

## Addendum No. 01

**TO: PLANS AND SPECIFICATIONS FOR:**

**Upgrade HVAC Controls  
Staples Building  
Southeast MO Mental Health Center  
Farmington, MO  
PROJECT NO. M2011-01**

**New Bid Opening Date: 1:30 PM, April 11, 2024 (CHANGED)**

**Bidders are hereby informed that the construction plans and/or specifications are modified as follows:**

### **SPECIFICATION CHANGES:**

1. Section 001116 - INVITATION FOR BID
  - a. REVISE Paragraph 3.0-A as follows:
    - A. Until: 1:30 PM, April 11, 2024

### **DRAWING CHANGES:**

1. Drawing M-001 MECHANICAL GENERAL NOTES  
GENERAL NOTES

**ADD:** 18. "OR BE INSTALLED IN ALIGATURE/TAMPER PROOF ENCLOSURE."

**ADD:** 20: "CONTRACTOR IS NOT RESPONSIBLE FOR FURNISHING NEW PC WITHIN THE SCOPE OF THIS JOB. NEW CONTROLS SYSTEM SHALL BE INTERNET BASED. ALL CONNECTIONS MUST BE HARD WIRED. COORDINATE WITHOWNER'S I.T. DEPARTMENT TO ENSURE ALL CONNECTIONS ARE UP TO OWNER AND STATE STANDARDS. CONTACT THE HEAD OF FACILITIES AT SITE FOR COORDINATION."

**ADD:** 21: "CONNECTION TO FORENSIC'S BUILDING BAS IS OUTSIDE OF THE SCOPE OF WORK. DO NOT CONNECTING EXISTING ALERTON SYSTEM INTO NEW BAS."

#### GENERAL NOTES (HYDRONIC)

**ADD:** 2: "THE CONTRACTOR SHALL BE RESPONSIBLE FOR DRAINING, FILLING, AND VENTING (FOR ALL SYSTEMS OPENED BY CONTRACTOR) OF ALL HYDRONIC SYSTEMS IMPACTED BY THIS PROJECT. CHEMICALS SHALL BE PROVIDED BY WALTER LOUIS (STATE OF MISSOURI CHEMICAL PROVIDER) AND BE BOUGHT BY THE STATE DIRECTLY (NOT AT THE COST TOTHE CONTRACTOR), BUT THE CONTRACTOR SHALL BE REQUIRED TO MIX AND INCORPORATE CHEMICALS INTO ALL HYDRONIC SYSTEMS IMPACTED BY PROJECT.COORDINATE WITH OWNER CONTACT AT WALTER LOUIS FOR REQUIRED WATERTREATMENT SCOPE. CONTACT: NICK KISER, PHONE: 636-399-9388."

**ADD:** 3: "AS PER OWNER DISCUSSION, THERE IS NO GLYCOL IN THE HOT WATER HEATING LOOP. IF FIELD RESULTS SHOW DIFFERENT THAT AS STATED, CONTACT ENGINEER."

**ADD:** 4: "AS PER DISCUSSION WITH OWNER, THE CHILLED WATER SYSTEM IS 30% FOOD GRADEGLYCOL. CONTRACTOR SHALL FIELD VERIFY PERCENTAGE. IF THIS NUMBER IS DIFFERENT THAN THAT FOUND IN FIELD, CONTRACTOR SHALL CONTACT ENGINEER."

**ADD:** 5: "AFTER COMPLETION OF WORK IN EACH WARD, CONTRACTOR SHALL CLEAN HOT WATER STRAINER(S) IN MECHANICAL ROOM"

(ITEMS THAT DO NOT HAVE A HEADING FALL UNDER AN EXISTING HEADING)

**ADD:** Boxed note highlighting the working days it will take staff to transition between wards. This reads as, "NOTE: FOR STAFF TO FULLY CHANGE RESIDENTS FROM ONE WARD TO ANOTHER, IT WAS REPORTED BY THE OWNER THAT THIS COULD BE COMPLETED IN TWO (2) WORKING DAYS. FOR EXAMPLE, IF WORK IS COMPLETED ON A FRIDAY BY THE CONTRACTOR, WORK CAN BESTARTED ON THE NEXT WARD ON THE WEDNESDAY OF THE FOLLOWING WEEK,. IF THE TRANSITION OF WARDS REQUIRES MORE TIME THAN TWO WORKING DAYS, THE CONTRACTOR SHALL CONTACT STATE CONSTRUCTION MANAGER."

**ADD:** Box note with the contact information for the fire alarm contractor. The contact is Hannah Smith with Johnson Controls. Her email is [hannah.smith@JCI.com](mailto:hannah.smith@JCI.com) and her phone number is 314-320-9296.

2. Drawing M-101 STAPLES PARTIAL MECHANICAL PLAN  
STAPLES BUILDING – 1<sup>ST</sup> FLOOR PARTIAL MECHANICAL PLAN

**ADD:** Damper sizes to all dampers on drawing

Keyed Notes

**ADD:** To end of note 10 "BID ALTERNATE #2: IF BID ALTERNATE # 2 IS APPROVED, INSTALL MODULATING TWO WAY VALVES IN PLACE OF THREE WAY VALVES UNLESS NOTED. CAP AND REMOVE BYPASS LINE.

**ADD:** 14. EXISTING ASU-7 AND 8 CONTROLLERS SHALL BE DEMOLISHED. NEW CONTROLLER SHALL BE INSTALLED IN PLACE OF EXISTING. CONNECT ALL POINTS BACK INTO CONTROLLER.

**ADD:** 15. BID ALTERNATE #2: INSTALL THREE WAY VALVE IN PLACE OF TWO WAY VALVE. INSTALL BALANCING VALVE IN RETURN AND BYPASS LINE.

3. Drawing M-102 STAPLES PARTIAL MECHANICAL PLAN  
STAPLES BUILDING – 1<sup>ST</sup> FLOOR PARTIAL MECHANICAL PLAN

**ADD:** Damper sizes to all dampers on drawing

KEYED NOTES

**ADD:** To end of note 2 "BID ALTERNATE #2: IF BID ALTERNATE # 2 IS APPROVED, INSTALL MODULATING TWO WAY VALVES IN PLACE OF THREE WAY VALVES UNLESS NOTED. CAP AND REMOVE BYPASS LINE.

**ADD:** 6. BID ALTERNATE #2: INSTALL THREE WAY VALVE IN PLACE OF TWO WAY VALVE. INSTALL BALANCING VALVE IN RETURN AND BYPASS LINE.

**ADD:** 7. EXISTING ASU-2 CONTROLLER SHALL BE DEMOLISHED. NEW CONTROLLER SHALL BE INSTALLED IN PLACE OF EXISTING. CONNECT ALL POINTS BACK INTO CONTROLLER.

4. Drawing M-103 STAPLES PARTIAL MECHANICAL PLAN  
KEYED NOTE

**ADD:** To end of note 2 "BID ALTERNATE #2: IF BID ALTERNATE # 2 IS APPROVED, INSTALL MODULATING TWO WAY VALVES IN PLACE OF THREE WAY VALVES UNLESS NOTED. CAP AND REMOVE BYPASS LINE.

**ADD:** 4. BID ALTERNATE #2: INSTALL THREE WAY VALVE IN PLACE OF TWO WAY VALVE. INSTALL BALANCING VALVE IN RETURN AND BYPASS LINE.

5. Drawing M-104 STAPLES PARTIAL MECHANICAL PLAN  
STAPLES BUILDING – 1<sup>ST</sup> FLOOR PARTIAL MECHANICAL PLAN

**ADD:** Damper sizes to all dampers on drawing

KEYED NOTE

**ADD:** To end of note 2 “BID ALTERNATE #2: IF BID ALTERNATE # 2 IS APPROVED, INSTALL MODULATING TWO WAY VALVES IN PLACE OF THREE WAY VALVES UNLESS NOTED. CAP AND REMOVE BYPASS LINE.

**ADD:** 5. BID ALTERNATE #2: INSTALL THREE WAY VALVE IN PLACE OF TWO WAY VALVE. INSTALL BALANCING VALVE IN RETURN AND BYPASS LINE

6. Drawing M-105 STAPLES PARTIAL MECHANICAL PLAN

KEYED NOTE

**ADD:** To end of note 2 “BID ALTERNATE #2: IF BID ALTERNATE # 2 IS APPROVED, INSTALL MODULATING TWO WAY VALVES IN PLACE OF THREE WAY VALVES UNLESS NOTED. CAP AND REMOVE BYPASS LINE.

**ADD:** 4. BID ALTERNATE #2: INSTALL THREE WAY VALVE IN PLACE OF TWO WAY VALVE. INSTALL BALANCING VALVE IN RETURN AND BYPASS LINE

7. Drawing M-106 STAPLES PARTIAL MECHANICAL PLAN  
STAPLES BUILDING – 2<sup>ND</sup> FLOOR PARTIAL MECHANICAL PLAN

**ADD:** Damper sizes to all dampers on drawing

KEYED NOTE

**ADD:** To end of note 1 “BID ALTERNATE #2: IF BID ALTERNATE # 2 IS APPROVED, INSTALL MODULATING TWO WAY VALVES IN PLACE OF THREE WAY VALVES UNLESS NOTED. CAP AND REMOVE BYPASS LINE.

**ADD:** 5. BID ALTERNATE #2: INSTALL THREE WAY VALVE IN PLACE OF TWO WAY VALVE. INSTALL BALANCING VALVE IN RETURN AND BYPASS LINE

8. Drawing M-107 STAPLES PARTIAL MECHANICAL PLAN

KEYED NOTE

**ADD:** To end of note 1 “BID ALTERNATE #2: IF BID ALTERNATE # 2 IS APPROVED, INSTALL MODULATING TWO WAY VALVES IN PLACE OF THREE WAY VALVES UNLESS NOTED. CAP AND REMOVE BYPASS LINE.

**ADD:** 3. BID ALTERNATE #2: INSTALL NEW DIFFERENTIAL PRESSURE SENSOR IN PIPING AT THIS LOCATION FOR CONTROL OF REHEAT PUMP.

**ADD:** 4. BID ALTERNATE #2: INSTALL THREE WAY VALVE IN PLACE OF TWO WAY VALVE. INSTALL BALANCING VALVE IN RETURN AND BYPASS LINE.

**ADD:** 5. EXISTING ASU – 4 CONTROLLER SHALL BE DEMOLISHED. NEW CONTROLLER SHALL BE INSTALLED IN PLACE OF EXISTING. CONNECT ALL POINTS BACK INTO CONTROLLER.

(ITEMS THAT DO NOT HAVE A HEADING FALL UNDER AN EXISTING HEADING)

**ADD:** DETAIL #2 WHICH SHOWS A PICTURE OF THE EXISTING ASU – 4

CONTROLLER.

9. Drawing M-108 STAPLES PARTIAL MECHANICAL PLAN

KEYED NOTE

**ADD:** To end of note 1 "BID ALTERNATE #2: IF BID ALTERNATE # 2 IS APPROVED, INSTALL MODULATING TWO WAY VALVES IN PLACE OF THREE WAY VALVES UNLESS NOTED. CAP AND REMOVE BYPASS LINE.

**ADD:** 3. EXISTING ASU – 5 CONTROLLER SHALL BE DEMOLISHED. NEW CONTROLLER SHALL BE INSTALLED IN PLACE OF EXISTING. CONNECT ALL POINTS BACK INTO CONTROLLER.

**ADD:** 4. EXISTING ASU – 6 CONTROLLER SHALL BE DEMOLISHED. NEW CONTROLLER SHALL BE INSTALLED IN PLACE OF EXISTING. CONNECT ALL POINTS BACK INTO CONTROLLER.

**ADD:** 5. BID ALTERNATE #2: INSTALL THREE WAY VALVE IN PLACE OF TWO WAY VALVE. INSTALL BALANCING VALVE IN RETURN AND BYPASS LINE.

(ITEMS THAT DO NOT HAVE A HEADING FALL UNDER AN EXISTING HEADING)

**ADD:** DETAIL #2 WHICH SHOWS A PICTURE OF THE EXISTING ASU – 5 AND 6 CONTROLLER

10. Drawing M-109 STAPLES PARTIAL MECHANICAL PLAN

STAPLES BUILDING – 2<sup>ND</sup> FLOOR PARTIAL MECHANICAL PLAN

**ADD:** Damper sizes to all dampers on drawing

KEYED NOTE

**ADD:** To end of note 2 "BID ALTERNATE #2: IF BID ALTERNATE # 2 IS APPROVED, INSTALL MODULATING TWO WAY VALVES IN PLACE OF THREE WAY VALVES UNLESS NOTED. CAP AND REMOVE BYPASS LINE.

**ADD:** 7. BID ALTERNATE #2: INSTALL THREE WAY VALVE IN PLACE OF TWO WAY VALVE. INSTALL BALANCING VALVE IN RETURN AND BYPASS LINE

11. Drawing M-110 STAPLES PARTIAL MECHANICAL PLAN

STAPLES BUILDING – 2<sup>ND</sup> FLOOR PARTIAL MECHANICAL PLAN

**ADD:** Damper sizes to all dampers on drawing

KEYED NOTE

**ADD:** To end of note 2 "BID ALTERNATE #2: IF BID ALTERNATE # 2 IS APPROVED, INSTALL MODULATING TWO WAY VALVES IN PLACE OF THREE WAY VALVES UNLESS NOTED. CAP AND REMOVE BYPASS LINE.

**ADD:** 6. BID ALTERNATE #2: INSTALL THREE WAY VALVE IN PLACE OF TWO WAY VALVE. INSTALL BALANCING VALVE IN RETURN AND BYPASS LINE

(ITEMS THAT DO NOT HAVE A HEADING FALL UNDER AN EXISTING HEADING)

**ADD:** DETAIL #2 WHICH SHOWS A PICTURE EXISTING ASU – 1 CONTROL SCHEMATIC.

12. Drawing M-601 MECHANICAL DETAILS

Existing Cooling Coil Balancing Schedule

**ADD:** Valve size column

Existing Heating Coil Balancing Schedule

**ADD:** Valve size column

13. Drawing M-614 MECHANICAL AIR FLOW DIAGRAM – ASU 6 & 7  
Existing TRU Schedule  
**ADD:** HW size column.

14. Drawing E-101 STAPLES PARTIAL ELECTRICAL PLAN  
POWER GENERAL NOTES  
**ADD:** I. “DASHED LINE INDICATES GROUPINGS FOR TRANSFORMER SERVICE.”

POWER KEYED NOTES

**ADD:** “11. CONTROL TRANSFORMER TYPE: BOD - SQUARE-D 9070T100D19, TYPE-T, OR APPROVED EQUAL, 277V – PRIMARY, 24V-SECONDARY, 100VA, 1-PHASE. CONNECT (2) UNITS.”

**ADD:** “12. CONTROL TRANSFORMER TYPE: BOD - SQUARE-D 9070T200D25, TYPE-T, EQUIVALENT – SIEMENS, EATON, OR APPROVED EQUAL), 277V – PRIMARY, 24V-SECONDARY, 200VA, 1-PHASE. CONNECT (4) UNITS.”

15. Drawing E-102 STAPLES PARTIAL ELECTRICAL PLAN  
POWER GENERAL NOTES  
**ADD:** “ I. DASHED LINE INDICATES GROUPINGS FOR TRANSFORMER SERVICE.”

POWER KEYED NOTES

**ADD:** “8. CONTROL TRANSFORMER TYPE: BOD - SQUARE-D 9070T100D19, TYPE-T, OR APPROVED EQUAL, 277V – PRIMARY, 24V-SECONDARY, 100VA, 1-PHASE. CONNECT (2) UNITS.”

**ADD:** “9. CONTROL TRANSFORMER TYPE: BOD - SQUARE-D 9070T200D25, TYPE-T, EQUIVALENT – SIEMENS, EATON, OR APPROVED EQUAL), 277V – PRIMARY, 24V-SECONDARY, 200VA, 1-PHASE. CONNECT (4) UNITS.”

16. Drawing E-103 STAPLES PARTIAL ELECTRICAL PLAN  
POWER GENERAL NOTES  
**ADD:** “I. DASHED LINE INDICATES GROUPINGS FOR TRANSFORMER SERVICE.”

POWER KEYED NOTES

**ADD:** “6. CONTROL TRANSFORMER TYPE: BOD - SQUARE-D 9070T100D19, TYPE-T, OR APPROVED EQUAL, 277V – PRIMARY, 24V-SECONDARY, 100VA, 1-PHASE. CONNECT (2) UNITS.”

**ADD:** “7. CONTROL TRANSFORMER TYPE: BOD - SQUARE-D 9070T200D25, TYPE-T, EQUIVALENT – SIEMENS, EATON, OR APPROVED EQUAL), 277V – PRIMARY, 24V-SECONDARY, 200VA, 1-PHASE. CONNECT (4) UNITS.”

17. Drawing E-104 STAPLES PARTIAL ELECTRICAL PLAN  
POWER GENERAL NOTES  
**ADD:** “I. DASHED LINE INDICATES GROUPINGS FOR TRANSFORMER SERVICE.”

POWER KEYED NOTES

**ADD:** “6. CONTROL TRANSFORMER TYPE: BOD - SQUARE-D 9070T100D19, TYPE-T, OR APPROVED EQUAL, 277V – PRIMARY, 24V-SECONDARY, 100VA, 1-PHASE. CONNECT (2) UNITS.”

**ADD:** “7. CONTROL TRANSFORMER TYPE: BOD - SQUARE-D 9070T200D25, TYPE-T,

EQUIVALENT – SIEMENS, EATON, OR APPROVED EQUAL), 277V – PRIMARY, 24V-SECONDARY, 200VA, 1-PHASE. CONNECT (4) UNITS.”

18. Drawing E-105 STAPLES PARTIAL ELECTRICAL PLAN

POWER GENERAL NOTES

**ADD:** “1. DASHED LINE INDICATES GROUPINGS FOR TRANSFORMER SERVICE.”

POWER KEYED NOTES

**ADD:** “6. CONTROL TRANSFORMER TYPE: BOD - SQUARE-D 9070T100D19, TYPE-T, OR APPROVED EQUAL, 277V – PRIMARY, 24V-SECONDARY, 100VA, 1-PHASE. CONNECT (2) UNITS.”

**ADD:** “7. CONTROL TRANSFORMER TYPE: BOD - SQUARE-D 9070T200D25, TYPE-T, EQUIVALENT – SIEMENS, EATON, OR APPROVED EQUAL), 277V – PRIMARY, 24V-SECONDARY, 200VA, 1-PHASE. CONNECT (4) UNITS.”

19. Drawing E-106 STAPLES PARTIAL ELECTRICAL PLAN

POWER GENERAL NOTES

**ADD:** “1. DASHED LINE INDICATES GROUPINGS FOR TRANSFORMER SERVICE.”

POWER KEYED NOTES

**ADD:** “5. CONTROL TRANSFORMER TYPE: BOD - SQUARE-D 9070T100D19, TYPE-T, OR APPROVED EQUAL, 277V – PRIMARY, 24V-SECONDARY, 100VA, 1-PHASE. CONNECT (2) UNITS.”

**ADD:** “6. CONTROL TRANSFORMER TYPE: BOD - SQUARE-D 9070T200D25, TYPE-T, EQUIVALENT – SIEMENS, EATON, OR APPROVED EQUAL), 277V – PRIMARY, 24V-SECONDARY, 200VA, 1-PHASE. CONNECT (4) UNITS.”

20. Drawing E-107 STAPLES PARTIAL ELECTRICAL PLAN

POWER GENERAL NOTES

**ADD:** “1. DASHED LINE INDICATES GROUPINGS FOR TRANSFORMER SERVICE.”

POWER KEYED NOTES

**ADD:** “4. CONTROL TRANSFORMER TYPE: BOD - SQUARE-D 9070T100D19, TYPE-T, OR APPROVED EQUAL, 277V – PRIMARY, 24V-SECONDARY, 100VA, 1-PHASE. CONNECT (2) UNITS.”

**ADD:** “5. CONTROL TRANSFORMER TYPE: BOD - SQUARE-D 9070T200D25, TYPE-T, EQUIVALENT – SIEMENS, EATON, OR APPROVED EQUAL), 277V – PRIMARY, 24V-SECONDARY, 200VA, 1-PHASE. CONNECT (4) UNITS.”

21. Drawing E-108 STAPLES PARTIAL ELECTRICAL PLAN

POWER GENERAL NOTES

**ADD:** “1. DASHED LINE INDICATES GROUPINGS FOR TRANSFORMER SERVICE.”

POWER KEYED NOTES

**ADD:** “4. CONTROL TRANSFORMER TYPE: BOD - SQUARE-D 9070T100D19, TYPE-T, OR APPROVED EQUAL, 277V – PRIMARY, 24V-SECONDARY, 100VA, 1-PHASE. CONNECT (2) UNITS.”

**ADD:** “5. CONTROL TRANSFORMER TYPE: BOD - SQUARE-D 9070T200D25, TYPE-T, EQUIVALENT – SIEMENS, EATON, OR APPROVED EQUAL), 277V – PRIMARY, 24V-SECONDARY, 200VA, 1-PHASE. CONNECT (4) UNITS.”

22. Drawing E-109 STAPLES PARTIAL ELECTRICAL PLAN

POWER GENERAL NOTES

**ADD:** "1. DASHED LINE INDICATES GROUPINGS FOR TRANSFORMER SERVICE."

POWER KEYED NOTES

**ADD:** "6. CONTROL TRANSFORMER TYPE: BOD - SQUARE-D 9070T100D19, TYPE-T, OR APPROVED EQUAL, 277V – PRIMARY, 24V-SECONDARY, 100VA, 1-PHASE. CONNECT (2) UNITS."

**ADD:** "7. CONTROL TRANSFORMER TYPE: BOD - SQUARE-D 9070T200D25, TYPE-T, EQUIVALENT – SIEMENS, EATON, OR APPROVED EQUAL), 277V – PRIMARY, 24V-SECONDARY, 200VA, 1-PHASE. CONNECT (4) UNITS."

23. Drawing E-110 STAPLES PARTIAL ELECTRICAL PLAN

POWER GENERAL NOTES

**ADD:** "1. DASHED LINE INDICATES GROUPINGS FOR TRANSFORMER SERVICE."

POWER KEYED NOTES

**ADD:** "7. CONTROL TRANSFORMER TYPE: BOD - SQUARE-D 9070T100D19, TYPE-T, OR APPROVED EQUAL, 277V – PRIMARY, 24V-SECONDARY, 100VA, 1-PHASE. CONNECT (2) UNITS."

**ADD:** "8. CONTROL TRANSFORMER TYPE: BOD - SQUARE-D 9070T200D25, TYPE-T, EQUIVALENT – SIEMENS, EATON, OR APPROVED EQUAL), 277V – PRIMARY, 24V-SECONDARY, 200VA, 1-PHASE. CONNECT (4) UNITS."

**GENERAL COMMENTS:**

- The Pre-Bid meeting was held March 13, 2024 followed by an inspection of the project site.
- Bidders desiring to perform a site inspection should contact staff Brad Burgess at 573-218-6857 [Brad.Burgess@oa.mo.gov](mailto:Brad.Burgess@oa.mo.gov) to schedule a time to enter the facility.
- Please contact Paul Girouard, 573-751-4797 [paul.girouard@oa.mo.gov](mailto:paul.girouard@oa.mo.gov) for questions about bidding procedures, MBE\WBE\SDVE Goals, and other submittal requirements.
- The deadline for technical questions is March 19,2024 at noon (12 pm).
- Changes to, or clarification of, the bid documents are only made as issued in the addenda.
- All correspondence with respect to this project must include the State of Missouri project number as indicated above.
- **All bids shall be submitted on the bid form without additional terms and conditions, modifications, or stipulations. Each space on the bid form shall be properly filled including a bid amount for each alternate. Failure to do so will result in rejection of the bid.**
- **MBE/WBE/SDVE participation requirements can be found in DIVISION 00. The MBE/WBE/SDVE participation goals are 10%/10%/3%, respectively. Only certified firms as of the bid opening date can be used to satisfy the MBE/WBE/SDVE participation goals for this project. If a bidder is unable to meet a participation goal, a Good Faith Effort Determination Form must be completed. Failure to complete this process will result in rejection of the bid.**

**ATTACHMENTS:**

Pre-bid sign in sheet

STAPLES MECHANICAL GENERAL NOTES

M-001


|   |       |
|---|-------|
| STAPLES PARTIAL MECHANICAL PLAN         | M-101 |
| STAPLES PARTIAL MECHANICAL PLAN         | M-102 |
| STAPLES PARTIAL MECHANICAL PLAN         | M-103 |
| STAPLES PARTIAL MECHANICAL PLAN         | M-104 |
| STAPLES PARTIAL MECHANICAL PLAN         | M-105 |
| STAPLES PARTIAL MECHANICAL PLAN         | M-106 |
| STAPLES PARTIAL MECHANICAL PLAN         | M-107 |
| STAPLES PARTIAL MECHANICAL PLAN         | M-108 |
| STAPLES PARTIAL MECHANICAL PLAN         | M-109 |
| STAPLES PARTIAL MECHANICAL PLAN         | M-110 |
| MECHANICAL DETAILS                      | M-601 |
| MECHANICAL AIR FLOW DIAGRAM – ASU 6 & 7 | M-614 |
| STAPLES PARTIAL ELECTRICAL PLAN         | E-101 |
| STAPLES PARTIAL ELECTRICAL PLAN         | E-102 |
| STAPLES PARTIAL ELECTRICAL PLAN         | E-103 |
| STAPLES PARTIAL ELECTRICAL PLAN         | E-104 |
| STAPLES PARTIAL ELECTRICAL PLAN         | E-105 |
| STAPLES PARTIAL ELECTRICAL PLAN         | E-106 |
| STAPLES PARTIAL ELECTRICAL PLAN         | E-107 |
| STAPLES PARTIAL ELECTRICAL PLAN         | E-108 |
| STAPLES PARTIAL ELECTRICAL PLAN         | E-109 |
| STAPLES PARTIAL ELECTRICAL PLAN         | E-110 |

**END OF ADDENDUM 01**

March 20, 2024



**Pre-Bid Meeting Attendance Sheet  
Upgrade HVAC Controls  
Southeast MO Mental Health Center  
Project #: M2011-01  
Mar 13<sup>th</sup>, 2024 10:30 AM**

| Name & Title   | Company Name & Type of Contracting | MBE/WBE/SDVE Status | Phone   | E-Mail Address of Attendee & E-Mail Address of Individual filling out Bid Documents |
|--|------------------------------------|---------------------|---|---|
| Shannon Thompson<br>Project Manager  | State of Missouri<br>OA/FMDC       |                     | 573-526-3166<br>573-257-7137                  | Shannon.thompson@oa.mo.gov  |
|  Kevin Hultberg<br>Construction Administrator | State of Missouri<br>OA/FMDC       |                     | 636-524-8528                                  | kevin.hultberg@oa.mo.gov  |
| <del>Regina Raineri</del><br><del>Architect</del>  | Casco Diversified Corporation      |                     | <del>314-821-1100</del><br><del>Ext 145</del> | <del>regina.raineri@thecdecompanies.com</del>                                       |
| Tom Grassi   | CASCO                              |                     | 314-443-7238                                  | <u>tom.grassi@ME1eng.com</u>  |
| Ryan Boatright   | CASCO                              |                     | 314-882-9924                                  | <u>ryan.boatright@me1eng.com</u>  |
| Alec Stacey  | Brockmiller                        |                     | 573-315-6512                                  | <u>B.stacy@Brockmillerconstruction.com</u>  |

**Pre-Bid Meeting Attendance Sheet  
 Upgrade HVAC Controls  
 Southeast MO Mental Health Center  
 Project #: M2011-01  
 Mar 13<sup>th</sup>, 2024 10:30 AM**

| Name & Title                              | Company Name<br>Type of Contracting        | MBE/WBE/<br>SDVE Status | Phone             | E-Mail Address of Attendee and<br>E-Mail Address of Individual filling<br>out Bid Documents |
|---|--|-------------------------|-------------------|---|
| KEVIN SKAGGS<br>SALES ENGINEER            | PREMIUM SOLUTIONS<br>CONTROLS & AUTOMATION |                         | (513)<br>450-9632 | <u>kskaggs@premiumbsi.com</u><br><u>rhenley@premiumbsi.com</u>                              |
| Brad Burgess                              | O A/FMDC                                   |                         | 573<br>218-6857   | <u>Brad.Burgess@oamc.gov</u>  |
| Andre Roberts<br>HVAC Controls Supervisor | Murphy Company                             |                         | 314.393.9051      | <u>aroberts@murphy.net.com</u>  |
| TOM FLAKER<br>ACCOUNT MGR                 | MURPHY COMPANY                             |                         | 514-575-8669      | <u>tflaker@murphy.net.com</u>   |
| Mat White<br>Account Mgr                  | Murphy Co.                                 |                         | (314) 406-7795    | <u>Mwhite@murphy.net.com</u>  |
| Amy Luebbers                              | SMHC                                       |                         | 573.218.6717      | <u>amy.luebbers@dmh.mo.gov</u>  |

**Pre-Bid Meeting Attendance Sheet**  
**Upgrade HVAC Controls**  
**Southeast MO Mental Health Center**  
**Project #: M2011-01**  
**Mar 13<sup>th</sup>, 2024 10:30 AM**

| Name & Title         | Company Name<br>Type of Contracting | MBE/WBE/<br>SDVE Status | Phone        | E-Mail Address of Attendee and<br>E-Mail Address of Individual filling<br>out Bid Documents |
|----------------------|-------------------------------------|-------------------------|--------------|---|
| Matthew Roach<br>CFO | SmmHC                               |                         | 573-218-6789 | <u>matthew.roach@dmb.mo.gov</u>   |
|                      |                                     |                         |              |   |
|                      |                                     |                         |              |   |
|                      |                                     |                         |              |   |
|                      |                                     |                         |              |   |
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|                      |                                     |                         |              |   |

**GENERAL NOTES**

- THESE PLANS ARE DIAGRAMMATIC IN NATURE SINCE THEY REFLECT ONLY THE AVAILABLE INFORMATION OBTAINED FROM EXISTING PLANS, SPECIFICATIONS, AND FIELD SURVEYS. THE EXACT LOCATION OF EXISTING DUCTWORK, PIPING, AND EQUIPMENT MAY DEVIATE FROM THE LOCATION INDICATED ON THE DRAWINGS. THE CONTRACTOR SHALL BE PREPARED TO MAKE SOME ALTERATIONS TO NEW AND/OR EXISTING SERVICES TO FIT ACTUAL JOB CONDITIONS.
- THE SPACE ALLOWED FOR MECHANICAL AND ELECTRICAL WORK ABOVE THE SUSPENDED CEILING IS CRITICAL AND REQUIRES COORDINATION BETWEEN TRADES. CONTRACTORS SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH THE EXISTING CONDITIONS PRIOR TO FABRICATION OR INSTALLATION OF ANY MATERIALS. DUCTWORK SHALL BE HUNG AS CLOSE AS POSSIBLE TO THE STRUCTURE ABOVE UNLESS INDICATED OTHERWISE. REWORK OF PIPING, DUCTWORK, EQUIPMENT LOCATION, CONDUIT, ETC. AS A RESULT OF POOR PLANNING, COORDINATION, OR SCHEDULING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- ANY HOLES LEFT IN EXISTING WALL CONSTRUCTION DUE TO DEMOLITION OR NEW WORK SHALL BE PATCHED TO MATCH EXISTING CONDITIONS.
- PIPES/DUCTS/ETC. PENETRATING EXTERIOR WALLS AND ROOFS SHALL BE SEALED AND WEATHER PROOFED.
- THERMOSTATS & ROOM TEMPERATURE SENSORS SHALL BE MOUNTED AT 48" A.F.F. TO THE TOP OF THERMOSTAT UNLESS NOTED OTHERWISE. DO NOT MOUNT IN DIRECT SUNLIGHT OR NEAR HEAT PRODUCING EQUIPMENT.
- INSTALL H.V.A.C. SYSTEM IN ACCORDANCE WITH ALL STATE AND LOCAL CODES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF ANY FRAMING REVISIONS, EQUIPMENT LOCATIONS, ADDITION OF CONTROLS, ELECTRICAL CIRCUITING REVISIONS, ETC. THAT RESULT FROM USING EQUIPMENT OTHER THAN INDICATED ON THE DRAWINGS. APPROVAL OF THE SHOP DRAWINGS BY THE ENGINEER WILL NOT WAIVE THE CONTRACTOR OF THIS RESPONSIBILITY.
- THE CONTRACTOR SHALL HAVE THE FINAL RESPONSIBILITY FOR MECHANICAL EQUIPMENT START UP AND TURN OVER TO THE OWNER. MANUFACTURER OF EQUIPMENT SHALL BE ON SITE DURING THE SYSTEM START UP.
- ALL ITEMS INCLUDED ON THESE DRAWINGS AND THE SPECIFICATIONS SHALL BE INCLUDED IN THE CONTRACTOR'S BID. IF THE CONTRACTOR DOES NOT CLEARLY UNDERSTAND THESE PLANS OR IS NOT SURE OF THEIR MEANING, THE CONTRACTOR SHOULD OBTAIN THE ENGINEER'S WRITTEN EXPLANATION AND INTERPRETATION PRIOR TO BID TIME. THE CONTRACTOR WILL BE HELD TO THE INTERPRETATION OF THE ENGINEER.
- IN THE EVENT THE CONTRACTOR DISCOVERS ANY POTENTIALLY HAZARDOUS MATERIALS (ASBESTOS, MOLD, MILDEW, ETC.), THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE AND THE ARCHITECT/ENGINEER OF RECORD, IN WRITING, OF THE CONCERNS AND/OR SUSPICIONS.
- CAULK ALL PENETRATIONS THRU WALLS TO MINIMIZE SOUND TRANSMISSION THRU WALLS.
- ANY DAMAGE TO THE SITE (SIDEWALKS, CURBS, ETC) OR TO THE BUILDING AS A RESULT OF WORK PERFORMED UNDER THIS CONTRACT SHALL BE FIXED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR WILL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING OF ROOFS/WALLS/FLOORS AND CORE DRILLS REQUIRED TO COMPLETE THEIR RESPECTIVE WORK.
- THE OWNER SHALL HAVE FIRST SALVAGE RIGHTS OF EQUIPMENT AND MATERIALS REMOVED. ALL EQUIPMENT AND MATERIALS NOT CLAIMED BY THE OWNER SHALL BE REMOVED FROM THE PREMISES BY THE CONTRACTORS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ANY TEMPORARY FENCING AROUND THE LIFT SITE DURING LIFTS.
- ALL EXISTING MECHANICAL EQUIPMENT, DUCTWORK, ETC. THAT SERVES SPACES NOT ON PLANS SHALL REMAIN AS IS. DO NOT DISCONNECT OR REMOVE ANY EQUIPMENT NOT SHOWN IN THESE PLANS.
- REMOVE AND RE-INSTALL EXISTING LAY-IN CEILING AS REQUIRED TO COMPLETE ALL DEMOLITION AND NEW WORK. REPLACE CEILING TILES DAMAGED DURING CONSTRUCTION WITH NEW TILES MATCHING EXISTING.
- ALL WORK THAT SHALL LEAVE EQUIPMENT EXPOSED TO PATIENTS SHALL BE LIGATURE AND TAMPER PROOF OR BE INSTALLED IN A LIGATURE/TAMPER PROOF ENCLOSURE. CONTRACTOR SHALL COORDINATE WORK WITH OWNER TO SET UP WORK TIMES AS A REPRESENTATIVE OF THE OWNER MUST BE ACCOMPANYING THE CONTRACTORS AT ALL TIME.
- WORKING TIMES WITHIN PATIENT WARDS SHALL BE SET AT A MAXIMUM OF 8 HOURS STRAIGHT. WORK WITHIN PATIENT WARDS MUST BE COORDINATED WITH THE ACTING MAINTENANCE SUPERVISOR AT LEAST ONE WEEK PRIOR TO START OF WORK. ALL TOOLS, ACCESSORIES, MATERIALS, ETC OWNED BY CONTRACTOR TO COMPLETE WORK MUST BE REMOVED PRIOR TO THE END OF THE MAXIMUM 8 HOUR WORKING TIME PERIOD. NO MATERIALS, TOOLS, ACCESSORIES, ETC SHALL BE LEFT WITHIN OCCUPIED WARDS. WHERE PATIENTS ARE NOT PRESENT, ALL EQUIPMENT, MATERIALS, ACCESSORIES, ETC MUST BE KEPT WITH SECURED ROOMS OR BOXES.
- CONTRACTOR IS NOT RESPONSIBLE FOR FURNISHING NEW PC ON THE SCOPE OF THIS JOB. NEW CONTROLS SYSTEM SHALL BE INTERNET BASED. ALL CONNECTIONS MUST BE HARD WIRED. COORDINATE WITH OWNER'S I.T. DEPARTMENT TO ENSURE ALL CONNECTIONS ARE UP TO OWNER AND STATE STANDARDS. CONTACT THE HEAD OF FACILITIES AT SITE FOR COORDINATION.
- CONNECTION TO FORENSIC'S BUILDING BAS IS OUTSIDE OF SCOPE OF WORK. DO NOT CONNECT EXISTING ALERTON SYSTEM INTO NEW BAS.

