously between the basement, ground, 2nd, 3rd, 5th, and 12th floors including the hospital elevators used for travel.

    f) Weekly timesheets for this person must be turned in and signed off by the construction manager.

    g) This person to have a minimum of 5 years of active hospital infection control experience.

50. **USE OF PREMISES**

A. **PARKING & TRANSPORTATION**:

1. Contractor **parking** is NOT permitted on the job site or on the University of Kentucky Campus.
2. Turner cannot guarantee that UK will issue passes to any lots on the University campus. Parking is at the discretion of the bidding contractor.
3. No parking is permitted at the UK PCF (East side) loading dock/staging area or in UK Parking Structures.
4. Any and all parking permitting costs or parking violations shall be borne by the Trade Contractors.
5. Construction parking will be limited to the construction lot (SK-101). Permits will be assigned based upon need by the Construction Manager. Figure only two passes per prime contractor on the project.

B. CAMPUS/HOSPITAL:

1. Trade Contractors are expressly forbidden to enter existing campus & Hospital buildings except for specific construction purposes. Restrooms, drinking fountains, vending machines, gift shop and food service areas are NOT for Contractor use.
2. Any contractor (all workers) must purchase a security badge to work onsite. Badges can be obtained from Pavilion A security office at the **current cost** to be paid for by each trade contractor.
3. Trade Contractor Communications with Hospital/University Staff, Faculty and students is strictly forbidden.
4. "Catcalling" or otherwise harassing Hospital/University Staff, Faculty, Students, or the general public is strictly forbidden. Noncompliance with this provision is grounds for immediate dismissal from the jobsite. Additionally, the tradesperson and Trade Contractor may be subject to legal action.

51. All Trade Contractors must fully comply with the Construction Manager's **Safety Plan** (included in this manual as **attachment 'C'),** and all federal, state, and local safety ordinances. The Trade Contractor must also submit a formal written project specific safety plan that is complimentary to the Construction Manager's Safety Plan.

    A. In addition, all Trade Contractors shall provide a competent safety person to monitor all aspects of the Trade Contractors' work in accordance with the Safety Plan.

    B. All workers must go through Safety Orientation prior to commencing work. Safety Orientations will be held Mondays, Wednesdays, and Fridays at **7:30 am** (pending staggered shift(s)) in the Turner jobsite office. Special orientation times will be approved at the discretion of the construction manager.

    C. All Trade Contractor "Principals" are required to attend a monthly safety jobsite walkthrough at the Construction Manager's discretion.

    D. In order to work on this project, a negative drug test is required prior to starting work. For "**Drug project testing requirements**", refer to Turner safety program.

    E. All personnel will be required to wear a high **visibility vest or shirt**, while inside the construction zone. This requirement will remain in effect until the construction manager waves the requirement.

52. All trade contractors are to be responsible to ensure at the end of each day's work shift the building perimeter is secure and locked down.

53. All Applications for Payment and all supporting documents (including but not limited to lien waivers, sworn statements, and the like) for Subcontractor and its sub-subcontractors and suppliers, shall be in electronic format and shall be submitted to Contractor using the Textura-CPM™ payment management system. Subcontractor shall be responsible for the fees and costs owed associated with Subcontractor's use of the Textura-CPM™ payment management system. Subcontractor shall include a similar provision in its sub-subcontracts and purchase orders. Fees to Subcontractors are calculated as 0.22% (22 basis points) of contract value, with a minimum fee of $50 and a maximum fee of $3,750. Fees to Subcontractors' sub-subcontractors and suppliers are a fixed fee of $100 per sub-subcontractor or supplier contract.

54. CONTRACTOR CONTROLLED INSURANCE PROGRAM (CCIP)

A. The project will incorporate a Contractor Controlled Insurance Program (CCIP) as described in the CCIP Manual included in the Project Manual. The Lump Sum Base Bid amount should not include on-site worker's compensation costs, commercial general liability, or excess liability costs for this work, in accordance with the CCIP Manual. Trade Contractors are responsible for & must provide evidence of automobile insurance and offsite general liability & worker's compensation. Trade Contractors **must submit required forms on the website** to be enrolled in the CCIP.

1. Trade contractors will not be able to start any work on site until they are enrolled in the CCIP program. This process will take a minimum of two (2) weeks. Any delays caused by late submission shall be borne by the trade contractor responsible. This includes the cost for overtime and extra crews to maintain the project schedule.

2. All sub tier contractors will be required to enroll in the CCIP program.

55. PAYMENT AND PERFORMANCE BONDS

A. The base bid should NOT include **Payment and Performance Bonds**. Provide, for reference, the additional cost to provide them on the trade contractors Bid Breakout sheet (page 1).

B. **Builder's Risk Insurance** is provided by the Construction Manager per the terms of the General Conditions Article 35.5. Unless otherwise provided for through agreement, the Trade Contractor experiencing any loss claimed under the builder's risk policy shall be responsible for that loss up to the amount of the deductible. Trade Contractor(s) may provide their own coverage for amounts up to the deductible. Refer to the General Conditions, Article 35.5 for deductible limits.

56. All equipment is to be equipped with high efficiency, durable construction exhaust purifiers **('Scrubbers").** Each Trade Contractor is responsible for providing and maintaining (including filter changes) scrubbers for each piece of equipment.

57. **TC-184 Drywall & Ceilings** contractor is to provide building **control lines** for column line offsets and column bench marks for All Areas. All users shall verify accuracy of layout before utilization.

A. All contractors requiring "box outs" in walls for their installations must mark out locations on the floor. All locations must be marked before that wall is topped out. Any locations not marked out before top out will be installed by **TC-184** at the offending contractors expense.

58. Access to Pavilion A for New Construction:

A. All building access for workers will be via the existing stairway by the Pediatric Emergency entrance.

B. Material deliveries shall be delivered to and coordinated with the loading dock. Coordinate with UK and Construction Manager for all deliveries.

C. Project area work and material access will be via the TCCo SK sketches.

D. All deliveries through the hospital must be covered.

59. **Smaller floor openings**: the respective trade providing opening will cover with reinforced secured plywood. Mark "hole" and maintain as required. Small opening metal deck cutouts will be by respective trade requiring opening; respective trade contractors will comply with OSHA requirements during and after alterations.

A. Floor covers shall be constructed in such a manner to avoid any random kicking off, and elevated high enough to control lifts, etc… from running over them. These covers should be anchored to the concrete floor and painted orange. Note ALL sleeves" are elevated 1-1/2" above rough slab.

60. **TC-181 General Trades** contractor shall maintain and pay for the rental of a **Temporary Delivery & Access Platform,** provided by **TC-180 Pre Construction Demo** contractor, on the roof of receiving dock area for delivery of materials and equipment to the project site for the duration of their contract. See SK-103 for location of platform and details. Platform to match 3rd floor roll up door opening height, leveled all directions, feet to be on high density insulation pads to protect roofing. Assume a rental duration of 15 months starting on February 1st, 2021. Coordinate scaffolding details with Dave Seibert with American Scaffold Inc. at 513-615-2647 or dseibert@amscaf.com. (ADD #3)

A. Temporary landing platform (loading dock) is to be located on the existing 1st level roof to the bottom of the 3rd floor overhead door between column lines 8 and 9 (in front of the overhead door). This platform to be approximately 23' long x 80' wide x 33' high. This platform will extend from the bottom of the 3rd floor O.H. Door east to the roof line.

B. This platform will be used as a "loading dock" to get materials in and out of the third floor (along with trash out). Material loading should not exceed 75 lbs/sq. ft. NO MATERIAL STORAGE TO BE ALLOWED ON PLATFORM

C. This platform to have an OSHA approved safety rail protection system in place (including toe board) around the entire perimeter. This platform shall have a removable guard rail system at the East edge of the platform. Any contractors utilizing the landing platform shall have the responsibility to remove and replace the guardrail per OSHA requirements.

D. Include two OSHA Tie-Off points and removable OSHA Guard Rail at edge of roof for delivery's.

E. This platform shall have a warning line spanning across the platform (approx. 30' wide) 15' away from the edge of the platform at the delivery entrance.

F. **TC-181 General Trades** contractor shall install 2 tie off anchor points for use by all contractors to access the landing platform. These tie off points shall be rated for 5000lbs. Contractor shall supply and maintain two 30ft retractable fall protection devices for use by all contractors.

G. This platform shall be anchored to the building into the 2nd and 3rd floor slabs, as required and detailed by a registered engineer, on either side of the platform (Contact Gate Precast Company for repairs to precast panels when platform is to be removed). Proper moisture control precautions should be used at the anchor points so that water cannot infiltrate the building.

H. This contractor to include debris netting protection for the existing fan enclosure on the east side of the hospital (see SK-103 for approximate location). Coordinate installation with CM

I. Platform shall be planked in a solid manner to prevent debris from falling below - (OSB is not allowed)

J. Install and maintain roof protection beneath all stair towers, scaffolding, and walkways that are to be constructed on the existing 1st level roof. This protection shall consist of, at a minimum: A single layer of plastic, followed by a layer of 2" rigid foam, and completed with a layer of standard size weather resistant plywood – (OSB is not allowed).

1. Contractor to review roof in pre-construction damage survey. Contractor shall repair any damages associated with the delivery ramp installation or usage.

K. All temporary materials and installations to be removed and surfaces cleaned, painted, and/or repaired to like new condition at end of project.

L. Contractor shall install and maintain three photocell lights for lighting the scaffold platform. Lights shall be weather proof. Lights shall be installed in such a manner that scaffold is usable in a night condition.

M. Contractor shall install a recessed portion of this scaffold to receive the trash hopper detailed below. (see SK103)

1. Entire perimeter of the recessed portion to have safety rails on the main level. Rail on west side shall be removable for trash carts to dump trash. Contractor shall provide an acceptable system for trash carts to be received in order for them to be dumped easily and safely.

2. Perimeter walls of recessed portion to have plywood installed full height to protect from trash overflow.

3. Removable ladder to be installed to access bottom of recessed portion.

61. **TC-181 General Trades** contractor shall include maintenance and removal when no longer needed a **Delivery Area**, provided by **TC-180 Pre Construction Demo**, as shown on SK-103. Delivery area will be on the east side of Pavilion A.

A. Contractor shall include leveling delivery area on the east side of Pavilion A. Include a ramp of slope 1/2" per 10' from the edge of the curb towards the delivery area (see SK103). Ramp is to consist of concrete. Remove asphalt down to grade and place concrete back. Rework grade and patch back asphalt as needed.

B. Include isolation joint between new concrete and existing curb

C. Include filling in offset in parking lot to make concrete flush. Remove asphalt to grade and pour back with concrete. Curbs are 5" tall

D. Install covered walkway to the security entrance. Walkway to have a hard top able to withstand falling debris from above and fenced sides the entire height of the walkway (see SK-103). Include installing ADA compliant handicap ramp for the covered walkway. Basis of design would be a scaffolding system pedestrian walkway. Walkway to extend from the finished building to the new ADA ramp.

E. Contractor to install concrete protection in delivery area. (see SK-103)

F. Install fencing around entire delivery area. This fence is not to be drilled into the asphalt. Fence is to be set into interlocking orange construction barriers. Total height of fence and barrier shall be 8 foot (basis of design Item #:WB36ORG-F on TrafficSafetyStore.com). Barriers to have reflective stripping Contractor is to maintain the barriers and fence for the duration of their scope of work.

1. Barriers shall be filled with water at all times. Contractor to inspect barriers water level weekly and refill it when necessary.

2. Fencing to be netted and include air relief holes. Contractor is to maintain fence and netting for the duration of the installation.

3. Fence shall include a rolling gate for delivery truck entry. Gate shall be 20 foot long. Contractor shall include a locking system for this gate. Keys must be made available to CM and UK. Contractor to include all material to ensure a working gate system. Contractor shall maintain gate for the duration of their contract.

4. If drilling posts is the only way deemed necessary in a location, contractor is to water excavate post locations. Utility tracing is to be completed before this begins.

G. Contractor shall demo existing outlets back to their source as shown on SK-107. Contractor is to install 2 new 30A twist lock outlets in new location as shown on SK-107 for UK vendor use. Contractor to run conduit and install

weatherproof outlet and cover for use by UK vendor. Assume that the location to tie in for power is within 30 feet. Contractor to provide new breakers for these outlets.

H. **TC-181 General Trades** shall provide and maintain an office for the Yard Boss. Office is to be located within the delivery area. Office should have heating, cooling, and electrical. It is then intent that the Yard Boss uses this as his permanent office. Office shall be no smaller than a 100 square foot footprint.

1. **TC-190 Electrical and Technology** shall provide power to Yard Boss office from a panel located inside the ground floor of the hospital.

62. All contractors shall review delivery access routes and include any temporary removal/relocation of existing items (AHU platform rails, stairs, etc.) to transport their materials and equipment. The load rating for the 3rd Floor is 150#/SF maximum.

63. **TC-181 General Trades** contractor shall provide a full time **Yard Boss/Operator (10-hour work days/week = 50 hrs./wk.)** and an **all terrain boom lift (Lull/JLG)** for use by all trades. Assume a duration of **66 weeks** for bidding purposes. This person will be responsible for scheduling deliveries and trash removal for the project and coordinating it with the active loading dock as well as operating the Lull for deliveries and trash removal. This person will be working in and around the active hospital. Professional behavior is required at all times. The Lull will be used to lift materials from delivery area up to the 3rd floor landing platform on the east side of the building (SK-103). The Lull is only to be used for getting materials to the 3rd floor and for trash removal out of the building from construction operations. In the event of Lull downtime there will be no compensation resulting equipment failure. Lull basis of design is a 10,000lb rated machine that must be able to carry a load of 2,000lbs, extending a height 38' at a distance of 20' away.

A. **TC-181 General Trades** is responsible for maintenance and all fuel for the Lull, for the duration of their scope of work.

B. Contractor to include providing and maintaining a HD-300-HD - Vestil Dump Hoppers with Bumper Release. This shall be used for removal of trash from the project

C. The Lull shall have an enclosed cab with heating and cooling.

64. **TC-181 General Trades** contractor is to furnish and install, maintain, and remove when no longer required **sixteen (16 ea) 20# fire extinguishers** with free standing stands for 3rd and 5th floor project areas in accordance with Turner Construction and OSHA standards. Provide initial certification upon delivery and re certification as needed.

65. **TC-181 General Trades** will furnish and maintain **twelve (12)** (minimum 55 gallon Rubbermaid drum) **trash cans** for miscellaneous trash (not construction materials) from the commencement of the project. Trash cans to remain through the duration of the project or when no longer required as dictated by the CM.

66. **TC-181 General Trades** will furnish (repair or replace when necessary) **twenty (20) new,** mobile, one cubic yard, covered **trash carts** for removal of construction debris materials from building. **One (1)** of these trash carts shall remain on the 2nd floor for the contractor break area. These trash carts (and any others in occupied areas) shall be scrubbed clean regularly (minimum once a week). Each contractor is responsible to transport their material debris into the on-site dumpster; this includes cleanup of your materials around the dumpster. Transport empty trash cart back to respective floor. Trash carts should be equipped with a lid or some form of covering material to meet UK ICRA requirements for working in occupied spaces. Trash carts will remain until the duration of the project or as no longer required.

A. **TC-189 Mechanical and Plumbing** shall furnish and maintain one (1) new mobile, one cubic yard, covered trash cart for outages. This cart shall be painted blue and clearly labeled "OUTAGE CART". This cart shall only be used for water type outages. No trash removal with this cart is allowed.

B. **TC-184, 189, and 190** are each to provide **three (3) new,** mobile, one cubic yard, covered trash carts for removal of construction debris materials from building. These shall be painted colors based on your trade. These shall be maintained by each contractor and be used for that contractors waste only. Colors to be coordinated with construction manager.

67. **TC-181 General Trades** will provide a "spill kit"

A. furnish and maintain one (1) new mobile, one cubic yard, covered, trash cart for water spills only

B. Furnish and maintain one (1) industrial wet/dry vacuum.

C. Paint all items white with blue lettering denoting "SPILL KIT"

D. Provide signage for spill kit area and location. Signage will be maintained throughout the entirety of this project.

E. Provide and maintain two brooms, two squeegees, two 25lb bags of Floor-Dry, and two (2) 10 foot sand snakes

F. Provide and maintain a 100' heavy duty construction grade extension cord with a separate GFCI pig tail

68. T**emporary facilities (toilets)** for this project will be located on the 2nd and 12th floor. Trade contractors are not permitted to use the active hospital toilets. There are existing toilets located on the 2nd floor currently. These will be upgraded in this contract.

A. **TC-181 General Trades Contractor** is to provide and maintain (cleaning three times per week) the contractor restrooms located on the 2nd and 12th floor.

B. **TC-190 Electrical and Technology** contractor shall provide one additional exhaust fan for the Men's restroom. This contractor is provide and maintain power to the exhaust fans for the contractor restrooms. This contractor shall provide and maintain lighting as needed to meet requirements for temporary lighting described within the General Requirements. (ADD #3)

1. **TC-190 Electrical and Technology** contractor shall provide and maintain power to **TC-189 Plumbing and Mechanical's** water heaters for the sinks. Coordinate with TC-189 for requirements. (ADD #3)

C. **TC-184 Drywall and Ceilings** is to include partial demolition of the restrooms and the addition of two (2) stalls and one sink to the Men's Restroom. All walls shall be covered in Fiberglass Reinforced Panels (FRP). Contractor to include removal and reinstallation of the ceiling as needed.

D. **TC-189 Plumbing and Mechanical** shall provide an additional urinal, sink, and toilet. Contractor shall include all piping necessary to install and tie these into the existing system. Contractor shall include an additional instantaneous water heater for the additional sink similar to LavAdvantage SPEX8208T (ADD #4).

1. Contractor shall support **TC-184 Drywall and Ceilings** during demolition and reconstruction of the restrooms for removal and replacement of any fixtures necessary. Include rerouting piping if needed by TC-184.

2. Contractor shall include maintenance of all fixtures associated with the temporary restrooms on the 2nd and 12th floors for the duration for their contract.

69. All plastic barriers installed on site must be fire retardant.

70. All construction crews on site are a minimum of two people. No single person crews allowed. This may consist of one ground person and one person in the air.

71. A special effort is to be made to provide the necessary protection to keep oil (from lifts, equipment, etc.) off of all floor areas. The offending Trade Contractor will be responsible for any clean-up required due to inadequate protection.

72. **TC-181 General Trades** shall provide and install fencing around Lot #1 on Conn Terrance and Lot #2 on Transcript Ave (see SK-108). For bidding purposes, estimate Lot #1's perimeter is 800 feet and Lot #2's perimeter is 450 feet.

A. Contractor to have utilities in the area marked prior to installation. If posts are in close proximity to underground utilities, contractor is to uncover utilities before installation.

B. Include demolition of existing construction and wood fencing around Lot #1

C. Include installing a 10 foot swinging gate with chain and lock on Lot #2. Lock to have four (4) keys to be turned over to construction manager after installation is complete. Posts for this gate must be installed in concrete.

D. Include five (5) parking grade signs with posts to be installed around these lots. Designs for these signs will be provided by the construction manager.

73. **The University of Kentucky campus and medical campus are tobacco free**. "Use of all tobacco products is prohibited in all owned, operated, leased or [health care] controlled university buildings, grounds, parking structures, enclosed bridges and walkways, sidewalks, parking lots and vehicles, as well as personal vehicles in these areas." "Tobacco includes cigarettes, pipes, snuff, chewing tobacco, etc."

A. There are tobacco treatment centers such as the Local health departments (Fayette county Health Department 859-288-2327), 1-800-quit-now. For listings "go to the UKhealthcare.uky.edu to find a link to a statewide listing of tobacco programs."

Review Comments

Attachment Q

Affiliated Engineers, Inc.
10 S. LaSalle Street
Chicago, IL 60603
Tel 312.977.2800 • Fax 312.977.2801

University of Kentucky – Pav. A 5th Floor Fitup	20736-00
Project Name	Project Number
Custom AHU's	11/12/20
Description	Date
23 7328-01	
Submittal Identification Number	
Chris Aschenbrenner	1 of 1
Reviewer	Page

Action:

- ☐ Approved as Submitted
- ☒ Approved as Noted (Refer to Individual Items Below)
  - ☐ Resubmittal Not Required
  - ☒ Resubmit Noted Portions Only
  - ☐ Resubmit
- ☐ Not Approved
- ☐ Reviewed Only/No Approval Action Required
- ☐ Review Not Required by Contract Documents
- ☐ Other

THIS REVIEW BY GBBN ARCHITECTS INC. IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR: ALL DIMENSIONS AND QUANTITIES, ALL FABRICATION, DELIVERY AND ERECTION; ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN ■ _____
EXCEPTIONS NOTED ☐ _____
REVISE AND RESUBMIT ☐ _____
FOR RECORD ONLY – NO REVIEW ☐ _____

By: cbowling 4:41:22 PM 12/23/2020
GBBN Architects, INC.
www.gbbn.com

Reviewed only for general conformance with design concept and information given in the Contract Documents. Corrections or comments made by reviewer on the submittal do not relieve the contractor from compliance with of the Contract Documents. Approval of a specific item shall not infer approval of an assembly of which the item is a component. The contractor is responsible for all dimensions, field conditions, coordination with other trades, and information that pertains solely to the fabrication process.

Comments:

1. See PDF for markups/comments on dimensional drawings.
2. Ionization to be hardwired to exterior of unit.
3. Provide dimensions for motor trollies. Steel sizes, clearance from floor to lower beam, extension distance outside of unit, etc.
4. Provide MERV 14 final filters.
5. Filter clips shall be "D" style as indicated on M804.
6. Modulating control dampers shall have opposing blades, 2-position control dampers and smoke dampers shall have parallel blades.
7. Confirm humidifier components (traps, valves, strainers) are stainless steel
8. Provide weight of heaviest unit sections.

PER CONSULATANT REVIEW AND COMMENT

2676 S 26TH ST KALAMAZOO, MI 49048 269-381-9070 FAX: 269-381-9075

SUBMITTAL

PROJECT: **UNIVERSITY OF KENTUCKY HEALTHCARE – PAV A 5th FLOOR UPGRADE**

LOCATION: **LEXINGTON, KY**

DATE: **OCTOBER 19th, 2020**

TABLE OF CONTENTS

1

GENERAL NOTES

AIR FLOW EQUIPMENT, INC.

2676 S 26TH ST KALAMAZOO, MI 49048 Phone: (269)381-9070 Fax: (269)381-9075

GENERAL NOTES

(3) Custom Air Handling Units

a. AHU's BT-51AW & BT-51AE Supply and Return Module

Work Not provided by AFE:

1. **Installation of ship split covers and sealing of the ship splits is not included**
2. **Reconnection of the 120 V lighting circuit at the ship splits is not included**

Notes:

1. **Ship Splits will be thermally broken, similar to unit casing.**
2. **Unit doors and viewports will be insulated with closed cell, poly-urethane foam.**

Units are ETL listed to UL1995

- Structural Steel Bases
  - 6", 8.2 # Structural C channel, perimeter, solid welded.
  - 6"x2"x7 Gauge, Structural Tube cross members (as needed)
  - Flooring: 1/8", Bright finish Aluminum tread plate flooring. Flooring shall be sloped to a 1 ½" galvanized drain with cap, which sticks through the base rail, where shown on the drawing. All others floors shall be flat. Flooring shall be braced underneath to prevent oil canning.
  - The flooring shall incorporate a 1 ½", solid welded, turned lip to form drainable floors.
  - Bases shall have stainless steel drain pans in all outside air, CW coil, and humidifier sections.
  - 20 Ga galvanized G90 sub-flooring
  - 3", poly-urethane foam insulation (R-21)
  - Base rails primed and painted with 2 coats of rust prohibitive dark gray machinery enamel
  - Each unit section will come with integral lifting lugs.
  - AFE will provide a factory tech to weld the ship splits seams together in the field, where like materals exist.
  - **NOTE: AFE will provide (3), full length, 2"x4"x1/4" steel tubes for the units. The intent is for the raise the unit 2" additional inches to provide adequate room for trapping as per the bid drawings.**
- Casing
  - Casing shall be 4", double wall, tongue and groove, formed panels.
  - 4", 4.5# density mineral wool insulation. The insulation shall have R value of 16.8
  - Panels shall be thermal break construction, with no thru metal.
  - Exterior skins: 16-gauge, galvanized, G90 mill finish
  - Interior skins: 22-gauge, 304 Stainless steel, G90 mill finish
  - Removable Panels – Casing shall be provided with removal plugs on both sides of the unit for coil removal. Casing shall also be provided with additional removable plugs as required to service major components.
  - 18-gauge galvanized safing

- Deflection shall not exceed 1/200th of largest panel span.
- Leakage shall not exceed ½% of design CFM
- Unit shall be provided with all gaskets, screws, bolts etc to install unit.
- **Note: Installation of ship split covers, gaskets etc., to be by installing contractor.**

- Doors
  - 4" thick Galvanized Steel doors with extruded aluminum frame.
  - Doors shall be thermal break construction
  - Doors shall be 24" x 72", unless shown differently in the drawing.
  - Doors to fan rooms shall be 30"x72"
  - Doors shall have 12"x12", double pane insulated viewports with wire mesh.
  - Unit doors to match casing construction.
  - Doors shall have Ventlock 699 Test Ports
  - All doors to open against air pressure.
  - Doors insulated with 2.25 # density polyurethane foam insulation
  - Full length stainless steel piano hinge
  - Continuous neoprene bulb gasket
  - Each door to have (2) Allegis door latches
- Fans & Motor
  - Fan Arrays:
  - Greenheck, Direct Drive Cube fans with airfoil wheels, Arrangement 4, Class II and III construction as required
  - Motors: Baldor, Premium Efficient, VFD Compatible, TEFC, 3,600 or 1,800 RPM, 460V, 3 Phase, 60 Hertz.
  - Fans cubes are internally isolated
  - Fan shall have gravity backdraft dampers for fan isolation
  - Fan rooms shall have motor trolley beams that extend outside the unit.
- Fan Motor Panels:
  - Each fan array will be wired to a Multi Motor panel with main, non-fused disconnect and individual disconnects and overload protection for each fan motor
  - All fans will be prewired to the motor panels.
  - Motor panels shall be mounted on the exterior of the fan section
- Filters
  - Pre Filters: Farr, 30/30, 30%, MERV 8, 24"x24"x2" pleated filters
  - Final Filters: Farr RigaFlo PH, MERV 14, 85%, 24"x24"x4" cartridge filters.
  - Filter Frames: Front loading Farr Type 8 Universal Filter frames built into built up banks with stiffeners.
  - Unit provided with Farr, Farr Magna Frame filter frames for future HEPA filters – HEPA's are NOT included
  - This unit will also have filter frames for future Carbon filters – Carbon filters NOT included
  - Filter Frames: Front loading Farr Type 8 Universal Filter frames built into built up banks with stiffeners.
  - Unit to ship with (2) complete sets of filters, and an additional set of construction filters(pre-filters only).
  - All clips required to hold filters in racks provided.
  - Dwyer Magnehelic 2000 Series differential pressure gauge shall be flush mounted to measure pressure drop across filter banks
- Chilled Water Coils
  - Heatcraft or Aerofin chilled water coil with 5/8" tube OD, 0.035" Copper wall thickness., .0095" aluminum fin thickness
  - 16 Ga, 304 stainless steel casings, copper headers and non-ferrous Red Brass connections.
  - Coil rated & certified in accordance with ARI Standard 410.
  - Coil headers and return bends contained within unit casing.
  - Coils to be mounted on 4"x4"x1/4" stainless steel coil uprights.
  - Splits coils shall have 2" thick panel blank offs separating the coils
  - Removable coil plugs shall be provided on both sides of the unit. Coils can be individually serviced.

    - 16 gauge 304, 2B stainless steel fully welded IAQ drain pans
        - Triple sloped IAQ drain pan
        - Pan extends full width of unit
        - 1-1/2" stainless steel drain coupling extended through base rail
    - Intermediate drain pans extending full coil length, sloped to a 1 1/2" stainless downspout to lower drain pan.
    - Coil connections shall be extended to outside of casing for continuation by mechanical contractor.
- Hot Water Coils
    - Heatcraft or Aerofin hot water coil with 5/8" tube OD, 0.035" Copper wall thickness., .0095" aluminum fin thickness
    - 16 Ga, galvanized steel casings, copper headers and non-ferrous Red Brass connections.
    - Coil rated & certified in accordance with ARI Standard 410.
    - Coil headers and return bends contained within unit casing.
    - Coils to be mounted on 4"x4"x1/4" stainless steel coil uprights.
    - Removable coil plugs shall be provided on both sides of the unit. Coils can be individually serviced.
    - Coil connections shall be extended to outside of casing for continuation by mechanical contractor.
- Humidifier Manifold
    - Pure Humidifier, Insty Pac, Stainless Steel Humidifier Manifold
    - Manifold shall come with steam traps, y strainer, electronic control valve, and temperature switch
- GPS Needlepoint Ionization System
    - Unit shall come with Global Plasma Solutions, Needlepoint Ionization System
    - The system shall be installed up stream of the CW coil
    - The system will be wired to a junction box mounted on the unit exterior
- Dampers
    - <u>Control Dampers</u>
        - Ruskin CD50, Aluminum Control dampers
    - **Damper actuators are not included and are by others.**
    - <u>Backdraft Dampers</u>
        - Greenheck, EM-32, Extruded Aluminum Back draft dampers for fan isolation
    - <u>Smoke Dampers</u>
        - Ruskin SD50, Smoke Dampers with pre-mounted actuators
- Electrical (3/4" EMT galvanized conduit minimum)
    - <u>Lighting Circuits</u>
    - Units shall be provided with vapor proof, LED light fixtures
    - The lighting circuit shall be wired to a combination timer switch/GFCI receptacle mounted near the supply fan doors
    - Each unit will have (2) GFCI receptacles
    - All lighting circuit wiring shall be ran in galvanized conduit, and will terminate in junction boxes at ship splits.
    - **<u>Motor leads shall be in flexible, metallic conduit</u>**
    - **Reconnection of wiring at the ship splits is by installing electrical contractor**
- Air Blenders
    - Blender Products Air Blenders
    - Blenders shall be fabricated from min. 0.0081" Aluminum
- Finish:
    - None – Unpainted, galvanized mill finish
- Factory Testing
    - Units shall factory tested. Factory Testing shall include the following:
    - Casing Leakage Testing
        - Units shall be factory pressure tested at 1.5x's the design static pressure or 10" , whichever is less
        - Leakage shall be no greater 1/2% of the combined supply and return fan CFM
        - Leakage rate shall be 1% of design CFM for the field built, knockdown unit
    - Casing Deflection Testing

        - Units shall be factory pressure tested at 1.5 x's the design static pressure or 10" , whichever is less
        - Panel deflection shall be no greater then L/200, where L is the longest unsupported panel length.
- Field Testing
    - Unit shall be tested for casing leakage after the unit is installed in the field. The same test process will used and for the factory testing.
    - Air Flow Equipment shall provide a factory technician and pressure blower to perform the leakage testing in the field
    - Units will be blanked off prior to shipping
    - Contractor to supply power for the blower and a tech to aid in the testing.
- Shipping
    - Units shall be shrunk wrap prior to shipping to job site.
- Installation and Start-up Support
    - (2) days of installation support is included
    - (2) days of Start-up support is included
    - (1) day of owner training is included
- **Other/Extra Material**
    - Unit shall ship with (2) spare set of filters, (3) total.
    - **Material not specifically listed in the bid is NOT included**

Warranty:

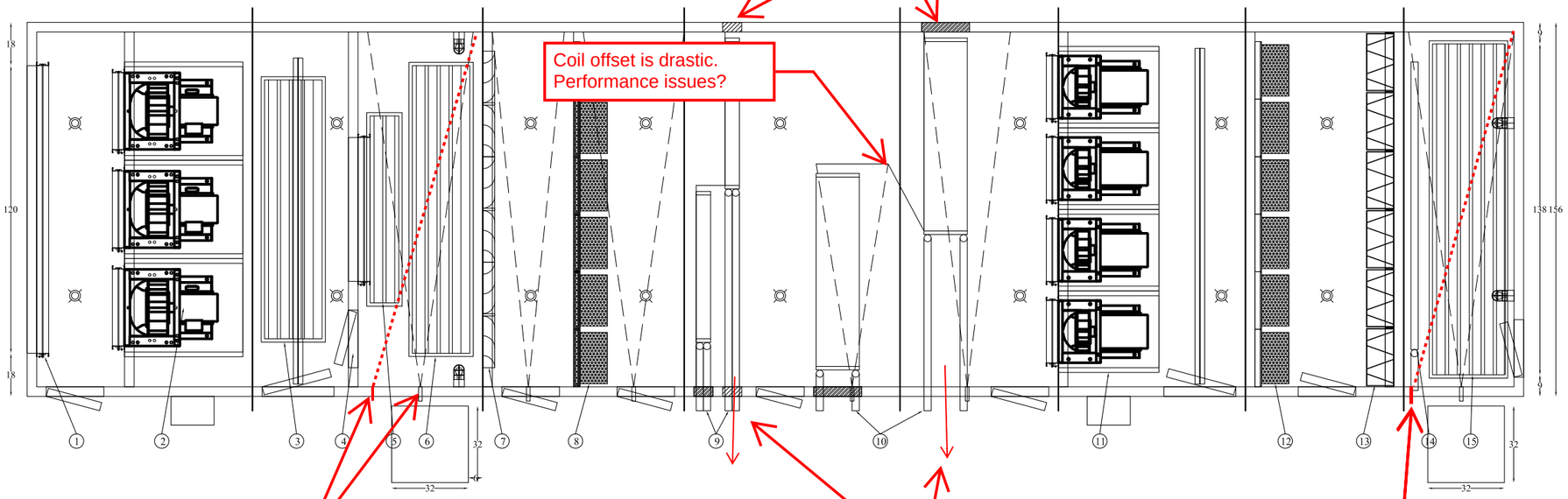
Warranty period shall be 18 months from shipment date or 12 months from unit start up, whichever comes first.

ALL components (such as motors, fans, coils, etc) shall be warranted by Air Flow using the specific warranty of that components manufacturer and shall follow that component manufacturer's policies. For example, should a motor fail, a purchase order shall be issued by M.C. for a new motor and the failed motor returned to an authorized service center. It shall be determined if it is a warrantable failure by that service center. If it is a warrantable failure, a credit shall be issued. Should a fan bearing fail, the same procedure shall be followed.

Component warranties are parts only and do not include labor.

3

AHU-BT51 AE PERFORMANCE



PLAN VIEW

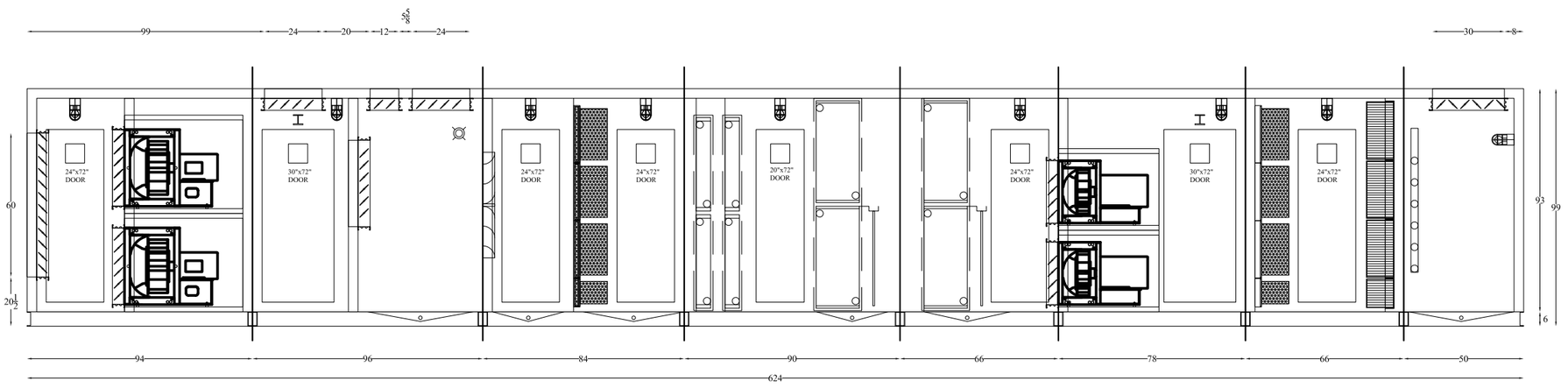
Removable panels? This side of unit not accessible

Coil offset is drastic. Performance issues?

Change slope so drain is not behind column

Coils must pull out in this direction or be removable through door

Change slope so drain is not behind column



ELEVATION

1-120"x60" SMOKE DAMPER
2-(6) 22", RETURN FANS w/7 1/2 HP MOTORS and BACK DRAFT DAMPERS
3-108"x24" EXHAUST AIR DAMPER
4-120"x18" RETURN AIR DAMPER
5-78"x12" MIN OUTSIDE AIR DAMPER
6-120"x24" ECON OUTSIDE AIR DAMPER
7-(3) AIR BLENDERS
8-2", MERV 8 PRE FILTER & 12", MERV 14 FINAL FILTER
9-(4) HW COILS
10-(4) CW COILS
11-(8) 18" SUPPLY FANS w/15 HP MOTORS and BACK DRAFT DAMPERS
12-FUTURE CARBON FILTERS
13-FUTURE HEPA FILTERS
14-HUMIDIFIER MANIFOLD
15-138"x30" SMOKE DAMPER

UK-PAV A

UNIT NAME: AHU- BT51AE

FILE LOCATION: S:\ACTIVE QUOTES\UK PAV A 5TH FLOOR\4-DRAWINGS(CAD)

DESIGNED BY: Tony Palmatier

DRAWN BY: N. REPLOGLE

DATE: October 19, 2020

LAST EDIT BY: Tpalmatier

PAPER SIZE: TABLOID

SCALE: 0":0"

AIR FLOW EQUIPMENT, INC.

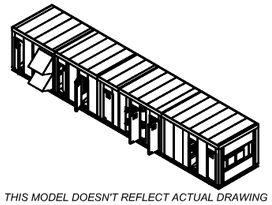
AIRFLOW EQUIPMENT
2676 S. 26TH ST.
KALAMAZOO, MI 49048
269.381.9070

THE INFORMATION HEREON IS THE PROPERTY OF AIRFLOW EQUIPMENT AND/OR ITS SUBSIDIARIES WITHOUT WRITTEN PERMISSION ANY COPYING, TRANSMITTAL TO OTHERS, AND ANY USE EXCEPT THAT FOR WHICH IT IS LOANED IS PROHIBITED.

UNLESS NOTED OTHERWISE
DIMENSIONS ARE IN INCHES
OVERALL DIMENSION TOLERANCE +3/4"/-0"

DO NOT SCALE PRINT U.N.O.

U.S. CUSTOM AIR HANDLING UNIT MANUFACTURER



THIS MODEL DOESN'T REFLECT ACTUAL DRAWING

AHU 51-AE System Static		
	Supply Fan	**Return Fan**
External Static Pressure	4.00	4.00
Intake/Dampers/Hood	0.15	0.20
Air Blender	0.24	
2", MERV 8 Filter	0.30	
12", MERV 14, Final-Filter	0.51	
HW Coil	0.06	
CW Coil	1.23	
Fan/System Effect	0.20	0.20
Future Carbon Filter	0.35	
Futer HEPA Filter	1.30	
Filter Loading	1.50	
Humidifier	0.15	
Discharge	0.20	0.15
TOTAL	10.19	4.55
Fan	8 x 18" - HPA-18-70-S-150	6 x 22" - HPA-22-75-S-75
CFM	8 x 5,000 = 40,000 CFM	6 x 5,333 = 32,000 CFM
TSP	10.19	4.55
RPM	3,456 RPM	1,896 RPM
BHP	8 x 12.28 = 98.24 BHP	6 x 5.85 = 35.10 BHP
Motor HP	8 x 15 HP	6 x 7 1/2 HP

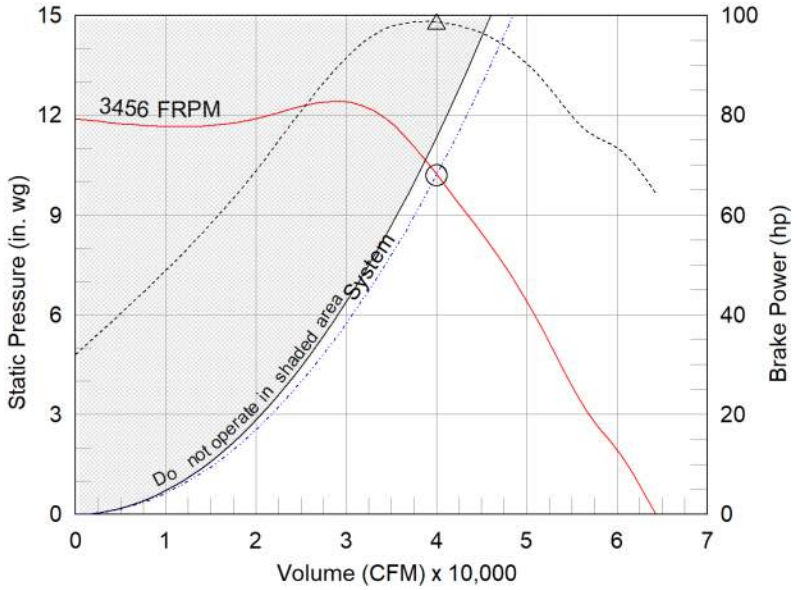
HPA-18-70-S-150

Mark: Supply Fans

Chart Type: Operating Conditions

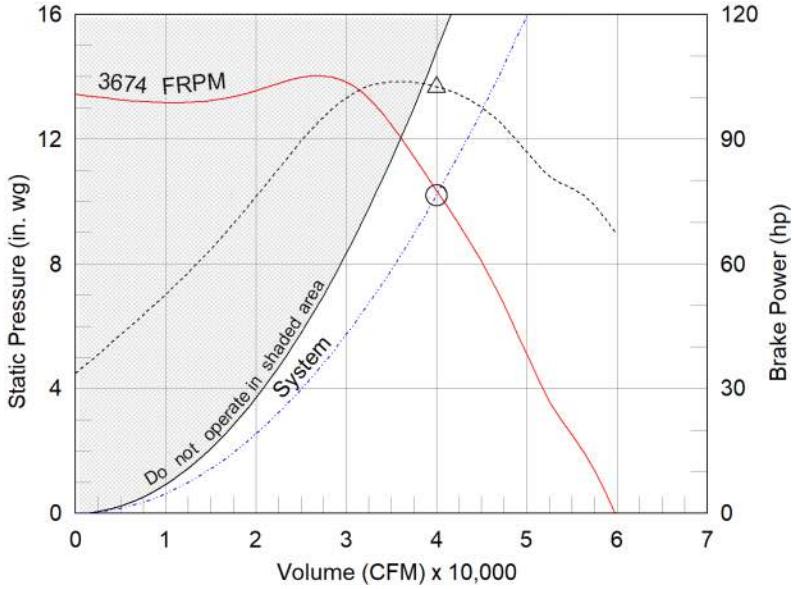
Requested Volume (CFM)	5,000	Actual Volume (CFM)	5,000	Total External SP (in. wg)	10.197
Elevation (ft)	617	Airstream Temp. (F)	70	Operating Power (hp)	12.28
Fan RPM	3456	Static Efficiency (%)	65	Fan Quantity	8
(N-1) Volume (CFM)	5,714	(N-1) Fan RPM	3674	(N-1) Operating Power (hp)	14.64

Operating Performance



△ Operating Bhp point
○ Operating point at Total External SP
Fan curve
System curve
Brake horsepower curve

Redundancy Performance (N-1)



Sound Power by Octave Band (Array)

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA
Inlet	101	102	104	110	105	100	97	91	110	99
Outlet	107	106	101	100	97	95	92	89	103	91

Sound Power by Octave Band (Single Fan)

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA
Inlet	92	93	95	101	96	91	88	82	101	90
Outlet	98	97	92	91	88	86	83	80	94	82

LwA - A weighted sound power level, based on ANSI S1.4
dBA - A weighted sound pressure level, based on 11.5 dB attenuation per Octave band at 5 ft. dBA levels are not licensed by AMCA International

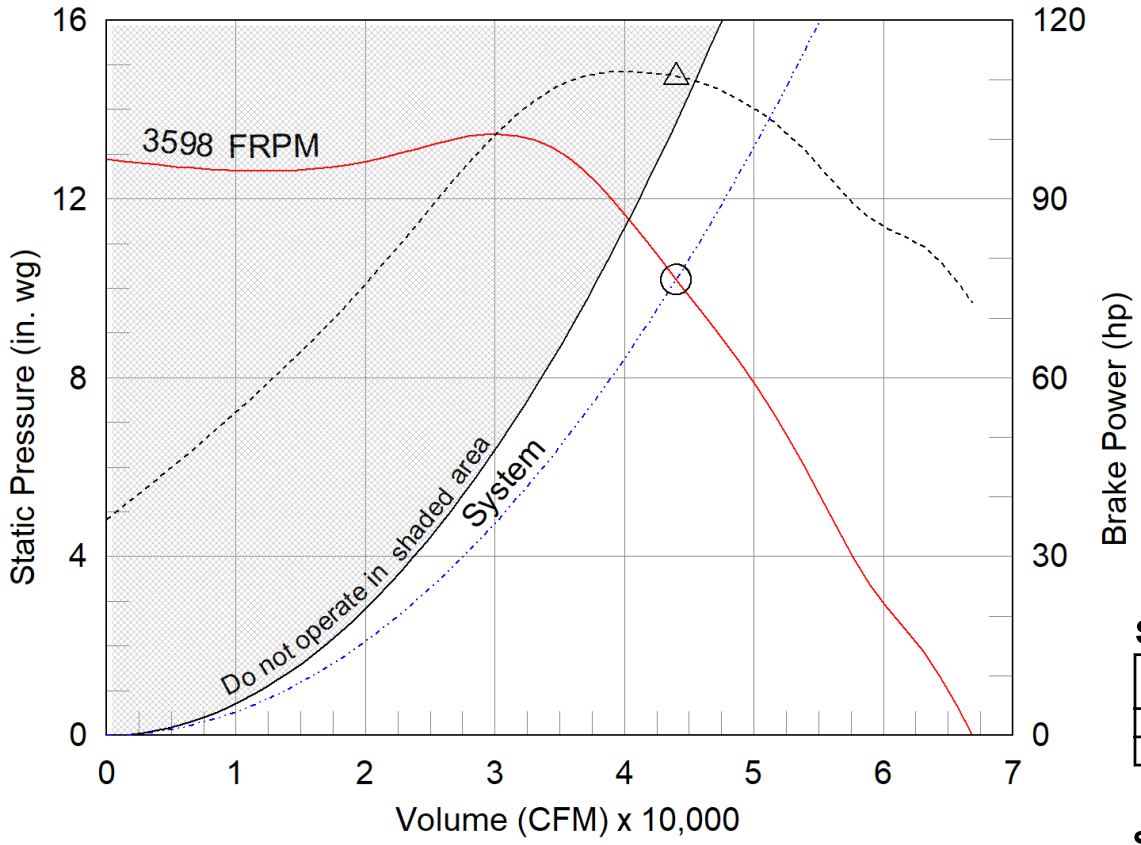
HPA-18-70-S-150

Mark: Supply Fans-110%

Chart Type: Operating Conditions

Requested Volume (CFM)	5,500	Actual Volume (CFM)	5,500	Total External SP (in. wg)	10.199
Elevation (ft)	617	Airstream Temp. (F)	70	Operating Power (hp)	13.8
Fan RPM	3598	Static Efficiency (%)	64	Fan Quantity	8

Supply Fans at 110% Design CFM
8 fans x 5,500 CFM = 44,000 CFM



Operating Bhp point
Operating point at Total External SP
Fan curve
System curve
Brake horsepower curve

Sound Power by Octave Band (Array)

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA
Inlet	102	104	106	111	108	102	99	93	112	101
Outlet	108	108	103	102	100	97	94	90	105	94

Sound Power by Octave Band (Single Fan)

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA
Inlet	93	95	97	102	99	93	90	84	103	92
Outlet	99	99	94	93	91	88	85	81	96	85

LwA - A weighted sound power level, based on ANSI S1.4
dBA - A weighted sound pressure level, based on 11.5 dB attenuation per Octave band at 5 ft. dBA levels are not licensed by AMCA International

Model: HPA-18-70-S-150
Housed Plenum Array

Fan Array	
# fans	8
Fans high	2
Fans wide	4
Total volume	40,000

Performance(single fan)	
Volume (CFM)	5,000
Total External SP (in. wg)	10.197
Operating Power (hp)	12.28
Required Power (hp)	12.75
Fan RPM	3456
Max Fan RPM	3,941
Oper. Frequency (Hz)	59
Elevation (ft)	617
Start-up Temp.(F)	70
Operating Temp.(F)	70

N-1 Redundancy Performance(Single Fan)	
Volume (CFM)	5,714
Operating Power (hp)	14.64
Required Power (hp)	14.64
Fan RPM	3674
Max Fan RPM	3,941
Oper. Frequency (Hz)	63

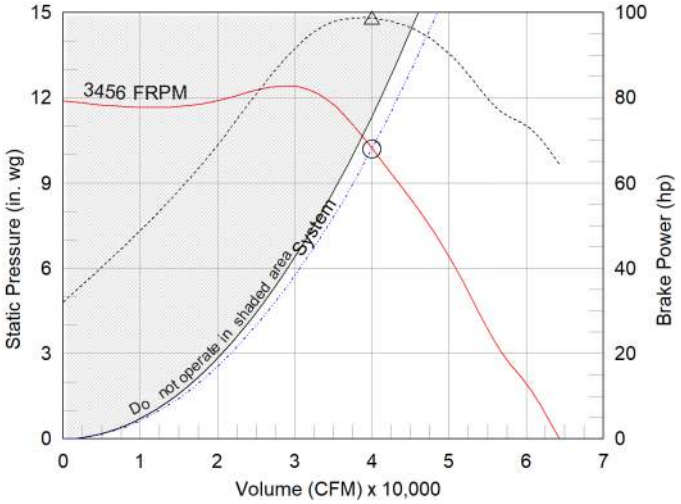
Fan Configuration	
Size	18
Arrangement	4
Housing Size	Standard
Wheel Width	70
Wheel Class	III
Rotation CW Qty	8
Rotation CCW Qty	0
Orientation	Horizontal
Inlet Cone Material	Steel

Total Array Weights	
Fan (LMD)(lb)	2,320
Motor/Drive (lb)	2,024
Accessories (lb)	0

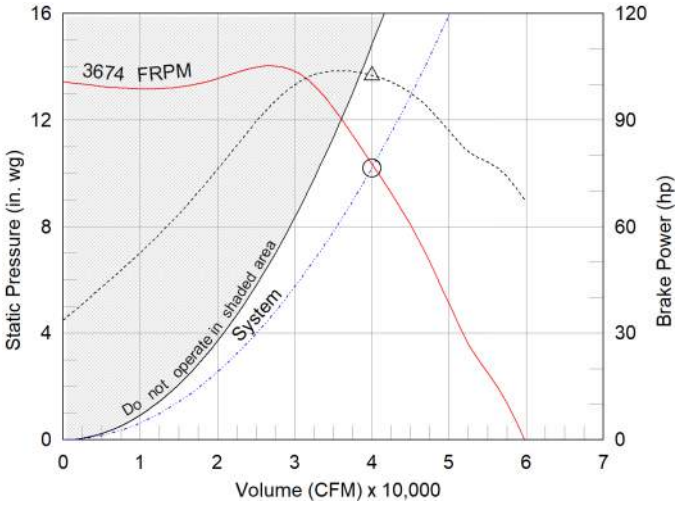
Misc Fan Data	
FEG	71
Outlet Velocity (ft/min)	794
Static Efficiency (%)	65
Wheel WR2 (lb-ft2)	0
Tip Speed (ft/min)	16,512

Motor and Drives	
Size (hp)	15
RPM	3500
Enclosure	TEFC
V/C/P	460/60/3
Frame Size	254T
Max Frame Size	256
Location	Centered

Operating Performance



Redundancy Performance



Operating performance shown is for 8 fans operating in parallel. For individual fan performance, divide the airflow and power scales by the number of fans.

△ Operating Bhp point
○ Operating point at Total External SP
Fan curve
System curve
Brake horsepower curve

Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA
Inlet	92	93	95	101	96	91	88	82	101	90
Outlet	98	97	92	91	88	86	83	80	94	82

LwA - A weighted sound power level, based on ANSI S1.4
dBA - A weighted sound pressure level, based on 11.5 dB attenuation per octave band at 5 ft- dBA levels are not licensed by AMCA International

Sound Power by Octave Band (Array)

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA
Total Inlet	101	102	104	110	105	100	97	91	110	99
Total Outlet	107	106	101	100	97	95	92	89	103	91

Total Array sound is not licensed by AMCA International

Model: HPA-18-70-S-150

Housed Plenum Array

Standard Construction Features:

HPA Standard Construction Features

FRAMEWORK: Heavy gauge laser cut and die formed galvanized steel frame integrally isolated from the fan housing with rubber isolators. HOUSING: Heavy gauge galvanized panels containing 2" of sound absorbing insulation with integral lifting points and punched flanges for fan array assembly. Motor lubrication lines will be extended to the outside of the housing panels on all motors with re-greasable bearings. WHEEL: Welded, aluminum 12- blade airfoil centrifugal.

Selected Options & Accessories:

Motor PN - 311916, Baldor Motor Model Number - EM2394T-G
NEMA Premium Efficient Motor - meets NEMA Table 12-12
Motor VFD Rated
Motor with Shaft Grounding
Motor with Class H Insulation
Direct Mount Isolators, Isolator-Rubber Mount, 0.25 Inch
Rotation CW Qty - 8, Rotation CCW Qty - 0
Inlet Damper, Gravity, EM-32, Alum. Blade, Parallel, w/ Mill Finish
Unit Warranty: 1 Yr (Standard)

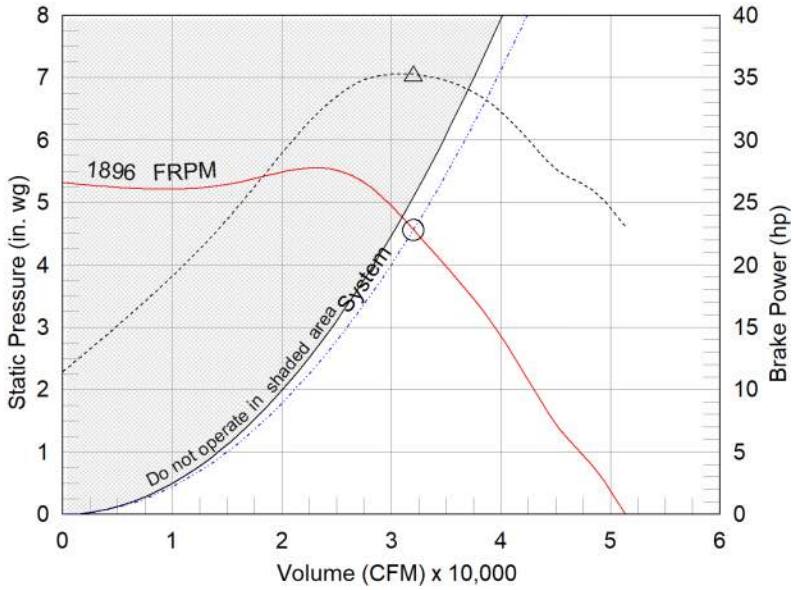
HPA-22-75-S-75

Mark: Return Fans

Chart Type: Operating Conditions

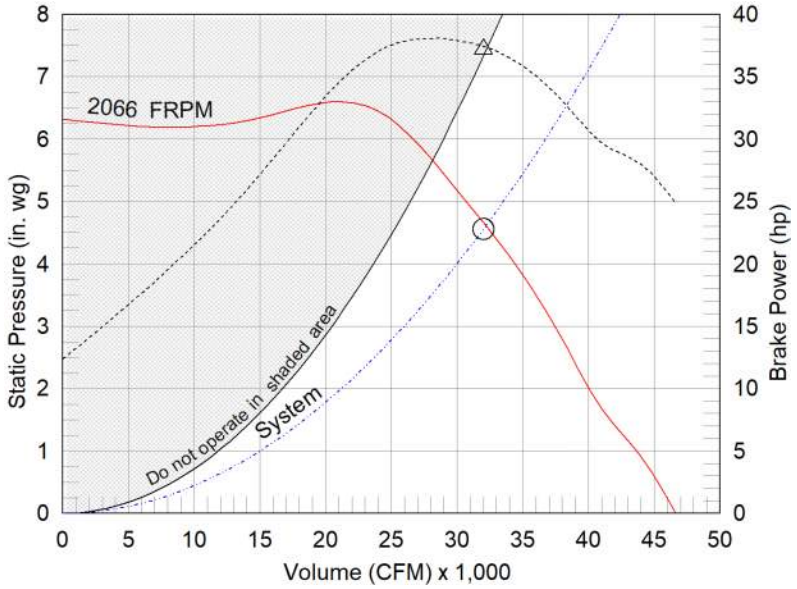
Requested Volume (CFM)	5,333	Actual Volume (CFM)	5,333	Total External SP (in. wg)	4.557
Elevation (ft)	617	Airstream Temp. (F)	70	Operating Power (hp)	5.85
Fan RPM	1896	Static Efficiency (%)	65	Fan Quantity	6
(N-1) Volume (CFM)	6,400	(N-1) Fan RPM	2066	(N-1) Operating Power (hp)	7.44

Operating Performance



Operating Bhp point
Operating point at Total External SP
Fan curve
System curve
Brake horsepower curve

Redundancy Performance (N-1)



Sound Power by Octave Band (Array)

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA
Inlet	95	101	102	110	90	90	83	78	107	96
Outlet	100	94	95	95	86	85	80	77	95	83

Sound Power by Octave Band (Single Fan)

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA
Inlet	87	93	95	102	83	82	75	70	100	88
Outlet	92	86	87	87	78	77	72	69	87	76

LwA - A weighted sound power level, based on ANSI S1.4
dBA - A weighted sound pressure level, based on 11.5 dB attenuation per Octave band at 5 ft. dBA levels are not licensed by AMCA International

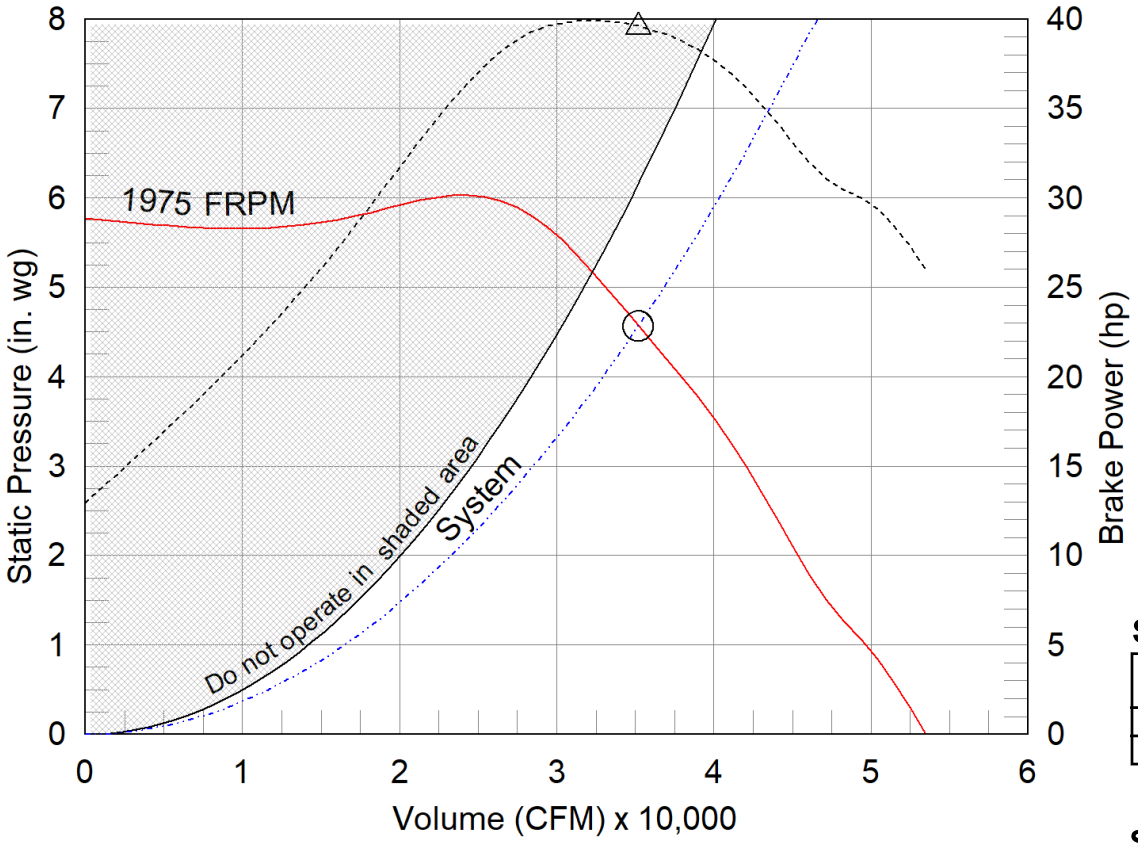
HPA-22-75-S-75

Mark: Return Fans-110%

Chart Type: Operating Conditions

Requested Volume (CFM)	5,867	Actual Volume (CFM)	5,867	Total External SP (in. wg)	4.568
Elevation (ft)	617	Airstream Temp. (F)	70	Operating Power (hp)	6.59
Fan RPM	1975	Static Efficiency (%)	64	Fan Quantity	6

Return Fans at 110% Design CFM
6 fans x 5,867 CFM = 35,200 CFM



Operating Bhp point
Operating point at Total External SP
Fan curve
System curve
Brake horsepower curve

Sound Power by Octave Band (Array)

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA
Inlet	97	101	103	111	92	91	85	79	108	97
Outlet	101	95	96	96	88	86	81	78	96	85

Sound Power by Octave Band (Single Fan)

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA
Inlet	89	93	95	103	84	83	77	72	100	89
Outlet	93	87	88	89	80	79	73	70	88	77

LwA - A weighted sound power level, based on ANSI S1.4
dBA - A weighted sound pressure level, based on 11.5 dB attenuation per Octave band at 5 ft. dBA levels are not licensed by AMCA International

Model: HPA-22-75-S-75
Housed Plenum Array

Fan Array	
# fans	6
Fans high	2
Fans wide	3
Total volume	32,000

Performance(single fan)	
Volume (CFM)	5,333
Total External SP (in. wg)	4.557
Operating Power (hp)	5.85
Required Power (hp)	5.85
Fan RPM	1896
Max Fan RPM	2,678
Oper. Frequency (Hz)	64
Elevation (ft)	617
Start-up Temp.(F)	70
Operating Temp.(F)	70

N-1 Redundancy Performance(Single Fan)	
Volume (CFM)	6,400
Operating Power (hp)	7.44
Required Power (hp)	7.44
Fan RPM	2066
Max Fan RPM	2,678
Oper. Frequency (Hz)	70

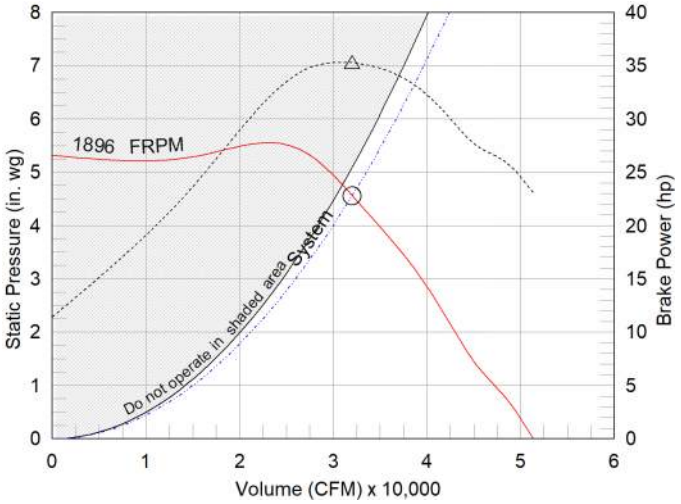
Fan Configuration	
Size	22
Arrangement	4
Housing Size	Standard
Wheel Width	75
Wheel Class	II
Rotation CW Qty	6
Rotation CCW Qty	0
Orientation	Horizontal
Inlet Cone Material	Steel

Total Array Weights	
Fan (LMD)(lb)	2,280
Motor/Drive (lb)	762
Accessories (lb)	0

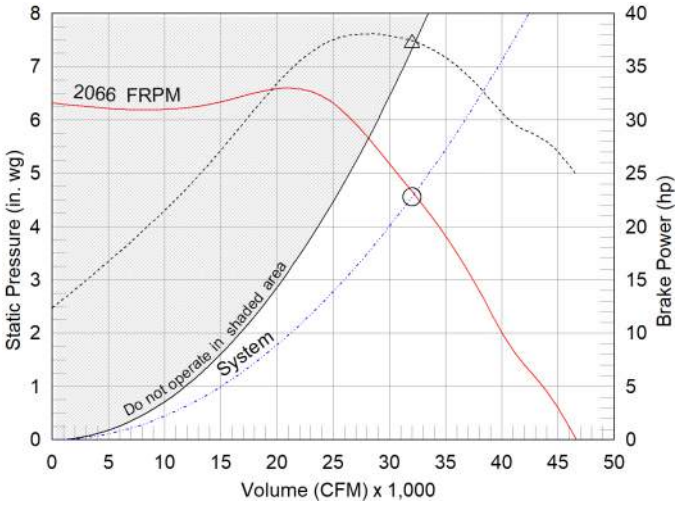
Misc Fan Data	
FEG	71
Outlet Velocity (ft/min)	569
Static Efficiency (%)	65
Wheel WR2 (lb-ft2)	0
Tip Speed (ft/min)	11,047

Motor and Drives	
Size (hp)	7 1/2
RPM	1770
Enclosure	TEFC
V/C/P	460/60/3
Frame Size	213T
Max Frame Size	286
Location	Centered

Operating Performance



Redundancy Performance



Operating performance shown is for 6 fans operating in parallel. For individual fan performance, divide the airflow and power scales by the number of fans.

△ Operating Bhp point
○ Operating point at Total External SP
Fan curve
System curve
Brake horsepower curve

Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA
Inlet	87	93	95	102	83	82	75	70	100	88
Outlet	92	86	87	87	78	77	72	69	87	76

LwA - A weighted sound power level, based on ANSI S1.4
dBA - A weighted sound pressure level, based on 11.5 dB attenuation per octave band at 5 ft- dBA levels are not licensed by AMCA International

Sound Power by Octave Band (Array)

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA
Total Inlet	95	101	102	110	90	90	83	78	107	96
Total Outlet	100	94	95	95	86	85	80	77	95	83

Total Array sound is not licensed by AMCA International

Model: HPA-22-75-S-75

Housed Plenum Array

Standard Construction Features:

HPA Standard Construction Features

FRAMEWORK: Heavy gauge laser cut and die formed galvanized steel frame integrally isolated from the fan housing with rubber isolators. HOUSING: Heavy gauge galvanized panels containing 2" of sound absorbing insulation with integral lifting points and punched flanges for fan array assembly. Motor lubrication lines will be extended to the outside of the housing panels on all motors with re-greasable bearings. WHEEL: Welded, aluminum 12- blade airfoil centrifugal.

Selected Options & Accessories:

Motor PN - 311092, Baldor Motor Model Number - EM3710T-G
NEMA Premium Efficient Motor - meets NEMA Table 12-12
Motor VFD Rated
Motor with Shaft Grounding
Motor with Class H Insulation
Direct Mount Isolators, Isolator-Rubber Mount, 0.25 Inch
Rotation CW Qty - 6, Rotation CCW Qty - 0
Inlet Damper, Gravity, EM-32, Alum. Blade, Parallel, w/ Mill Finish
Unit Warranty: 1 Yr (Standard)

Customer:
Contact:
Telephone:
Cell:
Fax:
Job:
Quote #:

Date: 8/14/2020
From:
Company:
Return Tel:
Return Fax:

Construction

Item:	AHU BT-51AE CC
Coils Per Bank:	4
Allow Opp. End:	No
Tube OD IN:	5/8
Coil Duty:	Cool-Standard
Fins Per Inch:	10
Rows:	12
Fin Surface:	B
Fin Height (IN):	40.50
Finned Length (IN):	79.00
Tubing Mat. (IN):	0.035 Copper
TurboSpirals:	No
Fin Mat. (IN):	0.0095 Aluminum
Conn Qty/Size (IN):	1 / Optimize
Circuiting:	Single
Face Area (SQ FT):	88.88

Air Side

Air Flow (Sft^3/min)	40000.0
Altitude FT:	0.00
Ent. Air DB/WB °F:	80.00 / 69.00
Lvg. Air DB/WB °F:	49.00 / 48.00
Total / Sensible MBH:	0.00 / 0.00
Max Air PD "H2O:	0.00
Fin Fouling Factor ft^2-°F-hr/BTU:	0

Fluid Side

Fluid Type:	Water
Ent. Fluid :	42.00
Lvg. Fluid :	0.00
Fluid Flow gal/min:	285.0
Max FPD FT H2O:	0.00
Fouling Factor ft^2-°F-hr/BTU:	0

O U T P U T D A T A		Most Economical			Specified Coil		
		Coil 1	Coil 2	Coil 3	Coil 4 ✓	Coil 5	Coil 6
Model Number:					**5WS1012B**		
FPI | Rows | Surf:					**10 | 12 | B**		
Circuiting:					**1**		
Air Velocity:	(Sft/min)				**450.1**		
Total Capacity:	MBH				**2505.8**		
Sens. Capacity:	MBH				**1395.9**		
Lvg. Air DB:	°F				**48.09**		
Lvg. Air WB:	°F				**47.83**		
Standard APD	"H2O				**1.23**		
Lvg. Fluid:	°F				**59.53**		
Fluid Flow:	gal/min				**285.0**		
Fluid PD:	FT H2O				**10.76**		
Fluid Vel.:	ft/s				**3.17**		
Conn Size:	IN				**(1) 2.500**		
Internal Volume:	in^3				**7585.1**		
Weight (Dry):	lbm				**1080.3**		
Weight (w/Fluid):	lbm				**1375.5**		
Notes:					**AGL**		

Notes:

A) Certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the Range of Standard Rating Conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at www.ahridirectory.org.
G) Rated performance is below the capacity or temperature requested.
L) Coil rating valid for Heatcraft coils only.

Copyright 2003 Modine Grenada LLC Confidential and Proprietary. This design is for the exclusive and confidential use of Modine Grenada LLC and its client. Any duplication made for the purpose of disclosing this design or any part of the design to a competitor of Modine Grenada LLC is in direct violation of this confidentiality. Any duplication must be approved in writing by Modine Grenada LLC.

Customer:		Date:	8/14/2020
Contact:		From:	
Telephone:		Company:	
Cell:		Return Tel:	
Fax:		Return Fax:	
Job:			
Quote #:			

Construction

Item:	AHU BT-51AE HC
Coils Per Bank:	4
Allow Opp. End:	No
Tube OD IN:	5/8
Coil Duty:	Heat-Return Bend
Fins Per Inch:	4
Rows:	1
Fin Surface:	A
Fin Height (IN):	36.00
Finned Length (IN):	60.00
Tubing Mat. (IN):	0.035 Copper
TurboSpirals:	No
Fin Mat. (IN):	0.0095 Aluminum
Conn Qty/Size (IN):	1 / Optimize
Circuiting:	One Sixth
Face Area (SQ FT):	60.00

Air Side

Air Flow (Sft^3/min)	25000.0
Altitude FT:	0.00
Ent. Air DB °F:	41.00
Lvg. Air DB °F:	55.00
Total Capacity MBH:	0.00
Max Air PD "H2O:	0.00
Fin Fouling Factor ft^2-°F-hr/BTU:	0

Fluid Side

Fluid Type:	Water
Ent. Fluid :	180.0
Lvg. Fluid :	0.00
Fluid Flow gal/min:	23.00
Max FPD FT H2O:	0.00
Fouling Factor ft^2-°F-hr/BTU:	0

OUTPUT DATA		Most Economical			Specified Coil		
		Coil 1	Coil 2	Coil 3	Coil 4 ✓	Coil 5	Coil 6
Model Number:					**5MI0401A**		
FPI | Rows | Surf:					**04 | 01 | A**		
Circuiting:					**1/6**		
Air Velocity:	(Sft/min)				**416.7**		
Total Capacity:	MBH				**459.3**		
Lvg. Air DB:	°F				**57.94**		
Standard APD	"H2O				**0.02**		
Lvg. Fluid:	°F				**139.2**		
Fluid Flow:	gal/min				**23.00**		
Fluid PD:	FT H2O				**1.23**		
Fluid Vel.:	ft/s				**1.73**		
Conn Size:	IN				**(1) 1.500**		
Internal Volume:	in^3				**627.6**		
Weight (Dry):	lbm				**89.88**		
Weight (w/Fluid):	lbm				**110.4**		
Notes:					**CKL**		

Notes:

C) Coil is NOT certified by AHRI.
K) Face and Row spacing on 1.5 inch centers.
L) Coil rating valid for Heatcraft coils only.

Copyright 2003 Modine Grenada LLC Confidential and Proprietary. This design is for the exclusive and confidential use of Modine Grenada LLC and its client. Any duplication made for the purpose of disclosing this design or any part of the design to a competitor of Modine Grenada LLC is in direct violation of this confidentiality. Any duplication must be approved in writing by Modine Grenada LLC.

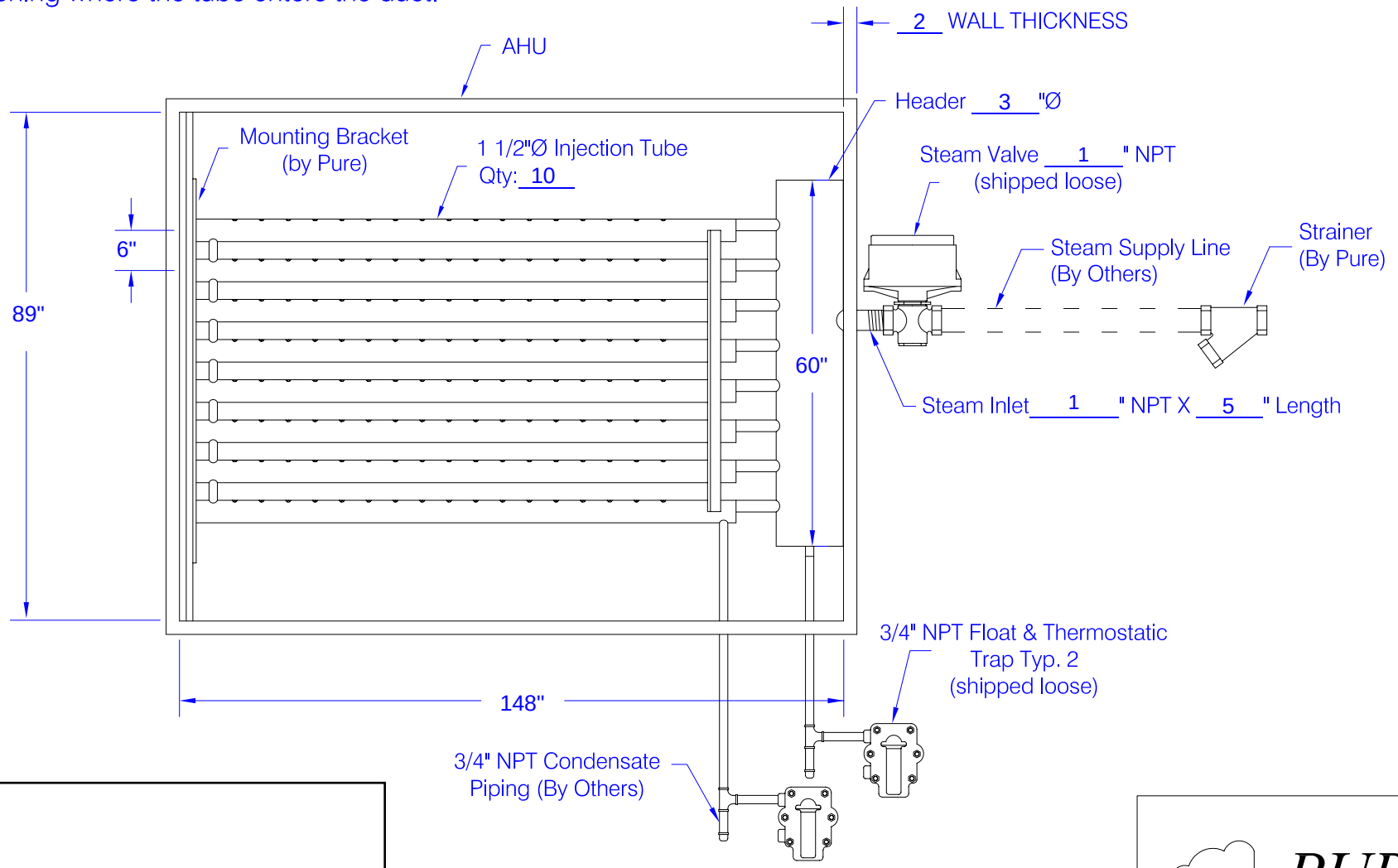
Mixers:

STATIC MIXER			AIR FLOW		PLENUM		Mixer Velocity @ Max CFM (fpm)	MIXER Ft2 AREA	PD in W.G.	MIXING DISTANCE		
QTY	MODEL		MAX cfm	MIN cfm	Wp in.	Hp in.				Dus in.	Dds in.	Total in.
	ABS/F	SIZE										
1	AB	78	40000	13990	146	99	1144	34.98	0.2	20	62	82
2	AB	54	40000	13410	146	99	1193	33.53	0.24	13	43	56
3	AB	44	40000	13360	146	99	1198	33.4	0.24	16	35	51
4	AB	36	40000	11920	146	99	1342	29.81	0.31	19	28	47
5	AB	28	40000	9020	146	99	1775	22.54	0.69	21	22	43

INSTALLATION

Tag: H-51AE

1. Install tube assembly level.
2. Install tube assembly with orifices injecting steam upward.
3. Galvanized steel duct plate is provided to seal the opening where the tube enters the duct.
4. All drain piping is by installing contractor.
5. Insty-Pac condensate steam traps must drain by gravity to an open drain (condensate cannot be elevated).



Title:	INSTY-PAC TUBE ASSEMBLY INSTALLATION		
Scale: No Scale	Date: March 15, 2006	Drwn: P.R.G.	Dwg No: M.M. AHU-2

PURE Humidifier Company

PURE Humidifier

Customer/Rep: Air Flow Equip. - Tony P.

Project Name: U of K 5th Floor

Tag: H-51AW & 51AE

○ Direct Entry
◉ Calculate Values

◉ Direct Steam Injection
○ Atmospheric Steam

Your device is connected. This is a valid selection

Room Temperature (°F):	52.0
Room Relative Humidity (%):	75.0
Outdoor Temp. (DB °F design):	52.0
Outdoor Rel. Humidity (% design):	20.0
Total Room (CFM):	25,000
Amount of Outside Air (CFM):	13,750
Duct Temperature (°F):	52.0
Duct Width (in):	142.0
Duct Height (in):	89.0
Required Non-Wetting Distance(in):	18.0

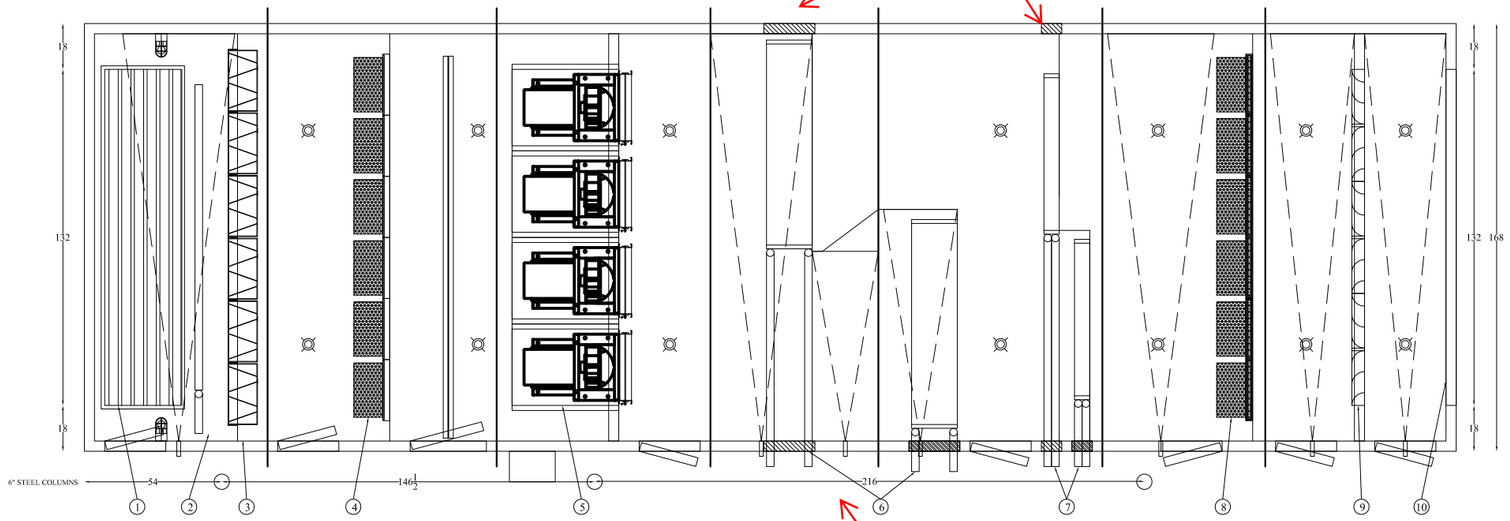
Capacity (lbs/hr)	**277.4**
Entering RH (%)	**44.8**
Leaving RH (%)	**75.0**

Insty-Pac Tubes Required	**10**
Number Of Traps	**2**

2

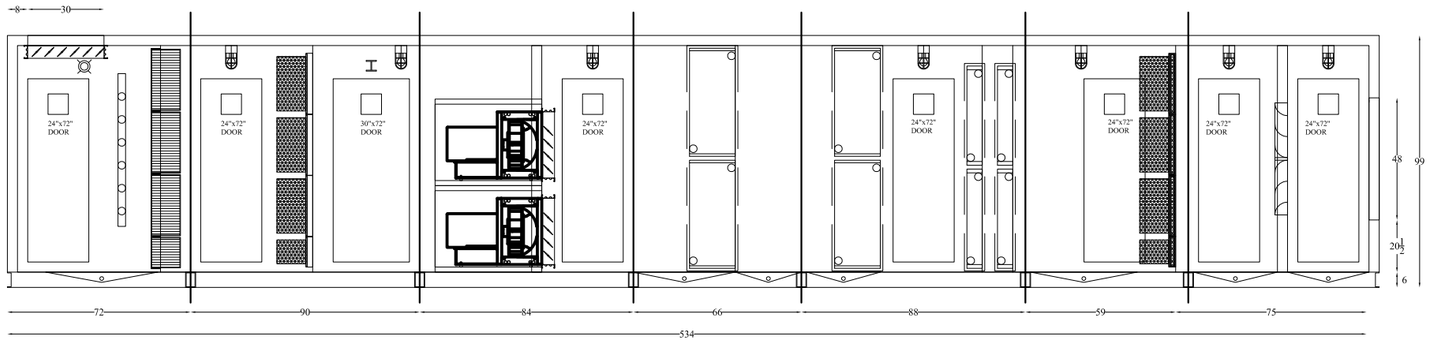
AHU-BT51 AW PERFORMANCE

Removable panels?
This side of unit is not accessible.



PLAN VIEW

All coils must be removable through this side of the unit.



ELEVATION

1-132"x30" SMOKE DAMPER
2-HUMIDIFIER MANIFOLD
3-FUTURE HEPA FILTERS
4-FUTURE CARBON FILTERS
5-(8) 18" SUPPLY FANS w/15HP MOTORS and BACK DRAFT DAMPERS
6-(4) CW COILS
7-(4) HW COILS
8-2", MERV 8 PREFILTER & 12", MERV 14 FINAL FILTERS
9-(3) AIR BLENDERS
10-132"x48" INTAKE

UK-PAV A

UNIT NAME: AHU- BT51AW

FILE LOCATION: S:\ACTIVE QUOTES\UK PAV A 5TH FLOOR\4-DRAWINGS(CAD)

DESIGNED BY: Tony Palmatier
DRAWN BY: N. REPLOGLE
DATE: October 19, 2020
LAST EDIT BY: Tpalmatier
PAPER SIZE: TABLOID
SCALE: 0":0"

AIR FLOW EQUIPMENT, INC.

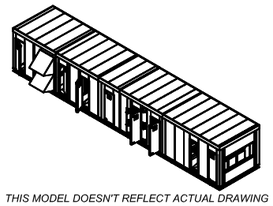
AIRFLOW EQUIPMENT
2676 S. 26TH ST.
KALAMAZOO, MI 49048
269.381.9070

THE INFORMATION HEREON IS THE PROPERTY OF AIRFLOW EQUIPMENT AND/OR ITS SUBSIDIARIES WITHOUT WRITTEN PERMISSION ANY COPYING, TRANSMITTAL TO OTHERS, AND ANY USE EXCEPT THAT FOR WHICH IT IS LOANED IS PROHIBITED.

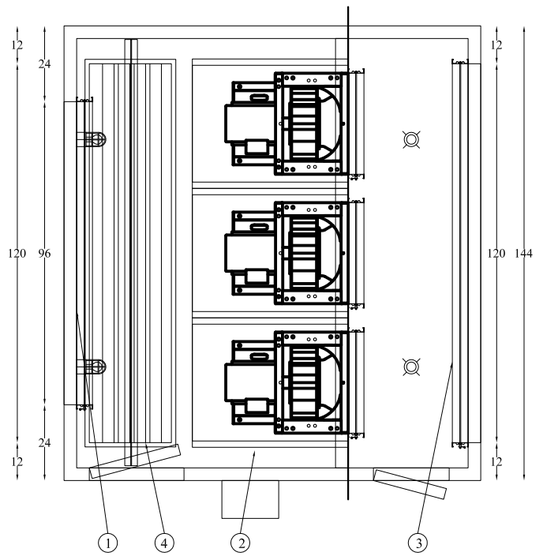
UNLESS NOTED OTHERWISE
DIMENSIONS ARE IN INCHES
OVERALL DIMENSION TOLERANCE +3/4"/-0"

DO NOT SCALE PRINT U.N.O.

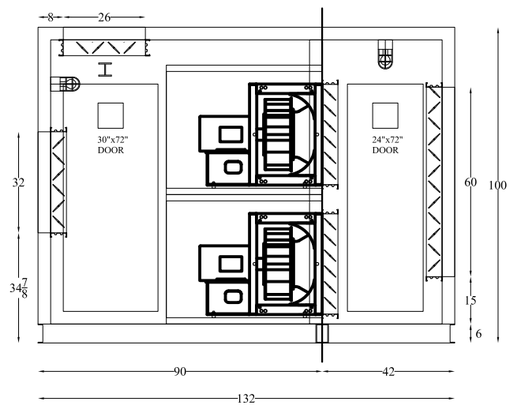
U.S. CUSTOM AIR HANDLING UNIT MANUFACTURER



THIS MODEL DOESN'T REFLECT ACTUAL DRAWING



PLAN VIEW



ELEVATION

1-96"x32" RETURN DAMPER
2-(6) 22" RETURN FANS w//7 ½ HP MOTORS & BACKDRAFT DAMPERS
3-120"x60" SMOKE DAMPER
4-120"x26" RELIEF DAMPER

UK- PAV A

UNIT NAME: RF-BT-51AW

FILE LOCATION: S:\ACTIVE QUOTES\UK PAV A 5TH FLOOR\4-DRAWINGS(CAD)

DESIGNED BY: Tony Palmatier

DRAWN BY: N. REPLOGLE

DATE: October 16, 2020

LAST EDIT BY: Tpalmatier

PAPER SIZE: TABLOID

SCALE: 0":0"

AIR FLOW EQUIPMENT, INC.

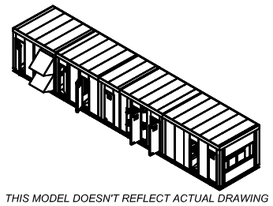
AIRFLOW EQUIPMENT
2676 S. 26TH ST.
KALAMAZOO, MI 49048
269.381.9070

THE INFORMATION HEREON IS THE PROPERTY OF AIRFLOW EQUIPMENT AND/OR ITS SUBSIDIARIES WITHOUT WRITTEN PERMISSION ANY COPYING, TRANSMITTAL TO OTHERS, AND ANY USE EXCEPT THAT FOR WHICH IT IS LOANED IS PROHIBITED.

UNLESS NOTED OTHERWISE
DIMENSIONS ARE IN INCHES
OVERALL DIMENSION TOLERANCE +3/4"/-0"

DO NOT SCALE PRINT U.N.O.

