

# Basecamp – Water Demand Report



April 26, 2021

Ms. Amber Gregory, PE  
City of Steamboat Springs – Utilities  
137 10<sup>th</sup> Street  
Steamboat Springs, Colorado 80477

**FOR REFERENCE - Already  
Submitted with DPVC-21-16  
and DPVC-21-06**

**Re: Water Demand Report  
Basecamp, Steamboat Springs, Colorado**

Dear Amber:

Landmark Consultants, Inc. (Landmark) is submitting this Water Demand Report for your review. This report is being submitted in conjunction with the Basecamp Development Plan application.

This report has been prepared in accordance with the City of Steamboat Springs Municipal Code, the Steamboat Springs Water and Wastewater Master Plan, and serves to document the water and sewer impacts associated with the Basecamp project.

If you have any questions during your review process, feel free to contact us.

Sincerely,

Landmark Consultants, Inc.



Erik Griepentrog, P.E.  
Vice-President

# Basecamp - Water Demand Report

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# Basecamp - Water Demand Report



## 1.0 INTRODUCTION, LOCATION, AND METHODOLOGY

This letter is an analysis of water and sewer demands required for the proposed construction of Basecamp (the Project). This letter includes all the base data, methods, assumptions and calculations used by Landmark Consultants, Inc. (Landmark). It was prepared in conjunction with the concurrent Development Plan application submitted for the project.

Landmark prepared this letter in accordance with Section 25-78 of the City of Steamboat Springs Municipal Code for the purpose of quantifying the water demanded and the sanitary sewerage produced per the proposal at the time of this letter. This letter may not be used by other parties without the express written consent of Landmark.

The facts and opinions expressed in this letter are based on Landmark's understanding of the project and data gathered from:

- Plans provided by **KASA**
- Water and Wastewater Master Plan Updates for the City of Steamboat Springs prepared by McLaughlin Water, December 2009 (referred herein as **Master Plan**)
- City and County of Denver Department of Public Works Sanitary Design Technical Criteria Manual, latest revision March 2008.
- City of Steamboat Springs Water/Sewer System Maps

The subject property is located on predominately on Lot 1 and with an access road crossing a portion of 2, Worldwest Subdivision, which is approximately 5.22 acres in total size. It is located in the South 1/2 of the Southwest 1/4, of Section 6, Township 6 North, Range 84 West of the 6<sup>th</sup> Principal Meridian, City of Steamboat Springs, Routt County, Colorado. Specifically, the property is the previous location of the Steamboat Pilot & Today newspaper on the block surrounded by Elk River Road, US Hwy 40, Shield Drive and Curve Court.

This mixed-use project is a combination of an adaptive reuse of a portion of the existing building along with a new construction component. The commercial functions of the building, namely a 3,650 SF coffee bar/restaurant and a 4,000 SF Fitness studio use, will be located within the "existing-to-remain" portion of the building. This portion of the building will also contain the residential lobby and two residential units. The portion of the existing building that formerly housed the printing press will be demolished and rebuilt ground-up as a five-story, 73-unit, apartment building (75 total units). The overall footprint will generally be the same.

Please refer to the included **Vicinity Map** for the subject property location.

## EQUIVALENT RESIDENTIAL UNIT (EQR) METHODOLOGY

The Master Plan uses the Equivalent Residential Unit (EQR) method for equating 'water demands and wastewater flows for different user categories' and describes EQR for Steamboat Springs as a 'three-bedroom, 2-bathroom home up to 2,500 sf.'

The Basecamp project is proposing a mix of units ranging among 1, 2, and 3 bedrooms. Additionally, the project contains a coffee bar/restaurant and fitness studio.



The existing building (pre-redevelopment) is approximately 22,690 SF and had a mix of use between the newspaper operation and the printing press. Based on the relatively minimal water demands for commercial activity, Landmark assumed that the previous land use/facility and the proposed coffee bar/restaurant and fitness studio essential negate any additional non-residential demand.

Based on this proposal, Landmark applied the land use category of Multi-Family (1 and 2 bedroom) with a 0.85 reduction factor and Multi-Family (3 bedroom) with a factor of 1.05 to the EQR calculation in this report.

## 2.0 SANITARY SEWER CAPACITY

The project site is approximately 10.1 acres in size. The property is proposing 75 residential apartment units, which will result in a weighted total of 67 Equivalent Residential Units (EQRs).

