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

IMPORTANT: BID AND ADDENDUM MUST BE RECEIVED BY 5-9-19 @ 3:00 P.M. LEXINGTON, KY TIME

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

Please see the enclosed clarifications for this project.

OFFICIAL APPROVAL
UNIVERSITY OF KENTUCKY

Jim Sutton
Contracting Officer / (859) 257-5406.

SIGNATURE

________________________________________
Typed or Printed Name
UK Interventional Services  
ADDENDUM No. 2  
CCK-2401-19  
4/18/2019

**Item No. 1**  
Re. Form of Proposal TC-160, General Trades, Attachment B, Use attached revised scope of work

**Item No. 2**  
Re: Form of Proposal TC-169, Electrical and Technology, Attachment B; Remove item 17.b and c from this contractors scope of work.

17) Demolition/rework of existing electrical systems
   b) This contractor is to remove the existing, above ceiling transformers in the Peds Endo area and all associated supports, hangers, wiring, etc. Remove all feeds and conduits back to source. Dispose of this equipment properly, the owner does not want these units.
   c) This contractor is to remove the “network of uni-strut” above the existing ceilings in the Peds Endo area and specifically in the new Peds Endo Procedure rooms. All existing uni-strut and otherwise supports, hangers, etc. shall be removed and disposed of.

**Item No. 3**  
Revise Attachment A, 3A page, item ‘C’ and project manual Table of Contents to include Attachment K – CCIP Manual dated March 26, 2019 and include in your scope of work for all trades.

**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 December 5th, 2018
- Attachment “D” IR Outage Request Log
- Attachment “E” Accounting Procedures
- Attachment “F” Percentage Markup Sheet
- Attachment “G” Project Schedule
- Attachment “H” Building Information Modeling/Coordination (BIM)
- Attachment “I” AHU Drawings and Specs (For Reference)
- Attachment “J” HVAC Water Systems Chemical Treating
- Attachment “K” CCIP Manual dated March 26, 2019 (ADD #2)
- Project General Conditions
- Project Special Conditions

**Item No. 4**  
Revise General Requirements to include the following items:

1.A. Onsite project supervision shall have minimum 5 years of active hospital construction experience. Resume’s will be due after low bid is determined.

50.D.1.h) This person to have a minimum of 5 years of active hospital infection control experience.

50.E.1) These persons to have a minimum of 5 years of active hospital construction experience.

**Item No. 5**  
GBBN Architects Addendum No. 02 – include all work scope items, clarifications, etc. as detailed consistent with your trade contract work scope document.
UNIVERSITY OF KENTUCKY
CAPITAL CONSTRUCTION PROCUREMENT SECTION
FORM OF PROPOSAL TC-160 GENERAL TRADES

Project No. 2402.13 Project Title: UK INTERVENTIONAL SERVICES
Purchasing Officer: Jim Sutton

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-2401-19
BID OPENING DATE: May 9th, 2019 (ADD #1)
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.
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-2401-19 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 __________________
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-160 GENERAL TRADES**

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)

ALTERTATES – 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 ______________________
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:**

<table>
<thead>
<tr>
<th>Classification</th>
<th>Base rate</th>
<th>Fringes</th>
<th>Burden</th>
<th>(if)</th>
<th>(SUM)</th>
<th>(SUM)</th>
<th>(SUM)</th>
<th>OH/P %</th>
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</table>
Fill in the following breakdown of costs included in your base bid. Each item shall 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.

<table>
<thead>
<tr>
<th>DESCRIPTION OF WORK</th>
<th>COST INCLUDED IN BID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobilizations (Permits &amp; Fees, Submittals, Engineering)</td>
<td>$______________________________</td>
</tr>
<tr>
<td>Division 2 - Selective Demolition</td>
<td>$______________________________</td>
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<tr>
<td>Division 3 &amp; 4 –Concrete and Masonry (note: MEP concrete EQ. pads by MEP’s)</td>
<td>$______________________________</td>
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<tr>
<td>Division 5, 6 &amp; 7 (Metal Fabrications, Rough Carpentry, Sealants)</td>
<td>$______________________________</td>
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<tr>
<td>Division 8 Hollow Metal, Wood Doors &amp; Hardware (Install) &amp; Glazing (F &amp; I)</td>
<td>$______________________________</td>
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<tr>
<td>ICU / CCU Entrances</td>
<td>$______________________________</td>
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<tr>
<td>Automatic Door Operators</td>
<td>$______________________________</td>
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<tr>
<td>Division 10 Specialties</td>
<td>$______________________________</td>
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<tr>
<td>Division 11 Owner Furnished Medical Equipment</td>
<td>$______________________________</td>
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<tr>
<td>Division 12 Modular Metal Casework</td>
<td>$______________________________</td>
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<tr>
<td>Division 05 Metals</td>
<td>$______________________________</td>
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<tr>
<td>Strut cost per Procedure Room = $__________________________</td>
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<tr>
<td>Healthcare Technology Boom Supports</td>
<td>$______________________________</td>
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<tr>
<td>Infection Control/Yard Boss/General Cleaning</td>
<td>2800 hours x ______ = $________________</td>
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<td>Labor Rate</td>
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<tr>
<td>Water Spill Kit Containment Allowance</td>
<td>$____________ (ADD #2)</td>
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<tr>
<td>Division 14 Conveying Equipment Allowance</td>
<td>$____________ (ADD #2)</td>
</tr>
<tr>
<td>Infection Control Allowance</td>
<td>$____________</td>
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<tr>
<td>Hard IC Barrier Allowance</td>
<td>$____________</td>
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<tr>
<td>3rd Floor AHU Coordination Allowance – Steel, Hand Rails, Misc. Iron</td>
<td>$____________</td>
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<tr>
<td>Covers for Medical Equipment Allowance</td>
<td>$____________</td>
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<tr>
<td>Miyabi Garage Door Allowance</td>
<td>$____________</td>
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<tr>
<td>General Work Requirements</td>
<td>$____________</td>
</tr>
<tr>
<td>Remaining work not listed above, Overhead &amp; Profit (not to exceed 10% of proposal)</td>
<td>$____________</td>
</tr>
</tbody>
</table>

**TOTAL BID AMOUNT (SHOULD MATCH PROPOSAL)** $____________________________

Cost of Performance and Payment Bond

*DO NOT INCLUDE THIS COST IN YOUR BID*
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 General Trades 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 2 - EXISTING CONDITIONS (Partial) as required for this trade and as defined below
         SECTION 02 4100 - DEMOLITION
         SECTION 02 4110 - SELECTIVE DEMOLITION
      DIVISION 3 - CONCRETE (Complete)
         SECTION 03 3000 - CAST-IN-PLACE CONCRETE
      DIVISION 5 – METALS (Complete)
         SECTION 05 1200 - STRUCTURAL STEEL
         SECTION 05 5000 - METAL FABRICATIONS
         SECTION 05 5050 - MEDICAL EQUIPMENT SUPPORT SYSTEMS
      DIVISION 6 - WOODS, PLASTICS & COMPOSITES (Partial)
         SECTION 06 1050 - MISCELLANEOUS ROUGH CARPENTRY
      DIVISION 7 - THERMAL AND MOISTURE PROTECTION (Partial) as…
         SECTION 07 2100 - INSULATION
         SECTION 07 8100 - APPLIED FIREPROOFING
         SECTION 07 8400 - FIRESTOPPING
         SECTION 07 9200 - JOINT SEALANTS
      DIVISION 8 – OPENINGS (Partial)
         SECTION 08 1100  HOLLOW METAL DOORS & FRAMES
         SECTION 08 1400  WOOD DOORS
         SECTION 08 1423  VYNAL CLAD WOOD DOORS (ADD #2)
         SECTION 08 1713  INTEGRATED METAL DOOR OPENINGS ASSEMBLIES (ADD #2)
         SECTION 08 4100  ENTRANCES AND STOREFRONTS (ADD #2)
         SECTION 08 4123  FIRE-RATED GLASS AND FRAMING SYSTEMS (ADD #2)
         SECTION 08 4243  INTESIVE CARE UNIT - CRITICAL CARE UNIT ENTRANCES
SCOPE OF WORK
TC-160 General Trades

SECTION 08 7100 DOOR HARDWARE
SECTION 08 7100.1 DOOR HARDWARE SETS
SECTION 08 7100.2 ELECTRIFIED HARDWARE DEVICE OPERATIONS SCHEDULE
SECTION 08 7113 AUTOMATIC DOOR OPERATORS
SECTION 08 8000 GLAZING

DIVISION 10 – SPECIALTIES
SECTION 10 1100 - VISUAL DISPLAY SURFACES
SECTION 10 1400 - SIGNAGE
SECTION 10 2113 - TOILET COMPARTMENTS
SECTION 10 2120 - CUBICLE CURTAIN TRACK SYSTEMS
SECTION 10 2600 - WALL PROTECTION
SECTION 10 2813 - TOILET ROOM ACCESSORIES
SECTION 10 4400 - FIRE PROTECTION SPECIALTIES
SECTION 10 5113 - METAL LOCKERS
SECTION 10 5116 - WOOD LOCKERS

DIVISION 11 – EQUIPMENT
SECTION 11 7000 - MEDICAL EQUIPMENT
VENDOR SUPPLIED DRAWINGS, DESCRIPTIONS AND SPECS.
(REFER TO VOLUME 4 – EQUIPMENT)

DIVISION 12 – FURNISHINGS
SECTION 12 2400 - ROLLER WINDOW SHADES
SECTION 12 3570 - MODULAR METAL CASEWORK

DIVISION 13 - SPECIAL CONSTRUCTION
SECTION 13 4900 - RADIATION PROTECTION
SECTION 13 4900.2 - RADIATION SHIELDING PLAN-PEDS-ENDO

DIVISION 14 – CONVEYING EQUIPMENT
SECTION 14 2123 – MACHINE ROOM-LESS ELEVATORS
SECTION 14 2123.1 – EXISTING ENTRACNES SHOP DRAWINGS
SECTION 14 2123.2 – EXISTING SIGNALS AND FIXTURE SHOP DRAWINGS
b) Bidder shall also include referenced specification sections listed in above specification sections as necessary to furnish complete work of this trade
c) Subcontractor includes all work indicated in specification COMPLETE, 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.
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) TC-160 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 contractor 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 Contractor shall coordinate/incorporate the MATERIAL IDENTIFICATION CODES (AS RELATED TO THIS SCOPE OF WORK) into their scope of work as shown on the Contract Documents and SECTION 01 6600.

14) This contractor shall provide DEMOLITION & SELECTIVE DEMOLITION (Partial as required for this trade) as shown on the Contract Documents and in accordance with Sections 024100 & 02 4110.
   a) This contractor is NOT responsible for demolition of MEP items. Demo of MEP Items will be done by appropriate Trade Contractor(s).
   b) Remove, repair, and later reinstall… D7
   c) Include demo of existing flooring in existing corridor between existing shells A01260 and A01300
   d) Remove existing door and frame… D3

15) This contractor shall provide CAST-IN-PLACE CONCRETE (COMPLETE) as shown on the Contract Documents and in accordance with Section 03 3000.
   a) Exclude MEP concrete equipment pads. These are by the MEP contractors.

16) This contractor shall provide METAL FABRICATIONS (COMPLETE) as shown on the Contract Documents and in accordance with Section 05 5000.
   a) Refer to documents – Specifically include framing on S001 and S101
      a. Coordinate structure for Equipment Garage with TC-162 Doors and Hardware (2/S001 and 3/S001)
   b) Assume all work to reinforce below slab to be done on 3rd shift/premium time hours.
   c) Include the appropriate fireproofing
   d) Include Division 11 Medical Equipment and Project Manual Volume 4; reference column “Qty F/I” for responsibility. Include ALL associated work for O/C and C/C. Exclude Guldmann overhead support and equipment installation.

17) This contractor shall provide MEDICAL EQUIPMENT SUPPORT SYSTEMS (COMPLETE) as shown on the Contract Documents and in accordance with Section 05 5050.
TC-160 General Trades

SCOPE OF WORK

a) This work is intended to be design-build. See specification for details
b) Review vendor drawings for anticipated loads of equipment needing support

18) This contractor shall provide receipt, transport, staging, and installation of all HEALTHCARE TECHNOLOGY (HT) BOOM SUPPORTS. See HT Drawings Title Page, LO.MYIABI, LO.PRO 1, LO.PRO 2, LO.PRO 3, LO.PRO 4, LO.PRO 5, LO.PRO 6, LO.PRO 7, LO.PRO 8, LO.PRO 9, LO.PRO 12, LO.PRO 13, S.1. Provide all equipment and material to anchor and assemble the supports. Include a minimum of 3 ea. ½” x 4 ½” Anchors for each A.600 Pan Joist Hanger. Include all layout and coordination of assembly with Structural Ceilings, HT and Berchtold/Stryker for the final installation location and heights. Include any shims as needed for adjustments based on field conditions.

19) This contractor shall provide ROUGH CARPENTRY (COMPLETE) as shown on the Contract Documents and in accordance with Section 06 1050 which includes but not limited to:

   a) All blocking required (where explicitly shown on the Contract Documents or not) for “your” divisions of work and installation of items in this scope of work.
   b) All blocking for all owner equipment listed on the owner Equipment Schedule, whether shown on the contract documents or not.
   c) This includes base of wall blocking at bottom of all wall partitions per “typical base detail”. This blocking to be installed within the stud cavity so it is “flush” with stud face.
   d) Install 16 ga. metal studs and full-height FRT plywood blocking behind all wall-hung ice machines.

20) This contractor shall provide all INSULATION (AS RELATED TO THIS SCOPE OF WORK) as shown on contract documents and as specified in Section 07 2100 Insulation.

21) This contractor shall provide APPLIED FIREPROOFING (Complete) as shown on the Contract Documents and in accordance with Section 07 8100.

22) This contractor shall provide FIRESTOPPING (AS RELATED TO THIS SCOPE OF WORK) as shown on the Contract Documents and in accordance with Section 07 8400.

23) This contractor shall provide JOINT SEALANTS (AS RELATED TO THIS SCOPE OF WORK) as shown on the Contract Documents and in accordance with Section 07 9200.

24) This contractor shall Install WOOD DOORS and VINYL CLAD WOOD DOORS (Complete) as shown on the Contract Documents and in accordance with specification Section 08 1400 Wood Doors & Section 08 1423 Vinyl Clad Wood Doors. Doors and Hardware to be provided by TC-162. (ADD #2)

   a. This includes the sliding doors for the equipment garage A01522B. Coordinate installation with all trades including TC-162, TC-163 and Unistrut Installer for installation of these doors. Provide all lifting equipment, safety equipment, transport equipment, and protection needed for receipt, transport and installation of the doors. Provide a complete installation plan for review and approval prior to installation.
   b. Provide field coordination and verification of all HM Frame Installations by TC-163 contractor. Provide field review and checklist of all installed door frames for plumb and straightness at completion of drywall installation for any corrections or repairs required prior to door install. (ADD #2)
   c. Include shimming of all doors to maintain required gap per hospital standards. Shims to be included (shipped loose) by TC-162 Doors and Hardware supplier.
   d. Include sealants when setting thresholds for air / water tight conditions.
   e. Contractor shall submit a written safety plan on the installation of lead lined doors. (ADD #2)
   f. Maintain all Door Protection provided with Doors until directed to remove by Turner Superintendent. Remove and dispose of all door protection into site dumpster as directed. (ADD #2)
   g. Receive and inventory, shake-out and hang, ALL hollow metal and wood doors; coordinate inventory with Construction Manager.
   h. Discard all packaging, skids, etc. to site dumpster unless instructed otherwise by hardware/door supplier.
i. Remove and reinstall various pieces of hardware to allow for Painting. MEP contractors to make final wiring connections. TC-160 contractor to include installation of “loose” hardware into the frame and not include as “pre-installed” such as devices mounted on/in the frame (i.e. shear locks, door contact) or after the door is mounted (i.e. closer). Coordinate installation with TC-169 Electrical and Integrated Technology Contractors.

25) This contractor shall provide **INTEGRATED METAL DOOR OPENINGS ASSEMBLIES (COMPLETE)** as shown on the Contract Documents and in accordance with Section 08 1713. (ADD #2)

26) This contractor shall provide **ENTRANCES AND STOREFRONTS (COMPLETE)** as shown on the Contract Documents and in accordance with Section 08 4100. (ADD #2)

27) This contractor shall provide **FIRE-RATED GLASS AND FRAMING SYSTEMS (COMPLETE)** as shown on the Contract Documents and in accordance with Section 08 4123. (ADD #2)

28) This contractor shall provide **ICU CCU ENTRANCES (COMPLETE)** as shown on the Contract Documents and in accordance with Section 08 4243.

29) This contractor shall provide **AUTOMATIC DOOR OPERATORS (COMPLETE)** as shown on the Contract Documents and in accordance with Section 08 7113.

30) This contractor shall provide **GLAZING (COMPLETE)** as shown on the Contract Documents and in accordance with Section 08 8000.

   a. Doors indicated to receive insulating glass with **integral blinds** must have factory installed units. This contractor TC-160 must purchase (Unicel) blinds (with custom color finish) and ship to the door Manufacturer for TC-162 Doors and Hardware, for factory installation. **These cannot be field installed**.

   b. This contractor shall include all window film as indicated on the project documents. Coordinate sizing and timing with new and/or existing conditions. Example: 08-8000-A109

   c. Contractor shall submit a written safety plan on the installation of lead lined glass.

   d. This includes all glass doors

31) This contractor shall provide **VISUAL DISPLAY SURFACES** as shown on the Contract Documents and in accordance with Section 10 1100.

32) This contractor shall provide **TOILET COMPARTMENTS** as shown on the Contract Documents and in accordance with Section 10 2113

33) This contractor shall provide **CUBICLE CURTAIN TRACK SYSTEMS (COMPLETE)** as shown on the Contract Documents and in accordance with Section 10 2123.

   a) Provide all blocking required by this specification to install cubicle curtain tracks.

34) This contractor shall provide **WALL PROTECTION** (COMPLETE) as shown on the Contract Documents and in accordance with Sections 10 2600. This contractor shall include caulking the edges of all metal corner guards and fiberglass reinforced plastics with clear silicone caulk.

35) This contractor shall provide **TOILET ROOM ACCESSORIES** (COMPLETE) as shown on the Contract Documents and in accordance with Section 10 2813 and the Toilet Room Accessories Schedule.

36) This contractor shall provide **FIRE PROTECTION SPECIALTIES** (COMPLETE) as shown on the Contract Documents and in accordance with Section 10 4400.

   a. Contractor shall review drawings for fire ratings associated with fire extinguisher cabinets

37) This contractor shall provide **METAL LOCKERS** (COMPLETE) as shown on the Contract Documents and in accordance with Sections 10 5113.

38) This contractor shall provide **WOOD LOCKERS** (COMPLETE) as shown on the Contract Documents and in accordance with Sections 10 5116
39) This contractor shall receive, shake-out, store at a location within Pavilion A, transport to place of installation and install **MEDICAL EQUIPMENT** as shown on the Contract Documents, Vendor Drawings and in accordance with Section 11 7000, Section 12 3570 and Volume 4. All items noted as O/C and C/C shall be Furnish and/or installed by this contractor. This contractor to provide all blocking, fasteners, supports, etc. to install this work scope.

   a. Witness delivery of equipment to jobsite. Inspect all equipment prior to unloading and identify in writing and damage observed. Notify Turner immediately upon discovery of any and all manufacturing flaws, missing components or damaged parts; include documentation and pictures. Missing equipment shall be noted on the packing slip at time of delivery.

   b. Include Division 11 Medical Equipment and Project Manual Volume 4; reference column "Qty F/I" for responsibility. Include ALL associated work for O/C and C/C.

   c. TC-160 shall “install” ALL (Bed Locator, Monitor Brackets, Sharps Disposal, Soap Dispenser, Hand Sanitizer, White Boards, Paper Towel Dispenser, Ice Machine, Bins & Shelving, Glove Dispenser, Patient Boards, TV Bracket, Otoscope Dispenser, Rail system Headwall, Over bed Light ceiling Mount, Otoscope mount, TV’s, TP Dispenser).

   d. Guldmann overhead support and equipment is O/V installed.

   e. Installation of headwalls is by this scope.

40) This contractor shall receive, shake-out, store at a location within Pavilion A, **MODULAR METAL CASEWORK** as shown on the Contract Documents, Vendor Drawings and in accordance with Section 12 2400.

41) This contractor shall provide **ROLLER WINDOW SHADES** (COMPLETE) as shown on the Contract Documents and in accordance with Section 12 2400.

42) This contractor shall coordinate with TC-163 Drywall and Ceiling Contractor and **RADIATION PROTECTION** (Partial) as shown on the Contract Documents and in accordance with Section 13 4900 and 134900.2 UK Physicist Report for any doors and hardware installed within this scope.

43) This contractor shall provide **CONVEYING EQUIPMENT** (Complete) as shown on the Contract Documents and in accordance with Section 14 2123.

   a. Coordinate with TC-163 contractor to assist with demo and/or reconstruction of the new elevator stops. (See A701).

   b. Include adding a stop to the “Big Boy” elevator (EL-47) on the 1st floor of Pavilion A.

   c. Include programing of elevators 35 and 47 to revise the floors accessible.

   d. **This work shall be performed by DC elevator, Dale Howard for more information (859) 254-8224. (ADD #2)**

44) This contractor shall provide a **preconstruction damage** survey of the existing building and surrounding construction limits. This shall consist of the existing elevator, exterior elevations, access routes and fit-out space. Survey shall include photographs, narrative and video. Submit survey to Construction Manager for project records.

45) This Contractor shall provide **BIM MODELING** for all work associated with each of the specification sections noted above for TC-160 Scope of work. This will include at a minimum Doors, Door Frames, Entrances, Glazing, Visual Display Surfaces, Curtain Tracks, Toilet Partitions, Wall Protection, Toilet Accessories, Fire Extinguishers, Metal Lockers, Wood Lockers, Medical Equipment, Modular Casework, Roller Shades, and Radiation Protection. In addition to BIM coordination, this contractor will provide layout and coordination of all TC-160 installation scope either on the floor or in wall framing for the purpose of coordination of all installations with wall trades.

