



# Chocolate Drive Multi Family Development

## Preliminary Water and Wastewater Capacity Report

September, 2022



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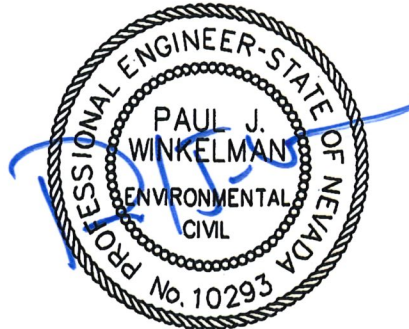
**Chris Melton, General Manager**  
**Brad Baeckel, Public Works Director**



## Chocolate Drive Development

# PRELIMINARY WATER AND WASTEWATER CAPACITY REPORT

September, 2022



Exp. 6/30/2024  
9/13/22



**SHAW**  
ENGINEERING

20 Vine Street  
Reno, Nevada 89503  
775.329.5559  
775.329.5406 (Fax)

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## Appendix A

Water Capacity Analysis

## 1.0 Introduction

The purpose of this Study is to provide a preliminary evaluation of the ability of the Sun Valley General Improvement District (SVGID) to supply municipal water and wastewater service to a proposed multifamily development located along Chocolate Drive hereinafter referred to as the Development. Furthermore, this Study identifies the water and wastewater infrastructure required to serve the Development.

The location of the proposed Development is shown in Figure 1, page 2. The Development is tentatively anticipated to include 240 multi-family units located in two story buildings that have approximately 12-24 units per building. It is further anticipated that the units will consist of approximately 72 one bedroom, 120 two bedroom and 48 three-bedroom units.

A preliminary site plan and elevation drawing dated 11/10/2020 was provided by the Development engineer, Kimley Horn, and was utilized in the preparation of this Preliminary Report and in the hydraulic models that were developed.

## 2.0 Water System Evaluation

### 2.1 Givens and General Assumptions

All the existing water system information was obtained from the *SVGID Water System Master Plan Update*, September 2016, (WMP) as prepared by Shaw Engineering. The following was utilized for the existing SVGID water system based upon the WMP;

Minimum Month Demand	140 GPD/Customer (PF=0.46)
Average Day Demand	262 Gallons per Day (GPD)/Customer
Maximum Day Demand	603 GPD/Customer (PF=2.3)
Peak Hour Demand	1,025 GPD/Customer (PF=3.6)

SVGID's current existing service area buildout customers and planned future developments are summarized in Table 1, page 3.

Water system improvements completed and incorporated into the hydraulic modeling utilized for this Study includes the following;

- a. New 12-inch main loop constructed for the new Middle School.
- b. New Juniper Terrace Pump Station upgrade.
- c. Integration of the Sidehill and Chimney Hydraulic Pressure Zones including addition of altitude valve at Sidehill Tank.
- d. New upsized 16-inch transmission main to the Klondike Tank.
- e. New 16 inch and 12-inch transmission main from the Klondike Tank to 5 Ridges development.



Figure 1  
Development  
Location Map

<b>TABLE 1</b>		
<b>Water Customers - Existing and Expanded Service Area</b>		
<b>Customer</b>	<b>Existing Service Area</b>	<b>Expanded Service Area</b>
Existing SVGID Service Area <sup>1</sup>	6,950 (±)	
Planned Future Developments <sup>2</sup>		
Chocolate Drive Apartments	240	
SV Apartments	201	
5 Ridges	1,404	
Highland Village Phase 1		215
Highland Village Phase 2		70
Sub Total	8,795	285
<b>Total</b>		<b>9,080</b>

*Footnotes:*

1. Total service area buildout projected in the 2016 Water Master Plan.
2. Will serves are issued by SVGID on a first come first serve basis.

The SVGID has historically and successfully utilized the following planning and design criteria for their public water system which is consistent with the Nevada Administrative Code (NAC) and the WMP and either meets or exceeds the minimum standards specified in the NAC;

Source of Supply (via TMWA Wholesale)

Sullivan + Raleigh Heights =Maximum Day Demand  
(Via SVGID Main Pump Station and Boundary Tank respectively)

Raleigh =Minimum Month Demand  
(Via Boundary Tank)

Storage

Operational =17% of Maximum Day Demand  
(Approximately equivalent to the peak hour demand minus what can be supplied into the zone via pumping considering the diurnal flow pattern)

Emergency =2 Average Day Demands

Fire =as dictated by Fire Authority

Pumping (with adequate Zone Storage)

With Largest Pump Offline =Maximum Day Demand

Pumping (with none or inadequate Zone Storage)

Not applicable, all SVGID pumped zones have gravity storage.

