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Date: **12-04-2020**

To: **All Plan Holders**

Subject: **ADDENDUM NO. 1**

Project: **CENTER FOR MATERIALS AND MANUFACTURING SCIENCES, TROY UNIVERSITY MAIN CAMPUS-TROY ALABAMA**

Job #: **SSL# 18144**
BC# 2020416
PSCA#: 006P

From: **Cody Smith**

The plans dated November 17, 2020 and Specifications dated November 2020 of the subject project, and any subsequent addenda are amended as follows: (Where there are conflicts between the plans and specifications and the addendum, this addendum shall govern)

Item 1: Refer to specification section "10 2113 Phenolic Toilet Compartments", Paragraph 2.01. Columbia Partitions will be considered an approved equal subject to requirements of the drawings and specifications.

Item 2: Refer to specification section "10 2113 Phenolic Toilet Compartments", Paragraph 2.01. Scranton Products will be considered an approved equal subject to requirements of the drawings and specifications.

Item 3: Refer to specification section "10 1400 Signage", Paragraph 2.03.A.1.:
Plaque shall be 36" wide x 48" tall.

Item 4: Refer to specification section "10 1400 Signage", Paragraph 2.03.A.3.:
Plaque shall include all required PSCA information.

Item 5: Refer to electrical drawing E001:
Added primary for new transformer at mechanical yard.

Item 6: Refer to electrical drawing E002:
Removed unused disconnect

Item 7: Refer to electrical drawing E003:
Added general note 18
Added sump pump connection to legend

Item 8: Refer to electrical drawing E007:
Added acid dilution monitor connection
Increased wire and disconnect sizes for CWP pumps
Added sump pump connection in elevator pit
Moved unit heater connection in mechanical room
Added desiccant dryer connections in mechanical room

Item 9: Refer to electrical drawing E008:
Added pre-action air compressor connections
Moved SATU-11, SATU-17, SATU-26 and VAV-2/6 unit connections
Rearranged outlets in Thermal Lab 1205

Item 10: Refer to electrical drawing E009:
Moved VAV-2/7 unit connections

Item 11: Refer to electrical drawing E017:
Added breakers in panel 0LM for acid dilution monitor and desiccant dryer
Added spare breakers in panel 0LM and 1RA
Added breaker in 0RA for sump pump

Item 12: Refer to electrical drawing E020:
Changed breaker sizes for CWP pumps in panel 0HM

Item 13: Refer to electrical drawing E023:
Added breaker for pre-action air compressor in panel 0LEQ
Added spare breakers in panel 0LEQ
Changed boiler shut down note in panel 0LEQ

Item 14: This project has been designated PSCA money. Refer to following Front End Document changes:
Add Construction Contracts and Bonds Checklist DCM Form B-7
Replace Construction Contract DCM Form C-5 with DCM Form 9-A
Replace Performance Bond DCM Form C-6 with DCM Form 9-B
Replace Payment Bond DCM Form C-7 with DCM Form 9-C
Add Invoice Checklist DCM 9-G
Add Certification of Compliance Title 41 DCM Form 9-H
Add Change Order Checklist B-12
Replace Contract Change Order DCM Form C-12 with DCM Form 9-J
Add Change Order Justification DCM Form B-11

Item 15: See attached Pre-Bid Conference Agenda and Sign-In Sheet from Thursday December 3, 2020.

Item 16: OMIT spec section "06 1760 Metal -Plate-Connected Wood Trusses" in its entirety.

Item 17: Refer to specification section "00 0102 Table of Contents":
Replace Table of Contents it its entirety with the attached.

Item 18: Replace Volume 1 Specification Coversheet and Volume 2 Specification Coversheet with the attached coversheets that include the PSCA project number.

Item 19: Replace Sheet T1.0 and Sheet T2.0 with the attached Title Sheets that include the PSCA project number.

End of Addendum No. 1

SECTION 10 2113 - PHENOLIC TOILET COMPARTMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Phenolic Toilet Compartments, Over Head Braced, Floor Anchored.
B. Urinal screens.

1.02 RELATED REQUIREMENTS

A. Section 05 1200 - Structural Steel Framing: Concealed steel support members.
B. Section 06 1000 - Rough Carpentry: Coordination with cocealed solid wood blocking in walls to secure panels, Screens, wall posts and stiles.
C. Section 09 3000 - Tiling
D. Section 10 2800 - Toilet, Bath, and Laundry Accessories.

1.03 REFERENCE STANDARDS

A. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar 2015.

1.04 ADMINISTRATIVE REQUIREMENTS

A. Coordination: Coordinate the work with placement of support framing and anchors in walls.

1.05 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
B. Shop Drawings: Indicate partition plan, elevation views, dimensions, details of wall supports, door swings.
C. Product Data: Provide data on panel construction, hardware, and accessories.
D. Samples: Submit two samples of partition panels, 6 by 6 inch (____by____ mm) in size illustrating panel finish, color, and sheen.
E. Manufacturer's Installation Instructions: Indicate special procedures.

1.06 QUALITY ASSURANCE

A. A. Manufacturer: Provide products manufactured by a company with a minimum of 10 years successful experience manufacturing similar products.
B. Single Source Requirements: To the greatest extent possible provide products from a single manufacturer.
C. Accessibility Requirements: Comply with requirements applicable in the jurisdiction of the project, including but not limited to ADA and ICC/ANSI A117.1 requirements as applicable.

1.07 WARRANTY

A. Manufacturer’s standard 25 year limited warranty for panels, doors, and stiles against breakage, corrosion, delamination, and defects in factory workmanship.
Manufacturer’s standard 10 year guarantee against defects in material and workmanship for stainless steel door hardware and mounting brackets.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Basis-of-Design Products: Based on the quality and performance requirements of the project, specifications are based solely on the products of Bobrick Washroom Equipment, Inc.. www.bobrick.com.

B. **Approved Manufacturers:** ***(Addendum 1)***
   1. **Columbia Partitions** ***(Addendum 1)***
   2. **Scranton Products** ***(Addendum 1)***

2.02 PHENOLIC TOILET COMPARTMENTS

A. Toilet Compartments: Factory fabricated doors, pilasters, and divider panels made of solid phenolic core panels with integral melamine finish, floor-mounted headrail-braced. Basis of Design is Bobrick 1082.67 Series Compact Laminate (Solid Phenolic) Floor Anchored and 1082.67 Urinal Screen. Provide full height stainless steel partition brackets and self closing hinges. Comply with ADA.
   1. Color: see Finish Schedule.

B. Screens: Without doors; to match compartments; mounted to wall as shown on brackets with full length brackets.

2.03 ACCESSORIES

A. Hardware and Accessories: Manufacturer's Institutional hardware design, Commercial Operating hardware and accessories.
   1. Material: Stainless Steel 304 standard finish

B. Anchorages and Fasteners: Manufacturer's standard exposed fasteners of stainless steel, finished to match hardware, with theft-resistant-type heads. Provide hex-type bolts for through-bolt applications. Wall hung Urinal Bracket (Stainless Steel with diagonal brace Braced

C. Provide emergency access latch & hinges.

2.04 FABRICATION

A. Floor-Anchored Units: Provide manufacturer's standard corrosion-resistant anchoring assemblies complete with threaded rods, lock washers, and leveling adjustment nuts at pilasters for structural connection to floor. Provide shoes at pilasters to conceal anchorage.

B. Doors: Unless otherwise indicated, provide 24-inch- (610-mm-) wide in-swinging doors for standard toilet compartments and 36-inch- (914-mm-) wide out-swinging doors with a minimum 32-inch- (813-mm-) wide clear opening for compartments indicated to be accessible to people with disabilities.
   1. Hinges: Manufacturer's Full Height Stainless Steel Hinge (self-closing type)
   2. Latch and Keeper: Manufacturer's institutional hardware surface-mounted latch unit designed for emergency access and with combination rubber-faced door strike and keeper. Provide units that comply with accessibility requirements of authorities having jurisdiction at compartments indicated to be accessible to people with disabilities. Complies with ADA Sections 404.2.7 and 309.4.
   3. Coat Hook: Manufacturer's stainless steel combination hook and rubber-tipped bumper, sized to prevent door from hitting compartment-mounted accessories.

4. Door Pull: Manufacturer's institutional hardware unit at out-swinging doors that complies with accessibility requirements of authorities having jurisdiction. Provide units on both sides of doors at compartments indicated to be accessible to people with disabilities.

C. Attachments, Screws, and Bolts: Stainless steel , tamper proof type.
   1. For attaching panels and pilasters to brackets: Through-bolts and nuts ; tamper proof.
   2. Balanced hinges
   3. Door Latch: Slide type with exterior emergency access feature.
   4. Door strike and keeper with rubber bumper; mounted on pilaster in alignment with door latch.
   5. Coat hook with rubber bumper; one per compartment, mounted on door.

D. Toilet Partition Suspension Members: As specified in Section 05 5000.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that field measurements are as indicated.
B. Verify correct spacing of and between plumbing fixtures.
C. Verify correct location of built-in framing, anchorage, and bracing.

3.02 INSTALLATION

A. A. Install products in strict compliance with manufacturer’s written instructions and recommendations, including the following:
   1. Verify blocking and supports in walls and ceilings have been installed properly at points of attachment.
   2. Verify location does not interfere with door swings or use of fixtures.
   3. Use fasteners and anchors suitable for substrate and project conditions
   4. Install units rigid, straight, plumb, and level.
   5. Conceal evidence of drilling, cutting, and fitting to room finish.
   6. Test for proper operation.

B. Field touch-up of scratches or damaged finish will not be permitted. Replace damaged or scratched materials with new materials.

3.03 TOLERANCES

A. Maximum Variation From True Position: 1/4 inch (6 mm).
B. Maximum Variation From Plumb: 1/8 inch (3 mm).

3.04 ADJUSTING

A. Adjust and align hardware to uniform clearance at vertical edge of doors, not exceeding 3/16 inch (5 mm).
B. Adjust hinges to position doors in partial opening position when unlatched. Return out-swinging doors to closed position.
C. Adjust adjacent components for consistency of line or plane.

END OF SECTION

SECTION 10 1400 - SIGNAGE

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Room and door signs shall be provided and installed by the owner
B. Plaque - furnished and installed by contractor.

1.02 REFERENCE STANDARDS

A. 36 CFR 1191 - Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines current edition.
B. ICC A117.1 - Accessible and Usable Buildings and Facilities 2009.
C. ATBCB ADAAG - Americans with Disabilities Act Accessibility Guidelines; 2002.

1.03 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
B. Product Data: Manufacturer's printed product literature for each type of sign, indicating sign styles, font, foreground and background colors, locations, overall dimensions of each sign.
C. Samples: Submit two samples of each type of sign, of size similar to that required for project, illustrating sign style, font, and method of attachment.
D. Verification Samples: Submit samples showing colors specified.
E. Manufacturer's Installation Instructions: Include installation templates and attachment devices.

1.04 DELIVERY, STORAGE, AND HANDLING

A. Package signs as required to prevent damage before installation.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Plaques:
   1. Architectural Signing Archtectural Signing www.archsign.com.
   2. Leeds Architectural Letters of Alabama Inc www. leedsletters.com.
   3. A.R.K Ramos.

2.02 SIGNAGE APPLICATIONS

A. Accessibility Compliance: All signs are required to comply with ADA Standards for Accessible Design and ANSI/ICC A 117.1 and applicable building codes, unless otherwise indicated; in the event of conflicting requirements, comply with the most comprehensive and specific requirements.

2.03 PLAQUES

A. Metal Plaques:
   1. Product: **36" x 48"*(Addendum 1)*** cast bronze textured background standard pebble plain beveled style border mounting concealed studs non corrosive for substrates encountered lettering decided on by owner during construction and communicated to contractor through architect's written document
   2. Locate plaque as directed by architect's written instructions.

3. **Plaque shall include all required PSCA information.** ***(Addendum 1)***

2.04 ACCESSORIES

A. Concealed Screws: Stainless steel, galvanized steel, chrome plated, or other non-corroding metal.

PART 3 EXECUTION

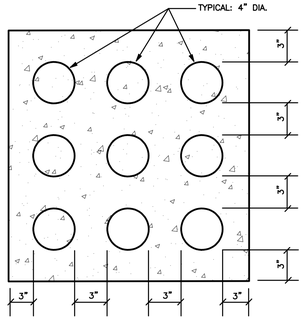
3.01 EXAMINATION

A. Verify that substrate surfaces are ready to receive work.
B. Verify plaque is fastened into solid subsrtate capable of securing plaque.

3.02 INSTALLATION

A. Install in accordance with manufacturer's instructions.
B. Install neatly, with horizontal edges level.
C. Locate signs where indicated:
   1. If no location is indicated obtain Owner's instructions through the architect.
D. Protect from damage until Substantial Completion; repair or replace damage items.

END OF SECTION



DUCT BANK NOTES:

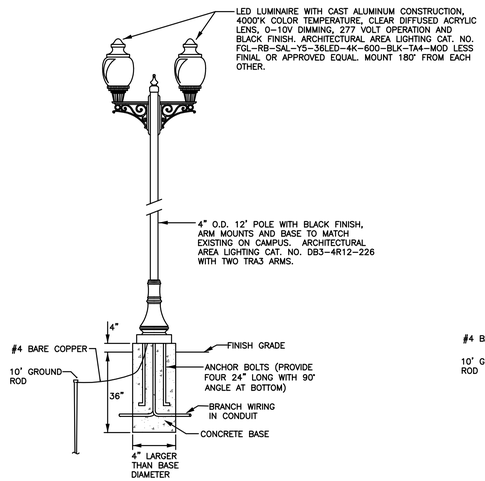
1. CONCRETE SHALL BE 3,000 P.S.I. @ 28 DAYS OR AS SPECIFIED.
2. PROVIDE REINFORCING RODS ON TOP OF DUCTS WHEN CROSSING OR PLACED IN ROADWAYS.
3. MINIMUM COVER TO TOP OF CONCRETE SHALL BE 24".
4. NON-FERROUS TIE WIRES TO BE INBEDED IN DUCT BED CONCRETE.
5. THE DUCT BANK FOR SECONDARY POWER CONDUCTORS FROM TRANSFORMER TO SE SWBD SHALL HAVE NINE 4" DIAMETER DUCTS (3 HIGH x 3 WIDE) WITH SAME SPACING AS DETAIL.
6. THE DUCT BANK FOR SECONDARY POWER CONDUCTORS FROM TRANSFORMER TO PANEL CH SHALL HAVE FOUR 4" DIAMETER DUCTS (2 HIGH x 2 WIDE) WITH SAME SPACING AS DETAIL.
7. THE DUCT BANK FOR GENERATOR FEED FROM GENERATOR TO DOCKING STATION AND DOCKING STATION TO BUILDING EMERGENCY WIRING GUTTER SHALL HAVE FOUR 4" DIAMETER DUCTS (2 HIGH x 2 WIDE) WITH SAME SPACING AS DETAIL.

POWER DUCT BANK DETAIL

SCALE: NOT TO SCALE

LEGEND (THIS SHEET ONLY):

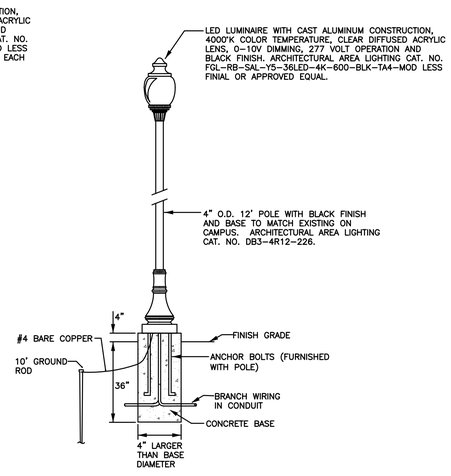
- NEW AREA LIGHTING STANDARD, TYPE A, SEE DETAIL.
- NEW AREA LIGHTING STANDARD, TYPE B, SEE DETAIL.
- BRANCH CIRCUIT WIRING IN UNDERGROUND PVC CONDUIT, #10 CONDUCTORS IN 1" CONDUIT 24" BELOW GRADE UNLESS NOTED.
- MOTOR OR EQUIPMENT JUNCTION BOX.
- SAFETY SWITCH, SIZE AND TYPE AS NOTED. FUSE PER NAMEPLATE.



SYMBOL:

AREA LIGHTING STANDARD "A"

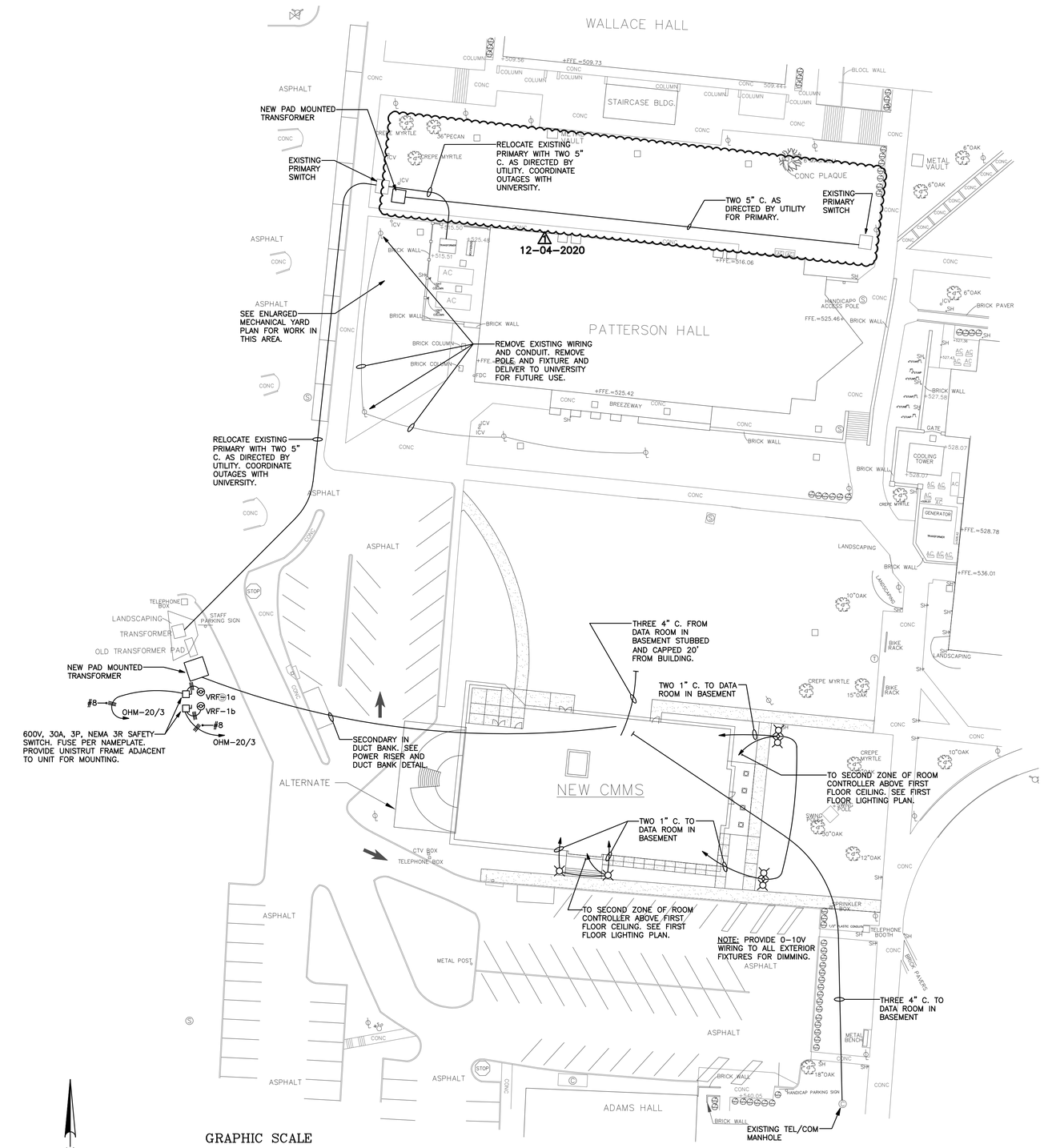
NO SCALE



SYMBOL:

AREA LIGHTING STANDARD "B"

NO SCALE



GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

ELECTRICAL SITE PLAN

SCALE: 1" = 30'

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Job Number 18144

Date 11/17/2020

Drawn By SCC

Checked By SLC

Revised 12/04/2020

Project Title

Center for Materials and Manufacturing Sciences
TROY UNIVERSITY

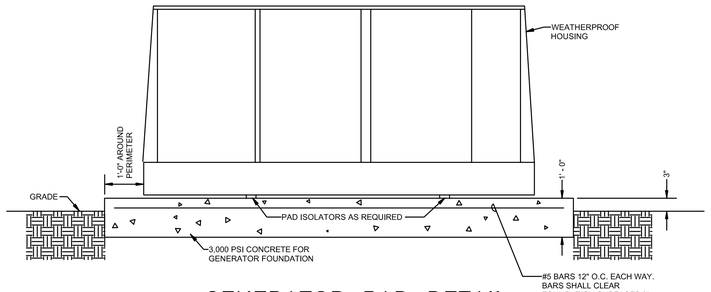
Sheet Title

Electrical Site Plan

Sheet Number

E001

ALABAMA REGISTERED PROFESSIONAL ENGINEER STEVEN L. CONOLY NO. 17691 12/04/20

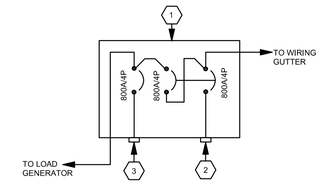


GENERATOR PAD DETAIL

SCALE: NOT TO SCALE

KEYED NOTES:

1. 800A, 277/480V, 3Ø, 4W TRIPLE SWITCH DOCKING STATION IN A NEMA 3R SS ENCLOSURE MOUNTED ON WALL. NEUTRAL SHALL BE SWITCHED (4 POLE) DOCKING STATION SHALL HAVE MECHANICAL INTERLOCKS TO PREVENT PERMANENT AND TEMPORARY GENERATORS FROM BEING CONNECTED AT THE SAME TIME. DOCKING STATION SHALL ALSO HAVE A TERMINAL BLOCK FOR TEMPORARY GENERATOR START/STOP CONTROL CONDUCTORS.
2. CONNECTION FOR FUTURE PORTABLE GENERATOR, MALE CAMLOCK CONNECTION WITH WEATHERPROOF COVER.
3. TO LOAD BANK, FEMALE CAMLOCK CONNECTION WITH WEATHERPROOF COVER.

