LEXINGTON MAIN POST OFFICE HVAC REPLACEMNT
101 LEE AVE.
LEXINGTON, VA 24450

SEPTEMBER 18, 2020
USPS PROJECT # C11386

Eastern Facilities Service Office
P.O. Box 27497
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UNITED STATES POSTAL SERVICE®

ABBREVIATIONS

ADJ	ADJACENT; ADJUSTABLE
ADDL	ADDITIONAL
AFF	ABOVE FINISH FLOOR
AL	ALUMINUM
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APPROX	APPROXIMATE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
BD	BOARD
BLDG	BUILDING
BLKG	BLOCKING
BOT	BOTTOM
BS	BOTH SIDES
BTWN	BETWEEN
CAB	CABINET
CJ	CONTROL JOINT
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CONC	CONCRETE
CONT	CONTINUOUS
COORD	COORDINATE
D	DEPTH; DEEP
DBL	DOUBLE
DET	DETAIL
DIA	DIAMETER
DIM	DIMENSION
DN	DOWN
DS	DOWNSPOUT
E	EAST
EA	EACH
EJ	EXPANSION JOINT
EL	ELEVATION
EMER	EMERGENCY
ENCL	ENCLOSE (URE)
EQ	EQUAL
EQUIP	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EXIST	EXISTING
F/O	FACE OF
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FH	FIRE HYDRANT
FIN	FINISH (ED)
FLASH	FLASHING
FLR	FLOOR
FR	FIRE RESISTANT
FRP	FIBERGLASS REINFORCED PANEL
FRTW	FIRE RETARDANT TREATED WOOD
FURG	FURRING (ED)
GA	GAGE
GALV	GALVANIZED
GL	GLASS
GYP	GYPSUM
HB	HOSE BIBB
HC	HANDICAP
HCW	HOLLOW CORE WOOD
HDW	HARDWARE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HT	HEIGHT
INCL	INCLUDE (D), (ING)
INFO	INFORMATION
INSUL	INSULATION; INSULATED
INT	INTERIOR
JAN	JANITOR
JST	JOIST
JT	JOINT
L	LONG; LENGTH
LAM	LAMINATE (D)
LAV	LAVATORY
LBS	POUNDS
LF	LINEAR FEET
MAS	MASONRY
MAX	MAXIMUM
MDF	MEDIUM DENSITY FIBERBOARD
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MTD	MOUNTED
MTG	MOUNTING
MTL	METAL
N	NORTH
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OPNG	OPENING
OPP	OPPOSITE
OVHD	OVERHEAD
PART	PARTIAL
PL	PLATE
PLAM	PLASTIC LAMINATE
PLYWD	PLYWOOD
PNL	PANEL
PTD	PAINTED
PTN	PARTITION
PVC	POLYVINYL CHLORIDE
R	RADIUS; RISER
RD	ROOF DRAIN
REINF	REINFORCEMENT
REQD	REQUIRED
RESIL	RESILIENT
REV	REVISION
RO	ROUGH OPENING
RWL	RAIN WATER LEADER
S	SOUTH
SAPC	SUSPENDED ACOUSTICAL PANEL CEILING
SCHED	SCHEDULE (D)
SCW	SOLID CORE WOOD
SECT	SECTION
SF	STOREFRONT; SQUARE FOOT
SIM	SIMILAR
SQ	SQUARE
SST	STAINLESS STEEL
ST	STREET
STC	SOUND TRANSMISSION CRITERIA
STD	STANDARD
STL	STEEL
STOR	STORAGE
SUSP	SUSPENDED
SYMM	SYMMETRY (ICAL)
T	TREAD
T/O	TOP OF
TEMP	TEMPERATURE; TEMPORARY
THK	THICK (NESS)
THRU	THROUGH
TOW	TOP OF WALL
TRTD	TREATED
TYP	TYPICAL
UL	UNDERWRITER'S LABORATORIES
UON	UNLESS OTHERWISE NOTED
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VTR	VENT THRU ROOF
VWC	VINYL WALL COVERING
W	WEST; WIDTH; WIRE
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET
WD	WOOD
WDW	WINDOW
WWF	WELDED WIRE FABRIC
XFMR	TRANSFORMER

GENERAL NOTES

1. PERFORM WORK IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL GOVERNING ORDINANCES, CODES AND REGULATIONS.
2. ALL MATERIALS SHALL COMPLY WITH APPLICABLE CODES, ORDINANCES AND REGULATIONS.
3. VISIT AND BECOME FAMILIAR WITH THE SITE AND BUILDING PRIOR TO BID. INCLUDE THE COST OF ALL WORK DESCRIBED IN THE CONTRACT DOCUMENTS AND THAT IS REQUIRED OR REASONABLY IMPLIED TO ACHIEVE THE DESIGN INTENT OF THE CONTRACT DOCUMENTS.
4. NOTIFY THE ARCHITECT OF ANY CONFLICTS BETWEEN EXISTING CONDITIONS AND THE NEW WORK, OF ANY OMISSIONS OR CONFLICTS IN THE DRAWINGS AND ANY RESTRICTIONS RELATED TO THE EXECUTION OF THE WORK INCLUDING THE COORDINATION WITH OTHER TRADES.
5. FIELD VERIFY ALL CONDITIONS AND DIMENSIONS INDICATED AND NOTIFY THE ARCHITECT OF ANY VARIATION PRIOR TO THE PURCHASING OF MATERIALS, FABRICATION OR CONSTRUCTION OF ANY ITEM.
6. PROVIDE SLEEVED/FRAMED OPENINGS IN EXISTING CONSTRUCTION FOR INSTALLATION OF MECHANICAL/PLUMBING/ELECTRICAL ITEMS. PATCH TO MATCH ADJACENT SURFACES UPON COMPLETION.
7. CONSULT ELECTRICAL AND MECHANICAL DRAWINGS FOR LOCATION OF OPENINGS OR RECESSES FOR EQUIPMENT, SUPPORTS, HEATERS, AND ELECTRICAL PANELS.
8. CLOSE AND SEAL ABANDONED OPENINGS TO MATCH EXISTING ADJACENT SURFACES WHERE MECHANICAL/PLUMBING/ELECTRICAL ITEMS ARE REMOVED.
9. PROVIDE FRAMED SUPPORT FOR ALL LIGHTING FIXTURES, CONDUIT, DUCTS, AND MECH EQUIPMENT AS REQUIRED FOR COMPLETE SUPPORT AT 2–1/2 TIMES LOAD. COORDINATE LOCATION OF FIXTURES, CEILING DIFFUSERS, AND OTHER EQUIPMENT.
10. ALL WOOD BLOCKING SHALL BE FIRE RETARDANT TREATED.
11. CONTRACTOR SHALL PROVIDE MINIMUM OF 6 MONTHS, OR LONGER IF NEEDED, OF TEMPORARY HEATING AND/OR COOLING AS REQUIRED FOR THE FACILITY DURING CONSTRUCTION.

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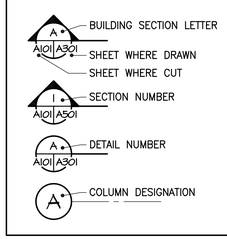
BUILDING DATA

SYMBOLS



MATERIALS

EARTH	PLYWOOD
GRAVEL	WOOD (FINISHED)
CONCRETE	WOOD (ROUGH)
BRICK	INSULATION (BATT OR LOOSE)
CONCRETE MASONRY UNIT	INSULATION (RIGID)
METAL (LARGE SCALE)	GYPSUM BOARD, CEMENT, GROUT
METAL (SMALL SCALE)	CERAMIC TILE, ACOUSTICAL TILE

INDEX OF DRAWINGS

T001 COVER SHEET

STRUCTURAL
S101 PARTIAL FRAMING PLAN
S201 GENERAL NOTES AND DETAILS

MECHANICAL
M001 COVER SHEET
M101 BASEMENT DEMOLITION PLAN
M102 1ST FLOOR DEMOLITION PLAN
M103 ATTIC/ROOF DEMOLITION PLAN
M201 BASEMENT NEW WORK FLOOR PLAN
M202 1ST FLOOR NEW WORK FLOOR PLAN
M203 ATTIC/ROOF NEW WORK FLOOR PLAN
M501 DIAGRAMS & DETAILS
M502 DIAGRAMS & DETAILS
M503 DIAGRAMS & DETAILS
M504 DIAGRAMS & DETAILS
M601 SCHEDULES
M602 SCHEDULES

ELECTRICAL
E001 ELECTRICAL COVER SHEET
E101 BASEMENT DEMOLITION PLAN
E102 1ST FLOOR DEMOLITION PLAN
E103 ATTIC/ROOF DEMOLITION PLAN
E201 BASEMENT POWER PLAN
E202 1ST FLOOR POWER PLAN
E203 ATTIC/ROOF POWER PLAN
E601 SCHEDULES AND RISER DIAGRAMS

FILE: TMPLCOV DATE: 9/23/20
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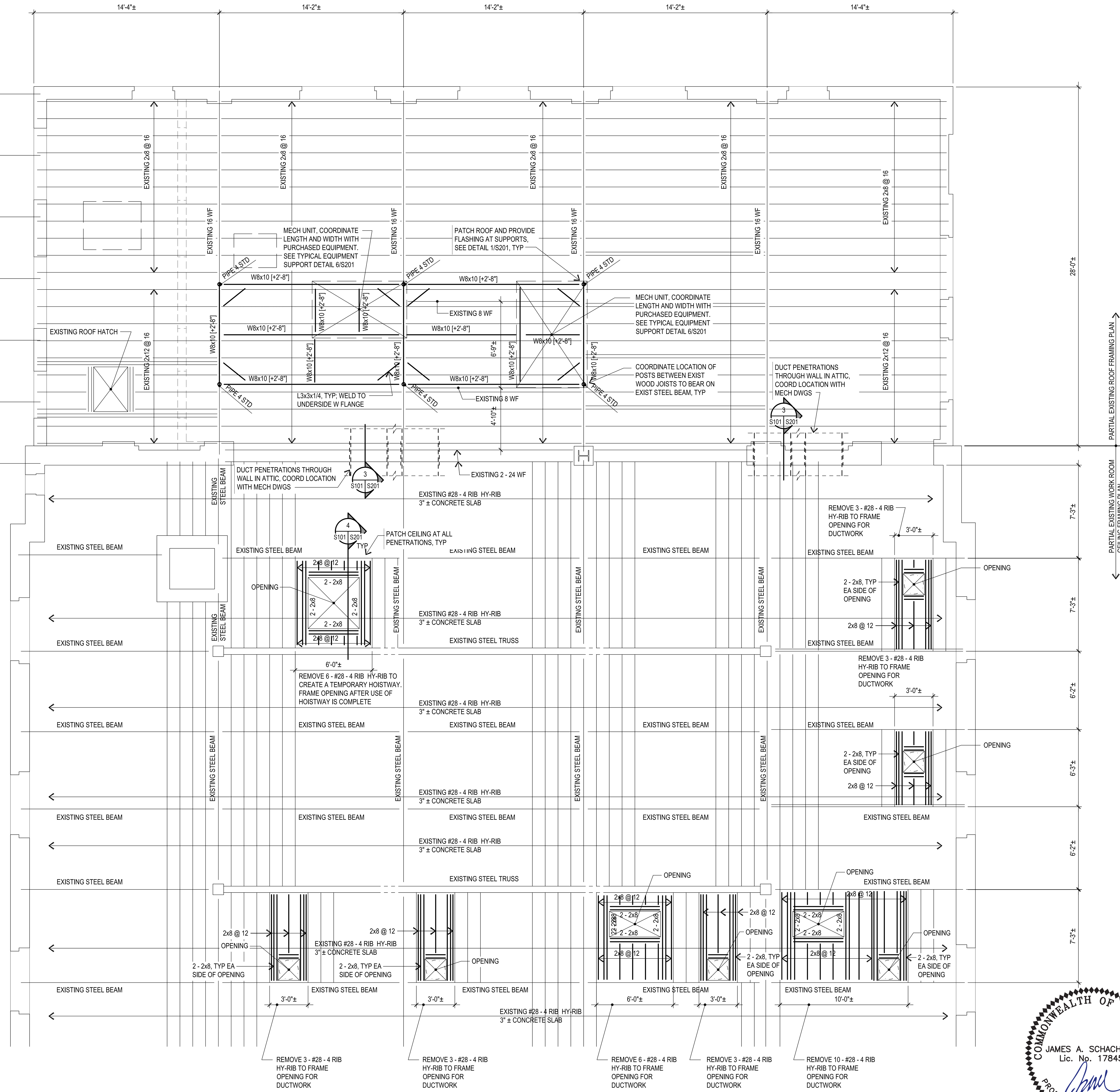

1/4" = 1'-0"
5' 3' 1' 0 5'

EXISTING PARTIAL FRAMING PLAN

1/4" = 1'-0"

PLAN NOTES:

- [XX'-XX"] INDICATES TOP OF STEEL ELEVATION ABOVE ROOF.
- CONNECT 2x8's @ 12 TO 2 - 2x8 W/ JOIST HANGERS.
- SEE DETAIL 5/S201 FOR DUCT HANGER DETAIL IN WORKROOM. COORDINATE WITH MECHANICAL DRAWINGS FOR LOCATIONS WHERE DUCTS WILL BE HUNG FROM CEILING.

FILE: 71945-S101 SCALE: 1/4" = 1'-0" DATE: 09/15/20 TIME: 12:33:1

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S101 PARTIAL FRAMING PLAN

Scale:
Date: 09-18-20
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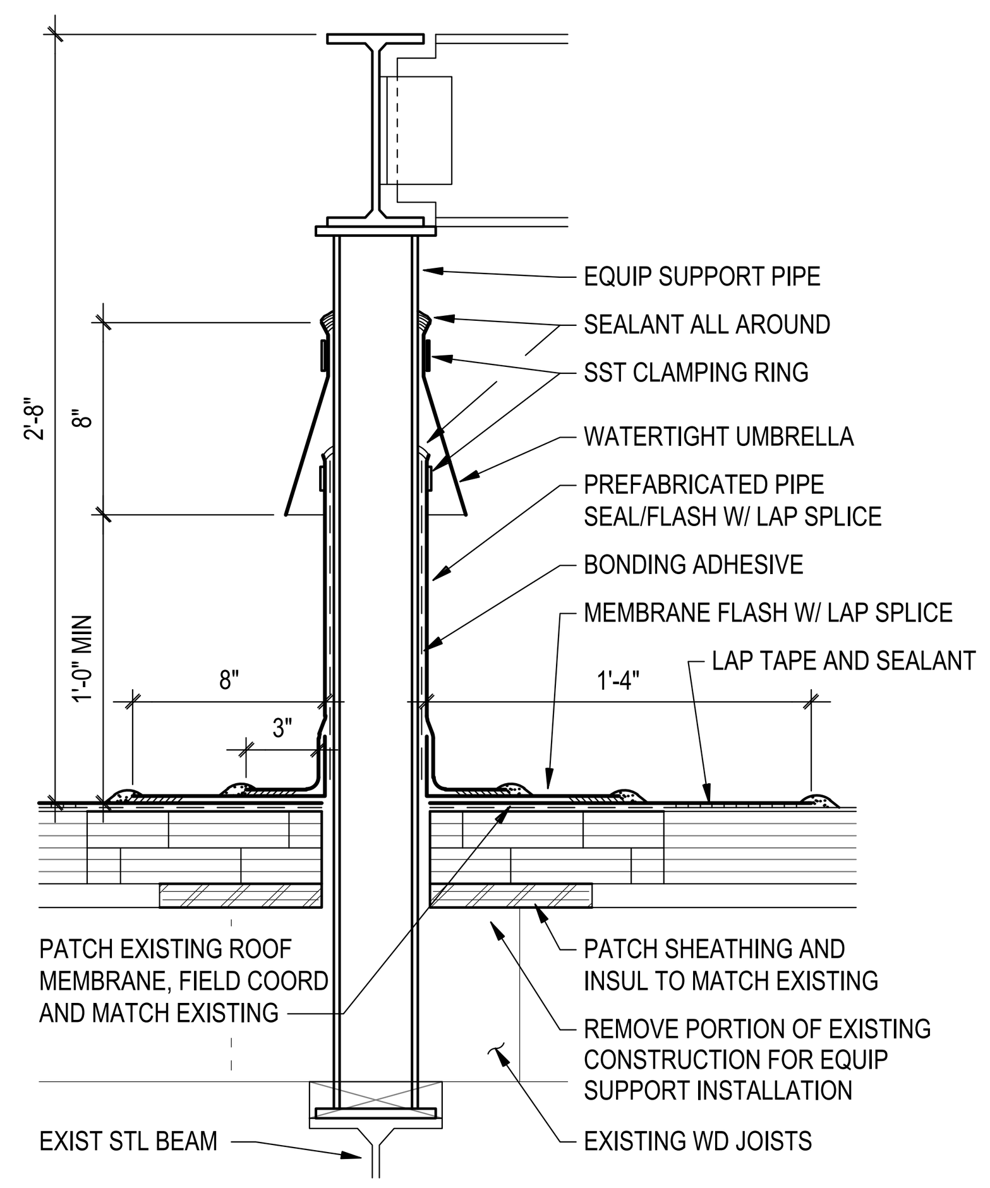
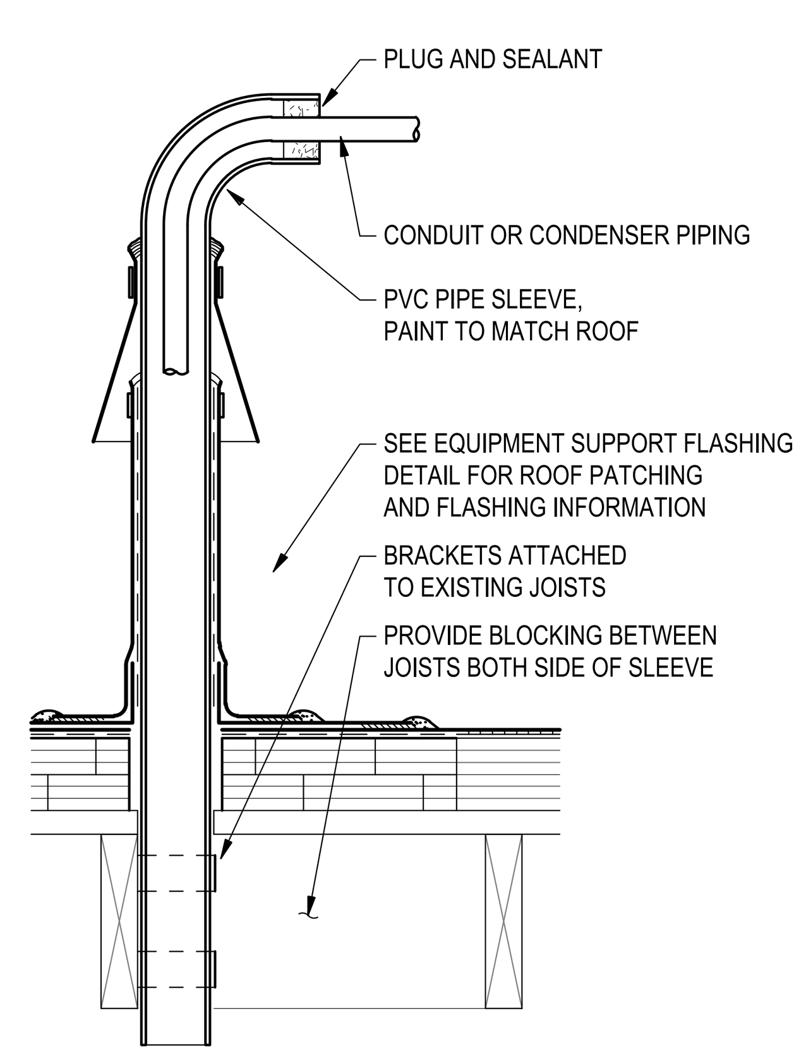


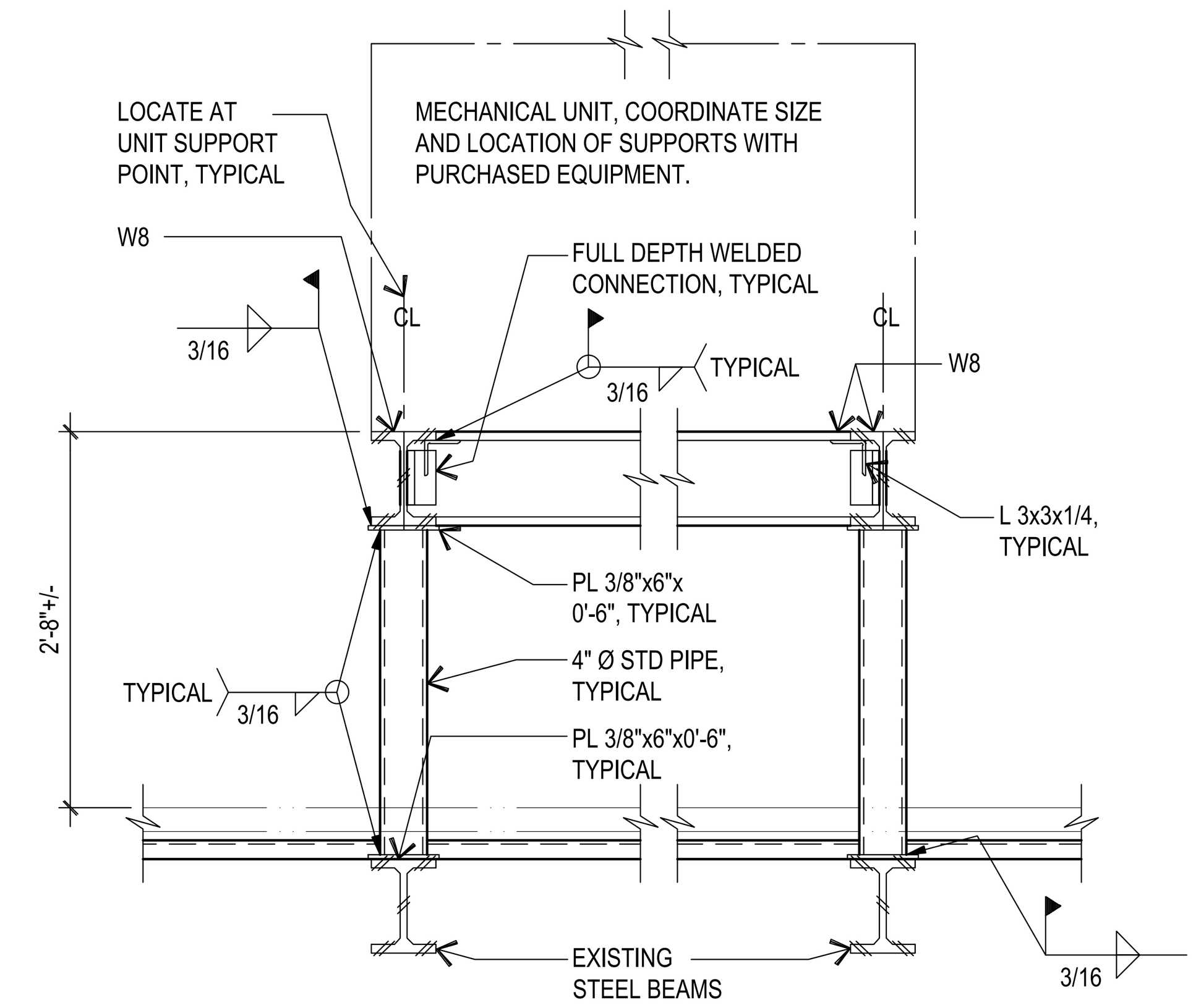
1 EQUIPMENT SUPPORT FLASHING DETAIL

S101 | S201 1-1/2" = 1'-0"



2 CONDUIT OR PIPE PENETRATION DETAIL

S101 | S201 1-1/2" = 1'-0"



6 TYPICAL EQUIPMENT SUPPORT DETAIL

S101 | S201 NOT TO SCALE

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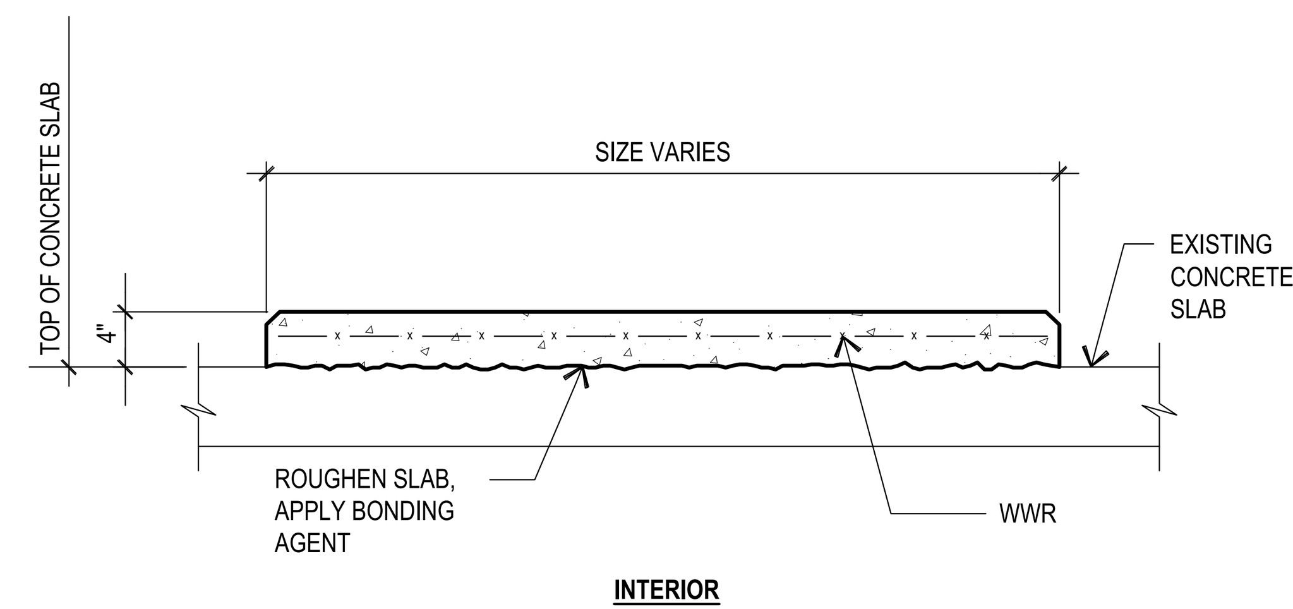

TYPICAL CONCRETE PAD DETAIL

NOT TO SCALE

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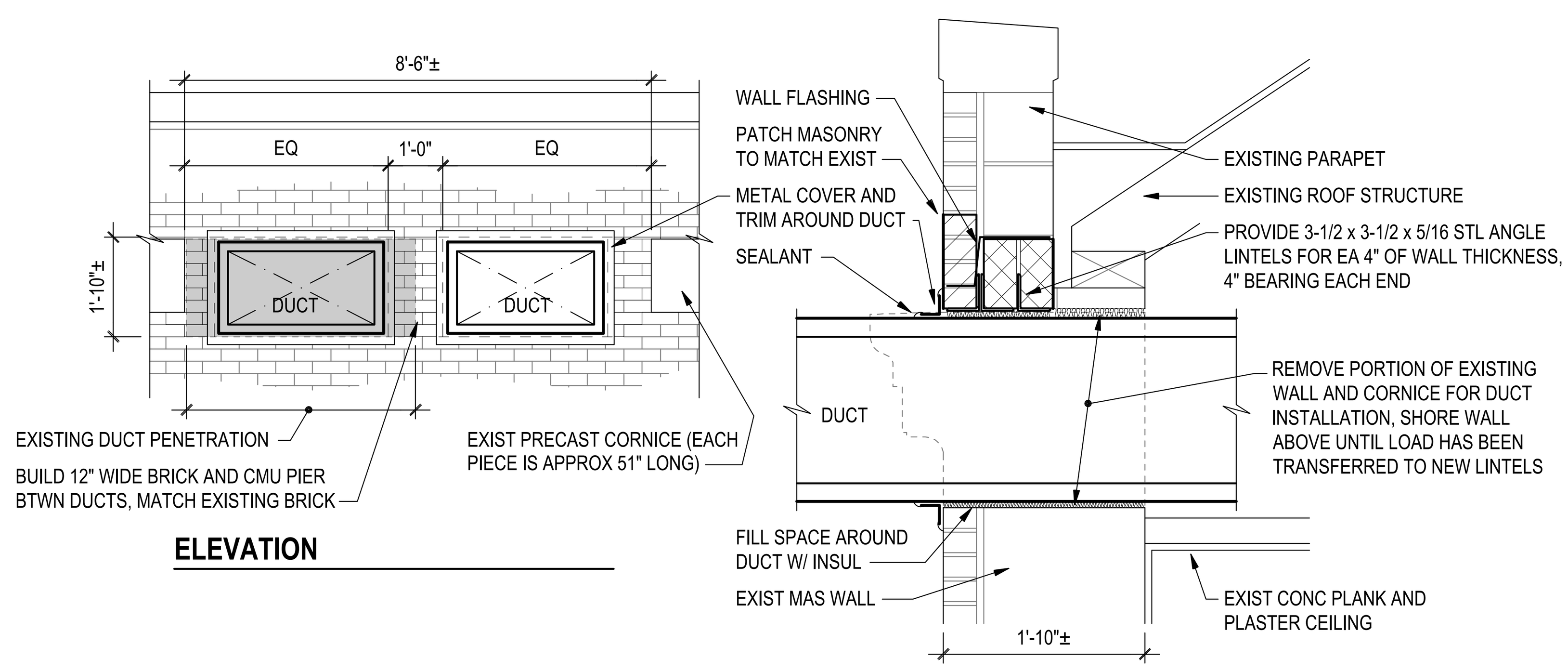
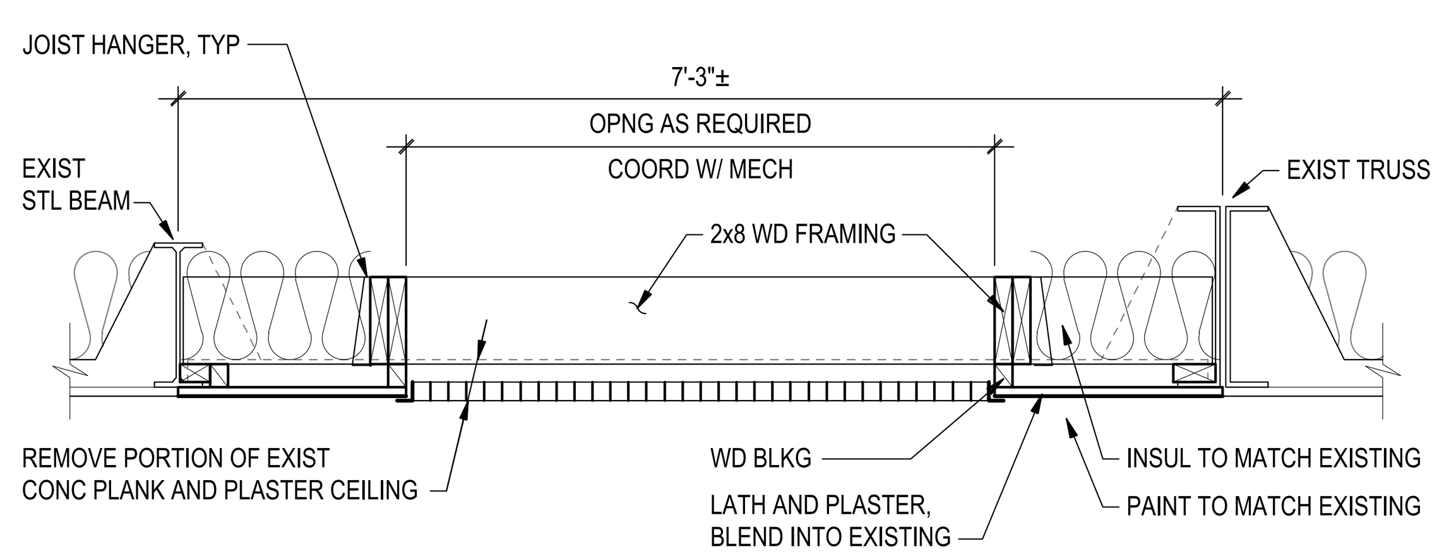


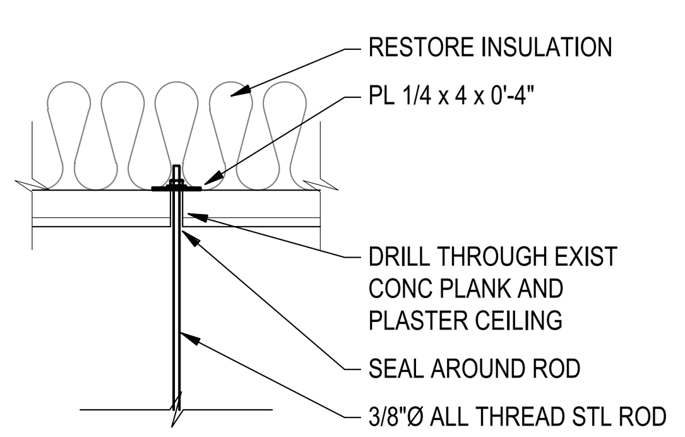
3 DUCT WALL PENETRATION DETAIL

S101 | S201 3/4" = 1'-0"



4 PENETRATION THROUGH CEILING DETAIL

S101 | S201 3/4" = 1'-0"



5 DUCT HANGER DETAIL

S101 | S201 3/4" = 1'-0"

STRUCTURAL GENERAL NOTES

APPLICABLE CODE:
VIRGINIA UNIFORM STATEWIDE BUILDING CODE (2015 EDITION)

RISK CATEGORY -- II

THERE IS NO INFORMATION ON THE ORIGINAL BUILDING DESIGN FOR THE LIVE LOADS, SNOW LOADS OR WIND LOADS. THIS DESIGN IS BASED ON THE FOLLOWING LIVE LOADS, SNOW LOADS AND WIND LOADS.

LIVE LOADS:
- ROOF -- 30 PSF

SNOW LOADS:
- GROUND SNOW LOAD (P_g) ---------------------------------- 30 PSF
- FLAT-ROOF SNOW LOAD (P_f) ------------------------------ 20 PSF
- SNOW EXPOSURE FACTOR (C_e) ------------------------- 0.9
- IMPORTANCE FACTOR (I_s) ---------------------------------- 1.0
- THERMAL FACTOR (C_t) -- 1.0

WIND LOADS:
- BASIC WIND SPEED (3-SECOND GUST) --------------- 90 MPH
- ULTIMATE WIND SPEED ------------------------------------- 115 MPH
- WIND EXPOSURE FACTOR --------------------------------- B

SEISMIC:
- SPECTRAL RESPONSE ACCELERATION -------------- S_S 0.250g; S_1 0.060g
- SPECTRAL RESPONSE COEFFICIENTS ---------------- S_{DS} 0.267g; S_{D1} 0.096g
- SITE CLASS --- D
- BASIC SEISMIC-FORCE-RESISTING SYSTEM -------- ORDINARY STEEL CONCENTRICALLY BRACED FRAME
- RESPONSE MODIFICATION FACTOR (R) -------------- 3.25
- SEISMIC DESIGN CATEGORY ---------------------------- B
- IMPORTANCE FACTOR (I_e) ---------------------------------- 1.0
- ANALYSIS PROCEDURE ------------------------------------ EQUIVALENT LATERAL FORCE

STRUCTURAL STEEL:
- STRUCTURAL WIDE FLANGE SHAPES: ASTM A-992
- STEEL ANGLES, CHANNELS AND PLATES: ASTM A-36
- STEEL PIPE: ASTM A-53, TYPE E OR S, GRADE B
- BOLTS FOR BOLTED CONNECTIONS: ASTM A-325
- FOR CONNECTIONS NOT DETAILED OR NOTED, DESIGN CONNECTIONS IN ACCORDANCE WITH AISC SPECIFICATION FOR STRUCTURAL STEEL (2010).
- SUPPLY LOOSE ANGLE LINTELS OVER MASONRY OPENINGS AND RECESSES, UNLESS NOTED OTHERWISE; FOR EACH 4" OF WALL THICKNESS ANGLES SHALL BE AS FOLLOWS:

MASONRY OPENING	ANGLE SIZE	BEARING EA END
4'-0" OR LESS	3-1/2x3-1/2x5/16	4"
BETWEEN 4"-1" AND 5'-11"	4x3-1/2x5/16	6"
BETWEEN 6'-0" AND 7'-11"	5x3-1/2X5/16	8"
BETWEEN 8'-0" AND 10'-0"	6x3-1/2x3/8	8"

(3-1/2" LEG HORIZONTAL)

- GALVANIZE ALL EXTERIOR STRUCTURAL SHAPES, PLATES, AND BARS.
- PROVIDE MISCELLANEOUS STEEL FRAMING AT OPENINGS, EQUIPMENT SUPPORTS AND OTHER ITEMS REQUIRED BY THE WORK OF OTHER TRADES.
- STRUCTURAL STEEL WORK SHALL COMPLY WITH AISC SPECIFICATION STRUCTURAL STEEL BUILDING (2016).

