

Zone Checksums

By MATENO

Food Prep

| COOLING COIL PEAK | | | | | CLG SPACE PEAK | | | HEATING COIL PEAK | | | | TEMPERATURES | | | |
|---------------------------|---------------------|----------------------------|------------------|----------------|------------------|-----------------------|---------------------------|-----------------------|-------------------------|--------------------|------------------|--------------|------------|-------|---------|
| Peaked at Time: | | Mo/Hr: 7 / 14 | | | Mo/Hr: 8 / 14 | | | Mo/Hr: Heating Design | | | | Cooling | | | Heating |
| Outside Air: | | OADB/WB/HR: 109 / 90 / 188 | | | OADB: 106 | | | OADB: 46 | | | | SADB | 58.4 | 69.0 | |
| Space Sens. + Lat. | Plenum Sens. + Lat. | Net Total | Percent Of Total | Space Sensible | Percent Of Total | Space Peak Space Sens | Coil Peak Tot Sens | Percent Of Total | Space Sens | Coil Peak Tot Sens | Percent Of Total | Plenum | 79.7 | 66.9 | |
| Btu/h | Btu/h | Btu/h | (%) | Btu/h | (%) | Btu/h | Btu/h | (%) | Btu/h | Btu/h | (%) | Return | 79.7 | 66.9 | |
| Envelope Loads | | | | | | | | | | | | | | | |
| Skylite Solar | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Skylite Solar | 0 | 0 | 0 | Fn MtrTD | 0.0 | 0.0 |
| Skylite Cond | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Skylite Cond | 0 | 0 | 0 | Fn BldTD | 0.0 | 0.0 |
| Roof Cond | 0 | 17,557 | 17,557 | 16 | 0 | 0 | 0 | 0 | Roof Cond | 0 | -4,135 | 33 | Fn Frict | 0.0 | 0.0 |
| Glass Solar | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Glass Solar | 0 | 0 | 0 | | | |
| Glass Cond | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Glass Cond | 0 | 0 | 0 | | | |
| Wall Cond | 8,268 | 1,249 | 9,516 | 9 | 8,541 | 13 | 0 | 0 | Wall Cond | -3,454 | -3,999 | 32 | | | |
| Partition | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Partition | 0 | 0 | 0 | | | |
| Exposed Floor | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Exposed Floor | 0 | 0 | 0 | | | |
| Infiltration | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Infiltration | 0 | 0 | 0 | | | |
| Sub Total ==> | 8,268 | 18,806 | 27,074 | 25 | 8,541 | 13 | | | Sub Total ==> | -3,454 | -8,134 | 64 | | | |
| Internal Loads | | | | | | | | | | | | | | | |
| Lights | 6,826 | 1,707 | 8,533 | 8 | 6,826 | 11 | 0 | 0 | Lights | 0 | 0 | 0 | Vent | 200 | 200 |
| People | 5,000 | 0 | 5,000 | 5 | 2,500 | 4 | 0 | 0 | People | 0 | 0 | 0 | Infil | 0 | 0 |
| Misc | 44,375 | 0 | 44,375 | 41 | 44,375 | 69 | 0 | 0 | Misc | 0 | 0 | 0 | Supply | 3,571 | 3,571 |
| Sub Total ==> | 56,201 | 1,707 | 57,908 | 54 | 53,701 | 83 | | | Sub Total ==> | 0 | 0 | 0 | MinStop/Rh | 0 | 0 |
| Ceiling Load | | | | | | | | | | | | | | | |
| Ceiling Load | 2,269 | -2,269 | 0 | 0 | 2,164 | 3 | -518 | 0 | Ceiling Load | -518 | 0 | 0 | Return | 3,571 | 3,571 |
| Ventilation Load | 0 | 0 | 23,922 | 22 | 0 | 0 | 0 | -4,771 | Ventilation Load | 0 | -4,771 | 38 | Exhaust | 200 | 200 |
| Dehumid. Ov Sizing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Ov/Undr Sizing | 0 | 0 | 0 | Rm Exh | 0 | 0 |
| Ov/Undr Sizing | 0 | 0 | 0 | 0 | 0 | 0 | 233 | -2 | Exhaust Heat | 0 | 233 | -2 | Auxil | 0 | 0 |
| Exhaust Heat | 0 | -1,022 | -1,022 | -1 | 0 | 0 | 0 | 0 | OA Preheat Diff. | 0 | 0 | 0 | | | |
| Sup. Fan Heat | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | RA Preheat Diff. | 0 | 0 | 0 | | | |
| Ret. Fan Heat | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Additional Reheat | 0 | 0 | 0 | | | |
| Duct Heat Pkup | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | System Plenum Heat | 0 | 0 | 0 | | | |
| Reheat at Design | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Grand Total ==> | 66,738 | 17,222 | 107,882 | 100.00 | 64,407 | 100.00 | Grand Total ==> | -3,972 | -12,672 | 100.00 | | | | | |