Landmark calculated the Peak Factors based upon methodology set forth in the “City and County of Denver Department of Public Works Sanitary Sewer Design Technical Criteria Manual” using:

$$\text{Peaking Factor} = 2.6 (\text{Average Flow CFS})^{-0.16}$$

The entirety of the Basecamp project will be serviced by a new sewer main that connects to the existing sewer main in Curve Court and the existing sewer service will be abandoned.

The maximum Peak Flow generated from the Project is projected at 0.12 cfs. Sanitary Sewer Capacity Calculations can be found in **Appendix A: Wastewater Impact Calculations**. The analysis showed that an 8” PVC sewer main at the minimum allowable slope, should be able to accommodate up to 121 EQR where this project aims to introduce 67 EQR.

The minimum allowable slope assumptions based on 10 States Standards can be found in **Appendix D**.

## 3.0 POTABLE WATER STUDY

Potable water for Basecamp will be provided by an expanded water main system that loops through the property as shown on the Development Plans. The existing water service on the west side of the building will be abandoned and the new project will be served off of the new water main.

The peaking factors used to estimate the Maximum Day (2.4 times Average Day) and the Maximum Hour (2.0 times the Maximum Day) were as described in the Master Plan.

Per the Master Plan, Landmark assumed a demand of 600 gallons per EQR per day to estimate Basecamp’s water usage. An Average Day flow of 28 gpm was calculated for the entire development with a Max Day flow of 67 gpm and a Max Hour flow of 95 gpm.

These water usage Calculations can be found in **Appendix B**.



## **APPENDIX - A**



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PROJECT	2387-004; Steamboat Basecamp
DESIGNER	
DATE	4/26/2021
LOCATION	Steamboat Springs, CO

## Basecamp

### Preliminary Utility Calculations

Assumptions based on City of Steamboat Springs Water and Wastewater Master Plan

### WASTEWATER IMPACT CALCULATIONS

Description/ Land Use	Assigned EQR Value	Acres	Units	Equivalent Residential Unit (EQR)	Assumptions:		Calculations:		
					Gallons per EQR per day <sup>1</sup> (gal/day/EQR)	Average Flow Rate (gpd)	Peaking Factor <sup>2</sup> $PF=2.6 \times (AFR_{cfs})^{-0.16}$	Peak Flow Rate (gpd)	Peak Flow Rate (cfs)
Studio Units	0.85	N/A	30	26	280	7,140	4.0	28,560	0.04
1 Bedroom Units	0.85	N/A	30	26	280	7,140	4.0	28,560	0.04
3 Bedroom Units	1.05	N/A	15	16	280	4,410	4.0	17,640	0.03
Inflow and Infiltration (10% of Ave.Flow)						N/A			
<b>TOTAL =</b>				<b>67</b>		<b>18,690</b>		<b>74,760</b>	<b>0.12</b>

<sup>1</sup>Inflow and Infiltration are included in the assumed value per City Master Plan

<sup>2</sup>Maximum Peaking Factor=4.0 Per City and County of Denver Sanitary Sewer Design Technical Criteria Manual



## APPENDIX - B



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PROJECT 2387-004; Steamboat Basecamp  
DESIGNER  
DATE 4/16/2021  
LOCATION Steamboat Springs, CO

## Basecamp

### Water Usage Calculations

Assumptions based on City of Steamboat Springs Water and Wastewater Master Plan

### WATER DEMAND CALCULATIONS

Description/ Land Use	Assigned EQR Value	Acres	Units	Equivalent Residential Units (EQR)	Assumptions:				Calculations:		
					Assumed Demand (gal /day /EQR)	Average Day (gpm/EQR)	Max Day <sup>1</sup> (gpm/EQR)	Max Hour <sup>2</sup> (gpm)	Average Day (gpm)	Max Day (gpm)	Max Hour (gpm)
Studio Units	0.85	N/A	30	26	600	0.42	1.00	2.00	11	26	51
1 Bedroom Units	0.85	N/A	30	26	600	0.42	1.00	2.00	11	26	51
3 Bedroom Units	1.05	N/A	15	16	600	0.42	1.00	2.00	7	16	32
N/A		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>TOTAL =</b>				<b>67</b>					<b>28</b>	<b>67</b>	<b>95</b>

