UNIVERSITY of VIRGINIA

Facilities Management
Capital Construction & Renovations
Design Services

Leake Building
1450 Leake Drive | P.O. Box 400726
Charlottesville, VA 22904-4726

Office (434) 924-1777
Fax (434) 982-5894
www.fm.virginia.edu

Supplemental Instructions **Bulletin No. 1**

PROJECT: Tucker House Kitchen
PROJ NO: PJ03200
SUBJECT: Description

DATE: June 5, 2023
A/E: Design Services

TO: Alex Muirhead
FM CRS

CONTACT: Theo Diamond
Design Services
434-989-5631
thd7t@virginia.edu

Contractor shall submit an itemized proposal for changes to the project cost and schedule for proposed modifications to the Contract Documents described herein. This is not a Change Order, Construction Change Directive, or a Direction to Proceed.

Summary:

This bulletin contains revisions to the project's design as follows:

Adds new Architectural layout for kitchen, updated electrical layout, and mechanical selections

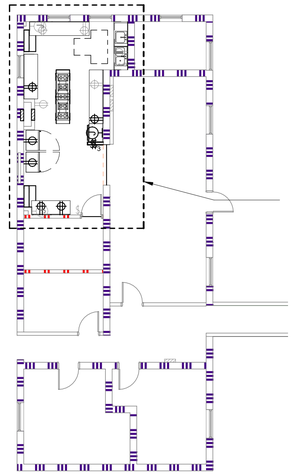
New or Revised Sheets:

1. G-000: Updates list of drawings.
2. AD-100: Adds Architectural Demo scope.
3. A-100: Provides new Architectural Layout.
4. A-200: Adds new Architectural Elevations.
5. M-000: Adds Mechanical Notes, Symbols, and Abbreviations.
6. M-001: Adds Specifications.
7. MH-100: Adds information on new hoods. Adds location for new Thermostats.
8. M-500: Adds Schedules for mechanical equipment.
9. M-700: Adds new Mechanical Controls information.
10. E-000: Adds Electrical Symbols. Updates sheet list.
11. E-100: Adds "Panel Upgrade" to sheet name.
12. E-101: Adds new electrical layout and panel schedules.

Theo Diamond
Design Services

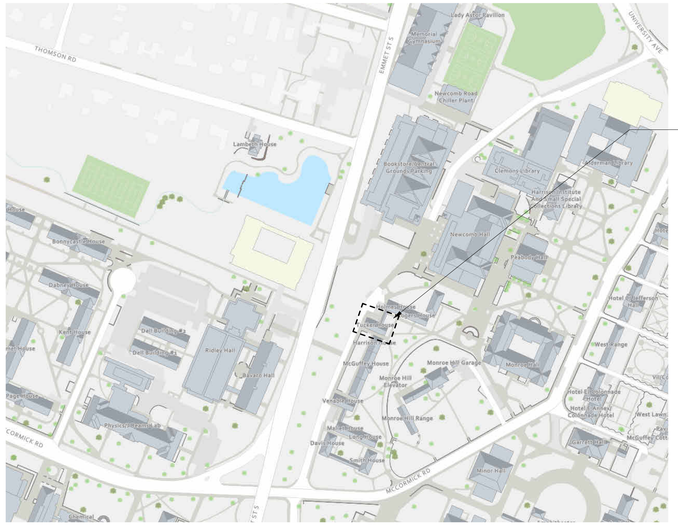
TUCKER HOUSE
KITCHEN RENOVATION

BUILDING NO. 2078
PROJECT NO. PJ03200



AREA OF WORK

1 G-000 AREA PLAN
NOT TO SCALE



PROJECT LOCATION

2 G-000 VICINITY MAP
NOT TO SCALE

GENERAL NOTES

- CONTRACTOR TO FIELD VERIFY ALL CONDITIONS AND DIMENSIONS BEFORE PROCEEDING WITH ANY WORK.
- CONTRACTOR TO NOTIFY ARCHITECT IMMEDIATELY IF ANY DISCREPANCIES ARE FOUND.
- CONDUCT ANY DEMOLITION TO MINIMIZE INTERFERENCE WITH ADJACENT AND OCCUPIED BUILDING AREAS.
- PROTECT EXISTING MATERIALS WHICH ARE NOT TO BE DEMOLISHED.
- WHERE NEW WORK ABUTS OR ALIGNS WITH EXISTING, PERFORM A SMOOTH AND TRANSITION. PATCH WORK TO MATCH EXISTING ADJACENT WORK, IN TEXTURE AND APPEARANCE.
- CONTRACTOR SHALL NOT SCALE DRAWINGS.
- REQUIRED MEANS OF EGRESS SHALL BE MAINTAINED CLEAR AT ALL TIMES DURING THE WORK. IF WORK CONDITIONS REQUIRE TEMPORARY BLOCKAGE OF ANY EXISTING MEANS OF EGRESS, PROVIDE ALTERNATE ROUTE(S) ACCEPTABLE TO THE UNIVERSITY BUILDING OFFICIAL.
- ALL EXISTING PROTECTION SYSTEMS SHALL REMAIN OPERATIONAL DURING CONSTRUCTION. IF TEMPORARY SHUTDOWN IS NECESSARY, THE SYSTEM SHALL BE RETURNED TO OPERATIONAL CONDITION AS SOON AS POSSIBLE AND NO LATER THAN THE END OF EACH WORKING DAY PRIOR TO THE CONTRACTOR LEAVING THE JOB SITE. THE CONTRACTOR IS TO NOTIFY THE UNIVERSITY FIRE MARSHAL PRIOR TO ANY NECESSARY SHUTDOWNS. ANY NECESSARY SHUTDOWNS SHALL NOT AFFECT OTHER AREAS NOT INVOLVED WITH THE CONSTRUCTION PROJECT.
- PROVIDE APPROVED PORTABLE FIRE EXTINGUISHER(S), IN ACCORDANCE WITH CODE REQUIREMENTS DURING CONSTRUCTION.
- REQUIRED MEANS OF EGRESS FROM THE BUILDING SHALL BE MAINTAINED CLEAR AND LABELED AT ALL TIMES DURING THE WORK. WORK BLOCKING REQUIRED MEANS OF EGRESS WILL BE PERFORMED WHEN BUILDING IS UNOCCUPIED.
- PATCH AND PAINT AREAS DISTURBED BY THIS PROJECT TO MATCH EXISTING FINISHES.
- CONTRACTOR SHALL MANAGE CONSTRUCTION AND DEMOLITION DEBRIS AND GENERAL CONSTRUCTION WASTE IN ACCORDANCE WITH THE ASSOCIATED STANDARD OPERATING PROCEDURES LOCATED AT HTTPS://POLLUTIONPREVENTION.VIRGINIA.EDU/SOPPP/.
- LIQUID WASTE MUST NOT BE DISPOSED OF IN THE GENERAL TRASH, ON THE GROUND, OR IN THE STORM SEWER.
- CONTRACTOR SHALL FOLLOW THE STANDARD OPERATING PROCEDURE ON CONCRETE, MASONRY MATERIALS, AND SAWCUTTING POLLUTION CONTROL LOCATED AT HTTPS://POLLUTIONPREVENTION.VIRGINIA.EDU/SOPPP/.

HAZARDOUS NOTES

- WHEN A MATERIAL SUSPECTED TO BE ASBESTOS OR TO CONTAIN ASBESTOS IS ENCOUNTERED DURING CONSTRUCTION, THE UNIVERSITY'S E.H.S.O. SHALL BE CONTACTED IMMEDIATELY TO DETERMINE ASBESTOS CONTENT. UNDER NO CIRCUMSTANCES SHALL WORK CONTINUE IN THE SUSPECTED AREA UNTIL THE UNIVERSITY'S E.H.S.O. HAS DETERMINED ASBESTOS CONTENT OF THE SUSPECTED MATERIAL.
- AN LEAD-CONTAINING PAINT INSPECTION WAS PERFORMED ON 04/04/2023AND LEAD-CONTAINING PAINT WAS FOUND IN THE AREAS INDICATED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH ALL VOSHA REGULATIONS REGARDING LEAD-CONTAINING PAINT PROTECTION FOR WORKERS.
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- ASBESTOS CONTAINING MATERIALS WERE FOUND IN FEEDER WIRE INSULATION.

LIST OF DRAWINGS

01 - GENERAL
G-000 TITLE SHEET AND BASE INFORMATION

02 - ARCHITECTURE
A-100 NEW BASEMENT FLOOR PLAN & RCP
AD-100 DEMO BASEMENT FLOOR PLAN & RCP
A-200 INTERIOR ELEVATIONS

23 - MECHANICAL
M-000 MECHANICAL NOTES, SYMBOLS, AND ABBREVIATIONS
MH-100 MECHANICAL FLOOR PLANS
M-500 DETAILS AND SCHEDULES
M-700 CONTROLS

26 - ELECTRICAL
E-000 GENERAL NOTES AND LEGEND
E-101 ELECTRICAL - LIGHTING AND POWER PLANS

CODE INFORMATION

CONSTRUCTION

YEAR BUILT: **1928**
GROSS SF OF BUILDING: **7,888 SQUARE FEET**
FIRE SUPPRESSION: **NONSPRINKLED**

BUILDING CODE: **VUSBC 2018 PART 2 (VIRGINIA EXISTING BUILDING CODE) VEBC**

USE GROUP: **R-2**

GROSS SF OF
PROJECT AREA : **356 SQUARE FEET**

OCCUPANT NOS: **8, PER VUSBC 1004.5**

CONSTRUCTION
CLASSIFICATION: **SEMI-FIREPROOF, MAINTAIN EXISTING PER VFSR**

ACCESSIBILITY: **WORK COMPLIES WITH ADA 2010**

CLASSIFICATION
OF WORK: **ALTERATION - LEVEL 2**

PROJECT SCOPE OF WORK
THE WORK INVOLVED WILL CONSIST OF THE FOLLOWING:
DEMOLISHING ALL EXISTING COUNTERS, CABINETS AND SINKS TO PROVIDE NEW COUNTERS AND COOKTOPS.

CONSTRUCTION PROCUREMENT
WORK TO BE PERFORMED BY FM CONSTRUCTION AND RENOVATION SERVICES

LIST OF APPLICABLE CODES

VIRGINIA CONSTRUCTION CODE (VUSBC, PART I)	2018
VIRGINIA EXISTING BUILDING CODE (VUSBC, PART II)	2018
ADA STANDARDS FOR ACCESSIBLE DESIGN	2010
VIRGINIA ENERGY CONSERVATION CODE	2018
VIRGINIA FUEL GAS CODE	2018
VIRGINIA MECHANICAL CODE	2018
VIRGINIA PLUMBING CODE	2018
NFPA 70 NATIONAL ELECTRICAL CODE	2017
NFPA 13 STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS	2016
NFPA 72 NATIONAL FIRE ALARM CODE	2016
13TH EDITION UVA FACILITY DESIGN GUIDELINES	2021

PROJECT TEAM

DESIGN TEAM: FM DESIGN SERVICES
1450 LEAKE DRIVE / PO BOX 400726 CHARLOTTESVILLE, VA 22904
(434)-982-4621

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COMMONWEALTH OF VIRGINIA
THEODORE HULL DIAMOND
Lic. No. 15195
09/12/2023
ARCHITECT

TUCKER HOUSE (2078)
KITCHEN RENOVATION
TITLE SHEET AND BASE INFORMATION

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CHECKED BY: THD
REVISIONS

1	BULLETIN 1	06/05/2023

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G-000

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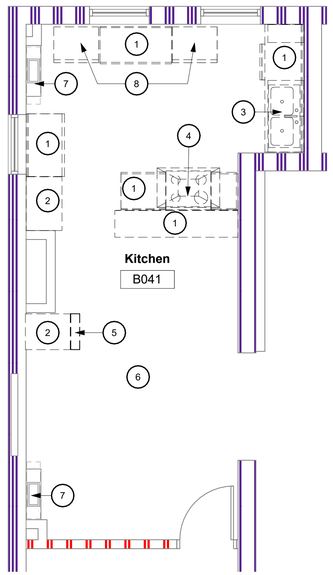
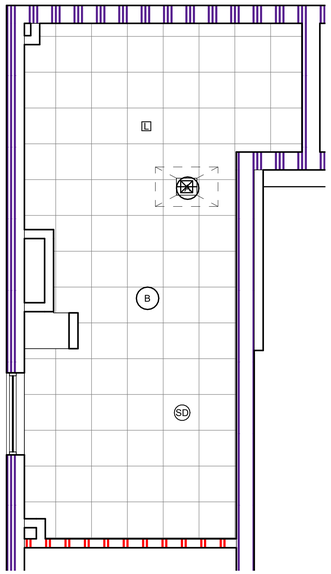


1 AD-100/AD-100 BASEMENT KITCHEN DEMO 1/4" = 1'-0"



2 AD-100/AD-100 BASEMENT KITCHEN RCP DEMO 1/4" = 1'-0"

0' 2' 4' 8'
1/4"=1'-0"

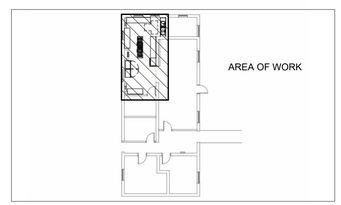
DEMO NOTES

1. REMOVE AND DISPOSE OF EXISTING UPPER AND BASE CABINETS AND COUNTERS
2. REMOVE AND DISPOSE OF SHELVING
3. REMOVE AND DISPOSE OF EXISTING SINK. EXISTING PIPING TO BE REUSED.
4. REMOVE AND DISPOSE OF EXISTING RANGE
5. REMOVE EXISTING WALL TO UNDERSIDE OF DECK.
6. REMOVE AND DISPOSE OF FLOOR TILE.
7. EXISTING READIATORS TO REMAIN. PROTECT DURING CONSTRUCTION.
8. REMOVE AND STORE EXISTING REFRIGERATORS/FREEZERS

DEMO RCP NOTES

A. REMOVE AND DISPOSE OF EXISTING RANGE HOOD.

B. REMOVE AND DISPOSE OF EXISTING RANGE HOOD.



KEY PLAN

UNIVERSITY of VIRGINIA
Facilities Management
Design Services
1450 Leake Drive / PO Box 400726
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COMMONWEALTH OF VIRGINIA
THEODORE HULL DIAMOND
Lic. No. 15195
09/12/2023
ARCHITECT

