

HVAC GENERAL NOTES

- 1. CONTRACTOR SHALL CAREFULLY REVIEW THESE PLANS AND SPECIFICATIONS PRIOR TO BID. CONTRACTOR SHALL ALSO REVIEW PLANS AND SPECIFICATIONS OF OTHER RELATED TRADES (INCLUDING ARCHITECTURAL, CIVIL, STRUCTURAL AND ELECTRICAL) PRIOR TO BID TO ENSURE AN ACCURATE UNDERSTANDING OF EXACT SCOPE OF WORK. ANY ITEMS REQUIRING CLARIFICATION SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT IN SUFFICIENT TIME TO BE INCORPORATED INTO THE BID.
2. CONTRACTOR SHALL VERIFY ALL EQUIPMENT MODEL NUMBERS, CAPACITIES, SIZES, VOLTAGES, AND ALL OTHER SCHEDULED INFORMATION WITH ALL OTHER APPLICABLE TRADES AND WITH THE MANUFACTURER PRIOR TO INSTALLATION.
3. CONTRACTOR SHALL VERIFY ALL LOCATIONS, SIZES, P.O.C.'S, AND AVAILABILITY OF ALL EXISTING ITEMS (I.E.: OUTSIDE AIR, EXHAUST ETC.) PRIOR TO INSTALLATION OF ANY MATERIAL OR EQUIPMENT.
4. THESE DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC AND ARE NOT INTENDED TO INDICATE ALL NECESSARY OFFSETS OF DUCTWORK AND PIPING. THE CONTRACTOR SHALL INSTALL MATERIAL AND EQUIPMENT IN A MANNER AS TO CONFORM TO STRUCTURE, AVOID OBSTRUCTIONS, PRESERVE HEADROOM, AND KEEP OPENINGS AND PASSAGEWAYS CLEAR. ALL INSTALLATIONS SHALL BE CONSISTENT WITH NORMALLY ACCEPTABLE INDUSTRY STANDARDS. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES OR CONFLICTS THAT WOULD AFFECT THE SYSTEM PERFORMANCE OR WHICH WOULD INCUR ADDITIONAL COSTS. THIS NOTIFICATION SHALL BE MADE PRIOR TO THE INSTALLATION OF THE ITEMS CONCERNED.
5. NEW AND/OR EXISTING EQUIPMENT INDICATED ON THIS DRAWING IS SHOWN IN APPROXIMATE POSITION(S). CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS INCLUDING EQUIPMENT LOCATIONS, P.O.C.'S AND STRUCTURAL MEMBERS PRIOR TO INSTALLATION. IN ALL CASES, ADEQUATE ACCESS (PER MANUFACTURER'S RECOMMENDATIONS AND CODE COMPLIANCE) FOR MAINTENANCE AND REPLACEMENT OF EQUIPMENT SHALL BE PROVIDED.
6. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE CODES. NOTHING SHOWN IN THE PLANS OR STATED IN THE SPECIFICATIONS IS INTENDED TO INDICATE THAT THE INSTALLATION OF CONNECTIONS OF ANY ITEM OR DEVICE SHOULD BE DONE CONTRARY TO THE MANUFACTURER'S INSTRUCTIONS AND ALL APPLICABLE CODES AND REGULATIONS. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT THE INSTALLATION AND CONNECTIONS OF ALL ITEMS AND DEVICES CONFORM TO MANUFACTURER'S INSTRUCTIONS AND TO ALL APPLICABLE CODES AND REGULATIONS.
7. ALL HVAC EQUIPMENT, MATERIAL, AND ALL CONNECTION THERETO SHALL BE INSTALLED COMPLETE PER MANUFACTURER'S INSTRUCTIONS TO PROVIDE A COMPLETE AND FULLY OPERATIONAL SYSTEM.
8. DUCT SIZES INDICATED ON DRAWINGS ARE INSIDE NET CLEARANCE DIMENSIONS.
9. CONTRACTOR MAY, AT HIS OPTION, WITH PRIOR APPROVAL FROM ENGINEER REVISE DUCTWORK SIZING AND ROUTING TO ALLOW FOR INSTALLATION IN THE AVAILABLE SPACE. DUCTWORK THAT IS RESIZED MUST MAINTAIN THE SAME CROSS-SECTIONAL AREA.
10. ALL NEW SUPPLY, RETURN, AND EXHAUST (AIR DISTRIBUTION) GRILLES, REGISTERS, AND DIFFUSERS SHALL MATCH (IF APPLICABLE) EXISTING, AND BE APPROVED BY ARCHITECT. THE MAXIMUM NOISE NC LEVEL SHALL BE 25.