**GENERAL NOTES (AIR SIDE)**

- ALL DUCTWORK SHALL BE CONSTRUCTED AND INSTALLED PER THE LATEST VERSION OF THE S.M.A.C.N.A. H.V.A.C. DUCT CONSTRUCTION STANDARDS, UNLESS SPECIFIED MORE STRINGENTLY IN THESE CONSTRUCTION DOCUMENTS. MINIMUM DUCT GAUGE SHALL BE 24.
- NOT ALL OF THE ACCESS DOORS IN THE DUCT SYSTEMS OR PLENUMS ARE SHOWN. PROVIDE ACCESS DOORS IN ALL DUCT SYSTEMS OR PLENUMS WHERE REQUIRED TO ACCESS AND MAINTAIN MOTORIZED OR AUTOMATIC DAMPER BLADES AND LINKAGES.
- FLEXIBLE DUCT RUNOUTS TO AIR DEVICES SHALL NOT EXCEED 5'-0" IN LENGTH. FLEXIBLE RUNOUTS SHALL BE TRIMMED TO THE MINIMUM LENGTH NECESSARY TO MAKE THE CONNECTION.
- WHERE DAMPER ACTUATORS ARE MOUNTED TO DUCTWORK OR PLENUMS PROVIDE A HEAVY GAGE BASE PLATE, ANGLE STIFFENERS, OR MOUNTING AS REQUIRED TO ELIMINATE DEFLECTION OF DUCTWORK DURING ACTUATOR OPERATION.
- ALL DAMPER ACTUATORS FOR DUCT SYSTEMS OR EQUIPMENT THAT COMMUNICATES DIRECTLY WITH THE OUTDOORS SHALL BE SPRING RETURN TYPE TO CLOSE IN THE EVENT OF A POWER FAILURE.
- AREAS ABOVE THE CEILING SERVE AS A RETURN AIR PLENUM. ALL MATERIALS EXPOSED IN THE PLENUM SHALL HAVE A 25/50 SMOKE/FLAME SPREAD RATING.
- CONTRACTOR SHALL BALANCE EACH AREA OF COMPLETED WORK. THE CONTRACTOR SHALL BALANCE SUPPLY, RETURN, AND EXHAUST AIR FLOWS AT EACH AIR DEVICE AFFECTED BY RENOVATION TO QUANTITY INDICATED ON THE DRAWINGS.
- ALL NEW DUCT CONNECTIONS TO EXISTING DUCTWORK SHALL BE SEALED AIRTIGHT.

**GENERAL NOTES (HYDRONIC)**

- THE CONTRACTOR SHALL COORDINATE SYSTEM SHUT-DOWNS, INCLUDING CHILLED WATER AND HEATING WATER SYSTEM SHUT-DOWNS, WITH THE OWNER. PROVIDE A MINIMUM ONE WEEK NOTICE PRIOR TO ANY SYSTEM SHUT-DOWN.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DRAINING, FILLING, AND VENTING (FOR ALL SYSTEMS OPENED BY CONTRACTOR) OF ALL HYDRONIC SYSTEMS IMPACTED BY THIS PROJECT. CHEMICALS SHALL BE PROVIDED BY WALTER LOUIS (STATE OF MISSOURI CHEMICAL PROVIDER) AND BE BOUGHT BY THE STATE DIRECTLY (NOT AT THE COST TO THE CONTRACTOR), BUT THE CONTRACTOR SHALL BE REQUIRED TO MIX AND INCORPORATE CHEMICALS INTO ALL HYDRONIC SYSTEMS IMPACTED BY PROJECT. COORDINATE WITH OWNER CONTACT AT WALTER LOUIS FOR REQUIRED WATER TREATMENT SCOPE. CONTACT: NICK KISER, PHONE: 636-399-9388.
- AS PER OWNER DISCUSSION, THERE IS NO GLYCOL IN THE HOT WATER HEATING LOOP. IF FIELD RESULTS SHOW DIFFERENT THAT AS STATED, CONTACT ENGINEER.
- AS PER DISCUSSION WITH OWNER, THE CHILLED WATER SYSTEM IS 30% FOOD GRADE GLYCOL. CONTRACTOR SHALL FIELD VERIFY PERCENTAGE. IF THIS NUMBER IS DIFFERENT THAN THAT FOUND IN FIELD, CONTRACTOR SHALL CONTACT ENGINEER.
- AFTER COMPLETION OF WORK IN EACH WARD, CONTRACTOR SHALL CLEAN HOT WATER STRAINER(S) IN MECHANICAL ROOM.

| HEATING AND VENTILATION SYMBOLS  |  | PIPING SPECIALTIES  |  |
|--|--|---|--|
| VD MANUAL VOLUME DAMPER<br>BD GRAVITY BACKDRAFT DAMPER<br>MD MOTORIZED VOLUME DAMPER<br>SD SMOKE DETECTOR<br>RETURN/TRANSFER/COMBUSTION AIR DISCHARGE DUCT UP<br>RETURN/TRANSFER/COMBUSTION AIR DISCHARGE DUCT DOWN<br>SUPPLY AIR/COMBUSTION AIR INTAKE UP<br>SUPPLY AIR/COMBUSTION AIR INTAKE DOWN<br>EXHAUST AIR DUCT UP<br>EXHAUST AIR DUCT DOWN<br>ROUND DUCT UP<br>INCLINED DROP IN THE DIRECTION OF AIR FLOW<br>INCLINED RISE IN THE DIRECTION OF AIR FLOW<br>ECCENTRIC DUCT TRANSITION<br>CONCENTRIC DUCT TRANSITION<br><p><b>AIR DEVICE TYPE:</b><br/>                     S - SUPPLY DIFFUSER<br/>                     R - RETURN GRILLE<br/>                     E - EXHAUST GRILLE<br/>                     T - TRANSFER GRILLE<br/> <b>DUCT SYSTEM TYPE:</b><br/>                     SA - SUPPLY AIR<br/>                     RA - RETURN AIR<br/>                     EA - EXHAUST AIR<br/>                     TA - TRANSFER AIR<br/>                     OA - OUTDOOR AIR<br/>                     MD - COLD/HOT MIXED DUCT<br/>                     CD - COLD DUCT<br/>                     HD - HOT DUCT</p> | CWS CHILLED WATER SUPPLY<br>CWR CHILLED WATER RETURN<br>HWS HEATING WATER SUPPLY<br>HWR HEATING WATER RETURN<br>T THERMOSTAT / TEMPERATURE SENSOR<br><p><b>MISCELLANEOUS SYMBOLS</b></p> EQUIPMENT OR PLUMBING FIXTURE DESIGNATION<br>(DETAIL NUMBER)<br>DETAIL DESIGNATION<br>(SHEET NUMBER WHERE DETAIL IS FOUND)<br>KEYED NOTES<br>REVISIONS<br>NEW CONNECTION<br>S-1 (AIR DEVICE TYPE) - (SCHEDULE NUMBER)<br>1000 (AIR FLOW IN CFM)<br><p>NOTE: NOT ALL SYMBOLS OR ABBREVIATIONS MAY BE USED.</p> | GV GATE VALVE<br>BV BALANCING VALVE<br>CV CHECK VALVE<br>GLV GLOBE VALVE<br>BLV BALL VALVE<br>STR STRAINER<br>U UNION<br>BC BALANCING COCK<br>SOC SHUT-OFF COCK<br>SLV SOLENOID VALVE<br>BFV BUTTERFLY VALVE<br>FS FLOW SWITCH<br>VALVE W/ SUPERVISORY SWITCH<br>FCV FLOW CONTROL VALVE (GPM INDICATED)<br>T&PR TEMPERATURE AND PRESSURE RELIEF VALVE<br>PG PRESSURE GAUGE<br>TH THERMOMETER (TUBE OR DIAL AS INDICATED)<br>MV MOTORIZED VALVE<br>DV DIAPHRAGM VALVE<br><p><b>ABBREVIATIONS</b></p> <p>FFE FINISH FLOOR ELEVATION<br/>                     AFF ABOVE FINISH FLOOR<br/>                     TE TOP ELEVATION<br/>                     BE BOTTOM ELEVATION<br/>                     FL FLOW LINE<br/>                     INV INVERT ELEVATION<br/>                     CL CENTER LINE<br/>                     GC GENERAL CONSTRUCTION CONTRACTOR<br/>                     HAC HEATING &amp; AIR CONDITIONING CONTRACTOR<br/>                     PC PLUMBING CONTRACTOR<br/>                     EC ELECTRICAL CONTRACTOR<br/>                     ACS AUTOMATIC CONTROL SUB-CONTRACTOR<br/>                     FPC FIRE PROTECTION CONTRACTOR<br/>                     HSC HALON SUB-CONTRACTOR<br/>                     KEC KITCHEN EQUIPMENT CONTRACTOR<br/>                     MC MECHANICAL CONTRACTOR<br/>                     TCC TEMPERATURE CONTROL CONTRACTOR</p> |  |

**GENERAL NOTES (DEMOLITION)**

- THESE PLANS ARE DIAGRAMMATIC IN NATURE. SINCE THEY REFLECT ONLY THE AVAILABLE INFORMATION OBTAINED FROM EXISTING PLANS, SPECIFICATIONS, AND FIELD SURVEYS. THE EXACT LOCATION OF EXISTING DUCTWORK, PIPING, AND EQUIPMENT MAY DEVIATE FROM THE LOCATION INDICATED ON THESE DRAWINGS. THE CONTRACTOR SHALL BE PREPARED TO MAKE SOME ALTERATIONS TO NEW AND/OR EXISTING SERVICES TO FIT ACTUAL JOB CONDITIONS.
- OWNER HAS FIRST RIGHT OF REFUSAL FOR ALL EQUIPMENT BEING REMOVED. CONTRACTOR TO DISPOSE OF EQUIPMENT BEING REMOVED BUT NOT RETAINED BY OWNER.
- WHEN REMOVING AND DEMOLISHING A PNEUMATIC AIR LINE OR CONNECTION TO A PIECE OF EQUIPMENT, CONTRACTOR SHALL CUT AND CAP AIR LINE WITH AN AIR TIGHT SEAL. COMPRESSED AIR SHALL REMAIN ACTIVE UNTIL THE END OF THE PROJECT TO ALLOW FOR BUILDING OPERATIONS TO CONTINUE. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REPAIRS THAT THEIR WORK CAUSES TO THE EXISTING SYSTEM THAT IMPEDES THE OPERATION OF THE BUILDING. COMPRESSED AIR LINES SHALL BE ABANDONED IN PLACE AT THE COMPLETION OF THE PROJECT.

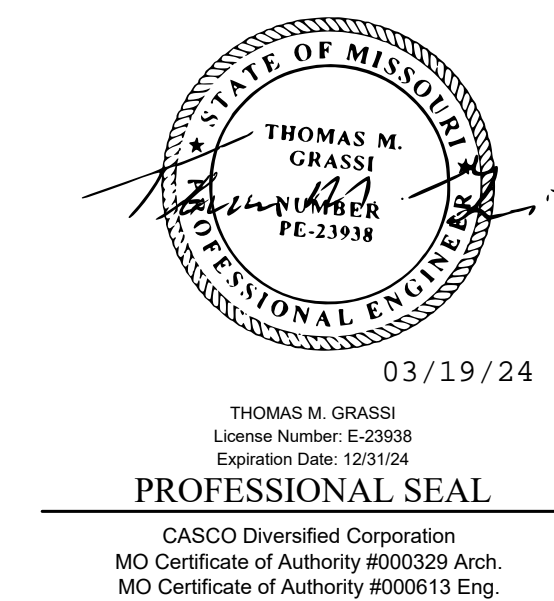
**GENERAL NOTES (ROOF PROTECTION)**

- THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE A MINIMUM OF ONE WEEK PRIOR TO THE BEGINNING OF WORK THAT INVOLVES ACTIVITY ON THE ROOF.
- TRAFFIC OVER THE EXISTING ROOF SURFACES SHALL BE KEPT TO AN ABSOLUTE MINIMUM.
- THE CONTRACTOR AND THE OWNER'S REPRESENTATIVE SHALL INSPECT THE EXPOSED ROOFING MEMBRANE SYSTEM PRIOR TO THE START OF CONSTRUCTION. ANY PREVIOUS DAMAGE OR DEFECTS OF THE ROOFING SYSTEM SHALL BE DOCUMENTED BY WRITING AND/OR PHOTOGRAPHS.
- THE CONTRACTOR SHALL PLACE MINIMUM OF 48" WIDE, 1/2" THICK APPROVED PROTECTION BOARDS (1 LAYER) MADE OF CONSTRUCTION GRADE PLYWOOD (ORIENTED STRAND BOARD WILL BE ACCEPTABLE) OVER ALL MEMBRANE ROOFING THAT WILL HAVE CONSTRUCTION TRAFFIC. THIS ROOF PROTECTION SHALL BE PROVIDED FOR THE ENTIRE AREA WITHIN THE LIMITS OF THE WORK. SUCH PROTECTION SHALL ALSO BE PROVIDED IN THE FORM OF A WALKWAY FROM THE ROOF ACCESS DOOR TO THE PROTECTED CONSTRUCTION AREA.
- STORAGE OF MATERIALS ON EXISTING ROOF WILL NOT BE ALLOWED.
- THE CONTRACTOR SHALL REMOVE DAILY ALL PROJECT DEBRIS FROM ALL ROOFING SURFACES.
- THE CONTRACTOR SHALL ADVISE THE OWNER WHEN WORK ON THE ROOF IS COMPLETE AND THE PROTECTION BOARDS HAVE BEEN REMOVED. THE CONTRACTOR AND THE OWNER SHALL EXAMINE ALL ROOF SURFACES WHERE WORK HAS OCCURRED AND WILL REPAIR ALL DEFECTS NOT PREVIOUSLY DOCUMENTED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE BUILDING, ROOF, STRUCTURAL FRAMING, ETC. INCURRED DURING CONSTRUCTION.
- THE CONTRACTOR SHALL VERIFY WARRANTY OF THE EXISTING MEMBRANE ROOFING SYSTEM. THE CONTRACTOR SHALL UTILIZE A LICENSED APPLICATOR OF THE EXISTING ROOFING SYSTEM TO PERFORM ALL ROOFING WORK AND TO REPAIR ANY AND ALL DAMAGE. UPON COMPLETION, THE CONTRACTOR SHALL OBTAIN A LETTER FROM THE ROOF MANUFACTURER STATING THAT THE EXISTING WARRANTY REMAINS IN FULL FORCE AND EFFECT.

FIRE ALARM COORDINATION SHALL BE DONE THROUGH EXISTING FIRE ALARM VENDOR.  
 COMPANY: JOHNSON CONTROLS  
 CONTACT: HANNAH SMITH  
 EMAIL: HANNAH.SMITH@JCI.COM  
 PHONE: 314-320-9296

NOTE: FOR STAFF TO FULLY CHANGE RESIDENTS FROM ONE WARD TO ANOTHER, IT WAS REPORTED BY THE OWNER THAT THIS COULD BE COMPLETED IN TWO (2) WORKING DAYS. FOR EXAMPLE, IF WORK IS COMPLETED ON A FRIDAY BY THE CONTRACTOR, WORK CAN BE STARTED ON THE NEXT WARD ON THE WEDNESDAY OF THE FOLLOWING WEEK. IF THE TRANSITION OF WARDS REQUIRES MORE TIME THAN TWO WORKING DAYS, THE CONTRACTOR SHALL CONTACT STATE CONSTRUCTION MANAGER.

STATE OF MISSOURI  
 MICHAEL L. PARSON,  
 GOVERNOR



03/19/24  
 THOMAS M. GRASSI  
 License Number: E-23938  
 Expiration Date: 12/31/24  
**PROFESSIONAL SEAL**  
 CASCO Diversified Corporation  
 MO Certificate of Authority #00329 Arch.  
 MO Certificate of Authority #00613 Eng.

**OFFICE OF  
 ADMINISTRATION  
 DIVISION OF FACILITIES  
 MANAGEMENT,  
 DESIGN AND  
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**DEPARTMENT OF MENTAL  
 HEALTH**

UPGRADE HVAC CONTROLS

STAPLES BUILDING  
 1010 W COLUMBIA ST.  
 FARMINGTON, MISSOURI  
 63640

PROJECT # M2011-01  
 SITE # 7354  
 ASSET# 6517354012

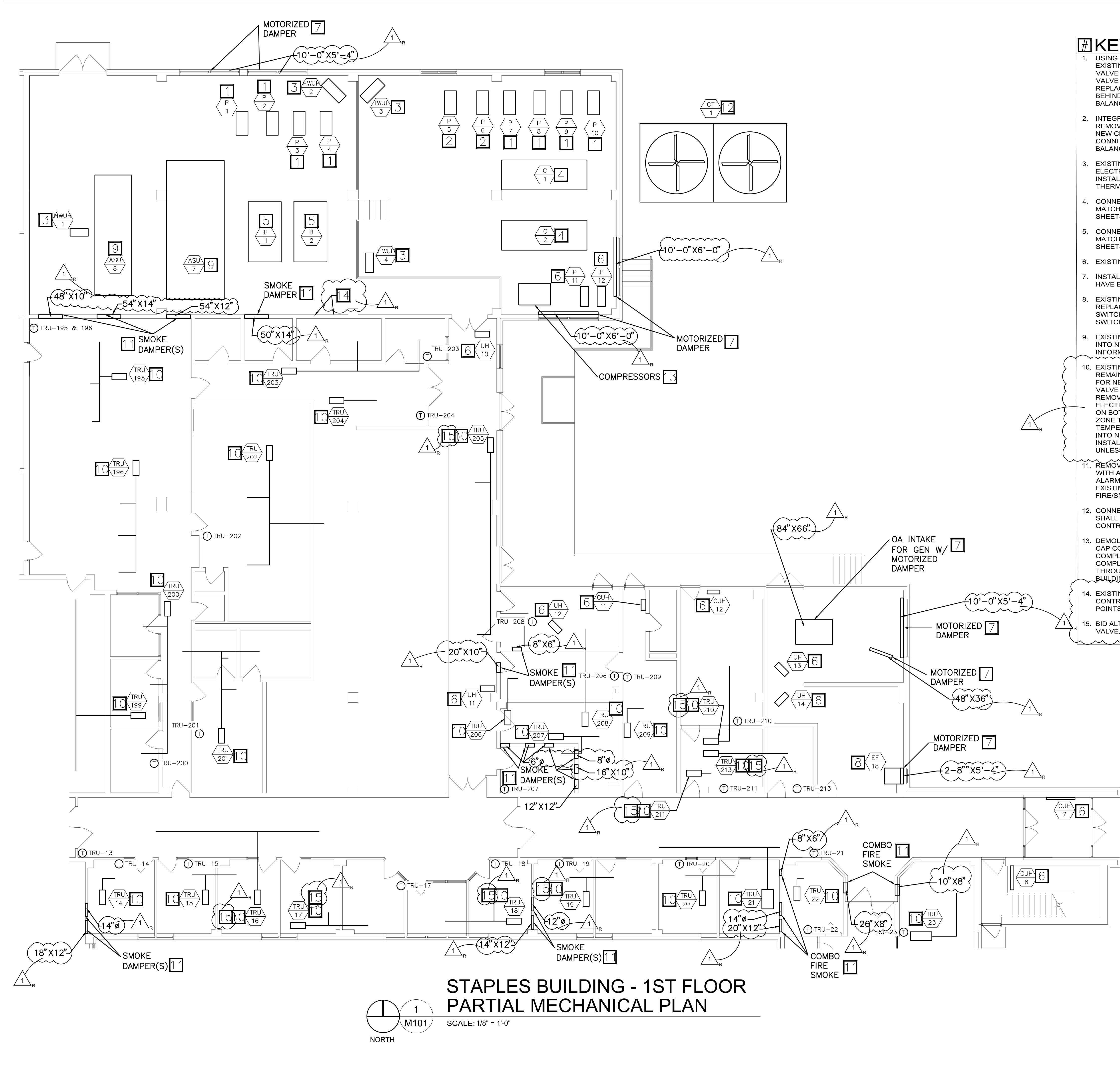
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 DATE: \_\_\_\_\_  
 ISSUE DATE: 01/10/2024

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 CHECKED BY: TMG  
 DESIGNED BY: RCB

SHEET TITLE:  
**MECHANICAL  
 GENERAL NOTES**

SHEET NUMBER:  
**M-001**  
 01/10/2024  
 3 OF 41 SHEETS

**CASCO**  
 12 Sunnen Drive, Suite 100, St. Louis, MO 63143 T: 314.821.1100

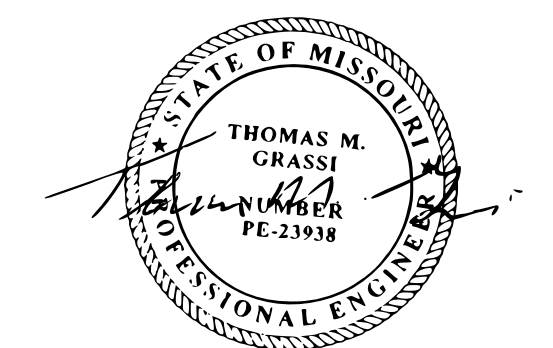
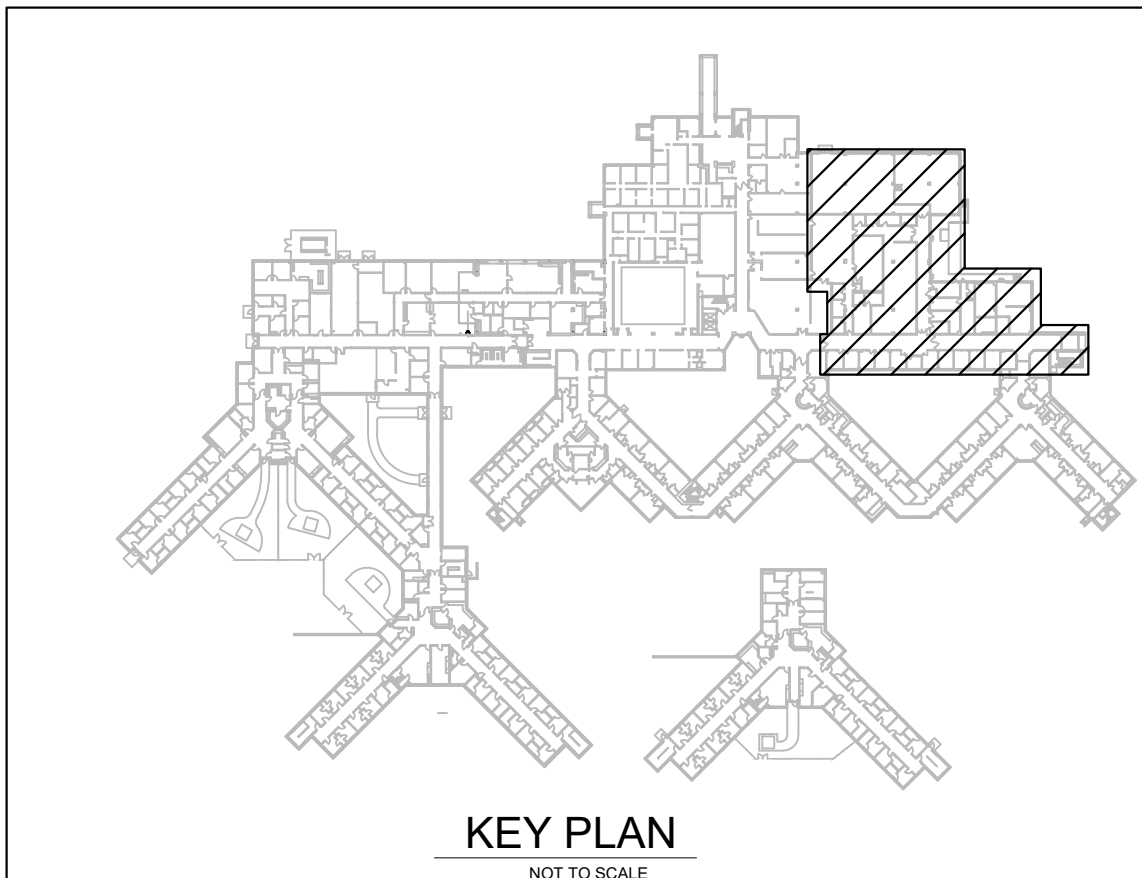


**STAPLES BUILDING - 1ST FLOOR  
PARTIAL MECHANICAL PLAN**

SCALE: 1/8" = 1'-0"  
NORTH

**# KEYED NOTES**

1. USING A DIFFERENTIAL PRESSURE SENSOR TO MONITOR ON/OFF. BRING EXISTING PUMP INTO NEW BAS. BID ALTERNATE #2: REMOVE TRIPLE DUTY VALVE ON DISCHARGE OF PUMP. INSTALL NEW CHECK VALVE AND SHUTOFF VALVE ON DISCHARGE OF PUMP. REMOVE CONSTANT SPEED MOTOR AND REPLACE WITH AN INVERTER DUTY MOTOR. INSTALL NEW VFD ON WALL BEHIND PUMP AND CONNECT INTO BAS. SEE DETAIL SHEETS FOR BALANCING. SEE SPECIFICATIONS FOR VFD REQUIREMENTS.
2. INTEGRATE EXISTING PUMP VFD INTO NEW BAS. BID ALTERNATE #2: REMOVE EXISTING TRIPLE DUTY VALVE ON DISCHARGE OF PUMP. INSTALL NEW CHECK VALVE AND SHUTOFF VALVE ON DISCHARGE OF PUMP. CONNECT EXISTING VFD INTO NEW BAS. SEE DETAIL SHEETS FOR BALANCING.
3. EXISTING HOT WATER UNIT HEATING SHALL REMAIN. INSTALL NEW, ELECTRONIC THREE WAY VALVE IN PLACE OF EXISTING PNEUMATIC VALVE. INSTALL NEW THERMOSTAT IN PLACE OF EXISTING PNEUMATIC THERMOSTAT. CONNECT NEW VALVE AND THERMOSTAT INTO BAS.
4. CONNECT EXISTING CHILLERS INTO NEW BAS. CONTROL SEQUENCE SHALL MATCH LIKE FOR LIKE TO EXISTING. BID ALTERNATE #2: SEE CONTROL SHEETS FOR MORE INFORMATION.
5. CONNECT EXISTING BOILERS INTO NEW BAS. CONTROL SEQUENCE SHALL MATCH LIKE FOR LIKE TO EXISTING. BID ALTERNATE #2: SEE CONTROL SHEETS FOR MORE INFORMATION.
6. EXISTING EQUIPMENT OUTSIDE OF SCOPE OF WORK.
7. INSTALL NEW, ELECTRONIC ACTUATOR ON DAMPER. ACTUATOR SHALL HAVE END SWITCHES. CONNECT INTO NEW BAS.
8. EXISTING EXHAUST FAN CONTROLLED BY PNEUMATIC THERMOSTAT. REPLACE WITH NEW, ELECTRONIC THERMOSTAT. INSTALL NEW PRESSURE SWITCH ON FAN TO MONITOR FAN OPERATION. CONNECT PRESSURE SWITCH AND THERMOSTAT INTO NEW BAS.
9. EXISTING AIR HANDLER. CONTRACTOR SHALL INTEGRATE EXISTING ASU INTO NEW BAS. SEE DETAIL AND CONTROL SHEETS FOR MORE INFORMATION.
10. EXISTING TERMINAL REHEAT UNITS AND EXISTING AIRFLOW SENSOR SHALL REMAIN. CONTRACTOR SHALL CLEAN AIRFLOW SENSOR TO BE REUSED FOR NEW WORK. EXISTING PNEUMATIC CONTROLLER, EXISTING BALANCING VALVE AND EXISTING PNEUMATIC HOT WATER CONTROL VALVE SHALL BE REMOVED. INSTALL NEW, DDC CONTROLLER ON TRU. INSTALL NEW, ELECTRONIC THREE WAY CONTROL VALVE AND A NEW BALANCING VALVE ON BOTH HYDRONIC HEATING RETURN AND BYPASS PIPES. INSTALL NEW ZONE TEMPERATURE SENSOR IN PLACE OF EXISTING PNEUMATIC ZONE TEMPERATURE SENSOR. CONNECT NEW VALVE AND DDC CONTROLLER INTO NEW BAS. BID ALTERNATE #2: IF BID ALTERNATE #2 IS APPROVED, INSTALL MODULATING TWO WAY VALVES IN PLACE OF THREE WAY VALVES UNLESS NOTED. CAP AND REMOVE BYPASS LINE.
11. REMOVE THE PNEUMATIC ACTUATORS FROM SMOKE DAMPERS. REPLACE WITH A NEW ELECTRONIC ACTUATOR. REPLACE EXISTING PNEUMATIC FIRE ALARM RELAY WITH NEW, ELECTRONIC FIRE ALARM RELAY. FIELD LOCATE EXISTING RELAY NEAR DAMPER. CONNECT NEW ACTUATOR INTO EXISTING FIRE/SMOKE SYSTEM VIA RELAY.
12. CONNECT EXISTING COOLING TOWER INTO NEW BAS. CONTROL SEQUENCE SHALL MATCH LIKE FOR LIKE TO EXISTING. BID ALTERNATE #2: SEE CONTROL SHEETS FOR MORE INFORMATION.
13. DEMOLISH AND REMOVE AIR COMPRESSORS FROM MECHANICAL ROOM. CAP COMPRESSED AIR LINE AND ABANDON LINE IN PLACE. THIS SHALL BE COMPLETED AFTER ALL OTHER CONTROLS WORK WITHIN THE BUILDING IS COMPLETED. COMPRESSED AIR MUST REMAIN OPERATIONAL THROUGHOUT THE BUILDING DURING CONSTRUCTION TO ALLOW FOR BUILDING TO OPERATE.
14. EXISTING ASU-7 AND 8 CONTROLLERS SHALL BE DEMOLISHED. NEW CONTROLLER SHALL BE INSTALLED IN PLACE OF EXISTING. CONNECT ALL POINTS BACK INTO CONTROLLER.
15. BID ALTERNATE #2: INSTALL THREE WAY VALVE IN PLACE OF TWO WAY VALVE. INSTALL BALANCING VALVE IN RETURN AND BYPASS LINE.