CONCRETE:
- CONCRETE STRENGTHS: 3500 psi; WEIGHT 145 pcf
  MAXIMUM WATER/CEMENT RATIO: 0.45.
- REINFORCING BARS: ASTM A-615, GRADE 60.
- WELDED WIRE REINFORCEMENT (WWR): ASTM A-1064

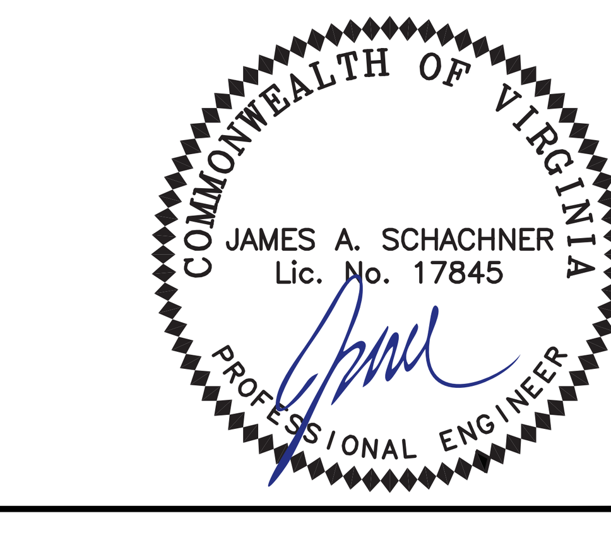
ITEM	SIZE
MECHANICAL EQUIPMENT PADS:	6x6 - W2.9xW2.9

- PROVIDE 2x4 KEYS, UNLESS NOTED OTHERWISE.
- PROVIDE #4 @ 12 EW EF IN SLABS OR WALLS NOT COVERED BY A NOTE OR SECTION.
- CONCRETE PROTECTION FOR REINFORCING: SLABS = 3/4"
- PROVIDE 1/2" CHAMFER ON CONCRETE CORNERS THAT WILL BE EXPOSED TO VIEW.
- CAST IN PLACE CONCRETE WORK SHALL COMPLY WITH ACI 318-14.
- PROVIDE A CHEMICAL FLOOR HARDENER FINISH ON ALL CONCRETE SLABS THAT DO NOT RECEIVE A FLOOR COVERING.
- PROVIDE CONCRETE PADS REQUIRED FOR THE WORK OF OTHER TRADES.
- USE AIR-ENTRAINING ADMIXTURE IN ALL CONCRETE EXPOSED TO FREEZING AND THAWING.

ANCHORS:
- 3/4"Ø ADHESIVE ANCHORS SHALL HAVE A 6 5/8" MINIMUM EMBEDMENT DEPTH WITH AN ULTIMATE PULLOUT STRENGTH OF 24300 lbs AND AN ULTIMATE SHEAR STRENGTH OF 24300 lbs.

COORDINATION:
- SEE ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR ADDITIONAL OPENINGS, SLEEVES, EQUIPMENT PADS, CURBS, DEPRESSIONS, INSERTS, AND OTHER EMBEDDED ITEMS.
- THE SIZES AND LOCATIONS OF ALL ROOF AND FLOOR OPENINGS, EQUIPMENT PADS, AND MECHANICAL EQUIPMENT SUPPORTS MUST BE VERIFIED AGAINST PURCHASED EQUIPMENT AND ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL COORDINATED SHOP DRAWINGS.

EXISTING CONDITIONS:
- CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION OF ANY ITEM.



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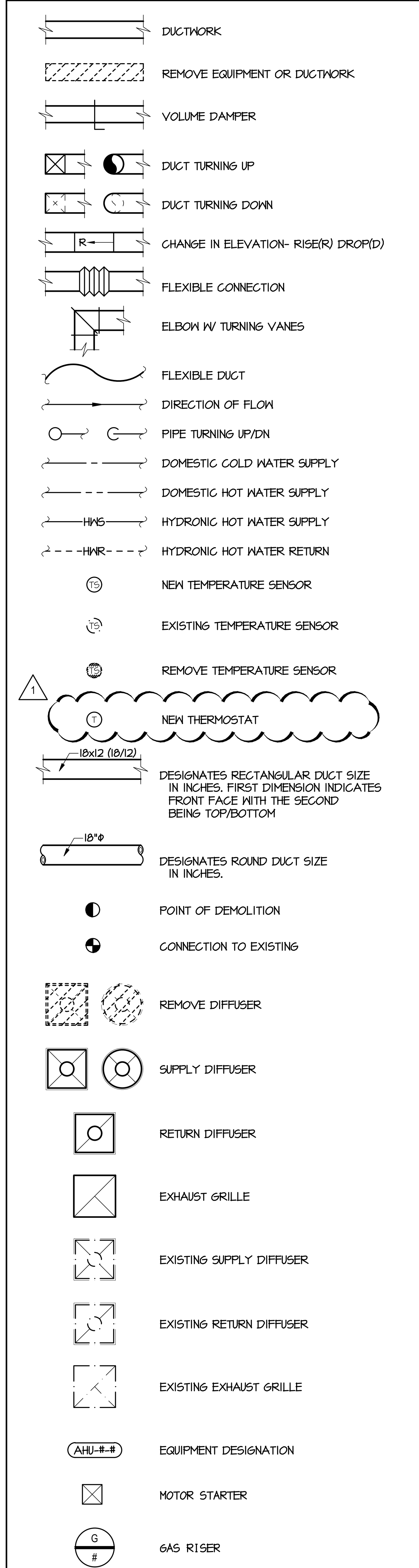
S201 GENERAL NOTES AND DETAILS
Scale: Date: 09-18-20 Revisions:
Project: LEXINGTON MAIN POST OFFICE HVAC REPLACEMENT
USPS File Number:

FILE: 71945-S201 SCALE: 3/4" = 1'-0" DATE: 09/15/20 TIME: 12:50:35

MECHANICAL ABBREVIATIONS

∠	ANGLE
@	AT
ABV	ABOVE
AD	ACCESS DOOR
AFD	ADJUSTABLE FREQUENCY DRIVE
AFF	ABOVE FINISH FLOOR
AFMS	AIRFLOW METERING STATION
AHU	AIR HANDLING UNIT
ARCH.	ARCHITECT
A.S.	AS SHOWN
AUX	AUXILIARY
BD	BACKDRAFT DAMPER
BFP	BACKFLOW PREVENTER
BLDG	BUILDING
BLW	BELOW
BOT	BOTTOM
BTU	BRITISH THERMAL UNIT
BV	BRICK VENT
BWV	BACK WATER VALVE
CD	CEILING DIFFUSER
CEF	CEILING EXHAUST FAN
CFH	CUBIC FEET PER HOUR
CFM, C, ¢	CUBIC FEET PER MINUTE
CG	CEILING GRILLE
CI	CAST IRON
CLG	CEILING
CO	CLEANOUT PLUG
CONC	CONCRETE
COND	CONDENSATE
CONN	CONNECTION
CR	CEILING RETURN
CUH	CABINET UNIT HEATER
CV	CONTROL VALVE
CWS	COLD WATER SUPPLY
dB	DECIBELS
DB	DRY BULB
DBL	DOUBLE
DDC	DIRECT DIGITAL CONTROL
DESIG	DESIGNATION
DET	DETAIL
DIA	DIAMETER
DIM	DIMENSION
DN	DOWN
DWG	DRAWING
EA	EACH
EAT	ENTERING AIR TEMPERATURE
EER	ENERGY EFFICIENCY RATIO
EL, ELEV	ELEVATION
EQ	EQUAL
EQUIP.	EQUIPMENT
ER	EXHAUST REGISTER
ESP	EXTERNAL STATIC PRESSURE
EWT	ENTERING WATER TEMPERATURE
EXH	EXHAUST
EXIST.	EXISTING
EF	EXHAUST FAN
F	FAHRENHEIT
FC	FLEXIBLE CONNECTION
FCU	FAN COIL UNIT
FD	FIRE DAMPER, FLOOR DRAIN
FIN.	FINISH (ED)
FL	FLOOR; FULL LENGTH
FLEX.	FLEXIBLE
FPM	FEET PER MINUTE
FPT	FAN POWERED TERMINAL UNIT
FT	FOOT, FEET
FTG	FITTING
FTR	FLUE THRU ROOF
FV	FACE VELOCITY
G	GUIDE
GAL	GALLON
GPM	GALLONS PER MINUTE
H	HEIGHT
HTR	HEATER
HOA	HAND-ON-AUTOMATIC
HPG	HIGH PRESSURE GAS
HP	HORSEPOWER, HEAT PUMP
HVAC	HEATING, VENTILATING & AIR CONDITIONING
HWS/HWR	HOT WATER SUPPLY/RETURN
IN.	INCH (ES)
INV	INVERT
LAT	LEAVING AIR TEMPERATURE
LAV	LAVATORY
LBS	POUNDS
LBS/HR	POUNDS PER HOUR
LG	LONG; LENGTH
LPG	LIQUID PETROLEUM GAS
MAX	MAXIMUM
MBH	THOUSAND BTU PER HOUR
MECH	MECHANICAL
MER	MECHANICAL EQUIPMENT ROOM
MFR	MANUFACTURER
MHP	MOTOR HORSEPOWER
MOD	MOTOR OPERATED DAMPER
MUW	MAKE UP WATER
N/A	NOT APPLICABLE
NC	NOISE CRITERION, NORMALLY CLOSED
NG	NATURAL GAS
NIC	NOT IN CONTRACT
NO., #	NUMBER, NORMALLY OPEN
NTS	NOT TO SCALE
O	OPEN
OA	OUTSIDE AIR
OAC	OPEN ABOVE CEILING (IN WALL)
OAL	OUTSIDE AIR INTAKE LOUVER
OC	ON CENTER
OBD	OPPOSED BLADE DAMPER
OED	OPEN END DUCT W/ 1/2" WIRE MESH
OD	OUTSIDE DIAMETER
PCF	POUNDS PER CUBIC FOOT
PE	PIPE ENCLOSURE
PRESS.	PRESSURE
PRV	PRESSURE REDUCING VALVE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
R	RADIUS; RISER
REC	RECOVERY
REG	REGISTER
REQD	REQUIRED
RPM	REVOLUTIONS PER MINUTE
RR	RETURN REGISTER
RTU	ROOFTOP UNIT
SA	SHOCK ABSORBER
SD	DUCT SMOKE DETECTOR
SF	SQUARE FEET
SF	SUPPLY FAN
SR	SUPPLY REGISTER
SS	STAINLESS STEEL
TEMP	TEMPERATURE; TEMPORARY
TG	TRANSFER GRILLE
TJW	THRU JOIST WEB
TOC	TOP OF CONCRETE
TYP	TYPICAL
TU	TERMINAL UNIT
UBJ	UP BETWEEN JOIST SPACE
UH	UNIT HEATER
UKN	UNKNOWN
UTR	UP THRU ROOF
UV	UNIT VENTILATION
V	VENT
VAV	VARIABLE AIR VOLUME TERMINAL
VENT	VENTILATION
VFD	VARIABLE FREQUENCY DRIVE
VIV	VALVE IN VERTICAL
VP	VENT PIPE
VTR	VENT THRU ROOF
W	WIDTH
W/	WITH
W/O	WITHOUT
WB	WET BULB
WCO	WALL CLEANOUT
WF	WALL FIN
WG	WATER GAUGE
WT	WEIGHT
WTR, H_2O	WATER

MECHANICAL SYMBOLS



MECHANICAL NOTES:

1. GENERAL

   A. THESE DRAWINGS ARE SCHEMATIC AND INTENDED TO DEPICT THE GENERAL LOCATION OF HVAC SYSTEM COMPONENTS IN ACCORDANCE WITH DRAWINGS, NOTES, AND THE INTENT OF THE DESIGN.

   B. DRAWINGS ARE SCHEMATIC. THIS CONTRACTOR IS RESPONSIBLE TO COORDINATE HIS WORK WITH ACTUAL FIELD CONDITIONS AND OTHER TRADES.

   C. THE INTENT OF THESE DRAWINGS IS TO PROVIDE COMPLETE AN PROPERLY FUNCTIONING HVAC SYSTEMS. PROVIDE ALL LABOR AND MATERIAL NECESSARY TO ACHIEVE SUCH ENDS.

2. CODES AND PERMITS: COMPLY WITH CODES, LAWS AND ORDINANCES IN FORCE AT BUILDING. SECURE AND PAY FOR PERMITS AND INSPECTION FEES REQUIRED FOR FULFILLING REQUIREMENTS OF THESE SPECIFICATIONS.

3. SUBSTITUTION OF EQUIPMENT AND MATERIALS: DRAWINGS ARE BASED UPON THE MANUFACTURER LISTED FIRST IN THE SCHEDULES. WHERE ANY OTHER EQUIPMENT IS USED, THIS CONTRACTOR WILL BE RESPONSIBLE FOR ANY CHANGES IN THE PLUMBING AND HVAC SYSTEM IN THE BUILDING DUE TO PHYSICAL LIMITATIONS OF SUCH EQUIPMENT, AND SHALL PAY FOR ALL GENERAL, STRUCTURAL, MECHANICAL AND ELECTRICAL CHANGES REQUIRED BY THE SUBSTITUTION. THIS CONTRACTOR SHALL INFORM ALL CONTRACTORS OF ANY CHANGES BEFORE THEY BEGIN THEIR RESPECTIVE WORK.

4. SLEEVES, OPENINGS, CUTTING AND DRILLING: CONTRACTOR SHALL PROVIDE AND PATCH ALL DUCT AND PIPING OPENINGS REQUIRED IN NEW CONSTRUCTION. MAKE ARRANGEMENTS WITH ALL OTHER CONTRACTORS FOR SPECIAL SLEEVES, FRAMING, SPACING AND CHASES. PROVIDE OPENINGS IN BUILDING CONSTRUCTION FOR PASSAGE OF PIPING AND DUCTWORK. DO NOT PENETRATE STRUCTURAL MEMBERS WITHOUT PRIOR WRITTEN APPROVAL OF BUILDING ENGINEER.

5. ALL NECESSARY ALLOWANCES AND PROVISIONS SHALL BE MADE BY THIS CONTRACTOR FOR BEAMS, COLUMNS OR OTHER OBSTRUCTIONS OF THE BUILDING OR THE WORK OF OTHER CONTRACTORS, WHETHER OR NOT SAME IS INDICATED. WHERE NECESSARY TO AVOID OBSTRUCTIONS THE DUCTS SHALL BE TRANSFORMED, DIVIDED, OFFSET, RAISED OR LOWERED WITH THE REQUIRED FREE AREA BEING MAINTAINED.

6. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF HVAC WORK WITH EXISTING CONDITIONS AND THE WORK OF OTHER TRADES. MINOR DEVIATIONS FROM THE PLANS MAY BE MADE TO AVOID MINOR CONFLICTS. WHEN MAJOR CONFLICTS ARE APPARENT, THE OWNER SHALL BE ADVISED IMMEDIATELY, AND AFFECTED WORK SHALL NOT BE INSTALLED UNTIL THE CONFLICT HAS BEEN RESOLVED.

7. THE CONTRACTOR SHALL THOROUGHLY CLEAN HIS WORK AREA DAILY OR AS REQUESTED BY THE GENERAL CONTRACTOR. MECHANICAL CONTRACTOR SHALL ALSO REMOVE ALL HIS TRASH AND DEBRIS AFTER THE COMPLETION OF THE WORK.

8. ELECTRICAL WORK

   A. ALL LINE VOLTAGE WIRING FOR HVAC EQUIPMENT, FACTORY-MOUNTED CONTROL PANELS AND TO INDIVIDUALLY MOUNTED STARTERS, AND FROM STARTERS TO MOTORS, SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. THIS CONTRACTOR SHALL TURN OVER ALL INDIVIDUALLY MOUNTED STARTERS AND DISCONNECT SWITCHES FURNISHED UNDER THIS CONTRACT TO THE ELECTRICAL CONTRACTOR FOR INSTALLATION BY HIM.

   B. ALL LINE, OR LOW VOLTAGE, WIRING REQUIRED FOR TEMPERATURE CONTROL SHALL BE PROVIDED BY HVAC CONTRACTOR.

   C. WIRING AND ELECTRICAL WORK SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE AND LOCAL REQUIREMENT.

9. TESTS

   A. ADJUST ALL FAN DRIVES, AND AIR DISTRIBUTION DEVICES TO PROVIDE THE REQUIRED AIR QUANTITIES AS SHOWN ON THE DRAWINGS WITHIN +10% TO -5%

   B. SUBMIT 3 COPIES OF BOTH PRELIMINARY AND FINAL CERTIFIED BALANCING REPORT FOR THE OWNER'S APPROVAL AND RECORDS.

10. DUCTWORK

    A. DUCTWORK SHALL BE FABRICATED FROM GALVANIZED (G90) SHEET STEEL IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARDS. NO DUCT LEAKAGE SHALL BE NOTICEABLE TO THE HAND OR EAR OF THE ENGINEER. DUCTWORK SHALL BE CLASSIFIED LOW PRESSURE (2 INCHES OF W.G.), LOW VELOCITY (2400 FPM) AS DEFINED BY SMACNA LOW VELOCITY MANUAL.

    B. PROVIDE AIR TURNING DEVICES IN DUCTWORK AT ANY CHANGES IN DIRECTION OF 30° OR GREATER.

    C. ALL DUCTWORK SHALL BE SUSPENDED FROM THE BUILDING STRUCTURE IN ACCORDANCE WITH THE SMACNA DUCT CONSTRUCTION STANDARDS.

    D. DIMENSIONS SHOWN ON DRAWINGS ARE INSIDE CLEAR DIMENSIONS.

    E. FLEXIBLE DUCT RUNS SHALL BE LIMITED TO 8'-0".

    F. ATTACH FLEXIBLE DUCTS TO DUCTWORK USING STAINLESS STEEL BAND CLAMPS.

11. DUCTWORK INSULATION:

    A. MINERAL-FIBER BLANKET INSULATION: COMPLY WITH ASTM C 553, TYPE II AND ASTM C 1290, TYPE I.

    B. JACKETS: COMPLY WITH THE FOLLOWING:

       1. ASJ: WHITE, KRAFT-PAPER, FIBERGLASS-REINFORCED SCRIM WITH ALUMINUM-FOIL BACKING; COMPLYING WITH ASTM C 1136, TYPE I. ASJ TAPE: WHITE VAPOR-RETARDER TAPE MATCHING FACTORY-APPLIED JACKET WITH ACRYLIC ADHESIVE, COMPLYING WITH ASTM C 1136.

       2. FSK JACKET: ALUMINUM-FOIL, FIBERGLASS-REINFORCED SCRIM WITH KRAFT-PAPER BACKING; COMPLYING WITH ASTM C 1136, TYPE II. FSK TAPE: FOIL-FACE, VAPOR-RETARDER TAPE MATCHING FACTORY-APPLIED JACKET WITH ACRYLIC ADHESIVE; COMPLYING WITH ASTM C 1136.

    C. MINERAL-FIBER INSULATION INSTALLATION: BLANKET AND BOARD INSULATION INSTALLATION ON DUCTS AND PLENUMS: SECURE WITH ADHESIVE AND INSULATION PINS.

    D. SIZE: 1" THICK ON ALL DUCTWORK.

12. FLEXIBLE CONNECTIONS

    RUBBERIZED - CANVAS FLEXIBLE CONNECTIONS.

13. VOLUME DAMPERS

    PROVIDE VOLUME DAMPERS, WHETHER INDICATED OR NOT, IN EVERY SUPPLY, RETURN, AND EXHAUST DUCT BRANCH FROM MAIN DUCT FITTED WITH LOCKING DEVICES FOR ADJUSTING THE AIR SUPPLY. PROVIDE ELEVATED DIAL REGULATORS FOR INSULATED DUCTS. INSTALL ADDITIONAL DAMPERS OF BAFFLES AS REQUIRED FOR FINAL AIR BALANCE.

14. AIR DISTRIBUTION DEVICES

    ALL DEVICES SHALL BE OF TUTTLE AND BAILEY, BARBER-COLMAN, CARNES, TITUS, METALAIRE, KRUEGER, OR AGITAIR.

15. VERIFY THE LOCATION, CAPACITY AND PERFORMANCE OF EXISTING EQUIPMENT IF THE EXISTING EQUIPMENT IS NOT FUNCTIONING AS RECOMMENDED BY THE MANUFACTURER, THIS CONTRACTOR SHALL REPAIR THE UNITS AS A PART OF THIS CONTRACT.

16. THE WORK DETAILED ON THESE PLANS IS BASED ON WHERE EXISTING FIELD CONDITIONS ARE DIFFERENT THAN SHOWN, THE CONTRACTOR SHALL ADVISE THE OWNER OF DISCREPANCIES WHICH WILL AFFECT THE PROPOSED WORK PRIOR TO BEGINNING THE WORK.

COMMONWEALTH OF VIRGINIA
RALPH HOFFMAN
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PROFESSIONAL ENGINEER

USPS Project # C11386

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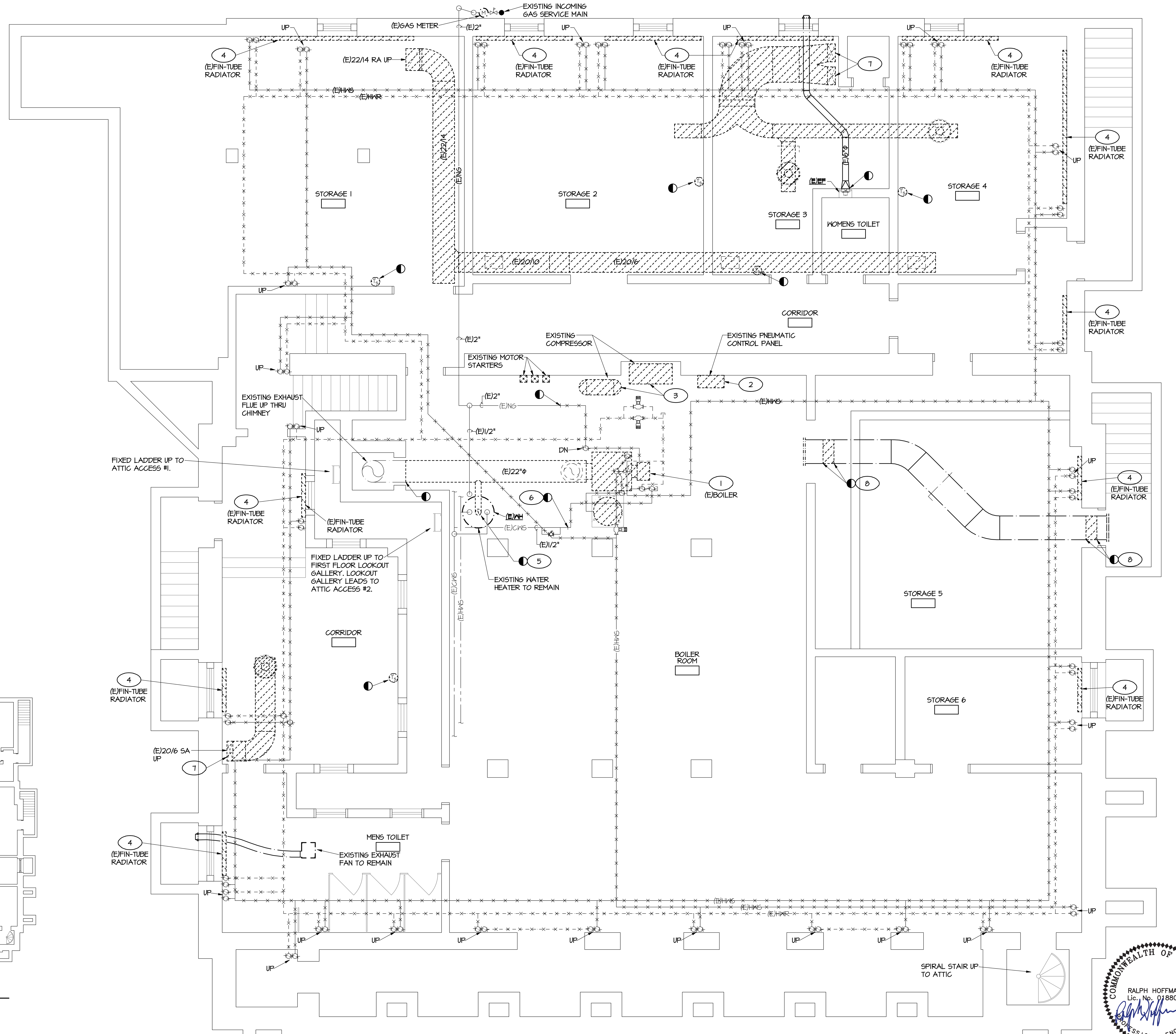
M001 COVER SHEET
Scale:
Date: 09-18-20
Revisions: 1 10-26/20 ADDENDUM 1
Project: LEXINGTON MAIN POST OFFICE HVAC REPLACEMENT
USPS File Number:

FILE: 11445-M001 DATE: 10/26/20
SCALE: NOT TO SCALE TIME: 13:40:08

BASEMENT DEMOLITION FLOOR PLAN

1/4" = 1'-0"

5' 3' 1' 0 5'

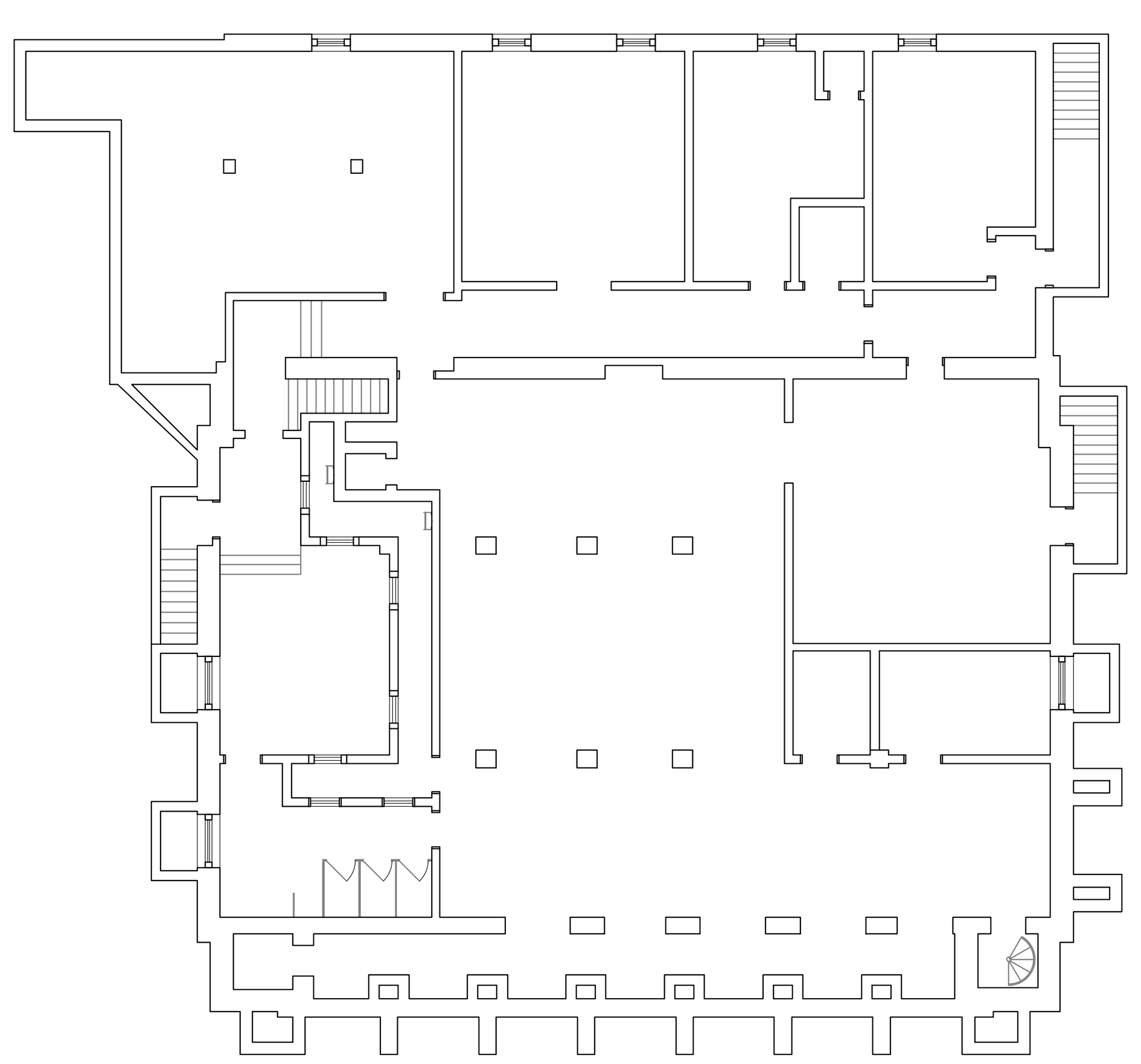


DEMOLITION KEY NOTES

1. REMOVE EXISTING BOILER AND ALL ASSOCIATED COMPONENTS IN IT'S ENTIRETY. REMOVE EXHAUST FLUE TO CHIMNEY, ALL HOT WATER DEVICES, EXPANSION TANK, AIR SEPARATOR, CIRCULATION PUMPS, AND HOT WATER PIPING. REMOVE GAS PIPING TO POINT WHERE INDICATED AND MAKE SAFE. RETAIN ALL PENETRATIONS FOR NEW INSTALLATION. EXISTING PIPING ARE EXPOSED.
2. REMOVE EXISTING PNEUMATIC CONTROL PANEL AND ALL ASSOCIATED COMPONENTS IT ITS ENTIRETY. REMOVE ALL ACCESSIBLE PNEUMATIC PIPING WITHIN BASEMENT AND CAP.
3. REMOVE EXISTING COMPRESSOR AND ALL ASSOCIATED COMPONENTS IN ITS ENTIRETY.
4. REMOVE EXISTING FIN-TUBE RADIATOR AND ALL ASSOCIATED COMPONENTS IN IT'S ENTIRETY, INCLUDING THERMOSTAT.
5. EXISTING WATER HEATER TO REMAIN. REMOVE EXISTING EXHAUST FLUE TO POINT WHERE INDICATED.
6. REMOVE EXISTING DOMESTIC CWS TO POINT WHERE INDICATED. RETAIN PIPING FOR NEW INSTALLATION.
7. REMOVE EXISTING DUCTWORK AND ALL ASSOCIATED COMPONENTS. RETAIN FLOOR OPENING FOR NEW INSTALLATION.
8. REMOVE PORTION OF COMBUSTION AIR DUCT TO POINTS WHERE INDICATED. ABANDON DUCT IN PLACE. CAP & SEAL LOUVER WITH INSULATED METAL PANEL.

NOTE:

1. FOR ALL EQUIPMENT AND PIPING TO BE REPLACED WITH LIKE EQUIPMENT IN THE SAME LOCATION, CONTRACTOR TO ASSESS CONDITION OF SUPPORT COMPONENTS DURING DEMOLITION AND PROVIDE RECOMMENDATION TO OWNER/ENGINEER ON EITHER RE-USE OR REPLACEMENT.