U.S. CUSTOM AIR HANDLING UNIT MANUFACTURER



THIS MODEL DOESN'T REFLECT ACTUAL DRAWING

AHU 51-AW System Static		
	Supply Fan	**Return Fan**
External Static Pressure	4.00	4.00
Intake/Dampers/Hood	0.15	0.20
Air Blender	0.24	
2", MERV 8 Filter	0.30	
12", MERV 14, Final-Filter	0.51	
HW Coil	0.06	
CW Coil	1.23	
Fan/System Effect	0.20	0.20
Future Carbon Filter	0.35	
Futer HEPA Filter	1.30	
Filter Loading	1.50	
Humidifier	0.15	
Discharge	0.20	0.15
TOTAL	10.19	4.55
Fan	8 x 18" - HPA-18-70-S-150	6 x 22" - HPA-22-75-S-75
CFM	8 x 5,000 = 40,000 CFM	6 x 5,333 = 32,000 CFM
TSP	10.19	4.55
RPM	3,456 RPM	1,896 RPM
BHP	8 x 12.28 = 98.24 BHP	6 x 5.85 = 35.10 BHP
Motor HP	8 x 15 HP	6 x 7 1/2 HP

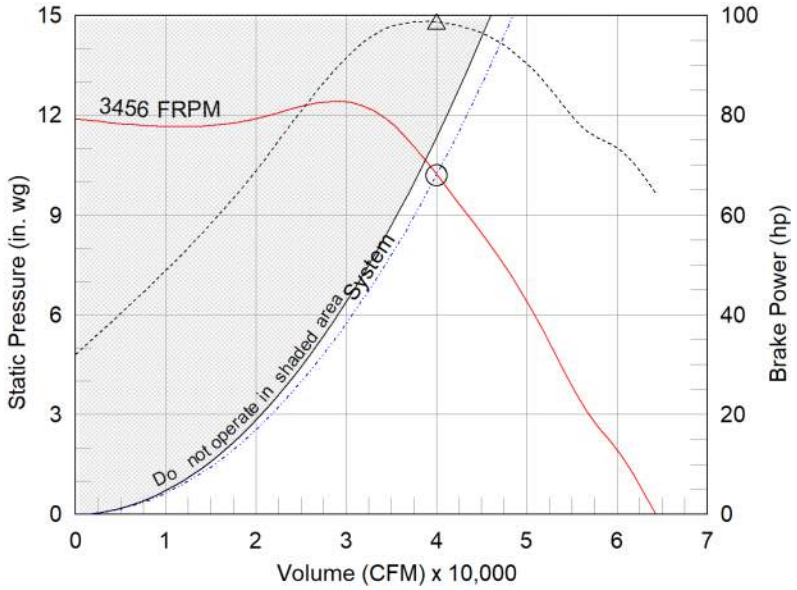
HPA-18-70-S-150

Mark: Supply Fans

Chart Type: Operating Conditions

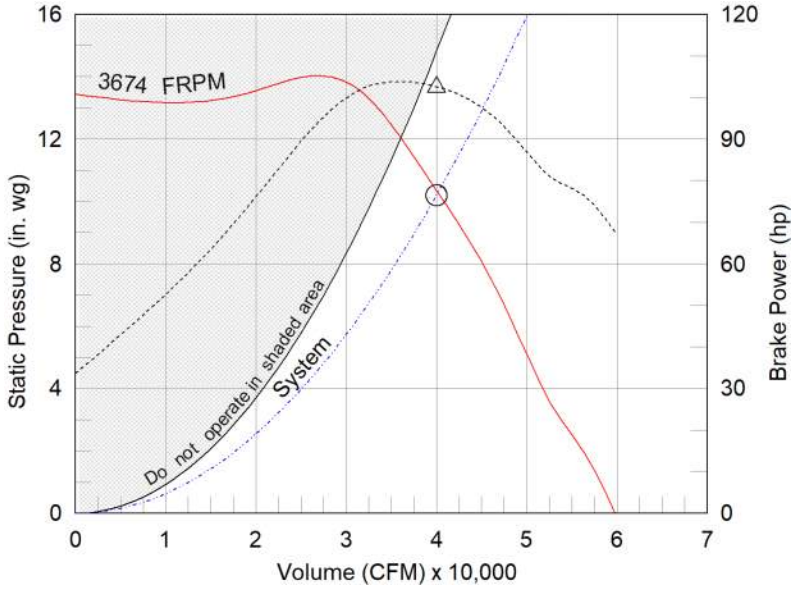
Requested Volume (CFM)	5,000	Actual Volume (CFM)	5,000	Total External SP (in. wg)	10.197
Elevation (ft)	617	Airstream Temp. (F)	70	Operating Power (hp)	12.28
Fan RPM	3456	Static Efficiency (%)	65	Fan Quantity	8
(N-1) Volume (CFM)	5,714	(N-1) Fan RPM	3674	(N-1) Operating Power (hp)	14.64

Operating Performance



△ Operating Bhp point
○ Operating point at Total External SP
Fan curve
System curve
Brake horsepower curve

Redundancy Performance (N-1)



Sound Power by Octave Band (Array)

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA
Inlet	101	102	104	110	105	100	97	91	110	99
Outlet	107	106	101	100	97	95	92	89	103	91

Sound Power by Octave Band (Single Fan)

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA
Inlet	92	93	95	101	96	91	88	82	101	90
Outlet	98	97	92	91	88	86	83	80	94	82

LwA - A weighted sound power level, based on ANSI S1.4
dBA - A weighted sound pressure level, based on 11.5 dB attenuation per Octave band at 5 ft. dBA levels are not licensed by AMCA International

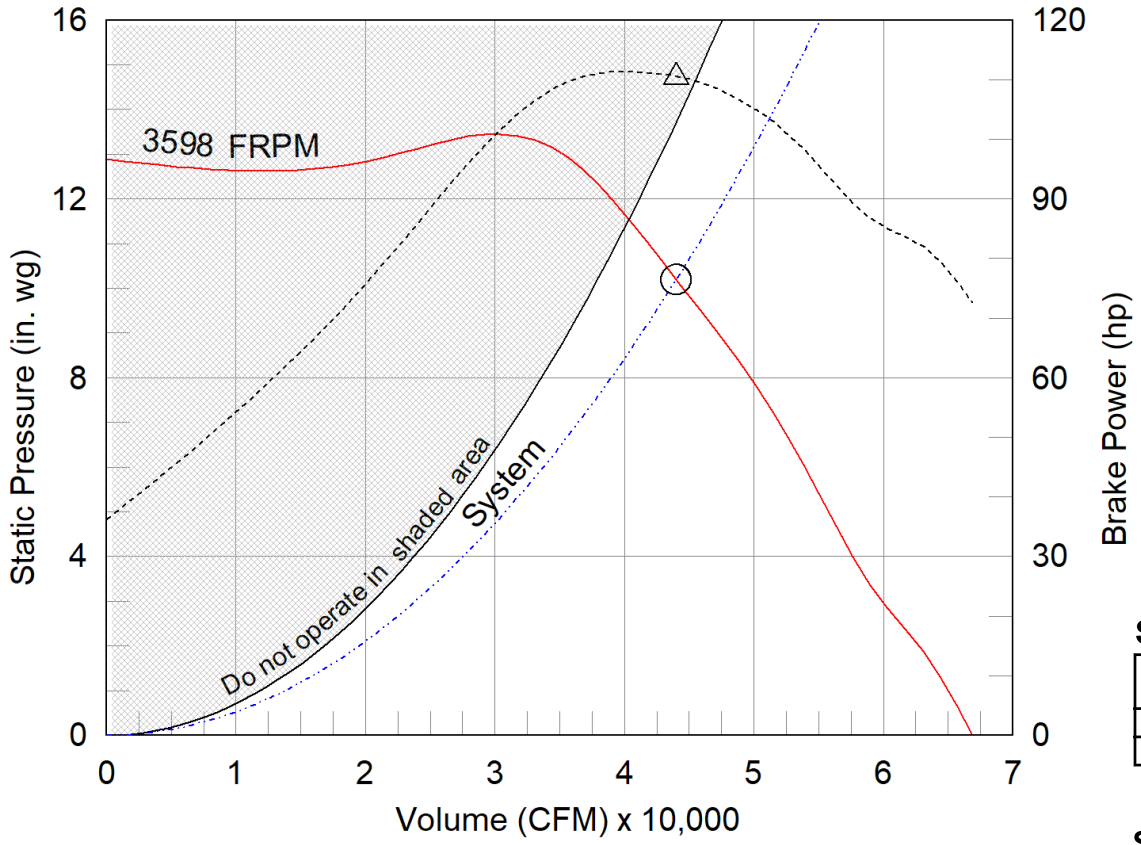
HPA-18-70-S-150

Mark: Supply Fans-110%

Chart Type: Operating Conditions

Requested Volume (CFM)	5,500	Actual Volume (CFM)	5,500	Total External SP (in. wg)	10.199
Elevation (ft)	617	Airstream Temp. (F)	70	Operating Power (hp)	13.8
Fan RPM	3598	Static Efficiency (%)	64	Fan Quantity	8

Supply Fans at 110% Design CFM
8 fans x 5,500 CFM = 44,000 CFM



Operating Bhp point
Operating point at Total External SP
Fan curve
System curve
Brake horsepower curve

Sound Power by Octave Band (Array)

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA
Inlet	102	104	106	111	108	102	99	93	112	101
Outlet	108	108	103	102	100	97	94	90	105	94

Sound Power by Octave Band (Single Fan)

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA
Inlet	93	95	97	102	99	93	90	84	103	92
Outlet	99	99	94	93	91	88	85	81	96	85

LwA - A weighted sound power level, based on ANSI S1.4
dBA - A weighted sound pressure level, based on 11.5 dB attenuation per Octave band at 5 ft. dBA levels are not licensed by AMCA International

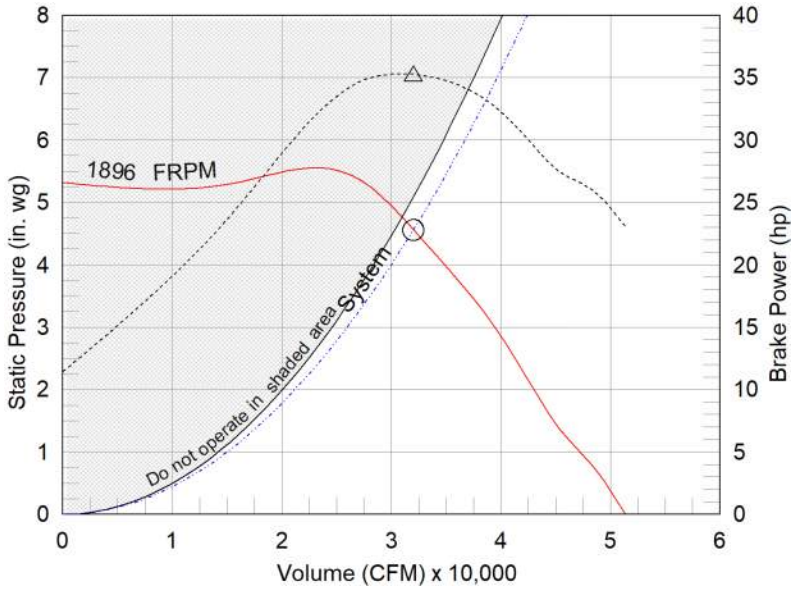
HPA-22-75-S-75

Mark: Return Fans

Chart Type: Operating Conditions

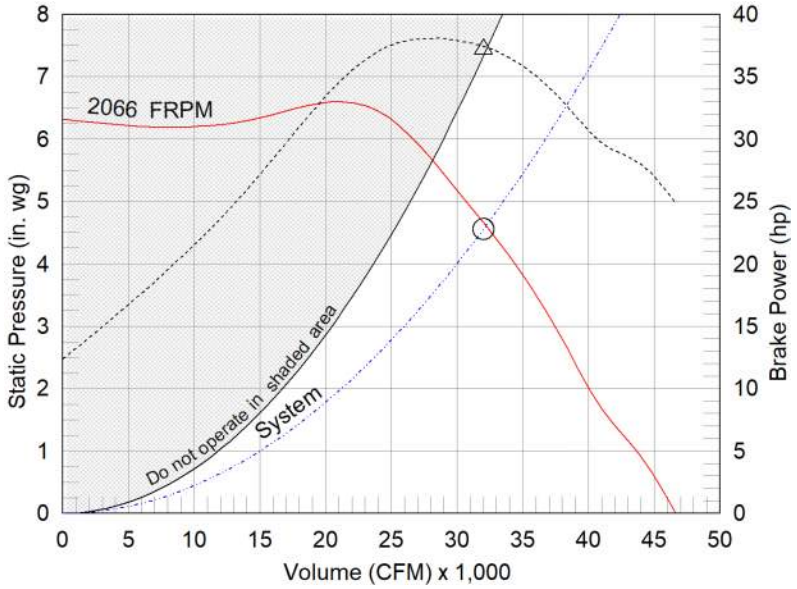
Requested Volume (CFM)	5,333	Actual Volume (CFM)	5,333	Total External SP (in. wg)	4.557
Elevation (ft)	617	Airstream Temp. (F)	70	Operating Power (hp)	5.85
Fan RPM	1896	Static Efficiency (%)	65	Fan Quantity	6
(N-1) Volume (CFM)	6,400	(N-1) Fan RPM	2066	(N-1) Operating Power (hp)	7.44

Operating Performance



Operating Bhp point
Operating point at Total External SP
Fan curve
System curve
Brake horsepower curve

Redundancy Performance (N-1)



Sound Power by Octave Band (Array)

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA
Inlet	95	101	102	110	90	90	83	78	107	96
Outlet	100	94	95	95	86	85	80	77	95	83

Sound Power by Octave Band (Single Fan)

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA
Inlet	87	93	95	102	83	82	75	70	100	88
Outlet	92	86	87	87	78	77	72	69	87	76

LwA - A weighted sound power level, based on ANSI S1.4
dBA - A weighted sound pressure level, based on 11.5 dB attenuation per Octave band at 5 ft. dBA levels are not licensed by AMCA International

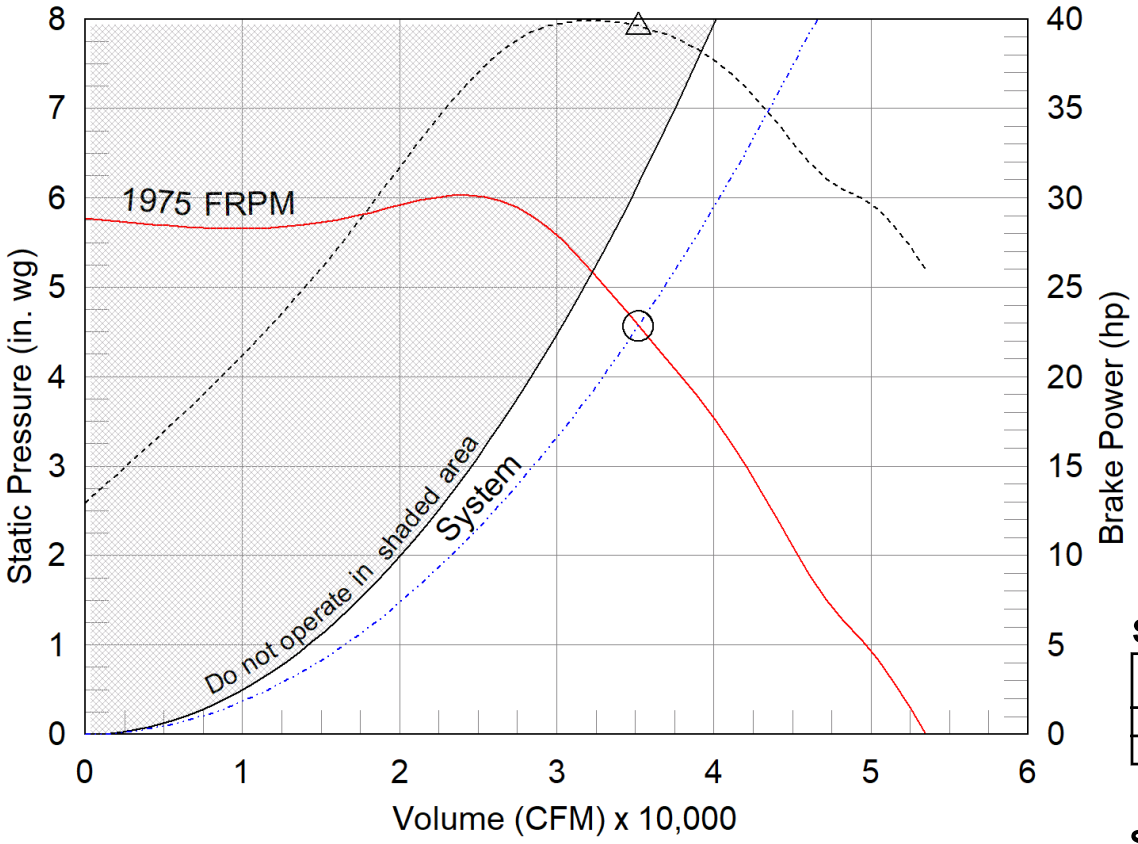
HPA-22-75-S-75

Mark: Return Fans-110%

Chart Type: Operating Conditions

Requested Volume (CFM)	5,867	Actual Volume (CFM)	5,867	Total External SP (in. wg)	4.568
Elevation (ft)	617	Airstream Temp. (F)	70	Operating Power (hp)	6.59
Fan RPM	1975	Static Efficiency (%)	64	Fan Quantity	6

Return Fans at 110% Design CFM
6 fans x 5,867 CFM = 35,200 CFM



Operating Bhp point
Operating point at Total External SP
Fan curve
System curve
Brake horsepower curve

Sound Power by Octave Band (Array)

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA
Inlet	97	101	103	111	92	91	85	79	108	97
Outlet	101	95	96	96	88	86	81	78	96	85

Sound Power by Octave Band (Single Fan)

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA
Inlet	89	93	95	103	84	83	77	72	100	89
Outlet	93	87	88	89	80	79	73	70	88	77

LwA - A weighted sound power level, based on ANSI S1.4
dBA - A weighted sound pressure level, based on 11.5 dB attenuation per Octave band at 5 ft. dBA levels are not licensed by AMCA International

Customer:		Date:	8/14/2020
Contact:		From:	
Telephone:		Company:	
Cell:		Return Tel:	
Fax:		Return Fax:	
Job:			
Quote #:			

Construction

Item:	AHU BT-51AW CC
Coils Per Bank:	4
Allow Opp. End:	No
Tube OD IN:	5/8
Coil Duty:	Cool-Standard
Fins Per Inch:	10
Rows:	12
Fin Surface:	B
Fin Height (IN):	40.50
Finned Length (IN):	79.00
Tubing Mat. (IN):	0.035 Copper
TurboSpirals:	No
Fin Mat. (IN):	0.0095 Aluminum
Conn Qty/Size (IN):	1 / Optimize
Circuiting:	Single
Face Area (SQ FT):	88.88

Air Side

Air Flow (Sft^3/min)	40000.0
Altitude FT:	0.00
Ent. Air DB/WB °F:	80.00 / 69.00
Lvg. Air DB/WB °F:	49.00 / 48.00
Total / Sensible MBH:	0.00 / 0.00
Max Air PD "H2O:	0.00
Fin Fouling Factor ft^2-°F-hr/BTU:	0

Fluid Side

Fluid Type:	Water
Ent. Fluid :	42.00
Lvg. Fluid :	0.00
Fluid Flow gal/min:	285.0
Max FPD FT H2O:	0.00
Fouling Factor ft^2-°F-hr/BTU:	0

OUTPUT DATA		Most Economical			Specified Coil		
		Coil 1	Coil 2	Coil 3	Coil 4 ✓	Coil 5	Coil 6
Model Number:					**5WS1012B**		
FPI | Rows | Surf:					**10 | 12 | B**		
Circuiting:					**1**		
Air Velocity:	(Sft/min)				**450.1**		
Total Capacity:	MBH				**2505.8**		
Sens. Capacity:	MBH				**1395.9**		
Lvg. Air DB:	°F				**48.09**		
Lvg. Air WB:	°F				**47.83**		
Standard APD	"H2O				**1.23**		
Lvg. Fluid:	°F				**59.53**		
Fluid Flow:	gal/min				**285.0**		
Fluid PD:	FT H2O				**10.76**		
Fluid Vel.:	ft/s				**3.17**		
Conn Size:	IN				**(1) 2.500**		
Internal Volume:	in^3				**7585.1**		
Weight (Dry):	lbm				**1080.3**		
Weight (w/Fluid):	lbm				**1375.5**		
Notes:					**AGL**		

Notes:

A) Certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the Range of Standard Rating Conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at www.ahridirectory.org.
G) Rated performance is below the capacity or temperature requested.
L) Coil rating valid for Heatcraft coils only.

Copyright 2003 Modine Grenada LLC Confidential and Proprietary. This design is for the exclusive and confidential use of Modine Grenada LLC and its client. Any duplication made for the purpose of disclosing this design or any part of the design to a competitor of Modine Grenada LLC is in direct violation of this confidentiality. Any duplication must be approved in writing by Modine Grenada LLC.

Customer:		Date:	8/14/2020
Contact:		From:	
Telephone:		Company:	
Cell:		Return Tel:	
Fax:		Return Fax:	
Job:			
Quote #:			

Construction

Item:	AHU BT-51AW HC
Coils Per Bank:	4
Allow Opp. End:	No
Tube OD IN:	5/8
Coil Duty:	Heat-Return Bend
Fins Per Inch:	4
Rows:	1
Fin Surface:	A
Fin Height (IN):	36.00
Finned Length (IN):	60.00
Tubing Mat. (IN):	0.035 Copper
TurboSpirals:	No
Fin Mat. (IN):	0.0095 Aluminum
Conn Qty/Size (IN):	1 / Optimize
Circuiting:	One Sixth
Face Area (SQ FT):	60.00

Air Side

Air Flow (Sft^3/min)	25000.0
Altitude FT:	0.00
Ent. Air DB °F:	41.00
Lvg. Air DB °F:	55.00
Total Capacity MBH:	0.00
Max Air PD "H2O:	0.00
Fin Fouling Factor ft^2-°F-hr/BTU:	0

Fluid Side

Fluid Type:	Water
Ent. Fluid :	180.0
Lvg. Fluid :	0.00
Fluid Flow gal/min:	23.00
Max FPD FT H2O:	0.00
Fouling Factor ft^2-°F-hr/BTU:	0

O U T P U T D A T A		Most Economical			Specified Coil		
		Coil 1	Coil 2	Coil 3	Coil 4 ✓	Coil 5	Coil 6
Model Number:					**5MI0401A**		
FPI | Rows | Surf:					**04 | 01 | A**		
Circuiting:					**1/6**		
Air Velocity:	(Sft/min)				**416.7**		
Total Capacity:	MBH				**459.3**		
Lvg. Air DB:	°F				**57.94**		
Standard APD	"H2O				**0.02**		
Lvg. Fluid:	°F				**139.2**		
Fluid Flow:	gal/min				**23.00**		
Fluid PD:	FT H2O				**1.23**		
Fluid Vel.:	ft/s				**1.73**		
Conn Size:	IN				**(1) 1.500**		
Internal Volume:	in^3				**627.6**		
Weight (Dry):	lbm				**89.88**		
Weight (w/Fluid):	lbm				**110.4**		
Notes:					**CKL**		

Notes:

C) Coil is NOT certified by AHRI.
K) Face and Row spacing on 1.5 inch centers.
L) Coil rating valid for Heatcraft coils only.

Copyright 2003 Modine Grenada LLC Confidential and Proprietary. This design is for the exclusive and confidential use of Modine Grenada LLC and its client. Any duplication made for the purpose of disclosing this design or any part of the design to a competitor of Modine Grenada LLC is in direct violation of this confidentiality. Any duplication must be approved in writing by Modine Grenada LLC.

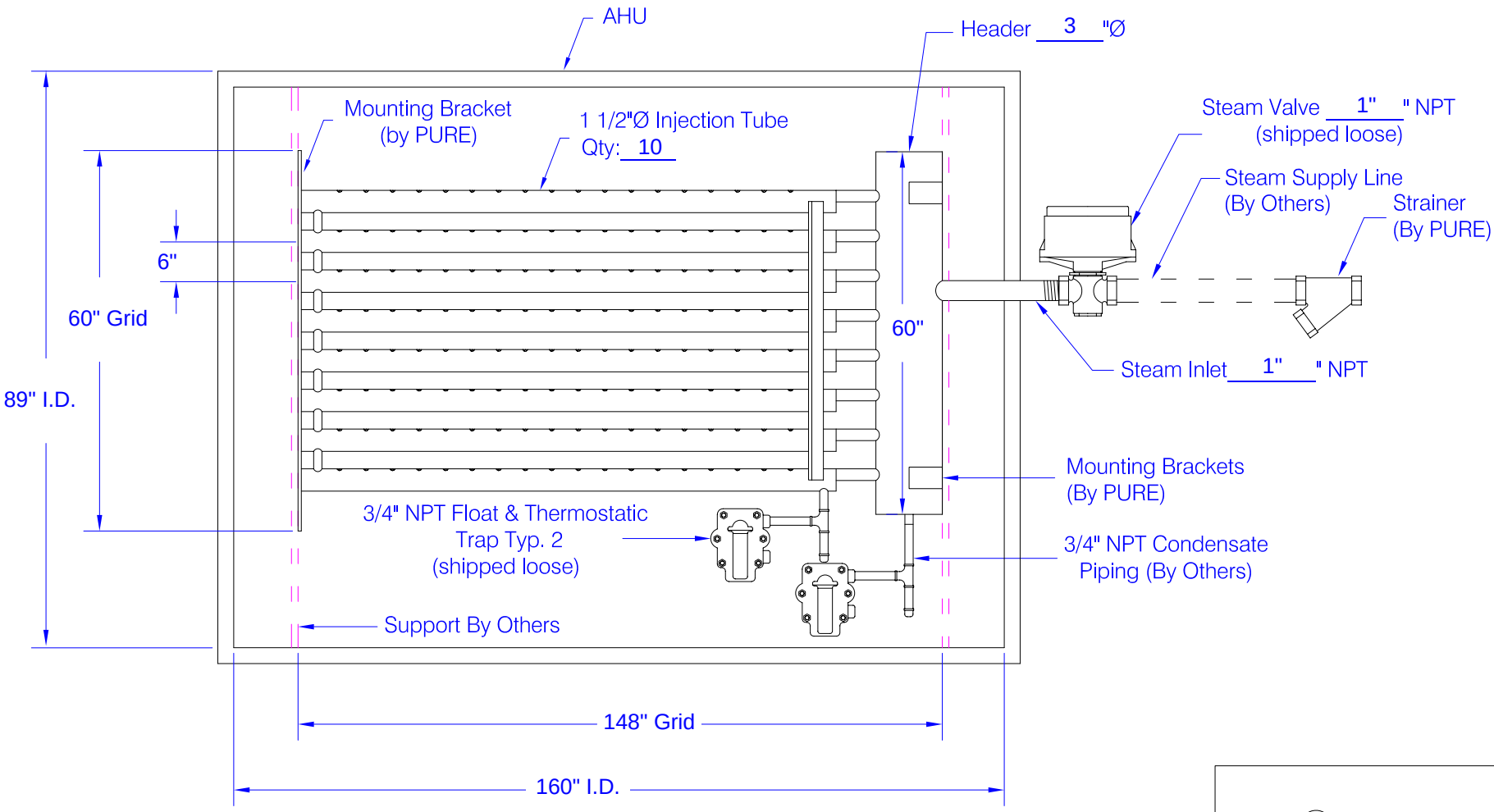
Mixers:

STATIC MIXER			AIR FLOW		PLENUM		Mixer Velocity @ Max CFM (fpm)	MIXER Ft2 AREA	PD in W.G.	MIXING DISTANCE		
QTY	MODEL		MAX cfm	MIN cfm	Wp in.	Hp in.				Dus in.	Dds in.	Total in.
	ABS/F	SIZE										
1	AB	78	40000	13990	146	99	1144	34.98	0.2	20	62	82
2	AB	54	40000	13410	146	99	1193	33.53	0.24	13	43	56
3	AB	44	40000	13360	146	99	1198	33.4	0.24	16	35	51
4	AB	36	40000	11920	146	99	1342	29.81	0.31	19	28	47
5	AB	28	40000	9020	146	99	1775	22.54	0.69	21	22	43

INSTALLATION

Tag: H-51AW

1. Install tube assembly level.
2. Install tube assembly with orifices injecting steam upward.
3. Galvanized steel duct plate is provided to seal the opening where the tube enters the duct.
4. All drain piping is by installing contractor.
5. Insty-Pac condensate steam traps must drain by gravity to an open drain (condensate cannot be elevated).



Title:	INSTY-PAC TUBE ASSEMBLY INSTALLATION		
Scale: No Scale	Date: May 22, 2007	Drwn: P.R.G.	Dwg No: 2050

PURE Humidifier Company

PURE Humidifier

Customer/Rep: Air Flow Equip. - Tony P.

Project Name: U of K 5th Floor

Tag: H-51AW & 51AE

○ Direct Entry
◉ Calculate Values

◉ Direct Steam Injection
○ Atmospheric Steam

Your device is connected. This is a valid selection

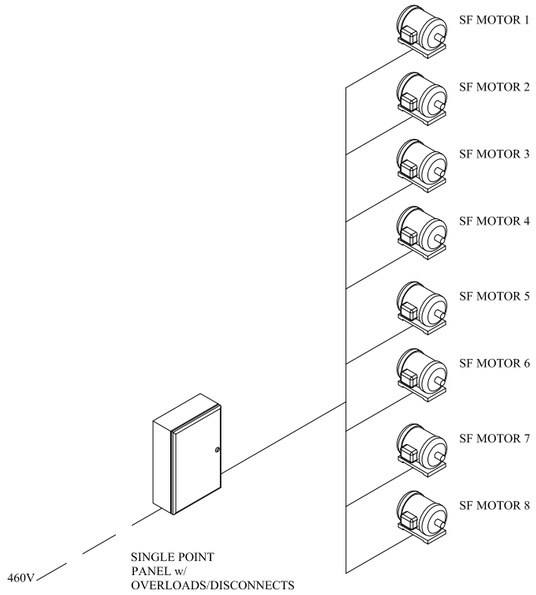
Room Temperature (°F):	52.0
Room Relative Humidity (%):	75.0
Outdoor Temp. (DB °F design):	52.0
Outdoor Rel. Humidity (% design):	20.0
Total Room (CFM):	25,000
Amount of Outside Air (CFM):	13,750
Duct Temperature (°F):	52.0
Duct Width (in):	142.0
Duct Height (in):	89.0
Required Non-Wetting Distance(in):	18.0

Capacity (lbs/hr)	**277.4**
Entering RH (%)	**44.8**
Leaving RH (%)	**75.0**

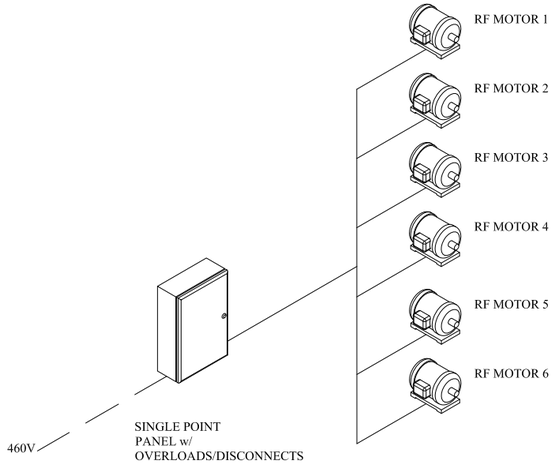
Insty-Pac Tubes Required	**10**
Number Of Traps	**2**

4

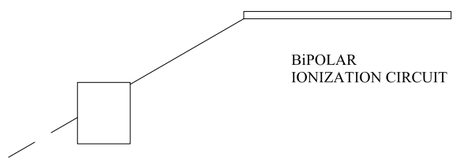
ELECTRICAL

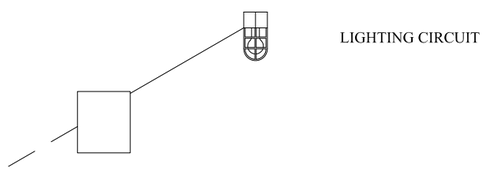


SUPPLY FAN ARRAYS



RETURN FAN ARRAYS





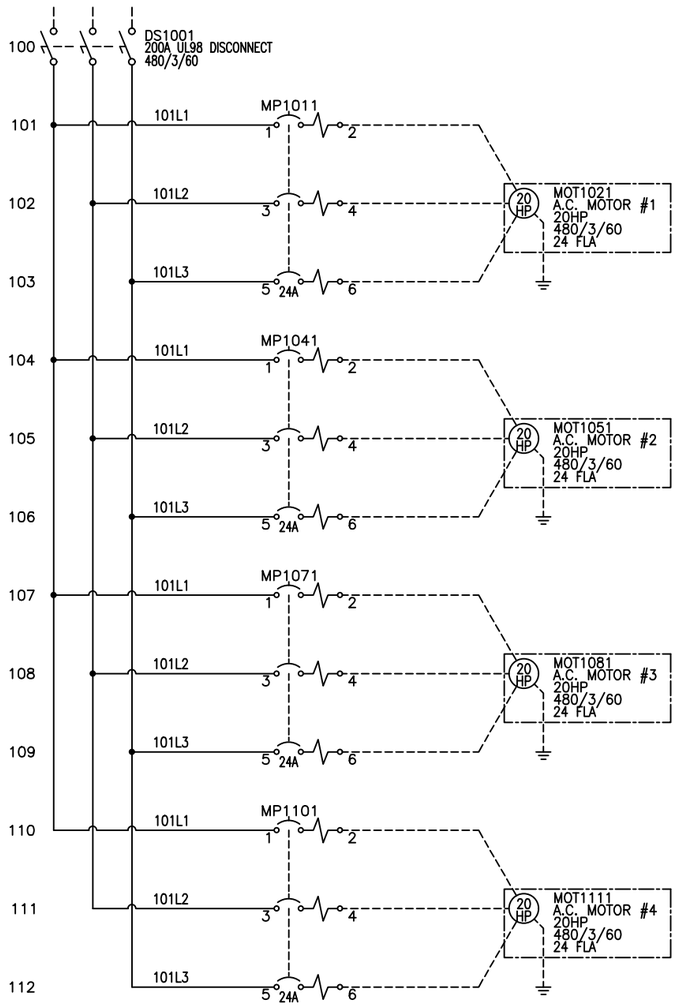
DASH LINE INDICATES WIRING BY OTHERS

ELECTRICAL SCHEMATIC

AIR FLOW EQUIPMENT, INC.

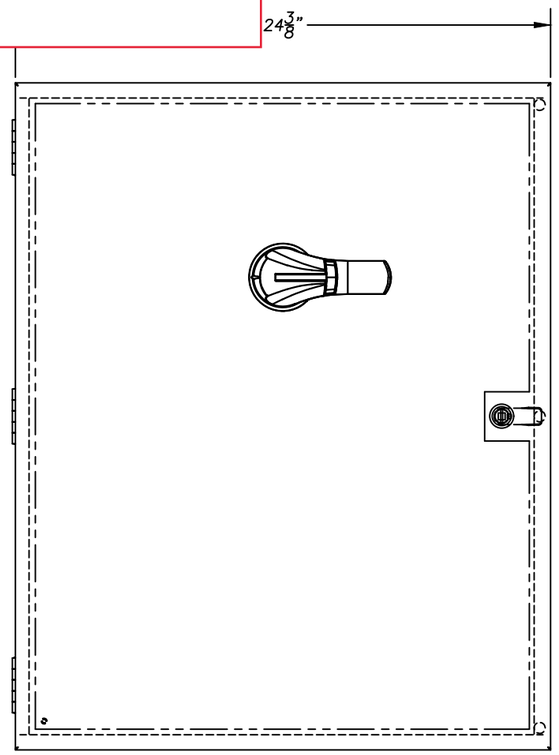
REV	DESCRIPTION	DATE	BY
.	.	.	.

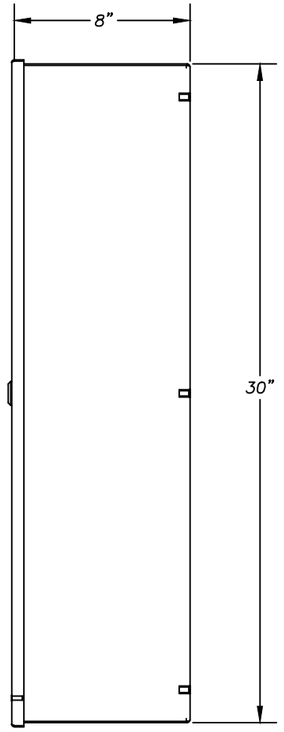
Typical MMP Panel to be sized for the # of fan motors and motor HP as per the bid docs.

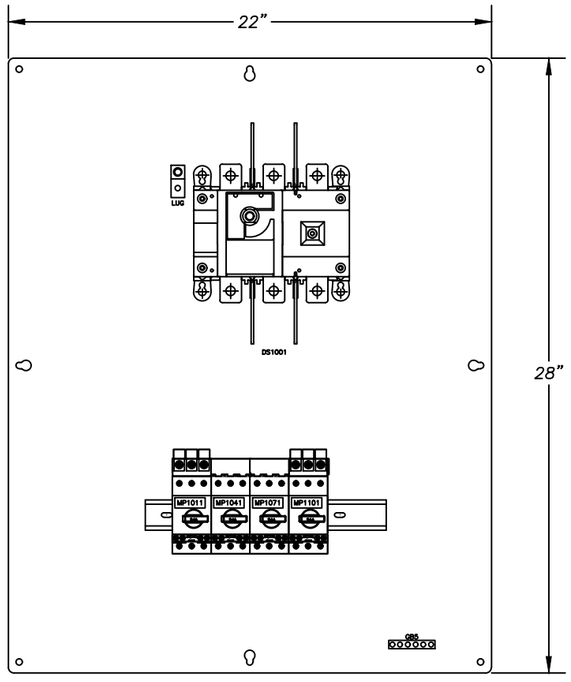


MOTOR PROTECTOR
AUX CONTACTS AVAILABLE

MP1011 1.61 1.62 101	MP1011 1.53 1.54 101
MP1041 1.61 1.62 104	MP1041 1.53 1.54 104
MP1071 1.61 1.62 107	MP1071 1.53 1.54 107
MP1101 1.61 1.62 110	MP1101 1.53 1.54 110







ITEM	QTY	PART #	MANUFACTURE	DESCRIPTION	DESCRIPTOR
1	1	SCE-30N2408LP	SCE	30"x24"x8" NEMA 1 ENCLOSURE	.
2	1	SCE-30N24MP	SCE	SUB PANEL	.
3	1	R9D3200U	EATON	200A UL98 ROTARY DISCONNECT	DS1001
4	1	SF200PH10X10	EATON	200mm, 10x10mm, SELECTOR HANDLE DISCONNECT SHAFT	DS1001
5	1	PHB2N12F	EATON	DISCONNECT SELECTOR HANDLE, SIZE 2	DS1001
6	1	TS3R9DB	EATON	3 POLE TERMINAL SHROUD (LOAD SIDE)	DS1001
7	1	TS3R9DT	EATON	3 POLE TERMINAL SHROUD (LINE SIDE)	DS1001
8	1	LK3R9DL	EATON	TERMINAL LUG (SET OF 3)	DS1001
9	1	LAMA1/0-14-QY	PANDUIT	ALUMINUM, 1 BARREL 1 HOLE TONGUE LUG (#14-1/0)	LUG
10	7.5'	B80801	OMNI	8 AWG DLO CABLE	.
11	6	LCAX8-38-L	PANDUIT	8 AWG FLEX WIRE LUG, 3/8" STUD HOLE	.
12	2	XTPAXLSA	EATON	MOTOR PROTECTOR LINE SIDE ADAPTOR	MP1011-1041,1071-1101
13	2	XTPAXCLKA2	EATON	4 DEVICE 3 PHASE BUS BAR	MP1011-1041,1071-1101
14	4	XTPR025BC1	EATON	20-25A MOTOR PROTECTOR, B FRAME	MP1011-1101
15	4	XTPAXFA11	EATON	1 N.O./N.C. FRONT MOUNT AUXILLIARY CONTACT	MP1011-1101
16	1'	0801733	PHOENIX	35mm DIN RAIL	.
17	1	GBK5	EATON	5 POINT GROUND BAR	GBK5
18					

VOLTAGE:	480 VOLT
PHASE & FREQ.:	3PH., 60HZ
FULL LOAD CURRENT:	96 AMP
S.C.C.R.:	10k AMP
ENCLOSURE RATING:	TYPE 1
SCHEMATIC:	AF-ND-MCKENNA-AHU1-SF
MFG. BY:	JP Motors and Drives

JP MOTORS
JP MOTORS & DRIVES
7870 S. SPRINKLE ROAD, PORTAGE, MICHIGAN 49002
PHONE (269) 321-0070 FAX (269) 321-0072

DATE 3/20/2020	JOB NO. AF-ND-MCKENNA-AHU1-SF	DRAWN	BJH
SCALE N/A		BOM = 1	DWG = 1

TITLE

MMP CONTROL PANEL

NEMA 1, 480/3/60

CUST. AIRFLOW EQUIPMENT

SHEET	OF	DWG. NO.	REV.
1	1	AF-ND-MCKENNA-AHU1-SF	.

BALDOR • RELIANCE

Product Information Packet

EM2394T-G

15HP,3520RPM,3PH,60HZ,254T,0930M,TEFC,F1

Supply Fan Motors

Copyright © All product information within this document is subject to ABB Motors and Mechanical Inc. copyright © protection, unless otherwise noted.

Part Detail

Revision:	AA	**Status:**	PRD/A	**Change #:**		**Proprietary:**	No
Type:	AC	**Elec. Spec:**	09WGZ602	**CD Diagram:**	CD0180	**Mfg Plant:**	
Mech. Spec:	09J359	**Layout:**	09LYJ359	**Poles:**	02	**Created Date:**	11-29-2011
Base:	RG	**Eff. Date:**	07-21-2020	**Leads:**	9#12		

Specs

Catalog Number:	EM2394T-G	**Heater Indicator:**	No Heater
Enclosure:	TEFC	**Insulation Class:**	H
Frame:	254T	**Inverter Code:**	Inverter Ready
Frame Material:	Iron	**KVA Code:**	G
Output @ Frequency:	15.000 HP @ 60 HZ	**Lifting Lugs:**	Standard Lifting Lugs
Synchronous Speed @ Frequency:	3600 RPM @ 60 HZ	**Locked Bearing Indicator:**	Locked Bearing
Voltage @ Frequency:	460.0 V @ 60 HZ	**Motor Lead Quantity/Wire Size:**	9 @ 12 AWG
	230.0 V @ 60 HZ	**Motor Lead Exit:**	Ko Box
XP Class and Group:	None	**Motor Lead Termination:**	Flying Leads
XP Division:	Not Applicable	**Motor Type:**	0930M
Agency Approvals:	UR	**Mounting Arrangement:**	F1
	CSA EEV	**Power Factor:**	87
	CSA	**Product Family:**	General Purpose
Auxillary Box:	No Auxillary Box	**Pulley End Bearing Type:**	Ball
Auxillary Box Lead Termination:	None	**Pulley Face Code:**	Standard
Base Indicator:	Rigid	**Pulley Shaft Indicator:**	Standard
Bearing Grease Type:	Polyrex EM (-20F +300F)	**Rodent Screen:**	None
Blower:	None	**Shaft Extension Location:**	Pulley End

Current @ Voltage:	17.500 A @ 460.0 V
	35.000 A @ 230.0 V
	38.000 A @ 208.0 V
Design Code:	B
Drip Cover:	No Drip Cover
Duty Rating:	CONT
Electrically Isolated Bearing:	Not Electrically Isolated
Feedback Device:	NO FEEDBACK
Front Face Code:	Standard
Front Shaft Indicator:	None

Shaft Ground Indicator:	Shaft Grounding
Shaft Rotation:	Reversible
Shaft Slinger Indicator:	Shaft Slinger
Speed Code:	Single Speed
Motor Standards:	NEMA
Starting Method:	Direct on line
Thermal Device - Bearing:	None
Thermal Device - Winding:	None
Vibration Sensor Indicator:	No Vibration Sensor
Winding Thermal 1:	None
Winding Thermal 2:	None

Nameplate NP3441L

CAT.NO.	EM2394T-G								
SPEC.	09J359Z602G1								
HP	15								
VOLTS	230/460								
AMP	35/17.5								
RPM	3520								
FRAME	254T	**HZ**	60					**PH**	3
SER.F.	1.15	**CODE**	G	**DES**	B	**CL**	H		
NEMA-NOM-EFF	91	**PF**	87						
RATING	40C AMB-CONT								
CC	010A					**USABLE AT 208V**	38		
DE	6309	**ODE**	6208						
ENCL	TEFC	**SN**							
VPWM INVERTER READY									
CT6-60H(10:1)VT3-60H(20:1									

Parts List

Part Number	Description	Quantity
SA235029	SA 09J359Z602G1	1.000 EA
RA221993	RA 09J359Z602G1	1.000 EA
37FN3002C02	EXFN, PLASTIC, 6.00 OD, 1.503 ID	1.000 EA
HW1002A63	0ASHER, 5/8 HI-COLLAR SPRLCKWASHER	1.000 EA
09CB3002SP	CB W/1.38 LEAD HOLE FOR 37, 39, 307 & 30	1.000 EA
09GS1000SP	GASKET-CONDUIT BOX, 1/16 THICK LEXIDE	1.000 EA
10XN2520K12	1/4-20 X.75 GRD 5	2.000 EA
HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	2.000 EA
09EP1101A11SP	PU ENDPLATE, MACH	1.000 EA
WD1000B16	T&B CX70TN OR L70P TERMINAL LUG	1.000 EA
59XW2520G07	.25-20X.44,HEX SER WSHR,TAPTITE 2,GREEN	1.000 EA
HW4600B44	V-RING SLINGER 1.500 X 1.810 X .28 VITON	1.000 EA
09EP1100A14	FREP ASSM, (FOR INTRL ROUTING PURPOSE)	1.000 EA
XY3816A12	3/8-16 FINISHED NUT	4.000 EA
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	4.000 EA
HW5100A08	W3118-035 WVY WSHR (WB)	1.000 EA
10XN2520K28	1/4-20 X 1.75" HX HD SCRWGRADE 5, ZINC P	2.000 EA
HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	2.000 EA
10XN2520K36	1/4-20 X 2.25" HX HD SCRWGRADE 5, ZINC P	4.000 EA
HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	4.000 EA
HA3113A02	THRUBOLT 3/8-16 X 16.750	4.000 EA
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	4.000 EA
09FH4000SP	309 FH - BLACK PRIMER	1.000 EA
HA2081A05	SPACER TUBE, 309 FAN HSG, 2.00 LONG	4.000 EA

Parts List (continued)

Part Number	Description	Quantity
XY3816A12	3/8-16 FINISHED NUT	4.000 EA
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	4.000 EA
09CB3501SP	CONDUIT BOX LID FOR 09CB3001 & 09CB3002	1.000 EA
09GS1013SP	09 GS FOR 09CB3501 LID - LEXIDE	1.000 EA
51XW2520A12	.25-20 X .75, TAPTITE II, HEX WSHR SLTD	2.000 EA
HW2501G26	KEY, 3/8 SQ X 3.000	1.000 EA
LB1115N	LABEL,LIFTING DEVICE (ON ROLLS)	1.000 EA
HW4500A05	1669B ALEM/UNIV860 GR FTG X	1.000 EA
HW4500A17	317400 ALEMITE GREASE RELIEF	1.000 EA
MN416A01	TAG-INSTAL-MAINT no wire (1200/bx) 3/19	1.000 EA
LB1350	BAR CODE LABEL FOR YORK	1.000 EA
HA4054	SHORT T-DRAIN FITTING, .125" N.P.T.	1.000 EA
MJ1000A02	GREASE, MOBIL POLYREX EM - 124047	0.080 LB
HW4500A03	GREASE FITTING, .125 NPT 1610(ALEMITE) 8	1.000 EA
HW4500A17	317400 ALEMITE GREASE RELIEF	1.000 EA
HA4054	SHORT T-DRAIN FITTING, .125" N.P.T.	1.000 EA
HW2500A25	WOODRUFF KEY USA #1008 #BLOW CARBON STEE	1.000 EA
51XB1214A20	12-14X1.25 HXWSSLD SERTYB	1.000 EA
MG1000Y03	MUNSELL 2.53Y 6.70/ 4.60, GLOSS 20,	0.050 GA
85XU0407S04	4X1/4 U DRIVE PIN STAINLESS	2.000 EA
LB1119N	WARNING LABEL	1.000 EA
LC0181	CONNECTION LABEL	1.000 EA
NP3441L	ALUM SUPER-E VPWM INVERTER READY UL	1.000 EA
09PA1000	PACKAGING GROUP COMBINED PRINT	1.000 EA

PE-0000003	ZRTG PE ASSEMBLY	1.000 EA

AC Induction Motor Performance Data
Record # 32873
Typical performance - not guaranteed values

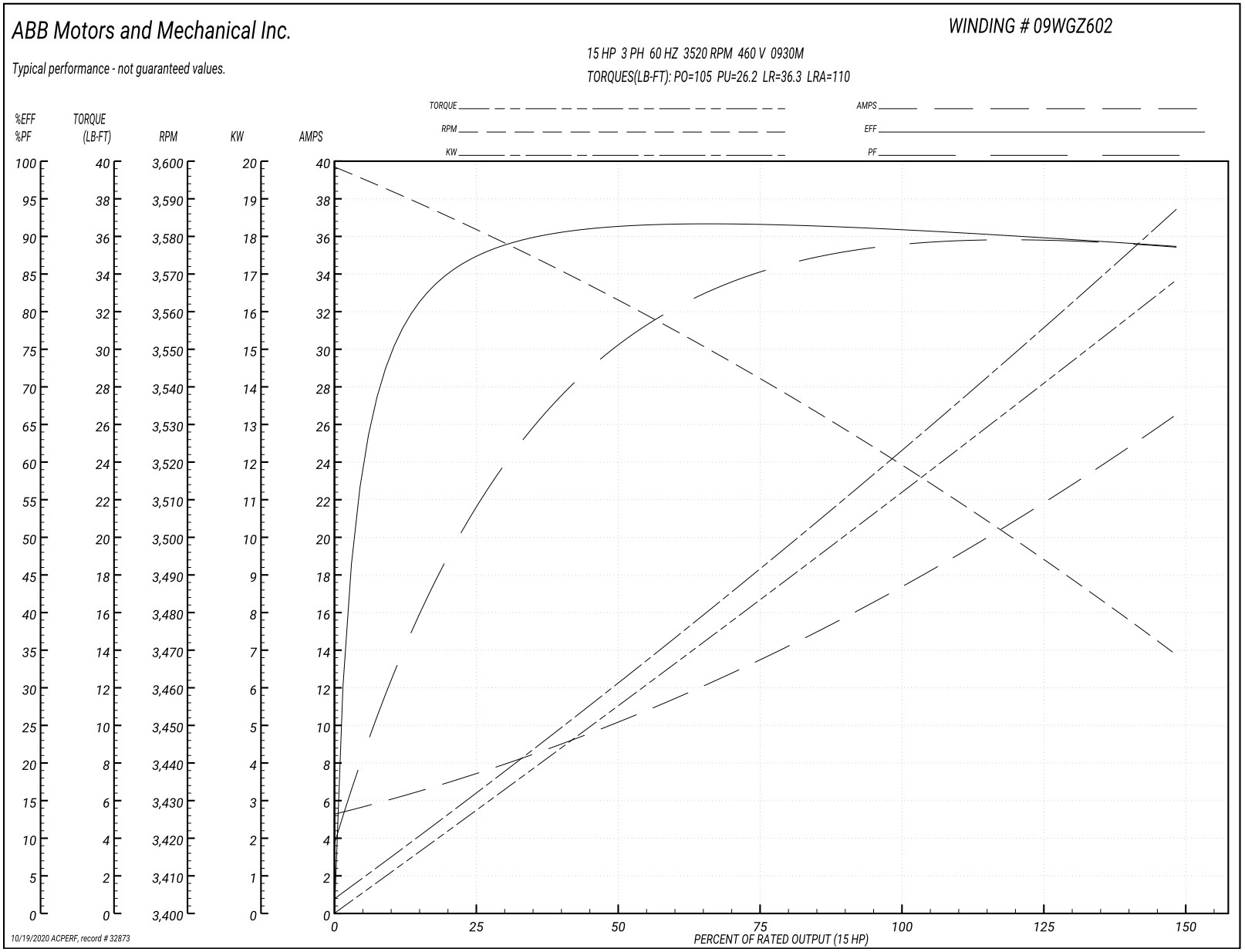
Winding: 09WGZ602-R008	**Type:** 0930M	**Enclosure:** TEFC

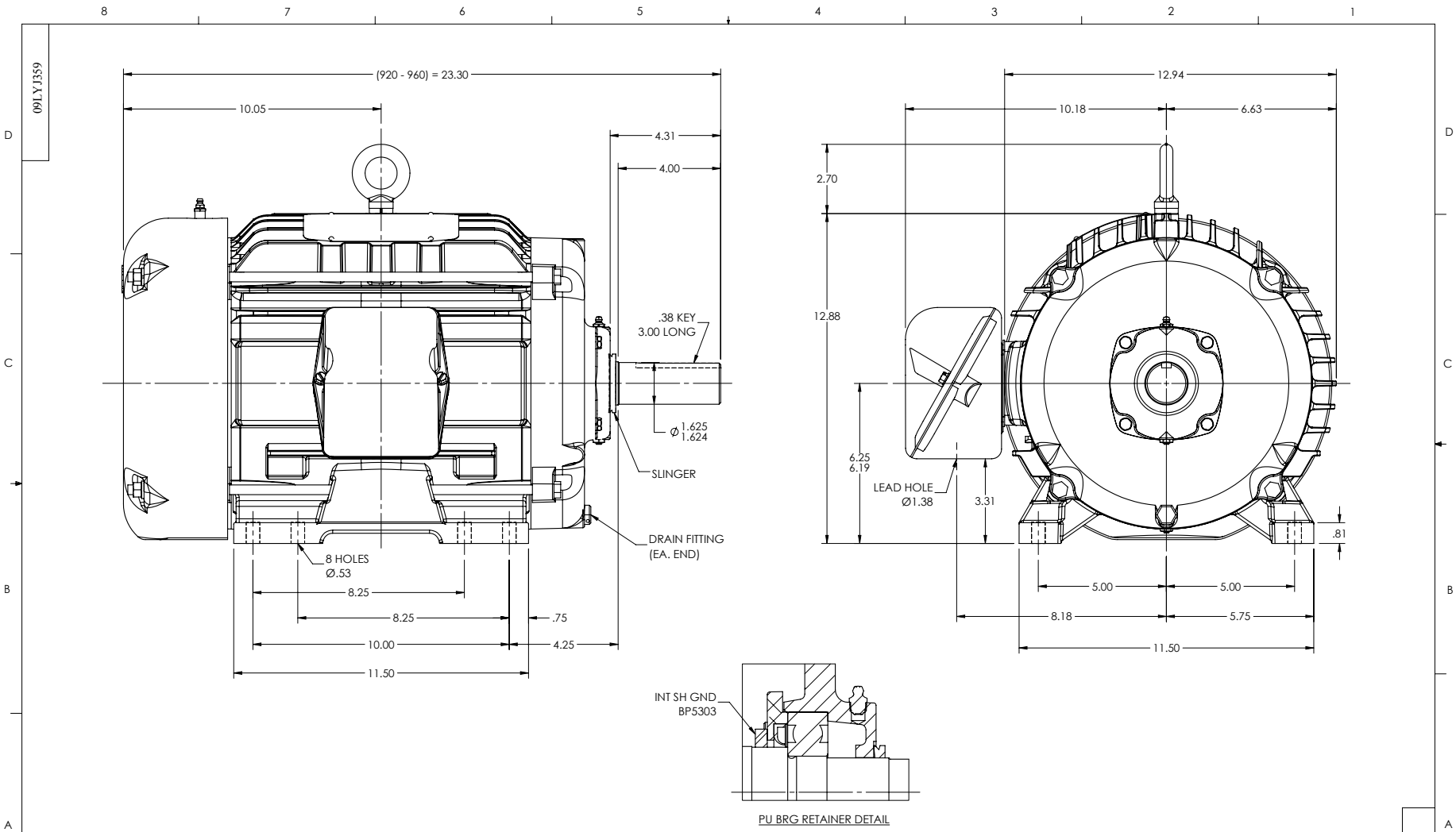
Nameplate Data			**460 V, 60 Hz: High Voltage Connection**	
Rated Output (HP)		15	**Full Load Torque**	22.1 LB-FT
Volts		230/460	**Start Configuration**	direct on line
Full Load Amps		35/17.5	**Breakdown Torque**	105 LB-FT
R.P.M.		3520	**Pull-up Torque**	26.2 LB-FT
Hz	60 **Phase**	3	**Locked-rotor Torque**	36.3 LB-FT
NEMA Design Code	B **KVA Code**	G	**Starting Current**	110 A
Service Factor (S.F.)		1.15	**No-load Current**	5.58 A
NEMA Nom. Eff.	91 **Power Factor**	87	**Line-line Res. @ 25ºC**	0.68654 Ω
Rating - Duty		40C AMB-CONT	**Temp. Rise @ Rated Load**	63°C
S.F. Amps			**Temp. Rise @ S.F. Load**	78°C
			Locked-rotor Power Factor	30
			Rotor inertia	0.766 LB-FT2

Load Characteristics 460 V, 60 Hz, 15 HP

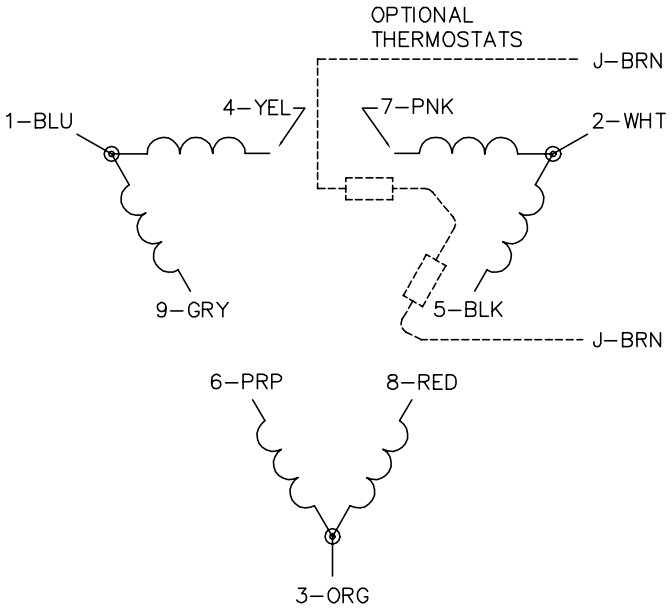
% of Rated Load	**25**	**50**	**75**	**100**	**125**	**150**	**S.F.**
Power Factor	55	77	85	87	89	89	88
Efficiency	86.4	91	91.6	91	90	88.6	90.4
Speed	3582.7	3563.6	3542.7	3520.9	3495.8	3468.3	3506
Line amperes	6.93	9.78	13.5	17.5	21.6	26.4	20

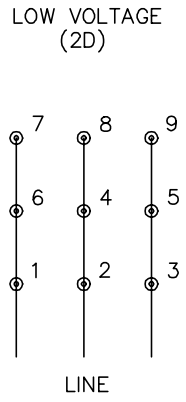
Performance Graph at 460V, 60Hz, 15.0HP Typical performance - Not guaranteed values

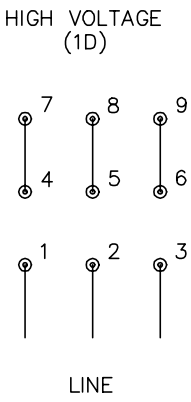



09LYJ359
(920 - 960) = 23.30
10.05
4.31
4.00
.38 KEY
3.00 LONG
Ø 1.625
1.624
SLINGER
DRAIN FITTING
(EA. END)
8 HOLES
Ø.53
8.25
8.25
.75
10.00
4.25
11.50
12.94
10.18
6.63
2.70
12.88
6.25
6.19
LEAD HOLE
Ø1.38
3.31
.81
5.00
5.00
8.18
5.75
11.50
INT SH GND
BP5303
PU BRG RETAINER DETAIL
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT THE PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION
REV. DESC: LOAD DRAWING TO SOLIDWORKS
REV: E
VERSION: 05
REVISED: 01:23:45 02/11/2020
TDR: 000001132140
MODEL NO. 09LYJ359
REF: -
BY: ENALEM0
B
BALDOR - RELIANCE®
HORZ TEFC 254-6T W/INT SH GND
09LYJ359

CD0180







NOTES:

1. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
2. OPTIONAL THERMOSTATS ARE PROVIDED WHEN SPECIFIED.
3. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY BE A MULTIPLE OF THOSE SHOWN ABOVE.
4. LEAD COLORS ARE OPTIONAL. LEADS MUST ALWAYS BE NUMBERED AS SHOWN.

CD0180

REV. DESC: ADD CLASS CONN00000007		
REV. LTR: D	VERSION: 01	TDR: 000001099922
FILE: \AAA\00005\148	REVISED: 10:25:29 02/19/2019	BY: ENBRIR0
MTL: –		

BALDOR - RELIANCE®

3PH, DV, 9 LEADS, DELTA CONNECTION

SH 1 of 1

BALDOR • RELIANCE

Product Information Packet

EM3710T-G

7.5HP,1770RPM,3PH,60HZ,213T,3738M,TEFC,F

Return Fan Motors

Copyright © All product information within this document is subject to ABB Motors and Mechanical Inc. copyright © protection, unless otherwise noted.

Part Detail

Revision:	L	**Status:**	PRD/A	**Change #:**		**Proprietary:**	No
Type:	AC	**Elec. Spec:**	37WGR872	**CD Diagram:**	CD0005	**Mfg Plant:**	
Mech. Spec:	37J838	**Layout:**	37LYJ838	**Poles:**	04	**Created Date:**	12-07-2015
Base:	RG	**Eff. Date:**	07-24-2020	**Leads:**	9#14		

Specs

Catalog Number:	EM3710T-G	**Insulation Class:**	H
Enclosure:	TEFC	**Inverter Code:**	Inverter Ready
Frame:	213T	**KVA Code:**	J
Frame Material:	Steel	**Lifting Lugs:**	Standard Lifting Lugs
Output @ Frequency:	7.500 HP @ 60 HZ	**Locked Bearing Indicator:**	Locked Bearing
Synchronous Speed @ Frequency:	1800 RPM @ 60 HZ	**Motor Lead Quantity/Wire Size:**	9 @ 14 AWG
Voltage @ Frequency:	460.0 V @ 60 HZ	**Motor Lead Exit:**	Ko Box
	230.0 V @ 60 HZ	**Motor Lead Termination:**	Flying Leads
XP Class and Group:	None	**Motor Type:**	3738M
XP Division:	Not Applicable	**Mounting Arrangement:**	F1
Agency Approvals:	UR	**Power Factor:**	80
	CSA EEV	**Product Family:**	General Purpose
	CSA	**Pulley End Bearing Type:**	Ball
Auxillary Box:	No Auxillary Box	**Pulley Face Code:**	Standard
Auxillary Box Lead Termination:	None	**Pulley Shaft Indicator:**	Standard
Base Indicator:	Rigid	**Rodent Screen:**	None
Bearing Grease Type:	Polyrex EM (-20F +300F)	**RoHS Status:**	ROHS COMPLIANT
Blower:	None	**Shaft Extension Location:**	Pulley End

Current @ Voltage:	19.000 A @ 230.0 V	**Shaft Ground Indicator:**	Shaft Grounding
	20.000 A @ 208.0 V	**Shaft Rotation:**	Reversible
	9.500 A @ 460.0 V	**Shaft Slinger Indicator:**	No Slinger
Design Code:	A	**Speed Code:**	Single Speed
Drip Cover:	No Drip Cover	**Motor Standards:**	NEMA
Duty Rating:	CONT	**Starting Method:**	Direct on line
Electrically Isolated Bearing:	Not Electrically Isolated	**Thermal Device - Bearing:**	None
Feedback Device:	NO FEEDBACK	**Thermal Device - Winding:**	None
Front Face Code:	Standard	**Vibration Sensor Indicator:**	No Vibration Sensor
Front Shaft Indicator:	None	**Winding Thermal 1:**	None
Heater Indicator:	No Heater	**Winding Thermal 2:**	None

Nameplate NP3441LUA

CAT.NO.	EM3710T-G							
SPEC	37J838R872G1							
HP	7.5							
VOLTS	230/460							
AMPS	19/9.5							
RPM	1770							
FRAME	213T	**HZ**	60			**PH**	3	
SF	1.15	**CODE**	J	**DES**	A	**CLASS**	H	
NEMA NOM. EFF	91.7	**PF**	80					
RATING	40C AMB-CONT							
CC	010A			**USABLE AT 208V**	20			
ENCL	TEFC	**SER**						
DE	6307	**ODE**	6206					
VPWM INVERTER READY								
CT6-60H(10:1)VT3-60H(20:1								
	50HZ 7.5HP 190/380V 22.4/11.2A							SF1.0

Parts List

Part Number	Description	Quantity
SA311541	SA 37J838R872G1	1.000 EA
RA298968	RA 37J838R872G1	1.000 EA
37FN3002C01	EXFN, PLASTIC, 6.00 OD, 1.155 ID	1.000 EA
HW3200A01	3/8-16X3/4 I-BLT WELDED F/S	1.000 EA
37CB3006	37 CB CASTING W/1.38 LEAD HOLE @ 6:00	1.000 EA
37GS1000SP	GASKET, CONDUIT BOX STD., .06 THICK LEXI	1.000 EA
51XW2520A12	.25-20 X .75, TAPTITE II, HEX WSHR SLTD	2.000 EA
11XW1032G06	10-32 X .38, TAPTITE II, HEX WSHR SLTD U	1.000 EA
37EP3101A01	FR ENDPLATE, FOR ROUTING PURPOSES	1.000 EA
HW4500A01	1641B(ALEMITE)400 UNIV, GREASE FITT	1.000 EA
HW5100A06	W2420-025 WVY WSHR (WB)	1.000 EA
37EP3100B06	PU EP 307 LOCK BRG,GRSR,DRAIN,2 RET HLS	1.000 EA
10XN2520A28	1/4-20X 1 3/4 HEX HD	4.000 EA
HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	4.000 EA
HW4500A01	1641B(ALEMITE)400 UNIV, GREASE FITT	1.000 EA
XY3118A12	5/16-18 HEX NUT DIRECTIONAL SERRATION	4.000 EA
07FH4007SP	PRIMED	1.000 EA
51XW1032A06	10-32 X .38, TAPTITE II, HEX WSHR SLTD S	3.000 EA
37CB4516	LIPPED LID FOR 37 FRAME NEC KOBX	1.000 EA
37GS1008	37 GS FOR CB LID - LEXIDE	1.000 EA
51XW0832A07	8-32 X .44, TAPTITE II, HEX WSHR SLTD SE	4.000 EA
HW2501F21	KEY, 5/16 SQ X 2.375	1.000 EA
HA7000A02	KEY RETAINER RING, 1 1/8 DIA, 1 3/8 DIA	1.000 EA
85XU0407S04	4X1/4 U DRIVE PIN STAINLESS	2.000 EA

Parts List (continued)

Part Number	Description	Quantity
LB1115N	LABEL,LIFTING DEVICE (ON ROLLS)	1.000 EA
LB1459	AEGIS SGR LABEL "AEGISLBL-100"	1.000 EA
MJ1000A02	GREASE, MOBIL POLYREX EM - 124047	0.050 LB
51XB1214A20	12-14X1.25 HXWSSLD SERTYB	1.000 EA
HA3104A17	5/16-18X13.250 T-BLT/OHIO	4.000 EA
MG1000Y03	MUNSELL 2.53Y 6.70/ 4.60, GLOSS 20,	0.028 GA
LC0005E01	CONN.DIA./WARNING LABEL (LC0005/LB1119N)	1.000 EA
NP3441LUA	ALUM SUPER-E VPWM INV READY UL CSA-EEV C	1.000 EA
37PA1074	PALLET PACK GRP, PRINT BOX PK1026A06	1.000 EA
MN416A01	TAG-INSTAL-MAINT no wire (1200/bx) 3/19	1.000 EA
LB1350	BAR CODE LABEL FOR YORK	1.000 EA

AC Induction Motor Performance Data
Record # 54310
Typical performance - not guaranteed values

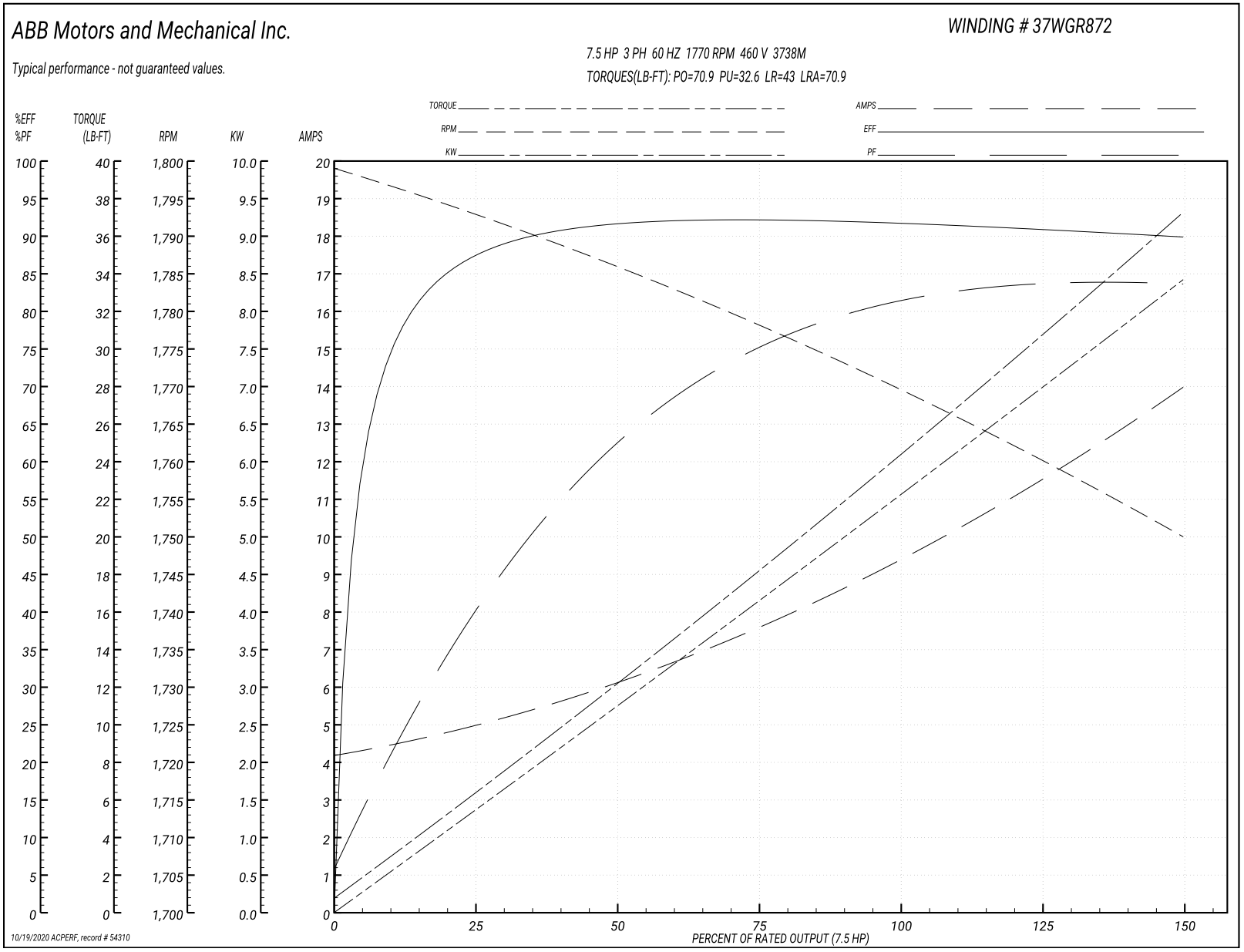
Winding: 37WGR872-R005	**Type:** 3738M	**Enclosure:** TEFC

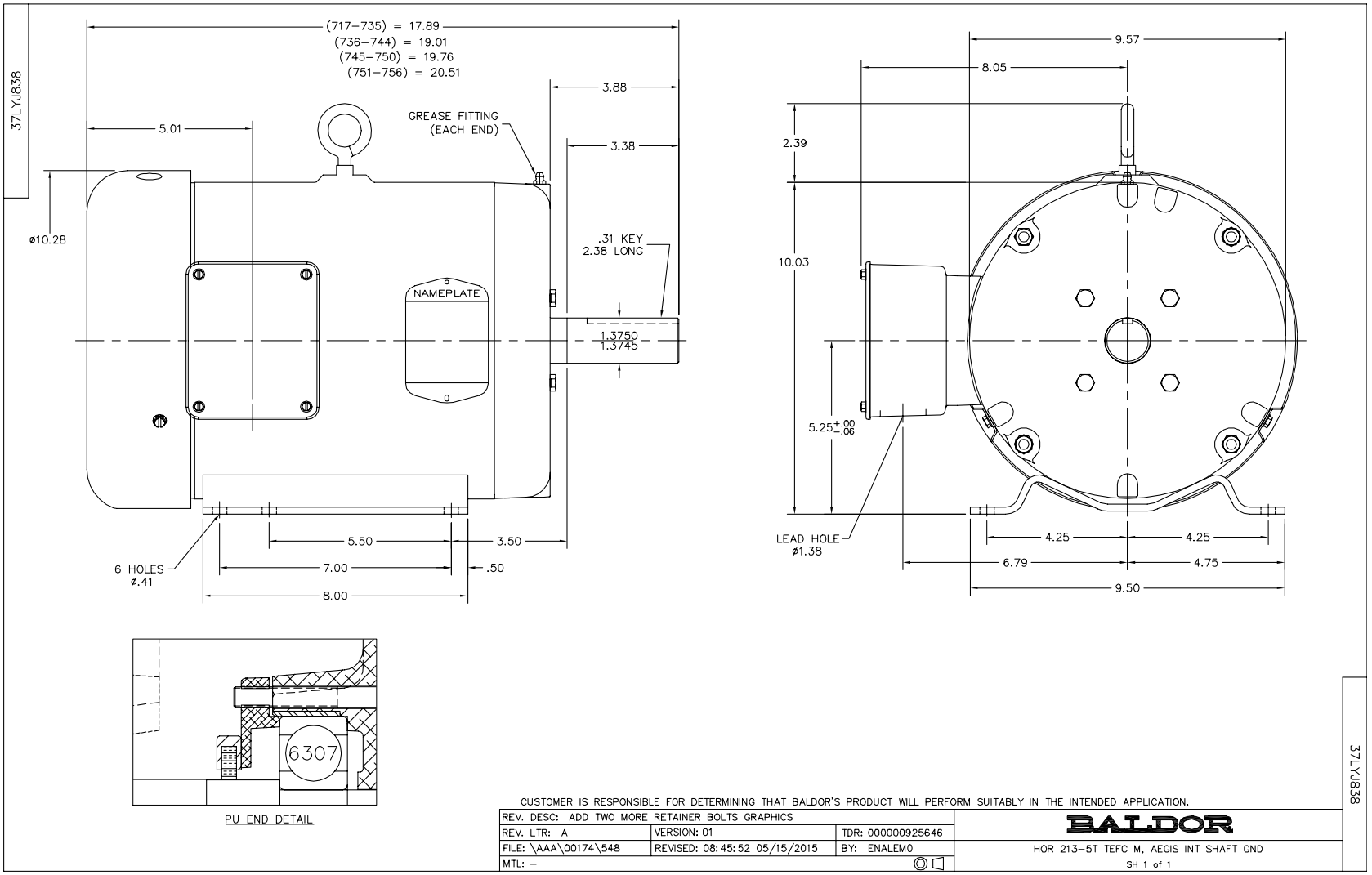
Nameplate Data			**460 V, 60 Hz: High Voltage Connection**	
Rated Output (HP)		7.5	**Full Load Torque**	22.2 LB-FT
Volts		230/460	**Start Configuration**	direct on line
Full Load Amps		19/9.5	**Breakdown Torque**	70.9 LB-FT
R.P.M.		1770	**Pull-up Torque**	32.6 LB-FT
Hz	60 **Phase**	3	**Locked-rotor Torque**	43 LB-FT
NEMA Design Code	A **KVA Code**	J	**Starting Current**	70.9 A
Service Factor (S.F.)		1.15	**No-load Current**	4.31 A
NEMA Nom. Eff.	91.7 **Power Factor**	80	**Line-line Res. @ 25ºC**	1.41 Ω
Rating - Duty		40C AMB-CONT	**Temp. Rise @ Rated Load**	63°C
S.F. Amps			**Temp. Rise @ S.F. Load**	77°C
			Locked-rotor Power Factor	37.2
			Rotor inertia	0.934 LB-FT2

Load Characteristics 460 V, 60 Hz, 7.5 HP

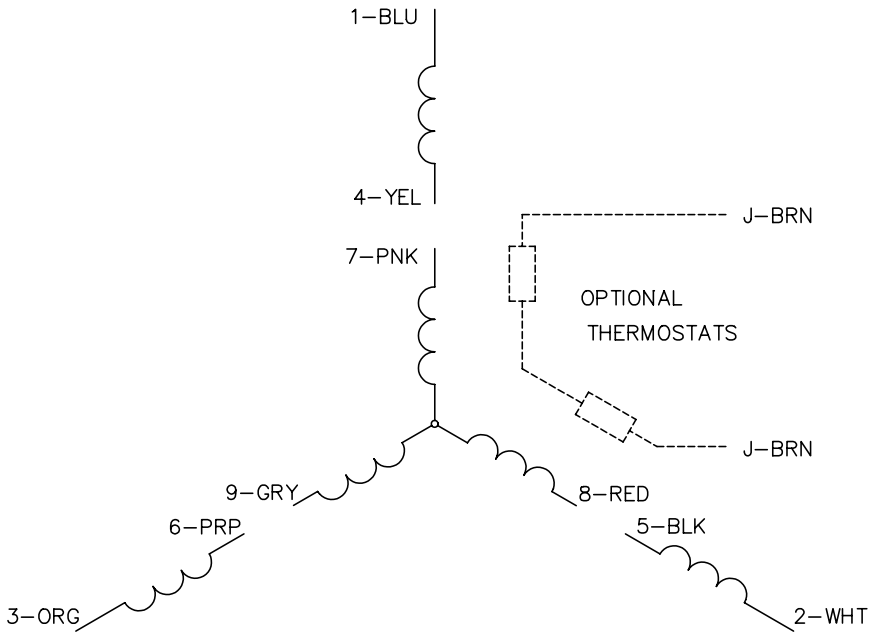
% of Rated Load	**25**	**50**	**75**	**100**	**125**	**150**	**S.F.**
Power Factor	42	64	75	80	83	84	82
Efficiency	87.1	91.6	92	92	91.1	89.8	91.5
Speed	1793	1786	1778	1770	1760	1750	1764
Line amperes	4.83	6.02	7.6	9.5	11.6	13.9	10.8

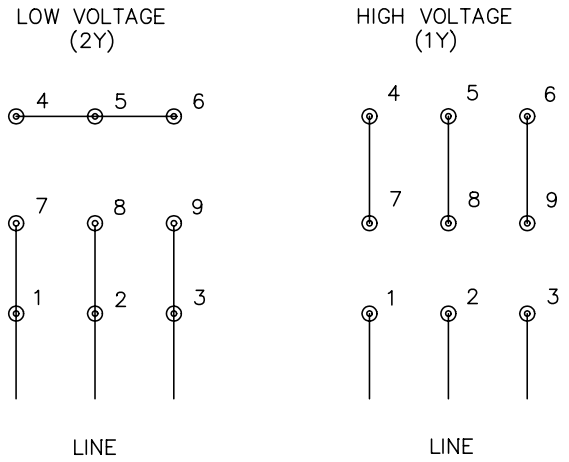
Performance Graph at 460V, 60Hz, 7.5HP Typical performance - Not guaranteed values




37LYJ838
(717–735) = 17.89
(736–744) = 19.01
(745–750) = 19.76
(751–756) = 20.51
3.88
5.01
GREASE FITTING
(EACH END)
3.38
ø10.28
.31 KEY
2.38 LONG
NAMEPLATE
1.3750
1.3745
5.50
3.50
6 HOLES
ø.41
7.00
.50
8.00
9.57
8.05
2.39
10.03
5.25 +.00 −.06
LEAD HOLE
ø1.38
4.25
4.25
6.79
4.75
9.50
6307
PU END DETAIL
37LYJ838
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT BALDOR'S PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION.
REV. DESC: ADD TWO MORE RETAINER BOLTS GRAPHICS
REV. LTR: A
VERSION: 01
TDR: 000000925646
FILE: \AAA\00174\548
REVISED: 08:45:52 05/15/2015
BY: ENALEM0
MTL: –
BALDOR
HOR 213–5T TEFC M, AEGIS INT SHAFT GND
SH 1 of 1

CD0005





NOTES:

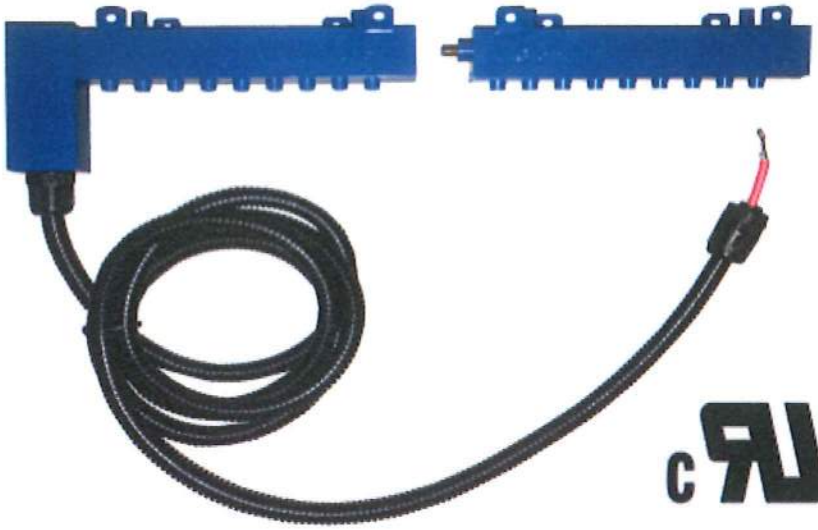
1. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
2. OPTIONAL THERMOSTATS ARE PROVIDED WHEN SPECIFIED.
3. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY BE A MULTIPLE OF THOSE SHOWN ABOVE.
4. LEAD COLORS ARE OPTIONAL. LEADS MUST ALWAYS BE NUMBERED AS SHOWN.

CD0005

REV. DESC: REVISE TO SHOW OPTIONAL COLORS			BALDOR ELECTRIC Co.
REV. LTR: E	BY: JLP	REVISED: 01/19/99 10:15	TDR: 0171435
CD0005		FILE: AAA00005140	MDL: –
		MTL: –	3PH, DV, 9 LEADS

iMOD®
MODULAR IONIZATION SYSTEM

PRODUCT DATA SHEET



Product Description: The GPS-iMOD is a modular ionization system that allows any size ionization bar to be field erected up to any length required. The all composite and carbon fiber construction allows the product to be mounted in any environment, regardless of corrosive chemicals in the air.

Standard Features Include: Universal Voltage Selector Switch, Illuminated On/Off Switch, Plasma On Indication Light, Six HV Output Ports, Alarm Contacts, magnets for ease of installation, and Auxiliary Terminals for connection of an optional GPS-iDetect-P ion sensor.

Benefits: Modular to fit any system in 6" increments, corrosion proof construction, multiple voltage inputs, provides balanced positive and negative ionization output.

Applications: Schools, Airports, Natatoriums, Offices, Hospitals, Arenas, Food Odors & Gyms.

Specifications:

Voltage / Temp / Hum:	24/120/208-240VAC -40F to 200F 0-100%
Amps:	0.5A/0.12A/0.065A
Power:	15 Watts
Frequency:	50/60HZ
Output Voltage:	5.0kV RMS—iMOD bar voltage is less due to safety coupling
Output Frequency:	50/60 HZ
Ion Output:	60M ions/cc per inch of bar
Power Entry:	6' UL Listed, Plenum Rated, Line Cord with 3 Prong Plug
Electrical Listings:	UL, cUL
Power Unit Dimensions:	9.0"L x 3.25"W x 4.75"H
Weight:	5.0 lbs
Bar Section Dimensions:	6.0"L* x 0.75"W x 1.6"H
Weight:	0.75 lb per bar

***Length = 6.0" X Bar Qty + 1.20"**

Global Plasma Solutions
10 Mall Terrace, Building C
Savannah, GA 31406

GPS®

Phone: 912-356-0115
Fax: 877-270-5353
Web: www.globalplasmasolutions.com

VX100DG

JOB NAME: _____

DATE: _____

TYPE: _____

DESCRIPTION

Box mount, die cast aluminum with built-in junction box and sturdy mounting lugs. Medium base socket, 1/2" or 3/4" NPS hub size and a variety of globes. Incandescent lamp A21 for 100 Series, PS25 for 200 Series. Lamp not supplied. CFL: 13 & 22 watt lamp supplied.

SPECIFICATIONS

Globes:
Supplied with clear thermal shock resistant soda lime glass unless otherwise stated. Colored and white glass globes available. Unbreakable Permaglobes available in clear and in color.

UL Listing:
Suitable for wet locations. Suitable for use in dwellings. Suitable for use with 90° C supply wiring. Complies with UL Standard 1598. For non-hazardous locations where the lamp, socket and wiring require protection from rain, corrosive fumes, non-combustible dusts, moisture, non-explosive vapors and gases. For lamp base up installation only when outdoors.

Colored Globe Maximum Watts:
100 watts

Die Cast Guard:
Supplied with one piece die cast guard with set screw

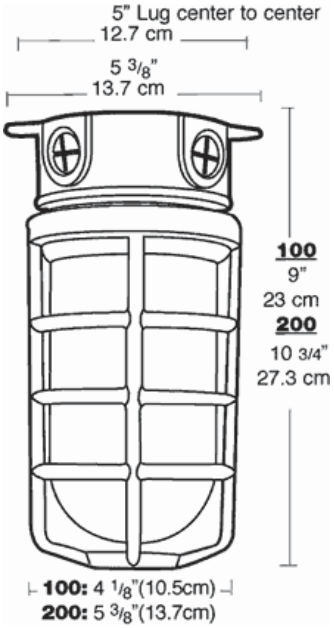
Maximum Watts:
150 watts

Patents:
RAB sensor and fixture designs are protected under U.S. and International Intellectual Property laws.

Color:
Natural

Weight:
2.83

DIMENSIONS



ORDERING INFORMATION

Total Watts	Lamp Type	Lamp Base	Ballast	Starting Amps/ Operating Amps 120V	208V	240V	277V	Input Watts	LAMP ANSI	Initial Lumens	Lamp Hours
150	A19	Medium	0	0	0	0	0	0	0	0	0

Factory Installed Options
Add suffix to Catalog Number

Note: Specifications may change without notice

RAB Lighting, Inc. • 170 Ludlow Ave• Northvale, NJ 07647 • Tel: 888 RAB-1000 • Fax: 888 RAB-1232 • www.rabweb.com

© 2011 RAB Lighting, Inc.

ULTRA 3-Way A19 LED Lamps

Omnidirectional

Key Features & Benefits

- Long life: up to 25,000 hours (L_{70})
- UV and IR free
- Mercury and lead free
- RoHS compliant
- Available in 2700K color temperatures
- Reduces energy consumption up to 85%
- Lasts up to 12.5 times longer than incandescent lamps
- No warm-up time, instant-on with full light output and stable color

Not intended for use with dimmer.

Rated up to 25,000 hours at 70% lumen maintenance, ULTRA 3-Way A19 LED lamps offer years of service and reduce energy and maintenance costs. ULTRA 3-Way A19 LED lamps are environmentally preferred products and allow you to control energy use and light output. They are RoHS compliant and contain no mercury, lead or other hazardous materials. They emit no UV or IR radiation. A CRI of 80 ensures good color definition. The ULTRA 3-Way A19 lamp is available in warm 2700K color temperature.

Product Offering

Ordering Abbreviation	Color Temperature	Typical Lumens
4W/8W/13W A19 LED	2700K	400/800/1100

Application Information

Applications

- Table lamps

Market Segments

- Residential

Application Notes

1. Operating temperature range between -20°C and +45°C (-4°F and +113°F)
2. Not for use with emergency light fixtures or exit lights
3. Use in open fixture
4. Suitable for indoor/outoor use

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. For FCC Part 15 user information, please see www.sylvania.com/fcc15b.

SYLVANIA

Specification Data

Catalog #	Type
Project	
Comments	
Prepared by	

Ordering Information

Item Number	Ordering Abbreviation	Wattage (W)	Base Type	Replaces	Input Voltage (V)	Average Rated Life (hrs.)[1]	CCT[2]	Typical Lumens (lm)[3]	CRI[4]	Power Factor	Bulb Finish	ENERGY STAR®
75164	LED13A19/3WAY/O/827/BL	4, 8, 13	Medium	40W/60W/75W	120	25,000	2700K	400/800/1100	80	.90	Frosted	Yes

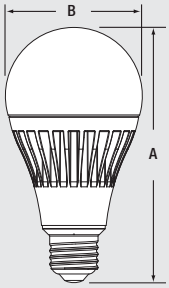
1. Hours lifetime with 70% (L70) lumen maintenance 2. Thermally stable typical CCT (±10%) 3. Thermally stable typical lumens (±10%) 4. CRI – Color Rendering Index

Ordering Guide

LED	13	A19	/	3WAY	/	0	/	8	27	/	BL
LED Lamps	Wattage: 13	Lamp Type: A19		3 Way		O=Omnidirectional		CRI 8=80+	CCT 27=2700K		Blister Pack

Lamp Dimensions

	(A) MOL inches (mm)	(B) Diameter inches (mm)
LED13A19	4.4 (112)	2.36 (60)



Energy Savings

Basic Product Description	LED Life (hrs.)	LED Lumens	Similar Incandescent	Incandescent Lumens	Incandescent Life (hrs.)	Watts Saved	LED Life vs. Incandescent
LED13A19	25,000	400/800/1100	40W/60W/75W	350/770/1035	2000	36/53/62	12.5x

*Energy savings over life of lamp calculated at $0.11/kWh

OSRAM

Americas Headquarters

OSRAM SYLVANIA Inc.
100 Endicott Street
Danvers, MA 01923 USA
Phone 1-800-LIGHTBULB (1-800-544-4828)
www.sylvania.com

SYLVANIA is a registered trademark of OSRAM SYLVANIA Inc.
ENERGY STAR is a registered trademark of the U.S. Government.
Specifications subject to change without notice.

/sylvania /sylvania

SYLVANIA

© 2015 OSRAM SYLVANIA

5

CONSTRUCTION DETAILS

AIR FLOW EQUIPMENT, INC.

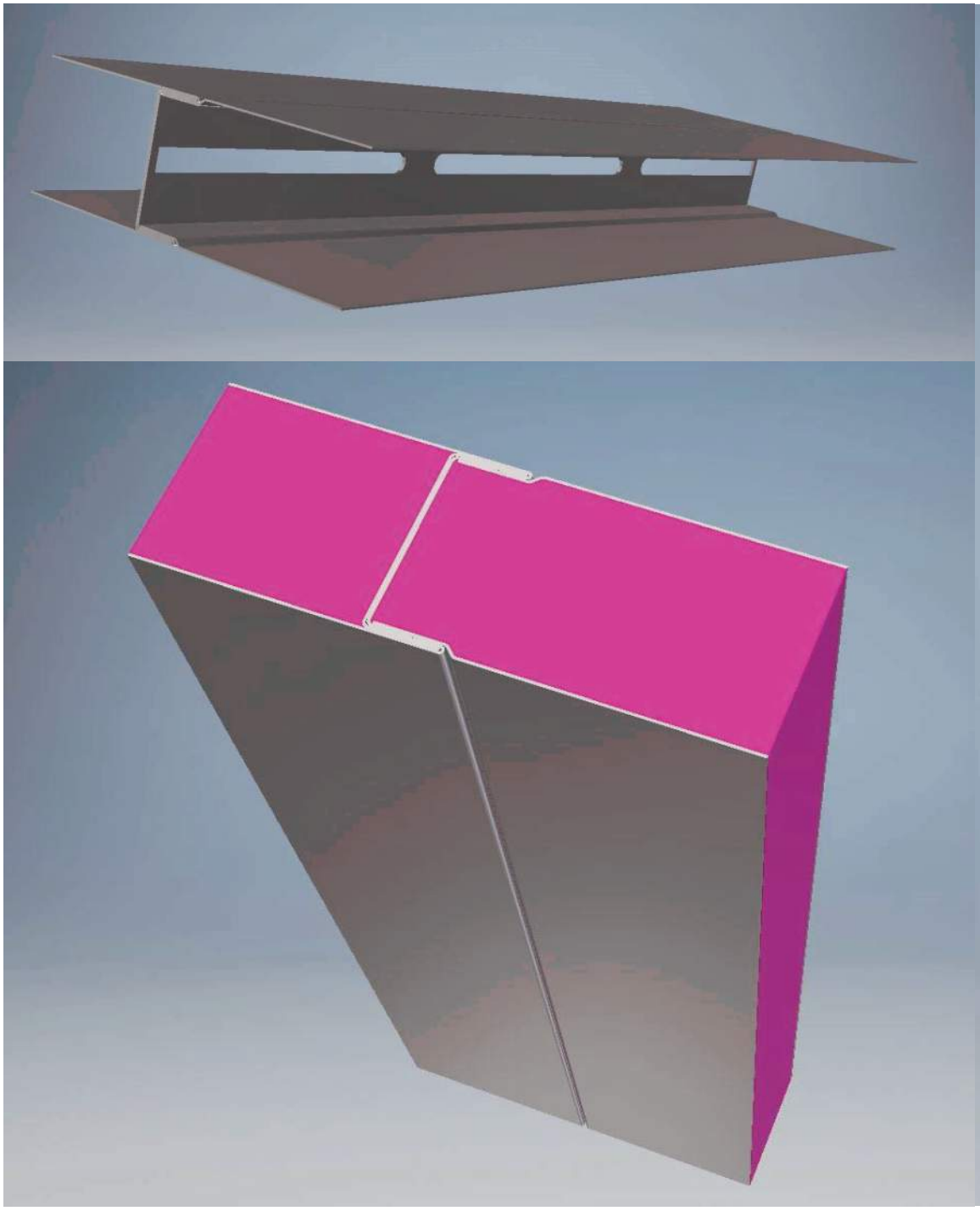
Thermal Break Panel Detail and Analysis. "Skip Bridge" Thermal Break.

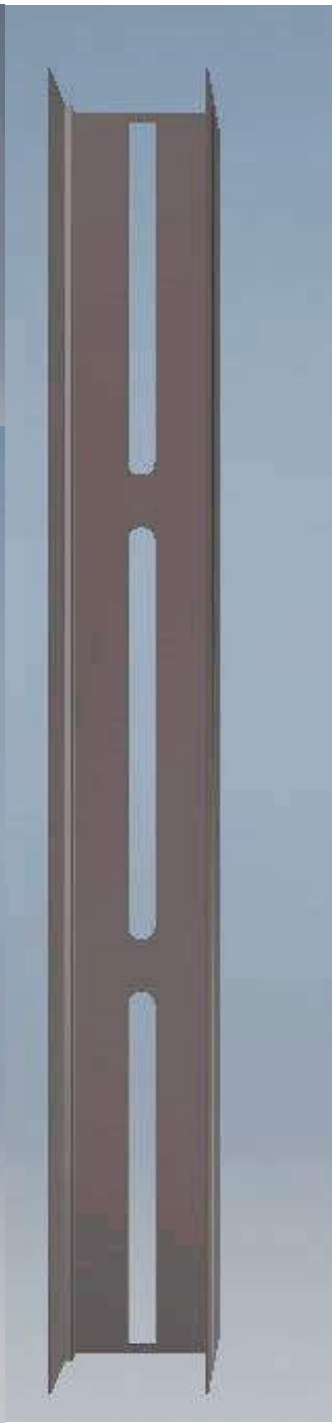
THERMAL ANALYSIS THERMAL BREAK SLOT

4" Wall & Insulation Thickness

4.5# Rigid Mineral Wool Insulation

Proprietary & Trade Design Secret NOT TO BE SHARED OR PUBLISHED





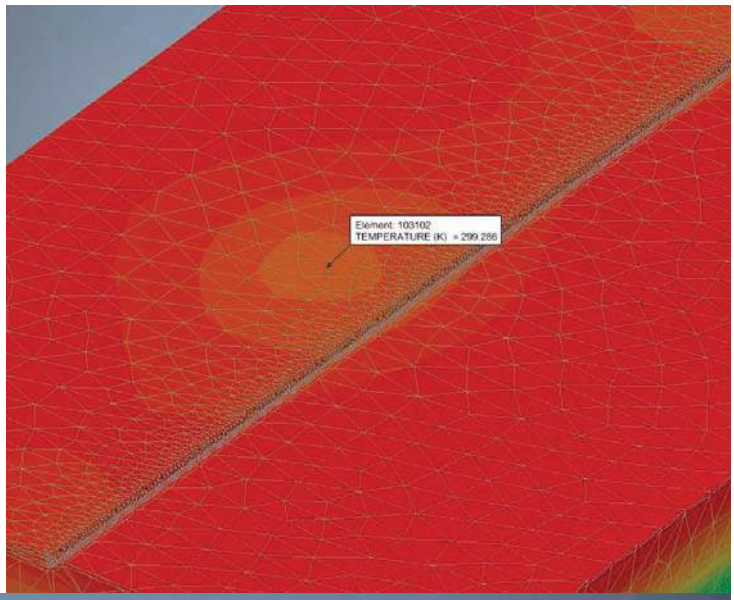
AIR FLOW EQUIPMENT, INC.

