UNIVERSITY OF KENTUCKY
Purchasing Division

INVITATION FOR BIDS

CCK-2528-21
Renew/Modernize Facilities (Cooper House)
ADDENDUM # 2
04/09/2021

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

IMPORTANT: BID AND ADDENDUM MUST BE RECEIVED BY: 04/20/2021 @ 3:00 P.M. LEXINGTON, KY TIME

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

1. Please refer to and incorporate within the offer, the attached written questions and answers, specifications and drawings.

Specifications Index:

- 00 0110 BSD-Table of Contents_vol1.pdf
- 00 9111 BSD-Addendum Number 2.pdf
- 07 5000 LAS-ROOFING.pdf
- 07 6100 PRJ-SHEET METAL ROOFING.pdf
- 08 1100 LAS-STEEL DOORS AND FRAMES...
- 23 2113 - HYDRONIC PIPING AND VALVE...

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

Drawings Index:

- A101 - FIRST FLOOR PLAN.pdf
- A103 - THIRD FLOOR PLAN.pdf
- A601 - DOOR ELEVATIONS, DETAILS, & S...
- A611 - FIRST FLOOR INTERIOR ELEVATIO...
- A612 - FIRST FLOOR INTERIOR ELEVATIO...
- A616 - THIRD FLOOR INTERIOR ELEVATIO...
- A801 - FURNITURE PLAN - FIRST FLOOR (...
- A803 - FURNITURE PLAN - THIRD FLOOR ...
- ADD-2 C1.0.pdf
- ADD-2 C2.2.pdf
- ADD-2 L0.0.pdf
- ADD-2 L4.1.pdf
- E100 - BASEMENT FLOOR PLAN - LIGHTI...
- E101 - FIRST FLOOR PLAN - LIGHTING.pdf
- E102 - SECOND FLOOR PLAN - LIGHTING...
- E200 - BASEMENT FLOOR PLAN - POWE...
- E201 - FIRST FLOOR PLAN - POWER.pdf
- E301 - FIRSTS FLOOR PLAN - SYSTEMS.pdf
- E302 - SECOND FLOOR PLAN - SYSTEMS....
- E503 - LIGHTING DETAILS.pdf
- E600 - ELECTRICAL RISER AND SCHEDUL...
- E601 - LIGHTING SCHEDULE.pdf
- E602 - LIGHTING SCHEDULE.pdf
- G001 - COVER SHEET.pdf
- G101 - LIFE SAFETY PLANS.pdf
- SU301 - ELECTRICAL SITE UTILITIES PLAN....
- SU302 - ELECTRICAL SITE UTILITIES PLAN....

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

OFFICIAL APPROVAL **UNIVERSITY OF KENTUCKY**	**SIGNATURE**
Ken Scott 04/09/21	_____
Contracting Officer / (859) 257-9102	_____ Typed or Printed Name

UNIVERSITY OF KENTUCKY
Purchasing Division

Written Questions and Answers

CCK-2528-21

#2511.1 Renew/Modernize Facilities (Cooper House)

No.	Question	Answer
1.	Can underpinning resistance piers, which can accommodate the specified 8 kip design loads, be used in lieu of underpinning micropiles?	Rock bearing piles/piers are required (specification 31 6413 and drawing S100). Rock surface is expected to be relatively shallow, coordinate with the Geotechnical Report for additional information regarding estimated rock elevation. Galvanized steel round pipe piles/piers designed for, and installed to, end bearing on the rock surface will be an acceptable alternative to the reinforced concrete micropiles at Contractor's option. Pile/pier load capacity and attachment to foundation must comply with the Construction Documents. Performance submittal requirements of specification 31 6413 apply to both options.
2.	Atlas would like to bid on the Steel Doors and Frames (08 11 00) for the project referenced above. Please see the Request for Manufacturer Substitution (Metal Products, Inc.) for our preferred manufacturers, along with product data and a project resume. If you need any additional information, please let me know.	Metal Products, Inc. has been added to approved manufacturers in specification section 08 1100-2.02:A3
3.	When is the anticipated start date of this project?	As soon as the bidder is chosen by University of Kentucky.

4.	I am the Kentucky representative for Firestone Building Products and DensDeck. Please feel free to contact me anytime with questions or for help with roof analysis and recommendations. As discussed, I have included the current Dens Deck specification language below with the enhanced Eonic Technology. If this could be included per addendum on the Cooper House project that would be fantastic! Please let me know if you have any questions or would like any more information on this product. Thanks again for your time! 1) ROOF COVER BOARDS a. Horizontal Roof Cover Boards: Glass-Mat Faced Gypsum Roof Boards. i. Material Quality Standard: ASTM C 1177 / C 1177M. ii. Description: Glass-mat faced gypsum roof boards specifically manufactured for use beneath roofing systems. Non-combustible moisture-resistant gypsum core with glass-mat facings. Provide in maximum lengths and widths available that will minimize short-edge-to-short-edge butt joints and to correspond to support system indicated. iii. Manufacturers and Products: 1. Georgia-Pacific Gypsum LLC; DensDeck and DensDeck Prime with EONIC™ Technology;; as recommended by roofing system manufacturer. iv. Thickness: Minimum 1/4 in (6 mm); or as required to meet performance requirements in 1/2 in or 5/8 in.	DensDeck Prime with EONIC Technology has been added to specification section 07 5000-2.05A-2.
5.	I had a question regarding the cameras. On plans it shows the basis of design model numbers for each camera location. However within the spec book those models do not match. Just need clarification on what model numbers are specified for this project.	The specified camera models are included on drawings E301, E302, and E303.
6.	There are 2 solid deltas in the bathroom (208) and 1 delta in the meeting room (204) on E302. Are those data drops as well?	See note 1, E302 for data drop and floor box note. Data drops shown in Restroom 208 will be removed, see revised E302.
7.	What is the estimate?	Estimate is $2.8 million.
8.	Section 76100 Sheet Metal Roofing - 1.05 Quality Assurance references the involvement of CDA. After speaking with CDA's Larry Peters this week, I learned their ability to provide training and oversight has not only changed but been impacted by the Corona Virus. Could you please clarify CDA's ability to assist and revise the	See revised spec section 076100. ITI training is still required to meet CDA standards. Contractor to notify architect if scheduling delays per Covid-19 will impact overall schedule.

	spec accordingly? Larry's contact information is as follows: Larry Peters Project Manager, Building Construction Copper Development Association Inc. office: 404.373.0324 New E-mail Address: Larry.Peters@copperalliance.us	
9.	Has the Architect already secured and paid for the building permit with HBC?	Yes.
10.	If the Architect has not secured permitting approval with HBC, will this cost be the responsibility of the Contractor?	Architect has secured permitting approval with HBC.
11.	Has a hazardous material test been conducted, and do hazardous materials currently exist?	See Article 15 Hazardous Materials of the general conditions.
12.	Has a hazardous material test been conducted, and do hazardous materials currently exist?	See Article 15 Hazardous Materials of the general conditions.
13.	Will it be the responsibility of the contractor to abate hazardous materials?	See Article 15 Hazardous Materials of the general conditions.
14.	Can the Unit Price, Subs and Manufacturers be submitted the following day at 12 noon?	Unit Prices must be submitted with your bid at the time of bid opening. Subs and Manufactures can be submitted no later than 12 O'clock (noon) on the first business day after the bid opening.
15.	The Custom Cabinets and Woodwork references requirements for AWI Certification. Can this requirement be waived as long as AWI Standards are met?	No. The custom cabinets must meet AWI Certification as required per specifications.
16.	Are you providing a specification for the drilled piers?	No, there will not be a specific "Drilled piers" specification section. Pertinent information for drilled piers is found in the 01 4110 Specification section, the 03 3000 Specification section, and the project drawings; including the structural General notes and detail A/S305.
17.	One of our roofing subcontractors has inquired whether or not it would be acceptable to provide the copper roof with a 1.5" rib and 16" wide pan. That is slightly different from the way the spec reads.	Drawings are designed to the Copper Development Association (CDA) standards. Any specific height information noted in drawings needs to be met. Width of pan size and height of seams to be in accordance with CDA details and as indicated in specification

		section 076000.

SECTION 00 0110
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END OF SECTION

SECTION 00 9111 - ADDENDUM NUMBER 02

PARTICULARS

1.01 DATE: April 8, 2021

1.02 PROJECT: 10663-01 U OF KY COOPER HOUSE RESTORATION PHASE II

TO: PROSPECTIVE BIDDERS:

2.01 THIS ADDENDUM FORMS A PART OF THE CONTRACT DOCUMENTS AND MODIFIES THE ORIGINALPROCUREMENT DOCUMENTS DATED May 14, 2020, AND ADDENDUM NUMBER 01 ISSUED March 24, 2021, WITH AMENDMENTS AND ADDITIONS NOTED BELOW.

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

CHANGES TO PRIOR ADDENDA:

3.01 CHANGES TO ADDENDUM NUMBER 01 - ISSUED March 24, 2021

CHANGES TO THE PROJECT MANUAL - SPECIFICATIONS:

Section 07 5000 – ROOFING
- This specification changed to include Georgia Pacific DensDeck Prime with EONIC Technology.

Section 07 6100 – SHEET METAL ROOFING
- This specification changed to clarify training requirements required.

Section 08 1100 – STEEL DOORS AND FRAMES
- This specification changed to include Metal Products, Inc. as an approved manufacturer.

Section 23 2113 – HYRDONIC PIPING AND VALVES
- This specification changed to remove GruvLok as an approved manufacturer.

CHANGES TO DRAWINGS:

G001 – COVER SHEET
- This drawing changed to show which sheets are revised in this Addendum.

G101 – LIFE SAFETY PLANS
- This drawing changed to show a new pair of doors between Exhibit Rooms 102 and 104, and a new door at Office 301. There are no impacts to life safety.

C1.0 – SITE CIVIL UTILITY PLAN
- This drawing changed to show the deletion of a fire hydrant line vault.

C2.2 – SITE CIVIL UTILITY DETAILS
- This drawing changed to show the fire hydrant line vault deleted.

L0.0 – SITE LOGISTICS PLAN
- This drawing changed to provide clarification on construction fencing and staging requirements.

L4.1 – SITE MATERIALS PLAN
- This drawing changed to update future improvements plan.

A101 – FIRST FLOOR PLAN
- This drawing changed to add new barn doors 108 between Exhibit rooms 102 and 104.

A103 – THIRD FLOOR PLAN
- This drawing changed to add new door 301 at Office 301.

A601 – DOOR ELEVATIONS, DETAILS & SCHEDULE
- This drawing changed to add doors 108 and 301 to schedule.

A611 – FIRST FLOOR INTERIOR ELEVATIONS

- This drawing changed to add new barn doors 108 between Exhibit rooms 102 and 104.

A612 – FIRST FLOOR INTERIOR ELEVATIONS

- This drawing changed to add new barn doors 108 between Exhibit rooms 102 and 104.

A616 – THIRD FLOOR INTERIOR ELEVATIONS

- This drawing changed to add new door 301 at Office 301.

A801 – FURNITURE PLAN – FIRST FLOOR (FOR REFERENCE ONLY)

- This drawing changed to add new barn doors 108 between Exhibit rooms 102 and 104, and a conference table in Exhibit 102.

A803 – FURNITURE PLAN – THIRD FLOOR (FOR REFERENCE ONLY)

- This drawing changed to add new door 301 at Office 301.

E100 – BASEMENT FLOOR PLAN - LIGHTING

- This drawing removes (2) light switches in Stair ST-A shown at base of stairs, and configures light switch at Room 003 entrance and light switch at first floor Stair ST-A to control basement lights in Rooms 000, 002, 003, 004 and 005. This drawing changes light fixture type to VWE at Elevator Pit EL-A, and changes pit lighting circuit from A-19 to CI-10.

E101 – FIRST FLOOR PLAN - LIGHTING

- This drawing adds a light switch in Exhibit 102, type ‘H’ adjacent to other light switches, adds a light switch in Reception 103, type ‘H’ adjacent to other light switch, adds a light switch in Exhibit 104, type ‘H’ adjacent to other light switches. This drawing adds a light switch in Common Space 107, type ‘B’ at bottom of Stair ST-B, coordinate exact location with architect and connect switch to stair lighting above. This drawing switches light fixture VWE in ST-A with group of basement lighting fixtures, not switched independently.

E102 – SECOND FLOOR PLAN - LIGHTING

- This drawing adds additional light switch in Office 203, type ‘H’ adjacent to other light switch, deletes light switch type ‘B’ in Break Area 201 that is floating in space, replace light switch type ‘A’ with type ‘B’. This drawing adds additional light switch in Office 202, type ‘H’ adjacent to other light switch. This drawing adds additional light switch in Office 204, type ‘H’ adjacent to other light switch. This drawing clarifies scone fixture in Restroom 208 as type ‘J’.

E200 – BASEMENT FLOOR PLAN - POWER

- This drawing adds sheet note 13 next to conductors MDP-10 and MDP-11.

E201 – FIRST FLOOR PLAN – POWER

- This drawing provided duplex power receptacle with (2) data in floor box/poke through in Exhibit 102, Hubbell System One 4” Round Recessed Box for use in wood floors with ADA compliant 0.15” flange thickness, or equal. Extend power from circuit A-35. Coordinate exact location with architect. This drawing also provided duplex power receptacle in floor box/ poke through. Hubbell System One 4” Round Recessed Box for use in wood floors with ADA compliant 0.15" flange thickness, or equal. Coordinate exact location with architect. This drawing clarified Coordinating location of receptacle in plan-north-west corner with architect in Exhibit 104 as location shown conflicts with sliding door. This drawing relocates receptacle in Restroom Women’s 108A . Coordinate with architect, location shown conflicts with paper towel dispenser. This drawing also relocates receptacle in Restroom Men’s 108B. Coordinate with architect, location shown conflicts with paper towel dispenser.

E301 – FIRST FLOOR PLAN - SYSTEMS

- This drawing added sheet note 12 to ‘Exterior Porch XA100’ door press plate, and added General Note B: “Provide additional devices if needed to cover fire alarm notification requirements (horns/strobes). Note applies to entire project.” This drawing also added duplex power receptacle with (2) data in floor box/ poke through in Exhibiti 102, Hubbell System One 4” Round Recessed Box for use in wood floors with ADA compliant 0.15” flange thickness, or equal. Extend power from circuit A-35. Coordinate exact location with architect.

E302 – SECOND FLOOR PLAN - SYSTEMS

- This d This drawing removed (2) Data symbols from Restroom 208 – Delete (2) data symbols, no data required in room. In Meeting Room 204, Wall mounted data to include quantity of (2) data where shown.

E503 – LIGHTING DETAILS

- This drawing added General Note to ‘nLight Enabled Relay Panels RLY1 and RLY2 Wiring Schematic’: “Provide IP connection, remote monitoring and remote control of relay panels from ‘Delta Room’. Provide components and complete system for BMS integration per UK standards.”

E600 – ELECTRICAL RISER AND SCHEDULES

- This drawing changed Power Riser – Detail Note 13 to, “Emergency lighting central inverter. 3#6, 1#10, 1"C.”

E601 – LIGHTING SCHEDULE

- This drawing changed Fixture Type VWE – description to, “Wall mounted vapor tight utility fixture on emergency power, added Fixture Type K – Ligman Lighting USA ULE-40721 3500K, equal by Cooper, equal by Hubbell, added Fixture Type C – note 9, changed Fixture NE description to, “Illuminated 4 inch diameter by 4 foot cylinder, matte acrylic diffuser, on emergency power” and changed Fixture NE mounting type to “Ceiling”.

E602 – LIGHTING SCHEUDLE

- This drawing added Note 9, “Provide with cable management.”

SU301 – ELECTRICAL SITE UTILTIES PLAN

- This drawing changed Sheet Keynote 17 – Note that there are (3) removeable bollards. Coordinate locations with engineer. See bollard details on Drawing L6.1, added Sheet Keynote 29 pointing to ‘Fire Hydrant Line Protection Vault’, added Sheet Keynote 29, “Provide GFCI receptacle in fire protection vault. Provide #10 conductors from Cooper, Circuit A-49”, revised General Note 4 “Not all existing utilities are shown. Contractor to hire independent underground utility location service. Contractor to provide drawing to engineer which indicates existing utility depths at locations of work” and added General Note – “Depth of conduit caps and approximate angle/direction of conduit associated with Sheet Keynotes 8, 27 and 28 to be coordinated with associated projects and approved by engineer prior to installation.

SU302 – ELECTRICAL SITE UTILTIES PLAN

- This drawing changed Underground Utility Section 9 – Section to include (1) 4” conduit and (4) 1-1/4” conduits, and added General Note – “Minimum duct bank burial depths indicated.

Actual depths will vary significantly in order to coordinate with existing and new infrastructure. It is the responsibility of the contractor to determine the new duct depths based on the existing and new infrastructure."

This addendum also addresses written bid questions issued on 3/31/21.

END OF SECTION

SECTION 07 5000 - ROOFING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Roofing Assembly:
   1. Single ply roof membrane.
   2. Overlay board.
   3. Insulation Board Cricket/Saddle.
   4. 2 layers of 2.6 inch isocyanurate insulation.
   5. Single-ply vapor retarder.
   6. Wood deck.
   7. Roof Expansion Joint.

1.02 REFERENCES

A. ASTM C1177/C1177M - Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing; 2013.

B. ASTM C1289 - Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board; 2017.

1.03 SUBMITTALS

A. Product Data:
   1. Manufacturer's data needed to demonstrate compliance with the specified requirements.
   2. Catalog illustrations or shop drawings in sufficient detail to show installation and interface of the work of this Section with the work of adjacent trades.
   3. Code Compliance:
      a. Provide manufacturer's data demonstrating compliance with wind uplift criteria specified.
   4. For information (Project Record): Membrane manufacturer's detailed (long form) installation instructions, edited or marked-up to suit project specifics and to indicate the precise materials to be installed and their methods of installation.
      a. No provision of such instructions shall be deemed to modify any requirement of the Contract Documents without the written approval of the Architect issued as a Contract Modification.
   5. For information (Project Record): Insulation board manufacturer's detailed (long form) installation instructions, edited or marked-up to suit project specifics and to indicate the precise materials to be installed and their methods of installation.
   6. Manufacturer's statement of review (see form provided at the end of this section) indicating that they have reviewed the drawings and specifications and other referenced requirements, have brought to the attention of the Architect conflicts between or exceptions to the stated project requirements and the manufacturer's requirements, and will provide the warranty required by the Contract Documents.
   7. Warranty draft from manufacturer.

B. Installer qualifications.

C. Samples:
   1. Membrane material.
   2. Membrane accessories.
   3. Overlay board.

D. Shop Drawings:
   1. Provide a roof plan showing layout of insulation board.

E. Schedule: Submit construction schedule for the Architect's approval indicating anticipated beginning and ending dates of the following tasks. Where work will be conducted independently in more than one area or zone, submit for each area or zone.

1. Preapplication review.
2. Preconstruction inspection.
3. Membrane installation.

F. Field Reports:
1. Preapplication review.
2. Preconstruction inspection.
3. Completion inspections.

G. Closeout Submittals:
1. Contractor's Certificate of Final Inspection
2. Special Project Warranty signed by Contractor and installer.
3. Manufacturer's Warranty.

1.04 QUALITY ASSURANCE

A. Installer Qualifications: Company specializing in performing the work of this section with at least 3 years documented experience and certified by the membrane manufacturer.
1. Certification:
a. Installer shall be a company licensed by or approved by the roofing materials manufacturer for materials specified in this section and for projects similar in scope to work included.
b. Licensing or approval shall have been in effect continuously for at least one year prior to the date of bid opening or, if none, the date of award of the general contract, for this Project.
c. Licensing or approval shall qualify for manufacturer's premium labor and material warranty.
2. Installer shall designate a single individual as project foreman who shall be on site at all times during installation. Installer shall designate key personnel of the on-site crew who shall be experienced in work of the type specified. Neither the foreman nor the key personnel shall be changed without the Architect's consent.

1.05 PREINSTALLATION MEETINGS

A. Coordination Review: Before start of construction of surfaces to receive membrane and after Architect's approval of submittals, schedule a meeting with membrane installer including the foreman, installers of work adjacent to or which penetrates membrane, Architect, Owner's representative, and membrane manufacturer's representative.
1. Review procedures for substrate construction and preparation.
2. Review Contract Document requirements for membrane and membrane manufacturer's product data and application instructions.
3. Review locations of conduits, piping, etc. Review requirements specified in Section 07 7210 for horizontal and vertical clearances between adjacent penetrations and curbs, corners, walls, or footings.
4. Review coordination of related work, preliminary installation schedule, inspection and testing methods, and certifications.
5. Review Contract Document requirements and submittals for system, including installation schedule, inspection and testing, and environmental conditions.
6. Identify any differences between contract requirements and manufacturer's recommendations or warranty requirements.
7. Obtain the Architect's written approval of any deviations from contract requirements.
8. Document discussion in writing, including issues requiring action, and distribute report to entities concerned with membrane installation, substrate construction, mechanical and electrical construction, and related work.

B. Substrate Review: Before start of work, schedule a meeting with membrane installer including the membrane installer's foreman, Architect, Owner's representative, and membrane manufacturer's representative.
1. Review each issue identified in the Substrate Preconstruction Review meeting.

2. Walk areas to review and discuss substrate preparation including repair.
   a. Unacceptable surfaces.
   b. Drainage, flatness, and slope.
   c. Penetrations.
   d. Curbs.
   e. Work performed by other trades which requires coordination with membrane system.
3. Verify that substrates that will receive the roofing system are complete and in place, including nailers, curbs, penetrations, and perimeter construction.
4. Document discussion in writing, including issues requiring action, and distribute report to entities concerned with membrane work and related work.

1.06 START-UP OF ROOFING OPERATIONS AND MOCK-UP

A. Construct mock-ups in the presence of the following:
   1. Membrane manufacturer's representative.
   2. Insulation adhesive manufacturer's representative.

B. Construct mock-ups of each typical condition occurring on the project, including changes in substrate, flashings at parapets, curbs, gravel guards or fascia, drains, etc., and other conditions encountered.

C. Construct mock-ups using the full complement of crew anticipated to staff the project. Do not construct mock-ups with a reduced crew size. Use the same crew members, including key personnel and flashing mechanics, anticipated to staff the project. Do not use other crew members.

D. Adjust installation techniques and methods to comply with the recommendations of the manufacturer’s representative.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Each roll, bucket, package (as applicable) of material included in assemblies covered by UL Designs shall be bear the UL Listing / Classification Mark as required by the UL Design.

B. Deliver materials to job site in manufacturer's unopened containers with all labels intact and legible at time of use.

C. Store the products in a dry condition during delivery, storage, handling, installation, and concealment.

D. Protect materials from prolonged sunlight exposure.

1.08 PROJECT CONDITIONS

A. Complete the construction of substrates, including work which will penetrate membrane, before start of membrane installation.

B. Comply with manufacturer's recommendations regarding condition of the substrate to receive membrane, weather conditions before and during installation, and protection of the installed membrane system.

C. Do not install primer or other materials during wet weather, nor to damp substrates.

D. Do not install primer or other materials when ambient or substrate temperatures are less than 40 deg. F.

1.09 WARRANTY

A. Provide Special Project Warranty specified in Section 01 7810.

B. Manufacturer's Warranty: Provide membrane manufacturer's premium NDL (no dollar limit), non-prorated material and labor warranty covering the following:
   1. Failure of membrane manufacturer's materials to resist penetration of water.
      a. Penetration of water is defined to include:
         1) Penetration of water below the membrane
         2) Penetration of water into insulation below the membrane
         3) Penetration of water into the substrate.

4) Penetration of water into the interior of building.

2. Partial or complete detachment of the membrane, of below-membrane insulation, or of board materials from each other or from substrates to which they are adhered or mechanically attached, up to a wind speed of 74 miles per hour.
   a. Warranty language referencing "gale force" or "the Beufort" scale is not acceptable.
3. Exclusions: Failure resulting from:
   a. Penetration of water through walls, parapets, and openings such as doors, windows, and louvers.
   b. Electrical, piping, and plumbing penetrations (other than drains) utilizing pitch pans.
   c. Structural failures of the building.
   d. Abuse.
   e. Work or alterations occurring after Final Completion of the Project.
   f. Acts of God.
   g. Other exclusions accepted by the Owner.
4. Hairline cracking of concrete is not considered a structural failure.
5. Warranty Term: Twenty year period after Date of Substantial Completion.

PART 2 PRODUCTS

2.01 SUBSTITUTIONS

A. Refer to Section 01 6000 - Product Requirements.

2.02 ASSEMBLY REQUIREMENTS

A. Wind uplift:
   1. Design Wind Pressures for Components and Cladding: As indicated on the structural drawings.
   2. Provide evidence acceptable to the Architect that demonstrates the resistance of the assembly to design wind loads specified above.

2.03 MATERIAL REQUIREMENTS

A. Materials provided for the work of this section shall be the products of a single company (the membrane manufacturer), as follows:
   1. Materials manufactured or fabricated in the company's own facility.
   2. Materials manufactured or fabricated in another's facility under license from the company (third party label).
   3. Materials manufactured or fabricated by others but acceptable to the company for inclusion in the roofing system and the membrane manufacturer's warranty.

2.04 SINGLE PLY ROOFING SYSTEM

A. EPDM Rubber Membrane Roofing, Fully Adhered Installation:
   1. Firestone Building products Company.
      a. RubberGard Non-Reinforced, 0.060 inch thick.
   2. Johns Manville.
      a. EPDM 60 FR.

2.05 INSULATION AND BOARD MATERIALS

A. Overlay board (cover board):
   1. Membrane manufacturer's preferred, dense, hard-surfaced overlay board or
   2. Glass-mat-faced gypsum board: ASTM C1177/C1177M.
      a. Georgia Pacific DensDeck Prime.
         i~~b~~. Thickness: 1/4 inch.
      b. Georgia Pacific DensDeck Prime with EONIC Technology
         i. Thickness: 1/4 inch.

B. Polyisocyanurate Insulation: ASTM C1289:

1. Two layers, total uniform thickness: 5.2 inches (2.6 + 2.6).
2. Tapered insulation.
   a. Slope as indicated on the drawings.

C. Fasteners for securing first layer of board product to deck:
   1. Comply with manufacturer's recommendations and wind uplift requirements.

D. Cold Adhesive for laminating board products:
   1. Comply with membrane manufacturer's recommendations and wind uplift requirements.

2.06 PENETRATION AND PERIMETER MATERIALS

A. Penetration Flashings: Provide membrane manufacturer's standard elastomeric boot or other material for electrical conduit, piping, equipment posts, and other items that penetrate the membrane. Include same in membrane manufacturer's warranty.

B. Manufactured Roof Specialties specified in Section 07 6200: Provide metal edges (metal copings, gravel stops, and other metal edge terminations) manufactured by (or third-party labeled by) the membrane manufacturer supplying the products of this section. Include same in membrane manufacturer's warranty.

2.07 ACCESSORIES

A. Vapor Retarder: Provide sheet, type, and thickness per membrane manufacturer's requirements

B. Nailers: Pressure preservative treated wood, specified in Section 06 1000.

C. Cants at expansion joints and roof area dividers: Pressure preservative treated wood, specified in Section 06 1000.

D. Other materials necessary for a complete system: as recommended by membrane manufacturer.

PART 3 EXECUTION

3.01 GENERAL

A. Do not begin installation of roofing insulation or membrane until construction above the deck as well as the deck itself and nailers, blocking, penetrations, curbs, equipment supports, drains, vents, etc., have been completed and approved.

3.02 PREPARATION

A. Surface preparation, detailing procedures, and installation procedures shall be in accordance with this Specification and the Drawings and the manufacturer's instructions.

B. If manufacturer's installation instructions deviate from requirements of this section, obtain the Architect's written approval of deviations before proceeding.

C. Protect adjacent surfaces not designated to receive membrane. Prevent roofing materials from damaging or spilling on adjacent construction. Replace adjoining materials damaged by roofing system installation.

D. Clean and prepare surfaces to receive membrane in accordance with manufacturer's instructions. Ensure that substrate is dry and free of dust and debris.

E. Do not apply membrane to surfaces unacceptable to membrane manufacturer.

F. Provide drop cloths or masking as required to prevent spilling and soiling of adjacent surfaces not indicated to receive membrane. Do not allow roofing operations to soil finish construction.

G. Lay out project to determine and anticipate conditions prior to start of work.
   1. Note termination and penetration conditions to determine methods for creating a waterproof envelope.

H. Interruptions of Roofing Work:
   1. Do not allow below-membrane sheathing, insulation, or overlay board to be exposed overnight or to become moist. Remove and discard any materials so exposed.

2. Install membrane plies in permanent, final form, including inspection, before allowing materials to be exposed during precipitation or overnight.
3. Install one flashing ply in permanent, final form, before allowing materials to be exposed during precipitation or overnight.
4. Do not use plastic cement or mastics as temporary measures to seal permanent work.
5. Membrane and flashing plies shall be installed in permanent, final form on a daily basis.
6. Install temporary water cut-offs at the end of each working day. Remove and discard before resuming permanent work.

3.03 SURFACE CONDITIONS

A. Coordinate as required with other trades to assure proper and adequate provision in the work of those trades for interface with the work of this Section, to avoid traffic by other trade on membrane, and to prevent damage to installed membrane.

3.04 EXAMINATION

A. Verify existing conditions before starting work.
   1. Verify substrate surfaces are durable; free of matter detrimental to adhesion or application of membrane system.
   2. Ensure that substrates are free of standing water, dirt and debris, loose material, voids, and protrusions or deformations which may inhibit application or performance of membrane
   3. Ensure that concrete and masonry substrates are free of voids deeper than 3/8" and free of surface protrusions more than 1/4 inches above the surface.
   4. Correct substrate surfaces that are unacceptable to the installer or fail to conform to the membrane manufacturer's printed instructions, unless otherwise approved by the membrane manufacturer's representative and the Architect.

B. Do not begin installation until plumbing, mechanical, and electrical items that penetrate membrane are complete and approved.
   1. Verify items which penetrate surfaces to receive membrane are securely installed.

C. Verify conformance of Project Conditions with manufacturer's requirements and correct as required.
   1. Report unsatisfactory conditions in writing to the Architect.
   2. Do not install membrane until substrate condition is acceptable to the Contractor, installer, and membrane manufacturer's representative and a written report of the preconstruction inspection has been approved by the Architect.

3.05 WOOD DECK PREPARATION

A. Ensure that deck is properly supported and securely fastened, and is clean, smooth, flat, and free of depressions, waves, or projections.

3.06 VAPOR RETARDER / AIR BARRIER

A. Install vapor retarder / air barrier before installing rigid board products and wood nailers.

B. Install vapor retarder in accordance with manufacturer's instructions.

C. Ensure that vapor retarder / air barrier is securely sealed to prevent the passage of air at laps, penetrations, and around the perimeter by using mastic, sealant, or other approved means.

3.07 COVERBOARD DIRECT TO WOOD DECK

A. Mechanically fasten cover board to substrate.

B. Space fasteners in field, perimeter, and corners to comply with manufacturer's recommendations to meet wind uplift requirements.

3.08 AIR BARRIER

A. Install air barrier before installing wood nailers.

B. Install air barrier in accordance with manufacturer's instructions.

C. Ensure that air barrier is securely sealed to prevent the passage of air along laps, at penetrations, and around the perimeter by using tape, mastic, sealant, or other means approved by the barrier manufacturer.

3.09 BELOW-MEMBRANE INSULATION

A. Layout:
   1. Layout end joints in a staggered pattern.
   2. Layout subsequent layers of board so that joints in each layer are offset at least 6 inches from joints in previous layer.
   3. Ensure that joints between adjacent boards are snug and are without voids or gaps.
   4. Abut insulation against perimeters and penetrations with not more than a 1/4-inch gap.

B. Provide crickets, saddles, and tapered areas to ensure positive slope to drain at all locations.

C. Mechanically fasten first layer of insulation.
   1. Space fasteners in field, perimeter, and corners so as to comply with wind uplift requirements.

D. Adhere subsequent layers of insulation in adhesive, following manufacturer's instructions.

E. Adhere overlay board in adhesive, following manufacturer's instructions.

3.10 SINGLE PLY MEMBRANE

A. Install in accordance with manufacturer's instructions and shop drawings.

3.11 FIELD QUALITY CONTROL

A. The membrane manufacturer's representative shall be present at the site to inspect substrates to receive membrane, during installation startup, to troubleshoot during installation when requested by the Architect or the Contractor, and to approve completed installation.

B. Inspect membrane surface after water testing or after drenching rain to verify that no ponds remain after 24 hours in summer weather or 48 hours in winter or damp weather.

C. Obtain the Architect's approval of the membrane prior to covering with other materials.

3.12 PROTECTION AND CLEANING

A. Take measures required to protect completed membrane after installation.

B. Do not permit traffic over unprotected or uncovered membrane.

C. Clean spillage and soiling from adjacent surfaces, using cleaning agents and procedures recommended by the manufacturer of the surface.

3.13 MEMBRANE MANUFACTURER'S STATEMENT OF REVIEW

A. Provide, on manufacturer's letterhead, the following statement:
   1. We have reviewed the Architect's Drawings and Specifications for the referenced project.
   2. We have reviewed wind uplift requirements contained therein.
   3. We have reviewed warranty requirements contained therein.
   4. We have reviewed surface burning and fire resistance rating requirements contained therein.
   5. We have reviewed the shop drawings and product data submittals that are enclosed with this statement.
   6. We have reviewed the copy, enclosed with this statement, of the manufacturer's detailed (long form) installation instructions, edited or marked-up to suit project specifics and to indicate the precise materials to be installed and their methods of installation, and have found them to be in compliance with the Architect's specifications and drawings, unless noted below.
   7. Conflicts with or exceptions to the above are as follows (if none, insert "none"):

8. When roofing has been installed with these the above, our completion inspection is performed and any required remedial action has been taken, and applicable fees have been paid, we will issue the required warranty, a draft copy of which is enclosed.

CONTRACTOR'S FINAL CERTIFICATE OF INSPECTION

I certify that I have inspected the work specified in Section 07500 - Roofing. I have inspected this work in its entirety prior to its concealment. No segment has been left uninspected. I have found this work to be complete and in accordance with the Contract Documents.

Certified this _____ day of _____, 20___, by

_____(signature)

_____(printed name) on behalf of

_____(Contractor).

END OF SECTION

SECTION 07 6100 - SHEET METAL ROOFING

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Sheet metal roofing.
   2. Built-in gutter linings.
   3. Sheet metal flashing, trim, closures, covers, clips, etc., comprising a complete system.
   4. Downspouts.
   5. Fasteners and attachment devices.
   6. Underlayment.
   7. Joint sealants in contact with work of this Section.
   8. Coatings and slip sheets to isolate sheet metal from dissimilar materials.

1.02 REFERENCES

A. ASTM B32 - Standard Specification for Solder Metal; 2008 (Reapproved 2014).

B. ASTM B370 - Standard Specification for Copper Sheet and Strip for Building Construction; 2012.

C. ASTM D226/D226M - Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing; 2017.

D. CDA A4050 - Copper in Architecture - Handbook; current edition.

E. SSPC-Paint 12 - Cold-Applied Asphalt Mastic (Extra Thick Film); 1982 (Ed. 2000).

1.03 SYSTEM DESCRIPTION

A. Sheet metal work includes gutters, gutter liners, downspouts, valleys, ridges, edge treatments, trim, flashings, counterflashings, and other sheet metal fabrications specified in this section, indicated on the Drawings, and as required by project conditions. Only the general arrangement and configuration of sheet metal work is indicated on the drawings.

B. The Contractor is responsible for preparing shop drawings illustrating details of seaming, joining, and fastening of sheet metal work in conformance with the Drawings and this Specification and to accomodate the project conditions on the site, and without change in Contract Time or Price.

C. Such details shall conform to the CDA A4050 recommendations for maximum life and reliability.

D. Such details shall provide:
   1. Weather-proof performance without relying on sealant.
   2. Expansion provisions for running work.
   3. Sheet metal roofing that is expected to be leak-free.
   4. Sheet metal roofing that can reasonably be expected to last in excess of 75 years without repairs other than required by storm damage.
   5. Exception: Where the use of joint sealant is required by the Contract Documents or is required by Project conditions and is approved in writing by the Architect.

