

## Exhaust Ventilation Systems

(To be completed by hood manufacturer, contractor, or mechanical engineer and submitted with the building plans)

Facility name: \_\_\_\_\_ Date: \_\_\_\_\_

Site address: \_\_\_\_\_

Hood information submitted by: \_\_\_\_\_ Phone: \_\_\_\_\_

1. Submit three (4) sets of plans, drawn to scale (i.e., 1/4 inch per foot), including:
  - a) Front and side elevations for each system with exhaust and make-up air duct details.
  - b) Floor plan showing the hood, make-up air registers and cooking equipment or dishwasher.
2. Submit one set of specification sheets with the performance curve for blower(s), filters and make-up air unit(s).
3. Submit a separate data sheet for each hood. For multiple hoods, identify each hood by name or number.
4. For clarification of requirements, refer to the current edition of the Uniform Mechanical Code (UMC), Chapter 5, "Commercial Hoods and Kitchen Ventilation".

### Hood (check applicable categories)

Type I  Type II Hood name or number: \_\_\_\_\_

UL® listed exhaust hood  Canopy\*  Compensating\*  Non-canopy  Other \_\_\_\_\_

\*Provide a 6-inch overhang beyond the cooking equipment on all open sides. NOTE: No exposed horizontal piping within the hood canopy.

Manufacturer and model number of the UL® listed exhaust hood: \_\_\_\_\_

### Size of Hood

Length: \_\_\_\_\_ x width: \_\_\_\_\_ (inside dimensions) Type of metal: \_\_\_\_\_

Gauge: \_\_\_\_\_ Distance from lowest edge of hood to: cooking \_\_\_\_\_ ; floor: \_\_\_\_\_  
surface: \_\_\_\_\_

Formula used for determining air flow:  $Q = 50A$  = \_\_\_\_\_

$Q = 75A$  = \_\_\_\_\_

$Q = 100A$  = \_\_\_\_\_

$Q = 200A$  = \_\_\_\_\_

Alternate formula:  $Q = 100PD$  \_\_\_\_\_

Listed CFM/linear foot or Other: \_\_\_\_\_  $Q =$  \_\_\_\_\_ = \_\_\_\_\_

Equipment exhausted by hood: \_\_\_\_\_

### Exhaust Duct

Duct size: \_\_\_\_\_ Area of duct: \_\_\_\_\_ sq. ft.

Number of ducts: \_\_\_\_\_ (1 duct per each 12 ft. of hood) Type of metal: \_\_\_\_\_

Gauge: \_\_\_\_\_ Exhaust duct velocity: \_\_\_\_\_ FPM (CFM ÷ sq. ft. of duct)

Grease ducts for a Type I hood must have a duct velocity between 1500-2500 feet per minute (FPM); 1800 FPM is recommended.

**Grease Filters** (Provide Engineering Data Sheets/cut sheets for all filters)

Manufacturer \_\_\_\_\_ Model \_\_\_\_\_  
 Rating \_\_\_\_\_ CFM at \_\_\_\_\_ sp (static pressure)  
 Dimensions \_\_\_\_\_ in. x \_\_\_\_\_ in. Functional surface area per filter \_\_\_\_\_ sq. ft.  
 Are all the filters the same size?  Yes  No Size of filters used \_\_\_\_\_  
 Number of filters used \_\_\_\_\_ Total filter area \_\_\_\_\_ sq. ft.  
 Number of blanks \_\_\_\_\_ Size of blanks \_\_\_\_\_ in. x \_\_\_\_\_ in.  
 Minimum distance between the lowest edge of the grease filters and the cooking surface \_\_\_\_\_ in.

**Average FPM design (flow rate) at the filter surface**  $[Q (cfm) \div A (sq. ft.) = V (fpm)]$  \_\_\_\_\_ FPM

**Static Pressure**

**Hood**

**Make-up**

**Hood Schematic**

Filters <sup>1</sup>	+	_____ sp	
Entrance loss <sup>2</sup>	+	_____ sp	
Duct length <sup>3</sup>	+	_____ sp	_____ sp
Elbows <sup>4</sup>	+	_____ sp	_____ sp
Exit loss <sup>5</sup>	+	_____ sp	_____ sp
	=	_____ total sp	= _____ total sp



**Exhaust Fan/Blower** (Provide Engineering Data Sheets for all exhaust and make-up air blowers)

Manufacturer \_\_\_\_\_ Model \_\_\_\_\_  
 Exhaust \_\_\_\_\_ CFM at \_\_\_\_\_ sp Blower \_\_\_\_\_ RPM Horsepower \_\_\_\_\_  
 Is the unit UL® listed under UL762 standard? Yes  No

**Makeup Air Fan/Blower** (The exhaust and makeup air systems must be connected by an electrical interlocking switch)

Manufacturer \_\_\_\_\_ Model \_\_\_\_\_  
 CFM \_\_\_\_\_ at \_\_\_\_\_ sp Duct size \_\_\_\_\_ Duct area \_\_\_\_\_ sq. ft.  
 Make-up air diffuser Type \_\_\_\_\_ Number \_\_\_\_\_ Mfr. & Model \_\_\_\_\_

**Average FPM design (flow rate) at the diffuser surface**  $[Q (cfm) \div A (sq. ft.) = V (fpm)]$  \_\_\_\_\_ FPM

(Note: 400 – 500 FPM is the average FPM design flow rate at the register surface  $[Q, A = V]$  and is the recommended maximum for each diffuser)

Does the unit supply the required make-up air? Yes  No

Is the make-up air intake on the roof at least 10 feet from the exhaust blower? Yes  No

**Note:** Hood(s) must be tested before the final construction inspection. The hood designer or building contractor may elect to have that test performed by a licensed testing company or contractor. A written report of that test must be submitted to this Department before the final construction inspection.

Comments: \_\_\_\_\_

1 From hood manufacturer  
 2 From hood manufacturer  
 3 From mechanical engineer  
 4 From mechanical engineer  
 5 From mechanical engineer

The above information has been reviewed by \_\_\_\_\_, REHS Date \_\_\_\_\_

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