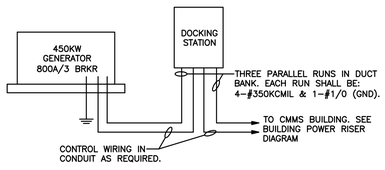


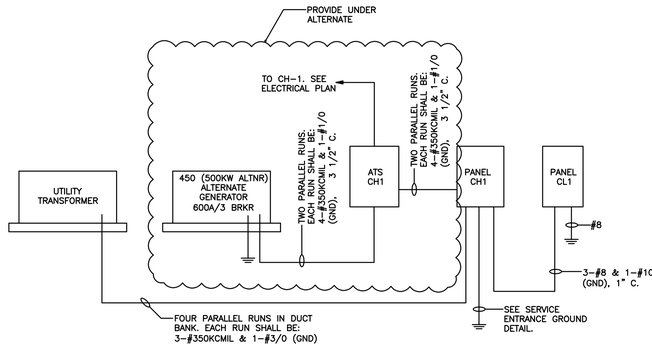
DOCKING STATION DETAIL

SCALE: NOT TO SCALE

LEGEND (THIS SHEET ONLY):

- BRANCH CIRCUIT WIRING IN UNDERGROUND PVC CONDUIT, #12 CONDUCTORS IN 1" CONDUIT BELOW GRADE UNLESS NOTED.
- SAFETY SWITCH, SIZE AND TYPE AS NOTED. FUSE PER NAMEPLATE.
- MOTOR OR EQUIPMENT JUNCTION BOX.
- DUPLEX RECEPTACLE, GFI WP TYPE, 18" A.F.F. UNLESS NOTED OTHERWISE. MOUNTED FLUSH IN WALL.
- PANELBOARD.
- 17"X8" LED WALL BRACKET WITH ALUMINUM HOUSING, FLAT RECTANGULAR DESIGN, 3000 LUMEN OUTPUT, WIDE THROW MEDIUM LIGHT DISTRIBUTION, INTEGRAL MOTION/PHOTO SENSOR, INTERNAL BATTERY BACKUP AND 120-277V INTERNAL DRIVER. LITHONIA #WSTLED-P2-40K-VW-MVOLT-PIR-E20WH OR APPROVED EQUAL.

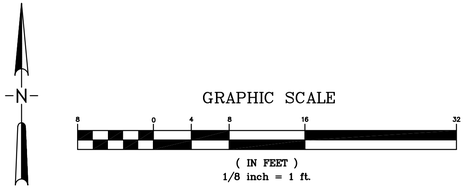


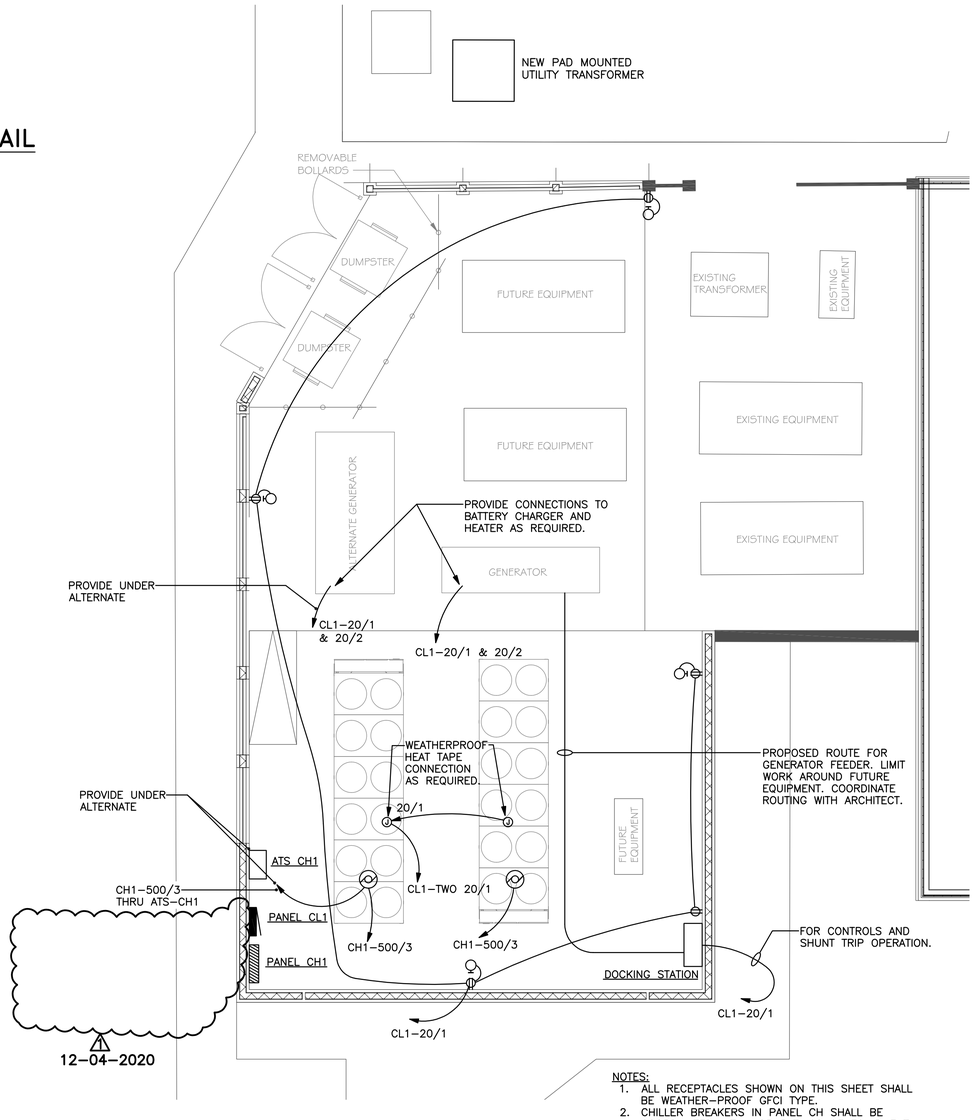


MECHANICAL YARD

POWER RISER DIAGRAM

SCALE: NOT TO SCALE





NOTES:

1. ALL RECEPTACLES SHOWN ON THIS SHEET SHALL BE WEATHER-PROOF GFCI TYPE.
2. CHILLER BREAKERS IN PANEL CH SHALL BE COORDINATED WITH MOP RATINGS OF EQUIPMENT PRIOR TO ORDERING.

ENLARGED MECHANICAL YARD ELECTRICAL PLAN

SCALE: 1/8" = 1'

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Date 11/17/2020

Drawn By SCC

Checked By SLC

Revised 12/04/2020

Project Title

Center for Materials and Manufacturing Sciences
TROY UNIVERSITY

Sheet Title

Mechanical Yard Electrical Site Plan

Sheet Number

E002

ALABAMA REGISTERED No. 17050 PROFESSIONAL 12/03/2020 ENGINEER STEVEN L. CONOLY

LEGEND

- LIGHT FIXTURE, LETTER IN OR ADJACENT TO SYMBOL DENOTES TYPE, SEE FIXTURE SCHEDULE.
- DUPLEX RECEPTACLE, 18" A.F.F. UNLESS NOTED OTHERWISE. HALF SWITCHED. MOUNTED FLUSH IN WALL.
- DUPLEX RECEPTACLE, 18" A.F.F. UNLESS NOTED OTHERWISE. MOUNTED FLUSH IN WALL.
- DOUBLE DUPLEX RECEPTACLE, 18" A.F.F. UNLESS NOTED OTHERWISE. ONE DUPLEX SWITCHED. MOUNTED FLUSH IN WALL.
- DOUBLE DUPLEX RECEPTACLE, 18" A.F.F. UNLESS NOTED OTHERWISE. MOUNTED FLUSH IN WALL.
- DUPLEX RECEPTACLE, MOUNTED 6' A.F.F. UNLESS NOTED OTHERWISE. HALF SWITCHED. MOUNTED FLUSH IN WALL.
- DUPLEX RECEPTACLE, MOUNTED 6' A.F.F. UNLESS NOTED OTHERWISE. MOUNTED FLUSH IN WALL.
- DUPLEX RECEPTACLE, 9" ABOVE COUNTER OR SINK HEIGHT. HALF SWITCHED. MOUNTED FLUSH IN WALL.
- DUPLEX RECEPTACLE, 9" ABOVE COUNTER OR SINK HEIGHT. MOUNTED FLUSH IN WALL.
- DUPLEX RECEPTACLE, MOUNTED FLUSH WITH CEILING WHERE CEILING OCCURS OR TO UNDERSIDE OF STRUCTURE.
- DATA WALL OUTLET, 18" A.F.F. MOUNTED FLUSH IN WALL. PROVIDE A 1" C. TO NEAREST CABLE HOOKS OR DATA ROOM WITH PULL WIRE.
- DATA WALL OUTLET, 9" ABOVE COUNTER MOUNTED FLUSH IN WALL. PROVIDE A 1" C. TO NEAREST CABLE HOOKS OR DATA ROOM WITH PULL WIRE.
- TELEVISION WALL OUTLET, 6' A.F.F. UNLESS NOTED OTHERWISE, MOUNTED FLUSH IN WALL. PROVIDE A 1" C. TO NEAREST CABLE HOOKS OR DATA ROOM WITH PULL WIRE.
- DATA CEILING OUTLET, MOUNTED FLUSH WITH CEILING WHERE CEILING OCCURS OR TO UNDERSIDE OF STRUCTURE. PROVIDE A 1" C. TO NEAREST CABLE HOOKS OR DATA ROOM WITH PULL WIRE.
- CABLE HOOK SYSTEM, SEE SPECIFICATIONS.
- FB — FLOOR BOX.
- FB S — FLOOR BOX. HALF SWITCHED.
- SAFETY SWITCH, SIZE AND TYPE AS NOTED. FUSE PER NAMEPLATE.
- 200A, 3P, NEMA 3R, FUSABLE ELEVATOR CONTROL SWITCH WITH SHUNT TRIP AND AUXILIARY CONTACTS. FUSE PER ELEVATOR RECOMMENDATIONS. EATON #ES4 (COORDINATE RELAY VOLTAGES WITH EQUIPMENT CONNECTED) OR APPROVED EQUAL.
- PANELBOARD.
- MOTOR OR EQUIPMENT JUNCTION BOX.
- J — JUNCTION BOX, MOUNTED ABOVE ACCESSIBLE CEILING WHERE CEILING OCCURS.
- J — JUNCTION BOX, MOUNTED FLUSH IN WALL.
- LOW VOLTAGE WIRING FOR LIGHTING CONTROLS, RUN CONCEALED.
- BRANCH CIRCUIT WIRING, RUN CONCEALED.
- BRANCH CIRCUIT WIRING, RUN UNDERGROUND.
- INDICATES NEUTRAL CONDUCTOR IN BRANCH CIRCUIT WIRING.
- INDICATES PHASE CONDUCTOR IN BRANCH CIRCUIT WIRING.
- INDICATES HOMERUN.
- A — SINGLE NEMA L6-30 RECEPTACLE. 18" A.F.F. IF LOCATED AT A COUNTER, MOUNT 9" ABOVE COUNTER.
- B — DOUBLE DUPLEX RECEPTACLE, MOUNT TO DATA RACK AS DIRECTED BY TROY IT AFTER UNIVERSITY INSTALLS RACK.
- C — ELECTRIC WATER COOLER OUTLET, GFCI RECEPTACLE JUST BELOW UNIT, 120V.
- CH — CANOPY HOOD CONNECTION, 150W, 120V. CONNECT TO HOOD LIGHT SWITCH AS DIRECTED BY HOOD INSTALLER.
- D — SINGLE NEMA L5-30 RECEPTACLE. 18" A.F.F. IF LOCATED AT A COUNTER, MOUNT 9" ABOVE COUNTER.
- DH — ELECTRIC DUCT HEATER, 480V, 3Ø.
- E — EMERGENCY SHOWER ALARM CONNECTION, 120V.
- FF — FURNITURE FEED INTO LEG OF FURNITURE. 120V. COORDINATE EXACT LOCATION WITH FURNITURE INSTALLER.
- G — GROUND OUTLET. SINGLE GANG JUNCTION BOX FLUSH IN WALL. EXTEND GROUND CONDUCTOR TO EQUIPMENT AND BOND TO EQUIPMENT AS DIRECTED BY EQUIPMENT INSTALLER.
- H — FUME HOOD CONNECTION, 120V. MAKE CONNECTIONS TO HOOD LIGHTING AND INTEGRAL RECEPTACLE AS REQUIRED.
- HD — HAND DRYER CONNECTION, 120V.
- K — KEY BOX CONNECTION, 120V.
- L — HVAC CONTROL PANEL, 120V. LOCATE AS DIRECTED BY MECHANICAL CONTRACTOR.
- M — 120 VOLT FOR HVAC CONTROLS AND HVAC USE. LOCATE AND CONNECT AS DIRECTED BY HVAC CONTRACTOR.
- N — ACCESS CONTROL, DOOR CONTROL POWER SUPPLY CONNECTION, 120V. COORDINATE WITH ACCESS CONTROL INSTALLER.
- P — DUCTLESS HEAT PUMP INDOOR UNIT CONNECTION, 208V, SØ, 2A. PROVIDE A 2 POLE WALL SWITCH ADJACENT TO UNIT FOR DISCONNECT AND LABEL "HVAC".
- R — ELECTRIC SHADE CONTROL PANEL CONNECTION, 120V. VERIFY LOCATION WITH SHADE INSTALLER. 1 12/04/2020
- SP — SIMPLEX RECEPTACLE FOR SUMP PUMP, 120V. LOCATE AS DIRECTED BY ELEVATOR INSTALLER.
- UV — UV LIGHT CONNECTION, 120V. COORDINATE WITH MECHANICAL CONTRACTOR.
- UH — UNIT HEATER CONNECTION, 120V. PROVIDE SINGLE POLE WALL SWITCH ADJACENT TO UNIT FOR DISCONNECT AND LABEL "UNIT HEATER".
- T — SUPPLY AIR VOLUME TERMINAL UNIT, 277V OR 480V. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR.
- V — VARIABLE AIR VOLUME TERMINAL UNIT, 277V OR 480V. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR.
- WC — HOT WATER HEATER CIRCULATING PUMP, 120V. PROVIDE A SINGLE GANG WALL SWITCH ADJACENT TO PUMP FOR DISCONNECT AND LABEL "PUMP".
- WI — HOT WATER HEATER CONNECTION, 45KW, 480V, 3Ø.
- Y — AHU INTERNAL LIGHTING. PROVIDE SINGLE POLE WALL SWITCH ON OR ADJACENT TO UNIT FOR CONTROL. LOCATE AS DIRECTED BY MECHANICAL CONTRACTOR.
- Z — BOILER CONNECTION, 120V.
- FURNITURE MOUNTED RECEPTACLES BY FURNITURE SUPPLIER. MAKE CONNECTIONS AS REQUIRED.
- TWO CHANNEL RACEWAY, MOUNT DIRECTLY ABOVE COUNTER BACKSPLASH WHERE COUNTERS OCCUR. WHERE NO COUNTERS OCCUR, MOUNT AT 18" A.F.F. COORDINATE WITH ARCHITECT PRIOR TO ROUGH-IN TO VERIFY COUNTER LOCATIONS. PROVIDE 1 1/4" C. FROM DATA SECTION TO NEAREST CABLE HOOKS OR DATA ROOM. MOUNT RECEPTACLES IN POWER SECTION 4' ON CENTER.
- CAMERA OUTLET. PROVIDE SINGLE GANG BOX FLUSH IN CEILING/WALL. PROVIDE A 1" C. TO NEAREST CABLE HOOKS OR DATA ROOM WITH PULL WIRE.
- (##) — ACCESS CONTROL DESIGNATION. SEE ACCESS CONTROL DETAILS.
- CR — CARD READER OUTLET.
- HO — HANDICAP OPERATOR OUTLET.
- DP — ACCESS CONTROL, DOOR OPENER POWER CONNECTION, 120V.
- ICS — INTERCOM SYSTEM, ELEVATOR LOBBY STATION.
- ICM — INTERCOM SYSTEM, MASTER STATION.
- GANN — GENERATOR ANNUNCIATOR.
- $ — WALL SWITCH, SINGLE POLE.
- $3 — WALL SWITCH, THREE WAY, SINGLE POLE.
- $O — OCCUPANCY SENSOR WALL SWITCH, SINGLE POLE, DUAL TECHNOLOGY.
- $U — OCCUPANCY SENSOR WALL SWITCH, SINGLE POLE, ULTRASONIC ONLY.
- $V — VACANCY SENSOR WALL SWITCH, SINGLE POLE, ULTRASONIC ONLY.

