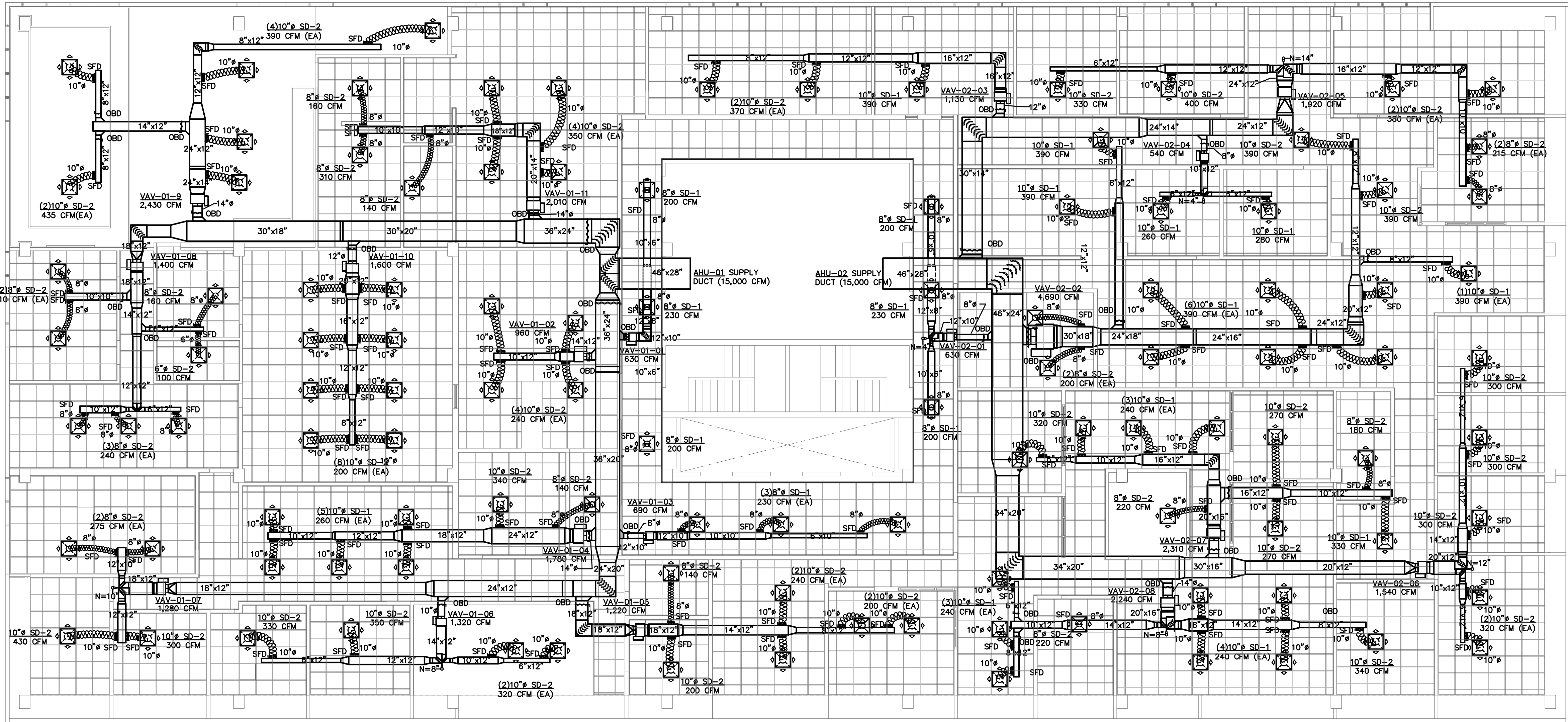


NEW IMPROVEMENTS ACAA BUILDING
255-273 AVENIDA DE LA CONSTITUCION
SAN JUAN, PUERTO RICO



10TH LEVEL REFLECTED CEILING PLAN-VAC LAYOUT
SCALE: 1/8"=1'-0"

NOTES:

- COORDINATE LOCATION OF TEMPERATURE CONTROLLERS AND TEMPERATURE SENSORS AT FIELD WITH OWNER.
- EXPOSED EQUIPMENT SHALL BE ANCHORED TO WITHSTAND HURRICANE FORCE WINDS.
- PROVIDE CORROSION PROTECTION TO ALL WEATHER EXPOSED MECH. EQUIPMENT BY MEANS OF FIELD APPLIED PRODUCT.
- ALL ROOF AND WALL OPENING SHALL BE COORDINATED WITH STRUCTURAL AND ARCHITECTURAL DRAWINGS.
- CEILING EXHAUST FAN SIMILAR TO -, 80 CFM, .07 AMPS, 120/1/60. INTERLOCKED WITH LIGHTING FIXTURE SWITCH.
- ALL HANGING FAN COIL UNITS SHALL HAVE A ACCESS DOOR FOR MAINTENANCE PURPOSES. COORDINATE WITH ARCHITECTURAL DWGS.
- ACCESS DOOR SHALL BE EQUAL OR SIMILAR TO MIFAB MODEL CAD-FR. 24"x24", RECESSED 1/2".
- FAN COIL UNITS CONDENSATE DRAIN PIPES SHALL BE 1" PVC INSULATED WITH 1/2" THICK CLOSED CELL ELASTOMATIC.
- WALL EXHAUST FAN SIMILAR TO PANASONIC MODEL FV-05-11VK1, 80 CFM, .07 AMPS, 120/1/60. INTERLOCKED WITH LIGHTING FIXTURE SWITCH.

ABBREVIATIONS:

- VAC VENTILATION & AIR CONDITIONING
CFM CUBIC FEET PER MINUTE
EF EXHAUST FAN
SF SUPPLY FAN
CD CEILING DIFFUSER
RR RETURN REGISTER. SEE SCHEDULE AT DWG VAC-2.0 (RR-1)
FCU FAN COIL UNIT
CU CONDENSING UNIT
SA SUPPLY AIR
RA RETURN AIR
OA OUTSIDE AIR
EA EXHAUST AIR
OAL OUTSIDE AIR LOUVER
SD SUPPLY DIFFUSER SEE SCHEDULE AT DWG VAC-2.0 (SD-1)
OBD OPPOSITE BLADE DAMPER
SFD SPINNING FITTING DAMPER
PCU POLLUTION CONTROL UNIT
AHU AIR HANDLING UNIT
(EA) EACH
① A/C THERMOSTAT AND CONTROLLER RECOMMENDED LOCATION, COORD. WITH ARCHITECT

SEQUENCE OF OPERATION

- COORDINATE LOCATION OF TEMPERATURE CONTROLLERS AND TEMPERATURE SENSORS AT FIELD WITH OWNER.
- EXPOSED EQUIPMENT SHALL BE ANCHORED TO WITHSTAND HURRICANE FORCE WINDS.
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REVISIONS		
No.	DESCRIPTION	DATE