46) This contractor shall furnish, install, maintain for duration, and remove all (including glue residue) **TEMPORARY PROTECTION** as described below

   a. Elevator protection on floor/ door/frames and cab for construction use of Pavilion A elevators 35 and 47. Protection on frame includes threshold, jambs and head every stop for this project. Protection of elevator cab is walls and ceiling. Includes installation and maintenance of all protection for locations as needed to support project.
b. Masonite door protection for all current existing doors to remain after construction is complete. Protect doors upon mobilizing to site.
   i. This includes IDF and EIDF Closets, Electrical rooms, Stair 04, Stair 05 (level 1 and 2), Elevator Machine rooms, etc.

c. Cardboard sheet door protection for all NEW wood doors for the entire project. Install heavy cardboard protection upon installation of new doors and so that subsequent work activities have access to need door features.

d. Hollow Metal Door Frame Guards, plastic or cardboard, that snap-fit over the HM frames for protection until final painting and/or Door installation. Install as soon as HM frames have been installed.

e. Plastic protection at all headwalls to protect new headwall installation from dust and dirt. Install plastic so that subsequent work activities have access to needed rough-in portions of headwall.

f. This contractor shall include vacuuming and cleaning of the headwall interiors, and bed pan cabinets prior to punch list activities.

g. This includes plywood protection for the existing fan enclosure on the east side of the hospital (see SK-101 for approximate location). Coordinate installation with CM.

h. Roof protection for delivery ramp. This includes, but is not limited to, insulation, plastic, and plywood.
   i. Contractor to review roof in pre-construction damage survey. Contractor shall repair any damages associated with the delivery ramp installation or usage.
   j. Building envelope protection at delivery ramp. This includes above the construction dumpster and at the weather tight doors into the project (see SK-101 and 102).

47) This contractor is to include the paving of the “purple and pink” lots as shown on SK-103. This includes all demo, landscaping, earthwork, grading, base material, asphalt and striping for both areas. For the purposes of this proposal include the following costs: Assume 15 Truck Loads (20 tons/truck) for a min. 6” base for leveling, compact for Asphalt, and Assume 2 Lifts of 1 1/2” Asphalt Base for Purple and Pink areas. Assume providing and installing 40 concrete wheel stops.

48) This contractor shall provide EDGE GUARD Infection Control Barriers and Equipment for use during construction and deliver all materials and equipment to the University at the completion of the project. An allowance of $40,000 has been established for purchase of this system materials. A final list of components and purchase list will be developed with Turner Superintendent.

49) This contractor shall provide removal and re-installation of Window Wall System at East side of project area for material and equipment delivery access. See SK-101 and 102 for location. Window system to be removed, packaged as needed for safe keeping and re-installed as directed for completion of the room(s) immediately inside the window.

50) This contractor shall provide monthly professional photographs of the interior construction each month at the direction of the Turner Superintendent utilizing MultiVista. Photos to provide interior progression, and slide shows. Views to include floor, walls, and ceiling progression. Photos are due to Turner before the 25th of the month. Only electronic versions are required and Turner will be the owner of the files and have all rights to the electronic media. No cell phone or tablet photos allowed. Photos shall be of professional service quality. Continue until project final completion.

51) This contractor shall provide once per week cleaning services for the CM/AE/Owner offices located on the 12th floor Pavilion A from 05/13/19 through FINAL project completion. This shall be “professional” in nature providing “hospital like” sanitary conditions. Approximately 9,000 SF of office space + existing men’s and women’s restroom. Cleaning shall consist of sweeping and mopping floors, taking out trash, furnish all required materials and restocking paper supplies in the restrooms, cleaning plumbing fixtures, furnish paper supplies for restrooms, replacing trash can liners, etc.

52) This Contractor shall also provide the same weekly cleaning services above for the 2nd and 12th floor contractor restrooms (see SK-101) from construction mobilization through final completion. Cleaning to include complete
weekly cleaning of the following areas including sanitary mopping of; Men's and Women's restrooms and all fixtures, Kitchen area including Utility Sink and Turner Construction Office area including all chairs and tables.

53) This contractor shall also include once/week floor sweeping and cleaning of the 12th floor “common” area between the office and elevators. Also include bi-weekly sweeping of the two (2) main stairwells from 12th floor down to 11th floor landing. Perform until FINAL completion.

54) This contractor shall provide and maintain a floor scrubbing/sucking machine (sim. to Global® Auto Floor Scrubber 26") for the duration of the project to be used by all contractors, cleanup crew, etc. This machine’s primary function shall be available to cleanup an accidental water leak from construction activity. TC-160 will be responsible for maintaining an adequate charge of this machine’s battery.

55) This contractor shall also include maintenance for the existing “Red Scrubber” for the duration of the project. The scrubber is a Factory Cat Mini HD.

56) This contractor shall provide a budget of $3,000 for Temporary Construction Signs to be procured and installed as directed by Turner Construction.

57) This contractor shall include $8,100 for project reproduction / production of temporary wayfinding, safety signage, and other project communications.

58) This contractor to provide once per month (20-months total) service for Two (2) onsite first aid boxes using Cintas. First Aid boxes are located on the 12th and 2nd floors.

59) This contractor shall include $3,000 for receiving and unloading Pneumatic Tube materials and misc. structural modifications for Pneumatic Tube system supplied.

F. CONSTRUCTION SCHEDULE

Contract Price is based on the project schedule included in 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) 08 8836 Switchable Privacy Glass is by TC-162 Doors and Hardware.

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

I. ALLOWANCES

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

1) Water Spill Kit Containment Allowance $2,500 (ADD #2)
2) Conveying Equipment Allowance $104,000 (ADD #2)
3) Infection Control Allowance as directed by Turner Construction $15,000
4) Hard Infection Control Barriers Allowance $40,000
5) 3rd Floor AHU Coordination Allowance $10,000
6) Covers for Medical Equipment Allowance $5,000
7) Miyabi Garage Door Allowance $10,000
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 shall 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
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   (06) Woman-Owned Large Business

(02) Large Business   (07) Disadvantaged Woman-Owned Small Business

(03) Disadvantaged Small Business   (08) Disadvantaged Woman-Owned Large Business

(04) Disadvantaged Large Business   (09) Other

(05) Woman-Owned Small Business
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.
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).
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.

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<thead>
<tr>
<th>FIRM NAME</th>
<th>MBE/WBE</th>
<th>WORK ITEMS SOLICITED</th>
<th>RESULT: NO RESPONSE OR NOT LOW BIDDER</th>
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________________________________________________
Signature Date

________________________________________________
Title
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.

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### 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.

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Attachment K

Turner Construction Company

Contractor Controlled Insurance Program (CCIP)
University of Kentucky PEDS, ENDO, and PICU, Interventional Radiology
Lexington, KY

CCIP Insurance Manual

Adherence to the Provisions of this Manual is a Requirement of Your Contract

This Manual Dated: March 26, 2019 R1
University of Kentucky PEDS, ENDO and PICU

Project Location:
Lexington, KY

Turner Business Unit: Cincinnati
250 West Court Street, Suite 300W, Cincinnati, OH
Telephone 513.721.4224
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</tbody>
</table>
Welcome to the Turner Contractor Controlled Insurance Program (CCIP). A CCIP is a coordinated insurance program where Turner provides specified coverage for enrolled contractors performing work at the project site. Turner Construction Company (Turner) has purchased the coverage and is therefore the Sponsor of the CCIP. Turner Surety and Insurance Brokerage (TSIB) is the administrator for the CCIP.

About This Insurance Manual

This insurance manual (Manual) provides information about bidding procedures, contact information, coverages provided by the CCIP, insurance coverage required of enrolled and excluded Subcontractors, the CCIP enrollment process and claim procedures. The manual also provides information about participant responsibilities and obligations.

This Manual:
- Generally describes the structure of the CCIP
- Provides answers to basic questions about the CCIP
- Identifies responsibilities and obligations of the various parties involved in the Project
- Provides a basic description of CCIP coverage (CCIP coverage is determined exclusively by the terms of the CCIP insurance policies)
- Sets forth insurance requirements for project Subcontractors
- Sets forth enrollment requirements
- Describes audit and administrative procedures

This Manual does not:
- Provide complete information about coverages and policy exclusions
- Provide coverage interpretations
- Provide answers to specific claims questions

Refer questions about the CCIP, its coverage or administration to the contact provided in the Project Directory in Section 2.

Advisory

The information in this Manual is intended to outline the CCIP. CCIP coverage is provided as set forth in the CCIP insurance policies. If any conflict exists between this Manual and the CCIP insurance policies, the CCIP insurance policies will govern.
CCIP PROJECT DIRECTORY

Notify Your Agent/Broker

It is important that you immediately notify your insurance agent(s) or broker(s) about your participation in the CCIP so they can consider your exposures and arrange your coverage in consideration of the CCIP. You can provide them a copy of this Manual. Your insurance representative should review the scope and limitations of the CCIP coverage since CCIP coverage only applies to work performed at the project site, after the inception date of your enrollment into this program.

Most liability policies include an exclusion for work covered by a controlled insurance program (CIP) or CCIP (often referred to as a “Wrap” exclusion). It is important for you and your agent or broker to fully understand the scope of the CIP exclusion on your policy and how it may apply to your operations or activities. You should ask your insurance agent or broker to endorse your liability coverage to be excess and contingent over the CCIP coverage provided by this Program. Any additional coverage you may wish to purchase will be at your option and expense.

Bid Instructions

You are required to prepare your bid to **exclude** the cost of your insurance for onsite workers’ compensation, employer’s liability, and primary and excess general liability. You must calculate the cost of insurance to be removed from your bid based on your current insurance rates at the time of bid. Turner may modify bidding and insurance cost identification procedures as necessary based on the specific project requirements.
### CCIP Project Directory

#### CCIP Administration

**SUBCONTRACTOR PARTICIPANT CONTACT:**

<table>
<thead>
<tr>
<th>Turner Surety and Insurance Brokerage Wrap-Up Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>35 Nutmeg Drive, Suite 300</td>
</tr>
<tr>
<td>Trumbull, CT 06611</td>
</tr>
<tr>
<td><strong>SERVICE CENTER WRAP ADMINISTRATOR</strong></td>
</tr>
<tr>
<td>Keon Marrero</td>
</tr>
<tr>
<td>Direct: 203.666.4326</td>
</tr>
<tr>
<td>E-Mail: <a href="mailto:kmarrero@tsibinc.com">kmarrero@tsibinc.com</a></td>
</tr>
</tbody>
</table>

**TURNER PERSONNEL CONTACT:**

<table>
<thead>
<tr>
<th>Turner Surety and Insurance Brokerage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>REGIONAL PROGRAM MANAGER</strong> —</td>
</tr>
<tr>
<td>Melissa Jarrett</td>
</tr>
<tr>
<td>Direct: 256.665.1300</td>
</tr>
<tr>
<td>E-Mail: <a href="mailto:mjarrett@tsibinc.com">mjarrett@tsibinc.com</a></td>
</tr>
</tbody>
</table>

**LOSS CONTROL CONTACT:**

<table>
<thead>
<tr>
<th>Liberty Mutual Insurance Co</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>REGIONAL LOSS CONTROL MANAGER</strong> —</td>
</tr>
<tr>
<td>LM Loss Control Manager</td>
</tr>
<tr>
<td>Telephone: Loss Control Mgr. office#</td>
</tr>
<tr>
<td>Direct: LM Loss Control Manager’s Cell #</td>
</tr>
<tr>
<td>E-Mail: LM Loss Control Manager’s Email</td>
</tr>
</tbody>
</table>
## CCIP Project Directory

### Turner Construction Company – Project Team

- **Project Manager** –
  - Dave Opalka
  - Telephone: 513.383.8004
  - Direct: TCCo PM’s Cell #
  - E-Mail: dopalka@tcco.com

- **Site Safety Manager** –
  - TCCo Safety
  - Telephone: TCCo Safety’s telephone #
  - Direct: TCCo Safety’s Cell #
  - E-Mail: TCCo Safety’s EMail

- **Project Superintendent** –
  - TCCo Superintendent
  - Telephone: TCCo Supt’s telephone #
  - Direct: TCCo Superintendent’s Cell #
  - E-Mail: TCCo Superintendent’s EMail

- **Project Engineer** –
  - Don Holtz
  - Telephone: TCCo PE telephone #
  - Direct: TCCo Project Engineer Cell #
  - E-Mail: dholtz@tcco.com

- **Claim Coordinator** –
  - Emily Viltrakis
  - Telephone: 513.404.1060
  - Direct: TCCo Claim’s cell #
  - E-Mail: eviltrakis@tcco.com

- **CCIP Coordinator** –
  - Emily Viltrakis
  - Telephone: 513.404.1060
  - Direct: TCCo Claim’s cell #
  - E-Mail: eviltrakis@tcco.com
The following list includes key CCIP definitions.

CCIP: A “CCIP,” or Contractor Controlled Insurance Program, is a coordinated insurance program providing certain coverages, as defined herein, for Turner and Enrolled Parties performing Work at the Project Site.

CCIP COVERAGE: Workers’ compensation and employer’s liability insurance, commercial general liability insurance, and excess liability insurance as detailed in the CCIP insurance policies for the benefit of Turner and Enrolled Parties performing Work at the Project Site.

CCIP ADMINISTRATOR: The party that provides administration services for the CCIP. Turner Surety and Insurance Brokerage (“TSIB”) is the CCIP Administrator.

CCIP INSURER: The insurance company(s) named on a policy or certificate of insurance. Liberty Mutual is the CCIP Insurer for workers’ compensation, employer’s liability and primary general liability.

CCIP SPONSOR: The party that purchases the CCIP. Turner Construction Company (“Turner” or “Turner Construction”) is the sponsor for the CCIP.

CERTIFICATE OF INSURANCE: A document providing information about one or more insurance policies.

CONTRACTOR PORTAL: The part of the CCIP website used by Subcontractors of any tier to manage their participation in the CCIP.

ELIGIBLE PARTIES/ELIGIBLE SUBCONTRACTOR OR SUB-SUBCONTRACTOR: Parties performing labor or services at the Project Site who are not Excluded Parties and are eligible to enroll in the CCIP.

ENROLLED PARTIES/ENROLLED SUBCONTRACTOR OR SUB-SUBCONTRACTOR: Those Eligible Parties or Eligible Subcontractors who have submitted all necessary enrollment information as detailed in Section 6, have been accepted and enrolled into the CCIP and have received a Welcome Letter and Certificate of Insurance as evidence of enrollment.
### EXCLUDED PARTIES/EXCLUDED SUBCONTRACTOR OR SUB-SUBCONTRACTOR:

At the discretion of Turner, or subject to state regulations, the following parties are excluded from (not eligible for) enrollment in the CCIP:

1. Hazardous materials remediation, removal and/or transport companies and their consultants;
2. Any Subcontractor performing structural demolition which is the moving or relocating of load bearing beams, columns, or walls;
3. Architects, engineers, soil testing engineers, surveyors, and their consultants;
4. Vendors, suppliers, fabricators, material dealers, truckers, haulers, drivers and others who merely transport, pickup, deliver, or carry materials, personnel, parts or equipment or any other items or persons to or from the Project Site;
5. Subcontractors, and any of their respective Sub-subcontractors, who do not perform any actual labor on the Project Site;
6. Turner’s first tier Subcontractors with aggregate subcontract value of less than $25,000;
7. Third Party Crane Subcontractors / companies of any tier as well as Subcontractors of any tier engaged in the erecting, dismantling or “jumping” of cranes;
8. Building implosion Subcontractors of any tier, or Subcontractors of any tier involved with blasting or the use of explosives;
9. Window washing systems (davit type systems or equivalent).
10. Any Subcontractor of any tier involved with Exterior Insulation Finishing Systems (EIFS)
11. Any other Subcontractor of any tier which Turner, at its sole discretion (and as permitted by law), chooses to exclude from enrollment.

### GENERAL LIABILITY OBLIGATION:

A Subcontractor’s obligation to pay up to $5,000 of each occurrence, including court costs, attorney’s fees and costs of defense for bodily injury or property damage, to the extent losses payable under the CCIP General Liability Policy are attributable to Subcontractor’s Work, acts or omissions, or the Work, acts or omissions of any of Subcontractor’s Sub-subcontractors, or any other entity or party for whom Subcontractor may be contractually or legally responsible.

### MOBILIZATION:

Obtaining all required insurance, bonds and permits, and commencement of preparatory work for on-site operations necessary for the movement of personnel, equipment, supplies, and incidentals to the Project Site.

### PARTY NO LONGER COVERED BY THE CCIP:

A party whose CCIP insurance coverage has been terminated. Upon termination of CCIP coverages, the party is to provide insurance coverage for activities both on and off the Project Site as required by the Subcontract Agreement or Sub-Subcontract Agreement and outlined in Section 5.

### PROJECT SITE:

The project location (designated in this Manual and more fully identified in the Subcontract Agreement) and adjacent or nearby areas as defined in the project documents where incidental operations are performed, excluding permanent locations of any insured party.
## Project Definitions

**Subcontractor:** Includes only those persons, firms, joint venture entities, corporations, or other parties that enter into a direct contractual agreement with Turner to perform Work at the Project Site.

**Sub-subcontractor:** Includes only those persons, firms, joint venture entities, corporations, or other parties of any tier that enter into a Sub-subcontract Agreement with a Subcontractor or Sub-subcontractor of any tier to perform Work at the Project Site.

**Subcontract / Subcontract Agreement:** A written agreement between Turner Construction and the Subcontractor.

**Sub-subcontract / Sub-subcontract Agreement:** A written agreement between Subcontractors of any tier.

**Subcontractor and Sub-subcontractor Insurance Cost (i.e., Insurance Cost):** The cost, at current corporate insurance rates, to provide insurance required by the Subcontract Agreement or Sub-subcontractor Agreement if the CCIP was not provided.

**Verified Insurance Cost:** The Subcontractor or Sub-subcontractors Insurance Cost that has been verified by the CCIP Administrator.

**Verified Blended Payroll Rate:** The composite rate determined by dividing an Enrolled Party’s total Verified Insurance Cost by the Enrolled Party’s estimated payroll multiplied by 100. The Verified Blended Payroll Rate is expressed as per $100 of payroll. The Verified Blended Payroll Rate formula equals (Verified Insurance Cost / Estimated Payroll) * 100.

**Final Insurance Cost Adjustment:** An adjustment to the subcontract price that Turner, at their sole discretion, can make in the event of an underestimate of payroll.

**Welcome Letter:** A document issued by the CCIP Administrator to notify an applicant of acceptance and enrollment into the CCIP.

**Work:** Operations or activities, as fully described in the Subcontract Agreement or Sub-subcontractor Agreement, performed at the Project Site.
CCIP Insurance Coverage

This Section provides a brief description of coverage provided by the CCIP. Participants should refer to the actual CCIP insurance policies for details about coverage, exclusions and limitations.

Disclaimer
Neither Turner nor TSIB assumes any obligation to provide insurance other than that specified in this Manual and the CCIP insurance policies. Turner’s arranging of CCIP coverages shall in no way relieve or limit, or be construed to relieve or limit, Subcontractor or any of its Sub-subcontractors of any responsibility, liability, or obligation imposed by the Subcontract Agreement or by law, including without limitation any indemnification obligations which Subcontractor or any of its Sub-subcontractors has to Turner or any other designated entity thereunder. Turner reserves the right at its option, without obligation to do so, to arrange other insurance coverage of various types and limits provided that such coverage is not less than that specified in the Subcontract Agreement.

Overview
As the Contractor Controlled Insurance Program (CCIP) sponsor, Turner has arranged with TSIB for this Project to be insured under Turner’s CCIP. Eligible Parties performing labor or services at the Project Site are eligible to enroll in the CCIP unless they are an Excluded Party or a Party No Longer Covered by the CCIP. The CCIP provides workers’ compensation and employer’s liability insurance, commercial general liability insurance, and excess liability insurance for the benefit of Enrolled Parties, as summarily described below, in connection with the performance of the Work (CCIP Coverage). CCIP Coverage shall cover only Enrolled Parties. Enrolled Parties are Turner, Eligible Subcontractors, and Eligible Sub-subcontractors of any tier and such other persons or entities as Turner at its sole discretion may designate who enroll in the CCIP and are provided a Welcome Letter and Certificate of Insurance as evidence of enrollment.

Excluded Parties and Parties No Longer Covered by the CCIP

Excluded Parties and Parties No Longer Covered by the CCIP are not granted any insurance coverage under the CCIP. Excluded Parties and Parties No Longer Covered by the CCIP must meet the insurance requirements in the Subcontract Agreement and outlined in Section 5, and provide evidence of coverage to Turner and TSIB.

Excluded Parties and Parties No Longer Covered by the CCIP shall require each of its Sub-subcontractors to obtain and maintain the insurance coverage specified in the Sub-Subcontract Agreement and outlined in Section 5. Excluded Contractors are to confirm there are no Wrap-Up Exclusions on their policies and must provide a copy of any Wrap-Up Exclusion endorsements for review with the COI.

Evidence of CCIP Coverage

The CCIP Administrator will provide a Certificate of Insurance evidencing CCIP Coverage to include workers’ compensation, general liability, and excess liability insurance to each Enrolled Party. Each Enrolled Party will be included as a named insured to the CCIP general liability insurance policy and excess liability policies. Each Enrolled Party will be issued an individual workers’ compensation policy provided by Liberty Mutual, the CCIP primary insurer. Liberty Mutual will furnish other documents including claim forms, and posting notices to each Enrolled Party. A copy of the primary General Liability policy
can be obtained upon Subcontractor’s written request to the CCIP Administrator. Copies of Excess/Umbrella policies are not available.

Description of CCIP Coverage

The summary descriptions of the CCIP Coverage in this Manual are not intended to alter or amend the actual CCIP Coverage. Rather, the CCIP Coverage and exclusions summarized in this Manual are set forth in full detail in their respective insurance policy forms. In the event any provision of this Manual conflicts with the CCIP insurance policies, the provisions of the actual CCIP insurance policies shall govern.

CCIP Coverage shall apply only to Enrolled Parties and only for those operations or activities performed at the Project Site in connection with the Work.

CCIP Coverage Summary

Turner will furnish the following CCIP Coverage to Enrolled Parties performing Work at the Project Site.

Workers’ Compensation and Employer’s Liability

A separate workers’ compensation policy will be issued to each Enrolled Party.