| AIRFLOWS | | |
|------------|---------|---------|
| | Cooling | Heating |
| Vent | 200 | 200 |
| Infil | 0 | 0 |
| Supply | 3,571 | 3,571 |
| MinStop/Rh | 0 | 0 |
| Return | 3,571 | 3,571 |
| Exhaust | 200 | 200 |
| Rm Exh | 0 | 0 |
| Auxil | 0 | 0 |

| ENGINEERING CKS | | |
|-----------------|---------|---------|
| | Cooling | Heating |
| % OA | 5.6 | 5.6 |
| cfm/ft2 | 2.35 | 2.35 |
| cfm/ton | 397.21 | |
| ft2/ton | 169.07 | |
| Btu/hr-ft2 | 70.97 | -8.34 |
| No. People | 10 | |

| COOLING COIL SELECTION | | | | | | | | | | |
|------------------------|----------------|--------------|-----------|--------------|----------------|------|-------|----------------|------|-------|
| | Total Capacity | | Sens Cap. | Coil Airflow | Enter DB/WB/HR | | | Leave DB/WB/HR | | |
| | ton | MBh | | | F | F | gr/lb | F | F | gr/lb |
| Main Clg | 9.0 | 107.9 | 88.9 | 3,571 | 81.4 | 65.9 | 73.5 | 58.4 | 56.2 | 65.9 |
| Aux Clg | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Opt Vent | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total | 9.0 | 107.9 | | | | | | | | |

| AREAS | | | |
|-------|-------------|-------|-----|
| | Gross Total | Glass | |
| | | ft2 | (%) |
| Floor | 1,520 | | |
| Part | 0 | | |
| ExFlr | 0 | | |
| Roof | 1,520 | 0 | 0 |
| Wall | 1,408 | 0 | 0 |

| HEATING COIL SELECTION | | | | |
|------------------------|--------------|--------------|------|------|
| | Capacity | Coil Airflow | Ent | Lvg |
| | | | | |
| Main Htg | -12.7 | 3,571 | 65.8 | 69.0 |
| Aux Htg | 0.0 | 0 | 0.0 | 0.0 |
| Preheat | 0.0 | 0 | 0.0 | 0.0 |
| Humidif | 0.0 | 0 | 0.0 | 0.0 |
| Opt Vent | 0.0 | 0 | 0.0 | 0.0 |
| Total | -12.7 | | | |