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DRAWING TITLE

10TH LEVEL
REFLECTED CEILING PLAN
VAC LAYOUT AND NOTES

SCALE 1/8"=1'-0"	DRAWING No. VAC-1.0
PROJECT No.	SHEET No.
DATE	

YO, RAFAEL A. PARES CRUZ INGENIERO LICENCIADO, NUMERO DE LICENCIA 197M, CERTIFICO QUE SOY EL PROFESIONAL QUE DISEÑO ESTOS PLANOS Y LAS ESPECIFICACIONES COMPLEMENTARIAS. TAMBIEN CERTIFICO QUE ENTENDIENDO QUE DICHOS PLANOS Y ESPECIFICACIONES CUMPLEN CON LAS DISPOSICIONES APPLICABLES DEL REGLAMENTO CONSUMIDOR Y LAS DISPOSICIONES APPLICABLES DE LOS REGLAMENTOS Y CODIGOS DE LAS AGENCIAS, JUNTAS REGULADORAS O CORPORACIONES PUBLICAS CON JURISDICCION, RECONOZCO QUE CUALQUIER DECLARACION FALSA O FALSIFICACION DE LOS HECHOS QUE SE HAYA PRODUCIDO SIN CONOCIMIENTO O POR NEGLIGENCIA VA SEA POR MI, MIS AGENTES O EMPLEADOS, O POR OTRAS PERSONAS CON MI CONOCIMIENTO, ME HACEN RESPONSABLE DE CUALQUIER ACCION JUDICIAL Y DISCIPLINARIA POR LA OTRAS Y OTRAS AUTORIDADES COMPETENTES, INCLUYENDO, PERO SIN LIMITARSE, A LA TERMINACION DE LA PARTICIPACION EN LOS PROCEDIMIENTOS DE CERTIFICACION PROFESIONAL EN LA OOPR.

A/C GENERAL NOTES:

- BIDDERS SHALL VISIT THE BUILDING AND ACQUAINT THEMSELVES WITH THE CONDITIONS AS THEY ACTUALLY EXIST AND VERIFY DIMENSIONS, LOCATIONS AND DETAILS REQUIRED TO COMPLETE THE WORK. FAILURE TO VISIT THE PROJECT AREA WILL IN NO WAY RELIEVE THE SUCCESSFUL BIDDER OF FURNISHING ALL MATERIAL AND PERFORMING ALL WORK REQUIRED FOR THE COMPLETION OF THE CONTRACT. VISIT TO THE PROJECT AREA SHALL BE ARRANGED THROUGH THE BUILDING MANAGER.
- CONTRACTOR SHALL PROVIDE SUITABLE VIBRATION ISOLATION FOR THE SYSTEM AS RECOMMENDED BY MANUFACTURER OF EQUIPMENT SPECIFIED OR PROVIDED.
- CONTRACTOR SHALL FURNISH AND INSTALL PIPING VALVES, SENSORS, CONTROL SYSTEMS AND ANY OTHER ITEM REQUIRED FOR THE FUNCTIONING AND OPERATION OF THE SYSTEM SHALL FORM PART OF THE WORK TO BE DONE BY THE CONTRACTOR.
- IT IS THE INTENTION OF THE DRAWINGS TO CALL FOR FINISHED WORK, COMPLETE, TESTED AND READY FOR OPERATION. MINOR DETAILS NOT SHOWN OR SPECIFIED, BUT NECESSARY FOR THE PROPER INSTALLATION AND FOR FUNCTIONING AND OPERATION OF THE SYSTEM SHALL FORM PART OF THE WORK TO BE DONE BY THE CONTRACTOR.
- CONTRACTOR SHALL PAINT ALL PIPING, PIPE INSULATION, FITTINGS, VALVES AND ALL EQUIPMENT TO BE INSTALLED.
- THE CONTRACTOR SHALL, WITHOUT EXTRA CHARGE, MAKE REASONABLE MODIFICATIONS IN THE DUCT AND PIPING ARRANGEMENTS AS NEEDED TO PREVENT CONFLICT WITH WORK OF OTHER TRADES OR FOR PROPER EXECUTION OF THE WORK.
- ALL EQUIPMENT AND MATERIAL SHALL BE INSTALLED WITH THE APPROVAL OF THE OWNER IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER AND THE SPECIFICATIONS ISSUED FOR THIS PROJECT.
- CONTRACTOR SHALL LOCATE IN FULLY ACCESSIBLE POSITIONS ALL EQUIPMENT WHICH MUST BE SERVICED, OPERATED, OR MAINTAINED. CONTRACTOR IS RESPONSIBLE OF COMPLY WITH EACH EQUIPMENT MANUFACTURER RECOMMENDED CLEARANCE.
- IN CASE OF DISCREPANCY BETWEEN THE EQUIPMENT SPECIFIED AND THE EQUIPMENT SUPPLIED BY THE OWNER, THE CONTRACTOR SHALL ARRANGE FOR THE PROPER INSTALLATION OF THE EQUIPMENT.
- CONTRACTOR SHALL FURNISH AND INSTALL AIR CONDITIONING EQUIPMENT, DUCTS, INSULATION, PIPING VALVES, SENSORS, CONTROL SYSTEMS AND ANY OTHER ITEM REQUIRED FOR THE PROPER FUNCTIONING AND OPERATION OF THE SYSTEM.
- MECHANICAL WORK SHALL BE COORDINATED WITH ALL OTHER TRADES.
- DUCTWORK:
 - DUCT MATERIAL - SHALL BE GALVANIZED SHEET METAL, AND MANUFACTURED AND INSTALLED IN ACCORDANCE WITH LATEST EDITION OF THE DUCT CONSTRUCTION STANDARDS OF SMACNA FOR THE APPLICABLE PRESSURE CLASS.
 - DUCT WORKMANSHIP - ALL DUCTWORK SHALL BE CONSTRUCTED AND ERECTED IN A WORKMANLIKE MANNER. DUCTS SHALL BE STRAIGHT AND SMOOTH ON THE INSIDE WITH NEATLY FINISHED JOINTS, AIRTIGHT, AND SHALL BE FREE FROM VIBRATION UNDER ALL CONDITIONS OF OPERATION. THE INTERNAL ENDS OF SLIP JOINTS SHALL BE MADE IN THE DIRECTION OF AIR FLOW. CHANGES IN DIMENSIONS AND SHAPE OF DUCTS SHALL BE GRADUAL. DUCT SIZES SHALL FALL WITHIN THE LIMITING DIMENSIONS INDICATED ON THE DRAWINGS UNLESS OTHERWISE APPROVED. CURVED ELBOWS, UNLESS OTHERWISE SPECIFIED ON THE DRAWINGS, SHALL HAVE A CENTER LINE RADIUS EQUAL TO 1 1/2 TIMES THE WIDTH OF THE DUCT. AIR TURNS SHALL BE INSTALLED IN ALL ABRUPT ELBOWS AND SHALL CONSIST OF CURVED METAL BLADES OR VANES, ARRANGED TO PERMIT THE AIR TO MAKE THE TURNS WITHOUT APPRECIABLE TURBULENCE. THEY SHALL BE THE MANUFACTURER'S STANDARD PRODUCT AND SHALL BE QUIET WHEN THE SYSTEM IS IN OPERATION. CONFIGURATION OF DUCTS SHALL BE AS INDICATED ON DRAWINGS. DUCT HANGER SHALL BE AS INDICATED ON DRAWINGS.
- ALL DUCT WORK AND PIPING SHALL BE PROVIDED WITH SEISMIC RESTRAINTS IN ACCORDANCE WITH IBC & N.E.P.A. STANDARDS.
- THE MECHANICAL CONTRACTOR SHALL COORDINATE THE CONCRETE SLABS PENETRATION WORKS WITH OWNER, STRUCTURAL ENGINEER AND ARCHITECTURAL DRAWINGS.
- EXPOSED AIR DUCT INSULATION SHALL BE 2" THICK JOHNS-MANVILLE NO. 817 (6 lbs/R) RIGID FIBERGLASS DUCT INSULATION WITH A FACTORY APPLIED FOIL-SCRM-KRAFT (FSK) VAPOR BARRIER FACING. COVER ALL INSULATION WITH GLASS FABRIC MESH USING FOSTER SEALFAS MASTIC. INSULATION SHALL HAVE A "K" FACTOR=0.22 BTU-in/hr.-ft. @ 75F.
- CONCEALED AIR DUCT INSULATION SHALL BE 1 1/2" THICK JOHNS-MANVILLE R-SERIES MICROTEC FIBER GLASS BLANKET WITH A FACTORY APPLIED FOIL-SCRM-KRAFT (FSK) VAPOR BARRIER FACING. INSULATION SHALL HAVE A "K" FACTOR= 0.31 BTU-in/hr.-ft @ 75F.
- ALL SHEETMETAL DUCTWORK SEAMS & JOINTS MUST BE SEALED WITH HIGH PRESSURE DUCT SEALER AS MANUFACTURED BY MINNESOTA MINING & MANUFACTURING CO. MODEL EC-800 OR APPROVED EQUAL. AIR LEAKS MUST BE 5X OR LESS. TEST DUCTWORK BEFORE FINAL CONNECTION TO AHU'S & AIR DISTRIBUTION.
- FOR EXACT LOCATION OF CEILING DIFFUSERS REFER TO ARCHITECTURAL REFLECTED CEILING PLAN.
- THE CONTRACTOR MUST FURNISHED & INSTALL A U.L. APPROVED FIRE DAMPER WITH 10 GAUGE METAL SLEEVE AND DUCT WHERE SHOWN ON DRAWINGS, AS REQUIRED BY LOCAL BUILDING CODES, OR AS REQUIRED BY N.E.P.A. FIRE DAMPERS SHALL BE CURTAIN TYPE AS MANUFACTURED BY RUSKIN MODEL 1002 STYLE C OR APPROVED EQUAL.
- ALL MATERIAL AND SPECIALTIES REQUIRED FOR THIS WORK SHALL BE NEW (UNLESS OTHERWISE INDICATED), OF FIRST-CLASS QUALITY AND SHALL BE FURNISHED, DELIVERED, ERECTED, CONNECTED AND FINISHED IN EVERY DETAIL, AND SHALL BE SO SELECTED AND ARRANGED AS TO FIT PROPERLY INTO THE BUILDING SPACES. DURING STORAGE ON THE JOB SITE OF CONSTRUCTION, THE CONTRACTOR SHALL KEEP PIPE ENDS PLUGGED OR CAPPED TO PREVENT DIRT OR MOISTURE ENTERING THE PIPE.
- PROVIDE SMOKE DETECTORS AS PER N.E.P.A. 90A.
- REFRIGERANT PIPING MATERIAL: SHALL BE TYPE "K" COPPER TUBING, HARD DRAWN WITH WROUGHT COPPER SOLDER TYPE FITTINGS SUITABLE FOR CONNECTION WITH SILVER SOLDER AND SHALL BE COVERED WITH ALUMINUM JACKET.
- COOLING COIL CONDENSATE DRIP PIPING MATERIAL: SHALL BE TYPE "M" COPPER OR SCH.40PVC.
- GLOBE VALVE: SHALL BE CONSTRUCTED OF FORGED BRASS AND SHALL BE OF THE BACKSEATING TYPE SUITABLE FOR 500 PSI.
- CHECK VALVES: SHALL BE CONSTRUCTED OF FORGED BRASS SUITABLE FOR 500 PSI.
- SOLENOID VALVES: SHALL BE CONSTRUCTED OF FORGED BRASS SUITABLE FOR 400 PSI.
- REFRIGERANT STRAINERS: SHALL BE CONSTRUCTED OF FORGED BRASS SUITABLE FOR 350 PSI. PROVIDE 100 MESH STRAINER.
- MOISTURE INDICATOR: SHALL BE CONSTRUCTED OF FORGED BRASS WITH OPTICAL GLASS SUITABLE FOR 500 PSI.
- FILTER DRAINS: SHALL BE CONSTRUCTED OF STEEL WITH STEEL COVER REPLACEABLE FILTER DRIER COVER.
- ALL ELBOWS SHALL BE OF THE LONG RADIUS TYPE.
- REFRIGERANT PIPING INSULATION MATERIAL: SHALL BE CLOSED CELL ELASOMETRIC 1/2" THICK ALL PIPE SIZES. K=0.25 @ 75F.
- CONTRACTOR SHALL PROVIDE INDIRECTLY CONNECTED CONDENSATE DRAIN TO A/C UNITS. COORDINATE WITH PLUMBING DRAWINGS.
- ALL EXPOSED DUCTWORK SHALL BE PAINTED AS PER ARCHITECT'S COLOR CODING.
- CONTRACTOR SHALL BE RESPONSIBLE OF SUBMIT DUCTWORK SHOP DWG. FOR APPROVAL. NO CHANGE ORDER WILL BE ALLOWED FOR DUCTS MODIFICATIONS RESULTING FROM NEW-COORDINATED SHOP DRAWINGS.
- PROVIDE CONDENSATE DRAIN PUMP FOR FCU'S IF SLOPE IS NOT ATTAINED.
- COORDINATE LOCATION OF TEMPERATURE CONTROLLERS AT FIELD WITH OWNER.
- EQUIPMENT AT ROOF SHALL BE ANCHORED TO WITHSTAND HURRICANE FORCE WINDS
- PROVIDE CORROSION PROTECTION TO ALL WEATHER EXPOSED MECH. EQUIPMENT BY MEANS OF FIELD APPLIED PRODUCT.
- PROVIDE 1" THICK INTERNAL ACOUSTICAL LINING TO FIRST 10'-0" OF SUPPLY & RETURN DUCTWORK. SIMILAR TO SCHULLER PERMACOUSTICS.
- PROPERTIES OF MATERIALS ASSUMED AT THE COOLING LOAD CALCULATIONS:
 - ROOF - R=30 H*F/T2*F/8TU
 - ROOF SKY LIGHT - U=0.6 BTU/H*F/T2*F / SHGC=0.3
 - WALLS - R=7.5 H*F/T2*F/8TU
 - WINDOWS - SINGLE PANE CLEAR 1/8"
 - SALES AREA LPD - 1.55 W/FT2
 - OCCUPANCY = 200 PEOPLE