BASEMENT KEY PLAN

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M101

BASEMENT DEMOLITION PLAN

Scale:
Date: 09-18-20
Revisions:
Project: LEXINGTON MAIN POST OFFICE HVAC REPLACEMENT
USPS File Number:

1ST FLOOR DEMOLITION FLOOR PLAN

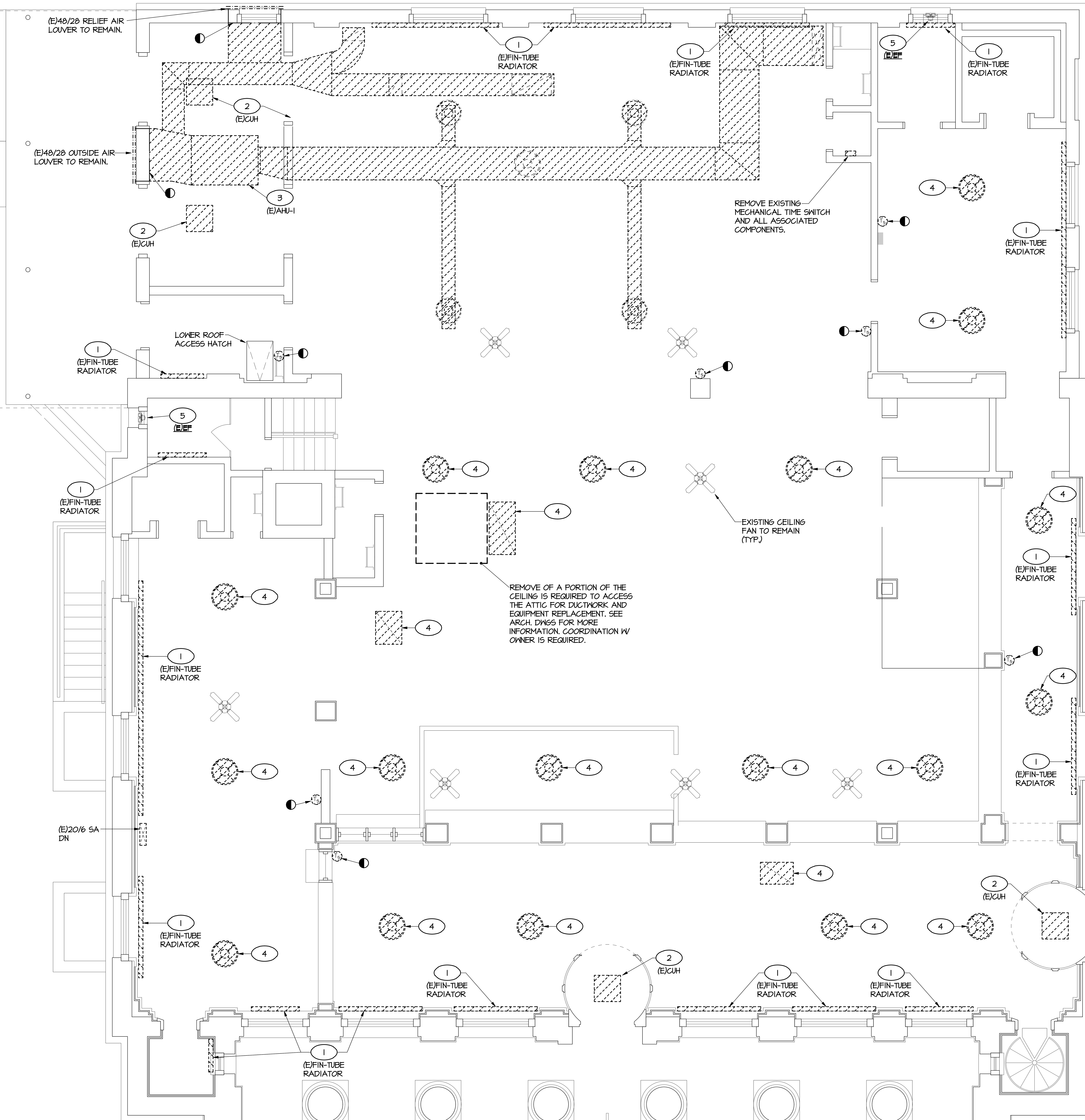
1/4" = 1'-0"

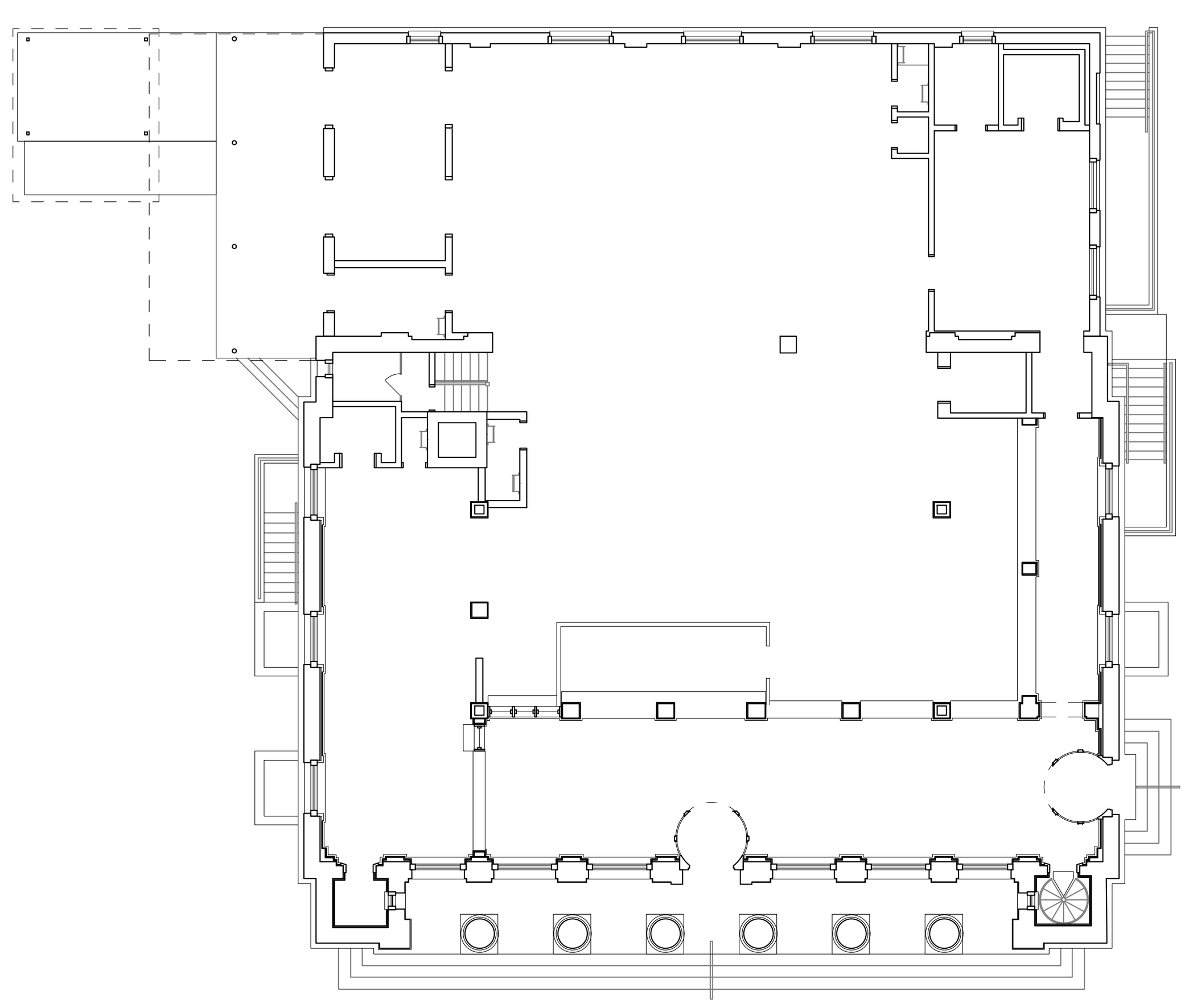
DEMOLITION KEY NOTES

1. REMOVE EXISTING FIN-TUBE RADIATOR AND ALL ASSOCIATED COMPONENTS IN IT'S ENTIRETY, INCLUDING THERMOSTAT AND PIPING. RETAIN FLOOR PENETRATIONS FOR NEW INSTALLATION.
2. REMOVE EXISTING CABINET UNIT HEATER AND ALL ASSOCIATED COMPONENTS IN ITS ENTIRETY, INCLUDING THERMOSTAT, PIPING, AND EQUIPMENT SUPPORT COMPONENTS. RETAIN FLOOR PENETRATIONS FOR NEW INSTALLATION.
3. REMOVE EXISTING AIR HANDLING UNIT AND ALL ASSOCIATED COMPONENTS IN IT'S ENTIRETY, INCLUDING CONTROLS, PIPING, AND EQUIPMENT SUPPORT COMPONENTS. RETAIN RELIEF AND OUTSIDE AIR LOUVERS.
4. REMOVE EXISTING DIFFUSER/REGISTER/GRILLE AND ASSOCIATED DUCT CONNECTION. RETAIN OPENING FOR NEW INSTALLATION. MAINTAIN INTEGRITY OF THE EXISTING GYP CEILING.
5. REMOVE EXISTING EXHAUST FAN. RETAIN OPENING FOR NEW INSTALLATION.

NOTE:

1. THIS FACILITY HAS 20'+ HIGH CEILINGS AND A LIFT WILL BE REQUIRED FOR ACCESS TO WORK. FIELD VERIFY AND COORDINATE WITH OWNER CONCERNING METHOD USED TO REACH HIGH CEILINGS. PROVIDE FLOOR PROTECTION IN ALL AREAS OF WORK. PROVIDE ADDITIONAL PROTECTION TO KEEP LIFT WHEELS FROM DAMAGING THE FLOOR.
2. FOR ALL EQUIPMENT AND PIPING TO BE REPLACED WITH LIKE EQUIPMENT IN THE SAME LOCATION, CONTRACTOR TO ASSESS CONDITION OF SUPPORT COMPONENTS DURING DEMOLITION AND PROVIDE RECOMMENDATION TO OWNER/ENGINEER ON EITHER RE-USE OR REPLACEMENT.





1ST FLOOR KEY PLAN

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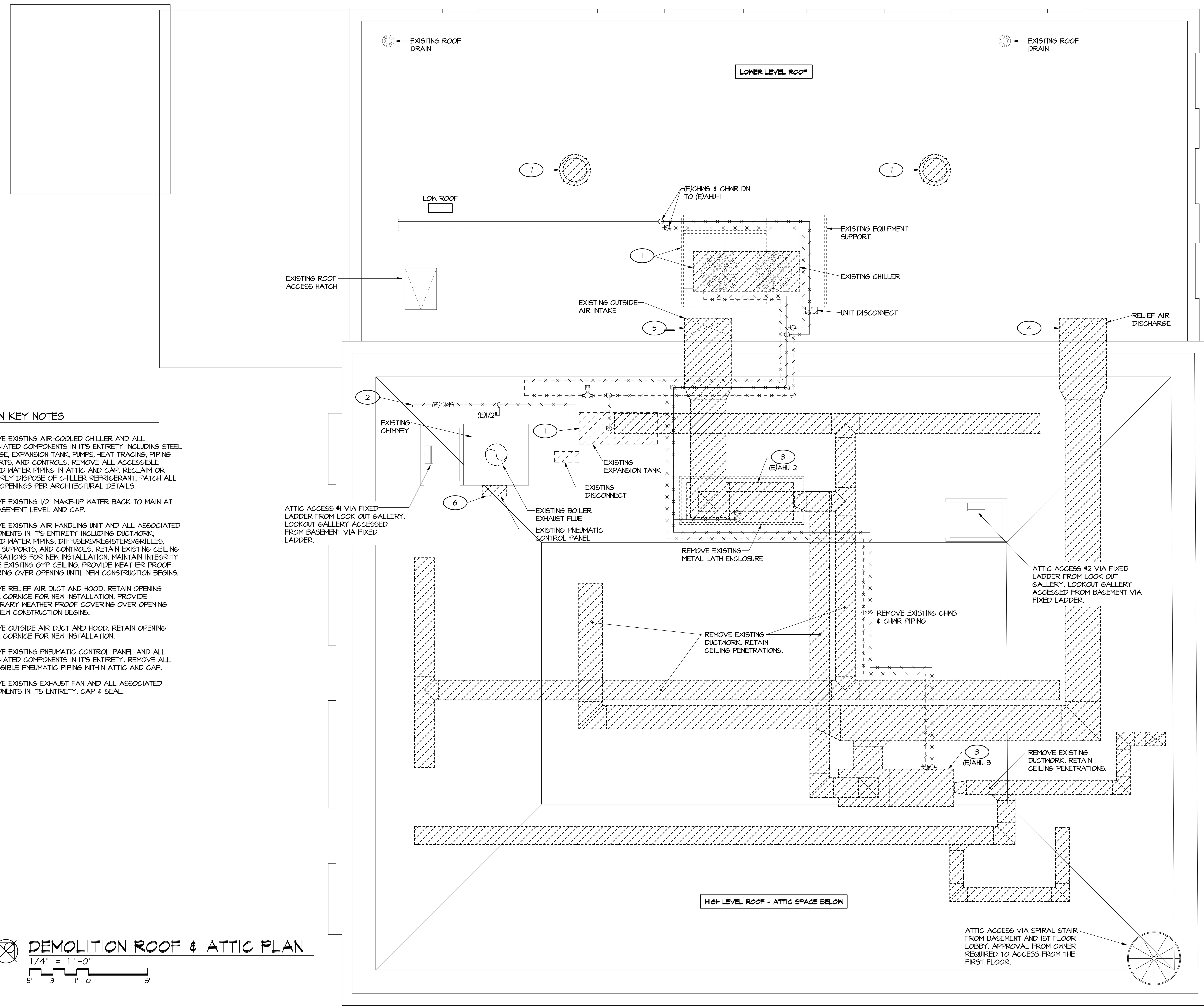
M102 FIRST FLOOR DEMOLITION PLAN

Scale:
Date: 09-18-20
Project: LEXINGTON MAIN POST OFFICE HVAC REPLACEMENT
USPS File Number:
Revisions:



DEMOLITION KEY NOTES

1. REMOVE EXISTING AIR-COOLED CHILLER AND ALL ASSOCIATED COMPONENTS IN IT'S ENTIRETY INCLUDING STEEL DUNNAGE, EXPANSION TANK, PUMPS, HEAT TRACING, PIPING SUPPORTS, AND CONTROLS. REMOVE ALL ACCESSIBLE CHILLED WATER PIPING IN ATTIC AND CAP. RECLAIM OR PROPERLY DISPOSE OF CHILLER REFRIGERANT. PATCH ALL ROOF OPENINGS PER ARCHITECTURAL DETAILS.
2. REMOVE EXISTING 1/2" MAKE-UP WATER BACK TO MAIN AT THE BASEMENT LEVEL AND CAP.
3. REMOVE EXISTING AIR HANDLING UNIT AND ALL ASSOCIATED COMPONENTS IN IT'S ENTIRETY INCLUDING DUCTWORK, CHILLED WATER PIPING, DIFFUSERS/REGISTERS/GRILLES, PIPING SUPPORTS, AND CONTROLS. RETAIN EXISTING CEILING PENETRATIONS FOR NEW INSTALLATION. MAINTAIN INTEGRITY OF THE EXISTING GYP CEILING. PROVIDE WEATHER PROOF COVERING OVER OPENING UNTIL NEW CONSTRUCTION BEGINS.
4. REMOVE RELIEF AIR DUCT AND HOOD. RETAIN OPENING BELOW CORNICE FOR NEW INSTALLATION. PROVIDE TEMPORARY WEATHER PROOF COVERING OVER OPENING UNTIL NEW CONSTRUCTION BEGINS.
5. REMOVE OUTSIDE AIR DUCT AND HOOD. RETAIN OPENING BELOW CORNICE FOR NEW INSTALLATION.
6. REMOVE EXISTING PNEUMATIC CONTROL PANEL AND ALL ASSOCIATED COMPONENTS IN IT'S ENTIRETY. REMOVE ALL ACCESSIBLE PNEUMATIC PIPING WITHIN ATTIC AND CAP.
7. REMOVE EXISTING EXHAUST FAN AND ALL ASSOCIATED COMPONENTS IN ITS ENTIRETY. CAP & SEAL.

DEMOLITION ROOF & ATTIC PLAN

1/4" = 1'-0"

5' 3' 1' 0 5'

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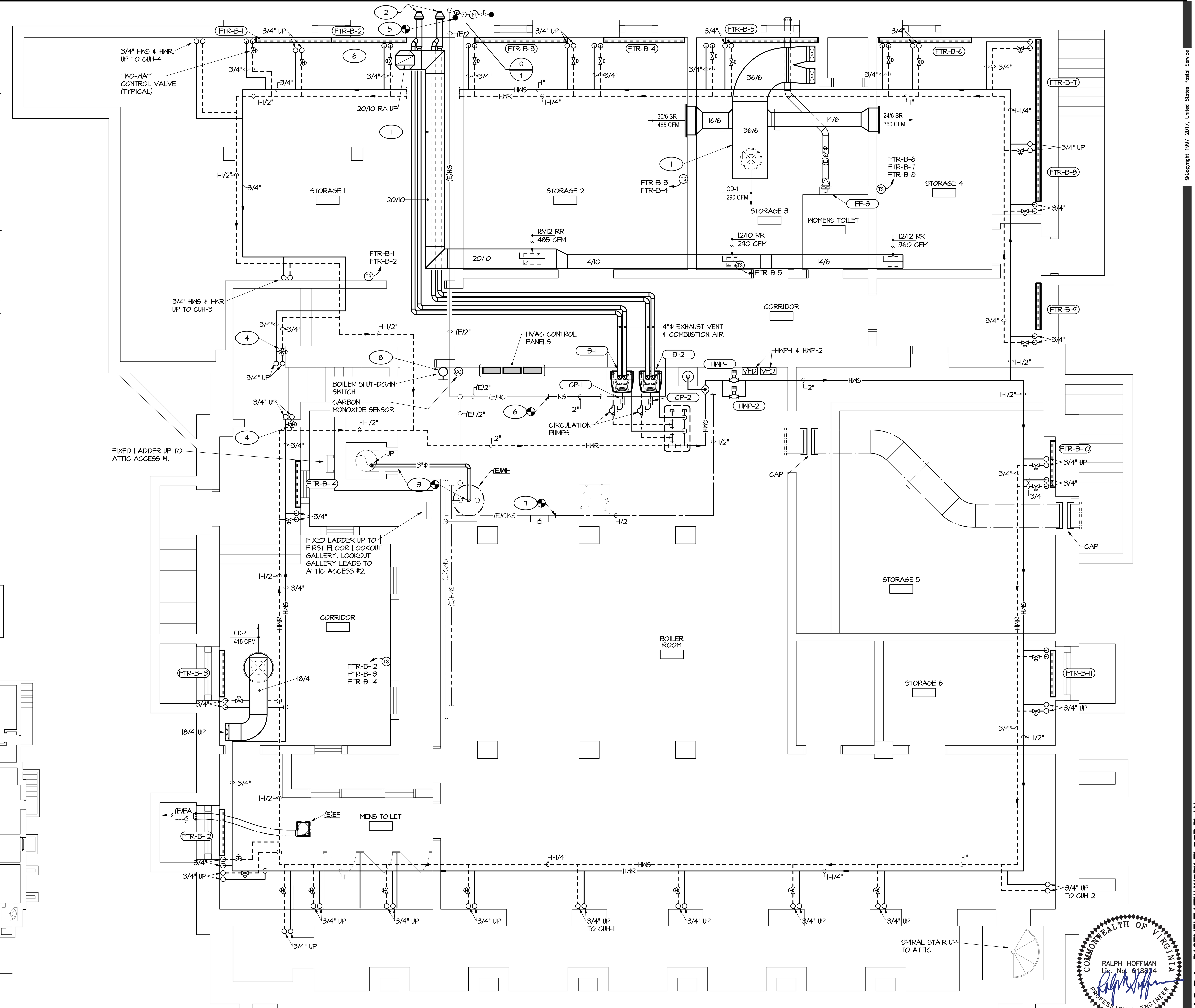
M103
ATTIC/ROOF DEMOLITION PLAN
Scale:
Date: 09-18-20
Project: LEXINGTON MAIN POST OFFICE HVAC REPLACEMENT
USPS File Number:
Revisions:

BASEMENT NEW WORK FLOOR PLAN

1/4" = 1'-0"

5' 3' 1' 0 5'

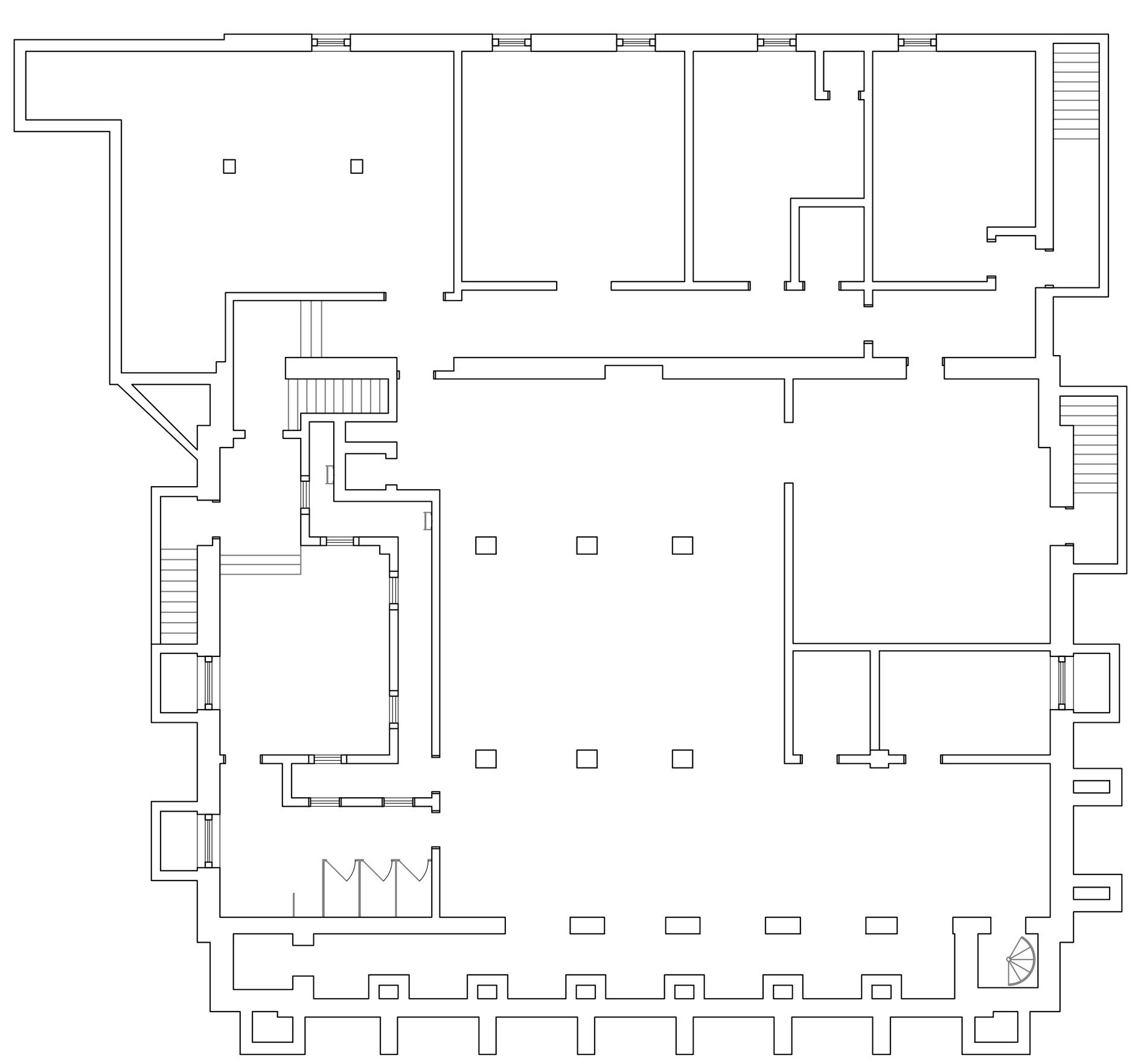


NEW WORK KEY NOTES

1. DUCTWORK EXPOSED. RUN TIGHT TO UNDERSIDE OF STRUCTURE.
2. 4"Ø SIDEWALL CONCENTRIC VENT/AIR TERMINATION WITH BIRD SCREEN. SEE PENETRATION DETAIL ON M504.
3. EXTEND NEW WATER HEATER EXHAUST VENT PIPING TO CHIMNEY AND UP TO TOP OF CHIMNEY, AND TERMINATE BELOW EXISTING RAIN CAP. SEAL CHIMNEY PENETRATION PER DETAIL ON M504.
4. PROVIDE A THREE-WAY CONTROL VALVE ON THE LAST EQUIPMENT OF EACH RUN.
5. EXTEND NEW 1-1/4" GAS PIPING UP TO LOWER ROOF. SEE ROOF PLAN FOR CONTINUATION.
6. EXTEND NEW 2" GAS PIPING TO BOILERS.
7. EXTEND NEW 1/2" MAKE-UP WATER TO BOILERS.
8. BOILER SHUT-DOWN SWITCH SHALL SHUT DOWN ALL BOILERS WHEN DEPRESSED. PROVIDE COVER TO PROTECT FROM ACCIDENTAL SHUTDOWN.

NOTE:

1. COORDINATE ALL PIPE AND DUCT RUNS WITH EXISTING CONDITIONS AND ALL TRADES.
2. PROVIDE RISE AND DROPS IN DUCTWORK AS NECESSARY.



BASEMENT KEY PLAN

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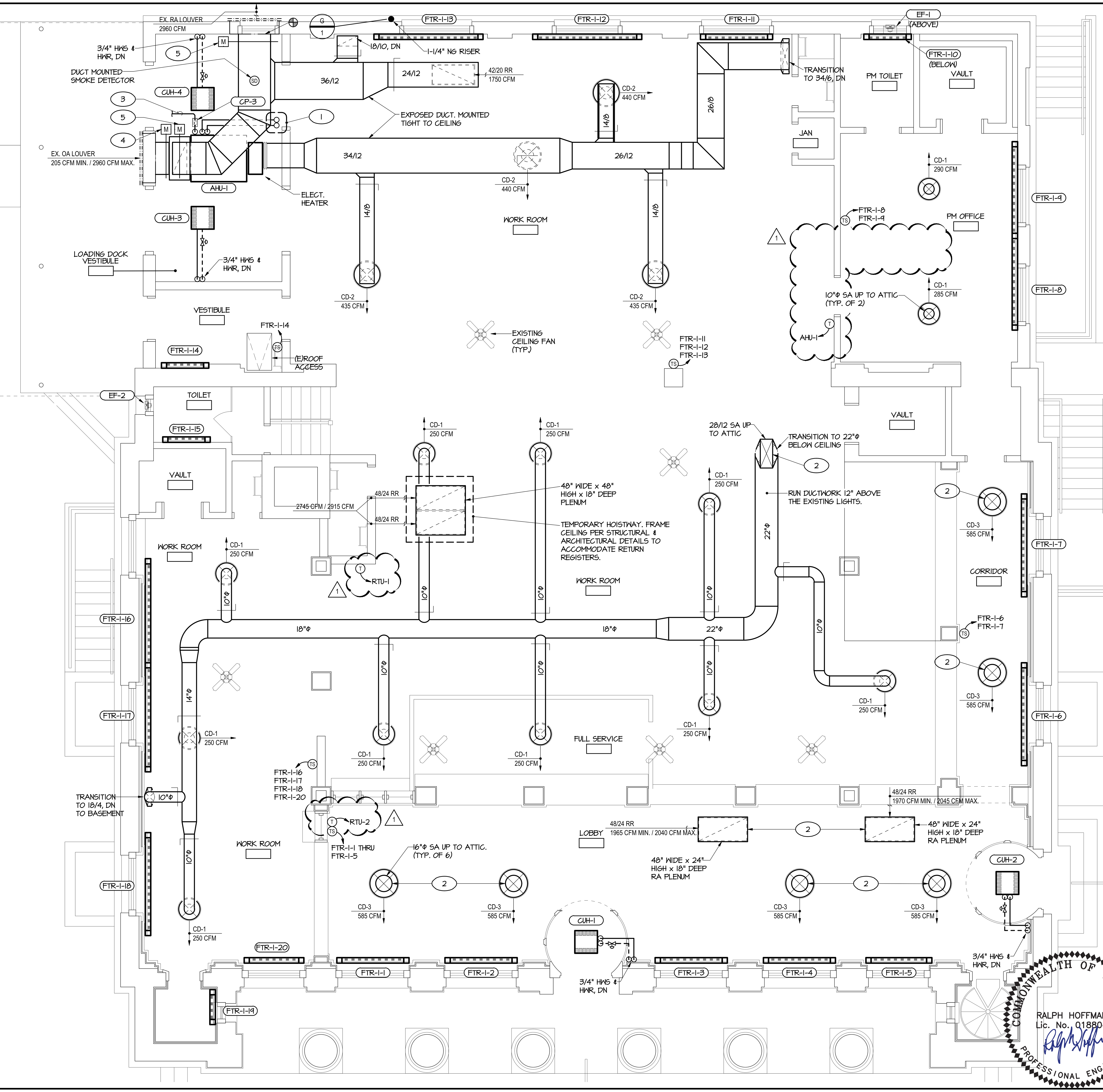
M201 BASEMENT NEW WORK FLOOR PLAN

Scale:
Date: 09-18-20
Revisions:
Project: LEXINGTON MAIN POST OFFICE HVAC REPLACEMENT
USPS File Number:

1ST FLOOR NEW WORK FLOOR PLAN

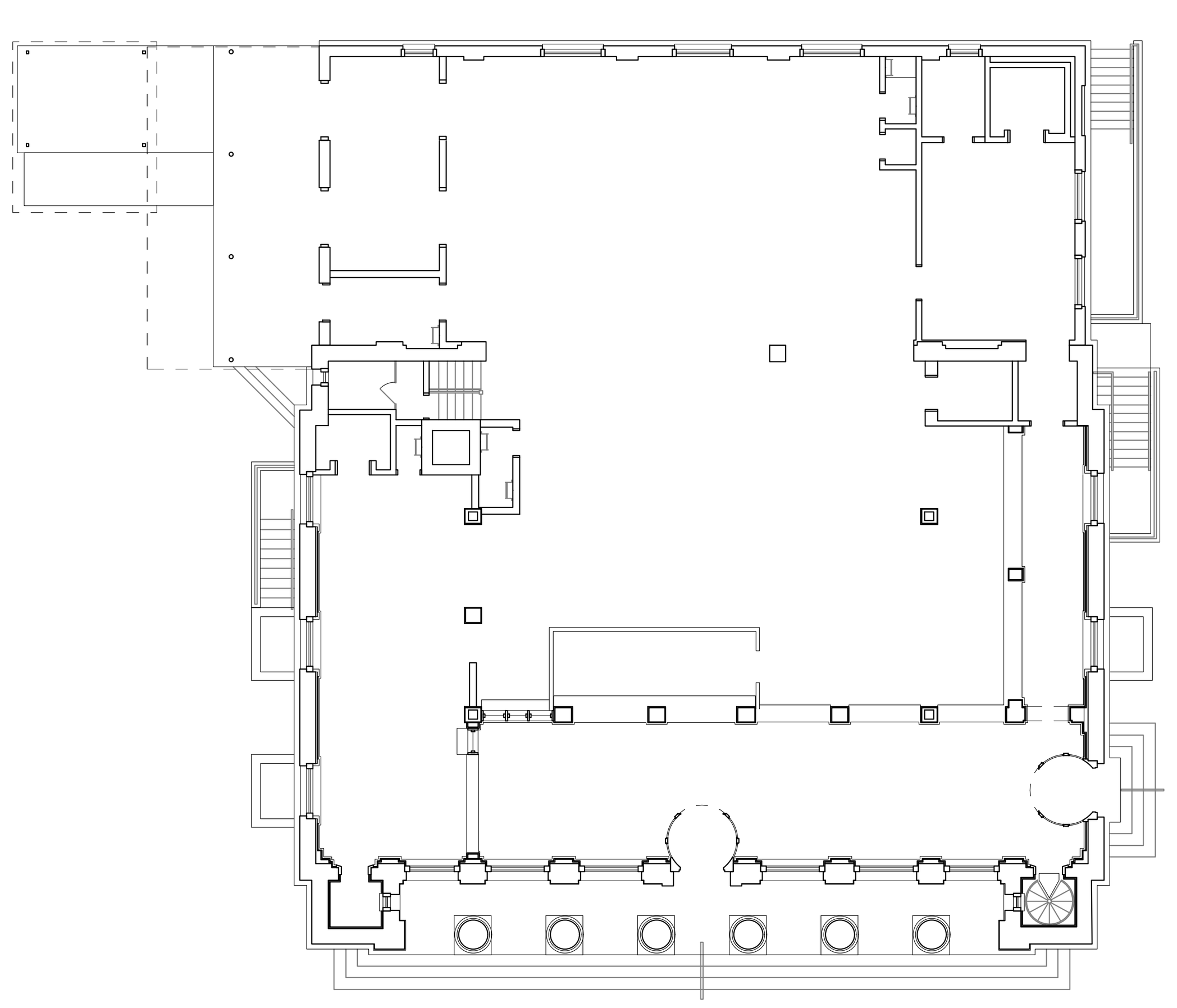
1/4" = 1'-0"

5' 3' 1' 0 5'



NEW WORK KEY NOTES

1. INSULATED REFRIGERANT PIPING UP TO HP-1. SEE M203 FOR CONTINUATION. REFRIGERANT PIPE SIZES SHALL BE AS RECOMMENDED BY MANUFACTURER.
2. REFER TO STRUCTURAL DRAWINGS FOR FRAMING INFORMATION TO ACCOMMODATE ENLARGED OPENINGS.
3. INSULATED COOLING COIL CONDENSATE DRAIN. CONNECT TO EXISTING CONDENSATE DRAIN PIPING. FIELD VERIFY EXACT LOCATION.
4. INTERLOCK OA DAMPER WITH AHU-1 OPERATION. OPEN WHEN AHU-1 IS ON AND CLOSE WHEN AHU-1 IS OFF.
5. INTERLOCK RA DAMPER WITH OA/AHU-1/ECONOMIZER OPERATION.



1ST FLOOR KEY PLAN

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Revisions: 1 10-26-20 ADDENDUM 1

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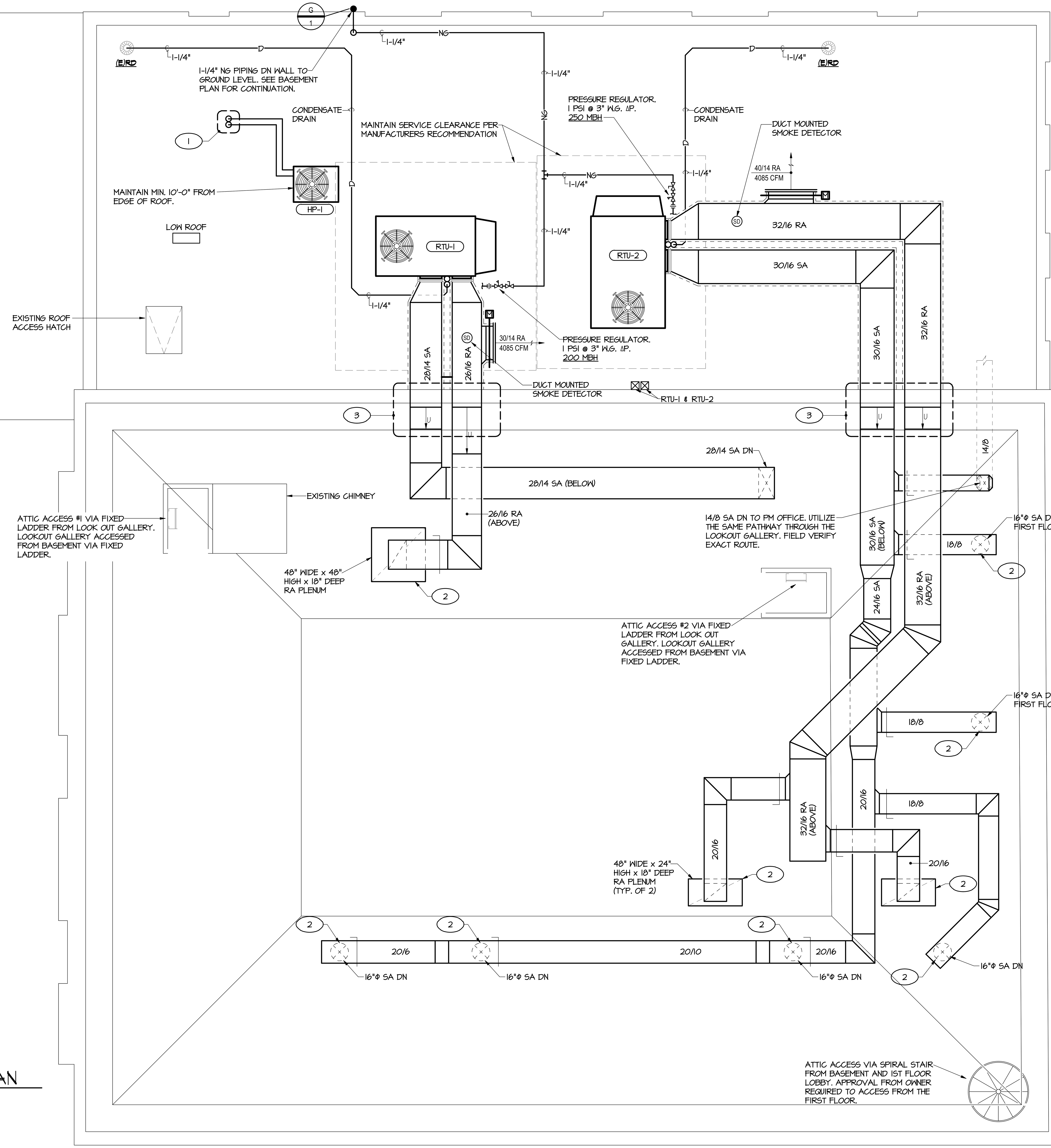
M202 FIRST FLOOR NEW WORK PLAN

Scale:
Date: 09-18-20
Project: LEXINGTON MAIN POST OFFICE HVAC REPLACEMENT
USPS File Number:



NEW WORK KEY NOTES

1. INSULATED REFRIGERANT PIPING DOWN TO AHU-1. SEE M202 FOR CONTINUATION. REFRIGERANT PIPE SIZES SHALL BE AS RECOMMENDED BY MANUFACTURER.
2. REFER TO STRUCTURAL DRAWINGS FOR FRAMING INFORMATION TO ACCOMMODATE ENLARGED OPENINGS IN THE CEILING.
3. SEE STRUCTURAL & ARCHITECTURAL DETAILS FOR WALL OPENING.

NOTE:

1. ALL EXTERIOR DUCTS SHALL BE COVERED WITH 2" FLEXIBLE ELASTOMERIC INSULATION AND SHALL BE LAMINATED WITH A 13-PLY LAMINATE (6 LAYERS OF ALUMINUM FOIL, 4 LAYERS OF POLYESTER FILM AROUND A SCRIM REINFORCED CORE) MEMBRANE.