LEGEND (CONTINUED)

- $L — DIGITAL LIGHTING CONTROLS, WALL SWITCH.
- $LD — DIGITAL LIGHTING CONTROLS, WALL DIMMER SWITCH.
- PS — DIGITAL LIGHTING CONTROLS, ONE ZONE POWER SUPPLY.
- RC — DIGITAL LIGHTING CONTROLS, ONE ZONE DIMMING ROOM CONTROLLER.
- 2RC — DIGITAL LIGHTING CONTROLS, TWO ZONE DIMMING ROOM CONTROLLER.
- RCT — DIGITAL LIGHTING CONTROLS, ONE ZONE ROOM CONTROLLER WITH TIME AND SCHEDULING CONTROL.
- PLC — DIGITAL LIGHTING CONTROLS, PLUG LOAD CONTROLLER. CONNECT TO OCCUPANCY SENSOR/ROOM CONTROLLER PER INSTALLATION INSTRUCTIONS.
- DIGITAL LIGHTING CONTROLS, OCCUPANCY SENSOR, 360°, DUAL TECHNOLOGY. FLUSH IN CEILING. IF NO CEILING OCCURS, SUSPEND TO LEVEL OF LIGHT FIXTURES.
- DIGITAL LIGHTING CONTROLS, OCCUPANCY SENSOR, WALL MOUNTED, DUAL TECHNOLOGY.
- GTD — UL 924 EMERGENCY GENERATOR TRANSFER DEVICE WITH DIMMING CONTROL BYPASS. CONNECT 0-10V WRING TO DEVICE AND FIXTURE PER INSTALLATION INSTRUCTIONS. HUBBELL #ALCR1277 OR APPROVED EQUAL.
- FANN — FIRE ALARM SYSTEM, ANNUNCIATOR.
- FIRE ALARM SYSTEM, CONTROL PANEL.
- FIRE ALARM SYSTEM, MONITOR MODULE AND TAMPER SWITCH CONNECTION.
- FIRE ALARM SYSTEM, MONITOR MODULE AND FLOW VALVE CONNECTION.
- FIRE ALARM SYSTEM, SPEAKER AND FLASHING LIGHT.
- FIRE ALARM SYSTEM, FLASHING LIGHT ONLY.
- FIRE ALARM SYSTEM, MANUAL STATION.
- C — FIRE ALARM SYSTEM, CONTROL MODULE.
- M — FIRE ALARM SYSTEM, MONITOR MODULE.
- FIRE ALARM SYSTEM, HEAT DETECTOR, CEILING MOUNTED.
- CO — FIRE ALARM SYSTEM, CARBON MONOXIDE DETECTOR, CEILING/WALL MOUNTED.
- S — FIRE ALARM SYSTEM, SMOKE DETECTOR, CEILING MOUNTED.
- S — FIRE ALARM SYSTEM, SMOKE DETECTOR, DUCT MOUNTED. COORDINATE LOCATION WITH MECHANICAL CONTRACTOR.
- GFI — ADJACENT TO DEVICE INDICATES GFI TYPE.
- WP — ADJACENT TO DEVICE INDICATES WEATHERPROOF TYPE.
- FPN — ADJACENT TO DEVICE INDICATES FUSE PER NAMEPLATE.
- NL — ADJACENT TO FIXTURE INDICATES FIXTURE TO BE CONSTANTLY ON (NIGHT LIGHT).

GENERAL ELECTRICAL NOTES:

1. NO MULTI-WIRE BRANCH CIRCUITS SHALL BE RUN ON THIS PROJECT. PROVIDE A NEUTRAL CONDUCTOR FOR EACH PHASE CONDUCTOR. THE NEUTRAL CONDUCTOR SHALL HAVE A CONTINUOUS STRIPE OF SAME COLOR AS THE PHASE CONDUCTOR IN BRANCH CIRCUIT. GROUP BRANCH CIRCUIT CONDUCTORS WHEN SAME COLOR IS USED IN COMMON CONDUIT. NO MORE THAN THREE CIRCUITS SHALL BE RUN IN A CONDUIT.

2. PROVIDE GREEN INSULATED GROUND CONDUCTOR IN ALL RUNS IN ADDITION TO THOSE SHOWN. WHEN NO CONDUCTORS ARE SHOWN, THEN PROVIDE A PHASE, NEUTRAL AND GROUND CONDUCTOR.

3. PLEASE CONTACT THE ARCHITECT OR ENGINEER IF ANY CONCERNS OR QUESTIONS OCCUR. IT IS BETTER TO DISCUSS THE ITEMS, NO MATTER HOW TRIVIAL, THAN TO ASSUME SOMETHING THAT COULD POSSIBLY BE INCORRECT.

4. FROM EACH DATA WALL OUTLET AND TELEVISION/DATA WALL OUTLET RUN A 3/4" CONDUIT CONCEALED IN WALL AND STUB OUT AT NEAREST CABLE HOOK SYSTEM OR DATA ROOM.

5. REFER TO SPECIFICATIONS FOR LIGHTNING PROTECTION WORK TO BE INCLUDED IN THIS PROJECT.

6. CONTRACTOR SHALL VERIFY ALL ELECTRICAL EQUIPMENT (PANELBOARDS, SWITCHBOARDS, TRANSFORMERS, ATS'S, SAFETY SWITCHES, ETC.) WILL PHYSICALLY FIT IN ROOMS OR SPACES SHOWN WITH OTHER EQUIPMENT BY ELECTRICAL AND OTHER TRADES PRIOR TO BID.

7. THIS PROJECT IS REQUIRED TO COMPLY WITH AN ENERGY CODE (ASHRAE 90.1 2013 EDITION). PROVIDE LIGHTING AND RECEPTACLE CONTROLS TO MEET THIS CODE. PROGRAM LIGHTING AND RECEPTACLES AS DIRECTED BY OWNER, BUT TO STILL MEET ENERGY CODE. PROVIDE ENERGY METERING IN PANELS TO MEET ENERGY CODE.

8. THE ELECTRICAL CONTRACTOR SHALL REFER TO THE MECHANICAL DRAWINGS AND PROVIDE THERMOSTAT BACK BOXES WHERE SHOWN. FROM EACH THERMOSTAT BOX RUN A 1/2" CONDUIT UP WALL AND STUB OUT AT AN ACCESSIBLE SPACE ABOVE THE CEILING. COORDINATE WORK AND BOX SIZES WITH MECHANICAL CONTRACTOR.

9. ALL BRANCH CIRCUIT RUNS SHALL BE OVERHEAD UNLESS SHOWN BELOW SLAB. PROVIDE JUNCTION BOXES ABOVE CEILING OR ON/SUSPENDED FROM STRUCTURE TO FEED LIGHT FIXTURES, RECEPTACLES AND OTHER DEVICES OR ITEMS.

10. AIC RATINGS SHOWN ON PANELBOARD/SWITCHBOAD SCHEDULES ARE ESTIMATED. ACTUAL RATING SHALL BE AS REQUIRED BY ARC FAULT STUDY CALCULATIONS.

11. ALL SURFACE MOUNTED PANELS SHALL HAVE DOOR-IN-DOOR CONSTRUCTION.

12. UNDER ALTERNATE FLOOR PLANS, PROVIDE ALL WORK SHOWN ON BASE BID FLOOR PLAN IN ADDITION TO WORK SHOWN ON ALTERNATE PLAN. SHADED SYMBOLS ON ALTERNATE FLOOR PLANS INDICATE BASE BID ITEMS.

13. PRIOR TO ROUGH-IN OF A NEW OUTLET (RECEPTACLE, DATA, TV, ETC.), VERIFY EXACT LOCATION WITH THE ARCHITECT.

14. THE LOW VOLTAGE LIGHTING CONTROL WIRING SHALL BE COLOR, TYPE AND SIZE RECOMMENDED BY THE LIGHTING/DIMMING MANUFACTURER AND SHALL BE INSTALLED IN CONDUIT SEPARATE FROM THE POWER CONDUCTORS OR RUN EXPOSED IN A NEAT AND ORDERLY MANNER ATTACHED TO THE LIGHTING CIRCUIT CONDUITS WITHIN 12" FROM LUMINAIRE AND BOX AND AT LEAST 24" MAXIMUM INTERVALS THROUGHOUT RUN.

15. AFTER WORK HAS BEEN COMPLETED, CLEAN ALL LIGHT FIXTURES IN THE RENOVATED SPACES. NO DIRT, DEBRIS, FINGER PRINTS, SOAP RESIDUE, ETC. SHALL BE VISIBLE.

16. SUBMIT SUBSTITUTIONS TO LIGHT FIXTURES AND LIGHTING CONTROLS TO THE ENGINEER AT LEAST 10 DAYS PRIOR TO BID FOR REVIEW.

1 12/04/2020

17. COORDINATE ANY POWER OUTAGES WITH UNIVERSITY.

18. THE SPACE ABOVE THE CEILINGS IS AN AIR PLENUM. ALL DEVICES, WIRING, ETC. SHALL BE PLENUM RATED IF LOCATED ABOVE THE CEILING.

Lighting Fixture Schedule

Type	Description	Model	Lamp	Mounting	Remarks
A	6" DIA. LED OPEN DOWNLIGHT WITH SEMI-SPECULAR REFLECTOR, 2000 LUMEN OUTPUT, MEDIUM DISTRIBUTION, WET LOCATION LISTED UNDER COVER, 0-10V DIMMING AND 120-277V INTERNAL DRIVER.	PRESCOLITE LTR-6RD-H-ML-20L-DM1-LTR-6RD-T-ML-40K-8-MD-SS	23W LED	RECESSED IN CEILING	
B	6" DIA. LED OPEN DOWNLIGHT WITH SEMI-SPECULAR REFLECTOR, 3500 LUMEN OUTPUT, MEDIUM DISTRIBUTION, 90+ CRI, 0-10V DIMMING AND 120-277V INTERNAL DRIVER.	PRESCOLITE LTR-6RD-H-HL-35L-DM1-LTR-6RD-T-HL-40K-9-MD-SS	43W LED	RECESSED IN CEILING	
G	42" TALL LED ACORN LUMINAIRE WITH CAST ALUMINUM CONSTRUCTION, CLEAR DIFFUSED ACRYLIC LENS, BLACK FINISH, TYPE 3 DISTRIBUTION, 0-10V DIMMING AND MULTVOLT INTERNAL DRIVER.	AAL FGL-RB-SAL-Y3-36LED-4K-600-BLK-TA3-WMA3-MOD LESS FINIAL	73W LED	WALL	MOUNT BOTTOM OF FIXTURE AT 6'-9" A.F.F. FIXTURE TO MATCH SITE POST TOPS.
H	36" TALL LED ACORN LUMINAIRE WITH CAST ALUMINUM CONSTRUCTION, CLEAR DIFFUSED ACRYLIC LENS, BLACK FINISH, TYPE 3 DISTRIBUTION, 0-10V DIMMING AND MULTVOLT INTERNAL DRIVER.	AAL FGS-RB-SAL-Y3-36LED-4K-450-BLK-TA3-WMA3-MOD LESS FINIAL	53W LED	WALL	MOUNT BOTTOM OF FIXTURE AT 6'-9" A.F.F. FIXTURE TO MATCH SITE POST TOPS.
K	17"X8" LED WALL BRACKET WITH ALUMINUM HOUSING, FLAT RECTANGULAR DESIGN, 3000 LUMEN OUTPUT, FORWARD THROW MEDIUM LIGHT DISTRIBUTION, INTEGRAL MOTION/PHOTO SENSOR AND 120-277V INTERNAL DRIVER.	LITHONIA WSTLED-P2-40K-VF-MVOLT-PIR-*	16W LED	WALL	*FINISH BY ARCHITECT.
L1	2'X2' LED FLAT PANEL WITH EXTRUDED ALUMINUM FRAME, ACRYLIC LENS, 3000 LUMEN OUTPUT, 0-10V DIMMING AND 120-277V INTEGRAL DRIVER.	COLUMBIA SRP22-40-ML-G-ED1-U	30W LED	RECESSED IN CEILING	
L2	2'X4' LED FLAT PANEL WITH EXTRUDED ALUMINUM FRAME, ACRYLIC LENS, 3500 LUMEN OUTPUT, 0-10V DIMMING AND 120-277V INTEGRAL DRIVER.	COLUMBIA SRP24-40-MW-G-ED1-U	33W LED	RECESSED IN CEILING	
L3	2'X4' LED FLAT PANEL WITH EXTRUDED ALUMINUM FRAME, ACRYLIC LENS, 4100 LUMEN OUTPUT, 0-10V DIMMING AND 120-277V INTEGRAL DRIVER.	COLUMBIA SRP24-40-LW-G-ED1-U	39W LED	RECESSED IN CEILING	
L4	2'X4' LED FLAT PANEL WITH EXTRUDED ALUMINUM FRAME, ACRYLIC LENS, 4500 LUMEN OUTPUT, 0-10V DIMMING AND 120-277V INTEGRAL DRIVER.	COLUMBIA SRP24-40-ML-G-ED1-U	45W LED	RECESSED IN CEILING	
L5	2'X4' LED FLAT PANEL WITH EXTRUDED ALUMINUM FRAME, ACRYLIC LENS, 5100 LUMEN OUTPUT, 0-10V DIMMING AND 120-277V INTEGRAL DRIVER.	COLUMBIA SRP24-40-HL-G-ED1-U	54W LED	RECESSED IN CEILING	
L6	2'X4' LED FLAT PANEL WITH EXTRUDED ALUMINUM FRAME, ACRYLIC LENS, 6600 LUMEN OUTPUT, 0-10V DIMMING AND 120-277V INTEGRAL DRIVER.	COLUMBIA SRP24-40-VL-G-ED1-U	69W LED	RECESSED IN CEILING	
P	LED WALL BRACKET (ENCLOSED AND GASKETED) WITH ALUMINUM GUARD AND 120 VOLT DRIVER.	HUBBELL V8LU15-WW1-VCG-1	20W LED	WALL	*MOUNT IN ELEVATOR PIT AS DIRECTED BY ELEVATOR INSTALLER.
P2	4' x 4" SQUARE LED LINEAR WITH EXTRUDED ALUMINUM HOUSING, DIE CAST ALUMINUM END CAPS, FLUSH SOFT DIFFUSED ACRYLIC LENS, AIRCRAFT CABLE SUSPENSION, 900 LUMENS/FOOT, 0-10V DIMMING AND 120-277V INTERNAL DRIVER.	LITECONTROL 4L-P-D-4(+)-SOF-C1-40K-D090-D01-1C-UNV-FA	33W LED	SUSPENDED	*FINISH BY ARCHITECT. SUSPEND FIXTURE UNDER OTHER TRADES TO HEIGHT BY ARCHITECT. PROVIDE CONTINUOUS RUNS WHERE SHOWN WITH 8-12' SECTIONS. FACTORY ASSEMBLED.
P3	4' x 4" SQUARE LED LINEAR WITH EXTRUDED ALUMINUM HOUSING, DIE CAST ALUMINUM END CAPS, FLUSH SOFT DIFFUSED ACRYLIC LENS, AIRCRAFT CABLE SUSPENSION, 1000 LUMENS/FOOT, 0-10V DIMMING AND 120-277V INTERNAL DRIVER.	LITECONTROL 4L-P-D-4(+)-SOF-C1-40K-D100-D01-1C-UNV-FA	36W LED	SUSPENDED	*FINISH BY ARCHITECT. SUSPEND FIXTURE UNDER OTHER TRADES TO HEIGHT BY ARCHITECT. PROVIDE CONTINUOUS RUNS WHERE SHOWN WITH 8-12' SECTIONS. FACTORY ASSEMBLED.
S1	4' LED STRIP WITH ROUND DIFFUSED LENS, 3600 LUMEN OUTPUT, WIDE LIGHT DISTRIBUTION, 0-10V DIMMABLE AND 120-277V INTERNAL DRIVER.	COLUMBIA MPS-4-40-MW-C-W-ED-U-PAF	30W LED	SUSPENDED/SURFACE	SUSPEND BELOW AND COORDINATE LOCATION WITH OTHER TRADES.
S2	4' LED STRIP WITH ROUND DIFFUSED LENS, 4600 LUMEN OUTPUT, WIDE LIGHT DISTRIBUTION, 0-10V DIMMABLE AND 120-277V INTERNAL DRIVER.	COLUMBIA MPS-4-40-ML-C-W-ED-U-PAF	40W LED	SUSPENDED/SURFACE	SUSPEND BELOW AND COORDINATE LOCATION WITH OTHER TRADES.
W4	4' x 4" LED WALL MOUNT FIXTURE WITH ROUND/CURVED LENS, DIRECT/INDERECT LIGHT DISTRIBUTION, 800 LUMENS/FT, INTERNAL BI-LEVEL OCCUPANCY SENSOR AND 120-277V INTERNAL DRIVER.	AXIS PRWLED-800-80-40-S-4-W-UNV-BI*-1-OS	29W LED	WALL	*PROVIDE OCCUPANCY SENSOR AND DRIVER SO THAT FIXTURE STAYS ON AT 30%, AND WHEN OCCUPANCY IS DETECTED BRIGHTENS TO 100%. PROVIDE CONSTANT HOT CIRCUIT TO FIXTURE.
W6	6' x 4" LED WALL MOUNT FIXTURE WITH ROUND/CURVED LENS, DIRECT/INDERECT LIGHT DISTRIBUTION, 800 LUMENS/FT, INTERNAL BI-LEVEL OCCUPANCY SENSOR AND 120-277V INTERNAL DRIVER.	AXIS PRWLED-800-80-40-S-6-W-UNV-BI*-1-OS	43W LED	WALL	*PROVIDE OCCUPANCY SENSOR AND DRIVER SO THAT FIXTURE STAYS ON AT 30%, AND WHEN OCCUPANCY IS DETECTED BRIGHTENS TO 100%. PROVIDE CONSTANT HOT CIRCUIT TO FIXTURE.
EXIT SNGL	SINGLE FACE EDGE LIT EXIT LIGHT WITH RED LETTERS ON MIRRORED BACKGROUND, BRUSHED ALUMINUM HOUSING TRIM, LED LAMPS, 120/277 VOLT OPERATION AND WITH OR WITHOUT ARROWS (AS SHOWN).	DUAL-LITE LES-C/W-S-R-*-N-A-M	N/A	CEILING/WALL	
EXIT DBL	DOUBLE FACE EDGE LIT EXIT LIGHT WITH RED LETTERS ON MIRRORED BACKGROUND, BRUSHED ALUMINUM HOUSING TRIM, LED LAMPS, 120/277 VOLT OPERATION AND WITH OR WITHOUT ARROWS (AS SHOWN).	DUAL-LITE LES-C-D-R-*-N-A-M	N/A	CEILING	