<table>
<thead>
<tr>
<th>Coverage:</th>
<th>Limits:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part One - Workers’ Compensation</td>
<td>Statutory Limit</td>
</tr>
<tr>
<td>Part Two - Bodily Injury by Accident, each accident</td>
<td>Annual Limits Per Enrolled Party</td>
</tr>
<tr>
<td>Bodily Injury by Disease, each employee</td>
<td>$2,000,000</td>
</tr>
<tr>
<td>Bodily Injury by Disease, policy limit</td>
<td>$2,000,000</td>
</tr>
</tbody>
</table>

- Does not cover the offsite operations of any Enrolled Party.
- Primary insurance for all covered occurrences at the Project Site.

How to Obtain a Copy of Your Workers’ Compensation Policy

Approximately sixty (60) days after you enroll and receive your Welcome Letter and Certificate of Insurance, a copy of your workers’ compensation policy will be uploaded into the Contractor Portal. Please refer to Section 8 (Contractor Portal Instructions) for how to login to the Portal. If after ninety (90) days your policy is not posted, or if you have problems navigating through the Portal, please contact the Wrap Administrator listed in the CCIP Project Directory in Section 2 for assistance.

Commercial General Liability

A single general liability policy will be issued for all Enrolled Parties. Each Enrolled Party will be a named insured on the CCIP general liability policy.

Coverage: Third party bodily injury, property damage liability and personal and advertising liability per the policy terms, conditions and exclusions.

<table>
<thead>
<tr>
<th>Primary Policy:</th>
<th>Limits of Liability Shared by All Enrolled Parties</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Aggregate Per Project</td>
<td>$4,000,000</td>
</tr>
<tr>
<td>Completed Operations Aggregate Per Project</td>
<td>$4,000,000</td>
</tr>
<tr>
<td>Each Occurrence Limit</td>
<td>$2,000,000</td>
</tr>
<tr>
<td>Fire Damage Legal Liability (any one fire)</td>
<td>$100,000</td>
</tr>
<tr>
<td>Medical Expense Limit (any one person)</td>
<td>$5,000</td>
</tr>
</tbody>
</table>
**CCIP Insurance Coverage**

**“Buffer” Layer Policy:**

<table>
<thead>
<tr>
<th>Limits of Liability</th>
<th>Shared by All Enrolled Parties</th>
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</thead>
<tbody>
<tr>
<td>General Aggregate Per Project</td>
<td>$6,000,000</td>
</tr>
<tr>
<td>Completed Operations Aggregate Per Project</td>
<td>$6,000,000</td>
</tr>
<tr>
<td>Each Occurrence Limit</td>
<td>$3,000,000</td>
</tr>
</tbody>
</table>

**Terms**

- General liability insurance issued on a current Insurance Services Office (ISO) occurrence form.
- Provides primary coverage for all covered occurrences at the Project Site.
- Does not provide coverage to any insured party, vendor, supplier, off-site fabricator, material dealer or other party for any product manufactured, assembled or otherwise worked upon away from the Project Site.
- Does not cover offsite operations or activities of any Enrolled Party.
- Completed Operations coverage is extended with a single non-reinstated aggregate limit for the period beginning from the earliest occurrence of (i) when the Project is put to its intended use, (ii) project completion, or (iii) CCIP policy termination, and ending after the earlier occurrence of (a) ten (10) years or (b) the expiration of the applicable statute of repose established per the civil code or statute of the state where the Project is located. Consult your Insurance Professional and/or legal counsel for additional information regarding the statute of repose for the state where the Project is located.
- Notable exclusions are: Real & Personal Property in the care, custody or control of the insured; Asbestos; Exterior Insulation Finishing Systems (EIFS); Discrimination & Wrongful Termination; Architects & Engineers Errors & Omissions; Owned & Non-owned Aircraft, Watercraft, and Automobile Liability; Nuclear Broad Form Liability; Pollution except hostile fire. Refer to the policy for a complete list of exclusions.

**Excess Liability**

A tower of Excess Liability coverage will be issued, covering all Enrolled Parties.

<table>
<thead>
<tr>
<th>Minimum Limits of Liability</th>
<th>Shared by All Enrolled Parties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Each Occurrence Limit (Combined Single Limit)</td>
<td>$100,000,000</td>
</tr>
<tr>
<td>Completed Operations Aggregate (Shared limit with other Projects)</td>
<td>$100,000,000</td>
</tr>
<tr>
<td>Annual General Aggregate Limit (Shared limit with other Projects)</td>
<td>$100,000,000</td>
</tr>
</tbody>
</table>

**Enrolled Party General Liability Obligation**

At Turner’s discretion, the Subcontractor may be required to pay up to the first $5,000 per occurrence to the extent that losses payable are attributable to Subcontractor’s Work, or the acts or omissions of its Sub-subcontractors, or any other party performing any of the Work for whom the Subcontractor may be contractually or legally responsible. All monies collected via this obligation will be reinvested into site safety / performance awards.

**Coverage NOT Provided by the CCIP**

The CCIP does not provide all coverage that may be needed by an Enrolled Party for their Work at the Project Site. Notably, the CCIP does not provide automobile coverage, professional liability, pollution liability or coverage for any Enrolled Party’s rented, owned, leased or borrowed equipment or materials not included for inclusion in the project. Enrolled Parties should consult with their agent(s) or broker(s) to arrange any coverage that may be needed in addition to the CCIP.
Subcontractor Insurance Requirements

Subcontractors and all Sub-subcontractors of any tier are required to provide and maintain coverage to protect against losses that occur away from the Project Site or that are otherwise not covered under the CCIP. All Certificates of Insurance must be submitted to the CCIP Administrator prior to start of Work at the Project Site.

The required coverage must protect the Subcontractor, Turner, the Project Owner, and all others as required by the Subcontract Agreement. Liability may arise from the Subcontractor of any tier’s operations performed away from the Project Site, from operations performed by Excluded Parties or Parties No Longer Covered by the CCIP or from operations or activities not covered by the CCIP. Insurance coverage must be maintained for the duration defined in the Subcontract Agreement or the Sub-subcontract Agreement.

Enrolled Parties

Enrolled Parties are to provide evidence of workers’ compensation, general liability and excess or umbrella liability insurance for its offsite activities, automobile liability (both onsite and offsite activity), and any other insurance required by the insurance specifications in the Subcontract Agreement or Sub-subcontractor Agreement. See Section 3 for the definition of Enrolled Parties.

Excluded Parties and Parties No Longer Covered by the CCIP

Excluded Parties and Parties No Longer Covered by the CCIP must provide evidence of workers’ compensation, general liability, excess/umbrella liability, automobile liability, and any other insurance as per the insurance specifications in the Subcontract Agreement for all activities both on and off the Project Site. See Section 3 for the definition of Excluded Parties and Parties No Longer Covered by the CCIP.

Proof of Required Coverage

Subcontractors shall provide an acceptable Certificate of Insurance and copies of Additional Insured endorsements as proof of compliance with the insurance requirements to the CCIP Administrator prior to start of Work at the Project Site and within three (3) days of any renewal, change or replacement of coverage.

Subcontractors are responsible for collecting, monitoring and retaining copies of their Sub-subcontractors’ Certificates of Insurance. Turner, at its sole discretion, may request copies of Sub-subcontractor’s Certificates of Insurance and/or Additional Insured endorsements to ensure compliance with the requirements of this Manual. Turner reserves the right to disapprove the use of Subcontractors or Sub-subcontractors unable to meet the insurance requirements or who do not meet other Turner policy requirements.

Sample Certificate of Insurance

A sample of an acceptable Certificate of Insurance that includes the requirements for waiver of subrogation, primary and non-contributory language and additional insured status is provided in Section 9 of this CCIP Insurance Manual.

Insurance Requirements

Subcontractor and their Sub-subcontractors shall obtain and maintain, and shall require each of its Sub-subcontractors to obtain and maintain, the insurance coverage specified in this Section and in each Subcontract Agreement in a form and from insurance companies reasonably acceptable to Turner. The insurance limits may be provided through a combination...
of primary and excess policies, including the umbrella form of policy. Each policy required under this Section, except for workers’ compensation and professional liability, shall name The Turner Corporation, Turner Construction Company, Owner, their respective officers, agents and employees, and any additional entities as Turner may request as additional insureds. Coverage is to be afforded on a primary and non-contributory basis with respect to any other insurance available to the additional insured. The additional insured endorsement utilized for the General Liability policy must provide coverage as broad as that available under the ISO CG 20 10 11 85 or its equivalent endorsement. The insurance obtained by Subcontractor and any Sub-subcontractor shall not contain any wrap-up exclusion or wrap-up excess endorsement that would bar or limit available coverage where the Subcontractor or Sub-subcontractor is not enrolled in the CCIP, or in instances where liability arises out of work performed by an enrolled Subcontractor away from the CCIP jobsite (i.e., offsite activities). Such insurance obtained by the Subcontractor and any Sub-subcontractor shall be primary to, and not contribute with, any CCIP insurance in any circumstance where the Named Insured is not enrolled in the CCIP or in instances where liability arises out of work performed by an enrolled Subcontractor away from the CCIP jobsite (i.e., offsite activities).

In the event that the law of the state in which the project is located (or other applicable law) limits the indemnity obligations of the Subcontractor, then the indemnity obligations of the Subcontractor shall be enforced to the fullest extent permitted by applicable law, and this Manual shall be read to conform to such law.

**Blanket Certificate of Insurance and Blanket Additional Insured Endorsement**

A so-called blanket Certificate of Insurance is a certificate that applies to all work versus a Certificate of Insurance that refers to a specific project. A blanket additional insured endorsement does not identify a specific additional insured but instead provides coverage to various additional insureds as detailed in the endorsement language. A blanket Certificate of Insurance and blanket additional insured endorsement conforming to Turner’s policies may be used for this project. Questions regarding Turner’s allowance of blanket Certificates of Insurance and blanket endorsements should be directed to Turner’s Procurement Agent for the project.

**Waiver of Claim / Waiver of Subrogation.** Where permitted by law, Subcontractor hereby waives all rights of recovery against Turner, Owner, the other additional insured parties, the CCIP Administrator, their respective officers, agents, or employees, and any other contractor, Subcontractor, or Sub-subcontractor performing Work or rendering services on behalf of Turner in connection with the planning, development and construction of the Project because of deductible clauses, inadequacy of limits of any insurance policy, limitations or exclusions of coverage, or any other reason. Where permitted by law, Subcontractor shall also require that all Subcontractor’s insurance coverage related to the Work include clauses providing that each insurer shall waive all of its rights of recovery by subrogation against the same parties referenced immediately above in this Section. Subcontractor shall require similar written express waivers and insurance clauses from each of its Sub-subcontractors. A waiver of claim / waiver of subrogation (as the case may be) shall be effective even if the party from which the claim against has been waived (a) would otherwise have a duty of indemnification, contractual or otherwise, (b) did not pay the insurance premium directly or indirectly, and (c) whether or not such individual or entity has an insurable interest in the property damaged.

**Insurance Requirements for Activities or Operations Not Insured Under the CCIP**

As to Enrolled Parties, the workers’ compensation, employer’s liability, and commercial general liability insurance required by this section shall only be for offsite activities or operations not insured under the CCIP Coverages. The following insurance coverages are to be provided by an insurance carrier selected by the Subcontractor and Sub-subcontractors and satisfactory to Turner. All costs for insurance coverages for offsite activities or operations are included in the Subcontract Agreement Price and are paid by Subcontractor.

1. Standard commercial automobile liability insurance covering all owned, non-owned and hired automobiles, trucks, and trailers with a combined single limit of not less than $1,000,000 (both onsite and offsite coverage is required).

2. Statutory workers’ compensation insurance and employer’s liability insurance, including maritime coverage, if appropriate. Workers’ compensation limits shall comply with the requirements of the governing jurisdiction. Employer’s liability limits shall be provided of not less than $1,000,000 each accident/$1,000,000 each
SUBCONTRACTOR MAINTAINED COVERAGE

employee/$1,000,000 policy limit.

(3) Commercial general liability insurance providing coverage on a standard ISO form providing “occurrence” based coverage including completed operations and contractual liability insurance against the liability assumed herein. The required insurance shall also include independent contractors liability insurance (if the Subcontractor sublets to another all or any portion of the Work), personal injury liability insurance, and broad form property damage coverage (including completed operations, and explosion, collapse and underground hazards). The minimum insurance limits required are set forth in the “Invitation to Bid”, the Subcontract Agreement, or as otherwise instructed by Turner. If no indication is given, then the minimum required limits will be $5,000,000. Coverage shall be equivalent to the current ISO occurrence form.

(4) If required by Turner, aviation and/or watercraft liability insurance with limits of liability acceptable to Turner and from an insuring entity reasonably satisfactory to Turner.

(5) If required by Turner, contractor’s pollution liability insurance with limits of liability acceptable to Turner and from an insuring entity reasonably satisfactory to the Turner.

If the Subcontractor fails to procure and maintain the insurance required of Enrolled Parties, Excluded Parties, and Parties No Longer Covered by the CCIP, Turner shall have the right, but not the obligation, to procure and maintain said insurance for and in the name of the Subcontractor and/or Sub-subcontractor and the Subcontractor and/or Sub-subcontractor shall pay the cost thereof and shall furnish all necessary information to make effective and maintain such insurance. At Turner’s option, Turner may offset the cost incurred by Turner against amounts otherwise payable to Subcontractor hereunder.

Required Insurance Summary

Workers’ Compensation and Employer’s Liability

• **Enrolled Parties** will provide evidence of workers’ compensation insurance coverage for all activities away from the Project Site.

• **Excluded Parties** and **Parties No Longer Covered by the CCIP** will provide evidence of workers’ compensation insurance coverage for all activities away from the Project Site.

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Commercial General Liability/Umbrella or Excess Liability

• **Enrolled Parties** shall provide evidence of general liability insurance for off-site activities with Turner and other required parties named as additional insured (ISO CG 20 10 11 85 version or its equivalent) to the policy. Coverage will apply away from the Project Site.

• **Excluded Parties** and **Parties No Longer Covered by the CCIP** shall provide evidence of general liability insurance applicable to this Project Site and must name Turner and other required parties named as additional insured (ISO CG 20 10 11 85 version or its equivalent) to their policy. Coverage will apply both onsite and offsite.

The required commercial general liability insurance shall include completed operations, contractual liability insuring against the liability assumed herein, personal injury liability, broad form property damage (including completed operations), and explosion, collapse and underground hazards, with the following minimum limits:
Limits of Liability

Combined Single Limit

As stipulated in Article XXIV of the Subcontract Agreement, in the Invitation to Bid, or as otherwise instructed by Turner. If no indication is given, then the minimum required limits are $5,000,000.

Coverage shall be equivalent to the current ISO occurrence form. The required commercial general liability/umbrella liability Insurance shall not contain any wrap-up exclusions or wrap-up excess endorsements that would bar or limit coverage in instances where the Subcontractor or Sub-subcontractor is not enrolled in the CCIP (i.e., is an Excluded Party or Party No Longer Covered by the CCIP) or where liability arises out of work performed by an Enrolled Party away from the CCIP jobsite (i.e., involving offsite activities).

Completed Operations Coverage

Each Enrolled Party will provide completed operations coverage from termination of the CCIP provided completed operations coverage (as shown in Section 4, Commercial General Liability, Terms) through the statute of repose applicable for the state in which the Project is located. All Enrolled Parties are strongly advised to provide a copy of this Manual and this provision to their insurance professional so the proper coverage extension is arranged.

Automobile Liability

All Subcontractors and Sub-subcontractors shall provide evidence of automobile liability insurance with Turner and other required parties named as additional insureds to the policy. The CCIP does not cover automobile liability. For Enrolled Parties, Excluded Parties and Parties No Longer Covered by the CCIP, coverage will apply both on and off the Project Site.

The Commercial Automobile Liability Insurance shall cover all owned, hired and non-owned automobiles, trucks and trailers used in connection with the work with the following minimum limits:

Combined Single Limit – Each Accident Bodily Injury And Property Damage

As stipulated in Article XXIV of the Subcontract Agreement, in the Invitation to Bid, or as otherwise instructed by Turner. If no indication is given, then the minimum required limit is $1,000,000.

Property Insurance

The CCIP does not provide coverage for Subcontractor’s or Sub-subcontractor’s personal property. Subcontractors of any tier must provide their own insurance for owned, leased, rented and borrowed equipment, whether such equipment is located at a Project Site or in transit. Subcontractors of any tier are solely responsible for any loss or damage to their personal property including, without limitation, property or materials created or provided under the Subcontract Agreement or Sub-subcontract Agreement until installed at the Project Site, Subcontractor tools and equipment, scaffolding and temporary structures.

Watercraft and Aircraft Liability

The CCIP does not provide watercraft or aircraft liability insurance. The operator of any watercraft or aircraft of any kind must maintain liability insurance naming Turner, the Owner, and others as required, and the respective Subcontractor as an additional insured with primary and non-contributory wording. In addition, the limit of liability must be satisfactory to Turner. Such project-specific insurance requirements will be indicated in the Subcontract Agreement.

Professional Liability

The CCIP does not provide professional liability insurance. All professional service firms must provide professional liability insurance appropriate for their profession. Architect and engineering firms must provide insurance covering liability...
arising out of design errors and omissions. Professional liability insurance requirements will be indicated in the Subcontract Agreement.

**Pollution Liability**

The CCIP does not provide pollution liability insurance. A Subcontractor whose Work involves removal or treatment of hazardous materials will provide and maintain contractors pollution liability insurance. Such coverage will specifically schedule the type of work defined in the Subcontract. Such project-specific insurance requirements will be indicated in the Subcontract Agreement Form.

**Limits of Liability**

The limits of liability shown for the insurance required of the Subcontractors and Sub-subcontractors are minimum limits only and are not intended to restrict the liability imposed on the Subcontractors for work performed under their Subcontract.

**Cancellation Notice**

Each Certificate of Insurance shall contain evidence that notice of cancellation will be provided to the certificate holder for cancellation or material change in coverage. The Certificate of Insurance must also include an endorsement allowing such notice attached to the Certificate for each applicable policy.

**Deductible, Self-Insured Retention (SIR) and Coverage Reduction Notification**

The Certificate of Insurance shall list all insurance carried by the Subcontractor or Sub-subcontractor for the coverage specified above and shall state the full policy limits, even if the limits exceed the amounts required above. All deductibles and/or self-insured retentions and all reductions in coverage from the standard policy forms shall be disclosed on the Certificate of Insurance. Turner reserves the right to reject the insurance obtained by the Subcontractor or Sub-subcontractor if the deductible or SIR exceeds a certain amount.
Subcontractor Responsibilities and Obligations

Throughout the course of the Project, Subcontractors of any tier will be responsible for reporting and maintaining certain records as outlined in this Section.

The Subcontractor and its Sub-subcontractors are required to cooperate with Turner, the insurance carrier(s), and the CCIP Administrator in all aspects of CCIP operation and administration.

Notice to Out-Of-State Subcontractors of Any Tier
All out-of-state Subcontractors of any tier are advised to contact the workers’ compensation department in the state where the project is located regarding requirements and compliance with the local workers’ compensation laws and regulations.

Identifying and Verifying Insurance Costs

Under the CCIP, Turner provides certain insurance (CCIP Coverage) for Enrolled Parties for Work performed at the Project Site and pays the premium for the CCIP Coverage. Accordingly each Enrolled Party will be required to identify the amount of Insurance Cost that was removed from its bid and submit copies of its policy documents to the CCIP Administrator for verification. The CCIP Administrator will provide you with the insurance cost calculation once all documents have been provided. This is done by accessing the Contractor Portal and uploading all required documents through the portal.

As part of the enrollment process Eligible Subcontractors of any tier are required to upload insurance policy pages that document their coverage and insurance rates using the Contractor Portal on the CCIP website. Required documentation includes the following pages from the workers’ compensation, general liability and umbrella or excess liability policies as follows:

- Declaration or Information Page
- Rate Page(s)
- Experience Modification Verification (Workers’ Compensation only)

If the Subcontractor is “self-insured”, carries a deductible or declares a dividend credit for its workers’ compensation and/or general liability program, then the following must also be provided:

- Deductible Page(s)
- Summary-5 Years of loss history for entities that retain losses
- Summary-5 Years of audited payroll by annual total

Umbrella or excess liability policies that are “flat rated” will be converted to a rating basis that matches the general liability policy and pro-rated for this project in order to include a value for it in the Insurance Cost calculation. Deductible credits will not be allowed for retroactively rated programs, including LRARO programs, in order to reflect the contractor’s loss fund for the program(s).

Enrolled Parties must also provide their estimated unburdened payroll (payroll without taxes, fringes, benefits and overtime) for that portion of the Work that will be performed at the Project Site (Initial Payroll Estimate) and their
SUBCONTRACTOR RESPONSIBILITIES AND OBLIGATIONS

Projected subcontract amount on the Contractor Portal.

Once the Initial Payroll Estimate and all policy documents are submitted and reviewed, the CCIP Administrator will review the information to verify the Insurance Cost. The CCIP Administrator will perform an Insurance Cost calculation based upon estimated payroll, contract volume and the rating information from the policy pages. The CCIP Administrator will apply discounts and modifiers in the order used by the insurance carrier and shown on the policy pages.

The Verified Insurance Cost, along with the Verified Blended Payroll Rate, will be available to the Enrolled party, and Turner, via the Contractor Portal. The Verified Blended Payroll Rate is determined by dividing the Enrolled Party’s total Verified Insurance Cost by the Enrolled Party’s Estimated On-Site Payroll as detailed in the Contractor Portal. The Verified Blended Payroll Rate is expressed as per $100 of on-site labor payroll. (Verified Blended Payroll Rate = Verified Insurance Cost / Estimated Initial Payroll * 100). Once established, the Verified Blended Payroll Rate is set for the life of the Enrolled Party’s performance of Work on site.

Until each Subcontractor or Sub-subcontractor submits all required documentation to enable verification and calculation of the Subcontractor of any tier’s Insurance Cost, an Insurance Cost equal to 3% (three percent) of the contract value may be assigned by Turner. Failure to submit the required documentation may result in a higher Final Insurance Cost Adjustment, if applicable.

Deductible and/or Dividend Credits

If Subcontractor or Sub-subcontractor fails to submit the required information summarized above, the CCIP Administrator will make one (1) written request via email for the information. If the required information is not received by the CCIP Administrator within seven (7) days of the written request, the Subcontractor or Sub-subcontractor’s Verified Insurance Cost and Verified Subcontractor Blended Payroll Rate will be calculated without any deductible and/or dividend credit. The Verified Insurance Cost and Verified Subcontractor Blended Payroll Rate may not be recalculated if Subcontractor submits the required information at a later date. Failure to submit the required documentation may result in a higher Final Insurance Cost Adjustment, if applicable.