Distribution

Existing and New

- ≥20 psi residual pressure @ Tank ½ Full at Maximum Day plus Fire
- ≥30 psi residual pressure @ Tank LWL at Peak Hour
- ≥40 psi residual pressure @ Tank LWL at Maximum Day
- ≤100 psi static pressure @ Tank HWL at Zero Demand require.
- ≤8 fps velocity during Peak Hour

Note. Every effort is made to not exceed 100 psi system pressures. When it is unavoidable, pressure reducing valves are required to be installed on individual services. There are several instances of this occurring throughout the SVGID system.

Redundant Main

Required when greater 250 Customers are being served

The elevations as currently proposed in the Development vary from approximately 4803 to 4914. The Development will therefore lie within the SVGID Chocolate hydraulic pressure zone whose upper elevation limit is approximately 4890. ***SVGID will not be able to serve any property at this Development location with a first-floor finish elevation above 4890 without substantial infrastructure improvements.*** This limitation currently impacts three buildings located on the southern end of the Development.

The Development has identified a Fire Flow requirement of 2,250 GPM for a 2-hour duration.

Adding the known future development demands to the SVGID service area buildout by hydraulic pressure zone is shown in Table 2, page 5 which also shows the total projected water system demands for the various system conditions. The water customer counts per development are further detailed in Appendix A.

The water system was modeled utilizing Bentley WaterCAD V8i Cybernet V7.0 hydraulic modeling software.

<b>TABLE 2 Total Equivalent Water Customers by Pressure Zone and Total Water System Demands</b>			
<b>Pressure Zone</b>	<b>Existing Service Area Buildout</b>	<b>Expanded Service Area</b>	<b>Total</b>
Southern	229	0	229
Central	3,321	0	3,321
Chocolate	3,592	285	3,877
Sidehill/Chimney	1,253	0	1,253
West 7th	1	0	1
Boundary	399	0	399
<b>Total</b>	<b>8,795</b>	<b>285</b>	<b>9,080</b>
<b>Minimum Month Demand</b>			<b>883 GPM</b>
<b>Average Day Demand</b>			<b>1,652 GPM</b>
<b>Maximum Day Demand</b>			<b>3,802 GPM</b>
<b>Peak Hour Demand</b>			<b>6,463 GPM</b>

## 2.2 Water System Capacity Summary

Table 3, page 6 summarizes the capacity analysis results for each effected facility (also see Appendix A). As can be seen in Table 3, all facilities have excess capacity except as noted below.

### Storage-Chocolate Zone

There is adequate storage volume in the Southern/Central/Chocolate Zone Tanks which serves the Development. The Development is mainly dependent on the Chocolate Storage Tank itself which is one of the oldest tanks in the SVGID system. The Chocolate Storage Tank requires the following improvements;

1. Replacement of the inlet altitude valve and outlet check valve, and
2. New interior tank coating

### Storage-Sidehill/Chimney Zone

There is not adequate storage in the Sidehill/Chimney Zone. The Sidehill Zone is deficient by approximately 0.10 MG. This deficiency is being caused by the 5 Ridges development and is not being exacerbated by the Development. 5 Ridges is responsible for correcting this deficiency.



<b>TABLE 3 Water System Capacity Analysis Summary</b>			
<b>System</b>	<b>Available Capacity</b>	<b>Required Capacity</b>	<b>Excess Capacity Remaining</b>
Source – Maximum Day	4,700 GPM	3,802 GPM	2,144 Customers
Source - Emergency Minimum Month	1,100 GPM	883 GPM	2,234 Customers
Main Pump Station	3,155 GPM	2,702 GPM	1,081 Customers
Juniper Terrace Pump Station	600 GPM	525 GPM	180 Customers
West 7th Pump Station	500 GPM	39 GPM (min. month)	4,743 Customers (min. month)
Southern/Central/Chocolate Storage	6.35 MG	5.322 MG	1,642 Customers
Chimney/Sidehill Storage	1.62 MG	1.69 MG	(104)
Boundary/West 7 <sup>th</sup> Storage	1.35 MG	0.791 MG	893 Customers
Fire Storage Chocolate Zone	0.540 MG	0.270 MG	yes
Distribution System Maximum Day + Fire	≥20 psi	Meets Required Pressure with Improvements	
Distribution System Maximum Day	≥40 psi	Meets Required Pressure with Improvements	
Distribution System Peak Hour	≥30 psi	Meets Required Pressure with Improvements	
Distribution System Minimal Demand	≤100 psi	Exceeds in some existing areas, not exacerbated by Development	
Distribution System maximum Velocity	≤8 f[ps	Exceeds in three locations not exacerbated by Development	

### Distribution

The existing 8-inch distribution main located in Sidehill Drive between 2<sup>nd</sup> Avenue and the southerly Development entrance at Brownlee will have to be upsized to a 12 inch. All potable water and fire mains and fire hydrants within the Development property are assumed to be private. The fire mains are currently anticipated to be 8 inches minimum and the potable water mains are anticipated to be 4 inches minimum. These main sizes will need to be designed by the Development.

