**FINAL Basis of Design** Report

✓ APPROVED

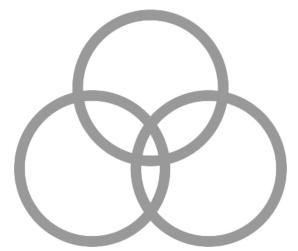
☐ APPROVED AS NOTED





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

DATE 12/19/2024





### Silverstone Parcel D

Final Water Basis Design Report

3 engineering Job #: 5315

December 18, 2024 Case #: 2-PP-2024



## Silverstone Parcel D FINAL WATER BASIS OF DESIGN REPORT

### Prepared for:

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Expires 12/31/2024
Matthew J. Mancini, P.E.

July 11, 2024

Revised August 26, 2024

Revised October 10, 2024

Revised December 18, 2024

### Submittal to:

City of Scottsdale 7447 E. Indian School Road, Suite 105 Scottsdale, AZ 85251

### Prepared by:

3 engineering, L.L.C. 6370 E. Thomas Road, Suite 200 Scottsdale, Arizona 85251 Contact: Matthew J. Mancini, P.E.

Job Number 5315



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#### 1. Introduction

The project site, Silverstone Parcel D, is located in Section 14, Township 14 North, Range 4 East of the Gila and Salt River Meridian, Maricopa County, Arizona within the City of Scottsdale. The project is located North of Williams Drive, West of 74th Street, and East of Scottsdale Road at 22602 N. 74th Street, Scottsdale, Arizona 85255. The site is bounded on the north by an existing senior living facility, on the west by Scottsdale Road and Vacant Land, on the south by Williams Road and commercial property, and east by 74th Street and an existing senior living facility. See Appendix A for a vicinity map.

The site is a proposed 100-lot single-family attached residential subdivision project.

#### 2. <u>Design Documentation</u>

The purpose of this design report is to verify that the existing City of Scottsdale water system can accommodate demands generated by the proposed project. Demands were calculated using the City of Scottsdale Design Standards & Policies Manual. It is our opinion that this report is in accordance with the City of Scottsdale Standards.

### 3. Existing Conditions

The property currently exists as a vacant parcel. See Appendix A for Aerial Map. The topography has an approximate slope of one percent (1.50%) and has an overall general slope from northeast to southwest.

The site is bounded on the north by an existing senior living facility, on the west by Scottsdale Road and Vacant Land, on the south by Williams Road and commercial property, and east by 74<sup>th</sup> Street and an existing senior living facility. There are existing 8" water lines adjacent to the south and east within Williams Drive, and 74<sup>th</sup> Street, respectively, along with an existing 12" waterline adjacent to the west within Scottsdale Road. The 8" water lines within Williams Drive & 74<sup>th</sup> Street are proposed to service the proposed project. See Exhibit WE1 for the water line layout.

#### 4. Proposed Conditions

The project proposes a 100-lot single-family attached residential subdivision on approximately 13.5 acres. The site also proposes a pool. There are proposed public 8" water lines through the development to service the lots. See WE1 for the proposed water system layout. All water lines shall be placed a minimum of six (6) feet horizontally from any structural footing or substantial improvement, and shall not be placed within seven (7) feet from the trunk of any tree. The fire flow demand for the site is 1,625 gpm based on Chapter 6 of the City of Scottsdale's Design Standards & Policies Manual and IFC with a Type VB Construction and Largest Building (Sprinklered) of 15,340 SF (3,250 gpm x 50% for sprinklers). The proposed water line is to be public within the site and is to be owned and maintained by the City.



### 5. Computations

The following demand criteria were used in determining the system demands for the proposed site (Used 12-hour active rates x 2 for 24 hour period):

- 1. Avg. Day Demand (7.4 du/ac) = 248.8 gpd/unit and 0.35 gpm/unit = 248.8 x 100 = 24,880 gpd or 35 gpm
- 2. Developed Open Space = 3,572 gallons/per/acre = 3,572 x 5 = 17,860 gpd or 12.40 gpm
- 3. Turf Area = 0.0494 gallons/day/S.F. = 10,000 (estimated SF) x 0.0494 = 494 gpd or 0.34 gpm
- 4. Large Pool = 342 gallons/day = 342 x 1 = 342 gpd or 0.24 gpm
- 5. Total Avg Day Demand = 43,576 gpd or 47.98 gpm
- 6. Max Day Demand = 2.0 x Avg. Day = 2.0 x 47.98 gpd = 95.96 gpm
- 7. Peak Hour Demand = 3.5 x Avg. Day = 3.5 x 47.98 gpd = 167.93 gpm