Thermal Break Panel, Calculation for Potential Condensation (Exterior)

Coldest Location will be downstream of the Cooling Coil Compared to an External Surface

Below picture indicates temperature at mid span bridge (K)

1. Interior unit air conditions: 49.1 degrees F @ 400 FPM
2. Exterior unit conditions: 95 degrees F dry bulb / 80 degrees F wet bulb @ minimum boundary layer thickness (H = 5 W/m2K)
2. Based on the above exterior conditions, the dew point is 75 F

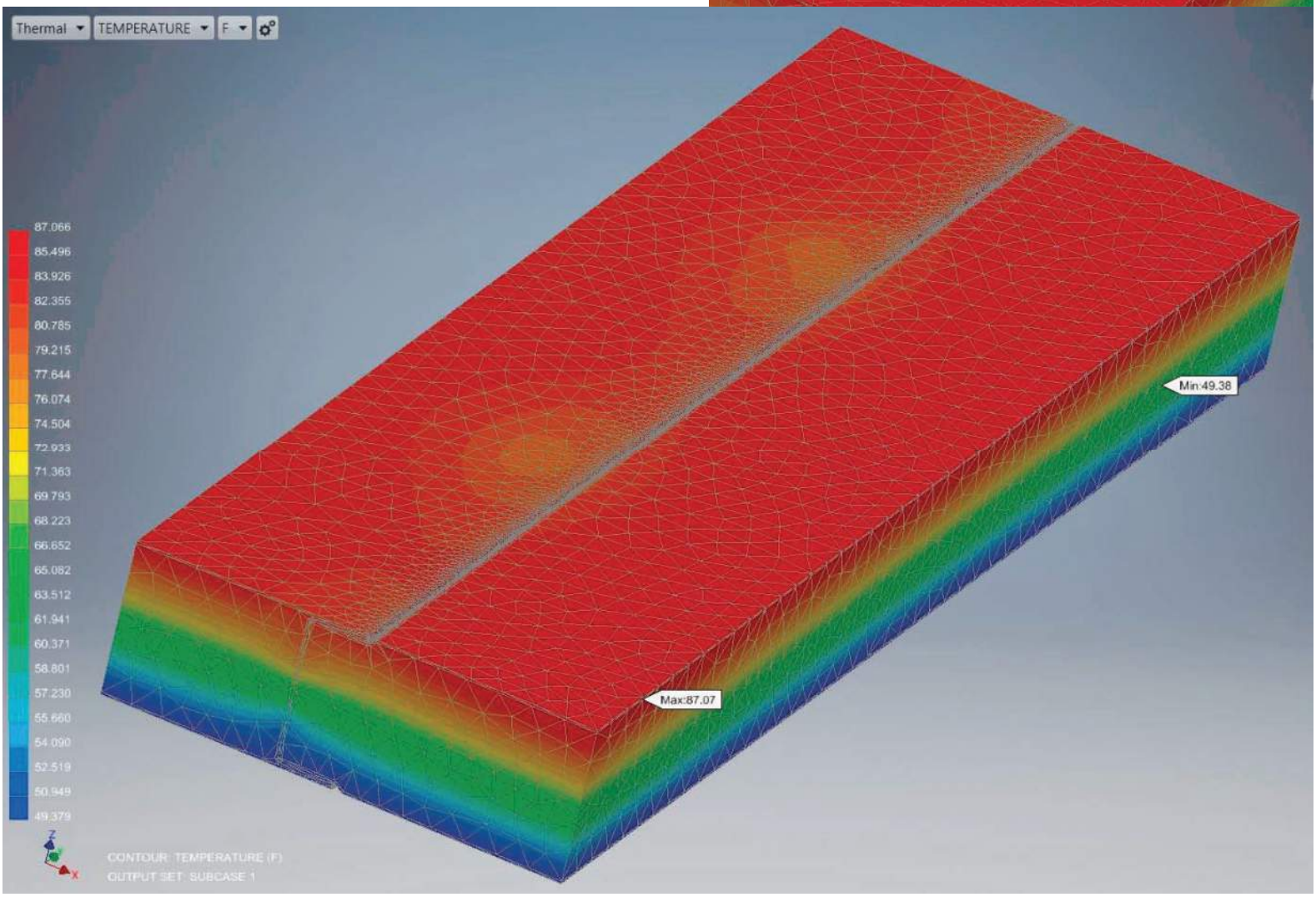


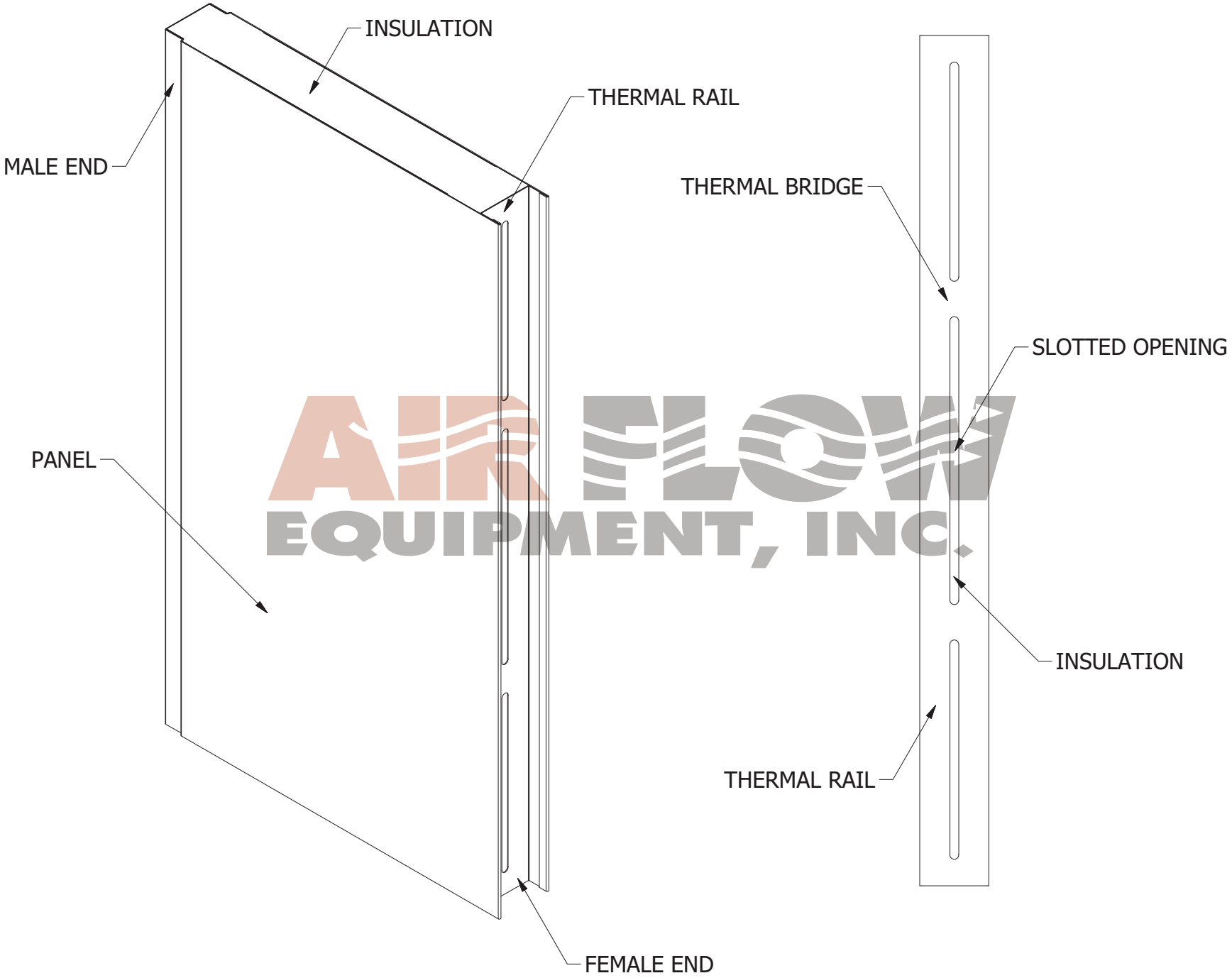
(299.3K = 79.1F)

Skin Temperature at Bridge contact point = 79.1F

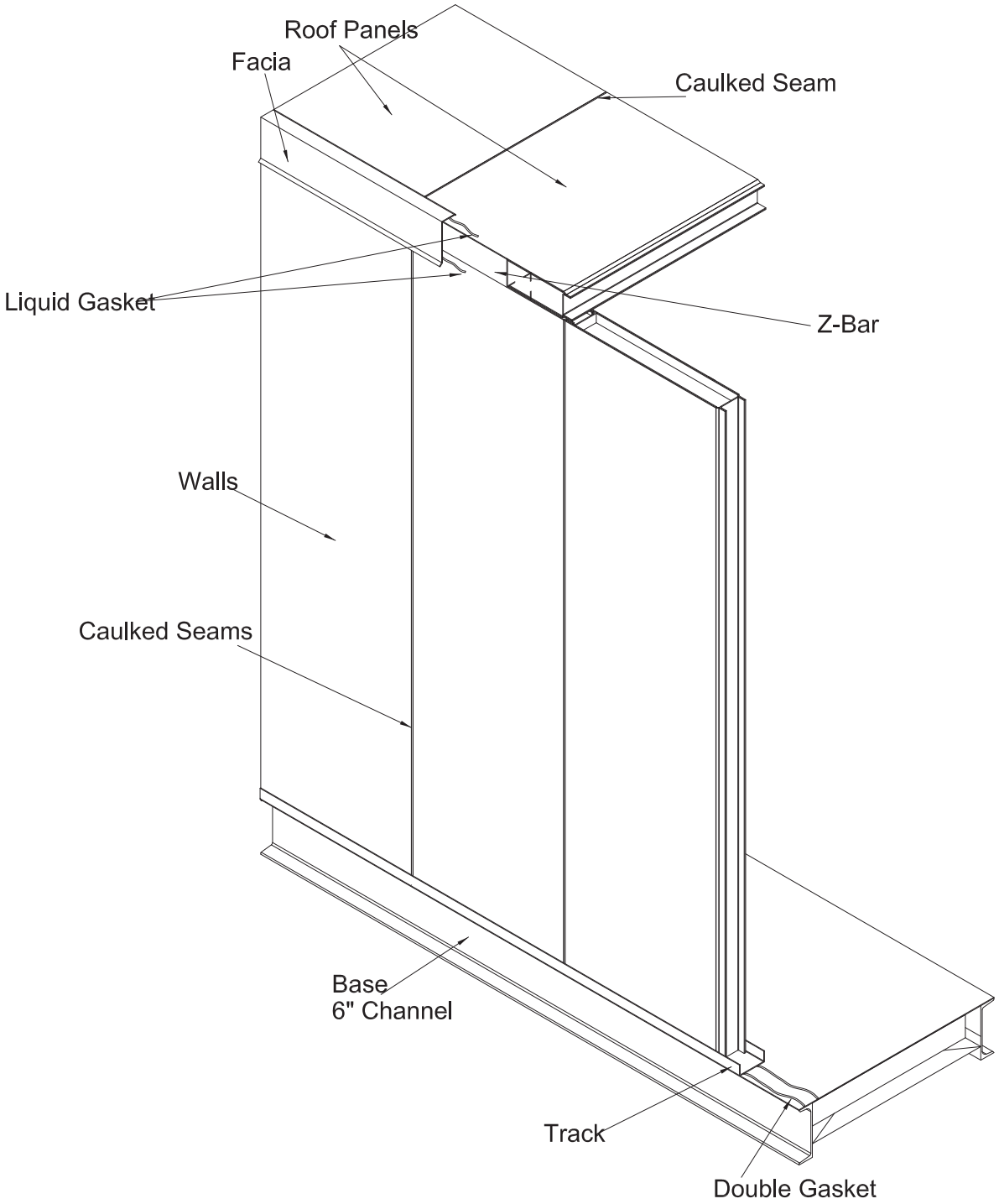
79.1F @ Bridge Contact Point is > 75F Dew Point Temp;

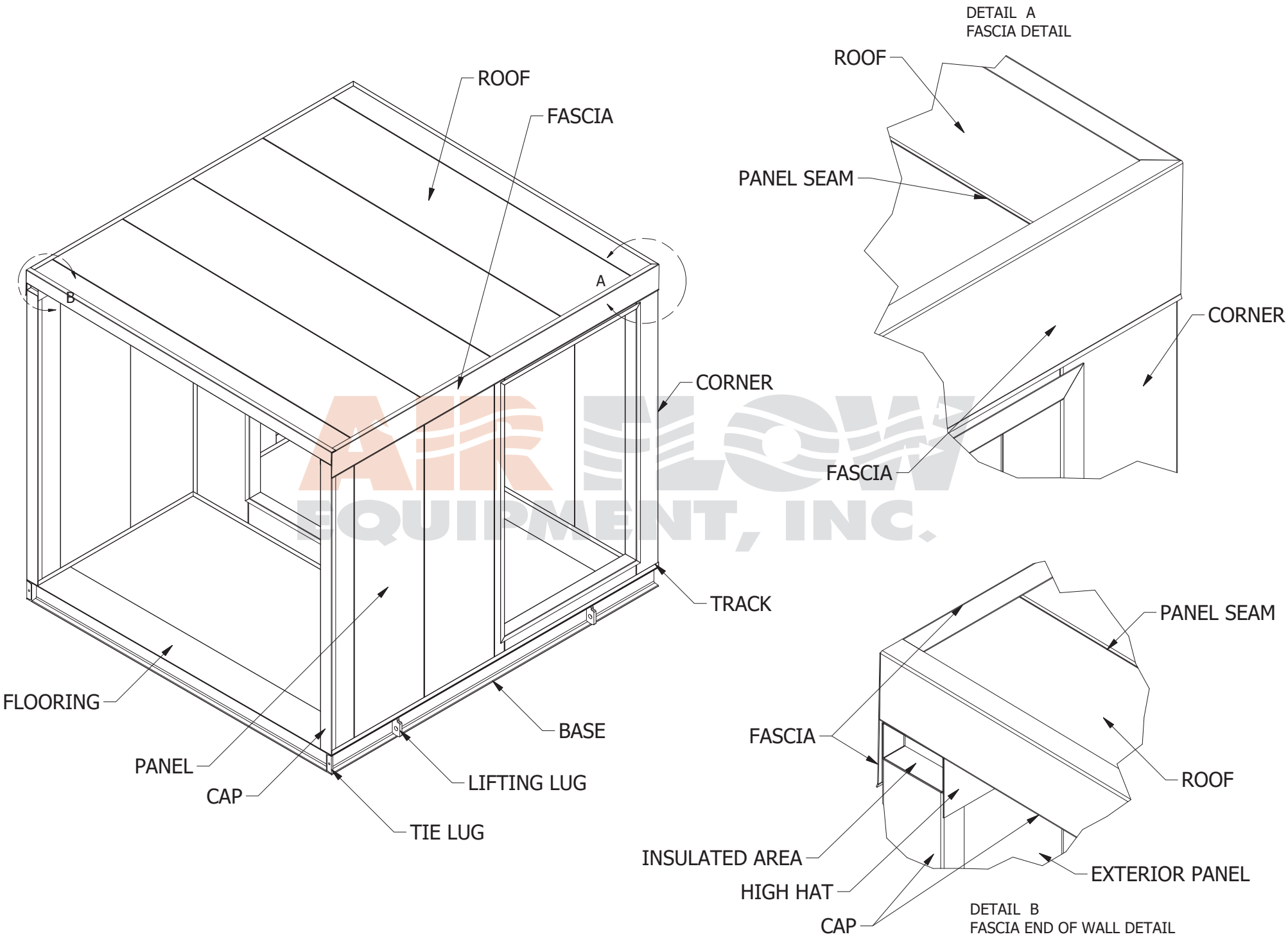
Therefore, we do not expect any condensation on the unit exterior



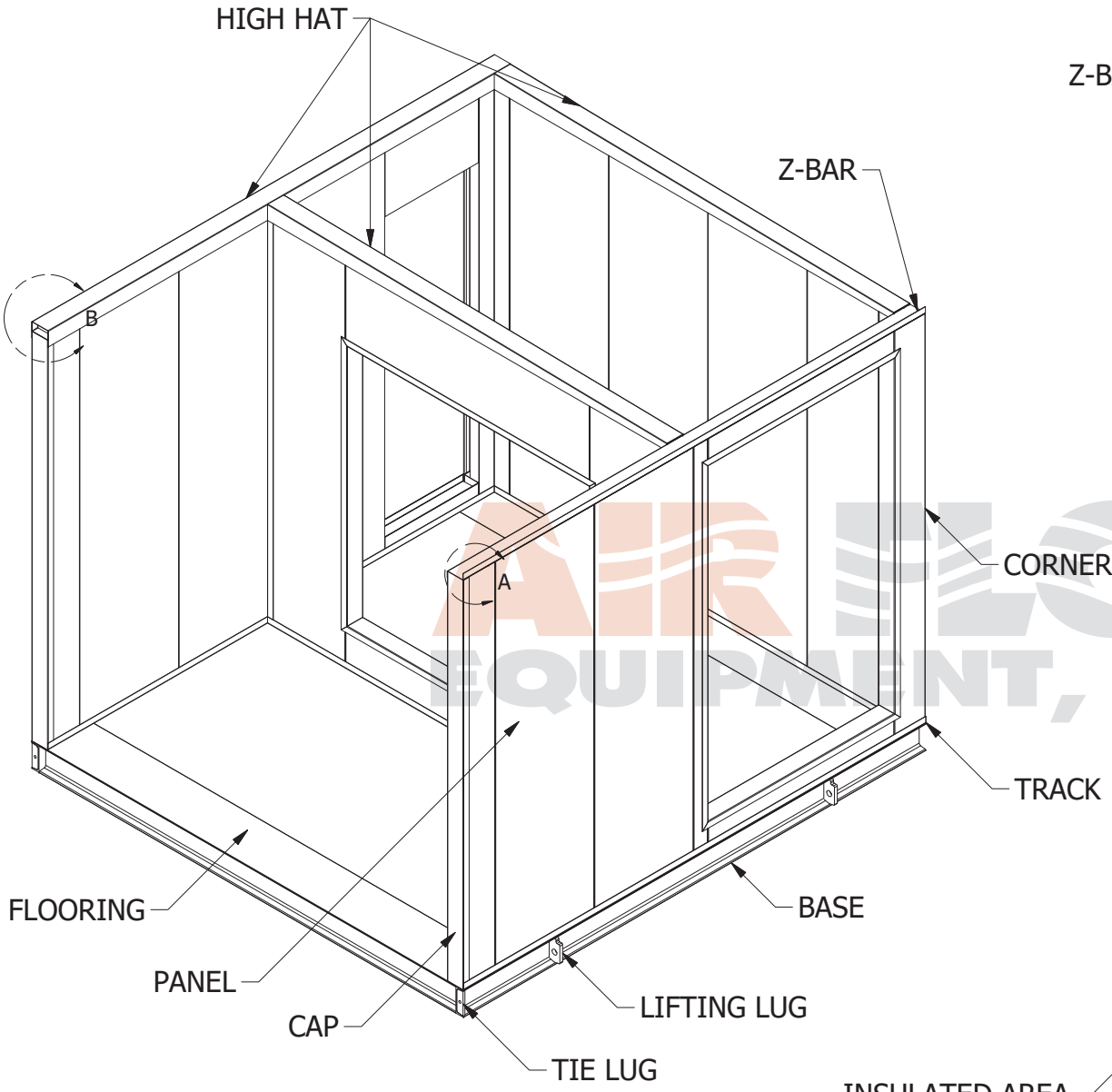


AIR FLOW EQUIPMENT, INC.

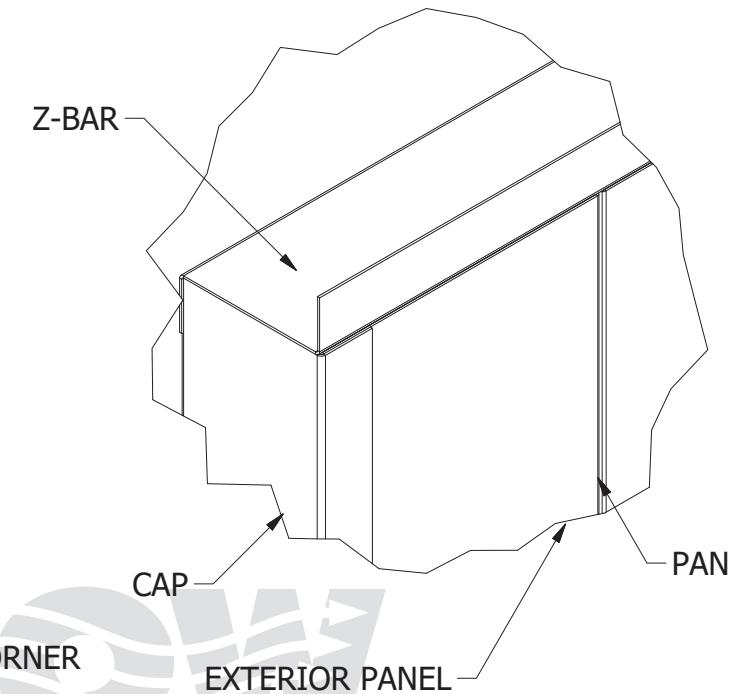

Roof Panels
Facia
Caulked Seam
Liquid Gasket
Z-Bar
Walls
Caulked Seams
Base
6" Channel
Track
Double Gasket

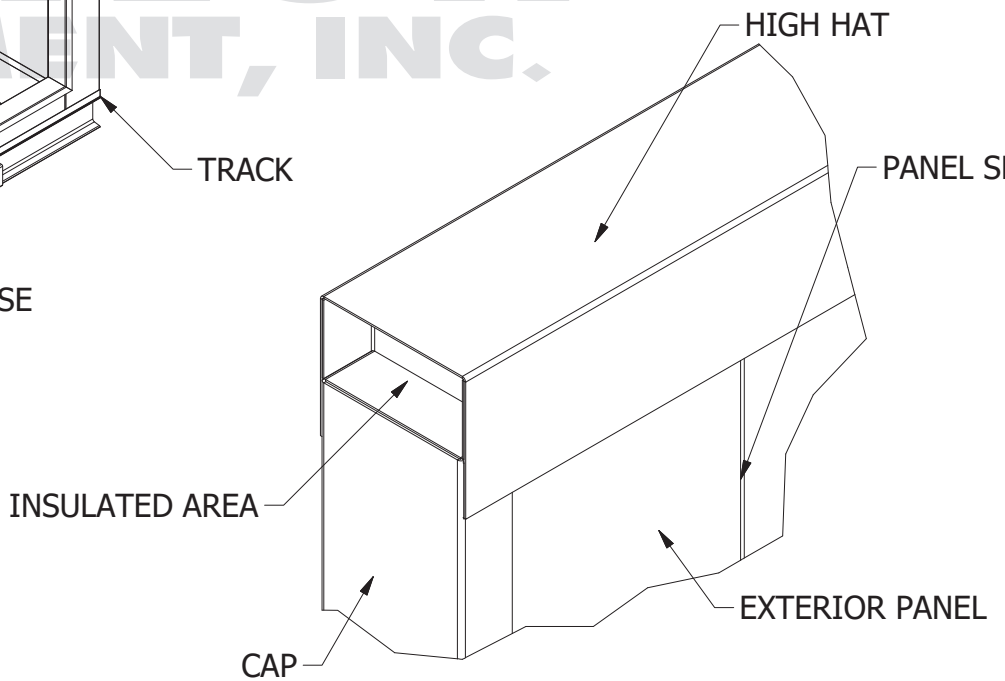


AIR FLOW EQUIPMENT, INC.



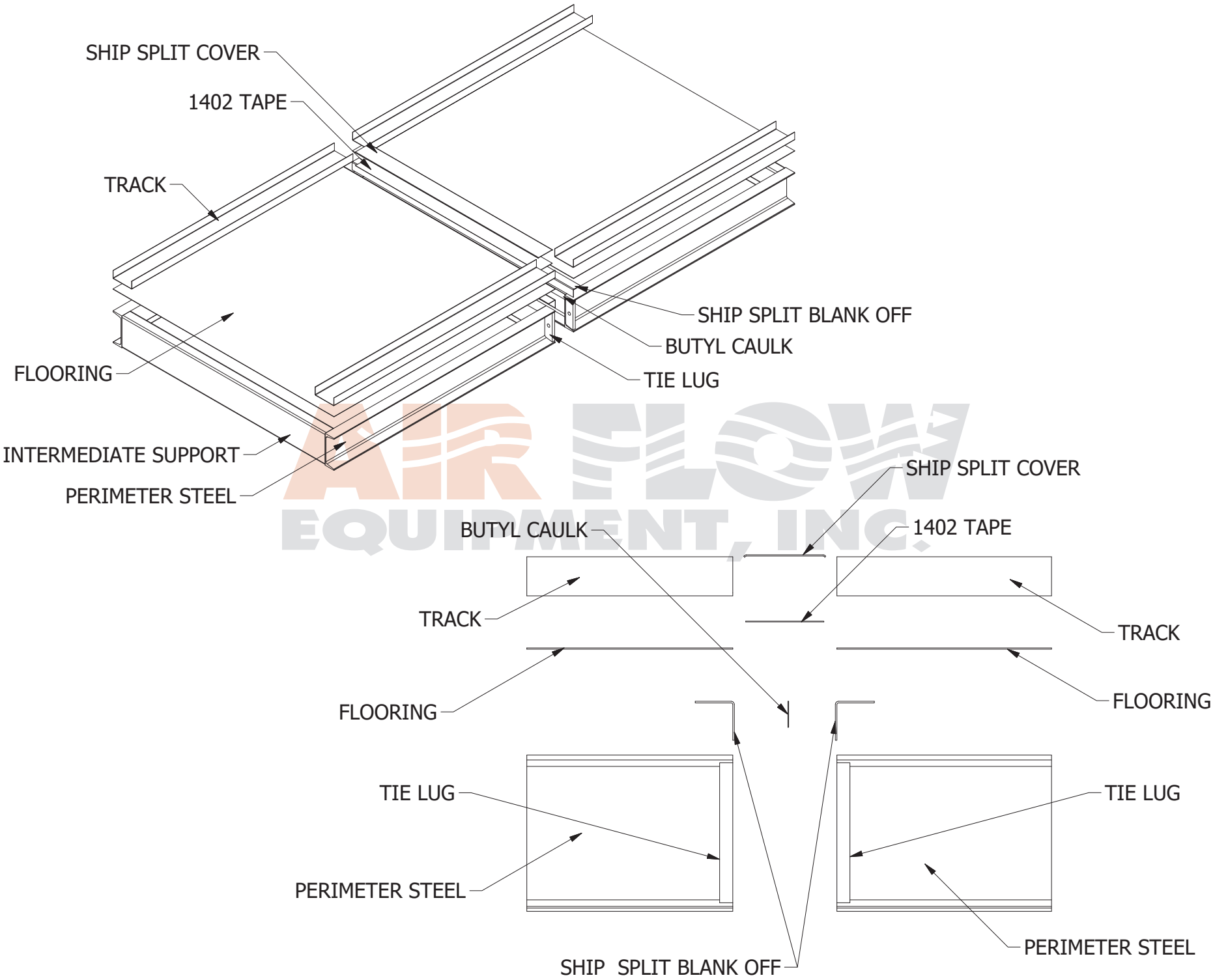
DETAIL A
Z-BAR TO EXTERIOR WALL DETAIL



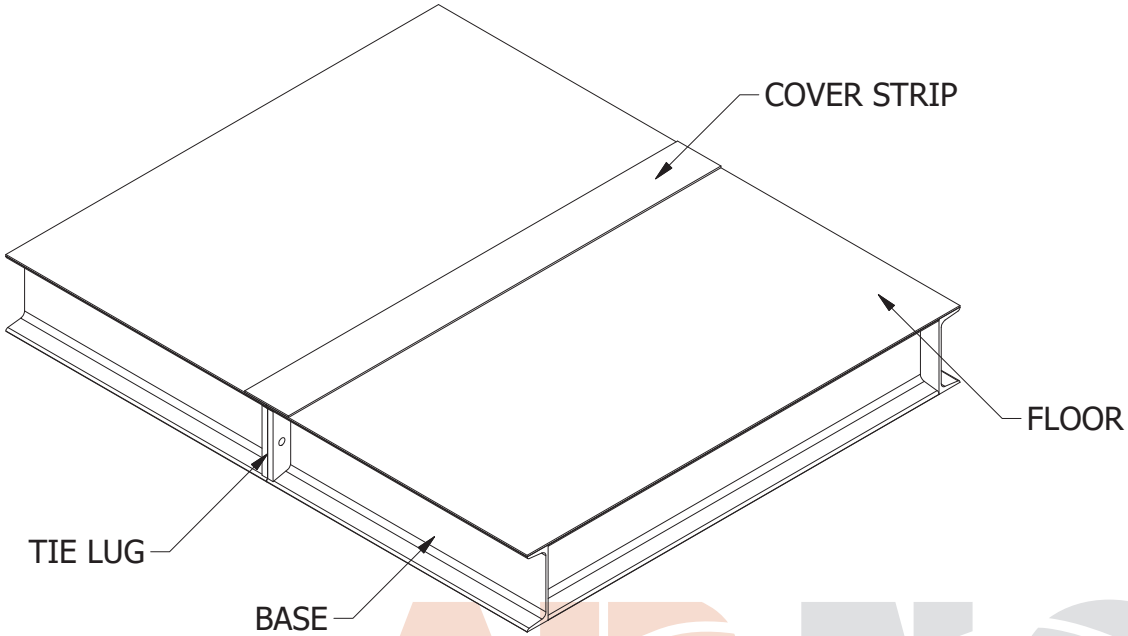


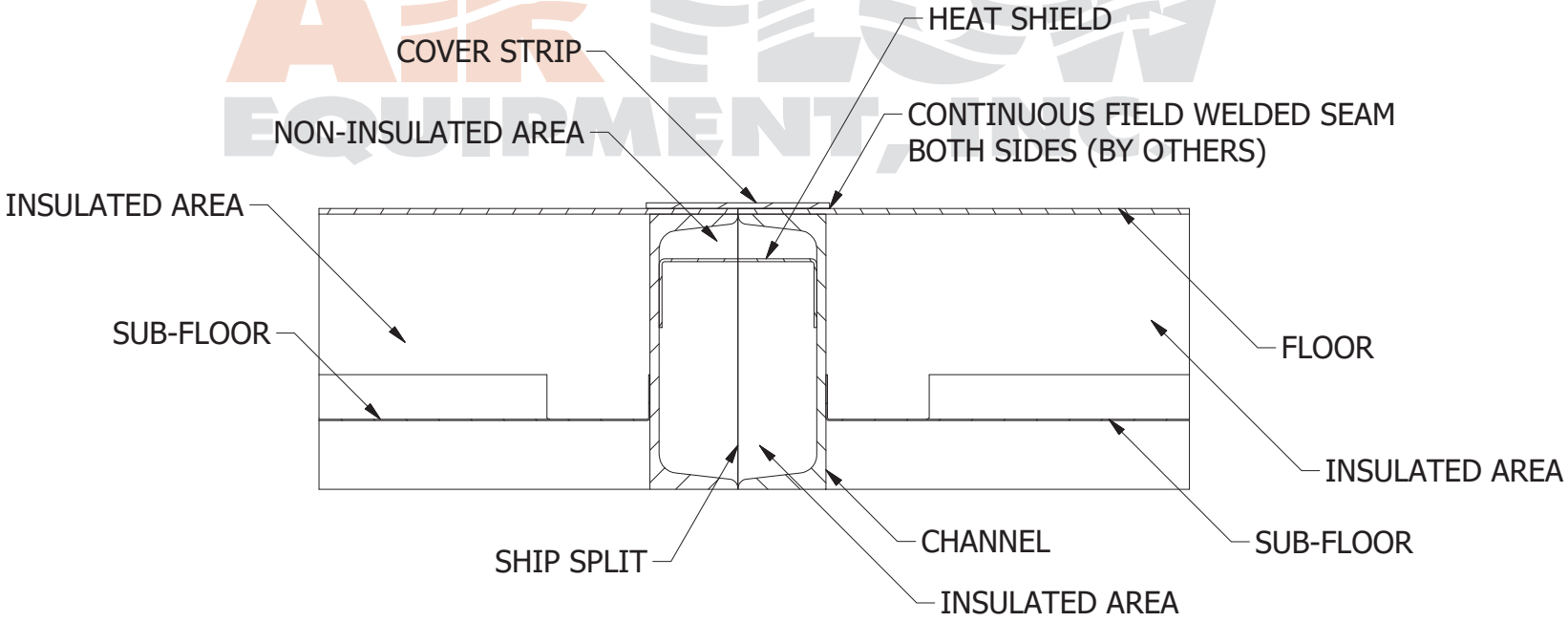
DETAIL B
HIGH HAT TO EXTERIOR WALL DETAIL

AIR FLOW EQUIPMENT, INC.



AIR FLOW EQUIPMENT, INC.

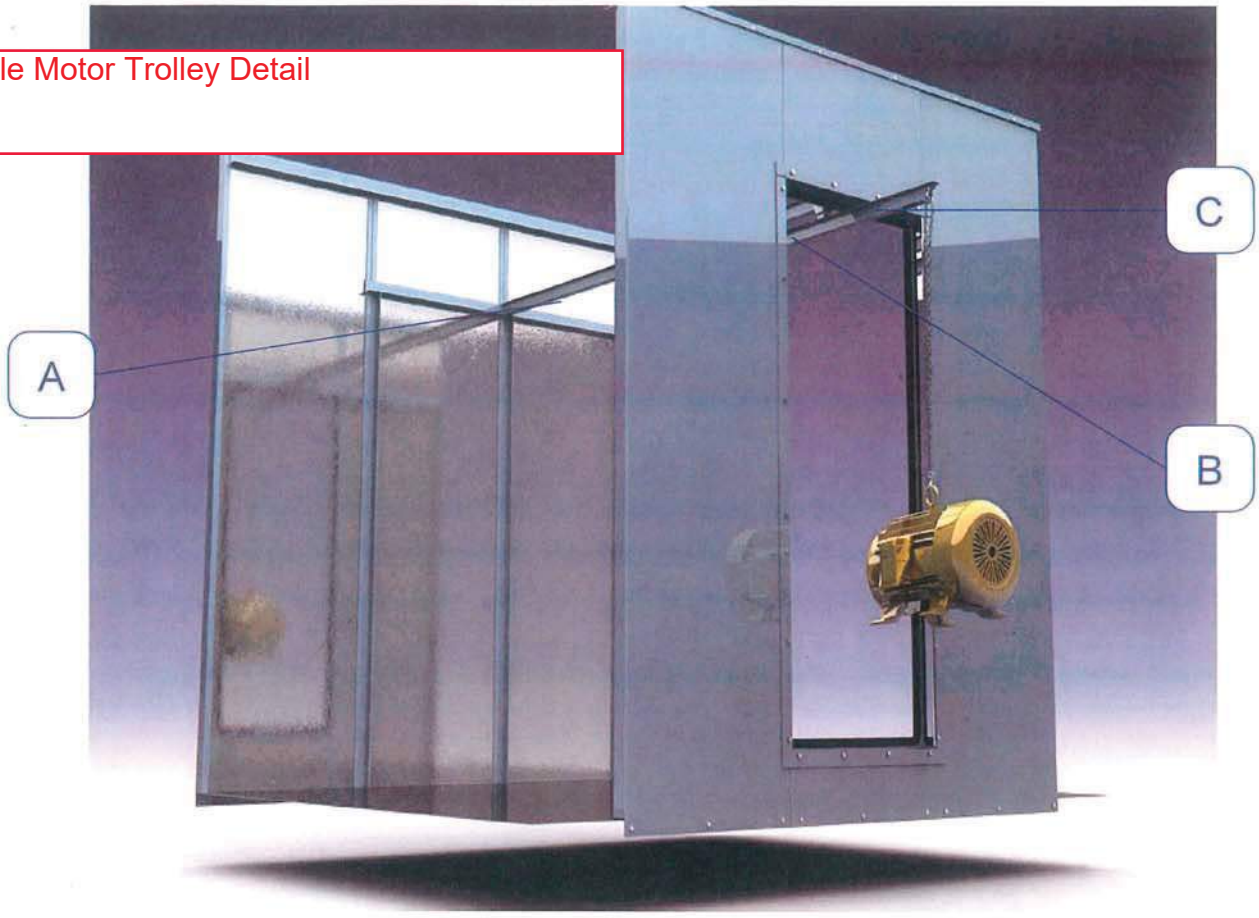




SECTION VIEW OF
VESTIBULE BASE

AIR FLOW EQUIPMENT, INC.

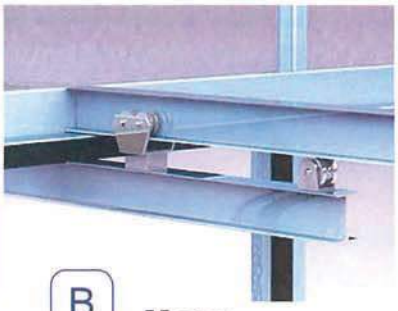
Extendable Motor Trolley Detail



A

I-Beam Frame

Structural steel frame is provided to support motor removal I-beam.



B

Motor Removal I-Beam

Structural steel I-beam is provided above motor for easy removal. I-beam is positioned to be inline with motor and access door.

C

Motor Removal Trolley

Optional trolley I-beam is provided to extend motor removal to unit exterior.

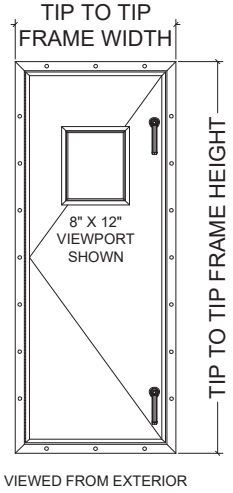
WINTECH
ACCESS DOORS

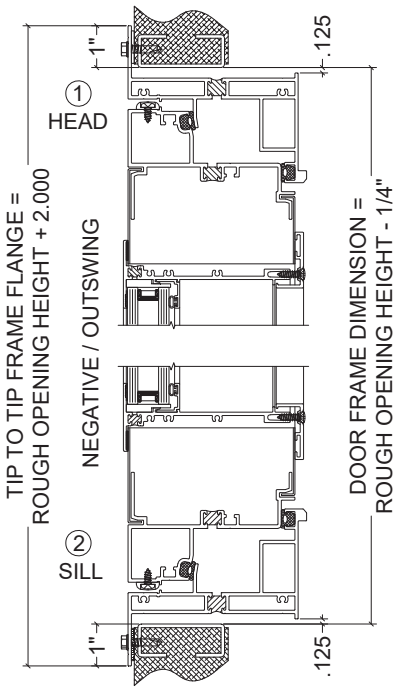
SD4200T 4" Thermal Submittal Form

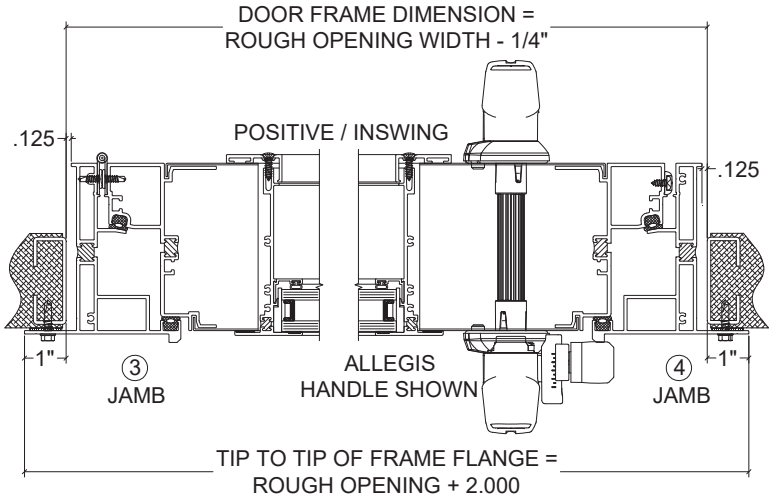
Door Cut Sheet

SD4200T
NEGATIVE / OUTSWING SHOWN AT HEAD & SILL

POSITIVE / INSWING SHOWN AT JAMBS







Door Construction – 45° degree mitered corners with screw spline assembly:

□ Negative (Outswing) □ Positive (Inswing)

Aluminum Extrusions – Aluminum made of 6063-T6 with minimum wall thickness .080.

Thermal Break – Consists of BASF ELASTOCAST® ISOCYANATE 2 part thermal Pour and Debridge.

Double Gasket Door (2g) – Two (2) Custom Extruded EPDM Closed Cell sponge gaskets.

Foam Door Insulation – Made from BASF AUTOFROTH® 2 part Expandable Polyurethane Foam. Density of 2.40 lbs/f^3, and thermal properties of K = 1.90; $R_{\text{Foam Only}}$ = 26.68.

Door R Value = 26.68

Door Panel Skins:

Interior Skin: _____

Exterior Skin: _____

Hinge/s - #304 Stainless Steel Piano Hinge:

□ 10" Hinges (Multiple Hinges) □ Continuous Hinges (Single Hinge) □ No Hinges

Latching Handles: _____

View Port Glass (if applicable):

□ View Port □ No View Port

□ 8" x 8" □ 8" x 12" □ 12" x 12" *(Viewing Size)*

□ Other: _____

Make up: _____

Note and Special Instructions

- ~ *Unless otherwise noted, all doors are as viewed from exterior.*
- ~ *Unless otherwise noted, all doors are dimensioned ¼" less then clear or rough opening.*
- ~ *Hinges are opposite latching hardware, unless a plug door or fixed access panel has been supplied.*
- ~ *Allegis Handles shown on drawings, refer to Latching Handle section for project specific hardware.*
- ~ *Negative (Outswing) Head and Sill detailed. Positive (Inswing) Jambs detailed.*
- ~ *Door frame is weeped at sill, do not install upside down.*
- ~ *Refer to WinTech Installation Manual for door mounting, maintenance, and cleaning.*
- ~ *Details are not to scale.*

Customer Information:

Project:
Customer:
Engineer:
Contractor:

Creation Date: 4/21/2017 *Item #: SD-4200T* *Revision Date:xx/xx/20xx*

ROXUL
The Better Insulation™

Casing Insulation

Technical Product Information

ROXUL RHT 40

BOARD INSULATION 15080*
PROCESS EQUIPMENT INSULATION
40 42 23**
MINERAL BOARD INSULATION
07 21 13**

General Product Information:

ROXUL® products are mineral wool fibre insulations made from basalt rock and slag. This combination results in a non-combustible product with a melting point of approximately 2150°F (1177°C), which gives it excellent fire resistance properties. ROXUL mineral wool is a water repellent yet vapour permeable material.

Description & Common Applications:

The RHT® 40 product is a non-combustible, semi-rigid mineral wool insulation boards that is water repellent and designed for high temperature applications where flexibility is required. Common application areas for the RHT series of board insulation are storage tank insulations, drying/oven equipment, petro-chemical and power generating equipment protection where high temperature, fire resistance, and moisture resistance are concerns.

Compliance and Performance:

ASTM C 612	Mineral Fiber Block and Board Thermal Insulation	Type IVA, Complies
MEA Approval	New York City Approval	330-97-M
City Of Los Angeles Approval		RR 25444

Fire Performance:

ASTM E 136	Behaviour of Materials at 750°C (1382°F)	Non-Combustible
CAN4 S114	Test for Non-Combustibility	Non-Combustible
ASTM E 84(UL 723)	Surface Burning Characteristics	Flame Spread = 0 Smoke Developed = 0
CAN/ULC S102	Surface Burning Characteristics	Flame Spread = 0 Smoke Developed = 0

Maximum Service Temperature:

ASTM C 411	Hot Surface Performance	In Compliance with ASTM C612 @ 1200°F(650°C)

Dimensional Stability:

ASTM C 356	Linear Shrinkage	<1% @ 1200°F (650°C)

Moisture Resistance:

ASTM C 1104	Moisture Sorption	0.03%

Thermal Resistance:

ASTM C 518 (C 177)	R-value/inch @ 75°F	4.2 hr.ft².F/Btu***
	RSI value/25.4 mm @ 24°C	0.74 m²K/W

Corrosive Resistance:

ASTM C 665	Corrosiveness to Steel	Pass
ASTM C 795 ****	Stainless Steel Stress Corrosion Specification as per Test Methods C871 and C692: U.S. Nuclear Regulatory Commision, Reg. Guide #1.36: U.S. Military Specifications MIL-I-24244 (all versions including B and C)	Conforms

Acoustical Performance

ASTM C 423
CO-EFFICIENTS AT FREQUENCIES

Thickness	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	NRC
1.5”	0.15	0.47	0.98	1.06	1.02	1.02	0.90
2.0”	0.26	0.68	1.14	1.13	1.06	1.07	1.00
3.0”	0.62	1.03	1.20	1.10	1.08	1.10	1.10

*MASTER FORMAT 1995 EDITION **MASTER FORMAT 2004 EDITION
*** at the time of manufacturing

ROXUL Safe

Acoustical Performance

ASTM C423 CO-EFFICIENTS AT FREQUENCIES							
Thickness	**125 Hz**	**250 Hz**	**500 Hz**	**1000 Hz**	**2000 Hz**	**4000 Hz**	**NRC**
2.0	0.26	0.68	1.12	1.10	1.03	1.04	1.00
3.0	0.63	0.95	1.14	1.01	1.03	1.04	1.05
4.0	1.03	1.07	1.12	1.04	1.07	1.08	1.10

Compressive Strength:

ASTM C 165 at 10% 144 psf (6.9 kPa)

Density:

ASTM C 612-00 Actual 4.5 lbs/ft³ 72 kg/m³

Dimensions:

24” (width) x 48” (length)
610 mm (width) x 1219 mm (length)

Thickness:

Product thickness is available in 2”, 3” and 4”

For additional sizes, please contact our customer service representatives.

Facing:

This product can be faced with reinforced foil facing. Please note that the facings will influence the product’s service temperature range.

Key Application Qualifiers:

- Easily cut
- Non-combustible
- Excellent sound absorbency
- Chemically inert
- Does not rot or sustain vermin
- Does not promote growth of fungi or mildew
- Low moisture sorption
- Water resistant
- CFC and HCFC free product and process
- Made from natural & recycled materials

Other ROXUL Products:

Please consult ROXUL for all your insulation needs. We have an extensive range of products for all applications from pipe insulation to commercial products to residential batts. ROXUL invites all inquiries and will act promptly to service all of your requirements.

ULC LISTED

CLASSIFIED UL

**** “Provisions for lot testing may be required, consult manufacturer.”

Note:
As ROXUL Inc. has no control over installation design and workmanship, accessory materials or application conditions, ROXUL Inc. does not warranty the performance or results of any installation containing ROXUL Inc’s. products. ROXUL Inc’s. overall liability and the remedies available are limited by the general terms and conditions of sale. This warranty is in lieu of all other warranties and conditions expressed or implied, including the warranties of merchantability and fitness for a particular purpose.

ROXUL INC. **Milton, Ontario Tel: 905-878-8474** **Fax: 905-878-8077**
www.roxul.com **Tel: 1-800-265-6878** **Fax: 1-800-991-0110**

Revised: May 25, 2009
Supersedes: March 10, 2009

FOAMSULATE™ 210 TECHNICAL DATA

Spray Polyurethane Foam
2.0lb Density
ICC ESR - 3081

Base Insulation

EQUIPMENT AND APPLICATION PARAMETERS:

Preheat Temperature "A" & "B" Side	125°F
Hose Temperature "A" & "B" Side	125°F
Mixing Ratio	1 to 1 By Volume Of "A" to "B"
Application Pressures	1,000 - 1,200 PSI
Ambient & Substrate Temperature - STANDARD APPLICATION	50°F - 120°F
Ambient & Substrate Temperature - COLD TEMPERATURE APPLICATION	Consult with PSP Technical Services for Cold Temperature (Winter) Application Guidelines.
Thickness Per Pass	2" Maximum

SURFACE BURNING CHARACTERISTICS

Flammability	ASTM E 84 Class I At 4 Inches
Flame Spread < 20 Smoke Development < 450	

PRODUCT REACTIVITY

Product Designation	Temperature Range
Fast (20)	20°-50°F
Mid (50)	40°-65°F
Reg (80)	55°-80°F
Slow (100)	80°-100°F

CREDENTIALS CHART

ICC ES Report Report # ESR-3081

ICC ES AC377, Appendix A1.2.2 and Appendix X

ASTM Method E84

NFPA 286

Maximum Thickness Tested :
(Tested Only - Not a Limit on application)

Wall Cavities = 8 Inches
Ceiling Cavities in Attics and Crawlspaces = 12 Inches

PRODUCT TYPE: Premium Spray Products, Inc. Foamsulate™ 210 is a two-component, medium density, one to one by volume spray applied polyurethane foam. To produce Foamsulate™ 210 requires the use of an "A" component (ISO) and a blended "B" component (RESIN) which contains ZERO Ozone Depleting blowing agents, catalysts, polyols and fire retarding materials.

GENERAL PROPERTIES: Foamsulate™ 210 is a 2.0 LB density closed cell insulating material. Foamsulate™ 210 is designed for use where insulation systems require superior air barrier characteristics along with the ability to minimize moisture infiltration. Foamsulate™ 210 has a 6.7 per inch R-value rating while providing structural enhancement due to its rigid nature when cured. When properly installed by a trained contractor Foamsulate™ 210 quickly expands to fill the cracks, crevices, gaps and voids that exist in every structure. In addition Foamsulate™ 210 will conform to the curves, irregular surfaces and spaces to form a superior thermal envelope around your entire structure.

RECOMMENDED USES: Foamsulate™ 210 is an insulation system designed for use in residential, commercial and industrial applications. Use in lieu of more traditional forms of insulating materials such as fiberglass, cellulose or other loose fill products. Typical area's where spray polyurethane foam is applied are; exterior walls, vented and un-vented attic assemblies, between floors, etc. Additional uses of this closed cell product are foundations, crawlspaces, HVAC ducts, fluid tanks, cold storage units, etc.

THERMAL BARRIER: Current International Residential Code (IRC) and International Building Code (IBC) require that spray polyurethane foam be separated from the building interior by an approved 15-minute thermal barrier or a code approved alternative. Gypsum board at a minimum thickness of ½" is an approved 15-minute thermal barrier. The following intumescent coatings when installed per manufacturer specifications are approved as thermal barrier alternatives for Foamsulate 210: DC315™ manufactured by Fireproof Technology, Inc. and Flame Seal-TB™ manufactured by Flame Seal Products, Inc.

IGNITION BARRIER: Foamsulate™ 210 meets the requirements of ICC-ES AC377 and Appendix X for use in attics and crawlspaces without the use of an ignition barrier. Explanation of these requirements is available at www.iccsafe.org.

EQUIPMENT AND APPLICATION PARAMETERS: The values represented in the Equipment and Application Properties Chart provides initial optimum settings. Actual operating ranges will vary as ambient air; humidity, moisture and substratetemperatures vary. Extreme conditions will affect the yield, adhesion and cured physical properties of the foam. Applicator must make adjustments as conditions vary.

STORAGE: Shelf life is six (6) months from date of manufacture when stored in original unopened containers between the temperatures of 65°F to 85°F.

PHYSICAL PROPERTIES

R-VALUE (Aged)	6.7 / Inch	ASTM C 518
Core Density	2.0 PSCF	ASTM D 1622
Closed Cell Content	> 96%	ASTM D 1940
Sound Transmission Coefficient	38	ASTM E 413
Water Vapor Transmission - Permeance	1.49 Perms @ 1" .92 Perms @ 1.5"; .77 Perms @ 2"	ASTM E 96
Air Leakage Rate	<0.003L/sM^2	ASTM E 283
Noise Reduction Coefficient	0.10	ASTM C 423
Tensile Strength (PSI)	51	ASTM D 1623
Dimensional Stability	< .27	ASTM D 2126
Compressive Strength (PSI)	41	ASTM D 1621

The information herein is to assist customers in determining whether our products are suitable for their applications. Customer assumes full responsibility for quality control, testing, and determination of suitability of product for its intended use or application. Premium Spray Products, Inc. warrants only that the material shall meet its specifications; this warranty is in lieu of all other written, expressed or implied warranties and Premium Spray Products, Inc. expressly disclaims any warranty of merchantability, fitness for a particular purpose, or freedom from patent infringement. Accordingly, buyer assumes all risks whatsoever as to the use of the material. Buyer's exclusive remedy as to any breach of warranty, negligence or other claim shall be limited to the purchase price of the material. Failure to adhere to any recommended procedures shall relieve Premium Spray Products, Inc. of all liability with respect to the material or the use thereof.

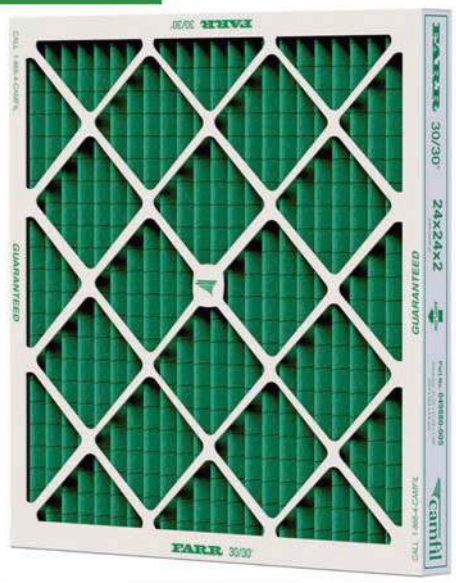
FOAMSULATE™ and Premium Spray Products are trademarks of Premium Spray Products, Inc.

Farr 30/30®

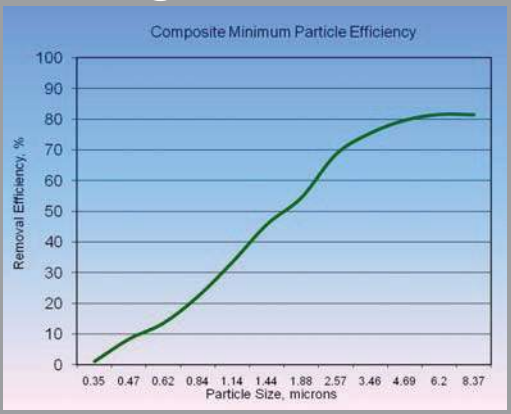
High-Capacity MERV 8/8A and ePM$_{10}$ Pleated Panel Filter

Pre Filter

ENERGY COST INDEX ★★★★★



The best performing pleated panel filter — guaranteed!



Composite minimum efficiency values of the 30/30 when evaluated per ASHRAE Standard 52.2-2007. The 30/30 has a MERV of 8 and MERV-A of 8 when tested per appendix J. It has an ISO efficiency of ePM$_{10}$.

The Camfil Farr 30/30 has set the industry standard for pleated panel filters since 1963. With over 50 design enhancements, it continues to provide the industry's best value for medium efficiency filtration.

Setting the standard by which other pleated filters are judged, modern media manufacturing techniques and proprietary technological advancements ensure that the 30/30 is:

- Guaranteed to perform at the rated efficiency, or better, throughout the life of the filter.
- Guaranteed to last longer than any other pleated panel filter available.

Performing at MERV 8/8A and ePM$_{10}$ under ASHRAE and ISO filter testing standards respectively, using a mechanical particle capture principle, the 30/30 will not drop in efficiency while in service as will other pleated panel filters that incorporate an electret charge to obtain an initial MERV 8 value.

Its radial pleat design provides the longest life and lowest average pressure drop reducing the number of filter changes so your facility will use less fan power to move air through the filter.

The high wet-strength beverage frame and welded wire media backing provide structural integrity in any type of HVAC application virtually eliminating the additional costs associated with filter bypass or filter failure.

Available in 1", 2" or 4" deep configurations, the 30/30 is ideal for commercial, industrial, institutional or any other application where the ultimate level of protection of equipment and indoor air quality is a concern.

The 30/30 has an Energy Cost Index (ECI) of five stars, the highest performance rating available.

[1] A 5-Star rating indicates that this filter performs in the top 20% of all products of similar construction in the HVAC industry. Factors of consideration include maintained efficiency, energy usage and resistance to air flow. Detailed evaluation information is available from your Camfil sales outlet or on the web at www.camfilfarr.com.

Camfil Farr 30/30®

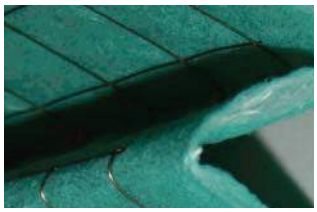
The highest media weight, more than any other pleated panel filter, and uniform lofting for high dust holding capacity, ensure that the 30/30 will last longer in any HVAC application.

Exclusive MERV 8 Performance from Camfil Media

The 30/30 media is manufactured from a proprietary blend of fibers that incorporate a mechanical principle of particle capture. The filter does not require an electret charge which would dissipate and reduce filter's efficiency after minimal hours of operation in a system. The media is lofted to a uniform depth to enhance the depth-loading characteristic and ensure the longest life of any pleated filter available. The high-loft also offers a lower resistance to airflow so fan horsepower required to move air through the filter is minimized. Camfil evaluates the quality of all incoming raw materials to maintain product integrity as part of a rigorous quality control program.

Welded Wire Grid Maintains Radial Pleat Design

The media is formed into a radial pleat for uniform dust loading and full use of the media area. V-style pleats blind while loading preventing full utilization of the media area and increasing the filters pressure drop resulting in increased energy usage. A welded wire grid, spot welded on one-inch centers maintains each radial pleat and maintains media stability through varying airflows.



Rounded radial pleats, instead of v-shape pleats, allow full usage of media area.

Diagonal support members, glued to each pleat at its apex, helps maintain pleat stability and filter rigidity.

High Wet-Strength Beverage Board Frame

The high wet-strength beverage board frame, the thickest board in the industry, creates a stable and non-yielding media pack. Filter bypass is virtually eliminated because the filter fits securely in the filter holding mechanism. The media is bonded to the frame ensuring that all of the air seen by the filter will be treated by the filter. Diagonal support members are bonded to each pleat to maintain pleat spacing and add stability to the pack through bridge-style engineering. The 30/30 is guaranteed to 2.0" w.g. of pressure filter without failure. Costly filter blowouts and compromising of HVAC system cleanliness is eliminated.

ISO 9001:2015 Certified Quality Control

Every 30/30 filter is identified on the frame with a unique manufacturing code that allows us to analyze every component of construction from raw materials to the point where the product is boxed for shipping. Filters are inspected for structural integrity so they are capable of operating in the harshest HVAC system conditions. The adhesiveness of diagonal support members to pleat apexes is inspected so pleat spacing is uniform to provide longer filter life. Each media lot is laboratory tested to confirm consistent performance and individual filters are submitted from each manufacturing facility on a strict schedule for ASHRAE 52.2 testing in our world-class testing facility.

The standard of the industry, by Camfil.

Used in many systems as a prefilter, the 30/30 extends the life of final filters by capturing larger contaminant and thereby allowing the final filters to concentrate on removing smaller particles such as those that are respirable and can cause lung damage. The 30/30 is also an excellent choice when applied as the only filter in a system to keep coils clean and maintain efficiency, and protect building occupants from contaminants of annoyance such as pollen, plant spores, atmospheric dusts and other indoor air irritants.

Unprecedented Industry Guarantee

If our filters don't outlast and outperform your current filters, we'll replace them, FREE.
For guarantee details and a distributor list, visit www.camfil.com.

PERFORMANCE DATA

2” Deep Filter (actual filter depth 1.75”)

Part Number	Nominal Depth (inches)	Nominal Size (inches)	Actual Size (inches)			Initial Resistance (inches w.g.)	Airflow Capacity (cfm)	Total Media Area (sq. ft.)	Pleats per Linear Foot
			Depth	Height	Width				
049880-019		16 x 16		15.50	15.50		890	7.8	
049880-008		20 x 10		19.50	9.50		700	6.0	
049880-009		20 x 14		19.50	13.50		975	8.3	
049880-007		20 x 12		19.50	11.88		835	7.4	
049880-011		20 x 15		19.50	14.50		1045	9.3	
049880-001		20 x 16		19.50	15.50		1100	9.9	
049880-013		20 x 18		19.50	17.50		1250	10.8	
049880-002		20 x 20		19.50	19.50		1390	11.9	
402271-007		20 x 30		19.50	29.50		2085	18.2	
049880-006	2	24 x 12	1.75	23.38	11.38	0.31	1000	8.4	15 pleats per linear foot
049880-015		24 x 18		23.50	17.50		1500	13.0	
049880-012		24 x 20		23.50	19.50		1670	14.3	
049880-005		24 x 24		23.38	23.38		2000	17.3	
049880-010		25 x 14		24.50	13.50		1220	10.4	
049880-020		25 x 15		24.50	14.50		1300	11.6	
049880-016		24 x 16		24.50	15.50		1335	11.8	
049880-004		25 x 16		24.50	15.50		1390	12.4	
049880-014		25 x 18		24.50	17.50		1565	13.5	
049880-003		25 x 20		24.50	19.50		1740	14.9	
049880-018		25 x 25		24.50	24.50		2170	19	

1” Deep Filter (actual filter depth 0.88”)

Part Number	Nominal Depth (inches)	Nominal Size (inches)	Actual Size (inches)			Initial Resistance (inches w.g.)	Airflow Capacity (cfm)	Total Media Area (sq. ft.)	Pleats per Linear Foot
			Depth	Height	Width				
404207-003		10 x 10		9.50	9.50		240	1.6	
054862-025		12 x 12		11.50	11.50		350	2.5	
404207-005		16 x 12		15.50	11.50		470	3.3	
054862-012		16 x 16		15.50	15.50		620	4.3	
054862-009		20 x 7		19.50	6.50		340	2.4	
054862-016		20 x 10		19.50	9.50		490	3.3	
054862-019		20 x 12		19.50	11.50		580	4.1	
054862-006		20 x 14		19.50	13.50		680	4.6	
054862-008		20 x 15		19.50	14.50		730	5.1	
054862-001		20 x 16		19.50	15.50		780	5.4	
054862-020		20 x 18		19.50	17.50		880	6.1	
054862-002		20 x 20		19.50	19.50		970	6.6	
054862-021		22 x 22		21.50	21.50		1180	8.2	
054862-022		24 x 10		23.50	9.50		580	4.0	
054862-010	1	24 x 12	0.88	23.50	11.50	0.23	700	4.9	16 pleats per linear foot
404207-004		24 x 14		23.50	13.50		820	5.5	
054862-015		24 x 16		23.50	15.50		970	6.7	
054862-028		24 x 18		23.50	17.50		1050	7.3	
054862-011		24 x 20		23.50	19.50		1165	8.0	
054862-005		24 x 24		23.50	23.50		1400	9.8	
054862-023		25 x 10		24.50	9.50		610	4.1	
054862-024		25 x 12		24.50	11.50		730	5.2	
054862-007		25 x 14		24.50	13.50		850	5.7	
054862-013		25 x 15		24.50	14.50		910	6.4	
054862-004		25 x 16		24.50	15.50		970	6.7	
054862-017		25 x 18		24.50	17.50		1100	7.6	
054862-003		25 x 20		24.50	19.50		1215	8.3	
054862-014		25 x 25		24.50	24.50		1520	10.5	

Riga-Flo® PH

Advantages

- **Supported media unaffected by varying airflow or turbulence**
- **Microfine high loft media blanket has long life and maintains efficiency throughout the life of the filter**
- **Includes 1" nominal header for side access or rear access built-up banks**

Final Filter

Description: High efficiency supported media box filter with header for side access installations.
Typical applications: Built-up filter banks, rooftops, split systems, free-standing units, package systems and air handlers.
Efficiency: MERV 9, MERV 11, MERV 13, MERV 14 and MERV-A of 9, 11, 13 and 14 respectively.
Media: Microfine glass media in a uniform high loft media blanket with a synthetic micro mesh media backing. (Non-metallic media backing).
Recommended final pressure drop: 1.5" w.g. when operated at 500 fpm. System design may dictate alternative changeout point.
Temperature: Maximum continuous operating temperature of 200° F (93° C).
Ratings: ECI value of four stars, UL 900.

See Literature 1303PH for more details.

Part Number A Style Header (nominal 1")	Part Number B Style Header (nominal 1-1/4")	MERV & MERV-A	Nominal Size (H x W x D inches)	Actual Size (H x W x D inches)	Rated Airflow (cfm)	Initial Resistance (inches w.g.)
402995-003	402996-003	MERV 14	24 X 24 x 12	23.38 X 23.38 x 11.50	2000	0.70
402995-006	402996-006	MERV 14	24 X 12 x 12	23.38 X 11.38 x 11.50	1000	0.70
402995-009	402996-009	MERV 14	24 X 20 x 12	23.38 X 19.38 x 11.50	1660	0.70
402995-012	402996-012	MERV 14	20 X 20 x 12	19.38 X 19.38 x 11.50	1400	0.70
402995-002	402996-002	MERV 13	24 X 24 x 12	23.38 X 23.38 x 11.50	2000	0.60
402995-005	402996-005	MERV 13	24 X 12 x 12	23.38 X 11.38 x 11.50	1000	0.60
402995-008	402996-008	MERV 13	24 X 20 x 12	23.38 X 19.38 x 11.50	1660	0.60
402995-011	402996-011	MERV 13	20 X 20 x 12	19.38 X 19.38 x 11.50	1400	0.60
402995-001	402996-001	MERV 11	24 X 24 x 12	23.38 X 23.38 x 11.50	2000	0.45
402995-004	402996-004	MERV 11	24 X 12 x 12	23.38 X 11.38 x 11.50	1000	0.45
402995-007	402996-007	MERV 11	24 X 20 x 12	23.38 X 19.38 x 11.50	1660	0.45
402995-010	402996-010	MERV 11	20 X 20 x 12	19.38 X 19.38 x 11.50	1400	0.45

As part of our program for continuous improvement, Camfil reserves the right to change specifications without notice. 2018-12-07

Conover NC, Corcoran CA, Crystal Lake IL, Riverdale NJ,
Washington NC, Concord Ontario
United States Tel: (866) 422-6345, Canada Tel: (800) 976-9382
www.camfil.com

Type 8 Built-up Bank Filter Holding Frame

Advantages

- **Universal filter acceptance, any filter from 1" deep to 36" deep with the application of specific fasteners**
- **May be assembled into banks up to six frames high by any number wide**
- **Leak free system integrity, ensuring that all of the air moving through the system will be treated by the filter**
- **Multiple stages of filters can be installed on each frame**

Typical applications: Built-up bank frames for installation in HVAC applications in commercial, industrial, manufacturing and medical facilities.
Construction: 16-gauge galvanized steel frame with gasketed filter seal flange, multiple lances for application of various fasteners to accommodate any 1" deep filter and up to 36" deep of multiple filter stages. Pre-drilled holes for bank assembly, marked top for ease of installation.
Filters: 1" MERV 6 to 12" deep MERV 15 filters. May also be used with adsorbent panels or modules.
Additional data: Available in stainless steel, consult factory.

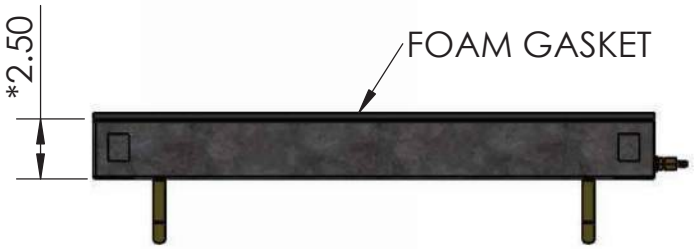
See Literature 2301 for more details.

Model Number	Actual Depth (inches)	Actual Height (inches)	Actual Width (inches)	Weight (lbs.)
For Built-up Bank Applications				
079473-004	2.69	24	12	4.3
079473-006		20	16	4.4
079473-005		25	16	5.0
079473-002		20	20	4.9
079473-003		25	20	5.5
079473-007		24	20	5.4
079473-001		24	24	6.0

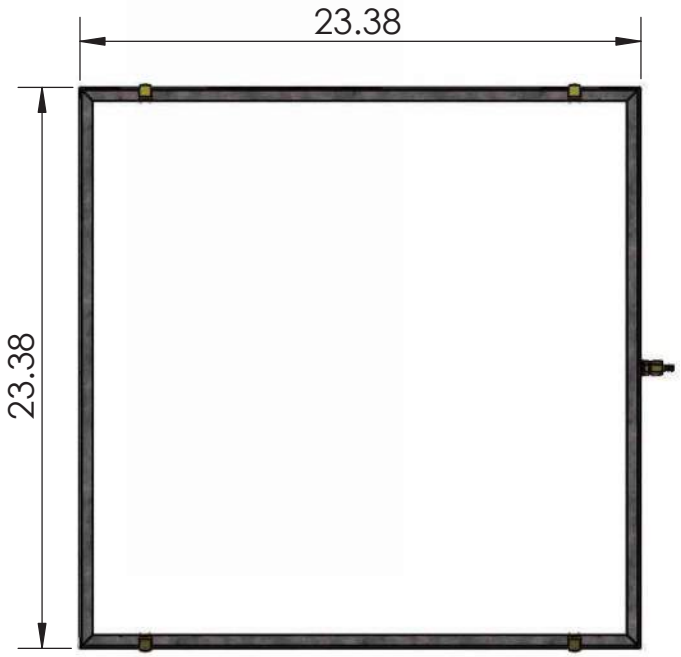
As part of our program for continuous improvement, Camfil reserves the right to change specifications without notice. 2018-12-07

Conover NC, Corcoran CA, Crystal Lake IL, Riverdale NJ,
Washington NC, Concord Ontario
United States Tel: (866) 422-6345, Canada Tel: (800) 976-9382
www.camfil.com

*DIMENSION DOES NOT INCLUDE FOAM GASKET

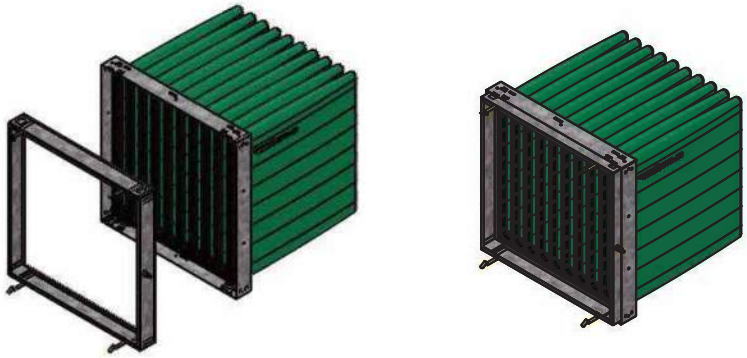


TOP VIEW



INLET VIEW

SIDE VIEW



ISOMETRIC VIEW OF INSTALLATION

GENERAL NOTES:

1. DESIGNED TO BE INSTALLED AFTER HEADER FILTER.
2. DESINGED TO HOLD 2" NOMINAL PREFILTER.

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:			
ANGULAR: ±1°			
FRACTION: ±1/16"			
DECIMAL: ±0.0625"			
DRAWN BY: *TLC*	DATE: *10/11/18*		
APPR. BY: *JH*	DATE: *10/11/18*		
SCALE: 1:8			

camfil WASHINGTON NORTH CAROLINA www.camfil.com

DRAWING TITLE: FFHF DP PLENUM 24X24

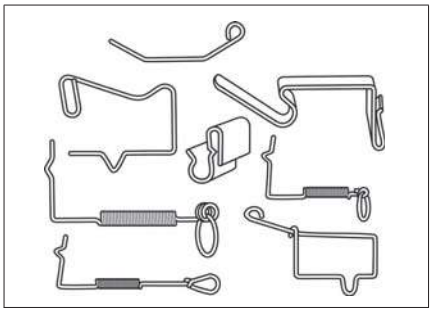
DWG SIZE	DRAWING NO.:	SHEET	OF	REV.
A	M25000667	1	1	0

MATERIAL: GALVANIZED STEEL -

REV.	DRAWN BY DATE	DESCRIPTION:	APPR. BY DATE

THE INFORMATION CONTAINED ON THIS DRAWING IS PROPRIETARY TO CAMFIL AND MAY NOT BE REPRODUCED NOR TRANSMITTED TO OTHER PARTIES WITHOUT THE CONSENT OF CAMFIL.

Fasteners



Advantages

- **Ensures that air filters are held in place securely in Camfil Type 8 Holding Frame or competitor's holding frame**
- **Configurations to hold pleated filters, box filters or filters with headers**

Typical applications: For securing air filters in built-up bank frames installed in HVAC applications in commercial, industrial, manufacturing and medical facilities.
Construction: Various forms including brass, galvanized steel or stainless steel. Consult factory.
Filters: Any 1" deep filter to various combinations of 2", 4", 6" and 12" ASHRAE grade filters in Camfil or competitive frames. May also be used with adsorbent panels or modules.

See Literature 2902 for more details.

	APPLICATIONS (4 fasteners per filter recommended for most applications) (See Sales Drawing # 050202)	Access	Model Number
30/30® Aeropleat® AP-Eleven Opti-Pac® in Type 8 Holding Frame	1" or 2" deep filter	U or D	C-70
	4" deep filter (use C-77 for Opti-Pac)	U	C-86
	4" deep filter (use C-77 for Opti-Pac)	U or D	C-77[1]
	2" deep filter as a prefilter to a Riga-Flo, or Aeropac (no header)	U	C-79-1
	4" deep filter as a prefilter to a Riga-Flo, or Aeropac (no header)	U	C-79-2
	4" deep Opti-Pac with 2" deep prefilter	U	C-79-5
	4" deep Opti-Pac with 4" deep prefilter	U	C-79-6
	2" deep filter as a prefilter to a Riga-Flo E-Series (no header)	U	C-102-1
	4" deep filter as a prefilter to a Riga-Flo E-Series (no header)	U	C-102-2
	1" deep filter as a prefilter in the same frame with Hi-Flo, Riga-Flo PH-A or Aeropac (single header)	U	C-70[4]
	2" deep filter as a prefilter in the same frame with Hi-Flo, Riga-Flo PH-A or Aeropac (single header). (Two C-70 should be used to hold headered filter in place, and two C-86 fasteners (or C-77) should be used to hold prefilter in place. Fasteners would be on opposite corners).	U	C-86[4] or C-77[1] & C-70
	4" deep filter as a prefilter in the same frame with Hi-Flo, Riga-Flo PH-A or Aeropac (single header)	U	C-89[4] & C-70
	2" deep filter as a prefilter in the same frame with Aeropac (double header)	U	C-103-1
	4" deep filter as a prefilter in the same frame with Aeropac (double header)	U	C-103-2
30/30® Aeropleat® Hi-Flo® S-Flo Opti-Pac® in other Manufacturer's Holding Frame	1" deep filter	U or D	C-78-1
	2" deep filter	U or D	C-78-2
	4" deep filter	U or D	C-78-4
	1" deep filter as a prefilter to a Hi-Flo or Riga-Flo PH-A	U	C-78-2[4]
	2" deep filter as a prefilter to a Hi-Flo or Riga-Flo PH-A	U	C-78-3[4]
	4" deep filter as a prefilter to a Hi-Flo or Riga-Flo PH-A	U	C-78-5[4]
	2" deep filter as a prefilter to an Opti-Pac	U	C-78-7
Riga-Flo® in Type 8 Holding Frame	To secure 12" deep filter — 24" x 24"	U or D	C-80[5] or C-99
	To secure 12" deep filter — 24" x 12"	U or D	C-80[2] or C-99[2]
	To secure 6" deep filter — 24" x 24"	U or D	C-90
	To secure 6" deep filter — 24" x 12"	U or D	C-90[2]
	To secure 6" deep filter as a prefilter to a 12" deep filter—24" x 24"	U	C-91
	To secure 6" deep filter as a prefilter to a 12" deep filter—24" x 12"	U	C-91[2]

As part of our program for continuous improvement, Camfil reserves the right to change specifications without notice. 2018-12-07

Conover NC, Corcoran CA, Crystal Lake IL, Riverdale NJ,
Washington NC, Concord Ontario
United States Tel: (866) 422-6345, Canada Tel: (800) 976-9382
www.camfil.com

Filter Frames & Housings

Frames (ASHRAE)

	APPLICATIONS (4 fasteners per filter recommended for most applications) (See Sales Drawing # 050202)	Access	Model Number
Riga-Flo® in other Manufacturer's Holding Frame	To secure 12" deep filter — 24" x 24"	U or D	C-83
	To secure 12" deep filter — 24" x 12"	U or D	C-83[2]
	To secure 6" deep filter — 24" x 24"	U or D	C-83-6
	To secure 6" deep filter — 24" x 12"	U or D	C-83-6[2]
Aeropac® Durafil® Hi-Flo® Riga-Flo® PH in Type 8 Holding Frame	To secure 12" deep Aeropac (no header) — 24" x 24", 24" x 12"	U or D	C-80[3] or C-99[2]
	To secure a single header pocket style filter (Hi-Flo)	U or D	C-70
	To secure a 12" deep single header style filter (Riga-Flo PH, Durafil, Aeropac)	U or D[5]	C-70
	To secure a 12" deep single header Aeropac style filter	U U or D	C-70 C-80
	To secure a 12" deep double header style filter	U	C-100
	To secure 6" deep single header style filter	U	C-70
	To secure 6" deep single header style filter	U or D	C-90

Notes

1 When using the Camfil 30/30 Class 1 filter in this application, a C-77 fastener should be used.

2 Two fasteners can be used for upstream application, however it is not recommended.

3 C-99 is also available in place of the C-80 to allow for more clearance downstream.

4 Hi-Flo filters can be accessed from either upstream or downstream.

5 To secure a Riga-Flo PH or Durafil using upstream access only, use a C-70 fastener, part number 050025-000. For the Durafil only, the C-70 fastener may be used on the

6 The terms upstream (U) and front access are synonymous, as are downstream (D) and rear access.

7 For upstream access & downstream access (Durafil and Aeropac only) where the filter goes through frame opening a C-70 fastener should be used. When the filter does

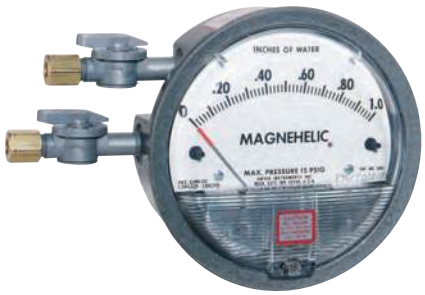
As part of our program for continuous improvement, Camfil reserves the right to change specifications without notice. 2018-12-07

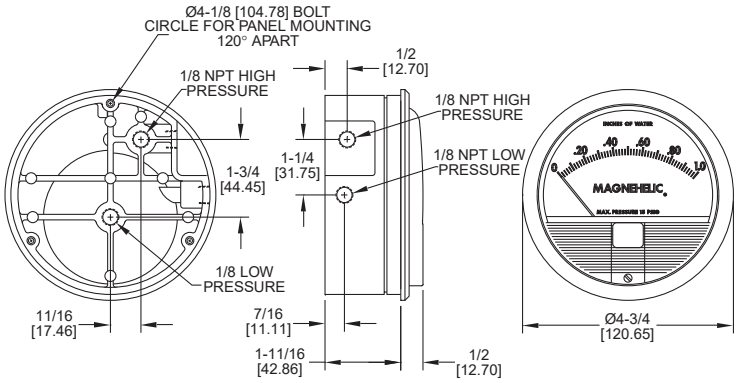
camfil

Conover NC, Corcoran CA, Crystal Lake IL, Riverdale NJ,
Washington NC, Concord Ontario
United States Tel: (866) 422-6345, Canada Tel: (800) 976-9382
www.camfil.com

Series 2000 Magnehelic® Air Filter Gages

Specifications - Installation and Operating Instructions





The Magnehelic® gage consists of two pressure-tight compartments separated by a molded flexible diaphragm.

The interior of the gage case serves as the "high" pressure compartment and a sealed chamber behind the diaphragm serves as the "low" pressure compartment.

Differences in pressure between the "high" and "low" sides of the diaphragm cause the diaphragm to assume a balanced position between the two pressures. The front support plate of the diaphragm is linked to a leaf spring which is anchored at one end. The spring provides calibrated resistance to the diaphragm motion. Motion of the spring is transmitted through an exclusive magnetic linkage to the pointer.

The Magnehelic® gage requires no maintenance. The only field adjustment required is occasional zero setting of the pointer which is done by opening the plastic vent valves and turning the adjustment of the gage.

STANDARD ACCESSORIES FURNISHED

Two 1/8″ NPT plugs for duplicate pressure taps, two 1/8″ pipe thread to rubber tubing adapter and three flush mounting adapters with screws. (Mounting and snap ring retainer substituted for 3 adapters in MP & HP gage accessories.)

Air Filter accessories furnished are mounting panel with necessary screws, two static pressure tips with integral compression fittings, two five foot lengths of 1/4″ aluminum tubing and the two molded plastic vent valve with compression fittings.

The Magnehelic® gage with molded plastic vent valves for easy zeroing. Available with adjustable signal flag (not shown; option "ASF" at extra cost) for immediate visual reference to maximum allowable pressure drop; External front screw for zero adjustment. Red and green scale overlays to highlight safe and dangerous readings are also available.

FEATURES

- Easiest reading for personnel accustomed to dial type gages.
- Lowest cost pointer type gage.
- Easy zeroing with molded plastic vent valves.
- Sensitivity to 0.01″ w.c.
- Withstands vibration.
- Unaffected by over range pressure surges.

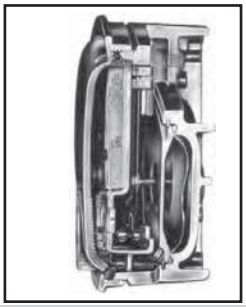
SPECIFICATIONS

Service: Air and non-combustible, compatible gases. (Natural Gas option available.)
Wetted Materials: Consult Factory.
Housing: Die cast aluminum case and bezel, with acrylic cover, Exterior finish is coated gray to withstand 168 hour salt spray corrosion test.
Accuracy: ±2% of full scale (±3% on - 0 and ±4% on - 00 ranges), throughout range at 70°F (21.1°C).
Pressure Limits: -20″ Hg. to 15 psig.† (-0.677 bar to 1.034 bar); MP option; 35 psig (2.41 bar), HP option; 80 psig (5.52 bar).
Overpressure: Relief plug opens at approximately 25 psig (1.72 kPa), standard gages only.
Temperature Limits: 20 to 140°F.* (-6.67 to 60°C).
Size: 4″ (101.6 mm) Diameter dial face.
Mounting Orientation: Diaphragm in vertical position. Consult factory for other position orientations.
Process Connections: 1/8″ female NPT duplicate high and low pressure taps - one pair side and one pair back.
Weight: 1 lb 2 oz (510 g), MP & HP 2 lb 2 oz (963 g).

* Low temperature models available as special option.
† For applications with high cycle rate within gage total pressure rating, next higher rating is recommended. See Medium and High pressure options at lower left.

OPERATING RANGES AVAILABLE

Model Number	Range	Minor Divisions
2000-0-AF	0-.5" water	0.01"
2001-AF	0-1" water	0.02"
2002-AF	0-2" water	0.05"
2003-AF	0-3" water	0.10"
2004-AF	0-4" water	0.10"



Cutaway view of the Magnehelic® gage showing the actuating diaphragm, the leaf spring with magnet, the helix which turns the indicating pointer in response to the position of the magnet without mechanical linkages.

DWYER INSTRUMENTS, INC.
P.O. BOX 373 • MICHIGAN CITY, INDIANA 46361, U.S.A.
Phone: 219/879-8000
Fax: 219/872-9057
www.dwyer-inst.com
e-mail: info@dwyer-inst.com

RUSKIN®

AMCA LICENSED
See Page 2

3900 Dr. Greaves Rd. • Kansas City, MO 64030 • (816) 761-7476 • FAX (816) 765-8955

CD50 LOW LEAKAGE CONTROL DAMPER

High Performance Extruded Aluminum Airfoil
Class 1A Leakage Rated

APPLICATION

The CD50 is a low leak, extruded aluminum damper designed with airfoil blades for higher velocity and pressure HVAC stystems. It meets the leakage requirements of the International Energy Conservation Code by leaking less than 3 cfm/sq. ft. at 1" of static pressure and is AMCA licensed as a Class 1A damper.

STANDARD CONSTRUCTION

FRAME
5" x 1" x 6063T5 extruded aluminum hat channel with .125" minimum wall thickness (127 x 25 x 3.2). Low profile, 5" x 1/2" (127 x 13) top and bottom frames on dampers 12" (305) high and less. Mounting flanges on both sides of frame.

BLADES
6" (152) wide, 6063T5 heavy gage extruded aluminum, airfoil shape.

SEALS
Ruskiprene blade edge seals and flexible metal compressible jamb seals.

BEARINGS
Molded synthetic.

LINKAGE
Concealed in frame.

AXLES
1/2" (13) plated steel hex.

MAXIMUM SIZE
Single section – 60"w x 72"h (1524 x 1829).
Multiple section assembly – Unlimited size.

MINIMUM SIZE
Single blade – 6"w x 5"h (152 x 127).
Two blades, parallel or opposed action: 6"w x 9"h (152 x 229).

TEMPERATURE LIMITS
-72°F (-58°C) and +275°F (+135°C) .

FEATURES

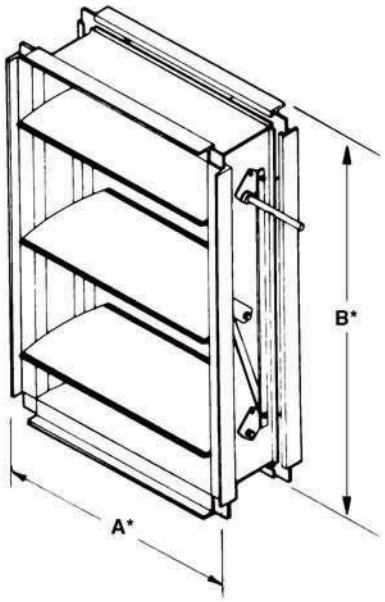
- Airfoil blade design for low pressure drop and less noise generation.
- Positive lock axles, noncorrosive bearings and shake proof linkage for low maintenance operation.
- Blade edge seals mechanically lock into the blade for superior sealing.

OPTIONS

- Factory-installed, pneumatic and electric actuators.
- Enamel and epoxy finishes.
- SP100 Switch Package to remotely indicate damper blade position.
- 16 gage galvanized steel hat channel frame.
- Front, rear or double flange frame with or without bolt holes.
- Face and bypass configurations.

NOTE: Dimensions shown in parenthesis ( ) indicate millimeters.

*Units furnished approximately 1/4" (6) smaller than given opening dimensions.

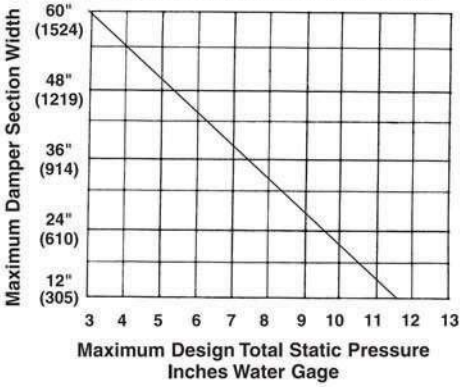


ALL STATED SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE OR OBLIGATION.

© Ruskin Co. February 2005

CD50 AMCA LICENSED PERFORMANCE DATA

CD50 PRESSURE LIMITATIONS



The CD50 may be used in systems with total pressures exceeding 3.5" by reducing damper section width as indicated. Example: Maximum design total pressure of 8.5" w.g. would require CD50 damper with maximum section width of 36" (914).

Pressure limitations shown above allow maximum blade deflection of 1/180 of span on 60" (1524) damper widths. Deflections in other damper widths (less than 48" [1219]) at higher pressures shown will result in blade deflection substantially less than 1/180 of span.

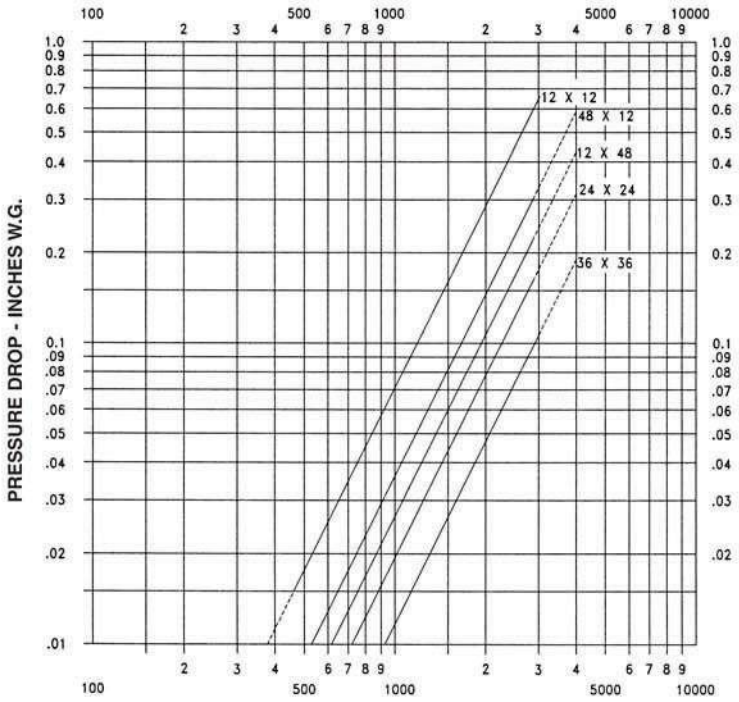
Ruskin Company certifies that the CD50 shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program.The AMCA International Certified Ratings Seal applies to Air Performance and Air Leakage.

Pressure/ Class	Leakage, L/s/m² (ft³/min/ft²)			
	Required Rating		Extended Ranges (Opt.)	
	1" (0.25 kPa)	4" (1.0 kPa)	8" (2.0 kPa)	12" (3.0 kPa)
1A	3 (15.2)	N/A	N/A	N/A
1	4 (20.3)	8 (40.6)	11 (55.9)	14 (71.1)
2	10 (50.8)	20 (102)	28 (142)	35 (178)
3	40 (203)	80 (406)	112 (569)	140 (711)

DAMPER WIDTH (INCHES)	1 IN. W.G.	4 IN. W.G.	8 IN. W.G.
12" (305)	IA	I	II
24" (610)	IA	I	II
36" (914)	IA	I	NA
48" (1219)	IA	I	NA
60"(1524)	IA	I	NA

Leakage testing conducted in accordance with AMCA Standard 500-D-98. Torque applied holding damper closed, 5 in. lbs./sq. ft. on opposed blade dampers and 7 in. lbs./sq. ft. on parallel blade dampers. Air leakage is based on operation between 50°F to 104°F. All data corrected to represent standard air density 0.075 lbs/ft³.

VELOCITY VS. PRESSURE DROP



FACE VELOCITY - FEET/MINUTE
AMCA FIG. 5.3

CD50 sizes 12 x 12, 24 x 24, 48 x 12, 12 x 48, 36 x 36 (305 x 305, 610 x 610, 1219 x 305, 305 x 1219, 914 x 914)

All data corrected to represent standard air at a density of 0.075 lbs/ft³.

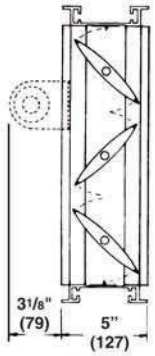
SOUND RATINGS

CD50 SOUND RATINGS

Damper Size	Damper Full Open		Damper 75% Open		Damper 50% Open		Damper 25% Open	
	CFM	NC	CFM	NC	CFM	NC	CFM	NC
12 x 12 (305 x 305)	2000	17	1500	11	1000	11	500	*
	3000	28	2250	22	1500	19	750	*
	4000	35	3000	29	2000	24	1000	*
18 x 18 (457 x 457)	2250	17	1688	10	1125	21	563	*
	4500	33	3375	26	2250	32	1125	*
	6750	43	5063	37	3375	40	1688	15
24 x 24 (610 x 610)	4000	11	3000	10	2000	26	1000	*
	8000	32	6000	30	4000	38	2000	21
	12000	43	9000	42	6000	46	3000	31

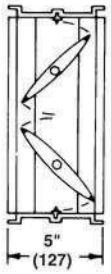
NC = Noise criteria in Decibels is based on 10db room effect and 10db of room attenuation.
* = Less than 10 NC
See ASHRAE Handbook (1977 Fundamentals, Chapter 7) for explanation of NC Ratings.

DIMENSIONAL INFORMATION



OPPOSED BLADE

PARALLEL BLADE



LOW PROFILE
Standard construction for higher free area on dampers 12" (305) high and less.

CD50 SUGGESTED SPECIFICATION

Furnish and install, at locations shown on plans, or in accordance with schedules, Low leakage dampers shall meet the following minimum construction standards: Frames shall be 5" x 1" x .125" (minimum thickness) (127 x 25 x 3.2) 6063T5 extruded aluminum hat channel with hat mounting flanges on both sides of the frame. Each corner shall be reinforced with two die formed internal braces and machine staked for maximum rigidity. Blades shall be airfoil type extruded aluminum (maximum 6" [152] depth) with integral structural reinforcing tube running full length of each blade.

Blade edge seals shall be extruded double edge design with inflatable pocket which enables air pressure from either direction to assist in blade to blade seal off. Blades seals shall be mechanically locked in extruded blade slots, yet shall be easily replaceable in field. Adhesive or clip-on type blade seals are not acceptable. Bearings shall be non-corrosive molded synthetic. Axles shall be hexagonal (round not acceptable) to provide positive locking connection to blades and linkage. Linkage shall be concealed in frame. Submittal must include leakage, maximum air flow and maximum pressure ratings based on AMCA Publication 500. Damper shall be tested and licensed in accordance with AMCA 511 for Air Performance and Air Leakage. Damper widths from 12" to 60" (305 to 1524) wide shall not leak any greater than 8 cfm sq. ft. @ 4" w.g. and a maximum of 3 CFM sq. ft. @ 1" w.g. Dampers shall be in all respects equivalent to Ruskin Model CD50.

RUSKIN®

3900 Dr. Greaves Rd. • Kansas City, MO 64030 • (816) 761-7476 • FAX (816) 765-8955

SD50 SMOKE DAMPER

UL555S Leakage Class 1 Classified

APPLICATION

The SD50 is an ultra low leakage rated smoke damper used in ducts that penetrate smoke rated barriers. One-piece extruded aluminum airfoil blades insure lowest resistance to airflow with velocities up to 4000 fpm (20.3 m/s) and 8 in w.g. (2 kPa). The SD50 may be installed vertically (with blades running horizontal) or horizontally and is rated for airflow and leakage in either direction.

STANDARD CONSTRUCTION	
Description	**SD50**
Frame	5" x 1" (127 x 25) 6063T5 extruded aluminum, hat shaped channel, .125" (3) minimum wall thickness.
Blades	One-piece 6063T5 extruded aluminum, airfoil shape, 6" (152) wide. Blades are approximately 6" (152) on center.
Bearings	Stainless steel sleeve type, pressed into frame.
Jamb Seals	Stainless steel, flexible metal compression type.
Blade Seals	Silicone edge type for smoke seal to 450°F (232°C) mechanically fastened to the blade edge.
Linkage	Concealed in frame.

OPERATION OPTIONS

Fail Position: Closed or Open

DAMPER SIZES

Sizes listed below are for ratings of 2000 fpm (10.2 m/s) and 4 in. wg (1 kPa). See page 3 for extended operational ratings.

MINIMUM SIZE

8"w x 6"h (203 x 152).

MAXIMUM SIZE

Single Section

48"w x 72"h (1219 x 1829).

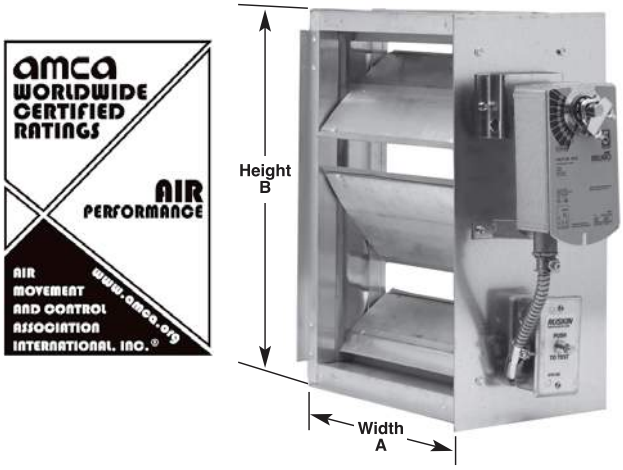
Multiple Section

144"w x 96"h (3658 x 2438), 288"w x 48"h (7315 x 1219) or 72"w x 192"h (1829 x 4877).

*Multiple section assemblies consist of 36" x 48" (914 x 1219) max single section sizes.

NOTES

1. Dampers furnished approximately 1/4" (6) smaller than given opening dimensions.
2. Dimensions shown in ( ) indicate millimeters.



*Damper shown with optional DTS-SD

MAXIMUM OPERATIONAL RATINGS	
Description	**SD50**
UL555S Leakage Rating	Class I
Maximum Velocity	4000 FPM (20.3 m/s)
Maximum Pressure	8 in. wg (2kPa)
Temperature	250°F (121°C)

OPTIONS

- **FM Approvals** as Specification Tested Product.
- **DSDF/DSDN Smoke Detector** (Flow rated or No-Flow)
- **DTS-SD** (Damper Test Switch) test switch for cycle testing.
- **SP100 Switch Package** to allow remote indication damper of damper blade position.
- **Factory Sleeves** of various lengths and thicknesses to ensure field compliance with UL installation requirements.
- **MCP** control panels for test purposes or smoke management systems.

Model SD50 meets the requirements for smoke dampers established by:

- **National Fire Protection Association** NFPA Standards 80, 90A, 92A, 92B, 101 and 105.
- **ICC International Building Codes**
- **CSFM California State Fire Marshal** Listing (#3230-0245:0130)
- **New York City** (MEA 252-05-E)

CLASSIFIED C UL US — SEE COMPLETE MARKING ON PRODUCT

UL555S Classification R5531

FM Approvals
Specification Tested Product
(Option)

ALL STATED SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE OR OBLIGATION.

© Ruskin July 2015

AMCA LICENSED AIR PERFORMANCE DATA

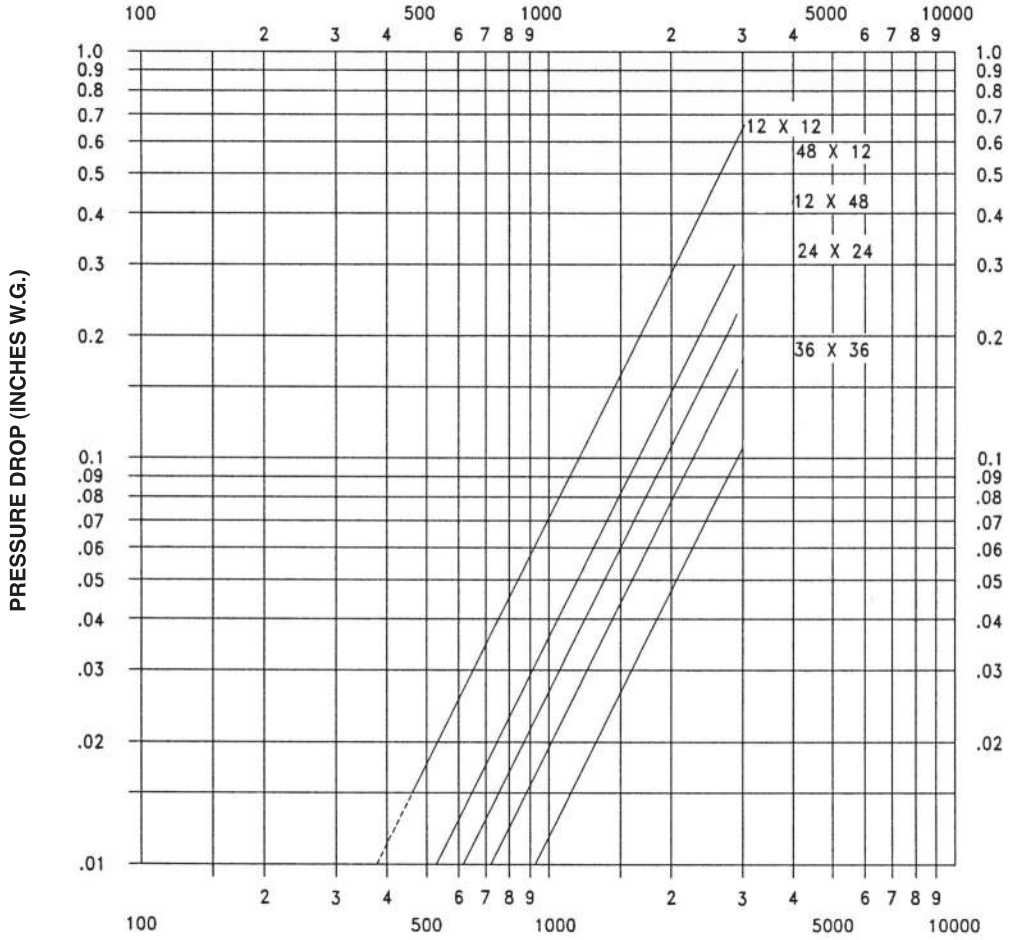
Ruskin Company certifies that the SD50 shown hereon is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to air performance for the SD50.