11. ALL SUPPLY, RETURN, AND EXHAUST REGISTER CONNECTIONS TO DUCTWORK SHALL BE PROVIDED WITH ACCESSIBLE MANUAL VOLUME DAMPERS. ALTERNATIVELY, ACCESSIBLE MANUAL VOLUME DAMPERS MAY BE PROVIDED IN DUCT WORK FEEDER LINES SERVING INDIVIDUAL REGISTERS. PROVIDE ACCESS DOOR AND PANEL AS REQUIRED.
12. SUBSTITUTION OF HVAC EQUIPMENT WITH EFFICIENCIES LOWER THAN THOSE INDICATED ON THE PLANS IS NOT PERMITTED.
13. IF THE CONTRACTOR'S USE OF SUBSTITUTE MATERIALS, EQUIPMENT, OR METHODS OF INSTALLATION REQUIRES ANY CHANGES IN OTHER TRADES' WORK FROM THAT SHOWN ON THE DRAWINGS, THE EXTRA COST OF THE OTHER TRADES' WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR INITIATING THE SUBSTITUTION.
14. SUBMITTALS: APPROVAL OF SUBMITTALS DOES NOT RELEASE THE CONTRACTOR FROM OBLIGATIONS TO COMPLY WITH ALL REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS OR APPLICABLE CODE REGULATIONS.
15. WHERE NONMETALLIC PIPING PENETRATES AREA SEPARATION WALLS, THE PIPE SECTION PASSING THROUGH THE WALLS AND THE FIXTURE CONNECTIONS THERETO SHALL BE OF METAL ONLY.
17. PROVIDE BALANCING DAMPERS ON ALL OUTSIDE AIR, EXHAUST AIR, SUPPLY AIR AND RETURN AIR SYSTEMS THROUGH OUT. DAMPERS ARE NOT INDICATED ON PLANS BUT ARE REQUIRED AT ALL BRANCH TAKE-OFFS.
18. PROVIDE TURNING VANES ON ALL 90 DEGREE SQUARE ELBOWS.
19. PROVIDE FLEXIBLE DUCT CONNECTIONS WITH MINIMUM 1" GAP ON THE SUPPLY AND RETURN DUCT CONNECTIONS ON ALL FANS.
20. ALL SUPPLY AND RETURN DUCTWORK FROM AC UNITS SHALL BE LINED WITH 1" ACOUSTIC INSTALLATION TO MINIMUM 15 FEET FROM THE FAN UNLESS NOTED TO BE LONGER. PROVIDE PERFORATED LINING. DUCT SIZE SHALL BE INCREASED TO PROVIDE THE CLEAR INSIDE DIMENSIONS AS NOTED ON PLANS.
21. COMMERCIAL GREASE KITCHEN EXHAUST DUCTS SHALL BE INSULATED WITH 2 HOUR RATED FIRE WRAP OR EQUIVALENT.
22. VERIFY MECHANICAL EQUIPMENT LOCATION & DUCT ROUTING WITH ENGINEERING PRIOR TO CONSTRUCTION.
23. ALL MECHANICAL CERTIFICATE OF ACCEPTANCE FORMS AND ALL RELATED ACCEPTANCE DOCUMENTS SHALL BE SUBMITTED TO THE FIELD INSPECTOR DURING CONSTRUCTION. CERTIFICATE OF OCCUPANCY WILL NOT BE ISSUED UNTIL THESE FORMS ARE REVIEWED AND APPROVED.
24. MCH-04-A FORM FOR DUCT LEAKAGE SEALING AND TESTING SHALL BE SUBMITTED TO THE FIELD INSPECTOR DURING CONSTRUCTION. CERTIFICATE OF OCCUPANCY WILL NOT BE ISSUED UNTIL THESE FORMS ARE REVIEWED AND APPROVED.
25. INSULATION MATERIAL SHALL MEET THE CALIFORNIA QUALITY STANDARD PER SECTION 110.8 ENERGY EFFICIENCY STANDARDS (E.E.S.)
26. DOOR AND WINDOWS SHALL MEET THE MINIMUM INFILTRATION REQUIREMENTS PER SECTIONS 110.6 AND 110.7 E.E.S.
27. ALL PIPING AND DUCT WORK SHALL BE INSULATED CONSISTENT WITH THE REQUIREMENTS OF SECTIONS 120.3, 120.4 AND 120.7 TITLE 24 ENERGY STANDARDS AND CHAPTER 6 OF CMC 2019.
28. ALL HVAC SYSTEMS SHALL MEET THE CONTROL REQUIREMENTS PER SECTION 110.2 AND 120.2 OF E.E.S.
29. ALL HVAC EQUIPMENT AND APPLIANCES SHALL MEET THE REQUIREMENTS PER SECTION 110.1-110.3, 110.5, 120.1-120.4 OF TITLE 24 ENERGY STANDARDS.
30. KITCHEN VENTILATION SYSTEMS SHALL MEET THE REQUIREMENTS OF SECTION 110.2, 120.6 AND 120.8 OF E.E.S.
31. CALIFORNIA MECHANICAL CODE (CMC 2019) AND 2019 TITLE 24 ENERGY STANDARDS ARE THE CODES/STANDARDS THAT ARE APPLICABLE TO THIS PROJECT.