E. Seams and Joints: Where specific types of seams and joints are not indicated in the Contract Documents, select seams and joints in the order that follows:
   1. Provide locked seam or joint where, due to slope and interlocking of seam, the seam or joint is inherently weather-proof without the use of solder or sealants.
   2. Provide locked and soldered seam or joint where slope and interlocking of seam would allow water penetration, and where rigid construction is required. Prepare edges to be seamed, form seams, and solder.
      a. Rivet joints for additional strength where recommended by CDA A4050.
   3. Provide sealant-filled expansion seams or joints only where lapped or bayonet-type expansion provisions in work cannot be used, or would not be water-and-weather-proof

Obtain the written authorization of the Architect in each case. Form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with mastic sealant concealed within joints.

F. Fastening:
   1. Employ concealed cleats to fasten sheet metal to the substrate.
   2. Do not fasten exposed fabrications directly to the substrate.
   3. Conceal fasteners wherever possible. Obtain the Architect's written authorization where exposed fasteners are proposed.
   4. Ensure fasteners are permanently sealed against water penetration.

1.04 SUBMITTALS

A. Product Data for each material.

B. Installer qualifications: Submit for Architect's approval within 7 days after notice of intent to award of subcontract.

C. Certificates: Submit with shop drawings.
   1. Training completion certificate, including name of each attendee.
      a. Contractor to notify Architect if training scheduling will impact overall project schedule.

D. Shop Drawings:
   1. Metal component profiles.
   2. Joints and seams.
   3. Joint and seam pattern.
   4. Fastening methods.
   5. Accessory items.
   6. Relationship of roofing materials to adjacent construction.

E. Samples:
   1. 6-inch-square samples of flat sheet metal, tinned on one edge.
   2. Submit two samples of each of the following fabrications per each workman who will perform soldering. Identify each workman's samples.
      a. 6-inch-square samples of flat locked soldered seams fabricated from two, 3-3/4 x 3 inch flat sheets, folded to form a 3/4 inch seam. Perform soldering with sheets in a horizontal position.
      b. 6-inch-square samples of flat locked soldered seams fabricated from two, 3-3/4 x 3 inch flat sheets, folded to form a 3/4 inch seam. Perform soldering with sheets in a sloped position (slope equal to slope existing on the project) and with seam in a horizontal orientation.
      c. 6-inch-square samples of flat locked soldered seams fabricated from two, 3-3/4 x 3 inch flat sheets, folded to form a 3/4 inch seam. Perform soldering with sheets in a vertical position and with seam in a vertical orientation.
      d. Gutters or gutter liners:
         1) 6 to 12 inch long sample of the cross-section of the gutter liner with end cap.
         2) 6 to 12 inch long sample of the cross-section of the gutter liner with expansion joint.

1.05 QUALITY ASSURANCE

A. Installer: A company with at least 15 years of experience with installing products included in this section and which has completed at least 20 installations similar in scope to work included in this section.
   1. Submit the names of at least 3 projects within 30 miles of the project site. Include project name, date of completion, name and telephone of Owner contact, name and telephone of Architect.
   2. Submit within the time limits specified in the Bidding Requirements and General Conditions.

B. Preconstruction Services:
   1. The Contractor shall pay for the fee of ~~CDA~~ ITI Representative.

C. Preconstruction Installer Training: Schedule in advance of submission of Shop Drawings.
   1. Schedule 2 consecutive days at the installer's shop for CDA Installer Training through International Training Institute (ITi). Attendance:
      a. Installer's foreman, shop crew, and field crew.
      b. Instructor: CDA Representative.
      c. Owner's or Architect's representative specializing in sheet metal roofing (optional).
   2. Curriculum:
      a. Lecture by instructor.
      b. Soldering techniques demonstration by instructor.
      c. Table-top demonstration exercises by instructor.
      d. Hands-on table-top exercises by installer.
      e. Instructional modules to be covered (soldering, standing seam, flat seam, gutters, etc.) shall include each module necessary for performing the work of the Project.
      f. Qualification test – American Welding Scoiety Standard B2.3:2018 "Specification for Soldering Procedure Performance Qualification Testing"
   3. If the Installer's foreman and field crew for this Project have received CDA training or ITI training, and individual CDA certificates or ITI certificates for the instructional modules applicable to this Project within a period of 3 years prior to the date of bid for this Project, the Contractor may submit a request for a waiver of preconstruction installer training for the Architect's consideration. Requests received after the date established for receipt of bids and issuance of addenda will be considered only in conjunction with a reduction in the Contract Price equal to the cost of the installer's time and materials and the cost of the CDA trainers.

D. Preconstruction Mock-up and Demonstration:
   1. Attendance:
      a. Installer's foreman and crew.
      b. Owner's or Architect's representative specializing in sheet metal roofing (optional).
   2. Construct mock-ups on site using flat sheet stock (no shop-formed fabrications, unless approved by the Architect) so as to demonstrate on site all aspects of preparation, fabrication, and installation of roofing work.
   3. Construct roofing system mock-up with materials and methods identical to those to be used in the actual work.
   4. Construct mock-up to include representative tasks and conditions on the Project.
   5. Prepare substrate for mock-ups of wood board or plywood sheathing with suitable rigid supporting framing where necessary. Construct mock-ups on the ground. Do not construct mock-ups on the actual building.
   6. Retain mock-ups at project site at least until acceptance of the work. Remove mock-ups from the project site thereafter.

E. Quality Standard:
   1. Fabricate and install metal roofing work in accordance with CDA A4050 recommendations (especially sections 4.1 and 4.2 et seq of "Copper in Architecture") unless specifically indicated otherwise.

1.06 DELIVERY, STORAGE AND HANDING

A. Follow metal manufacturer's recommendations for avoiding staining and marring of sheets.

B. Handle sheets with clean sheet metal worker's gloves.

C. Do not allow traffic of any kind on work.

1.07 WARRANTY

A. Provide Special Project Warranty specified in Section 01 7810.

PART 2 PRODUCTS

2.01 SUBSTITUTIONS

A. Refer to Section 01 6000 - Product Requirements.

2.02 MATERIALS

A. Copper Sheet: ASTM B370, H00 temper.
   1. Temper: H00 "cold-rolled".
      a. General use, unless otherwise indicated.
   2. Weight of Copper Sheet:
      a. 16 oz. per square foot, unless otherwise indicated.
      b. Standing Seam Pans: 16 oz. per square foot.
      c. Gutter Liner and Adjacent Running Trim: 24 oz. per square foot.
      d. All Other Running Trim: 20 oz. per square foot.
      e. Downspout: 16 oz. per square foot.

2.03 ACCESSORY MATERIALS

A. Fasteners for Copper Sheet:
   1. Nails: Copper or hardware bronze, 0.109 inch minimum x not less than 7/8 inch long; barbed with large head.
   2. Screws and bolts: Copper, bronze, or brass.
   3. Fixed cleats: Copper sheet; 2 inches wide 3 inches long.
   4. Expansion cleats: Copper sheet, size and configuration as indicated in CDA A4050 detail 4.1.4.
   5. Cleat gage: Fabricate cleats from metal of gage equal to the metal being fastened.
   6. Tinner's rivets: Solid; one-piece copper; 3/16" diameter shank; with copper washer.
   7. Pop Rivets: Copper with copper drive pins. Pop rivets shall not be used without the written permission of and at the sole discretion of the Architect, which permission may or may not be granted. Pop rivets are not usually permitted, and only occasionally are deemed to be useful.

B. Fasteners for Underlayment: Same type and material as for roofing sheets; nail through 1-inch-square washers cut from roofing sheet metal. Do not use plastic-cap-type nails.

C. Solder: ASTM B32.
   1. For copper sheet: 50/50 tin-lead solder; rosin flux.

D. Sealants in contact with Work of this Section:
   1. Concealed joints.
      a. Mastic sealant: Polyisobutylene sealant as specified in Section 07 9000.
      b. Polyisobutylene sealant tape: As specified in Section 07 9000.
   2. Exposed joints: Silicone as specified in Section 07 9000.

E. Underlayment:
   1. No. 15 asphalt felt, ASTM D226/D226M Type I, unperforated.
   2. Self-adhesive roofing underlayment as specified in Section 07 6500.

F. Slip Sheet: Rosin-sized paper, 5 lb. nominal weight.

G. Bituminous Coating: Heavy bodied, sulfur-free, asphalt-based paint; formulated for 15 mil application thickness; SSPC Paint 12.

2.04 FABRICATION

A. Shop and Field Fabrication:
   1. Shop fabricate work to the greatest extent possible.
   2. Whenever work of this section is in progress, maintain on the job site a complete set of tools and equipment capable of field fabricating any portion of the Work from flat sheet stock, and capable of field modifying any shop-fabricated item to suit field conditions as if fabricated new.
   3. Field tools and equipment shall include:

a. Complete range of tongs in the necessary sizes and configurations.
b. Brake.
c. Tinning bath.
d. Soldering coppers.
e. Shear.
f. Necessary hand tools.
g. Other tools and equipment necessary for fabricating and installing Work of this Section.

4. Form work to fit substrate.
5. Form sheet metal to match profiles indicated, substantially free from oil-canning, buckling, tool marks, fish-mouths, and other defects.
6. Where details are not specifically indicated, comply with the CDA A4050 recommendations for metal roofing.

B. Shop-fabricate work to the greatest extent possible. Form sheet metal to match profiles indicated, substantially free from oil-canning, buckling, tool marks, fish-mouths, and other defects. Form work to fit substrate. Comply with material manufacturer's instructions and recommendations for forming material.

C. Fasten sheet metal with concealed cleats. Fabricate cleats and attachment devices from same material as sheet metal component being anchored. Employ exposed fasteners only where and if specifically approved by the Architect.

D. Form a 1/2-inch hem on underside of exposed edges.

E. Fabricate roofing components including sheets, seams, pans, cleats, strips, clips, cleats, expansion provisions, valleys, ridges, edge treatments, flashing, and other components to match profiles and details indicated and to ensure permanently leak-proof construction. Provide for thermal expansion of sheet metal.
1. Where details are not specifically indicated on the Drawings, comply with the CDA A4050 recommendations for metal roofing, especially 4.0, 4.1, 4.2, and 4.3.6.

F. Standing Seam Roofing:
1. Nominal seam spacing (pan width): 16-1/4 inches.
2. Seam height: 1-1/4 inches.
3. Pan length: Not greater than 10 feet.

G. Built-in Gutter Liners:
1. Fabricate gutter liners from expansion joint to expansion joint (or end to end) using one piece of metal without transverse joints, unless otherwise approved.
2. Where transverse joints are required (such as corners without expansion joints) and approved, employ riveted and soldered lap joints. Ensure that sheet is properly prepared to bright metal, and tinned. Form a 1-1/2-inch-wide lap; provide 1 row of tinner's rivets 1/2 inch from edge; pre-punch holes spaced at 2 inches on center; provide a second row of rivets 1/2 inch from opposite edge of lap, staggered with first row. Peen rivets securely against washers. Solder a fully-sweated, water-tight lap.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine substrates and conditions under which products of this section are to be installed and verify that work may properly commence. Do not proceed with the work until unsatisfactory conditions have been fully resolved.
1. Verify that nailers, blocking, and other attachment provisions for sheet metal work are properly located and securely fastened to resist effects of wind and thermal stresses.

3.02 PREPARATION

A. Coordinate sheet metal roofing with other sheet metal work and substrate construction to provide a complete and permanently water-tight installation.

B. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.

C. Clean surfaces to receive sheet metal work. Verify that substrates are smooth and free of protrusions, irregularities, or other defects.
   1. Drive nails or other fasteners flush with substrate.

D. Coat the back side of metal with bituminous coating where it will be in contact with wood, dissimilar metal, or cementitious construction unless surfaces will be separated by self-adhesive roofing underlayment.

3.03 INSTALLATION

A. General: Comply with sheet metal manufacturer's installation methods and CDA A4050 recommendations.
   1. Fabricate and install work with lines and corners of exposed units true and accurate.
   2. Form exposed faces flat and free of buckles, excessive waves, and avoidable tool marks considering temper and reflectivity of metal.
   3. Provide uniform, neat seams with minimum exposure of solder, welds, and sealant.
   4. Fold back sheet metal to form a hem on concealed side of exposed edges.
   5. Conceal fasteners and expansion provision where possible in exposed work, and locate so as to minimize possibility of leakage.
   6. Cover and seal fasteners and anchors.

B. Underlayment:
   1. Install one layer of roofing felt underlayment with ends and edges lapped a minimum of 4 inches. Nail underlayment at 12 inches on center each way, and such that metal fasteners are flush and fully seated and none are exposed to underside of sheet metal roofing.
   2. Install one layer of self-adhesive roofing underlayment specified in Section 07 6500.
   3. Cover with a layer of rosin-sized building paper. Loose-lay the paper or use adhesive or mastic roofing cement to secure. Do not use metal fasteners to secure paper.

3.04 SEAMS AND JOINTS

A. General: Wherever practicable select joints that are permanently, inherently weather-tight and allow for thermal movement, and do not rely on solder or sealant for their integrity. Otherwise, use soldered joints wherever movement is not essential. Avoid the use of sealant joints except where movement must be accommodated.

B. Lapped Seams, Soldered and Riveted: Rivet and solder joints for additional strength where indicated or where recommended by CDA A4050. Ensure that sheet is properly prepared to bright metal, and tinned. Form a 1-1/2-inch-wide lap; provide 1 row of tinner's rivets 1/2 inch from edge; pre-punch holes spaced at 2 inches on center; provide a second row of rivets 1/2 inch from opposite edge of lap, staggered with first row. Solder a fully-sweated, water-tight lap.

C. Expansion Provisions: Where lapped or bayonet-type expansion provisions in work cannot be used, or would not be water-and-weather-proof, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with mastic sealant concealed within joints.

D. Sealant Joints: Where movable, non-expansion-type joints are indicated or required for proper performance of roofing, form sheet metal to provide for proper installation of elastomeric sealant as recommended by referenced standards.

E. Soldered Seams and Joints in Copper Sheet:
   1. Clean surfaces to be soldered, removing oils and foreign matter.
   2. Abrade sheets to bright metal before soldering.
   3. Neatly pre-tin edges of sheets to be soldered in a bath unless configuration prohibits the use of a bath; pretin in situ using heated soldering coppers only where detailed work cannot be tinned in a bath. Pre-tin to a width of 1-1/2 inches.
   4. Ensure that pre-tinned surfaces are soldered up as permanent work on the same day as pre-tinning occurs. Do not use pre-tinned surfaces that were tinned the previous day.

5. Employ heavy, heated soldering coppers to solder seams. Do not use direct flame torches for soldering.
6. Heat surfaces to receive solder and flow solder into joint. Fill joint completely.
7. Remove flux and solder spatter from exposed surfaces. Neutralize acidic flux with baking soda and fresh water.
8. Cover exposed and concealed surfaces to protect from corrosive spray when soldering coppers are dipped to clean.

F. Moving Joints:
1. When ambient temperature is moderate (40-70 degrees F) at time of installation, set joined members for 50 percent movement either way.
2. Adjust setting position of joined members proportionally for temperatures above 70 degrees F.
3. Do not install sealant at temperatures below 40 degrees F.
4. Refer to section on sealants elsewhere in Division 7 for handling and installation requirements for joint sealers.

3.05 CLEANING AND PROTECTION

A. Repair or replace work which is damaged or defaced, as directed by the Architect.

B. Remove from sheet metal surfaces any debris or substances which will inhibit uniform weathering.

C. Protect sheet metal work as recommended by the installer so that completed work will be clean, secured, and without damage at Substantial Completion.

3.06 INSTALLATION

A. Comply with sheet metal manufacturer's installation instructions and CDA A4050 recommendations.

END OF SECTION

SECTION 08 1100 - STEEL DOORS AND FRAMES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Work Included in this Section:
   1. Steel Doors:
      a. Non-fire-resistance rated interior steel doors.
      b. Fire-resistance rated interior steel doors.
   2. Steel Frames:
      a. Non-fire-resistance rated interior steel frames.
      b. Fire-resistance rated interior steel frames.
      c. Steel frames in gypsum board partitions.

1.02 REFERENCES

A. ANSI/SDI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames; 2011.

B. ANSI/SDI A250.8 - Specifications for Standard Steel Doors and Frames (SDI-100); 2014.

C. DHI (LOCS) - Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames; 2004.

D. DHI WDHS.3 - Recommended Locations for Architectural Hardware for Flush Wood Doors; 1993; also in WDHS-1/WDHS-5 Series, 1996.

E. ITS (DIR) - Directory of Listed Products; current edition.

F. NAAMM HMMA 840 - Guide Specifications for Installation and Storage of Hollow Metal Doors and Frames; 2007.

G. UL (BMD) - Building Materials Directory; current edition.

H. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies; 2018.

I. NFPA 80 - Standard for Fire Doors and Other Opening Protectives; 2016.

J. NAAMM HMMA 840 - Installation and Storage of Hollow Metal Doors and Frames; The National Association of Architectural Metal Manufacturers; 2007.

1.03 SUBMITTALS

A. Product Data: Materials and details of design and construction, hardware locations, reinforcement type and locations, anchorage and fastening methods, and finishes.

B. Samples: Submit two samples of metal, 2 x 2 inches in size showing factory finishes, colors, and surface texture.

C. Shop Drawings: Details of each opening showing elevations, glazing, frame profiles, and identifying location of different finishes, if any.

1.04 QUALITY ASSURANCE

A. Manufacturer: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

1.05 DELIVERY, STORAGE, AND PROTECTION

A. Store in accordance with NAAMM HMMA 840.

B. Protect with resilient packaging; avoid humidity build-up under coverings; prevent corrosion.

PART 2 PRODUCTS

2.01 SUBSTITUTIONS

A. Refer to Section 01 6000 - Product Requirements.

2.02 MANUFACTURERS

A. Steel Doors and Frames:
   1. Ceco Door Products: www.cecodoor.com.
   2. Steelcraft: www.steelcraft.com.
   3. Metal Products, Inc: www.metalproductsinc.com
   ~~3~~4. Approved Equal.

2.03 GENERAL

A. Requirements for All Units:
   1. Door Top Closures: Flush with top of faces and edges.
   2. Door Edge Profile: Beveled on both edges.
   3. Door Texture: Smooth faces.

B. Hardware Preparation: In accordance with DHI (LOCS) and DHI WDHS.3, with reinforcement welded in place, in addition to other requirements specified in door grade standard.

C. Finish: Factory primed, for field finishing.

D. Combined Requirements: If a particular door and frame unit is indicated to comply with more than one type of requirement, comply with all the specified requirements for each type; for instance, an exterior door that is also indicated as being sound-rated must comply with the requirements specified for exterior doors and for sound-rated doors; where two requirements conflict, comply with the most stringent.

2.04 STEEL DOORS

A. Thickness: 1-3/4 inches unless indicated otherwise.

B. Interior Doors, Non-Fire-Rated:
   1. Grade: ANSI/SDI A250.8 Level 2, 18 ga., physical performance Level B, Model 1, full flush.
   2. Core: Cardboard honeycomb.
   3. Texture: Smooth faces.

C. Interior Doors, Fire-Rated:
   1. Grade: ANSI/SDI A250.8 Level 2, 18 ga., physical performance Level B, Model 1, full flush.
   2. Fire Rating: As indicated on Door and Frame Schedule, with temperature rise ratings as required by code , tested in accordance with NFPA 252.
      a. Provide units listed and labeled by UL (BMD) or ITS (DIR).
      b. Attach fire rating label to each fire rated unit.
   3. Core: Mineral fiberboard.
   4. Texture: Smooth faces.

2.05 STEEL FRAMES

A. General:
   1. Comply with the requirements of grade specified for corresponding door.
      a. ANSI/SDI A250.8 Level 1 Doors: 16 gage frames.
      b. ANSI/SDI A250.8 Level 3 Doors: 14 gage frames.
   2. Finish: Same as for door.

B. Interior Door Frames, Non-Fire-Rated:
   1. Gypsum board partitions. Fully welded.

C. Interior Door Frames, Fire-Rated:
   1. Gypsum board partitions. Fully welded.
   2. Fire Rating: Same as door, labeled.

2.06 ACCESSORY MATERIALS

A. Silencers: Resilient rubber, fitted into drilled hole; 3 on strike side of single door, 3 on center mullion of pairs, and 2 on head of pairs without center mullions.

B. Temporary Frame Spreaders: Provide for all factory- or shop-assembled frames.

2.07 FINISH MATERIALS

A. Primer: Rust-inhibiting, complying with ANSI/SDI A250.10, door manufacturer's standard.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify existing conditions before starting work.

B. Verify that opening sizes and tolerances are acceptable.

3.02 INSTALLATION

A. Install in accordance with the requirements of the specified door grade standard.

B. In addition, install fire rated units in accordance with NFPA 80.

C. Coordinate frame anchor placement with wall construction.

D. Coordinate installation of hardware.

E. Coordinate installation of electrical connections to electrical hardware items.

F. Touch up damaged factory finishes.

3.03 ERECTION TOLERANCES

A. Maximum Diagonal Distortion: 1/16 in measured with straight edge, corner to corner.

3.04 ADJUSTING

A. Adjust for smooth and balanced door movement.

3.05 SCHEDULE

A. Refer to Door and Frame Schedule on the drawings.

END OF SECTION

SECTION 23 2113 - HYDRONIC PIPING AND VALVES

PART 1 - GENERAL

1.01 WORK INCLUDED

A. Pipe and pipe fittings

B. Valves

1.02 RELATED DOCUMENTS

A. The General and Special Conditions and all other Contract Documents (ESPECIALLY DIVISIONS 21, 22, 23 AND 26) are applicable to work under this section of the specifications. All the work under this section of the specifications shall be governed by any alternates and unit prices called for in the FORM OF PROPOSAL insofar as they affect this portion of the work.

B. Section 230100 - GENERAL PROVISION FOR MECHANICAL WORK

C. Section 230719 – HVAC PIPING INSULATION

D. Section 232118 - HYDRONIC PIPING SPECIALTIES

1.03 WELDING AND BRAZING

A. Welders Qualification

1. Welder's qualifications shall specify results of test, or retest, positions qualified and type of welding in which qualified.

2. All welds shall be of sound metal thoroughly fused to the base metal at all points, free from cracks; and reasonably free from oxidation, blow holes, and non-metallic inclusions. No fins or weld metal shall project within the pipe; and should they occur shall be removed. All pipe beveling shall be done by machine. The surface of all parts to be welded shall be thoroughly cleaned free from paint, oil, rust or scale, at the time of welding except that a light coat of oil may be used to preserve the beveled surfaces from rust.

3. All pipe and fittings shall be carefully aligned with adjacent parts and this alignment must be preserved in a rigid manner during the process of welding.

4. It is required that all welding of piping covered by this specification, regardless of conditions of service, be installed as follows:

a. Pipe welding shall comply with the provision of the latest revisions of the applicable code whether ASME "Boiler Construction Code", ANSI "Code for Pressure Piping", AWS and/or Kentucky KRS-236 "Boiler Safety Law". The contractor shall make arrangements for inspection visits by the state boiler inspector as required by KRS-236.

b. The Contractor's welding procedure shall clearly set forth P-numbers of parent metal to be welded, rod or filter metal to be used and positions required.

c. Before any pipe welding is performed, the Contractor shall submit to the Architect a copy of his welding procedure specifications together with proof of its qualification as outlined and required by the most recent issue of the code having jurisdiction.

d. Before any operator shall perform any pipe welding, the Contractor shall also submit to the Architect, the operator's qualification record in conformance with provisions of the Code having jurisdiction, showing

that the operator was tested under the approved procedure specification submitted by the Contractor.

e. Welding work shall not be performed by welders who are not approved by the Architect and any such work performed shall be summarily removed and replaced without further recourse by the Contractor.

f. Standard Procedure Specifications and operators qualified by the National Certified Pipe Welding Bureau shall be considered as conforming to the requirements of the specifications.

g. Each manufacturer or Contractor shall be responsible for the quality of welding done by his organization and shall repair any work not in accordance with these specifications.

h. Brazing, when specified or indicated on the contract drawings, shall be in accordance with Part UB of Section VIII of the ASME Code. Filler metal shall conform to AWS B260, Class B AG-1 or B AG-2. Procedure and performance qualification requirements for brazing shall be the same as for welding, as required above.

1.04 GROOVED COUPLING PIPING INSTALLATION INSPECTION SERVICES AND WARRANTY

A. The installing contractor shall be certified by the grooved coupling manufacturer. A Victaulic factory trained representative (direct employee) shall provide on-site certification training for the contractor's field personnel in the use of grooving tools, application of groove, and product installation. Applicable pipe shall be grooved utilizing Victaulic RG5200i grooving machine. A manufacturer's factory trained inspector shall visit the job site and review grooved joint products installation. The installing contractor shall remove and replace any improperly installed products. Upon completion of the manufacturer's inspection of the installation, the manufacturer will supply the owner and engineer with an inspection log and subsequent extended ten-year warranty on the inspected products.

1. Tooling:

a. Applicable pipe shall be grooved utilizing Victaulic automated roll grooving tool (RG5200i). Documented grooving dimensions shall be given to engineer/owner at their request.

2. Training

a. A Victaulic factory trained representative (direct employee) shall provide on-site training for the contractor's field personnel in the use of grooving tools, application of groove, and product installation.

3. Inspection

a. A manufacturer's factory trained inspector shall visit the job site and review all grooved joint product installation. The products must be inspected prior to insulation being applied and is contractor's responsibility to coordinate with manufacture. The installing contractor shall remove and replace any improperly installed products.

4. Warranty

a. Upon completion of the manufacturer's inspection of the installation, the manufacturer will supply the owner with an extended ten-year warranty on the inspected products.

1.05 PROTECTIVE COATINGS FOR PIPE AND FITTINGS

A. Protective Coating for Pipe and Fittings: Metallic pipe and fittings, except cast iron and copper, that are installed underground shall be provided with a field- or shop-applied coal-tar coating and wrapping or a shop-applied extruded polyethylene sheath. The

coating shall consist of a coat of coal-tar primer, a coat of coal-tar enamel, a second coat of coal-tar enamel, a second wrapper of coal-tar saturated felt, and a wrapper of Kraft paper applied in the order named and conforming to the requirements of AWWA Standard C203 for materials, thicknesses, methods of application, tests, and handling, except that interior lining will not be required. Upon completion of satisfactory tests hereinafter specified, the joints shall be hand-wrapped with hot-applied preformed coal-tar tape. Preparation of surface and hand-applied wrapping shall be done in such a manner that a covering equal in effectiveness to that of the shop-applied coating will be produced. When extruded polyethylene sheath is used for the protective coating, fittings and joints shall be covered in the manner and with the materials recommended by the manufacturer of the sheath.

PART 2 - PRODUCTS

2.01 HEAT PUMP WATER PIPING

A. Steel Pipe: ASTM A53 Grade B Type ERW A106 Schedule 40, black. **(INTERIOR PIPING ONLY – OPTION 1)**

1. Fittings: ANSI/ASTM B16.3, malleable iron or ASTM A234, forged steel welding type, or grooved mechanical type. Thread-o-lets may be used on connection up to 2 inches.

2. Wrought-Steel Fittings: ASTM A 234/A 234M, wall thickness to match adjoining pipe.

a. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work for Heating Hot Water, Condenser Water and Chilled Water include, but are not limited to, the following:

1) Couplings shall be Victaulic Styles 107N for 2” – 12” and W07 for 14” and above. Gaskets shall be grade “EHP” EDPM designed for operating temperatures from -30 deg F to +250 deg F.

2) Flexible Type: Use in locations where vibration attenuation and stress relief are required. Three flexible couplings may be used in lieu of flexible connectors at equipment connections and shall be placed in close proximity to the vibration source. Victaulic Style 177/W77. Equipment may be dressed with Style 380, 381 and 385 assemblies in conjunction with Victaulic headers.

3) All grooved components must be of one manufacturer.

4) Victaulic 300-Series/WVic-300 Butterfly Valve and 716/W716 Check Valve may be used with grooved piping system. Utilization of “Tri-Service” Assembly is acceptable

5) Victaulic Style 730/W730 Strainers are acceptable. Contractor may utilize Victaulic Style 731D Suction Diffuser with grooved end piping system.

6) Victaulic Y-Patterson Globe Style Balance Valve shall be utilized on coil connections.

7) Contractor may elect to utilize prefabrication services through Victaulic.

b. Grooved Joining Method. Assemble joints with coupling and gasket, lubricant and bolts. Cut or Roll grooves in ends of pipe based on pipe and coupling manufacturer’s written instructions, which may or may not include torque settings, torque wrenches, extreme lubricant and specified gaps. Engineer and Owner reserve the right to inspect any and all

installation of product. Factory trained representative must periodically visit the job site and provide on-site training. Grooved pipe shall be produced using the Victaulic RG5200i/5200i fully automated grooving tool, where applicable, that provides groove traceability documents, corresponding identification marks on the pipe, and confirm all critical dimensions fall into the required tolerance range as listed by the tool manufacturer.

3. Joints: Screwed for pipe 2 inch and under ANSI/AWS D1.1 welded for pipe over 2 inch, or grooved joints with EPDM gaskets.

B. Copper Tubing: ASTM B88, Type L, hard drawn. **(INTERIOR PIPING ONLY – OPTION 2)**

1. Fittings: ANSI/ASME B16.18 bronze sand castings, ANSI/ASME B16.22 wrought copper, ANSI/ASME B16.23 cast brass or ANSI/ASME B16.29 solder wrought copper.

2. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. Victaulic Company of America.

3. Grooved-End Tube Couplings: Rigid pattern, unless otherwise indicated; gasketed fitting. Ductile-iron housing with keys matching pipe and fitting grooves. Gasket shall be Grade “P” fluoroelastomer compound designed for potable water service. Couplings shall be Victaulic Style 607 and Butterfly Valve Victaulic Style 608N. If contractor elects to use stainless steel, Victaulic style 889 Couplings may be utilized in conjunction with Style 861 Butterfly Valve.

C. High Density Polyethylene Pipe **(EXTERIOR PIPING ONLY)**:

1. See Section 232113.33 – GROUND LOOP HEAT PUMP PIPING for requirements regarding loop piping to be used in well field.

D. Steel or copper piping fittings may be ductile iron grooved bolted mechanical couplings per ASTM-A536. Gaskets shall be pressure responsive synthetic rubber grade EPDM per ASTM D-2000.

2.02 EQUIPMENT DRAINS, CONDENSATE DRAINS AND OVERFLOWS

A. Copper Tubing: ASTM B88, Type L, M or DWV hard drawn.

1. Fittings: ANSI/ASME B16.18 bronze sand castings, ANSI B16.22 wrought copper, ANSI/ASME B16.23 cast brass, or ANSI/ASME B16.29 solder wrought copper.

2. Grooved joint fittings, as manufactured by Victaulic, or equal, shall be manufactured to copper tubing sizes, with grooved ends designed to accept grooved end couplings of the same manufacturer. Flaring of tube and fitting ends to IPS dimensions is not allowed.

3. Joints: ASTM B32, lead-free solder, Grade 95TA

2.03 FLANGES, UNIONS, AND COUPLINGS

A. Pipe Size 2 Inches and Under: 150 psig malleable iron unions for threaded ferrous piping; 300 psig stainless steel, threaded type with Vic Press 304™ ends for stainless steel pipe; bronze unions for copper pipe, soldered joints.

B. Pipe Size Over 2 Inches: 150 psig forged steel slip-on flanges for ferrous piping; bronze flanges for copper piping; 1/16-inch-thick preformed neoprene bonded to asbestos.

C. Grooved and Shouldered Pipe End Couplings: Ductile iron housing clamps to engage and lock, designed to permit some angular deflection, contraction, and expansion, where required; C-shape elastomer composition sealing gasket for operating temperature range from -30 degrees F to 250 degrees F; steel bolts, nuts, and washers; galvanized couplings for galvanized pipe.

1. IPS Steel Piping:

a. Rigid Type: Couplings housings cast with offsetting, angle-pattern bolt pads shall be used to provide system rigidity and support and hanging in accordance with ANSI B31.1 and B31.9. Victaulic Style 107H, ~~GruvLok~~ Figure 7402.

b. Flexible Type: Use in locations where vibration attenuation and stress relief are required. Victaulic Style 177, ~~GruvLok Figure 7001~~.

c. Flange Adapter: Flat face, for direct connection to ANSI Class 125 or 150 flanged components. Victaulic Style 741, ~~GruvLok Figure 7012 or Figure 7788~~.

2. Hard Copper Tube: Housings cast with offsetting, angle-pattern bolt pads. Housings coated with copper colored alkyd enamel. Manufactured to copper tube dimensions, with Grade “EHP” EPDM QuickVic type gasket or equal with a maximum temperature rating of 250 deg F. Victaulic Style 607 QuickVic, ~~GruvLok Figure 6402~~.

2.04 DIELECTRIC FITTINGS

A. Description: Combination fitting of copper alloy and ferrous materials with threaded, solder joint, plain or weld-neck and connections that match piping system materials.

B. Bronze is not considered dielectric and shall not be used.

2.05 ESCUTCHEONS

A. Escutcheons shall be Beaton and Caldwell; Carpenter and Patterson; Fee and Mason or approved equivalent. Chromium-plated iron or chromium-plated brags, either one piece or split patterns, held in place by internal spring tension or set screw that completely covers opening.

2.06 PROTECTIVE COATING FOR PIPE AND FITTINGS

A. Protective Coating for Pipe and Fittings: Metallic pipe and fittings, except cast iron and copper, that are installed underground shall be provided with a field- or shop-applied coal-tar coating and wrapping or a shop-applied extruded polyethylene sheath. The coating shall consist of a coat of coal-tar primer, a coat of coal-tar enamel, a second coat of coal-tar enamel, a second wrapper of coal-tar saturated felt, and a wrapper of Kraft paper applied in the order named and conforming to the requirements of AWWA Standard C203 for materials, thicknesses, methods of application, tests, and handling, except that interior lining will not be required. Upon completion of satisfactory tests hereinafter specified, the joints shall be hand-wrapped with hot-applied preformed coal-tar tape. Preparation of surface and hand-applied wrapping shall be done in such a manner that a covering equal in effectiveness to that of the shop-applied coating will be produced. When extruded polyethylene sheath is used for the protective coating, fittings and joints shall be covered in the manner and with the materials recommended by the manufacturer of the sheath.

2.07 GATE VALVES

A. Up to 2 Inches: Class 125, ASTM B-62 bronze body, bronze trim, rising stem, handwheel, screwed bonnet, ASTM B-62 bronze solid wedge disc, solder or threaded ends.

B. Over 2 Inches: Class 125, ASTM A-126 iron body, bronze trim, rising stem, handwheel, bolted bonnet, OS & Y, solid wedge disc, flanged or grooved ends.

C. Manufactured by Crane, Nibco, Stockham, or Watts.

2.08 GLOBE VALVES

A. Up to 2 Inches: Class 125, ASTM B-62 bronze body, bronze trim, rising stem, handwheel, screwed bonnet, renewable composition disc, solder or screwed ends, with back seating capacity.

B. Over 2 Inches: Class 125, ASTM B-62 iron body, bronze trim, rising stem, handwheel, bolted bonnet, OS & Y, plug-type disc, flanged ends, renewable bronze seat and disc.

C. Manufactured by Crane, Nibco, Stockham, or Watts.

2.09 BALL VALVES

A. Up to 2 Inches:

1. 150 psig WSP/600 psig WOG, conventional port bronze two-piece body, hard chrome plated forged brass ball, Teflon seats and stuffing box ring, lever handle, adjustable stem packing nut, blow-out proof stem, solder or threaded ends.

2. Forged brass two-piece body, chrome plated brass ball and stem, Teflon seats, lever handle, Vic Press 304™ ends, 300 PSIG CWP, Victaulic Series 589.

3. Manufactured by Crane, ~~GruvLok~~, Nibco, Stockham, Victaulic, or Watts.

B. Over 2 Inches:

1. 200 psig CWP, cast steel body, chrome plated steel ball, Teflon seat and stuffing box seals, lever handle.

2. 300 psig CWP, ductile iron body, chrome plated carbon steel ball and stem, Teflon seat, lever handle.