To determine the AMCA Licensed air performance:

Locate the applicable feet per minute face velocity on the bottom of the velocity vs. pressure drop chart below. Move up the chart to the most appropriate size damper line. From the intersection point, move left to determine the pressure drop on the left side of the chart.

For other damper sizes refer to **Air Performance Data For All Smoke Dampers** spec sheet.

VELOCITY vs. PRESSURE DROP



FACE VELOCITY – FEET/MINUTE

AMCA Fig. 5.3

Review Comments

Affiliated Engineers, Inc.

10 S. LaSalle Street
Chicago, IL 60603
Tel 312.977.2800 • Fax 312.977.2801

University of Kentucky – Pav. A 5th Floor Fitup	20736-00
Project Name	Project Number
AHU Return Fans MMP Panel	12/15/20
Description	Date
23 7323-02	
Submittal Identification Number	
Chris Aschenbrenner / Stephanie Chartrand	1 of 1
Reviewer	Page

Action:

- ☐ Approved as Submitted
- ☒ Approved as Noted (Refer to Individual Items Below)
  - ☒ Resubmittal Not Required
  - ☐ Resubmit Noted Portions Only
  - ☐ Resubmit
- ☐ Not Approved
- ☐ Reviewed Only/No Approval Action Required
- ☐ Review Not Required by Contract Documents
- ☐ Other

Reviewed only for general conformance with design concept and information given in the Contract Documents. Corrections or comments made by reviewer on the submittal do not relieve the contractor from compliance with of the Contract Documents. Approval of a specific item shall not infer approval of an assembly of which the item is a component. The contractor is responsible for all dimensions, field conditions, coordination with other trades, and information that pertains solely to the fabrication process.

Comments:

1. Equipment shall be re rated for available fault current for total fan array
2. Return fan MMP lugs for incoming wire shall be sized for 3#4, 1#8G

Turner

Project Name: UK 5th Floor Fit Out **Signature:** _____ **Date:** 12/14/2020

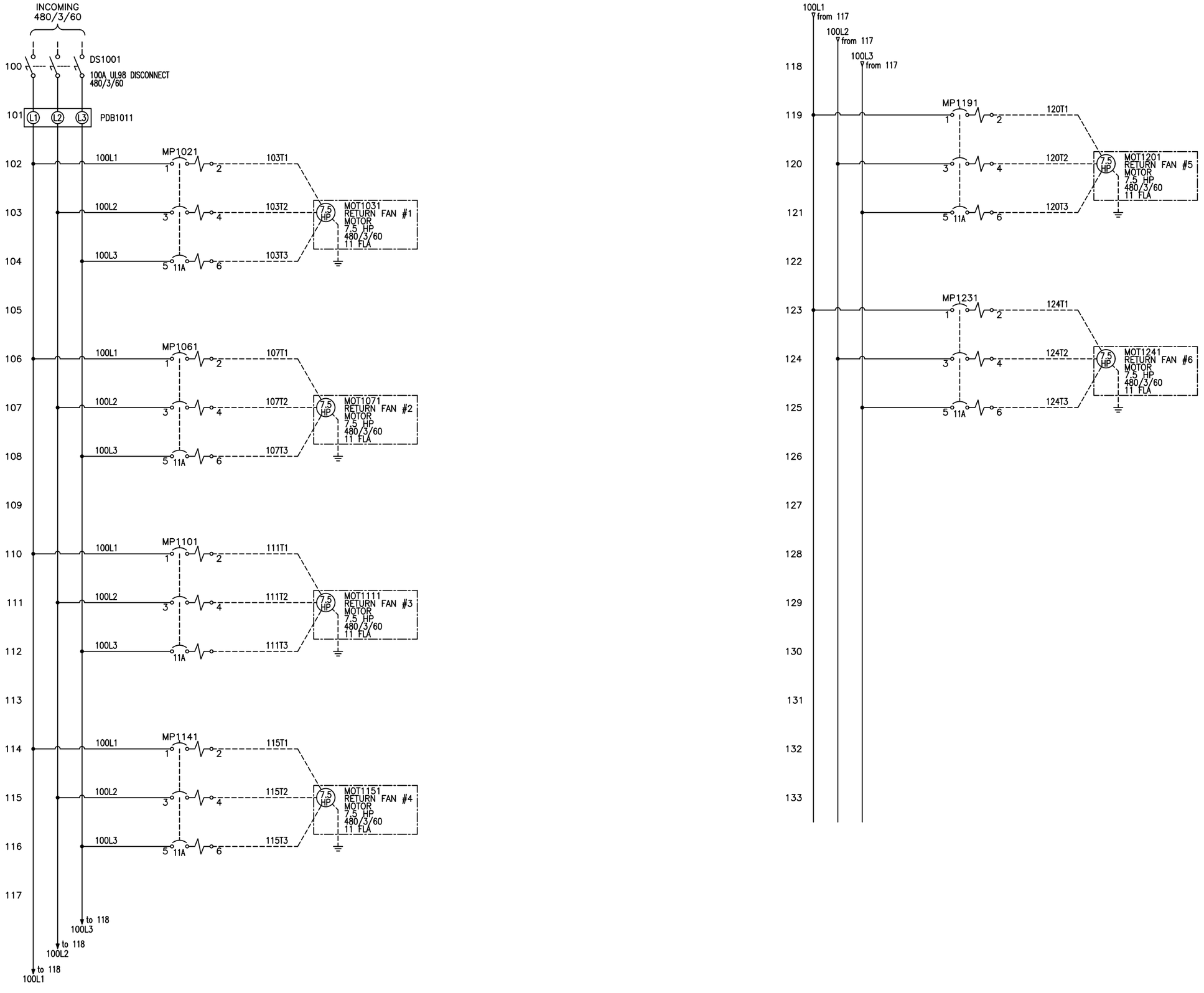
This review does not relieve the Trade Contractor of the responsibility for making the work conform to the requirements of the Contract. The Trade Contractor is responsible for all dimensions, correct fabrication and accurate fit with the work of other trades.

Date of Submittal Reception: 12/09/20 **Type:** Shop Drawing
Submittal #: 237323-02 **Submittal Description:** AHU Return Fans MMP Panel
Trade Contractor: Air Flow Equipment

SIMILAR TO SPEC
DIFFERENT FROM SPEC
TURNER COMMENTS

Additional Comments: _____

REV	DESCRIPTION	DATE	BY
.	.	.	.



JP MOTORS

JP MOTORS & DRIVES
7870 S. SPRINKLE ROAD, PORTAGE, MICHIGAN 49002
PHONE (269) 321-0070 FAX (269) 321-0072

DATE 11/13/2020	JOB NO. AF-UK-PAV-A-5TH-RF	DRAWN CB	
SCALE N/A		BOM = 1	DWG = 1

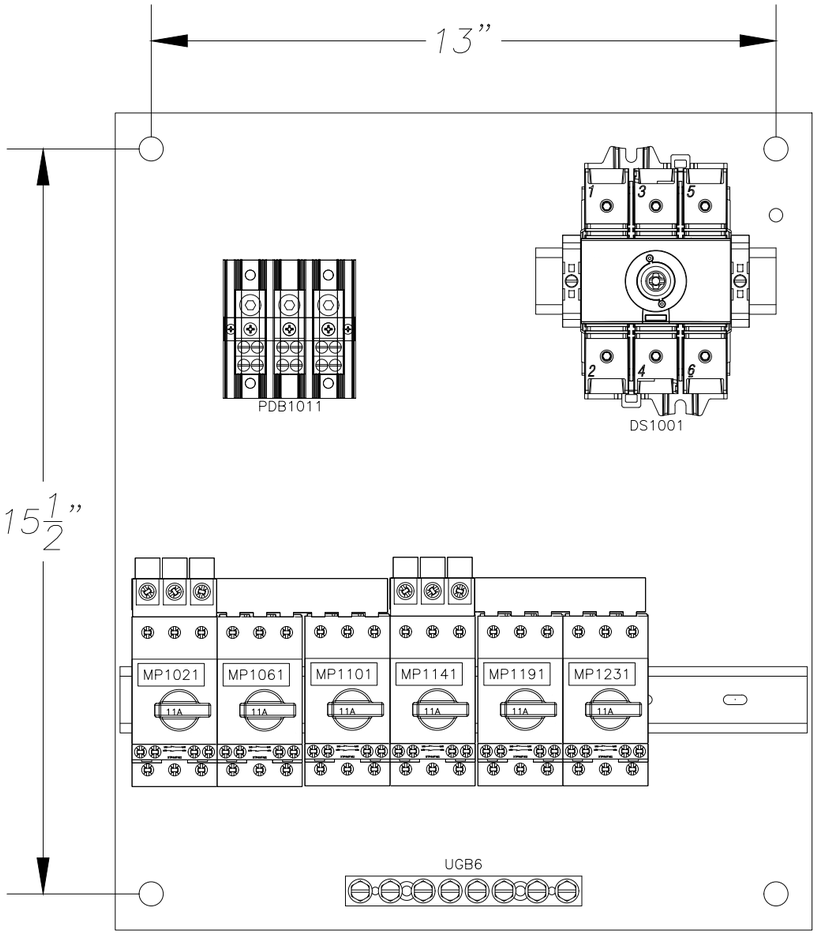
TITLE

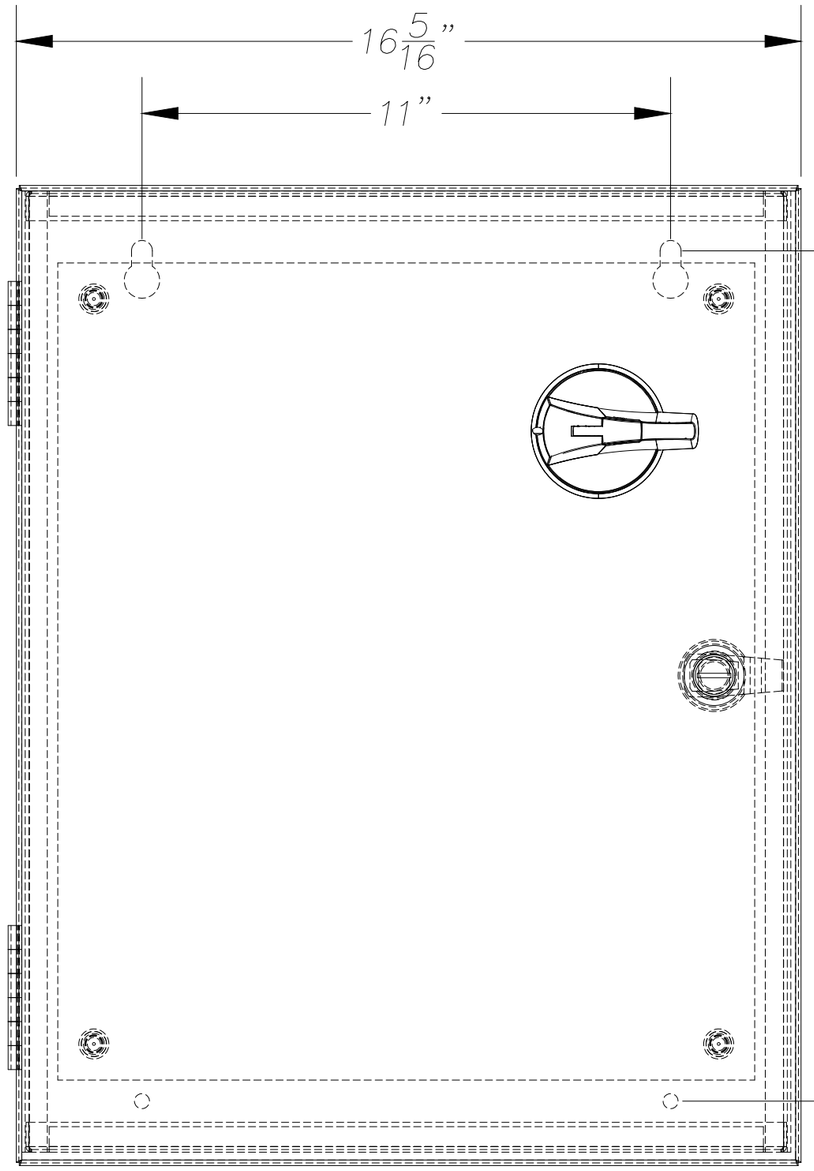
WIRING DIAGRAM
MOTOR CONTROL PANEL

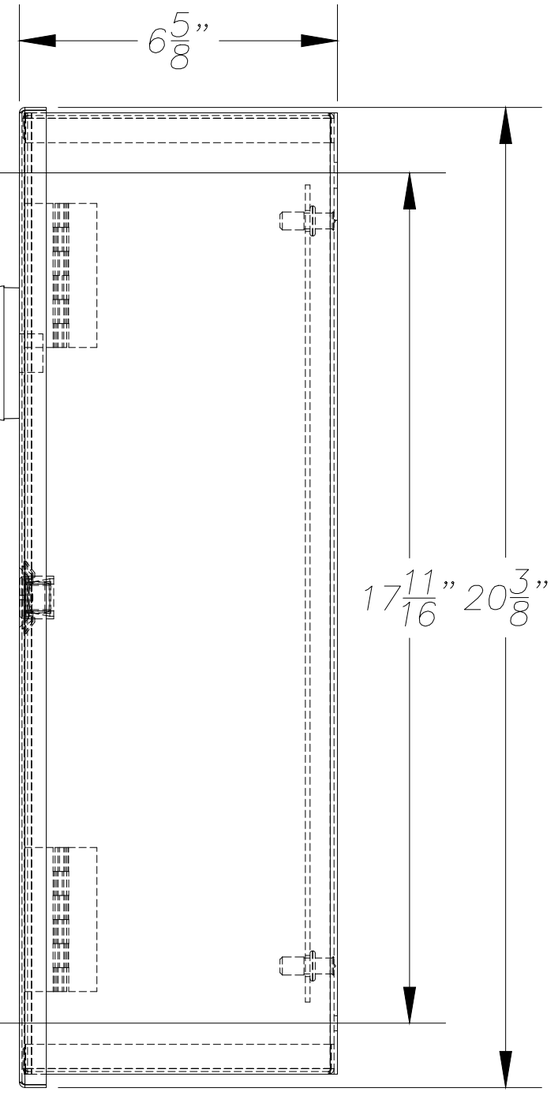
CUST. AIR FLOW EQUIPMENT

SHEET 1 OF 3	DWG. NO. AF-UK-PAV-A-5TH-RF	REV. .

REV	DESCRIPTION	DATE	BY
.	.	.	.







VOLTAGE:	480 VOLT
PHASE & FREQ.:	3PH., 60HZ
FULL LOAD CURRENT:	66 AMP
S.C.C.R.:	10k AMP
ENCLOSURE RATING:	TYPE 1
SCHEMATIC:	AF-UK-PAV-A-5TH-RF
MFG. BY:	JP Motors and Drives

JP MOTORS
JP MOTORS & DRIVES
7870 S. SPRINKLE ROAD, PORTAGE, MICHIGAN 49002
PHONE (269) 321-0070 FAX (269) 321-0072

DATE 11/13/2020	JOB NO. AF-UK-PAV-A-5TH-RF	DRAWN	CB
SCALE N/A		BOM = 1	DWG = 1

TITLE

PANEL LAYOUT

MOTOR CONTROL PANEL

CUST. AIR FLOW EQUIPMENT

SHEET	OF	DWG. NO.	REV.
2	3	AF-UK-PAV-A-5TH-RF	.

REV	DESCRIPTION	DATE	BY
.	.	.	.

ITEM	QTY	PART #	MANUFACTURE	DESCRIPTION	DESCRIPTOR
1	1	A20N16ALP	HOFFMAN	20"x16"x6.62" NEMA 1 ENCLOSURE	.
2	1	A20N16MP	HOFFMAN	SUB PANEL	.
3	1	RD100-3	BUSSMANN	100A UL98 ROTARY DISCONNECT	DS1001
4	1	SH4-200	BUSSMANN	200mm LENGTH, DISCONNECT SHAFT	DS1001
5	1	H4X-02B	BUSSMANN	DISCONNECT SELECTOR HANDLE, SIZE 2, NEMA 4/4X	DS1001
6	1	1492-PD3141	AB	175A POWER DISTRIBUTION BLOCK	PDB1011
7	1	1492-PBC1	AB	PDB COVER	PDB1011
8	6	XTPR016BC1	EATON	10-16A MOTOR PROTECTOR, B FRAME	MP1021-1231
9	6	XTPAXFA11	EATON	1 NO/ 1 NC FRONT MOUNT AUX CONTACT BLOCK	MP1021-1231
10	2	XTPAXLSA	EATON	LINE SIDE ADAPTOR	LSA1021,1141
11	2	XTPAXCLKA3	EATON	3 POLE 3 DEVICE COMMONING LINK	MP1021-1101,1141-1231
12	2	0800886	PHOENIX	SCREW ON END STOP	.
13	2'	0801733	PHOENIX	35mm DIN RAIL	.
14	1	UGB2/0-414-6	PANDUIT	6 POINT GROUND BAR	UGB6
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
41					
42					
43					
44					
45					
46					
47					
48					
49					
50					
51					
52					
53					
54					
55					
56					

ITEM	QTY	PART #	MANUFACTURE	DESCRIPTION	DESCRIPTOR
57					
58					
59					
60					
61					
62					
63					
64					
65					
66					
67					
68					
69					
70					
71					
72					
73					
74					
75					
76					
77					
78					
79					
80					
81					
82					
83					
84					
85					
86					
87					
88					
89					
90					
91					
92					
93					
94					
95					
96					
97					
98					
99					
100					
101					
102					
103					
104					
105					

JP MOTORS
JP MOTORS & DRIVES
7870 S. SPRINKLE ROAD, PORTAGE, MICHIGAN 49002
PHONE (269) 321-0070 FAX (269) 321-0072

DATE	11/13/2020	JOB NO.	AF-UK-PAV-A-5TH-RF	DRAWN	CB
SCALE	N/A			BOM = 1	DWG = 1

TITLE

BILL OF MATERIALS

MOTOR CONTROL PANEL

CUST. AIR FLOW EQUIPMENT

SHEET	OF	DWG. NO.	REV.
3	3	AF-UK-PAV-A-5TH-RF	.

Review Comments

Affiliated Engineers, Inc.

10 S. LaSalle Street
Chicago, IL 60603
Tel 312.977.2800 • Fax 312.977.2801

University of Kentucky – Pav. A 5th Floor Fitup	20736-00
Project Name	Project Number
AHU Return Fans MMP Panel	12/15/20
Description	Date
23 7323-02	
Submittal Identification Number	
Chris Aschenbrenner / Stephanie Chartrand	1 of 1
Reviewer	Page

THIS REVIEW BY GBBN ARCHITECTS INC. IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR: ALL DIMENSIONS AND QUANTITIES, ALL FABRICATION, DELIVERY AND ERECTION; ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN ■ _____
EXCEPTIONS NOTED ☐ _____
REVISE AND RESUBMIT ☐ _____
FOR RECORD ONLY – NO REVIEW ☐ _____

By: cbowling 4:41:22 PM 12/23/2020

GBBN Architects, INC.
www.gbbn.com

Action:

- ☐ Approved as Submitted
- ☒ Approved as Noted (Refer to Individual Items Below)
  - ☒ Resubmittal Not Required
  - ☐ Resubmit Noted Portions Only
  - ☐ Resubmit
- ☐ Not Approved
- ☐ Reviewed Only/No Approval Action Required
- ☐ Review Not Required by Contract Documents
- ☐ Other

Reviewed only for general conformance with design concept and information given in the Contract Documents. Corrections or comments made by reviewer on the submittal do not relieve the contractor from compliance with of the Contract Documents. Approval of a specific item shall not infer approval of an assembly of which the item is a component. The contractor is responsible for all dimensions, field conditions, coordination with other trades, and information that pertains solely to the fabrication process.

Comments:

1. Equipment shall be re rated for available fault current for total fan array
2. Return fan MMP lugs for incoming wire shall be sized for 3#4, 1#8G

PER CONSULATANT REVIEW AND COMMENT

Turner

Project Name: UK 5th Floor Fit Out **Signature:** _____ **Date:** 12/14/2020

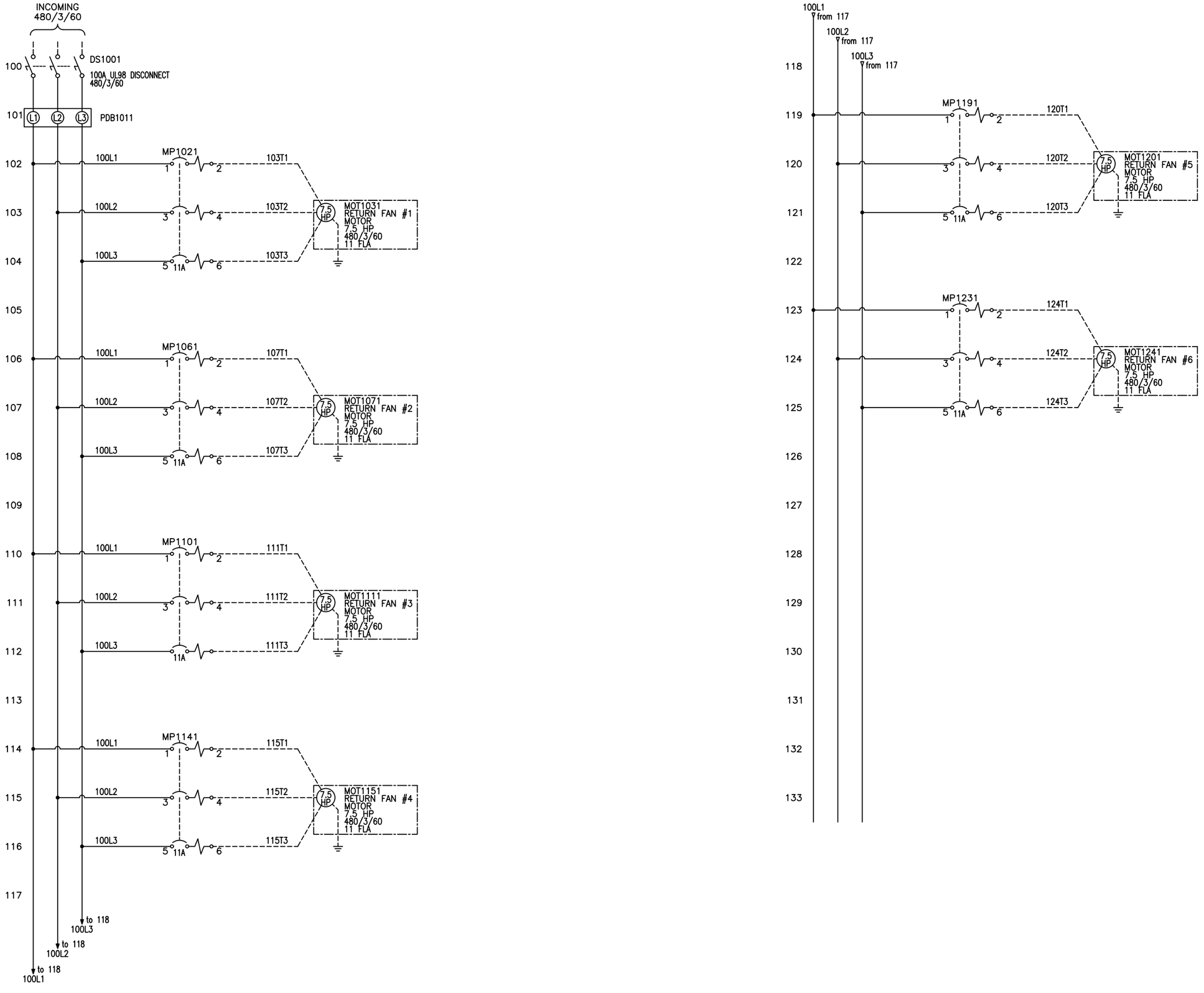
This review does not relieve the Trade Contractor of the responsibility for making the work conform to the requirements of the Contract. The Trade Contractor is responsible for all dimensions, correct fabrication and accurate fit with the work of other trades.

Date of Submittal Reception: 12/09/20 **Type:** Shop Drawing
Submittal #: 237323-02 **Submittal Description:** AHU Return Fans MMP Panel
Trade Contractor: Air Flow Equipment

SIMILAR TO SPEC
DIFFERENT FROM SPEC
TURNER COMMENTS

Additional Comments: _____

REV	DESCRIPTION	DATE	BY
.	.	.	.



JP MOTORS

JP MOTORS & DRIVES
7870 S. SPRINKLE ROAD, PORTAGE, MICHIGAN 49002
PHONE (269) 321-0070 FAX (269) 321-0072

DATE 11/13/2020	JOB NO. AF-UK-PAV-A-5TH-RF	DRAWN CB	
SCALE N/A		BOM = 1	DWG = 1

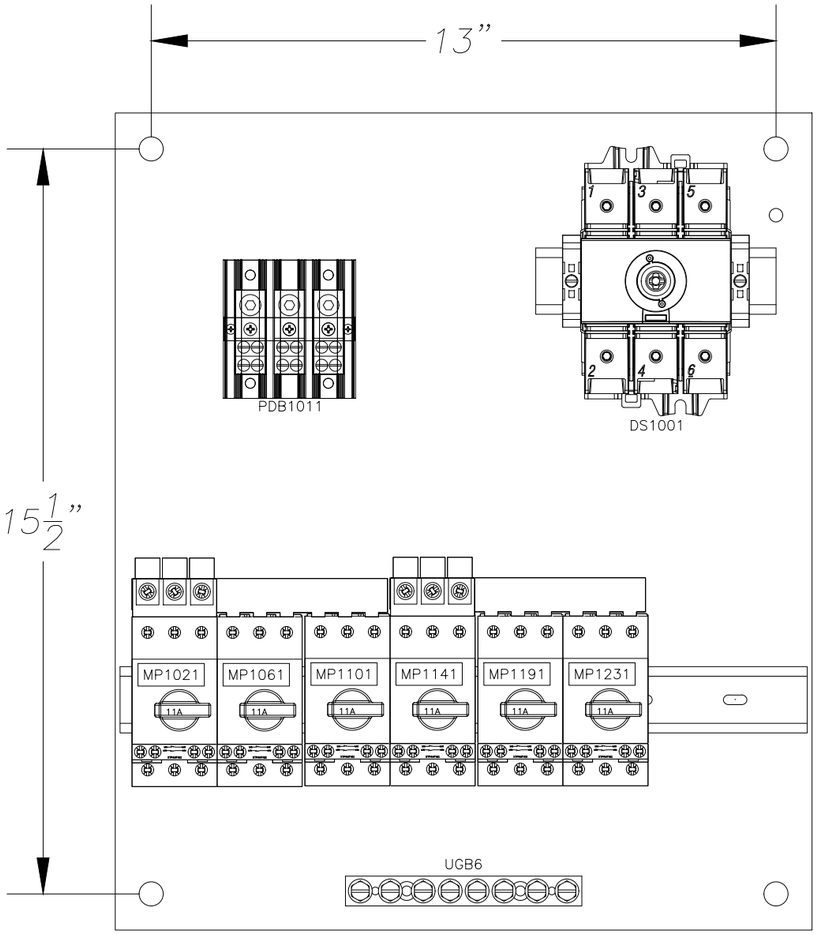
TITLE

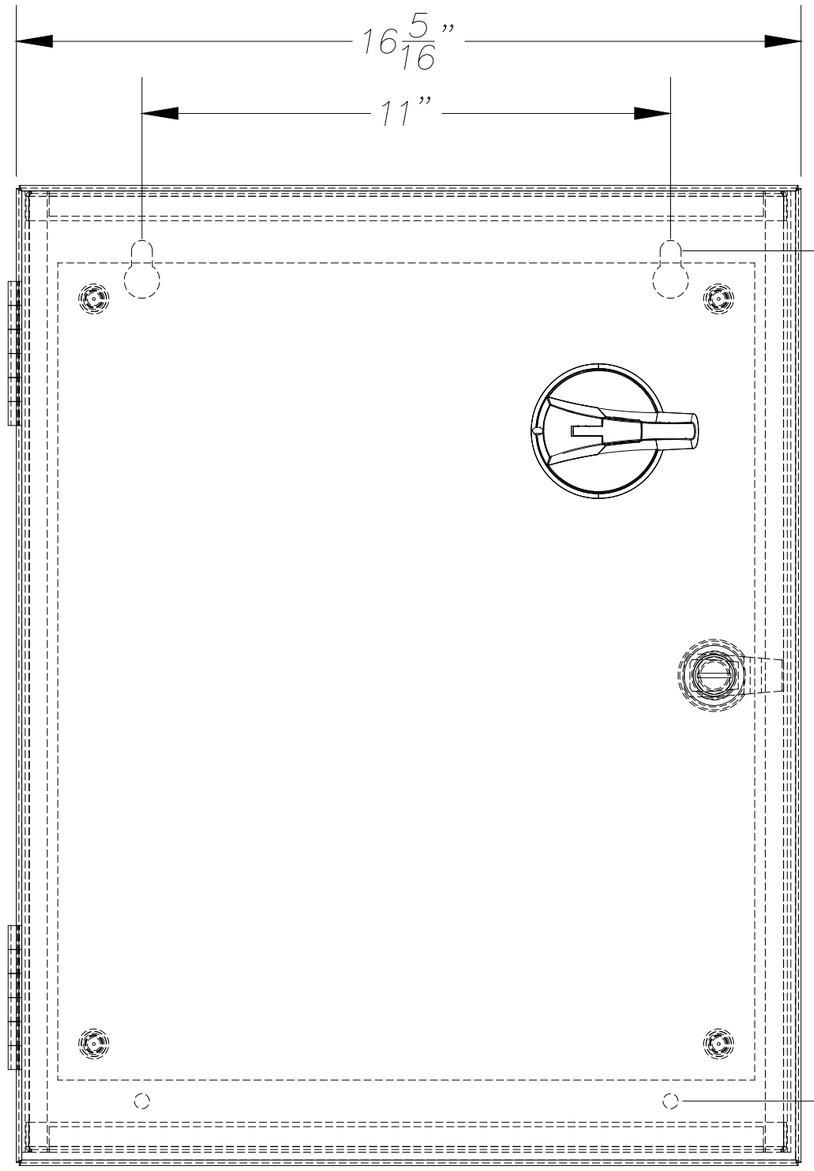
WIRING DIAGRAM
MOTOR CONTROL PANEL

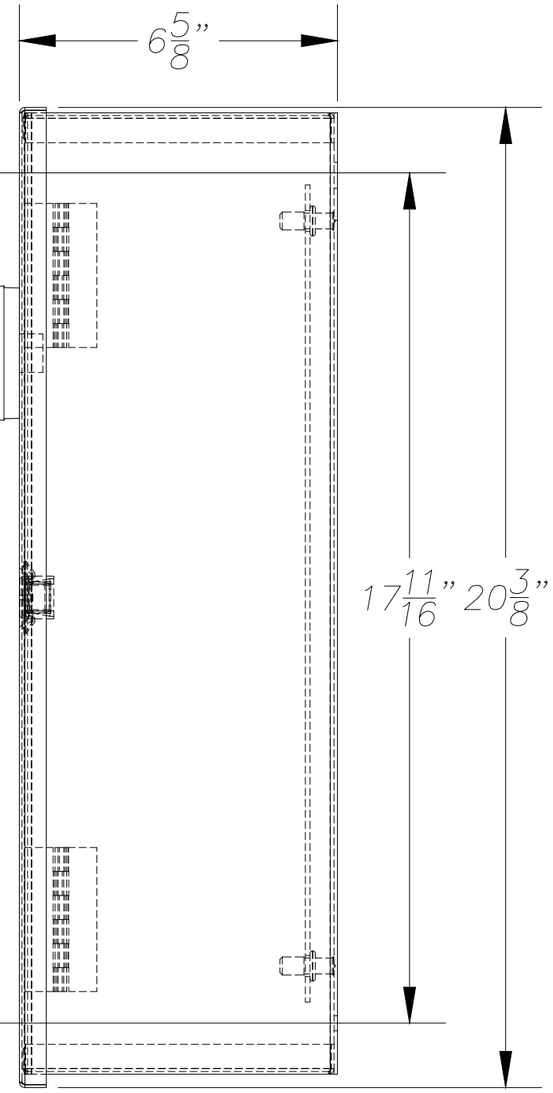
CUST. AIR FLOW EQUIPMENT

SHEET 1 OF 3	DWG. NO. AF-UK-PAV-A-5TH-RF	REV. .

REV	DESCRIPTION	DATE	BY
.	.	.	.







VOLTAGE:	480 VOLT
PHASE & FREQ.:	3PH., 60HZ
FULL LOAD CURRENT:	66 AMP
S.C.C.R.:	10k AMP
ENCLOSURE RATING:	TYPE 1
SCHEMATIC:	AF-UK-PAV-A-5TH-RF
MFG. BY:	JP Motors and Drives

JP MOTORS
JP MOTORS & DRIVES
7870 S. SPRINKLE ROAD, PORTAGE, MICHIGAN 49002
PHONE (269) 321-0070 FAX (269) 321-0072

DATE 11/13/2020	JOB NO. AF-UK-PAV-A-5TH-RF	DRAWN	CB
SCALE N/A		BOM = 1	DWG = 1

TITLE

PANEL LAYOUT

MOTOR CONTROL PANEL

CUST. AIR FLOW EQUIPMENT

SHEET	OF	DWG. NO.	REV.
2	3	AF-UK-PAV-A-5TH-RF	.

REV	DESCRIPTION	DATE	BY
.	.	.	.

ITEM	QTY	PART #	MANUFACTURE	DESCRIPTION	DESCRIPTOR
1	1	A20N16ALP	HOFFMAN	20"x16"x6.62" NEMA 1 ENCLOSURE	.
2	1	A20N16MP	HOFFMAN	SUB PANEL	.
3	1	RD100-3	BUSSMANN	100A UL98 ROTARY DISCONNECT	DS1001
4	1	SH4-200	BUSSMANN	200mm LENGTH, DISCONNECT SHAFT	DS1001
5	1	H4X-02B	BUSSMANN	DISCONNECT SELECTOR HANDLE, SIZE 2, NEMA 4/4X	DS1001
6	1	1492-PD3141	AB	175A POWER DISTRIBUTION BLOCK	PDB1011
7	1	1492-PBC1	AB	PDB COVER	PDB1011
8	6	XTPR016BC1	EATON	10-16A MOTOR PROTECTOR, B FRAME	MP1021-1231
9	6	XTPAXFA11	EATON	1 NO/ 1 NC FRONT MOUNT AUX CONTACT BLOCK	MP1021-1231
10	2	XTPAXLSA	EATON	LINE SIDE ADAPTOR	LSA1021,1141
11	2	XTPAXCLKA3	EATON	3 POLE 3 DEVICE COMMONING LINK	MP1021-1101,1141-1231
12	2	0800886	PHOENIX	SCREW ON END STOP	.
13	2'	0801733	PHOENIX	35mm DIN RAIL	.
14	1	UGB2/0-414-6	PANDUIT	6 POINT GROUND BAR	UGB6
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
41					
42					
43					
44					
45					
46					
47					
48					
49					
50					
51					
52					
53					
54					
55					
56					

ITEM	QTY	PART #	MANUFACTURE	DESCRIPTION	DESCRIPTOR
57					
58					
59					
60					
61					
62					
63					
64					
65					
66					
67					
68					
69					
70					
71					
72					
73					
74					
75					
76					
77					
78					
79					
80					
81					
82					
83					
84					
85					
86					
87					
88					
89					
90					
91					
92					
93					
94					
95					
96					
97					
98					
99					
100					
101					
102					
103					
104					
105					

JP MOTORS
JP MOTORS & DRIVES
7870 S. SPRINKLE ROAD, PORTAGE, MICHIGAN 49002
PHONE (269) 321-0070 FAX (269) 321-0072

DATE	11/13/2020	JOB NO.	AF-UK-PAV-A-5TH-RF	DRAWN	CB
SCALE	N/A			BOM = 1	DWG = 1

TITLE

BILL OF MATERIALS

MOTOR CONTROL PANEL

CUST. AIR FLOW EQUIPMENT

SHEET	OF	DWG. NO.	REV.
3	3	AF-UK-PAV-A-5TH-RF	.

BP-3_ADDENDUM NO. 4

BY: **GBBN Architects, Inc.**
609 W Main Street
Louisville, KY 40202
502.583.0700

Subject: **Renovate/Upgrade UK Healthcare Facilities**
Pavilion A 5th Floor
UK # 2402.9

FOR: **University of Kentucky**
222 Peterson Service Building
Lexington, KY 40506

TO: **All Bidders of Record**

Acknowledge receipt of this Addendum by inserting its number and date in the space provided on the Bid Form. Failure to do so may subject bidders to disqualification. This Addendum forms a part of the Bidding Documents and revises the Bidding Documents as follows:

PART 1, PROJECT MANUAL

1.1 Section 05 5000 – Metal Fabrications

A. Section Re-issued.

1.2 Section 06 1050 – Miscellaneous Rough Carpentry

A. Paragraph 2.9, B:

1. Delete Paragraph. Product not applicable.

1.3 Section 07 6200 – Sheet Metal Flashing and Trim

A. Section Added.

1.4 Section 08 7100 – Door Hardware

A. Section Re-issued.

1.5 Section 08 7100.1 – Door Hardware Sets

A. Section Re-issued.

1.6 Section 08-8000 – Glazing

A. Paragraph 2.7, B: Change acceptable manufacturers to Unicel Vision Control.

B. Paragraph 2.7, F. 1.1: Change finish to read as follows:

1) Finish: Factory finish to match Sherwin Williams SW-75-7 – Stone Lion.

1.7 Section 11 1300 – Loading Dock Equipment

A. Section Added.

1.8 Section 13 3400 – Fabricated Engineered Structures

A. Section Added.

1.9 Section 26 0536 – Cable Trays for Electrical Systems

A. Section Added.

PART 2, DRAWINGS

2.1 Sheet A500

A. Sheet issued to define loading dock canopy and dock leveler scope.

2.2 Sheet A611

A. Sheet re-issued. See revisions indicated ADDM-4

2.3 Sheet V-1.1

A. Sheet re-issued to address clarity of the vendor drawing.

2.4 Sheet V-11.1

A. Sheet issued to define window replacement scope.

2.5 Sheet i330

A. Detail 9/i330: Delete single end wall guard and provide (2) CG-1.

2.6 Sheet P901

A. MG-5-1 ICU gas outlet quantities updated.

2.7 Sheet E105A, E105B, E105C

A. Revised keynotes 2 and 5.

2.8 Sheet E105D, E205A, E205B, E205D

A. Revised keynote 2.

2.9 Sheet E303D

A. Extended view to include existing equipment.

B. Included additional wire sizing at VFDs.

2.10 Sheet E313AD

A. Revised existing and new work for permanent exhaust fans.

2.11 Sheet E800

A. Revised dual VFD wiring diagram.

2.12 Sheet E900

A. Removed distribution panels on 15th floor. Work now provided in demolition phase to provide power to temporary exhaust fans.

2.13 Sheet E910

A. Revised 'F10' Exam light.

2.14 Sheet T000

A. Revised language T700 to T609 under Nurse Call section.

2.15 Sheet SEC305A

A. Added door tag A05255.

2.16 Sheet SEC305B

A. Added door tag A05155.

2.17 Sheet SEC305C

A. Added door tag A05300 and A05281.

2.18 Sheet SEC305D

A. Added door tag A05181, A05024, A05025, A0526, A0527.

2.19 Sheet SEC502

A. Updated access control riser door tags.

PART 3, ATTACHMENTS

3.1 Specifications

A. 05-5000 – METAL FABRICATIONS
B. 07 6200 - SHEET METAL FLASHING AND TRIM.
C. 08 7100 - DOOR HARDWARE
D. 08 7100.1 - DOOR HARDWARE SETS – 5th FLOORS
E. 11 1300 - LOADING DOCK EQUIPMENT
F. 13 3400 - FABRICATED ENGINEERED STRUCTURES
G. 26 0536 - CABLE TRAYS FOR ELECTRICAL SYSTEMS

3.2 Drawings

A. A500
B. V-1.1, V-11.1
C. P901

D. E105A, E105B, E105C, E105D, E205A, E205B, E205D, E303D, E313AD, E800, E900, E910
E. T000
F. SEC305A, SEC305B, SEC305C, SEC305D, SEC502

3.3 Sketches:

A. None

3.4 Bidding Questions

A. Attached

END OF 100% CD/GMP_ADDENDUM NO. 4

SECTION 05 5000

METAL FABRICATIONS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Steel framing and supports for mechanical and electrical equipment.
2. Steel framing and supports for applications where framing and supports are not specified in other Sections.
3. Steel framing and supports for medical equipment and apparatus identified in the Drawings and project manual.
4. Loose bearing and leveling plates.
5. Supports that attach ceiling-hung toilet compartments, specified in Section 10 2113, to overhead structural system.
6. Steel Beam Guardrail, Terminal Sections No.1 and No. 2, and associated steel post and base plate supports and mounting posts.
7. Other items indicated in the Drawings.

B. Items specified herein but provided and installed elsewhere:

1. Division 11 Sections for Medical Equipment: Supports for medical equipment specified in Division 11 Sections for Medical Equipment.

1.2 PERFORMANCE REQUIREMENTS

A. Structural Performance of Ladders: Provide ladders capable of withstanding the effects of loads and stresses within limits and under conditions specified in ANSI A14.3.

B. Thermal Movements: Provide exterior metal fabrications that allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, overstressing of components, failure of connections, and other detrimental effects. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.

1.3 SUBMITTALS

A. Product Data:

1. Paint products.
2. Grout.

B. Shop Drawings: Show fabrication and installation details for metal fabrications.

1. Submit shop drawings of metal fabrications indicating fabrication assembly and erection details, sizes of members, fastenings, supports and anchors, patterns, clearances, and necessary connections to work of other trades. Submit manufacturer's shop drawings where a specific manufacturer is specified.
2. Submit setting drawings, templates, and directions for installation of anchorage items.
3. Submit manufacturer's product data for proprietary products specified herein.

4. For expansion bolts submit manufacturer's certificate of performance of expansion bolts.
5. Include plans, elevations, sections, and details of metal fabrications and their connections. Show anchorage and accessory items.
6. Provide templates for anchors and bolts specified for installation under other Sections.
7. For installed products indicated to comply with design loads, include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

C. Welding certificates.

D. Qualification Data: For professional engineer.

1.4 QUALITY ASSURANCE

A. Welding: Qualify procedures and personnel according to the following:
1. AWS D1.1, "Structural Welding Code--Steel."
2. AWS D1.2, "Structural Welding Code--Aluminum."
3. AWS D1.3, "Structural Welding Code--Sheet Steel."
4. AWS D1.6, "Structural Welding Code--Stainless Steel."

1.5 REFERENCES

A. Referenced Standards:
1. AISC "Code of Standard Practice for Steel Buildings".
2. AWS D1.1 "Structural Welding Code - Steel".
3. Steel Structures Painting Council (SSPC) for shop painting.
4. AHDGA "Design of Products To Be Hot Dip Galvanized After Fabrication".
5. AISC "Code of Standard Practice For Steel Buildings and Bridges".
6. ASTM A6 "General Requirements For Delivery of Rolled Steel Plates, Shapes, Sheet Piling and Bars For Structural Use."
7. NOMMA "Voluntary Guideline for Joint Finishes".
8. AASHTO M-180- Railing or Terminal Section -CLASS A, TYPE II; Terminal Sections - CLASS B, TYPE 2.

B. Steel Fabricator Qualifications: Not less than 10 years experience in fabrication of structural steel.

C. Steel Erector Qualifications:
1. Erector shall have not less than 5 years experience in erection of structural steel.
2. Submit a written description of structural steel erection ability including equipment, personnel and a list of similar completed projects.

D. Erector shall have not less than 5 years experience in erection of structural steel.

E. Submit a written description of structural steel erection ability including equipment, personnel and a list of similar completed projects.

F. Welders Qualifications: Welding procedures, welders, welding and tackers shall be qualified in accordance with AWS B2.1 "Standard for Welding Procedures and Performance Qualifications", except that thickness of metal for test samples shall be equivalent to those encountered on this project.

1.6 DESIGN REQURIMENTS

A. Design elements in accordance with requirements of the Kentucky Building Code.

B. Design steel beam guardrail elements in accordance with requirements of the Kentucky Building Code and the Kentucky Department of Highways.

1.7 PROJECT CONDITIONS

A. Field Measurements: Verify actual locations of walls and other construction contiguous with metal fabrications by field measurements before fabrication and indicate measurements on Shop Drawings.

1. Provide allowance for trimming and fitting at site.

1.8 DELIVERY, STORAGE AND HANDLING

A. Protect metal from injury at shops, in transit to job, until erected in place, completed, inspected and accepted.

B. Deliver anchorage items and templates for anchorage items embedded in cast-in-place concrete or masonry construction to site for timely installation in concrete and masonry construction.

C. Steel receiving fireproofing: After steel installation, wire brush scarred areas, welds and rust spots on surfaces to receive spray-applied fireproofing under Section “Spray Applied Fireproofing”. Ensure that all surfaces of steel are in a condition to ensure adherence of spray-applied fireproofing.

1.9 COORDINATION

A. Coordinate installation of anchorages for metal fabrications. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

B. Coordinate installation of steel weld plates and angles for casting into concrete that are specified in this Section but required for work of another Section. Deliver such items to Project site in time for installation.

PART 2 - PRODUCTS

2.1 METALS, GENERAL

A. Metal Surfaces, General: Provide materials with smooth, flat surfaces, unless otherwise indicated. For metal fabrications exposed to view in the completed Work, provide materials without seam marks, roller marks, rolled trade names, or blemishes.

B. Ferrous Metals

1. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.

    a. 3/32 inch plate over opening for future pneumatic tube station cover.

2. Stainless-Steel Sheet, Strip, Plate, and Flat Bars: ASTM A 666, Type **304**.

3. Stainless-Steel Bars and Shapes: ASTM A 276, Type **304**.

4. Rolled-Stainless-Steel Floor Plate: ASTM A 793.

5. Steel Tubing: ASTM A 500, cold-formed steel tubing.

6. Steel Pipe: ASTM A 53/A 53M, standard weight (Schedule 40), unless another weight is indicated or required by structural loads.
7. Stainless Steel Welded Pipe: ASTM A 312, type 304, standard weight (Schedule 40), unless another weight is indicated or required by structural loads.
8. Slotted Channel Framing: Cold-formed metal channels with continuous slot complying with MFMA-3.
    a. Size of Channels: As indicated but minimum 1-5/8 by 1-5/8 inches.
    b. Material: Steel complying with ASTM A 1008, structural steel, **Grade 33**; **0.0966-inch** minimum thickness; hot-dip galvanized after fabrication.
9. Cast Iron: ASTM A 48/A 48M, Class 30, unless another class is indicated or required by structural loads.
10. Forged metal framing systems: Basis of Design Manufacturer: Unistrut Inc., A division of Tyco International:
    a. Size and Loading: Provide sizes engineered for dead and live loading. Provide engineering calculations at request of Architect for any application employed within the Project.
    b. Finish:
        1) Interior locations. Factory applied corrosion resistant coatings.
        2) Damp locations: Factory applied Galvanized, G-90 coating.
    c. Traceability: Each framing member to be stamped with numeric code that allows traceability to the origin of the steel.
11. Vehicular Guardrail: Sheet Steel Beam (Rail Corrugated- 12'-6" Lengths) and associated Terminal Sections No. 1 and No. 2
    a. Provide and Install Standard Kentucky Department of Highways Galvanized Steel Vehicular Guardrail at 12'-6" Lengths, Galvanized "W" Beam Single-Face with Posts and baseplate, Pressure treated wood offset block, No. 1 Terminal Section and No. 2 Terminal Sections.
        1) Guard Rail Element shall comply with AASHTO M-180- Class A, Type II
        2) Terminal Section No. 1 shall comply with AASHTO M-180- Class A or B, Type 2
        3) Terminal Section No. 2 shall comply with AASHTO M-180- Class B, Type 2.
    b. 5/8" Button Head Bolt and Recessed Nut with round Washers and Rectangular Plate Washers, as approved by AASHTO, for mounting of Guardrail and Terminal Sections.

C. Nonferrous Metals

1. Aluminum Plate and Sheet: ASTM B 209, Alloy 6061-T6.
2. Aluminum Extrusions: ASTM B 221, Alloy 6063-T6.
3. Aluminum-Alloy Rolled Tread Plate: ASTM B 632/B 632M, Alloy 6061-T6.
4. Aluminum Castings: ASTM B 26/B 26M, Alloy 443.0-F.
5. Bronze Plate, Sheet, Strip, and Bars: ASTM B 36/B 36M, Alloy UNS No. C28000 (muntz metal, 60 percent copper).
6. Bronze Extrusions: ASTM B 455, Alloy UNS No. C38500 (extruded architectural bronze).
7. Bronze Castings: ASTM B 584, Alloy UNS No. C83600 (leaded red brass) or No. C84400 (leaded semired brass).
8. Nickel Silver Extrusions: ASTM B 151/B 151M, Alloy UNS No. C74500.

9. Nickel Silver Castings: ASTM B 584, Alloy UNS No. C97600 (20 percent leaded nickel bronze).

2.2 FASTENERS

A. General: Unless otherwise indicated, provide Type **304** stainless-steel fasteners for exterior use and zinc-plated fasteners with coating complying with ASTM B 633, Class Fe/Zn 5, at exterior walls. Provide stainless-steel fasteners for fastening aluminum. Select fasteners for type, grade, and class required.

B. Stainless-Steel Bolts and Nuts: Regular hexagon-head annealed stainless-steel bolts, nuts and, where indicated, flat washers; ASTM F 593 for bolts and ASTM F 594 for nuts, Alloy Group **2 (A4)**.

C. Anchor Bolts: ASTM F 1554, Grade 36.

1. Provide hot-dip or mechanically deposited, zinc-coated anchor bolts where item being fastened is indicated to be galvanized.

D. Eyebolts: ASTM A 489.

E. Machine Screws: ASME B18.6.3.

F. Lag Bolts: ASME B18.2.1.

G. Wood Screws: Flat head, ASME B18.6.1.

H. Plain Washers: Round, ASME B18.22.1.

I. Lock Washers: Helical, spring type, ASME B18.21.1.

J. Cast-in-Place Anchors in Concrete: Anchors capable of sustaining, without failure, a load equal to four times the load imposed, as determined by testing according to ASTM E 488, conducted by a qualified independent testing agency.

1. Threaded type; galvanized ferrous castings, either ASTM A 47/A 47M malleable iron or ASTM A 27/A 27M cast steel. Provide bolts, washers, and shims as needed, hot-dip galvanized per ASTM A 153/A 153M.

2. Halfen type: galvanized ferrous forgings.

K. Expansion Anchors: Anchor bolt and sleeve assembly with capability to sustain, without failure, a load equal to six times the load imposed when installed in unit masonry and four times the load imposed when installed in concrete, as determined by testing according to ASTM E 488, conducted by a qualified independent testing agency.

1. Material for Anchors in Interior Locations: Carbon-steel components zinc-plated to comply with ASTM B 633, Class Fe/Zn 5.

2. Material for Anchors in wet/damp Locations: Alloy Group **2** stainless-steel bolts complying with ASTM F 593 and nuts complying with ASTM F 594.

2.3 MISCELLANEOUS MATERIALS

A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.

B. Universal Shop Primer: Fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with MPI#79.

1. Zinc-Rich Primer: Complying with SSPC-Paint 20 or SSPC-Paint 29 and compatible with topcoat.

C. Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D 1187.

D. Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107. Provide grout specifically recommended by manufacturer for interior and exterior applications.

2.4 FABRICATION, GENERAL

A. Shop Assembly: Preassemble items in the shop to greatest extent possible. Disassemble units only as necessary for shipping and handling limitations. Use connections that maintain structural value of joined pieces. Clearly mark units for reassembly and coordinated installation.

B. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch, unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.

C. Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing work.

D. Form exposed work true to line and level with accurate angles and surfaces and straight edges.

E. Weld corners and seams continuously to comply with the following:

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.
3. Remove welding flux immediately.
4. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.

F. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners where possible. Where exposed fasteners are required, use Phillips flat-head (countersunk) screws or bolts, unless otherwise indicated. Locate joints where least conspicuous.

G. Fabricate seams and other connections that will be exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.

H. Cut, reinforce, drill, and tap metal fabrications as indicated to receive finish hardware, screws, and similar items.

I. Provide for anchorage of type indicated; coordinate with supporting structure. Space anchoring devices to secure metal fabrications rigidly in place and to support indicated loads.

1. Where units are indicated to be cast into concrete or built into masonry, equip with integrally welded steel strap anchors, 1/8 by 1-1/2 inches, with a minimum 6-inch embedment and 2-inch hook, not less than 8 inches from ends and corners of units and 24 inches o.c., unless otherwise indicated.

2.5 MISCELLANEOUS FRAMING AND SUPPORTS

A. General: Provide steel framing and supports not specified in other Sections as needed to complete the Work.

B. Fabricate units from steel shapes, plates, and bars of welded construction, unless otherwise indicated. Fabricate to sizes, shapes, and profiles indicated and as necessary to receive adjacent construction retained by framing and supports. Cut, drill, and tap units to receive hardware, hangers, and similar items.

C. **Slotted Channel Framing:** Fabricate units from slotted channel framing where indicated.

1. Basis of Design: Unistrut framing and support system.
2. Furnish inserts if units are installed after concrete is placed.

3. Where exposed at finished ceiling applications provide clip in cosmetic cover at all open slot areas.
    a. Configuration: Snap in type with full face width coverage.
    b. Material: Noryl plastic or approved equal; Grey color.

D. Fabricate supports for ceiling hung partitions; doors and; other assemblies from continuous steel beams of sizes indicated with attached bearing plates, anchors, and braces as indicated. Drill bottom flanges of beams to receive partition track hanger rods; locate holes where indicated on operable partition Shop Drawings.

E. Galvanize miscellaneous framing and supports at exterior locations, at wet locations and where indicated.

F. Prime miscellaneous framing and supports with zinc-rich primer where not indicated to be galvanized

2.6 JAMB SUPPORT FRAMING SYSTEM

A. Provide at each side of door jambs where indicated on documents.
    a. HSS 2x3x1/4-inch from floor to ceiling.
    b. ¼-inch bent plate welded to bottom of HSS tube for anchoring to floor.
    c. ¼-inch bent plate slot bolted to top of HSS tube for anchoring to underside of structure above. Allow for ½" movement.
    d. Provide expansion anchors into concrete floor structure.

2.7 LOOSE BEARING AND LEVELING PLATES

A. Provide loose bearing and leveling plates for steel items bearing on masonry or concrete construction. Drill plates to receive anchor bolts and for grouting.

B. Galvanize plates after fabrication.

2.8 STEEL WELD PLATES AND ANGLES

A. Provide steel weld plates and angles not specified in other Sections, for items supported from concrete construction as needed to complete the Work. Provide each unit with not less than two integrally welded steel strap anchors for embedding in concrete.

2.9 STEEL SLAB EDGE REINFORCEMENT

A. Curb Angles: Where indicated and at dock edge angles at dock levelers:
    1. Galvanized steel angle.
    2. Size: 3-by-3-by-3/16-inch Rear Angle, 2-by-2-by-3/16-inch Side Angle, or as approved by the Dock Leveler Manufacturer.

2.10 MISCELLANEOUS STEEL TRIM

A. Unless otherwise indicated, fabricate units from steel shapes, plates, and bars of profiles shown with continuously welded joints and smooth exposed edges. Miter corners and use concealed field splices where possible.

B. Provide cutouts, fittings, and anchorages as needed to coordinate assembly and installation with other work.

1. Provide with integrally welded steel strap anchors for embedding in concrete or masonry construction.

C. Galvanize miscellaneous steel trim in wet/damp locations.

D. Prime interior miscellaneous steel trim with zinc-rich primer.

2.11 FINISHES, GENERAL

A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

B. Finish metal fabrications after assembly.

C. Weld Finish:

1. Where exposed to view: NOMMA #2 finish except where noted otherwise.
2. Where hidden: NOMMA #3 finish.

D. Prep unfinished metal for applied painted finish where applicable.

2.12 STEEL AND IRON FINISHES

A. Galvanizing: Hot-dip galvanize items as indicated to comply with applicable standard listed below:

1. ASTM A123 for hot-dipped galvanizing rolled, pressed and forged steel shapes, plates, bars and strip 1/8 inch thick and heavier.
2. ASTM A153 for hot-dipped, centrifugal galvanizing of iron and steel hardware.
3. ASTM A385 and A386 for galvanizing assembled steel products.
4. Surface preparation: Prepare ferrous metal surfaces prior to galvanizing to comply with minimum requirements of SSPC. Ensure that metal is thoroughly clean.
5. To the maximum practicable extent, galvanize assemblies after fabrication.
6. Fabricate to permit venting and drainage during galvanizing, per referenced AHDGA standard.
7. Remove slag and weld spatters; grind, wire brush and clean welds before galvanizing.
8. After galvanizing touch up portions up to a maximum of one inch wide with zinc-rich touch-up primer meeting all requirements of ASTM A780 to ensure continuity of galvanized surfaces.
9. Where welding is required after galvanizing, provide adequate ventilation and protection of personnel. Comply with OSHA and other regulations of other regulatory agencies, and recommendations of AHDGA.
10. For galvanized items that will be painted under other section of Specifications, comply with requirements of AHDGA standard referenced in Part 1 herein so as not to inhibit bond of primer applied therein.
11. For galvanized steel to be finish coat field painted, prepare steel surface and apply steel fabricator's recommended and Architect's approved "paint-grip" primer. Ensure that prime painted surfaces are free from substances that will inhibit adherence of field paint. Comply with referenced AHDGA "Painting Galvanized Structural Steel" and coordinate with Section 09 9100 – Painting.
12. Galvanize the following:
    a. Items exposed to exterior temperatures.
    b. Items exposed to interior wet conditions.
    c. Items specified herein to be galvanized.

d. Items indicated on Drawings to be galvanized.

13. For items to receive spray-applied fireproofing, ensure that galvanized surfaces are free from substances that will inhibit adherence of fireproofing. Coordinate with Section 07810.

B. Preparation for Shop Priming: Prepare uncoated ferrous-metal surfaces to comply with minimum requirements indicated below for SSPC surface preparation specifications and environmental exposure conditions of installed metal fabrications:

1. Exteriors (SSPC Zone 1B) and Items Indicated to Receive Zinc-Rich Primer: SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning."

2. Interiors (SSPC Zone 1A): SSPC-SP 3, "Power Tool Cleaning."

C. Shop Priming: Apply shop primer to uncoated surfaces of metal fabrications, except those with galvanized finishes and those to be embedded in concrete, sprayed-on fireproofing, or masonry, unless otherwise indicated. Comply with SSPC-PA 1, "Paint Application Specification No. 1: Shop, Field, and Maintenance Painting of Steel," for shop painting.

1. Stripe paint corners, crevices, bolts, welds, and sharp edges.

D. Shop Applied Powder Coat finish: Siliconized polyester.

1. Color: As selected by Architect from manufacturers full range or as specified herein.

2. Provide pretreatment of galvanized surfaces to insure bonding of primer and finish coats.

3. Primer: Type recommended by paint manufacturer for optimum bonding to treated galvanized surfaces and for bonding of finish coat.

2.13 STAINLESS STEEL FINISHES

A. Remove tool and die marks and stretch lines or blend into finish.

B. Grind and polish surfaces to produce uniform, directionally textured, polished finish indicated, free of cross scratches. Run grain with long dimension of each piece.

C. Dull Satin Finish: No. 6.

D. When polishing is completed, passivate and rinse surfaces. Remove embedded foreign matter and leave surfaces chemically clean.

2.14 ALUMINUM FINISHES

A. Class I, Clear Anodic Finish: Anodic Coating: Architectural Class I, clear coating 0.018 mm or thicker complying with AAMA 611.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing metal fabrications. Set metal fabrications accurately in location, alignment, and elevation; with edges and surfaces level, plumb, true, and free of rack; and measured from established lines and levels.

B. Fit exposed connections accurately together to form hairline joints. Weld connections that are not to be left as exposed joints but cannot be shop welded because of shipping size limitations. Do not weld, cut, or abrade surfaces of exterior units that have been hot-dip galvanized after fabrication and are for bolted or screwed field connections.

C. Field Welding: Comply with the following requirements:

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.
3. Remove welding flux immediately.
4. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.

D. Fastening to In-Place Construction: Provide anchorage devices and fasteners where metal fabrications are required to be fastened to in-place construction. Provide threaded fasteners for use with concrete and masonry inserts, toggle bolts, through bolts, lag bolts, wood screws, and other connectors.

E. Provide temporary bracing or anchors in formwork for items that are to be built into concrete, masonry, or similar construction.

F. Corrosion Protection: Coat concealed surfaces of aluminum that will come into contact with grout, concrete, masonry, wood, or dissimilar metals with a heavy coat of bituminous paint.

3.2 INSTALLING MISCELLANEOUS FRAMING AND SUPPORTS

A. General: Install framing and supports to comply with requirements of items being supported, including manufacturers' written instructions and requirements indicated on Shop Drawings.

B. Anchor supports for operable partitions and miscellaneous equipment including medical equipment securely to and rigidly brace from building structure.

C. Support steel girders on solid grouted masonry, concrete, or steel pipe columns. Secure girders with anchor bolts embedded in grouted masonry or concrete or with bolts through top plates of pipe columns.

1. Where grout space under bearing plates is indicated for girders supported on concrete or masonry, install as specified in "Installing Bearing and Leveling Plates" Article.

D. Install pipe columns on concrete footings with grouted baseplates. Position and grout column baseplates as specified in "Installing Bearing and Leveling Plates" Article.

1. Grout baseplates of columns supporting steel girders after girders are installed and leveled.

E. Installing Slotted Channel Framing:

1. Install in strict accordance with manufacturer’s design and loading recommendations with a complete complement of recommended attachment accessories.
2. Where installed to be exposed adjacent to finished ceilings install flush with adjacent finished ceiling. Install to be level, straight and square.
    a. Install clip in covers at all exposed channel after suspended equipment is installed. Install in a manner to fully and completely close off all exposed slots

3.3 INSTALLING BEARING AND LEVELING PLATES

A. Clean concrete and masonry bearing surfaces of bond-reducing materials and roughen to improve bond to surfaces. Clean bottom surface of plates.

B. Set bearing and leveling plates on wedges, shims, or leveling nuts. After bearing members have been positioned and plumbed, tighten anchor bolts. Do not remove wedges or shims but, if protruding, cut off flush with edge of bearing plate before packing with grout.

1. Pack grout solidly between bearing surfaces and plates to ensure that no voids remain.

3.4 ADJUSTING AND CLEANING

A. Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas. Paint uncoated and abraded areas with the same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.

1. Apply by brush or spray to provide a minimum 2.0-mil dry film thickness.

B. Touchup Painting: Cleaning and touchup painting of field welds, bolted connections, and abraded areas of shop paint are specified in Division 09 painting Sections.

C. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing to comply with ASTM A 780.

END OF SECTION

This page intentionally left blank.

SECTION 07 6200

SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Manufactured Products:
   a. Manufactured Architectural Casting iron downspout boot.

B. Related Sections:

1. Division 13 Section "Fabricated Engineered Structures", for Eyebrow Canopy, 4-inch by 4-inch downspout, included with canopy assembly.

1.2 PERFORMANCE REQUIREMENTS

A. General: Stormwater drainage assemblies as indicated shall withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Completed sheet metal flashing and trim shall not rattle, leak, or loosen, and shall remain watertight.

B. Thermal Movements: Provide for in-plane thermal movements resulting from annual: Ambient temperature changes of 120 deg F; and 180 deg F, material surfaces.

C. SPRI Wind Design Standard: Manufacture and install copings and roof-edge flashings tested according to SPRI ES-1 and capable of resisting wind loads and design pressures indicated on Drawings and required by the Kentucky Building Code.

D. ASTM A-48 Class 30 Gray Iron for Architectural Casting Iron Downspout Boot.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each manufactured product and accessory.

B. Shop Drawings: Show fabrication and installation layouts of sheet metal flashing and trim, including plans, elevations, expansion-joint locations, and keyed details. Distinguish between shop- and field-assembled work. Include the following:

1. Identification of material, thickness, weight, and finish for each item and location in Project.
2. Details for forming sheet metal flashing and trim, including profiles, shapes, seams, and dimensions.
3. Details for joining, supporting, and securing sheet metal flashing and trim, including layout of fasteners, cleats, clips, and other attachments. Include pattern of seams.
4. Details of termination points and assemblies, including fixed points.
5. Details of special conditions.
6. Details of connections to adjoining work.

C. Qualification Data: For qualified fabricator.

D. Maintenance Data: For sheet metal flashing, trim, and accessories to include in maintenance manuals.

E. Warranty: Sample of special warranty.

1.4 QUALITY ASSURANCE

A. Fabricator Qualifications: Shop that employs skilled workers who custom fabricate sheet metal flashing and trim similar to that required for this Project and whose products have a record of successful in-service performance.

B. Sheet Metal Flashing and Trim Standard: Comply with SMACNA's "Architectural Sheet Metal Manual" unless more stringent requirements are specified or shown on Drawings.

C. Downspout design:

1. Per Eyebrow Canopy Manufacturer’s recommendations and provisions.

D. Architectural Casting Iron Downspout Boot design:

1. ASTM A-48 Class 30 Gray Iron.
2. Provide manufacturers Rubber Adapter Connection to match size of outflow at bottom of boot.
3. Provide 4-inch inside diameter pvc pipe to connect to rubber Adapter Connection for daylighting of stormwater from downspout connecting to downspout boot.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Do not store sheet metal flashing and trim materials in contact with other materials that might cause staining, denting, or other surface damage. Store sheet metal flashing and trim materials away from uncured concrete and masonry.

B. Protect strippable protective covering on sheet metal flashing and trim from exposure to sunlight and high humidity, except to the extent necessary for the period of sheet metal flashing and trim installation.

1.6 WARRANTY

A. Special Warranty on Powder Coated Painted Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace roof specialties that show evidence of deterioration of factory-applied finishes within specified warranty period.
   1. Fluoropolymer Finish: Deterioration includes, but is not limited to, the following:
      a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
      b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
      c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
   2. Finish Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 ARCHITECTURAL CASTING IRON DOWNSPOUT BOOTS

A. General: Protect mechanical and other finishes on exposed surfaces from damage by applying a strippable, temporary protective film before shipping.

B. Architectural Casting Iron Downspout Boot

1. ASTM A-48 Class 30 Gray Iron, factory applied powder coat finish to be selected from manufacturers standard color range.
2. Configuration- Ninety but without mounting ears.
3. Size- 4-inch by 4-inch by 24-inch long.
4. Surface: Smooth, flat.
5. Basis-of-Design:
   a. J.R. Hoe, Inc., 4006 Collins Lane, Louisville, KY 40245, (800) 245-5521
      1) Product Number N-4424AX, without mounting ears on either side.
      2) Weight- 36.95.
      3) Top Bell: 4-inch by 4-inch
   b. Length: 24-inch.
   c. Outlet Style: Ninety
6. Outlet: 4.25-inch diameter
7. Accessories: Provide Rubber Adapter Connection to match outlet size. Connect 4-inch inside diameter pvc pipe, to Rubber Adapter Connection, to daylight stormwater to outside of existing loading dock concrete foundation wall, per drawing details.

2.2 MISCELLANEOUS MATERIALS

A. General: Provide materials and types of fasteners, protective coatings, separators, sealants, and other miscellaneous items as required for complete stormwater downspout boot installation and recommended by manufacturer of downspout boot or manufactured item unless otherwise indicated.

B. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads and recommended by manufacturer of primary sheet metal or manufactured item.

1. General: Blind fasteners or self-drilling screws, gasketed, with hex-washer head.
   a. Exposed Fasteners: Heads matching color of sheet metal using plastic caps or factory-applied coating.
   b. Blind Fasteners: High-strength aluminum or stainless-steel rivets suitable for metal being fastened.
   c. Spikes and Ferrules: Same material as gutter; with spike with ferrule matching internal gutter width.

C. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, non-sag, nontoxic, non-staining tape ½-inch wide and 1/8-inch thick.

D. Elastomeric Sealant: ASTM C 920, elastomeric polyurethane polymer sealant; low modulus; of type, grade, class, and use classifications required to seal joints in adjacent materials and trim and remain watertight.

E. Butyl Sealant: ASTM C 1311, single-component, solvent-release butyl rubber sealant; polyisobutylene plasticized; heavy bodied for hooked-type expansion joints with limited movement.

2.3 FABRICATION, GENERAL

A. General: Custom fabricate sheet metal flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, geometry, metal thickness, and other characteristics of item indicated. Fabricate items at the shop to greatest extent possible.

1. Fabricate all items to meet performance criteria for exposure and seismic design as indicated in Part 1 herein.

B. Sealed Joints: Form non-expansion but movable joints in metal to accommodate elastomeric sealant.

C. Do not use graphite pencils to mark metal surfaces.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, to verify actual locations, dimensions and other conditions affecting performance of the Work.

1. Verify compliance with requirements for installation tolerances of substrates.
2. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored.

B. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

A. General: Anchor architectural casting iron downspout boot and other components of the Work securely in place, with provisions for thermal and structural movement. Use fasteners, protective coatings, separators, sealants, and other miscellaneous items as required to complete downspout boot installation as intended to divert Eyebrow Canopy Stormwater runoff to the existing loading dock trench drain, via the existing side wall of the concrete loading dock foundation wall.

1. Install downspout boot, offset away from existing concrete precast wall panels to accept Eyebrow Canopy 4-inch by 4-inch downspout with bottom offset. Rotate downspout boot to point stormwater outflow, from downspout boot, toward the lower adjacent existing concrete foundation wall, of existing Small Box Truck Loading Dock. Once downspout boot, rubber adapter and pvc pipe are installed into existing sawcut concrete loading dock slab and foundation wall, install new concrete to seal into place, for a flush loading dock slab surface, for a solid and permanent installation.
2. Install sealant tape where indicated or as required by manufacturer.

3. Torch cutting of sheet metal flashing and trim is not permitted.
4. Do not use graphite pencils to mark metal surfaces.

B. Metal Protection: Where dissimilar metals will contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with bituminous coating or by other permanent separation as recommended by SMACNA.

C. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10-feet with no joints allowed within 24 inches of corner or intersection. Where lapped expansion provisions cannot be used or would not be sufficiently watertight, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with sealant concealed within joints.

D. Fastener Sizes: Use fasteners of sizes that will penetrate substrate of length not less than recommended by fastener manufacturer to achieve required minimum pull-out resistance. Provide in length to insure fastener will not penetrate or damage adjacent sub surface materials or assemblies.

E. Seal joints as shown and as required for watertight construction.

1. Where sealant-filled joints are used, embed hooked flanges of joint members not less than 1 inch into sealant. Form joints to completely conceal sealant. When ambient temperature at time of installation is moderate, between 40 and 70 deg F, set joint members for 50 percent movement each way. Adjust setting proportionately for installation at higher ambient temperatures. Do not install sealant-type joints at temperatures below 40 deg F.
2. Prepare joints and apply sealants to comply with requirements in Division 07 Section "Joint Sealants."
3. Fully embed metal transitions such as flashings and counter flashings in mastic or butyl sealant to prevent air leakage

F. Rivets: Rivet joints in stainless steel where indicated and where necessary for strength.

3.3 ERECTION TOLERANCES

A. Installation Tolerances: Shim and align sheet metal flashing and trim within installed tolerance of 1/4 inch in 20 feet on slope and location lines as indicated and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.

3.4 CLEANING AND PROTECTION

A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.

B. Clean off excess sealants.

C. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed unless otherwise indicated in manufacturer's written installation instructions. On completion of installation, remove unused materials and clean finished surfaces. Maintain in a clean condition during construction.

END OF SECTION

This page intentionally left blank.

SECTION 08 7100

DOOR HARDWARE

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Commercial door hardware for the following:
      a. Swinging doors.
      b. Non-fire-rated sliding doors.
      c. Non-fire-rated folding doors.
      d. Other doors to the extent indicated.
   2. Cylinders for doors specified in other Sections.
   3. Electrified door hardware:
      a. Doors with electrified operation and operational components.
      b. Conformance with operational descriptions for electrified hardware.
   4. Final connections of electrified automatic door operators and control modules to provided adjacent power junctions.
   5. Scope and material described for all hardware sets and operational descriptions for door hardware provided as attachments within this division of the project manual.

B. Related Sections: Include cylinders and other items identified therein as provided herein: Other hardware items provided therein are as follows:
   1. Division 08 Section "Hollow Metal Doors and Frames" for door silencers provided as part of hollow-metal frames.
   2. Division 08 Section " Wood Doors" for integral intumescent seals provided as part of fire-rated labeled assemblies provided therein.
   3. Division 08 Section "Access Doors and Frames" for access door hardware.
   4. Division 26 Electrical Sections: Work provided therein:
      a. Providing electrical power to adjacent junction boxes at door installations with electrical requirements.
      b. Providing junction boxes at terminations of electrical power runs to a specific door.
      c. Conduit and back box installations for routing electrical wiring at and around electrified door hardware installations from junction boxes.
   5. Division 27 Section "Communication" for intercom systems installed at door openings and provided as part of a building wide communication system.
   6. Division 28 Section "Electronic Safety and Security"
      a. Access control devices installed at door openings and provided as part of a security access system.

b. Detection devices installed at door openings and provided as part of an intrusion detection system.

7. Division 28 Section "Fire Detection and Alarm" for connections to building fire alarm system.

C. Products furnished, but not installed, under this Section include the following. Coordinating, purchasing, delivering, and scheduling remain requirements of this Section.

1. Permanent cores for cylinders for locks.
2. Permanent cores to be installed by Owner.

1.2 SUBMITTALS

A. General: Submit items indicated below to Construction Manager for review by Architect.

B. Product Data: Include construction and installation details, material descriptions, dimensions of individual components and profiles, and finishes.

C. Shop Drawings: Details of electrified door hardware, indicating the following:

D. Functional Description: Provide written description of the function of each hardware set. Example as follows:

DOOR# HA00144, HA00146

1. New double WD Door and HM Frame.
2. Door normally locked from ingress side. Always free for Egress.
3. Card Reader activates lock and releases outside lever for ingress. Closing door re-locks.
4. Latch bolt monitor indicates position of latch bolt (extended or retracted) to remote location.
5. REX switch indicates door is being opened from egress side.
6. Door Position switch indicates position of door (open or closed) to remote location.

E. Wiring Diagrams: Complete wiring diagram for each electrified door. Including but not limited to the following:

a. System schematic.

b. Point-to-point wiring diagram for coordination/integration of work by other trades.

c. Riser diagram.

d. Elevation of each door.

e. Detail interface between electrified door hardware, fire alarm, access control, security and building control systems.

f. Operation Narrative: Describe the operation of doors controlled by electrified door hardware.

F. Samples for Verification: Submit minimum 2-by-4-inch plate Samples of each type of finish required, except primed finish.

G. Samples for Verification: For exposed door hardware of each type, in specified finish, full size. Tag with full description for coordination with the door hardware sets. Submit Samples before, or concurrent with, submission of the final door hardware sets.

1. Samples will be returned to Contractor. Units that are acceptable and remain undamaged through submittal, review, and field comparison process may, after final check of operation, be incorporated into the Work, within limitations of keying requirements.

H. Product Certificates: For electrified door hardware, signed by product manufacturer.

1. Certify that door hardware approved for use on types and sizes of labeled fire doors complies with listed fire door assemblies.

I. Qualification Data: For Installer.

J. Maintenance Data: For each type of door hardware to include in maintenance manuals. Include final hardware and keying schedule.

K. Warranty: Special warranty specified in this Section.

L. Keying Schedule: Prepared by or under the supervision of Architectural Hardware Consultant, detailing Owner's final keying instructions for locks. Include schematic keying diagram and index each key set to unique door designations.

1.3 REGULATORY REQUIREMENTS

A. Fire-rated openings: Comply with specifications and procedures of testing agency meeting the Kentucky Building Code; label with name of testing agency and manufacturer's name and file number.

B. Requirements for persons with disabilities: Comply with the Kentucky Building Code and with ADA standards.

1.4 QUALITY ASSURANCE

A. Supplier's qualifications: Supplier shall have an established organization with experience and competence required to interpret correctly Contract Documents and to furnish appropriate and complete finish hardware. Supplier shall be manufacturer-franchised to supply material which it proposes to furnish. Work shall be assigned to a specialist, a full-time employee of supplier's firm, who shall also be a DHI-certified Architectural Hardware Consultant (not an "Apprentice Hardware Consultant") or specialist with minimum 10 years experience in selecting and scheduling hardware of the type and quantity specified herein. Supplier and specialist shall be available upon short notice to Contractor and Architect throughout construction and one-year correction period.

1. Scheduling Responsibility: Preparation of door hardware and keying schedules.
2. Engineering Responsibility: Preparation of data for electrified door hardware, including Shop Drawings, based on testing and engineering analysis of manufacturer's standard units in assemblies similar to those indicated for this Project.

3. Electrified Door Hardware Consultant Qualifications: A qualified Architectural Hardware Consultant who is experienced in providing consulting services for electrified door hardware installations.

B. Installer Qualifications: An employer of workers trained and approved by lock manufacturer.
   1. Installer's responsibilities include supplying and installing door hardware and providing a qualified Architectural Hardware Consultant available during the course of the Work to consult with Contractor, Architect, and Owner about door hardware and keying.
   2. Installer shall have warehousing facilities in Project's vicinity.

C. Source Limitations: Obtain each type and variety of door hardware from a single manufacturer, unless otherwise indicated.
   1. Provide electrified door hardware from same manufacturer as mechanical door hardware, unless otherwise indicated. Manufacturers that perform electrical modifications and that are listed by a testing and inspecting agency acceptable to authorities having jurisdiction are acceptable.

D. Fire-Rated Door Assemblies: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to NFPA 252.
   1. Test Pressure: Test at atmospheric pressure. After 5 minutes into the test, neutral pressure level in furnace shall be established at 40 inches or less above the sill.

E. Electrified Door Hardware: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

F. Keying Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination." In addition to Owner, Construction Manager, Contractor, and Architect, conference participants shall also include Installer's Architectural Hardware Consultant. Incorporate keying conference decisions into final keying schedule after reviewing door hardware keying system including, but not limited to, the following:
   1. Function of building, flow of traffic, purpose of each area, degree of security required, and plans for future expansion.
   2. Preliminary key system schematic diagram.
   3. Requirements for key control system.
   4. Address for delivery of keys.

G. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Summary of Work." Review methods and procedures related to electrified door hardware including, but not limited to, the following:
   1. Inspect and discuss electrical roughing-in and other preparatory work performed by other trades.
   2. Review sequence of operation for each type of electrified door hardware.
   3. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
   4. Review required testing, inspecting, and certifying procedures.

1.5 DOOR AND FRAME WIRING

A. All wiring internal to doors and frames must be color coded, and must be same color system in all doors.

B. All connections inside doors and at frame must use Molex connectors. No other means of connectors to be allowed.

C. All color coding and use of Molex connectors to be shown on wiring diagram supplied by 087100.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Inventory door hardware on receipt and provide secure lock-up for door hardware delivered to Project site.

B. Tag each item or package separately with identification related to the final door hardware sets, and include basic installation instructions, templates, and necessary fasteners with each item or package.

C. Deliver keys to manufacturer of key control system for subsequent delivery to Owner. D. Deliver keys and permanent cores to Owner by registered courier service.

1. Deliver to location directed by Owner.
    a. Permanent cylinders to be delivered directly to the owner in sealed unopened containers originating directly from the manufacturer.
    b. Ship with controlled courier service to validate the seal and closure of all packaging as originated from the manufacturer directly to the Owners agent.

1.7 COORDINATION

A. Coordinate layout and installation of recessed pivots and closers with floor construction. Cast anchoring inserts into concrete. Concrete, reinforcement, and formwork requirements are specified in Division 03.

B. Templates: Distribute door hardware templates for doors, frames, and other work specified to be factory prepared for installing door hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.

C. Electrical System Roughing-in: Coordinate layout and installation of electrified door hardware with connections to power supplies, fire alarm system and detection devices, access control system, security system and building control system.

D. Existing Openings: Where new hardware components are scheduled for application to existing construction or where modifications to existing door hardware are required, field verify existing conditions and coordinate installation of door hardware to suit opening conditions and to provide for proper operation.

1.8 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:
    a. Structural failures including excessive deflection, cracking, or breakage.
    b. Faulty operation of operators and door hardware.
    c. Deterioration of metals, metal finishes, and other materials beyond normal weathering and use.
2. Warranty Period: Three years from date of Substantial Completion, except as follows:
    a. Electromagnetic Delayed-Egress Locks: Five years from date of Substantial Completion.
    b. Exit Devices: Two years from date of Substantial Completion.
    c. Manual Closers: 10 years from date of Substantial Completion.
    d. Concealed Floor Closers: 10years from date of Substantial Completion.

1.9 MAINTENANCE SERVICE

A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

B. Maintenance Service: Beginning at Substantial Completion, provide six months' full maintenance by skilled employees of door hardware Installer. Include quarterly preventive maintenance, repair or replacement of worn or defective components, lubrication, cleaning, and adjusting as required for proper door hardware operation. Provide parts and supplies same as those used in the manufacture and installation of original products.

PART 2 - PRODUCTS

2.1 GENERAL PRODUCT REQUIREMENTS

A. Hardware schedule is intended as a guide for description and quantity of material required. Hardware supplier is responsible for supplying correct quantity of materials under this section and for supplying hardware of quality, function and appearance suitable for job conditions as shown in Contract Documents.

1. Architect shall be sole judge of whether products meet any and/or all of the criteria for quality, finish, performance, design, weight, thickness and suitability of application as compared to listed products in the hardware schedule.

B. Coordinate hardware fastening devices with materials to which it is applied.

C. Hinges and door closers shall conform to manufacturer’s published recommendations relating to door size, weight, thickness, and anticipated frequency of operation and draft conditions.

D. Conform to all Regulatory Requirements indicated for The Project.

E. Hardware Requirements:

1. All hardware and fasteners provided shall meet and conform with all industry requirements for high frequency use applications.

2.2 MANUFACTURERS

A. Manufacturers listed as acceptable may be used provided they match listed products in design, weight, finish, and suitability for application. Architect shall be sole judge of whether products meet any and all of these criteria.

1. Unless otherwise specified herein, do not mix manufacturers for any hardware item category for different doors.

B.

ITEM	LISTED MANUFACTURER		ACCEPTABLE ALT'S
Hinges	Mckinney		Hager, Stanley
Continuous Hinges	Markar	(MA)	Bommer, Hager
Key System	BEST-CORMAX	BE	User standard –no sub
	Yale	(YA)	
Locksets			Sargent, BEST
	NOTE: BEST	ELEC LOCKS	MUST HAVE MOLEX PLUGS
Closers	Norton	(NO)	LCN 4040 EDA
			Sargent 351P-10
Exit Devices	Yale	(YA)	Von Duprin 99series X 32D
			Sargent 80Series X 32D

1. Provide custom endcap identical in intent and function as endcap designed and manufactured by Yale Manufacturing. (Endcap specifically designed for the University of Kentucky Patient Care Facility Project.)

Overhead Stops	Rixson	(RF)	ABH, GJ, Sargent
Floor / Wall Stops	Rockwood	(RO)	Trimco, Hager
Power Supplies	Securitron	(SU)	Von Duprin, Sargent
	Yale	(YA)	
Protection Plates	Rockwood	(RO)	Trimco, Hager
Thresholds	National Guard	(NG)	Reese, Pemko
Seals & Bottoms	National Guard	(NG)	Reese, Pemko
Sliding Door Hardware	Hager	(HA)	Stanley
Pivots	Rixson	(RF)	Dorma, Hager
Electromagnetic	Securitron		Locknetics
Door position Switches	Securitron	(SE)	Locknetics, Sentrol
Key Switches	Locknetics		Securitron, Sargent

Hospital Latches	Sargent (SA)		GJ
Flush Bolts	Rockwood	(RO)	Trimco, (TR)
Fire Latches	Trimco	(TR)	
Electro Magnetic Re-lease	Rixson	(RF)	Dorma, LCN

2.3 FABRICATION

A. Manufacturer's Nameplate: Do not provide products that have manufacturer's name or trade name displayed in a visible location except in conjunction with required fire-rated labels and as otherwise approved by Architect.

B. Base Metals: Produce door hardware units of base metal, fabricated by forming method indicated, using manufacturer's standard metal alloy, composition, temper, and hardness. Furnish metals of a quality equal to or greater than that of specified door hardware units and BHMA A156.18.

1. Do not furnish manufacturer's standard materials or forming methods if different from specified standard.

C. Reinforcing: Provide high frequency hardware reinforcing at all installations for all hardware.

D. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to commercially recognized industry standards for application intended, except aluminum fasteners are not permitted. Provide Phillips flat-head screws with finished heads to match surface of door hardware, unless otherwise indicated.

1. Concealed Fasteners: For door hardware units that are exposed when door is closed, except for units already specified with concealed fasteners. Do not use through bolts for installation where bolt head or nut on opposite face is exposed unless it is the only means of securely attaching the door hardware. Where through bolts are used on hollow door and frame construction, provide sleeves for each through bolt.
2. Steel Machine or Wood Screws: For the following fire-rated applications:
    a. Mortise hinges to doors.
    b. Strike plates to frames.
    c. Closers to doors and frames.
3. Steel Through Bolts: For the following fire-rated applications unless door blocking is provided:
    a. Surface hinges to doors.
    b. Closers to doors and frames.
    c. Surface-mounted exit devices.
4. Spacers or Sex Bolts: For through bolting of hollow-metal doors.
5. Fasteners for Wood Doors: Comply with requirements in DHI WDHS.2, "Recommended Fasteners for Wood Doors."

E. Kick plates: Size kick plates to butt into edge of edge guards. Do not overlap edge guards.

2.4 KEYING SYSTEM

A. Provide exclusive University of Kentucky Great Grand Master Keying System by Best Manufacturing.

1. Core/Keying System: Best High Security factory restricted Series Cormax key system: Seven pin removable cores with custom keyway exclusive to the University of Kentucky Hospital Complex at Lexington Campus as manufactured by Best.
2. Keying shall be an extension of the University of Kentucky Great Grand Master Key System.
    a. Supplier shall coordinate with Construction Manager in obtaining information about existing system, and keying required for new locks and cores supplied herein.

B. Keys for Great Grand Master Keyed, Grand Master Keyed and Master Keyed in sets:

1. Number of Great Grand Master Keys provided: Thirty, (30).
2. Number of Grand Master Keys for each set provided: Thirty, (30)
3. Number of Master Keys for each set provided: Thirty, (30)

C. Provide additional permanent combined cores under each Master Key Set for Owner's reserve.

1. Provide 10 additional cores for each Master Key set.
2. Provide 10 additional cores for each Grand Master Key set.
3. Provide 10 additional cores for the Great Grand Master Key set.

D. Keying schedule: To be developed by supplier per Owner's requirements as directed by Owner in conformance allowing ample time to meet Contractor’s construction schedule. Locks shall be keyed alike and different per Owner's requirements.

1. Provide minimum of Five, (5), change keys per lock.
2. Include cost of developing schedule with cost of hardware.

E. Furnish temporary construction cores for locks for Contractor's use during period of construction.

1. Hardware supplier to provide 200 temporary cores for use during construction and prior to placement of permanent cores. Deliver to hardware installing contract personnel.
2. Return all temporary cores to Hardware supplier after use and placement of permanent cores.

F. Delivery of final cores and keys: Deliver final cores and keys directly to the Owner’s representative via bonded courier service:

1. Pickup of final cores and keys by courier at Manufacturer’s facility.
2. Deliver directly to Owner’s representative from Manufacturer’s facility.
3. Deliver to designated site and individual as identified by the Owner.
    a. Delivery shall be on the Lexington campus of the University of Kentucky.
4. Provide signed manifest to Owner indicating and validating reception and delivery of cores and keys.
5. No permanent cores are to be delivered to contracted companies performing this or any other aspect of the work for The Project.

2.5 FINISHES

A. Standard: BHMA A156.18, as indicated in door hardware sets.

B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components areacceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.

B. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Coordinate with door suppliers to preinstall, repackage and label per door opening at door supplier’s factory prior to shipment to site.

B. Steel Doors and Frames: Comply with DHI A115 Series.

1. Surface-Applied Door Hardware: Drill and tap doors and frames according to ANSI A250.6.

C. Wood Doors: Comply with DHI A115-W Series.

3.3 INSTALLATION

A. Mounting Heights: Mount door hardware units at heights indicated on Drawings and as follows unless otherwise indicated or required to comply with governing regulations.

1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
2. Custom Steel Doors and Frames: DHI's "Recommended Locations for Builders' Hardware for Custom Steel Doors and Frames."
3. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."

B. Install each door hardware item to comply with manufacturer's written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 09 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.

1. Set units level, plumb, and true to line and location. Adjust and reinforce attachment substrates as necessary for proper installation and operation.
2. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.

C. Key Control System: Cores installed by Owner. Final keys remain in control of Owner.

D. Boxed Power Supplies: Locate power supplies as indicated or, if not indicated, above accessible ceilings or in equipment room or other location as directed by the Architect.

1. Configuration: Provide power supplies as scheduled.

E. Thresholds: Where indicated: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 07 Section "Joint Sealants."

3.4 FIELD QUALITY CONTROL

A. Independent Architectural Hardware Consultant: Architect will engage a qualified independent

B. Architectural Hardware Consultant to perform inspections and to prepare inspection reports.

1. Independent Architectural Hardware Consultant will inspect door hardware and state in each report whether installed work complies with or deviates from requirements, including whether door hardware is properly installed and adjusted.

3.5 ADJUSTING

A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

1. Spring Hinges: Adjust to achieve positive latching when door is allowed to close freely from an open position of 30 degrees.
2. Electric Strikes: Adjust horizontal and vertical alignment of keeper to properly engage lock bolt.
3. Door Closers: Unless otherwise required by authorities having jurisdiction, adjust sweep period so that, from an open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 inches from the latch, measured to the leading edge of the door.

B. Occupancy Adjustment: Approximately six months after date of Substantial Completion, Installer's Architectural Hardware Consultant shall examine and readjust, including adjusting operating forces, each item of door hardware as necessary to ensure function of doors, door hardware, and electrified door hardware.

3.6 CLEANING AND PROTECTION

A. Clean adjacent surfaces soiled by door hardware installation.

B. Clean operating items as necessary to restore proper function and finish.

C. Provide final protection and maintain conditions that ensure that door hardware is without damage or deterioration at time of Substantial Completion.

3.7 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain door hardware and door hardware finishes. Refer to Division 01 Section "Demonstration and Training."

3.8 DOOR HARDWARE SETS AND DESCRIPTIONS

A. Each door designation to receive complete hardware set as indicated in the attached set descriptions. Reference Door Schedules in The Drawings for set assignments.

B. Reference the following attachments for hardware set descriptions and door operation descriptions:

1. Section 08 7100.2 Electrified Hardware Device Operation Schedule.
    a. Door operation descriptions for all electrified doors.