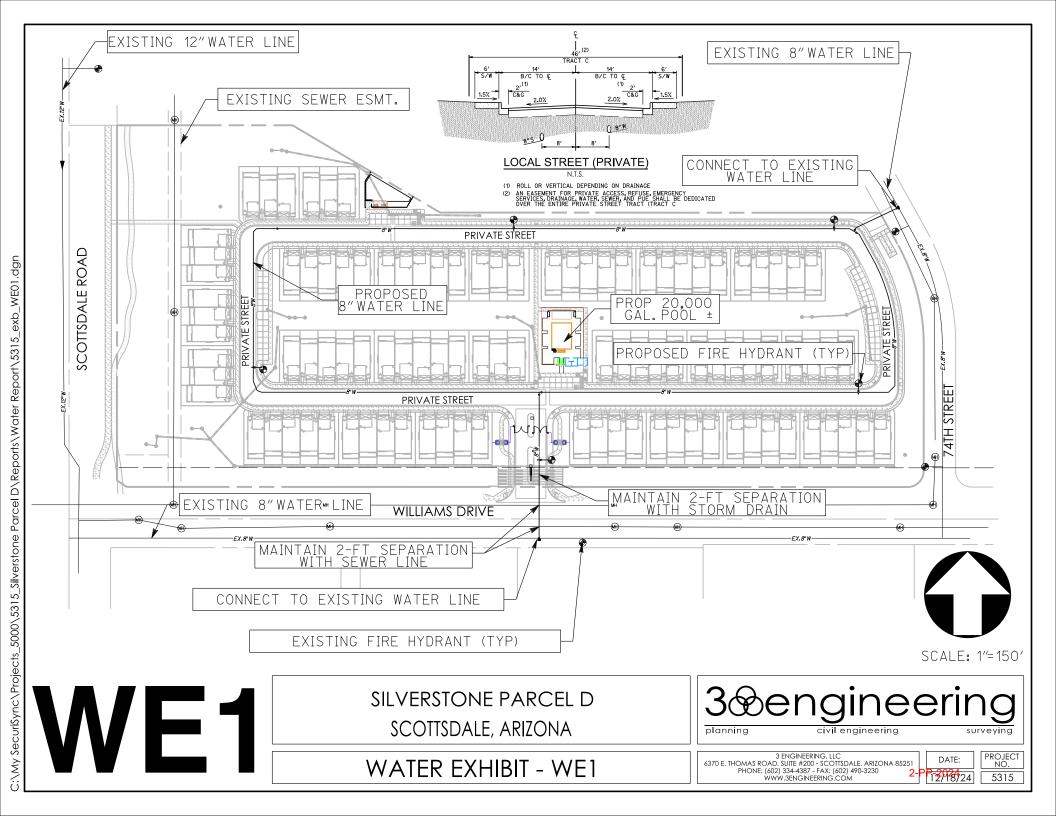
TABLE 1: ON-SITE WATER DEMANDS							
Lots	100						
Fire flow	1,625 gpm						
Max Day Demand Flow	95.96 gpm						
Fire flow + Max Day	1,720.96 gpm						

At the request of the City of Scottsdale, a comparison is being made of the proposed water demand for the residential site, versus the originally zoned commercial development that was proposed on the site. Per Appendix D, Parcel D was proposed as a 165,000 SF commercial site. The average day water demand for commercial property is 0.60 gal/day/sf, which equates to 99,000 gal/day. Applying max day demand factors, this equals 198,000 gal/day. The max day demand for the proposed residential site is 87,152 gal/day, which is less than the original development plan; therefore, puts less demand on the City's water infrastructure.

#### 6. Summary

The Max Day Plus Fire Flow for the proposed site is 1,720.96 gpm. Per the fire flow test (Appendix B) the existing system has 4,579 gpm at 20 psi. Based on the WaterCAD analysis in Appendix C, the existing water infrastructure provides adequate demand capacity and pressure for the proposed site during Average Day, Max Day, Peak Hour, and Max Day Plus Fire Flow Conditions.