3. Manufactured by Crane, ~~GruvLok~~, Nibco, Stockham, Victaulic, or Watts.

C. Ball valves shall have extended stem assembly to clear thickness of pipe insulation.

2.10 PLUG COCKS

A. Up to 2 Inches: 175 psig WOG, semi-steel, lubricated, Teflon packing, threaded ends, with one wrench operator for every ten plug cocks.

B. Over 2 Inches: 175 psig WOG, semi-steel body and plug, pressure lubricated, Teflon packing, flanged ends, with wrench operator with set screw.

C. Manufactured by Nordstrom, Powell, or Walworth.

2.11 BUTTERFLY VALVES

A. 125 psig WOG, iron body, bronze disc, resilient replaceable EPDM seat for service to 180 degrees F, wafer or lug ends, extended neck, 100 percent shut off lever with memory stop.

B. Ductile iron body, offset electroless nickel plated ductile iron disc, pressure responsive seat, Type 416 stainless steel stem and TFE lined fiberglass bearings. Victaulic Vic®-300 MasterSeal™.

C. Manufactured by Crane, ~~GruvLok~~, Nibco, Stockham, Victaulic, or Watts.

2.12 SWING CHECK VALVES

A. Up to 2 inches: Class 125, ASTM B-62 bronze body, threaded cap, horizontal swing type, ASTM B-62 bronze disc, threaded or soldered ends.

B. Over 2 inches: Class 125 iron body, bronze mounted trim, horizontal swing type, flanged ends.

C. 2 inches to 4 inches: 300 psig CWP, ductile iron body, type 316 stainless steel clapper, horizontal swing type with grooved ends. Victaulic Series 712 or equal.

D. Manufactured by Crane, ~~GruvLok~~, Nibco, Stockham, Victaulic or Watts.

2.13 SPRING LOADED WAFER CHECK VALVES

A. Over 2 inches: Class 125, ASTM A-126, cast iron body, stainless steel spring, ASTM B-62 bronze disc, Buna-N seal.

B. 2 inches to 3 inches: 365 psig CWP, ductile iron body, stainless steel disc and spring, brass shaft, plated nickel seat, grooved ends. Victaulic Series 716H or equal.

C. 4 inches to 12 inches: 300 psig CWP, ductile iron body, synthetic rubber coated ductile iron disc, stainless steel spring, brass shaft, welded-in nickel seat, grooved ends. Victaulic Series 716 and Series 779 or equal.

D. Manufactured by Crane, ~~GruvLok~~, Nibco, Stockham, Victaulic or Watts.

PART 3 - EXECUTION

3.01 PREPARATION

A. Ream pipe and tube ends. Remove burrs. Bevel or groove plain end ferrous pipe.

B. Remove scale and dirt on inside and outside before assembly.

C. Prepare piping connections to equipment with flanges, couplings or unions.

D. After completion, fill, clean, and treat systems.

3.02 INSTALLATION

A. Pipe shall be cut accurately to measurements established at the jobsite and worked into place without springing or forcing, properly clearing all windows, doors, and other openings.

B. Route piping in orderly manner, plumb and parallel to building structure, and maintain gradient.

C. Ferrous piping and copper piping shall be electrically isolated from each other with dielectric couplings or fittings.

D. Do not use bull-headed tee fittings.

E. Install piping to conserve building space, and not interfere with use of space and other work. Do not change the designed path of piping, add excessive turns or offsets, or change pipe sizes without first consulting the Engineer.

F. Group piping whenever practical at common elevations.

G. Install piping to allow for expansion and contraction without stressing pipe, joints, or connected equipment. Where expansion joints are required the following shall be the required standard.

1. INFORMATION:

a. This standard addresses expansion joints in all types of water piping (domestic hot and cold water, heating hot water and chilled water) in all university physical plant maintained facilities. This applies to any locations where expansion joints are required between fixed piping and mechanical equipment.

2. REQUIREMENTS:

a. All expansion joints shall be metal expansion joints consisting of a single hydraulically formed metal bellows with flange end fittings. Flanges shall be 150 lb. carbon steel and bellows shall be 304 or 316 stainless steel. All wetted surfaces shall be stainless steel.

b. Joints shall be designed to meet the design pressures and temperature for the system and shall be capable of accommodating piping system and equipment movements as needed. Pressure rating minimums shall be:

1) 150°F Maximum Working Pressure: 225 psi

2) 212°F Maximum Working Pressure: 190 psi

3) 480°F Maximum Working Pressure: 110 psi

3. Tie rods shall be included to prevent overextension of the expansion joints from pressure thrust loads. The number and size of the control rods shall be sufficient for the maximum system test pressure.

4. Rubber expansion joints are not acceptable in any of these applications.

5. This standard is the same for both plumbing and HVAC piping.

H. Provide clearance for installation of insulation, and access to valves and fittings.

I. Provide access where valves and fittings are not exposed.

J. Slope piping and arrange systems to drain at low points. Use eccentric reducers to maintain top of pipe level.

K. Where pipe support members are welded to structural building framing, scrape, brush clean, and apply one coat of zinc rich primer to welding.

L. Prepare pipe, fittings, supports, and accessories for finish painting. Refer to Section Painting.

M. Install valves with stems upright or horizontal, not inverted.

N. Vic Press 304™ Joints: Pipe shall be certified for use with the Vic Press 304™ system. Pipe shall be square cut, +/- 0.030”, properly deburred and cleaned. Pipe ends shall be marked at the required location, using a manufacturer-supplied gauge, to ensure full insertion into the coupling or fitting during assembly. Use a Victaulic ‘PFT’ series tool with the proper sized jaw for pressing.

O. Grooved joint piping systems shall be installed in accordance with the manufacturer’s guidelines and recommendations. All grooved couplings, fittings, valves and specialties shall be the products of a single manufacturer. Grooving tools shall be of the same manufacturer as the grooved components. The gasket style and elastomeric material (grade) shall be verified as suitable for the intended service as specified. Grooved end shall be clean and free of indentations, projections and roll marks in the area from pipe end to groove for proper gasket sealing. A factory trained field representative shall provide on-site training to contractor’s field personnel in the proper use of grooving tools and the installation of grooved piping products. Factory trained representative shall periodically review the product installation. Contractor shall remove and replace any improperly installed products.

P. Escutcheons shall be provided at all finished surfaces where exposed piping, bare or insulated, passes through floors, walls, or ceilings. Escutcheons shall be fastened securely to pipe sleeves or to extensions of sleeves without any part of sleeves being visible. Where sleeves project slightly from floors, special deep-type escutcheons shall be used.

Q. Metal saddles shall be installed on all pipes at piping supports.

R. Provide fire stopping pipe sleeves to permit the conduit, pipe, insulation to pass through partitions and floors. In floors, the sleeves shall extend 1" above the finished floor.

S. No piping shall be run across floors to cause a trip hazard.

T. Condensate Drain Piping must be routed to floor drains or basins, condensate shall not be spilled to floor.

U. Piping must be installed in a manner to not block or obstruct access to equipment or service areas.

3.03 APPLICATION

A. Use grooved mechanical couplings and fasteners in accessible locations or where approved by the engineer.

B. Install unions or grooved joint couplings downstream of valves and at equipment or apparatus connections.

C. Install brass male adapters each side of valves in copper piped system. Sweat solder adapters to pipe.

D. Install gate or ball valves for shut-off and to isolate equipment, part of systems, or vertical risers.

E. Install globe or ball valves for throttling, bypass, or manual flow control services.

F. Provide spring loaded check valves on discharge of condenser water pumps.

G. Use plug cocks for throttling service.

H. Use only butterfly valves in heat pump and cooling tower water systems interchangeably with gate and globe valves.

I. Use only butterfly valves in condenser water systems for throttling and isolation service.

J. Use lug or grooved end butterfly valves to isolate equipment.

K. Provide 3/4-inch gate or ball drain valves at main shut-off valves, low points of piping, bases of vertical risers, and at equipment. Pipe to nearest drain.

L. Provide automatic air vents, piped per details on drawings, at all high points of piping and at end of hydronic supply mains.

M. Do not install above grade piping in areas subject to freezing. When such an area is encountered, notify the engineer for further instructions.

3.04 TESTS

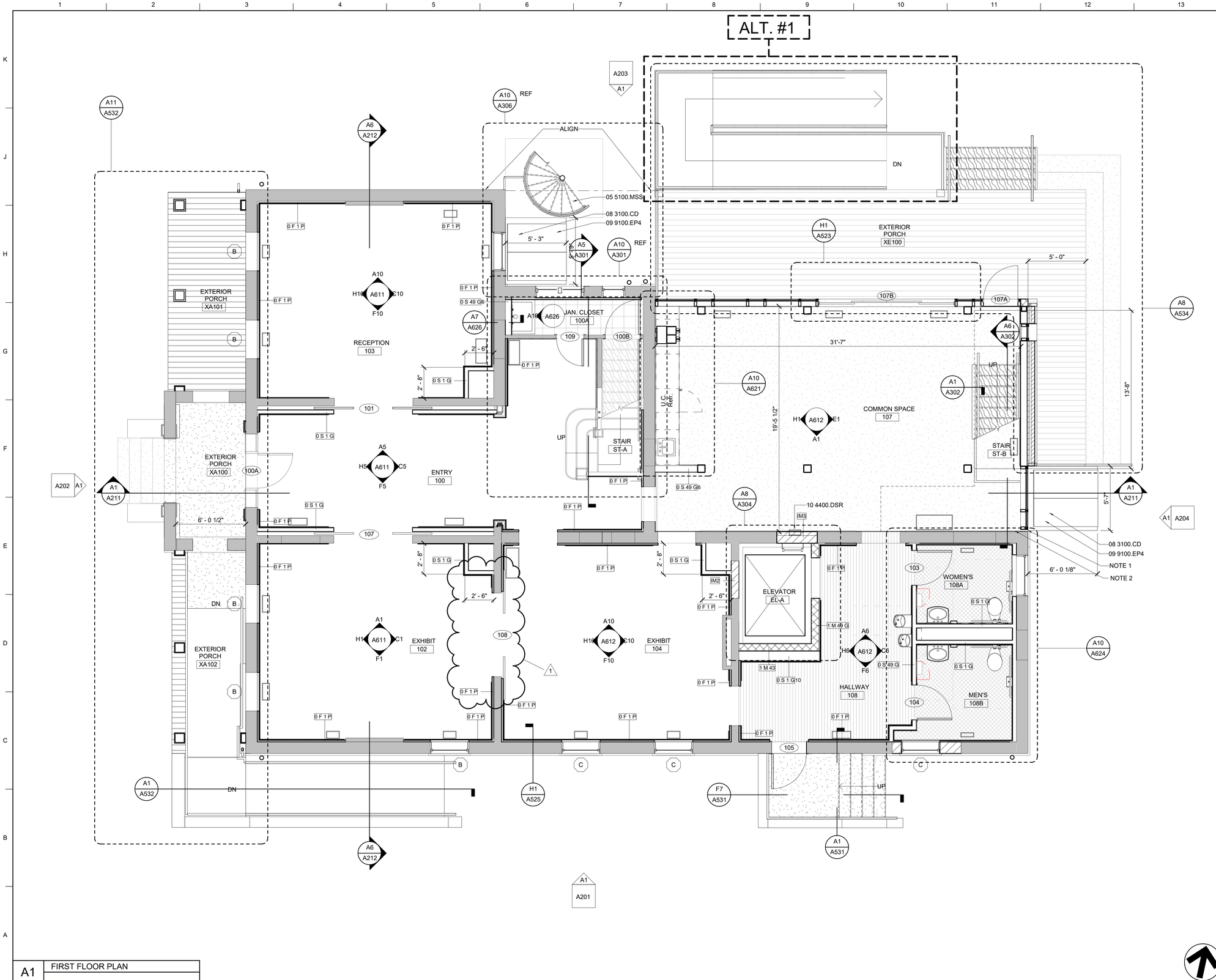
A. Piping: After cleaning, all piping shall be hydrostatically tested at a pressure equal to 150 percent of the total system operating pressure but not less than 100 psi for a period sufficient to inspect every joint in the system and in no case less than 2 hours. No loss of pressure will be allowed. Leaks found during tests shall be repaired by re-welding or replacing pipe or fittings. Caulking or peening of joints or fittings will not be permitted. Concealed and insulated piping shall be tested in place before covering or concealing.

END OF SECTION

SUBMITTALS

In accordance with the requirements of the General Conditions and Supplementary General Conditions, the following information is required to be submitted for this Section. The Contractor shall submit the required information to Architect for approval within 30 days after notice to proceed.

ITEM DESCRIPTION	SHOP DRAWINGS	CATALOG DATA	PARTS LISTS	OPERATING MANUAL	WIRING DIAGRAM	CERTIFICATION	SAMPLES	OTHER
Pipe	X	X						
Fittings	X	X						
Valves	X	X	X					
Welders Certificate						X		



MATERIAL KEYNOTES

05 5100.MSS	Metal Sprial Stair
08 3100.CD	Cellar Door
09 9100.EP4	Exterior Paint - Misc. Metal
10 4400.DSR	Multi-Purpose FE and Semi-recessed Cabinet

GENERAL NOTES

SHEET SPECIFIC NOTES

1. 2" VERTICAL EXPANSION JOINT
2. 1/4" HORIZONTAL EXPANSION JOINT.

STATE OF KENTUCKY APPROVAL

LORD AECK SARGENT
A KATERRA COMPANY
LordAeckSargent.com

REVISION:

1	Addendum 2	4/7/21

SHEET TITLE: FIRST FLOOR PLAN

SCALE (U.N.O.): 0 4 8 FT

JOB NAME: University of Kentucky

Cooper House Renovation - Project 2511.1

LOCATION: 1312 Nicholasville Road, Lexington, KY 40546

KEY PLAN

PROJECT NORTH

SEAL: Karen Gravel REGISTERED NO. 7288 COMMONWEALTH OF KENTUCKY ARCHITECT

ISSUE DATE: May 14, 2020

JOB. NO. 10663-01

DWG. NO. A101

A1 FIRST FLOOR PLAN

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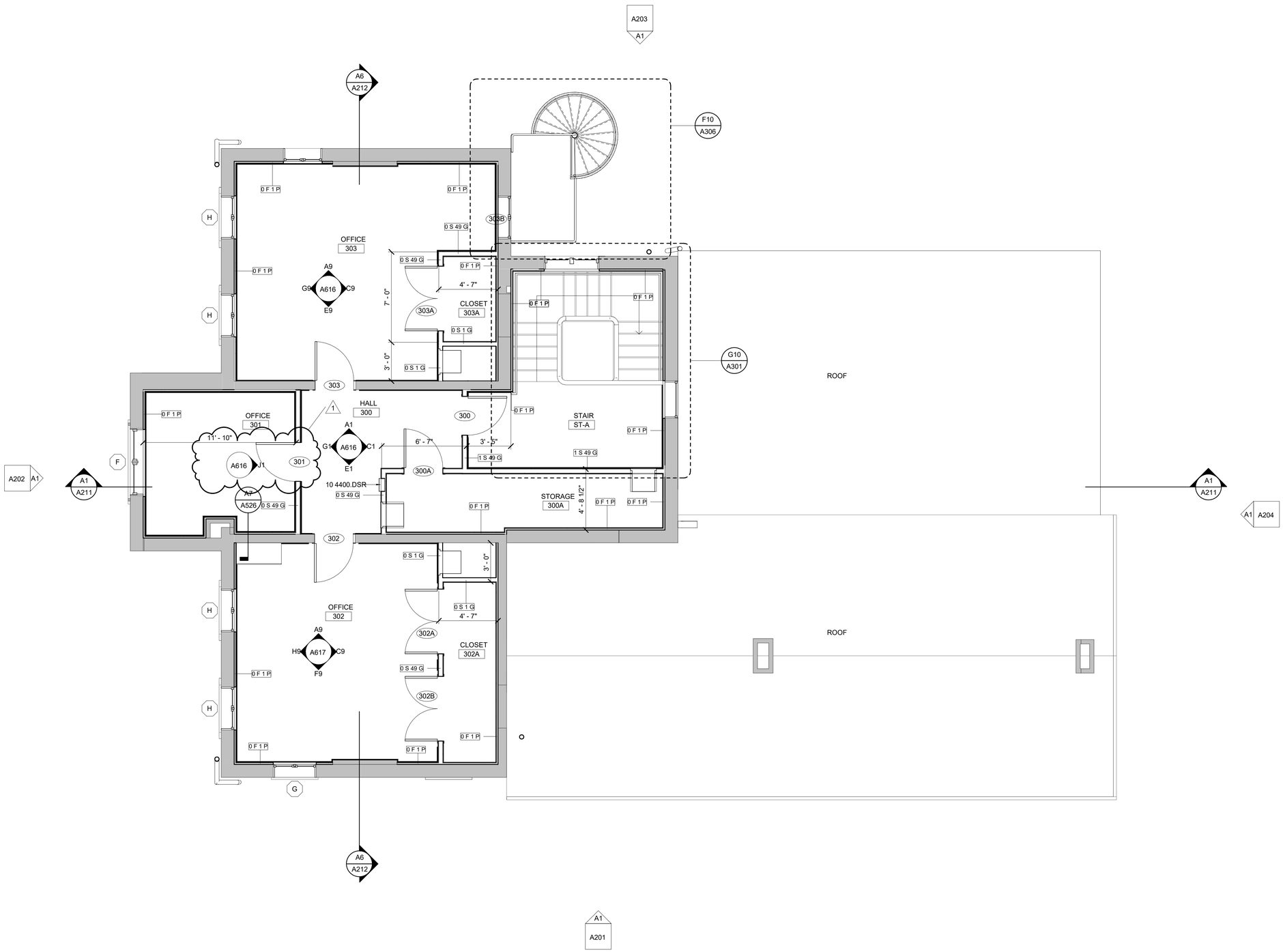

MATERIAL KEYNOTES

10 4400.DSR Multi-Purpose FE and Semi-recessed Cabinet

GENERAL NOTES

SHEET SPECIFIC NOTES

STATE OF KENTUCKY APPROVAL

LORD AECK SARGENT
A KATERRA COMPANY
LordAeckSargent.com

REVISION:

1	Addendum 2	4/7/21

SHEET TITLE
THIRD FLOOR PLAN

SCALE (U.N.O.) 0 4 8 FT

JOB NAME
University of Kentucky
Cooper House Renovation - Project 2511.1

LOCATION
1312 Nicholasville Road, Lexington, KY 40546

KEY PLAN

PROJECT NORTH

SEAL
Karen Gravel
REGISTERED
NO. 7288
COMMONWEALTH OF KENTUCKY
ARCHITECT

ISSUE DATE
May 14, 2020

JOB. NO.
10663-01

DWG. NO.
A103

A1 THIRD FLOOR PLAN

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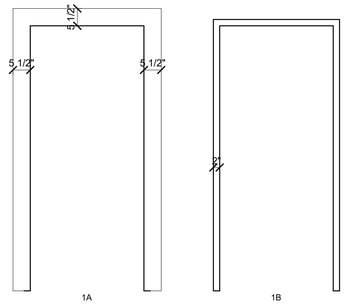
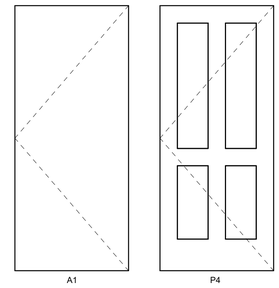


H1 DOOR FRAME TYPES
0 2 4 FT



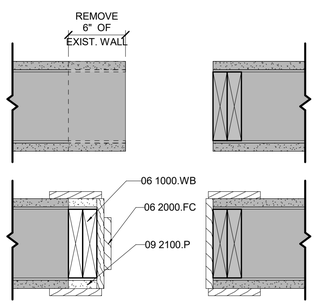
H4 DOOR ELEVATION TYPES
0 2 4 FT

DOOR SCHEDULE

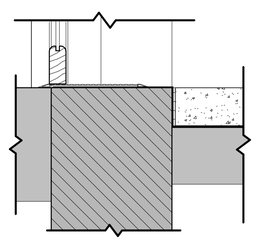
DOOR NO.	DESCRIPTION	DOOR 1 PR	DOOR 1 TYPE	DOOR 1 WIDTH	DOOR 2 TYPE	DOOR 2 WIDTH	HEIGHT	T	MAT	FIN	FRAME TYPE	FRAME MAT	DETAILS JAMB	DETAILS HEAD	DETAILS SILL	RATING (MIN.)	REMARKS
First Floor																	
100A	BUILDING ENTRANCE		P : 4	3' - 0"	--	0"	9' - 0"	1 3/4"	WD	PT	7 : A	WD	--	--	E4		RESTORE EXISTING DOOR/ FRAME TO REMAIN
100B	BASEMENT		P : 4	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	PT	1 : A	WD	C4	C4			
101	RECEPTION	PR	P : 4	3' - 4"	P : 4	3' - 4"	9' - 0"	1 3/4"	WD	PT	1 : A	WD					NEW SLIDING POCKET DOOR TO MATCH EXISTING
103	WOMEN'S		P : 4	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	PT	1 : A	WD	A9	C9			
104	MEN'S		P : 4	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	PT	1 : A	WD	A9	C9			
105	HALL		P : 4	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	PT	1 : A	WD	A9	C9			
107	EXHIBIT	PR	P : 4	3' - 4"	P : 4	3' - 4"	9' - 0"	1 3/4"	WD	PT	1 : A	WD					RESTORE EXTG. SLIDING POCKET DOOR TO REMAIN
108	EXHIBIT	PR	P : 4	3' - 9"	P : 4	3' - 9"	9' - 0"	1 3/4"	WD	PT	1 : A	WD					NEW SLIDING BARN DOORS TO MATCH EXISTING
109	JANITORS CLOSET		P : 4	2' - 4"	--	0"	7' - 0"	1 3/4"	WD	PT	1 : A	WD	C4	C4			
Second Floor																	
200	STAIR		A : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	HM	PT	1 : B	HM	A6	C6		60	
200A	ELEVATOR LOBBY		--	3' - 4"	--	0"	7' - 0"	1 3/4"	WD	PT	1 : A	WD	E1	A1			NEW CASED OPENING IN EXIST. MASONRY WALL
201	STAIR	PR	A : 1	4' - 0"	A : 1	4' - 0"	8' - 0"	1 3/4"	HM	PT	1 : B	HM	A6	C6		60	
202	OFFICE		P : 4	3' - 0"	--	0"	8' - 0"	1 3/4"	WD	PT	1 : A	WD	C1	C1			
203	OFFICE		P : 4	3' - 0"	--	0"	8' - 0"	1 3/4"	WD	PT	1 : A	WD	C1	C1			
204	CONFERENCE ROOM		P : 4	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	PT	1 : A	WD	A9	C9			
205	SHARED OFFICE		--	7' - 0"	--	0"	7' - 0"	1 3/4"	WD	PT	1 : A	WD	A4	A4			CASED OPENING
206A	ELECTRICAL/ IT		A : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	HM	PT	1 : B	HM	A6	C6			
206B	STORAGE		A : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	HM	PT	1 : B	HM	A6	C6			
206C	ELEVATOR MACHINE ROOM		A : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	HM	PT	1 : B	HM	A6	C6			
208	RESTROOM		P : 4	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	PT	1 : A	WD	A9	C9			
Third Floor																	
300	STAIR		A : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	HM	PT	1 : B	HM	A6	C6		60	
300A	STORAGE		A : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	HM	PT	1 : B	HM	A6	C6			
301	OFFICE		P : 4	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	PT	1 : A	WD	A9	C9			
302	OFFICE		P : 4	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	PT	1 : A	WD	A9	C9			
302A	CLOSET	PR	P : 4	2' - 6"	P : 4	2' - 6"	7' - 0"	1 3/4"	WD	PT	1 : A	WD	A9	C9			
302B	CLOSET	PR	P : 4	2' - 6"	P : 4	2' - 6"	7' - 0"	1 3/4"	WD	PT	1 : A	WD	A9	C9			
303	OFFICE		P : 4	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	PT	1 : A	WD	A9	C9			
303A	CLOSET	PR	P : 4	2' - 6"	P : 4	2' - 6"	7' - 0"	1 3/4"	WD	PT	1 : A	WD	A9	C9			

DOOR SCHEDULE - SPECIALTY

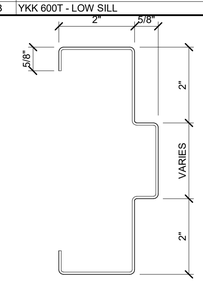
DOOR NO.	DESCRIPTION	PR	TYPE	0" / 11' - 9 1/2"	10 3/4" / 7' - 10 3/4"	RATING (MIN.)	REMARKS
107A	WIDE STILE		WIDE STILE - Dark Bronze	3' - 1 5/8"	7' - 11 11/16"		
107B	YKK 600T - LOW SILL	PR	WIDE STILE - Dark Bronze	0"	0"		SLIDER IN OX XO CONFIGURATION



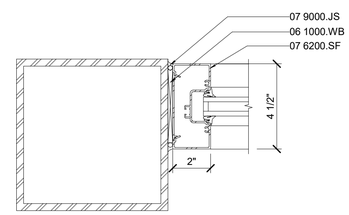
E1 WIDENED DOOR JAMB



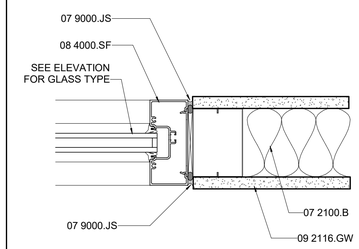
E4 ENTRY PORCH DOOR SILL



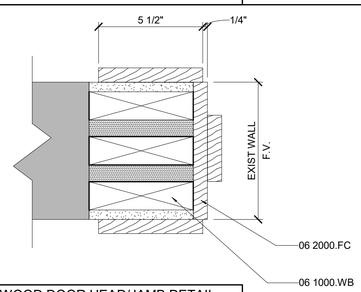
E6 TYP DOOR FRAME PROFILE
0 3 6 IN



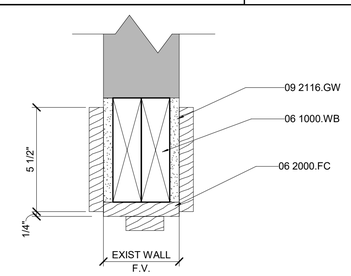
E9 STOREFRONT JAMB
0 6 12 IN



E11 STOREFRONT JAMB DETAIL
0 6 12 IN



C1 WOOD DOOR HEAD/JAMB DETAIL



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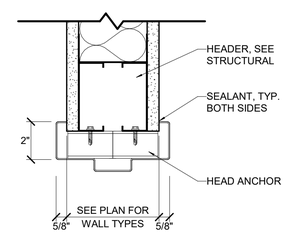
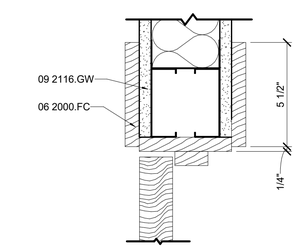
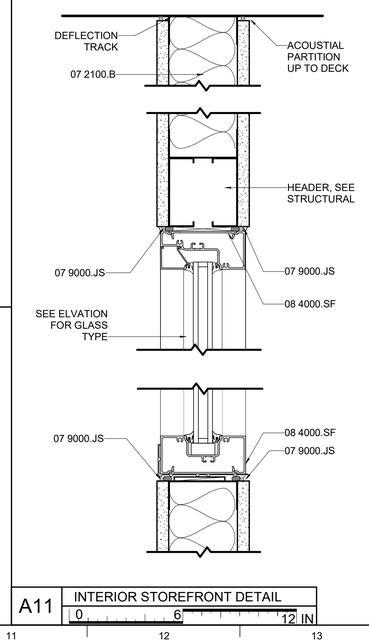


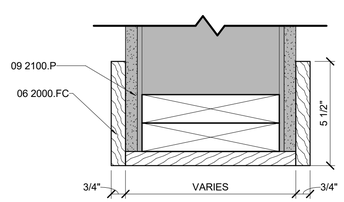
C6 HM DOOR HEAD DETAIL
0 6 12 IN



C9 WOOD DOOR HEAD DETAIL
0 6 12 IN

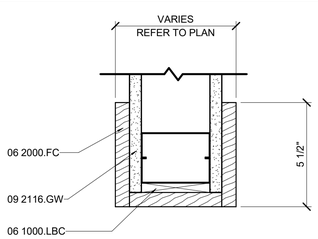


A11 INTERIOR STOREFRONT DETAIL
0 6 12 IN



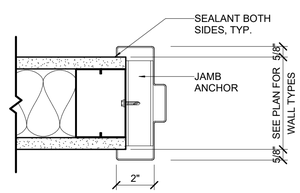
A1 CASED OPENING HEAD/JAMB

EXISTING WALL

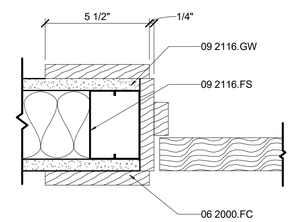


A4 CASED OPENING HEAD / JAMB

NEW WALL



A6 HM DOOR JAMB DETAIL
0 6 12 IN



A9 WOOD DOOR JAMB DETAIL

MATERIAL KEYNOTES

06 1000.LBC	Blocking, Continuous
06 1000.WB	Wood Blocking
06 2000.FC	Finish Carpentry
07 2100.B	Batt Insulation
07 6200.SF	Sheet Metal Flashing
07 9000.JS	Joint Sealant
08 4000.SF	Storefront
09 2100.P	Plaster
09 2116.FS	Metal Stud
09 2116.GW	Gypsum Wallboard

ABBREVIATIONS

PR:	PAIR OF DOORS
UPR:	UNEVEN PAIR OF DOORS
T:	THICKNESS
MAT:	MATERIAL
WD:	WOOD
AL:	ALUMINUM
GL:	GLASS
HM:	HOLLOW METAL
FIN:	FINISH
PT:	PAINTED
STN:	STAINED
HW:	HEAD WIDTH

GENERAL NOTES

DOOR SCHEDULE NOTES:

A. PR: ALL DOORS ARE SINGLE DOORS U.N.O.
B. DOOR MAT: ALL DOORS ARE 08 1100.SD U.N.O.
C. DOOR FIN: ALL DOORS ARE PAINTED U.N.O.
D. FRAME MAT: ALL FRAMES ARE 08 1100.WD U.N.O.
E. RATING: ALL DOORS ARE NON-RATED U.N.O.
F. GLASS: ALL GLAZING IS 08 8000.CF U.N.O.
G. DETAILS: SEE A3 / A601 FOR ALL DETAILS U.N.O.

SPECIALTY DOOR SCHEDULE NOTES:

A. PR: ALL DOORS ARE SINGLE DOORS U.N.O.

DOOR REMARKS

A. SEE D1/A700 FOR DOOR THRESHOLD DETAILS.

SHEET SPECIFIC NOTES

STATE OF KENTUCKY APPROVAL

KEY PLAN

PROJECT NORTH

SEAL

Karen Gravel REGISTERED NO. 7286 COMMONWEALTH OF KENTUCKY ARCHITECT

LORD AECK SARGENT
A KATERRA COMPANY
LordAeckSargent.com

REVISION:

1	Addendum 2	4/7/21

SHEET TITLE: DOOR ELEVATIONS, DETAILS, & SCHEDULE

SCALE (U.N.O.)

JOB NAME: University of Kentucky
Cooper House Renovation - Project 2511.1

LOCATION: 1312 Nicholasville Road, Lexington, KY 40546

ISSUE DATE: May 14, 2020

JOB. NO. 10663-01

DWG. NO. A601

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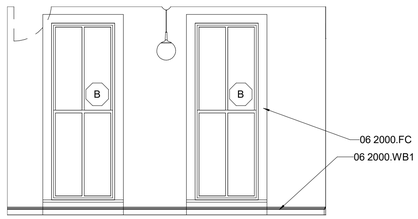

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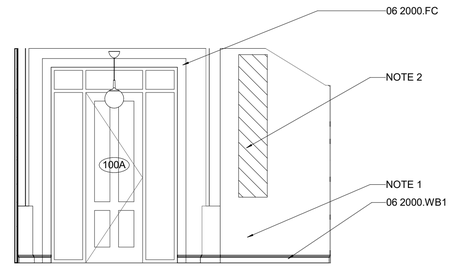

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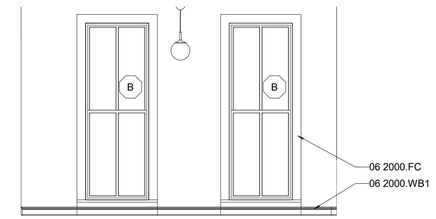

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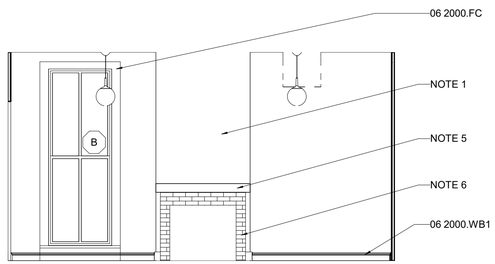

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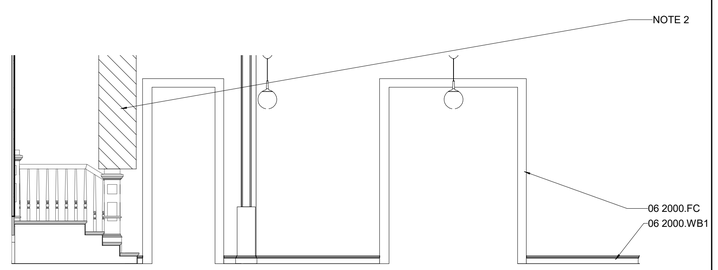

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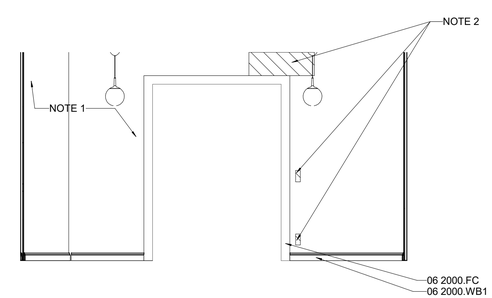

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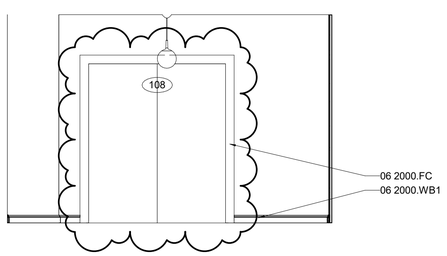

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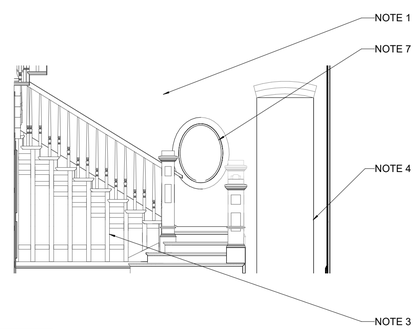

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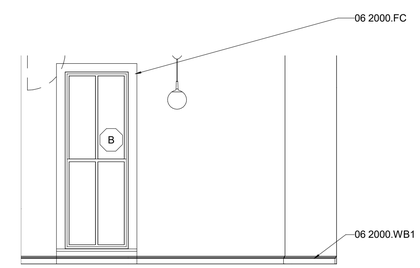

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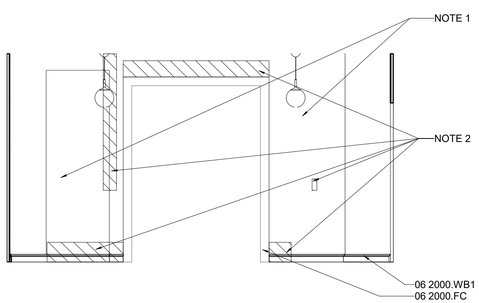

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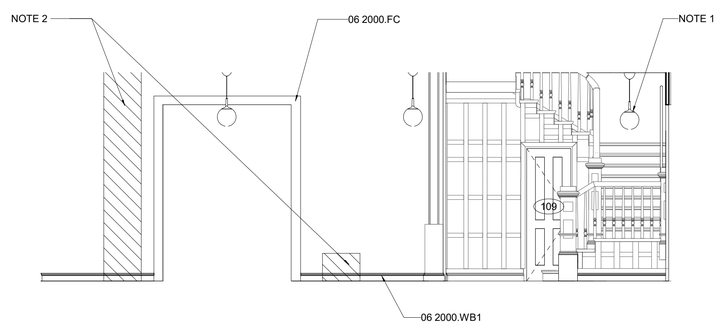

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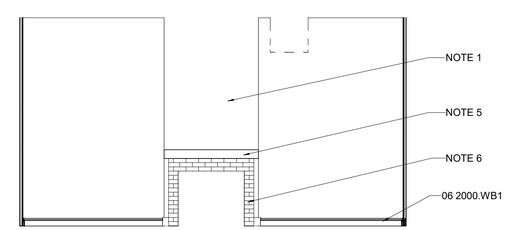

A10 INT. ELEV. - ADMIN N

MATERIAL KEYNOTES

06 2000.FC Finish Carpentry
06 2000.WB1 New Wood Base to Match Existing

GENERAL NOTES

A. PROVIDE NEW 1X6 TRIM AT ALL DOOR OPENINGS AND WINDOWS.

SHEET SPECIFIC NOTES

1. EXPOSED BRICK WALL. CLEAN ENTIRE WALL AND REPOINT IN KIND.
2. PATCH AND INFILL HOLES TO MATCH HISTORIC MASONRY AND MORTAR.
3. EXISTING DECORATIVE TRIM TO REMAIN. CAREFULLY REMOVE PAINT, SMOOTH AND REPAINT.
4. NO DECORATIVE TRIM AT EXISTING MASONRY OPENING.
5. NEW WOOD MANTEL.
6. T4 TILE SURROUND.
7. STAINED GLASS WINDOW, DESIGN TBD. SHOWN FOR REFERENCE ONLY; WINDOW TO BE INCLUDED IN THE FF&E PACKAGE PROVIDED BY THE OWNER.

