

Jackson Barracks 141st Field Artillery Battalion Readiness Center

HVAC LOAD CALCULATIONS

May 3, 2006

35% Design Submittal

SYSTEM SIZING SUMMARY

System: AHU 1-1
 Location: New Orleans, Louisiana
 Prepared by: Luvien T Vivien Jr

Block Load 3.05
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TABLE 1. SIZING DATA (COOLING)

| | | | |
|-----------------------|---------------------|--------------------|-------------------|
| Total Coil Load | 114,513 BTU/hr | Load Occurs | July 17:00 |
| Sensible Coil Load | 102,000 BTU/hr | Outdoor Db/Wb | 93.4/79.6 F |
| Total Zone Sensible | 81,158 BTU/hr | Coil Conditions: | |
| Supply Temperature | 55.0 F | Entering Db/Wb | 79.1/63.9 F |
| Supply Air (Actual) | 3,758 CFM | Leaving Db/Wb | 54.0/53.3 F |
| Supply Air (Standard) | 3,757 CFM | Apparatus Dewpoint | 52.6 F |
| Ventilation Air | 0 CFM | Bypass Factor | 0.050 |
| Direct Exhaust Air | 0 CFM | Resulting Zone RH | 49.6 % |
| Reheat Required | 0 BTU/hr | | |
| Floor Area | 10,853 sqft | Total Coil Load | 9.54 Ton |
| Overall U-Value | 0.174 BTU/hr/sqft/F | Sensible Coil Load | 8.50 Ton |
| Vent Air | 0.00 CFM/sqft | SQFT/Ton | 1,137.30 |
| Vent Air | 0.00 CFM/Person | Cooling | 10.55 BTU/hr/sqft |
| | | Cooling | 0.35 CFM/sqft |

TABLE 2. SIZING DATA (HEATING)

| | | | |
|---------------------|---------------|-----------------|------------------|
| Heating Coil Load | 44,301 BTU/hr | Heating | 4.08 BTU/hr/sqft |
| Ventilation Load | 0 BTU/hr | Heating | 0.35 CFM/sqft |
| Total Zone Load | 44,301 BTU/hr | Floor Area | 10,853 sqft |
| Ventilation Airflow | 0 CFM | Overall U-Value | 0.174 |
| Supply Airflow | 3,758 CFM | Vent Air | 0.00 CFM/sqft |
| | | Vent Air | 0.00 CFM/Person |

TABLE 3. INPUT DATA (WEATHER)

| | | | |
|-------------------------|------------------------|---------------------|--------|
| Location | New Orleans, Louisiana | | |
| Data Source | User Defined | Summer Dry-Bulb | 95.0 F |
| Latitude | 30.0 Degree | Coincident Wet-Bulb | 80.0 F |
| Elevation | 4.0 ft | Daily Range | 16.0 F |
| Atmospheric Clearness # | 0.90 | Winter Dry-Bulb | 30.0 F |

TABLE 4. INPUT (HVAC SYSTEM)

| | | | |
|-----------------------|---------------------|----------------------|--------------|
| System Name | AHU 1-1 | THERMOSTAT SETPOINTS | |
| System Type | Clg and Warm Air Ht | Cooling (Occ.) | 75.0 F |
| System Start | 6:00 | Cooling (Unocc.) | 80.0 F |
| Duration | 24 hrs | Heating | 68.0 F |
| SIZING SPECIFICATIONS | | RETURN AIR PLENUM | |
| Supply | | Roof Load | 70 % |
| Ventilation | | Lighting Load | 30 % |
| Exhaust | | Wall Load | 0 % |
| FACTORS | | FAN | |
| Coil Bypass | 0.050 | Configuration | Draw-Thru |
| Safety (Sens) | 10 % | Static Pressure | 1.50 in. wg. |
| Safety (Latent) | 10 % | | |
| Heating Safety | 10 % | | |

TABLE 5. TOP TEN COOLING COIL LOADS

| Time | Sensible Ton | Total Ton | Time | Sensible Ton | Total Ton |
|--------------------|--------------|-----------|--------------------|--------------|-----------|
| 1) July 17:00 | 8.50 | 9.54 | 6) July 18:00 | 8.46 | 9.50 |
| 2) September 15:00 | 8.49 | 9.53 | 7) July 16:00 | 8.44 | 9.48 |
| 3) June 17:00 | 8.48 | 9.53 | 8) August 16:00 | 8.43 | 9.47 |
| 4) September 16:00 | 8.47 | 9.51 | 9) September 14:00 | 8.42 | 9.46 |
| 5) June 18:00 | 8.46 | 9.51 | 10) August 15:00 | 8.42 | 9.46 |

SYSTEM SIZING SUMMARY

System: AHU 1-1
Location: New Orleans, Louisiana
Prepared by: Luvien T Vivien Jr

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TABLE 6. ZONE SIZING DATA

| Zone Name | Max. Cooling Sensible (BTU/hr) | Design Airflow Rate (CFM) | Design Time | Max. Heating Load (BTU/hr) | Design Flow Rate (CFM) |
|--------------------|--------------------------------------|---------------------------------|-------------|----------------------------------|------------------------------|
| Heated Storage 127 | 81,158 | 3,758 | July 17:00 | 44,301 | - |
| | Total: | 3,758 | | Total: | .00 |

SYSTEM SIZING SUMMARY

System: AHU 1-2
 Location: New Orleans, Louisiana
 Prepared by: Luvien T Vivien Jr

Block Load 3.05
 April 20, 2006
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TABLE 1. SIZING DATA (COOLING)

| | | | |
|-----------------------|---------------------|--------------------|-------------------|
| Total Coil Load | 256,015 BTU/hr | Load Occurs | July 15:00 |
| Sensible Coil Load | 188,365 BTU/hr | Outdoor Db/Wb | 95.0/80.0 F |
| Total Zone Sensible | 164,070 BTU/hr | Coil Conditions: | |
| Supply Temperature | 55.0 F | Entering Db/Wb | 76.2/64.4 F |
| Supply Air (Actual) | 7,597 CFM | Leaving Db/Wb | 53.3/52.8 F |
| Supply Air (Standard) | 7,596 CFM | Apparatus Dewpoint | 52.1 F |
| Ventilation Air | 0 CFM | Bypass Factor | 0.050 |
| Direct Exhaust Air | 0 CFM | Resulting Zone RH | 55.3 % |
| Reheat Required | 0 BTU/hr | | |
| | | Total Coil Load | 21.33 Ton |
| Floor Area | 6,654 sqft | Sensible Coil Load | 15.70 Ton |
| Overall U-Value | 0.310 BTU/hr/sqft/F | SQFT/Ton | 311.89 |
| Vent Air | 0.00 CFM/sqft | Cooling | 38.48 BTU/hr/sqft |
| Vent Air | 0.00 CFM/Person | Cooling | 1.14 CFM/sqft |

TABLE 2. SIZING DATA (HEATING)

| | | | |
|---------------------|---------------|-----------------|------------------|
| Heating Coil Load | 45,953 BTU/hr | Heating | 6.91 BTU/hr/sqft |
| Ventilation Load | 0 BTU/hr | Heating | 1.14 CFM/sqft |
| Total Zone Load | 45,953 BTU/hr | Floor Area | 6,654 sqft |
| Ventilation Airflow | 0 CFM | Overall U-Value | 0.310 |
| Supply Airflow | 7,597 CFM | Vent Air | 0.00 CFM/sqft |
| | | Vent Air | 0.00 CFM/Person |

TABLE 3. INPUT DATA (WEATHER)

| | | | |
|-------------------------|------------------------|---------------------|--------|
| Location | New Orleans, Louisiana | | |
| Data Source | User Defined | Summer Dry-Bulb | 95.0 F |
| Latitude | 30.0 Degree | Coincident Wet-Bulb | 80.0 F |
| Elevation | 4.0 ft | Daily Range | 16.0 F |
| Atmospheric Clearness # | 0.90 | Winter Dry-Bulb | 30.0 F |

TABLE 4. INPUT (HVAC SYSTEM)

| | | | |
|------------------------------|---------------------|-----------------------------|--------------|
| System Name | AHU 1-2 | THERMOSTAT SETPOINTS | |
| System Type | Clg and Warm Air Ht | Cooling (Occ.) | 75.0 F |
| System Start | 6:00 | Cooling (Unocc.) | 80.0 F |
| Duration | 24 hrs | Heating | 68.0 F |
| SIZING SPECIFICATIONS | | RETURN AIR PLENUM | Yes |
| Supply | | Roof Load | 70 % |
| Ventilation | | Lighting Load | 30 % |
| Exhaust | | Wall Load | 0 % |
| FACTORS | | FAN | |
| Coil Bypass | 0.050 | Configuration | Draw-Thru |
| Safety (Sens) | 10 % | Static Pressure | 2.50 in. wg. |
| Safety (Latent) | 10 % | | |
| Heating Safety | 10 % | | |

TABLE 5. TOP TEN COOLING COIL LOADS

| Time | Sensible Ton | Total Ton | Time | Sensible Ton | Total Ton |
|---------------|--------------|-----------|----------------|--------------|-----------|
| 1) July 15:00 | 15.70 | 21.33 | 6) July 16:00 | 15.65 | 21.28 |
| 2) July 14:00 | 15.68 | 21.32 | 7) June 17:00 | 15.63 | 21.26 |
| 3) June 15:00 | 15.68 | 21.32 | 8) July 13:00 | 15.60 | 21.24 |
| 4) June 14:00 | 15.67 | 21.30 | 9) July 17:00 | 15.59 | 21.23 |
| 5) June 16:00 | 15.66 | 21.29 | 10) June 13:00 | 15.59 | 21.22 |

SYSTEM SIZING SUMMARY

System: AHU 1-2
Location: New Orleans, Louisiana
Prepared by: Luvien T Vivien Jr

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TABLE 6. ZONE SIZING DATA

| Zone Name | Max. Cooling | Design Airflow | Design Time | Max. Heating | Design Flow |
|---------------|----------------------|----------------|-------------|------------------|---------------|
| | Sensible (BTU/hr) | Rate (CFM) | | Load (BTU/hr) | Rate (CFM) |
| Classroom 122 | 56,049 | 2,595 | July 10:00 | 24,050 | - |
| Classroom 123 | 35,550 | 1,646 | June 17:00 | 7,123 | - |
| Classroom 124 | 35,267 | 1,633 | June 17:00 | 7,123 | - |
| Classroom 125 | 35,090 | 1,625 | June 17:00 | 7,123 | - |
| Corridor 109 | 3,593 | 166 | July 15:00 | 535 | - |
| | Total: | 7,665 | | Total: | .00 |

SYSTEM SIZING SUMMARY

System: AHU 1-3
 Location: New Orleans, Louisiana
 Prepared by: Luvien T Vivien Jr

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TABLE 1. SIZING DATA (COOLING)

| | | | |
|-----------------------|---------------------|--------------------|-------------------|
| Total Coil Load | 145,042 BTU/hr | Load Occurs | November 15:00 |
| Sensible Coil Load | 122,492 BTU/hr | Outdoor Db/Wb | 83.0/74.0 F |
| Total Zone Sensible | 103,000 BTU/hr | Coil Conditions: | |
| Supply Temperature | 55.0 F | Entering Db/Wb | 77.1/63.3 F |
| Supply Air (Actual) | 4,769 CFM | Leaving Db/Wb | 53.3/52.7 F |
| Supply Air (Standard) | 4,769 CFM | Apparatus Dewpoint | 52.0 F |
| Ventilation Air | 0 CFM | Bypass Factor | 0.050 |
| Direct Exhaust Air | 0 CFM | Resulting Zone RH | 50.3 % |
| Reheat Required | 0 BTU/hr | | |
| | | Total Coil Load | 12.09 Ton |
| Floor Area | 6,939 sqft | Sensible Coil Load | 10.21 Ton |
| Overall U-Value | 0.172 BTU/hr/sqft/F | SQFT/Ton | 574.09 |
| Vent Air | 0.00 CFM/sqft | Cooling | 20.90 BTU/hr/sqft |
| Vent Air | 0.00 CFM/Person | Cooling | 0.69 CFM/sqft |

