



# COMMERCIAL FIRE-FLOW WORKSHEET

For all buildings constructed using the International Building Code, *Townhomes* and *Accessory Structures* more than 3,599 square feet



Permit Application # \_\_\_\_\_ Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_

Project Name: \_\_\_\_\_ Applicant Name: \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

**Exempt** Reason:

### Substantial Alteration Calculations (Structures constructed prior to November 14, 1992)

- Year Built: \_\_\_\_\_ Permit # \_\_\_\_\_ Existing building area \_\_\_\_\_
- Area of addition \_\_\_\_\_ + Area of replacement \_\_\_\_\_ + Area of remodel \_\_\_\_\_ Total = \_\_\_\_\_
- Lines 2 divided by line 1 x 100 = percent of alteration. \_\_\_\_\_
- Check alerts for cumulative total of any additions or replacements since 11/15/92.
- Add line 3 to line 4. If the total is equal to or greater than 50%, Fire Flow and Emergency Vehicle Access are required. \_\_\_\_\_

Accumulated alteration is less than 50%.

### Required Fire Flow

- Fire Flow Calculation Area: \_\_\_\_\_
- Type of Construction: \_\_\_\_\_
- Fire flow from Table 17C.60-3 \_\_\_\_\_ gpm for \_\_\_\_\_ hrs
- Credits  
Sprinklers<sup>1</sup>: 75%      50%
- Required Fire Flow: \_\_\_\_\_ gpm for \_\_\_\_\_ hrs
- Fire Flow available (from purveyor letter) must equal or exceed line 5. \_\_\_\_\_ gpm for \_\_\_\_\_ hrs
- Hydrants: Existing Hydrant Adequate      Additional Hydrants Required

<sup>1</sup> Sprinkler credit: 75% credit for NFPA 13 Sprinkler except H-occupancies receive 50% credit. Sprinkler credit: 50% for NFPA 13R. Shall not reduce to less than the minimum fire flow of Table 17C.60-3

<b>TABLE 17C.60-3</b>						
<b>Required Fire Flow for all Buildings Constructed Using the International Building Code, all Townhomes, and Accessory Structures Over 3,599 Square Feet</b>						
		IBC TYPE OF CONSTRUCTION				
REQUIRED FIRE FLOW (GPM)	DURATION (HOURS)	IA IB	IIA IIIA	VA IV- H.T.	IIB IIIB	VB
		WHEN TOTAL FIRE-FLOW CALCULATION AREA IN SQUAREFEET IS EQUAL TO OR LESS THAN THESE VALUES				
1,500	2	500	500	500	500	500
1,500	2	5,500	3,700	2,600	2,100	1,600
1,500	2	11,100	6,800	4,700	3,500	2,400
1,500	2	15,900	9,300	6,200	4,500	2,900
1,500	2	22,700	12,700	8,200	5,900	3,600
1,750	2	30,200	17,000	10,900	7,900	4,800
2,000	2	38,700	21,800	12,900	9,800	6,200
2,250	2	48,300	24,200	17,400	12,600	7,700
2,500	2	59,000	33,200	21,300	15,400	9,400
2,750	2	70,900	39,700	25,500	18,400	11,300
3,000	3	83,700	47,100	30,100	21,800	13,400
3,250	3	97,700	54,900	35,200	25,900	15,600
3,500	3	112,700	63,400	40,600	29,300	18,000
3,750	3	128,700	72,400	46,400	33,500	20,600
4,000	4	145,900	82,100	52,500	37,900	23,300
4,250	4	164,200	92,400	59,100	42,700	26,300
4,500	4	184,400	103,100	66,000	47,700	29,300
4,750	4	203,700	114,600	73,300	53,000	32,600
5,000	4	225,200	126,700	81,100	58,600	36,000
5,250	4	247,700	139,400	89,200	65,400	39,600
5,500	4	271,200	152,600	97,700	70,600	43,400
5,750	4	295,900	166,500	106,500	77,000	47,400
6,000	4	GREATER	GREATER	115,800	83,700	51,500
6,250	4			125,500	90,600	55,700
6,500	4			135,500	97,900	60,200
6,750	4			145,800	106,800	64,800
7,000	4			156,700	113,200	69,600
7,250	4			167,900	121,300	74,600
7,500	4			179,400	129,600	79,800
7,750	4			191,400	138,300	85,100
8,000	4			GREATER	GREATER	GREATER