



Utility Report
FOR
Salisbury Park North
AT
1700 MOTSENBOCKER RD
PARKER CO 80134
Town of Parker



November 20, 2024



November 20, 2024

Mr. Michael Walton, PE, CFM, Senior Development Review Engineer
Town of Parker – Engineering and Development
20120 E. Main Street
Parker, CO 80138

RE: Utility Report for Salisbury Park North
JVA, Inc. Project No. 3752c

Dear Michael,

As requested by the Town of Parker, JVA has prepared an analysis of the proposed utility design and conditions for the proposed development at Salisbury Park North. The following Utility Report is primarily intended to provide the water and wastewater demands based on the proposed site improvements. This report has been produced in accordance with the Town of Parker Design & Construction Standards.

It is our understanding that the information provided herein meets all requirements of the Town of Parker for the utility submission required for the Site Review submittal.

Please contact us if you have any questions regarding this submission.

Sincerely,

JVA, Inc.

Mussie Gebremedhin
Design Engineer II

Utility Report

FOR

Salisbury Park North

AT

**1700 MOTSENBOCKER RD
PARKER CO 80134**

FOR

Town of Parker

20120 E. MAIN STREET PARKER, CO 80138



JVA, Inc.

Consulting Engineers

1675 Larimer Street, STE 550

Denver, CO 80202

(303) 444-1951

JVA, Inc. Project No. 3752c

November 20, 2024

TABLE OF CONTENTS

Utility Report - Salisbury Park North

- I. Introduction 1
- II. Water Demands and Surrounding Water System 2
- III. Sanitary Sewer Demands and Conveyance System..... 3
- IV. Storm Sewer System..... 3
- V. Groundwater System 3
- VI. Dry Utility System 3
- VII. Conclusions 4

Appendix A – Site Maps

Appendix B – Calculations, Tables & References

SALISBURY PARK NORTH - UTILITY REPORT

I. INTRODUCTION

A. GENERAL LOCATION

The Town of Parker is proposing to develop the existing Salisbury Park North Park in Parker, Colorado. The site is bound to the west by Motsenbocker Road, to the northwest by Dransfeldt Road, and to the south by Salisbury Park South. Cherry Creek lies to the north, and there is Parker Water and Sanitary District pumping facility to the east. The subject property is 76.1 acres and lies within the Northwest $\frac{1}{4}$ of Section 27, Township 6 South, Range 6 West of the 6th Principal Meridian, Town of Parker, Conty of Douglas, State of Colorado. A vicinity map is included in Appendix A.

B. PROJECT DESCRIPTION

The proposed development includes the construction of four turf baseball/softball fields, two multipurpose synthetic fields, several pickleball and tennis courts, a Community Hub building, a Headquarters (HQ) building, two extra restroom buildings, an Overlook pavilion, two parking lots, and a new roadway through the site. The proposed development will be sequenced out into four phases as described below.

- Phase 1: This phase will include building four turf baseball and softball fields, two synthetic multipurpose fields, the Community Hub, and Headquarters buildings. It will also add two parking lots, sections of the new roadway, and essential utilities throughout the site.
- Phase 2: Improvements in this phase will include several pickleball and tennis courts, a portion of a parking lot, and a new section of roadway with head-in parking. Utilities will also be extended throughout this area.
- Phase 3: In this phase, the construction will focus on two basketball courts, a playground, multi-use fields, and two restroom buildings. Another section of the new roadway with head-in parking and utilities will be added to the site.
- Phase 4: This final phase will include building an overlook pavilion, a dog park, and additional utilities throughout the site.

Phase 1 planned utility upgrades feature a public water loop with five fire hydrants for added fire protection and a public sanitary main with private service lines running through the property for each building. A single 4-inch irrigation meter is proposed, and water and sanitary service stubs will be constructed to one of the future buildings. All water service and irrigation stubs will also include a meter.

II. WATER DEMANDS AND SURROUNDING WATER SYSTEM

A. EXISTING WATER SYSTEM

Based on the Topographic survey conducted by Aztec consulting Inc. and dated 06/26/23, there is an existing 16" DIP potable water main and a 24" DI raw water main located west of the park and within Motsenbocker Road, a 12" PVC potable main stubout to the site from the intersection of Motsenbocker and Dransfeldt, a 12" PVC potable water main southeast of our main site within the existing Salisbury South Park, and an existing 16" PVC raw water main running west to east through the site between the north and south parks.

