

MECHANICAL SYMBOL LIST

DUCTWORK

(NOT ALL SYMBOLS ARE NECESSARILY USED ON THIS PROJECT)

- SINGLE LINE DUCTWORK OR EQUIPMENT - NEW
- SINGLE LINE DUCTWORK OR EQUIPMENT - EXISTING
- DUCTWORK TO BE REMOVED
- DUCTWORK WITH ACOUSTIC LINING
- DUCT UNDER POSITIVE PRESSURE (SUPPLY AIR OR FAN DISCHARGE)
- DUCT UNDER NEGATIVE PRESSURE (RETURN, EXHAUST OR OUTSIDE AIR)
- VOLUME DAMPER
- FIRE DAMPER AND ACCESS DOOR
- BACK DRAFT DAMPER
- COMBINATION SMOKE & FIRE DAMPER W/ACCESS DOOR
- AUTOMATIC DAMPER
- AUTOMATIC SMOKE DAMPER
- RISE IN DUCTWORK (IN DIRECTION OF AIR FLOW)
- DROP IN DUCTWORK (IN DIRECTION OF AIR FLOW)
- CENTER LINE
- CUBIC FEET PER MINUTE
- DIAMETER
- POINT OF CONNECTION
- POINT OF DISCONNECTION
- RECTANGULAR CEILING DIFFUSER WITH 12" X 12" NECK 400 CFM SUPPLY AIR
- TYPE A CEILING DIFFUSER 400 CFM SUPPLY AIR
- 10" BY 8" CEILING REGISTER (CEILING GRILLE) 300 CFM RETURN AIR
- RECTANGULAR DIFFUSER WITH BLANKING PLATE
- 10" BY 6" TOP REGISTER, 150 CFM SUPPLY AIR
- 10" BY 6" TOP REGISTER (TOP GRILLE) 150 CFM RETURN AIR
- 10" BY 6" BOTTOM REGISTER (BOTTOM GRILLE) 150 CFM RETURN AIR
- VANED ELBOW (SEE DETAIL) OR RADIUS ELBOW
- FLEXIBLE DUCT
- DUCT FLEXIBLE CONNECTION
- VAV BOX TYPE A
- VAV BOX TYPE A WITH REHEAT COIL
- THERMOSTAT

PIPING

(NOT ALL SYMBOLS ARE NECESSARILY USED ON THIS PROJECT)

- NEW PIPE WITH DIRECTION OF FLOW
- EXISTING PIPING
- EXISTING PIPING TO BE REMOVED
- EXISTING PIPING TO BE ABANDONED
- PIPE DROP
- PIPE RISE
- FLANGED CONNECTION
- FLANGED END
- EXPANSION LOOP
- GATE VALVE
- ANGLE VALVE
- GLOBE VALVE
- ANGLE GLOBE VALVE
- NEEDLE VALVE COCK
- DRAIN VALVE
- LOCK SHIELD VALVE
- CHECK VALVE, SWING OR LIFT
- BUTTERFLY VALVE
- BALL VALVE
- AUTOMATIC CONTROL VALVE
- THREE-WAY AUTOMATIC CONTROL VALVE
- Y TYPE STRAINER W/BLOW OFF VALVE
- HOT WATER SUPPLY
- HOT WATER RETURN

ABBREVIATIONS

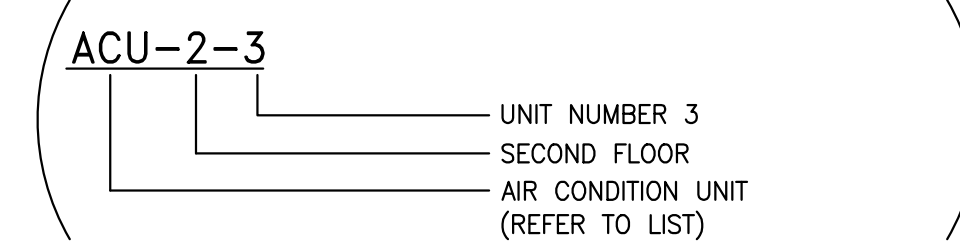
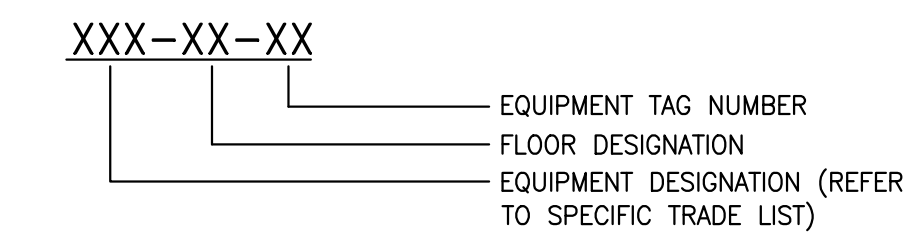
(NOT ALL ABBREV ARE NECESSARILY USED ON THIS PROJECT)