Zone Checksums

By MATENO

Main kitchen 20% exhst

| COOLING COIL PEAK | | | | | CLG SPACE PEAK | | | HEATING COIL PEAK | | | | TEMPERATURES | | | |
|---------------------------|---------------|----------------------------|------------------|----------------|------------------|---------------|---------------------------|-------------------|-------------------------|---------------|------------------|--------------|----------|---------|------|
| Peaked at Time: | | Mo/Hr: 7 / 14 | | | Mo/Hr: 8 / 14 | | Mo/Hr: Heating Design | | | | Cooling | | | Heating | |
| Outside Air: | | OADB/WB/HR: 109 / 90 / 188 | | | OADB: 106 | | OADB: 46 | | | | SADB | | | 69.0 | |
| Space Sens. | Plenum Sens. | Net Total | Percent Of Total | Space Sensible | Percent Of Total | Space Peak | Coil Peak Tot | Percent Of Total | Space Sens | Coil Peak Tot | Percent Of Total | SADB | 58.4 | 69.0 | |
| Btu/h | Btu/h | Btu/h | (%) | Btu/h | (%) | Btu/h | Btu/h | (%) | Btu/h | Btu/h | (%) | Plenum | 79.7 | 66.9 | |
| Envelope Loads | | | | | | | | | | | | | | | |
| Skylite Solar | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Skylite Solar | 0 | 0 | 0 | Return | 79.7 | 66.9 |
| Skylite Cond | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Skylite Cond | 0 | 0 | 0 | Ret/OA | 81.4 | 65.8 |
| Roof Cond | 0 | 17,557 | 17,557 | 16 | 0 | 0 | 0 | 0 | Roof Cond | 0 | -4,135 | 33 | Fn MtrTD | 0.0 | 0.0 |
| Glass Solar | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Glass Solar | 0 | 0 | 0 | Fn BldTD | 0.0 | 0.0 |
| Glass Cond | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Glass Cond | 0 | 0 | 0 | Fn Frict | 0.0 | 0.0 |
| Wall Cond | 8,268 | 1,249 | 9,516 | 9 | 8,541 | 13 | 0 | 0 | Wall Cond | -3,454 | -3,999 | 32 | | | |
| Partition | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Partition | 0 | 0 | 0 | | | |
| Exposed Floor | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Exposed Floor | 0 | 0 | 0 | | | |
| Infiltration | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Infiltration | 0 | 0 | 0 | | | |
| Sub Total ==> | 8,268 | 18,806 | 27,074 | 25 | 8,541 | 13 | | | Sub Total ==> | -3,454 | -8,134 | 64 | | | |
| Internal Loads | | | | | | | | | | | | | | | |
| Lights | 6,826 | 1,707 | 8,533 | 8 | 6,826 | 11 | 0 | 0 | Lights | 0 | 0 | 0 | | | |
| People | 5,000 | 0 | 5,000 | 5 | 2,500 | 4 | 0 | 0 | People | 0 | 0 | 0 | | | |
| Misc | 44,375 | 0 | 44,375 | 41 | 44,375 | 69 | 0 | 0 | Misc | 0 | 0 | 0 | | | |
| Sub Total ==> | 56,201 | 1,707 | 57,908 | 54 | 53,701 | 83 | | | Sub Total ==> | 0 | 0 | 0 | | | |
| Ceiling Load | | | | | | | | | | | | | | | |
| Ceiling Load | 2,269 | -2,269 | 0 | 0 | 2,164 | 3 | -518 | 0 | Ceiling Load | -518 | 0 | 0 | | | |
| Ventilation Load | 0 | 0 | 23,922 | 22 | 0 | 0 | 0 | -4,771 | Ventilation Load | 0 | -4,771 | 38 | | | |
| Dehumid. Ov Sizing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Ov/Undr Sizing | 0 | 0 | 0 | | | |
| Ov/Undr Sizing | 0 | 0 | 0 | 0 | 0 | 0 | 233 | -2 | Exhaust Heat | 0 | 233 | -2 | | | |
| Exhaust Heat | 0 | -1,022 | -1,022 | -1 | 0 | 0 | 0 | 0 | OA Preheat Diff. | 0 | 0 | 0 | | | |
| Sup. Fan Heat | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | RA Preheat Diff. | 0 | 0 | 0 | | | |
| Ret. Fan Heat | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Additional Reheat | 0 | 0 | 0 | | | |
| Duct Heat Pkup | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | System Plenum Heat | 0 | 0 | 0 | | | |
| Reheat at Design | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Grand Total ==> | 66,738 | 17,222 | 107,882 | 100.00 | 64,407 | 100.00 | Grand Total ==> | -3,972 | -12,672 | 100.00 | | | | | |

| AIRFLOWS | | |
|------------|---------|---------|
| | Cooling | Heating |
| Vent | 200 | 200 |
| Infil | 0 | 0 |
| Supply | 3,571 | 3,571 |
| MinStop/Rh | 0 | 0 |
| Return | 3,571 | 3,571 |
| Exhaust | 200 | 200 |
| Rm Exh | 0 | 0 |
| Auxil | 0 | 0 |

| ENGINEERING CKS | | |
|-----------------|---------|---------|
| | Cooling | Heating |
| % OA | 5.6 | 5.6 |
| cfm/ft2 | 2.35 | 2.35 |
| cfm/ton | 397.21 | |
| ft2/ton | 169.07 | |
| Btu/hr-ft2 | 70.97 | -8.34 |
| No. People | 10 | |

| COOLING COIL SELECTION | | | | | | | | | | |
|------------------------|----------------|--------------|-----------|--------------|----------------|------|-------|----------------|------|-------|
| | Total Capacity | | Sens Cap. | Coil Airflow | Enter DB/WB/HR | | | Leave DB/WB/HR | | |
| | ton | MBh | | | F | F | gr/lb | F | F | gr/lb |
| Main Clg | 9.0 | 107.9 | 88.9 | 3,571 | 81.4 | 65.9 | 73.5 | 58.4 | 56.2 | 65.9 |
| Aux Clg | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Opt Vent | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total | 9.0 | 107.9 | | | | | | | | |

