LOTTERY HEADQUARTERS
REPLACE ROOFTOP UNITS 5-7-8-9 AND SERVER ROOM AIR CONDITIONERS
JEFFERSON CITY , MISSOURI

OWNER:	STATE OF MISSOURI MICHAEL L. PARSON, GOVERNOR DEPARTMENT OF REVENUE
PROJECT MANAGEMENT:	OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION
DESIGNER:	STATE OF MISSOURI - OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT DESIGN AND CONSTRUCTION: 301 W. HIGH STREET, JEFFERSON CITY, MO. 65102
PROJECT NUMBER:	N2301-01
ASSET NUMBER:	8611951001
SITE NUMBER:	1951

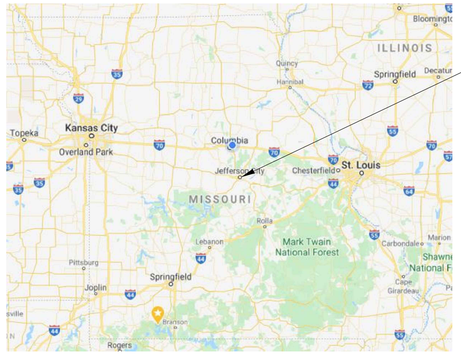
SHEET NUMBER:

G-001

1 OF 16 SHEETS

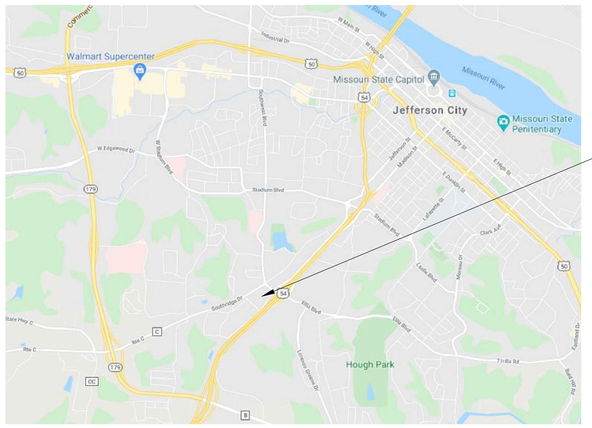
05/16/2024

SHEET INDEX



JEFFERSON CITY, MISSOURI

1 STATE OF MISSOURI PROJECT SITE LOCATION MAP



MISSOURI LOTTERY HEADQUARTERS

2 JEFFERSON CITY PROJECT SITE LOCATION MAP

GENERAL DEMOLITION NOTES

1 COVER ALL OPENINGS INTO THE BUILDING FROM THE WORK AREA. ENSURE DEBRIS IS REMOVED FROM THE CONSTRUCTION AND DEMOLITION AREA AND AIR BORN DEBRIS IS NOT ALLOWED TO TRAVEL TO THE REMAINDER OF THE BUILDING. CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND DISPOSAL OF ALL DEMOLISHED MATERIAL.

2 COORDINATE WITH EXISTING SYSTEMS WHICH SHALL REMAIN IN OPERATION DURING DEMOLITION AND CONSTRUCTION PHASES. INSTALL TEMPORARY CAPS AT TERMINATION POINTS OF EXISTING DUCTWORK TO REMAIN DURING DEMOLITION PHASES.

3 CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO ANY SURFACE IN THE AREA OF CONSTRUCTION THAT IS A RESULT OF CONSTRUCTION ACTIVITY. SURFACE SHALL BE REPAIRED AND FINISHED TO MATCH EXISTING CONDITIONS.

4 CONTRACTOR IS RESPONSIBLE FOR INSTALLING OWNER PROVIDED CEILING TILES WHERE DIFFUSERS ARE REMOVED.

GENERAL CONSTRUCTION NOTES

1 FABRICATION, INSTALLATION AND TESTING OF ALL HVAC SYSTEMS SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF THE NATIONAL ELECTRIC CODE, INTERNATIONAL MECHANICAL CODE, AND ALL MANUFACTURER INSTALLATION GUIDELINES.

2 ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL LINE VOLTAGE WIRING AND CONDUIT. MECHANICAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL LOW VOLTAGE WIRING FOR MECHANICAL SYSTEMS. COORDINATE WITH ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL ALL CONDUIT FOR LOW VOLTAGE WIRING.

3 ALL METALLIC AND FLEXIBLE DUCTS SHALL BE CONSTRUCTED AND INSTALLED AS SPECIFIED IN THE IMC AND SMACNA HVAC DUCT CONSTRUCTION STANDARDS.

4 THIRD PARTY, AABC OR NEBB CERTIFIED TESTING, ADJUSTING, AND BALANCING CONTRACTOR (TAB) SHALL TEST AND BALANCE ALL SYSTEMS TO SPECIFIED VALUES AND PREPARE A BALANCE REPORT PER ASHRAE STANDARD 111 OR EQUAL. REPORT SHALL BE SENT TO THE ENGINEER FOR APPROVAL PRIOR TO FINAL COMPLETION. BALANCE DAMPERS ARE REQUIRED ON ALL SUPPLY AIR DEVICES. VERIFY IF EXISTING DEVICES HAVE BALANCE DAMPERS. REFERENCE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

5 MECHANICAL CONTRACTOR TO COORDINATE WITH FACILITY FIRE CONTROLS CONTRACTOR TO ENSURE THAT NEW ROOFTOP UNITS TO BE INSTALLED ARE ON THE FIRE ALARM SAFETY SYSTEM.

6 ROOF IS CURRENTLY UNDER WARRANTY. COORDINATE WITH ROOF MANUFACTURER TO ENSURE ROOF WARRANTY REMAINS IN EFFECT. REFER TO APPENDIX A FOR ADDITIONAL INFORMATION.

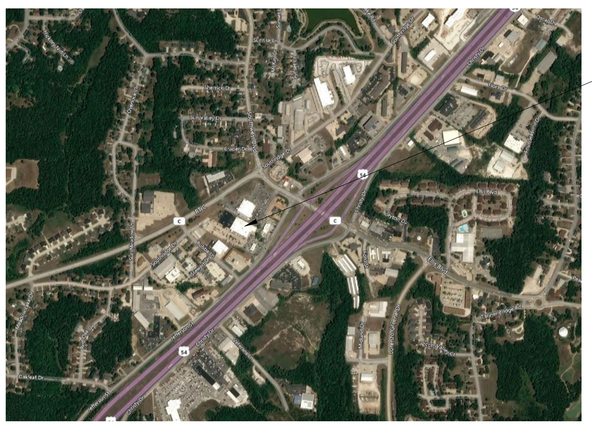
7 CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT EXISTING ROOF WHILE PERFORMING WORK ON ROOFTOP AND CONDENSING UNITS.

8 IF ANY MECHANICAL EQUIPMENT SPECIFIED IN THE DRAWINGS IS SUBSTITUTED BY THE CONTRACTOR, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE EQUIPMENTS ELECTRICAL PROTECTION PER THE MANUFACTURER'S NAMEPLATE.

9 ALL DUCTWORK WITH TWO DIMENSION <WxD> INDICATES RECTANGULAR DUCT. ALL <D#> INDICATES ROUND DUCT. DIMENSIONS ARE INCHES MEASURED INSIDE.

10 ALL INSULATION SHALL MEET THE ASTM E 84 FLAME/SMOKE SPREAD INDEX OF 25/50 MAXIMUM. ALL INSULATION SHALL BE INSTALLED IN ACCORDANCE WITH THE NORTH AMERICAN INSULATION MANUFACTURERS ASSOCIATION (NAIMA):
- SUPPLY DUCT LOCATED ABOVE THE CEILING: EXTERNAL INSULATION; 1.5 INCH THICK WITH MINIMUM THERMAL CONDUCTIVITY OF 0.25 BTU–IN/HR/SF/°F (R6) WITH VAPOR BARRIER.
- REFRIGERANT PIPE AND MAKE UP WATER PIPE: PLENUM RATED, CLOSED–CELL ELASTOMERIC; 0.75 INCH.
- CONDENSATE PIPE: PLENUM RATED, CLOSED–CELL ELASTOMERIC; 0.5 INCH.

11 PROVIDE SUITABLE SUPPORTS FOR STABILITY OF ALL HVAC DEVICES AND DUCT. AIR HANDLING EQUIPMENT SHALL BE PROVIDED WITH FLEXIBLE SUPPLY AND RETURN AIR DUCT CONNECTORS AT UNITS.



MISSOURI LOTTERY HEADQUARTERS

3 BUILDING LOCATION MAP

STATE OF MISSOURI
MICHAEL L. PARSON, GOVERNOR

TRACIE L SIEBENECK
NUMBER PE-2013019114
STATE OF MISSOURI
PROFESSIONAL ENGINEER

Tracie L. Siebeneck - Engineer
MO# PE-2013019114

BID DOCUMENTS

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT,
DESIGN AND CONSTRUCTION

DEPARTMENT OF REVENUE

LOTTERY HEADQUARTERS
REPLACE ROOFTOP UNITS
5-7-8-9 AND SERVER ROOM
AIR CONDITIONERS

MISSOURI LOTTERY
HEAD QUARTERS BUILDING
1823 SOUTHRIDGE
JEFFERSON CITY, MO 65109

PROJECT # N2301-01
SITE # 1951
ASSET # 8611951001

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE: 05/16/2024

CAD DWG FILE: ME_N2301-01
DRAWN BY: AH
CHECKED BY: TS
DESIGNED BY: TS/AH

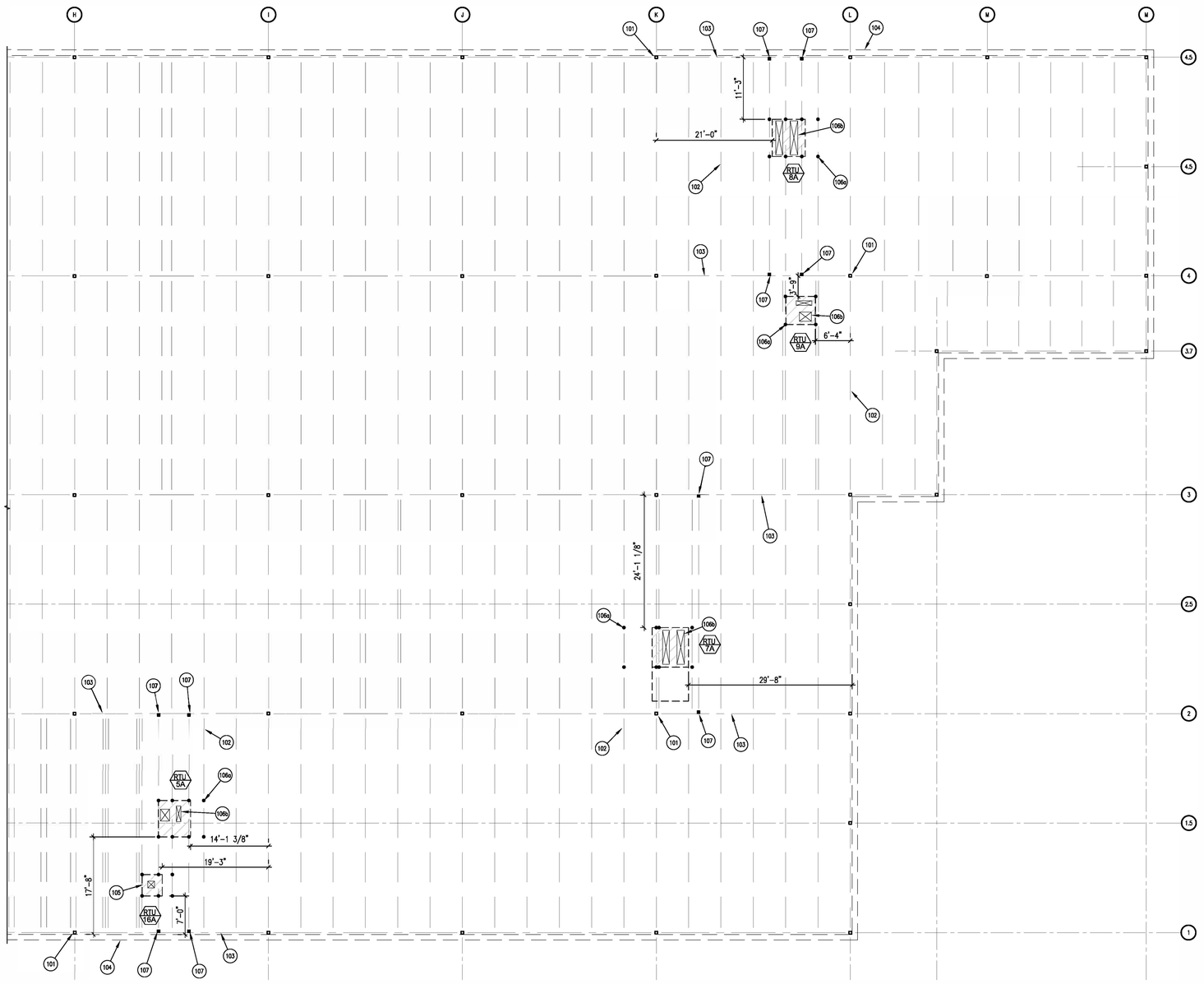
SHEET TITLE:

GENERAL NOTES AND DRAWING INDEX

SHEET NUMBER:

G-002

2 OF 16 SHEETS
05/16/2024



PARTIAL ROOF FRAMING PLAN

N

1 S-151 REF.

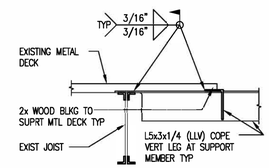
3/32" = 1'-0"

FRAMING GENERAL NOTES

1. THESE NOTES AND KEYNOTES ON THIS SHEET APPLY TO ALL FRAMING ELEMENTS OF STRUCTURE (S-151 SHEET) TYPICAL
2. ONLY NEW MECHANICAL UNITS ARE SHOWN ON THE STRUCTURAL PLANS. SEE MECHANICAL PLANS FOR LOCATIONS OF EXISTING UNITS.
3. STRUCTURAL DESIGN NOTES AND CRITERIA
   a. ROOF DEAD LOAD = 17 PSF
   b. ROOF LIVE LOAD = 20 PSF
   c. ANGLES SHALL CONFORM TO ASTM A572 GRADE 50 (50ksi)
   d. WELDING ELECTRODES SHALL BE E70XX (Fexx=70ksi) PER AWS D1.1 – STEEL
3. MECHANICAL UNIT SIZE, WEIGH, AND NOTES, SEE 4/S-151 SCHEDULE
4. EXISTING MECHANICAL CURB SIZE AND LOCATION SHALL BE VERIFIED BY THE GENERAL CONTRACTOR. NOTIFY ENGINEER OF ANY DISCREPANCIES AS DESIGN VERIFICATION WILL BE REQUIRED
5. TAPERED ROOF INSULATION SHOULD BE INSTALLED AS REQUIRED AT RTU'S 5A AND 16A TO PROVIDE POSITIVE DRAINAGE AND PREVENT WATER PONDING AT NEW RTU LOCATIONS.
6. STRUCTURAL ENGINEER OF RECORD REQUIRED SITE VISIT
   a. CONTRACTOR SHALL NOTIFY ENGINEER FIVE (5) WORKING DAYS PRIOR TO THE FOLLOWING CONSTRUCTION MILESTONE:
      i. STRUCTURAL STEEL FRAMING AND EXISTING FRAMING MODIFICATIONS: AFTER STEEL IS IN PLACE AND BEFORE PLACING ROOFING / FINISHES / RTUs
7. CONNECTIONS FOR MECHANICAL, ELECTRICAL, AND PLUMBING (MEP) (I.E., MECHANICAL UNIT CURBS, MECHANICAL UNITS, DUCT SUPPORTS, ETC.) SEE MEP DRAWINGS.
8. MECHANICAL UNITS SUPPORTED BY ROOF STRUCTURE ARE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER. BEFORE BEGINNING STEEL FABRICATION, VERIFY THE LOCATION OF MECHANICAL UNITS AND THE LOCATION OF THEIR SUPPORT POINTS WITH THE MECHANICAL CONTRACTOR. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ASSOCIATED COSTS FOR REDESIGN, COORDINATION, ETC. RESULTING IN A MECHANICAL UNIT SUBSTITUTION WITH A DIFFERENT SIZE OR HIGHER WEIGHT.
9. DO NOT HANG ANY MECHANICAL, ELECTRICAL, ETC. FROM BRIDGING, ROOF DECK, OR NON-STRUCUTURAL LOAD SUPPORTING ELEMENTS. ALL SUCH ITEMS SHALL BE SUPPORTED FROM JOISTS, BEAMS, OR STRUCTURAL LOAD SUPPORTING ELEMENTS.