Regarding water pressures in the area, Parker Water and Sanitation District (PWSD) reports 112 psi static pressure at an existing hydrant located in Salisbury Park South, and 118 psi pressure at the new stub into Salisbury North near the main park entrance.

B. PROPOSED WATER SYSTEM

Phase 1 will focus on constructing the Community Hub and Headquarters buildings, totaling 3,244 square feet. The proposed buildings are anticipated to be non-sprinklered with Type V-B construction as defined by the International Building Code. Per the 2021-International Fire Code, the required fire flow is expected to be 1,500 gpm and will require one hydrant per building for fire suppression. International Fire Code (IFC) tables and calculations are included in Appendix B. At this time, it is assumed that the hydrant service lines will be 6" DIP and five new hydrants will be located on the site to provide adequate coverage.

For Phase 1, it is planned to install an 8" PVC water main loop through the site to connect five new hydrants and two building services mentioned above. This 8" loop will connect to the 12" stub located northwest of the site in Dransfeldt Road to the existing 12" main installed in Salisbury South Park, southwest of the site. The Community Hub and HQ buildings will each have 1.5" Type K Copper service lines with 1.5" water meter assemblies. An additional 1.5" service line and water meter are also planned east of the HQ building to support future construction phases. Tees will also be installed on the 8" loop main where future connections are anticipated. See sheet C1-200, Phase 1 Overall Utility Plan, in Appendix A for layout details.

All portions of the 8" loop main will become public infrastructure at time of acceptance. The building service stubs are to be owned and maintained by the Town. Refer to Appendix A for layouts of the existing and proposed systems.

For the proposed Community Hub and Headquarters buildings the plumbing engineer anticipates a maximum water demand of 60.6 gpm and 64.4 gpm respectively. The plumbing demand calculations are included in Appendix B.

To ensure the existing main can supply the needed pressure to meet the demands with the proposed layout, a WaterGEMS model was created and run for two scenarios: peak hour demand and peak-day demand with fire-flow. The first model represents peak-hour demand without fire flow in which flow velocity must remain below 4 fps and pressure must remain above 40 psi. The second model represents peak-day demand with fire flow in which flow velocity remains below 8 fps and

pressure remains above 20 psi. The two models, both of which meet the above criteria, are shown in Appendix B.

A 4” irrigation stub was sized by the Irrigation Designer to provide 360 GPM of demand. The landscape worksheet for tap sizing for dedicated irrigation taps is shown in Appendix B. All work is proposed to be in conformance with the Town of Parker Standards.

III. SANITARY SEWER DEMANDS AND CONVEYANCE SYSTEM

A. EXISTING SANITARY SEWER SYSTEM

Based on the Topographic survey conducted by Aztec consulting Inc. and dated 06/26/23, there is an existing 24” PVC sanitary main running west-east on the north side of the site. There are also two existing sanitary sewer lines in Motsenbocker Road with pipe size and material not identified.

B. PROPOSED SANITARY SEWER SYSTEM

For the proposed Community Hub and Headquarters buildings the plumbing engineer anticipates a maximum sewer service demand of 52 gpm and 64.4 gpm respectively. The plumbing demand calculations are included in Appendix B. It was determined that a 4” diameter service line can adequately convey these demands. The two sanitary models are shown in Appendix B.

The proposed Headquarters and Community Hub buildings will each be serviced 4” PVC sanitary service lines which will be tapped into a proposed 8” PVC sanitary main. The proposed 8” sanitary main will tie-in to the existing 24” sanitary main to the north with a saddle tap. All work is proposed to be in conformance with the Town of Parker Standards. Refer to the proposed layout in the drawings provided in Appendix A.

IV. STORM SEWER SYSTEM

For the proposed stormwater improvements, please refer to the Preliminary Stormwater Report prepared by JVA, Inc.

V. GROUNDWATER SYSTEM

According to the Geotechnical Engineering Report prepared by Ninyo & Moore Geotechnical and Environmental Sciences Consultants, Inc. and dated November 10, 2023, groundwater was present on the site at depths ranging from 4 to 16 feet below existing grade.