<sup>1</sup>Assumed Max Day peaking factor is 2.4 times the Average Day

<sup>2</sup>Assumed Max Hour is 2.0 times Maximum Day



## **APPENDIX - C**

## Basecamp

### Minimum Grade Sewer Peak Capacity Calculations

Assumptions based on 10 States Standards

#### 8 " Capacity

Depth (ft)	Q (cfs)	Area (sqft)	Veloc (ft/s)	Wp (ft)	Yc (ft)	TopWidth (ft)	Energy (ft)	% Full
0.03	0.003	0.007	0.49	0.30	0.03	0.29	0.04	5%
0.07	0.014	0.018	0.77	0.43	0.06	0.40	0.08	11%
0.10	0.033	0.034	0.99	0.54	0.09	0.48	0.12	15%
0.13	0.059	0.051	1.17	0.62	0.12	0.54	0.16	20%
0.17	0.093	0.069	1.34	0.70	0.14	0.58	0.20	26%
0.20	0.132	0.089	1.48	0.78	0.17	0.61	0.23	30%
0.23	0.178	0.111	1.61	0.85	0.20	0.64	0.27	35%
0.27	0.226	0.132	1.72	0.92	0.22	0.66	0.31	41%
0.30	0.282	0.155	1.82	0.99	0.25	0.67	0.35	45%
<b>0.34</b>	<b>0.338</b>	<b>0.177</b>	<b>1.91</b>	<b>1.06</b>	<b>0.27</b>	<b>0.67</b>	<b>0.39</b>	<b>51%</b>
0.37	0.395	0.200	1.98	1.12	0.30	0.67	0.43	56%
0.40	0.452	0.221	2.04	1.19	0.32	0.66	0.47	60%
0.44	0.510	0.244	2.09	1.26	0.34	0.64	0.50	66%
0.47	0.563	0.264	2.13	1.33	0.36	0.61	0.54	71%
0.50	0.612	0.284	2.16	1.40	0.37	0.58	0.57	75%
0.54	0.656	0.302	2.17	1.48	0.38	0.54	0.61	81%
0.57	0.692	0.320	2.16	1.57	0.40	0.48	0.64	86%
0.60	0.715	0.334	2.14	1.68	0.40	0.40	0.67	90%
0.64	0.721	0.346	2.08	1.81	0.40	0.29	0.70	96%
0.67	0.671	0.353	1.90	2.10	0.39	0.00	0.73	101%

#### 10 " Capacity

Depth (ft)	Q (cfs)	Area (sqft)	Veloc (ft/s)	Wp (ft)	Yc (ft)	TopWidth (ft)	Energy (ft)	% Full
0.04	0.005	0.010	0.48	0.38	0.03	0.36	0.05	5%
0.08	0.021	0.028	0.74	0.54	0.07	0.50	0.09	10%
0.12	0.049	0.052	0.96	0.66	0.10	0.60	0.14	14%
0.17	0.088	0.078	1.13	0.77	0.13	0.67	0.19	20%
0.21	0.137	0.107	1.29	0.87	0.16	0.72	0.23	25%
0.25	0.195	0.137	1.43	0.96	0.19	0.76	0.28	30%
0.29	0.264	0.170	1.55	1.05	0.23	0.79	0.33	35%
0.33	0.335	0.202	1.66	1.14	0.26	0.81	0.37	40%
0.37	0.417	0.238	1.76	1.22	0.29	0.83	0.42	44%
0.42	0.500	0.272	1.84	1.31	0.31	0.83	0.47	50%
0.46	0.585	0.306	1.91	1.39	0.34	0.83	0.51	55%
<b>0.50</b>	<b>0.670</b>	<b>0.340</b>	<b>1.97</b>	<b>1.47</b>	<b>0.36</b>	<b>0.81</b>	<b>0.56</b>	<b>60%</b>
0.54	0.755	0.374	2.02	1.56	0.39	0.79	0.60	65%
0.58	0.834	0.405	2.06	1.65	0.41	0.76	0.65	70%
0.62	0.906	0.435	2.08	1.74	0.43	0.72	0.69	74%
0.66	0.972	0.464	2.09	1.84	0.44	0.66	0.73	79%
0.71	1.025	0.491	2.09	1.95	0.45	0.59	0.77	85%
0.75	1.059	0.513	2.06	2.08	0.46	0.50	0.81	90%
0.79	1.067	0.531	2.01	2.24	0.47	0.36	0.85	95%
0.83	0.994	0.541	1.84	2.61	0.45	0.00	0.88	100%