NEW WORK ROOF & ATTIC PLAN

1/4" = 1'-0"

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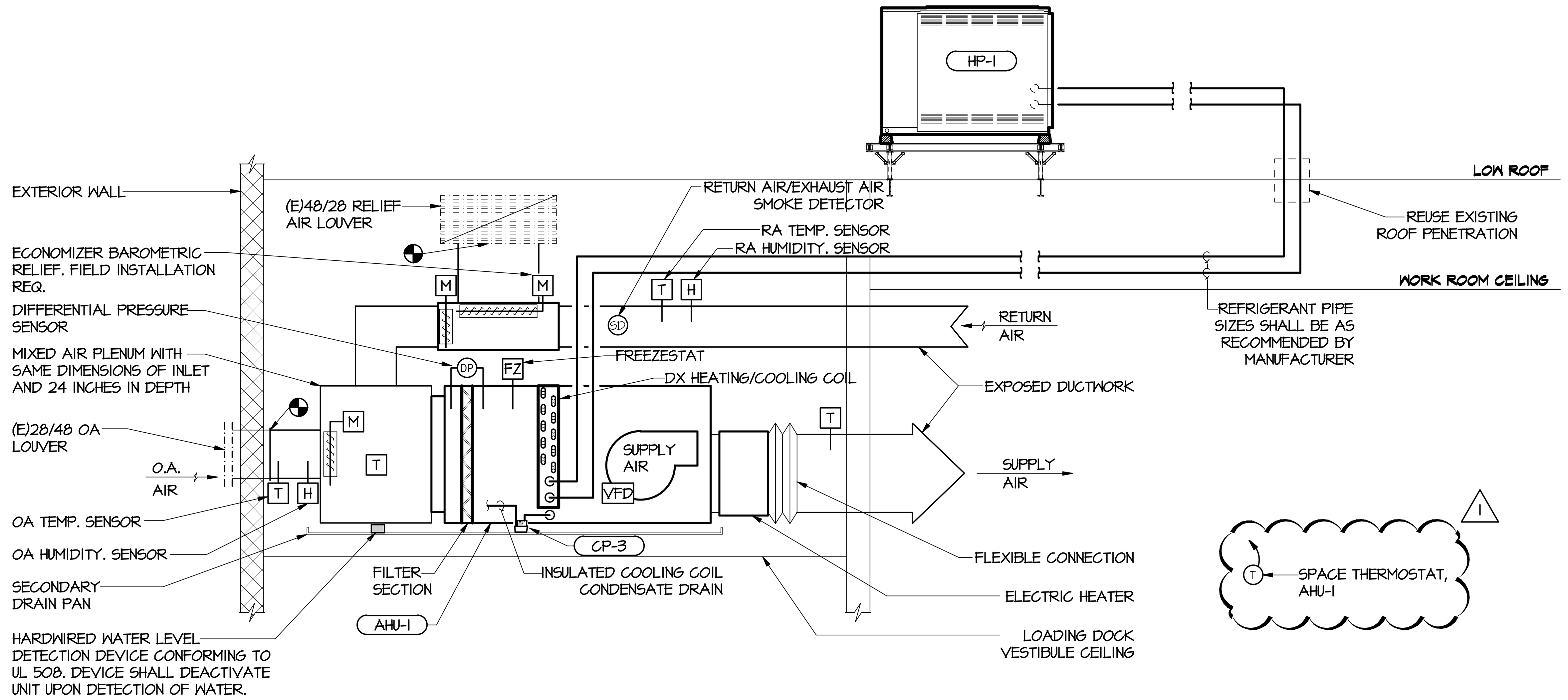
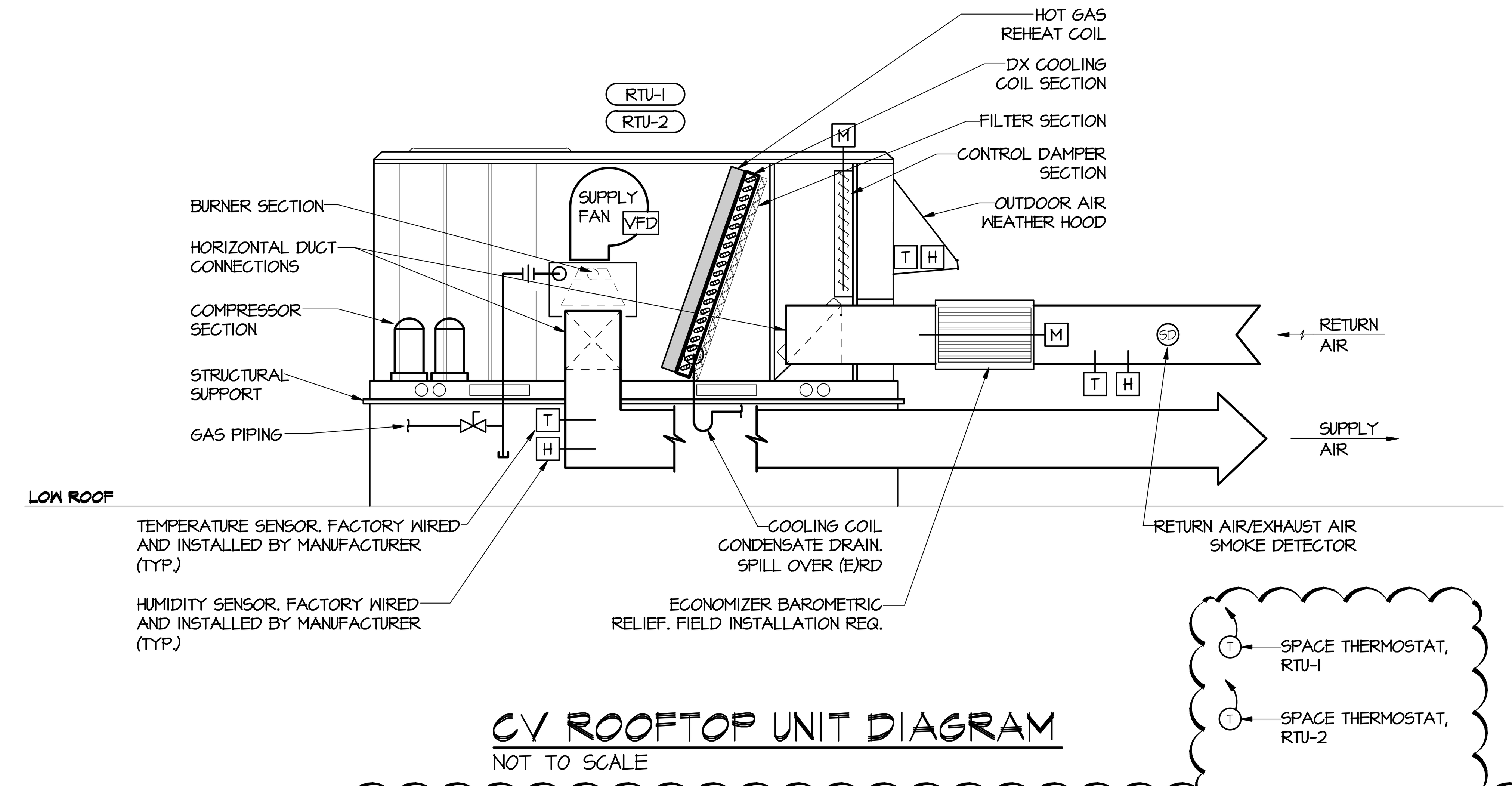
M203 ATTIC/ROOF NEW WORK PLAN

Scale:
Date: 09-18-20
Project: LEXINGTON MAIN POST OFFICE HVAC REPLACEMENT
USPS File Number:
Revisions:



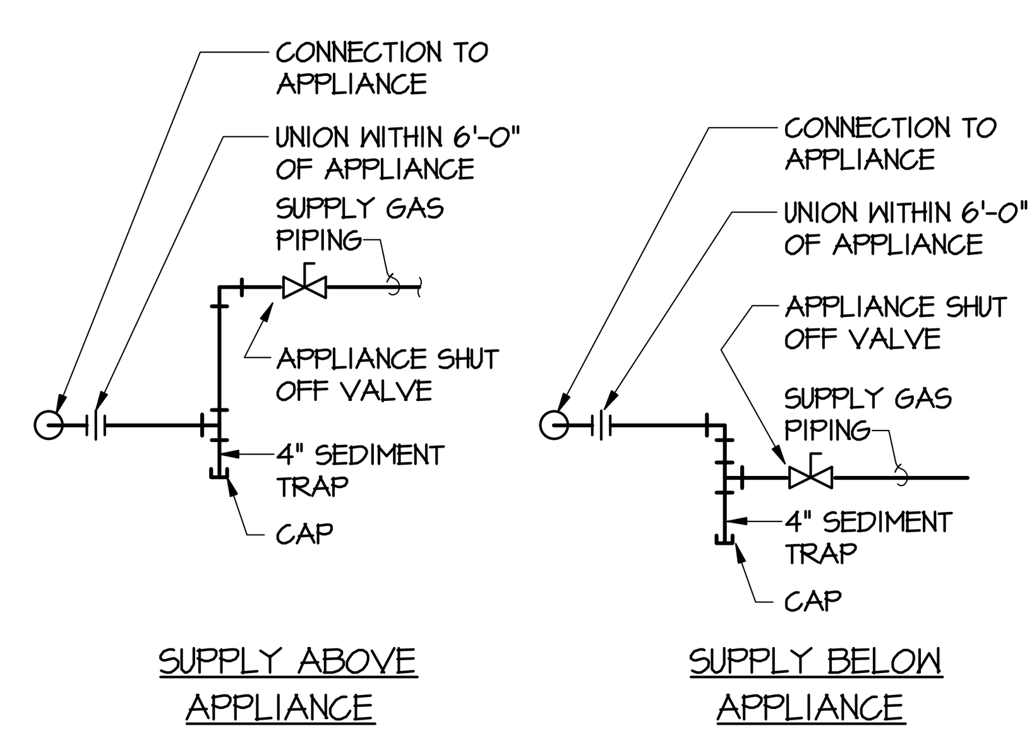
SPLIT SYSTEM HEAT PUMP AC UNIT DIAGRAM

NOT TO SCALE



CV ROOFTOP UNIT DIAGRAM

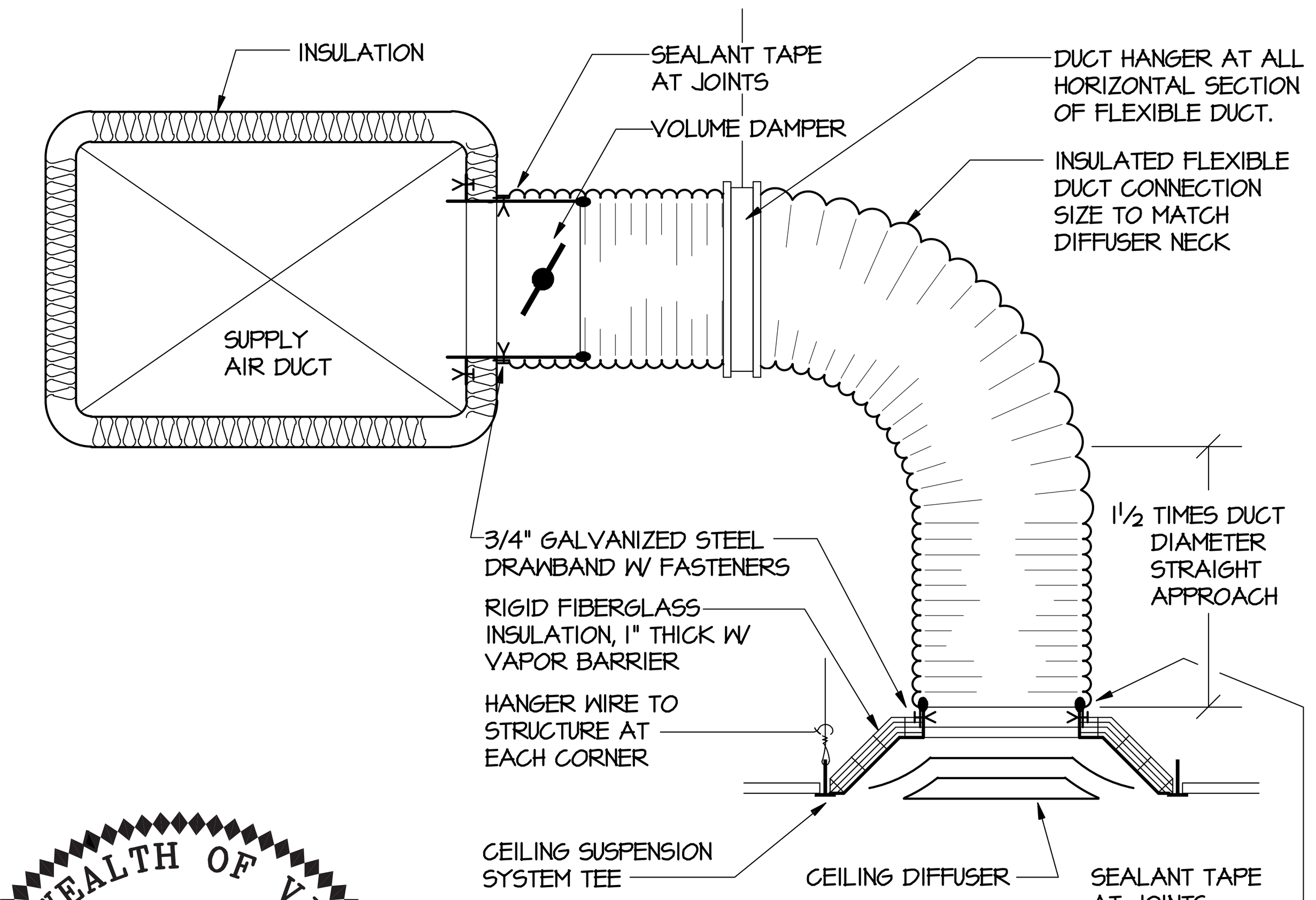
NOT TO SCALE



TYPICAL GAS CONNECTION

NOT TO SCALE

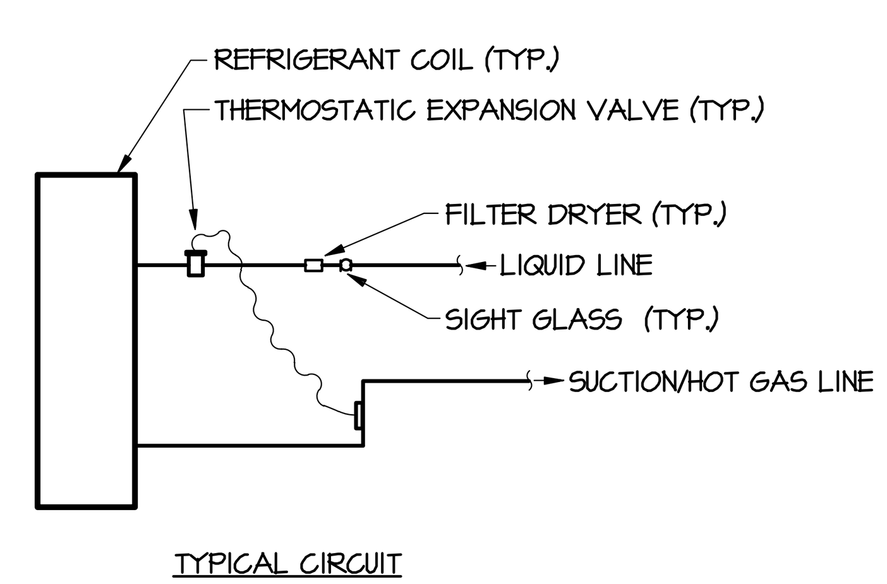
NOT USED



NOTE: 1. ALL FLEX DUCT SHALL BE 8'-0" MAX IN LENGTH.
2. ALL BRANCH TAPS SHALL BE 2'-0" MIN. RIGID BEFORE FLEX CONNECTION.

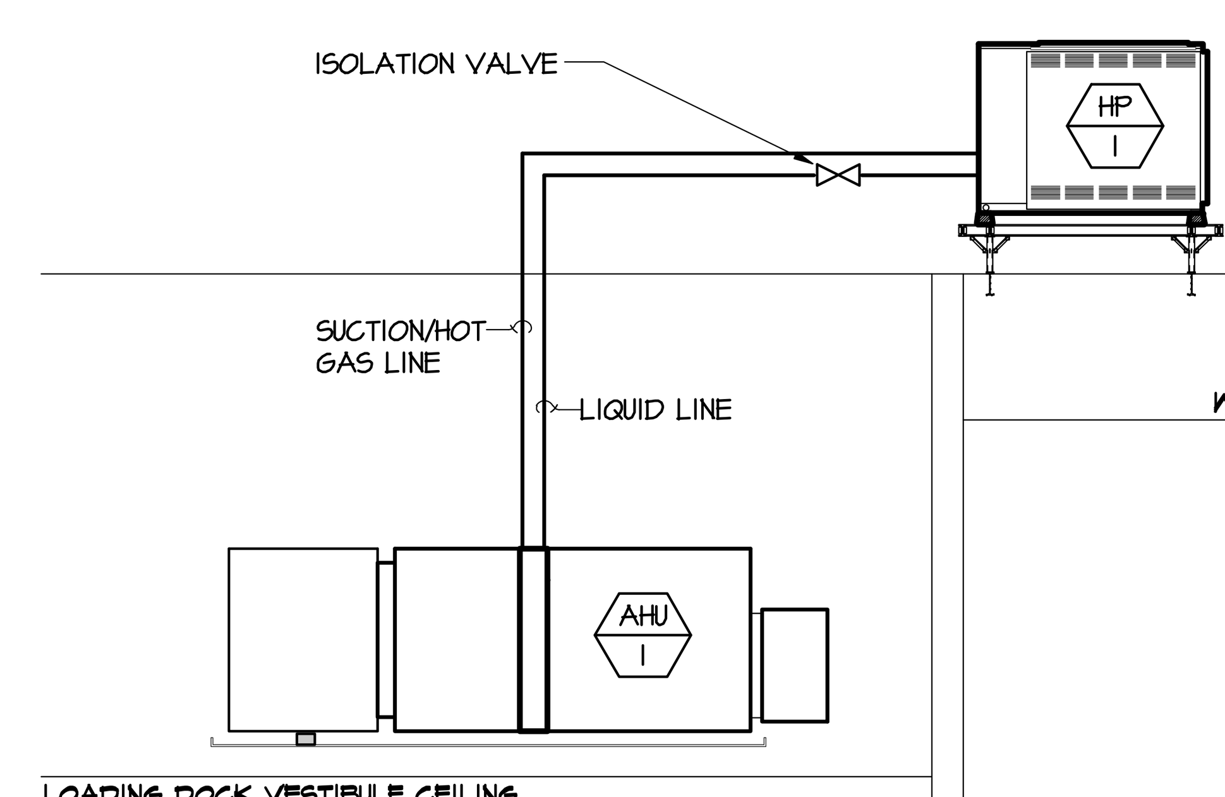
CEILING DIFFUSER DETAIL

NOT TO SCALE



REFRIGERANT COIL PIPING DIAGRAM

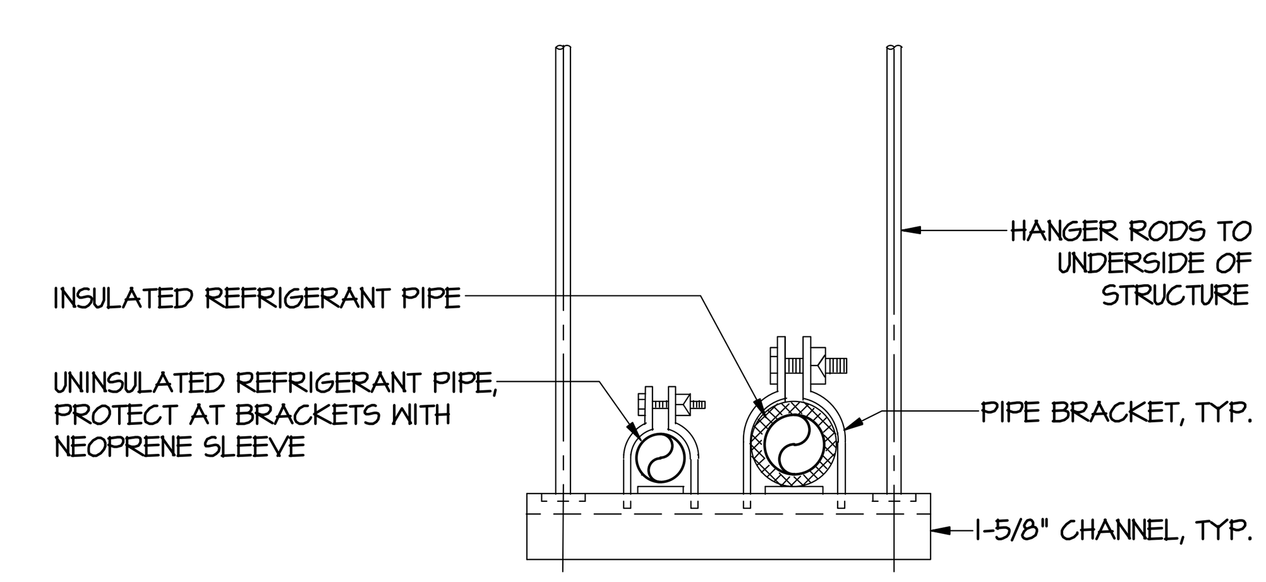
NOT TO SCALE



NOTE: REFRIGERANT PIPE SIZES TO BE SIZED AS RECOMMENDED MY A/C SYSTEM MANUFACTURER.

REFRIGERANT PIPING DIAGRAM

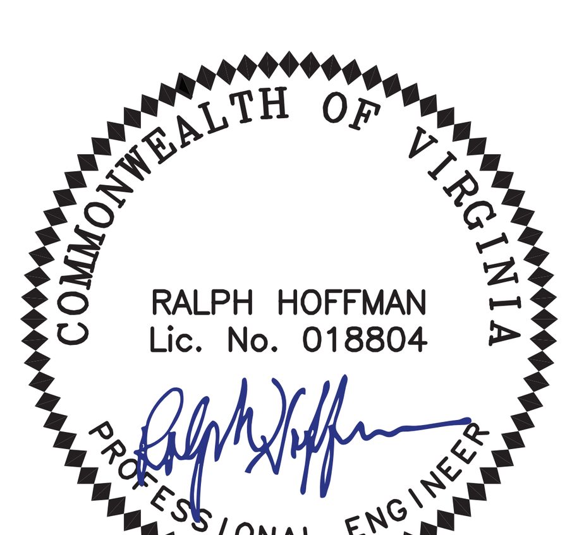
NOT TO SCALE



NOTES:
1. REFRIGERANT PIPING SUPPORT AT A MAXIMUM OF 6 FEET ON CENTER.

REFRIGERANT PIPE SUPPORT DETAIL

NOT TO SCALE



FILE: 11145-M501 DATE: 10/26/20
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USPS Project # C11386

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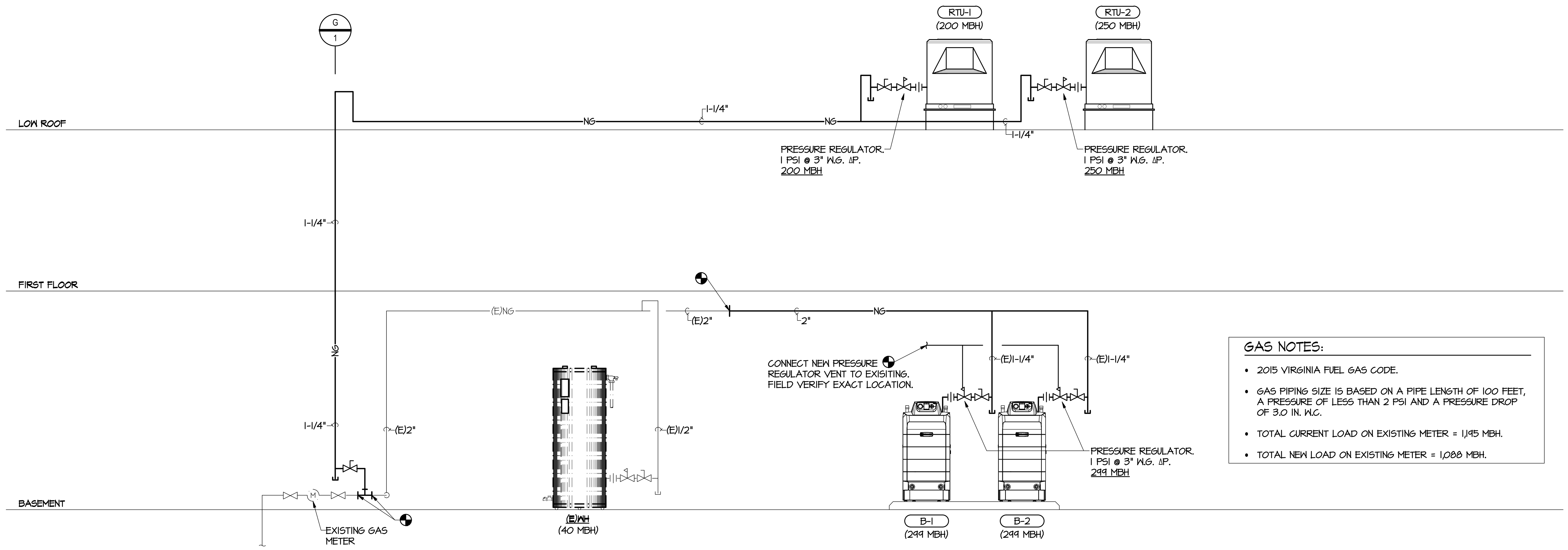
M501 DIAGRAMS + DETAILS

Scale:
Date: 09-18-20
Revisions: 1 10-26/20 ADDENDUM 1
Project: LEXINGTON MAIN POST OFFICE HVAC REPLACEMENT
USPS File Number:

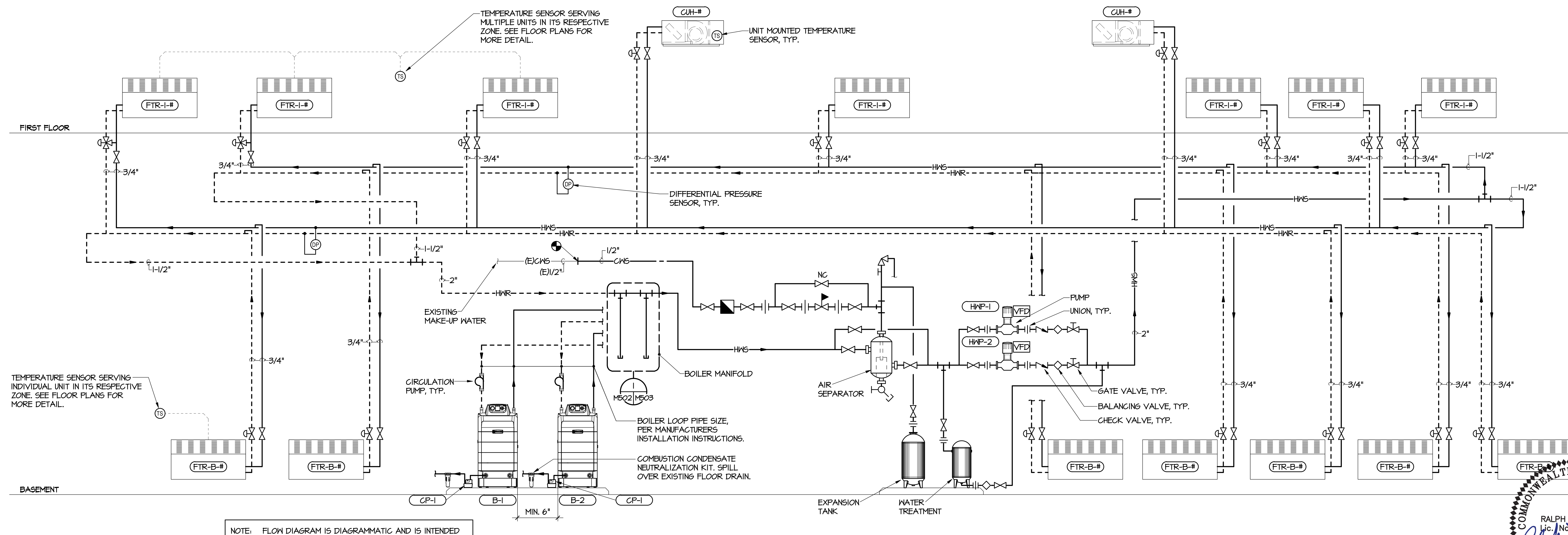


GAS NOTES:

- 2015 VIRGINIA FUEL GAS CODE.
- GAS PIPING SIZE IS BASED ON A PIPE LENGTH OF 100 FEET, A PRESSURE OF LESS THAN 2 PSI AND A PRESSURE DROP OF 3.0 IN. W.C.
- TOTAL CURRENT LOAD ON EXISTING METER = 1,195 MBH.
- TOTAL NEW LOAD ON EXISTING METER = 1,088 MBH.

NATURAL GAS RISER DIAGRAM

NOT TO SCALE



NOTE: FLOW DIAGRAM IS DIAGRAMMATIC AND IS INTENDED TO CONVEY PIPING ARRANGEMENT ONLY. IT DOES NOT REPRESENT THE ACTUAL NUMBER OF EQUIPMENT CONNECTED TO THE HOT WATER SYSTEM.

HOT WATER SYSTEM - FLOW DIAGRAM

NOT TO SCALE

GAA FILE: 1145-M502 DATE: 09/16/20
SCALE: NOT TO SCALE TIME: 14:41:45

USPS Project # C11386

LEXINGTON MPO HVAC REPLACEMENT
101 LEE AVE.
LEXINGTON, VA 24450

UNITED STATES POSTAL SERVICE

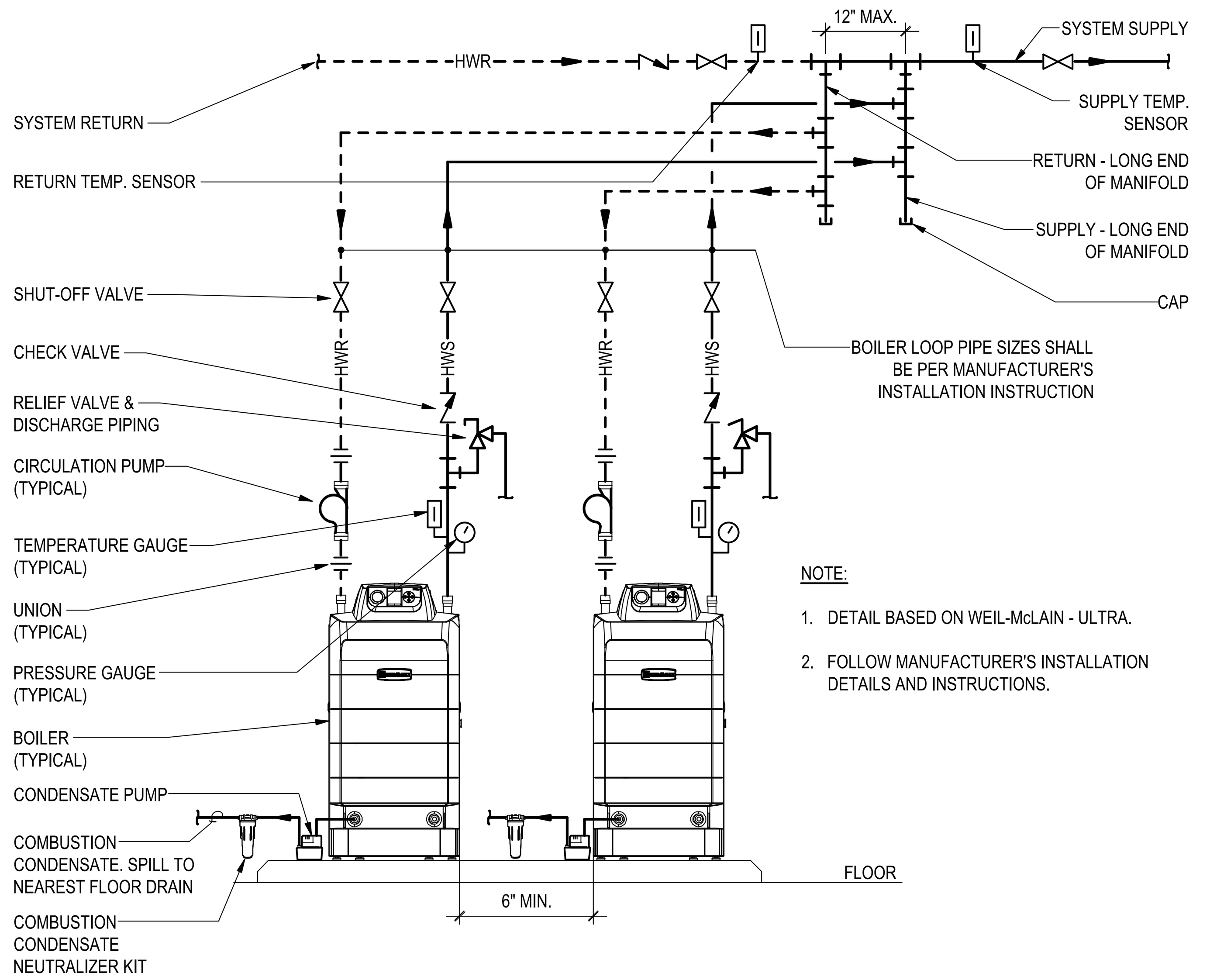
Eastern Facilities Service Office, P.O. Box 27497, Greensboro, NC 27498-1103

GAUTHIER ALVARADO ASSOCIATES
ARCHITECTURE | ENGINEERING | PLANNING

M502 DIAGRAMS + DETAILS

Scale:
Date: 09-18-20
Project: LEXINGTON MAIN POST OFFICE HVAC REPLACEMENT
USPS File Number:
Revisions:

COMMONWEALTH OF VIRGINIA
RALPH HOFFMAN
Lic. No. 011804
PROFESSIONAL ENGINEER

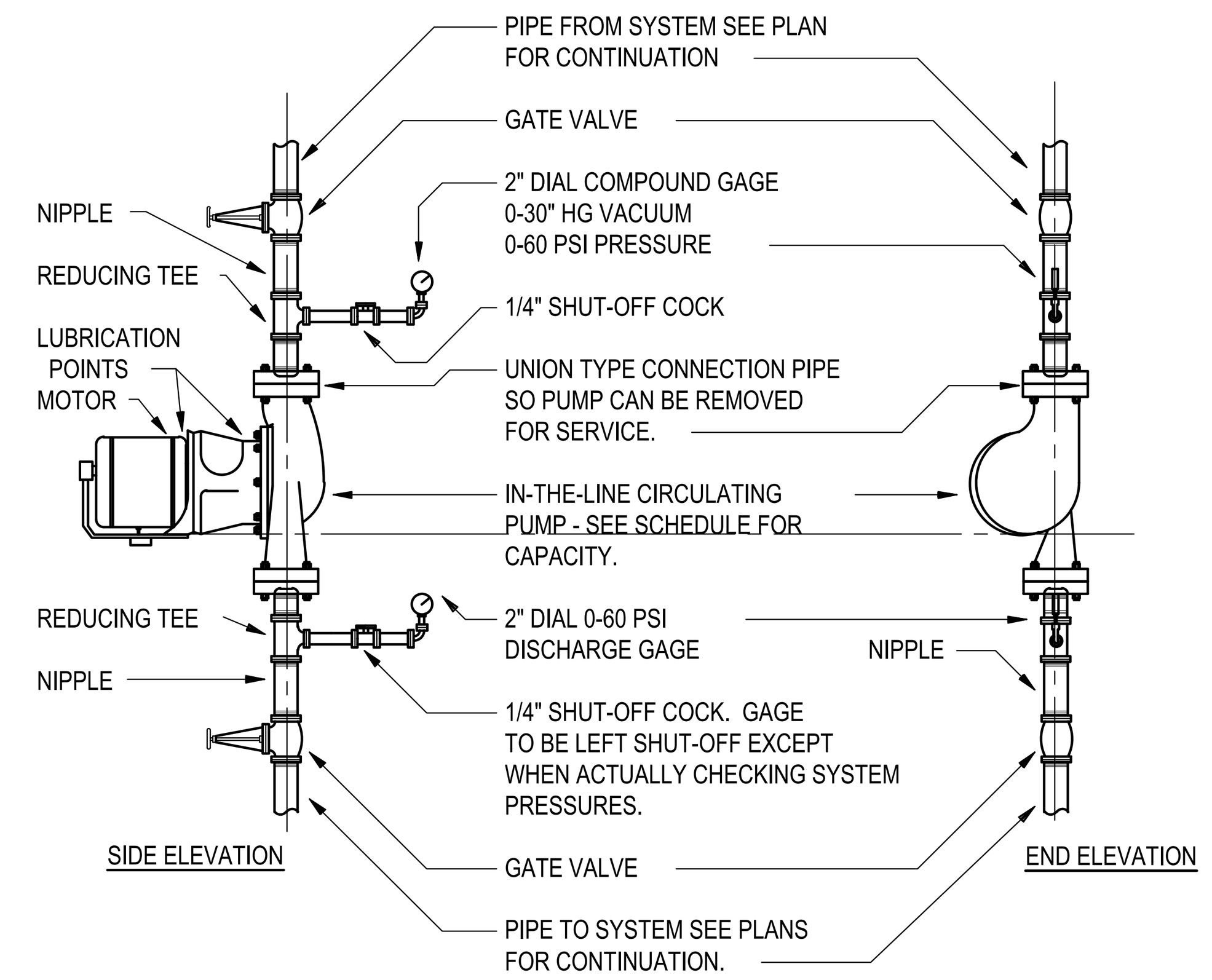


NOTE:

1. DETAIL BASED ON WEIL-McLAIN - ULTRA.
2. FOLLOW MANUFACTURER'S INSTALLATION DETAILS AND INSTRUCTIONS.

MODULAR BOILER DETAIL

NOT TO SCALE

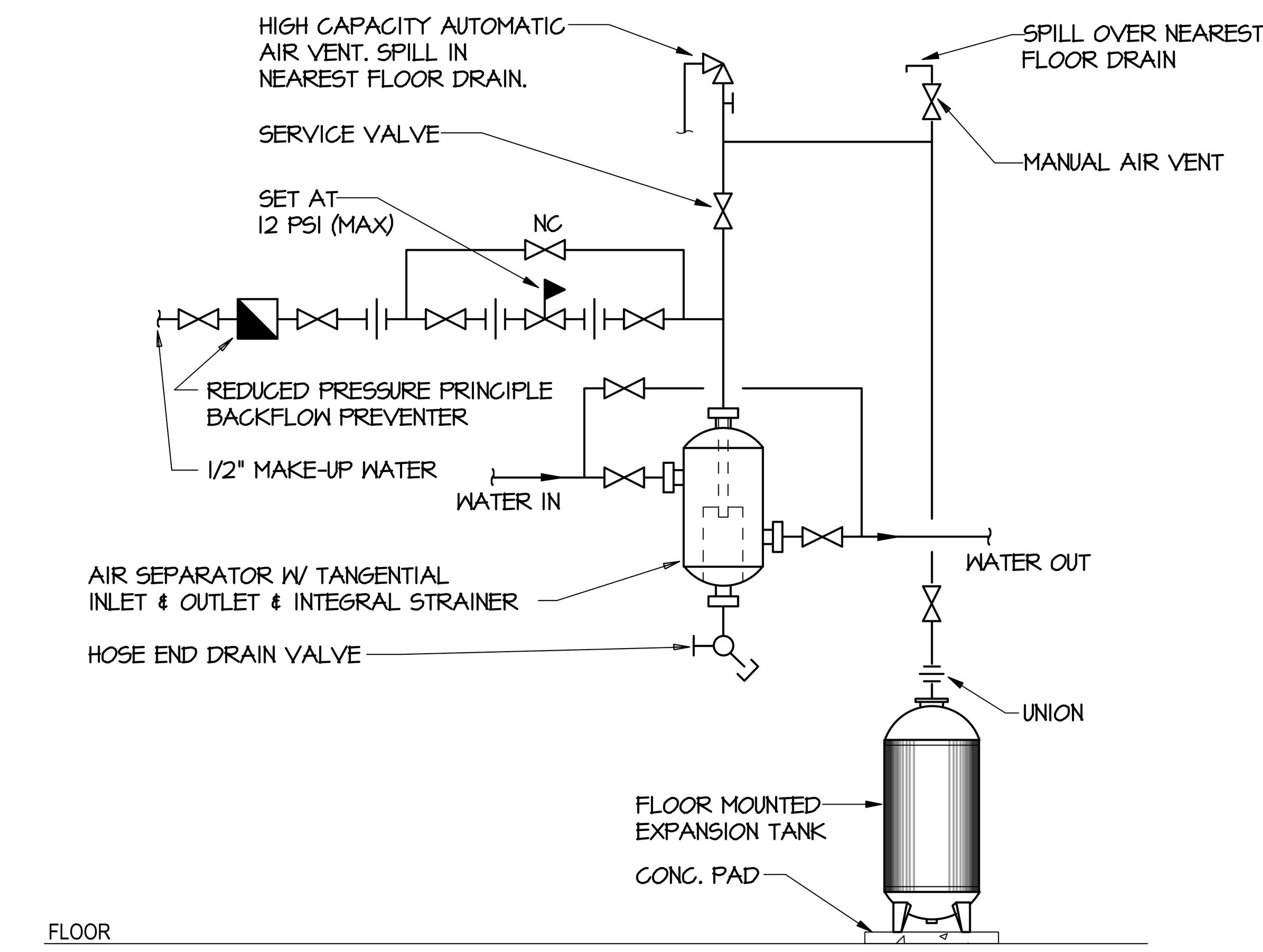


IN-THE-LINE CIRCULATING PUMP DETAIL

NOT TO SCALE

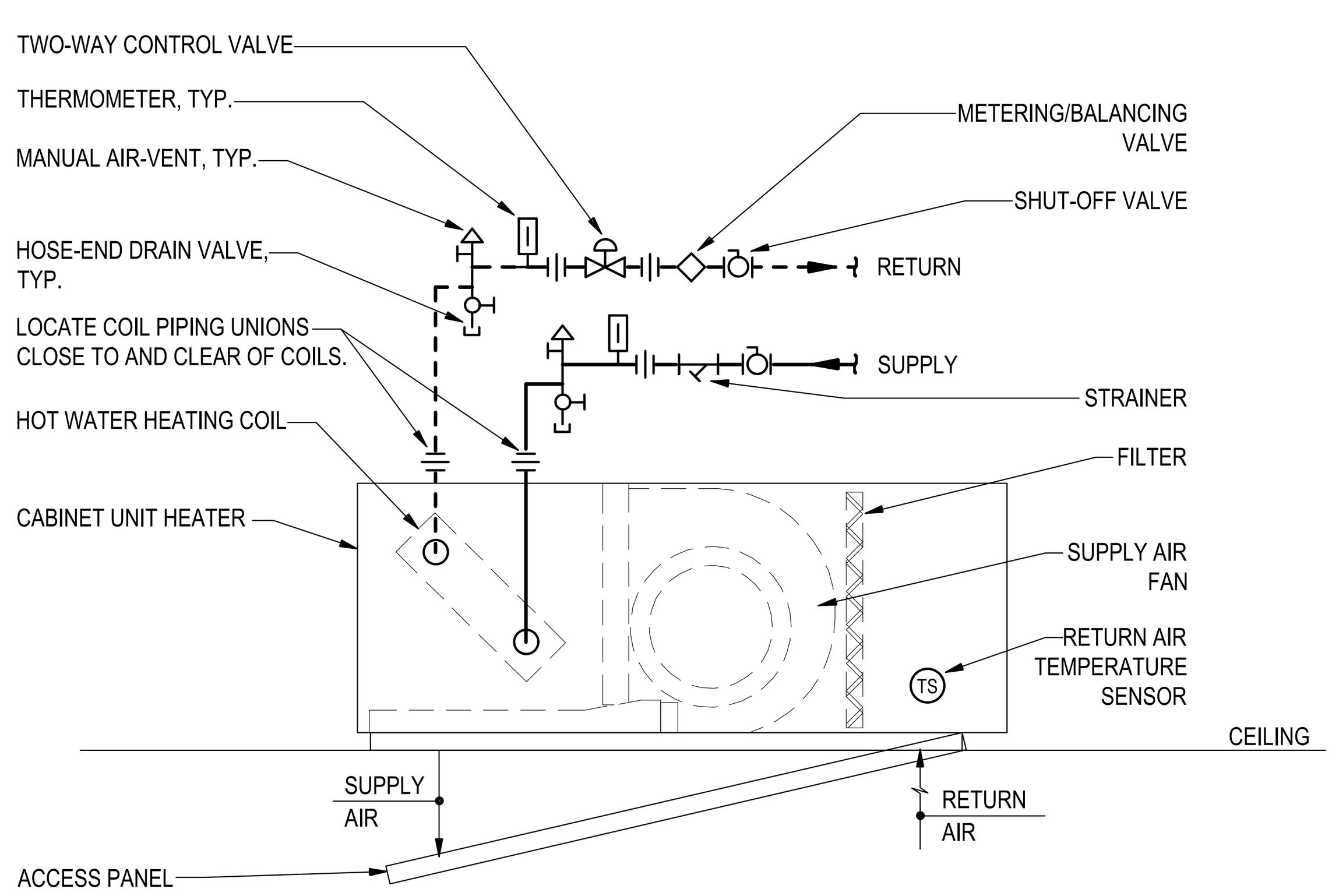
GENERAL NOTES:

1. THE PUMP SHALL BE INSTALLLED DEAD LEVEL, AND SHALL NOT TOUCH OR REST ON ANY PART OF THE BUILDING STRUCTURE.
2. THE ELECTRICAL CONNECTION TO THE PUMP SHALL BE MADE THROUGH THE USE OF FLEXIBLE CONDUIT (GREENFIELD) AT LEAST 18" LONG.
3. THE PUMP SHALL BE SO INSTALLED THAT THE PUMP CAN BE COMPLETELY REMOVED WITHOUT THE DISMANTLING OR REMOVAL OF ANY PIPING OR VALVES.
4. THE MOTOR & COUPLING SHALL BE CHECKED AND PROPERLY ALIGNED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
5. THE ADJACENT PIPING SHALL BE CAREFULLY FITTED AND ERECTED SO THAT THE PUMP CAN BE INSTALLED OR REMOVED FROM THE PIPE LINE WITHOUT FORCING OR SPRINGING.
6. AFTER THE SYSTEN HAS BEEN COMPLETED AND THE PUMP STARTED THE PUMP AND SYSTEM SHALL BE CHECKED FOR VIBRATION AND EXCESSIVE NOISE AND ANY SUCH NOISE OR VIBRAYTION SHALL BE IMMEDIATELY CORRECTED.
7. AFTER COMPLETION OF THE SYSTEM AND BEFORE START-UP OF THE PUMP, THE PUMP SHALL BE LUBRICATED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
8. A METAL INSTRUCTION PLATE SHALL BE ATTACHED TO THE PUMP IN A LOCATION WHERE IT IS CLEARLY VISIBLE. THESE INSTRUCTIONS SHALL INDICATE THE RECOMMENDED LUBRICANT, THE POINTS OF LUBRICATION, AND THE RECOMMENDED FREQUENCY OF LUBRICATION.



EXPANSION AND AIR SEPARATION TANK PIPING DETAIL - CLOSE SYSTEM

NOT TO SCALE

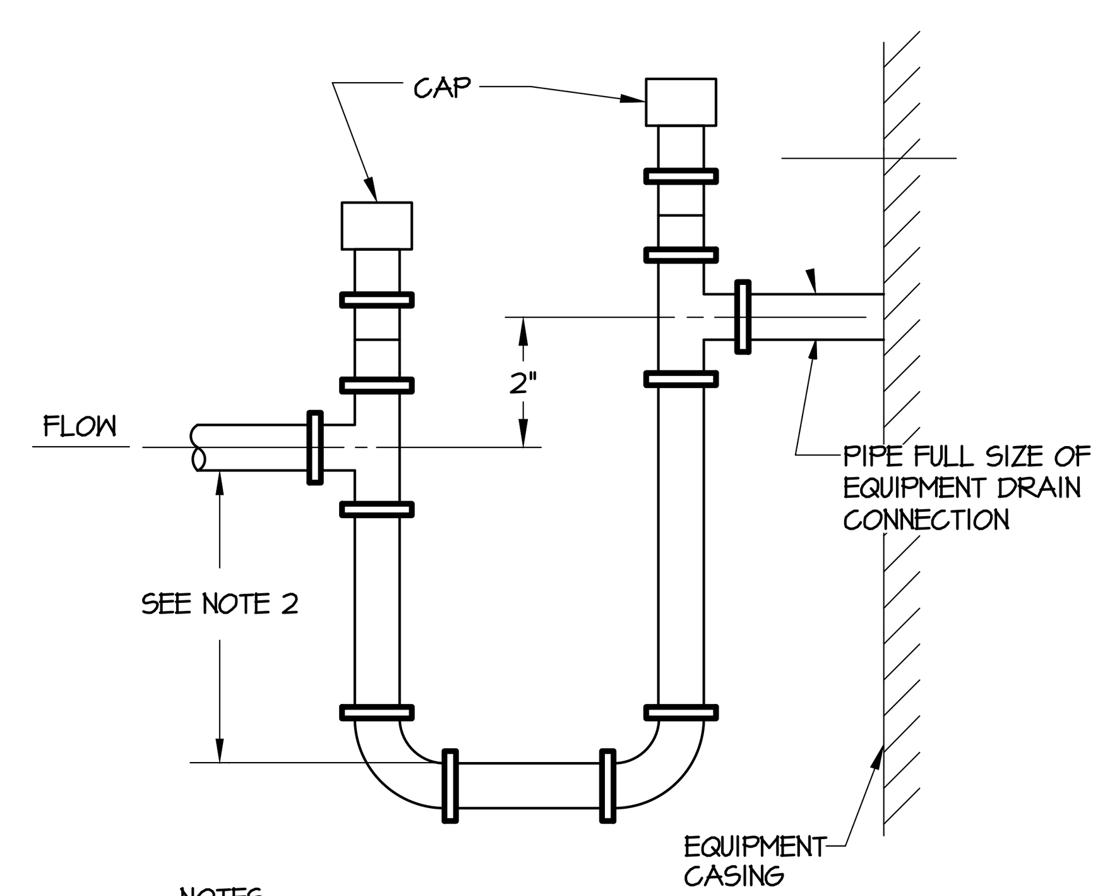


NOTE:

1. DETAIL BASED ON TRANE - FORCE-FLO.
2. FOLLOW MANUFACTURER'S INSTALLATION DETAILS AND INSTRUCTIONS.
3. PROVIDE MOUNTING PLATES FOR COMPLETE INSTALLATION.

HORIZONTAL RECESSED CABINET UNIT HEATER DETAIL

NOT TO SCALE

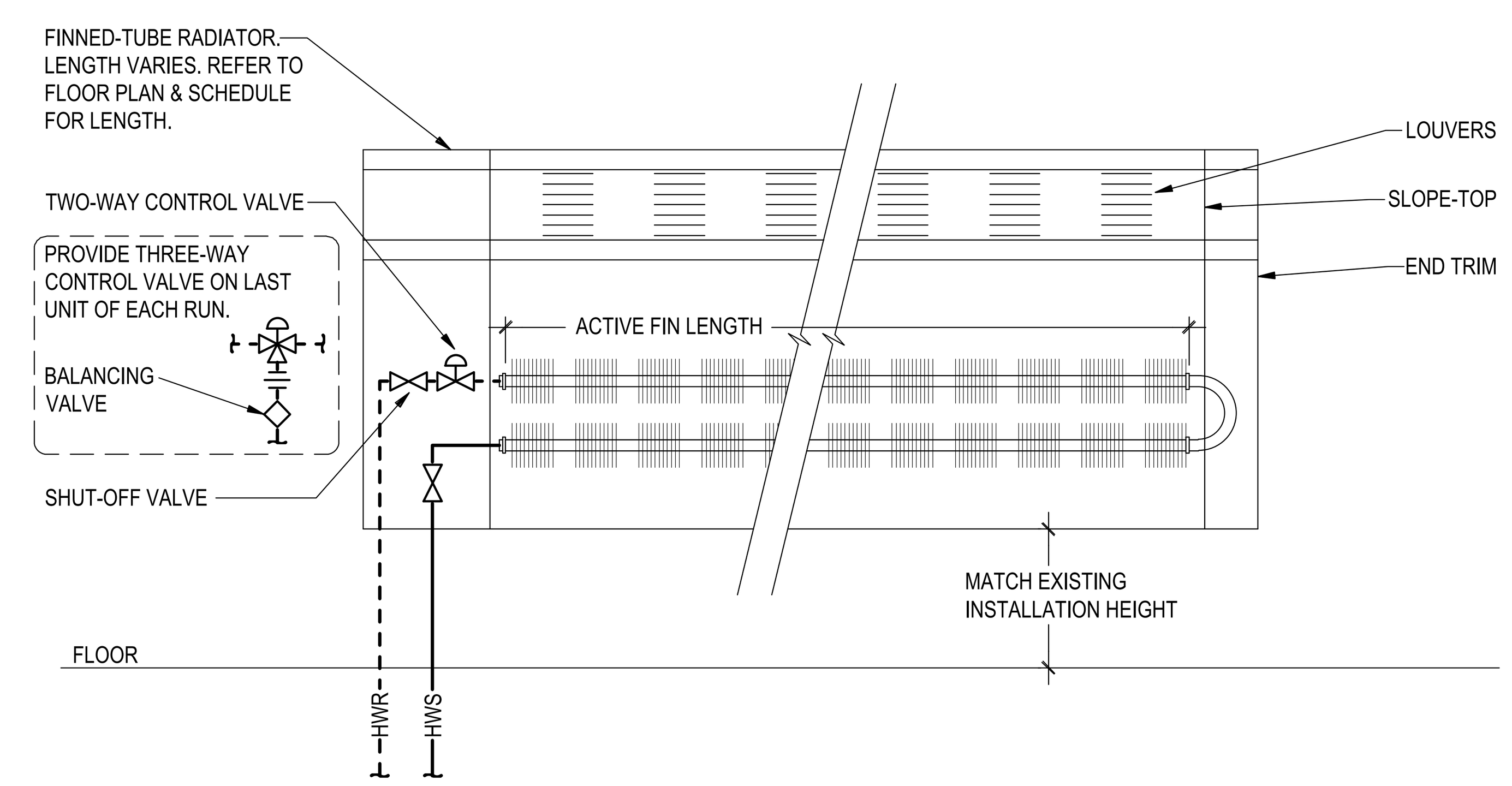


NOTES:

1. LOCATE TRAPS SO AS TO BE ACCESSIBLE FOR CLEANING.
2. HEIGHT SHALL BE EQUAL TO EQUIPMENT TOTAL STATIC PRESSURE PLUS 1".
3. PROVIDE MISC. STEEL AS REQUIRED TO RAISE UNIT TO HEIGHT AS REQUIRED TO ACCOMMODATE TRAP DEPTH

CONDENSATE DRAIN TRAP DETAIL

NOT TO SCALE



NOTE:

1. DETAIL BASED ON VULCAN - ARS.
2. FOLLOW MANUFACTURER'S INSTALLATION DETAILS AND INSTRUCTIONS.
3. PROVIDE MOUNTING PLATES FOR COMPLETE INSTALLATION.

FINNED-TUBE RADIATOR DETAIL

NOT TO SCALE

USPS Project # C11386

LEXINGTON MPO HVAC REPLACEMENT
101 LEE AVE.
LEXINGTON, VA 24450

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M503 DIAGRAMS + DETAILS

Scale:
Date: 09-18-20
Project: LEXINGTON MAIN POST OFFICE HVAC REPLACEMENT
USPS File Number:
Revisions:

COMMONWEALTH OF VIRGINIA
RALPH HOFFMAN
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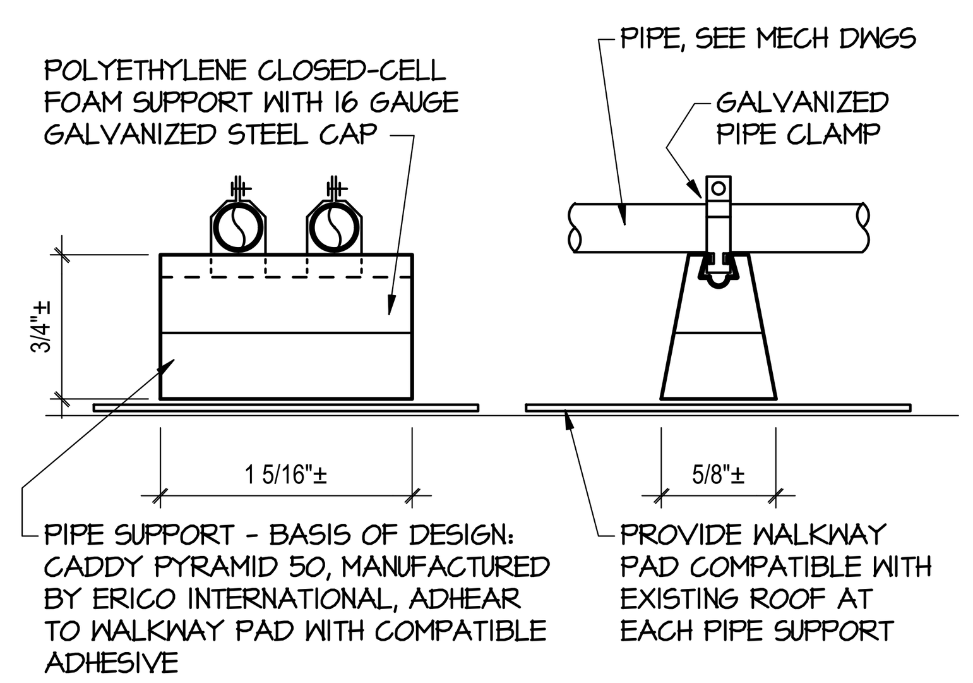
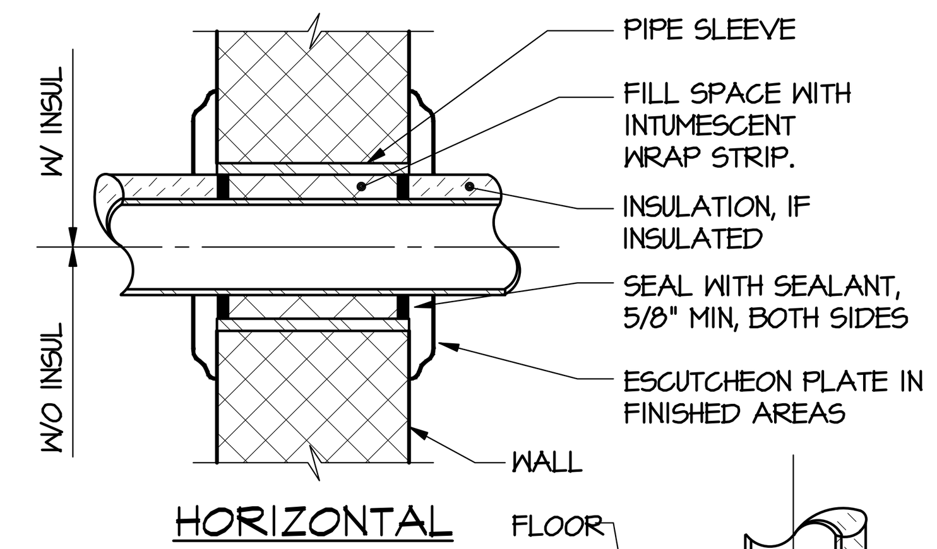
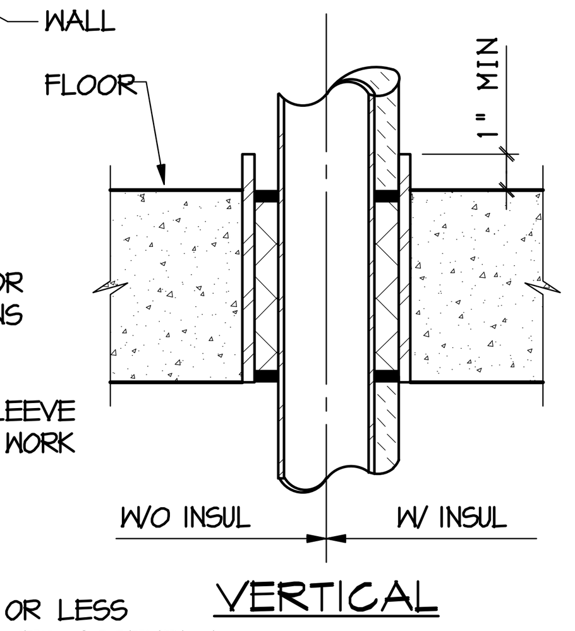


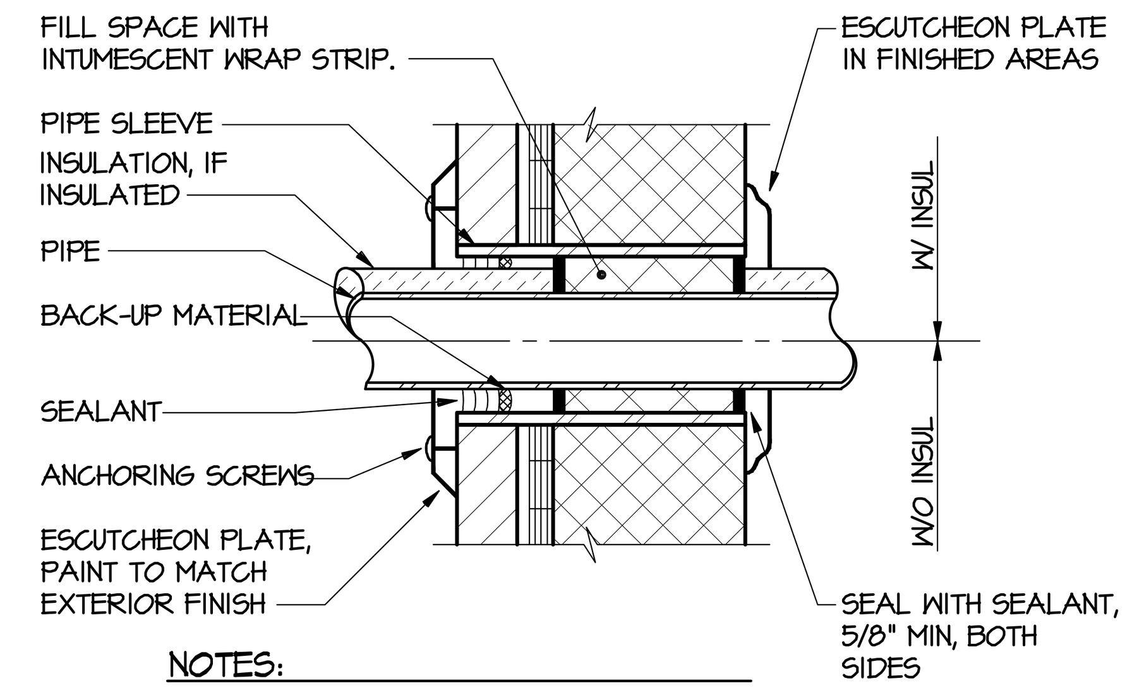
TYP CONDUIT/PIPE SUPPORT
NTS





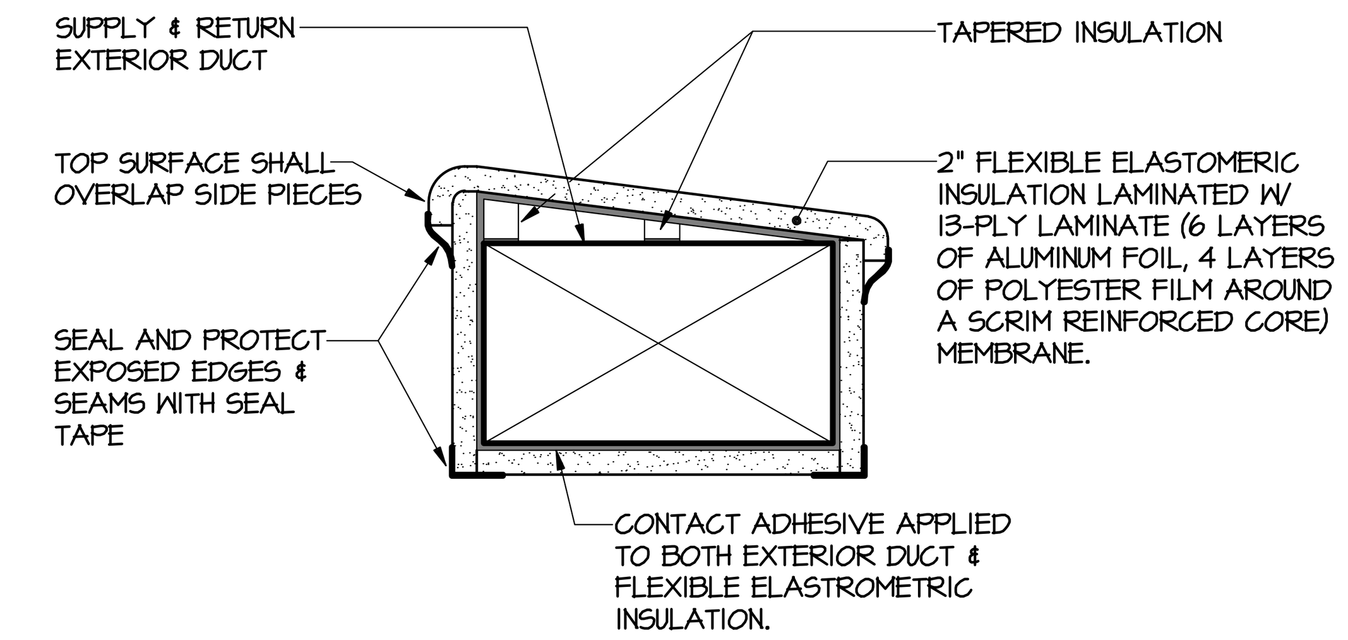
NOTES:
1. REFER TO ARCH DRAWINGS FOR BUILDING AND WALL SECTIONS AND DETAILS.
2. COORDINATE LOCATION OF SLEEVE WITH BUILDING STRUCTURAL WORK PRIOR TO INSTALLATION.
3. SLEEVE SHALL BE PVC.
5. INSULATED METAL PIPE, 4" OR LESS THAT PENETRATES A FIRE RATED ASSEMBLY SHALL FOLLOW UL SYSTEM NO. W-J-5037. SEE LS102 FOR DETAILS.
6. SEALANTS ON PENETRATIONS OF 3 HOUR FIRE RATED ASSEMBLIES SHALL BE 1".

INTERIOR PIPE SLEEVE DETAIL
NOT TO SCALE



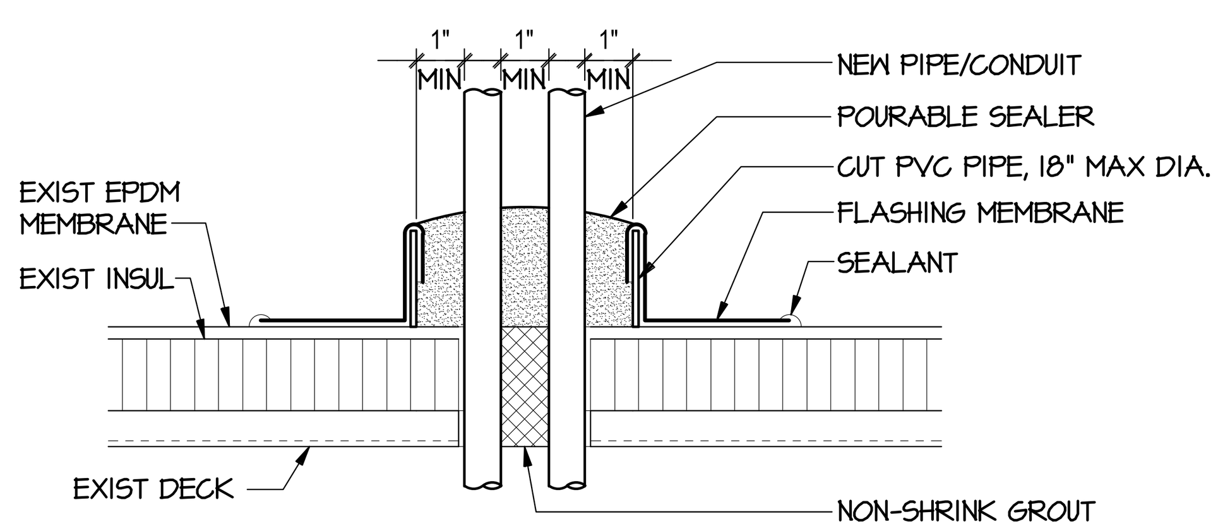
NOTES:
1. REFER TO ARCH DRAWINGS FOR BUILDING AND WALL SECTIONS AND DETAILS.
2. COORDINATE LOCATION OF SLEEVE WITH BUILDING STRUCTURAL WORK PRIOR TO INSTALLATION.
3. SLEEVE SHALL BE PVC.

EXTERIOR PIPE SLEEVE DETAIL
NOT TO SCALE

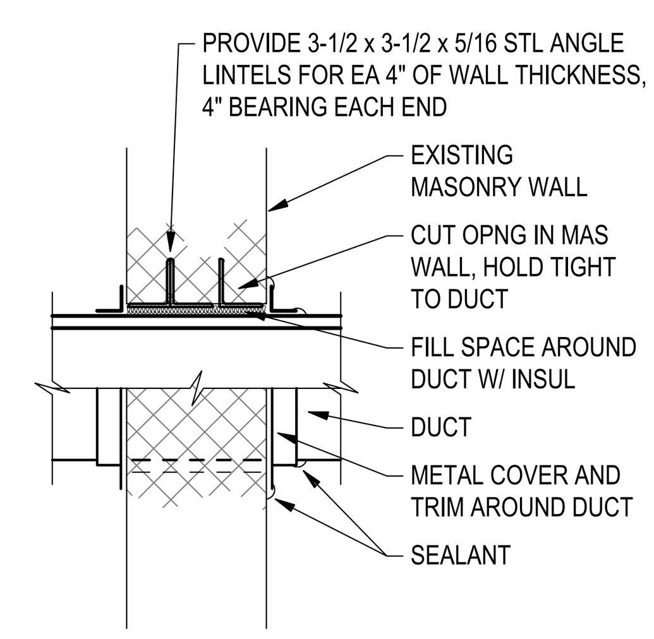


NOTE:
1. ALL SEAMS SHALL BE INSTALLED IN COMPRESSION AND SEALED WITH ADHESIVE PER MANUFACTURER'S RECOMMENDATIONS.
2. FOLLOW MANUFACTURER'S INSTALLATION DETAILS AND INSTRUCTIONS.