STATE OF KENTUCKY APPROVAL

LORD AECK SARGENT
A KATERRA COMPANY
LordAeckSargent.com

REVISION:

1	Addendum 2	4/7/21

SHEET TITLE
FIRST FLOOR INTERIOR ELEVATIONS

SCALE (U.N.O.) 0 4 8 FT

JOB NAME
University of Kentucky
Cooper House Renovation - Project 2511.1

LOCATION
1312 Nicholasville Road, Lexington, KY 40546

KEY PLAN

PROJECT NORTH

SEAL
Karen Gravel REGISTERED NO. 7286 COMMONWEALTH OF KENTUCKY ARCHITECT

ISSUE DATE
May 14, 2020

JOB. NO.
10663-01

DWG. NO.
A611

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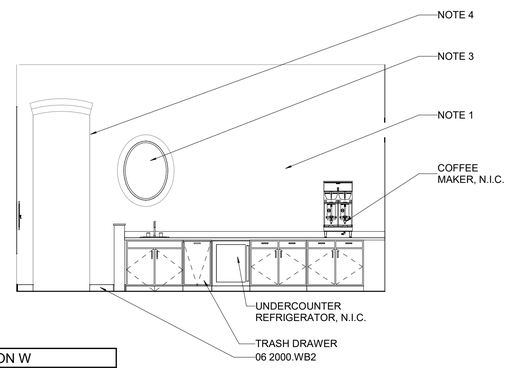

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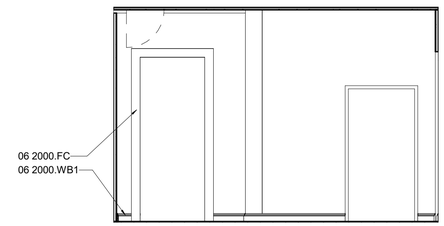

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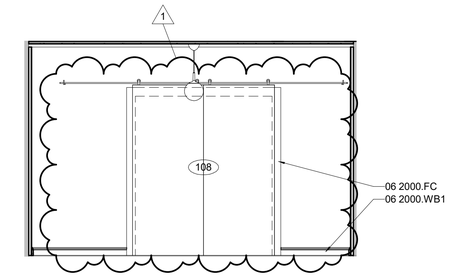

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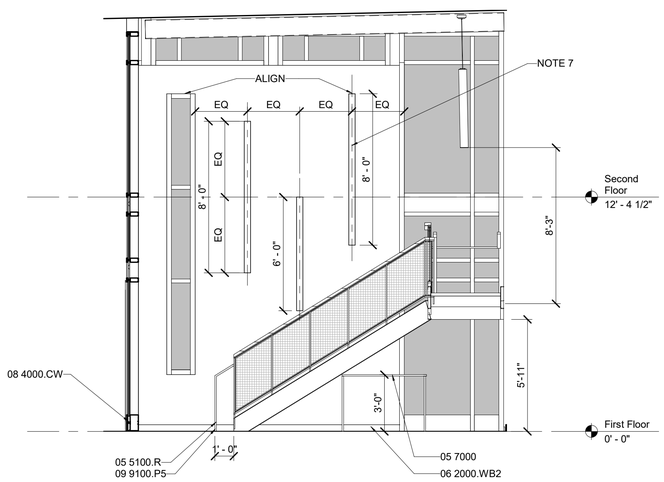

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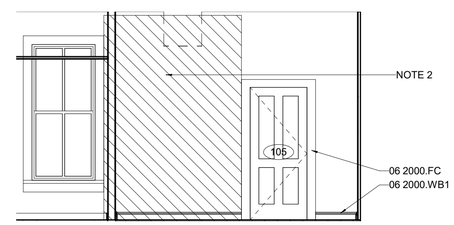

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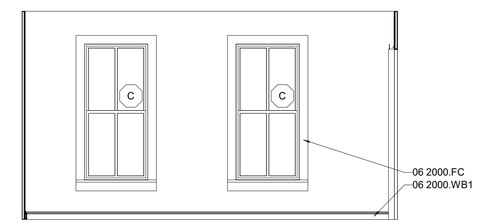

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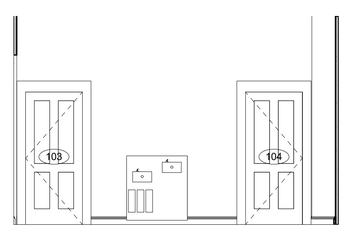

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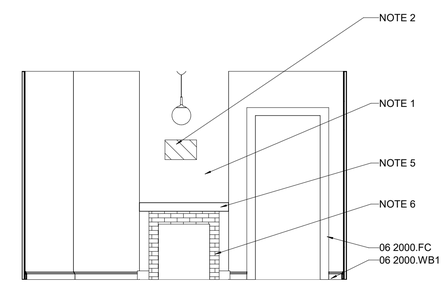

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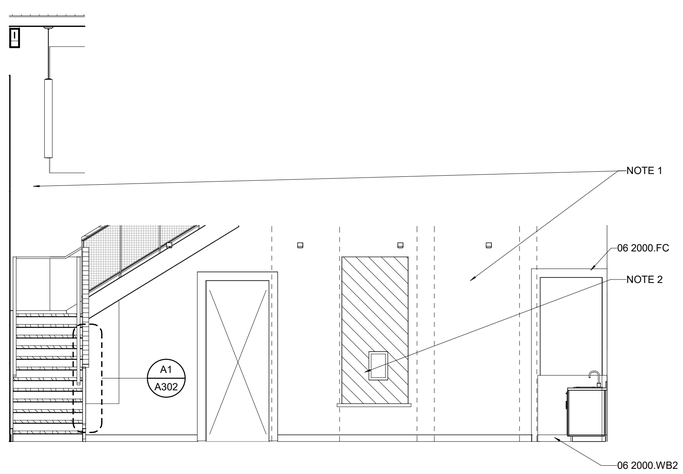

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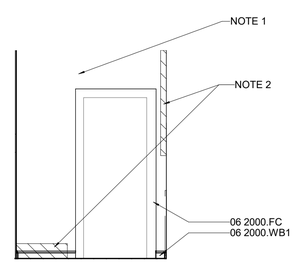

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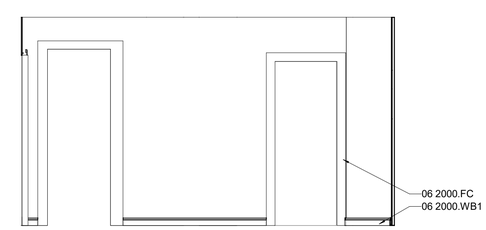

A10 INT. ELEV. - RETAIL 2 N

MATERIAL KEYNOTES

05 5100.R	Metal Stair Railing
05 7000	Decorative Metal
06 2000.FC	Finish Carpentry
06 2000.WB1	New Wood Base to Match Existing
06 2000.WB2	New Wood Base
08 4000.CW	Curtainwall
09 9100.P5	Paint Color - Metal Stair and Rail

GENERAL NOTES

A. PROVIDE NEW 1X6 TRIM AT ALL DOOR OPENINGS AND WINDOWS.

SHEET SPECIFIC NOTES

1. EXPOSED BRICK WALL. CLEAN ENTIRE WALL AND REPOINT IN KIND.
2. PATCH AND INFILL HOLES TO MATCH HISTORIC MASONRY AND MORTAR.
3. PROVIDE AND INSTALL NEW STAINED GLASS IN EXISTING MASONRY OPENING.
4. NO DECORATIVE TRIM AT EXISTING MASONRY OPENING.
5. NEW WOOD MANTEL.
6. CT3 TILE SURROUND.
7. NEW RECESSED LIGHTS, SEE ELECTRICAL.

STATE OF KENTUCKY APPROVAL

KEY PLAN

PROJECT NORTH

SEAL

Karen Grave REGISTERED NO. 7286 COMMONWEALTH OF KENTUCKY ARCHITECT

LORD AECK SARGENT
A KATERRA COMPANY

LordAeckSargent.com

REVISION:

1	Addendum 2	4/7/21

SHEET TITLE
FIRST FLOOR INTERIOR ELEVATIONS

SCALE (U.N.O.) 0 4 8 FT

JOB NAME
University of Kentucky
Cooper House Renovation - Project 2511.1

LOCATION
1312 Nicholasville Road, Lexington, KY 40546

ISSUE DATE
May 14, 2020

JOB. NO.
10663-01

DWG. NO.
A612

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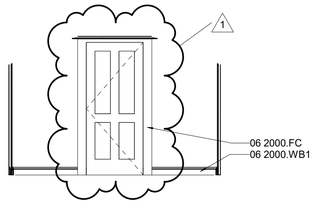
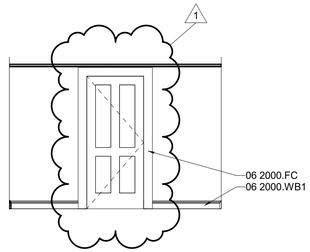


J1 INT. ELEV. -3RD FLOOR TEAM ROOM E



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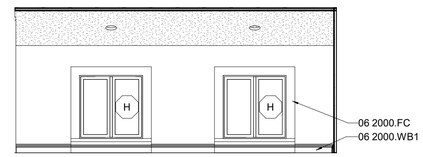
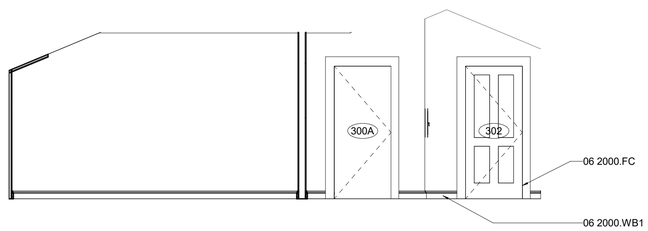


G9 INT. ELEV. - 3RD FLOOR OFFICE 1 W



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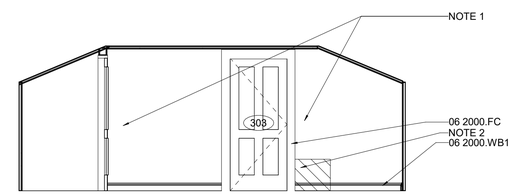

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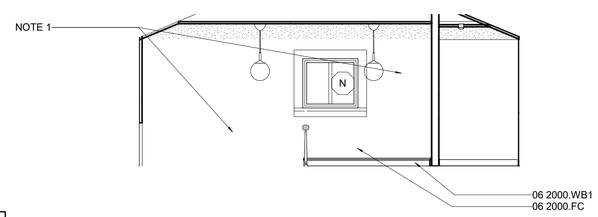
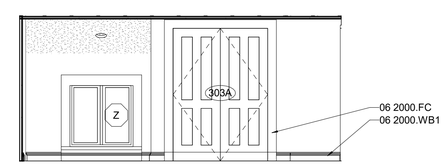
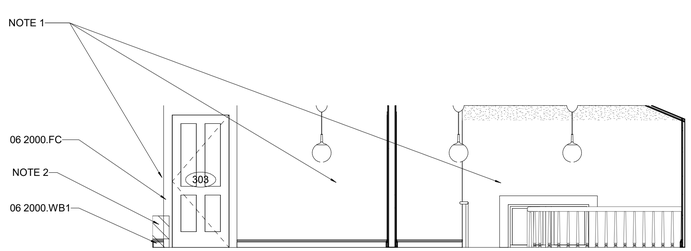


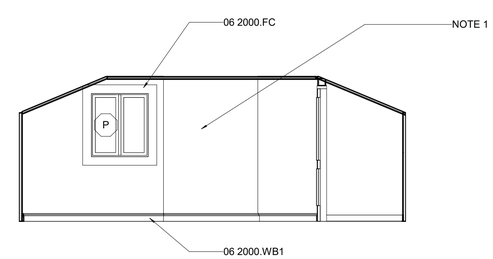
C1 INT. ELEV. - 3RD FLR CORRIDOR E



C9 INT. ELEV. - 3RD FLOOR OFFICE 1 E



A1 INT. ELEV. - 3RD FLR CORRIDOR N



A9 INT. ELEV. - 3RD FLOOR OFFICE 1 N

MATERIAL KEYNOTES

06 2000.FC Finish Carpentry
06 2000.WB1 New Wood Base to Match Existing

GENERAL NOTES

A. PROVIDE NEW 1X6 TRIM AT ALL DOOR OPENINGS AND WINDOWS.

SHEET SPECIFIC NOTES

1. EXPOSED BRICK WALL. CLEAN ENTIRE WALL AND REPOINT IN KIND.
2. PATCH AND INFILL HOLES TO MATCH HISTORIC MASONRY AND MORTAR.

STATE OF KENTUCKY APPROVAL

LORD AECK SARGENT
A KATERRA COMPANY
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REVISION:

1	Addendum 2	4/7/21

SHEET TITLE
THIRD FLOOR INTERIOR ELEVATIONS

SCALE (U.N.O.) 0 4 8 FT

JOB NAME
University of Kentucky
Cooper House Renovation - Project 2511.1

LOCATION
1312 Nicholasville Road, Lexington, KY 40546

KEY PLAN

PROJECT NORTH

SEAL
Karen Gravel REGISTERED NO. 7286 COMMONWEALTH OF KENTUCKY ARCHITECT

ISSUE DATE
May 14, 2020

JOB. NO.
10663-01

DWG. NO.
A616

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MATERIAL KEYNOTES

GENERAL NOTES

SHEET SPECIFIC NOTES

STATE OF KENTUCKY APPROVAL

LORD AECK SARGENT
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REVISION:		
1	Addendum 2	4/7/21

SHEET TITLE
FURNITURE PLAN - FIRST FLOOR (FOR REFERENCE ONLY)

SCALE (U.N.O.) 0 4 8 FT

JOB NAME
University of Kentucky
Cooper House Renovation - Project 2511.1

LOCATION
1312 Nicholasville Road, Lexington, KY 40546

KEY PLAN

PROJECT NORTH

SEAL
Karen Grabel
REGISTERED
NO. 7286
COMMONWEALTH OF KENTUCKY
ARCHITECT

ISSUE DATE
May 14, 2020

JOB. NO.
10663-01

DWG. NO.
A801

A1 FIRST FLOOR PLAN

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A1 THIRD FLOOR PLAN

MATERIAL KEYNOTES

GENERAL NOTES

SHEET SPECIFIC NOTES

STATE OF KENTUCKY APPROVAL

KEY PLAN

PROJECT NORTH

SEAL

Karen Gravel
REGISTERED
NO. 7286
COMMONWEALTH OF KENTUCKY
ARCHITECT

LORD AECK SARGENT
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REVISION:

1	Addendum 2	4/7/21

SHEET TITLE
FURNITURE PLAN - THIRD FLOOR (FOR REFERENCE ONLY)

SCALE (U.N.O.) 0 4 8 FT

JOB NAME
University of Kentucky
Cooper House Renovation - Project 2511.1

LOCATION
1312 Nicholasville Road, Lexington, KY 40546

ISSUE DATE
May 14, 2020

JOB. NO.
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DWG. NO.
A803

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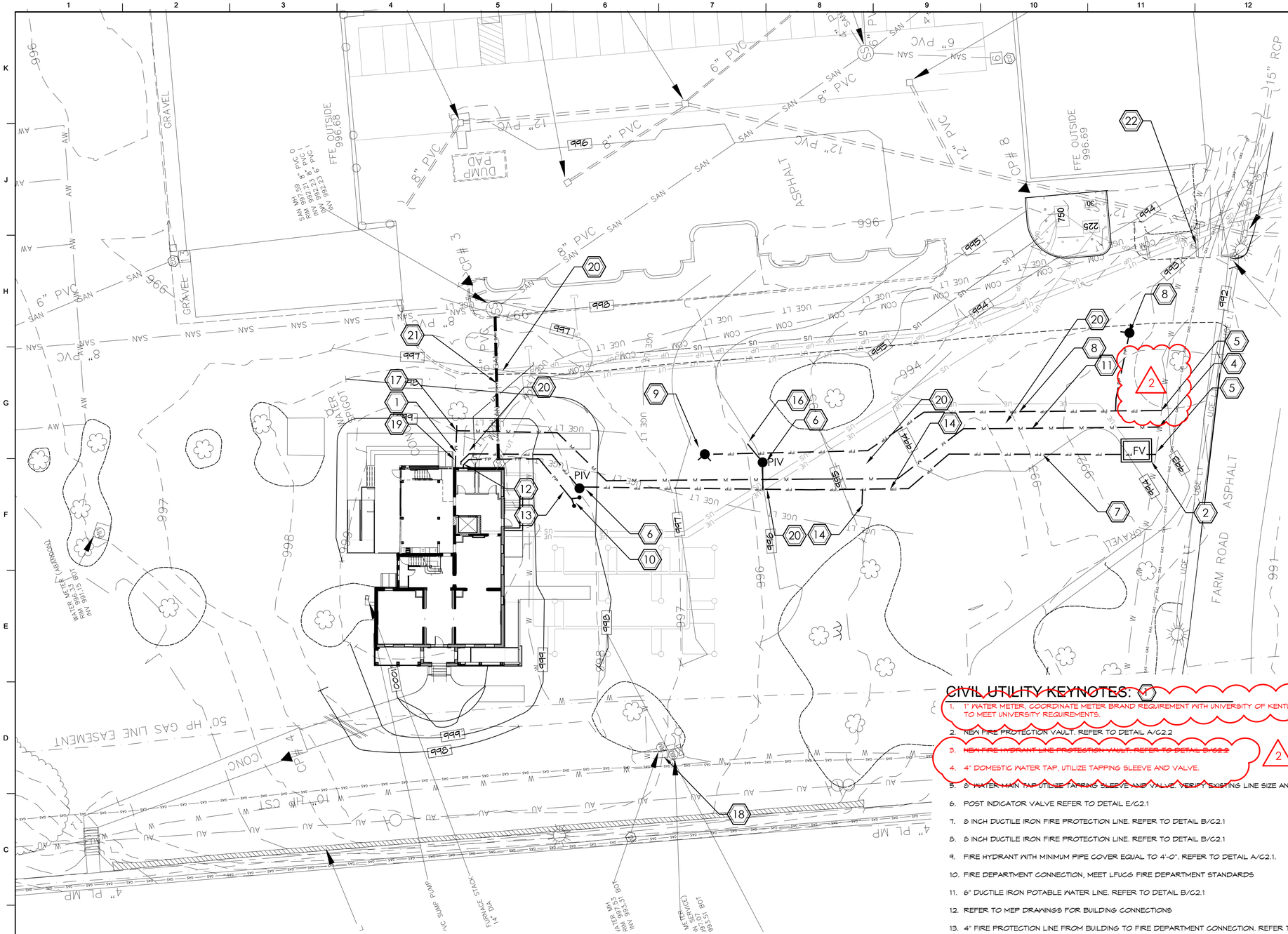

CIVIL UTILITY NOTES:

A. THE EXISTING TOPOGRAPHIC AND SITE INFORMATION SHOWN HAS BEEN PROVIDED BY S4ME, INC. THIS INFORMATION IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. THE ARCHITECT SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION SHOWN THEREON. CONTRACTOR TO VERIFY ALL INFORMATION SHOWN.

B. THE DRAWINGS SHOW THE APPROXIMATE LOCATION OF EXISTING AND PROPOSED UTILITY LINES. THESE LINES HAVE BEEN IDENTIFIED AND LOCATED AS ACCURATELY AS POSSIBLE USING AVAILABLE INFORMATION; THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL ACTUAL LOCATIONS.ALL REQUIRED EXPLORATION IS INCIDENTAL TO THE PROJECT.

C. UNLESS OTHERWISE INDICATED TO BE REMOVED, ALL ITEMS REMAINING WITHIN THE LIMIT OF CONTRACT ARE TO REMAIN AND BE PROTECTED FROM DAMAGE DURING CONSTRUCTION.

D. THE CONTRACTOR SHALL MAINTAIN UTILITY SYSTEMS TO FUNCTION THROUGHOUT THE CONSTRUCTION PERIOD.

E. REFER TO SPECIFICATION / PROJECT MANUAL FOR ADDITIONAL REQUIREMENTS. ALL MATERIALS AND ITEMS MUST MEET OWNER REQUIREMENTS.

F. ADJUST RIM ELEVATIONS OF ALL EXISTING STRUCTURES TO MATCH PROPOSED FINISHED GRADES.

G. FOR PROPOSED UTILITY STRUCTURES, INVERT ELEVATIONS ARE APPROXIMATE AND BASED ON INFORMATION PROVIDED FOR EXISTING STRUCTURES. FIELD VERIFY ELEVATIONS PRIOR TO INSTALLATION OF UTILITY STRUCTURES.

H. FOR PROPOSED UTILITY PIPE, PIPE LENGTHS & SLOPES ARE APPROXIMATE & SHOULD BE FIELD VERIFIED.

I. PROVIDE THRUST BLOCKS AT ALL BENDS, TEES, FITTINGS IN WATER AND FIRE LINE. REFER TO THRUST BLOCK DETAIL ON C2.1

J. REFER TO MEP PLANS TO COORDINATE SPECIFIC UTILITY TIE-IN LOCATIONS WITHIN 5' OF BUILDING FOOTPRINT.

H. CONTRACTOR SHALL COORDINATE ALL UTILITY CROSSINGS WITH INFORMATION PROVIDED FOR UTILITIES IN FUTURE PHASES. SEE SHEET L3.1

I. AT THE END OF EACH WEEK THE CONTRACTOR SHALL PROVIDE SURVEY POINT INFORMATION FOR ALL UTILITY WORK. THE SURVEY POINTS SHALL INCLUDE X, Y, AND Z INFORMATION AND DESCRIPTIONS FOR ALL UTILITY LINES INCLUDING THE START POINT, END POINT, CONNECTIONS, UTILITY CROSSINGS, BENDS, FIXTURES, FITTINGS, AND CHANGES IN SLOPE OR DIRECTION.

CIVIL UTILITY LEGEND

S	PROPOSED SANITARY SEWER MANHOLE
CO	PROPOSED SANITARY SEWER CLEANOUT
SAN — SAN	PROPOSED SANITARY SEWER PIPE
W	PROPOSED POTABLE WATER LINE
FP	PROPOSED FIRE PROTECTION SERVICE LINE
V	PROPOSED WATER VAULT SEE DETAILS A4B/C2.2
	PROPOSED FIRE HYDRANT SEE DETAIL A/2.1
	PROPOSED FIRE DEPARTMENT CONNECTION
	PROPOSED POST INDICATOR VALVE (PIV)
GAS — GAS	PROPOSED NATURAL GAS
G	PROPOSED NATURAL GAS METER

CIVIL UTILITY KEYNOTES:

1. 1" WATER METER, COORDINATE METER BRAND REQUIREMENT WITH UNIVERSITY OF KENTUCKY, METER VAULT TO MEET UNIVERSITY REQUIREMENTS.
2. NEW FIRE PROTECTION VAULT. REFER TO DETAIL A/C2.2
3. ~~NEW FIRE HYDRANT LINE PROTECTION VAULT. REFER TO DETAIL B/C2.2~~
4. 4" DOMESTIC WATER TAP, UTILIZE TAPPING SLEEVE AND VALVE.
5. 8" WATER MAIN TAP UTILIZE TAPPING SLEEVE AND VALVE. VERIFY EXISTING LINE SIZE AND LOCATION.
6. POST INDICATOR VALVE REFER TO DETAIL E/C2.1
7. 8 INCH DUCTILE IRON FIRE PROTECTION LINE. REFER TO DETAIL B/C2.1
8. 8 INCH DUCTILE IRON FIRE PROTECTION LINE. REFER TO DETAIL B/C2.1
9. FIRE HYDRANT WITH MINIMUM PIPE COVER EQUAL TO 4'-0". REFER TO DETAIL A/C2.1.
10. FIRE DEPARTMENT CONNECTION, MEET LFUCG FIRE DEPARTMENT STANDARDS
11. 6" DUCTILE IRON POTABLE WATER LINE. REFER TO DETAIL B/C2.1
12. REFER TO MEP DRAWINGS FOR BUILDING CONNECTIONS
13. 4" FIRE PROTECTION LINE FROM BUILDING TO FIRE DEPARTMENT CONNECTION. REFER TO DETAIL B/C2.1
14. INSTALL 8" GATE VALVE AND TWO 8" TEES WITH BLIND FLANGES FOR FUTURE CONNECTIONS. 8" GATE VALVE IS TO BE LOCATED BETWEEN THE TEES.
15. INSTALL 8INCH TEE WITH BLIND FLANGE FOR FUTURE CONNECTION
16. INSTALL BLIND FLANGE ON 8" LINE TO BUILDING FOR FUTURE CONNECTION
17. 2x3x6 TEE OR 6" TEE AND NECESSARY REDUCERS. INSTALL BLIND FLANGE FOR FUTURE CONNECTION
18. ABANDON EXISTING WATER SERVICE, COORDINATE WITH KENTUCKY AMERICAN WATER
19. 2" COPPER SERVICE LINE REFER TO DETAIL B/C2.1
20. ALL UTILITY CROSSING ELEVATIONS TO BE CONFIRMED PRIOR TO START OF INSTALLATION
21. REPLACE EXISTING 6" SANITARY WITH NEW 6" DUCTILE IRON SANITARY LINE. MATCH EXISTING ELEVATIONS. PROVIDE ELEVATIONS AND VIDEO INSPECTION REPORT OF EXISTING LINE CONDITIONS PRIOR TO INSTALLATION
22. VERIFY LOCATION AND ELEVATION OF EXISTING WATER AND GAS LINE

STATE OF KENTUCKY APPROVAL

KEY PLAN

PROJECT NORTH

SEAL

STATE OF KENTUCKY
R. DEREK MOTSCH
26439
PROFESSIONAL ENGINEER

LORD AECK SARGENT
A KATERRA COMPANY
LaSalle@LordSargent.com

REVISION:
Rev. 2-18-21
ADDENDUM 2 4-7-2021

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f. 502.589.4233
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lexington, ky 40508
p. 859.389.4333
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SHEET TITLE
SITE CIVIL UTILITY PLAN

SCALE (U.N.O.)
1" = 20'-0"

JOB NAME
University of Kentucky
Cooper House Renovation - Project 2511.1

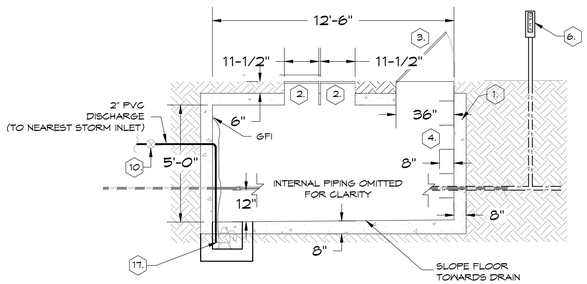
LOCATION
1312 Nicholasville Road, Lexington, KY 40546

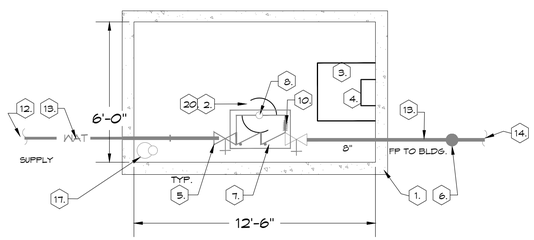
ISSUE DATE
May 14, 2020

JOB. NO.
10663-01

DWG. NO.
C1.0

C1.0	SITE CIVIL UTILITY PLAN





FIRE PROTECTION VAULT
N.T.S.

A

FIRE PROTECTION VAULT KEYNOTES

1. METER VAULT - SEE SPECIFICATIONS & LOCAL WATER UTILITY STANDARDS. VAULT SHALL BE SIZED BASED ON CONTRACTOR PROVIDED DIMENSIONED PIPING LAYOUT. A MINIMUM 12" CLEARANCE BETWEEN ALL PIPES, FITTINGS AND FIXTURES SHALL BE ACHIEVED.
2. COVER FOR READING METERS: FRAME AND COVER, FORD METER CO. INC. NO. 11 OR KANG APPROVED EQUAL.
3. METER VAULT ACCESS COVER: FRAME AND COVER, BILCO COMPANY NO K-4 WITH DOUBLE HINGE, LIFTHANDLE AND LOCKING DEVICE AS REQUIRED BY LOCAL FIRE DEPARTMENT.
4. PLASTIC CORROSION RESISTANT MANHOLE STEPS 15" O.C. AS REQUIRED.
5. OS&Y GATE VALVE. (SUPERVISED)
6. POST INDICATOR VALVE (P.I.V.) (SUPERVISED)
7. DOUBLE DETECTOR CHECK VALVE WITH BYPASS METER.
8. BYPASS METER
9. BYPASS GLOBE VALVE, NORMALLY CLOSED
10. CHECK VALVE
11. (NOT USED)
12. SEE SITE UTILITIES PLAN FOR COORDINATION.
13. SEE DRAWINGS FOR PIPE SIZES.
14. TO BLDG. SEE SITE UTILITIES PLAN FOR CONTINUATION.
15. (NOT USED)
16. (NOT USED)
17. 1/3 HP SUMP PUMP ON GFI. RUN ELECTRICAL CONDUIT AND POWER FROM BUILDING. WIRING TO BE ATTACHED TO VAULT WALLS SO THAT IT DOES NOT INTERFERE WITH FLOAT OPERATION. "PUMP ON" SHALL BE SET A MINIMUM OF 4" UNDER LOWEST ELEVATION OF POTABLE WATER / FP SYSTEM. "PUMP OFF" ELEVATION SHALL BE SET ABOVE THE VOLUTE OF THE PUMP SO THAT IT DOES NOT RUN DRY. DRILL 1/8" HOLE ON VERTICAL PORTION OF 2" DISCHARGE LINE NEAR PUMP. SUMP SHALL BE 12" DEEP WITH WIDTH AND LENGTH SUITABLE FOR OPERATION OF PUMP AND FLOAT.

GENERAL NOTES:

1. INSTALL A 1/4" PET COCK ON OUTLET SIDE OF METER SETTING AND BEFORE ALL GATE VALVES IN ACCORDANCE WITH LOCAL FIRE DEPARTMENT.
2. ALL PIPING IN VAULT SMALLER THAN 4" SHALL BE BRASS OR COPPER.
3. SUPERVISED VALVES WILL REQUIRE ELECTRICAL CONDUIT AND WIRE TO THE BUILDING FIRE CONTROL CENTER. SEE ELECTRICAL DRAWINGS FOR MORE INFORMATION.
4. SLOPE VAULT FLOOR TO DRAIN TOWARDS FLOOR DRAIN. TIE DRAIN INTO NEAREST STORM INLET.
5. SUPPORT ALL PIPE WORK ON CONCRETE BLOCKING UNDER VALVES AND METERS.
6. VAULT SHALL HAVE A MINIMUM SLOPE OF 0.5% ACROSS ITS FLOOR TOWARDS THE DRAIN.

DETAIL DELETED 2
N.T.S.

B

STATE OF KENTUCKY APPROVAL

KEY PLAN

PROJECT NORTH

SEAL

STATE OF KENTUCKY
R. DEREK MOTSCH
26439
PROFESSIONAL ENGINEER

C2.2 SITE CIVIL UTILITY DETAILS

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louisville, ky 40206
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SHEET TITLE
SITE CIVIL UTILITY DETAILS

SCALE (U.N.O.)
1" = 20'-0"

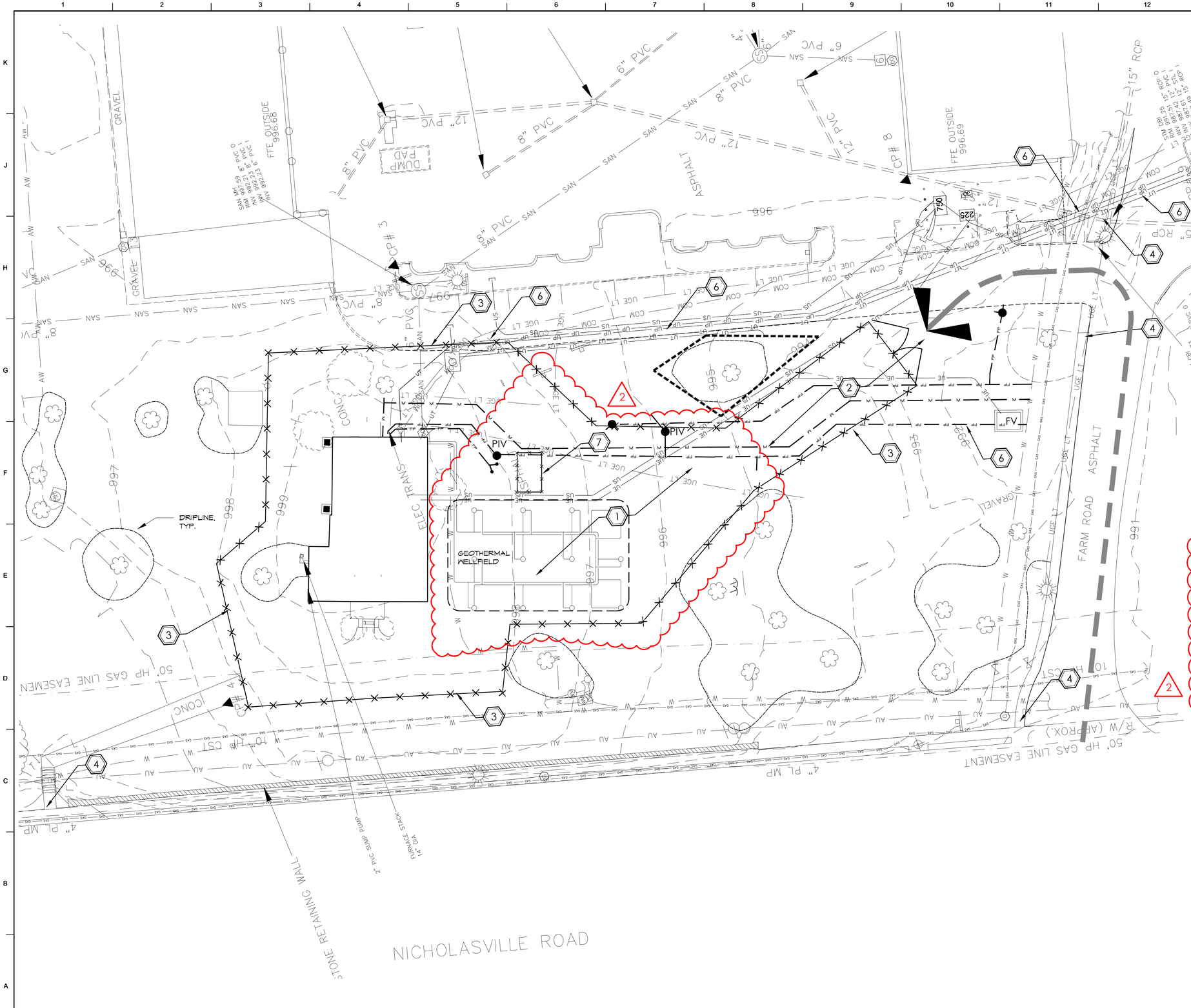
JOB NAME
University of Kentucky
Cooper House Renovation - Project 2511.1

LOCATION
1312 Nicholasville Road, Lexington, KY 40546

ISSUE DATE
May 14, 2020

JOB. NO.
10663-01

DWG. NO.
C2.2



SITE LOGISTICS NOTES

A. THE EXISTING TOPOGRAPHIC AND SITE INFORMATION SHOWN HAS BEEN PROVIDED BY S&ME, INC. THIS INFORMATION IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. THE ARCHITECT SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION SHOWN THEREON. CONTRACTOR TO VERIFY ALL INFORMATION SHOWN.