Four points of connection are anticipated to be required to the existing SVGID distribution system, two for fire, one for potable water and one for irrigation. For the fire system, one connection at 5<sup>th</sup>/Chocolate Drive and one at Brownlee/Sidehill are necessary. For the potable and irrigation water service, one connection each at 4<sup>th</sup> street will be necessary.

Figure 2 page 8 illustrates the water improvements and system connections anticipated to be required in this Preliminary Capacity Report.

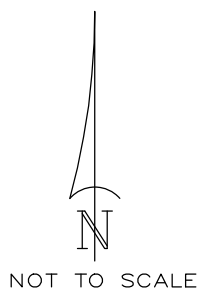
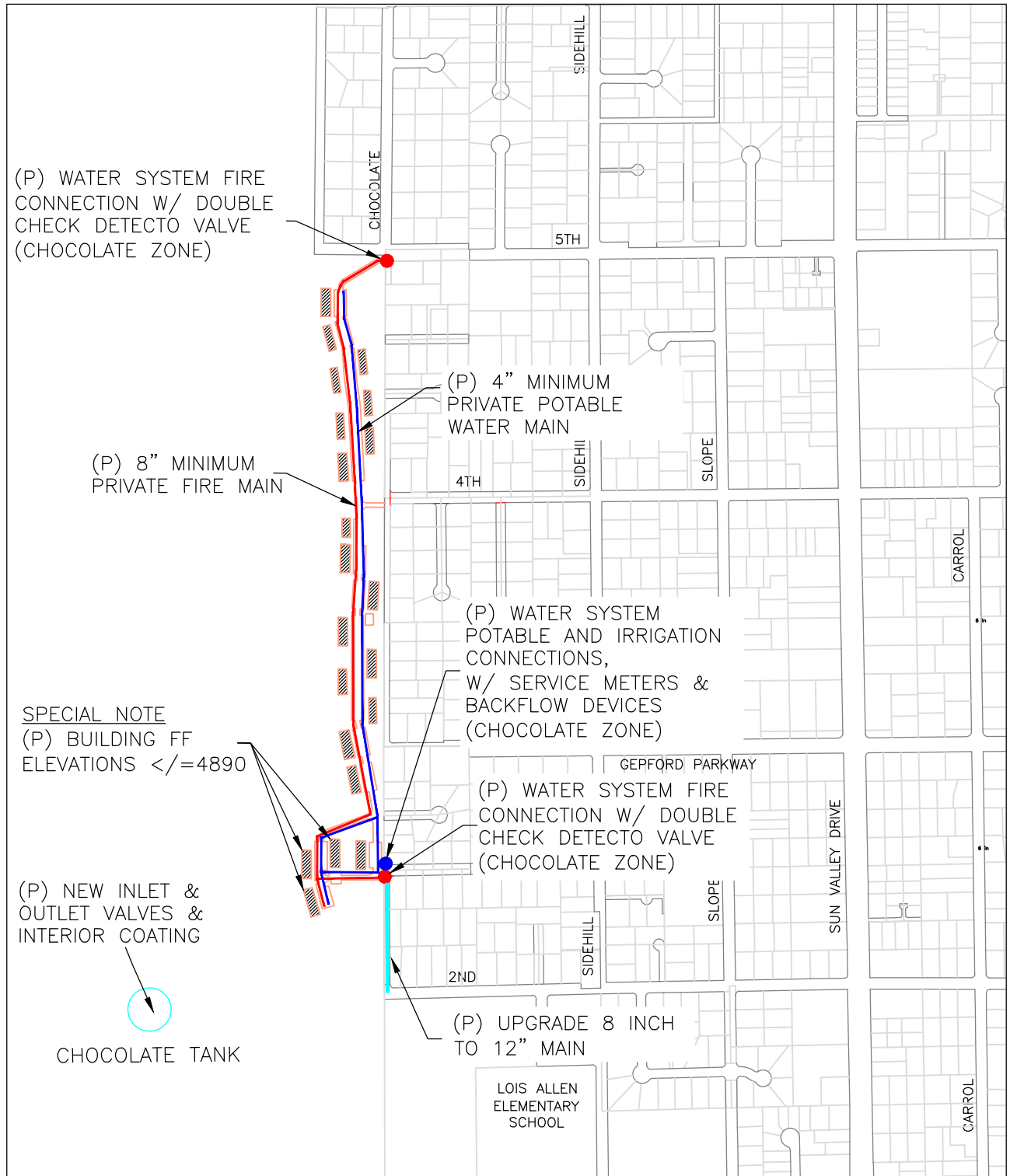


Figure 2  
Water Improvements

### 3.0 Wastewater Treatment and Conveyance Evaluation

#### 3.1 Givens and General Assumptions

The existing wastewater system information was obtained from the *SVGID Wastewater System Master Plan*, dated August, 2011 that was prepared by Shaw Engineering (WWMP) as well as from any subsequent work related to various developments and new infrastructure that have occurred since the WWMP was completed.