VARIABLE AIR VOLUME BOX SCHEDULE

DESIGNATION	AIRFLOW(CFM)		PD @ MAX. (INCH WG)	MANUFACTURER	MODEL	UNIT SIZE	CONTROL	REMARKS
	MAX.	MIN.						
VAV-01-01	630	65	.25	TRANE	VCCF	8	WALL MAUNTED THERMOSTAT	WITH ACTUATOR
VAV-01-02	960	100	.25	TRANE	VCCF	10	WALL MAUNTED THERMOSTAT	WITH ACTUATOR
VAV-01-03	690	70	.25	TRANE	VCCF	8	WALL MAUNTED THERMOSTAT	WITH ACTUATOR
VAV-01-04	1,780	180	.25	TRANE	VCCF	14	WALL MAUNTED THERMOSTAT	WITH ACTUATOR
VAV-01-05	1,220	125	.25	TRANE	VCCF	12	WALL MAUNTED THERMOSTAT	WITH ACTUATOR
VAV-01-06	1,320	100	.25	TRANE	VCCF	10	WALL MAUNTED THERMOSTAT	WITH ACTUATOR
VAV-01-07	1,280	130	.25	TRANE	VCCF	12	WALL MAUNTED THERMOSTAT	WITH ACTUATOR
VAV-01-08	1,400	140	.25	TRANE	VCCF	12	WALL MAUNTED THERMOSTAT	WITH ACTUATOR
VAV-01-09	2,430	245	.25	TRANE	VCCF	14	WALL MAUNTED THERMOSTAT	WITH ACTUATOR
VAV-01-10	1,600	160	.25	TRANE	VCCF	12	WALL MAUNTED THERMOSTAT	WITH ACTUATOR
VAV-01-11	2,010	205	.25	TRANE	VCCF	14	WALL MAUNTED THERMOSTAT	WITH ACTUATOR
VAV-02-01	630	65	.25	TRANE	VCCF	8	WALL MAUNTED THERMOSTAT	WITH ACTUATOR
VAV-02-02	4,290	430	.25	TRANE	VCCF	24x16	WALL MAUNTED THERMOSTAT	WITH ACTUATOR
VAV-02-03	1,130	130	.25	TRANE	VCCF	12	WALL MAUNTED THERMOSTAT	WITH ACTUATOR
VAV-02-04	540	180	.25	TRANE	VCCF	8	WALL MAUNTED THERMOSTAT	WITH ACTUATOR
VAV-02-05	1,920	290	.25	TRANE	VCCF	14	WALL MAUNTED THERMOSTAT	WITH ACTUATOR
VAV-02-06	1,540	290	.25	TRANE	VCCF	12	WALL MAUNTED THERMOSTAT	WITH ACTUATOR
VAV-02-07	2,310	270	.25	TRANE	VCCF	14	WALL MAUNTED THERMOSTAT	WITH ACTUATOR
VAV-02-08	2,240	135	.25	TRANE	VCCF	14	WALL MAUNTED THERMOSTAT	WITH ACTUATOR

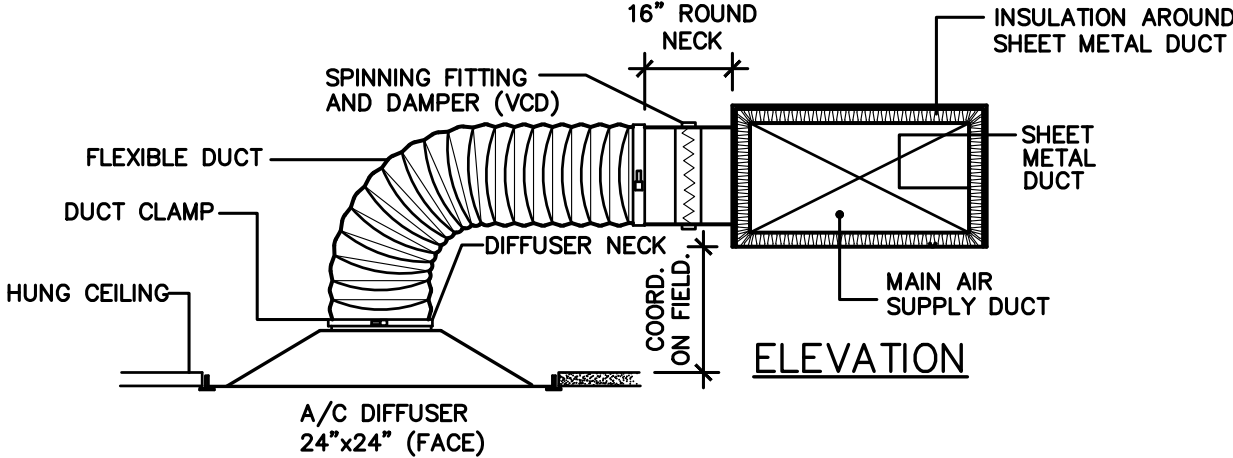
AIR TERMINALS SCHEDULE

DESIG.	TYPE	MODEL	MANUFACTURER	REMARK
SD-1	SUPPLY DIFFUSER	5000-8	METAL AIRE	ALUMINUM CONSTRUCTION
SD-2	THERMAL VAV DIFFUSER	TF	THERMAFUSER	ALUMINUM CONSTRUCTION
RR-1	RETURN REGISTER WITH DAMPER	RHD	METAL AIRE	ALUMINUM CONSTRUCTION

