

## Service Planning Letter # 3297-0

January 31, 2020

P.O. Box 3000 ~ 31315 Chaney St ~ Lake Elsinore, CA 92530 Phone: (951) 674-3146 ~ Fax: (951) 674-7554

**Description:** Commercial & Single Family (WO# 19-071)

Address:

0 Baxter

City:

Wildomar State: CA Zip: 92595

APN:

367-180-015 & 367-180-043

Phone:

(858) 546-0900

Email:

ericf@straequity.com

Zoning:

Commercial

# of Lots:

2

Acreage:

35.98

Tract Map:

**Pressure Zone:** 

1467

Strata Equity Group

4370 La Jolla Village Drive #960

San Diego, CA 92122 Attn: Eric Flodine Will Serve Fees Paid:

\$340.00

Paid Date:

01/31/2020

Check / Receipt #:

464283

#### **DEVELOPER**

Strata Baxter, LLC 4370 La Jolla Village Drive #960 San Diego, CA 92122

Attn: Eric Flodine

#### **ENGINEERING**

Michael Baker International 40810 County Center Dr. Suite 200

Temecula, CA 92591 Attn: Ivana Awayjan

Elsinore Valley Municipal Water District ("EVMWD") has determined that water and sewer is available to serve the above referenced project based on the information provided. This determination of water & sewer availability shall remain valid for two years from the date of this letter. If the construction of the project has not commenced within this two year time frame, EVMWD will be under no further obligation to serve the project unless the developer receives an updated letter from EVMWD reconfirming water and sewer availability. EVMWD reserves the right to re-evaluate, revise, and update the Service Planning Letter at any time. EVMWD considers the conditions to have expired, automatically, two years from the date of issuance of the Letter, (Section 3903. C EVMWD Administrative Code). EVMWD will provide such potable water at such pressure as may be available from time to time as a result of its normal operations. Installation of facilities through developer funding shall be made in accordance with the current EVMWD Standards and Administration Code. In order for us to provide adequate water for domestic use as well as fire service protection, it may be necessary for the developer to fund the cost of special facilities, such as, but not limited to booster pumps, in addition to the cost of mainlines and services. EVMWD will provide more specific information regarding special facilities and fees after submittal of your improvement plans, fire department requirements, and engineering fees for this project.

An estimate of fees will be quoted during the plan check process. Once plans have been accepted by the District and mylars have been submitted a formal invoice of fees will be prepared.

For all Commercial Development, please contact Keith Martinez at (951) 674-3146, extension 8326 regarding District requirements, Industrial Waste application, fees and inspection.

This letter shall at all times be subject to such changes or modifications by EVMWD. If you have any questions regarding the above, please contact me at (951) 674-3146 Ext. 8427

Authorized by

mey huisting Bachroski

Date

01/31/2020



### WO#: 19-071 (SINGLE FAMILY, MULTI-FAMILY, HOTEL, MEDICAL OFFICE)

# COMMERCIAL/INDUSTRIAL ELSINORE VALLEY MUNICIPAL WATER DISTRICT WILL SERVE & CONNECTION FEE APPLICATION

GENERAL INFORMATION	
Date of Application: 12/06/2019	
Agency Requesting Letter:	
Preferred Delivery Method of Completed Will Serve (Check One):	Pickup at District Offices
	Email to (Circle one): Owner/Developer Representative
	Mail to (Circle one): Owner/Developer Representative
CONTACT INFORMATION	
Owner/Developer	
Contact Name: Eric Flodine	
Business Name: Strata Baxter, LLC	
Mailing Address: 4370 La Jolla Village Drive, Suite 960	City: San Diego State: CA Zip: 92122
	Telephone: (858 ) 546-0900 Ext. 243
Email: Ericl-@strataequity.com	
Representative for Owner/Developer (or) Engineering Firm, if app	plicable
Contact Name: Ivana Awayjan	A
Business Name: Michael Baker International	Business Type: Engineering
Mailing Address: 40810 County Center Drive, Suite 200	City: Temecula State: CA Zip: 92591
Email: ivana.awayjan@mbakerintl.com	Telephone: (951 ) 506-2041
PROJECT INFORMATION	
Property Address: Enclosed by Grove St, Baxter Rd, White St.and I-15	City: Wildomar State: CA Zip: 92595
Assessor's Parcel Number(s): 367-180-015, 043	
Total Acres: 35.98	
Nearest Cross Streets: Baxter Road and White Street	
Type of Construction: ☑ New Construction** ☐ Tenant Improv	
	☐ Irrigation Meters
Will Serve Request for:   Water & Sewer □ Water Only □ S  ** REOUIRED FOR COMMERCIAL/INDUSTRIAL BUILDINGS	
*Attach a Site Map (8.5" x 11") identifying building/suite numbers, associate	ated square footage(s), and intended uses (i.e. office, warehouse, retail,
restaurant, etc.).	A copy of the City building permit is required for
*Provide Engineer's domestic & irrigation water demand calculations.  *Provide copy of Landscape Plans	all new development



