CTC Meeting # 22
December 1 – 2, 2011
Labeling of fire rated glazing SG report & CTC # 22 Notes

Notes from meeting in red

Issue 1: Clarification of when 703.6 can be used rather than 716

1. Revise as follows:

716.2 Fire-resistance-rated glazing. Fire-resistance-rated glazing tested as part of a fire-resistance-rated wall or floor/ceiling assembly in accordance with ASTM E 119 or UL 263 and labeled in accordance with Section 703.6 ~~shall be permitted in fire doors and fire window assemblies where tested and installed in accordance with their listings and~~ shall not otherwise be required to comply with this section when used as part of a wall or floor/ceiling assembly. Fire-resistance-rated glazing shall be permitted in fire door and fire window assemblies where tested and installed in accordance with their listings and when in compliance with the requirements of this section.

Reason: ~~Reason~~: The changes proposed for Section 716.2 clarify how the code currently provides fire-resistance-rated glazing. The modifications to the first sentence clarify that when fire-resistance-rated glazing tested in accordance with ATM E119 and used as part of a wall or floor/ceiling assembly, it is not subject to the provisions of Section 716.

However, the second sentence clarifies that when fire-resistance-rated glazing is used as part of a fire door or fire window assembly there are provisions in Section 716 that apply to its use. As currently worded the user could be mislead as to the application of the additional requirements for applications involving fire door and window assemblies.

Issue 2:

Clarification and relocation of fire-rated glazing identification requirements

Sections 716.3, 716.3.1, 716.3.2, 716.5.8.3, 716.5.8.3.1 and 716.6.8

Revise as follows:

716.3 Marking fire-rated glazing assemblies. *Fire-rated glazing* assemblies shall be marked in accordance with Tables 716.3, 716.5, and 716.6.

716.3.1 Identification. For fire-rated glazing, the *label* shall bear the identification required in Table 716.3 and Table 716.5. "D" indicates that the glazing is permitted to be used in *fire door* assemblies and that the glazing meets the fire protection requirements of NFPA 252. "H" shall

indicate that the glazing meets the hose stream requirements of NFPA 252. "T" shall indicate that the glazing meets the temperature requirements of Section 716.5.5.1. The placeholder "XXX" represents the fire -rating period, in minutes.

716.3.2 Identification. For fire-protection-rated glazing, the *label* shall bear the following identification required in Table 716.3 and Table 716.6: "OH – XXX." "OH" indicates that the glazing meets both the fire protection and the hose-stream requirements of NFPA257 or UL9 and is permitted to be used in fire window openings. The placeholder "XXX" represents the fire-rating period, in minutes.

~~**716.3.1**~~ **716.3.3 Fire-rated glazing that exceeds the code requirements.** *Fire-rated glazing* assemblies marked as complying with hose stream requirements (H) shall be permitted in applications that do not require compliance with hose stream requirements. *Fire-rated glazing* assemblies marked as complying with temperature rise requirements

(T) shall be permitted in applications that do not require compliance with temperature rise requirements. *Fire-rated glazing* assemblies marked with ratings (XXX) that exceed the ratings required by this code shall be permitted.

716.5.8.3 Labeling. Fire-protection-rated glazing shall bear a *label* or other identification showing the name of the manufacturer, the test standard and information required in Section 716.3.1 ~~716.5.8.3.1~~ that shall be issued by an *approved agency* and shall be permanently identified on the glazing.

~~**716.5.8.3.1 Identification.** For fire-protection-rated glazing, the *label* shall bear the following four-part identification: "D - H or NH - T or NT - XXX." "D" indicates that the glazing shall be used in *fire door* assemblies and that the glazing meets the fire protection requirements of NFPA 252. "H" shall indicate that the glazing meets the hose stream requirements of NFPA 252. "NH" shall indicate that the glazing does not meet the hose stream requirements of the test. "T" shall indicate that the glazing meets the temperature requirements of Section~~

~~716.5.5.1. "NT" shall indicate that the glazing does not meet the temperature requirements of Section~~

~~716.5.5.1. The placeholder "XXX" shall specify the fire-protection-rating period, in minutes.~~

716.6.8 Labeling requirements. Fire-protection-rated glazing shall bear a label or other identification showing the name of the manufacturer, the test standard and information required in Section 716.3.2 and Table 716.6 that shall be issued by an approved agency and shall be permanently identified on the glazing.

