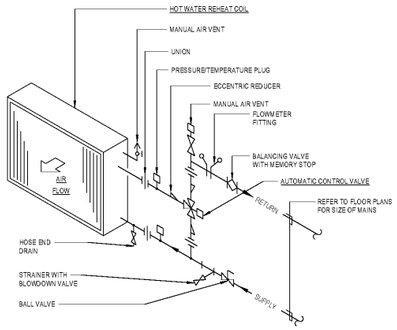


1 DETAIL - HYDRONIC COIL (3-WAY)
SCALE: N.T.S.

SEQUENCE OF OPERATION

A. THE VARIABLE VOLUME AIR TERMINAL SHALL OPERATE ON AN OCCUPIED/UNOCCUPIED SCHEDULE. OCCUPIED/UNOCCUPIED MODES SHALL BE AS DETERMINED BY THE OCCUPIED/UNOCCUPIED PROGRAM OF THE BUILDING AUTOMATION SYSTEM (BAS).

B. OCCUPIED MODE

1. WHEN THE SPACE TEMPERATURE IS BETWEEN ITS COOLING AND HEATING SETPOINTS THE SUPPLY AIR TERMINAL DAMPER SHALL BE AT ITS MINIMUM POSITION SET POINT.
2. THE SUPPLY AIR TERMINAL DAMPER SHALL INITIALLY OPEN TO ITS MINIMUM POSITION.
3. ON A RISE IN SPACE TEMPERATURE ABOVE SETPOINT, THE DAMPER SHALL MODULATE TOWARD IT'S MAXIMUM POSITION SET POINT.
4. ON A DROP IN SPACE TEMPERATURE BELOW COOLING SET POINT, THE DAMPER SHALL MODULATE TOWARD ITS MINIMUM POSITION SET POINT.
5. WHEN THE DAMPER REACHES ITS MINIMUM POSITION SET POINT AND THE SPACE TEMPERATURE FALLS BELOW SETPOINT THE HEATING CONTROL VALVE SHALL AND MODULATE TO MAINTAIN SPACE TEMPERATURE SETPOINT.
6. ON A CONTINUED FALL IN SPACE TEMPERATURE THE HEATING VALVE SHALL CONTINUE TO MODULATE OPEN UNTIL THE DISCHARGE AIR TEMPERATURE REACHES THE SCHEDULED DESIGN MAXIMUM.
7. ON A FURTHER DROP IN SPACE TEMPERATURE WITH THE DISCHARGE AIR TEMPERATURE AT ITS DESIGN MAXIMUM, THE DAMPER SHALL MODULATE FROM ITS MINIMUM AIRFLOW TO ITS MAXIMUM HEATING AIRFLOW WHILE MAINTAINING THE SCHEDULED MAXIMUM DISCHARGE AIR TEMPERATURE.
8. ON A RISE IN SPACE TEMPERATURE, THE REVERSE SHALL OCCUR.

C. UNOCCUPIED MODE

1. THE SUPPLY AIR TERMINAL UNIT DAMPER SHALL CLOSE TO MINIMUM POSITION AND THE HEATING CONTROL VALVE SHALL BE CLOSED WHEN THE UNOCCUPIED MODE IS INITIATED.
2. THE UNOCCUPIED SEQUENCE OF OPERATION SHALL BE THE SAME AS THE OCCUPIED SEQUENCE OF OPERATION, CONTROLLING TO THE UNOCCUPIED SETPOINTS.

D. WARM-UP MODE

1. THE SUPPLY AIR TERMINAL DAMPER SHALL BE OPEN TO MAXIMUM HEATING POSITION AND THE HEATING VALVE SHALL ENERGIZE AND MODULATE TO MAINTAIN THE OCCUPIED ROOM TEMPERATURE SET POINT.

E. COOL-DOWN MODE

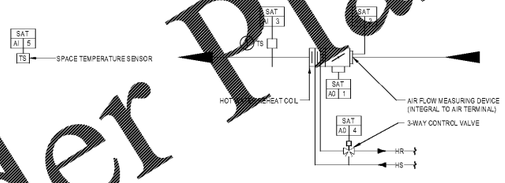
1. AIR TERMINAL UNIT DAMPER SHALL INITIALLY BE OPEN TO MAXIMUM COOLING POSITION AND SHALL MODULATE TO MAINTAIN THE OCCUPIED ROOM TEMPERATURE SET POINT.

F. THE SYSTEM AND AIR TERMINAL UNITS MAY BE PLACED INTO THEIR OCCUPIED MODE FOR A SCHEDULED OVERRIDE PERIOD FROM A CENTRAL COMMAND FROM THE BAS, OR THE SYSTEM AND AIR TERMINAL UNITS MAY BE PLACED INTO THEIR OCCUPIED MODE FOR A 2-HOUR OVERRIDE PERIOD BY PUSHING THE OVERRIDE BUTTON LOCATED ON THE SPACE TEMPERATURE SENSOR SERVING THE AIR TERMINAL UNIT.

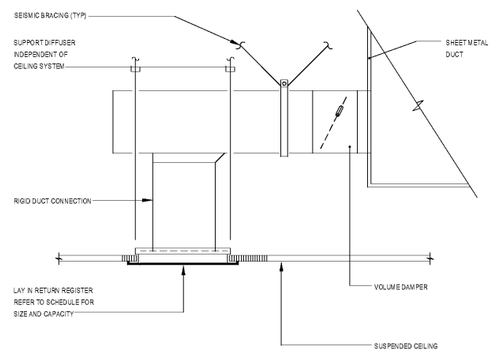
G. UPON LOSS OF POWER, DAMPER SHALL FAIL TO THE LAST POSITION HELD PRIOR TO LOSS OF POWER.