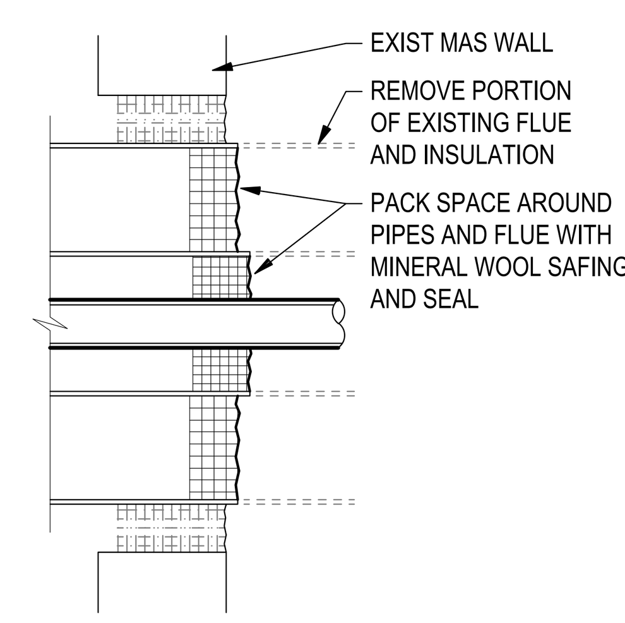
OUTDOOR DUCT INSULATION DETAIL
NOT TO SCALE



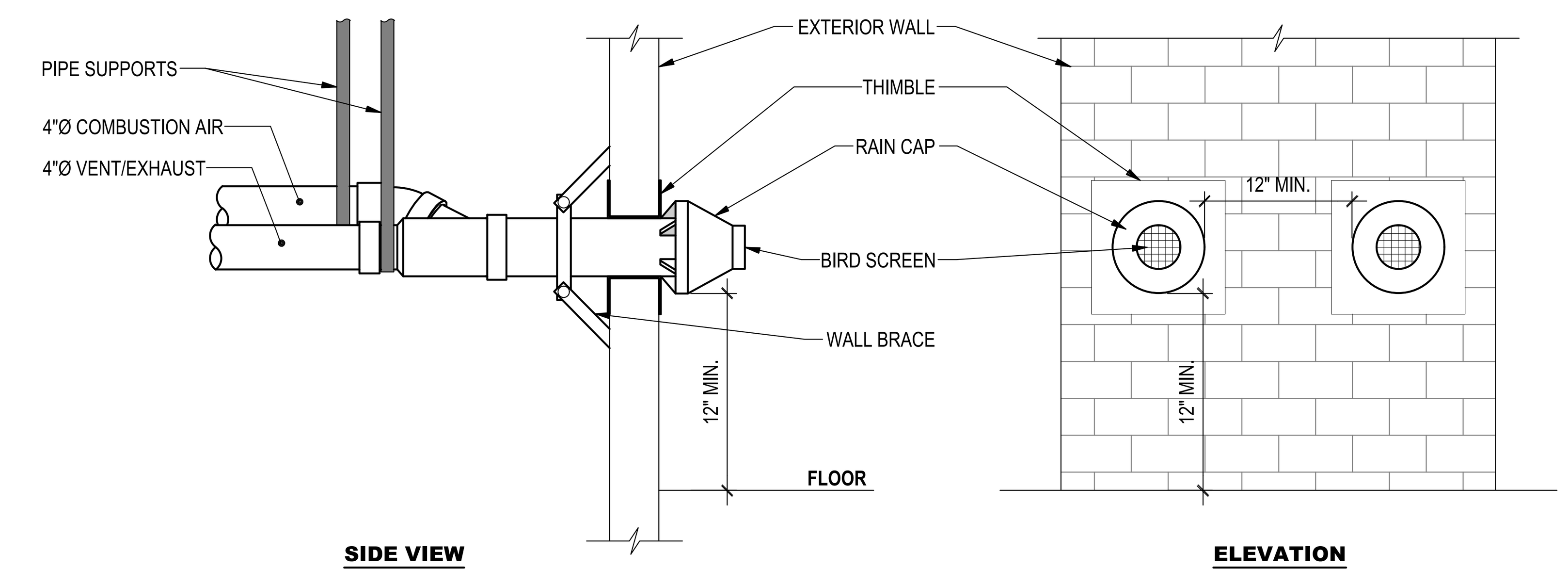
PIPE PENETRATION POCKET
1-1/2" = 1'-0"



EXTERIOR WALL PENETRATION DETAIL
3/4" = 1'-0"



CHIMNEY PENETRATION DETAIL
3/4" = 1'-0"



NOTES:
SEE ARCHITECTURAL DETAIL FOR PIPE PENETRATION DETAILS.

CONDENSING BOILER - CONCENTRIC VENT DETAIL
NOT TO SCALE

USPS Project # C11386

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COMMONWEALTH OF VIRGINIA
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M504 DIAGRAMS + DETAILS
Scale:
Date: 09-18-20
Revisions:
Project: LEXINGTON MAIN POST OFFICE HVAC REPLACEMENT
USPS File Number:

FILE: 71645-M504 SCALE: NOT TO SCALE DATE: 09/16/20 TIME: 19:47:58

CONSTANT VOLUME PACKAGED ROOFTOP UNIT SCHEDULE

DESIG	SERVES	SUPPLY FAN DATA					DX COIL							HOT GAS REHEAT		HEATING DATA					CONDENSING SECTION DATA			POWER EXHAUST FAN DATA			MIN OUTSIDE AIR CFM	BASIS OF DESIGN	REMARKS
							AIR DATA									NATURAL GAS - INDIRECT FIRE													
		CFM	T.S.P. IN. H_2O	E.S.P. IN. H_2O	RPM (MAX)	BHP	TOTAL CAPACITY MBH	SENSIBLE CAPACITY MBH	FACE VELOCITY MAX (FPM)	MAX A.P.D. IN. H_2O	EAT °FDB/ °FWB	LAT °FDB/ °FWB	EER	MBH	LAT °FDB	INPUT MBH	OUTPUT MBH	EAT °FDB	LAT °FDB	STAGES	NO. COMP	NO. FANS	AMBIENT TEMP.	CFM	MHP	RPM			
RTU-1	1ST FLR - WORKROOM	3075	2.0	1.6	1470	2.22	92.6	73.1	500	---	76/63	56/54	12.5	89	75	200	160	62	110	2	2	1	95	---	---	---	175	TRANE, YHC	---
RTU-2	1ST FLR - LOBBY	3925	2.0	1.4	1560	2.66	107.8	90.5	500	---	76/63	56/54	12.4	89	75	250	200	63	110	2	2	1	95	---	---	---	145	TRANE, YHC	---

NOTES:
1. REFER TO ELECTRICAL DESIGN DOCUMENTS FOR DISCONNECT SWITCH.
2. REFRIGERANT SHALL BE R-410A.
3. RTU'S SHALL BE PROVIDED WITH ECONOMIZER PACKAGE AND HOT GAS REHEAT.
4. VFD'S SHALL PROVIDED ON FAN MOTORS.

SPLIT SYSTEM HEAT PUMP AIR CONDITIONING UNIT SCHEDULE

DESIG	LOCATION	SERVES	INDOOR UNIT							OUTDOOR UNIT								MIN OA CFM	ELEC. DATA (V / PH)	PROTOTYPE: TRANE		REMARKS
			AIR DATA			DX COOLING CAPACITY DATA				HEAT PUMP				ELECTRIC AUXILIARY HEAT DATA								
			CFM	ESP IN H_2O	FAN HP	TOTAL (MBH)	SENSIBLE (MBH)	EAT °F DB	EAT °F WB	CAP. @ 47°F HIGH TEMP	CAP. @ 17°F LOW TEMP	EER	HSPF	EAT °F	LAT °F	kW	STEPS			INDOOR	OUTDOOR	
AHU-1/HP-1	MECH RM	ADMIN	3000	1.6	3	90.3	74.2	76	63	81.2	44.2	12.8	---	61	98	26 / 35	2	215	---	TWE	TWA	SEE NOTES

NOTES:
1. REFER TO ELECTRICAL DESIGN DOCUMENTS FOR DISCONNECT SWITCH.
2. CONTROL POWER TRANSFORMER AND LOW AMBIENT CONTROL SHALL BE FACTORY INSTALLED.
3. HEAT PUMP SHALL BE FULLY COMPATIBLE AND MATCH WITH INDOOR AIR HANDLING UNIT.
4. UNITS SHALL BE SINGLE POINT POWER CONNECTION.
5. PROVIDE 1-INCH THICK THROWAWAY FILTERS.
6. PROVIDE FIELD INSTALLED ECONOMIZER PACKAGE.

FINNED-TUBE RADIATOR SCHEDULE

DESIG	SERVES	TYPE	WATER FLOW					ROWS	ACTIVE LENGTH (FT)	HEIGHT (IN.)	DEPTH (IN.)	PROTOTYPE VULCAN	REMARKS
			GPM	AWT °F	LWT °F	MAX P.D. FT. H_2O	CAP. MBH						
FTR-B-1	STORAGE 1	A	0.5	150	140	-	6.4	2	6.5	25.5	5-5/16	CLASSIC - JV4-ARS	---
FTR-B-2	STORAGE 1		0.5			-	6.4		6.5				---
FTR-B-3	STORAGE 2		0.7			-	7.9		8				---
FTR-B-4	STORAGE 2		0.5			-	6.9		7				---
FTR-B-5	STORAGE 3		0.7			-	7.9		8				---
FTR-B-6	STORAGE 4		0.7			-	7.9		8				---
FTR-B-7	STORAGE 4		0.7			-	6.9		7				---
FTR-B-8	STORAGE 4		0.7			-	6.9		7				---
FTR-B-9	CORRIDOR		0.5			-	3.9		4				---
FTR-B-10	STORAGE 5		0.5			-	4.7		4				---
FTR-B-11	STORAGE 6		0.5			-	3.9		4				---
FTR-B-12	MENS TOILET		0.5			-	3.9		4				---
FTR-B-13	CORRIDOR		0.5			-	3.9		4				---
FTR-B-14	CORRIDOR		0.5			-	3.9		4				---
						-							---
FTR-1-1	LOBBY		0.5			-	5.8		5				---
FTR-1-2	LOBBY		0.5			-	5.8		5				---
FTR-1-3	LOBBY		0.5			-	5.8		5				---
FTR-1-4	LOBBY		0.5			-	5.8		5				---
FTR-1-5	LOBBY		0.5			-	5.3		4.5				---
FTR-1-6	CORRIDOR		1			-	9		7.5				---
FTR-1-7	CORRIDOR		1			-	9		7.5				---
FTR-1-8	PM OFFICE		1			-	8.5		7				---
FTR-1-9	PM OFFICE		1			-	8.5		7				---
FTR-1-10	PM TOILET		0.5			-	3.5		3				---
FTR-1-11	WORK ROOM		0.5			-	5.8		5				---
FTR-1-12	WORK ROOM		1			-	9.7		8				---
FTR-1-13	WORK ROOM		1			-	9.7		8				---
FTR-1-14	VESTIBULE		0.5			-	3.5		3				---
FTR-1-15	TOILET		0.5			-	2.9		3				---
FTR-1-16	WORK ROOM		0.7			-	7.8		8				---
FTR-1-17	WORK ROOM		0.7			-	7.8		8				---
FTR-1-18	WORK ROOM		1			-	9.2		7.5				---
FTR-1-19	STORAGE		0.5			-	2		2				---
FTR-1-20	WORK ROOM		0.5			-	4.8		4				---

NOTES: 'A' - VERTICAL SLOPE, WALL-MOUNTED

CABINET UNIT HEATER SCHEDULE

DESIG	SERVES	TYPE	AIR FLOW						WATER FLOW					PROTOTYPE TRANE	REMARKS
			CFM	EAT °F DB	LAT °F DB	MAX A.P.D. IN. H_2O	MHP	RPM	GPM	EWT °F	LWT °F	MAX P.D. FT. H_2O	CAP. MBH		
CUH-1	VESTIBULE	A	240	30	96	-	0.2	980	1.7	160	140	2.4	17.1	FORCE-FLO	---
CUH-2	VESTIBULE	A	240	30	96	-	0.2	980	1.7	160	140	2.4	17.1	FORCE-FLO	---
CUH-3	LOADING DOCK VEST.	A	240	30	96	-	0.2	980	1.7	160	140	2.4	17.1	FORCE-FLO	---
CUH-4	LOADING DOCK VEST.	A	240	30	96	-	0.2	980	1.7	160	140	2.4	17.1	FORCE-FLO	---

NOTES: 'A' - HORIZONTAL RECESSED
(1) REFER TO ELECTRICAL DRAWINGS FOR VOLTAGE.

MODULAR BOILER SCHEDULE

DESIG	TYPE	AFUE %	GROSS I=B=R OUTPUT (MBH)	I=B=R BURNER CAPACITY INPUT		BLOWER MHP (MAX)	ΔT°F	MIN. GPM	MAX. GPM	VENT DIA. (IN.)	AIR INTAKE (IN.)	CIRCULATING PUMP TACO-0013		PROTOTYPE WEIL McLAIN	WEIGHT (POUNDS)	REMARKS
				OIL GPH	GAS MBH							MAX. GPM	HEAD FT.			
B-1	A	95	284	-	299	---	25	13	22	4	4	34	33	EVERGREEN	260	---
B-2	A	95	284	-	299	---	25	13	22	4	4	34	33	EVERGREEN	260	---

NOTES: A - CONDENSING, HIGH EFFICIENCY, GAS BOILER, DIRECT VENTED
(1) REFER TO ELECTRICAL DRAWINGS FOR VOLTAGE AND DISCONNECT SWITCHES.
(2) BOILERS SHALL BE PROVIDED WITH CIRCULATORS, MANIFOLDS, CONDENSATE DRAIN NEUTRALIZATION KIT, AND CONCENTRIC VENT/AIR KITS. INSTALLATION SHALL COMPLY WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.

HVAC PUMP SCHEDULE

DESIG	LOCATION	SERVES	TYPE	GPM	MHP	RPM	HEAD FT	PROTOTYPE BELL & GOSSETT	REMARKS
HWP-1	MECH ROOM	HOT WATER HEATING	A	30	1/3	1750	25	SERIES E-60	-
HWP-2	MECH ROOM	HOT WATER HEATING	A	30	1/3	1750	25	SERIES E-60	-

NOTES: 1. TYPE A = IN-LINE CENTRIFUGAL PUMP.

CEILING DIFFUSER SCHEDULE

DESIG.	SERVICE	CFM RANGE	NECK SIZE IN.	OVERALL FACE DIM.	FACE	MOUNTING	PATTERN	FINISH	MAX NC LEVEL DB	MAX P.D IN.H_2O	PROTOTYPE:	REMARKS
CD-1	SUPPLY	220 - 330	10	22.5" DIA.	LOUV.	LAY-IN	4-W	WHITE	25	0.10	TITUS-TMRA	FULLY INSULATE TOP OF DIFFUSER
CD-2	SUPPLY	335 - 470	12	27" DIA.	LOUV.	LAY-IN	4-W	WHITE	25	0.10	TITUS-TMRA	-
CD-3	SUPPLY	660 - 700	16	29" DIA.	SPIRAL	LAY-IN	DN BLAST	WHITE	25	0.10	NAILOR-RBD	FULLY INSULATE TOP OF DIFFUSER

KEY: AN "A" FOLLOWING THE DIFFUSER DESIGNATION, AS IN "CD-1A" SHALL BE A DEVICE WITH THE SAME SPECIFICATIONS AS SHOWN EXCEPT FOR THE MOUNTING TYPE. MOUNTING TYPE ON DIFFUSERS DESIGNATED "A" SHALL BE FLUSH SURFACE MOUNTED.

REGISTERS AND GRILLES SCHEDULE

DESIG	SERVICE	CFM RANGE	FACE (IN.)	FACE BLADES			FINISH (1)	MAX. NC LEVEL dB	PROTOTYPE	ACCESSORIES (2)	REMARKS
				DEFLEC.	SPACING	MATERIAL					
SR	SUPPLY	-	AS SHOWN	ADJUST.	1/2"	SS	W-E	30	TITUS	OBD	NOTE 3
RR	RETURN	-	AS SHOWN	0°	1/2"	SS	W-E	30	TITUS	OBD	NOTE 3

NOTES:
1. 'W-E' - WHITE ENAMEL; 'UNPTD' - UNPAINTED.
2. 'OBD' - OPPOSED BLADE DAMPER; 'VD' - VOLUME DAMPER.
3. COORDINATE MOUNTING TYPE WITH CEILING.

COMMONWEALTH OF VIRGINIA
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UNITED STATES POSTAL SERVICE
Eastern Facilities Service Office, P.O. Box 27497, Greensboro, NC 27498-1103

M601 SCHEDULES

Scale:
Date: 09-18-20
Project: LEXINGTON MAIN POST OFFICE HVAC REPLACEMENT
USPS File Number:
Revisions:

FILE: 11145-M601 DATE: 09/16/20
SCALE: NOT TO SCALE TIME: 14:48:03

CONDENSATE PUMP SCHEDULE

DESIG	SERVES	LOCATION	PERFORMANCE GPH @ HEAD			TAKEOFF CONNECTION SIZE (IN.)	BASIS OF DESIGN: LITTLE GIANT	REMARKS
			1 FT	5 FT	10 FT			
CP-1	B-1	FLOOR	80	70	48	1/2" COPPER	VCMA-20 SERIES	-
CP-2	B-2	FLOOR	80	70	48	1/2" COPPER	VCMA-20 SERIES	-
CP-3	AHU-1	CEILING	80	70	48	1/2" COPPER	VCMA-20 SERIES	NOTE 1

NOTES: 1. PROVIDE COMPATIBLE RESERVOIR AND SENSOR. PUMP SHALL PLUG INTO INDOOR UNIT BOARD AND NOT REQUIRE SEPARATE POWER. PUMP SHALL BE CAPABLE OF SHUTTING DOWN THE UNIT IN FAULT MODE AND RESTARTING WHEN CLEAR.

FAN SCHEDULE

DESIG	SERVES	TYPE	CFM	ESP	BHP	RPM MAX	DRIVE	ELEC. DATA (V / PH)	PROTOTYPE	REMARKS
EF-1	PM TOILET	C	100	0.25"	0.04	1725	DIRECT	120/1	GREENHECK - SE	INTERLOCK WITH LIGHT SWITCH
EF-2	TOILET	C	100	0.25"	0.04	1725	DIRECT	120/1	GREENHECK - SE	INTERLOCK WITH LIGHT SWITCH
EF-3	WOMENS TOILET	C	100	0.25"	0.04	1725	DIRECT	120/1	GREENHECK - SE	INTERLOCK WITH LIGHT SWITCH

NOTES:
1. FAN TYPES: 'A'- CEILING FAN; 'B'- IN-LINE CENT; 'C'- PROPELLER FAN; 'D'- UTILITY SET FAN
2. REFER TO ELECTRICAL DESIGN DOCUMENTS FOR ELECTRICAL CHARACTERISTICS.
3. PROVIDE DISCONNECT SWITCH FOR ALL FANS.

EXPANSION TANK SCHEDULE

DESIG	LOCATION	TANK VOLUME (GALLONS)	ACCEPTANCE VOLUME (GALLONS)	SIZE (L x DIA)	PROTOTYPE	REMARKS
ET-1	BOILER ROOM	21.7	11.3	29.5" x 16"Φ	BELL & GOSSETT - SERIES D	VERTICAL - FLOOR MOUNTED

FILE NAME: MH10-D

AHU-1 VENTILATION SCHEDULE

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
ROOM NUMBER	ROOM OCCUPANCY CLASSIFICATION	AREA (FT^2) (A_Z)	AREA OUTDOOR AIR RATE PER IMC TABLE 403.3 (R_a)	AREA OUTDOOR AIR (R_aA_Z)	OCCUPANT LOAD RATE PER IMC TABLE 403.3 (PEOPLE/1000 FT^2)	OCCUPANCY C x F/1000 (P_Z)	OCCUPANT OUTDOOR AIR RATE PER IMC TABLE 403.3 (R_P)	OCCUPANT OUTDOOR AIR (R_PP_Z)	BREATHING ZONE OUTDOOR AIR ($V_{bz}=R_PP_Z+R_aA_Z$)	ZONE AIR DISTRIBUTION EFFECTIVENESS (E_Z)	ZONE OUTDOOR AIR ($V_{oz}=V_{bz}/E_Z$)	SUPPLY AIR DESIGN (V_{PZ})	TRANSFER AIR DESIGN	OUTDOOR AIR FRACTION ($Z_P=V_{oz}/V_{PZ}$)
1	WORKROOM	1210	0.06	73	-	5*	5	25	98	0.8	123	1750	0	0.07
1	STORAGE 2	390	0.12	47	-	-	-	-	47	0.8	59	485	0	0.12
1	STORAGE 3	234	0.12	28	-	-	-	-	28	0.8	35	290	0	0.12
1	STORAGE 4	265	0.12	32	-	-	-	-	32	0.8	40	360	0	0.11
TOTALS		2099		180		5		25	205		257	2885	-	0.12

UNCORRECTED O.A. = 205   ' * ' = SDC OCCUPANCY RATIO

E_V = 1.0

TOTAL REQUIRED OUTDOOR AIR = 205

TOTAL PROVIDED OUTDOOR AIR = 205

FILE NAME: MH10-D

RTU-1 VENTILATION SCHEDULE

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
ROOM NUMBER	ROOM OCCUPANCY CLASSIFICATION	AREA (FT^2) (A_Z)	AREA OUTDOOR AIR RATE PER IMC TABLE 403.3 (R_a)	AREA OUTDOOR AIR (R_aA_Z)	OCCUPANT LOAD RATE PER IMC TABLE 403.3 (PEOPLE/1000 FT^2)	OCCUPANCY C x F/1000 (P_Z)	OCCUPANT OUTDOOR AIR RATE PER IMC TABLE 403.3 (R_P)	OCCUPANT OUTDOOR AIR (R_PP_Z)	BREATHING ZONE OUTDOOR AIR ($V_{bz}=R_PP_Z+R_aA_Z$)	ZONE AIR DISTRIBUTION EFFECTIVENESS (E_Z)	ZONE OUTDOOR AIR ($V_{oz}=V_{bz}/E_Z$)	SUPPLY AIR DESIGN (V_{PZ})	TRANSFER AIR DESIGN	OUTDOOR AIR FRACTION ($Z_P=V_{oz}/V_{PZ}$)
1	WORKROOM	1723	0.06	103	-	6*	5	30	133	0.8	166	2280	0	0.07
1	MAIL/CLERK	174	0.06	10	5	1	5	5	15	0.8	19	220	0	0.09
1	TOILET	43	-	-	-	-	-	-	-	0.8	-	0	50	-
1	SWING CORRDOR	333	0.06	20	-	-	-	-	20	0.8	25	415	0	0.06
TOTALS		2273		133		7		35	168		210	2915	50	0.09

UNCORRECTED O.A. = 168   ' * ' = SDC OCCUPANCY RATIO

E_V = 1.0

TOTAL REQUIRED OUTDOOR AIR = 168

TOTAL PROVIDED OUTDOOR AIR = 170

FILE NAME: MH10-D

RTU-2 VENTILATION SCHEDULE

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
ROOM NUMBER	ROOM OCCUPANCY CLASSIFICATION	AREA (FT^2) (A_Z)	AREA OUTDOOR AIR RATE PER IMC TABLE 403.3 (R_a)	AREA OUTDOOR AIR (R_aA_Z)	OCCUPANT LOAD RATE PER IMC TABLE 403.3 (PEOPLE/1000 FT^2)	OCCUPANCY C x F/1000 (P_Z)	OCCUPANT OUTDOOR AIR RATE PER IMC TABLE 403.3 (R_P)	OCCUPANT OUTDOOR AIR (R_PP_Z)	BREATHING ZONE OUTDOOR AIR ($V_{bz}=R_PP_Z+R_aA_Z$)	ZONE AIR DISTRIBUTION EFFECTIVENESS (E_Z)	ZONE OUTDOOR AIR ($V_{oz}=V_{bz}/E_Z$)	SUPPLY AIR DESIGN (V_{PZ})	TRANSFER AIR DESIGN	OUTDOOR AIR FRACTION ($Z_P=V_{oz}/V_{PZ}$)
1	LOBBY	759	0.06	46	10	8	5	40	86	0.8	108	2140	0	0.05
1	CORRIDOR	172	0.06	10	5	1	5	5	15	0.8	19	500	0	0.04
1	WORKROOM	193	0.06	12	5	1	5	5	17	0.8	21	635	0	0.03
1	STORAGE	21	0.12	3	-	-	-	-	3	0.8	4	235	0	0.02
1	PM OFFICE	265	0.06	16	5	2	5	10	26	0.8	33	575	0	0.06
1	PM TOILET	45	-	-	-	-	-	-	-	0.8	-	0	50	-
TOTALS		1455		87		12		60	147		185	4085	50	0.06

UNCORRECTED O.A. = 147

E_V = 1.0

TOTAL REQUIRED OUTDOOR AIR = 147

TOTAL PROVIDED OUTDOOR AIR = 150

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LEXINGTON MPO HVAC REPLACEMENT
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M602 SCHEDULES

Scale:
Date: 09–18–20
Revisions:
Project: LEXINGTON MAIN POST OFFICE HVAC REPLACEMENT
USPS File Number:

GAA FILE: 11145-M602 DATE: 09/16/20
SCALE: NOT TO SCALE TIME: 14:48:06

ABBREVIATIONS

GENERAL

(X)	REMOVE
(E)	EXISTING TO REMAIN
(R)	RELOCATE EXISTING EQUIPMENT

ABBREVIATIONS

A	AMPERE
AFF	ABOVE FINISH FLOOR
AIC	AMPERE INTERRUPTING CAPACITY
AMP	AMPERE
AWG	AMERICAN WIRE GAGE
BC	BRANCH CONTROLLER
BKR	BREAKER
BLDG	BUILDING
C	CONDUIT
CAP	CAPACITY
C/B	CIRCUIT BREAKER
CKT	CIRCUIT
CONTR	CONTRACTOR
CU	COPPER
DESG	DESIGNATION
DISC	DISCONNECT SWITCH
DP	DISTRIBUTION PANEL
DWG(S)	DRAWING(S)
EC	EMPTY CONDUIT
EF	EXHAUST FAN
EG	EQUIPMENT GROUND
ELEC	ELECTRIC (AL)
EMER	EMERGENCY
ENC	ENCLOSE (URE)
EQUIP	EQUIPMENT
EXIST	EXISTING
FDR	FEEDER
FSS	FUSED SAFETY SWITCH
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
HP	HORSEPOWER
HVAC	HEATING/VENTILATING/ AIR CONDITIONING
JB	JUNCTION BOX
kcmil	THOUSAND CIRCULAR MILLS
kAIC	AMPERE INTERRUPT CAPACITY X 1000
kV	KILOVOLT
kVA	KILOVOLT - AMPERE
kW	KILOWATT
MCA	MINIMUM CIRCUIT AMPS
MCC	MOTOR CONTROL CENTER
MCM	THOUSAND CIRCULAR MILLS
MDP	MAIN DISTRIBUTION PANEL
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MTD	MOUNTED
MTG	MOUNTING
N/A	NOT APPLICABLE
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANU- FACTURERS ASSOCIATION
NFSS	NON- FUSED SAFETY SWITCH
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NO	NUMBER
NTS	NOT TO SCALE
PH, Ø	PHASE
PLMB	PLUMBING
PNL	PANEL
PP	POWER PANEL
PWR	POWER
RECEPT	RECEPTACLE
REF	REFER
RM	ROOM
RTU	ROOF TOP UNIT
SIM	SIMILAR
STD	STANDARD
STRU	STRUCTURE (AL)
SW	SWITCH
SWGR	SWITCHGEAR
TYP	TYPICAL
UE	UNDERGROUND ELECTRIC
UG	UNDERGROUND
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORIES
UON	UNLESS OTHERWISE NOTED
V	VOLT
VA	VOLT-AMPERE
VRF	VARIABLE REFRIGERANT FLOW
W/	WITH
W/O	WITHOUT
WP	WEATHERPROOF (ING)
XFMR	TRANSFORMER

SYMBOLS

POWER

	DUPLEX RECEPTACLE, NEMA 5-20R, MTD 18"AFF, UON
	DOUBLE-DUPLEX RECEPTACLE, NEMA 5-20R, MTD 18"AFF, UON
GFCI	GROUND FAULT INTERRUPTING DUPLEX RECEPTACLE, NEMA 5-20R, MTD 18"AFF, UON
$_M	MOTOR RATED SWITCH
▽	THREE-JACK DATA OUTLET
	4" WALL MOUNTED JUNCTION BOX
SD	DUCT SMOKE DETECTOR
M	MOTOR CONNECTION
	COMBINATION MOTOR STARTER OR CONTROLLER CONNECTION
30/3	DISCONNECT SWITCH. 30A, 3-POLE,
30/3/20	FUSED DISCONNECT SWITCH. 30A, 3-POLE, FUSED AT 20 A.
	PANELBOARD

WIRING

	UNDERGROUND CONDUCTORS AND CONDUIT
	CONDUIT RUN CONCEALED IN OR UNDER FLOOR SLAB.
	2 #12, 1 #12 GND IN 3/4" CONDUIT, U.O.N.
P-X (PANEL — CIRCUIT NO.)	HOMERUN TO PANELBOARD.
	CONDUIT TURNED DOWN
	CONDUIT TURNED UP

ELECTRICAL - GENERAL NOTES

A. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE FOLLOWING:

1. 2015 INTERNATIONAL BUILDING CODE
2. OSHA 29 CFR PART. 1926 - SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION
3. NFPA 70 - NATIONAL ELECTRICAL CODE (2014 EDITION)
4. USPS STANDARD DESIGN CRITERIA 2019-1
5. REGULATIONS OF ALL APPLICABLE CODES

B. SCOPE

PROVIDE (FURNISH AND INSTALL) ALL LABOR, MATERIALS, SUPPLIES, PERMITS, TOOLS, EQUIPMENT, DEVICES AND APPLIANCES, AND PERFORM ALL OPERATIONS NECESSARY FOR THE INSTALLATION OF COMPLETE ELECTRICAL SYSTEMS AND SATISFACTORY OPERATION OF ALL WORK AS SHOWN ON THE DRAWINGS OR HEREINAFTER SPECIFIED. THE SCOPE SHALL INCLUDE BUT SHALL NOT BE LIMITED TO THE FOLLOWING:

1. PERMITS AND CERTIFICATES
2. ELECTRICAL SYSTEMS AND EQUIPMENT
3. TESTING OF EQUIPMENT SYSTEMS AND MATERIALS
4. GENERAL PROVISIONS FOR ELECTRICAL WORK
5. DEMOLITION

C. GENERAL PROVISIONS FOR ELECTRICAL WORK

1. DOCUMENTS: DRAWINGS ARE CONSIDERED DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF WORK AND SYSTEMS. THE INTENT OF THIS DESIGN IS TO PROVIDE COMPLETE, PROPER, TESTED, ADJUSTED BALANCED AND FULLY ACCEPTABLE SYSTEMS AND EQUIPMENT TO THE OWNER FOR HIS SUCCESSFUL USE.
2. QUALITY OF MATERIALS: NEW, FREE FROM DEFECTS AND SHALL BEAR THE UL LABEL. ALL MATERIALS AND GENERAL EQUIPMENT SHALL MEET USPS'S BUILDING STANDARDS.
3. THE CONTRACTOR SHALL VISIT THE SITE AND THOROUGHLY EXAMINE ALL CONTRACT DOCUMENTS TO HAVE A COMPLETE UNDERSTANDING OF THE SCOPE OF THE PROJECT AND ALL EXISTING CONDITIONS, BEFORE SUBMITTING HIS PROPOSAL. ANY QUESTIONS, DISCREPANCIES, OR IRREGULARITIES THAT THE CONTRACTOR MAY HAVE ABOUT THE PROJECT, OR THAT MAY EXIST, SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER IN WRITING AND RESOLVED PRIOR BIDDING THE WORK, ORDERING MATERIALS, OR THE INSTALLATION OF WORK. FAILURE TO DO SO SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PERFORM ALL WORK AND TO PERFORM ALL MATERIALS AND EQUIPMENT REQUIRED FOR A COMPLETE AND SATISFACTORY INSTALLATION AS INTENDED BY THE ENGINEER.
4. ADJACENT AREAS OF THE EXISTING FACILITY WILL REMAIN IN OPERATION WHILE WORK IS BEING DONE. ALL WORK SHALL BE COORDINATED WITH THE OWNER'S REPRESENTATIVE, AND SHALL BE SEQUENCED AND PERFORMED IN A MANNER TO MINIMIZE ANY IMPACTS ON EXISTING FACILITY OPERATIONS. CLEAN ALL OCCUPIED SPACES EACH DAY OF DUST AND DEBRIS. PROVIDE FIRE STOPPING AT ALL WALL AND FLOOR ASSEMBLY PENETRATIONS. SEAL OPENING LEFT BY REMOVAL OF EXISTING CONDUITS.
5. QUALITY ASSURANCE: USE ADEQUATE NUMBER OF SKILLED WORKMEN WHO ARE THOROUGHLY TRAINED AND EXPERIENCED IN THE NECESSARY CRAFT FOR PROPER INSTALLATION OF THE WORK OF THIS SECTION.
6. ALL LIGHT AND RECEPTACLE CIRCUITS OVER 75 FEET FROM PANEL TO LAST OUTLET FOR 20A, 120V BRANCH CIRCUITS SHALL USE 10 AWG CONDUCTORS.
7. ALL OPENINGS CUT THROUGH WALL FOR CONDUIT AND ARMORED CABLE ARE TO BE SEALED AFTER COMPLETION OF WORK.
8. ALL CONDUCTORS, RACEWAYS AND CABLES SHALL BE CONCEALED IN THE CEILINGS OR WALLS UNLESS OTHERWISE INDICATED. IN AREAS WITH EXPOSED STRUCTURE, HOLD RACEWAY TIGHT TO UNDERSIDE OF STRUCTURE.
9. CONDUIT AND WIRE

   A. ALL CONDUCTORS SHALL BE COPPER WITH A MINIMUM CONDUCTOR SIZE OF #12 AWG, UON. CONDUCTORS SHALL BE COPPER - STRANDED FOR NO. 8 AWG AND LARGER, SOLID FOR NO. 10 AWG AND SMALLER.

   B. CONDUCTOR INSULATION WILL BE THERMOPLASTIC TYPE "THHN", "THWN" OR "XHHW", 90 DEGREE CELSIUS RATING.

   C. ALL WIRING SHALL BE INSTALLED IN RIGID GALVANIZED CONDUIT OR EMT. PROVIDE RIGID GALVANIZED CONDUIT FOR AREAS OUTSIDE AND IN MECHANICAL/ELECTRICAL ROOMS WHERE EXPOSED. PROVIDE SCHEDULE 40 PVC CONDUIT BELOW GRADE WITH 2" OF CONCRETE COVER.

   D. FLEXIBLE METAL CONDUIT: USE FLEXIBLE METAL CONDUIT IN LIEU OF EMT WHERE VIBRATING CONDITIONS EXIST BETWEEN CONNECTIONS AND TERMINAL POINTS. ALL FITTINGS USED MUST BE SPECIFICALLY DESIGNED FOR THE FLEXIBLE METAL CONDUIT. USE LIQUIDTIGHT FLEXIBLE METAL CONDUIT (LFMC) FOR CONNECTION OF VIBRATING EQUIPMENT OUTDOORS OR IN WET LOCATIONS.

   E. ALL LOW-VOLTAGE CABLING EXPOSED, RUN ABOVE CEILINGS OR IN WALLS SHALL BE PLENUM RATED.

   F. IDENTIFY AND COLOR-CODE CONDUCTORS AND CABLES FOR PHASE AND VOLTAGE-LEVEL IDENTIFICATION.

10. COMMUNICATIONS CABLING

    A. UTP CABLE: 100-OHM, FOUR PAIR UTP WITH A BLUE THERMOPLASTIC JACKET. COMPLY WITH TIA/EIA-568-B.2, CATEGORY 6 OR HIGHER.

    B. JACKS: 100-OHM, BALANCED, TWISTED PAIR CONNECTOR: FOUR PAIR, EIGHT POSITION MODULAR. COMPLY WITH TIA/EIA-568-B.1. STAINLESS STEEL FACE PLATE. TWO PORT-CONNECTOR ASSEMBLIES MOUNTED IN SINGLE FACEPLATE

11. SAFETY SWITCHES

    A. ALL SWITCHES SHALL BE HEAVY DUTY TYPE, IN NEMA-1 FOR INDOOR AND NEMA-3R FOR OUTDOORS LOCATIONS. FUSED SWITCHES SHALL BE PROVIDED WITH CURRENT LIMITING RK-1 OR RK-5 FUSES. PROVIDE DUAL ELEMENT TIME DELAY TYPE FOR MOTOR LOADS. FUSE RATING SHALL BE SELECTED TO MATCH THE RECOMMENDATIONS OF MANUFACTURER, FOR THE SERVED EQUIPMENT.