As identified in the WWMP, the following flows were utilized in this Report;

Annual Average Day Flow	186 Gallons per Day/Equivalent Residential Unit (GPD/ERU)
Peak Month Average Day Flow	201 GPD/ERU

This Study utilized existing SVGID planning and design criteria consistent with the WWMP and is summarized as follows;

Treatment Plant Capacity	Peak Month
8" Peak Hour Factor	3.0
10" and 12" Peak Hour Factors	2.5
15" and above Peak Hour Factor	2.25
Pipe Capacity (d/D)	75%

All system improvements completed since the last WWMP have been incorporated into the hydraulic modeling.

The customer counts by sewer EDU utilized for this Study are summarized in Table 4, page 10.

Based upon all of the above presented information, the total flows utilized in this Study are summarized in Table 5, page 10.

<b>TABLE 4</b>		
<b>Wastewater ERU's-Existing and Expanded Service Area</b>		
<b>Customer</b>	<b>Existing Service Area</b>	<b>Expanded Service Area</b>
Existing SVGID Service Area <sup>1</sup>	7,016	
WCDWR	986	1,397 <sup>3</sup>
Planned Future Developments <sup>2</sup>		
Chocolate Drive (This Study)	240	
Highland Vista Phase 2 (October, 2021)		70
Sun Valley Apartments (Sept, 2021)	201	
Highland Ranch Ph 1(Dec, 2020)		215
Sub Total	8,443 <sup>2</sup>	1,682
<b>Total</b>		<b>10,125</b>

*Footnotes:*

1. Derived from WWMP Table 2.10. Total SVGID service area buildout projected in the 2011 Wastewater Master Plan Update of 6,847 plus 43 additional Ladera (356 to 399 lots) + 126 Middle School.
2. Wastewater capacity studies have been completed. Will serves are issued by SVGID on a first come first serve basis.
3. WWMP Table 2.11 set aside capacity for WCDWR.

<b>TABLE 5</b>		
<b>Wastewater System Flows, GPM/MGD</b>		
<b>EDU's</b>	<b>Average Day Flow</b>	<b>Peak Month Flow</b>
10,125	1,308/1.883	1,413/2.035

### 3.2 Collection System Capacity

The anticipated point of connection to the SVGID collection system is either at the west end of Gepford Parkway or at the west end of 4<sup>th</sup> and is illustrated in Figure 3, page 11. Either location would be acceptable. The collection system downstream of the proposed point of connection has the capacity to serve the Development which lies within the existing service area.

There is a section of collection pipe located in Prosser Drive that is flow limiting under the expanded service area scenario and will have to be regraded and upsized to an 18 inch in the future. This improvement was previously identified in the WWMP (Section 5.2.4) and was also identified as being necessary to serve the Highland Village Phase 2 development (*Highlands Village Phase 2 Water and Wastewater Capacity Study, October, 2021 prepared by Shaw Engineering*). This improvement is illustrated in Figure 4, page 13.

