CITY OF MOUNT DORA
BUILDING & FIRE PREVENTION
CONSTRUCTION SERVICES

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COMMERCIAL KITCHEN HOOD WORKSHEET/CHECKLIST

BFP-058

Permit for a Type I Hood will not be issued until a permit for the Fire Suppression System has been issued.

Two copies of this worksheet/checklist must accompany plan sets submitted with commercial kitchen range hood permit applications. It explains and organizes information needed by the City of Mount Dora Building & Fire Prevention Construction Services to efficiently review plans and issue permits. Mount Dora Building & Fire Prevention Construction Services will keep this document as part of the permanent project file and will use it to verify code compliance.

A. Project Address: _____ **Permit Number** _____

B. Established use and history of building:
Is it an existing restaurant, food processing area or food service area: ☐ Yes ☐ No

If no, provide construction or change of use permit number: _____

C. Location of exterior ductwork and mechanical equipment:

1. Is ductwork or mechanical equipment located outside of building other than roof top? ☐ Yes ☐ No

2. Applicant shall provide plan and elevation views showing ductwork, duct enclosure, hood, cooking surface air supply, exhaust system, and equipment support including structural detail.

D. Type of Hood: (507.2)

1. For grease (grease-laden vapor) or smoke removal: Type I _____ Quantity
(Example: griddles, fryers, broilers, ovens, ranges, wok ranges and all solid-fuel appliances)

2. For heat, steam or products of combustion and do not produce grease or smoke: Type II _____ Quantity
(Example: steamers, kettles, pasta cookers and dishwashing machines)
Hood shall have a permanent, visible label identifying it as a Type II hood.

3. Is hood for extra-heavy-duty (solid-fuel) cooking appliances? ☐ Yes ☐ No
If yes, a separate exhaust system is required.

E. Type of material and gauge (506.3.1.1, 507.4, 507.5)

	TYPE I HOOD				TYPE II HOOD			
	Type of Material	**Min. Req.**	**Proposed**		**Type of Material**	**Min. Req.**	**Proposed**	
Grease Ducts	Stainless Steel	18 Ga.	_____	Ga.	Galvanized Steel	26 Ga. ≤12”	_____	Ga.
	Galvanized Steel	16 Ga.	_____	Ga.	Galvanized Steel	22 Ga. >12”	_____	Ga.
Hood	Stainless Steel	20 Ga.	_____	Ga.	Stainless Steel	24 Ga.	_____	Ga.
	Galvanized Steel	18 Ga.	_____	Ga.	Galvanized Steel	22 Ga.	_____	Ga.

F. Hood size and location (507.12, 507.14)

1. Canopy hoods are hoods that extend a minimum 6" beyond cooking surface.

Type of hood proposed: ☐ Canopy ☐ Non-canopy

Distance between lip of hood and cooking surface: Canopy _____ ft. (4 ft. maximum allowed) Non-canopy _____ft. (3 ft. maximum allowed)

2. Complete part " i " for listed hood **or** part " ii " for unlisted hood.

i) Listed hood. Make and Model No. Listed CFM _____

ii) Unlisted hood: Quality of air = Lineal ft. of hood front X CFM from Table below

= _____ ft. X _____ = _____ CFM

G. Minimum net quantity of air for different types of unlisted hood. (507.13)

Identify the cooking appliances and **circle** the CFM applied. Where any combination of heavy-duty, medium-duty and light-duty cooking appliances are utilized under a single hood, the exhaust rate required by this section for the heaviest duty appliance covered by the hood shall be used for the entire hood.

Hood Exhaust CFM Table
CFM per lineal ft. of hood

Type of Hood	Extra Heavy Duty	Heavy Duty	Medium Duty	Light Duty
Back-shelf / pass-over	Not allowed	400	300	250
Double island canopy (per side)	550	400	300	250
Eyebrow	Not allowed	Not allowed	250	250
Single island canopy	700	600	500	400
Wall – mounted canopy	550	400	300	200

Definitions:

Extra Heavy Duty cooking appliances include appliances utilizing solid fuel such as wood, charcoal, briquettes, and mesquite to provide all or part of the heat source for cooking.