1xx FRAMING KEYED NOTES

101. EXISTING COLUMN, TYPICAL
102. EXISTING JOIST, TYPICAL
103. EXISTING JOIST GIRDER
104. EXISTING EXTERIOR WALL
105. PROVIDE DECK OPENING AND MECHANICAL UNIT SUPPORT AND JOIST PANEL POINT REINFORCEMENT PER DETAILS 2/S-151 AND 3/S-151 RESPECTIVELY AT RTU 16A
106. MECHANICAL UNIT, SEE 4/S-151 SCHEDULE FOR SIZE AND WEIGHT TYPICAL
   a. CIRCLE DENOTES MECHANICAL UNIT LOAD DISTRIBUTED TO STRUCTURAL MEMBER. IF JOIST PANEL POINT REINFORCEMENT IS NOT PRESENT AT CONCENTRATED LOADS, SEE DETAIL 3/S-151
   b. EXISTING ROOF OPENING. IF ROOF OPENING SUPPORT IS NOT PRESENT, SEE DETAIL 2/S-151
107. SQUARE DENOTES LOCATION OF REQUIRED PANEL POINT REINFORCEMENT, SEE DETAIL 3/S-151 – APPROXIMATELY (10) LOCATIONS. WHERE JOIST GIRDER IS AT AN EXTERIOR WALL, A STRUT IS ONLY REQUIRED AT ONE SIDE OF GIRDER



TYPICAL DECK OPENING AND MECHANICAL UNIT SUPPORT

2 S-151

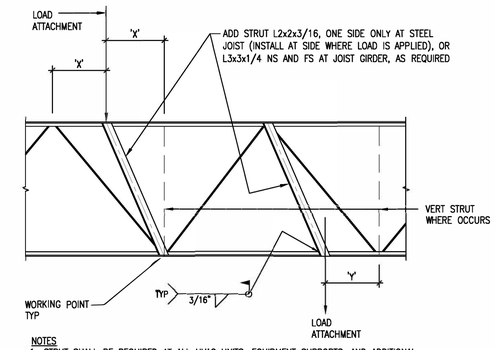
1" = 1'-0"

EQUIPMENT UNIT SIZE AND WEIGHT SCHEDULE

4 S-151

MARK	SIZE	WEIGHT (lbs)	REMARKS
RTU 5A	70"x79"	3,350	MOUNT ON (4) JOISTS
RTU 7A	79"x86"	4,700	MOUNT ON (4) JOISTS
RTU 8A	72"x81"	2,350	MOUNT ON (4) JOISTS
RTU 9A	61"x64"	1,750	MOUNT ON (2) JOISTS
RTU 16A	44"x46"	700	MOUNT ON (3) JOISTS

NOTES:
1. SIZE, WEIGHT, AND LOCATION SHALL BE VERIFIED BY MECHANICAL PLANS AND GENERAL CONTRACTOR.
2. REMARKS INDICATED ABOVE REPRESENTS THE NUMBER OF JOISTS THE EXISTING CURBS ARE SUPPORTED BY. IF NUMBER OF JOISTS DIFFERS, NOTIFY ENGINEER. DESIGN VERIFICATION WILL BE REQUIRED.
3. WEIGHT INDICATED ABOVE REPRESENTS NEW UNIT WEIGHT (MAX CORNER WEIGHT x 4) AND INCLUDES THE NEW CURB ADAPTOR WEIGHT. IF WEIGHTS DIFFERS, NOTIFY ENGINEER. DESIGN VERIFICATION WILL BE REQUIRED.
4. SIZE INDICATED ABOVE REPRESENTS EXISTING OUTSIDE CURB DIMENSIONS. IF ACTUAL EXISTING CURB SIZES DIFFER BY MORE THAN 10% (IN EITHER DIRECTION), NOTIFY ENGINEER. DESIGN VERIFICATION WILL BE REQUIRED.
5. IF ADAPTOR CURB DIFFERS FROM EXISTING CURB BY MORE THAN 10% (IN EITHER DIRECTION), NOTIFY ENGINEER. DESIGN VERIFICATION WILL BE REQUIRED.



NOTES
1. STRUT SHALL BE REQUIRED AT ALL HVAC UNITS, EQUIPMENT SUPPORTS, AND ADDITIONAL CONCENTRATED LOADS UNLESS SUPPORT IS AT PANEL POINT OF JOIST OR JOIST GIRDER.
2. STRUT IS NOT REQUIRED IF 'X' OR 'Y' IS LESS THAN OR EQUAL TO 3".
3. STRUT IS NOT REQUIRED IF CONCENTRATED LOAD IS 100 LBS OR LESS

JOIST OR JOIST GIRDER WEB STIFFENER AT POINT LOAD

3 S-151

NO SCALE

STATE OF MISSOURI
MICHAEL L. PARSON, GOVERNOR

STATE OF MISSOURI
BETHANY R. HAGEMANN
NOTARY PUBLIC
PE-2019000168
PROFESSIONAL ENGINEER

05/16/2024
BETHANY HAGEMANN - ENGINEER
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OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

DEPARTMENT OF REVENUE

LOTTERY HEADQUARTERS
REPLACE ROOFTOP UITS 5-7-8-9 AND SERVER ROOM AIR CONDITIONERS

MISSOURI LOTTERY
HEAD QUARTERS BUILDING
1823 SOUTHRIDGE
JEFFERSON CITY, MO 65109

PROJECT # N2301-01
SITE # 1951
ASSET # 8611951001

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REVISION:
DATE:
ISSUE DATE: 05/16/2024

CAD DWG FILE: Lottery-S-S151
DRAWN BY: brh
CHECKED BY: dcw
DESIGNED BY: brh

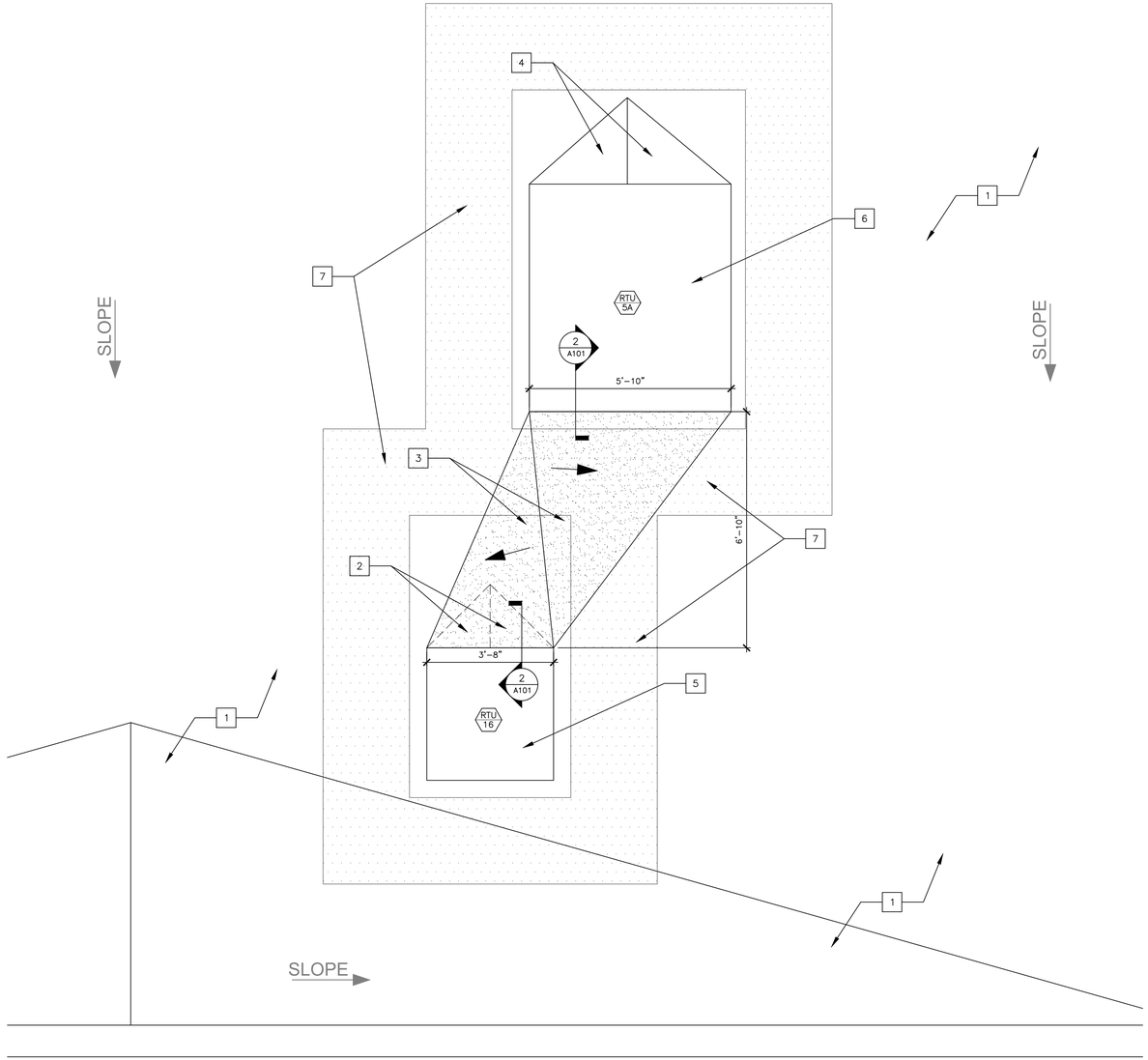
SHEET TITLE:

PARTIAL ROOF FRAMING PLAN

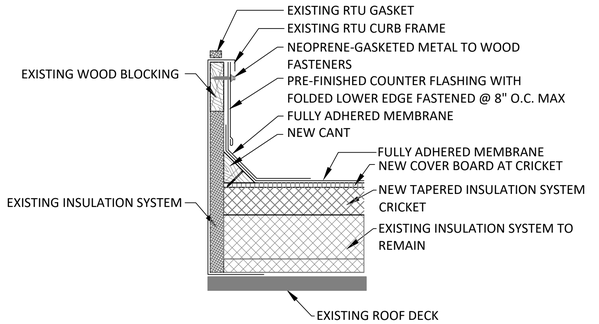
SHEET NUMBER:

S-151

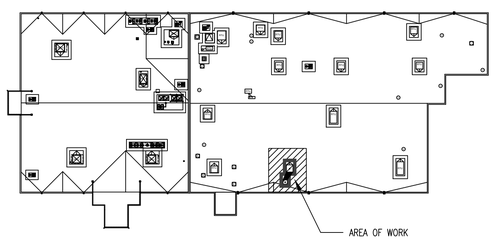
3 OF 15 SHEETS
05/16/2024



1 ENLARGED ROOF PLAN
SCALE: 1/2"=1'–0"



2 CURB DETAIL
SCALE: 1 1/2"=1'–0"



3 KEYPLAN
N.T.S.

RENOVATION KEYNOTES:

1. EXISTING TPO AND BUILT UP INSULATION ROOF SYSTEM TO REMAIN.
2. REMOVE EXISTING TPO CRICKET AND TAPERED INSULATION AT EXISTING ROOF TOP CURB.
3. REMOVE EXISTING TPO COVER SHEET IN SHADED AREAS. INSTALL NEW ¼" PER 1' INSULATION CRICKET BETWEEN EXISTING CURBS AS INDICATED. PROVIDE NEW TPO ROOF MATERIAL AND SEAMS TO MAINTAIN EXISTING ROOF WARRANTY.
4. EXISTING TAPERED INSULATION CRICKET TO REMAIN.
5. EXISTING ROOF TOP UNIT AND CURB TO REMAIN.
6. NEW ROOF TOP UNIT ON EXISTING CURB. RE: MEP SHEETS.
7. COORDINATE TEMPORARY REMOVAL AND REINSTALLATION OF EXISTING WALK PADS AT UNITS AS INDICATED BY SHADED AREA.

GENERAL NOTES:

1. DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
2. CONTRACTOR SHALL FLASH AROUND ALL ROOF PENETRATIONS AND CURBS PER MANUFACTURERS RECOMMENDATIONS, WHETHER SPECIFICALLY SHOWN OR NOT.
3. THE ENTIRE ROOF SYSTEM SHALL BE FULLY ADHERED. NO FASTENERS MAY PENETRATE THE EXISTING METAL DECKING DUE TO ELECTRICAL EQUIPMENT/CONDUIT LOCATED AGAINST THE UNDERSIDE OF THE DECK.

STATE OF MISSOURI
MICHAEL L. PARSON, GOVERNOR

STATE OF MISSOURI
BRAD MICHAEL SCHAEFER
NUMBER
A-2009027294
ARCHITECT

Brad M. Schaefer - Architect
MO# A-2009027294

BID DOCUMENTS

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

DEPARTMENT OF REVENUE

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JEFFERSON CITY, MO 65109

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ASSET # 8611951001

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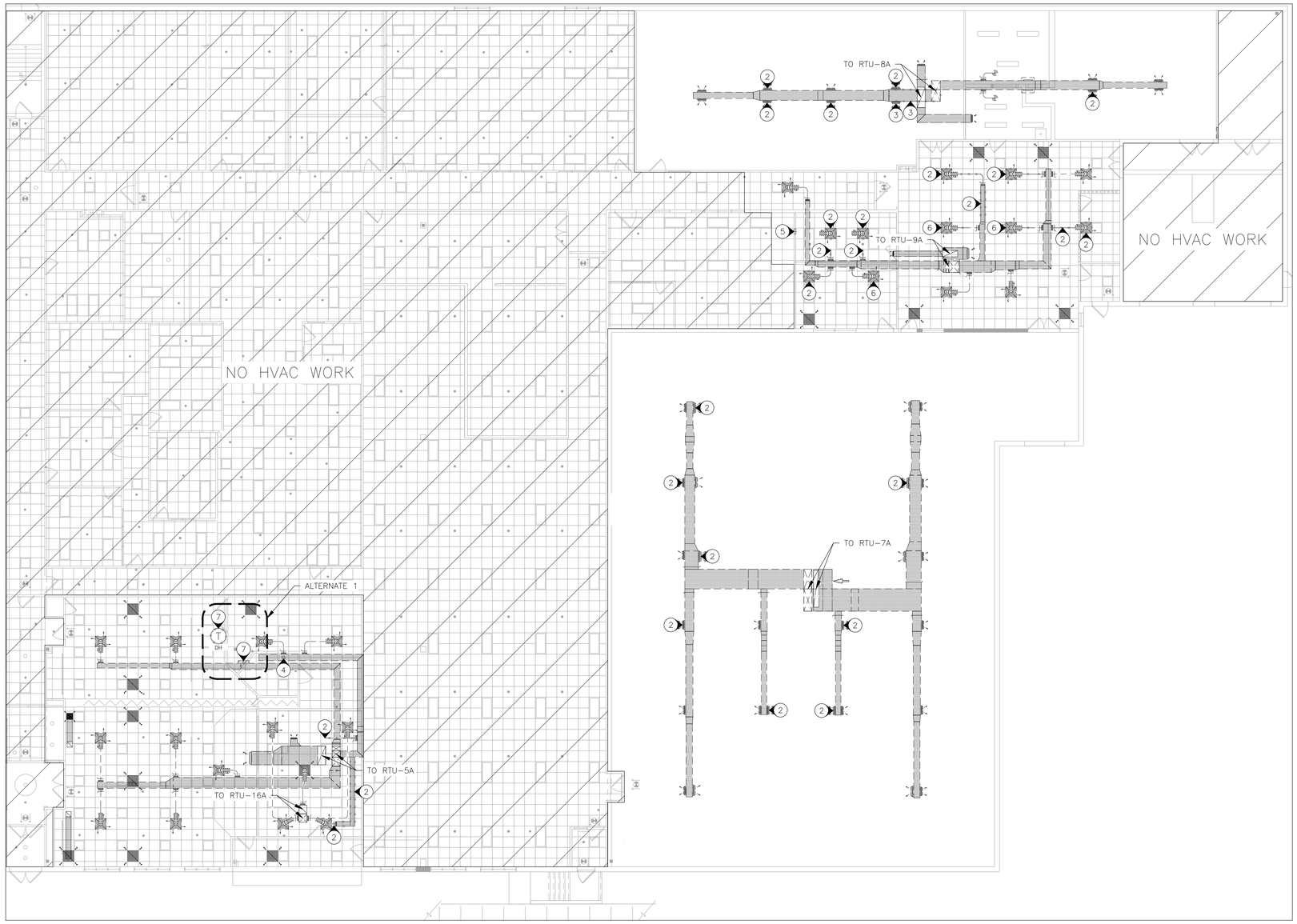
CAD DWG FILE: A101.dwg
DRAWN BY: BS
CHECKED BY: BS
DESIGNED BY: BS/TS

SHEET TITLE:
ROOF PLAN DETAILS

SHEET NUMBER:
A-101

4 OF 16 SHEETS
05/16/2024



1 MECHANICAL DEMOLITION PLAN – MAIN LEVEL
SCALE: 3/32" = 1'-0"

DEMOLITION NOTES

(N) INDICATES KEYED NOTES

1 REFER TO SHEET G-002 FOR GENERAL DEMOLITION NOTES.

(2) REMOVE AND DISPOSE OF GRILLE/DIFFUSER, BALANCE DAMPER AND ALL ASSOCIATED DUCT AS SHOWN. INSTALL SHEET METAL COVER. INSULATE TO MATCH EXISTING AND PROVIDE AIRTIGHT SEAL. PAINT COVER WHERE APPLICABLE. CLEAN SURFACES OF ALL OIL AND DIRT PRIOR TO PAINTING. APPLY 1 COAT OF PRIMER AND 2 COATS OF SEMI-GLOSS ACRYLIC PAINT. COLOR TO MATCH EXISTING.