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Job Number 18144

Date 11/17/2020

Drawn By SCC

Checked By SLC

Revised 12/04/2020

Project Title

Center for Materials and Manufacturing Sciences
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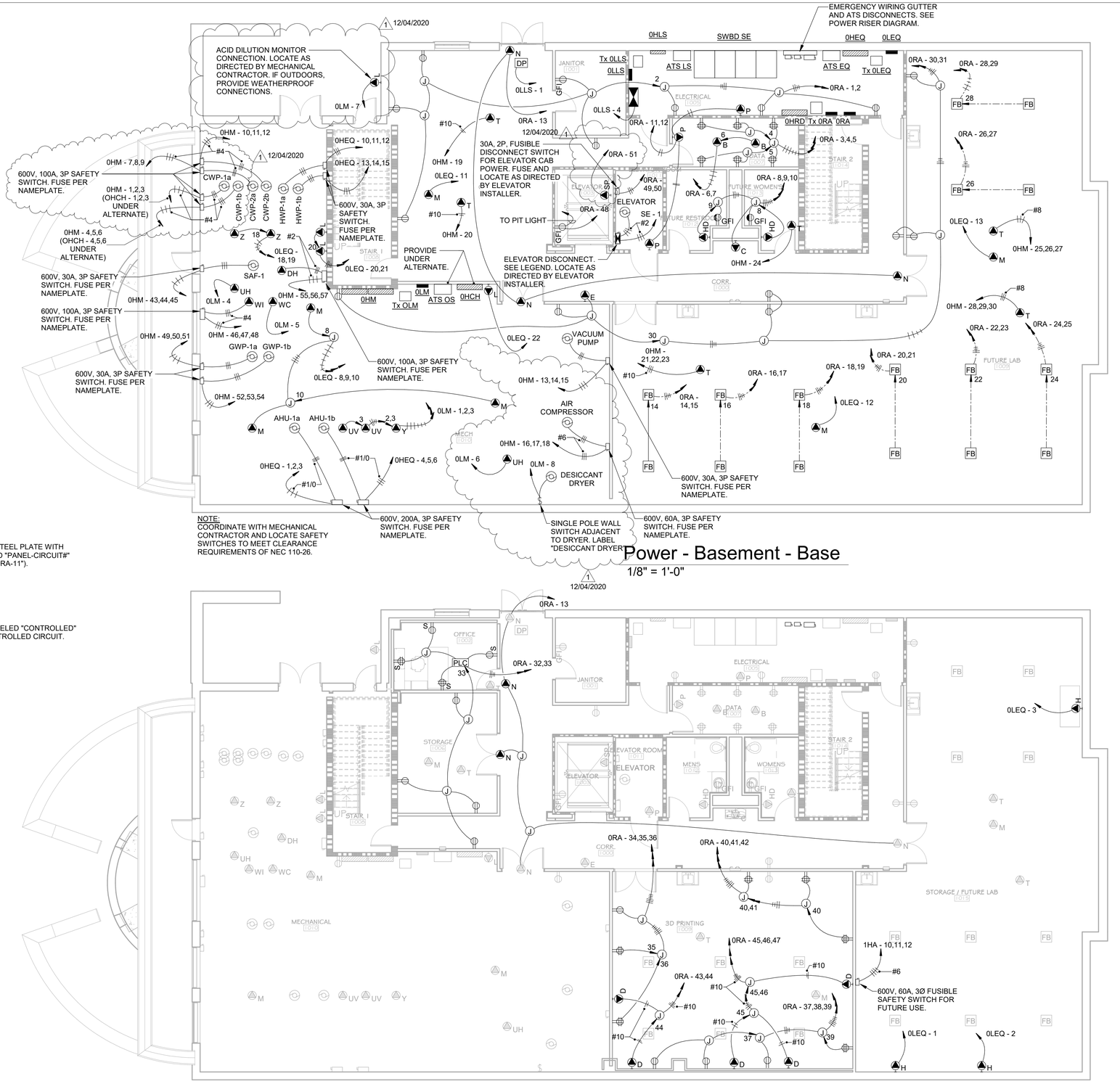
Sheet Title

Legends, Schedules and Notes

Sheet Number

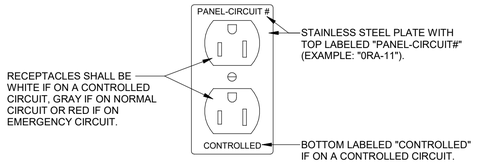
E003

ALABAMA REGISTERED No. 17050 PROFESSIONAL 12/17/20 ENGINEER STEVEN L. CONOLY



Power - Basement - Base

1/8" = 1'-0"



Receptacle Detail

No Scale

Power - Basement - Alternate

1/8" = 1'-0"

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Sheet Title

Basement Power Plans

Sheet Number

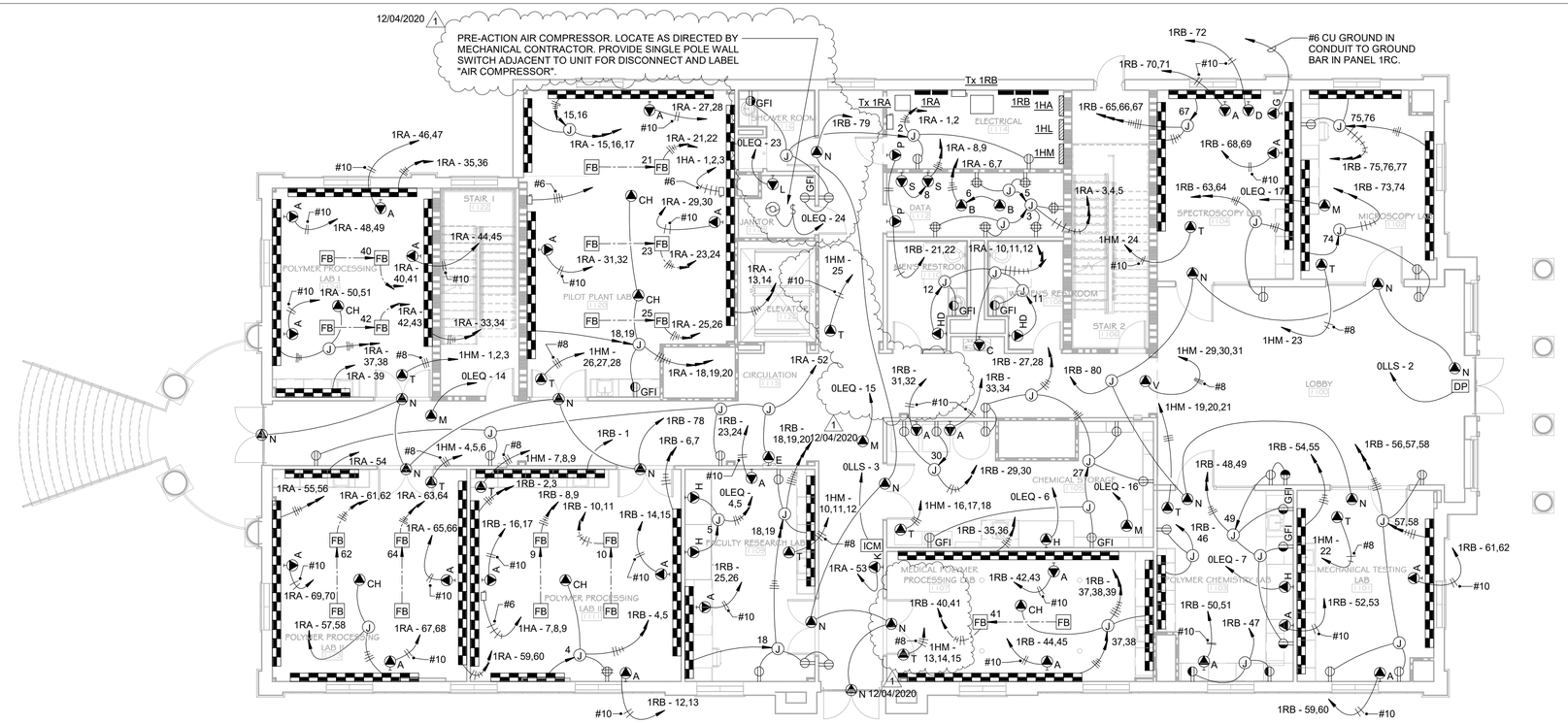
E007

ALABAMA REGISTERED No. 17030 PROFESSIONAL ENGINEER STEVEN L. CONOLY 12/17/20

12/04/2020 1

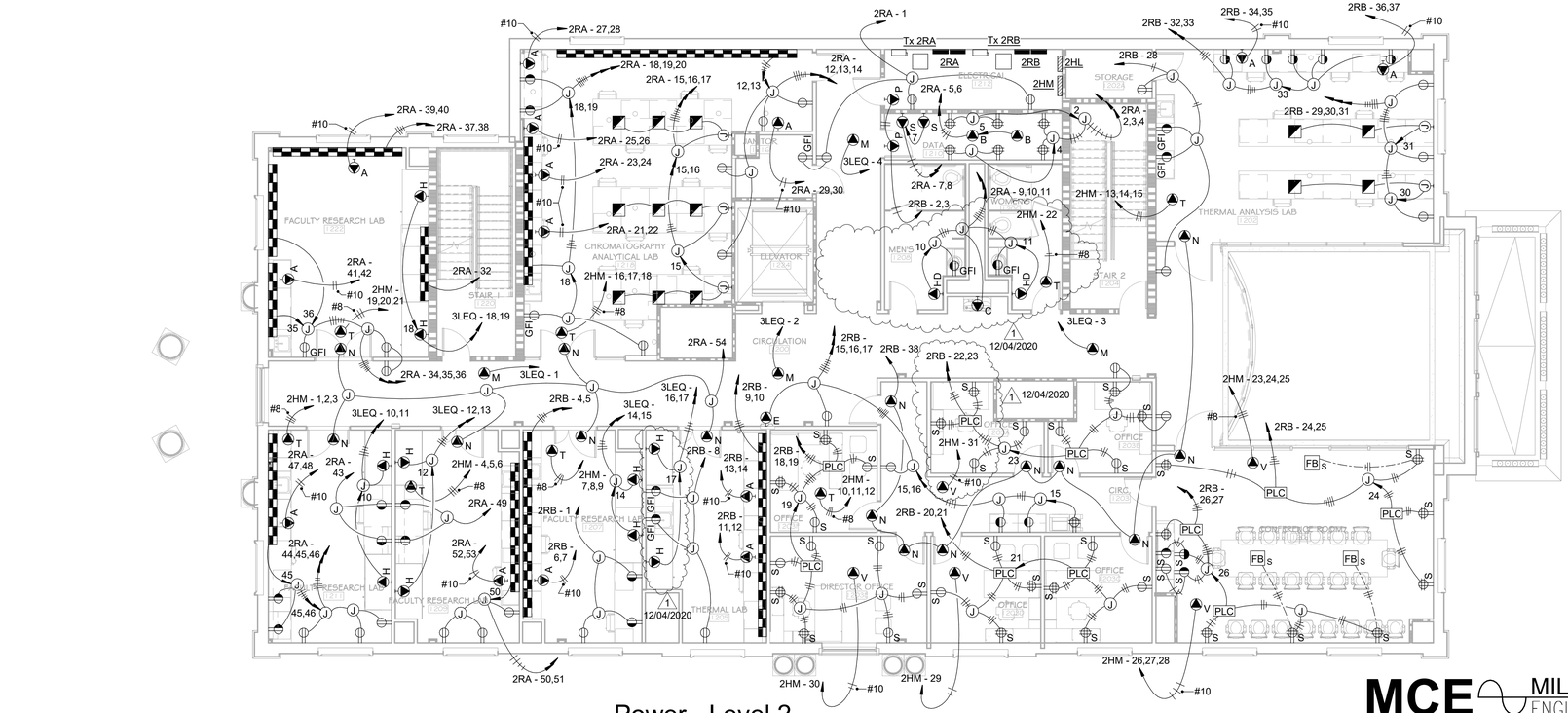
PRE-ACTION AIR COMPRESSOR. LOCATE AS DIRECTED BY MECHANICAL CONTRACTOR. PROVIDE SINGLE POLE WALL SWITCH ADJACENT TO UNIT FOR DISCONNECT AND LABEL "AIR COMPRESSOR".

#6 CU GROUND IN CONDUIT TO GROUND BAR IN PANEL 1RC.



Power - Level 1

1/8" = 1'-0"



Power - Level 2

1/8" = 1'-0"

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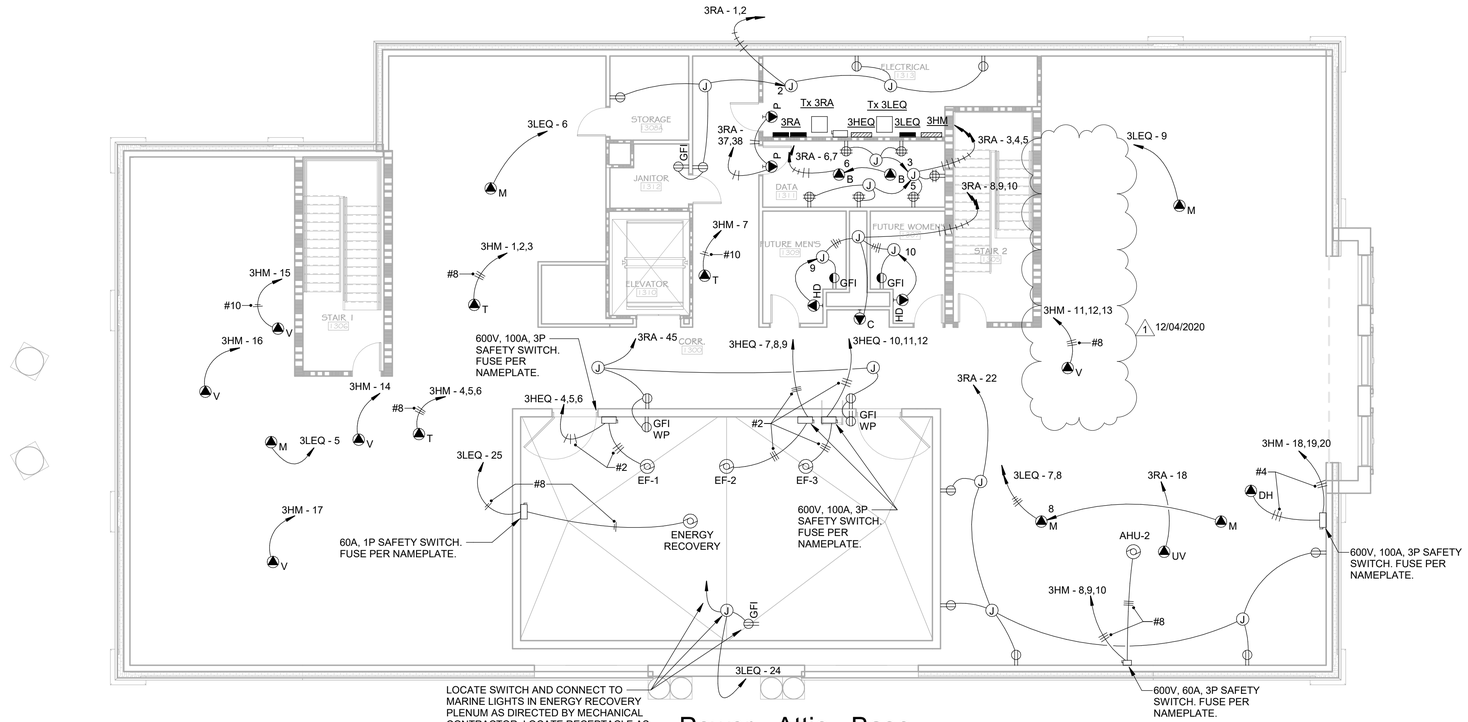
Sheet Title

First and Second Floor Power Plans

Sheet Number

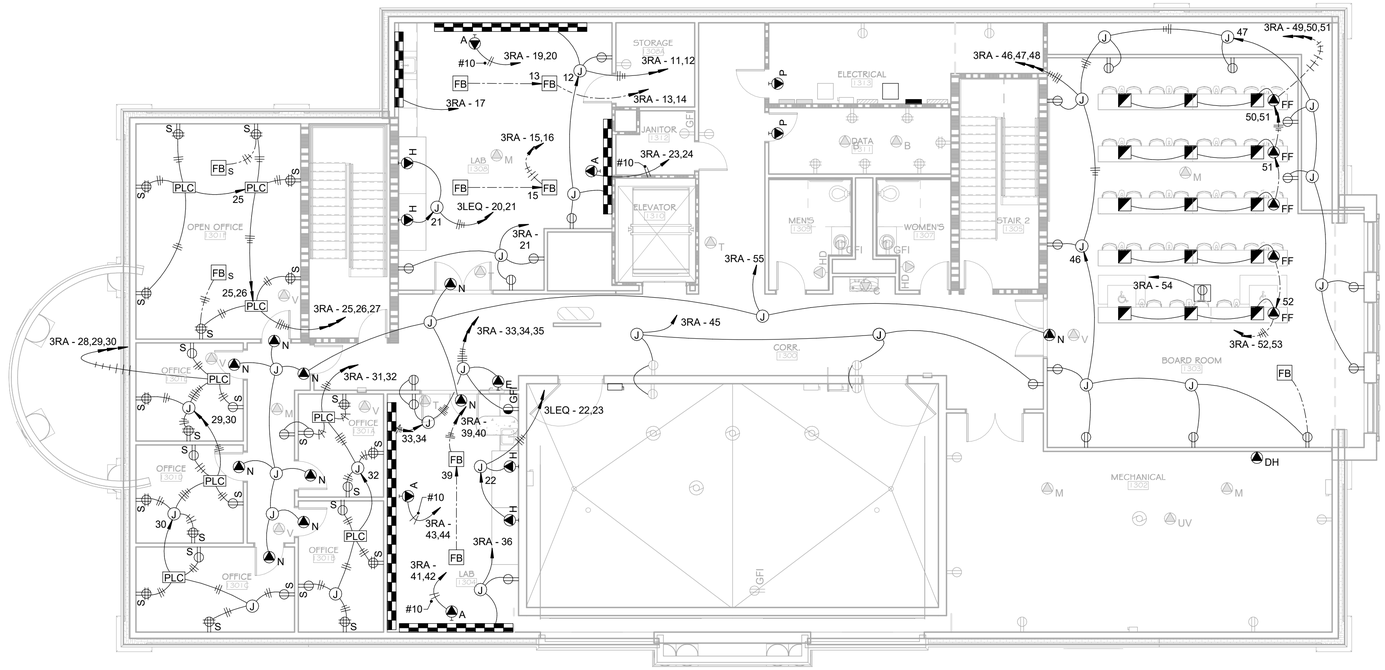
E008

ALABAMA REGISTERED No. 17050 PROFESSIONAL 12/17/20 ENGINEER STEVEN L. CONOLY



Power - Attic - Base

1/8" = 1'-0"



Power - Attic - Alternate

1/8" = 1'-0"

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Project Title

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Sheet Title

Attic Power Plans

Sheet Number

E009

ALABAMA REGISTERED No. 17050 PROFESSIONAL ENGINEER STEVEN L. CONOLY 12/03/20

Panel: 0LM

Location: Mech. 1010
Supply From: Tx OLM
Mounting: Surface Mounted
Enclosure: NEMA 1

Volts: 120/208 Wye
Phases: 3
Wires: 4
Type: NQOD

A.I.C. Rating: 10kA
Mains Type: MCB
Mains Rating: 100 A
MCB Rating: 100 A

CKT	Circuit Description	Trip	Poles	Breaker Type	A		B		C		Breaker Type	Poles	Trip	Circuit Description	CKT
1	AHU Lighting	20 A	1	QOB	365 VA	0 VA					--	--	--	Space	13
2	UV Lights	20 A	1	QOB			1680 VA	0 VA			--	--	--	Space	14
3	UV Lights	20 A	1	QOB					1680 VA	0 VA	--	--	--	Space	15
4	Unit Heater	20 A	1	QOB	600 VA	0 VA					--	--	--	Space	16
5	Circulating Pump	20 A	1	QOB			0 VA	0 VA			--	--	--	Space	17
6	Unit Heater	20 A	1						600 VA	0 VA	--	--	--	Space	18
7	HVAC Controls	20 A	1	QOB	125 VA	0 VA					--	--	--	Space	19
8	Desiccant Dryer	20 A	1	QOB			750 VA	0 VA			--	--	--	Space	20
9	Spare	20 A	1	--					0 VA	0 VA	--	--	--	Space	21
10	Space	--	--	--	0 VA	0 VA					--	--	--	Space	22
11	Space	--	--	--			0 VA	0 VA			--	--	--	Space	23
12	Space	--	--	--					0 VA	0 VA	--	--	--	Space	24
	Total Load:				1090 VA		2430 VA		2280 VA						
	Total Amps:				9 A		22 A		21 A						

12/04/2020 1

Panel Totals

Total Conn. Load: 5800 VA

Total Conn. Current: 16 A

Notes:
Provide internal Surge Protection Device (S.P.D.).
Spare breakers shall be QOB type.

