MECHANICAL GENERAL NOTES:

1. THIS CONTRACTOR SHALL REVIEW ENTIRE SET OF CONTRACT DOCUMENTS: INCLUDING BUT NOT NECESSARILY LIMITED TO ALL ARCHITECTURAL, ALL STRUCTURAL, ALL MECHANICAL, ALL ELECTRICAL DRAWINGS AND ENTIRE PROJECT MANUAL. THIS CONTRACTOR SHALL ACKNOWLEDGE AND INCLUDE IN THE SCOPE OF WORK (CONTRACT) ALL CONDITIONS PERTINENT TO THE COMPLETION OF HIS WORK. THIS CONTRACTOR SHALL FULLY COORDINATE HIS WORK WITH THE INSTALLATION OF WORK BY OTHER TRADES AND MAKE NECESSARY FIELD ADJUSTMENTS AS REQUIRED TO ACCOMMODATE THE INSTALLATION. ALL OF THE ABOVE SHALL BE INCLUDED IN THE SCOPE OF WORK AT NO ADDITIONAL CHARGE TO THE VA.

2. THIS CONTRACTOR SHALL CAREFULLY EXAMINE THE DRAWINGS AND SPECIFICATIONS, VISIT THE SITE OF THE WORK AND FULLY INFORM THEMSELVES AS TO ALL CONDITIONS AND MATTERS THAT CAN, IN ANY WAY, AFFECT THE WORK OR THE COST THEREOF. SHOULD THIS CONTRACTOR FIND DISCREPANCIES IN, OR OMISSIONS FROM THE DRAWINGS, SPECIFICATIONS OR OTHER DOCUMENTS, OR BE IN DOUBT AS TO THEIR MEANING, NOTIFY THE VA/CO AT ONCE, IN WRITING, OF ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND WORK, OR BETWEEN THEIR WORK AND THE WORK OF THEIR TRADES AND OBTAIN CLARIFICATION PRIOR TO SUBMITTING ANY BID. LACK OF SUCH NOTIFICATION SHALL BE CONSTRUED AS TO INDICATE NO DISCREPANCIES OR CONFLICTING CONDITIONS EXIST. ADDITIONAL COMPENSATION WILL NOT BE GRANTED AFTER AWARD OF CONTRACT FOR ANY WORK REQUIRED TO COMPLY WITH THESE REQUIREMENTS.

3. DRAWINGS ARE GENERALLY DIAGRAMMATIC. ROUTING OF PIPING, CONDUITS, RACEWAYS, ETC., AS SHOWN ON DRAWINGS, DOES NOT INTEND TO SHOW EVERY RISE, DROP, OFFSET, FITTING NOR EVERY STRUCTURAL ELEMENT THAT MAY BE ENCOUNTERED DURING THE INSTALLATION OF THIS WORK. EACH CONTRACTOR SHALL MAKE ANY REQUIRED CHANGES FROM THE GENERAL ROUTING SHOWN ON THESE DRAWINGS, SUCH AS OFFSETS, BENDS OR CHANGES IN ELEVATION DUE TO COORDINATION WITH THE WORK OF OTHER TRADES AND BUILDING CONSTRUCTION. SUBMIT PROPOSED CHANGES TO THE ARCHITECT / ENGINEER FOR REVIEW. ALL CHANGES SHALL BE MADE WITHOUT ADDITIONAL COST TO THE VA OR DELAY IN COMPLETION DATE OF THE PROJECT.

4. IT IS THE INTENT OF THESE DOCUMENTS THAT THE MECHANICAL CONTRACTOR PROVIDE ALL LABOR, MATERIAL, EQUIPMENT AND TOOLS FOR THE COMPLETE INSTALLATION OF ALL WORK SHOWN ON THE PLANS AND/OR DESCRIBED HEREIN, INCLUDING ALL DEVICES, CONTROLS AND APPURTENANCES AND TESTING THAT IS REQUIRED TO SET SYSTEMS INTO OPERATION.

5. SHOULD CONDITIONS NECESSITATE ANY REARRANGEMENTS, OR IF PIPING CAN BE RUN TO BETTER ADVANTAGE, PREPARE AND SUBMIT SHOP DRAWINGS SHOWING THE CHANGES BEFORE PROCEEDING WITH THE WORK. SUBMIT PROPOSED CHANGES TO THE ARCHITECT / ENGINEER FOR REVIEW. IF SUCH CHANGES ARE APPROVED, THEY SHALL BECOME A PART OF THE CONTRACT AFTER THEIR APPROVAL.

6. THIS CONTRACTOR SHALL VERIFY ALL MOUNTING, ALL ARRANGEMENTS, HEIGHTS AND LOCATIONS PRIOR TO ROUGH-IN. ANY MENTION OF A SPECIFIC MOUNTING ARRANGEMENT, WEIGHT OR LOCATION SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO VERIFY THE SPECIFIC REQUIREMENT FURNISHED OR THE OTHER TRADES WORKING IN THE SAME AREA. NO ADDITIONS TO THE CONTRACT SUM WILL BE PERMITTED FOR ITEMS INSTALLED IMPROPERLY, IN WRONG LOCATIONS, IN CONFLICT WITH OTHER WORK, ETC.

7. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL CURRENT FEDERAL BUILDING CODES, REGULATIONS, AND REQUIREMENTS, LOCAL UTILITY COMPANY REQUIREMENTS, AND ASHRAE STANDARDS.

8. THIS CONTRACTOR SHALL PAY ALL PERMIT FEES, PLAN REVIEW FEES, LICENSE FEES, INSPECTIONS, AND TAXES APPLICABLE TO THEIR DIVISION AND SHALL BE INCLUDED IN THE BASE BID AS PART OF THEIR CONTRACT.

9. THIS CONTRACTOR SHALL BE LICENSED, BONDED, INSURED AND CAPABLE OF PERFORMING QUALITY WORKMANSHIP. THIS CONTRACTOR GUARANTEES ALL OF HIS WORK AND MATERIALS FOR THE PERIOD AS REQUIRED IN THE SPECIFICATIONS. FROM FINAL ACCEPTANCE BY THE VA/COR.

10. THIS CONTRACTOR SHALL ESTABLISH SAFE WORKING PROCEDURES FOR THE PROTECTION OF THE WORKMEN IN ALL PHASES OF WORK, COMPLYING WITH ALL APPLICABLE PROVISIONS OF CITY, STATE, AND FEDERAL SAFETY LAWS (OSHA) AND AS RECOMMENDED IN THE "MANUAL OF ACCIDENT PREVENTION IN CONSTRUCTION" AS ISSUED BY THE ASSOCIATION OF GENERAL CONTRACTORS OF AMERICA, IN., 20TH AND E. STREETS, N.W. WASHINGTON, D.C.

11. CONTRACTOR SHALL CHECK DRAWINGS OF OTHER TRADES TO VERIFY THAT SPACES IN WHICH THEIR WORK WILL BE INSTALLED ARE CLEAR OF OBSTRUCTIONS. WORK SHALL BE INSTALLED TO MAINTAIN MAXIMUM HEADROOM AND SPACE CONDITIONS AT ALL POINTS IN THE BUILDING. WHERE HEADROOM OR SPACE CONDITIONS APPEAR INADEQUATE, CONTRACTOR SHALL NOTIFY VA/COR BEFORE PROCEEDING WITH THE INSTALLATION OF THEIR WORK.

12. THE SEQUENCE FOR THE INSTALLATION OF ALL WORK SHALL BE COORDINATED BETWEEN ALL CONTRACTORS ON THE PROJECT AND IN STRICT ACCORDANCE WITH VA STIPULATIONS AS DIRECTED BY SAME.

13. CONTRACTOR SHALL BE RESPONSIBLE AND PAY FOR ALL CORING, CUTTING, PATCHING, REPAIRING, REFINISHING AND REMOVAL/REPLACEMENT OF NEW OR EXISTING BUILDING CONSTRUCTION REQUIRED TO ACCOMMODATE THE INSTALLATION OR REMOVAL OF THEIR WORK. CONTRACTOR SHALL XRAY ALL SLABS PRIOR TO CORING. ALL PATCHING, REPAIRING AND REFINISHING WORK SHALL BE PERFORMED BY THOSE REGULARLY INVOLVED IN THAT TRADE AND SHALL MATCH THE ADJACENT CONSTRUCTION AS CLOSELY AS POSSIBLE. CARE SHALL BE TAKEN SO AS NOT TO DAMAGE ANY EXISTING BUILDING CONSTRUCTION OR ITEMS THAT ARE TO REMAIN. ANY EXISTING FINISHES THAT ARE DAMAGED DURING THE INSTALLATION OF NEW WORK OR REMOVAL OF EXISTING WORK SHALL BE REPAIRED, REPLACED AND PAID FOR BY THE INSTALLING CONTRACTOR, TO THE SATISFACTION OF THE VA/COR. REFER TO ARCHITECTURAL DRAWINGS FOR EXISTING BUILDING CONSTRUCTION THAT IS TO REMAIN AND, THEREFORE, SUBJECT TO PATCHING, REPAIRING, REFINISHING, AND REMOVAL/REPLACEMENT. WHERE THERE IS EVIDENCE THAT WORK OF ONE TRADE WILL INTERFERE WITH WORK OF OTHER TRADES, ALL TRADES SHALL MEET ON JOB SITE TO WORK OUT SPACE CONDITIONS AND MAKE SATISFACTORY ADJUSTMENTS TO INSTALLATION OF THE NEW WORK. CONTRACTORS SHALL VERIFY EXACT LOCATIONS OF ALL DEVICES AND EQUIPMENT WITH FIELD CONDITIONS, SHOP DRAWINGS, AND WORK OF OTHER TRADES PRIOR TO ROUGH-IN. EACH CONTRACTOR SHALL BE RESPONSIBLE, AT THEIR OWN EXPENSE, FOR THE REMOVAL AND REINSTALLATION OF ANY PART OF THEIR WORK IF SAME WAS INSTALLED WITHOUT CONSULTING WITH OTHER TRADES BEFORE INSTALLING THEIR WORK.

14. CONTRACTOR SHALL STORE ALL MATERIALS AND EQUIPMENT SHIPPED TO THE SITE IN A PROTECTED AREA. IF MATERIAL IS STORED OUTSIDE OF THE BUILDING, IT MUST BE STORED OFF THE GROUND A MINIMUM OF SIX INCHES (6") SET ON 6 X 6 PLANKS AND/OR WOOD PALLETS. ALL MATERIAL AND EQUIPMENT MUST BE COMPLETELY COVERED WITH WATERPROOF TARPS OR VISQUIN. ALL PIPING AND DUCTWORK WILL HAVE THE ENDS CLOSED TO KEEP OUT DIRT AND OTHER DEBRIS. NO EQUIPMENT WILL BE ALLOWED TO BE STORED OUTSIDE THE BUILDING ON THE SITE UNLESS IT IS SUPPORTED OFF THE GROUND AND COMPLETELY PROTECTED WITH WEATHERPROOF COVERS.

15. THIS CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AS REQUIRED IN THE SPECIFICATIONS PRIOR TO THE START OF INSTALLATION FOR VA/COR APPROVAL AND THE SUCCESSFUL REVIEW BY THE ARCHITECT/ENGINEER.

16. THIS CONTRACTOR SHALL FURNISH AS-BUILT DRAWINGS TO THE VA BEFORE FINAL PAYMENT WILL BE ISSUED. THE AS-BUILT DRAWINGS SHALL BE SUBMITTED IN ELECTRONIC REPRODUCIBLE FORM TO THE ARCHITECT / ENGINEER OF RECORD FOR REVIEW AND COMPILATION.

17. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE STARTUP AND TESTING OF ALL EQUIPMENT, UTILITIES AND SYSTEMS.

18. THIS CONTRACTOR SHALL PROVIDE A COMPETENT OPERATING TECHNICIAN TO INSTRUCT THE VA IN THE OPERATION AND MAINTENANCE OF THE EQUIPMENT.

19. UPON COMPLETION OF THE WORK, THIS CONTRACTOR SHALL REVIEW AND CHECK THE ENTIRE PORTION OF WORK, CLEAN EQUIPMENT AND DEVICES. REMOVE SURPLUS MATERIALS AND RUBBISH FROM THE PROPERTY AND LEAVE THE WORK IN NEAT AND CLEAN ORDER AND IN COMPLETE WORKING CONDITION. EACH RESPECTIVE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ANY CARTONS, DEBRIS, EQUIPMENT, ETC., INSTALLED BY THIS CONTRACTOR INCLUDING EQUIPMENT FURNISHED BY OTHERS AND UNPACKED OR REMOVED FROM CARTONS BY THIS CONTRACTOR. CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH ON-SITE DEBRIS COLLECTIONS / STORAGE AND OFFSITE DISPOSAL. DUMPSTER LOCATIONS SHALL BE COORDINATED WITH THE VA COR.

20. ALL ITEMS THAT REQUIRE ACCESS, SUCH AS FOR OPERATING, CLEANING, SERVICING, MAINTENANCE, AND CALIBRATION, SHALL BE EASILY AND SAFELY ACCESSIBLE BY PERSONS STANDING AT FLOOR LEVEL, OR STANDING ON PERMANENT PLATFORMS, WITHOUT THE USE OF PORTABLE LADDERS. EXAMPLES OF THESE ITEMS INCLUDE, BUT ARE NOT LIMITED TO: ALL TYPES OF VALVES, FILTERS AND STRAINERS, TRANSMITTERS, CONTROL DEVICES. PRIOR TO COMMENCING INSTALLATION WORK, REFER CONFLICTS BETWEEN THIS REQUIREMENT AND CONTRACT DRAWINGS TO THE ARCHITECT / ENGINEER OF RECORD FOR RESOLUTION. FAILURE OF THE CONTRACTOR TO RESOLVE, OR POINT OUT ANY ISSUES WILL RESULT IN THE CONTRACTOR CORRECTING AT NO ADDITIONAL COST TO THE VA.

21. UNLESS INDICATED OTHERWISE, THE ARCHITECT/ENGINEER MAKES NO REPRESENTATION AS TO WHETHER OR NOT ANY HAZARDOUS OR CONTAMINATED MATERIALS (INCLUDING BUT NOT LIMITED TO ASBESTOS, PCB'S, LEAD, CONTAMINATED SOILS, ETC.) ARE PRESENT WITHIN THE EXISTING BUILDING OR ON THE SITE. WORK SHOWN ON THE DRAWINGS AND/OR INDICATED IN THE SPECIFICATIONS SHALL NOT BE CONSTRUED TO CALL FOR CONTACT WITH ANY OF THESE MATERIALS. IF THESE MATERIALS ARE ENCOUNTERED OR SUSPECTED, THE CONTRACTOR SHALL NOT DISTURB THEM AND SHALL CONTACT THE VA/COR IMMEDIATELY.

22. SERVICES TO EXISTING BUILDING SHALL BE KEPT IN OPERATION INCLUDING POWER, SIGNAL SYSTEMS, LIGHTING, TELEPHONE, HEATING, COOLING, VENTILATING, TEMPERATURE CONTROL, SEWERS AND HOT AND COLD WATER. ANY NECESSARY INTERRUPTION OF THESE SERVICES TO ACCOMPLISH CONTRACT WORK SHALL BE ARRANGED WITH THE VA / COR A MINIMUM OF 30 DAYS IN ADVANCE. SUCH INTERRUPTIONS SHALL BE KEPT TO AN ABSOLUTE MINIMUM AS FAR AS TIME INTERVAL IS INVOLVED AND TEMPORARY SERVICES SHALL BE FURNISHED AND INSTALLED UNDER THIS CONTRACT WHERE NECESSARY TO ACCOMPLISH THIS PURPOSE. TEMPORARIES SHALL BE REMOVED BY THE CONTRACTOR ONLY AFTER NEW PERMANENT SERVICES ARE INSTALLED AND FULLY OPERATIONAL. SELECT SHUTDOWNS MAY REQUIRED WORK OUTSIDE OF NORMAL OPERATING HOURS OF 8:00 am - 4:30 pm.

23. IN CASE OF CONFLICTS OR DISCREPANCIES WITHIN OR AMONG THE CONTRACT DRAWINGS, THE BETTER QUALITY, MORE STRINGENT REQUIREMENTS, OR GREATER QUANTITY OF WORK, AS DETERMINED BY THE GOVERNMENT/CONTRACTING OFFICER, SHALL BE PROVIDED.

MECHANICAL EQUIPMENT NOTES:

1. ALL EQUIPMENT/DEVICES SHALL BE OF FIRST RATE QUALITY (UNLESS OTHERWISE SPECIFIED) AND ARE TO BEAR THE APPROPRIATE AGA, CSA OR UL APPROVED LABELS, LISTINGS, AND CERTIFICATIONS FOR THE SPECIFIC DESIGN PURPOSE.

2. ALL EQUIPMENT SOUND LEVELS SHALL NOT EXCEED 50 DB AT PROPERTY LINE.

3. ALL INTERCONNECTING WIRING AT UNIT SHALL BE FACTORY PRE-WIRED AND REQUIRE ONLY ONE (1) POWER CONNECTION TO THE UNIT BY THE ELECTRICAL CONTRACTOR. DISCONNECT SWITCH SHALL BE BY THE ELECTRICAL CONTRACTOR.

4. SUBMIT THE REQUIRED NUMBER OF COPIES OF EACH CATALOG CUT, FOR THE EQUIPMENT SPECIFIED, TO THE VA/COR FOR APPROVAL AND TO THE ARCHITECT /ENGINEER FOR HIS/HER SUCCESSFUL REVIEW PRIOR TO THE BEGINNING OF CONSTRUCTION. THIS CONTRACTOR SHALL ALSO ASSEMBLE PRINTED INSTRUCTIONS FOR THE OPERATION AND MAINTENANCE OF EACH ITEM INSTALLED AND BIND TOGETHER WITH EQUIPMENT CUTS AND CONTROL WIRING DIAGRAMS. SUBMIT THE REQUIRED NUMBER OF COPIES TO THE VA/COR FOR HIS/HER SUCCESSFUL REVIEW.

5. THE DRAWINGS, SCHEDULES AND SPECIFICATIONS HAVE BEEN PREPARED USING ONE MANUFACTURER FOR EACH PIECE OF EQUIPMENT AS THE BASIS OF DESIGN INCLUDING ALL DIMENSIONAL DESIGN. IF THE CONTRACTOR PURCHASES EQUIPMENT FROM A SPECIFIED ACCEPTABLE MANUFACTURER, BUT NOT THE SCHEDULED MANUFACTURER USED FOR THE BASE DESIGN, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING ALL THE DIMENSIONS OF THE EQUIPMENT TO VERIFY THAT IT WILL FIT IN THE SPACE SHOWN ON THE DRAWINGS. MINOR DEVIATIONS IN DIMENSIONS WILL BE PERMITTED, PROVIDED THE RATINGS MEET THOSE SHOWN ON THE DRAWINGS AND EQUIPMENT WILL PHYSICALLY FIT INTO THE SPACE ALLOCATED WITH SUITABLE ACCESS AROUND EQUIPMENT FOR OPERATION AND MAINTENANCE OF THE EQUIPMENT. WHEN EQUIPMENT SUBMITTED FOR REVIEW DOES NOT MEET THE PHYSICAL SIZE OR ARRANGEMENT OF THAT SCHEDULED AND SPECIFIED, CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ALTERATIONS REQUIRED TO ACCOMMODATE SUCH EQUIPMENT AT NO ADDITIONAL COST TO THE VA. CONTRACTOR WILL ALSO PAY ALL COSTS FOR ADDITIONAL WORK REQUIRED BY OTHER CONTRACTORS AND THE VA TO MAKE CHANGES WHICH WOULD ALLOW THE EQUIPMENT TO FIT IN THE SPACE AND TO FUNCTION AS INTENDED.

6. CONTRACTOR AND/OR MANUFACTURER SHALL VERIFY THAT THE CHARACTERISTICS OF THE EQUIPMENT HE SUBMITS FOR REVIEW MEET THE CAPACITY AND DUTY SPECIFIED. WHEN EQUIPMENT SUBMITTED FOR REVIEW REQUIRES MODIFICATIONS TO THE WORK OF OTHER CONTRACTORS, SUBMITTING CONTRACTOR SHALL PAY FOR ALL COSTS FOR ADDITIONAL WORK REQUIRED BY OTHER CONTRACTORS, VA, ARCHITECT OR ENGINEER TO MAKE CHANGES WHICH WOULD ALLOW THE EQUIPMENT FUNCTION SAFELY AND PROPERLY.

7. CONTRACTOR MUST FIELD VERIFY SIZES, CAPACITIES, WEIGHTS, HORSE POWERS, ETC. ON ALL EQUIPMENT. NOTIFY THE VA/COR IF ANY DISCREPANCIES EXIST BETWEEN THE ACTUAL FIELD CONDITIONS AND THE DRAWINGS.

ENGINEERING DISCIPLINE REFERENCE NOTES

SEE ALL PROJECT GENERAL NOTES AND OTHER REQUIREMENTS INCLUDING THE LIFE SAFETY AND INFECTION CONTROL WORK LOCATED WITHIN THE GENERAL DRAWINGS SECTION. COMPLY WITH ALL REQUIREMENTS AS THEY ARE A DIRECT PART OF THIS SECTION AS IF THEY WERE DIRECTLY INCLUDED AND PROVIDED HEREIN.

EQUIVALENCY SUBSTITUTIONS: THE "BASIS OF DESIGN (BOD) COMPLIANCE PROTOCOLS" ARE TO BE FOLLOWED FOR ALL MATERIALS, EQUIPMENT, ASSEMBLIES AND SYSTEMS SPECIFIED AND DETAILED THROUGHOUT ALL DRAWINGS AND SPECIFICATION SECTIONS, WHETHER THE BOD DESIGNATE IS SPECIFICALLY REFERENCED THEREIN OR NOT. SEE THE GENERAL DRAWINGS SECTION FOR THE SPECIFIC BOD COMPLIANCE REQUIREMENTS AND PROTOCOLS TO BE FOLLOWED.

HVAC SYMBOLS AND ABBREVIATIONS

AD	ACCESS DOOR
A.F.F.	ABOVE FINISHED FLOOR
BAS	BUILDING AUTOMATION SYSTEM
BHP	BRAKE HORSEPOWER
BOP	BOTTOM OF PIPE
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
CC	COOLING COIL
CFM	CUBIC FEET PER MINUTE
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CWTT	CONDENSER WATER TO TOWER
CWFT	CONDENSER WATER FROM TOWER
D	DRAIN LINE
DB	DRY BULB
DN.	DOWN
(E)	EXISTING
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EF	EXHAUST FAN
ESP	EXTERNAL STATIC PRESSURE
EWT	ENTERING WATER TEMPERATURE
F	FAHRENHEIT
FPF	FINS PER FOOT
FPM	FEET PER MINUTE
FV	FACE VELOCITY
GC	GENERAL CONTRACTOR
GPM	GALLONS PER MINUTE
HP	HORSEPOWER
HWC	HOT WATER COIL
HTS	HIGH TEMPERATURE HOT WATER SUPPLY
HTR	HIGH TEMPERATURE HOT WATER RETURN
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
LAT	LEAVING AIR TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MCA	MINIMUM CIRCUIT AMPS
MOCP	MAXIMUM OVERCURRENT PROTECTION
MTHWS	MEDIUM TEMPERATURE HOT WATER SUPPLY
MTHWR	MEDIUM TEMPERATURE HOT WATER RETURN
NK	NECK
NTS	NOT TO SCALE
PD	PRESSURE DROP
PH	PHASE
PHC	PREHEAT COIL
PSI	POUNDS PER SQUARE INCH
RPM	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR
SF	SUPPLY FAN
SP	STATIC PRESSURE
TC	TEMPERATURE CONTROL
TSP	TOTAL STATIC PRESSURE
TYP.	TYPICAL
VD	VOLUME DAMPER
VFD	VARIABLE FREQUENCY DRIVE
WB	WET BULB
W.C.	WATER COLUMN
WG	WATER GAUGE

	BUTTERFLY VALVE
	GLOBE VALVE
	GATE VALVE
	CHECK VALVE
	BALL VALVE (2" & SMALLER) BUTTERFLY VALVE (2 1/2" & LARGER)
	3 WAY CONTROL VALVE
	2 WAY CONTROL VALVE
	CIRCUIT BALANCING VALVE W/BALANCING PORTS (8" AND UNDER) CIRCUIT FLOW INDICATOR W/BALANCING PORTS AND MEMORY STOP BUTTERFLY VALVE FOR BALANCING (10" AND ABOVE)
S	SOLENOID VALVE
	PRESSURE REDUCING VALVE
	PLUG VALVE (GAS COCK)
	PRESSURE RELIEF VALVE (PIPE TO FLOOR DRAIN)
D	DRAIN VALVE WITH HOSE THREADED OUTLET
	AUTOMATIC BALL OR BUTTERFLY VALVE
	PIPE UNION (OR FLANGES IF 2 1/2" OR LARGER PIPE)
	CONCENTRIC PIPE REDUCER OR INCREASER
	STEAM TRAP ASSEMBLY
PS	PRESSURE SWITCH (WITH THREAD OR WELD-O-LET)
	PRESSURE GAUGE AND NEEDLE VALVE
FS	FLOW SWITCH (WITH THREAD OR WELD-O-LET)
	THERMOMETER (WITH PIPE WELL)
	THERMOMETER WELL
	TEMPERATURE WELL WITH DDC SENSOR
	PRESSURE WELL WITH DDC SENSOR
	PRESSURE/TEMPERATURE PLUG WITH CAP
	STRAINER
	STRAINER WITH BLOWDOWN VALVE
	REFRIGERANT EXPANSION VALVE
	DIRECTION OF FLOW
PITCH	PITCH OF PIPE (DOWN)
	PIPE ELBOW (TURNED UP)
	PIPE ELBOW (TURNED DOWN)
	PIPE TEE DOWN (DROP)
	PIPE TEE UP
	PIPE TEE UP OR ANGLE
	PIPE TEE DOWN OR ANGLE
NC	NEW CONNECTION
	PIPING, DUCTWORK, OR EQUIPMENT TO BE REMOVED
HWS	LOW TEMPERATURE (HEATING) HOT WATER SUPPLY (UP TO 120°F)
HWR	LOW TEMPERATURE (HEATING) HOT WATER RETURN (UP TO 120°F)
HTS	HIGH TEMPERATURE (HEATING) HOT WATER SUPPLY
HTR	HIGH TEMPERATURE (HEATING) HOT WATER RETURN
HPS	HIGH PRESSURE STEAM SUPPLY
HPR	HIGH PRESSURE CONDENSATE RETURN
SP	SPRAY WATER SUPPLY
SPR	SPRAY WATER RETURN
LPS	LOW PRESSURE STEAM (UP TO 15 PSIG)
LPR	LOW PRESSURE CONDENSATE (UP TO 15 PSIG)
MU	MAKE-UP WATER
PCR	PUMPED CONDENSATE RETURN
VC	VACUUM CONDENSATE
D	DRAIN LINE
CHWS	CHILLED WATER SUPPLY
CHWR	CHILLED WATER RETURN
CWTT	CONDENSER WATER TO TOWER
CWFT	CONDENSER WATER FROM TOWER
GHS	50% PROPYLENE GLYCOL HOT WATER SUPPLY
GHR	50% PROPYLENE GLYCOL HOT WATER RETURN

	FLEXIBLE DUCT CONNECTION
	MANUAL SINGLE BLADE OR OPPOSED BLADE DAMPER
	MOTOR OPERATED DAMPER
FD	VERTICAL FIRE DAMPER WITH ACCESS DOOR
FD	HORIZONTAL FIRE DAMPER
	AIR FLOW
12x24	DUCT SIZE FREE AREA (1ST FIGURE, SIDE OF DUCT SHOWN)
	CROSS-SECTION OF SUPPLY OR OUTSIDE AIR INTAKE DUCT
	CROSS-SECTION OF RETURN DUCT
	CROSS-SECTION OF EXHAUST DUCT
R D	INCLINED RISE (R) OR DROP (D)
	90° ELBOW WITH TURNING VANES
	90° BRANCH TAKE-OFF W/45 DEGREE ENTRY
	ROUND FLEXIBLE DUCT
	SQUARE OR RECTANGLE DUCT TRANSITION
	SQUARE OR RECTANGLE TO ROUND DUCT TRANSITION
	DUCT UP TO ROOF MOUNTED EXHAUST FAN OR VENTILATOR
XXX-1	EQUIPMENT TAG
T	WALL THERMOSTAT OR TEMPERATURE SENSOR
T	WALL THERMOSTAT OR TEMPERATURE SENSOR WITH GUARD
H	WALL HUMIDISTAT
Ø	ROUND
	NEW CONNECTION POINT
DSD	DUCT SMOKE DETECTOR
S-SUPPLY R-RETURN E-EXHAUST XX	DIFFUSER TAG DIFFUSER/GRILLE IDENTIFICATION DIFFUSER/GRILLE SIZE DIFFUSER/GRILLE AIRFLOW RATE CFM

THESE LISTS OF SYMBOLS AND ABBREVIATIONS ARE GENERAL. NOT ALL SYMBOLS AND ABBREVIATIONS MAY BE APPLICABLE TO THIS PROJECT.

ISSUE FOR BID	08-09-2024
Revisions:	Date:

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08-09-2024

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: MECHANICAL NOTES, SYMBOLS AND ABBREVIATIONS

Phase: ISSUE FOR BID

Project Title: PARKING RAMP EXPANSION

Project Number: 528-18-375

Building Number: 29

Approved: Project Director

Location: 3495 BAILEY AVE., BUFFALO, NY 14215

Issue Date: 08-09-2024 | Checked: DGG | Drawn: DGG

Drawing Number: M001

VA FORM 08 - 6231

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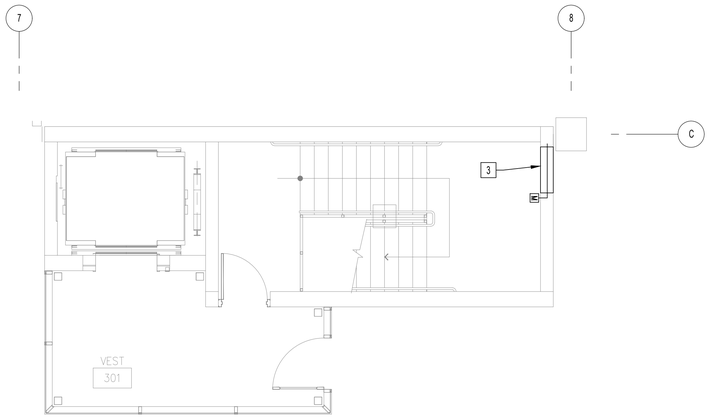
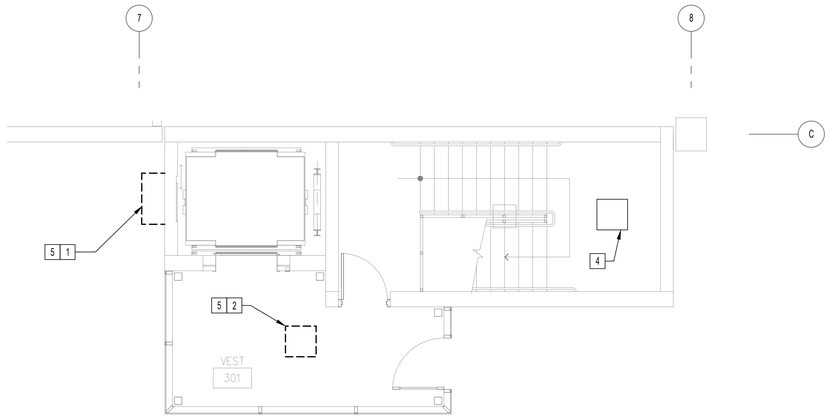
X MECHANICAL DEMOLITION KEY NOTES

1. REMOVE AC UNIT AND ALL ASSOCIATED SUPPORTS AND CONTROLS. PATCH HOLES TO MATCH EXISTING.
2. REMOVE EXISTING ROOF FAN AND ALL ASSOCIATED SUPPORTS AND CONTROLS, THERMOSTATS, ETC.
3. EXISTING LOUVER TO REMAIN. LOUVER SHALL REMAIN IN CLOSED POSITION AND ALARM SET IN THE OFF POSITION DURING CONSTRUCTION.
4. EXISTING FAN TO REMAIN IN SERVICE.
5. CAREFULLY REMOVE EQUIPMENT AND RETURN TO THE VA FOR FURTHER INSTRUCTIONS. CONTRACTOR SHALL PROPERLY DISPOSE OF ANY EQUIPMENT NOT WANTED BY THE VA.

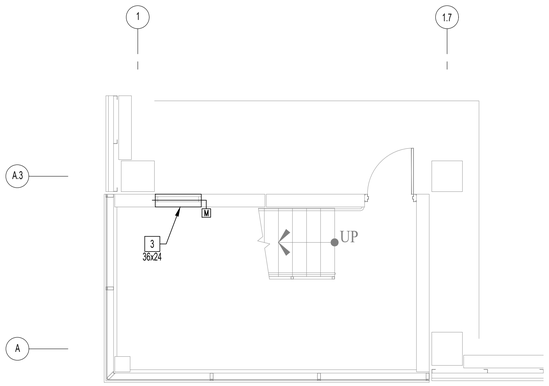


1 MECHANICAL - DEMOLITION PLAN - STAIR 3 LEVEL 1
1/4"=1'-0"

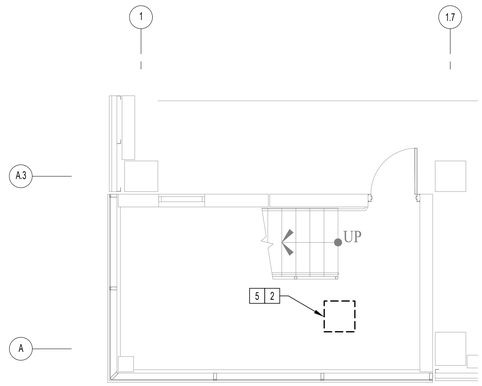


2 MECHANICAL - DEMOLITION PLAN - STAIR 3 LEVEL 3
1/4"=1'-0"

3 STAIR 3 EXTERIOR PHOTO
NTS

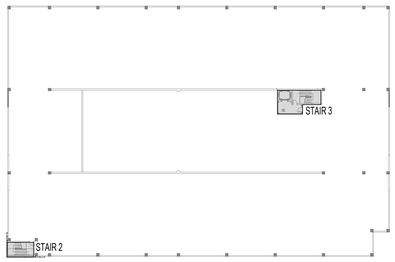


4 MECHANICAL - DEMOLITION PLAN - STAIR 2 LEVEL 1
1/4"=1'-0"



5 MECHANICAL - DEMOLITION PLAN - STAIR 2 ROOF
1/4"=1'-0"

6 STAIR 2 EXTERIOR PHOTO
NTS



N KEY PLAN

ISSUE FOR BID	08-09-2024
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Office of Construction and Facilities Management
VA U.S. Department of Veterans Affairs

Drawing Title: MECHANICAL DEMOLITION PLANS	Phase: ISSUE FOR BID	Project Title: PARKING RAMP EXPANSION	Project Number: 528-18-375
			Building Number: 29
Approved: Project Director		Location: 3495 BAILEY AVE., BUFFALO, NY 14215	Drawing Number: MD101
		Issue Date: 08-09-2024 · Checked: DGG · Drawn: DGG	

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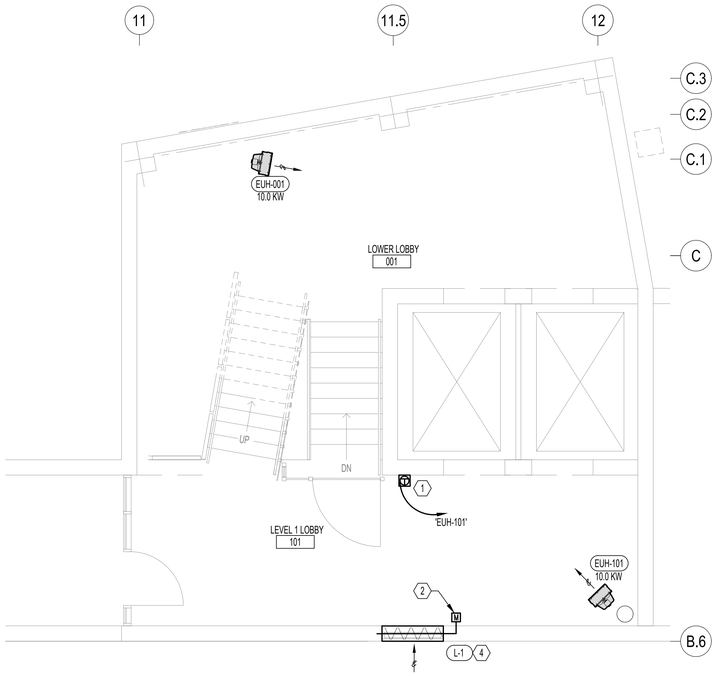
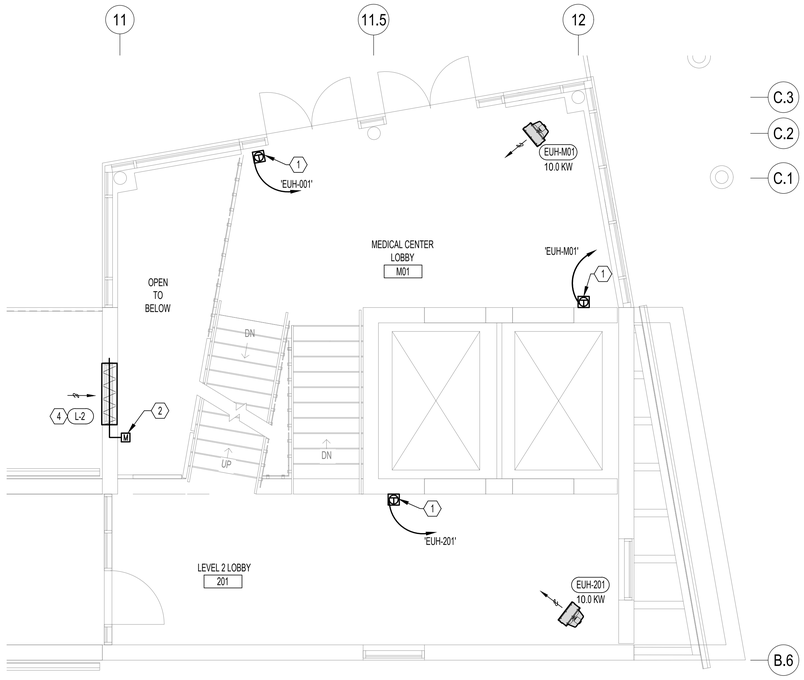


2 MECHANICAL LOBBY PLAN - LEVEL 1
1/4"=1'-0"



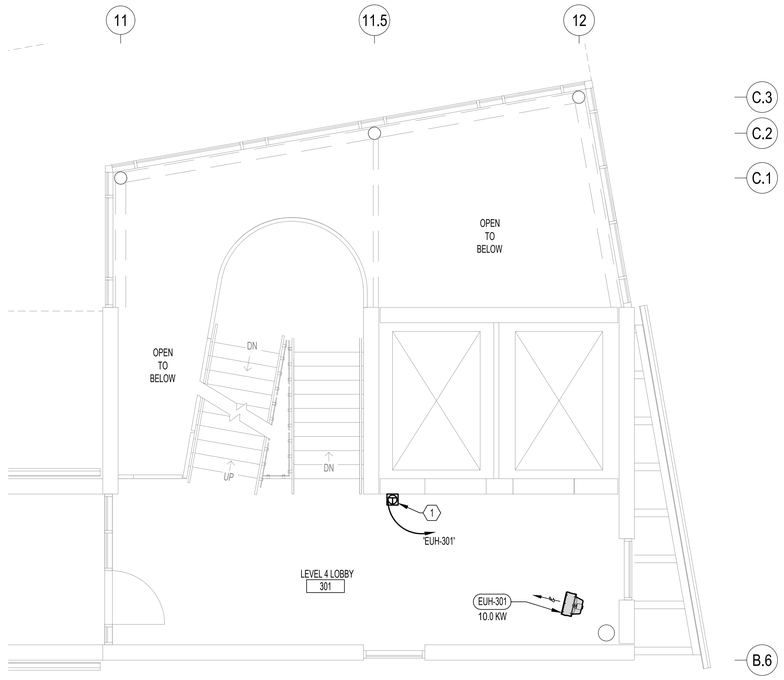
1 MECHANICAL LOBBY FLOOR PLAN - LEVEL 2
1/4"=1'-0"

GENERAL NOTES

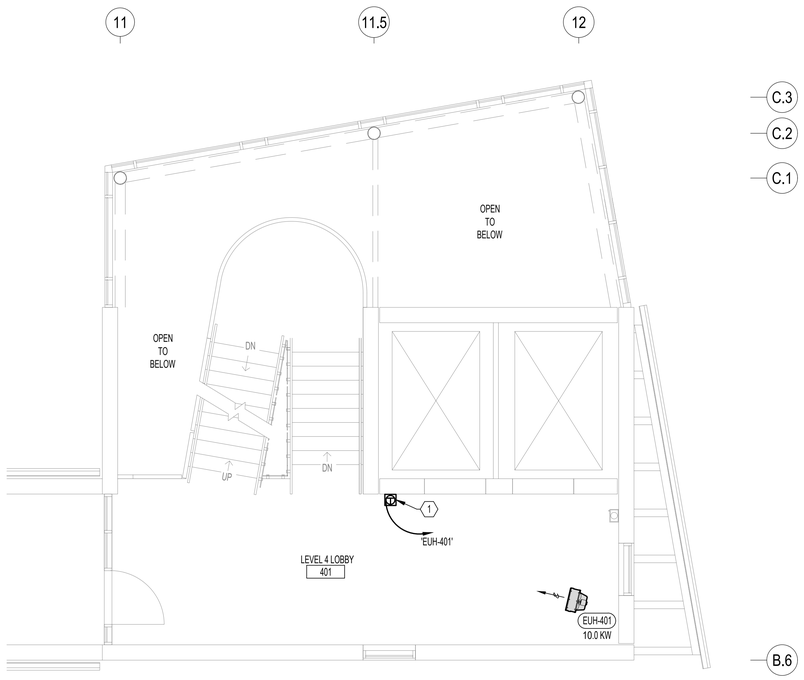
A. REFER TO ELECTRICAL DRAWINGS FOR CONDUIT LOCATIONS, WIRING REQUIREMENTS, PANEL LOCATIONS AND DISCONNECTS FOR ELECTRICAL UNIT HEATERS.
B. MOUNT ELECTRIC UNIT HEATER (EUH) SUCH THAT THE BOTTOM OF THE HEATER IS 8'-6" ABOVE FINISHED FLOOR.
C. THERMOSTATS SHALL BE MOUNTED APPROXIMATELY 48" AFF. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT INFORMATION.

(X) MECHANICAL KEY NOTES

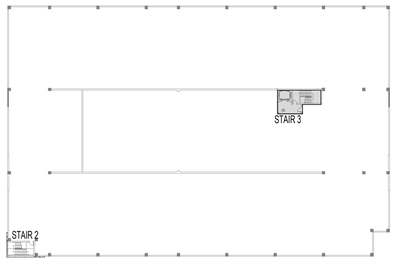
1. THERMOSTAT WITH LOCKABLE GUARD PROVIDED AND INSTALLED BY TEMPERATURE CONTROL CONTRACTOR, TO INTERLOCK WITH UNIT INDICATED.
2. DAMPER TO BE INTERLOCKED WITH NEW FAN 'EF-501' ON ROOF. WHEN FAN STARTS/STOPS, DAMPER SHALL OPEN/CLOSE. UPON LOSS OF POWER, DAMPER SHALL FAIL OPEN. A SIGNAL SHALL SEND AN ALARM TO THE BAS IF THE DAMPER FAILS TO OPEN. MOTORIZED DAMPER POWER SHALL BE FROM FAN CIRCUIT VIA INTEGRAL TRANSFORMER.
3. MAKE FULL SIZE DUCT CONNECTION TO FAN. TERMINATE DUCT BELOW ROOF WITH WIRE MESH SCREEN.
4. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT AND LOCATION.



4 MECHANICAL LOBBY PLAN - LEVEL 3
1/4"=1'-0"



3 MECHANICAL LOBBY PLAN - LEVEL 4
1/4"=1'-0"



N KEY PLAN

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08-09-2024

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title	Phase	Project Title	Project Number
MECHANICAL VENTILATION PLANS - LEVELS 1 THRU 4	ISSUE FOR BID	PARKING RAMP EXPANSION	528-18-375
Approved: Project Director		Location: 3495 BAILEY AVE., BUFFALO, NY 14215	Building Number: 29
		Issue Date: 08-09-2024 · Checked: DGG · Drawn: DGG	Drawing Number: M101

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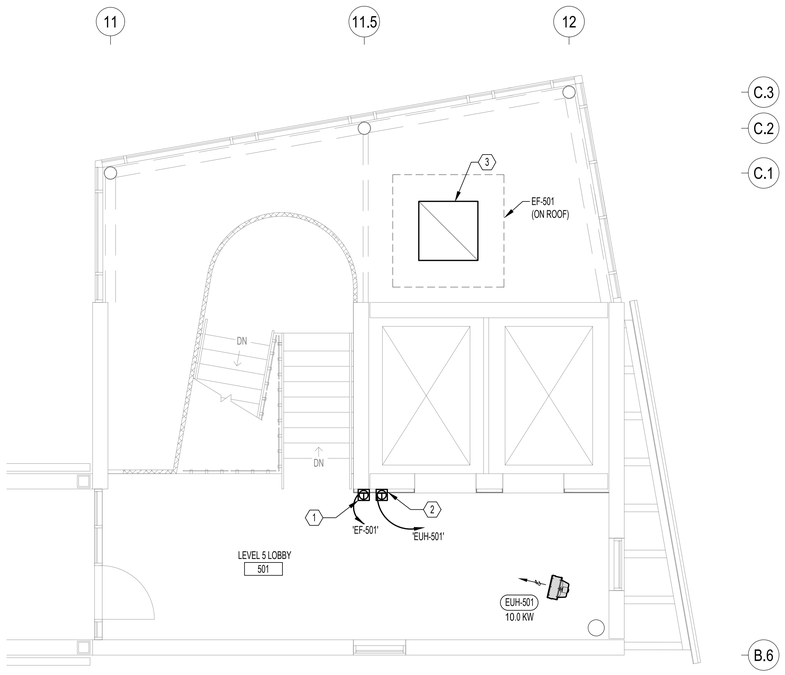
GENERAL NOTES

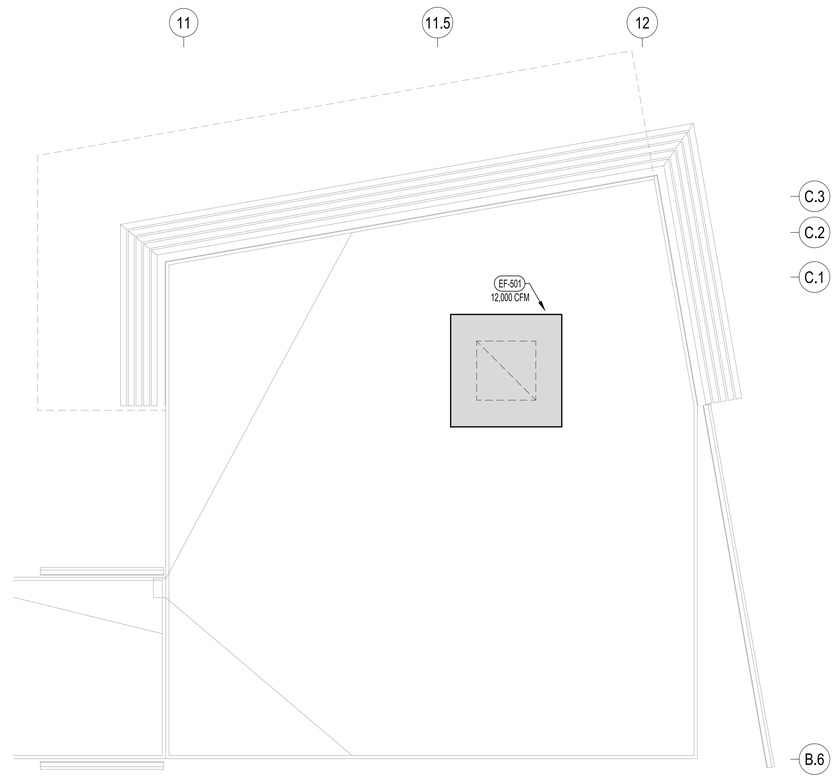
A. REFER TO ELECTRICAL DRAWINGS FOR CONDUIT LOCATIONS, WIRING REQUIREMENTS, PANEL LOCATIONS AND DISCONNECTS FOR ELECTRICAL UNIT HEATERS.
B. MOUNT ELECTRIC UNIT HEATER (EUH) SUCH THAT THE BOTTOM OF THE HEATER IS 8'-6" ABOVE FINISHED FLOOR.
C. THERMOSTATS SHALL BE MOUNTED APPROXIMATELY 48" AFF. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT INFORMATION.

X MECHANICAL KEY NOTES

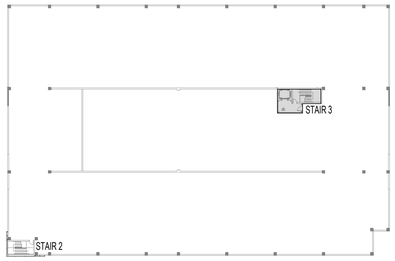
1. THERMOSTAT WITH LOCKABLE GUARD, PROVIDED AND INSTALLED BY TEMPERATURE CONTROL CONTRACTOR, TO INTERLOCK WITH 'EF-501' ON ROOF. MOTORIZED DAMPER TO INTERLOCK WITH 'EF-501' ON ROOF. WHEN EF-501 STARTS/STOPS, MOTORIZED DAMPER SHALL OPEN/CLOSE.
2. THERMOSTAT WITH GUARD, PROVIDED AND INSTALLED BY TEMPERATURE CONTROL CONTRACTORL, TO INTERLOCK WITH WITH UNIT INDICATED.
3. MAKE FULL SIZE DUCT CONNECTION TO FAN. TERMINATE DUCT BELOW ROOF WITH WIRE MESH SCREEN.



2 MECHANICAL LOBBY PLAN - LEVEL 5
1/4"=1'-0"



1 MECHANICAL LOBBY ROOF PLAN
1/4"=1'-0"



N KEY PLAN

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08-09-2024

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: MECHANICAL VENTILATION PLANS - LEVELS 1 AND ROOF	Phase: ISSUE FOR BID	Project Title: PARKING RAMP EXPANSION	Project Number: 528-18-375
			Building Number: 29
Approved: Project Director		Location: 3495 BAILEY AVE., BUFFALO, NY 14215	Drawing Number: M102
		Issue Date: 08-09-2024 · Checked: DGG · Drawn: DGG	

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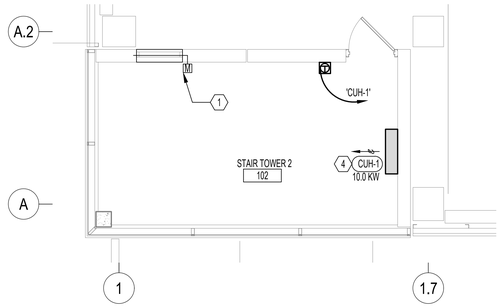
GENERAL NOTES

A. REFER TO ELECTRICAL DRAWINGS FOR CONDUIT LOCATIONS, WIRING REQUIREMENTS, PANEL LOCATIONS AND DISCONNECTS FOR CABINET UNIT HEATER.
B. THERMOSTATS SHALL BE MOUNTED APPROXIMATELY 48" AFF. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT INFORMATION.

(X) MECHANICAL KEY NOTES

1. EXISTING 36x24 LOUVER TO REMAIN. DAMPER TO BE INTERLOCKED WITH NEW FAN 'EF-502' ON ROOF. WHEN FAN STARTS/STOPS, DAMPER SHALL OPEN/CLOSE. UPON LOSS OF POWER, DAMPER SHALL FAIL OPEN AND A SIGNAL SHALL SEND AN ALARM TO THE BAS IF THE DAMPER FAILS TO OPEN. MOTORIZED DAMPER POWER SHALL BE FROM FAN CIRCUIT VIA INTEGRAL TRANSFORMER.
2. THERMOSTAT WITH LOCKABLE GUARD TO INTERLOCK WITH 'EF-502' ON STAIR TOWER 2 ROOF. MOUNT THERMOSTAT APPROXIMATELY 48" AFF. REFER TO ARCHITECTURAL DRAWINGS FOR MORE INFORMATION ON MOUNTING HEIGHTS.
3. MAKE FULL SIZE DUCT CONNECTION TO FAN. TERMINATE DUCT BELOW ROOF WITH WIRE MESH SCREEN.
4. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.



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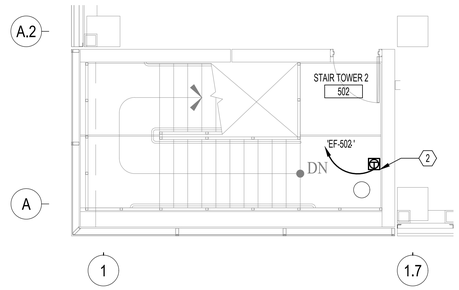
1 STAIR TOWER 2 MECHANICAL PLAN - LEVEL 1
1/4"=1'-0"



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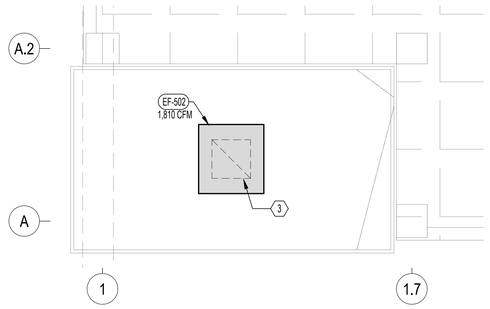
2 STAIR TOWER 2 MECHANICAL PLAN - LEVEL 5
1/4"=1'-0"



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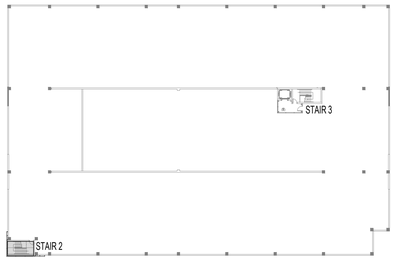
3 STAIR TOWER 2 MECHANICAL PLAN - ROOF
1/4"=1'-0"



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KEY PLAN

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08-09-2024

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: MECHANICAL VENTILATION PLAN - STAIR TOWER 2

Phase: ISSUE FOR BID

Project Title: PARKING RAMP EXPANSION

Project Number: 528-18-375

Building Number: 29

Approved: Project Director

Location: 3495 BAILEY AVE., BUFFALO, NY 14215

Issue Date: 08-09-2024

Checked: DGG

Drawn: DGG

Drawing Number: M103

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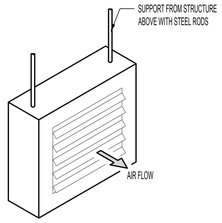
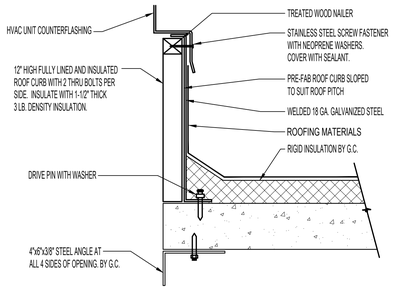
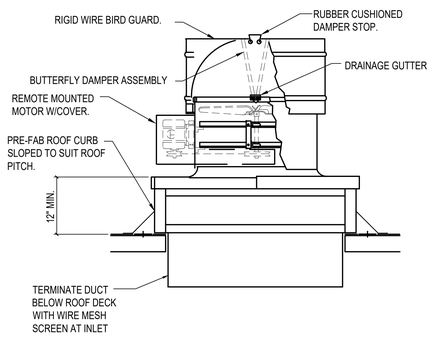


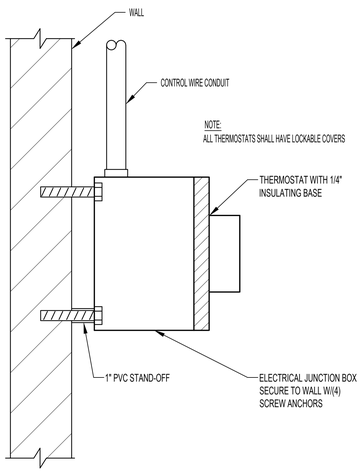
1 SUSPENDED UNIT HEATER DIAGRAM
NTS



4 ROOF CURB CONCRETE DECK
NTS



2 UPBLAST PROPELLER ROOF EXHAUSTER DETAIL
NTS



3 WALL MOUNTED THERMOSTAT DETAIL
NTS

EXHAUST FAN SCHEDULE

EQUIPMENT TAG	BASIS OF DESIGN		LOCATION	AREA SERVED	TYPE	DRIVE	WEIGHT (LBS)	CFM	SP (IN.)	MAXIMUM SONES	FAN RPM	BHP	MOTOR				CONTROL TYPE	NOTES
	MANUFACTURER	MODEL											HP	RPM	PHASE	VOLT		
EF-501	GREENHECK	RE2-36-615-VG	ROOF	ELEVATOR LOBBY	PROPELLER HOOD	DIRECT	656	12,000	0.5	37	1,066	2.6	5	1,725	3	480	T-STAT	1,2,3,4,5
EF-502	GREENHECK	RE2-20-419-VG	ROOF	STAIR TOWER 2	PROPELLER HOOD	DIRECT	225	1,810	0.5	24	1,474	0.51	1	1,725	3	480	T-STAT	1,2,3,4,5

NOTES:
1. OTHER ACCEPTABLE MANUFACTURERS: VA APPROVED EQUALS
2. PROVIDE THE FOLLOWING OPTIONS: GRAVITY BACKDRAFT DAMPER, NEMA 3R DISCONNECT SWITCH, AND SPEED CONTROLLER
3. PROVIDE ALUMINUM BIRDSCREEN.
4. PROVIDE PRE-FABRICATED 18" TALL INSULATED ROOF CURB.
5. ALL MOTORIZED DAMPERS INTERLOCKED WITH FANS SHALL BE FROM FAN CIRCUIT VIA INTEGRAL TRANSFORMER.

WALL LOUVER SCHEDULE

EQUIPMENT TAG	LOCATION	SERVICE	MANUFACTURER	MODEL	TYPE	SIZE (IN.)			CFM	FREE AREA VELOCITY (FPM)	P.D. (IN. W.G.)	WATER PENETRATION VELOCITY (FPM)	NOTES
						W	H	D					
L-1	LEVEL 1 LOBBY101	EF-1	GREENHECK	EDJ-601	EXTRUDED ALUMINUM DRAINABLE	48	74	6	6,000	423	0.05	998	1,2,3,4
L-2	MEDICAL CENTER LOBBY M01	EF-1	GREENHECK	EDJ-601	EXTRUDED ALUMINUM DRAINABLE	48	74	6	6,000	423	0.05	998	1,2,3,4

NOTES:
1. OTHER ACCEPTABLE MANUFACTURERS: VA APPROVED EQUAL
2. BIRDSCREEN.
3. COLOR AND FINISH TO BE SELECTED BY ARCHITECT.
4. WATER PENETRATION VELOCITY IF BASED ON 0.01 OUNCES/SQ.FT. WITH A 48"x48" LOUVER AND A TEST PERIOD OF 15 MIN.

ELECTRIC SUSPENDED HEATER SCHEDULE

GENERAL					HEATER			FAN DATA		ELECTRICAL DATA			NOTES
EQUIPMENT TAG	LOCATION	TYPE	MANUFACTURER	MODEL	KW	PHASE	VOLT	TYPE	CFM	AMPS	PHASE	VOLT	
EUH-001	ELEVATOR LOBBY	SUSPENDED HORIZONTAL	MARLEY	MUH0541	10.0	3	480	PROP.	650	12.0	3	480	1,2,3,4
EUH-101	ELEVATOR LOBBY	SUSPENDED HORIZONTAL	MARLEY	MUH0541	10.0	3	480	PROP.	650	12.0	3	480	1,2,3,4
EUH-M01	ELEVATOR LOBBY	SUSPENDED HORIZONTAL	MARLEY	MUH0541	10.0	3	480	PROP.	650	12.0	3	480	1,2,3,4
EUH-201	ELEVATOR LOBBY	SUSPENDED HORIZONTAL	MARLEY	MUH0541	10.0	3	480	PROP.	650	12.0	3	480	1,2,3,4
EUH-301	ELEVATOR LOBBY	SUSPENDED HORIZONTAL	MARLEY	MUH0541	10.0	3	480	PROP.	650	12.0	3	480	1,2,3,4
EUH-401	ELEVATOR LOBBY	SUSPENDED HORIZONTAL	MARLEY	MUH0541	10.0	3	480	PROP.	650	12.0	3	480	1,2,3,4
EUH-501	ELEVATOR LOBBY	SUSPENDED HORIZONTAL	MARLEY	MUH0541	10.0	3	480	PROP.	650	12.0	3	480	1,2,3,4

NOTES:
1. OTHER ACCEPTABLE MANUFACTURERS: VA APPROVED EQUAL.
2. DISCONNECT SWITCH.
3. MOUNTING KIT TO MATCH MOUNTING REQUIREMENTS PROVIDED BY HEATER MANUFACTURER.
4. FAN DELAY SWITCH.

ELECTRIC CABINET UNIT HEATER SCHEDULE

EQUIPMENT TAG	LOCATION	MANUFACTURER	MODEL	TYPE	FAN	HEATER				CABINET		CABINET DIMENSIONS (IN.)				FILTER		NOTES
					CFM	KW	PHASE	AMPS	VOLT	MOUNTING	ARRANGEMENT	L	W	H	MOUNTING HEIGHT	TYPE	SIZE	
CUH-1	STAIR TOWER 2	MARLEY	CUH945	WALL MOUNTED	500	10.0	3.0	13.0	480	SURFACE	UPFLOW	48	9.5	26.5	10"	PERM.	1/2"	1,2,3,4,5

NOTES:
1. OTHER ACCEPTABLE MANUFACTURERS: VA APPROVED EQUAL
2. COLOR AS SELECTED BY ARCHITECT.
3. RETURN AIR THERMOSTAT.
4. FACTORY INSTALLED MOTOR STARTER AND DISCONNECT SWITCH.
5. WALL MOUNTING KIT TO MATCH APPLICATION.

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Revisions:	Date:

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Drawing Title: MECHANICAL SCHEDULES AND DETAILS
Phase: ISSUE FOR BID
Project Title: PARKING RAMP EXPANSION
Project Number: 528-18-375
Building Number: 29
Approved: Project Director
Location: 3495 BAILEY AVE., BUFFALO, NY 14215
Issue Date: 08-09-2024
Checked: DGG
Drawn: DGG
Drawing Number: M501

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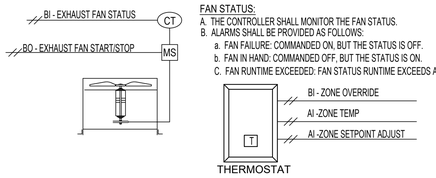
NOTE TO TEMPERATURE CONTROL CONTRACTOR:

ALL CONTROLS SHALL BE INTEGRATED INTO THE EXISTING BUILDING MANAGEMENT SYSTEM.

THE CONTROL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE CORRECT TYPE, SIZES AND QUANTITIES OF CONTROL CABLES, CONTROLLERS, SENSORS, TRANSFORMERS, DEVICES AND PROGRAMMING NECESSARY FOR A FULLY FUNCTIONAL SYSTEM.



MECHANICAL ROOM EXHAUST FAN

THE FAN SHALL RUN WHENEVER ZONE THERMOSTAT RISES ABOVE 85°F (ADJ.)

FAN STATUS:

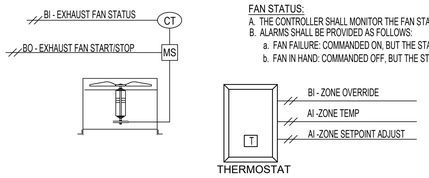
A. THE CONTROLLER SHALL MONITOR THE FAN STATUS.
B. ALARMS SHALL BE PROVIDED AS FOLLOWS:
   a. FAN FAILURE: COMMANDED ON, BUT THE STATUS IS OFF.
   b. FAN IN HAND: COMMANDED OFF, BUT THE STATUS IS ON.
C. FAN RUNTIME EXCEEDED: FAN STATUS RUNTIME EXCEEDS A USER DEFINABLE LIMIT (ADJ.).

1 EXHAUST FAN CONTROL SEQUENCE (EF-501)

NTS

STAIR 3 EXHAUST FAN POINTS LIST (EF-501)

POINT NAME	HARDWARE POINTS				SOFTWARE POINTS					SHOW ON GRAPHIC
	AI	AO	BI	BO	AV	BV	SCHED	TREND	ALARM	
FAN STATUS			X							X
FAN START/STOP				X					X	X
FAN FAILURE									X	
FAN RUNTIME EXCEEDED			X						X	
LOUVER DAMPER A STATUS (EF-501)			X							X
LOUVER DAMPER A FAILURE TO OPEN (EF-501)			X							X
LOUVER DAMPER B STATUS (EF-501)									X	X
LOUVER DAMPER B FAILURE TO OPEN (EF-501)			X							X
			X							X
									X	X



MECHANICAL ROOM EXHAUST FAN

THE FAN SHALL RUN WHENEVER ZONE THERMOSTAT RISES ABOVE 80°F (ADJ.)

FAN STATUS:

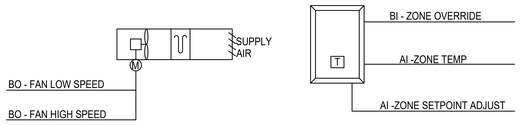
A. THE CONTROLLER SHALL MONITOR THE FAN STATUS.
B. ALARMS SHALL BE PROVIDED AS FOLLOWS:
   a. FAN FAILURE: COMMANDED ON, BUT THE STATUS IS OFF.
   b. FAN IN HAND: COMMANDED OFF, BUT THE STATUS IS ON.

2 EXHAUST FAN CONTROL SEQUENCE (EF-502)

NTS

STAIR 2 EXHAUST FAN POINTS LIST (EF-502)

POINT NAME	HARDWARE POINTS				SOFTWARE POINTS					SHOW ON GRAPHIC
	AI	AO	BI	BO	AV	BV	SCHED	TREND	ALARM	
FAN STATUS			X							X
FAN START/STOP				X					X	X
FAN FAILURE									X	
FAN RUNTIME EXCEEDED			X						X	
WALL DAMPER CLOSED STATUS			X							X
WALL DAMPER OPEN STATUS			X							X
WALL DAMPER FAILURE TO OPEN									X	X



SUSPENDED UNIT HEATER POINTS LIST

POINT NAME	HARDWARE POINTS				SOFTWARE POINTS					SHOW ON GRAPHIC
	AI	AO	BI	BO	AV	BV	SCHED	TREND	ALARM	
								X		X
HEATING SETPOINT ADJUST	X									X
ZONE TEMPERATURE	X							X		X
ZONE OVERRIDE			X					X		X
LOW ZONE TEMPERATUR									X	
FAN STATUS	X								X	X
FAN START/STOP		X							X	X
FAN FAILURE									X	
ELECTRIC HEAT FAILURE TO ENERGIZE									X	

FAN:

A. THE FAN SHALL RUN ANYTIME THE ZONE TEMPERATURE IS BELOW HEATING SETPOINT (40°F ADJ), UNLESS SHUTDOWN ON SAFETIES.

3 CABINET UNIT HEATER / ELECTRIC UNIT HEATER CONTROL DIAGRAM

NTS

ISSUE FOR BID	08-09-2024
Revisions:	Date:

CONSULTANT

ARCHITECT/ENGINEER OF RECORD

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08-09-2024

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: MECHANICAL DETAILS AND TEMPERATURE CONTROLS

Phase: ISSUE FOR BID

Project Title: PARKING RAMP EXPANSION

Project Number: 528-18-375

Building Number: 29

Approved: Project Director

Location: 3495 BAILEY AVE., BUFFALO, NY 14215

Issue Date: 08-09-2024 | Checked: DGG | Drawn: DGG

Drawing Number: M701

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