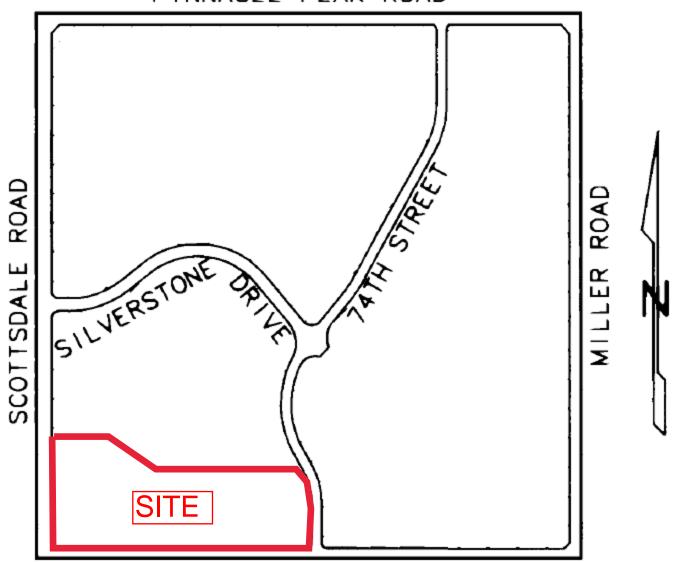


APPENDIX A

Vicinity Map

Page | A1 2-PP-2024

### PINNACLE PEAK ROAD



WILLIAMS ROAD

SECTION 14 T.4N, R.4.E

### VICINITY MAP

N.T.S.



APPENDIX B

Fire Flow Test

### **Arizona Flow Testing LLC**

### HYDRANT FLOW TEST REPORT

Project Name: Silverstone Parcel D

Project Address: 74th Street & Williams Drive (NEC), Scottsdale, Arizona 85255

Client Project No.: 5315
Flow Test Permit Number: C74516
Arizona Flow Testing Project No.: 24156

Date and Time flow test conducted: February 22, 2024 at 7:00 AM

Data is current and reliable until: August 22, 2024

Conducted by: Floyd Vaughan – Arizona Flow Testing, LLC (480-250-8154)
Witnessed by: Sonny Schreiner – City of Scottsdale-Inspector (602-819-7718)

Raw Test Data

Static Pressure: **84.0 PSI** (Measured in pounds per square inch)

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

Pitot Pressure: **25.0 PSI** (Measured in pounds per square inch)

Diffuser Orifice Diameter: One 4-inch Hose Monster

(Measured in inches)

Coefficient of Diffuser: 0.7875

Flowing GPM: **1,880 GPM** 

(Measured in gallons per minute)

GPM @ 20 PSI: **5,122 GPM** 

**Data with 12PSI Safety Factor** 

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

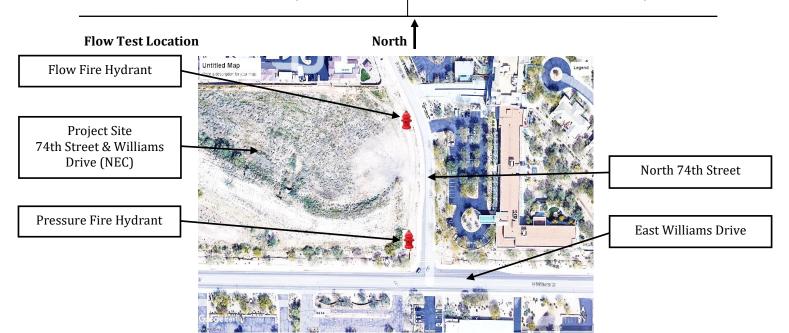
Residual Pressure: **62.0 PSI** (Measured in pounds per square inch)