Groundwater levels can change due to seasonal rainfall, nearby water sources, and groundwater extraction. Heavy rainfall can create perched water at the soil-bedrock interface. These fluctuations should be considered in construction planning. While groundwater isn’t expected to hinder park facility construction, dewatering may be necessary to install underground utilities and foundations close to the groundwater table.

VI. DRY UTILITY SYSTEM

Dry utilities and the construction of new building services will be coordinated between the dry utility consultant, the Owner, and the respective utility providers. Transformer and generator equipment will be sized by the project MEP and utility owners.

VII. CONCLUSIONS

Phase 1 will include the installation of an 8" water main loop across the site, connecting the existing 12" stubout in Dransfeldt Lane to the east side of the existing 12" main between the north and south Salisbury Park sites. Additionally, an 8" sanitary main extension will be connected to the existing 24" main. Sanitary services from this proposed 8" main will be 4" PVC for both the Community Hub and HQ buildings.

Two new water meters and two domestic service lines are proposed for the two proposed Phase 1 buildings. Sizing and demands are listed below. Two additional water meters and service stubs are proposed for the irrigation connection (4") and for a future building (1.5" Type K Copper).

- Community Hub: 1.5" Type K Copper water service with 60.6 gpm peak hour demand
- Headquarters: 1.5" Type K Copper service with 64.4 gpm peak hour demand

Per IFC, the buildings will be Type V-B construction, non-sprinklered. An external fire suppression demand of 1,500 gpm will be provided by a combination of five hydrants within reach of the buildings.

REFERENCES

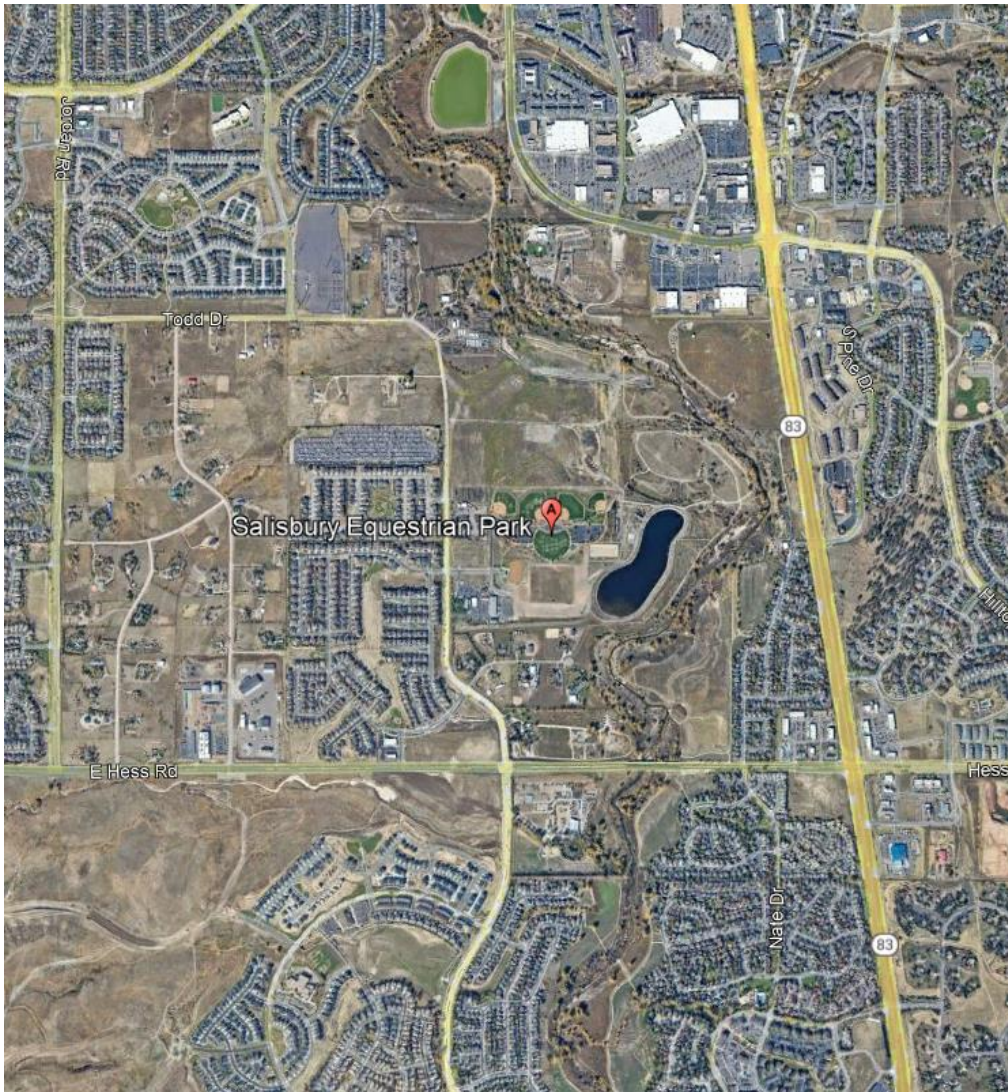
1. "Wastewater Collection System Master Plan," July 2016.
2. "International Fire Code," 2021 Edition.

