WOOD PATEL

FINAL Master Plan

☑ APPROVED
☐ APPROVED AS NOTED
☐ REVISE AND RESUBMIT

CITY OF SCOTTSDALE
SCOTTSDALE WATER
9379 E San Salvador Dr.
Scottsdale, AZ 85258

Disclaimer: If approved; the approval is granted under the condition that the final construction documents submitted for city review will match the information herein. Any subsequent changes in the water or sewer design that materially impact design criteria or standards will require re-analysis, re-submittal, and approval of a revised basis of design report prior to the plan review submission.; this approval is not a guarantee of construction document acceptance.
For questions or clarifications contact the Water Resources Planning and Engineering Department at 480-312-5685.

BY apritchard DATE 7/28/2025

FINAL MASTER WATER REPORT FOR FAIRMONT SCOTTSDALE PRINCESS

Review 1 - November 22, 2023
Review 2 - March 29, 2024

May 23, 2025
WP# 215319

Prepared by
Robert G. Saunders, EIT

EXPIRES 06-30-28

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1.0 INTRODUCTION

1.1 General Background

This Master Water Report for the Fairmont Scottsdale Princess addresses the addition of six (6) proposed projects that will improve approximately 15.6 acres across three (3) parcels with a combined total area of 53.4 acres. The three (3) parcels disturbed within the City of Scottsdale are APN#215-08-695, APN#215-08-694, and APN#215-08-693 which are all zoned C-2. Each project will include one (1) or more buildings, hardscape, landscape, and utility improvements.

The design criteria used to estimate water demands and evaluate system hydraulics are based on Wood, Patel & Associates, Inc.'s (WOODPATEL's) understanding of the requirements listed in the *City of Scottsdale Design Standards and Policies Manual, 2018* (Ref. 1).

The following is a summary of the primary design criteria utilized:

Average Day Water Demand, Commercial/Retail: ..... 0.8 gpd/sf
Average Day Water Demand, Resort/Hotel*: ..... 446.3 gpd/DU
Average Day Water Demand, Restaurant: ..... 1.3 gpd/sf
Maximum Pressure: ..... 120 psi
Minimum Pressure: 50psi
Maximum Day Demand: ..... 2 x ADD
Peak Hour Factor; Commercial & Resort ..... 3.5 x ADD
Peak Hour Factor; Restaurant: ..... 6.0 x ADD

Abbreviations: gpd = gallons per day; sf = square feet; DU = dwelling units; ADD = average day demand
*Includes both inside and outside use, per Figure 6-1.2, City of Scottsdale *Design Standards and Policies Manual* (Ref. 1)

1.2 Project Location

The Fairmont Scottsdale Princess is a resort property with multiple guest buildings and amenities including pools, restaurants, conference rooms, and retail. It is located within Section 35, Township 4 North, Range 4 East of the Gila and Salt River Base and Meridian, Maricopa County, Arizona. Refer to Exhibit 1 - *Vicinity Map* for project location. The specific location of the proposed projects onsite are as follows:

The Sunset Villas and Bungalows project includes nine (9) proposed buildings on approximately 3.7 acres of an approximate 34.4-acre parcel (APN#215-08-695). This project is located east of Cottage Terrace, south of Hacienda Way, and west of the existing Spa Building.

The Conference Center/Event Lawn project includes a proposed building with open space for events on approximately 10.95 acres overlapping two (2) parcels with an approximate area of 44.4 acres (APN#215-08-693 and APN#215-08-695). This project is located east of Cottage Terrace, north of Hacienda Way, and west of the existing Palomino Ballroom.

The Parking Garage project includes a multi-level parking structure on approximately 3.9 acres of an approximate 9.0-acre parcel (APN#215-08-694). This project is located east of Princess Drive and south of Princess Boulevard.

The Guest Room Addition project includes a single building with underground parking on approximately 0.9 acres of an approximate 34.4-acre parcel (APN#215-08-695). This project is located east of Cottage Terrace and south of Hacienda Way.

The Italian Restaurant is a proposed restaurant on approximately 0.37 acres of an approximate 9.94-acre parcel (APN#215-08-693). This project is located on the southeast corner of Princess Boulevard and Cottage Terrace.

The Roasterie Restaurant is a proposed restaurant on approximately 0.24 acres of an approximate 34.4-acre parcel (APN#215-08-695). This project is located approximately 512-feet east of Cottage Terrace, 1151-feet south of East Hacienda Way, and south of the existing Spa Building.

2.0 EXISTING WATER INFRASTRUCTURE

The water infrastructure in the area includes existing public 12-inch water mains within Cottage Terrace, Princess Boulevard, and Princess Drive. There is an existing public 8-inch water main within Hacienda Way that connects to the existing 12-inch water mains within Cottage Terrace and Princess Drive. The existing Hacienda Way public 8-inch water main serves the dock area of the main resort, the existing Spa Building and the existing Palomino Ballroom. In addition, an existing 6-inch public water main extends from Hacienda Way south along the west side of the existing Spa Building through the property where it connects to the existing public 12-inch water main in Cottage Terrace. Refer to Exhibit 2 – *Concept Master Water Layout*.

3.0 PROPOSED WATER INFRASTRUCTURE

Water demands for the proposed projects can be found in Appendix A - *Water Demand and Calculations.* Average day, max day, and peak hour demands were calculated according to their land use in accordance with *City of Scottsdale Design Standards and Policies Manual* (Ref. 1). Although there are multiple projects being proposed, the construction schedule for them will overlap at some point where all the projects will be in construction at the same time. The water main infrastructure in particular will be done together to avoid multiple shutdowns.

3.1 Proposed Layout

A section of the existing public 6-inch water main will be removed west of the Spa Building and south of the public 8-inch water main in Hacienda Way. It will be replaced with a new section of public 8-inch water main extending south from the public 8-inch water main in Hacienda Way through the proposed Sunset Villas and Bungalows project, which connects back into the existing public 6-inch water main. The existing public 8-inch water main along the north side of the Palamino Ballroom, connecting the 8-inch water main in Hacienda Way to the 12-inch water main in Princess Drive, will be rerouted around the proposed Conference Center. Refer to Exhibit 2 – *Concept Master Water Layout.* All landscape

irrigation needed for all projects will be provided by the existing onsite grey water system. Water demands have also been added due to the addition of fountains on Conference Center/Event Lawn, The Italian Restaurant, and The Roasterie Restaurant. These fountains include a maximum capacity of 15,000 gallons, using the small pool capacity, with demand values from Appendix D – *Scottsdale Water Demand Exhibit*.

3.1.1 Sunset Villas and Bungalows

The Sunset Villas and Bungalows improvements include a proposed public 8-inch water line through the Site which will connect to the existing public 8-inch water main in Hacienda Way and the existing public 6-inch water main along the west side of the Spa building as described in Section 3.1. The proposed public 8-inch water main will provide a 4-inch fire service to each of the nine (9) proposed buildings. Domestic demands will be served from a 4-inch water meter, vault, and backflow preventer connected to the existing public 8-inch line within Hacienda Way. This line will route through the site serving five (5) buildings with a 2-inch service and the remaining four (4) buildings will be served by two (2) 2.5-inch services that will each serve two (2) buildings. See plumbing plans for details. There will be one (1) proposed Fire Hydrant connection to the existing public 8-inch water main within Hacienda Way. Each proposed building will have a Fire Department Connection (FDC) with a backflow preventer placed inside the building. See plumbing plans for details.

3.1.2 Conference Center/Event Lawn

The Conference Center/Event Lawn improvements include the removal and re-alignment of the existing public 8-inch water main from Hacienda Way to Princess Drive as described in Section 3.1. The proposed improvements for the project include four (4) proposed fire hydrants, a 4-inch domestic water meter, vault, and backflow preventer, the relocation of two (2) existing fire hydrants, one (1) FDC, one (1) proposed 6-inch fire service with backflow preventer, and two (2) proposed fountains.

3.1.3 Parking Garage

The proposed water service for this project includes a 6-inch fire service with backflow preventer which connects to the existing public 12-inch water main within Princess Drive and one (1) FDC connection.

3.1.4 Guest Room Addition

The proposed water services for this project will include a 6-inch fire service with backflow preventer, a 2-inch domestic water service with meter and backflow preventer connected to the existing public 12-inch water main within Cottage Terrace, and one (1) FDC connection.

3.1.5 The Italian Restaurant

The proposed water services for this project will include a 6-inch fire service with backflow preventer, a 2-inch domestic service with meter and backflow preventer connected to the existing

public 12-inch water main within Cottage Terrace, one (1) FDC connection, and a proposed fountain.

3.1.6 The Roasterie Restaurant

The proposed water services for this project will include a 6-inch fire service with backflow preventer, a 2-inch domestic service with meter and backflow preventer connected to the existing public 6-inch main running through the Fairmont Scottsdale Princess property south of the Spa Building, one (1) FDC connection, and a proposed fountain.

4.0 HYDRAULIC MODELING

4.1 Methodology

Bentley WaterCAD version 10i was used to analyze the proposed water system. The existing water infrastructure was calibrated using the results of two (2) hydrant flow tests. Fire Flow Test #1 (Permit #C69698) conducted on August 4, 2022, tested the fire hydrants connected to the existing public 12-inch water main along Cottage Terrace. Fire Flow Test #2 (Permit #C71326) conducted on February 6, 2023, tested the fire hydrants connected to the existing public 12-inch water main along Princess Drive. Refer to Appendix B - *Fire Hydrant Flow Test Results and Calculations*.

The domestic demands calculated for each of the proposed projects are listed in *Table 1: Domestic Demand* below using City of Scottsdale's design criteria (Ref. 1). Refer to Appendix A – *Water Demand and Calculations*. Demands for the Site include only the square footage of the Conference Center considering that the Event Lawn will not be in use simultaneously with the equivalent space in the Conference Center or the existing Palomino Ballroom. If inclement weather forces guests to go indoors, the space will be used in the Conference Center or the existing Palomino Ballroom and the Event Lawn will no longer be in use.

Table 1: Domestic Demand

Contributing Site	Average Daily Demand		Max Day		Peak Hour	
	(gpm)	(gpd)	(gpm)	(gpd)	(gpm)	(gpd)
Italian Restaurant*	29.9	21,502	59.7	42,952	178.9	128,752
Roasterie Restaurant*	19.1	13,702	38.1	27,352	114.1	81,952
Sunset Villas and Bungalows	26.7	19,191	53.4	38,382	93.5	67,169
Conference Center*	110.7	79,723	221.3	159,394	401.7	289,363
Event Lawn	--	--	--	--	--	--
Parking Garage	--	--	--	--	--	--
Guest Room Addition	96.1	69,177	192.2	138,354	336.4	242,120
Total	**282.5**	**203,295**	**564.7**	**406,434**	**1,124.6**	**809,356**

* Additional demands from fountains (Appendix D - *Scottsdale Water Demand Exhibit*)

The modeling results show that the minimum pressure experienced in the system is 62 psi during Peak Hour Demand and the maximum pressure experienced in the system is 74 psi during Average Day

Demand. All results fell within the City of Scottsdale Standard allowable operating pressure range of 50 psi and 120 psi. Refer to Appendix C - *Hydraulic Modeling Results*.

The Fire Flow requirement for each project was determined from Appendix B of the International Fire Code (IFC) (Ref. 2). The fire flow requirement for each proposed project can be found in *Table 2: Fire Flow Demand* below. The projects associated with Fire Flow Test #1 are The Italian Restaurant, The Roasterie Restaurant, Sunset Villas and Bungalows, Conference Center/Event Lawn, and the Guest Room Addition. This is reflected within the modeling results which are labeled “Model 1”. The only project associated with Fire Flow Test #2 is the Parking Garage. This is reflected within the modeling results which are labeled “Model 2”. Applicable junctions were highlighted within each project’s fire flow report for reference. Refer to Appendix B - *Fire Hydrant Flow Test Results and Calculations* and Appendix C – *Hydraulic Modeling Results*.

Table 2: Fire Flow Demand

Site	Building Type	Area (sf)	Fire Flow Required (gpm)	Reduction (%)	Total Fire Flow (gpm)
Italian Restaurant	V-B	16,500	3,500	50%	1,750
Roasterie Restaurant	V-B	10,500	2,750	Minimum	1,500
Sunset Villas and Bungalows	V-B	12,131*	3,000	50%	1,500
Conference Center	I-B	97,576	3,250	50%	1,625
Event Lawn	N/A	39,400	N/A	N/A	1,500
Parking Structure	I-B	340,500	6,000	50%	3,000
Guest Room Addition	V-A	151,086**	6,250	50%	1,750

***** Area of largest single building
** Square footage includes the underground parking garage

Modeling results determined that each project achieves its fire flow requirement at or above the minimum pressure of 30 psi established by the City of Scottsdale. Refer to Appendix C – *Hydraulic Modeling Results* for specific results.

The fire hydrants associated with each project in the model are as follows:

- Italian Restaurant: FH-4 & EX FH-5
- Roasterie Restaurant: FH-7
- Sunset Villas and Bungalows: FH-1, FH-2, FH-8, EX FH-1(TEST), & EX FH-3(FLOW)
- Conference Center: FH-1, FH-2, FH-3, FH-4, FH-5, FH-6, & EX FH-7(FLOW2)
- Event Lawn: FH-5 & FH-6
- Parking Structure: EX FH-6(TEST2), EX FH-7(FLOW2), EX FH-10, & EX FH-11
- Guest Room Addition: FH-2, EX FH-1(TEST1), & EX FH-3(FLOW1)

5.0 CONCLUSIONS

The following conclusions can be made based on the above analysis for the six (6) proposed Fairmont Scottsdale Princess projects:

1. The design criteria used to calculate potable water demands and evaluate system hydraulics are based on the *City of Scottsdale Design Standards and Policies Manual, 2018*.

2. The proposed water infrastructure described is adequate to serve the domestic and fire flow demands for the proposed projects.

3. The proposed projects meet or exceed the minimum pressure of 30 psi with their respective fire flow requirements per the City of Scottsdale for the MDD + FF scenarios.

4. The proposed projects exceed the minimum 50-psi pressure requirement as outlined by the City of Scottsdale standards for the ADD, MDD, and PH scenarios.

5. The proposed projects do not exceed the maximum 120-psi pressure requirement as outlined by the City of Scottsdale standards for the ADD, MDD, and PH scenarios.

6.0 REFERENCES

1. *City of Scottsdale Design Standards and Policies Manual*, 2018
2. *International Fire Code, by International Code Council*, 2021
3. *The Italian Restaurant – Phase 4C, Scottsdale, AZ*, by Kimley-Horn and Associates, Inc. November 2023.
4. *The Roasterie Restaurant – Phase 4D, Scottsdale, AZ*, by Kimley-Horn and Associates, Inc. November 2023.
5. *Water Distribution System Basis of Design Report for Fairmont Scottsdale Princess Conference Center & Event Lawn, Scottsdale, AZ,* by Wood, Patel & Associates, Inc. November 2023.
6. *Water Distribution System Basis of Design Report for Fairmont Scottsdale Princess Guest Room Addition, Scottsdale, AZ,* by Wood, Patel & Associates, Inc. November 2023.
7. *Water Distribution System Basis of Design Report for Fairmont Scottsdale Princess Sunset Villas and Bungalows, Scottsdale, AZ,* by Wood, Patel & Associates, Inc. June 2023.
8. *Water Distribution System Basis of Design Report for Fairmont Scottsdale Princess Parking Structure, Scottsdale, AZ,* by Wood, Patel & Associates, Inc. June 2023.