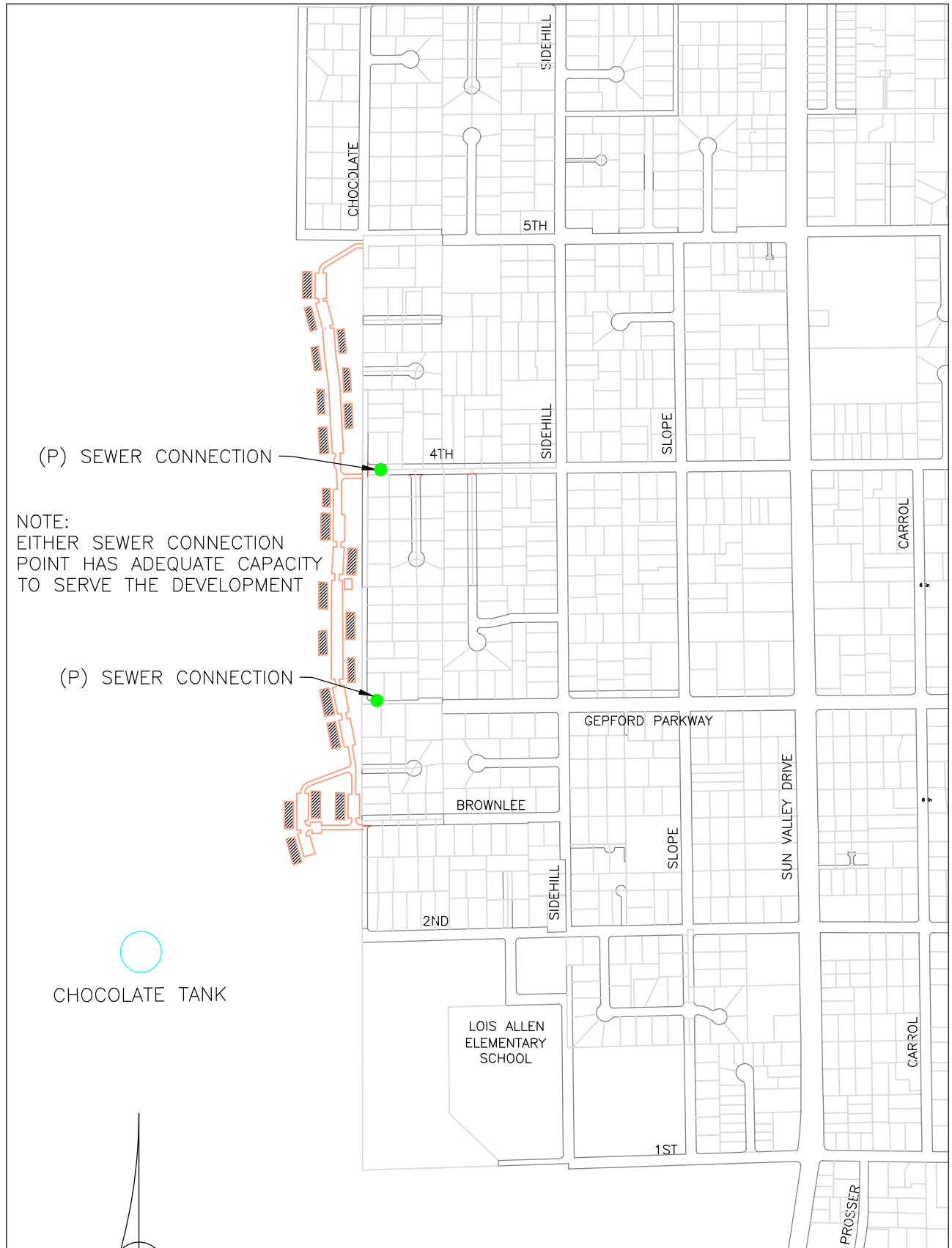


Figure 3  
Collection Connections

### 3.3 Interceptor Capacity

The interceptor begins at SVGID Flow Meter Station #1 located at Prosser Drive and travels all the way to the intersection of Sparks Boulevard and Baring Way where it then discharges into the City of Sparks Spanish Springs Interceptor that then travels to TMWRF.

The WWMP identified one area along the interceptor between manholes 18 and 19 (WWMP Section 5.3.1) for the service area buildout scenario that has been monitored and is of ongoing concern. It is recommended that this section of pipe be corrected. This correction would entail regrading and upsizing the pipe to 21-inch PVC between interceptor manholes 17 and 19. This improvement is illustrated in Figure 4, page 13.