APPENDIX A – SITE MAPS

Salisbury Park North

Development

AT
11700 Motsenbocker Road
Parker, CO



VICINITY MAP NOT TO SCALE

APPENDIX B – CALCULATIONS, TABLES AND REFERENCES

Fire Hydrant Calculations:

VB Construction Type, s-1 Occupancy, non-Sprinklered, bldg heights 35-45'

Bldg HQ HUB
 Bldg floor area (sf) 1,733 1,511

ALL BUILDINGS

TABLE B105.1(2) REFERENCE TABLE FOR TABLES B105.1(1) AND B105.2

FIRE-FLOW CALCULATION AREA (square feet)					FIRE FLOW (gallons per minute) ^b	FLOW DURATION (hours)
Type IA and IB ^a	Type IIA and IIIA ^a	Type IV and V-A ^a	Type IIB and IIIB ^a	Type V-B ^a		
0-22,700	0-12,700	0-8,200	0-5,900	0-3,600	1,500	2
22,701-30,200	12,701-17,000	8,201-10,900	5,901-7,900	3,601-4,800	1,750	
30,201-38,700	17,001-21,800	10,901-12,900	7,901-9,800	4,801-6,200	2,000	
38,701-48,300	21,801-24,200	12,901-17,400	9,801-12,600	6,201-7,700	2,250	
48,301-59,000	24,201-33,200	17,401-21,300	12,601-15,400	7,701-9,400	2,500	
59,001-70,900	33,201-39,700	21,301-25,500	15,401-18,400	9,401-11,300	2,750	3
70,901-83,700	39,701-47,100	25,501-30,100	18,401-21,800	11,301-13,400	3,000	
83,701-97,700	47,101-54,900	30,101-35,200	21,801-25,900	13,401-15,600	3,250	
97,701-112,700	54,901-63,400	35,201-40,600	25,901-29,300	15,601-18,000	3,500	
112,701-128,700	63,401-72,400	40,601-46,400	29,301-33,500	18,001-20,600	3,750	
128,701-145,900	72,401-82,100	46,401-52,500	33,501-37,900	20,601-23,300	4,000	4
145,901-164,200	82,101-92,400	52,501-59,100	37,901-42,700	23,301-26,300	4,250	
164,201-183,400	92,401-103,100	59,101-66,000	42,701-47,700	26,301-29,300	4,500	
183,401-203,700	103,101-114,600	66,001-73,300	47,701-53,000	29,301-32,600	4,750	
203,701-225,200	114,601-126,700	73,301-81,100	53,001-58,600	32,601-36,000	5,000	
225,201-247,700	126,701-139,400	81,101-89,200	58,601-65,400	36,001-39,600	5,250	4
247,701-271,200	139,401-152,600	89,201-97,700	65,401-70,600	39,601-43,400	5,500	
271,201-295,900	152,601-166,500	97,701-106,500	70,601-77,000	43,401-47,400	5,750	
295,901-Greater	166,501-Greater	106,501-115,800	77,001-83,700	47,401-51,500	6,000	
—	—	115,801-125,500	83,701-90,600	51,501-55,700	6,250	
—	—	125,501-135,500	90,601-97,900	55,701-60,200	6,500	4
—	—	135,501-145,800	97,901-106,800	60,201-64,800	6,750	
—	—	145,801-156,700	106,801-113,200	64,801-69,600	7,000	
—	—	156,701-167,900	113,201-121,300	69,601-74,600	7,250	
—	—	167,901-179,400	121,301-129,600	74,601-79,800	7,500	
—	—	179,401-191,400	129,601-138,300	79,801-85,100	7,750	4
—	—	191,401-Greater	138,301-Greater	85,101-Greater	8,000	

For SI: 1 square foot = 0.0929 m², 1 gallon per minute = 3.785 L/m, 1 pound per square inch = 6.895 kPa.

