



**SAN JOAQUIN COUNTY  
COMMUNITY DEVELOPMENT DEPARTMENT**

1810 E. HAZELTON AVE., STOCKTON, CA 95205-6232  
PHONE: 209/468-3121 FAX: 209/468-3163

## PAINT SPRAY BOOTH

### Plans Review

Plans are required for all paint-spray booths and shall be complete in floor layout and include the paint-spray booth, all ventilation equipment, electrical criteria, i.e. amps, watts, phase, hazard-classification and single-line drawing. Exterior booths shall be provided with engineering for both structural and lateral loads as required by the Building Code.

- \_\_\_ 1. Paint-spray booths shall not exceed 1500 sq. ft. nor 10% of the basic allowable area permitted for the major use of the building per the (CFC 1504.3.2.6.)
- \_\_\_ 2. Paint-spray booths shall be constructed of No. 18 gage steel. (CFC 1504.2.1)
- \_\_\_ 3. Interior surfaces shall be smooth and continuous without edges, designed to prevent pocketing of residue and permit the free passage of air from all parts. (CFC 1504.3.2.2)
- \_\_\_ 4. Paint-spray booths shall be protected by an approved automatic fire-extinguishing system. (CFC 1504.4)
- \_\_\_ 5. Spaces within the booth on the downstream and upstream side of the filters shall be protected with approved automatic sprinklers. (CFC 1504.4)
- \_\_\_ 6. The floor of the booth shall be of noncombustible material. (CFC 1504.3.2.3)
- \_\_\_ 7. Spray booths shall be separated from other operations by not less than three feet, by a wall or partition, or by greater distance as required by the A.H.J. (CFC 1504.3.2.5)
- \_\_\_ 8. Clear space. All portions of spray booths shall be readily available for cleaning and a clear space of not less than three feet shall be kept free of storage of combustible materials. (CFC 1504.3.2.5)
- \_\_\_ 9. Illumination of booths shall be through heat-treated or hammered wire glass. (CFC 1504.6.2)
- \_\_\_ 10. Exit doors from pre-manufactured spray booths shall not be less than two feet six inches by six feet eight inches. (CFC 1504.3.2.4 Exception)

- \_\_\_ 11. Clearly specify on the plans the Hazard-classification of wiring and equipment: (CFC 1503.2.1)
- \_\_\_ Wiring in the booth shall be explosion-proof: Class 1 Division 1.
  - \_\_\_ Wiring in the booth shall not produce sparks and shall be in rigid conduit or boxes and fittings containing no taps or splices.
  - \_\_\_ All metal parts of spray-booths, exhaust ducts and piping shall be electrically grounded.
- \_\_\_ 12. Clearly provide detail to show that the electrical equipment is interlocked with the ventilation system so that equipment cannot be operated unless the ventilation system is in operation. (CFC 1504.6.1.2.1)
- \_\_\_ 13. Spray booths shall have mechanical ventilation adequate to prevent the dangerous accumulation of vapors. (CFC 1504.7)
- \_\_\_ 14. The average air velocity through the booth cross-section shall not be less than 100 lineal fpm. (CFC 1504.7.5)
- \_\_\_ 15. Each booth shall have an independent exhaust system discharging to the exterior. (CFC 1504.7.2)
- \_\_\_ 16. The termination point for exhaust ducts discharging to the atmosphere shall not be less than the following: (CFC 1504.7.6)
1. Ducts conveying explosive or flammable vapors, fumes or dusts: 30 feet (9144 mm) from property line; 10 feet (3048 mm) from openings into the building; 6 feet (1829 mm) from exterior walls or roofs; 30 feet (9144 mm) from combustible walls or openings into the building which are in the direction of the exhaust discharge; 10 feet (3048 mm) above adjoining grade.
  2. Other product-conveying outlets: 10 feet (3048 mm) from property line; 3 feet (914 mm) from exterior wall or roof; 10 feet (3048 mm) from openings into the building; 10 feet (3048 mm) above adjoining grade.
  3. Environmental air duct exhaust: 3 feet (914 mm) from property line; 3 feet (914 mm) from openings into the building.
- \_\_\_ 17. Electrical motors for exhaust fans shall not be inside booths or ducts and rotating elements shall be non-ferrous or non-sparking. (CFC 1504.7.7)

\_\_\_ 18. Exhaust ducts shall be of the following U.S. Std. Gage:

<u>Diameter</u>	<u>Gage</u>
8" or less	No. 24
over 8" to 18"	No. 22
over 18" to 30"	No. 20
over 30"	No. 18