APPENDIX A – WATER DEMAND CALCULATIONS

WOOD PATEL

TABLE 1
WATER DISTRIBUTION SYSTEM DESIGN CRITERIA

Project	Fairmont Scottsdale Princess
Location	Scottsdale AZ
Project Number	215319
Project Engineer	Andrew J. Sanchez, E.I.T.
References	City of Scottsdale Design and Policies Manual (2018)

RESIDENTIAL WATER DEMANDS			
LAND USE	**AVERAGE DAILY DEMAND (ADD)**		**NOTES**
	VALUE	**UNITS**	
High Density Condominium	185.3	gpd/DU	Note 1
Resort Hotel	446.3	gpd/DU	Note 1

NON-RESIDENTIAL WATER DEMANDS			
LAND USE	**AVERAGE DAILY DEMAND (ADD)**		**NOTES**
	VALUE	**UNITS**	
Restaurant	1.3	gpd/sf	Note 1
Commercial/Retail	0.8	gpd/sf	Note 1
Commercial High Rise	0.6	gpd/sf	Note 1
Office	0.6	gpd/sf	Note 1
Institutional	1340	gpd/acre	Note 1
Industrial	1027	gpd/acre	Note 1
Research and Development	1284	gpd/acre	Note 1

HYDRAULIC MODELING CRITERIA				
DESCRIPTION		**VALUE**	**UNITS**	**NOTES**
PEAK FLOW				
	Max Day = Peaking Factor x ADD	2.0 x ADD	gpd	Note 1
	Peak Hour = Peaking Factor x ADD	3.5 x ADD	gpd	Note 1
	Peak Hour = Peaking Factor (Restraunt) x ADD	6.0 x ADD	gpd	Note 1
MODELED FIRE HYDRANT FLOW WITH 50% FIRE SPRINKLER REDUCTION (MINIMUM)				
☐	Residential, 0 - 3,600 sf fire-flow calculation area	1,000	gpm	Note 3
☑	Residential, 3,601 - 4,800 sf fire-flow calculation area	1,750	gpm	Note 4
☐	Residential, 4,801 - 6,200 sf fire-flow calculation area	2,000	gpm	Note 4
☐	Residential, 6,201 - 7,700 sf fire-flow calculation area	2,250	gpm	Note 4
☐	Residential, 7,701 - 9,400 sf fire-flow calculation area	2,500	gpm	Note 4
☐	Residential, 9,401 - 11,300 sf fire-flow calculation area	2,750	gpm	Note 4
☐	Multi-Family Residential	-	gpm	Note 2
☐	Commercial	-	gpm	Note 2
HYDRAULICS				
	Residual Pressure Range, Peak Flow	50-120	psi	Note 1
	Minimum Residual Pressure, Peak Flow + Fire Flow	30	psi	Note 1
	Maximum Velocity, Peak Flow	5	ft/sec	Note 1
	Maximum Velocity, Peak Day + Fire Flow	10	ft/sec	Note 1
	Minimum Pipe Diameter, Looped System	8	in	Note 1
	Hazen-Williams C-value	120	-	Note 1

Notes

1. Per City of Scottsdale Design and Policies Manual (2018)
2. Per 2021 International Fire Code
3. Residential limited to one- and two-family dwellings, assumes Type V-B construction, and has a 1-hour fire duration, with 50% sprinkler reduction
4. Residential limited to one- and two-family dwellings, assumes Type V-B construction, and has a 2-hour fire duration, with 50% sprinkler reduction

WOOD PATEL

WATER DEMAND DESIGN FLOWS

Project Fairmont Scottsdale Princess
Location Scottsdale AZ
Project Number 215319
Project Engineer Andrew J. Sanchez, E.I.T.
References City of Scottsdale Design and Policies Manual (2018)

LAND USE AND DWELLING UNIT BREAKDOWN BY JUNCTION												FIRE FLOW		
HYDRAULIC MODEL NODE	LAND USE	DWELLING UNITS	AREA (SF)	DEMAND VALUE	UNITS	AVERAGE DAILY DEMAND		MAX DAY		PEAK HOUR		FIRE FLOW AREA	FIRE FLOW TYPE	FIRE - FLOW
						(gpm)	(gpd)	(gpm)	(gpd)	(gpm)	(gpd)	(sf)		(gpm)
Italian Restaurant	Restaurant	--	16,500	1.3	gpd/sf	29.8	21,450	59.6	42,900	178.8	128,700	16,500	V-B	1,750
*** Fountain	Small Pool or Spa	--	--	--	--	.1	52	.1	52.0	.1	52.0			
Roasterie Restaurant	Restaurant	--	10,500	1.3	gpd/sf	19.0	13,650	38.0	27,300	114.0	81,900	10,500	V-B	1,500*
*** Fountain	Small Pool or Spa	--	--	--	--	.1	52	.1	52.0	.1	52.0			
Sunset Villas and Bungalows	Resort Hotel	43	--	446.3	gpd/DU	26.7	19,191	53.4	38,382	93.5	67,169	12,131	V-B	1,500
Conference Center	Restaurant (Kitchen)	--	3,219	1.3	gpd/sf	5.8	4,185	11.6	8,370	34.8	25,110	97,576	I-B	1,625
	Commercial/Retail	--	94,357	0.8	gpd/sf	104.8	75,486	209.6	150,972	366.8	264,201			
*** Fountain	Small Pool or Spa	--	--	--	--	.1	52	.1	52.0	.1	52.0			
Event Lawn	N/A	N/A	N/A	N/A	N/A	--	--	--	--	--	--	39,400	N/A	1,500
Parking Garage	N/A	N/A	N/A	N/A	N/A	--	--	--	--	--	--	340,500	I-B	3,000
Guest Room Addition	Resort Hotel	155	--	446.3	gpd/DU	96.1	69,177	192.2	138,354	336.4	242,120	151,086 **	V-A	1750****
Total		**198**	**124,576**			**282.5**	**203,295**	**564.7**	**406,434**	**1,124.6**	**809,356**			

* Adjusted for minimum fire flow requirements based on the square footage being below the minimums per the IFC.

** Square footage includes the underground parking garage.

*** Additional water demands calculated by City of Scottsdale Development Water Demand Exhibit.

**** Fire Flow with 75% reduction

APPENDIX B – FIRE HYDRANT FLOW TEST RESULTS AND CALCULATIONS

Arizona Flow Testing LLC

HYDRANT FLOW TEST REPORT 1

Project Name:	Fairmont Scottsdale Princess
Project Address:	7575 East Princess Blvd., Scottsdale, Arizona 85255
Client Project No.:	Not Provided
Arizona Flow Testing Project No.:	24990
Flow Test Permit No.:	C77219
Date and time flow test conducted:	December 9, 2024 at 6:50 AM
Data is current and reliable until:	June 9, 2025
Conducted by:	Floyd Vaughan – Arizona Flow Testing, LLC (480-250-8154)
Witnessed by:	Chris Mendez – City of Scottsdale-Inspector (602-9028-9046)

Raw Test Data

Static Pressure: **92.0 PSI**
(Measured in pounds per square inch)

Residual Pressure: **70.0 PSI**
(Measured in pounds per square inch)

Pitot Pressure: **42.0 PSI**
(Measured in pounds per square inch)

Diffuser Orifice Diameter: One 4-inch Pollard Diffuser
(Measured in inches)

Coefficient of Diffuser: 0.9

Flowing GPM: **2,785 GPM**
(Measured in gallons per minute)

GPM @ 20 PSI: **5,282 GPM**

Data with 20 PSI Safety Factor

Static Pressure: **72.0 PSI**
(Measured in pounds per square inch)

Scottsdale requires a maximum Static Pressure of 72 PSI for AFES Design.

Residual Pressure: **50.0 PSI**
(Measured in pounds per square inch)

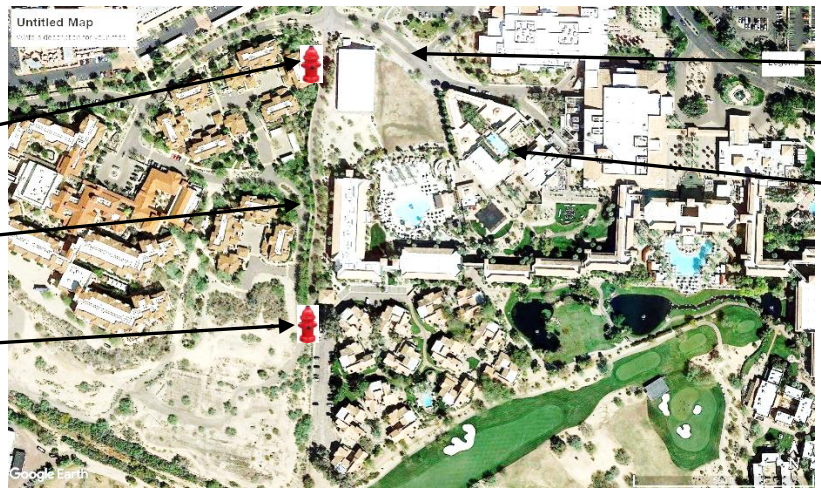
Approx distance between hydrants: 810 Feet

Main size: Not Provided

Flowing GPM: **2,785 GPM**

GPM @ 20 PSI**:** **4,431 GPM**

Flow Test Location **North**



Flow Fire Hydrant

North Cottage Terrace

Pressure Fire Hydrant

East Hacienda Way

Project Site
7575 East Princess Blvd.

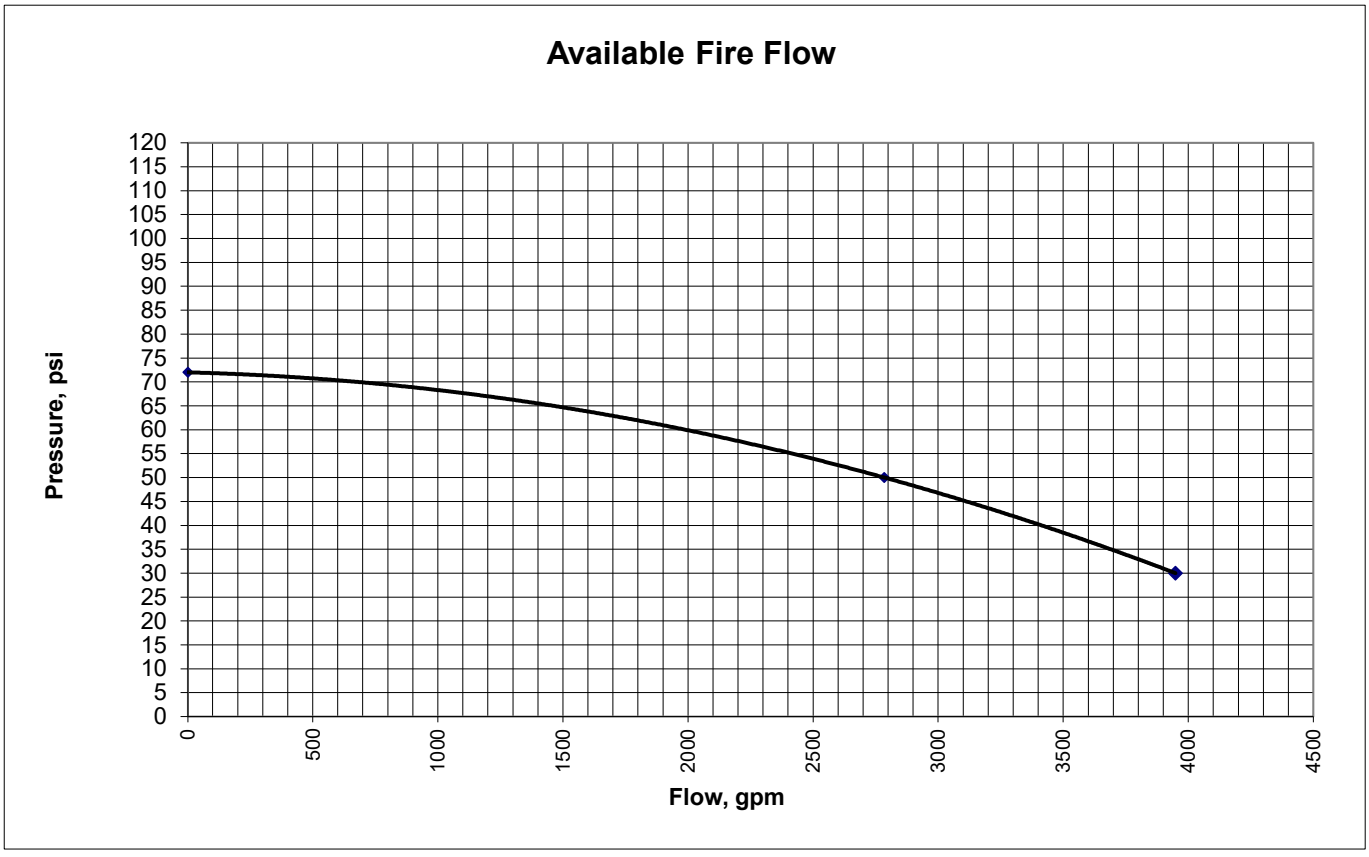
WOOD PATEL

EXISTING WATER SYSTEM PRESSURES
MODEL 1 (COTTAGE TERRACE)

Project	Fairmont Scottsdale Princess
Location	Scottsdale AZ
Project Number	215319
Project Engineer	Andrew J. Sanchez, E.I.T.

Flow Test Location
Date of Flow Test

Pressure Hydrant		**Flow Hydrant**	
Static Pressure (psi)	72.0		
Residual Pressure (psi)	50.0	Flow (gpm)	2785
Calculated Flow at 30 psi	3949 gpm	Calculated Flow at	30 psi



Discharge (gpm)	Pressure (psi)	Head (ft)
0	72	166.2
2785	50	115.5
3949	30	69.3

Notes
1. Values provided from a flow test by Arizona Flow Testing LLC

Arizona Flow Testing LLC

HYDRANT FLOW TEST REPORT 2

Project Name:	Fairmont Scottsdale Princess
Project Address:	7575 East Princess Drive, Scottsdale, Arizona, 85255
Client Project No.:	Not Provided
Arizona Flow Testing Project No.:	24990
Flow Test Permit No.:	C77218
Date and time flow test conducted:	December 9, 2024 at 7:05 AM
Data is current and reliable until:	June 9, 2025
Conducted by:	Floyd Vaughan-Arizona Flow Testing, LLC (480-250-8154)
Witnessed by:	Chris Mendez – City of Scottsdale-Inspector (602-9028-9046)

Raw Test Data

Static Pressure: **90.0 PSI**
(Measured in pounds per square inch)

Residual Pressure: **74.0 PSI**
(Measured in pounds per square inch)

Pitot Pressure: **45.0 PSI**
(Measured in pounds per square inch)
+

Diffuser Orifice Diameter: One 4-inch Pollard Diffuser
(Measured in inches)

Coefficient of Diffuser: 0.9

Flowing GPM: **2,882 GPM**
(Measured in gallons per minute)

GPM @ 20 PSI: **6,396 GPM**

Data with 18 PSI Safety Factor

Static Pressure: **72.0 PSI**
(Measured in pounds per square inch)

Scottsdale requires a maximum Static Pressure of 72 PSI for AFES Design.

Residual Pressure: **56.0 PSI**
(Measured in pounds per square inch)

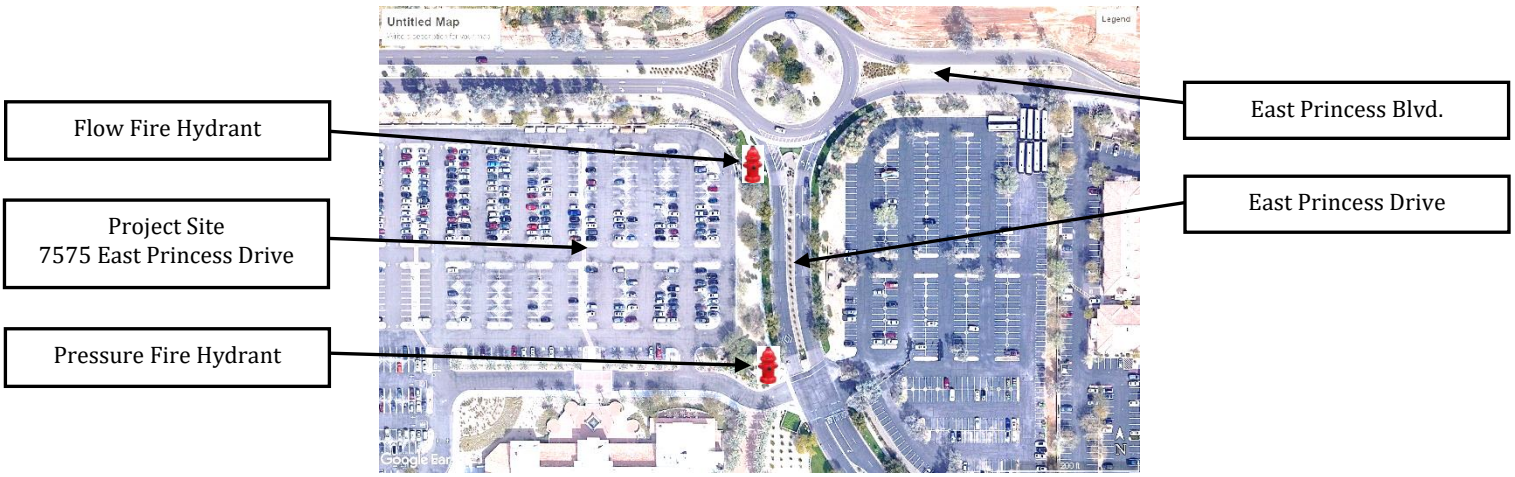
Approx. distance between hydrants: 340 Feet

Main size: Not Provided

Flowing GPM: **2,882 GPM**

GPM @ 20 PSI**:** **5,447 GPM**

Flow Test Location **North**



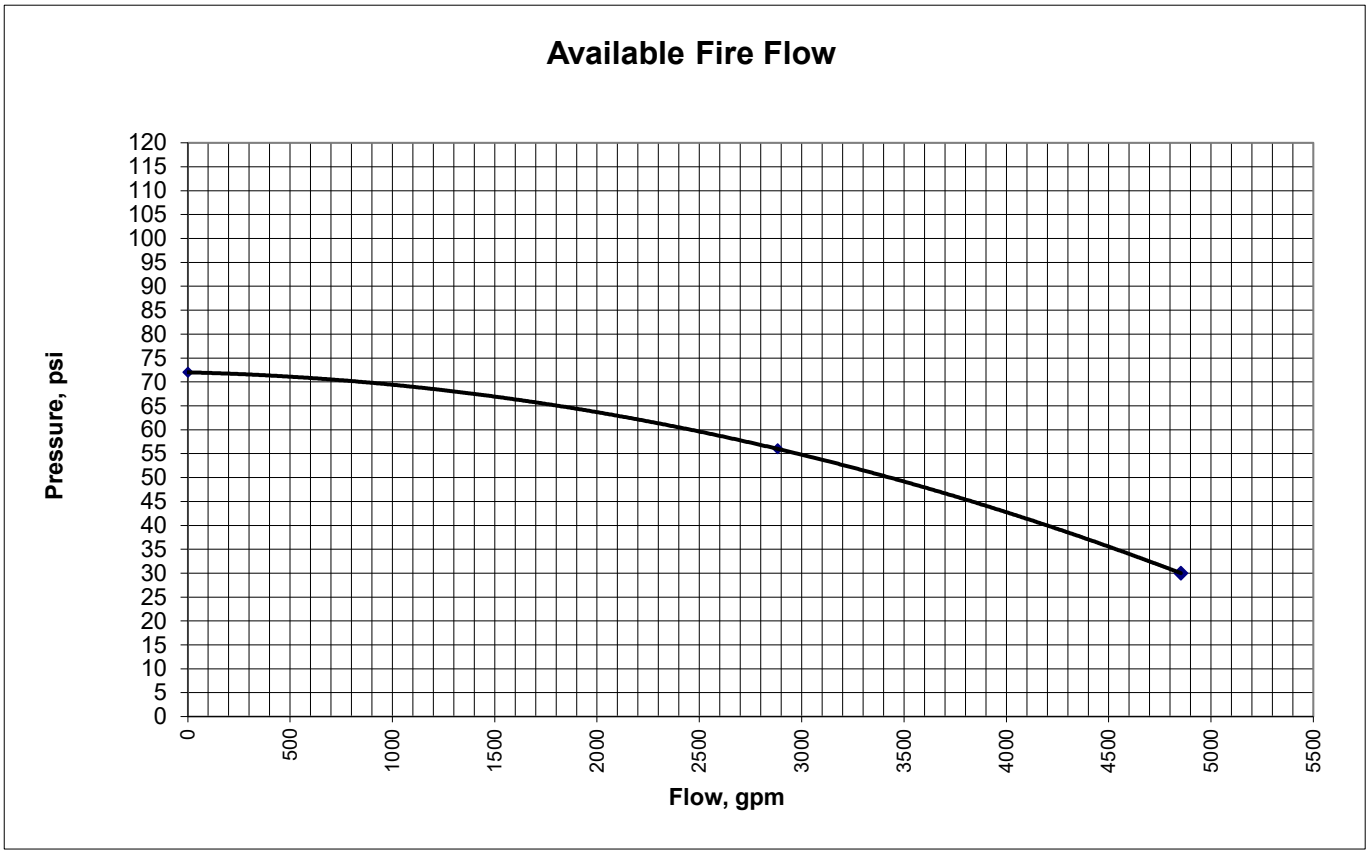
WOOD PATEL

EXISTING WATER SYSTEM PRESSURES
MODEL 2 (PRINCESS DRIVE)

Project	Fairmont Scottsdale Princess
Location	Scottsdale AZ
Project Number	215319
Project Engineer	Andrew J. Sanchez, E.I.T.

