

Return To:
Worcester County Health Department
Office of Environmental Health
13070 St. Martin's Neck Rd.
Bishopville, MD 21813
Phone: 410-352-3234 or 410-641-9559

Date Plan Submitted _____	
TYPE OF PLAN	FEE
___ New High/Moderate	\$275.00
___ New Low/Prepackaged	\$150.00
___ Remodel/Addition	\$150.00
___ Hood Review	\$135.00
___ Mobile Unit High/Moderate	\$275.00
___ Mobile Unit Low/Prepackaged	\$150.00

*****Make Checks Payable to:
Worcester County Commissioners*****

Food Service Facility Plan Submittal Information Form

Name of Facility _____

Location _____

Owner _____ Phone _____

Type of Proposed Facility

- ___ Full Service Restaurant and/or Lounge (seating, reusable tableware, etc.)
- ___ Bar/Tavern/Niteclub (beverages only)
- ___ Carry-out only
- ___ Grocery/Market
- ___ Bakery
- ___ Confections (ice cream, candy, etc.)
- ___ Institution (school, care facility, etc)
- ___ Nonprofit Kitchen (church, vol. fire co., etc.)
- ___ Mobile unit
- ___ Other (specify) _____

SEATS (if applicable) _____

Project Manager/Builder/Contact Person

Name _____ Phone _____

Address _____

Construction Schedule

Anticipated Start Date _____ Completion Date _____

Exhaust Ventilation System Fabricator/Manufacturer

Name _____ Phone _____

System Type _____

Plumbing Contractor

Name _____ Phone _____

WORCESTER COUNTY HEALTH DEPARTMENT

Office of Environmental Health

13070 St. Martin's Neck Rd.

Bishopville, MD 21813

410-352-3234 or 410-641-9559

COOKING EQUIPMENT REQUIRING HOOD VENTILATION SYSTEM

- A) A grease-removing exhaust hood must be installed in conjunction with commercial cooking equipment which produces grease vapors, as specified in the State Fire Prevention Code, NFPA-96, and the applicable building code. For the purpose of this criteria, cooking equipment which, by heating grease, produces vapors in concentrated levels of 5.0 mg/cubic meter, requires a grease hood without exception. Such equipment may include:
- 1) Grills.
 - 2) Fryers.
 - 3) Charbroilers.
 - 4) Ovens used to cook fatty foods at a temperature which exceeds the vaporization point of grease.
 - 5) Solid fuel cooking equipment.
- B) A grease-removing hood may be required in conjunction with equipment which, by heating grease, produces vapors in concentrated levels of 5.0 mg/cubic meter or less, when an insanitary condition or cross-contamination hazard may result without a grease hood. Such equipment may include:
- 1) Closed ovens used to cook fatty foods at a temperature which exceeds the vaporization point of grease.
 - 2) Conveyor pizza ovens.
- C) In determining whether a piece of equipment which emits vapors in concentrated levels of 5.0 mg/cubic meter or less requires a grease-removing hood, the following factors shall be considered:
- 1) Equipment size.
 - 2) Size of room or enclosing structure.
 - 3) Design of the overall ventilation system.
 - 4) Amount of equipment use.
 - 5) Cross-contamination potential from grease condensate.
 - 6) Advice from the State Fire Marshal or local fire authority.
- D) Vent hoods must be installed in conjunction with food equipment that generates steam, heat, or fumes which cannot otherwise be removed in a safe and sanitary manner. Such equipment may include:
- 1) High temperature ovens not cooking fatty foods or not emitting grease vapors.
 - 2) Steam kettles.
 - 3) Warewashing machines using hot water sanitation.
- E) In determining whether a piece of equipment which does not emit grease vapors requires a vent hood, the following factors shall be considered:
- 1) Equipment size.
 - 2) Size of room or enclosing structure.
 - 3) Design of overall ventilation system.
 - 4) Cross-contamination potential from condensate.

F) The following types of equipment do not require a hood unless it is determined by an inspection of the operating equipment that a hood is necessary to maintain a sanitary condition:

- 1) Hot food holding units.
- 2) Low temperature, insulated, enclosed ovens.
- 3) Microwave ovens.
- 4) Warewashing machines using a chemical sanitizer.

REQUIREMENTS AND GUIDELINES FOR SUBMITTING PLANS FOR NONCOMPENSATING EXHAUST VENTILATION SYSTEMS

- A) Plans must be scaled shop drawings of the proposed cooking system.
- B) Indicate the scale used on the plans (e.g. 1/4" = 1'0").
- C) All plan submittals must provide the following information:
- 1) The position, type, and size of the cooking equipment under the hood using both a front and side view to illustrate the amount of hood overhang. **NOTE:** Be sure to allow spacing for the installation of utility lines behind cooking equipment.
 - 2) The distance between the bottom of the hood and the floor and the distance from the bottom edge of the grease filters to the cooking surface.
 - 3) All hood and duct dimensions.
 - 4) The location and dimensions of the single or multiple exhaust duct openings in the hood plenum.
 - 5) The type and gauge of the metal to be used in the construction of the hood and the exhaust ducts.
 - 6) The size and number of filters to be installed.
 - 7) The angle of slope of the filter bank. **NOTE:** The slope must be from 45° to 60°.
 - 8) The amount of slope of the removable grease trough and the location of the enclosed removable grease cup(s). **NOTE:** A slope of one-eighth to one-quarter (1/8" to 1/4") inch per foot is recommended.
 - 9) The source and the amount of the make-up air. **NOTE:** A volume of outside air approximately equal to the volume of air exhausted must be introduced into the facility.
 - 10) The rating of the fans to be installed in the exhaust and make-up air systems measured in cubic feet per minute.
 - 11) The cross-sectional area of the hood plenum measured in square feet.
 - 12) In addition to the above requirements, for a proposed UL 710 hood, the UL listing card information for the hood must be submitted to include the following:
 - a) Hood lengths listed.
 - b) Minimum exhaust.
 - c) Maximum supply (if compensating hood).
 - d) Maximum cooking surface temperature.
 - e) Vertical offset from cooking surface to hood.
 - f) Minimum front and side overhangs.

