

NO.	DATE	BY	DESCRIPTION
1	2019.08	OLS	BUILDING DEPARTMENT CORRECTIONS

MECHANICAL FLOOR PLAN
 CALIBER COLLISION
 2300 GREENBRO
 LAKE AND, FL
 PROJECT NO. 192006

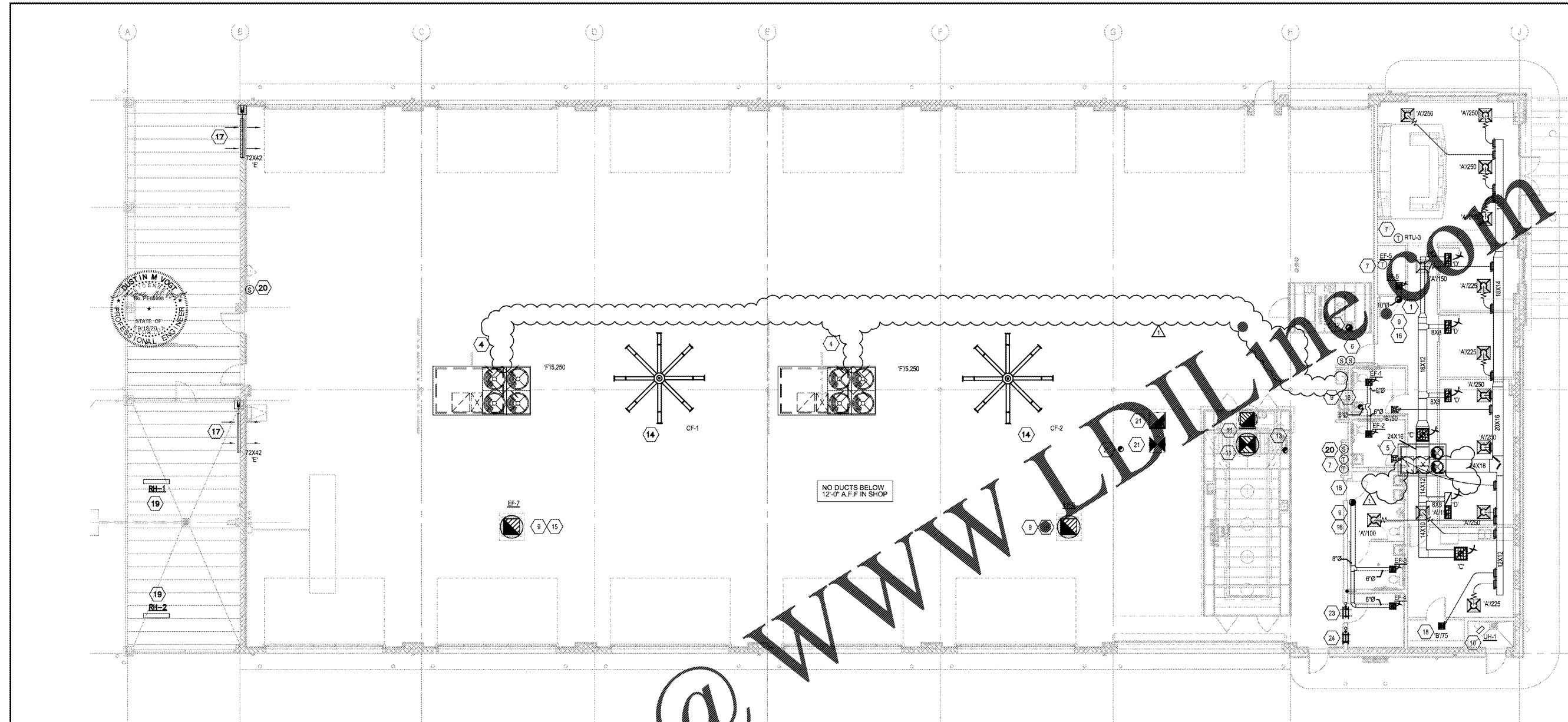
FILE NAME: 192006
 DRAWN BY: BPH
 DATE: 08/19/2020
 REVIEWED BY: MS

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WHEN PLASTIC PIPING AND TUBING IS USED IN PLUMBING SYSTEMS IT SHALL BE LISTED AND SHALL EXHIBIT A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE DEVELOP INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E84 OR UL 723.

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01 MECHANICAL FLOOR PLAN
 1/8"=1'-0"

GENERAL MECHANICAL NOTES:

- ALL WORK SHALL BE ARRANGED IN A NEAT, WELL ORGANIZED MANNER. ALL WORK SHALL BE PARALLEL AND PERPENDICULAR TO THE PRIMARY LINES OF THE BUILDING. LOCATE ALL OPERATING AND CONTROL EQUIPMENT PROPERLY TO PROVIDE CODE AND/OR MANUFACTURERS CLEARANCES.
- ALL WORK SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE PORTIONS OF ALL NATIONAL, STATE, AND LOCAL CODES AND STANDARDS. WHERE THE CONTRACT DOCUMENTS ARE IN EXCESS OF CODE REQUIREMENTS, THE CONTRACT DOCUMENTS SHALL GOVERN. IN THE EVENT OF A CONFLICT BETWEEN THE CONTRACT DOCUMENTS AND APPLICABLE CODES, THE LATTER SHALL GOVERN.
- GC SHALL ENSURE THAT ALL LIGHTS, SPRINKLER HEADS, DIFFUSERS AND OTHER CEILING DEVICES ARE CENTERED IN CEILING TILES AND IN BETWEEN LIGHT FIXTURES.
- ALL DUCT SIZES ARE CLEAR INSIDE DIMENSIONS.
- ALL DUCTWORK TO BE EXTERNALLY INSULATED PER SPECIFICATIONS UNLESS NOTED OTHERWISE ON THE PLANS.
- ALL EXPOSED DUCTWORK SHALL BE SUPPORTED BY ALL-THREAD ROD, SHALL BE INTERNALLY LINED AND SHALL BE PAINTED PER OWNER REQUIREMENTS.
- FURNISH AND INSTALL ALL ITEMS, INCLUDING EVERY ARTICLE, DEVICE OR ACCESSORY REASONABLY NECESSARY TO FACILITATE EACH SYSTEMS' FUNCTIONING AS INDICATED BY THE DESIGN AND THE EQUIPMENT SPECIFIED. ELEMENTS OF THE WORK SHALL INCLUDE, BUT ARE NOT LIMITED TO: MATERIALS, LABOR, SUPERVISION, SUPPLIES, EQUIPMENT, TRANSPORTATION, HOISTING/RIGGING, STORAGE, UTILITIES AND ALL REQUIRED PERMITS AND LICENSES.
- UNIT LOCATIONS SHOWN ON PLAN ARE APPROXIMATE. COORDINATE EXACT LOCATION WITH STRUCTURAL PRIOR TO ROUGH-IN.
- CONTRACTOR SHALL COORDINATE ALL DUCTWORK SIZES AND ROUTING WITH STRUCTURE AND OTHER DISCIPLINES PRIOR TO PURCHASING, CONSTRUCTING, OR INSTALLING ANY DUCTWORK. CONTRACTOR SHALL PROVIDE DUCTWORK SHOP DRAWINGS TO ENGINEER/ARCHITECT FOR APPROVAL PRIOR TO CONSTRUCTION. UNLESS SHOP DRAWINGS ARE SUBMITTED, CONTRACTOR ASSUMES ALL RESPONSIBILITY AND COST FOR ANY NECESSARY REWORK.
- ALL BRANCH DUCTS ARE TO BE THE SAME SIZE AS DIFFUSER NECK UNLESS OTHERWISE NOTED. SEE DIFFUSERS RUNOUT SIZING CHART.
- MAINTAIN ALL OUTSIDE AIR INTAKE OPENINGS MINIMUM 10'-0" FROM ALL MECHANICAL VENTS, PLUMBING VENTS, AND EXHAUST FANS.
- PROVIDE BALANCING DAMPERS AT ALL SUPPLY AIR RUNOUTS.
- ALL DUCTWORK SHALL BE CONSTRUCTED TO SEAL AND SUPPORTED PER LATEST SMACNA AND AIA RECOMMENDATIONS.
- PROVIDE ALL MECHANICAL EQUIPMENT WITH LAMINATED IDENTIFICATION TAGS, LABEL TAGS SHOWN ON PLAN INCLUDING AIR FLOW DIRECTION.
- ALL GAS FIRED EQUIPMENT SHALL BE U.L. LISTED AND A.S.A. APPROVED.
- ALL EQUIPMENT SHALL BE ANCHORED TO THE BUILDING STRUCTURE.
- FLEX DUCT SHALL BE USED ONLY IN SUPPLY DUCTWORK IN AREAS WITH ACCESSIBLE CEILINGS AND ONLY IN THE LAST 6 FEET OF RUNOUTS. NO FLEX DUCTWORK ALLOWED IN RETURN AIR DUCTWORK.
- REFER TO PLUMBING PLANS FOR CONDENSATE ROUTING.
- EXCEPT AS REQUIRED BY IMC SECTIONS 602.2.1.1 THROUGH 602.2.1.6, MATERIALS WITHIN PLENUMS SHALL BE NONCOMBUSTIBLE OR SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE DEVELOP INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM-E-84 OR UL-723.
- PROVIDE SLEEVES AND FLASHINGS REQUIRED FOR PIPING AND DUCTWORK PENETRATIONS. PROVIDE ESCUTCHEON PLATES FOR ALL PIPING PENETRATING FINISHED WALLS AND CEILINGS.
- FIELD VERIFICATION OF EXISTING CONDITIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOUND PRIOR TO SUBMISSION OF BID. THE CONTRACTOR SHALL TAKE NOTE THAT THE DRAWINGS ARE SCHEMATIC IN NATURE AND INDICATE THE

APPROXIMATE LOCATIONS OF THE MECHANICAL AND PLUMBING SYSTEMS. ALL ITEMS BY OTHER TRADES MEASURED BY CONTRACTOR WITH OTHER TRADES TO ENSURE PROPER FIT AND ACCESS TO ALL ITEMS.

PROVIDE FIRE AND/OR SMOKE DAMPERS IN ALL DUCT PENETRATIONS OF PARTY WALLS WHETHER OR NOT SHOWN ON PLANS.

COORDINATE WITH ELECTRICAL TO PROVIDE POWER FOR ALL SMOKE DAMPERS WHETHER OR NOT SHOWN ON PLANS.

CONSIDERATION SHALL NOT BE GRANTED FOR MISUNDERSTANDING OF THE SCOPE OR AMOUNT OF WORK TO BE PERFORMED. TENDER OF A PROPOSAL CONVEYS FULL CONTRACTOR AGREEMENT OF THE ITEMS AND CONDITIONS SPECIFIED AND/OR INDICATED, SCHEDULED, OR IMPLIED ON THE CONTRACT DOCUMENTS, AND/OR REQUIRED BY THE NATURE OF THIS WORK.

THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL COORDINATE THE INSTALLATION OF DUCTWORK, PIPING, CONDUIT, CABLE, ETC. INSTALLATION WITH LIGHTING FIXTURES, SPECIAL CEILING CONSTRUCTION, AIR DISTRIBUTION EQUIPMENT AND THE STRUCTURE. PROVIDE ADDITIONAL RISES AND OFFSETS AS REQUIRED, IF, AFTER INSTALLED, NEW DUCTWORK, PIPING CONDUIT, OR CABLE IS FOUND TO BE IN CONFLICT WITH THE ARCHITECTURE, STRUCTURE, OR OTHER TRADE WORK, OR WHICH IS EITHER EXISTING OR SHOWN ON THE CONTRACT DOCUMENT, THE DUCTWORK, CONDUIT, OR CABLE SHALL BE RELOCATED WITHOUT ADDITIONAL COST TO THE OWNER.

THE CONTRACTOR SHALL PROTECT THE WORK, EQUIPMENT, AND MATERIALS FROM DAMAGE BY HIS WORK OR HIS PERSONNEL, AND SHALL CORRECT ALL DAMAGE THUS CAUSED WITHOUT ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK, MATERIALS, AND EQUIPMENT UNTIL FINAL ACCEPTANCE BY THE OWNER. PROTECT ALL WORK AGAINST THEFT, INJURY, OR DAMAGE AND CAREFULLY STORE MATERIAL AND EQUIPMENT RECEIVED ON SITE WHICH IS NOT IMMEDIATELY INSTALLED. THE CONTRACTOR SHALL CLOSE OPEN ENDS OF WORK WITH TEMPORARY COVERS OR PLUGS DURING CONSTRUCTION TO PREVENT THE ENTRY OF DUST, DIRT, AND OBSTRUCTING MATERIAL. THE CONTRACTOR SHALL PROTECT ALL EQUIPMENT AND MATERIALS FROM DAMAGE DUE TO WATER, SPRAY-ON FIREPROOFING, CONSTRUCTION DEBRIS, ETC. IN A MANNER ACCEPTABLE TO THE ENGINEER AND/OR OWNER.

MECHANICAL NOTES BY SYMBOL

- LOUVERED DOOR FOR IT ROOM EXHAUST BY OTHERS
- NOT USED.
- NOT USED.
- INSTALL SUPPLY/RETURN AIR DROP BOX WITH FILTER RACK AND HARDWARE CLOTH. BOTTOM OF PLENUM TO BE AT 12'-0" A.F.F.
- AIR-SIDE ECONOMIZER KIT TO BE INSTALLED ON UNIT.
- PROVIDE WALL MOUNTED FAN SPEED CONTROLLER FOR CF-1,2.
- PROVIDE WALL MOUNTED TEMPERATURE CONTROLLER INTERLOCKED WITH DUCT MOUNTED TEMPERATURE SENSORS IN RTU-1,2. TEMPERATURE SENSORS TO BE INSTALLED IN RETURN AIR STREAM
- NOT USED.
- ENSURE EF/EXHAUST OUTLET IS MINIMUM 10' FROM ALL OUTSIDE AIR INTAKES.
- COORDINATE MOUNTING LOCATION WITH OTHER EQUIPMENT IN ROOM.
- PROVIDE ROOF PENETRATIONS AND ROOF CURBS FOR BOOTH INTAKE DUCT AND EXHAUST DUCT. COORDINATE ROOF PENETRATION AND ROOF CURB LOCATION AND SIZE WITH BOOTH MANUFACTURER IN THE FIELD PRIOR TO INSTALLATION. PENETRATIONS TO BE 10'-0" APART WHEN POSSIBLE. MAINTAIN 10'-0" CLEARANCE BETWEEN BUILDING INTAKE AND EXHAUST OPENINGS. SPRAY BOOTH MANUFACTURER TO PROVIDE ALL NECESSARY DUCTWORK AND CAPS FOR A COMPLETE WORKABLE SYSTEM. EXHAUST OUTLETS TO BE INSTALLED IN ACCORDANCE WITH 2012 IMC SECTION 501.3.1.
- NOT USED.
- PROVIDE ROOF PENETRATION FOR BOOTH EXHAUST DUCT. COORDINATE ROOF PENETRATION AND SIZE WITH BOOTH MANUFACTURER IN THE FIELD PRIOR TO INSTALLATION. MAINTAIN 10'-0" CLEARANCE FROM ANY BUILDING INTAKE. PAINT BOOTH MANUFACTURER TO PROVIDE ALL NECESSARY DUCTWORK AND CAPS FOR A COMPLETE WORKABLE SYSTEM. EXHAUST OUTLETS TO BE INSTALLED IN ACCORDANCE WITH 2012 IMC SECTION 501.3.1.
- PROVIDE GAS VENT UP THROUGH ROOF. ROUTE THROUGH ROOF AND SEAL ROOF PENETRATION AIR AND WATER TIGHT. MAINTAIN 10'-0" CLEARANCE BETWEEN BUILDING INTAKE AND EXHAUST OPENINGS. ALL EQUIPMENT AND MATERIAL FOR A COMPLETE AND OPERABLE BOOTH(S) TO BE FURNISHED BY OTHERS WHERE APPLICABLE. COORDINATE ROOF PENETRATION AND SIZES WITH BOOTH MANUFACTURER IN THE FIELD PRIOR TO INSTALLATION. EXHAUST OUTLETS TO BE INSTALLED IN ACCORDANCE WITH 2012 IMC SECTION 501.3.1.
- FANS TO BE MOUNTED AT 12' A.F.F. CONTRACTOR TO PROVIDE MOUNTING KIT AND EXTENSION TUBE AS REQUIRED.
- ROUTE 30X30 DUCT DOWN FROM EXHAUST FAN AND TERMINATE WITH WIRE MESH SCREEN.
- EXHAUST DUCT ROUTED UP TO WEATHERPROOF CAP.

MECHANICAL NOTES:

- CONFIRM ALL MECHANICAL REQUIREMENTS, CONNECTIONS, AND LOCATIONS FOR ALL BOOTHS AND EQUIPMENT WITH MANUFACTURER SPECIFICATIONS AND CUTSHEETS PRIOR TO ROUGH-IN.
- THERMOSTATS TO BE PROVIDED WITH PASSWORD LOCK-OUT CAPABILITY OR LOCK BOXES.
- LOUVERS TO BE MOUNTED 9' A.F.F.
- NOT USED.
- RADIANT HEATERS TO BE INSTALLED TIGHT TO BOTTOM OF STRUCTURE AND IN A MANNER NOT TO DAMAGE ANY VEHICLES. INSTALL PER MANUFACTURE'S RECOMMENDATIONS.
- INSTALL CARBON MONOXIDE SENSOR, COSTAR 24VC-E OR SIMILAR AT THIS LOCATION. MOUNT AT 98" A.F.F. SENSOR TO BE INTERLOCKED WITH EF-6.7.
- PROVIDE ROOF PENETRATIONS AND ROOF CURBS FOR FUTURE BOOTH INTAKE DUCT AND EXHAUST DUCT. RE: KEYNOTE 11 FOR FURTHER INFORMATION.
- PROVIDE GAS VENT UP THROUGH ROOF FOR FUTURE BOOTH. RE: KEYNOTE 13 FOR FURTHER INFORMATION.
- PROVIDE TITUS 350FL 12"x12" TRANSFER GRILLE. RECTANGULAR FIRE/SMOKE DAMPERS SHALL BE GREENHECK MODEL NO. FSD-212 OR EQUAL. PROVIDE 120V 2 POSITION ACTUATOR. MOUNT AS HIGH AS POSSIBLE.
- PROVIDE TITUS 350FL 12"x12" TRANSFER GRILLE WITH FIRE DAMPER RECTANGULAR FIRE/SMOKE DAMPERS SHALL BE GREENHECK MODEL NO. FSD-212 OR EQUAL. PROVIDE 120V 2 POSITION ACTUATOR. MOUNT ON WALL 12" AFF.

VENTILATION SUPPLIED:

RTU-1	850 CFM
RTU-2	850 CFM
RTU-3	375 CFM
EF-8	12,000 CFM
EF-7	12,000 CFM
TOTAL SUPPLIED (NORMAL OPERATION):	2,075 CFM
TOTAL SUPPLIED:	26,075 CFM

EXHAUST AIR:

EF-1	75 CFM
EF-2	75 CFM
EF-3	75 CFM
EF-4	75 CFM
EF-5	200 CFM
EF-6	12,000 CFM
EF-7	12,000 CFM
TOTAL EXHAUST AIR (NORMAL OPERATION):	500 CFM
TOTAL EXHAUST AIR:	24,500 CFM

OUTSIDE AIR CALCULATION

OFFICES:
 240 SF X 5 OCCUPANTS/1000 SF = 2 OCCUPANTS
 2 OCCUPANTS X 5 CFM/OCCUPANT = 10 CFM
 240 SF X .06 CFM/SF = 15 CFM
 TOTAL O/A REQUIRED = 25 CFM

MAIN LOBBY:
 480 SF X 10 OCCUPANTS/1000 SF = 5 OCCUPANTS
 5 OCCUPANTS X 5 CFM/OCCUPANT = 25 CFM
 480 SF X .06 CFM/SF = 29 CFM
 TOTAL O/A REQUIRED = 54 CFM

CORRIDOR:
 263 SF X .06 CFM/SF = 16 CFM
 TOTAL O/A REQUIRED = 16 CFM

BREAKROOM:
 228 SF X 10 OCCUPANTS/1000 SF = 3 OCCUPANTS
 3 OCCUPANTS X 5 CFM/OCCUPANT = 15 CFM
 228 SF X .06 CFM/SF = 14 CFM
 TOTAL O/A REQUIRED = 29 CFM

DATA ENTRY:
 262 SF X 60 OCCUPANTS/1000 SF = 16 OCCUPANTS
 16 OCCUPANTS X 5 CFM/OCCUPANT = 80 CFM
 262 SF X .06 CFM/SF = 16 CFM
 TOTAL O/A REQUIRED = 96 CFM

SERVICE BAY:
 O/A CALCULATION:
 13,300 SF X 0.12 CFM/SF = 1,596 CFM
 TOTAL REQUIRED O/A:
 1,816 CFM

TOTAL SUPPLIED O/A:
 1,975 CFM

AIR BALANCE CALCULATION
 AIR BALANCE:
 1,975 CFM OUTSIDE - 500 CFM EXHAUST = 1,475 POSITIVE CFM