B. THE CONTRACT DRAWINGS SHOW THE APPROXIMATE LOCATION OF EXISTING AND PROPOSED UTILITY LINES. THESE LINES HAVE BEEN IDENTIFIED AND LOCATED AS ACCURATELY AS POSSIBLE USING AVAILABLE INFORMATION. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL ACTUAL UTILITY LOCATIONS.

C. LIMIT CONSTRUCTION ACCESS TO THE SITE TO THE LOCATION INDICATED AS AN ACCESS DRIVEWAY(S). TEMPORARY ACCESS DRIVEWAYS FOR CONSTRUCTION VEHICLES SHALL BE GRAVELED A MINIMUM OF 6" DEPTH WITH FILTER FABRIC PLACED BETWEEN SOIL AND STONE FOR A DISTANCE OF 100 FEET INTO THE SITE AND MAINTAINED IN GOOD CONDITION THROUGHOUT THE CONSTRUCTION PERIOD. THE ACCESS DRIVE TO THE SITE SHALL BE MAINTAINED BY THE CONTRACTOR TO MINIMIZE THE ACCUMULATION OF MUD, DIRT, DUST AND OTHER DEBRIS CAUSED BY THE CONTRACTOR'S OPERATIONS. THE DRIVE SHALL BE CHECKED DAILY AND CLEANED BY THE CONTRACTOR AS REQUIRED TO MAINTAIN THIS CONDITION THROUGHOUT THE CONSTRUCTION PERIOD.

D. THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES AND AVAILABILITY OF SITES WITH THE OWNER PRIOR TO BEGINNING WORK AT ANY GIVEN SITE.

E. REFER TO L1.0 (EPSC PLAN) AND L2.0 (SITE DEMOLITION PLAN) FOR ADDITIONAL CONSTRUCTION PHASING NOTES AND REQUIREMENTS.

F. ALL MAJOR EQUIPMENT AND MATERIAL DELIVERIES SHALL BE SCHEDULED WITH THE COLLEGE IN ADVANCE. PROVIDE MINIMUM 48 HOURS NOTICE.

G. SITE LOGISTICS PLAN INDICATES MINIMUM REQUIREMENTS, CONTRACTOR MAY MAKE ADJUSTMENTS UPON COORDINATION WITH AND AGREEMENT BY OWNER.

G. REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

SITE LOGISTICS LEGEND

CONSTRUCTION SITE ACCESS, SEE NOTES ON PLAN

CONSTRUCTION LAYDOWN AND PARKING AREA, SEE KEYNOTE 1

6' CHAIN LINK CONSTRUCTION FENCE / SITE LIMITS, SECURED TO GROUND WITH STAKES

LIMITS OF GEOTHERMAL FIELD, SEE MEP PLANS & KEYNOTE 6

SITE LOGISTICS KEYNOTES (1)

1. PROTECT NEWLY INSTALLED UTILITIES FROM DAMAGE DURING USE FOR STAGING AND PARKING. CONSTRUCTION VEHICLES MUST BE PARKED WITHIN THE DESIGNATED PARKING AREA OR OFF CAMPUS. SEE L1.0 EPSC PLAN FOR ADDITIONAL REQUIREMENTS.
2. CONSTRUCTION ACCESS DRIVE, SEE L1.0 EPSC PLAN FOR REQUIREMENTS.
3. CONSTRUCTION FENCE. INSTALL ALL CONSTRUCTION FENCE OUTSIDE OF THE DRIPLINE OF EXISTING TREES TO REMAIN. ADJUST AS REQUIRED TO COMPLETE UTILITY WORK.COOPER HOUSE SITE FENCE TO REMAIN UNTIL FUTURE MATURATION AND STILL BUILDING PROJECTS ARE COMPLETE (SUMMER 2022). CONTRACTOR FOR THE COOPER HOUSE PROJECT SHALL COORDINATE WITH, REMOVE AND/OR MODIFY ONLY A PORTION OF THE FENCE AROUND COOPER HOUSE WHEN THE STILL AND MATURATION BUILDINGS CONSTRUCTION BEGINS (SCHEDULED FOR JULY, 2021). SEE L4.1 FOR FUTURE SITE DEVELOPMENT DIAGRAM.
4. PROVIDE SIGNAGE TO PEDESTRIANS INDICATING SIDEWALK IS CLOSED.
5. NOTE DELETED
6. FOR ELECTRICAL / DATA CONSTRUCTION WORK OUTSIDE OF CONSTRUCTION FENCE, SEE MEP PLANS. EXTEND CONSTRUCTION FENCING AS NEEDED TO SECURE WORK AND PROTECT PEDSTRIANS. COORDINATE ANY EXISTING DRIVE LANE SHUT DOWN WITH UK MINIMUM 7 DAYS IN ADVANCE OF WORK. PLATE OPEN TRENCHES AS NEEDED TO MAINTAIN SAFE VEHICULAR ACCESS / SAFE SITE.
7. INSTALL CONSTRUCTION FENCE AROUND NEW HYDRANT AND PIV WITHIN LIMITS OF CONSTRUCTION FENCE FOR PROTECTION.

STATE OF KENTUCKY APPROVAL

L0.0 SITE LOGISTICS PLAN
SCALE: 1" = 20'-0"

0 20 40 80'

KEY PLAN

PROJECT NORTH

SEAL

STATE OF KENTUCKY RAMONA LEE ADAMS REGISTERED LANDSCAPE ARCHITECT

LORD AECK SARGENT
A KATERRA COMPANY

LaDAdvice@Sargent.com

REVISION:
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louisville, ky 40206
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SHEET TITLE: SITE LOGISTICS PLAN

SCALE (U.N.O.): 1" = 20'-0"

JOB NAME: University of Kentucky
Cooper House Renovation - Project 2511.1

LOCATION: 1312 Nicholasville Road, Lexington, KY 40546

ISSUE DATE: May 14, 2020

JOB. NO.: 10663-01

DWG. NO.: L0.0

LAYOUT & MATERIALS NOTES:

A. THE EXISTING TOPOGRAPHIC AND SITE INFORMATION SHOWN IS FROM A SURVEY PERFORMED BY S&ME, INC.. THIS INFORMATION IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. THE ARCHITECT SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION SHOWN THEREON. CONTRACTOR TO VERIFY ALL INFORMATION SHOWN.CONTRACTOR TO VERIFY ALL INFORMATION SHOWN.

B. DIMENSIONS GIVEN IN RELATIONSHIP TO BUILDINGS OR OTHER SITE ELEMENTS ARE MEASURED PERPENDICULAR FROM THE OUTSIDE FACE OF BRICK, STONE OR CONCRETE UNLESS OTHERWISE INDICATED. DIMENSIONS GIVEN AT ROADWAYS ARE FROM FACE OF CURB TO FACE OF CURB UNLESS OTHERWISE NOTED.

C. DIMENSIONS ARE REFERENCED AT 90 DEGREE ANGLES UNLESS OTHERWISE INDICATED. RADII ARE 5' UNLESS OTHERWISE INDICATED.

D. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL INVOLVED UTILITY COMPANIES AND COORDINATING WITH THEM ALL CONSTRUCTION ACTIVITIES AND VERIFYING ALL SITE UTILITIES PRIOR TO CONSTRUCTION ACTIVITY.

E. PROVIDE EXPANSION JOINTS WHERE CONCRETE PAVEMENT ABUTS ALL WALL AND BUILDING FACES, TYPICAL.

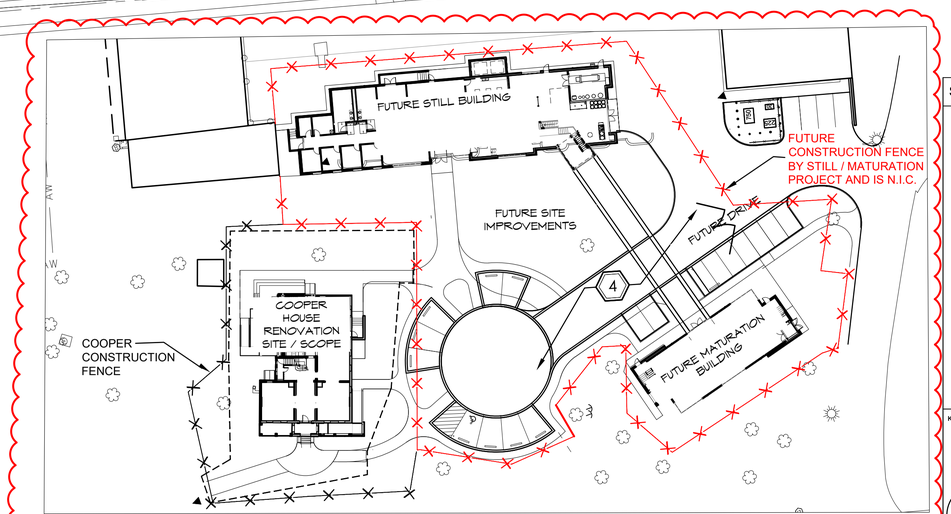
F. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

MATERIALS LEGEND:

- NEW BROOMED 4" CONCRETE PAVEMENT WITH TOOLED CONTROL JTS SEE KEYNOTE 7
- NEW BROOMED 6" HEAVY DUTY CONCRETE PAVEMENT WITH TOOLED CONTROL JTS SEE KEYNOTES 5 & 6
- LIMITS OF COOPER HOUSE RENOVATION IMPROVEMENTS
- EJ — EXPANSION JOINT- SEE DETAIL I/L6.0
- CONTROL JOINT- SEE DETAIL H/L6.0

MATERIALS KEY NOTES:

1. EXISTING ASPHALT DRIVE TO REMAIN.
2. SEE L1.0 FOR STONE CONSTRUCTION ACCESS AND STAGING AREA TO BE LEFT IN PLACE AT CONCLUSION OF CONSTRUCTION, KEYNOTES 2, 3 AND 6/L1.0.
3. NEW CONCRETE HEADER CURB, SEE DETAIL B/L6.1.
4. FUTURE DEVELOPMENT THAT IS N.I.C., REFER TO SITE MASTER PLAN, L4.1.
5. TRANSFORMER UTILITY YARD. SEE MEP PLANS FOR PAD AND BOLLARD LOCATIONS. SEE DETAIL A/L6.1 FOR BOLLARD REQUIREMENTS.
6. NEW HEAVY DUTY CONCRETE SIDEWALK PAVEMENT, SEE DETAIL F/L6.0.
7. NEW LIGHT DUTY CONCRETE SIDEWALK PAVEMENT, SEE DETAIL G/L6.0.
8. NEW EXTERIOR STAIRS, SEE ARCHITECTURAL DRAWINGS.
9. NEW EXTERIOR PLAZA AND ASSOCIATED STEPS AND RAMP, SEE ARCHITECTURAL DRAWINGS.
10. NEW HEAVY DUTY CONCRETE PAD FOR GOLF CART STORAGE. COORDINATE WITH ARCHITECT AND OWNER FOR FINAL LOCATION. SEE DETAIL F/L6.1 FOR PAVEMENT SECTION.
11. NEW LIMESTONE TREADS AT ENTRANCE, SEE DETAIL J/L6.0.
12. NEW RAMP, SEE ARCHITECTURAL DRAWINGS.
13. NEW RAMP / ALTERNATE NO. 1, SEE ARCHITECTURAL DRAWINGS.



FUTURE SITE DEVELOPMENT PLAN (FOR REFERENCE ONLY)
SCALE: 1" = 40'-0"

STATE OF KENTUCKY APPROVAL

L4.1 SITE LAYOUT& MATERIALS PLAN
SCALE: 1" = 20'-0"

0 20 40 80'

KEY PLAN — PROJECT NORTH

SEAL: STATE OF KENTUCKY — RAMONA LORD AECK — REGISTERED LANDSCAPE ARCHITECT

LORD AECK SARGENT
A KATERRA COMPANY
LaDAS@Sargent.com

REVISION:
Rev. 2-18-21
ADDENDUM 2 4-7-2021

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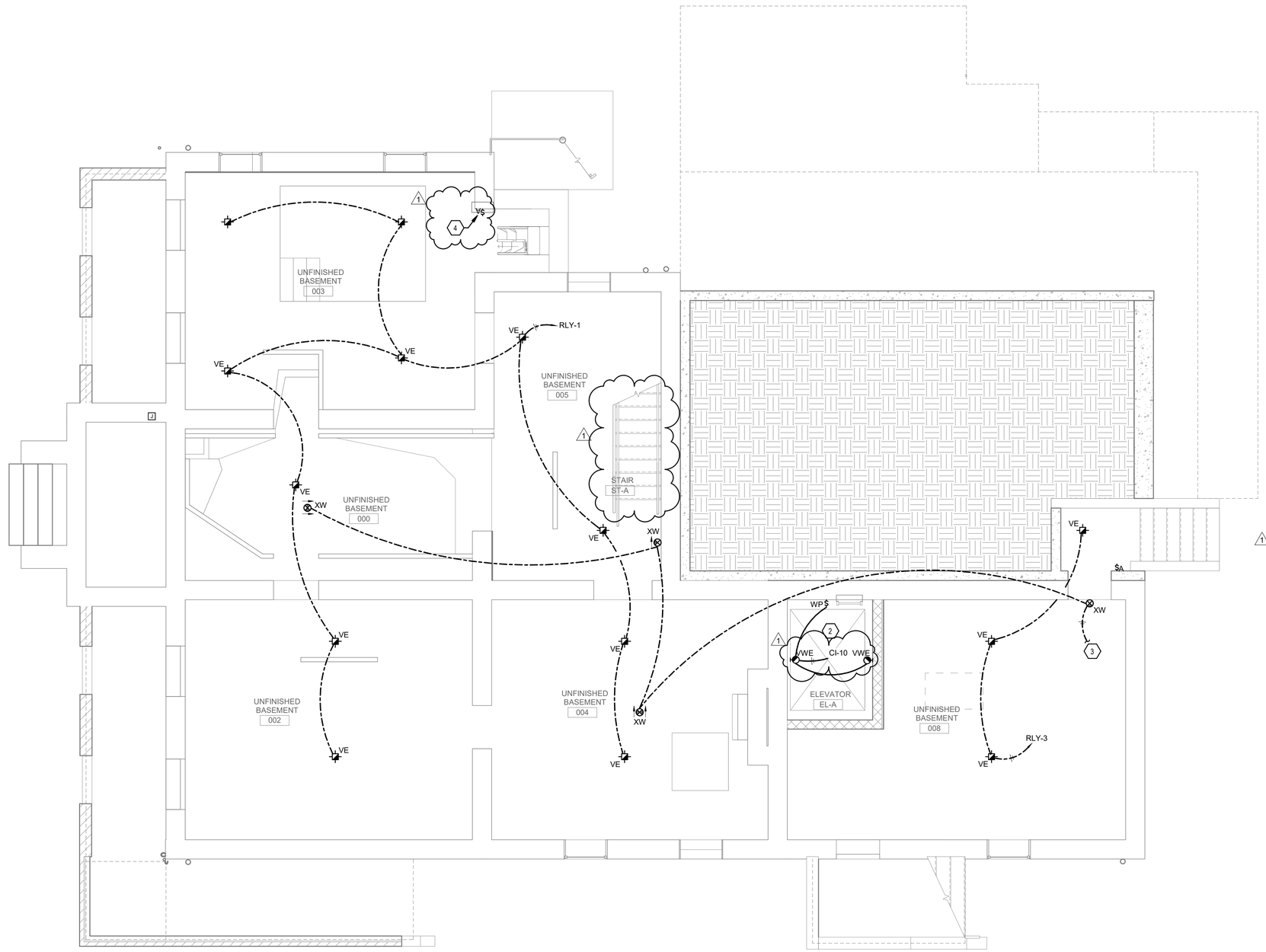
SHEET TITLE: SITE MATERIALS PLAN
SCALE (U.N.O.): 1" = 20'-0"

JOB NAME: University of Kentucky
Cooper House Renovation - Project 2511.1
LOCATION: 1312 Nicholasville Road, Lexington, KY 40546

ISSUE DATE: May 14, 2020
JOB. NO.: 10663-01
DWG. NO.: L4.1



GENERAL NOTES

1. REFER TO SHEET E003 FOR ADDITIONAL REQUIREMENTS.

SHEET NOTES

1. SWITCH FOR CONTROL OF STAIR LIGHTING.
2. COORDINATE LIGHT FIXTURE AND LITHGT SWITCH LOCATION WITH ELEVATOR CONTRACTOR.
3. CIRCUIT WITH EXIT SIGNS ON FLOOR ABOVE.
4. CONFIGURE LIGHT SWITCH AT ROOM 003 ENTRANCE AND LIGHT SWITCH AT FIRST FLOOR STAIR ST-A TO CONTROL BASEMENT LIGHTS IN ROOMS 000, 002, 003, 004, AND 005.

1 BASEMENT PLAN - LIGHTING
SCALE: 1/4" = 1'-0"

STATE OF KENTUCKY APPROVAL

KEY PLAN

PROJECT NORTH

SEAL

STATE OF KENTUCKY
MICHAEL SHUTLEY CASEY
LICENSED PROFESSIONAL ENGINEER

May 14, 2020

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1	Addendum 02	4/8/21

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Lexington - Louisville
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SHEET TITLE: BASEMENT FLOOR PLAN - LIGHTING

SCALE (U.N.O.): 1/4" = 1'-0"

JOB NAME: University of Kentucky
Cooper House Renovation - Project 2511.1

LOCATION: 1312 Nicholasville Road, Lexington, KY 40546

ISSUE DATE: May 14, 2020

JOB. NO. 10663-01

DWG. NO. E100

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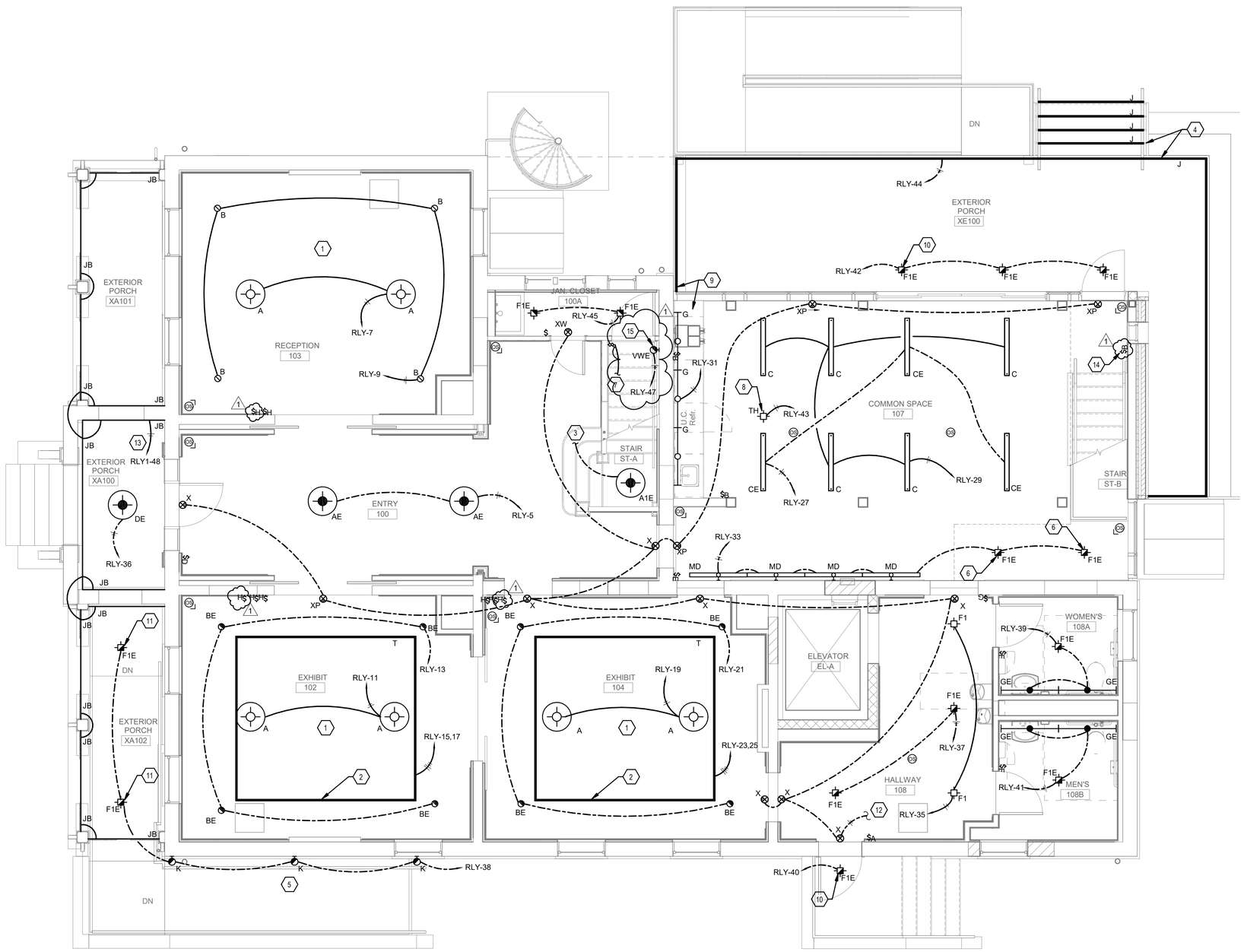

GENERAL NOTES

1. REFER TO SHEET E003 FOR ADDITIONAL REQUIREMENTS.
2. UNLESS NOTED OTHERWISE, ALL LIGHTING LOW VOLTAGE CONTROLS REQUIRED TO FACILITATE OPERATION OF THE DEVICES SHOWN SHALL BE LOCATED IN THE 2ND FLOOR MECHANICAL ROOM NEAR THE LIGHTING RELAY PANELS RLY1 AND RLY2. THIS INCLUDES, BUT NOT LIMITED TO, POWER PACKS, AUXILIARY RELAYS, EMERGENCY RELAYS, LOW VOLTAGE TRANSFORMERS, REMOTE DRIVERS, ETC.

SHEET NOTES

1. FIELD COORDINATE EXACT LOCATIONS OF TYPE 'B' AND/OR 'BE' FIXTURES IN THIS ROOM WITH EXISTING FLOOR JOIST TO MAINTAIN SYMMETRY. COORDINATE FINAL LOCATIONS WITH ARCHITECT PRIOR TO ROUGH-IN.
2. PROVIDE TWO CIRCUIT TRACK WITH CURRENT LIMITING BASE. PROVIDE A TOTAL OF SIXTEEN(16) TRACK HEADS TYPE 'TH' IN EACH EXHIBIT ROOM. LOCATE FOUR(4) TRACKHEADS ON EACH SECTION, TWO ON EACH CIRCUIT PER SECTION.
3. CIRCUIT EXTENDS UP TO STAIR LIGHTING ABOVE.
4. MOUNT LED CHANNEL IN NOTCH AT BOTTOM OF DECKING EDGE. REFER TO ARCHITECTURAL DETAIL. LED CHANNEL TO BE CONTROLLED WITH AREA SITE LIGHTING AND VIA EMERGENCY RELAY.
5. TYPE 'K' FIXTURE ARE TO OPERATE IN NORMAL POWER FAILURE ONLY.
6. MOUNT FIXTURE TO UNDERSIDE OF STAIR.
7. CONTROLS STAIR LIGHT WITH SWITCH AT BOTTOM OF STAIRS.
8. PROVIDE MONOSPOT MOUNT FOR TRACK HEAD. AIM AT STAINED GLASS FEATURE AT ADJACENT STAIR.
9. MOUNT CONTROL TRANSFORMER FOR TYPE 'J' FIXTURES BELOW COUNTER IN CASEWORK. COORDINATE EXACT LOCATION IN FIELD.
10. MOUNT FIXTURE TO UNDERSIDE OF CANOPY.
11. MOUNT FIXTURE TO UNDERSIDE OF BALCONY.
12. CIRCUIT WITH EXIT SIGNS ON FLOORS ABOVE.
13. LOCATE ASSOCIATED LOW VOLTAGE CONTROL EQUIPMENT ADJACENT TO RELAY PANEL RLY1.
14. COORDINATE EXACT LOCATION WITH ARCHITECT. CONNECT SWITCH TO STAIR LIGHTING ABOVE.
15. LIGHT FIXTURE VWE TO BE SWITCHED WITH GROUP OF BASEMENT LIGHTING FIXTURES, NOT SWITCHED INDEPENDENTLY.

STATE OF KENTUCKY APPROVAL

KEY PLAN

PROJECT NORTH

SEAL

STATE OF KENTUCKY
BRADLEY C. MOTLEY
LICENSED PROFESSIONAL ENGINEER

May 14, 2020

1 FIRST FLOOR PLAN - LIGHTING
SCALE: 1/4" = 1'-0"

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1	Addendum 02	4/8/21

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MECHANICAL AND ELECTRICAL ENGINEERS
Lexington - Louisville
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SHEET TITLE: FIRST FLOOR PLAN - LIGHTING

SCALE (U.N.O.): 1/4" = 1'-0"

JOB NAME: University of Kentucky
Cooper House Renovation - Project 2511.1

LOCATION: 1312 Nicholasville Road, Lexington, KY 40546

ISSUE DATE: May 14, 2020

JOB. NO. 10663-01

DWG. NO. E101

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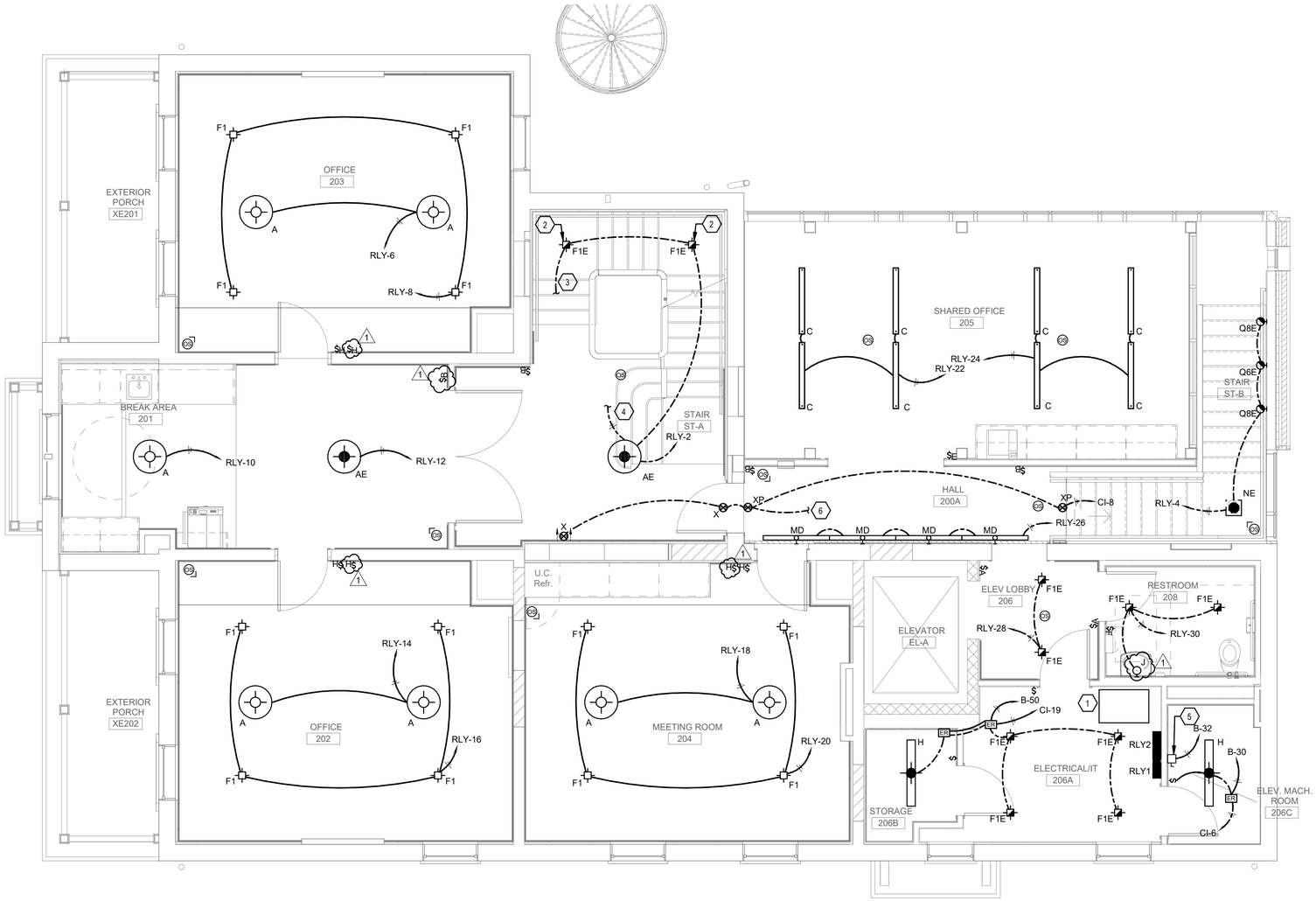

GENERAL NOTES

1. REFER TO SHEET E003 FOR ADDITIONAL REQUIREMENTS.
2. UNLESS NOTED OTHERWISE, ALL LIGHTING LOW VOLTAGE CONTROLS REQUIRED TO FACILITATE OPERATION OF THE DEVICES SHOWN SHALL BE LOCATED IN THE 2ND FLOOR MECHANICAL ROOM NEAR THE LIGHTING RELAY PANELS RLY1 AND RLY2. THIS INCLUDES, BUT NOT LIMITED TO, POWER PACKS, AUXILIARY RELAYS, EMERGENCY RELAYS, LOW VOLTAGE TRANSFORMERS, REMOTE DRIVERS, ETC.

SHEET NOTES

1. PROVIDE A 3 KW CENTRAL INVERTER TO SERVE ALL EGRESS LIGHTING (CONTROLLED POWER ELU-LL-X-3-2-S-1-0 OR EQUAL). PROVIDE INVERTER WITH TWENTY(20) INTEGRAL LOAD SIDE CIRCUIT BREAKERS, EACH CIRCUIT BREAKER TO BE 20A/1P. EXTEND BRANCH EMERGENCY CIRCUITS TO EMERGENCY RELAYS AS INDICATED ON DRAWINGS, RELAY PANEL SCHEDULES, AND CENTRAL INVERTER SCHEDULE. PROVIDE UNIT WITH INTELLISTAT TS FOR BACNET/IP COMMUNICATIONS AND CONNECT TO BAS.
2. MOUNT FIXTURES TO UNDERSIDE OF LANDING FROM FIRST TO SECOND FLOOR.
3. CIRCUIT EXTENDS DOWN TO STAIR LIGHTING BELOW.
4. CIRCUIT EXTENDS UP TO STAIR LIGHTING ABOVE.
5. PROVIDE FUSIBLE DISCONNECT TO FEED ELEVATOR CAB LIGHTS. COORDINATE REQUIREMENTS WITH ELEVATOR SHOP DRAWING.
6. EXTEND CIRCUIT TO EXIT SIGNS ON FLOORS ABOVE AND BELOW.