Change Order Procedures

Enrolled Subcontractors of any tier are required to price all change orders to exclude their Insurance Cost for CCIP Coverage and must provide an estimate of payroll, including any payroll estimates for Eligible or Enrolled Sub-subcontractors for Work to be performed under the change order, unless otherwise directed by Turner.

Adjustments for Subcontractor Insurance Costs

Upon completion of the Work, Turner, at its sole discretion, unless subject to state regulations, may direct the CCIP Administrator to calculate the Subcontractor’s additional Insurance Cost, and Turner may deduct such costs from future payments, based on the following formula:

**Final Insurance Cost Adjustment Formula:**

\[
\text{Total Reported or Audited Payroll} \quad \text{(including all Change Order Work)}
\]
\[
\text{Minus} \quad \text{Initial Payroll Estimate}
\]
\[
\text{Minus} \quad \text{Change Order Payroll Estimate(s)}
\]
\[
\text{Equals} \quad \text{Payroll Overrun}
\]
\[
\text{Times} \quad \text{Verified Blended Payroll Rate ($10 per $100 of payroll)}
\]
\[
\text{Equals} \quad \text{Final Insurance Cost Adjustment}
\]
At Turner’s sole discretion, the Final Insurance Cost Adjustment may include any or all Final Insurance Cost Adjustments resulting from Sub-subcontractors as follows:

Subcontractor’s Final Insurance Cost Adjustment

\[ \text{Plus} \quad \text{Sum of all Sub-subcontractor’s Final Insurance Cost Adjustments} \]

\[ \text{Equals} \quad \text{Subcontractor’s Final Insurance Cost Adjustment} \]

Turner will deduct the Final Insurance Cost Adjustment from the Subcontract price. Subcontractors are solely responsible for recovering Final Insurance Cost Adjustments from its Sub-subcontractors of any tier.

Interim Insurance Cost Adjustment

Turner, at its option, may choose to perform an interim Insurance Cost adjustment should an Enrolled Party’s reported payroll exceed the Initial Payroll Estimate for the Work.

Assignment of Premiums

Since Turner pays the cost of the CCIP Coverage as described above, all Enrolled Parties are required to assign to Turner all adjustments, refunds, premium discounts, dividends, costs or any other monies due from the CCIP insurer(s). The assignment is part of the online enrollment application. Subcontractors will ensure that its Sub-subcontractors of any tier execute such an assignment.

Withholding of Payments

In the event a Turner audit of a Subcontractor’s (of any tier) records reveals a discrepancy in the insurance, payroll, safety, or any other information required by the Subcontract Agreement, or reveals the inclusion of any Insurance Cost in any payment for the Work, Turner shall have the right to withhold or deduct from the Subcontract price all such Insurance Cost amounts. If the Subcontractor or its Sub-subcontractor fail to timely comply with the provisions of this Manual, Turner may withhold any payments due Subcontractor and its Sub-subcontractors until such time as they have met the requirements of the CCIP as outlined this Manual.

\[ \text{Failure to submit any information required by the CCIP may result in the withholding of payments by Turner until required documentation is received.} \]
Enrollment

NOTE: The Application for Enrollment is required to be completed online via the Contractor Portal. Section 8 of this manual provides instructions on how to access the Contractor Portal and complete your online enrollment. Section 2 of this manual provides the corresponding Wrap Administrator’s contact information if you require assistance.

Each Subcontractor and Sub-subcontractor shall provide details about its Sub-subcontractors as necessary for CCIP enrollment. The information requested on the online Application for Enrollment is mandatory for enrollment. The online application must be completed through the Contractor Portal, and CCIP coverage subsequently confirmed by the CCIP Administrator, prior to Mobilization or the start of Work to obtain CCIP Coverage.

A separate online Application for Enrollment is required for each Eligible Sub-subcontractor of any tier that performs Work at the Project Site.

The CCIP Administrator will issue to each Enrolled Party a Welcome Letter and a CCIP Certificate of Insurance acknowledging acceptance of the applicant into the CCIP. The insurance carrier will issue a separate Workers’ Compensation policy to each Enrolled Party.

Enrollment Is Not Automatic
Eligible Subcontractors and Sub-subcontractors MUST complete the online enrollment forms through the Contractor Portal. Once successfully completed the CCIP Administrator who will confirm enrollment into the CCIP. Access to the Project Site will not be permitted until enrollment is complete. Enrollment is confirmed by a Welcome Letter and a CCIP Certificate of Insurance. If a Subcontractor of any tier obtains access to the Project Site, with or without Turner’s knowledge, no CCIP Coverage is provided if Subcontractor or Sub-subcontractor is not enrolled. There is no CCIP Coverage for unenrolled parties, Excluded Parties and Parties No Longer Covered by the CCIP.

Fines for Late Enrollments / Late Reporting
Should the insurance carrier(s) or any regulatory agency assess a fine or penalty for late enrollment and/or late reporting, Turner reserves the right to assess these fines to the Subcontractor. This reservation of rights applies whether fines and/or penalties are due to a Subcontractor or any of its Sub-subcontractors. If a fine or penalty is assessed to a Sub-subcontractor, the prime tier Subcontractor is solely responsible for recovering the fine or penalty amount from its Sub-subcontractor(s).

Payroll Reports
Each Enrolled Party is required to submit payroll and work hour information by the 10th of each month using Contractor Portal on the CCIP Website. Enrolled Parties must report payroll expended at the Project Site for each applicable workers’ compensation classification that was included in the Subcontractor’s Application for Enrollment.

A monthly payroll report must be submitted for each month, including months where there was zero payroll or work hours, until completion of the Work under each Subcontract. For those Subcontractors performing Work under multiple Subcontract Agreements, a separate monthly payroll report is required for each Subcontract.

The monthly payroll report should include unburred straight-time payroll and the unburred straight-time portion of any overtime payroll (except in the states of Pennsylvania, Nevada, Utah, Delaware and applicable Workers’ Compensation monopolistic States which require the entire unburred overtime payroll to be reported) for all CCIP qualified employees, including onsite supervisors and onsite clerical personnel.
SUBCONTRACTOR RESPONSIBILITIES AND OBLIGATIONS

All payrolls submitted for this project should be excluded from the payroll submitted to your corporate insurance carrier(s) to avoid paying premiums for exposures covered by the Turner CCIP. The workers’ compensation policy issued to you and the Certificate of Insurance naming you as an insured on the CCIP general liability policy can be used to provide evidence of your enrollment in the Turner CCIP to your corporate insurance carriers.

Failure to submit the payroll report, along with any other forms or documents required by the CCIP, may result in the withholding of payments by Turner until required documentation is received.

Insurance Company Payroll Audit

Each Enrolled Party is required to maintain payroll records for each Subcontract. Such records must allocate payroll by workers’ compensation classification(s) and exclude the excess or premium paid for overtime (i.e., except for projects in the state of Pennsylvania, Nevada, Utah, Delaware and applicable workers’ compensation monopolistic States), only the straight time rate will apply to overtime hours worked. Furthermore, such records will limit the payroll for executive officers, partners, and sole proprietors to the limitations as stated in the applicable state manual rules. It is important that you properly classify payrolls, as these are reported to the rating bureau for promulgation of future experience modifiers for your firm.

All Enrolled Parties shall make available their books, vouchers, contracts, documents, payroll records, certified copies of insurance coverages, declaration pages of coverages, certificates of insurance, underwriting data, insurance cost information, prior loss history information, safety records or history, OSHA citations, or such other data or information as Turner, the CCIP Administrator, CCIP Insurers including the CCIP Insurer Auditors, or other Turner Representative may request in the administration or payroll audit of the CCIP, or as required by this Manual. Availability of records must be for a reasonable time during the policy period, any extension, or during a final audit period as required by the insurance policies.

Modified Alternate Duty Program

Subcontractor and its Sub-subcontractor(s) must provide a modified return to work program for any of its injured employees insured under workers’ compensation as part of the CCIP. Failure to provide reasonable accommodations to an injured worker will result in a penalty assessment to the Subcontractor of any tier of $1,500 weekly until such time as the injured worker is returned to work. Subcontractors are responsible for the assessments of their Sub-subcontractors. Job expectations are defined as outlined in the Position Description for each Trade. Turner and the CCIP insurer will determine reasonable accommodations.

Claim Reporting

Subcontractor and its Sub-subcontractor(s) must immediately report all injuries, occupational-related illnesses or property damage to the Site Safety Manager. All Subcontractors of any tier will instruct employees and other personnel to report, in writing, within 24 hours all accidents and occurrences of any type to the Project Site Safety Manager. Failure to immediately report a claim and issue a written report to the Turner Site Safety Manager or Project Superintendent within 24 hours of an occurrence may result in a $5,000 penalty.

CCIP Closeout and Audit Procedures

When a Subcontractor has completed its Work at the Project Site and no longer has onsite workers, the Subcontractor must complete and submit the Work Completion Form electronically via the Contractor Portal. The Work Completion form should be e-signed by Turner for all Subcontractors and e-signed by the Subcontractors for all Sub-subcontractors of any tier. Note: Subcontractor electronic Completion Form closes out all Sub-subcontractors. The form will be used to initiate the final audit of
Subcontractor’s CCIP Obligations

Subcontractor shall:

1. Incorporate the terms of this Manual in all Sub-subcontract Agreements.

2. Within five (5) days of execution of the Subcontract Agreement, or no less than forty five (45) days before Mobilization onsite, enroll in the CCIP and maintain enrollment in the CCIP, and ensure that Subcontractor’s eligible Sub-subcontractors enroll in the CCIP and maintain enrollment in the CCIP within five (5) days of sub-subcontracting or no less than forty five (45) days before Mobilization.

3. Comply with all of the administrative, safety, claims management, insurance, and other requirements contained in this Manual, the CCIP insurance policies, and the Subcontract Agreement.

4. Provide each of its Sub-subcontractors with a copy of this Manual and ensure Sub-subcontractor compliance with the provisions of this Manual, the CCIP insurance policies, and the Subcontract Agreement. The failure of (a) Turner to include this Manual in the bid documents, or (b) Subcontractor to provide each of its eligible Sub-subcontractors with a copy of it shall not relieve Subcontractor or any of its Sub-subcontractors from any of the obligations contained therein.

5. Provide timely evidence of required insurance to Turner and the CCIP Administrator.

6. Subcontractor shall access the Contractor Portal and upload copies of its workers’ compensation, general liability and umbrella or excess rates, deductible endorsement/page (if applicable), and other requirements set forth in Section 6 to verify the Insurance Cost calculation.

7. Be solely responsible for the recovery of any Sub-subcontractor Insurance Cost attributable to such Sub-subcontractors’ eligibility for participation in the CCIP. If unit pricing is the basis for the Subcontract price, Turner may, at its option, apply a “per unit” Subcontractor Insurance Cost where appropriate.

8. Notify the CCIP Administrator and Turner’s Project Site Superintendent of all Sub-subcontracts awarded (first tier and subsequent tiers). Accordingly, Subcontractor shall cause all Sub-subcontractors to submit an online Application for Enrollment and all documents required to verify their Insurance Cost.

9. Provide estimated onsite payroll amount for itself and its eligible or enrolled Sub-subcontractors for its Work. Subsequently identify estimated onsite payroll for each Change Order request.

10. Acknowledge, and require all of its Sub-subcontractors to acknowledge in writing, that Turner and the CCIP
Administrator are not agents, partners or guarantors of the insurance companies providing coverage under the CCIP (“CCIP Insurer”) and that Turner is not responsible for any claims or disputes between or among Subcontractor, its Sub-subcontractors, and any CCIP Insurer(s). Any type of insurance coverage or limits of liability in addition to the CCIP coverages that Subcontractor or any Sub-subcontractor requires for its or their own protection, or that is required by applicable laws or regulations, shall be Subcontractor’s or its Sub-subcontractor’s sole responsibility and expense and shall not be billed to Turner or the Owner.

(11) Cooperate fully with the CCIP Administrator and the CCIP Insurers, as applicable, in its or their administration of the CCIP.

(12) Notify the CCIP Administrator immediately of any insurance cancellation or non-renewal of Subcontractor’s and Sub-subcontractor’s required insurance and any subsequent reinstatement of coverage.

(13) At Turner’s discretion, be required to pay a sum of up to $5,000 of each occurrence, including court costs, attorney’s fees and costs of defense for bodily injury or property damage to the extent losses payable under the CCIP General Liability Policy are attributable to Subcontractor’s Work, acts or omissions, or the Work, acts or omissions of any of Subcontractor’s Sub-subcontractors, or any other entity or party for whom Subcontractor may be contractually or legally responsible (General Liability Obligation). The General Liability Obligation shall remain uninsured by Subcontractor and will not be covered by the CCIP Coverages. All monies collected via this obligation will be reinvested into site safety/performance awards.

(14) Acknowledge that Turner shall pay the costs of premiums for the CCIP coverages on behalf of all Enrolled Parties and will receive or pay, as the case may be, all adjustments to such costs, whether by way of dividends, retroactive adjustments, return premiums, other moneys due, audits or otherwise. Accordingly, each Subcontractor and each of its Sub-subcontractors agrees to assign to Turner the right to receive all such adjustments.

Subcontractor Representations and Warranties to Turner

Subcontractor represents and warrants to Turner, on behalf of itself and its Sub-subcontractors:

(1) That all information it submits to Turner and/or the CCIP Administrator shall be accurate and complete.

(2) That they have had the opportunity to read this Manual request, read and analyze a copy of the CCIP general liability policy and that they understand the CCIP Coverage.

Duty of Care

Nothing contained in this Manual shall relieve the Subcontractor or any of its Sub-subcontractors of their respective obligations to exercise due care in the performance of their duties in connection with the Work and to complete the Work in strict compliance with the Subcontract Agreement.

Conflicts

In the event of a conflict, the provisions of the Subcontract Agreement and its other related Subcontract Agreement shall supersede the provisions of this Manual. Likewise, in cases of conflict regarding CCIP Coverage, the provisions of the policies supersede the provisions of this Manual.
Claim Procedures

This section describes basic procedures for reporting various types of claims: Workers’ Compensation, Liability, and damage to the project.

General Procedures

Subcontractors and Sub-subcontractors (of any tier) must immediately report all injuries, occupational-related illnesses or property damage to the Site Safety Manager. Subcontractors and Sub-subcontractors (of any tier) will instruct their onsite employees and other personnel to report, in writing, within 24 hours all accidents and occurrences of any type, including near misses, to the Site Safety Manager or Project Superintendent.

The Site Safety Manager or Project Superintendent contact information can be found in Section 2 of this Manual.

While all injuries and property damage must be reported immediately, the following list identifies losses which could represent substantial exposure. It is essential that the Site Safety Manager or the Project Superintendent be notified immediately of the following events so that a comprehensive investigation can be initiated at once:

- Any injury for which an ambulance is called
- Injury to head or neck
- Possible injury to back or spinal cord
- Unconscious employee
- Possible blindness
- Amputation of limbs
- Fatality
- Heart attack or stroke
- Hospitalization
- Property damage estimated over $1,000

Subcontractors may be assessed a $5,000 penalty for any claim not reported immediately and/or a written report not submitted within 24 hours of occurrence.

Investigation Assistance

Subcontractors and Sub-subcontractors (of any tier) will assist in the investigation of any accident or occurrence involving injury to persons or property. Involved parties will cooperate with CCIP insurers or representatives by securing and giving evidence and obtaining the participation and attendance of witnesses required for the adjustment, investigation and defense of any claim or suit.

Workers’ Compensation Claims

The main responsibility of any party is first to see that an injured worker receives immediate medical care. Next, the party should immediately notify the Site Safety Manager or Project Superintendent.

Subcontractors’ and Sub-subcontractors’ onsite personnel will follow these procedures if any employee is involved in an
CLAIM PROCEDURES

accident or occurrence resulting in bodily injury:

1. Contact designated first aid/medical personnel and transport the injured party to the onsite first aid or medical facility, as necessary.
2. Report all injuries or occupational-related illnesses immediately to the Employer’s Project Supervisor and Turner’s Site Safety Manager or Project Superintendent.
3. Complete a Supervisor’s Accident Investigation Report and return to Turner’s Site Safety Manager within 24 hours of employee’s notice of injury/claim. The Turner Site Safety Manager will fax/mail the completed form to the Turner Claims Manager within 24 hours of receipt.
4. Supply the injured party with a Medical Information Claim Folder which shall include a Doctor’s Initial Report Form, Turner’s 90 Day Modified Alternate Duty Program, Position Description and a Medical Authorization Form which are to be returned by the injured party to the Turner Site Safety Manager by the end of the business day. (Please see Section 9 for all appropriate forms relative to the Return to Work Program).
5. Provide for Modified Alternate Duty based upon the work abilities given to the injured party from the treating physician.
6. Immediately send all subsequent medical return to work notes, inquiries or correspondence about an injured party to the Turner Site Safety Manager. No injured party will be allowed on a job site unless they have provided the Turner Site Safety Manager with the proper return to work note, either full duty or modified duty.

Liability Claims

Subcontractors must immediately report all accidents or occurrences at the Project Site involving death, injury, or damage to property of non-employee personnel (the public, tenants, and visitors) to the Turner Site Safety Manager or Turner Superintendent. As soon as the onsite personnel become aware of the accident or occurrence, they must:

1. Take appropriate emergency measures to prevent additional injury or damage, including contacting police and fire authorities.
2. Complete and submit a Supervisor’s Accident Investigation Report and General Liability Loss Notice to the Turner Site Safety Manager within 24 hours of the incident.
3. Immediately send all subsequent inquiries or correspondence about an insured loss or claim, including a summons or other legal documents, to the Site Safety Manager immediately.

Any involved party should not voluntarily admit liability or responsibility and should cooperate with Turner and the CCIP insurer representatives in the accident investigation. The accident should not be discussed with anyone other than Turner Personnel, CCIP insurer representatives, or legal counsel retained on Turner’s or the Enrolled Party’s behalf.

Property Claims

Any damages to your Work or the Work of any other Subcontractors of Sub-subcontractors (of any tier) should be immediately reported to the Project Site Safety Manager.

Automobile Claims

Automobile Insurance is not provided under the CCIP. It is the sole responsibility of each party to report accidents/claims involving their automobiles to their own insurers.

HOWEVER, all accidents occurring in or around the Project Site must be reported to Turner’s Site Safety Manager. Accident investigations will occur and focus on liability arising out of the project construction activities that could result in future claims (i.e. due to the conditions of the roads, etc.). Each involved party shall cooperate in the investigation of all automobile accidents.

Pollution Claims

The CCIP general liability policy may provide some coverage for sudden and accidental pollution but only if the incidents are
discovered and reported promptly in writing. Any known or suspected pollution incidents must be immediately reported to the Turner Site Safety Manager for investigation.

Joint Representation

In the event legal representation is required to defend parties insured under this CCIP, absent an actual conflict of interest between two or more insureds, the insurer shall have the right to retain one counsel to represent all such insureds in any action or proceeding in which more than one insured is joined.

An insured has an actual conflict, and is entitled to separate counsel, only in the following circumstances:

a. the CCIP insurer has issued a reservation of its rights to one, but not all, insureds joined in such action or proceeding;
b. a CCIP insurer’s reservation of rights issued to one insured contains reservations different that a reservation issued to another insured(s) joined in such action or proceeding; or
c. adequate, unexhausted limits of CCIP insurance are not available for the damages sought in such action or proceeding.

Any insured with an actual conflict of interest may waive that conflict.

Enrollment in this CCIP program shall be deemed a waiver of any conflict which does not meet the above definition of an actual conflict. As a condition of enrollment in this CCIP program, all insureds agree to perform any additional acts required to effectuate the waiver of any conflict which does not meet the above definition of an actual conflict.

Waiver of Insured Cross-Claims

As a condition of enrollment in this CCIP program, no insured shall be entitled to make a cross-claim (or any similar legal claim) against another insured if that cross-claim arises from “bodily injury”, “property damage” or “personal injury” to which this CCIP’s insurance applies and for which there is adequate unexhausted limits of insurance to pay damages in any such proceeding. Enrollment in this CCIP program shall be deemed a waiver of such claims. As a condition of enrollment in this CCIP program, all insureds agree to perform any additional acts required to effectuate the waiver of any such claim. This paragraph shall not apply to any suit or claim necessary to trigger CCIP coverage.

Availability of Claims Data

Turner has made claims data available to all CCIP Enrolled Parties. Data is accessible through the Contractor Portal of the CCIP Website also known as WrapWorks. Claim data is updated no less than quarterly. Claims are associated with each Subcontract.

If you know your User ID and Password, then please proceed to the Contractor Portal:
https://wrapup.vuewrapup.com/contractorportal

If you do not have a User ID and Password, then proceed to the Contractor Portal and click “Register Me”. Note: You will need to know your Federal ID (FEIN) as you will need to enter it (with the dash) into the Contractor Portal. Your User ID and Password information will be emailed to you.

Please direct all claim related questions to the Turner Claim Coordinator/Claim Manager listed in Section 2, CCIP Project Directory.
Contractor Portal Instructions

Contractor Portal Web Address: https://wrapup.vuewrapup.com/contractorportal

Please have your documents in hand and ready to upload - This will speed up the process.

*** MUST BE UPLOADED ***

- Your Rate Pages from your Workers Compensation, General Liability and Excess/Umbrella Policies, and Deductible Endorsement (if applicable)
- Your Non-CIP Certificate of Insurance (offsite COI) along with required endorsements

If you know your User ID and Password, then please proceed.

If you do not have one, then click on “Register Me”. You will need to know your Federal ID (with the dash). Your User ID and Password information will be emailed to you.
Welcome to the 1, 2, 3s of
I am on a CIP Project What do I do?
BASIC FLOW CHART – Easy as 1,2,3
Everything is completed online via the Contractor Portal:
https://wrapup.vuewrapup.com/contractorportal

Step 1
Complete Enrollment – Coverage will not start until you are enrolled.
Answer ALL questions – You must check a Primary Contact and Address.
(This is the person who will receive all delinquency letters)
Enter any lower tier contractors you will have working for you.

Step 2
Upload ALL Required Documents (Name them appropriately)
1. Rate Pages (Declaration pages) for all applicable lines of coverage: Workers’ Compensation, General Liability and Excess/Umbrella (This supports your insurance cost entered for this contract).

Step 3
Report Payroll Monthly by the due date in the Manual.
All days need to be accounted for from the Start of your Enrollment date (Policy Start Date) until your contract is complete.
This is not certified payroll – Only man hours/gross and reportable payroll.