Flow Test Location
Date of Flow Test

Pressure Hydrant		**Flow Hydrant**	
Static Pressure (psi)	72.0		
Residual Pressure (psi)	56.0	Flow (gpm)	2882
Calculated Flow at 30 psi	4853 gpm	Calculated Flow at	30 psi



Discharge (gpm)	Pressure (psi)	Head (ft)
0	72	166.2
2882	56	129.3
4853	30	69.3

Notes
1. Values provided from a flow test by Arizona Flow Testing LLC

APPENDIX C – HYDRAULIC MODELING RESULTS

Fairmont Scottsdale Princess Water Master Plan - WaterCAD
FlexTable: Reservoir Table
Active Scenario: Calibration Static Model 1

ID	Label	Elevation (ft)	Hydraulic Grade (ft)
284	R-1	1,543.25	1,543.25

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Pump Table

Active Scenario: Calibration Static Model 1

ID	Label	Elevation (ft)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
283	PMP-1	1,543.20	1,543.25	1,709.45	0	166.20

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Junction Table

Active Scenario: Calibration Static Model 1

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
Domestic (Conference Center)	1,553.33	0	68	1,709.45
Domestic (Guest Room Addition)	1,550.00	0	69	1,709.45
Domestic (Italian)	1,556.30	0	66	1,709.45
Domestic (Roasterie)	1,560.25	0	65	1,709.45
EX FH-1	1,547.30	0	70	1,709.45
EX FH-2 (TEST 1)	1,543.00	0	72	1,709.45
EX FH-3 (FLOW 1)	1,549.00	0	69	1,709.45
EX FH-4	1,557.29	0	66	1,709.45
EX FH-5	1,558.03	0	66	1,709.45
EX FH-6 (TEST 2)	1,559.33	0	65	1,709.45
EX FH-7 (FLOW 2)	1,556.86	0	66	1,709.45
EX FH-8	1,556.95	0	66	1,709.45
EX FH-9	1,554.65	0	67	1,709.45
EX FH-11	1,557.90	0	66	1,709.45
EX FH-12	1,552.10	0	68	1,709.45
EX J-10	1,552.00	0	68	1,709.45
EX J-20	1,553.00	0	68	1,709.45
EX J-30	1,553.00	0	68	1,709.45
EX J-34	1,553.36	0	68	1,709.45
EX J-40	1,552.55	0	68	1,709.45
EX J-50	1,552.03	0	68	1,709.45
EX J-54	1,555.20	0	67	1,709.45
EX J-70	1,542.85	0	72	1,709.45
EX J-80	1,542.85	0	72	1,709.45
EX J-90	1,547.00	0	70	1,709.45
EX J-100	1,550.00	0	69	1,709.45
EX J-110	1,556.50	0	66	1,709.45
EX J-120	1,556.34	0	66	1,709.45
EX J-130	1,558.03	0	66	1,709.45
EX J-140	1,560.63	0	64	1,709.45
EX J-141	1,563.47	0	63	1,709.45
EX J-150	1,557.41	0	66	1,709.45
EX J-160	1,554.89	0	67	1,709.45
EX J-170	1,558.93	0	65	1,709.45
EX J-190	1,556.35	0	66	1,709.45
EX J-194	1,556.60	0	66	1,709.45
EX J-200	1,555.17	0	67	1,709.45
FH-1	1,552.65	0	68	1,709.45
FH-2	1,553.15	0	68	1,709.45
FH-7	1,557.87	0	66	1,709.45
FH-8	1,552.10	0	68	1,709.45
Fire (Garage)	1,554.70	0	67	1,709.45
Fire (Guest Room Addition)	1,550.00	0	69	1,709.45
Fire (Italian)	1,556.30	0	66	1,709.45
Fire (Roasterie)	1,559.64	0	65	1,709.45
J-20	1,552.46	0	68	1,709.45

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Junction Table

Active Scenario: Calibration Static Model 1

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
J-70	1,553.30	0	68	1,709.45

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Pump Table

Active Scenario: Calibration Residual Model 1

ID	Label	Elevation (ft)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
283	PMP-1	1,543.20	1,543.25	1,658.75	2,785	115.50

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Junction Table

Active Scenario: Calibration Residual Model 1

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
Domestic (Conference Center)	1,553.33	0	32	1,628.23
Domestic (Guest Room Addition)	1,550.00	0	35	1,631.04
Domestic (Italian)	1,556.30	0	31	1,627.73
Domestic (Roasterie)	1,560.25	0	33	1,636.96
EX FH-1	1,547.30	0	37	1,631.95
EX FH-2 (TEST 1)	1,543.00	0	50	1,658.75
EX FH-3 (FLOW 1)	1,549.00	2,785	34	1,627.57
EX FH-4	1,557.29	0	30	1,627.77
EX FH-5	1,558.03	0	30	1,627.79
EX FH-6 (TEST 2)	1,559.33	0	30	1,627.89
EX FH-7 (FLOW 2)	1,556.86	0	31	1,628.00
EX FH-8	1,556.95	0	31	1,628.18
EX FH-9	1,554.65	0	32	1,628.40
EX FH-11	1,557.90	0	30	1,627.92
EX FH-12	1,552.10	0	33	1,629.08
EX J-10	1,552.00	0	33	1,627.68
EX J-20	1,553.00	0	32	1,627.91
EX J-30	1,553.00	0	32	1,628.04
EX J-34	1,553.36	0	32	1,628.22
EX J-40	1,552.55	0	33	1,628.62
EX J-50	1,552.03	0	33	1,629.08
EX J-54	1,555.20	0	34	1,634.49
EX J-70	1,542.85	0	47	1,651.56
EX J-80	1,542.85	0	41	1,636.54
EX J-90	1,547.00	0	37	1,632.93
EX J-100	1,550.00	0	34	1,627.69
EX J-110	1,556.50	0	31	1,627.71
EX J-120	1,556.34	0	31	1,627.75
EX J-130	1,558.03	0	30	1,627.80
EX J-140	1,560.63	0	29	1,627.87
EX J-141	1,563.47	0	28	1,627.87
EX J-150	1,557.41	0	31	1,627.92
EX J-160	1,554.89	0	32	1,627.92
EX J-170	1,558.93	0	30	1,627.90
EX J-190	1,556.35	0	31	1,628.08
EX J-194	1,556.60	0	31	1,628.04
EX J-200	1,555.17	0	32	1,628.50
FH-1	1,552.65	0	33	1,628.91
FH-2	1,553.15	0	33	1,628.33
FH-7	1,557.87	0	37	1,643.74
FH-8	1,552.10	0	33	1,629.08
Fire (Garage)	1,554.70	0	32	1,627.92
Fire (Guest Room Addition)	1,550.00	0	35	1,630.98
Fire (Italian)	1,556.30	0	31	1,627.73
Fire (Roasterie)	1,559.64	0	33	1,636.66
J-20	1,552.46	0	33	1,628.96

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Junction Table

Active Scenario: Calibration Residual Model 1

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
J-70	1,553.30	0	32	1,628.25

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Pump Table

Active Scenario: Calibration Flow@20 Model 1

ID	Label	Elevation (ft)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
283	PMP-1	1,543.20	1,543.25	1,589.50	4,431	46.25

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Junction Table

Active Scenario: Calibration Flow@20 Model 1

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
Domestic (Conference Center)	1,553.33	0	-16	1,517.38
Domestic (Guest Room Addition)	1,550.00	0	-11	1,524.03
Domestic (Italian)	1,556.30	0	-17	1,516.19
Domestic (Roasterie)	1,560.25	0	-10	1,538.00
EX FH-1	1,547.30	0	-9	1,526.16
EX FH-2 (TEST 1)	1,543.00	0	20	1,589.50
EX FH-3 (FLOW 1)	1,549.00	4,431	-14	1,515.82
EX FH-4	1,557.29	0	-18	1,516.29
EX FH-5	1,558.03	0	-18	1,516.34
EX FH-6 (TEST 2)	1,559.33	0	-18	1,516.58
EX FH-7 (FLOW 2)	1,556.86	0	-17	1,516.82
EX FH-8	1,556.95	0	-17	1,517.25
EX FH-9	1,554.65	0	-16	1,517.77
EX FH-11	1,557.90	0	-18	1,516.65
EX FH-12	1,552.10	0	-14	1,519.38
EX J-10	1,552.00	0	-16	1,516.09
EX J-20	1,553.00	0	-16	1,516.63
EX J-30	1,553.00	0	-16	1,516.92
EX J-34	1,553.36	0	-16	1,517.35
EX J-40	1,552.55	0	-15	1,518.30
EX J-50	1,552.03	0	-14	1,519.38
EX J-54	1,555.20	0	-10	1,532.16
EX J-70	1,542.85	0	13	1,572.52
EX J-80	1,542.85	0	-3	1,537.01
EX J-90	1,547.00	0	-8	1,528.47
EX J-100	1,550.00	0	-15	1,516.09
EX J-110	1,556.50	0	-17	1,516.15
EX J-120	1,556.34	0	-17	1,516.23
EX J-130	1,558.03	0	-18	1,516.35
EX J-140	1,560.63	0	-19	1,516.52
EX J-141	1,563.47	0	-20	1,516.52
EX J-150	1,557.41	0	-18	1,516.65
EX J-160	1,554.89	0	-17	1,516.65
EX J-170	1,558.93	0	-18	1,516.60
EX J-190	1,556.35	0	-17	1,517.01
EX J-194	1,556.60	0	-17	1,516.92
EX J-200	1,555.17	0	-16	1,518.02
FH-1	1,552.65	0	-15	1,518.98
FH-2	1,553.15	0	-15	1,517.60
FH-7	1,557.87	0	-2	1,554.02
FH-8	1,552.10	0	-14	1,519.38
Fire (Garage)	1,554.70	0	-16	1,516.65
Fire (Guest Room Addition)	1,550.00	0	-11	1,523.87
Fire (Italian)	1,556.30	0	-17	1,516.20
Fire (Roasterie)	1,559.64	0	-10	1,537.29
J-20	1,552.46	0	-14	1,519.10

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Junction Table

Active Scenario: Calibration Flow@20 Model 1

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
J-70	1,553.30	0	-16	1,517.42

Fairmont Scottsdale Princess Water Master Plan - WaterCAD
FlexTable: Reservoir Table
Active Scenario: Calibration Static Model 2

ID	Label	Elevation (ft)	Hydraulic Grade (ft)
175	R-2	1,559.53	1,559.53

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Pump Table

Active Scenario: Calibration Static Model 2

ID	Label	Elevation (ft)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
176	PMP-2	1,559.43	1,559.53	1,725.73	0	166.20

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Junction Table

Active Scenario: Calibration Static Model 2

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
Domestic (Conference Center)	1,553.33	0	75	1,725.73
Domestic (Guest Room Addition)	1,550.00	0	76	1,725.73
Domestic (Italian)	1,556.30	0	73	1,725.73
Domestic (Roasterie)	1,560.25	0	72	1,725.73
EX FH-1	1,547.30	0	77	1,725.73
EX FH-2 (TEST 1)	1,543.00	0	79	1,725.73
EX FH-3 (FLOW 1)	1,549.00	0	76	1,725.73
EX FH-4	1,557.29	0	73	1,725.73
EX FH-5	1,558.03	0	73	1,725.73
EX FH-6 (TEST 2)	1,559.33	0	72	1,725.73
EX FH-7 (FLOW 2)	1,556.86	0	73	1,725.73
EX FH-8	1,556.95	0	73	1,725.73
EX FH-9	1,554.65	0	74	1,725.73
EX FH-11	1,557.90	0	73	1,725.73
EX FH-12	1,552.10	0	75	1,725.73
EX J-10	1,552.00	0	75	1,725.73
EX J-20	1,553.00	0	75	1,725.73
EX J-30	1,553.00	0	75	1,725.73
EX J-34	1,553.36	0	75	1,725.73
EX J-40	1,552.55	0	75	1,725.73
EX J-50	1,552.03	0	75	1,725.73
EX J-54	1,555.20	0	74	1,725.73
EX J-70	1,542.85	0	79	1,725.73
EX J-80	1,542.85	0	79	1,725.73
EX J-90	1,547.00	0	77	1,725.73
EX J-100	1,550.00	0	76	1,725.73
EX J-110	1,556.50	0	73	1,725.73
EX J-120	1,556.34	0	73	1,725.73
EX J-130	1,558.03	0	73	1,725.73
EX J-140	1,560.63	0	71	1,725.73
EX J-141	1,563.47	0	70	1,725.73
EX J-150	1,557.41	0	73	1,725.73
EX J-160	1,554.89	0	74	1,725.73
EX J-170	1,558.93	0	72	1,725.73
EX J-190	1,556.35	0	73	1,725.73
EX J-194	1,556.60	0	73	1,725.73
EX J-200	1,555.17	0	74	1,725.73
FH-1	1,552.65	0	75	1,725.73
FH-2	1,553.15	0	75	1,725.73
FH-7	1,557.87	0	73	1,725.73
FH-8	1,552.10	0	75	1,725.73
Fire (Garage)	1,554.70	0	74	1,725.73
Fire (Guest Room Addition)	1,550.00	0	76	1,725.73
Fire (Italian)	1,556.30	0	73	1,725.73
Fire (Roasterie)	1,559.64	0	72	1,725.73
J-20	1,552.46	0	75	1,725.73

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Junction Table

Active Scenario: Calibration Static Model 2

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
J-70	1,553.30	0	75	1,725.73

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Pump Table

Active Scenario: Calibration Residual Model 2

ID	Label	Elevation (ft)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
176	PMP-2	1,559.43	1,559.53	1,688.83	2,882	129.30

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Junction Table

Active Scenario: Calibration Residual Model 2

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
Domestic (Conference Center)	1,553.33	0	57	1,685.61
Domestic (Guest Room Addition)	1,550.00	0	59	1,686.67
Domestic (Italian)	1,556.30	0	57	1,687.16
Domestic (Roasterie)	1,560.25	0	54	1,685.31
EX FH-1	1,547.30	0	60	1,686.67
EX FH-2 (TEST 1)	1,543.00	0	62	1,686.55
EX FH-3 (FLOW 1)	1,549.00	0	60	1,686.69
EX FH-4	1,557.29	0	56	1,687.60
EX FH-5	1,558.03	0	56	1,687.82
EX FH-6 (TEST 2)	1,559.33	0	56	1,688.83
EX FH-7 (FLOW 2)	1,556.86	2,882	53	1,678.43
EX FH-8	1,556.95	0	53	1,680.27
EX FH-9	1,554.65	0	55	1,682.54
EX FH-11	1,557.90	0	55	1,685.94
EX FH-12	1,552.10	0	57	1,684.86
EX J-10	1,552.00	0	58	1,686.70
EX J-20	1,553.00	0	58	1,686.24
EX J-30	1,553.00	0	58	1,685.99
EX J-34	1,553.36	0	57	1,685.63
EX J-40	1,552.55	0	57	1,684.83
EX J-50	1,552.03	0	57	1,684.86
EX J-54	1,555.20	0	56	1,685.17
EX J-70	1,542.85	0	62	1,686.58
EX J-80	1,542.85	0	62	1,686.65
EX J-90	1,547.00	0	60	1,686.67
EX J-100	1,550.00	0	59	1,686.69
EX J-110	1,556.50	0	56	1,686.96
EX J-120	1,556.34	0	57	1,687.32
EX J-130	1,558.03	0	56	1,687.83
EX J-140	1,560.63	0	55	1,688.58
EX J-141	1,563.47	0	54	1,688.58
EX J-150	1,557.41	0	56	1,685.94
EX J-160	1,554.89	0	57	1,685.94
EX J-170	1,558.93	0	56	1,688.08
EX J-190	1,556.35	0	53	1,679.23
EX J-194	1,556.60	0	53	1,678.85
EX J-200	1,555.17	0	56	1,683.60
FH-1	1,552.65	0	57	1,684.85
FH-2	1,553.15	0	57	1,685.42
FH-7	1,557.87	0	55	1,685.70
FH-8	1,552.10	0	57	1,684.86
Fire (Garage)	1,554.70	0	57	1,685.94
Fire (Guest Room Addition)	1,550.00	0	59	1,686.67
Fire (Italian)	1,556.30	0	57	1,687.17
Fire (Roasterie)	1,559.64	0	54	1,685.29
J-20	1,552.46	0	57	1,684.85

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Junction Table

Active Scenario: Calibration Residual Model 2

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
J-70	1,553.30	0	57	1,685.58

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Pump Table

Active Scenario: Calibration Flow@20 Model 2

ID	Label	Elevation (ft)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
176	PMP-2	1,559.43	1,559.53	1,605.69	5,447	46.16