DDO IECT INFODM ATION (continued)		====			
PROJECT INFORMATION (continued)					
Duplicate this page for each building/suite.					
Building/Suite # Medical Office Building Square Footage 84,000 Sq-ft					
<b>OPERATION(S)</b> (Check all that apply.)					
Animal Kennel Auditorium/Amusement Auto Detail/Wash, Type Auto Sales/Repair Auto Service/Repair Bar, # Seats Beauty/Barber Shop, # Seats Bowling/Skating Campsite (Developed) # Sites Car Wash-Tunnel Type Car Wash-Wand Type Church Club Dentist Office Doctor Office Drive-In Theater Dry Cleaning Office Only, # Employees Plant, # Employees	☐ Financial Institutions ☐ Golf Course/Camp/Park ☐ Health Spa ☐ Hospital ☐ With Showers, # Rooms ☐ Without Showers, # Rooms ☐ Hotel/Motel/Rooming House, # Rooms ☐ Indoor Theater ☐ Laundromat, # Machines ☐ Lumber Yard ☐ Mobile Home Park, # Spaces ☐ Mortuary/Cemetery ☐ Night Club ☐ Nurseries/Greeneries ☐ Nursing Home, # Beds ☐ Office Building ☐ Open Storage ☐ Pre-School, # Students	Retail Sales/Store/Unknown  RV Camp With Sewer Hookups,  # Sites  School  With Cafeteria and Showers,  # Students  Cafeteria without Showers,  # Students  No Cafeteria, No Showers,  # Students  Service Shop  Service Station  Shopping Center  Special Events Center,  # Attendance  Supermarket  Veterinarian  Warehousing			
Dry Manufacturing	Professional Building	☐ Wholesale Outlet			
this site. This information will be used to	determine whether the proposed project wi	roduction, or service activities proposed for ill require pre-treatment of wastewater. If the ste at (951) 674-3146 Ext. 8326, before a Will			



PROJECT INFORMATION (continued)					
Duplicate this page for each building/suite.					
Building/Suite # Hotel Square Footage 67,000 Sq-ft					
OPERATION(S) (Check all that apply.)		_			
Animal Kennel Auditorium/Amusement Auto Detail/Wash, Type Auto Sales/Repair Auto Service/Repair Bar, # Seats Beauty/Barber Shop, # Seats Bowling/Skating Campsite (Developed) # Sites Car Wash-Tunnel Type Car Wash-Wand Type Church Club Dentist Office Doctor Office Drive-In Theater Dry Cleaning Office Only, # Employees Plant, # Employees	☐ Financial Institutions ☐ Golf Course/Camp/Park ☐ Health Spa ☐ Hospital ☐ With Showers, # Rooms ☐ Without Showers, # Rooms ☐ Hotel/Motel/Rooming House, # Rooms 102 ☐ Indoor Theater ☐ Laundromat, # Machines ☐ Lumber Yard ☐ Mobile Home Park, # Spaces ☐ Mortuary/Cemetery ☐ Night Club ☐ Nurseries/Greeneries ☐ Nursing Home, # Beds ☐ Office Building ☐ Open Storage ☐ Pre-School, # Students ☐ Pre-School, # Students	Retail Sales/Store/Unknown  RV Camp With Sewer Hookups,  # Sites  School  With Cafeteria and Showers,  # Students  Cafeteria without Showers,  # Students  No Cafeteria, No Showers,  # Students  Service Shop  Service Station  Shopping Center  Special Events Center,  # Attendance  Supermarket  Veterinarian  Warehousing			
Dry Manufacturing	Professional Building	Wholesale Outlet			
this site. This information will be used to d	etermine whether the proposed project wi	roduction, or service activities proposed for ill require pre-treatment of wastewater. If the ste at (951) 674-3146 Ext. 8326, before a Will			



