openings between two or more floors. Table 3412.6.6(1) contains the appropriate protection values. Multiply that value by the construction type factor found in Table 3412.6.6(2). Enter the vertical opening value and its sign (positive or negative) in Table 3412.7 under Safety Parameter 3412.6.6, Vertical Openings, for fire safety, means of egress, and general safety. If the structure is a one-story building or if all the unenclosed vertical openings within the building conform to the requirements of Section 708, enter a value of 2. The maximum positive value for this requirement shall be 2.

3412.6.6.1 Vertical opening formula. The following formula shall be used in computing vertical opening value.

$VO = PV \times CF$ **(Equation 34-5)**

where:

VO = Vertical opening value.

PV = Protection value [Table 3412.6.6(1)].

CF = Construction type factor [Table 3412.6.6(2)].

TABLE 3412.6.6(1) VERTICAL OPENING PROTECTION VALUE

PROTECTION	VALUE
None (unprotected opening)	-2 times number floors connected
Less than 1 hour	-1 times number floors connected
1 to less than 2 hours	1
2 hours or more	2

TABLE 3412.6.6(2) CONSTRUCTION-TYPE FACTOR

	TYPE OF CONSTRUCTION								
	IA	IB	IIA	IIB	IIIA	IIIB	IV	VA	VB
FACTOR	1.2	1.5	2.2	3.5	2.5	3.5	2.3	3.3	7

3412.6.7 HVAC systems. Evaluate the ability of the HVAC system to resist the movement of smoke and fire beyond the point of origin. Under the categories in Section 3412.6.7.1, determine the appropriate value and enter that value into Table 3412.7 under Safety Parameter 3412.6.7, HVAC Systems, for fire safety, means of egress and general safety.

3412.6.7.1 Categories. The categories for HVAC systems are:
1. Category a-Plenums not in accordance with Section 602 of the *International Mechanical Code*. -10 points.
2. Category b-Air movement in egress elements not in accordance with Section 1018.5. -5 points.
3. Category c-Both categories a and b are applicable. -15 points.
4. Category d-Compliance of the HVAC system with Section 1018.5 and Section 602 of the *International Mechanical Code*. 0 points.