| AREAS | | | |
|-------|-------------|-------|-----|
| | Gross Total | Glass | |
| | | ft2 | (%) |
| Floor | 1,520 | | |
| Part | 0 | | |
| ExFlr | 0 | | |
| Roof | 1,520 | 0 | 0 |
| Wall | 1,408 | 0 | 0 |

| HEATING COIL SELECTION | | | | |
|------------------------|--------------|--------------|-------|-------|
| | Capacity | Coil Airflow | Ent F | Lvg F |
| | | | | |
| Main Htg | -12.7 | 3,571 | 65.8 | 69.0 |
| Aux Htg | 0.0 | 0 | 0.0 | 0.0 |
| Preheat | 0.0 | 0 | 0.0 | 0.0 |
| Humidif | 0.0 | 0 | 0.0 | 0.0 |
| Opt Vent | 0.0 | 0 | 0.0 | 0.0 |
| Total | -12.7 | | | |

Zone Checksums

By MATENO

REST AREA

| COOLING COIL PEAK | | | | | CLG SPACE PEAK | | | HEATING COIL PEAK | | | | TEMPERATURES | | |
|---------------------------|----------------|----------------------------|------------------|----------------|------------------|---------------|-----------|-------------------|---------------------------|----------------|----------------|---------------|----------|----------|
| Peaked at Time: | | Mo/Hr: 7 / 14 | | | Mo/Hr: 7 / 14 | | | | Mo/Hr: Heating Design | | | | | |
| Outside Air: | | OADB/WB/HR: 109 / 90 / 188 | | | OADB: 109 | | | | OADB: 46 | | | | | |
| Space Sens. | Plenum Sens. | Net Total | Percent Of Total | Space Sensible | Percent Of Total | Space Peak | Coil Peak | Percent | Space Sens | Tot Sens | Of Total | SADB | Cooling | Heating |
| + Lat. | + Lat | Btu/h | (%) | Btu/h | (%) | Btu/h | Btu/h | (%) | Btu/h | Btu/h | (%) | Plenum | | |
| Btu/h | Btu/h | | | | | | | | | | | Return | | |
| | | | | | | | | | | | | Ret/OA | | |
| | | | | | | | | | | | | Fn MtrTD | | |
| | | | | | | | | | | | | Fn BldTD | | |
| | | | | | | | | | | | | Fn Frict | | |
| Envelope Loads | | | | | | | | | | | | | | |
| Skylite Solar | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Skylite Solar | 0 | 0 | 0 | 0.0 | 0.0 |
| Skylite Cond | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Skylite Cond | 0 | 0 | 0 | 0.0 | 0.0 |
| Roof Cond | 0 | 86,526 | 86,526 | 39 | 0 | 0 | 0 | 0 | Roof Cond | 0 | -20,305 | 49 | 0.0 | 0.0 |
| Glass Solar | 10,485 | 0 | 10,485 | 5 | 10,485 | 11 | 0 | 0 | Glass Solar | 0 | 0 | 0 | 0.0 | 0.0 |
| Glass Cond | 8,894 | 0 | 8,894 | 4 | 8,894 | 10 | 0 | 0 | Glass Cond | -5,681 | -5,681 | 14 | 0.0 | 0.0 |
| Wall Cond | 9,958 | 1,745 | 11,703 | 5 | 9,958 | 11 | 0 | 0 | Wall Cond | -4,763 | -5,696 | 14 | 0.0 | 0.0 |
| Partition | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Partition | 0 | 0 | 0 | 0.0 | 0.0 |
| Exposed Floor | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Exposed Floor | 0 | 0 | 0 | 0.0 | 0.0 |
| Infiltration | 45,924 | 0 | 45,924 | 21 | 16,724 | 18 | 0 | 0 | Infiltration | -10,752 | -10,752 | 26 | 0.0 | 0.0 |
| Sub Total ==> | 75,261 | 88,271 | 163,532 | 74 | 46,061 | 50 | | | Sub Total ==> | -21,196 | -42,434 | 102 | | |
| Internal Loads | | | | | | | | | | | | | | |
| Lights | 1,365 | 341 | 1,707 | 1 | 1,365 | 1 | 0 | 0 | Lights | 0 | 0 | 0 | 0 | 0 |
| People | 60,000 | 0 | 60,000 | 27 | 30,000 | 33 | 0 | 0 | People | 0 | 0 | 0 | 7,962 | 7,962 |
| Misc | 1,500 | 0 | 1,500 | 1 | 1,500 | 2 | 0 | 0 | Misc | 0 | 0 | 0 | 451 | 451 |
| Sub Total ==> | 62,865 | 341 | 63,207 | 28 | 32,865 | 36 | | | Sub Total ==> | 0 | 0 | 0 | 0 | 0 |
| Ceiling Load | | | | | | | | | | | | | | |
| Ceiling Load | 13,216 | -13,216 | 0 | 0 | 13,216 | 14 | 0 | 0 | Ceiling Load | -3,168 | 0 | 0 | 0 | 0 |
| Ventilation Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Ventilation Load | 0 | 0 | 0 | 0 | 0 |
| Dehumid. Ov Sizing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Ov/Undr Sizing | 0 | 0 | 0 | 0 | 0 |
| Ov/Undr Sizing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Exhaust Heat | 0 | 1,023 | -2 | 0.0 | 0.0 |
| Exhaust Heat | 0 | -4,268 | -4,268 | -2 | 0 | 0 | 0 | 0 | OA Preheat Diff. | 0 | 0 | 0 | 1.57 | 1.57 |
| Sup. Fan Heat | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | RA Preheat Diff. | 0 | 0 | 0 | 405.16 | |
| Ret. Fan Heat | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Additional Reheat | 0 | 0 | 0 | 257.65 | |
| Duct Heat Pkup | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | System Plenum Heat | 0 | 0 | 0 | 46.57 | -8.67 |
| Reheat at Design | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | 120 | |
| Grand Total ==> | 151,343 | 71,128 | 222,471 | 100.00 | 92,143 | 100.00 | | | Grand Total ==> | -24,364 | -41,411 | 100.00 | | |