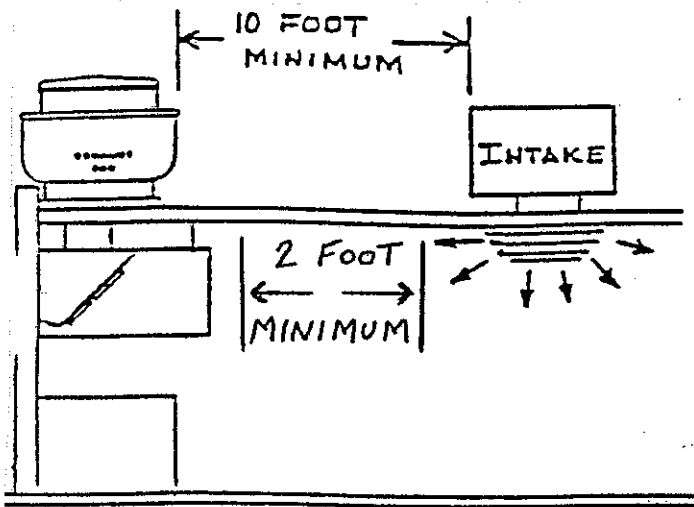
NOTE: The dimensions referenced above must be indicated on the plans and all other dimensions must be accurate to the scale indicated on the plans. **Submit completed Exhaust Ventilation Data Sheet (p. 17 of this packet).**

- D) General Construction Requirements for Non-UL Hoods:
- 1) Hoods must be constructed of a minimum of 20 gauge stainless steel.
 - 2) All seams and joints must have liquid tight, continuous external welds.
 - 3) The plenum area behind the filters may not contain any ledges, hems, crevices, etc., that could collect grease, dirt, or dust. Internal seams must be sealed so that the hood construction is smooth and easily cleanable.
 - 4) Any exposed threaded bolts or fasteners in the hood construction must be cut and capped with acorn nuts or finished in a manner which creates a smooth and easily cleanable surface.
 - 5) No interior surfaces of a hood may be painted.

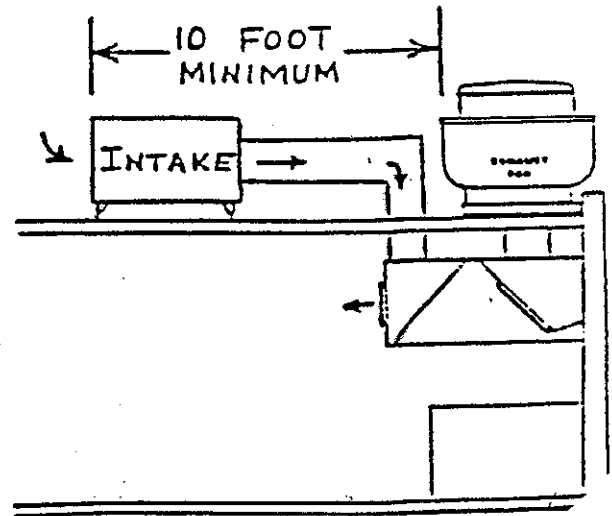
- 6) The hood plenum should be constructed so that no trough or depression for the accumulation of grease is created behind the filters. The base of the plenum should be sloped toward the filters so that all grease collected in the plenum will flow through the filters into the externally mounted grease trough.
- 7) The filter bank must be designed to prevent grease or condensate from dripping into food or onto food preparation surfaces.
- 8) Ducts must be constructed of a minimum of 16 gauge galvanized or carbon steel (i.e. black iron), **OR** 18 gauge stainless steel.
- 9) Duct systems must conform to the applicable requirements of NFPA-96, the local building code, and the State Fire Marshal.
- 10) Dampers shall not be installed in exhaust ducts unless specifically listed for such use or required as part of a listed or approved device or system.
- 11) Insulation in supply ducts and hood plenums must be properly secured and covered so as not to contaminate food or food contact surfaces.
- 12) The make-up air intakes must be a minimum of 10 horizontal feet from the exhaust duct termination point. Refer to the illustration below.

EXAMPLES OF MAKE-UP AIR SYSTEMS:

Vented Through the Ceiling



Vented Through the Hood



NOTE: All hood design and construction must meet the requirements of the Maryland State Department of Health and Mental Hygiene, the Code of Maryland Regulations (COMAR) 10.15.03.08, Standard Ninety-Six (96) of the National Fire Protection Association, and the Worcester County Health Department, as well as all local Fire and Building Codes.

E) Hood Lighting

- 1) Lighting fixtures in kitchen hoods must be certified by a bona fide testing lab as meeting all the requirements of NFPA-96 and the applicable electrical code.
- 2) Lighting fixtures in hoods over open food product or food contact surfaces must meet NSF requirements.
- 3) Lighting fixtures must be provided with plastic-coated thermal and shock-resistant globes. Recessed fixtures must be provided with heat and shock-resistant diffusers.
- 4) A minimum of 20 foot candles of light shall be required on all work surfaces.

F) Fire Suppression

- 1) Grease hoods must include a fixed automatic fire extinguishing system that conforms to NFPA-96 and to the requirements of the State Fire Marshal.
- 2) Automatic fire extinguishing systems must be listed with an organization acceptable to the State Fire Marshal.
- 3) A readily accessible means for manual activation of the fire extinguishing system must be provided unless an exception is allowed by the State Fire Marshal.
- 4) The components of the fire extinguishing system located within the hood cavity must be easily cleanable and designed to preclude food adulteration.

G) Multiple Hood Configurations

Individual canopy hoods may be joined to create larger ventilation units as long as the joints are properly sealed by continuous welding or other method approved by a testing laboratory. The joints must be grease-tight.

H) Hood and Filter Installations:

- 1) Eyebrow Hood: Refer to EXHIBIT A
- 2) Canopy Hood: Refer to EXHIBIT B
- 3) Backshelf Hood: Refer to EXHIBIT C
- 4) Filter Bank: Refer to EXHIBIT D

NOTE: All cooking exhaust ventilation systems must be designed to produce an air flow of a minimum of 50 feet per minute (FPM) across all cooking surfaces in the direction of the exhaust.

I) Make-up air supply system:

- 1) A volume of make-up air approximately equal to the volume of air exhausted must be introduced into the facility.
- 2) When exhausting less than 800 cubic feet per minute (CFM) of air, a make-up air recovery system may not be required.
- 3) Where make-up air is in excess of 2500 CFM, multiple duct openings are required.
- 4) Make-up air must be tempered when necessary to:
 - a) Prevent condensation from being a sanitation or cross-contamination problem.
 - b) Promote comfortable conditions.
 - c) Comply with the applicable building code.
- 5) The outside make-up air supplied into a food establishment may enter via the HVAC system, a separate supply fan unit, or a combination of the two, and in limited situations, passively, thru unforced make-up air openings.
- 6) For gravity-fed make-up air, the required opening size is calculated as follows:

$$\frac{\text{Make-up Air CFM}}{400} = \text{Square Feet of Opening}$$

- 7) External openings for make-up air are to be provided with motorized dampers that are electrically interconnected with the exhaust fans.
- 8) The fan for the make-up air must be electrically interconnected with the exhaust fans.
- 9) Air intake ducts must be designed to prevent the entrance of dust, dirt, insects, or other contaminating materials.

- F) Eyebrow hoods without grease removal devices shall extend past the front of the equipment opening by at least 12 inches.
- G) The length of eyebrow and backshelf hoods shall equal or exceed the length of the cooking surface or door opening of associated equipment.
- H) The distance between the bottom of the filter bank and the cooking surface shall be a minimum of 18 inches.
- I) Submit the following calculations with the submittal of shop drawings:

- 1) FORMULA for calculating the Hood Exhaust Capacity (with grease extractors):

$$\text{Hood Exhaust Capacity} = \text{Length}_{(ft)} \times 250$$

$$\text{Hood Exhaust Capacity} = \underline{\hspace{2cm}} \times 250$$

$$\text{Hood Exhaust Capacity} = \underline{\hspace{2cm}} \text{CFM}$$

- 2) FORMULA for calculating the Hood Exhaust Capacity (without grease extractors):

$$\text{Hood Exhaust Capacity} = \text{Length}_{(ft)} \times 150$$

$$\text{Hood Exhaust Capacity} = \underline{\hspace{2cm}} \times 150$$

$$\text{Hood Exhaust Capacity} = \underline{\hspace{2cm}} \text{CFM}$$

Abbreviations: CFM = cubic feet per minute

Length_(ft) = length of cooking surface or door opening measured in feet

- 3) FORMULA for calculating the Duct Velocity:

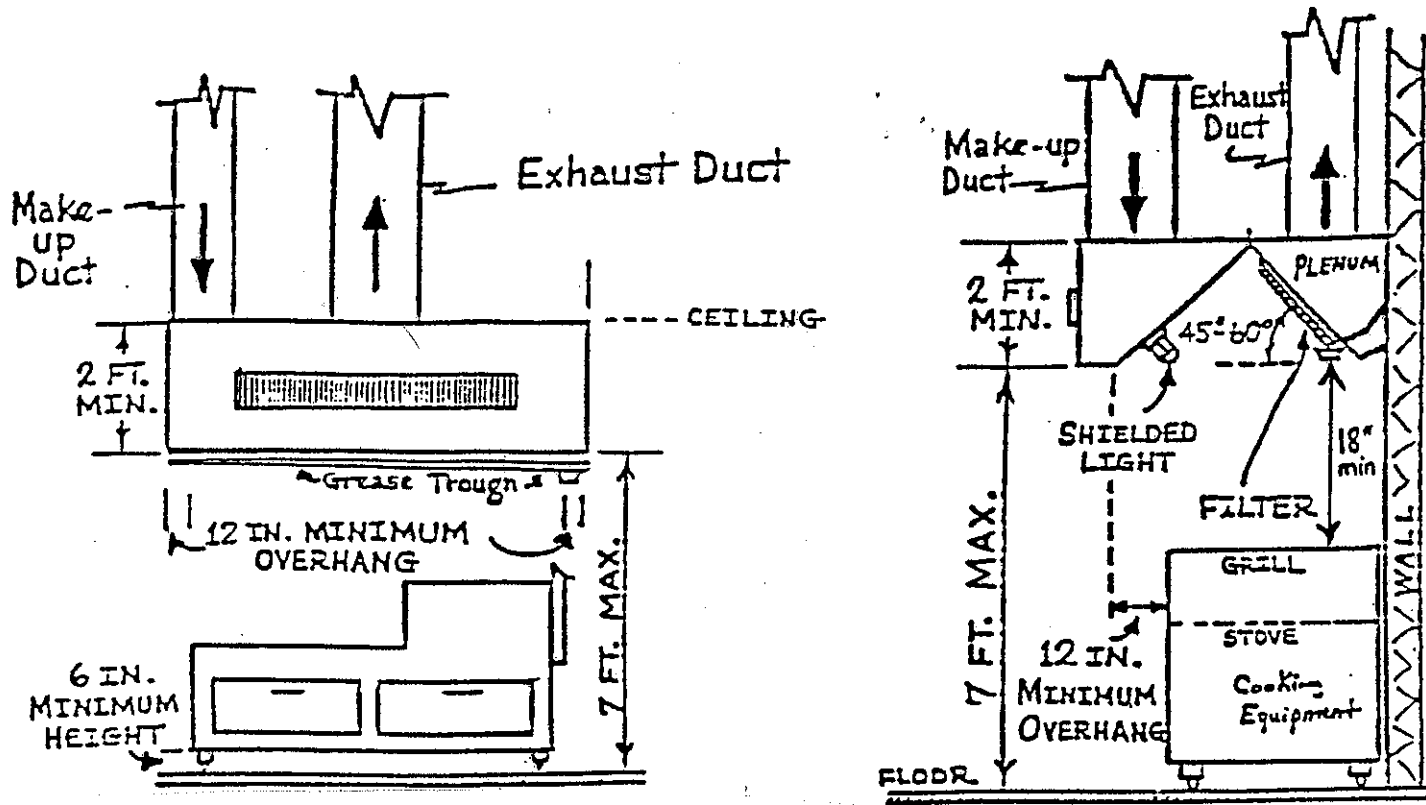
Duct Velocity = (fan CFM) divided by (AREA of exhaust duct in square feet)

$$\text{Duct Velocity} = \left(\underline{\hspace{2cm}} \right) \div \left(\underline{\hspace{2cm}} \right)$$

$$\text{Duct Velocity} = \left(\underline{\hspace{2cm}} \right) \text{FPM}$$

NOTE: The duct velocity must be between 1500 FPM and 2200 FPM.

Exhibit B CANOPY HOODS



CHECK LIST FOR SUBMITTING PLANS FOR CANOPY HOODS

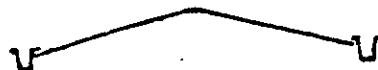
- A) The shop drawings must provide all the information shown in the above illustrations as well as that requested on the list of Requirements and Guidelines for Submitting Plans for Cooking Exhaust Ventilation Systems.
- B) All canopy hoods must be installed in accordance with the minimum and maximum spacing requirements shown on the above illustrations. The hood overhang is calculated from the beginning of the hood capture space and does not include any sheet metal associated with the make-up plenum at the front edge of the hood. Overhang requirements for hoods over charbroilers are listed below.
- C) A canopy hood must have a minimum capture depth of 2 feet.
- D) The externally mounted grease trough must be sloped to drain to an enclosed removable grease cup.

NOTE: When the hood is of considerable length, the grease trough may be installed in sections, each of which must be sloped to drain to a removable grease cup.

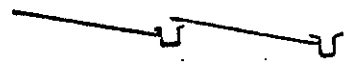
Ex: a)



b)



c)



E) Duct Collar Locations

- 1) Duct collars shall be located so as to maximize the efficiency of the hood in performing its intended function.
- 2) Grease hoods with a length of 9 feet or less may have a single duct outlet. Grease hoods with a length between 9 and 18 feet shall have at least 2 ducts. Grease hoods with a length between 18 and 24 feet shall have at least 3 ducts. Grease hoods with a length of between 24 and 30 feet shall have a minimum of 4 duct takeoffs.
- 3) Grease hood duct collars must be evenly spaced with no more than 8 feet separating the centerline of ducts.
- 4) The requirements in 2 and 3 above may be waived when previous testing has shown that the velocity at each filter or slot is within the manufacturer's recommended range, and that the hood performs satisfactorily with a duct configuration other than listed above. Such testing must be completed by a bona-fide testing lab.

F) Requirements For Hoods Over Charbroilers:

- 1) A canopy hood is required to overhang a charbroiler by a minimum of 18 inches on all sides.
- 2) A minimum vertical distance of 4 feet must be maintained between the lower edge of the grease filters and the cooking surface of all charcoal-type and charbroilers.
- 3) Charbroilers with more than 5 square feet of cooking area must be registered with the Air Management Administration, 201 Baptist St., Suite 15, Salisbury, MD 21801, phone 410-713-3680.

G) When side panels are utilized, each side panel must extend below the cooking surface.

H) Submit the following calculations:

- 1) Formula for calculating the hood exhaust capacity:

$$\text{Hood Exhaust Capacity} = \text{Length}_{(ft)} \times \text{Width}_{(ft)} \times 150 \text{ or } 100 \text{ or } 80$$

$$\text{Hood Exhaust Capacity} = \text{_____} \text{CFM}$$

Abbreviations: CFM = cubic feet

Length_(ft) = length of hood measured in feet

Width_(ft) = width of hood measured in feet

NOTE: Variations in the hood exhaust capacity formula:

- Canopy hood open on all four sides: Hood Exhaust Capacity = L x W x 150

- Canopy hood open on two or three sides: Hood Exhaust Capacity = L x W x 100

- Canopy hood open in front only: Hood Exhaust Capacity = L x W x 80

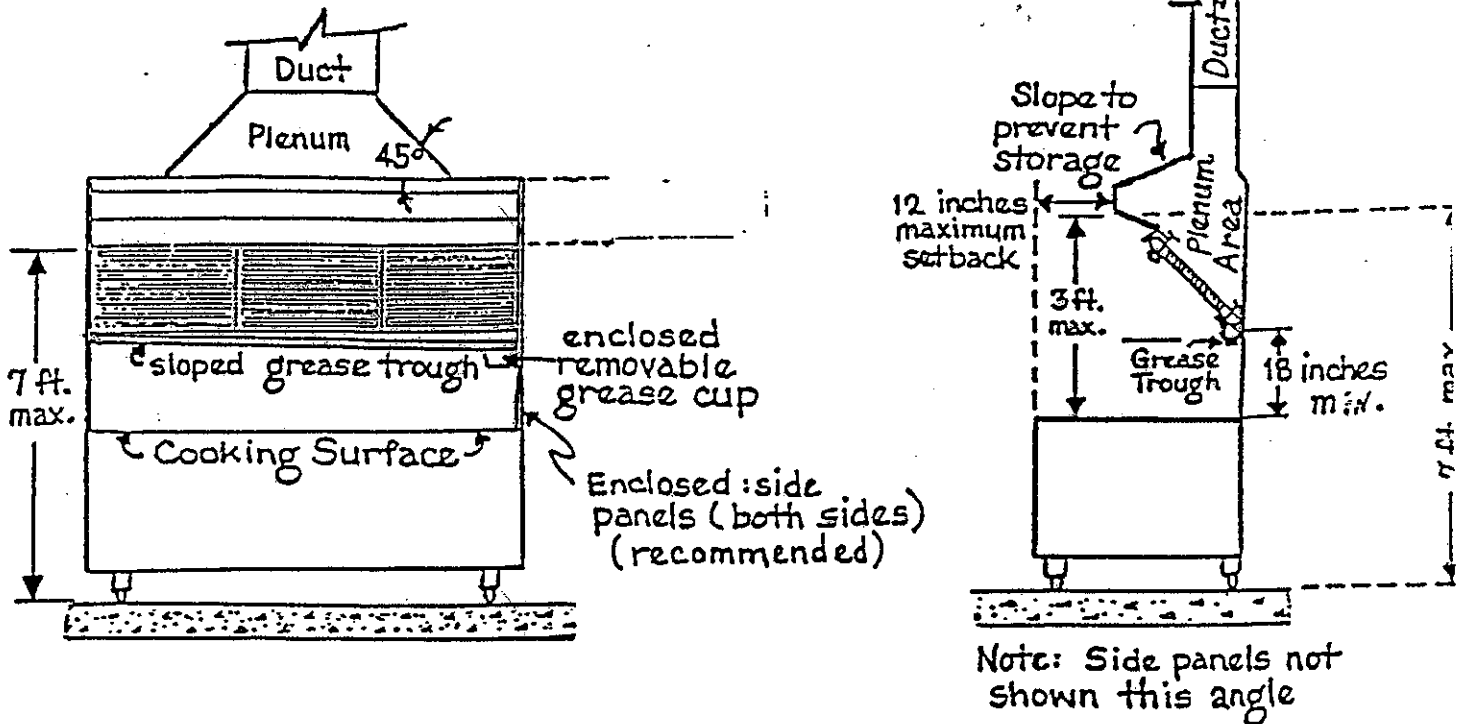
- 2) Formula for calculating the duct velocity:

$$\text{Duct Velocity} = \frac{\text{CFM Rating of Exhaust Fan}}{\text{Area of Exhaust Duct in Square Feet}} \text{ DIVIDED BY } ()$$

$$\text{Duct Velocity} = \text{_____} \text{FPM}$$

NOTE: The duct velocity must exceed 1500 FPM and be no more than 2200 FPM.

Exhibit C BACKSHELF HOODS



CHECKLIST FOR SUBMITTING PLANS FOR A BACKSHELF HOOD

- A) The shop drawings must provide all the information shown in the above illustrations as well as that requested on the List of Requirements and Guidelines for Submitting Plans for Cooking Exhaust Ventilation Systems.
- B) All backsplash hoods must be installed in accordance with the minimum and maximum dimensions shown on the above illustrations.
- C) The top surface of the hood should be sloped to prevent storage.
- D) The grease trough must slope to drain to enclosed removable grease cup.
- E) Charbroilers may not be installed under backsplash hoods.

F) Submit the following calculations:

1) Formula for calculating the hood exhaust capacity:

$$\text{Hood Exhaust Capacity} = L_{ft} \times 250$$

$$\text{Hood Exhaust Capacity} = \underline{\hspace{2cm}} \times 250$$

$$\text{Hood Exhaust Capacity} = \underline{\hspace{2cm}} \text{ CFM}$$

Abbreviations: CFM = cubic feet per minute

L_{ft} = length of the hood measured in feet

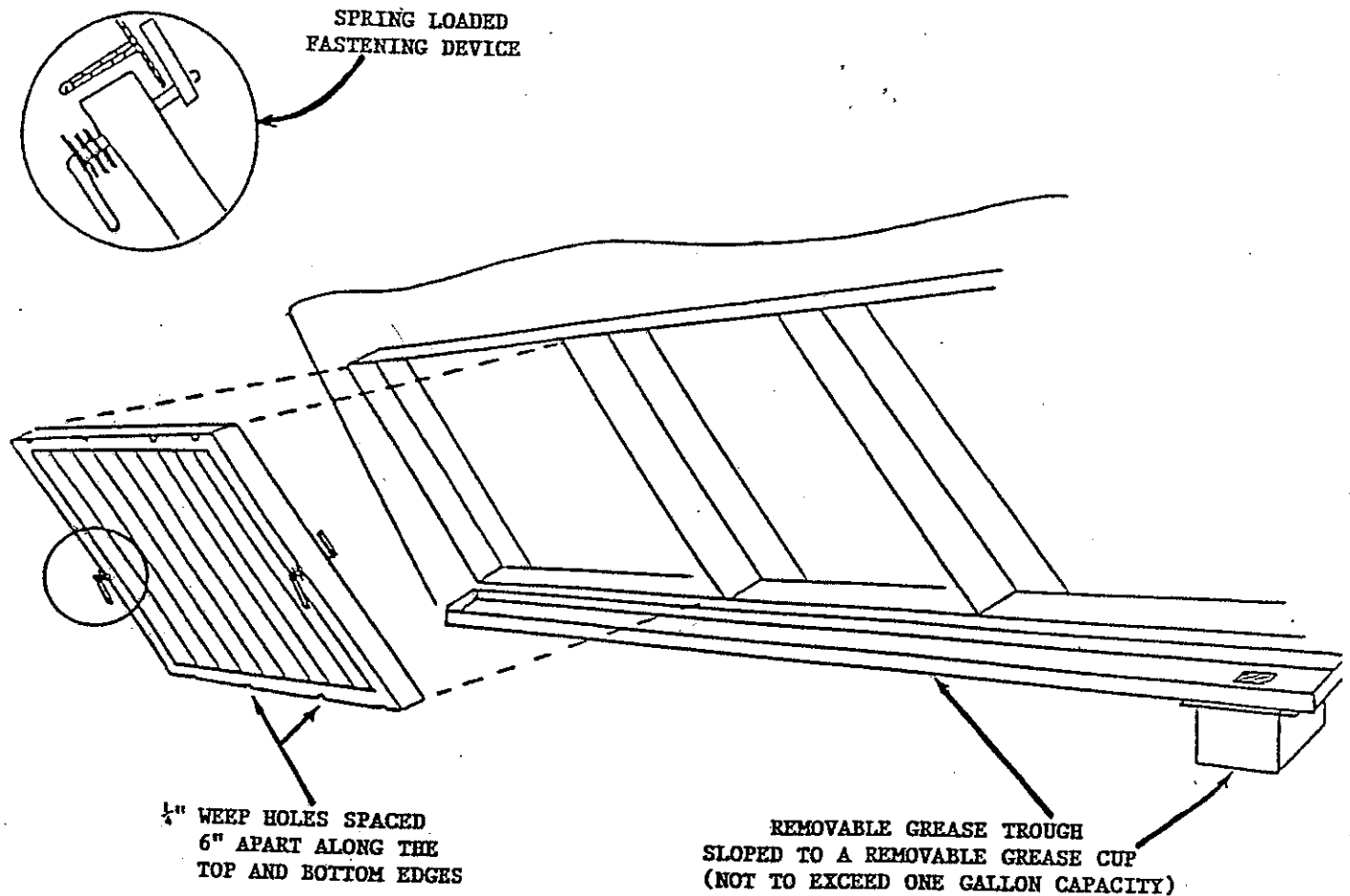
2) Formula for calculating the duct velocity:

$$\text{Duct Velocity} = \frac{\text{CFM Rating of Fan}}{\text{Area of Exhaust Duct in Square Feet}} \text{ DIVIDED BY })$$

$$\text{Duct Velocity} = \underline{\hspace{2cm}} \text{ FPM}$$

NOTE: The duct velocity must exceed 1500 FPM.

Exhibit D FILTER BANKS



REQUIREMENTS FOR THE DESIGN OF FILTER BANKS

- A) All filters must be Underwriters Laboratories (UL) approved baffle-type grease filters.
- B) All filters must be easily removable for cleaning. Filters must be held in place with spring-loaded fastening devices.
- C) Filter frames must be designed to firmly hold the filters in place so as to accomplish a continuous surface to surface contact between filters or between filters and supports.
- D) Blanks when used must:
 - 1) Not interfere with the proper operation of the hood system.
 - 2) Be easily cleanable.
 - 3) Constructed of materials that are accepted for grease filters.
 - 4) Be installed only at the ends.
 - 5) Have a total length of 12 inches or less.
 - 6) Not violate NFPA-96, State Fire Prevention Code, or an exhaust hood system's listing.

ADDITIONAL REQUIREMENTS AND GUIDELINES FOR SUBMITTING PLANS FOR COMPENSATING HOOD SYSTEMS

Definition: "Compensating Hood" means a hood that is designed to introduce supply air through an integral plenum either directly into the hood capture area or by directing air down along the hood perimeter. (A hood with only front face discharge of supply air is not a compensating hood.)

A) For a non-UL 710 compensating hood, the following additional information must be submitted (per sample hood problems 1, 2, and 3):

1) Canopy Hoods

$$Q = (v) (l) (d) + 50 (L)$$

where:

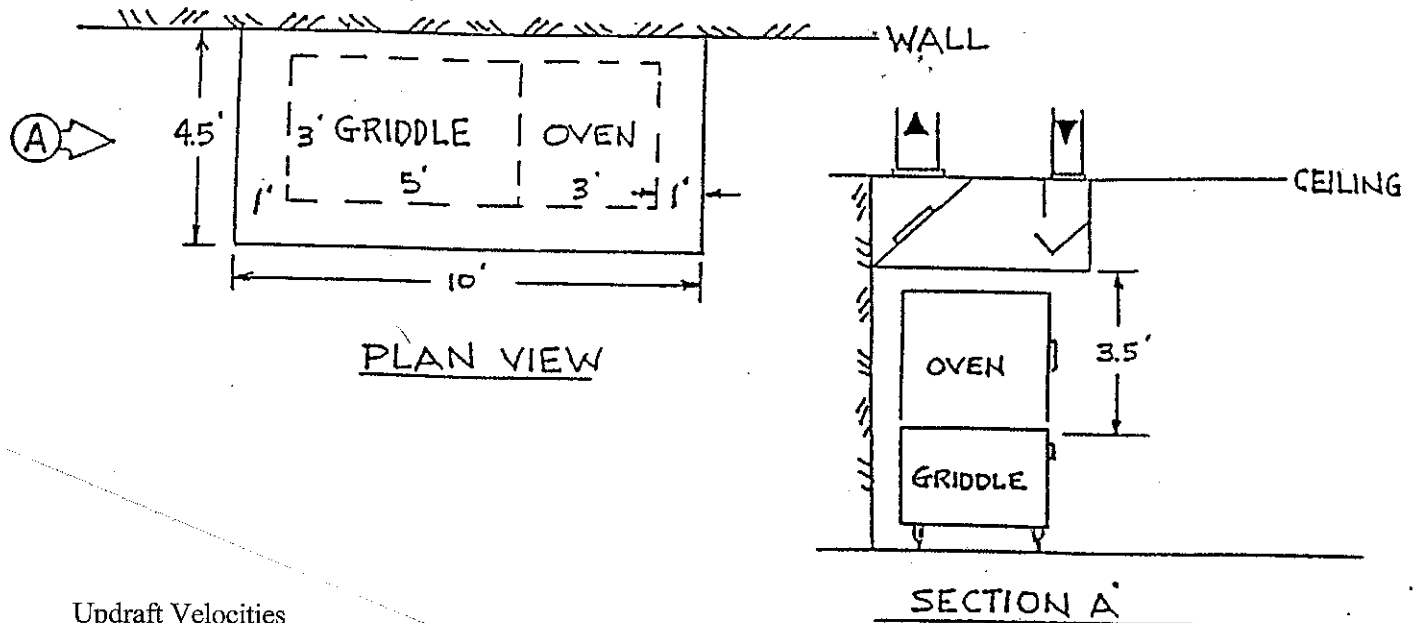
- Q = quantity of exhaust air in cubic feet per minute (CFM)
- v = updraft velocity of contaminated air in feet per minute (fpm) given in chart below
- l = length of equipment or line of equipment with the same updraft velocity
- d = depth of equipment or the vertical distance from the cooking surface to the lower edge of the filter bank plenum, whichever is greatest
- L = total length of the longitudinal side(s) which are void of equipment plus the length of exposed ends. (An exposed end does not include an end of a hood that is equipped with a full side curtain. For single line island hoods, one longitudinal side is considered to be void of equipment.)

<u>Equipment Type</u>	<u>Updraft Velocity (fpm)</u>
LOW HEAT, STEAM AND GREASE (pizza ovens, enclosed ovens, small steam kettles, open burner ranges, and steamers)	50
MEDIUM HEAT AND GREASE (griddles, fryers, skillets braising pans, hot top ranges, and pressure fryers)	85
HIGH HEAT AND GREASE (charbroilers, broilers, and woks)	125
WOOD AND CHARCOAL	150

B) Make-up Air Volumes

- 1) Sufficient make-up air must be introduced in the vicinity of the exhaust hoods so as to prevent a negative pressure exceeding .02 inches wg from developing. The remaining quantity of supply air can be introduced into adjoining areas which allow air transfer to the exhaust points.
- 2) A compensating hood which is UL 710 must not introduce compensating air in excess of its listed maximum supply volume.
- 3) A compensating hood not listed under UL Standard 710 must not introduce compensating supply air in a volume such that the minimum calculated net exhaust is not met.

Sample Hood Problem 1 (Non-UL 710 Hood)
COMPENSATING WALL CANOPY HOOD



Updraft Velocities

$$v(\text{griddle}) = 85 \text{ FPM}$$

$$v(\text{oven}) = 50 \text{ FPM}$$

$$L = 1 + 1 + 4.5 + 4.5 = 11 \text{ feet}$$

Net Exhaust for a Compensating Hood (Q_E)
 (approximates the volume of contaminated air)

$$Q_E = [v l d] + 50 L$$

$$Q_E = [(85)(5)(3.5) + (50)(3)(3)] + 50(11)$$

$$Q_E = [1488 + 450] + 550$$

$$Q_E = 2488 \text{ CFM (which is the minimum net exhaust volume for this compensating hood)}$$

Total Exhaust (BOCA) (Q_T)

Where BOCA applies:

$$Q_T = 100 (A) \text{ where } A = \text{hood area}$$

$$Q_T = (100)(10)(4.5)$$

$$Q_T = 4500 \text{ CFM}$$

Compensating Supply Volume (Q_S)

For a compensating hood:

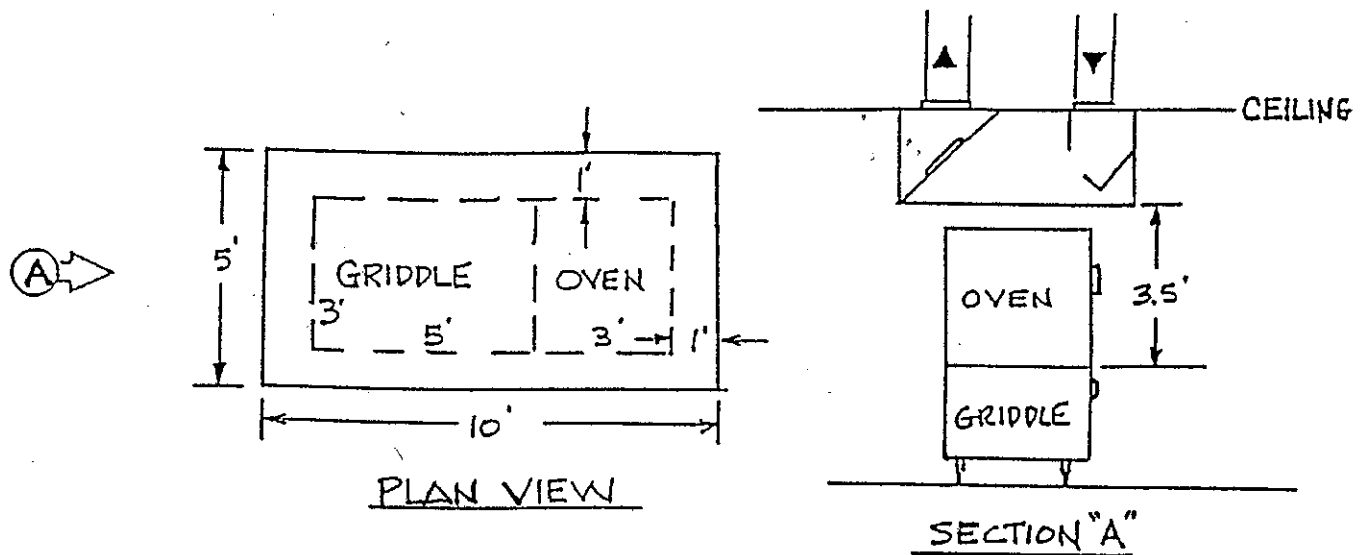
$$Q_T = Q_E + Q_S \text{ then}$$

$$Q_S = Q_T - Q_E$$

$$Q_S = 4500 - 2488$$

$$Q_S = 2012 \text{ CFM (44\% compensating)}$$

This compensating hood, in order to meet the BOCA exhaust requirement, needs to exhaust 4500 CFM. The criteria limits the hood's compensating supply to 2012 CFM in order to ensure that the contaminated air generated by the equipment which is approximated by Q_E is exhausted.

COMPENSATING SINGLE LINE ISLAND CANOPY HOOD

Updraft Velocities

$$v (\text{griddle}) = 85 \text{ FPM}$$

$$v (\text{oven}) = 50 \text{ FPM}$$

$L = 10 + 1 + 1 + 5 + 5 = 22$ feet (For single line island hoods, one longitudinal side is considered void of equipment.)

Net Exhaust for a Compensating Hood (Q_E)
(approximates the volume of contaminated air)

$$Q_E = [v l d] + 50 L$$

$$Q_E = [(85)(5)(3.5) + (50)(3)(3)] + 50(22)$$

$$Q_E = 1488 + 450 + 1100$$

$$Q_E = 3038 \text{ CFM (which is the minimum net exhaust volume for this compensating hood)}$$

Total Exhaust (BOCA) (Q_T)

Where BOCA applies:

$$Q_T = (150)(A) \text{ where } A = \text{hood area}$$

$$Q_T = (150)(5)(10)$$

$$Q_T = 7500 \text{ CFM}$$

Compensating Supply Volume (Q_s)

For a compensating hood:

$$Q_T = Q_E + Q_s \text{ then}$$

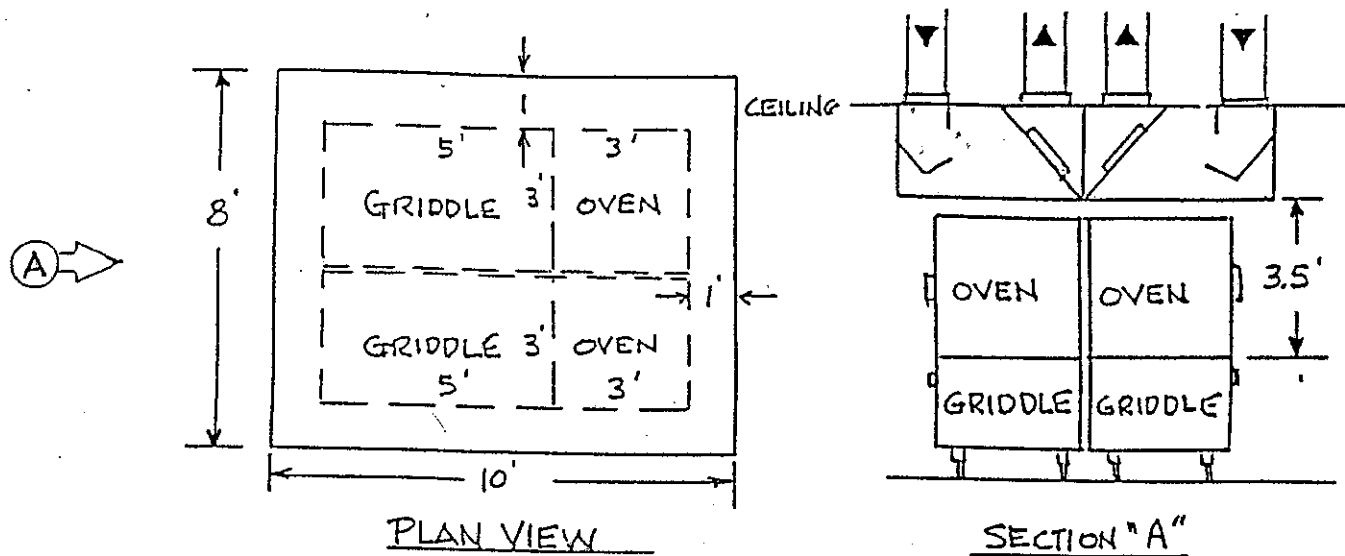
$$Q_s = Q_T - Q_E$$

$$Q_s = 7500 - 3038$$

$$Q_s = 4462 \text{ CFM (59\% compensating)}$$

This hood is required by BOCA to exhaust 7500 CFM of air. In order to remove the contaminated air generated by the equipment which is approximated by Q_E , the compensating supply volume is limited to a maximum of 4462 CFM.

COMPENSATING DOUBLE LINE ISLAND CANOPY HOOD



Updraft Velocities
 v (griddle) = 85 FPM
 v (oven) = 50 FPM

$$L = 8 + 8 + 1 + 1 + 1 + 1 = 22 \text{ feet}$$

Net Exhaust For a Compensating Hood (Q_E)
 (approximates the volume of contaminated air)

$$Q_E = [v \cdot l \cdot d] + 50 (L)$$

$$Q_E = [(85) (5) (3.5) + (50) (3) (3)] [2] + 50 (20)$$

$$Q_E = 3876 + 1000$$

$$Q_E = 4876 \text{ CFM (which is the minimum net exhaust volume for this compensating hood)}$$

Total Exhaust (BOCA) (Q_T)
 Where BOCA applies:

$$Q_T = 150 (A) \text{ where } A = \text{area of hood}$$

$$Q_T = 150 (8) (10)$$

$$Q_T = 12000 \text{ CFM}$$

Compensating Supply (Q_S)
 For a compensating hood:

$$Q_T = Q_E + Q_S$$

$$Q_S = Q_T - Q_E$$

$$Q_S = 12000 - 4876$$

$$Q_S = 7124 \text{ CFM (59\% compensating)}$$

This hood is required by BOCA to exhaust 12000 CFM of air. In order to exhaust the contaminated air generated by the equipment which is approximated by Q_E , the integral supply air, Q_S , is limited by the criteria to a maximum of 7124 CFM.

EXHAUST VENTILATION DATA SHEET

WCHD (rev) 1/96

Facility Name _____ Owner _____
Location _____ Phone _____
Type of Hood _____ Fabricator _____
Plan Submitted by _____ Date _____

DESIGN INFORMATION

- 1) Hood Dimensions _____
- 2) List Equipment Being Vented _____
- 3) Construction Materials (INCLUDE GAUGE): Hood _____
Ducts _____
- 4) Air Movement Criteria
a) Hood Exhaust Capacity (CFM's) _____ b) CFM Rating of Exhaust Fan _____
c) Duct Velocity (FPM's) _____
- 5) Number and Type of Filters _____
- 6) Area of Exhaust Duct in sq ft _____
- 7) Make-up Air Criteria (in CFM's)

Total CFM's	Mechanical	Gravity-fed	HVAC Supply	Compensating Supply
_____	_____	_____	_____	_____
				sq ft mua opening= _____

ADDITIONAL ITEMS

- _____ Hood overhang (in inches, or setback if backshelf or eyebrow)
- _____ Height from floor
- _____ Height from cooking surface to bottom of filters
- _____ Angle of slope of filter bank
- _____ Slope of grease trough
- _____ Spacing of roof exhaust and intake units
- _____ Intake openings protected (filtered, etc.)
- _____ Spacing of duct openings (from sides of hood and between ducts)
- _____ Charbroiler
- _____ Size of charbroiler in sq ft
- _____ Removable grease cup
- _____ Welds at seams and joints
- _____ Filter construction (weep holes)
- _____ Shielded light
- _____ Exhaust fan and make-up air electronically interconnected
- _____ Side panels

ADDITIONAL INFORMATION