#### 12 " Capacity

Depth (ft)	Q (cfs)	Area (sqft)	Veloc (ft/s)	Wp (ft)	Yc (ft)	TopWidth (ft)	Energy (ft)	% Full
0.05	0.007	0.015	0.48	0.45	0.04	0.44	0.05	5%
0.10	0.030	0.041	0.74	0.64	0.07	0.60	0.11	10%
0.15	0.072	0.075	0.96	0.80	0.11	0.72	0.16	15%
0.20	0.128	0.113	1.14	0.93	0.15	0.80	0.22	20%
0.25	0.200	0.155	1.29	1.05	0.19	0.87	0.28	25%
0.30	0.284	0.198	1.43	1.16	0.22	0.92	0.33	30%
0.35	0.384	0.247	1.56	1.27	0.26	0.96	0.39	35%
0.40	0.488	0.294	1.66	1.37	0.29	0.98	0.44	40%
0.45	0.608	0.345	1.76	1.47	0.33	1.00	0.50	45%
0.50	0.729	0.395	1.85	1.57	0.36	1.00	0.55	50%
0.55	0.853	0.445	1.92	1.67	0.39	0.99	0.61	55%
0.60	0.976	0.493	1.98	1.77	0.42	0.98	0.66	60%
0.65	1.100	0.542	2.03	1.88	0.44	0.95	0.71	65%
<b>0.70</b>	<b>1.215</b>	<b>0.588</b>	<b>2.06</b>	<b>1.98</b>	<b>0.47</b>	<b>0.92</b>	<b>0.77</b>	<b>70%</b>
0.75	1.321	0.632	2.09	2.10	0.49	0.87	0.82	75%
0.80	1.416	0.674	2.10	2.22	0.51	0.80	0.87	80%
0.85	1.494	0.712	2.10	2.35	0.52	0.71	0.92	85%
0.90	1.543	0.745	2.07	2.50	0.53	0.60	0.97	90%
0.95	1.555	0.771	2.02	2.70	0.53	0.43	1.01	95%
1.00	1.448	0.785	1.84	3.14	0.51	0.00	1.05	100%

0.338 CFS Typical Allowable Qp 50%  
 218440 gpd Typical Allowable Qp  
 72813.3 gpd Typical Allowable Qp with PF =3  
 121 EQR Equivalent Residential Units (EQRs)

0.67 CFS Typical Allowable Qp 60%  
 433002 gpd Typical Allowable Qp  
 144334 gpd Typical Allowable Qp with PF =3  
 241 EQR Equivalent Residential Units (EQRs)



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## Basecamp

### Minimum Grade Sewer Peak Capacity Calculations

Assumptions based on 10 States Standards

#### 15 " Capacity

Depth (ft)	Q (cfs)	Area (sqft)	Veloc (ft/s)	Wp (ft)	Yc (ft)	TopWidth (ft)	Energy (ft)	% Full	
0.06	0.011	0.024	0.46	0.57	0.04	0.55	0.07	5%	
0.13	0.046	0.064	0.71	0.81	0.09	0.75	0.13	10%	
0.19	0.108	0.117	0.92	1.00	0.13	0.90	0.20	15%	
0.25	0.192	0.176	1.09	1.16	0.17	1.00	0.27	20%	
0.31	0.300	0.242	1.24	1.31	0.22	1.08	0.34	25%	
0.38	0.425	0.310	1.37	1.45	0.26	1.15	0.40	30%	
0.44	0.576	0.386	1.49	1.59	0.30	1.19	0.47	35%	
0.50	0.731	0.459	1.59	1.71	0.34	1.22	0.54	40%	
0.56	0.911	0.539	1.69	1.84	0.38	1.24	0.61	45%	
0.63	1.091	0.617	1.77	1.97	0.42	1.25	0.67	50%	
0.69	1.277	0.695	1.84	2.09	0.45	1.24	0.74	55%	
0.75	1.461	0.771	1.90	2.22	0.48	1.22	0.81	60%	
0.81	1.647	0.848	1.94	2.35	0.51	1.19	0.87	65%	
<b>0.88</b>	<b>1.819</b>	<b>0.919</b>	<b>1.98</b>	<b>2.48</b>	<b>0.54</b>	<b>1.14</b>	<b>0.94</b>	<b>70%</b>	1.819 CFS Typical Allowable Qp 70%
0.94	1.977	0.988	2.00	2.62	0.56	1.08	1.00	75%	1175569 gpd Typical Allowable Qp
1.00	2.119	1.053	2.01	2.77	0.59	1.00	1.06	80%	391856 gpd Typical Allowable Qp with PF =3
1.06	2.236	1.113	2.01	2.94	0.60	0.89	1.13	85%	653 EQR Equivalent Residential Units (EQRs)
1.13	2.311	1.164	1.99	3.13	0.61	0.75	1.19	90%	
1.19	2.329	1.205	1.93	3.37	0.61	0.54	1.25	95%	
1.25	2.167	1.227	1.77	3.93	0.59	0.00	1.30	100%	