(3) REMOVE AND DISPOSE OF DAMAGED DUCT. RETAIN AIR DEVICE FOR USE IN NEW CONSTRUCTION.

(4) CREATE PENETRATION ON BOTTOM OF EXISTING DUCTWORK. REFER TO SHEET M-101 FOR PENETRATION SIZE.

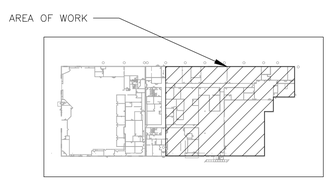
(5) CREATE PENETRATION ABOVE THE SUSPENDED CEILING FOR RETURN DUCT PATH. REFER TO SHEET M-101 FOR PENETRATION SIZE.

(6) DIFFUSER TO BE RELOCATED. REFER TO SHEET M-101 FOR NEW LOCATION.

(7) ALTERNATE 1: MECHANICAL CONTRACTOR TO REMOVE AND DISPOSE OF DUCT HEATER AND ASSOCIATED THERMOSTAT. PATCH DUCT, INSULATE TO MATCH EXISTING AND PROVIDE AIR TIGHT SEAL. PROVIDE AND INSTALL METAL COVER PLATE IN PLACE OF THERMOSTAT. ELECTRICAL CONTRACTOR TO REMOVE AND DISPOSE OF DISCONNECT. TRACE WIRE AND REMOVE BACK TO SOURCE.

LEGEND

(T) DH	THERMOSTAT WITH EQUIPMENT LABEL
	SUPPLY AIR – EXISTING
	RETURN AIR – EXISTING
	EXHAUST AIR – EXISTING
	EXISTING MATERIALS TO BE REMOVED



AREA MAP
NORTH

STATE OF MISSOURI
MICHAEL L. PARSON, GOVERNOR

STATE OF MISSOURI
TRACIE L SIEBENECK
NUMBER PE-2013019114
PROFESSIONAL ENGINEER

Tracie L. Siebeneck - Engineer
MO# PE-2013019114

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CAD DWG FILE: ME_N2301-01
DRAWN BY: AH
CHECKED BY: TS
DESIGNED BY: TS/AH

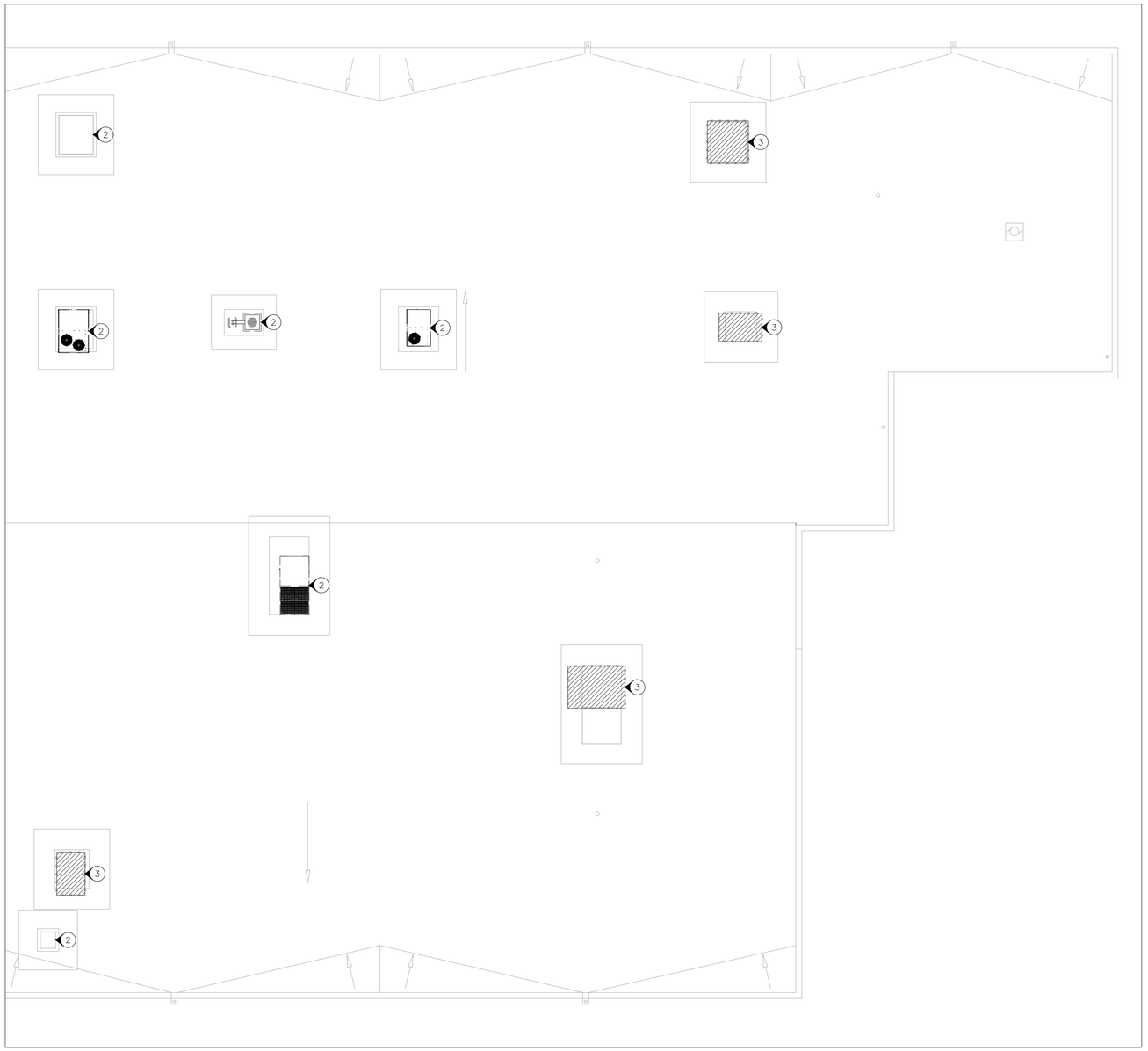
SHEET TITLE:

MECHANICAL DEMOLITION PLAN - MAIN LEVEL

SHEET NUMBER:

D-101

5 OF 16 SHEETS
05/16/2024



1 MECHANICAL DEMOLITION PLAN – ROOF
SCALE: 3/32" = 1'-0"

DEMOLITION NOTES

(N) INDICATES KEYED NOTES

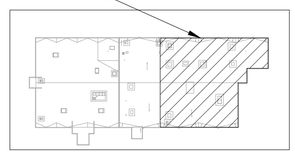
1 REFER TO SHEET G-002 FOR GENERAL DEMOLITION NOTES.

(2) EXISTING ROOF TOP UNIT TO REMAIN.

(3) MECHANICAL CONTRACTOR TO REMOVE AND DISPOSE OF ROOF TOP UNIT AND ROOF CURB ADAPTOR. ROOF CURB SHALL REMAIN FOR USE IN NEW CONSTRUCTION. COORDINATE WITH ELECTRICAL CONTRACTOR TO DISCONNECT POWER PRIOR TO DEMOLITION. ELECTRICAL CONTRACTOR TO REMOVE AND DISPOSE OF DISCONNECT AND FUSE. REFER TO SHEET E-101 FOR PANEL LOCATIONS. REFER TO SHEET E-102 FOR NOTES ABOUT CONDUIT AND CONDUCTORS FOR EACH RTU.

LEGEND	
— — —	HVAC EQUIPMENT – EXISTING
- - - - - - -	EXISTING MATERIALS TO BE REMOVED

AREA OF WORK



AREA MAP
NORTH

STATE OF MISSOURI
MICHAEL L. PARSON, GOVERNOR

STATE OF MISSOURI
TRACIE L SIEBENECK
NUMBER PE-2013019114
PROFESSIONAL ENGINEER

Tracie L. Siebeneck - Engineer
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CAD DWG FILE: ME_N2301-01
DRAWN BY: AH
CHECKED BY: TS
DESIGNED BY: TS/AH

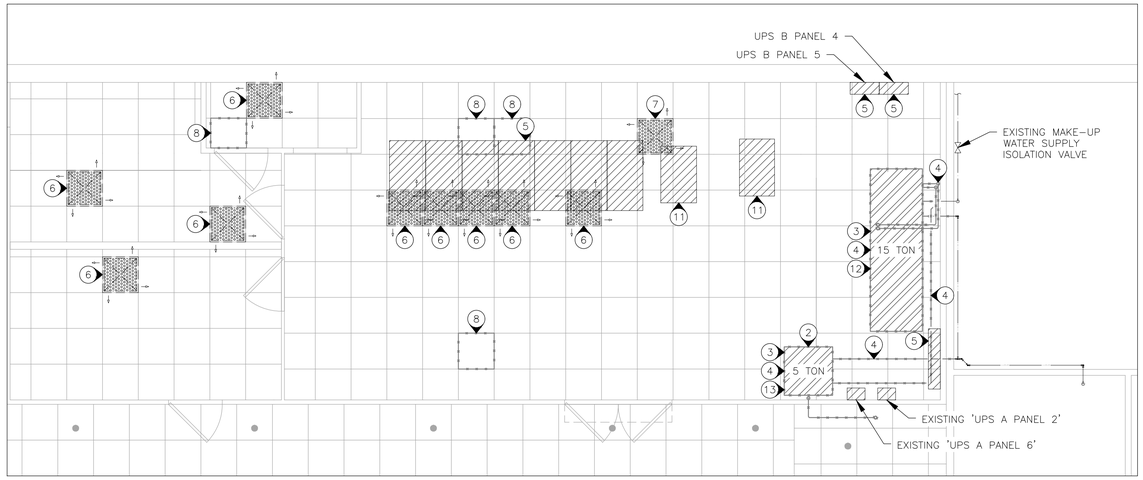
SHEET TITLE:

MECHANICAL DEMOLITION PLAN - ROOF

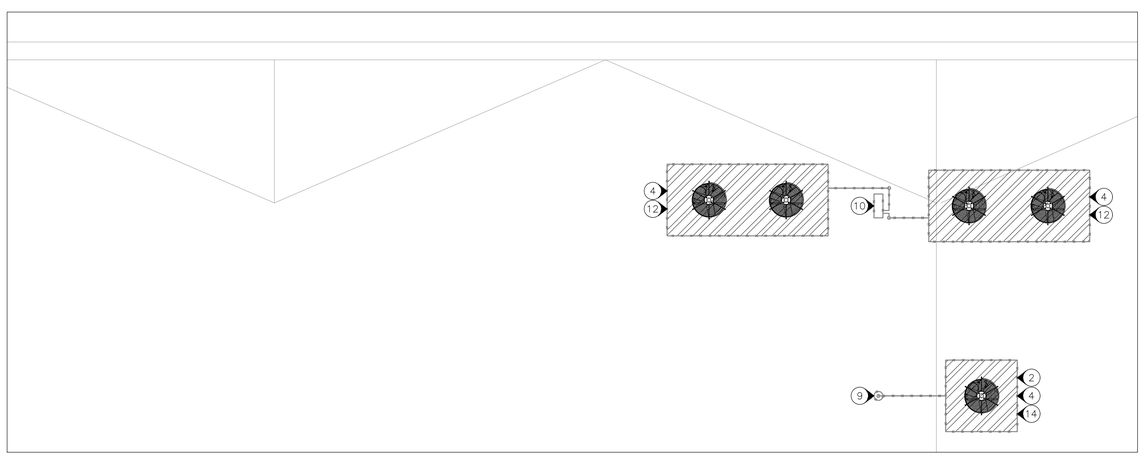
SHEET NUMBER:

D-102

6 OF 16 SHEETS
05/16/2024



2 MECHANICAL DEMOLITION PLAN – SERVER ROOM
SCALE: 1/4" = 1'–0"



1 MECHANICAL DEMOLITION PLAN – ROOF
SCALE: 1/4" = 1'–0"

DEMOLITION NOTES

N INDICATES KEYED NOTES

1 REFER TO SHEET G–002 FOR GENERAL DEMOLITION NOTES.

2 SERVER ROOM IS REQUIRED TO BE CONDITIONED CONTINUOUSLY WITHOUT INTERRUPTIONS THROUGHOUT CONSTRUCTION. EXISTING 5 TON COMPUTER ROOM AIR CONDITIONER (CRAC) UNIT SHALL REMAIN IN OPERATION UNTIL ONE OF THE NEW CRAC UNITS IS OPERATIONAL.

3 GENERAL CONTRACTOR TO PROVIDE AND INSTALL RAISED FLOOR TILES AND SUPPORTS IN PLACE OF LIEBERT UNITS. MATCH EXISTING CONDITIONS.

4 MECHANICAL CONTRACTOR TO REMOVE AND DISPOSE OF CRAC UNIT AND ASSOCIATED CONDENSING UNIT. REMOVE AND DISPOSE OF ALL REFRIGERANT PIPING AND CONTROLS. REMOVE CONDENSATE DRAIN AND MAKE–UP WATER SUPPLY PIPE AS NEEDED TO COMPLETE THE WORK. CONDENSATE DRAIN AND MAKE–UP WATER SUPPLY PIPE SHALL BE EXTENDED TO NEW EQUIPMENT LOCATION. COORDINATE WITH ELECTRICAL CONTRACTOR TO DISCONNECT POWER PRIOR TO DEMOLITION. COORDINATE WITH GENERAL CONTRACTOR TO RELOCATE EXISTING EQUIPMENT PADS TO ACCOMMODATE NEW UNITS. RETURN ANY UNUSED EQUIPMENT PADS TO OWNER.

5 EXISTING EQUIPMENT TO REMAIN.

6 EXISTING AIR DEVICE TO REMAIN.

7 MECHANICAL CONTRACTOR TO REMOVE AND RETAIN AIR DEVICE FOR USE IN NEW CONSTRUCTION. REFER TO NOTE 5 ON SHEET M–103 FOR NEW LOCATION.

8 CONTRACTOR TO REMOVE AND DISPOSE OF DAMAGED TILES. SOME TILES HAVE PENETRATIONS WITH WIRES ROUTED THROUGH. DO NOT REMOVE TILES BEING USED FOR THIS PURPOSE.