TABLE 2. SIZING DATA (HEATING)

| | | | |
|---------------------|---------------|-----------------|------------------|
| Heating Coil Load | 19,108 BTU/hr | Heating | 2.75 BTU/hr/sqft |
| Ventilation Load | 0 BTU/hr | Heating | 0.69 CFM/sqft |
| Total Zone Load | 19,108 BTU/hr | Floor Area | 6,939 sqft |
| Ventilation Airflow | 0 CFM | Overall U-Value | 0.172 |
| Supply Airflow | 4,769 CFM | Vent Air | 0.00 CFM/sqft |
| | | Vent Air | 0.00 CFM/Person |

TABLE 3. INPUT DATA (WEATHER)

| | | | |
|-------------------------|------------------------|---------------------|--------|
| Location | New Orleans, Louisiana | | |
| Data Source | User Defined | Summer Dry-Bulb | 95.0 F |
| Latitude | 30.0 Degree | Coincident Wet-Bulb | 80.0 F |
| Elevation | 4.0 ft | Daily Range | 16.0 F |
| Atmospheric Clearness # | 0.90 | Winter Dry-Bulb | 30.0 F |

TABLE 4. INPUT (HVAC SYSTEM)

| | | | |
|------------------------------|---------------------|----------------------|--------------|
| System Name | AHU 1-3 | THERMOSTAT SETPOINTS | |
| System Type | Clg and Warm Air Ht | Cooling (Occ.) | 75.0 F |
| System Start | 6:00 | Cooling (Unocc.) | 80.0 F |
| Duration | 24 hrs | Heating | 68.0 F |
| SIZING SPECIFICATIONS | | RETURN AIR PLENUM | Yes |
| Supply | 55.0 F | Roof Load | 70 % |
| Ventilation | 0 CFM | Lighting Load | 30 % |
| Exhaust | 0.00 CFM | Wall Load | 0 % |
| FACTORS | | FAN | |
| Coil Bypass | 0.050 | Configuration | Draw-Thru |
| Safety (Sens) | 10 % | Static Pressure | 2.50 in. wg. |
| Safety (Latent) | 10 % | | |
| Heating Safety | 10 % | | |

TABLE 5. TOP TEN COOLING COIL LOADS

| Time | Sensible Ton | Total Ton | Time | Sensible Ton | Total Ton |
|-------------------|--------------|-----------|--------------------|--------------|-----------|
| 1) November 15:00 | 10.21 | 12.09 | 6) November 16:00 | 10.11 | 11.99 |
| 2) October 15:00 | 10.20 | 12.08 | 7) December 15:00 | 10.08 | 11.96 |
| 3) October 14:00 | 10.18 | 12.06 | 8) October 13:00 | 10.07 | 11.95 |
| 4) November 14:00 | 10.18 | 12.05 | 9) December 14:00 | 10.05 | 11.93 |
| 5) October 16:00 | 10.12 | 12.00 | 10) November 13:00 | 10.05 | 11.93 |

SYSTEM SIZING SUMMARY

System: AHU 1-3
 Location: New Orleans, Louisiana
 Prepared by: Luvien T Vivien Jr

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TABLE 6. ZONE SIZING DATA

| Zone Name | Max. Cooling | Design Airflow | Design Time | Max. Heating | Design Flow |
|-------------------|----------------------|----------------|----------------|------------------|---------------|
| | Sensible (BTU/hr) | Rate (CFM) | | Load (BTU/hr) | Rate (CFM) |
| Audio Visual 126 | 10,155 | 470 | January 23:00 | 0 | - |
| Break/Vending 118 | 16,059 | 744 | November 15:00 | 5,574 | - |
| Classroom 117A | 21,382 | 990 | October 15:00 | 6,561 | - |
| Corridor 108 | 3,885 | 180 | January 23:00 | 0 | - |
| Corridor 109A | 2,205 | 102 | October 18:00 | 522 | - |
| Corridor 110 | 504 | 23 | January 23:00 | 0 | - |
| elevator Vest | 319 | 15 | January 23:00 | 0 | - |
| Library 119 | 10,682 | 495 | January 23:00 | 0 | - |
| Men RR 104 | 1,889 | 87 | January 23:00 | 0 | - |
| Storage 121 | 1,515 | 70 | January 23:00 | 0 | - |
| Table Storage 116 | 3,054 | 141 | January 23:00 | 0 | - |
| Women RR 105 | 2,165 | 100 | January 23:00 | 0 | - |
| Class room 117 | 29,419 | 1,362 | November 15:00 | 6,451 | - |
| | Total: | 4,779 | | Total: | .00 |

SYSTEM SIZING SUMMARY

System: AHU 1-4
 Location: New Orleans, Louisiana
 Prepared by: Luvien T Vivien Jr

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TABLE 1. SIZING DATA (COOLING)

| | | | |
|-----------------------|---------------------|--------------------|-------------------|
| Total Coil Load | 38,925 BTU/hr | Load Occurs | June 17:00 |
| Sensible Coil Load | 36,670 BTU/hr | Outdoor Db/Wb | 92.4/79.6 F |
| Total Zone Sensible | 31,395 BTU/hr | Coil Conditions: | |
| Supply Temperature | 55.0 F | Entering Db/Wb | 76.6/62.1 F |
| Supply Air (Actual) | 1,454 CFM | Leaving Db/Wb | 53.3/52.6 F |
| Supply Air (Standard) | 1,453 CFM | Apparatus Dewpoint | 52.1 F |
| Ventilation Air | 0 CFM | Bypass Factor | 0.050 |
| Direct Exhaust Air | 0 CFM | Resulting Zone RH | 46.5 % |
| Reheat Required | 0 BTU/hr | | |
| | | Total Coil Load | 3.24 Ton |
| Floor Area | 1,681 sqft | Sensible Coil Load | 3.06 Ton |
| Overall U-Value | 0.261 BTU/hr/sqft/F | SQFT/Ton | 518.22 |
| Vent Air | 0.00 CFM/sqft | Cooling | 23.16 BTU/hr/sqft |
| Vent Air | 0.00 CFM/Person | Cooling | 0.86 CFM/sqft |

TABLE 2. SIZING DATA (HEATING)

| | | | |
|---------------------|---------------|-----------------|------------------|
| Heating Coil Load | 14,130 BTU/hr | Heating | 8.41 BTU/hr/sqft |
| Ventilation Load | 0 BTU/hr | Heating | 0.86 CFM/sqft |
| Total Zone Load | 14,130 BTU/hr | Floor Area | 1,681 sqft |
| Ventilation Airflow | 0 CFM | Overall U-Value | 0.261 |
| Supply Airflow | 1,454 CFM | Vent Air | 0.00 CFM/sqft |
| | | Vent Air | 0.00 CFM/Person |

TABLE 3. INPUT DATA (WEATHER)

| | | | |
|-------------------------|------------------------|---------------------|--------|
| Location | New Orleans, Louisiana | | |
| Data Source | User Defined | Summer Dry-Bulb | 95.0 F |
| Latitude | 30.0 Degree | Coincident Wet-Bulb | 80.0 F |
| Elevation | 4.0 ft | Daily Range | 16.0 F |
| Atmospheric Clearness # | 0.90 | Winter Dry-Bulb | 30.0 F |

TABLE 4. INPUT (HVAC SYSTEM)

| | | | |
|------------------------------|---------------------|-----------------------------|--------------|
| System Name | AHU 1-4 | THERMOSTAT SETPOINTS | |
| System Type | Clg and Warm Air Ht | Cooling (Occ.) | 75.0 F |
| System Start | 6:00 | Cooling (Unocc.) | 80.0 F |
| Duration | 24 hrs | Heating | 68.0 F |
| SIZING SPECIFICATIONS | | RETURN AIR PLENUM | Yes |
| Supply | 55.0 F | Roof Load | 70 % |
| Ventilation | 0 CFM | Lighting Load | 30 % |
| Exhaust | 0.00 CFM | Wall Load | 0 % |
| FACTORS | | FAN | |
| Coil Bypass | 0.050 | Configuration | Draw-Thru |
| Safety (Sens) | 10 % | Static Pressure | 2.50 in. wg. |
| Safety (Latent) | 10 % | | |
| Heating Safety | 10 % | | |

TABLE 5. TOP TEN COOLING COIL LOADS

| Time | Sensible Ton | Total Ton | Time | Sensible Ton | Total Ton |
|---------------|--------------|-----------|----------------|--------------|-----------|
| 1) June 17:00 | 3.06 | 3.24 | 6) June 15:00 | 3.01 | 3.19 |
| 2) June 18:00 | 3.03 | 3.22 | 7) July 15:00 | 3.00 | 3.19 |
| 3) June 16:00 | 3.03 | 3.21 | 8) July 18:00 | 2.99 | 3.18 |
| 4) July 17:00 | 3.02 | 3.21 | 9) June 14:00 | 2.98 | 3.17 |
| 5) July 16:00 | 3.01 | 3.20 | 10) July 14:00 | 2.98 | 3.17 |

SYSTEM SIZING SUMMARY

System: AHU 1-4
 Location: New Orleans, Louisiana
 Prepared by: Luvien T Vivien Jr

Block Load 3.05
 April 20, 2006
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TABLE 6. ZONE SIZING DATA

| Zone Name | Max. Cooling Sensible (BTU/hr) | Design Airflow Rate (CFM) | Design Time | Max. Heating Load (BTU/hr) | Design Flow Rate (CFM) |
|--------------------|--------------------------------------|---------------------------------|---------------|----------------------------------|------------------------------|
| Family Support 113 | 6,411 | 297 | January 23:00 | 0 | - |
| Janitor 114 | 354 | 16 | January 23:00 | 0 | - |
| Lobby 100 | 894 | 41 | January 23:00 | 0 | - |
| Recruiting 112 | 8,628 | 400 | June 17:00 | 3,377 | - |
| Security 111 | 6,908 | 320 | June 17:00 | 2,555 | - |
| Vestibule 107 | 8,203 | 380 | June 17:00 | 8,198 | - |
| | Total: | 1,454 | | Total: | .00 |

SYSTEM SIZING SUMMARY

System: AHU 1-5
 Location: New Orleans, Louisiana
 Prepared by: Luvien T Vivien Jr

Block Load 3.05
 April 20, 2006
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TABLE 1. SIZING DATA (COOLING)

| | | | |
|-----------------------|---------------------|--------------------|-------------------|
| Total Coil Load | 595,267 BTU/hr | Load Occurs | July 17:00 |
| Sensible Coil Load | 294,967 BTU/hr | Outdoor Db/Wb | 93.4/79.6 F |
| Total Zone Sensible | 274,025 BTU/hr | Coil Conditions: | |
| Supply Temperature | 55.0 F | Entering Db/Wb | 75.8/69.3 F |
| Supply Air (Actual) | 12,688 CFM | Leaving Db/Wb | 54.3/54.1 F |
| Supply Air (Standard) | 12,686 CFM | Apparatus Dewpoint | 53.2 F |
| Ventilation Air | 0 CFM | Bypass Factor | 0.050 |
| Direct Exhaust Air | 0 CFM | Resulting Zone RH | 74.4 % |
| Reheat Required | 0 BTU/hr | | |
| | | Total Coil Load | 49.61 Ton |
| Floor Area | 7,514 sqft | Sensible Coil Load | 24.58 Ton |
| Overall U-Value | 0.094 BTU/hr/sqft/F | SQFT/Ton | 151.47 |
| Vent Air | 0.00 CFM/sqft | Cooling | 79.22 BTU/hr/sqft |
| Vent Air | 0.00 CFM/Person | Cooling | 1.69 CFM/sqft |

