MECHANICAL GENERAL NOTES:

- DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED IN THE CONTRACT. IT IS NOT INTENDED TO SPECIFY OR SHOW EVERY OFFSET, FITTING OR COMPONENT; HOWEVER, CONTRACT DOCUMENTS REQUIRE COMPONENTS AND MATERIALS WHETHER OR NOT INDICATED OR SPECIFICALLY SPECIFIED TO MAKE THE SYSTEMS BEING INSTALLED COMPLETE, CODE COMPLIANT, TESTED AND OPERATIONAL.
- CONTRACTOR SHALL FIELD VERIFY ALL LOCATIONS, DIMENSIONS AND ELEVATIONS PRIOR TO CONSTRUCTION.
- . ALL MATERIALS, EQUIPMENT, METHODS OF INSTALLATION, REMOVALS AND DISPOSAL SHALL BE IN ACCORDANCE WITH THE STANDARDS, REGULATIONS, CODES, ORDINANCES, AND LAWS OF LOCAL, STATE, AND FEDERAL GOVERNMENTS, AND OTHER AUTHORITIES THAT HAVE LAWFUL JURISDICTION.
- . PERFORM WORK, PROVIDE MATERIALS AND EQUIPMENT FOR SYSTEMS SHOWN, SPECIFIED AND DESCRIBED ON DRAWINGS. COMPLETELY COORDINATE ALL TRADES OF THIS CONTRACT AND PROVIDE COMPLETE AND FULLY FUNCTIONAL INSTALLATION. ALL WORK IN THIS SET TO BE COMPLETED UNDER THIS CONTRACT. UNLESS OTHERWISE INDICATED.
- . PROTECT ALL EXISTING AND NEW BUILDING ELEMENTS (INSTALLED BY OTHER CONTRACTS) FROM DAMAGE. CONTRACTOR SHALL RESTORE ALL DAMAGED ELEMENTS TO ORIGINAL OR BETTER
- WORK SHALL BE EXECUTED IN A WORKMANLIKE MANNER AND SHALL PRESENT NEAT, RECTILINEAR APPEARANCE WHEN COMPLETED. MAINTAIN MAXIMUM HEAD ROOM AT ALL TIMES. DO NOT RUN PIPES, DUCTS, AND CONDUIT EXPOSED UNLESS SHOWN AND NOTED TO BE EXPOSED ON DRAWINGS.
- MATERIALS AND EQUIPMENT SHALL BE NEW AND INSTALLED ACCORDING TO MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS. MAINTAIN MANUFACTURER'S EQUIPMENT
- B. CONTRACTOR IS RESPONSIBLE FOR ALL WORK RELATED TO ISOLATING, SHUTTING DOWN, DRAINING, FILLING AND TESTING SYSTEMS TO ALLOW FOR COMPLETION OF WORK. INTERRUPTIONS TO EXISTING SERVICES AND SYSTEMS SHALL BE AS SHORT AS POSSIBLE AND AT A TIME AND DURATION APPROVED BY THE OWNER AND UTILITY AS APPLICABLE. INCLUDE ALL PREMIUM TIME ASSOCIATED WITH INTERRUPTIONS. ALL SYSTEM INTERRUPTIONS SHALL BE SCHEDULED WITH OWNER, UTILITY AND COORDINATED WITH OTHER TRADE WORK.
- 9. ALL EQUIPMENT PIPING, WIRING, INSULATION ETC. INSTALLED IN HVAC AIR PLENUM SPACES SHALL MEET CODE REQUIREMENTS FOR SMOKE AND COMBUSTIBILITY.
- 10. SEAL ALL PENETRATIONS THROUGH FIRE RATED WALLS, PARTITIONS AND FLOORS WITH UL RATED MATERIALS/METHODS EQUIVALENT TO FIRE RATING OF ASSEMBLY.
- 1. COORDINATE ALL WALL/FOUNDATION PENETRATIONS WITH GENERAL CONTRACT AND SEAL WEATHERTIGHT. PROVIDE STAINLESS STEEL ESCUTCHEON PLATE/TRIM RING FOR EACH ABOVE GRADE PENETRATION (BOTH SIDES).
- 12. PROVIDE PROPER ACCESS TO EQUIPMENT THAT REQUIRES INSPECTION, REPLACEMENT OR REPAIR. ACCESS PANELS/DOORS SHALL BE A MINIMUM OF 12"x12", UNLESS OTHERWISE NOTED.
- 13. DO NOT SUPPORT EQUIPMENT FROM SUSPENDED CEILINGS. ALL SUPPORTS SHALL BE FROM BUILDING STRUCTURE OR FROM CEILING SUSPENSION SYSTEM WHICH HAS BEEN REINFORCED. SUPPORTS SHALL BE SELECTED AND INSTALLED TO PROVIDE A VIBRATION FREE INSTALLATION.
- 14. CLEANING DURING MECHANICAL WORK: CLEAN THE MECHANICAL ROOM AND ROOMS WORK WILL BE DONE TO MINIMIZE DISTURBANCE IN THE BUILDINGS. WORKERS ARE TO USE PATHWAYS AND FACILITIES AGREED UPON WITH THE DISTRICT DESIGNEE IN WRITING. THE AREA OUTSIDE THE BUILDING WHERE CUTTING WELDING OR STORAGE IS ALLOWED IS TO BE FENCED AT ALL TIMES. THE CONTRACTOR WILL ON A DAILY BASIS CLEAN THE GROUNDS AND THE BUILDING OF ANY DEBRIS OR GARBAGE GENERATED BY THEIR WORK.
- 15. MODIFICATIONS TO CONTROLS WILL BE PROVIDED BY EMF CONTROLS. 581 N STATE ROAD, STE 6, BRIARCLIFFE MANOR NY 10510-1556