PRO	JECT INFORMATION (continued)					
Dupli	Duplicate this page for each building/suite.					
Ruild	Building/Suite # Multi-Family Residential Square Footage 11.3 acres					
				•	•	
OPE	RATION(S) (Check all that apply.)	_		_		
	Animal Kennel	Ц	Financial Institutions		Restaurant, # Fixtures	
	Auditorium/Amusement		Golf Course/Camp/Park		Retail Sales/Store/Unknown	
	Auto Detail/Wash, Type	Ц	Health Spa	Ц	RV Camp With Sewer Hookups, # Sites	
	Auto Sales/Repair	Ш	Hospital			
	Auto Service/Repair		With Showers, # Rooms	Ц	School  Wish Cafetania and Shawara	
	Bar, # Seats	_	Without Showers, # Rooms		With Cafeteria and Showers, # Students	
	Beauty/Barber Shop, # Seats	Ш	Hotel/Motel/Rooming House, # Rooms		Cafeteria without Showers,	
Ä	Bowling/Skating	_			# Students	
닏	Campsite (Developed) # Sites		Indoor Theater		☐ No Cafeteria, No Showers,	
	Car Wash-Tunnel Type		Laundromat, # Machines Lumber Yard		# Students	
	Car Wash-Wand Type				Service Shop	
	Church	Η	Mobile Home Park, # Spaces Mortuary/Cemetery		Service Station	
H	Club	님	Night Club	H	Shopping Center	
	Dentist Office		Nurseries/Greeneries		Special Events Center,	
님	Doctor Office		Nursing Home, # Beds	П	# Attendance	
	Drive-In Theater	H	Office Building	П	Supermarket	
Ш	Dry Cleaning  Office Only, # Employees	H	Open Storage	H	Veterinarian	
			Pre-School, # Students	H	Warehousing	
	Plant, # Employees  Dry Manufacturing		Professional Building	H	Wholesale Outlet	
u	Dry Manufacturing	Ч	Tolessional Dunding		Wholesale Canet	
	Other		· · · · · · · · · · · · · · · · · · ·			
this proje	ide a detailed description of the type of site. This information will be used to do ct requires a Pre-Treatment Program, you will be issued.  I with 102 rooms.	eterr	nine whether the proposed project wi	ill requ	ire pre-treatment of wastewater. If the	



PROJECT INFORMATION (continued)				
Duplicate this page for each building/suite.				
Building/Suite # Single Family Residential		Square Footage 12.5 acres		
OPERATION(S) (Check all that apply.)				
this site This information will be used to	determine whether the proposed project wi	Retail Sales/Store/Unknown RV Camp With Sewer Hookups, # Sites School With Cafeteria and Showers, # Students Cafeteria without Showers, # Students No Cafeteria, No Showers, # Students Service Shop Service Station Shopping Center Special Events Center, # Attendance Supermarket Veterinarian Warehousing Wholesale Outlet  roduction, or service activities proposed for ill require pre-treatment of wastewater. If the ste at (951) 674-3146 Ext. 8326, before a Will		



	SEWER		WATER	
Building/Suite #	uilding/Suite # No. of Units		Meter Size 3/4" 1" 1-1/2" 2" 3" 4"	Backflow Required? Yes / No / Not applicable
ou require more inf	ormation please cont	act Engineering at (951)	674-3146 Ext. 8427	
NCINEERING F	EES ( <i>EVMWD Ad</i> r	ninistrative Code. Secti	ion 2000)	
			ion 2600)	
ERVICE AVAILA	BILITY LETTE		\$340.00	
ERVICE AVAILA	BILITY LETTE			
ERVICE AVAILA	ABILITY LETTE al Development	RS		
ERVICE AVAILA	ABILITY LETTE al Development	RS	\$340.00	
ERVICE AVAILA	ABILITY LETTE al Development INCOMP	RS	\$340.00 S WILL NOT BE ACCEPTED.	
Fees Due:	ABILITY LETTE al Development INCOMP	LETE APPLICATIONS	\$340.00  S WILL NOT BE ACCEPTED.  Reviewed by:	
Fees Due:	ABILITY LETTE al Development  INCOMP	LETE APPLICATIONS  I No	\$340.00  S WILL NOT BE ACCEPTED.  Reviewed by:  Reimbursement #(s)	
Fees Due:	ABILITY LETTE al Development  INCOMP  ents: Yes t Received:	LETE APPLICATIONS  No Rece	\$340.00  S WILL NOT BE ACCEPTED.  Reviewed by: Reimbursement #(s)	
Fees Due:	ABILITY LETTE al Development  INCOMP  ents: Yes t Received: d by Engineering:	RS  LETE APPLICATIONS  No Rece	\$340.00  S WILL NOT BE ACCEPTED.  Reviewed by: Reimbursement #(s)  ipt No.:	CK:
Reimbursement Date Payment Date Received	ABILITY LETTE al Development  INCOMP  ents: Yes t Received:	RS  LETE APPLICATIONS  No Rece	\$340.00  S WILL NOT BE ACCEPTED.  Reviewed by: Reimbursement #(s)  ipt No.:	