STATE OF KENTUCKY APPROVAL

1 SECOND FLOOR PLAN - LIGHTING
SCALE: 1/4" = 1'-0"

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SHEET TITLE: SECOND FLOOR PLAN - LIGHTING
SCALE (U.N.O.): 1/4" = 1'-0"

JOB NAME: University of Kentucky
Cooper House Renovation - Project 2511.1
LOCATION: 1312 Nicholasville Road, Lexington, KY 40546

KEY PLAN
PROJECT NORTH

SEAL
STATE OF KENTUCKY
BRIAN MATTLEY
LICENSED PROFESSIONAL ENGINEER
May 14, 2020

ISSUE DATE: May 14, 2020
JOB. NO. 10663-01
DWG. NO. E102

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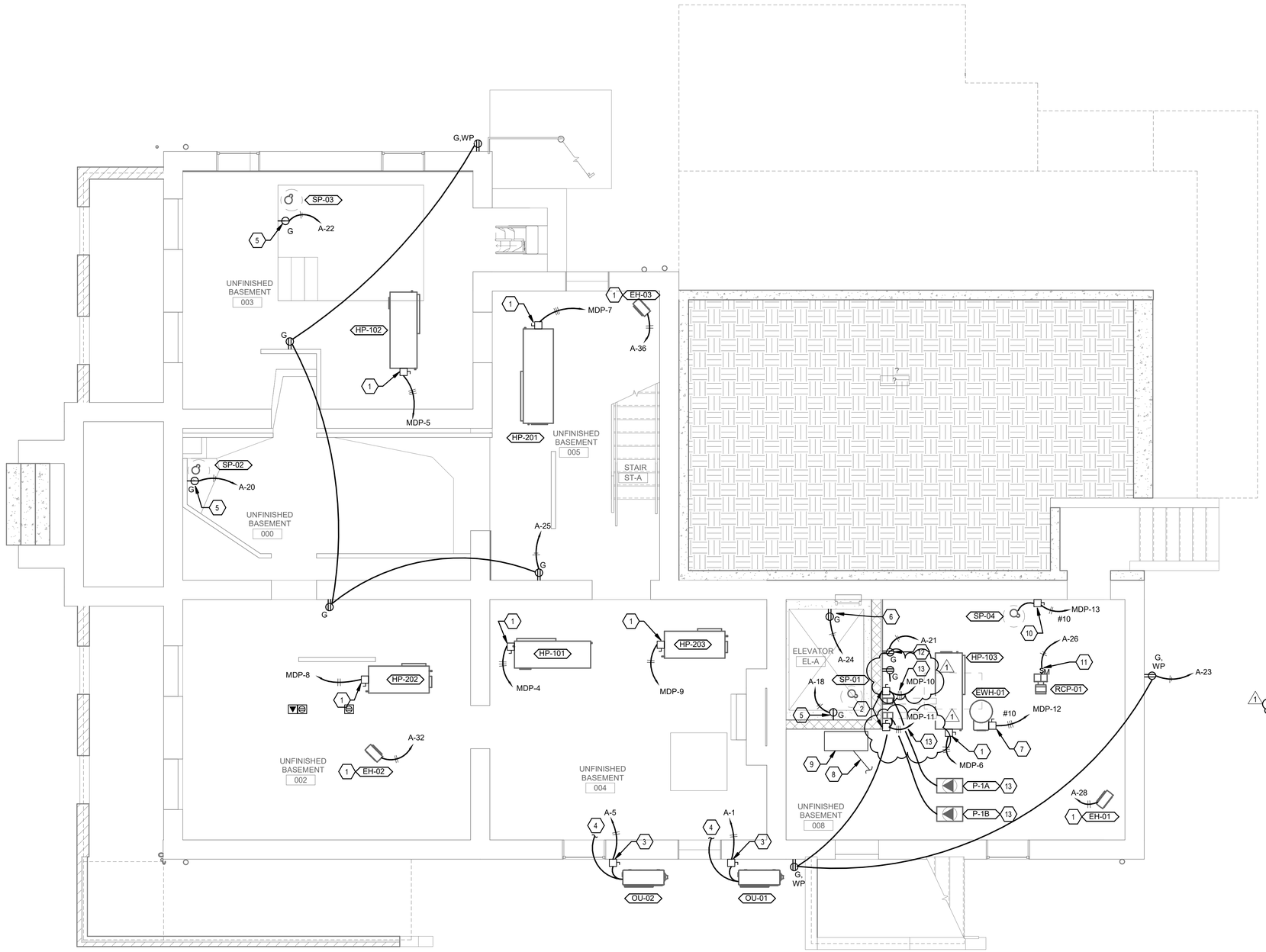

GENERAL NOTES

A. SEE GENERAL NOTES ON SHEET E003.

SHEET NOTES

1. PROVIDE CONNECTION TO HVAC EQUIPMENT WITH FACTORY INSTALLED DISCONNECT SWITCH.
2. PROVIDE 60A/3P, 208V NON-FUSED DISCONNECT SWITCH AND CONNECTION TO PUMP EQUIPMENT VFD. MAKE FINAL CONNECTIONS. MAINTAIN PROPPER WORKING SPACE; COORDINATE WITH MECHANICAL CONTRACTOR.
3. PROVIDE 30A/2P, 208V NON-FUSED DISCONNECT SWITCH IN A NEMA 3R ENCLOSURE CONNECTED TO HVAC EQUIPMENT.
4. EXTEND TO INDOOR UNITS ON SECOND FLOOR.
5. PROVIDE DEDICATED CIRCUIT WITH SINGLE RECEPTACLE AND CONNECTION TO SUMP PUMP. COORDINATE LOCATION WITH PUMP INSTALLER.
6. PROVIDE DEDICATED CIRCUIT FOR SERVICE RECEPTACLE IN ELEVATOR PIT. COORDINATE LOCATION WITH ELEVATOR INSTALLER.
7. PROVIDE 30A/3P, 208V NON-FUSED DISCONNECT AND SWITCH AND CONNECTION TO WATER HEATER.
8. SECONDARY CONDUCTORS TO BE BURIED WITHIN THE FLOOR ENCASED IN CONCRETE.
9. PROVIDE CMU CHASE AROUND SECONDARY CONDUCTORS. SECONDARY CONDUCTORS TO BE ENCLOSED FROM THE FLOOR TO THE STRUCTURE.
10. PROVIDE 30A/2P, 208V NON-FUSED DISCONNECT SWITCH CONNECTED TO THE SUMP PUMP.
11. PROVIDE DISCONNECT AND CONNECTION TO RCP-01.
12. PROVIDE POWER TO THE HVAC CONTROL PANEL. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR.
13. PUMP CONDUCTORS: 3#8, 1#10G, 3/4"C

1	BASEMENT PLAN - POWER SCALE: 1/4" = 1'-0"

STATE OF KENTUCKY APPROVAL

KEY PLAN

PROJECT NORTH

SEAL

STATE OF KENTUCKY
BRADLEY C. MAYES
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LICENSED PROFESSIONAL ENGINEER
May 14, 2020

ISSUE DATE: May 14, 2020
JOB. NO.: 10663-01
DWG. NO.: E200

FOR CONSTRUCTION

JOB NAME: University of Kentucky
Cooper House Renovation - Project 2511.1
LOCATION: 1312 Nicholasville Road, Lexington, KY 40546

SHEET TITLE: BASEMENT FLOOR PLAN - POWER
SCALE (U.N.O.): 1/4" = 1'-0"

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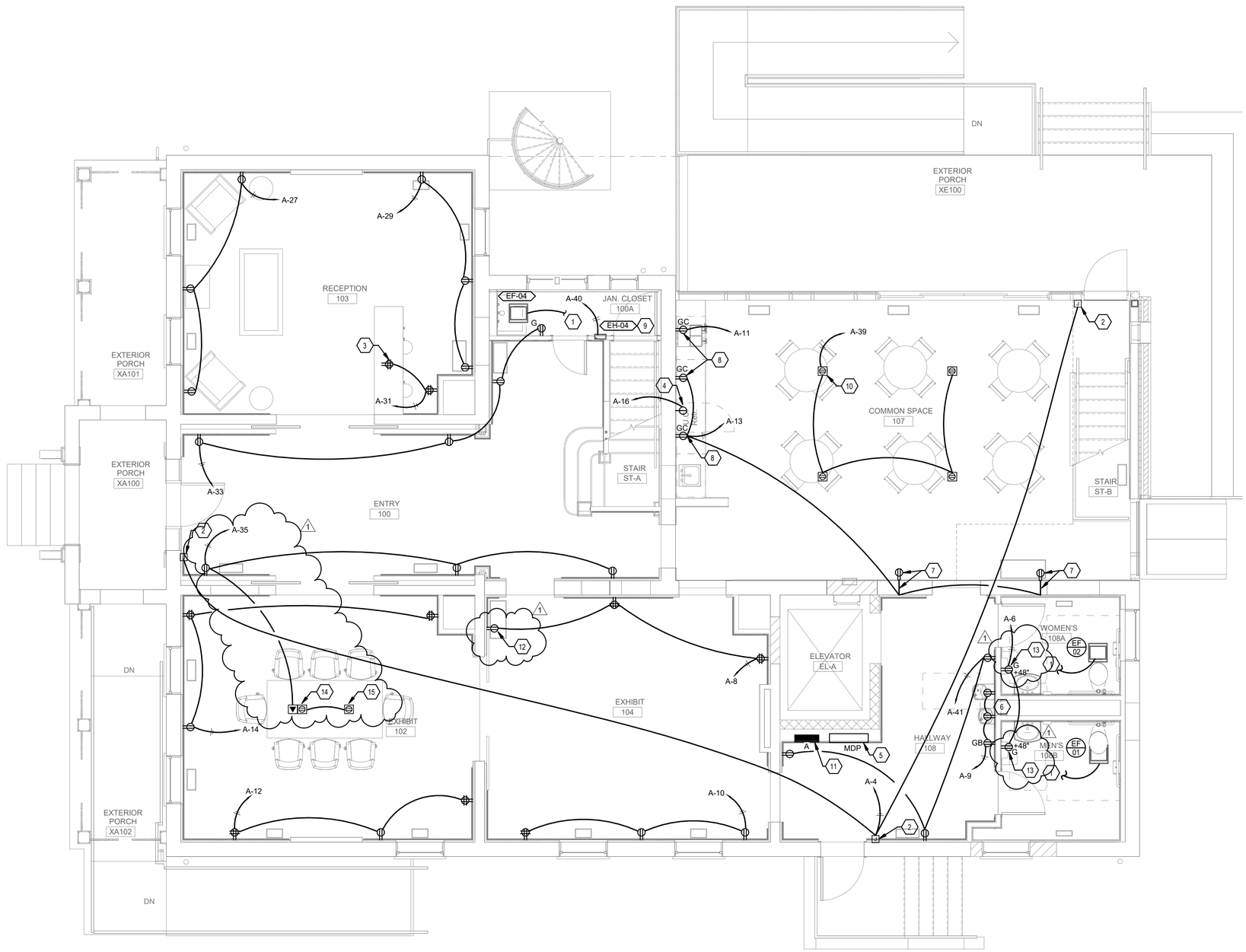

GENERAL NOTES

A. SEE GENERAL NOTES ON SHEET E003.

SHEET NOTES

1. CIRCUIT EXHAUST FAN TO SWITCHED LIGHTING CIRCUIT IN ROOM.
2. PROVIDE POWER AND RACEWAY TO DOOR ACCESS CONTROL POWER SUPPLY. COORDINATE ALL RACEWAYS REQUIRED FOR DOOR SYSTEM. COORDINATE WITH DOOR HARDWARE CONTRACTOR AND DOOR HARDWARE SHOP DRAWINGS. EXTEND CONDUIT TO BASEMENT FOR ACCESSIBILITY. LOCATE POWER SUPPLY IN BASEMENT. EXPOSED CONDUIT OR JUNCTION BOXES WILL NOT BE PERMITTED WITHOUT PRIOR WRITTEN PERMISSION.
3. MOUNT RECEPTACLE IN CASEWORK. COORDINATE WITH ARCHITECT AND CASE WORK SHOP DRAWINGS.
4. PROVIDE RECEPTACLE UNDER CABINET FOR REFRIGERATOR.
5. MAIN PANELBOARD TO BE FLUSH MOUNTED. PROVIDE BOTTOM FEED INTO MAIN PANELBOARD. PROVIDE CT'S WITHIN PANELBOARD ENCLOSURE. CT AND VOLTAGE SIGNAL CABLES TO EXTEND TO METER ON SECOND FLOOR. PROVIDE DOOR ON PANELBOARD. PAINT PANEL; COORDINATE COLOR WITH ARCHITECT.
6. COORDINATE HEIGHT OF WATER COOLER RECEPTACLES WITH PLUMBING CONTRACTOR AND WATER COOLER SHOP DRAWINGS.
7. PROVIDE FLUSH MOUNTED RECEPTACLE IN EXPOSED BRICK WALL. FEED FROM NON-EXPOSED BRICK SIDE OF THE WALL; ROUTE/TRENCH IN WALL AS NEEDED AND EXTEND CONDUIT TO BASEMENT BELOW.
8. PROVIDE RECEPTACLE RECESSED IN COUNTER BACKSPLASH, ROTATE ORIENTATION 90 DEGREES FROM TYPICAL. COORDINATE WITH COUNTER CONTRACTOR AND SHOP DRAWINGS. COORDINATE EXACT LOCATION WITH ARCHITECT.
9. PROVIDE CONNECTION TO HVAC EQUIPMENT WITH FACTORY INSTALLED DISCONNECT SWITCH.
10. PROVIDE DUPLEX POWER RECEPTACLE IN FLOORBOX / POKE THROUGH. HUBBELL SYSTEM ONE 4" ROUND RECESSED BOX WITH ADA COMPLIANT 0.15" FLANGE THICKNESS, OR EQUAL.
11. PAINT PANEL; COORDINATE COLOR WITH ARCHITECT.
12. COORDINATE LOCATION OF RECEPTACLE WITH ARCHITECT. LOCATION SHOWN CONFLICTS WITH SLIDING DOOR.
13. COORDINATE LOCATION OF RECEPTACLE WITH ARCHITECT. LOCATION SHOWN CONFLICTS WITH PAPER TOWEL DISPENSER.
14. PROVIDE DUPLEX POWER RECEPTACLE WITH (2) DATA IN FLOOR BOX/POKE THROUGH. HUBBEL SYSTEM ONE 4" ROUND RECESSED BOX FOR USE IN WOOD FLOORS WITH ADA COMPLIANT 0.15" FLANGE THICKNESS OR EQUAL. EXTEND POWER FROM CIRCUIT A-35. COORDINATE EXACT LOCATION WITH ARCHITECT.
15. PROVIDE DUPLEX POWER RECEPTACLE IN FLOOR BOX/POKE THROUGH. HUBBELL SYSTEM 4" ROUND RECESSED BOX FOR USE IN WOOD FLOORS WITH ADA COMPLIANT 0.15" FLANGE THICKNESS, OR EQUAL. COORDINATE EXACT LOCATION WITH ARCHITECT.

1 FIRST FLOOR PLAN - POWER
SCALE: 1/4" = 1'-0"

STATE OF KENTUCKY APPROVAL

KEY PLAN

PROJECT NORTH

SEAL

STATE OF KENTUCKY
HUTLEY C. TATE
15711
LICENSED
PROFESSIONAL ENGINEER

May 14, 2020

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1	Addendum 02	4/8/21

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SHEET TITLE: FIRST FLOOR PLAN - POWER

SCALE (U.N.O.): 1/4" = 1'-0"

JOB NAME: University of Kentucky
Cooper House Renovation - Project 2511.1

LOCATION: 1312 Nicholasville Road, Lexington, KY 40546

ISSUE DATE: May 14, 2020

JOB. NO.: 10663-01

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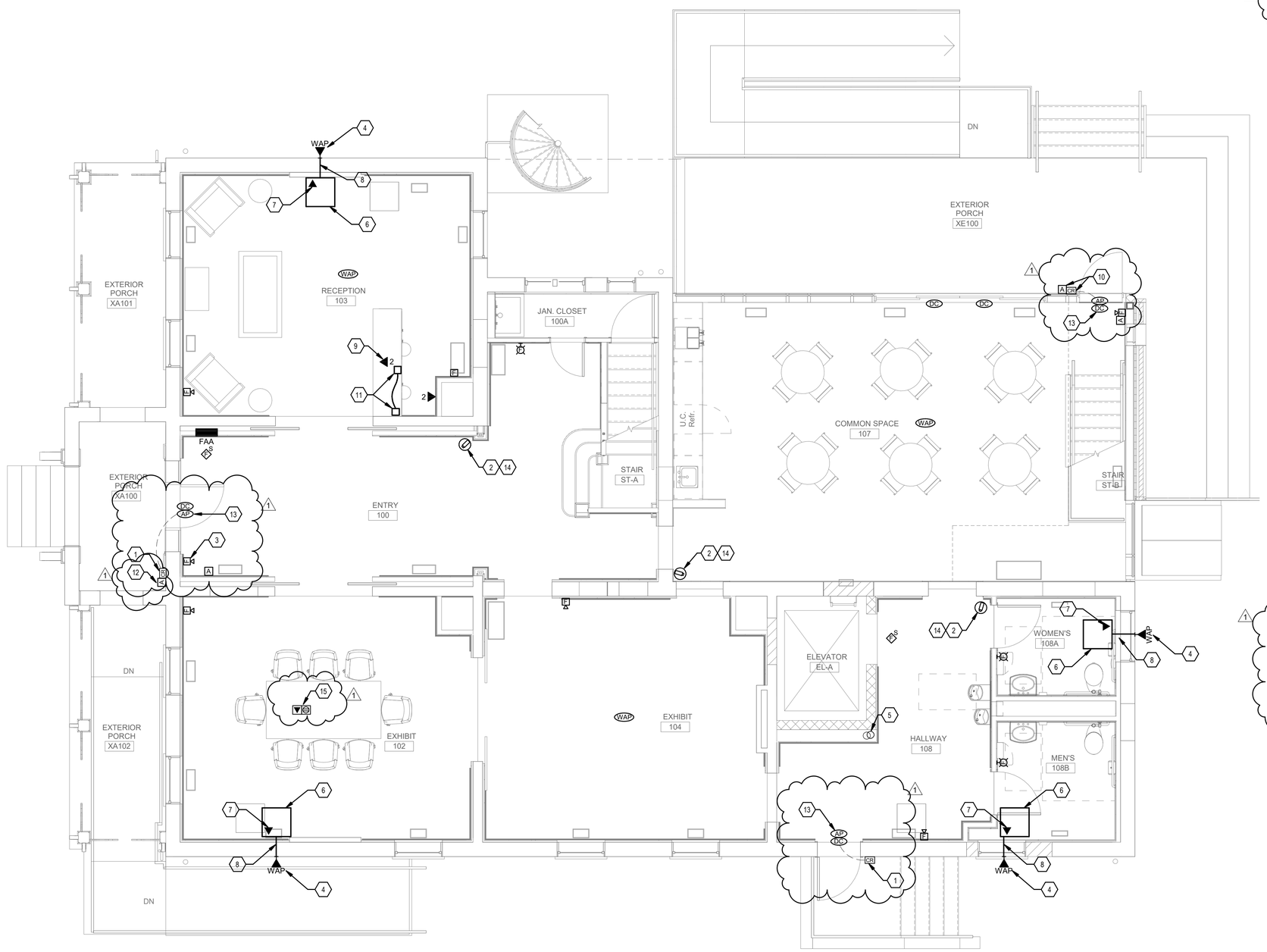

GENERAL NOTES

A. SEE GENERAL NOTES ON SHEET E005.

B. PROVIDE ADDITIONAL DEVICES IF NEEDED TO COVER FIRE ALARM NOTIFICATION REQUIREMENTS (HORNS/STROBES). NOTE APPLIES TO ENTIRE PROJECT.

SHEET NOTES

1. PROVIDE CARD READER PER SPECIFICATION SECTION 280000. COORDINATE WITH DOOR HARDWARE VENDOR AND DOOR HARDWARE SHOP DRAWINGS. COORDINATE ROUTING OF CABLING WITH ARCHITECT PRIOR TO ROUGH IN. COORDINATE ALL RACEWAYS REQUIRED FOR DOOR SYSTEM. EXTEND CONDUIT TO BASEMENT FOR ACCESSIBILITY. EXPOSED CONDUIT OR JUNCTION BOXES WILL NOT BE PERMITTED WITHOUT PRIOR WRITTEN PERMISSION.
2. PROVIDE SECURITY CAMERAS PER SPECIFICATION SECTION 280000.
3. PROVIDE INFORMACAST MASS NOTIFICATION SYSTEM (TYPICAL FOR ALL HORN AND STROBE DEVICES).
4. COORDINATE MOUNTING HEIGHT AND LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN. WAP EQUIPMENT AND ANTENNA TO BE INSTALLED BY THE OWNER. COORDINATE WORK WITH SHELBY AVERY <alaver1@email.uky.edu> OR NICK RHODES <nickrhodes@uky.edu>. CONTRACTOR TO PAINT THE WIRELESS ANTENNA THE SAME COLOR AS THE BUILDING EXTERIOR.
5. 3 INCH CONDUIT WITH FIBER AND COPPER FROM BASEMENT TO SECOND FLOOR MDF.
6. PROVIDE 24" BY 24" CEILING ACCESS PANEL FOR SYSTEMS PULL BOXES. COORDINATE STYLE AND EXACT LOCATION WITH ARCHITECT IN THE FIELD PRIOR TO ROUGH IN.
7. PROVIDE (1) DATA OUTLET ABOVE THE CEILING FOR USE BY THE WAP EQUIPMENT. SEE DETAIL ON SHEET E500 FOR ADDITIONAL INFORMATION.
8. PROVIDE 1-1/4" CONDUIT FROM ABOVE THE ACCESSIBLE CEILING TO THE EXTERIOR WALL FOR USE BY WAP ANTENNA. COORDINATE EXACT LOCATION WITH ARCHITECT IN THE FIELD PRIOR TO ROUGH IN.
9. MOUNT DATA IN CASEWORK. COORDINATE WITH ARCHITECT AND CASE WORK SHOP DRAWINGS.
10. PROVIDE MULLION MOUNTED CARD READER AND PRESS PLATE FOR AUTOMATIC OPENER PER SPECIFICATION SECTION 280000. COORDINATE WITH DOOR HARDWARE VENDOR. COORDINATE WITH ARCHITECT.
11. PROVIDE WALLPLATE CONNECTION, CONNECTION CABLE, AND PANIC DEVICE (HONEYWELL TYPE 270R, HARDWIRED HOLD-UP SWITCH OR FUNCTIONAL EQUAL) CONNECTED TO THE LENEL SECURITY/ACCESS CONTROL SYSTEM. COORDINATE EXACT HOLD-UP SWITCH LOCATION WITH STEPHEN CORNETT <stephen.cornett@uky.edu> AND ARCHITECT PRIOR TO ROUGH IN. PROVIDE COMPLETE OPERABLE AND INSTALLED SYSTEM.
12. PROVIDE PRESS PLATE FOR AUTOMATIC OPENER PER SPECIFICATIONS. COORDINATE WITH DOOR HARDWARE VENDOR AND DOOR HARDWARE SHOP DRAWINGS. COORDINATE ROUTING OF CABLING WITH ARCHITECT PRIOR TO ROUGH IN. COORDINATE ALL RACEWAYS REQUIRED FOR DOOR SYSTEM. EXTEND CONDUIT TO BASEMENT FOR ACCESSIBILITY.
13. PROVIDE ROUGH-IN AND WIRING FOR ELECTRIC DOOR HARDWARE. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITTIONAL INFORMATION.
14. CAMERA BASIS OF DESIGN IS XND-L6080V.
15. PROVIDE DUPLEX RECEPTACLE WITH (2) DATA IN FLOOR BOX/POKE THROUGH. HUBBELL SYSTEM ONE 4" ROUND RECESSED BOX FOR USE IN WOOD FLOORS WITH ADA COMPLIANT 0.15" FLANGE THICKNESS, OR EQUAL. EXTEND POWER FROM CIRCUIT A-35. COORDINATE EXACT LOCATION WITH ARCHITECT.

STATE OF KENTUCKY APPROVAL

KEY PLAN

PROJECT NORTH

SEAL

STATE OF KENTUCKY
JAMES HUNTLEY CASSEY
No. 18325
LICENSED PROFESSIONAL ENGINEER

May 14, 2020

1 FIRST FLOOR PLAN - SYSTEMS
SCALE: 1/4" = 1'-0"

LORD AECK SARGENT
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REVISION:

1	Addendum 02	4/8/21

SHROUT TATE WILSON
MECHANICAL AND ELECTRICAL ENGINEERS
Lexington - Louisville
www.stweng.com

SHEET TITLE: FIRST FLOOR PLAN - SYSTEMS

SCALE (U.N.O.): 1/4" = 1'-0"

JOB NAME: University of Kentucky
Cooper House Renovation - Project 2511.1

LOCATION: 1312 Nicholasville Road, Lexington, KY 40546

ISSUE DATE: May 14, 2020

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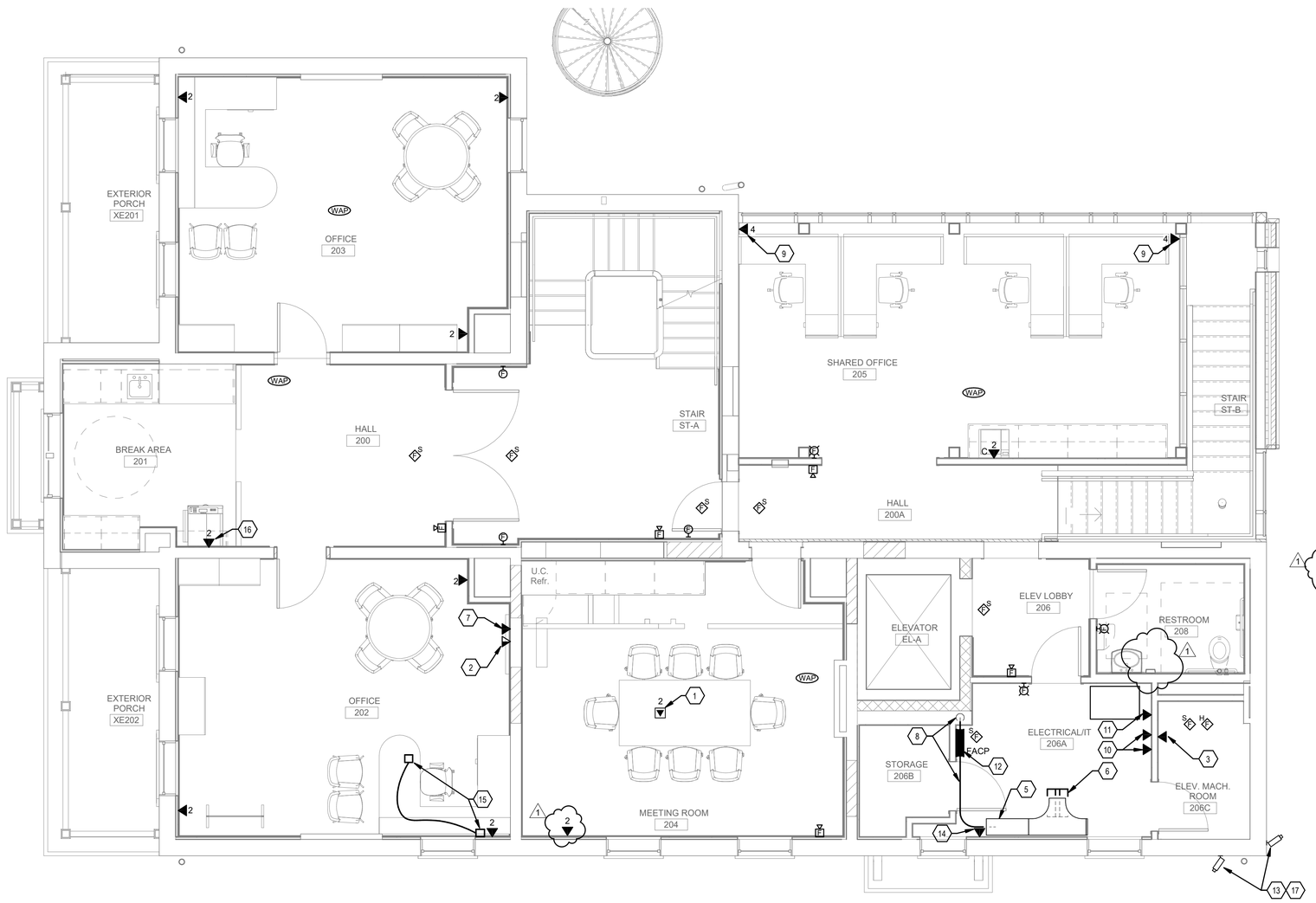

GENERAL NOTES

A. SEE GENERAL NOTES ON SHEET E003.

SHEET NOTES

1. PROVIDE FLOOR BOX / POKE THROUGH WITH DUPLEX POWER RECEPTACLE AND (2) DATA. HUBBELL SYSTEM ONE 4" ROUND RECESSED BOX FOR USE IN WOOD FLOORS WITH ADA COMPLIANT 0.15" FLANGE THICKNESS, OR EQUAL.
2. PROVIDE HDMI INPUT AT 16" AFF AND 60" AFF. PROVIDE SURFACE MOUNTED INPUT PLATES WITH SURFACE RACEWAY CONNECTION.
3. PROVIDE COPPER CONNECTION FROM PUNCH DOWN BLOCK TO ELEVATOR CONTROLLER. COORDINATE DETAILS WITH UK IT AND ELEVATOR CONTRACTOR.
4. FIRE ALARM CONTROL PANEL WITH VOICE NOTIFICATION AND INFORMACAST. SEE SPECIFICATIONS FOR REQUIREMENTS.
5. PROVIDE CABLE TRAY. SEE ADDITIONAL IT ROOM COMPONENTS ON SHEET E500 INCLUDING GROUNDING BUSBAR, GROUNDING CONDUCTOR, PLYWOOD AROUND THE PERIMETER WALLS, ETC.
6. TWO POST IT RACK; ORTRONICS OR-MM20706-B WITH OR-MM20VMD706-B VERTICAL WIRE MANAGERS ON EACH SIDE. SEE SHEET E500 AND SPECIFICATIONS FOR MORE INFORMATION.
7. PROVIDE (1) DATA OUTLET AT 16" AFF AND (1) DATA OUTLET AT 60" AFF. PROVIDE DATA IN SURFACE MOUNTED BOX. PROVIDE VERTICAL METAL SURFACE RACEWAY, FED FROM BELOW, IN DUAL CHANNEL RACEWAY STYLE INCLUDING SEPARATE POWER CHANNEL. SEE DRAWING E202 FOR POWER RECEPTACLE INFORMATION.
8. 3" CONDUIT WITH FIBER AND COPPER FROM BASEMENT.
9. PROVIDE DATA CONNECTIONS FOR SYSTEMS FURNITURE. COORDINATE DETAILS WITH FURNITURE SHOP DRAWINGS AND ARCHITECT PRIOR TO ROUGH IN.
10. PROVIDE DATA CONNECTION TO LIGHTING RELAY PANELS
11. PROVIDE DATA CONNECTION TO LIGHTING EMERGENCY INVERTER/BATTERY SYSTEM.
12. PROVIDE FIRE ALARM CONTROL PANEL WITH INFORMACAST SYSTEM PER SPECIFICATION. FIRE ALARM SYSTEM TO BE CONNECTED TO CAMPUS FIRE FIBER LOOP. PROVIDE COMPLETE SYSTEM.
13. PROVIDE DATA, BACKBOX, AND CAMERA. COORDINATE EXACT LOCATION NEAR TO EAVE WITH THE ARCHITECT PRIOR TO ROUGH IN.
14. PROVIDE DATA CONNECTION TO ACCESS CONTROL, SECURITY, AND CAMERA HEAD END DEVICES (MULTIPLE PANELS). PROVIDE ELECTRONIC SAFETY AND SECURITY SYSTEM PER SPECIFICATION 28 0000 S04. PROVIDE COMPLETE OPERATBLE SYSTEM.
15. PROVIDE WALLPLATE CONNECTION, CONNECTION CABLE, AND PANIC DEVICE (HONEYWELL TYPE 270R, HARDWIRED HOLD-UP SWITCH OR FUNCTIONAL EQUAL) CONNECTED TO THE LENEL SECURITY/ACCESS CONTROL SYSTEM. COORDINATE EXACT HOLD-UP SWITCH LOCATION WITH STEPHEN CORNETT <stephen.cornett@uky.edu> AND ARCHITECT PRIOR TO ROUGH IN. PROVIDE COMPLETE OPERABLE SYSTEM.
16. PROVIDE DATA IN SURFACE MOUNTED BOX. PROVIDE VERTICAL METAL SURFACE RACEWAY, FED FROM BELOW.
17. CAMERA BASIS OF DESIGN IS XNV-8080R.

STATE OF KENTUCKY APPROVAL

1 SECOND FLOOR PLAN - SYSTEMS
SCALE: 1/4" = 1'-0"

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1	Addendum 02	4/8/21

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SHEET TITLE: SECOND FLOOR PLAN - SYSTEMS
SCALE (U.N.O.): 1/4" = 1'-0"

JOB NAME: University of Kentucky
Cooper House Renovation - Project 2511.1
LOCATION: 1312 Nicholasville Road, Lexington, KY 40546

KEY PLAN
PROJECT NORTH

SEAL: STATE OF KENTUCKY, STEPHEN C. WILTSEY, 25711, LICENSED PROFESSIONAL ENGINEER
May 14, 2020

ISSUE DATE: May 14, 2020
JOB. NO. 10663-01
DWG. NO. E302

FOR CONSTRUCTION

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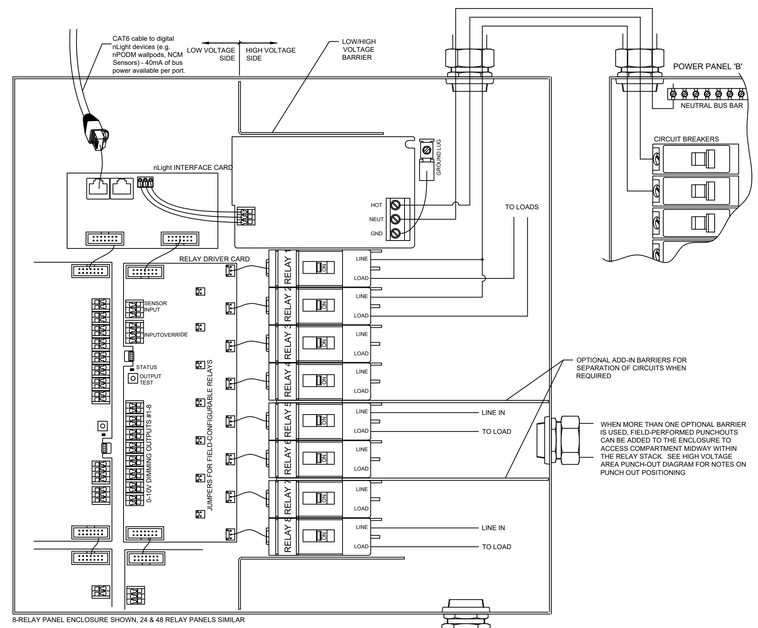
LIGHTING CONTROL DEVICES LEGEND - BASIS OF DESIGN: LITHONIA nLIGHT

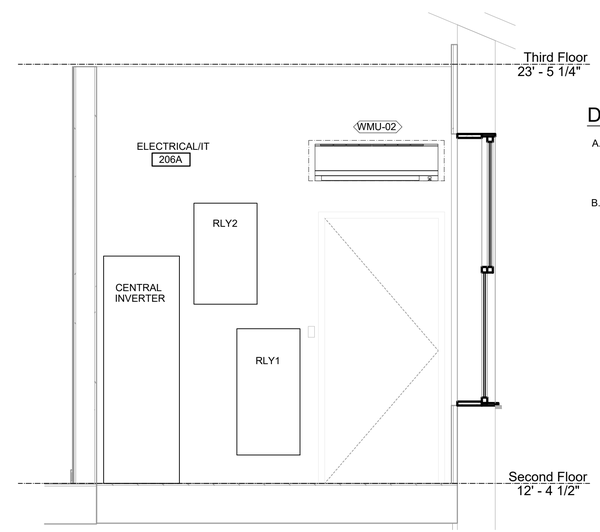
nPODM	nPODM DX	nPODM 2P DX	nWSX PDT LV	nPODB	nPODBA	nCM PDT 9 AR	nWV PDT 16	nAR40	nPCDM
$A	$B	$E	$F	$G	$H	OS	OS		
SINGLE ZONE ON/OFF SWITCH	SINGLE ZONE ON/OFF SWITCH WITH DIMMING	DUAL ZONE ON/OFF SWITCH WITH DIMMING	OCCUPANCY SENSOR SINGLE ZONE ON/OFF SWITCH	WIRELESS SINGLE ZONE ON/OFF SWITCH	WIRELESS SINGLE ZONE ON/OFF SWITCH WITH DIMMING	CEILING DUAL TECHNOLOGY OCCUPANCY SENSOR WITH AUXILIARY CONTACT	CORNER DUAL TECHNOLOGY OCCUPANCY SENSOR PROVIDE WVBR CEILING MOUNT BRACKET	AUXILARILY RELAY USE WITH ALL nWV PDT 16 OCCUPANCY SENSORS	PHASE CONTROL DIMMING MODULE



2 GENERAL NOTE: Provide IP connection, remote monitoring and remote control of relay panels from 'Delta Room'. Provide components and complete system for BMS integration per UK standards.

nLIGHT ENABLED RELAY PANELS RLY1 AND RLY2 WIRING SCHEMATIC

NOT TO SCALE



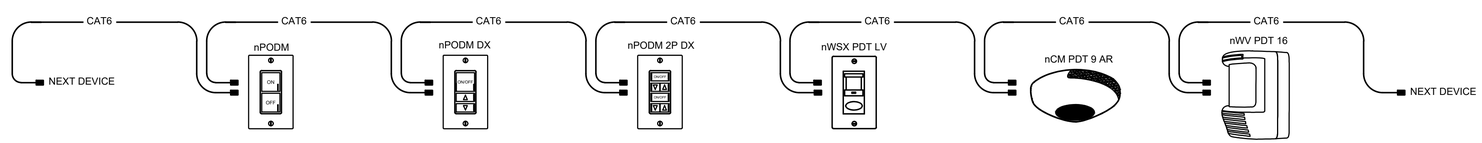
RELAY PANELS RLY1 AND RLY2 DETAIL / SECTION

NOT TO SCALE

DETAIL GENERAL NOTES

A. STAGGER / OFFSET RELAY PANELS RLY1 AND RLY2 WITHIN WALL SPACE AVAILABLE BETWEEN CENTRAL INVERTER AND ELEVATOR MACHINE ROOM DOOR TO ALLOW FOR CONDUITS TO EXIT PANELS. FIELD COORDINATE EXACT LOCATIONS.