DRAWING NOTES:

1. TEMPERATURE SENSOR SHALL BE INSTALLED TWO FEET DOWNSTREAM OF AIR TERMINAL UNIT.

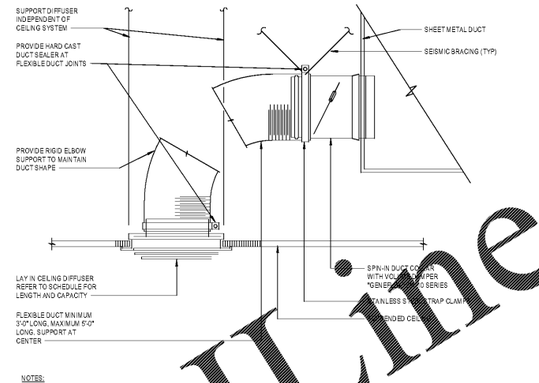


5 VARIABLE VOLUME SUPPLY AIR TERMINAL UNIT WITH REHEAT
SCALE: N.T.S.



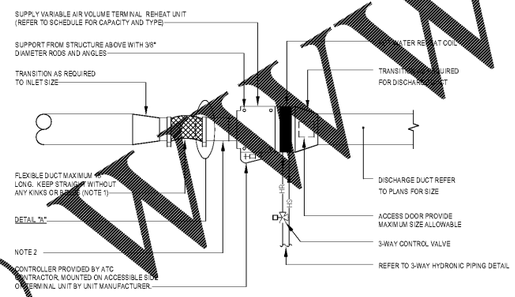
NOTES:
1. DUCT INSULATION AND LINING SHALL BE PROVIDED AS SPECIFIED.
2. PROVIDE SEISMIC SWAY BRACING FOR ALL DUCTWORK AND HANGERS PER THE INTERNATIONAL BUILDING CODE AND INTERNATIONAL MECHANICAL CODE.
3. CONTRACTOR SHALL VERIFY MAXIMUM LOADING ON DUCTWORK SUPPORT ASSEMBLIES.

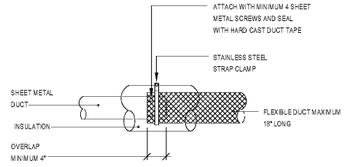
2 DETAIL - RETURN/EXHAUST AIR REGISTER BRANCH DUCT
SCALE: N.T.S.



NOTES:
1. DUCT INSULATION SHALL BE PROVIDED AS SPECIFIED.
2. PROVIDE ADDITIONAL ROD HANGERS AS REQUIRED FOR DUCTWORK AS REQUIRED TO LIMIT FLEXIBLE DUCT LENGTH TO 5'-0" MAXIMUM.
3. MAXIMUM SAG 1/2" IN ANY DUCT.
4. PROVIDE SEISMIC SWAY BRACING FOR ALL DUCTWORK AND HANGERS PER THE INTERNATIONAL BUILDING CODE AND INTERNATIONAL MECHANICAL CODE.
5. CONTRACTOR SHALL VERIFY MAXIMUM LOADING ON DUCTWORK SUPPORT ASSEMBLIES.

3 DETAIL - CEILING DIFFUSER BRANCH DUCTS
SCALE: N.T.S.





NOTES:
1. FLEXIBLE DUCTWORK SHALL NOT BE INSTALLED THROUGH WALLS OR PARTITIONS. SOLID DUCTWORK THE SAME DIMENSION AS THE FLEXIBLE DUCTWORK SHALL BE USED THROUGH THE PENETRATION, THEN TRANSITION TO THE FLEXIBLE DUCTWORK AS INDICATED ON THE DETAIL.
2. A STRAIGHT SECTION OF UNRESTRICTED DUCT AT LEAST TWO (2) DIAMETERS LONG SHALL BE INSTALLED AT THE TERMINAL UNIT INLET.

4 DETAIL - VARIABLE AIR VOLUME TERMINAL REHEAT UNIT
SCALE: N.T.S.

THERMOSTAT

1. UNLESS OTHERWISE NOTED, DEVICES LOCATED IN OCCUPIED SPACES SHALL BE MOUNTED 48" TO THE TOP OF THE DEVICE TO MATCH ELECTRICAL DEVICES.
2. COORDINATE FINAL SENSOR LOCATIONS WITH INTERIOR FINISH AND FURNITURE EQUIPMENT DRAWINGS PRIOR TO INSTALLATION.

6 SPACE SENSOR
SCALE: N.T.S.

STATE OF SOUTH CAROLINA — ENGINEERING INC. CHARLESTON, SC C-00551 — REGISTERED ENGINEERS
SOUTH CAROLINA — No. 24044 — REGISTERED PROFESSIONAL ENGINEER
SEALS

NOTES

MUSC MEDICAL UNIVERSITY of SOUTH CAROLINA

PROJECT NUMBER: H51-50068

DHEC PROJECT NUMBER: 580145

CONSTRUCTION DOCUMENTS

5/9/2018 3:45:10 PM

STORM EYE INSTITUTE
OPTICAL SHOP
H51-50068

167 ASHLEY AVE
CHARLESTON, SC 29425

ROSENBLUM COE ARCHITECTS, INC.
1643 MEANS STREET
CHARLESTON, SC 29412
843.577.6073

MECHANICAL DETAILS AND CONTROLS

SHEET NAME

PROJECT NUMBER	17016
DRAWN BY	TSN
CHECKED BY	CRB
DATE	05/09/2018
SCALE	N.T.S.

M201