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Junction Table

Active Scenario: Calibration Flow@20 Model 2

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
Domestic (Conference Center)	1,553.33	0	18	1,595.21
Domestic (Guest Room Addition)	1,550.00	0	21	1,598.68
Domestic (Italian)	1,556.30	0	19	1,600.25
Domestic (Roasterie)	1,560.25	0	15	1,594.25
EX FH-1	1,547.30	0	22	1,598.67
EX FH-2 (TEST 1)	1,543.00	0	24	1,598.29
EX FH-3 (FLOW 1)	1,549.00	0	22	1,598.73
EX FH-4	1,557.29	0	19	1,601.70
EX FH-5	1,558.03	0	19	1,602.41
EX FH-6 (TEST 2)	1,559.33	0	20	1,605.69
EX FH-7 (FLOW 2)	1,556.86	5,447	6	1,571.87
EX FH-8	1,556.95	0	9	1,577.85
EX FH-9	1,554.65	0	13	1,585.25
EX FH-11	1,557.90	0	17	1,596.31
EX FH-12	1,552.10	0	18	1,592.79
EX J-10	1,552.00	0	20	1,598.75
EX J-20	1,553.00	0	19	1,597.27
EX J-30	1,553.00	0	19	1,596.46
EX J-34	1,553.36	0	18	1,595.30
EX J-40	1,552.55	0	17	1,592.70
EX J-50	1,552.03	0	18	1,592.79
EX J-54	1,555.20	0	17	1,593.79
EX J-70	1,542.85	0	24	1,598.39
EX J-80	1,542.85	0	24	1,598.60
EX J-90	1,547.00	0	22	1,598.65
EX J-100	1,550.00	0	21	1,598.73
EX J-110	1,556.50	0	19	1,599.61
EX J-120	1,556.34	0	19	1,600.78
EX J-130	1,558.03	0	19	1,602.44
EX J-140	1,560.63	0	19	1,604.86
EX J-141	1,563.47	0	18	1,604.86
EX J-150	1,557.41	0	17	1,596.31
EX J-160	1,554.89	0	18	1,596.31
EX J-170	1,558.93	0	19	1,603.24
EX J-190	1,556.35	0	8	1,574.49
EX J-194	1,556.60	0	7	1,573.23
EX J-200	1,555.17	0	14	1,588.68
FH-1	1,552.65	0	17	1,592.75
FH-2	1,553.15	0	18	1,594.62
FH-7	1,557.87	0	16	1,595.50
FH-8	1,552.10	0	18	1,592.79
Fire (Garage)	1,554.70	0	18	1,596.31
Fire (Guest Room Addition)	1,550.00	0	21	1,598.68
Fire (Italian)	1,556.30	0	19	1,600.30
Fire (Roasterie)	1,559.64	0	15	1,594.19
J-20	1,552.46	0	17	1,592.76

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Junction Table

Active Scenario: Calibration Flow@20 Model 2

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
J-70	1,553.30	0	18	1,595.12

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Pump Table

Active Scenario: Average Daily Demand

ID	Label	Elevation (ft)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
283	PMP-1	1,543.20	1,543.25	1,708.72	282	165.47

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Junction Table

Active Scenario: Average Daily Demand

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
Domestic (Conference Center)	1,553.33	111	67	1,708.28
Domestic (Guest Room Addition)	1,550.00	96	69	1,708.35
Domestic (Italian)	1,556.30	30	66	1,708.32
Domestic (Roasterie)	1,560.25	19	64	1,708.33
EX FH-1	1,547.30	0	70	1,708.36
EX FH-2 (TEST 1)	1,543.00	0	72	1,708.72
EX FH-3 (FLOW 1)	1,549.00	0	69	1,708.33
EX FH-4	1,557.29	0	65	1,708.32
EX FH-5	1,558.03	0	65	1,708.32
EX FH-6 (TEST 2)	1,559.33	0	64	1,708.32
EX FH-7 (FLOW 2)	1,556.86	0	66	1,708.32
EX FH-10	1,563.50	0	63	1,708.32
EX FH-11	1,557.90	0	65	1,708.32
EX FH-12	1,552.10	0	68	1,708.28
EX J-10	1,552.00	0	68	1,708.32
EX J-20	1,553.00	0	67	1,708.30
EX J-30	1,553.00	0	67	1,708.29
EX J-34	1,553.36	0	67	1,708.28
EX J-40	1,552.55	0	67	1,708.28
EX J-50	1,552.03	0	68	1,708.28
EX J-54	1,555.20	0	66	1,708.31
EX J-70	1,542.85	0	72	1,708.62
EX J-80	1,542.85	0	72	1,708.42
EX J-90	1,547.00	0	70	1,708.37
EX J-100	1,550.00	0	69	1,708.33
EX J-110	1,556.50	0	66	1,708.32
EX J-120	1,556.34	0	66	1,708.32
EX J-130	1,558.03	0	65	1,708.32
EX J-140	1,560.63	0	64	1,708.32
EX J-141	1,563.47	0	63	1,708.32
EX J-150	1,557.41	0	65	1,708.32
EX J-160	1,554.89	0	66	1,708.32
EX J-170	1,558.93	0	65	1,708.32
EX J-190	1,556.35	0	66	1,708.32
EX J-194	1,556.60	0	66	1,708.32
FH-1	1,552.65	0	67	1,708.28
FH-2	1,553.15	0	67	1,708.28
FH-3	1,556.46	0	66	1,708.32
FH-4	1,556.42	0	66	1,708.32
FH-5	1,556.39	0	66	1,708.32
FH-6	1,556.95	0	65	1,708.32
FH-7	1,557.87	0	65	1,708.45
FH-8	1,552.10	0	68	1,708.28
Fire (Conf. Center)	1,556.46	0	66	1,708.32
Fire (Garage)	1,554.70	0	66	1,708.32
Fire (Guest Room Addition)	1,550.00	0	69	1,708.35

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Junction Table

Active Scenario: Average Daily Demand

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
Fire (Italian)	1,556.30	0	66	1,708.32
Fire (Roasterie)	1,559.64	0	64	1,708.33
Fire (Villas and Bungalows)	1,553.13	0	67	1,708.31
J-10	1,550.14	0	68	1,708.30
J-20	1,552.46	0	67	1,708.28
J-66	1,556.22	0	66	1,708.32
J-70	1,553.30	0	67	1,708.28
J-BUNGALOW 1	1,552.30	1	62	1,695.78
J-BUNGALOW 2&3	1,554.15	2	61	1,695.78
J-VILLA 1&2	1,553.50	5	62	1,695.84
J-VILLA 3&4	1,553.15	12	62	1,695.78
J-VILLA 5	1,553.20	2	62	1,695.82
J-VILLA 6	1,553.50	4	62	1,695.79

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Pipe Table

Active Scenario: Average Daily Demand

Label	Start Node	Stop Node	Length (ft)	Diameter (in)	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
EX P-15	EX J-20	EX J-10	80	8.0	130.0	-93	0.59
EX P-25	EX J-30	EX J-20	43	8.0	130.0	-93	0.59
EX P-33	EX J-34	EX J-30	63	8.0	130.0	-93	0.59
EX P-35(1)	J-70	Domestic (Conference Center)	5	8.0	130.0	-27	0.17
EX P-35(2)	Domestic (Conference Center)	EX J-34	5	8.0	130.0	-137	0.88
EX P-37	FH-2	J-70	27	8.0	130.0	0	0.00
EX P-39	EX J-40	FH-2	103	8.0	130.0	0	0.00
EX P-45	FH-1	EX J-40	46	8.0	130.0	0	0.00
EX P-47(1)	EX J-50	J-20	19	8.0	130.0	0	0.00
EX P-47(2)	J-20	FH-1	9	8.0	130.0	0	0.00
EX P-53	Fire (Roasterie)	EX J-54	87	6.0	130.0	44	0.50
EX P-55	Domestic (Roasterie)	Fire (Roasterie)	12	6.0	130.0	44	0.50
EX P-57(1)	EX FH-2 (TEST 1)	FH-7	603	6.0	130.0	63	0.72
EX P-57(2)	FH-7	Domestic (Roasterie)	272	6.0	130.0	63	0.72
EX P-58	EX J-50	EX FH-12	89	8.0	130.0	0	0.00
EX P-59	EX FH-12	FH-8	37	8.0	130.0	0	0.00
EX P-65	EX J-70	EX FH-2 (TEST 1)	22	6.0	130.0	-219	2.49
EX P-75	EX J-80	EX J-70	46	6.0	130.0	-219	2.49
EX P-85	EX J-90	EX J-80	323	12.0	130.0	-219	0.62
EX P-93	EX FH-1	EX J-90	87	12.0	130.0	-219	0.62
EX P-95	Domestic (Guest Room Addition)	EX FH-1	81	12.0	130.0	-219	0.62
EX P-97	Fire (Guest Room Addition)	Domestic (Guest Room Addition)	6	12.0	130.0	-123	0.35
EX P-99	EX J-100	Fire (Guest Room Addition)	294	12.0	130.0	-123	0.35
EX P-105	EX FH-3 (FLOW 1)	EX J-100	10	12.0	130.0	-123	0.35
EX P-107	EX J-10	EX FH-3 (FLOW 1)	133	12.0	130.0	-123	0.35
EX P-109	EX J-110	EX J-10	231	12.0	130.0	-30	0.08
EX P-113	Domestic (Italian)	EX J-110	171	12.0	130.0	-27	0.08
EX P-115	Fire (Italian)	Domestic (Italian)	13	12.0	130.0	3	0.01
EX P-117	EX J-120	Fire (Italian)	130	12.0	130.0	3	0.01
EX P-125	EX FH-4	EX J-120	245	12.0	130.0	3	0.01

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Pipe Table

Active Scenario: Average Daily Demand

Label	Start Node	Stop Node	Length (ft)	Diameter (in)	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
EX P-127	EX FH-5	EX FH-4	190	12.0	130.0	3	0.01
EX P-129	EX J-130	EX FH-5	9	12.0	130.0	3	0.01
EX P-135	EX J-140	EX J-130	649	12.0	130.0	3	0.01
EX P-145	EX J-141	EX J-140	403	12.0	130.0	0	0.00
EX P-147	EX FH-10	EX J-141	91	6.0	130.0	0	0.00
EX P-147(1)	EX J-150	EX FH-10	802	6.0	130.0	0	0.00
EX P-155	Fire (Garage)	EX J-150	268	12.0	130.0	0	0.00
EX P-157	EX J-160	Fire (Garage)	189	12.0	130.0	0	0.00
EX P-165	EX J-160	EX J-170	191	12.0	130.0	3	0.01
EX P-175	EX J-170	EX FH-6 (TEST 2)	67	12.0	130.0	3	0.01
EX P-177	EX FH-6 (TEST 2)	EX J-140	221	12.0	130.0	3	0.01
EX P-191	EX J-160	EX FH-7 (FLOW 2)	93	8.0	130.0	-3	0.02
EX P-193	EX FH-7 (FLOW 2)	EX J-194	50	8.0	130.0	-3	0.02
P-5	J-10	EX J-34	333	8.0	130.0	44	0.28
P-15	Fire (Villas and Bungalows)	J-10	106	8.0	130.0	44	0.28
P-17	EX J-54	Fire (Villas and Bungalows)	73	8.0	130.0	44	0.28
P-21	EX J-194	J-66	44	8.0	130.0	-3	0.02
P-23	J-66	EX J-190	16	8.0	130.0	-3	0.02
P-25	FH-5	EX J-190	267	8.0	130.0	3	0.02
P-27	FH-4	FH-5	243	8.0	130.0	3	0.02
P-29	Fire (Conf. Center)	FH-4	222	8.0	130.0	3	0.02
P-31	FH-3	Fire (Conf. Center)	51	8.0	130.0	3	0.02
P-50	FH-3	EX J-110	302	8.0	130.0	-3	0.02
P-55	FH-6	J-66	125	8.0	130.0	0	0.00
P-58	R-1	PMP-1	1	48.0	130.0	282	0.05
P-59	PMP-1	EX FH-2 (TEST 1)	1	48.0	130.0	282	0.05
P-60	J-70	GPV-1	14	4.0	130.0	27	0.68
P-61	GPV-1	J-VILLA 1&2	182	4.0	130.0	27	0.68
P-62	J-VILLA 1&2	J-VILLA 5	53	4.0	130.0	22	0.55
P-63	J-VILLA 5	J-VILLA 6	69	4.0	130.0	20	0.50

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Pipe Table

Active Scenario: Average Daily Demand

Label	Start Node	Stop Node	Length (ft)	Diameter (in)	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-64	J-VILLA 6	J-VILLA 3&4	27	4.0	130.0	16	0.41
P-65	J-VILLA 3&4	J-BUNGALOW 2&3	78	4.0	130.0	4	0.09
P-66	J-BUNGALOW 2&3	J-BUNGALOW 1	71	2.5	130.0	1	0.08
P-EX FH-11	EX J-150	EX FH-11	23	12.0	130.0	0	0.00

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Pump Table

Active Scenario: Max Day

ID	Label	Elevation (ft)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
283	PMP-1	1,543.20	1,543.25	1,706.82	565	163.57

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Junction Table

Active Scenario: Max Day

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
Domestic (Conference Center)	1,553.33	221	66	1,705.22
Domestic (Guest Room Addition)	1,550.00	192	67	1,705.46
Domestic (Italian)	1,556.30	60	64	1,705.37
Domestic (Roasterie)	1,560.25	38	63	1,705.41
EX FH-1	1,547.30	0	68	1,705.51
EX FH-2 (TEST 1)	1,543.00	0	71	1,706.82
EX FH-3 (FLOW 1)	1,549.00	0	68	1,705.40
EX FH-4	1,557.29	0	64	1,705.37
EX FH-5	1,558.03	0	64	1,705.37
EX FH-6 (TEST 2)	1,559.33	0	63	1,705.37
EX FH-7 (FLOW 2)	1,556.86	0	64	1,705.37
EX FH-10	1,563.50	0	61	1,705.37
EX FH-11	1,557.90	0	64	1,705.37
EX FH-12	1,552.10	0	66	1,705.22
EX J-10	1,552.00	0	66	1,705.38
EX J-20	1,553.00	0	66	1,705.31
EX J-30	1,553.00	0	66	1,705.28
EX J-34	1,553.36	0	66	1,705.23
EX J-40	1,552.55	0	66	1,705.22
EX J-50	1,552.03	0	66	1,705.22
EX J-54	1,555.20	0	65	1,705.33
EX J-70	1,542.85	0	71	1,706.47
EX J-80	1,542.85	0	70	1,705.73
EX J-90	1,547.00	0	69	1,705.55
EX J-100	1,550.00	0	67	1,705.41
EX J-110	1,556.50	0	64	1,705.38
EX J-120	1,556.34	0	64	1,705.37
EX J-130	1,558.03	0	64	1,705.37
EX J-140	1,560.63	0	63	1,705.37
EX J-141	1,563.47	0	61	1,705.37
EX J-150	1,557.41	0	64	1,705.37
EX J-160	1,554.89	0	65	1,705.37
EX J-170	1,558.93	0	63	1,705.37
EX J-190	1,556.35	0	64	1,705.37
EX J-194	1,556.60	0	64	1,705.37
FH-1	1,552.65	0	66	1,705.22
FH-2	1,553.15	0	66	1,705.22
FH-3	1,556.46	0	64	1,705.37
FH-4	1,556.42	0	64	1,705.37
FH-5	1,556.39	0	64	1,705.37
FH-6	1,556.95	0	64	1,705.37
FH-7	1,557.87	0	64	1,705.85
FH-8	1,552.10	0	66	1,705.22
Fire (Conf. Center)	1,556.46	0	64	1,705.37
Fire (Garage)	1,554.70	0	65	1,705.37
Fire (Guest Room Addition)	1,550.00	0	67	1,705.46

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Junction Table

Active Scenario: Max Day

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
Fire (Italian)	1,556.30	0	64	1,705.37
Fire (Roasterie)	1,559.64	0	63	1,705.40
Fire (Villas and Bungalows)	1,553.13	0	66	1,705.32
J-10	1,550.14	0	67	1,705.30
J-20	1,552.46	0	66	1,705.22
J-66	1,556.22	0	65	1,705.37
J-70	1,553.30	0	66	1,705.22
J-BUNGALOW 1	1,552.30	2	59	1,689.24
J-BUNGALOW 2&3	1,554.15	5	58	1,689.25
J-VILLA 1&2	1,553.50	10	59	1,689.45
J-VILLA 3&4	1,553.15	25	59	1,689.25
J-VILLA 5	1,553.20	4	59	1,689.37
J-VILLA 6	1,553.50	7	59	1,689.27

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Pipe Table

Active Scenario: Max Day

Label	Start Node	Stop Node	Length (ft)	Diameter (in)	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
EX P-15	EX J-20	EX J-10	80	8.0	130.0	-186	1.19
EX P-25	EX J-30	EX J-20	43	8.0	130.0	-186	1.19
EX P-33	EX J-34	EX J-30	63	8.0	130.0	-186	1.19
EX P-35(1)	J-70	Domestic (Conference Center)	5	8.0	130.0	-53	0.34
EX P-35(2)	Domestic (Conference Center)	EX J-34	5	8.0	130.0	-275	1.75
EX P-37	FH-2	J-70	27	8.0	130.0	0	0.00
EX P-39	EX J-40	FH-2	103	8.0	130.0	0	0.00
EX P-45	FH-1	EX J-40	46	8.0	130.0	0	0.00
EX P-47(1)	EX J-50	J-20	19	8.0	130.0	0	0.00
EX P-47(2)	J-20	FH-1	9	8.0	130.0	0	0.00
EX P-53	Fire (Roasterie)	EX J-54	87	6.0	130.0	88	1.00
EX P-55	Domestic (Roasterie)	Fire (Roasterie)	12	6.0	130.0	88	1.00
EX P-57(1)	EX FH-2 (TEST 1)	FH-7	603	6.0	130.0	126	1.43
EX P-57(2)	FH-7	Domestic (Roasterie)	272	6.0	130.0	126	1.43
EX P-58	EX J-50	EX FH-12	89	8.0	130.0	0	0.00
EX P-59	EX FH-12	FH-8	37	8.0	130.0	0	0.00
EX P-65	EX J-70	EX FH-2 (TEST 1)	22	6.0	130.0	-438	4.97
EX P-75	EX J-80	EX J-70	46	6.0	130.0	-438	4.97
EX P-85	EX J-90	EX J-80	323	12.0	130.0	-438	1.24
EX P-93	EX FH-1	EX J-90	87	12.0	130.0	-438	1.24
EX P-95	Domestic (Guest Room Addition)	EX FH-1	81	12.0	130.0	-438	1.24
EX P-97	Fire (Guest Room Addition)	Domestic (Guest Room Addition)	6	12.0	130.0	-246	0.70
EX P-99	EX J-100	Fire (Guest Room Addition)	294	12.0	130.0	-246	0.70
EX P-105	EX FH-3 (FLOW 1)	EX J-100	10	12.0	130.0	-246	0.70
EX P-107	EX J-10	EX FH-3 (FLOW 1)	133	12.0	130.0	-246	0.70
EX P-109	EX J-110	EX J-10	231	12.0	130.0	-60	0.17
EX P-113	Domestic (Italian)	EX J-110	171	12.0	130.0	-54	0.15
EX P-115	Fire (Italian)	Domestic (Italian)	13	12.0	130.0	6	0.02
EX P-117	EX J-120	Fire (Italian)	130	12.0	130.0	6	0.02
EX P-125	EX FH-4	EX J-120	245	12.0	130.0	6	0.02

