

MECHANICAL NOTES

- THE CONTRACTOR SHALL FINISH ALL LABORS, MATERIALS, AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF A COMPLETE SYSTEM IN ACCORDANCE WITH THESE DRAWINGS, THE FLORIDA BUILDING CODE, 2007 AND ALL OTHER APPLICABLE STATE, FEDERAL, AND LOCAL CODES AND REGULATIONS. ASHRAE 62.1-06, ASHRAE 90.1-06, ASHRAE 90A-02, 90B-02, 91-99, 96-01, 101-06, ANSI Z10.1-98, Z10.3-98, Z11.8-94, Z21.83-98, AND ALL OTHER APPLICABLE STANDARDS SHALL BE USED.
 - THE CONTRACTOR SHALL PAY ALL COSTS OF PERMIT, INSPECTIONS, AND ALL OTHER COSTS INCIDENTAL TO THE COMPLETION AND TESTING OF THIS WORK.
 - THE CONTRACTOR SHALL VISIT THE SITE AND COORDINATE WORK WITH OTHER TRADES.
 - THE CONTRACTOR SHALL SUPPLY THE ARCHITECT/ENGINEER WITH "AS-BUILT" DRAWINGS.
 - CONTRACTOR SHALL SUBMIT FOR APPROVAL (VE) COPIES OF A COMPLETE SET OF SHOP DIMS. MANUFACTURER'S SUBMITTALS FOR EACH PIECE OF EQUIPMENT & CONTROLS INCLUDED IN CONTRACT.
 - ALL MATERIAL SHALL BE NEW OF U.S. MANUFACTURER OF GOOD QUALITY. ALL WORK SHALL BE PERFORMED AT INDUSTRY STANDARD QUALITY LEVEL BY CERTIFIED PROFESSIONALS. ALL INSTALLATIONS SHALL COMPLY WITH FMC 2007, CH. 3, GENERAL REGULATIONS. BUILDINGS LOCATED WITHIN 3,000 FT FROM THE OCEAN SHALL UTILIZE NON-FERROUS MATERIALS FOR ALL OUTDOOR EXPOSED SUPPORTS, STANDS, FASTENERS, ETC.
 - ALL HVAC AIR CONDITIONING DUCT WORK SHALL BE OF 1" (R-4.2) STANDARD DUTY FOIL REINFORCED FIBERGLASS WITH MANUFACTURER'S LOGO PRINTED ON VAPOR BARRIER. ALL DUCTS SHALL BE PROTECTED FROM PHYSICAL DAMAGE. ALL DUCTS SHALL BE INSTALLED UL LISTED FOR FLEXIBLE DUCTWORK ELBOW SUPPORTS AT EACH DIFFUSER, GRILLE, AND REGISTER EQUAL TO "FLEXLOFT ELBOW" AS MANUFACTURED BY "THERMAFLEX".
- SPECIAL NOTES**
- SMOKE DUCT PRESSURE CLASSES BASED ON OPERATING PRESSURE ARE 1/2", 1", 2", 3", 4", 6", AND 10". EACH DUCT SYSTEM SHALL BE CONSTRUCTED FOR THE SPECIFIC DUCT PRESSURE CLASS SHOWN ON THESE DRAWINGS.
 - ALL PRESSURE CLASS DUCTS SHALL BE INSTALLED TO ENSURE COMPLIANCE WITH FMC 2007, PAR. 603.4 FOR BALANCED AIR FLOW AND WITH PAR. 601.4 FOR BALANCED RETURN, TRANSFER AIR FLOW.
 - TEMPERATURE CONTROLS/THERMOSTATS:
 - EXISTING DAMPERS SHALL BE RELOCATED TO THE NEW THERMOSTAT LOCATION.
