## EDGEMONT PHASE II BUILDING

## FIRE FLOW REQUIREMENT WORK SHEET

DATE: #/15/19 CONTACT PHONE#:	303- 442-5458
NAME OF PROJECT: ENGEMONT PHA	SETT
OWNER/DEVELOPER: KEVIN STONEBUR	NER
TOTAL BUILDING SQ.FT: 17,032	
TYPE OF CONSTRUCTION (2015 IBC): IB	
OCCUPANCY CLASSIFICATION (2015 IBC): P-Z	WITH 5-2 PARKING GAUGE
BUILDING SPRINKLERED/UNSPRINKLERED: SPP	WELERED

FIRE FLOW DEMAND (GPM):_	
MIN.# OF HYDRANTS:	AVERAGE SPACING (FT): 500
MAX.DISTANCE FROM HYD.TO	O STREET OR ROAD: 250
(Please attach a vicinity map illus NOTES:	strating approx. location & distances to existing fire hydrants.)

USE TABLES ON FOLLOWING PAGE TO OBTAIN INFORMATION REQUIRED ABOVE.

#### FIRE-FLOW CALCULATION AREA (square feet) FIRE FLOW FLOW Type IA and IB<sup>a</sup> Type IIA and IIIA<sup>a</sup> (gallons per DURATION Type IV and V-A<sup>a</sup> Type IIB and IIIB<sup>a</sup> Type V-B<sup>a</sup> minute) (hours) 0-22,700 0-12.700 0-8,200 0-5,900 0-3,800 1,500 22,701-30,200 12,701-17,000 8,200-10,900 5,901-7,900 3.601-4.800 1,750 30,201-38,700 17,001-21,800 10,901-12,900 7,901-9.800 4,801-6,200 2 000 37,701-48,300 21,801-24,200 12,901-17,400 2 9,801-12.600 6,201-7,700 2,250 48,301-59,000 24,201-33,200 17,401-21,300 12,601-15,400 7,701-9,400 2,500 59,001-70,900 33,201-39,700 21,301-25,500 15,401-18,400 9,401-11,300 2 750 70,901-83,700 39,701-47,100 25,501-30,100 18,401-21,800 11,301-13,400 3,000 83,701-97,700 47,101-54,900 30,101-35,200 21,801-25,900 13,401-15,600 3,250 97,701-112,700 54,901-63,400 35,201-40,600 3 25,901-29,300 15,601-18,000 3,500 112,701-128,700 63,401-72,400 40,801-46,400 29,301-33,500 18,001-20,600 3,750 128,701-145,900 72,401-82,100 46,401-52,500 33,501-37,900 20,601-23,300 4,000 145,901-164,200 82,101-92,400 52,501-59,100 37,901-42,700 23,301-26,300 4.250 164,201-183,400 92,401-130,100 59,101-66,000 42,701-47,700 26,301-29,300 4.500 183,401-203,700 130,101-114.600 66,001-73,300 47,701-53,000 29,301-32,600 4,750 203,701-225,200 114,601-126,700 73.301-81.100 53,001-58,600 32.601-36.000 5,000 225,201-247,700 126,701-139,400 81,101-89,200 58,601-65,400 36,001-39,600 5.250 247,701-271,200 139,401-152,600 89,201-97,700 65.401-70 600 39,601-43,400 5.500 271,201-295,900 152,601-166,500 97,701-106,500 70,601-77,000 43.401-47,400 5,750 295,901-Greater 166,501-Greater 106,501-115,800 77,001-83,700 47,401-51,500 6.000 4 -115,801-125,500 83,701-90,600 51,501-55,700 6.250 \_\_ 125,501-135,500 90,601-97,900 55,701-60,200 6,500 ---135,501-145,800 97,901-106,800 60,201-64,800 6,750 \_ 145,801-156,700 106,801-113,200 64,801-89,600 7.000 156,701-187,900 \_ 113,201-121,300 69,601-74,600 7,250 167,901-179,400 121,301-129,600 74,601-79,800 7,500 ----179,401-191,400 129,601-138,300 79,801-85,100 7.750 191,401-Greater 138,301-Greater 85,101-Greater 8.000

### TABLE B105.1(2): REFERENCE TABLE FOR TABLES B105.1(1) AND B105.2

For S1: 1 square foot = 0.0929 m2, 1 gallon per minute = 3.785 L/m, 1 pound per square inch = 6.895 kPa.

a. Types of construction are based on the International Building Code.

b. Measured at 20 psi residual pressure.

## TABLE C102.1: REQUIRED NUMBER AND SPACING OF FIRE HYDRANTS

FIRE-FLOW REQUIREMENT (gpm)	MINIMUM NUMBER OF HYDRANTS	AVERAGE SPACING BETWEEN HYDRANTS <sup>a,b,c,f,g</sup> (feet)	MAXIMUM DISTANCE FROM ANY POINT ON STREET OR ROAD FRONTAGE TO A HYDRANT <sup>4,1,9</sup>
1,7500 or less	(1)	500	(250)
2,000-2,250	2	450	230
2,500	3	450	
3,000	3	400	225
3,500-4,000	4		225
4,500-5,000	5	350	210
5,500	5	300	180
	6	300	180
6,000	6	250	
6,500-7,000	7	250	150
7,500 or more	8 or more <sup>e</sup>		150
	o or more	200	120

For SI: 1 foot = 304.8 mm, 1 gallon per minute = 3.785 L/m.

a. Reduce by 100 feet for dead-end streets or roads.

