NYC GREEN CODES
LEGISLATION AT A GLANCE

GCTF Proposal
Filter Soot from Incoming Air

Implemented
Local Law 72 of 2011, City Council Intro 0592-2011

Summary

Heating, ventilation and air-conditioning (HVAC) systems bring outside air into buildings, including airborne pollutants. Without proper filters, this can lower the quality of indoor air.

This law requires new mechanical ventilation systems to filter soot and other pollutants with a filter rated at MERV 11 or greater.

New Requirements or Changes

Effective: July 1, 2012. These changes do not apply retroactively; they are only triggered when construction activity requires a permit for work covered by this section of the Construction Codes.

Amendments to Section 605.2.1 of the Mechanical Code:

• Air-handling units with a design capacity of 5,000 cubic feet per minute or greater that provide outside air ventilation must have a particulate matter system in accordance with ASHRAE 62.1 with filters rated at MERV 11 or better in accordance with ASHRAE 52.2
• Does not apply to alterations or repairs of systems installed before July 1, 2012 unless the system is replaced or an air handling unit is added.

Amendments to Chapter 15 of the Mechanical Code:

• Adds ASHRAE 52.2-2007 and 62.1-2010 to the list of reference standards.

Enforcement

These new and revised provisions are a standard part of the Mechanical Code. They will be enforced by the Department of Buildings in the same manner as any other element of the Construction Codes.

Implementation

There are no significant challenges for implementation of this local law as high efficiency filters are becoming common in the marketplace. High efficiency filtration at a rating of MERV 11 or higher can be achieved with a variety of filter types including cartridge and bag types for all common configurations.

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The challenges that may exist for installing such filters are space requirements, the higher operating cost of replacing them, and slightly higher energy costs due to the higher pressure drop. Space challenges can be met by a creative arrangement of the air handling unit sections. Examples include stacked arrangements where the fan section sits atop the coil and filter banks and L-shape arrangements occupying a corner if the room is too short for a linear configuration. Higher energy use can be mitigated by enlarging the face area of the filter section thereby producing the same airflow over a greater area with less pressure drop. Operating costs due to the replacement of these filters can be higher, but can be mitigated by using a lower efficiency prefilter upstream to collect the bulk of the soot and debris; prefilters are then changed more frequently than the higher efficiency filters.