- AC AIR CONDITIONING
- ACU AIR CONDITIONING UNIT
- AD ACCESS DOOR
- AHU AIR HANDLING UNIT
- BG BOTTOM GRILLE
- BHP BRAKE HORSEPOWER
- BR BOTTOM REGISTER
- BT BOTTOM THROAT
- BTU BRITISH THERMAL UNIT
- BTUH BTU PER HOUR
- CD CEILING DIFFUSER
- CFM CUBIC FEET PER MINUTE
- CG CEILING GRILLE
- CLG CEILING
- COND CONDENSATE
- CR CEILING REGISTER
- CUH CABINET UNIT HEATER
- CV CONSTANT VOLUME
- DB DRY BULB
- DIA DIAMETER
- DMPR DAMPER
- DX DIRECT EXPANSION
- (E) EXISTING TO REMAIN
- (ER) EXISTING TO BE REMOVED
- (ERR) EXISTING TO BE REMOVED & RELOCATED
- EA EACH
- EAT ENTERING AIR TEMPERATURE
- EDB ENTERING DRY BULB TEMPERATURE
- EF EXHAUST FAN
- ELEV ELEVATION
- EWB ENTERING WET BULB
- EWT ENTERING WATER TEMPERATURE
- EXH EXHAUST
- F DEGREES FAHRENHEIT
- FA FREE AREA (SQ.FT.)
- FC FLEXIBLE CONNECTION
- FD FIRE DAMPER
- FIN FL FINISHED FLOOR
- FLA FULL LOAD AMPERES
- FPM FEET PER MINUTE
- GAL GALLON
- GPH GALLONS PER HOUR
- GPM GALLONS PER MINUTE
- HT HEIGHT
- HR HOUR
- HV HEATING AND VENTILATING
- HZ FREQUENCY
- IN INCH OR INCHES
- LAT LEAVING AIR TEMPERATURE
- LD LINEAR DIFFUSER
- LF LINEAR FEET
- LWB LEAVING WET BULB TEMPERATURE
- LWT LEAVING WATER TEMPERATURE
- MBH THOUSAND BTU PER HOUR
- MER MECHANICAL EQUIPMENT ROOM
- MIN MINIMUM
- (N) NEW
- NC NORMALLY CLOSED
- NIC NOT IN CONTRACT
- NO NORMALLY OPEN
- NO. NUMBER
- NTS NOT TO SCALE
- OA OUTSIDE AIR
- OAI OUTSIDE AIR INTAKE
- OED OPEN END DUCT
- PSI POUNDS PER SQUARE INCH
- PSIA PSI ABSOLUTE
- PSIG PSI GAUGE
- RA RETURN AIR
- (RE) RELOCATED EXISTING
- RH RELATIVE HUMIDITY
- RHC REHEAT COIL
- RPM REVOLUTIONS PER MINUTE
- (RR0) EXISTING TO BE REMOVED AND RETURN TO OWNER
- SA SUPPLY AIR
- SD SMOKE DAMPER
- SF SUPPLY FAN
- SP STATIC PRESSURE
- SPEC SPECIFICATION
- TEMP TEMPERATURE
- TG TOP GRILLE
- TR TOP REGISTER
- TYP TYPICAL
- UH UNIT HEATER
- VAV VARIABLE AIR VOLUME UNIT
- W WIDTH
- w/ WITH
- WB WET BULB