Approx. distance between hydrants: 300 Feet

Main size: Not Provided

Flowing GPM: **1,880 GPM** 

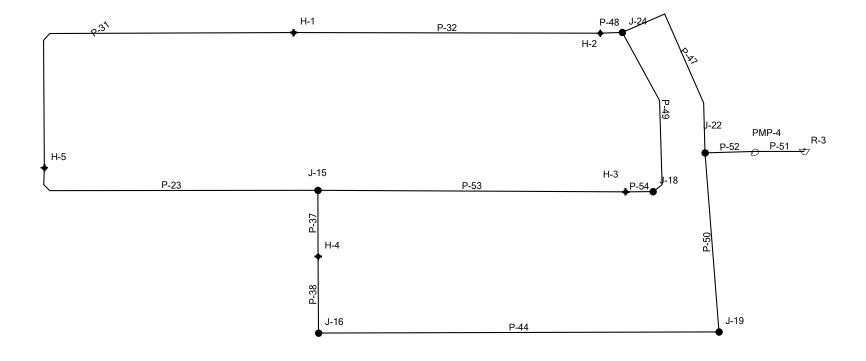
GPM @ 20 PSI: **4,579 GPM** 





# APPENDIX C WaterCAD Model

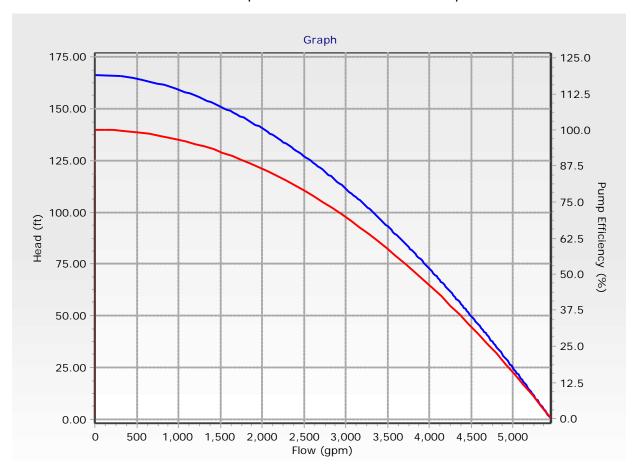
### Scenario: Base



### Pump Definition Detailed Report: Fire Flow 02-2-2024

E. (B.()			
Element Details			
ID	93	Notes	
Label	Fire Flow 02-		
Label	2-2024		
Pump Definition Type			
Pump Definition Type	Standard (3 Point)	Design Head	143.22 ft
Shutoff Flow	0 gpm	Maximum Operating Flow	4,579 gpm
Shutoff Head	166.32 ft	Maximum Operating Head	46.20 ft
Design Flow	1,880 gpm		
Pump Efficiency			
	Best	Motor Efficiency	100.0 %
Pump Efficiency	Efficiency	·	
	Point		
BEP Efficiency	100.0 %	Is Variable Speed Drive?	False
BEP Flow	0 gpm		
Transient (Physical)			
Inertia (Pump and Motor)	0.000 lb·ft²	Specific Speed	SI=25,
Connect (Fig.III)	0		US=1280
Speed (Full)	0 rpm	Reverse Spin Allowed?	True

### Pump Definition Detailed Report: Fire Flow 02-2-2024





### **AVERAGE DAY**

### FlexTable: Hydrant Table (5153.wtg)

ID	ID Label		Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
68	H-2	Closed	110.50	10	276.28	71.7
65	H-1	Closed	109.00	10	276.28	72.4
128	H-3	Closed	108.00	10	276.28	72.8
80	H-5	Closed	104.70	10	276.28	74.2
83	H-4	Closed	102.00	10	276.28	75.4

### FlexTable: Junction Table (5153.wtg)

	ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
ſ	120	J-24	111.00	<none></none>	0	276.29	71.5
	116	J-22	110.00	<none></none>	0	276.29	71.9
	98	J-18	108.00	<none></none>	0	276.28	72.8
	108	J-19	107.00	<none></none>	0	276.29	73.2
	78	J-15	104.60	<none></none>	0	276.28	74.3
	85	J-16	99.00	<none></none>	0	276.28	76.7