HVAC REMOVAL NOTES:

- THE SCOPE OF REMOVAL SHOWN ON "REMOVALS" DRAWING IS DIAGRAMMATIC ONLY AND INDICATES THE INTENT OF THE WORK TO BE PERFORMED AND NOT THE COMPLETE SCOPE OF DEMOLITION AND/OR REMOVAL WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE OR RELOCATE ANY RELATED MECHANICAL DEVICES/ITEMS EVEN IF NOT SPECIFICALLY INDICATED TO BE REMOVED ON THESE DRAWINGS IN ORDER TO ACCOMODATE NEW WORK.
- EQUIPMENT/ITEMS SHOWN CROSS HATCHED ON DRAWINGS ARE ITEMS TO BE REMOVED. ANY DEVICES/ITEMS REMOVED SHALL INCLUDE (BUT SHALL NOT BE LIMITED TO) THE REMOVAL OF ALL ASSOCIATED PIPING, CONTROLS, ETC. THAT ARE NOT INCORPORATED IN THE NEW LAYOUT. THE CONTRACTOR SHALL PERFORM ALL WORK REQUIRED TO INSURE CONTINUITY OF SERVICE TO EXISTING REMAINING EQUIPMENT. NO EXTRAS RELATING TO THE SCOPE OF WORK DESCRIBED WILL BE
- EQUIPMENT, PIPING, ETC. REQUIRED TO RECONNECT SHALL BE INSTALLED CONCEALED WITHIN THE SUSPENDED CEILINGS, PARTITIONS AND/OR WALLS, FLOORS. NO SURFACE MOUNTED OR EXPOSED EQUIPMENT, PIPING, ETC., SHALL BE PERMITTED, UNLESS SPECIFICALLY INDICATED.
- ALL ITEMS TO BE REMOVED SHALL BE REVIEWED WITH THE OWNER PRIOR TO REMOVAL. OWNER SHALL HAVE FIRST SALVAGE RIGHTS. ITEMS THE OWNER WISHES TO KEEP SHALL BE REMOVED WITH CARE AND STORED AS DIRECTED BY OWNER. ITEMS THE OWNER DOES NOT WISH TO KEEP SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY.

