# HVAC Checklist - Long Form



Building: _____ File Number: _____

Completed by: _____ Title: _____ Date Checked: _____

*Appendix B discusses HVAC system components in relation to indoor air quality.*

| Component | OK | Needs Attention | Not Applicable | Comments |
|---|---|---|---|---|
| **Outside Air Intake** | | | | |
| Location _____ _____ | | | | |
| Open during occupied hours? | | | | |
| Unobstructed? | | | | |
| Standing water, bird droppings in vicinity? | | | | |
| Odors from outdoors? (describe) _____ _____ | | | | |
| Carryover of exhaust heat? | | | | |
| Cooling tower within 25 feet? | | | | |
| Exhaust outlet within 25 feet? | | | | |
| Trash compactor within 25 feet? | | | | |
| Near parking facility, busy road, loading dock? | | | | |
| | | | | |
| **Bird Screen** | | | | |
| Unobstructed? | | | | |
| General condition? | | | | |
| Size of mesh? (½" minimum) | | | | |
| | | | | |
| **Outside Air Dampers** | | | | |
| Operation acceptable? | | | | |
| Seal when closed? | | | | |

# HVAC Checklist - Long Form



Building: _____ File Number: _____

Completed by: _____ Title: _____ Date Checked: _____

| Component | OK | Needs Attention | Not Applicable | Comments |
|---|---|---|---|---|
| Actuators operational? | | | | |
| | | | | |
| **Outdoor Air (O.A.) Quantity** ***(Check against applicable codes and ASHRAE 62-1989.)*** | | | | |
| Minimum % O.A. _____ | | | | |
| Measured % O.A. _____ *Note day, time, HVAC operating mode under "Comments"* | | | | |
| Maximum % O.A. _____ | | | | |
| Is minimum O.A. a separate damper? | | | | |
| For VAV systems: is O.A. increased as total system air-flow is reduced? | | | | |
| | | | | |
| **Mixing Plenum** | | | | |
| Clean? | | | | |
| Floor drain trapped? | | | | |
| Airtightness | | | | |
| ■ of outside air dampers | | | | |
| ■ of return air dampers | | | | |
| ■ of exhaust air dampers | | | | |
| All damper motors connected? | | | | |
| All damper motors operational? | | | | |
| Air mixers or opposed blades? | | | | |

# HVAC Checklist - Long Form



Building: _____ File Number: _____

Completed by: _____ Title: _____ Date Checked: _____

| Component | OK | Needs Attention | Not Applicable | Comments |
|---|---|---|---|---|
| Mixed air temperature control setting _____ $^{O}$F | | | | |
| Freeze stat setting _____ $^{O}$F | | | | |
| Is mixing plenum under negative pressure? *Note: If it is under positive pressure, outdoor air may not be entering.* | | | | |
| **Filters** | | | | |
| Type _____ | | | | |
| Complete coverage? (i.e., no bypassing) | | | | |
| Correct pressure drop? *(Compare to manufacturer's recommendations.)* | | | | |
| Contaminants visible? | | | | |
| Odor noticeable? | | | | |
| | | | | |
| **Spray Humidifiers or Air Washers** | | | | |
| Humidifier type | | | | |
| All nozzles working? | | | | |
| Complete coil coverage? | | | | |
| Pans clean, no overflow? | | | | |
| Drains trapped? | | | | |
| Biocide treatment working? *Note: Is MSDS on file?* _____ | | | | |
| Spill contaminant system in place? | | | | |

# HVAC Checklist - Long Form



Building: _____ File Number: _____

Completed by: _____ Title: _____ Date Checked: _____

| Component | OK | Needs Attention | Not Applicable | Comments |
|---|---|---|---|---|
| **Face and Bypass Dampers** | | | | |
| Damper operation correct? | | | | |
| Damper motors operational? | | | | |
| | | | | |
| | | | | |
| **Cooling Coil** | | | | |
| Inspection access? | | | | |
| Clean? | | | | |
| Supply water temp. _____°F | | | | |
| Water carryover? | | | | |
| Any indication of condensation problems? | | | | |
| | | | | |
| **Condensate Drip Pans** | | | | |
| Accessible to inspect and clean? | | | | |
| Clean, no residue? | | | | |
| No standing water, no leaks? | | | | |
| Noticeable odor? | | | | |
| Visible growth (e.g., slime)? | | | | |
| Drains and traps clear, working? | | | | |
| Trapped to air gap? | | | | |
| Water overflow? | | | | |
| | | | | |

# HVAC Checklist - Long Form



Building: _____ File Number: _____

Completed by: _____ Title: _____ Date Checked: _____

| Component | OK | Needs Attention | Not Applicable | Comments |
|---|---|---|---|---|
| **Mist Eliminators** | | | | |
| Clean, straight, no carryover? | | | | |
| | | | | |
| | | | | |
| | | | | |
| **Supply Fan Chambers** | | | | |
| Clean? | | | | |
| No trash or storage? | | | | |
| Floor drain traps are wet or sealed? | | | | |
| No air leaks? | | | | |
| Doors close tightly? | | | | |
| | | | | |
| | | | | |
| **Supply Fans** | | | | |
| Location _____ | | | | |
| Fan blades clean? | | | | |
| Belt guards installed? | | | | |
| Proper belt tension? | | | | |
| Excess vibration? | | | | |
| Corrosion problems? | | | | |
| Controls operational, calibrated? | | | | |