03/19/24  
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PROJECT # M2011-01  
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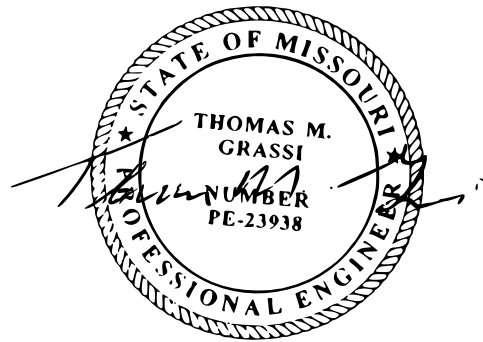
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CHECKED BY: TMG  
DESIGNED BY: RCB

SHEET TITLE:

STAPLES PARTIAL  
MECHANICAL PLAN

SHEET NUMBER:

**M-101**  
01/10/2024  
4 OF 41 SHEETS



03/19/24

THOMAS M. GRASSL  
License Number: E-23938  
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STAPLES PARTIAL  
MECHANICAL PLAN

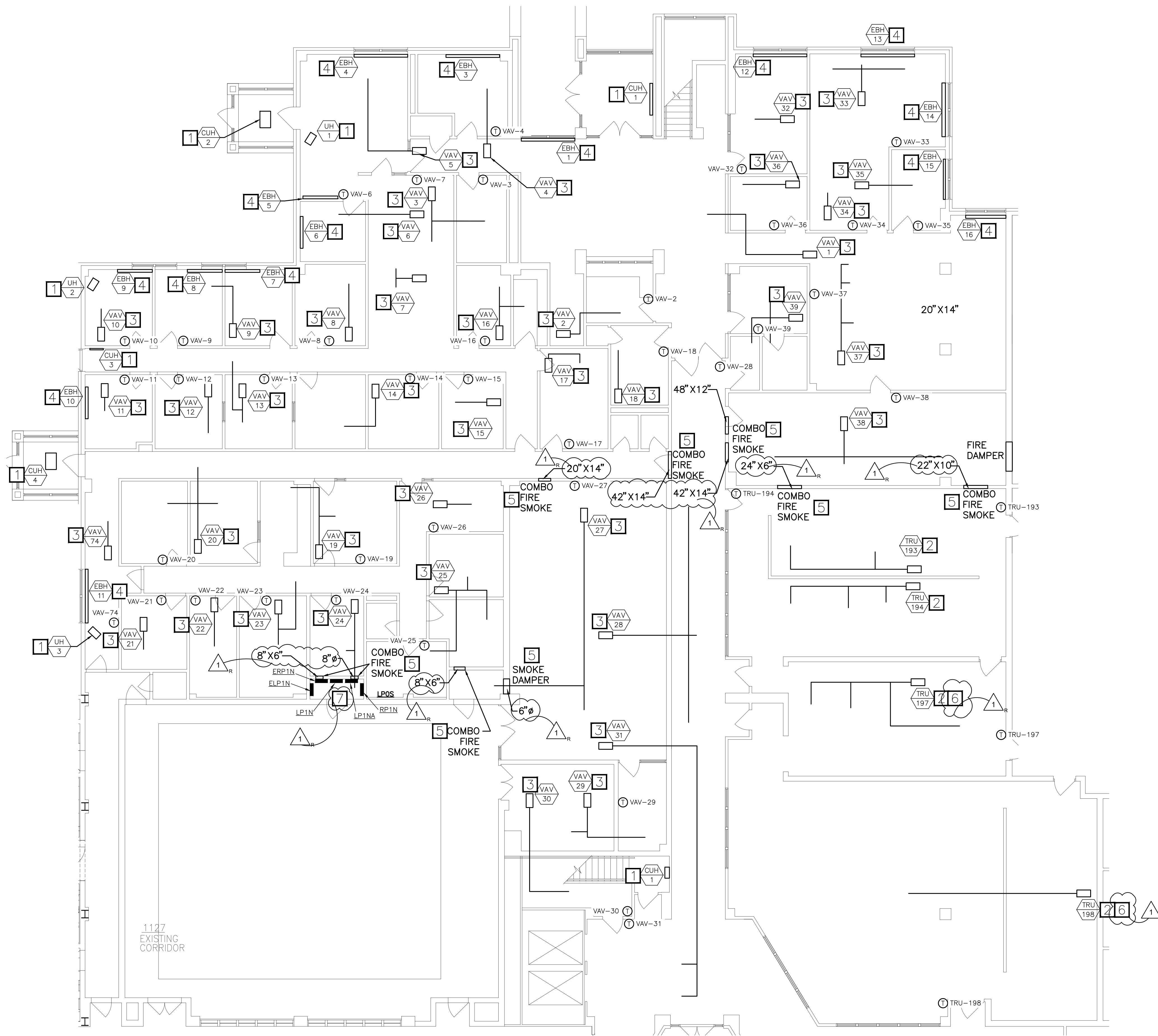
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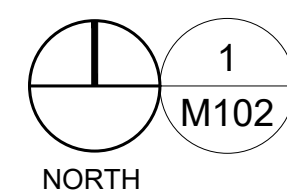
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### #KEYED NOTES

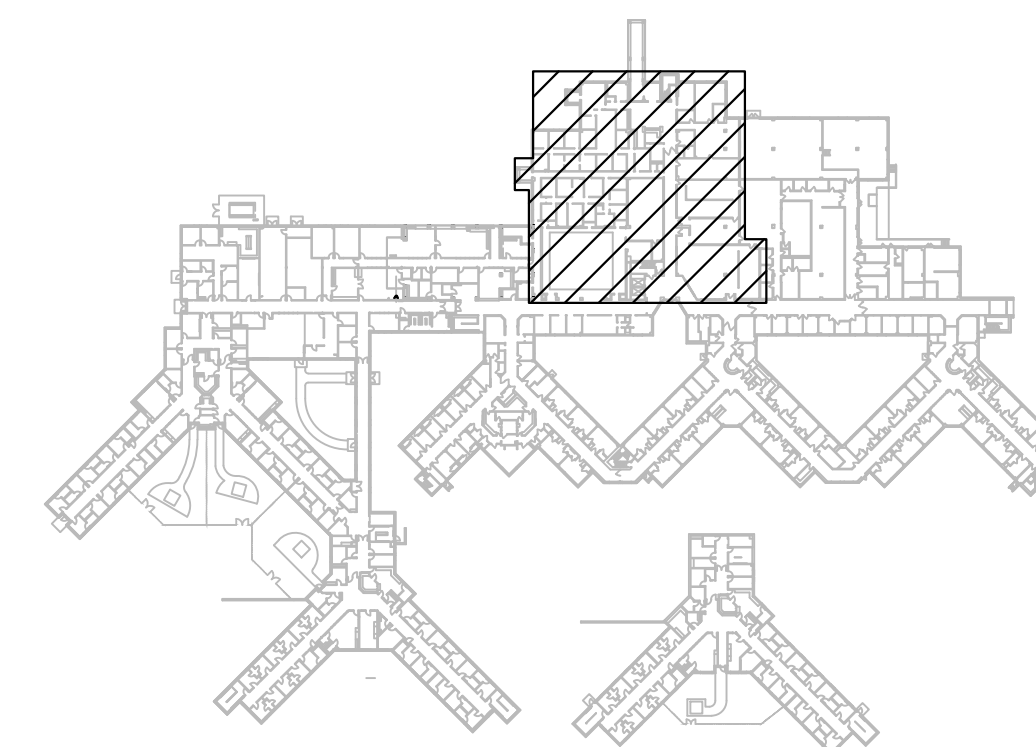
- EXISTING EQUIPMENT OUTSIDE OF SCOPE OF WORK.
- EXISTING TERMINAL REHEAT UNITS AND EXISTING AIRFLOW SENSOR SHALL REMAIN. CONTRACTOR SHALL CLEAN AIRFLOW SENSOR TO BE REUSED FOR NEW WORK. EXISTING PNEUMATIC CONTROLLER, EXISTING BALANCING VALVE AND EXISTING PNEUMATIC HOT WATER CONTROL VALVE SHALL BE REMOVED. INSTALL NEW, DDC CONTROLLER ON TRU. INSTALL NEW, ELECTRONIC THREE WAY CONTROL VALVE AND A NEW BALANCING VALVE ON BOTH HYDRONIC HEATING RETURN AND BYPASS PIPES. INSTALL NEW ZONE TEMPERATURE SENSOR IN PLACE OF EXISTING PNEUMATIC ZONE TEMPERATURE SENSOR. CONNECT NEW VALVE AND DDC CONTROLLER INTO NEW BAS. BID ALTERNATE #2; IF BID ALTERNATE #2 IS APPROVED, INSTALL MODULATING TWO WAY VALVES IN PLACE OF THREE WAY VALVES UNLESS NOTED. CAP AND REMOVE BYPASS LINE.
- EXISTING VARIABLE AIR VOLUME UNITS AND EXISTING AIRFLOW SENSOR SHALL REMAIN. CONTRACTOR SHALL CLEAN AIRFLOW SENSOR TO BE REUSED FOR NEW WORK. EXISTING PNEUMATIC CONTROLLER SHALL BE REMOVED. REPLACE WITH A NEW, DDC CONTROLLER AND TIE NEW CONTROLLER INTO NEW BAS. INSTALL NEW ZONE TEMPERATURE SENSOR IN PLACE OF EXISTING PNEUMATIC ZONE TEMPERATURE SENSOR.
- EXISTING ELECTRIC BASEBOARD HEATER SHALL REMAIN. INSTALL NEW ELECTRONIC, UNIT MOUNTED TEMPERATURE SENSOR IN PLACE OF PNEUMATIC TEMPERATURE SENSOR. NEW 277V/24V CONTACTOR SHALL BE INSTALLED IN PLACE OF EXISTING PNEUMATIC CONTACTOR. CONTRACTOR SHALL BE RESPONSIBLE FOR THE 24V CONNECTION TO THE CONTACTOR. COORDINATE WITH ELECTRICAL CONTRACTOR FOR THE PROCUREMENT AND PLACING OF RELAY WITHIN THE BASEBOARD HEATER.
- REMOVE THE PNEUMATIC ACTUATORS FROM SMOKE DAMPERS. REPLACE WITH A NEW ELECTRONIC ACTUATOR. REPLACE EXISTING, PNEUMATIC FIRE ALARM RELAY WITH NEW, ELECTRONIC FIRE ALARM RELAY. FIELD LOCATE EXISTING RELAY NEAR DAMPER. CONNECT NEW ACTUATOR INTO EXISTING FIRE/SMOKE SYSTEM VIA RELAY.
- BID ALTERNATE #2: INSTALL THREE WAY VALVE IN PLACE OF TWO WAY VALVE. INSTALL BALANCING VALVE IN RETURN AND BYPASS LINE.
- EXISTING ASU-2 CONTROLLER SHALL BE DEMOLISHED. NEW CONTROLLER SHALL BE INSTALLED IN PLACE OF EXISTING. CONNECT ALL POINTS BACK INTO CONTROLLER.



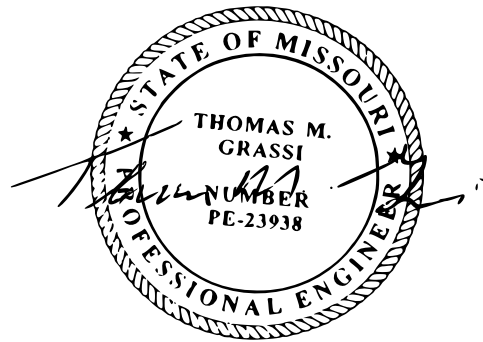
## STAPLES BUILDING - 1ST FLOOR PARTIAL MECHANICAL PLAN



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



KEY PLAN  
NOT TO SCALE



03/19/24

THOMAS M. GRASSI  
License Number: E-23938  
Expiration Date: 12/31/24

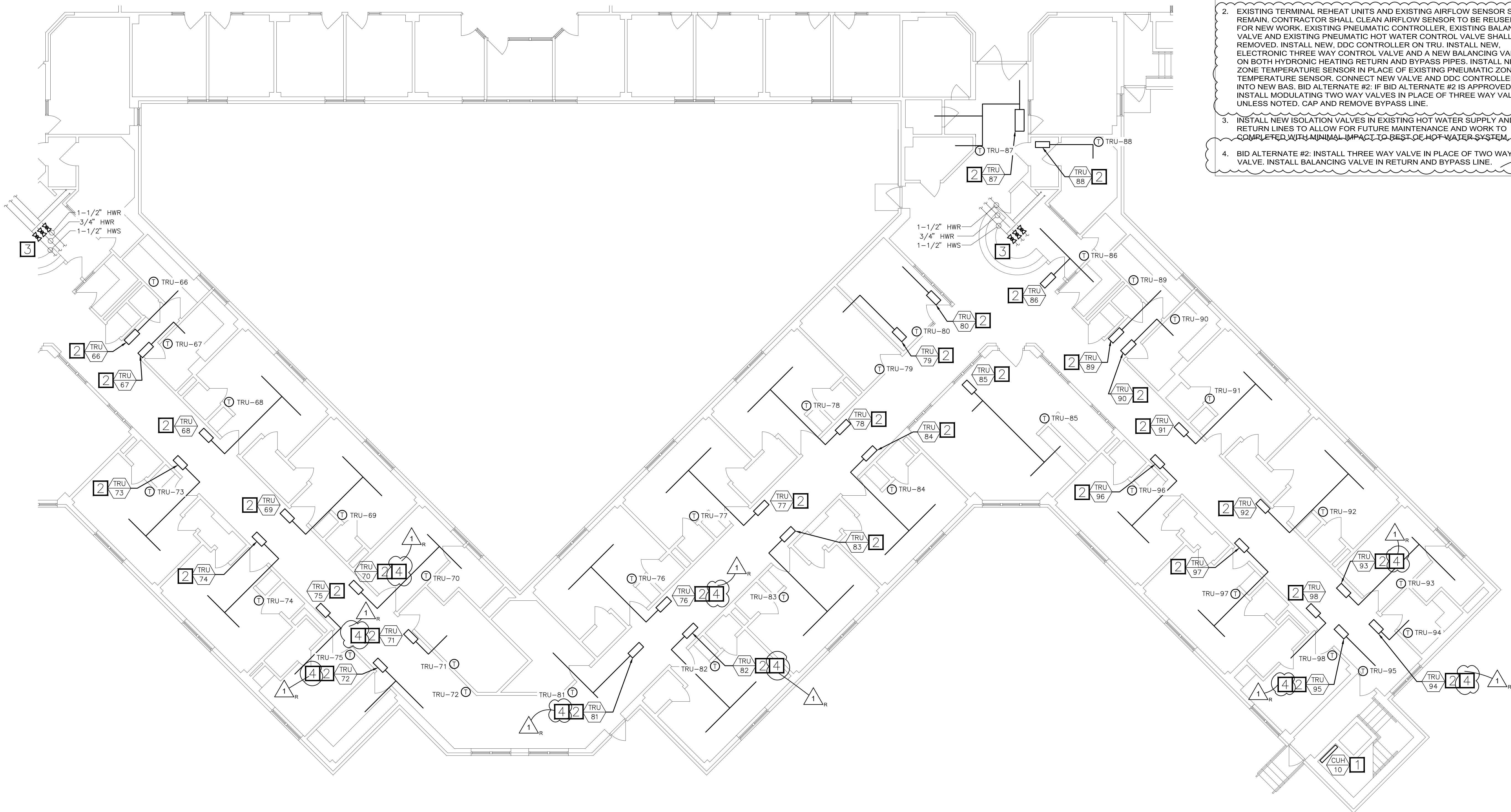
PROFESSIONAL SEAL

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MO Certificate of Authority #000329 Arch.  
MO Certificate of Authority #000613 Eng.

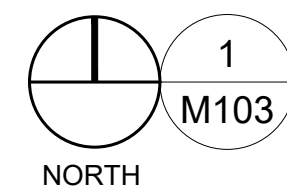
CASCO  
12 Sunnen Drive, Suite 100, St. Louis, MO 63143 T: 314.821.1100

**#KEYED NOTES**

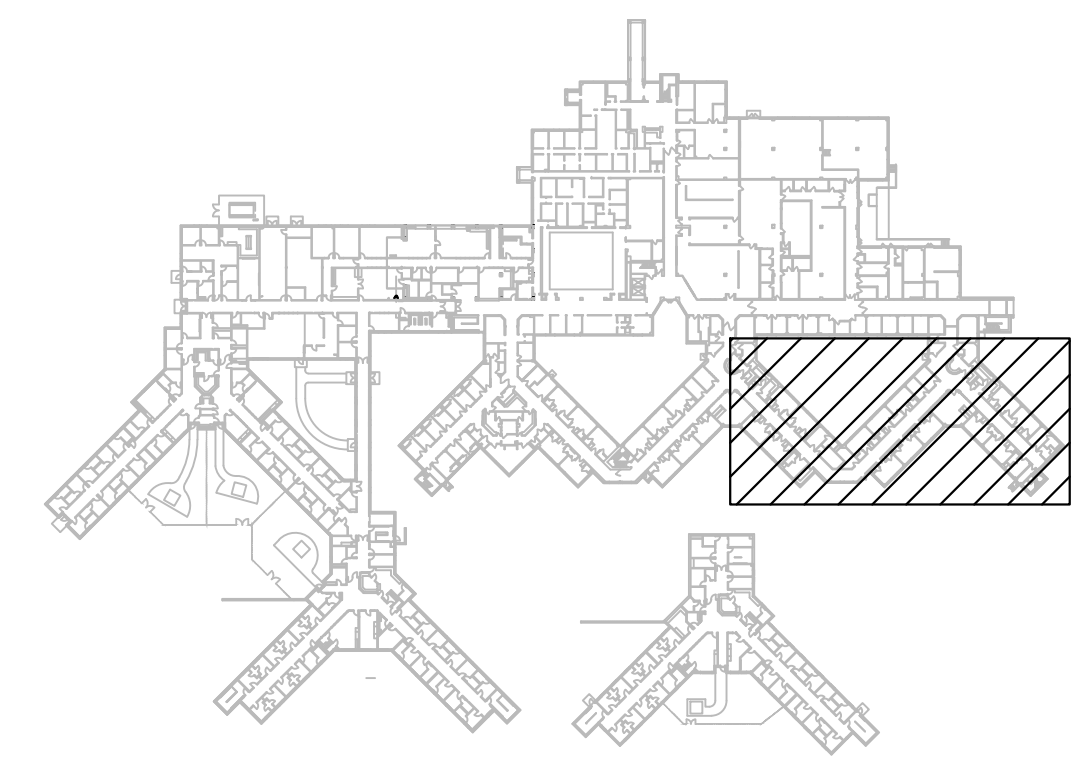
1. EXISTING EQUIPMENT OUTSIDE OF SCOPE OF WORK.
2. EXISTING TERMINAL REHEAT UNITS AND EXISTING AIRFLOW SENSOR SHALL REMAIN. CONTRACTOR SHALL CLEAN AIRFLOW SENSOR TO BE REUSED FOR NEW WORK. EXISTING PNEUMATIC CONTROLLER, EXISTING BALANCING VALVE AND EXISTING PNEUMATIC HOT WATER CONTROL VALVE SHALL BE REMOVED. INSTALL NEW, DDC CONTROLLER ON TRU. INSTALL NEW, ELECTRONIC THREE WAY CONTROL VALVE AND A NEW BALANCING VALVE ON BOTH HYDRONIC HEATING RETURN AND BYPASS PIPES. INSTALL NEW ZONE TEMPERATURE SENSOR IN PLACE OF EXISTING PNEUMATIC ZONE TEMPERATURE SENSOR. CONNECT NEW VALVE AND DDC CONTROLLER INTO NEW BAS. BID ALTERNATE #2. IF BID ALTERNATE #2 IS APPROVED, INSTALL MODULATING TWO WAY VALVES IN PLACE OF THREE WAY VALVES UNLESS NOTED, CAP AND REMOVE BYPASS LINE.
3. INSTALL NEW ISOLATION VALVES IN EXISTING HOT WATER SUPPLY AND RETURN LINES TO ALLOW FOR FUTURE MAINTENANCE AND WORK TO COMPLETED WITH MINIMAL IMPACT TO REST OF HOT WATER SYSTEM.
4. BID ALTERNATE #2: INSTALL THREE WAY VALVE IN PLACE OF TWO WAY VALVE. INSTALL BALANCING VALVE IN RETURN AND BYPASS LINE.



**STAPLES BUILDING - 1ST FLOOR  
PARTIAL MECHANICAL PLAN**



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



KEY PLAN  
NOT TO SCALE

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DIVISION OF FACILITIES  
MANAGEMENT,  
DESIGN AND  
CONSTRUCTION

DEPARTMENT OF MENTAL  
HEALTH

UPGRADE HVAC CONTROLS

STAPLES BUILDING  
1010 W COLUMBIA ST.  
FARMINGTON, MISSOURI  
63640

PROJECT # M2011-01  
SITE # 7354  
ASSET# 6517354012

REVISION: ADDENDUM #1  
DATE: 03/19/24  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
ISSUE DATE: 01/10/2024

CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: RCB  
CHECKED BY: TMG  
DESIGNED BY: RCB

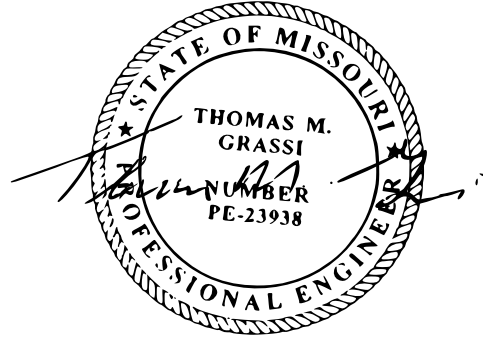
SHEET TITLE:

STAPLES PARTIAL  
MECHANICAL PLAN

SHEET NUMBER:

**M-103**

01/10/2024  
6 OF 41 SHEETS



03/19/24

THOMAS M. GRASSI  
License Number: E-23938  
Expiration Date: 12/31/24  
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UPGRADE HVAC CONTROLS

STAPLES BUILDING  
1010 W COLUMBIA ST.  
FARMINGTON, MISSOURI  
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PROJECT # M2011-01  
SITE # 7354  
ASSET# 6517354012

REVISION: ADDENDUM #1  
DATE: 03/19/24  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
ISSUE DATE: 01/10/2024

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DRAWN BY: RCB  
CHECKED BY: TMG  
DESIGNED BY: RCB

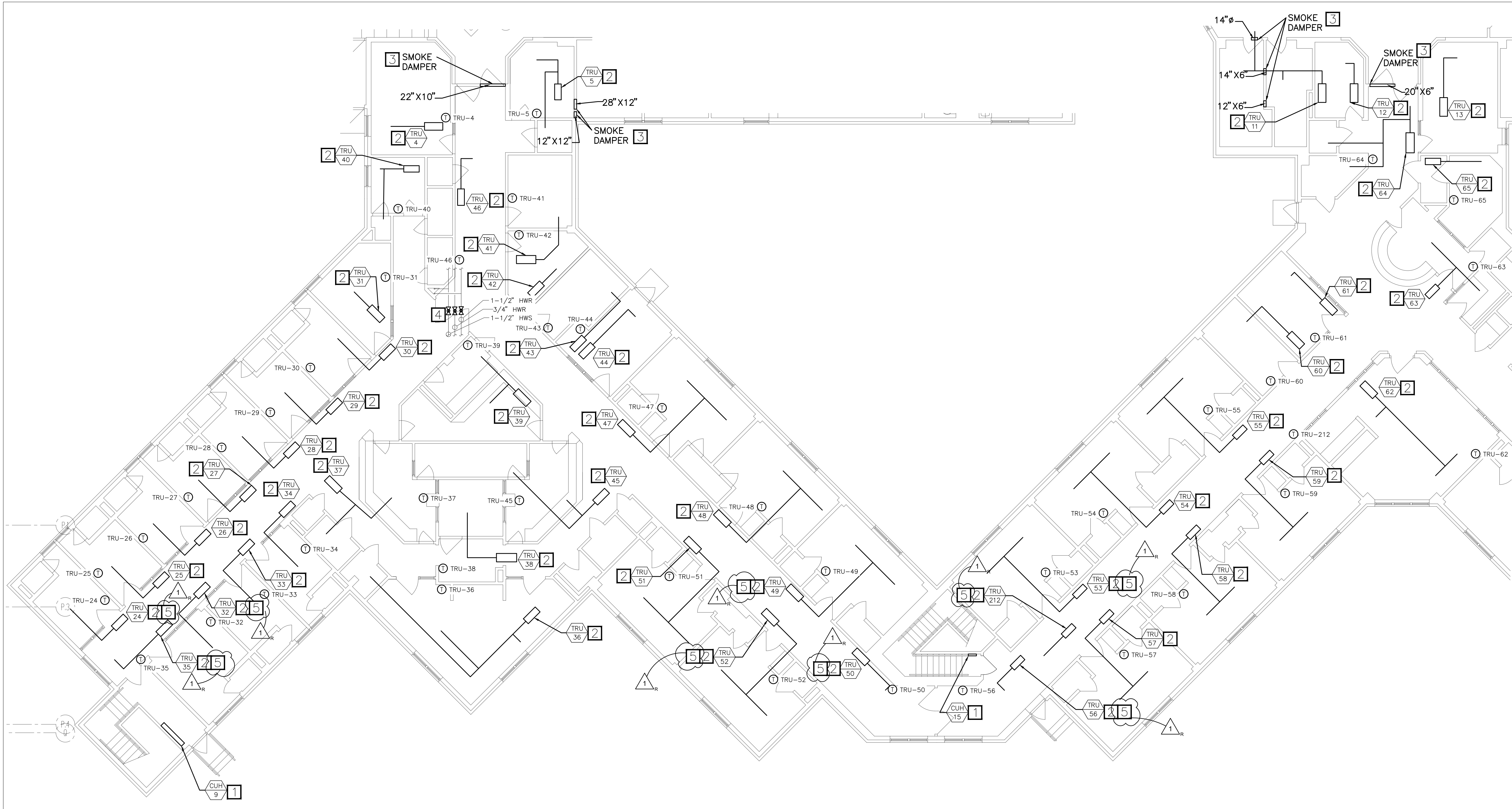
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STAPLES PARTIAL  
MECHANICAL PLAN

SHEET NUMBER:

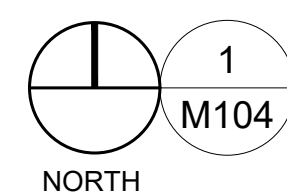
**M-104**

01/10/2024  
7 OF 41 SHEETS



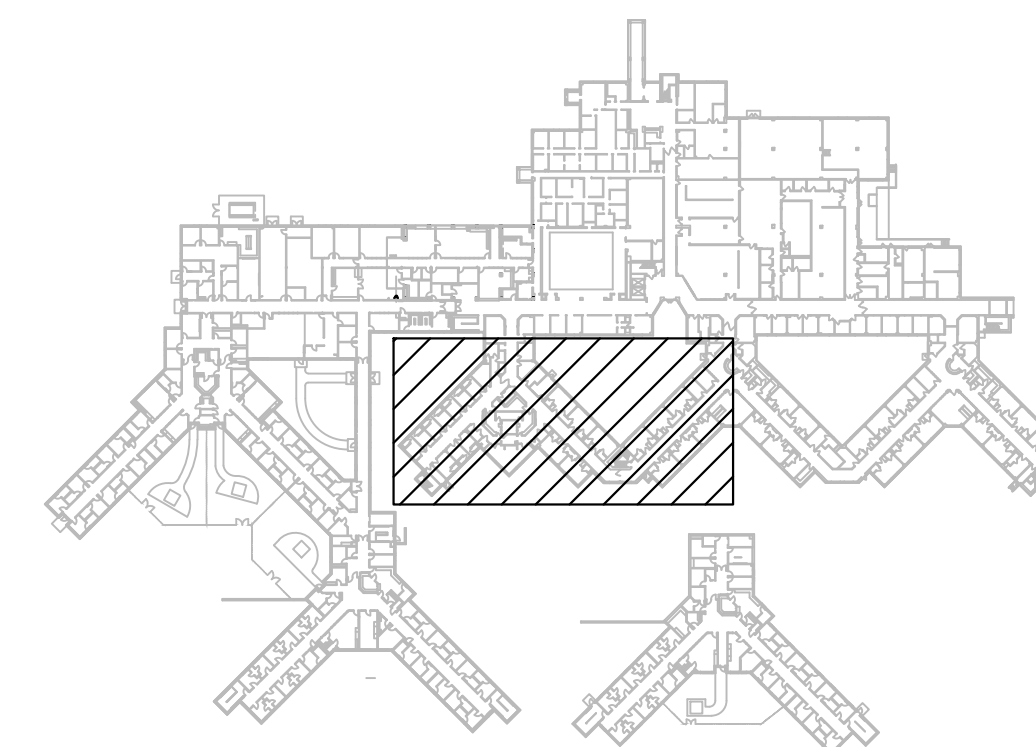
### STAPLES BUILDING - 1ST FLOOR PARTIAL MECHANICAL PLAN

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



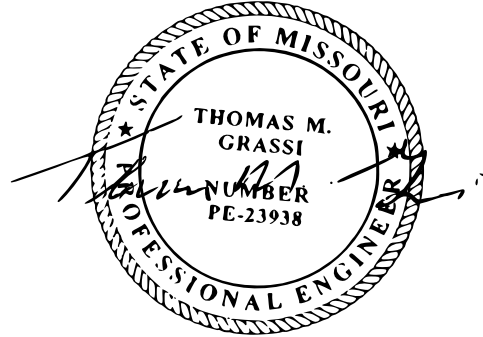
#### KEYED NOTES

1. EXISTING EQUIPMENT OUTSIDE OF SCOPE OF WORK.
2. EXISTING TERMINAL REHEAT UNITS AND EXISTING AIRFLOW SENSOR SHALL REMAIN. CONTRACTOR SHALL CLEAN AIR-FLOW SENSOR TO BE REUSED FOR NEW WORK. EXISTING PNEUMATIC CONTROLLER, EXISTING BALANCING VALVE AND EXISTING PNEUMATIC HOT WATER CONTROL VALVE SHALL BE REMOVED. INSTALL NEW, DDC CONTROLLER ON TRU. INSTALL NEW, ELECTRONIC THREE WAY CONTROL VALVE AND A NEW BALANCING VALVE ON BOTH HYDRONIC HEATING RETURN AND BYPASS PIPES. INSTALL NEW ZONE TEMPERATURE SENSOR IN PLACE OF EXISTING PNEUMATIC ZONE TEMPERATURE SENSOR. CONNECT NEW VALVE AND DDC CONTROLLER INTO NEW BAS. BID ALTERNATE #2: IF BID ALTERNATE #2 IS APPROVED, INSTALL MODULATING TWO WAY VALVES IN PLACE OF THREE WAY VALVES UNLESS NOTED. CAP AND REMOVE BYPASS LINE.
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4. INSTALL NEW ISOLATION VALVES IN EXISTING HOT WATER SUPPLY AND RETURN LINES TO ALLOW FOR FUTURE MAINTENANCE AND WORK TO COMPLETED WITH MINIMAL IMPACT TO REST OF HOT WATER SYSTEM.
5. BID ALTERNATE #2: INSTALL THREE WAY VALVE IN PLACE OF TWO WAY VALVE. INSTALL BALANCING VALVE IN RETURN AND BYPASS LINE.



KEY PLAN  
NOT TO SCALE





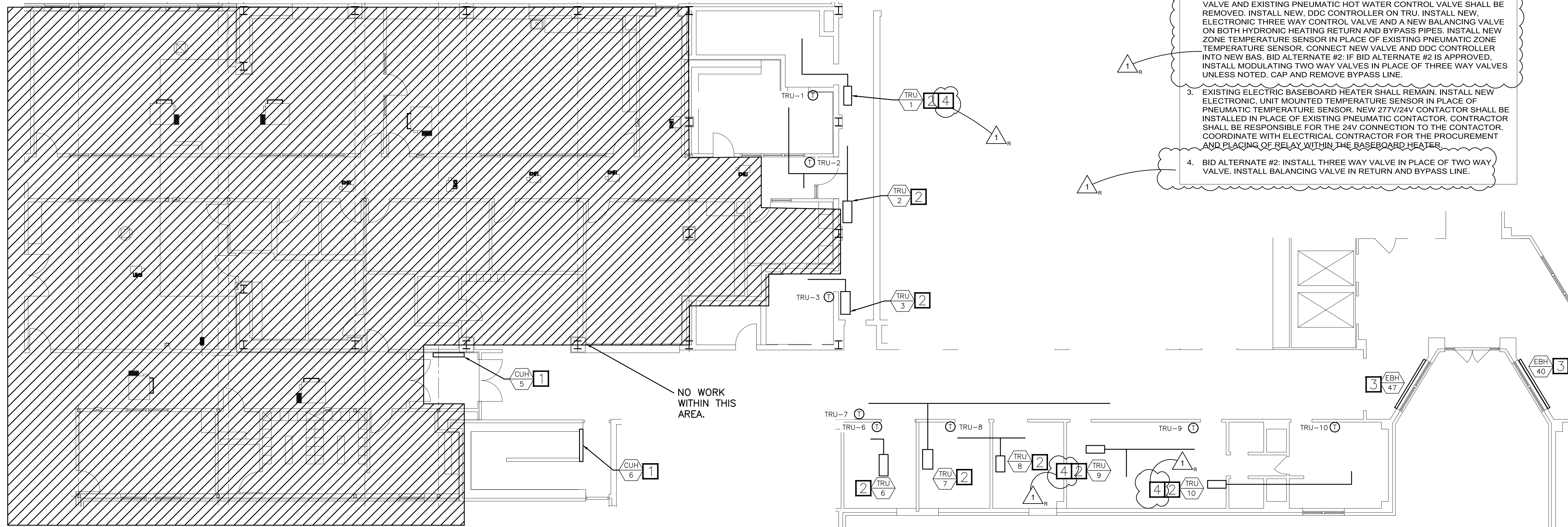
03/19/24

THOMAS M. GRASSI  
License Number: E-23938  
Expiration Date: 12/31/24  
PROFESSIONAL SEAL  
CASCO Diversified Corporation  
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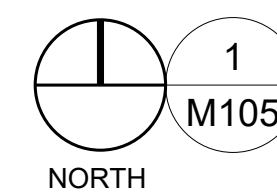
CASCO  
12 Sunnen Drive, Suite 100, St. Louis, MO 63143 T: 314.821.1100

**# KEYED NOTES**

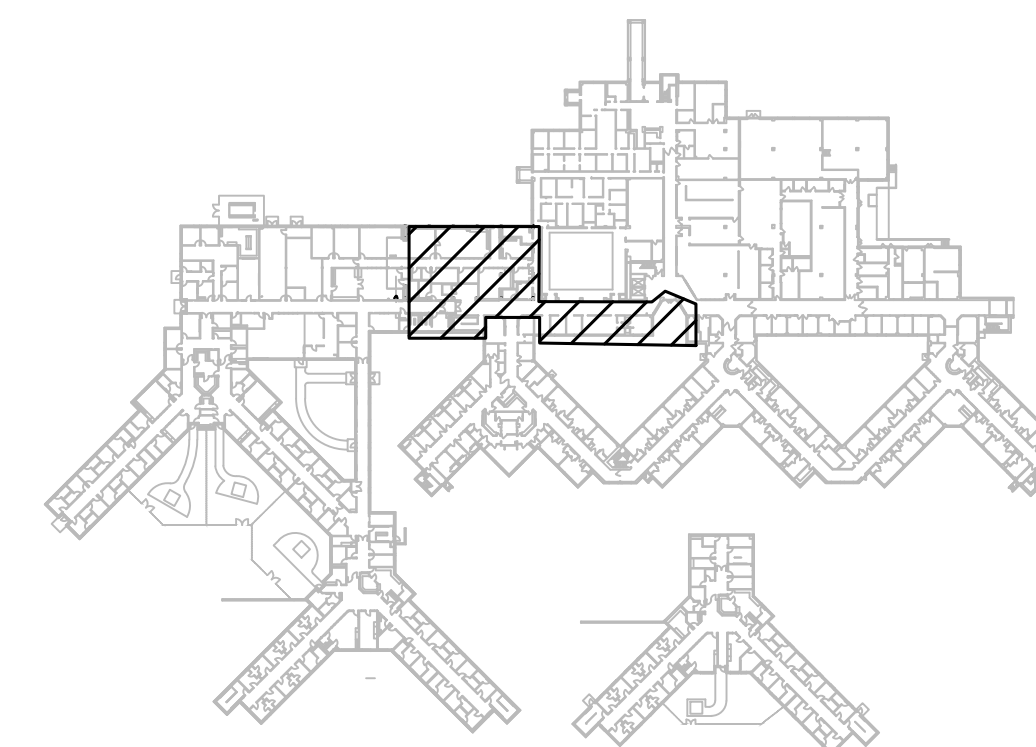
1. EXISTING EQUIPMENT OUTSIDE OF SCOPE OF WORK.
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4. BID ALTERNATE #2: INSTALL THREE WAY VALVE IN PLACE OF TWO WAY VALVE. INSTALL BALANCING VALVE IN RETURN AND BYPASS LINE.