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Pipe Table

Active Scenario: Max Day

Label	Start Node	Stop Node	Length (ft)	Diameter (in)	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
EX P-127	EX FH-5	EX FH-4	190	12.0	130.0	6	0.02
EX P-129	EX J-130	EX FH-5	9	12.0	130.0	6	0.02
EX P-135	EX J-140	EX J-130	649	12.0	130.0	6	0.02
EX P-145	EX J-141	EX J-140	403	12.0	130.0	1	0.00
EX P-147	EX FH-10	EX J-141	91	6.0	130.0	1	0.01
EX P-147(1)	EX J-150	EX FH-10	802	6.0	130.0	1	0.01
EX P-155	Fire (Garage)	EX J-150	268	12.0	130.0	1	0.00
EX P-157	EX J-160	Fire (Garage)	189	12.0	130.0	1	0.00
EX P-165	EX J-160	EX J-170	191	12.0	130.0	5	0.01
EX P-175	EX J-170	EX FH-6 (TEST 2)	67	12.0	130.0	5	0.01
EX P-177	EX FH-6 (TEST 2)	EX J-140	221	12.0	130.0	5	0.01
EX P-191	EX J-160	EX FH-7 (FLOW 2)	93	8.0	130.0	-6	0.04
EX P-193	EX FH-7 (FLOW 2)	EX J-194	50	8.0	130.0	-6	0.04
P-5	J-10	EX J-34	333	8.0	130.0	88	0.56
P-15	Fire (Villas and Bungalows)	J-10	106	8.0	130.0	88	0.56
P-17	EX J-54	Fire (Villas and Bungalows)	73	8.0	130.0	88	0.56
P-21	EX J-194	J-66	44	8.0	130.0	-6	0.04
P-23	J-66	EX J-190	16	8.0	130.0	-6	0.04
P-25	FH-5	EX J-190	267	8.0	130.0	6	0.04
P-27	FH-4	FH-5	243	8.0	130.0	6	0.04
P-29	Fire (Conf. Center)	FH-4	222	8.0	130.0	6	0.04
P-31	FH-3	Fire (Conf. Center)	51	8.0	130.0	6	0.04
P-50	FH-3	EX J-110	302	8.0	130.0	-6	0.04
P-55	FH-6	J-66	125	8.0	130.0	0	0.00
P-58	R-1	PMP-1	1	48.0	130.0	565	0.10
P-59	PMP-1	EX FH-2 (TEST 1)	1	48.0	130.0	565	0.10
P-60	J-70	GPV-1	14	4.0	130.0	53	1.36
P-61	GPV-1	J-VILLA 1&2	182	4.0	130.0	53	1.36
P-62	J-VILLA 1&2	J-VILLA 5	53	4.0	130.0	43	1.10
P-63	J-VILLA 5	J-VILLA 6	69	4.0	130.0	39	1.01

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Pipe Table

Active Scenario: Max Day

Label	Start Node	Stop Node	Length (ft)	Diameter (in)	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-64	J-VILLA 6	J-VILLA 3&4	27	4.0	130.0	32	0.82
P-65	J-VILLA 3&4	J-BUNGALOW 2&3	78	4.0	130.0	7	0.18
P-66	J-BUNGALOW 2&3	J-BUNGALOW 1	71	2.5	130.0	2	0.16
P-EX FH-11	EX J-150	EX FH-11	23	12.0	130.0	0	0.00

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Pump Table

Active Scenario: Peak Hour Demand

ID	Label	Elevation (ft)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
283	PMP-1	1,543.20	1,543.25	1,700.02	1,124	156.77

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Junction Table

Active Scenario: Peak Hour Demand

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
Domestic (Conference Center)	1,553.33	402	61	1,694.33
Domestic (Guest Room Addition)	1,550.00	336	63	1,695.19
Domestic (Italian)	1,556.30	179	60	1,694.81
Domestic (Roasterie)	1,560.25	114	58	1,694.80
EX FH-1	1,547.30	0	64	1,695.35
EX FH-2 (TEST 1)	1,543.00	0	68	1,700.02
EX FH-3 (FLOW 1)	1,549.00	0	63	1,694.95
EX FH-4	1,557.29	0	59	1,694.81
EX FH-5	1,558.03	0	59	1,694.81
EX FH-6 (TEST 2)	1,559.33	0	59	1,694.81
EX FH-7 (FLOW 2)	1,556.86	0	60	1,694.81
EX FH-10	1,563.50	0	57	1,694.81
EX FH-11	1,557.90	0	59	1,694.81
EX FH-12	1,552.10	0	62	1,694.33
EX J-10	1,552.00	0	62	1,694.84
EX J-20	1,553.00	0	61	1,694.63
EX J-30	1,553.00	0	61	1,694.52
EX J-34	1,553.36	0	61	1,694.35
EX J-40	1,552.55	0	61	1,694.33
EX J-50	1,552.03	0	62	1,694.33
EX J-54	1,555.20	0	60	1,694.60
EX J-70	1,542.85	0	67	1,698.77
EX J-80	1,542.85	0	66	1,696.15
EX J-90	1,547.00	0	64	1,695.52
EX J-100	1,550.00	0	63	1,694.96
EX J-110	1,556.50	0	60	1,694.82
EX J-120	1,556.34	0	60	1,694.81
EX J-130	1,558.03	0	59	1,694.81
EX J-140	1,560.63	0	58	1,694.81
EX J-141	1,563.47	0	57	1,694.81
EX J-150	1,557.41	0	59	1,694.81
EX J-160	1,554.89	0	61	1,694.81
EX J-170	1,558.93	0	59	1,694.81
EX J-190	1,556.35	0	60	1,694.81
EX J-194	1,556.60	0	60	1,694.81
FH-1	1,552.65	0	61	1,694.33
FH-2	1,553.15	0	61	1,694.33
FH-3	1,556.46	0	60	1,694.82
FH-4	1,556.42	0	60	1,694.81
FH-5	1,556.39	0	60	1,694.81
FH-6	1,556.95	0	60	1,694.81
FH-7	1,557.87	0	60	1,696.43
FH-8	1,552.10	0	62	1,694.33
Fire (Conf. Center)	1,556.46	0	60	1,694.82
Fire (Garage)	1,554.70	0	61	1,694.81
Fire (Guest Room Addition)	1,550.00	0	63	1,695.19

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Junction Table

Active Scenario: Peak Hour Demand

Label	Elevation (ft)	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
Fire (Italian)	1,556.30	0	60	1,694.81
Fire (Roasterie)	1,559.64	0	58	1,694.78
Fire (Villas and Bungalows)	1,553.13	0	61	1,694.57
J-10	1,550.14	0	62	1,694.52
J-20	1,552.46	0	61	1,694.33
J-66	1,556.22	0	60	1,694.81
J-70	1,553.30	0	61	1,694.33
J-BUNGALOW 1	1,552.30	4	54	1,675.96
J-BUNGALOW 2&3	1,554.15	8	53	1,675.97
J-VILLA 1&2	1,553.50	18	53	1,676.55
J-VILLA 3&4	1,553.15	43	53	1,675.99
J-VILLA 5	1,553.20	7	53	1,676.31
J-VILLA 6	1,553.50	13	53	1,676.05

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Pipe Table

Active Scenario: Peak Hour Demand

Label	Start Node	Stop Node	Length (ft)	Diameter (in)	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
EX P-15	EX J-20	EX J-10	80	8.0	130.0	-353	2.25
EX P-25	EX J-30	EX J-20	43	8.0	130.0	-353	2.25
EX P-33	EX J-34	EX J-30	63	8.0	130.0	-353	2.25
EX P-35(1)	J-70	Domestic (Conference Center)	5	8.0	130.0	-93	0.60
EX P-35(2)	Domestic (Conference Center)	EX J-34	5	8.0	130.0	-495	3.16
EX P-37	FH-2	J-70	27	8.0	130.0	0	0.00
EX P-39	EX J-40	FH-2	103	8.0	130.0	0	0.00
EX P-45	FH-1	EX J-40	46	8.0	130.0	0	0.00
EX P-47(1)	EX J-50	J-20	19	8.0	130.0	0	0.00
EX P-47(2)	J-20	FH-1	9	8.0	130.0	0	0.00
EX P-53	Fire (Roasterie)	EX J-54	87	6.0	130.0	142	1.61
EX P-55	Domestic (Roasterie)	Fire (Roasterie)	12	6.0	130.0	142	1.61
EX P-57(1)	EX FH-2 (TEST 1)	FH-7	603	6.0	130.0	256	2.91
EX P-57(2)	FH-7	Domestic (Roasterie)	272	6.0	130.0	256	2.91
EX P-58	EX J-50	EX FH-12	89	8.0	130.0	0	0.00
EX P-59	EX FH-12	FH-8	37	8.0	130.0	0	0.00
EX P-65	EX J-70	EX FH-2 (TEST 1)	22	6.0	130.0	-868	9.85
EX P-75	EX J-80	EX J-70	46	6.0	130.0	-868	9.85
EX P-85	EX J-90	EX J-80	323	12.0	130.0	-868	2.46
EX P-93	EX FH-1	EX J-90	87	12.0	130.0	-868	2.46
EX P-95	Domestic (Guest Room Addition)	EX FH-1	81	12.0	130.0	-868	2.46
EX P-97	Fire (Guest Room Addition)	Domestic (Guest Room Addition)	6	12.0	130.0	-532	1.51
EX P-99	EX J-100	Fire (Guest Room Addition)	294	12.0	130.0	-532	1.51
EX P-105	EX FH-3 (FLOW 1)	EX J-100	10	12.0	130.0	-532	1.51
EX P-107	EX J-10	EX FH-3 (FLOW 1)	133	12.0	130.0	-532	1.51
EX P-109	EX J-110	EX J-10	231	12.0	130.0	-179	0.51
EX P-113	Domestic (Italian)	EX J-110	171	12.0	130.0	-162	0.46
EX P-115	Fire (Italian)	Domestic (Italian)	13	12.0	130.0	17	0.05
EX P-117	EX J-120	Fire (Italian)	130	12.0	130.0	17	0.05
EX P-125	EX FH-4	EX J-120	245	12.0	130.0	17	0.05

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Pipe Table

Active Scenario: Peak Hour Demand

Label	Start Node	Stop Node	Length (ft)	Diameter (in)	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
EX P-127	EX FH-5	EX FH-4	190	12.0	130.0	17	0.05
EX P-129	EX J-130	EX FH-5	9	12.0	130.0	17	0.05
EX P-135	EX J-140	EX J-130	649	12.0	130.0	17	0.05
EX P-145	EX J-141	EX J-140	403	12.0	130.0	2	0.01
EX P-147	EX FH-10	EX J-141	91	6.0	130.0	2	0.02
EX P-147(1)	EX J-150	EX FH-10	802	6.0	130.0	2	0.02
EX P-155	Fire (Garage)	EX J-150	268	12.0	130.0	2	0.01
EX P-157	EX J-160	Fire (Garage)	189	12.0	130.0	2	0.01
EX P-165	EX J-160	EX J-170	191	12.0	130.0	15	0.04
EX P-175	EX J-170	EX FH-6 (TEST 2)	67	12.0	130.0	15	0.04
EX P-177	EX FH-6 (TEST 2)	EX J-140	221	12.0	130.0	15	0.04
EX P-191	EX J-160	EX FH-7 (FLOW 2)	93	8.0	130.0	-17	0.11
EX P-193	EX FH-7 (FLOW 2)	EX J-194	50	8.0	130.0	-17	0.11
P-5	J-10	EX J-34	333	8.0	130.0	142	0.91
P-15	Fire (Villas and Bungalows)	J-10	106	8.0	130.0	142	0.91
P-17	EX J-54	Fire (Villas and Bungalows)	73	8.0	130.0	142	0.91
P-21	EX J-194	J-66	44	8.0	130.0	-17	0.11
P-23	J-66	EX J-190	16	8.0	130.0	-17	0.11
P-25	FH-5	EX J-190	267	8.0	130.0	17	0.11
P-27	FH-4	FH-5	243	8.0	130.0	17	0.11
P-29	Fire (Conf. Center)	FH-4	222	8.0	130.0	17	0.11
P-31	FH-3	Fire (Conf. Center)	51	8.0	130.0	17	0.11
P-50	FH-3	EX J-110	302	8.0	130.0	-17	0.11
P-55	FH-6	J-66	125	8.0	130.0	0	0.00
P-58	R-1	PMP-1	1	48.0	130.0	1,124	0.20
P-59	PMP-1	EX FH-2 (TEST 1)	1	48.0	130.0	1,124	0.20
P-60	J-70	GPV-1	14	4.0	130.0	93	2.38
P-61	GPV-1	J-VILLA 1&2	182	4.0	130.0	93	2.38
P-62	J-VILLA 1&2	J-VILLA 5	53	4.0	130.0	76	1.93
P-63	J-VILLA 5	J-VILLA 6	69	4.0	130.0	69	1.76

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Pipe Table

Active Scenario: Peak Hour Demand

Label	Start Node	Stop Node	Length (ft)	Diameter (in)	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-64	J-VILLA 6	J-VILLA 3&4	27	4.0	130.0	56	1.43
P-65	J-VILLA 3&4	J-BUNGALOW 2&3	78	4.0	130.0	13	0.32
P-66	J-BUNGALOW 2&3	J-BUNGALOW 1	71	2.5	130.0	4	0.27
P-EX FH-11	EX J-150	EX FH-11	23	12.0	130.0	0	0.00

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Pump Table

Active Scenario: MD+FF Bungalows/The Roasterie (Model 1)

ID	Label	Elevation (ft)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
283	PMP-1	1,543.20	1,543.25	1,706.82	565	163.57

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Pump Table

Active Scenario: MD+FF Conference Center (Model 1)

ID	Label	Elevation (ft)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
283	PMP-1	1,543.20	1,543.25	1,706.82	565	163.57

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Pump Table

Active Scenario: MD+FF Guest Room Addition (Model 1)

ID	Label	Elevation (ft)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
283	PMP-1	1,543.20	1,543.25	1,706.82	565	163.57

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Pump Table

Active Scenario: MD+FF Parking Structure (Model 2)

ID	Label	Elevation (ft)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
176	PMP-2	1,559.43	1,559.53	1,724.23	511	164.70

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

FlexTable: Pump Table

Active Scenario: MD+FF The Italian (Model 1)

ID	Label	Elevation (ft)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
283	PMP-1	1,543.20	1,543.25	1,706.82	565	163.57

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

Fire Flow Node FlexTable: Fire Flow Results Table

Active Scenario: MD+FF Bungalows/The Roasterie (Model 1)

Label	Elevation (ft)	Satisfies Fire Flow Constraints?	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Calculated Residual) (psi)	Hydraulic Grade (ft)
Domestic (Conference Center)	1,553.33	True	1,721	2,088	37	1,705.22
Domestic (Guest Room Addition)	1,550.00	True	1,692	2,254	39	1,705.46
Domestic (Italian)	1,556.30	True	1,560	2,066	34	1,705.37
Domestic (Roasterie)	1,560.25	True	1,538	1,859	30	1,705.41
EX FH-1	1,547.30	True	1,500	2,075	40	1,705.51
EX FH-2 (TEST 1)	1,543.00	True	1,500	2,708	42	1,706.82
EX FH-3 (FLOW 1)	1,549.00	True	1,500	2,022	39	1,705.40
EX FH-4	1,557.29	True	1,500	2,006	33	1,705.37
EX FH-5	1,558.03	True	1,500	2,003	32	1,705.37
EX FH-6 (TEST 2)	1,559.33	True	1,500	1,954	31	1,705.37
EX FH-7 (FLOW 2)	1,556.86	True	1,500	1,970	31	1,705.37
EX FH-10	1,563.50	True	1,500	1,727	30	1,705.37
EX FH-11	1,557.90	True	1,500	1,949	31	1,705.37
EX FH-12	1,552.10	True	1,500	1,862	30	1,705.22
EX J-10	1,552.00	True	1,500	2,006	38	1,705.38
EX J-20	1,553.00	True	1,500	1,945	37	1,705.31
EX J-30	1,553.00	True	1,500	1,914	37	1,705.28
EX J-34	1,553.36	True	1,500	1,874	37	1,705.23
EX J-40	1,552.55	True	1,500	1,862	34	1,705.22
EX J-50	1,552.03	True	1,500	1,862	33	1,705.22
EX J-54	1,555.20	True	1,500	1,950	30	1,705.33
EX J-70	1,542.85	True	1,500	2,471	42	1,706.47
EX J-80	1,542.85	True	1,500	2,147	42	1,705.73
EX J-90	1,547.00	True	1,500	2,090	40	1,705.55
EX J-100	1,550.00	True	1,500	2,024	39	1,705.41
EX J-110	1,556.50	True	1,500	2,006	35	1,705.38
EX J-120	1,556.34	True	1,500	2,006	34	1,705.37
EX J-130	1,558.03	True	1,500	2,002	32	1,705.37
EX J-140	1,560.63	True	1,500	1,951	31	1,705.37
EX J-141	1,563.47	True	1,500	1,904	30	1,705.37

