



GARAGE VENTILATION APPLICATION Design Review And Startup Checklist

DRAWING CHECKLIST

	YES	N/A
• Designate equipment on drawing.	<input type="checkbox"/>	<input type="checkbox"/>
• Schedule and specify equipment in construction documents.	<input type="checkbox"/>	<input type="checkbox"/>
• Coordinate electric data (motor control, VSD panels) locations with electrical engineer.	<input type="checkbox"/>	<input type="checkbox"/>
• Coordinate fire protection with fire protection engineer.	<input type="checkbox"/>	<input type="checkbox"/>
• Coordinate structural data (weights, housekeeping pad, inertia pads) with structural engineer.	<input type="checkbox"/>	<input type="checkbox"/>
• Show associated ATC and DDC panel on drawing(s).	<input type="checkbox"/>	<input type="checkbox"/>
• Coordinate location with project one-line diagram.	<input type="checkbox"/>	<input type="checkbox"/>
• Check access around equipment (section needed?).	<input type="checkbox"/>	<input type="checkbox"/>
• Indicate direction of flow (arrow).	<input type="checkbox"/>	<input type="checkbox"/>
• Indicate reference to applicable detail on drawing.	<input type="checkbox"/>	<input type="checkbox"/>
• Indicate control devices indicated on detail.	<input type="checkbox"/>	<input type="checkbox"/>

DRAWING CHECKLIST

	YES	N/A
• Base layout on one-line diagram.	<input type="checkbox"/>	<input type="checkbox"/>
• Coordinate sequence of operation with flow diagram.	<input type="checkbox"/>	<input type="checkbox"/>
• Coordinate carbon monoxide detector locations for maximum CO coverage.	<input type="checkbox"/>	<input type="checkbox"/>
• Include fan curve in job folder.	<input type="checkbox"/>	<input type="checkbox"/>
• Include static pressure/head pressure calculations in job folder.	<input type="checkbox"/>	<input type="checkbox"/>
• Include cfm/gpm at each main/branch on flow diagram.	<input type="checkbox"/>	<input type="checkbox"/>
• Coordinate electric data (two-speed motor, VSD, etc.) with electrical engineer.	<input type="checkbox"/>	<input type="checkbox"/>
• Coordinate plumbing data (floor drains, gas piping, gas vent piping, etc.) with plumbing engineer.	<input type="checkbox"/>	<input type="checkbox"/>
• Coordinate fire protection data with fire protection engineer.	<input type="checkbox"/>	<input type="checkbox"/>
• Coordinate structural data with structural engineer. (Seismic restraint bracing required per International Mechanical Code [IMC]?)	<input type="checkbox"/>	<input type="checkbox"/>
• Complete design intent document.	<input type="checkbox"/>	<input type="checkbox"/>
• Complete system readiness (startup) sheet(s).	<input type="checkbox"/>	<input type="checkbox"/>
• Complete verification test procedure(s).	<input type="checkbox"/>	<input type="checkbox"/>

VALUE ENGINEERING TIPS

	YES	N/A
• Specify premium efficiency motors with ROI.	<input type="checkbox"/>	<input type="checkbox"/>
• Specify VSD with ROI.	<input type="checkbox"/>	<input type="checkbox"/>
• Concrete inertia pad probably not needed when located slab on grade.	<input type="checkbox"/>	<input type="checkbox"/>
• Consider variable volume based on CO detection.	<input type="checkbox"/>	<input type="checkbox"/>
• Consider energy recovery between exhaust air and makeup air to garage.	<input type="checkbox"/>	<input type="checkbox"/>

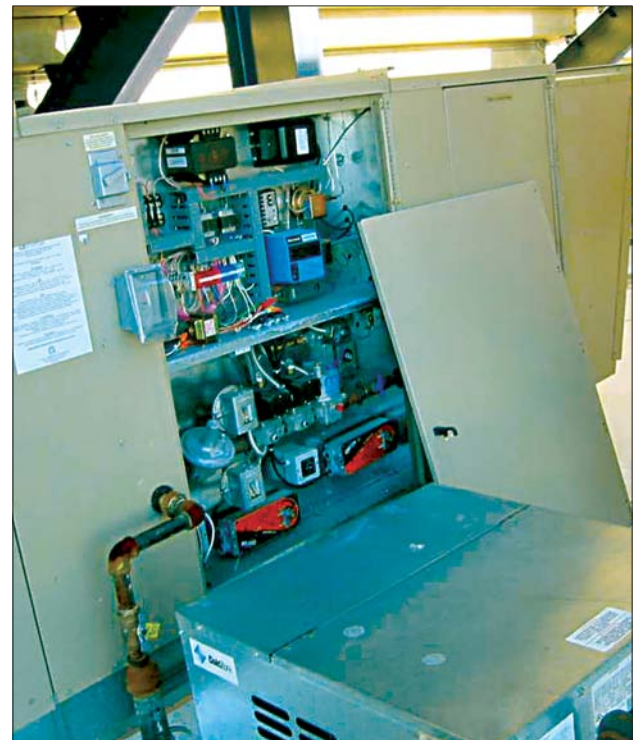
REFERENCE INFORMATION

	YES	N/A
• System selection analysis based on <i>2004 ASHRAE Handbook — Systems</i> (Chapter 1).	<input type="checkbox"/>	<input type="checkbox"/>
• For design considerations, review <i>2003 ASHRAE Handbook — Applications</i> (Chapter 13) for specific benefits and design considerations associated with enclosed vehicle facilities.	<input type="checkbox"/>	<input type="checkbox"/>
• Consult all necessary building codes applicable. Garage ventilation systems are considered as hazardous exhaust under international codes.	<input type="checkbox"/>	<input type="checkbox"/>
• Consult NFPA 704.	<input type="checkbox"/>	<input type="checkbox"/>
• Consult IMC 510.	<input type="checkbox"/>	<input type="checkbox"/>

CENTRAL EQUIPMENT

TERMINAL EQUIPMENT AND SPACE

PROJECT CLOSEOUT



If you have any comments, suggestions, or questions regarding this designer checklist, contact Amanda McKew at amckew@rdkengineers.com. This column is meant to provide some basic guidelines for good design. Always consult all necessary codes and resources relevant to each particular project.