TUCKER HOUSE (2078)
KITCHEN RENOVATION
DEMO BASEMENT FLOOR PLAN & RCP

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AD-100

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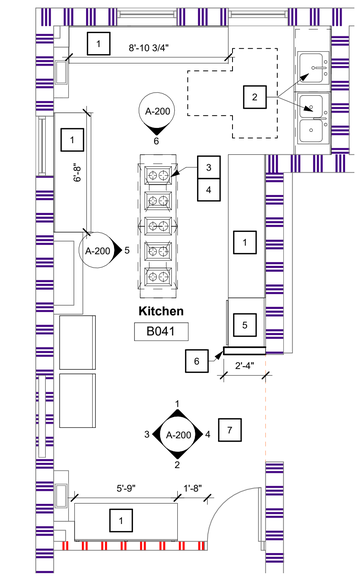
NEW WORK NOTES

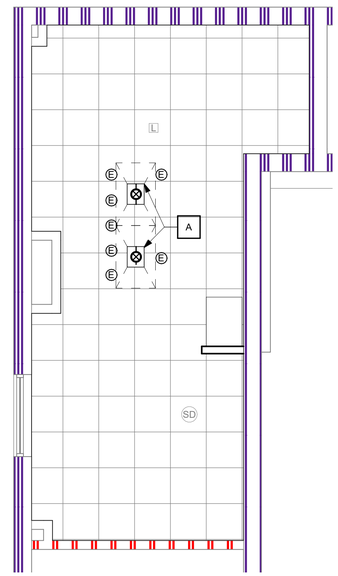
1. INSTALL NEW WALL MTD CONCRETE COUNTER TOPS AND BACKSPLASH. PROVIDE BRACKETS BELOW AS NECESSARY.
2. INSTALL NEW DOUBLE SINK AND SINGLE ADA SINK IN NEW CABINET BASE. REUSE EXISTING PIPING. BASIS OF DESIGN: ADA ELKAY LRAD33265PD-1, LRADQ222265-1, LKAV3032 FAUCETS, STRAINER, BADGER SERIES 5 GARBAGE DISPOSAL.
3. INSTALL NEW KITCHEN ISLAND WITH NO STORAGE OR OPENINGS. CONCRETE COUNTER TOP.
4. INSTALL 5 NEW 2-BURNER COOKTOPS IN KITCHEN ISLAND.
5. INSTALL NEW DOUBLE OVEN IN NEW WALL CABINET. CABINET TO NOT HAVE ANY STORAGE OR OPENINGS
6. BUILD NEW CHEEK WALL TO UNDERSIDE OF SLAB. WALL TO BE MADE OF 20 GA STL STUDS AND 5/8" GYP. BD BOTH SIDES.
7. NEW EPOXY FLOOR PAINT.

NEW WORK RCP NOTES

A. NEW COOKING HOOD. SEE MECHANICAL DRAWINGS.

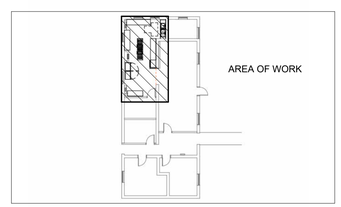


1 A-100 A-100 BASEMENT KITCHEN NEW
1/4" = 1'-0"



2 A-100 A-100 BASEMENT KITCHEN NEW
1/4" = 1'-0"

0' 2' 4' 8'
1/4"=1'-0"



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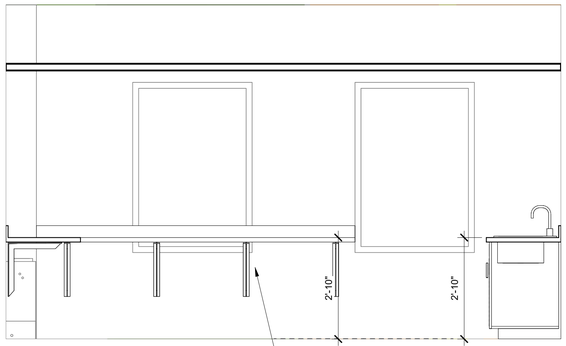
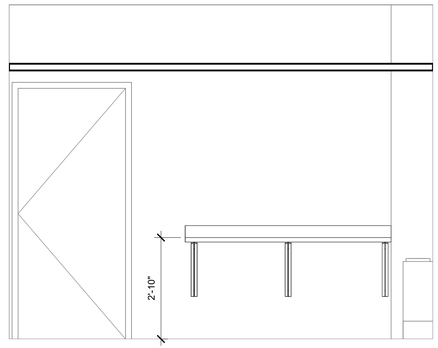
A-100

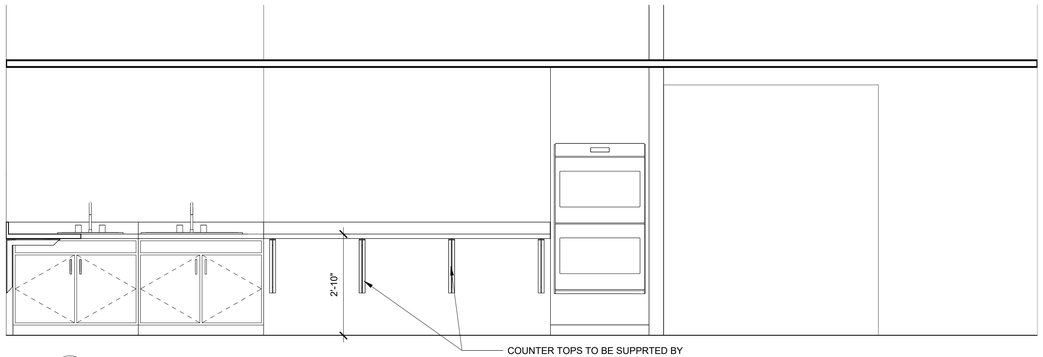


1 A-200/A-200 West Kitchen Elevation
1/2" = 1'-0"

COUNTER TOPS TO BE SUPPRTED BY
RAKKS EH-1818 WALL BRACKETS @ 30" O.C.

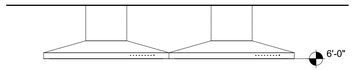


2 A-200/A-200 East Kitchen Elevation
1/2" = 1'-0"

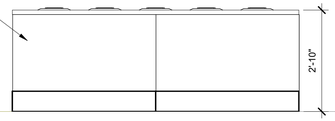


COUNTER TOPS TO BE SUPPRTED BY
RAKKS EH-1818 WALL BRACKETS @ 30" O.C.

4 A-200/A-200 North Kitchen Elevation
1/2" = 1'-0"



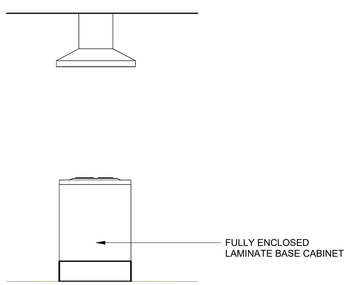
FULLY ENCLOSED
LAMINATE BASE
CABINET



5 A-200/A-200 Longitudinal Elevation - Kitchen Island
1/2" = 1'-0"

COUNTER TOPS TO BE SUPPRTED BY
RAKKS EH-1818 WALL BRACKETS @ 30" O.C.

3 A-200/A-200 South Kitchen Elevation
1/2" = 1'-0"



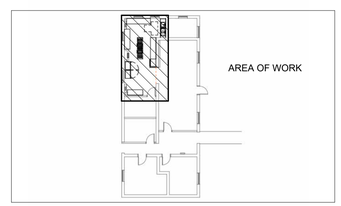
FULLY ENCLOSED
LAMINATE BASE CABINET

6 A-200/A-200 End Elevation - Kitchen Island
1/2" = 1'-0"

0' 1' 2' 4'
1/2"=1'-0"

NEW WORK NOTES

1. REUSE EXISTING REFRIGERATOR/FREEZERS



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A-200

MECHANICAL LEGEND

HVAC PIPING

SYMBOL	DESCRIPTION
------CHR------	CHILLED WATER RETURN
------CHS------	CHILLED WATER SUPPLY
------CD------	CONDENSATE DRAIN
------CWR------	CONDENSER WATER RETURN
------CWS------	CONDENSER WATER SUPPLY
------GR------	GLYCOL WATER RETURN
------GS------	GLYCOL WATER SUPPLY
------HPR------	HIGH PRESSURE CONDENSATE RETURN
------HPS------	HIGH PRESSURE STEAM
------LPR------	LOW PRESSURE CONDENSATE RETURN
------LPS------	LOW PRESSURE STEAM
------LTHWR------	LOW TEMPERATURE HEATING WATER RETURN
------LTHWS------	LOW TEMPERATURE HEATING WATER SUPPLY
------MTHWR------	MEDIUM TEMPERATURE HEATING WATER RETURN
------MTHWS------	MEDIUM TEMPERATURE HEATING WATER SUPPLY
------PCR------	PROCESS WATER RETURN
------PCS------	PROCESS WATER SUPPLY
------RL------	REFRIGERANT LIQUID
------RS------	REFRIGERANT SUCTION
------RV------	REFRIGERANT VENT
	TOP OF MAIN
	BOTTOM OF MAIN
	2-WAY MOTORIZED CONTROL VALVE
	3-WAY MOTORIZED CONTROL VALVE
	BALANCING VALVE
	BALL VALVE
	BUTTERFLY VALVE
	CHECK VALVE
	GLOBE VALVE
	PRESSURE REDUCING VALVE
	PRESSURE RELIEF VALVE
	SHUTOFF VALVE
	STRAINER
	ENDCAP
	UNION

DUCTWORK

SYMBOL	DESCRIPTION
X/X	RECTANGULAR DUCT, FIRST DIMENSION IS SIDE SHOWN. DIMENSION IN INCHES
X"Ø	ROUND DUCT, DIAMETER DIMENSION IN INCHES
X/X	RECTANGULAR DUCT, FIRST DIMENSION IS SIDE SHOWN. DIMENSION IN INCHES
X"Ø	ROUND DUCT, DIAMETER DIMENSION IN INCHES
	RECTANGULAR ELBOW TURNING UP (SUPPLY)
	RECTANGULAR ELBOW TURNING UP (RETURN)
	RECTANGULAR ELBOW TURNING DOWN (SUPPLY)
	RECTANGULAR ELBOW TURNING DOWN (RETURN)
	RECTANGULAR DUCT SECTION (SUPPLY)
	RECTANGULAR CEILING SUPPLY DIFFUSER, ROUND CONNECTION, TYPE AS INDICATED
	SUPPLY DIFFUSER, LINEAR SLOT
	SUPPLY DIFFUSER, SIDEWALL
	RETURN GRILLE, TYPE AS INDICATED
	RETURN GRILLE, SIDEWALL
	EXHAUST GRILLE, TYPE AS INDICATED
E	EXHAUST GRILLE, SIDEWALL
	ROUND DUCT SECTION (SUPPLY)
	ROUND DUCT SECTION (RETURN)
	ROUND DUCT SECTION (EXHAUST)
	ROUND ELBOW TURNING UP (SUPPLY)
	ROUND ELBOW TURNING UP (RETURN)
	ROUND ELBOW TURNING UP (EXHAUST)
	ROUND ELBOW TURNING DOWN (SUPPLY)
	ROUND ELBOW TURNING DOWN (RETURN)
	ROUND ELBOW TURNING DOWN (EXHAUST)
F	FIRE DAMPER
FS	FIRE SMOKE DAMPER
	MANUAL VOLUME DAMPER
	MOTORIZED DAMPER
L	DOOR LOUVER
U	DOOR UNDERCUT

HVAC CONTROLS & SENSORS

SYMBOL	DESCRIPTION
T	THERMOSTAT, ELECTRIC
T	THERMOSTAT, PNEUMATIC
H	HUMIDISTAT, ELECTRIC
H	HUMIDISTAT, PNEUMATIC
T X	TEMPERATURE SENSOR , 48" AFF. SP = WITH SET POINT CONTROL AND OCCUPANCY OVERRIDE H = WITH HUMIDITY CONTROL OCC = WITH OCCUPANCY SENSING
OCC	OCCUPANCY SENSOR, 48" AFF.
CO2	CO2 SENSOR, 48" AFF.

UVA FIRE RATINGS

SRC SRC	SMOKE RESISTIVE CONSTRUCTION
SP SP	SMOKE PARTITION
HE HE	HORIZONTAL EXIT
FP1/2 FP1/2	HALF HOUR FIRE PARTITION
FB1 FB1	ONE HOUR FIRE BARRIER
FP1 FP1	ONE HOUR FIRE PARTITION
SB1 SB1	ONE HOUR SMOKE BARRIER
FB2 FB2	TWO HOUR FIRE BARRIER
FW2 FW2	TWO HOUR FIRE WALL
FB3 FB3	THREE HOUR FIRE BARRIER
FW3 FW3	THREE HOUR FIRE WALL
FB4 FB4	FOUR HOUR FIRE BARRIER
FW4 FW4	FOUR HOUR FIRE WALL
	SMOKE PARTITION
FB1	ONE HOUR FIRE BARRIER
FB2	TWO HOUR FIRE BARRIER

GENERAL MECHANICAL

SYMBOL	DESCRIPTION
	EXISTING TO REMAIN
	DEMOLITION
	NEW WORK
	POINT OF DISCONNECTION FOR DEMOLITION
	POINT OF CONNECTION NEW-TO-EXISTING
	PIPE FLOW DIRECTION
SD-1 100	DIFFUSER TAG W/ TYPE & AIRFLOW
#	DEMOLITION KEY NOTE
#	NEW WORK KEY NOTE