Mail application form with appropriate fee to: EVMWD, P.O. Box 3000, Lake Elsinore, CA 92531-3000. For questions, please contact Engineering at (951) 674-3146 Ext. 8427 or email <a href="mailto:Development@evmwd.net">Development@evmwd.net</a>.

Please allow up to 20 working days for processing once the completed application has been accepted by the District.



31315 Chaney St PO Box 3000 Lake Elsinore, CA 92531 Office: (951) 674-3146 Fax: (951) 346-3352

#### January 31, 2020 10:02

Staff ID:

CBLI

Receipt No.

464283

Account:

Service:

Customer:

#### Tender Methods

Check 192

(\$340.00)

Total

(\$340.00)

Change

\$0.00

Beginning Balance

\$340.00

Payments applied

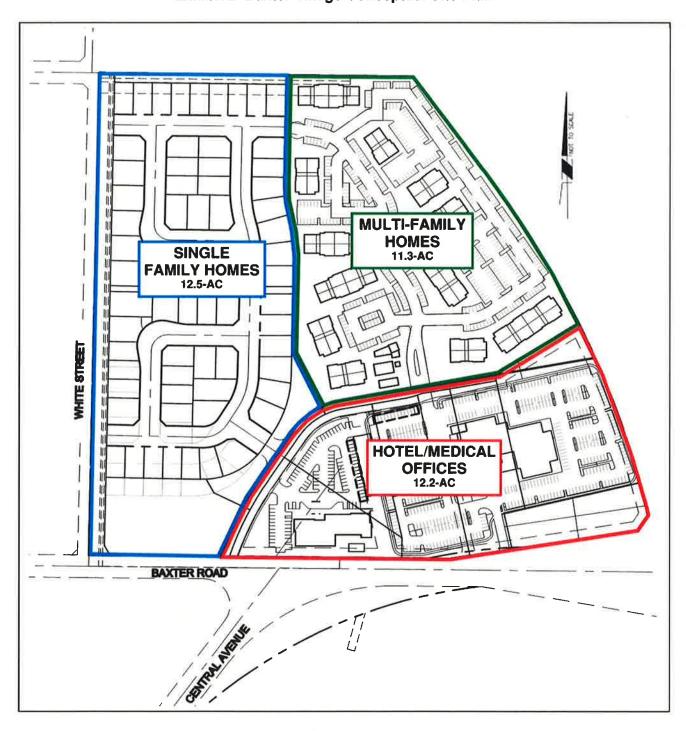
(\$340.00)

Did you know you can make payments 24/7 using your credit/debit card by calling our main number or accessing your account at www.evmwd.com?

THANK YOU FOR YOUR PAYMENT!

Visit our website at www.evmwd.com to access your account and make payments 24/7 or get valuable conservation information.

USE WATER WISELY!



**Exhibit 2 Baxter Village Conceptual Site Plan** 

## **TECHNICAL MEMORANDUM**

## **Baxter Village Water Study**

Owner

Strata Baxter, LLC

Engineer

**Michael Baker International** 

Kaveh Haghighi, PE

**Project Manager** 

Miles Costanza, PE

**Project Engineer** 

Ivana Awayjan, EIT

Civil Associate

Rev. Date	Summary
10/2019	Draft V1
10/29/2019	Draft V2
11/01/2019	Due Diligence Mtg. Draft

MBI JN 133555 **EVMWD WO#13-029** 



40810 County Center Drive, Suite 200 (951) 676-8042

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Appendix A: Appendix B: Appendix C:	<ul> <li>IEC's Hydraulic Study Review done for the District dated October 2016</li> <li>Domestic Water Model Results</li> <li>Supporting Documents</li> <li>EVMWD's 2015 Planning and Design Criteria for Water Systems</li> <li>Riverside County Fire Department's fire flow requirements letter</li> <li>Fire Hydrant Flow Test from EMVWD dated March 20, 2018 (NOT USED)</li> <li>Reservoir and Pump Capacity Charts from 2016 Water Master Plan</li> </ul>