Panel: 1RA

Location: Electrical 1114
Supply From: Tx 1RA
Mounting: Surface Mounted
Enclosure: NEMA 1

Volts: 120/208 Wye
Phases: 3
Wires: 4
Type: NQOD

A.I.C. Rating: 10kA
Mains Type: MCB
Mains Rating: 225 A
MCB Rating: 225 A

CKT	Circuit Description	Trip	Poles	Breaker Type	A		B		C		Breaker Type	Poles	Trip	Circuit Description	CKT
1	Receptacles	20 A	1	QOB	360 VA	360 VA					QOB	1	20 A	Other	43
2	Receptacles	20 A	1	QOB			720 VA	750 VA			QOB	2	30 A	L6-30R	44
3	Receptacles	20 A	1	QOB					720 VA	750 VA	--	--	--	--	45
4	Receptacles	20 A	1	QOB	720 VA	750 VA					QOB	2	30 A	L6-30R	46
5	Receptacles	20 A	1	QOB			720 VA	750 VA			--	--	--	--	47
6	Rack Receptacle	20 A	1	QOB					1500 VA	750 VA	QOB	2	30 A	L6-30R	48
7	Rack Receptacle	20 A	1	QOB	1500 VA	750 VA					--	--	--	--	49
8	Shades	20 A	1	QOB			1200 VA	750 VA			QOB	2	30 A	L6-30R	50
9	Shades	20 A	1	QOB					1200 VA	750 VA	--	--	--	--	51
10	Receptacles	20 A	1	QOB	610 VA	665 VA					QOB	1	20 A	Receptacles	52
11	Hand Dryer	20 A	1	QOB			1200 VA	125 VA			QOB	1	20 A	Key Box	53
12	Hand Dryer	20 A	1	QOB					1200 VA	720 VA	QOBGFI	1	20 A	Plug-in Strip	54
13	Plug-in Strip	20 A	1	QOB	1080 VA	1080 VA					QOB	1	20 A	Plug-in Strip	55
14	Plug-in Strip	20 A	1	QOB			1080 VA	720 VA			QOB	1	20 A	Plug-in Strip	56
15	Plug-in Strip	20 A	1	QOB					720 VA	720 VA	QOB	1	20 A	Plug-in Strip	57
16	Plug-in Strip	20 A	1	QOB	1080 VA	870 VA					QOB	1	20 A	Plug-in Strip	58
17	Plug-in Strip	20 A	1	QOB			720 VA	1080 VA			QOB	1	20 A	Plug-in Strip	59
18	Plug-in Strip	20 A	1	QOB					720 VA	720 VA	QOB	1	20 A	Plug-in Strip	60
19	Plug-in Strip	20 A	1	QOB	720 VA	360 VA					QOB	1	20 A	Floorbox	61
20	Plug-in Strip	20 A	1	QOBGFI			480 VA	360 VA			QOB	1	20 A	Floorbox	62
21	Floorbox	20 A	1	QOB					360 VA	360 VA	QOB	1	20 A	Floorbox	63
22	Floorbox	20 A	1	QOB	360 VA	360 VA					QOB	1	20 A	Floorbox	64
23	Floorbox	20 A	1	QOB			360 VA	750 VA			QOB	2	30 A	L6-30R	65
24	Floorbox	20 A	1	QOB					360 VA	750 VA	--	--	--	--	66
25	Floorbox	20 A	1	QOB	360 VA	750 VA					QOB	2	30 A	L6-30R	67
26	Floorbox	20 A	1	QOB			360 VA	750 VA			--	--	--	--	68
27	L6-30R	30 A	2	QOB					750 VA	750 VA	QOB	2	30 A	L6-30R	69
28	--	--	--	--	750 VA	750 VA					--	--	--	--	70
29	L6-30R	30 A	2	QOB			750 VA	0 VA			--	1	20 A	Spare	71
30	--	--	--	--					750 VA	0 VA	--	1	20 A	Spare	72
31	L6-30R	30 A	2	QOB	750 VA	0 VA					--	1	20 A	Spare	73
32	--	--	--	--			750 VA	0 VA			--	1	20 A	Spare	74
33	Plug-in Strip	20 A	1	QOB					720 VA	0 VA	--	1	20 A	Spare	75
34	Plug-in Strip	20 A	1	QOB	720 VA	0 VA					--	1	20 A	Spare	76
35	Plug-in Strip	20 A	1	QOB			720 VA	0 VA			--	1	20 A	Spare	77
36	Plug-in Strip	20 A	1	QOB					720 VA	0 VA	--	1	20 A	Spare	78
37	Plug-in Strip	20 A	1	QOB	1080 VA	0 VA					--	1	20 A	Spare	79
38	Plug-in Strip	20 A	1	QOB			870 VA	0 VA			--	1	20 A	Spare	80
39	Plug-in Strip	20 A	1	QOBGFI					720 VA	0 VA	--	1	20 A	Spare	81
40	Floorbox	20 A	1	QOB	360 VA	0 VA					--	1	20 A	Spare	82
41	Floorbox	20 A	1	QOB			360 VA	0 VA			--	1	20 A	Spare	83
42	Floorbox	20 A	1	QOB					360 VA	0 VA	--	1	20 A	Spare	84
	Total Load:				17145 VA		16325 VA		17070 VA						
	Total Amps:				144 A		136 A		143 A						

1 12/04/2020

Panel Totals

Total Conn. Load: 50540 VA

Total Conn. Current: 140 A

Notes:
Two equal sections.
Spare breakers shall be QOB type.
Provide internal Surge Protection Device (S.P.D.).

Panel: 0RA

Location: Electrical 1005
Supply From: Tx 0RA
Mounting: Surface Mounted
Enclosure: NEMA 1

Volts: 120/208 Wye
Phases: 3
Wires: 4
Type: NQOD

A.I.C. Rating: 10kA
Mains Type: MCB
Mains Rating: 225 A
MCB Rating: 225 A

CKT	Circuit Description	Trip	Poles	Breaker Type	A		B		C		Breaker Type	Poles	Trip	Circuit Description	CKT
1	Receptacles	20 A	1	QOB	540 VA	1500 VA					QOB	1	30 A	Receptacles	43
2	Receptacles	20 A	1	QOB			1260 VA	1500 VA			QOB	1	30 A	Receptacles	44
3	Receptacles	20 A	1	QOB					720 VA	1500 VA	QOB	1	30 A	Receptacles	45
4	Receptacles	20 A	1	QOB	720 VA	1500 VA					QOB	1	30 A	Receptacles	46
5	Receptacles	20 A	1	QOB			720 VA	1500 VA			QOB	1	30 A	Receptacles	47
6	Rack Receptacle	20 A	1	QOB					1500 VA	380 VA	QOB	1	20 A	Elevator Pit	48
7	Power	20 A	1	QOB	1500 VA	1200 VA					QOB	2	20 A	Elevator Cab	49
8	Hand Dryer	20 A	1	QOB			1200 VA	1200 VA			--	--	--	--	50
9	Hand Dryer	20 A	1	QOB					1200 VA	1176 VA	QOB	1	20 A	Sump Pump	51
10	Receptacles	20 A	1	QOB	610 VA	0 VA					--	1	20 A	Spare	52
11	DHP	20 A	2	QOB			563 VA	0 VA			--	1	20 A	Spare 1 12/04/2020	53
12	--	--	--	--					563 VA	0 VA	--	1	20 A	Spare	54
13	Door Controls	20 A	1	QOB	400 VA	0 VA					--	1	20 A	Spare	55
14	Floorbox	20 A	1	QOB			360 VA	0 VA			--	1	20 A	Spare	56
15	Floorbox	20 A	1	QOB					360 VA	0 VA	--	1	20 A	Spare	57
16	Floorbox	20 A	1	QOB	360 VA	0 VA					--	1	20 A	Spare	58
17	Floorbox	20 A	1	QOB			360 VA	0 VA			--	1	20 A	Spare	59
18	Floorbox	20 A	1	QOB					360 VA	0 VA	--	1	20 A	Spare	60
19	Floorbox	20 A	1	QOB	360 VA	0 VA					--	1	20 A	Spare	61
20	Floorbox	20 A	1	QOB			360 VA	0 VA			--	1	20 A	Spare	62
21	Floorbox	20 A	1	QOB					360 VA	0 VA	--	1	20 A	Spare	63
22	Floorbox	20 A	1	QOB	360 VA	0 VA					--	--	--	Space	64
23	Floorbox	20 A	1	QOB			360 VA	0 VA			--	--	--	Space	65
24	Floorbox	20 A	1	QOB					360 VA	0 VA	--	--	--	Space	66
25	Floorbox	20 A	1	QOB	360 VA	0 VA					--	--	--	Space	67
26	Floorbox	20 A	1	QOB			360 VA	0 VA			--	--	--	Space	68
27	Floorbox	20 A	1	QOB					360 VA	0 VA	--	--	--	Space	69
28	Floorbox	20 A	1	QOB	360 VA	0 VA					--	--	--	Space	70
29	Floorbox	20 A	1	QOB			360 VA	0 VA			--	--	--	Space	71
30	Receptacles	20 A	1	QOB					485 VA	0 VA	--	--	--	Space	72
31	Receptacles	20 A	1	QOB	900 VA	0 VA					--	--	--	Space	73
32	Receptacles	20 A	1	QOB			1080 VA	0 VA			--	--	--	Space	74
33	Receptacles	20 A	1	QOB					720 VA	0 VA	--	--	--	Space	75
34	Receptacles	20 A	1	QOB	360 VA	0 VA					--	--	--	Space	76
35	Receptacles	20 A	1	QOB			360 VA	0 VA			--	--	--	Space	77
36	Receptacles	20 A	1	QOB					360 VA	0 VA	--	--	--	Space	78
37	Receptacles	20 A	1	QOB	360 VA	0 VA					--	--	--	Space	79
38	Receptacles	20 A	1	QOB			180 VA	0 VA			--	--	--	Space	80
39	Receptacles	20 A	1	QOB					360 VA	0 VA	--	--	--	Space	81
40	Receptacles	20 A	1	QOB	360 VA	0 VA					--	--	--	Space	82
41	Receptacles	20 A	1	QOB			360 VA	0 VA			--	--	--	Space	83
42	Receptacles	20 A	1	QOB					360 VA	0 VA	--	--	--	Space	84
	Total Load:				11750 VA		12083 VA		11124 VA						
	Total Amps:				99 A		101 A		93 A						

Panel Totals

Total Conn. Load: 34956 VA

Total Conn. Current: 97 A

Notes:
Two equal sections.
Spare breakers shall be QOB type.
Provide internal Surge Protection Device (S.P.D.).

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Checked By: SLC
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Project Title:
Center for Materials and Manufacturing Sciences
TROY UNIVERSITY

Sheet Title:
Panelboard Schedules

Sheet Number:
E017

ALABAMA REGISTERED No. 17030 PROFESSIONAL ENGINEER STEVEN L. CONOLY 12/17/20

Panel: 0HM

Location: Mech. 1010
Supply From: SE
Mounting: Surface Mounted
Enclosure: NEMA 1

Volts: 480/277 Wye
Phases: 3
Wires: 4
Type: NF

A.I.C. Rating: 65kA
Mains Type: MCB
Mains Rating: 800 A
MCB Rating: N/A

12/04/2020 1

CKT	Circuit Description	Trip	Poles	Breaker Type	A		B		C		Breaker Type	Poles	Trip	Circuit Description	CKT
1	CWP-1a	70 A	3	EDB	9422 VA	1108 VA					EDB	3	20 A	SAF-1	43
2	--	--	--	--			9422 VA	1108 VA			--	--	--	--	44
3	--	--	--	--					9422 VA	1108 VA	--	--	--	--	45
4	CWP-1b	70 A	3	EDB	9422 VA	15000 VA					EDB	3	80 A	Water Heater	46
5	--	--	--	--			9422 VA	15000 VA			--	--	--	--	47
6	--	--	--	--					9422 VA	15000 VA	--	--	--	--	48
7	CWP-2a	70 A	3	EDB	9422 VA	2106 VA					EDB	3	20 A	GWP-1a	49
8	--	--	--	--			9422 VA	2106 VA			--	--	--	--	50
9	--	--	--	--					9422 VA	2106 VA	--	--	--	--	51
10	CWP-2b	70 A	3	EDB	9422 VA	2106 VA					EDB	3	20 A	GWP-1b	52
11	--	--	--	--			9422 VA	2106 VA			--	--	--	--	53
12	--	--	--	--					9422 VA	2106 VA	--	--	--	--	54
13	Vacuum Pump	20 A	3	EDB	4312 VA	16667 VA					EDB	3	100 A	Duct Heater	55
14	--	--	--	--			4312 VA	16667 VA			--	--	--	--	56
15	--	--	--	--					4312 VA	16667 VA	--	--	--	--	57
16	Air Compressor	60 A	3	EDB	11085 VA	0 VA					--	3	50 A	Spare	58
17	--	--	--	--			11085 VA	0 VA			--	--	--	--	59
18	--	--	--	--					11085 VA	0 VA	--	--	--	--	60
19	SATU-1	30 A	1	EDB	5000 VA	0 VA					--	3	20 A	Spare	61
20	SATU-2	30 A	1	EDB			5000 VA	0 VA			--	--	--	--	62
21	SATU-3	30 A	3	EDB					5000 VA	0 VA	--	--	--	--	63
22	--	--	--	--	5000 VA	0 VA					--	--	--	Space	64
23	--	--	--	--			5000 VA	0 VA			--	--	--	Space	65
24	SATU-4	20 A	1	EDB					3000 VA	0 VA	--	--	--	Space	66
25	SATU-5	50 A	3	EDB	10000 VA	0 VA					--	--	--	Space	67
26	--	--	--	--			10000 VA	0 VA			--	--	--	Space	68
27	--	--	--	--					10000 VA	0 VA	--	--	--	Space	69
28	SATU-6	50 A	3	EDB	10000 VA	0 VA					--	--	--	Space	70
29	--	--	--	--			10000 VA	0 VA			--	--	--	Space	71
30	--	--	--	--					10000 VA	0 VA	--	--	--	Space	72
31	Tx OLM	25 A	3	EDB	1090 VA	0 VA					--	--	--	Space	73
32	--	--	--	--			2430 VA	0 VA			--	--	--	Space	74
33	--	--	--	--					2280 VA	0 VA	--	--	--	Space	75
34	VRF-1a	20 A	3	EDB	4157 VA	0 VA					--	--	--	Space	76
35	--	--	--	--			4157 VA	0 VA			--	--	--	Space	77
36	--	--	--	--					4157 VA	0 VA	--	--	--	Space	78
37	VRF-1b	20 A	3	EDB	4157 VA	0 VA					--	--	--	Space	79
38	--	--	--	--			4157 VA	0 VA			--	--	--	Space	80
39	--	--	--	--					4157 VA	0 VA	--	--	--	Space	81
40	ATS OS (Alternate)	100 A	3	EDB	18845 VA	0 VA					--	--	--	Space	82
41	--	--	--	--			18845 VA	0 VA			--	--	--	Space	83
42	--	--	--	--					18845 VA	0 VA	--	--	--	Space	84
		Total Load:			148323 VA		149663 VA		147513 VA						
		Total Amps:			536 A		541 A		533 A						

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Redudant 1+1	182240 VA	50.00%	91120 VA		
Redudant 2+1	0 VA	0.00%	0 VA	**Total Conn. Load:**	445499 VA
				Total Est. Demand:	354379 VA
				Total Conn. Current:	536 A
				Total Est. Demand Current:	426 A

Notes:
Spare breakers shall be EDB type.
Two equal sections.

Panel: 0HRD

Location: Electrical 1005
Supply From: SE
Mounting: Surface Mounted
Enclosure: NEMA 1

Volts: 480/277 Wye
Phases: 3
Wires: 4
Type: I-Line

A.I.C. Rating: 65kA
Mains Type: MLO
Mains Rating: 600 A
MCB Rating: N/A

CKT	Circuit Description	Trip	Poles	Breaker Type	A		B		C		Breaker Type	Poles	Trip	Circuit Description	CKT
1	Tx 0RA	125 A	3	HD	11750 VA	0 VA					--	--	--	Space	19
2	--	--	--	--			12083 VA	0 VA			--	--	--	--	20
3	--	--	--	--					11124 VA	0 VA	--	--	--	--	21
4	Tx 1RA	125 A	3	HD	17145 VA	0 VA					--	--	--	Space	22
5	--	--	--	--			16325 VA	0 VA			--	--	--	--	23
6	--	--	--	--					17070 VA	0 VA	--	--	--	--	24
7	Tx 1RB	175 A	3	JD	18730 VA	0 VA					--	--	--	Space	25
8	--	--	--	--			19810 VA	0 VA			--	--	--	--	26
9	--	--	--	--					20140 VA	0 VA	--	--	--	--	27
10	Tx 2RA	125 A	3	HD	13530 VA	0 VA					--	--	--	Space	28
11	--	--	--	--			16140 VA	0 VA			--	--	--	--	29
12	--	--	--	--					14620 VA	0 VA	--	--	--	--	30
13	Tx 2RB	125 A	3	HD	11100 VA	0 VA					--	--	--	Space	31
14	--	--	--	--			11695 VA	0 VA			--	--	--	--	32
15	--	--	--	--					8690 VA	0 VA	--	--	--	--	33
16	Tx 3RA	125 A	3	HD	15220 VA	0 VA					--	--	--	Space	34
17	--	--	--	--			14315 VA	0 VA			--	--	--	--	35
18	--	--	--	--					17380 VA	0 VA	--	--	--	--	36
		Total Load:			87475 VA		90368 VA		89024 VA						
		Total Amps:			316 A		327 A		322 A						

Panel Totals

Total Conn. Load: 266866 VA

Total Conn. Current: 321 A

Notes:

Panel: 0HCH

Location: Mechanical 1010
Supply From: ATS OS
Mounting: Surface Mounted
Enclosure: NEMA 1

Volts: 480/277 Wye
Phases: 3
Wires: 4
Type: NF

A.I.C. Rating: 65kA
Mains Type: MLO
Mains Rating: 100 A
MCB Rating: N/A

CKT	Circuit Description	Trip	Poles	Breaker Type	A		B		C		Breaker Type	Poles	Trip	Circuit Description	CKT
1	CWP-1a	50 A	3	EDB	9422 VA	0 VA					--	--	--	Space	10
2	--	--	--	--			9422 VA	0 VA			--	--	--	Space	11
3	--	--	--	--					9422 VA	0 VA	--	--	--	Space	12
4	CWP-1b	50 A	3	EDB	9422 VA	0 VA					--	--	--	Space	13
5	--	--	--	--			9422 VA	0 VA			--	--	--	Space	14
6	--	--	--	--					9422 VA	0 VA	--	--	--	Space	15
7	Space	--	--	--	0 VA	0 VA					--	--	--	Space	16
8	Space	--	--	--			0 VA	0 VA			--	--	--	Space	17
9	Space	--	--	--					0 VA	0 VA	--	--	--	Space	18
		Total Load:			18845 VA		18845 VA		18845 VA						
		Total Amps:			68 A		68 A		68 A						

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Redudant 1+1	56534 VA	50.00%	28267 VA		
Redudant 2+1	0 VA	0.00%	0 VA	**Total Conn. Load:**	56534 VA
				Total Est. Demand:	28267 VA
				Total Conn. Current:	68 A
				Total Est. Demand Current:	34 A

Notes:
Provide under alternate.