END OF SECTION

SECTION 08 7100.1

DOOR HARDWARE SETS – 5TH FLOORS

PART 1 - PRODUCTS

1.1 GENERAL

A. Each door designation to receive complete hardware set as indicated herein. Reference Door Schedules in The Drawings for set assignments

1.2 HARDWARE SETS FOR 5TH FLOOR PATIENT ROOM FIT-OUT

Hardware Set 01

2	CONT SW CL HING	HG329 x 83-1/8"		32D	MA
4	SHIMS	CHS-2 7'0"			MA
1	SELF LATCH BOLT	2805 18" TOP ONLY x WD		26D	RO
1	HOSP LATCH	28-114P (ENG)	5"Backset	26D	SA
1	CONC OH STOP	1-536		630	RF
1	CONC OH STOP	1-136		630	RF
1	SURF DOOR EDGE	306 x 83"		32D	RO
1	SURF DOOR EDGE	306B x 83"		32D	RO
2	KICKPLATE	6 x .050" x 3BE	x LGTH TO FIT	32D	RO
2	MOP PLATE	6 x .050" x 3BE	X LGTH TO FIT	32D	RO

Hardware Set 02

2	CONT SW CL HING	HG329 x 83-1/8"		32D	MA
4	SHIMS	CHS-2 7'0"			MA
1	SELF LATCH BOLT	2805 18" TOP ONLY x WD		26D	RO
1	HOSP LATCH	28-114P (ENG) 5" Backset		26D	SA
1	SURF OH STOP	55-136		630	
1	CONC OH STOP	5-336		630	RF
2	MOP PLATE	6 x .050" x 3BE x LGTH TO FIT		32D	RO
2	KICKPLATE	6 x .050" x 3BE x LGTH TO FIT		32D	RO
1	MORT. ASTRAGAL	300CP x 84' (ONE PC)			PE

HARDWARE SET 02.2

2	CONT SW CL HING	HG329 x 83-1/8"		32D	MA
4	SHIMS	CHS-2 7'0"			MA
1	SELF LATCH BOLT	2805 18" TOP ONLY x WD		26D	RO
1	PRIV LATCH	JNR8802 FL		26D	YA
1	SURF OH STOP	55-136		630	
1	CONC OH STOP	5-336		630	RF
2	MOP PLATE	6 x .050" x 3BE x LGTH TO FIT		32D	RO
2	KICKPLATE	6 x .050" x 3BE x LGTH TO FIT		32D	RO
1	MORT. ASTRAGAL	300CP x 84' (ONE PC)			PE

Hardware Set 02.1

2	CONT SW CL HING	HG329 x 83-1/4”	32D	MA
4	SHIMS	CHS-2 7’0”		MA
2	PUSH	71 RCG 4 X20	32D	RO
2	PULL	BF110 X 71 RCG 4 X 20	32D	SA
1	SURF OH STOP	55-136	630	RF
1	CONC OH STOP	5-336	630	RF
2	MOP PLATE	6 x .050" x 3BE x LGTH TO FIT	32D	RO
2	KICKPLATE	6 x .050” x 3BE x LGTH TO FIT	32D	RO
1	MORT. ASTRAGAL	144SA x 84’ (ONE PC)		NG
2	ROLLER LATCH	592	26D	

NOTE: HINGE AND ASTRAGAL HEIGHT PER DOOR HEIGHT

Hardware Set 05

3	HINGE	TA2714 4.5 X 4.5	26D	MK
1	CLASSROOM LOCK	JNR8808FL	626	YA
1	HS MORTISE CYL	5194 X 1765 RING 7P	26D	YA
1	KICKPLATE	6 x 34 x .050" x 3BE	32D	RO
1	WALL STOPS	400	26D	RO

HARDWARE SET 05.1

3	HINGE	TA2714 4.5 X 4.5	26D	MK
1	CLASSROOM LOCK	JNR8808FL	626	YA
1	HS MORTISE CYL	5194 X 1765 RING 7P	26D	YA
1	KICKPLATE	6 x 34 x .050" x 3BE	32D	RO
1	WALL STOPS	400	26D	RO
1	CLOSER	7500	689	NO

Hardware Set 08

3	HINGE	TA2714 4.5 X 4.5	26D	MK
1	ELEC MORT LOCK	JNR8891FL x LBM x REX (secure)	626	YA
	CARD READER BY SECTION 28000			
1	HS MORTISE CYL	5194 X 1765 RING 7P	26D	YA
1	CLOSER	7500	689	NO
1	KICKPLATE	6 x 34 x .050" x 3BE	32D	RO
1	WALL STOPS	400	26D	RO
1	POWER TRANSFER	EL-EPT/SC		SU
1	CONC DOOR POS SWITCH	MSS-1C	628	SU
1	POWER SUPPLY	CENTRALIZED		
	NEEDS RACEWAY THRU DOOR			
1	DOOR CABLE	QC-C300P		
1	FRAME CABLE	QC-C1500P		
1	WIRE DIAGRAM BY 087100/PER EXAMPLE			
1	SMART PACK	2005M3		HES
1	JUNCTION BOX	JB7		VD

Hardware Set 09

3	HINGE	TA2714 4.5 X 4.5	26D	MK
1	HS MORTISE CYL	5194 X 1765 RING 7P	26D	YA
1	KEYPAD LOCK	KP-8278 LNB	26D	SA
1	CLOSER	7500	689	NO
		PR7500 @ SWING OUT DOORS		
1	KICKPLATE	6 x 34 x .050" x 3BE	32D	RO
1	MOP PLATE	6 x .050" x 3BE x LGTH TO FIT	32D	RO
1	WALL STOP	400	26D	RO

HARDWARE SET 10

3	HINGE	TA2714 4.5 X 4.5	26D	MK
1	ELEC MORT LOCK	JNR8894-2 FL (SAFE)	626	YA
2	CARD READERS	BY SECTION 28000		
2	HS MORTISE CYL	5194 X 1765 RING 7P	26D	YA
1	CLOSER	7500	689	NO
1	KICKPLATE	6 x 34 x .050" x 3BE	32D	RO
1	WALL STOPS	400	26D	RO
1	POWER TRANSFER	EL-EPT/SC		SU
1	CONC DOOR POS SWITCH	MSS-1C	628	SU
1	POWER SUPPLY	CENTRALIZED		
	NEEDS RACEWAY THRU DOOR			
1	DOOR CABLE	QC-C300P		
1	FRAME CABLE	QC-C1500P		
1	WIRE DIAGRAM	BY 087100/PER EXAMPLE		
1	SMART PACK	2005M3		HES
1	JUNCTION BOX	JB7		VD
	NOTE: CARD READER IN & OUT, FAIL SAFE LOCK			

Hardware Set 11

2	CONT SW CL HING	HG329 x 83-1/8"	32D	MK
4	SHIMS	CHS-2 7'0"		MA
2	PUSH PLATES	71 RCG 4 x 20	32D	RO
2	PULLS	BF110 X 71 REG 4 X 20	32D	RO
2	CLOSER	PR7500	689	NO
2	SURF DOOR EDGE	306B x 83"	32D	RO
4	KICKPLATE	6 x .050" x 3BE x LGTH TO FIT	32D	RO
2	ELEC MAG RELEAS	998 x 24VDC	689	RF
	WIRE TO FIRE ALARM SYSTEM			
1	WIRE DIAGRAM	BY 087100/PER EXAMPLE		

Hardware Set 13

3	HINGE	T4A3786 4.5 X 4.5	26D	MK
1	HS MORTISE CYL	5194 X 1765 RING 7P	26D	YA
1	KEYPAD LOCK	KP8278 LNB	26D	SA
1	CLOSER	PR7500	689	NO
		7500 @ DOORS SWINGING IN		
1	KICKPLATE	6 x .050" x 3BE x LGTH TO FIT	32D	RO
1	MOP PLATE	6 x .050" x 3BE x LGTH TO FIT	32D	RO
1	WALL STOP	400	26D	RO

Hardware Set 14

2	CONT SW CL HING	HG329 x 83-1/8"	32D	MA
4	SHIMS	CHS-2 7'0"		MA
1	SELF LATCH BOLT	2805 18" TOP ONLY x WD	26D	RO
1	HOSP LATCH	28-114P (ENG) 5"Backset	26D	SA
1	CONC OH STOP	1-536	630	RF
1	CONC OH STOP	1-136	630	RF
1	SURF DOOR EDGE	306 x 83"	32D	RO
1	SURF DOOR EDGE	306B x 83"	32D	RO
2	KICKPLATE	6 x .050" x 3BE x LGTH TO FIT	32D	RO
2	MOP PLATE	6 x .050" x 3BE x LGTH TO FIT	32D	RO
1	SEAL	5050B-22		NG
1	SPLIT ASTRAGAL	9115A(SET) x 84"		NG

Hardware Set 15

1	CONT SW CL HING	HG329 x 83-1/8" x EPT	32D	MA
2	SHIMS	CHS-2 7'0"		MA
1	ELEC MORT LOCK	JNR8891FL x LBM x REX (secure)	626	YA
1	HS MORTISE CYL	5194 X 1765 RING 7P	26D	YA
1	CLOSER	7500	689	NO
1	ARMOR PLATE	36 x .050" x 3BE x LGTH TO FIT	32D	RO
1	MOP PLATE	6 x .050" x 3BE x LGTH TO FIT	32D	RO
1	WALL STOPS	400	26D	RO
1	POWER TRANSFER	EL-EPTL / SC		SU
1	CONC.DOOR POS SWITCH	MCC-1C	628	SU
1	POWER SUPPLY	CENTRALIZED		
	CARD READER BY SECTION 28 0000			
	NEEDS RACEWAY THRU DOOR			
1	SMART PACK	2005M3		HES
1	DOOR CABLE	QC-C400P		
1	FRAMING CABLE	QC-C1500P		
1	WIRE DIAGRAM	BY 087100/PER EXAMPLE		
1	JUNCTION BOX	JB7		VD
1	CARD READER	SECTION 28 0000		

Hardware Set 19

3	HINGE	T4A3786 4.5 X 4.5	26D	MK
1	STORAGE LOCK	JNR8805FL	626	YA
1	HS MORTISE CYL	5194 X 1765 RING 7P	26D	YA
1	CLOSER	7500	689	NO
1	KICKPLATE	6 x .050" x 3BE x LGTH TO FIT	32D	RO
1	WALL STOPS	400	26D	RO

Hardware Set 54

3	HINGE	TA2714 4.5 X 4.5	26D	MK
1	DORM LOCK	JNR8822FL	626	YA
1	HS MORTISE CYL	5194 x 1765 RING 7P	26D	YA
1	CLOSER	PR7500	689	NO
		7500 @ INSWINGING DOORS		
1	KICKPLATE	6 x 34 x .050" x 3BE	32D	RO
1	MOP PLATE	6 x 35 x .050" x 3BE	32D	RO
1	WALL STOPS	400	26D	RO

Hardware Set 59

6	HINGE	T4A3786 5.0 X 4.5	26D	MK
1	SELF LATCH FLUSH BOLT	2805 18" TOP ONLY	26D	RO
1	CLASSROOM LOCK	JNR8808FL	626	YA
1	HS MORTISE CYL	5194 X 1765 RING 7P	26D	YA
2	MOP PLATE	6 x .050" x 3BE x LGTH TO FIT	32D	RO
2	KICKPLATES	6 x .050" x 3BE x LGTH TO FIT	32D	RO
2	WALL STOPS	400	26D	RO
2	CLOSER 7500	7500	689	NO
1	CORD	1673		RO

Hardware Set 60

3	HINGE	T4A3786 4.5 X 4.5	26D	MK
1	PUSH PLATE	71 RCG 4 x 20	32D	RO
1	PULL	RM4412 x 24" x TYPE 12 MTG	32D	RO
1	CLOSER	7500	689	NO
1	KICKPLATE	6 x 34 x .050" x 3BE	32D	RO
1	MOP PLATE	6 x 35 x .050" x 3BE	32D	RO
1	WALL STOPS	400	26D	RO

Hardware Set 63

3	HINGE	TA2714 4.5 X 4.5	26D	MK
1	DORM LOCK	JNR8822FL IND	626	YA
1	HS MORTISE CYL	5194 x 1765 RING 7P	26D	YA
1	KICKPLATE	6 x 34 x .050" x 3BE	32D	RO
1	MOP PLATE	6 x 35 x .050" x 3BE	32D	RO
1	WALL STOPS	400	26D	RO

HARDWARE SET 69

3	HINGE	T4A3786 4.5 X 4.5	26D	MK
1	ELEC MORT LOCK	T4A3786 5 x 4.5 @ 4'-0" DOORS JNR8891FL x LBM x REX (secure)	626	YA
	CARD READER BY SECTION 28 0000			
1	HS MORTISE CYL	5194 X 1765 RING 7P	26D	YA
1	CLOSER	7500	689	NO
1	KICK PLATE	6 x .050" x 3BE x LGTH TO FIT	32D	RO
1	WALL STOPS	400	26D	RO
	OMIT WHEN OH STOP IS USED			
1	POWER TRANSFER	EL-EPTL / SC		SU
1	CONC.DOOR POS SWITCH	MSS-1C	628	SU
1	POWER SUPPLY	CENTRALIZED		
	NEEDS RACEWAY THRU DOOR			
1	SMART PACK	2005M3		
1	DOOR CABLE	QC-C400P		
1	FRAMING CABLE	QC-C1500P		
1	WIRE DIAGRAM	BY 087100/PER EXAMPLE		
1	JUNCTION BOX	JB7		VD

Hardware Set 69B

3	HINGE	T4A3786 4.5 X 4.5	26D	MK
		T4A3786 5 x 4.5 @ 4'-0" DOORS		
1	ELEC MORT LOCK	JNR8891FL x LBM x REX (secure)	626	YA
2	HS MORTISE CYL	5194 X 1765 RING 7P	26D	YA
1	CLOSER	7500	689	NO
1	CONC OH STOP	5-436 or 5-536	630	RF
	PROVIDE WHEN WALL STOP IS NOT APPLICABLE			
1	KICK PLATE	6 x .050" x 3BE x LGTH TO FIT	32D	RO
1	WALL STOPS	400	26D	RO
	OMIT WHEN OH STOP IS USED			
1	POWER TRANSFER	EL-EPTL / SC		SU
1	CONC.DOOR POS SWITCH	MSS-1C	628	SU
1	POWER SUPPLY	CENTRALIZED		
	NEEDS RACEWAY THRU DOOR			
1	DOOR CABLE	QC-C400P		
1	FRAMING CABLE	QC-C1500P		
1	WIRE DIAGRAM	BY 087100/PER EXAMPLE		
1	SMART PACK	2005M3		HES
1	JUNCTION BOX	JB7		VD

HARDWARE SET 69.2

1	CONTINUOUS HINGE	HG329 83-1/8" EPT	630	MA
2	SHIMS	CHS-2 7'0"		MA
1	FAIL SECURE LOCK	JNR 8891FL X LBM X REX	626	YA
1	I/C CORE		626	YA
1	SMART PAC III	2005M3		HES
1	SURFACE CLOSER	7500 (REGULAR ARM) DA	689	NO
1	ARMOR PLATE	36" X .050 3BE SIZE TO FIT	32D	RO
1	WALL STOP	400	26D	RO
1	EDGE GUARD	306B 83-3/8"	32D	RO
1	ELECTRIC POWER TRANSFER	EL-EPT-SC		SU
1	ELECTROLYNX HARNESS	QC-C400P		MK
1	ELECTROLYNX HARNESS	QC-C1500P		MK
1	JUNCTION BOX	JB7		VD
1	DOOR POSITION SWITCH	MSS-1C		SU
1	CARD READER	READER BY SECURITY		
1	POWER SUPPLY	CENTRALIZED BY SECURITY		
1	WIRING DIAGRAM	BY 087100		

Hardware Set 75.1

1	CONT SW CL HINGE	HG329 X 83-1/8	32D	MA
2	SHIMS	CHS-2 7'0"		MA
1	CLASSROOM LOCK	JNR8808FL	626	YA
1	HS MORTISE CYL	5194 X 1765 RING 7P	26D	YA
1	CLOSER	7500 DA	689	NO
1	SURFACE DOOR EDGE	306B X 8'3"	32D	RO
1	ARMOR PLATE	36" X .050" X 3BE X LGTH TO FIT	32D	RO
1	KICKPLATE	6 x .050" x 3BE x LGTH TO FIT	32D	RO
1	WALL STOP	400	26D	RO

Hardware Set 75.2

1	CONT SW CL HINGE	HG329 X 83-1/2 32D MA	32D	MA
1	CONT SW CL HINGE	HG329 X 83-1/2 X EPT	32D	MA
4	SHIMS	CHS-2 7'0"		MA
1	ELECT. LOCK	JNR8891 FL X LBM X REX (SECURE)	626	YA
1	HS MORTISE CYL	5194 X 1765 RING 7P	626	YA
1	SURFACE DOOR EDGES	306B X 83" (W/PREPS)	32D	RO
1	SURFACE DOOR EDGE	306X 83" (W/PREPS)	32D	RO
2	ARMOR PLATES	36" X .050" X 3BE X LGTH TO FIT	32D	RO
2	WALL STOP	400	26D	RO
1	SELF LATCH BOLT	2805 X 18" TOP ONLY	26D	RO
1	POWER TRANSFER	EL-EPT/SL		SU
2	CONC DOOR POS SWITCH	MCC-1C		SU
1	POWER SUPPLY	CENTRALIZED		
1	CARD READER	SECTION 28000		
1	SMART PACK	2005M3		
1	DOOR CABLE	QC-C400P		
1	FRAME CABLE	QC-C1500P		
1	WIRING DIAGRAM	BY 087100		
1	JUNCTION BOX	JB7		VD

HARDWARE SET 75.3

3	HINGE	T4A3786 4.5 X 4.5	26D	MK
1	ELEC MORT LOCK	JNR8891FL X LBM X REX (SECURE)	626	YA
		CARD READER BY SECTION 28 0000		
1	CLASSROOM LOCK	JNR8808FL	626	YA
1	HS MORTISE CYLINDER	5194 X 1765 RING 7P	626	YA
1	SURFACE DOOR EDGES	306B X 83" (W/PREPS)	32D	RO
1	SURFACE DOOR EDGE	306 X 83" (W/PREPS)	32D	RO
2	ARMOR PLATES	36" X .050" X 3BE X LGTH TO FIT	32D	RO
2	WALL STOPS	400	26D	RO
1	SELF LATCH BOLT	1945 TOP ONLY	26D	RO
1	POWER TRANSFER	EL-EPTL/SC		SU
1	CONC. DOOR POS SWITCH	MSS-1C	628	SU
1	POWER SUPPLY	CENTRALIZED		
	NEEDS RACEWAY THRU DOOR			
1	JUNCTION BOX	JB7		VD
1	SMART PACK	2005M3		HES
1	DOOR CABLE	QC-C300P		
1	FRAMING CABLE	QC-C1500P		
1	WIRE DIAGRAM	BY 087100/PER EXAMPLE		

Hardware Set 82

3	HINGE	T4A3786 4.5 X 4.5	26D	MK
1	ELEC MORT LOCK	JNR8891FL x LBM x REX (secure)	626	YA
	CARD READER BY SECTION 28 0000			
1	HS MORTISE CYL	5194 X 1765 RING 7P	26D	YA
1	CLOSER	7500	689	YA
1	KICK PLATE	6 x 34 x .050" x 3BE	32D	RO
1	WALL STOPS	400	26D	RO
1	POWER TRANSFER	EL-EPTL / SC		SU
1	CONC.DOOR POS SWITCH	MSS-1C	628	SU
1	POWER SUPPLY	CENTRALIZED		
	NEEDS RACEWAY THRU DOOR			
1	SMART PACK	2005M3		HES
1	DOOR CABLE	QC-C300P		
1	FRAMING CABLE	QC-C1500P		

1	WIRE DIAGRAM	BY 087100/PER EXAMPLE		
1	JUNCTION BOX	JB7		VD

Hardware Set 82.1

3	HINGE	T4A3786 4.5 X 4.5	26D	MK
1	ELEC MORT LOCK	V21 PHR NAC 82281 LNB	626	SA
1	HS MORTISE CYL	5194 X 1765 RING 7P	26D	YA
1	CLOSER	7500	689	YA
1	KICK PLATE	6 x 34 x .050" x 3BE	32D	RO
1	WALL STOPS	400	26D	RO
1	POWER TRANSFER	EL-EPT / SC		SU
1	CONC.DOOR POS SWITCH	MSS-1C	628	SU
1	POWER SUPPLY	CENTRALIZED		
	CARD READER BY SECTION 28 0000			
	NEEDS RACEWAY THRU DOOR			
1	SMART PACK	2005M3		HES
1	DOOR CABLE	QC-C300P		
1	FRAMING CABLE	QC-C1500P		
1	WIRE DIAGRAM	BY 087100/PER EXAMPLE		
1	JUNCTION BOX	JB7		VD
	NOTE: LOCK WITH CARD READER SHUNT WHEN DEADBOLT ACTIVATED			
	LOCK WITH OUTSIDE INDICATOR			

Hardware Set 82.2

1	CONT SW CL HINGE	HG329 X 83-1/8 X EPT	32D	MK
2	SHIMS	CHS-2 7'0"		MA
1	ELEC MORT LOCK	JN8891FL X LBM X REX (SECURE) (SECURE)	626	YA
1	HS MORTISE CYL	5194 X 1765 RING 7P	26D	YA
1	SURFACE DOOR EDGE	306B X 83"	32D	RO
1	ARMOR PLATE	36" X .050 X 3BE LGTH TO FIT	32D	RO
1	MOP PLATE	6" X .050" X 3BE LGTH TO FIT	32D	RO
1	CLOSER	7500 DA	689	NO
1	WALL STOP	400	26D	RO
1	POWER TRANSFER	EL-EPTL / SC		SU
1	CONC.DOOR POS SWITCH	MSS-1C	628	SU
1	POWER SUPPLY	CENTRALIZED		
	CARD READER BY SECTION 28 0000			
	NEEDS RACEWAY THRU DOOR			
1	SMART PACK	2005M3		HES
1	DOOR CABLE	QC-C400P		
1	FRAMING CABLE	QC-C1500P		
1	WIRE DIAGRAM	BY 087100/PER EXAMPLE		
1	JUNCTION BOX	JB7		VD

Hardware Set 98

3	HINGE	TA2714 4.5 X 4.5	26D	MK
1	STORAGE LOCK	JNR8805FL (SECURE)	626	YA
1	HS MORTISE CYL	5194 X 1765 RING 7P	26D	YA
1	CLOSER	7500	689	NO
		PR75OO @ OUTSWIND DOORS		
1	KICK PLATE	6 x .050" x 3BE x LGTH TO FIT	32D	RO
1	WALL STOP	400	26D	RO

Hardware Set 113

2	CONT SW CL HING	HG329 x 83-1/8" x EPT	32D	MA
4	SHIMS	CHS-2 7'0"		MA
2	ELEC VR EXIT	7160 LBR x S x B x JN 627F (NITEL)	630	YA
2	ELEC. MODIFICATION	1550K-MDC		ACSI
2	HS RIM CYLINDER	5193 x 1765 RING 7P	26D	YA
2	SURF DOOR EDGE	306B x 83"	32D	RO
2	MOP PLATE	6 x .050" x 3BE x LGTH TO FIT	32D	RO
2	KICK PLATE	6 x .050" x 3BE x LGTH TO FIT	32D	RO
2	WALL STOPS	400	26D	RO
2	POWER TRANSFER	EL-EPTL / SC		SU
2	EDGE GUARD	5" METAL CHANNEL BY WD MFGR		
2	CONC.DOOR POS SWITCH	MSS-1C	628	SE
1	POWER SUPPLY	CENTRALIZED		
2	DOOR CABLE	QC-C200P		
2	FRAMING CABLE	QC-C1500P		
1	WIRE DIAGRAM	BY 087100/PER EXAMPLE		
2	AUTO OPERATORS	BY OTHERS		
2	ADA ACTUATORS	BY OTHERS		
1	JUNCTION BOX	JB7		VD
1	CARD READER	BY SECURITY		

HARDWARE SET 113A

2	CONTINUOUS HINGE	HG329 83-1/8" CTP	630	MA
4	SHIM KITS	CHS-2 7'0"		MA
2	CONC VERT ROD EXIT	7160F LBR EO	630	YA
4	ELEC MODIFICATIONS	1550K-MDC		ACSI
2	AUTO OPERATOR	OPERATOR BY SECT 087113		
2	ACTUATOR	ACTUATOR BY SECT 087113		
2	KICK PLATE	6" X .050 X 3BE LGTH TO FIT	32D	ROCK
2	KICK PLATE	6" X .050 X 3BE LGTH TO FIT	32D	ROCK
2	MAG H.O.	998	26D	
1	GASKETING	5050B-22		NG
1	ASTRAGAL	600A		NG
1	EDGE GUARD	5" METAL EDGE CHANNEL BY DR MFGR		
2	ELECTROLYNX HARNESS	QC-C1500P		MCK
2	ELECTROLYNX HARBESS	QC-C200P		MCK
2	ELECTRIC POWER TRANSFER	EL-EPT-SC		SEC
2	TERMINATION BOX	JB7		VD
2	POWER SUPPLY			
2	WIRING DIAGRAM			
1	POWER SUPPLY	AL400 UL AUM		AL
	NOTE: MAG H.O. TO RELEASE ON FIRE ALARM			

HARDWARE SET 126

2	CONT SW CL HING	HG329 x 83-1/8"	32D	MA
4	SHIMS	CHS-2 7'0"		MA
2	PUSH PLATES	71 RCG 4 x 20	32D	RO
2	SHEAR MAG LOCK	SAMSC: SHEAR MAG W/ SENSTAT WIRE TO FIRE ALARM SYSTEM		SU
2	SAM WD DR BRKT	SWB	26D	SU

1	MORT CYLINDER	5194 x 1765 RING 7P FOR KEY SWITCHES	26D	YA
2	SURF DOOR EDGE	306B x 83"	32D	RO
4	KICKPLATE	6 x .050" x 3BE x LGTH TO FIT	32D	RO
2	WALL STOPS	400	26D	RO
2	CONC.DOOR POS SWITCH	MSS-1C	628	SU
2	AUTO OPERATORS	BY OTHERS		
2	ADA ACTUATORS	BY OTHERS		
1	POWER SUPPLY	CENTRALIZED		
1	KEY SWITCH	4370L		SA
1	EMERGENCY RELEASE	EEB2		SU
1	WIRING DIAGRAM	BY 087100/PER EXAMPLE		
1	JUNCTION BOX	JB7		VD
1	MOTION SENSOR	XMS		SU

CARD READER BY 28 0000 /AUTO OPER BY SECT 087113

Hardware Set 127

2	CONT SW CL HING	HG329 x 83-1/8"	32D	MA
4	SHIMS	CHS-2 7'0"		MA
2	PUSH PLATES	71 RCG 4 x 20	32D	RO
2	SHEAR MAG LOCK	SAMSC: SHEAR MAG W/ SENSTAT WIRE TO FIRE ALARM SYSTEM		SU
2	SAM WD DR BRKT	SWB	26D	SU
1	MOTION SENSOR	XMS		SU
2	SURF DOOR EDGE	306B x 83"	32D	RO
4	KICKPLATE	6 x .050" x 3BE x LGTH TO FIT	32D	RO
2	CONC.DOOR POS SWITCH	MSS-1C	628	SU
1	KEY SWITCH	4372L		SA
1	HS MORT CYLINDER	5194 x 1765 RING 7P FOR KEY SWITCHES		
1	POWER SUPPLY	CENTRALIZED		
1	EMER RELEASE	EEB2		SU
1	KEY SWITCH	437OL		SA
1	WIRING DIAGRAM	BY 087100/PER EXAMPLE		
1	JUNCTION BOX	JB7		VD
2	AUTO OPERATORS	BY OTHERS		
2	ADA ACTUATORS	BY OTHERS		

CARD READER BY SECT 28 0000 /AUTO OPER BY SECT 087113 / REMOTE RELEASE BY SECT 28 0000

Hardware Set 129

3	HINGE	TA2714 4.5 X 4.5	26D	MK
1	HOSP LATCH	28-114P (ENG) 5"Backset	26D	SA
1	KICKPLATE	6 x .050" x 3BE x LGTH TO FIT	32D	RO
1	MOP PLATE	6 x .050" x 3BE x LGTH TO FIT	32D	RO
1	CONC OH STOP5-336	32D 5-336	32D	RF
1	SEAL	5050B-22		NG

Hardware Set 130

2	CONT SW CL HING	HG329 x 83-1/8" x EPT	32D	MA
4	SHIMS	CHS-2 7'0"		MA
2	PUSH PLATES	71RCG 4 x 20	32D	RO
2	SHEAR MAG LOCK	SAMSC: SHEAR MAG W/ SENSTAT WIRE TO FIRE ALARM SYSTEM		SU
2	SAM WD DR BRKT	SWB	26D	SU

1	MOTION SENSOR	XMS		SU
2	SURF DOOR EDGE	306B x 83”	32D	RO
4	KICKPLATE	6 x .050” x 3BE x LGTH TO FIT	32D	RO
2	AUTO OPERATOR	BY OTHERS		
2	ADA ACTUATORS	BY OTHERS		
2	WALL STOPS	400	26D	RO
2	DOOR POS SWITCH	MSS-1C	628	SU
1	HS MORTISE CYLINDER	5194 x 1765 RING 7P FOR KEY SWITCH		YA
1	POWER SUPPLY	CENTRALIZED		
1	KEY SWITCH	4370L CONTROLS SHEAR LOCK		SA
1	EMERGENCY RELEASE	EEB2		
1	WIRING DIAGRAM	BY 087100/PER EXAMPLE		
2	AUTO OPERATORS	BY OTHERS		
2	ADA ACTUATORS	BY OTHERS		
1	JUNCTION BOX	JB7		VD

CARD READER BY SECT 28 0000 / AUTO OPERATOR BY SECT 087113
REMOTE RELEASE BY SECT 28 0000

Hardware Set 133

2	CONT SW CL HING	HG329 x 83-1/8" x EPT	32D	MA
4	SHIMS	CHS-2 7’0”		MA
2	PUSH PLATES	71RCG 4 x 20	32D	RO
2	SHEAR MAG LOCK	SAMSC: SHEAR MAG W/ SENSTAT WIRE TO FIRE ALARM SYSTEM		SU
2	SAM WD DR BRKT	SWB	26D	SU
2	SURF DOOR EDGE	306B x 83”	32D	RO
4	KICKPLATE	6 x .050” x 3BE x LGTH TO FIT	32D	RO
2	WALL STOPS	400	26D	RO
2	DOOR POS SWITCH	MSS-1C	628	SU
1	HS MORTISE CYLINDER	5194 x 1765 RING 7P FOR KEY SWITCH		YA
1	KEY SWITCH	4370L		SA
1	EMERGENCY RELEASE	EEB2		SU
1	WIRING DIAGRAM	BY 087100/PER EXAMPLE		
2	AUTO OPERATORS	BY OTHERS		
2	ADA ACTUATORS	BY OTHERS		
1	JUNCTION BOX	JB7		VD

CARD READER BY SECT 28 0000 / AUTO OPERATOR BY SECT 0871**13**
REMOTE RELEASE BY SECT 28 0000

Hardware Set 135

3	HINGE	TA2714 4.5 X 4.5	26D	MK
1	HOSP LATCH	28-114P (ENG) 5"Backset	26D	SA
1	CONC OH STOP	5-336	689	RF
1	KICKPLATE	6 x .050" x 3BE x LGTH TO FIT	32D	RO
1	MOP PLATE	6 x .050 x 3BE x LGTH TO FIT	32D	RO
1	SEAL	5050B-22		NG

Hardware Set 136

1	PIVOTS	EP-5J DOUBLE ACTING PIVOTS	26D	MK
1	STOP/STRIKE	CSS-9 CENTER HUNG-STOP/STR	26D MK	
1	CLASS / PRIVACY LOCK	JNR8862FLIND (NO DEADBOLT)	626	YA
2	KICKPLATE	6 x .050" x 3BE x LGTH TO FIT	32D	RO

1	CONC OH STOP5-336	32D	RF	
2	MORT. ASTRAGAL	144SA x 84" (ONE PC)		NG

Hardware Set 211

ALL HARDWARE BY DOOR MANUFACTURER EXCEPT:

1	HOSPITAL LATCH	24-28-114P (ENGRAVED) 2 3/4 BACKSET	26D	SA

Hardware Set 216

2	CONT SW CL HING	HG329 x 83-1/8" x EPT	26D	MA
4	SHIMS	CHS-2 7'0"		MA
2	PUSH PLATES	71RCG 4 x 20	32D	RO
1	HS MORTISE CYLINDER	5194 x 1765 RING 7P FOR KEY SWITCH	26D	YA
1	SHEAR MAG LOCK	SAMSC: SHEAR MAG W/ SENSTAT WIRE TO FIRE ALARM SYSTEM		SU
1	SAM WD DR BRKT	SWB		SU
1	KEY SWITCH	4370L (W-2 LEDS)		SA
2	KICKPLATE	6 x .050" x 3BE x LGTH TO FIT	32D	RO
2	SURF DOOR EDGES	306B x 83"	32D	RO
2	WALL STOPS	400	26D	RO
1	SEAL	5050B-22		NG
2	CONC.DOOR POS SWITCH	MSS-1C	628	SE
1	POWER SUPPLY CARD READER BY SECT 28 0000	CENTRALIZED		
2	AUTO OPERATORS	BY OTHERS		
2	ADA ACTUATORS	BY OTHERS		
1	JUNCTION BOX	JB7		VD
1	WIRING DIAGRAM	BY 087100/PER EXAMPLE AUTO OPERATOR BY SECT 087113 REMOTE RELEASE IN NURSE STATION BY SECT 28 0000 FOR OPERATOR		

Hardware Set 226

6	HINGE	T4A3786 5.0 X 4.5	26D	MK
1	SELF LATCH FLUSH BOLT	2805 18" TOP ONLY	26D	RO
1	ELEC MORT LOCK	JNR8891FL x LBM x REX (secure)	626	YA
1	HS MORTISE CYL	5194 X 1765 RING 7P	26D	YA
1	CLOSER	7500H (ACTIVE LEAF)	689	NO
2	MOP PLATE	6 x .050" x 3BE x LGTH TO FIT	32D	RO
2	KICKPLATE	6 x .050" x 3BE x LGTH TO FIT	32D	RO
2	WALL STOP	400	26D	RO
1	POWER TRANSFER	EL-EPT / SC	SU	
2	CONC.DOOR POS SWITCH	MSS-1C	628	SU
1	POWER SUPPL	CENTRALIZED		
1	DOOR CABLE	QC-C400P		
1	FRAME CABLE	QC-C1500P		
1	WIRING DIAGRAM	BY 087100/PER EXAMPLE NEEDS RACEWAY THRU ACTIVE LEAF		

CARD READER BY SECT 28 0000

1	SMART PACK	2005M3	HES
1	JUNCTION BOX	JB7	VD

HARDWARE SET 241

1EA NEW PASSAGE LEVER TRIM FOR EXISTING EXIT DEVICE (MFG TBD)
ELECTRIC EXIT DEVICE TO BE DEACTIVATED
CARD READER TO BE REMOVED AND BLANK PLATE TO BE INSTALLED

HARDWARE SET 251

3	HINGE	T4A3786 4.5 X 4.5	26D	MK
1	PASSAGE SET	JNR8809FL	626	YA
1	CLOSER	7500	689	NO
1	KICKPLATE	6 X 34 X .050” X 3BE	32D	RO
1	MOP PLATE	6 X 35 X .050” X 3BE	32D	RO
1	WALL STOPS	400	26D	RO

HARDWARE SET 251.1

3	HINGE	T4A3786 4.5 X 4.5	26D	MK
1	PASSAGE SET	JNR8809 FL	626	YA
1	CLOSER	7500	689	NO
1	MOP PLATE	6 X 35 X .050” X 3BE	32D	RO
1	WALL STOPS	400	26D	RO

HARDWARE SET 251.2

3	HINGE	T4A3786 4.5 X 4.5	26D	MK
1	PASSAGE SET	JNR8801FL	626	YA
1	CLOSER	7500	689	NO
1	MOP PLATE	6 X 35 X .050” X 3BE	32D	RO
1	CONC.OH STOP	5-336	32D	RF

HARDWARE SET 251.3

3	HINGE	T4A3786 4.5 X 4.5	26D	MK
1	PASSAGE SET	JNR8809FL	626	YA
1	CLOSER	7500	689	NO
1	KICK PLATE	6 X 2” LDW X .050 X 3BE	32D	RO
1	MOP PLATE	6 X 2” LDW X .050 X 3BE	32D	RO
1	MAG H.O.	998	26D	RF

HARDWARE SET 252

3	HINGE	T4A3786 4.5 X 4.5	26D	MK
1	PRIVACY LOCK	JNR8802FL	626	YA
1	MOP PLATE	6 X 35 X .050” X 3BE	32D	RO

1	CONC.OH STOP	5-336	32D	RF

HARDWARE SET 253

2	CONT SW CL HINGE	HG329 X 83-1/8”	32D	MA
2	SHIMS	CHS-2-83-1/8		
1	SELF LATCH BOLT	2805 18” TOP ONLY X WD	26D	RO
1	PRIVACY LOCK	JNR8822 FL	626	YA
1	CONC OH STOP	1-536	630	RF
1	CONC OH STOP 1-136	630		RF
1	SURF DOOR EDGE	306 X 83”	32D	RO
1	SURF DOOR EDGE	306B X 83”	32D	RO
2	KICK PLATE	6 X .050” X 3BE X LGTH TO FIT	32D	RO
2	MOP PLATES	6 X .050” X 3BE X LGTH TO FIT	32D	RO
1	HS MORTISE CYLINDER	5194 X 1765 RING 7P		

HARDWARE SET 254

3	HINGE	T4A3786 4.5 X 4.5	26D	MK
1	ELEC MORT LOCK	JNR8891FL X LBM X REX (SECURE)	626	YA
	CARD READER BY SECTION 28 0000			
1	HS MORTISE CYL	5194 X 1765 RING 7P	26D	YA
1	KICK PLATE	6 X 34 X .050” X 3BE	32D	RO
1	MOP PLATE	6 X .050” X 3BE	32D	RO
1	WALL STOP	400	26D	RO
1	POWER TRANSFER	EL-EPTL/SC		SU
1	CONC DOOR POS SWITCH	MSS-1C	628 SE	
1	POWER SUPPLY	CENTRALIZED		
	NEEDS RACEWAY THRU DOOR			
1	SMART PACK	2005M3		HES
1	DOOR CABLE	QC-C300P		
1	FRAMING CABLE	QC-C1500P		
1	WIRING DIAGRAM	BY 087100/PER EXAMPLE		
1	JUNCTION BOX	JB7		

Hardware Set 255

3	HINGE	T4A3786 4.5 X 4.5	26D	MK
1	ELEC MORT LOCK	JNR8891FL x LBM x REX (secure)	626	YA
	CARD READER BY SECTION 28 0000			
1	HS MORTISE CYL	5194 X 1765 RING 7P	26D	YA
1	CLOSER	CLP7500	689	NO
1	KICK PLATE	6 x .050" x 3BE x LGTH TO FIT	32D	RO
1	POWER TRANSFER	EL-EPTL / SC		SU
1	POWER SUPPLY	CENTRALIZED		
	NEEDS RACEWAY THRU DOOR			
1	SMART PACK	2005M3		
1	DOOR CABLE	QC-C400P		
1	FRAMING CABLE	QC-C1500P		
1	WIRE DIAGRAM	BY 087100/PER EXAMPLE		
1	JUNCTION BOX	JB7		

NOTE: EXISTING FRAME TO BE REVIEWED FOR HARDWARE PREPS AND HARDWARE LOCATIONS

PART 2 - NOT USED

END OF SECTION

This page intentionally left blank.

SECTION 11 1300

LOADING DOCK EQUIPMENT

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Recessed dock levelers.
2. Dock bumpers.
3. Foam Pad dock seals.

B. Items provided herein but specified elsewhere:

1. Section 09 9600 High Performance Coatings: Shop Applied Protective Coatings.

C. Related Sections:

1. Division 03 Section "Cast-in-Place Concrete" for concrete work for recessed loading dock equipment.
2. Division 05 Section "Metal Fabrications" for curb angles at edges of recessed pits and loading dock platform edge channels.
3. Division 26 Sections for electrical wiring for, and connections to, loading dock equipment and loading dock pivoting lighting.

1.2 DEFINITIONS

A. Operating Range: Maximum amount of travel above and below the loading dock level.

B. Working Range: Recommended amount of travel above and below the loading dock level for which loading and unloading operations can take place.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for loading dock equipment. Include rated capacities, operating characteristics, electrical characteristics, and furnished specialties and accessories.

B. Shop Drawings: For loading dock equipment. Include plans, elevations, sections, details, and attachments to other work.

1. Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
2. Wiring Diagrams: For power, signal, and control wiring.

C. Samples for Initial Selection:

1. For each type of dock bumper.

2. Colors for each item specified herein: Manufacturer's standard and custom colors.

D. Qualification Data: For qualified Installer.

E. Welding certificates.

F. Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency; indicate compliance of dock levelers with requirements in MH 30.1 for determining rated capacity, which is based on comprehensive testing within last two years of current products.

1. Submittal Form: According to MH 30.1, Appendix A.

G. Operation and Maintenance Data: For loading dock equipment to include in operation and maintenance manuals.

H. Warranty: Sample of special warranty.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of units required for this Project.

1. Maintenance Proximity: Not more than two hours' normal travel time from Installer's place of business to Project site.

B. Source Limitations: Obtain dock leveler from single source from single manufacturer.

C. Welding Qualifications: Qualify procedures and personnel according to the following:

1. AWS D1.1/D1.1M, "Structural Welding Code - Steel."
2. AWS D1.3, "Structural Welding Code - Sheet Steel."

D. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

E. Preinstallation Conference: Conduct conference at Project site.

1. Inspect and discuss electrical roughing-in, equipment bases, and other preparatory work specified elsewhere.
2. Review sequence of operation for each type of loading dock equipment.
3. Review coordination of interlocked equipment specified in this Section and elsewhere.
4. Review required testing, inspecting, and certifying procedures.

1.5 PROJECT CONDITIONS

A. Field Measurements: Verify actual dimensions of new and existing construction contiguous with loading dock equipment, including recessed pit dimensions, slopes of driveways and heights of loading docks, by field measurements before fabrication.

1.6 WARRANTY

A. Special Warranty for Dock Levelers: Manufacturer's standard form in which manufacturer agrees to repair or replace dock-leveler components that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:
    a. Structural failures including cracked or broken structural support members, load-bearing welds, and front and rear hinges.
    b. Faulty operation of operators, control system, or hardware.
    c. Deck plate failures including cracked plate or permanent deformation in excess of 1/4 inch between deck supports.
    d. Hydraulic system failures including failure of hydraulic seals and cylinders.
2. Warranty Period for Structural Assembly: 10 years from date of Substantial Completion.
3. Warranty Period for Hydraulic System: 5 years from date of Substantial Completion.
4. Warranty shall be for unlimited usage of leveler for the specified rated capacity over the term of the warranty.

1.7 MAINTENANCE SERVICE

A. Initial Maintenance Service: Beginning at Substantial Completion, provide 12 months' full maintenance by skilled employees of loading dock equipment Installer. Include quarterly preventive maintenance, repair or replacement of worn or defective components, lubrication, cleaning, and adjusting as required for proper loading dock equipment operation at rated speed and capacity. Provide parts and supplies the same as those used in the manufacture and installation of original equipment.

B. Continuing Maintenance Proposal: From Installer to Owner, in the form of a standard yearly maintenance agreement, starting on date initial maintenance service is concluded. State services, obligations, conditions, and terms for agreement period and for future renewal options.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Steel Plates, Shapes, and Bars: ASTM 36/A 36M.

B. Rolled-Steel Floor Plate: ASTM A 786/A 786M, rolled from steel plate complying with ASTM A 572/A 572M, Grade 55.

C. Steel Tubing: ASTM A 500, cold formed.

D. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.

E. Wood: DOC PS 20 dimension lumber, select structural grade, kiln dried.

F. Pressure-Treated Wood: DOC PS 20 dimension lumber, select structural grade, kiln dried, and pressure treated with waterborne preservatives to comply with AWPA C2.

G. Poly Tube Raceway or conduit for Power Supply to Self-Contained Power Unit, to meet manufacturer's recommendations and Electrical Code.

2.2 ACCEPTABLE MANUFACTURERS

A. Manufacturers and products listed in this Section11 3000 are specified standards, intended to further define the design and performance intent of Contract Documents. Equivalent products by the following manufacturers subject to compliance with requirements specified herein and approved by Architect shall be acceptable:

1. Basis-of-Design:
    a. Pentalift Equipment Corporation.
        1) Model 6x8
        2) Actual pit dimensions, 74-inches by 88-inches
        3) Options: Auto Return, Independent Lip Control and Deck Stop.
        4) Wall Mounted Push Button Hydraulic Fallsafe
2. Beacon Industries, Inc.
3. Blue Giant Equipment Corporation.
4. Chalfant Dock Equipment.
5. Flexon, Inc.
6. McGuire, W. B. Co., Inc.
7. Rite-Hite Corporation
8. SPX Dock Products.
9. Vestil Manufacturing Company.

2.3 RECESSED DOCK LEVELERS

A. General: Recessed, hydraulic hinged-lip-type dock levelers, to match adjacent existing dock levelers, except in size, designed for permanent installation in concrete pits preformed in the edge of loading platform; of type, function, operation, capacity, size, and construction indicated; and complete with controls, safety devices, and accessories required.

B. Standard: Comply with MH 30.1, except for structural testing to establish rated capacity.

C. Rated Capacity: Capable of supporting total gross load of 30,000 pounds without permanent deflection or distortion.

D. Platform: Not less than 3/8-inch thick, nonskid steel plate.

1. Platform Size: As indicated on Drawings.
2. Frame: Clean-pit type, designed to support leveler at sides of pit, with no side-to-side supports at front of pit floor.
    a. Grease fitting at all articulating and pivoting joints.
3. Toe Guards: Equip open sides of dock leveler over range indicated with metal toe guards.
    a. Toe-Guard Range: Entire upper operating range.

E. Hinged Lip: Not less than 5/8-inch thick, nonskid steel plate.

1. Hinge: Full width, piano-type hinge with heavy-wall hinge tube and greased fittings, with gussets on lip and ramp for support.

2. Safety Barrier Lip: Designed to protect material-handling equipment from an accidental fall from loading platform edge of the dock leveler when the leveler is not in use.

F. Function: Dock levelers shall compensate for differences in height between truck bed and loading platform.

1. Vertical Travel: Operating range above platform level of sufficient height to enable lip to extend and clear truck bed before contact with the following minimum working range:
   a. Above Adjoining Platform: 12 inches
   b. Below Adjoining Platform: 12 inches.
2. Automatic Vertical Compensation: Floating travel of ramp with lip extended and resting on truck bed shall compensate automatically for upward or downward movement of truck bed during loading and unloading.
3. Automatic Lateral Compensation: Tilting of ramp with lip extended and resting on truck bed shall compensate automatically for canted truck beds of up to 4 inches over width of ramp.
4. Lip Operation: Manufacturer's standard mechanism that automatically extends and supports hinged lip on ramp edge with lip resting on truck bed over dock leveler's working range, allows lip to yield under impact of incoming truck, and automatically retracts lip when truck departs.
   a. Length of Lip Extension: 20 inches.
5. Manual Ramp Return: Manual return of unloaded ramp, from raised or lowered positions to stored position, level with platform.

G. Mechanical Operating System: Manual control; counterbalance and spring operation. Spring-operated raising and walk-down lowering of unloaded ramp. Equip leveler with an upward-biased-spring counterbalancing mechanism controlled by a hold-down device. Ramp raises to top limit of operating range by operating recessed control handle in ramp to disengage hold-down device. Ramp lowers below platform level with lip retracted by operating auxiliary, recessed control handle to release support legs.

1. Free-Fall Protection: Manufacturer's standard protection system to limit free fall of loaded ramps with front edge supported by truck bed.

H. Construction: Fabricate dock-leveler frame, platform supports, and lip supports from structural- or formed-steel shapes. Weld platform and hinged lip to supports. Fabricate entire assembly to withstand deformation during both operating and stored phases of service. Chamfer lip edge to minimize obstructing wheels of material-handling vehicles.

1. Cross-Traffic Support: Manufacturer's standard method of supporting ramp at platform level in stored position with lip retracted. Provide a means to release supports to allow ramp to descend below platform level.
2. Maintenance Strut: Integral strut to positively support ramp in up position during maintenance of dock leveler.
3. Articulating and pivoting joints: Grease fitting at all articulating and pivoting joints.

I. Accessories:

1. Curb Angles: Section 05 5000 Metal Fabrications.
2. Self-Forming Pan: Manufacturer's standard prefabricated, self-forming steel form system for poured-in-place construction of concrete pit.
3. Night Locks: Manufacturer's standard means to prevent extending lip and lowering ramp when overhead doors are locked.

4. Side and rear neoprene weather seals.
5. Foam insulation under dock-leveler platform.
6. Abrasive skid-resistant surface.

J. Finish: Hot-dip galvanize and paint dock levelers after assembly and testing.

1. Color: Selected by Architect from manufacturers full range of custom and standard colors.
2. Toe Guards: Paint orange to comply with ANSI Z535.1.

2.4 DOCK BUMPERS

A. Laminated-Tread Dock Bumper: Fabricated from multiple, uniformly thick plies cut from fabric-reinforced rubber tires. Laminate plies under pressure on not less than two 3/4-inch diameter, steel supporting rods that are welded at one end to 1/4-inch thick, structural-steel end angle and secured with a nut and angle at the other end. Fabricate angles with predrilled anchor holes and sized to provide not less than 1 inch of tread plies extending beyond the face of closure angles.

1. Thickness: 6 inches.
2. Horizontal Style: 12 inches high by 36 inches wide or as directed by Architect.
3. Vertical Style: 12 inches wide by 24 inches high or as directed by Architect.

B. Anchorage Devices: Hot-dip galvanized-steel anchor bolts, nuts, washers, bolts, sleeves, cast-in-place plates, and other anchorage devices as required to fasten bumpers securely in place and to suit installation type indicated. Minimum ½ diameter by 5 inches long.

2.5 FOAM-PAD DOCK SEALS

A. General: Dock seals consisting of fabric-covered foam pads designed to compress 4 to 5 inches under pressure of truck body to form an airtight seal at jambs and head of loading dock openings; of type, size, and construction indicated.

1. Basis-of-Design Product: Subject to compliance with requirements: Model 191 type “B” jamb by Beacon Industries, Inc.
2. Properties:
    a. Sized to fit door opening. Verify.
    b. Head curtain: 40 oz. Neoprene coated nylon.
    c. Side pads: 40 oz. Neoprene coated nylon.
    d. Base color: Black except Blue if available.
    e. Jamb style: Flush with door opening edge.

B. Door Opening Size: Existing Opening, as indicated in Drawings and schedules. Field verify dimensions before ordering or installation begins.

C. Stationary Head Pad: 24 inches high and same depth as jamb pads sized for opening width.

D. Jamb Pads: Square.

1. Nominal Size: 12 inches wide and sized for opening height.

E. Construction: Consisting of double-ply, coated, nylon fabric-covered, urethane-foam core with supporting frame. Fabricate jamb and head pads of same depth and sized for opening width.

1. Preservative Treated Wood Support Frame: Factory painted; with steel mounting hardware.
2. Steel Support Frame: Steel channel frame of manufacturer's standard weight, shape, and finish; with steel mounting hardware.
3. Cover Fabric: Neoprene-coated nylon with minimum total weight of 40 oz./sq. yd.
   a. Color: Black except Blue where available from manufacturer's standard and/or custom colors.
4. Guide Strips: 4-inch wide, coated, nylon guide strips on jamb pads.

2.6 GENERAL FINISH REQUIREMENTS

A. Finish loading dock equipment after assembly and testing.

2.7 STEEL FINISHES

A. Galvanizing: All steel components except contacting parts of working, (moving, interlocking, pivoting, retracting, etc.), machine components: Hot-dip galvanize components as indicated to comply with the following: Galvanize components and machine contacting areas of moving parts:
   1. ASTM A 123/A 123M for iron and steel loading dock equipment.
   2. ASTM A 153/A 153M or ASTM F 2329 for iron and steel hardware for loading dock equipment.

B. Galvanized-Steel and Steel Finish: After Galvanizing and immediately after cleaning and pretreating, apply prime a in Black
   1. Finish: Section 09 9600 High Performance Coatings: Shop Applied Protective Coatings.
   2. Color: Black

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas, new and existing, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of loading dock equipment.

B. Examine walls and floors of pits for suitable conditions where recessed loading dock equipment is to be installed. Pits shall be plumb and square and properly sloped for drainage from back to front of loading dock.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Coordinate size and location of loading dock equipment indicated to be attached to or recessed into concrete or masonry, and furnish anchoring devices with templates, diagrams, and instructions for their installation.

B. Place self-forming pan system for recessed dock levelers in proper relation to loading platform before pouring concrete.

C. Clean recessed pits of debris.

3.3 INSTALLATION

A. General: Install loading dock equipment, including safety devices and accessories as required for a complete installation.

1. Examine all existing dock concrete slab, foundation wall and new pit construction for acceptance before any new installation is commenced.

B. Recessed Dock Levelers: Attach dock levelers securely to loading dock platform, flush with adjacent loading dock surfaces and square to recessed pit.

C. Dock Bumpers: Attach dock bumpers to face of loading dock in a manner that complies with requirements indicated for spacing, arrangement, and position relative to top of platform and anchorage.

1. Remove existing dock bumpers from existing concrete foundation wall. Examine existing and new dock construction for acceptance of conditions before proceeding with new dock bumper installation.
2. Bolted Attachment: Attach dock bumpers to preset anchor bolts embedded in concrete or to cast-in-place inserts or threaded studs welded to embedded-steel plates or angles. If preset anchor bolts, cast-in-place inserts, or threaded studs welded to embedded-steel plates or angles are not provided, attach dock bumpers by drilling and anchoring with expansion anchors and bolts.

D. Dock Seals: Attach dock-seal support frames securely to building structure in proper relation to openings, dock bumpers, and dock levelers to ensure compression of dock seals when trucks are positioned against dock bumpers.

3.4 ADJUSTING

A. Dock leveler:

1. Adjust for smooth and balanced operation in complete compliance with requirements of manufacturer, Owner, and agencies specified under Regulatory Requirements in Part 1 herein.
2. Replace any portions or components damaged or not functioning as required by manufacturer's standards.
3. Clean entire installation to new condition.
4. Test dock levelers for vertical travel within operating range indicated.

B. Dock seal and shelter:

1. Adjust for proper operation in complete compliance with requirements of manufacturer and Owner.
2. Replace any portions or components damaged or not functioning as required by manufacturer's standards.
3. Clean entire installation to new condition.

C. Dock bumpers: Replace any portions or components damaged as required by manufacturer's standards.

D. After completing installation of exposed, factory-finished loading dock equipment, inspect exposed finishes and repair damaged finishes.

3.5 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain loading dock equipment.

END OF SECTION

This page intentionally left blank.

-SECTION 13 3400

FABRICATED ENGINEERED STRUCTURES

PART 1 - GENERAL

1.1 SUMMARY

A. Work Included
   1. Prefabricated steel canopies.

1.2 REFERENCES

A. Work specified herein shall conform to applicable portions of the following referenced standards:
   1. ASTM A-500 - Specification for Structural Tubing for construction of bridges and buildings.
   2. ASTM A-653 - Specification for Steel Sheet, zinc coated by the hotdip process. structural quality.
   3. ASTM A-924 - General requirements for Steel Sheet, metallic coated by the hot-dip process.
   4. AISI - Specification for the Design of Cold-Formed steel structural members.

1.3 SYSTEM DESCRIPTION

A. Design of system shall be certified by a registered Professional Engineer.

B. Design requirements:
   1. Provide design requirements In compliance with the Kentucky Building Code, and all applicable codes.
   2. Refer to structural drawings, Sheet S000 for project design loads and earthquake design data.
      a. Live Load to be 26 PSF minimum, Wind Load to be 110 MPH minimum, and Wind Exposure of C-minimum.
   3. Design, reinforce, size and install members to withstand dead loads and live loads caused by pressure and suction of wind acting normal to plane of wall as calculated in accordance with building code unless more stringent requirements are specified herein.

1.4 QUALITY ASSURANCE

A. Manufacturer: Shall have a minimum of 10 years experience in the manufacture and supplying of steel canopies.

B. Installer- Shall have a minimum of 5 years experience installing pre-engineered steel canopies, Installation shall be in accordance with manufacturers shop drawings.

1.5 REGULATORY REQUIREMENTS

A. Conform to the Kentucky Building Code requirements.

1.6 SUBMITTALS

A. Submit Items Indicated below for review by Architect:
   1. Shop drawings for all items indicating material, construction, finishes, location and extent of work and coordination with work of other trades for proper installation.
      a. Canopies:
         1) Indicate adaptation of manufacturer's standard canopy system to Project
         2) Structural support requirements and tolerances, anticipated deflection under load
         3) Profiles of members and details.

4) Finishes, connections and attachments, and anchorages to other work.

2. Manufacturer's literature indicating compliance with specified requirements.
3. Provide Professional Engineer's Stamp, Registered in the State of Kentucky, included with submittals.
4. Submit (2) 2-inch by 3-inch color samples for selection of roof deck and trim.

1.7 QUALITY ASSURANCE

A. Coordinate work with other trades requiring accurate rough-in dimensions or other requirements.
   1. Coordination of Work: Review other sections to which the Canopy System attach or coordinate.

B. Canopy systems shall be manufactured by a firm with a minimum of 5 years of experience in the design, engineering and fabrication of similar systems.

C. Single-source Responsibility: Provide canopy system manufactured by a single manufacturer.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Manufacturers listed in this Section 13 3400 are intended to further define the design and performance intent of Contract Documents. Equivalent products, subject to compliance with requirements specified herein shall be acceptable as approved by Architect:

2.2 CANOPY

A. Basis of Design: Childers Carports & Structures, Inc., Houston. Texas. (713) 460-2181.
   1. Model EB-16, 10-Foot Wide Eyebrow Canopy, with 12-inch Nassau trim, box gutter at wall and 4-inch by 4-inch box downspout, with kick-out at bottom, for installation into cast iron downspout boot.
      a. Size and configuration of Eyebrow Canopy as indicated on drawings.

B. Acceptable Manufacturers:
   1. Ballew's Aluminum Products, Inc.
   2. Mapes Industries.
   3. Mobile Walkways, Inc.

2.3 MATERIALS

A. Roof deck and trim shall be pre-painted, hot-dip galvanized steel meeting ASTM Specification A-653. Grade 50. 50,000 psi yield. Galvanizing shall meet ASTM Specification A-924, G-90 Class. Paint shall be factory applied baked polyester with a full coat on color side and a uniform wash coat on reverse. Roof deck to be 26 gauge minimum.

B. Roof beams shall meet ASTM Specification A-653 Grade 50, 50.000 psi yield. Galvanizing shall meet ASTM specification A-924. G-90 Class.

C. Provide wall mounted gutter and integral downspouts.

D. Provide support rafter assembly and all canopy support structure.

E. Provide galvanized through wall attachment consisting of engineered wall angles, backing plates, through bolts, and wedge anchors, etc.

F. Fabrication
   1. All connections shall be mechanically assembled utilizing 3/16-inch fasteners with a minimum shear stress of 350 lb. Pre-welded or factory-welded connections are not acceptable.

2. Decking shall be designed with interlocking extruded aluminum members with mechanical fasteners field applied to provide structural integrity for the completed assembly.
3. Concealed drainage. Water shall drain from covered surfaces into integral rear gutter and directed to ground level discharge via one or more designated downspouts.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine surfaces and openings to receive items specified for defects that will adversely affect execution and quality of work.
   1. Do not start installation of items until unsatisfactory condition has been corrected.

3.2 INSTALLATION

A. Install items in strict conformance with approved shop drawings and manufacturer's printed specifications, recommendations.

B. Make attachment with anchors approved by manufacturer. At existing internally insulated precast concrete walls, attach wall-mounted items, wall angles, backing plates, through bolts, and wedge anchors, through exterior concrete precast panel and insulation, into the interior structural precast concrete panel component.

C. Locate, install items plumb, square, level; anchor securely in place.

D. Provide and install cover molds, fillers, closure pieces, scribe strips, similar items necessary for secure installation and proper operation as acceptable to Architect.

E. Tolerances:
   1. Maximum variation from plan or location indicated on Drawings: None.
   2. Maximum offset from true alignment between adjacent members butting or in-line: None.

3.3 FIELD QUALITY CONTROL

A. Verify that canopies are installed straight and true.

3.4 ADJUSTING AND CLEANING

A. Clean up site and remove excess material.

B. Patch, refinish adjacent work damaged or marred during installation.

C. Touch-up mars, defects. Remove and refinish or replace with new damaged factory finished items.

D. Replace any damaged portions or components as required by manufacturer’s standards.

END OF SECTION

This page intentionally left blank.

SECTION 26-0536

CABLE TRAYS FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.1 RELATED WORK

A. Section 26-0000 - General Electrical Requirements

B. Section 26-0526 - Grounding and Bonding

C. Section 26-0529 - Hangers and Supports for Electrical Systems

D. Section 26-0533 - Raceway and Boxes for Electrical Systems

E. Section 26-0548 - Vibration and Seismic Controls for Electrical Systems

F. Section 26-0593 - Electrical System Firestopping

G. Related sections in other Divisions of Work:
   1. Section 27-0528.29 - Hangers and Supports for Communications Systems
   2. Section 27-0528.36 - Cable Trays for Communications Systems
   3. Section 27-100 – Communications Equipment Room Fittings

1.2 REFERENCE

A. The Work under this Section is subject to requirements of the Contract Documents including the General Conditions, Supplementary Conditions, and sections under Division 01 General Requirements.

1.3 DESCRIPTION

A. Provide complete cable tray system including straight tray sections, fittings such as horizontal elbows, vertical risers, crosses, tees, wyes, reducers and coupling accessories, splice plates and cable tray supports to support cable systems in locations as indicated on Electrical and Communications drawings.

B. Electrical cable tray system is intended to carry 120V and above power systems only.

C. Communications cable tray system is intended to carry communications and approved related cable only; A/C power wiring and fire alarm system cabling are not allowed.

1.4 REFERENCE STANDARDS

A. ASTM A 123 - Specification for Zinc (Hot-Galvanized) Coatings on Products Fabricated from Rolled, Pressed, and forged Steel Shapes, Plates, Bars, and Strip.

B. ASTM A 446 - Specification for Zinc-Coated (Galvanized) by Hot-Dip Process, Structural (Physical) Quality.

C. ASTM A 525 - Specification for Steel Sheet, Zinc-Coated Galvanized by Hot Dip Process.

D. ASTM A 607 - Specification for Steel Sheet and Strip, Hot-rolled and Cold-Rolled, High Strength, Low Alloy Columbium or Vanadium.

E. ASTM B 633 - Specification for Electro-deposited Coatings of Zinc on Iron and Steel.

F. NEMA VE 1 - Metal Cable Tray Systems.

G. UK-CNS – Telecommunication Standards, Revision 4.0

1.5 SUBMITTALS

A. Submit shop drawings for equipment provided under this Section.

B. As-built drawings showing floor plan location, elevation changes and conduit drops.

PART 2 PRODUCTS

2.1 MATERIALS

A. Acceptable Manufacturers: Cooper B-Line, Mono Systems, MP Husky.

2.2 FABRICATION AND MANUFACTURER

A. Materials of Construction:
   1. Materials shall be adequately protected against corrosion or made of corrosion resistant material.

B. Aluminum Trays:
   1. Straight section and fitting side rails shall be extruded aluminum. Other components shall be aluminum.

C. Tray system shall be ladder type, inside width as indicated in documents with minimum usable loading depth 1" less than overall nominal tray depth.

D. Ladder type trays:
   1. Shall consist of 2 longitudinal members (side rails) with transverse members (rungs) welded to side rails. Tray rung spacing shall be designed to prevent cable sagging as follows:
      a. Rungs shall have minimum cable bearing surface of 7/8" with radiused edges. No portion of rungs shall protrude below bottom plane of side rails.
   2. Communications cable tray rungs shall have maximum spacing of 6” over the entire length of the cable tray.

E. Tray system shall not present sharp edges, burrs or projections injurious to wiring. Upper flanges shall be rolled out and downward for safety.

F. Provide splice plates with each straight section and fitting.
   1. Splice plates shall be bolted type.
   2. Splice plates shall have the proper UL rating for grounding conductors.
   3. Splice joints that are hinged and expansion plates require a separate bonding conductor between the cable tray sections.
   4. Splice plate construction shall be designed to permit splice to be located at any point within support span without diminishing cable tray rated loading capacity.

5. Splice plates for aluminum tray systems shall be aluminum and attached with minimum of 4 rib neck carriage bolts, lock washers.

G. Components shall be stainless steel for stainless steel trays.

H. Electrical tray system shall be side rail hung.

I. Communications Cable Tray Requirements:
   1. Communications tray system shall be mounted using a trapeze method with threaded rods and unistrut. Center-hung hangers are not allowed.
   2. No bends in threaded rods are allowed.
   3. Tray shall be supported in this fashion within 24” of every section junction and at 5 foot intervals between joints.
   4. Tray system shall not be used to support other services or utilities.
   5. Minimum bending radius of Communications cross-ties and elbows shall allow greater than the minimum bend radius for cabling to be installed in the tray.

J. Supports for Aluminum Tray:
   1. Aluminum.

K. Minimum bending radius of cross-ties and elbows shall be 24".

L. Trapeze hangers shall be supported by 1/2" minimum diameter rods.

M. Cadmium plated components shall not be used in any part of cable tray system, except when located in clean areas as shown on the drawings.

N. Aluminum cable trays shall be UL classified as equipment grounding conductors.

PART 3 EXECUTION

3.1 GENERAL

A. Division 26 Contractor shall provide all Division 27 pathway infrastructure as specified and shown on plans, including but not exclusive to back boxes, conduits, pull boxes, cable trays, surface raceways, and floor boxes.

3.2 INSTALLATION

A. Tray system shall be accessible, with sufficient space provided about cable trays to permit side access for installing and maintenance of cables.

B. Provide blind end plates for trays that dead end.

C. Provide full-width dropouts where cable exit from tray.

D. Join cable tray system sections at ends using manufacturer prefabricated splice plates.

E. Provide prefabricated expansion splice plates at intervals of 48 ft in straight runs and where cable tray systems cross building expansion joints.

F. Provide minimum of one expansion splice plate in straight runs, which exceed 12 ft for tray installations in exterior areas.

G. Splice joints that are hinged and expansion splice plates require a separate bonding conductor between the cable tray sections.

H. Support cable tray system utilizing trapeze hangers from building or other structural steel members, angle brackets from vertical structural steel members, upright angle brackets on pipe racks, or directly upon horizontal structural steel members of the building or pipe racks.

I. Size, anchor, and space supports to sustain weight of cable tray system, cable and tubes which are to be installed into cable tray, and 200 lbs excess on any individual ladder rung or section, with safety factor of 65 minimum when supported as simple span and tested per NEMA requirements. Load and safety factors are applicable to both, rung or section and side rails.

J. Calculate supports based on 60 lbs/ft load of cables and tubes.

K. Total vertical tray deflection shall not exceed 1-1/2" between supports.

L. Include dynamic loads in calculations for outside area installations.

M. Secure tray covers to cable tray system side rails using manufacturer prefabricated cover clamps and join covers at ends using manufacturer prefabricated cover splices.

N. Covers in outside areas shall be secured using manufacturer's recommended clamp for that service location.

O. Make intersections, bends, and tees, using fittings of same type and model series as straight run sections.

P. Cable tray systems shall be electrically continuous.

Q. Connect each cable tray system subassembly to building ground system using grounding clamps and grounding conductors. Provide 3.0 ohm maximum resistance to building ground connection.

R. Copper grounding conductors shall not be installed on aluminum tray systems.

S. Cable tray shall not be connected to instrumentation grounding system.

T. Structural side members shall not be punched or drilled except for splice-plate and fastener bolt holes.

U. Cable tray system components shall not be flame-cut or arc-cut. Make cuts using a saw.

V. Drill or punch holes for splice-plates and fasteners and remove burrs.

W. Provide blind end plates for trays that dead end.

X. Nicks and scratches and ends of cut sections with galvanized coatings shall be coated with approved galvanizing coating after tray installation.

Y. Communications cable tray shall:
   1. Communications tray system shall be supported using a trapeze method with threaded rods and unistrut.
      a. Cable tray shall be supported on sides of tray and not from the center.
      b. No bends in threaded rods are allowed.

c. Tray shall be supported in this fashion at every section junction and at 5 foot intervals between joints.
d. Tray system shall not be used to support other services or utilities.
e. Cable tray will loop the inside perimeter of all Communications rooms.

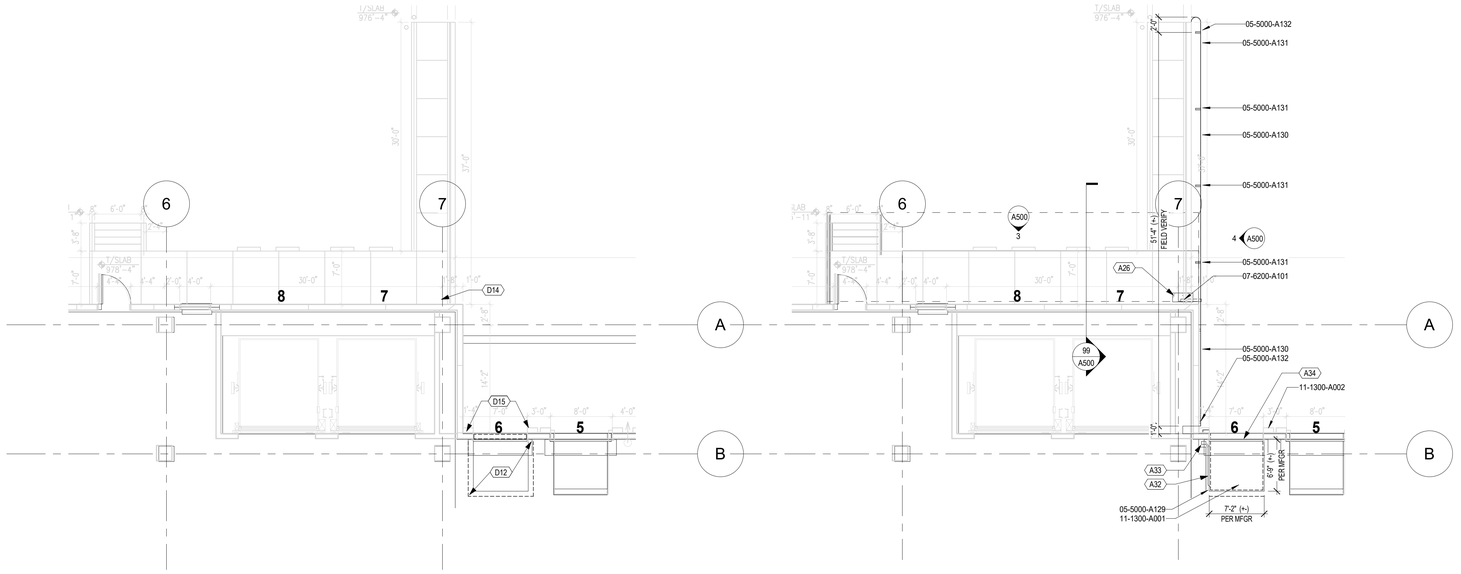
2. Provide a minimum of 12” clearance above the cable tray, and minimum of 24” along the length one side of the tray.
3. Provide a minimum clearance of 24” from fluorescent lighting.
4. Be located a minimum of 6” above the ceiling, and a minimum of 8’ AFF.
5. Be the first utility above the ceiling.
6. Be supported by trapeze-type supports every 5’, and within 24” of each side of every connection to a fitting.
   a. Center-hung hangers are not allowed.
7. Communications cable tray shall not be supported from pipe racks.
8. Splice joints that are hinged and expansion splice plates require a separate bonding conductor between the cable tray sections.
9. Test and document electrical continuity of entire cable tray system to Owner prior to Communications conductor installation.

Z. Conductor Installation:

1. Provide metallic grounding conduit clamps to attach conduits to cable tray system.
2. Provide bushings on conduit ends where cables enter conduit to protect insulation.
3. Make multiple drops at ends of sections using manufacturer prefabricated ladder drops.
4. Provide plastic prefabricated closure straps (tie-wrap type) of black or opaque color for securing cables in cable tray system. Ensure that cables are not cut by applying these straps too tightly or by fastening strapped grouping to another strapped grouping.
   a. Communications cables shall not be strapped to cable tray rungs in horizontal runs.
5. Cut strap ends on opposite side of rung from cables or tubes except where back of rung is inaccessible.
6. Strap cables larger than #1/0 to cable tray rungs every 3 to 4 ft in horizontal runs to prevent movement due to fault current magnetic field forces.
7. Cables smaller than #1/0 shall not be fastened to cable tray rungs in horizontal runs. Strapping is to be kept to minimum.
8. Strap vertical runs as required, to prevent sagging of cables.
9. Provide sufficient slack in cables to allow for unequal expansion coefficients of cable tray and cables. This requirement is in addition to slack required at cable tray expansion joints.

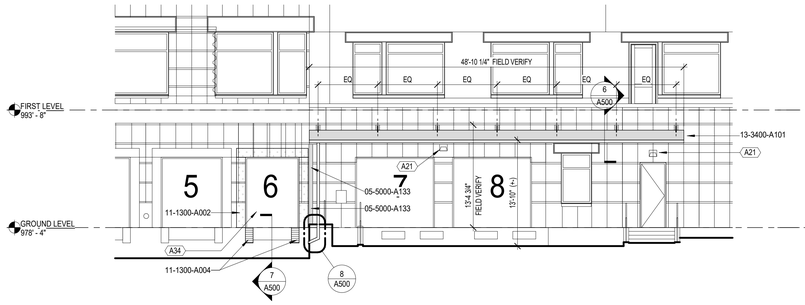
END OF SECTION

THIS PAGE LEFT INTENTIONALLY BLANK

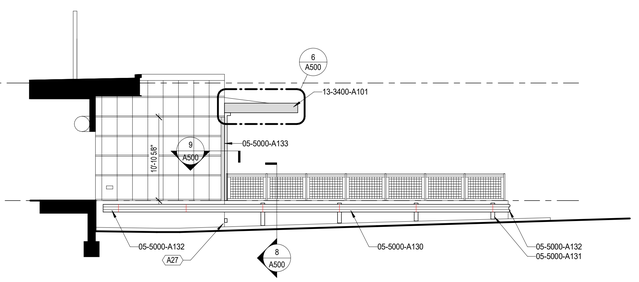


REF:
1 A500 **PARTITAL DEMOLITION PLAN**
SCALE: 1/8" = 1'-0"

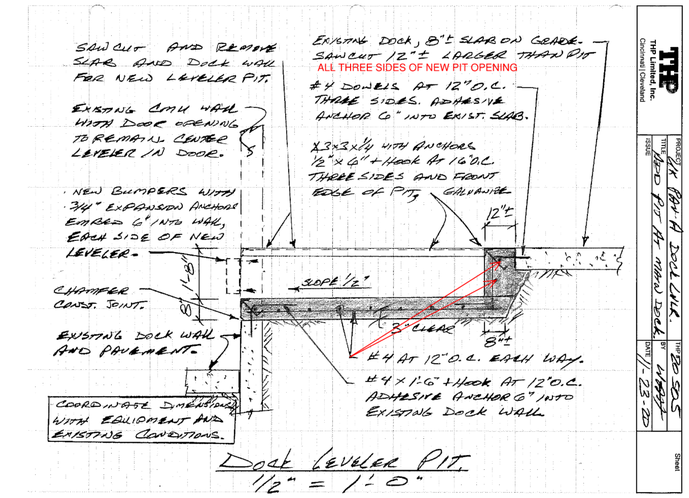
2 A500 **PARTIAL FLOOR PLAN**
SCALE: 1/8" = 1'-0"

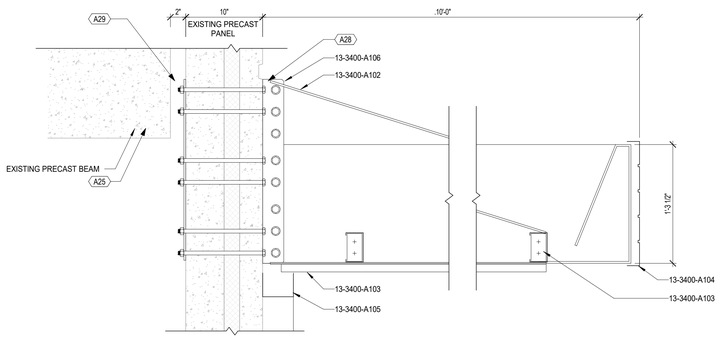


3 A500 **PARTIAL EAST ELEVATION**
SCALE: 1/8" = 1'-0"

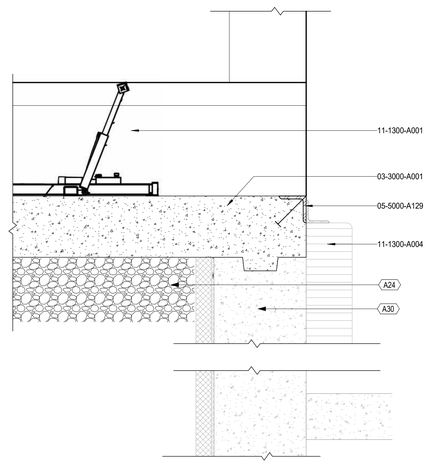


4 A500 **PARTIAL SOUTH ELEVATION**
SCALE: 1/8" = 1'-0"

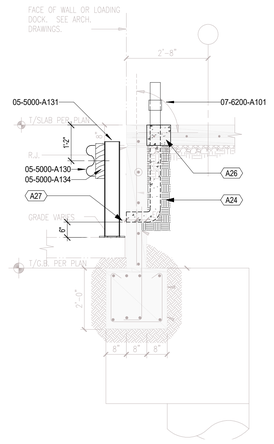




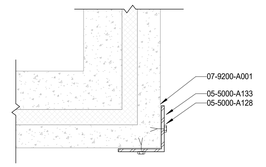
6 A500 **SECTION DETAIL**
SCALE: 1 1/2" = 1'-0"



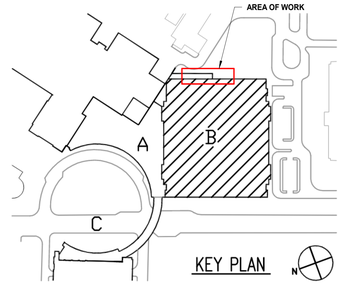
7 A500 **SECTION DETAIL**
SCALE: 1 1/2" = 1'-0"



8 A500 **SECTION DETAIL**
SCALE: 1/2" = 1'-0"



9 A500 **PLAN DETAIL**
SCALE: 1 1/2" = 1'-0"



KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
03-3000-A001	CONCRETE SLAB ON GRADE. REFER TO STRUCTURAL DRAWINGS.
05-5000-A128	EXPANSION ANCHOR
05-5000-A129	STEEL SLAB EDGE REINFORCEMENT
05-5000-A130	GALVANIZED STEEL VEHICULAR GUARDRAIL
05-5000-A131	GALVANIZED POST
05-5000-A132	TERMINAL RAIL
05-5000-A133	6" X 6" X 3/8" THICK 90-DEGREE STEEL BENT PLATE
05-5000-A134	OFFSET BLOCK
07-6200-A101	MANUFACTURED ARCHITECTURAL CASTING IRON DOWNSPOUT BOOT.
07-9200-A001	SEALANT.
11-1300-A001	DOCK LEVELER
11-1300-A002	DOCK SEAL
11-1300-A004	DOCK BUMPER
13-3400-A101	PREFABRICATED STEEL CANOPY
13-3400-A102	ROOF SUPPORT RAFTERS
13-3400-A103	ROOF DECK
13-3400-A104	FACIA TRIM
13-3400-A105	GUTTER / INTEGRAL DOWNSPOUT
13-3400-A106	CANOPY SUPPORT STRUCTURE
A21	EXISTING EXTERIOR LIGHT FIXTURES TO REMAIN
A24	COMPACTED FILL. MATCH EXISTING
A25	EXISTING CONCRETE BEAM.
A26	NEW CONCRETE TO MATCH EXISTING
A27	DOWNSPOUT OUTLET THROUGH EXISTING CONCRETE WALL
A28	ALIGN T/BRACKET W/ BOTTOM OF REVEAL
A29	TO FACILITATE INSTALLATION AROUND OBSTRUCTION, IT MAY BE NECESSARY TO WELD WASHER AND NUT TO BACKPLATE.
A30	EXISTING CONCRETE FOUNDATION WALL MODIFIED FOR INSTALLATION OF NEW DOCK LEVELER
A32	RECESSED DOCK LEVELER BELOW SLAB ELECTRICAL CONDUIT, TYPICAL OF TWO, TO BE COORDINATED WITH MEP
A33	RECESSED DOCK LEVELER WALL MOUNTED CONTROL PANEL
A34	EXISTING DOCK DOOR AND OPENING
D12	REMOVE ALL EXISTING CONCRETE AND FILL NECESSARY FOR INSTALLATION OF NEW RECESSED DOCK LEVELER
D14	CORE DRILL EXISTING CONCRETE SLAB-ON-GRADE/FOUNDATION WE/FOUNDATION WALL FOR INSTALLATION OF PREFABRICATED STEEL EYEBROW CANOPY DOWNSPOUT
D15	REMOVE EXISTING DOCK BUMPERS AND SEALS IN PREPARATION FOR NEW BUMPER INSTALLATION

PROJECT ARCHITECT
609 West Main Street
Louisville, KY 40202
502.583.0700
GBBN.COM

HealthCare
Renovate/Upgrade
UK Healthcare
Facilities
Pavilion A 5th Floor
Project Number: 2402.9

OWNER
University of Kentucky
222 Peterson Service Building
Lexington, Kentucky 40506

CONSTRUCTION MANAGER
Turner Construction Company
588 Leestown Road Suite 130-300
Lexington, KY 40511
859.421.4913

CONSULTANTS

MEP ENGINEER
AEI Affiliated Engineers, Inc.
10 South LaSalle Street, Suite 2700
Chicago, IL 60603
312.977.2800

MEDICAL EQUIPMENT
BSA Life Structures
9365 Counselors Row #300
Indianapolis, IN 46240
317.819.7878

Pavilion A 5th Floor PAVILION A, 1000 S. LIMESTONE, LEXINGTON, KY 40536

DRAWING ISSUE

CONTRACT DOCUMENTS

NO.	DATE	DESCRIPTION
1	01.07.21	ADDENDUM 04

DRAWING TITLE

LEVEL 0G CANOPY AND DOCK

SEAL

JOB NUMBER

13703.01

A500

BIM 360://UK 5th and 12th Floors/ARCH_UK-PCF_H1_5_12_R20v1.rvt
1/11/2021 11:24:45 AM

DOOR SCHEDULE (FIFTH FLOOR)

DOOR MARK	DOOR LOCATION	DOOR INFORMATION: WIDTH	HEIGHT	MATERIAL	STYLE	FRAME INFORMATION: MATERIAL	TYPE	DETAILS: HEAD	JAMB	OTHER	HARDWARE SET	FIRE RATING	GLASS TYPE	COMMENTS	REV. NO.
A05L004	LINEN CHUTE	3'-6"	7'-0"	WD	F	HM	1	21	21	-	15	45	-	CR, HS	
A05L005	LINEN CHUTE	3'-6"	7'-0"	WD	F	HM	1	21	21	-	15	45	-	CR, HS	
A05013	CORRIDOR	2 @ 3'-8"	7'-0"	WD	N	HM	1	21	21	-	113	SMOKE	GL10T	CR, AO, HS, TUG	
A05017	CORRIDOR	2 @ 3'-8"	7'-0"	WD	N	HM	3	25	26	-	127	20	GL20T	CR, AO, HS, RATED CONSTRUCTION, TUG, RO	
A05019	CORRIDOR	2 @ 3'-8"	7'-0"	WD	N	HM	3	25	26	-	133	20	GL20T	CR, AO, HS, TUG	
A05021	CLEAN EQUIPMENT	3'-6"	7'-0"	WD	N	HM	1	21	35	-	69.2	45	GL20T	HS, CR	
A05024	OT/PT GYM	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	35	-	75.2	SMOKE	-	CR, HS	
A05024A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02.2	-	-		
A05025	SLP REPORT ROOM	3'-0"	7'-0"	WD	F	HM	1	21	21	-	82	SMOKE	-	CR, HS	
A05026	DIETARY	4'-0"	7'-0"	WD	N	HM	1	21	35	-	82	SMOKE	-	CR, HS	
A05027	NEUROSCIENCE DIRECTOR OFFICE	3'-6"	7'-0"	WD	F	HM	1	21	21	-	05.1	SMOKE	-	HS	
A05031	CORRIDOR	2 @ 3'-8"	7'-0"	WD	N	HM	3	25	26	-	127	20	GL20T	CR, AO, HS, RATED CONSTRUCTION, TUG, RO	
A05035	CORRIDOR	2 @ 3'-8"	7'-0"	WD	N	HM	3	25	26	-	126	20	GL20T	CR, AO, HS, RATED CONSTRUCTION, TUG	
A05041	CORRIDOR	2 @ 3'-8"	7'-0"	WD	N	HM	1	21	21	-	113	SMOKE	GL10T	CR, AO, HS, TUG	
A05047	CORRIDOR	2 @ 3'-8"	7'-0"	WD	N	HM	3	25	26	-	11	20	GL20T	HO, HS, RATED CONSTRUCTION	
A05101	VEST.	3'-0"	7'-0"	WD	F	HM	1	21	21	-	60	-	-	HS	
A05101A	PUBLIC WOMEN'S RESTROOM	3'-0"	7'-0"	WD	F	HM	1	21	21	-	60	-	-	HS	
A05102A	UNIT CLERK	3'-0"	7'-0"	WD	N	HM	1	21	21	-	10	SMOKE	GL10T	HS, CR, CR	
A05102B	CONSULT	3'-0"	7'-0"	WD	F	HM	1	21	21	-	05	SMOKE	-	HS	
A05111	ANTE ROOM	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	14	SMOKE	-	HS	
A05111A	PATIENT RM PROG ISO.	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	14	SMOKE	-	HS	
A05111B	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05111C	ANTE ROOM	1'-2 1/4"	3'-2"	-		HM	5	30	30	31	-	-	GL10T	-	
A05111D	ANTE ROOM	2'-7 3/4"	3'-2"	-		HM	5	30	30	31	-	SMOKE	GL36	-	
A05112	PATIENT RM PROG	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	01	SMOKE	-	HS	
A05112A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05112B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL36	-	
A05113	PATIENT RM PROG	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	01	SMOKE	-	HS	
A05113A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05113B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL36	-	
A05114	PATIENT RM PROG	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	01	SMOKE	-	HS	
A05114A	TOILET	1'-6"(3'-0")	8'-10"	WD	F1	HM	1	32	32	-	02.1	-	-	HS, NOTCH TOP OF DOOR. REFER TO DETAIL 25/A395	
A05114B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL36	LG	
A05115	PATIENT RM PROG	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	01	SMOKE	-	HS	
A05115A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05115B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL36	LG	
A05116	PATIENT RM PROG	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	01	SMOKE	-	HS	
A05116A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05116B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL36	-	
A05117	PATIENT RM PROG	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	01	SMOKE	-	HS	
A05117A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05117B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL36	-	
A05118	PATIENT RM PROG	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	01	SMOKE	-	HS	
A05118A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05118B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL36	-	
A05119	PATIENT RM PROG	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	01	SMOKE	-	HS	
A05119A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02		-	HS	
A05119B	CHARTING	1'-8"	3'-2"	-		HM	5	30	30	31	-	SMOKE	GL36	INTEGRAL BLINDS	
A05120	PATIENT RM PROG	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	253	SMOKE	-	HS	
A05120A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05120B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL36	OPAQUE FROSTED WINDOW FILM	
A05121	PATIENT RM PROG	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	01	SMOKE	-	HS	
A05121A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05121B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL36	-	
A05122	PATIENT RM PROG	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	01	SMOKE	-	HS	
A05122A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05122B	CHARTING	1'-8"	3'-2"	-		HM	5	30	30	31	-	SMOKE	GL36	INTEGRAL BLINDS	
A05123	PATIENT RM PROG	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	01	SMOKE	-	HS	
A05123A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05123B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL36	-	
A05124	PATIENT RM PROG	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	01	SMOKE	-	HS	
A05124A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02		-	HS	
A05124B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL36	LG	
A05125	PATIENT RM PROG	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	01	SMOKE	-	HS	
A05125A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05125B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL36	LG	
A05126	PATIENT RM PROG ISO.	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	14	SMOKE	-	HS	
A05126A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02		-	HS	
A05126B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL36	-	
A05127	PATIENT RM PROG ISO.	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	14	SMOKE	-	HS	
A05127A	TOILET	1'-6"(3'-0")	8'-10"	WD	F1	HM	1	32	32	-	02.1		-	HS, NOTCH TOP OF DOOR. REFER TO DETAIL 25/A395	
A05127B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL36	-	
A05128	PATIENT RM PROG	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	01	SMOKE	-	HS	
A05128A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02		-	HS	
A05128B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL36	-	
A05129	PATIENT RM PROG	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	01	SMOKE	-	HS	
A05129A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05129B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL36	-	
A05130	PATIENT RM PROG	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	01	SMOKE	-	HS	
A05130A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05130B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL36	-	
A05131	PATIENT RM. PROG. - PROT. ISO.	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	14	SMOKE	GL36	-	ADDM-4
A05131A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05131B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL36	-	
A05132	PATIENT RM. PROG. - PROT. ISO.	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	14	SMOKE	GL36	-	ADDM-4
A05132A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05132B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL36	-	
A05133	PATIENT RM. PROG.	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	01	SMOKE	GL36	-	ADDM-4
A05133A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05133B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL36	-	
A05134	PATIENT RM. PROG.	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	01	SMOKE	GL36	-	ADDM-4
A05134A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05134B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL36	-	
A05135	PATIENT RM. PROG.	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	01	SMOKE	GL36	-	ADDM-4
A05135A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05135B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL36	-	
A05136	PATIENT RM. PROG.	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	01	SMOKE	GL36	-	ADDM-4
A05136A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05136B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL36	-	
A05137	PATIENT RM. PROG.	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	01	SMOKE	GL36	-	ADDM-4
A05137A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05137B	CHARTING	1'-8"	3'-2"	-		HM	5	30	30	31	-	SMOKE	GL36	INTEGRAL BLINDS	
A05138	PATIENT RM PROG ISO.	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	14	SMOKE	GL36	-	ADDM-4
A05138A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05138B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL36	-	
A05139	PATIENT RM PROG ISO.	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	14	SMOKE	GL36	-	ADDM-4
A05139A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05139B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL36	-	
A05140	PATIENT RM. PROG.	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	01	SMOKE	GL36	-	ADDM-4
A05140A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05140B	CHARTING	1'-8"	3'-2"	-		HM	5	30	30	31	-	SMOKE	GL36	INTEGRAL BLINDS	
A05141	PATIENT RM. PROG.	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	01	SMOKE	GL36	-	ADDM-4
A05141A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05141B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL36	-	
A05142	PATIENT RM PROG ISO.	2'-0"(4'-0")	7'-0"	AL	FG	AL	-	46	47	-	14	SMOKE	GL10T	-	
A05142A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05142B	ANTE RM.	3'-0"	7' 0"	WD	G	HM	1	21	21	-	129	SMOKE	GL36	HS	
A05142C	PATIENT RM PROG ISO.	3'-0"	7' 0"	WD	G	HM	1	21	21	-	135	-	GL36	HS, INTEGRAL BLINDS	
A05142D	PATIENT RM PROG ISO.	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL36	-	
A05150	STAFF TR	3'-0"	7'-0"	WD	F	HM	1	21	21	-	54	SMOKE	-	HS	
A05151	OFFICE	3'-0"	7'-0"	WD	F	HM	1	21	21	-	82	SMOKE	GL10T	CR, HS	
A05152	WORK ROOM	3'-0"	7'-0"	WD	N	HM	1	21	21	-	82	SMOKE	GL10T	CR, HS	
A05153	NOUR.	3'-6"	7'-0"	WD	N	HM	1	21	21	-	69	45	GL20T	CR, HS	
A05154	CLEAN UTIL.	3'-6"	7'-0"	WD	N	HM	1	21	21	-	69	45	GL20T	CR, HS	
A05155	HSKP.	3'-6"	7'-0"	WD	F	HM	1	21	21	-	13	SMOKE	-	CLOSER, PIN PAD, HS	
A05157	EQUIP.	3'-6"	7'-0"	WD	F	HM	1	21	35	-	69	45	GL20T	CR, HS	
A05160	CORRIDOR	2 @ 3'-8"	7'-0"	WD	N	HM	3	25	26	-	113A	20	GL20T	CR, AO, HS, RR, RATED CONSTRUCTION, TUG, HO	
A05162A	SOILED UTILITY	3'-6"	7'-0"	WD	N	HM	1	21	21	-	69	45	GL20T	CR, HS	
A05162B	SOILED UTILITY	3'-6"	7'-0"	WD	N	HM	1	21	21	-	69	45	GL20T	CR, HS	
A05163	NOUR.	3'-6"	7'-0"	WD	N	HM	1	21	21	-	69	45	GL20T	CR, HS	
A05164	CLEAN UTILITY	3'-6"	7'-0"	WD	N	HM	1	21	21	-	69	45	GL20T	CR, HS	
A05165	EQUIP	3'-6"	7'-0"	WD	N	HM	1	21	35	-	69	45	GL20T	CR, HS	
A05170A	BREAK ROOM	3'-6"	7'-0"	WD	N	HM	1	21	21	-	69	SMOKE	GL10T	HS, CR	
A05170B	BREAK ROOM	3'-6"	7'-0"	WD	N	HM	1	21	21	-	69	SMOKE	GL10T	HS, CR	
A05171	STAFF TOILET	3'-0"	7'-0"	WD	F	HM	1	21	21	-	54	SMOKE	-	HS	
A05173	LACTATION	3'-0"	7'-0"	WD	F	HM	1	21	21	-	82.1	SMOKE	-	CR, HS	
A05174	OFFICE MGR.	3'-0"	7'-0"	WD	F	HM	1	21	21	-	05	SMOKE	-	HS	
A05175	CLASSROOM	3'-0"	7'-0"	WD	N	HM	1	21	21	-	69	SMOKE	GL10T	HS, CR	
A05176	HOSPITALITY	3'-0"	7'-0"	WD	N	HM	1	21	21		05.1	SMOKE	GL10T	HS	
A05180	ASST. OFFICE MGR	3'-0"	7'-0"	WD	F	HM	1	21	21	-	05	SMOKE	-	HS	
A05181	HSKP.	3'-6"	7'-0"	WD	F	HM	1	21	21	-	13	SMOKE	-	CLOSER, PIN PAD, HS	
A05182	STAFF TOILET	3'-0"	7'-0"	WD	F	HM	1	21	21	-	54	SMOKE	-	HS	
A05183	STAFF TOILET	3'-0"	7'-0"	WD	F	HM	1	21	21	-	54	SMOKE	-	HS	
A05184	STAFF TOIL./SHR.	3'-0"	7'-0"	WD	F	HM	1	21	21	-	63	-	-	HS	
A05185	LOCKERS	3'-0"	7'-0"	WD	F	HM	1	21	21	-	08	SMOKE	-	CR, HS	
A05186	SOILED UTILITY	3'-6"	7'-0"	WD	N	HM	1	21	21	-	69	45	GL20T	CR, HS	
A05187	EQUIP.	3'-6"	7'-0"	WD	N	HM	1	21	35	-	69	45	GL20T	CR, HS	
A05189	NOUR.	3'-6"	7'-0"	WD	N	HM	1	21	21	-	69	45	GL20T	CR, HS	
A05190	CLEAN UTILITY	3'-6"	7'-0"	WD	N	HM	1	21	21	-	69	45	GL20T	CR, HS	
A05195	CORRIDOR	2 @ 3'-8"	7'-0"	WD	N	HM	3	25	26	-	130	SMOKE	GL10T	CR, AO, HS, TUG, RO	
A05201	VEST	3'-0"	7'-0"	WD	F	HM	1	21	21	-	60	SMOKE	-	HS	
A05201A	PUBLIC MEN'S RESTROOM	3'-0"	7'-0"	WD	F	HM	1	21	21	-	60	-	-	HS	
A05202A	UNIT CLERK	3'-0"	7'-0"	WD	N	HM	1	21	21	-	10	SMOKE	GL10T	HS, CR, CR	
A05202B	CONSULT	3'-0"	7'-0"	WD	F	HM	1	21	21	-	05	SMOKE	-	HS	
A05211	ANTE ROOM	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	14	SMOKE	-	HS	
A05211A	PATIENT RM. PROG. ISO.	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	14	-	-	HS	
A05211B	TOILET	1'-6"(3'-0")	8'-10"	WD	F1	HM	1	32	32	-	02.1	-	-	HS, NOTCH TOP OF DOOR. REFER TO DETAIL 25/A395	
A05211C	ANTE ROOM	1'-2 1/4"	3'-2"	-		HM	5	30	30	31	-	-	GL10T	-	
A05211D	CHARTING	2'-7 3/4"	3'-2"	-		HM	5	30	30	31	-	SMOKE	GL36	-	
A05212	PATIENT RM. EMU PROG.	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	01	SMOKE	-	HS	
A05212A	TOILET	1'-6"(3'-0")	8'-10"	WD	F1	HM	1	32	32	-	02.1	-	-	HS,NOTCH TOP OF DOOR. REFER TO DETAIL 25/A395	
A05212B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL36	-	
A05213	PATIENT RM. EMU PROG.	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	01	SMOKE	-	HS	
A05213A	TOILET	1'-6"(3'-0")	8'-10"	WD	F1	HM	1	32	32	-	02.1	-	-	HS, NOTCH TOP OF DOOR. REFER TO DETAIL 25/A395	
A05213B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL36	-	
A05214	PATIENT RM. EMU PROG.	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	01	SMOKE	-	HS	
A05214A	TOILET	1'-6"(3'-0")	8'-10"	WD	F1	HM	1	32	32	-	02.1	-	-	HS, NOTCH TOP OF DOOR. REFER TO DETAIL 25/A395	
A05214B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL36	-	
A05215	PATIENT RM. EMU PROG.	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	01	SMOKE	-	HS	
A05215A	TOILET	1'-6"(3'-0")	8'-10"	WD	F1	HM	1	32	32	-	02.1	-	-	HS, NOTCH TOP OF DOOR. REFER TO DETAIL 25/A395	
A05215B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL36	-	
A05216	PATIENT RM. EMU PROG.	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	01	SMOKE	-	HS	
A05216A	TOILET	1'-6"(3'-0")	8'-10"	WD	F1	HM	1	32	32	-	02.1	-	-	HS, NOTCH TOP OF DOOR. REFER TO DETAIL 25/A395	
A05216B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL36	-	
A05217	PATIENT RM. EMU PROG.	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	01	SMOKE	-	HS	
A05217A	TOILET	1'-6"(3'-0")	8'-10"	WD	F1	HM	1	32	32	-	02.1	-	-	HS, NOTCH TOP OF DOOR. REFER TO DETAIL 25/A395	
A05217B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL36	-	
A05218	PATIENT RM. EMU PROG.	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	01	SMOKE	-	HS	
A05218A	TOILET	1'-6"(3'-0")	8'-10"	WD	F1	HM	1	32	32	-	02.1	-	-	HS, NOTCH TOP OF DOOR. REFER TO DETAIL 25/A395	
A05218B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL36	-	
A05219	PATIENT RM. EMU PROG.	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	01	SMOKE	-	HS	
A05219A	TOILET	1'-6"(3'-0")	8'-10"	WD	F1	HM	1	32	32	-	02.1	-	-	HS, NOTCH TOP OF DOOR. REFER TO DETAIL 25/A395	
A05219B	CHARTING	1'-8"	3'-2"	-		HM	5	30	30	31	-	SMOKE	GL36	INTEGRAL BLINDS	
A05220	PATIENT RM. EMU PROG.	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	01	SMOKE	-	HS	
A05220A	TOILET	1'-6"(3'-0")	8'-10"	WD	F1	HM	1	32	32	-	02.1	-	-	HS, NOTCH TOP OF DOOR. REFER TO DETAIL 25/A395	