B. ALL LIGHTING CONTROL SYSTEM LOW VOLTAGE CABLING FROM RELAY PANELS TO CEILING/JOIST AREA SHALL BE IN CONDUIT.



DEVICE TOPOLOGY - DAISY CHAIN PER MANUFACTURERS RECOMMENDATION - CONNECT TO RELAY PANELS

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STATE OF KENTUCKY APPROVAL

KEY PLAN

PROJECT NORTH

SEAL

STATE OF KENTUCKY
JAMES HUTLEY CAMPBELL
LICENSE NO. 25711
PROFESSIONAL ENGINEER
May 14, 2020

ISSUE DATE: May 14, 2020
JOB. NO.: 10663-01
DWG. NO.: E503

SHEET TITLE: LIGHTING DETAILS
SCALE (U.N.O.): NOT TO SCALE

JOB NAME: University of Kentucky
Cooper House
LOCATION: 1312 Nicholasville Road, Lexington, KY 40546

FOR CONSTRUCTION

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1	Addendum 2	4/8/2021

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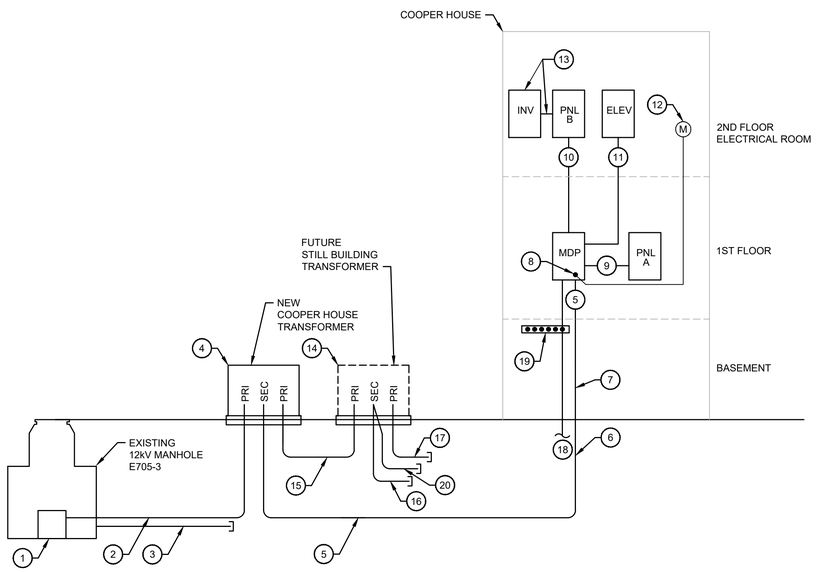

POWER RISER

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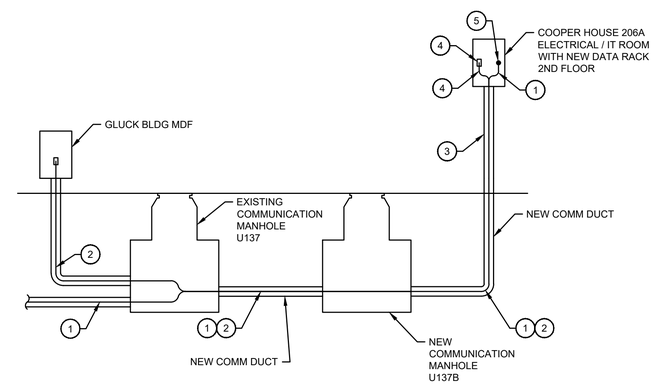
DETAIL NOTES

1. CONNECT NEW COOPER HOUSE PRIMARY CIRCUIT TO EXISTING SWITCH E705-3. PROVIDE DEAD BREAK, PREMOLDED, DEAD FRONT, SUBMERGIBLE 600 AMP ELBOWS AT THE SWITCH CONNECTION. SEE SPECIFICATION SECTION 26 10 00 FOR ADDITIONAL MATERIAL, INSTALLATION, AND TESTING DETAILS.
2. PROVIDE NEW DUCT BANK TO COOPER HOUSE; 3#2/0, 4"C AND 4" SPARE CONDUIT.
3. PROVIDE SPARE DUCT BANK TO FUTURE CLASSROOM/OFFICE BUILDING; (4) 5" CONDUITS, CAP DUCT BANK FOR FUTURE USE.
4. PROVIDE NEW CONCRETE PAD AND 225 KVA TRANSFORMER. CONNECT NEW 15 kV PRIMARY VIA 200 AMP ELBOWS. TRANSFORMER DETAILS:
   - 4.1. 12,470 V DELTA PRIMARY
   - 4.2. 208Y/120V SECONDARY
   - 4.3. PRIMARY SECTIONALIZING SWITCH TO BE T-BLADE, BREAK BEFORE MAKE STYLE
   - 4.4. PRIMARY LIGHTNING ARRESTORS
   - 4.5. PRIMARY FUSING = 15 AMPS
   - 4.6. SEE SPECIFICATION SECTION 26 10 00 FOR ADDITIONAL TRANSFORMER REQUIREMENTS.
5. PROVIDE NEW CONDUIT AND CONDUCTOR FROM TRANSFORMER TO NEW MAIN PANEL IN COOPER HOUSE; (3 SETS)(4#300, 2-1/2"C).
6. SECONDARY CONDUCTOR RACEWAY TO PENETRATE BUILDING BELOW GRADE, ENTER CRAWL SPACE, AND EXTEND TO MDP.
7. SECONDARY CONDUCTORS WITHIN BASEMENT TO BE CONCRETE ENCASED BELOW GRADE. PROVIDE CMU CHASE IN BASEMENT (FROM GRADE/FLOOR TO STRUCTURE).
8. PROVIDE CT'S AND VOLTAGE CONNECTION WITHIN MDP ENCLOSURE. EXTEND SIGNAL WIRES TO METER ON SECOND FLOOR.
9. 4#4/0, 1#4G, 2-1/2"C
10. 4#4/0, 1#4G, 2-1/2"C
11. COORDINATE CABLE SIZE WITH ELEVATOR SHOP DRAWINGS.
12. PROVIDE ELECTRICAL METER CONNECTED TO CAMPUS ENERGY MANAGEMENT SYSTEM PER SPECIFICATION 26 27 13.
13. EMERGENCY LIGHTING CENTRAL INVERTER; 3#6, 1#10G, 3/4"C.
14. PROVIDE NEW CONCRETE PAD FOR FUTURE 750 KVA TRANSFORMER.
15. PROVIDE (2) 4" CONDUITS BETWEEN TRANSFORMER PAD PRIMARY SECTIONS.
16. PROVIDE SECONDARY CONDUIT STUBBED OUT AND CAPPED FOR FUTURE STILL BUILDING; (6) 3" CONDUITS.
17. PROVIDE (2) 4" PRIMARY CONDUITS FOR FUTURE CONNECTION TO CLASSROOM BUILDING.
18. PROVIDE NEW GROUNDING ELECTRODES.
19. PROVIDE NEW MAIN GROUNDING ELECTRODE SYSTEM BUS BAR IN BASEMENT.
20. PROVIDE SECONDARY CONDUIT STUBBED OUT AND CAPPED FOR FUTURE MATURATION BUILDING; (4) 3" CONDUITS.

DETAIL NOTES

1. INSTALL 24 STRAND SINGLE MODE FIBER AND 24 STRAND OM1 MULTIMODE INDOOR/OUTDOOR FIBER CABLES FROM PLANT SCIENCE MDF ROOM 120 TO COOPER HOUSE 206A.
2. INSTALL 50 PAIR PE89 COPPER CABLE FROM GLUCK RM 1 TO THE COOPER HOUSE DATA ROOM. TERMINATE ON BUILDING PROTECTION BLOCKS.
3. PROVIDE A NEW 2 INCH CONDUIT FROM THE COOPER HOUSE CRAWL SPACE TO THE 2ND FLOOR DATA RACK LOCATION.
4. PROVIDE PUNCHDOWN BLOCK IN THE NEW ELECTRICAL / IT ROOM. CONNECT THE NEW 50 PAIR COPPER LINE.
5. TERMINATE THE FIBERS ON PIGRAIL SPLICE CASSETTES IN A NEW 4U FIBER ENCLOSURE.

NOTE: SEE E300 SERIES DRAWINGS FOR ADDITIONAL INFORMATION.



COMMUNICATION RISER

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STATE OF KENTUCKY APPROVAL

KEY PLAN

PROJECT NORTH

SEAL

COMMONWEALTH OF KENTUCKY
BRADLEY C. WHITLEY
LICENSE NO. 25711
PROFESSIONAL ENGINEER

May 14, 2020

LORD AECK SARGENT
A KATERRA COMPANY

REVISION:		
1	Addendum 2	4/8/2021

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SHEET TITLE: ELECTRICAL RISER AND SCHEDULES

SCALE (U.N.O.): NOT TO SCALE

JOB NAME: University of Kentucky Cooper House

LOCATION: 1312 Nicholasville Road, Lexington, KY 40546

ISSUE DATE: May 14, 2020

JOB. NO. 10663-01

DWG. NO. E600

FOR CONSTRUCTION

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LIGHT FIXTURE SCHEDULE

FIXTURE TYPE	DESCRIPTION	LAMPS TYPE	CRI	DIMMING	COLOR TEMP	LUMENS	WATTS	VOLTS	MOUNTING TYPE	MANUFACTURER - MODEL NUMBER	NOTES
A	DECORATIVE 10" DIAMETER OPAQUE ROUND GLASS PENDANT WITH OIL RUBBED BRONZE FINISHED FITTER, STEM MOUMTED.	LED	80+	PHASE	3500 K	1800	19	120	PENDANT	BARN LIGHT ELECTRIC S-RND-615-STxxx-E26 MVOLT LIGHTOLIER EQUAL SPI EQUAL	6,8
AE	SAME AS TYPE 'A' CIRCUITED TO EMERGENCY POWER.	LED	80+	PHASE	3500 K	1800	19	120	PENDANT	BARN LIGHT ELECTRIC S-RND-615-STxxx-E26 MVOLT LIGHTOLIER EQUAL SPI EQUAL	6,8
A1E	DECORATIVE 10" DIAMETER OPAQUE ROUND GLASS FIXTURE, WITH OIL RUBBED BRONZE FINISHED FITTER, SEMI-FLUSH MOUMTED.	LED	80+	PHASE	3500 K	1800	19	120	SURFACE	BARN LIGHT ELECTRIC S-RND-615-SFS-E26 MVOLT LIGHTOLIER EQUAL SPI EQUAL	6,8
B	RECESSED 2" LED ROUND DOWNLIGHT, 38° WIDE OPTIC, UL AND CUL LISTED FOR DAMP LOCATIONS.	LED	90+	0-10V, @ 1%	3500 K	1000	10.9	120	RECESSED	JUNO 2LEDDRIVER G2 10LM MVOLT ZT 2LEDTRIM G2 DC 35K 90CRI FL NK 2NCMF TARGETTI EQUAL PHILIPS EQUAL	
BE	SAME AS TYPE 'B' CIRCUITED TO EMERGENCY POWER.	LED	90+	0-10V, @ 1%	3500 K	1000	10.9	120	RECESSED	JUNO 2LEDDRIVER G2 10LM MVOLT ZT 2LEDTRIM G2 DC 35K 90CRI FL NK 2NCMF TARGETTI EQUAL PHILIPS EQUAL	
C	PENDANT MOUNTED LINEAR LED WITH SQUARE EXTRUDED ALUMINUM HOUSING, WHITE TRANSLUCENT ACRYLIC DIFFUSER, AIRCRAFT SUSPENSION CABLE, INTEGRAL POWER HOUSING, UL LISTED	LED	80+	0-10V, @ 1%	3500 K	815 / FT	12.7	120	PENDANT	VODE 207-BX 01 ZZ CC 48 IP AE 1 Z SO 35 G2 SONNEMAN EQUAL LITECONTROL EQUAL	1 9
CE	SAME AS TYPE 'C' CIRCUITED TO EMERGENCY POWER.	LED	80+	0-10V, @ 1%	3500 K	815 / FT	12.7	120	PENDANT	VODE 207-BX 01 ZZ CC 48 IP AE 1 Z SO 35 G2 SONNEMAN EQUAL LITECONTROL EQUAL	
DE	DECORATIVE 10" DIAMETER OPAQUE ROUND GLASS FIXTURE, WITH OIL RUBBED BRONZE FINISHED FITTER, SEMI-FLUSH MOUMTED.	LED	80+	PHASE	3500 K	1800	19	120	SURFACE	BARN LIGHT ELECTRIC S-RND-615-SFS-E26 MVOLT LIGHTOLIER EQUAL SPI EQUAL	6,8
F1	7" ROUND X .75" DEEP LED, UL LISTING FOR WET LOCATIONS. ON EMERGENCY POWER.	LED	80+	-	3500k	1000	13	120	SURFACE	JUNO JSF 7IN 10LM 30K 90CRI MVOLT ZT WH PRESCOLITE EQUAL PHILIPS EQUAL	
F1E	SAME AS TYPE 'F1' CIRCUITED TO EMERGENCY POWER.	LED	80+	-	3500k	1000	13	120	SURFACE	JUNO JSF 7IN 10LM 30K 90CRI MVOLT ZT WH PRESCOLITE EQUAL PHILIPS EQUAL	
F2E	7-1/2" ROUND X 6-1/8" TALL LED, UL LISTING FOR WET LOCATIONS. PROVIDE EMERGENCY POWER.	LED	80+	-	3500k	1980	13	120	SURFACE	BEGA 66978-K35-xx ERCO EQUAL WE-EF EQUAL	
G	STRIP LIGHT WITH STEEL HOUSING, WHITE ENAMEL FINISH, ACRYLIC LENS, CSA LISTED FOR DAMP LOCATIONS.	LED	80+	0-10V, @ 1%	3500 K	4000	32	120	RECESSED	LITHONIA CLX L48 4000LM FDL MVOLT 35K 80CRI WILLIAMS EQUAL LSI EQUAL	7
GE	SAME AS TYPE 'G' CIRCUITED TO EMERGENCY POWER	LED	80+	0-10V, @ 1%	3500 K	4000	32	120	RECESSED	LITHONIA CLX L48 4000LM FDL MVOLT 35K 80CRI WILLIAMS EQUAL LSI EQUAL	7
H	STRIP LIGHT WITH 20 GAUGE STEEL HOUSING, WHITE ENAMEL FINISH, ACRYLIC LENS, CSA LISTED FOR DAMP LOCATIONS.	LED	80+	0-10V, @ 1%	3500 K	5000	35.4	120	SUSPENDED	LITHONIA CLX L48 5000LM MDD MVOLT 30K 80CRI WILLIAMS EQUAL LSI EQUAL	
J	FLEXIBLE STRIP LIGHT, UV/IR PROTECTED TPU COVER, MOUNTING CHANNEL, IP65 RATED, UL 2108 LISTED.	LED	80+	-	3000k	155 / FT	3 / FT	24	SURFACE AT DECKING NOTCH, REFER TO ARCH DETAILS.	DIODE LED DI 24V HLP27/DI HL MTCH TARGETTI EQUAL KELVIX EQUAL	4
JB	RGBW LINEAR WITH 1.26" WIDE X 1.34" TALL EXTRUDED ALUMINUM HOUSING, FLAT SEALED POLYCARBONATE LENS, IP66 RATED, UL LISTING FOR WET LOCATIONS. FIXTURE TO BE PROVIDED WITH DMAX CONTROLLER TO PROVIDE 12 PRESET SCENES . THE CONTROLLER WILL ACCEPT CONTACT CLOSURES PROVIDED BY THE HVAC CONTROL SYSTEM.	LED	80+	-	-	320 / FT	5.6 / FT	24	SURFACE AT PORCH UPPER PERIMETER, REFER TO ARCH DETAILS.	THE SMART LIGHTING CO HB3024 RGBW AC LUMENPULSE EQUAL WINONA EQUAL	4
1 K	STEP LIGHT	LED	80+	-	3500 K				WALL	LIGMAN LIGHTING USA ULE-40721 COOPER EQUAL HUBBELL EQUAL	
M	WALL MOUNTED DIRECT/INDIRECT EXTRUDED ALUMINUM FIXTURE, POLYCARBONATE LENS, CSA LISTED.	LED	80+	-	3500k	600 DN 425 UP PER FOOT	64 PER FOOT	120	WALL MOUNTED	MARK S1LWIDP 90CRI 30K 600LMF I90CRI I30K I400LMF MIN1 SCT 120 ZT DCF ZUMTOBEL EQUAL SELUX EQUAL	4
MD	WALL MOUNTED DIRECT DISTRIBUTION EXTRUDED ALUMINUM FIXTURE, POLYCARBONATE LENS, CSA LISTED.	LED	80+	0-10V, @ 1%	3500k	600 DN PER FOOT	32 PER FOOT	120	WALL MOUNTED	MARK S1LWDP 90CRI 30K 600LMF I90CRI I30K MIN1 SCT 120 ZT DCF ZUMTOBEL EQUAL SELUX EQUAL	4
NE	ILLUMINATED 4 INCH DIAMETER BY 4 FOOT CYLIINDER, MATTE ACRYLIC DIFFUSER, ON EMERGENCY POWER. 1	LED	80+	-	3500k	2600	29	120	CEILING	VISA CP2024 L30K 2600 BETA CALCO EQUAL SPI EQUAL	4
P	PEDESTRIAN POLE AND FIXTURE, TYPE IV DISTRIBUTION,	LED	80+	NONE	3500 K	13226	140	120	POLE TOP	HOLOPHANE PTE2 P50 40K AS GL3 BK N	
PWAP	PEDESTRIAN POLE AND FIXTURE, TYPE IV DISTRIBUTION,	LED	80+	NONE	3500 K	13226	140	120	POLE TOP	HOLOPHANE PTE2 P50 40K AS GL3 BK N	3
P POLE	CHARLESTON CH14F4 ALUMINUM FLUTED POLE	NA	NA	NA	NA	NA	NA	NA	NA	HOLOPHANE CHARLESTON CH A 14 F4J 16 BK	2
Q6E	RECESSED 6' VERTICAL EXTRUDED ALUMINUM FIXTURE, CLEAR FROSTED ACRYLIC LENS, UL LISTED. ON EMERGENCY POWER.	LED	80+	0-10V, @ 1%	3500 K	400 PER FOOT	3.3 PER FOOT	120	RECESSED	MARK SL1P NK GB 90CRI 35K 400LMF MIN1 MVOLT ZT NEOREY EQUAL LITECONTROL EQUAL	4
Q8E	RECESSED 8' VERTICAL EXTRUDED ALUMINUM FIXTURE, CLEAR FROSTED ACRYLIC LENS, UL LISTED. ON EMERGENCY POWER.	LED	80+	0-10V, @ 1%	3500 K	400 PER FOOT	3.3 PER FOOT	120	RECESSED	MARK SL1P NK GB 90CRI 35K 400LMF MIN1 MVOLT ZT NEOREY EQUAL LITECONTROL EQUAL	4
T	TWO CIRCUIT TWO NEUTRAL SURFACE MOUNTED EXTRUDED ALUMINUM TRACK. PROVIDE CURRENT LIMITER.	LED	80+	-	-	-	-	120	SURFACE	JUNO TEKx / TCLCB-14A LIGHTOLIER EQUAL LSI EQUAL	5
TH	ADJUSTABLE LED TRACK HEAD WITH CAST ALUMINUM DRIVER, ADJUSTABLE FITTER, ADJUSTABLE BEAM PATTERN FROM 17 TO 53 DEGREE DISTRIBUTION	LED	90+	PHASE	3500	1100	15	120	SURFACE	JUNO R620L-35k-90-PDIM-VBS-xx LIGHTOLIER EQUAL LSI EQUAL	
VE	VAPOR TIGHT UTILITY FIXTURE ON EMERGENCY POWER.	LED	80+	NONE	4000K	600	15	120	SURFACE	LITHONIA OLVTCM GE EQUAL APPLETON EQUAL	
VWE	VAPOR TIGHT UTILITY FIXTURE WALL MOUNT WITH INTERGRALON EMERGENCY POWER. 1	LED	80+	NONE	4000K	600	15	120	WALL	LITHONIA OLVTWM GE EQUAL APPLETON EQUAL	1

LIGHTING RELAY PANEL RLY1

LIGHTING CONTROL SYSTEM

VOLTAGE			RELAYS	RELAY AMPS						MOUNTING		
120/208			48	20						SURFACE		
RELAY	CIRCUIT		LOAD SERVED	RELAY LOADS					LOAD SERVED	CIRCUIT		RELAY
NO.	PNL	P		KVA	EM		EM	KVA		P	PNL	NO.
1	B	1	BASEMENT LIGHTING	0.2	YES		YES	0.3	HISTORIC STAIR LTG	53	B	2 D
3	B	1	BASEMENT LIGHTING	0.1	YES		YES	0.2	EAST STAIR LTG	53	B	4 D
5 D	B	3	ENTRY LIGHTING	0.1	YES		NO	0.1	OFFICE 1 (2ND)	44	B	6 D
7 D	B	3	RECEPTION LIGHTING	0.1	NO		NO	0.1	OFFICE 1 (2ND)	44	B	8 D
9 D	B	3	RECEPTION LIGHTING	0.1	NO		NO	0.1	BREAKROOM (2ND)	44	B	10 D
11 D	B	3	EXHIBIT 1 LIGHTING	0.1	NO		NO	0.1	LOBBY (2ND)	44	B	12 D
13 D	B	3	EXHIBIT 1 LIGHTING	0.1	YES		NO	0.1	OFFICE 2 (2ND)	44	B	14 D
15 P	B	43	EXHIBIT 1 TRACK CKT 1	1.6	NO		NO	0.1	OFFICE 2 (2ND)	44	B	16 D
17 P	B	45	EXHIBIT 1 TRACK CKT 2	1.6	NO		NO	0.1	OFFICE 3 (2ND)	44	B	18 D
19 D	B	3	EXHIBIT 2 LIGHTING	0.1	NO		NO	0.1	OFFICE 3 (2ND)	44	B	20 D
21 D	B	3	EXHIBIT 2 LIGHTING	0.1	YES		NO	0.1	SHARED OFFICE (2ND)	46	B	22 D
23 P	B	47	EXHIBIT 2 TRACK CKT 1	1.6	NO		NO	0.1	SHARED OFFICE (2ND)	46	B	24 D
25 P	B	49	EXHIBIT 2 TRACK CKT 2	1.6	NO		YES	0.1	CORRIDOR (2ND)	46	B	26 D
27 D	B	5	COMMON SPACE	0.1	YES		YES	0.1	ELEVATOR LOBBY (2ND)	46	B	28
29 D	B	5	COMMON SPACE	0.1	NO		YES	0.1	RESTROOM (2ND)	46	B	30
31 D	B	5	COMMON SPACE CTR	0.1	NO		YES	0.4	SITE LIGHTING (EAST)	52	B	32
33 D	B	5	COMMON CORRIDOR	0.2	YES		YES	0.3	SITE LIGHTING (WEST)	54	B	34
35	B	5	HALLWAY	0.1	NO		YES	0.1	MAIN ENTRANCE	51	B	36
37	B	5	HALLWAY	0.1	YES		YES	0.1	RAMP EGRESS	51	B	38
39	B	5	RR WOMENS 1ST FL	0.1	YES		YES	0.1	SOUTH CANOPY LTS	51	B	40
41	B	5	RR MENS 1ST FL	0.1	YES		YES	0.1	NORTH CANOPY LTS	51	B	42
43	B	5	STAINED GLASS SPOT	0.1	NO		YES	0.1	DECK STEP LIGHTS	51	B	44
45	B	5	JANITOR CLOSET LTG	0.1	NO		YES	0.1	FIRE ESCAPE EGRESS	51	B	46
47	B	1	BASEMENT STAIR LTG	0.1	YES		NO	0.1	EXTERIOR BLUE ACCENT	51	B	48

NOTES:

LIGHTING RELAY PANEL "RLY1' SHALL BE LITHONIA ARP INTENC48 NLT 48FCR MVOLT HLK SM OR EQUIVALLANT

PROVIDE PHASE DIMMING MODULE ADJACENT TO RELAY PANEL FOR CONTROL OF TRACK LIGHTING

PROVIDE INTERFACE FOR LIGHTING CONTROL PANEL AND LINK TO UNIVERSITY OF KENTUCKY'S DELTA ROOM FOR REMOTE MANAGEMENT OF LIGHTING SYSTEM

ABBREVIATIONS:

EM (COLUMN) - PROVIDE UL924 RELAY ADJACENT TO PANEL FOR EMERGENCY CONTROL OF LIGHTING CIRCUIT

D (BY RELAY NUMBER) - EXTEND LOW VOLTAGE DIMMING CONDUCTORS TO ALL LIGHTING FIXTURES CONTROLED BY THIS RELAY

P (BY RELAY NUMBER) - EXTEND LOW VOLTAGE DIMMING CONDUCTORS PHASE DIMMING MODULE CONTROLED BY THIS RELAY

LIGHTING RELAY PANEL RLY2

LIGHTING CONTROL SYSTEM

VOLTAGE			RELAYS	RELAY AMPS						MOUNTING		
120/208			24	20						SURFACE		
RELAY	CIRCUIT		LOAD SERVED	RELAY LOADS					LOAD SERVED	CIRCUIT		RELAY
NO.	PNL	P		KVA	EM		EM	KVA		P	PNL	NO.
1 D	B	48	OFFICE 1 (3RD)	0.1	NO		NO	0.6	OFFICE 2 (2ND) PLUG LOAD)	16	B	2
3 D	B	48	OFFICE 2 (3RD)	0.1	NO		NO	0.6	SHARED OFC (2ND) PLUG LOAD	11	B	4
5	B	48	CORRIDOR LTG (3RD)	0.1	YES		NO	0.6	OFFICE 1(3RD) PLUG LOAD	23	B	6
7 D	B	48	OFFICE 3 (3RD)	0.1	NO		NO	0.6	OFFICE 1(3RD) PLUG LOAD	25	B	8
9	B	2	OFFICE 1 (2ND) PLUG LOAD	0.6	NO		NO	0.4	OFFICE 2 (3RD) PLUG LOAD	27	B	10
11	B	4	OFFICE 1 (2ND) PLUG LOAD)	0.4	NO		NO	0.4	OFFICE 3 (3RD) PLUG LOAD	24	B	12
13	B	6	OFFICE 1 (2ND) PLUG LOAD	0.6	NO		NO	0.4	OFFICE 3 (3RD) PLUG LOAD	26	B	14
15	B	14	OFFICE 2 (2ND) PLUG LOAD)	0.4	NO		NO	0.1	OFFICE CLOSET (3RD)	48	B	16
17	B	48	OFFICE 1 (3RD)	0.1	YES				SPARE			18
19			SPARE						SPARE			20
21			SPARE						SPARE			22
23			SPARE						SPARE			24
25			- - - SPACE - - -						- - - SPACE - - -			26
27			- - - SPACE - - -						- - - SPACE - - -			28
29			- - - SPACE - - -						- - - SPACE - - -			30
31			- - - SPACE - - -						- - - SPACE - - -			32

NOTES:

LIGHTING RELAY PANEL 'RLY2' SHALL BE LITHONIA ARP INTENC24 NLT 24FCR MVOLT HLK SM OR EQUIVALLANT

FOR ALL PLUG LOADS SERVED, EXTEND SWITCHED RECEPTACLE CIRCUIT LEG THROUGH RELAY FOR CONTROL

PROVIDE INTERFACE FOR LIGHTING CONTROL PANEL AND LINK TO UNIVERSITY OF KENTUCKY'S DELTA ROOM FOR REMOTE MANAGEMENT OF LIGHTING SYSTEM

ABBREVIATIONS:

EM (COLUMN) - PROVIDE UL924 RELAY ADJACENT TO PANEL FOR EMERGENCY CONTROL OF LIGHTING CIRCUIT

D (BY RELAY NUMBER) - EXTEND LOW VOLTAGE DIMMING CONDUCTORS TO ALL LIGHTING FIXTURES CONTROLED BY THIS RELAY

STATE OF KENTUCKY APPROVAL

KEY PLAN

PROJECT NORTH

SEAL

STATE OF KENTUCKY
JAMES HUTLEY CAREY
No. 22507
LICENSED PROFESSIONAL ENGINEER
May 14, 2020

LORD AECK SARGENT
A KATERRA COMPANY
LordAeckSargent.com

REVISION:		
1	Addendum 2	4/8/2021

SHROUT TATE WILSON
MECHANICAL AND ELECTRICAL ENGINEERS
Lexington - Louisville
www.ctweng.com

SHEET TITLE: LIGHTING SCHEDULE

SCALE (U.N.O.): NOT TO SCALE

JOB NAME: University of Kentucky
Cooper House
LOCATION: 1312 Nicholasville Road, Lexington, KY 40546

ISSUE DATE: May 14, 2020

JOB. NO. 10663-01

DWG. NO. E601

FOR CONSTRUCTION

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PANEL MDP

DISTRIBUTION PANELBOARD

VOLTAGE	PHASE/WIRE	MAIN AMPS	MAIN TYPE	A.I. RATING
120/208	3P / 4W	800	MCB	35,000

CKT NO.	AMP FRAME	AMP TRIP	NO. POLES	LOAD SERVED	KVA	NOTES
1		225	3	PANEL A	49.1	
2		225	3	PANEL C	53.0	
3		110 S	4	ELEVATOR	37.6	2, 3
4		15	3	HP-101	3.4	
5		20	3	HP-102	4.9	
6		20	3	HP-103	4.9	
7		15	3	HP-201	3.4	
8		15	2	HP-202	2.7	
9		15	2	HP-203	2.7	
10		35	3	PUMP P-1A	6.3	
11		35	3	PUMP P-1B	6.3	
12		25	3	EWH-1	6.0	
13		25	2	SUMP PUMP SP-4	3.7	
14				SURGE PROTECTION DEVICE		INTEGRAL TYPE
15		225	3	SPACE		
16		100	3	SPACE		
17						
18						
19						
20						
				TOTAL:	184.0	KVA

NOTES:
1. PANEL TO BE FLUSH MOUNTED WITHIN STUD WALL, WITH FACTORY PROVIDED DOOR.
2. ELEVATOR CIRCUIT BREAKER: PROVIDE WITH SHUNT TRIP OPERATOR AND INTERLOCK WITH FIRE ALARM SYSTEM TO TRIP UPON ALARM ACTIVATION. COORDINATE COIL VOLTAGE WITH ELEVATOR EQUIPMENT SHOP DRAWINGS.
3. COORDINATE SIZE WITH ELEV SHOP DRAWINGS.

ABBREVIATIONS:
G - GFCI BREAKER
A - AFCI
L - LOCKOUT BREAKER
S - SHUNT TRIP BREAKER
C - COMBINATION GFCI/AFCI BREAKER
E - ELECTRONIC ADJUSTABLE TRIP BREAKER
MCB - MAIN CIRCUIT BREAKER
MLO - MAIN LUG ONLY

LIGHT FIXTURE SCHEDULE

FIXTURE TYPE	DESCRIPTION	LAMPS TYPE	CRI	DIMMING	COLOR TEMP	LUMENS	WATTS	VOLTS	MOUNTING TYPE	MANUFACTURER - MODEL NUMBER	NOTES
X	EDGE-LIT SINGLE FACE LED EXIT SIGN WITH INJECTION-MOLDED PANEL, SURFACE MOUNTED CAST ALUMINUM HOUSING, PLUG-IN POWER CONNECTORS, GREEN LETTERING. ON EMERGENCY POWER.	LED	-	-	-	-	2	120	SURFACE	ISOLITE ELT AC G 1C BA SC DUALITE EQUAL EMERGILITE EQUAL	
XP	SAME AS TYPE 'X' EXCEPT WITH PENDANT MOUNT	LED	-	-	-	-	2	120	PENDANT	ISOLITE ELT AC G 1C BA MPx SC DUALITE EQUAL EMERGILITE EQUAL	
XW	HIGH-ABUSE EXIT SIGN WITH CAST ALUMINUM HOUSING, POLYCARBONATE COVER, WHITE FINISH, LONG-LIFE LED LAMPS, DAMP LOCATION LISTING.	LED	-	-	-	-	2	120	SURFACE	LITHONIA LVSW1R 277 DL NEWSTAR EQUAL KENALL EQUAL	

NOTES:
1 WHERE INDICATED, PROVIDE EMERGENCY POWER CIRCUIT.
2 PROVIDE CONCRETE POLE BASE PER DRAWING DETAIL.
3 PROVIDE INTEGRAL WIFI ANTENNA IN FIXTURE GLOBE AND RELATED WIRING. SEE IT SPECIFICATION FOR FURTHER DETAILS.
4 COORDINATE MOUNTING WITH ARCHITECTURAL DETAILS.
5 PROVIDE ALL REQUIRED HARDWARE TO FORM PATTERNS SHOWN ON DRAWINGS.
6 PROVIDE DIMMABLE LED LAMP
7 MOUNT IN FRAMED SOFFIT/SLOT, PROVIDE FROSTED LENS AT CEILING LEVEL TO FIT SOFFIT OPENING. COORDINATE EXACT LENS REQUIREMENTS WITH ARCHITECTURAL DRAWINGS.
8 PROVIDE MANUFACTURER LABEL RESTRICTING LAMP WATTAGE TO 19 WATTS.
9 PROVIDE WITH CABLE MANAGEMENT.

1

PANEL A (FIRST FLOOR)

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	A. I. RATING	MOUNTING
120/208	4 WIRE	54	225	MLO	22,000	FLUSH

POLE NO.	BREAKER TRIP	BREAKER P	LOAD SERVED	PHASE LOADS KVA	A	B	C	KVA	LOAD SERVED	BREAKER TRIP	BREAKER P	POLE NO.
1	15	2	OU-01	1.3	1.8			0.5	SPARE	20	1	2
3		2	" "	1.3		2.3		1.0	ACCESS CONTROL	20	1	4
5	15	2	OU-02	1.3			1.6	0.4	REC RESTROOMS	20	1	6
7		2	" "	1.3	2.2			0.9	REC EXHIBIT 104	20	1	8
9	20	1	EWC1A WATER FNTN	0.7		1.4		0.7	REC EXHIBIT 104	20	1	10
11	20	1	COMMON COFFEE MAKER	1.5			10.5	9.0	REC EXHIBIT 102	20	1	12
13	20	1	COMMON REFRIGERATOR	0.7	1.6			0.9	REC EXHIBIT 102	20	1	14
15	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	16
17	20	1	SPARE	0.5			1.7	1.2	SUMP PUMP SP-01 ELEV	20	1	18
19	20	1	LIGHTING ELEV PIT	0.3	1.5			1.2	SUMP PUMP SP-02	20	1	20
21	20	1	BASMNT HVAC CNRTL PNL	0.5		1.7		1.2	SUMP PUMP SP-03	20	1	22
23	20	1	REC EXTERIOR	1.5			1.7	0.2	REC ELEV PIT	20	1	24
25	20	1	REC BASEMENT	0.5	0.7			0.2	RCP-01	15	1	26
27	20	1	REC RECEPTION	0.7		2.0		1.3	EH-01	15	2	28
29	20	1	REC RECEPTION	0.5			1.8	1.3	" "		2	30
31	20	1	REC RECEPTION	0.7	2.0			1.3	EH-02	15	2	32
33	20	1	REC ENTRY	0.7		2.0		1.3	" "		2	34
35	20	1	REC ENTRY	0.5			1.8	1.3	EH-03	15	2	36
37	20	1	REC COMMON	0.7	2.0			1.3	" "		2	38
39	20	1	REC COMMON FLOOR	0.7		1.1		0.4	EH-04	15	2	40
41	20	1	REC ELEVATOR LOBBY	0.5			0.9	0.4	" "		2	42
43	20	1	DATA MANHOLE SUMP	0.5	1.0			0.5	SPARE	20	1	44
45	20	1	DATA MANHOLE LTG	0.5		1.0		0.5	SPARE	20	1	46
47	20	1	FIRE VAULT SUMP	0.5			1.0	0.5	SPARE	20	1	48
49	20	1	SPARE	0.5	1.0			0.5	SPARE	20G	1	50
51	20	1	SPARE	0.5		1.0		0.5	SPARE	20G	1	52
53	20	1	SPARE	0.5			1.0	0.5	SPARE	20G	1	54
			PHASE TOTALS:		13.7	13.4	22.0		TOTAL: 49.1	KVA		

NOTES:

ABBREVIATIONS:
G - GFCI BREAKER, A - AFCI BREAKER, L - LOCKOUT BREAKER,
C - COMBINATION GFCI/AFCI BREAKER, MLO - MAIN LUG ONLY

PANEL B (SECOND FLOOR)

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	A. I. RATING	MOUNTING
120/208	4 WIRE	72	225	MLO	22,000	SURFACE

POLE NO.	BREAKER TRIP	BREAKER P	LOAD SERVED	PHASE LOADS KVA	A	B	C	KVA	LOAD SERVED	BREAKER TRIP	BREAKER P	POLE NO.
1	20G	1	LIGHTING BASEMENT	0.2	0.9			0.7	REC OFFICE 203	20	1	2
3	20	1	FIRST FLOOR LIGHTING	0.3		0.5		0.2	REC OFFICE 203	20	1	4
5	20	1	FIRST FLOOR LIGHTING	0.4			1.1	0.7	REF OFFICE 203	20	1	6
7	20	1	REC SH OFFICE 2ND	0.7	1.4			0.7	REC BREAK AREA 201	20	1	8
9	20	1	REC SH OFFICE 2ND	0.7		1.4		0.7	REC CORRIDOR 2ND	20	1	10
11	20	1	REC SH OFFICE 2ND	0.9			2.4	1.5	COPIER BREAK 201	20	1	12
13	20	1	REC SH OFFICE 2ND	0.9			2.4	1.5	COPIER BREAK 201	20	1	14
15	20	1	REC RR 2ND	0.4	0.9			0.5	REC OFFICE 202	20	1	16
17	20	1	ACCESS CNTRL EQUIP	1.0		1.9		0.9	REF OFFICE 202	20	1	18
19	20	1	REC ELEC / IT RM	0.5			1.1	0.5	REC MEETING ROOM	20	1	20
21	20	1	SPARE	0.5	1.4			0.9	REC MEETING ROOM	20	1	22
23	20	1	REC ELEV MACH RM	0.2		0.5		0.4	REC MEETING RM FLOOR	20	1	24
25	20	1	REC OFFICE 303 W	0.5			1.1	0.5	REC OFFICE 302 W	20	1	26
27	20	1	REC OFFICE 303 E	0.7	1.3			0.5	REC OFFICE 302 E	20	1	28
29	30	1	REC MDF 30A	2.5		1.3		0.5	REC HALL 3RD	20	1	30
31	20	1	REC MDF	0.4	0.9		3.0	0.5	LIGHTING ELEV MACH RM	20	1	32
33	20	1	SPARE	0.5		1.0		0.5	LIGHTING ELEV CAB	20	1	34
35	20	1	REFRG MEETING RM	1.0			1.9	0.9	FACP	20	1	36
37	30	3	HP-204	1.6	2.5			0.9	HP-301	15	1	38
39		3	" "	1.6		2.5		0.9	HP-302	15	1	40
41		3	" "	1.6			2.5	0.9	HP-303	15	1	42
43	20	1	EXHIBIT 1 TRACK LTG	1.6	2.1			0.5	HP-304	20	1	44
45	20	1	EXHIBIT 1 TRACK LTG	1.6		2.1		0.5	SECOND FLOOR LTG	20	1	46
47	20	1	EXHIBIT 2 TRACK LTG	1.6			2.1	0.5	SECOND FLOOR LTG	20	1	48
49	20	1	EXHIBIT 2 TRACK LTG	1.6	1.9			0.3	THIRD FLOOR LTG	20	1	50
51	20	1	EXTERIOR BLDG LTG	0.8		1.2		0.4	ELECTRICAL ROOM LTG	20	1	52
53	20	1	STAIR LIGHTING	0.5			0.9	0.4	EAST SITE LIGHTING	20	1	54
55	20	1	SPARE	0.5	2.0			1.5	WEST SITE LIGHTING	20	1	56
57	20	1	SPARE	0.5		2.0		1.5	EMERGENCY LTG INVTR	30	2	58
59	20	1	SPARE	0.5			1.0	0.5	" "		2	60
61	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	62
63	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	64
65	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	66
67	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	68
69	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	70
71	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	72
			PHASE TOTALS:		17.4	16.5	19.2		TOTAL: 53.0	KVA		

NOTES:
1. FACP CIRCUIT BREAKER, POLE # 34, TO BE RED.