 - FOR ALL HVAC EQUIPMENT, WHERE APPLICABLE AS REQUIRED BY THE A. EOR. VAV BOXES: CONTROLS TO BE DDC, PROVIDE ROOM THERMOSTAT/SENSOR WITH OVERRIDE B. FOR EXISTING EQUIPMENT: SHALL BE SERVED AND RELOCATED AS SHOWN. IF NEW THERMOSTAT IS PROVIDED IT SHALL MATCH BUILDING STANDARDS.
 - THE THERMOSTAT LOCATION SHALL BE APPROVED BY OWNER AND ENGINEER BEFORE INSTALLATION. MECHANICAL CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR ALL REQUIREMENTS FOR JUNCTION BOXES, CONDUTS, CONTROL, WIRING, POWER, ETC. AND DEFINE RESPONSIBILITIES AND SCOPE OF WORK FOR EACH TRADE PRIOR TO ANY PURCHASING OR INSTALLATION.
 - REFERENCED LINES SHALL BE COPPER, TYPE "L", HARD DRINKS WITH WROUGHT COPPER PER AMP 48.6. BOP SERIES COPPER-PHOSPHORUS ALLOY OR BA91 SILVER ALLOY. SOFT COPPER TYPE "M" SHALL BE ALLOWED FOR RISER PIPING INSIDE CHASE TO LIMIT NUMBER OF JUNCTIONS. COPPER SHALL BE PROTECTED FROM PHYSICAL DAMAGE BY AN UL LISTED INSULATION SHALL BE PROTECTED WITH INSULATION, PLANT OR ALUMINA, SHELDS. ALL REFERRED INSULATION SHALL BE PROTECTED WITH INSULATION, PLANT OR ALUMINA, SHELDS. 1" FOR BELOW 40°F PER FLORIDA ENERGY CODE TABLE 5-17 FOR PIPING INSULATION. FILTER/ARJYER AND SIGHT GLASS SHALL BE PROVIDED AT LIQUID LINES.
 - ALL BRANCH TAKE-OFFS TO BE PROVIDED W/ MANUAL VOLUME DAMPERS. PROVIDE RADIUS ELBOWS WHERE FEASIBLE, SQUARE ELBOWS AND TEES SHALL BE FURNISHED W/SINGLE FOIL TURNING VANES. PROVIDE MANUAL VOLUME DAMPERS WITH EXTRACTOR AT ALL FLEX TAKE-OFFS.
 - PROVIDE NEW FILTERS FOR ALL AIR CONDITIONING EQUIPMENT BEFORE START-UP. REPLACE PRIOR TO FINAL ACCEPTANCE BY OWNER.
 - ALL INSTALLED ELECTRICAL DEVICES, ACTUATORS, APPURTENANCES, AUXILIARY EQUIPMENT, ETC. REQUIRING ENVIRONMENTAL PROTECTION SHALL BE PROVIDED WITH ADEQUATE NEMA RATED ENCLOSURE. ALL ELECTRICAL DEVICES SHALL BE INSTALLED, WEATHER INDOORS OR OUTDOORS, EVEN IF NOT SPECIFICALLY INDICATED ON PLANS.
 - PROVIDE TYPE "B" DYNAMIC FIRE DAMPERS WITH SERVICE ACCESS DOORS IN ALL DUCTS AND OPENINGS PENETRATING FIRE RATED WALLS, MECHANICAL AND ELECTRICAL EQUIPMENT ROOMS. PROVIDE TYPE "B" DYNAMIC FIRE DAMPERS WITH SERVICE ACCESS DOORS IN ALL DUCTS AND OPENINGS PENETRATING FIRE RATED WALLS, MECHANICAL AND ELECTRICAL EQUIPMENT ROOMS. PROVIDE RADIATION DAMPERS IN RATED CEILING FOR ALL CEILING OPENINGS, CEILING FANS, DIFFUSERS OR GRILLES RATED FOR USE IN THE CEILING ASSEMBLY. AIRFLOW CFM HAS TO BE CONTROLLED, VERIFY AND REPLACE AS REQUIRED FOR EXISTING SYSTEMS.