TABLE 2. SIZING DATA (HEATING)

| | | | |
|---------------------|---------------|-----------------|------------------|
| Heating Coil Load | 69,871 BTU/hr | Heating | 9.30 BTU/hr/sqft |
| Ventilation Load | 0 BTU/hr | Heating | 1.69 CFM/sqft |
| Total Zone Load | 69,871 BTU/hr | Floor Area | 7,514 sqft |
| Ventilation Airflow | 0 CFM | Overall U-Value | 0.094 |
| Supply Airflow | 12,688 CFM | Vent Air | 0.00 CFM/sqft |
| | | Vent Air | 0.00 CFM/Person |

TABLE 3. INPUT DATA (WEATHER)

| | | | |
|-------------------------|------------------------|---------------------|--------|
| Location | New Orleans, Louisiana | | |
| Data Source | User Defined | Summer Dry-Bulb | 95.0 F |
| Latitude | 30.0 Degree | Coincident Wet-Bulb | 80.0 F |
| Elevation | 4.0 ft | Daily Range | 16.0 F |
| Atmospheric Clearness # | 0.90 | Winter Dry-Bulb | 30.0 F |

TABLE 4. INPUT (HVAC SYSTEM)

| | | | |
|------------------------------|---------------------|-----------------------------|--------------|
| System Name | AHU 1-5 | THERMOSTAT SETPOINTS | |
| System Type | Clg and Warm Air Ht | Cooling (Occ.) | 75.0 F |
| System Start | 6:00 | Cooling (Unocc.) | 80.0 F |
| Duration | 24 hrs | Heating | 68.0 F |
| SIZING SPECIFICATIONS | | RETURN AIR PLENUM | Yes |
| Supply | 55.0 F | Roof Load | 70 % |
| Ventilation | 0 CFM | Lighting Load | 30 % |
| Exhaust | 0.00 CFM | Wall Load | 0 % |
| FACTORS | | FAN | |
| Coil Bypass | 0.050 | Configuration | Draw-Thru |
| Safety (Sens) | 10 % | Static Pressure | 1.00 in. wg. |
| Safety (Latent) | 10 % | | |
| Heating Safety | 10 % | | |

TABLE 5. TOP TEN COOLING COIL LOADS

| Time | Sensible Ton | Total Ton | Time | Sensible Ton | Total Ton |
|-----------------|--------------|-----------|-----------------|--------------|-----------|
| 1) July 17:00 | 24.58 | 49.61 | 6) July 16:00 | 24.47 | 49.50 |
| 2) July 18:00 | 24.54 | 49.57 | 7) July 19:00 | 24.42 | 49.44 |
| 3) June 17:00 | 24.51 | 49.54 | 8) June 16:00 | 24.40 | 49.43 |
| 4) June 18:00 | 24.50 | 49.52 | 9) August 16:00 | 24.38 | 49.41 |
| 5) August 17:00 | 24.48 | 49.51 | 10) July 20:00 | 24.38 | 49.40 |

SYSTEM SIZING SUMMARY

System: AHU 1-5
Location: New Orleans, Louisiana
Prepared by: Luvien T Vivien Jr

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TABLE 6. ZONE SIZING DATA

| Zone Name | Max. Cooling | Design Airflow | Design Time | Max. Heating | Design Flow |
|-------------------|----------------------|----------------|-------------|------------------|---------------|
| | Sensible (BTU/hr) | Rate (CFM) | | Load (BTU/hr) | Rate (CFM) |
| Assembly Hall 115 | 274,025 | 12,688 | July 17:00 | 69,871 | - |
| | Total: | 12,688 | | Total: | .00 |

SYSTEM SIZING SUMMARY

System: AHU 2-1
 Location: New Orleans, Louisiana
 Prepared by: Luvien T Vivien Jr

Block Load 3.05
 April 20, 2006
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TABLE 1. SIZING DATA (COOLING)

| | | | |
|-----------------------|---------------------|--------------------|------------------|
| Total Coil Load | 9,928 BTU/hr | Load Occurs | January 23:00 |
| Sensible Coil Load | 9,026 BTU/hr | Outdoor Db/Wb | 64.8/64.1 F |
| Total Zone Sensible | 6,945 BTU/hr | Coil Conditions: | |
| Supply Temperature | 55.0 F | Entering Db/Wb | 80.3/64.2 F |
| Supply Air (Actual) | 322 CFM | Leaving Db/Wb | 54.3/53.6 F |
| Supply Air (Standard) | 322 CFM | Apparatus Dewpoint | 52.9 F |
| Ventilation Air | 0 CFM | Bypass Factor | 0.050 |
| Direct Exhaust Air | 0 CFM | Resulting Zone RH | 49.5 % |
| Reheat Required | 0 BTU/hr | | |
| | | Total Coil Load | 0.83 Ton |
| Floor Area | 1,200 sqft | Sensible Coil Load | 0.75 Ton |
| Overall U-Value | 0.000 BTU/hr/sqft/F | SQFT/Ton | 1,450.45 |
| Vent Air | 0.00 CFM/sqft | Cooling | 8.27 BTU/hr/sqft |
| Vent Air | 0.00 CFM/Person | Cooling | 0.27 CFM/sqft |

TABLE 2. SIZING DATA (HEATING)

| | | | |
|---------------------|------------|-----------------|------------------|
| Heating Coil Load | 611 BTU/hr | Heating | 0.51 BTU/hr/sqft |
| Ventilation Load | 0 BTU/hr | Heating | 0.27 CFM/sqft |
| Total Zone Load | 611 BTU/hr | Floor Area | 1,200 sqft |
| Ventilation Airflow | 0 CFM | Overall U-Value | 0.000 |
| Supply Airflow | 322 CFM | Vent Air | 0.00 CFM/sqft |
| | | Vent Air | 0.00 CFM/Person |

TABLE 3. INPUT DATA (WEATHER)

| | | | |
|-------------------------|------------------------|---------------------|--------|
| Location | New Orleans, Louisiana | | |
| Data Source | User Defined | Summer Dry-Bulb | 95.0 F |
| Latitude | 30.0 Degree | Coincident Wet-Bulb | 80.0 F |
| Elevation | 4.0 ft | Daily Range | 16.0 F |
| Atmospheric Clearness # | 0.90 | Winter Dry-Bulb | 30.0 F |

TABLE 4. INPUT (HVAC SYSTEM)

| | | | |
|-----------------------|---------------------|----------------------|--------------|
| System Name | AHU 2-1 | THERMOSTAT SETPOINTS | |
| System Type | Clg and Warm Air Ht | Cooling (Occ.) | 75.0 F |
| System Start | 6:00 | Cooling (Unocc.) | 80.0 F |
| Duration | 24 hrs | Heating | 68.0 F |
| SIZING SPECIFICATIONS | | RETURN AIR PLENUM | Yes |
| Supply | 55.0 F | Roof Load | 70 % |
| Ventilation | 0 CFM | Lighting Load | 30 % |
| Exhaust | 0.00 CFM | Wall Load | 0 % |
| FACTORS | | FAN | |
| Coil Bypass | 0.050 | Configuration | Draw-Thru |
| Safety (Sens) | 10 % | Static Pressure | 1.00 in. wg. |
| Safety (Latent) | 10 % | | |
| Heating Safety | 10 % | | |

TABLE 5. TOP TEN COOLING COIL LOADS

| Time | Sensible Ton | Total Ton | Time | Sensible Ton | Total Ton |
|-------------------|--------------|-----------|--------------------|--------------|-----------|
| 1) January 23:00 | 0.75 | 0.83 | 6) June 23:00 | 0.75 | 0.83 |
| 2) February 23:00 | 0.75 | 0.83 | 7) July 23:00 | 0.75 | 0.83 |
| 3) March 23:00 | 0.75 | 0.83 | 8) August 23:00 | 0.75 | 0.83 |
| 4) April 23:00 | 0.75 | 0.83 | 9) September 23:00 | 0.75 | 0.83 |
| 5) May 23:00 | 0.75 | 0.83 | 10) October 23:00 | 0.75 | 0.83 |

SYSTEM SIZING SUMMARY

System: AHU 2-1
Location: New Orleans, Louisiana
Prepared by: Luvien T Vivien Jr

Block Load 3.05
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TABLE 6. ZONE SIZING DATA

| Zone Name | Max. Cooling | Design Airflow | Design Time | Max. Heating | Design Flow |
|-----------|----------------------|----------------|---------------|------------------|---------------|
| | Sensible (BTU/hr) | Rate (CFM) | | Load (BTU/hr) | Rate (CFM) |
| Vault 212 | 6,945 | 322 | January 23:00 | 611 | - |
| | Total: | 322 | | Total: | .00 |

SYSTEM SIZING SUMMARY

System: AHU 2-2
 Location: New Orleans, Louisiana
 Prepared by: Luvien T Vivien Jr

Block Load 3.05
 April 20, 2006
 Page: 1

TABLE 1. SIZING DATA (COOLING)

| | | | |
|-----------------------|---------------------|--------------------|-------------------|
| Total Coil Load | 136,194 BTU/hr | Load Occurs | January 23:00 |
| Sensible Coil Load | 92,898 BTU/hr | Outdoor Db/Wb | 64.8/64.1 F |
| Total Zone Sensible | 76,608 BTU/hr | Coil Conditions: | |
| Supply Temperature | 55.0 F | Entering Db/Wb | 77.5/65.9 F |
| Supply Air (Actual) | 3,547 CFM | Leaving Db/Wb | 53.3/52.8 F |
| Supply Air (Standard) | 3,547 CFM | Apparatus Dewpoint | 52.0 F |
| Ventilation Air | 0 CFM | Bypass Factor | 0.050 |
| Direct Exhaust Air | 0 CFM | Resulting Zone RH | 59. % |
| Reheat Required | 0 BTU/hr | | |
| | | Total Coil Load | 11.35 Ton |
| Floor Area | 6,328 sqft | Sensible Coil Load | 7.74 Ton |
| Overall U-Value | 0.000 BTU/hr/sqft/F | SQFT/Ton | 557.56 |
| Vent Air | 0.00 CFM/sqft | Cooling | 21.52 BTU/hr/sqft |
| Vent Air | 0.00 CFM/Person | Cooling | 0.56 CFM/sqft |

TABLE 2. SIZING DATA (HEATING)

| | | | |
|---------------------|-----------|-----------------|------------------|
| Heating Coil Load | 0 BTU/hr | Heating | 0.00 BTU/hr/sqft |
| Ventilation Load | 0 BTU/hr | Heating | 0.56 CFM/sqft |
| Total Zone Load | 0 BTU/hr | Floor Area | 6,328 sqft |
| Ventilation Airflow | 0 CFM | Overall U-Value | 0.000 |
| Supply Airflow | 3,547 CFM | Vent Air | 0.00 CFM/sqft |
| | | Vent Air | 0.00 CFM/Person |

TABLE 3. INPUT DATA (WEATHER)

| | | | |
|-------------------------|------------------------|---------------------|--------|
| Location | New Orleans, Louisiana | | |
| Data Source | User Defined | Summer Dry-Bulb | 95.0 F |
| Latitude | 30.0 Degree | Coincident Wet-Bulb | 80.0 F |
| Elevation | 4.0 ft | Daily Range | 16.0 F |
| Atmospheric Clearness # | 0.90 | Winter Dry-Bulb | 30.0 F |