DOOR SCHEDULE (FIFTH FLOOR)

DOOR MARK	DOOR LOCATION	DOOR INFORMATION: WIDTH	HEIGHT	MATERIAL	STYLE	FRAME INFORMATION: MATERIAL	TYPE	DETAILS: HEAD	JAMB	OTHER	HARDWARE SET	FIRE RATING	GLASS TYPE	COMMENTS	REV. NO.
A05220B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL36	-	
A05221	PATIENT RM. EMU PROG.	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	01	SMOKE	-	HS	
A05221A	TOILET	1'-6"(3'-0")	8'-10"	WD	F1	HM	1	32	32	-	02.1	-	-	HS, NOTCH TOP OF DOOR. REFER TO DETAIL 25/A395	
A05221B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL36	-	
A05222	PATIENT RM. EMU PROG.	2'-0"(4'-0")	7'-0"	WD	FG	HM	1	21	21	-	01	SMOKE	-	HS	
A05222A	TOILET	1'-6"(3'-0")	8'-10"	WD	F1	HM	1	32	32	-	02.1	-	-	HS, NOTCH TOP OF DOOR. REFER TO DETAIL 25/A395	
A05222B	CHARTING	1'-8"	3'-2"	-		HM	5	30	30	31	-	SMOKE	GL36	INTEGRAL BLINDS	
A05223	PATIENT RM. ICU	2'-0"(4'-0")	7'-0"	AL	ICU	AL	1	46	47		211	SMOKE	GL10T	-	
A05223A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05223B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL10T	-	
A05224	PATIENT RM. ICU	2'-0"(4'-0")	7'-0"	AL	ICU	AL	1	46	47	-	211	SMOKE	GL10T	-	
A05224A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05224B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL10T	-	
A05225	PATIENT RM. ICU	2'-0"(4'-0")	7'-0"	AL	ICU	AL	1	46	47	-	211	SMOKE	GL10T	-	
A05225A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05225B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL10T	-	
A05226	PATIENT RM. ICU ISO.	2'-0"(4'-0")	7'-0"	AL	ICU	AL	1	46	47	-	211	SMOKE	GL10T	-	
A05226A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05226B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL10T	-	
A05227	PATIENT RM. ICU ISO.	2'-0"(4'-0")	7'-0"	AL	ICU	AL	1	46	47	-	211	SMOKE	GL10T	-	
A05227A	TOILET	1'-6"(3'-0")	8'-10"	WD	F1	HM	1	32	32	-	02.1	-	-	HS, NOTCH TOP OF DOOR. REFER TO DETAIL 25/A395	
A05227B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL10T	-	
A05228	PATIENT RM. ICU	2'-0"(4'-0")	7'-0"	AL	ICU	AL	1	46	47	-	211	SMOKE	GL10T	-	
A05228A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05228B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL10T	-	
A05229	PATIENT RM. ICU	2'-0"(4'-0")	7'-0"	AL	ICU	AL	1	46	47	-	211	SMOKE	GL10T	-	
A05229A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05229B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL10T	-	
A05230	PATIENT RM. ICU	2'-0"(4'-0")	7'-0"	AL	ICU	AL	1	46	47	-	211	SMOKE	GL10T	-	
A05230A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05230B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL10T	-	
A05231	PATIENT RM. ICU	2'-0"(4'-0")	7'-0"	AL	ICU	AL	-	46	47	-	211	SMOKE	GL10T	-	
A05231A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05231B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL10T	-	
A05232	PATIENT RM. ICU	2'-0"(4'-0")	7'-0"	AL	ICU	AL	1	46	47	-	211	SMOKE	GL10T	-	
A05232A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05232B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL10T	-	
A05233	PATIENT RM. ICU	2'-0"(4'-0")	7'-0"	AL	ICU	AL	-	46	47	-	211	SMOKE	GL10T	-	
A05233A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05233B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL10T	-	
A05234	PATIENT RM. ICU	2'-0"(4'-0")	7'-0"	AL	ICU	AL	-	46	47	-	211	SMOKE	GL10T	-	
A05234A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05234B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL10T	-	
A05235	PATIENT RM. ICU	2'-0"(4'-0")	7'-0"	AL	ICU	AL	-	46	47	-	211	SMOKE	GL10T	-	
A05235A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05235B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL10T	-	
A05236	PATIENT RM. ICU	2'-0"(4'-0")	7'-0"	AL	ICU	AL	-	46	47	-	211	SMOKE	GL10T	-	
A05236A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05236B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL10T	-	
A05237	PATIENT RM. ICU	2'-0"(4'-0")	7'-0"	AL	ICU	AL	-	46	47	-	211	SMOKE	GL10T	-	
A05237A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05237B	CHARTING	1'-8"	3'-2"	-		HM	5	30	30	31	-		GL10T	INTEGRAL BLINDS	
A05238	PATIENT RM. ICU ISO.	2'-0"(4'-0")	7'-0"	AL	ICU	AL	-	46	47	-	211	SMOKE	GL10T	-	
A05238A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05238B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL10T	-	
A05239	PATIENT RM. ICU ISO.	2'-0"(4'-0")	7'-0"	AL	ICU	AL	-	46	47	-	211	SMOKE	GL10T	-	
A05239A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05239B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL10T	-	
A05240	PATIENT RM. ICU	2'-0"(4'-0")	7'-0"	AL	ICU	AL	-	46	47	-	211	SMOKE	GL10T	-	
A05240A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05240B	CHARTING	1'-8"	3'-2"	-		HM	5	30	30	31	-	SMOKE	GL10T	INTEGRAL BLINDS	
A05241	PATIENT RM. ICU	2'-0"(4'-0")	7'-0"	AL	ICU	AL	-	46	47	-	211	SMOKE	GL10T	-	
A05241A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05241B	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL10T	-	
A05242	PATIENT RM. ICU ISO.	2'-0"(4'-0")	7'-0"	AL	ICU	AL	-	46	47	-	211	SMOKE	GL10T	-	
A05242A	TOILET	1'-6"(3'-0")	7'-0"	WD	F	HM	1	32	32	-	02	-	-	HS	
A05242B	ANTE ROOM	3'-0"	7' 0"	WD	G	HM	1	21	21	-	129	SMOKE	GL10T	HS	
A05242C	PATIENT RM. ICU ISO.	3'-0"	7' 0"	WD	G	HM	1	21	21	-	135	-	GL10T	HS, INTEGRAL BLINDS	
A05242D	CHARTING	-	3'-2"	-		HM	11	30	30	31	-	SMOKE	GL10T	-	
A05250	STAFF TOIL.	3'-0"	7'-0"	WD	F	HM	1	21	21	-	54	SMOKE	-	HS	
A05251	EMU WORK ROOM	3'-0"	7'-0"	WD	N	HM	1	21	21	-	82	SMOKE	GL10T	HS	
A05253	NOUR.	3'-6"	7'-0"	WD	N	HM	1	21	21	-	69	45	GL20T	CR, HS	
A05254	CLEAN UTILITY	3'-6"	7'-0"	WD	N	HM	1	21	21	-	69	45	GL20T	CR, HS	
A05255	HSKP.	3'-6"	7'-0"	WD	F	HM	1	21	21	-	13	SMOKE	-	CLOSER, PIN PAD, HS	
A05257	EQUIP.	3'-6"	7'-0"	WD	N	HM	1	21	35	-	69	45	GL20T	CR, HS	
A05260	CORR.	2 @ 3'-8"	7'-0"	WD	N	HM	3	25	26		113A	20	GL20T	CR, AO, HS, RR, RATED CONSTRUCTION, TUG, HO	
A05262A	SOILED UTILITY	3'-6"	7'-0"	WD	N	HM	1	21	21	-	69	45	GL20T	CR, HS	
A05262B	SOILED UTILITY	3'-6"	7'-0"	WD	N	HM	1	21	21	-	69	45	GL20T	CR, HS	
A05263	NOUR.	3'-6"	7'-0"	WD	N	HM	1	21	21	-	69	45	GL20T	CR, HS	
A05264	CLEAN UTILITY	3'-6"	7'-0"	WD	N	HM	1	21	21	-	69	45	GL20T	CR, HS	
A05265	EQUIP.	3'-6"	7'-0"	WD	N	HM	1	21	35	-	69	45	GL20T	CR, HS	
A05270A	BREAK ROOM	3'-6"	7'-0"	WD	N	HM	1	21	21	-	69	SMOKE	GL10T	CR, HS	
A05270B	BREAK ROOM	3'-6"	7'-0"	WD	N	HM	1	21	21	-	69	SMOKE	GL10T	CR, HS	
A05271	STAFF TOIL.	3'-0"	7'-0"	WD	F	HM	1	21	21	-	54	SMOKE	-	HS	
A05273	DICTATION	3'-0"	7'-0"	WD	F	HM	1	21	21	-	82.1	SMOKE	-	CR, HS	
A05274	OFFICE MGR.	3'-0"	7'-0"	WD	F	HM	1	21	21	-	05	SMOKE	-	HS	
A05275	RESIDENT WORK ROOM	3'-0"	7'-0"	WD	N	HM	1	21	21	-	69	SMOKE	GL10T	CR, HS	
A05276	LACTATION ROOM	3'-0"	7'-0"	WD	F	HM	1	21	21	-	82.1	SMOKE	-	CR, HS	
A05280	OFFICE ASST MGR	3'-0"	7'-0"	WD	F	HM	1	21	21	-	05	SMOKE	-	HS	
A05281	HSKP.	3'-6"	7'-0"	WD	F	HM	1	21	21	-	13	SMOKE	-	CLOSER, PIN PAD, HS	
A05282	STAFF TOILET	3'-0"	7'-0"	WD	F	HM	1	21	21	-	54	SMOKE	-	HS	
A05283	STAFF TOILET	3'-0"	7'-0"	WD	F	HM	1	21	21	-	54	SMOKE	-	HS	
A05284	STAFF TOIL./SHR.	3'-0"	7'-0"	WD	F	HM	1	21	21	-	63	-	-	HS	
A05285	LOCKERS	3'-0"	7'-0"	WD	F	HM	1	21	21	-	08	SMOKE	-	CR, HS	
A05286	SOILED UTILITY	3'-6"	7'-0"	WD	N	HM	1	21	21	-	69	45	GL20T	CR, HS	
A05287	EQUIP	3'-6"	7'-0"	WD	N	HM	1	21	35	-	69	45	GL20T	CR, HS	
A05289	NOUR	3'-6"	7'-0"	WD	N	HM	1	21	21	-	69	45	GL20T	CR, HS	
A05290	CLEAN UTILITY	3'-6"	7'-0"	WD	N	HM	1	21	21	-	69	45	GL20T	CR, HS	
A05295	CORRIDOR	2 @ 3'-8"	7'-0"	WD	N	HM	3	25	26	-	130	SMOKE	GL10T	CR, AO, HS, TUG, RO	
A05298	CLASSROOM	3'-0"	7'-0"	WD	N	HM	1	21	21	-	05	SMOKE	GL10T	HS	
A05298A	CLOSET	2'-0"	7'-0"	WD	F	HM	1	21	21	-	05	-	-	HS	
A05300	OFFICE	3'-0"	7'-0"	WD	F	HM	1	21	21	-	05	SMOKE	-	HS	
A05300A	CORRIDOR	4'-0"	7'-0"	WD	F	HM	1	21	21		251.3	SMOKE			ADDM 2

DOOR SCHEDULE_EXISTING (FIFTH FLOOR)

DOOR MARK	DOOR LOCATION	DOOR INFORMATION: WIDTH	HEIGHT	MATERIAL	STYLE	FRAME INFORMATION: MATERIAL	TYPE	DETAILS: HEAD	JAMB	OTHER	HARDWARE SET	FIRE RATING	Glass Type	COMMENTS	REV. NO.
A05C002	IDF	-	-								-			EXISTING DOOR	
A05C007	IDF	-	-								-			EXISTING DOOR	
A05E001	ELEC.	-	-								255			EXISTING DOOR - ADD CARD READER	ADDM 2
A05E008	ELEC.	-	-								255			EXISTING DOOR - ADD CARD READER	ADDM 2
A05Q003	EIDF	-	-								-			EXISTING DOOR - ADD CARD READER	
A05Q006	EIDF	-	-								-			NEW WOOD DOOR, EXISTING DOOR	ADDM-4
A05S01	STAIR	-	-								241			EXISTING DOOR - MODIFY HARDWARE	
A05S02	STAIR	-	-								241			EXISTING DOOR - MODIFY HARDWARE	
A05S04A	CORR.	-	-								241			EXISTING DOOR - MODIFY HARDWARE	
A05S05A	STAIR	-	-								241			EXISTING DOOR - MODIFY HARDWARE	

REFER TO SHEET A613 FOR HARDWARE, GENERAL NOTES, AND ABBREVIATIONS

GBBN

PROJECT ARCHITECT
609 West Main Street
Louisville, KY 40202
502.583.0700
GBBN.COM

UK HealthCare
Renovate/Upgrade
UK Healthcare
Facilities
Pavilion A 5th Floor
Project Number: 2402.9

OWNER
University of Kentucky
222 Peterson Service Building
Lexington, Kentucky 40506

CONSTRUCTION MANAGER
Turner Construction Company
588 Leestown Road Suite 130-300
Lexington, KY 40511
859.421.4913

CONSULTANTS

MEP ENGINEER
AEI Affiliated Engineers, Inc.
10 South LaSalle Street, Suite 2700
Chicago, IL 60603
312.977.2800

MEDICAL EQUIPMENT
BSA Life Structures
9365 Counselors Row #300
Indianapolis, IN 46240
317.819.7878

Pavilion A 5th Floor PAVILION A, 1000 S. LIMESTONE, LEXINGTON, KY 40536

DRAWING ISSUE

CONTRACT DOCUMENTS

NO.	DATE	DESCRIPTION
1	10.27.20	CONTRACT DOCUMENTS
2	11.24.20	ADDENDUM 01
3	01.07.21	ADDENDUM 04

DRAWING TITLE

DOOR SCHEDULE - LEVEL 05

SEAL

JOB NUMBER

13703.01

A611

1/8/2021 10:05:28 AM
BIM 360://UK 5th and 12th Floors/ARCH_UK-PCF_Int_5_12_R20rvt.rvt

* TBD APPROXIMATE CENTRAK STAR LOCATIONS
PLEASE LEAVE 20 FT SERVICE LOOP WITH CABLE

System Type = ESL 2.0 (P) Unit: PAV A 5TH FLOOR

	Pnumber	QTY	Description
NS	P2500NNC1B00	4	STAFF CONSOLE, DESK MOUNT
	P2505NNC1B00	64	AUDIO STATION BED CONNECTOR
	P2506NNC2B00	2	SINGLE BULB DOME LIGHT, POLARIZ
	P2508NNCRA00-D	69	ICON BASED-LIGHT LED DOME LIGHT
	P2508NNCRA00-Z	18	ICON BASED-LIGHT LED ZONE LIGHT
	P2515NNC1A00	11	HANDSET/CRADLE
POE-24	P2519NNC2A24	10	POE SWITCH NNC 24-PORT UL60950
	P2520NNC2A07	1	PB SWITCH, CODE BLUE, W/CANCEL
	P2520NNC2A08	2	PB SWITCH,STAFF EMER,W/CANCEL
	P2520NNC2B01	62	PULL SWITCH,BATH W/CANCEL
	P2520NNC2B02	61	PULL SWITCH, BATH, W/O CANCEL
	P2520NNC2B03	1	PULL SWITCH, SE, W/CANCEL
	P2594NNC2D00	39	GRAPHICAL ROOM STATION (GRS) - STAFF
	P2594NNC2D11	65	GRAPHICAL ROOM STATION (GRS) - PATIENT
	P2599NNC3A00	107	RCB3 ROOM CONTROL BOARD
PRIVATE	RPNC000001	1	Private Room Shared Audio
STAFF	RPNC000003	35	Staff Room
ANCILLARY	RPNC000006	2	Ancillary
PROCEDURE	RPNC000015	64	Procedure Room Deluxe
NURSE STATION	RPNCN00007	4	Nurse Station
	RPOP000001	65	Graphical Stn Upgrade, Pat
	RPOP000008	101	Dedicated Audio Upgrade
	RPOP000009	39	Graphical Stn Upgrade - Staff
	RTLS-P-ADDON	26	RTLS - (P) STAFF LOCATING ADD-ON 2.0
	RTLS-P-BASE	102	RTLS - (P) STAFF LOCATING BASE 2.0

PRELIMINARY
DRAWING ONLY
08/28/2020
DO NOT USE FOR CONSTRUCTION

DRAWN BY: NS
CHECKED BY:

NOTICE
The drawings and all information thereon is property of:
HILL-ROM COMPANY, INC.
BATESVILLE, INDIANA
This drawing and information thereon, is confidential and must not be made public, copied, or used to disadvantage of said Hill-Rom Company, Inc.
The drawing and all information is subject to return to Hill-Rom Company, Inc. on demand.

HILL-ROM IT SOLUTIONS
1225 CRESENT GREEN
SUITE 200
CARY, NC 27518
www.hill-rom.com

Hillrom™

Revision Date	Revised by	Comments

Revision History

Drawing Information
01 DWG NWISQ1643-02 UNIVERSITY OF KENTUCKY HOSPITAL PAV A 5TH FLOOR.dwg
Sheet Number: 1 Total Sheets: 1
Drawing Scale: 1/16" = 1'
U.L. LISTED

Project Information
PAV A 5TH FLOOR
Proposal #NWISQ1643-02
NNC + RTLS LAYOUT

Customer Information
609837
UNIVERSITY OF KENTUCKY HOSPITAL
1000 SOUTH LIMESTONE
LEXINGTON KY 40506

PROJECT ARCHITECT
609 West Main Street
Louisville, KY 40202
502.583.0700
GBBN.COM

UK HealthCare
Renovate/Upgrade
UK Healthcare
Facilities
Pavilion A 5th Floor
Project Number: 2402.9

OWNER
University of Kentucky
222 Peterson Service Building
Lexington, Kentucky 40506

CONSTRUCTION MANAGER
Turner Construction Company
588 Leestown Road Suite 130-300
Lexington, KY 40511
859.421.4913

CONSULTANTS

MEP ENGINEER
AEI Affiliated Engineers, Inc.
10 South LaSalle Street, Suite 2700
Chicago, IL 60603
312.977.2800

MEDICAL EQUIPMENT
BSA Life Structures
9365 Counselors Row #300
Indianapolis, IN 46240
317.819.7878

DRAWING ISSUE

CONTRACT DOCUMENTS

NO.	DATE	DESCRIPTION
A	10.05.20	95% PHASE 3 - CD REVIEW
1	01.07.21	ADDENDUM 04

DRAWING TITLE

HILLROM NNC + RTLS LAYOUT

SEAL

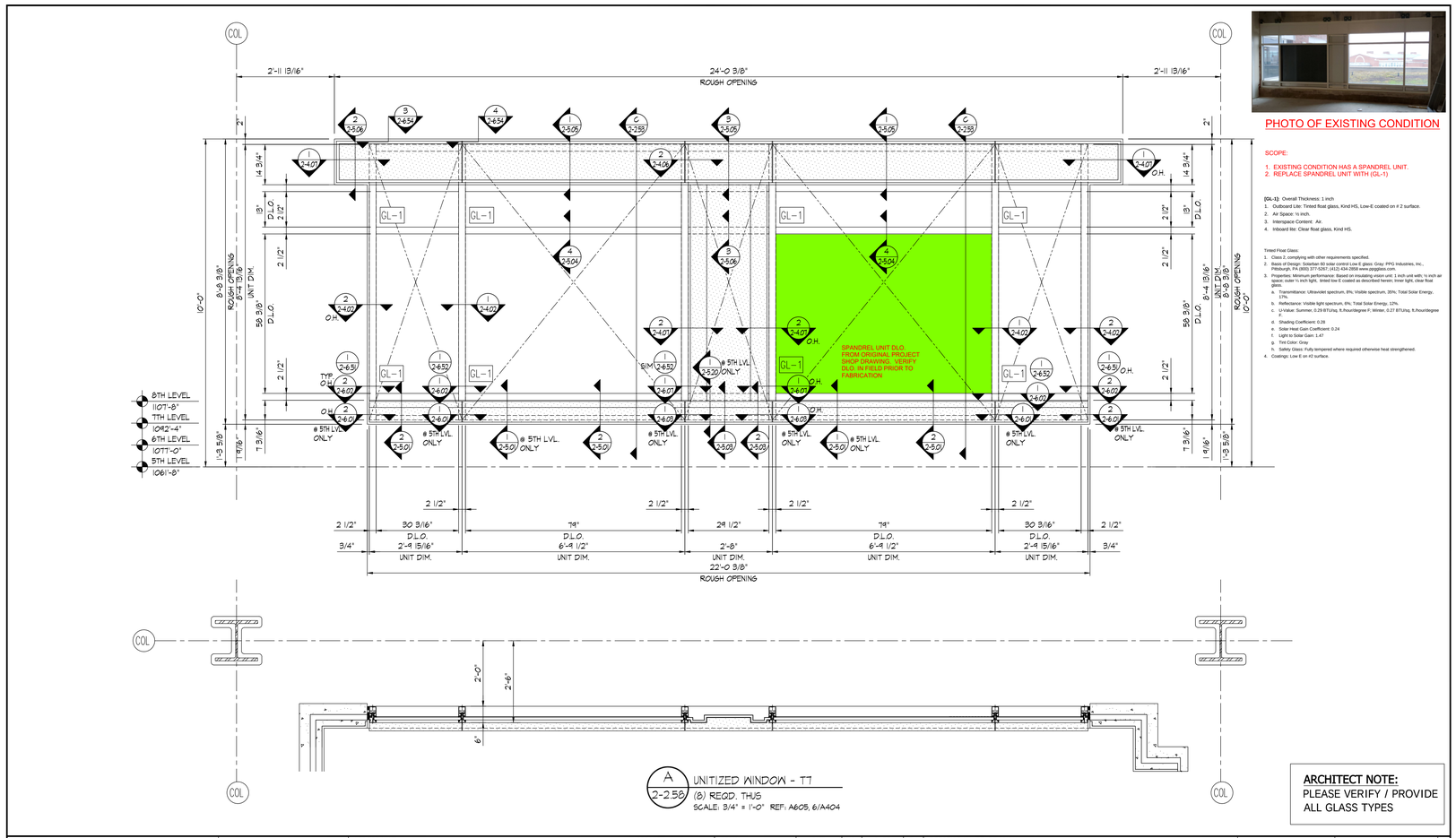
JOB NUMBER

13703.01

V-1.1

Pavilion A 5th Floor PAVILION A, 1000 S. LIMESTONE, LEXINGTON, KY 40536

BIM 360://UK 5th and 12th Floors/ARCH_UK_PCF_H1_5_12_R20v1.rvt
1/11/2021 1:26:39 PM



A 2-2.58 UNITIZED WINDOW - TT
(8) REQD. THUS
SCALE: 3/4" = 1'-0" REF: A605, 6/A404

PHOTO OF EXISTING CONDITION

SCOPE:

1. EXISTING CONDITION HAS A SPANDREL UNIT.
2. REPLACE SPANDREL UNIT WITH (GL-1)

(GL-1): Overall Thickness: 1 inch

1. Outboard Lite: Tinted float glass, Kind HS, Low-E coated on # 2 surface.
2. Air Space: ½ inch.
3. Interspace Content: Air.
4. Inboard lite: Clear float glass, Kind HS.

Tinted Float Glass:

1. Class 2, complying with other requirements specified.
2. Basis of Design: Solarban 60 solar control Low-E glass: Gray: PPG Industries, Inc., Pittsburgh, PA (800) 377-5267 (412) 434-2858 www.ppgglass.com.
3. Performance Requirements: Monolithic-glazed vision unit: 1 inch unit width; ½ inch air space; outer ½ inch light, tinted low-E coated as described herein; inner light, clear float glass.
   a. Transmittance: Ultraviolet spectrum, 8%; Visible spectrum, 35%; Total Solar Energy, 17%.
   b. Reflectance: Visible light spectrum, 6%; Total Solar Energy, 12%.
   c. U-Value: Summer, 0.29 BTU/sq. ft./hour/degree F; Winter, 0.27 BTU/sq. ft./hour/degree F.
   d. Shading Coefficient: 0.28
   e. Solar Heat Gain Coefficient: 0.24
   f. Light to Solar Gain: 1.47
   g. Tint Color: Gray
   h. Safety Glass: Fully tempered where required otherwise heat strengthened.
4. Coatings: Low E on #2 surface.

Insulating Vision Unit Performance Comparisons 1-inch (25mm) units with 1/2-inch (13mm) airspace and two 1/4-inch (6mm) lites; interior lite clear unless otherwise noted

Glass Type: Outdoor Lite: *Coating if Any (Surface) Glass* + Indoor Lite: *Coating if Any (Surface) Glass*	Transmittance[2] Ultra-violet %	Visible %	Total Solar Energy %	Exterior Reflectance[2] Visible Light %	Total Solar Energy %	U-Value[1] (Imperial) Winter Night-time	Summer Day-time	European U-Value[1]	Shading Coefficient[5]	Solar Heat Gain Coefficient[6]	Light to Solar Gain (LSG)[7]
Uncoated											
Clear Glass + Clear	50	79	61	15	12	0.47	0.50	2.81	0.81	0.70	1.13
STARPHIRE™ + *STARPHIRE*	77	84	80	15	14	0.47	0.50	2.81	0.94	0.82	1.02
SOLEXIA™ + Clear	25	69	39	13	8	0.47	0.50	2.81	0.57	0.49	1.41
ATLANTICA™ + Clear	13	60	29	11	7	0.47	0.50	2.81	0.47	0.40	1.50
CARIBIA™ + Clear	20	50	28	11	7	0.47	0.50	2.81	0.45	0.39	1.55
AZURIA™ + Clear	34	61	28	11	7	0.47	0.50	2.81	0.45	0.39	1.56
SOLARBRONZE™ + Clear	21	47	39	8	7	0.47	0.50	2.81	0.59	0.51	0.93
SOLARGRAY™ + Clear	20	40	33	7	7	0.47	0.50	2.81	0.53	0.45	0.88
OPTIGRAY™ 23 + Clear	6	21	15	5	5	0.47	0.50	2.81	0.34	0.29	0.71
GRAYLITE™ + Clear	6	12	19	5	5	0.47	0.50	2.81	0.39	0.34	0.36
***SUNGATE™* 500 Low-E Glass**											
SUNGATE 500 (2) + Clear	42	74	52	17	14	0.35	0.35	1.96	0.71	0.62	1.19
SOLEXIA + SUNGATE 500 (3) Clear	21	64	33	14	9	0.35	0.35	1.96	0.51	0.44	1.45
ATLANTICA + SUNGATE 500 (3) Clear	11	56	25	12	7	0.35	0.35	1.96	0.41	0.35	1.60
CARIBIA + SUNGATE 500 (3) Clear	17	56	24	12	7	0.35	0.35	1.96	0.40	0.34	1.65
AZURIA + SUNGATE 500 (3) Clear	29	57	24	12	7	0.35	0.35	1.96	0.40	0.34	1.66
Bronze + SUNGATE 500 (3) Clear	18	44	33	9	9	0.35	0.35	1.96	0.53	0.46	0.96
Gray + SUNGATE 500 (3) Clear	17	37	28	8	8	0.35	0.35	1.96	0.47	0.40	0.92
OPTIGRAY 23 + SUNGATE 500 (3) Clear	6	19	13	6	6	0.35	0.35	1.96	0.28	0.24	0.80
GRAYLITE + SUNGATE 500 (3) Clear	5	11	16	6	6	0.35	0.35	1.96	0.33	0.28	0.41
***SOLARBAN®* 60 Solar Control Low-E Glass**											
SOLARBAN 60 (2) STARPHIRE + *STARPHIRE*	25	74	38	11	42	0.29	0.27	1.55	0.46	0.40	1.85
SOLARBAN 60 (2) Clear + Clear	19	70	33	11	29	0.29	0.27	1.55	0.44	0.38	1.85
SOLARBAN 60 (2) ATLANTICA + Clear	5	54	20	8	7	0.29	0.27	1.55	0.31	0.27	1.98
SOLARBAN 60 (2) AZURIA + Clear	13	54	21	8	7	0.29	0.27	1.55	0.32	0.28	1.93
SOLARBAN 60 (2) CARIBIA + Clear	8	54	20	8	7	0.29	0.27	1.55	0.31	0.27	1.99
SOLARBAN 60 (2) SOLEXIA + Clear	10	61	25	10	11	0.29	0.27	1.55	0.36	0.32	1.92
SOLARBAN 60 (2) SOLARBRONZE + Clear	8	42	20	7	16	0.29	0.27	1.55	0.31	0.27	1.56
SOLARBAN 60 (2) SOLARGRAY + Clear	8	35	17	6	12	0.29	0.27	1.55	0.28	0.24	1.47
SOLEXIA + *SOLARBAN 60* (3) Clear	10	61	25	11	11	0.29	0.27	1.55	0.42	0.36	1.70
ATLANTICA + *SOLARBAN 60* (3) Clear	5	53	20	9	7	0.29	0.27	1.55	0.35	0.30	1.78
CARIBIA + *SOLARBAN 60* (3) Clear	8	54	20	9	7	0.29	0.27	1.55	0.35	0.31	1.74
AZURIA + *SOLARBAN 60* (3) Clear	13	54	21	9	7	0.29	0.27	1.55	0.36	0.31	1.75
Bronze + *SOLARBAN 60* (3) Clear	8	42	20	7	17	0.29	0.27	1.55	0.36	0.31	1.36
Gray + *SOLARBAN 60* (3) Clear	**8**	**35**	**17**	**7**	**13**	**0.29**	**0.27**	**1.55**	**0.30**	**0.26**	**1.26**
OPTIGRAY 23 + *SOLARBAN 60* (3) Clear	3	18	9	5	6	0.29	0.27	1.55	0.21	0.18	1.02
GRAYLITE + *SOLARBAN 60* (3) Clear	2	11	7	5	10	0.29	0.27	1.55	0.20	0.17	0.64
***SOLARBAN®* 80 Solar Control Low-E Glass**											
SOLARBAN 80 (2) Clear + Clear	13	48	20	33	38	0.29	0.27	1.52	0.28	0.24	1.98
SOLARBAN 80 (2) Clear + *OPTIBLUE*	10	34	15	32	38	0.29	0.27	1.52	0.27	0.23	1.48
SOLARBAN 80 (2) OPTIBLUE + Clear	9	34	15	19	28	0.29	0.27	1.52	0.23	0.20	1.70
SOLARBAN 80 (2) OPTIBLUE + *OPTIBLUE*	7	25	11	19	28	0.29	0.27	1.52	0.23	0.20	1.23
***SOLARBAN®* z50 Solar Control Low-E Glass[3]**											
SOLARBAN z50 (2) OPTIBLUE + Clear	14	51	26	8	23	0.29	0.27	1.55	0.36	0.31	1.64
SOLARBAN z50 (2) OPTIBLUE + *OPTIBLUE*	11	37	20	7	23	0.29	0.27	1.55	0.35	0.31	1.18
AZURIA + *SOLARBAN z50 (3) OPTIBLUE*	10	39	16	8	7	0.29	0.27	1.55	0.35	0.30	1.31
ATLANTICA + *SOLARBAN z50 (3) OPTIBLUE*	4	39	15	8	7	0.29	0.27	1.55	0.34	0.30	1.28
CARIBIA + *SOLARBAN z50 (3) OPTIBLUE*	6	39	15	8	7	0.29	0.27	1.55	0.34	0.30	1.29
SOLEXIA + *SOLARBAN z50 (3) OPTIBLUE*	8	44	19	10	11	0.29	0.27	1.55	0.41	0.35	1.26
Bronze + *SOLARBAN z50 (3) OPTIBLUE*	7	30	16	7	17	0.29	0.27	1.55	0.35	0.31	0.98
Gray + *SOLARBAN z50 (3) OPTIBLUE*	6	25	14	6	13	0.29	0.27	1.55	0.32	0.28	0.91

* Performance data is based on representative samples of factory production. Actual values may vary slightly due to variations in the production process.

† *Optiblue* is a unique substrate by PPG designed specically for *Solarban z50*. It can also be used for spandrel glass and as an interior lite for *Solarban 80* glass.

†† *Solarban 70XL* requires the coating on *Starphire* glass.

1. **Figures may vary due to manufacturing tolerances. All tabulated data is based on NFRC methodology using the LBNL Window 5.2 software. Variations from previously published data are due to minor changes in the LBNL Window 5.2 software versus Version 4.1.**
2. **Transmittance and Reflectance** values are based on spectrophotometric measurements and energy distribution of solar radiation.
3. **U-Value** is the overall coefficient of heat transmittance or heat flow measured in BTU/hr. • ft² • °F. Lower U-values indicate better insulating performance.
4. **European U-Value** is the overall coefficient of heat transmittance or heat flow measured in Watts/m²•°C, and is calculated using WinDat WIS version 3.0.1 software.
5. **Shading Coefficient** is the ratio of the total amount of solar energy that passes through a glass relative to 1/8-inch (3.0mm) thick clear glass under the same design conditions. It includes both solar energy transmitted directly plus any absorbed solar energy re-radiated and convected. Lower shading coefficient values indicate better performance in reducing solar heat gain. Note: Performance values were calculated using the LBNL Window 5.2 program using NFRC 100-2001 standard winter and summer design condition.
6. **Solar Heat Gain Coefficient (SHGC)** represents the solar heat gain through the glass relative to the incident solar radiation. It is equal to 86% of the shading coefficient.
7. **Light to Solar Gain (LSG) ratio** is the ratio of visible light transmittance to solar heat gain coefficient.

PERFORMANCE DATA FROM ORIGINAL PRODUCT DATA SUBMISSION

© 2008 PPG Industries, Inc. All rights reserved. *Atlantica, Azuria, Azurlite, Caribia, Graylite, Oceans of Color, Optiblue, Optigray, IdeaScapes, Solarban, Solarbronze, Solarcool, Solargray, Solargreen, Solex, Solexia, Starphire, Sungate, Watsocal,* PPG and the PPG logo are trademarks and *EcoLogical Building Solutions* is a service mark owned by PPG Industries, Inc.

Printed in U.S.A.
7084 8/08 5M

PPG Ideascapes. Glass • Coatings • Paint

PPG Industries, Inc. Glass Technology Center 400 Guys Run Road Cheswick, PA 15024 1-888-PPG-IDEA www.ppgideascapes.com

ARCHITECT NOTE:
PLEASE VERIFY / PROVIDE ALL GLASS TYPES

ASI LIMITED
BUILDING ENCLOSURE SPECIALISTS
4485 SOUTH PERRY WORTH ROAD
WHITESTOWN, IN 46075
PHONE (317) 769-7170
FAX (317) 769-7166
WWW.ASILIMITED.COM

PROJECT NAME	UNIVERSITY OF KENTUCKY PATIENT CARE FACILITY
LOCATION	LEXINGTON, KY
DESIGN ARCHITECT	GBBN ARCHITECTS, INC. & ASSOCIATES
OFFICE	LEXINGTON, KY
CONTRACTOR/CONSTRUCTION MANAGER	TURNER CONSTRUCTION COMPANY
OFFICE	LEXINGTON, KY
DRAWN	CDC
DATE	09/15/09
APPROVED FOR DIST	
DATE	XX/XX/XX
SCALE	3/4" = 1'-0"

NO.	DATE	BY	DESCRIPTION OF REVISION
1	·	·	·
2	·	·	·
3	·	·	·
4	·	·	·
5	·	·	·
6	·	·	·

PHASE - AREA (E, C, A, D, B, G) KEY PLAN

JOB NUMBER 286

SHEET NO. 2-2.58

PLOT DATE: 09-15-09

GBBN
PROJECT ARCHITECT
609 West Main Street
Louisville, KY 40202
502.583.0700
GBBN.COM

UK HealthCare
Renovate/Upgrade
UK Healthcare
Facilities
Pavilion A 5th Floor
Project Number: 2402.9

OWNER
University of Kentucky
222 Peterson Service Building
Lexington, Kentucky 40506

CONSTRUCTION MANAGER
Turner Construction Company
588 Leestown Road Suite 130-300
Lexington, KY 40511
859.421.4913

CONSULTANTS
MEP ENGINEER
AEI Affiliated Engineers, Inc.
10 South LaSalle Street, Suite 2700
Chicago, IL 60603
312.977.2800

MEDICAL EQUIPMENT
BSA Life Structures
9365 Counselors Row #300
Indianapolis, IN 46240
317.819.7878

Pavilion A 5th Floor PAVILION A, 1000 S. LIMESTONE, LEXINGTON, KY 40536

DRAWING ISSUE

CONTRACT DOCUMENTS

NO.	DATE	DESCRIPTION
1	01.07.21	ADDENDUM 04

DRAWING TITLE

EXISTING WINDOW REPLACEMENT

SEAL

JOB NUMBER

13703.01

V-11.1

11/12/2021 1:30:33 PM BIM 360://UK 5th and 12th Floors/ARCH_UK-PCF_Int_5_12_R20int.rvt

PLUMBING FIXTURES

NUMBER	FIXTURE	WASTE	VENT*	TRAP	COLD WATER	HOT WATER	REMARKS
WC-1	WATER CLOSET	4"	2"	-	1-1/4"	-	WALL HUNG, SENSOR OPERATED FLUSH VALVE, STANDARD HEIGHT
WC-2	WATER CLOSET	4"	2"	-	1-1/4"	-	WALL HUNG, SENSOR OPERATED FLUSH VALVE, ADA HEIGHT
WC-3	WATER CLOSET	4"	2"	-	1-1/4"	-	WALL HUNG, BED PAN LUGS, FLUSH VALVE WITH BED PAN WASHER, ADA HEIGHT, PATIENT TOILET ROOMS
UR-1	URINAL	2"	1-1/2"	2"	3/4"	-	WALL HUNG, BATTERY POWERED SENSOR OPERATED FLUSH VALVE, STANDARD
UR-2	URINAL	2"	1-1/2"	2"	3/4"	-	WALL HUNG, BATTERY POWERED SENSOR OPERATED FLUSH VALVE, ADA HEIGHT
L-3	LAVATORY	1-1/2"	1-1/2"	1-1/2"	1/2"	1/2"	WALL HUNG, WITH SHROUD, SENSOR OPERATED GOOSENECK FAUCET; NOTE 1.
L-4	LAVATORY	1-1/2"	1-1/2"	1-1/2"	1/2"	1/2"	WALL HUNG, GOOSENECK FAUCET WITH WRISTBLADE HANDLES; NOTE 1.
L-5	LAVATORY	1-1/2"	1-1/2"	1-1/2"	1/2"	1/2"	ONE PIECE, COUNTERTOP LAVATORY, SENSOR OPERATED GOOSENECK FAUCET; NOTE 1.
L-6	LAVATORY	1-1/2"	1-1/2"	1-1/2"	1/2"	1/2"	ONE PIECE, COUNTERTOP LAVATORY, GOOSENECK FAUCET WITH WRISTBLADE HANDLES; NOTE 1.
L-7	LAVATORY	1-1/2"	1-1/2"	1-1/2"	1/2"	1/2"	WALL HUNG, SENSOR OPERATED, GOOSENECK FAUCET; NOTE 1.
S-1	SINK	1-1/2"	1-1/2"	1-1/2"	1/2"	1/2"	SINGLE COMPARTMENT, COUNTER MOUNT BY TRADE CONTRACTOR, GOOSENECK FAUCET WITH WRISTBLADE HANDLES
S-6	SINK	1-1/2"	1-1/2"	1-1/2"	1/2"	1/2"	ONE PIECE COUNTERTOP AND BOWL BY TRADE CONTRACTOR, DECK MOUNT WRISTBLADE FAUCET.
S-8	SINK	2"	1-1/2"	1-1/2"	1/2"	1/2"	STAINLESS STEEL, SINGLE COMPARTMENT, FLOOR MOUNTED, BACK MOUNT LEVER HANDLE FAUCET WITH SPRAY
CS-1	CLINICAL SERVICE SINK	4"	1-1/2"	-	1-1/4"	1/2"	WALL HUNG
SH-1	SHOWER	3"	1-1/2"	3"	1/2"	1/2"	ENCLOSURE BY GENERAL CONTRACTOR, FD-2 FLOOR DRAIN, MIXING VALVE PER SPECIFICATIONS.
SH-2	SHOWER	3"	1-1/2"	3"	1/2"	1/2"	GELCOAT ONE-PIECE ADA ENCLOSURE, MIXING VALVE PER SPECIFICATIONS.
BT-1	BATH TUB						PLUMBING FIXTURE NOT TO BE PLUMBED
JS-1	JANITOR'S SINK	3"	1-1/2"	3"	1/2"	1/2"	36"x36" FLOOR MOUNTED
DB-1	DIALYSIS BOX	2"	1-1/2"	2"	1/2"	-	ACORN MODEL 8196
EWC-1	ELECTRIC WATER COOLER	1-1/2"	1-1/2"	1-1/2"	1/2"	-	HI-LO BARRIER FREE DESIGN
TEWC-1	ELECTRIC WATER COOLER	1-1/2"	1-1/2"	1-1/2"	1/2"	-	BARRIER FREE DESIGN
SS-1	SCRUB SINK	2"	1-1/2"	1-1/2"	3/4"	3/4"	WALL HUNG, SINGLE COMPARTMENT, VITREOUS CHINA SCRUB SINK WITH SENSOR OPERATED GOOSENECK FAUCET
EW-1	EMERGENCY EYEWASH	-	-	-	1/2"	1/2"	COORDINATE EXACT LOCATION WITH ARCHITECTURAL ELEVATION; PROVIDE TMV-1
HB-1	HOSE BIB DCW/DHW	-	-	-	3/4"	3/4"	PROVIDED WITH VB AND FAUCET OUTLET
HB-3	HOSE BIBB DCW				3/4"		PROVIDED IN FLUSH MOUNTED WALL BOX.
WB-1	WASHER BOX	2"	1-1/2"	2"	1/2"	1/2"	

*UNLESS OTHERWISE NOTED ON PLANS

NOTES:
1. PROVIDE ADA COMPLIANT INSULATION FOR TRAP AND PIPING BELOW/SURFACE.

EQUIPMENT BY OTHERS

NUMBER	EQUIPMENT NAME	ITEMS AND CONNECTIONS BY PLUMBING CONTRACTOR						REMARKS
		WASTE	VENT	COLD WATER	HOT WATER	HIGH PURITY WATER	AIR	
154	ICE MAKER	3/4"	-	1/2"	-	-	-	1/2" CW BRANCH W/BALL VALVE FROM SINK SUPPLY, INSTALL WATER FILTER BELOW SINK. 3/4" FTP WASTE CONNECTION, DRAIN INTO SINK.

NOTE:
PLUMBING CONTRACTOR TO PROVIDE WASTE, VENT, TRAPS, COLD WATER, HOT WATER, GAS AND AIR SERVICES TO ALL EQUIPMENT AND MAKE FINAL CONNECTIONS. INCLUDE ALL COLD WATER, HOT WATER, GAS AND AIR SHUT OFF VALVES. PROVIDE SHOCK ARRESTORS FOR ALL SOLENOID VALVES AS REQUIRED.

MEDICAL GAS AREA ALARM PANELS

NUMBER	SERVICE IDENTIFICATION	GENERAL LOCATION	ALARMS REQUIRED											SENSOR LOCATIONS	BASIS OF DESIGN	REMARKS
			O2	VAC	MED AIR	N20	WGE	TG	CO2	HP O2	DLCO	HE	N2	DA			
AAP 5-1	5TH FLOOR ICU & PATIENT ROOMS EAST	NEURO SURG REPORT/WORK ROOM RM A05291	X	X	X										** LOCAL IN ZVB-5-01	BEACON MEDAES	
			X	X	X										** LOCAL IN ZVB-5-02	BEACON MEDAES	
			X	X	X										** LOCAL IN ZVB-5-03	BEACON MEDAES	
AAP 5-2	5TH FLOOR PATIENT ROOMS WEST	STROKE AND TRANSITION OF CARE WORK ROOM A05194	X	X	X										** LOCAL IN ZVB-5-04	BEACON MEDAES	
			X	X	X										** LOCAL IN ZVB-5-05	BEACON MEDAES	
			X	X	X										** LOCAL IN ZVB-5-06	BEACON MEDAES	

NOTE: LOCAL SENSORS LOCATED IN ZONE VALVE BOXES UNLESS NOTED OTHERWISE IN AREA ALARM

MEDICAL GAS ZONE VALVE BOXES

NUMBER (BOX-FLOOR-UNIT DESIG)	SERVICE IDENTIFICATION	GENERAL LOCATION	VALVE SIZE (IN) IN BOX							BASIS OF DESIGN	REMARKS
			O2(55 PSI)	MED VAC	MED AIR	N2O	TG	CO2	WGE	N2	
ZVB-5-01	AREA C ICU ROOMS	CORRIDOR A05295	3/4	2	3/4	-	-	-	-	-	BEACON MEDAES	
ZVB-5-02	AREA A EAST ICU ROOMS	CORRIDOR A05260	3/4	1-1/4	3/4	-	-	-	-	-	BEACON MEDAES	
ZVB-5-03	AREA A WEST PATIENT ROOMS	CORRIDOR A05260	3/4	1	3/4	-	-	-	-	-	BEACON MEDAES	
ZVB-5-04	AREA B EAST PATIENT ROOMS	CORRIDOR A05195-2	3/4	1-1/2	3/4	-	-	-	-	-	BEACON MEDAES	
ZVB-5-05	AREA D PATIENT ROOMS	CORRIDOR A05199	3/4	1-1/4	3/4	-	-	-	-	-	BEACON MEDAES	
ZVB-5-06	AREA B WEST PATIENT ROOMS	CORRIDOR A05195-2	3/4	1-1/4	3/4	-	-	-	-	-	BEACON MEDAES	

NOTE: REFER TO MEDICAL GAS AREA ALARM PANELS SCHEDULE FOR ALARM PANEL SENSOR LOCATION REQUIREMENTS.

MEDICAL GAS TERMINALS

4

	TERMINAL ID	Room Qty	O2	IA	MA	N2O	N2	CO2	NON MED VAC	MV	WAGD	SLIDE	Med Gas Delivery
GROUND FLOOR													
ICU PATIENT HEADWALL	MG-5-1	1	2	-	2	-	-	-	-	2	-	-	CEILING BOOM CONNECTION TO HEADWALL
PATIENT ROOM	MG-5-3	-	2	-	2	-	-	-	-	2	-	-	CONNECTION TO HEADWALL
OT/PT GYM	MG-5-4	1	1	-	-	-	-	-	-	1	-	-	
CLEAN EQUIPMENT	MG-5-5	1	1	-	1	-	-	-	-	-	-	-	

NOTES: REFER TO SPACE PROGRAM DRAWINGS AND ROOM ELEVATIONS FOR CONFIGURATION OF OUTLETS

VACUUM PUMPS

TAG	SERVICE	LOCATION	BASIS OF DESIGN MANUFACTURER AND MODEL	TYPE	CAPACITY SYSTEM (SCFM)	CAPACITY EACH (SCFM)	SUCTION PRESSURE (" HG)	MOTOR HP (EA)	RPM	VOLT	PH	VFD	SCCR AMPS	REMARKS
MVP-1	MV	LEVEL 3 MECH. EQUIPMENT ROOM	BEACON MEDAES VHS15P-240V-P PENTAPLEX	4	512	128	19	15	3450	460	3	N	89.3	

PUMP TYPES
1 = ROTARY VANE
2 = LIQUID RING
3 = DRY SCREW
4 = ROTARY CLAW

AIR COMPRESSORS

TAG	LOCATION	BASIS OF DESIGN MANUFACTURER AND MODEL	CAPACITY (CFM)	PRESSURE (PSIG)	RECEIVER SIZE (GAL)	MOTOR HP	RPM	VOLT	PH	VFD	SCCR (AMPS)	REMARKS
MAC-1	GROUND LEVEL MED EQUIPMENT ROOM	BEACONMEDAES SAS15P-240V-P HEXAPLEX	252	55	240	15	3600	460	3	N	90	

GBBN

PROJECT ARCHITECT
609 West Main Street
Louisville, KY 40202
502.583.0700
GBBN.COM

UK HealthCare

Renovate/Upgrade
UK Healthcare
Facilities
Pavilion A 5th Floor
Project Number: 2402.9

OWNER

University of Kentucky
222 Peterson Service Building
Lexington, Kentucky 40506

CONSTRUCTION MANAGER

Turner Construction Company
588 Leestown Road Suite 130-300
Lexington, KY 40511
859.421.4913

CONSULTANTS

MEP CONSULTANT
AEI Affiliated Engineers, Inc.
10 South LaSalle Street, Suite 2700
Chicago, IL 60603
312.977.2800

MEDICAL EQUIPMENT
BSA Life Structures
9365 Counselors Row #300
Indianapolis, IN 46240
317.819.7878

DRAWING ISSUE

CONTRACT DOCUMENTS

NO	DATE	DESCRIPTION
1	07.17.20	DESIGN DEVELOPMENT
2	10.27.20	CONTRACT DOCUMENTS
3	12.15.20	ADDENDUM 03
4	01.07.21	ADDENDUM 04

DRAWING TITLE

PLUMBING SCHEDULES

SEAL

STATE OF KENTUCKY
SCOTT FOSTER
31321
LICENSED PROFESSIONAL ENGINEER

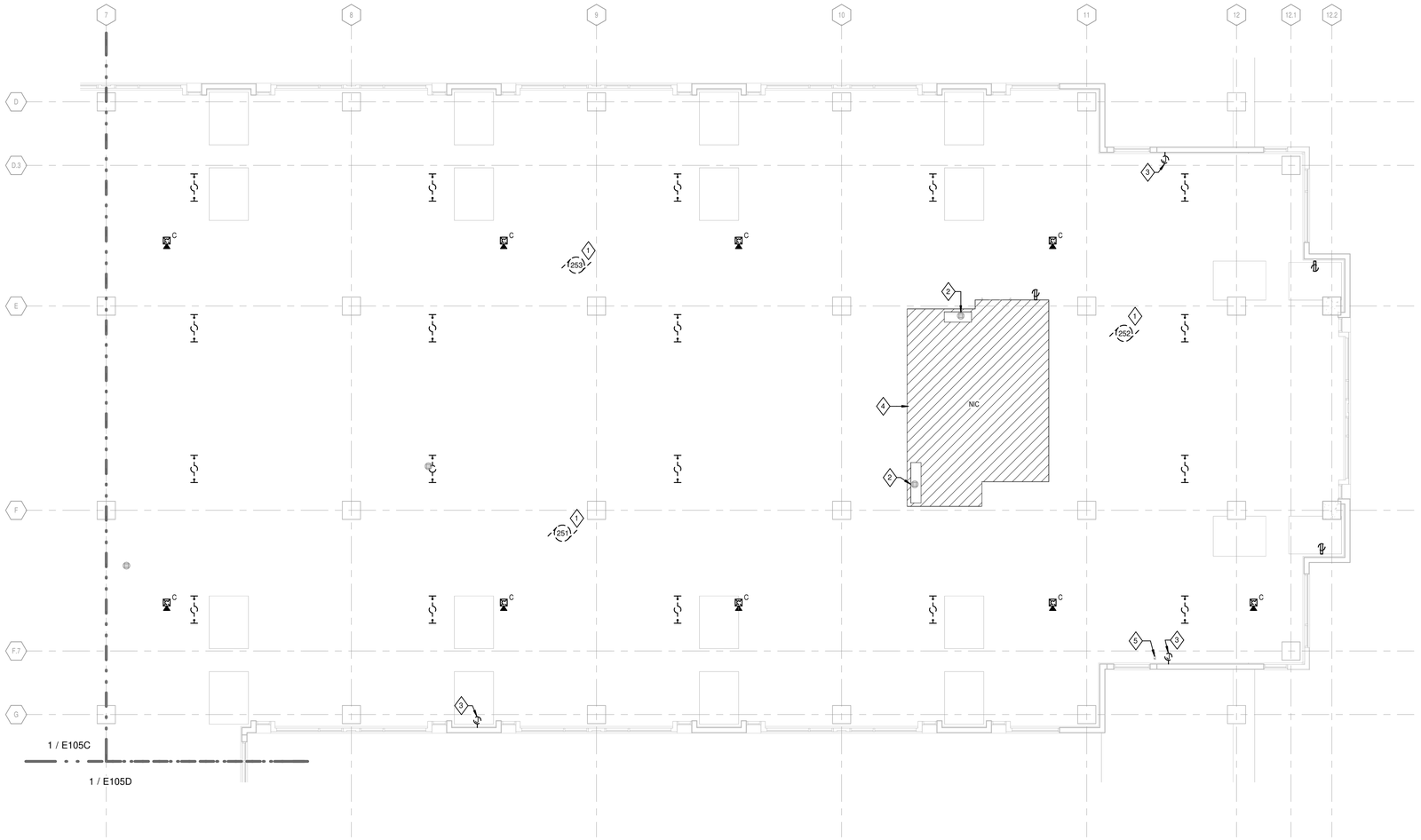
JOB NUMBER

13703.01

P901

Pavilion A 5th Floor PAVILION A, 1000 S. LIMESTONE, LEXINGTON, KY 40536

1/5/2021 1:08:39 PM C:\Users\dkriesel\Documents\Revit 2020\Local Copy\20136_UK-5_12_MEP-R20_DKRIESEL.rvt



1 LEVEL 05 ELECTRICAL DEMOLITION FLOOR PLAN - AREA A

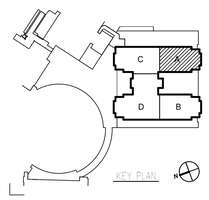
SCALE: 1/8" = 1'-0"

ELECTRICAL DEMOLITION GENERAL NOTES

1. REFER TO SPECIFICATIONS FOR DIRECTIONS REGARDING DEMOLITION WORK.
2. AREA OF DEMOLITION SHOWN IS FOR APPROXIMATION PURPOSES ONLY. CONTRACTOR SHALL REFER TO ARCHITECTURAL DRAWINGS FOR EXACT AREA OF DEMOLITION.
3. EQUIPMENT LOCATIONS SHOWN ARE APPROXIMATE AND SHALL BE FIELD VERIFIED.
4. DEMOLITION DRAWINGS SHOWING EXISTING CONDITIONS HAVE BEEN PREPARED BASED ON FIELD OBSERVATION AND EXISTING ELECTRICAL DRAWINGS. ADDITIONAL COMPONENTS MAY EXIST WHICH DO NOT SHOW AND SUCH ITEMS SHALL BE DEALT WITH IN A MANNER SIMILAR TO THOSE ITEMS, WHICH DO SHOW.
5. FURNISH ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO COMPLETE DEMOLITION OF EXISTING ELECTRICAL EQUIPMENT AS SPECIFIED OR INDICATED. DISCONNECT, REMOVE AND RELOCATE ALL ITEMS AS REQUIRED TO FACILITATE THE NEW CONSTRUCTION.
6. CONTRACTOR SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH EXISTING ELECTRICAL SYSTEM, WHICH WILL BE AFFECTED BY THE DEMOLITION AND REMODELING WORK.
7. CONTRACTOR SHALL OBTAIN PERMISSION FROM OWNERS REPRESENTATIVE TO SHUT OFF SERVICES OR SYSTEM, WHICH MAY AFFECT OTHER AREAS BEYOND THE LIMITS OF THE IMMEDIATE DEMOLITION AREA. SUCH PERMISSION WILL BE GRANTED ONLY AFTER OWNERS REPRESENTATIVE IS INFORMED AS TO THE REASON FOR AND DURATION OF THE SHUTDOWN AND IS SATISFIED THAT THE SHUTDOWN CAN BE MADE WITH AS LITTLE INCONVENIENCE TO OTHER AREAS AS POSSIBLE.
8. WHERE REMOVAL OF CONDUIT AND WIRING AFFECTS THE OPERATION OF "UPSTREAM" AND/OR "DOWNSTREAM" UTILIZATION EQUIPMENT WHICH IS NOT INDICATED TO BE REMOVED, PROVIDE ADDITIONAL CONDUIT AND WIRING TO RESTORE THE "UPSTREAM" AND "DOWNSTREAM" UTILIZATION EQUIPMENT TO ITS NORMAL OPERATION.
9. WIRING SHALL BE REMOVED, TERMINATED OR EXTENDED AS REQUIRED TO MAINTAIN CIRCUIT CONTINUITY AS CONDITIONS MAY DICTATE. ALL BRANCH CIRCUITS TO BE DISCONNECTED SHALL BE IDENTIFIED AS TO LOCATION OR ITEM SERVED BEFORE DISCONNECTING. CIRCUITS SERVING AREAS BEYOND THE IMMEDIATE DEMOLITION AND REMODELING SHALL BE MAINTAINED.
10. IN DEMOLITION AND REMODELED AREAS ANY FEEDERS, CONDUITS, BRANCH CIRCUITS, SIGNAL AND TELEPHONE CIRCUITS, ETC. PASSING THROUGH THESE AREAS TO SERVE REMOTE OR SURROUNDING AREAS THAT ARE TO REMAIN, SHALL BE RETAINED AND KEPT OPERATIONAL AND SHALL BE REROUTED IN ALL CASES WHERE THEY INTERFERE WITH ANY NEW WORK.
11. ALL EXISTING ELECTRICAL EQUIPMENT AND MATERIAL IN AREAS TO BE REMODELED/ALTERED SHALL BE REMOVED. UNLESS NOTED OTHERWISE ON DRAWING TO BE RETAINED OR RELOCATED.
12. REMOVE ALL ELECTRICAL COMPONENTS WITHIN AREA OF DEMOLITION UNLESS OTHERWISE NOTED. REMOVE ALL JUNCTION BOXES AND CONDUIT ASSOCIATED WITH DEVICES. REMOVE ALL CIRCUIT WIRING FROM COMPONENT BACK TO ORIGIN (PANELBOARD, MOTOR CONTROL CENTER, ETC.), UNLESS IT IS REQUIRED TO MAINTAIN CIRCUIT CONTINUITY TO COMPONENTS OUTSIDE OF THE AREA OF DEMOLITION. IF CIRCUIT CONTINUITY IS REQUIRED REWORK CONDUIT AND WIRE SO THAT THE NEW ROUTE IS OUTSIDE OF THE AREA TO BE DEMOLISHED.
13. REMOVE ALL EXISTING WIRING/CABLING FROM ALL EXISTING CONCEALED RACEWAYS IN PARTITIONS THAT ARE TO REMAIN.
14. REMOVE ALL ELECTRICAL EQUIPMENT ON OR IN EXISTING WALLS, CEILINGS AND PARTITIONS THAT ARE TO BE DEMOLISHED.
15. REMOVE ABANDONED WIRING TO SOURCE OF SUPPLY.
16. CONDUITS, BOXES, ETC. SHALL BE REMOVED AS REQUIRED BY WALL DEMOLITION.
17. WHERE EXISTING WALLS ARE TO REMAIN, REMOVE ALL EXPOSED RACEWAYS, SURFACE AND RECESSED BOXES THAT ARE NOT TO BE REUSED.
18. DISCONNECT ABANDONED OUTLETS AND REMOVE DEVICES. REMOVE ABANDONED OUTLETS IF CONDUIT SERVICING THEM IS ABANDONED AND REMOVED. PROVIDE BLANK COVER FOR ABANDONED OUTLETS, WHICH ARE NOT REMOVED.

SHEET KEYNOTES

1. DISCONNECT EXISTING POWER CONNECTION FROM EXISTING UNIT HEATER AND REMOVE ALL WIRE AND RACEWAY BACK TO SOURCE PANELBOARD.
2. POWER CONNECTION ASSOCIATED WITH FIRE/SMOKE DAMPER IS EXISTING TO REMAIN. RELOCATE TEST SWITCH TO CEILING. RELOCATE EXISTING DUCT SMOKE DETECTOR TO NEW DUCTWORK.
3. REMOVE J-BOX FOR EXTERIOR RECEPTACLE AND REPLACE WITH CONTINUOUS CONDUIT THROUGH THE WALL.
4. THIS AREA IS EXISTING TO REMAIN UNLESS OTHERWISE NOTED. REFER TO GENERAL NOTES FOR DIRECTION REGARDING SPACES OUTSIDE THIS AREA.
5. LIGHT SWITCH SERVING EXTERIOR FIXTURES IS EXISTING TO BE RELOCATED TO FINISHED WALL ELEVATION.



GBBN

PROJECT ARCHITECT
609 West Main Street
Louisville, KY 40202
502.583.0700
GBBN.COM

UK HealthCare

Renovate/Upgrade
UK Healthcare
Facilities
Pavilion A 5th Floor
Project Number: 2402.9

OWNER
University of Kentucky
222 Peterson Service Building
Lexington, Kentucky 40506

CONSTRUCTION MANAGER
Turner Construction Company
588 Leestown Road Suite 130-300
Lexington, KY 40511
859.421.4913

CONSULTANTS

MEP CONSULTANT
AEI Affiliated Engineers, Inc.
10 South LaSalle Street, Suite 2700
Chicago, IL 60603
312.977.2800

MEDICAL EQUIPMENT
BSA Life Structures
9365 Counselors Row #300
Indianapolis, IN 46240
317.819.7878

DRAWING ISSUE

CONTRACT DOCUMENTS

NO	DATE	DESCRIPTION
1	07.17.20	DESIGN DEVELOPMENT
2	09.18.20	ERP-1_DEMOLITION PACKAGE
3	10.27.20	CONTRACT DOCUMENTS
4	01.07.21	ADDENDUM 04

DRAWING TITLE

LEVEL 05 ELECTRICAL DEMOLITION FLOOR PLAN - AREA A

SEAL

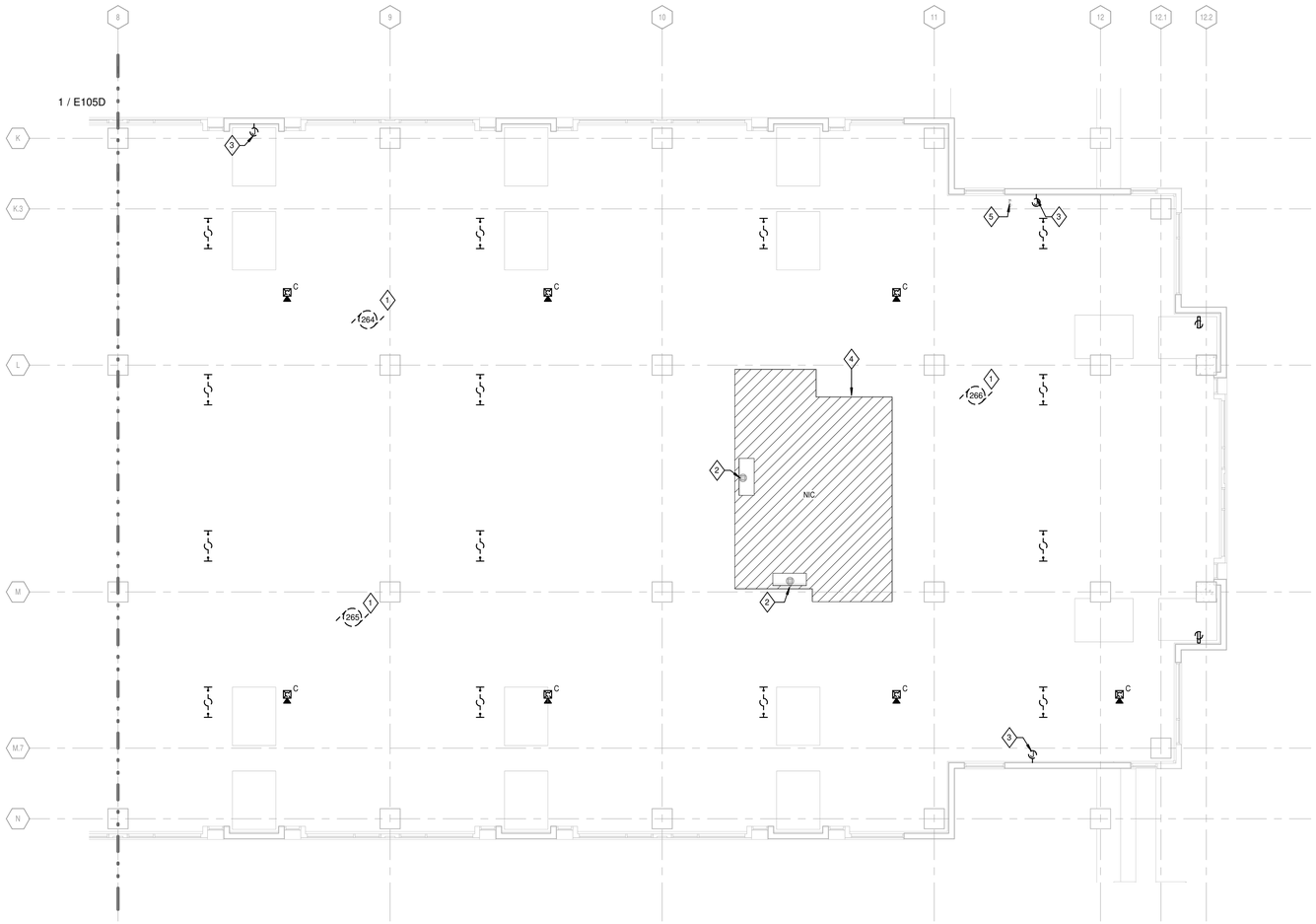
JOB NUMBER

13703.01

E105A

Pavilion A 5th Floor PAVILION A, 1000 S. LIMESTONE, LEXINGTON, KY 40536

1/7/2021 11:45:20 AM C:\Users\schartner\Documents\Revit 2020\Local Copy\13703_UK-5_12_MEP+20_schartnerRTB9Ch.rvt



1 **LEVEL 05 ELECTRICAL DEMOLITION FLOOR PLAN - AREA B**
SCALE: 1/8" = 1'-0"

ELECTRICAL DEMOLITION GENERAL NOTES

1. REFER TO SPECIFICATIONS FOR DIRECTIONS REGARDING DEMOLITION WORK.
2. AREA OF DEMOLITION SHOWN IS FOR APPROXIMATION PURPOSES ONLY. CONTRACTOR SHALL REFER TO ARCHITECTURAL DRAWINGS FOR EXACT AREA OF DEMOLITION.
3. EQUIPMENT LOCATIONS SHOWN ARE APPROXIMATE AND SHALL BE FIELD VERIFIED.
4. DEMOLITION DRAWINGS SHOWING EXISTING CONDITIONS HAVE BEEN PREPARED BASED ON FIELD OBSERVATION AND EXISTING ELECTRICAL DRAWINGS. ADDITIONAL COMPONENTS MAY EXIST WHICH DO NOT SHOW AND SUCH ITEMS SHALL BE DEALT WITH IN A MANNER SIMILAR TO THOSE ITEMS, WHICH DO SHOW.
5. FURNISH ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO COMPLETE DEMOLITION OF EXISTING ELECTRICAL EQUIPMENT AS SPECIFIED OR INDICATED. DISCONNECT, REMOVE AND RELOCATE ALL ITEMS AS REQUIRED TO FACILITATE THE NEW CONSTRUCTION.
6. CONTRACTOR SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH EXISTING ELECTRICAL SYSTEM, WHICH WILL BE AFFECTED BY THE DEMOLITION AND REMODELING WORK.
7. CONTRACTOR SHALL OBTAIN PERMISSION FROM OWNERS REPRESENTATIVE TO SHUT OFF SERVICES OR SYSTEM, WHICH MAY AFFECT OTHER AREAS BEYOND THE LIMITS OF THE IMMEDIATE DEMOLITION AREA. SUCH PERMISSION WILL BE GRANTED ONLY AFTER OWNERS REPRESENTATIVE IS INFORMED AS TO THE REASON FOR AND DURATION OF THE SHUTDOWN AND IS SATISFIED THAT THE SHUTDOWN CAN BE MADE WITH AS LITTLE INCONVENIENCE TO OTHER AREAS AS POSSIBLE.
8. WHERE REMOVAL OF CONDUIT AND WIRING AFFECTS THE OPERATION OF "UPSTREAM" AND/OR "DOWNSTREAM" UTILIZATION EQUIPMENT WHICH IS NOT INDICATED TO BE REMOVED, PROVIDE ADDITIONAL CONDUIT AND WIRING TO RESTORE THE "UPSTREAM" AND "DOWNSTREAM" UTILIZATION EQUIPMENT TO ITS NORMAL OPERATION.
9. WIRING SHALL BE REMOVED, TERMINATED OR EXTENDED AS REQUIRED TO MAINTAIN CIRCUIT CONTINUITY AS CONDITIONS MAY DICTATE. ALL BRANCH CIRCUITS TO BE DISCONNECTED SHALL BE IDENTIFIED AS TO LOCATION OR ITEM SERVED BEFORE DISCONNECTING. CIRCUITS SERVING AREAS BEYOND THE IMMEDIATE DEMOLITION AND REMODELING SHALL BE MAINTAINED.
10. IN DEMOLITION AND REMODELED AREAS ANY FEEDERS, CONDUITS, BRANCH CIRCUITS, SIGNAL AND TELEPHONE CIRCUITS, ETC. PASSING THROUGH THESE AREAS TO SERVE REMOTE OR SURROUNDING AREAS THAT ARE TO REMAIN, SHALL BE RETAINED AND KEPT OPERATIONAL AND SHALL BE REROUTED IN ALL CASES WHERE THEY INTERFERE WITH ANY NEW WORK.
11. ALL EXISTING ELECTRICAL EQUIPMENT AND MATERIAL IN AREAS TO BE REMODELED/ALTERED SHALL BE REMOVED. UNLESS NOTED OTHERWISE ON DRAWING TO BE RETAINED OR RELOCATED.
12. REMOVE ALL ELECTRICAL COMPONENTS WITHIN AREA OF DEMOLITION UNLESS OTHERWISE NOTED. REMOVE ALL JUNCTION BOXES AND CONDUIT ASSOCIATED WITH DEVICES. REMOVE ALL CIRCUIT WIRING FROM COMPONENT BACK TO ORIGIN (PANELBOARD, MOTOR CONTROL CENTER, ETC.), UNLESS IT IS REQUIRED TO MAINTAIN CIRCUIT CONTINUITY TO COMPONENTS OUTSIDE OF THE AREA OF DEMOLITION. IF CIRCUIT CONTINUITY IS REQUIRED REWORK CONDUIT AND WIRE SO THAT THE NEW ROUTE IS OUTSIDE OF THE AREA TO BE DEMOLISHED.
13. REMOVE ALL EXISTING WIRING/CABLING FROM ALL EXISTING CONCEALED RACEWAYS IN PARTITIONS THAT ARE TO REMAIN.
14. REMOVE ALL ELECTRICAL EQUIPMENT ON OR IN EXISTING WALLS, CEILINGS AND PARTITIONS THAT ARE TO BE DEMOLISHED.
15. REMOVE ABANDONED WIRING TO SOURCE OF SUPPLY.
16. CONDUITS, BOXES, ETC. SHALL BE REMOVED AS REQUIRED BY WALL DEMOLITION.
17. WHERE EXISTING WALLS ARE TO REMAIN, REMOVE ALL EXPOSED RACEWAYS, SURFACE AND RECESSED BOXES THAT ARE NOT TO BE REUSED.
18. DISCONNECT ABANDONED OUTLETS AND REMOVE DEVICES. REMOVE ABANDONED OUTLETS IF CONDUIT SERVICING THEM IS ABANDONED AND REMOVED. PROVIDE BLANK COVER FOR ABANDONED OUTLETS, WHICH ARE NOT REMOVED.

SHEET KEYNOTES

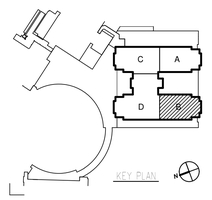
1 DISCONNECT EXISTING POWER CONNECTION FROM EXISTING UNIT HEATER AND REMOVE ALL WIRE AND RACEWAY BACK TO SOURCE PANELBOARD.

2 POWER CONNECTION ASSOCIATED WITH FIRE/SMOKE DAMPER IS EXISTING TO REMAIN. RELOCATE TEST SWITCH TO CEILING. RELOCATE EXISTING DUCT SMOKE DETECTOR TO NEW DUCTWORK.

3 REMOVE J-BOX FOR EXTERIOR RECEPTACLE AND REPLACE WITH CONTINUOUS CONDUIT THROUGH THE WALL.

4 THIS AREA IS EXISTING TO REMAIN UNLESS OTHERWISE NOTED. REFER TO GENERAL NOTES FOR DIRECTION REGARDING SPACES OUTSIDE THIS AREA.

5 LIGHT SWITCH SERVING EXTERIOR FIXTURES IS EXISTING TO BE RELOCATED TO FINISHED WALL ELEVATION.



PROJECT ARCHITECT
609 West Main Street
Louisville, KY 40202
502.583.0700
GBBN.COM

UK HealthCare

Renovate/Upgrade
UK Healthcare
Facilities
Pavilion A 5th Floor
Project Number: 2402.9

OWNER
University of Kentucky
222 Peterson Service Building
Lexington, Kentucky 40506

CONSTRUCTION MANAGER
Turner Construction Company
588 Leestown Road Suite 130-300
Lexington, KY 40511
859.421.4913

CONSULTANTS

MEP CONSULTANT
AEI Affiliated Engineers, Inc.
10 South LaSalle Street, Suite 2700
Chicago, IL 60603
312.977.2800

MEDICAL EQUIPMENT
BSA Life Structures
9365 Counselors Row #300
Indianapolis, IN 46240
317.819.7878

DRAWING ISSUE

CONTRACT DOCUMENTS

NO	DATE	DESCRIPTION
1	07.17.20	DESIGN DEVELOPMENT
2	09.18.20	ERP-1_DEMOLITION PACKAGE
3	10.27.20	CONTRACT DOCUMENTS
4	01.07.21	ADDENDUM 04

DRAWING TITLE

LEVEL 05 ELECTRICAL DEMOLITION FLOOR PLAN - AREA B

SEAL

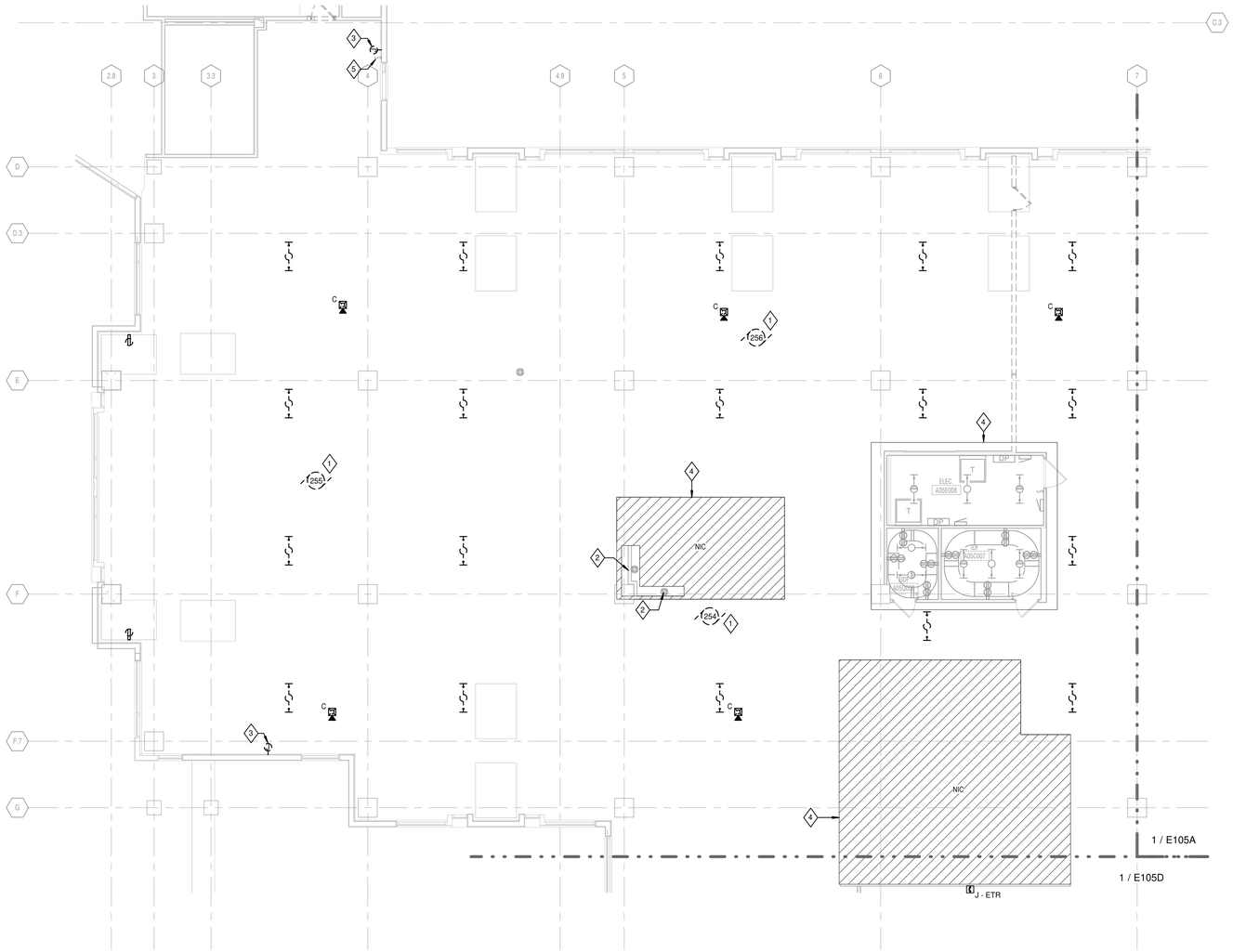
JOB NUMBER

13703.01

E105B

Pavilion A 5th Floor PAVILION A, 1000 S. LIMESTONE, LEXINGTON, KY 40536

1/7/2021 11:45:24 AM C:\Users\sharwell\Documents\Revit 2020 Local Copy\20726_UK-IL-12_MEPv20_sharwell79380.rvt



1 LEVEL 05 ELECTRICAL DEMOLITION FLOOR PLAN - AREA C

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

ELECTRICAL DEMOLITION GENERAL NOTES

1. REFER TO SPECIFICATIONS FOR DIRECTIONS REGARDING DEMOLITION WORK.
2. AREA OF DEMOLITION SHOWN IS FOR APPROXIMATION PURPOSES ONLY. CONTRACTOR SHALL REFER TO ARCHITECTURAL DRAWINGS FOR EXACT AREA OF DEMOLITION.
3. EQUIPMENT LOCATIONS SHOWN ARE APPROXIMATE AND SHALL BE FIELD VERIFIED.
4. DEMOLITION DRAWINGS SHOWING EXISTING CONDITIONS HAVE BEEN PREPARED BASED ON FIELD OBSERVATION AND EXISTING ELECTRICAL DRAWINGS. ADDITIONAL COMPONENTS MAY EXIST WHICH DO NOT SHOW AND SUCH ITEMS SHALL BE DEALT WITH IN A MANNER SIMILAR TO THOSE ITEMS, WHICH DO SHOW.
5. FURNISH ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO COMPLETE DEMOLITION OF EXISTING ELECTRICAL EQUIPMENT AS SPECIFIED OR INDICATED. DISCONNECT, REMOVE AND RELOCATE ALL ITEMS AS REQUIRED TO FACILITATE THE NEW CONSTRUCTION.
6. CONTRACTOR SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH EXISTING ELECTRICAL SYSTEM, WHICH WILL BE AFFECTED BY THE DEMOLITION AND REMODELING WORK.
7. CONTRACTOR SHALL OBTAIN PERMISSION FROM OWNERS REPRESENTATIVE TO SHUT OFF SERVICES OR SYSTEM, WHICH MAY AFFECT OTHER AREAS BEYOND THE LIMITS OF THE IMMEDIATE DEMOLITION AREA. SUCH PERMISSION WILL BE GRANTED ONLY AFTER OWNERS REPRESENTATIVE IS INFORMED AS TO THE REASON FOR AND DURATION OF THE SHUTDOWN AND IS SATISFIED THAT THE SHUTDOWN CAN BE MADE WITH AS LITTLE INCONVENIENCE TO OTHER AREAS AS POSSIBLE.
8. WHERE REMOVAL OF CONDUIT AND WIRING AFFECTS THE OPERATION OF "UPSTREAM" AND/OR "DOWNSTREAM" UTILIZATION EQUIPMENT WHICH IS NOT INDICATED TO BE REMOVED, PROVIDE ADDITIONAL CONDUIT AND WIRING TO RESTORE THE "UPSTREAM" AND "DOWNSTREAM" UTILIZATION EQUIPMENT TO ITS NORMAL OPERATION.
9. WIRING SHALL BE REMOVED, TERMINATED OR EXTENDED AS REQUIRED TO MAINTAIN CIRCUIT CONTINUITY AS CONDITIONS MAY DICTATE. ALL BRANCH CIRCUITS TO BE DISCONNECTED SHALL BE IDENTIFIED AS TO LOCATION OR ITEM SERVED BEFORE DISCONNECTING. CIRCUITS SERVING AREAS BEYOND THE IMMEDIATE DEMOLITION AND REMODELING SHALL BE MAINTAINED.
10. IN DEMOLITION AND REMODELED AREAS ANY FEEDERS, CONDUITS, BRANCH CIRCUITS, SIGNAL AND TELEPHONE CIRCUITS, ETC. PASSING THROUGH THESE AREAS TO SERVE REMOTE OR SURROUNDING AREAS THAT ARE TO REMAIN, SHALL BE RETAINED AND KEPT OPERATIONAL AND SHALL BE REROUTED IN ALL CASES WHERE THEY INTERFERE WITH ANY NEW WORK.
11. ALL EXISTING ELECTRICAL EQUIPMENT AND MATERIAL IN AREAS TO BE REMODELED/ALTERED SHALL BE REMOVED. UNLESS NOTED OTHERWISE ON DRAWING TO BE RETAINED OR RELOCATED.
12. REMOVE ALL ELECTRICAL COMPONENTS WITHIN AREA OF DEMOLITION UNLESS OTHERWISE NOTED. REMOVE ALL JUNCTION BOXES AND CONDUIT ASSOCIATED WITH DEVICES. REMOVE ALL CIRCUIT WIRING FROM COMPONENT BACK TO ORIGIN (PANELBOARD, MOTOR CONTROL CENTER, ETC.), UNLESS IT IS REQUIRED TO MAINTAIN CIRCUIT CONTINUITY TO COMPONENTS OUTSIDE OF THE AREA OF DEMOLITION. IF CIRCUIT CONTINUITY IS REQUIRED REWORK CONDUIT AND WIRE SO THAT THE NEW ROUTE IS OUTSIDE OF THE AREA TO BE DEMOLISHED.
13. REMOVE ALL EXISTING WIRING/CABLING FROM ALL EXISTING CONCEALED RACEWAYS IN PARTITIONS THAT ARE TO REMAIN.
14. REMOVE ALL ELECTRICAL EQUIPMENT ON OR IN EXISTING WALLS, CEILINGS AND PARTITIONS THAT ARE TO BE DEMOLISHED.
15. REMOVE ABANDONED WIRING TO SOURCE OF SUPPLY.
16. CONDUITS, BOXES, ETC. SHALL BE REMOVED AS REQUIRED BY WALL DEMOLITION.
17. WHERE EXISTING WALLS ARE TO REMAIN, REMOVE ALL EXPOSED RACEWAYS, SURFACE AND RECESSED BOXES THAT ARE NOT TO BE REUSED.
18. DISCONNECT ABANDONED OUTLETS AND REMOVE DEVICES. REMOVE ABANDONED OUTLETS IF CONDUIT SERVICING THEM IS ABANDONED AND REMOVED. PROVIDE BLANK COVER FOR ABANDONED OUTLETS, WHICH ARE NOT REMOVED.

SHEET KEYNOTES

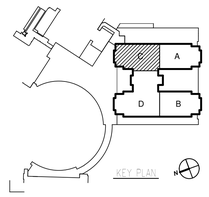
1 DISCONNECT EXISTING POWER CONNECTION FROM EXISTING UNIT HEATER AND REMOVE ALL WIRE AND RACEWAY BACK TO SOURCE PANELBOARD.

2 POWER CONNECTION ASSOCIATED WITH FIRE/SMOKE DAMPER IS EXISTING TO REMAIN. RELOCATE TEST SWITCH TO CEILING. RELOCATE EXISTING DUCT SMOKE DETECTOR TO NEW DUCTWORK.

3 REMOVE J-BOX FOR EXTERIOR RECEPTACLE AND REPLACE WITH CONTINUOUS CONDUIT THROUGH THE WALL.

4 THIS AREA IS EXISTING TO REMAIN UNLESS OTHERWISE NOTED. REFER TO GENERAL NOTES FOR DIRECTION REGARDING SPACES OUTSIDE THIS AREA.

5 LIGHT SWITCH SERVING EXTERIOR FIXTURES IS EXISTING TO BE RELOCATED TO FINISHED WALL ELEVATION.



GBBN

PROJECT ARCHITECT
609 West Main Street
Louisville, KY 40202
502.583.0700
GBBN.COM

UK HealthCare

Renovate/Upgrade
UK Healthcare
Facilities
Pavilion A 5th Floor
Project Number: 2402.9

OWNER
University of Kentucky
222 Peterson Service Building
Lexington, Kentucky 40506

CONSTRUCTION MANAGER
Turner Construction Company
588 Leestown Road Suite 130-300
Lexington, KY 40511
859.421.4913

CONSULTANTS

MEP CONSULTANT
AEI Affiliated Engineers, Inc.
10 South LaSalle Street, Suite 2700
Chicago, IL 60603
312.977.2800

MEDICAL EQUIPMENT
BSA Life Structures
9365 Counselors Row #300
Indianapolis, IN 46240
317.819.7878

DRAWING ISSUE

CONTRACT DOCUMENTS

NO	DATE	DESCRIPTION
1	07.17.20	DESIGN DEVELOPMENT
2	09.18.20	ERP-1_DEMOLITION PACKAGE
3	10.27.20	CONTRACT DOCUMENTS
4	01.07.21	ADDENDUM 04

DRAWING TITLE

LEVEL 05 ELECTRICAL DEMOLITION FLOOR PLAN - AREA C

SEAL

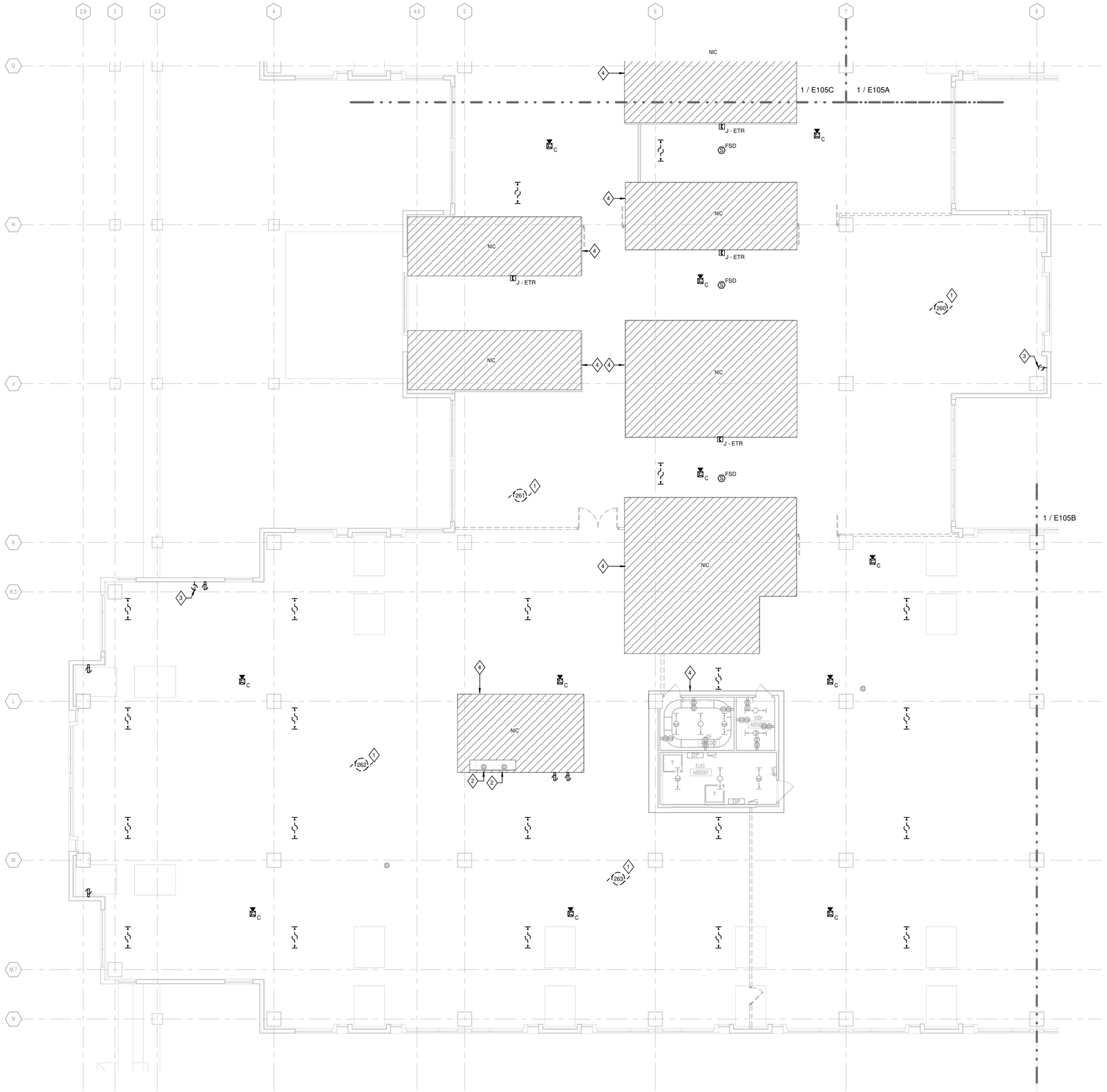
JOB NUMBER

13703.01

E105C

Pavilion A 5th Floor PAVILION A, 1000 S. LIMESTONE, LEXINGTON, KY 40536

1/7/2021 11:14:29 AM C:\Users\cshartner\Documents\Revit 2020 Local Copy\20706_UK-5_12_MEP(0)_cshartnerDTB360.rvt



1 **ELEVEL 05 LECTRICAL DEMOLITION FLOOR PLAN - AREA D**

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

ELECTRICAL DEMOLITION GENERAL NOTES

1. REFER TO SPECIFICATIONS FOR DIRECTIONS REGARDING DEMOLITION WORK.
2. AREA OF DEMOLITION SHOWN IS FOR APPROXIMATION PURPOSES ONLY. CONTRACTOR SHALL REFER TO ARCHITECTURAL DRAWINGS FOR EXACT AREA OF DEMOLITION.
3. EQUIPMENT LOCATIONS SHOWN ARE APPROXIMATE AND SHALL BE FIELD VERIFIED.
4. DEMOLITION DRAWINGS SHOWING EXISTING CONDITIONS HAVE BEEN PREPARED BASED ON FIELD OBSERVATION AND EXISTING ELECTRICAL DRAWINGS. ADDITIONAL COMPONENTS MAY EXIST WHICH DO NOT SHOW AND SUCH ITEMS SHALL BE DEALT WITH IN A MANNER SIMILAR TO THOSE ITEMS, WHICH DO SHOW.
5. FURNISH ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO COMPLETE DEMOLITION OF EXISTING ELECTRICAL EQUIPMENT AS SPECIFIED OR INDICATED. DISCONNECT, REMOVE AND RELOCATE ALL ITEMS AS REQUIRED TO FACILITATE THE NEW CONSTRUCTION.
6. CONTRACTOR SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH EXISTING ELECTRICAL SYSTEM, WHICH WILL BE AFFECTED BY THE DEMOLITION AND REMODELING WORK.
7. CONTRACTOR SHALL OBTAIN PERMISSION FROM OWNERS REPRESENTATIVE TO SHUT OFF SERVICES OR SYSTEM, WHICH MAY AFFECT OTHER AREAS BEYOND THE LIMITS OF THE IMMEDIATE DEMOLITION AREA. SUCH PERMISSION WILL BE GRANTED ONLY AFTER OWNERS REPRESENTATIVE IS INFORMED AS TO THE REASON FOR AND DURATION OF THE SHUTDOWN AND IS SATISFIED THAT THE SHUTDOWN CAN BE MADE WITH AS LITTLE INCONVENIENCE TO OTHER AREAS AS POSSIBLE.
8. WHERE REMOVAL OF CONDUIT AND WIRING AFFECTS THE OPERATION OF "UPSTREAM" AND/OR "DOWNSTREAM" UTILIZATION EQUIPMENT WHICH IS NOT INDICATED TO BE REMOVED, PROVIDE ADDITIONAL CONDUIT AND WIRING TO RESTORE THE "UPSTREAM" AND "DOWNSTREAM" UTILIZATION EQUIPMENT TO ITS NORMAL OPERATION.
9. WIRING SHALL BE REMOVED, TERMINATED OR EXTENDED AS REQUIRED TO MAINTAIN CIRCUIT CONTINUITY AS CONDITIONS MAY DICTATE. ALL BRANCH CIRCUITS TO BE DISCONNECTED SHALL BE IDENTIFIED AS TO LOCATION OR ITEM SERVED BEFORE DISCONNECTING. CIRCUITS SERVING AREAS BEYOND THE IMMEDIATE DEMOLITION AND REMODELING SHALL BE MAINTAINED.
10. IN DEMOLITION AND REMODELED AREAS ANY FEEDERS, CONDUITS, BRANCH CIRCUITS, SIGNAL AND TELEPHONE CIRCUITS, ETC. PASSING THROUGH THESE AREAS TO SERVE REMOTE OR SURROUNDING AREAS THAT ARE TO REMAIN, SHALL BE RETAINED AND KEPT OPERATIONAL AND SHALL BE REROUTED IN ALL CASES WHERE THEY INTERFERE WITH ANY NEW WORK.
11. ALL EXISTING ELECTRICAL EQUIPMENT AND MATERIAL IN AREAS TO BE REMODELED/ALTERED SHALL BE REMOVED. UNLESS NOTED OTHERWISE ON DRAWING TO BE RETAINED OR RELOCATED.
12. REMOVE ALL ELECTRICAL COMPONENTS WITHIN AREA OF DEMOLITION UNLESS OTHERWISE NOTED. REMOVE ALL JUNCTION BOXES AND CONDUIT ASSOCIATED WITH DEVICES. REMOVE ALL CIRCUIT WIRING FROM COMPONENT BACK TO ORIGIN (PANELBOARD, MOTOR CONTROL CENTER, ETC.), UNLESS IT IS REQUIRED TO MAINTAIN CIRCUIT CONTINUITY TO COMPONENTS OUTSIDE OF THE AREA OF DEMOLITION. IF CIRCUIT CONTINUITY IS REQUIRED REWORK CONDUIT AND WIRE SO THAT THE NEW ROUTE IS OUTSIDE OF THE AREA TO BE DEMOLISHED.
13. REMOVE ALL EXISTING WIRING/CABLING FROM ALL EXISTING CONCEALED RACEWAYS IN PARTITIONS THAT ARE TO REMAIN.
14. REMOVE ALL ELECTRICAL EQUIPMENT ON OR IN EXISTING WALLS, CEILINGS AND PARTITIONS THAT ARE TO BE DEMOLISHED.
15. REMOVE ABANDONED WIRING TO SOURCE OF SUPPLY.
16. CONDUITS, BOXES, ETC. SHALL BE REMOVED AS REQUIRED BY WALL DEMOLITION.
17. WHERE EXISTING WALLS ARE TO REMAIN, REMOVE ALL EXPOSED RACEWAYS, SURFACE AND RECESSED BOXES THAT ARE NOT TO BE REUSED.
18. DISCONNECT ABANDONED OUTLETS AND REMOVE DEVICES. REMOVE ABANDONED OUTLETS IF CONDUIT SERVICING THEM IS ABANDONED AND REMOVED. PROVIDE BLANK COVER FOR ABANDONED OUTLETS, WHICH ARE NOT REMOVED.