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Project Title
Center for Materials and Manufacturing Sciences
TROY UNIVERSITY

Sheet Title
Panelboard Schedules

Sheet Number
E020

ALABAMA REGISTERED No. 17030 PROFESSIONAL ENGINEER STEVEN L. CONOLY 12/17/20

Panel: 0HEQ

Location: Electrical 1005
Supply From: ATS EQ
Mounting: Surface Mounted
Enclosure: NEMA 1

Volts: 480/277 Wye
Phases: 3
Wires: 4
Type: I-Line

A.I.C. Rating: 65kA
Mains Type: MLO
Mains Rating: 600 A
MCB Rating: N/A

CKT	Circuit Description	Trip	Poles	Breaker Type	A		B		C		Breaker Type	Poles	Trip	Circuit Description	CKT
1	AHU-1a	150 A	3	HD	32424 VA	0 VA					--	3	100 A	Spare	19
2	--	--	--	--			32424 VA	0 VA			--	--	--	--	20
3	--	--	--	--					32424 VA	0 VA	--	--	--	--	21
4	AHU-1b	150 A	3	HD	32424 VA	0 VA					--	--	--	Space	22
5	--	--	--	--			32424 VA	0 VA			--	--	--	--	23
6	--	--	--	--					32424 VA	0 VA	--	--	--	--	24
7	Tx 0LEQ	50 A	3	HD	7535 VA	0 VA					--	--	--	Space	25
8	--	--	--	--			5875 VA	0 VA			--	--	--	--	26
9	--	--	--	--					7760 VA	0 VA	--	--	--	--	27
10	HWP-1a	20 A	3	HD	2106 VA	0 VA					--	--	--	Space	28
11	--	--	--	--			2106 VA	0 VA			--	--	--	--	29
12	--	--	--	--					2106 VA	0 VA	--	--	--	--	30
13	HWP-1b	20 A	3	HD	2106 VA	0 VA					--	--	--	Space	31
14	--	--	--	--			2106 VA	0 VA			--	--	--	--	32
15	--	--	--	--					2106 VA	0 VA	--	--	--	--	33
16	Panel 3HEQ	225 A	3	JJ	53732 VA	0 VA					--	--	--	Space	34
17	--	--	--	--			51482 VA	0 VA			--	--	--	--	35
18	--	--	--	--					51132 VA	0 VA	--	--	--	--	36
		Total Load:			130328 VA		126418 VA		127953 VA						
		Total Amps:			471 A		456 A		463 A						

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Redudant 1+1	207182 VA	50.00%	103591 VA		
Redudant 2+1	129696 VA	66.67%	86468 VA	**Total Conn. Load:**	384698 VA
				Total Est. Demand:	230279 VA
				Total Conn. Current:	463 A
				Total Est. Demand Current:	277 A

Notes:
Spare breaker shall be HD type.

Panel: 0LEQ

Location: Electrical 1005
Supply From: Tx 0LEQ
Mounting: Surface Mounted
Enclosure: NEMA 1

Volts: 120/208 Wye
Phases: 3
Wires: 4
Type: NQOD

A.I.C. Rating: 10kA
Mains Type: MCB
Mains Rating: 100 A
MCB Rating: 100 A

CKT	Circuit Description	Trip	Poles	Breaker Type	A		B		C		Breaker Type	Poles	Trip	Circuit Description	CKT
1	Hood	20 A	1	QOB	1200 VA	125 VA					QOB	1	20 A	HVAC Controls	22
2	Hood	20 A	1	QOB			1200 VA	125 VA			QOB	1	20 A	Pre-Action Control Panel	23
3	Hood	20 A	1	QOB					1200 VA	1200 VA	QOB	1	20 A	Pre-Action Air Compressor	24
4	Hood	20 A	1	QOB	1200 VA	0 VA					--	1	20 A	Spare	25
5	Hood	20 A	1	QOB			1200 VA	0 VA			--	1	20 A	Spare	26
6	Hood	20 A	1	QOB					1200 VA	0 VA	--	1	20 A	Spare	27
7	Hood	20 A	1	QOB	1200 VA	0 VA					--	1	20 A	Spare	28
8	HVAC Controls	20 A	1	QOB			750 VA	0 VA			--	1	20 A	Spare	29
9	HVAC Controls	20 A	1	QOB					750 VA	0 VA	--	1	20 A	Spare	30
10	HVAC Controls	20 A	1	QOB	750 VA	0 VA					--	--	--	Space	31
11	HVAC Controls	20 A	1	QOB			750 VA	0 VA			--	--	--	Space	32
12	HVAC Controls	20 A	1	QOB					750 VA	0 VA	--	--	--	Space	33
13	HVAC Controls	20 A	1	QOB	750 VA	0 VA					--	--	--	Space	34
14	HVAC Controls	20 A	1	QOB			750 VA	0 VA			--	--	--	Space	35
15	HVAC Controls	20 A	1	QOB					750 VA	0 VA	--	--	--	Space	36
16	HVAC Controls	20 A	1	QOB	750 VA	0 VA					--	--	--	Space	37
17	HVAC Controls	20 A	1	QOB			750 VA	0 VA			--	--	--	Space	38
18	Boiler*	20 A	1	QOB-ST					1560 VA	0 VA	--	--	--	Space	39
19	Boiler*	20 A	1	QOB-ST	1560 VA	0 VA					--	--	--	Space	40
20	HVAC Controls	20 A	1	QOB			350 VA	0 VA			--	--	--	Space	41
21	HVAC Controls	20 A	1	QOB					350 VA	0 VA	--	--	--	Space	42
		Total Load:			7535 VA		5875 VA		7760 VA						
		Total Amps:			65 A		49 A		67 A						

Panel Totals

Total Conn. Load: 21170 VA

Total Conn. Current: 59 A

Notes:
*Provide shunt trip breakers for boilers. Provide connections required for emergency shut off switches to shunt breakers. Coordinate with mechanical contractor. Provide internal Surge Protection Device (S.P.D.).
Spare breakers shall be QOB type.

1 12/04/2020

Panel: 3HEQ

Location: Electrical 1313
Supply From: 0HEQ
Mounting: Surface Mounted
Enclosure: NEMA 1

Volts: 480/277 Wye
Phases: 3
Wires: 4
Type: NF

A.I.C. Rating: 65kA
Mains Type: MLO
Mains Rating: 225 A
MCB Rating: N/A

CKT	Circuit Description	Trip	Poles	Breaker Type	A		B		C		Breaker Type	Poles	Trip	Circuit Description	CKT
1	Tx 3LEQ	70 A	3	EDB	10500 VA	0 VA					--	--	--	Space	16
2	--	--	--	--			8250 VA	0 VA			--	--	--	Space	17
3	--	--	--	--					7900 VA	0 VA	--	--	--	Space	18
4	Exhaust Fan	90 A	3	EDB	14411 VA	0 VA					--	--	--	Space	19
5	--	--	--	--			14411 VA	0 VA			--	--	--	Space	20
6	--	--	--	--					14411 VA	0 VA	--	--	--	Space	21
7	Exhaust Fan	90 A	3	EDB	14411 VA	0 VA					--	--	--	Space	22
8	--	--	--	--			14411 VA	0 VA			--	--	--	Space	23
9	--	--	--	--					14411 VA	0 VA	--	--	--	Space	24
10	Exhaust Fan	90 A	3	EDB	14411 VA	0 VA					--	--	--	Space	25
11	--	--	--	--			14411 VA	0 VA			--	--	--	Space	26
12	--	--	--	--					14411 VA	0 VA	--	--	--	Space	27
13	Space	--	--	--	0 VA	0 VA					--	--	--	Space	28
14	Space	--	--	--			0 VA	0 VA			--	--	--	Space	29
15	Space	--	--	--					0 VA	0 VA	--	--	--	Space	30
		Total Load:			53732 VA		51482 VA		51132 VA						
		Total Amps:			194 A		186 A		185 A						

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Redudant 1+1	0 VA	0.00%	0 VA		
Redudant 2+1	129696 VA	66.67%	86468 VA	**Total Conn. Load:**	156346 VA
				Total Est. Demand:	109718 VA
				Total Conn. Current:	188 A
				Total Est. Demand Current:	132 A

Notes:

Panel: 3LEQ

Location: Electrical 1313
Supply From: Tx 3LEQ
Mounting: Surface Mounted
Enclosure: NEMA 1

Volts: 120/208 Wye
Phases: 3
Wires: 4
Type: NQOD

A.I.C. Rating: 10kA
Mains Type: MCB
Mains Rating: 225 A
MCB Rating: 150 A

CKT	Circuit Description	Trip	Poles	Breaker Type	A		B		C		Breaker Type	Poles	Trip	Circuit Description	CKT
1	HVAC Controls	20 A	1	QOB	750 VA	1200 VA					QOB	1	20 A	Hood	22
2	HVAC Controls	20 A	1	QOB			750 VA	1200 VA			QOB	1	20 A	Hood	23
3	HVAC Controls	20 A	1	QOB					750 VA	850 VA	QOB	1	20 A	Energy Recovery Wheel	24
4	HVAC Controls	20 A	1	QOB	750 VA	2250 VA					QOB	1	40 A	Energy Recovery Wheel	25
5	HVAC Controls	20 A	1	QOB			750 VA	0 VA			--	1	20 A	Spare	26
6	HVAC Controls	20 A	1	QOB					750 VA	0 VA	--	1	20 A	Spare	27
7	HVAC Controls	20 A	1	QOB	750 VA	0 VA					--	1	20 A	Spare	28
8	HVAC Controls	20 A	1	QOB			750 VA	0 VA			--	1	20 A	Spare	29
9	HVAC Controls	20 A	1	QOB					750 VA	0 VA	--	1	20 A	Spare	30
10	Hood	20 A	1	QOB	1200 VA	0 VA					--	--	--	Space	31
11	Hood	20 A	1	QOB			1200 VA	0 VA			--	--	--	Space	32
12	Hood	20 A	1	QOB					1200 VA	0 VA	--	--	--	Space	33
13	Hood	20 A	1	QOB	1200 VA	0 VA					--	--	--	Space	34
14	Hood	20 A	1	QOB			1200 VA	0 VA			--	--	--	Space	35
15	Hood	20 A	1	QOB					1200 VA	0 VA	--	--	--	Space	36
16	Hood	20 A	1	QOB	1200 VA	0 VA					--	--	--	Space	37
17	Hood	20 A	1	QOB			1200 VA	0 VA			--	--	--	Space	38
18	Hood	20 A	1	QOB					1200 VA	0 VA	--	--	--	Space	39
19	Hood	20 A	1	QOB	1200 VA	0 VA					--	--	--	Space	40
20	Hood	20 A	1	QOB			1200 VA	0 VA			--	--	--	Space	41
21	Hood	20 A	1	QOB					1200 VA	0 VA	--	--	--	Space	42
		Total Load:			10500 VA		8250 VA		7900 VA						
		Total Amps:			88 A		69 A		66 A						

Panel Totals

Total Conn. Load: 26650 VA

Total Conn. Current: 74 A

Notes:
Provide internal Surge Protection Device (S.P.D.).
Spare breakers shall be QOB type.

MCE MILLS-CONOLY ENGINEERING, P.C.
8218 OLD FEDERAL ROAD MONTGOMERY, AL 36117
TEL: (334) 270-0010 WEB: MILLS-CONOLY.COM

ALABAMA REGISTERED No. 17050 PROFESSIONAL ENGINEER STEVEN L. CONOLY 12/03/20

SS&L Seay, Seay & Litchfield Architects
Architects & Interior Designers
Montgomery | Dothan
(M) 334. 263. 5162
(D) 334. 791. 5248
www.sslarch.com

Job Number 18144
Date 11/17/2020
Drawn By SCC
Checked By SLC
Revised 12/04/2020

Project Title
Center for Materials and Manufacturing Sciences
TROY UNIVERSITY

Sheet Title
Panelboard Schedules

Sheet Number
E023

PREPARATION AND APPROVAL OF
CONSTRUCTION CONTRACTS
and *BONDS*

CHECKLIST

Use with DCM Forms C-5, C-6, & C-7
and DCM Forms 9-A, 9-B, & 9-C

CONSTRUCTION CONTRACT - DCM Form C-5 or DCM Form 9-A (PSCA Projects)
Six copies of documents with original signatures required. The numbers in the left column below correspond to numbers in the left margin of the Contract form. If the project is funded partially or fully by the Alabama Public School and College Authority (PSCA), use DCM Form 9-A instead of DCM Form C-5.

(1)	**PROJECT NUMBER(S):** Insert the DCM (BC) Project Number in the block provided. • On DCM Form 9-A, also insert the PSCA Project Number in the block provided.
(2)	**DATE:** Insert the date upon which the Contractor will sign the contract.
(3)	**OWNER:** Insert the full, legal name of the Owner (Awarding Authority). • On DCM Form 9-A, insert the name of the Local Education Authority (city or county school board, college, university, etc.) after "Alabama Public School and College Authority"
(4)	**CONTRACTOR:** Insert the Contractor's full, legal company name and correct mailing address. For State Agency projects, the Contractor Company name and address must match the name and address registered in the State of Alabama Accounting and Resource System (STAARS) used by the State to pay Vendors. The Contractor Company name and address must be consistent across all documents in the same contract package, in order to avoid STAARS rejection. • On DCM Form 9-A: The Contractor Company name and address must match the name and address registered in STAARS used by the State to pay Vendors. The Contractor Company name and address must be consistent across all documents in the same contract package, in order to avoid STAARS rejection.
(5)	**The WORK:** Insert the complete name of the Project; same as in the Bid Documents.
(6)	**CONTRACT DOCUMENTS**: Insert the date of the Bid Documents
(7)	**ADDENDA:** Identify, by number and date, all pre-bid Addenda that were issued to the Bid Documents. If none were issued, insert "None". All Addenda shall be submitted to DCM for review prior to contract issuance.
(8)	**ARCHITECT:** Insert the full, legal name of the Project Architectural or Engineering firm.
(9)	**CONTRACT SUM:** The Contract Sum is the total of the Contract's Base Bid and accepted Bid Alternate Prices, if any. Insert the Contract Sum in words and figures, verifying that this amount corresponds with the CERTIFIED TABULATION OF BIDS.
(10)	**BID ALTERNATE PRICES**: Identify which, if any, Bid Alternate Prices are accepted and included in the Contract Sum by inserting either (a) "No Alternate Prices Requested in Bid", (b) "No Alternate Prices Accepted", or (c) a listing of the accepted Alternates by number and dollar amount.
(11)	**The CONTRACT TIME:** State the Contract Time in words and in figures.
(12)	**LIQUIDATED DAMAGES:** If the Owner has computed a daily rate for liquidated damages, insert the amount in both words and figures in the spaces provided.
(13)	**SPECIAL PROVISIONS:** This space may be used to incorporate Special Provisions into the Contract, such as unit prices, compliance with enacted provisions, and value engineering. If the solicitation for bids required Unit Prices, insert a statement of which Unit Prices, if any, are accepted and incorporated into the Contract. If more space is needed, Special Provisions may be stated on an attachment that is cited in the Special Provisions section. • DCM Form 9-A is published bearing Special Provision **"A. Severable Payments"**, which is where the portions of the Contract Sum to be paid by the PSCA and the Local Education Authority are to be stated. Obtain these amounts from DCM and insert them in the spaces provided. Other Special Provisions, such as disposition of Unit Prices, may be inserted below this provision.
(14)	**STATE GENERAL CONTRACTOR'S LICENSE:** Insert the Contractor's current state general contracting license number, bid limit, and classification in the spaces provided.

(15)	**SIGNATURES - APPROVING and CONTRACTING PARTIES** Signature spaces vary for State Agency projects, fully locally-funded Alabama Community College System (ACCS) projects and partially or fully PSCA-funded projects. Download the appropriate document per Owner/funding type from www.dcm.alabama.gov/forms.aspx. Original signatures required; copies of signatures will not be accepted.

PERFORMANCE BOND, DCM Form C-6 or DCM Form 9-B (PSCA Projects), and
PAYMENT BOND, DCM Form C-7 or DCM Form 9-C (PSCA Projects)

Before forwarding the Construction Contract and Bonds to the Owner, verify that the Surety has accurately provided all information in the spaces provided. The information should be the same on both Bonds.

(1)	**SURETY'S BOND NUMBER** should be inserted in the block provided.
(2)	**PRINCIPAL:** The Contractor's name and address is to be the same as appears in the Construction Contract.
(3)	**SURETY:** The full, legal name and address of the bonding company.
(4)	**OWNER:** The Owner's name and address is to be the same as appears in the Construction Contract.
(5)	**PENAL SUM:** The Penal Sum of each Bond is to be the Contract Sum of the Construction Contract and is to be inserted in both words and figures.
(6)	The **Date** of the Construction Contract**:** The date that appears on the Construction Contract.
(7)	The **PROJECT:** The same name or description as appears in the Construction Contract.
(8)	**DATE:** After "SIGNED AND SEALED" is to appear the date upon which Contractor and Surety sign the Bond. **THIS DATE MUST NOT PRECEDE THE DATE OF THE CONSTRUCTION CONTRACT.**
(9)	**CONTRACTOR'S SIGNATURE:** The Contractor's name must appear beneath "CONTRACTOR", under which the signature of a member or officer of the firm must appear with the name and title of the signing party appearing LEGIBLY beneath the signature.
(10)	**SURETY'S SIGNATURE:** **a.** The full, legal name of the bonding company must appear under "SURETY", under which the signature of an individual having power of attorney for the bonding company must appear with the individual's name and title appearing LEGIBLY beneath the signature.
(11)	**ATTACHED POWER OF ATTORNEY:** Clipped to each copy of the Bonds must be a Power of Attorney, signed by an officer of the bonding company, for the individual signing the bond on behalf of the bonding company. **THE DATE OF THE POWER OF ATTORNEY MUST NOT PRECEDE THE DATE OF THE BOND.**

ATTACHMENTS - The following attachments are required to be submitted with Construction Contracts:

- Insurance Certificate: It is the responsibility of the design professional to ensure all insurance requirements are discussed with bidders prior to a bid and that they have provided the requirements to their insurance provider. Contractor must obtain all insurance coverage specified in Article 37 of the General Conditions of the Contract.
- Performance Bond (not required for contracts under $50,000.00)
- Payment Bond (not required for contracts under $50,000.00)
- Certified Tabulation of Bids (required for all projects including those with informal proposal bids).
- DCM Form C-3: Proposal Form
- DCM Form C-3A: Accounting of Sales Tax (form must be the executed C-3A from bid documents).
- EVerify Memorandum of Understanding
- Alabama Disclosure Statement

FORWARDING CONTRACT and ATTACHMENTS: After determining that the Construction Contract (signed by the Contractor) and attachments are in order, the design professional shall forward all six (6) copies of these documents (with original signatures) to the Owner for signature. The Owner shall then forward the documents per the Review/Signature Flow instructions specified on the contract form underneath the signature block.

SUBMITTAL TO DCM:

- All contract documents and attachments must be single-sided on letter-sized paper without staples; use clips. Purpose: quickly and efficiently scan thousands of documents into DCM's database. Scanners compatible with the database do not scan double-sided nor legal-sized paper.
- Contracts with double-sided printing will not be accepted.
- The Contract Document Administration Fee-CC must be paid by the time a Construction Contract for a state agency project, Alabama Community College System (ACCS) project or PSCA-funded project is submitted to DCM for review, or when a fully locally-funded project Construction Contract is converted to PSCA. Contract reviews can begin once the fee has been paid.