9 CONTRACTOR TO REMOVE AND DISPOSE OF ROOF CURB. SEAL PENETRATION WITH AIR TIGHT AND WATER TIGHT SEAL. PERFORM WORK SUCH THAT EXISTING ROOF WARRANTY IS MAINTAINED.

10 CONTRACTOR TO REMOVE AND DISPOSE OF ROOF CURB. PENETRATION TO BE EXPANDED FOR NEW ROOF CURB INSTALLATION. ENSURE EXISTING ROOF WARRANTY IS MAINTAINED. REFER TO SHEET M–103 FOR NEW ROOF CURB INFORMATION.

11 EQUIPMENT TO BE RELOCATED BY FACILITY STAFF. REFER TO SHEET M–103 FOR NEW LOCATION.

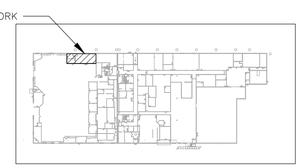
12 ELECTRICAL CONTRACTOR TO REMOVE AND DISPOSE OF DISCONNECT AND FUSE LOCATED IN PANEL 'SDP1'. CONDUIT AND CONDUCTORS MAY REMAIN FOR USE IN NEW CONSTRUCTION IF APPROPRIATELY SIZED PER NEC. REFER TO SHEET E–101 FOR PANEL LOCATION.

13 ELECTRICAL CONTRACTOR TO REMOVE AND DISPOSE OF CONDUCTORS AND CONDUIT BACK TO 'UPS A PANELBOARD 2'. 60 AMP, 3 POLE BREAKER TO REMAIN AS SPARE. REFER TO SHEET E–101 FOR PANEL LOCATION.

14 ELECTRICAL CONTRACTOR TO REMOVE AND DISPOSE OF CONDUCTORS AND CONDUIT BACK TO 'UPS A PANEL 2' LOCATED IN SERVER ROOM. 15 AMP, 2 POLE BREAKER TO REMAIN AS SPARE.

LEGEND	
– – – – –	SUPPLY AIR – EXISTING
———	EQUIPMENT – EXISTING
——— ———	CONDENSATE DRAIN PIPE – EXISTING
——— ———	MAKE–UP WATER SUPPLY PIPE – EXISTING
——•——•——	EXISTING MATERIALS TO BE REMOVED

AREA OF WORK



AREA MAP
NORTH

STATE OF MISSOURI
MICHAEL L. PARSON, GOVERNOR

STATE OF MISSOURI
TRACIE L SIEBENECK
NUMBER PE-2013019114
PROFESSIONAL ENGINEER

Tracie L. Siebeneck - Engineer
MO# PE-2013019114

BID DOCUMENTS

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT,
DESIGN AND CONSTRUCTION

DEPARTMENT OF REVENUE

LOTTERY HEADQUARTERS
REPLACE ROOFTOP UNITS
5-7-8-9 AND SERVER ROOM
AIR CONDITIONERS

MISSOURI LOTTERY
HEAD QUARTERS BUILDING
1823 SOUTHRIDGE

JEFFERSON CITY, MO 65109

PROJECT # N2301-01
SITE # 1951
ASSET # 8611951001

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE: 05/16/2024

CAD DWG FILE: ME_N2301-01
DRAWN BY: AH
CHECKED BY: TS
DESIGNED BY: TS/AH

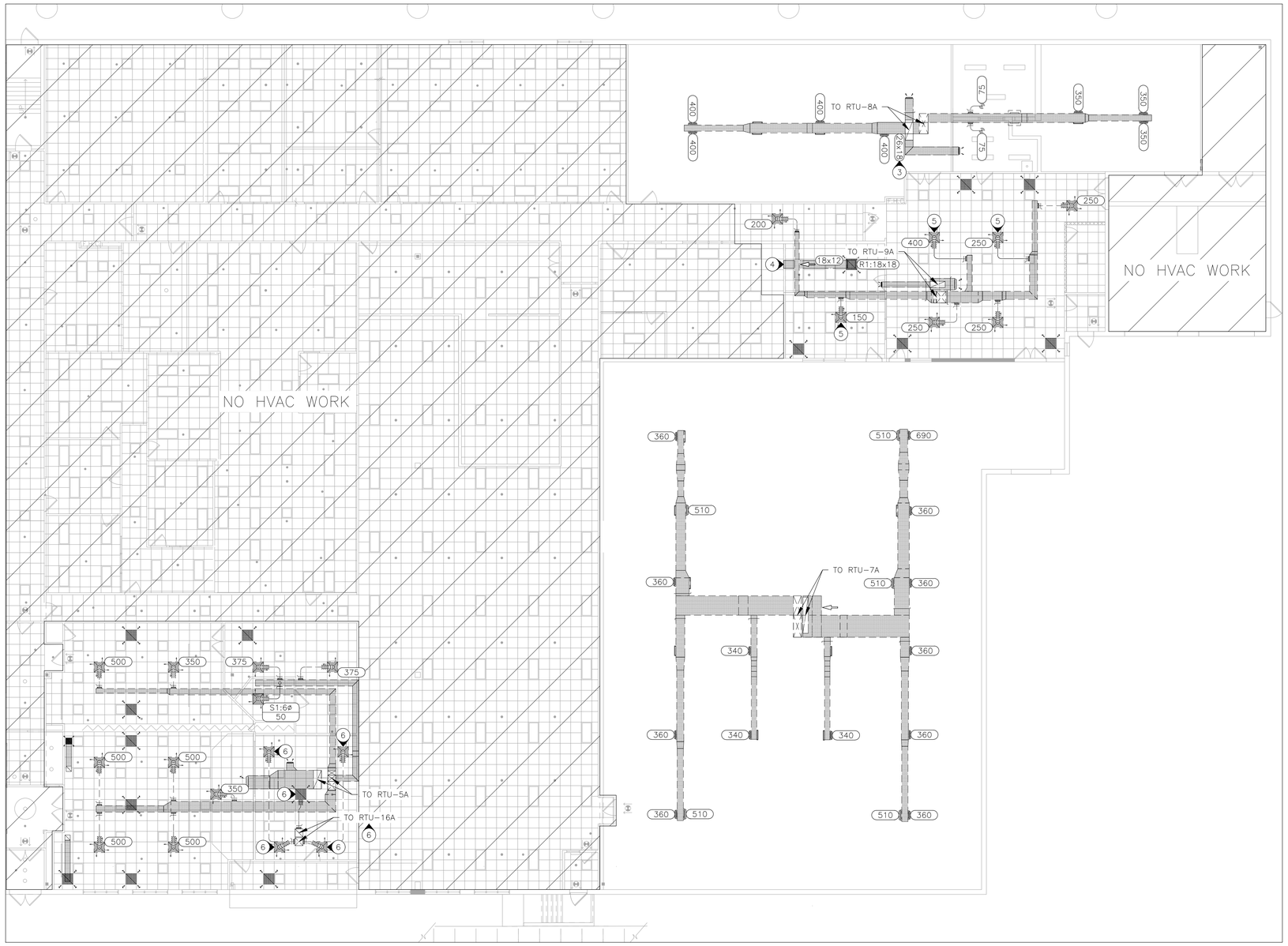
SHEET TITLE:

MECHANICAL DEMOLITION PLAN - SERVER ROOM

SHEET NUMBER:

D-103

7 OF 16 SHEETS
05/16/2024



1 MECHANICAL RENOVATION PLAN – MAIN LEVEL
SCALE: 3/32" = 1'-0"

NOTES

N INDICATES KEYED NOTES

1 REFER TO SHEET G-002 FOR GENERAL MECHANICAL NOTES.

2 TAB CONTRACTOR TO BALANCE AIR DEVICES TO VALUES PROVIDED ON DRAWING.

3 INSTALL SHEET METAL DUCT TO REPLACE DAMAGED DUCT. GAUGE AND INSULATE TO MATCH EXISTING. DUCT SHALL BE PAINTED. CLEAN SURFACES OF ALL OIL AND DIRT PRIOR TO PAINTING. APPLY 1 COAT OF PRIMER AND 2 COATS OF SEMI-GLOSS ACRYLIC PAINT. COLOR TO MATCH EXISTING.

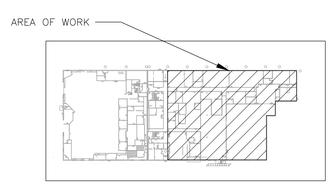
4 ROUTE DUCT SUCH THAT IT ENTERS THE SPACE ABOVE THE SUSPENDED CEILING.

5 RELOCATE EXISTING AIR DEVICE AS SHOWN.

6 FOR REFERENCE ONLY. TESTING AND BALANCING NOT REQUIRED.

HVAC LEGEND

S1:6ø / 50	AIR DEVICE: SIZE (INCHES)/CFM
12x12	DUCT SIZE-RECTANGULAR (INCHES X INCHES)
3500	AIR FLOW (CUBIC FEET PER MINUTE)
R1:18x30	RETURN AIR DEVICE: SIZE (INCHES)
	DIRECTION OF FLOW
	SUPPLY AIR
	SUPPLY AIR – EXISTING
	RETURN AIR – EXISTING
	EXHAUST AIR – EXISTING



AREA MAP
NORTH

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PROFESSIONAL ENGINEER

Tracie L. Siebeneck - Engineer
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DRAWN BY: AH
CHECKED BY: TS
DESIGNED BY: TS/AH

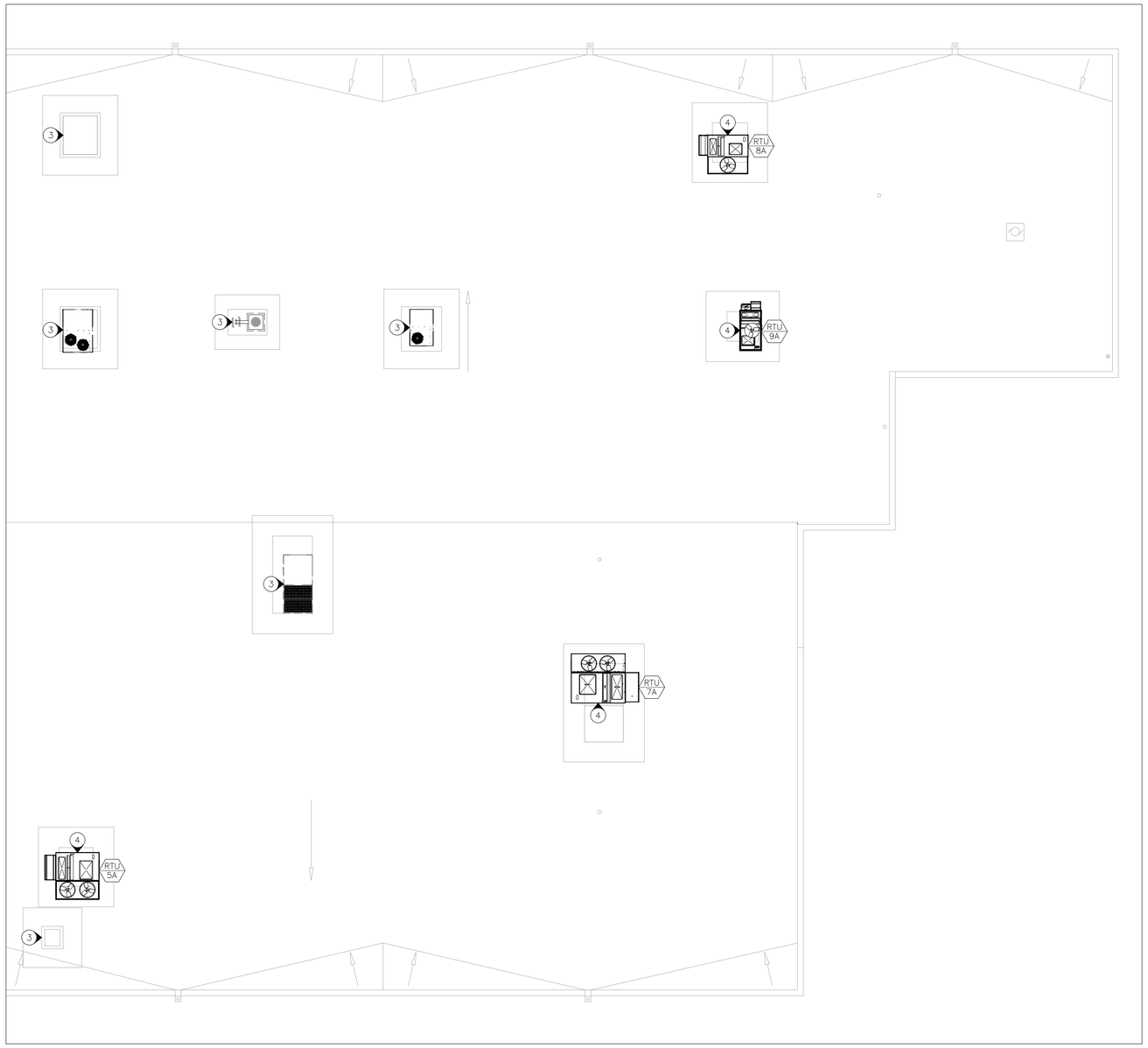
SHEET TITLE:

MECHANICAL RENOVATION PLAN - MAIN LEVEL

SHEET NUMBER:

M-101

8 OF 16 SHEETS
05/16/2024



1 MECHANICAL RENOVATION PLAN – ROOF
SCALE: 3/32" = 1'-0"

NOTES

(N) INDICATES KEYED NOTES

1 REFER TO SHEET G-002 FOR GENERAL NOTES.

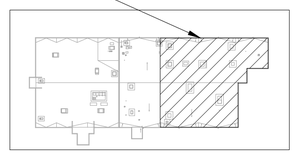
2 PROVIDE A TRAPPED CONDENSATE DRAIN PIPE FOR NEW ROOFTOP UNITS (RTU). SIZE PER MANUFACTURER'S INSTRUCTIONS. EXTEND DRAIN PIPE AND ROUTE TO ENSURE DISCHARGE IS DIRECTED AWAY FROM ROOF CURB.

(3) EXISTING ROOFTOP UNIT TO REMAIN.

(4) EXISTING ROOF CURB TO REMAIN. FIELD MEASURE TO DETERMINE DIMENSIONS OF REQUIRED TRANSITION TO NEW RTU. ENSURE ANY FLAT SURFACE OF ROOF CURB TRANSITION SLOPES TO DRAIN WATER AWAY FROM RTU.