*PROVIDE TR TRANSITION WHEN REQUIRED

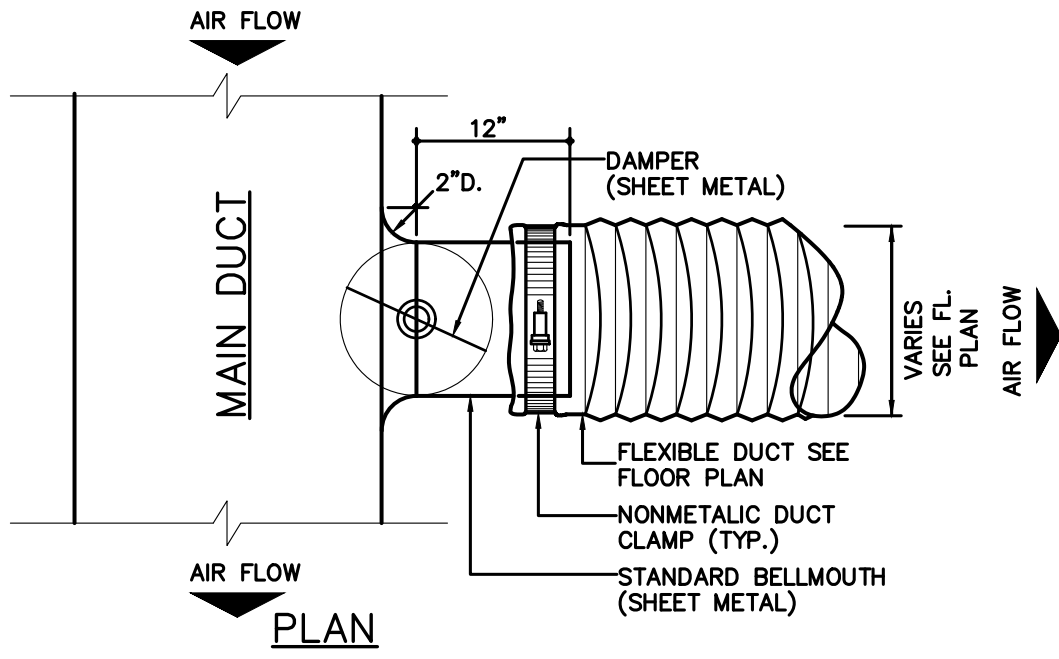
BALANCING:

- THE A/C CONTRACTOR SHALL PROVIDE AIR AND HYDRONIC SYSTEM BALANCING.
- PERFORM AIR & HYDRONIC BALANCING BY A INDEPENDENT THIRD PARTY NEBB OR AABE CERTIFIED AIR BALANCE CONTRACTOR SHALL ACCURATELY BALANCE THE AIR SYSTEMS TO PROVIDE AIR QUALITIES INDICATED ON THE DRAWINGS AND IN THIS SPECIFICATION. OPERATE AUTOMATIC CONTROLS SYSTEM AND VERIFY SET POINTS DURING BALANCING. THE FINAL READING AND ADJUSTMENT SHALL BE PERFORMED WITH THE PRESENCE OF THE OWNER'S REPRESENTATIVE. SUBMIT TAB REPORT TO THE ENGINEER FOR APPROVAL.
- PRESSURIZATION LEAKAGE AND INFILTRATION TEST SHALL BE PERFORMED PER SMACNA STANDARDS AND TECHNICAL SPECIFICATIONS.
- THE AIR DISTRIBUTION SYSTEM AND DEVICES SHALL BE BALANCED FOR PROPER AIR FLOW. TEST DATA OF THE BALANCING OF THE SYSTEMS SHALL BE SUBMIT TO THE ARCHITECT FOR REVIEW. ALL AIR QUANTITIES SHALL BE SET TO WITHIN 10% OF THE LISTED QUANTITIES. DEFLECTION VANES SHALL BE SET TO ELIMINATE ANY EXCESSIVE AIR MOVEMENT IN THE AREA.
- THE AIR SIDE BALANCING SHALL INCLUDE:
 - RECORD MOTOR FULL LOAD AMPS AND ACTUAL OPERATING AMPERAGE.
 - RECORD SUPPLY, RETURN AND OUTSIDE AIR TEMPERATURES.
 - MAKE PITTOT TUBE TRAVERSE OF MAIN SUPPLY DUCT AND OBTAIN DESIGN CFM AT FAN AND FAN RPM.
 - RECORD SYSTEM STATIC PRESSURES, RETURN AND DISCHARGE.
 - FIVE (5) COPIES OF BALANCING REPORTS CONTAINING THE DATA MENTIONED ABOVE AND SHALL BE GIVEN TO THE OWNER'S REPRESENTATIVE.
- BALANCING WORK SHALL FULLY COMPLY WITH A.A.B.C. OR N.E.B.B.



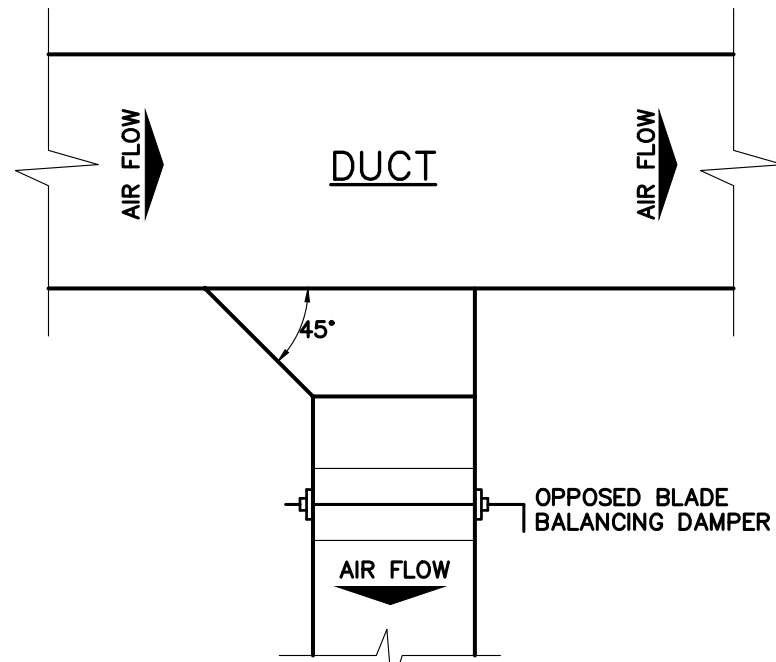
CEILING DIFFUSER & FLEXIBLE DUCT INSTALLATION DETAIL

SCALE: N.T.S.