MECHANICAL ABBREVIATIONS

2HOR	2 HOUR OVERRIDE
A/C	AIR CONDITIONING
A/E	ARCHITECT/ENGINEER
ABV	ABOVE
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AFUE	ANNUAL FUEL UTILIZATION
AHU	AIR HANDLING UNIT
AI	ANALOG INPUT
ALT	ALTERNATE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
AO	ANALOG OUTPUT
APD	AIR PRESSURE DROP
APPROX	APPROXIMATE
ASHRAE	AMERICAN SOCIETY OF HEATING REFRIGERATION & AIR CONDITIONING ENGINEERS
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
BAS	BUILDING AUTOMATION SYSTEM
BDD	BACK DRAFT DAMPER
BHP	BRAKE HORSEPOWER
BI	BINARY INPUT
BO	BINARY OUTPUT
BTUH	BRITISH THERMAL UNIT PER HOUR
CD	CONDENSATE DRAIN OR CEILING DIFFUSER
CD-E	CEILING DIFFUSER - EXISTING
CEG	CEILING EXHAUST GRILLE
CEG-E	CEILING EXHAUST GRILLE - EXISTING
CFM	CUBIC FEET PER MINUTE
CHW	CIRCULATING HOT WATER
CHWS/R	CHILLED WATER SUPPLY / RETURN
CO	CLEANOUT
CRG	CEILING RETURN GRILLE
CRG-E	CEILING RETURN GRILLE - EXISTING
CU	CONDENSING UNIT
CW	COLD WATER
D & DR	DRAIN
DB	DRY BULB
dB	DECIBEL
DEG	DEGREES
DESCR	DESCRIPTION
DH	DUCT HEATER
DIA	DIAMETER
DN	DOWN
DP	DIFFERENTIAL PRESSURE
DS	DAMPER SWITCH
DTW	DUAL TEMPERATURE WATER
DWH	DOMESTIC WATER HEATER
EA	EXHAUST AIR
EAD	EXHAUST AIR DUCT
EAT	ENTERING AIR TEMPERATURE
EER	ENERGY EFFIFIENCY RATIO
EF	EXHAUST FAN
EFF	EFFICIENCY
EL	ELEVATION
ENT	ENTERING
ESP	EXTERNAL STATIC PRESSURE
EWC	ELECTRIC WATER COOLER
EWT	ENTERING WATER TEMPERATURE
EX	EXISTING
EZ	ZONE AIR DISTRIBUTION EFFECTIVENESS
FA	FRESH AIR
FCO	FLOOR CLEANOUT
FD	FIRE DAMPER OR FLOOR DRAIN
FLA	FULL LOAD AMPS
FPM	FEET PER MINUTE
FT	FOOT, FEET
FTR	FINNED TUBE RADIATOR
FV	FACE VELOCITY
°F	FARENHEIT
GALV	GALVANIZED
GPM	GALLONS PER MINUTE
HORIZ	HORIZONTAL
HP	HORSEPOWER
HR	HOUR
HS	HUMIDITY SENSOR
HW	HOT WATER
HWS/R	HEATING WATER SUPPLY / RETURN
Hz	HERTZ
IN	INCHES
kW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LD	LINEAR DIFFUSER
LR	LOUVERED RETURN
LS	LOUVERED SUPPLY
LVG	LEAVING
LWT	LEAVING WATER TEMPERATURE
MA	MIXED AIR
MAX	MAXIMUM
MBD	MANUAL BALANCING DAMPER
MBH	THOUSAND BTUH
MCA	MINIMUM CIRCUIT AMPACITY
MER	MECHANICAL EQUIPMENT ROOM
MHP	MOTOR HORSEPOWER
MIN	MINIMUM
NC	NORMALLY CLOSED OR NOISE CRITERIA
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OAD	OUTSIDE AIR DUCT
OCC	OCCUPANT COUNT
OSD	OPEN SITE DRAIN
PCT	PERCENT
PD	PRESSURE DROP
PH	PHASE
PRV	POWERED ROOF VENTILATOR
PSIG	POUNDS PER SQUARE IN GAUGE
PVC	POLYVINYL CHLORIDE
RA	RETURN AIR, AREA OUTDOOR AIR RATE CFM/FT^2
RAD	RETURN AIR DUCT
RCP	REFLECTED CEILING PLAN
RHC	REHEAT COIL
RLA	RATED LOAD AMPS
RP	PEOPLE OUTDOOR AIR RATE CFM/PERSON
RPM	ROTATIONS PER MINUTE
RTU	ROOFTOP UNIT
SAD	SUPPLY AIR DUCT
SAN	SANITARY
SP	STATIC PRESSURE
SWSG	SIDEWALL SUPPLY GRILLE
SWSG-E	SIDEWALL SUPPLY GRILLE - EXISTING
TEMP	TEMPERATURE
TS	TEMPERATURE SENSOR
TSP	TOTAL STATIC PRESSURE
TTL	TOTAL
TYP	TYPICAL
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
V	VENT OR VOLT
VAV	VARIABLE AIR VOLUME
VLV	VALVE
VTR	VENT THRU ROOF
WB	WET BULB
WC	WATER COLUMN
WCO	WALL CLEANOUT
WPD	WATER PRESSURE DROP
WWM	WOVEN WIRE MESH

GENERAL NOTES

1. ALL DEMOLITION WORK SHALL BE COORDINATED THROUGH THE UNIVERSITY PROJECT MANAGER. WHERE QUESTIONS OR DISCREPANCIES ARISE, THE UNIVERSITY PROJECT MANAGER AND A/E SHALL BE NOTIFIED IMMEDIATELY FOR RESOLUTION.
2. PROVIDE SINGLE THICKNESS, 1.1/2 IN SPACED, TURNING VANES IN ALL MITERED SUPPLY, RETURN, AND EXHAUST DUCTWORK ELBOWS.
3. ALL DUCTWORK DIMENSIONS CITED ARE THE INSIDE CLEAR DIMENSIONS.
4. CONTRACTOR SHALL COORDINATE LOCATION OF ALL EQUIPMENT AND DUCTWORK WITH OTHER TRADES. MAINTAIN REQUIRED SERVICE ACCESS.
5. AIRFLOW QUANTITIES INDICATED ON THE PLANS ARE FOR OCCUPIED OPERATING MODE, UNO.
6. ALL DUCTWORK SHALL BE CONCEALED ABOVE FINISHED CEILINGS, WITHIN WALLS, OR BELOW FLOORS IN FINISHED SPACES.
7. CONTRACTOR(S) SHALL COORDINATE THEIR WORK WITH ALL OTHER TRADES PRIOR TO FABRICATION OF SYSTEMS AND COMMENCEMENT OF INSTALLATION. IT SHALL BE THE RESPONSIBILITY OF EACH CONTRACTOR TO REVIEW THE WORK OF OTHER TRADES (INCLUDING, BUT NOT LIMITED TO ARCHITECTURAL, ELECTRICAL, PLUMBING, AND MECHANICAL) AS IT AFFECTS OTHER RADES, TO ENSURE THAT THE CONSTRUCTION DOCUMENTS ARE CLOSELY FOLLOWED. WHERE DISCREPANCIES ARISE, THEY SHALL BE REFERRED TO THE ARCHITECT/ENGINEER FOR RESOLUTION BEFORE PROCEEDING WITH THE WORK.

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TUCKER HOUSE (2078)
KITCHEN RENOVATION
MECHANICAL NOTES, SYMBOLS, AND ABBREVIATIONS

ISSUE FOR CONSTRUCTION

LOCATION FOR QUBO OR RECORD DOCUMENT STAMP

DATE: 05/12/2023
DRAWN BY: MBG
CHECKED BY: JCB
REVISIONS

1	BULLETIN 1	06/05/2023

PROJECT NUMBER
PJ03200

M-000

SPECIFICATIONS

23 500 COMMON WORK RESULTS FOR HVAC
1. DEMOLITION: DOCUMENTATION OF EXISTING SYSTEMS IS BASED ON AVAILABLE RECORD DRAWINGS AND NON-INTRUSIVE FIELD OBSERVATIONS. MAJOR DISCREPANCIES SHALL BE REFERRED TO THE A/E FOR RESOLUTION PRIOR TO PROCEEDING WITH THE WORK.
2. NEW WORK: ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH VUSBC 2018, VECC 2018, VMC 2018, THE 2018 VIRGINIA REHABILITATION CODE, AND UNIVERSITY OF VIRGINIA 2021 FACILITY DESIGN GUIDELINES.
3. SUBMITTALS
   A. PRODUCT DATA: PROVIDE MANUFACTURER'S CATALOG INFORMATION TAILORED TO SPECIFIC PRODUCTS, COMPONENTS AND EQUIPMENT BEING USED ON THE PROJECT.
   B. PROJECT RECORD DOCUMENTS: RECORD ACTUAL LOCATIONS OF COMPONENTS.
4. INSTALLATION
   A. INSTALL IN ACCORDANCE WITH VUSBC, IMC, AND MANUFACTURER 'S INSTRUCTIONS FOR APPLICATION INTENDED. MAINTAIN COPIES OF MANUFACTURER 'S INSTRUCTIONS AT THE PROJECT SITE.
   B. FIRE STOPPING TO WALLS, FLOORS, CEILINGS, SHAFTS, ETC. THE CONTRACTOR WILL PROVIDE APPROVED UL LISTED "THROUGH PENETRATION FIRESTOP" SYSTEMS TO ENSURE INTEGRITY OF RATED ASSEMBLY. REFER TO ARCHITECTURAL DRAWINGS AND DETAILS FOR APPROVED OPTIONS AND CONFIRM FINAL SELECTION BEFORE PROCEEDING WITH THIS PORTION OF THE WORK.
5. COORDINATION
   A. THE HVAC CONTRACTOR SHALL COORDINATE THEIR WORK WITH ALL OTHER TRADES PRIOR TO FABRICATION OF SYSTEMS AND COMMENCEMENT OF INSTALLATION. IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO REVIEW THE WORK OF THE OTHER TRADES AND COORDINATE TO MAKE ARRANGEMENTS TO AVOID CONFLICTS AND INTERFERENCE WITH OTHER WORK.
6. PROJECT CLOSEOUT
   A. REMOVE DIRT AND DEBRIS FROM ALL DEVICES AT THE COMPLETION OF WORK.
   B. RECORD DRAWINGS: DURING CONSTRUCTION AN ACCURATE RECORD OF ALL DEVIATIONS BETWEEN THE WORK SHOWN ON THE CONTRACT DOCUMENTS AND THAT WHICH IS ACTUALLY INSTALLED SHALL BE MAINTAINED. THESE SHALL BE DATED AND LABELED AS RECORD DRAWINGS AND BE DELIVERED TO THE OWNER AND A/E TEAM FOR REVIEW.

23 0553 IDENTIFICATION FOR HVAC PIPING AND EQUIPMENT
1. PRODUCT DATA
   A. EQUIPMENT: LAMINATED THREE-LAYER PLASTIC WITH ENGRAVED LETTERS, 1/2 INCH HIGH LETTERS, COLORS CONFORMING TO ASME A13.1
   B. DUCTWORK: PAINTED STENCILS, 2-1/2 INCH HIGH LETTERS. SEMI-GLOSS ENAMEL PAINT, COLORS CONFORMING TO ASME A13.1.
   C. PIPING: PLASTIC PIPE MARKERS. FACTORY FABRICATED, FLEXIBLE, SEMI-RIGID PLASTIC, PREFORMED TO FIT AROUND PIPE OR PIPE COVERING; MINIMUM INFORMATION INDICATING FLOW DIRECTION ARROW AND IDENTIFICATION OF FLUID BEING CONVEYED. COLORS CONFORMING TO ASME A13.1.
2. INSTALLATION
   A. DEGREASE AND CLEAN SURFACES TO RECEIVE IDENTIFICATION.
   B. LOCATE IDENTIFICATION AT EACH SIDE OF PENETRATION OF STRUCTURE OR ENCLOSURE, AND AT EACH OBSTRUCTION.

23 0593 TESTING, ADJUSTING, AND BALANCING FOR HVAC
1. NEW CONSTRUCTION TESTING, ADJUSTING, AND BALANCING
   A. PERFORM SYSTEM BALANCE IN ACCORDANCE WITH NEBB PROCEDURAL STANDARDS FOR TESTING ADJUSTING BALANCING OF ENVIRONMENTAL SYSTEMS.
   B. FAN COIL UNITS: ADJUST TO WITHIN PLUS OR MINUS 10 PERCENT OF DESIGN. AIRFLOW QUANTITIES INDICATED ON THE PLANS ARE FOR OCCUPIED OPERATION MODE, HIGH SPEED.
   C. RANGE HOODS: ADJUST TO WITHIN PLUS OR MINUS 10 PERCENT OF DESIGN. AIRFLOW QUANTITIES INDICATED ON THE PLANS ARE FOR HIGH SPEED. VERIFY OPERATION WITH EACH INDIVIDUAL HOOD OPERATING AND BOTH HOODS OPERATING SIMULTANEOUSLY.
   D. HYDRONIC SYSTEMS: ADJUST TO WITHIN PLUS OR MINUS 10 PERCENT OF DESIGN.
2. SUBMITTALS
   A. FINAL REPORT: PROVIDE FINAL REPORT FOR A/E REVIEW AND APPROVAL.

23 0719 HVAC PIPING INSULATION
1. PRODUCT DATA
   A. SURFACE BURNING CHARACTERISTICS, ALL PRODUCTS: FLAME SPREAD/SMOKE DEVELOPED INDEX OF 25/50, MAXIMUM, WHEN TESTED IN ACCORDANCE WITH ASTM E64.
   B. THERMAL CONDUCTIVITY OF 0.23 AT 75°F WHEN TESTED IN ACCORDANCE WITH ASTM C1045.
   C. INSULATION SHALL CONTAIN NO ADDED FORMALDEHYDE PER UVA FACILITIES DESIGN GUIDELINES SECTION 7.4.4.2.2 INSULATION. GREENGUARD GOLD CERTIFIED INSULATION MEETS THE INTENT OF THIS REQUIREMENT.
   D. VERIFY THAT PIPING HAS BEEN TESTED BEFORE APPLYING INSULATION MATERIALS AND THAT SURFACES ARE CLEAN AND DRY, WITH FOREIGN MATERIAL REMOVED. FOR EXPOSED PIPING, LOCATE INSULATION AND COVER SEAMS IN LEAST VISIBLE LOCATIONS.
   E. PROVIDE AN ALL SERVICE JACKET ON PIPING. JACKET TO BE A MOLD RESISTANT, FLAME-RETARDANT VAPOR-BARRIER FACING. JACKET TO BE CONSTRUCTED OF LIGHTWEIGHT ALUMINUM FOIL LAYERED WITH A TRI-DIRECTIONAL FIBER GLASS REINFORCED SCRIM AND COUPLED WITH A BLEACHED WHITE KRAFT PAPER.
   F. PROVIDE INSERTS AND SHIELDS FOR PIPING. SHIELDS SHALL BE GALVANIZED STEEL BETWEEN PIPE HANGERS OR PIPE HANGER ROLLS AND INSERTS. INSTALL 6" LONG INSERTS BETWEEN SUPPORT SHIELD AND PIPING AND UNDER THE FINISH JACKET.
   G. CONTINUE INSULATION THROUGH WALLS, SLEEVES, PIPE HANGERS, AND OTHER PIPE PENETRATIONS. FINISH AT SUPPORTS, PROTRUSIONS, AND INTERRUPTIONS.
2. SUBMITTALS
   A. PRODUCT DATA: PROVIDE MANUFACTURER'S CATALOG INFORMATION.
   B. PROJECT RECORD DOCUMENTS: RECORD ACTUAL LOCATIONS OF COMPONENTS.