Got Delinquencies?
Print the Missing Data Report by Contract.
This will tell you exactly what is missing from each category:
Enrollment / ICW / Payroll / Non-CIP COI / Closeout
Forms

This Section contains the forms needed for administration of the CCIP.

Exhibit 1   SAMPLE ENROLLED PARTY Certificate of Insurance
Exhibit 2   SAMPLE EXCLUDED PARTY AND PARTIES NO LONGER COVERED BY THE CCIP Certificate of Insurance
WC Form 1   Turner’s 90 Day Modified Alternate Duty Program
WC Form 2   Doctor’s Initial Report Form
WC Form 3   Position Description
WC Form 4   Medical Authorization Form

For assistance in providing required information, please contact the Turner Surety and Insurance Brokerage Service Center. See Section 2 (CIP Project Directory) for the TSIB Wrap Administrator assigned to this Project.
EXHIBIT 1 – SAMPLE ENROLLED PARTY Contractor Certificate of Insurance

CERTIFICATE OF LIABILITY INSURANCE

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERRES NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Insurance Agency’s/Brokerage’s Name And Address</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INSURED</td>
<td>INSURER A:</td>
<td>INSURER B:</td>
<td>INSURER C:</td>
<td>NAIC #:</td>
<td></td>
</tr>
<tr>
<td>Subcontractor’s Name and Address</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Sample Certificate for Enrolled Parties Required Insurance

**COVERAGES**

<table>
<thead>
<tr>
<th>INSURER E:</th>
<th>INSURER F:</th>
<th>INSURER G:</th>
<th>INSURER H:</th>
<th>INSURER I:</th>
</tr>
</thead>
</table>

- **COMMERCIAL GENERAL LIABILITY**
  - CLAIMS-MADE
  - GENERAL AGGREGATE LIMIT APPLIES PER:
    - POLICY
    - PROJECT
    - LOC
  - As required by Agreement

- **AUTOMOBILE LIABILITY**
  - ANY AUTO
  - OWNED AUTOS ONLY
  - HIRED AUTOS ONLY
  - EXCESS LIABILITY:
    - OCCURANCE
    - CLAIMS-MADE
    - AS REQUIRED BY AGREEMENT

- **Umbrella Liability**
  - OCCURANCE
  - CLAIMS-MADE
  - AS REQUIRED BY AGREEMENT

- **Workers Compensation**
  - Any Proprietor/Partner/Executive Officer/Member Excluded?
    - (Mandatory in NH)
  - If yes, describe under DESCRIPTION OF OPERATIONS below

**DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES**

- **Additional Insureds**
  - The University of Kentucky, its directors, officers, trustees and employees of the University, The Turner Corporation, Turner Construction Company, their officials, employees and agents and any wholly owned Subsidiaries or parent organizations, and all Enrolled Parties.

**CERTIFICATE HOLDER**

- Certificate Holder
  - c/o Turner Surety and Insurance Brokerage, Inc.
  - 35 Nutmeg Drive, Suite 300
  - Trumbull, CT 06611
  - Attention: Keon Marrero

- Authorized Representative

- Certificate Holder

- Should any of the above described policies be cancelled before the expiration date thereof, notice will be delivered in accordance with the policy provisions.

- **CANCELATION**

- **CERTIFICATE NUMBER**

- **REVISION NUMBER**

- **DATE (MM/DD/YYYY)**

- **© 1988-2016 ACORD CORPORATION. All rights reserved.**
WC Form 1 – Turner’s 90 Day Modified Alternate Duty Program

RETURN TO WORK PROGRAM – Turner Construction Company CCIP

Purpose:

TURNER Construction Company is committed to providing a safe work place for both its employees and the subcontractors’ employees; facilitating prompt quality medical care in the event of a work related injury; and pursuing modified alternate duty to minimize the risks and financial burdens to its workforce.

TURNER Construction Company has established a return to work (RTW) program which is expected to be implemented by each subcontractor. Each subcontractor will provide a 90 day Modified Alternate Duty Program for an employee who has sustained a work related injury or illness and is medically unable to perform all or any part of his / her normal duties during all or any part of the normal workday or shift.

This applies to all Contractors on the project. The policy must include, but not be limited to:

1) All work related injuries will be reported to your supervisor and TURNER Construction Company immediately.
2) All injured employees will be provided with an approved medical treatment facility listing where appropriate, or a recommended panel listing. If there is any doubt as to where to go for treatment, the injured employee must contact TURNER Construction Company.
3) Subcontractors need to communicate to the injured employee and treating physician TURNER Construction Company’s 90 Day Modified Alternate Duty Program and facilitate Modified Alternate Duty with the treating physician and the employee.
4) Modified Alternate Duty assignments must comply with all medical limitations outlined by the treating physician so that injury or aggravation does not occur.
5) Project Managers, Supervisors and Foreman all must be informed of the modified alternate duty assignment, length of alternate duty, and the restrictions and responsible for the adherence.
6) Failure of a Subcontractor to provide reasonable Modified Alternate Duty to an injured worker will result in a $1500 weekly assessment against the Subcontractor until the injured employee is returned to work in either a modified alternate duty position or full duty.
7) The injured employee must provide the Project Managers, Supervisors and Foreman copies of all return to work notes, either modified duty or full duty.
8) The injured employee is not to assume normal work activities unless they have presented medical documentation releasing them to their normal duties to TURNER.
9) No injured employee on modified alternate duty will be allowed to work more than forty (40) hours per week or holidays.
10) The injured employee will remain on the project where the injury occurred while on Modified Alternate Duty or be transferred to another Project if the current Project’s work phase is completed.

Responsibilities:

The following will define the reporting responsibilities of each party involved in the CCIP or Corporate Program for Return to Work.

Injured Employee – A successful return to work program requires the cooperation and accountability of all your employees.

1) Ensure that your employees have attended training sessions and clarify any procedures which are unclear.
2) They are to report all injuries, even minor incidents, immediately within established reporting protocols.
3) They are to work closely with managers / supervisors and communicate all necessary information regarding their ability to return to work.
4) They are to provide the treating physician with the information necessary to help them determine how and when they can return to work.
5) They are to work within their medical stated limitations as outlined by their treating physician.
6) They are to help co-workers stay focused and provide a positive environment when they return to modified alternate duty.

Supervisor / Manager – Supervisors / Managers play a key role in the success of the return to work program. They must be willing to implement and manage the program.

1) Understand and support TURNER’S written policies / procedures and maintain a listing of Position Descriptions as outlined by TURNER.
2) Facilitate treatment procedures with injured employee and ensure that they have received a copy of the Medical Information Claim Folder.
3) Complete the Accident Investigation Form immediately after the incident and send to TURNER.
4) Coordinate Modified Alternate Duty with the injured employee and TURNER once you are aware and have received medical documentation outlining the injured employee’s work abilities.
5) Monitor the injured employee’s progress on modified alternate duty and provide weekly updates to the TURNER Claim Coordinator.

TURNER Claim Coordinator – The Claim Coordinator is the major communication link between the employee, the supervisor, the site safety personnel, the medical provider and Liberty Mutual.

1) Understand and promote the return to work program.
2) Field and answer questions regarding the Return to Work Program.
3) Ensure that all injuries / incidents are reported promptly to Liberty Mutual.
4) Follow up for medical documentation regarding work abilities and facilitate return to work in the modified alternate duty program where appropriate.
5) Maintain communication with the injured worker, treating physician and supervisor to ensure that the injured worker is working within their medical abilities.
6) Evaluate the modified alternate duty at a maximum of 30 day intervals.
7) Record and report progress and concerns to management at least quarterly.

Liberty Mutual Team – Are responsible for the daily claim handling guidelines outlined in their SSI.

1) Coordinate medical care and return to work issues.
2) Contact and communicate with the treating physician on an ongoing basis.
3) Manage issues related to claim file resolution.
4) Analyze losses and recommend corrective action.
## Work Flow for Turner’s Modified Alternate Duty Program

The following charts outline the workflow guidelines for each anticipated return to work scenario and define the expectations of each involved party. It is imperative that all injured workers receive proper medical treatment and that they are not returned to work without proper medical documentation releasing them to either modified duty or full duty.

### NO LOST TIME w/ ONE TIME OFFICE VISIT

<table>
<thead>
<tr>
<th>Employee</th>
<th>Sustains Incident and reports immediately to their Supervisor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervisor</td>
<td>Supervisor reports Incident to Site Safety / Field Supervisor immediately</td>
</tr>
<tr>
<td>Site Safety / Field Supervisor</td>
<td>Upon Incident notification, gives Employee Medical Information Claim Folder and facilitates medical treatment where appropriate.</td>
</tr>
<tr>
<td>Employee</td>
<td>Seeks immediate medical treatment where appropriate.</td>
</tr>
<tr>
<td></td>
<td>Gives the treating physician the Medical Information Claim Folder.</td>
</tr>
<tr>
<td></td>
<td>Receives from the treating physician a return to work note indicating full duty.</td>
</tr>
<tr>
<td></td>
<td>Immediately provides the Site Safety / Field Supervisor a copy of the medical note.</td>
</tr>
<tr>
<td>Site Safety / Field Supervisor</td>
<td>Immediately faxes medical note to Claim Coordinator and Liberty Mutual.</td>
</tr>
<tr>
<td>Employee</td>
<td>Verifies with Supervisor that Employee has actually returned to job site.</td>
</tr>
<tr>
<td></td>
<td>Once verified, immediately provides information to Claim Coordinator.</td>
</tr>
<tr>
<td>Claim Coordinator</td>
<td>Advises Liberty Mutual of RTW status of Employee.</td>
</tr>
<tr>
<td></td>
<td>Faxes all medical notes and documentation to Liberty Mutual upon receipt.</td>
</tr>
<tr>
<td>Liberty Mutual</td>
<td>Creates claim file upon receipt of 800 report.</td>
</tr>
<tr>
<td></td>
<td>Completes claim handling protocols as outlined in Special Service Instructions.</td>
</tr>
</tbody>
</table>

### NO LOST TIME w/ ON GOING TREATMENT

<table>
<thead>
<tr>
<th>Employee</th>
<th>Sustains Incident and reports immediately to their Supervisor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervisor</td>
<td>Supervisor reports Incident to Site Safety / Field Supervisor immediately</td>
</tr>
<tr>
<td>Turner Site Safety / Superintendent</td>
<td>Upon Incident notification, gives Employee Medical Information Claim Folder and facilitates medical treatment where appropriate.</td>
</tr>
<tr>
<td>Employee</td>
<td>Seeks immediate medical treatment where appropriate.</td>
</tr>
<tr>
<td></td>
<td>Gives the treating physician the Medical Information Claim Folder.</td>
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<td>Creates claim file upon receipt of 800 report.</td>
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<td></td>
<td>Completes claim handling protocols as outlined in Special Service Instructions.</td>
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</tbody>
</table>

### RELEASED TO MODIFIED ALTERNATE DUTY w/ CONTINUED TREATMENT

<table>
<thead>
<tr>
<th>Employee</th>
<th>Sustains Incident and reports immediately to their Supervisor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervisor</td>
<td>Supervisor reports Incident to Site Safety / Superintendent immediately</td>
</tr>
<tr>
<td>Turner Site Safety / Superintendent</td>
<td>Upon Incident notification, gives Employee Medical Information Claim Folder and facilitates medical treatment where appropriate.</td>
</tr>
<tr>
<td>Employee</td>
<td>Seeks immediate medical treatment where appropriate.</td>
</tr>
<tr>
<td></td>
<td>Gives the treating physician the Medical Information Claim Folder.</td>
</tr>
<tr>
<td></td>
<td>Receives from the treating physician a return to work note indicating work restrictions.</td>
</tr>
<tr>
<td></td>
<td>Immediately provides the Site Safety / Field Supervisor a copy of the medical note noting work restrictions.</td>
</tr>
<tr>
<td>Site Safety / Field Supervisor</td>
<td>Immediately faxes medical note to Claim Coordinator and Liberty Mutual.</td>
</tr>
<tr>
<td>Employee</td>
<td>Coordinates with Supervisor and Claim Coordinator Modified Alternate Duty for Employee.</td>
</tr>
<tr>
<td></td>
<td>Once modified duty outlined, immediately provides information to Claim Coordinator.</td>
</tr>
<tr>
<td>Claim Coordinator</td>
<td>Advises Liberty Mutual of RTW status of Employee.</td>
</tr>
<tr>
<td></td>
<td>Faxes all medical notes and documentation to Liberty Mutual upon receipt.</td>
</tr>
<tr>
<td>Liberty Mutual</td>
<td>Creates claim file upon receipt of 800 report.</td>
</tr>
<tr>
<td></td>
<td>Completes claim handling protocols as outlined in Special Service Instructions.</td>
</tr>
</tbody>
</table>
Note to all Parties

**OUT OF WORK w/ ON GOING TREATMENT**

<table>
<thead>
<tr>
<th>Employee</th>
<th>Sustains Incident and reports immediately to their Supervisor.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervisor</td>
<td>Supervisor reports Incident to Site Safety / Field Supervisor immediately.</td>
</tr>
<tr>
<td>Turner Site Safety / Superintendent</td>
<td>Upon Incident notification, gives Employee Medical Information Claim Folder and facilitates medical treatment where appropriate. Calls in Incident to Liberty 800 reporting number. CCIP 1-877 4-TURNER; Corporate 1-877 4-TURNER.</td>
</tr>
<tr>
<td>Employee</td>
<td>Seeks immediate medical treatment where appropriate. Gives the treating physician the Medical Information Claim Folder. Receives from the treating physician indicating out of work. Immediately provides the Site Safety / Field Supervisor a copy of the medical note noting out of work.</td>
</tr>
<tr>
<td>Turner Site Safety / Superintendent</td>
<td>Immediately faxes medical note to Claim Coordinator and Liberty Mutual. Discusses Modified Alternate Duty program with Employee and Supervisor.</td>
</tr>
<tr>
<td>Employee</td>
<td>Returns home to follow treatment protocols.</td>
</tr>
<tr>
<td>Claim Coordinator</td>
<td>Advises Liberty Mutual of RTW or Out Of Work status of Employee. Sends all medical notes and documentation to Liberty Mutual upon receipt.</td>
</tr>
<tr>
<td>Liberty Mutual</td>
<td>Creates claim file upon receipt of 800 report. Completes claim handling protocols as outlined in Special Service Instructions. Liberty immediately follows up with treating physician to discuss Modified Alternate Duty Program and verify work abilities using approved Physical Capabilities Form and verifying that treating physician has copy of Employee’s Position Description.</td>
</tr>
<tr>
<td>Employee</td>
<td>Follows up with medical treatment as outlined by treating physician. At the end of each office visit, provides the Site Safety / Field Supervisor with a copy of the doctor’s note regarding RTW and further treatment. Maintains weekly contact with Supervisor and Claim Coordinator regarding treatment and expected RTW.</td>
</tr>
<tr>
<td>Turner Site Safety / Superintendent</td>
<td>Immediately faxes all medical notes to Claim Coordinator and Liberty Mutual. Continues to provide information to Claim Coordinator upon verification of RTW.</td>
</tr>
<tr>
<td>Claim Coordinator</td>
<td>Faxes all medical notes and documentation to Liberty Mutual upon receipt. Monitors RTW status of Employee. Maintains weekly contact with Employee. Discusses Modified Alternate Duty options w/ Liberty Mutual on Weekly basis.</td>
</tr>
<tr>
<td>Liberty Mutual</td>
<td>Continues to follow up with treating physician within 24 hours of each office visit to monitor medical treatment / discharge and facilitate full duty / modified duty return to work.</td>
</tr>
<tr>
<td>Employee</td>
<td>Is released to modified duty. See Modified Alternate Duty Table.</td>
</tr>
<tr>
<td>Turner Site Safety / Superintendent</td>
<td>See Modified Alternate Duty Table.</td>
</tr>
<tr>
<td>Claim Coordinator</td>
<td>See Modified Alternate Duty Table.</td>
</tr>
<tr>
<td>Liberty Mutual</td>
<td>Liberty immediately sends written verification via Certified Mail to Employee and a copy to the Claim Coordinator of Modified Alternate Duty provided by Site once contacted by Site verifying modified duty provided. Continues to follow up with treating physician within 24 hours of each office visit to monitor medical treatment / discharge and verify full duty return to work. See Modified Alternate Duty Table.</td>
</tr>
</tbody>
</table>

**Note to Claim Coordinator:** Notify Liberty Mutual Claim Department when an employee returns to work and if they fail to return when released by the treating doctor. The employee’s Modified Alternate Duty will end when:

1) released to regular work
2) employee returns in another capacity
3) employee has exceeded 90 day program for modified alternate duty
4) employee quits or is terminated for reasons unrelated to the injury
5) worker’s compensation claim is closed
6) company withdraws the modified duty assignment

**Note to Supervisors:** You are to keep track of all modified alternate duty activity and report the progress of each injured employee weekly to the Claim Coordinator. You shall also provide copies of all medical releases, agreements, notes, etc. to the Claim Coordinator and keep a copy to maintain accurate records for the OSHA 300 log. Failure to provide appropriate modified alternate duty will result in a penalty assessment of $1500 weekly for each week the injured employee has not returned to work.

**Note to Parties:** Lost time ends when the injured employee is returned to their pre-injury position or when / if the injured employee refuses appropriate work offered consistent with the medical work abilities.
Doctor’s Initial Report Form

Completed by Site: _______________________
Injured Associate: _______________________

Associate Address: ____________________________________________
Telephone Number: ____________________________________________ Date of Injury: _______________________
Job Title: ____________________________________________ SSN / DOB: _______________________

Accident Description (include Body Part, Nature, Cause, etc): ____________________________________________

Authorized By: ____________________________________________ Title: _______________________

Note: If this medical condition is classified non-work related, the above individual shall be referred to his / her own personal physician for further evaluation.

AUTHORIZATION FOR CONTINUED TREATMENT MUST BE OBTAINED BY DIALING

☐ Worker’s Compensation  ☒ Modified Alternate Duty Available  ☐ Urine Drug Screen  ☐ Breathalyzer Test

TO BE COMPLETED BY PHYSICIAN

Physician Data (Name, Address, Phone, etc): ____________________________________________

Diagnosis: ____________________________________________

Accident History: ____________________________________________

Mechanism of Injury: ____________________________________________

Exam Findings / Treatment Recommendations: ____________________________________________

_____Return to Full Duty  Date:_________________ RTO:_______________
_____Out of Work  From:_________________ To:_________________ RTO:_______________
_____Return to Work w/ Specific Restrictions  Date:_________________ RTO:_______________

Please see SPECIFIC RESTRICTIONS below – NOTE – TURNER CONSTRUCTION HAS AN ACTIVE MODIFIED DUTY PROGRAM

SPECIFIC WORK RESTRICTIONS: EST. LENGTH OF MODIFIED DUTY: ________________ days / weeks

_____Sedentary Work Only
_____No Operating of Heavy Equipment
_____No Work Requiring Continuous Walking and/or Standing for ___1hr ___2hrs ___3hrs ___4hrs ___5hrs+
[ ] No Work Requiring Repetitive or Continuous Bending or Stooping for ___1hr ___2hrs ___3hrs ___4hrs ___5hrs+
[ ] No Lifting Over _________lbs
[ ] No Carrying / Pushing / Pulling Over _________lbs
[ ] No Work Requiring Use of Arms above Shoulder Level
[ ] Additional Restrictions: ____________________________________________

Physician Signature: _______________________
Date: _______________________

Turner Construction Company CCIP Insurance Manual Version 10.05.2017
University of Kentucky Peds, Endo and Picu, Lexington, Ky
WC Form 3 – Position Description

TURNER CONSTRUCTION JOB ANALYSIS

JOB TRADE/CRAFT:

Task Description/Primary or Daily Duties:

I. Working Conditions:

II. Specific Equipment Operations or Specific Safety Devices or Other Relevant Factors:

III. Physical Demands

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<tr>
<th>Task</th>
<th>Continuous</th>
<th>Intermittent</th>
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<td>Lifting/Lowering/Carrying – Weights</td>
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<td>Upper Body-Shoulder/Elbow Use</td>
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<td>Hand/Wrist Flexion-Extension</td>
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<td>Noise/Dust/Chemical Exposures</td>
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<td>Confined Space Hazards</td>
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<td>Operating Mobile Equipment/Machinery</td>
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WC Form 4 – Medical Authorization Form

Turner Construction
<address>
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Attn: <Safety Manager>

Injured Worker: __________________________________________________________
Date of Injury: __________________________________________________________
Subcontractor: __________________________________________________________
Job Site: ________________________________________________________________

Medical Authorization Form

I, ______________________________________________ (injured worker), hereby authorize ____________________________________________________________ (name of doctor) and any other provider of medical, dental, or hospital services to give to Turner Construction & Liberty Mutual, hereinafter called the company, any medical, dental or hospital records which have been acquired in the course of any examination of or treatment to __________________________________________ (injured worker), for a workers’ compensation injury or disease commencing on or about __________________________ (date), including any medical history relating thereto.

This information is to be used in the evaluation by the company, its agents, employees, or any other person performing a business, professional, or insurance function for their benefit of a workers’ compensation claim presented to the company and will not be given, sold, transferred, or in any way relayed to another person without further written authorization, except as required by law. This information may, however, be redisclosed to persons or organizations engaged in the prevention, detection or prosecution of fraud or other illegal activities.

This authorization shall be valid for the duration of the subject claim. I know I may request a copy of this authorization. A photographic copy of this authorization shall be as valid as the original.

Signature__________________________________________  Date _________________
ADDENDUM NO. 2

BY:  GBBN Architects, Inc.
     609 West Main Street
     Louisville, Kentucky 40202
     502.583.0700

SUBJECT: University of Kentucky
         Renovate/Expand UK Healthcare Facilities
         Pavilion A - Interventional Services
         UK # 2402.13

FOR:  University of Kentucky
       222 Peterson Service Building
       Lexington, Kentucky 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 Architectural Specifications
   A. None

1.2 Mechanical Specifications
   A. Section 20-0514 Variable Frequency Drive (VFD) System:
      1. Revise article 1.3.A.

1.3 Electrical Specifications
   A. Section 28-3116 Multiplexed Fire Detection and Alarm Systems:
      1. Article 2.1 revised to Honeywell Building Solutions.