### FlexTable: Pipe Table (5153.wtg)

ID	Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
129	P-53	500	J-15	H-3	8.0	Ductile Iron	130.0	1	0.01	0.00000
126	P-51	1	R-3	PMP-4	48.0	Ductile Iron	130.0	48	0.01	0.00000
127	P-52	1	PMP-4	J-22	48.0	Ductile Iron	130.0	48	0.01	0.00000
96	P-31	618	H-5	H-1	8.0	Ductile Iron	130.0	-2	0.01	0.00000
81	P-23	477	J-15	H-5	8.0	Ductile Iron	130.0	8	0.05	0.00000
103	P-37	107	J-15	H-4	8.0	Ductile Iron	130.0	-9	0.05	0.00000
130	P-54	45	H-3	J-18	8.0	Ductile Iron	130.0	-9	0.06	0.00000
97	P-32	498	H-1	H-2	8.0	Ductile Iron	130.0	-11	0.07	0.00000
123	P-49	282	J-24	J-18	6.0	Ductile Iron	130.0	9	0.10	0.00001
104	P-38	125	H-4	J-16	8.0	Ductile Iron	130.0	-18	0.12	0.00001
115	P-44	651	J-19	J-16	8.0	Ductile Iron	130.0	18	0.12	0.00001
124	P-50	292	J-22	J-19	8.0	Ductile Iron	130.0	18	0.12	0.00001
121	P-47	314	J-22	J-24	8.0	Ductile Iron	130.0	30	0.19	0.00003
122	P-48	36	J-24	H-2	6.0	Ductile Iron	130.0	21	0.24	0.00006

### FlexTable: Pump Table (5153.wtg)

### **Current Time: 0.000 hours**

ID	Label	Elevation (ft)	Pump Definition	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
12 5	PMP-4	110.00	Fire Flow 02-2-2024	On	110.00	276.29	48	166.29

35 gpm

### FlexTable: Reservoir Table (5153.wtg)

ID Label E		Elevation (ft)	Zone	Flow (Out net) (gpm)	Hydraulic Grade (ft)
105	R-3	110.00	<none></none>	48	110.00



### MAX DAY

### FlexTable: Hydrant Table (5153.wtg)

ID	ID Label		Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
68	H-2	Closed	110.50	19	276.19	71.7
65	H-1	Closed	109.00	19	276.18	72.3
128	H-3	Closed	108.00	19	276.18	72.8
80	H-5	Closed	104.70	19	276.18	74.2
83	H-4	Closed	102.00	19	276.18	75.4

### FlexTable: Junction Table (5153.wtg)

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
120	J-24	111.00	<none></none>	0	276.20	71.5
116	J-22	110.00	<none></none>	0	276.23	71.9
98	J-18	108.00	<none></none>	0	276.18	72.8
108	J-19	107.00	<none></none>	0	276.22	73.2
78	J-15	104.60	<none></none>	0	276.18	74.2
85	J-16	99.00	<none></none>	0	276.19	76.7

### FlexTable: Pipe Table (5153.wtg)

ID	Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
129	P-53	500	J-15	H-3	8.0	Ductile Iron	130.0	2	0.01	0.00000
126	P-51	1	R-3	PMP-4	48.0	Ductile Iron	130.0	96	0.02	0.00000
127	P-52	1	PMP-4	J-22	48.0	Ductile Iron	130.0	96	0.02	0.00000
96	P-31	618	H-5	H-1	8.0	Ductile Iron	130.0	-4	0.02	0.00000
81	P-23	477	J-15	H-5	8.0	Ductile Iron	130.0	16	0.10	0.00001
103	P-37	107	J-15	H-4	8.0	Ductile Iron	130.0	-17	0.11	0.00001
130	P-54	45	H-3	J-18	8.0	Ductile Iron	130.0	-18	0.11	0.00001
97	P-32	498	H-1	H-2	8.0	Ductile Iron	130.0	-23	0.15	0.00002
123	P-49	282	J-24	J-18	6.0	Ductile Iron	130.0	18	0.20	0.00004
104	P-38	125	H-4	J-16	8.0	Ductile Iron	130.0	-36	0.23	0.00004
115	P-44	651	J-19	J-16	8.0	Ductile Iron	130.0	36	0.23	0.00004
124	P-50	292	J-22	J-19	8.0	Ductile Iron	130.0	36	0.23	0.00004
121	P-47	314	J-22	J-24	8.0	Ductile Iron	130.0	60	0.38	0.00010
122	P-48	36	J-24	H-2	6.0	Ductile Iron	130.0	42	0.48	0.00021

### FlexTable: Pump Table (5153.wtg)

ID	Label	Elevation (ft)	Pump Definition	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
12 5	PMP-4	110.00	Fire Flow 02-2-2024	On	110.00	276.23	96	166.23