TABLE 4. INPUT (HVAC SYSTEM)

| | | | |
|-----------------------|---------------------|----------------------|--------------|
| System Name | AHU 2-2 | THERMOSTAT SETPOINTS | |
| System Type | Clg and Warm Air Ht | Cooling (Occ.) | 75.0 F |
| System Start | 6:00 | Cooling (Unocc.) | 80.0 F |
| Duration | 24 hrs | Heating | 68.0 F |
| SIZING SPECIFICATIONS | | RETURN AIR PLENUM | Yes |
| Supply | 55.0 F | Roof Load | 70 % |
| Ventilation | 0 CFM | Lighting Load | 30 % |
| Exhaust | 0.00 CFM | Wall Load | 0 % |
| FACTORS | | FAN | |
| Coil Bypass | 0.050 | Configuration | Draw-Thru |
| Safety (Sens) | 10 % | Static Pressure | 2.50 in. wg. |
| Safety (Latent) | 10 % | | |
| Heating Safety | 10 % | | |

TABLE 5. TOP TEN COOLING COIL LOADS

| Time | Sensible Ton | Total Ton | Time | Sensible Ton | Total Ton |
|-------------------|--------------|-----------|--------------------|--------------|-----------|
| 1) January 23:00 | 7.74 | 11.35 | 6) June 23:00 | 7.74 | 11.35 |
| 2) February 23:00 | 7.74 | 11.35 | 7) July 23:00 | 7.74 | 11.35 |
| 3) March 23:00 | 7.74 | 11.35 | 8) August 23:00 | 7.74 | 11.35 |
| 4) April 23:00 | 7.74 | 11.35 | 9) September 23:00 | 7.74 | 11.35 |
| 5) May 23:00 | 7.74 | 11.35 | 10) October 23:00 | 7.74 | 11.35 |

SYSTEM SIZING SUMMARY

System: AHU 2-2
 Location: New Orleans, Louisiana
 Prepared by: Luvien T Vivien Jr

Block Load 3.05
 April 20, 2006
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TABLE 6. ZONE SIZING DATA

| Zone Name | Max. Cooling Sensible (BTU/hr) | Design Airflow Rate (CFM) | Design Time | Max. Heating Load (BTU/hr) | Design Flow Rate (CFM) |
|------------------|--------------------------------------|---------------------------------|---------------|----------------------------------|------------------------------|
| Corridor 208 | 2,267 | 105 | January 23:00 | 0 | - |
| Elev. Equip 229 | 279 | 13 | January 23:00 | 0 | - |
| Janitor 228 | 394 | 18 | January 23:00 | 0 | - |
| Men Locker 219 | 39,780 | 1,842 | January 23:00 | 0 | - |
| Men RR 204 | 1,023 | 47 | January 23:00 | 0 | - |
| Men Toilet 218 | 2,370 | 110 | January 23:00 | 0 | - |
| Store Room 223 | 331 | 15 | January 23:00 | 0 | - |
| Vest 230 | 787 | 36 | January 23:00 | 0 | - |
| Women Locker 217 | 25,489 | 1,180 | January 23:00 | 0 | - |
| Women RR 205 | 1,023 | 47 | January 23:00 | 0 | - |
| Women Toilet 216 | 2,865 | 133 | January 23:00 | 0 | - |
| Total: | | 3,546 | | Total: | .00 |

SYSTEM SIZING SUMMARY

System: AHU 2-3
 Location: New Orleans, Louisiana
 Prepared by: Luvien T Vivien Jr

Block Load 3.05
 April 20, 2006
 Page: 1

TABLE 1. SIZING DATA (COOLING)

| | | | |
|-----------------------|---------------------|--------------------|-------------------|
| Total Coil Load | 154,290 BTU/hr | Load Occurs | June 17:00 |
| Sensible Coil Load | 144,819 BTU/hr | Outdoor Db/Wb | 92.4/79.6 F |
| Total Zone Sensible | 123,920 BTU/hr | Coil Conditions: | |
| Supply Temperature | 55.0 F | Entering Db/Wb | 76.7/62.2 F |
| Supply Air (Actual) | 5,738 CFM | Leaving Db/Wb | 53.3/52.6 F |
| Supply Air (Standard) | 5,737 CFM | Apparatus Dewpoint | 52.1 F |
| Ventilation Air | 0 CFM | Bypass Factor | 0.050 |
| Direct Exhaust Air | 0 CFM | Resulting Zone RH | 46.6 % |
| Reheat Required | 0 BTU/hr | | |
| | | Total Coil Load | 12.86 Ton |
| Floor Area | 5,720 sqft | Sensible Coil Load | 12.07 Ton |
| Overall U-Value | 0.192 BTU/hr/sqft/F | SQFT/Ton | 444.88 |
| Vent Air | 0.00 CFM/sqft | Cooling | 26.97 BTU/hr/sqft |
| Vent Air | 0.00 CFM/Person | Cooling | 1.00 CFM/sqft |

TABLE 2. SIZING DATA (HEATING)

| | | | |
|---------------------|---------------|-----------------|------------------|
| Heating Coil Load | 24,959 BTU/hr | Heating | 4.36 BTU/hr/sqft |
| Ventilation Load | 0 BTU/hr | Heating | 1.00 CFM/sqft |
| Total Zone Load | 24,959 BTU/hr | Floor Area | 5,720 sqft |
| Ventilation Airflow | 0 CFM | Overall U-Value | 0.192 |
| Supply Airflow | 5,738 CFM | Vent Air | 0.00 CFM/sqft |
| | | Vent Air | 0.00 CFM/Person |

TABLE 3. INPUT DATA (WEATHER)

| | | | |
|-------------------------|------------------------|---------------------|--------|
| Location | New Orleans, Louisiana | | |
| Data Source | User Defined | Summer Dry-Bulb | 95.0 F |
| Latitude | 30.0 Degree | Coincident Wet-Bulb | 80.0 F |
| Elevation | 4.0 ft | Daily Range | 16.0 F |
| Atmospheric Clearness # | 0.90 | Winter Dry-Bulb | 30.0 F |

TABLE 4. INPUT (HVAC SYSTEM)

| | | | |
|-----------------------|---------------------|----------------------|--------------|
| System Name | AHU 2-3 | THERMOSTAT SETPOINTS | |
| System Type | Clg and Warm Air Ht | Cooling (Occ.) | 75.0 F |
| System Start | 6:00 | Cooling (Unocc.) | 80.0 F |
| Duration | 24 hrs | Heating | 68.0 F |
| SIZING SPECIFICATIONS | | RETURN AIR PLENUM | Yes |
| Supply | 55.0 F | Roof Load | 70 % |
| Ventilation | 0 CFM | Lighting Load | 30 % |
| Exhaust | 0.00 CFM | Wall Load | 0 % |
| FACTORS | | FAN | |
| Coil Bypass | 0.050 | Configuration | Draw-Thru |
| Safety (Sens) | 10 % | Static Pressure | 2.50 in. wg. |
| Safety (Latent) | 10 % | | |
| Heating Safety | 10 % | | |

TABLE 5. TOP TEN COOLING COIL LOADS

| Time | Sensible Ton | Total Ton | Time | Sensible Ton | Total Ton |
|---------------|--------------|-----------|----------------|--------------|-----------|
| 1) June 17:00 | 12.07 | 12.86 | 6) July 16:00 | 12.04 | 12.83 |
| 2) June 16:00 | 12.06 | 12.85 | 7) July 14:00 | 12.04 | 12.82 |
| 3) June 15:00 | 12.06 | 12.85 | 8) July 17:00 | 12.03 | 12.82 |
| 4) July 15:00 | 12.05 | 12.84 | 9) June 18:00 | 12.00 | 12.79 |
| 5) June 14:00 | 12.04 | 12.83 | 10) June 13:00 | 11.99 | 12.78 |

SYSTEM SIZING SUMMARY

System: AHU 2-3
 Location: New Orleans, Louisiana
 Prepared by: Luvien T Vivien Jr

Block Load 3.05
 April 20, 2006
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TABLE 6. ZONE SIZING DATA

| Zone Name | Max. Cooling Sensible (BTU/hr) | Design Airflow Rate (CFM) | Design Time | Max. Heating Load (BTU/hr) | Design Flow Rate (CFM) |
|---------------------|--------------------------------------|---------------------------------|---------------|----------------------------------|------------------------------|
| 1st 349 RCT | 27,041 | 1,252 | June 17:00 | 13,300 | - |
| Audio Equipmnet 242 | 8,238 | 381 | January 23:00 | 0 | - |
| CMDS 229 | 11,263 | 522 | July 18:00 | 706 | - |
| Comm. 207 | 256 | 12 | January 23:00 | 0 | - |
| Cooridor 239 | 1,189 | 55 | January 23:00 | 0 | - |
| Corridor 238 | 6,592 | 305 | July 10:00 | 3,938 | - |
| Electrical 206 | 331 | 15 | January 23:00 | 0 | - |
| SIM Center | 57,035 | 2,641 | June 17:00 | 7,015 | - |
| Storage 215 | 354 | 16 | January 23:00 | 0 | - |
| Storage 231 | 1,330 | 62 | January 23:00 | 0 | - |
| Storage 236 | 354 | 16 | January 23:00 | 0 | - |
| tech 230 | 11,099 | 514 | January 23:00 | 0 | - |
| Total: | | 5,791 | | Total: | .00 |

SYSTEM SIZING SUMMARY

System: AHU 2-4
 Location: New Orleans, Louisiana
 Prepared by: Luvien T Vivien Jr

Block Load 3.05
 April 20, 2006
 Page: 1

TABLE 1. SIZING DATA (COOLING)

| | | | |
|-----------------------|---------------------|--------------------|-------------------|
| Total Coil Load | 293,066 BTU/hr | Load Occurs | June 17:00 |
| Sensible Coil Load | 211,886 BTU/hr | Outdoor Db/Wb | 92.4/79.6 F |
| Total Zone Sensible | 183,791 BTU/hr | Coil Conditions: | |
| Supply Temperature | 55.0 F | Entering Db/Wb | 76.3/64.7 F |
| Supply Air (Actual) | 8,510 CFM | Leaving Db/Wb | 53.3/52.8 F |
| Supply Air (Standard) | 8,509 CFM | Apparatus Dewpoint | 52.1 F |
| Ventilation Air | 0 CFM | Bypass Factor | 0.050 |
| Direct Exhaust Air | 0 CFM | Resulting Zone RH | 56. % |
| Reheat Required | 0 BTU/hr | | |
| | | Total Coil Load | 24.42 Ton |
| Floor Area | 8,027 sqft | Sensible Coil Load | 17.66 Ton |
| Overall U-Value | 0.318 BTU/hr/sqft/F | SQFT/Ton | 328.68 |
| Vent Air | 0.00 CFM/sqft | Cooling | 36.51 BTU/hr/sqft |
| Vent Air | 0.00 CFM/Person | Cooling | 1.06 CFM/sqft |

TABLE 2. SIZING DATA (HEATING)

| | | | |
|---------------------|---------------|-----------------|------------------|
| Heating Coil Load | 44,824 BTU/hr | Heating | 5.58 BTU/hr/sqft |
| Ventilation Load | 0 BTU/hr | Heating | 1.06 CFM/sqft |
| Total Zone Load | 44,824 BTU/hr | Floor Area | 8,027 sqft |
| Ventilation Airflow | 0 CFM | Overall U-Value | 0.318 |
| Supply Airflow | 8,510 CFM | Vent Air | 0.00 CFM/sqft |
| | | Vent Air | 0.00 CFM/Person |

TABLE 3. INPUT DATA (WEATHER)

| | | | |
|-------------------------|------------------------|---------------------|--------|
| Location | New Orleans, Louisiana | | |
| Data Source | User Defined | Summer Dry-Bulb | 95.0 F |
| Latitude | 30.0 Degree | Coincident Wet-Bulb | 80.0 F |
| Elevation | 4.0 ft | Daily Range | 16.0 F |
| Atmospheric Clearness # | 0.90 | Winter Dry-Bulb | 30.0 F |

TABLE 4. INPUT (HVAC SYSTEM)

| | | | |
|-----------------------|---------------------|----------------------|--------------|
| System Name | AHU 2-4 | THERMOSTAT SETPOINTS | |
| System Type | Clg and Warm Air Ht | Cooling (Occ.) | 75.0 F |
| System Start | 6:00 | Cooling (Unocc.) | 80.0 F |
| Duration | 24 hrs | Heating | 68.0 F |
| SIZING SPECIFICATIONS | | RETURN AIR PLENUM | Yes |
| Supply | 55.0 F | Roof Load | 70 % |
| Ventilation | 0 CFM | Lighting Load | 30 % |
| Exhaust | 0.00 CFM | Wall Load | 0 % |
| FACTORS | | FAN | |
| Coil Bypass | 0.050 | Configuration | Draw-Thru |
| Safety (Sens) | 10 % | Static Pressure | 2.50 in. wg. |
| Safety (Latent) | 10 % | | |
| Heating Safety | 10 % | | |

TABLE 5. TOP TEN COOLING COIL LOADS

| Time | Sensible Ton | Total Ton | Time | Sensible Ton | Total Ton |
|---------------|--------------|-----------|-----------------|--------------|-----------|
| 1) June 17:00 | 17.66 | 24.42 | 6) July 18:00 | 17.32 | 24.09 |
| 2) July 17:00 | 17.61 | 24.38 | 7) August 16:00 | 17.29 | 24.06 |
| 3) June 16:00 | 17.50 | 24.26 | 8) August 17:00 | 17.29 | 24.06 |
| 4) July 16:00 | 17.49 | 24.26 | 9) July 15:00 | 17.26 | 24.02 |
| 5) June 18:00 | 17.44 | 24.20 | 10) June 15:00 | 17.23 | 23.99 |

SYSTEM SIZING SUMMARY

System: AHU 2-4
 Location: New Orleans, Louisiana
 Prepared by: Luvien T Vivien Jr

Block Load 3.05
 April 20, 2006
 Page: 2

TABLE 6. ZONE SIZING DATA

| Zone Name | Max. Cooling Sensible (BTU/hr) | Design Airflow Rate (CFM) | Design Time | Max. Heating Load (BTU/hr) | Design Flow Rate (CFM) |
|-----------------|--------------------------------------|---------------------------------|---------------|----------------------------------|------------------------------|
| Corridor 210 | 3,322 | 154 | January 23:00 | 0 | - |
| Janitor 224 | 169 | 8 | January 23:00 | 0 | - |
| Lobby 200 | 8,054 | 373 | June 17:00 | 4,160 | - |
| Men Lockers 221 | 165,258 | 7,652 | June 17:00 | 38,390 | - |
| Men toilet 220 | 2,913 | 135 | January 23:00 | 0 | - |
| Storage 225 | 279 | 13 | January 23:00 | 0 | - |
| Vest 226 | 3,840 | 178 | July 17:00 | 2,274 | - |
| | Total: | 8,513 | | Total: | .00 |

SYSTEM SIZING SUMMARY

System: AHU 3-1
 Location: New Orleans, Louisiana
 Prepared by: Luvien T Vivien Jr

Block Load 3.05
 April 20, 2006
 Page: 1

TABLE 1. SIZING DATA (COOLING)

| | | | |
|-----------------------|---------------------|--------------------|-------------------|
| Total Coil Load | 158,938 BTU/hr | Load Occurs | October 15:00 |
| Sensible Coil Load | 149,918 BTU/hr | Outdoor Db/Wb | 89.0/77.0 F |
| Total Zone Sensible | 126,768 BTU/hr | Coil Conditions: | |
| Supply Temperature | 55.0 F | Entering Db/Wb | 76.9/62.2 F |
| Supply Air (Actual) | 5,870 CFM | Leaving Db/Wb | 53.3/52.6 F |
| Supply Air (Standard) | 5,869 CFM | Apparatus Dewpoint | 52.0 F |
| Ventilation Air | 0 CFM | Bypass Factor | 0.050 |
| Direct Exhaust Air | 0 CFM | Resulting Zone RH | 46.5 % |
| Reheat Required | 0 BTU/hr | | |
| | | Total Coil Load | 13.24 Ton |
| Floor Area | 5,657 sqft | Sensible Coil Load | 12.49 Ton |
| Overall U-Value | 0.080 BTU/hr/sqft/F | SQFT/Ton | 427.11 |
| Vent Air | 0.00 CFM/sqft | Cooling | 28.10 BTU/hr/sqft |
| Vent Air | 0.00 CFM/Person | Coilng | 1.04 CFM/sqft |

TABLE 2. SIZING DATA (HEATING)

| | | | |
|---------------------|---------------|-----------------|------------------|
| Heating Coil Load | 27,770 BTU/hr | Heating | 4.91 BTU/hr/sqft |
| Ventilation Load | 0 BTU/hr | Heating | 1.04 CFM/sqft |
| Total Zone Load | 27,770 BTU/hr | Floor Area | 5,657 sqft |
| Ventilation Airflow | 0 CFM | Overall U-Value | 0.080 |
| Supply Airflow | 5,870 CFM | Vent Air | 0.00 CFM/sqft |
| | | Vent Air | 0.00 CFM/Person |

TABLE 3. INPUT DATA (WEATHER)

| | | | |
|-------------------------|------------------------|---------------------|--------|
| Location | New Orleans, Louisiana | | |
| Data Source | User Defined | Summer Dry-Bulb | 95.0 F |
| Latitude | 30.0 Degree | Coincident Wet-Bulb | 80.0 F |
| Elevation | 4.0 ft | Daily Range | 16.0 F |
| Atmospheric Clearness # | 0.90 | Winter Dry-Bulb | 30.0 F |

TABLE 4. INPUT (HVAC SYSTEM)

| | | | |
|------------------------------|---------------------|-----------------------------|--------------|
| System Name | AHU 3-1 | THERMOSTAT SETPOINTS | |
| System Type | Clg and Warm Air Ht | Cooling (Occ.) | 75.0 F |
| System Start | 6:00 | Cooling (Unocc.) | 80.0 F |
| Duration | 24 hrs | Heating | 68.0 F |
| SIZING SPECIFICATIONS | | RETURN AIR PLENUM | Yes |
| Supply | 55.0 F | Roof Load | 70 % |
| Ventilation | 0 CFM | Lighting Load | 30 % |
| Exhaust | 0.00 CFM | Wall Load | 0 % |
| FACTORS | | FAN | |
| Coil Bypass | 0.050 | Configuration | Draw-Thru |
| Safety (Sens) | 10 % | Static Pressure | 2.50 in. wg. |
| Safety (Latent) | 10 % | | |
| Heating Safety | 10 % | | |

TABLE 5. TOP TEN COOLING COIL LOADS

| Time | Sensible Ton | Total Ton | Time | Sensible Ton | Total Ton |
|--------------------|--------------|-----------|--------------------|--------------|-----------|
| 1) October 15:00 | 12.49 | 13.24 | 6) October 14:00 | 12.43 | 13.18 |
| 2) September 15:00 | 12.49 | 13.24 | 7) September 17:00 | 12.43 | 13.18 |
| 3) September 16:00 | 12.48 | 13.23 | 8) October 17:00 | 12.38 | 13.13 |
| 4) October 16:00 | 12.48 | 13.23 | 9) September 18:00 | 12.35 | 13.10 |
| 5) September 14:00 | 12.43 | 13.18 | 10) August 16:00 | 12.34 | 13.09 |

SYSTEM SIZING SUMMARY

System: AHU 3-1
 Location: New Orleans, Louisiana
 Prepared by: Luvien T Vivien Jr

Block Load 3.05
 April 20, 2006
 Page: 2

TABLE 6. ZONE SIZING DATA

| Zone Name | Max. Cooling | Design Airflow | | Max. Heating | Design Flow |
|--------------------|----------------------|----------------|----------------|------------------|---------------|
| | Sensible (BTU/hr) | Rate (CFM) | Design Time | Load (BTU/hr) | Rate (CFM) |
| 1st Plat GSG | 6,122 | 283 | October 16:00 | 1,037 | - |
| 1st Plat LDR 321 A | 7,653 | 354 | October 15:00 | 3,506 | - |
| 1st plat LDR 321B | 6,942 | 321 | June 14:00 | 2,508 | - |
| 1st Plat SGT321 | 6,410 | 297 | November 15:00 | 1,619 | - |
| 2nd Plat LDR | 6,830 | 316 | November 15:00 | 1,421 | - |
| 2nd Plat SGT | 6,407 | 297 | November 15:00 | 1,501 | - |
| 2ns Plat GSG | 4,763 | 221 | January 23:00 | 0 | - |
| clerk A 321 | 7,118 | 330 | November 15:00 | 1,861 | - |
| Comander 321 | 7,883 | 365 | November 15:00 | 2,604 | - |
| ISG 321 | 7,854 | 364 | November 15:00 | 2,568 | - |
| Men RR 304 | 1,023 | 47 | January 23:00 | 0 | - |
| R-NCO | 4,763 | 221 | January 23:00 | 0 | - |
| Storage Room 319 | 2,413 | 112 | January 23:00 | 0 | - |
| T-NCO | 4,763 | 221 | January 23:00 | 0 | - |
| Battery A Admin | 24,369 | 1,128 | July 18:00 | 4,836 | - |
| Battery B Admin | 23,580 | 1,092 | July 18:00 | 4,307 | - |
| | Total: | 5,969 | | Total: | .00 |

SYSTEM SIZING SUMMARY

System: AHU 3-2
 Location: New Orleans, Louisiana
 Prepared by: Luvien T Vivien Jr

Block Load 3.05
 April 20, 2006
 Page: 1

TABLE 1. SIZING DATA (COOLING)

| | | | |
|-----------------------|---------------------|--------------------|-------------------|
| Total Coil Load | 206,400 BTU/hr | Load Occurs | June 17:00 |
| Sensible Coil Load | 195,125 BTU/hr | Outdoor Db/Wb | 92.4/79.6 F |
| Total Zone Sensible | 161,705 BTU/hr | Coil Conditions: | |
| Supply Temperature | 55.0 F | Entering Db/Wb | 77.4/62.4 F |
| Supply Air (Actual) | 7,487 CFM | Leaving Db/Wb | 53.3/52.6 F |
| Supply Air (Standard) | 7,486 CFM | Apparatus Dewpoint | 52.0 F |
| Ventilation Air | 0 CFM | Bypass Factor | 0.050 |
| Direct Exhaust Air | 0 CFM | Resulting Zone RH | 46.4 % |
| Reheat Required | 0 BTU/hr | | |
| | | Total Coil Load | 17.20 Ton |
| Floor Area | 7,858 sqft | Sensible Coil Load | 16.26 Ton |
| Overall U-Value | 0.098 BTU/hr/sqft/F | SQFT/Ton | 456.89 |
| Vent Air | 0.00 CFM/sqft | Cooling | 26.26 BTU/hr/sqft |
| Vent Air | 0.00 CFM/Person | Cooling | 0.95 CFM/sqft |

TABLE 2. SIZING DATA (HEATING)

| | | | |
|---------------------|---------------|-----------------|------------------|
| Heating Coil Load | 39,450 BTU/hr | Heating | 5.02 BTU/hr/sqft |
| Ventilation Load | 0 BTU/hr | Heating | 0.95 CFM/sqft |
| Total Zone Load | 39,450 BTU/hr | Floor Area | 7,858 sqft |
| Ventilation Airflow | 0 CFM | Overall U-Value | 0.098 |
| Supply Airflow | 7,487 CFM | Vent Air | 0.00 CFM/sqft |
| | | Vent Air | 0.00 CFM/Person |

TABLE 3. INPUT DATA (WEATHER)

| | | | |
|-------------------------|------------------------|---------------------|--------|
| Location | New Orleans, Louisiana | | |
| Data Source | User Defined | Summer Dry-Bulb | 95.0 F |
| Latitude | 30.0 Degree | Coincident Wet-Bulb | 80.0 F |
| Elevation | 4.0 ft | Daily Range | 16.0 F |
| Atmospheric Clearness # | 0.90 | Winter Dry-Bulb | 30.0 F |