1.4 Technology Specifications
   A. None

1.5 Plumbing Specifications
   A. None.
PART 2 DRAWINGS

2.1 General Drawings:
   A. Sheet INDEX:
      I. Add HT-01 to HT-14 “HEATHTECH_ADDENDUM 1” drawings to the drawing index.

2.2 Life Safety Drawings:
   A. Sheet LS.CC.00
      I. Change Applicable Codes as follows.

   APPLICABLE CODES
   • 2018 KENTUCKY BUILDING CODE (KBC), BASED ON THE 2015 INTERNATIONAL BUILDING CODE WITH AMENDMENTS
   • INTERNATIONAL MECHANICAL CODE, 2015 EDITION (IMC) AS ADOPTED BY THE STATE OF KENTUCKY
   • 2017 KENTUCKY STATE PLUMBING LAW, REGULATIONS AND CODE BOOK
   • INTERNATIONAL ENERGY CONSERVATION CODE (IECC), 2015 EDITION, AS ADOPTED BY THE STATE OF KENTUCKY
   • INTERNATIONAL FIRE CODE (IFC), 2015 EDITION, AS ADOPTED BY THE STATE OF KENTUCKY
   • NFPA 101®, LIFE SAFETY CODE®, 2015 EDITION, AS ENFORCED BY THE CENTERS FOR MEDICAID/MEDICARE SERVICES AND THE JOINT COMMISSION (TJC)
   • NFPA 101®, LIFE SAFETY CODE®, 2012 EDITION, AS ENFORCED BY THE CENTERS FOR MEDICAID/MEDICARE SERVICES AND THE JOINT COMMISSION (TJC)
   • 2006 FGI GUIDELINES FOR DESIGN AND CONSTRUCTION OF HOSPITAL AND HEALTH CARE FACILITIES
   • NFPA 99, HEALTH CARE FACILITIES CODE, 2012 EDITION, AS ENFORCED BY THE CENTERS FOR MEDICAID/MEDICARE SERVICES AND THE JOINT COMMISSION (TJC)
   • 2010 AMERICANS WITH DISABILITY ACT
   • NFPA 72, NATIONAL FIRE ALARM AND SIGNALING CODE, 2013 EDITION AS ADOPTED BY KBC
   • NFPA 13, INSTALLATION OF SPRINKLER SYSTEMS, 2013 EDITION AS ADOPTED BY KBC
   • NFPA 70, NATIONAL ELECTRICAL CODE, 2017 EDITION AS ADOPTED BY KBC

2.3 Civil Drawings:
   A. None.

2.4 Architectural Drawings:
   A. None

2.5 Structural Drawings:
   A. None

2.6 Vendor Drawings:
   A. Sheets HT-01 to HT-14
      I. New sheets issued 04/17/19.

2.7 Mechanical Drawings:
2.8 Instrumentation and Control Drawings:
A. None

2.9 Plumbing Drawings:
A. None

2.10 Electrical Drawings:
A. Sheet E401A:
   1. Added speaker strobe to control room A01525A.
   2. Added an existing to remain pull station next to existing stair.
B. Sheet E401B:
   1. Added visual devices to minor procedure rooms.
   2. Added an existing to remain pull station by stair A01S01.
C. Sheet E800:
   1. Modified detail number 1-Dual variable frequency drive wiring diagram.

2.11 Technology Drawings:
A. Sheet T101A:
   1. Added wallphone location to CT Scan Room A01516
B. Sheet T101B:
   1. Added wallphone locations to Procedure Rooms A01315, A01317, A01325, and A01327
   2. Added (1) 2-port outlet location to Offices A01429, A01431, A01433, and A01436
   3. Deleted unused sheet keynote 6

PART 3 ATTACHMENTS

3.1 Specifications
A. Sections 20 0514 & 28 3116 dated April 17, 2019

3.2 Drawings
A. Vendor Drawings HT-01 to HT-14, dated 04/17/19.
C. Technology Drawings T101A and T101B, dated 04/17/19.
D.  None

3.3  Sketches
A.  None

3.4  Copy of RFI's
A.  None

3.5  Supplemental Information
A.  None

END OF ADDENDUM
SECTION 20-0514
VARIABLE FREQUENCY DRIVE (VFD) SYSTEM

PART 1 GENERAL

1.1 RELATED WORK
A. Section 20-0513 – Motors
B. Section 23-0901 – Control System Integration
C. Section 23-0923 – Direct Digital Controllers and Networks
D. Section 23 0993 – Control Sequences
E. Section 26-2816 - Enclosed Switches and Circuit Breakers
F. Section 26-2913 - Enclosed Controllers

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.
B. This section specifies a system or a component of a system being commissioned as defined in Section 01 91 00 Commissioning. Testing of these systems is required, in cooperation with the Owner and the Commissioning Authority. Refer to Section 01 91 00 Commissioning for detailed commissioning requirements.

1.3 SYSTEM DESCRIPTION
A. Mechanical Contractor shall provide redundant N+1, variable frequency drives (VFD) with integral manual transfer selector switch for each air handlers fan array, sized to accommodate motors horsepower's as shown on drawings or schedules. Each drive to be feed from an independent power source. All VFD's shall be from same manufacturer. Manual transfer switch shall be located on load side of VFDs to prevent backfeeding power into load side of inactive VFD.

B. VFD manufacturer shall review driven equipment and motors for VFD compatibility. Submit written statement from manufacturer of driven equipment along with VFD shop drawing submittals, indicating verification of compatibility.

C. Contractor shall verify distance from motors to VFD's. VFD manufacturer shall provide sufficient equipment to assure proper operation and to avoid premature motor failure.

D. VFD manufacturer shall provide filter equipment as necessary to limit voltage transient ring wave stress placed on stator windings to withstand rating value of motors supplied per Section 20 0513 - Motors.

E. VFD shall vary speed of its respective fan, or other driven equipment motor in response to either 4-20 mA or 0-10 VDC control signal provided by Control Contractor.
F. VFD system shall consist of the following:
   1. Variable frequency drive
   2. UL listed disconnect device
   3. Electrical noise attenuation device as required to meet electrical noise criteria
   4. Motor starter for bypass mode operation with VFD/OFF/BYPASS selector and input and output isolation contactors where VFD bypass starters are specified.
   5. Line reactor
   6. Step-up or step-down isolation transformer as required

1.4 QUALIFICATIONS
   A. VFD system shall be furnished by a manufacturer with at least 5 years experience in design, construction and application of VFD.

1.5 SUBMITTALS
   A. Shop drawings for each VFD system including, but not limited to, the following:
      1. Manufacturer's name
      2. Identification of system components
      3. Type of enclosure, front elevation and plan view, equipment weight, conduit access locations.
      4. Capacities/ratings
      5. Warranty
      6. System wiring and block diagram showing system components
      7. Performance, control and protection data with specified features clearly shown
      8. Operating and monitoring devices with specified features clearly indicated
      9. Start-up operation, maintenance, spare parts, and field tests
     10. Manufacturer's installation instructions
     11. Other appropriate data
     12. Variations from this specification

   B. After quality assurance tests are complete, submit written certification that drive and components have passed factory quality assurance tests.

   C. Submit calculations indicating conformance with electrical noise criteria specified. Refer to electrical documents for information regarding electrical building distribution system.

   D. Submit product and performance data on electrical noise attenuation device if required to meet electrical noise criteria specified. Isolation transformer is not electrical noise attenuation device.

1.6 ELECTRICAL NOISE CRITERIA
   A. Voltage and current distortion generated by VFD and attenuation devices measured at input and output of VFD assembly and as installed in place, shall not exceed the following criteria as referenced by IEEE Standard 519.
      1. Total harmonic distortion (THD) shall not exceed 3% RMS of fundamental input voltage at full load with maximum 3% RMS on any single harmonic.
      2. Line voltage distortion shall not exceed 5% in amplitude of fundamental input voltage.
      3. Area of commutation notch (A_d) shall not exceed 16,400 volt microseconds measured at point of coupling to distribution system.
B. VFD manufacturer shall perform harmonic analysis at the input and secondary side of each distribution transformer to define submittals that compliance to IEEE-519-1992, Special Category, is attained. Analysis shall include electrical one line drawing defining resistance and impedance of each wire run and transformer leading to each VFD. Analysis shall be computer generated and perform Fourier analysis of the system. Results shall list current and voltage amplitudes of all harmonics up to 50th level at input of distribution transformer. A summary shall detail percent total harmonic distortion for voltage and power factors for distortion displacement, and total.

C. Electrical one line diagrams shown on Electrical Drawings include transformer kVA and impedance, and typical configuration of electrical system. Use this information for evaluation of harmonics for bidding purposes.

D. Successful contractor must provide required data for VFD manufacturer to complete harmonic analysis. Information shall include utility short circuit amperes capability; distribution transformer kVA and impedance; length, size and number of wires per phase to motor control center feeding VFD's; wire data to VFD's from motor control center; wire data to motor from VFD; and motor nameplate data.

E. VFD manufacturer is responsible for cost of all equipment required to meet IEEE-519, Special Category. Equipment, which can be provided, includes input line reactors, DC bus reactors and harmonic filters.

1.7 START-UP OPERATION AND MAINTENANCE DATA

A. Manufacturer shall provide services of factory trained engineer or technician to approve installation; start-up test and adjust for proper operation; and instruct and train Owner's representative in operation and maintenance of VFD systems. Provide minimum of 4 hrs of Owner training for each VFD system.

B. Should drive be deficient, drive manufacturer shall be required to make changes necessary to bring units into compliance with specified performance requirements. Cost of changes and retest shall be borne by drive manufacturer.

C. Upon completion of this service, submit a report, signed by manufacturer's service representative, including start-up and test log.

D. Manufacturer shall include additional 1 year (total 2 years) warranty for VFD system, covering parts, labor and travel expenses.

PART 2 PRODUCTS

2.1 MANUFACTURER

2.2 FABRICATION
A. VFD shall be variable torque, solid state, microprocessor based control, modular design for standard induction AC motor.
B. VFD components shall be factory mounted and wired in NEMA 1 enclosure with lock.
C. Circuitry shall be plug-in, plug-out modular. Printed circuit boards shall have protective coating to reduce corrosion.
D. Unit shall conform to NEMA and NEC standards and be CSA, UL or ETL listed. Control circuitry shall be electrically isolated from power circuitry. Entire assembly panel shall have UL or equivalent panel sticker.
E. Inverter section shall be pulse width modulated (PWM) design and third generation insulated gate bipolar transistors (IGBTs).

2.3 PERFORMANCE REQUIREMENTS
A. Input: 460 (+10%, -5%) VAC, 3-phase, 60 (± 2) Hz.
B. Output: 460 VAC, 3 phase, 10 to 60 Hz.
C. Operating Environment Conditions: Ambient 0 to 40°C temperature, relative humidity up to 95% non-condensing.
D. Linear acceleration and deceleration adjustable from 5 to 60 seconds. Provide adjustable v/f ratio and low speed boost features.
E. Input harmonic distortion shall have true RMS (KW/RMSKVA) power factor greater than 90% at full load.
F. Output Current Rating: Continuous full load output current rating of drive shall not be less than that listed for motor of equivalent horsepower in NEC table 430-150.
G. Drive overload capacity to be minimum 110% of motor FLA based on NEC ratings for one minute.
H. Time to Shutdown: Inversely proportional to square of overload current (t = k/I^2).
I. Motor Regeneration Protection: Unit shall have capacity of dissipating regeneration energy without damage to or shutdown of drive. Unit shall be capable of starting into rotating load.
J. Output Frequency Stability: ± 0.5% of base frequency in 24 hrs throughout range of rated operating conditions.
K. Output Voltage Regulation: ± 2% of maximum rated output voltage.
L. Output voltage rise time shall be no faster than 1000 volts/micro sec measured at the motor terminals. The voltage over shoot at the motor terminals shall be less than 250 volts.
M. Power Loss Ride-Through: 3 cycles or 50 milliseconds.
N. Linearity (speed reference to output frequency): ± 1.0%
O. Input Power Factor: Minimum of 0.95 regardless of speed and load.
P. The VFD and Bypass shall be UL listed for 100 KAIC without the need for input fuses.
Q. Minimum drive efficiency as percent of input power shall be as follows:

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<th>Percent Load</th>
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2.4 CONTROL FEATURES

A. VFD speed control circuit shall accept either 4-20 mA DC or 0-10 VDC isolated ungrounded transmitter signal in automatic mode and from manual speed potentiometer in manual mode.

B. Provide adjustable minimum and maximum speed settings (0 - 100%) for both auto and manual mode. Initial minimum setting shall be 30%.

C. Provide adjustable automatic reset for fault trips, except short circuit type faults. After selected number of unsuccessful restart attempts, drive shall be shut down. Number of restart attempts and time interval between resets shall be selective.

D. When unit shuts down due to power outage, unit shall be capable of being restarted manually or automatically.

E. VFD shall be capable of starting into rotating loads spinning in any direction.

F. Provide critical frequency avoidance circuit with at least 3 field adjustable bands to avoid operation at speeds, which cause excessive vibration in driven equipment.

G. Provide isolated ungrounded output signal to indicate drive percent of speed or drive frequency.

2.5 COORDINATION WITH BUILDING AUTOMATION SYSTEM (BAS)

A. Furnish each VFD with digital communication bus card for BAS use. VFD and Bypass shall be fully BACnet compliant without the use of integration gateways and shall utilize BACnet/MSTP or BACnet/IP communication protocols to communicate with BAS. Refer to Specification 23 0901 Control Systems Integration and 23 0923 Direct Digital Controllers and Networks for BAS and equipment controller architecture and Coordinate with Control Contractor for specific interface requirement.

B. Provide contacts (1 NO and 1 NC contact) for remote control of start/stop function for VFD mode and second set for bypass mode if bypass is specified.

C. Provide contacts (1 NO and 1 NC contact) for remote indication of VFD fault condition.

2.6 PROTECTION FEATURES

A. Power circuits shall be protected by, electronic protection circuits. Electronic protection circuits shall provide orderly shutdown without blowing fuses and prevent component loss under the following abnormal conditions.
   1. Instantaneous overcurrent and over voltage trip of output.
   2. Solid state protective circuit shall provide NEC motor running overload protection tested in accordance with UL Standard 991.
   3. Power line overvoltage or undervoltage.
4. Phase sequence detection or insensitivity to incoming power phase sequence.
5. Single and 3 phase short circuit protection.
6. Control circuit malfunction.
7. Overtemperature.
8. Ground fault for all 3 phases.

B. VFD shall protect itself from damage due to phase-to-phase or phase-to-ground faults without fuse blowing or use of isolation transformers. VFD’s, which require isolation transformers to provide ground fault protection, are not acceptable.

C. In addition, provide the following protection features.
1. Input line-to-line and line-to-ground MOVs for transient protection up to 3000 volts.
2. Control circuit transformer fusing.
3. Grounded control chassis.
4. Diagnostic indication.
5. One set of spare fuses for each type used in drive for each VFD.

D. Interlock VFD and Bypass control circuits with driven motor's disconnect switches where such motor disconnect switches are provided. Disconnecting on-line motor shall shut down VFD and Bypass. VFD and Bypass shall restart upon reconnection of motor.

E. VFD shall employ adjustable torque limit control, which shall override speed command and decrease frequency while maintaining correct volts/hertz ratio whenever load level surpasses VFD design level or set point.

2.7 OPERATING AND MONITORING DEVICES

A. Door interlock to disconnect VFD input power.
B. Manual stop/start device.
C. Operating mode selector device marked "Manual-Off-Automatic".
D. Manual speed control potentiometer.
E. Power on indication.
F. Drive run indication.
G. Drive fault indication with testable feature.
H. Fault reset device.
I. Speed indicating meter or digital indication (0 - 100%) calibrated in percent speed or frequency meter with 0 to 90 Hz scale to indicate motor speed.
J. Integral digital programming and operating display which shows Hz, Percent Output Current, Output Voltage, Percent Output Power, 89 Operating Parameters and their values, and Diagnostic Fault Codes. In addition, Keypads shall be incorporated to facilitate digital programming of drive adjustments. Analog potentiometer adjustments are not acceptable.
K. Provision shall be included to provide selectable programming security by inhibiting program parameter changes with internal dip switch setting or with password security.
L. Control shall incorporate microprocessors for operator interface, diagnostics, and fault managements, and power management.

M. Optional DOS-based programming software, which includes provision for serial communication with drive, shall be available for shipment at time of equipment order placement.

N. Fault buffers to sequentially store last 4 faults. Parameter and fault information to be stored in non-volatile memory.

O. VFD with Manual Bypass Starter:
   1. Manual selector switch to select power through VFD or bypass line with label marked "VFD/OFF/BYPASS".
   2. Mechanically- and electrically-interlocked VFD/BYPASS contactors with padlocking capability on input side of VFD and bypass starter. Interlock shall be accomplished such that shorting together of any 2 control circuit points cannot cause non-selected device to be energized. Provide mechanically-and electrically-interlocked device that connects only output of selected starting device (VFD or bypass starter) to VFD system output lug. Single shorting of any 2 control circuit points shall not cause both VFD and bypass starter outputs to be interconnected.

2.8 QUALITY ASSURANCE TESTS

A. Complete drive assembly shall be factory tested with actual AC induction motor, 100% load and temperature cycled within environment chamber at 40°C (104°F). Documentation of test shall be furnished to verify successful completion of test at Engineer's request.

2.9 DISCONNECT DEVICE

A. Provide integral switch to disconnect incoming electrical power to units. Disconnect device shall be UL listed device of the following:
   2. Enclosed molded case breaker; ampere rated and providing over current protection.
   3. Molded case switch; ampere rated enclosed switch with or without over current protection.
   4. Rotary switch: with or without fuser.

B. Unit shall have an interrupting rating not less than that of the upstream overcurrent device as shown on electrical drawings.

C. Disconnect shall be capable of being padlocked in OFF position and complying with OSHA requirements. Operating handle shall indicate whether switch is "ON" or "OFF".

D. Switch shall have dual cover interlock to prevent unauthorized opening of switch door when handle is in "ON" position and to prevent closing of switch mechanism with door open. Provide defeater mechanism to defeat the interlock for user required access.

2.10 MOTOR CONTROL EQUIPMENT (BYPASS STARTERS)

A. Bypass starter shall be NEMA or IEC rated device of the following:
   1. Electromechanical across-the-line starter with solid state overload protection for 50 HP or smaller.
   2. Solid-state reduced voltage starter consisting of SCR based power section, logic control board and solid state overload protection for 60 HP or larger.
2.11 LINE REACTORS

A. Series line reactors shall be designed for harmonic filtering service and shall be UL component recognized. Construction shall be copper wire wound on steel cores. Inductors shall be 3 phase. Series line reactors shall be sized at 5% impedance and appropriately for total connected load. Design maximum temperature rise for inductors shall be 115°C.

B. Core shall be made of laminated grain oriented electrical steel (grade M6 or better). Brackets shall be ASTM structural steel or structural aluminum. Coils shall be wedged in place and core locked in place using vertical ties or rods.

C. Windings shall be copper wire, MW35C (round) or MW36C (rectangular) or copper foil. Terminations shall be tin plated copper alloy ring lugs, UL recognized terminal blocks, or solid copper bus. Terminations shall be pressure crimped or TIG welded to windings. Sheet insulation shall be DuPont Nomex 410 of thickness meeting UL insulation systems.

D. Inductors shall be double impregnated (vacuum/pressure impregnate and bake followed by varnish dip and bake). Insulation systems shall be rated Class H (180°C), 600 volt. Inductors shall be Hi-Pot tested (2500 volt, 60 Hz, 1 minute) line-to-line and line-to-ground.

E. Inductors shall be air-gapped to avoid saturation. Inductance shall be measured under full load and shall be within ± 5% of design value.

F. Enclosure shall be steel with enamel finish and no knockouts. Enclosure shall be NEMA 1 construction with hinged lockable cover. Screened openings shall be provided for enclosure ventilation. Enclosure shall be built with integral mounting brackets for platform or wall mounting.

2.12 OUTPUT LC FILTER

A. Output LC filter shall consist of gapped, three phase, iron core inductor; AC-rated polypropylene capacitors; and wire-wound resistors. Filter shall be rated for application at maximum fundamental system frequency of 60Hz at nominal system voltages up to 600V. Filter shall operate at maximum carrier frequency of 8kHz at 40% of fundamental voltage. Ambient temperature of operation shall be 40°C.

B. Three phase inductors shall be designed for harmonic filtering service and for slowing rate of rapid current changes. Inductors shall be UL component-recognized and shall be built to comply with UL 508A Standard. Construction shall be of copper wire wound on magnetic grade steel. Inductors shall be sized appropriately for total connected load. Design maximum temperature rise for reactors shall be 115°C at rated current.

C. Core shall be made of laminated grain-oriented electrical steel (grade M6 or better). Brackets shall be ASTM structural steel or structural aluminum. Coils shall be locked in place using vertical ties or rods.

D. Windings shall consist of copper wire or of copper foil. Terminations shall be copper alloy ring lugs, UL-recognized terminal blocks, or solid copper bus. Sheet insulation shall be DuPont Nomex 410 of thickness as required for UL insulation systems.

E. Inductors shall be air-gapped to control saturation. Inductance shall be measured under full load and shall be within 10% of design value.

F. Completed inductors shall be impregnated with 100% solid epoxy resin. Insulation varnish systems shall be rated Class H (180°C), 600V.
2.13 ISOLATION TRANSFORMERS

A. Provide isolation transformer similar to Square D DIT type. Size transformer based on maximum kVA load of connected motor and in accordance with VFD manufacturer's recommendations.

B. Three phase transformers shall be 60 Hz, 480 volt delta primary and 480Y/277 volt secondary.

C. Transformers shall be air cooled, 2 winding type with minimum of four 2-1/2% full capacity primary taps, 2 above and 2 below full rated primary voltage.

D. Transformers 25 kVA to 112.5 kVA shall have 115°C temperature rise above 40°C ambient, allowing 15% continuous overload without exceeding 150°C rise in same ambient. Transformers above 112.5 kVA shall have temperature rise of 80°C above 40°C ambient, allowing 30% continuous overload without exceeding 150°C rise in same ambient.

E. Insulating material shall be in accordance with NEMA ST20 standard for 220°C UL component recognized insulation system.

F. Maximum temperature at top of enclosure shall not exceed 50°C rise above 40°C ambient.

G. Ventilation opening shall be designed to prevent accidental access to live parts.

H. Transformer coils shall be continuous wound construction and shall be impregnated with non-hygroscopic, thermostetting varnish.