#### I. Introduction

Michael Baker International was contracted by Strata Baxter, LLC to prepare a water analysis for the proposed project known as Baxter Village. The project site consists of approximately 36-acres of land in the City of Wildomar; 12.5-acres designated to single family homes, 11.3-acres to multi-family residential units, and 12.2-acres designated to a hotel and medical offices. The project is concurrently moving forward with the planning approval process with the City. The area is bounded by Baxter Road to the south, White Street to the west, Grove Street to the north, and Interstate 15 (I-15) to the east, as shown in the Vicinity Map in Exhibit 1.

The water purveyor for this development is Elsinore Valley Municipal Water District (EVMWD). EVMWD requested a that a water study be performed for the project focusing on the flows within the Baxter Village site.

This analysis used EVMWD's planning and design criteria for water systems. The criteria guidelines are included within Appendix C. The intent of this study is to provide the Owner with an overall assessment of the proposed water facilities necessary for the Project.

This project was previously entitled and approved by the City of Wildomar under the project name Baxter Village in 2016. A complete water and sewer hydraulic analysis was also completed and reviewed by the District in 2016. Since then, a portion of the project site plan and proposed development have changed. This revised analysis will incorporate the revised land use plan. The primary change in the proposed development is the 12.2 acres of commercial development are now replaced with a hotel and medical offices located in the same 12.2-acre area.

#### II. Project Background

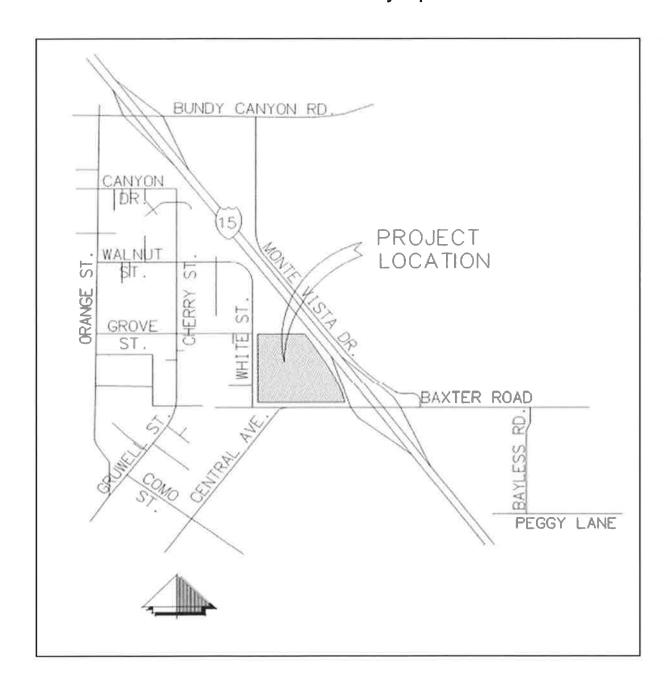
The closest existing water infrastructure is a 20-inch transmission water main along Baxter Road and a 12-inch distribution water main also along Baxter Road. The water system supporting the project is a part of EVWMD's 1467 Pressure Zone (Zone). A storage tank (2.5 MG) that supports this Zone is located along Waite Street. The following documents, exhibits, and correspondences (meetings/emails) were used as resources for determining demands and developing hydraulic models:

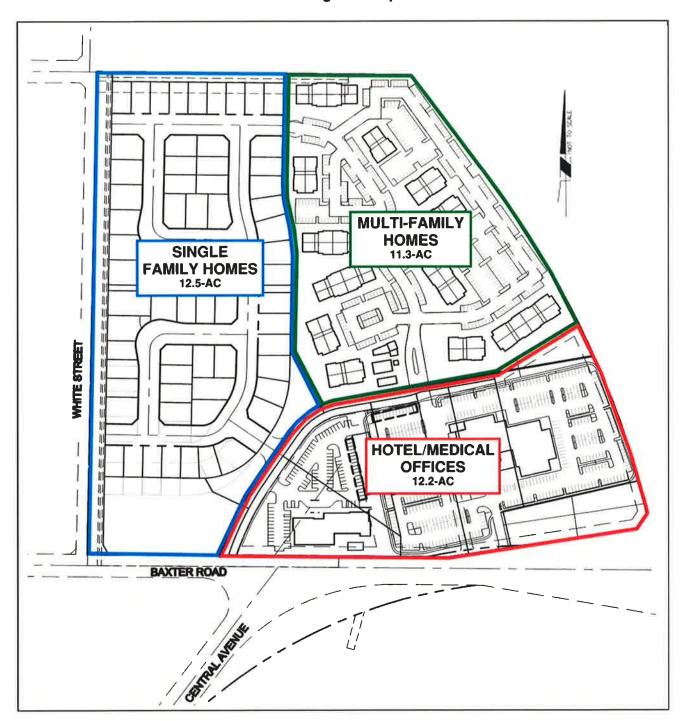
- EVMWD's "Design Standards and Standard Drawings, Volume I" dated February 2015.
- Riverside County Fire Department letter dated August 18, 2015.
- Existing Utility Plans, MBI, dated March 5<sup>th</sup>, 2018.
- Topography of Baxter Village Site, dated April 9<sup>th</sup>, 2018.
- Topography and aerial imaging using Google Earth Pro.
- City of Wildomar Zoning Map dated September 2016.
- Aerial imaging of the City of Wildomar, received March 2018.
- IEC's "Review of the Hydraulic Analysis for Baxter Village" dated October 2016.

#### III. Land Use

The proposed land use for the Project Site consists of residential and commercial development that includes a hotel and medical offices as shown in Exhibit 2.

**Exhibit 1 Vicinity Map** 





**Exhibit 2 Baxter Village Conceptual Site Plan** 

#### IV. Domestic Water and Fire Flow

Table 1 displays the anticipated flows within the Project using flow demand from EVMWD's Design Standards dated February 2015. The Average, Maximum Day, and Maximum Hour demands were determined using EVMWD's flow rates based on gallons per day per acreage. For the hotel and medical office area, a demand factor of 3,000 GPD/AC was assumed. The Design Standards do not include a specific demand factor for medical offices, and the number of units for the proposed hotel has not yet been determined.

Table 1 Land Use and Water Demand Summary

Planning Area Land Use	Gross Acreage	Dwelling Unit	Water Demand Factor (GPD/unit) <sup>[1]</sup>	Average Day (gpm)	Max Day (gpm) <sup>[2]</sup>	Max Hour (gpm) <sup>[3]</sup>
Single Family	12.5	66	500 GPD/unit	22.9	45.8	103.1
Multi-Family	11.3	204	400 GPD/unit	56.7	113.3	255.0
Hotel/ Hospital	12.2		3,000 GPD/ AC	25.4	50.8	114.4
Total	36.0			105.0	210.0	472.5

<sup>[1] 2015</sup> Design Criteria flow factors were used because it reflects the most recent study done by IEC for EVMWD. Please see attachments for a copy of this report.

The proposed water system was evaluated using EVMWD's design criteria. The design criteria is summarized in Table 2.

**Table 2 Water System Design Criteria** 

System Operating Pressures	20 psi – minimum pressure with fire flows 40 psi – minimum pressure during maximum hour demand
Minimum Pipeline Diameter [1]	8-inches
Fire Flow [2]	
Commercial/Office	3,750 gpm
Residential	500 gpm
Pipeline Sizing	
Maximum Pipeline Velocities	10 fps –Maximum with fire flows
	6 fps –Maximum during MHD
Friction Factors	Hazen Williams Coefficient (PVC Pipe) C=120

<sup>[1]</sup> EVMWD states that no 10-inch and 14-inch pipes shall be used.

#### **Fire Flow**

Table 3 displays the fire flow requirements for the Project Site upon the Draft Conditions presented by Riverside County Fire Department dated August 18, 2015. Please refer to Appendix C for a copy of this letter. A new letter will be requested for the project, and it is anticipated that the fire flow requirement will increase to 3,875 gpm for 4 hours.

Maximum Day Demand (MDD) peaking factor of 2 was multiplied to the Average Day Demands. Factor was provided by EVMWD's "Standard Design Requirements".

Maximum Hour Demand (MHD) peaking factor of 4.5 was multiplied to the Average Day Demands. Factor was provided by EVMWD's "Standard Design Requirements".

<sup>[2]</sup> Fire Flow provided by Riverside County Fire Department dated 2015. Please see Appendix C for a copy of this letter.

**Table 3 Fire Flow Requirements** 

Planning Area	Flow (GPM)	Duration (hours) at 20 psi
Residential	500	1
Commercial	3,750	4
Anticipated New requirement	3,875	4

EVMWD provided a hydrant flow test based upon their 1467 pressure zone on March 20th, 2018 presented in Table 4.

**Table 4 EVMWD Fire Hydrant Flow Test** 

Pressure Zone	1467
Static Pressure (psi)	56
Residual Pressure (psi)	20
Amount of Flow	2,516.41

Note: Please refer to Appendix C for a copy of this fire hydrant test.

The hydrant test provided by EVMWD was not used when creating a project-specific hydraulic model because the fire flow requirements from Riverside County Fire Department exceed the amount of flow received from the hydrant test. However, on October 5, 2016 a study was done by IEC (see Appendix A) at the request of the District, which indicated there would be enough water supply for the project. Based on the outcome of the study performed by IEC, it has been assumed that the District has sufficient supply and residual pressure to provide water for this proposed development.

The hydraulic model has been based on a storage reservoir in the 1467 Zone with an unlimited amount of source, until the District gives their input on system limitations and/or other possible points of connection.

#### **On-site Pipeline Systems**

Both the residential and commercial areas of the Project are anticipated to use a public water distribution system with EVMWD as the purveyor. Therefore, water demands were determined using EVMWD's Planning and Design Criteria dated 2015. Pipelines are sized to ensure minimum pressures are met throughout the system while providing the required fire flows and adhering to EVMWD's system criteria. The study area includes 12-inch diameter pipelines for on-site distribution.

Pipe sizes and alignments found in Exhibit 3 are for preliminary planning and estimating and is not considered as an approved layout by EVMWD. Once a site plan is developed, a more refined analysis can be performed to confirm the various elements: elevation grades, pipe corridors and sizes, connections to off-site and on-site distribution piping, and phasing. The analysis presented in this study assumes a complete project buildout using a public system delivery.

#### **Hydraulic Water Analysis**

The domestic water system hydraulic analysis was performed using Bentley's WaterCAD CONNECT Edition Hydraulic Modeling Software. The on-site hydraulic model was created using proposed grading and site plans for the project. Junctions were placed at intersections to join two or more pipelines and for applying water demands for system simulations. Scenarios created within the model are as follows:

Scenario 1: Maximum Hour flows (MHD) of 472.5 gpm associated with the site are added to designated junctions.

Scenario 2: Maximum Day Demands associated with the entire project and a commercial/office fire flow event totaling to 3,960 gpm within the project area. This scenario placed Max Day Demands at designated junctions, and the fire flow of 3,750 gpm at FH-2.

Conservative operating scenarios were chosen, such as fire flow demands at hydraulically remote locations to ensure minimum pressures are available for service. All scenarios used a Hazen Williams roughness coefficient (C) of 120 as a conservative value. This lower coefficient value assumes minor losses such as valves, fittings, and smaller size meters provided to various retail facilities as well as assuming an aged pipeline system. A summary of the worst-case modeling results is displayed in Table 5. The program output files are included in Appendix A.

Table 5 Computer Analysis Hydraulic Summary for On-Site Piping

Scenario	Description	Minimum Pressure		Minimum Service	Maximum Velocity		Max. Allowable
		(psi)	Junction	Pressure Required	(fps)	Pipe	Velocity
1	Maximum Hour Flow (MHD)	41	J-26	40	0.60	P-51	6
2	Max Day + Fire Flow at FH-11	34	FH-2	20	7.05	P-47, P-48, P-49	10

These pressures are based on the assumption previously stated that the EVMWD Distribution system is able to provide an unlimited volume of water at Zone pressures. Further refinement of the model based on actual operating conditions may reduce the observed minimum pressures presented in this report.

LEGEND: EXISTING WATER LINE PROPOSED 12-INCH LINE PROPOSED FIRE HYDRANT EXISTING FIRE HYDRANT anon marin WHITE STREET BAXTER ROAD EX 12" WATER-LINE

**Exhibit 3 Proposed Domestic Water System** 

#### Reservoir Capacity Evaluation

Reservoir storage capacity for the Waite Street reservoir serving pressure Zone 1467 near the project was evaluated in the EVMWD 2016 Water Master Plan. In the Master Plan, the reservoir was identified as having deficient storage volume. Please refer to Table 6 for a summary of the reservoir information presented in the District's 2016 Master Plan.