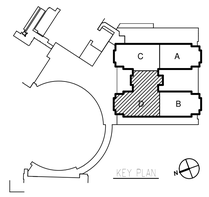
SHEET KEYNOTES

1 DISCONNECT EXISTING POWER CONNECTION FROM EXISTING UNIT HEATER AND REMOVE ALL WIRE AND RACEWAY BACK TO SOURCE PANELBOARD.

2 POWER CONNECTION ASSOCIATED WITH FIRE/SMOKE DAMPER IS EXISTING TO REMAIN. RELOCATE TEST SWITCH TO CEILING. RELOCATE EXISTING DUCT SMOKE DETECTOR TO NEW DUCTWORK.

3 REMOVE J-BOX FOR EXTERIOR RECEPTACLE AND REPLACE WITH CONTINUOUS CONDUIT THROUGH THE WALL.

4 THIS AREA IS EXISTING TO REMAIN UNLESS OTHERWISE NOTED. REFER TO GENERAL NOTES FOR DIRECTION REGARDING SPACES OUTSIDE THIS AREA.



GBBN

PROJECT ARCHITECT
609 West Main Street
Louisville, KY 40202
502.583.0700
GBBN.COM

HealthCare

Renovate/Upgrade
UK Healthcare
Facilities
Pavilion A 5th Floor
Project Number: 2402.9

OWNER

University of Kentucky
222 Peterson Service Building
Lexington, Kentucky 40506

CONSTRUCTION MANAGER

Turner Construction Company
588 Leestown Road Suite 130-300
Lexington, KY 40511
859.421.4913

CONSULTANTS

MEP CONSULTANT
AEI Affiliated Engineers, Inc.
10 South LaSalle Street, Suite 2700
Chicago, IL 60603
312.977.2800

MEDICAL EQUIPMENT
BSA Life Structures
9365 Counselors Row #300
Indianapolis, IN 46240
317.819.7878

DRAWING ISSUE

CONTRACT DOCUMENTS

NO	DATE	DESCRIPTION
1	07.17.20	DESIGN DEVELOPMENT
2	09.18.20	ERP-1_DEMOLITION PACKAGE
3	10.27.20	CONTRACT DOCUMENTS
4	01.07.21	ADDENDUM 04

DRAWING TITLE

LEVEL 05 ELECTRICAL DEMOLITION FLOOR PLAN - AREA D

SEAL

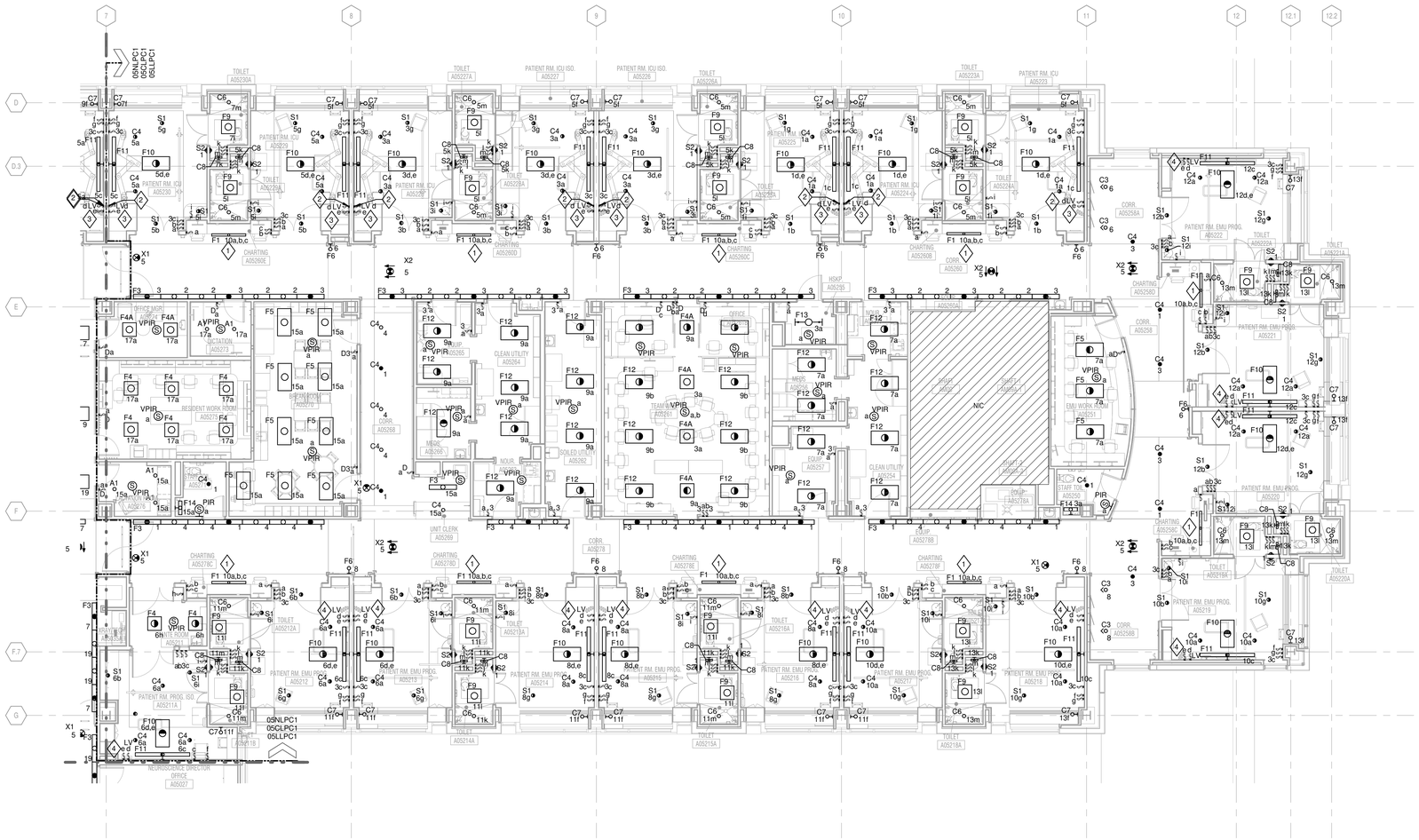
JOB NUMBER

13703.01

E105D

Pavilion A 5th Floor PAVILION A, 1000 S. LIMESTONE, LEXINGTON, KY 40536

1/7/2021 11:45:34 AM C:\Users\ashartner\Documents\Revit 2020\Local Copy\13703_UK-5_12_MEP-20_ashartner@TBD5.rvt



1 LEVEL 05 LIGHTING FLOOR PLAN - AREA A

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

ELECTRICAL LIGHTING GENERAL NOTES

1. LIGHTING FIXTURES SHOWN ARE FOR CIRCUITING AND SWITCHING INFORMATION ONLY. SEE ARCHITECTURAL PLANS FOR ACTUAL FIXTURE LOCATIONS.

2. SEE SHEETS E910 FOR LIGHTING FIXTURE SCHEDULES.

3. ALL RACEWAYS ARE TO CONTAIN NO MORE THAN NINE CURRENT CARRYING CONDUCTORS AND A CODE SIZED EQUIPMENT GROUNDING CONDUCTOR.

5. SEAL ALL RACEWAYS AND PENETRATIONS BOTH INTERNALLY AND EXTERNALLY WHERE TRANSITIONS ARE MADE FROM CONDITIONED SPACES TO OUTDOOR OR UNDERGROUND. RACEWAYS ARE TO BE SEALED TO PREVENT AIR, MOISTURE, AND RODENT MIGRATION THROUGH AND AROUND RACEWAYS.

6. COORDINATE FIRE SEPARATION BARRIER PENETRATIONS WITH ARCHITECT'S DRAWINGS. USE APPROVED FIRE STOPPING SEALANT AROUND PENETRATION AFTER RACEWAYS ARE INSTALLED.

SHEET KEYNOTES

1 SWITCHES FOR SEPARATE CONTROL OF EACH DOWNLIGHT AND LINEAR COMPONENT OF THIS LUMINAIRE TYPE F1. COORDINATE EXACT LOCATION WITH REPRESENTATIVE IN THE FIELD.

2 (LV) LOW VOLTAGE SWITCH, MOUNTED IN STRYKER BOOM SHALL CONTROL AMBIENT LIGHTING PORTION, TWO LAMPS, ON SWITCH "D" IN LUMINAIRE F10. (LVC) LOW VOLTAGE CONTROLLER SHALL BE MOUNTED IN STRYKER BOOM. ELECTRICAL CONTRACTOR SHALL PROVIDE WIRING BETWEEN SWITCHES AND LUMINAIRE. ELECTRICAL CONTRACTOR SHALL PULL BRANCH CIRCUIT WIRING FOR THE LUMINAIRE SERVED INTO THE BOOM AND TERMINATE COMPLETE IN BOOM PER BOOM MANUFACTURER REQUIREMENTS.

3 LINE VOLTAGE SWITCH "E" SHALL HAVE RED BODY AND RED FACEPLATE AND CONTROL EXAM PORTION LAMPING IN LUMINAIRE F10. ELECTRICAL CONTRACTOR SHALL PROVIDE WIRING BETWEEN SWITCHES AND LUMINAIRE. SWITCH SHALL BE LOCATED A MINIMUM OF 4'-0" FROM CENTER LINE OF BED TO PROVIDE CLEARANCE FOR CASEWORK.

4 (LV) LOW VOLTAGE SWITCH TO CONTROL AMBIENT LIGHTING PORTION, TWO LAMPS, ON SWITCH "D" IN LUMINAIRE F10. (LVC) LOW VOLTAGE CONTROLLER PROVIDED IN LOWER PORTION OF HEADWALL. LINE VOLTAGE SWITCH "E" SHALL HAVE RED BODY AND RED FACEPLATE. SWITCHES SHALL BE PROVIDED BY ELECTRICAL CONTRACTOR AND INSTALLED IN HEADWALL. ELECTRICAL CONTRACTOR SHALL PROVIDE WIRING BETWEEN SWITCHES AND LUMINAIRE. 4

PROJECT ARCHITECT
609 West Main Street
Louisville, KY 40202
502.583.0700
GBBN.COM

HealthCare

Renovate/Upgrade
UK Healthcare
Facilities
Pavilion A 5th Floor
Project Number: 2402.9

OWNER

University of Kentucky
222 Peterson Service Building
Lexington, Kentucky 40506

CONSTRUCTION MANAGER

Turner Construction Company
588 Leestown Road Suite 130-300
Lexington, KY 40511
859.421.4913

CONSULTANTS

MEP CONSULTANT
AEI Affiliated Engineers, Inc.
10 South LaSalle Street, Suite 2700
Chicago, IL 60603
312.977.2800

MEDICAL EQUIPMENT
BSA Life Structures
9365 Counselors Row #300
Indianapolis, IN 46240
317.819.7878

DRAWING ISSUE

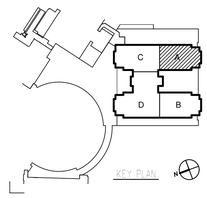
CONTRACT DOCUMENTS

NO	DATE	DESCRIPTION
1	07.17.20	DESIGN DEVELOPMENT
2	10.27.20	CONTRACT DOCUMENTS
3	12.15.20	ADDENDUM 03
4	01.07.21	ADDENDUM 04

DRAWING TITLE

LEVEL 05 LIGHTING FLOOR PLAN - AREA A

SEAL



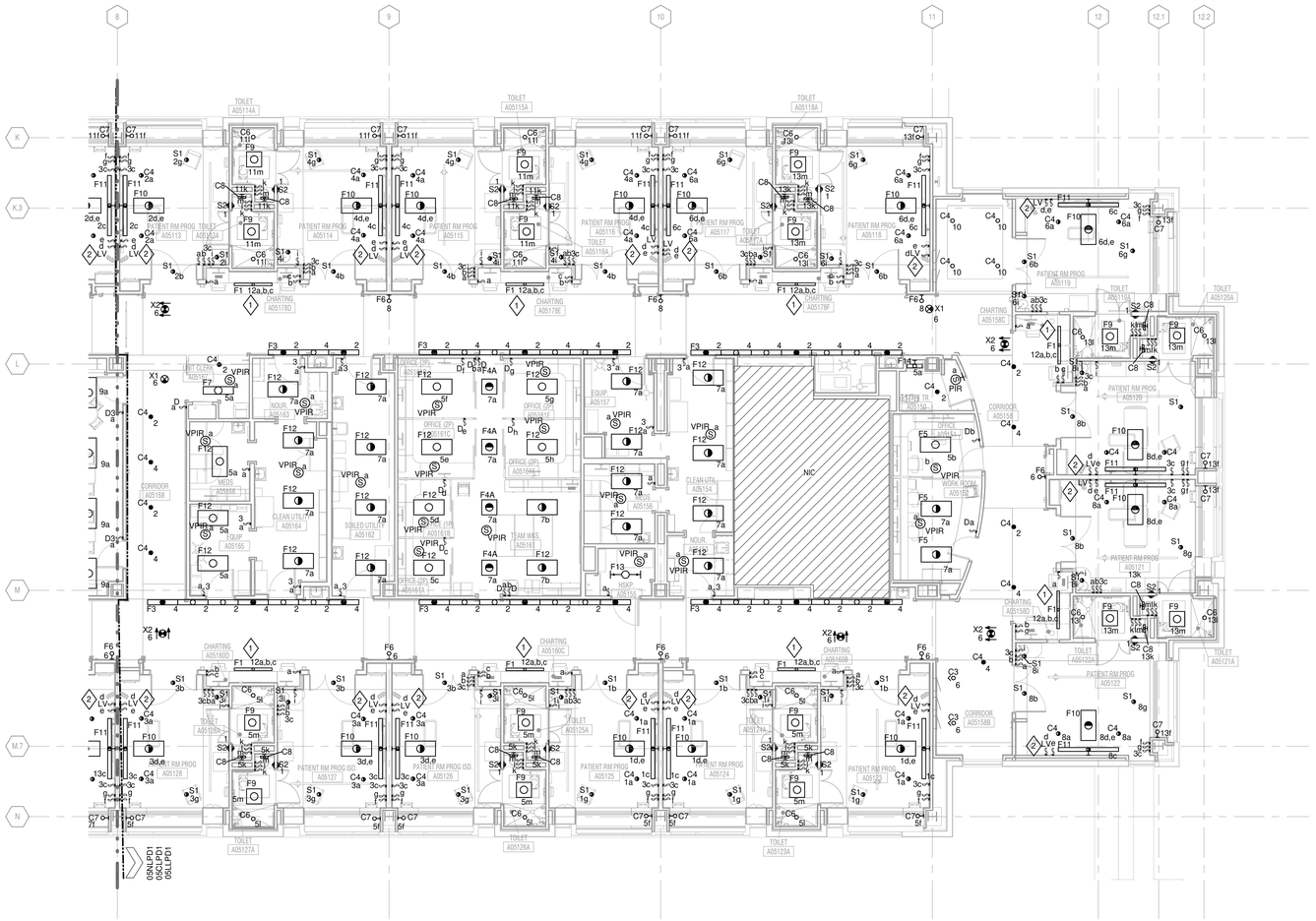
JOB NUMBER

13703.01

E205A

Pavilion A 5th Floor PAVILION A, 1000 S. LIMESTONE, LEXINGTON, KY 40536

1/7/2021 11:45:53 AM C:\Users\ahartner\Documents\Revit 2020 Local Copy\20736_UK-5_12_MEP120_ahartner.rvt



1 LEVEL 05 LIGHTING FLOOR PLAN - AREA B

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

ELECTRICAL LIGHTING GENERAL NOTES

1. LIGHTING FIXTURES SHOWN ARE FOR CIRCUITING AND SWITCHING INFORMATION ONLY. SEE ARCHITECTURAL PLANS FOR ACTUAL FIXTURE LOCATIONS.

2. SEE SHEETS E910 FOR LIGHTING FIXTURE SCHEDULES.

3. ALL RACEWAYS ARE TO CONTAIN NO MORE THAN NINE CURRENT CARRYING CONDUCTORS AND A CODE SIZED EQUIPMENT GROUNDING CONDUCTOR.

5. SEAL ALL RACEWAYS AND PENETRATIONS BOTH INTERNALLY AND EXTERNALLY WHERE TRANSITIONS ARE MADE FROM CONDITIONED SPACES TO OUTDOOR OR UNDERGROUND. RACEWAYS ARE TO BE SEALED TO PREVENT AIR, MOISTURE, AND RODENT MIGRATION THROUGH AND AROUND RACEWAYS.

6. COORDINATE FIRE SEPARATION BARRIER PENETRATIONS WITH ARCHITECT'S DRAWINGS. USE APPROVED FIRE STOPPING SEALANT AROUND PENETRATION AFTER RACEWAYS ARE INSTALLED.

SHEET KEYNOTES

1 SWITCHES FOR SEPARATE CONTROL OF EACH DOWNLIGHT AND LINEAR COMPONENT OF THIS LUMINAIRE TYPE F1. COORDINATE EXACT LOCATION WITH REPRESENTATIVE IN THE FIELD.

2 (LV) LOW VOLTAGE SWITCH TO CONTROL AMBIENT LIGHTING PORTION, TWO LAMPS, ON SWITCH "D" IN LUMINAIRE F10. (LVC) LOW VOLTAGE CONTROLLER PROVIDED IN LOWER PORTION OF HEADWALL. LINE VOLTAGE SWITCH "E" SHALL HAVE RED BODY AND RED FACEPLATE. SWITCH IS SHALL BE PROVIDED BY ELECTRICAL CONTRACTOR AND INSTALLED IN HEADWALL. ELECTRICAL CONTRACTOR SHALL PROVIDE WIRING BETWEEN SWITCHES AND LUMINAIRE.

PROJECT ARCHITECT
609 West Main Street
Louisville, KY 40202
502.583.0700
GBBN.COM

UK HealthCare

Renovate/Upgrade
UK Healthcare
Facilities
Pavilion A 5th Floor
Project Number: 2402.9

OWNER
University of Kentucky
222 Peterson Service Building
Lexington, Kentucky 40506

CONSTRUCTION MANAGER
Turner Construction Company
588 Leestown Road Suite 130-300
Lexington, KY 40511
859.421.4913

CONSULTANTS

MEP CONSULTANT
AEI Affiliated Engineers, Inc.
10 South LaSalle Street, Suite 2700
Chicago, IL 60603
312.977.2800

MEDICAL EQUIPMENT
BSA Life Structures
9365 Counselors Row #300
Indianapolis, IN 46240
317.819.7878

Pavilion A 5th Floor PAVILION A, 1000 S. LIMESTONE, LEXINGTON, KY 40536

DRAWING ISSUE

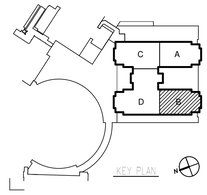
CONTRACT DOCUMENTS

NO	DATE	DESCRIPTION
1	07.17.20	DESIGN DEVELOPMENT
2	10.27.20	CONTRACT DOCUMENTS
3	12.15.20	ADDENDUM 03
4	01.07.21	ADDENDUM 04

DRAWING TITLE

LEVEL 05 LIGHTING FLOOR PLAN - AREA B

SEAL

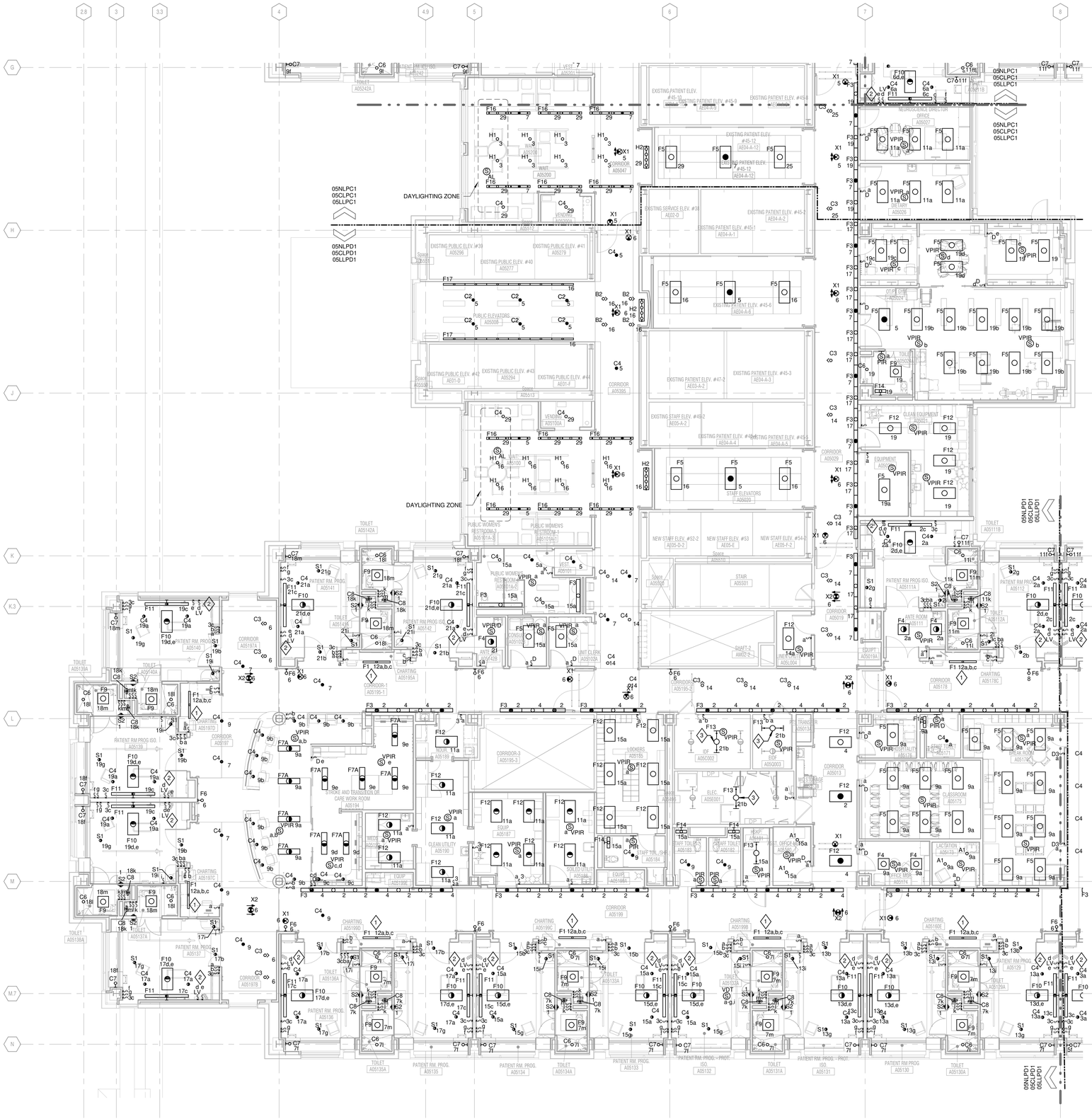


JOB NUMBER

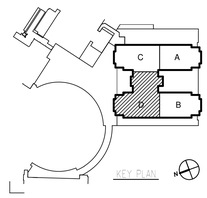
13703.01

E205B

1/7/2021 11:46:07 AM C:\Users\sbrahan\Documents\Revit 2020 Local Copy\20706_UK-5_12_MEP20_sbrahan.rvt [T938D-1r4



1 **LEVEL 05 LIGHTING FLOOR PLAN - AREA D**
SCALE: 1/8" = 1'-0"



ELECTRICAL LIGHTING GENERAL NOTES

1. LIGHTING FIXTURES SHOWN ARE FOR CIRCUITING AND SWITCHING INFORMATION ONLY. SEE ARCHITECTURAL PLANS FOR ACTUAL FIXTURE LOCATIONS.

2. SEE SHEETS E910 FOR LIGHTING FIXTURE SCHEDULES.

3. ALL RACEWAYS ARE TO CONTAIN NO MORE THAN NINE CURRENT CARRYING CONDUCTORS AND A CODE SIZED EQUIPMENT GROUNDING CONDUCTOR.

5. SEAL ALL RACEWAYS AND PENETRATIONS BOTH INTERNALLY AND EXTERNALLY WHERE TRANSITIONS ARE MADE FROM CONDITIONED SPACES TO OUTDOOR OR UNDERGROUND. RACEWAYS ARE TO BE SEALED TO PREVENT AIR, MOISTURE, AND RODENT MIGRATION THROUGH AND AROUND RACEWAYS.

6. COORDINATE FIRE SEPARATION BARRIER PENETRATIONS WITH ARCHITECT'S DRAWINGS. USE APPROVED FIRE STOPPING SEALANT AROUND PENETRATION AFTER RACEWAYS ARE INSTALLED.

SHEET KEYNOTES

1 SWITCHES FOR SEPARATE CONTROL OF EACH DOWNLIGHT AND LINEAR COMPONENT OF THIS LUMINAIRE TYPE F1. COORDINATE EXACT LOCATION WITH REPRESENTATIVE IN THE FIELD.

2 (LV) LOW VOLTAGE SWITCH TO CONTROL AMBIENT LIGHTING PORTION, TWO LAMPS, ON SWITCH "D" IN LUMINAIRE F10. (LVC) LOW VOLTAGE CONTROLLER PROVIDED IN LOWER PORTION OF HEADWALL. LINE VOLTAGE SWITCH FC SHALL HAVE RED BODY AND RED FACEPLATE. SWITCHES SHALL BE PROVIDED BY ELECTRICAL CONTRACTOR AND INSTALLED IN HEADWALL ELECTRICAL CONTRACTOR SHALL PROVIDE WIRING BETWEEN SWITCHES AND LUMINAIRE.

3 RECIRCUIT EXISTING LUMINAIRE (CURRENTLY FED BY CRITICAL CIRCUIT) TO NORMAL CIRCUIT AND PROVIDE NEW WALL SWITCH AS INDICATED. MOUNT NEW WALL SWITCH ADJACENT TO EXISTING WALL SWITCH. ALL OTHER LUMINAIRES IN THIS ROOM ARE EXISTING TO REMAIN.

GBBN

PROJECT ARCHITECT
609 West Main Street
Louisville, KY 40202
502.583.0700
GBBN.COM

UK HealthCare

Renovate/Upgrade
UK Healthcare
Facilities
Pavilion A 5th Floor
Project Number: 2402.9

OWNER
University of Kentucky
222 Peterson Service Building
Lexington, Kentucky 40506

CONSTRUCTION MANAGER
Turner Construction Company
588 Leestown Road Suite 130-300
Lexington, KY 40511
859.421.4913

CONSULTANTS

MEP CONSULTANT
AEI Affiliated Engineers, Inc.
10 South LaSalle Street, Suite 2700
Chicago, IL 60603
312.977.2800

MEDICAL EQUIPMENT
BSA Life Structures
9365 Counselors Row #300
Indianapolis, IN 46240
317.819.7878

DRAWING ISSUE

CONTRACT DOCUMENTS

NO	DATE	DESCRIPTION
1	07.17.20	DESIGN DEVELOPMENT
2	10.27.20	CONTRACT DOCUMENTS
3	12.15.20	ADDENDUM 03
4	01.07.21	ADDENDUM 04

DRAWING TITLE

LEVEL 05 LIGHTING FLOOR PLAN - AREA D

SEAL

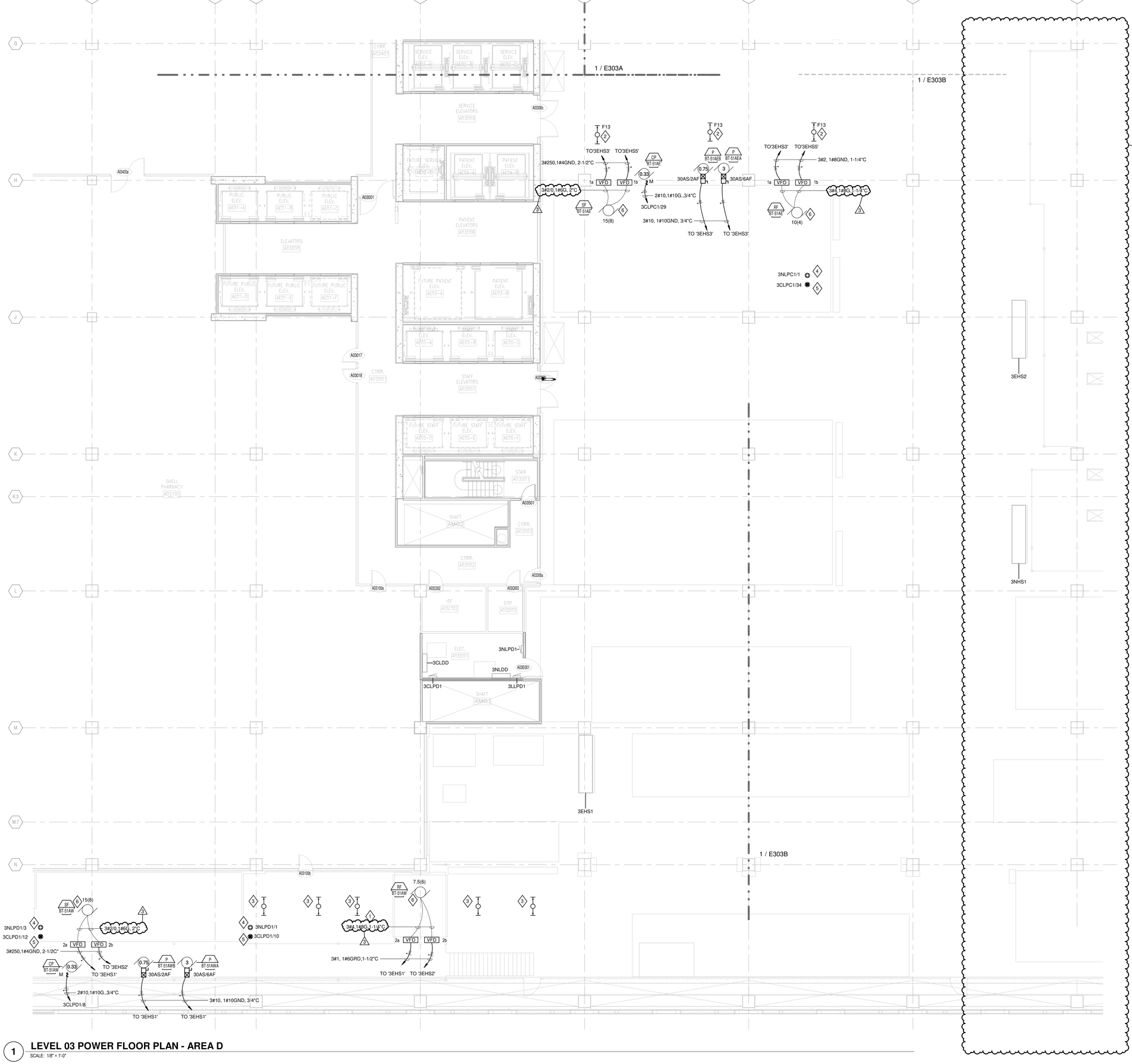
JOB NUMBER

13703.01

E205D

A 5th Floor PAVILION A, 1000 S. LIMESTONE, LEXINGTON, KY 40536

1/7/2021 11:46:29 AM C:\Users\ahartner\Documents\Revit 2020 Local Copy\20735_UK-5_12_MEP-09_ahartner0TR360.rvt



1 LEVEL 03 POWER FLOOR PLAN - AREA D

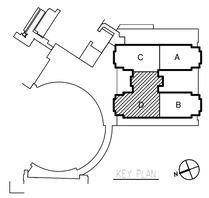
SCALE: 1/8" = 1'-0"

ELECTRICAL POWER GENERAL NOTES

1. ALL IDF AND MDF ROOMS SHALL COMPLY WITH UK IT FACILITY STANDARDS.
2. CONDUCTOR SIZES ARE BASED ON COPPER THHN/THWN IN METALLIC RACEWAY. 60°C CONDUCTOR USED FOR AMPERAGES LESS THAN 100. 75°C CONDUCTOR USED FOR AMPERAGES GREATER THAN OR EQUAL TO 100.
3. VERIFY EQUIPMENT LOCATIONS AND CONDUCTOR LENGTHS PRIOR TO INSTALLATION. CONSULT ENGINEER IF INCREASED CONDUCTOR LENGTHS RESULT IN UNACCEPTABLE VOLTAGE DROP (3% OR GREATER).
4. ALL RACEWAYS ARE TO CONTAIN NO MORE THAN NINE CURRENT CARRYING CONDUCTORS AND A CODE SIZED EQUIPMENT GROUNDING CONDUCTOR.
5. EACH CIRCUIT IS TO HAVE ITS OWN NEUTRAL. MULTIWIRE BRANCH CIRCUITS ARE NOT ALLOWED.
6. SEAL ALL RACEWAYS AND PENETRATIONS BOTH INTERNALLY AND EXTERNALLY WHERE TRANSITIONS ARE MADE FROM CONDITIONED SPACES TO OUTDOOR OR UNDERGROUND. RACEWAYS ARE TO BE SEALED TO PREVENT AIR, MOISTURE, AND RODENT MIGRATION THROUGH AND AROUND RACEWAYS.
7. COORDINATE FIRE SEPARATION BARRIER PENETRATIONS WITH ARCHITECT'S DRAWINGS. USE APPROVED FIRE STOPPING SEALANT AROUND PENETRATION AFTER RACEWAYS ARE INSTALLED.
8. SEE ARCHITECT'S DRAWINGS FOR ADDITIONAL RECEPTACLE LOCATIONS AND MOUNTING HEIGHTS.
9. ANY CORING INTO THE STRUCTURAL FLOOR SHALL BE PRE-APPROVED AND COORDINATED WITH STRUCTURAL ENGINEER. THE ELECTRICAL CONTRACTOR SHALL X-RAY FLOOR SLAB, PRIOR TO START OF CONSTRUCTION.
10. ALL MECHANICAL, PLUMBING, AND FIRE PROTECTION EQUIPMENT SHOWN ON PLANS ARE TO INDICATE LOCATION. COORDINATE LOCATION OF ELECTRICAL EQUIPMENT ASSOCIATED WITH MECHANICAL, PLUMBING, AND FIRE PROTECTION EQUIPMENT WITH FINAL ROOM LAYOUT.
11. PROVIDE 120V LIFE SAFETY CONNECTION FOR NOTIFICATION APPLIANCE CIRCUIT PANEL (NAC) FROM NEAREST LIFE SAFETY PANEL. COORDINATE PANEL LOCATIONS WITH FIRE ALARM CONTRACTOR.
12. PROVIDE 3.5" CONCRETE HOUSEKEEPING PAD FOR ALL FLOOR MOUNTED ELECTRICAL EQUIPMENT.
13. COORDINATE MOUNTING OF RECEPTACLES AND LOW VOLTAGE ROUGH-IN WITH FURNITURE PROVIDER AND ARCHITECTURAL ELEVATIONS.
14. BACKBOXES & WIRING DEVICES FOUND INSTALLED IN NON-COMPLIANCE WITH ARCHITECTURAL AND ELECTRICAL SHALL BE COMPLETELY REMOVED WITH CONTRACTOR RESPONSIBLE FOR RE-FINISHING WALL PER ARCHITECTURAL SPECIFICATIONS AS REQUIRED BY STAGE OF PROGRESS OF CONSTRUCTION. INSTALLATION OF BLANKOFF PLATES IS NOT ACCEPTABLE.
15. ALL RECEPTACLES INSTALLED SHALL BE HOSPITAL GRADE.
16. REFER TO STRUCTURAL DRAWINGS FOR ACCEPTABLE MEANS OF SUPPORTING EQUIPMENT FROM CONCRETE STRUCTURAL COMPONENTS AND CONCRETE SLAB LOCATIONS.
17. PROVIDE MEANS OF DISCONNECT FOR ALL FIXED EQUIPMENT CONNECTIONS SHOWN.

SHEET KEYNOTES

1 RELOCATE EXISTING LIGHT FIXTURES TO BE COORDINATED WITH NEW AHU INSTALLATION.
2 CONNECT LUMINAIRE TO EXISTING LIGHTING CIRCUIT. CIRCUIT NUMBER AND SWITCH LEG INDICATES EXISTING CIRCUIT AND SWITCH LEG SERVING CURRENT AREA. LOCATION OF FIXTURES TO BE COORDINATED IN FIELD.
3 FIXTURE IS EXISTING TO BE RELOCATED AND REINSTALLED AFTER AHU INSTALLATION. USE EXISTING CIRCUITING CURRENTLY SERVING FIXTURE.
4 PROVIDE 120V, 20AMP NORMAL CONNECTION TO AIR HANDLING UNIT BIPOLAR IONIZATION LIGHTS. COORDINATE FINAL CONNECTION POINT WITH MECHANICAL CONTRACTOR. CIRCUIT SHOWN FOR REFERENCE ONLY. FEED FROM ANY SPARE CIRCUIT BREAKER.
5 PROVIDE 120V CRITICAL CONNECTION TO AIR HANDLING UNIT FOR LIGHTS AND RECEPTACLES. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH MANUFACTURER. CIRCUIT SHOWN FOR REFERENCE ONLY. FEED FROM ANY SPARE CIRCUIT BREAKER.
6 REFER TO DETAIL 6/E800.



PROJECT ARCHITECT
609 West Main Street
Louisville, KY 40202
502.583.0700
GBBN.COM

HealthCare

Renovate/Upgrade
UK Healthcare
Facilities
Pavilion A 5th Floor
Project Number: 2402.9

OWNER
University of Kentucky
222 Peterson Service Building
Lexington, Kentucky 40506

CONSTRUCTION MANAGER
Turner Construction Company
588 Leestown Road Suite 130-300
Lexington, KY 40511
859.421.4913

CONSULTANTS

MEP CONSULTANT
AEI Affiliated Engineers, Inc.
10 South LaSalle Street, Suite 2700
Chicago, IL 60603
312.977.2800

MEDICAL EQUIPMENT
BSA Life Structures
9365 Counselors Row #300
Indianapolis, IN 46240
317.819.7878

DRAWING ISSUE

CONTRACT DOCUMENTS

NO	DATE	DESCRIPTION
1	07.17.20	DESIGN DEVELOPMENT
2	10.27.20	CONTRACT DOCUMENTS
3	01.07.21	ADDENDUM 04

DRAWING TITLE

LEVEL 03 POWER FLOOR PLAN - AREA D

SEAL

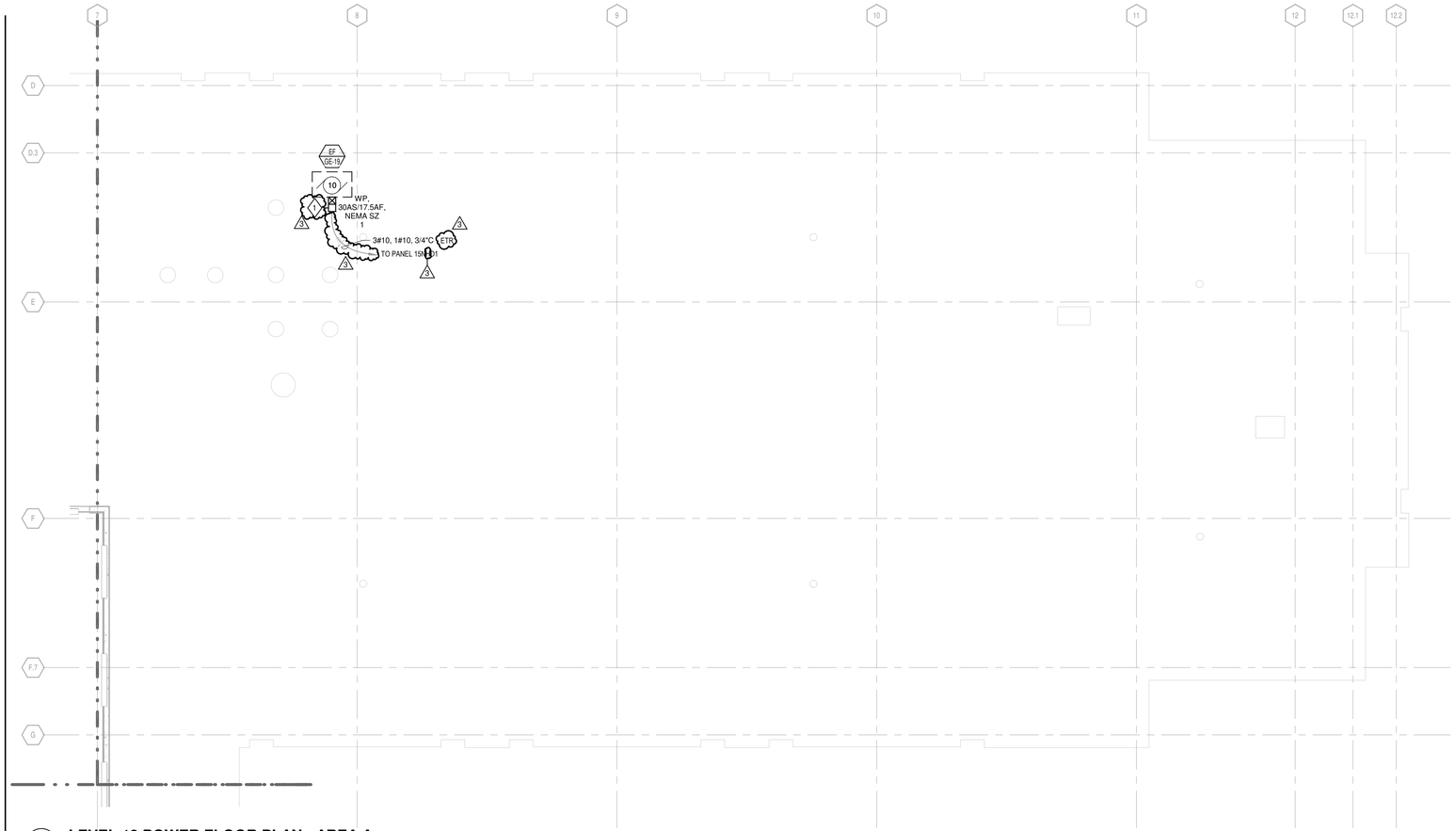
JOB NUMBER

13703.01

E303D

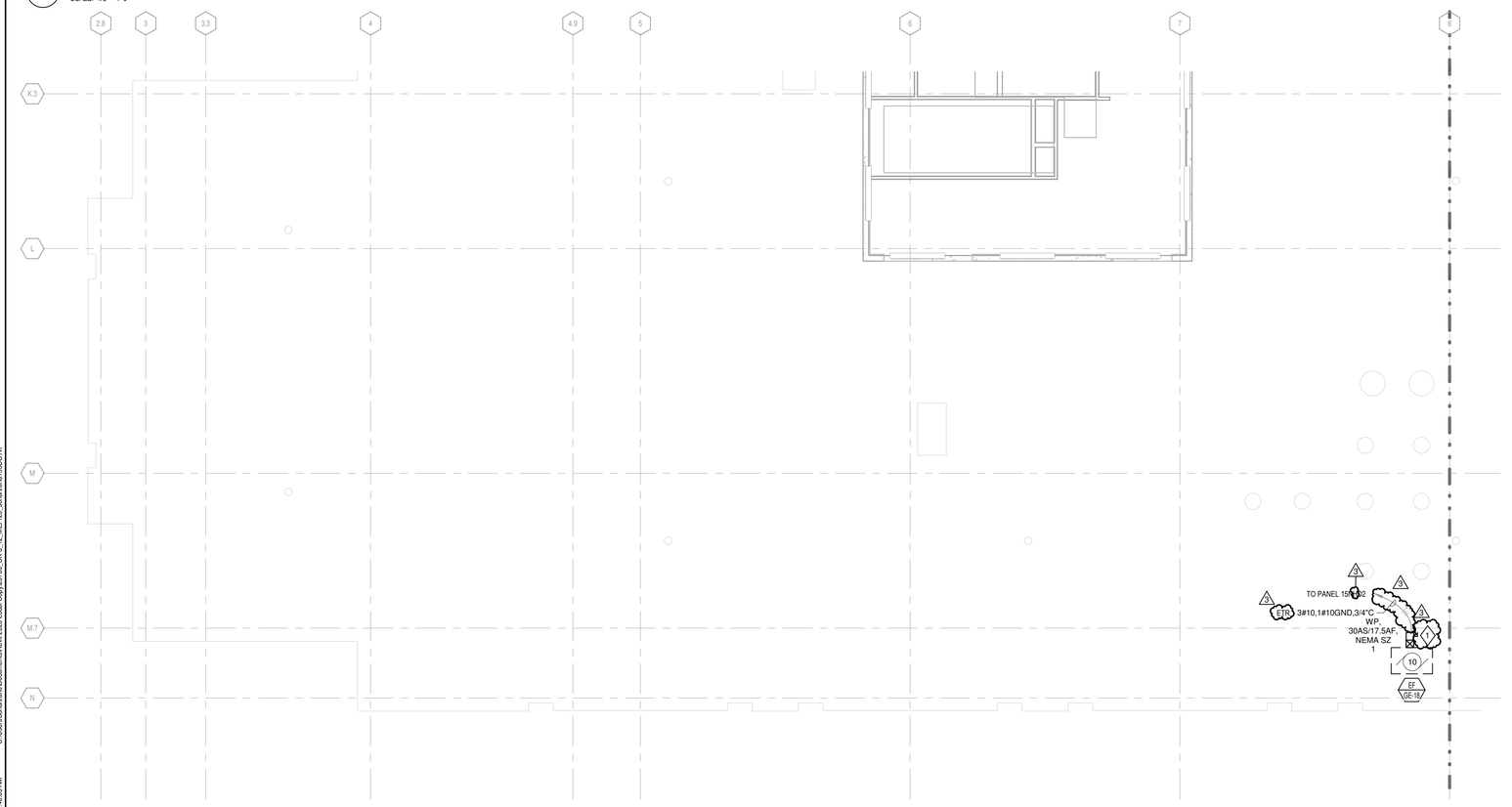
Pavilion A 5th Floor PAVILION A, 1000 S. LIMESTONE, LEXINGTON, KY 40536

1/7/2021 11:46:34 AM C:\Users\cshartwell\Documents\Revit 2020 Local Copy\20726_UK-K_12_MEPnD_schartwell75980.rvt



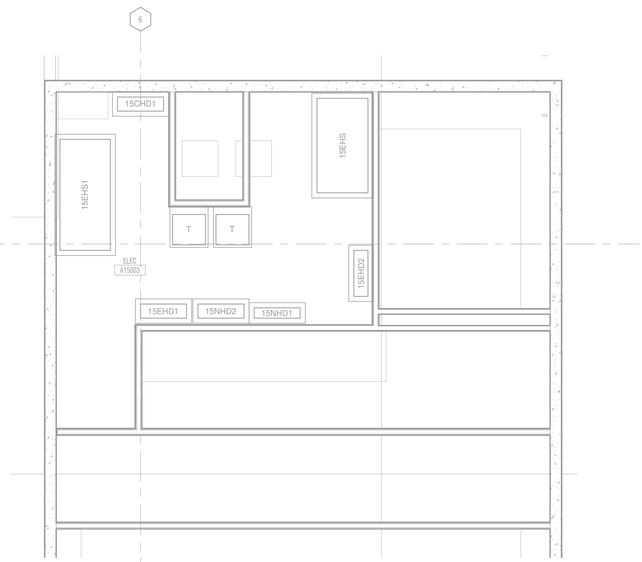
2 LEVEL 13 POWER FLOOR PLAN - AREA A

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



1 LEVEL 13 POWER FLOOR PLAN - AREA D

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



3 LEVEL 15 POWER FLOOR PLAN - AREA D

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

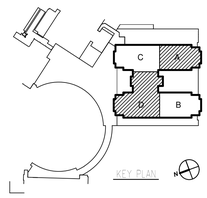
ELECTRICAL POWER GENERAL NOTES

1. ALL IDF AND MDF ROOMS SHALL COMPLY WITH UK IT FACILITY STANDARDS.
2. CONDUCTOR SIZES ARE BASED ON COPPER THHN/THWN IN METALLIC RACEWAY. 60°C CONDUCTOR USED FOR AMPERAGES LESS THAN 100. 75°C CONDUCTOR USED FOR AMPERAGES GREATER THAN OR EQUAL TO 100.
3. VERIFY EQUIPMENT LOCATIONS AND CONDUCTOR LENGTHS PRIOR TO INSTALLATION. CONSULT ENGINEER IF INCREASED CONDUCTOR LENGTHS RESULT IN UNACCEPTABLE VOLTAGE DROP (3% OR GREATER).
4. ALL RACEWAYS ARE TO CONTAIN NO MORE THAN NINE CURRENT CARRYING CONDUCTORS AND A CODE SIZED EQUIPMENT GROUNDING CONDUCTOR.
5. EACH CIRCUIT IS TO HAVE ITS OWN NEUTRAL. MULTIWIRE BRANCH CIRCUITS ARE NOT ALLOWED.
6. SEAL ALL RACEWAYS AND PENETRATIONS BOTH INTERNALLY AND EXTERNALLY WHERE TRANSITIONS ARE MADE FROM CONDITIONED SPACES TO OUTDOOR OR UNDERGROUND. RACEWAYS ARE TO BE SEALED TO PREVENT AIR, MOISTURE, AND RODENT MIGRATION THROUGH AND AROUND RACEWAYS.
7. COORDINATE FIRE SEPARATION BARRIER PENETRATIONS WITH ARCHITECT'S DRAWINGS. USE APPROVED FIRE STOPPING SEALANT AROUND PENETRATION AFTER RACEWAYS ARE INSTALLED.
8. SEE ARCHITECT'S DRAWINGS FOR ADDITIONAL RECEPTACLE LOCATIONS AND MOUNTING HEIGHTS.
9. ANY CORING INTO THE STRUCTURAL FLOOR SHALL BE PRE-APPROVED AND COORDINATED WITH STRUCTURAL ENGINEER. THE ELECTRICAL CONTRACTOR SHALL X-RAY FLOOR SLAB, PRIOR TO START OF CONSTRUCTION.
10. ALL MECHANICAL, PLUMBING, AND FIRE PROTECTION EQUIPMENT SHOWN ON PLANS ARE TO INDICATE LOCATION. COORDINATE LOCATION OF ELECTRICAL EQUIPMENT ASSOCIATED WITH MECHANICAL, PLUMBING, AND FIRE PROTECTION EQUIPMENT WITH FINAL ROOM LAYOUT.
11. PROVIDE 120V LIFE SAFETY CONNECTION FOR NOTIFICATION APPLIANCE CIRCUIT PANEL (NAC) FROM NEAREST LIFE SAFETY PANEL. COORDINATE PANEL LOCATIONS WITH FIRE ALARM CONTRACTOR.
12. PROVIDE 3.5" CONCRETE HOUSEKEEPING PAD FOR ALL FLOOR MOUNTED ELECTRICAL EQUIPMENT.
13. COORDINATE MOUNTING OF RECEPTACLES AND LOW VOLTAGE ROUGH-IN WITH FURNITURE PROVIDER AND ARCHITECTURAL ELEVATIONS.
14. BACKBOXES & WIRING DEVICES FOUND INSTALLED IN NON-COMPLIANCE WITH ARCHITECTURAL AND ELECTRICAL SHALL BE COMPLETELY REMOVED WITH CONTRACTOR RESPONSIBLE FOR RE-FINISHING WALL PER ARCHITECTURAL SPECIFICATIONS AS REQUIRED BY STAGE OF PROGRESS OF CONSTRUCTION. INSTALLATION OF BLANKOFF PLATES IS NOT ACCEPTABLE.
15. ALL RECEPTACLES INSTALLED SHALL BE HOSPITAL GRADE.
16. REFER TO STRUCTURAL DRAWINGS FOR ACCEPTABLE MEANS OF SUPPORTING EQUIPMENT FROM CONCRETE STRUCTURAL COMPONENTS AND CONCRETE SLAB LOCATIONS.
17. PROVIDE MEANS OF DISCONNECT FOR ALL FIXED EQUIPMENT CONNECTIONS SHOWN.

△3

SHEET KEYNOTES

1 REPLACE THE TEMPORARY 10 AMP FUSE IN COMBINATION MOTOR STARTER SERVING TEMPORARY EXHAUST FAN WITH 17.5 AMP FUSE TO SERVE PERMANENT EXHAUST FAN.



GBBN

PROJECT ARCHITECT
609 West Main Street
Louisville, KY 40202
502.583.0700
GBBN.COM

HealthCare

Renovate/Upgrade
UK Healthcare
Facilities
Pavilion A 5th Floor
Project Number: 2402.9

OWNER

University of Kentucky
222 Peterson Service Building
Lexington, Kentucky 40506

CONSTRUCTION MANAGER

Turner Construction Company
588 Leestown Road Suite 130-300
Lexington, KY 40511
859.421.4913

CONSULTANTS

MEP CONSULTANT
AEI Affiliated Engineers, Inc.
10 South LaSalle Street, Suite 2700
Chicago, IL 60603
312.977.2800

MEDICAL EQUIPMENT
BSA Life Structures
9365 Counselors Row #300
Indianapolis, IN 46240
317.819.7878

DRAWING ISSUE

CONTRACT DOCUMENTS

NO	DATE	DESCRIPTION
1	07.17.20	DESIGN DEVELOPMENT
2	10.27.20	CONTRACT DOCUMENTS
3	01.07.21	ADDENDUM 04

DRAWING TITLE

LEVEL 13 POWER FLOOR PLAN - AREA AD

SEAL

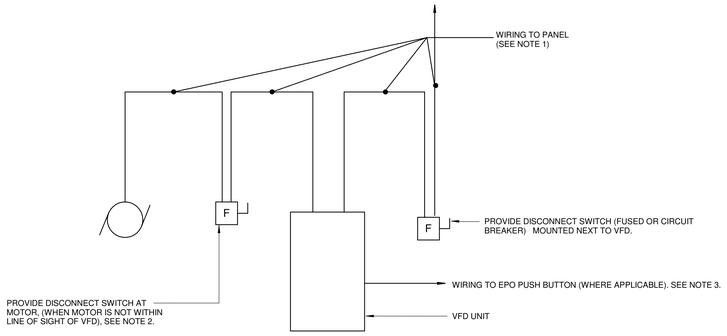
JOB NUMBER

13703.01

E313AD

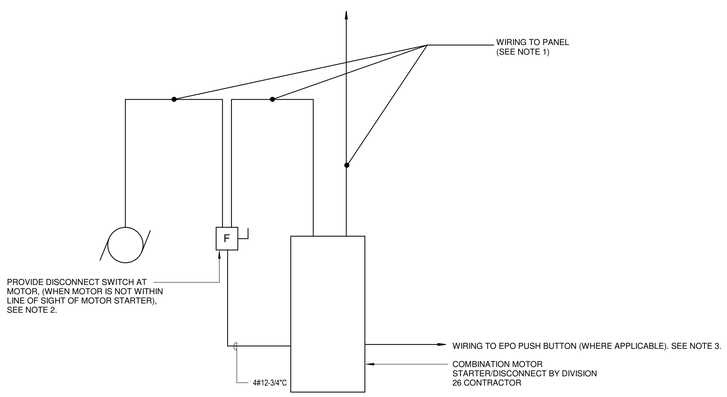
Pavilion A 5th Floor PAVILION A, 1000 S. LIMESTONE, LEXINGTON, KY 40536

1/7/2021 11:46:35 AM C:\Users\schartner\Documents\Revit 2020\Local Copy\20726_UK-5_12_MEPv20_schartnerd19380.rvt



NOTES:

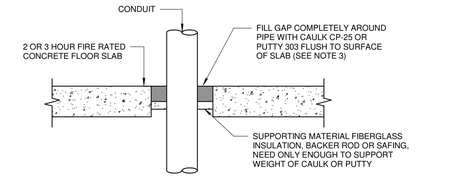
1. REFER TO SCHEDULES FOR WIRE AND CONDUIT SIZE REQUIREMENTS FOR EACH MOTOR. SEE MECHANICAL DRAWING FOR VFD LOCATIONS.
2. PROVIDE POWER POLE ADDER INTERLOCK ON DISCONNECT SWITCH. INTERLOCK WITH VFD SUCH THAT WHEN DISCONNECT SWITCH IS ABOUT TO BE OPENED THE VFD IS COMMANDED TO STOP.



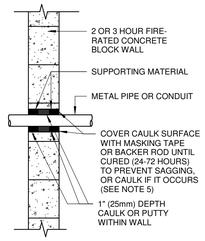
NOTES:

1. REFER TO SCHEDULES FOR WIRE AND CONDUIT SIZE REQUIREMENTS FOR EACH MOTOR. SEE ELECTRICAL DRAWINGS FOR MOTOR STARTER LOCATIONS.
2. PROVIDE POWER POLE ADDER INTERLOCK ON DISCONNECT SWITCH INTERLOCK WITH MOTOR STARTER SUCH THAT WHEN DISCONNECT SWITCH IS OPENED THE MOTOR STARTER IS COMMANDED TO STOP.

4 WIRING DIAGRAMS
SCALE: NOT TO SCALE



SECTION VIEW



SECTION VIEW

NOTES:

(1) FOR CONCRETE BLOCK WALLS, CENTER CAULK OR PUTTY WITHIN WALL WITH DAMMING ON BOTH SIDES.

(2) RECOMMENDATIONS BASED ON PRODUCT PERFORMANCE PER ASTM E-814 (UL 1479) FIRE TEST AND UL CLASSIFICATION FIRESTOP SYSTEMS 49, 33 AND 91.

(3) WET INSTALLED DEPTH OF CAULK OR PUTTY DEPENDS ON TYPE AND SIZE OF PIPE:

WET DEPTH	PIPE SIZE	FIRE RATING
1/2" (13mm)	MAX 8" (200mm)	2 HOURS
1" (25mm)	MAX 6" (150mm)	3 HOURS

(4) UP TO 40% SHRINKAGE OF CAULK OR PUTTY IS ACCEPTABLE AFTER WET DEPTH INSTALLATION.

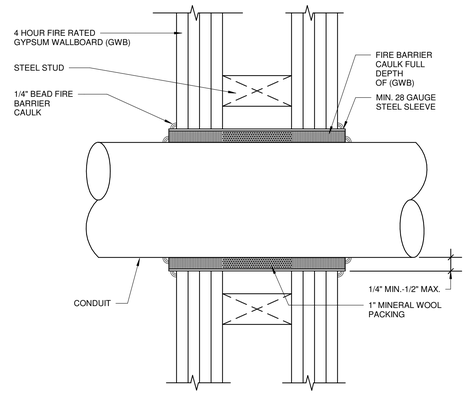
(5) OPTIONS TO MASKING TAPE TO PREVENT SAGGING:

A. INSTALL ADDITIONAL DAMMING MATERIAL OVER PRODUCT TO HOLD WITHIN OPENING.

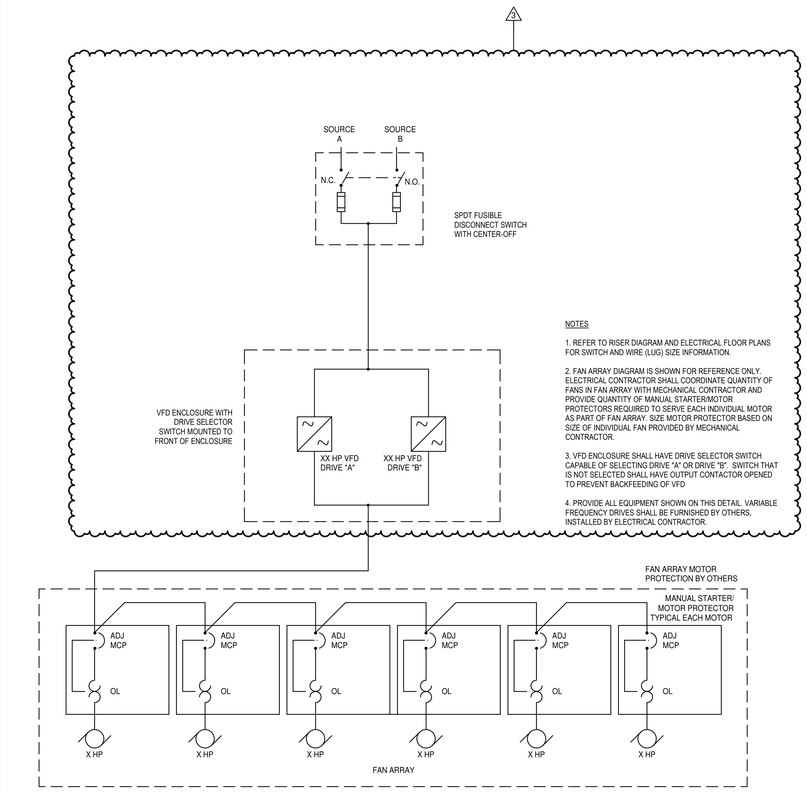
B. REMOVE PRODUCT FROM CONTAINER AND ALLOW TO AIR CURE IN SMALL BATCHES FOR 12 HOURS. THEN HAND FORM INTO OPENING.

(6) WHEN ANNULAR SPACE EXCEEDS 3/4" (19mm), A 28 AWG METAL COVER PLATE MUST BE MECHANICALLY SECURED ATOP THE FIRE BARRIER APPLICATION, OR TIGHTLY PACK A NON-COMBUSTIBLE DAMMING MATERIAL ATOP INSTALLED CAULK OR PUTTY. COVER PLATE NOT REQUIRED FOR 2 HOUR RATING UP TO 1 7/8" (48mm) ANNULAR SPACE.

1 SING. COND. PENETRATION OF 2 OR 3 HR FIRE RATED GYP. WALLBOARD WALL
SCALE: NOT TO SCALE



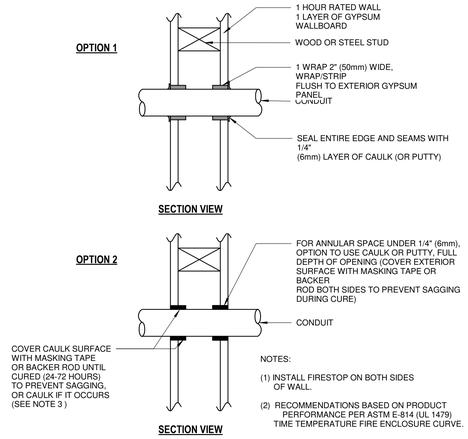
2 SING. COND. PENETRATION OF 4 HR FIRE RATED GYP. WALLBOARD ASSY
SCALE: NOT TO SCALE



NOTES

1. REFER TO RISER DIAGRAM AND ELECTRICAL FLOOR PLANS FOR SWITCH AND WIRE (LUG) SIZE INFORMATION.
2. FAN ARRAY DIAGRAM IS SHOWN FOR REFERENCE ONLY. ELECTRICAL CONTRACTOR SHALL COORDINATE QUANTITY OF FANS IN FAN ARRAY WITH MECHANICAL CONTRACTOR AND PROVIDE QUANTITY OF MANUAL STARTERS/MOTOR PROTECTORS REQUIRED TO SERVE EACH INDIVIDUAL MOTOR AS PART OF FAN ARRAY. SIZE MOTOR PROTECTOR BASED ON SIZE OF INDIVIDUAL FAN PROVIDED BY MECHANICAL CONTRACTOR.
3. VFD ENCLOSURE SHALL HAVE DRIVE SELECTOR SWITCH CAPABLE OF SELECTING DRIVE "A" OR DRIVE "B". SWITCH THAT IS NOT SELECTED SHALL HAVE OUTPUT CONTACTOR OPENED TO PREVENT BACKFEEDING OF VFD
4. PROVIDE ALL EQUIPMENT SHOWN ON THIS DETAIL. VARIABLE FREQUENCY DRIVES SHALL BE FURNISHED BY OTHERS; INSTALLED BY ELECTRICAL CONTRACTOR.

6 DUAL VARIABLE FREQUENCY DEVICE WIRING DIAGRAM
SCALE: NOT TO SCALE



NOTES:

(1) INSTALL FIRESTOP ON BOTH SIDES OF WALL.

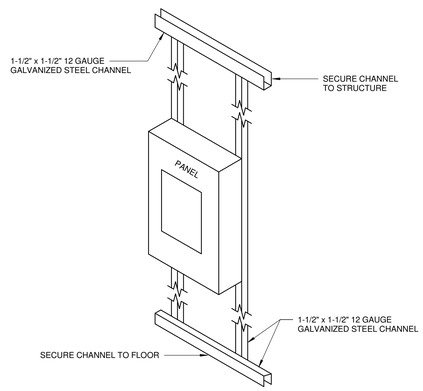
(2) RECOMMENDATIONS BASED ON PRODUCT PERFORMANCE PER ASTM E-814 (UL 1479) TIME TEMPERATURE FIRE ENCLOSURE CURVE.

(3) OPTIONS FOR MASKING TAPE TO PREVENT SAGGING:

A. INSTALL ADDITIONAL DAMMING MATERIAL INSIDE WALL AND OVER PRODUCT TO HOLD WITHIN OPENING.

B. REMOVE PRODUCT FROM CONTAINER AND ALLOW TO AIR CURE IN SMALL BATCHES FOR 12 HOURS, THEN HAND FORM INTO OPENING.

5 SING. COND. PENETRATION OF 1 HR FIRE RATED GYP. WALLBOARD WALL
SCALE: NOT TO SCALE



3 PANELBOARD MOUNTING DETAIL
SCALE: NOT TO SCALE

PROJECT ARCHITECT
609 West Main Street
Louisville, KY 40202
502.583.0700
GBBN.COM

HealthCare

Renovate/Upgrade
UK Healthcare
Facilities
Pavilion A 5th Floor
Project Number: 2402.9

OWNER
University of Kentucky
222 Peterson Service Building
Lexington, Kentucky 40506

CONSTRUCTION MANAGER
Turner Construction Company
588 Leestown Road Suite 130-300
Lexington, KY 40511
859.421.4913

CONSULTANTS

MEP CONSULTANT
AEI Affiliated Engineers, Inc.
10 South LaSalle Street, Suite 2700
Chicago, IL 60603
312.977.2800

MEDICAL EQUIPMENT
BSA Life Structures
9365 Counselors Row #300
Indianapolis, IN 46240
317.819.7878

Pavilion A 5th Floor PAVILION A, 1000 S. LIMESTONE, LEXINGTON, KY 40536

DRAWING ISSUE

CONTRACT DOCUMENTS

NO	DATE	DESCRIPTION
1	07.17.20	DESIGN DEVELOPMENT
2	10.27.20	CONTRACT DOCUMENTS
3	01.07.21	ADDENDUM 04

DRAWING TITLE

ELECTRICAL DETAILS - POWER

SEAL

JOB NUMBER

13703.01

E800

C:\Users\schartrand\Documents\Revit 2020 Local Copy\13703_UK-5_12_MEPV20_schartrand703800.rvt
1/7/2021 11:46:38 AM

05NLPC3-1

MAIN TYPE: MLO | MAIN RATING: 225 A | BUS RATING: 225 A
VOLTAGE: 120/208 Wye | 3 PHASE | 4 WIRE | MOUNTING: Surface | ENCLOSURE: Type 1
LOCATION: Level 5,ELEC. A05E008 | FED FROM: 05NLDC | SCCR: 22 kA | CALCULATED AVAILABLE FAULT... kA

REMARKS: 1)DOUBLETUB PANEL WITH "05NLPC3-2" PROVIDE FEED THROUGH LUGS
2) PROVIDE 20A/1PH BREAKER AT EACH CIRCUIT SHOWN ON PLAN AT BOOM; BOOM CIRCUITS WITH "--" IN PANEL SCHEDULE SHAL...

DESCRIPTION	BRKR NOTES	BRKR AMP	POLES	CKT NO	LEFT A	LEFT B	LEFT C	RIGHT A	RIGHT B	RIGHT C	CKT NO	POLES	BRKR AMP	BRKR NOTES	DESCRIPTION
RECEPTACLE CORRIDOR A05297		20 A	1	1	0.72			0.72			2	1	20 A		RECEPTACLE CHARTING A05297C
RECEPT PT RM. ICU A05240		20 A	1	3		1.08			0.90		4	1	20 A		RECEPTACLE CLEAN UTILITY A05290
RECEPT PT RM. ICU A05240		20 A	1	5			0.72			0.18	6	1	20 A		RECEPTACLE CLEAN UTILITY A05290
POWER PT RM. ICU A05240		20 A	2	7	0.36			0.50			8	1	20 A		MICROWAVE NOUR A05289
--	--	--	--	9		0.36			1.20		10	1	20 A		RECEPTACLE CHARTING A05295A
REC. PATIENT RM. ICU ISO. A05239		20 A	1	11			0.72			0.72	12	1	20 A		RECEPTACLE EQUIP A05287
BOOM PATIENT RM. ICU ISO. A05239		20 A	2	13	0.36			0.18			14	1	20 A		PRINTER NEURO SURG...
--	--	--	--	15		0.36			0.36		16	1	20 A		RECEPTACLE PATIENT RM. ICU ISO...
RECEPTACLE PATIENT RM. ICU ISO...		20 A	1	17			0.72			0.72	18	1	20 A		RECEPT NS REPORT/WORK RM...
BOOM PATIENT RM. ICU ISO. A05238		20 A	2	19	0.36			0.36			20	1	20 A		RECEPTACLE PATIENT RM. ICU ISO...
--	--	--	--	21		0.36			0.72		22	1	20 A		RECEPTACLE CHARTING A05297D
RECEPT PT RM. ICU A05237		20 A	1	23			0.54			0.72	24	1	20 A		RECEPTACLE CHARTING A05299D
RECEPT PT RM. ICU A05237		20 A	1	25	0.54			0.36			26	1	20 A		A/V RACK CLOSET A05298A
BOOM PATIENT RM. ICU A05237		20 A	2	27		0.36			1.26		28	1	20 A		RECEPTACLE CLASSROOM A05298
--	--	--	--	29			0.36			0.90	30	1	20 A		RECEPTACLE CLASSROOM A05298
RECEPTACLE PATIENT RM. ICU...		20 A	1	31	0.72			0.18			32	1	20 A		RECEPTACLE CLASSROOM A05298
SPARE		20 A	1	33		0.00			0.18		34	1	20 A		RECEPTACLE CLASSROOM A05298
SPARE		20 A	1	35			0.00			0.36	36	1	20 A		RECEPTACLE ICU TEAM WKS A05293
SPARE		20 A	1	37	0.00			0.00			38	1	20 A		SPARE
SPARE		20 A	1	39		0.00			0.00		40	1	20 A		SPARE
SPARE		20 A	1	41			0.00			0.00	42	1	20 A		SPARE

TOTAL PHASE SUMMARY

	A	B	C
PHASE SUBTOTAL (kVA):	12.6...	15.0...	13....
PHASE SUBTOTAL (AMPS):	105 A	127 A	114 A

LOAD CLASSIFICATION	CONNECTED (KVA)	DEMAND FACTOR	DEMAND (KVA)
POWER	7.560 kVA	100%	7.560 kVA
LIGHTING	0.000 kVA	125%	0.000 kVA
MOTOR	0.000 kVA	125% LARGEST, 100% OTHER	0.000 kVA
RECEPTACLE	33.700 kVA	100% FIRST 10KVA, 50% OTHER	21.850 kVA
HEATING	0.000 kVA	125%	0.000 kVA
TOTAL LOAD	41.260 kVA		29.410 kVA
TOTAL AMPS	115 A		82 A

05NLPC2

MAIN TYPE: MLO | MAIN RATING: 100 A | BUS RATING: 100 A
VOLTAGE: 120/208 Wye | 3 PHASE | 4 WIRE | MOUNTING: Surface | ENCLOSURE: Type 1
LOCATION: Level 5,ELEC. A05E008 | FED FROM: 05NLDC | SCCR: 22 kA | CALCULATED AVAILABLE FAULT... kA

REMARKS: 1) PROVIDE 20A/1PH BREAKER AT EACH CIRCUIT SHOWN ON PLAN AT BOOM; BOOM CIRCUITS WITH "--" IN PANEL SCHEDULE SHALL HAVE (1) 20A/1PH BREAKER AT EACH CIRCUIT SERVING BOOM....

DESCRIPTION	BRKR NOTES	BRKR AMP	POLES	CKT NO	LEFT A	LEFT B	LEFT C	RIGHT A	RIGHT B	RIGHT C	CKT NO	POLES	BRKR AMP	BRKR NOTES	DESCRIPTION
SPARE		20 A	1	1	0.00			0.36			2	2	20 A		BOOM PATIENT RM. ICU ISO. A05242
SPARE		20 A	1	3		0.00			0.36		4	--	--	--	--
REC NS OFFICE-1 A05027-1		20 A	1	5			0.72			0.72	6	1	20 A		RECEPTACLE PATIENT RM. ICU ISO...
RECEPTACLE NS OFFICE-1 A05027-1		20 A	1	7	0.72			0.72			8	1	20 A		RECEPTACLE PATIENT RM. ICU ISO...
RECEPT PT RM. PROG. ISO. A05211A		20 A	1	9		0.72			0.30		10	1	20 A		RECEPTACLE CHARTING A05295A
HEADWALL PT RM. PROG. ISO....		20 A	2	11			0.27			0.72	12	1	20 A		RECEPTACLE PATIENT RM. ICU...
--	--	--	--	13	0.27			0.36			14	2	20 A		BOOM PATIENT RM. ICU A05241
RECEPT PT RM. PROG. ISO. A05211A		20 A	1	15		0.90			0.36		16	--	--	--	--
RECEPTACLE XRAY/TECH A05035A		20 A	1	17			0.54			0.54	18	1	20 A		RECEPTACLE CORRIDOR A05295
RECEPTACLE CORRIDOR A05029		20 A	1	19	0.90			0.72			20	1	20 A		RECEPTACLE PATIENT RM. ICU...
RECEPTACLE VENDING A05200A		20 A	1	21		0.18			0.00		22	1	20 A		SPARE
RECEPTACLE VENDING A05200A		20 A	1	23			0.30			0.00	24	1	20 A		SPARE
RECEPTACLE WAIT. A05200		20 A	1	25	0.92			0.00			26	1	20 A		SPARE
RECEPTACLE WAIT. A05200		20 A	1	27		0.74			0.00		28	1	20 A		SPARE
RECEPTACLE CORRIDOR A05047		20 A	1	29			0.36			0.00	30	1	20 A		SPARE
RECEPT PUBLIC RESTROOM...		20 A	1	31	0.90			0.00			32	1	20 A		SPARE
RECEPTACLE UNIT CLERK A05202A		20 A	1	33		0.54			0.00		34	1	20 A		SPARE
HAND DRYER MEN'S RR A05201A		20 A	2	35			0.18			0.00	36	1	20 A		SPARE
--	--	--	--	37	0.18			0.00			38	1	20 A		SPARE
SPARE		20 A	1	39		0.00			0.00		40	1	20 A		SPARE
SPARE		20 A	1	41			0.00			0.00	42	1	20 A		SPARE

TOTAL PHASE SUMMARY

	A	B	C
PHASE SUBTOTAL (kVA):	6.05...	4.10...	4.3...
PHASE SUBTOTAL (AMPS):	51 A	34 A	37 A

LOAD CLASSIFICATION	CONNECTED (KVA)	DEMAND FACTOR	DEMAND (KVA)
POWER	2.280 kVA	100%	2.280 kVA
LIGHTING	0.000 kVA	125%	0.000 kVA
MOTOR	0.000 kVA	125% LARGEST, 100% OTHER	0.000 kVA
RECEPTACLE	12.220 kVA	100% FIRST 10KVA, 50% OTHER	11.110 kVA
HEATING	0.000 kVA	125%	0.000 kVA
TOTAL LOAD	14.500 kVA		13.390 kVA
TOTAL AMPS	40 A		37 A

05NLPC1

MAIN TYPE: MCB | MAIN RATING: 225 A | BUS RATING: 225 A
VOLTAGE: 120/208 Wye | 3 PHASE | 4 WIRE | MOUNTING: Surface | ENCLOSURE: Type 1
LOCATION: Level 5,ELEC. A05E008 | FED FROM: | SCCR: 22 kA | CALCULATED AVAILABLE FAULT... kA

REMARKS: 1) EXISTING PANEL
2) " * " INDICATES PROGRAMABLE BREAKER FOR LIGHTING CONTROL FOR CIRCUITS SERVING CORRIDOR FIXTURES

DESCRIPTION	BRKR NOTES	BRKR AMP	POLES	CKT NO	LEFT A	LEFT B	LEFT C	RIGHT A	RIGHT B	RIGHT C	CKT NO	POLES	BRKR AMP	BRKR NOTES	DESCRIPTION
LIGHTING PATIENT RM. ICU A05223		20 A	1	1	0.26			0.45			2	1	20 A	*	LIGHTING CORR. A05260
LIGHTING TEAM WKS A05261		20 A	1	3		0.13			0.48		4	1	20 A	*	LIGHTING CORR. A05278
LIGHTING TOILET A05223A		20 A	1	5			0.63			0.22	6	1	20 A	*	LIGHTING CORR. A05260
LIGHTING TOILET A05230A		20 A	1	7	0.62			0.19			8	1	20 A	*	LIGHTING CORR. A05278
LIGHTING PATIENT RM. ICU A05231		20 A	1	9		0.55			0.91		10	1	20 A	*	LIGHTING CHARTING A05278C
LIGHTING TOILET A05216A		20 A	1	11			0.75			0.00	12	1	20 A		SPARE
LIGHTING TOILET A05222A		20 A	1	13	0.53			0.00			14	1	20 A		SPARE
LIGHTING UNIT CLERK A05275		20 A	1	15		0.48			0.00		16	1	20 A		SPARE
LIGHTING OFFICE MGR. A05274		20 A	1	17			0.28			0.00	18	1	20 A		SPARE
LIGHTING CORRIDOR A05295	*	20 A	1	19	0.61			0.00			20	1	20 A		SPARE
LIGHTING CORRIDOR A05297	*	20 A	1	21		0.37			0.00		22	1	20 A		SPARE
LIGHTING CORRIDOR A05299	*	20 A	1	23			0.20			0.00	24	1	20 A		SPARE
LIGHTING CORRIDOR A05297	*	20 A	1	25	0.46			0.00			26	1	20 A		SPARE
LIGHTING MEDS A05292		20 A	1	27		0.68			0.00		28	1	20 A		SPARE
LIGHTING WAIT. A05200	*	20 A	1	29			0.88			0.00	30	1	20 A		SPARE
LIGHTING ELEC. A05E008	*	20 A	1	31	0.10			0.00			32	1	20 A		SPARE
SPACE	--	--	--	33		0.00			0.00		34	--	--	--	SPACE
SPACE	--	--	--	35			0.00			0.00	36	--	--	--	SPACE
SPACE	--	--	--	37	0.00			0.00			38	--	--	--	SPACE
SPACE	--	--	--	39		0.00			0.00		40	--	--	--	SPACE
SPACE	--	--	--	41			0.00			0.00	42	--	--	--	SPACE

TOTAL PHASE SUMMARY

	A	B	C
PHASE SUBTOTAL (kVA):	3.20...	3.58...	2.9...
PHASE SUBTOTAL (AMPS):	27 A	30 A	25 A

LOAD CLASSIFICATION	CONNECTED (KVA)	DEMAND FACTOR	DEMAND (KVA)
POWER	0.000 kVA	100%	0.000 kVA
LIGHTING	9.763 kVA	125%	12.204 kVA
MOTOR	0.000 kVA	125% LARGEST, 100% OTHER	0.000 kVA
RECEPTACLE	0.000 kVA	100% FIRST 10KVA, 50% OTHER	0.000 kVA
HEATING	0.000 kVA	125%	0.000 kVA
TOTAL LOAD	9.763 kVA		12.204 kVA
TOTAL AMPS	27 A		34 A

05NLPC5

MAIN TYPE: MCB | MAIN RATING: 100 A | BUS RATING: 100 A
VOLTAGE: 120/208 Wye | 3 PHASE | 4 WIRE | MOUNTING: Recessed | ENCLOSURE: Type 1
LOCATION: Level 5,CORR. A05258B | FED FROM: 05NLDC | SCCR: 22 kA | CALCULATED AVAILABLE FAULT... kA

REMARKS: 1) PROVIDE 20A/1PH BREAKER AT EACH CIRCUIT SHOWN ON PLAN AT BOOM; BOOM CIRCUITS WITH "--" IN PANEL SCHEDULE SHALL HAVE (1) 20A/1PH BREAKER AT EACH CIRCUIT SERVING BOOM....

DESCRIPTION	BRKR NOTES	BRKR AMP	POLES	CKT NO	LEFT A	LEFT B	LEFT C	RIGHT A	RIGHT B	RIGHT C	CKT NO	POLES	BRKR AMP	BRKR NOTES	DESCRIPTION
RECEPTACLE ROOM A05226A,...		20 A	1	1	0.72			0.27			2	2	20 A		HEADWALL
RECEPTACLE ROOM A05224, A05225		20 A	1	3		0.54			0.27		4	--	--	--	--
RECEPTACLE ROOM A05224, A05225		20 A	1	5			0.72			0.27	6	2	20 A		HEADWALL PT RM. EMU PROG....
BOOM PATIENT RM. ICU A05225		20 A	2	7	0.36			0.27			8	--	--	--	--
--	--	--	--	9		0.36			0.72		10	1	20 A		RECEPT ROOM A05219A, A05220A
RECEPTACLE CHARTING A05260C		20 A	1	11			0.72			0.72	12	1	20 A		RECEPT ROOM A05258D, A05258
RECEPTACLE CHARTING A05260B		20 A	1	13	0.72			1.08			14	1	20 A		RECEPT CHARTING A05260C
RECEPTACLE ROOM A05223A,...		20 A	1	15		0.72			0.54		16	1	20 A		RECEPT PT RM. ICU A05225
RECEPTACLE PATIENT RM. ICU...		20 A	1	17			0.72			0.72	18	1	20 A		RECEPT PT RM. EMU PROG. A05222
BOOM PATIENT RM. ICU A05223		20 A	2	19	0.36						20				
--	--	--	--	21		0.36			0.72		22	1	20 A		RECEPT CHARTING A05278F
RECEPT ROOM A05221, A05222		20 A	1	23			0.72			0.90	24	1	20 A		RECEPT ROOM A05218, A05217
BOOM PT RM. ICU A05224		20 A	2	25	0.36			0.72			26	1	20 A		RECEPT ROOM A05217A, A05218A
--	--	--	--	27		0.36			0.27		28	2	20 A		HEADWALL PT RM. EMU PROG....
RECEPT ROOM A05222A, A05221A		20 A	1	29			0.36			0.27	30	--	--	--	--
RECEPT ROOM A05221, A05222		20 A	1	31	0.72			0.90			32	1	20 A		RECEPTACLE ROOM A05217, A05218
RECEPT ROOM A05221, A05222		20 A	1	33		0.72			0.27		34	2	20 A		HEADWALL PT RM. EMU PROG....
RECEPT PT RM. EMU PROG. A05219		20 A	1	35			0.90			0.27	36	--	--	--	--
RECEPT ROOM A05219		20 A	1	37	0.90			0.36			38	1	20 A		RECEPT PT RM. EMU PROG. A05218
HEADWALL PT RM. EMU PROG....		20 A	2	39		0.27			0.27		40	2	20 A		HEADWALL PT RM. EMU PROG....
--	--	--	--	41			0.27			0.27	42	--	--	--	--

TOTAL PHASE SUMMARY

	A	B	C
PHASE SUBTOTAL (kVA):	7.74...	6.39...	7.8...
PHASE SUBTOTAL (AMPS):	66 A	53 A	67 A

LOAD CLASSIFICATION	CONNECTED (KVA)	DEMAND FACTOR	DEMAND (KVA)
POWER	5.400 kVA	100%	5.400 kVA
LIGHTING	0.000 kVA	125%	0.000 kVA
MOTOR	0.000 kVA	125% LARGEST, 100% OTHER	0.000 kVA
RECEPTACLE	16.560 kVA	100% FIRST 10KVA, 50% OTHER	13.280 kVA
HEATING	0.000 kVA	125%	0.000 kVA
TOTAL LOAD	21.960 kVA		18.680 kVA
TOTAL AMPS	61 A		52 A

05NLPC4

MAIN TYPE: MCB | MAIN RATING: 100 A | BUS RATING: 100 A
VOLTAGE: 120/208 Wye | 3 PHASE | 4 WIRE | MOUNTING: Recessed | ENCLOSURE: Type 1
LOCATION: Level 5,CORR. A05258A | FED FROM: 05NLDC | SCCR: 22 kA | CALCULATED AVAILABLE FAULT... kA

REMARKS: 1) PROVIDE GFCI BREAKER WHERE NOTED
2) PROVIDE 20A/1PH BREAKER AT EACH CIRCUIT SHOWN ON PLAN AT BOOM; BOOM CIRCUITS WITH "--" IN PANEL SCHEDULE SHAL...

DESCRIPTION	BRKR NOTES	BRKR AMP	POLES	CKT NO	LEFT A	LEFT B	LEFT C	RIGHT A	RIGHT B	RIGHT C	CKT NO	POLES	BRKR AMP	BRKR NOTES	DESCRIPTION
BOOM PATIENT RM. ICU A05230		20 A	2	1	0.36			1.92			2	1	20 A	GFCI	VENDING REC. BREAK ROOM A05270
--	--	--	--	3		0.36			1.92		4	1	20 A	GFCI	VENDING REC. BREAK ROOM A05270
RECEPT PATIENT RM. ICU A05230		20 A	1	5			0.90			1.02	6	1	20 A	GFCI	FRIDGE REC.BREAK ROOM A05270
RECEPT PATIENT RM. ICU A05230		20 A	1	7	0.90			1.02			8	1	20 A	GFCI	FRIDGE REC.BREAK ROOM A05270
RECEPTACLE PATIENT RM. ICU...		20 A	1	9		0.54			1.55		10	1	20 A		RECEPTACLE BREAK ROOM A05270
RECEPT PT RM. ICU A05228		20 A	1	11			0.90			1.55	12	1	20 A		RECEPTACLE BREAK ROOM A05270
RECEPT PATIENT RM. ICU A05230		20 A	1	13	0.90			0.40			14	1	20 A		RECEPTACLE BREAK ROOM A05270
RECEPT PATIENT RM. ICU A05229		20 A	1	15		0.72			0.66		16	1	20 A		RECEPTACLE BREAK ROOM A05270
RECEPTACLE PATIENT RM. ICU ISO...		20 A	1	17			0.72			0.72	18	1	20 A		POWER UNIT CLERK A05275
RECEPT PT RM. ICU ISO. A05227		20 A	1	19	0.72			0.18			20	1	20 A		RECEPTACLE UNIT CLERK A05275
BOOM PATIENT RM. ICU A05229		20 A	2	21		0.36			0.68		22	1	20 A		MICROWAVE NOUR. A05263
--	--	--	--	23			0.36			0.50	24	1	20 A		MICROWAVE NOUR. A05263
BOOM PATIENT RM. ICU A05228		20 A	2	25	0.36			1.26			26	1	20 A		RECEPTACLE SOILED UTILITY...
--	--	--	--	27		0.36			1.08		28	1	20 A		RECEPTACLE SPACE A05358
BOOM PT RM. ICU ISO. A05227		20 A	2	29			0.36			0.54	30	1	20 A		RECEPTACLE TEAM WKS A05261
--	--	--	--	31	0.36			0.72			32	1	20 A		RECEPTACLE TEAM WKS A05261
BOOM PT RM. ICU ISO. A05226		20 A	2	33		0.36			0.72		34	1	20 A		RECEPTACLE TEAM WKS A05261
--	--	--	--	35			0.36			0.54	36	1	20 A		RECEPTACLE TEAM WKS A05261
RECEPT PT RM. ICU ISO. A05227		20 A	1	37	0.72			0.66			38	1	20 A		RECEPTACLE TEAM WKS A05261
RECEPTACLE CORR. A05260		20 A	1	39		0.90			0.18		40	1	20 A		PRINTER TEAM WKS A05261
RECEPTACLE TEAM WKS A05261		20 A	1	41			0.90			0.00	42	1	20 A		SPARE

TOTAL PHASE SUMMARY

	A	B	C
PHASE SUBTOTAL (kVA):	10.4...	10.3...	9.3...
PHASE SUBTOTAL (AMPS):	89 A	88 A	78 A

LOAD CLASSIFICATION	CONNECTED (KVA)	DEMAND FACTOR	DEMAND (KVA)
POWER	3.960 kVA	100%	3.960 kVA
LIGHTING	0.000 kVA	125%	0.000 kVA
MOTOR	0.000 kVA	125% LARGEST, 100% OTHER	0.000 kVA
RECEPTACLE	26.280 kVA	100% FIRST 10KVA, 50% OTHER	18.140 kVA
HEATING	0.000 kVA	125%	0.000 kVA
TOTAL LOAD	30.240 kVA		22.100 kVA
TOTAL AMPS	84 A		61 A

05NLPC3-2

MAIN TYPE: MLO | MAIN RATING: 225 A | BUS RATING: 225 A
VOLTAGE: 120/208 Wye | 3 PHASE | 4 WIRE | MOUNTING: Surface | ENCLOSURE: Type 1
LOCATION: Level 5,ELEC. A05E008 | FED FROM: 05NLPC3-1 | SCCR: 22 kA | CALCULATED AVAILABLE FAULT... kA

REMARKS: 1) PROVIDE 20A/1PH BREAKER AT EACH CIRCUIT SHOWN ON PLAN AT BOOM; BOOM CIRCUITS WITH "--" IN PANEL SCHEDULE SHALL HAVE (1) 20A/1PH BREAKER AT EACH CIRCUIT SERVING BOOM.

DESCRIPTION	BRKR NOTES	BRKR AMP	POLES	CKT NO	LEFT A	LEFT B	LEFT C	RIGHT A	RIGHT B	RIGHT C	CKT NO	POLES	BRKR AMP	BRKR NOTES	DESCRIPTION
RECEPT PT RM. ICU A05236		20 A	1	1	0.72			0.72			2	1	20 A		RECEPT PT RM. ICU A05230
BOOM PATIENT RM. ICU A05236		20 A	2	3		0.36			0.36		4	1	20 A		RECEPT TOILET A05231A
--	--	--	--	5			0.36			0.36	6	2	20 A		BOOM PATIENT RM. ICU A05231
RECEPT PATIENT RM. ICU A05236		20 A	1	7	0.72			0.36			8	--	--	--	--
RECEPTACLE PATIENT RM. ICU...		20 A	1	9		0.72			0.72		10	1	20 A		RECEPTACLE PATIENT RM. ICU...
BOOM PT RM. ICU A05235		20 A	2	11			0.36			1.08	12	1	20 A		RECEPTACLE PATIENT RM. ICU...
--	--	--	--	13	0.36			0.72			14	1	20 A		RECEPTSOILED UTILITY A05286
RECEPT PATIENT RM. ICU A05235		20 A	1	15		0.72			0.90		16	1	20 A		RECEPT STAFF TOILET A05283
RECEPTACLE PATIENT RM. ICU...		20 A	1	17			0.72			0.25	18	2	20 A		RECEPTACLE EIDF A05Q006
BOOM PATIENT RM. ICU A05234		20 A	2	19	0.36			0.25			20	--	--	--	--
--	--	--	--	21		0.36			0.18		22	2	100 A		POWER IDF A05C007
RECEPT PATIENT RM. ICU A05234		20 A	1	23			0.72			0.18	24	--	--	--	--
RECEPT CORRIDOR A05299		20 A	1	25	0.54			0.54			26	1	20 A		REC DICTATION A05273
RECEPTACLE CHARTING A05260E		20 A	1	27		0.72			0.54		28	1	20 A		REC CORRIDOR A05299
REC BREAK ROOM A05270		20 A	1	29			0.18			0.72	30	1	20 A		RECEPT PATIENT RM. ICU A05233
RECEPT PATIENT RM. ICU A05233		20 A	1	31	0.72			0.72			32	1	20 A		RECEPT CHARTING A05299B
REC RESIDENT WORK ROOM A05275		20 A	1	33		0.90			0.90		34	1	20 A		REC RESIDENT WORK ROOM A05275
BOOM PT RM. ICU A05233		20 A	2	35			0.36			0.54	36	1	20 A		REC RESIDENT WORK ROOM A05275
--	--	--	--	37	0.36			0.18			38	1	20 A		REC RESIDENT WORK ROOM A05275
BOOM PT RM. ICU A05232		20 A	2	39		0.36			0.18		40	1	20 A		RECEPT LACTATION ROOM A05276
--	--	--	--	41			0.36			0.72	42	1	20 A		RECEPT LACTATION ROOM A05276

TOTAL PHASE SUMMARY

	A	B	C
PHASE SUBTOTAL (kVA):	7.27...	7.92...	6.9...
PHASE SUBTOTAL (AMPS):	61 A	66 A	58 A

LOAD CLASSIFICATION	CONNECTED (KVA)	DEMAND FACTOR	DEMAND (KVA)
POWER	4.680 kVA	100%	4.680 kVA
LIGHTING	0.000 kVA	125%	0.000 kVA
MOTOR	0.000 kVA	125% LARGEST, 100% OTHER	0.000 kVA
RECEPTACLE	17.420 kVA	100% FIRST 10KVA, 50% OTHER	13.710 kVA
HEATING	0.000 kVA	125%	0.000 kVA
TOTAL LOAD	22.100 kVA		18.390 kVA
TOTAL AMPS	61 A		51 A

05NLPC6

MAIN TYPE: MCB | MAIN RATING: 100 A | BUS RATING: 100 A
VOLTAGE: 120/208 Wye | 3 PHASE | 4 WIRE | MOUNTING: Recessed | ENCLOSURE: Type 1
LOCATION: Level 5,CORR. A05258B | FED FROM: 05NLDC | SCCR: 22 kA | CALCULATED AVAILABLE FAULT... kA

REMARKS: 1) PROVIDE 20A/1PH BREAKER AT EACH CIRCUIT SHOWN ON PLAN AT HEADWALL; HEADWALL CIRCUITS WITH "--" IN PANEL SCHEDULE SHALL HAVE (1) 20A/1PH BREAKER AT EACH CIRCUIT SERVING HEADWALL.