I. High grade silicon steel, non-aging with high magnetic permeability, low eddy current loses and low hysteresis is required of cores. Magnetic flux densities shall be below saturation point. Core laminations shall be clamped securely with sturdy steel members.

J. Provisions shall be made to isolate core and coil from enclosure with no metal-to-metal contact. Rubber vibration absorbing mounts shall be used to isolate base of enclosure from core and coil assembly.

K. Visibly ground transformer neutral to enclosure with flexible grounding conductor.

L. Entire transformer enclosure shall be degreased, cleaned, phosphatized, primed, and finished with baked enamel.

M. Provide grounded shield between primary and secondary windings. Electrostatic shield shall consist of one-turn strip-copper winding placed between transformer primary and secondary winding. Insulate ends to prevent shorting. Lead from one end of shield shall run to transformer enclosure for grounding. Electrostatic shield shall not change primary and secondary winding insulation level to ground.

PART 3 EXECUTION

3.1 INSPECTION

A. Visually inspect equipment and components at time of delivery. Submit report to Engineer with list of items or deficiencies to be corrected.

3.2 INSTALLATION

A. Install VFD system in accordance with details, approved shop drawings and manufacturer's instructions and recommendations.
B. Provide field electrical wiring, both line and low voltage of VFD system components, including interconnecting wiring between VFD and by-pass starter if by-pass starter is specified. Install wiring in metal conduit and in accordance with electrical sections of this specification and applicable electrical code.

C. Provide control wiring between interlocks in VFD and Bypass control circuits and driven motor's disconnect switches, where such motor disconnect switches are provided.

D. Provide ground conductor in addition to conduit ground for each motor circuit.

E. Do not connect ground from one unit to another unit’s cabinet.

F. Use separate conduits for incoming and outgoing power conductors from each unit.

G. Use separate conduit for control wiring for each unit. Control wiring shall not occupy same conduit as power wiring.

H. Use minimum 18 ga shielded wiring with ground for control wiring.

I. Furnish 3 sets of air filters if unit is equipped with integral cooling fan.

J. Install floor mounted drives, on minimum 3-1/2” high concrete housekeeping pad and minimum 3/4” thick neoprene pad similar to Mason Super W, 50 durometer.

K. Install VFDs for air handling unit equipment on independent unistrut support structure. Do not mount VFDs on AHU housing.

L. Isolation Transformers:
   1. Unless otherwise indicated, transformers below 75 kVA shall be wall or ceiling mounted. Transformers 75 kVA and above shall be floor mounted. Ample space shall be allowed for air circulation around all sides. Do not mount transformers below VFD equipment. Mount transformers above if conditions are tight.
   2. Make all connections through enclosure at sides near bottom with vinyl covered flexible metal conduit in lengths not to exceed 3 ft.

3.3 START UP

A. Perform start-up of VFD in accordance with procedures as defined by manufacturer for proper operation.

B. Adjust critical frequency avoidance feature to step over frequencies, which cause excessive vibration in driven equipment.

C. At start up, factory trained engineer shall measure harmonic distortion attributable to VFDs and confirm compliance with IEEE 519-1992 and consistency with computer based harmonic distortion analysis from submittal. If harmonic distortion exceeds limits, adjust or replace filters and reactors until limits are met.

D. Major equipment and system startup and operational tests shall be scheduled and documented in accordance with Section 01 91 00 Commissioning.
3.4 COMMISSIONING

A. System functional performance testing is part of the Commissioning Process as specified in Section 01 91 00. Functional performance testing shall be performed by the contractor and witnessed and documented by the Commissioning Authority.

END OF SECTION
SECTION 28-3116
MULTIPLEXED FIRE DETECTION AND ALARM SYSTEMS

PART 1 GENERAL

1.1 RELATED WORK

A. Section 21-1314 - Automatic Fire Sprinkler System
B. Section 21-1318 - Fire Protection Systems
C. Section 23-0993 - Control Sequences
D. Section 26-0000 - General Electrical Requirements
E. Section 26-0519 - Low-Voltage Electrical Power Conductors and Cables
F. Section 26-0526 - Grounding and Bonding for Electrical Systems
G. Section 26-0533 - Raceway and Boxes for Electrical Systems
H. Section 26-0553 - Electrical Systems Identification

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. In general work consists of:

1. Furnish and install complete Multiplexed Fire Alarm System as shown on plans.
2. Connecting new fire alarm devices to existing building Honeywell Notifier Fire Alarm system.
3. System shall:
   a. Be interfaced with and report to existing building Honeywell Notifier Fire Alarm system in an identical manner as existing devices throughout the building.
   b. Be an intelligent analog system.
   c. Allow for loading and editing special instructions and operating sequences as required.
   d. Be capable of on-site programming to accommodate system expansion and facilitate changes in operation.
   e. Be wired, connected, and left in operating condition.
4. System includes:
   a. Manual Stations
   b. Heat Detectors
   c. Smoke Detectors
   d. Alarm Indicating Devices
e. Terminations
f. Other necessary material for complete operating systems.

5. Software operations shall be stored in non-volatile programmable memory within fire alarm control panel. Loss of primary and secondary power shall not erase instructions stored in memory.

6. Existing NAC panels are located in existing EIDF rooms on first level. Provide additional NAC panels as required to provide a fully functioning fire alarm system within area of work.

1.4 REFERENCE STANDARDS

A. IBC - 2000 - International Building Code
B. IFC - 2000 - International Fire Code
C. NECA 305 - Standard for Fire Alarm System Job Practices
D. NFPA 72 - National Fire Alarm Code
F. UL 268 - Smoke Detectors for Fire Protective Signaling Systems
G. UL 497B - Protectors for Communications and Fire Alarm Circuits
H. UL 521 - Heat Detectors for Fire Protective Signaling Systems
I. UL 864 - Control Units for Fire Protective Signaling Systems
J. UL 1480 - Speakers for Fire Protective Signaling Systems
K. UL 1481 - Power Supplies for Fire Protective Signaling Systems
L. UL 1711 - Amplifiers for Fire Protective Signaling Systems

1.5 QUALIFICATIONS

A. Equipment shall be supplied by company specializing in fire alarm and smoke detection systems with 5 years documented experience
B. Work shall be performed by licensed contractor regularly engaged in installation and servicing of fire alarm systems.
C. Proof of 5 years documented experience and factory authorization to furnish and install equipment proposed shall be furnished.
D. Contractor shall be located within 100 miles or less from site of project.
E. Programming of existing building Honeywell Notifier Fire Alarm system shall be performed by a technician certified by Honeywell Notifier in order to maintain the UL listing of existing building fire alarm system, and to extend the UL listing of the overall fire alarm system to the new devices installed under this scope of work.

1.6 SUBMITTALS

A. Bill of materials listing part number and quantity of components and devices.
B. Block diagrams showing layout and operation of entire system.
C. Schematic diagrams, of circuits from field devices to terminal strip(s) associated with existing control panel.
   1. Diagrams shall show schematic wiring of equipment; and connections to be made to devices.
   2. Terminal connections in equipment shall be numbered to correspond to diagrams.
   3. Wiring diagrams shall be coordinated so that terminal numbering, circuit designation and equipment or device designations are same on drawings.

D. Standby battery power calculations.

E. Sound amplifier and strobe power supply calculations showing current draws for every device and module during standby, alarm and trouble conditions.

F. Voltage drop calculations for both initiating and alarming circuits.

G. List of device addresses with location labeling as they will appear in 2 line, 40 character display of fire alarm panel and remote annunciator.

H. Submission to Authority Having Jurisdiction (AHJ):
   1. Copy of shop drawings as required to show component locations.
   2. Upon receipt of comments from AHJ, make resubmissions if required to make clarifications or revisions to obtain approval.
   3. All fees associated with this shall be included in the bid.

PART 2 PRODUCTS

2.1 MANUFACTURERS (DEVICES ONLY)
   A. Cooper Wheelock
   B. Edwards Systems Technology (EST)
   A. Honeywell Building Systems
   C. Honeywell Notifier

2.2 SYSTEM OPERATIONS
   A. Alarm Initiation
      1. System alarm operation after activation of any manual station, automatic detection device, or sprinkler flow switch shall match current building sequence of operation for system initiation, including:
         a. Appropriate initiating device circuit red LED shall flash on Control Panel and remote annunciator until the alarm has been acknowledged at Control Panel or remote annunciator.
         b. Once acknowledged, this same LED shall latch on.
         c. Subsequent alarm received after acknowledging shall flash subsequent zone alarm LED on Control Panel and remote annunciator.
         d. Acknowledgment of alarm shall not reset activated device.
e. Pulsing alarm tone shall occur within Control Panel and remote annunciator until event has been acknowledged.

f. Alarm audible-indicating devices shall sound in three pulse temporal pattern until silenced by alarm silence switch at Control Panel or remote annunciator.

g. Visual alarm indicating devices shall operate in continuous flashing pattern until system is reset.

h. Signal to notify the local fire department supervising station shall be activated.

i. Doors held open by door control devices shall close.

j. Mechanical controls shall activate air handling systems as specified by Division 23.

2. Alarm shall be displayed on an 80-character LCD display as follows:

a. 40 characters for:
   1) Point address and loop number
   2) Type of device
   3) Point status

b. 40 characters for:
   1) Custom location label

3. Fire alarm system provided for this project must have the ability to communicate directly with the existing building Honeywell Notifier fire alarm system. All required programming and equipment needed to perform these tasks shall be included under this scope of work.

B. Silencing

1. Alarm audible indicating devices shall be silenced by operating alarm silence switch or by use of key operated switch at remote annunciator.

2. Strobes shall remain active until system is reset.

3. Subsequent zone alarm shall reactivate alarm signals.

C. Reset

1. SYSTEM RESET button shall return system to its normal state after an alarm condition has been remedied.

D. Supervision

1. System shall independently supervise:
   a. Initiating device circuits.
   b. Independently fused indicating appliance circuits for alarm horn/strobe units.
   d. Auxiliary circuits for addressable relays. Blown fuse or open in circuit shall be visibly and audibly annunciated.
   e. Incoming power. Power failure shall be audibly and visually indicated at Control Panel and remote annunciator. Green "power on" LED shall be displayed continuously while incoming power is present.
   f. System Modules for module placement. Should modules become disconnected, system trouble indicator shall illuminate and audible trouble signal shall sound.
2. Device activation shall be annunciated at Control Panel and remote annunciator.

3. Independently supervised circuits shall include visible amber "Trouble" LED to indicate disarrangement conditions per circuit.

4. Disarrangement conditions of any circuit shall not affect operation of other circuits.

5. Alarm activation of any initiation circuit shall not prevent subsequent alarm operation of any other initiation circuit.

6. System shall have provisions for disabling and enabling circuits individually for maintenance or testing purposes.

E. Power Requirements

1. Provide 120 VAC power via dedicated branch circuit in emergency panel.

2. Branch circuit shall have "breaker lock" to prevent accidentally de-energizing of power to fire alarm panel.

3. Circuit breaker shall be painted red and labeled "FIRE ALARM".

4. Provide back-up battery capacity to operate entire system in normal supervisory mode for period of 24 hours with 10 minutes of alarm operation at end of period.

5. System shall automatically transfer to standby batteries upon power failure.
   a. Battery charging and recharging operations shall be automatic.

6. Provide power limited, filtered and regulated battery charger.
   a. Charger shall:
      1) Be combination high rate/float maintenance type.
      2) Charge fully discharged battery to 70% in 12 hours.
      3) Monitor for AC fail/disconnect, low/no battery, and high battery level.
      4) Include switches and associated LEDs for high rate and AC disconnect.
      5) Provide 5 amps of regulated 24VDC for peripheral devices requiring ± 5% regulation and 8 amps at 24VDC for standard peripheral devices.
      6) Be compatible with lead acid batteries.

7. External circuits requiring system operating power shall be 24VDC and shall be individually supervised and fused at Control Panel.

F. Smoke Detection Operation

1. New smoke detectors shall report to existing Honeywell Notifier fire alarm panel in an identical manner to existing building smoke detectors.

2. Smoke detector alarms shall be processed and reported immediately.

3. Upon building completion, alarm verification shall be added to detector(s) as directed by project engineer.

4. Control Panel shall:
   a. Be capable of displaying number of times (tally) detector has gone into verification mode from the system history.
   b. Download alarm set point to detector.
   c. Determine condition of each detector by comparing detector's value to stored values.
d. Maintain moving average of detectors' smoke chamber value to automatically compensate for dust and dirty conditions.

e. Continuously perform an automatic self-test routine on each detector.

f. Have capability of being programmed for pre-alarm or two-stage function.

g. Clear "detector dirty" trouble after detector has been removed from its base cleaned and replaced.

5. System shall maintain constant smoke obscuration sensitivity for each detector by compensating for environmental factors.

6. Photoelectric detector's smoke obscuration sensitivity shall be adjustable to within 0.3% of either limit of UL window (0.5% to 4.0%) to compensate for any environment.

7. System shall indicate when individual detector needs cleaning. When detector's average value reaches predetermined level, trouble MESSAGE shall be audible and visibly indicated at Control Panel. LED on detector base shall glow steady giving visible indication.

8. For scheduling of maintenance, Control Panel shall generate MESSAGE indication for any detector approaching trouble condition due to dirt or contamination.

9. Operator shall have capability to manually access the following information for each detector:

   a. Primary status
   b. Device type
   c. Present average value
   d. Present sensitivity value selected
   e. Detector range (normal, dirty, etc.)

10. Values at Control Panel shall be in "percent of smoke obscuration" format so that, no interpretation is required by operator.

11. Operator shall be able to manually control following for each detector:

   a. Enable or disable detector
   b. Establish alarm sensitivity
   c. Control detector's relay driver output

12. It shall be possible to program Control Panel to automatically change sensitivity settings of each detector based on time-of-day and day-of-week. There shall be 3 sensitivity settings available for each detector.

G. System Response

1. Maximum elapsed time from sensing fire at non-smoke detector initiating device or second smoke detector until it is recorded at Control Panel and remote annunciator shall not exceed 5 seconds and not to exceed 15 seconds for remote station reporting.

2. Maximum elapsed time for first smoke detector shall not exceed 35 seconds including verification period and not to exceed 40 seconds for remote station reporting.

H. Air Handling Unit System Operation/Interface

1. Control Panel shall provide alarm interface to air handling/energy management system controllers, which shall perform automatic functions as specified in Division 23.
2. Fire Alarm Control Panel shall provide manual control mode to override fire alarm panel’s signal so that air handling units can be restarted.

I. LED and LCD Test Operation

1. Activation of Lamp Test switch shall turn on all LED indicators, LCD display, and the local sounder and then return to previous condition.

J. One-Way Voice Communications

1. Selective Paging:
   a. Upon activation of any speaker manual control switch(es), 2 seconds of tone shall sound over selected speakers. At end of this tone, operator shall be able to make announcements via push-to-talk paging microphone over pre-selected speakers.
   b. Strobes shall flash only in selected area(s) or floor(s).
   c. Eighth floor shall be a separate selectable zone.

2. All Call:
   a. Upon activation of “All Call” switch, 2 seconds of tone shall sound over all speakers in system. At end of this tone, the operator shall be able to make announcements via push-to-talk paging microphone over all system speakers.
   b. Strobes shall flash in all areas or floors.
   c. System shall default to normal operations if the microphone becomes inactive for more than 1 minute.

K. Two-Way Voice Communications

1. Two-Way Fire Fighter Communications
   a. Plugging handset into emergency phone jack or removal of any phone from its normal hook position, shall cause phone location LED to flash and distinctive audible device to sound at Control Panel.
   b. Attempting to use another phone on same circuit shall not cause pulsing tone to activate if any two-way communications are already established.
   c. Any new circuits activated shall cause their discrete phone circuit LEDs to flash until acknowledged.
   d. Two-Way Communications System shall provide capacity to handle simultaneous use of multiple remote phones.
   e. Unplugging all handsets in use and replacement of all remote phones to their normal hook position and returning all related circuit acknowledgment switches to normal position shall cause restoration of normal supervisory functions.
   f. If any remote phone is not hung up, or unplugged then appropriate phone zone indicator LED shall flash and pulsing tone shall resume at control panel.
   g. When combined with 1-way voice communications system, it shall permit remote paging from any fire fighters remote phone location via system speakers as manually selected at main controls.
   h. Master Telephones shall be capable of communicating to one another or to any remote fire fighters phone jack or phone station.
2.3 ENCLOSURE
   A. Provide cabinets of sufficient size to accommodate equipment.

2.4 ACKNOWLEDGMENT
   A. Incorporate new area of work into the existing fire alarm system acknowledgement programming.
   B. Two methods of acknowledgment for each abnormal condition shall be provided:
      1. Acknowledge one event at a time from an unacknowledged list of events.
      2. Pressing acknowledge button shall display first unacknowledged condition in list (either alarm, supervisory or trouble), and require another acknowledge button. Press to acknowledge only displayed point.
   C. After all points have been acknowledged, LEDs shall glow steadily and alarm will be silenced. Total number of alarms, supervisory and trouble conditions shall be displayed.
   D. Pressing appropriate acknowledge button shall acknowledge all points

2.5 SILENCING
   A. If an alarm condition exists and "Alarm Silence" button is pressed, all alarm signals shall cease operation. Strobes shall remain active until system is reset.
   B. If trouble conditions exist in system and "Trouble Silence" button has been pressed, audible trouble signal shall cease, but shall resound at timed intervals to act as reminder that fire alarm system is not in normal operating mode.

2.6 FIELD PROGRAMMING
   A. System shall be fully programmable, configurable, and expandable in field and shall not require replacement of memory IC's.
   B. Programming may be accomplished through Control Panel keyboard or keyboard at printer, or use of PC.
   C. Programs shall be stored in non-volatile memory.
   D. Programming or reprogramming shall be done by a Honeywell Notifier certified technician at no charge until system is accepted by Owner.
   E. Existing Owner Tridium graphical dashboard shall be updated to reflect devices installed in this scope of work, and shall communicate information as indicated on fire alarm control panel. Provide programming at fire alarm control panel required to communicate information of new devices and coordinate with Tridium programmer and Owner.
   F. Fire alarm system shall be programmed in order to allow voice override of announcements on the floor of alarm from existing Medical Center Physical Plant Division dispatch office located in the Chandler Pavilion.

2.7 INTELLIGENT NETWORK
   A. System shall provide communications with intelligent initiating and control devices individually.
   B. Devices shall be individually annunciated at control panel.
   C. Annunciation shall include the following conditions for each point:
1. Alarm
2. Trouble
3. Open
4. Short
5. Device missing/failed

D. Devices shall have capability of being disabled or enabled individually.
E. There shall be no limit to number of detectors, stations, or addressable modules, which may be activated or “in alarm” simultaneously.
F. Multiple intelligent devices shall be connected to a single pair of wires.
G. Communication format must be completely digital poll/response protocol to allow t-tapping of circuit wiring.

2.8 TWO-WAY VOICE COMMUNICATION SYSTEM

A. Two-way voice communications shall be integral with the fire alarm system.
B. All wires between Central Control and remote units shall be supervised. Any fault shall be reported visually and audibly at Central Control.
C. Line (talk) circuit modules shall be furnished to supervise for shorts, opens and grounds of circuit wiring.
D. Each line module shall contain “Call” and “Trouble” indication and, 2-position switch to enable two-way voice communication between remote and master phones.
E. Provide Emergency Phone Jacks as shown on plans.
   1. Jack shall be mounted on stainless steel single gang plate with words “Fire Emergency Phone” screened on each.
F. Provide Remote Phones in break rod cabinets, where shown on plans.
G. Emergency phones shall be constructed of red cyclac type, thermal ABS material and be equipped with armored cable.

2.9 MULTIPLEXED PERIPHERAL DEVICES

A. Devices shall be supervised for trouble conditions.
B. Failure of device shall not hinder operation of other system devices.
C. Device Identification
   1. Each intelligent device shall be identified by an address code.
   2. Location of end-of-line device shall be indicated on device that containing same.
   3. System must verify that proper type device is in place and matches software configuration.
D. Intelligent Detector Bases
1. Either base or head shall contain electronic circuits that communicate detector's status (normal, alarm, sensitivity status, trouble) to Control Panel over two wires. Same 2 wires shall also provide power to base and detector.

2. Contacts between base and head shall be of bifurcated type using spring-type, self-wiping contacts.

3. Base shall have locking capability. Locking feature must be field removable when not required.

4. Upon removal of detector's head, trouble signal shall be transmitted to Control Panel.

5. Detector base or head shall contain LED(s), which shall flash when detector is being scanned by Control Panel.

6. LED(s) shall turn on steady when detector is in alarm condition.

E. Intelligent Detector Heads - General

1. Intelligent detector heads shall be low-profile type.

2. Heads shall be plug-in units, which mount to common base.

3. Heads shall be 24VDC type.

4. Heads may be reset by actuating Control Panel reset switch.

5. To minimize false alarms, voltage and RF transient suppression techniques shall be employed.

6. Smoke detectors shall:
   a. Be listed for sensitivity testing from Control Panel. Sensitivity test results shall be logged and downloaded to printer.
   b. Include an insect screen.
   c. Communicate actual smoke chamber values to Control Panel.
   d. Be covered with plastic bags after installation to maintain cleanliness. Bags shall be red for quick visual identification for removal at time of occupancy.

F. Intelligent Photoelectric Smoke Detectors

1. Detectors shall:
   a. Contain no radioactive material
   b. Be of solid state photoelectric type and shall operate on light scattering photodiode principle using pulsed infrared LED light.

G. Intelligent Heat Detectors

1. Detectors shall:
   a. Be combination rate-of-rise and fixed temperature (135°F unless noted).
   b. Sense within temperature range of 32°F to 158°F. Control panel shall be capable of sensing either set point of 135°F, or rate-of-rise of 15°F per minute for fire sensing.

H. Intelligent Duct Smoke Detectors

1. Duct detectors shall be of photoelectric ionization type.

2. Detectors shall be rated for air velocity to be expected.

3. It shall be possible to alarm duct detector by using remote or local test switch.
4. It shall be possible to clean sampling tubes by access through duct housings front cover.

5. Provide relays adjacent to motor controller, and remote keyed test switch and alarm LED indicator.

6. In mechanical rooms, alarm LED indicators shall be grouped on a stainless steel cover plate.
   a. Mount adjacent to main mechanical room door.
   b. Each LED shall be labeled with detectors loop and address.
   c. Floor plan of room showing detectors and addresses shall be located adjacent to cover plate.
   d. Provide Plexiglas cover over plan.