### FlexTable: Reservoir Table (5153.wtg)

ID	ID Label		Zone	Flow (Out net) (gpm)	Hydraulic Grade (ft)
105	R-3	110.00	<none></none>	96	110.00



### PEAK HOUR

### FlexTable: Hydrant Table (5153.wtg)

ID	Label	Hydrant Status	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
68	H-2	Closed	110.50	34	275.95	71.6
65	H-1	Closed	109.00	34	275.92	72.2
128	H-3	Closed	108.00	34	275.93	72.7
80	H-5	Closed	104.70	34	275.92	74.1
83	H-4	Closed	102.00	34	275.94	75.3

### FlexTable: Junction Table (5153.wtg)

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
120	J-24	111.00	<none></none>	0	275.97	71.4
116	J-22	110.00	<none></none>	0	276.06	71.8
98	J-18	108.00	<none></none>	0	275.94	72.7
108	J-19	107.00	<none></none>	0	276.02	73.1
78	J-15	104.60	<none></none>	0	275.93	74.1
85	J-16	99.00	<none></none>	0	275.95	76.6

### FlexTable: Pipe Table (5153.wtg)

ID	Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
129	P-53	500	J-15	H-3	8.0	Ductile Iron	130.0	3	0.02	0.00000
127	P-52	1	PMP-4	J-22	48.0	Ductile Iron	130.0	168	0.03	0.00000
126	P-51	1	R-3	PMP-4	48.0	Ductile Iron	130.0	168	0.03	0.00000
96	P-31	618	H-5	H-1	8.0	Ductile Iron	130.0	-6	0.04	0.00000
81	P-23	477	J-15	H-5	8.0	Ductile Iron	130.0	27	0.17	0.00002
103	P-37	107	J-15	H-4	8.0	Ductile Iron	130.0	-30	0.19	0.00003
130	P-54	45	H-3	J-18	8.0	Ductile Iron	130.0	-31	0.20	0.00003
97	P-32	498	H-1	H-2	8.0	Ductile Iron	130.0	-40	0.25	0.00005
123	P-49	282	J-24	J-18	6.0	Ductile Iron	130.0	31	0.35	0.00012
104	P-38	125	H-4	J-16	8.0	Ductile Iron	130.0	-64	0.41	0.00011
115	P-44	651	J-19	J-16	8.0	Ductile Iron	130.0	64	0.41	0.00011
124	P-50	292	J-22	J-19	8.0	Ductile Iron	130.0	64	0.41	0.00011
121	P-47	314	J-22	J-24	8.0	Ductile Iron	130.0	104	0.67	0.00028
122	P-48	36	J-24	H-2	6.0	Ductile Iron	130.0	73	0.83	0.00059

### FlexTable: Pump Table (5153.wtg)

ID	Label	Elevation (ft)	Pump Definition	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
12 5	PMP-4	110.00	Fire Flow 02-2-2024	On	110.00	276.06	168	166.06

### FlexTable: Reservoir Table (5153.wtg)

ID	Label	Elevation (ft)	Zone	Flow (Out net) (gpm)	Hydraulic Grade (ft)	
105	R-3	110.00	<none></none>	168	110.00	



### MAX DAY + FIRE

### Fire Flow Node FlexTable: Fire Flow Report (5153.wtg)

Label	Satisfies Fire Flow Constraints?	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Junction w/ Minimum Pressure (System)
H-1	True	2,770	1,644	30.0	30.0	H-5
J-18	True	2,784	1,625	30.0	30.0	H-3
H-3	True	2,793	1,644	30.0	30.0	J-18
H-5	True	2,838	1,644	30.0	30.0	H-1
H-2	True	3,045	1,644	30.0	30.0	H-1
J-15	True	3,098	1,625	30.0	30.0	H-3
H-4	True	3,126	1,644	30.0	30.0	J-15
J-16	True	3,175	1,625	30.0	30.0	H-4
J-24	True	3,261	1,625	30.0	30.0	H-2
J-19	True	3,374	1,625	30.0	30.0	H-3
J-22	True	3,960	1,625	30.0	30.4	J-24

### FlexTable: Hydrant Table (5153.wtg)

ID	Label	Hydrant Status	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
65	H-1	Closed	109.00	1,019	243.23	58.1
68	H-2	Closed	110.50	644	245.80	58.5
128	H-3	Closed	108.00	19	249.24	61.1
80	H-5	Closed	104.70	19	246.52	61.4
83	H-4	Closed	102.00	19	249.88	64.0