- a. Types of construction are based on the International Building Code.
- b. Measured at 20 psi residual pressure.

TABLE B105.2 REQUIRED FIRE FLOW FOR BUILDINGS OTHER THAN ONE- AND TWO-FAMILY DWELLINGS, GROUP R-3 AND R-4 BUILDINGS AND TOWNHOUSES

AUTOMATIC SPRINKLER SYSTEM (Design Standard)	MINIMUM FIRE FLOW (gallons per minute)	FLOW DURATION (hours)
No automatic sprinkler system	Value in Table B105.1(2)	Duration in Table B105.1(2)
Section 903.3.1.1 of the International Fire Code	25% of the value in Table B105.1(2) ^b	Duration in Table B105.1(2) at the reduced flow rate
Section 903.3.1.2 of the International Fire Code	25% of the value in Table B105.1(2) ^b	Duration in Table B105.1(2) at the reduced flow rate

For SI: 1 gallon per minute = 3.785 L/m.

- a. The reduced fire flow shall be not less than 1,000 gallons per minute.
- b. The reduced fire flow shall be not less than 1,500 gallons per minute.

ALL BUILDINGS

TABLE C102.1 REQUIRED NUMBER AND SPACING OF FIRE HYDRANTS^a

FIRE-FLOW REQUIREMENT (gpm)	MINIMUM NUMBER OF HYDRANTS	AVERAGE SPACING BETWEEN HYDRANTS ^{b, c, f, g} (feet)	MAXIMUM DISTANCE FROM ANY POINT ON STREET OR ROAD FRONTAGE TO A HYDRANT ^{d, f, g}
1,750 or less	1	500	250
1,751-2,250	2	450	225
2,251-2,750	3	450	225
2,751-3,250	3	400	225
3,251-4,000	4	350	210
4,001-5,000	5	300	180
5,001-5,500	6	300	180
5,501-6,000	6	250	150
6,001-7,000	7	250	150
7,001 or more	8 or more ^e	200	120

For SI: 1 foot = 304.8 mm, 1 gallon per minute = 3.785 L/m.

- a. Reduce by 100 feet for dead-end streets or roads.
- b. Where streets are provided with median dividers that cannot be crossed by fire fighters pulling hose lines, or where arterial streets are provided with four or more traffic lanes and have a traffic count of more than 30,000 vehicles per day, hydrant spacing shall average 500 feet on each side of the street and be arranged on an alternating basis.
- c. Where new water mains are extended along streets where hydrants are not needed for protection of structures or similar fire problems, fire hydrants shall be provided at spacing not to exceed 1,000 feet to provide for transportation hazards.
- d. Reduce by 50 feet for dead-end streets or roads.
- e. One hydrant for each 1,000 gallons per minute or fraction thereof.
- f. A 50-percent spacing increase shall be permitted where the building is equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1 of the International Fire Code.
- g. A 25-percent spacing increase shall be permitted where the building is equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.2 or 903.3.1.3 of the International Fire Code or Section P2904 of the International Residential Code.
- h. The fire code official is authorized to modify the location, number and distribution of fire hydrants based on site-specific constraints and hazards.

Water and Sanitation Size/Demand Calculations (Re: Plumb):

Job Title: Salisbury Park North - Community Hub Restrooms and Storage
 Job #: 023-039
 Date: 9/9/2024