- b. Where streets are provided with median dividers that cannot be crossed by fire fighters pulling hose lines, or where arterial streets are provided with four or more traffic lanes and have a traffic count of more than 30,000 vehicles per day, hydrant spacing shall average 500 feet on each side of the street and be arranged on an alternating basis. c.
- Where new water mains are extended along streets where hydrants are not needed for protection of structures or similar fire problems, fire hydrants shall be provided at spacing not to exceed 1,000 feet to provide for transportation hazards. d. Reduce by 50 feet for dead-end streets or roads.
- One hydrant for each 1,000 gallons per minute or fraction thereof. f.
- A 50-percent spacing increase shall be permitted where the building is equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1 of the International Fire Code.
- g. A 25-percent spacing increase shall be pennitted where the building is equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.2 or 903.3.1.3 of the International Fire Code or Section P2904 of the International Residential Code.

# EDGEMONT PHASE I BUILDING 2

## FIRE FLOW REQUIREMENT WORK SHEET

DATE: #/15/19CONTACT PHONE#: 303- 442-5458	
NAME OF PROJECT: ELOGEMONT PHASE IT	-
OWNER/DEVELOPER: KEVIA STONEBURNER	8
TOTAL BUILDING SQ.FT: 21,290	s
TYPE OF CONSTRUCTION (2015 IBC): TB	
OCCUPANCY CLASSIFICATION (2015 IBC): R-Z WITH S-Z PARKING GAULE	e
BUILDING SPRINKLERED/UNSPRINKLERED: SPRINKLERED	2

FIRE FLOW DEMAND (GPM): 1,500 DURATION (HRS): 2	
MIN.# OF HYDRANTS: AVERAGE SPACING (FT)	
MAX.DISTANCE FROM HYD.TO STREET OR ROAD 250	
(Please attach a vicinity map illustrating approx. location & distances to existing fire hydrants.)	

USE TABLES ON FOLLOWING PAGE TO OBTAIN INFORMATION REQUIRED ABOVE.

#### FIRE-FLOW CALCULATION AREA (square feet) FIRE FLOW FLOW (gallons per Type IA and IB<sup>a</sup> DURATION Type IIA and IIIA<sup>a</sup> Type IV and V-A<sup>a</sup> Type IIB and IIIB<sup>a</sup> Type V-B<sup>a</sup> minute (hours) 0-22,700 0-12,700 0-8,200 0-5,900 0-3.600 1,500 22,701-30,200 12,701-17,000 8,200-10,900 5,901-7,900 3,601-4,800 1750 30,201-38,700 17,001-21,800 10,901-12,900 7 901-9 800 4,801-6,200 2,000 37,701-48,300 21.801-24.200 12,901-17,400 9,801-12.600 6,201-7,700 2,250 48,301-59,000 24,201-33,200 17,401-21,300 12,601-15,400 7,701-9,400 2 500 59,001-70,900 33,201-39,700 21,301-25,500 15,401-18,400 9,401-11,300 2,750 70,901-83,700 39,701-47,100 25,501-30,100 18,401-21,800 11,301-13,400 3,000 83,701-97,700 47,101-54,900 30,101-35,200 21,801-25,900 13,401-15,600 3.250 97,701-112,700 54,901-63,400 3 35,201-40,600 25,901-29,300 15,601-18,000 3,500 112,701-128,700 63,401-72,400 40,601-46,400 29,301-33,500 18,001-20,600 3,750 128,701-145,900 72,401-82,100 46,401-52,500 33,501-37,900 20,601-23,300 4.000 145,901-164,200 82,101-92,400 52,501-59,100 37,901-42,700 23,301-26,300 4.250 164,201-183,400 92,401-130,100 59,101-66,000 42,701-47,700 26,301-29,300 4,500 183,401-203,700 130,101-114,600 66,001-73,300 47,701-53,000 29,301-32,600 4,750 203,701-225,200 114,601-126,700 73,301-81,100 53,001-58,600 32,601-36,000 5 000 225,201-247,700 126,701-139,400 81,101-89,200 58.601-65.400 36,001-39,600 5,250 247,701-271,200 139,401-152,600 89,201-97,700 65,401-70,600 39,601-43,400 5,500 271,201-295,900 152,601-166,500 97.701-106,500 70,601-77,000 43.401-47,400 5.750 295.901-Greater 166,501-Greater 106,501-115,800 77,001-83,700 47,401-51,500 6,000 4 115,801-125,500 -----83,701-90,600 51,501-55,700 6,250 125,501-135,500 90,601-97,900 55,701-60,200 6.500 ----\_ 135,501-145,800 97,901-106,800 60,201-64,800 6.750 145,801-156,700 106,801-113,200 64,801-69,600 7,000 156,701-167,900 113,201-121,300 69,601-74,600 7,250 167,901-179,400 121,301-129,600 74,601-79,800 7,500 179,401-191,400 ----129,601-138,300 79.801-85.100 7,750 191,401-Greater 138,301-Greater 85,101-Greater 8.000