#### 18 " Capacity

Depth (ft)	Q (cfs)	Area (sqft)	Veloc (ft/s)	Wp (ft)	Yc (ft)	TopWidth (ft)	Energy (ft)	% Full	
0.08	0.016	0.034	0.46	0.68	0.05	0.66	0.08	5%	
0.15	0.066	0.093	0.72	0.97	0.10	0.90	0.16	10%	
0.23	0.157	0.169	0.93	1.20	0.15	1.08	0.24	15%	
0.30	0.279	0.254	1.10	1.39	0.20	1.20	0.32	20%	
0.38	0.436	0.348	1.25	1.57	0.25	1.30	0.40	25%	
0.45	0.619	0.447	1.39	1.74	0.29	1.38	0.48	30%	
0.53	0.837	0.555	1.51	1.90	0.34	1.43	0.56	35%	
0.60	1.064	0.661	1.61	2.05	0.39	1.47	0.64	40%	
0.68	1.324	0.776	1.71	2.21	0.44	1.49	0.72	45%	
0.75	1.588	0.888	1.79	2.36	0.48	1.50	0.80	50%	
0.82	1.857	1.000	1.86	2.51	0.51	1.49	0.88	55%	
0.90	2.126	1.110	1.91	2.66	0.55	1.47	0.96	60%	
0.97	2.396	1.221	1.96	2.82	0.59	1.43	1.03	65%	
<b>1.05</b>	<b>2.646</b>	<b>1.324</b>	<b>2.00</b>	<b>2.98</b>	<b>0.62</b>	<b>1.37</b>	<b>1.11</b>	<b>70%</b>	2.646 CFS Typical Allowable Qp 70%
1.13	2.876	1.422	2.02	3.14	0.65	1.30	1.19	75%	1710036 gpd Typical Allowable Qp
1.20	3.083	1.516	2.03	3.32	0.67	1.20	1.26	80%	570012 gpd Typical Allowable Qp with PF =3
1.28	3.253	1.603	2.03	3.53	0.69	1.07	1.34	85%	950 EQR Equivalent Residential Units (EQRs)
1.35	3.361	1.676	2.01	3.75	0.70	0.90	1.41	90%	
1.43	3.387	1.735	1.95	4.04	0.71	0.65	1.48	95%	
1.50	3.153	1.767	1.78	4.71	0.68	0.00	1.55	100%	




## APPENDIX - D

# City of Steamboat Springs

## SEWER MASTER PLAN

### LEGEND

- STEAMBOAT SPRINGS CITY LIMIT
- - - WSSAP BOUNDARY
- - - URBAN GROWTH BOUNDARY
- - - MT. WERNER WATER DISTRICT BOUNDARY
- 8" - 12" EXISTING SEWER (WITH PIPE SIZE)
- PROPOSED SEWER (SIZES APPROXIMATE, TO BE VERIFIED DURING FINAL DESIGN PHASE)
- BASIN BOUNDARY
- SUB BASIN BOUNDARY
- PIPE CAPACITY EXCEEDED-REPLACEMENT REQUIRED
- PIPE CAPACITY APPROACHED - TO BE MONITORED
- INFILTRATION/INFLOW MONITORING MANHOLE



