



Chesterfield County , Virginia

Department of Building Inspection

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Building Official

Mechanical Checklist

The following checklist contains the minimum information and details required on mechanical plans prior to submission for plan review. This is a basic pre-submittal checklist that is intended to expedite the plan review process by minimizing the number of required revisions. Please contact the commercial plan review staff at (804) 748-1057 with any questions regarding this checklist or any other commercial permit questions.

A mechanical permit is required for installation of HVAC systems, storage tanks, paint spray and powder coating booths, walk-in cooler/freezer, and kitchen hoods.

General Requirements:

- Construction documents prepared and sealed by a registered design professional for:
 - The following occupancy classifications: Institutional (I), Educational (E), High hazard (H), and per departmental policy all Assembly (A) occupancies that have an occupant load over 100
 - All buildings over 3 stories in height
 - Any building or occupancy using non-packaged equipment or packaged equipment exceeding 300 °F (other than flue gases) and pressures greater than 125 PSI
- Construction documents that are not required to be prepared by an RDP, prepared by a licensed master plumber or master mechanical worker, or a licensed Class A contractor with an associated plumbing or mechanical specialty designation
- Name, occupation, address and telephone number of the person who prepared the plans
- All pages of the plan set the same size. If different discipline designers use different page sizes, re-print the smaller pages on sheets the size of the largest in the set.
- Mechanical plans on same sized sheets as rest of plans in building permit package
- Mechanical code edition. The current code edition is the 2015 VMC (2015 IMC)
- New work vs. existing work clearly distinguished
- Drawings at least 1/8" = 1'-0" scale or larger
- Equipment location, access, service space and guard rails as applicable
- Each mechanical sheet with distinct sheet numbers (i.e. M1, M2, etc.)
- A Boiler/Mechanical Permit is required prior to scheduling inspections

HVAC

- Equipment schedule (system type, cooling/heating capacity, blower rating)
- Any equipment options provided (economizer, duct heaters, CO2)
- Duct sizes, location of all supplies, returns, exhaust, fresh air ducts, and duct smoke detectors

Ventilation

- Occupant loads and amount of outside air in accordance with VMC Table 403.3
- Capacity of all exhaust fans; exhaust quantities added as outside air to ventilation

Penetrations of Fire- or Smoke-resistance Rated Assemblies

- Location of any fire-resistance rated or smoke-resistant construction. Activation and control for smoke dampers
- Penetration protection details for HVAC ducts or vents penetrating fire-resistance rated or smoke-resistant construction

Miscellaneous

- Kitchen Hoods:
 - Complete details for Type I and Type II kitchen hoods, clearances to combustibles and cooking equipment
 - UL 710 listing criteria if applicable
 - All cooking and dishwashing equipment
 - Duct sizes, cleanout locations, and fire-resistance rated shafts where required
 - Source and capacity of make-up air system
 - Exhaust fan/make-up air interlock, exhaust fan/gas supply interlock
- Storage Tanks: tank contents, construction standards, piping materials and details
- Boiler: details to include safety controls and distribution piping layout
- Combustion Air: combustion air sources for fuel-fired appliances and venting detail
- Dryer exhaust systems: routing and developed length of dryer exhaust
- Hazardous Exhaust System: engineered design for hazardous exhaust system
- Smoke Management System: engineered design for smoke management system