2021 IPC DOMESTIC WATER SIZING											
PER APPENDIX E											
WATER SUPPLY FIXTURE UNIT LOAD VALUES (1)										WASTE	
FIXTURE TYPE	OCCUPANCY	TYPE OF SUPPLY CONTROL	QTY	CW		HW		COMBINED HW & CW		FIX. DFU	TOTAL DFU
				PER FIX.	TOTAL	PER FIX.	TOTAL	PER FIX.	TOTAL		
Drinking Fountain	Public	Faucet	1	0.25	0.25	0	0	0.25	0.25	0.5	0.5
Lavatory	Public	Faucet	5	1.5	7.5	1.5	7.5	2	10	1	5
Service Sink/Basin	Offices	Faucet	1	2.25	2.25	2.25	2.25	3	3	2	2
Urinal	Public	3/4" Flush Valve	1	5	5	0	0	5	5	2	2
Water Closet	Public	Flush Valve	6	10	60	0	0	10	60	4	24
Floor Drains- 2"			4	0	0	0	0	0	0	3	12
Indirect Waste-2"			1	0	0	0	0	0	0	3	3
Indirect Waste-4"			1	0	0	0	0	0	0	6	6
TOTAL FU				75		10		78.25			54.50
TOTAL GPM (From Hunter's Curve or Demand Estimate Table)				59.5		27		60.6			52

WATER SERVICE SIZE	1"	Per 2021 IPC Table E104.1: 250'-0" Maximum Length, over 60 psig pressure range.
WATER METER SIZE	1"	Per 2021 IPC Table E104.1: 250'-0" Maximum Length, over 60 psig pressure range.
DISTRIBUTION SIZE	1-1/2"	Per 2021 IPC Table E104.1: 250'-0" Maximum Length, over 60 psig pressure range.
SANITARY SEWER SIZE	4"	Per 2021 IPC Table 710.1(1) at 1/8" per foot slope

Job Title: Salisbury Park North - Headquarters and Restrooms
 Job #: 023-039
 Date: 9/9/2024

2021 IPC DOMESTIC WATER SIZING											
PER APPENDIX E											
WATER SUPPLY FIXTURE UNIT LOAD VALUES (1)										WASTE	
FIXTURE TYPE	OCCUPANCY	TYPE OF SUPPLY CONTROL	QTY	CW		HW		COMBINED HW & CW		FIX. DFU	TOTAL DFU
				PER FIX.	TOTAL	PER FIX.	TOTAL	PER FIX.	TOTAL		
Drinking Fountain	Public	Faucet	1	0.25	0.25	0	0	0.25	0.25	0.5	0.5
Kitchen Sink	Hotel/Restaurant	Faucet	0	3	0	3	0	4	0	2	0
Lavatory	Public	Faucet	5	1.5	7.5	1.5	7.5	2	10	1	5
Service Sink/Basin	Offices	Faucet	1	2.25	2.25	2.25	2.25	3	3	2	2
Urinal	Public	3/4" Flush Valve	1	5	5	0	0	5	5	2	2
Water Closet	Public	Flush Valve	7	10	70	0	0	10	70	4	28
Floor Drains- 2"			3	0	0	0	0	0	0	3	9
Indirect Waste-2"			1	0	0	0	0	0	0	3	3
Indirect Waste-4"			1	0	0	0	0	0	0	6	6
Handsink	Public	Faucet	1	1.5	1.5	1.5	1.5	2	2	1	1
TOTAL FU				87		11		90.25			56.50
TOTAL GPM (From Hunter's Curve or Demand Estimate Table)				64		27.8		64.4			52

WATER SERVICE SIZE	1-1/2"	Per 2021 IPC Table E104.1: 100'-0" Maximum Length, over 60 psig pressure range.
WATER METER SIZE	1-1/2"	Per 2021 IPC Table E104.1: 100'-0" Maximum Length, over 60 psig pressure range.
DISTRIBUTION SIZE	1-1/2"	Per 2021 IPC Table E104.1: 100'-0" Maximum Length, over 60 psig pressure range.
SANITARY SEWER SIZE	4"	Per 2021 IPC Table 710.1(1) at 1/8" per foot slope