23 2113 HYDRONIC PIPING
1. PRODUCT DATA
   A. COPPER TUBE: ASTM B88 (ASTM B88M), TYPE L (B), HARD DRAWN; USING ONE OF THE FOLLOWING JOINT TYPES:
   B. SOLDER JOINTS: ASME B16.18 CAST BRASS/BRONZE OR ASME B16.22, SOLDER WROUGHT COPPER FITTINGS.
      1. SOLDER - ASTM B32 LEAD-FREE SOLDER, HB ALLOY (95-5 TIN-ANTIMONY) OR TIN AND SILVER.
      2. BRAZE - AWS A5.8/A5.8M BCUP COPPER/SILVER ALLOY.
   C. PRESS FITTINGS: AWWA C606 GROOVED TUBE, FITTINGS OF SAME MATERIAL, AND COPPER-TUBE-DIMENSION MECHANICAL COUPLINGS (PRO PRESS OR EQUAL).
   D. BALL VALVES, 4 INCHES AND SMALLER: BRONZE ONE PIECE BODY, CHROME PLATED BRASS BALL, TEFLON SEATS AND STUFFING BOX RING, LEVER HANDLE WITH BALANCING STOPS, SOLDER ENDS WITH UNION
   E. PRESSURE TEST ALL NEW PIPING AT 150 PSIG FOR A MINIMUM OF 2 HOURS. IF ANY ITEMS ARE UNSUITABLE FOR 150 PSIG, TEST AT 1.1/2 TIMES DESIGN PRESSURE FOR 2 HOURS AND VALVE OFF PRIOR TO 150 PSIG TESTING OF OTHER COMPONENTS. TEST ALL PRESS FITTINGS FOR 24 HOURS.
   F. CONNECTIONS BETWEEN PIPE OF DISSIMILAR METALS SHALL BE MADE WITH 6" LONG BRASS NIPPLES (6" BETWEEN THE THREADS). DIELECTRIC UNIONS, FLANGES, AND PLATED NIPPLES SHALL NOT BE USED.
2. SUBMITTALS
   A. PRODUCT DATA: PROVIDE MANUFACTURER'S CATALOG INFORMATION.
   B. PROJECT RECORD DOCUMENTS: RECORD ACTUAL LOCATIONS OF COMPONENTS.

23 3461 RANGE HOOD
1. PRODUCTS
   A. ISLAND RANGE HOOD:
      1. STAINLESS STEEL CONSTRUCTION WITH REMOVABLE STAINLESS STEEL BAFFLE FILTERS. HOOD SHALL BE PROVIDED WITH LED LIGHTS AND BUTTON BANKS PRE-INSTALLED.
      2. HOOD SHALL BE PROVIDED WITH ADJUSTABLE MOUNTING KIT COMPATIBLE WITH CEILING INSTALLATION.
      3. HOOD SHALL BE PROVIDED WITH A SQUARE TO 6" ROUND TRANSITION PIECE AND BACKDRAFT DAMPER.
   B. HOOD EXHAUST FAN
      1. VARIABLE SPEED FAN WITH A MINIMUM OF 4 SPEED SETTINGS.
      2. FANS WILL PROVIDE CFM AND STATIC PRESSURE, AS SHOWN IN PERFORMANCE SPECIFICATIONS.
      3. FAN WHEELS SHALL BE CONSTRUCTED OF GALVANIZED STEEL.
2. SUBMITTALS
   A. PRODUCT DATA: PROVIDE MANUFACTURER'S CATALOG INFORMATION.
   B. PROJECT RECORD DOCUMENTS: RECORD ACTUAL LOCATIONS OF COMPONENTS.

23 8101 FAN COIL UNITS
1. GENERAL
   A. UNIT WILL BE COMPLETE WITH FANS, MOTORS, COILS, FILTERS, DAMPERS, ACCESS DOORS AND OTHER COMPONENTS/OPTIONS, AS SHOWN ON PRODUCT DRAWINGS, WIRING DIAGRAMS, AND AS DESCRIBED IN PERFORMANCE SPECIFICATIONS.
   B. PRODUCT DRAWINGS, PERFORMANCE SPECIFICATIONS, AND OTHER SUBMITTAL DOCUMENTS SHOW SEGMENTS, COMPONENTS, OPTIONS, AND FEATURES FURNISHED BY MANUFACTURER.
   C. UNIT WILL BE ETL LISTED AND CONFORM TO ALL OTHER APPLICABLE RATINGS AS REQUIRED BY THE ASSOCIATED CERTIFICATION AGENCY.
2. WARRANTY
   A. MANUFACTURER WILL WARRANTY UNIT FOR EIGHTEEN (18) MONTHS FROM DATE OF SHIPMENT.
3. PRODUCT DATA
   A. DRAIN PAN WILL BE DOUBLE SLOPED 20GA 304 STAINLESS STEEL.
   B. DRAIN PAN COMPLY WITH THE GUIDELINES OF ASHRAE 62.
      1. DRAIN PAN WILL BE DOUBLE SLOPED AT LEAST 1/8" PER FOOT, AND HAVE NO HORIZONTAL SURFACES.
      2. PROVIDE 6" BRASS NIPPLE BETWEEN DRAIN PAN CONNECTION AND DRAIN PIPING WHEN DISSIMILAR METALS ARE CONNECTED.
      3. DRAIN PAN DRAIN TO ONE POINT.
      4. DRAIN CONNECTION WILL BE WELDED TO DRAIN PAN
   C. FANS WILL PROVIDE CFM AND STATIC PRESSURE, AS SHOWN IN PERFORMANCE SPECIFICATIONS.
   D. FAN WHEELS SHALL BE CONSTRUCTED OF GALVANIZED STEEL.
   E. FAN MOTORS SHALL BE NEMA PREMIUM EFFICIENCY TYPE, COMPLYING WITH LATEST EDITION OF NEMA MG-1 AND HAVE A MINIMUM SERVICE FACTOR OF 1.1. PROVIDE SHAFT GROUNDING RING(S).
   F. FAN MOTORS COMPLY WITH ASHRAE STANDARD 90.1.
   G. MOTORS WILL BE FACTORY-INSTALLED ELECTRONICALLY COMMUTATED MOTOR (ECM): HIGH STATIC WITH FORWARD CURVED BLOWER FOR HIGH EFFICIENCY DIRECT DRIVE OPERATION.
   H. FAN MOTOR DISCONNECTS WILL BE PROVIDED WITH UNIT, AS SHOWN IN PERFORMANCE SPECIFICATIONS.
   I. DISCONNECT WILL BE HOUSED IN A NEMA 1 ENCLOSURE.
   J. CAPACITY AND PRESSURE DROP PERFORMANCE WILL BE CERTIFIED IN ACCORDANCE WITH AHRI STANDARD 410, WHEN SELECTED WITHIN FLUID VELOCITY, INLET FLUID TEMPERATURE, AND ENTERING AIR TEMPERATURE RANGES SPECIFIED BY AHRI 410.
   K. COOLING COIL SEGMENTS WILL HAVE A FULL-WIDTH STAINLESS STEEL IAQ DRAIN PAN THAT EXTENDS AT LEAST 6" DOWNSTREAM OF THE LAST COIL IN THE SECTION.
   L. FILTER TRACKS/FRAMES WILL BE AN INTEGRAL PART OF THE UNIT.
   M. FILTER ACCESS WILL BE PROVIDED VIA ACCESS DOORS ON FILTER SEGMENTS. SEE PRODUCT DRAWINGS FOR DETAILS.
   N. UNIT TO BE MOUNTED ON A PLATFORM WITH SUITABLE ISOLATION TO MINIMIZE SOUND TRANSMISSION TO STRUCTURE.
   O. ALL UNIT SURFACES WILL BE FACTORY CLEANED PRIOR TO FINISHING OR SHIPPING.
4. INSTALLATION
   A. ALL COMPONENETS TO BE INSTALLED PER MANUFACTURER'S RECCOMENDATIONS.
   B. CONTRACTOR TO COORDINATE WITH ALL TRADES AS REQUIRED TO ENSURE PROPER INSTALLATION, OPERATION, AND MAINTINENCE OF UNIT AND ASSOCIATED APPURTANCES.
5. SUBMITTALS
   A. PRODUCT DATA: PROVIDE MANUFACTURER'S CATALOG INFORMATION.
   B. PROJECT RECORD DOCUMENTS: RECORD ACTUAL LOCATIONS OF COMPONENTS.

25 0500 COMMON WORK RESULTS FOR BUILDING AUTOMATION
1. ALL NEW EQUIPMENT SHALL BE DDC CONTROLLED AS AN EXTENSION OF THE EXISTING JCI CONTROLS NETWORK IN THE BUILDING. ALL SENSORS, CONTROLLERS, VALVES, AND ASSOCIATED COMPONENTS INDICATED SHALL BE PROVIDED BY THE BAS VENDOR.
2. EXECUTION
   A. BAS CONTRACTOR SHALL COORDINATE 120V ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR. BAS SHALL PROVIDE ANY ADDITIONAL CIRCUITS AS REQUIRED FOR CONTROL POWER.
   B. ALL CONTROL WIRING SHALL BE CONCEALED IN WALLS OR ABOVE FUTURE CEILINGS OF FINISHED SPACES (COORDINATE HEIGHTS WITH CONSTRUCTION MANAGER), UNLESS NOTED OTHERWISE. IN SPACES WITH EXPOSED STRUCTURE CEILINGS, CONTRACTOR SHALL CLOSELY COORDINATE ROUTING WITH OTHER TRADES. UTILIZE PLENUM RATED CABLE ABOVE CEILINGS. ALL CONTROL WIRING WITHIN WALLS SHALL BE RUN IN CONDUIT. CONDUIT FROM THE WALL OUTLET BOX MAY TERMINATE SEVERAL INCHES ABOVE THE CEILING WHERE FUTURE LAY-IN CEILING TILES ARE TO BE USED. CABLING ABOVE THE CEILING WITHIN PLENUMS SHALL BE NEATLY BUNDLED AND ATTACHED TO OR INDEPENDENTLY SUPPORTED FROM THE BUILDING STRUCTURE ABOVE. ANY EXPOSED WIRING IN MECHANICAL ROOMS OR ATTICS SHALL BE RUN IN CONDUIT.
   C. PROVIDE ADDITIONAL POINTS AS NEEDED TO ACHIEVE THE SPECIFIED SEQUENCE OF OPERATION AND SYSTEM GRAPHIC DISPLAY.
   D. INSTALLATION SHALL BE IN ACCORDANCE WITH MOST RECENT VERSION OF UVA BAS STANDARD: HTTP://WWW.FM.VIRGINIA.EDU/RESOURCES/DOCUMENTS.HTML
3. SUBMITTALS
   A. PRODUCT DATA: PROVIDE MANUFACTURER'S CATALOG INFORMATION.
   B. SEQUENCE OF OPERATIONS FOR ALL CONTROLLED EQUIPMENT.
   C. CONTROLS DIAGRAMS FOR ALL CONTROLLED EQUIPMENT.
   D. PROJECT RECORD DOCUMENTS: RECORD ACTUAL LOCATIONS AND OPERATIONS OF COMPONENTS

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05/12/2023
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KITCHEN RENOVATION
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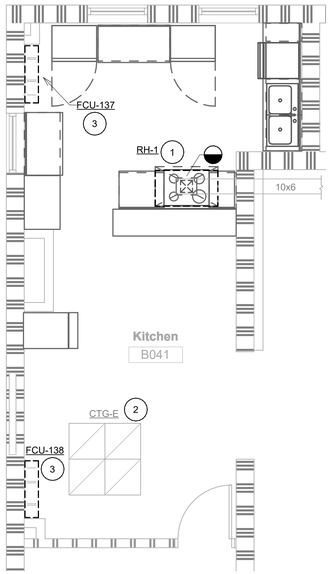
CHECKED BY: Checker
REVISIONS

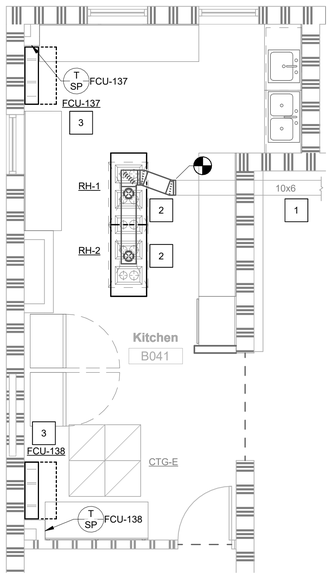
1	BULLETIN 1	06/05/2023

PROJECT NUMBER
PJ03200

M-001



1 MH-100 BASEMENT DUCT+PIPE DEMOLITION PLAN
1/4" = 1'-0"



2 MH-100 BASEMENT DUCT+PIPE NEW WORK PLAN
1/4" = 1'-0"

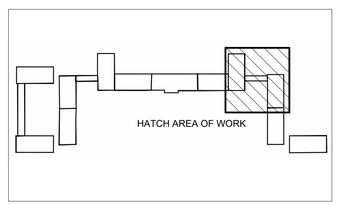
DEMO NOTES

1. EXISITNG RANGE HOOD EXHAUST FAN IS 800 CFM.
2. EXISTING TRANSFER GRILLES TO PROVIDE HOOD MAKEUP AIR.
3. CONTRACTOR TO VERIFY FAN COIL UNIT CONNECTIONS PRIOR TO FABRICATION OF NEW UNIT.

NEW WORK NOTES

1. EXISTING TO REMAIN EXHAUST DUCT TERMINATES AT EXTERIOR LOUVER.
2. ENSURE MANUFACTURER PROVIDED BACKDRAFT DAMPER IS INSTALLED AT HOOD CONNECTION.
3. LIKE IN KIND FAN COIL UNIT REPLACEMENT. INSTALL NEW FCU AT EXISTING FCU LOCATION. COORDINATE CONNECTIONS TO EXISTING DUAL TEMPERATURE AND CONDENSATE PIPING. REFER TO DETAILS AND CONTROLS DRAWINGS FOR ADDITIONAL INFORMATION.