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

Fire Flow Node FlexTable: Fire Flow Results Table

Active Scenario: MD+FF Bungalows/The Roasterie (Model 1)

Label	Elevation (ft)	Satisfies Fire Flow Constraints?	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Calculated Residual) (psi)	Hydraulic Grade (ft)
EX J-150	1,557.41	True	1,500	1,949	31	1,705.37
EX J-160	1,554.89	True	1,500	1,956	33	1,705.37
EX J-170	1,558.93	True	1,500	1,954	32	1,705.37
EX J-190	1,556.35	True	1,500	1,983	30	1,705.37
EX J-194	1,556.60	True	1,500	1,976	31	1,705.37
FH-1	1,552.65	True	1,500	1,862	33	1,705.22
FH-2	1,553.15	True	1,500	1,862	37	1,705.22
FH-3	1,556.46	True	1,500	2,006	31	1,705.37
FH-4	1,556.42	True	1,500	1,972	30	1,705.37
FH-5	1,556.39	True	1,500	1,963	30	1,705.37
FH-6	1,556.95	True	1,500	1,868	30	1,705.37
FH-7	1,557.87	True	1,500	1,819	30	1,705.85
FH-8	1,552.10	True	1,500	1,848	30	1,705.22
Fire (Conf. Center)	1,556.46	True	1,500	2,006	30	1,705.37
Fire (Garage)	1,554.70	True	1,500	1,953	33	1,705.37
Fire (Guest Room Addition)	1,550.00	True	1,500	2,062	39	1,705.46
Fire (Italian)	1,556.30	True	1,500	2,006	34	1,705.37
Fire (Roasterie)	1,559.64	True	1,500	1,834	30	1,705.40
Fire (Villas and Bungalows)	1,553.13	True	1,500	1,942	32	1,705.32
J-10	1,550.14	True	1,500	1,926	35	1,705.30
J-20	1,552.46	True	1,500	1,862	33	1,705.22
J-66	1,556.22	True	1,500	1,981	30	1,705.37
J-70	1,553.30	True	1,500	1,862	37	1,705.22
J-BUNGALOW 1	1,552.30	False	1,502	288	30	1,689.24
J-BUNGALOW 2&3	1,554.15	False	1,505	431	30	1,689.25
J-VILLA 1&2	1,553.50	False	1,510	563	30	1,689.45
J-VILLA 3&4	1,553.15	False	1,525	485	30	1,689.25
J-VILLA 5	1,553.20	False	1,504	518	30	1,689.37
J-VILLA 6	1,553.50	False	1,507	481	30	1,689.27

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

Fire Flow Node FlexTable: Fire Flow Results Table

Active Scenario: MD+FF Conference Center (Model 1)

Label	Elevation (ft)	Satisfies Fire Flow Constraints?	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Calculated Residual) (psi)	Hydraulic Grade (ft)
Domestic (Conference Center)	1,553.33	True	1,846	2,088	37	1,705.22
Domestic (Guest Room Addition)	1,550.00	True	1,817	2,254	39	1,705.46
Domestic (Italian)	1,556.30	True	1,685	2,066	34	1,705.37
Domestic (Roasterie)	1,560.25	True	1,663	1,859	30	1,705.41
EX FH-1	1,547.30	True	1,625	2,075	40	1,705.51
EX FH-2 (TEST 1)	1,543.00	True	1,625	2,708	42	1,706.82
EX FH-3 (FLOW 1)	1,549.00	True	1,625	2,022	39	1,705.40
EX FH-4	1,557.29	True	1,625	2,006	33	1,705.37
EX FH-5	1,558.03	True	1,625	2,003	32	1,705.37
EX FH-6 (TEST 2)	1,559.33	True	1,625	1,954	31	1,705.37
EX FH-7 (FLOW 2)	1,556.86	True	1,625	1,970	31	1,705.37
EX FH-10	1,563.50	True	1,625	1,727	30	1,705.37
EX FH-11	1,557.90	True	1,625	1,949	31	1,705.37
EX FH-12	1,552.10	True	1,625	1,862	30	1,705.22
EX J-10	1,552.00	True	1,625	2,006	38	1,705.38
EX J-20	1,553.00	True	1,625	1,945	37	1,705.31
EX J-30	1,553.00	True	1,625	1,914	37	1,705.28
EX J-34	1,553.36	True	1,625	1,874	37	1,705.23
EX J-40	1,552.55	True	1,625	1,862	34	1,705.22
EX J-50	1,552.03	True	1,625	1,862	33	1,705.22
EX J-54	1,555.20	True	1,625	1,950	30	1,705.33
EX J-70	1,542.85	True	1,625	2,471	42	1,706.47
EX J-80	1,542.85	True	1,625	2,147	42	1,705.73
EX J-90	1,547.00	True	1,625	2,090	40	1,705.55
EX J-100	1,550.00	True	1,625	2,024	39	1,705.41
EX J-110	1,556.50	True	1,625	2,006	35	1,705.38
EX J-120	1,556.34	True	1,625	2,006	34	1,705.37
EX J-130	1,558.03	True	1,625	2,002	32	1,705.37
EX J-140	1,560.63	True	1,625	1,951	31	1,705.37
EX J-141	1,563.47	True	1,625	1,904	30	1,705.37

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

Fire Flow Node FlexTable: Fire Flow Results Table

Active Scenario: MD+FF Conference Center (Model 1)

Label	Elevation (ft)	Satisfies Fire Flow Constraints?	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Calculated Residual) (psi)	Hydraulic Grade (ft)
EX J-150	1,557.41	True	1,625	1,949	31	1,705.37
EX J-160	1,554.89	True	1,625	1,956	33	1,705.37
EX J-170	1,558.93	True	1,625	1,954	32	1,705.37
EX J-190	1,556.35	True	1,625	1,983	30	1,705.37
EX J-194	1,556.60	True	1,625	1,976	31	1,705.37
FH-1	1,552.65	True	1,625	1,862	33	1,705.22
FH-2	1,553.15	True	1,625	1,862	37	1,705.22
FH-3	1,556.46	True	1,625	2,006	31	1,705.37
FH-4	1,556.42	True	1,625	1,972	30	1,705.37
FH-5	1,556.39	True	1,625	1,963	30	1,705.37
FH-6	1,556.95	True	1,625	1,868	30	1,705.37
FH-7	1,557.87	True	1,625	1,819	30	1,705.85
FH-8	1,552.10	True	1,625	1,848	30	1,705.22
Fire (Conf. Center)	1,556.46	True	1,625	2,006	30	1,705.37
Fire (Garage)	1,554.70	True	1,625	1,953	33	1,705.37
Fire (Guest Room Addition)	1,550.00	True	1,625	2,062	39	1,705.46
Fire (Italian)	1,556.30	True	1,625	2,006	34	1,705.37
Fire (Roasterie)	1,559.64	True	1,625	1,834	30	1,705.40
Fire (Villas and Bungalows)	1,553.13	True	1,625	1,942	32	1,705.32
J-10	1,550.14	True	1,625	1,926	35	1,705.30
J-20	1,552.46	True	1,625	1,862	33	1,705.22
J-66	1,556.22	True	1,625	1,981	30	1,705.37
J-70	1,553.30	True	1,625	1,862	37	1,705.22
J-BUNGALOW 1	1,552.30	False	1,627	288	30	1,689.24
J-BUNGALOW 2&3	1,554.15	False	1,630	431	30	1,689.25
J-VILLA 1&2	1,553.50	False	1,635	563	30	1,689.45
J-VILLA 3&4	1,553.15	False	1,650	485	30	1,689.25
J-VILLA 5	1,553.20	False	1,629	518	30	1,689.37
J-VILLA 6	1,553.50	False	1,632	481	30	1,689.27

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

Fire Flow Node FlexTable: Fire Flow Results Table

Active Scenario: MD+FF Guest Room Addition (Model 1)

Label	Elevation (ft)	Satisfies Fire Flow Constraints?	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Calculated Residual) (psi)	Hydraulic Grade (ft)
Domestic (Conference Center)	1,553.33	True	1,971	2,088	37	1,705.22
Domestic (Guest Room Addition)	1,550.00	True	1,942	2,254	39	1,705.46
Domestic (Italian)	1,556.30	True	1,810	2,066	34	1,705.37
Domestic (Roasterie)	1,560.25	True	1,788	1,859	30	1,705.41
EX FH-1	1,547.30	True	1,750	2,075	40	1,705.51
EX FH-2 (TEST 1)	1,543.00	True	1,750	2,708	42	1,706.82
EX FH-3 (FLOW 1)	1,549.00	True	1,750	2,022	39	1,705.40
EX FH-4	1,557.29	True	1,750	2,006	33	1,705.37
EX FH-5	1,558.03	True	1,750	2,003	32	1,705.37
EX FH-6 (TEST 2)	1,559.33	True	1,750	1,954	31	1,705.37
EX FH-7 (FLOW 2)	1,556.86	True	1,750	1,970	31	1,705.37
EX FH-10	1,563.50	False	1,750	1,727	30	1,705.37
EX FH-11	1,557.90	True	1,750	1,949	31	1,705.37
EX FH-12	1,552.10	True	1,750	1,862	30	1,705.22
EX J-10	1,552.00	True	1,750	2,006	38	1,705.38
EX J-20	1,553.00	True	1,750	1,945	37	1,705.31
EX J-30	1,553.00	True	1,750	1,914	37	1,705.28
EX J-34	1,553.36	True	1,750	1,874	37	1,705.23
EX J-40	1,552.55	True	1,750	1,862	34	1,705.22
EX J-50	1,552.03	True	1,750	1,862	33	1,705.22
EX J-54	1,555.20	True	1,750	1,950	30	1,705.33
EX J-70	1,542.85	True	1,750	2,471	42	1,706.47
EX J-80	1,542.85	True	1,750	2,147	42	1,705.73
EX J-90	1,547.00	True	1,750	2,090	40	1,705.55
EX J-100	1,550.00	True	1,750	2,024	39	1,705.41
EX J-110	1,556.50	True	1,750	2,006	35	1,705.38
EX J-120	1,556.34	True	1,750	2,006	34	1,705.37
EX J-130	1,558.03	True	1,750	2,002	32	1,705.37
EX J-140	1,560.63	True	1,750	1,951	31	1,705.37
EX J-141	1,563.47	True	1,750	1,904	30	1,705.37

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

Fire Flow Node FlexTable: Fire Flow Results Table

Active Scenario: MD+FF Guest Room Addition (Model 1)

Label	Elevation (ft)	Satisfies Fire Flow Constraints?	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Calculated Residual) (psi)	Hydraulic Grade (ft)
EX J-150	1,557.41	True	1,750	1,949	31	1,705.37
EX J-160	1,554.89	True	1,750	1,956	33	1,705.37
EX J-170	1,558.93	True	1,750	1,954	32	1,705.37
EX J-190	1,556.35	True	1,750	1,983	30	1,705.37
EX J-194	1,556.60	True	1,750	1,976	31	1,705.37
FH-1	1,552.65	True	1,750	1,862	33	1,705.22
FH-2	1,553.15	True	1,750	1,862	37	1,705.22
FH-3	1,556.46	True	1,750	2,006	31	1,705.37
FH-4	1,556.42	True	1,750	1,972	30	1,705.37
FH-5	1,556.39	True	1,750	1,963	30	1,705.37
FH-6	1,556.95	True	1,750	1,868	30	1,705.37
FH-7	1,557.87	True	1,750	1,819	30	1,705.85
FH-8	1,552.10	True	1,750	1,848	30	1,705.22
Fire (Conf. Center)	1,556.46	True	1,750	2,006	30	1,705.37
Fire (Garage)	1,554.70	True	1,750	1,953	33	1,705.37
Fire (Guest Room Addition)	1,550.00	True	1,750	2,062	39	1,705.46
Fire (Italian)	1,556.30	True	1,750	2,006	34	1,705.37
Fire (Roasterie)	1,559.64	True	1,750	1,834	30	1,705.40
Fire (Villas and Bungalows)	1,553.13	True	1,750	1,942	32	1,705.32
J-10	1,550.14	True	1,750	1,926	35	1,705.30
J-20	1,552.46	True	1,750	1,862	33	1,705.22
J-66	1,556.22	True	1,750	1,981	30	1,705.37
J-70	1,553.30	True	1,750	1,862	37	1,705.22
J-BUNGALOW 1	1,552.30	False	1,752	288	30	1,689.24
J-BUNGALOW 2&3	1,554.15	False	1,755	431	30	1,689.25
J-VILLA 1&2	1,553.50	False	1,760	563	30	1,689.45
J-VILLA 3&4	1,553.15	False	1,775	485	30	1,689.25
J-VILLA 5	1,553.20	False	1,754	518	30	1,689.37
J-VILLA 6	1,553.50	False	1,757	481	30	1,689.27

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

Fire Flow Node FlexTable: Fire Flow Results Table

Active Scenario: MD+FF Parking Structure (Model 2)

Label	Elevation (ft)	Satisfies Fire Flow Constraints?	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Calculated Residual) (psi)	Hydraulic Grade (ft)
Domestic (Conference Center)	1,553.33	False	3,221	3,136	31	1,723.25
Domestic (Guest Room Addition)	1,550.00	True	3,192	3,445	32	1,723.39
Domestic (Italian)	1,556.30	True	3,060	3,578	32	1,723.65
Domestic (Roasterie)	1,560.25	False	3,038	2,265	30	1,723.25
EX FH-1	1,547.30	True	3,000	3,246	32	1,723.39
EX FH-2 (TEST 1)	1,543.00	False	3,000	2,907	30	1,723.38
EX FH-3 (FLOW 1)	1,549.00	True	3,000	3,290	34	1,723.44
EX FH-4	1,557.29	True	3,000	3,659	31	1,723.81
EX FH-5	1,558.03	True	3,000	3,739	31	1,723.89
EX FH-6 (TEST 2)	1,559.33	True	3,000	4,230	32	1,724.23
EX FH-7 (FLOW 2)	1,556.86	True	3,000	3,881	30	1,724.17
EX FH-10	1,563.50	True	3,000	3,041	30	1,724.16
EX FH-11	1,557.90	True	3,000	3,892	30	1,724.21
EX FH-12	1,552.10	False	3,000	2,443	30	1,723.25
EX J-10	1,552.00	True	3,000	3,314	34	1,723.47
EX J-20	1,553.00	True	3,000	3,107	32	1,723.37
EX J-30	1,553.00	True	3,000	3,021	32	1,723.32
EX J-34	1,553.36	False	3,000	2,915	31	1,723.25
EX J-40	1,552.55	False	3,000	2,690	30	1,723.25
EX J-50	1,552.03	False	3,000	2,573	30	1,723.25
EX J-54	1,555.20	False	3,000	2,445	31	1,723.25
EX J-70	1,542.85	True	3,000	3,010	30	1,723.38
EX J-80	1,542.85	True	3,000	3,187	33	1,723.39
EX J-90	1,547.00	True	3,000	3,236	32	1,723.39
EX J-100	1,550.00	True	3,000	3,289	34	1,723.44
EX J-110	1,556.50	True	3,000	3,466	32	1,723.60
EX J-120	1,556.34	True	3,000	3,567	32	1,723.71
EX J-130	1,558.03	True	3,000	3,743	31	1,723.89
EX J-140	1,560.63	True	3,000	4,050	31	1,724.15
EX J-141	1,563.47	True	3,000	3,798	30	1,724.15

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

Fire Flow Node FlexTable: Fire Flow Results Table

Active Scenario: MD+FF Parking Structure (Model 2)

Label	Elevation (ft)	Satisfies Fire Flow Constraints?	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Calculated Residual) (psi)	Hydraulic Grade (ft)
EX J-150	1,557.41	True	3,000	3,909	30	1,724.21
EX J-160	1,554.89	True	3,000	4,193	31	1,724.21
EX J-170	1,558.93	True	3,000	4,217	31	1,724.23
EX J-190	1,556.35	True	3,000	3,656	30	1,724.11
EX J-194	1,556.60	True	3,000	3,764	30	1,724.14
FH-1	1,552.65	False	3,000	2,610	30	1,723.25
FH-2	1,553.15	False	3,000	2,892	30	1,723.25
FH-3	1,556.46	True	3,000	3,315	30	1,723.74
FH-4	1,556.42	True	3,000	3,282	30	1,723.87
FH-5	1,556.39	True	3,000	3,370	30	1,723.99
FH-6	1,556.95	True	3,000	3,211	30	1,724.12
FH-7	1,557.87	False	3,000	2,093	30	1,723.29
FH-8	1,552.10	False	3,000	2,394	30	1,723.25
Fire (Conf. Center)	1,556.46	True	3,000	3,299	30	1,723.77
Fire (Garage)	1,554.70	True	3,000	4,067	31	1,724.21
Fire (Guest Room Addition)	1,550.00	True	3,000	3,254	32	1,723.40
Fire (Italian)	1,556.30	True	3,000	3,523	32	1,723.66
Fire (Roasterie)	1,559.64	False	3,000	2,249	30	1,723.25
Fire (Villas and Bungalows)	1,553.13	False	3,000	2,494	31	1,723.25
J-10	1,550.14	False	3,000	2,573	33	1,723.25
J-20	1,552.46	False	3,000	2,599	30	1,723.25
J-66	1,556.22	True	3,000	3,671	30	1,724.12
J-70	1,553.30	False	3,000	2,915	31	1,723.25

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

Fire Flow Node FlexTable: Fire Flow Results Table

Active Scenario: MD+FF The Italian (Model 1)