**STAPLES BUILDING - 1ST FLOOR  
PARTIAL MECHANICAL PLAN**



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



KEY PLAN  
NOT TO SCALE

OFFICE OF  
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DIVISION OF FACILITIES  
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DEPARTMENT OF MENTAL  
HEALTH

UPGRADE HVAC CONTROLS

STAPLES BUILDING  
1010 W COLUMBIA ST.  
FARMINGTON, MISSOURI  
63640

PROJECT # M2011-01  
SITE # 7354  
ASSET# 6517354012

REVISION: ADDENDUM #1  
DATE: 03/19/24  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
ISSUE DATE: 01/10/2024

CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: RCB  
CHECKED BY: TMG  
DESIGNED BY: RCB

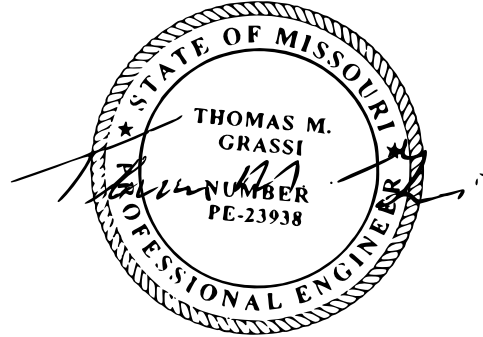
SHEET TITLE:

STAPLES PARTIAL  
MECHANICAL PLAN

SHEET NUMBER:

**M-105**

01/10/2024  
8 OF 41 SHEETS

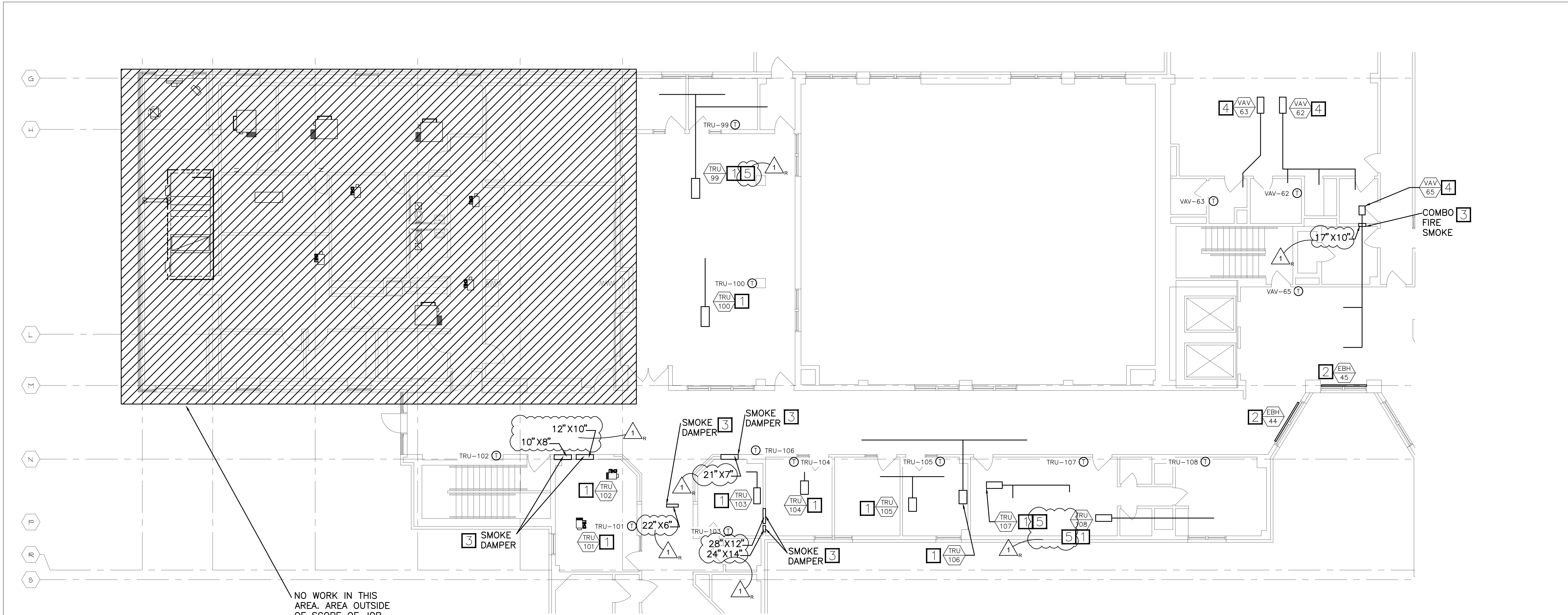


03/19/24

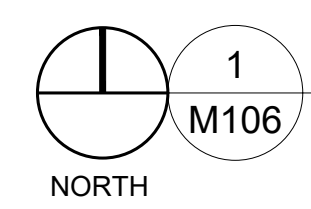
THOMAS M. GRASSL  
License Number: E-23938  
Expiration Date: 12/31/24  
**PROFESSIONAL SEAL**

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MO Certificate of Authority #000613 Eng.

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NO WORK IN THIS  
AREA. AREA OUTSIDE  
OF SCOPE OF JOB.

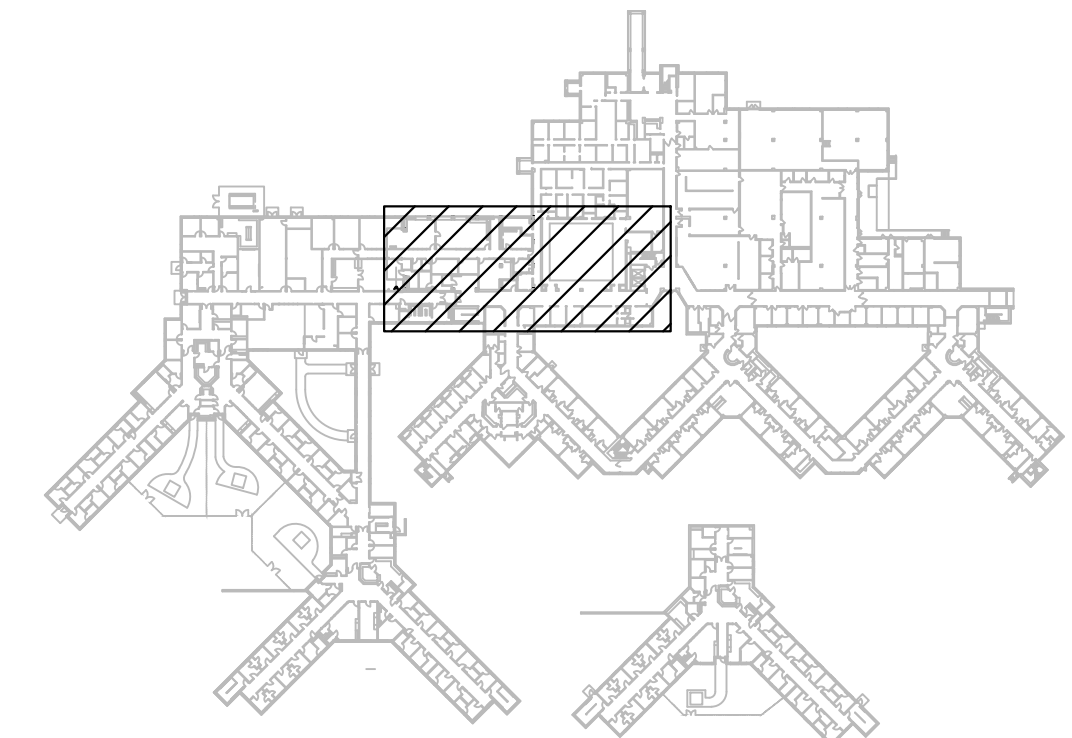


**STAPLES BUILDING - 2ND FLOOR  
PARTIAL MECHANICAL PLAN**

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

**# KEYED NOTES**

1. EXISTING TERMINAL REHEAT UNITS AND EXISTING AIRFLOW SENSOR SHALL REMAIN. CONTRACTOR SHALL CLEAN AIRFLOW SENSOR TO BE REUSED FOR NEW WORK. EXISTING PNEUMATIC CONTROLLER, EXISTING BALANCING VALVE AND EXISTING PNEUMATIC HOT WATER CONTROL VALVE SHALL BE REMOVED. INSTALL NEW, DDC CONTROLLER ON TRU. INSTALL NEW, ELECTRONIC THREE WAY CONTROL VALVE AND A NEW BALANCING VALVE ON BOTH HYDRONIC HEATING RETURN AND BYPASS PIPES. INSTALL NEW ZONE TEMPERATURE SENSOR IN PLACE OF EXISTING PNEUMATIC ZONE TEMPERATURE SENSOR. CONNECT NEW VALVE AND DDC CONTROLLER INTO NEW BAS. BID ALTERNATE #2: IF BID ALTERNATE #2 IS APPROVED, INSTALL MODULATING TWO WAY VALVES IN PLACE OF THREE WAY VALVES UNLESS NOTED. CAP AND REMOVE BYPASS LINE.
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3. REMOVE THE PNEUMATIC ACTUATORS FROM SMOKE DAMPERS. REPLACE WITH A NEW ELECTRONIC ACTUATOR. REPLACE EXISTING PNEUMATIC FIRE ALARM RELAY WITH NEW, ELECTRONIC FIRE ALARM RELAY. FIELD LOCATE EXISTING RELAY NEAR DAMPER. CONNECT NEW ACTUATOR INTO EXISTING FIRE/SMOKE SYSTEM VIA RELAY.
4. EXISTING VARIABLE AIR VOLUME UNITS AND EXISTING AIRFLOW SENSOR SHALL REMAIN. CONTRACTOR SHALL CLEAN AIRFLOW SENSOR TO BE REUSED FOR NEW WORK. EXISTING PNEUMATIC CONTROLLER SHALL BE REMOVED. REPLACE WITH A NEW, DDC CONTROLLER AND TIE NEW CONTROLLER INTO NEW BAS. INSTALL NEW ZONE TEMPERATURE SENSOR IN PLACE OF EXISTING PNEUMATIC ZONE TEMPERATURE SENSOR.
5. BID ALTERNATE #2: INSTALL THREE WAY VALVE IN PLACE OF TWO WAY VALVE. INSTALL BALANCING VALVE IN RETURN AND BYPASS LINE.



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UPGRADE HVAC CONTROLS

STAPLES BUILDING  
1010 W COLUMBIA ST.  
FARMINGTON, MISSOURI  
63640

PROJECT # M2011-01  
SITE # 7354  
ASSET# 6517354012

REVISION: ADDENDUM #1  
DATE: 03/19/24  
REVISION:  
DATE:  
REVISION:  
DATE:  
ISSUE DATE: 01/10/2024

CAD DWG FILE:  
DRAWN BY: RCB  
CHECKED BY: TMG  
DESIGNED BY: RCB

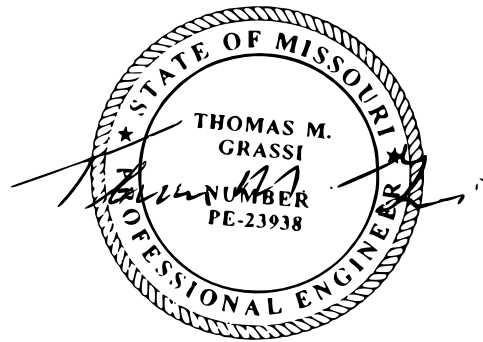
SHEET TITLE:

STAPLES PARTIAL  
MECHANICAL PLAN

SHEET NUMBER:

**M-106**

01/10/2024  
9 OF 41 SHEETS



03/19/24

THOMAS M. GRASSI  
License Number: E-23938  
Expiration Date: 12/31/24

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PROJECT # M2011-01  
SITE # 7354  
ASSET# 6517354012

REVISION: ADDENDUM #1  
DATE: 03/19/24  
REVISION: \_\_\_\_\_  
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REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
ISSUE DATE: 01/10/2024

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DESIGNED BY: RCB

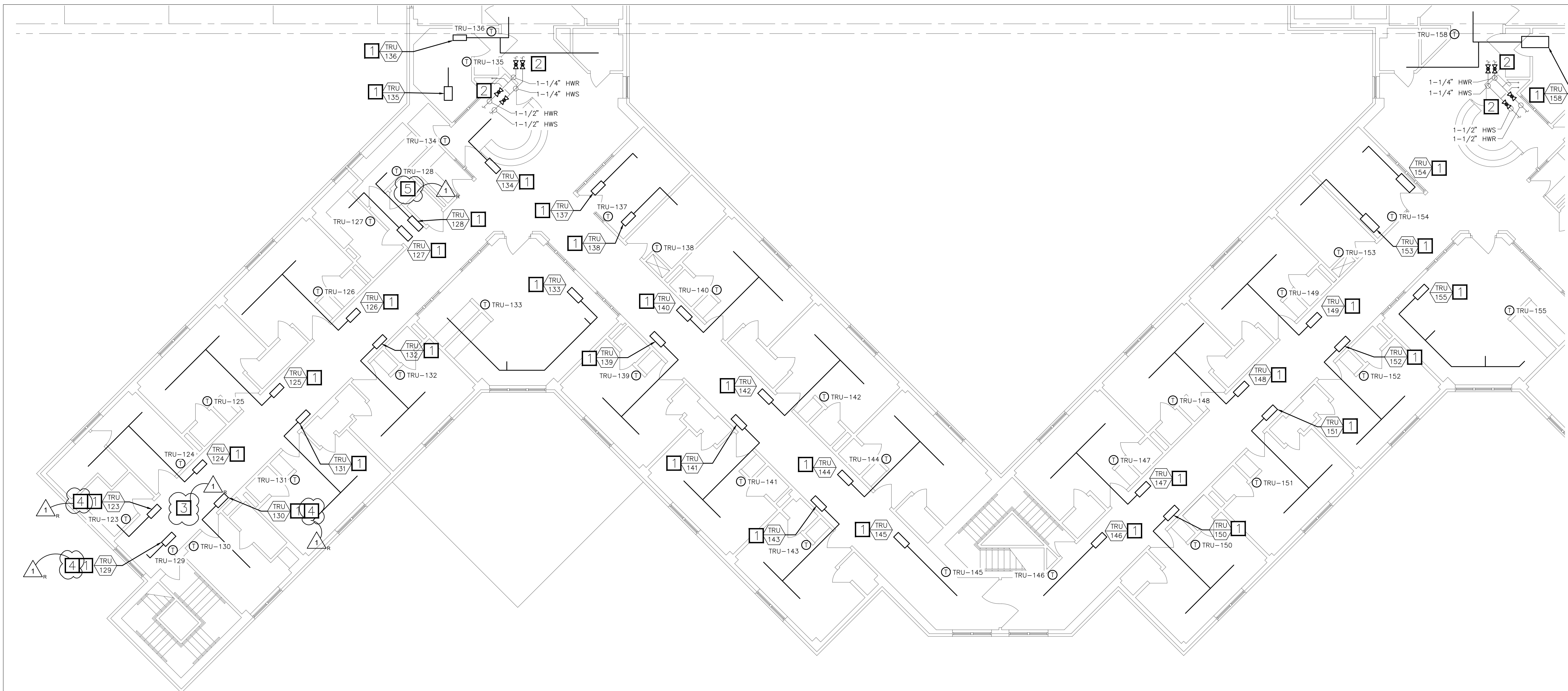
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STAPLES PARTIAL  
MECHANICAL PLAN

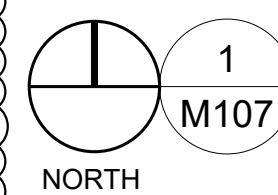
SHEET NUMBER:

**M-107**

01/10/2024  
10 OF 41 SHEETS



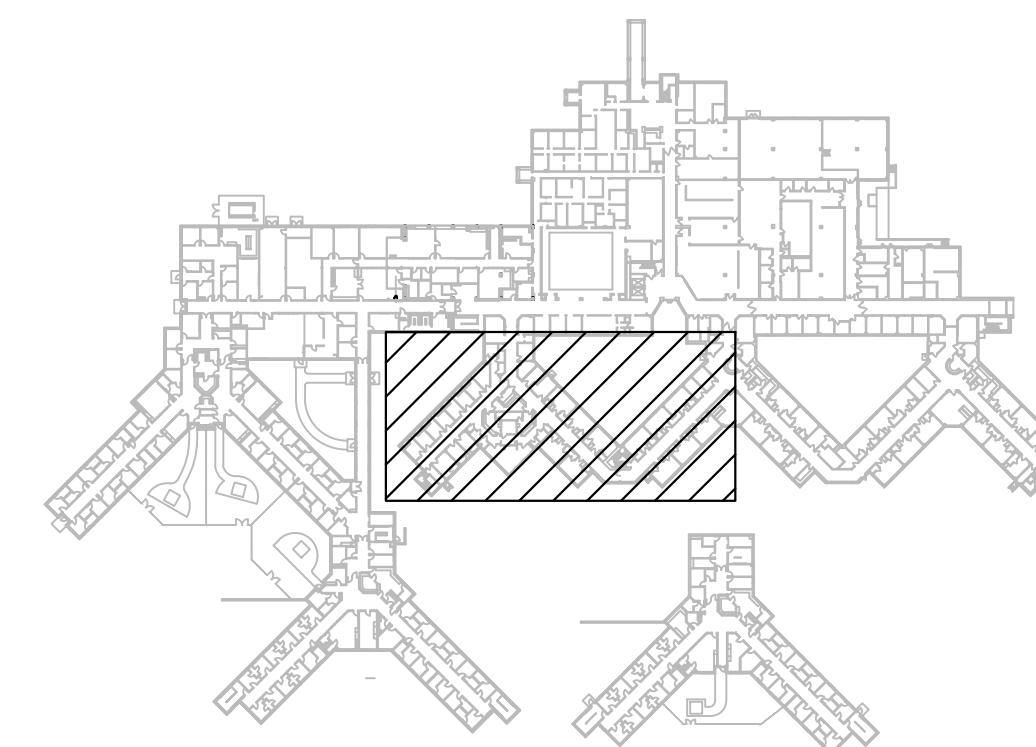
**STAPLES BUILDING - 2ND FLOOR  
PARTIAL MECHANICAL PLAN**



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

**#1 KEYED NOTES**

1. EXISTING TERMINAL REHEAT UNITS AND EXISTING AIRFLOW SENSOR SHALL REMAIN. CONTRACTOR SHALL CLEAN AIRFLOW SENSOR TO BE REUSED FOR NEW WORK. EXISTING PNEUMATIC CONTROLLER, EXISTING BALANCING VALVE AND EXISTING PNEUMATIC HOT WATER CONTROL VALVE SHALL BE REMOVED. INSTALL NEW, DDC CONTROLLER ON TRU. INSTALL NEW, ELECTRONIC THREE WAY CONTROL VALVE AND A NEW BALANCING VALVE ON BOTH HYDRONIC HEATING RETURN AND BYPASS PIPES. INSTALL NEW ZONE TEMPERATURE SENSOR IN PLACE OF EXISTING PNEUMATIC ZONE TEMPERATURE SENSOR. CONNECT NEW VALVE AND DDC CONTROLLER INTO NEW BAS. BID ALTERNATE #2. IF BID ALTERNATE #2 IS APPROVED, INSTALL MODULATING TWO WAY VALVES IN PLACE OF THREE WAY VALVES UNLESS NOTED. CAP AND REMOVE BYPASS LINE.
2. INSTALL NEW ISOLATION VALVES IN EXISTING HOT WATER SUPPLY AND RETURN LINES TO ALLOW FOR FUTURE MAINTENANCE AND WORK TO COMPLETED WITH MINIMAL IMPACT TO REST OF HOT WATER SYSTEM.
3. BID ALTERNATE #2: INSTALL NEW DIFFERENTIAL PRESSURE SENSOR IN PIPING AT THIS LOCATION FOR CONTROL OF REHEAT PUMP.
4. BID ALTERNATE #2: INSTALL THREE WAY VALVE IN PLACE OF TWO WAY VALVE. INSTALL BALANCING VALVE IN RETURN AND BYPASS LINE.
5. EXISTING ASU-4 CONTROLLER SHALL BE DEMOLISHED. NEW CONTROLLER SHALL BE INSTALLED IN PLACE OF EXISTING. CONNECT ALL POINTS BACK INTO CONTROLLER.

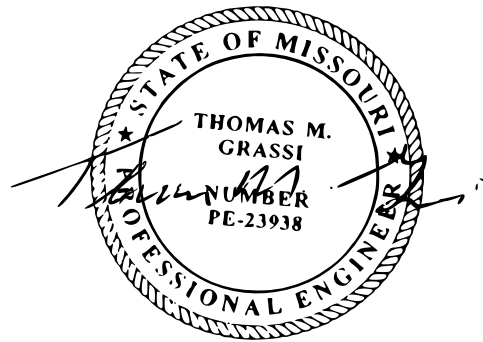


KEY PLAN  
NOT TO SCALE



**PICTURE OF ASU - 4 CONTROLLER**

SCALE: N.T.S.



03/19/24

THOMAS M. GRASSI

License Number: E-23938

Expiration Date: 12/31/24

PROFESSIONAL SEAL

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1010 W COLUMBIA ST.  
FARMINGTON, MISSOURI  
63640

PROJECT # M2011-01  
SITE # 7354  
ASSET# 6517354012

REVISION: ADDENDUM #1  
DATE: 03/19/24  
REVISION:  
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CAD DWG FILE:  
DRAWN BY: RCB  
CHECKED BY: TMG  
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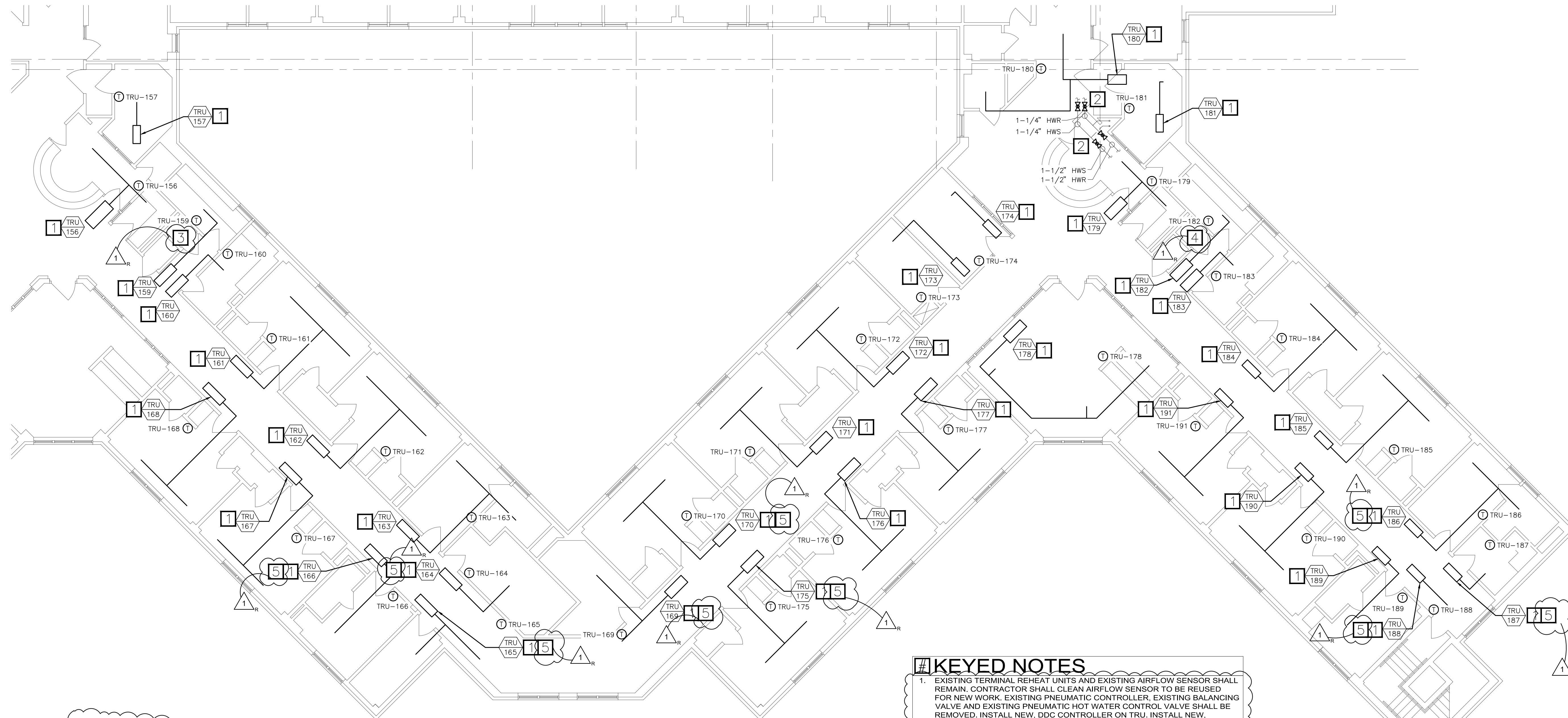
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STAPLES PARTIAL  
MECHANICAL PLAN

SHEET NUMBER:

**M-108**

01/10/2024  
11 OF 41 SHEETS

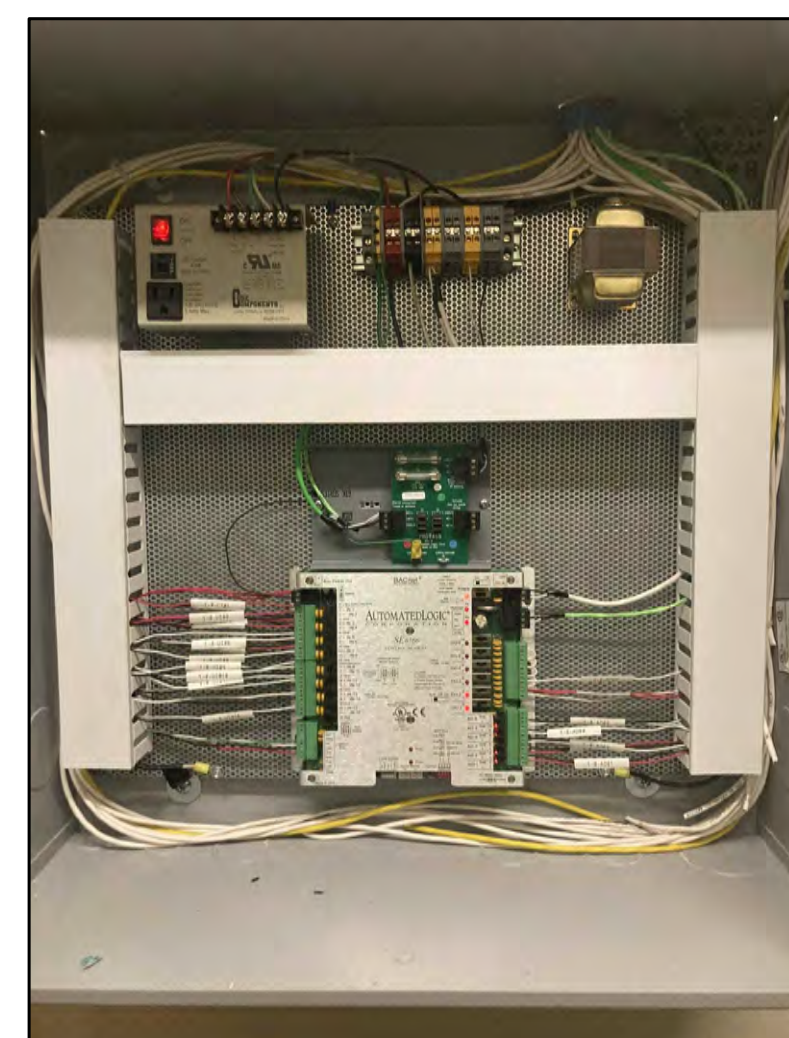
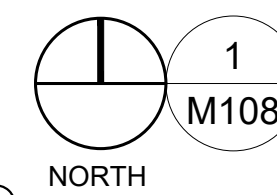


**KEYED NOTES**

- EXISTING TERMINAL REHEAT UNITS AND EXISTING AIRFLOW SENSOR SHALL REMAIN. CONTRACTOR SHALL CLEAN AIRFLOW SENSOR TO BE REUSED FOR NEW WORK. EXISTING PNEUMATIC CONTROLLER, EXISTING BALANCING VALVE AND EXISTING PNEUMATIC HOT WATER CONTROL VALVE SHALL BE REMOVED. INSTALL NEW, DDC CONTROLLER ON TRU. INSTALL NEW, ELECTRONIC THREE WAY CONTROL VALVE AND A NEW BALANCING VALVE ON BOTH HYDRONIC HEATING RETURN AND BYPASS PIPES. INSTALL NEW ZONE TEMPERATURE SENSOR IN PLACE OF EXISTING PNEUMATIC ZONE TEMPERATURE SENSOR. CONNECT NEW VALVE AND DDC CONTROLLER INTO NEW BAS. BID ALTERNATE #2: IF BID ALTERNATE #2 IS APPROVED, INSTALL MODULATING TWO WAY VALVES IN PLACE OF THREE WAY VALVES UNLESS NOTED, CAP AND REMOVE BYPASS LINE.
- INSTALL NEW ISOLATION VALVES IN EXISTING HOT WATER SUPPLY AND RETURN LINES TO ALLOW FOR FUTURE MAINTENANCE AND WORK TO COMPLETED WITH MINIMAL IMPACT TO REST OF HOT WATER SYSTEM.
- EXISTING ASU-5 CONTROLLER SHALL BE DEMOLISHED. NEW CONTROLLER SHALL BE INSTALLED IN PLACE OF EXISTING. CONNECT ALL POINTS BACK INTO CONTROLLER.
- EXISTING ASU-6 CONTROLLERS SHALL BE DEMOLISHED. NEW CONTROLLER SHALL BE INSTALLED IN PLACE OF EXISTING. CONNECT ALL POINTS BACK INTO CONTROLLER.
- BID ALTERNATE #2: INSTALL THREE WAY VALVE IN PLACE OF TWO WAY VALVE. INSTALL BALANCING VALVE IN RETURN AND BYPASS LINE.

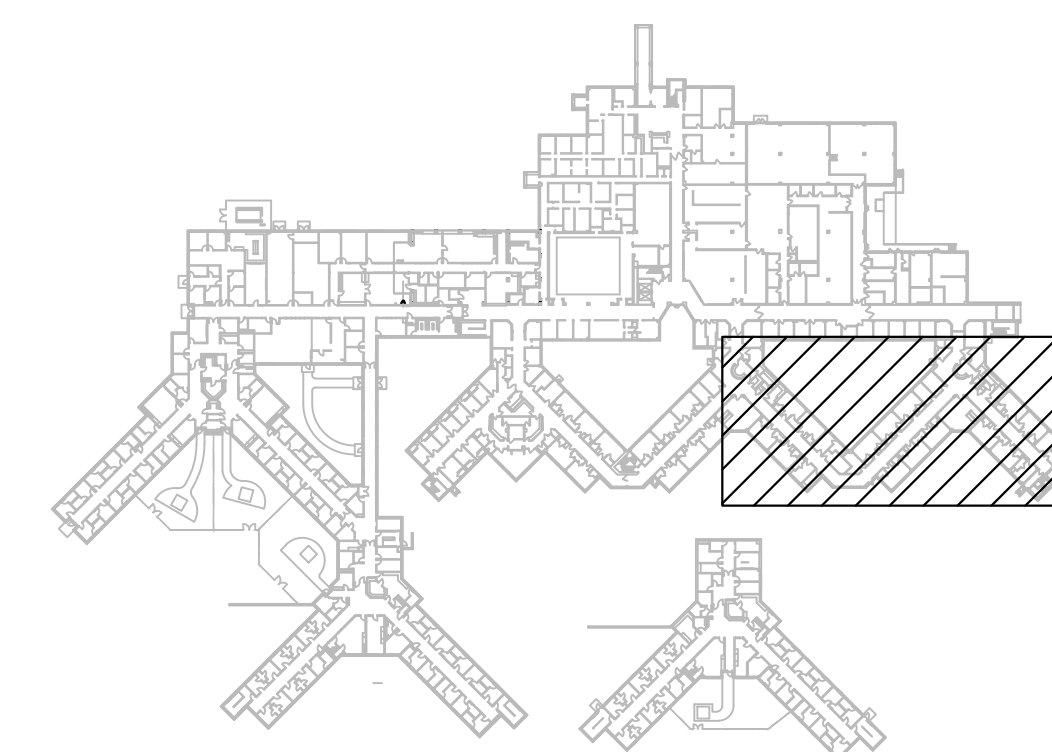
**STAPLES BUILDING - 2ND FLOOR  
PARTIAL MECHANICAL PLAN**

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

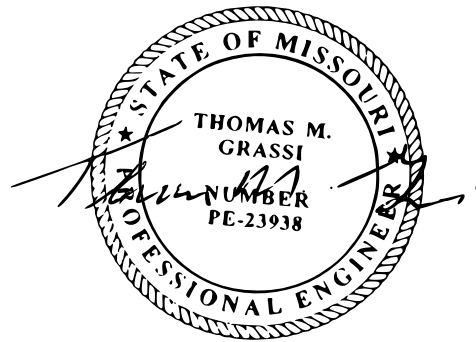


**ASU 5 AND 6 EXISTING CONTROLLER PICTURE**

2  
M108 SCALE: N.T.S.



KEY PLAN  
NOT TO SCALE



03/19/24

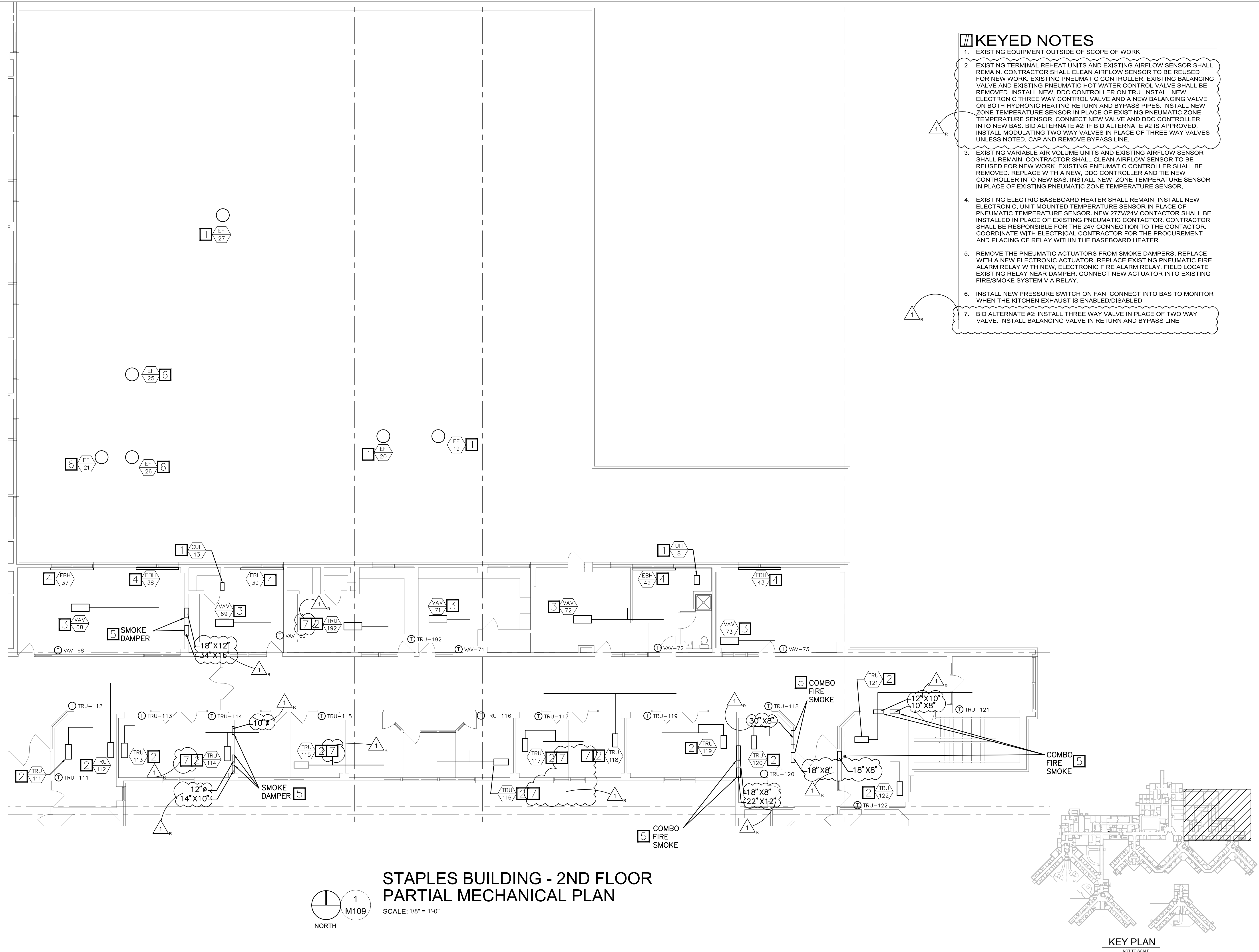
THOMAS M. GRASSI  
License Number: E-23938  
Expiration Date: 12/31/24  
PROFESSIONAL SEAL

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MO Certificate of Authority #000613 Eng.