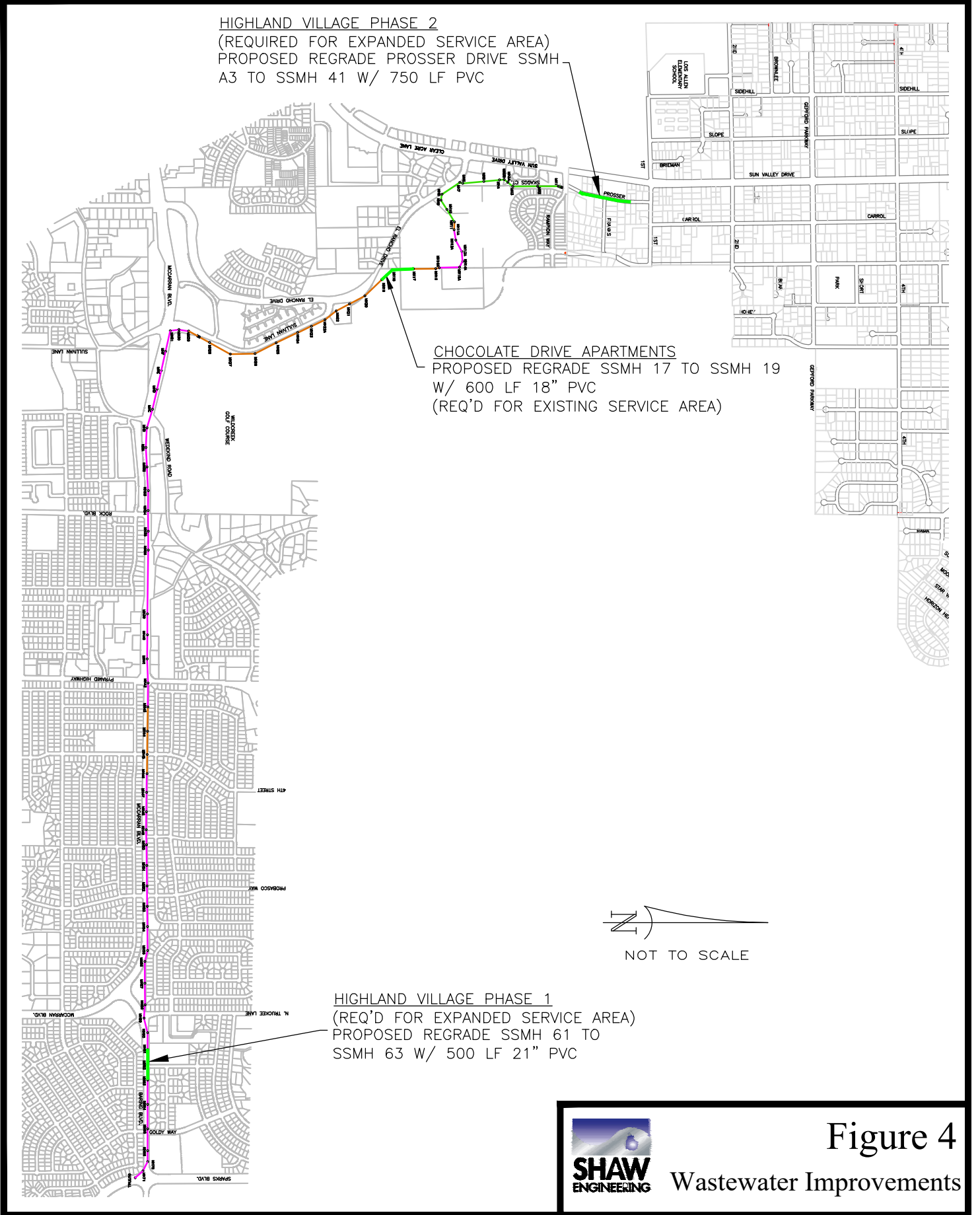
There is also a section of interceptor between manholes 62 and 63 on Baring Boulevard that is flow limiting under the expanded service area scenario that will have to be regraded in the future. This improvement was previously identified in the WWMP (Section 5.3.4) and was also identified as being necessary to serve the Highland Village Phase 1 development (*Highlands Village Water and Wastewater Capacity Study, December, 2020 prepared by Shaw Engineering*). This improvement is also illustrated in Figure 4, page 13.


### 3.4 Treatment Capacity at TMWRF

SVGID has 2.099 MGD of total treatment capacity at the Truckee Meadows Water Reclamation Facility (TMWRF) of which 0.479 MGD is reserved for Washoe County. The capacity available to SVGID is therefore 1.62 MGD (8,060 ERU's). The estimated existing and expanded service area buildout scenario ERU's for SVGID is 7,742 ERU's (Table 4, 10,125 ERU's minus the 2,383 WCDWR ERU's) which equates to a peak month flow of 1.56 MGD. SVGID therefore has the treatment capacity available to serve the Development.

## 4.0 Additional Comments and Considerations

1. This Report utilized elevations and building layouts provided by the Development. Any changes to these two items will require revisions to the hydraulic model and could impact the required infrastructure described herein.
2. The fire flow requirements presented by the Development will need to be confirmed by the Fire Authority. Changes in the required fire flows could impact the required water infrastructure described herein.
3. All onsite water and wastewater infrastructure design is the responsibility of the Development.



 **Figure 4**  
Wastewater Improvements



4. Any costs associated with onsite water and wastewater systems and appurtenances, connections fees and water rights dedications and any other fees, unless specifically indicated otherwise, have not been included in this Report
5. Water demand and wastewater flow estimates per Customers and ERU's respectively are based upon past historical SVGID estimates which are mainly attributable to residential and neighborhood commercial type of use. These estimates were assumed to be consistent with the multifamily Development.
6. Opinions on construction costs and project schedules, when included, are made based on the experience and qualifications of Shaw Engineering. Furthermore, the estimates are based upon current prices and appropriate escalation or de-escalation factors need to be considered as time passes. The ongoing COVID pandemic also is affecting material and labor availability and has an indeterminate effect on project costs and project time. Since Shaw Engineering has no control over the cost of labor, materials, equipment or services furnished by others, or over the Contractor's methods of determining prices, or over competitive bidding or market conditions, SVGID and the Development are cautioned that the prices presented cannot and do not guarantee that the actual construction bid will not vary from opinions of construction cost presented herein. If Owner wishes greater assurance as to construction cost estimates, Owner should consider employing an independent cost estimator.

## **5.0 Summary**

The SVGID system has the capacity to provide water and wastewater service to the Development with some infrastructure upgrades.

On the water side, the existing 8-inch distribution main on Chocolate Drive between 2<sup>nd</sup> and Brownlee will need to be upsized to a 12-inch main and the inlet and outlet valves and interior tank coating at the Chocolate Tank need to be replaced.

On the wastewater side, the interceptor line between manholes 17 and 19 will have to be regraded and upsized to a 21-inch pipe. No other offsite improvements are anticipated to be required at this time.

It should be noted that excess capacity is provided on a first come first serve basis and this preliminary report should be revisited prior to will serves being issued.

## **Appendices**

Appendix A – Existing Water System Capacity Analysis

## **Appendix A – Existing Water System Capacity Analysis**

**APPENDIX A-EXISTING WATER SYSTEM CAPACITY ANALYSIS**

Project Name: Chocolate Dr Development  
 Date: 7/14/22  
 Analysis By: PJW

Project Location: Chocolate Drive between 2nd and 5th

Project Description: The project includes approximately 240 Multi family Units, 1 Br to 3 Br.

Fire Flow: 2250 GPM for 2 Hrs

Number of Proposed New Service(s): 240 % of Existing Service Connections Effected: 2.73%

Service Elevation(s): Approx. FF 4820 to 4895 Service Pressure Zone: Chocolate Service Node(s): Ending in "Choc"

Existing Demands:	Minimum Month	140 GPD/Customer	Table 2.4, 2016 SVGID Water Master Plan
	Average Day	262 GPD/Customer	Table 2.4, 2016 SVGID Water Master Plan
	Maximum Day	603 GPD/Customer	Table 2.4, 2016 SVGID Water Master Plan
	Peak Hour	1025 GPD/Customer	Table 2.4, 2016 SVGID Water Master Plan

**Planned Customers and Flows By Pressure Zone**

Customers and Flows	Pressure Zone						Total	Comments	
	South	Central	Choc	Sde/Chm	W. 7th	Bndry			
<b>Existing Service Area Buildout</b>									
Approx Existing	229	3043	2220	504	1		5997		
Ladera						399	399	Final Reports-Phase 1-Nov 2017, Phase 2-Nov 2017 and Phase 3-Nov 2017	
Middle School				239			239	Equivalent Customers. Final Report March, 2018	
Jehova Irrigation		1					1	Letter, April 2018	
Sun Mesa			205				205	Final Report, March 2019	
5115 Sun Valley Blvd		1					1	Letter August, 2019	
Valle Vista		75					75	Final Report March, 2020	
5880 Sun Valley Blvd			4				4	Draft Report July, 2020	
Harmony Mesa				18			18	Draft Report November 2020	
Caleb Court			11				11	Final Report March 2021	
5 Ridges			912	492			1404	Final Report June, 2022 (Updates and superceds 9/2020 Report). Equivalent Customers	
SV Apartments		201					201	Final Report dated September, 2021. 200 Apts + Clubhouse. Area not included in past master planning build outs as MF	
Chocolate Dr.			240				240	This Report	
							0		
Subtotals	229	3321	3592	1253	1	399	8795	6950 (Table 2.3, 2016 SVGID WMP) + 1404 (5 Ridges) + 201 (SV Apts)	
<b>Expanded Service Area</b>							0		
							0		
							0		
Highlands Village Ph 1			215				215	Final Report December,2020	
Highland Village Phase 2			70				70	Final Report October, 2021	
							0		
							0		
							0		
Subtotals	0	0	285	0	0	0	285		
<b>Total Customers</b>	<b>229</b>	<b>3321</b>	<b>3877</b>	<b>1253</b>	<b>1</b>	<b>399</b>	<b>9080</b>		
Minimum Month, GPM	22	323	377	122	0.097	39	883	1.27	MGD
Average Day, GPM	42	604	705	228	0.182	73	1652	2.38	MGD
Maximum Day, GPM	96	1391	1623	525	0.419	167	3802	5.48	MGD
Peak Hour, GPM	163	2364	2760	892	1	284	6463	9.31	MGD



## Source Capacity

### TMWA Wholesale

Available Max Day Capacity 4700 GPM By TMWA Agreement-Sullivan Wholesale=3600 GPM (Pumped) + Raleigh Wholesale=1100 GPM (Gravity)  
Required Max Day Capacity 3802 GPM Estimated Per Flow Calculations Above  
**Excess Max Day Capacity 897.75 GPM or 2144 Customers<sup>1</sup>**

Available Emergency Capacity 1100 GPM By TMWA Agreement-Raleigh Wholesale=1100 GPM (Gravity).  
Required Emergency Capacity 883 GPM Estimated Minimum Month Per Flow calculations Above (At assumed reduced consumption per SVGID WMP Table 4.1)  
**Excess Emergency Capacity 217.22 GPM or 2234 Customers<sup>1</sup>**

## Pump Station Capacity (with Adequate Zone Storage as calculated below, Alternative Pump Station Capacity is Not Required)<sup>2</sup>