REACH	SUB REACH	Manhole	Length (ft.)	Invert Elevations	Pipe Slope	Pipe Diam. (in.)	Mannings n	Q(full) (cfs)	Q(full) (gpd)	*Q(Aallow) (cfs)	*Q(Aallow) (gpd)	Area (acres)	Existing (EUR)	Existing Q-Ave (gpd)	Existing Q-Cumm. (gpd)	PEAK FACTOR	Domestic Peak Flow (gpd)	I & I (gpd)	I & I Cumm.	Existing *IPF (gpd)	Existing Excess Capacity	Percent Capacity	Proposed (EUR)	Ultimate (EUR)	Ultimate (Cum. EUR)	Ultimate Q-Ave (gpd)	Ultimate Q-Cumm. (gpd)	PEAK FACTOR	Domestic Peak Flow (gpd)	Ultimate IPF (gpd)	Ultimate Excess Capacity	Percent Capacity
K	56.1	56	164		0.0040	8	0.67	0.013	0.766	495,254	247,627		14	0	3,892	5.89	22929	0	22,929	224,698	5%	53	0	14,812	4.76	70462	70,462	177,165	14%			
<b>J-3 BASIN TRUNK</b>																																
J	J-3	48.4.33.5	48.4.33.4	225	6866.50	6860.69	0.0258	8	0.67	0.013	1,947	1,258,331	629,166	8	8	2,324	2,324	14869	0	14,869	614,297	1%	28	36	10,136	5.05	51235	51,235	577,930	4%		
J	48.4.33.4	48.4.33.3	110	6860.69	6859.00	0.0154	8	0.67	0.013	1,502	970,611	485,305	6	14	1,680	4,004	5.86	23482	0	23,482	461,823	2%	20	26	62	7280	17,416	4.64	80730	80,730	404,575	8%
J	48.4.33.3	48.4.33.2	68	6853.35	6852.35	0.0147	8	0.67	0.013	1,469	949,606	474,803	6	20	1,680	5,684	5.54	31517	0	31,517	443,286	3%	20	26	88	7280	24,696	4.38	108255	108,255	366,549	11%
J	48.4.33.2	48.4.33.1	264	6852.35	6842.40	0.0377	8	0.67	0.013	2,352	1,520,224	760,112	6	26	1,680	7,364	5.32	39176	0	39,176	720,937	3%	20	26	114	7280	31,976	4.21	134491	134,491	625,622	9%
J	48.4.33.1	48.4.33	175	6842.40	6838.00	0.0251	8	0.67	0.013	1,921	1,241,668	620,834	6	32	1,680	9,044	5.15	46557	0	46,557	574,277	4%	6	120	1680	33,656	4.17	140402	140,402	480,432	11%	
J	48.4.33	48.4.32	111	6837.50	6828.50	0.0811	8	0.67	0.013	3,450	2,229,759	1,114,879	6	38	1,680	5,01	5.01	53720	0	53,720	1,061,159	2%	6	126	1680	35,336	4.14	146266	146,266	968,614	7%	
J	48.4.32	48.4.31	282	6828.50	0.0400	8	0.67	0.013	2,423	1,566,131	783,065	6	44	1,680	12,404	4.89	60706	0	60,706	722,360	4%	6	132	1680	37,016	4.11	152085	152,085	630,980	10%		
J	48.4.31	48.4.30	119		0.0050	8	0.67	0.013	857	553,711	276,855	6	50	1,680	14,084	4.80	67541	0	67,541	209,314	12%	6	138	1680	38,696	4.08	157863	157,863	118,993	29%		
J	48.4.30	48.4.29	119		0.0070	8	0.67	0.013	1,014	655,160	327,580	6	56	1,680	4,71	74247	0	74,247	253,333	11%	6	144	1680	40,376	4.05	163600	163,600	163,980	25%			
J	48.4.29	48.4.28	90		0.0070	8	0.67	0.013	1,014	655,160	327,580	6	62	1,680	17,444	4.63	80839	0	80,839	246,741	12%	6	150	1680	42,056	4.03	169299	169,299	158,280	26%		
J	48.4.28	48.4.27	193		0.0620	8	0.67	0.013	3,017	1,949,818	974,908	6	68	1,680	19,124	4.57	87330	0	87,330	887,578	4%	6	156	1680	43,736	4.00	174962	174,962	799,948	9%		
J	48.4.27	48.4.26	121		0.0100	8	0.67	0.013	3,908	1,525,311	1,262,655	6	74	1,680	20,804	4.51	93731	0	93,731	1,168,924	4%	6	162	1680	45,416	3.98	180591	180,591	1,682,065	7%		
J	48.4.26	48.4.25	396		0.0110	8	0.67	0.013	3,229	2,086,543	1,043,271	6	80	1,680	22,484	4.45	100049	0	100,049	943,222	5%	6	168	1680	47,096	3.95	186186	186,186	857,086	9%		
J	48.4.25	48.4.24	188		0.0740	8	0.67	0.013	3,296	2,130,169	1,065,084	6	86	1,680	24,164	4.40	106292	0	106,292	958,792	5%	6	174	1680	48,776	3.93	191749	191,749	873,335	8%		
J	48.4.24	48.4.23	280		0.0340	8	0.67	0.013	2,434	1,443,902	721,951	6	92	1,680	25,844	4.35	112466	0	112,466	609,485	8%	6	180	1680	50,456	3.91	197282	197,282	524,668	14%		
J	48.4.23	48.4.22	201		0.0690	8	0.67	0.013	3,160	2,028,985	1,020,903	6	98	1,680	27,532	4.31	118576	0	118,576	904,526	10%	6	186	1680	52,136	3.89	202785	202,785	816,206	14%		
J	48.4.22	48.4.21	201		0.0201	8	0.67	0.013	1,718	1,110,247	555,094	6	104	1,680	29,204	4.27	124,627	0	124,627	430,429	11%	6	192	1680	53,810	3.87	206260	206,260	344,034	19%		
J	48.4.21	48.4.20	397		0.0179	8	0.67	0.013	1,621	1,047,670	520,835	6	110	1,680	30,984	4.23	130622	0	130,622	332,313	12%	6	198	1680	55,986	3.85	217069	217,069	310,123	20%		
J	48.4.20	48.4.19	62		0.0081	8	0.67	0.013	1,090	704,769	352,379	6	116	1,680	32,564	4.19	136555	0	136,555	215,814	19%	6	204	1680	57,178	3.83	219129	219,129	133,251	31%		
J	48.4.19	48.4.18	400		0.0067	8	0.67	0.013	993	640,673	320,493	7	123	1,680	34,524	4.15	143437	0	143,437	177,046	23%	7	211	1680	50,126	3.81	226423	226,423	95,062	35%		
J	48.4.18	48.4.17	402	6711.02	6708.31	0.0067	8	0.67	0.013	995	642,293	321,469	7	130	1,680	36,484	4.12	150247	0	150,247	171,222	23%	7	218	1680	61,096	3.79	231681	231,681	89,788	36%	
J	48.4.17	48.4.16	163	6708.11	6706.73	0																										

