Fire Code Analysis, Fire Flow Demand and Availability - Planning Applications

Use this form for any planning application that includes Fire Code Analysis, Fire Flow Demand and Availability as a submittal requirement.

Fire Code Analysis

Provide responses to the following:

- Occupancy classification and uses. For example: residential, commercial, mixed use, accessory.
- Estimated occupancy load, if applicable.
- Construction type.
- Square footage.
- Will the building be sprinklered? Based on occupancy type and or location.
- Will the building have a monitored fire alarm system?
- Will the building have a security system? Will it monitor smoke or carbon monoxide?
    - If so, a permit is required. Refer to the Steamboat Springs Fire Rescue Plans and Permit submittal Policy (web).
- Alterations or remodels in existing buildings with fire sprinkler or alarm systems require permits and a final fire inspection.
- Number stories above and below grade.
- Fire Department Access
    - Detailed site plans are required showing all dimensions including street/driveway length, width, grade, turnarounds and turn-outs. Refer to the Fire Prevention Services Access Standards (web).
- Will the property be gated? Please see IFC 503.6 for details call fire prevention at 970-879-7170.
- Will there be a commercial kitchen? If so permits are required.

Fire Flow Demand Worksheet

Please attach a vicinity map illustrating location and distances to existing fire hydrants. Use tables on following pages to obtain the information required below. Tables taken from 2018 International Fire Code. Contact the Steamboat Springs Fire Department at 970-871-8216 or Mt Werner Water at 970-879-2424 with questions.

Property Information

Physical Address 135 11th Street
Legal Description RIVER HOUSE CONDOMINIUM
Parcel ID # 286700004, 286700003, 286700002, 286700001

Primary Contact

Name
Address
Phone
Email

Project Information

Total building square footage (sf)

2018 International Building Code (IBC) Type of Construction

2018 IBC Occupancy Classification

Building sprinklered or Unsprinklered?

Fire Flow Demand Gallons per Minute (GPM)

Minimum Number of Hydrants and Average Space in Feet

Maximum Distance from Hydrant to Street or Road

Other Notes

Table B105.1(2) Two Hour Flow Duration: Reference Table for Tables B105.1(1) and B105.2

Type IA and IB[a]	Type IIA and IIIA[a]	Type IV and V-A[a]	Type IIB and IIIB[a]	Type V-B[a]	Fire Flow (gallons per minute)[b]	Flow Duration (hours)
0-22,700	0-12,700	0-8,200	0-5,900	0-3,600	1,500	2
22,701-30,200	12,701-17,000	8,200-10,900	5,901-7,900	3,601-4,800	1,750	2
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	2
48,301-59,000	24,201-33,200	17,401-21,300	12,601-15,400	7,701-9,400	2,500	2
59,001-70,900	33,201-39,700	21,301-25,500	15,401-18,400	9,401-11,300	2,750	2

Types IA, IB, IIA, IIIA, IV, V-A, IIB, IIIB, and V-b represent the Fire Flow calculation area in sf.
For SI: 1 square foot = 0.0929 m2, 1 gallon per minute = 3.785 L/m, 1 pound per square inch (PSI) = 6.895 kPa.

[a] Types of construction are based on the IBC.

[b] Measured at 20 PSI residual pressure.

Table B105.1(2) Three Hour Flow Duration: Reference Table for Tables B105.1(1) and B105.2

Type IA and IB[a]	Type IIA and IIIA[a]	Type IV and V-A[a]	Type IIB and IIIB[a]	Type V-B[a]	Fire Flow (gallons per minute)[b]	Flow Duration (hours)
70,901-83,700	39,701-47,100	25,501-30,100	18,401-21,800	11,301-13,400	3,000	3
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	3
112,701-128,700	63,401-72,400	40,601-46,400	29,301-33,500	18,001-20,600	3,750	3

Types IA, IB, IIA, IIIA, IV, V-A, IIB, IIIB, and V-b represent the Fire Flow calculation area in sf.
For SI: 1 square foot = 0.0929 m2, 1 gallon per minute = 3.785 L/m, 1 pound per square inch (PSI) = 6.895 kPa.

[a] Types of construction are based on the IBC.

[b] Measured at 20 PSI residual pressure.

Table B105.1(2) Four Hour Flow Duration: Reference Table for Tables B105.1(1) and B105.2

Type IA and IB[a]	Type IIA and IIIA[a]	Type IV and V-A[a]	Type IIB and IIIB[a]	Type V-B[a]	Fire Flow (gallons per minute)[b]	Flow Duration (hours)
128,701-145,900	72,401-82,100	46,401-52,500	33,501-37,900	20,601-23,300	4,000	4
145,901-164,200	82,101-92,400	52,501-59,100	37,901-42,700	23,301-26,300	4,250	4
164,201-183,400	92,401-130,100	59,101-66,000	42,701-47,700	26,301-29,300	4,500	4
183,401-203,700	130,101-114,600	66,001-73,300	47,701-53,000	29,301-32,600	4,750	4
203,701-225,200	114,601-126,700	73,301-81,100	53,001-58,600	32,601-36,000	5,000	4
225,201-247,700	126,701-139,400	81,101-89,200	58,601-65,400	36,001-39,600	5,250	4
247,701-271,200	139,401-152,600	89,201-97,700	65,401-70,600	39,601-43,400	5,500	4
271,201-295,900	152,601-166,500	97,701-106,500	70,601-77,000	43.401-47,400	5,750	4
295,901-Greater	166,501-Greater	106,501-115,800	77,001-83,700	47,401-51,500	6,000	4

Types IA, IB, IIA, IIIA, IV, V-A, IIB, IIIB, and V-b represent the Fire Flow calculation area in sf.
For SI: 1 square foot = 0.0929 m2, 1 gallon per minute = 3.785 L/m, 1 pound per square inch (psi) = 6.895 kPa.

[a] Types of construction are based on the IBC.

[b] Measured at 20 PSI residual pressure.

Table B105.1(2) Four Hour Flow Duration Continued: Reference Table for Tables B105.1(1) and B105.2

Type IA and IB[a]	Type IIA and IIIA[a]	Type IV and V-A[a]	Type IIB and IIIB[a]	Type V-B[a]	Fire Flow (gallons per minute)[b]	Flow Duration (hours)
--	--	115,801-125,500	83,701-90,600	51,501-55,700	6,250	4
--	--	125,501-135,500	90,601-97,900	55,701-60,200	6,500	4
--	--	135,501-145,800	97,901-106,800	60,201-64,800	6,750	4
--	--	145,801-156,700	106,801-113,200	64,801-69,600	7,000	4
--	--	156,701-167,900	113,201-121,300	69,601-74,600	7,250	4
--	--	167,901-179,400	121,301-129,600	74,601-79,800	7,500	4
--	--	179,401-191,400	129,601-138,300	79,801-85,100	7,750	4
--	--	191,401-Greater	138,301-Greater	85,101-Greater	8,000	4

Types IA, IB, IIA, IIIA, IV, V-A, IIB, IIIB, and V-b represent the Fire Flow calculation area in sf.
For SI: 1 square foot = 0.0929 m2, 1 gallon per minute = 3.785 L/m, 1 pound per square inch (PSI) = 6.895 kPa.

[a] Types of construction are based on the IBC.

[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[a,b,c,f,g] (feet)	Maximum Distance from Any Point on Street or Road Frontage to a Hydrant[d,f,g]
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	6	250	150
6,500-7,000	7	250	150
7,500 or more	8 or more[e]	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.

[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

Please attach a vicinity map illustrating location and distances to existing fire hydrants or sketch plan. Contact the Steamboat Springs Fire Department at 970-871-8216 or Mt Werner Water at 970-879-2424 with questions.

Property Information

Physical Address 135 11th Street
Legal Description RIVER HOUSE CONDOMINIUM
Parcel ID # 286700004, 286700003, 286700002, 286700001

Primary Contact

Name Ryan Spaustat
Address 141 9th Street
Phone 970-819-2742
Email ryans@landmark-co.com

Staff Use Only

The information in this box must be completed and signed by an authorized representative of Steamboat Springs Water District by representative from City Utility Dept. or Mt. Werner Water & Sanitation, whichever is applicable.

Fire Flow Demand for Projects GPM is (insert GPM) 6000 gpm

As determined by the following methods used (list methods) Plummer Water Model 2025

Attach computational sheet.

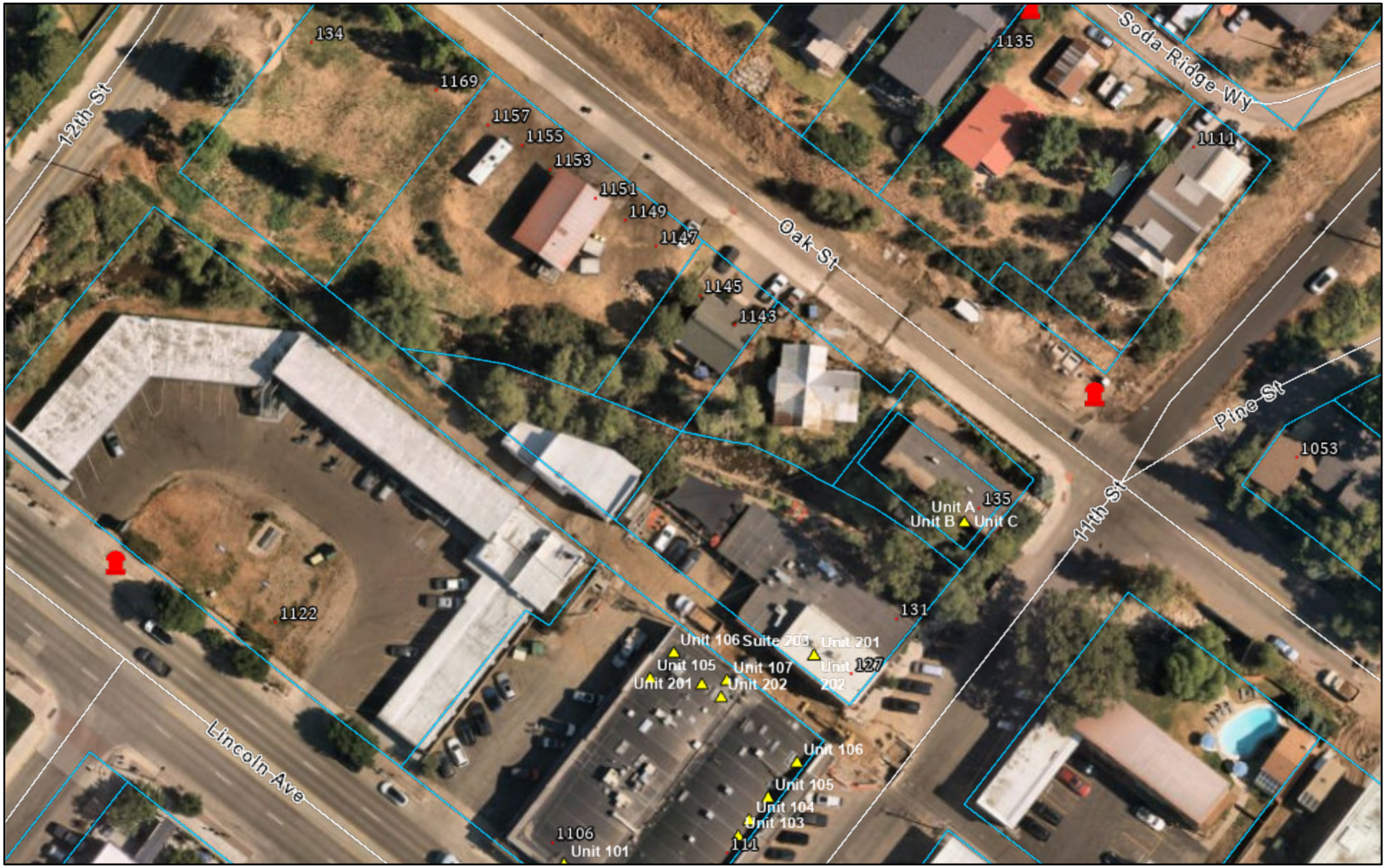
Printed Name, Title
Entity
Signature Amber Gregory Digitally signed by Amber Gregory
DN: CN=Amber Gregory, OU=Default, OU=COSS Users, DC=steamboat, DC=local
Contact Info: Utilities Engineer
Date: 2025.08.28 14:07:49-06'00'
Date

Applicant Acknowledgement

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 GPM at a residual of 20 PSI.

Printed Name Ryan Spaustat
Signature
Date 08/28/2025

ArcGIS Web Map



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City Limits

Fire Hydrants

Lots

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

ArcGIS Web AppBuilder