HVAC LEGEND	
(AA N)	DEVICE SCHEDULE TAG
———	HVAC EQUIPMENT – NEW
— — —	HVAC EQUIPMENT – EXISTING

AREA OF WORK



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DRAWN BY: AH
CHECKED BY: TS
DESIGNED BY: TS/AH

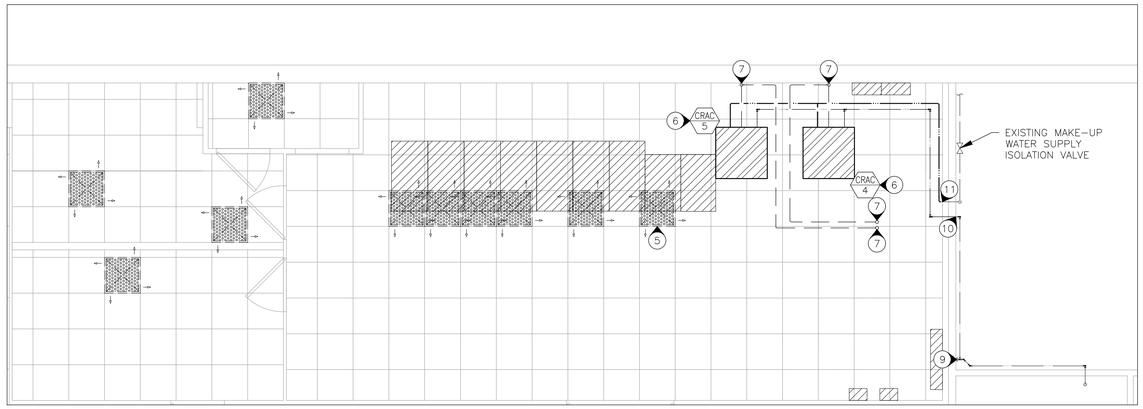
SHEET TITLE:

MECHANICAL RENOVATION PLAN - ROOF

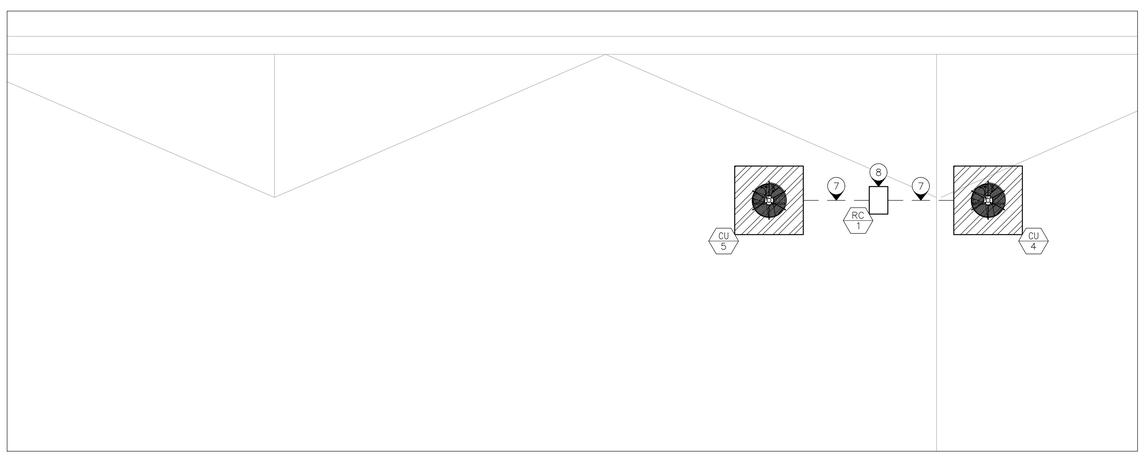
SHEET NUMBER:

M-102

9 OF 16 SHEETS
05/16/2024



2 MECHANICAL RENOVATION PLAN – SERVER ROOM
SCALE: 1/4" = 1'–0"



1 MECHANICAL RENOVATION PLAN – ROOF
SCALE: 1/4" = 1'–0"

NOTES

N INDICATES KEYED NOTES

1 REFER TO SHEET G–002 FOR GENERAL CONSTRUCTION NOTES.

2 PROVIDE A TRAPPED CONDENSATE DRAIN PIPE FOR ALL EVAPORATORS. CONDENSATE PIPE SHALL BE 0.75 INCH INSIDE DIAMETER COPPER. SLOPE IN THE DIRECTION OF DISCHARGE A MINIMUM OF 1/8" PER FOOT. INSULATE PER NOTE 10 ON SHEET G–002. CONNECT TO EXISTING CONDENSATE DRAIN SYSTEM AS NOTED.

3 PROVIDE NEW RAISED FLOOR TILES FOR PREVIOUSLY DAMAGED TILES AND FOR ANY GAPS EXISTING IN THE FLOOR ASSEMBLY.

4 REFRIGERANT PIPES SHALL BE SUPPORTED WITH A MAXIMUM SPAN BETWEEN HANGERS OF 5 FEET. USE LONG RADIUS ELBOWS WHEREVER POSSIBLE. INSULATE PIPES PER NOTE 10 ON SHEET G–002. INSTALL PVC LINESET COVER TO PIPE EXPOSED IN OCCUPIED SPACE. INSTALL ALUMINUM JACKET TO ANY EXTERIOR REFRIGERANT PIPE.

(5) RELOCATE AIR DEVICE PER NOTE 7 ON SHEET D–103 AS SHOWN.

(6) INSTALL COMPUTER ROOM AIR CONDITIONERS (CRAC–4 AND CRAC–5) PER MANUFACTURER'S INSTRUCTIONS. ENSURE REQUIRED MAINTENANCE SPACE IS PROVIDED FOR CRAC UNITS AND ELECTRICAL PANELS.

(7) ROUTE REFRIGERANT LINES FROM CRAC–4 AND CRAC–5 TO CONDENSING UNITS MOUNTED ON ROOF. ROUTE LINES UNDER RAISED FLOOR OVER TO INTERIOR WALL AS SHOWN. ROUTE UP WALL TO ABOVE SERVER ROOM CEILING. THEN ROUTE THROUGH ROOF VIA NEW PIPE CHASE HOUSING PER NOTE 8.

(8) PROVIDE AND INSTALL ROOF CURB WITH PIPE CHASE HOUSING. ENSURE EXISTING ROOF WARRANTY IS MAINTAINED. COORDINATE WITH ELECTRICAL CONTRACTOR FOR PIPE CHASE CONDUIT PENETRATION REQUIREMENTS.

(9) PROVIDE WATERTIGHT CAP FOR CONDENSATE DRAIN PIPE. MATCH EXISTING MATERIAL.

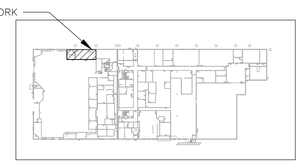
(10) CONNECT CRAC–4 AND CRAC–5 CONDENSATE DRAIN TO EXISTING DRAIN PIPE.

(11) EXTEND MAKE–UP WATER SUPPLY PIPE TO CRAC–4 AND CRAC–5 HUMIDIFIERS AS SHOWN. SIZE PIPE TO MATCH EXISTING AND PROVIDE TYPE L COPPER. INSULATE PIPE IN UNDER FLOOR PLENUM SPACE PER NOTE 10 ON SHEET G–002.

HVAC LEGEND

AA N	DEVICE SCHEDULE TAG
———	HVAC EQUIPMENT – NEW
– – – – –	SUPPLY AIR – EXISTING
— — —	REFRIGERANT PIPE – NEW
———	CONDENSATE DRAIN PIPE – NEW
———	CONDENSATE DRAIN PIPE – EXISTING
———	MAKE–UP WATER SUPPLY PIPE – NEW
———	MAKE–UP WATER SUPPLY PIPE – EXISTING

AREA OF WORK



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JEFFERSON CITY, MO 65109

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CAD DWG FILE: ME_N2301-01
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CHECKED BY: TS
DESIGNED BY: TS/AH

SHEET TITLE:

MECHANICAL RENOVATION PLAN - SERVER ROOM

SHEET NUMBER:

M-103

10 OF 16 SHEETS
05/16/2024

CONTROL NOTES

THIS FACILITY HAS AN EXISTING SCHNEIDER ELECTRIC BUILDING AUTOMATION SYSTEM. INTEGRATION OF HVAC EQUIPMENT CONTROL SHALL BE PROVIDED BY C&C GROUP:

BRIAN SCHEPERS
2414 HYDE PARK RD.
JEFFERSON CITY, MO 65109
573.632.4247

CONTROLS CONTRACTOR SHALL PROVIDE ALL PROGRAMMING AND GRAPHICS REQUIRED TO INTEGRATE NEW EQUIPMENT INTO THE EXISTING CONTROLS SYSTEM.

ROOFTOP UNIT SEQUENCE OF OPERATION

BUILDING AUTOMATION SYSTEM INTERFACE:

THE BUILDING AUTOMATION SYSTEM (BAS) SHALL SEND THE RTU CONTROLLER MORNING WARM–UP / PRE–COOL, OCCUPIED / UNOCCUPIED AND HEAT / COOL MODES. IF BAS COMMUNICATION IS LOST, THE RTU CONTROLLER SHALL OPERATE USING DEFAULT MODES AND SETPOINTS.

OPTIMAL START:

BAS SHALL MONITOR THE SCHEDULED OCCUPIED TIME, OCCUPIED SPACE SETPOINTS, AND SPACE TEMPERATURE TO CALCULATE WHEN THE OPTIMAL START OCCURS.

MORNING WARM–UP MODE:

DURING OPTIMAL START, IF THE AVERAGE SPACE TEMPERATURE IS BELOW THE OCCUPIED HEATING SETPOINT, A MORNING WARM–UP MODE SHALL BE ACTIVATED. WHEN MORNING WARM–UP IS INITIATED THE UNIT SHALL ENABLE THE HEATING AND SUPPLY FAN. THE OUTSIDE AIR DAMPER SHALL REMAIN CLOSED. WHEN THE AVERAGE SPACE TEMPERATURE REACHES THE OCCUPIED HEATING SETPOINT (ADJ.), THE UNIT SHALL TRANSITION TO THE OCCUPIED MODE.

PRE–COOL MODE:

DURING OPTIMAL START, IF THE AVERAGE SPACE TEMPERATURE IS ABOVE THE OCCUPIED COOLING SETPOINT, PRE–COOL MODE SHALL BE ACTIVATED. WHEN PRE–COOL IS INITIATED THE UNIT SHALL ENABLE THE FAN AND COOLING OR ECONOMIZER. THE OUTSIDE AIR DAMPER SHALL REMAIN CLOSED UNLESS ECONOMIZING. WHEN THE AVERAGE SPACE TEMPERATURE REACHES OCCUPIED COOLING SETPOINT (ADJ.), THE UNIT SHALL TRANSITION TO THE OCCUPIED MODE.

OCCUPIED MODE:

DURING OCCUPIED PERIODS, THE SUPPLY FAN SHALL RUN CONTINUOUSLY AND THE OUTSIDE AIR DAMPER SHALL OPEN TO MAINTAIN MINIMUM VENTILATION REQUIREMENTS. THE VARIABLE SPEED COMPRESSOR SHALL MODULATE TO MAINTAIN THE SPACE TEMPERATURE AND HUMIDITY SETPOINTS.

UNOCCUPIED MODE:

WHEN THE SPACE TEMPERATURE IS BELOW THE UNOCCUPIED HEATING SETPOINT OF 65.0° F (ADJ.) THE SUPPLY FAN SHALL START, THE OUTSIDE AIR DAMPER SHALL REMAIN CLOSED AND THE HEAT SHALL BE ENABLED. WHEN THE SPACE TEMPERATURE RISES ABOVE THE UNOCCUPIED HEATING SETPOINT PLUS THE UNOCCUPIED DIFFERENTIAL OF 4.0° F (ADJ.) THE SUPPLY FAN SHALL STOP AND THE HEAT SHALL BE DISABLED. WHEN THE SPACE TEMPERATURE IS ABOVE THE UNOCCUPIED COOLING SETPOINT OF 85.0° F (ADJ.) THE SUPPLY FAN SHALL START AND THE OUTSIDE AIR DAMPER SHALL OPEN IF ECONOMIZING IS ENABLED. WHEN ECONOMIZING IS NOT ENABLED, COOLING SHALL BE ENABLED. WHEN THE SPACE TEMPERATURE FALLS BELOW THE UNOCCUPIED COOLING SETPOINT MINUS THE UNOCCUPIED DIFFERENTIAL OF 4.0° F (ADJ.) THE SUPPLY FAN SHALL STOP, THE COOLING SHALL BE DISABLED AND THE OUTSIDE AIR DAMPER SHALL CLOSE.

OCCUPIED OVERRIDE:

BAS SHALL MONITOR THE STATUS OF THE PUSH BUTTON OVERRIDE OF THE SPACE TEMPERATURE SENSORS. WHEN AN OCCUPIED BYPASS REQUEST IS RECEIVED FROM A SPACE SENSOR, THE UNIT SHALL ENTER OCCUPIED BYPASS MODE AND THE UNIT SHALL MAINTAIN THE SPACE TEMPERATURE AND HUMIDITY TO THE OCCUPIED SETPOINTS (ADJ.). THE TIME PERIOD OF THE OVERRIDE SHALL BE ADJUSTABLE FROM THE BAS.

DEHUMIDIFICATION

BAS SHALL MONITOR HUMIDITY WITH A WALL MOUNTED SPACE SENSOR. IF SPACE RELATIVE HUMIDITY RISES ABOVE 55% (ADJ.), THE COOLING COIL DISCHARGE AIR TEMPERATURE SHALL BE LESS THAN OR EQUAL TO 55°F, AND THE MODULATING HOT GAS REHEAT SHALL OPERATE TO MAINTAIN SPACE TEMPERATURE SETPOINT.

ECONOMIZER:

THE SUPPLY AIR SENSOR SHALL MEASURE THE DRY BULB TEMPERATURE OF THE AIR LEAVING THE EVAPORATOR COIL. WHEN ECONOMIZING IS ENABLED AND THE UNIT IS OPERATING IN THE COOLING MODE, THE ECONOMIZER DAMPER SHALL BE MODULATED BETWEEN ITS MINIMUM POSITION AND 100% TO MAINTAIN THE DISCHARGE AIR TEMPERATURE SETPOINT. THE ECONOMIZER DAMPER SHALL MODULATE TOWARD MINIMUM POSITION IN THE EVENT THE DISCHARGE AIR TEMPERATURE FALLS BELOW THE DISCHARGE LOW LIMIT TEMPERATURE SETPOINT.

SUPPLY FAN:

BAS SHALL MONITOR THE DIFFERENTIAL PRESSURE ACROSS THE THE FAN. IF THE SWITCH DOES NOT OPEN WITHIN 40 SECONDS, A FAN FAILURE ALARM SHALL BE ANNUNCIATED AT THE BAS AND THE UNIT SHALL STOP, REQUIRING A MANUAL RESET.

FILTER STATUS:

BAS SHALL MONITOR THE DIFFERENTIAL PRESSURE ACROSS THE FILTER WHEN THE FAN IS RUNNING. IF THE SWITCH CLOSES FOR 2 MINUTES AFTER A REQUEST FOR FAN OPERATION A DIRTY FILTER ALARM SHALL BE ANNUNCIATED AT THE BAS.

CRAC SEQUENCE OF OPERATION

BUILDING AUTOMATION SYSTEM INTERFACE:

THE BUILDING AUTOMATION SYSTEM (BAS) SHALL MONITOR AND DISPLAY POINTS PROVIDED BY COMPUTER ROOM AIR CONDITIONER MANUFACTURER PROVIDED CONTROLLER. MINIMUM POINTS PROVIDED SHALL BE SPACE TEMPERATURE, SPACE HUMIDITY, SUPPLY AIR TEMPERATURE, RETURN AIR TEMPERATURE, FAN STATUS/SPEED (%), COMPRESSOR STATUS/SPEED (%), HUMIDIFIER STATUS, ELECTRIC REHEAT STATUS/STAGE, AND UNIT RUN TIME. COORDINATE WITH THE ENGINEER IF POINTS ARE NOT PROVIDED BY MANUFACTURER PROVIDED CONTROLLER.

ROOM TEMPERATURE AND HUMIDITY SETPOINTS SHALL BE PROVIDED BY BAS AND SHALL BE ADJUSTABLE AT THE BAS. THERE SHALL BE NO SETBACK IN TEMPERATURE DURING UNOCCUPIED HOURS.

CRAC UNIT SHALL OPERATE VIA MANUFACTURER PROVIDED CONTROLLER AND SHALL MODULATE COOLING, HEATING, FAN SPEED, AND HUMIDIFIER AND STAGE ELECTRIC REHEAT AS NEEDED TO MAINTAIN ROOM TEMPERATURE AND HUMIDITY SETPOINTS.

CRAC UNITS SHALL OPERATE IN LEAD/LAG MODE UNTIL ROOM LOAD REQUIRES BOTH UNITS TO OPERATE TOGETHER.