**Submittal Requirement Waiver:** Waivers must be approved by the respective reviewing agency and the approved waiver must be submitted with the application to be considered complete. If the waiver is not approved, the report is required for a complete submittal.

## Project Information

Project Name Basecamp Square  
Physical Address 1950 Curve Court and Unassigned - vacant land adjacent to former Pilot Building  
Legal Description Portion of Lot 1 and all of Lot 2, Worldwest Subdivision  
Parcel ID # 278600001 and 278600002

To waive any of the following items, contact the Community Development Engineer at  
**970-871-8227 or [sking@steamboatsprings.net](mailto:sking@steamboatsprings.net)**

## Traffic Impact Analysis Report

Reason for Waiver \_\_\_\_\_  
Approved?  Y  N      Determined By \_\_\_\_\_ Date \_\_\_\_\_

## Soils & Geo-Technical Report

Reason for Waiver \_\_\_\_\_  
Approved?  Y  N      Determined By \_\_\_\_\_ Date \_\_\_\_\_

## Drainage Study

Reason for Waiver \_\_\_\_\_  
Approved?  Y  N      Determined By \_\_\_\_\_ Date \_\_\_\_\_

To waive the report below, contact City of Steamboat Springs Water District Utilities Engineer at  
**970-871-8211 or [agregory@steamboatsprings.net](mailto:agregory@steamboatsprings.net)**

## Water Demand Report

Project proposes 38 units (37 EQRs) which is exempt from the water demand report requirement.  
Reason for Waiver \_\_\_\_\_  
Approved?  Y  N      Determined By Amber Gregory Date August 10, 2021

## WATER DEMAND WORKSHEET

### City of Steamboat Springs

Note to Applicants: Please complete all information. Additional comments to be entered under section 8 below.

Project Name: Basecamp Square  
Contact Person: Erik Griepentrog  
Telephone: 970-846-2592  
Email: [erikg@landmark-co.com](mailto:erikg@landmark-co.com)  
Date: 08/06/2021

Description of Proposed Project: Construction of multiple buildings and exterior amenity space on a +/- 2.4-acre parcel bounded by Lincoln Avenue, Elk River Rd, Curve Ct, and a new interior road proposed by the owner. On the Southern end of the block, (14) 4-story townhomes are to be constructed in (3) separate clusters, and (24) condominium units will be constructed in (2) garden-style multifamily buildings. Central to the block, a 50-space shared parking lot will be constructed to serve all uses within the site. On the Northern end of the block, an exterior amusement amenity will be created, containing one exterior, 8,000-sf covered space; one 800-sf bar/restaurant building, and an outdoor gathering plaza.

Location of Project (qtr qtr section, township, range, lot/filing) (attach legal description): Portion of Lot 1 and all of Lot 2, Worldwest Subdivision

Total Area (square feet or acres): 2.54 Acres

Has this area been annexed into City limits? Yes x \_\_\_\_\_  
No \_\_\_\_\_

Is this project a redevelopment of existing lots and structures? Yes \_\_\_\_\_  
No X\* \_\_\_\_\_

\*The property is currently vacant but previously platted

If Yes, identify by water/sewer billing address:

#### 1. RESIDENTIAL INDOOR WATER DEMAND

- A. Detached single family lots (number): 0  
Average lot size: square feet
- B. Average floor area of house: 0 square feet  
(inclusive of garage and unfinished basement)
- C. Greater of A or A x B/3,000: 0 single family equivalents (SFEs)
- D. In-house demand (C x 0.392): 0 acre-feet per year
- E. Multi-family units (number): 38  
(inclusive of duplex, condominium, townhouse, and apartment units)
- F. Average floor area of unit: 1,291 square feet  
(inclusive of garage and unfinished basement)
- G. Greater of E or E x F/3,000: 38 single family equivalents (SFEs)
- H. In-house demand (G x 0.336): 12.768 acre-feet per year
- I. Total indoor demand (D + H): 12.768 acre-feet per year
- J. Total residential SFEs: 38 SFEs

## 2. IRRIGATION WATER DEMAND

Describe irrigation methods (sprinkler, drip, etc.)

- A. Average irrigated area per detached single family lot: \_\_\_\_\_ square feet  
B. Irrigated area (1A x 2A/43,560): \_\_\_\_\_ 0 acres
- C. Average irrigated area per multi-family unit: \_\_\_\_\_ 200 square feet  
D. Irrigated area (1E x 2C/43,560) \_\_\_\_\_ 0.174472 acres
- E. Other irrigated areas:  
1. Irrigated parks \_\_\_\_\_ acres  
2. Irrigated entry features \_\_\_\_\_ acres  
3. Irrigated street ROW \_\_\_\_\_ acres  
4. Common space \_\_\_\_\_ acres  
5. Total other \_\_\_\_\_ 0 acres
- F. Total irrigated area (2B + 2D + 2E5): \_\_\_\_\_ 0.174472 acres  
G. Total irrigation demand (2F x 2.5) \_\_\_\_\_ 0.43618

## 3. OTHER OUTDOOR WATER USES

- A. Pond water surface area: \_\_\_\_\_ N/A square feet  
B. Fountain water surface area: \_\_\_\_\_ N/A square feet  
C. Swimming pool:  
1. Surface area \_\_\_\_\_ N/A square feet  
2. Volume \_\_\_\_\_ N/A gallons

## 4. OTHER INDOOR WATER USES

- A. Retail (square feet x 0.000112) \_\_\_\_\_ square feet 0 0.10 gpd/sqft  
B. Office (square feet x 0.000179) \_\_\_\_\_ square feet 0 0.16 gpd/sqft  
C. Warehouse or Storage (square feet x 0.0000672) \_\_\_\_\_ square feet 0 0.06 gpd/sqft  
D. Motel/hotel without kitchens (room x 0.1120) \_\_\_\_\_ guest rooms 0 100 gpd/room  
E. Motel/hotel with kitchens (room x 0.1680) \_\_\_\_\_ guest rooms 0 150 gpd/room  
F. Restaurant (seat x 0.0392) \_\_\_\_\_ 51 seats 1785 35 gpd/seat  
G. Tavern \_\_\_\_\_ seats 0 20 gpd/seat  
H. Other (describe)
- I. Total other indoor water usage \_\_\_\_\_ 1785 gpd

Describe below the expected number of employees/guests/daily hours and anything that impacts the number of people using the facilities or special features such as swimming pools, hot tubs, or other indoor water features. Use the Comments worksheet if more space is needed: **No special features are proposed.**

**5. AVERAGE ANNUAL CONSUMPTION USAGE (FOR CITY OF STEAMBOAT SPRINGS STAFF USE)**

	Demand (acre-feet)	Consumptive Use (acre-feet)
A. Indoor usage	_____	_____
B. Outdoor usage	_____	_____
C. Total	_____	_____

**6. APPLICANT**

Project Name: Basecamp Square  
By (print name): FV Basecamp, LLC  
(Owner/Authorized Representative)  
Title:  
Signature:  
Date:

**7. CITY**

Verified by (print name):  
(City employee)  
Title:  
Signature:  
Date:

**8. ADDITIONAL COMMENTS**