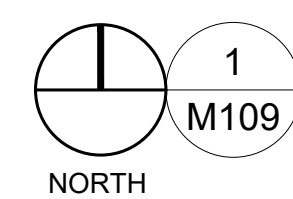
CASCO  
12 Sunnen Drive, Suite 100, St. Louis, MO 63143 T: 314.821.1100

**# KEYED NOTES**

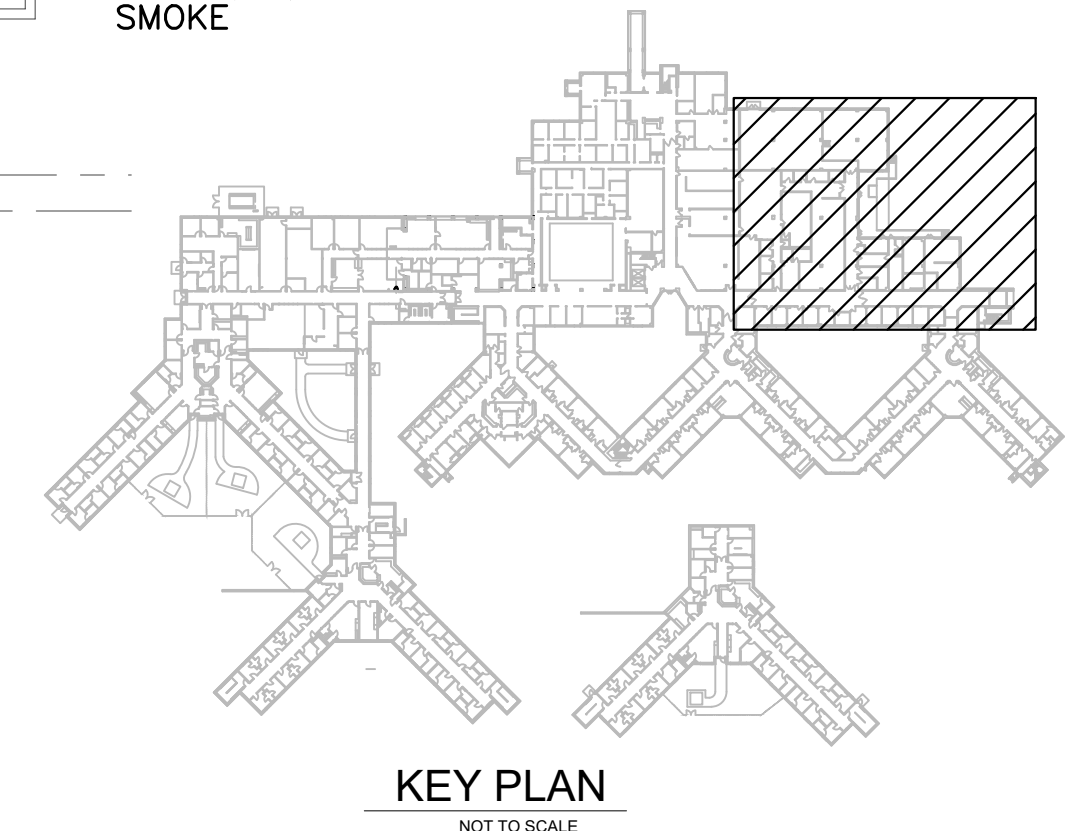
1. EXISTING EQUIPMENT OUTSIDE OF SCOPE OF WORK.
2. EXISTING TERMINAL REHEAT UNITS AND EXISTING AIRFLOW SENSOR SHALL REMAIN. CONTRACTOR SHALL CLEAN AIRFLOW SENSOR TO BE REUSED FOR NEW WORK. EXISTING PNEUMATIC CONTROLLER, EXISTING BALANCING VALVE AND EXISTING PNEUMATIC HOT WATER CONTROL VALVE SHALL BE REMOVED. INSTALL NEW, DDC CONTROLLER ON TRU. INSTALL NEW, ELECTRONIC THREE WAY CONTROL VALVE AND A NEW BALANCING VALVE ON BOTH HYDRONIC HEATING RETURN AND BYPASS PIPES. INSTALL NEW ZONE TEMPERATURE SENSOR IN PLACE OF EXISTING PNEUMATIC ZONE TEMPERATURE SENSOR. CONNECT NEW VALVE AND DDC CONTROLLER INTO NEW BAS. BID ALTERNATE #2: IF BID ALTERNATE #2 IS APPROVED, INSTALL MODULATING TWO WAY VALVES IN PLACE OF THREE WAY VALVES UNLESS NOTED. CAP AND REMOVE BYPASS LINE.
3. EXISTING VARIABLE AIR VOLUME UNITS AND EXISTING AIRFLOW SENSOR SHALL REMAIN. CONTRACTOR SHALL CLEAN AIRFLOW SENSOR TO BE REUSED FOR NEW WORK. EXISTING PNEUMATIC CONTROLLER SHALL BE REMOVED. REPLACE WITH A NEW, DDC CONTROLLER AND TIE NEW CONTROLLER INTO NEW BAS. INSTALL NEW ZONE TEMPERATURE SENSOR IN PLACE OF EXISTING PNEUMATIC ZONE TEMPERATURE SENSOR.
4. EXISTING ELECTRIC BASEBOARD HEATER SHALL REMAIN. INSTALL NEW ELECTRONIC, UNIT MOUNTED TEMPERATURE SENSOR IN PLACE OF PNEUMATIC TEMPERATURE SENSOR. NEW 277V/24V CONTACTOR SHALL BE INSTALLED IN PLACE OF EXISTING PNEUMATIC CONTACTOR. CONTRACTOR SHALL BE RESPONSIBLE FOR THE 24V CONNECTION TO THE CONTACTOR. COORDINATE WITH ELECTRICAL CONTRACTOR FOR THE PROCUREMENT AND PLACING OF RELAY WITHIN THE BASEBOARD HEATER.
5. REMOVE THE PNEUMATIC ACTUATORS FROM SMOKE DAMPERS. REPLACE WITH A NEW ELECTRONIC ACTUATOR. REPLACE EXISTING PNEUMATIC FIRE ALARM RELAY WITH NEW, ELECTRONIC FIRE ALARM RELAY. FIELD LOCATE EXISTING RELAY NEAR DAMPER. CONNECT NEW ACTUATOR INTO EXISTING FIRE/SMOKE SYSTEM VIA RELAY.
6. INSTALL NEW PRESSURE SWITCH ON FAN. CONNECT INTO BAS TO MONITOR WHEN THE KITCHEN EXHAUST IS ENABLED/DISABLED.
7. BID ALTERNATE #2: INSTALL THREE WAY VALVE IN PLACE OF TWO WAY VALVE. INSTALL BALANCING VALVE IN RETURN AND BYPASS LINE.



**STAPLES BUILDING - 2ND FLOOR  
PARTIAL MECHANICAL PLAN**



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



KEY PLAN  
NOT TO SCALE

OFFICE OF  
ADMINISTRATION  
DIVISION OF FACILITIES  
MANAGEMENT,  
DESIGN AND  
CONSTRUCTION

DEPARTMENT OF MENTAL  
HEALTH

UPGRADE HVAC CONTROLS

STAPLES BUILDING  
1010 W COLUMBIA ST.  
FARMINGTON, MISSOURI  
63640

PROJECT # M2011-01  
SITE # 7354  
ASSET# 6517354012

REVISION: ADDENDUM #1  
DATE: 03/19/24  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
ISSUE DATE: 01/10/2024

CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: RCB  
CHECKED BY: TMG  
DESIGNED BY: RCB

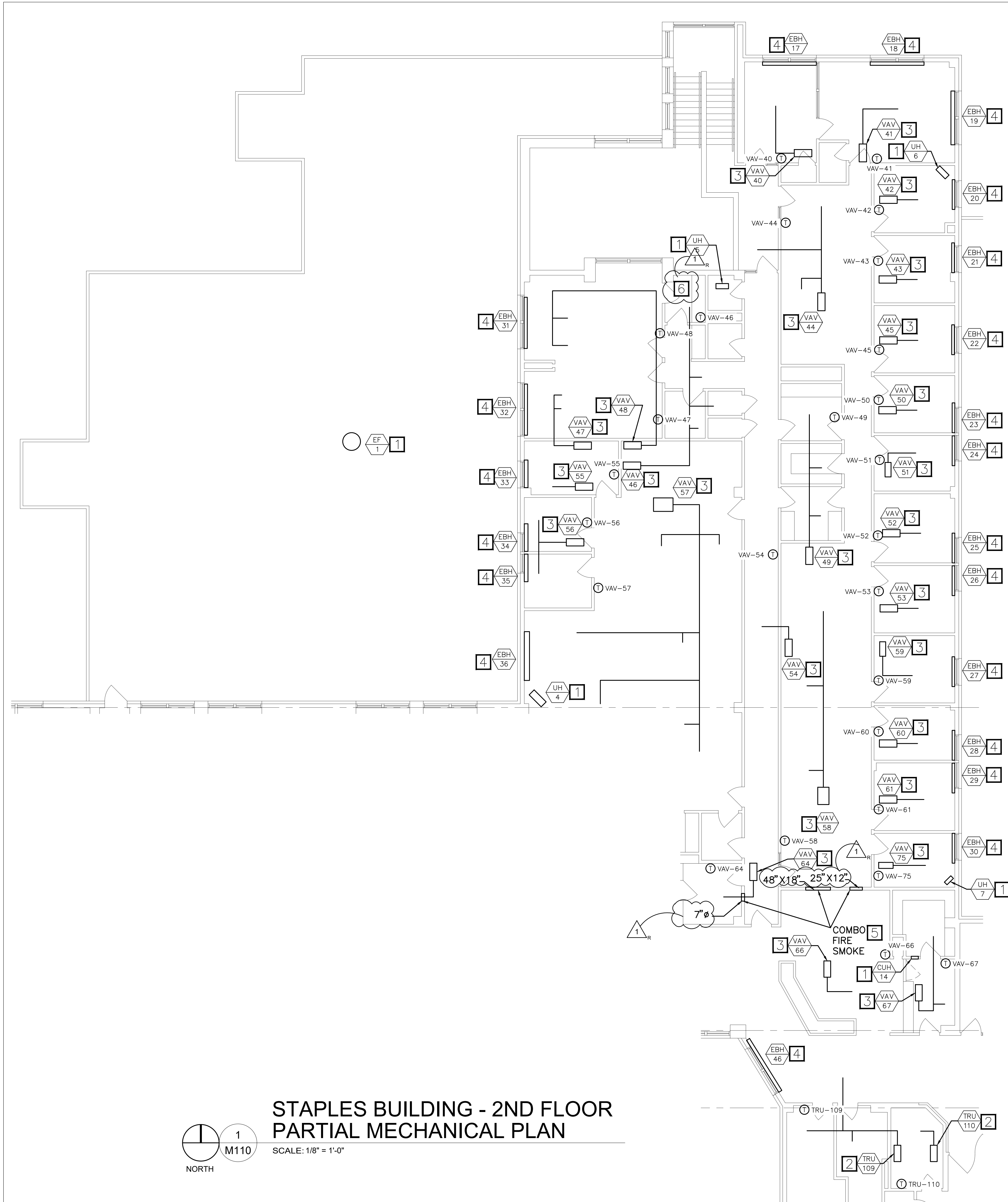
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STAPLES PARTIAL  
MECHANICAL PLAN

SHEET NUMBER:

**M-109**

01/10/2024  
12 OF 41 SHEETS

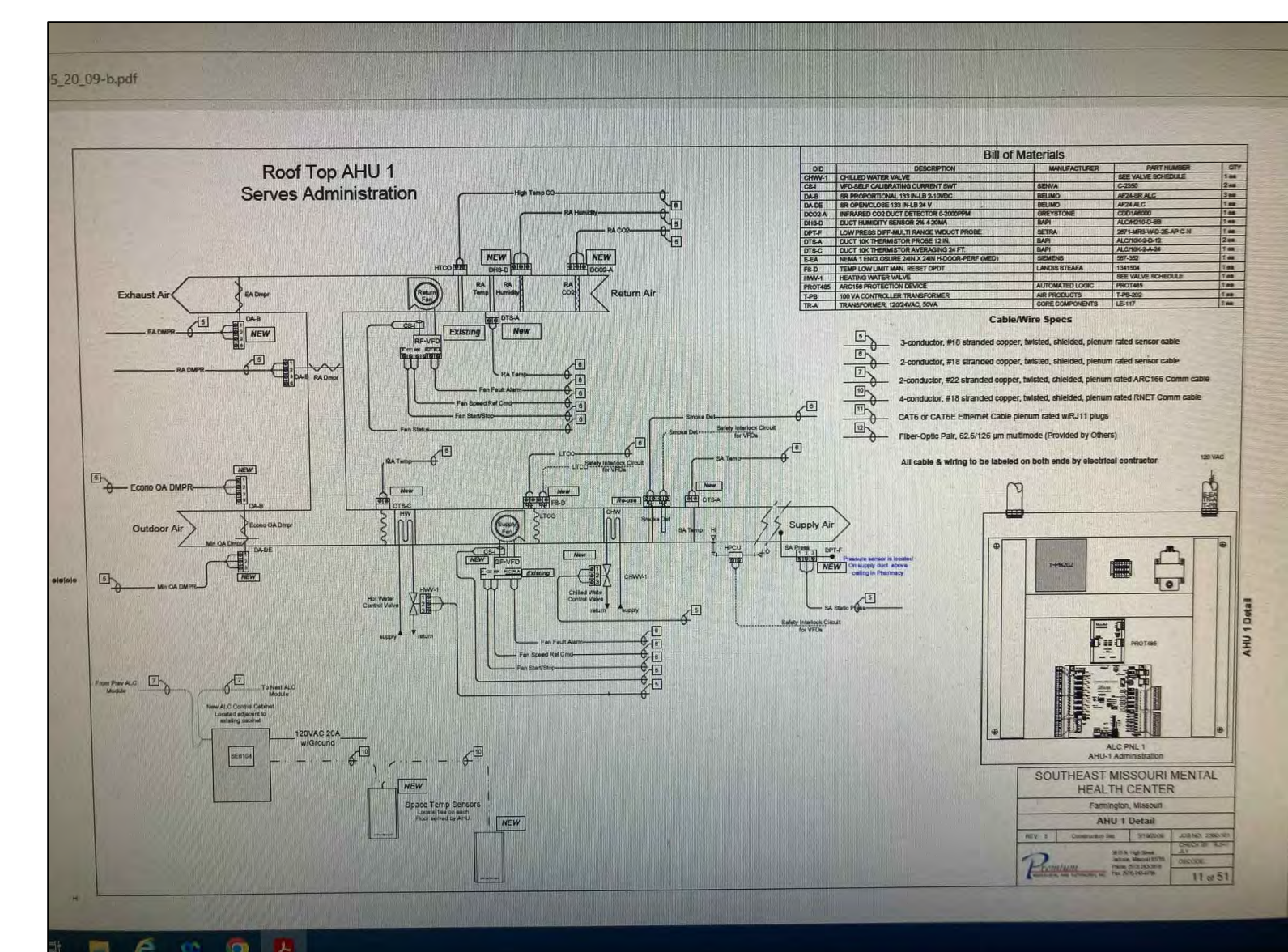


**STAPLES BUILDING - 2ND FLOOR  
PARTIAL MECHANICAL PLAN**

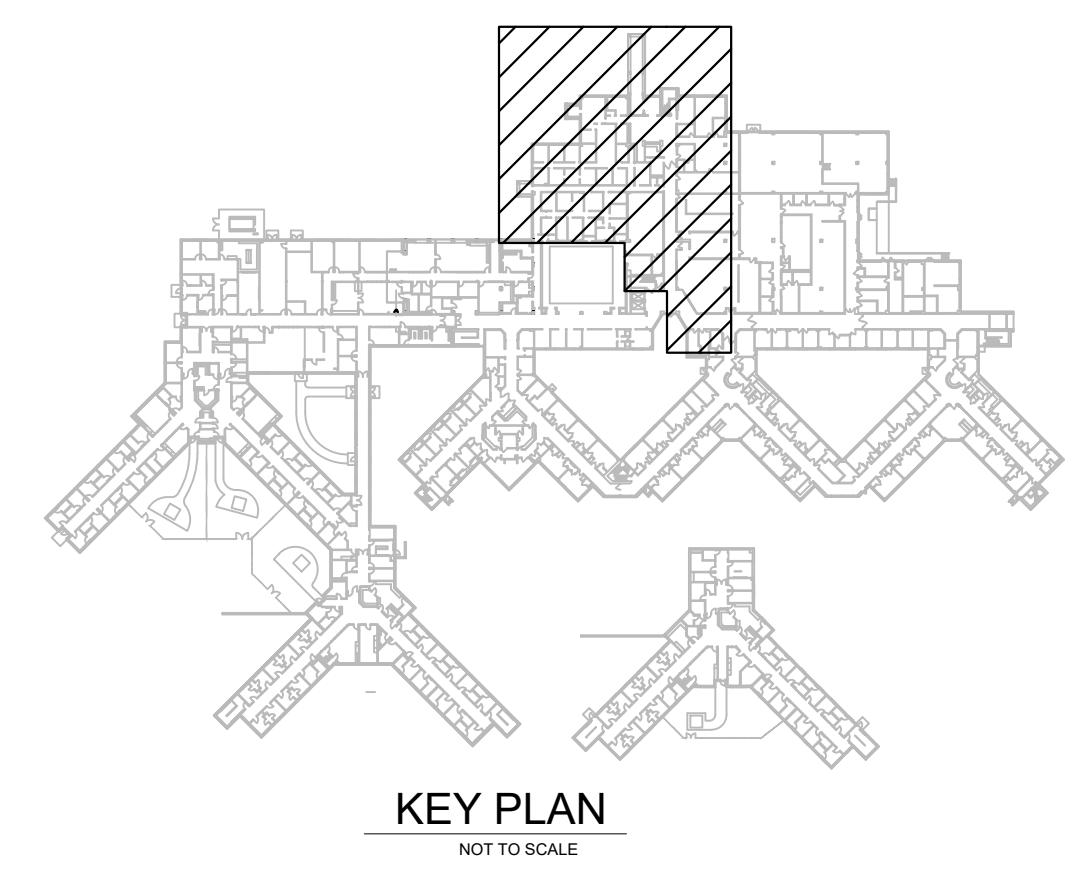
1  
M110  
SCALE: 1/8" = 1'-0"  
NORTH

**#KEYED NOTES**

1. EXISTING EQUIPMENT OUTSIDE OF SCOPE OF WORK
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6. EXISTING ASU-1 CONTROLLER SHALL BE DEMOLISHED. NEW CONTROLLER SHALL BE INSTALLED IN PLACE OF EXISTING. CONNECT ALL POINTS BACK INTO CONTROLLER.

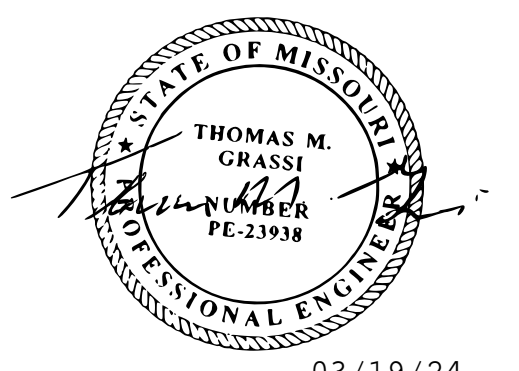


2  
M110  
**ASU - 1 EXISTING CONTROL SCHEMATIC**  
SCALE: N.T.S.



**KEY PLAN**  
NOT TO SCALE

STATE OF MISSOURI  
MICHAEL L. PARSON,  
GOVERNOR



03/19/24  
THOMAS M. GRASSI  
License Number: E-23938  
Expiration Date: 12/31/24  
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HEALTH

UPGRADE HVAC CONTROLS

STAPLES BUILDING  
1010 W COLUMBIA ST.  
FARMINGTON, MISSOURI  
63640

PROJECT # M2011-01  
SITE # 7354  
ASSET# 6517354012

REVISION: ADDENDUM #1  
DATE: 03/19/24  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
ISSUE DATE: 01/10/2024

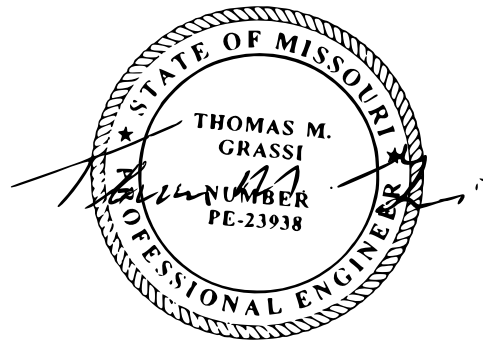
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DRAWN BY: RCB  
CHECKED BY: TMG  
DESIGNED BY: RCB

SHEET TITLE:

STAPLES PARTIAL  
MECHANICAL PLAN

SHEET NUMBER:

**M-110**  
01/10/2024  
13 OF 41 SHEETS



03/19/24  
THOMAS M. GRASSI  
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UPGRADE HVAC CONTROLS

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DATE:  
ISSUE DATE: 01/10/2024

CAD DWG FILE:  
DRAWN BY: RCB  
CHECKED BY: TMG  
DESIGNED BY: RCB

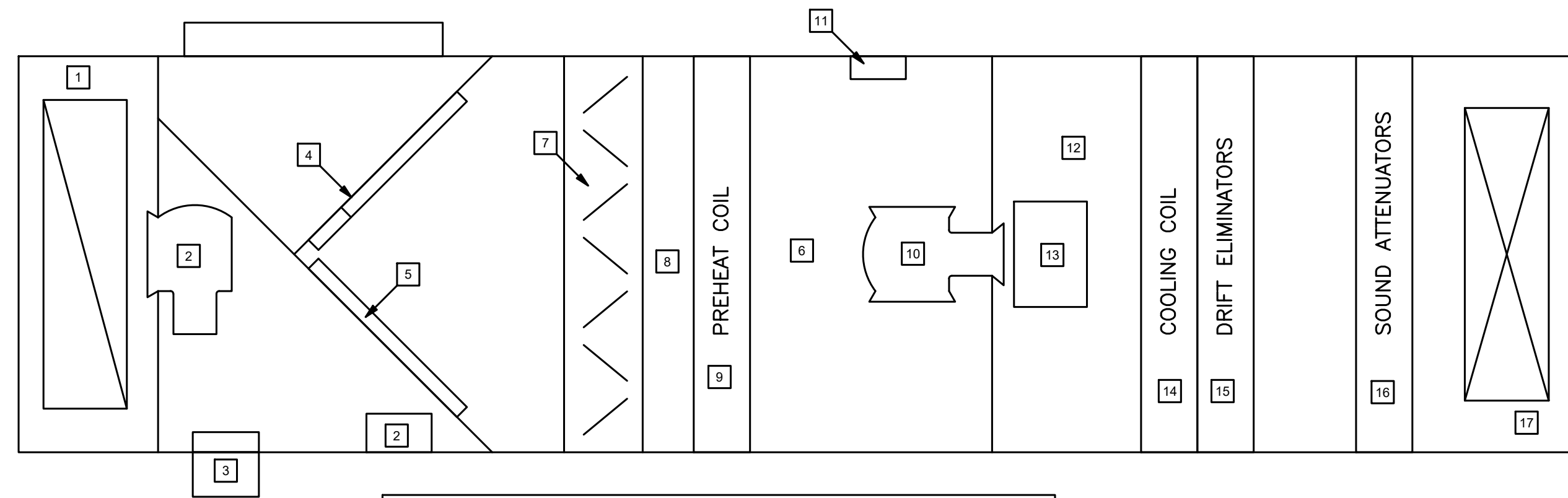
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MECHANICAL  
DETAILS

SHEET NUMBER:

M-601

01/10/2024  
15 OF 41 SHEETS



- KEYED NOTES**
- REPLACE EXISTING CO2, TEMPERATURE, AND HUMIDITY SENSOR AND TIE INTO NEW BAS. EXISTING SMOKE DETECTOR SHALL REMAIN. INSTALL NEW LOW PRESSURE SWITCH FOR THE RETURN FAN WITHIN RETURN SECTION OF CABINET.
  - EXISTING RETURN FAN AND RETURN FAN VFD. FAN SHALL REMAIN. EXISTING VFD SHALL BE REMOVED AND REPLACED WITH A NEW VFD. SEE SPECIFICATIONS FOR VFD REQUIREMENTS. COORDINATE WITH EC. TIE NEW VFD INTO NEW BAS. REMOVE INLET GUIDE VANES FROM FAN. INSTALL A NEW, LOW PRESSURE SAFETY SWITCH NEAR INLET SIDE OF RETURN.
  - EXISTING RELIEF DAMPER SHALL REMAIN. ADJUST ACTUATOR AND REPAIR DAMPER AS REQUIRED. TIE EXISTING ACTUATOR INTO NEW BAS.
  - EXISTING OA DAMPER. ADJUST ACTUATORS AND REPAIR DAMPER (MIN OUTSIDE AIR AND ECONOMIZER) TO ALLOW DAMPERS TO FULLY OPEN AND CLOSE. TIE ACTUATORS INTO NEW BAS. ADD NEW FLOW MEASURING STATIONS TO OUTSIDE AIR STREAM. CONNECT INTO BAS.
  - EXISTING RETURN AIR DAMPERS. ADJUST ACTUATOR AND REPAIR DAMPER TO ALLOW DAMPERS TO FULLY OPEN AND CLOSE. TIE ACTUATOR INTO NEW BAS.
  - INSTALL NEW LOW PRESSURE SAFETY SWITCH IN THE CABINET NEAR INLET OF SUPPLY FAN. CONNECT INTO OTHER SAFETIES TO SHUTDOWN FAN.
  - EXISTING FILTERS. INSTALL NEW, DIFFERENTIAL PRESSURE MONITOR ACROSS FILTERS. TIE DIFFERENTIAL PRESSURE MONITOR INTO NEW BAS TO ALLOW MAINTENANCE TO OBSERVE LOADING OF FILTERS.
  - REPLACE EXISTING AVERAGING MIXING AIR TEMPERATURE SENSOR. TIE NEW AVERAGING MIXING AIR TEMPERATURE SENSOR INTO NEW BAS.
  - EXISTING PREHEAT COIL SHALL REMAIN. REMOVE THREE WAY VALVE WITHIN CABINET AND REPLACE WITH A NEW, THREE WAY VALVE. INSTALL NEW, ENTERING WATER TEMPERATURE SENSOR AND NEW, LEAVING WATER TEMPERATURE SENSOR. INSTALL NEW, AIR TEMPERATURE SENSOR WITHIN CABINET SPACE TO MONITOR DISCHARGE AIR TEMPERATURE SENSOR FROM COIL. CONNECTION NEW CONTROL VALVE AND SENSORS INTO NEW BAS.
  - EXISTING SUPPLY FAN SHALL REMAIN. REMOVE INLET GUIDE VANES FROM FAN.
  - EXISTING SUPPLY FAN VFD SHALL REMAIN. CONNECT EXISTING VFD INTO NEW BAS.
  - REPLACE EXISTING HIGH PRESSURE SAFETY SWITCH AND FREEZESTAT WITH NEW, HIGH PRESSURE SAFETY SWITCH AND FREEZESTAT. CONNECT INTO EXISTING SAFETY LOOP OF THE AIR HANDLER AND BAS.
  - EXISTING, ABANDONED HUMIDIFIER. NO WORK.
  - EXISTING COOLING COIL SHALL REMAIN. REMOVE EXISTING THREE WAY CONTROL VALVE AND REPLACE WITH A NEW, THREE WAY CONTROL VALVE. INSTALL NEW ENTERING WATER TEMPERATURE SENSOR AND LEAVING WATER TEMPERATURE SENSORS. TIE NEW CONTROL VALVE AND NEW TEMPERATURE SENSORS INTO NEW BAS.
  - EXISTING DRIFT ELIMINATOR SHALL REMAIN. NO WORK.
  - EXISTING SOUND ATTENUATOR SHALL REMAIN. NO WORK.
  - EXISTING SUPPLY AIR CABINET SECTION. REMOVE SINGLE POINT TEMPERATURE SENSOR AND REPLACE WITH A NEW, AVERAGING SENSOR OVER OPENING INTO SUPPLY DUCT DROP. CONNECT NEW, AVERAGING SENSOR INTO NEW BAS.