#### TABLE B105.1(2): REFERENCE TABLE FOR TABLES B105.1(1) AND B105.2

For SI: 1 square foot = 0.0929 m2, 1 gallon per minute = 3.785 L/m, 1 pound per square inch = 6.895 kPa.

a. Types of construction are based on the International Building Code.

b. Measured at 20 psi residual pressure.

## TABLE C102.1: REQUIRED NUMBER AND SPACING OF FIRE HYDRANTS

FIRE-FLOW REQUIREMENT (gpm)	MINIMUM NUMBER OF HYDRANTS	AVERAGE SPACING BETWEEN HYDRANTS <sup>a,b,c,f,g</sup> (feet)	MAXIMUM DISTANCE FROM ANY POINT ON STREET OR ROAD FRONTAGE TO A HYDRANT <sup>4,1,9</sup>
(1,7500 or less)	(1)	(500)	250
2,000-2,250	2	450	225
2,500	3	450	
3,000	3	400	225
3,500-4,000	4		225
4,500-5,000	5	350	210
5.500		300	180
	6	300	180
6,000	6	250	150
6,500-7,000	7	250	
7,500 or more	8 or more <sup>e</sup>	200	150

For SI: 1 foot = 304.8 mm, 1 gallon per minute = 3.785 L/m.

a. Reduce by 100 feet for dead-end streets or roads.

b. Where streets are provided with median dividers that cannot be crossed by fire fighters pulling hose lines, or where arterial streets are provided with four or more traffic lanes and have a traffic count of more than 30,000 vehicles per day, hydrant spacing shall average 500 feet on each side of the street and be arranged on an alternating basis.

c. Where new water mains are extended along streets where hydrants are not needed for protection of structures or similar fire problems, fire hydrants shall be provided at spacing not to exceed 1,000 feet to provide for transportation hazards.

d. Reduce by 50 feet for dead-end streets or roads.

e. One hydrant for each 1,000 gallons per minute or fraction thereof.

f. A 50-percent spacing increase shall be permitted where the building is equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1 of the *International Fire Code*.

g. A 25-percent spacing increase shall be permitted where the building is equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.2 or 903.3.1.3 of the International Fire Code or Section P2904 of the International Residential Code.

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# EDGEMONT PHASE IF BUILDING 3

## FIRE FLOW REQUIREMENT WORK SHEET

DATE: #/15/19	CONTACT PHONE#:	303-442.	-54.58
NAME OF PROJECT: EDOG	MONT PHAS	SE TI	
OWNER/DEVELOPER: KEVIN	1 STONEBURY	IER.	
TOTAL BUILDING SQ.FT: 21,	290		
TYPE OF CONSTRUCTION (2015	BC): IB		
OCCUPANCY CLASSIFICATION	(2015 IBC): F-Z	WITH 5-2	PARKING GAULE
BUILDING SPRINKLERED/UNSP	RINKLERED: SPRA	KLERED	Chiphice

MIN.# OF HYDRANTS:	DURATION (HRS): 2 AVERAGE SPACING (FT.): 500
MAX.DISTANCE FROM HYD.TO STI	REET OR ROAD: 250
(Please attach a vicinity map illustratin NOTES:	g approx. location & distances to existing fire hydrants.)

USE TABLES ON FOLLOWING PAGE TO OBTAIN INFORMATION REQUIRED ABOVE.

#### TABLE B105.1(2): REFERENCE TABLE FOR TABLES B105.1(1) AND B105.2

FLOW	FIRE FLOW	FIRE-FLOW CALCULATION AREA (square feet)				
r DURATI (hours	(gallons per minute) <sup>b</sup>	Type V-B <sup>a</sup>	Type IIB and IIIB <sup>a</sup>	Type IV and V-A <sup>a</sup>	Type IIA and IIIA <sup>a</sup>	Type IA and IB <sup>a</sup>
	(1,500)	0-3,600	0-5,900	0-8,200	0-12,700	0-22,700)
	1,750	3,601-4,800	5,901-7,900	8,200-10,900	12,701-17,000	22,701-30,200
	2,000	4,801-6,200	7,901-9,800	10,901-12,900	17,001-21,800	30,201-38,700
2	2,250	6,201-7,700	9,801-12,600	12,901-17,400	21,801-24,200	37,701-48,300
	2,500	7,701-9,400	12,601-15,400	17,401-21,300	24,201-33,200	48,301-59,000
	2,750	9,401-11,300	15,401-18,400	21,301-25,500	33,201-39,700	59,001-70,900
	3,000	11,301-13,400	18,401-21,800	25,501-30,100	39,701-47,100	70,901-83,700
	3,250	13,401-15,600	21,801-25,900	30,101-35,200	47,101-54,900	83,701-97,700
3	3,500	15,601-18,000	25,901-29,300	35,201-40,600	54,901-63,400	97,701-112,700
	3,750	18,001-20,600	29,301-33,500	40,601-46,400	63,401-72,400	112,701-128,700
	4,000	20,601-23,300	33,501-37,900	46,401-52,500	72,401-82,100	128,701-145,900
	4,250	23,301-26,300	37,901-42,700	52,501-59,100	82,101-92,400	145,901-164,200
	4,500	26,301-29,300	42,701-47,700	59,101-66,000	92,401-130,100	164,201-183,400
	4,750	29,301-32,600	47,701-53,000	66,001-73,300	130,101-114,600	183,401-203,700
	5,000	32,601-36,000	53,001-58,600	73,301-81,100	114,601-126,700	203,701-225,200
	5,250	36,001-39,600	58,601-65,400	81,101-89,200	126,701-139,400	225,201-247,700
	5,500	39,601-43,400	65,401-70,600	89,201-97,700	139,401-152,600	247,701-271,200
	5,750	43.401-47,400	70,601-77,000	97,701-106,500	152,601-166,500	271,201-295,900
- 4	6,000	47,401-51,500	77,001-83,700	106,501-115,800	166,501-Greater	295,901-Greater
	6,250	51,501-55,700	83,701-90,600	115,801-125,500		
	6,500	55,701-60,200	90,601-97,900	125,501-135,500	_	
	6,750	60,201-64,800	97,901-106,800	135,501-145,800		
	7,000	64,801-69,600	106,801-113,200	145,801-156,700	_	
	7,250	69,601-74,600	113,201-121,300	156,701-167,900	-	
	7,500	74,601-79,800	121,301-129,600	167,901-179,400	_	
	7,750	79,801-85,100	129,601-138,300	179,401-191,400	-	
	8,000	85,101-Greater	138,301-Greater	191,401-Greater	_	_

For SI: 1 square foot = 0.0929 m2, 1 gallon per minute = 3.785 L/m, 1 pound per square inch = 6.895 kPa.

a. Types of construction are based on the International Building Code.

b. Measured at 20 psi residual pressure.

#### TABLE C102.1: REQUIRED NUMBER AND SPACING OF FIRE HYDRANTS

FIRE-FLOW REQUIREMENT (gpm)	MINIMUM NUMBER OF HYDRANTS	AVERAGE SPACING BETWEEN HYDRANTS <sup>a,b,c,f,g</sup> (feet)	MAXIMUM DISTANCE FROM ANY POINT ON STREET OR ROAD FRONTAGE TO A HYDRANT <sup>4,fg</sup>
(1,7500 or less)	$(\mathcal{D})$	(500)	(250)
2,000-2,250	2	450	225
2,500	3	450	225
3,000	3	400	225
3,500-4,000	4	350	210
4,500-5,000	5	300	180
5,500	6	300	180
6,000	6	250	150
6,500-7,000	7	250	150
7,500 or more	8 or more <sup>®</sup>	200	120

For S1: 1 foot = 304.8 mm, 1 gallon per minute = 3.785 L/m.

a. Reduce by 100 feet for dead-end streets or roads.

 b. Where streets are provided with median dividers that cannot be crossed by fire fighters pulling hose lines, or where arterial streets are provided with four or more traffic lanes and have a traffic count of more than 30,000 vehicles per day, hydrant spacing shall average 500 feet on each side of the street and be arranged on an alternating basis.

Where new water mains are extended along streets where hydrants are not needed for protection of structures or similar fire problems, fire hydrants shall be provided at spacing not to exceed 1,000 feet to provide for transportation hazards.

d. Reduce by 50 feet for dead-end streets or roads.

e. One hydrant for each 1,000 gallons per minute or fraction thereof.

f. A 50-percent spacing increase shall be pennitted where the building is equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1 of the International Fire Code.

g. A 25-percent spacing increase shall be permitted where the building is equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.2 or 903.3.1.3 of the International Fire Code or Section P2904 of the International Residential Code.



## FIRE FLOW REQUIREMENT WORK SHEET

DATE: #/15/19 CONTACT PHONE#: 303- 442-5458
NAME OF PROJECT: EDGEMONT PHASE T
OWNER/DEVELOPER: KEVIN STONEBURNER
TOTAL BUILDING SQ.FT: 21290
TYPE OF CONSTRUCTION (2015 IBC): IB
OCCUPANCY CLASSIFICATION (2015 IBC): F-Z WITH 5-2 PARKING GARAGE
BUILDING SPRINKLERED/UNSPRINKLERED: SPRINKLERED

FIRE FLOW DEMAND (GPM):_ MIN.# OF HYDRANTS:/	(,500 DURATION (HRS): 2 AVERAGE SPACING (FT.): 500
MAX.DISTANCE FROM HYD.TO	O STREET OR ROAD: 250
Please attach a vicinity map illus	strating approx. location & distances to existing fire hydrants.)

USE TABLES ON FOLLOWING PAGE TO OBTAIN INFORMATION REQUIRED ABOVE.

#### FIRE-FLOW CALCULATION AREA (square feet) FIRE FLOW EL OW DURATION Type IA and IB<sup>a</sup> (gallons per Type IIA and IIIA<sup>a</sup> Type IV and V-A<sup>a</sup> Type IIB and IIIB<sup>a</sup> Type V-B<sup>a</sup> minute) (hours) (0-22,700) 0-12,700 0-8,200 0-5.900 0-3.600 1,500 22,701-30,200 12,701-17,000 8,200-10,900 5,901-7,900 3,601-4,800 1.750 30,201-38,700 17.001-21.800 10,901-12,900 7,901-9,800 4,801-6,200 2,000 2 37,701-48,300 21,801-24,200 12.901-17.400 9,801-12,600 6,201-7,700 2,250 48.301-59,000 24,201-33,200 17,401-21,300 12.601-15.400 7,701-9,400 2.500 59,001-70,900 33,201-39,700 21.301-25.500 15,401-18,400 9,401-11,300 2,750 70,901-83,700 39,701-47,100 25,501-30,100 18,401-21,800 11,301-13,400 3,000 83,701-97,700 47,101-54,900 30,101-35,200 21,801-25,900 13.401-15.600 3 250 3 97,701-112,700 54 901-63 400 35,201-40,600 25,901-29,300 15,601-18,000 3.500 112,701-128,700 63,401-72,400 40.601-46.400 29,301-33,500 18,001-20,600 3,750 128,701-145,900 72,401-82,100 46,401-52,500 33,501-37,900 20,601-23,300 4,000 145,901-164,200 82.101-92.400 52,501-59,100 37,901-42,700 23,301-26,300 4,250 164,201-183,400 92,401-130,100 59.101-66.000 42,701-47,700 26,301-29,300 4.500 183,401-203,700 130,101-114,600 66,001-73,300 47 701-53 000 29,301-32,600 4,750 203,701-225,200 114,601-126,700 73,301-81,100 53,001-58,600 32 601-36 000 5.000 225,201-247,700 126,701-139,400 81,101-89,200 58,601-65,400 36,001-39,600 5.250 247,701-271,200 139,401-152,600 89,201-97,700 65,401-70,600 39,601-43,400 5,500 271,201-295,900 152,601-166,500 97,701-106,500 43.401-47,400 70,601-77,000 5,750 295,901-Greater 166 501-Greater 106,501-115,800 77,001-83,700 47,401-51,500 6.000 4 115 801-125 500 83,701-90,600 51,501-55,700 6,250 -----125,501-135,500 90.601-97.900 55.701-60.200 6,500 135,501-145,800 97,901-106,800 \_ 60.201-64.800 6,750 145.801-156,700 106,801-113,200 64,801-69,600 7,000 \_ 156,701-167,900 113,201-121,300 69,601-74,600 7,250 \_ 167,901-179,400 121,301-129,600 74,601-79,800 7 500 179,401-191,400 129.601-138.300 79,801-85,100 7,750 191,401-Greater 138,301-Greater 85.101-Greater 8.000

#### TABLE B105.1(2): REFERENCE TABLE FOR TABLES B105.1(1) AND B105.2

For S1: 1 square foot = 0.0929 m2, 1 gallon per minute = 3.785 L/m, 1 pound per square inch = 6.895 kPa.

a. Types of construction are based on the International Building Code.

b. Measured at 20 psi residual pressure.

#### TABLE C102.1: REQUIRED NUMBER AND SPACING OF FIRE HYDRANTS

FIRE-FLOW REQUIREMENT	MINIMUM NUMBER OF HYDRANTS	AVERAGE SPACING BETWEEN HYDRANTS <sup>a,b,c,f,g</sup> (feet)	MAXIMUM DISTANCE FROM ANY POINT ON STREET OR ROAD FRONTAGE TO A HYDRANT <sup>d.fg</sup>
(1,7500 or less)	$\mathcal{O}$	(500)	(250)
2,000-2,250	2	450	225
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3,000	3	400	225
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4,500-5,000	5	300	180
5,500	6	300	180
6,000	6	250	150
6,500-7,000	7	250	
7,500 or more	8 or more <sup>e</sup>	200	150

For S1: 1 foot = 304.8 min, 1 gallon per minute = 3.785 L/m.

a. Reduce by 100 feet for dead-end streets or roads.

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d. Reduce by 50 feet for dead-end streets or roads.

One hydrant for each 1,000 gallons per minute or fraction thereof.
 A 50-percent spacing increase shall be pennitted where the building

f. A 50-percent spacing increase shall be pennitted where the building is equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1 of the *International Fire Code*.

g. A 25-percent spacing increase shall be permitted where the building is equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.2 or 903.3.1.3 of the International Fire Code or Section P2904 of the International Residential Code.

## EDGEMONT PHASE II BUILDING 5

## FIRE FLOW REQUIREMENT WORK SHEET

DATE: # / 15/19	CONTACT PHONE#:	303-442	-5458		
NAME OF PROJECT: EDG	SEMONT PHA	SE TI			
OWNER/DEVELOPER: KEN	IN STONEBUR	NER			
TOTAL BUILDING SQ.FT:	,290				
<b>TYPE OF CONSTRUCTION (2)</b>	015 IBC): IB				
OCCUPANCY CLASSIFICATIO	ON (2015 IBC): アーフ	WITH 5-2	PARKING GARAGE		
BUILDING SPRINKLERED/UNSPRINKLERED: SPRINKLERED					

FIRE FLOW DEMAND (GPM): 1,500 DURATION (HRS): 2 MIN.# OF HYDRANTS: 1 AVERAGE SPACING (FT.): 500
MAX.DISTANCE FROM HYD.TO STREET OR ROAD: 250 (Please attach a vicinity map illustrating approx. location & distances to existing fire hydrants.) NOTES:

USE TABLES ON FOLLOWING PAGE TO OBTAIN INFORMATION REQUIRED ABOVE.

### TABLE B105.1(2): REFERENCE TABLE FOR TABLES B105.1(1) AND B105.2

FLOW	FIRE FLOW	FIRE-FLOW CALCULATION AREA (square feet)				
DURATION (hours)	(gallons per minute) <sup>b</sup>	Type V-B <sup>a</sup>	Type IIB and IIIB <sup>a</sup>	Type IV and V-A <sup>a</sup>	Type IIA and IIIA <sup>a</sup>	Type IA and IB <sup>a</sup>
(nours)	(1,500)	0-3,600	0-5,900	0-8,200	0-12,700	0-22,700
	1,750	3,601-4,800	5,901-7,900	8,200-10,900	12,701-17,000	22,701-30,200
2	2,000	4,801-6,200	7,901-9,800	10,901-12,900	17,001-21,800	30,201-38,700
(2)	2,250	6,201-7,700	9,801-12,600	12,901-17,400	21,801-24,200	37,701-48,300
	2,500	7,701-9,400	12,601-15,400	17,401-21,300	24,201-33,200	48,301-59,000
	2,750	9,401-11,300	15,401-18,400	21,301-25,500	33,201-39,700	59,001-70,900
	3,000	11,301-13,400	18,401-21,800	25,501-30,100	39,701-47,100	70,901-83,700
	3,250	13,401-15,600	21,801-25,900	30,101-35,200	47,101-54,900	83,701-97,700
3	3,500	15,601-18,000	25,901-29,300	35,201-40,600	54,901-63,400	97,701-112,700
	3,750	18,001-20,600	29,301-33,500	40,801-46,400	63,401-72,400	112,701-128,700
	4,000	20,601-23,300	33,501-37,900	46,401-52,500	72,401-82,100	128,701-145,900
	4,250	23,301-26,300	37,901-42,700	52,501-59,100	82,101-92,400	145,901-164,200
	4,500	26,301-29,300	42,701-47,700	59,101-86,000	92,401-130,100	164,201-183,400
	4,750	29,301-32,600	47,701-53,000	66,001-73,300	130,101-114,600	183,401-203,700
	5,000	32,601-36,000	53,001-58,600	73,301-81,100	114,801-126,700	203,701-225,200
	5,250	36,001-39,600	58,601-65,400	81,101-89,200	126,701-139,400	225,201-247,700
	5,500	39,601-43,400	65,401-70,600	89,201-97,700	139,401-152,600	247,701-271,200
	5,750	43.401-47,400	70,601-77,000	97,701-106,500	152,601-166,500	271,201-295,900
4	6,000	47,401-51,500	77,001-83,700	106,501-115,800	166,501-Greater	295,901-Greater
-	6,250	51,501-55,700	83,701-90,600	115,801-125,500		
	6,500	55,701-60,200	90,801-97,900	125,501-135,500		-
	6,750	60,201-64,800	97,901-106,800	135,501-145,800		
	7,000	64,801-69,600	106,801-113,200	145,801-158,700	-	
	7,250	69,601-74,600	113,201-121,300	156,701-167,900		
	7,500	74,601-79,800	121,301-129,600	187,901-179,400	-	
	7,750	79,801-85,100	129,801-138,300	179,401-191,400	-	-
	8,000	85,101-Greater	138,301-Greater	191,401-Greater		

For S1: 1 square foot = 0.0929 m2, 1 gallon per minute = 3.785 L/m, 1 pound per square inch = 6.895 kPa.

a. Types of construction are based on the *International Building Code*. b. Measured at 20 psi residual pressure.

### TABLE C102.1: REQUIRED NUMBER AND SPACING OF FIRE HYDRANTS

FIRE-FLOW REQUIREMENT (gpm)	MINIMUM NUMBER OF HYDRANTS	AVERAGE SPACING BETWEEN HYDRANTS <sup>a,b,c,f,g</sup> (feet)	MAXIMUM DISTANCE FROM ANY POINT ON STREET OR ROAD FRONTAGE TO A HYDRANT <sup>4,1,g</sup>	
(1,7500 or less)	(1)	500	(250)	
2,000-2,250	2	450	225	
2,500	3	450	225	
3,000	3	400	225	
3,500-4,000	4	350	210	
4,500-5,000	5	300	180	
5,500	6	300	180	
6,000	8	250	150	
6,500-7,000	7	250		
7,500 or more	8 or more*	200	150	

For S1: 1 foot = 304.8 min, 1 gallon per minute = 3.785 L/m. a. Reduce by 100 feet for dead-end streets or roads.

- b. Where streets are provided with median dividers that cannot be crossed by fire fighters pulling hose lines, or where arterial streets are provided with four or more traffic lanes and have a traffic count of more than 30,000 vehicles per day, hydrant spacing shall average 500 feet on each side of the street and be arranged on an alternating basis.

c. Where new water mains are extended along streets where hydrants are not needed for protection of structures or similar fire problems, fire hydrants shall be provided at spacing not to exceed 1,000 feet to provide for transportation hazards. d. Reduce by 50 feet for dead-end streets or roads.

- e. One hydrant for each 1,000 gallons per minute or fraction thereof.
   f. A 50-percent spacing increase shall be permitted where the building is equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1 of the International Fire Code.
- g. A 25-percent spacing increase shall be permitted where the building is equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.2 or 903.3.1.3 of the *International Fire Code* or Section P2904 of the *International Residential Code*.

# EDGE MONT PHASE II BUILDING 69,66 & AMENITY

## FIRE FLOW REQUIREMENT WORK SHEET

DATE: 11/15/19CONTACT PHONE#: 303 - 442-5458					
NAME OF PROJECT: EDGEMONT PHASE I					
OWNER/DEVELOPER: KEVIN STONEBURNER					
TOTAL BUILDING SQ.FT: 47,363 (TOTAL FOR BLOG 60, Blog 66 & Amenity					
TYPE OF CONSTRUCTION (2015 IBC): IBC					
OCCUPANCY CLASSIFICATION (2015 IBC): P-2 WITH 5-2 PARKING GARAGE					
BUILDING SPRINKLERED/UNSPRINKLERED: SPRINKLERED					

FIRE FLOW DEMAND (GPM): 2,250 DURATION (HRS): 2
MIN.# OF HYDRANTS: 2 AVERAGE SPACING (FT.): 450
MAX.DISTANCE FROM HYD.TO STREET OR ROAD: 225
(Please attach a vicinity map illustrating approx. location & distances to existing fire hydrants.)
NOTES: FIFE FLOW DEMAND CONSIDERING 2 BUILDINGS
PLUS AMENITY SPACE - EACH BUILDING HAS 1500 GPM & I HYTRANT
PEQUIPENENT

USE TABLES ON FOLLOWING PAGE TO OBTAIN INFORMATION REQUIRED ABOVE.

FLOW	FIRE FLOW	FIRE-FLOW CALCULATION AREA (square feet)				
DURATION (hours)	(gallons per minute) <sup>b</sup>	Type V-B <sup>a</sup>	Type IIB and IIIB <sup>a</sup>	Type IV and V-A <sup>a</sup>		
(	1,500	0-3,600	0-5,900	0-8,200	0-12,700	0-22,700
6	1,750	3,801-4,800	5,901-7,900	8,200-10,900	12,701-17,000	22,701-30,200
0	2,000	4,801-6,200	7,901-9,800	10,901-12,900	17,001-21,800	30,201-38,700
2	2,250	6,201-7,700	9,801-12,600	12,901-17,400	21,801-24,200	37,701-48,300
	2,500	7,701-9,400	12,601-15,400	17,401-21,300	24,201-33,200	48,301-59,000
	2,750	9,401-11,300	15,401-18,400	21,301-25,500	33,201-39,700	59,001-70,900
	3,000	11,301-13,400	18,401-21,800	25,501-30,100	39,701-47,100	70,901-83,700
	3,250	13,401-15,600	21,801-25,900	30,101-35,200	47,101-54,900	83,701-97,700
3	3,500	15,601-18,000	25,901-29,300	35,201-40,800	54,901-63,400	97,701-112,700
	3,750	18,001-20,600	29,301-33,500	40,601-46,400	83,401-72,400	112,701-128,700
	4.000	20,601-23,300	33,501-37,900	46,401-52,500	72,401-82,100	128,701-145,900
	4,250	23,301-26,300	37,901-42,700	52,501-59,100	82,101-92,400	145,901-164,200
	4,500	26,301-29,300	42,701-47,700	59,101-68,000	92,401-130,100	164,201-183,400
	4,750	29,301-32,600	47,701-53,000	66,001-73,300	130,101-114,600	183,401-203,700
	5,000	32,601-36,000	53,001-58,600	73,301-81,100	114,601-126,700	203,701-225,200
	5,250	38,001-39,600	58,601-65,400	81,101-89,200	126,701-139,400	225,201-247,700
	5,500	39,601-43,400	65,401-70,600	89,201-97,700	139,401-152,600	247,701-271,200
	5,750	43.401-47,400	70,601-77,000	97,701-106,500	152,601-166,500	271,201-295,900
4	6,000	47,401-51,500	77,001-83,700	106,501-115,800	166,501-Greater	295,901-Greater
-	6,250	51,501-55,700	83,701-90,600	115,801-125,500	-	
	6,500	55,701-60,200	90,801-97,900	125,501-135,500		
	6,750	60,201-64,800	97,901-106,800	135,501-145,800		
	7,000	64,801-89,600	106,801-113,200	145,801-156,700		-
	7,250	89,601-74,600	113,201-121,300	156,701-167,900		
	7,500	74,601-79,800	121,301-129,800	167,901-179,400	_	
	7,750	79,801-85,100	129,601-138,300	179,401-191,400	-	
	8,000	85,101-Greater	138,301-Greater	191,401-Greater	-	-

#### TABLE B105.1(2): REFERENCE TABLE FOR TABLES B105.1(1) AND B105.2

For SI: 1 square foot = 0.0929 m2, 1 gallon per minute = 3.785 L/m, 1 pound per square inch = 6.895 kPa.

a. Types of construction are based on the *International Building Code*, b. Measured at 20 psi residual pressure.

### TABLE C102.1: REQUIRED NUMBER AND SPACING OF FIRE HYDRANTS

FIRE-FLOW REQUIREMENT (gpm)	MINIMUM NUMBER OF HYDRANTS	AVERAGE SPACING BETWEEN HYDRANTS <sup>a,b,c,f,g</sup> (feet)	MAXIMUM DISTANCE FROM ANY POINT ON STREET OR ROAD FRONTAGE TO A HYDRANT <sup>4.fg</sup> 250	
1,7500 or less	1	500		
(2,000-2,250)	2	450	(225)	
2,500	3	450	225	
3,000	3	400	225	
3,500-4,000	4	350	210	
4,500-5,000	5	300	180	
5,500	6	300	180	
6,000	6	250		
6,500-7,000	7	250	150	
7,500 or more	8 or more <sup>e</sup>	200	150	

For SI: 1 foot = 304.8 min, 1 gallon per minute = 3.785 L/m.

a. Reduce by 100 feet for dead-end streets or roads.

b. Where streets are provided with median dividers that cannot be crossed by fire fighters pulling hose lines, or where arterial streets are provided with four or more traffic lanes and have a traffic count of more than 30,000 vehicles per day, hydrant spacing shall average 500 feet on each side of the street and be arranged on an alternating basis.

Where new water mains are extended along streets where hydrants are not needed for protection of structures or similar fire problems, fire hydrants shall be provided at spacing not to exceed 1,000 feet to provide for transportation hazards.

d. Reduce by 50 feet for dead-end streets or roads.

- e. One hydrant for each 1,000 gallons per minute or fraction thereof.
- f A 50-percent spacing increase shall be permitted where the building is equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1 of the International Fire Code.

g. A 25-percent spacing increase shall be permitted where the building is equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.2 or 903.3.1.3 of the International Fire Code or Section P2904 of the International Residential Code.

#### REQUEST FOR FIRE FLOW AVAILABILITY FORM

PROJECT NAME: Edgemont Phase II

PROPERTY LOCATION: Vacant portion of Edgemont Parcel

LEGAL DESCRIPTION: Expansiton Property shown on Edgemont

(ATTACH SKETCH PLAN)

OWNER OR DEVELOPER'S NAME: Steamboat Ski-In Ski-Out, LLC (c/o Landmark)

ADDRESS: 465 Bayfront PI, Naples, FL 34102

CONTACT PHONE: attn: Erik Griepentrog, 970-846-2592

INFORMATION IN THE FOLLOWING BOX MUST BE COMPLETED BY AN AUTHORIZED REPRESENTATIVE OF STEAMBOAT SPRINGS WATER DISTRICT.

FIRE FLOW DEMAND FOR PROJECTS IN GALLONS PER MINUTE IS: TBD (ATTACH COMPUTATION SHEET)

THE AVAILABLE FIRE FLOW IS: \_\_\_\_\_G.P.M. AS DETERMINED BY

(METHOD):\_\_\_To be determined. Will be based on computer model from MWW district consultant. Engineering costs to be born by developer based on MWW District Rules and Regulations.

(Must be signed by representative from City Utility Dept. or Mt. Werner Water & Sanitation, whichever is applicable.)

I the undersigned request the available fire flow at said project and agree to pay all costs associated with obtaining such information.

Costs are based on time and materials for obtaining such information from available records and performing actual field tests for computation of flows in G.P.M. at a residual of 20 P.S.I.

RB

SIGNATURE

Dist Engineer

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DATE 11/11/19