### Main Pump Station

Available Max Day Capacity 3155 GPM Pumps D+B Running with Largest Pump in Standby. Table 3.1, SVGID 2016 Water Master Plan  
Required Max Day Capacity 2702 GPM Estimated Per Flow Calculations Above - 1100 GPM being Served through Gravity Raleigh Wholesale Point  
**Excess Capacity 452.75 GPM or 1081 Customers<sup>1</sup>**

### Juniper Terrace Pump Station

Available Max Day Capacity 600 GPM 1 Pump Running with 1 Pump in Standby. Upgraded capacity to accomodate new Middel School.  
Required Max Day Capacity 525 GPM Estimated Per Flow Calculations Above  
**Excess Capacity 75.31 GPM or 180 Customers<sup>1</sup>**

### West 7th Pump Station

Available Capacity 500 GPM 1 Pump Running with 1 Pump In Standby. Table 3.4, SVGID 2016 Water Master Plan  
Required Capacity 39 GPM Minimum Month. Provides redundant service only to the Boundary and West 7th Zones that are gravity fed via the Gravity Raleigh Wholesale Point  
**Excess Capacity 461.11 GPM or 4743 Customers<sup>1</sup>, Min Month**

## Gravity Storage Capacity

### Southern/Central/Chocolate

Available Storage Capacity 6.350 MG Chocolate + Eastside + Klondike + Juniper Terrace + Westside Tanks. Table 3.5, SVGID 2016 Water Master Plan  
Required Fire Storage Capacity 0.540 MG 3000 GPM for 3 hours. Table 3.9, SVGID 2016 Waster Master Plan  
Required Emergency Storage Capacity 3.892 MG 2 Average Day Demands per Flow Calculation Above and Section 4.4.3 SVGID 2016 WMP  
Required Operational Storage Capacity 0.890 MG 17% of Maximum Day Demand per Flow Calculations Above and Section 4.4.4 SVGID 2016 WMP. Also includes Operational Storage for Sidehill/Chimney  
Total Required Capacity 5.322  
**Excess Capacity 1.03 MG or 1642 Customers<sup>1</sup>**

### Chimney/Sidehill

Available Storage Capacity 1.620 MG Chimney 1 + Chimney 2 + Sidehill Tanks. Table 3.5, SVGID 2016 Water Master Plan  
Required Fire Storage Capacity 0.900 MG 3750 GPM for 4 hours. SVGID March, 2018 WCSD New Middle School Water Capacity Study  
Required Emergency Storage Capacity 0.657 MG 2 Average Day Demands per Flow Calculation Above and Section 4.4.3 SVGID 2016 WMP  
Required Operational Storage Capacity 0.128 MG 17% of Maximum Day Demand per Flow Calculations Above and Section 4.4.4 SVGID 2016 WMP  
Total Required Capacity 1.685  
**Excess Capacity (0.07) MG or (104) Customers<sup>1</sup>**

### Boundary/West 7th

Available Storage Capacity 1.350 MG Boundary Tank. Table 3.5, SVGID 2016 Water Master Plan  
Required Fire Storage Capacity 0.540 MG 3000 GPM for 3 hours. Table 3.9, SVGID 2016 Waster Master Plan  
Required Emergency Storage Capacity 0.210 MG 2 Average Day Demands per Flow Calculation Above and Section 4.4.3 SVGID 2016 WMP  
Required Operational Storage Capacity 0.041 MG 17% of Maximum Day Demand per Flow Calculations Above and Section 4.4.4 SVGID 2016 WMP  
Total Required Capacity 0.791  
**Excess Capacity 0.56 MG or 892.88 Customers<sup>1</sup>**

**Distribution System Capacity**

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**Hydraulic Model Results:**

System Condition	Req'd	Actual		Comments
		Min	Max	
Maximum Day + Fire, Tanks at 50%	Fire Storage, MG Fire Flow, GPM	0.270 2250	0.54 0.54	Dedicated Fire Storage provided in the Chocolate Zone
	Residual Pressure, PSI	=>20		
Maximum Day, Tanks at LWL	Residual Pressure, PSI	=>40	43 79	Within Development
Peak Hour, Tanks at LWL	Residual Pressure, PSI	=>30	42 79	Within Development
Static (Minimal Demand), Tanks Full	Pressure, PSI	=<100		Within Development
Peak Hour Flow	Velocity, FPS	=<8	0 13.12	all <8 within Development

**Offsite Improvements**

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Do Distribution Main Improvements Exceed 500 feet? Yes

Description of Improvements: See Report Figures.

*Footnotes:*

- (1) Excess capacity shown is of the date of this analysis and is provided on a first come first serve basis. This analysis should be updated if required at the time will serves are issued*
- (2) The Main Pump Station has dedicated standby power while the other facilities have manual transfer switches. SVGID maintains one mobile generator.*