BELLMOUTH & FLEXIBLE DUCT INSTALLATION DETAIL

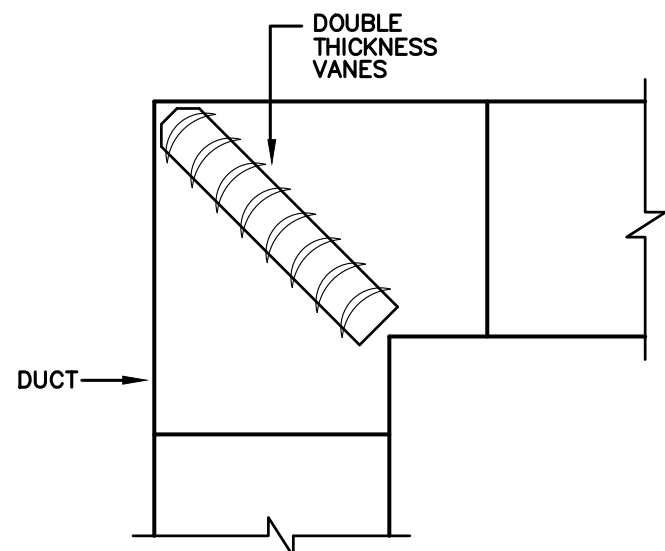
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PLAN

TYPICAL TAKE-OFF DETAIL

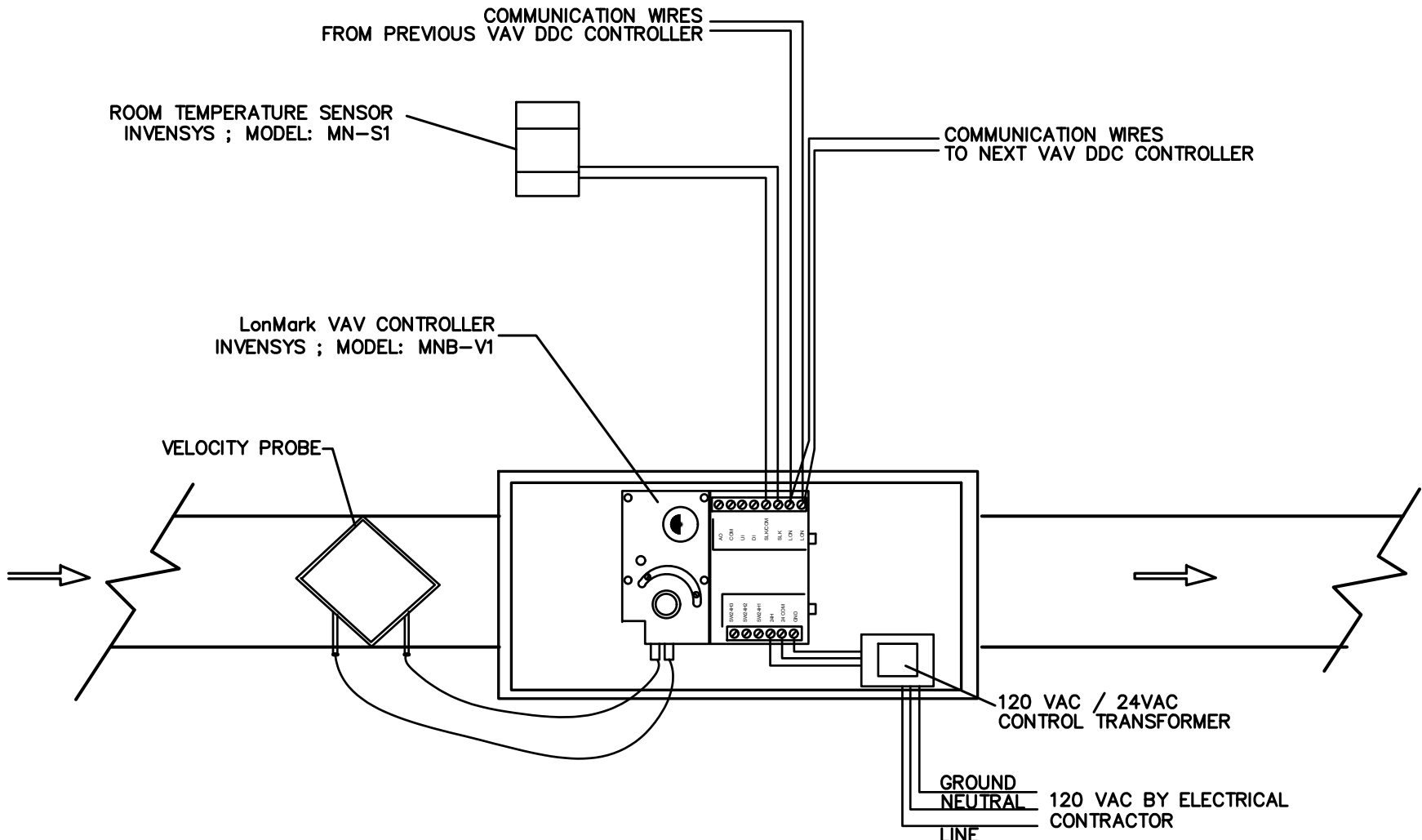
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PLAN

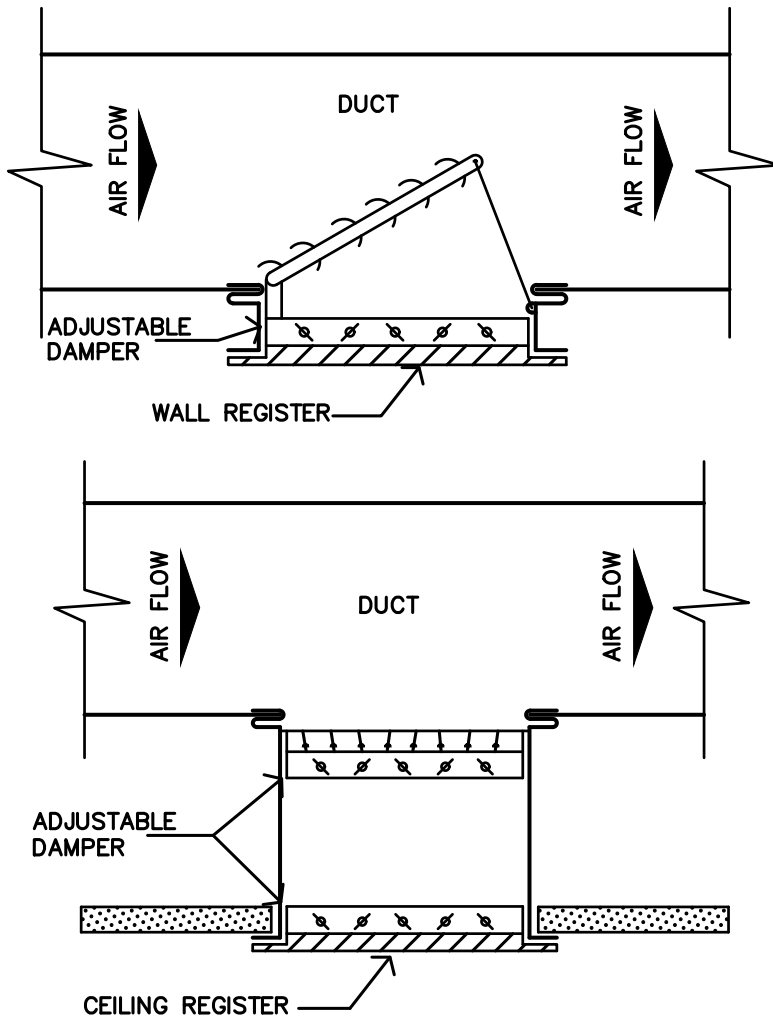
SQUARED VANED ELBOW

SCALE: N.T.S.