DEMOLITION NOTES

- ALL PIPING IN WALLS AND FLOORS NOT TO BE REUSED WILL BE PLUGGED OR CAPPED AND CUTTING AND PATCHING WILL BE PERFORMED TO RESTORE SURFACE TO ORIGINAL CONDITION BY THIS CONTRACTOR.
- AFTER REMOVING PIPE THROUGH THE FLOOR SLABS, PACK OPENING WITH APPROVED FIRE-RATED PACKING.
- THE CONTRACTOR SHALL INCLUDE IN HIS PRICE ALL COSTS ASSOCIATED WITH REMOVALS AND RELOCATIONS OF HVAC WORK AS DESCRIBED ON THE DRAWINGS AND IN THE SPECIFICATIONS WITH ALLOWANCES FOR EXPECTED OR UNFORESEEN DIFFICULTIES WHEN CONCEALED WORK HAS BEEN OPENED. NO CLAIMS FOR ADDITIONAL WORK ASSOCIATED WITH DEMOLITION WILL BE ACCEPTED, EXCEPT IN CERTAIN CASES CONSIDERED JUSTIFIABLE BY THE OWNER/ENGINEER.
- THE CONTRACTOR SHALL PERFORM DEMOLITION AND REMOVAL WORK WITH MINIMUM INTERFERENCE WITH FUNCTIONING HVAC SYSTEMS. ALL AFFECTED SYSTEMS SHALL BE RECONNECTED AND RESTORED.
- DEMOLITION AND REMOVAL WORK SHALL BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER. THE CONTRACTOR SHALL PATCH, REPAIR OR OTHERWISE RESTORE ANY DAMAGED INTERIOR OR EXTERIOR BUILDING SURFACE TO ITS ORIGINAL CONDITION.
- THE CONTRACTOR SHALL REMOVE ALL DUCT & PIPING SUPPORTS, ETC. FROM PARTITIONS THAT ARE TO BE REMOVED. WHERE THE REMOVAL OF THESE ITEMS DISRUPTS EXISTING PIPING THAT IS TO REMAIN, THE CONTRACTOR SHALL INSTALL AND PROVIDE BYPASS CONNECTIONS NECESSARY.
- ALL PIPING WHICH BECOMES EXPOSED DURING THE ALTERATION WORK SHALL BE REMOVED AND REROUTED CONCEALED BEHIND FINISHED SURFACES.
- PORTIONS OF PIPING & DUCTWORK TO BE REMOVED OR ABANDONED AS A RESULT OF DEMOLITION WORK, BUT WHICH ARE REQUIRED TO REMAIN ACTIVE, SHALL BE CUT AT CONVENIENT LOCATIONS, REROUTED AND RECONNECTED.
- THE CONTRACTOR SHALL NOTIFY THE OWNER AT THE APPROPRIATE TIME OF THE PROJECTED DEMOLITION AND PHASING SCHEDULE SO THAT REMOVAL OR RELOCATION OF AFFECTED UTILITIES MAY BE CARRIED OUT IN COORDINATION WITH THE PROJECT REQUIREMENTS.
- ALL EXISTING MATERIAL AND EQUIPMENT IN USABLE CONDITION, WHICH IS TO BE REMOVED UNDER THIS CONTRACT, SHALL REMAIN THE PROPERTY OF THE OWNER OR SHALL BE DISPOSED OF BY THE HVAC CONTRACTOR, AS DIRECTED BY THE OWNER.
- ARRANGE TO WORK CONTINUOUSLY, INCLUDING OVER TIME, IF REQUIRED, TO ASSURE THAT SYSTEMS WILL BE SHUT DOWN ONLY DURING THE TIME ACTUALLY REQUIRED TO MAKE THE NECESSARY CONNECTIONS TO THE EXISTING SYSTEMS.
- THE SHUTDOWN OF EXISTING BUILDING HVAC SERVICES SHALL BE COORDINATED WITH THE OWNER. MAKE ARRANGEMENTS AT LEAST 5 BUSINESS DAYS PRIOR TO A SHUTDOWN.
- CONTRACTOR SHALL COMPLY WITH ALL FEDERAL STATE & LOCAL REQUIREMENTS REGARDING DISPOSAL OF REFRIGERANTS.