CALIFORNIA GREEN BUILDING STANDARDS CODE 2019

- 1. ALL HVAC DUCTS ARE REQUIRED TO BE SEALED WITH MASTIC AND SHALL BE TESTED. CONCEALED DUCT SHALL BE INSULATED WITH MIN R-8 DUCT INSULATION.
2. AT THE TIME OF ROUGH INSTALLATION OR DURING STORAGE ON THE CONSTRUCTION SITE AND UNTIL START-UP OF THE HEATING AND COOLING EQUIPMENT, ALL DUCTS AND OTHER RELATED AIR DISTRIBUTION COMPONENT EQUIPMENT SHALL BE COVERED WITH TAPE, PLASTIC, SHEETMETAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF DUST OR DEBRIS WHICH MAY COLLECT IN THE SYSTEM. CGBC 5.504.3
3. BASED ON THESE PLANS, THE MECHANICAL/BALANCING CONTRACTOR SHALL PROVIDE A TESTING AND ADJUSTING PLAN AND SHALL FOLLOW IT AS PER CALIFORNIA GREEN BUILDING STANDARDS CODE. SECTION 5.410.4.
4. IN MECHANICAL VENTILATED BUILDINGS, PROVIDE REGULARLY OCCUPIED AREAS OF THE BUILDING WITH AIR FILTRATION MEDIA FOR OUTSIDE AND RETURN AIR PRIOR OCCUPANCY THAT PROVIDES AT LEAST A MERV 13. CGBC 5.504.5.3
5. BUILDINGS SHALL MEET OR EXCEED THE PROVISIONS OF CALIFORNIA BUILDING CODE, CCR, TITLE 24, PART 2, SECTIONS 1203 (VENTILATION) AND CHAPTER 14 (EXTERIOR WALLS). FOR ADDITIONAL MEASURES NOT APPLICABLE TO LOW-RISE RESIDENTIAL OCCUPANCIES, SEE SECTION 5.407.2 OF THIS CODE. CGBC 5.505.1
7. FOR MECHANICALLY OR NATURALLY VENTILATED SPACES IN BUILDINGS, MEET THE MINIMUM REQUIREMENTS OF SECTION 120.1 (REQUIREMENTS FOR VENTILATION) OF THE 2019 CALIFORNIA ENERGY CODE, OR THE APPLICABLE LOCAL CODE, WHICHEVER IS MORE STRINGENT, AND DIVISION 1, CHAPTER 4 OF CCR, TITLE 8. CGBC 5.506.1
8. FOR BUILDINGS OR ADDITIONS EQUIPPED WITH DEMAND CONTROL VENTILATION, CO2 SENSORS AND VENTILATION CONTROLS SHALL BE SPECIFIED AND INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2019 CALIFORNIA ENERGY CODE, SECTION 120(C)(4). CGBC 5.506.2
9. TESTING AND ADJUSTING SYSTEMS SHALL BE REQUIRED FOR BUILDING LESS THAN 10,000 SQFT. CGBC 5.410.4.
10. DEVELOP A WRITTEN PLAN OF PROCEDURES FOR TESTING AND ADJUSTING SYSTEMS. SYSTEMS TO BE INCLUDED FOR TESTING AND ADJUSTING SHALL INCLUDE, AS APPLICABLE TO THE PROJECT, THE SYSTEMS LISTED IN SECTION 5.410.4.2.
11. PERFORM TESTING AND ADJUSTING PROCEDURES IN ACCORDANCE WITH APPLICABLE STANDARDS ON EACH SYSTEM AS DETERMINED BY THE ENFORCING AGENCY. 5.410.4.3. BEFORE A NEW SPACE-CONDITIONING SYSTEM SERVING A BUILDING IS OPERATED FOR NORMAL USE, BALANCE IN ACCORDANCE WITH THE PROCEDURES DEFINED BY NATIONAL STANDARDS LISTED IN SECTION 5.410.4.3.1. OR AS APPROVED BY THE ENFORCING AGENCY.
12. AFTER COMPLETION OF TESTING, ADJUSTING AND BALANCING, PROVIDE A FINAL REPORT OF TESTING SIGNED BY THE INDIVIDUAL RESPONSIBLE FOR OPERATING THESE SERVICES.
13. PROVIDE THE BUILDING OWNER WITH DETAILED OPERATING AND MAINTENANCE INSTRUCTIONS AND COPIES OF WARRANTIES FOR EACH SYSTEM PRIOR TO FINAL INSPECTION. INCLUDE A COPY OF ALL INSPECTION VERIFICATIONS AND REPORTS REQUIRED BY THE ENFORCING AGENCY.
14. IF THE HVAC SYSTEM IS USED DURING CONSTRUCTION, USE RETURN AIR FILTERS WITH A MERV OF 8, BASED ON ASHRAE 52.2-1999, OR AN AVERAGE EFFICIENCY OF 30% BASED ON ASHRAE 52.1-1992. REPLACE ALL FILTERS IMMEDIATELY PRIOR TO OCCUPANCY. APPLIES TO ADDITIONS OR ALTERATIONS.
15. INSTALL HVAC AND REFRIGERATION EQUIPMENT THAT DOES NOT CONTAIN CFCs. CGGB 5.508.1.1.
16. INSTALL FIRE SUPPRESSION EQUIPMENT THAT DOES NOT CONTAIN HALONS. CGBC 5.508.1.2.
17. ADHESIVES, ADHESIVE BONDING PRIMERS, ADHESIVE PRIMERS, SEALANT, SEALANT PRIMERS AND CAULS SHALL COMPLY WITH LOCAL OR REGIONAL AIR POLLUTION CONTROL OR AIR QUALITY MANAGEMENT DISTRICT RULES WHERE APPLICABLE, OR SCAQMD RULE 1168 VOC LIMITS, AS SHOWN IN CALGREEN TABLES 5.504.4.2. SUCH PRODUCTS SHALL COMPLY WITH THE RULE 1168 PROHIBITION ON THE USE OF CERTAIN TOXIC COMPOUNDS (CHLOROFORM, ETHYLENE DICHLORIDE, METHYLENE CHLORIDE, PERCHLOROETHYLENE AND TRICHLOROETHYLENE), EXCEPT FOR AEROSOL PRODUCTS AS SPECIFIED BELOW. AEROSOL ADHESIVES, AND SMALLER UNIT SIZES OF ADHESIVES, AND SEALANT OR CAULKING COMPOUNDS IN UNITS OF PRODUCT, LESS PACKAGING, WHICH DO NOT WEIGH MORE THAN ONE POUND AND DO NOT CONSIST OF MORE THAN 16 FLUID OUNCES) SHALL COMPLY WITH STATEWIDE VOC STANDARDS AND OTHER REQUIREMENTS, INCLUDING PROHIBITIONS ON USE OF CERTAIN TOXIC COMPOUNDS, OF CALIFORNIA CODE OF REGULATIONS, TITLE 17, COMMENCING WITH SECTION 94507.

SPECIAL HANGING REQUIREMENTS

- 1. FOR ALL ITEMS AND EQUIPMENT BEING SUPPORTED FROM ROOF DECK, SUBMIT COORDINATION DRAWINGS CLEARLY SHOWING DETAILS OF FIELD CONNECTIONS, ANCHORAGE, AND THE RELATIONSHIP TO THE WORK OF OTHERS.
2. MECHANICAL CONTRACTOR TO ACQUIRE SPECIAL HANGER SUPPORTS FROM THE CUSTOM ROOF DECK MANUFACTURER. SUBMIT SHOP DRAWING AND HANGER DATA SHEET FOR APPROVAL.

FIRE DEPARTMENT NOTES

- 1. SMOKE DETECTORS INSTALLED IN EXTERIOR ENVIRONMENT SHALL BE LISTED AND SHALL BE WEATHER PROOF LISTED.
2. THE SMOKE DETECTOR(S) RELAY SHALL SHUT DOWN AIR-MOVING SYSTEMS IN ALL MODES OF OPERATION.
3. RELAYS USED TO INITIATE CONTROL OFF THE HVAC UNIT SHUTDOWN SHALL BE LISTED FOR FIRE ALARM USE, AND LOCATED WITHIN THREE (3) FEET OF THE CONTROLLED CIRCUIT.
4. THE HVAC CONTRACTOR OR COMMISSIONING CONTRACTOR SHALL PROVIDE THE DOCUMENTATION OF THE DIFFERENTIAL PRESSURE ACROSS THE DUCT SMOKE DETECTOR'S SAMPLING TUBES, ALONG WITH THE MANUFACTURER'S INSTALLATION MANUAL FOR THE DUCT SMOKE DETECTOR SHOWING THE LISTED DIFFERENTIAL PRESSURE RANGE.
5. HVAC SYSTEM'S SMOKE DETECTOR(S) SHALL ACTIVATE THE VISIBLE AND AUDIBLE SIGNAL AT AN APPROVED LOCATION. THE SIGNALS SHALL BE IDENTIFIED AS AIR DUCT DETECTOR SUPERVISORY SIGNAL AND DUCT SMOKE DETECTOR TROUBLE SIGNAL, IN ACCORDANCE WITH CFC 907.3.1. THIS APPLIES TO BUILDINGS THAT DO NOT CONTAIN A FIRE ALARM CONTROL PANEL.

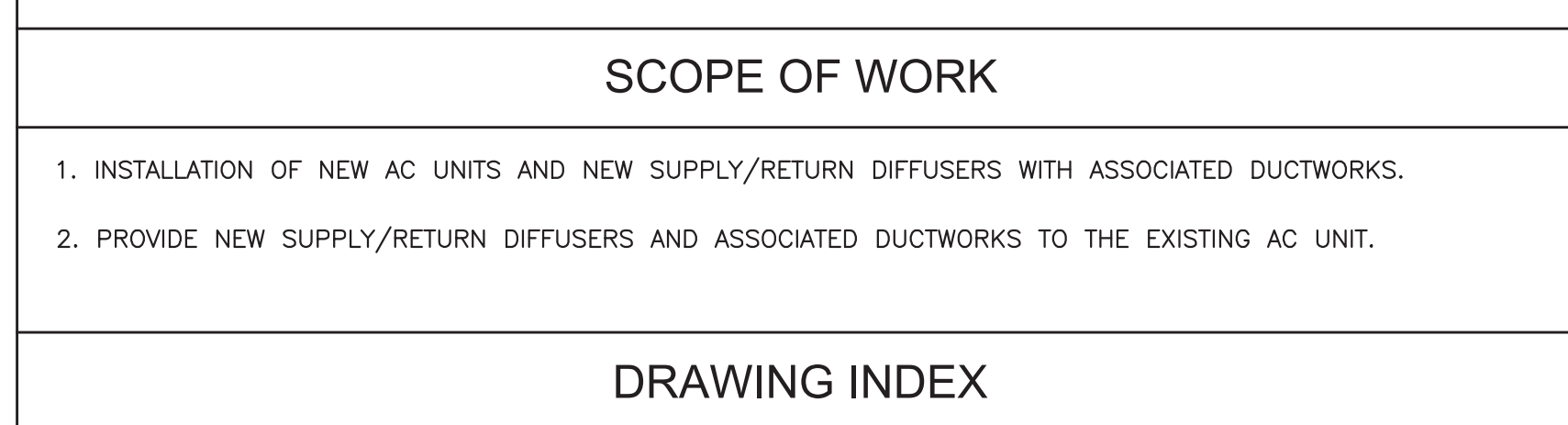
MECHANICAL SPECIFICATIONS

- 1. GENERAL PROVISIONS - THE GENERAL CONDITIONS, SUPPLEMENTS AND AMENDMENTS SHALL GOVERN THIS DIVISION OF THE SPECIFICATIONS.
2. PROJECT REQUIREMENTS - PROVIDE ALL ITEMS, MATERIALS, EQUIPMENT AND LABOR REQUIRED TO COMPLETE THE WORK OR OPERATIONS MENTIONED HEREIN, OR INDICATED ON THE DRAWINGS AND REASONABLY INFERRED THEREIN, AS REQUIRED TO MAKE A COMPLETE AND WORKING SYSTEM.
3. INTENT - WORK SHALL BE DONE IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS AND THEIR INTENT, COMPLETE WITH ALL NECESSARY COMPONENTS, INCLUDING THOSE NOT NORMALLY SHOWN OR CALLED FOR, AND SHALL BE READY FOR OPERATION BEFORE ACCEPTANCE.
ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE CODES. NOTHING SHOWN IN THE PLANS OR STATED IN THE SPECIFICATIONS IS INTENDED TO INDICATE THAT THE INSTALLATION OR CONNECTIONS OF ANY ITEM OR DEVICE SHOULD BE DONE CONTRARY TO MANUFACTURERS INSTRUCTIONS AND ALL APPLICABLE CODES AND REGULATIONS. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT THE INSTALLATION AND CONNECTIONS OF ALL ITEMS AND DEVICES CONFORMS TO MANUFACTURERS INSTRUCTIONS AND TO ALL APPLICABLE CODES AND REGULATIONS.
ANY REFERENCE TO THE DESIGN AUTHORITY SHALL MEAN MR ENGINEERING, INC.
THE WORK "PROVIDE" SHALL MEAN "SUPPLY AND INSTALL" UNLESS OTHERWISE INDICATED.
4. GOVERNING REGULATIONS - THE WORK UNDER MECHANICAL SCOPE OF WORK, SHALL CONFORM, BUT NOT LIMITED TO THE REQUIREMENTS OF THE FOLLOWING CODES, REGULATIONS AND STANDARDS:
- 2019 EDITIONS OF THE CALIFORNIA BUILDING CODE, INCLUDING BUT NOT LIMITED TO THE MECHANICAL, PLUMBING, FIRE AND ENERGY CODES.
- SMACNA PUBLICATIONS, INCLUDING BUT NOT LIMITED TO, HVAC DUCT CONSTRUCTION STANDARDS AND GUIDELINES FOR SEISMIC RESTRAINT OF MECHANICAL SYSTEMS.
- AABC OR NEBB REGULATIONS GOVERNING TESTING AND BALANCING AND COMMISSIONING OF SYSTEMS.
- OSHA REGULATIONS.
5. PERMITS - OBTAIN ALL REQUIRED PERMITS AND PAY ALL FEES THEREFORE AND COMPLY WITH ALL LOCAL AND STATE REGULATIONS, CODES AND BY-LAWS APPLICABLE TO THE WORK.
6. RESPONSIBILITY - VISIT THE SITE BEFORE SUBMITTING A BID AND EXAMINE ALL LOCAL AND EXISTING CONDITIONS ON WHICH THE WORK IS DEPENDENT.
NO CONSIDERATION WILL BE GRANTED FOR ANY MISUNDERSTANDING OF WORK TO BE DONE RESULTING FROM FAILURE TO VISIT THE SITE.
WHEN THE CONTRACT DOCUMENTS DO NOT CONTAIN SUFFICIENT INFORMATION FOR THE PROPER SELECTION OF EQUIPMENT FOR BIDDING, NOTIFY THE DESIGN AUTHORITY DURING THE BIDDING PERIOD. IF CLARIFICATION CANNOT BE OBTAINED, ALLOW FOR THE MOST EXPENSIVE ARRANGEMENT. FAILURE TO DO THIS SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO SUPPLY THE INTENDED EQUIPMENT AND OR INSTALLATION.
CHECK DRAWINGS OF ALL TRADES AND SITE SURVEY TO VERIFY SPACE AVAILABILITY FOR THE INSTALLATION. COORDINATE WORK WITH ALL TRADES AND MAKE CHANGES TO FACILITATE SATISFACTORY INSTALLATION. MAKE NO DEVIATIONS TO THE DESIGN INTENT INVOLVING EXTRA COST TO THE OWNER WITHOUT DESIGN AUTHORITY WRITTEN APPROVAL.
7. WORKMANSHIP - WORKMANSHIP SHALL BE IN ACCORDANCE WITH WELL ESTABLISHED PRACTICE AND STANDARDS ACCEPTED AND RECOGNIZED BY DESIGN AUTHORITY AND THE TRADE.
EMPLOY ONLY TRADESMEN HOLDING VALID TRADE QUALIFICATION CERTIFICATES. TRADESMEN SHALL PERFORM ONLY WORK THAT THEIR CERTIFICATE PERMITS.
8. DRAWING AND MEASUREMENTS - DRAWINGS ARE GENERALLY DIAGRAMMATIC AND ARE INTENDED TO INDICATE THE SCOPE AND GENERAL ARRANGEMENT OF WORK. DO NOT SCALE DRAWINGS.
TAKE FIELD MEASUREMENTS WHERE EQUIPMENT AND MATERIAL DIMENSIONS ARE DEPENDENT UPON BUILDING DIMENSIONS.
9. SUBMITTALS - SUBMIT THREE SETS OF ALL EQUIPMENT AND RELATED MATERIAL FOR APPROVAL PRIOR TO ORDERING. AFTER 10 DAYS FROM CONTRACT AWARD, SUBMIT DUCT SHOP DRAWINGS TO ARCHITECT FOR ENGINEERS REVIEW.
10. RECORD DRAWINGS - MAINTAIN ONE CONTRACT DRAWING, WHITE PRINT, ON SITE, SOLELY FOR THE PURPOSE OF RECORDING, IN RED, ANY CHANGES AND/OR DEVIATION FROM THE CONTRACT DRAWINGS AS IT OCCURS.
AT THE COMPLETION OF THE PROJECT, CERTIFY THE ABOVE-MENTIONED DRAWINGS AS BEING ACCURATE AND COMPLETE BY LABELLING IN THE LOWER RIGHT HAND CORNER IN LETTERS OF AT LEAST 1/4 INCH HIGH AS FOLLOWS: "AS-BUILT DRAWINGS. DATED ---". DELIVER TO DESIGN AUTHORITY.
11. OPERATING AND MAINTENANCE MANUALS - PREPARE INSTRUCTION MANUALS WHICH INCLUDE EQUIPMENT MANUFACTURER'S OPERATING AND MAINTENANCE BULLETINS, AND A REPORT ON THE TESTING AND BALANCING. SUBMIT THREE (3) COPIES TO DESIGN AUTHORITY.
12. SERVICES - PROTECT ALL SERVICES AND MAKE GOOD ANY DAMAGE CAUSED BY THE WORK IN THIS CONTRACT.
THE PLANS SHOW APPROXIMATE LOCATIONS OF DUCTWORK, PIPING AND EQUIPMENT BASED UPON EXISTING RECORD DRAWINGS. BE PREPARED TO ACCOMMODATE CHANGES IN LOCATION AS MAY BE FOUND ON SITE.
13. DUCTWORK CLEANING - ALL NEW DUCTWORK SHALL BE WIPED CLEAN OF ALL OIL AND OTHER SURFACE FILMS WITH SUITABLE SOLVENT PRIOR TO INSTALLATION.
ALL SUPPLY AND RETURN DUCTWORK SHALL BE THOROUGHLY CLEANED BY A PROFESSIONAL DUCT CLEANING AGENCY PRIOR TO REUSE.
14. CLEAN UP - MAKE GOOD AND CLEAN ALL AREAS DISRUPTED BY THIS WORK.
15. BALANCING - AIR SYSTEMS - BALANCING SHALL BE DONE BY AN AABC OR NEBB CERTIFIED FIRM. ADJUST AIR HANDLING EQUIPMENT AND ASSOCIATED BALANCE DAMPERS ON SUPPLY, RETURN AND EXHAUST SYSTEMS TO WITHIN PLUS OR MINUS 10% OF THE SPECIFIED AIR QUANTITIES. MAINTAIN THE DESIGN PRESSURE RELATIONSHIPS.
ADJUST DIFFUSERS, REGISTERS AND GRILLES TO OBTAIN OPTIMUM AIR DISTRIBUTION PATTERN.
MEASURE OUTSIDE AIR QUANTITIES AND CONFIRM THAT THE SPECIFIED OUTSIDE AIR QUANTITIES PER TITLE-24 CALCULATIONS HAVE BEEN PROVIDED THROUGHOUT.
PERMANENTLY MARK THE FINAL BALANCE POSITION ON ALL BALANCE DAMPERS AND ADJUSTABLE TURNING DEVICES.
SUBMIT A REPORT TO THE DESIGN AUTHORITY INDICATING FINAL AIR QUANTITIES OBTAINED.
16. EQUIPMENT START UP AND COMMISSIONING
CHECK AND ADJUST REFRIGERANT CHARGE AS REQUIRED FOR PROPER OPERATION.
BALANCE AC UNITS TO PROVIDE SPECIFIED AIR FLOWS.
PROVIDE ALL AC UNITS WITH NEW MERV 13 FILTERS.
TEST ALL EQUIPMENT AND MAKE GOOD.

MECHANICAL LEGEND

Table with 5 columns: SYMBOL, ABBREV, DESCRIPTION, ABBREV, DESCRIPTION. Lists various mechanical symbols and abbreviations such as POC, POD, EXISTING EQUIPMENT OR PIPING TO REMAIN, etc.

EQUIPMENT IDENTIFICATION SYMBOL



SCOPE OF WORK

- 1. INSTALLATION OF NEW AC UNITS AND NEW SUPPLY/RETURN DIFFUSERS WITH ASSOCIATED DUCTWORKS.
2. PROVIDE NEW SUPPLY/RETURN DIFFUSERS AND ASSOCIATED DUCTWORKS TO THE EXISTING AC UNIT.

DRAWING INDEX

Table listing drawing indices: M0.1 SPECIFICATIONS, LEGEND AND GENERAL NOTES; M0.2 MECHANICAL SCHEDULES; M0.3 MECHANICAL SCHEDULES; M0.4 MECHANICAL SCHEDULES; M0.5 MECHANICAL T24 FORMS; M0.6 MECHANICAL T24 FORMS; M0.7 MECHANICAL T24 FORMS; M0.8 MECHANICAL T24 FORMS; M0.9 MECHANICAL T24 FORMS; M2.1 MECHANICAL PARKING LEVEL PLAN; M2.2 MECHANICAL LEVEL 1 PLAN; M2.3 MECHANICAL LEVEL 2-5 PLAN; M2.4 MECHANICAL LEVEL 6 PLAN; M2.5 MECHANICAL ROOF PLAN; M3.1 MECHANICAL DETAILS; M3.2 MECHANICAL DETAILS.

DUCT TESTING AND INSULATION

- 1. ALL DUCTWORK SHALL BE SEALED AND PRESSURE TESTED FOR LEAKS PER SMACNA REQUIREMENTS IN THE "HVAC AIR DUCT LEAKAGE TEST MANUAL" AND THE CALIFORNIA GREEN BUILDING 2019 STANDARDS.
2. INSULATE ALL DUCTWORK AND PIPES PER THE 2019 CALIFORNIA MECHANICAL CODE AND TITLE 24 REQUIREMENT. DUCTWORK SHALL BE INSULATED WITH WOOL FIBER OR FIBERGLASS INSULATION WITH FSK VAPOR BARRIER. ALL PIPES(INCLUDING CONDENSATE PIPING) SHALL BE INSULATED WITH EARTHWOOL FIBERGLASS PIPE INSULATION WITH ASJ+SSL FACING. REFRIGERANT PIPING SHALL BE INSULATED WITH CLOSED CELL INSULATION.ALL DUCTS AND PIPES EXPOSED TO WEATHER, INCLUDING REFRIGERANT PIPING, SHALL BE PROVIDED WITH ALUM OR SS JACKET INSTALLED PER MANUFACTURERS PRINTED INSTALLATION MANUAL.
3. FOR PROJECTS WITH EXISTING DUCTS, PERFORM DUCT CLEANING PER "THE NATIONAL DUCT CLEANERS ASSOCIATION". CLEAN EXISTING DIFFUSERS, GRILLES AND REGISTERS WITHOUT DAMAGING PAINT OR COATING. IF THE DAMAGE IS EXISTING, INFORM ARCHITECT AND TAKE PHOTOS BEFORE PERFORMING CLEANING PROCEDURE.

Revision table with columns: REV, DESCRIPTION, DATE. Shows design changes and FC comments.

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ENGINEERING CONSULTANTS, INC. logo and contact information: 1115 6th Ave. #111, San Diego, CA 92101. Phone: (619) 734-4488. Website: www.enr.com. License: No. M26141, Ren. 5/30/23.

Professional Engineer Seal for Nikblla Stamenkovic, License No. M26141, State of California, Mechanical Engineering, expires 5/30/23.

MECHANICAL PERMIT ISSUED stamp from the City of San Diego, dated 8/20/2023, 10:00:27 AM.

SPECIFICATIONS LEGEND AND GENERAL NOTES

Job information table: JOB NO: B1910-AA031, DRAWN: ME, CHECKED: CZ, SCALE: NONE, DATE: 10.21.2021.

M0.1