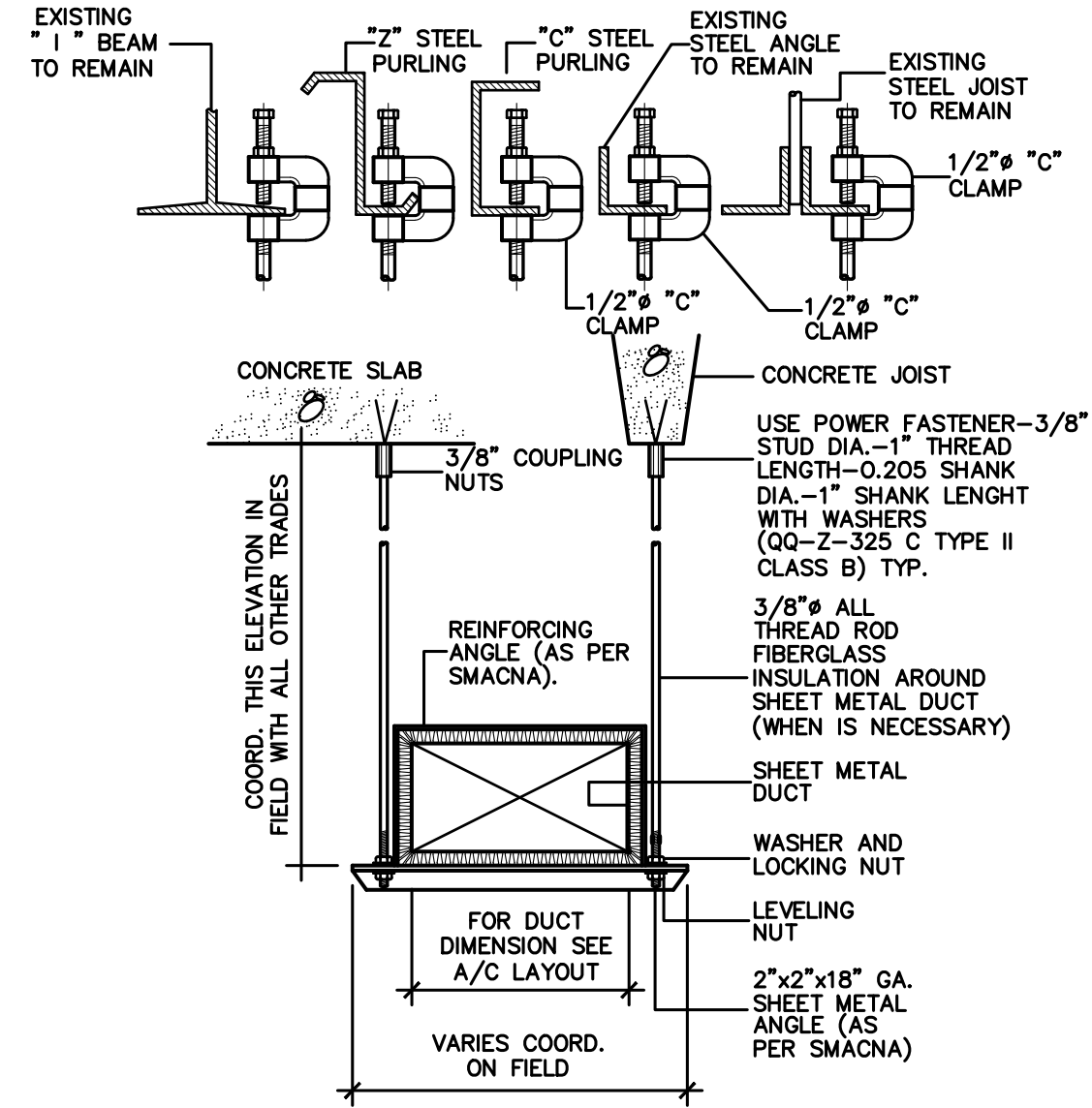
VAV DDC CONTROLLER CONTROL DIAGRAM
TYPICAL FOR ROOM TEMPERATURE CONTROL APPLICATION

SCALE: N.T.S.



SUPPLY DIFFUSER, EXHAUST OR RETURN REGISTER MOUNTING DETAIL

SCALE: N.T.S.

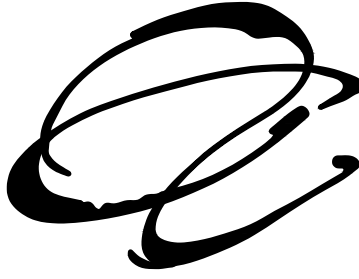


ELEVATION

SUPPLY,RETURN OR EXHAUST SHEET METALDUCT HANGER DETAIL

SCALE: N.T.S.

ABACUS



ARCHITECTURE PSC

CONSULTANT

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PROJECT NAME

NEW IMPROVEMENTS ACAABUILDING

255-273 AVENIDA DE LA CONSTITUCION

SAN JUAN, PUERTO RICO

REVISIONS		
No.	DESCRIPTION	DATE

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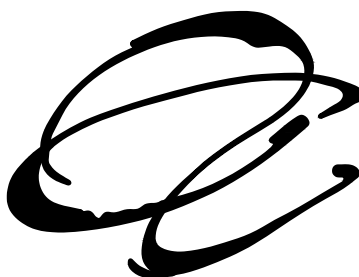
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VAC NOTES