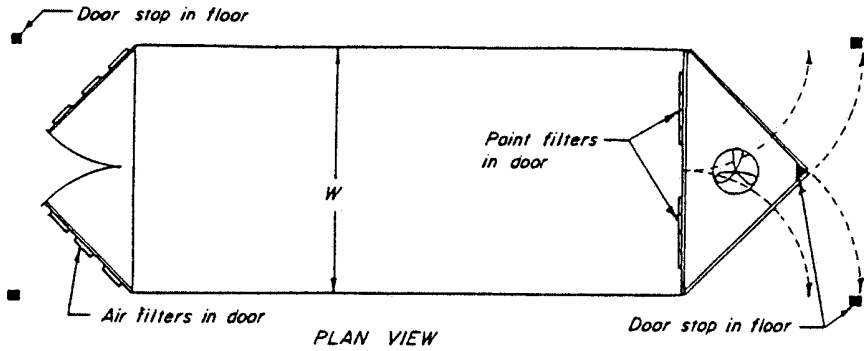
\_\_\_ 19. Exhaust ducts shall have eighteen (18) inches clearance to unprotected combustible construction. (CMC 610.7)

\_\_\_ 20. Protection of combustible construction may be accomplished to the following reductions:

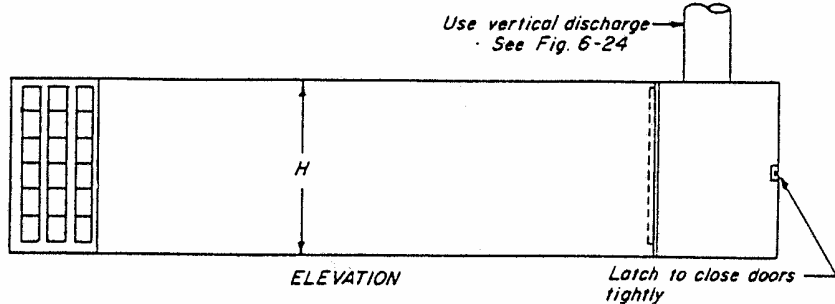
<u>Diameter</u>	<u>Reduced Clearance</u>
___ No. 28 gage metal on 1/4" insulating millboard .....	12"
___ No. 28 gage metal on 1/8" insulating millboard Spaced out 1" on noncombustible spacers .....	9"
___ No. 22 gage metal on 1" rock-wool with batts reinforced with wire-mesh.....	3"

\_\_\_ 21. Exhaust ducts shall not be installed at an angle exceeding forty-five (45) degrees. (CMC 610.3)

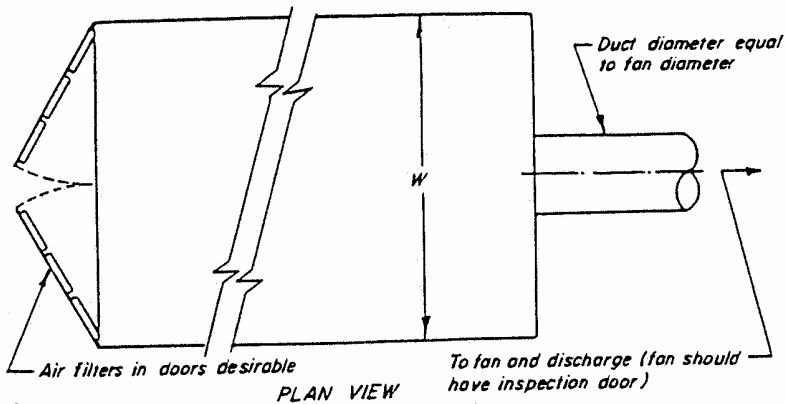
\_\_\_ 22. Clean-out opening shall be provided with tight-fitting sliding or hinged doors equal to or greater in thickness than the duct. (CMC 508.3)



PLAN VIEW

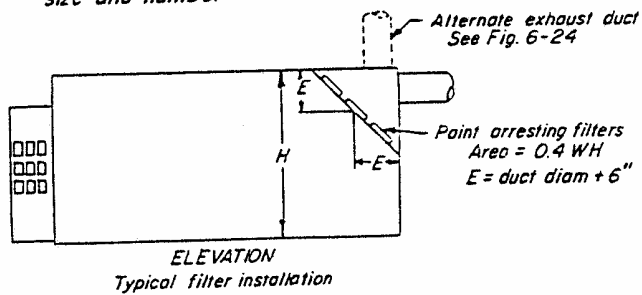


ELEVATION



PLAN VIEW

$Q = 100 \text{ cfm/sq ft of cross-sectional area}^*$   
 (When  $W \times H$  is greater than 150 sq ft,  $Q = 50 \text{ cfm/sq ft}$ )  
 Entry loss = 0.50 VP plus resistance of each filter bank when dirty  
 Duct velocity = 1000 - 3000 fpm  
 Air filters to be sized for 275 cfm/sq ft of filter  
 Paint filters: combustibility Class 2 or better; consult mfr for size and number



ELEVATION  
Typical filter installation