0' 2' 4' 8'
1/4"=1'-0"



KEY PLAN

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1	BULLETIN 1	06/05/2023

PROJECT NUMBER
PJ03200

MH-100

DESIGN CONDITIONS

LOCATION	OUTDOOR SUMMER, dB/wB	INDOOR SUMMER, dB	OUTDOOR WINTER, dB	INDOOR WINTER, dB
CHARLOTTESVILLE, VA	95/76	74	15	70

NOTES:
1. OUTDOOR DESIGN CONDITIONS BASED ON UNIVERSITY FDG.

23 3100 DUCT & INSULATION SCHEDULE

DUCT SYSTEM	MATERIAL	PRESSURE CLASS, IN WC	INSULATION	
			TYPE	THICKNESS, IN
EXHAUST	GALV	2	-	-

23 0700 PIPING & INSULATION SCHEDULE

SYSTEM	MATERIAL	PIPE SIZE, IN	INSULATION	
			TYPE	THICKNESS, IN
DUAL TEMP WATER PIPING	TYPE L COPPER	LESS THAN 1.1/2	GLASS FIBER, RIGID	1.1/2
DUAL TEMP WATER PIPING	TYPE L COPPER	≥ 1.1/2, LESS THAN 4	GLASS FIBER, RIGID	2
CONDENSATE PIPING	TYPE L COPPER	ALL	GLASS FIBER, RIGID	1

23 8101 FAN COIL UNIT SCHEDULE

MARK	ASSET ID	SUPPLY FAN ESP, IN WC	COOLING COIL									HEATING COIL					FILTER	ELECTRICAL				PHYSICAL DIMENSIONS				BASIS OF DESIGN	
			SA CFM	MBH TTL	MBH SENS	GPM	WPD, FT HD	EAT DB, °F	EAT WB, °F	LAT DB, °F	LAT WB, °F	MBH	GPM	WPD, FT HD	EAT DB, °F	LAT DB, °F		HP	VOLTAGE	PHASE	FLA	LENGTH, IN	WIDTH, IN	HEIGHT, IN	WEIGHT, LBS	MNFR	MODEL
FCU-137	233424	0.20	400	10.1	8.6	1.9	7.32	74	62	54	53	17.7	1.3	3.13	70	110	1" MERV 13	0.13	120	1	2.2	38	9	29	125	TRANE	FFJ-040
FCU-138	233425	0.20	400	10.1	8.6	1.9	7.32	74	62	54	53	17.7	1.3	3.13	70	110	1" MERV 13	0.13	120	1	2.2	38	9	29	125	TRANE	FFJ-040

NOTES:
1. DESIGN AND PERFORMANCE BASED ON TRANE.
2. COOLING CAPACITY BASED ON 42°/62° F EWT/LWT.
3. HEATING CAPACITY BASED ON 130°/100° F EWT/LWT.
4. UNIT IS 2-PIPE. PROVIDE 4-ROW CHANGEOVER COIL. CONTRACTOR TO VERIFY RIGHT HAND LEFT HAND CONFIGURATION PRIOR TO FABRICATION.
5. MECHANICAL CONTRACTOR TO PROVIDE PIPING PACKAGE. BAS CONTRACTOR TO FURNISH PIC VALVE AND ACTUATOR, INSTALLED BY MECHANICAL CONTRACTOR.
6. BAS CONTROLS SHALL BE FURNISHED AND FIELD INSTALLED BY BAS CONTRACTOR. REFER TO CONTROL DRAWINGS FOR FURTHER DETAIL.
7. PROVIDE ECM HIGH STATIC MOTOR WITH PROPORTIONAL 0-10VDC CONTROL.
8. PROVIDE AUXILARY DRAIN PAN FACTORY MOUNTED IN UNIT.

23 3461 RANGE HOOD SCHEDULE

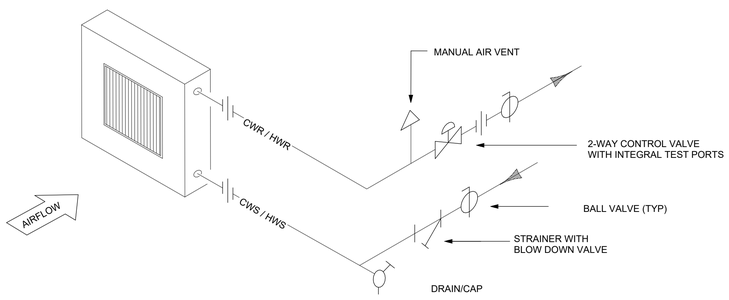
MARK	ASSET ID	FAN						HOOD DIMENSIONS			BASIS OF DESIGN	
		CFM	ESP	DBA	VOLTAGE	PHASE	MCA	LENGTH, IN	WIDTH, IN	HEIGHT, IN	MNFR	MODEL
RH-1	233426	400	0.20	2.5	120	1	1.7	48	24	7	ZLINE	GL2I-48
RH-2	233426	400	0.20	2.5	120	1	1.7	48	24	7	ZLINE	GL2I-48

NOTES:
1. FAN IS FOUR SPEED. FAN IS SELECTED AT HIGH SPEED TO MATCH EXISTING HOOD.
2. PROVIDE CHIMNEY SHORT KIT FOR INSTALLATION IN LOW CEILING.

VENTILATION MATRIX

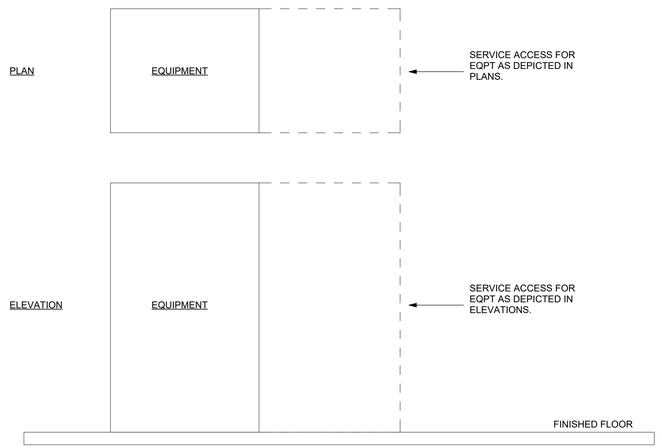
ROOM NUMBER	ASHRAE 62.1 OCCUPANCY CATEGORY	AREA, SF	OCC	RP	RA	COOLING EZ	MIN REQUIRED OA, CFM	MIN REQUIRED EA, CFM
B042 KITCHEN	GROUP R-2 KITCHEN	360	10	5.0	0.06	0.8	75	100

NOTES:
1. VENTILATION SHALL BE GOVENERED BY VMC 403.3.2.2 GROUP R-2, R-3, AND R-4 OCCUPANCIES, THREE STORIES AND LESS: OUTDOOR AIR FOR OTHER SPACES.
2. VENTILATION SHALL BE PROVIDED BY OPERABLE WINDOWS.



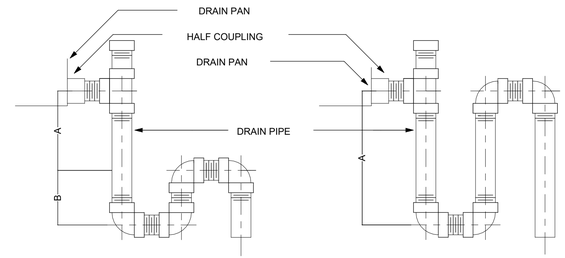
NOTES:
1. INDUSTRIAL GRADE PRESSURE INDEPENDENT TYPE TWO-WAY CONTROL VALVE WITH TEST PORTS FURNISHED BY BAS CONTRACTOR, INSTALLED BY MECHANICAL CONTRACTOR.

1 M-500 CHILLED / HEATING WATER COIL PIPING DETAIL
NOT TO SCALE



NOTES:
1. LOCATE ALL EQUIPMENT WHICH MUST BE SERVICED, OPERATED, OR MAINTAINED IN FULLY ACCESSIBLE POSITIONS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
2. MAINTAIN A CLEAR PATH WITHOUT OBSTRUCTION TO ALLOW FOR ACCESS TO EQUIPMENT.
3. PROVIDE A MINIMUM OF THREE FEET CLEAR SPACE IN FRONT OF EQUIPMENT ACCESS DOORS AND COMPONENTS REQUIRING SERVICE, UNO.

2 M-500 EQUIPMENT SERVICE CLEARANCE DETAIL
NOT TO SCALE



DRAIN PAN ON FAN INLET
(NEGATIVE PRESSURE)

DRAIN PAN ON FAN OUTLET
(POSITIVE PRESSURE)

NOTES:
1. DRAIN PIPE TO BE SAME SIZE AS UNIT OUTLET, BUT NOT LESS THAN 3/4" PIPE SIZE.
2. "A" = TWICE SYSTEM STATIC IN INCHES AT DRAIN POINT. "B" = 1/2 SYSTEM STATIC IN INCHES AT DRAIN POINT.

3 M-500 CONDENSATE PIPING DRAIN DETAIL
NOT TO SCALE

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COMMONWEALTH OF VIRGINIA
JONATHAN C. BRUNEAU
Lic. No. 45138
09/12/2023
PROFESSIONAL ENGINEER

TUCKER HOUSE (2078)
KITCHEN RENOVATION
DETAILS AND SCHEDULES

ISSUE FOR CONSTRUCTION

LOCATION FOR QUBO OR RECORD DOCUMENT STAMP

DATE: 05/12/2023
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CHECKED BY: JCB
REVISIONS

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M-500

GENERAL NOTES

1. THE UNIVERSITY WILL SOLICIT PROPOSAL FOR THE WORK SPECIFIED FROM JOHNSON CONTROLS AS AN EXTENSION OF THE EXISTING CONTROLS SYSTEM. ALL SENSORS, CONTROLLERS, VALVES, AND CONTROLS SYSTEM. ALL SENSORS, CONTROLLERS, VALVES, AND ASSOCIATED COMPONENTS INDICATED SHALL BE PROVIDED BY THE BAS VENDORS.

2. BAS CONTRACTOR SHALL COORDINATE 120V ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR. BAS SHALL PROVIDE ANY ADDITIONAL CIRCUITS AS REQUIRED FOR CONTROL POWER.

3. ALL CONTROL WIRING SHALL BE CONCEALED IN WALLS OR ABOVE FUTURE CEILINGS OF FINISHED SPACES (COORDINATE HEIGHTS WITH CONSTRUCTION MANAGER), UNLESS NOTED OTHERWISE. IN SPACES WITH EXPOSED STRUCTURE CEILINGS, CONTRACTOR SHALL CLOSELY COORDINATE ROUTING WITH OTHER TRADES. ALL CONTROL WIRING WITHIN WALLS SHALL BE RUN IN CONDUIT. CONDUIT FROM THE WALL OUTLET BOX MAY TERMINATE SEVERAL INCHES ABOVE THE CEILING WHERE FUTURE LAY-IN CEILING TILES ARE TO BE USED. CABLING ABOVE THE CEILING WITHIN PLENUMS SHALL BE NEATLY BUNDLED AND ATTACHED TO OR INDEPENDENTLY SUPPORTED FROM THE BUILDING STRUCTURE ABOVE. ANY EXPOSED WIRING IN MECHANICAL ROOMS OR ATTICS SHALL BE RUN IN CONDUIT.

4. PROVIDE ADDITIONAL POINTS AS NEEDED TO ACHIEVE THE SPECIFIED SEQUENCE OF OPERATION AND SYSTEM GRAPHIC DISPLAY.

5. INSTALLATION SHALL BE IN ACCORDANCE WITH MOST RECENT VERSION OF UVA BAS STANDARD: HTTP://WWW.FM.VIRGINIA.EDU/RESOURCES/DOCUMENTS.HTML

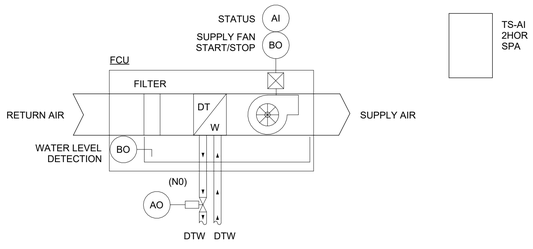
SEQUENCE OF OPERATIONS

CONVENTIONS

1. UNLESS OTHERWISE NOTED THE FOLLOWING CONVENTIONS SHALL APPLY FOR ALL HVAC SYSTEM SEQUENCES OF OPERATION CONTAINED HEREIN.
2. IF A SENSED CHANGE RESULTS IN A PRESCRIBED ACTION, THE OPPOSITE OF THE SENSED CHANGE SHALL RESULT IN THE OPPOSITE ACTION.
3. OCCUPIED/UNOCCUPIED SCHEDULING SHALL BE COORDINATED WITH THE OWNER SHORTLY AFTER CONSTRUCTION IS COMPLETE.
4. SPECIFIC DIAGNOSTIC MESSAGES, AT A MINIMUM, SHALL INCLUDE:
   A. SENSOR FAILURE. (IDENTIFY SENSOR)
   B. OUT OF LIMIT FOR NORMAL SYSTEM OPERATION. (ALL SENSORS)
   C. LOSS OF COMMUNICATION. (IDENTIFY COMPONENT)
5. ALL SET POINTS, COMPLETE WITH INDIVIDUAL SYSTEM & EQUIPMENT GRAPHICS, SHALL BE ADJUSTABLE THROUGH THE BAS. TYPICAL ALARM RANGE: 4°F DB ABOVE OR BELOW SET POINT RANGE.
6. SPACE TEMPERATURE CONTROL:
   A. DURING PERIODS OF OCCUPIED OPERATION (SPACE IS OCCUPIED, SCHEDULED TO BE OCCUPIED OR OCCUPANCY IS DETECTED) THE OPERATOR MAY ADJUST THE NORMAL (72°F ADJ.) SETPOINT. OCCUPANTS MAY FURTHER ADJUST THE NORMAL SETPOINT VIA THE LOCAL SENSOR SETPOINT ADJUSTMENT (THE RANGE OF ADJUSTMENT SHALL BE CONFIGURABLE VIA THE BAS, INITIALLY +/-2°F). INITIAL SETPOINTS SHALL BE AS FOLLOW:
      - COOLING 74°F
      - HEATING 70°F
   B. DURING PERIODS OF UNOCCUPIED OPERATION (SPACE IS SCHEDULED UNOCCUPIED) THE OPERATOR MAY ADJUST SETBACK HEATING (60°F ADJ.), AND SETBACK COOLING (85°F ADJ.) SETPOINTS.