SCHEDULES AND DETAILS

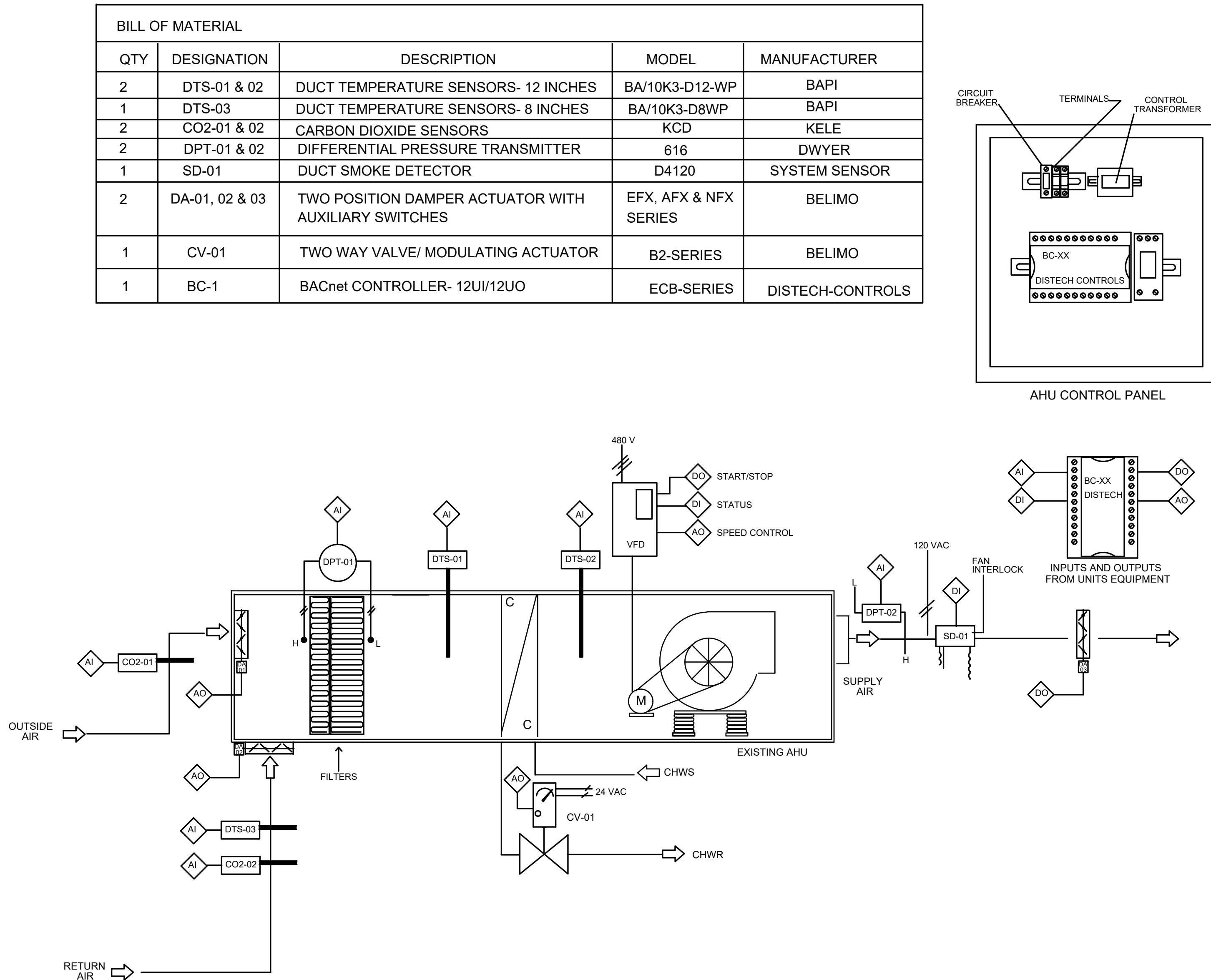
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N.T.S.	VAC-2.0
PROJECT No.	SHEET No.
DATE	

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AHU'S SEQUENCE OF OPERATION

1. The BMS Should Start / Stop the Unit base on a Daily Schedule.
2. When BMS send a Start Signal the Fresh Air , Return Air and Supply Air Damper Actuator should Open and Send a Open Position Feedback in order to Start the Unit.
3. When BMS send a Stop Signal the Fresh Air , Return Air and Supply Air Damper Actuator should Closed and Send a Closed Position Feedback .
4. In case of Power Failure All Dampers Actuators will close (Spring Return).
5. Distech Control BMS will monitor Supply, Return, Mix Temperature Sensors, Carbon Dioxide Sensors for Outside / Return Air, Static Pressure Sensor, Smoke Detector, Filter / Fan Status and Motorized Damper Position
6. Variable Frequency Drive will Increase or Decrease Hz in order to reach desire static pressure setpoint. A Smoke Detector installed at the Supply Duct will shutdown the Unit in case of Activation.
7. A Supply Temperature Sensor will monitor the Unit to Assure 55 °F with the Cooling Coil Control Valve
8. Carbon Dioxide Sensor installed at the Return Duct will Monitor PPM and Compare it with Outside Carbon Dioxide PPM. If the CO2 Sensor from the Return is Higher than 1,000 PPM and 250 PPM from Outside CO2 a Control Damper at the Fresh Air will Modulate to Open an a Control Damper at the Return will Modulate to Close.
9. A Differential Pressure Transmitter will be installed to Monitor Filter Condition.



AHU CONTROL DIAGRAM

NEW IMPROVEMENTS ACAA BUILDING
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VAC AUTOMATIC
CONTOL SYSTEM

YO, RAFAEL A. PARES CRUZ INGENIERO LICENCIADO, NUMERO DE LICENCIA 16246 CERTIFICO QUE SOY EL PROFESIONAL QUE DISEÑO ESTOS PLANOS Y LAS ESPECIFICACIONES COMPLEMENTARIAS. TAMBIEN CERTIFICO QUE ENTENDIENDO QUE DICHO PLANOS Y ESPECIFICACIONES CUMPLEN CON LAS DISPOSICIONES APLICABLES DEL REGLAMENTO CONSULTIVO Y LAS DISPOSICIONES APLICABLES DE LOS REGLAMENTOS Y CODIGOS DE LAS AGENCIAS, JUNTAS REGULADORAS O CORPORACIONES PUBLICAS CON JURISDICCION, RECONOZCO QUE CUALQUIER DECLARACION FALSA O FALSIFICACION DE LOS HECHOS QUE SE HAYA PRODUCIDO SIN CONOCIMIENTO O POR NEGLIGENCIA YA SEA POR MI, MIS AGENTES O EMPLEADOS, O POR OTRAS PERSONAS CON MI CONOCIMIENTO, ME HACEN RESPONSABLE DE CUALQUIER ACCION JUDICIAL Y DISCIPLINARIA POR LA QUE Y OTRAS AUTORIDADES COMPETENTES, INCLUYENDO, PERO SIN LIMITARSE, A LA TERMINACION DE LA PARTICIPACION EN LOS PROCEDIMIENTOS DE CERTIFICACION PROFESIONAL EN LA OGP.

SCALE	DRAWING No.
N.T.S.	VAC-3.0
PROJECT No.	SHEET No.