| AIRFLOWS | | |
|------------|---------|---------|
| | Cooling | Heating |
| Vent | 0 | 0 |
| Infil | 451 | 451 |
| Supply | 7,511 | 7,511 |
| MinStop/Rh | 0 | 0 |
| Return | 7,962 | 7,962 |
| Exhaust | 451 | 451 |
| Rm Exh | 0 | 0 |
| Auxil | 0 | 0 |

| ENGINEERING CKS | | |
|-----------------|---------|---------|
| | Cooling | Heating |
| % OA | 0.0 | 0.0 |
| cfm/ft2 | 1.57 | 1.57 |
| cfm/ton | 405.16 | |
| ft2/ton | 257.65 | |
| Btu/hr-ft2 | 46.57 | -8.67 |
| No. People | 120 | |

| COOLING COIL SELECTION | | | | | | | | | | |
|------------------------|----------------|--------------|-----------|--------------|----------------|------|-------|----------------|------|-------|
| | Total Capacity | | Sens Cap. | Coil Airflow | Enter DB/WB/HR | | | Leave DB/WB/HR | | |
| | ton | MBh | | | F | F | gr/lb | F | F | gr/lb |
| Main Clg | 18.5 | 222.5 | 163.3 | 7,511 | 83.7 | 70.2 | 92.7 | 63.7 | 61.7 | 81.5 |
| Aux Clg | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Opt Vent | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total | 18.5 | 222.5 | | | | | | | | |

| AREAS | | | |
|-------|-------------|-------|-----|
| | Gross Total | Glass | |
| | | ft2 | (%) |
| Floor | 4,777 | | |
| Part | 0 | | |
| ExFlr | 0 | | |
| Roof | 4,777 | 0 | 0 |
| Wall | 2,532 | 506 | 20 |

| HEATING COIL SELECTION | | | | |
|------------------------|--------------|--------------|------|------|
| | Capacity | Coil Airflow | Ent | |
| | | | F | Lvg |
| Main Htg | -41.4 | 7,511 | 65.9 | 71.0 |
| Aux Htg | 0.0 | 0 | 0.0 | 0.0 |
| Preheat | 0.0 | 0 | 0.0 | 0.0 |
| Humidif | 0.0 | 0 | 0.0 | 0.0 |
| Opt Vent | 0.0 | 0 | 0.0 | 0.0 |
| Total | -41.4 | | | |