MECHANICAL SYMBOLS - THERMOSTAT - ARROW INDICATES → NEW PIPING, DUCTWORK, → PIPE ELBOW UP AND EQUIPMENT DEVICE/ZONE CONTROL - EXISTING TO REMAIN PIPING, FREEZESTAT GAUGE WITH BALL VALVE DUCTWORK, AND EQUIPMENT STATIC PRESSURE SENSOR PIPING, DUCTWORK, AND AUTOMATIC AIR VENT EQUIPMENT FOR REMOVAL - TEMPERATURE SENSOR W/CONTROL → BALL VALVE MANUAL AIR VENT WIRING AND 1/2" CONDUIT WITH CLEAR PLASTIC GUARD(LOCKABLE) HUMIDITY SENSOR ← CHECK VALVE PIPE CAP FLOW SENSOR CONTROL VALVE - 2 WAY PIPE BREAK \longmapsto - DUCT SMOKE DETECTOR DRAIN VALVE WITH HOSE BIB → PIPE FLOW ARROW - VARIABLE FREQUENCY DRIVE REVISION NOTE \leftarrow \rightarrow \rightarrow UNION ROUND DUCTWORK STRAINER WITH BLOWDOWN KEYED NOTE - POINT OF NEW CONNECTION - 4- WAY CEILING SUPPLY DIFFUSER → → → → REDUCER OR INCREASER - BRANCH FROM BOTTOM OF PIPE LIMIT OF REMOVAL - CEILING EXHAUST/RETURN REGISTER → → → − BRANCH FROM TOP OF PIPE FLOW ARROW -√- DIFFUSER/GRILLE LABEL NEW VALVE OR ENCLOSURE → PIPE ELBOW DN - CAP - REMOVE VALVE OR ENCLOSURE FIRE DAMPER SMOKE DAMPER FIRE AND SMOKE DAMPER DOUBLE LINE SINGLE LINE DOUBLE LINE SINGLE LINE → — — — MANUAL VOLUME DAMPER RETURN/EXHAUST AIR RECTANGULAR ELBOW DN AUTOMATIC AIR DAMPER ROUND ELBOW UP \leftarrow INTERLOCKED WITH EQUIPMENT ← ROUND ELBOW DN - DUCT SMOKE DETECTOR → CENTERED TRANSITION → FLEXIBLE CONNECTION SUPPLY/OUTSIDE AIR → OFFSET TRANSITION RECTANGULAR ELBOW UP SUPPLY/OUTSIDE AIR → SQUARE TO ROUND TRANSITION RECTANGULAR ELBOW DN - RETURN/EXHAUST AIR - RADIUS ELBOW RECTANGULAR ELBOW UP 45° DEGREE LEADING EDGE → → - MITERED ELBOW WITH TURNING BRANCH TAKEOFF

COORDINATION NOTE: . COORDINATION- IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL AND MECHANICAL CONTRACTORS TO COORIDNATE THEIR WORK. THE HVAC CONTRACTOR SHALL TAKE THE LEAD IN THE COORDINATION EFFORT AND PRODUCE THE COORDINATION DRAWINGS. COORDINATION DRAWINGS SHALL BE SUBMITTED FOR APPROVAL TO THE ENGINEER PRIOR TO STARTING ANY WORK. CEILING SPACE IS VERY LIMITED AND DUCTWORK/PIPING INSTALLATION AND LOCATION IS CRITIAL. THE PURPOSE OF THESE DRAWINGS IS TO COORDINATE THE LOCATIONS OF ALL PIPING, DUCTWORK, AND ASSOCIATED ELECTRICAL EQUIPMENT. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED AND LOCATED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC). MECHANICAL EQUIPMENT CANNOT INFILTRATE THE ELECTRICAL EQUIPMENTS WORKING CLEARANCE AND WORKING SPACE, NOR CAN IT BE INSTALLED DIRECTLY ABOVE OR BELOW TO THE STRUCTURE, AS IDENTIFIED WITHIN THE NEC, ARTICLE 110 -"REQUIREMENTS FOR ELECTRICAL INSTALLATION". THIS COORDINATION IS REQUIRED FOR ALL PHASES OF THIS PROJECT. FAILURE TO FOLLOW THIS PROCEDURE DOES NOT RELIEVE THE CONTRACTOR FROM THE DUTIES AND WILL NOT CONSTITUTE A