12. ELECTRICAL DEMOLITION

    A. PROVIDE ALL ELECTRICAL DEMOLITION WORK NECESSARY TO INSTALL NEW WORK. CONTRACTOR SHALL REROUTE AND RECONNECT ANY CIRCUITS THAT REMAIN IN USE BUT INTERFERE WITH NEW CONSTRUCTION.

    B. EXERCISE CARE IN REMOVING DEMOLISHED ITEMS. CONTRACTOR SHALL REPAIR OR REPLACE ANY DAMAGE CAUSED TO EXISTING CONSTRUCTION AND EQUIPMENT TO REMAIN.

    C. ALL MATERIALS REMOVED UNDER DEMOLITION (AND NOT TO BE RELOCATED) SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED COMPLETELY FROM THE SITE UNLESS OTHERWISE NOTED.

    D. WHERE ELECTRICAL DEVICES AND EQUIPMENT (RECEPTACLES, LIGHTING FIXTURES, SWITCHES, ETC.) ARE EXISTING TO REMAIN, MAINTAIN EXISTING CIRCUITING TO THOSE DEVICES. WHERE CIRCUITING TO EXISTING DEVICES AND EQUIPMENT IS DISCONNECTED BY WORK IN ADJACENT SPACES, THE CONTRACTOR SHALL RECONNECT THE REMAINING EXISTING DEVICES AND EQUIPMENT TO NEW DEVICES AS INDICATED OR TO THE REMAINING UNDISTURBED PORTION OF EXISTING CIRCUIT.

13. COORDINATION AND REPAIR: WHERE EXISTING ELECTRICAL WORK INTERFERES WITH NEW WORK AND WHERE SUCH INSTALLATIONS ARE TO REMAIN IN USE, THE INSTALLATION SHALL BE DISCONNECTED AND/OR RECONNECTED TO COORDINATE WITH THE WORK INDICATED ON THE CONTRACT DRAWINGS AND AS SPECIFIED.

D. EXECUTION

1. INTERRUPTION OF EXISTING ELECTRIC SERVICE: DO NOT INTERRUPT ELECTRIC SERVICE TO FACILITIES OCCUPIED BY OWNER OR OTHERS UNLESS PERMITTED UNDER THE FOLLOWING CONDITIONS AND THEN ONLY AFTER ARRANGING TO PROVIDE TEMPORARY ELECTRIC SERVICE ACCORDING TO REQUIREMENTS INDICATED:

   I. NOTIFY OWNER NO FEWER THAN SEVEN DAYS IN ADVANCE OF PROPOSED INTERRUPTION OF ELECTRIC SERVICE.

   II. DO NOT PROCEED WITH INTERRUPTION OF ELECTRIC SERVICE WITHOUT OWNER'S WRITTEN PERMISSION.

   III. COMPLY WITH NFPA 70E.

2. UPON COMPLETION OF THE WORK, ALL EQUIPMENT SHALL BE THOROUGHLY CLEANED AND LEFT IN FIRST-CLASS OPERATING CONDITION.
3. PROTECT ALL EQUIPMENT PROVIDED UNTIL THE FINAL ACCEPTANCE OF THE JOB.
4. COORDINATE WITH MECHANICAL AND PLUMBING TRADES FOR LOCATION AND ELECTRICAL CHARACTERISTICS OF ACTUAL EQUIPMENT PROVIDED.
5. COORDINATE WITH ACTUAL EQUIPMENT PROVIDED PRIOR TO PURCHASE OR DELIVERY OF ELECTRICAL DEVICES.
6. PROVIDE PANELBOARDS WITH CIRCUIT BREAKERS SIZED AS INDICATED ON THE PANEL SCHEDULES PROVIDED IN THESE DOCUMENTS.
7. EQUIPMENT LABELING AND IDENTIFICATION:

   1. PROVIDE EQUIPMENT IDENTIFICATION AT ALL EQUIPMENT W/ BLACK LETTERS ON WHITE FIELD. INDICATE EQUIPMENT FED FROM.
   2. PROVIDE ARC FLASH WARNING LABEL ON ALL SERVICEABLE EQUIPMENT PER NFPA 70.
   3. PERMANENTLY LABEL ALL EMERGENCY SYSTEM EQUIPMENT PER NFPA 70.
   4. PERMANENTLY LABEL ALL EQUIPMENT WITH MULTIPLE SOURCES PER NFPA 70. IDENTIFY ALL SOURCES PROVIDED AND ANY EQUIPMENT FED.
   5. CONDUCTOR IDENTIFICATION AND SCHEDULE SHALL BE POSTED AT EACH PANELBOARD. IDENTIFY EACH SPARE CONDUCTOR AT EACH END WITH IDENTITY NUMBER AND LOCATION OF OTHER END OF CONDUCTOR, AND IDENTIFY AS SPARE.

8. PROVIDE ALL FINAL CONNECTIONS TO MECHANICAL EQUIPMENT, PANELS, CONTROLLERS, SUCH THAT ALL SYSTEMS HAVE POWER AT COMPLETION OF THIS PROJECT.
9. TEST AND INSPECTION

   I. AT THE TIME OF FINAL INSPECTION AND TEST, ALL CONNECTIONS TO PANELBOARDS AND EQUIPMENT CONNECTED MUST TEST FREE OF SHORT CIRCUITS AND GROUNDS.

   II. CORRECT ANY EQUIPMENT OR SYSTEMS THAT DO NOT TEST SATISFACTORILY.

10. WARRANTY: GUARANTEE ENTIRE ELECTRICAL INSTALLATION (LABOR AND MATERIAL) FOR ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE BY OWNER REPRESENTATIVE.
11. THE CONTRACTOR SHALL MAINTAIN A RECORD SET OF DRAWINGS AT SITE. ALL CHANGES TO THE DRAWINGS SHALL BE MARKED IN RED AND INITIATED BY PROJECT ENGINEER. THE CONTRACTOR SHALL DELIVER THE RECORD SET TO THE USPS PROJECT ENGINEER AT THE COMPLETION OF THE PROJECT.

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Eastern Facilities Service Office, P.O. Box 27497, Greensboro, NC 27498-1103

E001 ELECTRICAL COVER SHEET
Scale: Date: 09-18-20 Revisions:
Project: LEXINGTON MAIN POST OFFICE HVAC REPLACEMENT
USPS File Number:

FILE: THA5-E001 DATE: 09/21/20
SCALE: NOT TO SCALE TIME: 13:21:46

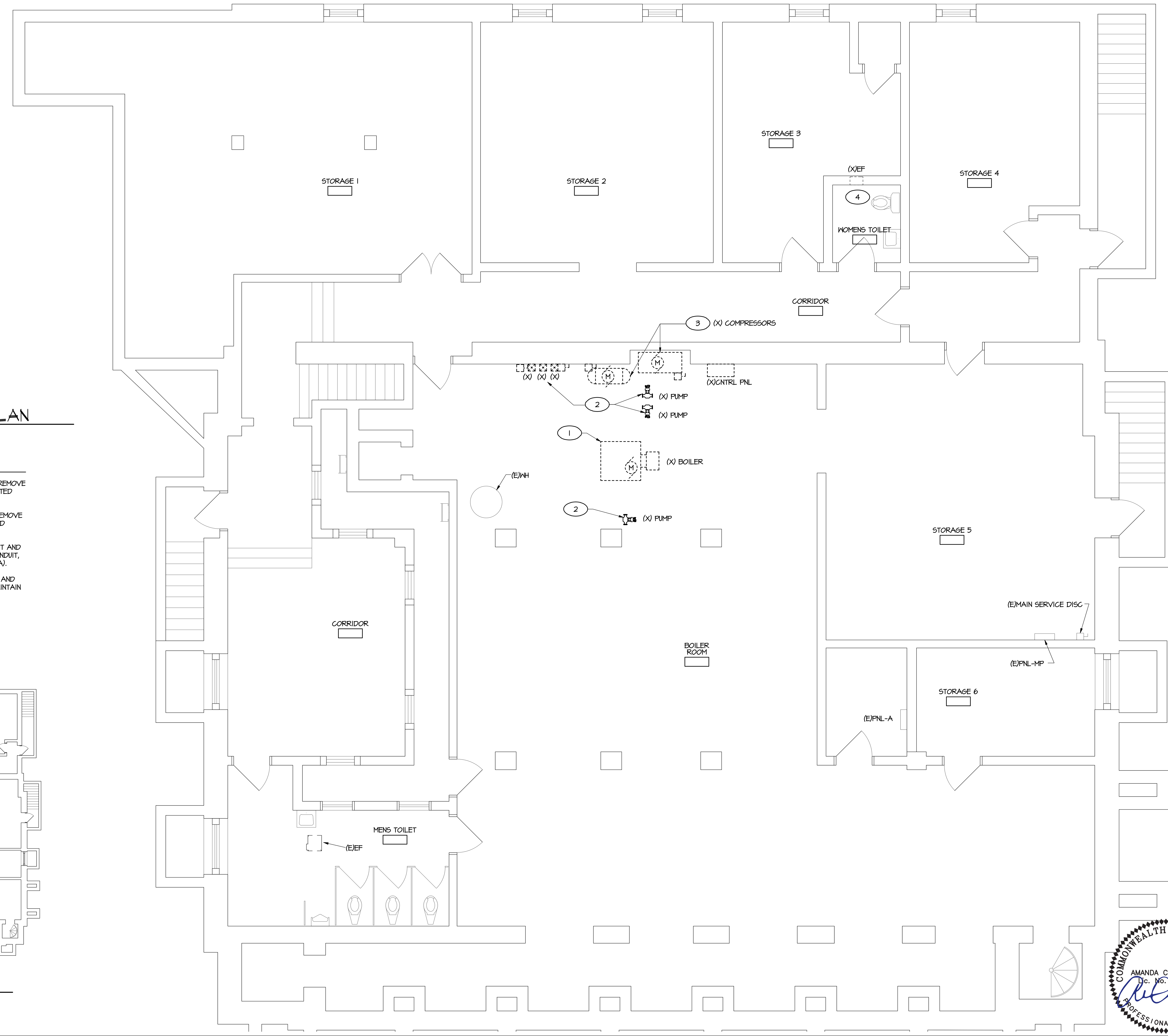
BASEMENT DEMOLITION PLAN

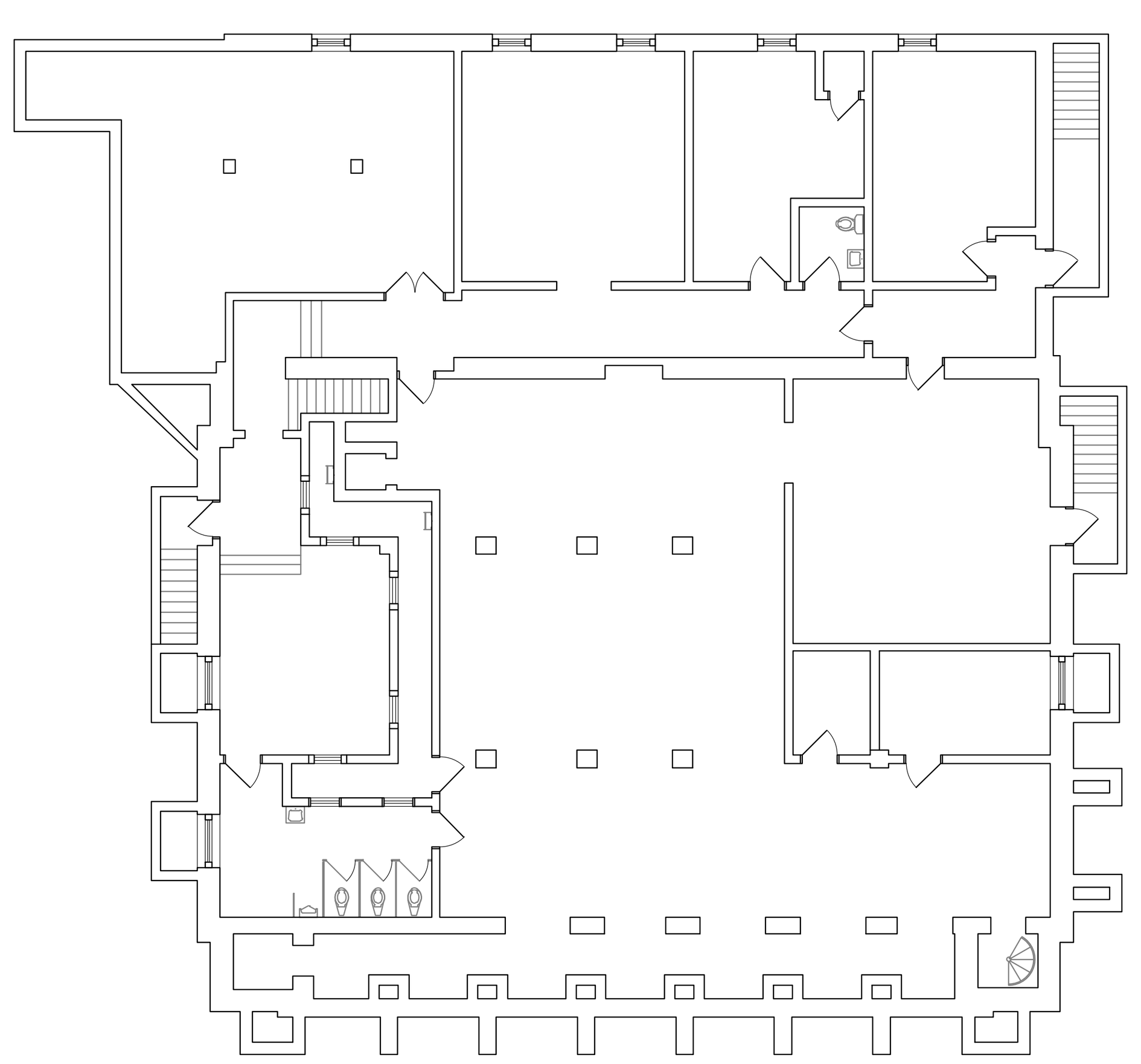
1/4" = 1'-0"

5' 3' 1' 0 5'

DEMOLITION PLAN NOTES:

1. EXISTING BOILER TO BE REMOVED. DISCONNECT AND REMOVE EXISTING DISCONNECT, WIRING, CONDUIT, AND ASSOCIATED CONTROLS BACK TO SOURCE.
2. EXISTING PUMPS TO BE REMOVED. DISCONNECT AND REMOVE EXISTING DISCONNECT, STARTERS, WIRING, CONDUIT, AND ASSOCIATED CONTROLS BACK TO SOURCE (PNL-A).
3. EXISTING COMPRESSORS TO BE REMOVED. DISCONNECT AND REMOVE EXISTING DISCONNECT, STARTERS, WIRING, CONDUIT, AND ASSOCIATED CONTROLS BACK TO SOURCE (PNL-A).
4. EXISTING EXHAUST FAN TO BE REMOVED. DISCONNECT AND REMOVE ASSOCIATED DISCONNECT AND CONTROL. MAINTAIN EXISTING BRANCH CIRCUIT WIRING AND CONDUIT FOR CONNECTION TO NEW EXHAUST FAN.





BASEMENT KEY PLAN

NOT TO SCALE

COMMONWEALTH OF VIRGINIA
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E101 BASEMENT DEMOLITION PLAN

Scale: Date: 09-18-20 Revisions:

Project: LEXINGTON MAIN POST OFFICE HVAC REPLACEMENT

USPS File Number:

UNITED STATES POSTAL SERVICE

Eastern Facilities Service Office, P.O. Box 27497, Greensboro, NC 27498-1103

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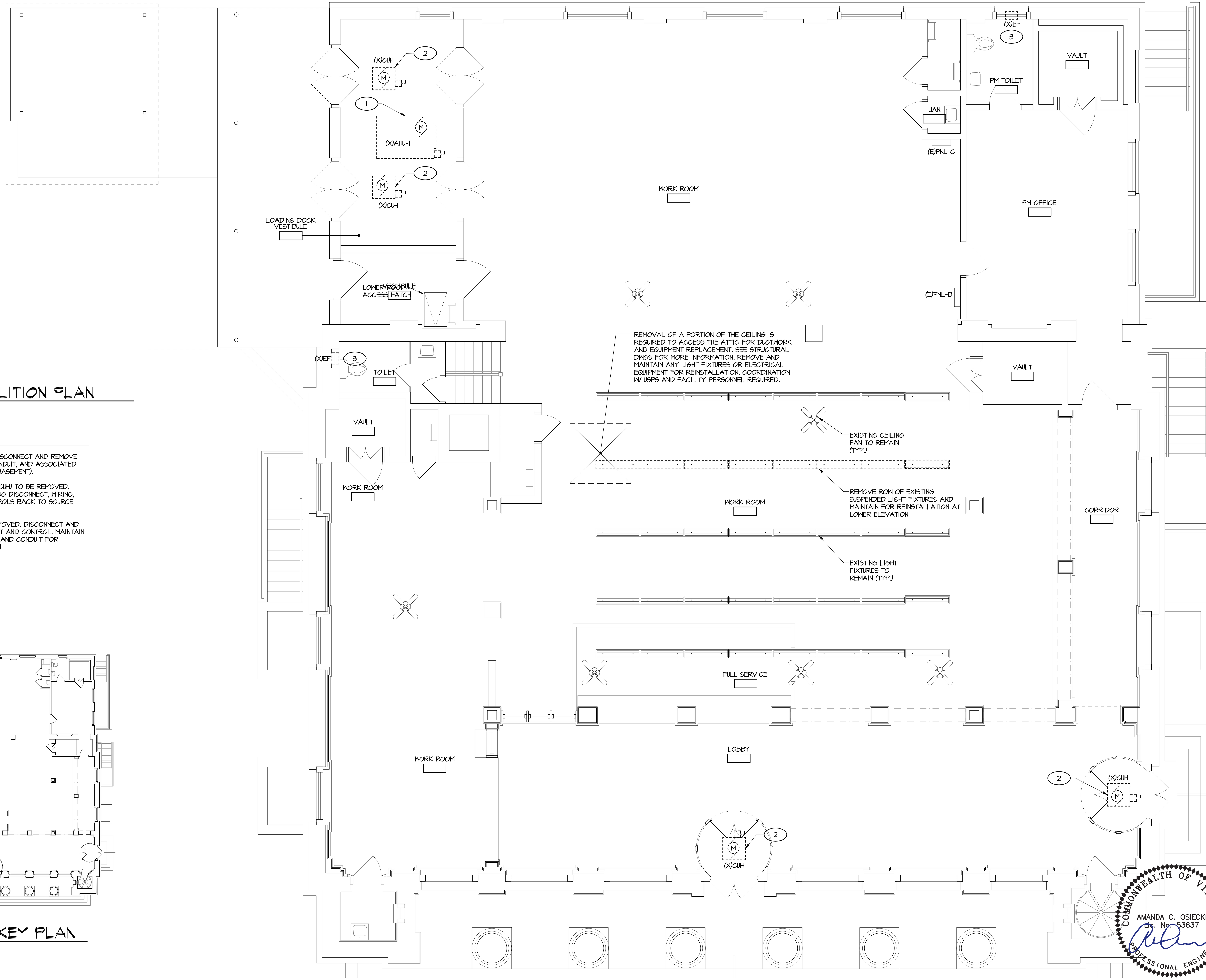
GAA FILE: 11445-EP-B SCALE: 1/4" = 1'-0" DATE: 09/12/20 TIME: 23:08:16

GAA FILE: 11445-E101 SCALE: 1/4" = 1'-0" DATE: 06/01/20 TIME: 14:16:54

1ST FLOOR DEMOLITION PLAN

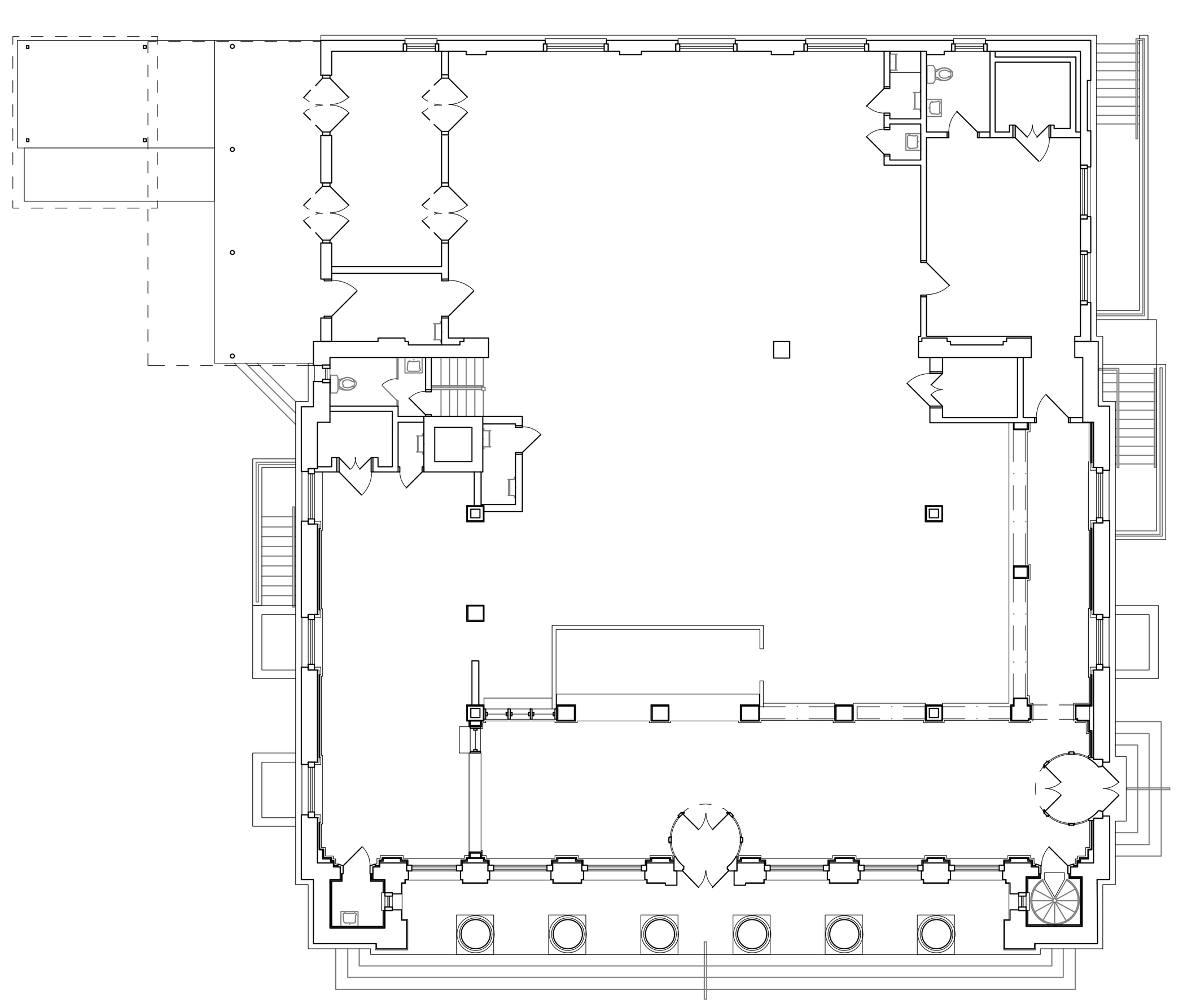
1/4" = 1'-0"

5' 3' 1' 0 5'



DEMOLITION PLAN NOTES:

1. EXISTING AHU TO BE REMOVED. DISCONNECT AND REMOVE EXISTING DISCONNECT, WIRING, CONDUIT, AND ASSOCIATED CONTROLS BACK TO SOURCE (IN BASEMENT).
2. EXISTING CABINET UNIT HEATERS (CUH) TO BE REMOVED. DISCONNECT AND REMOVE EXISTING DISCONNECT, WIRING, CONDUIT, AND ASSOCIATED CONTROLS BACK TO SOURCE (PNL-B).
3. EXISTING EXHAUST FAN TO BE REMOVED. DISCONNECT AND REMOVE ASSOCIATED DISCONNECT AND CONTROL. MAINTAIN EXISTING BRANCH CIRCUIT WIRING AND CONDUIT FOR CONNECTION TO NEW EXHAUST FAN.



1ST FLOOR KEY PLAN

NOT TO SCALE

USPS Project # C11386

LEXINGTON MPO HVAC REPLACEMENT
101 LEE AVE.
LEXINGTON, VA 24450

UNITED STATES POSTAL SERVICE
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COMMONWEALTH OF VIRGINIA
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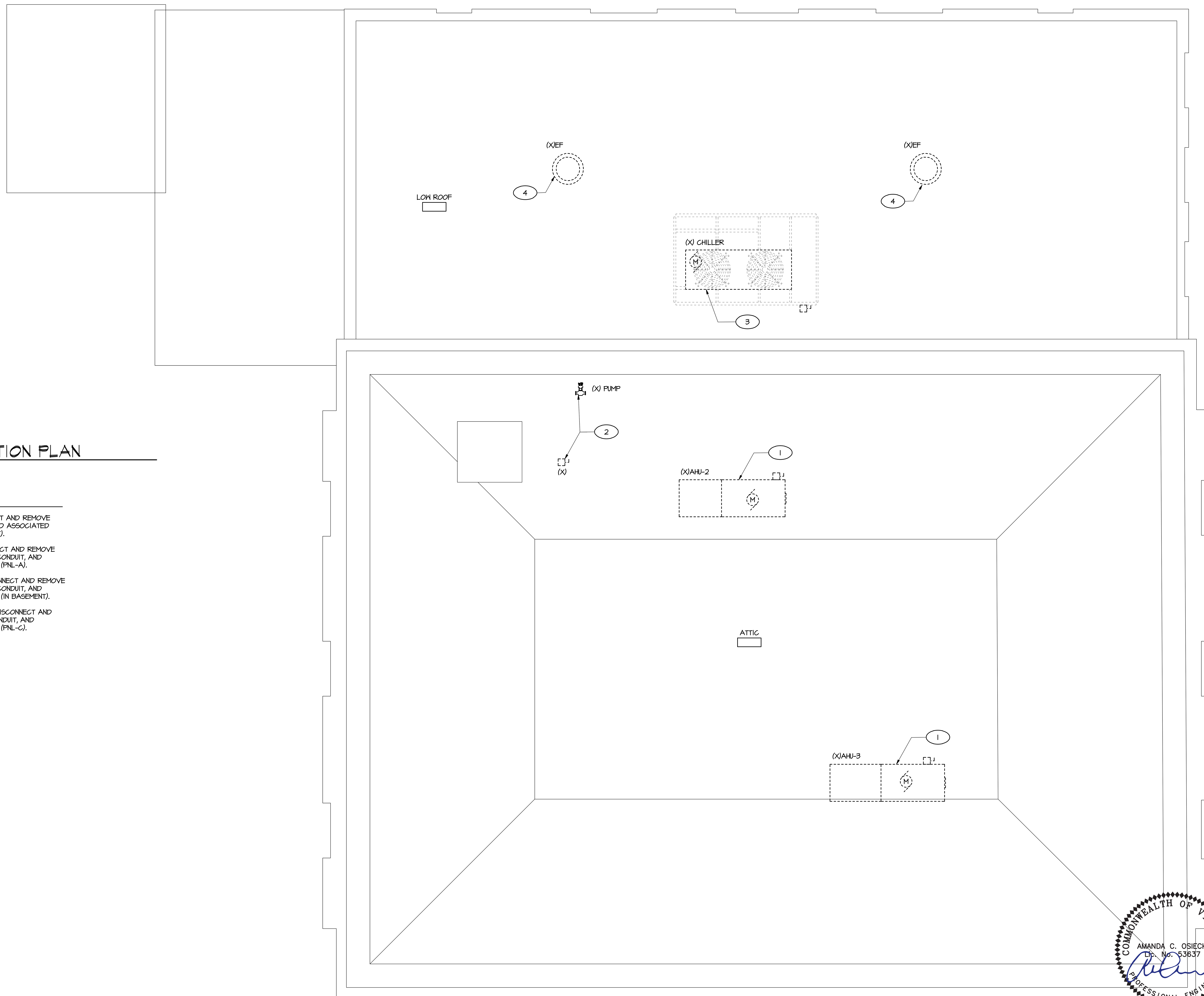
E102 1ST FLOOR DEMOLITION PLAN
Scale:
Date: 09-18-20
Revisions:
Project: LEXINGTON MAIN POST OFFICE HVAC REPLACEMENT
USPS File Number:



ATTIC/ROOF DEMOLITION PLAN

1/4" = 1'-0"

5' 3' 1' 0 5'

DEMOLITION PLAN NOTES:

1. EXISTING AHU TO BE REMOVED. DISCONNECT AND REMOVE EXISTING DISCONNECT, WIRING, CONDUIT, AND ASSOCIATED CONTROLS BACK TO SOURCE (IN BASEMENT).
2. EXISTING PUMP TO BE REMOVED. DISCONNECT AND REMOVE EXISTING DISCONNECT, STARTERS, WIRING, CONDUIT, AND ASSOCIATED CONTROLS BACK TO SOURCE (PNL-A).
3. EXISTING CHILLER TO BE REMOVED. DISCONNECT AND REMOVE EXISTING DISCONNECT, STARTERS, WIRING, CONDUIT, AND ASSOCIATED CONTROLS BACK TO SOURCE (IN BASEMENT).
4. EXISTING EXHAUST FAN TO BE REMOVED. DISCONNECT AND REMOVE EXISTING DISCONNECT, WIRING, CONDUIT, AND ASSOCIATED CONTROLS BACK TO SOURCE (PNL-C).

E103 ATTIC/ROOF DEMOLTION PLAN

Scale:
Date: 09-18-20
Revisions:
Project: LEXINGTON MAIN POST OFFICE HVAC REPLACEMENT
USPS File Number:

UNITED STATES POSTAL SERVICE.

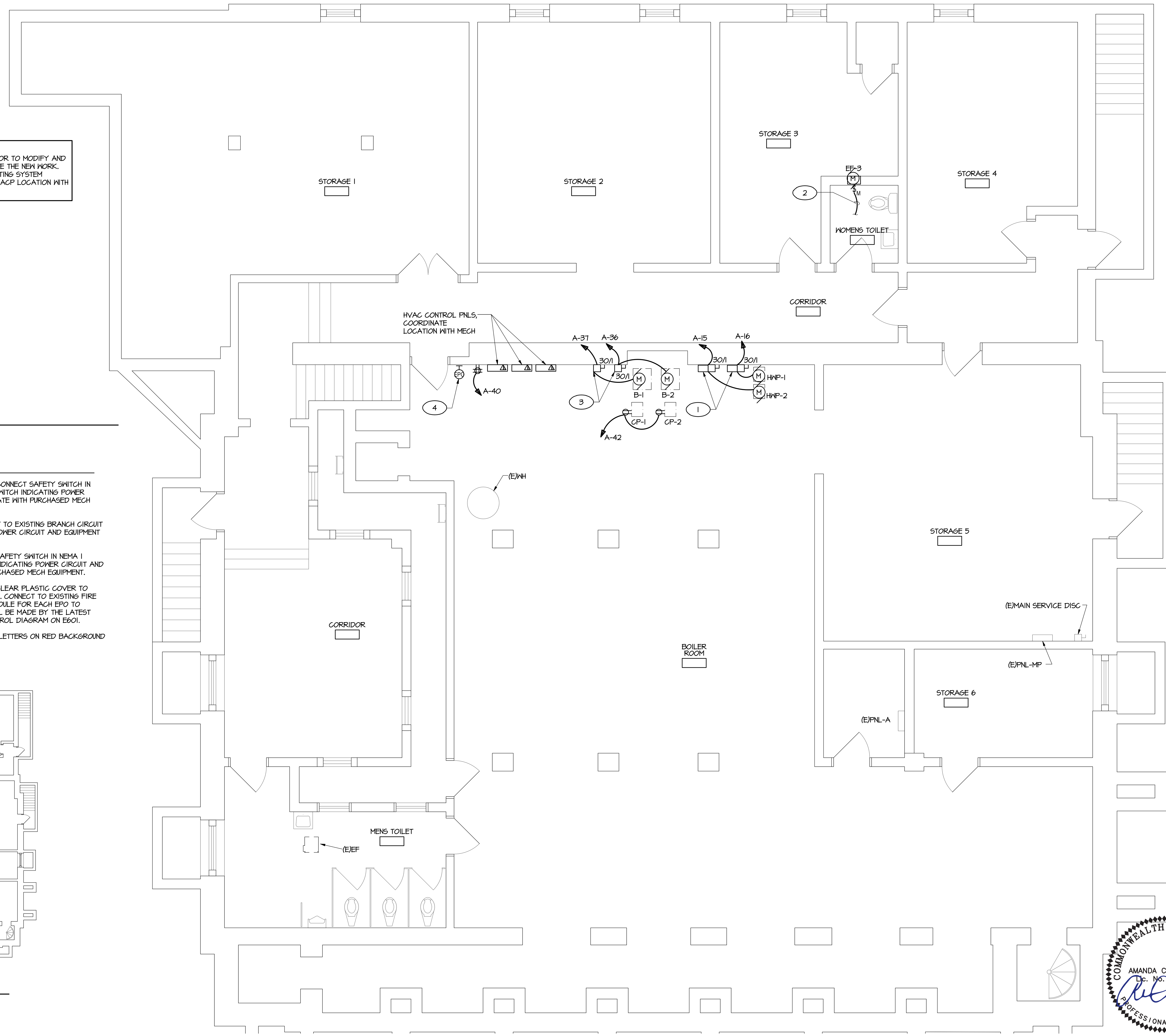
Eastern Facilities Service Office, P.O. Box 27497, Greensboro, NC 27498-1103

LEXINGTON MPO HVAC REPLACEMENT
101 LEE AVE.
LEXINGTON, VA 24450

USPS Project # C11386

GAUTHIER ALVARADO ASSOCIATES
ARCHITECTURE | ENGINEERING | PLANNING

FIRE ALARM NOTE:
OBTAIN THE SERVICES OF A QUALIFIED FIRE ALARM SYSTEM CONTRACTOR TO MODIFY AND EXPAND THE EXISTING FIRE ALARM SYSTEM IN ORDER TO ACCOMMODATE THE NEW WORK. CONTRACTOR SHALL BE CERTIFIED BY THE MANUFACTURER OF THE EXISTING SYSTEM TO PERFORM THE MODIFICATIONS NECESSARY. FIELD VERIFY EXISTING FACP LOCATION WITH OWNER PRIOR TO WORK.



