Town of Johnstown

Annual Water Demand Worksheet

Project Name: 27 Parish Ave

Site Address or Parcel #s: _____

Applicant/Project Owner: 27 Parish Investments

Email: Kevin@Kevin Shawrealestate.com   **Primary Phone:** 303 946 7358

Consultant /Representative: _____

Email: _____   **Primary Phone:** _____

Submitted: _____   **Date:** _____
   Signature

Project Summary

Detailed Description of Proposed Land Use:

Prior use was a bunker mechanics shop and (1) Single family home. Proposed use is 2885 sq feet of office space and (4) 1640 sq ft 2 bedroom apartment / condo style lofts. Main floor includes (5) self contained parking spots for single family units and concealed trash storage.

For Commercial/Industrial uses – Describe type of business and expected number of employees. Please provide any relevant water use records for comparable projects, if available:

Real Estate office 3 Employees.

HELTON & WILLIAMSEN, P.C.
CONSULTING ENGINEERS IN WATER RESOURCES

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M E M O R A N D U M

November 3, 2021

To: Justin Currie & Kim Meyer

From: Tom Williamsen & Tyler Hancock

Subject: Water Demand Update – Parish Mixed-use Building Submittal 1

This memorandum summarizes our review of the water demand estimates submitted by Kevin Shaw of Kevin Shaw Real Estate for the Mixed-use building located at 27 N. Parish Avenue. This site will have 2,885 ft^2 of office space and four 1640 ft^2 apartments. The building will span the entire area of the property so there will be no irrigated area.

The total annual water demand is estimated as 1.67 acre-feet. Of the total, the office space yields an annual water demand of 0.51 acre-feet using the general office municipal code rate. The four apartments will require an annual water demand of 1.16 acre-feet, which was calculated by using the single family attached municipal code rate.

The previous use of this property was for a mechanics shop and a single family home. To estimate change in water demand due to the new building, the previous building's use was calculated. Assuming the mechanics shop was open 5 days per week, had 4 employees, each employee used the bathroom 4 times a day, and averaged 5 gallons of water use per trip to the bathroom, the mechanics shop would have used 0.064 acre-feet/year. The single family home would have used 0.33 acre-feet/year. The total annual water demand would have been 0.39 acre-feet.

The change in annual water demand due to the new building is estimated as 1.28 acre-feet.

Attached is a scan of our review of the water demand worksheet.

c:\2021-11-3 Memo to JCurrie and KMeyer re Parish Mixed-use Bulding Sub 1.doc

Irrigation Demand

I. **All Uses - General L.S. areas (parks, common area, greenbelts, entry features, right of way, etc.)**

a.	Spray-irrigated Area - i.e., Sod/Seed	*O* SF	÷ 43,560 =		Acres
				x 2.5 AF/Ac =	
b.	**Spray-irrigation Demand**				AF
c.	*Drip-irrigated Area – i.e., mulched beds	*O* SF	÷ 43,560 =		Acres
				x 1.5 AF/Ac =	
d.	***Drip-irrigated Demand**				AF
e.	*Xeriscape-irrigated Area	*O* SF	÷ 43,560 =		Acres
				x 1.0 AF/Ac =	
f.	***Xeric-irrigated Demand**				AF
I. Irrigation Demand (b + d + f)				*O*	AF

*Some non-potable systems are not able to accommodate a demand difference and require all landscape areas at a 2.5 AF/ac rate. If non-potable water is used, check with individual system administrator.

II. **Residential – Single Family Detached (a-c) & Single Family Attached/Townhome/Multifamily (d-f)**

a.	Total # SFD Lots	Lots	---	---	---	
b.	Ave Irrigated SF/Lot	*O* SF/Lot	Total SF	÷ 43,560 =		Acres
					X 2.5 ac-ft/ac	
c.	**Irrigation Demand**					AF
d.	Total # SFA/TH/MF Units	Units				
e.	Ave Irrigated SF/Unit	*O* SF/Unit	Total SF	÷ 43,560 =		Acres
					X 2.5 ac-ft/ac	
f.	**Irrigation Demand**					AF
II. Irrigation Demand (c + f)					*O*	AF

III. **TOTAL Irrigation Demand: I + II =** _____*O*_____ AF

IV. **Indoor Use**

Land Use	# Units / Lots / SF	Municipal Code Rates	Annual Requirement (AF)
☐ Single Family Detached	Lots	x 0.33 AF/Lot	AF
☑ Single Family Attached / TH / Multifamily	*4* Units	x 0.29 AF/Unit	*1.16* AF
☐ General Commercial	SF	x 0.10 GPD/SF x 0.00112 =	AF
☑ General Office	*2885* SF	x 0.16 GPD/SF x 0.00112 =	*0.516992* AF
☐ Light Industrial / Flex	SF	x 0.06 GPD/SF x 0.00112 =	AF
☐ Other (describe*):	SF	*Attach detailed explanation of proposed AF calculation*	AF
Total Indoor Use (a + b + c + d + e + f)		---	*1.67* AF

ANNUAL WATER USE

	Demand	Factor	Consumptive Use
Total Irrigation Use (from III.)	AF	x 0.85 =	*O* AF
Total Indoor Use (from IV.)	*1.67* AF	x 0.05 =	*.0838* AF
TOTAL Annual Water Use	AF	---	*.0838* AF

TGH
11/3/21