OUTSIDE AIR CALCULATIONS

BASED ON ASHRAE 62.1-07, TABLE 6.1

AREA SERVED OR UNIT TAG	NET OCCUPABLE AREA SQ.FT.	VENTILATION RATE O/A CFM/50.FT.²	ACTUAL OCCUPANCY NO. OF PEOPLE	VENTILATION RATE COMBINED O/A CFM/PERSON	TOTAL CFM O/A PROV. BY BASE BLDG. AIRU	NOTES
AMERIPRISE	4133	.06	16	328	5	1,2

* PROVIDED BY BASE BUILDING SYSTEM O/A FANS 5--5 AND 5--6, ABOUT 2000 CFM ON 6TH FLOOR. SEE BASE BUILDING DRAWINGS FOR MORE DETAILS.

NOTES:

- CALCULATIONS ARE BASED ON ESTIMATED MAX. OCCUPANCY RATES PER ARCHITECTURAL PLANS AND ASHRAE 62.1-07.
- FOR OFFICE AND OTHER SIMILAR AREAS CALCULATIONS ARE BASED ON CONTINUOUS OCCUPANCY
- CONTRACTOR SHALL REBALANCE O/A TO PROVIDE MIN. 775 CFM PER EACH AHU.

AIR DISTRIBUTION SCHEDULE

TAG	MANUF. & MODEL	FACE SIZE	NECK SIZE	MATERIAL	FRAME	FINISH	DAMPER	THROW	NC	CFM RANGE	NOTES
A	TITUS TDC-A-AA	24X24	SEE SCH.	ALUM.	LAY-IN	OFF WHITE	ORBD	SEE PLANS	MAX. 30	SEE SCH.	1,3,4,5,6,7
AA	TITUS PAR-AA	24X24	SEE SCH.	ALUM.	LAY-IN	OFF WHITE	ORBD	SEE PLANS	MAX. 30	3,4,5,7	

(*) EQUIVALENT MANUFACTURER: TITUS, METALABRE, GARNES, T & B, NAJLOR

GENERAL NOTES:

- PROVIDE SPIN-IN COLLAR WITH VOLUME DAMPER AT TRUNK TO FLEX DUCT CONNECTION (SEE DETAIL).
- PROVIDE TYPICAL T-WAY DIFFUSION, 2-WAY OR 3-WAY ONLY WHERE INDICATED ON PLANS.
- FINAL COLOR SELECTION SUBJECT TO ARCHITECT APPROVAL.
- PROVIDE INSULATION ON THE BACK OF DIFFUSER IN UNCONDITIONED SPACE.
- PROVIDE VOLUME CONTROL DAMPERS FOR ALL RETURN GRILLES OR REGISTERS FOR BALANCED AIRFLOW.
- CONTRACTOR SHALL VERIFY WITH ARCHITECT AND TENANT/OWNER, PRIOR TO ANY PURCHASING OR INSTALLATION, IF A BUILDING OR MANUFACTURER AND SHALL BRING ANY DISCREPANCY TO THE ATTENTION OF ENGINEER.