BASEMENT POWER PLAN

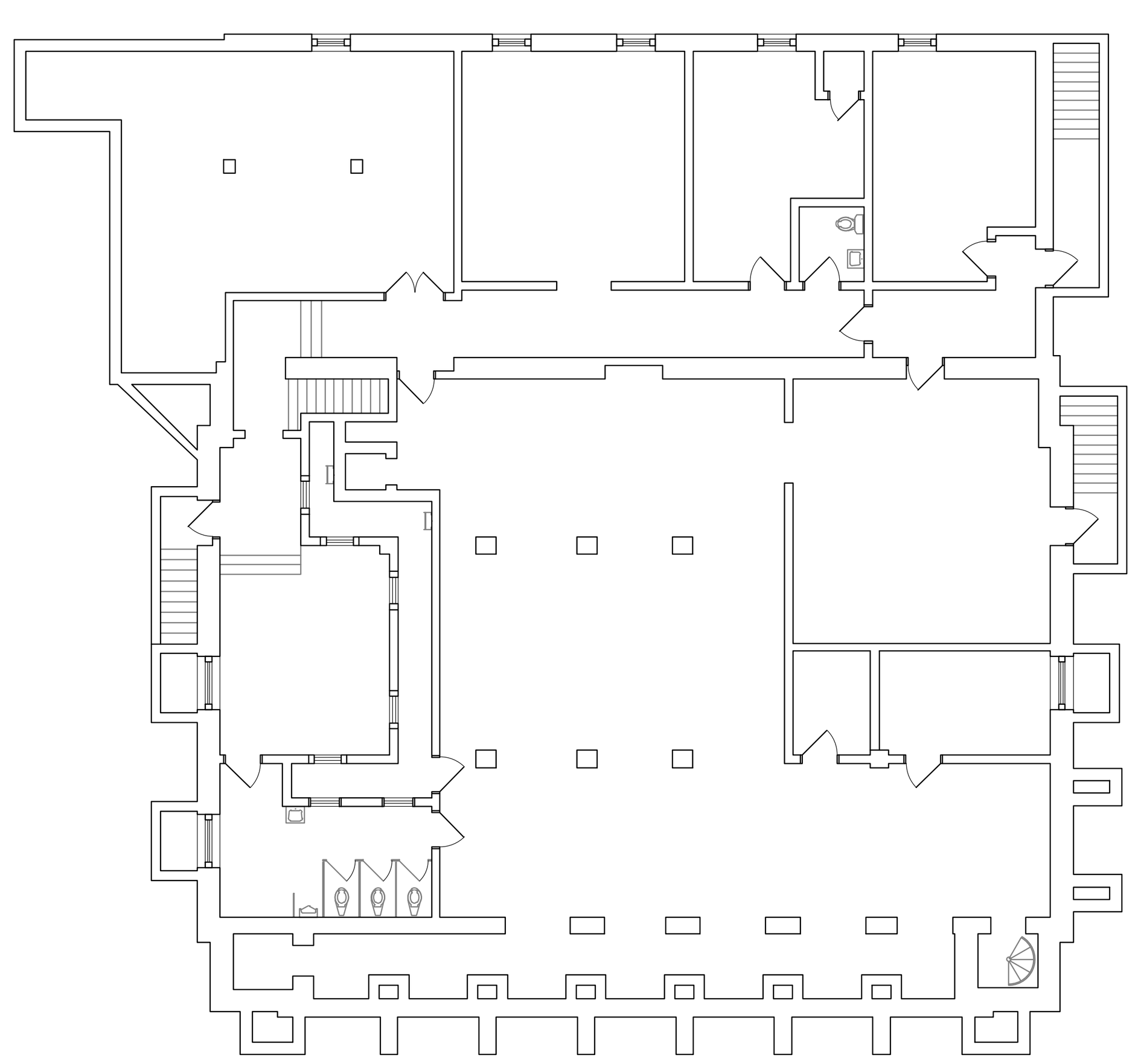
1/4" = 1'-0"

5' 3' 1' 0 5'

POWER PLAN NOTES:

1. PROVIDE VFD AND 30A, 1-POLE, 250V NON-FUSED DISCONNECT SAFETY SWITCH IN NEMA 1 ENCLOSURE. PROVIDE LABEL AT DISCONNECT SWITCH INDICATING POWER CIRCUIT AND EQUIPMENT SERVED BY SWITCH. COORDINATE WITH PURCHASED MECH EQUIPMENT.
2. PROVIDE MOTOR RATED DISCONNECT SWITCH. CONNECT TO EXISTING BRANCH CIRCUIT WIRING. PROVIDE LABEL AT DISCONNECT INDICATING POWER CIRCUIT AND EQUIPMENT SERVED BY SWITCH.
3. PROVIDE 30A, 1-POLE, 250V NON-FUSED DISCONNECT SAFETY SWITCH IN NEMA 1 ENCLOSURE. PROVIDE LABEL AT DISCONNECT SWITCH INDICATING POWER CIRCUIT AND EQUIPMENT SERVED BY SWITCH. COORDINATE WITH PURCHASED MECH EQUIPMENT.
4. EMERGENCY POWER OFF (EPO) PUSHBUTTON. PROVIDE CLEAR PLASTIC COVER TO PREVENT ACCIDENTAL OPERATION OF EPO PUSHBUTTON. CONNECT TO EXISTING FIRE ALARM SYSTEM. PROVIDE ADDRESSABLE MONITOR MODULE FOR EACH EPO TO VERIFY TROUBLE AND ALARM. ALL CONNECTIONS SHALL BE MADE BY THE LATEST EDITION OF NFPA 72. SEE FIRE ALARM NOTE. SEE CONTROL DIAGRAM ON E601.

   PROVIDE A PHENOLIC LABEL WITH 1" WHITE ENGRAVED LETTERS ON RED BACKGROUND THAT READS AS:
   "EMERGENCY POWER OFF
   PUSH TO KILL
   PULL TO RESET"



BASEMENT KEY PLAN

NOT TO SCALE

AMANDA C. OSIECKI
Lic. No. 53637
COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER

E201 BASEMENT POWER PLAN

Scale: Date: 09-18-20 Revisions:
Project: LEXINGTON MAIN POST OFFICE HVAC REPLACEMENT
USPS File Number:

UNITED STATES POSTAL SERVICE.
Eastern Facilities Service Office, P.O. Box 27497, Greensboro, NC 27498-1103

LEXINGTON MPO HVAC REPLACEMENT
101 LEE AVE.
LEXINGTON, VA 24450

USPS Project # C11386

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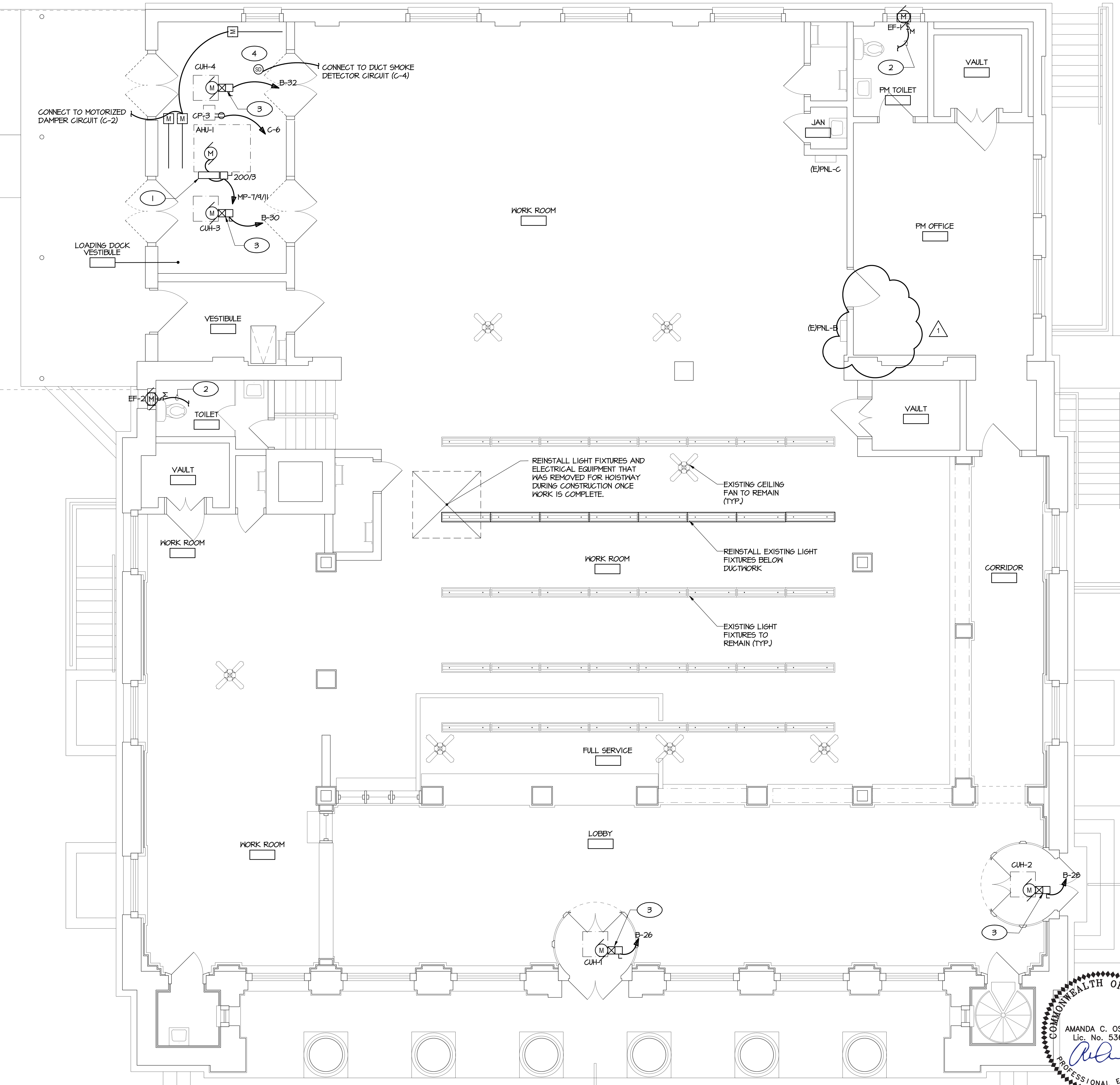


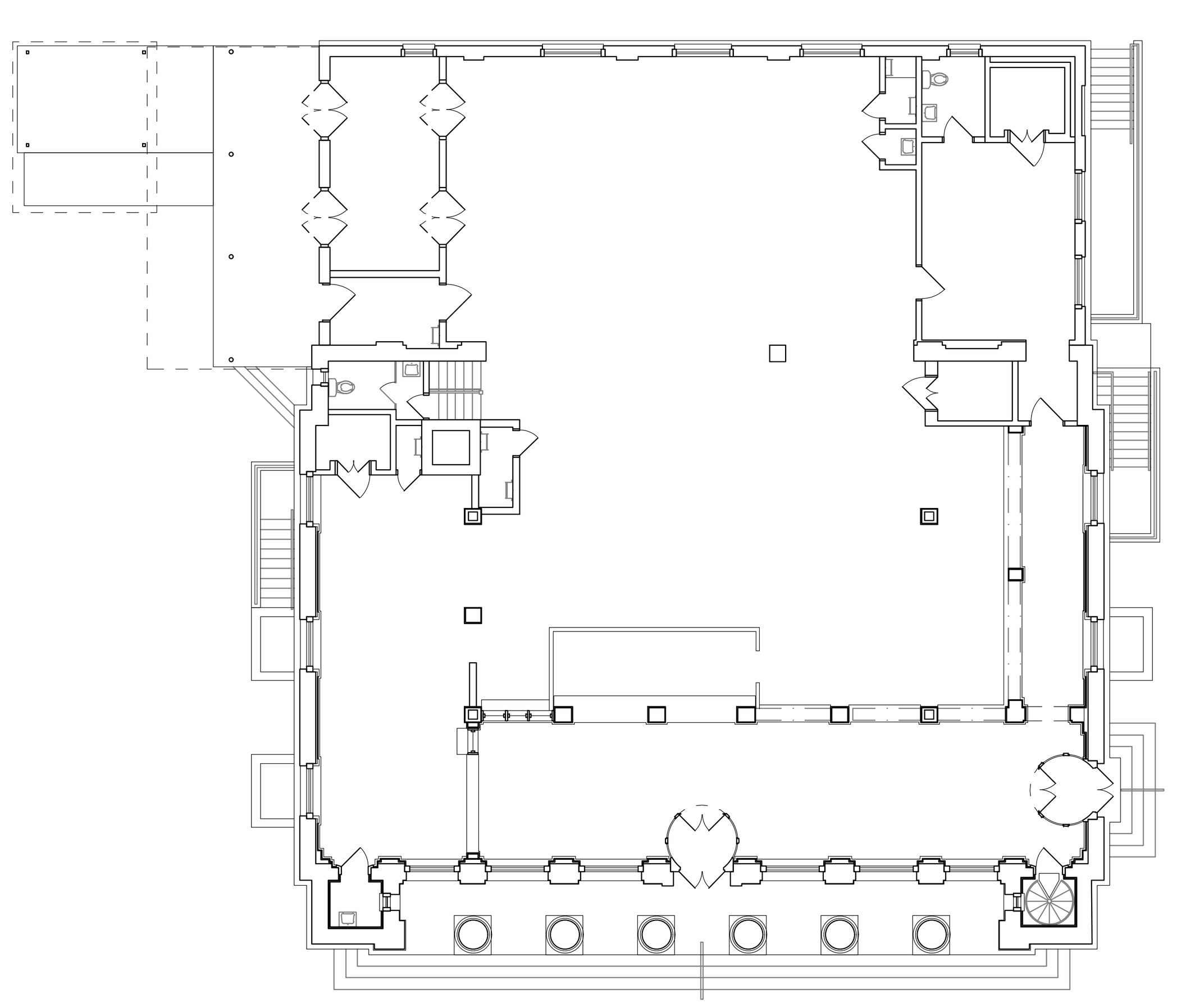
1ST FLOOR POWER PLAN

1/4" = 1'-0"

5' 3' 1' 0 5'

POWER PLAN NOTES:

1. PROVIDE VFD AND HEAVY DUTY 200A, 3-POLE, 250V, NON-FUSED SAFETY DISCONNECT SWITCH IN NEMA 1 ENCLOSURE. PROVIDE LABEL AT DISCONNECT SWITCH INDICATING POWER CIRCUIT AND EQUIPMENT SERVED BY SWITCH. COORDINATE WITH PURCHASED MECH EQUIPMENT.
2. PROVIDE MOTOR RATED DISCONNECT SWITCH. CONNECT TO EXISTING BRANCH CIRCUIT WIRING. PROVIDE LABEL AT DISCONNECT INDICATING POWER CIRCUIT AND EQUIPMENT SERVED BY SWITCH.
3. PROVIDE 250V, 1-POLE, NEMA SIZE 00 COMBINATION MOTOR STARTER DISCONNECT SAFETY SWITCH IN NEMA 1 ENCLOSURE. PROVIDE LABEL AT DISCONNECT INDICATING POWER CIRCUIT AND EQUIPMENT SERVED BY SWITCH.
4. DUCT MOUNTED SMOKE DETECTORS. COORDINATE WITH MOTOR CONTROLS TO STOP OPERATION UPON SENSING ELEMENTS OF COMBUSTION. VERIFY CORRECT OPERATION AND CONNECTION TO EXISTING FIRE ALARM SYSTEM. ALL CONNECTIONS SHALL BE MADE BY LATEST EDITION OF NFPA 72.



1ST FLOOR KEY PLAN

NOT TO SCALE

FILE: TH45-E202 SCALE: 1/4" = 1'-0" DATE: 10/26/20 TIME: 13:46:34

FILE: TH45-EP SCALE: 1/4" = 1'-0" DATE: 10/26/20 TIME: 13:45:50

USPS Project # C11386

LEXINGTON MPO HVAC REPLACEMENT
101 LEE AVE.
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UNITED STATES POSTAL SERVICE
Eastern Facilities Service Office, P.O. Box 27497, Greensboro, NC 27498-1103

1ST FLOOR POWER PLAN

Scale:
Date: 09-18-20
Project: LEXINGTON MAIN POST OFFICE HVAC REPLACEMENT
USPS File Number:

Revisions:
1 10-26/20 ADDENDUM 1

E202

COMMONWEALTH OF VIRGINIA
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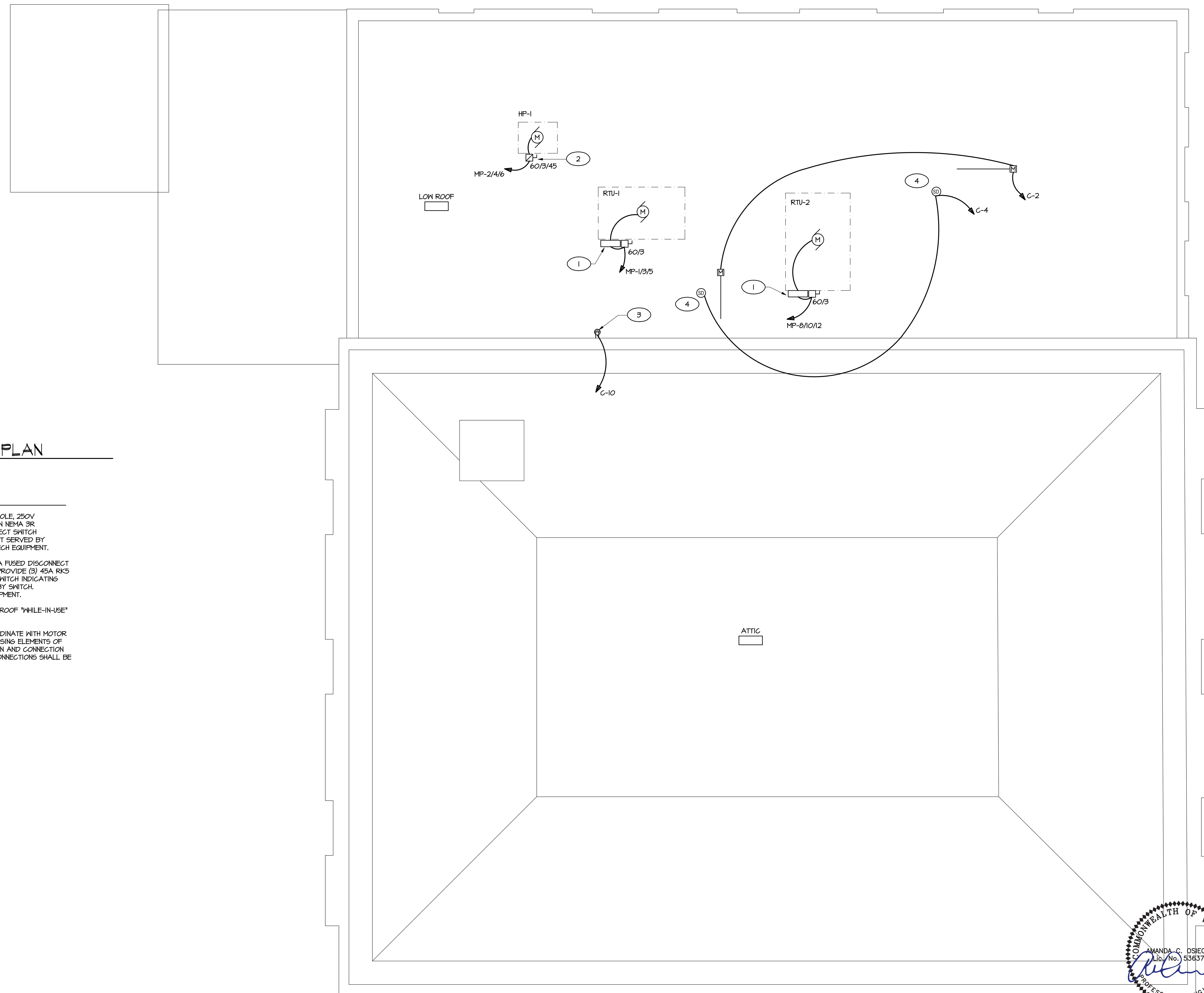

ATTIC/ROOF POWER PLAN

1/4" = 1'-0"

5' 3' 1' 0 5'

POWER PLAN NOTES:

1. PROVIDE VFD AND HEAVY-DUTY 60A, 3-POLE, 250V NON-FUSED DISCONNECT SAFETY SWITCH IN NEMA 3R ENCLOSURE. PROVIDE LABEL AT DISCONNECT SWITCH INDICATING POWER CIRCUIT AND EQUIPMENT SERVED BY SWITCH. COORDINATE WITH PURCHASED MECH EQUIPMENT.
2. PROVIDE HEAVY DUTY, 3-POLE, 250V, 60A FUSED DISCONNECT SAFETY SWITCH IN NEMA 3R ENCLOSURE. PROVIDE (3) 45A RK5 FUSES. PROVIDE LABEL AT DISCONNECT SWITCH INDICATING POWER CIRCUIT AND EQUIPMENT SERVED BY SWITCH. COORDINATE WITH PURCHASED MECH EQUIPMENT.
3. PROVIDE GFCI RECEPTACLE IN WEATHERPROOF "WHILE-IN-USE" ENCLOSURE.
4. DUCT MOUNTED SMOKE DETECTORS. COORDINATE WITH MOTOR CONTROLS TO STOP OPERATION UPON SENSING ELEMENTS OF COMBUSTION. VERIFY CORRECT OPERATION AND CONNECTION TO EXISTING FIRE ALARM SYSTEM. ALL CONNECTIONS SHALL BE MADE BY LATEST EDITION OF NFPA 72.

COMMONWEALTH OF VIRGINIA
AMANDA C. OSIECKI
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UNITED STATES POSTAL SERVICE.

Eastern Facilities Service Office, P.O. Box 27497, Greensboro, NC 27498-1103

E203 ATTIC/ROOF POWER PLAN

Scale:
Date: 09–18–20
Revisions:
Project: LEXINGTON MAIN POST OFFICE HVAC REPLACEMENT
USPS File Number:

FILE: 71945-E601 DATE: 09/15/20
SCALE: NOT TO SCALE TIME: 13:31:36

FILE NAME: EHOIC

PANEL A (EXISTING)

LOCATION: BOILER ROOM — TYPE: ITE — MOUNTING: SURFACE
VOLTAGE: 120V/240, 1Φ, 3W — 225 A MLO — KAIC

WIRE AND CONDUIT SIZE	CIRCUIT DESCRIPTION	C/B	CKT	LOADS (kVA) Φ A	Φ B	CKT	C/B	CIRCUIT DESCRIPTION	WIRE AND CONDUIT SIZE	
	EXISTING	20/1	1			2	20/1	EXISTING		
	EXISTING	20/1	3			4	20/1	EXISTING		
	EXISTING	20/1	5			6	20/1	EXISTING		
	EXISTING	20/1	7			8	20/1	EXISTING		
	EXISTING	20/1	9			10	20/1	EXISTING		
	EXISTING	20/1	11			12	20/1	EXISTING		
	EXISTING	20/1	13			14	20/1	EXISTING		
(1)	HWP-2	20/1	15		0.8 / 0.8	16	20/1	HWP-1	(1)	
	EXISTING	20/1	17			18	20/1	EXISTING		
	EXISTING	20/1	19			20	20/1	EXISTING		
	EXISTING	20/1	21			22	20/1	EXISTING		
	EXISTING	20/1	23			24	20/1	EXISTING		
	EXISTING	20/1	25			26	20/1	EXISTING		
	EXISTING	20/1	27			28	20/1	EXISTING		
	EXISTING	20/1	29			30	20/1	EXISTING		
	SPARE	20/1	31			32	20/1	SPARE		
	EXISTING	20/1	33			34	20/1	EXISTING		
	EXISTING	20/1	35		0.8	36	20/1	B-2	(1)	4
4 (1)	B-1	20/1	37	0.8		38		SHUNT TRIP		
	SHUNT TRIP		39		0.4	40	20/1	CONTROL PNL	(1)	4
	SPACE		41	0.4		42	20/1	CP-1 & CP-2	(1)	4
	TOTAL KILOVOLT-AMPERES			2.00	2.00	0.00				

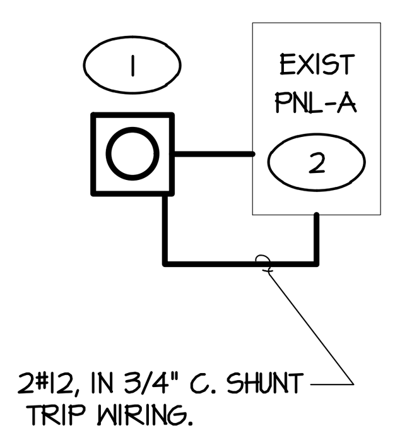
TOTAL CONNECTED LOAD: 4.00 kVA x 1000 ÷ 240 = 17 A

LOAD	CONNECTED kVA	DEMAND FACTOR	COMPUTED kVA	REMARKS
LIGHTING	0.00	1.0	0.00	CONTINUOUS
RECEPTACLES	0.40	1.00 *	0.40	NON-CONTINUOUS
MOTORS	0.00	1.0	0.00	NON-CONTINUOUS
OTHER	3.60	1.0	3.60	NON-CONTINUOUS
TOTAL	4.00		4.00	

MINIMUM FEEDER AMPACITY: 4.00 kVA** x 1000 ÷ 240 = 17 A

WIRE AND CONDUIT SCHEDULE

No.	WIRE AND CONDUIT SIZES
(1)	(2) #12, (1) #12 GND, IN 3/4" CONDUIT
(2)	(3) #6, (1) #6 GND, IN 1" CONDUIT
(3)	(3) #4, (1) #4 GND, IN 1" CONDUIT
(4)	(3) #1, (1) #6 GND, IN 1-1/4" CONDUIT
(E)	EXISTING WIRE AND CONDUIT



KEY NOTES

1. PROVIDE EMERGENCY POWER OFF (EPO) PUSHBUTTON WITH 6-SETS OF NORMALLY OPEN ("NO") CONTACTS RATED 3A AT 120V. EPO SHALL HAVE RED MUSHROOM HEAD OPERATOR WITH MAINTAINED CONTACT PUSH (ACTIVE)/PULL (DEACTIVE) FEATURE. EPO SHALL BE WIRED TO DISCONNECT POWER TO BOILERS B-1 AND B-2. CONNECT PER MANUFACTURER'S RECOMMENDATION.
2. CIRCUIT BREAKERS IN PANEL-A WITH 120VAC SHUNT TRIP.

EMERGENCY POWER OFF (EPO) DIAGRAM

FILE NAME: EHOIC

PANEL B (EXISTING)

LOCATION: WORKROOM — TYPE: ITE — MOUNTING: RECESSED
VOLTAGE: 120V/240, 1Φ, 3W — 225 A MLO — KAIC

WIRE AND CONDUIT SIZE	CIRCUIT DESCRIPTION	C/B	CKT	LOADS (kVA) Φ A	Φ B	CKT	C/B	CIRCUIT DESCRIPTION	WIRE AND CONDUIT SIZE	
	EXISTING	20/1	1			2	20/1	EXISTING		
	EXISTING	20/1	3			4	20/1	EXISTING		
	EXISTING	20/1	5			6	20/1	EXISTING		
	EXISTING	20/1	7			8	20/1	EXISTING		
	EXISTING	20/1	9			10	20/1	EXISTING		
	EXISTING	20/1	11			12	20/1	EXISTING		
	EXISTING	20/1	13			14	20/1	EXISTING		
	EXISTING	20/1	15			16	20/1	EXISTING		
	EXISTING	20/1	17			18	20/1	EXISTING		
	EXISTING	20/1	19			20	20/1	EXISTING		
	EXISTING	20/1	21			22	20/1	EXISTING		
	EXISTING	20/1	23			24	20/1	EXISTING		
	EXISTING	20/1	25	0.4		26	20/1	CUH-1	(1)	
	EXISTING	20/1	27		0.4	28	20/1	CUH-2	(1)	
	EXISTING	20/1	29	0.4		30	20/1	CUH-3	(1)	
	EXISTING	20/1	31		0.4	32	20/1	CUH-4	(1)	
	SPACE		33	0.2		34	20/1	CONTROL PNL	(1)	4
	SPACE		35			36		SPACE		
	SPACE		37			38		SPACE		
	SPACE		39			40		SPACE		
	SPACE		41			42		SPACE		
	TOTAL KILOVOLT-AMPERES			1.00	0.80	0.00				

TOTAL CONNECTED LOAD: 1.80 kVA x 1000 ÷ 240 = 8 A

LOAD	CONNECTED kVA	DEMAND FACTOR	COMPUTED kVA	REMARKS
LIGHTING	0.00	1.0	0.00	CONTINUOUS
RECEPTACLES	0.00	0.00 *	0.00	NON-CONTINUOUS
MOTORS	0.00	1.0	0.00	NON-CONTINUOUS
OTHER	1.80	1.0	1.80	NON-CONTINUOUS
TOTAL	1.80		1.80	

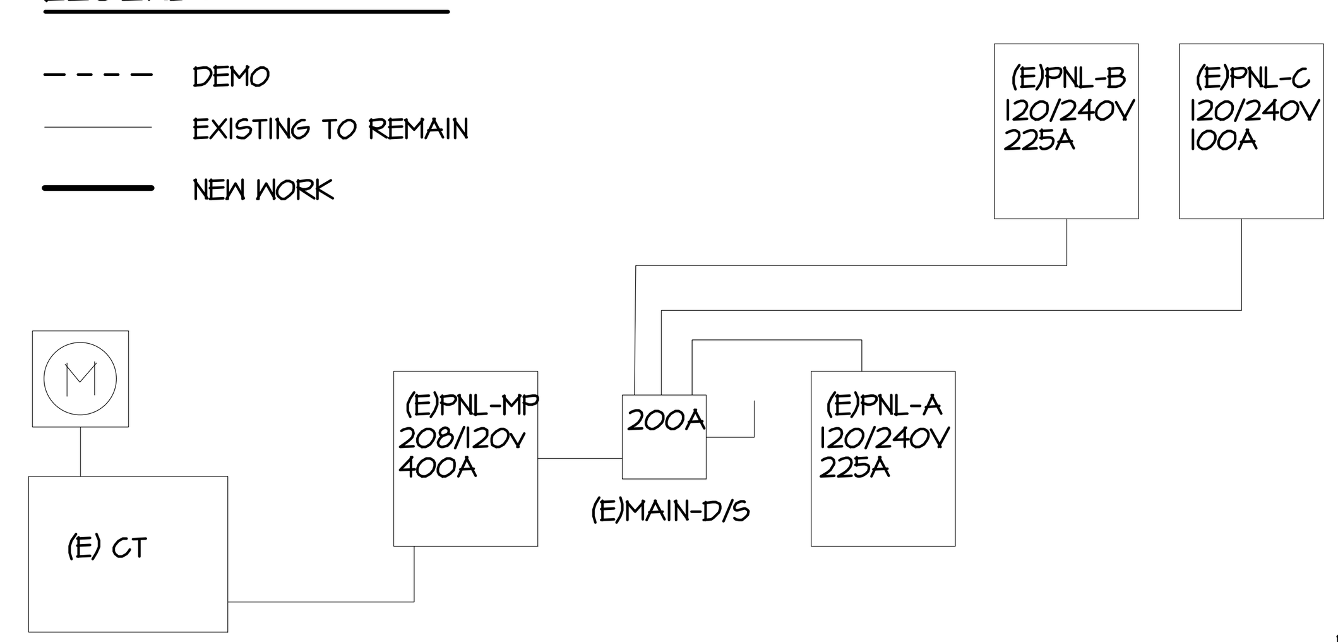
MINIMUM FEEDER AMPACITY: 1.80 kVA** x 1000 ÷ 240 = 8 A

SCHEDULE NOTES:

1. PROVIDE 50 AMP, 3-POLE CIRCUIT BREAKER.
2. PROVIDE 45 AMP, 3-POLE CIRCUIT BREAKER.
3. PROVIDE 60 AMP, 3-POLE CIRCUIT BREAKER.
4. PROVIDE 20 AMP, 1-POLE CIRCUIT BREAKER.

LEGEND:

- - - - DEMO
—— EXISTING TO REMAIN
━━ NEW WORK



EXISTING POWER RISER DIAGRAM

NOT TO SCALE

FILE NAME: EH01D

PANEL C (EXISTING)

LOCATION: OFFICE — TYPE: SQUARE D — MOUNTING: SURFACE
VOLTAGE: 120V/240, 1Ø, 3W — 100 A MLO — kAIC

WIRE AND CONDUIT SIZE	CIRCUIT DESCRIPTION	C/B	CKT	LOADS (kVA) Ø A	Ø B	CKT	C/B	CIRCUIT DESCRIPTION	WIRE AND CONDUIT SIZE	
	SPARE	20/2	1	0.4		2	20/1	MOTORIZED DAMPERS	(1)	4
			3		0.2	4	20/1	DUCT SMOKE DETECTORS	(1)	4
	SPARE	20/2	5	0.2		6	20/1	CP-3	(1)	4
			7			8	20/1	SPARE		4
	SPARE	20/2	9	0.2		10	20/1	GFCI RECEPT ON ROOF	(1)	
			11			12	30/1	LIFT RECEPT		
	SPARE	20/2	13			14	30/2	LIFT CONTROL		
			15			16				
	SPACE		17			18		SPACE		
	SPACE		19			20		SPACE		
	SPACE		21			22		SPACE		
	SPACE		23			24		SPACE		
	SPACE		25			26		SPACE		
	SPACE		27			28		SPACE		
	SPACE		29			30		SPACE		
	TOTAL KILOVOLT-AMPERES			0.80	0.20	0.00				

TOTAL CONNECTED LOAD: 1.00 kVA x 1000 ÷ 240 = 4 A

LOAD	CONNECTED kVA	DEMAND FACTOR	COMPUTED kVA	REMARKS
LIGHTING	0.00	1.0	0.00	CONTINUOUS
RECEPTACLES	0.20	1.00 *	0.20	NON-CONTINUOUS
MOTORS	0.00	1.0	0.00	NON-CONTINUOUS
OTHER	0.80	1.0	0.80	NON-CONTINUOUS
TOTAL	1.00		1.00	

MINIMUM FEEDER AMPACITY: 1.00 kVA** x 1000 ÷ 240 = 4 A

* BASED ON NEC 220-44. (100% OF LOAD UPTO 10 kVA, PLUS 50% OF LOAD ABOVE 10 kVA)

** BASED ON NEC 215, 220, AND 430: (COMPUTED LIGHTING KVA x 125%), + (COMPUTED RECEPTACLE KVA x 100%), + (LARGEST MOTOR KVA x 125%), + (OTHER MOTOR KVA x 100%), + (COMPUTED OTHER LOADS x 100%).

GENERAL PANELBOARD NOTE:

EXISTING PANELBOARD DIRECTORIES ARE PROVIDED FROM AVAILABLE PANELBOARD SCHEDULES. ACTUAL BRANCH CIRCUIT HOMERUNS MAY VARY. CONTRACTOR SHALL VERIFY EXISTING BRANCH CIRCUITS AS NEEDED. UPDATE PANELBOARD BRANCH CIRCUIT DIRECTORIES TO REFLECT WORK DONE AS PART OF THIS PROJECT.

FILE NAME: EHOIB

PANEL MP (EXISTING)

LOCATION: BASEMENT STORAGE — TYPE: GE — MOUNTING: SURFACE
VOLTAGE: 208Y/120V, 3Φ, 4W — 400 A MCB — KAIC

WIRE AND CONDUIT SIZE	CIRCUIT DESCRIPTION	C/B	CKT	LOADS (kVA) Φ A	Φ B	Φ C	CKT	C/B	CIRCUIT DESCRIPTION	WIRE AND CONDUIT SIZE
(2)	RTU 1 (note 1)	50/3	1	5.0 / 4.0			2	45/3	HP-1 (note 2)	(2)
			3		5.0 / 4.0		4			
			5			5.0 / 4.0	6			
(4)	AHU-1	125/3	7	13.5 / 5.7			8	60/3	RTU-2 (note 3)	(3)
			9		13.5 / 5.7		10			
			11			13.5 / 5.7	12			
(E)	EXISTING MAIN D/S	100/2	13				14		SPACE	
			15				16			
	SPACE		17				18			
	SPACE		19				20	30/3	EXISTING	(E)
			21				22			
			23				24			
			25				26			
			27				28			
			29				30			
	TOTAL KILOVOLT-AMPERES			28.20	28.20	28.20				

TOTAL CONNECTED LOAD: 84.60 kVA x 1000 ÷ $\sqrt{3}$(208) = 235 A

LOAD	CONNECTED kVA	DEMAND FACTOR	COMPUTED kVA	REMARKS
LIGHTING	0.00	1.0	0.00	CONTINUOUS
RECEPTACLES	0.00	0.00 *	0.00	NON-CONTINUOUS
MOTORS	0.00	1.0	0.00	NON-CONTINUOUS
OTHER	84.60	1.0	84.60	NON-CONTINUOUS
TOTAL	84.60		84.60	

MINIMUM FEEDER AMPACITY: 84.60 kVA** x 1000 ÷ $\sqrt{3}$(208) = 235 A

COMMONWEALTH OF VIRGINIA
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UNITED STATES POSTAL SERVICE

Eastern Facilities Service Office, P.O. Box 27497, Greensboro, NC 27498-1103

E601 SCHEDULES AND RISER DIAGRAM
Scale: Date: 09-18-20 Revisions:
Project: LEXINGTON MAIN POST OFFICE HVAC REPLACEMENT
USPS File Number: