

1 H.V.A.C. FLOOR PLAN
SCALE: 3/32" = 1'-0"

DIFFUSER / GRILLE SCHEDULE											
MARK	MANUFACTURER & MODEL #	CFM	NECK SIZE	FRAME TYPE	FACE TYPE	PATTERN	DAMPER	MATERIAL	SERVICE	FINISH	NOTES
SR-1	TTTUS 300-RL	AS NOTED	AS NOTED	SURFACE	HORIZ. BAR	DOUBLE REFLECTION	YES	STEEL	SUPPLY	OFF-WHITE	1
6-1	TTTUS 350-RL	AS NOTED	AS NOTED	SURFACE	HORIZ. BAR	NA	NO	STEEL	TRANSFER	OFF-WHITE	1

NOTES:
1. DIFFUSER DESIGNATIONS ON PLANS AS FOLLOWS:
GRILLE, REGISTER, OR DIFFUSER TYPE AS NOTED ABOVE
AIR QUANTITY
6-1, 12x12 400 CFM
DIFFUSER NECK SIZE OR GRILLE/REGISTER SIZE.

H.V.A.C. GENERAL NOTES:

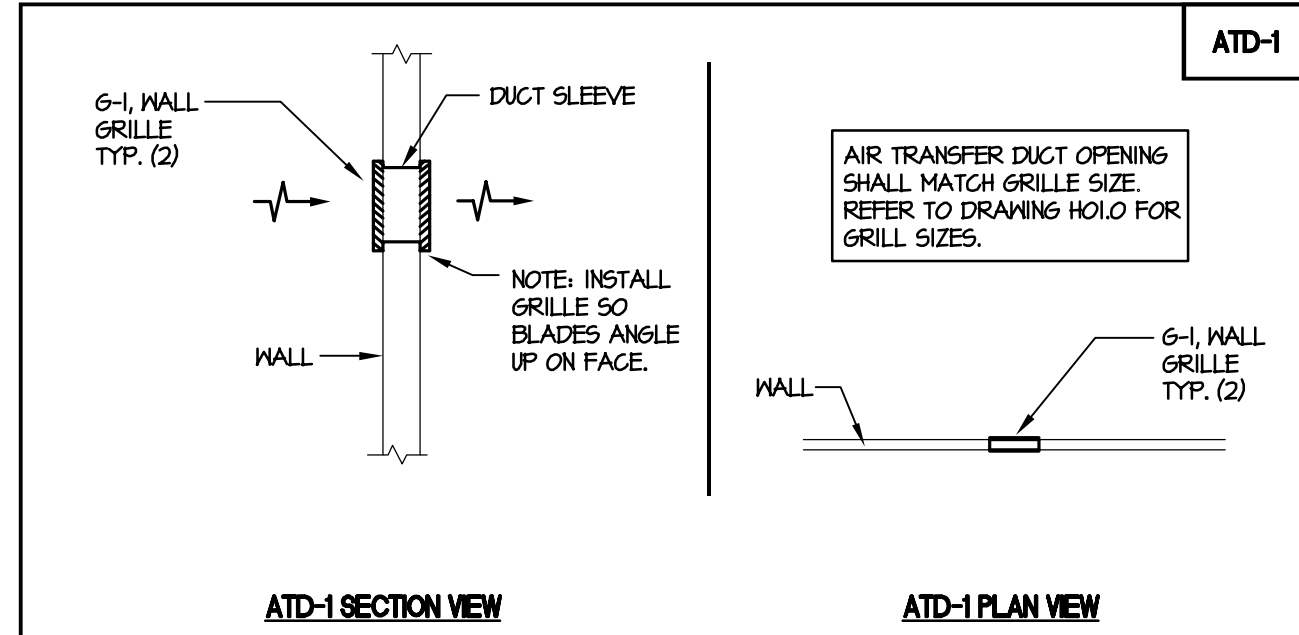
- CONTRACTOR SHALL VISIT SITE PRIOR TO BIDDING PROCESS AND FIELD VERIFY EXISTING CONDITIONS. CONTRACTOR SHALL TAKE ALL INTERFERENCES INTO CONSIDERATION. PROVIDE ALL NECESSARY OFFSETS OR TRANSITIONS WITH EQUIVALENT AREAS TO MATCH DUCT SIZES AS INDICATED ON DRAWINGS.
- CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, LICENSES, DOCUMENTS AND SERVICES RELATED TO INSTALLATION OF THE WORK.
- CONTRACTOR IS RESPONSIBLE TO AND SHALL PERFORM ALL WORK IN ACCORDANCE WITH THE LATEST STATE CODES, TOWNSHIP, AND NFPA OSHA, AND THE RULES AND REGULATIONS OF ALL CITY, STATE, AND FEDERAL AUTHORITIES HAVING JURISDICTION. PROVIDE OWNER WITH CERTIFICATES OF INSPECTION.
- CONTRACTOR SHALL BE LICENSED, TRAINED AND CERTIFIED IN THE PROPER INSTALLATION OF MECHANICAL SYSTEMS, INCLUDING DUCTS, PIPING AND EQUIPMENT. UNCERTIFIED PERSONS MAY PERFORM MECHANICAL INSTALLATIONS ONLY WHEN UNDER DIRECT SUPERVISION AND RESPONSIBILITY OF A CERTIFIED INSTALLER OR LICENSED CONTRACTOR. VERIFICATION OF CERTIFICATION AND LICENSES ARE REQUIRED.
- THESE DRAWINGS INDICATE THE SIZE AND GENERAL LOCATION OF WORK. SCALED DIMENSIONS SHALL NOT BE USED. ANY DIMENSIONS NOT SHOWN SHALL BE OBTAINED FROM THE ARCHITECTURAL DRAWINGS. FOR EXACT LOCATIONS, HEIGHT, DOOR SINGS, MOUNTING HEIGHTS, ETC. REFER TO ARCHITECTURAL DRAWINGS AND DETAILS.
- PRIOR TO STARTING ANY WORK, PURCHASE OF EQUIPMENT, ETC. COORDINATE THE WORK WITH OTHER TRADES. COOPER WITH OTHER CONTRACTORS WHOSE WORK MIGHT AFFECT THIS INSTALLATION AND ARRANGE ALL PARTS OF THIS WORK AND EQUIPMENT OF OTHERS, WITH THE BUILDING CONSTRUCTION AND WITH ARCHITECTURAL FINISH.
- CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIALS FOR ONE YEAR, EFFECTIVE THE DAY THE PROJECT IS ACCEPTED BY THE OWNER.
- DO ALL NECESSARY CUTTING AND ROUGH PATCHING. FINISH PAINTING, FINISH PATCHING AND POWER WIRING IS BY OTHERS.
- REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF ALL MECHANICAL CEILING EQUIPMENT.
- HVAC DUCTWORK SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH ASHRAE AND LATEST SMACNA STANDARDS. PROVIDE TURNING VANES IN ALL ELBOWS. DUCTWORK SHALL HAVE A MINIMUM PRESSURE CLASSIFICATION OF 2" SEAL CLASS C, WITH A MAXIMUM LEAKAGE RATE OF 5%.
- PROVIDE A MANUAL BALANCING DAMPER AT ALL SUPPLY AND RETURN BRANCH TAKEOFFS, IN ACCESSIBLE LOCATION OR WITH ACCESS DOOR.
- DUCTWORK DIMENSIONS NOTED ON DRAWINGS ARE EXTERIOR DIMENSIONS AND INCLUDE LINING.
- INSTALL BOTTOM OF HORIZONTAL EXPOSED DUCTWORK IN SALES AREAS AND STOCK ROOMS UP WITH-IN IN JOIST SPACE TO MAINTAIN MAXIMUM CLEARANCE.
- THE BALANCING CONTRACTOR SHALL BALANCE AIR FLOW QUANTITIES TO WITHIN 5% OF THE DESIGN CONDITIONS LISTED ON PLANS. THIS CONTRACTOR SHALL INCLUDE ONE (1) ADDITIONAL SET OF BELTS AND SHEAVES AND REBALANCING FOR EACH SYSTEM FOR THE PROJECT. ALL OF THE ABOVE WORK SHALL BE AT NO ADDITIONAL COST TO THE OWNER.