# HVAC Checklist - Long Form



Building: _____ File Number: _____

Completed by: _____ Title: _____ Date Checked: _____

| Component | OK | Needs Attention | Not Applicable | Comments |
|---|---|---|---|---|
| Control sequence conforms to design/specifications? (describe changes) | | | | |
| No pneumatic leaks? | | | | |
| | | | | |
| | | | | |
| | | | | |
| **Heating Coil** | | | | |
| Inspection access? | | | | |
| Clean? | | | | |
| Contol sequence conforms to design/specifications? (describe changes) | | | | |
| Supply water temp. _____$^{O}$F | | | | |
| Discharge thermostat? (air temp. setting _____$^{O}$F) | | | | |
| | | | | |
| **Reheat Coils** | | | | |
| Clean? | | | | |
| Obstructed? | | | | |
| Operational? | | | | |
| | | | | |
| **Steam Humidifier** | | | | |
| Humidifier type | | | | |
| Treated boiler water | | | | |
| Standing water? | | | | |

# HVAC Checklist - Long Form



Building: _____ File Number: _____

Completed by: _____ Title: _____ Date Checked: _____

| Component | OK | Needs Attention | Not Applicable | Comments |
|---|---|---|---|---|
| Visible growth? | | | | |
| Mineral deposits? | | | | |
| Control setpoint _____°F | | | | |
| High limit setpoint _____°F | | | | |
| Duct liner within 12 feet? (If so, check for dirt, mold growth.) | | | | |
| | | | | |
| **Supply Ductwork** | | | | |
| Clean? | | | | |
| Sealed, no leaks, tight connections? | | | | |
| Fire dampers open? | | | | |
| Access doors closed? | | | | |
| Lined ducts? | | | | |
| Flex duct connected, no tears? | | | | |
| Light troffer supply? | | | | |
| Balanced within 3-5 years? | | | | |
| Balanced after recent renovations? | | | | |
| Short circuiting or other air distribution problems? Note location(s) _____ _____ | | | | |
| **Pressurized Ceiling Supply Plenum** | | | | |
| No unintentional openings? | | | | |
| All ceiling tiles in place? | | | | |

# HVAC Checklist - Long Form



Building: _____ File Number: _____

Completed by: _____ Title: _____ Date Checked: _____

| Component | OK | Needs Attention | Not Applicable | Comments |
|---|---|---|---|---|
| Barrier paper correctly placed and in good condition? | | | | |
| Proper layout for air distribution? | | | | |
| Supply diffusers open? | | | | |
| Supply diffusers balanced? | | | | |
| Noticeable flow of air? | | | | |
| Short circuiting or other air distribution problems? *Note location(s) in"Comments"* | | | | |
| **Terminal Equipment (supply)** | | | | |
| Housing interiors clean and unob-structed? | | | | |
| Controls working? | | | | |
| Delivering rated volume? | | | | |
| Balanced within 3-5 years? | | | | |
| Filters in place? | | | | |
| Condensate pans clean, drain freely? | | | | |
| **VAV Box** | | | | |
| Minimum stops _____ % | | | | |
| Minimum outside air ___ % *(from page 2 of this form)* | | | | |
| Minimum airflow _____cfm | | | | |
| Minimum outside air _____ cfm | | | | |

# HVAC Checklist - Long Form



Building: _____ File Number: _____

Completed by: _____ Title: _____ Date Checked: _____

| Component | OK | Needs Attention | Not Applicable | Comments |
|---|---|---|---|---|
| Supply setpoint _____°F (summer)<br>_____°F (winter) | | | | |
| | | | | |
| | | | | |
| **Thermostats** | | | | |
| Type _____ | | | | |
| Properly located? | | | | |
| Working? | | | | |
| Setpoints _____°F (summer)<br>_____°F (winter) | | | | |
| Space temperature _____°F | | | | |
| **Humidity Sensor** | | | | |
| Humidistat setpoints _____ % RH | | | | |
| Dehumudistat setpoints _____ % RH | | | | |
| Actual RH _____ % | | | | |
| **Room Partitions** | | | | |
| Gap allowing airflow at top? | | | | |
| Gap allowing airflow at bottom? | | | | |
| Supply, return each room? | | | | |
| | | | | |
| | | | | |

