

CITY OF SACRAMENTO
1231 J Street, Sacramento, CA 95814

Permit No: 0000511
Insp Area: 1

Site Address: 1213 ~~1215~~ K ST SAC
Parcel No 006-0111-012

ESQUIRE GRILL

Sub-Type: ACOM
Housing (Y/N): N

CONTRACTOR
 INNRWORKS FIRE&CONSTRUCTION
 PO Box 388
 1000 AVENUE A 95696-6388

OWNER
 3100 ZINFANDEL DR #160
 RANCHO CORDOVA, CA 95670

ARCHITECT
 ESQUIRE PARTNERS L.L.C.

Nature of Work: INSTALL HOOD AND DUCT FIRE SYSTEM

CONSTRUCTION LENDING AGENCY : I hereby affirm under penalty of perjury that there is a construction lending agency for the performance of the work for which this permit is issued (Sec. 3097, Civ. Code).

Lender's Name: _____ **Lender's Address:** _____

LICENSED CONTRACTORS DECLARATION: I hereby affirm under penalty of perjury that I am licensed under provisions of Chapter 9 (commencing with section 7000) of Division 3 of the Business and Professions Code and my license is in full force and effect.

License Class: _____ **License Number:** _____ **Date:** _____ **Contractor Signature:** _____

OWNER-BUILDER DECLARATION: I hereby affirm under penalty of perjury that I am exempt from the contractors License Law for the following reason (Sec. 7031.5, Business and Professions Code: any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, or to its issuance, also requires the applicant for such permit to file a signed statement that he or she is licensed pursuant to the provisions of the Contractors License Law (Chapter 9 (commencing with Section 7000) of Division 8 of the Business and Professions Code) or that he or she is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars (\$500.00).

I am owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business and Professional Code). The Contractors License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or herself or through his/her own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he/she did not build or improve for the purpose of sale.)

I am owner of the property, am exclusively contracting with licensed contractors to construct the project (Sec. 7044, Business and Professions Code). The Contractors License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractors License Law)

I am exempt under Sec. _____ B & PC for this reason: _____

Date: _____ **Owner Signature:** _____

IN ISSUING THIS BUILDING PERMIT, the applicant represents, and the city relies on the representation of the applicant, that the applicant verified all measurements and locations shown on the application or accompanying drawings and that the improvement to be constructed does not violate any law or private agreement relating to permissible or prohibited locations for such improvements. This building permit does not authorize any illegal location of any improvement or the violation of any private agreement relating to location of improvements.

I certify that I have read this application and state that all information is correct. I agree to comply with all city and county ordinances and state laws relating to building construction and herby authorize representative(s) of this city to enter upon the abovementioned property for inspection purposes.

Date: _____ **Applicant/Agent Signature:** _____

WORKER'S COMPENSATION DECLARATION: I hereby affirm under penalty of perjury one of the following declarations:

I have and will maintain a certificate of consent to self-insure for workers' compensation as provided for by Section 3700 of the Labor Code, for the performance of work for which the permit is issued.

I have and will maintain workers' compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. My workers' compensation insurance carrier and policy number are:

Carrier: NO EMPLOYEES **Policy Number:** _____ **Exp Date:** _____

This section need not be completed if the permit is for \$100 or less) I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the workers' compensation laws of California and agree that if I should become subject to the workers' compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

Date: _____ **Applicant Signature:** _____

WARNING: FAILURE TO SECURE WORKER'S COMPENSATION COVERAGE IS UNLAWFUL AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS (\$100,000) IN ADDITION TO THE COST OF CO-MPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3706 OF THE LABOR CODE, INTEREST AND ATTORNEY'S FEE.

THIS PERMIT SHALL EXPIRE BY LIMITATION IF WORK IS NOT COMMENCED WITHIN 180 DAYS.

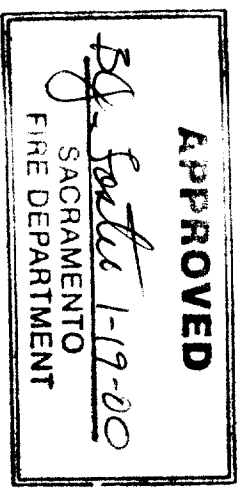
JOB NAME : ESCORT SQUIRE GRILL

13th + K
SAC CA

CITY COPY
0000511
1215 K ST.

Hood + Duct Fire System Plans

ANSUL PIRANHA 13



INSTALLER : INNERWORKS INC

PO BOX 5321

LIC # 730356

NAGA CA 95109
#707-446-3383

FAX # 707-447-6252

TANK AND CARTRIDGE REQUIREMENTS CHART

The following chart is used to determine tank (and cartridge) requirements after the total number of nozzles have been determined.

Maximum Total No. of Nozzles	Quantity and Size of Tank(s)	Nitrogen Cartridge Size Required (Part No.)
7	(1) PIRANHA-7	LT-20-R (7032)
10	(1) PIRANHA-10	LT-30-R (5373)
13	(1) PIRANHA-13	LT-30-R (5373)
14	(1) PIRANHA-7 (1) PIRANHA-7*	LT-20-R (7032)
17	(1) PIRANHA-7 (1) PIRANHA-10*	LT-20-R (7032) LT-30-R (5373)
20	(1) PIRANHA-10 (1) PIRANHA-10*	LT-30-R (5373) LT-30-R (5373)
23	(1) PIRANHA-10 (1) PIRANHA-13*	LT-30-R (5373) LT-30-R (5373)
26	(1) PIRANHA-13 (1) PIRANHA-13*	LT-30-R (5373) LT-30-R (5373)
27	(1) PIRANHA-7 (1) PIRANHA-10* (1) PIRANHA-10*	LT-20-R (7032) LT-30-R (5373) LT-30-R (5373)

Additional combinations are available up to a maximum system size of 39 nozzles (three PIRANHA-13).

* Regulated Actuator

DISTRIBUTION PIPING REQUIREMENTS

Once the nozzle placement and quantity of tanks has been determined, it is then necessary to determine the piping configuration from each tank to the discharge nozzles. This section contains the guidelines and limitations for designing the distribution piping so that the system will discharge from all nozzles utilized at proper flow rates. These limitations should also be referred to when selecting the mounting location for the regulated release and agent tank.

DISTRIBUTION PIPING DEFINITIONS

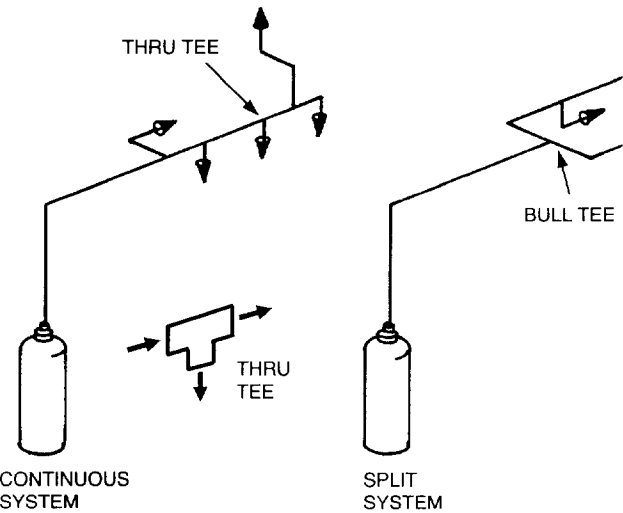
Bull Tee: A bull tee is defined as a tee positioned in the system so that the flow enters the center inlet of the tee and exits 90° out both side outlets. See Figure 14.

Thru Tee: A thru tee is defined as a tee positioned in the system so that the flow enters a side inlet and exits straight through the tee to the opposite outlet and also exits 90° through the center outlet. See Figure 14.

Continuous System: A continuous distribution piping system is one that does not include a bull tee between the agent tank and the first nozzle. See Figure 14.

Split System: A split distribution piping system contains a bull tee between the agent tank and first nozzle. See Figure 14.

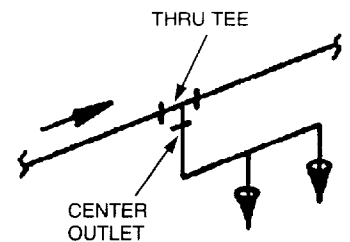
Equivalent Length: Length of distribution piping, defined in feet, which has the same effect as the actual length of pipe.



GENERAL DISTRIBUTION PIPING RULES

► (Common to All Size Systems Both High and Low)

1. Maximum elevation difference between the top of the agent tank and the highest nozzle = 9 ft.
2. Maximum elevation difference between the top of the agent tank and the lowest nozzle = 8 ft.
3. The water supply pressure must be between 3 and 100 psi at each Water Pressure Testing Assembly gauge.
4. Minimum amount of total linear piping for a system used to protect a fryer, wok, range, tilt cooking pan = 8.0 ft.
5. Maximum nozzles allowed downstream of the first thru tee = 2. See Figure 15.
6. Linear pipe lengths are measured center to center.



7. Multiple bull tees are allowed in both continuous and split systems as long as maximum linear and equivalent lengths are not exceeded.
8. No nozzles are allowed on the 1/2 in. pipe run.
9. Minimum number of nozzles in a system = 2 (only).

PROTECTION (Continued)

Appliance Nozzle and Hazard Zone Location (Continued)

The hazard zone must be located from front to rear so that it covers the depths of all the cooking hazards of the appliances. Exception: If the depth of a cooking hazard, such as a fryer, grill, or braising pan/tilt skillet that was listed as 32 in. or less, then the selected hazard zone must be located so that its centerline is equidistant from the front and back of the cooking hazard. If the depth of the cooking hazard exceeds 32 in., then the selected hazard zone area can be located a maximum of 4 in. forward or backward from the edge of the hazard zone.

For a group of protected appliances under a common hood, the overlapping nozzles must be located from right to left so that each end nozzle is located a maximum of 11.5 in. from the outside edge of the cooking hazard of each end, and the inside overlapping nozzles must be located so that the two end nozzles are at a maximum spacing of 25.5 in. See Figures 3 and 4.

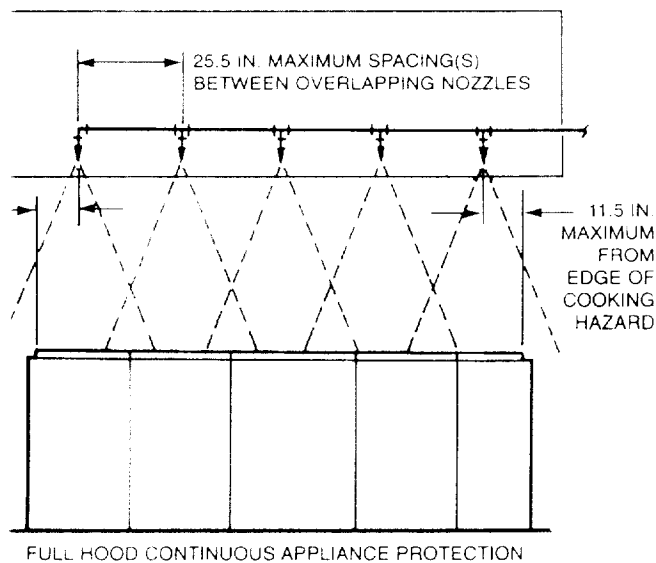
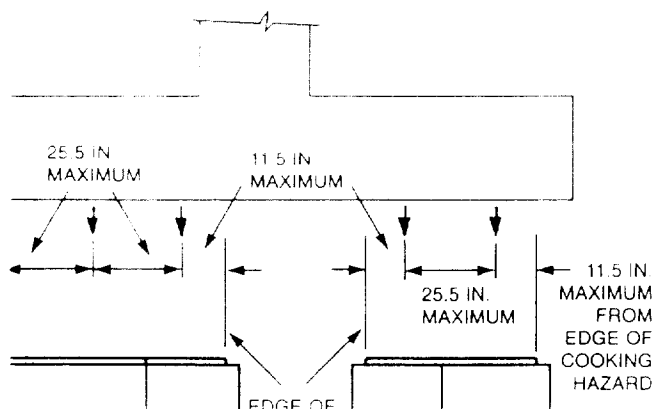


FIGURE 3
001710



- When taller appliance(s) or other obstructions are located adjacent to appliance(s) protected by overlapping nozzles, the overlapping appliance nozzle spacing must start with the appliance(s) adjacent to the obstruction. See Figure 5.

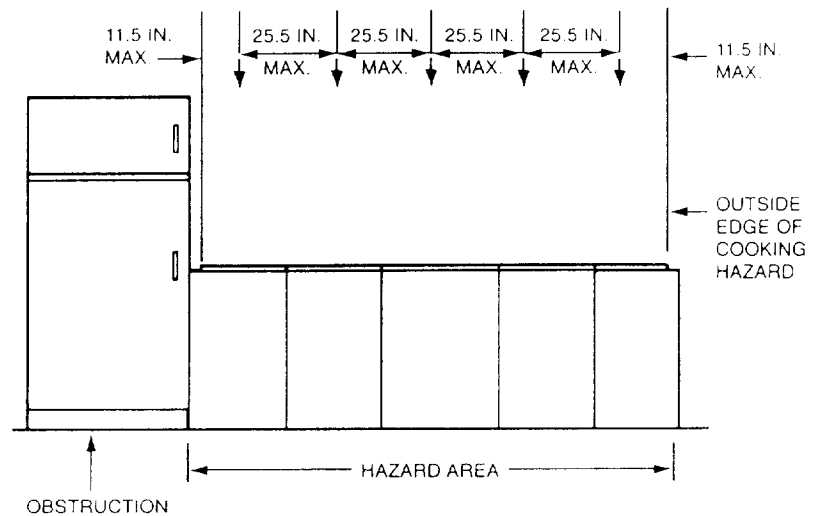


FIGURE 5
001713

- When appliances requiring dedicated nozzle coverage are located within the overlapping appliance nozzle protected area, the overlapping appliance nozzle spacing must start with the appliance(s) adjacent to the dedicated appliance. See Figure 5a.

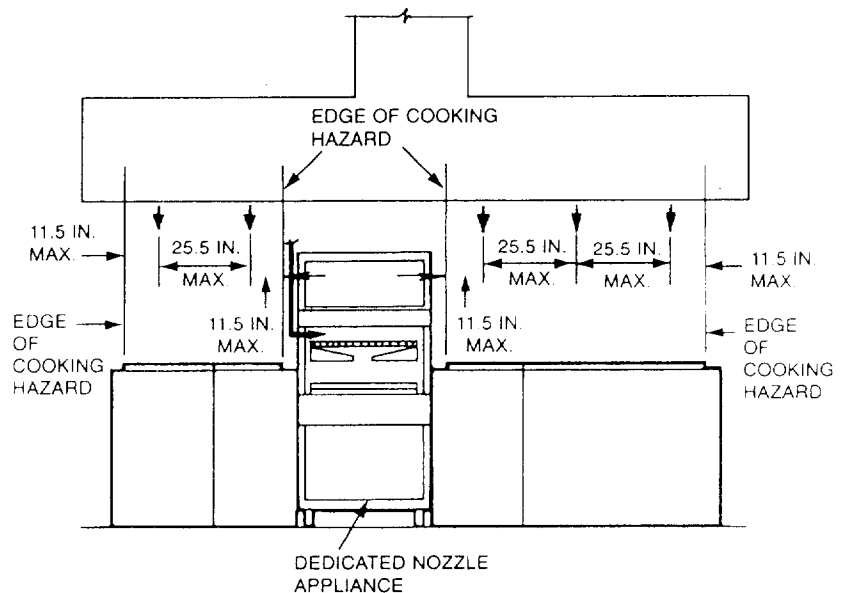


FIGURE 5a
001756

CTION

Nozzle Duct Protection:

A "D" nozzle, Part No. 426093, will protect rectangular, round ducts with a maximum perimeter of 100 in. The nozzle must be installed 0-8 in. (0-20 cm) into the opening and 0-3 in. (0-7.6 cm) from the front edge, aimed at the center of the opening. See Figure 7.

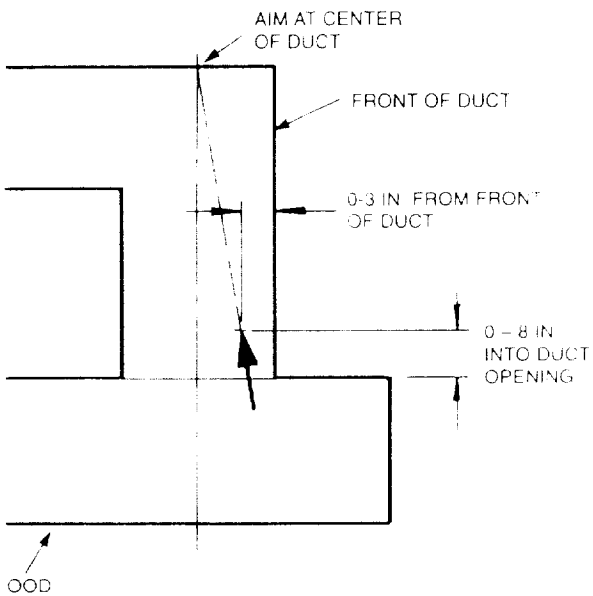


FIGURE 7
001635

Nozzle Duct Protection: (Rectangular or Square)

For ducts that exceed 100 perimeter in., duct protection can be utilized. The duct must be to equal modules with the diagonal dimension of module not exceeding 37 3/8 in. See Figure 8.

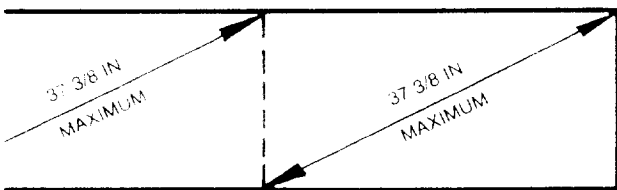


FIGURE 8
001610

The nozzle must be installed 0-8 in. (0-20 cm) into the opening and 0-3 in. (0-7.6 cm) from the front edge and aimed at the center of the opening.

NOTICE

In installations where a UL listed damper assembly is employed, the "DL" nozzle can be installed beyond the 8 in. (20 cm) maximum, to point just beyond the damper assembly that it not interfere with the damper. Exceeding the

ELECTROSTATIC PRECIPITATOR PROTECTION (ESP)

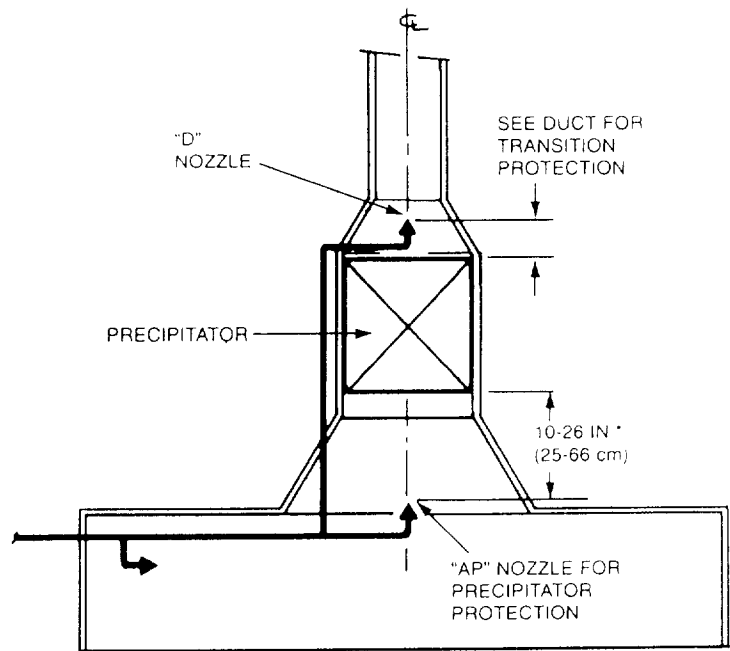
Some restaurant ventilating ducts have an electrostatic precipitator installed at or near the base or it may be installed midway or at the end of the duct system. These precipitators are used to aid in the cleaning of exhaust air.

Normally electrostatic precipitators do not require protection but should the "authority having jurisdiction" require protection, use the following guidelines.

Ducts with precipitators located at or near the base can be protected using a "D" nozzle above the precipitator and an "AP" nozzle (Part No. 423480) for the precipitator. One "AP" nozzle must be used for each cell being protected.

If the area above the precipitator is a duct, the nozzle(s) must be positioned according to duct protection guidelines.

The "AP" nozzle (Part No. 423480) must be centered 10 to 26 in. (25 to 66 cm) below the precipitator and aimed to discharge at the center of each precipitator cell. However, if it is physically impossible to mount the nozzle at 10 to 26 in. (25 to 66 cm) due to precipitator placement, the nozzle may be mounted closer than 10 in. (25 cm). See Figure 9.



* IF PHYSICALLY IMPOSSIBLE AT 10 TO 26 IN. (25 TO 66 cm), NOZZLE MAY BE MOUNTED CLOSER THAN 10 IN. (25 cm)

FIGURE 9
000196

STEM DESIGN

NOTATION

em uses the "AP" Nozzle (Part No. 423480) for

ll protect 11 linear ft. (3.4 m) of plenum length, ank or "V" bank. The nozzle must be located as), and aimed down the length of the plenum. **ist not** exceed 25 in. (63.5 cm).

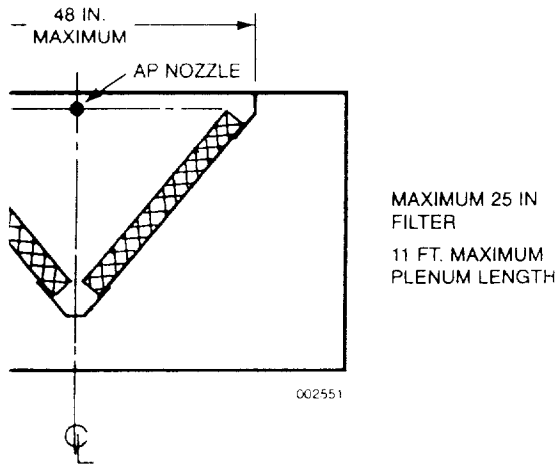
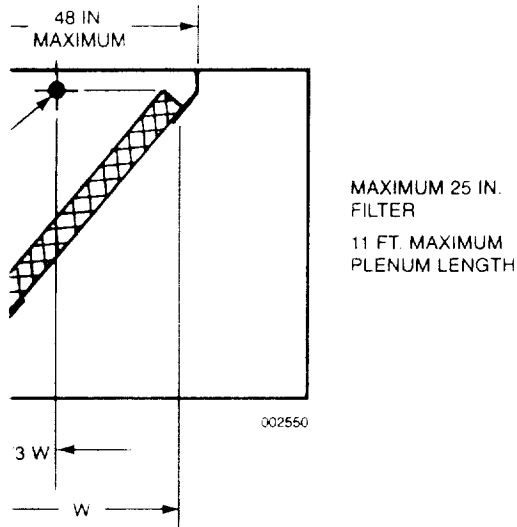


FIGURE 10

er single or "V" bank, with a linear extension 3.4 m), each filter bank may be protected using every 11 ft. (3.4 m) or less depending on the plenum. See Figure 11. The nozzles may point ons as long as the entire plenum area is pro. (3.4 m) limitation is not exceeded. See Figure ioning shown in Figure 13 is not an acceptable n because the plenum area directly under the discharge pattern of either nozzle.

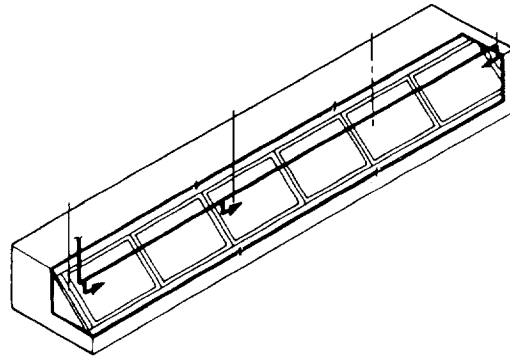
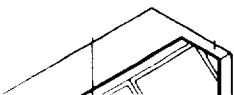


FIGURE 12

000207

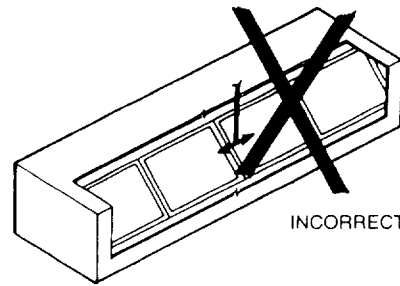


FIGURE 13

000208

NOZZLE PLACEMENT SUMMARY CHART

Hazard	Nozzle Type	Height	Maximum Spacing	Location
Appliances (Overlapping Protection)	"AP," Part No. 423480	40-48 in. above top of appliance	11.5 in. from edge of hazard zone 25.5 in. center to center of nozzles	4 to 16 in. forward of hazard zone center line. Nozzle must be aimed at hazard zone centerline
High Proximity				
Appliances (Overlapping Protection) Low Proximity	"DL," Part No. 426093	13-24 in. above top of appliance	8 in. from edge of hazard zone 12 in. center to center of nozzles	13 to 19 in. from back of hazard zone. Nozzle must be aimed straight down
Plenum	"AP," Part No. 423480	Even with top of filter(s)	11 ft. per nozzle	Aimed horizontal
Duct	"DL," Part No. 426093	0-8 in. into duct	100 in. perimeter or circumference per nozzle unlimited	0-3 in. from front edge of duct aimed into center of duct

SIGN

A Restaurant Fire Suppression System may be used of different types of restaurant cooking appliances duct configurations. The design information listed in deals with the limitations and parameters of this pre-system. Those individuals responsible for the design of system must be trained, and hold a current Ansul PIRANHA training program.

A system is a pre-engineered hybrid wet chemical ng PRX agent for suppressing the fire and water to e cooking appliances, eliminating reflash. Design of system will require not only consideration of the abilities of the system, but also the source of water

sections must be carefully followed and completed during any installation.

ement Requirements

tribution Piping Requirements

ity and Cartridge Requirements

as Line Requirements

g Requirements

ystem Requirements

Station Requirements

and Electrical Gas Valve Requirements

ch and Pressure Switch Requirements

APPLIANCE PROTECTION DEFINITIONS

Cooking Hazard Area

The cooking hazard area is defined as the heated portion of the appliance where the actual cooking operation is performed, such as the griddle plate, broiler grate, fryer pot, wok pan, range burner grates, etc.

Hazard Zone

The hazard zone is defined as a theoretical, flat and level, rectangular surface, that includes all of the cooking hazards of the protected appliances under a common hood(s). The purpose of the hazard zone is to provide a means of locating the appliances and the overlapping nozzles, as well as aiming the overlapping nozzles. The hazard zone measures 32 in. deep by the length of the cooking hazard(s). The centerline of the hazard zone must bisect the 32 in. depth and run from right-to-left for the full width of the hazard zone.

Overlapping Nozzle Appliance Protection

Overlapping Nozzle Appliance Protection is defined as protection of cooking appliances by nozzles spaced uniformly at uniform elevations under a common hood(s). Overlapping protection of appliances is continuous for the full length of the hood or divided when group(s) of protected appliances are separated by counters or appliances not requiring protection.

Full hood continuous protection is defined as overlapping nozzle appliance protection that covers the complete appliance line-up located under the total hood length. All appliances under the hood are those which can be an ignition source of grease in the hood, grease removal device or duct.

Group protection is defined as overlapping nozzle appliance protection that protects individual hazard zones located under a common hood. These “groups” of appliances may be separated by appliances not requiring protection, such as steam equipment or work tables.

See Figure 3 (full hood continuous protection) and Figure 4 (multiple group protection).

Dedicated Nozzle Appliance Protection

Appliance protection using dedicated nozzle coverage is defined as protection of cooking appliances with enclosed cooking hazards, such as upright broilers, which cannot be protected with overlapping nozzles and therefore must be protected with nozzles dedicated to the appliance.

PROTECTION

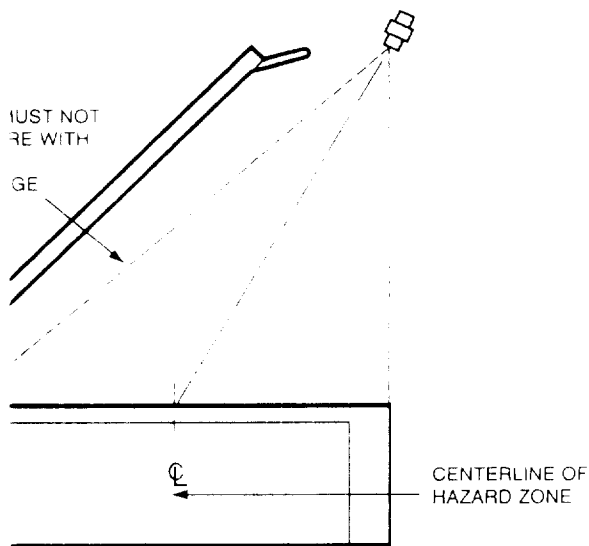
Cooking equipment (such as deep fat fryers, and broilers) that might be a source of ignition of food, grease removal device, or duct shall be provided with extinguishing equipment."

Appliances tested and approved include fryers, griddles, woks, tilt skillets and tilt braising pans. The code provides two types of appliance protection: dedicated appliance protection. Following is a list of appliances, along with their maximum cooking hazards, and protection with overlapping nozzle coverages.

Appliance Nozzle Coverage – High Proximity

	Maximum Cooking Hazard
	34 in. Deep x 5.8 sq. ft.
	36 in. Deep x Unlimited Length
	32 in. Deep x Unlimited Length
	30 in. Diameter x 5 in. Deep
	11 in. Diameter x 3 in. Deep
Skillet*	34 in. Deep x Unlimited Length
Broiler	32 in. Deep x Unlimited Length
	32 in. Deep x Unlimited Length (4 in. Maximum Fuel Depth)
Deep Broiler	32 in. Deep x Unlimited Length (12 in. Maximum Fuel Depth)
Griddle-Broiler	36 in. Deep x Unlimited Length
Skillet	36 in. Deep x Unlimited Length

*Appliance location



NOZZLES TO BE PLACED TOWARD THE FRONT OF THE APPLIANCE TO MINIMIZE THE POTENTIAL FOR THE SKILLET OR BRAISING PAN TO INTERFERE WITH THE NOZZLE DISCHARGE.

FIGURE 1

000071

- ▶ 2. The overlapping high proximity appliance nozzles must be located 40 in. to 48 in. above the top surface of the protected appliances. See Figure 2a. Exception No. 1: Nozzle dimensions for wok protection are measured to bottom of wok.
- ▶ Exception No. 2: When using overlapping high proximity appliance nozzles in areas where there is a back shelf, the nozzle cannot be positioned in the shaded area as shown in Figure 2. Also, back shelf must not extend more than 11 in. over the hazard zone or be less than 20 in. above the hazard zone. See Figure 2.

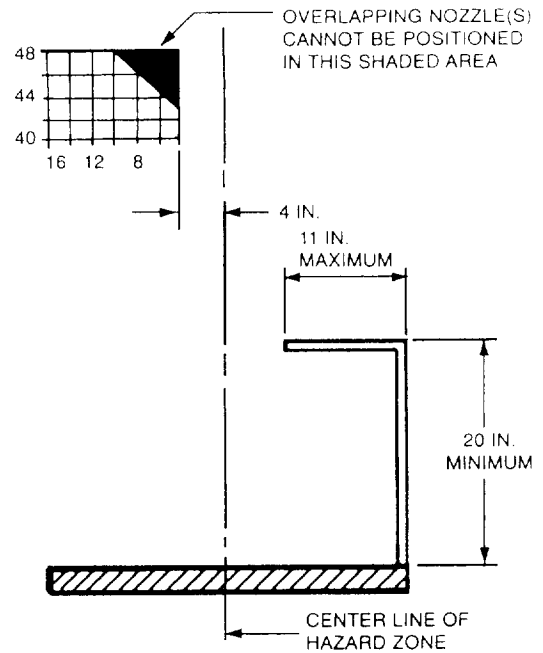
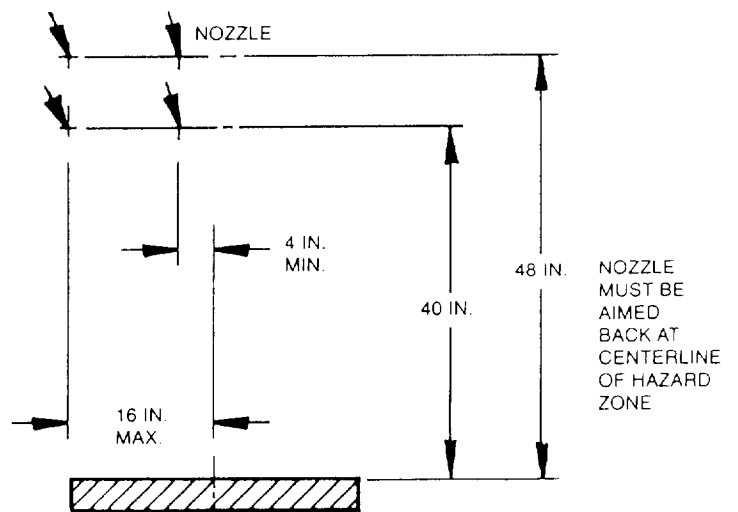


FIGURE 2

001758

- ▶ 3. The overlapping high proximity appliance nozzles must be located 4 in. to 16 in. forward of the centerline of the selected hazard zone. See Figure 2a.



SECTION (Continued)

Appliance Coverage – Low Proximity

	<u>Maximum Cooking Hazard</u>
	27 5/8 in. x 4 sq. ft.
	36 in. Deep x Unlimited Length
	32 in. Deep x Unlimited Length
Broiler	36 in. Deep x Unlimited Length
Grill	36 in. Deep x Unlimited Length
	32 in. Deep x Unlimited Length (4 in. Maximum Fuel Depth)
Broiler	32 in. Deep x Unlimited Length
Grill	32 in. Deep x Unlimited Length (6 in. Maximum Fuel Depth)

Appliance Nozzle and Hazard Zone Location –

For low proximity appliance nozzles must be the Part No. 426093, and must be located at the top of the hazard and in a straight line from right to left.

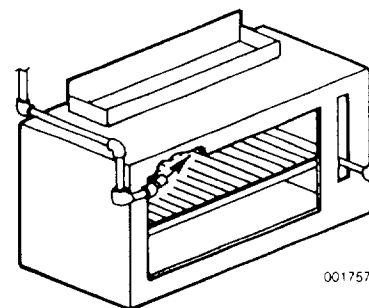
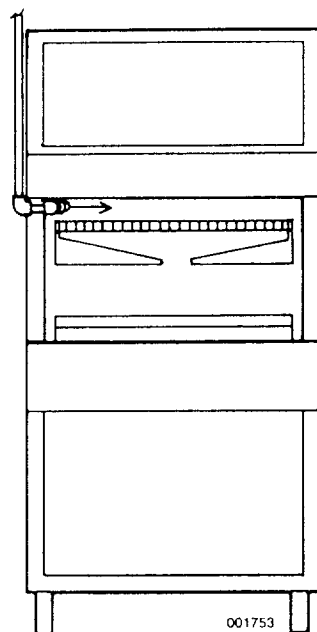
For low proximity appliance nozzle must be located in a straight line above the top surface of the protected appliance.

For low proximity appliance nozzle must be located in a straight line from the back of the hazard zone, and aimed at the center of the hazard. Exception: When protecting ranges, if the nozzle is wider than 17 in., the hazard cooking surface must be centered to the front or back of the nozzle centerline.

For protection of protected appliances, the overlapping low proximity nozzles must be located from right to left. If a nozzle is located a maximum of 8 in. inside the hazard zone of the cooking hazard of each end appliance, the nozzles must be located between the two end appliances with a maximum spacing of 12 inches.

Appliance Coverage

For protection of cooking appliances, along with their maximum cooking hazard which must be protected with dedicated nozzle.



LOCATE NOZZLE OUTSIDE IN EITHER OF THE UPPER CORNERS OF BROILER CHAMBER AND AIM AT CENTER OF GRATE WHEN GRATE IS IN THE HIGHEST POSITION. NOZZLE TIP MUST BE FLUSH WITH THE FRONT EDGE OF BROILING CHAMBER

LOCATE NOZZLE OUTSIDE IN EITHER OF THE UPPER CORNERS OF BROILER CHAMBER AND AIM AT CENTER OF CHAIN WHEN GRATE IS IN THE HIGHEST POSITION. NOZZLE TIP MUST BE FLUSH WITH THE FRONT EDGE OF BROILING CHAMBER.

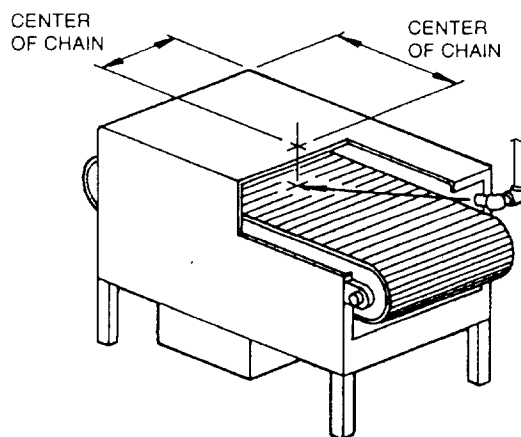
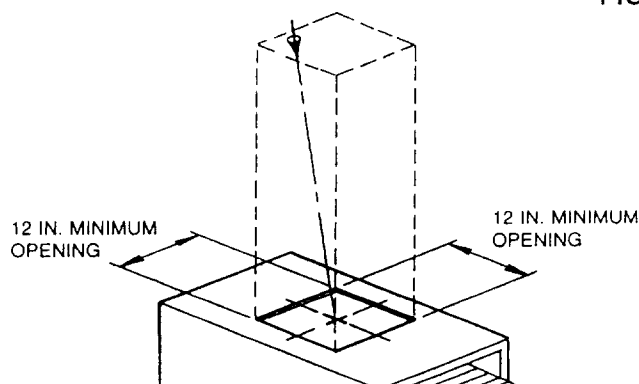


FIGURE 6

LOCATE NOZZLE OUTSIDE IN EITHER OF THE UPPER CORNERS OF BROILER CHAMBER, ABOVE CHAIN, AND AIM AT CENTER OF CHAIN. NOZZLE TIP MUST BE FLUSH WITH THE FRONT EDGE OF BROILING CHAMBER.

FIGURE 6a



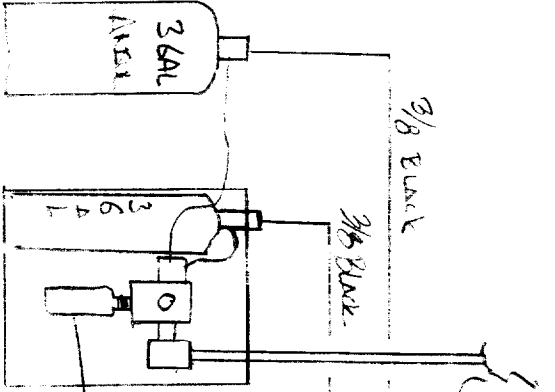
<u>Maximum Cooking Hazard</u>	<u>"AP" Nozzle Location</u>
27 1/2 in. depth x 35 1/2 in. width (inside cooking chamber)	See Figure 6
Maximum chain width of 21 in. and a maximum chamber depth of 26 in.	See Figure 6a
Maximum chain width of 21 in.	See Figure 6a

ESQUIRE CALL

1213 K ST

SAE CA

SYSTEM TO
REF CONNECTED
TIN TUBE
FURNISH



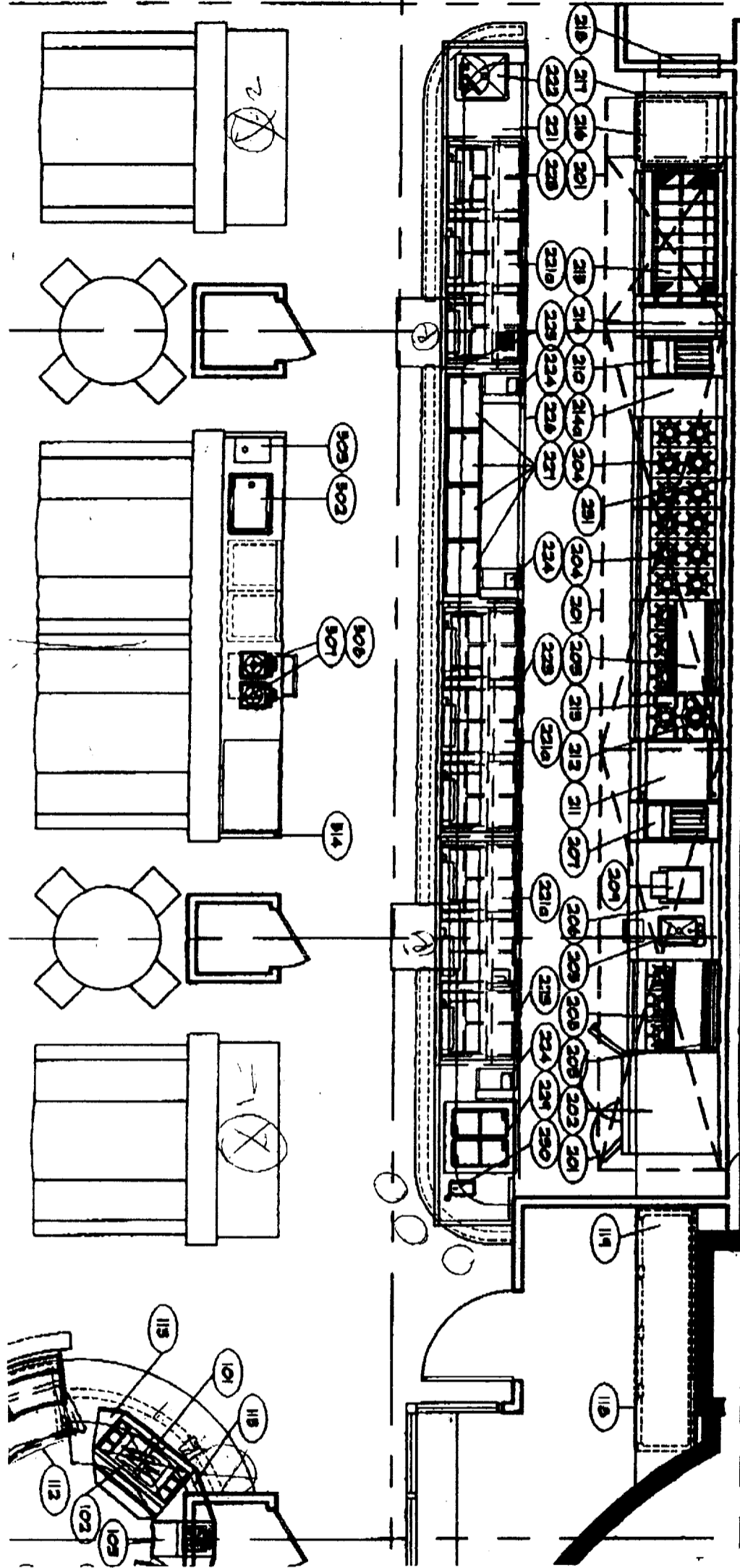
1/2 WATER SUPPLY FROM FIRE SPRINKLER SYSTEM

TO HOOD

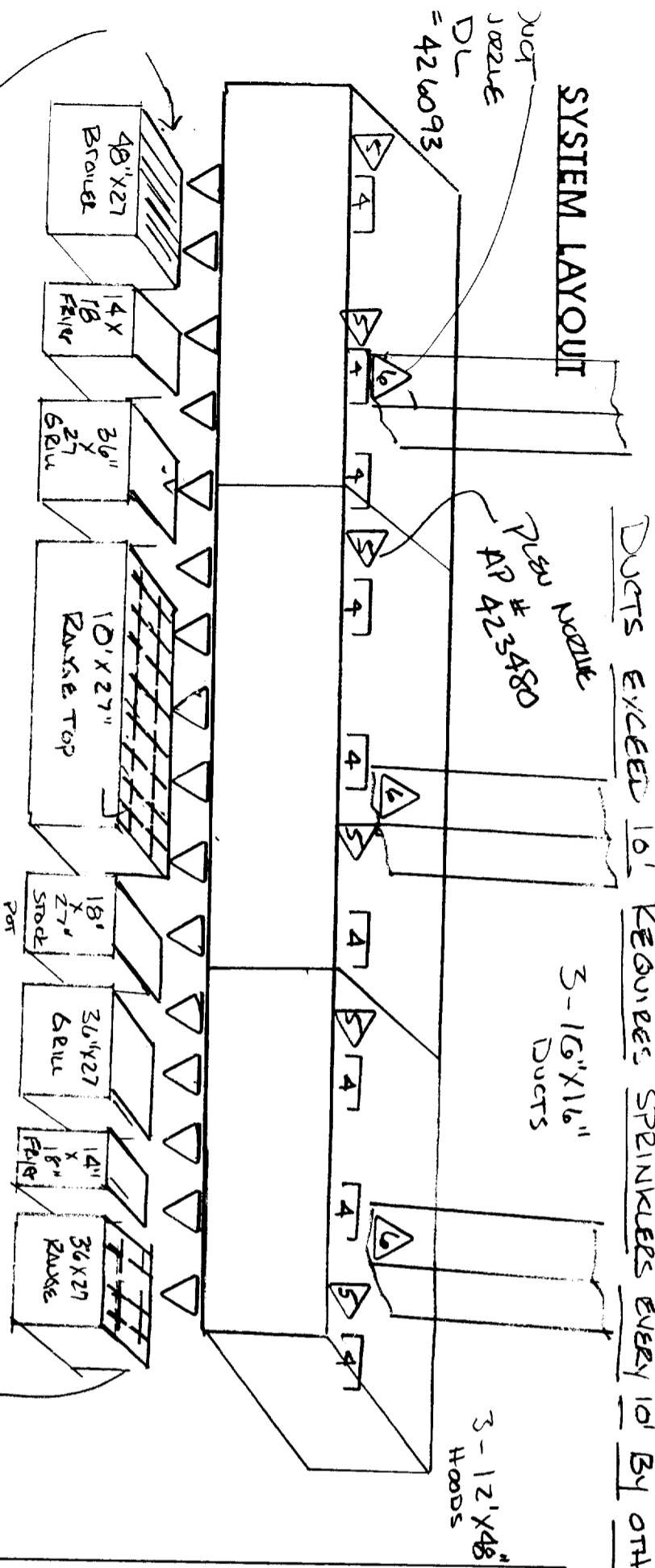
3/8 BLACK

NITRO CART L730

ANSWER PIZANHA 12



SYSTEM LAYOUT

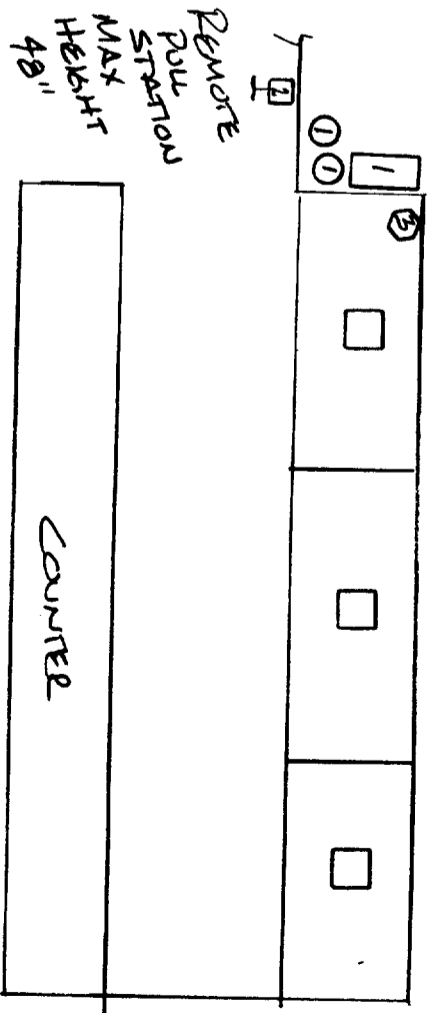


DUCTS EXCEED 10' REQUIRES SPRINKLERS EVERY 10' BY OTHER!!

3-16\"/>

3-12\"/>

FLOOR PLAN



40BC EXT REQUIRED

INSTALLING CONTRACTOR:

INNERWORKS FIRE & CONSTRUCTION, INC.
 P.O. Box 5321 Vacaville, CA 95696-6388

707-446-3383 Contractors Lic. # 730356 Fax: 707-447-6252

JOB SITE

ESQUIRE GRILL

13th + K ST
 SAE A

NOZZLE HEIGHT 30\"/>

ALL SURFACE NOZZLES TO BE AP PART # 423450

PIPING ALL PIPE 3/8 SCH 40 BLACK SYSTEM PER UL300

No.	Description	Quan.	Part #	Flows Per	Comments
1	ANSOL FIRE SYSTEM	1	REAVUA 13+13	13+13=26	A MAX. ALLOWABLE FLOWS 26
2	REMOTE MANUAL PULL		RPS-M		B ACTUAL NO. OF FLOWS 26
3	AUTO. MECH. GAS VALVE		GVSO-1		C SINGLE BANK FILTERS 1
4	DETECTOR BRACKET				D DUCT PERIMETER (S) (3)
5	PLENUM NOZZLE				E 450° FUSIBLE LINKS (4) 4
6	DUCT NOZZLE				F DRAWINGS NOT TO SCALE
7	FRYER NOZZLE				
8	RANGE NOZZLE				
9	BROILER NOZZLE				
10	DUCT NOZZLE				
11	GRID NOZZLE				
12	RANGE NOZZLE				