Reason: The proposed changes to Section 716.3 (the addition of Section 716.3.1 and 716.3.2) clarify the requirements for marking of fire-rated glazing assemblies. No technical changes are being introduced.

Section 716.3.1 was moved from Section 716.5.8.3.1. The language was modified to clarify that the provisions of the section apply to fire-rated glazing used in fire door assemblies. Additionally, consistent with Tables 716.3 and Table 716.5, the language was modified to reflect the fact that fire-rated glazing assemblies that do not meet the temperature or hose stream requirements of this section are not required to be labeled as "NT" and "NH" respectively.

Section 716.3.2 was added to clarify that Tables 716.3 and 716.6 are the appropriate tables to be used for fire-protection-rated glazing, and to provide details of the required label and standards for performance, consistent with such tables. This section essentially reflects the same language as contained in Section 715.5.9.1 of the 2009 IBC.

The remaining changes are made to update cross-references to reflect the new section numbers.

Issue 3: Clarifications to Table 716.5 to reflect current code requirements. CTC questioned footnote b in the door vision panel column. The use of footnote b is appropriate as it is applicable to the entire column. Rather than leaving the first two row entries blank, reference to note b seems clearer.

Table 716.5

Revise as follows:

TABLE 716.5
OPENING FIRE PROTECTION ASSEMBLIES, RATINGS AND MARKINGS

TYPE OF ASSEMBLY	REQUIRED WALL ASSEMBLY RATING (hours)	MINIMUM FIRE DOOR AND FIRE SHUTTER ASSEMBLY RATING (hours)	DOOR VISION PANEL SIZE [b]	FIRE RATED GLAZING MARKING DOOR VISION PANEL [e d]	MINIMUM SIDELIGHT/ TRANSOM ASSEMBLY RATING (hours)		FIRE-RATED GLAZING MARKING SIDELITE/TRANSOM PANEL	
					Fire protection	Fire resistance	Fire protection	Fire resistance
Fire walls and fire barriers having a required fire-resistance rating greater than 1 hour	4	3	~~Not Permitted~~ See note b	~~Not Permitted~~ D-H-W-240	Not Permitted	4	Not Permitted	W-240
	3	3[a]	~~Not Permitted~~ See note b	~~Not Permitted~~ D-H-W-180	Not Permitted	3	Not Permitted	W-180
	2	$1^1/_2$	100 sq. in.[-e]	≤100 sq.in. = D-H-90 >100 sq.in.= D-H-W-90	Not Permitted	2	Not Permitted	W-120
	$1^1/_2$	$1^1/_2$	100 sq. in.[-e]	≤100 sq.in. = D-H-90 >100 sq.in.= D-H-W-90	Not Permitted	$1^1/_2$	Not Permitted	W-90
Horizontal exits in fire walls [e]	4	3	100 sq. in.	≤100 sq.in. = D-H-180 > 100 sq.in.= D-H-W-240	Not Permitted	4	Not Permitted	W-240