Heavy Duty cooking appliances include electric under-fired broilers, electric chain (conveyor) broilers, gas under-fired broilers, gas chain (conveyor) broilers, gas open-burner ranges (with or without oven), electric and gas wok ranges, and electric and gas over-fired (upright) broilers and salamanders.

Medium Duty Cooking appliances include electric discrete element ranges (with or without oven), electric and gas hot-top ranges, electric and gas griddles, electric and gas double-sided griddles, electric and gas fryers (including open deep fat fryers, donut fryers, kettle fryers, and pressure fryers), electric and gas pasta cookers, electric and gas conveyor pizza ovens, electric and gas tilting skillets (braising pans) and electric and gas rotisseries.

Light Duty Cooking appliances include gas and electric ovens (including standard, bake, roasting, revolving, retherm, convection, combination convection/steamer, conveyor, deck or deck-style pizza, and pastry), electric and gas steam-jacketed kettles, electric and gas compartment steamers (both pressure and atmospheric) and electric and gas cheesemelters.

H. Air velocity. (506.3.4)

1. Applicant shall provide the specified air velocity in exhaust duct (Gray numbers for example).

2. (Duct size _____ 24 in X _____ 36 in.) / 144 = (dcfm) _____ 6 ft^2

3.

Type of Hood	Air Velocity (FPM)	CFM	/	Duct Area (ft^2)	= Proposed Air Velocity
Type I hood	(1500 to 2500)	_____1500	/	_____6 (dcfm)ft^2	= _____250 FPM
Type II hood		_____	/	_____ (dcfm)ft^2	= _____ FPM

4. Static pressure loss
Duct _____ in. + grease filters / extractor _____ in. + other _____ in. = Total _____ in.of H_20

5. 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.

I. Slope of duct and cleanout access (506.3.7, 506.3.8, 506.3.9)

1. Horizontal duct up to 75' long — Min slope ¼" per ft — Proposed _____ per ft
Horizontal duct over 75' long — Min slope 1" per ft — Proposed _____ per ft

2. Tight-fitting cleanout doors shall be provided at any portion of such system having sections not provided with access from the duct entry or discharge.

3. Cleanouts located on horizontal sections of ducts shall be spaced not more than 20 feet apart.

Total number proposed _____

J. Exhaust outlet location (506.3.12)

		Min. required	Proposed	
Exhaust outlet shall terminate above roof (506.5.3)	Type I	40 in.		
	(Duct work)Type II	18 in.	_____	in.
Distance from same or adjacent building		10 ft.	_____	ft.
Distance above adjoining grade level		10 ft.	_____	ft.
Distance from adjacent property line		10 ft.	_____	ft.
Distance from windows and doors		10 ft.	_____	ft.
Distance from mechanical air intake		10 ft.	_____	ft.

K. Multiple hood venting (506.3.5, 507.15)

1. Number of hoods vented by a single duct system (must meet all 4 conditions) Proposed: _____
- **i.** All interconnected hoods are located within the same story.
- **ii.** All interconnected hoods are located within the same room or in adjoining rooms.
- **iii.** Interconnecting ducts do not penetrate assemblies required to be fire-resistance rated.
- **iv.** The grease duct system does not serve solid fuel-fired appliances.

2. A hood outlet shall serve not more than a 12-foot section of hood.

L. Makeup air (508.1)

1. The amount of makeup air supplied shall be approximately equal to the amount of exhaust air.

2. The exhaust and makeup air systems shall be electrically interlocked to ensure that makeup air is provided whenever the exhaust system is in operation.

3. Makeup air shall be provided by gravity or mechanical means or both. Windows and door openings shall not be used for the purpose of providing makeup air.

Gravity _____ CFM.
Mechanical _____ CFM.
Total _____ CFM.

FAN	MOTORIZED DAMPER
Make and Model _____ H.P. ____	Recommended air velocity, 500 FPM
Static pressure _____ in. at CFM	Duct area req. = CFM / _____ FPM: _____CFM / _____ FPM = _____ ft^2
Duct Dimension _____ in **X** _____ in /144 = ____ $ft.^2$	Duct dimension required = _____
Air velocity = CFM / Area:	
_____CFM / _____ ft^2 = _____FPM	Eff. Damper opening_____ X _____ = _____ ft^2

M. Duct enclosure (506.3.10, 506.3.11)

1. A grease duct serving a Type I hood that penetrates a fire rated ceiling, fire rated wall or floor shall be enclosed from the point of penetration to the outlet terminal.per FBC 707.4

2. A duct may only penetrate exterior walls at locations where unprotected openings are permitted by FBC Table 704.8.

3. The enclosure shall be separated from the duct by a minimum of 6 inches and a maximum of 12 inches and shall serve a single grease exhaust duct system.

4. Access openings shall be equipped with tight-fitting sliding or hinged doors that are equal in fire-resistive protection to that of the shaft or enclosure. An approved sign shall be placed on access opening panels with wording as follows:
"**ACCESS PANEL. DO NOT OBSTRUCT**."

N. Additional information for Type I hood only:

1. Type I hood systems shall be designed and installed to automatically activate the exhaust fan whenever cooking operations occur. The activation of the exhaust fan shall occur through an interlock with the cooking appliances, by means of heat sensors or by means of other approved methods. (507.2.1.1)
2. Filters shall be installed at an angle of not less than 45 degrees from the horizontal and shall be equipped with a drip tray beneath the lower edge of the filters. (507.11.2) Proposed ____ Degrees
3. Minimum distance between the lowest edge of a grease filter and the cooking surface or the heating surface (507.11)
   - Without exposed flame shall be not less than 0.5 ft. Proposed ____ ft.
   - Exposed flame and burners shall be not less than 2 ft. Proposed ____ ft.
   - Exposed charcoal and charbroil type shall be not less than 4 ft. Proposed ____ ft.
4. Grease duct systems and exhaust equipment serving a Type I hood shall have a clearance to combustible construction of not less than 18 inches and shall have a clearance to noncombustible construction and gypsum wallboard attached to noncombustible structures of not less than 3 inches. (506.3.6)
5. A Type I hood shall be installed with a clearance to combustibles of not less than 18 inches. Clearance shall not be required from gypsum wallboard attached to noncombustible structures provided that a smooth, cleanable, nonabsorbent and noncombustible material is installed between the hood and the gypsum wallboard over an area extending not less than 18 inches in all directions from the hood. (507.9)
6. Joints, seams and penetrations of grease ducts shall be made with a continuous liquid-tight weld made on the external surface of the duct system. Light test required. (see exceptions: 506.3.2)
7. A light test or an approved equivalent test method shall be performed to determine that all welded and brazed joints are liquid tight. A light test shall be performed by passing a lamp having a power rating of not less than 100 watts through the entire section of duct work to be tested. (506.3.2.5)
8. Exhaust fans shall be positioned so that the discharge will not impinge on the roof, other equipment or appliances or parts of the structure. A vertical discharge fan shall be manufactured with an approved drain outlet at the lowest point of the housing to permit drainage of grease to an approved grease reservoir. (506.5.2)
9. A performance test shall be conducted upon completion and before final approval of the installation of a ventilation system serving commercial cooking appliances. The test shall verify the rate of exhaust airflow required by Section 507.13, makeup airflow required by Section 508, and proper operation. (507.16)

10. **Fire Suppression System**. Type I hood shall be provided with an approved automatic fire suppression system complying with the Florida Building Code, Building and the Florida Fire Prevention Code. Fire Suppression System shall be Reviewed by the City of Mount Dora Building Department.

References:

1) Florida Mechanical Code
2) NFPA 96
3) Florida Building Code
4) Florida Fire Prevention Code