# FlexTable: Junction Table (5153.wtg)

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
120	J-24	111.00	<none></none>	0	249.24	59.8
98	J-18	108.00	<none></none>	0	249.24	61.1
78	J-15	104.60	<none></none>	0	249.24	62.6
116	J-22	110.00	<none></none>	0	256.71	63.5
108	J-19	107.00	<none></none>	0	254.84	64.0
85	J-16	99.00	<none></none>	0	250.68	65.6

# FlexTable: Pipe Table (5153.wtg)

ID	Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
130	P-54	45	H-3	J-18	8.0	Ductile Iron	130.0	-4	0.03	0.00000
123	P-49	282	J-24	J-18	6.0	Ductile Iron	130.0	4	0.04	0.00000
129	P-53	500	J-15	H-3	8.0	Ductile Iron	130.0	15	0.10	0.00001
126	P-51	1	R-3	PMP-4	48.0	Ductile Iron	130.0	1,721	0.31	0.00001
127	P-52	1	PMP-4	J-22	48.0	Ductile Iron	130.0	1,721	0.31	0.00000
97	P-32	498	H-1	H-2	8.0	Ductile Iron	130.0	-505	3.23	0.00516
96	P-31	618	H-5	H-1	8.0	Ductile Iron	130.0	514	3.28	0.00532
81	P-23	477	J-15	H-5	8.0	Ductile Iron	130.0	533	3.40	0.00570
103	P-37	107	J-15	H-4	8.0	Ductile Iron	130.0	-548	3.50	0.00600
104	P-38	125	H-4	J-16	8.0	Ductile Iron	130.0	-567	3.62	0.00640
115	P-44	651	J-19	J-16	8.0	Ductile Iron	130.0	567	3.62	0.00640
124	P-50	292	J-22	J-19	8.0	Ductile Iron	130.0	567	3.62	0.00640
121	P-47	314	J-22	J-24	8.0	Ductile Iron	130.0	1,153	7.36	0.02379
122	P-48	36	J-24	H-2	6.0	Ductile Iron	130.0	1,150	13.04	0.09601

# FlexTable: Pump Table (5153.wtg)

ID	Label	Elevation (ft)	Pump Definition	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
12 5	PMP-4	110.00	Fire Flow 02-2-2024	On	110.00	256.71	1,721	146.71

# FlexTable: Reservoir Table (5153.wtg)

ID	Label	Elevation (ft)	Zone	Flow (Out net) (gpm)	Hydraulic Grade (ft)
105	R-3	110.00	<none></none>	1,721	110.00



# MAX DAY + FIRE - 2nd STORY

# FlexTable: Hydrant Table (5153\_2nd Floor.wtg)

ID	Label	Hydrant Status	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
65	H-1	Closed	119.00	1,019	243.23	53.7
68	H-2	Closed	120.50	644	245.80	54.2
128	H-3	Closed	118.00	19	249.24	56.8
80	H-5	Closed	114.70	19	246.52	57.0
83	H-4	Closed	112.00	19	249.88	59.7

# FlexTable: Junction Table (5153\_2nd Floor.wtg)

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
120	J-24	121.00	<none></none>	0	249.24	55.5
98	J-18	118.00	<none></none>	0	249.24	56.8
78	J-15	114.60	<none></none>	0	249.24	58.3
116	J-22	110.00	<none></none>	0	256.71	63.5
108	J-19	107.00	<none></none>	0	254.84	64.0
85	J-16	99.00	<none></none>	0	250.68	65.6

# FlexTable: Pipe Table (5153\_2nd Floor.wtg)

ID	Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
130	P-54	45	H-3	J-18	8.0	Ductile Iron	130.0	-4	0.03	0.00000
123	P-49	282	J-24	J-18	6.0	Ductile Iron	130.0	4	0.04	0.00000
129	P-53	500	J-15	H-3	8.0	Ductile Iron	130.0	15	0.10	0.00001
126	P-51	1	R-3	PMP-4	48.0	Ductile Iron	130.0	1,721	0.31	0.00001
127	P-52	1	PMP-4	J-22	48.0	Ductile Iron	130.0	1,721	0.31	0.00000
97	P-32	498	H-1	H-2	8.0	Ductile Iron	130.0	-505	3.23	0.00516
96	P-31	618	H-5	H-1	8.0	Ductile Iron	130.0	514	3.28	0.00532
81	P-23	477	J-15	H-5	8.0	Ductile Iron	130.0	533	3.40	0.00570
103	P-37	107	J-15	H-4	8.0	Ductile Iron	130.0	-548	3.50	0.00600
104	P-38	125	H-4	J-16	8.0	Ductile Iron	130.0	-567	3.62	0.00640
115	P-44	651	J-19	J-16	8.0	Ductile Iron	130.0	567	3.62	0.00640
124	P-50	292	J-22	J-19	8.0	Ductile Iron	130.0	567	3.62	0.00640
121	P-47	314	J-22	J-24	8.0	Ductile Iron	130.0	1,153	7.36	0.02379
122	P-48	36	J-24	H-2	6.0	Ductile Iron	130.0	1,150	13.04	0.09601

### FlexTable: Pump Table (5153\_2nd Floor.wtg)

ID	Label	Elevation (ft)	Pump Definition	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
12 5	PMP-4	110.00	Fire Flow 02-2-2024	On	110.00	256.71	1,721	146.71

# FlexTable: Reservoir Table (5153\_2nd Floor.wtg)

ID	Label	Elevation (ft)	Zone	Flow (Out net) (gpm)	Hydraulic Grade (ft)
105	R-3	110.00	<none></none>	1,721	110.00



# APPENDIX D Original Zoning Table

#### STIPULATIONS FOR CASE 15-ZN-2005, 13-UP-2005

Revised stipulations after the Planning Commission hearing are shown in BOLD CAPS and strikethrough.

#### PLANNING/ DEVELOPMENT

- 1. CONFORMANCE TO LAND USE PLAN. Development shall generally conform to the land use plan submitted by H&S International with a revision date of 10/4/2005. These stipulations take precedence over the above-referenced land use plan. The applicant understands and agrees that the approved density for each parcel is subject to drainage, topography, and other site planning concerns that will need to be resolved at the time of site plan or preliminary plat approval. Appropriate design solutions to these constraints may preclude achievement of the proposed units or density on any or all parcels. Any proposed significant change, as determined by the Zening Administrator CITY MANAGER OR DESIGNEE, shall be subject to subsequent public hearings before the Planning Commission and City Council.
- 2. MAXIMUM DENSITY/INTENSITY. The maximum dwelling units/density and maximum intensity for Parcels shown on the above-referenced land use plan shall be as indicated in the land use budget table below, and as stipulated below.

Parcel	Acres	Comparable Zoning	Land Use	Floor Area/Units
A and B	4.48	C-O	Municipal	45,000 sq.ft
С	12.47	C-2	Retail	95,000 sq.ft.
D	12.42	C-O	Office	165,000 sq.ft.
E .	17.47	R-5-	Residential	262 units
F٠	21.82	R-5	Residential	186 units
G	23.77	R-5	Residential	258 units
Н	34.26	R-5	Residential	270 units
Wash/ Park	12.92	R-5	Wash/Park	-
Other	20.39	_	Streets, etc.	/ _
Total	160.00			305,000 sq.ft. 976 units

The specific location of each parcel shall be determined at the time of site plan or preliminary plat review. Any redistribution of floor area or dwelling units is subject to Zoning Administrator CITY MANAGER OR DESIGNEE approval, and limited to the overall total outlined in the land use budget table. Additional floor area may be allowed for municipal uses if determined not be a significant change as determined by the Zoning Administrator CITY MANAGER OR DESIGNEE. Any redistribution request shall be submitted by the developer with the development review board application and shall include a revised master development plan and a revised land use budget table indicating the parcels with the corresponding reductions and increases. Any proposed significant change, as determined by the Zoning Administrator CITY MANAGER OR DESIGNEE, shall be subject to subsequent public hearings before the Planning Commission and City Council.

- 3. RESIDENTIAL HEALTH CARE FACILITY. The location of the residential health care facility shall be limited to Parcel H, and shall be limited to 60 units.
- LIVE/WORK UNITS. A maximum of one-third of the dwelling units in Parcel E shall be allowed to be live/work units.