DESCRIPTION	BRKR NOTES	BRKR AMP	POLES	CKT NO	LEFT A	LEFT B	LEFT C	RIGHT A	RIGHT B	RIGHT C	CKT NO	POLES	BRKR AMP	BRKR NOTES	DESCRIPTION
REC PT RM. EMU PROG. A05216		20 A	1	1	0.54			0.27			2	2	20 A		HEADWALL PATIENT RM. EMU PRO...
RECEPT PT RM. EMU PROG. A05212		20 A	1	3		0.54			0.27		4	--	--	--	--
RECEPTACLE CHARTING A05278C		20 A	1	5			0.72			0.27	6	2	20 A		HEADWALL PT RM. EMU PROG....
RECEPTACLE CHARTING A05278C		20 A	1	7	0.54			0.27			8	--	--	--	--
HEADWALL PT RM. EMU PROG....		20 A	2	9		0.27			0.72		10	1	20 A		RECEPT PT RM. EMU PROG. A05212
--	--	--	--	11			0.27			0.90	12	1	20 A		RECEPT ROOM A05213A, A05214A
HEADWALL PT RM. EMU PROG....		20 A	2	13	0.27			0.90			14	1	20 A		RECEPT ROOM A05213, A05214
--	--	--	--	15		0.27			0.90		16	1	20 A		RECEPT ROOM A05214, A05213
HEADWALL PT RM. EMU PROG....		20 A	2	17			0.27			0.72	18	1	20 A		RECEPT ROOM A05216A, A05215A
--	--	--	--	19	0.27			0.90			20	1	20 A		RECEPT ROOM A05216, A05215
RECEPTACLE CHARTING A05278E		20 A	1	21		0.72			0.90		22	1	20 A		RECEPT ROOM A05215, A05216
RECEPTACLE CLEAN UTILITY A05254		20 A	1	23			0.18			0.00	24	1	20 A		SPARE
RECEPTACLE CLEAN UTILITY A05254		20 A	1	25	0.75			0.00			26	1	20 A		SPARE
RECEPTACLE EQUIP.-1 A05278A-1		20 A	1	27		0.18			0.00		28	1	20 A		SPARE
RECEPTACLE STAFF TOIL. A05250		20 A	1	29			0.36			0.00	30	1	20 A		SPARE
MICROWAVE NOUR. A05253		20 A	1	31	0.50			0.00			32	1	20 A		SPARE
RECEPTACLE NOUR. A05253		20 A	1	33		0.18			0.00		34	1	20 A		SPARE
MICROWAVE NOUR. A05253		20 A	1	35			0.50			0.00	36	1	20 A		SPARE
SPARE		20 A	1	37	0.00			0.00			38	1	20 A		SPARE
SPARE		20 A	1	39		0.00			0.00		40	1	20 A		SPARE
SPARE		20 A	1	41			0.00			0.00	42	1	20 A		SPARE

TOTAL PHASE SUMMARY

	A	B	C
PHASE SUBTOTAL (kVA):	5.21...	4.95...	4.1...
PHASE SUBTOTAL (AMPS):	44 A	42 A	35 A

LOAD CLASSIFICATION	CONNECTED (KVA)	DEMAND FACTOR	DEMAND (KVA)
POWER	2.700 kVA	100%	2.700 kVA
LIGHTING	0.000 kVA	125%	0.000 kVA
MOTOR	0.000 kVA	125% LARGEST, 100% OTHER	0.000 kVA
RECEPTACLE	11.650 kVA	100% FIRST 10KVA, 50% OTHER	10.825 kVA
HEATING	0.000 kVA	125%	0.000 kVA
TOTAL LOAD	14.350 kVA		13.525 kVA
TOTAL AMPS	40 A		38 A

3

3

GBBN

PROJECT ARCHITECT
609 West Main Street
Louisville, KY 40202
502.583.0700
GBBN.COM

UK HealthCare

Renovate/Upgrade
UK Healthcare
Facilities
Pavilion A 5th Floor
Project Number: 2402.9

Pavilion A 5th Floor PAVILION A, 1000 S. LIMESTONE, LEXINGTON, KY 40536

OWNER
University of Kentucky
222 Peterson Service Building
Lexington, Kentucky 40506

CONSTRUCTION MANAGER
Turner Construction Company
588 Leestown Road Suite 130-300
Lexington, KY 40511
859.421.4913

CONSULTANTS

MEP CONSULTANT
AEI Affiliated Engineers, Inc.
10 South LaSalle Street, Suite 2700
Chicago, IL 60603
312.977.2800

MEDICAL EQUIPMENT
BSA Life Structures
9365 Counselors Row #300
Indianapolis, IN 46240
317.819.7878

DRAWING ISSUE

CONTRACT DOCUMENTS

NO	DATE	DESCRIPTION
1	07.17.20	DESIGN DEVELOPMENT
2	10.27.20	CONTRACT DOCUMENTS
3	01.07.21	ADDENDUM 04

DRAWING TITLE

ELECTRICAL PANEL SCHEDULES - TOWER 100 'C' NORMAL POWER

SEAL

JOB NUMBER

13703.01

E900

1/7/2021 11:46:42 AM C:\Users\schartrand\Documents\Revit 2020 Local Copy\20736_UK-5_12_MEPr20_schartrandT93BG.rvt

LIGHTING CONTROL SCHEDULE

CONTROLLED-ZONE	6:00 AM	6:00 AM	6:00 AM	5:00 AM	5:00 AM	Dusk to	Dusk to	24 HRS	Local Override
	6:00 PM	8:00 PM	10:00 PM	11:00 PM	11:00 PM	12:00 PM	Dawn		Switching
Patient Level Elev Lobby-Accent			X						
Patient Level Elev Lobby-Ambient									X
Patient Floor-Accent Lighting			X						
Patient Floor-Ambient Lighting									X

Notes:

1. All lighting control panels shall be networked to BAS with BACnet over IP. Each individual smart breaker shall be controllable.
2. All enclosed spaces with Vacancy occupancy sensors and manual wall switches shall be configured to function as: Manual-ON, Automatic-OFF.

LUMINAIRE SCHEDULE

Type	Description	Type & Wattage	Watts/ Lamps	DRIVER(S)	Volt	Mtg.	Manufacturer	Catalog Number
A1	LED DOWNLIGHT WITH NOMINAL 6" APERTURE, WHITE FINISH TRIM AND CLEAR SPECULAR REFELECTOR FINISH. FIXTURE IS CAPABLE OF 0-10V DIMMING, PROVIDE COMPATIBLE DIMMER SWITCH.	1500 LUMEN LED	30	LED	120	CL/RE	GOTHAM LIGHTOLIER PORTFOLIO	EVO6-35/15-AR-MD-LS-MVOLT-TRW 6RN / P6RDL15835CLZ10U LD6A-15-D010TE-ERM6A15-835-6LM0-H
B2	DOWNLIGHT WITH NOMINAL 4" APERTURE, ADJUSTABLE AIMING UP TO 35 DEG ANGLE, SPECULAR LOW IRIDESCENT ALZAK REFLECTOR CONE, SOFT LENS, WHITE TRIM FINISH AND STEP-DOWN TRANSFORMER.	1500 LUMEN LED (MIN.)	35	LED	120	CL/RE	GOTHAM LIGHTOLIER PORTFOLIO	ICO4ADJ-35/15-AR-T30-LS-25D-120-EZB-TRW C4LA-15-N-U-Z10V/C4L-15-A-35K-8-FL LDA4A-18-8-35-D010TE
C2	DOWNLIGHT WITH NOMINAL 6" APERATURE, SPECULAR LOW IRIDESCENT ALZAK REFLECTOR CONE. PROVIDE DECORATIVE OPAL ANGLED GLASS RING.	2000 LUMEN LED	32	LED	120	CL/RE	LIGHTOLIER	6RN / C6L20835NZ10U / C6RDLCLF / D6A03
C3	LENSED WALLWASH DOWNLIGHT WITH NOMINAL 6" APERTURE, SPECULAR LOW IRIDESCENT ALZAK REFLECTOR CONE AND WHITE TRIM FINISH.	1400 LUMEN LED	30	LED	120	CL/RE	GOTHAM LIGHTOLIER PORTFOLIO	EVO6-LW-35/15-AR-LS-MVOLT-TRW 6RN / P6RLW15835CLZ10U LD6A-15-D010TE-ERM6A15-835-6LM110-LI
C4	LENSED DOWNLIGHT WITH NOMINAL 6" APERTURE, WHITE REFLECTOR CONE AND WHITE TRIM FINISH.	1400 LUMEN LED	30	LED	120	CL/RE	GOTHAM LIGHTOLIER PORTFOLIO	EVO6-35/15-WR-MD-LS-MVOLT- TRW 6RN / P6RDL15835WHZ10U LD6A-15-D010TE-ERM6A15-835-6LM0-W
C6	6" APERTURE SHOWER LIGHT	1500 LUMEN LED	31	LED	120	CL/RE	GOTHAM LIGHTOLIER	EVO6SH-35/15-DFF-SMO-MVOLT 6R/C6L-15-9-35-[BEAM]Z10-U/C6-R-DL-[FINISH]-[FLANGE]
C7	DECORATIVE WALL MOUNTED LUMINAIRE WITH POLISHED ALUMINIUM FINISH AND WHITE GLASS DIFFUSER.	600 LUMEN LED	10	LED	120	CL/SU	TECH LIGHTING	700WSESXGWS-LED
C8	WALL MOUNTED LUMINAIRE INSTALLED ABOVE THE MIRROR AT THE SINK. EXTRUDED ALUMINUM HOUSING WITH DIE-CAST END CAPS AND UV STABILIZED, HIGH IMPACT RESISTANT, 100% DR FROSTED ACRYLIC LENS WITH SMOOTH EXTERIOR. LENS SHALL BE SECURELY POSITIONED IN BODY CHANNELS. UL LISTED FOR DAMP LOCATION.	3500K LED	25	LED	120	SUR	Kenall	MWUD-24-MW-25L-35K8-DIM1-120
F1	NARROW APERTURE, NOMINAL OVERALL LENGTH OF 5' LONG WALLWASH LUMINAIRE WITH 2-LED ADJUSTABLE ACCENT LIGHTS AT EACH END. * = COORDINATE INSTALLATION WITH THE CEILING TYPE. EACH LAMP TO BE INDIVIDUALLY SWITCHED. LOW-VOLTAGE LAMPS CONTROLLED VIA LOCAL WALL-MOUNTED SWITCH AT INDIVIDUAL NURSE-STATIONS. LINEAR SHALL BE CONTROLLED VIA CENTRAL PROGRAMMABLE LIGHTING CONTROL SYSTEM. INSTALL THIS LUMINAIRE AT 16" FROM THE FACE OF THE WALL.	4' LINEAR LED AND (2)LED ACCENT	7.2/LF AND 10.5	LED	120	CE/RE	ARCHITECTURAL LIGHTING WORKS	LP3.5RT-4'-DRY-S-MED-80-3500K-0/10V/S-EXT/ASY/LED ACCENT DOWNLIGHTS: DL1500-80-3500K-40-2QTY-[FINISH]-UNV
F3	RECESSED CONTINUOUS PERIMETER SLOT LIGHT WITH ALUMINUM EXTRUDED HOUSING, WITH WHITE ACYLIC LENS. PROVIDE APPROPRIATE SECTIONS AND ACCESSORIES INCLUDING NON-ILLUMINATED TELESCOPING ENDS OF EQUAL SECTIONS NOT MORE THAN 1' IN LENGTH. INSTALL PRIOR TO CEILING INSTALLATION. EGRESS LIGHTING NON-SWITCHED. PROVIDE CONTINUOUS ROW, MULTIPLE FEEDS FOR NORMAL AND EMERGENCY POWER CIRCUITING AS INDICATED ON PLANS. REFER TO ARCHITECTURAL PLANS FOR REQUIRED LENGTHS. FIXTURE CREATES ARCHITECTURAL SLOT.	1200 LUMENS PER 4' SECTION (MINIMUM)	28W PER 4' (MAX)	LED	120	CE/RE	FOCAL POINT	FSM2PR-375LF-835-UNV-L11-[MOUNTING]-EH- SEE ARCHITECTURAL PLANS FOR LENGTH
F4	2X2 BASKET STYLE LUMINAIRE WITH FROSTED ACRYLIC DIFFUSERS. CONFIRM ACOUSTICAL GRID TYPE WITH ARCHITECTURAL DRAWINGS.	2000 LUMEN LED (MIN.)	24	LED	120	CE/RE	FOCAL POINT PINNACLE	FLUL-22-PS-2000L-35K-1C-UNV-LD1-G-WH AD22A-35LO-G(SEE ARCH)-UNV-1D-W
F4A	2X2 BASKET STYLE LUMINAIRE WITH FROSTED ACRYLIC DIFFUSERS. CONFIRM ACOUSTICAL GRID TYPE WITH ARCHITECTURAL DRAWINGS.	3000 LUMEN LED (MIN.)	37	LED	120	CE/RE	FOCAL POINT PINNACLE	FLUL-22-PS-3000L-35K-1C-UNV-LD1-G-WH AD22A-35MO-G(SEE ARCH.)-UNV-1D-W
F5	2X4 BASKET STYLE LUMINAIRE WITH FROSTED ACRYLIC DIFFUSERS. CONFIRM ACOUSTICAL GRID TYPE WITH ARCHITECTURAL DRAWINGS.	3000 LUMEN LED (MIN.)	34	LED	120	CE/RE	FOCAL POINT PINNACLE	FLUL-24-PS-4000L-35K-1C-UNV-LD1-G-WH AD24A-35LO-G(SEE ARCH.)-UNV-1D-W
F5A	2X4 BASKET STYLE LUMINAIRE WITH FROSTED ACRYLIC DIFFUSERS. CONFIRM ACOUSTICAL GRID TYPE WITH ARCHITECTURAL DRAWINGS.	3800 LUMEN LED (MIN.)	41	LED	120	CE/RE	FOCAL POINT PINNACLE	FLUL-24-PS-4000L-35K-1C-UNV-LD1-G-WH AD24A-35MO-G(SEE ARCH.)-UNV-1D-W
F6	WALL MOUNTED LUMINAIRE SATIN NICKEL FINISH.	LED	32	LED	120	WALL	VISA LIGHTING	CB6286-1L10[MR16]-120V
F7	1X4 BASKET STYLE LUMINAIRE WITH FROSTED ACRYLIC DIFFUSERS. CONFIRM ACOUSTICAL GRID TYPE WITH ARCHITECTURAL DRAWINGS.	2200 LUMEN LED (MIN.)	24	LED	120	CE/RE	FOCAL POINT PINNACLE	FLUL-14-PS-2500L-35K-1C-UNV-LD1-G-WH AD14A-35LO-G(SEE ARCH.)-UNV-1C-W
F7A	1X4 BASKET STYLE LUMINAIRE WITH FROSTED ACRYLIC DIFFUSERS. CONFIRM ACOUSTICAL GRID TYPE WITH ARCHITECTURAL DRAWINGS.	3300 LUMEN LED (MIN.)	36	LED	120	CE/RE	FOCAL POINT PINNACLE	FLUL-14-PS-3500L-35K-1C-UNV-LD1-G-WH AD14A-CL8353300-G(SEE ARCH.)-UNV-1C-W
F9	2X2 RECESSED INDIRECT WITH ACRYLIC DIFFUSER. PROVIDE WITH PLASTER FLANGE.	2000 LUMEN LED (MIN.)	24	LED	120	CE/RE	FOCAL POINT PINNACLE	FAML-22-ACR-2000L-35K-1C-UNV-LD1-F-WH AD22A-35LO-FL-UNV-1C-W
F10	2X4 PATIENT LED TROFFER WITH EXAM LIGHT AND AMBIENT LIGHT. LOW VOLTAGE CONTROLLER FOR PILLOW SPEAKER CONTROL. COORDINATE WITH MANUFACTURER FOR WIRING AND SWITCH REQUIREMENTS. COORDINATE WITH HEADWALL INSTALLATION. PROVIDE SAMPLE WITH SUBMITTAL	1300 LUMEN	175	LED	120	CE/RE	KENALL	MPC-G-25L/45L/90L40K-dcc-120-SYM-IB-HD-FSLVC
F11	NOMINAL 8' LONG BY 4" WIDE LUMINAIRE INSTALLED IN ARCHITECTURAL POCKET TO ILLUMINATE WALL. LUMINAIRE SHALL HAVE WHITE FINISH AND REGRESSED UV STABILIZED CLEAR LENS.	1540 LUMENS PER 4' SECTION (MINIMUM)	28W PER 4' (MAX)	LED	120	CE/RE	AXIS LIGHTING LUMENPULSE NEO-RAY	BMSLED-B3-MF-400-80-35-SO-8-W-UNV-D-1-S LLI2S-CM-120-SU8-dRO35K-WFL-DIM-WH -C8 S23DS-1L35-SR-8-1DD-SI-S93-W
F12	2X4 LENSED TROFFER FOR CORRIDORS	4000 LUMEN LED (MIN.)	39	LED	120	CE/RE	DAY-BRITE LITHONIA METALUX	2-LT-G-40L-835-4-21-UNV 2GTL-4-40L-LP835 2GR-LD1-48-A125-UNV-L835-CD-1
F13	4' INDUSTRIAL WITH LAMP HOLDERS AND WIRE GUARD	3000 LUMEN LED (MIN.)	32	LED	120	PEND	METALUX DAY-BRITE LITHONIA	4SNLED-LD4-30SL-LW-UNV-L835-CD-1 FSS430L835-UNV-DIM / FSSWG4 ZL1F-L48-3000LM-MDD-MVOLT-35K-80CRI-WH
F14	LINEAR VANITY FIXTURE. * CUSTOM COLOR TO BE DETERMINED BY ARCHITECT.	2100 LUMENS LED (MIN.)	20.6	LED	120	WALL/ SUR	TERON LIGHTING	JN24-L20.6-120-ZE600-35K
F16	THREE 4' LINEAR INDIRECT LUMINAIRES. SURFACE CEILING SUSPENDED, WITH ASYMMETRIC LIGHT DISTRIBUTION, PRISMATIC ACRYLIC LENS COVER. INTENDED TO ILLUMINATE THE CEILING. PROVIDE A NOMINAL 9" BRACKET. SUSPEND THE LUMINAIRE DIRECTLY FROM CEILING WITH RIGID ROD AT 9" BELOW THE CEILING AND 6" FROM THE FACE OF SOFFIT. UTILIZE MINIMUM POSSIBLE SUPPORTS AND LONGEST POSSIBLE CONTINUOUS MODULES. FINISH SHALL BE WHITE. PROVIDE INDIVIDUAL POWER DROPS FOR EMERGENCY AND NORMAL POWER. PROVIDE SHOP DRAWING FOR EACH UNIQUE CONDITION OF THIS LIGHTING SYSTEM CONFIGURATION ALONG WITH THE MODULES AND THE SUPPORTING SYSTEM.	900LM/FT LED	40	LED	120	CLG	PRUDENTIAL	MWR-LED35-SO-4-TMW-SC-UNV-SSC-X1-DM10
F17	NARROW APERTURE, NOMINAL 4" WIDE AND REGRESS LENS SLOT LUMINAIRE. LUMINAIRE SHALL BE PROVIDED WITH CONTINUOUS LENS AND STAGGERED LAMP CONFIGURATION. * = REFER TO DRAWING FOR EXACT LENGTH. ** = COORDINATE INSTALLATION WITH THE CEILING TYPE AND INSTALLATION.	350 LM/FT LED (MIN.)	17	LED	120	CE/RE	FOCAL POINT PINNACLE ZUMTOBEL	FSM4L-FL-375LF-35K-1C-UNV-LD1-TF-WH-X E4A-35-XX-FL-UNV-1C-W SLDR-4-FL-1-N-3-835-XX-P-W-U
H1	NOMINAL 4" APERTURE RECESSED ADJUSTABLE DOWNLIGHT. CLEAR ALZAK ALUMINIUM REFLECTOR CONE AND WHITE FLANGE TRIM.	LED	20	LED	120	CE/RE	PORTFOLIO LIGHTOLIER	MA439 1E 9471 LI WF C4LA25NUZ10V / C4L25A35K8NF / C4LACLW
H2	ADJUSTABLE MR-16 TRACK PIVOT HEAD.	PHILIPS 10MR16/END/ F35/3000	75 /fixture head		120	TRACK	TECH LIGHTING	700MOPIVS
S1	RECESSED ADJUSTABLE LED LUMINAIRE, NOMINAL 2" DIAMETER APERTURE WITH REMOTE DRIVER INSTALLED IN NEAREST ACCESSIBLE CEILING.	LED	50		120	CE/RE	MOLTO LUCE	#####-###-###
S2	NIGHT-LIGHT. DOUBLE SIDED THRU-WALL. HORIZONTAL LOUVERED FACE PLATE. CUSTOM COLOR FINISH ON FACE PLATE. * VERIFY WALL THICKNESS.	LED AMBER			120	RE/ WALL	Healthcare Ltg	HNL612-MVOLT-LEDAM-[cc]
S2A	NIGHT-LIGHT. HORIZONTAL LOUVERED DIECAST ALUMINUM FACE PLATE. CUSTOM COLOR FINISH ON FACE PLATE.	LED AMBER			120	RE/ WALL	Healthcare Ltg VISTA	HNL610-MVOLT-LEDAMB-[cc] VSP-LED-ST-HL-C-ZN-AM-UNV-X
X1	EXIT SIGN, SINGLE FACE, UNIVERSAL MOUNTING. THERMOPLASTIC WHITE HOUSING. RED LETTERS. DIRECTIONAL ARROWS AS INDICATED ON PLANS.	LED			120	UNV	MCPHILBEN PHILIPS SURE-LITES LITHONIA	CXL1RW CLZXARW - VEPMC/CXPAS12W[AS REQUIRED] LPX60RWH LQM-W-1-R-120/277
X2	EXIT SIGN, DOUBLE FACE, UNIVERSAL MOUNTING. THERMOPLASTIC WHITE HOUSING. RED LETTERS. DIRECTIONAL ARROWS AS INDICATED ON PLANS.	LED			120	UNV	MCPHILBEN PHILIPS SURE-LITES LITHONIA	CXL2RW CLXARW - VEPMC/CXPAS12W[AS REQUIRED] LPX60RWH LQM-W-3-R-120/277

3

Notes:

1. Refer to plans for driver requirements for fixture types with various switching and dimming methods (IE Dual switching, single switching, etc). Contractor is responsible for providing fixture with quantity of drivers per luminaire required to accomplish intended switching scheme.

1 PROVIDE ALL OPTIONS AND ACCESSORIES REFERENCED AND AS NEEDED BASED ON REVIEW OF ARCHITECTURAL RCP'S, ELEVATIONS AND ACTUAL FIELD CONDITIONS FOR COMPLETE INSTALLATION.
2 SPECIFICATIONS AND DRAWINGS CONVEY THE FEATURES, AND FUNCTIONS OF LUMINAIRES ONLY AND DO NOT SHOW EVERY ITEM OR DETAIL NECESSARY FOR THE WORK.
3 COORDINATE HOUSING TYPE WITH ARCHITECTURAL REFLECTED CEILING PLANS FOR GRID OR GYP. BOARD CEILING MOUNTING OF THE FIXTURES.
4 FIXTURE COLOR TEMP SHALL BE 3500K UNLESS OTHERWISE NOTED.
5 COORDINATE ALL DIMMING DRIVERS WITH SPECIFIED LIGHTING CONTROLS. VERIFY COMPATIBILITY OF DIMMING CIRCUITS AND FIXTURE SELECTION PRIOR TO ORDERING.
6 PROVIDE INTEGRAL IN-LINE FUSES FOR ALL LIGHTING FIXTURES.
7 ALL FIXTURES SHALL BE PROVIDED WITH TRANSIENT SURGE PROTECTION PER ANSI C62.41
8 ALL FIXTURES SHALL BE PROVIDED WITH RFI SHIELDING.

GBBN

PROJECT ARCHITECT
609 West Main Street
Louisville, KY 40202
502.583.0700
GBBN.COM

UK HealthCare

Renovate/Upgrade
UK Healthcare
Facilities
Pavilion A 5th Floor
Project Number: 2402.9

Pavilion A 5th Floor PAVILION A, 1000 S. LIMESTONE, LEXINGTON, KY 40536

OWNER
University of Kentucky
222 Peterson Service Building
Lexington, Kentucky 40506

CONSTRUCTION MANAGER
Turner Construction Company
588 Leestown Road Suite 130-300
Lexington, KY 40511
859.421.4913

CONSULTANTS

MEP CONSULTANT
AEI Affiliated Engineers, Inc.
10 South LaSalle Street, Suite 2700
Chicago, IL 60603
312.977.2800

MEDICAL EQUIPMENT
BSA Life Structures
9365 Counselors Row #300
Indianapolis, IN 46240
317.819.7878

DRAWING ISSUE

CONTRACT DOCUMENTS

NO	DATE	DESCRIPTION
1	07.17.20	DESIGN DEVELOPMENT
2	10.27.20	CONTRACT DOCUMENTS
3	01.07.21	ADDENDUM 04

DRAWING TITLE

LUMINAIRE SCHEDULE

SEAL

JOB NUMBER

13703.01

E910

1/7/2021 11:46:42 AM C:\Users\schartrand\Documents\Revit 2020 Local Copy\20736_UK-5_12_MEPr20_schartrandT93BG.rvt

TECHNOLOGY SYMBOLS AND ABBREVIATIONS

NOTE: SYMBOLS INDICATED HERE AND NOT USED IN THE CONTRACT DOCUMENTS DO NOT APPLY TO THIS PROJECT. ADDITIONAL SYMBOLS MAY BE INDICATED IN THE CONTRACT DOCUMENTS

TECHNOLOGY SERVICES

W — WALL TELEPHONE OUTLET
CONFIGURATION: AS INDICATED BY NO. (REFER TO SCHEDULE)
MOUNTING LOCATION: FLUSH WALL
MOUNTING HEIGHT: 4'-0" AFF

W — WALL TELEPHONE OUTLET
CONFIGURATION: 1 VOICE
MOUNTING LOCATION: SURFACE WALL
MOUNTING HEIGHT: 4'-0" AFF

— WORKSTATION OUTLETS
CONFIGURATION: AS INDICATED BY NO. (REFER TO SCHEDULE)
MOUNTING LOCATION: FLUSH WALL
MOUNTING HEIGHT: 1'-6" AFF, U.N.O.

— WORKSTATION OUTLETS - FLOOR MOUNTED
CONFIGURATION: AS INDICATED BY NO. (REFER TO SCHEDULE)
MOUNTING LOCATION: FLUSH FLOOR
MOUNTING HEIGHT: F/FF

— WORKSTATION OUTLETS - CEILING MOUNTED
CONFIGURATION: AS INDICATED BY NO. (REFER TO SCHEDULE)
MOUNTING LOCATION: FLUSH CEILING, U.N.O
MOUNTING HEIGHT: F/FC

— WORKSTATION OUTLETS
CONFIGURATION: AS INDICATED BY NO. (REFER TO SCHEDULE)
MOUNTING LOCATION: CASEWORK OR ABOVE BACKSPLASH - FLUSH
MOUNTING HEIGHT: FIELD VERIFY

— WORKSTATION OUTLETS
CONFIGURATION: AS INDICATED BY NO.
MOUNTING LOCATION: RACEWAY
MOUNTING HEIGHT: AS INDICATED BY RACEWAY MOUNTING

TV — TV OUTLET
CONFIGURATION: 1 COAX AND 2 CATEGORY 6A
MOUNTING LOCATION: WALL
MOUNTING HEIGHT: 7'-0" AFF

JUNCTION BOX ABOVE ACCESSIBLE CEILING

J — FLUSH JUNCTION BOX - WALL

TELECOMMUNICATIONS GROUNDING BUSBAR PROVIDED BY OTHERS (ELEVATION VIEW)

TELECOMMUNICATIONS GROUNDING BUSBAR PROVIDED BY OTHERS (PLAN VIEW)

RACK MOUNTED GROUNDING BAR (ELEVATION VIEW)

RACK MOUNTED POWER RECEPTACLE (ELEVATION VIEW)

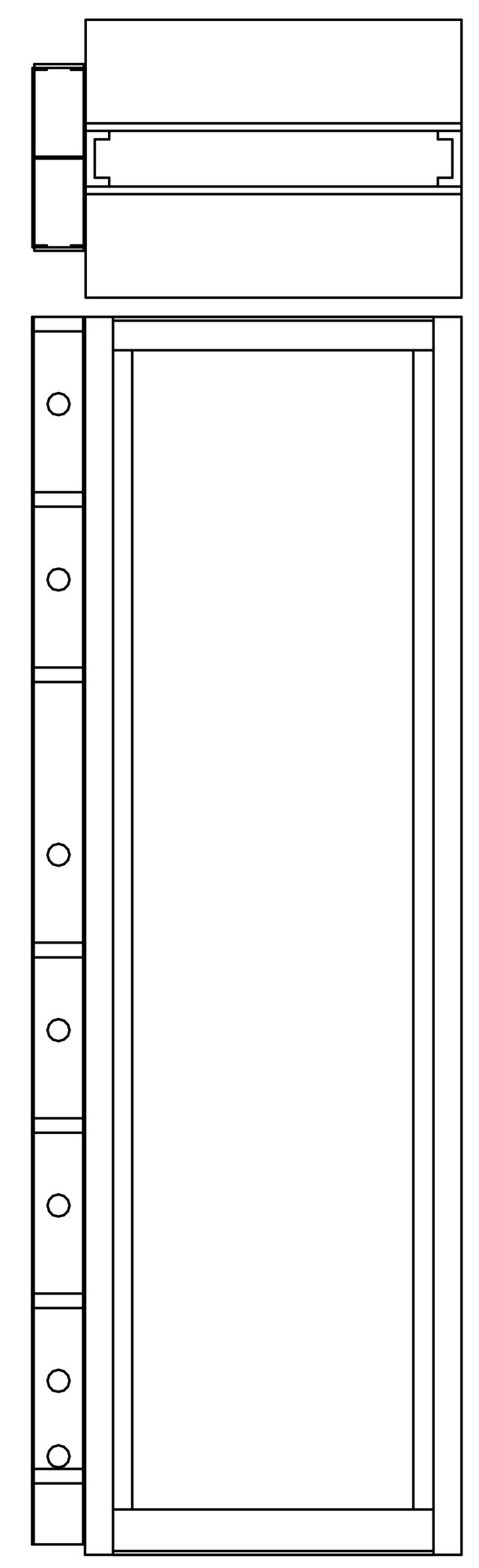
RACK MOUNTED UPS PROVIDED BY OTHERS (ELEVATION VIEW)

1 RACK UNIT 24 PORT PATCH PANEL (ELEVATION VIEW)

2 RACK UNIT 48 PORT PATCH PANEL (ELEVATION VIEW)

1 RACK UNIT HORIZONTAL CABLE MANAGER (ELEVATION VIEW)

2 RACK UNIT HORIZONTAL CABLE MANAGER (ELEVATION VIEW)



FREESTANDING EQUIPMENT RACK WITH VERTICAL WIRE MANAGER(PLAN VIEW) 19" WIDE UON

FREESTANDING EQUIPMENT RACK AND VERTICAL CABLE MANAGER (FRONT ELEVATION VIEW) 19" WIDE UON

RACK MOUNTED FIBER OPTIC PATCH PANEL

RACK MOUNTED FIBER OPTIC PATCH PANEL

RACK MOUNTED FIBER OPTIC PATCH PANEL

RACK MOUNTED FIBER OPTIC PATCH PANEL

CONFIGURATION TYPE (X)	DESCRIPTION	# OF DATA JACKS	# OF COAX JACKS	DATA CABLE TYPE	CABLE COLOR	FACEPLATE	JACK COLOR	DEFAULT MOUNTING HEIGHT. (REFER TO ARCHITECTURAL ELEVATIONS)	CONDUIT	CABLE SOURCE
W	WALL TELEPHONE	1		CAT. 6A F/UTP	GREEN	SS 1-PORT	GREEN	48" AFF	(1) 1"	IDF ROOM
1		1		CAT. 6A F/UTP	GREEN	1-GANG	GREEN	18" AFF	(2) 1"	IDF ROOM
2		2		CAT. 6A F/UTP	GREEN	1-GANG	GREEN	18" AFF	(2) 1"	IDF ROOM
3		2		CAT. 6A F/UTP	GREEN	1-GANG	GREEN	18" AFF	(1) 1"	IDF ROOM
8		4		CAT. 6A F/UTP	GREEN	1-GANG	GREEN	18" AFF	(2) 1"	IDF ROOM
9		3		2 DATA-CAT. 6A F/UTP 1 PM-CAT. 6 UTP	2 DATA-GREEN 1 PM-YELLOW	1-GANG	2 DATA-GREEN 1 PM-YELLOW	60" AFF OR AS NOTED	(2) 1"	IDF ROOM
12		6		6 DATA- CAT. 6A F/UTP	GREEN	2-GANG	GREEN	18" AFF	(2) 1"	IDF ROOM
TV	TELEVISION	2	1	CAT. 6A F/UTP	GREEN	1-GANG	GREEN	84" AFF	(1) 1"	IDF ROOM
F	INFOTAINMENT TV	2 1/4" JACK	1	CAT. 6A F/UTP	GREEN	1-GANG	GREEN	84" AFF	(2) 1"	IDF ROOM
MM	MEDICAL MONITORING CAMERA	1		CAT. 6 UTP	ORANGE	1-GANG	ORANGE	100" AFF	(1) 1"	EIDF ROOM
OC	OBSERVATION CAMERA	1		CAT. 6 UTP	ORANGE	1-GANG	ORANGE	ABOVE CEILING	(1) 1"	IDF ROOM
MMF	MEDICAL MONITORING CAMERA- FUTURE (ROUGH-IN ONLY)			N/A	N/A	1-GANG BLANK	N/A	100" AFF	(1) 1"	EIDF ROOM
SC	SECURITY CAMERA	1		CAT. 6 UTP	GRAY	1-GANG	GRAY	ABOVE CEILING W/ 15' SERVICE LOOP	(1) 1"	IDF ROOM
AC	ACCESS CONTROLLER	1		CAT. 6 UTP	GRAY	1-GANG	GRAY	ABOVE CEILING ADJACENT TO DOOR CONTROLLER	(1) 1"	IDF ROOM
TC	TIME CLOCK	1		CAT. 6A F/UTP	GREEN	1-GANG	GREEN	48" AFF	(1) 1"	IDF ROOM
P	PROJECTOR	1		CAT. 6A F/UTP	GREEN	1-GANG	GREEN	FLUSH CEILING	(1) 1"	IDF ROOM
C	COMMUNICATIONS ACCESS POINT	2		CAT. 6A F/UTP	GREEN	1-GANG	GREEN	ABOVE CEILING	(1) 1"	IDF ROOM
DAS	DISTRIBUTED ANTENNA SYSTEM	1		.500 COAX	WHITE	N/A	N/A	ABOVE CEILING	(1) 1.5"	EIDF ROOM
T	TELEMETRY ACCESS POINT	1		CAT. 6 UTP	YELLOW	1-GANG	YELLOW	ABOVE CEILING	(1) 1"	EIDF ROOM
TR	TELEMETRY REMOTE	NA		REFER TO TELEMETRY VENDOR DRAWINGS AND PROVIDE CABLE RACEWAY						
PM	PHYSIOLOGICAL (PATIENT) MONITORING	1		CAT. 6 UTP	YELLOW	1-GANG	YELLOW	66" AFF	(1) 1"	IDF ROOM
PM4	PHYSIOLOGICAL MONITORING-AUX	4		CAT. 6 UTP	YELLOW	1-GANG	YELLOW	66" AFF	(1) 1"	EIDF ROOM
CM	CENTRAL MONITOR	2		2 CAT. 6 UTP	YELLOW	1-GANG	YELLOW	AS NOTED	(1) 1"	EIDF ROOM
CM2	CENTRAL MONITOR	4		4 CAT. 6 UTP	YELLOW	1-GANG	YELLOW	AS NOTED	(1) 1-1/4"	EIDF ROOM
NC	NURSE CALL: WAO	1		CAT. 6 UTP	WHITE	1-GANG	WHITE	AT RCB U.N.O. REFER TO NC	(1) 1"	EIDF ROOM
NC	NURSE CALL: MS	2		CAT. 6 UTP	WHITE	1-GANG	WHITE	REFER TO NC	(1) 1"	EIDF ROOM
GW	BAS GATEWAY	2		CAT. 6 UTP	BLUE	1-GANG	BLUE	ABOVE CEILING	(1) 1"	EIDF ROOM
J	JOY STICK FOR GAMING	1		CAT. 6 UTP	VIOLET	1-GANG	VIOLET	18" AFF	(1) 1"	IN-ROOM TV OUTLET
E	ELEVATOR PHONE & MONITOR	3		CAT. 6 UTP	GREEN	1-GANG	GREEN	36" AFF	(1) 1"	IDF ROOM
PT	PNEUMATIC TUBE	1		CAT. 6A F/UTP	GREEN	1-GANG	BLACK	SEE DRAWINGS	(1) 1"	IDF ROOM
PS	PATIENT STATUS MONITOR	1		CAT. 6 UTP	YELLOW	1-GANG	YELLOW	ABOVE CEILING OR AS AS SHOWN	(1) 1"	EIDF ROOM
IC	INTERCOM STATION	1		CAT. 6 UTP	GRAY	1-GANG	GRAY	REFER TO SECURITY	(1) 1"	IDF ROOM
S	OVERHEAD PAGING SPEAKER	1		CAT. 6 F/UTP	GREEN	1-GANG	GREEN	ABOVE CEILING	(1) 1"	IDF ROOM
AV-C	AV CAMERA	1		CAT. 6A F/UTP	GREEN	1-GANG	GREEN	FLUSH CEILING	(1) 1"	IDF ROOM
IR	IR - INFRARED CAMERA	1		CAT. 6 UTP	ORANGE	1-GANG	ORANGE	ABOVE CEILING	(1) 1"	IDF ROOM
MIC	MICROPHONE	CABLED TO IR CAMERA								
NAT	NATUS CAMERA	1		CAT. 6 UTP	ORANGE	1-GANG	ORANGE	ABOVE CEILING	(1) 1"	IDF ROOM

NOTES:
1. MOUNTING HEIGHTS ARE AS LISTED, UNLESS OTHERWISE NOTED ON DRAWINGS. COORDINATE WITH ARCHITECTURAL ELEVATION DRAWINGS.
2. PROVIDE BLANK MODULES OR INSERTS AS REQUIRED TO FILL EMPTY FACEPLATE PORTS.
3. ALL CONDUIT, CABLE TRAY, SURFACE RACEWAY, AND BACK BOXES PROVIDED BY COMMUNICATIONS CONTRACTOR.
4. ":H" SUFFIX DENOTES MOUNTING IN MODULAR HEADWALL. ":B" SUFFIX DENOTES MOUNTING IN BED LOCATOR.
5. OWNER TO FURNISH (1) PATCH CORD AND (1) EQUIPMENT CORD PER EIDF-SERVED DEVICE. CORD TYPE TO MATCH HORIZONTAL CABLE PERFORMANCE. MATCH HORIZONTAL CABLE MANUFACTURER. REFER TO SPECIFICATIONS FOR MORE INFORMATION. IN ADDITION TO PATCH CORDS REQUIRED BY SPECIFICATIONS, AT TYPE-CM EIDF TERMINATIONS, OWNER TO PROVIDE F/UTP AND UTP PATCH CORDS TO REACH PHILIPS HARDWARE IN IDF.
7. COORDINATE BAS GATEWAY OUTLET LOCATIONS WITH MECHANICAL/CONTROLS CONTRACTOR PRIOR TO INSTALLATION.BY COMMUNICATIONS CONTRACTOR.

REFERENCE SYMBOLS

REFER / SHT # — GENERAL REFERENCE DESIGNATES SHEET NUMBER

DET # / SHT # — DETAIL REFERENCE TOP DESIGNATES DETAIL NUMBER BOTTOM DESIGNATES SHEET NUMBER

/ SHT # — SECTION REFERENCE TOP DESIGNATES SECTION NUMBER BOTTOM DESIGNATES SHEET NUMBER

ELEVATION SYMBOL

NAME / # — EQUIPMENT NAME AND NUMBER

— LAB EQUIPMENT NUMBER

— KEYNOTE NUMBER

— REVISION NUMBER

— CONSTRUCTION BULLETIN NUMBER

NEW CONNECTION TO EXISTING

ABBREVIATIONS

3.5mm - MINIATURE TIP-RING-SLEEVE CONNECTOR
8Ω - 8 OHM SPEAKER LEVEL AUDIO
25V - CONSTANT VOLTAGE SPEAKER LEVEL AUDIO-25V
70V - CONSTANT VOLTAGE SPEAKER LEVEL AUDIO-70V
100V - CONSTANT VOLTAGE SPEAKER LEVEL AUDIO-100V

A - AMPERES
ABV - ABOVE
AC - ABOVE CEILING
ACP - ACCESS CONTROL PANEL
ACT - ACOUSTICAL CEILING TILE
AFF - ABOVE FINISHED FLOOR
ALT - ALTERNATE
AP - ACCESS POINT
ARCH - ARCHITECTURAL
ASC - ABOVE SUSPENDED CEILING
AUTO - AUTOMATIC
AV - AUDIOVISUAL
AVC - AUDIOVISUAL CONTRACTOR
AWG - AMERICAN WIRE GAUGE

BAS - BUILDING AUTOMATION SYSTEM
BCS - BUILDING CONTROL SYSTEM
BEF - BUILDING ENTRANCE FACILITY
BFC - BELOW FINISH CEILING
BFL - BELOW FLOOR LEVEL
BLDG - BUILDING
BMS - BUILDING MANAGEMENT SYSTEM
BU - BASE UNIT

C - CONDUIT
CAB - CABINET
CAT - CATEGORY
CATV - COMMUNITY ACCESS TELEVISION
CCTV - CLOSED CIRCUIT TELEVISION
CFCI - CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
CLG - CEILING
CO - CONDUIT ONLY
CONTR - CONTRACTOR
CORR - CORRIDOR
CP - CONSOLIDATION POINT
CT - CABLE TRAY
CU - COPPER
CV - COMPOSITE VIDEO

D - DATA
DAS - DISTRIBUTED ANTENNA SYSTEM
DB - DIRECT BURIAL
DC - DIRECT CURRENT
DED - DEDICATED
DET - DETAIL
DIA - DIAMETER
DIG - DIGITAL
DN - DOWN

EC - ELECTRICAL CONTRACTOR
EDB - ELECTRIC DUCT BANK
EF - ENTRANCE FACILITY
EG - EQUIPMENT GROUND
EIDF - EQUIPMENT INTERMEDIATE DISTRIBUTION FACILITY
EJ - EXPANSION JOINT
ELEC - ELECTRIC / ELECTRICAL
ELEV - ELEVATOR
EMER - EMERGENCY
EMI - ELECTROMAGNETIC INTERFERENCE
EMT - ELECTRICAL METALLIC TUBING
EQ - EQUAL
EQUIP - EQUIPMENT
ER - EQUIPMENT ROOM
ET - ELAPSED TIMER
ETR - EXISTING TO REMAIN

F/FC - FLUSH WITH FINISHED CEILING
F/FF - FLUSH WITH FINISHED FLOOR
F/FW - FLUSH WITH FINISHED WALL
FA - FIRE ALARM
FACP - FIRE ALARM CONTROL PANEL
FATC - FIRE ALARM TERMINAL CABINET
FB - FLOOR BOX
FL - AT FLOOR LINE
FLEX - FLEXIBLE / FLEXIBLE CONDUIT
FLR - FLOOR
FO - FIBER OPTIC
FOC - FIBER OPTIC CABLE / FACE OF COLUMN
FOE - FIBER OPTIC ENCLOSURE

G - GROUND
GBIC - GIGABIT INTERFACE CONVERTER
GC - GENERAL CONTRACTOR
GND - GROUND
GRC - GALVANIZED RIGID CONDUIT

HH - HANDHOLE
HT - HEIGHT

IC - INSTALLED BY CONTRACTOR
IDF - INTERMEDIATE DISTRIBUTION FACILITY
IH - IMAGE HEIGHT
IMC - INTERMEDIATE METAL CONDUIT
IT - INFORMATION TECHNOLOGY
IW - IMAGE WIDTH

JB - JUNCTION BOX

KO - KNOCK-OUT

LA - LINE LEVEL AUDIO
LAN - LOCAL AREA NETWORK
LGT - LIGHT
L/R - STEREO LINE LEVEL AUDIO
LV - LOW VOLTAGE

MATV - MASTER ANTENNA TELEVISION
MC - MECHANICAL CONTRACTOR
MDF - MAIN DISTRIBUTION FACILITY
MER - MAIN EQUIPMENT ROOM
MH - MAINTENANCE HOLE
MIC - MICROPHONE LEVEL AUDIO
MM - MULTIMODE
MP - MUSIC & PAGE
MTD - MOUNTED
MTG - MOUNTING
MTG HGT - MOUNTING HEIGHT

NA - NOT APPLICABLE
NC - NEW CONNECTION / NORMALLY CLOSED
NIC - NOT IN CONTRACT
NO - NORMALLY OPEN
NTS - NOT TO SCALE

OC - ON CENTER
OFCI - OWNER FURNISHED CONTRACTOR INSTALLED
OFOI - OWNER FURNISHED OWNER INSTALLED
OSP - OUTSIDE PLANT

P - POLE
P-P - POINT TO POINT
PA - PUBLIC ADDRESS
PB - PULL BOX / PUSH-BUTTON
PBX - PRIVATE BRANCH EXCHANGE
PC - PHOTOCELL
PD - PROJECTION DISTANCE
PDU - POWER DISTRIBUTION UNIT
PH - PHASE
PIR - PASSIVE INFRARED DETECTOR
PNL - PANEL
PP - PATCH PANEL
PR - PAIR
PRT - PORT
PS - POWER SUPPLY
PTZ - PAN, TILT, ZOOM
PWR - POWER

QTY - QUANTITY

R - RACK
RC - RELAY CONTACT
REC - RECESSED
RECEP - RECEPTACLE
REL - RELOCATE
REQD - REQUIRED
RGBHV - RED, GREEN, BLUE, HORIZONTAL SYNC, VERTICAL SYNC
RS - RECOMMENDED STANDARD
RS-232 - EIA STANDARD RS-232-C (RECOMMENDED STANDARD 232)
RSVD - RESERVED
RU - RACK UNIT

SHT - SHEET
SIG - SIGNAL
SIM - SIMILAR
SIO - STANDARD INFORMATION OUTLET
SM - SINGLE MODE
SPEC - SPECIFICATION
SPK - SPEAKER
STD - STANDARD
STA - STATION
SW - SWITCH
SYS - SYSTEM

TBB - TELECOMMUNICATIONS BACKBONE
TELE - TELECOMMUNICATIONS
TELECOM- TELECOMMUNICATIONS
TFA - TO FLOOR ABOVE
TFB - TO FLOOR BELOW
T(M)GB - TELECOMMUNICATIONS (MAIN) GROUND BUSBAR.
TO - TELECOMMUNICATIONS OUTLET
TP - TAMPER PROOF
TR - TELECOM ROOM
TS - TAMPER SWITCH
TV - TELEVISION
TYP - TYPICAL

UC - UNDER COUNTER
UF - UNDER FLOOR
UG - UNDERGROUND
UON - UNLESS OTHERWISE NOTED
UPS - UNINTERRUPTABLE POWER SUPPLY
USB - UNIVERSAL SERIAL BUS

V - VOICE / VOLTAGE
VGA - VIDEO GRAPHICS ARRAY CONNECTOR
VoIP - VOICE OVER INTERNET PROTOCOL
VP - VIDEO PROJECTOR
VPS - VIDEO PROJECTION SCREEN

W - WIRE / WALL / WATT
W/ - WITH
WAP - WIRELESS ACCESS POINT
WP - WEATHERPROOF
WS - WALL SURFACE
WT - WATER TIGHT

X - EXISTING
XP - EXPLOSION PROOF

YC - S-VIDEO

LINE TYPE LEGEND

IDF/EIDF DIVISION LINE

NURSE CALL

CL — CORRIDOR LIGHT
MOUNTING LOCATION: CEILING

CL — CORRIDOR LIGHT
MOUNTING LOCATION: WALL (3.5" BACK BOX MINIMUM)
MOUNTING HEIGHT: REFER TO ARCHITECTURAL ELEVATION PLANS

LS — LAVATORY EMERGENCY STATION
MOUNTING LOCATION: WALL

SH — SHOWER EMERGENCY STATION
MOUNTING LOCATION: WALL

P1 — PATIENT STATION
MOUNTING LOCATION: FLUSH WALL
MOUNTING HEIGHT: REFER TO VENDOR DRAWINGS

BI — BED INTERFACE UNIT
MOUNTING LOCATION: FLUSH WALL/BOOM

CB — CODE BLUE BUTTON
MOUNTING LOCATION: FLUSH WALL

PB — PUSH BUTTON
MOUNTING LOCATION: FLUSH WALL

HS — STAFF STATION WITH HANDSET
MOUNTING LOCATION: FLUSH WALL

ZP — ZONE LIGHT W/ PIEZO
MOUNTING LOCATION: CEILING

ZL — ZONE LIGHT
MOUNTING LOCATION: CEILING

SL — STAFF EMERGENCY LEVER
MOUNTING LOCATION: FLUSH WALL
MOUNTING HEIGHT: REFER TO VENDOR DRAWINGS

RC — EQUIPMENT RECEPTACLE W/ CALL CORD
MOUNTING LOCATION: WALL
MOUNTING HEIGHT: 48" "AFF

SS — STAFF STATION
MOUNTING LOCATION: WALL
MOUNTING HEIGHT: 48" "AFF

CT — CENTRAK STAR ACCESS POINT
MOUNTING LOCATION: CEILING
NURSE CALL: WAO - REFER TO SCHEDULE THIS SHEET

MS — MASTER STATION (WITH HANDSET)
MOUNTING LOCATION: CASEWORK OR ABOVE BACKSPLASH, (DESKTOP IF NOTED)
NURSE CALL: MS - REFER TO SCHEDULE THIS SHEET

ASSEMBLIES

3

NOTE: REFER TO SHEET T609 FOR ADDITIONAL INFORMATION.
COORDINATE WITH WITH VENDOR DRAWINGS PRIOR TO INSTALLATION.
ALL RCB ENCLOSURES ARE OFCI AND SHALL BE INCLUDED IN THIS PHASE.

N1 — ASSEMBLY 1
ABOVE CEILING MOUNTING LOCATIONS:
ROOM CONTROL BOARD - ABOVE CEILING ADJACENT TO DOOR CONTROLLER
CORRIDOR LIGHT - FLUSH WALL U.N.O
NURSE CALL: WAO - REFER TO SCHEDULE THIS SHEET
MOUNTING HEIGHT:
ROOM BOARD - FIELD VERIFY
CORRIDOR LIGHT - REFER TO ARCHITECTURAL

N2 — ASSEMBLY 2
ABOVE CEILING MOUNTING LOCATIONS:
ROOM BOARD - ABOVE CEILING ADJACENT TO DOOR CONTROLLER
CORRIDOR LIGHT - FLUSH WALL U.N.O
ZONE LIGHT - CEILING
NURSE CALL WAO: - REFER TO SCHEDULE THIS SHEET
MOUNTING HEIGHT:
ROOM BOARD - FIELD VERIFY
CORRIDOR LIGHT - REFER TO ARCHITECTURAL ELEVATIONS
ZONE LIGHT - REFER TO ARCHITECTURAL ELEVATIONS

N3 — ASSEMBLY 3
ABOVE CEILING MOUNTING LOCATIONS:
ROOM BOARD - ABOVE CEILING ADJACENT TO DOOR CONTROLLER
CORRIDOR LIGHT - FLUSH WALL U.N.O
ZONE LIGHT - CEILING
NURSE CALL: WAO - REFER TO SCHEDULE THIS SHEET
MOUNTING HEIGHT:
ROOM BOARD - FIELD VERIFY
CORRIDOR LIGHT - REFER TO ARCHITECTURAL ELEVATIONS
ZONE LIGHT - REFER TO ARCHITECTURAL ELEVATIONS

N4 — ASSEMBLY 4
MOUNTING LOCATION:
ROOM BOARD - ABOVE CEILING ADJACENT TO DOOR CONTROLLER
CORRIDOR LIGHT - FLUSH WALL U.N.O
ZONE LIGHT - CEILING
NURSE CALL: WAO - REFER TO SCHEDULE THIS SHEET
MOUNTING HEIGHT:
ROOM BOARD - FIELD VERIFY
CORRIDOR LIGHT - REFER TO ARCHITECTURAL ELEVATIONS
ZONE LIGHT - REFER TO ARCHITECTURAL ELEVATIONS

GBBN

PROJECT ARCHITECT
609 West Main Street
Louisville, KY 40202
502.583.0700
GBBN.COM

UK HealthCare

Renovate/Upgrade
UK Healthcare
Facilities
Pavilion A 5th Floor
Project Number: 2402.9

OWNER
University of Kentucky
222 Peterson Service Building
Lexington, Kentucky 40506

CONSTRUCTION MANAGER
Turner Construction Company
588 Leestown Road Suite 130-300
Lexington, KY 40511
859.421.4913

CONSULTANTS

MEP CONSULTANT
AEI Affiliated Engineers, Inc.
10 South LaSalle Street, Suite 2700
Chicago, IL 60603
312.977.2800

MEDICAL EQUIPMENT
BSA Life Structures
9365 Counselors Row #300
Indianapolis, IN 46240
317.819.7878

Pavilion A 5th Floor PAVILION A, 1000 S. LIMESTONE, LEXINGTON, KY 40536

DRAWING ISSUE

CONTRACT DOCUMENTS

NO	DATE	DESCRIPTION
1	07.17.20	DESIGN DEVELOPMENT
2	10.27.20	CONTRACT DOCUMENTS
3	01.07.21	ADDENDUM 04

DRAWING TITLE

TECHNOLOGY SYMBOLS AND ABBREVIATIONS

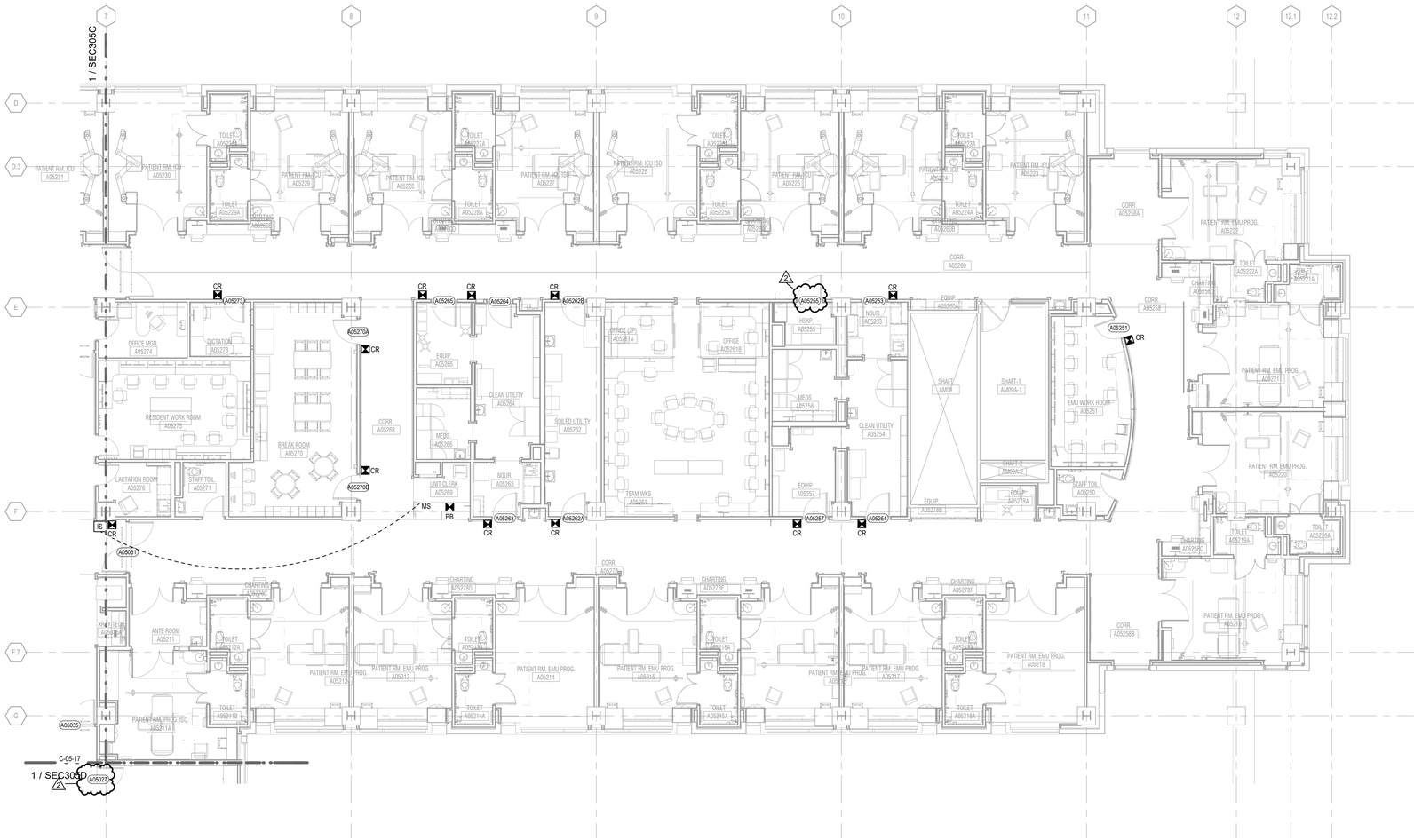
SEAL

JOB NUMBER

13703.01

T000

C:\Users\kodonnell\Documents\Revit 2020 Local Copy\20736_UK-5_12_MEP20_kodonnellYV7N6.rvt
1/6/2021 6:48:44 PM



1 LEVEL 05 SECURITY FLOOR PLAN - AREA A

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

PROJECT ARCHITECT
609 West Main Street
Louisville, KY 40202
502.583.0700
GBBN.COM

UK HealthCare

Renovate/Upgrade
UK Healthcare
Facilities
Pavilion A 5th Floor
Project Number: 2402.9

OWNER

University of Kentucky
222 Peterson Service Building
Lexington, Kentucky 40506

CONSTRUCTION MANAGER

Turner Construction Company
588 Leestown Road Suite 130-300
Lexington, KY 40511
859.421.4913

CONSULTANTS

MEP CONSULTANT
AEI Affiliated Engineers, Inc.
10 South LaSalle Street, Suite 2700
Chicago, IL 60603
312.977.2800

MEDICAL EQUIPMENT
BSA Life Structures
9365 Counselors Row #300
Indianapolis, IN 46240
317.819.7878

Pavilion A 5th Floor PAVILION A, 1000 S. LIMESTONE, LEXINGTON, KY 40536

DRAWING ISSUE

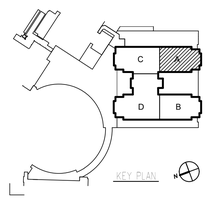
CONTRACT DOCUMENTS

NO	DATE	DESCRIPTION
1	10.27.20	CONTRACT DOCUMENTS
2	01.07.21	ADDENDUM 04

DRAWING TITLE

LEVEL 05 SECURITY FLOOR PLAN - AREA A

SEAL



JOB NUMBER

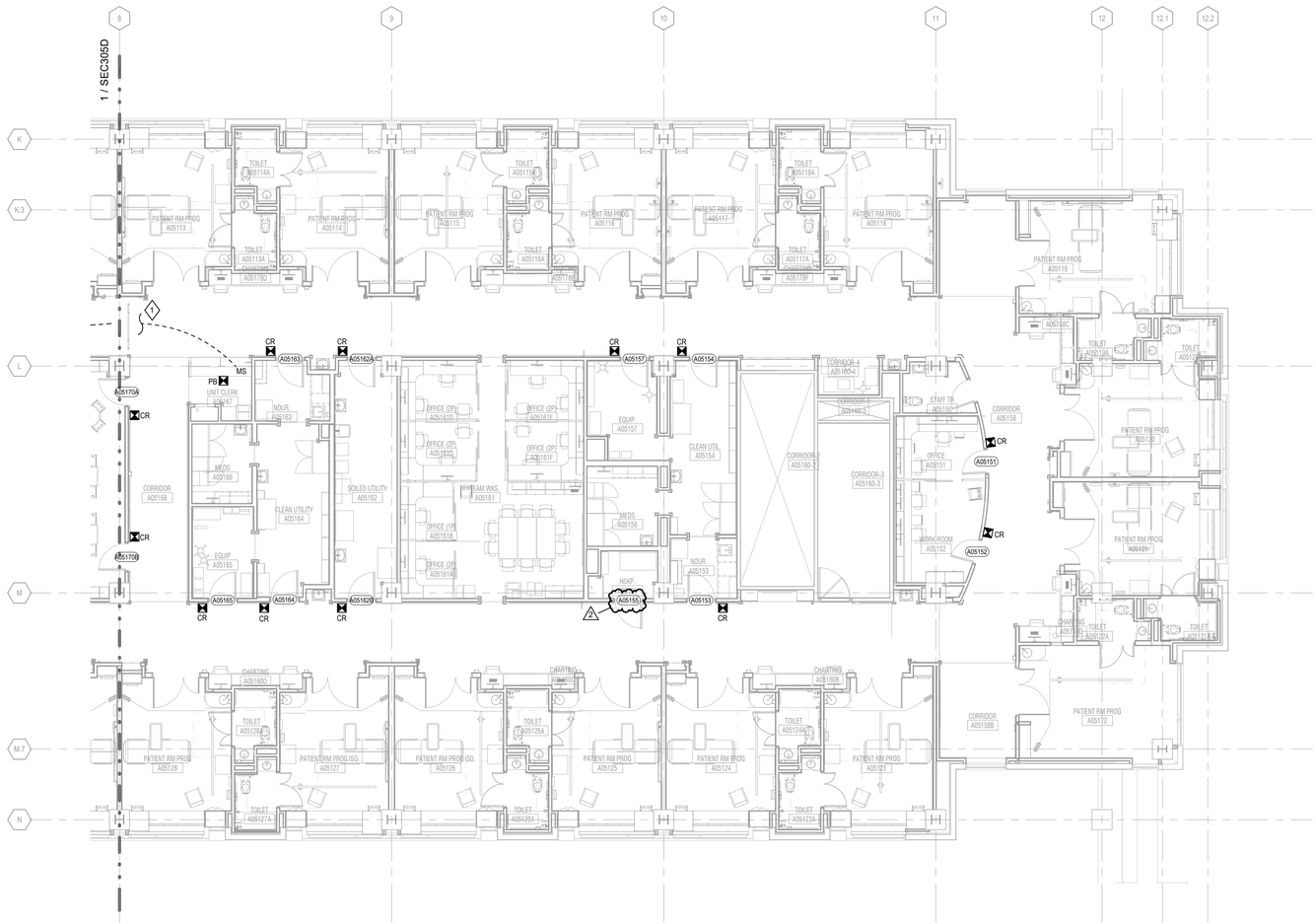
13703.01

SEC305A

1/4/2021 7:58:28 PM C:\Users\PMILMAN\OVDocuments\Revit 2020 Local Copy\03735_UK-S_12_MEPH20_pmilmanrevit48PK.rvt

SHEET KEYNOTES

1 REFER TO SHEET SEC305D FOR CONTINUATION.



1 LEVEL 05 SECURITY FLOOR PLAN - AREA B

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

PROJECT ARCHITECT
609 West Main Street
Louisville, KY 40202
502.583.0700
GBBN.COM

HealthCare

Renovate/Upgrade
UK Healthcare
Facilities
Pavilion A 5th Floor
Project Number: 2402.9

OWNER

University of Kentucky
222 Peterson Service Building
Lexington, Kentucky 40506

CONSTRUCTION MANAGER

Turner Construction Company
588 Leestown Road Suite 130-300
Lexington, KY 40511
859.421.4913

CONSULTANTS

MEP CONSULTANT
AEI Affiliated Engineers, Inc.
10 South LaSalle Street, Suite 2700
Chicago, IL 60603
312.977.2800

MEDICAL EQUIPMENT
BSA Life Structures
9365 Counselors Row #300
Indianapolis, IN 46240
317.819.7878

Pavilion A 5th Floor PAVILION A, 1000 S. LIMESTONE, LEXINGTON, KY 40536

DRAWING ISSUE

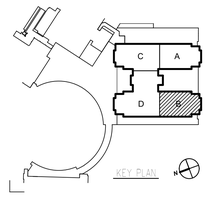
CONTRACT DOCUMENTS

NO	DATE	DESCRIPTION
1	10.27.20	CONTRACT DOCUMENTS
2	01.07.21	ADDENDUM 04

DRAWING TITLE

LEVEL 05 SECURITY FLOOR PLAN - AREA B

SEAL



JOB NUMBER

13703.01

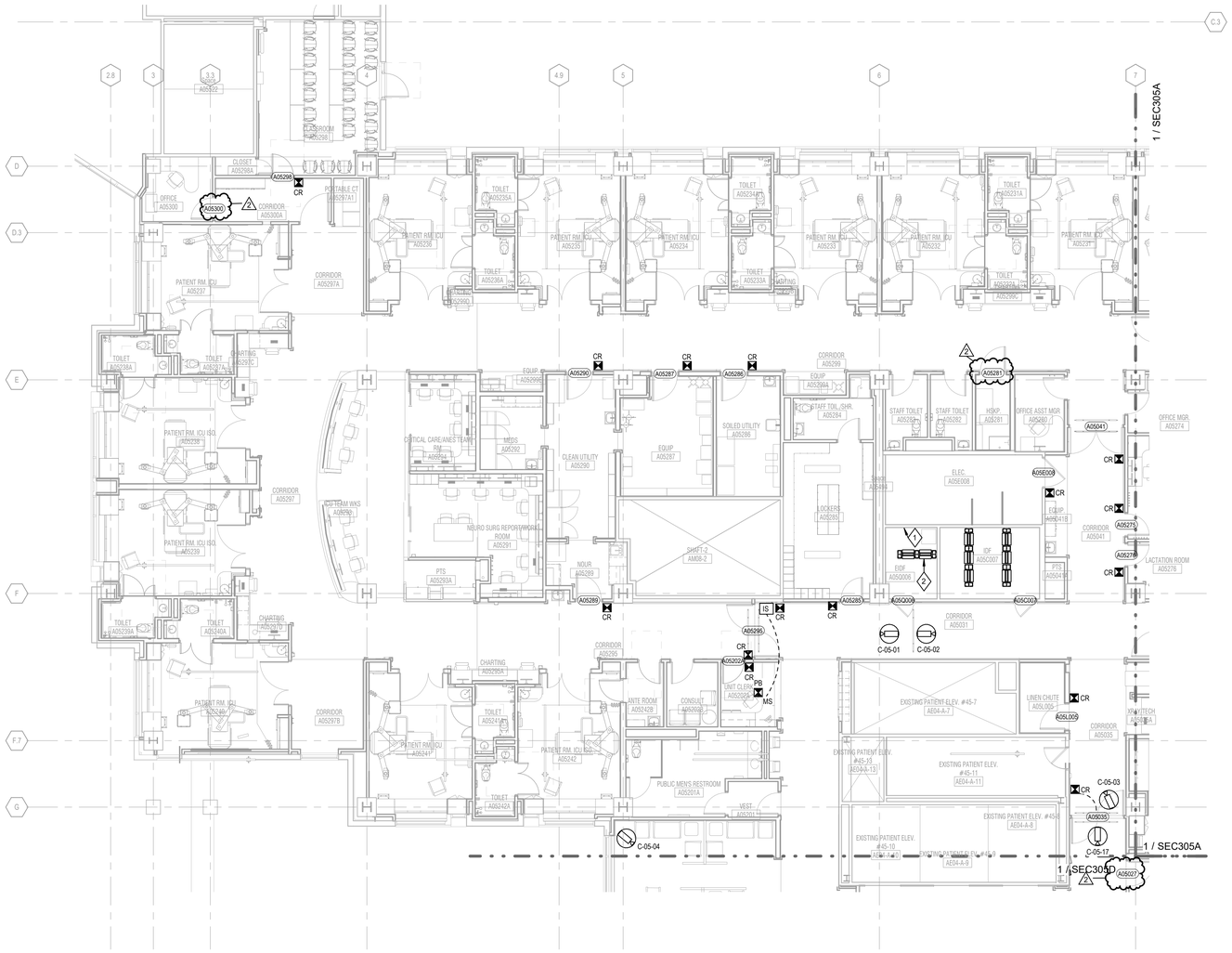
SEC305B

1/4/2021 7:58:36 PM C:\Users\PHILMARCW\Documents\Revit 2020 Local Copy\20736_UK-5_12_MEP100_philmarcw.rvt

SHEET KEYNOTES

1 SECURITY CONTRACTOR TO COORDINATE ACCESS CONTROL INTEGRATION TO CENTRALIZED SMS WITH UKPD PRIOR TO INSTALLATION.

2 SECURITY CONTRACTOR TO COORDINATE CAMERA INTEGRATION TO CENTRALIZED VMS WITH UKPD PRIOR TO INSTALLATION.



1 **LEVEL 05 SECURITY FLOOR PLAN - AREA C**
SCALE: 1/8" = 1'-0"

PROJECT ARCHITECT
609 West Main Street
Louisville, KY 40202
502.583.0700
GBBN.COM

UK HealthCare

Renovate/Upgrade
UK Healthcare
Facilities
Pavilion A 5th Floor
Project Number: 2402.9

OWNER
University of Kentucky
222 Peterson Service Building
Lexington, Kentucky 40506

CONSTRUCTION MANAGER
Turner Construction Company
588 Leestown Road Suite 130-300
Lexington, KY 40511
859.421.4913

CONSULTANTS

MEP CONSULTANT
AEI Affiliated Engineers, Inc.
10 South LaSalle Street, Suite 2700
Chicago, IL 60603
312.977.2800

MEDICAL EQUIPMENT
BSA Life Structures
9365 Counselors Row #300
Indianapolis, IN 46240
317.819.7878

Pavilion A 5th Floor PAVILION A, 1000 S. LIMESTONE, LEXINGTON, KY 40536

DRAWING ISSUE

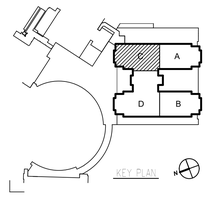
CONTRACT DOCUMENTS

NO	DATE	DESCRIPTION
1	10.27.20	CONTRACT DOCUMENTS
2	01.07.21	ADDENDUM 04

DRAWING TITLE

LEVEL 05 SECURITY FLOOR PLAN - AREA C

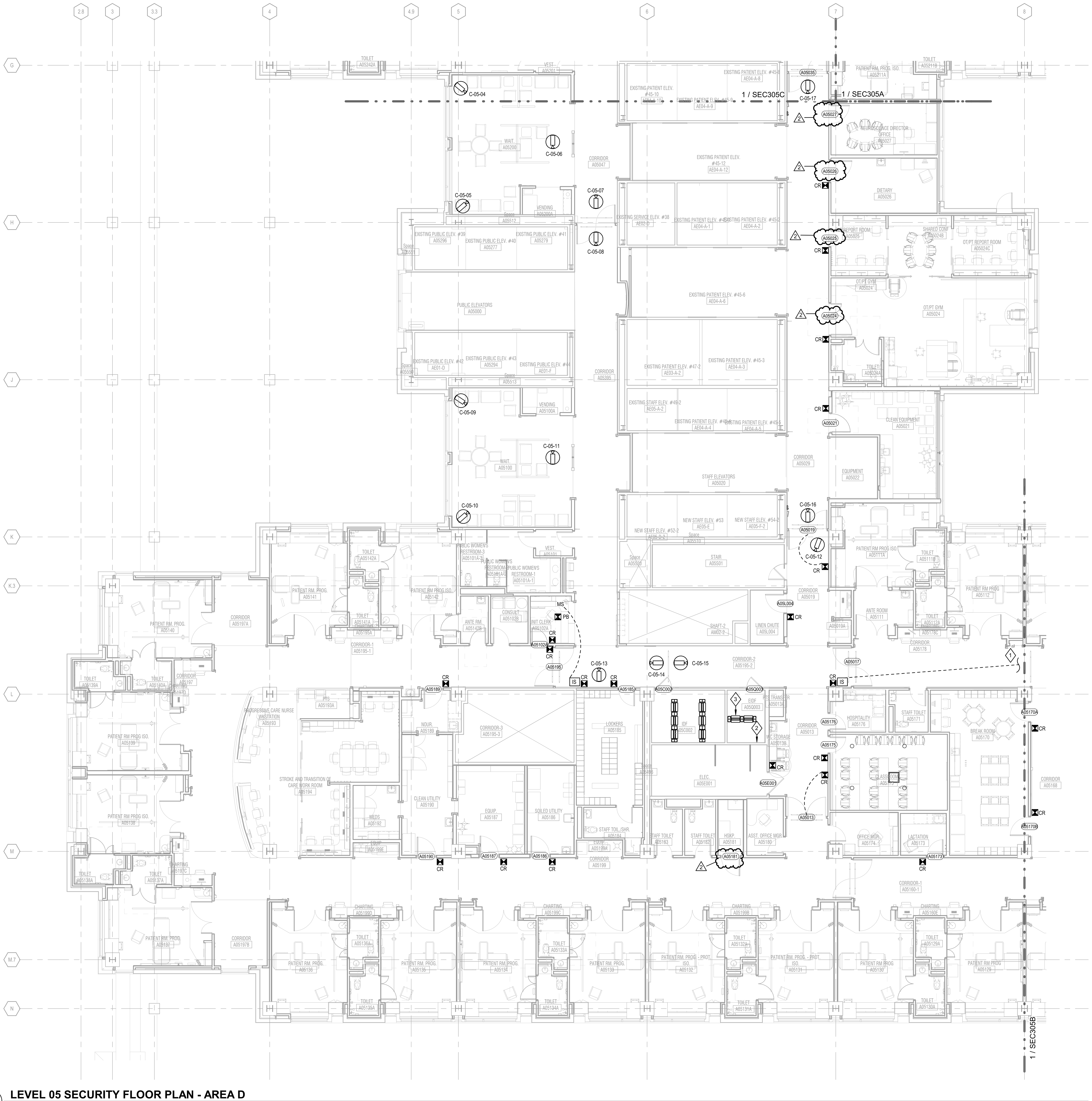
SEAL



JOB NUMBER
13703.01

SEC305C

1/4/2021 7:58:44 PM C:\Users\PHILNAMON\Documents\Revit 2020 Local Copy\20736_UK-5_12_MEPhD_philnamonvwk4PX.rvt



1 LEVEL 05 SECURITY FLOOR PLAN - AREA D

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

SHEET KEYNOTES

1. REFER TO SHEET SEC305B FOR CONTINUATION.
2. SECURITY CONTRACTOR TO COORDINATE ACCESS CONTROL INTEGRATION TO CENTRALIZED SMS WITH UKPD PRIOR TO INSTALLATION.
3. SECURITY CONTRACTOR TO COORDINATE CAMERA INTEGRATION TO CENTRALIZED VMS WITH UKPD PRIOR TO INSTALLATION.

GBBN

PROJECT ARCHITECT

609 West Main Street
Louisville, KY 40202
502.583.0700

GBBN.COM

UK HealthCare

Renovate/Upgrade
UK Healthcare
Facilities
Pavilion A 5th Floor
Project Number: 2402.9

Pavilion A 5th Floor PAVILION A, 1000 S. LIMESTONE, LEXINGTON, KY 40536

OWNER

University of Kentucky
222 Peterson Service Building
Lexington, Kentucky 40506

CONSTRUCTION MANAGER

Turner Construction Company
588 Leestown Road Suite 130-300
Lexington, KY 40511
859.421.4913

CONSULTANTS

MEP CONSULTANT

AEI Affiliated Engineers, Inc.
10 South LaSalle Street, Suite 2700
Chicago, IL 60603
312.977.2800

MEDICAL EQUIPMENT

BSA Life Structures
9365 Counselors Row #300
Indianapolis, IN 46240
317.819.7878

DRAWING ISSUE

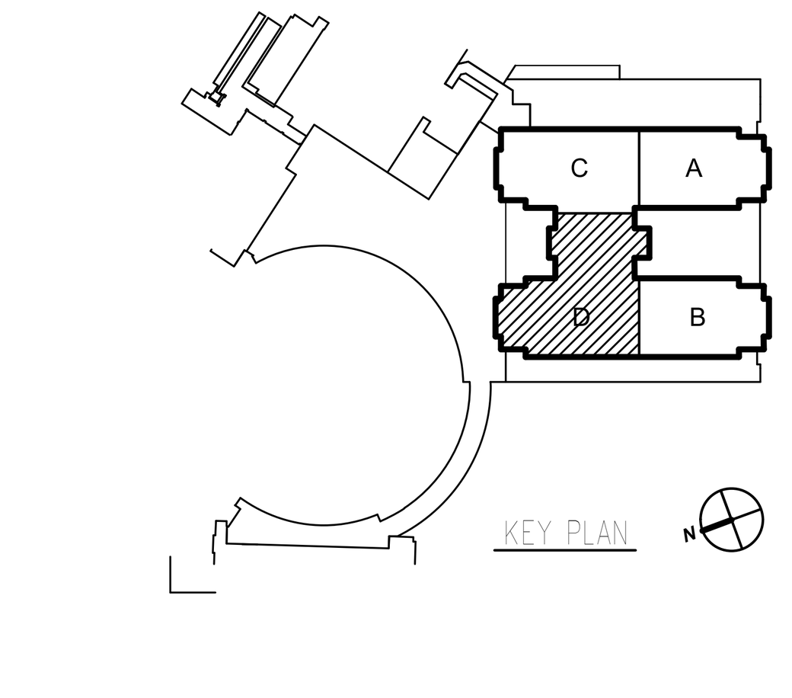
CONTRACT DOCUMENTS

NO	DATE	DESCRIPTION
1	10.27.20	CONTRACT DOCUMENTS
2	01.07.21	ADDENDUM 04

DRAWING TITLE

LEVEL 05 SECURITY FLOOR PLAN - AREA D

SEAL



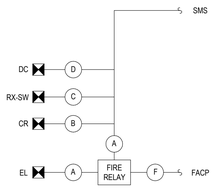
JOB NUMBER

13703.01

SEC305D

C:\Users\PMILNAMOW\Documents\Revit 2020 Local Copy\20736_UK-5_12_MEPr20_pmilnamowA48FK.rvt

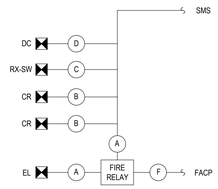
1/4/2021 7:58:56 PM



3 ACCESS CONTROL RISER - AA

SCALE: 3/16" = 1'-0"

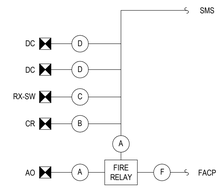
EIDF A05Q006	EIDF A05Q003
A05251	A05026
A05253	A05L004
A05254	A05021
A05257	A05025
A05263	A05151
A05264	A05152
A05265	A05153
A05273	A05154
A05275	A05157
A05276	A05162A
A05285	A05162B
A05286	A05163
A05287	A05164
A05289	A05165
A05290	A05170A
A05298	A05170B
A05262A	A05173
A05262B	A05175
A05270A	A05185
A05270B	A05186
A05C007	A05187
A05E008	A05189
A05L005	A05190
A05Q006	A05E001



2 ACCESS CONTROL RISER - BB

SCALE: 3/16" = 1'-0"

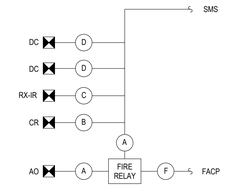
EIDF A05Q006	EIDF A05Q003
A05202A	A05102A



1 ACCESS CONTROL RISER - CC

SCALE: 3/16" = 1'-0"

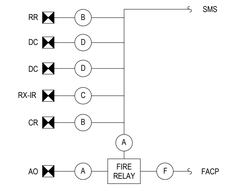
EIDF A05Q006	EIDF A05Q003
A05041	A05013
	A05024



6 ACCESS CONTROL RISER - DD

SCALE: 3/16" = 1'-0"

EIDF A05Q006	EIDF A05Q003
A05035	A05019



5 ACCESS CONTROL RISER - EE

SCALE: 3/16" = 1'-0"

EIDF A05Q006	EIDF A05Q003
A05031	A05017
A05295	A05195

4 ACCESS CONTROL RISER - FF

SCALE: 3/16" = 1'-0"

EIDF A05Q006	EIDF A05Q003
	A05176

LEGEND

A	18-2 SHIELDED CABLE	RR	REMOTE RELEASE
B	18-5 SHIELDED CABLE	CR	CARD READER
C	18-4 SHIELDED CABLE	EL	ELECTRIFIED LOCK/STRIKE BY DIV. 8
D	22-2 SHIELDED CABLE	RX-SW	REQUEST TO EXIT - HARDWARE INTEGRATED SWITCH BY DIV. 8
F	FIRE ALARM CIRCUIT BY DIVISION 26	RX-IR	OPTICAL REQUEST TO EXIT BY DIV. 8
		DC	DOOR CONTACT BY DIV. 8
		AO	AUTO OPERATOR BY DIV. 8
		SMS	SECURITY MANAGEMENT SYSTEM
		FACP	FIRE ALARM CONTROL PANEL
			NOTE: FIRE RELAY BY DIVISION 26

PROJECT ARCHITECT
609 West Main Street
Louisville, KY 40202
502.583.0700
GBBN.COM

HealthCare

Renovate/Upgrade
UK Healthcare
Facilities
Pavilion A 5th Floor
Project Number: 2402.9

OWNER

University of Kentucky
222 Peterson Service Building
Lexington, Kentucky 40506

CONSTRUCTION MANAGER

Turner Construction Company
588 Leestown Road Suite 130-300
Lexington, KY 40511
859.421.4913

CONSULTANTS

MEP CONSULTANT
AEI Affiliated Engineers, Inc.
10 South LaSalle Street, Suite 2700
Chicago, IL 60603
312.977.2800

MEDICAL EQUIPMENT
BSA Life Structures
9365 Counselors Row #300
Indianapolis, IN 46240
317.819.7878

Pavilion A 5th Floor PAVILION A, 1000 S. LIMESTONE, LEXINGTON, KY 40536

DRAWING ISSUE

CONTRACT DOCUMENTS

NO	DATE	DESCRIPTION
1	10.27.20	CONTRACT DOCUMENTS
2	01.07.21	ADDENDUM 04

DRAWING TITLE

SECURITY ACCESS CONTROL RISER

SEAL

JOB NUMBER

13703.01

SEC502

1/4/2021 1:58:59 PM C:\Users\PMILMAN\Documents\Revit 2020 Local Copy\20736_UK-5_12_MEP400_pmilmanrowMEPC.rvt

UNIVERSITY OF KENTUCKY
Purchasing Division

Written Questions and Answers

CCK-2516-21

#2402.9 Pavilion A – 5th Floor Patient Room Fit-Out - BP-03 - TC-181 through TC-190

No.	Question		Answer
1.	Has an estimated budget, start date, and completion date have been established?	TURNER	See Attachment G for Bid Schedule. The construction estimate for this project is $18 Million.
2.	Request for Subsitution for: Hollow Metal Door (08 11 00) – Metal Products Inc. Flush Wood Doors (08 14 00) – Oshkosh Door Co.	GBBN	No substitutions.
3.	Looks like a simple Flat Panel w/Tegular edge condition. I do see (and I haven't dug deep enough yet) a couple of areas where wood is listed. WPC-1 would be the flat panels. However there are also notes on the RCP (A705D) for an ACOUSTICAL wood panel. Have you seen this clarified anywhere in the specs.? If you look at 5/A721 it shows this falls under spec 09 54 26. However, it shows a different panel within the sub spec. that is not clarified on the detail referenced.	GBBN	09-5426 Hardware veneer ceiling tile (WPC-1) is located at Elevator Lobby A05000. You are correct that (WPC-1) is not acoustic.
4.	Security Control Riser SEC502 lists Access control doors that are not shown on security plans, please clarify that doors listed in riser get access control.	AEI	Please clarify which door numbers are being referred to as not shown on security plans. Refer to door hardware schedule for keypad locations (i.e. housekeeping rooms) Following have been updated in the listing: - A05004 to be A05L004. - A05041 to be A05041. - 5026 refers to Dietary A05026 - A05025 refers to SLP report room A05025 - A05024 refers to OT/PT Gym room A05024

			- DC – only 5176 hospitality to remain on the list.
5.	Please list Aiphone Intercom model that will be approved.	AEI	Owner to approve contractor proposed AiPhone Intercom model. Model to be most recent.
6.	Will all work performed outside of the 5th floor project area required to be off hours? Specifically, will the work associated with the AHU's on the 3rd and 4th level be required to be performed after normal straight time hours?	TURNER	Assume that the work on the 3rd and 4th floor will be on normal working time. This excludes outages. Outages should be bid on off hours.
7.	Should it be assumed that the clean steam piping should be insulated with the same specification as the Low Pressure Steam and Condensate Return?	AEI	Yes
8.	Will the Foamglas, Calcium Silicate, or Polyisocyanurate pre-insulated pipe supports called out in specification section 200529 be a requirement on this project for all insulated pipes 2" and larger? Wood inserts or Fiberglass H-blocks have been accepted on similar projects in the past and would provide a cost savings if they are accepted on this project in lieu of the pre-insulated pipe supports mentioned above. Please advise.	AEI	Pre-insulated pipe supports are an option. Refer to Part 3 Application for execution requirements. Refer to specification 20 0529, 2.6 Weight Bearing Insulation Inserts for acceptable products.
9.	Substitution Request: Radiant Ceiling Panels - VULCAN as Acceptable along with Aero Tech for Radiant Ceiling Panels	AEI	Vulcan is an acceptable manufacturer of radiant ceiling panels. Specification section 23 8314 has been added in Addendum 03
10.	Substitution Request: Structural Subfloor - Megaboard	GBBN	There is no structural subfloor required for this project.
11.	HVAC Piping: On drawing M903, note 8 of the terminal unit schedule says piping to be ¾" to all reheat coils greater than 1.5gpm. are we to assume that piping run outs to all reheat coils 1.5gpm or less shall be ½"?	AEI	Correct. Refer to General Note 1 on all mechanical piping sheets
12.	HVAC Piping: Piping run out sizes where not shown for radiant panels or fin tube. Shall we assume anything 1.5gpm or less will be ½" and anything greater than 1.5gpm will be ¾"?	AEI	Refer to General Notes 1 and 3 on all mechanical piping sheets. Radiant panels are terminal heating devices. Runouts to FTR shall be 1".
13.	HVAC Piping: Can pipe sizes and numbers of coils be given for the pre-purchased AHUs?	AEI	See keyed notes on level 3 mechanical plans.

14.	HVAC Piping: In the chemical treatment spec, is says to maintain 50% ethylene glycol in the glycol system. Is the chilled water a glycol system? If so is it 50% as stated in section 1.5 or is it 40% as stated in section 3.3?	AEI	There is no glycol system piping included in this project.
15.	HVAC Piping: To make the chilled water tie-in for the new AHUs, we will need to drain the existing system. If this system contains glycol can an estimated quantity of how much needs to be drained and refilled in the existing system? Or will the university take care of that re-fill?	AEI	Chilled water system does not contain glycol.
16.	Plumbing: Item #68 in the project general requirements says the plumbing contractor shall provide additional urinal, sink, toilet, and water heater for temporary men's room. Is this just required on the 2nd floor or is it required on the 12th floor as well?	Turner	This work will only be provided and installed on the 2nd floor. It is not needed for the 12th floor.
17.	Regarding specification 28 23 00 page 4, section D, 1. VMS Gateway. It is our understanding that UK has stopped using individual appliances for its video storage, instead preferring a virtual server. Can you confirm if an appliance is required for this project?	AEI	Contractor to coordinate with UK ITS and UKPD for central monitoring and camera additions to existing system. Refer to section 2.4
18.	Sheet E303D. Supply and return fans 2B for BT-51-AW are fed from panel 3EHS2. Please provide a location for this panel.	AEI	Existing Panel 3EHS2 is located at column lines 'J' between '9' and '10'. Will include existing location in subsequent revision for clarity.
19.	Spec section 27-0528.36-1.2-B-2 for related work refers to section 26-0536 "cable trays for electrical systems". Section 26-0536 is not included in the division 26 specifications. Could you include a specification for cable tray?	AEI	Specifications included in BP-3_Addendum 4
20.	Sheet T000. Nurse call assemblies note says to refer to sheet T700 for additional information. Sheet T700 was not issued as part of this drawing package.	AEI	Sheet T000 has been updated with the correct sheet number referenced. The correct sheet number is T609
22.	Sheets E105A, 105B, 105C and 105D. Except for sheet note #5 on sheets E105A, E105B, and 105C all of these demo sheets appear to be identical to the demo sheets of the previous bid package. Is the work on these sheets in this bid package or is this work being done by the demo contractors?	AEI/TURNER	Changes from previous bid package are to keynote #2, "Relocate existing duct smoke detector to new ductwork" and keynote #5 "Light switch serving exterior fixtures is existing to be relocated to finished wall elevation." It is the intent to have TC-190 to do the work associated with

			note 5 on the electrical demolition sheets. It is also the intention for the TC-190 contractor to complete demolition needed for electrical and technology items in the areas outside of the 5th floor and item 18 under their scope of work. TC-180 will be responsible for the initial demolition and rework of existing electrical and fire alarm shown on the 5th floor electrical demolition drawings included in their package.
23.	Attachment "B" TC-190 Scope of work, Item #22A says in part "Provide and maintain two (2) Audio Visual devices per work area". These AV's were also included in the previous demo package as item #21A of Attachment "B" (addendum #1) TC-180 scope of work. Do we include these again as part of this scope of work, or is this a duplicate?	TURNER	TC-190's scope will be revised to remove providing the audio visual devices. These were provided in TC-180's contract.
24.	Attachment "B" TC-190 Scope of work, Item #22C says in part "Contractor shall refeed fire alarm wire in conduit to stairwells 01, 02, 04, and 05". This conduit was also included in the previous demo package as item #21C of Attachment "B" (addendum #1) TC-180 scope of work. Was this work removed from the previous bid package?	TURNER	TC-190's scope will be revised to only include the work that will be associated with their scope.
25.	Drawing V1.1 (Nurse call lay-out drawing). The resolution on this drawing makes it impossible to read the device symbols in the legend and on the drawing. Can we get a drawing that can be read when zoomed in to see the devices?	GBBN	Sheet re-issued BP-3_Addendum 4
26.	Sheet E313AD. The panel called out to feed the 2 exhaust fans on the 13th floor roof is 15ND2. I could not find this panel on the 15th floor.	AEI	15NHD1 and 15NHD2 are located in electrical panel ELEC A15003. 15NHD1 should feed the east fan and 15NHD2 should feed the west fan. See addendum #4 for revisions in scope.
27.	Sheet E313AD. Is there an existing pathway the get to the 13th floor roof exhaust fans from the 15th floor or can you clarify this pathway?	AEI/TURNER	Yes, ¾" conduit from the panels to the fan locations is existing. See addendum #4 for revisions.

			Pathway and wire will be installed in TC-180's contract. TC-190 shall include disconnecting the temporary exhaust fan and connecting the permanent exhaust fans.
28.	Sheet E313AD. Are there existing breakers in the 15th floor panel to feed the 2 new exhaust fans on the 13th floor?	AEI/ TURNER	Yes. Breakers are existing. See addendum #4 for revisions. Pathway, wire, and breakers will be installed in TC-180's contract.
29.	Is there a deck height for the existing space?	GBBN	15'-4" is floor to floor height.
30.	Which trade contractor is responsible for the head of wall fire stopping and safing at rated CMU walls?	TURNER	TC-184 drywall and ceilings is responsible for all top of wall installations. Per the documents there are no CMU walls on this 5th floor project.
31.	Window Type 11 – Does this set of windows required integral blinds? If so, Glass Type 50 or Glass Type 51	GBBN	No integral blinds at Frame Type 11.
32.	Window Type 5 – Which type of integral blinds do these windows required? Glass Type 50 or Glass Type 51	GBBN	For Frame Type-5 with integral blinds: Provide GL 51 (clear) at A05219B, A05222B, A05237B & A05240B. Provide GL-50 (patterned) at A05119B, A05122B, A05137B & A05140B.
33.	There are a few openings on the door schedule that are missing a frame type: A05131, A05132, A05138, A05139, A05133, A05134, A05135, A05136, A05137, A05140, A05141.	GBBN	See BP-3_Addendum 4
34.	Please provide hardware set 241. Openings A05S01, A05S02, A05S05A, and A05S05A in the existing door schedule are listed as having hardware set 241, but it is not included in spec section 087100.1.	GBBN	See BP-3_Addendum 4
35.	Please provide hardware set 255. Openings A05E001 and A05E008 in the existing door schedule are listed as having hardware set 255, but it is not included in spec section 087100.1.	GBBN	Hardware set 255 was added in BP-3_Addendum 2
36.	Hardware set 113A calls for 2 shim kits and 4 exit devices. Should this be 4 shim kits and 2 exit devices?	GBBN	Correct. 4 shim kits and 2 exit devices
37.	Please clarify if wood door type WD-1A (spec sections 08 1400 and 06 4000) should be plain sliced or quarter sawn.	GBBN	Quarter Sawn

38.	Will any doors need to be wood type WD-2? Spec section 08 1400 and Plan page A621 call for all doors to be WD-1A unless noted otherwise and I do not see any notes calling for doors to be anything else.	GBBN	There are no WD-2 doors on this floor.
39.	Substitution Request: Include Danfoss as an Acceptable Manufacturer for the VFDs: Section 20-0514 Part 2 Products Paragraph 2.1.A	AEI	Danfoss will be considered as an acceptable manufacturer for VFDs provided they meet all requirements of spec section 20 0514
40.	The instructions for Bidders state that a Bid Bond is required for the UK PAB A 5th Fl Patient Rm Fit-Out. However, Per the TC-189 Scope of Work, G. Work Excluded Payment & Performance Bond. Can you please advise?	TURNER	A bid bond and a payment and performance bond are different. A bid bond is required to submit a bid to the University. The payment and performance bond shall not be included in your cost. See the bid breakout on page 5 of the scope of work. The payment and performance bond to complete the work in the respective scope is to be separated from the total bid amount.
41.	Per the Bid Submittal Requirements page, it states that the TSIB Form 1 of the CCIP Manual is required by the apparent low bidder. I have not been able to locate this form.	TURNER	This has been updated in Addendum 3.
42.	Is the wood paneling shown at the patient rooms on the reflected ceiling plans to be from the 098400 spec, or is that to be architectural casework?	GBBN	Architectural Woodwork – Plastic laminate clad panels – See 1/A393
43	Substitution Request: Include Patton's Medical as an acceptable manufacturer for medical vacuum pumps and air compressor. a. Specs vs. schedule for the vacuum system are inconsistent; want to verify what is needed b. Ethernet Connectivity; our systems have this option included; want to verify if BACnet is needed	AEI	Patton Medical will be considered as an acceptable manufacturer for medical gas equipment provided they meet all requirements of spec section 22 6316 a. Follow schedule. b. BACnet is required.
44.	I have noticed the fixture schedule tag numbers do not match up with the Specifications It appears the schedule is consistent with the drawings. Please advise	AEI	Refer to the fixture schedule for specific fixture requirements and to spec section 26 5100 Interior Lighting for additional info. Fixture tag numbers do not appear in the specs
45.	TC-181, Item 60 details the maintenance of a platform installed by TC-180. Does maintenance include rental costs?	TURNER	Yes. This includes the rental costs. The general requirements will be revised to specify this.

46.	TC-181 Item 61 details the maintenance and removal of various components of the delivery area provided by TC-180. However, Item H explicitly describes an item to be furnished by TC-181. Kindly clarify which items under Item 61 are to be furnished by TC-181.	TURNER	TC-181 will furnish item 61.H. This item is to remain on site after this contractor's scope of work is complete. TC-181 is to maintain all items as detailed under item 61.