# HVAC Checklist - Long Form



Building: _____ File Number: _____

Completed by: _____ Title: _____ Date Checked: _____

| Component | OK | Needs Attention | Not Applicable | Comments |
|---|---|---|---|---|
| **Stairwells** | | | | |
| Doors close and latch? | | | | |
| No openings allowing uncontrolled airflow? | | | | |
| Clean, dry? | | | | |
| No noticeable odors? | | | | |
| | | | | |
| **Return Air Plenum** | | | | |
| Tiles in place? | | | | |
| No unintentional openings? | | | | |
| Return grilles? | | | | |
| Balancing capability? | | | | |
| Noticeable flow of air? | | | | |
| Transfer grilles? | | | | |
| Fire dampers open? | | | | |
| **Ducted Returns** | | | | |
| Balanced within 3-5 years? | | | | |
| Unobstructed grilles? | | | | |
| Unobstructed return air path? | | | | |
| **Return Fan Chambers** | | | | |
| Clean and no trash or storage? | | | | |
| No standing water? | | | | |
| Floor drain traps are wet or sealed? | | | | |

# HVAC Checklist - Long Form



Building: _____ File Number: _____

Completed by: _____ Title: _____ Date Checked: _____

| Component | OK | Needs Attention | Not Applicable | Comments |
|---|---|---|---|---|
| No air leaks? | | | | |
| Doors close tightly, kept closed? | | | | |
| | | | | |
| **Return Fans** | | | | |
| Location _____ | | | | |
| Fan blades clean? | | | | |
| Belt guards installed? | | | | |
| Proper belt tension? | | | | |
| Excess vibration? | | | | |
| Corrosion problems? | | | | |
| Controls working, calibrated? | | | | |
| Controls sequence conforms to design/specifications? (describe changes) | | | | |
| | | | | |
| **Exhaust Fans** | | | | |
| Central? | | | | |
| Distributed (locations) _____ _____ | | | | |
| Operational? | | | | |
| Controls operational? | | | | |
| Toilet exhaust only? | | | | |
| Gravity relief? | | | | |

# HVAC Checklist - Long Form



Building: _____ File Number: _____

Completed by: _____ Title: _____ Date Checked: _____

| Component | OK | Needs Attention | Not Applicable | Comments |
|---|---|---|---|---|
| Total powered exhaust _____ cfm | | | | |
| Make-up air sufficient? | | | | |
| | | | | |
| **Toilet Exhausts** | | | | |
| Fans working occupied hours? | | | | |
| Registers open, clear? | | | | |
| Make-up air path adequate? | | | | |
| Volume according to code? | | | | |
| Floor drain traps wet or sealable? | | | | |
| Bathrooms run slightly negative relative to building? | | | | |
| | | | | |
| **Smoking Lounge Exhaust** | | | | |
| Room runs negative relative to building? | | | | |
| | | | | |
| **Print Room Exhaust** | | | | |
| Room runs negative relative to building? | | | | |
| | | | | |
| **Garage Ventilation** | | | | |
| Operates according to codes? | | | | |
| Fans, controls, dampers all operate? | | | | |

# HVAC Checklist - Long Form



Building: _____ File Number: _____

Completed by: _____ Title: _____ Date Checked: _____

| Component | OK | Needs Attention | Not Applicable | Comments |
|---|---|---|---|---|
| Garage slightly negative relative to building? | | | | |
| Doors to building close tightly? | | | | |
| Vestibule entrance to building from garage? | | | | |
| | | | | |
| **Mechanical Rooms** | | | | |
| General condition? | | | | |
| Controls operational? | | | | |
| Pneumatic controls: | | | | |
| ■ compressor operational? | | | | |
| ■ air dryer operational? | | | | |
| Electric contols? | | | | |
| EMS (Energy Management System) or DDC (Direct Digital Control): | | | | |
| ■ operator on site? | | | | |
| ■ controlled off-site? | | | | |
| ■ are fans cycled "off" while building is occupied? | | | | |
| ■ is chiller reset to shed load? | | | | |
| **Preventive Maintenance** | | | | |
| Spare parts inventoried? | | | | |
| Spare air filters? | | | | |
| Control drawing posted? | | | | |

# HVAC Checklist - Long Form



Building: _____ File Number: _____

Completed by: _____ Title: _____ Date Checked: _____

| Component | OK | Needs Attention | Not Applicable | Comments |
|---|---|---|---|---|
| PM (Preventive Maintenance) schedule available? | | | | |
| PM followed? | | | | |
| | | | | |
| **Boilers** | | | | |
| Flues, breeching tight? | | | | |
| Purge cycle working? | | | | |
| Door gaskets tight? | | | | |
| Fuel system tight, no leaks? | | | | |
| Combustion air: at least 1 square inch free area per 2000 Btu input? | | | | |
| **Cooling Tower** | | | | |
| Sump clean? | | | | |
| No leaks, no overflow? | | | | |
| Eliminators working, no carryover? | | | | |
| No slime or algae? | | | | |
| Biocide treatment working? | | | | |
| Dirt separator working? | | | | |
| **Chillers** | | | | |
| No refrigerant leaks? | | | | |
| Purge cycle normal? | | | | |
| Waste oil, refrigerant properly disposed of and spare refrigerant properly stored? | | | | |
| Condensation problems? | | | | |

# HVAC Checklist - Long Form



Building: _____ File Number: _____

Completed by: _____ Title: _____ Date Checked: _____

| Component | OK | Needs Attention | Not Applicable | Comments |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |