

CITY OF SACRAMENTO
1231 I Street, Sacramento, CA 95814

Permit No: 0012534
Insp Area: 1

Site Address: 1400 SPROULE AV SAC
Parcel No: 001-0141-003

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

CONTRACTOR
FIRE TECH SYSTEMS
4516 ELIZABETH
SACRAMENTO CA 95821

OWNER
PENNEY L H TRESTE
SACRAMENTO CA
95825

ARCHITECT

Nature of Work: FIRE SUPPRESSION SYSTEM IN EXIST PAINT BOOTH

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. C).

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.

X License Class C16 License Number 717609 Date 11/13/00 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, prior 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, as a 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, as 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 hereby authorize representative(s) of this city to enter upon the abovementioned property for inspection purposes.

X Date 11/13/00 X 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 _____

X (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.

X Date 11/13/00 X 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 COMPENSATION, 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.

APPLICATION FOR COMMERCIAL BUILDING PERMIT

CITY OF SACRAMENTO
 DEVELOPMENT SERVICES DIVISION
 PERMIT SERVICES SECTION

1231 I Street, Rm. 200
 Sacramento, CA 95814 (916) 264-7619 FAX 264-7046

ACTIVITY #

0012534

Insp. Area

1C

Applicant **MUST** complete ALL Unshaded areas

ADDRESS 1400 Spruce Ave 95814 Suite _____
 PARCEL # _____

| | |
|---|---|
| <p style="text-align: center;">CONTACT</p> <p>Name <u>Rick Schaeffer Fire Tech →</u> Street Address _____ City/State/Zip _____ Phone _____ FAX _____ E-mail: _____</p> | <p style="text-align: center;">LICENSED CONTRACTOR Lic No. # <u>C16 717609</u></p> <p>Name <u>Rick Schaeffer Fire Tech Systems</u> Address <u>Box 216364</u> City/State/Zip <u>SAC, CA 95821</u> Phone <u>763-9525</u> FAX <u>456-5591</u> E-mail: _____</p> |
| <p style="text-align: center;">ARCHITECT/ENGINEER</p> <p>Name _____ Address _____ City/State/Zip _____ Phone _____ FAX _____ E-mail: _____</p> | <p style="text-align: center;">BUSINESS OWNER</p> <p>Name <u>Armando Uribe Vice Pres Ord Pty</u> Address _____ City/State/Zip _____ Phone <u>310-388-0390</u> FAX _____ E-mail: _____</p> |

→ Will permittee have any employees on the jobsite? No Yes → INSURANCE CO: _____
 → WORKER'S COMPENSATION POLICY # _____ EXPIRATION DATE: _____

NATURE OF WORK IN DETAIL: Install Fire Suppression System in an Existing Paint Booth

OCCUPANT/TENANT: _____ VALUATION: \$ 3000

| | | | | | | | | | |
|------------------------|--------------|------------|----------|------------|---------------------------------------|--|-------|--|---|
| FLOOD STATUS: | | | | S.C.A.T. | | | | | |
| JOB DESCRIPTION | | BLDG | SHELL | APT | TI() | REM() | SW | <input checked="" type="checkbox"/> FIRE | ADD <input checked="" type="checkbox"/> OTH |
| INSPECTION DISCIPLINES | | | BLDG | MECH | PLUMB | ELEC | | SITE | FIRE |
| # Stories | 1st flrArea. | Total Area | Use Zone | Occp Group | Const type | Fire Req. <input checked="" type="checkbox"/> Y <input type="checkbox"/> N | | Fed Code | Vio. File |
| | | | | <u>S</u> | | <input checked="" type="checkbox"/> PR | ALARM | | [H] [Quad] |
| B | L | P | M | E | <input checked="" type="checkbox"/> F | S | | D | PW UTIL |
| | | | | | | | | <u>MS</u> | |

COMMENTS: _____

REGIONAL SANITATION FEES? Yes No HEALTH DEPARTMENT? Yes No

WATER FLOW TEST FOR NEW BUILDINGS OR ADDITIONS? Provided Faxed

MEMORANDUM

SACRAMENTO FIRE DEPARTMENT

TO: BUILDING DEPARTMENT

DATE: 2-15-01

FROM: Troy Malaspino
Fire Marshal

SUBJECT: FIRE SYSTEM INSPECTION

A final inspection of the newly installed fire system at:

1400 Sproule Ave

Has been conducted by Inspector

S. Bodick

On

2-13-01

00-12534-154
Permit Number 308 Square Footage

PAINT BOOTH -
Type of Inspection
FIRE SUPPRESSION

They system is acceptable by this department.

Ross L. Woodman
By: Ross L. Woodman,
Fire Prevention Officer II

00-423
F.D. Reference Number



PG#0012534

FIRETECH

FIRE PROTECTION SYSTEMS

ISSUED

PLANS FOR FIRE SUPPRESSION SYSTEM
ONE DAY PAINT AND BODY
1400 SPROULE AVE
SACRAMENTO CA, 95814

OCT 13 2000

Sacramento Building Division

System - Pyro Chem PCI Industrial fire suppression system one 35 lb.ABC tank for duct and plenum protection and one 70 lb.ABC tank for work area protection

This is an existing business, the paint booth has been in operation for more than eight years, therefore there is no other work being done on this job electrical or otherwise. Protection of booth ordered by Fire Inspector Steve Bodick.

This is a pre-engineered automatic dry chemical fire suppression system as defined by N.F.P.A. 17 for dry chemical systems for the protection of vehicle paint spray booth, plenum and exhaust duct.

This system is equipped with automatic detection (fusible links) and manual activation

This set of plans and specifications must be kept on the job at all times and it is unlawful to make any changes or alterations from the Building Inspection Division.

All plans and installation done by Fire Tech Systems telephone number: 763-9525.

The approval of this plan and specification SHALL NOT be held to permit or approve the violation of any City Ordinance or State Law

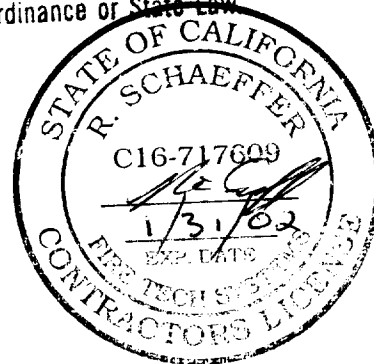


OFFICE OF SACRAMENTO PERMIT ASSISTANCE

OCT 18 2000

APPROVED
34 Foster 11-3-00
Sacramento Fire Department
PENDING FIELD INSPECTION

RECEIVED



#0012534C

HAZARD Coverage $\frac{1}{4}'' = 1'$

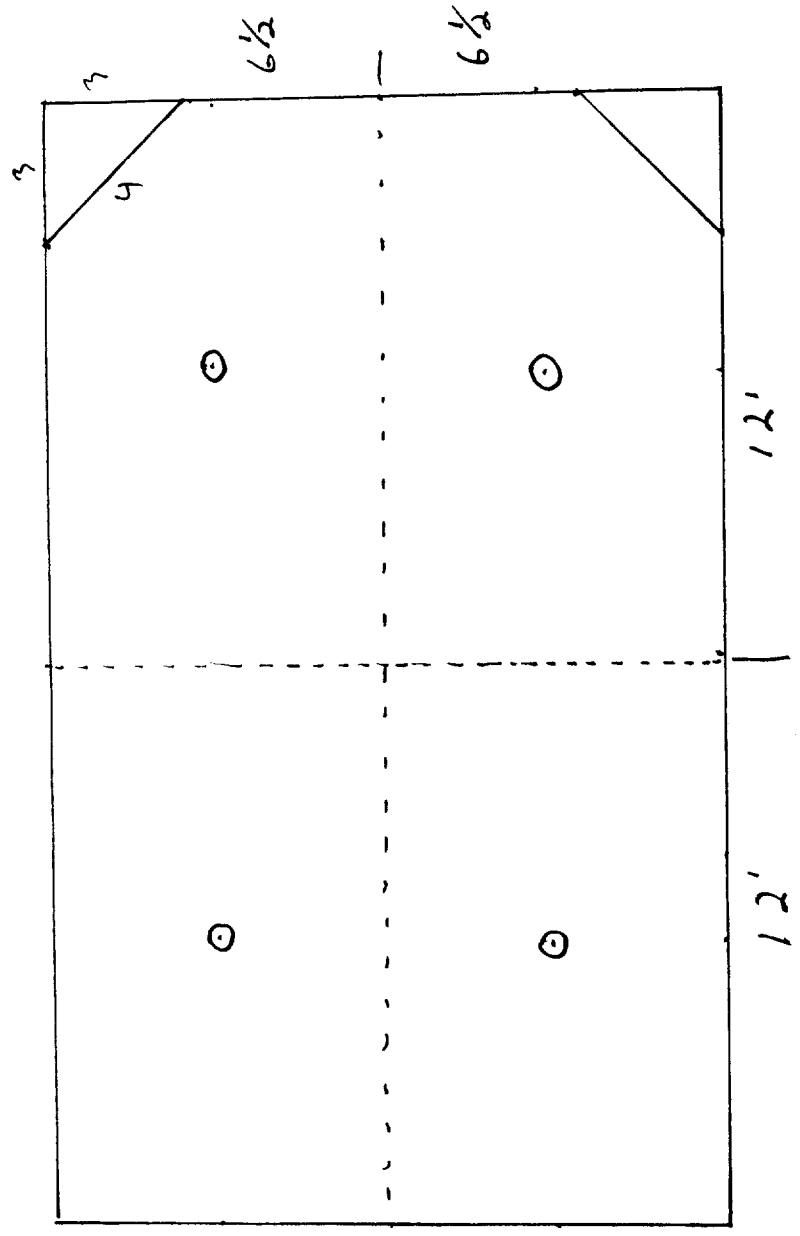
Work AREA 24' x 14' x 9'H = 3024 cu. ft.

1 NU-WA nozzle MAX coverage 1344 cu. ft.

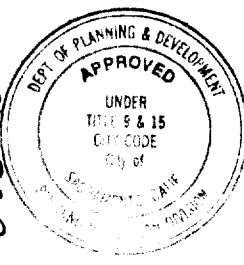
each nozzle covers 756 cu. ft.

PCI 70 Lb. ABC MAX 4 NU-WA nozzles

⊙ = 1 NU-WA nozzle
Paint Booth work area 24' x 14' x 9'H
Divide into 4 sections 12' x 6.5' x 9'



Paint Booth
overhead view



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The approval of this plan and specification SHALL NOT be held to excuse any violation of any City Ordinance or Code.

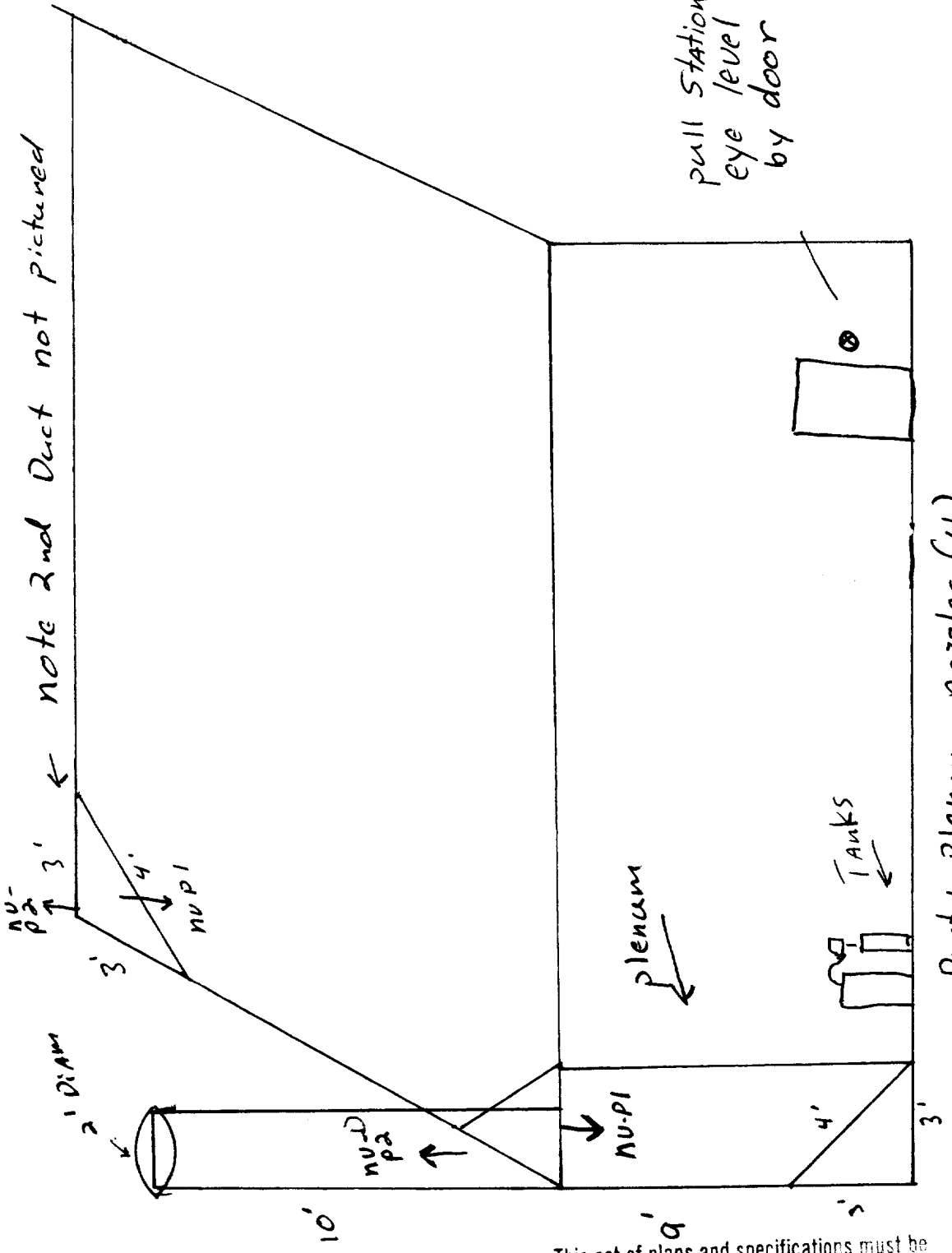
HAZARD COVERAGE $\frac{1}{4}'' = 1'$

(2) Plenum Area 3'x3'x4'x9'H = 40.5 cu. ft

1 NU-P1 Plenum Nozzle MAX COVERAGE 672 cu. ft.

(2) Duct Dimensions 2' Diameter by 10' High

1 NU-P2 Nozzle MAX COVERAGE AREA 2'11" Diam by 24' High



Duct →



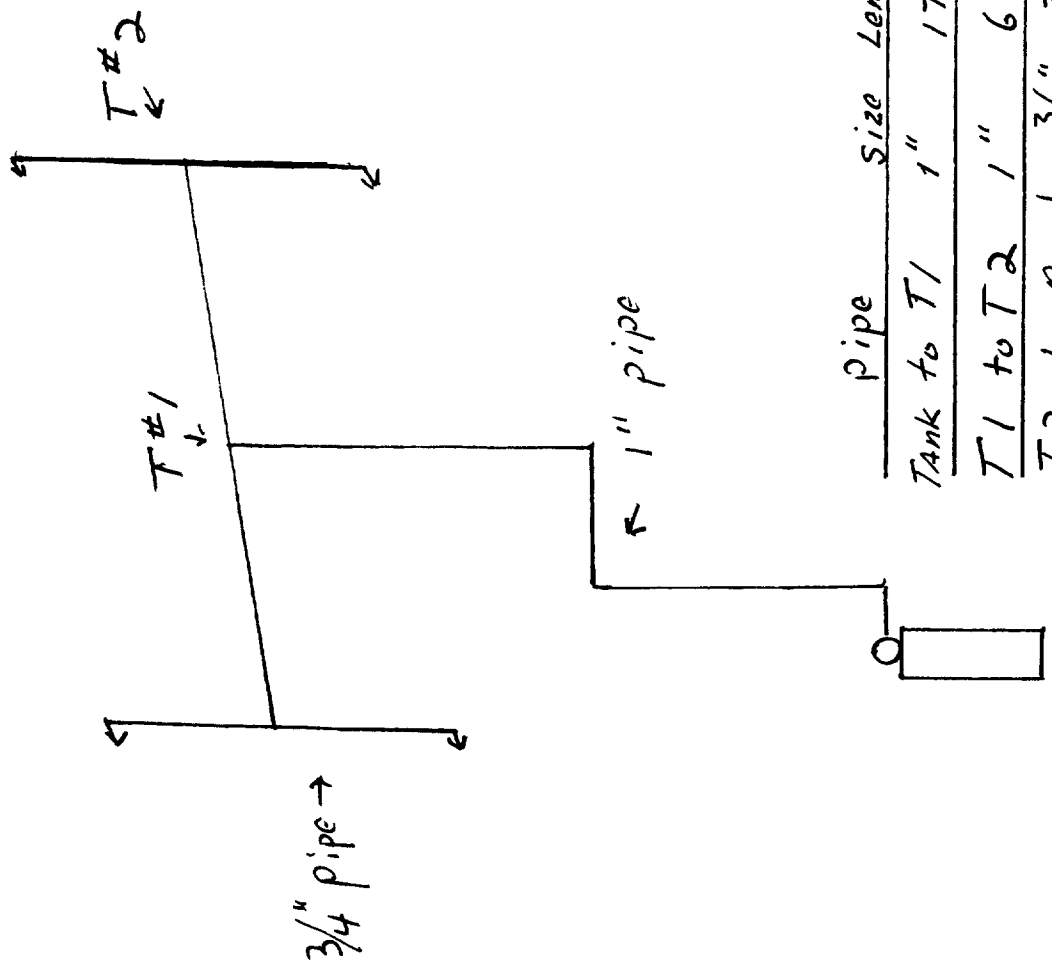
This set of plans and specifications must be kept on the job at all times and it is unlawful to make any changes or alterations to the same without written permission from the Building Inspection Department.

side view

Duct + Plenum Nozzles (4)

Supplied by PCI 35 ABC Tanks

Pipe: Tank to Nozzles 1/4" = 1"
170 ABC to NU-WA Nozzles



| Pipe | Size | Length / MAX Allowed | Elbows / MAX Allowed |
|--------------|------|----------------------|----------------------|
| Tank to T1 | 1" | 17' / 20' | 3 / 3 |
| T1 to T2 | 1" | 6' / 9' | 0 / 2 |
| T2 to Nozzle | 3/4" | 3.5' / 7' | 1 / 2 |

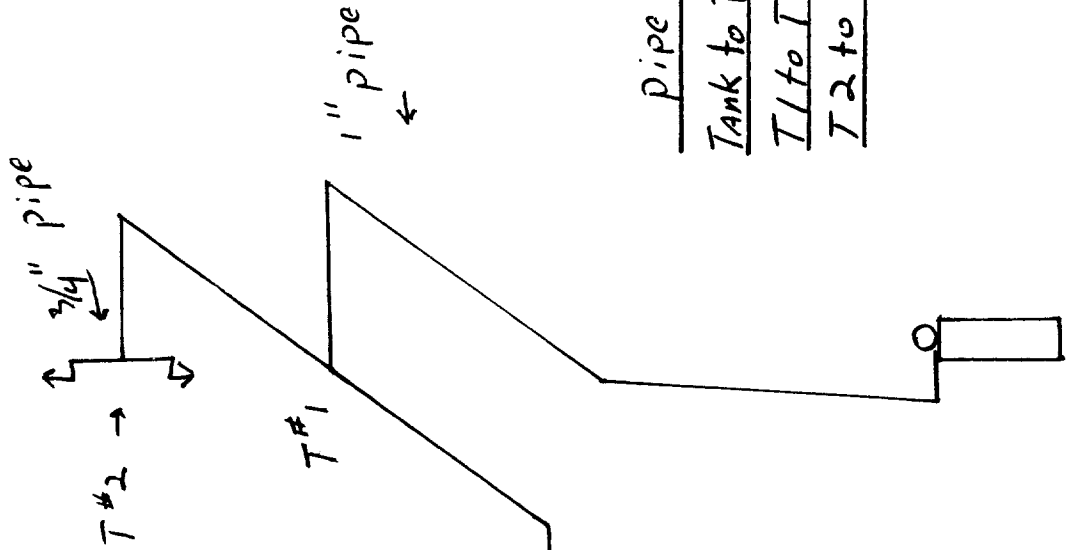


This set of plans and specifications must be kept on the job at all times and it is unlawful to make any changes or alterations from the same without written permission from the Engineer.

DAVID J. HARRIS
 S.E.C.C.

3-13

Pipe Tank to Nozzle $\frac{1}{4}'' = 1'$
35 ABC to Duct + Plenum Nozzles



| Pipe | Size | Length | max Allowed | Elbows | max Allowed |
|--------------|-----------------|--------|-------------|--------|-------------|
| Tank to T1 | 1" | 19' | 30' | 3 | 4 |
| T1 to T2 | 1" | 8' | 8' | 1 | 1 |
| T2 to Nozzle | $\frac{3}{4}''$ | 2' | 8' | 2 | 2 |



This set of plans and specifications must be kept on the job at all times and it is unlawful to make any change or alterations from the same without written permission from the

NVP 211
 NVP 1

See page

3-11

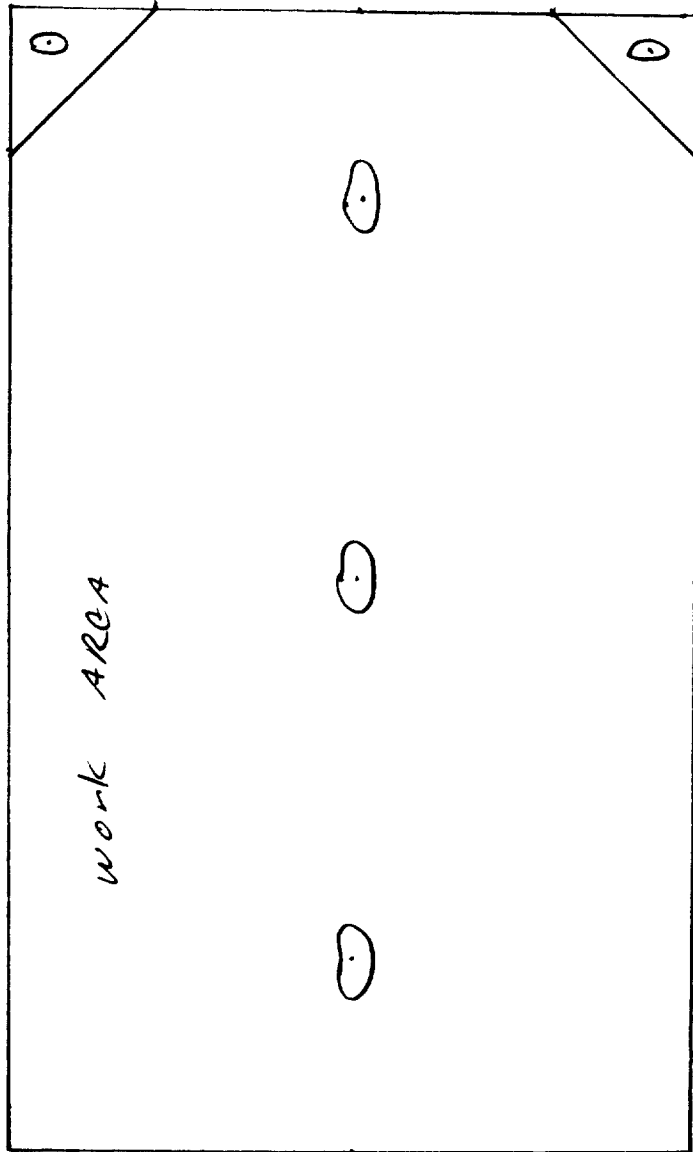
Ductor Location $\frac{1}{4}'' = 1'$

⊙ = 1 200° Fusible Link

WORK AREA 1 Link per each 25 lbs Chemical

1 Link At top of each plenum + Base of Ducts

Duct +
Plenum
↓



Paint Booth
overhead
view

This set of plans and specifications must be kept on the job at all times and it is disallowed to make any changes or alterations for any reason without written permission from the building inspection division.

By approving this set of plans, the contractor hereby certifies that the work will conform to all applicable codes and regulations of the City of New York.

CHAPTER I General Information

INTRODUCTION

Pyro Chem automatic dry chemical systems are of the pre-engineered type as defined by the NFPA Standard for Dry Chemical Extinguishing Systems, NFPA-17. All systems must be installed in accordance with the limitations in this manual. Limitations detailed in this manual have been established through extensive testing by Underwriters Laboratories, Inc. Installation and maintenance of the system must conform to the limitations detailed in this manual and be performed by an Authorized Pyro Chem, Inc. dealer.

The Pyro Chem, Inc. System utilizes either a sodium bicarbonate based dry chemical agent (specifically designed to suppress liquid, gas or electrical fires), or a monoammonium phosphate based dry chemical agent (specifically designed to suppress carbonaceous solid, liquid, gas or electrical fires). The system provides mechanical or electrical automatic actuation and can be manually actuated through a remote mechanical pull station. Upon actuation, the system discharges a pre-determined amount of agent to the hazard area.

The shutdown of fuel and power to the hazard area is required upon system actuation. Exhaust fan(s) in the ventilation system must be shut off on during system discharge to allow the proper concentration of agent to build up in the hazard area.

TEMPERATURE LIMITATIONS

The operating temperature range of the Pyro Chem, Inc. System are -

Sodium Bicarbonate (BC) Total Flooding Systems: -40° F. (-40° C.) minimum to 120° F. (49° C.) maximum.

Monoammonium Phosphate (ABC) Total Flooding Systems: -20° F. (-28° C.) minimum to 120° F. (49° C.) maximum.

Local Application - Overhead Systems: 32° F. (0° C.) minimum to 120° F. (49° C.) maximum.

Local Application - Tankside Systems: -20° F. (-28° C.) minimum to 120° F. (49° C.) maximum.

UL LISTING

The Pyro Chem, Inc. Industrial Fire Suppression System has been tested to the UL Standard for Pre-Engineered Dry Chemical Extinguishing System Units, UL1254 and Listed by Underwriters Laboratories, Inc.

This set of plans and specifications must be kept on the job at all times and it is understood that any changes or alterations from the original specifications must be approved by the manufacturer.

Note: Components with like Model Numbers bearing the Wells Fargo Pyro Technologies, Inc. name can be used as direct replacements for components bearing the Pyro Chem, Inc. name.

CHAPTER III SYSTEM DESIGN

General

Pyro-Chem Industrial Vehicle Paint Spray Booth Fire Suppression System has been designed and tested for use in commercial vehicle paint spray booth applications. The guidelines listed in this chapter deal with the limitations and parameters of various system configurations. It is the responsibility of the Certified installer to ensure that the proper system design is being utilized, and that the system meets the limitations and parameters listed in this chapter. Before attempting to design any system, it is necessary to attend a Factory Certification Training Class and become Certified to install Pyro-Chem Industrial Vehicle Paint Spray Booth Fire Suppression Systems. Because it is impossible to completely understand every aspect of a pre-engineered system simply by reading the Technical Manual, Pyro-Chem will not be responsible for system design, installation, or maintenance performed by any non-Certified person(s).

Choosing the Proper Agent

It is necessary for the system designer to consider the combustible material found in the hazard area to ensure proper protection. The agent used in the system must be approved for the hazard class of the combustible material. The following are the hazard classes:

“A” Class - Ordinary solid carbonaceous combustibles. These include wood, paper, cloth, fiberglass, and plastics

“B” Class - Flammable liquids and gases. These include paints, solvents, gasoline, oils, and hydraulic fluids.

“C” Class - Electrical appliances. These include computers, power generators, and power transformers.

“D” Class - Combustible metals such as sodium, potassium, magnesium, titanium, and zirconium. The Pyro-Chem Industrial Vehicle Paint Spray Booth Fire Suppression System is not intended to protect Class D hazards.

The following guidelines should be used for determining the proper agent:

ABC (monoammonium phosphate-based) - for use with all “A”, “B”, and “C” Class hazards.

As per NFPA 17, pre-engineered dry chemical systems are not approved for deep-seated or burrowing fires (such as ordinary combustibles where the agent cannot reach the point of combustion), or on chemicals that contain their own oxygen supply (such as cellulose nitrate). Do not mix different types of agents, or agents from different manufacturers. Chemical reactions may occur when incompatible chemicals are mixed. **Keep in mind that the agent must be acceptable to the Authority Having Jurisdiction.**

Designing the Proper Type of System

It is necessary for the system designer to consider the physical characteristics and layout of the hazard area to ensure proper protection. The hazard area must meet the criteria for a particular system for that system to be effective. Each nozzle is tested and designed to protect a certain part of the total hazard area.

In order to comply with the approval requirements of UL 1254 Standard, when protecting a Vehicle Paint Spray Booth, **no unclosable openings are allowed.**

The system must also contain a discharge time delay.

The ventilation system must be shut down before or simultaneously with the discharge of the system.

Total Flooding

a. Cylinders:

The Models PCI-15ABC, PCI-17ABC, PCI-25sABC, PCI-35ABC, and PCI-70ABC cylinders can be used for total flooding vehicle paint spray booth applications.

b. Nozzles:

Five nozzles are available for use in protecting vehicle paint spray booths:

| Nozzle | Application |
|--------|--------------------------------------|
| NV-WA | Work Area (Overhead Position) |
| NV-P1 | Backdraft/Pit (Overhead Position) |
| NV-UF | Under Floor (Overhead Position) |
| NV-DP2 | Pit/Duct (End Position - Horizontal) |
| N-DCT | Duct Only* |

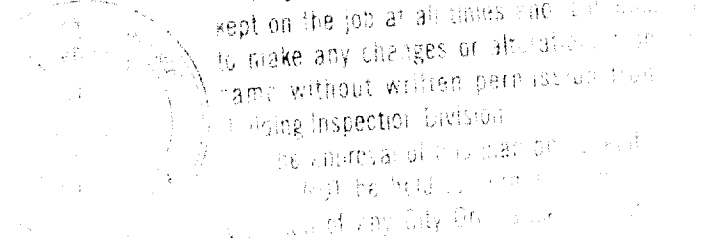
* Can be used with PCI-15ABC and PCI-25sABC cylinders only

c. Temperature Range:

The operating temperature range for vehicle paint booth applications is 32 °F. to 120 °F. (0 °C. to 48 °C.).

d. Piping Requirements:

Piping diagrams include limitations on pipe length and fittings. See the following pages for specific piping design and limitations for each size cylinder.



f. Nozzle Coverages:

| Protection | Nozzle | Protection Zone/Nozzle L W Ht | Specifications Maximum | Nozzle Location within Protection Zone | Nozzle Offset** | Nozzle Orientation |
|-----------------------|--------|----------------------------------|--|---|--------------------|---|
| Work Area | NV-WA | See Table 3-1 | Volume 1344 cu ft Area 112 sq. ft Diagonal 16.12 ft | Shortest side-2' max. off center (each side) Longest side-3' max. off center (each side) | 0" - 6" | Vertical |
| Backdraft Plenum | NV-P1 | 4' 14' 12' | Volume 672 cu ft Area 56 sq ft Side 14 ft | Shortest side-center Longest side-3 inch off center (each side) | 0" - 6" | Vertical |
| Pant Leg Plenum* | NV-P1 | 4' 14' 12' | Volume 672 cu ft Area 56 sq ft Side 14 ft | Shortest side-center Longest side-3 inch off center (each side) | 0" - 6" | Vertical |
| Pit (Option 1) | NV-P1 | 24' 4' 4' | Volume 384 cu ft Area 96 sq ft Side 24 ft | Shortest side-center Longest side-center | 0" - 6" | Vertical |
| Pit (Option 2) | NV-DP2 | 24' 4' 4' | Volume 384 cu ft Area 96 sq ft Side 24 ft | Shortest side-center Height-center | 2" - 8" | Horizontal |
| Under Floor Plenum | NV-UF | 16' 14' 4' | Volume 896 cu ft Area 224 sq ft Side 16 ft | Shortest side-center Longest side-center | 0" - 6" | Vertical |
| Exhaust Duct | NV-DP2 | 3' 3' 24' | Volume 216 cu ft Area 9 sq ft Side 3 ft (Round Duct 2'-11" diameter) | Shortest side (cross-section) -center Longest side (cross-section) | 0" - 6" | Horizontal for horizontal ducts Vertical for vertical ducts |

* Pant leg dimensions 4" minimum x 24" maximum

** Nozzle offset is the maximum distance from the tip of the nozzle to the closest edge of the protection zone.



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and specifications
I do approve the
above or State Law.

**TABLE 3-1
Work Area – Paint Spray Booth Nozzle Protection Chart**

Maximum Dimensions in feet/nozzle for one (1) Model NV-WA

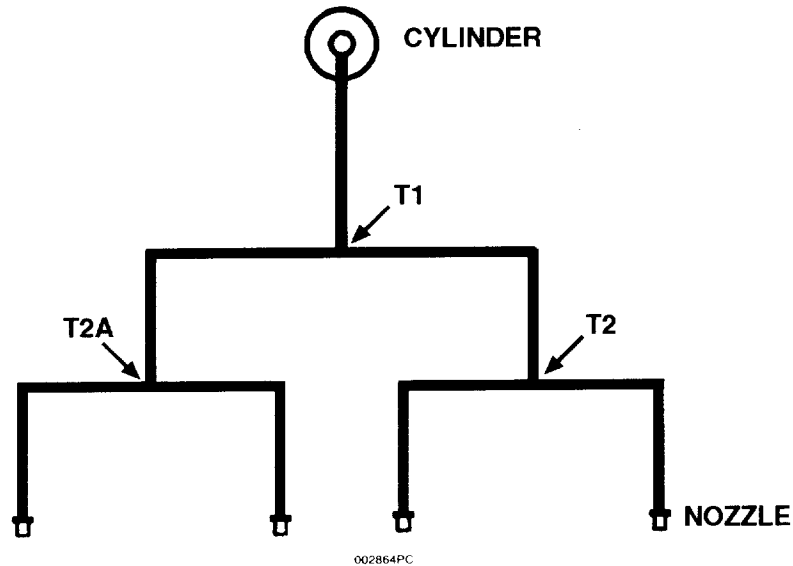
| Side 1 (feet) | Nozzle Height (feet) | Maximum Side 2 (feet) | Side 1 (feet) | Nozzle Height (feet) | Maximum Side 2 (feet) | Side 1 (feet) | Nozzle Height (feet) | Maximum Side 2 (feet) |
|---------------|----------------------|-----------------------|---------------|----------------------|-----------------------|---------------|----------------------|-----------------------|
| 3 | 12 | 15.84 | 8 | 12 | 14.00 | 13 | 12 | 8.62 |
| | 11 | 15.84 | | 11 | 14.00 | | 11 | 8.62 |
| | 10 | 15.84 | | 10 | 14.00 | | 10 | 8.62 |
| | 9 | 15.84 | | 9 | 14.00 | | 9 | 8.62 |
| | 8 | 15.84 | | 8 | 14.00 | | 8 | 8.62 |
| 4 | 12 | 15.62 | 9 | 12 | 12.44 | 14 | 12 | 8.00 |
| | 11 | 15.62 | | 11 | 12.44 | | 11 | 8.00 |
| | 10 | 15.62 | | 10 | 12.44 | | 10 | 8.00 |
| | 9 | 15.62 | | 9 | 12.44 | | 9 | 8.00 |
| | 8 | 15.62 | | 8 | 12.44 | | 8 | 8.00 |
| 5 | 12 | 15.33 | 10 | 12 | 11.20 | 15 | 12 | 5.92 |
| | 11 | 15.33 | | 11 | 11.20 | | 11 | 5.92 |
| | 10 | 15.33 | | 10 | 11.20 | | 10 | 5.92 |
| | 9 | 15.33 | | 9 | 11.20 | | 9 | 5.92 |
| | 8 | 15.33 | | 8 | 11.20 | | 8 | 5.92 |
| 6 | 12 | 14.97 | 11 | 12 | 10.18 | 16 | 12 | 2.00 |
| | 11 | 14.97 | | 11 | 10.18 | | 11 | 2.00 |
| | 10 | 14.97 | | 10 | 10.18 | | 10 | 2.00 |
| | 9 | 14.97 | | 9 | 10.18 | | 9 | 2.00 |
| | 8 | 14.97 | | 8 | 10.18 | | 8 | 2.00 |
| 7 | 12 | 14.53 | 12 | 12 | 9.33 | | | |
| | 11 | 14.53 | | 11 | 9.33 | | | |
| | 10 | 14.53 | | 10 | 9.33 | | | |
| | 9 | 14.53 | | 9 | 9.33 | | | |
| | 8 | 14.53 | | 8 | 9.33 | | | |



his set of plans and specifications shall be kept on the job at all times and it is unlawful to execute any changes or alterations from the same without written permission from the Building Inspection Division.

The approval of this plan and specification shall not be held to permit or approve the violation of any City Ordinance or State Law.

PCI-70ABC with 4 nozzles

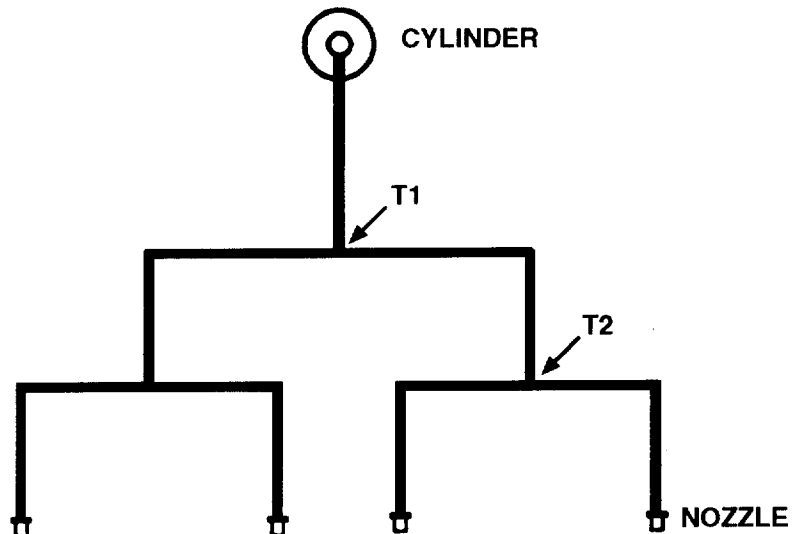


| Cylinder Size | Nozzle Quantity | Nozzle Type | Piping Section | Size | Length Maximum | Elbows Maximum |
|---------------|-----------------|-------------|----------------|------|----------------|----------------|
| PCI-70ABC | 4 | NV-WA | Cylinder to T1 | 1" | 20' | 3 |
| | | | T1 to T2 | 1" | 9' | 2 |
| | | | T2 to Nozzle | 3/4" | 7' | 2 |

| Cylinder Size | Nozzle Quantity | Nozzle Type | Piping Section | Size | Length Maximum | Elbows Maximum |
|---------------|-----------------|---|----------------|------|----------------|----------------|
| PCI-70ABC | 4 | 3 - NV-WA and 1 of: NV-P1 (See Note 6) NV-UF NV-DP2 | Cylinder to T1 | 1" | 20' | 3 |
| | | | T1 to T2 | 1" | 9' | 2 |
| | | | T2 to Nozzle | 3/4" | 7' | 2 |

This set of plans and specifications must be read and understood in their entirety at all times and it is understood that any changes or alterations to the original design must be approved in writing by the design engineer. Any changes or alterations to the original design must be approved in writing by the design engineer. Any changes or alterations to the original design must be approved in writing by the design engineer.

PCI-35ABC with 4 nozzles



002864PC

| Cylinder Size | Nozzle Quantity | Nozzle Type | Piping Section | Size | Length Maximum | Elbows Maximum |
|---------------|-----------------|---|----------------|------|----------------|----------------|
| PCI-35ABC | 4 | Any Combination of NV-P1, NV-D/P2, or NV-UF | Cylinder to T1 | 1" | 30' | 4 |
| | | | T1 to T2 | 1" | 8' | 1 |
| | | | T2 to Nozzle | 3/4" | 8' | 2 |

NOTE:

1. These limitations apply to PCI-35ABC using four nozzles (any combination of NV-P1, NV-UF, or NV-D/P2).
2. System piping must be balanced. Balanced piping is that in which the difference between the shortest actual pipe length from last tee to nozzle and the longest actual pipe length from last tee to nozzle does not exceed 10% of the longest actual pipe length from last tee to nozzle. The number and type of fittings for all last tee to nozzle sections must be equal.
3. A Main/Reserve Tee Check, Model TC-1, may be located between the cylinder and T1, and counts as two elbows in that section.
4. All systems protecting vehicle paint spray booths require a factory pre-set time delay.
5. When using an NV-P1 nozzle, the two largest discharge orifices in the nozzle body must be positioned parallel to the longest dimension of the hazard being protected.

...plans and specifications must be...
...at all times and it is...
...or alterations...
...approved...

Detector Placement

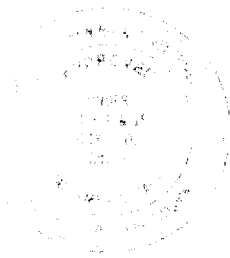
Thermal detectors are required in all hazard areas protected by the Pyro-Chem Vehicle Paint Spray Booth Industrial Fire Suppression System if automatic system operation is required. Either mechanical or electrical thermal detectors can be used for automatic system operation. Mechanical detectors (fusible links) are used in conjunction with the Pyro-Chem Models MCH, NMCH, and EN-MCU control devices. Electrical detectors are used in conjunction with the Pyro-Chem Models ECH-24 and ECH-120 Control Heads.

A temperature survey must be performed to determine the maximum ambient temperature of the hazard survey. The detectors used to protect a hazard area must be at least 70°F above the maximum ambient temperature.

The minimum number of thermal detectors (either mechanical or electrical) required for each hazard area is one detector for each twenty-five (25) pounds of agent required in that hazard area. To determine the number of detectors required in a particular hazard area, divide the total amount of agent required for that hazard area by 25 and round up. Keep in mind that at least one detector is required in every protected hazard area.

Additional detectors may be used to achieve faster system response; however, do not exceed the detector limitations outlined in this manual.

For detector location, evenly divide the protected hazard area into protected zones, with the number of protected zones equal to the number of detectors. Located a detector at the top center of each protected zone



This set of plans and specifications must be kept on the job at all times and it is understood that no changes or alterations to these plans shall be made without written permission from the Fire Department Inspection Division.

The approval of this plan and specifications shall not be held to permit or apply to the violation of any City Ordinance or State Law.

e. Nozzle Placement:

The nozzle is to be mounted in the center (See Note) of the protected area, with the discharge holes in the nozzle no greater than four (4) inches from the ceiling. For duct protection, the nozzle is to be mounted in the center. See Figure 3-1.

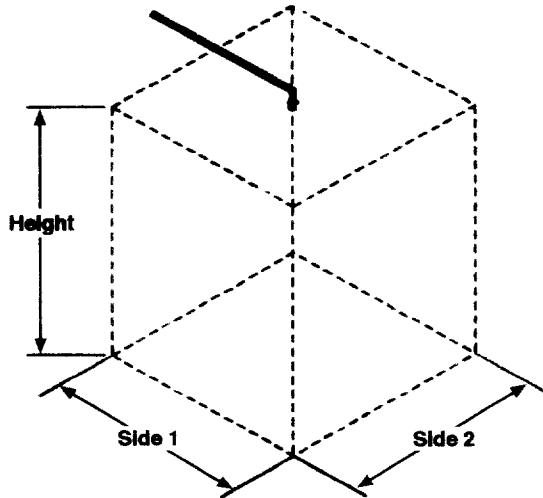


Figure 3-1. Nozzle Location

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Note: See Design Chart for allowable offset of nozzles from center of each hazard area.



This set of plans and specifications must be kept on the job at all times and it is unlawful to make any changes or alterations from the same without written permission from the Fire Inspection Division.
I hereby approve of this plan and specification and the Bid to install or approve the same in accordance with any City Ordinance or State Law.