



Mason County Fire Marshal's Office Commercial Fire-Flow Worksheet

426 West Cedar St. Shelton, WA 98584
360-427-9670 or 360-275-4467 ext.352



Permit # _____

**S
T
E
P
1**

Date of Application: _____ Parcel Number: _____

Name: _____ Business Name: _____

Phone Number: _____ Address: _____

Use and Occupancy classification: _____ Building Construction Type (IBC): _____

Square footage: _____ Fire flow as outlined in Appendix A: _____ gpm for _____ hour(s)

Closest hydrant location from furthest corner of building (as a vehicle would drive) _____ feet (+400 ft mitigation required)

**S
T
E
P
2**

Deduct from fire flow required: (Not less than 1500 gpm/min)

- Sprinkler System: Non-high pile (-75%)
- Sprinkler system: High pile (-50%)
- Monitored alarm system (-250 gpm)
- Off-site water supply (-250 gpm)
- 30 foot setbacks all sides (-250 gpm)

GPM required (Table A):	_____
Deductions (GPM):	- _____
Total required:	_____
Not less than 1500 gpm	

Do you have sufficient fire flow? Yes (stop if yes) No (go to step 3)

*Step 3 may be required in addition to the fire protection requirement set by the International Fire and Building Code. (Supporting documentation must be provided from local Fire District, Water District or Authority having jurisdiction)

**S
T
E
P
3**

- 0-1,999 sq/ft: No mitigation needed
- 2,000-5,999 sq/ft: (One of the following must be completed)
NFPA 72 addressable fire alarm system **OR** Maximum allowable fire area of 2000 sq/ft with Fire Walls
- 6000-11,999 sq/ft: (Both must be completed or NFPA 13 automatic sprinkler system installed)
NFPA 72 addressable fire alarm system **AND** Maximum allowable fire area of 5,999 sq/ft with Fire Walls
- 12,000+ sq/ft: NFPA 13 automatic sprinkler system

Portions of buildings that are separated by FIRE WALLS, without openings or penetrations, and constructed in accordance with the International Building Code are allowed to be considered separate fire-flow calculation areas.

Reviewer: _____ Date Completed: _____

Comments: _____

TABLE A
Mason County
Required Fire Flow for Buildings Constructed
Using the International Building Code and All Townhomes

Urban Growth Area		Construction Type (1)					Non-Urban Growth Area	
DURATION (HOURS)	REQUIRED FIRE FLOW (GPM)	IA and IB	IIA and IIIA	IV-H.T. VA	IIB IIIB	VB	REQUIRED FIRE FLOW (GPM)	DURATION (HOURS)
		WHEN TOTAL FIRE AREA IN SQUARE FEET (3) IS EQUAL TO OR LESS THAN THESE VALUES						
1	1,500	500	500	500	500	500	0 (4)	
1	1,500	5,500	3,700 6,800	2,600 4,700	2,100 3,500	1,600 2,400	500	¾
1	1,500	11,100	9,300	6,200	4,500	2,900	750	¾
1	1,500	15,900					1,000	1
1	1,500	22,700	12,700	8,200	5,900	3,600	1,250	1
1½	1,750	30,200	17,000	10,900	7,900	4,800	1,500	1
1½	2,000	38,700	21,800	12,900	9,800	6,200	1,750	1½
2	2,250	48,300	24,200	17,400	12,600	7,700	2,000	1½
2	2,500	59,000	33,200	21,300	15,400	9,400	2,250	2
2	2,750	70,900	39,700	25,500	18,400	11,300	2,500	2
2	3,000	83,700	47,100	30,100	21,800	13,400	2,750	2
3	3,250	97,700	54,900	35,200	25,900	15,600	3,000	2
3	3,500	112,700	63,400	40,600	29,300	18,000	3,250	3
3	3,750	128,700	72,400	46,400	33,500	20,600	3,500	3
4	4,000	145,900	82,100	52,500	37,900	23,300	3,750	3
4	4,250	164,200	92,400	59,100	42,700	26,300	4,000	4
4	4,500	184,400	103,100	66,000	47,700	29,300	4,250	4
4	4,750	203,700	114,600	73,300	53,000	32,600	4,500	4
4	5,000	225,200	126,700	81,100	58,600	36,000	4,750	4
4	5,250	247,700	139,400	89,200	65,400	39,600	5,000	4
4	5,500	271,200	152,600	97,700	70,600	43,400	5,250	4
4	5,750	295,900	166,500	106,500	77,000	47,400	5,500	4
4	6,000	GREATER	GREATER	115,800	83,700	51,500	5,750	4
4	6,250			125,500	90,600	55,700	6,000	4
4	6,500			135,500	97,900	60,200	6,250	4
4	6,750			145,800	106,800	64,800	6,500	4
4	7,000			156,700	113,200	69,600	6,750	4
4	7,250			167,900	121,300	74,600	7,000	4
4	7,500			179,400	129,600	79,800	7,250	4
4	7,750			191,400	138,300	85,100	7,500	4
4	8,000			GREATER	GREATER	GREATER	7,750	4

- (1) Types of construction are based upon IBC.
- (2) In Types I and II-FR construction, only the three largest successive floor areas shall be used.
- (3) Each portion of a building shall be considered as a separate building when separated by one or more fire walls with a fire resistance rating of not less than IBC Table 706 and meet all requirements of IBC 706 EXCEPT: NO OPENINGS ARE PERMITTED.
- (4) Shall not apply to IBC "H" occupancy classifications. Minimum fire flow is 500 gpm for Group H Occupancies.