Label	Elevation (ft)	Satisfies Fire Flow Constraints?	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Calculated Residual) (psi)	Hydraulic Grade (ft)
Domestic (Conference Center)	1,553.33	True	1,971	2,088	37	1,705.22
Domestic (Guest Room Addition)	1,550.00	True	1,942	2,254	39	1,705.46
Domestic (Italian)	1,556.30	True	1,810	2,066	34	1,705.37
Domestic (Roasterie)	1,560.25	True	1,788	1,859	30	1,705.41
EX FH-1	1,547.30	True	1,750	2,075	40	1,705.51
EX FH-2 (TEST 1)	1,543.00	True	1,750	2,708	42	1,706.82
EX FH-3 (FLOW 1)	1,549.00	True	1,750	2,022	39	1,705.40
EX FH-4	1,557.29	True	1,750	2,006	33	1,705.37
EX FH-5	1,558.03	True	1,750	2,003	32	1,705.37
EX FH-6 (TEST 2)	1,559.33	True	1,750	1,954	31	1,705.37
EX FH-7 (FLOW 2)	1,556.86	True	1,750	1,970	31	1,705.37
EX FH-10	1,563.50	False	1,750	1,727	30	1,705.37
EX FH-11	1,557.90	True	1,750	1,949	31	1,705.37
EX FH-12	1,552.10	True	1,750	1,862	30	1,705.22
EX J-10	1,552.00	True	1,750	2,006	38	1,705.38
EX J-20	1,553.00	True	1,750	1,945	37	1,705.31
EX J-30	1,553.00	True	1,750	1,914	37	1,705.28
EX J-34	1,553.36	True	1,750	1,874	37	1,705.23
EX J-40	1,552.55	True	1,750	1,862	34	1,705.22
EX J-50	1,552.03	True	1,750	1,862	33	1,705.22
EX J-54	1,555.20	True	1,750	1,950	30	1,705.33
EX J-70	1,542.85	True	1,750	2,471	42	1,706.47
EX J-80	1,542.85	True	1,750	2,147	42	1,705.73
EX J-90	1,547.00	True	1,750	2,090	40	1,705.55
EX J-100	1,550.00	True	1,750	2,024	39	1,705.41
EX J-110	1,556.50	True	1,750	2,006	35	1,705.38
EX J-120	1,556.34	True	1,750	2,006	34	1,705.37
EX J-130	1,558.03	True	1,750	2,002	32	1,705.37
EX J-140	1,560.63	True	1,750	1,951	31	1,705.37
EX J-141	1,563.47	True	1,750	1,904	30	1,705.37

Fairmont Scottsdale Princess Water Master Plan - WaterCAD

Fire Flow Node FlexTable: Fire Flow Results Table

Active Scenario: MD+FF The Italian (Model 1)

Label	Elevation (ft)	Satisfies Fire Flow Constraints?	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Calculated Residual) (psi)	Hydraulic Grade (ft)
EX J-150	1,557.41	True	1,750	1,949	31	1,705.37
EX J-160	1,554.89	True	1,750	1,956	33	1,705.37
EX J-170	1,558.93	True	1,750	1,954	32	1,705.37
EX J-190	1,556.35	True	1,750	1,983	30	1,705.37
EX J-194	1,556.60	True	1,750	1,976	31	1,705.37
FH-1	1,552.65	True	1,750	1,862	33	1,705.22
FH-2	1,553.15	True	1,750	1,862	37	1,705.22
FH-3	1,556.46	True	1,750	2,006	31	1,705.37
FH-4	1,556.42	True	1,750	1,972	30	1,705.37
FH-5	1,556.39	True	1,750	1,963	30	1,705.37
FH-6	1,556.95	True	1,750	1,868	30	1,705.37
FH-7	1,557.87	True	1,750	1,819	30	1,705.85
FH-8	1,552.10	True	1,750	1,848	30	1,705.22
Fire (Conf. Center)	1,556.46	True	1,750	2,006	30	1,705.37
Fire (Garage)	1,554.70	True	1,750	1,953	33	1,705.37
Fire (Guest Room Addition)	1,550.00	True	1,750	2,062	39	1,705.46
Fire (Italian)	1,556.30	True	1,750	2,006	34	1,705.37
Fire (Roasterie)	1,559.64	True	1,750	1,834	30	1,705.40
Fire (Villas and Bungalows)	1,553.13	True	1,750	1,942	32	1,705.32
J-10	1,550.14	True	1,750	1,926	35	1,705.30
J-20	1,552.46	True	1,750	1,862	33	1,705.22
J-66	1,556.22	True	1,750	1,981	30	1,705.37
J-70	1,553.30	True	1,750	1,862	37	1,705.22
J-BUNGALOW 1	1,552.30	False	1,752	288	30	1,689.24
J-BUNGALOW 2&3	1,554.15	False	1,755	431	30	1,689.25
J-VILLA 1&2	1,553.50	False	1,760	563	30	1,689.45
J-VILLA 3&4	1,553.15	False	1,775	485	30	1,689.25
J-VILLA 5	1,553.20	False	1,754	518	30	1,689.37
J-VILLA 6	1,553.50	False	1,757	481	30	1,689.27

APPENDIX D – SCOTTSDALE WATER DEMAND EXHIBIT

INSTRUCTIONS

INPUT DEVELOPMENT NAME, CASE NUMBER, AND QUANTITY VALUES TO DETERMINE TOTAL AVERAGE DAILY WATER USE PER THE 2018 DESIGN STANDARDS AND POLICY MANUAL (DS7PM) CHAPTER 6 USING GALLONS PER DAY (GPD) VALUES FROM FIGURE 6-1.2

TABLE 1: QUANTITY INPUT TABLE FOR THE DEVELOPMENT

FAIRMONT SCOTTSDALE PRINCESS

WATER USE DEVELOPMENT TYPE/CATEGORY	AVERAGE UNIT WATER USE PER DS&PM CH. 6 (GPD/UNIT)	INPUT APPLICABLE QUANTITY FOR DEVELOPMENT IN THIS COLUMN	NUMERICAL UNIT	TOTAL AVERAGE WATER USE (GPD)	NOTES
Category: Residential/ Commerical Residential/ Hotel					
< 2 DU/ac	485.6	-	DU	-	Community pool demands not included here. Refer to separate category.
2 – 2.9 DU/ac	470.4	-	DU	-	
3 – 7.9 DU/ac	248.2	-	DU	-	
8 – 11.9 DU/ac	227.6	-	DU	-	
12 – 22 DU/ac	227.6	-	DU	-	
High Density Condominium (condo)	185.3	-	DU	-	
Resort Hotel	446.3	**198**	ROOM	88,367	Includes site amenities such as 1 "standard" restaurant w/ associated dedicated kitchen, laundry service, landscaping, fountains, and 1 medium capacity pool. Large event venues/kitchens or multiple/large pools and multiple restaurants are not included.
Category: Commerical/ Other					
Restaurant	1.3	**29,719**	FT2	38,635	
Commercial/Retail	0.80	**94,357**	FT2	75,486	
Commerical High Rise	0.60	-	FT2	-	per IBC highrise is at or over 75 feet to highest finished floor
Office	0.60	-	FT2	-	
Institutional	1,340	-	ACRE	-	
Industrial	1,027	-	ACRE	-	
Research and Development	1,284	-	ACRE	-	
Category: Special Use Areas					
Natural Area Open Space	-		ACRE	-	Zero water demand
Developed Open Space - Parks	1,786	-	ACRE	-	
Developed Open Space- Golf Course	4,285	-	ACRE	-	
Category: Evaporation from Swimming Pools/Spas, Cooling, Turf Area Irrigation, Other Outdoor Consumptive Uses					
Extra large pool (60k to 100k gallons)	274	-	EA	-	Annual mean ETo = 74.75 in as collected by AZ Met. Kc = 1.1. Average pool size of 400 sq. ft. loses 20,490 gallons per year, or 51.23 gallons per sq ft, not including backwashing or leaks, per AMWUA calculator.
Large pool (above 30k to 60k gallons)	154	-	EA	-	
Medium pool (15k to 30k gallons)	75	-	EA	-	
Small pool or spa (under 15k gallons)	51	**3**	EA	154	
Total Bermuda Turf Area	0.10	**4,885**	FT2	468	1 sq ft of non-overseeded turf at 60% efficiency with increased Kc is 35 gallons per sq ft per year, per AMWUA calculator.
Total Overseeded Turf Area	0.02	-	FT2	-	1 sq ft of overseeded turf at 60% efficiency with increased Kc is 9 gallons per sq ft per year, per AMWUA calculator.
Evaporative Cooling/ Cooling Towers	-	-	TOTAL COOLING TONNAGE	-	Baed on 1.50 cycles of concentration and average annual daily utilization of 68%. Water use is linear with respect to total cooling capacity tonnage. Based on US Dept of Energy Efficiency and Renewable Energy data.
Category: Filter Backwash Flows & Make-up Water from Pools & Spas (rapid sand filters)					
Extra large pool (60k to 100k gallons)	229	-	EA	-	Based on once per 7 day backwash @ 50,100, and 150gpm, respectively for each size pool category for 8 minute duration. Quantity values used from pool input values above.
Large pool (above 30k to 60k gallons)	171	-	EA	-	
Medium pool (15k to 30k gallons)	114	-	EA	-	
Small pool or spa (under 15k gallons)	57	**3**	EA	171	
A. TOTAL AVERAGE DAILY WATER USE FOR THIS DEVELOPMENT				**203,282**	GPD

NOTES:

GPD=GALLONS PER DAY, DU=DWELLING UNITS, FT2=SQUARE FEET, AC=ACRE, EA=EACH UNIT, ETo=EVAPOTRANSPIRATION, Kc=CROP COEFFICIENT, AZMET=ARIZONA METEOROLOGICAL NETWORK, AMWUA=ARIZONA MUNICIPAL WATER USERS ASSOCIATION

NONE OF THE VALUES OR CALCULATIONS HEREIN ARE INTENDED TO BE USED FOR INFRASTRUCTURE DESIGN, PEAK FLOW DETERMINATION, OR SYSTEM CAPACITY ANALYSIS. FOR THESE PURPOSES REFER TO CH.6 & 7 OF THE CITY'S DESIGN STANDARDS AND POLICY MANUAL FOR THE RESPECTIVE DESIGN VALUES AND PEAKING FACTORS.

TABLE INPUT VALUES LAST UPDATED: 11/29/2023

INSTRUCTIONS

IDENTIFY WATER CONSERVATION MEASURES ABOVE THOSE REQUIRED BY CITY CODE THAT THE DEVELOPMENT(S) PROPOSE TO IMPLEMENT. ENTER AN "X" FOR EACH PROPOSED MEASURE.

TABLE 2: APPROVED SUPPLEMENTAL WATER CONSERVATION MEASURES

FAIRMONT SCOTTSDALE PRINCESS

PROPOSED FOR THIS DEVELOPMENT (ENTER "X")	MEASURE	DESCRIPTION
	1. Submetering	Multi-family and mixed-use developments SUBMETER UNITS for leak detection and for occupants ability to manage their own water use
	2. No outdoor water features	Decorative water features outdoors can be a source of water use that is not functional
	3. Indoor water features submetered	Water features have proven to be a source of leaks. Submetering that is capable of alerts to the building monitoring system greatly reduce water waste
x	4. Limitation on functional turf grass	Functional grass turf are areas used for congregation of large number of people and should be limited to up to 10% of the landscapable area
	5. Limitations on artificial turf	Artificial turf is a large source of heat especially during summer months.
	6. Landscaped Rainwater harvesting	Earthworks, such as berms and basins, are encouraged to promote passive rainwater harvesting for planned plants and trees
	7. Cooling tower controllers with monitoring technology	Arizona high evapotranspiration rates, cooling towers use significantly more water here than in other states. Monitory systems can optimize this water use.
	8. Pools and splashpads submeters with monitoring technology	Pools and splashpad can be a source of leaks. Submetering that is capable of alerts to the building monitoring system greatly reduce water waste. Timers on Splash pads

NOTES:

Greywater systems and large areas of artificial turf are not recommended by water conservation.

This list represents water conservation measures that the conservation office has approved and has shown to provide proven water savings.

TABLE INPUT VALUES LAST UPDATED: 11/29/2023

Water Demand Exhibit Summary

FAIRMONT SCOTTSDALE PRINCESS

1. Total Estimated Water Use per Day on a Sustainable Basis (gallons per day, gpd)

203,282 gpd

2. Net Water (NW) / Consumptive Use (gallons per day, gpd)

41,698 gpd

3. Proposed Water Conservation Measures Above Those Required By City Code

	1. Submetering	NOT PROPOSED
	2. No outdoor water features	NOT PROPOSED
	3. Indoor water features submetered	NOT PROPOSED
X	4. Limitation on functional turf grass	Functional grass turf are areas used for congregation of large number of people and should be limited to up to 10% of the landscapable area
	5. Limitations on artificial turf	NOT PROPOSED
	6. Landscaped Rainwater harvesting	NOT PROPOSED
	7. Cooling tower controllers with monitoring technology	NOT PROPOSED
	8. Pools and splashpads submeters with monitoring technology	NOT PROPOSED

4. Annual Economic Value of the Development on a per Gallon of Use Basis (Applies to Commercial or Mixed Use, To be Completed by City)

1. Major City Revenues $/1,000 gallons
2. Total Annual Output Impact $/1,000 gallons

TABLE INPUT VALUES LAST UPDATED: 11/29/2023

TABLE 4: WATER USE SUMMARY

FAIRMONT SCOTTSDALE PRINCESS

WATER USE SUMMARY FOR THE DEVELOPMENT

USE CATEGORY	AMOUNT	UNITS	% OF TOTAL USE	CALCULATION NOTES
A. TOTAL DAILY AVERAGE WATER USE	**203,282**	**GPD**	**100.0%**	A=B+C, C=D+E, F=B+D
B. OUTDOOR CONSUMPTIVE USE	21,861	GPD	10.8%	
C. TOTAL INDOOR USE	181,421	GPD	89.2%	
D. INDOOR CONSUMPTIVE USE	19,837	GPD	9.8%	
E. WASTEWATER TO SEWER	161,584	GPD	79.5%	
F. TOTAL CONSUMPTIVE USE (NET USE)	41,698	GPD	20.5%	

NOTES:
GPD=GALLONS PER DAY
ALL VALUES ARE FOR AVERAGE WATER USE ANALYSIS ONLY. THIS CALCULATION IS NOT INTENDED TO BE USED FOR INFRASTRUCTURE DESIGN, PEAK FLOW DETERMINATION, OR SYSTEM CAPACITY ANALYSIS. FOR THESE PURPOSES REFER TO CH.6 & 7 OF THE CITY'S DESIGN STANDARDS AND POLICY MANUAL FOR THE RESPECTIVE DESIGN VALUES, PEAKING FACTORS, AND DESIGN REQUIREMENTS.

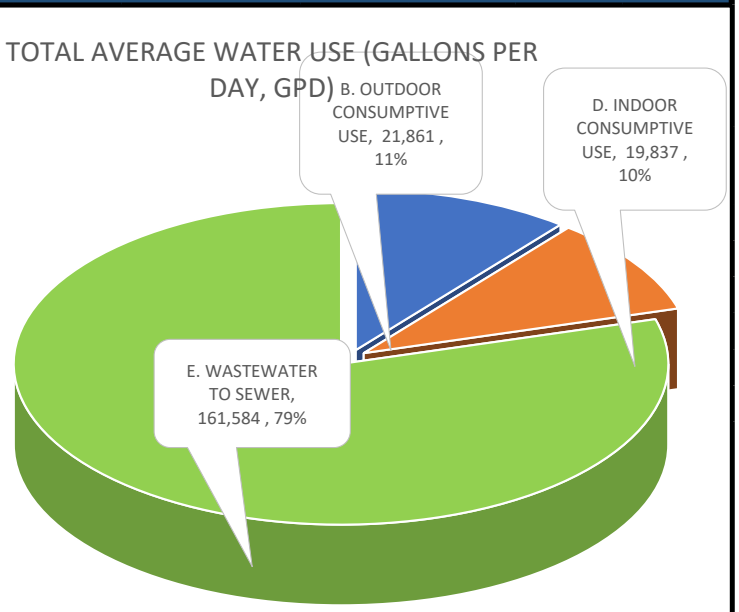


TABLE INPUT VALUES LAST UPDATED: 11/29/2023

TABLE 5: DETAILED WATER USE BREAKDOWN FOR THE DEVELOPMENT

FAIRMONT SCOTTSDALE PRINCESS

TO RIGHT:WATER USE ALLOCATION--->		B. AVERAGE OUTDOOR CONSUMPTIVE WATER USE[1]			C. AVERAGE INDOOR TOTAL WATER USE[1]			D. AVERAGE INDOOR CONSUMPTIVE WATER USE[2]			E. AVERAGE WASTEWATER FLOWS TO SEWER[3]		
BELOW: WATER USE DEVELOPMENT TYPE/CATEGORY	A. TOTAL AVERAGE WATER USE (GPD)	UNIT OUTDOOR CONSUMPTIVE WATER USE (GPD/UNIT)	OUTDOOR CONSUMPTIVE USE (GPD)	OUTDOOR CONSUMPTIVE USE (% OF TOTAL USE)	UNIT TOTAL INDOOR WATER USE (GPD/UNIT)	INDOOR TOTAL USE (GPD)	INDOOR TOTAL USE (% OF TOTAL USE)	UNIT CONSUMPTIVE INDOOR WATER USE (GPD/UNIT)	INDOOR CONSUMPTIVE USE (GPD)	INDOOR CONSUMPTIVE USE (% OF TOTAL USE)	WASTEWATER FLOW (GPD/UNIT)	WASTEWATER FLOW (GPD)	WASTEWATER (% OF TOTAL USE)
Category: Residential/ Commerical Residential/ Hotel													
< 2 DU/ac)	-	276.7	-	0.0%	208.9	-	0.0%	20.9	-	0.0%	188	-	0.0%
2 – 2.9 DU/ac	-	276.7	-	0.0%	193.7	-	0.0%	19.4	-	0.0%	174	-	0.0%
3 – 7.9 DU/ac	-	72.3	-	0.0%	175.9	-	0.0%	17.6	-	0.0%	158	-	0.0%
8 – 11.9 DU/ac	-	72.3	-	0.0%	155.3	-	0.0%	15.5	-	0.0%	140	-	0.0%
12 – 22 DU/ac	-	72.3	-	0.0%	155.3	-	0.0%	15.5	-	0.0%	140	-	0.0%
High Density Condominium (condo)	-	30.0	-	0.0%	155.3	-	0.0%	15.5	-	0.0%	140	-	0.0%
Resort Hotel	88,367	44.6	8,831	4.3%	401.7	79,536.6	39.1%	32.1	6,362.9	3.1%	370	73,174	36.0%
Category: Commerical/ Other													
Restaurant	38,635	0.10	2,972	1.5%	1.20	35,662.8	17.5%	0.12	3,566.3	1.8%	1.08	32,097	15.8%
Commercial/Retail	75,486	0.10	9,436	4.6%	0.70	66,049.9	32.5%	0.11	9,907.5	4.9%	0.60	56,142	27.6%
Commerical High Rise	-	0.10	-	0.0%	0.50	-	0.0%	0.05	-	0.0%	0.45	-	0.0%
Office	-	0.10	-	0.0%	0.50	-	0.0%	0.05	-	0.0%	0.45	-	0.0%
Institutional	-	670	-	0.0%	670.0	-	0.0%	100.50	-	0.0%	569.50	-	0.0%
Industrial	-	154	-	0.0%	873.0	-	0.0%	130.95	-	0.0%	742.05	-	0.0%
Research and Development	-	192	-	0.0%	1,092.0	-	0.0%	163.80	-	0.0%	928.20	-	0.0%
Category: Special Use Areas													
Natural Area Open Space	-	-	-	0.0%							-	-	0.0%
Developed Open Space - Parks	-	1,786	-	0.0%							-	-	0.0%
Developed Open Space- Golf Course	-	4,285	-	0.0%							-	-	0.0%
Category: Evaporation from Swimming Pools/Spas, Cooling, Turf Area Irrigation, Other Outdoor Consumptive Uses													
Extra large pool (60k to 100k gallons)	-	274	-	0.0%							-	-	0.0%
Large pool (above 30k to 60k gallons)	-	154	-	0.0%							-	-	0.0%
Medium pool (15k to 30k gallons)	-	75	-	0.0%							-	-	0.0%
Small pool or spa (under 15k gallons)	154	51	154	0.1%							-	-	0.0%
Total Bermuda Turf Area	468	0.10	468	0.2%							-	-	0.0%
Total Overseeded Turf Area	-	0.02	-	0.0%							-	-	0.0%
Evaporative Cooling/ Cooling Towers	-	-	-	0.0%							-	-	0.0%
Category: Filter Backwash Flows & Make-up Water from Pools & Spas (rapid sand filters)													
Extra large pool (60k to 100k gallons)	-				228.6	-	0.0%				229	-	0.0%
Large pool (above 30k to 60k gallons)	-				171.4	-	0.0%				171	-	0.0%
Medium pool (15k to 30k gallons)	-				114.3	-	0.0%				114	-	0.0%
Small pool or spa (under 15k gallons)	171				57.1	171.4	0.1%				57	171	0.1%
TOTALS	**203,282**		**21,861**	**10.8%**		**181,421**	**89.2%**		**19,837**	**9.8%**		**161,584**	**79.5%**

F. TOTAL CONSUMPTIVE/NET WATER USE FOR THIS DEVELOPMENT (B. + D.) **41,698 GPD** **20.5% OF TOTAL USE**

NOTES:

(1) PER 2018 DS&PM CHAPTER 6, FIGURE 6-1.2

(2) VARIES FROM 8% TO 15%, TYPICALLY 10%

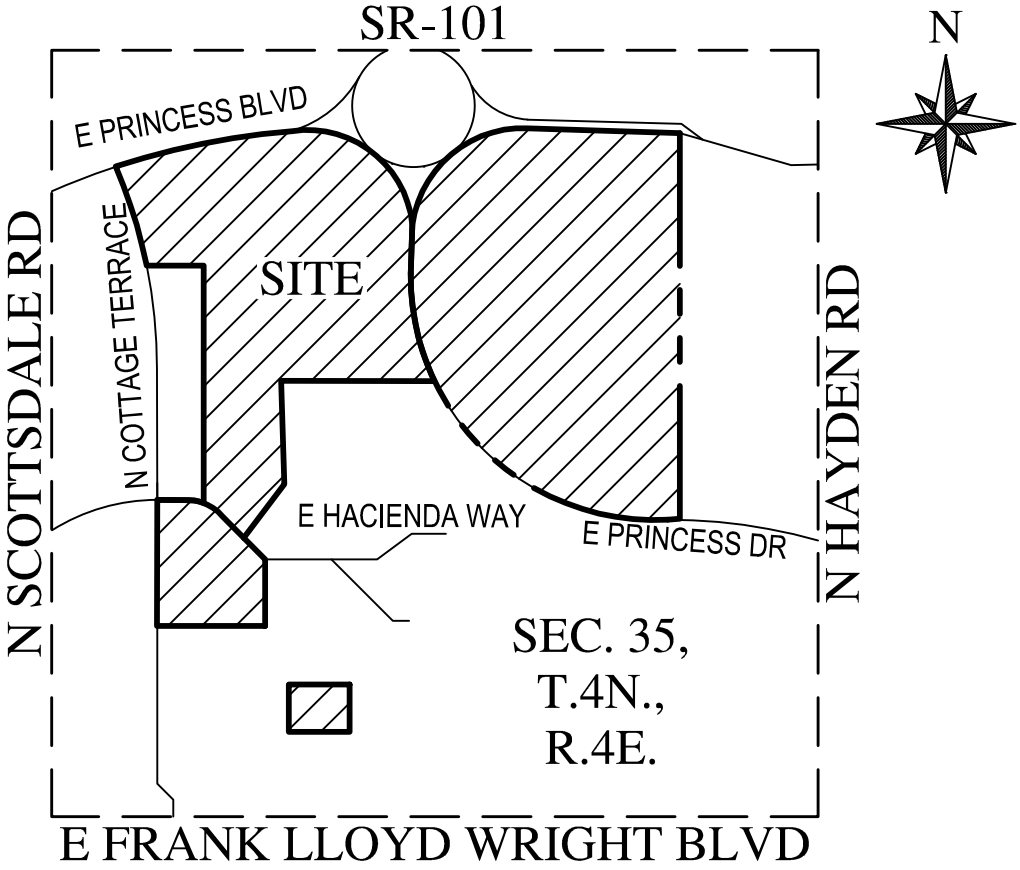
(3) WASTEWATER FLOWS TO SEWER ARE CALCULATED AS C. MINUS D.

GPD=GALLONS PER DAY, DU=DWELLING UNIT, FT2=SQUARE FEET, AC=ACRE, EA=EACH UNIT

NONE OF THE VALUES OR CALCULATIONS HEREIN ARE INTENDED TO BE USED FOR INFRASTRUCTURE DESIGN, PEAK FLOW DETERMINATION, OR SYSTEM CAPACITY ANALYSIS. FOR THESE PURPOSES REFER TO CH.6 & 7 OF THE CITY'S DESIGN STANDARDS AND POLICY MANUAL FOR THE RESPECTIVE DESIGN VALUES AND PEAKING FACTORS.

TABLE INPUT VALUES LAST UPDATED: 11/29/2023

EXHIBIT 1 – VICINITY MAP



VICINITY MAP

N.T.S.

NOT
FOR
CONSTRUCTION
OR RECORDING

WOOD PATEL

FAIRMONT SCOTTSDALE PRINCESS

VICINITY MAP

DATE	05/23/2025	SCALE	N.T.S	SHEET	1 OF 1
JOB NO.	215319	DESIGN	AJS	CHECK	RS
		DRAWN	AJS	RFI #	

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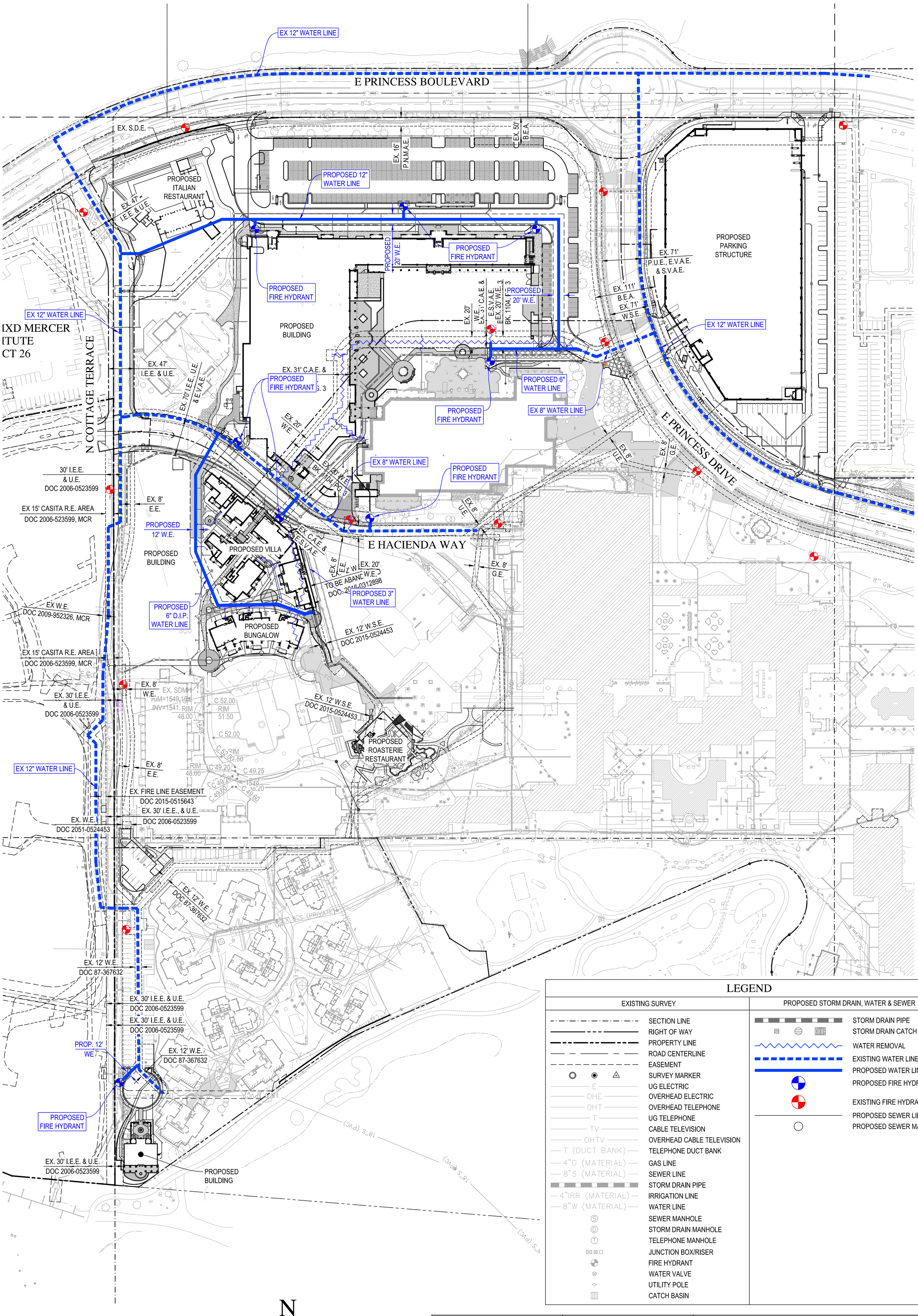
EXHIBIT 2 – CONCEPT MASTER WATER LAYOUT



LEGEND

EXISTING SURVEY		PROPOSED STORM DRAIN, WATER & SEWER	
	SECTION LINE		STORM DRAIN PIPE
	RIGHT OF WAY		STORM DRAIN CATCH BASIN
	PROPERTY LINE		WATER REMOVAL
	ROAD CENTERLINE		EXISTING WATER LINE
	EASEMENT		PROPOSED WATER LINE
	SURVEY MARKER		PROPOSED FIRE HYDRANT
E	UG ELECTRIC		EXISTING FIRE HYDRANT
OHE	OVERHEAD ELECTRIC		PROPOSED SEWER LINE
OHT	OVERHEAD TELEPHONE		PROPOSED SEWER MANHOLE
T	UG TELEPHONE		
TV	CABLE TELEVISION		
OHTV	OVERHEAD CABLE TELEVISION		
T (DUCT BANK)	TELEPHONE DUCT BANK		
4"G (MATERIAL)	GAS LINE		
8"S (MATERIAL)	SEWER LINE		
	STORM DRAIN PIPE		
4"IRR (MATERIAL)	IRRIGATION LINE		
8"W (MATERIAL)	WATER LINE		
Ⓢ	SEWER MANHOLE		
Ⓓ	STORM DRAIN MANHOLE		
Ⓣ	TELEPHONE MANHOLE		
	JUNCTION BOX/RISER		
	FIRE HYDRANT		
⊗	WATER VALVE		
	UTILITY POLE		
	CATCH BASIN		

N

0 80 160

Horz. 1 in. = 80 ft.

WOOD PATEL

FAIRMONT SCOTTSDALE PRINCESS

MASTER WATER EXHIBIT

DATE	05/23/2025	SCALE	1" = 80'	SHEET	1 OF 1
JOB NO	215319	DESIGN	RS	DRAWN	JRS

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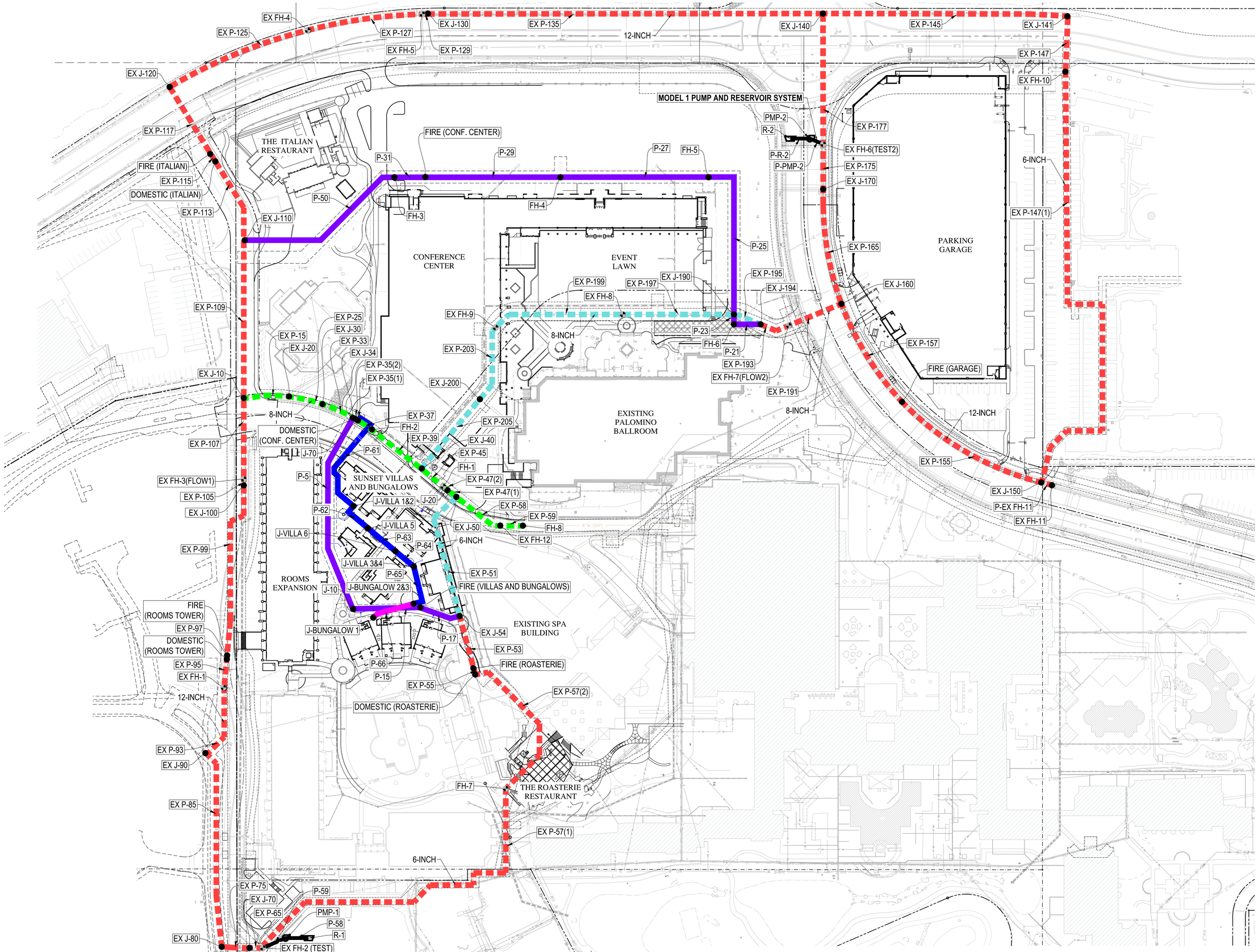
EXHIBIT 3 – WATERCAD LAYOUT



N

0 50 100

Horz. 1 in. = 50 ft.

LEGEND

- PROPOSED 2.5" WATER SERVICE
- PROPOSED 4" WATER SERVICE
- PROPOSED 8" WATER MAIN
- EXISTING WATER MAIN
- EXISTING WATER MAIN TO BE REMOVED

R-XX — RESERVOIR NODE AND LABEL

PMP-XX — PUMP NODE AND LABEL

J-XX — JUNCTION NODE AND LABEL

P-XX — PIPE LABEL

FH-XX — FIRE HYDRANT LABEL

NOT FOR CONSTRUCTION OR RECORDING

WOOD PATEL

FAIRMONT SCOTTSDALE PRINCESS

WATERCAD MODELING MAP

DATE	05/23/2025	SCALE	1" = 50'
JOB NO	215319	DESIGN	AJS
		DRAWN	DLH / JRS
		CHECK	RS
		SHEET	1 OF 1

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