I. **Manual Stations**
   1. Manual stations shall:
      a. Be double action.
      b. Be constructed of high impact, red Lexan with raised white lettering and smooth high gloss finish.
      c. Contain circuits that communicate station's status (alarm, normal) to Control Panel over 2 wires.
      d. Mechanically latch upon operation and remain so until manually reset. Stations, which use Allen wrenches or special tools to reset shall not be accepted.
      e. Be fitted with screw terminals for field wire attachment.
   2. Address shall be field programmable on station.

J. **Interface Modules - General**
   1. Interface Modules shall:
      a. Receive 24VDC power from separate two wire circuit.
      b. Be available in either Class B or Class A supervision version.
      c. Be supervised and identified by Control Panel.
      d. Be capable of being programmed for its "address" location.
      e. Be compatible with addressable manual stations and intelligent detectors on same intelligent initiating circuit.
   2. Class A wiring shall be looped back and connected to module.
   3. Class B wiring shall be supervised by an end-of-line device.
   4. Should interface module become non-operational or removed, trouble signal shall be transmitted to Control Panel.
   5. Interface module LED's shall be clearly visible on the face of the trim plate.

K. **Interface Modules - Supervised Control**
   1. Interface Modules shall be used for control of indicating appliances, door holders, and AHU systems.
2. For signals, speakers, fire fighter phone jacks and other device control interface module shall provide double-pole,double-throw relay switching that can connect any of the following through 2 amp fuses:
   a. Zone of signals to power source
   b. Speakers to audio source
   c. Fire fighter phone jacks to communications channel
   d. Variety of controlled devices to appropriate controlling circuits.

3. Interface modules shall:
   a. Communicate supervised wiring status (normal, trouble) to fire alarm control panel.
   b. Receive from fire alarm control panel command to transfer relay.

L. Interface Modules - Supervised Monitoring
   1. Interface Modules shall:
      a. Be suited for monitoring of water-flow, valve tamper, and non-intelligent detectors.
      b. Addressable interface module shall be provided for interfacing normally open direct-contact devices to an intelligent initiating circuit.
      c. Provide power to and monitor status of zone consisting of conventional 2-wire smoke or heat detectors and N/O contact devices.
      d. Communicate zone’s status (normal, alarm, trouble) to Control Panel.
   2. Supervision of zone wiring shall be Class B or Class A.

M. Interface Modules - Non-Supervised Control
   1. Interface module shall provide double-pole,double-throw relay switching for loads up to 120VAC. It shall contain 2 amp fuses, one on each common leg of relay.

2.10 SPEAKER/STROBE DEVICES

A. Combination Speaker/Strobe Devices
   1. Speakers:
      a. Operate on 24V DC circuit
      b. Include separate wire leads for in/out wiring for each leg of associated signal circuit. Tappings of signal device conductors shall not be acceptable.
      c. Be suitable for rear mounting behind audio-visual assemblies, which shall be flush or semi-flush mounted, with manufacturer back boxes and flush trim ring.
      d. Have field adjustable output taps, 3 taps minimum.
      e. Provide minimum sound pressure level of 85.7 dBA at 10 feet using 1-watt tap.
      f. Speakers located in mechanical room shall have 3 taps minimum with 8W being the highest.
      g. Provide minimum sound pressure level of 90 dBA at 10 feet using 2-watt tap.
      h. Include blocking capacitor for line supervision and screw terminal for in-out wiring.
2. Strobes shall be:
   a. Multi-tap units with taps at 15, 30, 75 and 110 cd.
   b. Tapped at 15-candela peak power or as noted on drawings.
   c. Have flash synchronization module on circuit when more than one strobe is visible at a time.
   d. On separate supervised circuit from speaker circuit.

3. White Lexan lens shall have “FIRE” in red lettering visible from 180° field of view.

4. Have off-white semi flush housing.

5. Strobe circuit loading shall be calculated at 75 cd tap for all devices, except in mechanical, interstitial spaces where circuit loading shall be calculated at 110 cd tap.

B. Speaker Devices
   1. Speakers without strobe units shall have:
      a. Above listed features
      b. Flush ceiling mounted white baffle and recessed back box for installation in suspended ceiling system.
      c. Red baffle with surface mounted back box, furnished by speaker manufacturer, where installed in areas with exposed structure.
      d. Cast metal grille and back box where installed in mechanical/interstitial spaces.

2.11 CONVENTIONAL PERIPHERAL DEVICES

A. Door Holders
   1. Magnetic door holders shall:
      a. Be provided by the Trade Contractor. Refer to Section 08 7110 - Door Hardware.
      b. Be capable of being surface, flush, or semi-flush mounted as required.
   2. Power for door holders shall be 24 volt.

B. Fault Isolator Module
   1. Provide Fault Isolator Module (FIM) on initiating device circuits in following situations:
      a. For each 25 devices on a loop
   2. Fault Isolator Module shall:
      a. Automatically re-connect isolated section of loop upon correction of fault conditions.
      b. Not require any address setting
      c. Operations shall be totally automatic. It shall not be necessary to replace or reset FIM after its normal operation.
      d. Include LED, which shall flash under normal operation and illuminate steady to indicate short circuit.
PART 3 EXECUTION

3.1 GENERAL

A. Class A circuiting shall be used.

B. Installation shall be done in neat, workmanlike manner in accordance with manufacturer’s recommendations.

C. Smoke detectors shall not be mounted until construction is completed.

3.2 RACEWAYS

A. Fire Alarm Panel risers shall be in conduit system separate from other building wiring.

B. Wiring shall be in conduit system separate from other building wiring. See Section 26 0533 - Raceway and Boxes for Electrical Systems.

C. Minimum 3/4” steel raceway.

D. Contractor shall size conduit and boxes by circular mil size of cable in conduit or box.

3.3 CONDUCTORS

A. Cables and wires shall be provided per manufacturer shop drawings.

B. Conductors shall be color-coded. Coding shall be consistent through out facility.

C. Green wire shall be used only for equipment ground.

D. Cable Detector Loops shall be twisted pair with shield jacket. Shield shall be connected to earth ground only at control panel.

E. Detector wiring shall not be in same conduit with 120/240 VAC wiring or other high current circuits.

F. T-taps or branch circuit connections allowed for class B intelligent loop circuits.

G. Leave 8” wire tails at each device box and 36” wire tails at Control Panel and Remote Annunciator Panel(s)

H. Wiring of initiating device circuits, alarm horn circuits, and alarm strobe circuits shall be #14 AWG minimum.

I. Fire alarm cable shall be held in place at device box, by means of 2-screw connector, (do not use squeeze or crimp type connectors).

J. Splices or connections shall be made within approved junction boxes and with approved fittings.

K. Boxes shall be red and labeled “FIRE ALARM SYSTEM” by decal or other approved markings.

L. Horn and strobe circuits shall have separate conductors, and shall operate independently of each other.

M. Tray cable is not acceptable for use as fire alarm systems raceway.

3.4 DEVICE MOUNTING

A. Recommended mounting heights, and requirements are as follows:
1. Audio-Visual Devices
   a. Install flush, semi-flush surface mount allowed only in back of house spaces. (i.e. storage rooms, mechanical rooms, shell space) 6” below finished ceiling or 80” from bottom of device to finished floor.
   b. No devices protruding 4” or more shall be installed lower than 80”.
   c. Audio/visual devices may be installed on the ceilings in accordance with NFPA 72 - Table 2-A.
   d. For surface mounting, use manufacture-supplied backboxes and trim plates.
   e. Mark each device with its circuit number.

2. Manual Stations
   a. Operable part of manual stations shall be installed not less than 3-1/2 ft (42”) and not more than 4-1/2 ft (54”) above finished floor.
   b. Manual stations shall be in unobstructed locations.
   c. For surface mounting, use manufacturers supplied backboxes and trim plates
   d. Mark unit’s address on inside and outside of housing.

3. Heat and Smoke Detectors
   a. Location of detectors shown on plans is schematic only. Detectors must be located according to code requirements.
   b. Surface mounted detectors shall be installed using back boxes equal to base size. Standard octagon and square boxes are not acceptable.
   c. Detectors shall be located on the highest part of smooth ceiling so that edge of detector is no closer than 4” from sidewall.
   d. Ceilings with beams, joists or soffits that exceed 8” in depth require special planning and closer spacing.
   e. Mount detectors on sidewalls with top of detector no closer than 4” from ceiling and no further away than 12”.
   f. Smoke detectors shall not be installed closer than 3 ft from air supply diffusers.
   g. No detectors shall be installed in direct airflow.
   h. Heat and smoke detectors should be located near center of open area, which they protect.
   i. Mark zone number and ranking of each detector on its base.
   j. For intelligent systems, mark address and loop number on each detector's base.

3.5 DEMOLITION

A. Existing equipment that is removed shall be inventoried and turned over to Owner.

B. Upon inspection by Owner, Contractor shall dispose of equipment that is deemed useless to Owner.

C. Contractor shall remove abandoned devices and conduit not being reused.

D. Contractor shall provide temporary heat detectors to serve areas affected by sprinkler demolition.
   1. Provide fire alarm system programming required to connect temporary heat detectors to existing building fire alarm system.
2. Contractor shall disconnect and remove temporary heat detectors upon installation of new sprinkler system. Contractor shall reprogram fire alarm system as required to remove temporary heat detectors from fire alarm system upon completion of new sprinkler work.

3.6 IDENTIFICATION LABELS

A. Junction boxes shall be painted red and labeled “Fire Alarm”.
B. Circuits must be labeled with name of circuit and area being served by circuit.
C. Labels shall be permanent, and be machine generated. NO HANDWRITTEN OR NON-PERMANENT LABELS SHALL BE ALLOWED.
D. Labels shall be self-laminating, white/transparent vinyl and be wrapped around cable.
E. Flag type labels are not allowed.
F. Labels shall be of adequate size to accommodate circumference of cable being labeled and properly self-laminate over full extent of printed area of label.
G. Adhesive type labels not permitted except for phase and wire identification.
H. Wiring color code shall be maintained throughout installation.
I. Green wire shall be used only for equipment ground.

3.7 MANUFACTURER’S SERVICES

A. Supervision of installation shall be provided by trained service technician from manufacturer of fire alarm equipment.
B. Technician shall be US certified and have had minimum of 2 years of service experience in fire alarm industry.
C. Technician's name shall appear on equipment submittals and letter of certification from fire alarm manufacturer shall be sent to project engineer.
D. Manufacturer's service technician shall be responsible for following items:
   1. Pre-installation visit to job site to review equipment submittals and verify method by which system shall be wired.
   2. Make periodic job site visits to verify installation and wiring of system.
   3. Upon completion of wiring, final connections shall be made under supervision of technician.
   4. At time of final checkout, technician shall give operational instructions to Owner and/or his representative.
   5. Job site visits shall be dated and documented in writing and signed by Electrical Contractor.
   6. Discrepancy shall be noted on document and copy kept in system job folder, which shall be available to Project Engineer any time during Project.
E. Programming of existing fire alarm system to incorporate installation of new devices shall be performed by a technician certified by Honeywell Notifier in order to maintain the UL listing of the overall building fire alarm system, and to extend the UL listing to incorporate the new installation.
3.8 TESTING

A. Manufacturer's authorized representative shall perform complete functional test of each system and submit written report to Contractor attesting to proper operation of completed system prior to final inspection.

B. Contractor shall test each device in system before system is considered substantially complete.

C. Completed fire alarm system shall be fully tested by Contractor, including Honeywell Notifier representative, in presence of the Owner's representative and local Fire Marshal.

D. Upon completion of successful test, Contractor shall:
   1. Certify system to Owner in writing.
   2. Complete NFPA 1-7.2.1 record of completion form.
   3. Provide as-built and O&M manuals.

3.9 WARRANTY

A. Contractor shall warrant completed fire alarm system wiring and equipment to be free from inherent mechanical and electrical defects for a period of 2 years from the date of substantial completion of Project.

B. Contractor shall post warranty period along with company's name and telephone number inside fire alarm panel.

C. Warranty service for equipment shall be provided by system supplier's factory trained representative.

D. Warranty shall include parts, labor and necessary travel.

E. Occupied facility shall not be without UL and NFPA approved and fully operational fire alarm system for period longer than 2 hours. Emergency response shall be provided within 2 hours of notification, to contractor, of failure of system to perform operationally per UL and NFPA standards.

F. Non-emergency service calls shall be responded to within 24 hrs of notification to Contractor.

G. Repairs and/or replacement shall be completed within 72 hrs of time of notification. Other than emergency, actual repairs and/or replacement shall be provided during normal working hours, Monday through Friday, excluding holidays.

H. If repair and/or replacement cannot be made within prescribed time, other means and methods of protection shall be provided to insure safety of building occupants during which time system is not in compliance with standards. This may involve up to and include hiring Owner approved qualified personnel to stand fire watch, at contractor's expense.

3.10 TRAINING

A. Contractor shall provide minimum of 4 hrs system operation training for Owner, Architect/Engineer, and fire department personnel.

B. Training session shall be at time to be stipulated by Owner.

C. Training shall be completed prior to final inspection.
3.11 MAINTENANCE CONTRACT

A. Equipment manufacturer shall make available to Owner, maintenance contract proposal to provide minimum of 2 inspections and tests per year in compliance with NFPA-72 Codes.

3.12 SPECIAL CONSIDERATIONS

A. Contractor shall refer to Division 01, General Requirements, item “SPECIAL SITE CONDITIONS”.
B. Contractor shall notify Owner's security officer 24 hrs in advance of any zones inoperative for period of time exceeding 2 hrs.
C. Existing fire alarm systems must be returned to full operation at end of each working day, or notification to campus security of what zones are inoperative on daily basis in writing, hand delivered.

3.13 DUCT SMOKE DETECTORS

A. Electrical Contractor shall provide and install all duct smoke detectors required for this facility. Refer to Mechanical Drawings for locations of all smoke dampers requiring duct detector installation as well as location of all supply and return ductwork for air handling units requiring duct smoke detectors.

1. Duct smoke detectors shall be provide in each main return and exhaust air plenum of each air handling unit having a capacity greater than 2000 cubic feet per minute (cfm). Such detectors shall be located in a serviceable area downstream of the last duct inlet.

2. Duct smoke detectors shall be provided downstream of the air filters and ahead of any branch connections in air supply systems having a capacity greater than 2000 cubic feet per minute (cfm).

3. Duct smoke detectors shall be provided at each connection to a vertical duct or riser servicing two or more stories from a return air duct or plenum of an air handling unit.

4. In return air systems, a smoke duct detector shall be provided where the air leaves each smoke compartment, or in the duct system before the air enters the return air system common to more than one smoke compartment.

a. Detectors shall be installed at the opening where the return air enters the common return air system. The detectors should be installed up to 12” in front of or behind the opening and spaced according to the following opening dimensions.

   1) Up to 36” – One detector center in opening.
   2) Up to 72” – Two detectors located at the one-quarter points of the opening.
   3) Over 72” – One additional detector each full 24” of opening.

b. The number and spacing of detectors in the depth of the opening should be the same as those given for the width.

END OF SECTION
GENERAL NOTES
A. VENDOR DRAWINGS FOR REFERENCE ONLY.

EQUIPMENT SCHEDULE

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EXTRAS

- 3'-7" 15'-11"
- 24'-3" 23'-6"
- 4'-2" 9'-7"
- 5'-7" 24'-3"

EQUIPMENT SCHEDULE

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UNIVERSITY OF KENTUCKY HOSPITAL
INTERVENTIONAL SERVICES

A. VENDOR DRAWINGS FOR REFERENCE ONLY.

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CONTRACT DOCUMENTS

- D PER CUSTOMER REQUEST 121718
- 23'-6" 3 S.1
- 2" 2 S.1
- 3" 3 S.1
- 4" 4 S.1

UNIVERSITY OF KENTUCKY HOSPITAL
INTERVENTIONAL SERVICES

A. VENDOR DRAWINGS FOR REFERENCE ONLY.
GENERAL NOTES
A. VENDOR DRAWINGS FOR REFERENCE ONLY.

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PROCEDURE ROOM 3
ACCU-MOUNT SUPPORT SYSTEM LAYOUT

DATE: APRIL 1, 2018

PROJECT NO: 981130

LO.PR0 3

24'-3" 12'-2"
5'-6"
7'-6"
4'-6"
3'
S.1
1
S.1
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**SCALE:** 3/8" = 1'-0"

**DATE:** APRIL 5, 2018

**Project No:** 981130

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**PROCEDURE 6**

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**CONTRACT DOCUMENTS**

2          04/17/19        ADDENDUM 2
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GENERAL NOTES
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PROCEDURE 8
EQUIPMENT SCHEDULE
KEY
ITEM NAME QTY
D 300 ACCU-MOUNT FOR TELETOM ® 1
TP-622 (LSM3T BOOM) 1
TP-632 (EQUIPMENT BOOM) 1
TF-612 (ANESTHESIA BOOM) 1
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GENERAL NOTES
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UNIVERSITY OF KENTUCKY HOSPITAL

PROCEDURE ROOM 12
ACCU-MOUNT SUPPORT SYSTEM LAYOUT
DATE: APRIL 5, 2018
PROJECT NO: B1310

LO.PRO 12
3/8" = 1'-0"
REV
DESCRIPTION
DATE
3
S.1
4
S.1

D PER CUSTOMER REQUEST 121718

PROCEDURE 12

25'-9"
6'-9"
25'-2"
9'-3"
E2
2'-4"
### GENERAL NOTES

A. VENDOR DRAWINGS FOR REFERENCE ONLY.

### EQUIPMENT SCHEDULE

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### PROCEDURE ROOM 13

**ACCU-MOUNT SUPPORT SYSTEM LAYOUT**

**UNIVERSITY OF KENTUCKY HOSPITAL**

**PROCEDURE ROOM 13**

**ACCU-MOUNT SUPPORT SYSTEM LAYOUT**

**D S.1.**

**E2.**

**23'-7"**

**11'-3"**

**5'-6"**

**8'-0"**

**4'-6"**

**D2.**

**5'-6"**

**EQUIPMENT SCHEDULE**

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### SCALE: 3/8" = 1'-0"

**PROCEDURE 13**

**S.1.**

**D PER CUSTOMER REQUEST 121718**

**4**

**S.1.**

**4**

**S.1.**

**REVDESCRIPTIONDATE**

**ADDENDUM 2**

**HT-13**

**APRIL 5, 2018**

**981130**

**LO.PRO 13**

**4**

**S.1.**

**4**

**S.1.**

**ADDENDUM 2**

**ADDENDUM 2**

**ADDENDUM 2**
1. SECTION
SCALE: 1/16" = 1`

2. SECTION
SCALE: 1/16" = 1`

3. SECTION
SCALE: 1/16" = 1`

4. SECTION
SCALE: 1/16" = 1`
NOTES FOR ISOLATED POWER SYSTEM

1. **DUAL VARIABLE FREQUENCY DRIVE WIRING DIAGRAM**

2. **PROCEDURE ROOM GROUNDING DETAIL**

3. **PREP/RECOVERY ROOM LIGHT SWITCH ELEVATION**

---

**NOTES FOR ISOLATED POWER SYSTEM**

1. INTERIOR FAN ARRAY DIAGRAM IS SHOWN FOR REFERENCE ONLY. ELECTRICAL CONTRACTOR SHALL COORDINATE AND PROVIDE QUANTITY OF FANS IN FAN ARRAY WITH MECHANICAL CONTRACTOR.

2. PROVIDE ALL EQUIPMENT SHOWN ON THIS DETAIL. VARIABLE FREQUENCY DRIVES SHALL BE FURNISHED BY OTHERS, INSTALLED BY ELECTRICAL CONTRACTOR.

3. ROOM BONDING CONDUCTORS - CONNECT ALL EXPOSED CONDUCTIVE METAL BUILDING SURFACES WITHIN ROOM TO ROOM BONDING POINT WITH #10 GREEN INSULATED STRANDED COPPER, IN CONDUIT.

4. GROUND MODULE GROUNDING CONDUCTOR - #6 GREEN INSULATED STRANDED COPPER IN CONDUIT.

5. CONDUIT GROUNDING BUSHING - BOND TO EQUIPMENT GROUNDING BUS WITH #10 GREEN INSULATED STRANDED COPPER JUMPER.

6. OUTLET BOX GROUNDING JUMPER - #12 GREEN INSULATED STRANDED COPPER, CONNECT TO RECEPTACLE WITH #6 GREEN INSULATED STRANDED COPPER CONNECT IN ACCORDANCE WITH NEC ARTICLE 250 IN SAME CONDUIT WITH POWER CONDUCTORS.

7. MOTOR PROTECTOR BASED ON SIZE OF MOTOR PROTECTOR.

---

**PROCEDURE ROOM GROUNDING DETAIL**

1. FAN ARRAY DIAGRAM IS SHOWN FOR REFERENCE ONLY. ELECTRICAL CONTRACTOR SHALL COORDINATE AND PROVIDE QUANTITY OF FANS IN FAN ARRAY WITH MECHANICAL CONTRACTOR.

2. PROVIDE ALL EQUIPMENT SHOWN ON THIS DETAIL. VARIABLE FREQUENCY DRIVES SHALL BE FURNISHED BY OTHERS, INSTALLED BY ELECTRICAL CONTRACTOR.

3. ROOM BONDING CONDUCTORS - CONNECT ALL EXPOSED CONDUCTIVE METAL BUILDING SURFACES WITHIN ROOM TO ROOM BONDING POINT WITH #10 GREEN INSULATED STRANDED COPPER, IN CONDUIT.

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7. MOTOR PROTECTOR BASED ON SIZE OF MOTOR PROTECTOR.

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**PREP/RECOVERY ROOM LIGHT SWITCH ELEVATION**

1. FAN ARRAY DIAGRAM IS SHOWN FOR REFERENCE ONLY. ELECTRICAL CONTRACTOR SHALL COORDINATE AND PROVIDE QUANTITY OF FANS IN FAN ARRAY WITH MECHANICAL CONTRACTOR.

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3. ROOM BONDING CONDUCTORS - CONNECT ALL EXPOSED CONDUCTIVE METAL BUILDING SURFACES WITHIN ROOM TO ROOM BONDING POINT WITH #10 GREEN INSULATED STRANDED COPPER, IN CONDUIT.

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7. MOTOR PROTECTOR BASED ON SIZE OF MOTOR PROTECTOR.