ABBREVIATIONS:
G - GFCI BREAKER, A - AFCI BREAKER, L - LOCKOUT BREAKER,
C - COMBINATION GFCI/AFCI BREAKER, MLO - MAIN LUG ONLY

PANEL CI (CENTRAL INVERTER - SECOND FLOOR)

EGRESS LIGHTING CENTRAL INVERTER WITH INTEGRAL OUTPUT CIRCUIT BREAKERS

VOLTAGE	1 PHASE	POLES	UNIT KW	BACKUP TIME	MOUNTING
120/208	3 WIRE	20	4.2	90 MINUTES	FLOOR

POLE NO.	BREAKER TRIP	BREAKER P	LOAD SERVED	PHASE LOADS KVA	A	B	KVA	LOAD SERVED	BREAKER TRIP	BREAKER P	POLE NO.
1	20	1	RLY1-1,3 (BASEMENT)	0.2	0.6		0.4	RLY1-32 SITE LIGHTING (EAST)	20	1	2
3	20	1	RLY1-5,36 (ENTRY/PORCH)	0.3		0.6	0.3	RLY1-34 SITE LIGHTING (WEST)	20	1	4
5	20	1	RLY1-38,40,42,44,46 (EXTERIOR)	0.3	0.4		0.1	ELEVATOR MACHINE RM	20	1	6
7	20	1	RLY1-13,21,37 (1ST FL SW)	0.1		0.2	0.1	EXIT SIGNS	20	1	8
9	20	1	RLY1-33,39,41 (1ST FL SE)	0.2	0.3		0.1	SPARE	20	1	10
11	20	1	RLY1-2 (CENTRAL STAIR)	0.6		0.7	0.1	SPARE	20	1	12
13	20	1	RLY1-12,26,28,30 (2ND FL)	0.5	0.6		0.1	SPARE	20	1	14
15	20	1	RLY1-4 (EAST STAIR)	0.1		0.2	0.1	SPARE	20	1	16
17	20	1	RLY2-5 (3RD FL)	0.2	0.3		0.1	SPARE	20	1	18
19	20	1	ELEC/IT ROOM	0.1		0.2	0.1	SPARE	20	1	20
			PHASE TOTALS:		2.2	1.9		TOTAL: 4.1	KVA		

NOTES:
1. IF DESCRIPTION BEGINS WITH RLY1 OR RLY2, EXTEND CIRCUITS TO EMERGENCY RELAYS MODULES LOCATED ADJACENT TO RELAY PANELS RLY1 AND RLY2.

STATE OF KENTUCKY APPROVAL

KEY PLAN

PROJECT NORTH

SEAL

STATE OF KENTUCKY
BRIAN E. WHITLEY
LICENSE NO. 25711
PROFESSIONAL ENGINEER
May 14, 2020

LORD AECK SARGENT
A KATERRA COMPANY
LordAeckSargent.com

REVISION:		
1	Addendum 2	4/8/2021

SHROUT TATE WILSON
MECHANICAL AND ELECTRICAL ENGINEERS
Lexington - Louisville
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SHEET TITLE: LIGHTING SCHEDULE

SCALE (U.N.O.): NOT TO SCALE

JOB NAME: University of Kentucky
Cooper House
LOCATION: 1312 Nicholasville Road, Lexington, KY 40546

ISSUE DATE: May 14, 2020
JOB. NO. 10663-01
DWG. NO. E602

FOR CONSTRUCTION

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University of Kentucky

Cooper House Renovation - Project 2511.1

Phase 3 - 100% Construction Documents - Contract Documents

May 14, 2020

LAS Project No. 10663-01

Lord Aeck Sargent
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Element Design
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Mechanical, Electrical, Plumbing & Fire Protection

628 Winchester Road
Lexington, KY 40505

(859) 277-8177

DRAWING INDEX

STATE OF KENTUCKY APPROVAL

SEAL

Karen Gravel
REGISTERED
NO. 7286
STATE OF KENTUCKY
ARCHITECT

LORD AECK SARGENT
A KATERRA COMPANY
LordAeckSargent.com

REVISION:		
1	Addendum 1	2/18/21
2	Addendum 2	4/7/21

SHEET TITLE: COVER SHEET

SCALE (U.N.O.)

JOB NAME: University of Kentucky
Cooper House Renovation - Project 2511.1

LOCATION: 410 Transylvania Lexington, KY 40506

ISSUE DATE: May 14, 2020

JOB. NO. 10663-01

DWG. NO. G001

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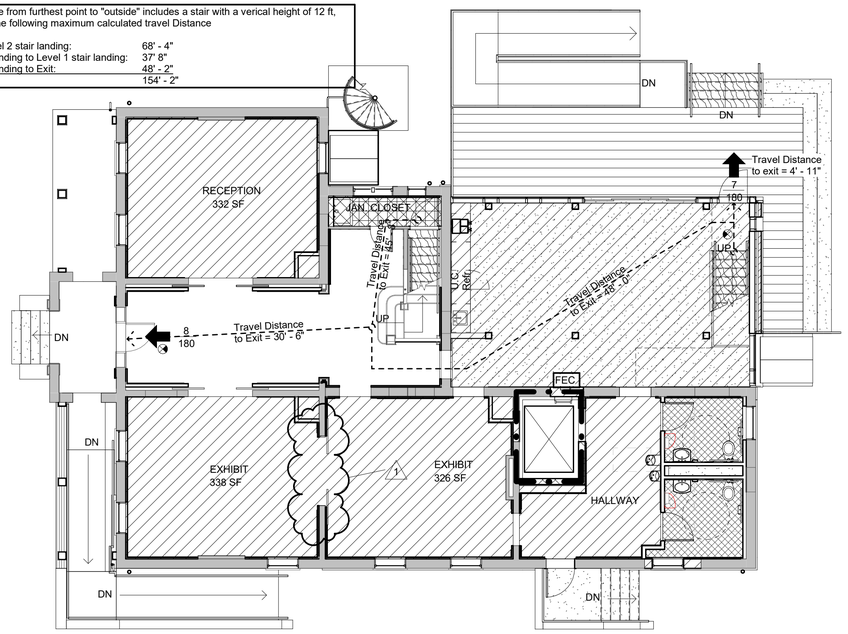
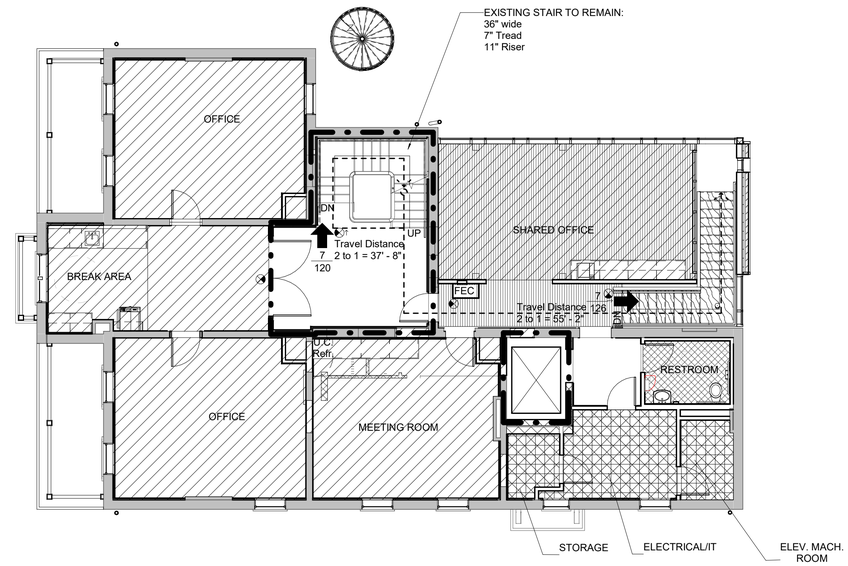
Travel Distance from furthest point to "outside" includes a stair with a verical height of 12 ft, and includes the following maximum calculated travel Distance

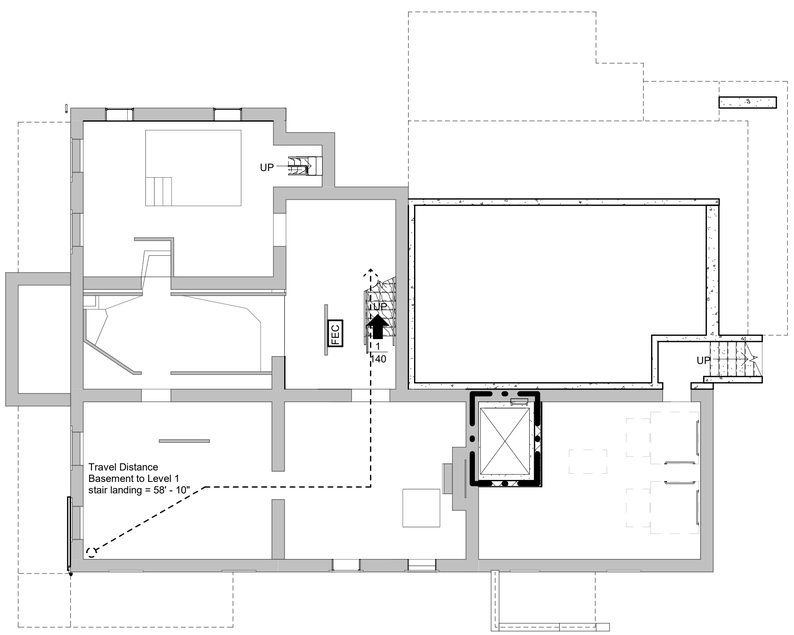
Level 3 to Level 2 stair landing:	68' - 4"
Level 2 stair landing to Level 1 stair landing:	37' 8"
Level 1 stair landing to Exit:	48' - 2"
TOTAL	154' - 2"



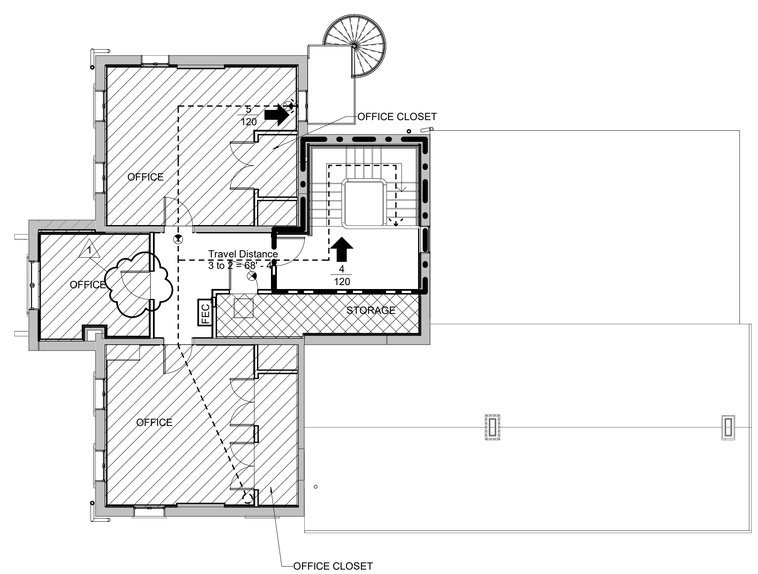
F1 FIRST FLOOR LIFE SAFETY



F7 SECOND FLOOR PLAN



A1 BASEMENT LIFE SAFETY



A7 THIRD FLOOR PLAN

MATERIAL KEYNOTES

LIFE SAFETY LEGEND

- 'B' - BUSINESS 100 GROSS
- 'S' - STORAGE 300 GROSS
- 1 HR PATRITION
- 2 HR PATRITION
- FEC — FIRE EXTINGUISHER CABINET
- XXX / XXX — EXIT & ACTUAL OCCUPANT LOAD / EXIT CAPACITY
- EXIT SIGN

STATE OF KENTUCKY APPROVAL

KEY PLAN

PROJECT NORTH

SEAL

Karen Gravel REGISTERED NO. 7286 COMMONWEALTH OF KENTUCKY ARCHITECT

LORD AECK SARGENT
A KATERRA COMPANY
LordAeckSargent.com

REVISION:

1	Addendum 2	4/7/21

SHEET TITLE: LIFE SAFETY PLANS

SCALE (U.N.O.): 0 8 16 FT

JOB NAME: University of Kentucky
Cooper House Renovation - Project 2511.1

LOCATION: 1312 Nicholasville Road, Lexington, KY 40546

ISSUE DATE: May 14, 2020

JOB. NO. 10663-01

DWG. NO. G101

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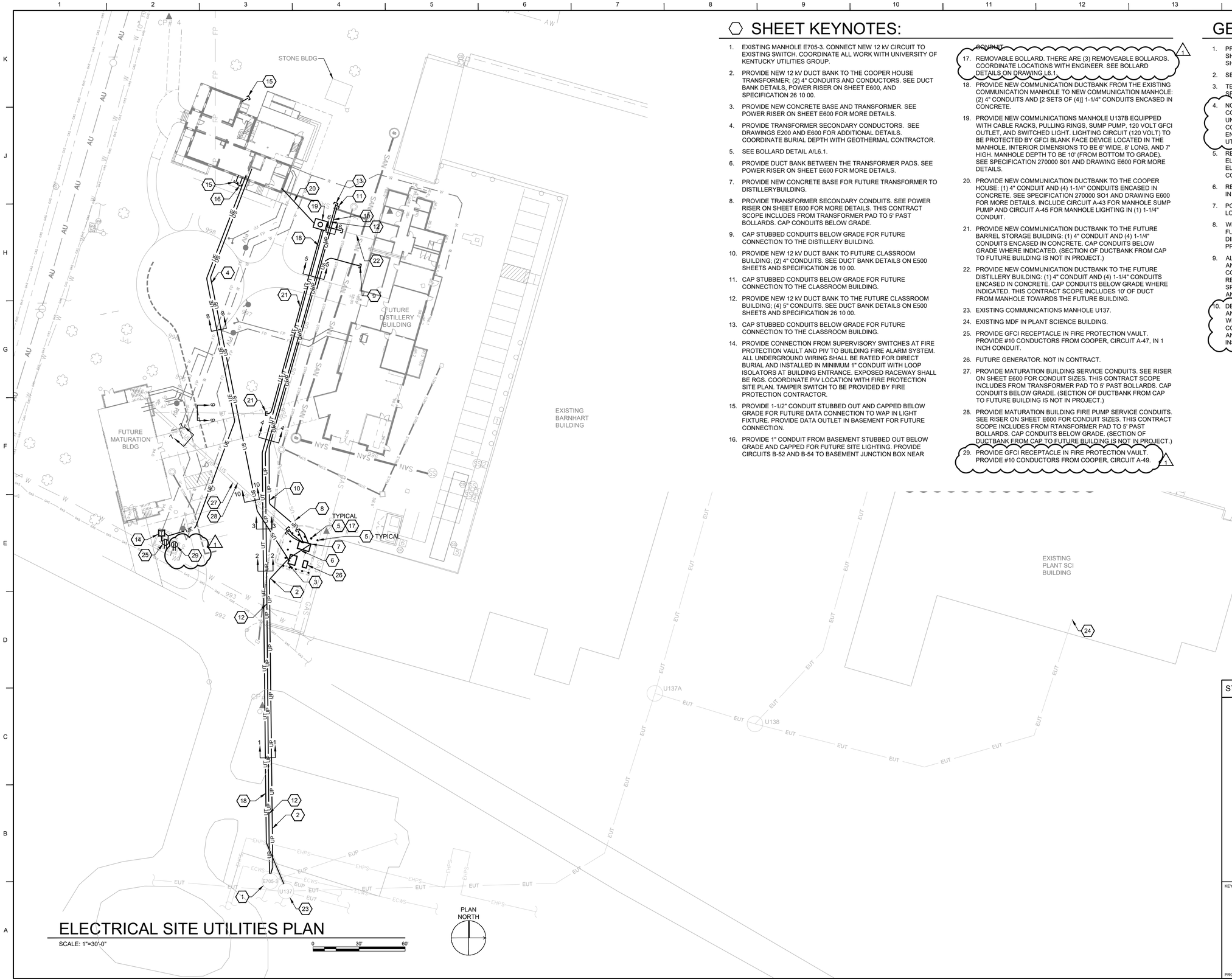

ELECTRICAL SITE UTILITIES PLAN

SCALE: 1"=30'-0"

0 30' 60'

SHEET KEYNOTES:

1. EXISTING MANHOLE E705-3. CONNECT NEW 12 kV CIRCUIT TO EXISTING SWITCH. COORDINATE ALL WORK WITH UNIVERSITY OF KENTUCKY UTILITIES GROUP.
2. PROVIDE NEW 12 kV DUCT BANK TO THE COOPER HOUSE TRANSFORMER; (2) 4" CONDUITS AND CONDUCTORS. SEE DUCT BANK DETAILS, POWER RISER ON SHEET E600, AND SPECIFICATION 26 10 00.
3. PROVIDE NEW CONCRETE BASE AND TRANSFORMER. SEE POWER RISER ON SHEET E600 FOR MORE DETAILS.
4. PROVIDE TRANSFORMER SECONDARY CONDUCTORS. SEE DRAWINGS E200 AND E600 FOR ADDITIONAL DETAILS. COORDINATE BURIAL DEPTH WITH GEOTHERMAL CONTRACTOR.
5. SEE BOLLARD DETAIL A/L6.1.
6. PROVIDE DUCT BANK BETWEEN THE TRANSFORMER PADS. SEE POWER RISER ON SHEET E600 FOR MORE DETAILS.
7. PROVIDE NEW CONCRETE BASE FOR FUTURE TRANSFORMER TO DISTILLERYBUILDING.
8. PROVIDE TRANSFORMER SECONDARY CONDUITS. SEE POWER RISER ON SHEET E600 FOR MORE DETAILS. THIS CONTRACT SCOPE INCLUDES FROM TRANSFORMER PAD TO 5' PAST BOLLARDS. CAP CONDUITS BELOW GRADE.
9. CAP STUBBED CONDUITS BELOW GRADE FOR FUTURE CONNECTION TO THE DISTILLERY BUILDING.
10. PROVIDE NEW 12 kV DUCT BANK TO FUTURE CLASSROOM BUILDING; (2) 4" CONDUITS. SEE DUCT BANK DETAILS ON E500 SHEETS AND SPECIFICATION 26 10 00.
11. CAP STUBBED CONDUITS BELOW GRADE FOR FUTURE CONNECTION TO THE CLASSROOM BUILDING.
12. PROVIDE NEW 12 kV DUCT BANK TO THE FUTURE CLASSROOM BUILDING; (4) 5" CONDUITS. SEE DUCT BANK DETAILS ON E500 SHEETS AND SPECIFICATION 26 10 00.
13. CAP STUBBED CONDUITS BELOW GRADE FOR FUTURE CONNECTION TO THE CLASSROOM BUILDING.
14. PROVIDE CONNECTION FROM SUPERVISORY SWITCHES AT FIRE PROTECTION VAULT AND PIV TO BUILDING FIRE ALARM SYSTEM. ALL UNDERGROUND WIRING SHALL BE RATED FOR DIRECT BURIAL AND INSTALLED IN MINIMUM 1" CONDUIT WITH LOOP ISOLATORS AT BUILDING ENTRANCE. EXPOSED RACEWAY SHALL BE RGS. COORDINATE PIV LOCATION WITH FIRE PROTECTION SITE PLAN. TAMPER SWITCH TO BE PROVIDED BY FIRE PROTECTION CONTRACTOR.
15. PROVIDE 1-1/2" CONDUIT STUBBED OUT AND CAPPED BELOW GRADE FOR FUTURE DATA CONNECTION TO WAP IN LIGHT FIXTURE. PROVIDE DATA OUTLET IN BASEMENT FOR FUTURE CONNECTION.
16. PROVIDE 1" CONDUIT FROM BASEMENT STUBBED OUT BELOW GRADE AND CAPPED FOR FUTURE SITE LIGHTING. PROVIDE CIRCUITS B-52 AND B-54 TO BASEMENT JUNCTION BOX NEAR CONDUIT.
17. REMOVABLE BOLLARD. THERE ARE (3) REMOVEABLE BOLLARDS. COORDINATE LOCATIONS WITH ENGINEER. SEE BOLLARD DETAILS ON DRAWING L6.1. 1
18. PROVIDE NEW COMMUNICATION DUCTBANK FROM THE EXISTING COMMUNICATION MANHOLE TO NEW COMMUNICATION MANHOLE: (2) 4" CONDUITS AND [2 SETS OF (4)] 1-1/4" CONDUITS ENCASED IN CONCRETE.
19. PROVIDE NEW COMMUNICATIONS MANHOLE U137B EQUIPPED WITH CABLE RACKS, PULLING RINGS, SUMP PUMP, 120 VOLT GFCI OUTLET, AND SWITCHED LIGHT. LIGHTING CIRCUIT (120 VOLT) TO BE PROTECTED BY GFCI BLANK FACE DEVICE LOCATED IN THE MANHOLE. INTERIOR DIMENSIONS TO BE 6' WIDE, 8' LONG, AND 7' HIGH. MANHOLE DEPTH TO BE 10' (FROM BOTTOM TO GRADE). SEE SPECIFICATION 270000 S01 AND DRAWING E600 FOR MORE DETAILS.
20. PROVIDE NEW COMMUNICATION DUCTBANK TO THE COOPER HOUSE: (1) 4" CONDUIT AND (4) 1-1/4" CONDUITS ENCASED IN CONCRETE. SEE SPECIFICATION 270000 SO1 AND DRAWING E600 FOR MORE DETAILS. INCLUDE CIRCUIT A-43 FOR MANHOLE SUMP PUMP AND CIRCUIT A-45 FOR MANHOLE LIGHTING IN (1) 1-1/4" CONDUIT.
21. PROVIDE NEW COMMUNICATION DUCTBANK TO THE FUTURE BARREL STORAGE BUILDING: (1) 4" CONDUIT AND (4) 1-1/4" CONDUITS ENCASED IN CONCRETE. CAP CONDUITS BELOW GRADE WHERE INDICATED. (SECTION OF DUCTBANK FROM CAP TO FUTURE BUILDING IS NOT IN PROJECT.)
22. PROVIDE NEW COMMUNICATION DUCTBANK TO THE FUTURE DISTILLERY BUILDING: (1) 4" CONDUIT AND (4) 1-1/4" CONDUITS ENCASED IN CONCRETE. CAP CONDUITS BELOW GRADE WHERE INDICATED. THIS CONTRACT SCOPE INCLUDES 10' OF DUCT FROM MANHOLE TOWARDS THE FUTURE BUILDING.
23. EXISTING COMMUNICATIONS MANHOLE U137.
24. EXISTING MDF IN PLANT SCIENCE BUILDING.
25. PROVIDE GFCI RECEPTACLE IN FIRE PROTECTION VAULT. PROVIDE #10 CONDUCTORS FROM COOPER, CIRCUIT A-47, IN 1 INCH CONDUIT.
26. FUTURE GENERATOR. NOT IN CONTRACT.
27. PROVIDE MATURATION BUILDING SERVICE CONDUITS. SEE RISER ON SHEET E600 FOR CONDUIT SIZES. THIS CONTRACT SCOPE INCLUDES FROM TRANSFORMER PAD TO 5' PAST BOLLARDS. CAP CONDUITS BELOW GRADE. (SECTION OF DUCTBANK FROM CAP TO FUTURE BUILDING IS NOT IN PROJECT.)
28. PROVIDE MATURATION BUILDING FIRE PUMP SERVICE CONDUITS. SEE RISER ON SHEET E600 FOR CONDUIT SIZES. THIS CONTRACT SCOPE INCLUDES FROM RTANSFORMER PAD TO 5' PAST BOLLARDS. CAP CONDUITS BELOW GRADE. (SECTION OF DUCTBANK FROM CAP TO FUTURE BUILDING IS NOT IN PROJECT.)
29. PROVIDE GFCI RECEPTACLE IN FIRE PROTECTION VAULT. PROVIDE #10 CONDUCTORS FROM COOPER, CIRCUIT A-49. 1

GENERAL NOTES:

1. PROVIDE PERMANENT UTILITY MARKERS AS SHOWN IN THE "UTILITY MARKER DETAIL" SHOWN ON E501.
2. SEE DEMOLITION NOTES ON SHEET E003.
3. TEST ALL NEW 12kV CABLES, SEE THE SPECIFICATION SECTION FOR DETAILS. 1
4. NOT ALL EXISTING UTILITIES ARE SHOWN. CONTRACTOR TO HIRE INDEPENDENT UNDERGROUND UTILITY LOCATION SERVICE. CONTRACTOR TO PROVIDE DRAWING TO ENGINEER WHICH INDICATES EXISTING UTILITY DEPTHS AT LOCATIONS OF WORK.
5. REFER TO L3.0 AND L3.1 FOR FINISH GRADE ELEVATIONS AND INFRASTRUCTURE ELEVATIONS (BOTH IN CONTRACT AND NOT IN CONTRACT).
6. REFER TO L4.1 FOR FINAL MATERIALS (BOTH IN CONTRACT AND NOT-IN-CONTRACT).
7. POWER AND DATA DUCT TURNS TO BE 36" LONG RADIUS MINIMUM.
8. WHERE DUCTBANKS ARE CAPPED FOR FUTURE EXTENSION, FOLLOW SPECIFICATION DIRECTIONS FOR MULTI-POUR DUCT BANK PREPARATION.
9. ALL UNDERGROUND THREE PHASE POWER AND ALL UNDERGROUND COMMUNICATION CONDUITS ARE TO BE ENCASED IN STEEL REINFORCED CONCRETE. SEE SPECIFICATIONS 26 0533 S01, 27 1000 S01, AND 33 7100 S01 FOR ADDITIONAL DETAILS. 1
10. DEPTH OF CONDUIT CAPS AND APPROXIMATE ANGLE/DIRECTION OF CONDUIT ASSOCIATED WITH SHEET KEYNOTES 8, 27 AND 28 TO BE COORDINATED WITH ASSOCIATED PROJECTS AND APPROVED BY ENGINEER PRIOR TO INSTALLATION.

STATE OF KENTUCKY APPROVAL

KEY PLAN

PROJECT NORTH

SEAL

STATE OF KENTUCKY
BRIAN MUTLEY
LICENSED
PROFESSIONAL ENGINEER
No. 25711

May 14, 2020

LORD AECK SARGENT
A KATERRA COMPANY
LordAeckSargent.com

REVISION:		
1	Addendum 2	4/8/2021

SHROUT TATE WILSON
MECHANICAL AND ELECTRICAL ENGINEERS
Lexington - Louisville
www.stweng.com

SHEET TITLE: ELECTRICAL SITE UTILITIES PLAN

SCALE (U.N.O.): AS NOTED

JOB NAME: University of Kentucky Cooper House

LOCATION: 1312 Nicholasville Road, Lexington, KY 40546

ISSUE DATE: May 14, 2020

JOB. NO.: 10663-01

DWG. NO.: SU301

FOR CONSTRUCTION

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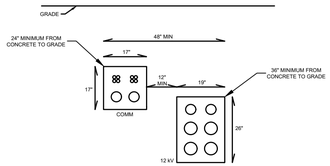

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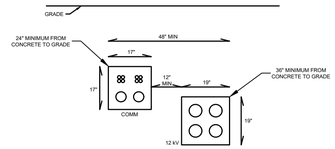

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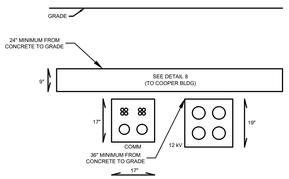

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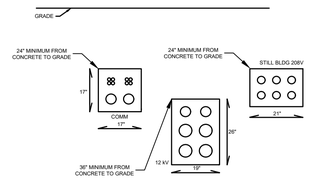

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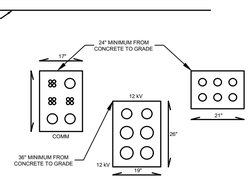

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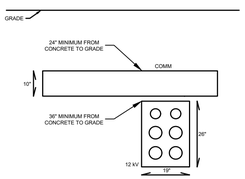

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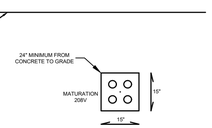

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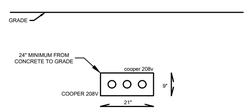

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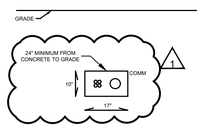

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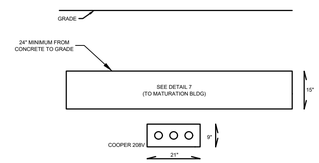

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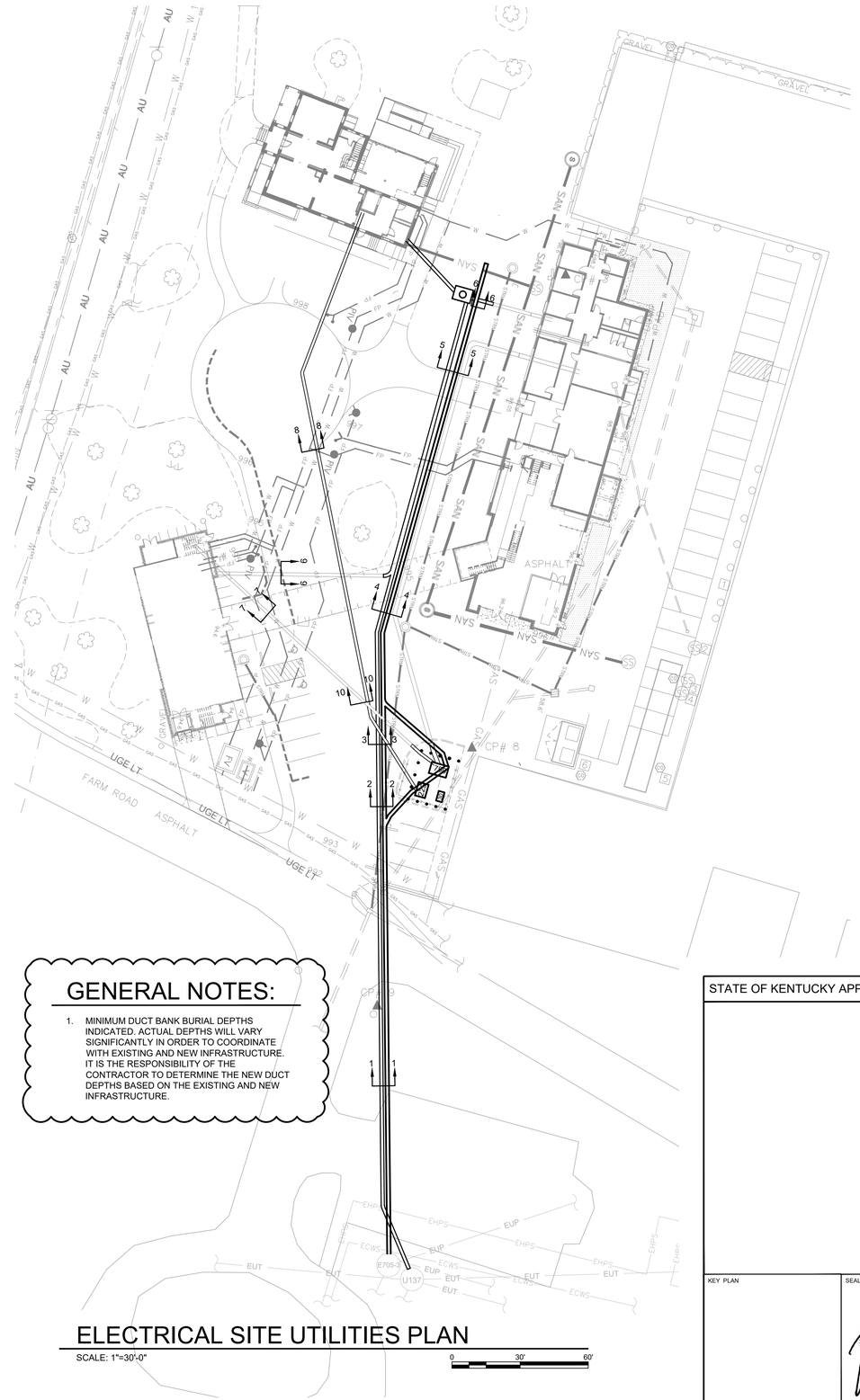

GENERAL NOTES:

1. MINIMUM DUCT BANK BURIAL DEPTHS INDICATED. ACTUAL DEPTHS WILL VARY SIGNIFICANTLY IN ORDER TO COORDINATE WITH EXISTING AND NEW INFRASTRUCTURE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE NEW DUCT DEPTHS BASED ON THE EXISTING AND NEW INFRASTRUCTURE.

ELECTRICAL SITE UTILITIES PLAN

SCALE: 1"=30'-0"

0 30' 60'

STATE OF KENTUCKY APPROVAL

KEY PLAN

PROJECT NORTH

SEAL

STATE OF KENTUCKY
WHITLEY C. CASEY
No. 25711
LICENSED PROFESSIONAL ENGINEER

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