  Basic Contract Document Administration (CDA) Fee: This fee covers review of the Agreement Between Owner and Architect (O/A Agreement) and Construction Contract for state agency projects, ACCS projects and partailly or fully PSCA-funded projects of K-12 public schools and universities and the related amendments, change orders, service invoices and pay requests. This fee does not apply to fully locally-funded K-12 public school projects or fully locally-funded university projects. The Basic CDA Fee covers review of the original submitted document and one revision. The total basic CDA fee is 1/2 of 1% of the total construction cost, due in two parts: 1/4 of 1% (.25%) of the Project Budget for administration of the O/A Agreement. 1/4 of 1% (.25%) of the Construction Contract Amount for administration of the Construction Contract.

  Fees may be paid online at www.dcm.alabama.gov or paid with a physical check. Make check payable to: "Finance - Construction Management", include the DCM (BC) Project #, if assigned, on the check and attach the CDA Fees Calculation Worksheet (also available on www.dcm.alabama.gov). Mail payment to: Finance - Construction Management, P.O. Box 301150, Montgomery, AL 36130-1150. For payments using Public School and College Authority (PSCA) funds and for state agency inter-fund transfers: contact Jennie Jones at 334-242-4808 or jennie.jones@realproperty.alabama.gov.

  Additional Revised Contract Document Fee: When more than one revision of a Construction Contract is required, an additional fee of $200.00 will be charged to the design professional for each additional submittal until the document is executed.

Numbers in margin correspond to "Checklist", DCM Form B-7

(1) **DCM (BC) Project # _____** *(required)*

PSCA Project # _____ *(required)*

Do not staple this form and/or attachments; use clips. Print single-sided; do not submit double-side printed documents.

CONSTRUCTION CONTRACT

(2) This Construction Contract is entered into this day of in the year of between the **OWNERS, the ALABAMA PUBLIC SCHOOL AND COLLEGE AUTHORITY**

(3) and **LOCAL OWNER,**
Entity Name:
Address:
Email & Phone #:

(4) and the **CONTRACTOR,**
Company Name:
Address:
Email & Phone #:

(5) for the **WORK** of the Project, identified as:

(6) The **CONTRACT DOCUMENTS** are dated and have been amended by

(7) **ADDENDA**

(8) The **ARCHITECT** is
Firm Name:
Address:
Email & Phone #:

(9) The **CONTRACT SUM** is

Dollars ($) and is the sum of the Contractor's Base Bid for the Work and the following

(10) **BID ALTERNATE PRICES:**

(11) The **CONTRACT TIME** is ( ) calendar days.

THE OWNER AND THE CONTRACTOR AGREE AS FOLLOWS: The Contract Documents, as defined in the General Conditions of the Contract (DCM Form C-8), are incorporated herein by reference. The Contractor shall perform the Work in accordance with the Contract Documents. The Owner will pay and the Contractor will accept as full compensation for such performance of the Work, the Contract Sum subject to additions and deductions (including liquidated damages) as provided in the Contract Documents. The Work shall commence on a date to be specified in a Notice to Proceed issued by the Owner or the Director, Alabama Division of Construction Management, and shall then be substantially completed within the Contract Time.

(12) **LIQUIDATED DAMAGES** for which the Contractor and its Surety (if any) shall be liable and may be required to pay the Owner in accordance with the Contract Documents shall be equal to six percent interest per annum on the total Contract Sum unless a dollar amount is stipulated in the following space, in which case liquidated damages shall be determined at _____ dollars ($_____) per calendar day.

Numbers in margin correspond to "Checklist", ABC Form B-7

(13) **SPECIAL PROVISIONS** *(such as acceptance or rejection of unit prices. Indicate continuation on an attachment if needed.)*

A. SEVERABLE PAYMENTS: The Alabama Public School and College Authority will first pay the Contractor _____ Dollars ($_____) from its available funds and the _____ will thereafter pay the Contractor the remaining _____ Dollars ($_____) from its available funds.

B.

(14) **STATE GENERAL CONTRACTOR'S LICENSE**: The Contractor does hereby certify that Contractor is currently licensed by the Alabama State Licensing Board for General Contractors and that the certificate for such license bears the following:

License No.: Classification(s):

Bid Limit:

The Owner and Contractor have entered into this Construction Contract as of the date first written above and have executed this Construction Contract in sufficient counterparts to enable each contracting party to have an originally executed Construction Contract each of which shall, without proof or accounting for the other counterparts, be deemed an original thereof.

The Owner does hereby certify that this Construction Contract was let in accordance with the provisions of Title 39, Code of Alabama 1975, as amended, and all other applicable provisions of law, and that the terms and commitments of this Construction Contract do not constitute a debt of the State of Alabama in violation of Article 11, Section 213 of the Constitution of Alabama, 1901, as amended by Amendment Number 26.

(15)

APPROVALS

**ALABAMA DEPARTMENT OF FINANCE,
REAL PROPERTY MANAGEMENT,
DIVISION OF CONSTRUCTION MANAGEMENT
(DCM)**

By _____
Director

REVIEWED BY AND FUNDS AVAILABLE:
PSCA funds are available in the amount stated in (13) "Special Provisions", Paragraph A.

By _____
Contract Administrator

CONTRACTING PARTIES

_____
Contractor Company

By _____
Signature

Name & Title _____

_____
Local Owner Entity

By _____

Name & Title _____

ALABAMA PUBLIC SCHOOL and COLLEGE AUTHORITY

By _____ Date: _____
Governor and President of Authority

Review/Signature flow: Architect/Engineer (prepare documents) > Contractor (review and sign) > Architect/Engineer (review) > Local Owner (review and sign) > DCM (review and sign) > Finance-Legal > Governor (review and sign) > DCM (distribute the fully executed Contract to all parties along with a Notice to Proceed).

Numbers in margin correspond to second page of "Checklist", DCM Form B-7

(1) # PERFORMANCE BOND

SURETY'S BOND NUMBER

Do not staple this form; use clips.

(2) The **PRINCIPAL** (*Company name and address of Contractor as appears in the Construction Contract*)
Name:
Address:

(3) The **SURETY** (*Company name and primary place of business*)
Name:
Address:

(4) The **OWNER: The ALABAMA PUBLIC SCHOOL AND COLLEGE AUTHORITY** and
(*Local Owner entity's name and address, same as appears in the Construction Contract*)
Name:
Address:

(5) The **PENAL SUM** of this Bond (the Contract Sum)

Dollars ($).

(6) **DATE** of the Construction Contract :

(7) The **PROJECT**: (*Same as appears in the Construction Contract*)

1. **WE, THE PRINCIPAL (hereinafter "Contractor") AND THE SURETY**, jointly and severally, hereby bind ourselves, our heirs, executors, administrators, successors, and assigns to the Owner in the Penal Sum stated above for the performance of the Contract, and Contract Change Orders, in accord with the requirements of the Contract Documents, which are incorporated herein by reference. If the Contractor performs the Contract, and Contract Change Orders, in accordance with the Contract Documents, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

2. The Penal Sum shall remain equal to the Contract Sum as the Contract Sum is adjusted by Contract Change Orders. All Contract Change Orders involving an increase in the Contract Sum will require consent of Surety by endorsement of the Contract Change Order form. The Surety waives notification of any Contract Change Orders involving only extension of the Contract Time.

Numbers in margin correspond to second page of "Checklist", DCM Form B-7

3. Whenever the Architect gives the Contractor and the Surety, at their addresses stated above, a written Notice to Cure a condition for which the Contract may be terminated in accordance with the Contract Documents, the Surety may, within the time stated in the notice, cure or provide the Architect with written verification that satisfactory positive action is in process to cure the condition.

4. The Surety's obligation under this Bond becomes effective after the Contractor fails to satisfy a Notice to Cure and the Owner:

(a) gives the Contractor and the Surety, at their addresses stated above, a written Notice of Termination declaring the Contractor to be in default under the Contract and stating that the Contractor's right to complete the Work, or a designated portion of the Work, shall terminate seven days after the Contractor's receipt of the notice; and

(b) gives the Surety a written demand that, upon the effective date of the Notice of Termination, the Surety promptly fulfill its obligation under this Bond.

5. In the presence of the conditions described in Paragraph 4, the Surety shall, at its expense:

(a) On the effective date of the Notice of Termination, take charge of the Work and be responsible for the safety, security, and protection of the Work, including materials and equipment stored on and off the Project site, and

(b) Within twenty-one days after the effective date of the Notice of Termination, proceed, or provide the Owner with written verification that satisfactory positive action is in process to facilitate proceeding promptly, to complete the Work in accordance with the Contract Documents, either with the Surety's resources or through a contract between the Surety and a qualified contractor to whom the Owner has no reasonable objection.

6. As conditions precedent to taking charge of and completing the Work pursuant to Paragraph 5, the Surety shall neither require, nor be entitled to, any agreements or conditions other than those of this Bond and the Contract Documents. In taking charge of and completing the Work, the Surety shall assume all rights and obligations of the Contractor under the Contract Documents; however, the Surety shall also have the right to assert "Surety Claims" to the Owner in accordance with the Contract Documents. The presence or possibility of a Surety Claim shall not be just cause for the Surety to fail or refuse to promptly take charge of and complete the Work or for the Owner to fail or refuse to continue to make payments in accordance with the Contract Documents.

7. By accepting this Bond as a condition of executing the Construction Contract, and by taking the actions described in Paragraph 4, the Owner agrees that:

(a) the Owner shall promptly advise the Surety of the unpaid balance of the Contract Sum and, upon request, shall make available or furnish to the Surety, at the cost of reproduction, any portions of the Project Record, and

(b) as the Surety completes the Work, or has it completed by a qualified contractor, the Owner shall pay the Surety, in accordance with terms of payment of the Contract Documents, the unpaid balance of the Contract Sum, less any amounts that may be or become due the Owner from the Contractor under the Construction Contract or from the Contractor or the Surety under this Bond.

8. In the presence of the conditions described in Paragraph 4, the Surety's obligation includes responsibility for the correction of Defective Work, liquidated damages, and reimbursement of any reasonable expenses incurred by the Owner as a result of the Contractor's default under the Contract, including architectural, engineering, administrative, and legal services.

Numbers in margin correspond to second page of "Checklist", DCM Form B-7

9. Nothing contained in this Bond shall be construed to mean that the Surety shall be liable to the Owner for an amount exceeding the Penal Sum of this Bond, except in the event that the Surety should be in default under the Bond by failing or refusing to take charge of and complete the Work pursuant to Paragraph 5. If the Surety should fail or refuse to take charge of and complete the Work, the Owner shall have the authority to take charge of and complete the Work, or have it completed, and the following costs to the Owner, less the unpaid balance of the Contract Sum, shall be recoverable under this Bond:

(a) the cost of completing the Contractor's responsibilities under the Contract, including correction of Defective Work;

(b) additional architectural, engineering, managerial, and administrative services, and reasonable attorneys' fees incident to completing the Work;

(c) interest on, and the cost of obtaining, funds to supplement the unpaid balance of the Contract Sum as may be necessary to cover the foregoing costs;

(d) the fair market value of any reductions in the scope of the Work necessitated by insufficiency of the unpaid balance of the Contract Sum and available supplemental funds to cover the foregoing costs; and

(f) additional architectural, engineering, managerial, and administrative services, and reasonable attorneys' fees incident to ascertaining and collecting the Owner's losses under the Bond.

10. All claims and disputes arising out of or related to this bond, or its breach, shall be resolved in accordance with Article 24, General Conditions of the Contract.

(8) **SIGNED AND SEALED** this _____ day of _____, _____.

(9 & 10)

SURETY:	**CONTRACTOR as PRINCIPAL:**
_____	_____
Surety Company Name	Contractor Company Name
By_____	By_____
_____	_____
Signee's Printed Name and Title	Signee's Printed Name and Title

(11) NOTE: Original power of attorney for the Surety's signatory shall be furnished with each of the original six bond forms to be attached to each of the six contract forms per project.

Do not staple this form; use clips. Purpose: quickly and efficiently scan thousands of documents into DCM's database.

Numbers in margin correspond to second page of "Checklist", DCM Form B-7

(1) # PAYMENT BOND

SURETY'S BOND NUMBER

Do not staple this form; use clips.

(2) The **PRINCIPAL** *(Company name and address of Contractor as appears in the Construction Contract)*
Name:
Address:

(3) The **SURETY** (Company *name and primary place of business*)
Name:
Address:

(4) The **OWNER: The ALABAMA PUBLIC SCHOOL AND COLLEGE AUTHORITY** and (*Local Owner entity's name and address, same as appears in the Construction Contract*)
Name:
Address:

(5) The **PENAL SUM** of this Bond (the Contract Sum)

Dollars ($).

(6) **DATE** of the Construction Contract :

(7) The **PROJECT**: (*Same as appears in the Construction Contract*)

1. **WE, THE PRINCIPAL (hereinafter "Contractor") AND THE SURETY**, jointly and severally, hereby bind ourselves, our heirs, executors, administrators, successors, and assigns to the Owner in the Penal Sum stated above to promptly pay all persons supplying labor, materials, or supplies for or in the prosecution of the Contract, which is incorporated herein by reference, and any modifications thereof by Contract Change Orders. If the Contractor and its Subcontractors promptly pay all persons supplying labor, materials, or supplies for or in the prosecution of the Contract and Contract Change Orders, then this obligation shall be null and void; otherwise to remain and be in full force and effect.

2. The Penal Sum shall remain equal to the Contract Sum as the Contract Sum is adjusted by Contract Change Orders. All Contract Change Orders involving an increase in the Contract Sum will require consent of Surety by endorsement of the Contract Change Order form. The Surety waives notification of any Contract Change Orders involving only extension of the Contract Time.

Numbers in margin correspond to second page of "Checklist", DCM Form B-7

3. Any person that has furnished labor, materials, or supplies for or in the prosecution of the Contract and Contract Change Orders for which payment has not been timely made may institute a civil action upon this Bond and have their rights and claims adjudicated in a civil action and judgment entered thereon. Notwithstanding the foregoing, a civil action may not be instituted on this bond until 45 days after written notice to the Surety of the amount claimed to be due and the nature of the claim. The civil action must commence not later than one year from the date of final settlement of the Contract. The giving of notice by registered or certified mail, postage prepaid, addressed to the Surety at any of its places of business or offices shall be deemed sufficient. In the event the Surety or Contractor fails to pay the claim in full within 45 days from the mailing of the notice, then the person or persons may recover from the Contractor and Surety, in addition to the amount of the claim, a reasonable attorney's fee based on the result, together with interest on the claim from the date of the notice.

4. Every person having a right of action on this bond shall, upon written application to the Owner indicating that labor, material, or supplies for the Work have been supplied and that payment has not been made, be promptly furnished a certified copy of this bond and the Construction Contract. The claimant may bring a civil action in the claimant's name on this Bond against the Contractor and the Surety, or either of them, in the county in which the Work is to be or has been performed or in any other county where venue is otherwise allowed by law.

5. This bond is furnished to comply with Code of Alabama, §39-1-1, and all provisions thereof shall be applicable to civil actions upon this bond.

6. All claims and disputes between Owner and either the Contractor or Surety arising out of or related to this bond, or its breach, shall be resolved in accordance with Article 24, General Conditions of the Contract.

(8) **SIGNED AND SEALED** this _____ day of _____, _____.

(9 & 10)

SURETY:	**CONTRACTOR as PRINCIPAL:**
_____	_____
Surety Company Name	Contractor Company Name
By_____	By_____
_____	_____
Signee's Printed Name and Title	Signee's Printed Name and Title

(11) NOTE: Original power of attorney for the Surety's signatory shall be furnished with each of the original six bond forms to be attached to each of the six contract forms per project.

Do not staple this form; use clips. Purpose: quickly and efficiently scan thousands of documents into DCM's database.

DCM Form 9-G
Revised May 2020

Alabama Department of Finance
Real Property Management
Division of Construction Management (DCM)
770 Washington Avenue, Suite 444
Montgomery, Alabama 36104
(334) 242-4082 FAX (334) 242-4182

INVOICE CHECKLIST

For Materials and Equipment to be Purchased with Funds of the
ALABAMA PUBLIC SCHOOL AND COLLEGE AUTHORITY

This checklist contains the prerequisites for DCM's approval of the use of ALABAMA PUBLIC SCHOOL AND COLLEGE AUTHORITY (PSCA) bond issue funds for the purchase of materials and equipment. The prerequisites assure conformance with PSCA requirements, competitive bid laws, DCM recording methods, and distribution requirements. The authority submitting invoices for payment with PSCA funds should utilize this checklist when preparing invoices for submittal to assure prompt approval and processing.

☐	1.	Materials and/or equipment are to be for capital improvements only (not maintenance, etc.)
☐	2.	Two originals of the invoice are to be submitted. Faxed and emailed copies are not acceptable.
☐	3.	The two invoices must be certified as being "True, correct and unpaid." The vendor's signature must be **Notarized**.
☐	4.	Material Receipt DCM form 9 – I is no longer required. Instead, the following statement must be included on each invoice and signed by the Owner. Agencies can use a certification stamp or affix a printed label to the invoices. **"I hereby certify that the article(s) and or service(s) listed on this document were received on _____ in the proper condition, are the kind and quantity ordered and appropriate purchasing policy and purchasing procedures were followed.** **Received by:**_____ **Date:**_____**"**
☐	5.	A "Certificate of Compliance" with Competitive Bid Law must be attached to each invoice. DCM Form 9-H, Certificate of Compliance, Title 41: Public Contracts, is to be used for this purpose.
☐	6.	Each "Certificate of Compliance" must bear the original signature of the president, director or superintendent of the school or institution. This signature must be **Notarized**.
☐	7.	The following statement is to be included via Memorandum on the school or institution letterhead. The president, director or superintendent should initial his/her name. **To:** **Any/All Interested Parties** **From:** **(*Insert name of President, Director or Superintendent)*** **Subject:** **Immigration Requirements** **Date:** **(*Insert Date)*** **The undersigned hereby certifies that the transaction under which this payment is requested is subject to the requirements of §31-13-9(a) and (b), Code of Alabama, 1975, as amended, and the proper documentation is on file in the agency.** **If you have questions, please call (*insert school or institution telephone number*).**

Alabama Department of Finance
Real Property Management
Division of Construction Management
770 Washington Avenue, Suite 444
Montgomery, Alabama 36104
(334) 242-4082 FAX (334) 242-4182

DCM Form 9-H
Revised August 2020

CERTIFICATION OF COMPLIANCE
TITLE 41: PUBLIC CONTRACTS

I hereby certify that the contract for the Equipment or Materials covered by the attached invoice was awarded in accordance with Competitive Bid Law applying to the School Board or Institution noted below.

DCM (BC)# _____ _____
City - County - Institution

PSCA# _____ By _____
Signature of Officer & Title

Sworn to and subscribed before me
this _____ day of _____, 20_____.

_____
Notary Public Signature

Seal

INSTRUCTIONS: This certification must be signed by the president, director, or superintendent of the school or institution, notarized, and attached to each copy of each invoice for equipment or materials being submitted to Alabama Division of Construction Management for approval to pay the invoice from funds of the ALABAMA PUBLIC SCHOOL AND COLLEGE AUTHORITY. The certificate attached to each copy of an invoice must bear original signatures.

Alabama Department of Finance
Real Property Management
Division of Construction Management
770 Washington Avenue, Suite 444
Montgomery, Alabama 36104
(334) 242-4082 FAX (334) 242-4182

DCM Form B-12
Revised July 2020

CHANGE ORDER CHECKLIST

For use with DCM Form C-12 and DCM Form 9-J

WHICH FORM DO YOU USE?

Use **DCM Form C-12** for contracts of state agencies and departments, ACCS & SDE.
Use **DCM Form 9-J** for contracts of projects partially or fully Public School and College Authority (PSCA)-funded.
Include a completed **DCM Form B-11:** Change Order Justification with either DCM Forms C-12 or 9-J.

Verify that the following information is inserted in the spaces provided on the CONTRACT CHANGE ORDER form, or attached to the form where attachments are noted to be acceptable or obviously necessary. Do not staple forms; use clips.

