



# TRIGGERS for 2013 Title 24, Part 6 Nonresidential Built-up HVAC Alterations

Change this (and nothing else)	Mandatory Measures						Prescriptive Requirements			
	Design Requirements <sup>A</sup> §10-103(a)1	Required Controls §120.2 (a), (b), & (e)	Supply & Exhaust Dampers §120.2(f)	Ventilation Calcs §120.1	Demand Control Ventilation <sup>A</sup> §120.1(c) 3 & 4	Duct Installation §120.4	Equipment Sizing (per load calcs) §140.4(a)(b)	Fan Power <sup>B</sup> §140.4(c)	Economizer <sup>C</sup> §140.4(e)	SAT Reset Controls §140.4(f)
Entire Unit	YES	YES	YES	YES	YES	no	YES	YES	YES	YES
Cooling Coil	YES	YES	no	no	no	no	no	no	no	no
Heating Coil, Burner	YES	YES	no	no	no	no	no	no	no	no
Blower Fan (Supply, Return/Exhaust) <sup>E</sup>	YES	no	no	no	no	no	no	no	no	no
Compressor <sup>E</sup>	YES	no	no	no	no	no	no	no	no	no
Condenser Coil <sup>E</sup>	YES	no	no	no	no	no	no	no	no	no
Plenums	YES	no	no	no	no	no	no	no	no	no
Duct Work	YES	no	no	no	no	YES	no	no	no	no
Dampers	YES	no	no	YES	YES	no	no	no	no	no
Sensors and Control Equipment	YES	YES	no	no	YES	no	no	no	YES	YES

<sup>A</sup> Must be completed by a third-party registered Professional Engineer.

<sup>B</sup> If total system fan power is >25 hp.

<sup>C</sup> If >54,000 Btu/h nominal cooling capacity (4.5 tons).

<sup>D</sup> Should not exceed 6% of the nominal air handler airflow rate. If it is a constant-volume, single zone unit that serves <5,000 ft conditioned floor area and >25% duct surface in unconditioned space. (Typically this will not apply to built-up systems.)

<sup>E</sup> This is considered a repair and does not trigger the Title 24, Part 6 Standards.

<sup>F</sup> Exemption: when system heating or cooling is expanded only onto existing systems, systems and equipment do not apply to §110.0, §120.9, §140.4, §140.5.





# Acceptance Tests

## Non-residential Built-up HVAC Alterations

Form and Measure Matrix <sup>A</sup>	Setback T-stat, Zone Control	Supply & Exhaust Dampers, Isolation Devices	Min. Cooling And/or Heating Efficiency, Load Calcs	Ventilation Calcs, Economizer FDD, DCV	Demand Shedding	Duct Installation	Supply Temp Reset	Equipment Sizing	Fan Power <sup>B</sup>	Shutoff & Reset	Duct Seal & Test <sup>D</sup>	Variable Flow Control
2013-NRCA-MCH-02-A Outdoor Air	no	YES	no	YES	no	no	no	no	no	no	no	no
2013-NRCA-MCH-05-A Air Economizer Controls	no	YES	no	YES	no	no	no	no	no	no	no	no
2013-NRCA-MCH-06-A Demand Control Ventilation	no	YES	no	YES	no	no	no	no	no	no	no	no
2013-NRCA-MCH-07-A Supply Fan VFD	no	YES	no	no	no	no	no	no	YES	YES	no	YES
2013-NRCA-MCH-08-A Valve Leakage	no	YES	no	no	no	no	no	no	no	no	no	no
2013-NRCA-MCH-09-F Supply Water Temperature Reset	no	no	no	no	no	no	YES	no	no	no	no	no
2013-NRCA-MCH-10-A Hydronic System Variable Flow	YES	YES	no	no	no	no	no	no	no	YES	no	YES
2013-NRCA-MCH-11-A Automatic Demand Shed	YES	no	no	no	YES	no	no	no	no	YES	no	no
2013-NRCA-MCH-12-F Fault Detection and Diagnostic for DX Systems	no	no	no	YES	no	no	no	no	no	no	no	no
2013-NRCA-MCH-13-F Fault Detection and Diagnostic for AHUs	no	no	no	YES	no	no	no	no	no	no	no	no



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2013-NRCA-MCH-16-F Supply Air Temp Reset	YES	no	no	no	no	no	YES	no	no	no	no	no
2013-NRCA-MCH-17-F Condenser Water Temperature Reset	no	no	no	no	no	no	YES	No	no	no	no	YES
2013-NRCA-MCH-18-F Energy Management Control System	YES	YES	YES	YES	YES	no	YES	YES	YES	YES	YES	YES