- ALL PIPING, DUCTS, VENTS, ETC., EXTENDING THROUGH WALLS AND ROOF SHALL BE FLASHED AND GUTTER-FLASHED IN A WATERPROOF MANNER.
- SPRINKLER CONTRACTOR SHALL COORDINATE INSTALLATION OF SPRINKLER PIPING WITH DUCTWORK, LIGHTS, AND PARTITION LAYOUT. LIGHTS ARE NOT TO BE MOVED, SPRINKLER PIPING SHALL BE ROUTED AROUND LIGHTS AS REQUIRED.
- MECHANICAL CONTRACTOR SHALL PERFORM ROUTINE SERVICE INSPECTION OF EXISTING ROOFTOP UNIT TO BE REUSED FOR THIS PROJECT. LUBRICATE BEARINGS, SERVICE CONTROL SYSTEMS, REPLACE FAN BELTS AS REQUIRED, CLEAN AND COMB EVAPORATOR AND CONDENSER COILS, CLEAN CONDENSATE DRAIN AND PAN AND INSTALL NEW FILTERS AFTER COMPLETION OF CONSTRUCTION. ADD REFRIGERANT AS REQUIRED TO MEET MANUFACTURER'S RECOMMENDED OPERATING CHARGE. EQUIPMENT SHALL BE PLACED IN FULL OPERATION WITH CONTROLS CALIBRATED UPON COMPLETION OF PROJECT. SUBMIT A WRITTEN REPORT TO OWNER OF ANY MAJOR COMPONENT FAILURES OR ANTICIPATED COMPONENT FAILURES. REPORT SHALL INCLUDE COST INCLUDING LABOR TO SERVICE ALL ITEMS NOT OTHERWISE LISTED ABOVE.
- CONTRACTORS BIDDING THIS PROJECT SHALL HAVE PRIOR EXPERIENCE WORKING IN THIS JURISDICTION AND MUST LIST ON BID FORM ANY LOCAL REQUIREMENTS THAT ARE NOT SHOWN ON THE DRAWINGS. SUBMISSION OF A BID SHALL BE EVIDENCE THAT THE CONTRACTOR'S BID INCLUDES ALL JURISDICTIONAL REQUIREMENTS.
- THIS CONTRACTOR SHALL COMPLETE ALL DEMOLITION OF EXISTING MECHANICAL SYSTEMS AS INDICATED ON MECHANICAL AND ARCHITECTURAL PLANS OR AS NECESSARY FOR THE PROJECT. REMOVE FROM SITE AND DISPOSE OF ALL MATERIAL AND DEBRIS FROM THIS WORK IN A CODE AND EPA APPROVED MANNER.
- CONTRACTOR SHALL TAKE NOTE THAT NOT ALL NEW WORK CAN BE PERFORMED AT ONE TIME. CONTRACTOR SHALL COORDINATE ALL NEW WORK WITH STORE PHASING CONSTRUCTION PLAN. REFER TO ARCHITECTURAL PLANS.

H.V.A.C. CODED NOTES:

- CONTRACTOR SHALL PERFORM ROUTINE SERVICE INSPECTION OF EXISTING ROOFTOP UNIT TO BE REUSED FOR THIS PROJECT. LUBRICATE BEARINGS, SERVICE CONTROL SYSTEMS, REPLACE FAN BELTS AS REQUIRED, CLEAN AND COMB EVAPORATOR AND CONDENSER COILS, CLEAN CONDENSATE DRAIN AND PAN, AND INSTALL NEW FILTERS AFTER COMPLETION OF CONSTRUCTION. ADD REFRIGERANT AS REQUIRED TO MEET MANUFACTURER'S RECOMMENDED OPERATING CHARGE. EQUIPMENT SHALL BE PLACED IN FULL OPERATION WITH CONTROLS CALIBRATED UPON COMPLETION OF PROJECT. SUBMIT A WRITTEN REPORT TO OWNER OF ANY MAJOR COMPONENT FAILURES OR ANTICIPATED COMPONENT FAILURES. REPORT SHALL INCLUDE COST INCLUDING LABOR TO SERVICE ALL ITEMS NOT OTHERWISE LISTED ABOVE.
- EXISTING DUCT SMOKE DETECTOR(S) TO REMAIN TO SHUT DOWN ROOFTOP UNIT UPON ALARM.
- EXISTING TEMPERATURE AND CARBON DIOXIDE SENSORS TO REMAIN.
- CLEAN EXISTING DIFFUSER AND DUCTWORK FOR NEW PAINT. BALANCE DIFFUSER TO CFM INDICATED.
- CONNECT NEW SUPPLY AIR BRANCH DUCT TO EXISTING SUPPLY DUCT MAIN BETWEEN ROOFTOP UNIT AND CONCENTRIC DIFFUSER. EXTEND BRANCH DUCTWORK AS INDICATED THRU GRIFFER MEBBERING. MODIFY EXISTING SUPPLY AIR DUCT MAIN TO DIFFUSER AND INSTALL MANUAL VOLUME DAMPER. REFER TO DETAIL ON THIS DRAWING.
- ALL DUCTWORK ON SALES FLOOR SHALL BE DESIGNED AND INSTALLED INSIDE JOIST MEBBERING TO MAINTAIN MAXIMUM CLEARANCE. IF THIS IS NOT ACHIEVABLE THEN ALL DUCTWORK SHALL BE DESIGNED AND INSTALLED TIGHT TO THE STRUCTURE ABOVE TO MAINTAIN MAXIMUM CLEARANCE. DUCT PENETRATIONS OF WALLS SHALL NOT BE INSTALLED BELOW THE PAINT BREAK LINE. IF THE CONTRACTOR IS IN DOUBT, SUBMIT AN RFI TO THE ARCHITECT OF RECORD FOR CLARIFICATION. COORDINATE DUCT LAYOUT WITH ALL OTHER TRADES. TYPICAL.
- PROVIDE 2" TRIM FLANGE AROUND FULL PERIMETER OF EXPOSED DUCT PENETRATION ON BOTH SIDES OF WALL PENETRATIONS. CAULK FULL PERIMETER OF TRIM FLANGES AIR TIGHT. TYPICAL. TRIM FLANGE NOT REQUIRED IN LOCATIONS NOT VISIBLE AND ON SIDE OF WALL WHERE A SUPPLY REGISTER OR RETURN GRILLE IS INSTALLED.
- DUCT PENETRATION SHALL BE ABOVE PAINT BREAK LINE.
- AIR TRANSFER DUCT. REFER TO DETAIL ON THIS DRAWING. MOUNT BOTTOM OF AIR TRANSFER GRILLE AS HIGH AS POSSIBLE ABOVE FINISHED FLOOR. PAINT GRILLES TO MATCH ADJACENT WALL COLOR.
- NO H.V.A.C. WORK DONE IN HATCHED AREA.
- MODIFY CONCENTRIC DIFFUSER TO REMOVE REGISTER FACING NEW PARTITION WALL, INSTALL AIR TIGHT SHEET METAL BLANK-OFF AND RE-INSTALL REGISTER OVER SHEET METAL BLANK OFF.

AFF	ABOVE FINISHED FLOOR
ATD	AIR TRANSFER DUCT
B	BOTTOM OF
CD	CEILING DIFFUSER
CFM	CUBIC FEET PER MINUTE
CONN.	CONNECT / CONNECTION
CORR.	CORRIDOR
CUH	CABINET UNIT HEATER
DIA	DIAMETER
DEG	DEGREES
DLPD	DRUM LOUVER PLENUM DIFFUSER SYSTEM
DWG	DRAWING
EA	EXHAUST AIR
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
EFF.	EFFICIENCY
E.S.P.	EXTERNAL STATIC PRESSURE
EXH	EXHAUST
G	GRILLE
HP	HORSE POWER
HTG	HEATING
KW	KILOWATTS
LD	LINEAR DIFFUSER
MEH	THOUSAND BTU/HOUR
MVD	MANUAL VOLUME DAMPER
OA	OUTSIDE AIR
OP. HT.	OPERABLE HEIGHT
PRESS.	PRESSURE
RA	RETURN AIR
RO	ROOF OPENING
RTU	ROOFTOP UNIT
SA	SUPPLY AIR
SP	STATIC PRESSURE
SR	SUPPLY REGISTER
T	TOP OF
TSTAT	THERMOSTAT
TYP.	TYPICAL
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORY
GC	GENERAL CONTRACTOR
FFC	FIRE PROTECTION CONTRACTOR
FC	PLUMBING CONTRACTOR
MC	MECHANICAL CONTRACTOR
EC	ELECTRICAL CONTRACTOR
---	LOW PRESSURE GAS PIPING
---	REGULATED 2 PSI GAS PIPING
'X' OR ---	EXISTING TO REMAIN
'XR' OR ---X---	EXISTING TO BE REMOVED
'XA' OR ---	EXISTING TO BE ABANDONED IN PLACE
'XRL' OR ---X---	EXISTING TO BE RELOCATED
'XNL' OR ---	EXISTING, RELOCATED, SHOWN IN NEW LOCATION
②	CO-2 SENSOR TO BE FURNISHED BY MC. INSTALLED AND WIRED BY EC.
②	NOVAR GLOBAL HUMIDITY SENSOR. REFER TO ELECTRICAL DWGS FOR DETAILS.
①	LENNOX HUMIDITY SENSOR. REFER TO ELECTRICAL DWGS FOR DETAILS.
①	NOVAR INDOOR TEMPERATURE SENSOR. REFER TO ELECTRICAL DWGS FOR DETAILS.
①	NOVAR TEMPERATURE SENSOR. REFER TO ELECTRICAL DWGS FOR DETAILS.
①	THERMOSTAT. FURNISHED BY MC. INSTALLED AND WIRED BY EC.
①	COMBINATION TEMPERATURE/RELATIVE HUMIDITY/CARBON DIOXIDE SENSOR FURNISHED BY MC. INSTALLED AND WIRED BY VENDOR 16.
①	INDICATES CODED NOTE
①	MOTORIZED DAMPER, 120 VOLT
①	LISTED FIRE DAMPER WITH DUCT ACCESS DOOR
①	DUCT SMOKE DETECTOR TO SHUT DOWN UNIT UNDER ALARM. DETECTOR SHALL BE LOCATED, INSTALLED AND WIRED AS INDICATED ON FLOOR PLAN AND SPECIFICATIONS, ALL WIRING TO BE IN CONDUIT PER N.E.C.
①	UNDERCUT DOOR, REFER TO ARCHITECTURAL DRAWINGS.
①	EQUIPMENT TAG
\$	ONE (1) HOUR THERM WALL SWITCH. FURNISHED BY MC. INSTALLED AND WIRED BY EC.

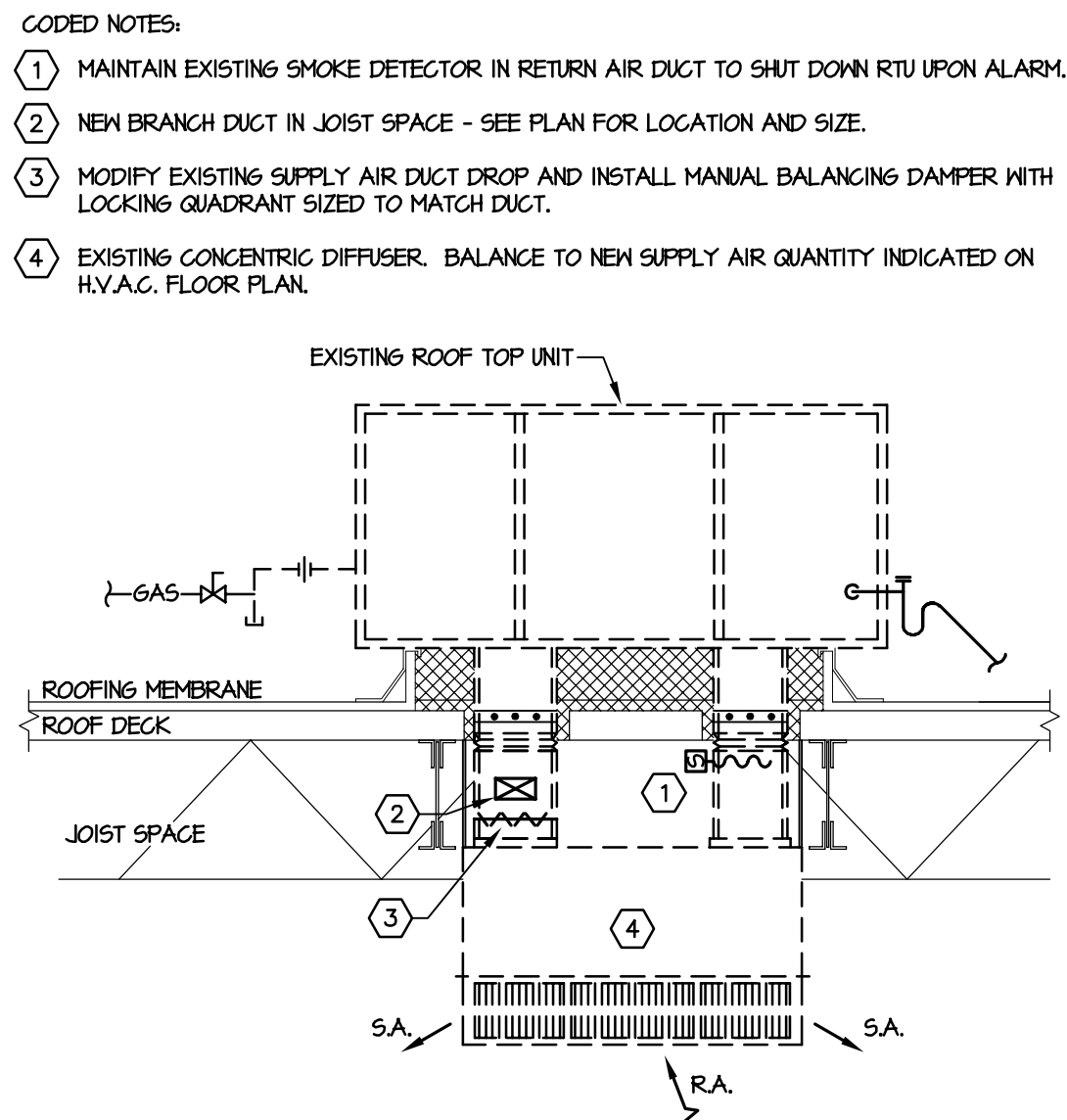
5 H.V.A.C. LEGEND
SCALE: NONE



2 AIR TRANSFER DUCT DETAILS
SCALE: NONE

ELBOW WITH AIRFOIL TURNING VANES	ACOUSTIC LINED DUCT (NOTE 4)	DOUBLE SINGLE
BRANCH TAKE-OFF RECTANGULAR TO RECTANGULAR	BRANCH TAKE-OFF RECTANGULAR TO ROUND	45° 1/2" MVD
BRANCH TAKE-OFF ROUND TO ROUND	SQUARE TO ROUND TRANSITION FITTING	90° 1/2" MVD
PROPORTION SPLIT	FLEXIBLE DUCT	BRANCH DIFFUSER TO 2" DUCT MAX. LENGTH = 48"
MANUAL VOLUME DAMPER (MVD)	NOTES: 1. DASHED LINE INDICATES 1" INTERIOR ACOUSTIC LINING UNLESS OTHERWISE NOTED. DUCT SIZE IS EXTERIOR AND INCLUDES LINING.	

3 TYPICAL DUCT TAKE-OFF DETAIL
SCALE: NONE



4 ROOFTOP AIR CONDITIONING UNIT DETAIL
SCALE: NONE