DUAL TEMP FAN COIL UNIT

1. GENERAL: THE TWO PIPE VERTICAL FAN COIL UNIT SHALL BE FULLY CONTROLLED BY THE BAS.
2. SPACE TEMPERATURE CONTROL: REFER TO CONVENTIONS.
3. OCCUPANCY OVERRIDE: OCCUPANCY OVERRIDE SHALL BE INITIATED AT THE LOCAL ZONE SENSOR. UNIT SHALL CHANGE TO THE OCCUPIED MODE WHENEVER THE OVERRIDE BUTTON IS DEPRESSED FOR A PERIOD OF 2 HOURS (ADJ.) AND RESET TO NORMAL OPERATION AT THE END OF THE PERIOD OR WHENEVER THE OVERRIDE BUTTON IS HELD FOR MORE THAN 5 SECONDS (ADJ.).
4. FAN:
   A. FAN SHALL RUN INTERMITTENTLY TO MAINTAIN SPACE CONDITIONS.
   B. DURING UNOCCUPIED OPERATION THE FAN SHALL BE DEENERGIZED EXCEPT AS REQUIRED TO MAINTAIN TEMPERATURE SETPOINTS FOR BOTH HEATING AND COOLING WITH A CYCLE DIFFERENTIAL OF 3°F (ADJ.).
   C. BAS SHALL PROVE FAN OPERATION AND USE THE STATUS INDICATION TO ACCUMULATE RUNTIME.
5. VALVES: BAS SHALL MODULATE THE WATER VALVE TO MAINTAIN THE ACTIVE SPACE TEMPERATURE SETPOINT (NORMAL OCCUPIED, SETBACK COOLING, SETBACK HEATING).
6. HEATING REQUEST: A "HEATING REQUEST" SHALL BE BROADCAST TO THE HW SYSTEM SERVING THIS UNIT WHENEVER THE HW OUTPUT IS AT 100% (ADJ.) OR THE SPACE TEMPERATURE FALLS BELOW THE THROTTLING RANGE OF THE HEATING LOOP.
7. COOLING REQUEST: A "COOLING REQUEST" SHALL BE BROADCAST TO THE CHW SYSTEM SERVING THIS UNIT WHENEVER THE CHW OUTPUT IS AT 100% (ADJ.) OR THE SPACE TEMPERATURE RISES ABOVE THE THROTTLING RANGE OF THE COOLING LOOP.
8. SYSTEM GRAPHIC DISPLAY:
   A. OUTSIDE AIR TEMPERATURE AND HUMIDITY - GLOBAL
   B. UNIT MARK, TYPE, SIZE, OCCUPANCY SCHEDULE, AND OVERRIDE STATUS
   C. SPACE TEMPERATURE AND SETPOINTS
   D. VALVE MODULATION
   E. SUPPLY FAN ENABLE AND STATUS



NOTES:

1. PROVIDE THERMOSTAT WITH TEMPERATURE DISPLAY AND COMMUNICATIONS PORT.
2. DUAL TEMPERATURE WATER CONTROL VALVE SHALL BE FURNISHED BY BAS CONTRACTOR, FIELD INSTALLED BY MECHANICAL CONTRACTOR.
3. WATER LEVEL DETECTION SHALL BE LOCATED IN FACTORY PROVIDED AUXILARY DRAIN PAN AND HARD WIRED TO EQUIPMENT SAFETY TO DISABLE OPERATION WHEN MOISTURE IS SENSED.

1 / M-700 FCU CONTROLS DETAIL
NOT TO SCALE

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GENERAL NOTES

1. COMPLY WITH ALL APPLICABLE CODES & ORDINANCES.
2. DO NOT SCALE THESE DRAWINGS.
3. THE CONTRACTOR SHALL MAKE A THOROUGH INSPECTION OF THE JOB SITE BEFORE CONSTRUCTION BEGINS AND NOTIFY THE ARCHITECT IF EXISTING CONDITIONS ARE NOT AS INDICATED ON THE DRAWINGS.
4. UNLESS OTHERWISE NOTED, DIMENSIONS ARE TO FACE OF FINISHED WALL OR TO CENTERLINE OF STRUCTURAL COLUMNS.
5. PATCH AND SEAL ANY OPENINGS IN EXISTING PARTITION WALLS. PATCH AND SEAL WALLS WITH NEW MATERIALS TO MATCH EXISTING MATERIALS.
6. ALL SURFACES TO BE PATCHED, REPAIRED AND PREPARED AS REQUIRED TO RECEIVE SPECIFIED FINISHES PER MANUFACTURER'S RECOMMENDATIONS.
7. LIGHTING FIXTURE FINISHES TO BE SELECTED BY OWNER/ARCHITECT.

ELECTRICAL SYMBOLS

1

POWER

SYMBOL	DESCRIPTION
	PANELBOARD, SURFACE MOUNTED, 120/208V
	PANELBOARD, FLUSH MOUNTED, 120/208V
#X #X	RECEPTACLE, DUPLEX - 18" AFF, TYP. FILLED IN REGION INDICATES SWITCHED # CIRCUIT ID GFCI GROUND FAULT CIRCUIT INTERRUPTER
#X	RECEPTACLE, DUPLEX - 2 INCHES ABOVE TOP OF BLACKSPLASH TO BOTTOM OF DEVICE. UNO. # CIRCUIT ID GFCI GROUND FAULT CIRCUIT INTERRUPTER
#(J)	JUNCTION BOX (CEILING MOUNTED) # CIRCUIT ID
#(J)	JUNCTION BOX (WALL MOUNTED) # CIRCUIT ID
#(E)	EQUIPMENT CONNECTION, REFER TO MANUFACTURER FOR DETAILS # CIRCUIT ID

LIGHTING

a,#X a,#X	LIGHTING, RECESSED DOWNLIGHT (STANDARD / EMERGENCY) a SWITCHING ZONE # CIRCUIT ID X FIXTURE TYPE
a,#X a,#X	LIGHTING, RECESS MOUNT (STANDARD / EMERGENCY) a SWITCHING ZONE # CIRCUIT ID X FIXTURE TYPE
$a X	LIGHT SWITCH, SINGLE-POLE a SWITCH ID 3 3-WAY D DIMMER OC INTEGRATED OCCUPANCY SENSOR D/O DIMMER & OCCUPANCY SENSOR RTS REMOTE TEST SWITCH
(SD)	SMOKE DETECTOR
L	FIRE ALARM STROBE (CEILING MOUNTED)

GENERAL ELECTRICAL

(#)	SHEET NOTE DEMO WORK
#	SHEET NOTE NEW WORK
	NEW WORK
	DEMO WORK
	EXISTING TO REMAIN

UVA FIRE RATINGS

FB2 FB2	TWO HOUR FIRE BARRIER
FB3 FB3	THREE HOUR FIRE BARRIER

ELECTRICAL SPECIFICATIONS

26 0500 COMMON WORK RESULTS FOR ELECTRICAL

1. THE WORK TO BE PERFORMED UNDER THIS DIVISION SHALL CONSIST OF FURNISHING AND INSTALLING ALL ELECTRICAL WORK SHOWN ON THE DRAWINGS AND SPECIFIED UNDER THIS DIVISION. ALL WORK SHALL COMPLY WITH 2018 VIRGINIA EXISTING BUILDING CODE AND NATIONAL ELECTRICAL CODE (NFPA 70, 2017 EDITION).

26 0519 WIRES AND CABLES

1. CONDUCTORS
   A. ALL POWER AND LIGHTING CIRCUIT CONDUCTORS SHALL BE #12 AWG OR LARGER. #8 AWG AND LARGER SHALL BE STRANDED CONDUCTORS AND #10 AWG AND SMALLER SHALL BE SOLID CONDUCTORS. CONDUCTOR MATERIAL: COPPER FOR ALL WIRES AND CABLES. INSULATION: PROVIDE THHN/THWN INSULATION FOR ALL CONDUCTORS. COLORS FOR EACH INDIVIDUAL PHASE SHALL MATCH CONVENTION FOR THE EXISTING BUILDING.

26 0533 RACEWAYS & BOXES

1. RACEWAYS
   INTERIOR USE: ELECTRIC METALLIC TUBE (EMT).
   UNDERGROUND USE: POLYVINYL CHLORIDE (PVC).
   EXTERIOR MOUNTED: RIGID GALVANIZED STEEL (RGS).
   FITTINGS: ANSI C80.3, FITTING SHALL BE SET SCREW COMPRESSION TYPE.
2. JUNCTION BOXES: BOXES SHALL HAVE SCREWED OR BOLTED ON COVERS OF MATERIAL SAME AS BOX AND SHALL BE OF SIZE AND SHAPE TO SUIT APPLICATION. STEEL BOXES: SHEET STEEL WITH WELDED SEAMS.
3. WIRING METHODS
   ALL WIRING SHALL BE INSTALLED IN CONDUIT. THE MINIMUM CONDUIT SIZE IS TO BE 3/4". INSTALL CONDUIT BEHIND WALLS AND ABOVE CEILING IN FINISHED AREAS. USE RIGID GALVANIZED STEEL IN EXPOSED EXTERIOR LOCATIONS AND SCHEDULE 80 PVC IN BURIED INSTALLATIONS. INSTALL ELECTRICAL RACEWAYS IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS, NEC AND NECA STANDARD OF INSTALLATION.

26 0526 GROUNDING

1. GROUNDING AND BONDING PRODUCTS CONDUCTOR MATERIALS: COPPER.
2. APPLICATION
   EQUIPMENT GROUNDING CONDUCTOR APPLICATION: COMPLY WITH NEC ARTICLE 250 FOR SIZES AND QUANTITIES OF EQUIPMENT GROUNDING CONDUCTORS. PROVIDE A GREEN EQUIPMENT GROUNDING CONDUCTOR IN ALL CIRCUITS.

SECTION 26 0553 - IDENTIFICATION FOR ELECTRICAL SYSTEMS

1. SUBMITTALS: PROVIDE MANUFACTURER'S STANDARD CATALOG PAGES AND DATA SHEETS FOR EACH PRODUCT.
2. IDENTIFICATION REQUIREMENTS: USE IDENTIFICATION NAMEPLATE TO IDENTIFY EACH PIECE OF ELECTRICAL DISTRIBUTION AND CONTROL EQUIPMENT AND ASSOCIATED SECTIONS, COMPARTMENTS, AND COMPONENTS.
3. SWITCHBOARDS: USE IDENTIFICATION NAMEPLATE TO IDENTIFY LOAD(S) SERVED FOR EACH BRANCH DEVICE. DO NOT IDENTIFY SPARES AND SPACES.
4. PANELBOARDS: USE TYPEWRITTEN CIRCUIT DIRECTORY TO IDENTIFY LOAD(S) SERVED FOR PANELBOARDS WITH A DOOR. FOR POWER PANELBOARDS WITHOUT A DOOR, USE IDENTIFICATION NAMEPLATE TO IDENTIFY LOAD(S) SERVED FOR EACH BRANCH DEVICE. DO NOT IDENTIFY SPARES AND SPACES.
5. ENCLOSED SWITCHES, CIRCUIT BREAKERS, AND MOTOR CONTROLLERS: IDENTIFY POWER SOURCE AND CIRCUIT NUMBER. INCLUDE LOCATION WHEN NOT WITHIN SIGHT OF EQUIPMENT. IDENTIFY LOAD(S) SERVED. INCLUDE LOCATION WHEN NOT WITHIN SIGHT OF EQUIPMENT.
6. ARC FLASH HAZARD WARNING LABELS: USE WARNING LABELS TO IDENTIFY ARC FLASH HAZARDS FOR ELECTRICAL EQUIPMENT, SUCH AS SWITCHBOARDS, PANELBOARDS, INDUSTRIAL CONTROL PANELS, METER SOCKET ENCLOSURES, AND MOTOR CONTROL CENTERS THAT ARE LIKELY TO REQUIRE EXAMINATION, ADJUSTMENT, SERVICING, OR MAINTENANCE WHILE ENERGIZED. INCLUDE ORANGE HEADER THAT READS "WARNING", FOLLOWED BY THE WORD MESSAGE "ARC FLASH AND SHOCK HAZARD; APPROPRIATE PPE REQUIRED; DO NOT OPERATE CONTROLS OR OPEN COVERS WITHOUT APPROPRIATE PERSONAL PROTECTION EQUIPMENT; FAILURE TO COMPLY MAY RESULT IN INJURY OR DEATH; REFER TO NFPA 70E FOR MINIMUM PPE REQUIREMENTS" OR APPROVED EQUIVALENT.
7. IDENTIFICATION FOR CONDUCTORS AND CABLES: COLOR CODING FOR POWER CONDUCTORS 600 V AND LESS: COMPLY WITH SECTION 26 0519. USE IDENTIFICATION NAMEPLATE OR IDENTIFICATION LABEL TO IDENTIFY COLOR CODE FOR UNGROUNDED AND GROUNDED POWER CONDUCTORS INSIDE DOOR OR ENCLOSURE AT EACH PIECE OF FEEDER OR BRANCH-CIRCUIT DISTRIBUTION EQUIPMENT WHEN PREMISES HAS FEEDERS OR BRANCH CIRCUITS SERVED BY MORE THAN ONE NOMINAL VOLTAGE SYSTEM.
8. IDENTIFICATION FOR DEVICES: USE IDENTIFICATION LABEL OR ENGRAVED WALLPLATE TO IDENTIFY SERVING BRANCH CIRCUIT FOR ALL RECEPTACLES.
9. IDENTIFICATION FOR LUMINAIRES: USE PERMANENT RED DOT ON LUMINAIRE FRAME TO IDENTIFY LUMINAIRES CONNECTED TO EMERGENCY POWER SYSTEM.
10. IDENTIFICATION NAMEPLATES AND LABELS:
    A. IDENTIFICATION NAMEPLATES: TWO-LAYER OR THREE-LAYER LAMINATED ACRYLIC OR ELECTRICALLY NON-CONDUCTIVE PHENOLIC WITH BEVELED EDGES; MINIMUM THICKNESS OF 1/16 INCH (1.6 MM); ENGRAVED TEXT.
    B. MOUNTING HOLES FOR MECHANICAL FASTENERS: TWO, CENTERED ON SIDES FOR SIZES UP TO 1 INCH (25 MM) HIGH; FOUR, LOCATED AT CORNERS FOR LARGER SIZES.
    C. RECEPTACLE IDENTIFICATION LABELS: SELF-ADHESIVE LAMINATED PLASTIC LABELS; UV, CHEMICAL, WATER, HEAT, AND ABRASION RESISTANT. INDICATE PANEL AND CIRCUIT NUMBER.
11. INSTALLATION: INSTALL IDENTIFICATION PRODUCTS CENTERED, LEVEL, AND PARALLEL WITH LINES OF ITEM BEING IDENTIFIED. SECURE NAMEPLATES TO EXTERIOR SURFACES OF ENCLOSURES USING STAINLESS STEEL SCREWS AND TO INTERIOR SURFACES USING SELF-ADHESIVE BACKING OR EPOXY CEMENT. INSTALL SELF-ADHESIVE LABELS AND MARKERS TO ACHIEVE MAXIMUM ADHESION, WITH NO BUBBLES OR WRINKLES AND EDGES PROPERLY SEALED. MARK ALL HANDWRITTEN TEXT, WHERE PERMITTED, TO BE NEAT AND LEGIBLE.