HVAC EQUIPMENT DESIGNATIONS



GENERAL NOTES

- GENERAL NOTES, SYMBOL LIST AND DETAILS ARE APPLICABLE TO ALL HVAC/MECHANICAL DRAWINGS.
- ALL WORK IS NEW UNLESS OTHERWISE NOTED.
- DRAWINGS ARE DIAGRAMMATIC. DETERMINE LOCATIONS OF SYSTEMS AND COMPONENTS IN FIELD. RELOCATE EXISTING WORK THAT INTERFERES WITH WORK OF THIS CONTRACT.
- COORDINATE THIS WORK WITH THAT OF OTHER TRADES.
- DIMENSIONS SHOWN ON PLAN ARE HORIZONTAL. DIMENSIONS SHOWN IN ELEVATION ARE VERTICAL EXCEPT IN WAY OF STRUCTURAL STEEL. DIMENSIONS ARE MEASURED PERPENDICULAR TO FLANGE.
- NEITHER ACCURACY NOR COMPLETION OF SERVICES AND UTILITY LOCATIONS SHOWN ON DRAWINGS IS GUARANTEED. DETERMINE EXACT LOCATIONS OF EXISTING SERVICES AND UTILITIES IN FIELD, WHETHER OR NOT SHOWN ON DRAWINGS. EXERCISE CAUTION AND IDENTIFY LOCATIONS OF UNMARKED UTILITY LINES AS NECESSARY TO PERFORM WORK OF THIS SECTION.
- MANUFACTURERS MODEL NUMBERS ARE SPECIFIED SOLELY TO ESTABLISH STANDARDS OF QUALITY FOR PERFORMANCE AND MATERIALS.
- PRODUCT INSTALLATION SHALL ADHERE TO MANUFACTURERS RECOMMENDATIONS.
- PROVIDE ACCESS PANELS FOR EQUIPMENT THAT REQUIRES PERIODIC SERVICE.
- PROVIDE HANGERS, INSERTS, ANCHORS, SUPPLEMENTAL STEEL & SUPPORTS AS REQUIRED TO SUPPORT DUCTWORK, PIPING AND EQUIPMENT FROM STRUCTURE.
- SCHEDULE WORK OF THIS SECTION TO AVOID INTERFERING WITH EXISTING OPERATIONS IN THE FACILITY.
- RUN DUCTS AND PIPING CONCEALED, UNLESS OTHERWISE SPECIFIED AND CLEAR OF CEILING INSERTS.
- INSTALL THERMOSTATS 4"-6" ABOVE FINISHED FLOOR OR AS DIRECTED OTHERWISE BY ARCHITECT.
- STRUCTURAL WELDING SHALL BE CONTINUOUS 1/4" FILLET UNLESS REQUIRED OTHERWISE.

AIR SYSTEMS

- AIR SYSTEMS REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF AIR DEVICES.
- INTERNAL AIRFLOW DIMENSIONS ARE SHOWN FOR DUCTS. INCREASE DUCT SIZE AS NECESSARY TO MAINTAIN FREE FLOW AREA INDICATED.
- USE FLAT TRANSVERSE SEAM FOR DUCTWORK WHERE SPACE AVAILABLE DICTATES.
- DIFFUSER SIZES SHOWN ARE NECK SIZES. REGISTERS AND GRILLE SIZES ARE NOMINAL.
- PROVIDE VOLUME DAMPERS OR OTHER APPROVED BALANCING DEVICES AT DUCT BRANCHES AND RUN OUTS, AND AT REGISTER GRILLE AND DIFFUSER NECKS IN SUPPLY, RETURN AND EXHAUST DUCTWORK WHETHER SHOWN OR NOT.

PIPING SYSTEMS

- PITCH PIPING 1" IN 20' IN DIRECTION OF FLOW.

MECHANICAL DRAWING LIST

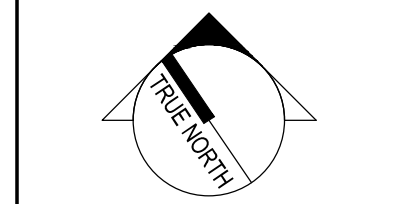
DRAWING NO.	DRAWING TITLE
M0.0	MECHANICAL COVER SHEET
M1.0	MECHANICAL FLOOR PLAN - DEMO AND NEW
M2.0	MECHANICAL SPECIFICATIONS
M2.1	MECHANICAL SPECIFICATIONS
M2.2	MECHANICAL SPECIFICATIONS

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REV	DESCRIPTION	DATE
0	ISSUED FOR CONSTRUCTION	2-27-17

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CURRENT ISSUE STATUS:



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MAINE MEDICAL CENTER
BRAMHALL CAMPUS
MRI #1 REPLACEMENT
PORTLAND, MAINE

MECHANICAL COVER SHEET

SHEET TITLE:



SCALE: NTS

PROJECT MANAGER: PROJECT NO: B180143-004

A/E OF RECORD:

JOB CAPTAIN:

DRAWN BY: DD

SMRT FILE: SHEET No.

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