ROOFTOP UNIT SCHEDULE

			FAN			COOLING (DESIGN OA: 95/76°F)					HEATING (DESIGN OA: 6°F)				ELECTRIC AUXILIARY HEATER				ELECTRICAL				
MARK	MFR	MODEL	SUPPLY AIRFLOW (CFM)	OUTDOOR AIRFLOW (CFM)	ESP (IN WG)	CAPACITY TOTAL (MBH)	CAPACITY SENSIBLE (MBH)	EAT (db°F/wb°F)	COIL LAT (db°F/wb°F)	EER	CAPACITY (MBH)	EAT (db°F/wb°F)	COIL LAT (db°F/wb°F)	COP	CAPACITY (MBH)	EAT (db°F/wb°F)	COIL LAT (db°F/wb°F)	INPUT (KW)	VOLTS PHASE	MCA	MOP	WEIGHT (LBS)	NOTES
RTU-5A	AAON	RN013	4000	610	0.75	132.33	103.62	78.05/64.43	52.22/52.19	10.8	76.80	63.3/55.4	79.5/61.5	3.5/2.3	68.30	79.5/61.5	95.3/66.7	20	460/3	61	70	2087	1,2,3,4,5
RTU-7A	AAON	RN020	7500	445	0.75	207.78	174.43	76.19/62.96	52.82/52.52	10.1	105.10	70.9/59.8	83.9/64.3	1.74	136.50	83.9/64.3	100.8/69.6	40	460/3	118	125	2988	1,2,3,4,5
RTU-8A	AAON	RN007	2800	210	0.75	76.57	62.15	76.5/63.21	54.27/53.06	11.1	41.70	69.8/59.2	82.5/63.7	3.5/2.4	34.10	82.5/63.7	93.8/67.4	10	460/3	39	45	1275	1,2,3,4,5
RTU-9A	AAON	RQ005	1750	175	0.75	57.33	44.73	80.03/65.94	54.22/54.09	9.5	30.80	69.8/59.2	84.8/64.4	3.5/2.2	34.10	84.8/64.4	102.9/70.1	10	460/3	35	35	971	1,2,3,4,5

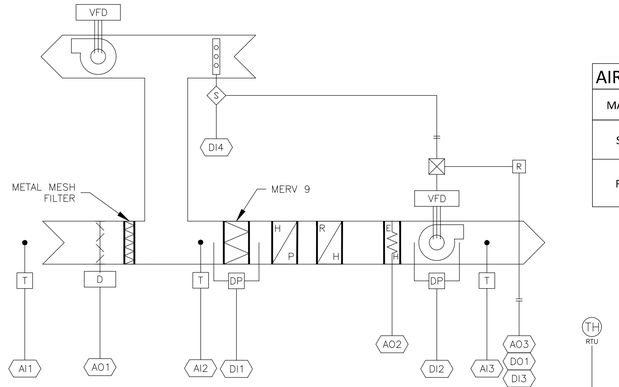
NOTES ***** SEE ALSO EQUIPMENT SCHEDULE NOTES THIS SHEET*****

1 PROVIDE HEAT PUMP OPERATION DOWN TO 6°F. MODULATING/SCR AUXILIARY ELECTRIC HEATING TO MEET HEAT LOAD REQUIREMENTS
2 PROVIDE VARIABLE SPEED SCROLL COMPRESSOR, MODULATING HOT GAS REHEAT; VFD SUPPLY BLOWER, VFD EXHAUST BLOWER, DIFFERENTIAL DRY BULB MODULATING ECONOMIZER
3 PROVIDE WIRED CONVENIENCE OUTLET, NON-FUSED FACTORY INSTALLED DISCONNECT; BACnet MSTP; RETURN AIR SMOKE DETECTOR
4 PROVIDE R-13 DOUBLE WALL CONSTRUCTION, STAINLESS STEEL DRAIN PAN; 30% EFFICIENT FILTER WITH CLOGGED FILTER SWITCH; CONDENSER COIL GUARDS; HAIL GUARDS
5 PROVIDE ROOF CURB ADAPTORS; CONTRACTOR SHALL FIELD MEASURE TO DETERMINE REQUIRED DIMENSIONS

EQUIPMENT SCHEDULE NOTES

MANUFACTURERS LISTED ARE BASIS OF DESIGN. REFERENCE SPECIFICATIONS FOR ADDITIONAL APPROVED MANUFACTURERS.

STRUCTURE IS BEING MODIFIED FOR INCREASED RTU AND CURB ADAPTOR WEIGHT. REFER TO S–151 FOR MAXIMUM WEIGHT REQUIREMENTS. ANY EQUIPMENT SUBSTITUTION THAT EXCEEDS THE MAXIMUM WEIGHT SHALL REQUIRE CONTRACTOR OBTAIN ADDITIONAL STRUCTURAL ENGINEERING SERVICES FROM STRUCTURAL ENGINEER OF RECORD AT CONTRACTORS COST.



1 TYPICAL ROOFTOP UNIT (RTU) CONTROLS DIAGRAM

COMPUTER ROOM AIR CONDITIONER SCHEDULE

MARK	MANUFACTURER MODEL	AIRFLOW ESP	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	VOLTAGE PHASE	HUMIDIFIER CAPACITY (LB/HR)	ELECTRIC REHEAT CAPACITY (kW)	MCA MOP	NOTES
CRAC-4	LIEBERT PX018	2800 CFM 0.2 IN WG	62.5	57.1	460/3	7.7	12	30.5/40	1,2,3,4
CRAC-5	LIEBERT PX018	2800 CFM 0.2 IN WG	62.5	57.1	208/3	7.7	12	67.5/90	1,2,3,4

NOTES
1 PROVIDE DOWNFLOW, ELECTRONICALLY COMMUTATED FAN MOTOR; DIGITAL SCROLL COMPRESSOR WITH CRANKCASE HEATER; MERV 8 FILTER WITH ALARM
2 PROVIDE INFRARED HUMIDIFIER AND LEAK DETECTION SENSOR; ELECTRIC REHEAT
3 PROVIDE FLOOR STAND, VERIFY RAISED FLOOR HEIGHT PRIOR TO ORDERING EQUIPMENT
4 PROVIDE LED DISPLAY CONTROLLER, SUPPLY/RETURN TEMPERATURE SENSORS, RETURN HUMIDITY SENSOR, UNIT TO UNIT COMMUNICATION, BACnet/IP CONNECTIVITY

CONDENSING UNIT SCHEDULE

MARK	MANUFACTURER	MODEL	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	DESCRIPTION	VOLTS PHASE	FLA/MOP	NOTES
CU-4	LIEBERT	MCM040	62.5	57.1	AIR COOLED CONDENSER W/ VARIABLE SPEED MOTOR	460/3	1.4/15	1,2,3
CU-5	LIEBERT	MCM040	62.5	57.1	AIR COOLED CONDENSER W/ VARIABLE SPEED MOTOR	208/3	2.3/15	1,2,3

NOTES
1 DESIGN AMBIENT OUTDOOR AIR TEMPERATURE: -20 F° TO 105 F°
2 PROVIDE FACTORY MOUNTED NEMA 3R ELECTRICAL BOX, FACTORY DISCONNECT, ELECTRONICALLY COMMUTATED FAN MOTOR; HAIL GUARDS
3 PROVIDE CONTROLS COMPONENTS FOR COMMUNICATION WITH INDOOR UNIT

AIR DEVICE SCHEDULE

MARK	MANUFACTURER	MODEL	NECK SIZE (INCHxINCH)	FACE SIZE (INCHxINCH)	TYPE	SPECIFICATION
S1	PRICE	PDN	SEE PLANS	24X24	SUPPLY LAYIN MOUNT	FRAME: STEEL, WHITE; INLET: ROUND; TYPE: PERFORATED; CORE: MODULAR CORE PATTERN DEFLECTORS
R1	PRICE	PDDR	SEE PLANS	24X24	RETURN LAYING MOUNT	FRAME: STEEL, WHITE; INLET: ROUND; TYPE: PERFORATED

PIPE CHASE ROOF CURB SCHEDULE

MARK	MANUFACTURER	MODEL	LxWxH (INCHES)	DESCRIPTION	SPECIFICATION	NOTES
RC-1	ALTA PRODUCTS	AL-201412	20.5 x 14.5 x 12	PIPE CHASE HOUSING	HOUSING: 0.080" THICK ALUMINUM; CURB 0.080" THICK ALUMINUM; FINISH: BEIGE UV PROTECTED POWDER COATED (2 MIL THICK); FULL THERMAL BREAK; EXIT SEALS: SIZED TO MATCH PIPE/CONDUIT DIAMETER	1,2,3

NOTES
1 PROVIDE CURB MODEL AL-1014C
2 PROVIDE SIGRIST EXIT SEALS SIZED TO MATCH REFRIGERANT LINE SETS
3 PROVIDE SIGRIST EXIT SEALS SIZED TO MATCH CONDUIT

ANALOG INPUTS

AI1	OUTSIDE AIR TEMP/HUMIDITY
AI2	MIXED AIR TEMPERATURE
AI3	DISCHARGE AIR TEMPERATURE
AI4	SPACE TEMPERATURE
AI5	SPACE HUMIDITY

DIGITAL INPUTS

DI1	FILTER PRESSURE DROP
DI2	SUPPLY FAN PRESSURE DROP
DI3	SUPPLY FAN STATUS
DI4	SMOKE DETECTOR STATUS

ANALOG OUTPUTS

AO1	OUTSIDE AIR DAMPER
AO2	AUXILIARY ELECTRIC HEAT COIL
AO3	SUPPLY FAN SPEED
AO3	COMPRESSOR SPEED

DIGITAL OUTPUTS

DO1	SUPPLY FAN START/STOP COMMAND
DO1	COMPRESSOR START/STOP COMMAND

CONTROL LEGEND

TH RTU	WALL SENSOR – TEMPERATURE AND HUMIDITY
	FILTER
	HEAT PUMP COIL
	REHEAT COIL
	AUXILIARY ELECTRIC HEATING COIL
	CONTROL DAMPER
	FAN WITH VARIABLE FREQUENCY DRIVE (VFD)
T	DUCT TEMPERATURE SENSOR
	DIFFERENTIAL PRESSURE SENSOR

STATE OF MISSOURI
MICHAEL L. PARSON, GOVERNOR

STATE OF MISSOURI · TRACIE L SIEBENECK · NUMBER PE-2013019114 · PROFESSIONAL ENGINEER

Tracie L. Siebeneck - Engineer
MO# PE-2013019114

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DIVISION OF FACILITIES MANAGEMENT,
DESIGN AND CONSTRUCTION

DEPARTMENT OF REVENUE

LOTTERY HEADQUARTERS
REPLACE ROOFTOP UNITS 5-7-8-9 AND SERVER ROOM AIR CONDITIONERS

MISSOURI LOTTERY
HEAD QUARTERS BUILDING
1823 SOUTHRIDGE
JEFFERSON CITY, MO 65109

PROJECT # N2301-01
SITE # 1951
ASSET # 8611951001

REVISION:
DATE:
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DATE:
ISSUE DATE: 05/16/2024

CAD DWG FILE: ME_N2301-01
DRAWN BY: AH
CHECKED BY: TS
DESIGNED BY: TS/AH

SHEET TITLE:
MECHANICAL SCHEDULES AND DETAILS

SHEET NUMBER:
M-601

11 OF 16 SHEETS
05/16/2024

NOTES

(N) INDICATES KEYED NOTES

1 REFER TO SHEET G-002 FOR GENERAL NOTES.

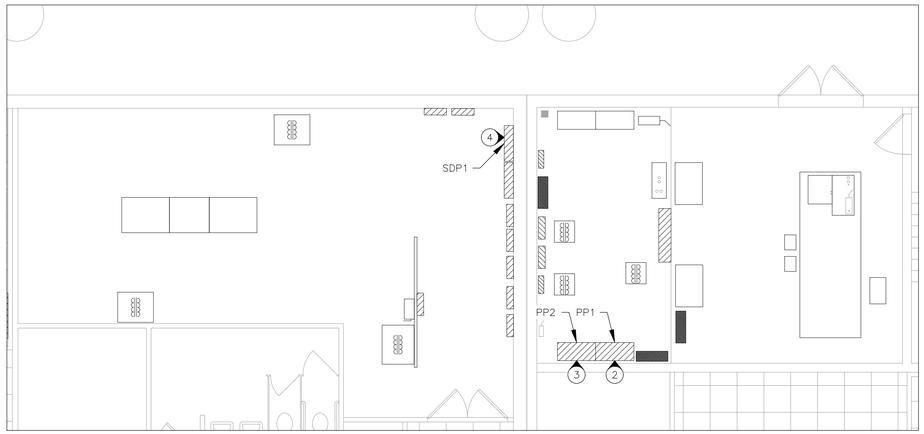
(2) EXISTING 480V/3 PHASE PANEL 'PP1' SERVING RTU-7A, RTU-8A, AND RTU-9A.

(3) EXISTING 480V/3 PHASE PANEL 'PP2' SERVING RTU-5A.

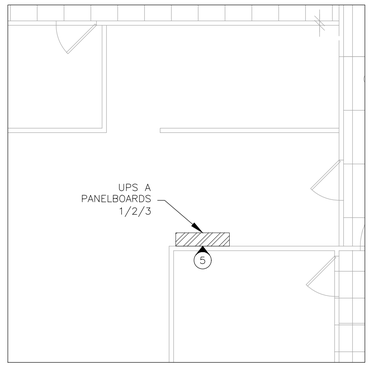
(4) EXISTING 480V/3 PHASE PANEL 'SDP1' SERVING EXISTING 15 TON COMPUTER ROOM AIR CONDITIONER (CRAC) AND THE ASSOCIATED ROOFTOP CONDENSER.

(5) EXISTING 208V/3 PHASE PANEL 'UPS A PANELBOARD 2' SERVING INDOOR UNIT FOR EXISTING 5 TON CRAC UNIT. REFER TO SHEET E-103 FOR PANEL SERVING ASSOCIATED ROOFTOP CONDENSER.

6 REFER TO SHEETS E-601 AND E-602 FOR PANEL SCHEDULES.



2 ENLARGED ELECTRICAL RENOVATION PLAN – ELECTRICAL/MECHANICAL ROOM
SCALE: 3/16" = 1'-0"



3 ENLARGED ELECTRICAL RENOVATION PLAN – UPS A PANELBOARDS 1/2/3
SCALE: 3/16" = 1'-0"

1 ELECTRICAL POWER PLAN
SCALE: 1/16" = 1'-0"

STATE OF MISSOURI
MICHAEL L. PARSON, GOVERNOR

STATE OF MISSOURI
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PROFESSIONAL ENGINEER

Tracie L. Siebeneck - Engineer
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CAD DWG FILE: ME_N2301-01
DRAWN BY: AH
CHECKED BY: TS
DESIGNED BY: TS/AH

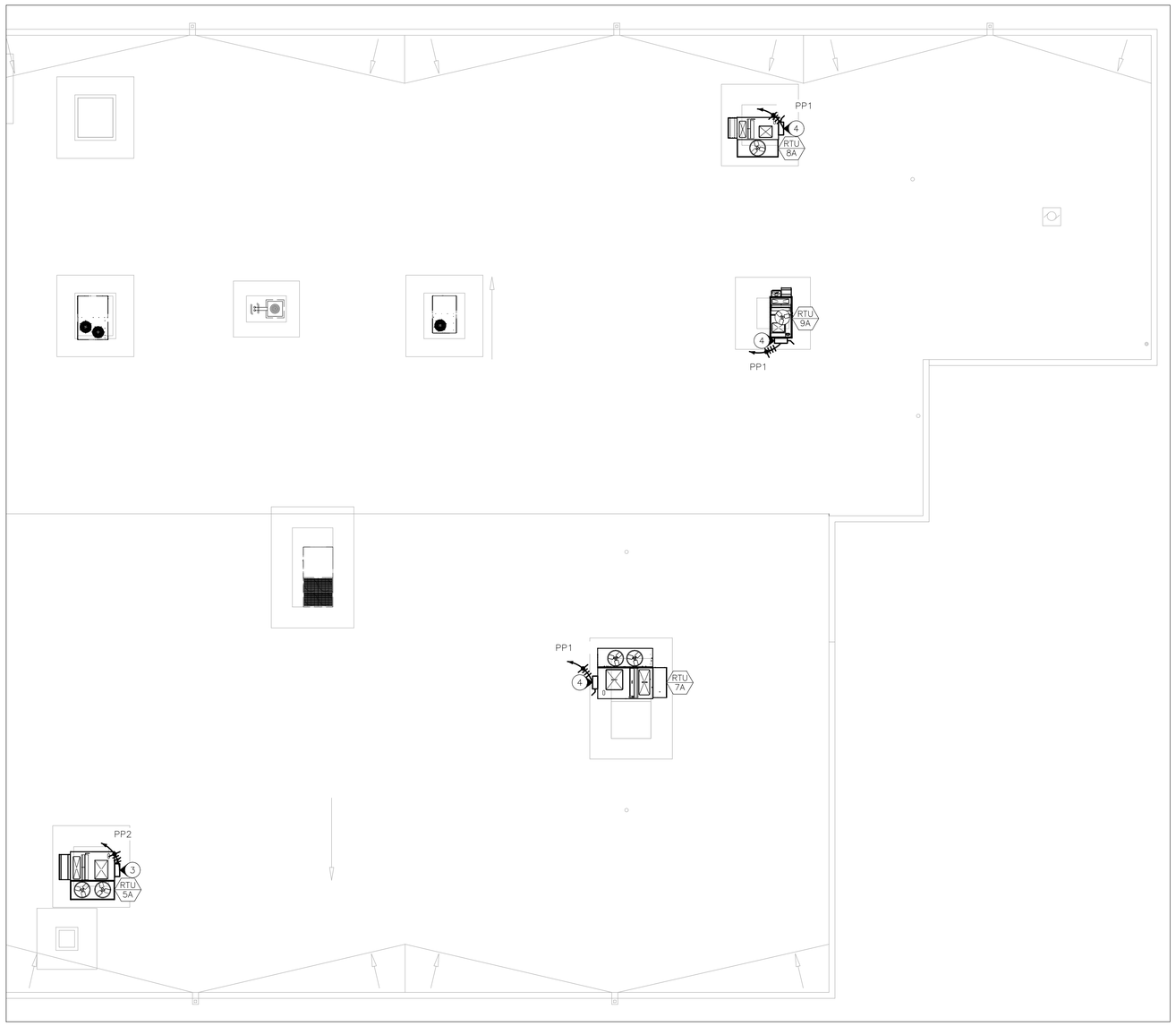
SHEET TITLE:

ELECTRICAL RENOVATION PLAN - MAIN LEVEL

SHEET NUMBER:

E-101

12 OF 16 SHEETS
05/16/2024



1 ELECTRICAL RENOVATION PLAN – ROOF
SCALE: 3/32" = 1'-0"

NOTES

(N) INDICATES KEYED NOTES

1 REFER TO SHEET G–002 FOR GENERAL NOTES.

2 REFER TO SHEET E–101 FOR PANEL LOCATIONS.

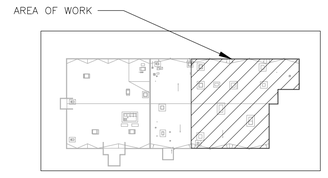
(3) PROVIDE AND INSTALL NEW FUSE IN PANEL 'PP2' AND ROUTE (3) #4 CU THHN, AND (1) #8 CU GROUND TO RTU. ELECTRICAL CONTRACTOR MAY REUSE EXISTING CONDUIT IF IT IS INSTALLED PER THE MOST RECENT VERSION OF THE NEC. PROVIDE NEW CONDUIT AND CONDUCTORS AS NEEDED TO COMPLETE WORK.

(4) PROVIDE AND INSTALL NEW FUSE IN PANEL 'PP1'. EXISTING CONDUIT, CONDUCTORS AND GROUND MATCH OR EXCEED REQUIRED SIZES. ELECTRICAL CONTRACTOR MAY REUSE EXISTING CONDUIT AND CONDUCTORS PROVIDED IT IS INSTALLED PER THE MOST RECENT VERSION OF THE NEC. PROVIDE NEW CONDUIT AND CONDUCTORS AS NEEDED TO COMPLETE WORK.

5 REFER TO SHEET E–601 FOR PANEL SCHEDULES AND FUSE SIZES.

ELECTRICAL LEGEND

AA N	DEVICE SCHEDULE TAG
	HOME RUN–SHORT STROKES INDICATE PHASE OR SWITCHED WIRES, LONG STROKE INDICATE NEUTRAL, LONG WITH DOT INDICATE GROUND
	NON FUSED DISCONNECT SWITCH
———	HVAC EQUIPMENT – NEW
— — —	HVAC EQUIPMENT – EXISTING



AREA MAP
NORTH

STATE OF MISSOURI
MICHAEL L. PARSON, GOVERNOR

STATE OF MISSOURI
TRACIE L SIEBENECK
NUMBER PE-2013019114
PROFESSIONAL ENGINEER

Tracie L. Siebeneck - Engineer
MO# PE-2013019114

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DEPARTMENT OF REVENUE

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JEFFERSON CITY, MO 65109

PROJECT # N2301-01
SITE # 1951
ASSET # 8611951001

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CAD DWG FILE: ME_N2301-01
DRAWN BY: AH
CHECKED BY: TS
DESIGNED BY: TS/AH

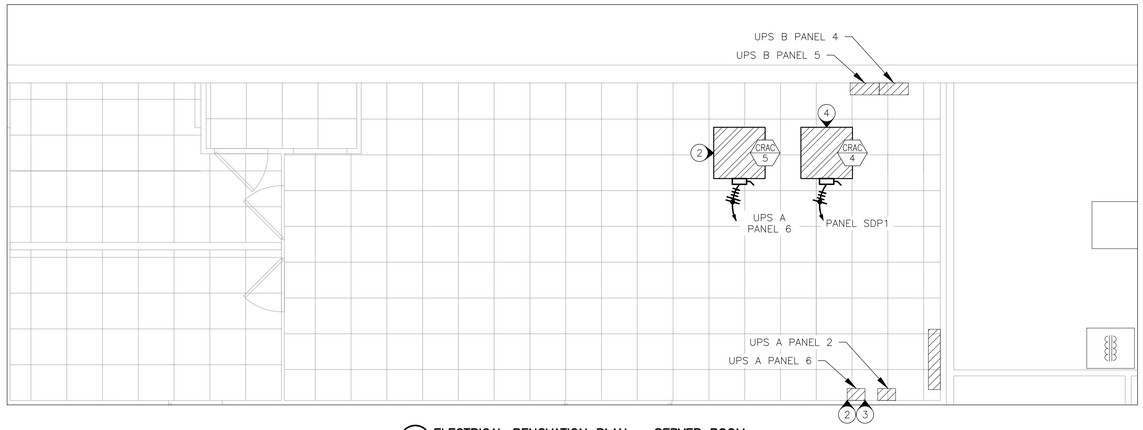
SHEET TITLE:

ELECTRICAL RENOVATION PLAN - ROOF

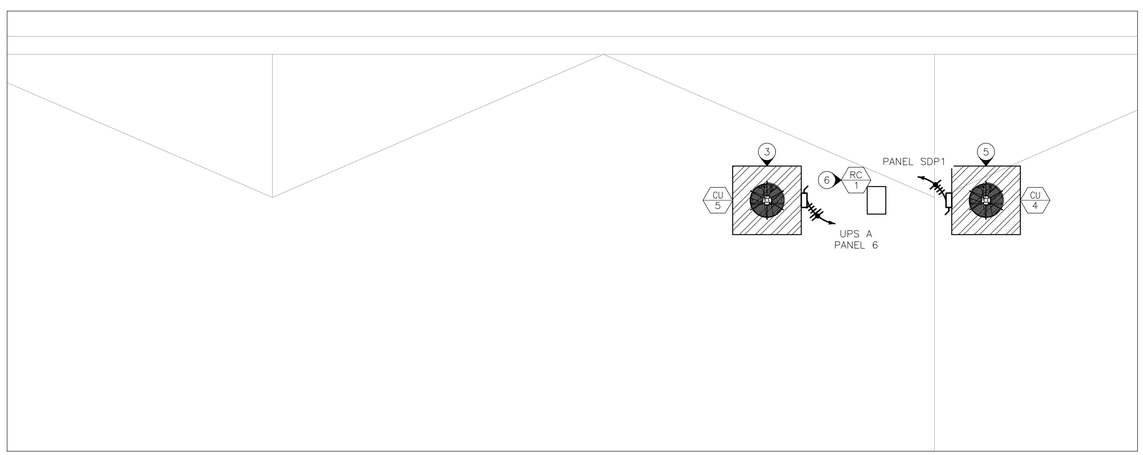
SHEET NUMBER:

E-102

13 OF 16 SHEETS
05/16/2024



2 ELECTRICAL RENOVATION PLAN – SERVER ROOM
SCALE: 1/4" = 1'-0"



1 ELECTRICAL RENOVATION PLAN – ROOF
SCALE: 1/4" = 1'-0"

NOTES

(N) INDICATES KEYED NOTES

1 REFER TO SHEET G–002 FOR GENERAL NOTES.

(2) PROVIDE AND INSTALL NEW BREAKER IN PANEL 'UPS A PANEL 6' AND ROUTE (4) #4 CU THHN, AND (1) #8 CU GROUND IN 1 1/4" EMT TO CRAC–5.

(3) PROVIDE AND INSTALL NEW BREAKER IN PANEL 'UPS A PANEL 6' AND ROUTE (4) #10 CU THHN, AND (1) #12 CU GROUND IN 1/2" EMT TO CU–5.

(4) PROVIDE AND INSTALL NEW FUSE IN PANEL 'SDP1' AND ROUTE (3) #6 CU THHN, AND (1) #10 CU GROUND IN 3/4" EMT TO CRAC–4. IF EXISTING CONDUIT AND CONDUCTORS MATCH OR EXCEED LISTED SIZES THEN ELECTRICAL CONTRACTOR MAY REUSE EXISTING CONDUIT AND CONDUCTORS PROVIDED IT IS INSTALLED PER THE MOST RECENT VERSION OF THE NEC. PROVIDE NEW CONDUIT AND CONDUCTORS AS NEEDED TO COMPLETE WORK.

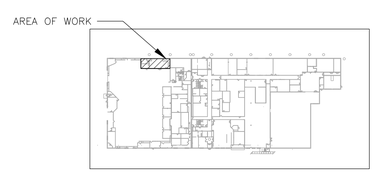
(5) PROVIDE AND INSTALL NEW FUSE PANEL 'SDP1' AND INSTALL (3) #10 CU THHN, AND (1) #12 CU GROUND IN 1/2" EMT TO CU–5. IF EXISTING CONDUIT AND CONDUCTORS MATCH OR EXCEED LISTED SIZES THEN ELECTRICAL CONTRACTOR MAY REUSE EXISTING CONDUIT AND CONDUCTORS PROVIDED IT IS INSTALLED PER THE MOST RECENT VERSION OF THE NEC. PROVIDE NEW CONDUIT AND CONDUCTORS AS NEEDED TO COMPLETE WORK.

(6) MECHANICAL CONTRACTOR TO PROVIDE AND INSTALL PIPE CHASE ROOF CURB. REFER TO SHEET M–103. PROVIDE MECHANICAL CONTRACTOR WITH ELECTRICAL REQUIREMENTS FOR PIPE CHASE.

4 REFER TO SHEETS E–601 AND E–602 FOR PANEL SCHEDULES AND BREAKER/FUSE SIZES.

ELECTRICAL LEGEND

AA N	DEVICE SCHEDULE TAG
	HOME RUN–SHORT STROKES INDICATE PHASE OR SWITCHED WIRES, LONG STROKE INDICATE NEUTRAL, LONG WITH DOT INDICATE GROUND
	NON FUSED DISCONNECT SWITCH
	HVAC EQUIPMENT – NEW
	EQUIPMENT – EXISTING



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CAD DWG FILE: ME_N2301-01
DRAWN BY: AH
CHECKED BY: TS
DESIGNED BY: TS/AH

SHEET TITLE:

ELECTRICAL RENOVATION PLAN - SERVER ROOM

SHEET NUMBER:

E-103

14 OF 16 SHEETS
05/16/2024

NOTES

(N) INDICATES KEYED NOTES

1 REFER TO SHEET E-101 FOR PANEL LOCATIONS.

(2) REMOVE AND DISPOSE OF EXISTING FUSE.

(3) PROVIDE AND INSTALL NEW FUSE. IF EQUIPMENT IS OTHER THAN SPECIFIED ENSURE APPROPRIATELY SIZED FUSE IS PROVIDED.

PANEL DESIGNATION: **PP1**
VOLTAGE: **480V 3 PHASE 3 WIRE** | PANEL LOCATION: **ELECTRICAL/GENERATOR 138** | TOTAL VOLTAMPS THIS PANEL 0
MAINS: **600 A** _ CB **X** MLO | MOUNTING: _ FLUSH **X** SURFACE | PANEL SPACES: **10** | TOTAL CONNECTED LOAD (AMPS) 0

CIRCUIT DESIGNATION	WIRE	TRIP	CONNECTED LOAD A	B	C	CKT. NO.	CONNECTED LOAD A	B	C	TRIP	WIRE	CIRCUIT DESIGNATION
(2) **ROOF TOP UNIT #8**		**100A/3P**				1				30A/3P		SPARE
LIEBERT CONDENSOR MECH RM2		30A/3P				2 3				30A/3P		UNIT HEATER #2
UNIT HEATER #3		30A/3P				4 5				60A/3P		ROOF TOP UNIT #3
ROOF TOP UNIT #4		50A/3P				6 7				60A/3P		LIEBERT A/C MECH RM2 (WIRE IS OLD FEED TO RTU#8)
(2) **ROOF TOP UNIT #9**		**60A/3P**				8 9				**200A/3P**		**ROOF TOP UNIT #7** (2)
			0				0			PHASE A		0
				0				0		PHASE B		0
					0				0	PHASE C		0

1 PANEL PP1 – EXISTING

PANEL DESIGNATION: **PP1**
VOLTAGE: **480V 3 PHASE 3 WIRE** | PANEL LOCATION: **ELECTRICAL/GENERATOR 138** | TOTAL VOLTAMPS THIS PANEL 0
MAINS: **600 A** _ CB **X** MLO | MOUNTING: _ FLUSH **X** SURFACE | PANEL SPACES: **10** | TOTAL CONNECTED LOAD (AMPS) 0

CIRCUIT DESIGNATION	WIRE	TRIP	CONNECTED LOAD A	B	C	CKT. NO.	CONNECTED LOAD A	B	C	TRIP	WIRE	CIRCUIT DESIGNATION
(3) **ROOF TOP UNIT #8**		**45A/3P**				1				30A/3P		SPARE
LIEBERT CONDENSOR MECH RM2		30A/3P				2 3				30A/3P		UNIT HEATER #2
UNIT HEATER #3		30A/3P				4 5				60A/3P		ROOF TOP UNIT #3
ROOF TOP UNIT #4		50A/3P				6 7				60A/3P		LIEBERT A/C MECH RM2 (WIRE IS OLD FEED TO RTU#8)
(3) **ROOF TOP UNIT #9**		**35A/3P**				8 9				**125A/3P**		**ROOF TOP UNIT #7** (3)
			0				0			PHASE A		0
				0				0		PHASE B		0
					0				0	PHASE C		0

2 PANEL PP1 – RENOVATION

PANEL DESIGNATION: **PP2**
VOLTAGE: **480V 3 PHASE 3 WIRE** | PANEL LOCATION: **ELECTRICAL/GENERATOR 138** | TOTAL VOLTAMPS THIS PANEL 0
MAINS: **600 A** _ CB **X** MLO | MOUNTING: _ FLUSH **X** SURFACE | PANEL SPACES: **10** | TOTAL CONNECTED LOAD (AMPS) 0

CIRCUIT DESIGNATION	WIRE	TRIP	CONNECTED LOAD A	B	C	CKT. NO.	CONNECTED LOAD A	B	C	TRIP	WIRE	CIRCUIT DESIGNATION
ON LINE #2 LIEBERT		100A/3P				1				30A/3P		ON LINE #2 LIEBERT COND. UNIT
ROOF TOP UNIT #2		25A/3P				2 3				30A/3P		WATER HEATER "A"
WATER HEATER "B"		30A/3P				4 5				50A/3P		ROOF TOP UNIT #1
TRANSFORMER "T6"		60A/3P				6 7				60A/3P		EXTRA G TECH BACK UP
(2) **ROOF TOP UNIT #5**		**60A/3P**				8 9				100A/3P		ROOF TOP UNIT #6 (FUSED AT 100 AMPS)
			0				0			PHASE A		0
				0				0		PHASE B		0
					0				0	PHASE C		0

