



**F. Quantity of air exhausted through the hood**

1. Canopy hoods shall extend a minimum of 6” beyond cooking surface.

Type of hood proposed:  Canopy  Non-Canopy

Distance between lip of hood and cooking surface. Canopy \_\_\_\_\_ft. 4 ft. max. allowed Non-Canopy \_\_\_\_\_ft. 3 ft. max. allowed

2. Complete part “a” for listed hood **or** part “b” for unlisted hood.

a. Listed hood: Make and Model No.: \_\_\_\_\_ Listed CFM \_\_\_\_\_  
**Provide manufactures installation instructions and listing documents for listed hoods and grease ducts.**

b. Unlisted hood: Use the following formula: The Quantity of Air = Lineal ft. of hood front x CFM from Tables below. Please note when any combination of cooking appliances are utilized under a single hood, the highest exhaust rate required by the Tables shall be used for the entire hood.

$$\text{Quantity of Air} = \text{_____ ft.} \times \text{_____ CFM}$$

**Extra-heavy-duty cooking appliances:**

<b><u>Type of Hood</u></b>	<b><u>CFM per linear foot of hood</u></b>
Back-shelf/pass-over	Not allowed
Double island canopy (per side)	550
Eyebrow	Not allowed
Single island canopy	700
Wall-mounted canopy	500

**Heavy-duty cooking appliances:**

<b><u>Type of Hood</u></b>	<b><u>CFM per linear foot of hood</u></b>
Back-shelf/pass-over	400
Double island canopy (per side)	400
Eyebrow	Not allowed
Single island canopy	600
Wall-mounted canopy	400

**Medium-duty cooking appliances:**

<b><u>Type of Hood</u></b>	<b><u>CFM per linear foot of hood</u></b>
Back-shelf/pass-over	300
Double island canopy (per side)	300
Eyebrow	250
Single island canopy	500
Wall-mounted canopy	300

**Light-duty cooking appliances:**

<b><u>Type of Hood</u></b>	<b><u>CFM per linear foot of hood</u></b>
Back-shelf/pass-over	250
Double island canopy (per side)	250
Eyebrow	250
Single island canopy	400
Wall-mounted canopy	200

**G. Exhaust Duct System**

1. Applicant shall provide the specified air velocity in exhaust duct.
2. Duct size \_\_\_\_\_ in. X \_\_\_\_\_ in., Duct area = \_\_\_\_\_ in. x \_\_\_\_\_ in. = \_\_\_\_\_ ft.<sup>2</sup>  
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<b>Type Of Hood</b>	<b>Air Velocity (FPM)</b>	<b>CFM/Duct Area (ft.<sup>2</sup>)</b>	<b>Proposed Air Velocity</b>
1. I 500 cfm min.	_____ / _____	= _____	_____ FPM
II 500 cfm min.	_____ / _____	= _____	_____ FPM

2. Static pressure loss

Duct \_\_\_\_\_ in. + grease filters/extractor \_\_\_\_\_ in. = other \_\_\_\_\_ in. = Total \_\_\_\_\_ in. of H<sub>2</sub>O

3. Fan and Motor shall be of sufficient capacity to provide the required air movement. Fan motor shall not be installed within ducts or under hood.

Fan make and model \_\_\_\_\_ HP \_\_\_\_\_

Static pressure \_\_\_\_\_ in. at \_\_\_\_\_ CFM

**H. Exhaust outlet location**

	<b>Min. required</b>	<b>Proposed</b>
Exhaust outlet shall terminate above roof	Type I 40 in. Type II 24 in.	_____ in. _____ in.
Distance from same or adjacent building	10 ft.	_____ ft.
Distance from property line	10 ft.	_____ ft.
Distance from adjoining grade	10 ft.	_____ ft.
Distance from windows and doors	10 ft.	_____ ft.
Distance from mechanical air intake	10 ft.	_____ ft.
Distance of duct above adjoining grade at alley	16 ft.	_____ ft.
If exhaust outlet terminates at exterior wall, provide cleaning equipment per DR-14-98	<input type="checkbox"/> Yes	<input type="checkbox"/> No

**I. Makeup Air**

- Applicant shall provide makeup air not less than 90% of the exhaust. Makeup Air \_\_\_\_\_ CFM
- Makeup air system shall be electrically interlocked with the exhaust system, such that the makeup air system will operate when the exhaust system is in operation. Please note on plan sheet no. \_\_\_\_\_
- Makeup air shall be provided by a mechanical or gravity means of sufficient capacity. Windows and door operations shall not be used for the purpose of providing makeup air.

**FAN**

**MOTORIZED DAMPER**

Make and model _____ H.P. _____ Static pressure _____ in. at cfm Duct Dimension _____, area _____ ft. <sup>2</sup> Air Velocity = cfm/area _____ / _____ = _____ fpm	Recommended air velocity, 500fpm Duct area req. = cfm/500fpm _____ /500 = _____ ft. <sup>2</sup> Duct Dimension req. = _____ Eff. Damper opening _____ x _____ = _____ ft. <sup>2</sup>
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**J. Slope of duct and cleanout access**

- Horizontal duct up to 75' long                      Min. slope ¼ in/ft                      proposed slope \_\_\_\_\_ in/ft
- Horizontal duct more than 75' long                      Min. slope 1 in/ft                      proposed slope \_\_\_\_\_ in/ft
- Tight-fitting cleanout doors shall be provided every 20' horizontally, and at every change in ductwork direction.  
Total proposed cleanouts \_\_\_\_\_

**K. Duct enclosure**

- Ducts penetrating a ceiling, wall or floor shall be enclosed in a duct enclosure having a fire rating per IBC 707.4 from the point of penetration to the outside air. A duct may only penetrate exterior walls at locations where unprotected openings are permitted by Table 704.8 of the 2006 International Building code.
- For code compliance purposes, it is acceptable to assume that ducts penetrating concrete, brick or steel ceilings, walls or floors shall require a 2-hour fire resistive duct enclosure, and for others, it shall be 1 hour.
- Duct enclosures shall be separated from the duct by at least 6".                      Proposed \_\_\_\_\_ in.

4. Duct enclosures shall be sealed around the duct at the point of penetration and vented to the exterior through a weather-protected opening.
5. Duct enclosures shall serve only one kitchen exhaust duct. (See multiple hood venting for exception)
6. Tight-fitting hinged access doors shall be provided at each cleanout. Access enclosures doors shall have a fire-resistance rating equal to the enclosure. An approved sign shall be placed on the access door stating "ACCESS PANEL. DO NOT OBSTRUCT."
7. **If using a listed duct wrap, provide manufactures installation instructions and listing documents. Duct wrap shall meet the requirements of ASTM E 2336.**

<u>Type of Construction</u>	<u>Min. fire-Restive Const. of Enclosure</u>	<u>Proposed</u>	<u>Proposed Material and Construction</u>
I F.R., II F.R.	2 hour	_____ hr	_____
II, III, IV, V	1 hour	_____ hr	_____

**L. Multiple Hood Venting**

1. Number of hood vented by a single duct system. Proposed: \_\_\_\_\_  
A single duct system may serve more than one hood located in the same story of the building, provided that the interconnecting ducts do not penetrate any fire resistant rated construction and the grease duct system does not serve a solid fuel-fired appliance.
2. A hood outlet shall serve not more than a 12-foot section of hood.

**M. Provide seismic restraint vertical support and attachment details. Details shall be prepared by a Washington State Licensed Structural Engineer.**

**N. Additional information for Type I Hood only:**

1. Grease filters shall be installed at a minimum 45 degree angle and equipped with drip trays and gutter beneath the lower edge of filters. Proposed \_\_\_\_\_ Degrees
2. Distance between lowest edge of grease filters and cooking surface of:  
Grill, fryer, exposed flame shall not be less than 2 ft. Proposed \_\_\_\_\_ ft.  
Exposed charcoal, charbroil shall not be less than 3-1/2 ft. Proposed \_\_\_\_\_ ft.
3. Type I hood and duct shall have clearances from construction of:  
GWB on **metal stud** (minimum 3" clearance required) Proposed \_\_\_\_\_ In.  
GWB on **wood stud** (minimum 18" clearance required)

<u>UNPROTECTED (Combustible Construction)</u>		<u>PROTECTED (Non-Combustible Construction)</u>	
Hood Min. Req. 18 in.	Proposed _____ in.	Min. Req. 3 in	Proposed _____ in.
Duct Min. Req. 18 in.	Proposed _____ in.	Min. Req. 3 in	Proposed _____ in.

4. Hoods less than 12 inches from ceilings or walls shall be solidly flashed.  
Flashing provided  Yes  NO Distance from ceiling \_\_\_\_\_ in., wall \_\_\_\_\_ in.
5. All joints and seams shall be made with continuous liquid-tight weld or braze made on the external surface of the duct system. A vibration insulation connector maybe used provided it consists of noncombustible packing in a metal sleeve joint. Joints shall be smooth and accessible for inspection.
6. Exhaust fans used for discharging grease exhaust shall be positioned so that the discharge will not impinge on the roof. The fan shall be provided with an adequate drain opening at the lowest point to permit drainage of grease to a suitable device.
7. Fire Suppression System: A separate permit is required to install the Fire Suppression System. The Fire Suppressions System shall be installed per the 2006 International Fire Code. The installer shall provide automatic shut off for the make-up air, exhaust system, and appliances when the suppression system is activated. The permit holder shall call the Fire department for an acceptance test of the Fire Suppression System at 360-363-8206.