26 2416 PANELBOARDS

1. COORDINATION: COORDINATE THE WORK WITH OTHER TRADES TO AVOID PLACEMENT OF DUCTWORK, PIPING, EQUIPMENT, OR OTHER POTENTIAL OBSTRUCTIONS WITHIN THE DEDICATED EQUIPMENT SPACES AND WORKING CLEARANCES FOR ELECTRICAL EQUIPMENT REQUIRED BY NFPA 70. COORDINATE ARRANGEMENT OF ELECTRICAL EQUIPMENT WITH TEH DIMENSIONS AND CLEARANCE REQUIREMENTS OF THE ACTUAL EQUIPMENT TO BE INSTALLED.
2. SUBMITTALS: PROVIDE MANUFACTURER'S STANDARD CATALOG PAGES AND DATA SHEETS FOR PANELBOARDS, ENCLOSURES, OVERCURRENT PROTECTIVE DEVICES, AND OTHER INSTALLED COMPONENTS AND ACCESSORIES. INDICATE OUTLINE AND SUPPORT POINT DIMENSIONS, VOLTAGE, MAIN BUS AMPACITY, OVERCURRENT PROTECTIVE DEVICE ARRANGEMENT AND SIZES, SHORT CIRCUIT CURRENT RATINGS, CONDUIT ENTRY LOCATIONS, CONDUCTOR TERMINAL INFORMATION, AND INSTALLED FEATURES AND ACCESSORIES.
3. PANELBOARDS: PROVIDE PANELBOARDS WITH LISTED SHORT CIRCUIT CURRENT RATING NOT LESS THAN THE AVAILABLE FAULT CURRENT AT THE INSTALLED LOCATION AS INDICATED ON THE DRAWINGS. CONFIGURE FOR TOP OR BOTTOM INCOMING FEED AS INDICATED OR AS REQUIRED FOR THE INSTALLATION. PROVIDE FULLY RATED NEUTRAL BUS UNLESS OTHERWISE INDICATED, WITH A SUITABLE LUG FOR EACH FEEDER OR BRANCH CIRCUIT REQUIRING A NEUTRAL CONNECTION. PROVIDE SOLIDLY BONDED EQUIPMENT GROUND BUS IN EACH PANELBOARD, WITH A SUITABLE LUG FOR EACH FEEDER AND BRANCH CIRCUIT EQUIPMENT GROUNDING CONDUCTOR. PROVIDE COPPER BUSSING FOR PHASE, NEUTRAL, AND GROUND BUSSES. LOAD CENTERS ARE NOT ACCEPTABLE.
4. ENCLOSURES: INDOOR CLEAN, DRY LOCATIONS: TYPE 1.
5. BOXES: GALVANIZED STEEL UNLESS OTHERWISE INDICATED. PROVIDE WIRING GUTTERS SIZED TO ACCOMMODATE THE CONDUCTORS TO BE INSTALLED.
6. FRONTS: FOR SURFACE-MOUNTED ENCLOSURES: SAME DIMENSIONS AS BOXES.
7. FUTURE PROVISIONS: PREPARE ALL UNUSED SPACES FOR FUTURE INSTALLATION OF DEVICES INCLUDING BUSSING, CONNECTORS, MOUNTING HARDWARE AND ALL OTHER REQUIRED PROVISIONS.
8. OVERCURRENT PROTECTIVE DEVICES: MOLDED CASE CIRCUIT BREAKERS WITH QUICK-MAKE QUICK-BREAK, OVER CENTER TOGGLE, TRIP-FREE, TRIP-INDICATING CIRCUIT BREAKERS LISTED AND LABELED AS COMPLYING WITH UL489 AND COMPLYING WITH FS W-C-375 WHERE APPLICABLE; RATINGS, CONFIGURATIONS, AND FEATURES AS INDICATED. PROVIDE CIRCUIT BREAKERS WITH INTERRUPTING CAPACITY AS SPECIFIED ON DRAWINGS. PROVIDE CIRCUIT BREAKERS WITH INTERRUPTING CAPACITY NOT LESS THAN THE SHORT CIRCUIT CURRENT RATING INDICATED.
9. METERING: COORDINATE METERING REQUIREMENTS WITH UVA METERING. PROVIDE DEDICATED DATA OUTLET AND CONNECT METER TO SECURE NETWORK.
10. INSTALLATION: MOUNT PANELBOARDS SUCH THAT THE HIGHEST POSITION OF ANY OPERATING HANDLE FOR CIRCUIT BREAKERS OR SWITCHES DOES NOT EXCEED 79 INCHES ABOVE THE FLOOR OR WORKING PLATFORM. PROVIDE GROUNDING AND BONDING IN ACCORDANCE WITH SECTION 26 0526. INSTALL ALL FIELD-INSTALLED BRANCH DEVICES, COMPONENTS, AND ACCESSORIES. PROVIDE FILLER PLATES TO COVER UNUSED SPACES IN PANELBOARDS. 26 2717 EQUIPMENT WIRING
11. ELECTRICAL CONNECTIONS:
    MAKE ELECTRICAL CONNECTIONS IN ACCORDANCE WITH EQUIPMENT MANUFACTURER'S INSTRUCTIONS. MAKE CONDUIT CONNECTIONS TO EQUIPMENT USING FLEXIBLE CONDUIT. USE LIQUIDTIGHT FLEXIBLE CONDUIT WITH WATERTIGHT CONNECTORS IN DAMP OR WET LOCATIONS. CONNECT HEAT PRODUCING EQUIPMENT USING WIRE AND CABLE WITH INSULATION SUITABLE FOR TEMPERATURES ENCOUNTERED. PROVIDE RECEPTACLE OUTLET TO ACCOMMODATE CONNECTION WITH ATTACHMENT PLUG. PROVIDE CORD AND CAP WHERE FIELD-SUPPLIED ATTACHMENT PLUG IS REQUIRED. INSTALL SUITABLE STRAIN-RELIEF CLAMPS AND FITTINGS FOR CORD CONNECTIONS AT OUTLET BOXES AND EQUIPMENT CONNECTION BOXES. INSTALL DISCONNECT SWITCHES, CONTROLLERS, CONTROL STATIONS, AND CONTROL DEVICES TO COMPLETE EQUIPMENT WIRING REQUIREMENTS. INSTALL TERMINAL BLOCK JUMPERS TO COMPLETE EQUIPMENT WIRING REQUIREMENTS. INSTALL INTERCONNECTING CONDUIT AND WIRING BETWEEN DEVICES AND EQUIPMENT TO COMPLETE EQUIPMENT WIRING REQUIREMENTS.

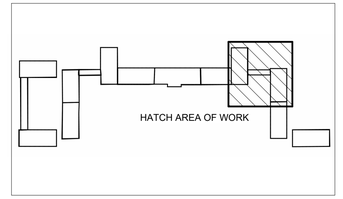
ELECTRICAL SHEET LIST

SHEET NAME	SHEET NUMBER
GENERAL NOTES AND LEGEND	E-000
ELECTRICAL PLANS - PANEL UPGRADE	E-100
ELECTRICAL - LIGHTING AND POWER PLANS	E-101

1

ABBREVIATIONS

ADA	ADA COMPLIANT
A/E	ARCHITECT/ENGINEER
AFF	ABOVE FINISHED FLOOR
CND	CONDUIT
CLG	CEILING
CKT	CIRCUIT
DS	DAYLIGHT SENSOR
EF	EXHAUST FAN
ETR	EXISTING TO REMAIN
GND	GROUND
OS	OCUPANCY SENSOR
PIR	PASSIVE INFRARED
PNL	PANELBOARD
REC	RECEPTACLE
SEC	SECURITY
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
US	ULTRASONIC
VS	VACANCY SENSOR



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TUCKER HOUSE (2078)
KITCHEN RENOVATION
GENERAL NOTES AND LEGEND

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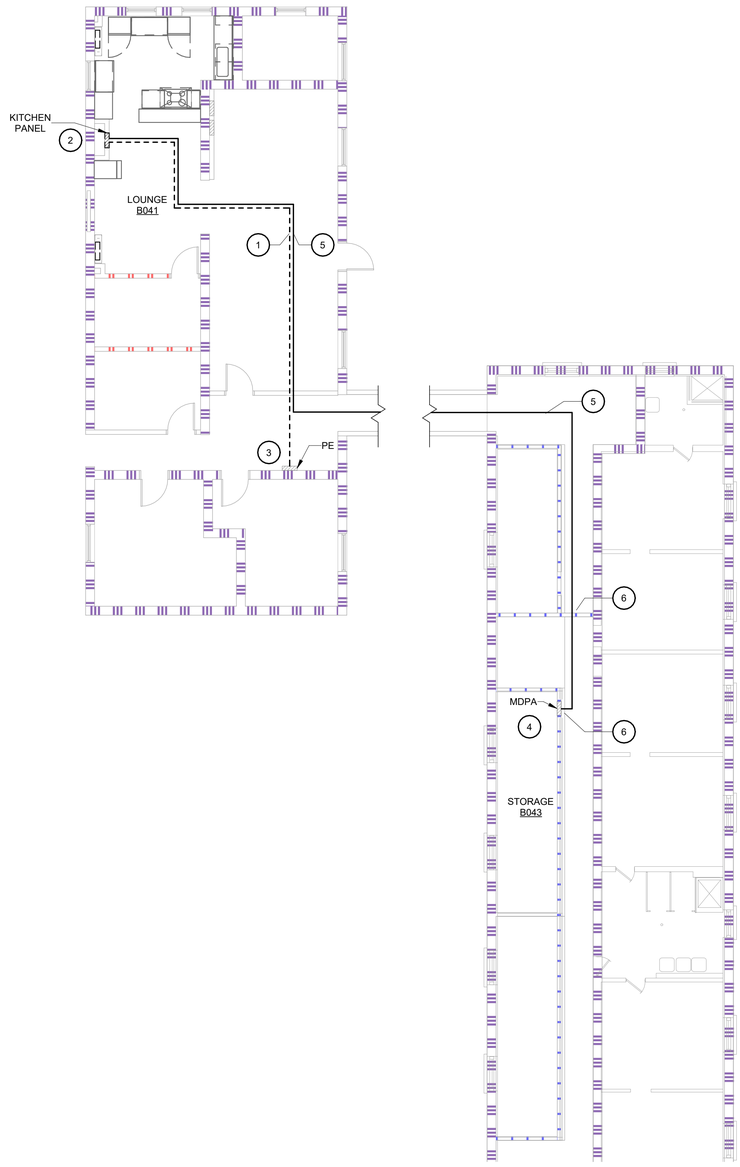
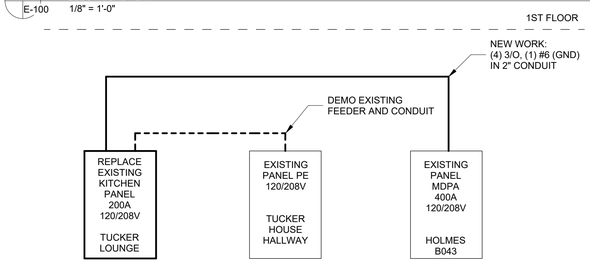


1 E-100 ELECTRICAL PLAN
1/8" = 1'-0"



2 E-100 RISER DIAGRAM
NOT TO SCALE

Branch Panel: KITCHEN PANEL

Location: KITCHEN B041
Supply From: MDPA
Mounting: RECESSED
Enclosure: Type 1

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

A.I.C. Rating: 10K
Mains Type: MCB
Mains Rating: 225 A
MCB Rating: 200 A

CKT	Circuit Description	Notes	Trip	Poles	A		B		C		Poles	Trip	Notes	Circuit Description	CKT
1	REC. UNDER PANEL; LEFT COUNTER	1,2	20 A	1	0.0	0.0					1	20 A	1,2	REC. COUNTER WEST WALL; GFI...	2
3	REC. COUNTER NORTH WALL; HOOD	1,2	20 A	1			0.0	0.0			1	20 A	1	GARBAGE DISPOSAL	4
5	REFRIGERATOR	1,2	20 A	1					0.0	0.0	1	20 A	1	KITCHEN & DINING LIGHTS	6
7	OVEN & MICROWAVE COMBO	1	40 A	2	0.0	0.0					1	20 A	2	SPARE	8
9							0.0	0.0			2	40 A	1	COOKTOP	10
11	SPARE	2	20 A	1					0.0	0.0					12
13	SPARE		20 A	2	0.0	0.0					2	20 A		SPARE	14
15							0.0	0.0							16
17	SPARE		20 A	2					0.0	0.0	2	20 A		SPARE	18
19					0.0	0.0									20
21	SPARE		20 A	2			0.0	0.0			1	20 A	2	SPARE	22
23									0.0	0.0	1	20 A	2	SPARE	24
25	SPARE	2	20 A	1	0.0	0.0					1	20 A	2	SPARE	26
27	SPARE	2	20 A	1			0.0	0.0			1	20 A	2	SPARE	28
29	SPACE		--	1					--	--	1	--		SPACE	30
31	SPACE		--	1	--	--					1	--		SPACE	32
33	SPACE		--	1			--	--			1	--		SPACE	34
35	SPACE		--	1					--	--	1	--		SPACE	36
37	SPACE		--	1	--	--					1	--		SPACE	38
39	SPACE		--	1			--	--			1	--		SPACE	40
41	SPACE		--	1					--	--	1	--		SPACE	42

Notes:
1. EXISTING CIRCUIT, RECONNECT TO BREAKER IN NEW PANEL.
2. GFCI BREAKER

UL Product iQ®

UL Solutions

XHEZ.C-AJ-1013 - Through-penetration Firestop Systems

Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

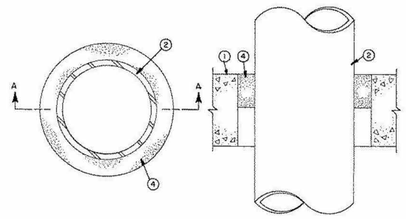
XHEZ - Through-penetration Firestop Systems

See General Information for Through-penetration Firestop Systems

System No. C-AJ-1013

May 09, 2013

F Rating — 1 Hr
T Rating — 0 Hr
L Rating At Ambient — Less Than 1 CFM/sq ft
L Rating At 400 F — Less Than 1 CFM/sq ft



Section A-A

1. **Floor or Wall Assembly —** Min 5 in. (127 mm) thick reinforced normal weight (140-155) pcf) concrete. Wall may also be constructed of any UL Classified **Concrete Blocks***. Max diam of opening is 6 in. (152 mm).
See **Concrete Block** (CAZT) category in the Fire Resistance Directory.

2. **Through Penetrants —** One metallic pipe, or conduit to be centered within the firestop system. Pipe or conduit to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes or conduits may be used:
A. **Steel Pipe —** — Nom 4 in. (102 mm) diam (or smaller) Schedule 5 (or heavier) steel pipe. A nom annular space of 3/4 in. (19 mm) is required within the firestop system.

B. **Conduit —** Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing or steel conduit. A nom annular space of 3/4 in. (19 mm) is required within the firestop system.

3. **Packing Material —** (Not Shown) — Nom 1 in. (25 mm) diam open cell polyurethane foam backer rod friction-fitted into the opening as a permanent form. Packing material to be recessed from top surface of floor or from both surfaces of wall as required to accommodate the required thickness of fill material.

4. **Fill, Void or Cavity Material* — Sealant —** Min 3/4 in. (19 mm) thickness of fill material applied within annulus, flush with top surface of floor or with both surfaces of wall.
3M COMPANY — Types FB-1000 NS, FB-1003SL (floors only), FB-2000 or FB-2000+.

Feedback

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

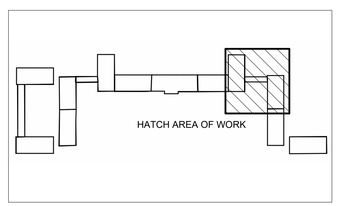
Last Updated on 2013-05-09

PLAN NOTES

1. REMOVE EXSITING FEEDER AND CONDUIT.
2. REMOVE EXISTING RECESSED KITCHEN PANEL AND INSTALL NEW 42 CIRCUIT, 200A RECESSED PANEL. SEE RISER DIAGRAM AND PANEL SCHEDULE FOR DETAILS. RECONNECT EXISTING CIRCUITS.
3. EXISTING PANEL 'PE'. LABEL CIRCUIT 16 AS 'SPARE'.
4. EXISTING PANEL 'MDPA'. INSTALL NEW 3-POLE, 200A BREAKER TO FEED NEW KITCHEN PANEL. MATCH EXISTING AIC RATING. UPDATE PANEL SCHEDULE.
5. INSTALL NEW FEEDER AND CONDUIT BETWEEN MDPA AND NEW KITCHEN PANEL.
6. REFER TO PENETRATION DETAIL FOR FIRESTOPPING INFORMATION.

LOAD CALCULATIONS

KITCHEN PANEL:	
MAX LOAD	38 AMPS (METERED)
PANEL MDPA:	
EXISTING LOAD	119 AMPS (METERED)
x125%	149 AMPS
NEW LOAD	38 AMPS
TOTAL	**187 AMPS**



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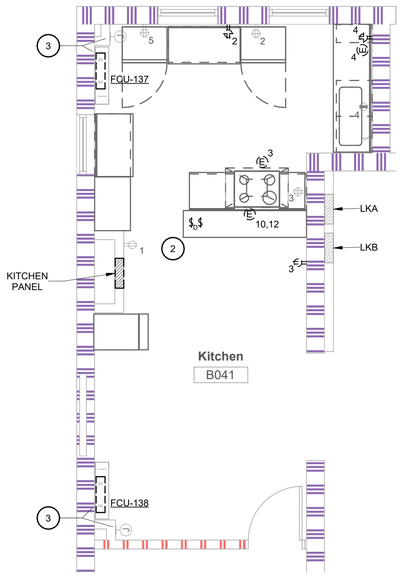
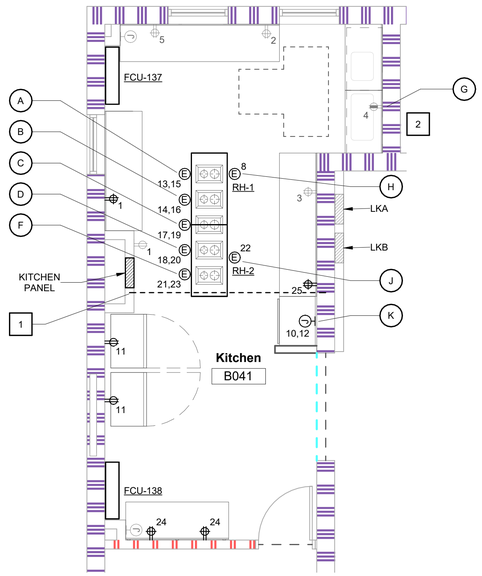


1 E-101 POWER DEMOLITION - BASEMENT 1/4" = 1'-0"



2 E-101 POWER NEW WORK - BASEMENT 1/4" = 1'-0"

KITCHEN EQUIPMENT SCHEDULE

NOTE	DESCRIPTION	MODEL	MANUFACTURER	VOLTAGE	PHASE	DRAW (AMPS)	BREAKER SIZE (AMPS)	CONNECTION
A	2-BURNER COOKTOP	CR2B23T3B	SUMMIT	230V	SINGLE	15	20	HARDWIRED EQUIPMENT CONNECTION BELOW COUNTER
B	2-BURNER COOKTOP	CR2B23T3B	SUMMIT	230V	SINGLE	15	20	HARDWIRED EQUIPMENT CONNECTION BELOW COUNTER
C	2-BURNER COOKTOP	CR2B23T3B	SUMMIT	230V	SINGLE	15	20	HARDWIRED EQUIPMENT CONNECTION BELOW COUNTER
D	2-BURNER COOKTOP	CR2B23T3B	SUMMIT	230V	SINGLE	15	20	HARDWIRED EQUIPMENT CONNECTION BELOW COUNTER
F	2-BURNER COOKTOP	CR2B23T3B	SUMMIT	230V	SINGLE	15	20	HARDWIRED EQUIPMENT CONNECTION BELOW COUNTER
G	DISPOSAL	BADGER INSINKERATOR 5	EMERSON	120V	SINGLE	6.3	20	SWITCHED OUTLET BELOW COUNTER.
H	EXHAUST HOOD	GL2i-48	ZLINE	120V	SINGLE	1.5	20	HARDWIRED EQUIPMENT CONNECTION ABOVE CEILING
J	EXHAUST HOOD	GL2i-48	ZLINE	120V	SINGLE	1.5	20	HARDWIRED EQUIPMENT CONNECTION ABOVE CEILING
K	DOUBLE OVEN	WOD51EC0H	WHIRLPOOL	208V	SINGLE	40	50	HARDWIRED EQUIPMENT CONNECTION IN WALL MOUNTED JUNCTION BOX.

GENERAL NOTES

A. ALL RECEPTACLES IN SPACE SHALL BE GFCI PROTECTED EITHER AT BREAKER OR DEVICE.

B. ALL DEVICES AND EQUIPMENT TO BE FED FROM KITCHEN PANEL UNLESS NOTED OTHERWISE.

C. MAINTAIN INTEGRITY OF EXISTING PATHWAYS DURING CONSTRUCTION.

DEMO NOTES

1. RELOCATE EXISTING RECESSED LIGHTING AS INDICATED ON THE NEW WORK PLAN. REPLACE INCANDESCENT BULBS WITH 3500K LED EQUIVALENT.
2. REMOVE BELOW COUNTER SWITCHES.
3. DISCONNECT EXISTING FAN COIL UNIT AND MAINTAIN WIRING BACK TO 2 GANG JUNCTION BOX. MAINTAIN ORIGINAL CIRCUIT CONTINUITY BACK TO PANEL LKA. RECONNECT TO NEW FCU.

NEW WORK NOTES

1. TRENCH CONDUIT BETWEEN WALLS FOR DOUBLE OVEN. STUB-UP CONDUIT AS NEEDED FOR (5) RANGE TOPS IN ISLAND.
2. VERIFY THAT SWITCHED OUTLET FEEDING GARBAGE DISPOSAL IS DEDICATED. MAINTAIN ABOVE COUNTER SWITCHING FOR DISPOSAL. REPURPOSE EXISTING DISPOSAL CIRCUIT.

LOAD CALCULATIONS

KITCHEN PANEL (PANEL UPGRADE PHASE)

MAX LOAD	13.7 KVA (METERED)*
REMOVED	8.040 KVA
DIFFERENCE (x 125%)	**7.075**

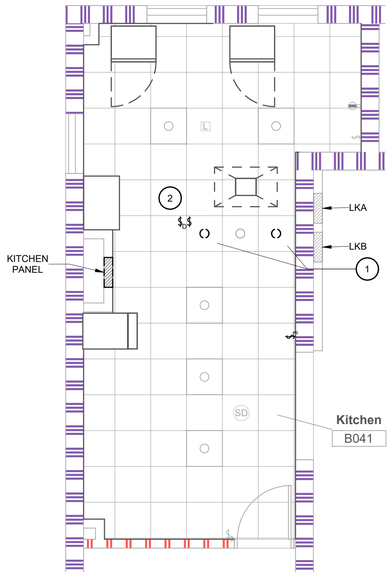
KITCHEN PANEL (NEW WORK PHASE)

ADDED LOAD	**29.290 KVA**

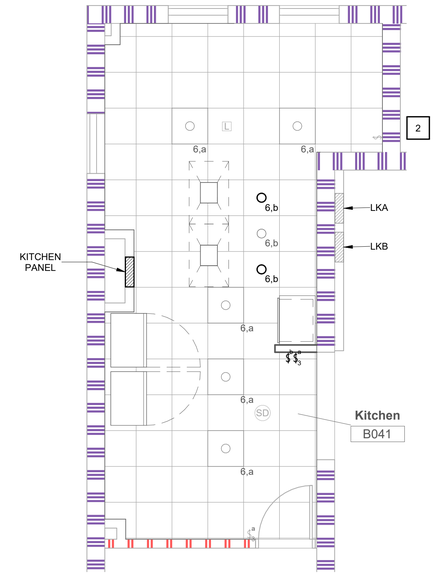
EXISTING & ADDED LOAD

TOTAL	**36.365 KVA**

*KITCHEN PANEL METERED 9/27/2022 THROUGH 10/04/2022



3 E-101 LIGHTING AND CEILING DEMOLITION - BASEMENT 1/4" = 1'-0"



4 E-101 LIGHTING AND CEILING NEW WORK - BASEMENT 1/4" = 1'-0"

Branch Panel: KITCHEN PANEL

Location: KITCHEN B041
Supply From: MDPA
Mounting: RECESSED

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

A.I.C. Rating: 10K
Mains Type: MCB
Mains Rating: 225 A
MCB Rating: 200 A

CKT	Circuit Description	Notes	Trip	Poles	PHASE A (KVA)		PHASE B (KVA)		PHASE C (KVA)		Poles	Trip	Notes	Circuit Description	CKT
1	COUNTER & BELOW PANEL REC.		20 A	1	0.4	0.4					1	20 A		COUNTER REC. - DEDICATED	2
3	COUNTER REC. - DEDICATED		20 A	1			0.4	0.9			1	20 A		DISPOSAL (G)	4
5	COUNTER REC. - DEDICATED		20 A	1					0.2	1.0	1	20 A		LIGHTING - KITCHEN & DINING	6
7	SPARE		40 A	2	0.0	1.1					1	20 A		EXHAUST HOOD RH-1 (H)	8
9							0.0	3.7			**2**	**50 A**		**DOUBLE OVEN (K)**	**10**
11	REFRIGERATORS		20 A	1					1.0	3.7					**12**
13	2-BURNER COOKTOP (A)		20 A	2	1.5	1.5					2	20 A		2-BURNER COOKTOP (B)	14
15							1.5	1.5							16
17	2-BURNER COOKTOP (C)		20 A	2					1.5	1.5	2	20 A		2-BURNER COOKTOP (D)	18
19					1.5	1.5									20
21	2-BURNER COOKTOP (F)		20 A	2			1.5	1.1			1	20 A		EXHAUST HOOD RH-2 (J)	22
23									1.5	0.4	1	20 A		COUNTER REC.	24
25	COUNTER REC. - DEDICATED		20 A	1	0.2	0.0					1	20 A		SPARE	26
27	SPARE		20 A	1			0.0	0.0			1	20 A		SPARE	28
29	SPACE		--	1					--	--	1	--		SPACE	30
31	SPACE		--	1	--	--					1	--		SPACE	32
33	SPACE		--	1			--	--			1	--		SPACE	34
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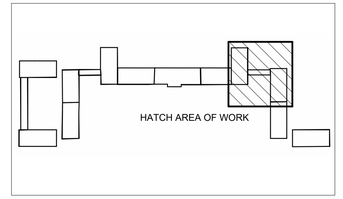
37	SPACE		--	1	--	--					1	--		SPACE	38
39	SPACE		--	1			--	--			1	--		SPACE	40
41	SPACE		--	1					--	--	1	--		SPACE	42

Notes:
1. (3) #6AWG, (1) #10AWG GND, 3/4-INCH CONDUIT.
2. (3) #12AWG, (1) #12AWG GND, 3/4-INCH CONDUIT.
3. CONTRACTOR TO PROVIDE NEW OVERCURRENT DEVICE FOR CIRCUIT SHOWN.

0' 2' 4' 8'
1/4"=1'-0"



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