3 PANEL PP2 – EXISTING

PANEL DESIGNATION: **PP2**
VOLTAGE: **480V 3 PHASE 3 WIRE** | PANEL LOCATION: **ELECTRICAL/GENERATOR 138** | TOTAL VOLTAMPS THIS PANEL 0
MAINS: **600 A** _ CB **X** MLO | MOUNTING: _ FLUSH **X** SURFACE | PANEL SPACES: **10** | TOTAL CONNECTED LOAD (AMPS) 0

CIRCUIT DESIGNATION	WIRE	TRIP	CONNECTED LOAD A	B	C	CKT. NO.	CONNECTED LOAD A	B	C	TRIP	WIRE	CIRCUIT DESIGNATION
ON LINE #2 LIEBERT		100A/3P				1				30A/3P		ON LINE #2 LIEBERT COND. UNIT
ROOF TOP UNIT #2		25A/3P				2 3				30A/3P		WATER HEATER "A"
WATER HEATER "B"		30A/3P				4 5				50A/3P		ROOF TOP UNIT #1
TRANSFORMER "T6"		60A/3P				6 7				60A/3P		EXTRA G TECH BACK UP
(3) **ROOF TOP UNIT #5**		**70A/3P**				8 9				100A/3P		ROOF TOP UNIT #6 (FUSED AT 100 AMPS)
			0				0			PHASE A		0
				0				0		PHASE B		0
					0				0	PHASE C		0

4 PANEL PP2 – RENOVATION

PANEL DESIGNATION: **SDP1**
VOLTAGE: **480V 3 PHASE 3 WIRE** | PANEL LOCATION: **ELECTRICAL/GENERATOR 138** | TOTAL VOLTAMPS THIS PANEL 0
MAINS: **600 A** _ CB **X** MLO | MOUNTING: _ FLUSH **X** SURFACE | PANEL SPACES: **10** | TOTAL CONNECTED LOAD (AMPS) 0

CIRCUIT DESIGNATION	WIRE	TRIP	CONNECTED LOAD A	B	C	CKT. NO.	CONNECTED LOAD A	B	C	TRIP	WIRE	CIRCUIT DESIGNATION
ROOF TOP UNIT #5 (WEST SIDE OF BUILDING)		100A/3P				1				100A/3P		ROOF TOP UNIT #4 (WEST SIDE OF BUILDING)
ROOF TOP UNIT #2 (WEST SIDE OF BUILDING)		100A/3P				2 3				100A/3P		ROOF TOP UNIT #3 (WEST SIDE OF BUILDING)
LIEBERT CONDENSOR MECH RM 1		30A/3P				4 5				60A/3P		SPARE
LIEBERT A/C MECH RM 1		60A/3P				6 7				60A/3P		ROOF TOP UNIT #1 (WEST SIDE OF BUILDING)
(2) **L4 LIEBERT**		**60A/3P**				8 9				**60A/3P**		**ROOF TOP CONDENSOR COMPUTER ROOM** (2)
			0				0			PHASE A		0
				0				0		PHASE B		0
					0				0	PHASE C		0

5 PANEL SDP1 – EXISTING

PANEL DESIGNATION: **SDP1**
VOLTAGE: **480V 3 PHASE 3 WIR** | PANEL LOCATION: **ELECTRICAL/GENERATOR 138** | TOTAL VOLTAMPS THIS PANEL 0
MAINS: **600 A** _ CB **X** MLO | MOUNTING: _ FLUSH **X** SURFACE | PANEL SPACES: **10** | TOTAL CONNECTED LOAD (AMPS) 0

CIRCUIT DESIGNATION	WIRE	TRIP	CONNECTED LOAD A	B	C	CKT. NO.	CONNECTED LOAD A	B	C	TRIP	WIRE	CIRCUIT DESIGNATION
ROOF TOP UNIT #5 (WEST SIDE OF BUILDING)		100A/3P				1				100A/3P		ROOF TOP UNIT #4 (WEST SIDE OF BUILDING)
ROOF TOP UNIT #2 (WEST SIDE OF BUILDING)		100A/3P				2 3				100A/3P		ROOF TOP UNIT #3 (WEST SIDE OF BUILDING)
LIEBERT CONDENSOR MECH RM 1		30A/3P				4 5				60A/3P		SPARE
LIEBERT A/C MECH RM 1		60A/3P				6 7				60A/3P		ROOF TOP UNIT #1 (WEST SIDE OF BUILDING)
(3) **CRAC 4**		**40A/3P**				8 9				**15A/3P**		**CRAC4 CONDENSING UNIT CU4** (3)
			0				0			PHASE A		0
				0				0		PHASE B		0
					0				0	PHASE C		0

6 PANEL SDP1 – RENOVATION

STATE OF MISSOURI
MICHAEL L. PARSON, GOVERNOR

STATE OF MISSOURI
TRACIE L SIEBENECK
NUMBER PE-2013019114
PROFESSIONAL ENGINEER

Tracie L. Siebeneck - Engineer
MO# PE-2013019114

BID DOCUMENTS

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

DEPARTMENT OF REVENUE

LOTTERY HEADQUARTERS
REPLACE ROOFTOP UNITS 5-7-8-9 AND SERVER ROOM AIR CONDITIONERS

MISSOURI LOTTERY
HEAD QUARTERS BUILDING
1823 SOUTHRIDGE

JEFFERSON CITY, MO 65109

PROJECT # N2301-01
SITE # 1951
ASSET # 8611951001

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:

ISSUE DATE: 05/16/2024

CAD DWG FILE: ME_N2301-01
DRAWN BY: AH
CHECKED BY: TS
DESIGNED BY: TS/AH

SHEET TITLE:

ELECTRICAL SCHEDULES

SHEET NUMBER:

E-601

15 OF 16 SHEETS
05/16/2024

NOTES

(N) INDICATES KEYED NOTES

1 REFER TO SHEET E-101 AND E-103 FOR PANEL LOCATIONS.

(2) REMOVE AND DISPOSE OF EXISTING CIRCUIT BREAKER.

(3) CIRCUIT BREAKER TO REMAIN AS SPARE.

(4) REMOVE AND DISPOSE OF EXISTING FILLER PLATE.

(5) PROVIDE AND INSTALL NEW CIRCUIT BREAKER. IF EQUIPMENT IS OTHER THAN SPECIFIED ENSURE APPROPRIATELY SIZED BREAKER IS PROVIDED.

(6) PROVIDE AND INSTALL SQUARE D FILLER PLATE FOR CIRCUIT NOT LONGER IN USE.

PANEL DESIGNATION: **PANELBOARD 2 UPS A**
VOLTAGE: **208V 3 PHASE 3 WIRE** | PANEL LOCATION: **COORDINATE WITH OWNER** | TOTAL VOLTAMPS THIS PANEL 0
MAINS: 225 **A** _ CB **X** MLO | MOUNTING: _ FLUSH **X** SURFACE | PANEL SPACES: **42** | TOTAL CONNECTED LOAD (AMPS) 0

CIRCUIT DESIGNATION	WIRE	TRIP	CONNECTED LOAD A	B	C	CKT. NO.	CONNECTED LOAD A	B	C	TRIP	WIRE	CIRCUIT DESIGNATION
154		30A/2P								100A/3P		G-TECH BACKUP
155												
N/A		20A/1P								**60A/3P**		**CRAC 5 IN COMPUTER ROOM** (3)
N/A		20A/1P										
N/A		20A/1P								20A/1P		TEST ROOM
STRAWS ROOM RACK		20A/1P								20A/1P		TEST ROOM
STRAWS ROOM RACK		20A/1P								20A/1P		TEST ROOM
STRAWS ROOM RACK		20A/1P								20A/1P		TEST ROOM
STRAWS ROOM RACK		20A/1P										SPACE
SPACE												SPACE
SPACE												SPACE
SPACE												SPACE
SPACE												SPACE
SPACE												SPACE
SPACE												SPACE
SPACE												SPACE
SPACE												SPACE
SPACE												SPACE
SPACE												SPACE
			0				0			PHASE A		0
				0				0		PHASE B		0
					0				0	PHASE C		0

1 PANELBOARD 2 UPS A – EXISTING

PANEL DESIGNATION: **PANELBOARD 2 UPS A**
VOLTAGE: **208V 3 PHASE 3 WIRE** | PANEL LOCATION: **COORDINATE WITH OWNER** | TOTAL VOLTAMPS THIS PANEL 0
MAINS: 225 **A** _ CB **X** MLO | MOUNTING: _ FLUSH **X** SURFACE | PANEL SPACES: **42** | TOTAL CONNECTED LOAD (AMPS) 0

CIRCUIT DESIGNATION	WIRE	TRIP	CONNECTED LOAD A	B	C	CKT. NO.	CONNECTED LOAD A	B	C	TRIP	WIRE	CIRCUIT DESIGNATION
154		30A/2P								100A/3P		G-TECH BACKUP
155												
N/A		20A/1P								**60A/3P**		**SPARE** (3)
N/A		20A/1P										
N/A		20A/1P								20A/1P		TEST ROOM
STRAWS ROOM RACK		20A/1P								20A/1P		TEST ROOM
STRAWS ROOM RACK		20A/1P								20A/1P		TEST ROOM
STRAWS ROOM RACK		20A/1P								20A/1P		TEST ROOM
STRAWS ROOM RACK		20A/1P										SPACE
SPACE												SPACE
SPACE												SPACE
SPACE												SPACE
SPACE												SPACE
SPACE												SPACE
SPACE												SPACE
SPACE												SPACE
SPACE												SPACE
SPACE												SPACE
SPACE												SPACE
			0				0			PHASE A		0
				0				0		PHASE B		0
					0				0	PHASE C		0

2 PANELBOARD 2 UPS A – RENOVATION

PANEL DESIGNATION: **PANEL 2 UPS A**
VOLTAGE: **208V 3 PHASE 3 WIRE** | PANEL LOCATION: **SERVER ROOM** | TOTAL VOLTAMPS THIS PANEL 0
MAINS: _ **A** _ CB **X** MLO | MOUNTING: _ FLUSH **X** SURFACE | PANEL SPACES: **24** | TOTAL CONNECTED LOAD (AMPS) 0

CIRCUIT DESIGNATION	WIRE	TRIP	CONNECTED LOAD A	B	C	CKT. NO.	CONNECTED LOAD A	B	C	TRIP	WIRE	CIRCUIT DESIGNATION
N/A		20A/1P								20A/1P		UPS
N/A		20A/1P				1				20A/1P		N/A
CRAC-5		**15A/2P**								20A/1P		N/A
Condensing Unit										20A/1P		SPARE
Telephone Room		20A/1P				2 3				30A/2P		N/A
Telephone Room		20A/1P										N/A
N/A												N/A
N/A		30A/3P				4 5				30A/3P		N/A
N/A												N/A
SPACE												SPACE
SPACE						6 7						SPACE
SPACE												SPACE
			0				0			PHASE A		0
				0				0		PHASE B		0
					0				0	PHASE C		0

3 PANEL 2 UPS A – EXISTING

PANEL DESIGNATION: **PANEL 2 UPS A**
VOLTAGE: 208**V 3 PHASE 3 WIRE** | PANEL LOCATION: **SERVER ROOM** | TOTAL VOLTAMPS THIS PANEL 0
MAINS: _ **A** _ CB **X** MLO | MOUNTING: _ FLUSH **X** SURFACE | PANEL SPACES: **24** | TOTAL CONNECTED LOAD (AMPS) 0

CIRCUIT DESIGNATION	WIRE	TRIP	CONNECTED LOAD A	B	C	CKT. NO.	CONNECTED LOAD A	B	C	TRIP	WIRE	CIRCUIT DESIGNATION
N/A		20A/1P								20A/1P		UPS
N/A		20A/1P				1				20A/1P		N/A
SPARE		**15A/2P**								20A/1P		N/A
										20A/1P		SPARE
Telephone Room		20A/1P				2 3				30A/2P		N/A
Telephone Room		20A/1P										N/A
N/A												N/A
N/A		30A/3P				4 5				30A/3P		N/A
N/A												N/A
N/A												N/A
N/A						6 7						N/A
N/A												N/A
			0				0			PHASE A		0
				0				0		PHASE B		0
					0				0	PHASE C		0

4 PANEL 2 UPS A – RENOVATION

PANEL DESIGNATION: **PANEL 6 UPS A**
VOLTAGE: **208V 3 PHASE 3 WIRE** | PANEL LOCATION: **SERVER ROOM** | TOTAL VOLTAMPS THIS PANEL 0
MAINS: _ **A** _ CB **X** MLO | MOUNTING: _ FLUSH **X** SURFACE | PANEL SPACES: **42** | TOTAL CONNECTED LOAD (AMPS) 0

CIRCUIT DESIGNATION	WIRE	TRIP	CONNECTED LOAD A	B	C	CKT. NO.	CONNECTED LOAD A	B	C	TRIP	WIRE	CIRCUIT DESIGNATION
N/A		20A/2P								30A/2P		N/A
N/A												N/A
N/A		20A/1P								30A/2P		N/A
SPARE (2)		**20A/1P**										N/A
SPARE (2)		**20A/1P**								**20A/1P**		**SPARE** (2)
SPARE (2)		**20A/1P**								30A/2P		N/A
N/A												N/A
N/A		30A/3P								20A/1P		SPARE
N/A										20A/2P		N/A
SPARE (2)		**20A/2P**										N/A
SPARE (2)										**20A/1P**		**SPARE** (2)
SPACE (4)												SPACE
SPACE												SPACE
SPACE												SPACE
SPACE												SPACE
SPACE												SPACE
SPACE												SPACE
SPACE												SPACE
SPACE												SPACE
SPACE												SPACE
			0				0			PHASE A		0
				0				0		PHASE B		0
					0				0	PHASE C		0

5 PANEL 6 UPS A – EXISTING

PANEL DESIGNATION: **PANEL 6 UPS A**
VOLTAGE: **208V 3 PHASE 3 WIR** | PANEL LOCATION: **SERVER ROOM** | TOTAL VOLTAMPS THIS PANEL 0
MAINS: _ **A** _ CB **X** MLO | MOUNTING: _ FLUSH **X** SURFACE | PANEL SPACES: **42** | TOTAL CONNECTED LOAD (AMPS) 0

CIRCUIT DESIGNATION	WIRE	TRIP	CONNECTED LOAD A	B	C	CKT. NO.	CONNECTED LOAD A	B	C	TRIP	WIRE	CIRCUIT DESIGNATION
N/A		20A/2P								30A/2P		N/A
N/A												N/A
N/A		20A/1P								30A/2P		N/A
CRAC-5 (5)		**90A/3P**										**SPACE** (5)
										30A/2P		N/A
N/A												N/A
N/A		30A/3P								20A/1P		SPARE
N/A										20A/2P		N/A
CRAC-5 CONDENSING UNIT CU-5 (6)		**15A/3P**										**SPACE** (6)
SPACE												SPACE
SPACE												SPACE
SPACE												SPACE
SPACE												SPACE
SPACE												SPACE
SPACE												SPACE
SPACE												SPACE
SPACE												SPACE
SPACE												SPACE
			0				0			PHASE A		0
				0				0		PHASE B		0
					0				0	PHASE C		0

6 PANEL 6 UPS A – RENOVATION

STATE OF MISSOURI
MICHAEL L. PARSON, GOVERNOR

STATE OF MISSOURI
TRACIE L SIEBENECK
NUMBER PE-2013019114
PROFESSIONAL ENGINEER

Tracie L. Siebeneck - Engineer
MO# PE-2013019114

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REPLACE ROOFTOP UNITS 5-7-8-9 AND SERVER ROOM AIR CONDITIONERS

MISSOURI LOTTERY
HEAD QUARTERS BUILDING
1823 SOUTHRIDGE

JEFFERSON CITY, MO 65109

PROJECT # N2301-01
SITE # 1951
ASSET # 8611951001

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE: 05/16/2024

CAD DWG FILE: ME_N2301-01
DRAWN BY: AH
CHECKED BY: TS
DESIGNED BY: TS/AH

SHEET TITLE:

ELECTRICAL SCHEDULES

SHEET NUMBER:

E-602

16 OF 16 SHEETS
05/16/2024