STAPLES BUILDING -  
ASU-1 WORK TO BE DONE - BID ALTERNATE #1

1  
M601

SCALE: N. T. S.

| TAG   | SUPPLY FAN |    |              | RETURN FAN |    |              |
|-------|------------|----|--------------|------------|----|--------------|
|       | CFM        | HP | TSP (IN WC.) | CFM        | HP | TSP (IN WC.) |
| ASU-1 | 26000      | 50 | 8            | 20800      | 15 | 2.5          |
| ASU-2 | 6500       | 5  | 2.5          | 6500       | 3  | 2            |
| ASU-4 | 24800      | 50 | 8            | 17300      | 15 | 2            |
| ASU-5 | 21300      | 50 | 8            | 16200      | 15 | 2            |
| ASU-6 | 21500      | 50 | 8            | 16200      | 15 | 2            |
| ASU-7 | 15150      | 25 | 6            | 10530      | 3  | 3            |
| ASU-8 | 8805       | 10 | 4            | -          | -  | -            |

| UNIT  | CFM   | EAT DB (F) |      | LAT DB (F) |     | EWT (F) |     | LWT (F) | VALVE SIZE | GPM |
|-------|-------|------------|------|------------|-----|---------|-----|---------|------------|-----|
|       |       | IN         | OUT  | IN         | OUT | IN      | OUT |         |            |     |
| ASU-1 | 26000 | 89         | 65.6 | 55         | 54  | 45      | 55  | 4"      | 14         |     |
| ASU-2 | 6500  | 77         | 64.1 | 55         | 54  | 45      | 55  | 2"      | 14         |     |
| ASU-4 | 24800 | 81         | 67.2 | 55         | 54  | 45      | 55  | 4"      | 205        |     |
| ASU-5 | 21300 | 75         | 66.4 | 55         | 54  | 45      | 55  | 4"      | 164        |     |
| ASU-6 | 21500 | 75         | 66.4 | 55         | 54  | 45      | 55  | 4"      | 165        |     |
| ASU-7 | 15150 | 81         | 71   | 55         | 54  | 45      | 55  | 4"      | 168        |     |
| ASU-8 | 8805  | 95         | 78   | 55         | 54  | 45      | 55  | 3"      | 114        |     |

| UNIT  | TYPE    | CFM   | EAT (F) |     | LAT (F) |     | EWT (F) |     | LWT (F) | VALVE SIZE | GPM |
|-------|---------|-------|---------|-----|---------|-----|---------|-----|---------|------------|-----|
|       |         |       | IN      | OUT | IN      | OUT | IN      | OUT |         |            |     |
| ASU-1 | PREHEAT | 26000 | 58      | 95  | 200     | 160 | 160     | 160 | 2-1/2"  | 14         |     |
| ASU-2 | PREHEAT | 6500  | 66.5    | 100 | 200     | 160 | 160     | 160 | 1-1/2"  | 12         |     |
| ASU-8 | PREHEAT | 8805  | 50      | 80  | 200     | 160 | 160     | 160 | 2"      | 15         |     |
| ASU-8 | REHEAT  | 8805  | -10     | 50  | 200     | 160 | 160     | 160 | 1-1/2"  | 28         |     |

| TAG  | GPM  | FT OF HEAT |     | HP |
|------|------|------------|-----|----|
|      |      | IN         | OUT |    |
| P-1  | 160  | 70         | 7.5 |    |
| P-2  | 160  | 70         | 7.5 |    |
| P-3  | 260  | 110        | 20  |    |
| P-4  | 260  | 110        | 20  |    |
| P-5  | 1200 | 105        | 50  |    |
| P-6  | 1200 | 105        | 50  |    |
| P-7  | 600  | 50         | 7.5 |    |
| P-8  | 600  | 50         | 7.5 |    |
| P-9  | 750  | 70         | 20  |    |
| P-10 | 750  | 70         | 20  |    |

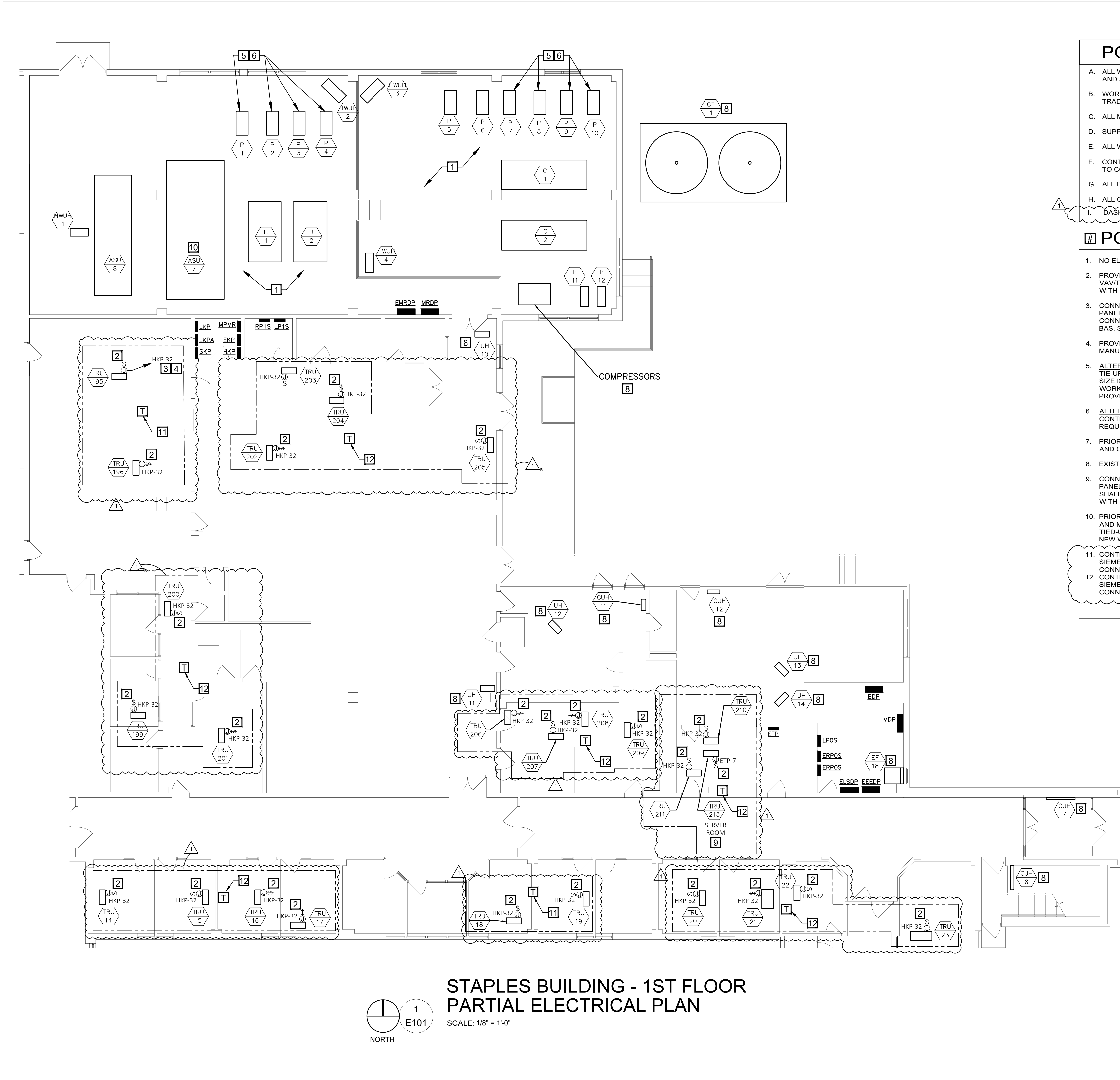
STAPLES BUILDING -  
ASU-2 WORK TO BE DONE - BID ALTERNATE #1 & #3

2  
M601

SCALE: N. T. S.







**STAPLES BUILDING - 1ST FLOOR  
PARTIAL ELECTRICAL PLAN**

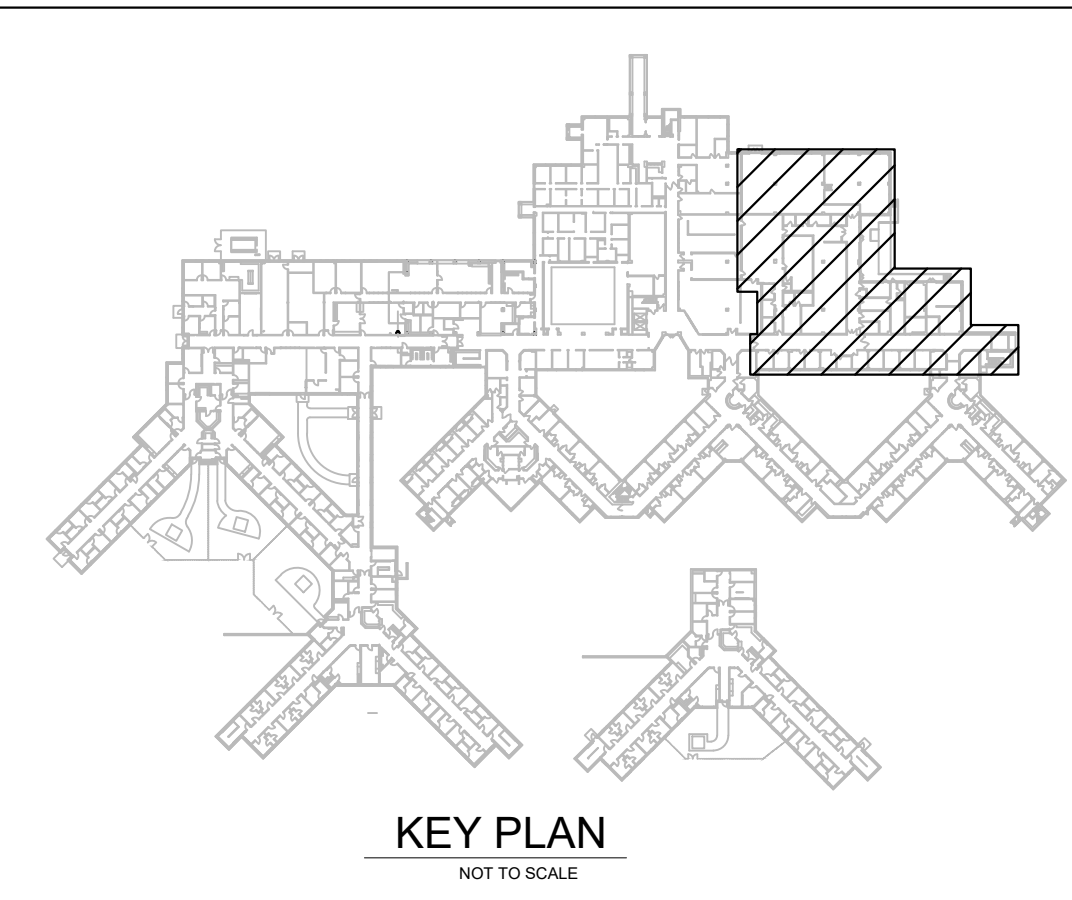
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NORTH

**POWER GENERAL NOTES**

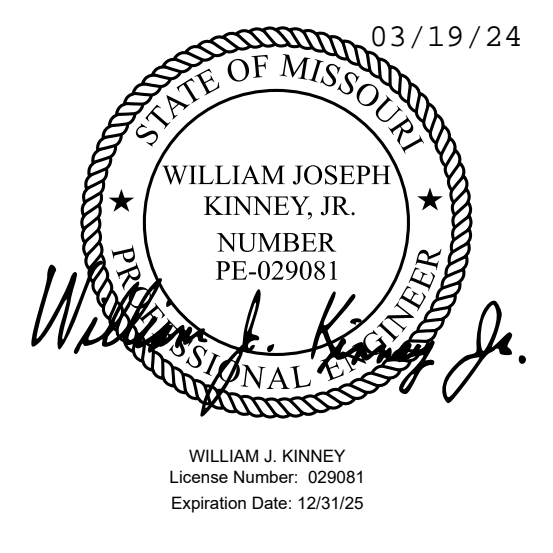
- A. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE APPLICABLE BUILDING CODE, NEC AND ANY OTHER LOCAL CODES AND ORDINANCES.
- B. WORKMANSHIP SHALL BE FIRST QUALITY AND IN ACCORDANCE WITH BEST PRACTICES FOR THE TRADE BY SKILLED WORKERS.
- C. ALL MATERIALS SHALL BE NEW, WITH "UL" APPROVED LABELS.
- D. SUPPLY AND INSTALL NEW ELECTRICAL DEVICES AS SHOWN.
- E. ALL WIRING SHALL BE AS SPECIFIED UNDER ELECTRICAL SPEC SECTION.
- F. CONTROL WIRING FOR VAV, TRU WILL BE FURNISHED, INSTALLED AND CONNECTED BY MC. MC TO COORDINATE ANY ELECTRICAL WORK REQUIRED BY EC.
- G. ALL BRANCH CIRCUITS IN EXCESS OF 100 FT. TO VAV/TRU FROM PANEL SHALL BE #10 AWG.
- H. ALL CONDUIT SHALL BE EMT, UNO.
- I. DASHED LINE INDICATES GROUPINGS OF TRANSFORMER SERVICE.

**POWER KEYED NOTES**

- 1. NO ELECTRICAL WORK IN THIS AREA, UNO.
- 2. PROVIDE JUNCTION BOX WITH 20A-1P HP RATED TOGGLE DISCONNECT SWITCH. CONNECT TO VAV/TRU 24V. CONTROL TRANSFORMER FURNISHED AND INSTALLED BY EC. COORDINATE WORK WITH MC.
- 3. CONNECT EXISTING TRU AND VAV UNIT VIA UNIT TRANSFORMER TO NEW 20A-1P C/B IN 277V PANEL. SEE NOTE 4. VERIFY THAT PANEL IS NOT CONTROLLED BY CONTACTOR OR BAS. IF SO, CONNECT TO 20A-1P SPARE C/B IN NEAREST 277V PANEL NOT CONTROLLED BY CONTACTOR OR BAS. SEE POWER GENERAL NOTE G.
- 4. PROVIDE NEW 20A-1P C/B IN OPEN SPACE IN 277V PANEL AND CONNECT. C/B SHALL BE SAME MANUFACTURER AND INTERRUPTING RATING AS EXISTING C/B'S.
- 5. ALTERNATE #2 - PRIOR TO REMOVAL OF PUMP MOTOR, EC TO DISCONNECT MOTOR FEEDER, TIE-UP AND MAKE SAFE FOR REUSE. AFTER NEW PUMP MOTOR IS IN-PLACE, VERIFY MOTOR SIZE IS EQUAL WITH DEMO'ED MOTOR SIZE AND CONNECT FEEDER TIED-UP DURING DEMO WORK AND CONNECT AS REQUIRED. NOTE: IF MOTOR SIZE IS LARGER THAN PREVIOUS MOTOR, PROVIDE NEW FEEDER AND NEW SWITCH OR C/B IN EXISTING PANEL AND CONNECT.
- 6. ALTERNATE #2 - NEW MOTOR PUMPS CONTROLLED BY NEW VFD PROVIDED BY CONTROLS CONTRACTOR. EC TO COORDINATE WITH CONTROLS CONTRACTOR AND CONNECT AS REQUIRED.
- 7. PRIOR TO REMOVAL OF EXISTING AIR COMPRESSORS, DISCONNECT AND REMOVE FEEDERS AND CONDUITS BACK TO SOURCE. SWITCH/CIRCUIT BREAKER IN PANEL TO BECOME SPARE.
- 8. EXISTING EQUIPMENT WITH ELECTRICAL CONNECTION TO REMAIN IN-PLACE, UNO.
- 9. CONNECT EXISTING VAV UNIT VIA UNIT TRANSFORMER TO SPARE 20A-1P C/B IN EMERGENCY PANEL. NOT CONTROLLED BY CONTACTOR OR BAS. NEW 20A-1P C/B IN 120V EMERGENCY PANEL SHALL BE SAME MANUFACTURER AND INTERRUPTING RATING AS EXISTING C/B'S. COORDINATE WITH MECHANICAL THIS UNIT SUPPLIES THE SERVER ROOM.
- 10. PRIOR TO REPLACEMENT OF VFD FOR EXISTING ASU# 7 BY MC, DISCONNECT FEEDER, TIE-UP AND MAKE SAFE FOR REUSE. AFTER NEW VFD IS INSTALLED BY MC, RECONNECT FEEDER TIED-UP DURING DEMO WORK. COORDINATE WORK WITH MC. SEE MECHANICAL DRAWINGS FOR NEW WORK.
- 11. CONTROL TRANSFORMER TYPE: BOB - SQUARE-D 9070T100D19, TYPE-T, (EQUIVALENTS - SIEMENS, EATON, OR APPROVED EQUAL), 277V - PRIMARY, 24V-SECONDARY, 100VA, 1-PHASE. CONNECT (2) UNITS.
- 12. CONTROL TRANSFORMER TYPE: BOB - SQUARE-D 9070T200D25, TYPE-T, (EQUIVALENTS - SIEMENS, EATON, OR APPROVED EQUAL), 277V - PRIMARY, 24V-SECONDARY, 200VA, 1-PHASE. CONNECT (4) UNITS.



STATE OF MISSOURI  
MICHAEL L. PARSON,  
GOVERNOR



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OFFICE OF  
ADMINISTRATION  
DIVISION OF FACILITIES  
MANAGEMENT,  
DESIGN AND  
CONSTRUCTION  
DEPARTMENT OF MENTAL  
HEALTH

UPGRADE HVAC CONTROLS

STAPLES BUILDING  
1010 W COLUMBIA ST.  
FARMINGTON, MISSOURI  
63640

PROJECT # M2011-01  
SITE # 7354  
ASSET# 6517354012

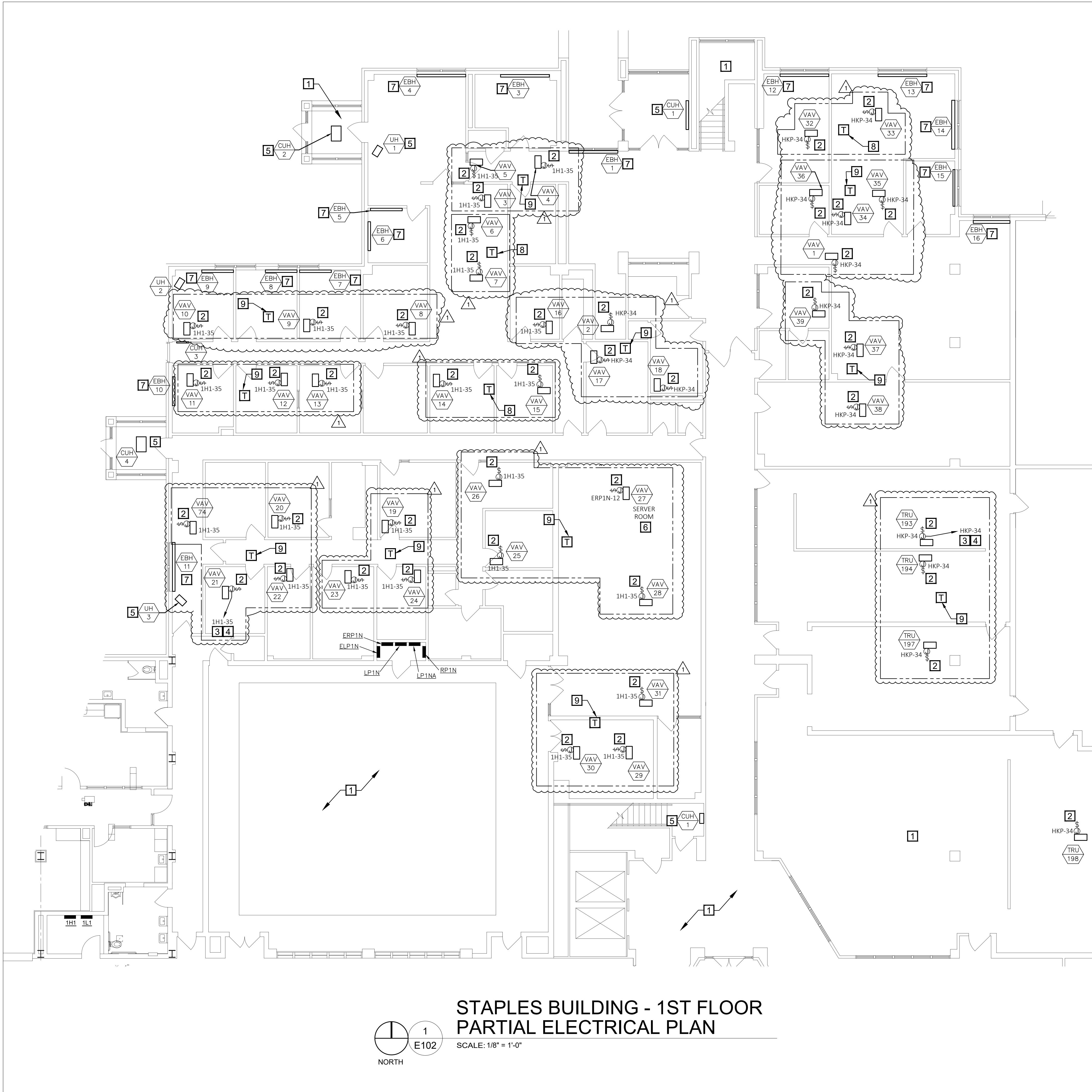
REVISION: ADDENDUM #1  
DATE: 03/19/24  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
ISSUE DATE: 01/10/2024

CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: RA  
CHECKED BY: WJK  
DESIGNED BY: \_\_\_\_\_

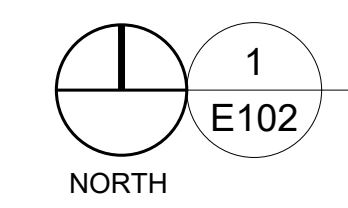
SHEET TITLE:  
**STAPLES PARTIAL  
ELECTRICAL PLAN**

SHEET NUMBER:  
**E-101**  
01/10/2024  
30 OF 41 SHEETS

**CASCO**  
12 Sunnen Drive, Suite 100, St. Louis, MO 63114 T: 314.821.1100



**STAPLES BUILDING - 1ST FLOOR  
PARTIAL ELECTRICAL PLAN**



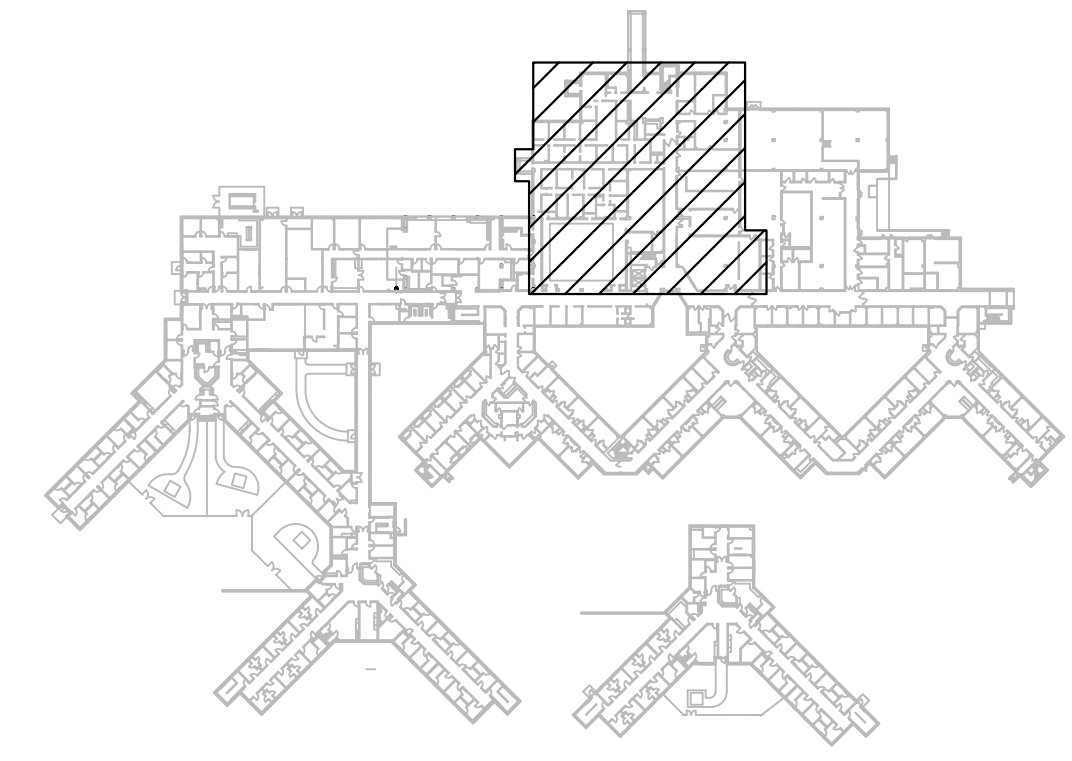
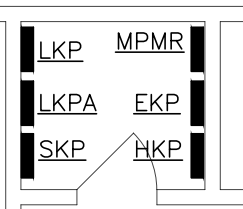
SCALE: 1/8" = 1'-0"

**POWER GENERAL NOTES**

- A. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE APPLICABLE BUILDING CODE, NEC AND ANY OTHER LOCAL CODES AND ORDINANCES.
- B. WORKMANSHIP SHALL BE FIRST QUALITY AND IN ACCORDANCE WITH BEST PRACTICES FOR THE TRADE BY SKILLED WORKERS.
- C. ALL MATERIALS SHALL BE NEW, WITH "UL" APPROVED LABELS.
- D. SUPPLY AND INSTALL NEW ELECTRICAL DEVICES AS SHOWN.
- E. ALL WIRING SHALL BE AS SPECIFIED UNDER ELECTRICAL SPEC SECTION.
- F. CONTROL WIRING FOR VAV, TRU WILL BE FURNISHED, INSTALLED AND CONNECTED BY MC. MC TO COORDINATE ANY ELECTRICAL WORK REQUIRED BY EC.
- G. ALL BRANCH CIRCUITS IN EXCESS OF 100 FT. TO VAV/TRU FROM PANEL SHALL BE #10 AWG.
- H. ALL CONDUIT SHALL BE EMT, UNO.
- I. DASHED LINE INDICATES GROUPINGS OF TRANSFORMER SERVICE.

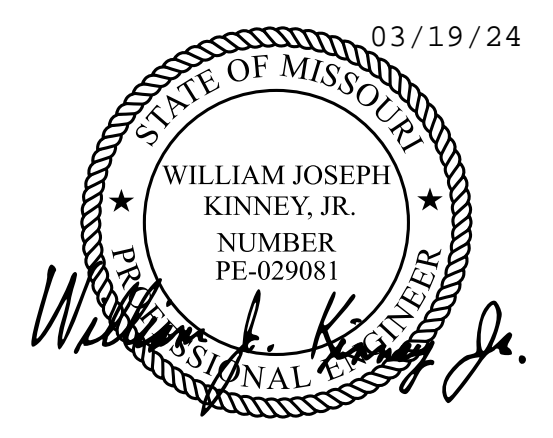
**# POWER KEYED NOTES**

- 1. NO ELECTRICAL WORK IN THIS AREA, UNO.
- 2. PROVIDE JUNCTION BOX WITH 20A-1P HP RATED TOGGLE DISCONNECT SWITCH. CONNECT TO VAV/TRU 24V. NEW CONTROL TRANSFORMER FURNISHED AND INSTALLED BY EC. COORDINATE WORK WITH MC.
- 3. CONNECT EXISTING TRU AND VAV UNIT VIA NEW UNIT TRANSFORMER TO NEW 20A-1P C/B IN 277V PANEL. SEE NOTE 4. VERIFY THAT PANEL IS NOT CONTROLLED BY CONTACTOR OR BAS. IF SO, CONNECT TO 20A-1P SPARE C/B IN NEAREST 277V PANEL NOT CONTROLLED BY CONTACTOR OR BAS. SEE POWER GENERAL NOTE G.
- 4. PROVIDE NEW 20A-1P C/B IN OPEN SPACE IN 277V PANEL AND CONNECT. C/B SHALL BE SAME MANUFACTURER AND INTERRUPTING RATING AS EXISTING C/B'S.
- 5. EXISTING EQUIPMENT WITH ELECTRICAL CONNECTION TO REMAIN IN-PLACE, UNO.
- 6. CONNECT EXISTING VAV UNIT VIA NEW UNIT TRANSFORMER TO SPARE 20A-1P C/B IN EMERGENCY PANEL. CIRCUIT SHOWN IS FOR WIRING PURPOSE ONLY. IF C/B IS NOT AVAILABLE IN EMERGENCY PANEL, CONNECT TO SPARE 20A/1P C/B IN NEAREST 120V EMERGENCY PANEL NOT CONTROLLED BY CONTACTOR OR BAS. IF NEW 20A-1P C/B IS REQUIRED IN 120V EMERGENCY PANEL, IT SHALL BE SAME MANUFACTURER AND INTERRUPTING RATING AS EXISTING C/B'S. SEE POWER GENERAL NOTE G. COORDINATE WITH MECHANICAL THIS UNIT SUPPLIES THE SERVER ROOM.
- 7. EXISTING ELECTRIC BASEBOARD HEATER TO REMAIN. PRIOR TO REMOVAL OF PNEUMATIC CONTACTOR IN BASEBOARD HEATER BY MC, EC TO DISCONNECT POWER WIRING AND MAKE SAFE FOR REUSE. MC TO REMOVE PNEUMATIC CONTACTOR AND SHALL REPLACE WITH NEW 24V-277V CONTACTOR. EC TO RECONNECT POWER WIRING AND MC TO CONNECT 24V CONTROL WIRING AS REQUIRED. COORDINATE WORK WITH MC.
- 8. CONTROL TRANSFORMER TYPE: BOB - SQUARE-D 9070T100D19, TYPE-T, (EQUIVALENTS - SIEMENS, EATON, OR APPROVED EQUAL), 277V - PRIMARY, 24V-SECONDARY, 100VA, 1-PHASE. CONNECT (2) UNITS.
- 9. CONTROL TRANSFORMER TYPE: BOB - SQUARE-D 9070T200D25, TYPE-T, (EQUIVALENTS - SIEMENS, EATON, OR APPROVED EQUAL), 277V - PRIMARY, 24V-SECONDARY, 200VA, 1-PHASE. CONNECT (4) UNITS.



KEY PLAN  
NOT TO SCALE

STATE OF MISSOURI  
MICHAEL L. PARSON,  
GOVERNOR



WILLIAM J. KINNEY  
License Number: 029081  
Expiration Date: 12/31/25  
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MO Certificate of Authority #000329 Arch.  
MO Certificate of Authority #000613 Eng.

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FARMINGTON, MISSOURI  
63640

PROJECT # M2011-01  
SITE # 7354  
ASSET# 6517354012

REVISION: ADDENDUM #1  
DATE: 03/19/24  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
ISSUE DATE: 01/10/2024

CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: RA  
CHECKED BY: WJK  
DESIGNED BY: \_\_\_\_\_

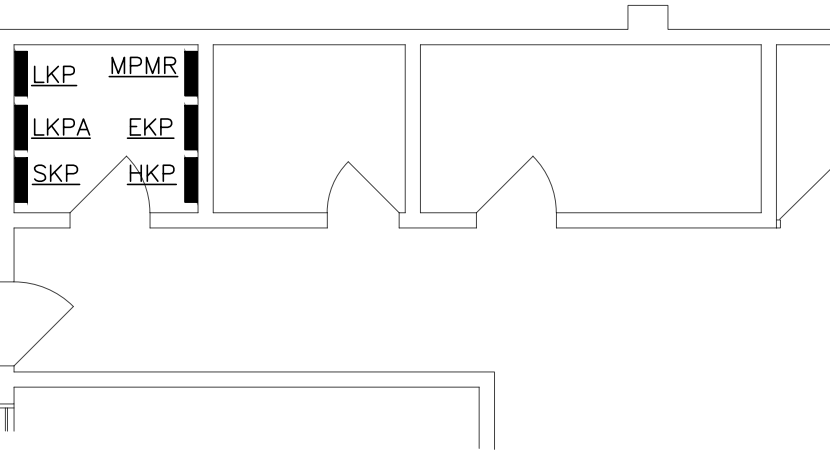
SHEET TITLE:

STAPLES PARTIAL  
ELECTRICAL PLAN

SHEET NUMBER:

**E-102**

09/07/23  
31 OF 40 SHEETS



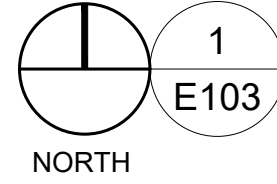
### POWER GENERAL NOTES

- ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE APPLICABLE BUILDING CODE, NEC AND ANY OTHER LOCAL CODES AND ORDINANCES.
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- ALL WIRING SHALL BE AS SPECIFIED UNDER ELECTRICAL SPEC SECTION.
- CONTROL WIRING FOR VAV, TRU WILL BE FURNISHED, INSTALLED AND CONNECTED BY MC, MC TO COORDINATE ANY ELECTRICAL WORK REQUIRED BY EC.
- ALL BRANCH CIRCUITS IN EXCESS OF 100 FT. TO VAV/TRU FROM PANEL SHALL BE #10 AWG.
- ALL CONDUIT SHALL BE EMT, UNO.
- DASHED LINE INDICATES GROUPINGS OF TRANSFORMER SERVICE.

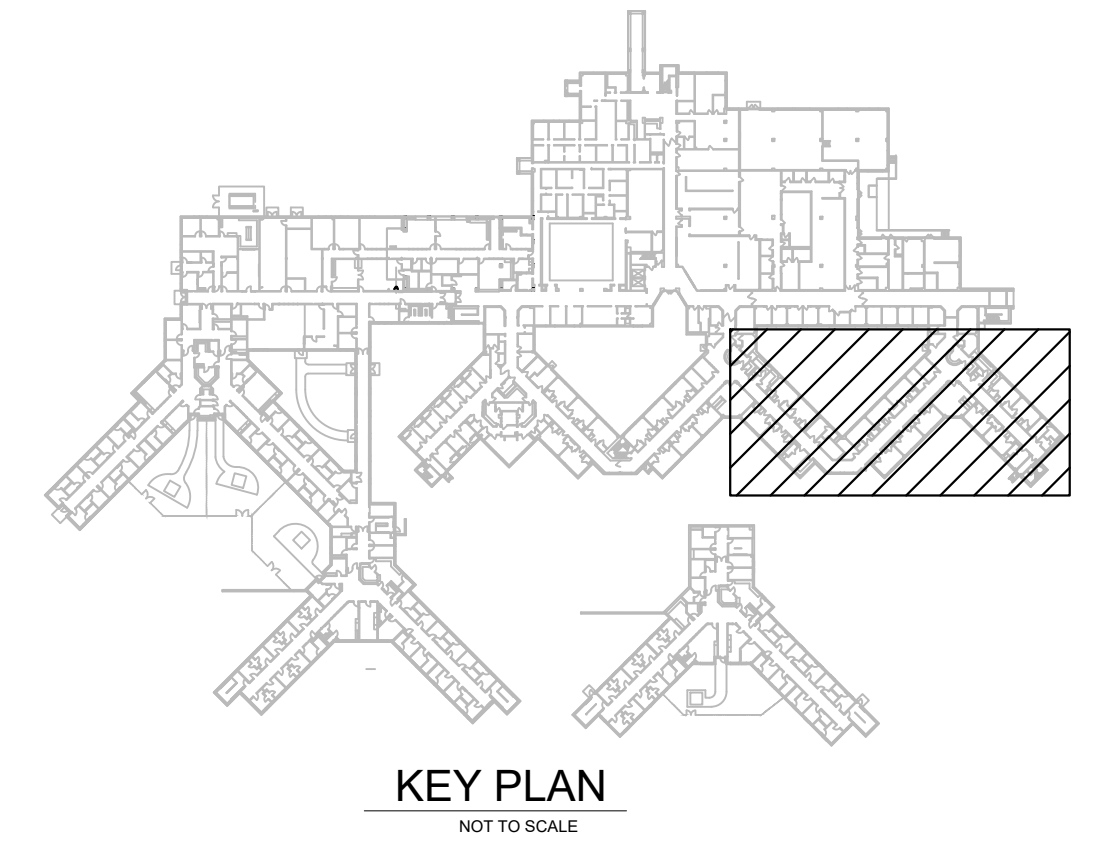
### # POWER KEYED NOTES

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- PROVIDE JUNCTION BOX WITH 20A-1P HP RATED TOGGLE DISCONNECT SWITCH. CONNECT TO VAV/TRU 24V. NEW CONTROL TRANSFORMER FURNISHED AND INSTALLED BY EC. COORDINATE WORK WITH MC.
- CONNECT EXISTING TRU AND VAV UNIT VIA NEW UNIT TRANSFORMER TO NEW 20A-1P C/B IN 277V PANEL. SEE NOTE 4. VERIFY THAT PANEL IS NOT CONTROLLED BY CONTACTOR OR BAS. IF SO, CONNECT TO 20A-1P SPARE C/B IN NEAREST 277V PANEL NOT CONTROLLED BY CONTACTOR OR BAS. SEE POWER GENERAL NOTE G.
- PROVIDE NEW 20A-1P C/B IN OPEN SPACE IN 277V PANEL AND CONNECT. C/B SHALL BE SAME MANUFACTURER AND INTERRUPTING RATING AS EXISTING C/B'S.
- EXISTING EQUIPMENT WITH ELECTRICAL CONNECTION TO REMAIN IN-PLACE, UNO.
- CONTROL TRANSFORMER TYPE: SQUARE-D 9070T100D19, TYPE-T. (EQUIVALENT - SIEMENS, EATON, OR APPROVED EQUAL), 277V - PRIMARY, 24V-SECONDARY, 100VA, 1-PHASE. CONNECT (2) UNITS.
- CONTROL TRANSFORMER TYPE: SQUARE-D 9070T200D25, TYPE-T. (EQUIVALENT - SIEMENS, EATON, OR APPROVED EQUAL), 277V - PRIMARY, 24V-SECONDARY, 200VA, 1-PHASE. CONNECT (4) UNITS.