S/A FLEX SCHEDULE	
6"	50-125 CFM
8"	130-200 CFM
10"	205-330 CFM
12"	335-450 CFM
14"	455-700 CFM

MECHANICAL SHEET INDEX

SHEET#	DESCRIPTION
M0.1	MECHANICAL NOTES, LEGEND & INDEX
M0.1	11TH FLOOR - MECHANICAL PLAN
M0.1	MECHANICAL SCHEDULES

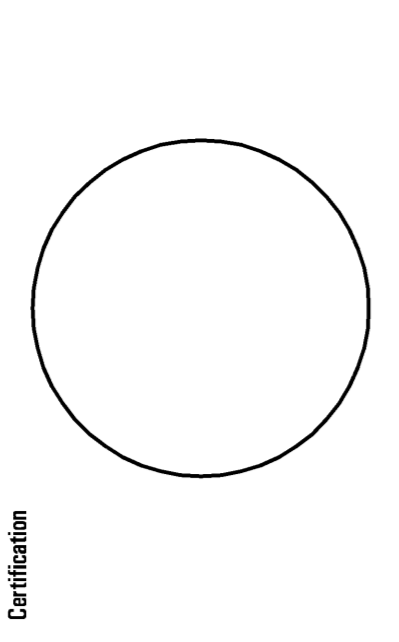
MECHANICAL LEGEND

	NEW S/A CEILING DIFFUSER		CEILING EXHAUST FAN
	EXISTING S/A CEILING DIFFUSER		IN-ROOM EXHAUST FAN
	EXISTING R/A CEILING GRILLE		SIDEWALL EXHAUST FAN
	EXISTING R/A CEILING DIFFUSER		ROOF EXHAUST FAN
	WALL LOUVER / WALL DIFFUSER		VARIABLE FREQ. DRIVE CONTROL PANEL
	VOLUME CONTROL DAMPER		SUPPLY AIR DIFFUSER OR GRILLE DESIGNATION
	REDUCER OR IN-CREASER		RETURN/EXHAUST AIR DIFFUSER OR GRILLE DESIGNATION
	NEW FLEX DUCT		EQUIPMENT TAG
	EXISTING FLEX DUCT		THERMOSTAT
	NEW DUCTWORK		HUMIDISTAT
	EXISTING DUCTWORK		WALL SWITCH
	2" BOOT TRANSFER DUCT		POC - POINT OF CONNECTION
	ROUND TAP		SUPPLY AIR
	BELLMOUTH TAP		RETURN AIR
	SLIDE TAP DAMPER		DOOR UNDER CUT
	FIRE DAMPER		AP - ACCESS PANEL
	FIRE SMOKE DAMPER		SECTION MARK
	RETURN AIR FIRE SMOKE DAMPER		SMOKE DAMPER
	DUCT SMOKE DETECTOR		FIRE-SMOKE DAMPER
	STANDARD SINGLE DUCT VAN BOX (3" SERVICE CLEARANCE)		MOTORIZED DAMPER
	STANDARD SINGLE DUCT VAN BOX (3" SERVICE CLEARANCE)		GATE VALVE
	STANDARD SINGLE DUCT VAN BOX (3" SERVICE CLEARANCE)		BUTTERFLY VALVE
	STANDARD SINGLE DUCT VAN BOX (3" SERVICE CLEARANCE)		CHECK VALVE
	STANDARD SINGLE DUCT VAN BOX (3" SERVICE CLEARANCE)		BALANCING VALVE

NOTE: EXISTING AIR CONDITIONING SYSTEMS NOT REQUIRED PER FLORIDA ENERGY CODE 10L5.1.

NOT ALL SYMBOLS MAY APPLY TO THESE PLANS

Constants



Signature: TERRY WUBKIEN
 Registration No. 10641
 Expires On 02/28/11
 Date: _____
 Project for: _____
 AMPF Project # 0826
 AMPF Cost Center # _____
 AMPF Project Name AVENTURA

TENANT IMPROVEMENT

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 ONE TURNBERRY PLACE
 19495 BISCAMYNE BLVD.,
 SUITE #604
 AVENTURA, FL 33180

Project No. 2010-0513
 Drawn By GSK
 Checked By MP/LTC
 Issue Date 11/19/10

NOTE: The design shows an electrical layout including electrical drawings, equipment schedules, and other drawings. It is intended to be used in conjunction with the mechanical drawings and specifications. The contractor shall verify the accuracy of the information provided herein and shall be responsible for any errors or omissions. The contractor shall also verify the accuracy of the information provided herein and shall be responsible for any errors or omissions.

Mark	Date	Description
11/19/10	ISSUED FOR PERMIT	

MECHANICAL NOTES

ISSUED FOR PERMIT
 ISSUED FOR CONSTRUCTION

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 PROJECT MANAGER: GREG EBP
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M0.1