	3	3[a]	100 sq. in.	≤100 sq.in. = D-H-180 > 100 sq.in.= D-H-W-180	Not Permitted	3	Not Permitted	W-180
Shaft, exit enclosures and exit passageway walls	2	$1^1/_2$	100 sq. in. [c, d]	≤100 sq.in. = D-H-90 > 100 sq.in.= ~~D-H-T or~~ D-H-T-W-90	Not Permitted	2	Not Permitted	W-120
Fire barriers having a required fire-resistance rating of 1 hour: Enclosures for shafts, exit access stairways, exit access ramps, interior exit stairways, interior exit ramps and exit passageway walls	1	1	100 sq. in. [c, d]	≤100 sq.in. = D-H-60 >100 sq.in.= ~~D-H-T-60 or~~ D-H-T-W-60	Not Permitted	1	Not Permitted	W-60
					Fire protection			
Other fire barriers	1	$^3/_4$	Maximum size tested	D-H-~~NT-~~45	$^3/_4$		D-H-~~NT-~~45	
Fire partitions: Corridor walls	1	$^1/_3$ [b]	Maximum size tested	D-20	$^3/_4$ [b]		D-H-OH-45	
	0.5	$^1/_3$ [b]	Maximum size tested	D-20	$^1/_3$		D-H-OH-20	
Other fire partitions	1	$^3/_4$	Maximum size tested	D-H-45	$^3/_4$		D-H-45	
	0.5	$^1/_3$	Maximum size tested	D-H-20	$^1/_3$		D-H-20	

(continued)

TABLE 716.5—continued
OPENING FIRE PROTECTION ASSEMBLIES, RATINGS AND MARKINGS

TYPE OF ASSEMBLY	REQUIRED WALL ASSEMBLY RATING (hours)	MINIMUM FIRE DOOR AND FIRE SHUTTER ASSEMBLY RATING (hours)	DOOR VISION PANEL SIZE [b]	FIRE RATED GLAZING MARKING DOOR VISION PANEL [e, d]	MINIMUM SIDELIGHT/ TRANSOM ASSEMBLY RATING (hours)		FIRE-RATED GLAZING MARKING SIDELITE/TRANSOM PANEL	
					Fire protection	Fire resistance	Fire protection	Fire resistance
Exterior walls	3	$1^1/_2$	100 sq. in. [e, b]	≤100 sq.in. = D-H-90 >100 sq.in = D-H-W-90	Not Permitted	3	Not Permitted	W-180
	2	$1^1/_2$	100 sq. in. [e, b]	≤100 sq.in. = D-H-90 >100 sq.in.= D-H-W-90	Not Permitted	2	Not Permitted	W-120
					Fire Protection			

	1	3/4	Maximum size tested	D-H-45	3/4	D-H-45
Smoke barriers					**Fire protection**	
	1	1/3 ~~b~~	Maximum size tested	D-20	3/4	D-H-OH-45

For SI: 1 square inch = 645.2 mm.

a. Two doors, each with a fire protection rating of $1\frac{1}{2}$ hours, installed on opposite sides of the same opening in a fire wall, shall be deemed equivalent in fire protection rating to one 3-hour fire door.

~~b. For testing requirements, see Section 716.6.3.~~

b ~~c~~. Fire-resistance-rated glazing tested to ASTM E 119 in accordance with Section 716.2 shall be permitted, in the maximum size tested.

c ~~d~~. Except where the building is equipped throughout with an automatic sprinkler and the fire-rated glazing meets the criteria established in Section 716.5.5.

d ~~e~~. Under the column heading "Fire-rated glazing marking door vision panel," W refers to the fire-resistance rating of the glazing, not the frame.

e. See Section 716.5.8.1.2.1.

Reason: Needs to be drafted. Bob Davidson has prepared.

Issue 4: Clarify safety glazing requirements apply to all fire rated glazing and simplify the reference to Chapter 24.

Revise as follows:

716.5.8.4 Safety glazing. Fire ~~protection~~ rated glazing installed in *fire doors* assemblies ~~in areas subject to human impact in hazardous locations~~ shall also comply with the safety glazing requirements of Chapter 24 where applicable.

716.6.3 Safety glazing. Fire ~~protection~~ rated glazing installed in *fire window assemblies* ~~in areas subject to human impact in hazardous locations~~ shall also comply with the safety glazing requirements of Chapter 24 where applicable.

Reason: The proposed changes to Section 716.5.8.4 and 716.6.3 are needed to clarify the code changes approved in the last code cycle to ensure that there is no question that Chapter 24 language covers both fire-protection-rated glazing and fire-resistance-rated glazing. Proposed language also addresses requirements for safety glazing not defined as hazardous locations by referencing compliance with Chapter 24. No technical changes are being introduced.