## STAPLES BUILDING - 1ST FLOOR PARTIAL ELECTRICAL PLAN

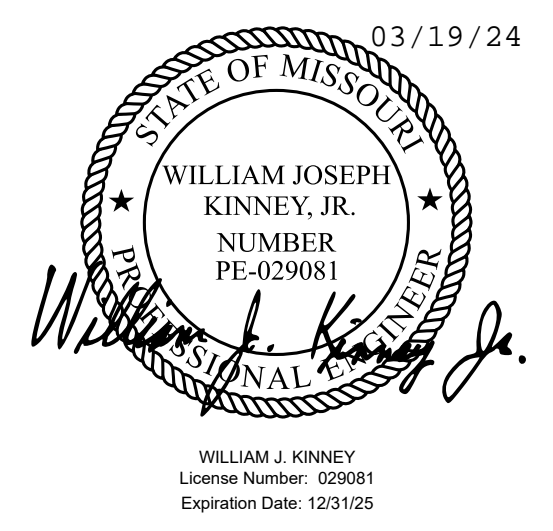


SCALE: 1/8" = 1'-0"



KEY PLAN  
NOT TO SCALE

STATE OF MISSOURI  
MICHAEL L. PARSON,  
GOVERNOR



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DEPARTMENT OF MENTAL  
HEALTH

UPGRADE HVAC CONTROLS

STAPLES BUILDING  
1010 W COLUMBIA ST.  
FARMINGTON, MISSOURI  
63640

PROJECT # M2011-01  
SITE # 7354  
ASSET# 6517354012

REVISION: ADDENDUM #1  
DATE: 03/19/24  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
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DATE: \_\_\_\_\_  
ISSUE DATE: 01/10/2024

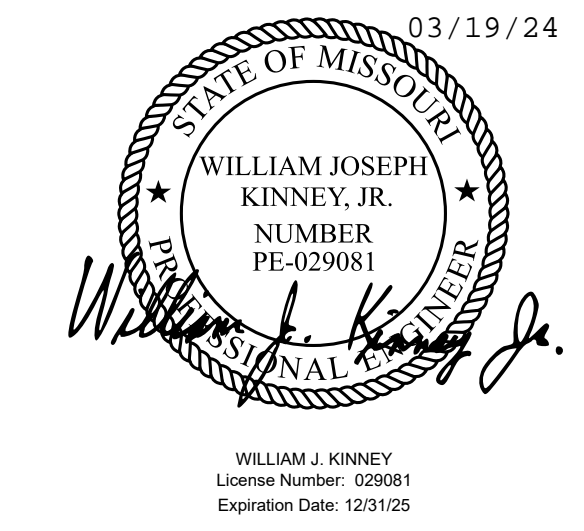
CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: RA  
CHECKED BY: WJK  
DESIGNED BY: \_\_\_\_\_

SHEET TITLE:  
**STAPLES PARTIAL  
ELECTRICAL PLAN**

SHEET NUMBER:  
**E-103**  
01/10/2024  
32 OF 41 SHEETS

**CASCO**

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SITE # 7354  
ASSET# 6517354012

REVISION: ADDENDUM #1  
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REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
ISSUE DATE: 01/10/2024

CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: RA  
CHECKED BY: WJK  
DESIGNED BY: \_\_\_\_\_

SHEET TITLE:

STAPLES PARTIAL  
ELECTRICAL PLAN

SHEET NUMBER:

**E-104**

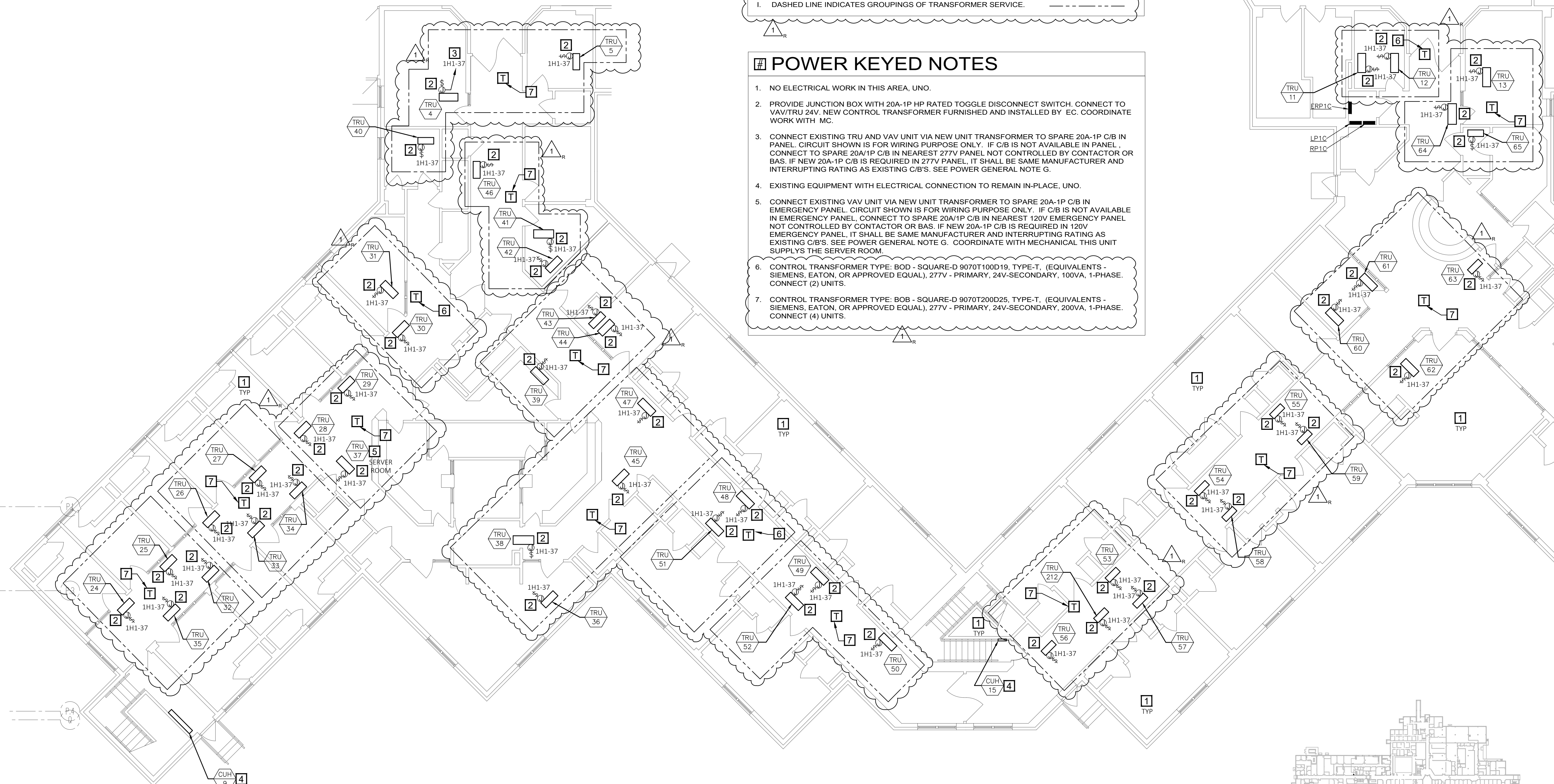
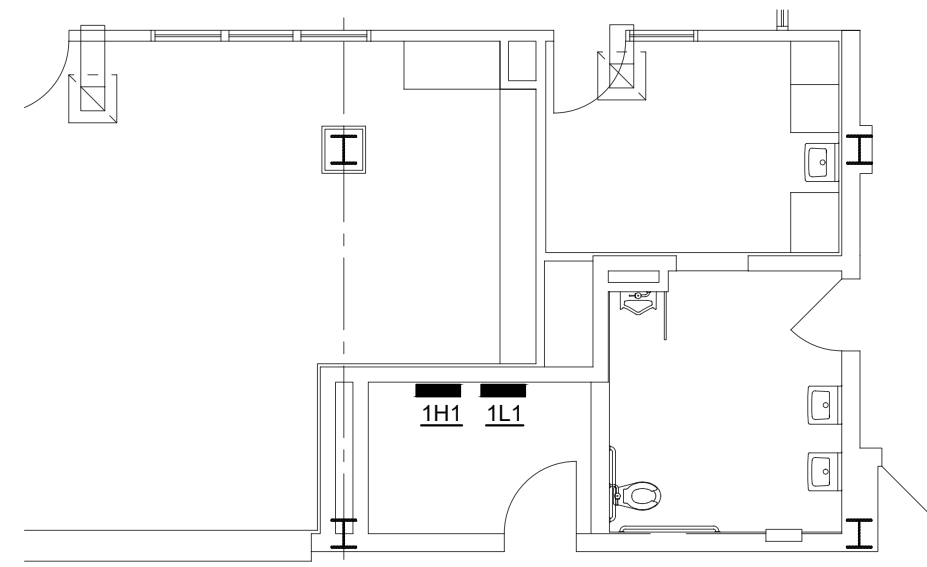
01/10/2024  
33 OF 41 SHEETS

**POWER GENERAL NOTES**

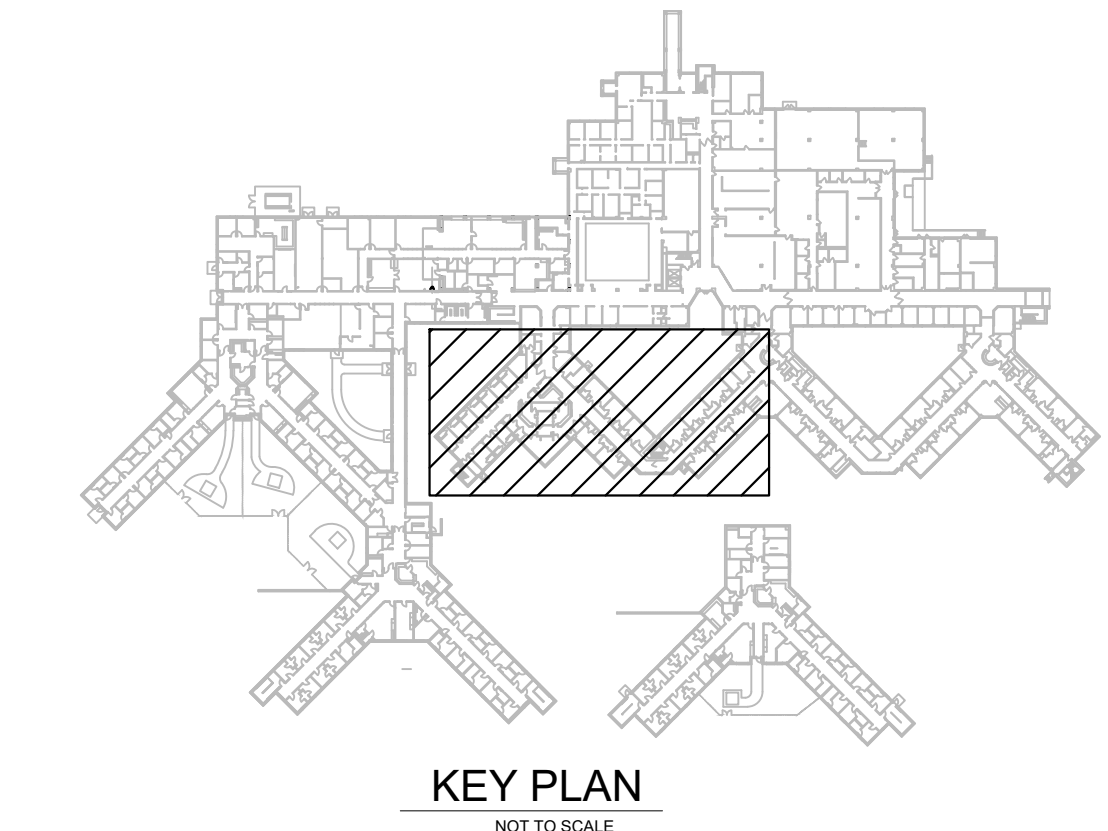
- A. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE APPLICABLE BUILDING CODE, NEC AND ANY OTHER LOCAL CODES AND ORDINANCES.
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- C. ALL MATERIALS SHALL BE NEW, WITH "UL" APPROVED LABELS.
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- F. CONTROL WIRING FOR VAV, TRU WILL BE FURNISHED, INSTALLED AND CONNECTED BY MC. MC TO COORDINATE ANY ELECTRICAL WORK REQUIRED BY EC.
- G. ALL BRANCH CIRCUITS IN EXCESS OF 100 FT. TO VAV/TRU FROM PANEL SHALL BE #10 AWG.
- H. ALL CONDUIT SHALL BE EMT, UNO.
- I. DASHED LINE INDICATES GROUPINGS OF TRANSFORMER SERVICE.

**POWER KEYED NOTES**

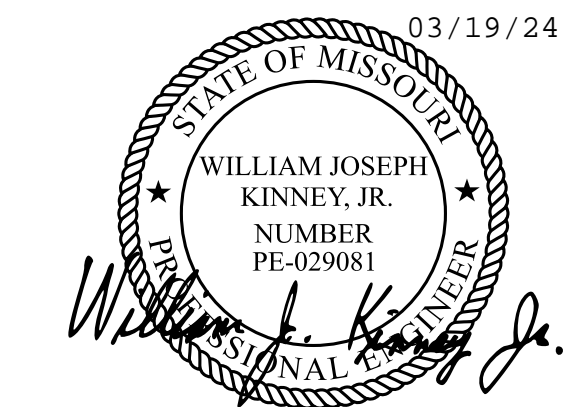
1. NO ELECTRICAL WORK IN THIS AREA, UNO.
2. PROVIDE JUNCTION BOX WITH 20A-1P HP RATED TOGGLE DISCONNECT SWITCH. CONNECT TO VAV/TRU 24V. NEW CONTROL TRANSFORMER FURNISHED AND INSTALLED BY EC. COORDINATE WORK WITH MC.
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4. EXISTING EQUIPMENT WITH ELECTRICAL CONNECTION TO REMAIN IN-PLACE, UNO.
5. CONNECT EXISTING VAV UNIT VIA NEW UNIT TRANSFORMER TO SPARE 20A-1P C/B IN EMERGENCY PANEL. CIRCUIT SHOWN IS FOR WIRING PURPOSE ONLY. IF C/B IS NOT AVAILABLE IN EMERGENCY PANEL, CONNECT TO SPARE 20A/1P C/B IN NEAREST 120V EMERGENCY PANEL NOT CONTROLLED BY CONTACTOR OR BAS. IF NEW 20A-1P C/B IS REQUIRED IN 120V EMERGENCY PANEL, IT SHALL BE SAME MANUFACTURER AND INTERRUPTING RATING AS EXISTING C/B'S. SEE POWER GENERAL NOTE G. COORDINATE WITH MECHANICAL THIS UNIT SUPPLYS THE SERVER ROOM.
6. CONTROL TRANSFORMER TYPE: BOD - SQUARE-D 9070T100D19, TYPE-T, (EQUIVALENTS - SIEMENS, EATON, OR APPROVED EQUAL), 277V - PRIMARY, 24V-SECONDARY, 100VA, 1-PHASE. CONNECT (2) UNITS.
7. CONTROL TRANSFORMER TYPE: BOB - SQUARE-D 9070T200D25, TYPE-T, (EQUIVALENTS - SIEMENS, EATON, OR APPROVED EQUAL), 277V - PRIMARY, 24V-SECONDARY, 200VA, 1-PHASE. CONNECT (4) UNITS.



**STAPLES BUILDING - 1ST FLOOR  
PARTIAL ELECTRICAL PLAN**  
SCALE: 1/8" = 1'-0"  
NORTH

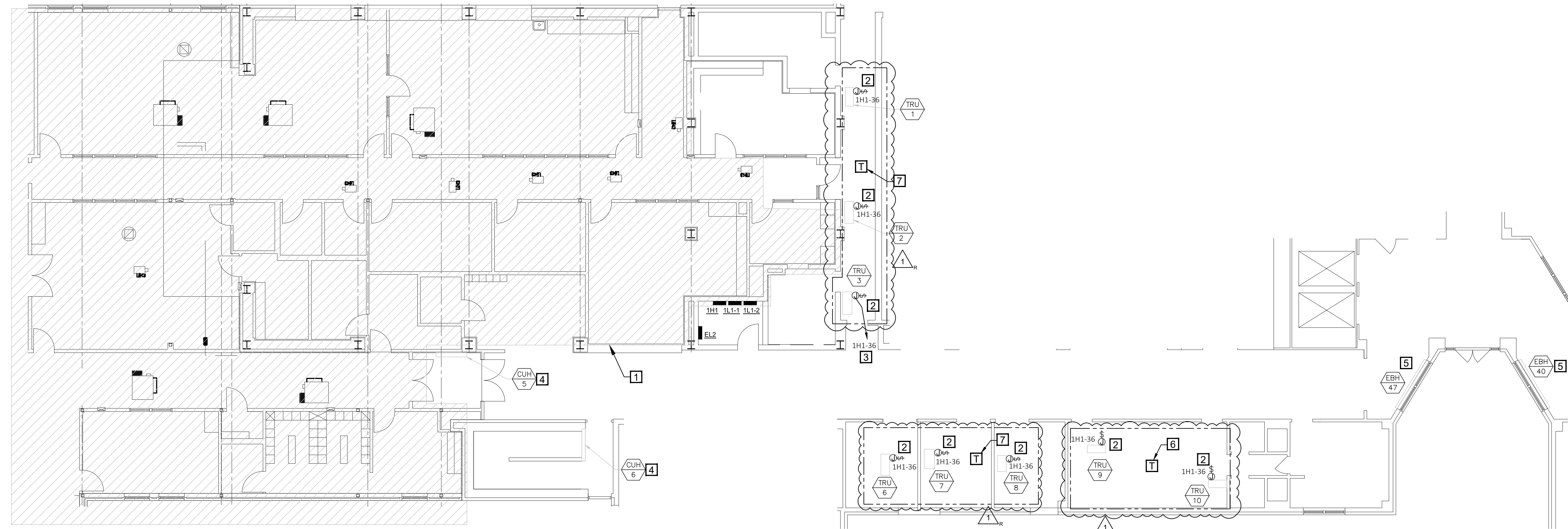


KEY PLAN  
NOT TO SCALE



WILLIAM J. KINNEY  
License Number: 029081  
Expiration Date: 12/31/25  
CASCO Diversified Corporation  
MO Certificate of Authority #000329 Arch.  
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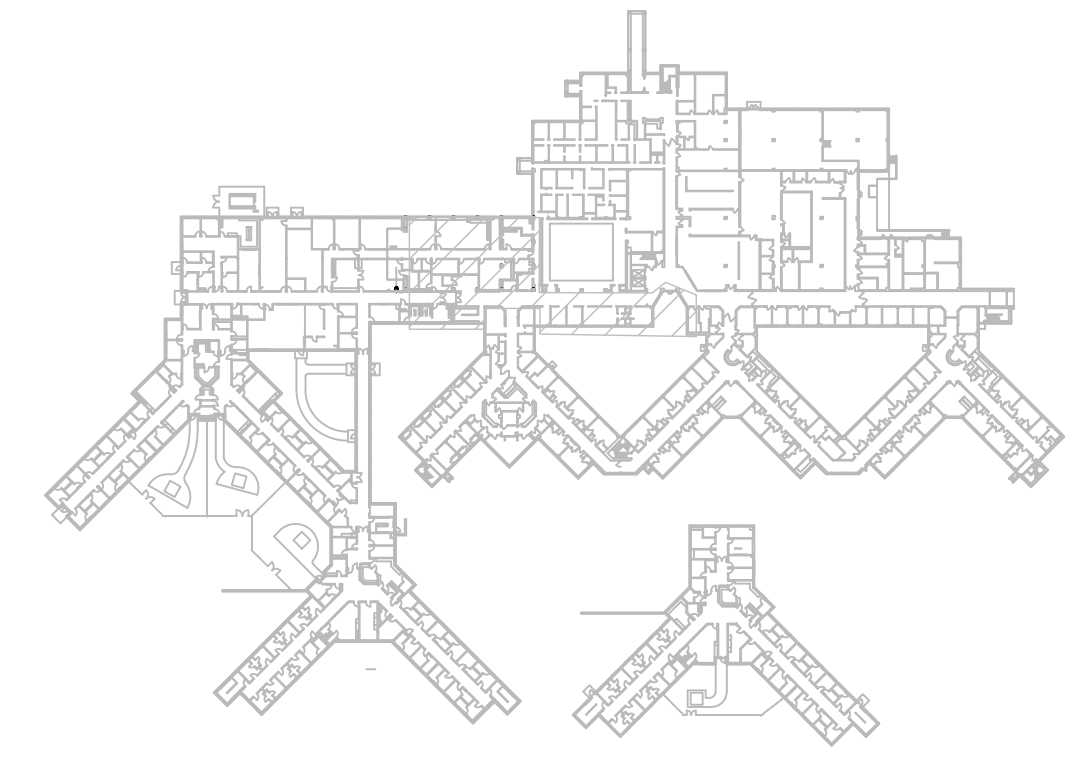
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12 Sunnen Drive, Suite 100, St. Louis, MO 63143 T: 314.821.1100



**STAPLES BUILDING - 1ST FLOOR  
PARTIAL ELECTRICAL PLAN**  
SCALE: 1/8" = 1'-0"  
NORTH

- POWER GENERAL NOTES**
- A. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE APPLICABLE BUILDING CODE, NEC AND ANY OTHER LOCAL CODES AND ORDINANCES.
  - B. WORKMANSHIP SHALL BE FIRST QUALITY AND IN ACCORDANCE WITH BEST PRACTICES FOR THE TRADE BY SKILLED WORKERS.
  - C. ALL MATERIALS SHALL BE NEW, WITH "UL" APPROVED LABELS.
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  - E. ALL WIRING SHALL BE AS SPECIFIED UNDER ELECTRICAL SPEC SECTION.
  - F. CONTROL WIRING FOR VAV, TRU WILL BE FURNISHED, INSTALLED AND CONNECTED BY MC. MC TO COORDINATE ANY ELECTRICAL WORK REQUIRED BY EC.
  - G. ALL BRANCH CIRCUITS IN EXCESS OF 100 FT. TO VAV/TRU FROM PANEL SHALL BE #10 AWG.
  - H. ALL CONDUIT SHALL BE EMT, UNQ.
  - I. DASHED LINE INDICATES GROUPINGS OF TRANSFORMER SERVICE.

- POWER KEYED WORK NOTES**
1. NO ELECTRICAL WORK IN THIS AREA, UNO.
  2. PROVIDE JUNCTION BOX WITH 20A-1P HP RATED TOGGLE DISCONNECT SWITCH. CONNECT TO VAV/TRU 24V. NEW CONTROL TRANSFORMER FURNISHED AND INSTALLED BY EC. COORDINATE WORK WITH MC.
  3. CONNECT EXISTING TRU AND VAV UNIT VIA NEW UNIT TRANSFORMER TO SPARE 20A-1P C/B IN PANEL. CIRCUIT SHOWN IS FOR WIRING PURPOSE ONLY. IF C/B IS NOT AVAILABLE IN PANEL, CONNECT TO SPARE 20A/1P C/B IN NEAREST 277V PANEL NOT CONTROLLED BY CONTACTOR OR BAS. IF NEW 20A-1P C/B IS REQUIRED IN 277V PANEL, IT SHALL BE SAME MANUFACTURER AND INTERRUPTING RATING AS EXISTING C/B'S. SEE POWER GENERAL NOTE G.
  4. EXISTING EQUIPMENT WITH ELECTRICAL CONNECTION TO REMAIN IN-PLACE, UNO.
  5. EXISTING ELECTRIC BASEBOARD HEATER TO REMAIN. PRIOR TO REMOVAL OF PNEUMATIC CONTACTOR IN BASEBOARD HEATER BY MC, EC TO DISCONNECT POWER WIRING AND MAKE SAFE FOR REUSE. MC TO REMOVE PNEUMATIC CONTACTOR AND SHALL REPLACE WITH NEW 24V-277V CONTACTOR. EC TO RECONNECT POWER WIRING AND MC TO CONNECT 24V CONTROL WIRING AS REQUIRED. COORDINATE WORK WITH MC.
  6. CONTROL TRANSFORMER TYPE: BOD - SQUARE-D 9070T100D19, TYPE-T, (EQUIVALENTS - SIEMENS, EATON, OR APPROVED EQUAL), 277V - PRIMARY, 24V-SECONDARY, 100VA, 1-PHASE. CONNECT (2) UNITS.
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**KEY PLAN**  
NOT TO SCALE

**OFFICE OF  
ADMINISTRATION  
DIVISION OF FACILITIES  
MANAGEMENT,  
DESIGN AND  
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**DEPARTMENT OF MENTAL  
HEALTH**

UPGRADE HVAC CONTROLS

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63640

PROJECT # M2011-01  
SITE # 7354  
ASSET# 6517354012

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ISSUE DATE: 01/10/2024

CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: RA  
CHECKED BY: WJK  
DESIGNED BY: \_\_\_\_\_

SHEET TITLE:  
**STAPLES PARTIAL  
ELECTRICAL PLAN**

SHEET NUMBER:  
**E-105**  
01/10/2024  
34 OF 41 SHEETS

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ADMINISTRATION  
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CAD DWG FILE:  
DRAWN BY: RA  
CHECKED BY: WJK  
DESIGNED BY:

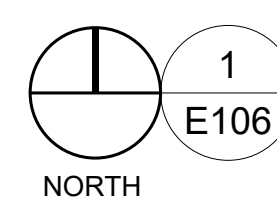
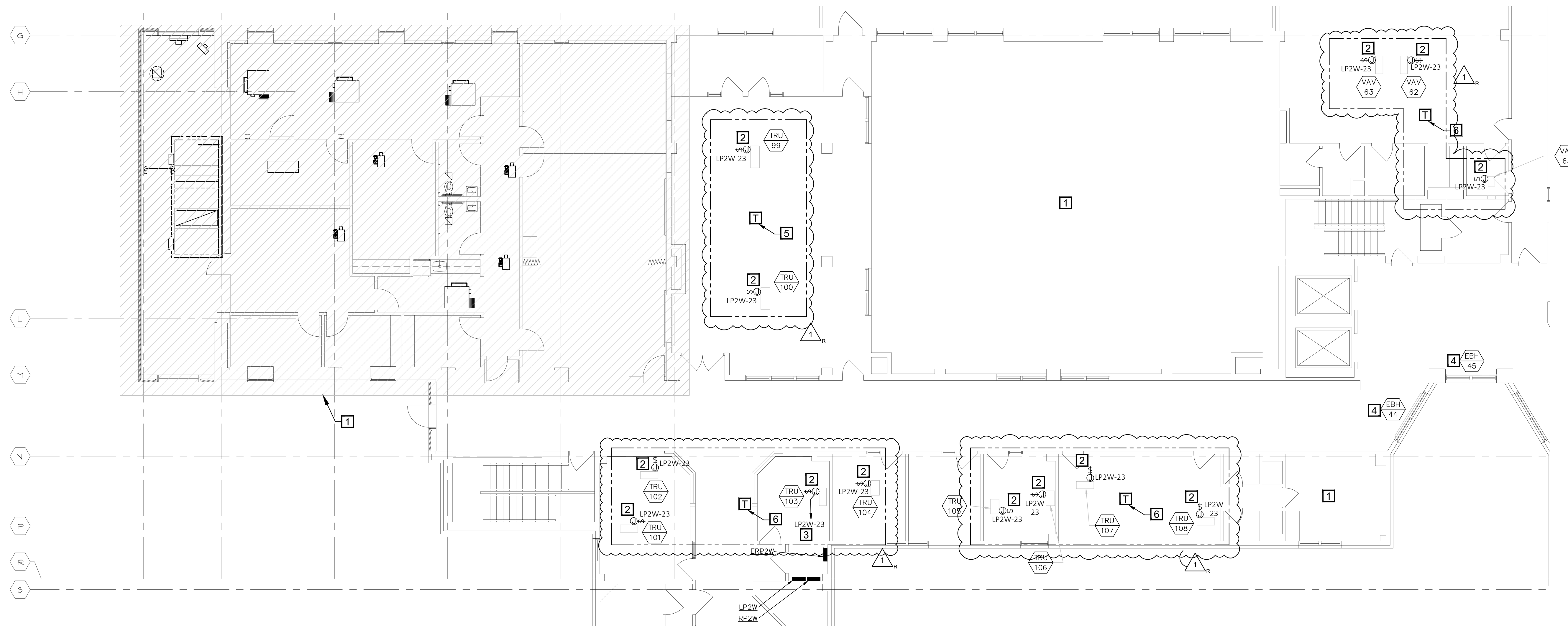
SHEET TITLE:

STAPLES PARTIAL  
ELECTRICAL PLAN

SHEET NUMBER:

E-106

01/10/2024  
35 OF 41 SHEETS



STAPLES BUILDING - 2ND FLOOR  
PARTIAL ELECTRICAL PLAN

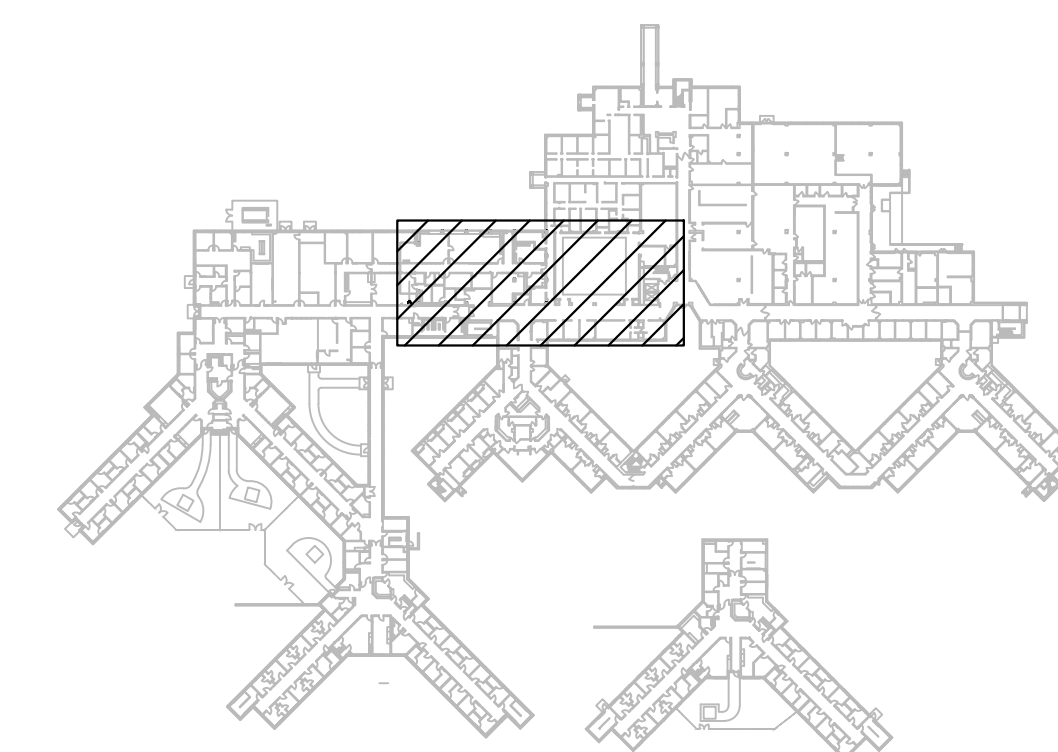
SCALE: 1/8" = 1'-0"

POWER GENERAL NOTES

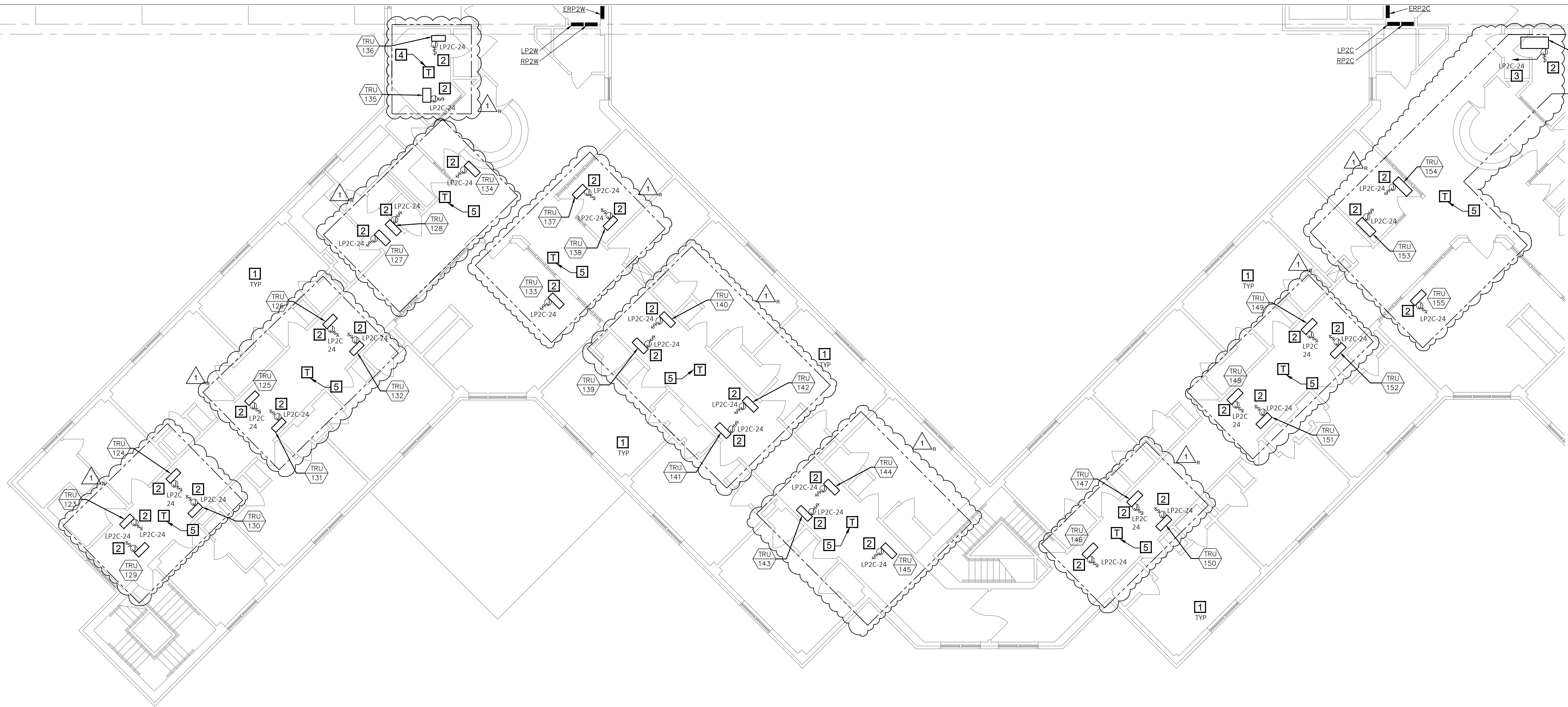
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- DASHED LINE INDICATES GROUPINGS OF TRANSFORMER SERVICE.