REASON FOR A CHANGE ORDER.

HVAC ABBREVIATIONS

AUTOMATIC AIR DAMPER

ACCESS DOOR

AMPERAGE

CONDENSATE

DIAMETER

DOWN

AIR HANDLING UNIT

BACKDRAFT DAMPER

BRAKE HORSEPOWER

BRITISH THERMAL UNIT

CUBIC FEET PER MINUTE

DRYBULB TEMPERATURE

DEWPOINT TEMPERATURE

ENTERING AIR TEMPERATURE

EXTERNAL STATIC PRESSURE

DIRECT EXPANSION

EXHAUST AIR

EXHAUST FAN

EXHAUST GRILLE

EFFICIENCY

EXHAUST

FAHRENHEIT

FIRE DAMPER

FINAL FILTER

FREEZESTAT

FT WG FEET OF WATER GAUGE

GALLON

HEAD

HORSEPOWER

GPM

SEN

TSTAT

GALLONS PER MINUTE

MIXED AIR TEMPERATURE

MINIMUM BRANCH CIRCUIT AMPACITY

MAKE-UP AIR UNIT

OUTSIDE AIR INTAKE

REFRIGERANT LIQUID

REVOLUTIONS PER MINUTE

SUPPLY AIR TEMPERATURE

TESTING, ADJUSTING, BALANCE

REFRIGERANT SUCTION

PRESSURE DROP

REMOVE

RETURN AIR

SATISFACTORY

SENSIBLE HEAT

SPECIFIC GRAVITY

STATIC PRESSURE

VOLUME DAMPER

THERMOSTAT

TYPICAL

WETBULB

WATER GAUGE

HEAT PUMP

TEMPERATURE DIFFERENCE

1,000 BTU/HR

OUTSIDE AIR

FEET PER MINUTE

FLOOR

FEET

FT HD FEET OF HEAD

DIRECT DIGITAL CONTROL (SYSTEM)

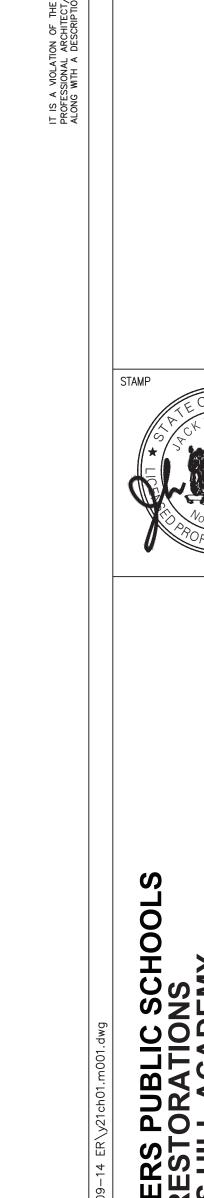
AIR COOLED CONDENSING UNIT

BUILDING MANAGEMENT SYSTEM

Eisenbach & Ruhnke Engineering.

<u>Ph: 315-735-1916 Fax: 315-735-6365</u> www.erengpc.com

CONSULTANT(S):



YOU FIR CR(E&R PROJECT NO. Y21CH01 10929

DATE BY ISSUED FOR BID DRAWN BY CHECKED BY ARCH E1 30" x 42" SHEET SIZE AS NOTED

SHEET TITLE ABBREVIATIONS

AND SYMBOLS