TABLE 4. INPUT (HVAC SYSTEM)

| | | | |
|------------------------------|---------------------|-----------------------------|--------------|
| System Name | AHU 3-2 | THERMOSTAT SETPOINTS | |
| System Type | Clg and Warm Air Ht | Cooling (Occ.) | 75.0 F |
| System Start | 6:00 | Cooling (Unocc.) | 80.0 F |
| Duration | 24 hrs | Heating | 68.0 F |
| SIZING SPECIFICATIONS | | RETURN AIR PLENUM | Yes |
| Supply | 55.0 F | Roof Load | 70 % |
| Ventilation | 0 CFM | Lighting Load | 30 % |
| Exhaust | 0.00 CFM | Wall Load | 0 % |
| FACTORS | | FAN | |
| Coil Bypass | 0.050 | Configuration | Draw-Thru |
| Safety (Sens) | 10 % | Static Pressure | 2.50 in. wg. |
| Safety (Latent) | 10 % | | |
| Heating Safety | 10 % | | |

TABLE 5. TOP TEN COOLING COIL LOADS

| Time | Sensible Ton | Total Ton | Time | Sensible Ton | Total Ton |
|---------------|--------------|-----------|------------------|--------------|-----------|
| 1) June 17:00 | 16.26 | 17.20 | 6) July 16:00 | 16.14 | 17.08 |
| 2) June 18:00 | 16.23 | 17.17 | 7) June 15:00 | 16.05 | 16.99 |
| 3) July 17:00 | 16.22 | 17.16 | 8) July 15:00 | 16.04 | 16.98 |
| 4) July 18:00 | 16.17 | 17.11 | 9) June 19:00 | 15.97 | 16.91 |
| 5) June 16:00 | 16.16 | 17.10 | 10) August 17:00 | 15.95 | 16.89 |

SYSTEM SIZING SUMMARY

System: AHU 3-2
 Location: New Orleans, Louisiana
 Prepared by: Luvien T Vivien Jr

Block Load 3.05
 April 20, 2006
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TABLE 6. ZONE SIZING DATA

| Zone Name | Max. Cooling Sensible (BTU/hr) | Design Airflow Rate (CFM) | Design Time | Max. Heating Load (BTU/hr) | Design Flow Rate (CFM) |
|---------------------|--------------------------------------|---------------------------------|---------------|----------------------------------|------------------------------|
| 1st Plat GSG 322 | 5,072 | 235 | June 21:00 | 669 | - |
| 1st Plat LDR 322 B | 6,885 | 319 | June 17:00 | 2,859 | - |
| 1st Plat LDR 322A | 6,991 | 324 | June 17:00 | 3,256 | - |
| 1st Plat SGT 322 | 5,762 | 267 | June 17:00 | 1,558 | - |
| 2nd Plat GSG 322 | 4,838 | 224 | January 23:00 | 0 | - |
| 2nd Plat LDR 322 | 7,263 | 336 | June 17:00 | 1,878 | - |
| 2nd Plat SGT 322 | 13,179 | 610 | June 17:00 | 1,107 | - |
| A- Battery 322 | 31,286 | 1,449 | July 18:00 | 6,897 | - |
| Break Room 322 | 9,144 | 423 | January 23:00 | 0 | - |
| Clerk 322 | 6,036 | 280 | June 17:00 | 1,896 | - |
| CMDS 314 | 9,746 | 451 | July 17:00 | 2,712 | - |
| Comm 307 | 4,023 | 186 | January 23:00 | 0 | - |
| Commander 322 | 6,795 | 315 | June 17:00 | 2,299 | - |
| Conference Room 322 | 19,353 | 896 | June 17:00 | 8,398 | - |
| Cooridor 309 | 4,508 | 209 | July 18:00 | 1,881 | - |
| Electrical 306 | 4,016 | 186 | January 23:00 | 0 | - |
| ISG 322 | 6,946 | 322 | June 17:00 | 2,953 | - |
| R-NCO 322 | 4,935 | 229 | July 18:00 | 418 | - |
| T-NCO 322 | 5,072 | 235 | June 21:00 | 669 | - |
| Total: | | 7,496 | | Total: | .00 |

SYSTEM SIZING SUMMARY

System: AHU 3-3
 Location: New Orleans, Louisiana
 Prepared by: Luvien T Vivien Jr

Block Load 3.05
 April 20, 2006
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TABLE 1. SIZING DATA (COOLING)

| | | | |
|-----------------------|---------------------|--------------------|-------------------|
| Total Coil Load | 331,322 BTU/hr | Load Occurs | July 17:00 |
| Sensible Coil Load | 290,814 BTU/hr | Outdoor Db/Wb | 93.4/79.6 F |
| Total Zone Sensible | 252,525 BTU/hr | Coil Conditions: | |
| Supply Temperature | 55.0 F | Entering Db/Wb | 76.3/62.7 F |
| Supply Air (Actual) | 11,693 CFM | Leaving Db/Wb | 53.3/52.7 F |
| Supply Air (Standard) | 11,691 CFM | Apparatus Dewpoint | 52.1 F |
| Ventilation Air | 0 CFM | Bypass Factor | 0.050 |
| Direct Exhaust Air | 0 CFM | Resulting Zone RH | 48.8 % |
| Reheat Required | 0 BTU/hr | | |
| | | Total Coil Load | 27.61 Ton |
| Floor Area | 6,865 sqft | Sensible Coil Load | 24.23 Ton |
| Overall U-Value | 0.187 BTU/hr/sqft/F | SQFT/Ton | 248.64 |
| Vent Air | 0.00 CFM/sqft | Cooling | 48.26 BTU/hr/sqft |
| Vent Air | 0.00 CFM/Person | Cooling | 1.70 CFM/sqft |

TABLE 2. SIZING DATA (HEATING)

| | | | |
|---------------------|---------------|-----------------|-------------------|
| Heating Coil Load | 72,933 BTU/hr | Heating | 10.62 BTU/hr/sqft |
| Ventilation Load | 0 BTU/hr | Heating | 1.70 CFM/sqft |
| Total Zone Load | 72,933 BTU/hr | Floor Area | 6,865 sqft |
| Ventilation Airflow | 0 CFM | Overall U-Value | 0.187 |
| Supply Airflow | 11,693 CFM | Vent Air | 0.00 CFM/sqft |
| | | Vent Air | 0.00 CFM/Person |

TABLE 3. INPUT DATA (WEATHER)

| | | | |
|-------------------------|------------------------|---------------------|--------|
| Location | New Orleans, Louisiana | | |
| Data Source | User Defined | Summer Dry-Bulb | 95.0 F |
| Latitude | 30.0 Degree | Coincident Wet-Bulb | 80.0 F |
| Elevation | 4.0 ft | Daily Range | 16.0 F |
| Atmospheric Clearness # | 0.90 | Winter Dry-Bulb | 30.0 F |

TABLE 4. INPUT (HVAC SYSTEM)

| | | | |
|------------------------------|---------------------|-----------------------------|--------------|
| System Name | AHU 3-3 | THERMOSTAT SETPOINTS | |
| System Type | Clg and Warm Air Hf | Cooling (Occ.) | 75.0 F |
| System Start | 6:00 | Cooling (Unocc.) | 80.0 F |
| Duration | 24 hrs | Heating | 68.0 F |
| SIZING SPECIFICATIONS | | RETURN AIR PLENUM | |
| Supply | 55.0 F | Roof Load | 70 % |
| Ventilation | 0 CFM | Lighting Load | 30 % |
| Exhaust | 0.00 CFM | Wall Load | 0 % |
| FACTORS | | FAN | |
| Coil Bypass | 0.050 | Configuration | Draw-Thru |
| Safety (Sens) | 10 % | Static Pressure | 2.50 in. wg. |
| Safety (Latent) | 10 % | | |
| Heating Safety | 10 % | | |

TABLE 5. TOP TEN COOLING COIL LOADS

| Time | Sensible Ton | Total Ton | Time | Sensible Ton | Total Ton |
|-----------------|--------------|-----------|-----------------|--------------|-----------|
| 1) July 17:00 | 24.23 | 27.61 | 6) August 16:00 | 23.77 | 27.14 |
| 2) June 17:00 | 24.22 | 27.59 | 7) June 18:00 | 23.68 | 27.05 |
| 3) July 16:00 | 23.97 | 27.35 | 8) May 17:00 | 23.68 | 27.05 |
| 4) June 16:00 | 23.90 | 27.28 | 9) July 18:00 | 23.55 | 26.93 |
| 5) August 17:00 | 23.87 | 27.25 | 10) May 16:00 | 23.39 | 26.77 |

SYSTEM SIZING SUMMARY

System: AHU 3-3
 Location: New Orleans, Louisiana
 Prepared by: Luvien T Vivien Jr

Block Load 3.05
 April 20, 2006
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TABLE 6. ZONE SIZING DATA

| Zone Name | Max. Cooling Sensible (BTU/hr) | Design Airflow Rate (CFM) | Design Time | Max. Heating Load (BTU/hr) | Design Flow Rate (CFM) |
|---------------------|--------------------------------------|---------------------------------|---------------|----------------------------------|------------------------------|
| 1st Plat GSG 324 | 4,935 | 229 | July 18:00 | 418 | - |
| 1st plat LDR A 324 | 6,884 | 319 | June 17:00 | 2,852 | - |
| 1st Plat LDR B 324 | 7,286 | 337 | June 18:00 | 3,601 | - |
| 1st Plat SGT 324 | 7,845 | 363 | June 17:00 | 2,859 | - |
| 2nd Plat LDe 324 | 6,405 | 297 | June 17:00 | 1,878 | - |
| 2nd Plat SGT 324 | 5,658 | 262 | June 17:00 | 1,107 | - |
| B-Battery 324 | 31,286 | 1,449 | July 18:00 | 6,897 | - |
| Break Room 324 | 11,024 | 510 | January 23:00 | 0 | - |
| Clerk 324 | 6,036 | 280 | June 17:00 | 1,896 | - |
| CMSD 324 | 106,014 | 4,909 | July 17:00 | 35,037 | - |
| Commander 324 | 7,456 | 345 | June 14:00 | 2,953 | - |
| conference Room 324 | 19,317 | 894 | June 17:00 | 8,398 | - |
| Corridor 308 | 2,932 | 136 | January 23:00 | 0 | - |
| ISG 324 | 6,946 | 322 | June 17:00 | 2,953 | - |
| Medical 316 | 8,842 | 409 | October 18:00 | 829 | - |
| R-NCO 324 | 4,935 | 229 | July 18:00 | 418 | - |
| snd PLAt GSG 324 | 4,876 | 226 | July 18:00 | 418 | - |
| T-NCO 324 | 4,876 | 226 | July 18:00 | 418 | - |
| Total: | | 11,742 | | Total: | .00 |

SYSTEM SIZING SUMMARY

System: AHU 3-4
 Location: New Orleans, Louisiana
 Prepared by: Luvien T Vivien Jr

