Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 01/20/17

PART 1 - DUCTWORK

1.1 RECTANGULAR DUCTS AND FITTINGS

A. General Fabrication Requirements: Comply with SMACNAs "HVAC Duct Construction Standards - Metal and Flexible" based on indicated static-pressure class unless otherwise indicated.

B. Transverse Joints: Select joint types and fabricate according to SMACNAs "HVAC Duct Construction Standards - Metal and Flexible," Figure 1-4, "Transverse (Girth) Joints," for static-pressure class, applicable sealing requirements, materials involved, duct-support intervals, and other provisions in SMACNAs "HVAC Duct Construction Standards - Metal and Flexible."

C. Longitudinal Seams: Pittsburg hammer. Fabricate according to SMACNAs "HVAC Duct Construction Standards - Metal and Flexible," Figure 1-5, "Longitudinal Seams - Rectangular Ducts," for static-pressure class, applicable sealing requirements, materials involved, duct-support intervals, and other provisions in SMACNAs "HVAC Duct Construction Standards - Metal and Flexible."

D. Elbows, Transitions, Offsets, Branch Connections, and Other Duct Construction: Select types and fabricate according to SMACNAs "HVAC Duct Construction Standards - Metal and Flexible," Chapter 2, "Fittings and Other Construction," for static-pressure class, applicable sealing requirements, materials involved, duct-support intervals, and other provisions in SMACNAs "HVAC Duct Construction Standards - Metal and Flexible."

1.2 SHEET METAL MATERIALS

A. General Material Requirements: Comply with SMACNAs "HVAC Duct Construction Standards - Metal and Flexible" for acceptable materials, material thicknesses, and duct construction methods unless otherwise indicated. Sheet metal materials shall be free of pitting, seam marks, roller marks, stains, discolorations, and other imperfections.
See "Sheet Metal Materials" Article in the Evaluations for discussion on applicable materials and coatings in first four paragraphs below.

B. Galvanized Sheet Steel: Comply with ASTM A 653/A 653M.
1. Galvanized Coating Designation: G60 (Z180).
2. Finishes for Surfaces Exposed to View: Mill phosphatized.

1.3 HANGERS AND SUPPORTS

A. Hanger Rods for Noncorrosive Environments: Cadmium-plated steel rods and nuts.

B. Strap and Rod Sizes: Comply with SMACNAs "HVAC Duct Construction Standards - Metal and Flexible," Table 4-1

C. Duct Attachments: Sheet metal screws, blind rivets, or self-tapping metal screws; compatible with duct materials.

D. Trapeze and Riser Supports:
1. Supports for Galvanized-Steel Ducts: Galvanized-steel shapes and plates.
2. Supports for Stainless-Steel Ducts: Stainless-steel shapes and plates.

1.4 DUCT INSTALLATION

A. Drawing plans, schematics, and diagrams indicate general location and arrangement of duct system. Indicate locations, configurations, and arrangements were used to size ducts and calculate friction loss for air-handling equipment sizing and for other design considerations. Install duct systems as indicated unless deviations to layout are approved on Shop Drawings and Coordination Drawings.

B. Install ducts according to SMACNAs "HVAC Duct Construction Standards - Metal and Flexible" unless otherwise indicated.

C. Install ducts with fewest possible joints.

D. Install factory- or shop-fabricated fittings for changes in direction, size, and shape and for branch connections.

E. Unless otherwise indicated, install ducts vertically and horizontally, and parallel and perpendicular to building lines.

F. Install ducts close to walls, overhead construction, columns, and other structural and permanent enclosure elements of building.

G. Where ducts pass through non-fire-rated interior partitions and are exposed to view, cover the opening between the partition and duct or duct insulation with sheet metal flanges of same metal thickness as the duct. Overlap openings on four sides by at least 1-1/2 inches (38 mm).

PART 2 - POWER VENTILATOR

2.1 INSTALLATION

A. Install power ventilators level and plumb.

B. Secure roof fans to roof curbs with cadmium-plated hardware.
Retain and edit first paragraph below for suspended units; delete if vibration and seismic controls are indicated on Drawings. If not scheduled, identify required vibration- and seismic-control device by using the titles of devices described in Division 23 Section "Vibration and Seismic Controls for HVAC Piping and Equipment" and identify its required static deflection.

C. Label units

D. Install ducts adjacent to power ventilators to allow service and maintenance.

E. Ground equipment according to Electrical

F. Connect wiring according to Electrical

2.2 FIELD QUALITY CONTROL

A. Perform the following field tests and inspections and prepare test reports:
1. Verify that shipping, blocking, and bracing is removed.
2. Verify that unit is secure on mountings and supporting devices and connections to ducts and electrical components are complete. Verify that proper thermal-overload protection is installed in motors, starters, and disconnect switches.
3. Verify that cleaning and adjusting are complete.
4. Adjust damper linkages for proper damper operation.
5. Verify lubrication for bearings and other moving parts.
6. Remove and replace malfunctioning units and retest as specified above.

B. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

STATE OF MAINE
CLIFTON W. GREIM
No. 6405
LICENSED
PROFESSIONAL ENGINEER

NO	REVISIONS	DATE	BY
	ISSUED FOR CONSTRUCTION	11-14-16	JSC

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DWG TITLE: SPECIFICATIONS
LOCATION: PRODUCE COOLER AND RESTROOMS PORTLAND, ME

SCALE
DRAWN JSC
DATE: 11-14-16
DRAWING NO. M001
Store No. 8351