**Table 6 Existing Reservoir Capacity** 

	Pressure Zone	1467
	Reservoir Name	Waite Street
Maatan Blan	Total Existing Volume Required (MG)	3.2
Master Plan	Existing Storage Volume (MG)	2.5
	Fire Flow Required (GPM) for 2 Hours [1]	4,000
	Current Deficiency (MG)	-0.7
Project Flows	Baxter Village Required Volume (MG) [3]	0.39
Flow by Others	Baxter Towne Center Required Volume (MG) [2]	0.39
Totals	Total Volume Required (MG) [4]	3.98
iotais	Total Deficit Volume (MG) [5]	-1.48

<sup>[1]</sup> Required Fire Flow for the reservoir is more than what the project requires, therefore, storage for fire suppression is supported by the reservoir.

Based on the information provided by EVMWD's 2016 Water Master Plan, the total existing required volume already surpasses the existing storage volume. Currently, the reservoir does not have sufficient capacity for existing flows.

#### **Booster Station Evaluation**

The booster station capacity for the following pressure zone (1467) was also analyzed in the EVMWD 2016 Master Plan. Please refer to Table 7 for a summary of the booster station information presented in the District's 2016 Master Plan.

**Table 7 Existing Potable Water Booster Station Capacity** 

	Pressure Zone	1467
	Pump Station Name	Waite
Master Dien	Total Existing MDD (gpm)	1,196
Master Plan	Total Existing Pumping and Well Capacity	3,000
	Firm Pumping Capacity (gpm)	2,000
	Existing Pumping Surplus (gpm)	804
Project Flows	Baxter Village Required Water (gpm) [2]	210
Flow by Others	Baxter Towne Center Required Water (gpm) [1]	208
Total	Total Required Water (gpm) [3]	418
Excess	Excess Pumping Capacity (gpm)	386

MDD flows from just Baxter Towne Center, multiplied by 1.3 as stated in EVMWD's Supplemental Standards Volume II (2008) to account for reservoir capacity.

Maximum Day Demand flows by others taken from IEC study: "Review of the Hydraulic Analysis for Baxter Village" (October 2016). Please refer to Appendix B for study excerpt. The MDD was multiplied by 1.3 to account for reservoir capacity.

Total volume required includes: Total Existing Volume Required, Baxter Towne Center Required Volume, and Baxter Village Required Volume. Please note, that the Total Existing Volume already includes the Current Deficiency (2.5 - 3.2 = -0.7).

Total Deficit Volume includes: Total Volume Required minus the existing storage volume (2.5 – 3.98 = -1.48).

- [2] Maximum Day Demand for Baxter Village taken from IEC Study: "Review of the Hydraulic Analysis for Baxter Village" (October 2016).
- Total Required Water includes the addition of Baxter Towne Center, Baxter Village Required water.

The pumping surplus is more than the Baxter and Baxter Towne Center flows combined. Therefore, the boosting capacity appears adequate for flow required for both projects.

#### VI. Conclusion and Recommendations

The domestic water system analysis for the Project is based on EVMWD's criteria and ensuring adequate system performance under all operating scenarios. The Project shows two water tie-in connections to the District's 12-inch line along Baxter Road. The existing 6-inch line within White Street was indicated to be upsized to a 8-inch line per EVMWD's letter attached to IEC's Hydraulic Review dated October 2016. These connections are for system redundancy and reliability. Complete output results of the hydraulic analysis are found in Appendix B. The recommended domestic on-site system includes 12-inch diameter pipelines. The fire demand used during modeling purposes was 3,750 gpm for commercial and 500 gpm for residential areas. It is conceivable that different fire flow conditions may be requested from the City of Wildomar and the fire flow demand will increase slightly. The hydraulic model should be re-analyzed once Conditions of Approval have been adopted for the Project.

Exhibit 3 shows the recommended public domestic water distribution system for the on-site system. It should be noted that interior system operation may require additional facilities to ensure adequate operation prior to ultimate development such as meters, backflow preventers, fire detector checks, etc. to individual commercial buildings. These devices will change the available pressure. Please refer to Appendix B, for water meter requirements, per design policy 2.02.Q.4. A review of the domestic water hydraulic model is recommended when the Project's grading plans as well as site plans are finalized. The hydraulic model ensures that pressures will be sufficient at ground level. Any stories above the first floor may require pumping for the fire sprinkler and potable water systems.

The hydraulic analysis presented herein is based on the assumptions that the existing EVMWD system can supply the required project flow at the assumed Zone pressures. The District will need to verify these assumptions, and any changes to these assumptions may affect model results. Additionally, the District will need to verify the need for any improvements that could be required to offsite piping or storage to achieve the required project supply.