Block Load 3.05
 April 20, 2006
 Page: 1

TABLE 1. SIZING DATA (COOLING)

| | | | |
|-----------------------|---------------------|--------------------|-------------------|
| Total Coil Load | 172,993 BTU/hr | Load Occurs | October 15:00 |
| Sensible Coil Load | 162,620 BTU/hr | Outdoor Db/Wb | 89.0/77.0 F |
| Total Zone Sensible | 139,367 BTU/hr | Coil Conditions: | |
| Supply Temperature | 55.0 F | Entering Db/Wb | 80.1/63.4 F |
| Supply Air (Actual) | 5,611 CFM | Leaving Db/Wb | 53.3/52.5 F |
| Supply Air (Standard) | 5,611 CFM | Apparatus Dewpoint | 51.9 F |
| Ventilation Air | 0 CFM | Bypass Factor | 0.050 |
| Direct Exhaust Air | 0 CFM | Resulting Zone RH | 42.2 % |
| Reheat Required | 0 BTU/hr | | |
| | | Total Coil Load | 14.42 Ton |
| Floor Area | 6,450 sqft | Sensible Coil Load | 13.55 Ton |
| Overall U-Value | 0.082 BTU/hr/sqft/F | SQFT/Ton | 447.42 |
| Vent Air | 0.00 CFM/sqft | Cooling | 26.82 BTU/hr/sqft |
| Vent Air | 0.00 CFM/Person | Cooling | 0.87 CFM/sqft |

TABLE 2. SIZING DATA (HEATING)

| | | | |
|---------------------|---------------|-----------------|------------------|
| Heating Coil Load | 30,858 BTU/hr | Heating | 4.78 BTU/hr/sqft |
| Ventilation Load | 0 BTU/hr | Heating | 0.87 CFM/sqft |
| Total Zone Load | 30,858 BTU/hr | Floor Area | 6,450 sqft |
| Ventilation Airflow | 0 CFM | Overall U-Value | 0.082 |
| Supply Airflow | 5,611 CFM | Vent Air | 0.00 CFM/sqft |
| | | Vent Air | 0.00 CFM/Person |

TABLE 3. INPUT DATA (WEATHER)

| | | | |
|-------------------------|------------------------|---------------------|--------|
| Location | New Orleans, Louisiana | | |
| Data Source | User Defined | Summer Dry-Bulb | 95.0 F |
| Latitude | 30.0 Degree | Coincident Wet-Bulb | 80.0 F |
| Elevation | 4.0 ft | Daily Range | 16.0 F |
| Atmospheric Clearness # | 0.90 | Winter Dry-Bulb | 30.0 F |

TABLE 4. INPUT (HVAC SYSTEM)

| | | | |
|------------------------------|---------------------|-----------------------------|--------------|
| System Name | AHU 3-4 | THERMOSTAT SETPOINTS | |
| System Type | Clg and Warm Air Hf | Cooling (Occ.) | 78.0 F |
| System Start | 6:00 | Cooling (Unocc.) | 80.0 F |
| Duration | 24 hrs | Heating | 68.0 F |
| SIZING SPECIFICATIONS | | RETURN AIR PLENUM | Yes |
| Supply | 55.0 F | Roof Load | 70 % |
| Ventilation | 0 CFM | Lighting Load | 30 % |
| Exhaust | 0.00 CFM | Wall Load | 0 % |
| FACTORS | | FAN | |
| Coil Bypass | 0.050 | Configuration | Draw-Thru |
| Safety (Sens) | 10 % | Static Pressure | 2.50 in. wg. |
| Safety (Latent) | 10 % | | |
| Heating Safety | 10 % | | |

TABLE 5. TOP TEN COOLING COIL LOADS

| Time | Sensible Ton | Total Ton | Time | Sensible Ton | Total Ton |
|--------------------|--------------|-----------|--------------------|--------------|-----------|
| 1) October 15:00 | 13.55 | 14.42 | 6) October 17:00 | 13.40 | 14.26 |
| 2) October 16:00 | 13.53 | 14.39 | 7) September 14:00 | 13.40 | 14.26 |
| 3) October 14:00 | 13.48 | 14.34 | 8) September 17:00 | 13.38 | 14.25 |
| 4) September 15:00 | 13.46 | 14.33 | 9) November 15:00 | 13.35 | 14.22 |
| 5) September 16:00 | 13.45 | 14.31 | 10) October 13:00 | 13.33 | 14.19 |

SYSTEM SIZING SUMMARY

System: AHU 3-4
 Location: New Orleans, Louisiana
 Prepared by: Luvien T Vivien Jr

Block Load 3.05
 April 20, 2006
 Page: 2

TABLE 6. ZONE SIZING DATA

| Zone Name | Max. Cooling | Design Airflow | | Max. Heating | Design Flow |
|---------------------|----------------------|----------------|----------------|------------------|---------------|
| | Sensible (BTU/hr) | Rate (CFM) | Design Time | Load (BTU/hr) | Rate (CFM) |
| 1st Plat GSG 323 | 6,040 | 243 | October 16:00 | 1,037 | - |
| 1ST PLAT LDR A 323 | 8,102 | 326 | November 15:00 | 2,657 | - |
| 1ST PLAT LDR B 323 | 7,348 | 296 | October 15:00 | 3,251 | - |
| 1ST PLAT SGT 323 | 6,307 | 254 | November 15:00 | 1,491 | - |
| 2ND PLAT GSG 323 | 4,763 | 192 | January 23:00 | 0 | - |
| 2ND PLAT LDR 323 | 6,738 | 271 | November 15:00 | 1,441 | - |
| 2ND PLAT SGT 323 | 6,347 | 256 | November 15:00 | 1,501 | - |
| BREAK ROOM 323 | 11,094 | 447 | July 18:00 | 435 | - |
| CLERK 323 | 7,804 | 314 | November 15:00 | 2,425 | - |
| COMMANDER 323 | 8,200 | 330 | November 15:00 | 2,852 | - |
| CONFERENCE ROOM 323 | 11,667 | 470 | June 21:00 | 1,003 | - |
| CORRIDOR 310 | 4,210 | 170 | July 18:00 | 2,508 | - |
| G-COMPANY 323 | 31,201 | 1,256 | July 18:00 | 6,897 | - |
| ISG 323 | 7,684 | 309 | November 15:00 | 2,551 | - |
| R-NC0 323 | 4,771 | 192 | January 23:00 | 0 | - |
| STORAGE 323 | 2,413 | 97 | January 23:00 | 0 | - |
| STRG 323 | 754 | 30 | July 20:00 | 808 | - |
| T-NCO 323 | 4,763 | 192 | January 23:00 | 0 | - |
| WOMEN RR 305 | 1,023 | 41 | January 23:00 | 0 | - |
| | Total: | 5,686 | | Total: | .00 |

SYSTEM SIZING SUMMARY

System: AHU 4-1
 Location: New Orleans, Louisiana
 Prepared by: Luvien T Vivien Jr

Block Load 3.05
 April 20, 2006
 Page: 1

TABLE 1. SIZING DATA (COOLING)

| | | | |
|-----------------------|---------------------|--------------------|-------------------|
| Total Coil Load | 148,574 BTU/hr | Load Occurs | August 17:00 |
| Sensible Coil Load | 122,798 BTU/hr | Outdoor Db/Wb | 93.4/79.6 F |
| Total Zone Sensible | 89,083 BTU/hr | Coil Conditions: | |
| Supply Temperature | 55.0 F | Entering Db/Wb | 80.9/65.0 F |
| Supply Air (Actual) | 4,125 CFM | Leaving Db/Wb | 53.3/52.6 F |
| Supply Air (Standard) | 4,124 CFM | Apparatus Dewpoint | 51.8 F |
| Ventilation Air | 395 CFM | Bypass Factor | 0.050 |
| Direct Exhaust Air | 0 CFM | Resulting Zone RH | 46.6 % |
| Reheat Required | 0 BTU/hr | | |
| | | Total Coil Load | 12.38 Ton |
| Floor Area | 7,344 sqft | Sensible Coil Load | 10.23 Ton |
| Overall U-Value | 0.073 BTU/hr/sqft/F | SQFT/Ton | 593.16 |
| Vent Air | 0.05 CFM/sqft | Cooling | 20.23 BTU/hr/sqft |
| Vent Air | 11.77 CFM/Person | Cooling | 0.56 CFM/sqft |

TABLE 2. SIZING DATA (HEATING)

| | | | |
|---------------------|---------------|-----------------|------------------|
| Heating Coil Load | 57,017 BTU/hr | Heating | 7.76 BTU/hr/sqft |
| Ventilation Load | 16,208 BTU/hr | Heating | 0.56 CFM/sqft |
| Total Zone Load | 40,808 BTU/hr | Floor Area | 7,344 sqft |
| Ventilation Airflow | 395 CFM | Overall U-Value | 0.073 |
| Supply Airflow | 4,125 CFM | Vent Air | 0.05 CFM/sqft |
| | | Vent Air | 11.77 CFM/Person |

TABLE 3. INPUT DATA (WEATHER)

| | | | |
|-------------------------|------------------------|---------------------|--------|
| Location | New Orleans, Louisiana | | |
| Data Source | User Defined | Summer Dry-Bulb | 95.0 F |
| Latitude | 30.0 Degree | Coincident Wet-Bulb | 80.0 F |
| Elevation | 4.0 ft | Daily Range | 16.0 F |
| Atmospheric Clearness # | 0.90 | Winter Dry-Bulb | 30.0 F |

TABLE 4. INPUT (HVAC SYSTEM)

| | | | |
|------------------------------|---------------------|-----------------------------|--------------|
| System Name | AHU 4-1 | THERMOSTAT SETPOINTS | |
| System Type | Clg and Warm Air Ht | Cooling (Occ.) | 75.0 F |
| System Start | 6:00 | Cooling (Unocc.) | 80.0 F |
| Duration | 24 hrs | Heating | 68.0 F |
| SIZING SPECIFICATIONS | | RETURN AIR PLENUM | Yes |
| Supply | 55.0 F | Roof Load | 70 % |
| Ventilation | 395 CFM | Lighting Load | 30 % |
| Exhaust | 0.00 CFM | Wall Load | 0 % |
| FACTORS | | FAN | |
| Coil Bypass | 0.050 | Configuration | Draw-Thru |
| Safety (Sens) | 10 % | Static Pressure | 2.50 in. wg. |
| Safety (Latent) | 10 % | | |
| Heating Safety | 10 % | | |

TABLE 5. TOP TEN COOLING COIL LOADS

| Time | Sensible Ton | Total Ton | Time | Sensible Ton | Total Ton |
|--------------------|--------------|-----------|--------------------|--------------|-----------|
| 1) August 17:00 | 10.23 | 12.38 | 6) July 17:00 | 10.16 | 12.31 |
| 2) August 16:00 | 10.23 | 12.38 | 7) August 18:00 | 10.16 | 12.31 |
| 3) September 16:00 | 10.28 | 12.35 | 8) July 16:00 | 10.15 | 12.30 |
| 4) August 15:00 | 10.19 | 12.34 | 9) September 17:00 | 10.23 | 12.30 |
| 5) September 15:00 | 10.26 | 12.33 | 10) July 18:00 | 10.11 | 12.25 |

SYSTEM SIZING SUMMARY

System: AHU 4-1
 Location: New Orleans, Louisiana
 Prepared by: Luvien T Vivien Jr

Block Load 3.05
 April 20, 2006
 Page: 2

TABLE 6. ZONE SIZING DATA

| Zone Name | Max. Cooling | Design Airflow | Design Time | Max. Heating | Design Flow |
|----------------|----------------------|----------------|---------------|------------------|---------------|
| | Sensible (BTU/hr) | Rate (CFM) | | Load (BTU/hr) | Rate (CFM) |
| CDR | 10,662 | 494 | October 15:00 | 5,295 | - |
| Corridor 408 | 6,724 | 311 | July 20:00 | 2,696 | - |
| Corridor 408 A | 1,476 | 68 | January 23:00 | 0 | - |
| Corridor 409 | 3,047 | 141 | July 18:00 | 2,044 | - |
| CSM | 11,976 | 555 | October 16:00 | 5,135 | - |
| Men RR 404 | 950 | 44 | July 18:00 | 627 | - |
| Office area SE | 14,196 | 657 | July 18:00 | 3,859 | - |
| Office Area SW | 15,664 | 725 | June 21:00 | 5,615 | - |
| Storage 413 | 1,282 | 59 | July 18:00 | 732 | - |
| TOC | 28,006 | 1,297 | October 15:00 | 14,179 | - |
| Women RR 405 | 950 | 44 | July 18:00 | 627 | - |
| | Total: | 4,395 | | Total: | .00 |

SYSTEM SIZING SUMMARY

System: AHU 4-2
 Location: New Orleans, Louisiana
 Prepared by: Luvien T Vivien Jr

Block Load 3.05
 April 20, 2006
 Page: 1

TABLE 1. SIZING DATA (COOLING)

| | | | |
|-----------------------|---------------------|--------------------|-------------------|
| Total Coil Load | 208,821 BTU/hr | Load Occurs | June 17:00 |
| Sensible Coil Load | 175,590 BTU/hr | Outdoor Db/Wb | 92.4/79.6 F |
| Total Zone Sensible | 138,244 BTU/hr | Coil Conditions: | |
| Supply Temperature | 55.0 F | Entering Db/Wb | 78.7/64.0 F |
| Supply Air (Actual) | 6,401 CFM | Leaving Db/Wb | 53.3/52.6 F |
| Supply Air (Standard) | 6,400 CFM | Apparatus Dewpoint | 51.9 F |
| Ventilation Air | 450 CFM | Bypass Factor | 0.050 |
| Direct Exhaust Air | 0 CFM | Resulting Zone RH | 46.8 % |
| Reheat Required | 0 BTU/hr | | |
| | | Total Coil Load | 17.40 Ton |
| Floor Area | 6,393 sqft | Sensible Coil Load | 14.63 Ton |
| Overall U-Value | 0.069 BTU/hr/sqft/F | SQFT/Ton | 367.38 |
| Vent Air | 0.07 CFM/sqft | Cooling | 32.66 BTU/hr/sqft |
| Vent Air | 9.00 CFM/Person | Cooling | 1.00 CFM/sqft |

TABLE 2. SIZING DATA (HEATING)

| | | | |
|---------------------|---------------|-----------------|------------------|
| Heating Coil Load | 55,126 BTU/hr | Heating | 8.62 BTU/hr/sqft |
| Ventilation Load | 18,465 BTU/hr | Heating | 1.00 CFM/sqft |
| Total Zone Load | 36,660 BTU/hr | Floor Area | 6,393 sqft |
| Ventilation Airflow | 450 CFM | Overall U-Value | 0.069 |
| Supply Airflow | 6,401 CFM | Vent Air | 0.07 CFM/sqft |
| | | Vent Air | 9.00 CFM/Person |

TABLE 3. INPUT DATA (WEATHER)

| | | | |
|-------------------------|------------------------|---------------------|--------|
| Location | New Orleans, Louisiana | | |
| Data Source | User Defined | Summer Dry-Bulb | 95.0 F |
| Latitude | 30.0 Degree | Coincident Wet-Bulb | 80.0 F |
| Elevation | 4.0 ft | Daily Range | 16.0 F |
| Atmospheric Clearness # | 0.90 | Winter Dry-Bulb | 30.0 F |

TABLE 4. INPUT (HVAC SYSTEM)

| | | | |
|------------------------------|---------------------|-----------------------------|--------------|
| System Name | AHU 4-2 | THERMOSTAT SETPOINTS | |
| System Type | Clg and Warm Air Ht | Cooling (Occ.) | 75.0 F |
| System Start | 6:00 | Cooling (Unocc.) | 80.0 F |
| Duration | 24 hrs | Heating | 68.0 F |
| SIZING SPECIFICATIONS | | RETURN AIR PLENUM | Yes |
| Supply | 55.0 F | Roof Load | 70 % |
| Ventilation | 450 CFM | Lighting Load | 30 % |
| Exhaust | 0.00 CFM | Wall Load | 0 % |
| FACTORS | | FAN | |
| Coil Bypass | 0.050 | Configuration | Draw-Thru |
| Safety (Sens) | 10 % | Static Pressure | 2.50 in. wg. |
| Safety (Latent) | 10 % | | |
| Heating Safety | 10 % | | |

TABLE 5. TOP TEN COOLING COIL LOADS

| Time | Sensible Ton | Total Ton | Time | Sensible Ton | Total Ton |
|---------------|--------------|-----------|------------------|--------------|-----------|
| 1) June 17:00 | 14.63 | 17.40 | 6) July 18:00 | 14.63 | 17.36 |
| 2) July 17:00 | 14.67 | 17.40 | 7) July 15:00 | 14.55 | 17.28 |
| 3) June 18:00 | 14.60 | 17.37 | 8) June 15:00 | 14.50 | 17.27 |
| 4) July 16:00 | 14.63 | 17.36 | 9) August 17:00 | 14.53 | 17.25 |
| 5) June 16:00 | 14.59 | 17.36 | 10) August 16:00 | 14.50 | 17.23 |

SYSTEM SIZING SUMMARY

System: AHU 4-2
 Location: New Orleans, Louisiana
 Prepared by: Luvien T Vivien Jr

Block Load 3.05
 April 20, 2006
 Page: 2

TABLE 6. ZONE SIZING DATA

| Zone Name | Max. Cooling Sensible (BTU/hr) | Design Airflow Rate (CFM) | Design Time | Max. Heating Load (BTU/hr) | Design Flow Rate (CFM) |
|------------------|--------------------------------------|---------------------------------|-------------|----------------------------------|------------------------------|
| A-OPS NOC | 7,029 | 325 | June 18:00 | 3,398 | - |
| A-S3 | 5,749 | 266 | June 17:00 | 1,619 | - |
| Break room | 11,355 | 526 | June 20:00 | 1,013 | - |
| Comm 407 | 4,086 | 189 | July 18:00 | 251 | - |
| Conference Room | 11,772 | 545 | June 20:00 | 1,775 | - |
| Corridor 410 | 3,990 | 185 | June 21:00 | 3,244 | - |
| Electrical 406 | 4,064 | 188 | July 18:00 | 209 | - |
| Fire Control NOC | 5,438 | 252 | July 20:00 | 1,115 | - |
| Lobby 400 | 3,645 | 169 | July 18:00 | 2,445 | - |
| Master Gunner | 5,511 | 255 | July 20:00 | 1,195 | - |
| OPS NOC | 6,194 | 287 | June 17:00 | 1,619 | - |
| S-1 | 5,429 | 251 | July 16:00 | 1,206 | - |
| S-1 NOC | 5,323 | 246 | July 15:00 | 736 | - |
| S-2 | 5,503 | 255 | July 20:00 | 1,195 | - |
| S-3 | 5,749 | 266 | June 17:00 | 1,619 | - |
| S-4 | 5,372 | 249 | July 16:00 | 1,126 | - |
| S-6 | 7,057 | 327 | June 17:00 | 3,418 | - |
| Staff Area 445 | 30,049 | 1,391 | July 18:00 | 7,838 | - |
| X-O | 5,757 | 267 | June 17:00 | 1,639 | - |
| | Total: | 6,439 | | Total: | .00 |

SYSTEM SIZING SUMMARY

System: Central Plant office Fan
 Location: New Orleans, Louisiana
 Prepared by: Luvien T Vivien Jr

Block Load 3.05
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TABLE 1. SIZING DATA (COOLING)

| | | | |
|-----------------------|---------------------|--------------------|-------------------|
| Total Coil Load | 5,940 BTU/hr | Load Occurs | August 18:00 |
| Sensible Coil Load | 5,007 BTU/hr | Outdoor Db/Wb | 91.6/79.2 F |
| Total Zone Sensible | 4,531 BTU/hr | Coil Conditions: | |
| Supply Temperature | 55.0 F | Entering Db/Wb | 77.1/64.1 F |
| Supply Air (Actual) | 210 CFM | Leaving Db/Wb | 55.0/54.4 F |
| Supply Air (Standard) | 210 CFM | Apparatus Dewpoint | 53.8 F |
| Ventilation Air | 20 CFM | Bypass Factor | 0.050 |
| Direct Exhaust Air | 0 CFM | Resulting Zone RH | 48. % |
| Reheat Required | 0 BTU/hr | | |
| | | Total Coil Load | 0.49 Ton |
| Floor Area | 224 sqft | Sensible Coil Load | 0.42 Ton |
| Overall U-Value | 0.080 BTU/hr/sqft/F | SQFT/Ton | 452.53 |
| Vent Air | 0.09 CFM/sqft | Cooling | 26.52 BTU/hr/sqft |
| Vent Air | 0.00 CFM/Person | Cooling | 0.94 CFM/sqft |

TABLE 2. SIZING DATA (HEATING)

| | | | |
|---------------------|--------------|-----------------|-------------------|
| Heating Coil Load | 3,713 BTU/hr | Heating | 16.58 BTU/hr/sqft |
| Ventilation Load | 864 BTU/hr | Heating | 0.94 CFM/sqft |
| Total Zone Load | 2,849 BTU/hr | Floor Area | 224 sqft |
| Ventilation Airflow | 20 CFM | Overall U-Value | 0.080 |
| Supply Airflow | 210 CFM | Vent Air | 0.09 CFM/sqft |
| | | Vent Air | 0.00 CFM/Person |

TABLE 3. INPUT DATA (WEATHER)

| | | | |
|-------------------------|------------------------|---------------------|--------|
| Location | New Orleans, Louisiana | | |
| Data Source | User Defined | Summer Dry-Bulb | 95.0 F |
| Latitude | 30.0 Degree | Coincident Wet-Bulb | 80.0 F |
| Elevation | 4.0 ft | Daily Range | 16.0 F |
| Atmospheric Clearness # | 0.90 | Winter Dry-Bulb | 30.0 F |

TABLE 4. INPUT (HVAC SYSTEM)

| | | | |
|------------------------------|--------------------------|-----------------------------|--------------|
| System Name | Central Plant office Fan | THERMOSTAT SETPOINTS | |
| System Type | Clg and Warm Air Ht | Cooling (Occ.) | 75.0 F |
| System Start | 6:00 | Cooling (Unocc.) | 80.0 F |
| Duration | 24 hrs | Heating | 70.0 F |
| SIZING SPECIFICATIONS | | RETURN AIR PLENUM | No |
| Supply | 55.0 F | FAN | |
| Ventilation | 20 CFM | Configuration | Blow-Thru |
| Exhaust | 0.00 CFM | Static Pressure | 0.75 in. wg. |
| FACTORS | | | |
| Coil Bypass | 0.050 | | |
| Safety (Sens) | 5 % | | |
| Safety (Latent) | 5 % | | |
| Heating Safety | 5 % | | |

TABLE 5. TOP TEN COOLING COIL LOADS

| Time | Sensible Ton | Total Ton | Time | Sensible Ton | Total Ton |
|-----------------|--------------|-----------|------------------|--------------|-----------|
| 1) August 18:00 | 0.42 | 0.49 | 6) June 18:00 | 0.41 | 0.49 |
| 2) August 17:00 | 0.42 | 0.49 | 7) June 17:00 | 0.41 | 0.49 |
| 3) July 18:00 | 0.42 | 0.49 | 8) August 19:00 | 0.41 | 0.49 |
| 4) July 17:00 | 0.42 | 0.49 | 9) July 16:00 | 0.41 | 0.49 |
| 5) July 19:00 | 0.41 | 0.49 | 10) August 16:00 | 0.41 | 0.49 |

SYSTEM SIZING SUMMARY

System: Central Plant office Fan
Location: New Orleans, Louisiana
Prepared by: Luvien T Vivien Jr

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TABLE 6. ZONE SIZING DATA

| Zone Name | Max. Cooling Sensible (BTU/hr) | Design Airflow Rate (CFM) | Design Time | Max. Heating Load (BTU/hr) | Design Flow Rate (CFM) |
|-----------|--------------------------------------|---------------------------------|-------------|----------------------------------|------------------------------|
| Office | 4,542 | 210 | July 19:00 | 2,849 | - |
| | Total: | 210 | | Total: | .00 |