POWER KEYED NOTES

- NO ELECTRICAL WORK IN THIS AREA, UNO.
- PROVIDE JUNCTION BOX WITH 20A-1P HP RATED TOGGLE DISCONNECT SWITCH. CONNECT TO VAV/TRU 24V. NEW CONTROL TRANSFORMER FURNISHED AND INSTALLED BY EC. COORDINATE WORK WITH MC.
- CONNECT EXISTING TRU AND VAV UNIT VIA NEW UNIT TRANSFORMER TO SPARE 20A-1P C/B IN PANEL. CIRCUIT SHOWN IS FOR WIRING PURPOSE ONLY. IF C/B IS NOT AVAILABLE IN PANEL, CONNECT TO SPARE 20A/1P C/B IN NEAREST 277V PANEL NOT CONTROLLED BY CONTACTOR OR BAS. IF NEW 20A-1P C/B IS REQUIRED IN 277V PANEL, IT SHALL BE SAME MANUFACTURER AND INTERRUPTING RATING AS EXISTING C/B'S. SEE POWER GENERAL NOTE G.
- EXISTING ELECTRIC BASEBOARD HEATER TO REMAIN. PRIOR TO REMOVAL OF PNEUMATIC CONTACTOR IN BASEBOARD HEATER BY MC, EC TO DISCONNECT POWER WIRING AND MAKE SAFE FOR REUSE. MC TO REMOVE PNEUMATIC CONTACTOR AND SHALL REPLACE WITH NEW 24V-277V CONTACTOR. EC TO RECONNECT POWER WIRING AND MC TO CONNECT 24V CONTROL WIRING AS REQUIRED. COORDINATE WORK WITH MC.
- CONTROL TRANSFORMER TYPE: BOB - SQUARE-D 9070T100D19, TYPE-T, (EQUIVALENTS - SIEMENS, EATON, OR APPROVED EQUAL), 277V - PRIMARY, 24V-SECONDARY, 100VA, 1-PHASE. CONNECT (2) UNITS.
- CONTROL TRANSFORMER TYPE: BOB - SQUARE-D 9070T200D25, TYPE-T, (EQUIVALENTS - SIEMENS, EATON, OR APPROVED EQUAL), 277V - PRIMARY, 24V-SECONDARY, 200VA, 1-PHASE. CONNECT (4) UNITS.



KEY PLAN  
NOT TO SCALE



**STAPLES BUILDING - 2ND FLOOR  
PARTIAL ELECTRICAL PLAN**

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

NORTH

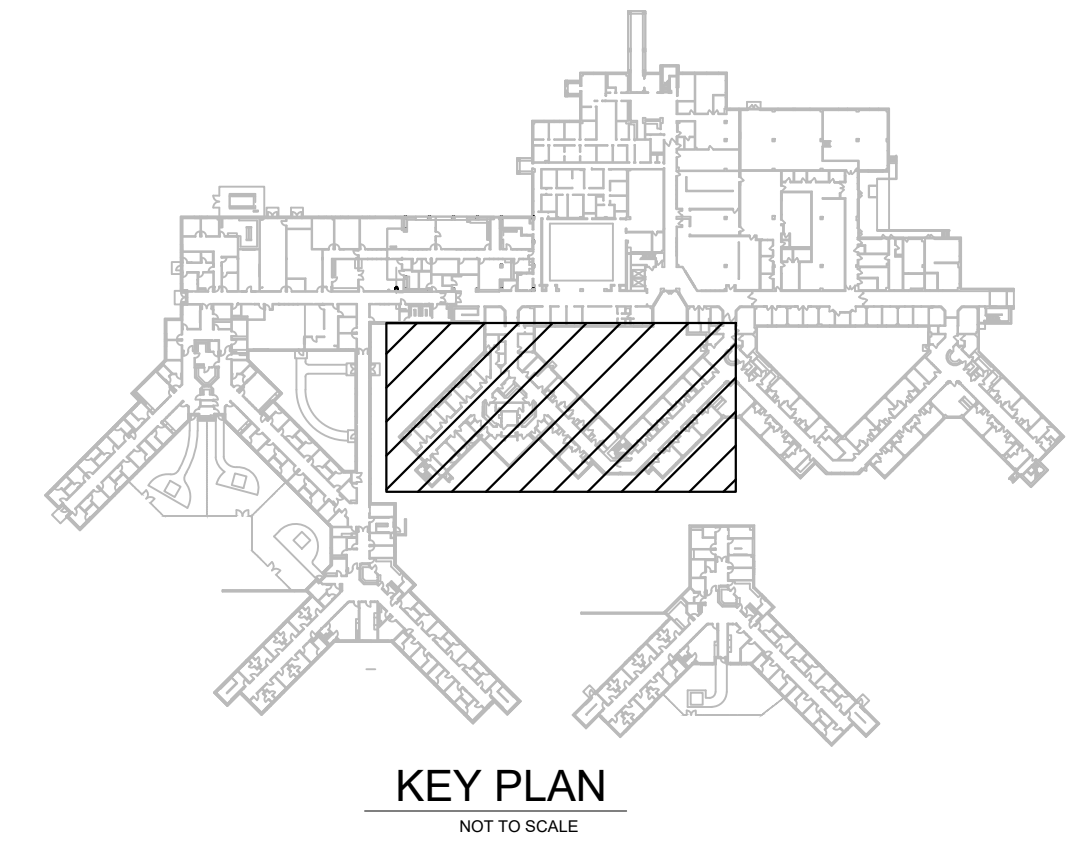
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E107

**POWER GENERAL NOTES**

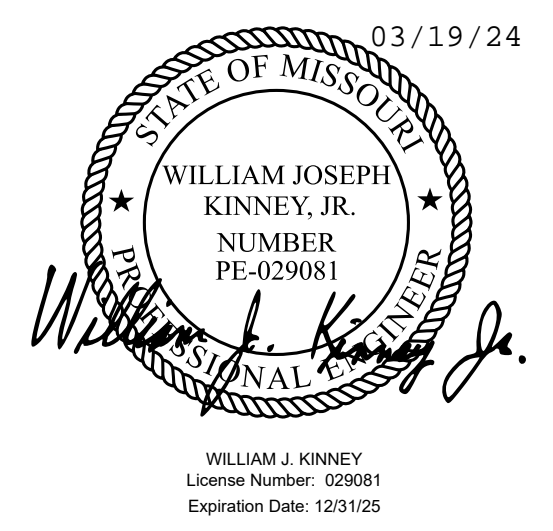
- A. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE APPLICABLE BUILDING CODE, NEC AND ANY OTHER LOCAL CODES AND ORDINANCES.
- B. WORKMANSHIP SHALL BE FIRST QUALITY AND IN ACCORDANCE WITH BEST PRACTICES FOR THE TRADE BY SKILLED WORKERS.
- C. ALL MATERIALS SHALL BE NEW, WITH "UL" APPROVED LABELS.
- D. SUPPLY AND INSTALL NEW ELECTRICAL DEVICES AS SHOWN.
- E. ALL WIRING SHALL BE AS SPECIFIED UNDER ELECTRICAL SPEC SECTION.
- F. CONTROL WIRING FOR VAV, TRU WILL BE FURNISHED, INSTALLED AND CONNECTED BY MC. MC TO COORDINATE ANY ELECTRICAL WORK REQUIRED BY EC.
- G. ALL BRANCH CIRCUITS IN EXCESS OF 100 FT. TO VAV/TRU FROM PANEL SHALL BE #10 AWG.
- H. ALL CONDUIT SHALL BE EMT, UNO.
- I. DASHED LINE INDICATES GROUPINGS OF TRANSFORMER SERVICE.

**POWER KEYED NOTES**

1. NO ELECTRICAL WORK IN THIS AREA, UNO.
2. PROVIDE JUNCTION BOX WITH 20A-1P HP RATED TOGGLE DISCONNECT SWITCH. CONNECT TO VAV/TRU 24V. NEW CONTROL TRANSFORMER FURNISHED AND INSTALLED BY EC. COORDINATE WORK WITH MC.
3. CONNECT EXISTING TRU AND VAV UNIT VIA NEW UNIT TRANSFORMER TO SPARE 20A-1P C/B IN PANEL. CIRCUIT SHOWN IS FOR WIRING PURPOSE ONLY. IF C/B IS NOT AVAILABLE IN PANEL, CONNECT TO SPARE 20A/1P C/B IN NEAREST 277V PANEL NOT CONTROLLED BY CONTACTOR OR BAS. IF NEW 20A-1P C/B IS REQUIRED IN 277V PANEL, IT SHALL BE SAME MANUFACTURER AND INTERRUPTING RATING AS EXISTING C/B'S. SEE POWER GENERAL NOTE G.
4. CONTROL TRANSFORMER TYPE: BOD - SQUARE-D 9070T100D19, TYPE-T, (EQUIVALENTS - SIEMENS, EATON, OR APPROVED EQUAL), 277V - PRIMARY, 24V-SECONDARY, 100VA, 1-PHASE. CONNECT (2) UNITS.
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STATE OF MISSOURI  
MICHAEL L. PARSON,  
GOVERNOR



CASCO Diversified Corporation  
MO Certificate of Authority #00329 Arch.  
MO Certificate of Authority #00613 Eng.

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DIVISION OF FACILITIES  
MANAGEMENT,  
DESIGN AND  
CONSTRUCTION

DEPARTMENT OF MENTAL  
HEALTH

UPGRADE HVAC CONTROLS

STAPLES BUILDING  
1010 W COLUMBIA ST.  
FARMINGTON, MISSOURI  
63640

PROJECT # M2011-01  
SITE # 7354  
ASSET# 6517354012

REVISION: ADDENDUM #1  
DATE: 03/19/24  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
ISSUE DATE: 01/10/2024

CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: RA  
CHECKED BY: WJK  
DESIGNED BY: \_\_\_\_\_

SHEET TITLE:

STAPLES PARTIAL  
ELECTRICAL PLAN

SHEET NUMBER:

E-107

01/10/2024  
36 OF 41 SHEETS

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12 Sunnen Drive, Suite 100, St. Louis, MO 63143 T: 314.821.1100

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ISSUE DATE: 01/10/2024

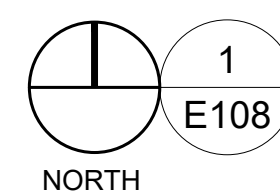
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DRAWN BY: RA  
CHECKED BY: WJK  
DESIGNED BY: \_\_\_\_\_

SHEET TITLE:  
STAPLES PARTIAL  
MECHANICAL PLAN

SHEET NUMBER:  
**E-108**  
01/10/2024  
37 OF 41 SHEETS



**STAPLES BUILDING - 2ND FLOOR  
PARTIAL ELECTRICAL PLAN**



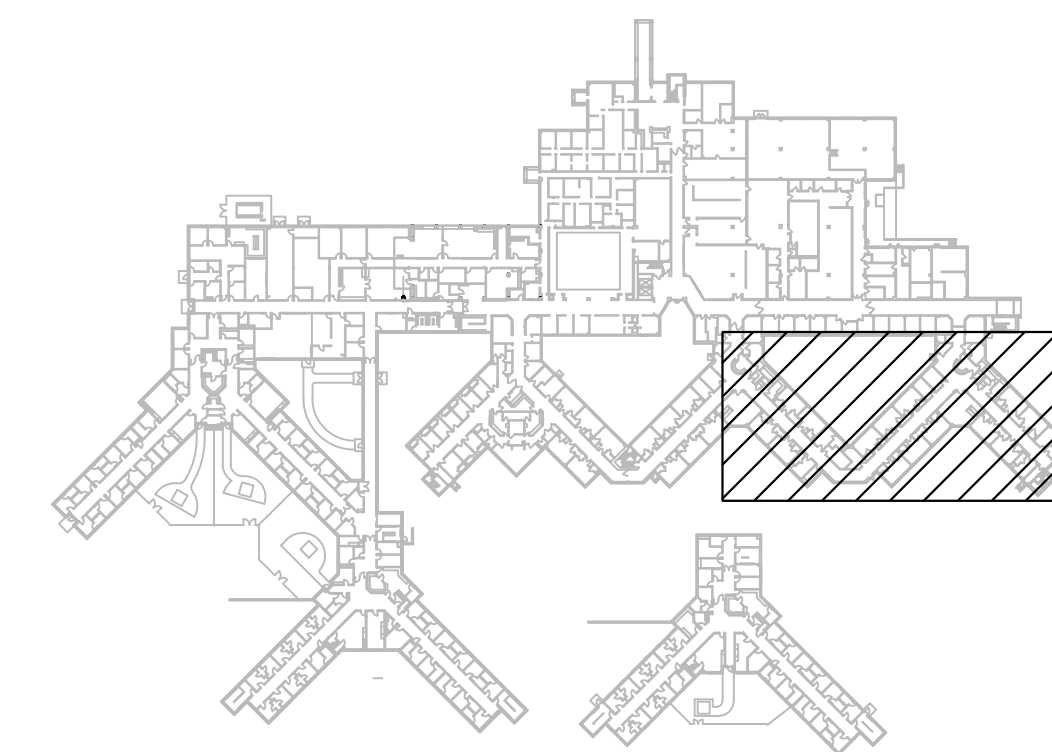
SCALE: 1/8" = 1'-0"

**POWER GENERAL NOTES**

- A. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE APPLICABLE BUILDING CODE, NEC AND ANY OTHER LOCAL CODES AND ORDINANCES.
- B. WORKMANSHIP SHALL BE FIRST QUALITY AND IN ACCORDANCE WITH BEST PRACTICES FOR THE TRADE BY SKILLED WORKERS.
- C. ALL MATERIALS SHALL BE NEW, WITH "UL" APPROVED LABELS.
- D. SUPPLY AND INSTALL NEW ELECTRICAL DEVICES AS SHOWN.
- E. ALL WIRING SHALL BE AS SPECIFIED UNDER ELECTRICAL SPEC SECTION.
- F. CONTROL WIRING FOR VAV, TRU WILL BE FURNISHED, INSTALLED AND CONNECTED BY MC, MC TO COORDINATE ANY ELECTRICAL WORK REQUIRED BY EC.
- G. ALL BRANCH CIRCUITS IN EXCESS OF 100 FT. TO VAV/TRU FROM PANEL SHALL BE #10 AWG.
- H. ALL CONDUIT SHALL BE EMT, UNO.
- I. DASHED LINE INDICATES GROUPINGS OF TRANSFORMER SERVICE.

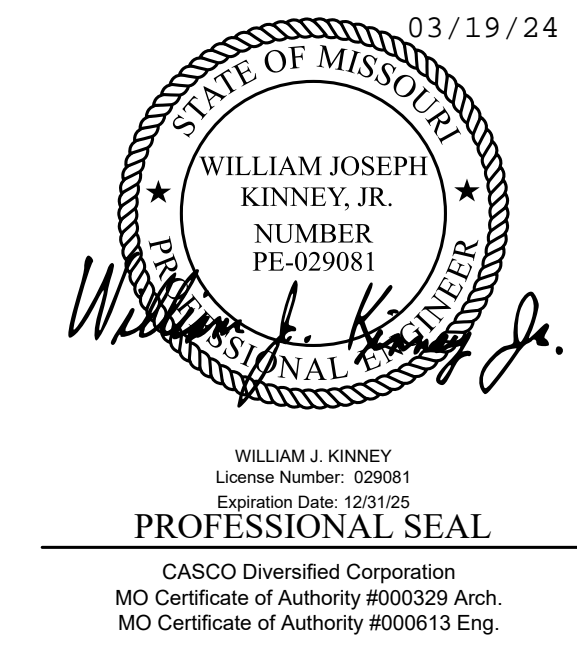
**POWER KEYED NOTES**

- 1. NO ELECTRICAL WORK IN THIS AREA, UNO.
- 2. PROVIDE JUNCTION BOX WITH 20A-1P HP RATED TOGGLE DISCONNECT SWITCH. CONNECT TO VAV/TRU 24V. NEW CONTROL TRANSFORMER FURNISHED AND INSTALLED BY EC. COORDINATE WORK WITH MC.
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- 4. CONTROL TRANSFORMER TYPE: BOB - SQUARE-D 9070T100D19, TYPE-T, (EQUIVALENTS - SIEMENS, EATON, OR APPROVED EQUAL), 277V - PRIMARY, 24V-SECONDARY, 100VA, 1-PHASE. CONNECT (2) UNITS.
- 5. CONTROL TRANSFORMER TYPE: BOB - SQUARE-D 9070T200D25, TYPE-T, (EQUIVALENTS - SIEMENS, EATON, OR APPROVED EQUAL), 277V - PRIMARY, 24V-SECONDARY, 200VA, 1-PHASE. CONNECT (4) UNITS.



KEY PLAN  
NOT TO SCALE



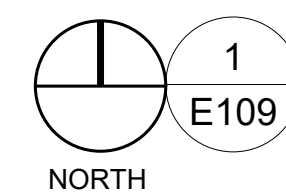
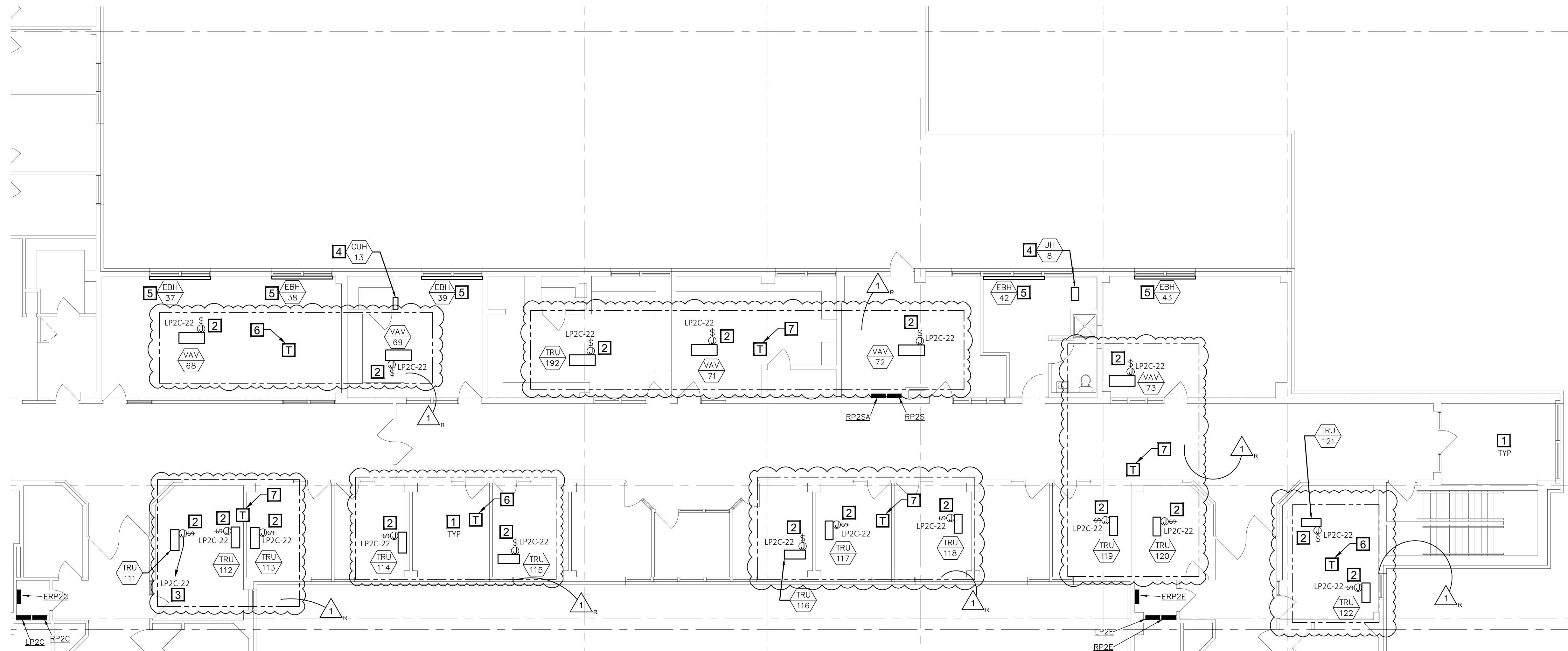


### POWER GENERAL NOTES

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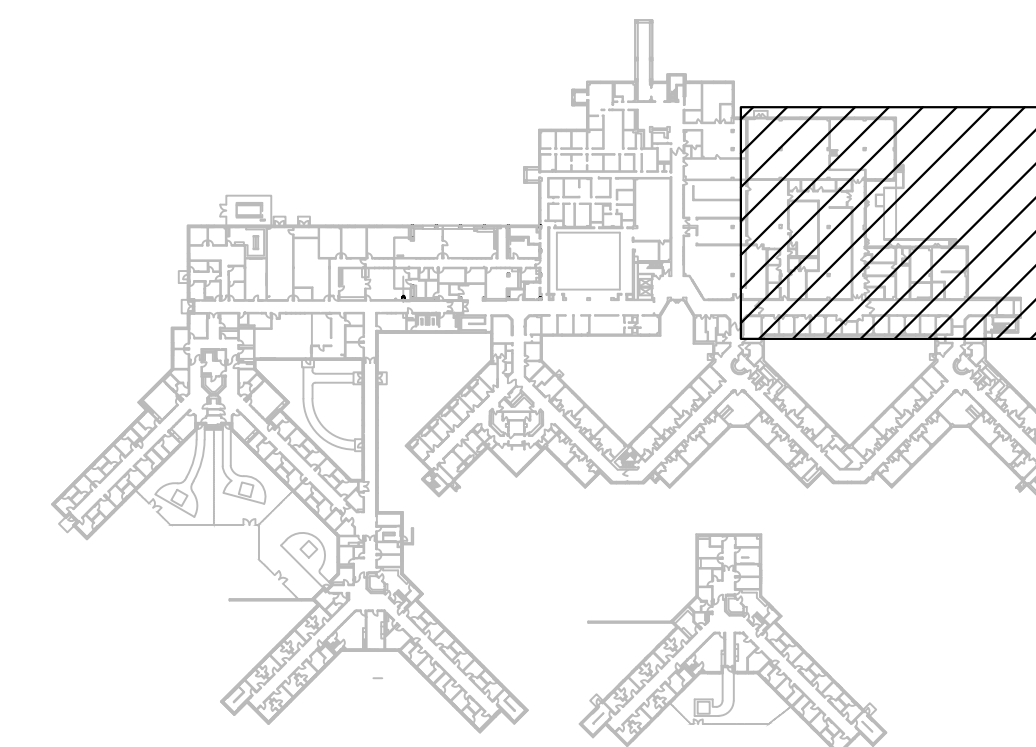
### POWER KEYED NOTES

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5. EXISTING ELECTRIC BASEBOARD HEATER TO REMAIN. PRIOR TO REMOVAL OF PNEUMATIC CONTACTOR IN BASEBOARD HEATER BY MC, EC TO DISCONNECT POWER WIRING AND MAKE SAFE FOR REUSE. MC TO REMOVE PNEUMATIC CONTACTOR AND SHALL REPLACE WITH NEW 24V-277V CONTACTOR. EC TO RECONNECT POWER WIRING AND MC TO CONNECT 24V CONTROL WIRING AS REQUIRED. COORDINATE WORK WITH MC.
6. CONTROL TRANSFORMER TYPE: BOD - SQUARE-D 9070T100D19, TYPE-T, (EQUIVALENTS - SIEMENS, EATON, OR APPROVED EQUAL), 277V - PRIMARY, 24V-SECONDARY, 100VA, 1-PHASE. CONNECT (2) UNITS.
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## STAPLES BUILDING - 2ND FLOOR PARTIAL ELECTRICAL PLAN

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



KEY PLAN  
NOT TO SCALE

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DIVISION OF FACILITIES  
MANAGEMENT,  
DESIGN AND  
CONSTRUCTION

DEPARTMENT OF MENTAL  
HEALTH

UPGRADE HVAC CONTROLS

STAPLES BUILDING  
1010 W COLUMBIA ST.  
FARMINGTON, MISSOURI  
63640

PROJECT # M2011-01  
SITE # 7354  
ASSET# 6517354012

REVISION: ADDENDUM #1  
DATE: 03/19/24  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
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CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: RA  
CHECKED BY: WJK  
DESIGNED BY: \_\_\_\_\_

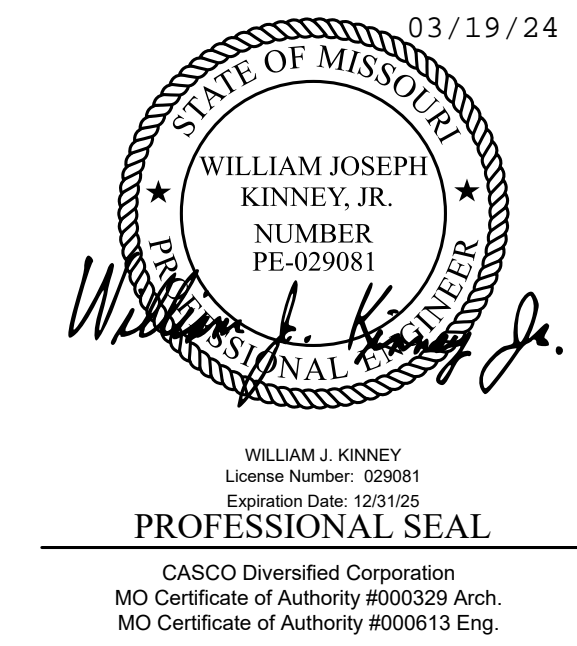
SHEET TITLE:

STAPLES PARTIAL  
ELECTRICAL PLAN

SHEET NUMBER:

**E-109**

01/10/2024  
38 OF 41 SHEETS



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PROJECT # M2011-01  
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SHEET TITLE:

STAPLES PARTIAL  
ELECTRICAL PLAN

SHEET NUMBER:

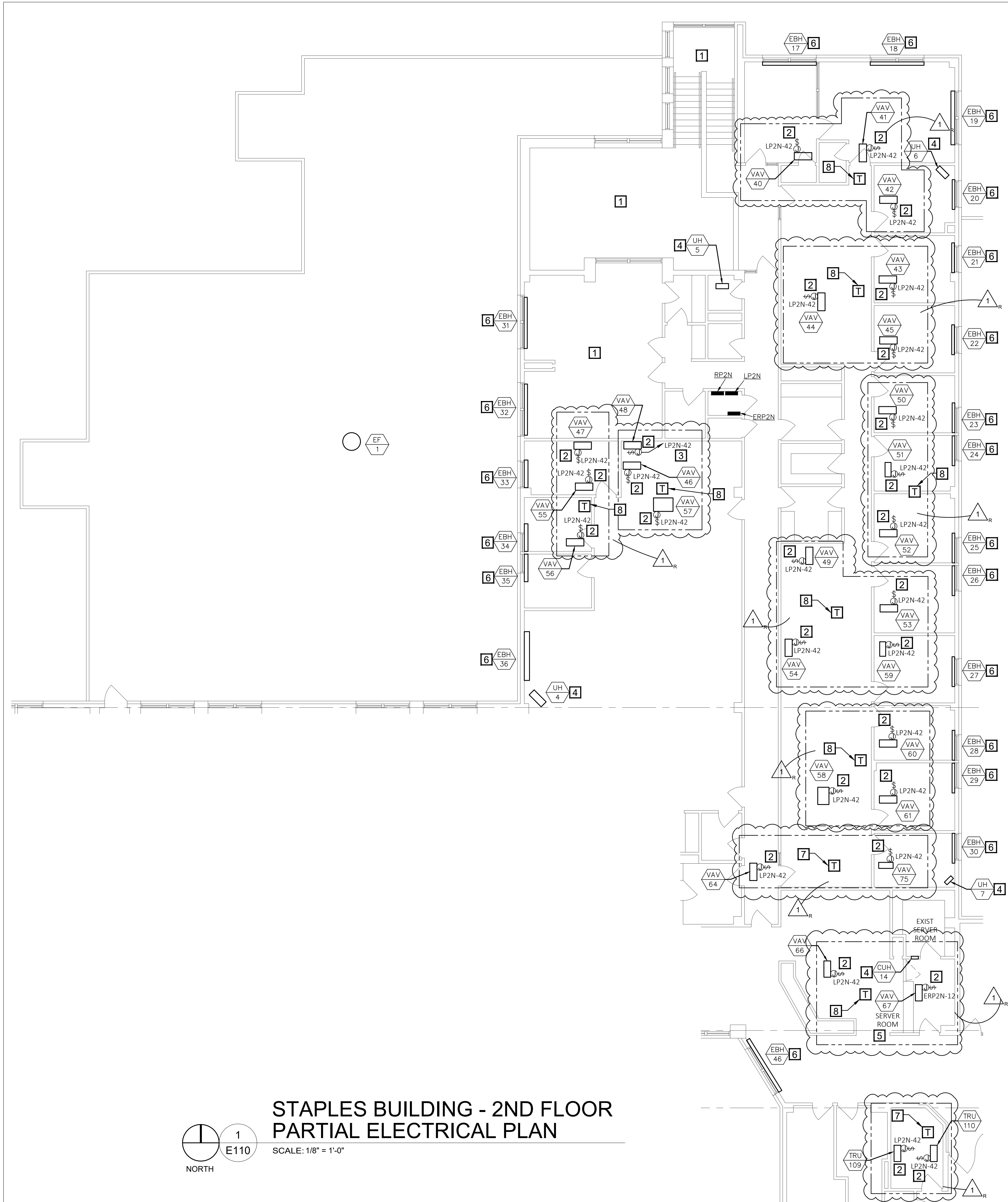
**E-110**  
01/10/2024  
39 OF 41 SHEETS

**POWER GENERAL NOTES**

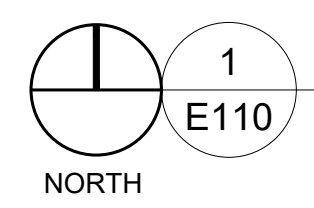
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- G. ALL BRANCH CIRCUITS IN EXCESS OF 100 FT. TO VAV/TRU FROM PANEL SHALL BE #10 AWG.
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**POWER KEYED NOTES**

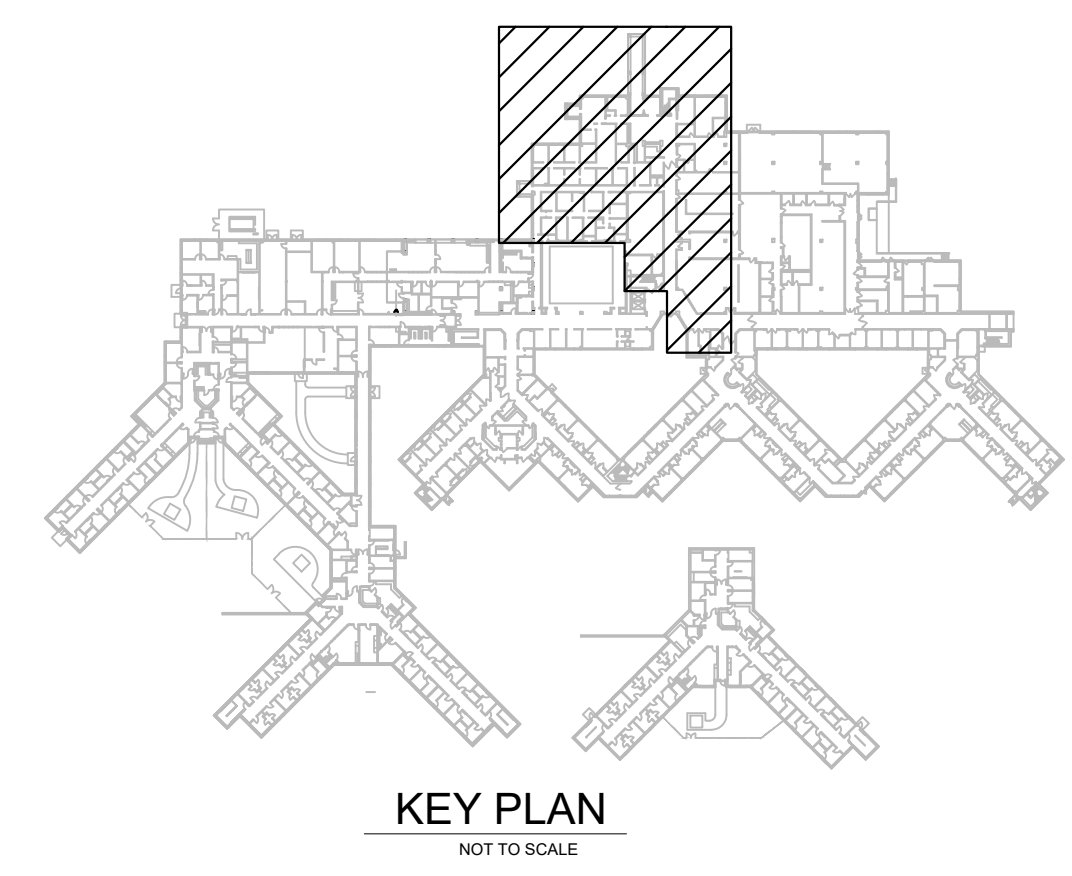
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4. EXISTING EQUIPMENT WITH ELECTRICAL CONNECTION TO REMAIN IN-PLACE, UNO.
5. CONNECT EXISTING VAV UNIT VIA NEW UNIT TRANSFORMER TO SPARE 20A-1P C/B IN EMERGENCY PANEL. CIRCUIT SHOWN IS FOR WIRING PURPOSE ONLY. IF C/B IS NOT AVAILABLE IN EMERGENCY PANEL, CONNECT TO SPARE 20A/1P C/B IN NEAREST 120V EMERGENCY PANEL NOT CONTROLLED BY CONTACTOR OR BAS. IF NEW 20A-1P C/B IS REQUIRED IN 120V EMERGENCY PANEL, IT SHALL BE SAME MANUFACTURER AND INTERRUPTING RATING AS EXISTING C/B'S. SEE POWER GENERAL NOTE G. COORDINATE WITH MECHANICAL THIS UNIT SUPPLYS THE SERVER ROOM.
6. EXISTING ELECTRIC BASEBOARD HEATER TO REMAIN. PRIOR TO REMOVAL OF PNEUMATIC CONTACTOR IN BASEBOARD HEATER BY MC, EC TO DISCONNECT POWER WIRING AND MAKE SAFE FOR REUSE. MC TO REMOVE PNEUMATIC CONTACTOR AND SHALL REPLACE WITH NEW 24V-277V CONTACTOR. EC TO RECONNECT POWER WIRING AND MC TO CONNECT 24V CONTROL WIRING AS REQUIRED. COORDINATE WORK WITH MC.
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**STAPLES BUILDING - 2ND FLOOR  
PARTIAL ELECTRICAL PLAN**



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



**KEY PLAN**  
NOT TO SCALE