1.	**CHANGE ORDER NUMBER:** Insert current change order number.
2.	**DATE:** Insert date.
3.	**DCM (BC) PROJECT NUMBER:** Insert DCM Project Number in the block provided at top of document.
4.	**CONTRACTOR** Insert name and address of the Contractor, exactly as they appear on the Construction Contract.
5.	**NAME OF PROJECT:** Under "Project", insert the complete name of the project as identified in the bid documents. If using DCM Form 9-J, insert the PSCA Project Number in the space provided.
6.	**CONTRACTOR'S PROPOSALS:** Under "TERMS", identify the change order proposals submitted by the contractor that are being addressed by the Contract Change Order. Identify these proposals by inserting their dates.
7.	**DESCRIPTION OF THE CHANGE(S) IN WORK:** Fully describe the change or changes to the original contract work for which the Construction Contract is being modified. This description should be written so that a reader of the document who is not directly involved in the project can understand what is being changed. If the space provided on the form is inadequate for such a description, use attachments and cite them.
8.	**CONTRACT AND CHANGE ORDER AMOUNTS:** Insert the applicable dollar amounts to record the original contract sum, change orders, and the currently revised contract sum.
9.	**EXTENSION OF TIME:** If the Contract Time is being extended by the Contract Change Order, insert appropriate number of **calendar days** in the space provided. If the Contract Time is not being extended, insert "NONE".
10.	**RESPONSIBILITY FOR CHANGE ORDER FUNDING - DCM Form 9-J ONLY:** The authority responsible for funding the change order is to be identified in the following sentence in the form,: "The amount of this Change Order will be the responsibility of _____." Insert whichever is appropriate: (1) "PSCA", (2) name of LEA, or (3) "PSCA" and name of LEA.
11.	**SIGNATURES:** The signature spaces for State Agency, PSCA and fully locally-funded Alabama Community College System projects are different from each other. Download the appropriate document per Owner/project type from www.dcm.alabama.gov/forms.aspx. Before submitting a Contract Change Order to DCM, the document must be signed by the contractor, surety (for additive change orders only), design professional and owner (local owner or using agency). Signature by the surety is not necessary on deductive change orders or change orders involving only extensions of time. If the cumulative change order amount exceeds 10% of the original contract amount then the Owner's legal consultant must sign DCM Form B-11: Change Order Justification.
12.	**ATTACHMENTS:** To each copy of the Contract Change Order form, attach with clips (do not staple): a. Contractor's change order proposals and/or invoices providing a detailed breakdown of change order costs. General Contractors (GC) must include subcontractors' (sub) quotes as backup. All GC and sub quotes must be broken down by labor (hours and rates), materials including quantities and unit prices (with receipts or quotes attached), equipment whether rented or owned (with receipts or quotes attached), and Overhead & Profit (OH&P). 1. Total OH&P can be a maximum of 25% divided between GC and subs; GC can have a maximum of 15% OH&P (in which case a sub could have up to 10% OH&P). See General Conditions- Article #19. 2. Sales tax cannot be included in change orders. 3. Deductive change orders also require backup including breakdown of labor and material, and must also deduct OH&P if included in original bid. Include specification section regarding allowances. b. **POWER OF ATTORNEY** for the individual signing the Contract Change Order for the surety. c. **DCM Form B-11, CHANGE ORDER JUSTIFICATION:** completed and signed by the design professional and owner.

Do not staple this form and/or attachments; use clips. Print single-sided; do not submit double-side printed documents.

DCM Form 9-J, Revised November 2020;
PSCA Version of DCM Form C-12;
A Change Order is not valid without an accompanying completed Change Order Justification (DCM Form B-11).

CONTRACT CHANGE ORDER

Change Order No. _____ **Date** _____

DCM (BC) # _____ *(required)*

PSCA # _____ *(required)*

TO: Contractor Company Name & Address:	**PROJECT:**

TERMS: You are hereby authorized, subject to the provisions of your Contract for this project, to make the following changes thereto in accordance with your proposal(s) dated _____

_____.

FURNISH the necessary labor, materials, and equipment to (*Description of work to be done or changes to be made. If the description is continued in an attachment, identify the attachment below.*):

Description continued from Page 1:

ORIGINAL CONTRACT SUM $ _____

NET TOTAL OF PREVIOUS CHANGE ORDERS $ _____

PREVIOUS REVISED CONTRACT SUM $ _____

THIS CHANGE ORDER WILL ☐ **INCREASE** ☐ **DECREASE**
THE CONTRACT SUM BY $ _____

REVISED CONTRACT SUM, INCLUDING THIS CHANGE ORDER $ _____

EXTENSION OF TIME resulting from this Change Order: ☐ None *or* _____ Calendar days

The amount of this Change Order will be the responsibility of _____
(*Owner and/or PSCA*)

The Owner does hereby certify that this Change Order was executed per the provisions of Title 39, Code of Alabama, 1975, as amended.

_____
Architectural/Engineering Firm

Recommended By _____

Name & Title _____

APPROVALS

**ALABAMA DEPARTMENT OF FINANACE,
REAL PROPERTY MANAGEMENT
DIVISION OF CONSTRUCTION MANAGEMENT (DCM)**

By _____
Director

Reviewed By _____
Contract Administrator

For DCM office use only:

_____ PSCA funds are available to fund this change order.

_____ PSCA funds will not be used to fund this change order.

CONTRACTING PARTIES

_____
Contractor Company

By _____

Name & Title _____

_____
Local Owner Entity

By _____

Name & Title _____

ALABAMA PUBLIC SCHOOL & COLLEGE AUTHORITY

By _____ Date: _____
Governor and President of Authority

CONSENT OF SURETY

_____
Surety Company

By _____
(Attach current Power of Attorney)

Name & Title _____

Review/Signature flow: Architect/Engineer (prepare documents) > Contractor (review and sign) (> Surety for additive $ change orders only [sign]) > Architect/Engineer (review and sign) > Local Owner (review and sign) > DCM (review and sign) > Finance-Legal > Governor (review and sign) > DCM (distribute fully executed Change Order to all parties).

TO: **Alabama Department of Finance**
Real Property Management
Division of Construction Management
770 Washington Avenue, Suite 444
Montgomery, Alabama 36104
(334) 242-4082 FAX (334) 242-4182

CHANGE ORDER JUSTIFICATION

Change Order No. _____

Date: _____

DCM (BC) No. _____

Purpose and instructions on next page.
Do not staple this form and/or attachments; use clips.

(A)

PROJECT NAME & LOCATION:	OWNER ENTITY NAME & ADDRESS:
CONTRACTOR COMPANY NAME & ADDRESS:	ARCHITECTURAL / ENGINEERING FIRM NAME & ADDRESS:

(B) **DESCRIPTION OF PROPOSED CHANGE(S):** **ATTACH CONTRACTOR'S DETAILED COST PROPOSAL(s)**

AMOUNT: ☐ **ADD** ☐ **DEDUCT $_____** **TIME EXTENSION: _____ CALENDAR DAYS**

(C)

ORIGINAL CONTRACT AMOUNT		PREVIOUS C.O.'s _____ THRU _____		CONTRACT AMOUNT PRIOR TO PROPOSED CHANGE ORDER
$_____	+	$_____	=	$_____

(D) **JUSTIFICATION FOR NEED OF CHANGE(S):**

(E) **JUSTIFICATION OF CHANGE ORDER vs. COMPETITIVE BID:**

(F) **ARCHITECT / ENGINEER'S EVALUATION OF PROPOSED COST:**

(G)

CHANGE ORDER RECOMMENDED	CHANGE ORDER JUSTIFIED AND APPROVED
_____ ARCHITECTURAL / ENGINEERING FIRM NAME	_____ LOCAL OWNER ENTITY NAME
By: _____ ARCHITECT / ENGINEER'S SIGNATURE	By: _____ OWNER'S SIGNATURE
By: _____ OWNER'S PROJECT REPRESENTATIVE'S SIGNATURE	By: _____ OWNER'S LEGAL COUNSEL'S SIGNATURE

CHANGE ORDER JUSTIFICATION: PURPOSE and INSTRUCTIONS

PURPOSE

The awarding of work through an existing contract may potentially conflict with, or violate, the "Competitive Bid Laws" of the State of Alabama. **The determination of legality of Change Orders rests with the Awarding Authority and its legal advisor.** In a June 15, 1979, Opinion, the Office of the Attorney General offered guidelines for making such determinations in conjunction with considering the facts and merits of each situation. The purpose of the CHANGE ORDER JUSTIFICATION is to provide a means through which the Awarding Authority considers these guidelines and the intent of the "Competitive Bid Laws" when authorizing Change Orders. Pursuant to these guidelines, the following types of changes meet the criteria for awarding work through Change Orders in lieu of through the Competitive Bid process:

I. Minor Changes for a monetary value less than required for competitive bidding.

II. Changes for matters relatively minor and incidental to the original contract necessitated by unforeseeable circumstances arising during the course of the work.

III. Emergencies arising during the course of the work of the contract.

IV. Bid alternates provided for in the original bidding where there is no difference in price of the change order from the original best bid on the alternate.

V. Changes of relatively minor items not contemplated when the plans and specifications were prepared and the project was bid which are in the public interest and which do not exceed 10% of the contract price.

Under these guidelines the cumulative total of Change Orders, including any negotiations to bring the original contract price within the funds available, would become questionable if the total of such changes and negotiations exceed 10% of the original contract price. These guidelines are not intended to interfere with the Awarding Authority's good faith discretion to respond to specific situations in the public's best interest. If the cumulative change order amount exceeds 10% of the original contract amount then the Owner's legal consultant must sign the Change Order Justification prior to submission to the Division of Construction Management (DCM).

INSTRUCTIONS

The CHANGE ORDER JUSTIFICATION is to be prepared by the design professional, who has evaluated the fairness and reasonableness of the proposed cost of the change(s) and recommends that the proposed Change Order be executed. The fully executed Form B-11: CHANGE ORDER JUSTIFICATION must accompany the proposed DCM Form C-12: Change Order. Instructions for completing the B-11 form are:

1. Insert the proposed Change Order Number, date of the Justification, and DCM (BC) Project Number in the spaces provided in the upper right-hand corner.

2. **Section (A):** Insert the complete name and address of the PROJECT, OWNER, CONTRACTOR, AND ARCHITECT/ENGINEER.

3. **Section (B)**: Provide a complete description of the proposed changes in work, referring to and attaching revised specifications and/or drawings as appropriate. An attachment may be used if additional space is needed, but insert the proposed amount and time extension of the change(s) in the spaces provided. **Attached a copy of the contractor's detailed cost proposal.**

4. **Section (C**): Insert the Original Contract amount, the net increase or decrease of previous Change Orders, and the Current Contract amount (preceding the currently proposed Change Order).

5. **Section (D):** Explain why it is necessary, or in the public's interest, to make the proposed change(s) to the Work.

6. **Section (E)**: Explain why award of the changed work to the existing contractor instead of awarding the work under the competitive bid process is justified.

7. **Section (F)**: The design professional must state his evaluation of the reasonableness and fairness of the proposed costs based upon his review of the contractor's proposal.

8. **Section (G)**: The design professional must recommend the Change Order to the Owner by signing the document; the Owner may require such recommendation from other individuals. The Owner must sign the document indicating that they believe change order action in lieu of the competitive bid process is justified for the proposed change(s). **Review of the matter and signing of the document by the Owner's legal counsel is highly recommended. If the cumulative change order amount exceeds 10% of the original contract amount then the Owner's legal consultant must sign the Change Order Justification prior to submission to DCM.**

CENTER FOR MATERIALS AND MANUFACTURING SCIENCES (CMMS)
TROY UNIVERSITY | TROY, AL

PRE-BID CONFERENCE
Physical Plant Conference Room
1 Melton Carter Drive, Troy, AL 36081
2:00 P.M., December 3, 2020

- **Sign Attendance Roster/ Introductions**

Receipt of Proposals -all Bidders to ensure that all required documents are included in the submitted bid proposal. Sealed bids will be received by Troy University until 2:00 p.m. for Base bids and 3:00 p.m. for alternates, on Tuesday, December 15, 2020 at the Physical Plant Conference Room located at 1 Melton Carter Drive, Troy, AL 36081, and then publicly opened and read at 3:00p.m. (for both Base Bid and Alternates) for furnishing all labor, materials and equipment necessary for the completion of the Center for Materials and Manufacturing Sciences (Drawings Dated November 17,2020 and Specifications Dated November 2020).

  - Bid prices do NOT include Sales or Use Taxes in accordance with Act 2013-205.
  - Ensure Form C-3A is included with your bid proposal.
  - Ensure Permit Fee for Division of Construction Management is included in bid price.
  - Ensure General Contingency and Landscape Contingency are included in proposal.

- **Project Overview** – The scope of the work includes the demolition of McCartha Hall and the new construction of Center for Materials and Manufacturing Sciences. Hence forth Center for Materials and Manufacturing Sciences will be refer to as CMMS.

- **Construction time** – Three Hundred Thirty-Five (335) calendar days from notice to proceed to substantial completion. Liquidated Damages will be incurred if all deliverables are not received by the contract end date.

- **Project Site Access / Security Issues** (This will be discussed in detail at Pre-Construction Meeting) Construction fence boundaries have been identified on the site plan. Work must be coordinated to maintain operation of surrounding roadways and parking lots during construction activities.

- **Bid Items / Alternates:**
  - Alternate 1) West Elevation
  - Alternate 2) East Elevation
  - Alternate 3) Basement (Level 0) Fit-out
  - Alternate 4) Site Lighting
  - Alternate 5) Cupola
  - Alternate 6) Lightning Protection
  - Alternate 7) Window Shades
  - Alternate 8) Metal Laboratory Casework
  - Alternate 9) Interior Impact Protection
  - Alternate 10) Level 3 Fit-out

- **Unit Prices**:
  - Unit Price 1: Removal of Unsuitable Soil/Engineered Fill
  - Unit Price 2: Over Excavated Footing/Lean Concrete

- **Prior Approval** - All requests for product substitutions should be made per the contract documents.

- **Bid Document Questions / Clarifications** – RFIs must be received in writing by Cody Smith at Seay Seay & Litchfield, P.C. via email at csmith@sslarch.com no later than close of business (2:00 PM local time) on Friday, December 11, 2020.

- **Attic Stock:** Please review specification book for required attic stock quantities.

- **Utilities:** General Contractor will be responsible for Temporary Utilities.

- **Contractor will be required to provide the following prior to start of work:**

    - Construction Schedule
    - List of all subcontractors
    - Schedule of Values
    - Submittal Log / Schedule

- **Protection of Existing Items:** The contractor must ensure that he protects all surrounding work. Any damage to existing to remain work shall be replaced / repaired at the contractor's expense. The General Contractor shall provide means and methods to protect existing to remain work throughout the project.

- **OAC Meetings:** The contractor will conduct OAC meetings at the site as required. The contractor is expected to produce an updated RFI log, Change Order log, and Submittal log at every OAC meeting.

- **Superintendent:** This project requires a full-time superintendent on site when **ANY** work is underway. Superintendent shall be an employee of the General Contractor.

- **Safety** – Safety is the General Contractor's responsibility.

- **Questions/Comments**

    - It was asked and clarified, that the General Contractor's Project Manager is not required to be on site at all times when work is underway.

- **SITE TOUR**
    - The Contractors present were allowed to walk the site, observe existing conditions, and question the Architect and Owner regarding scope of work and conditions. All RFIs should be addressed to the Architect in writing.

    - To schedule a site visit prior to Bid Opening contact the Troy University Physical Plant. Contact:
        Matt Tice
        334-722-0245
        Mtice185128@troy.edu

SUBJECT:	**CMMS PreBid Conference**
DATE:	**December 3, 2020**
TIME:	**2:00PM**
PROJECT:	**CMMS**
SS&L PROJECT NO:	**18144**

SS&L
sslarch.com / Seay Seay & Litchfield, P.C.
architecture . interiors . planning . graphics

	NAME	COMPANY	ROLE	PHONE	E-MAIL
1	Cody Smith	SS&L Architects	PM	(334) 263-5162	csmith@sslarch.com
2	Greg O'Neal	SS&L Architects	PM	(334) 263-5162	goneal@sslarch.com
3	JOSH BANKS	"	"	( ) "	
4	BRANDON MILLER	WHITE-SPUNNER	GC	251) 471-5189	ESTIMATING @ WHITE-SPUNNER.COM
5	Tommy VINES	WAR	GC	(205)593-6241	tvines@warconstruction.com bids@warconstruction.com ajackson@warconstruction.com
6	Patrick Hendon	Ingle Demo	GC	(205)410-1995	Patrick@ingledemolition.com
7	Hani Johnson	Troy University		(334)670-3402	acjohnson@troy.edu
8	Mark Salmon	Troy University Dir		(334) 268-1428	
9	MIKE FREEMAN	~~HIRACHY CONST~~	PM	(334) 403-2481	
10	DAVID HAWKINS	FREEMAN & ASSOC	G.C	(706)2891240	DHawkins@freemanteam.com
11				( )	
12				( )	
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Specifications
for the
CENTER FOR MATERIALS AND MANUFACTURING SCIENCES

Troy University
Troy, AL

ARCHITECTURE & INTERIOR DESIGN
1115 South Court Street | Montgomery, AL 36104
Tel. 334. 263. 5162 | **WWW.SSLARCH.COM**

Volume 1

ARCHITECTURAL	MECHANICAL	ELECTRICAL	STRUCTURAL
STATE OF ALABAMA MONTGOMERY Jim H. Seay, Jr. 1846 Gregory A. O'Neal 6043 Wesley R. Osmer 6244 ALABAMA REGISTERED ARCHITECTS	ALABAMA LICENSED No. 23369 PROFESSIONAL 11.17.20 ENGINEER J. R. EIRING	ALABAMA REGISTERED No. 17050 PROFESSIONAL 11/16/20 ENGINEER STEVEN L. CONOLY	ALABAMA REGISTERED NO. 16466 PROFESSIONAL ENGINEER TERRANCE W. GRANT 11-17-2020

Date: November 2020
SS&L Job No: 18144
DCM Project No: 2020416
PSCA Project No: 006P
Volume No: 1

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Specifications
for the
CENTER FOR MATERIALS AND MANUFACTURING SCIENCES

Troy University
Troy, AL

SS&L
ARCHITECTURE & INTERIOR DESIGN
1115 South Court Street | Montgomery, AL 36104
Tel. 334. 263. 5162 | **WWW.SSLARCH.COM**

Volume 2

ARCHITECTURAL	MECHANICAL	ELECTRICAL	STRUCTURAL
STATE OF ALABAMA MONTGOMERY Jim H. Seay, Jr. 1846 Gregory A. O'Neal 6043 Wesley R. Osmer 6244 ALABAMA REGISTERED ARCHITECTS	ALABAMA LICENSED No. 23369 PROFESSIONAL 11.17.20 ENGINEER J. R. EIRING	ALABAMA REGISTERED No. 17050 PROFESSIONAL 11/16/20 ENGINEER STEVEN L. CONOLY	ALABAMA REGISTERED NO. 16466 PROFESSIONAL ENGINEER TERRANCE W. GRANT 11-17-2020

Date: November 2020
SS&L Job No: 18144
DCM Project No: 2020416
PSCA Project No: 006P
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CENTER FOR MATERIALS AND MANUFACTURING SCIENCES

TROY UNIVERSITY | TROY, ALABAMA

FACULTY RESEARCH FACILITY

SS&L Job No: 18144

DCM Project No: 2020416

PSCA Project No: 006P 1

VICINITY MAP

THIS IMAGE IS NOT PART OF CONTRACT DOCUMENTS; FOR GRAPHIC PURPOSES ONLY

VOLUME 1

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