LANDSCAPE/IRRIGATION WORKSHEET

Tap sizing for dedicated irrigation taps

Yellow fields require user input

Irrigation Water Requirement = (ETo x PF x LA)/IE

Define Landscape & Irrigation System:	
High Water Use Plant Material	
*Cool season turfgrass (Kentucky bluegrass)	
Plant Factor (PF, %)	High 0.9
Landscape Area (LA, sq ft)	365100
Irrigation Efficiency (IE, %)	Overhead 0.65
High-Moderate Water Use Plant Material	
*Hybrid grass types (Texas hybrids, fescue, etc.)	
Plant Factor (PF, %)	High-Med 0.8
Landscape Area (LA, sq ft)	
Irrigation Efficiency (IE, %)	Overhead 0.65
Moderate Water Use Plant Material	
*Traditional trees/shrubs/perennials, alternative grass types (buffalograss, blue grama, etc.)	
Plant Factor (PF, %)	Med 0.5
Landscape Area (LA, sq ft)	0
Irrigation Efficiency (IE, %)	Drip 0.9
Low Water Use Plant Material	
*Xeric trees/shrubs/perennials, native grass mixes	
Plant Factor (PF, %)	Low 0.25
Landscape Area (LA, sq ft)	592310
Irrigation Efficiency (IE, %)	Overhead 0.65

*PWSD holds final discretion for determining appropriate plant factor designations based on landscape plan submission

Site Summary:	
Total Irrigated Area (sq ft)	957410
Avg Plant Factor (%)	0.50
Avg Irrigation Efficiency (%)	0.65

Peak monthly ET, Parker, CO:	
Peak monthly ET (July):	7.56 in

Irrigation Water Requirement (IWR):	
Peak monthly IWR:	3437286 gal
Maximum flow requirement	359.3 GPM

* Max. flow requirements are based on peak monthly irrigation demands and follow PWSD's watering guidelines

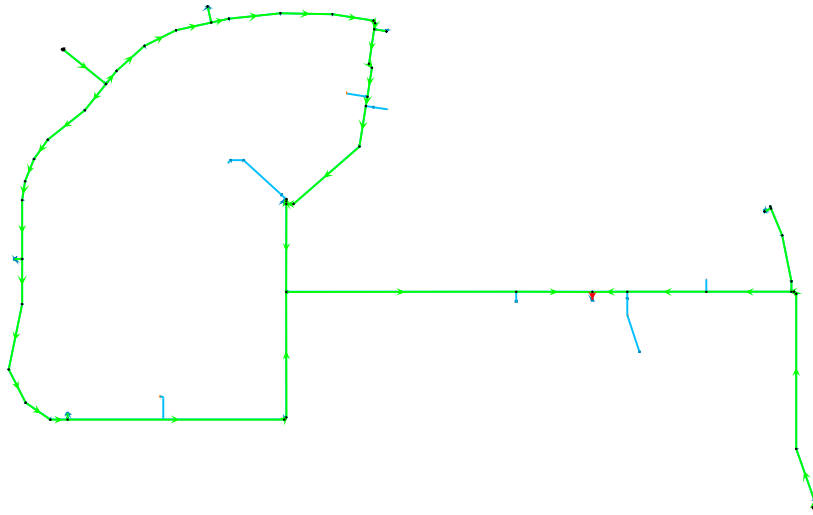
Hydraulic Requirements:	
Tap Size (in)	Max GPM v = 7.5 fps
3/4"	10
1"	18
1 1/2"	40
2"	71
3"	189
4"	380
* 2" and smaller assumes Seamless K Copper Tube 3" and larger assumes Ductile Iron Pipe Class 350	
Tap Size Requirement	4"

System Design Pressure: PSI

- Design pressure has been field tested & verified
- This form has been completed in compliance with PWSD's Engineering Standards & Specifications Manual regarding irrigation design specifications

[Visit Appendix B of the SMWSA Model Ordinance for Plant Factor Guidelines](#)

Water Model/Tables:



FlexTable: Pipe Table

ID	Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)
41	P-1	133	R-1	J-2	8.0	PVC	904	5.77
43	P-2	81	J-2	J-3	8.0	PVC	413	2.63
45	P-3	114	J-3	J-4	8.0	PVC	413	2.63
47	P-4	57	J-4	J-5	8.0	PVC	413	2.63
49	P-5	57	J-5	J-6	8.0	PVC	413	2.63
51	P-6	46	J-6	J-7	8.0	PVC	413	2.63
55	P-8	161	J-8	J-9	8.0	PVC	413	2.63
57	P-9	90	J-9	J-10	8.0	PVC	413	2.63
59	P-10	71	J-10	J-11	8.0	PVC	413	2.63
61	P-11	42	J-11	J-12	8.0	PVC	413	2.63
63	P-12	522	J-12	J-13	8.0	PVC	413	2.63
65	P-13	7	J-13	J-14	8.0	PVC	413	2.63
67	P-14	303	J-14	J-15	8.0	PVC	413	2.63
69	P-15	554	J-15	J-16	8.0	PVC	791	5.05
71	P-16	183	J-16	J-17	8.0	PVC	726	4.64
73	P-17	84	J-17	J-18	8.0	PVC	-774	4.94
75	P-18	190	J-18	IRRIG Tap	8.0	PVC	-835	5.33
77	P-19	205	IRRIG Tap	J-20	8.0	PVC	-1,194	7.62
79	P-20	7	J-20	J-21	8.0	PVC	-1,194	7.62
81	P-21	7	J-21	J-22	8.0	PVC	-1,194	7.62
83	P-22	374	J-22	J-23	8.0	PVC	-1,194	7.62
85	P-23	130	J-23	J-24	8.0	PVC	-1,194	7.62
87	P-24	19	J-24	R-2	8.0	PVC	-1,194	7.62
89	P-25	41	J-2	J-26	8.0	PVC	492	3.14
91	P-26	90	J-26	J-27	8.0	PVC	492	3.14
93	P-27	85	J-27	J-28	8.0	PVC	492	3.14
95	P-28	87	J-28	J-29	8.0	PVC	492	3.14
97	P-29	43	J-29	J-30	8.0	PVC	492	3.14
99	P-30	125	J-30	J-31	8.0	PVC	492	3.14
101	P-31	125	J-31	J-32	8.0	PVC	492	3.14
103	P-32	100	J-32	J-33	8.0	PVC	492	3.14
105	P-33	7	J-33	J-34	8.0	PVC	492	3.14
107	P-34	15	J-34	J-35	8.0	PVC	492	3.14
109	P-35	84	J-35	J-36	8.0	PVC	492	3.14
111	P-36	12	J-36	J-37	8.0	PVC	492	3.14
113	P-37	71	J-37	J-38	8.0	PVC	492	3.14
115	P-38	23	J-38	J-39	8.0	PVC	492	3.14
117	P-39	99	J-39	J-40	8.0	PVC	439	2.80
119	P-40	211	J-40	J-41	8.0	PVC	439	2.80
121	P-41	17	J-41	J-42	8.0	PVC	439	2.80
122	P-42	212	J-42	J-15	8.0	PVC	378	2.41
124	P-43	6	J-42	J-43	8.0	PVC	61	0.39
125	P-44	5	J-43	H-3	6.0	Ductile Iron	0	0.00
127	P-7(1)	142	J-7	J-44	8.0	PVC	413	2.63
128	P-7(2)	109	J-44	J-8	8.0	PVC	413	2.63
129	P-45	18	J-44	H-1	6.0	Ductile Iron	0	0.00

FlexTable: Pipe Table

ID	Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)
130	P-46	15	J-12	H-2	6.0	Ductile Iron	0	0.00
131	P-47	20	J-17	H-4	6.0	Ductile Iron	1,500	17.02
133	P-48	25	J-20	J-45	8.0	PVC	0	0.00
135	P-49	113	J-45	J-46	8.0	PVC	0	0.00
137	P-50	70	J-46	J-47	8.0	PVC	0	0.00
139	P-51	5	J-47	J-48	8.0	PVC	0	0.00
140	P-52	17	J-47	H-5	6.0	Ductile Iron	0	0.00
141	P-53	38	J-29	H-6	6.0	Ductile Iron	0	0.00
142	P-54	29	J-35	H-7	6.0	Ductile Iron	0	0.00
173	P-55	5	J-43	J-51	8.0	PVC	61	0.39

FlexTable: Junction Table

ID	Label	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)	Elevation (ft)
74	IRRIG Tap	359	6,112.31	114	5,849.68
40	J-2	0	6,121.45	118	5,849.64
42	J-3	0	6,121.23	117	5,850.48
44	J-4	0	6,120.92	117	5,851.60
46	J-5	0	6,120.76	116	5,852.16
48	J-6	0	6,120.60	116	5,852.72
50	J-7	0	6,120.48	116	5,853.17
52	J-8	0	6,119.80	114	5,856.48
54	J-9	0	6,119.36	114	5,855.15
56	J-10	0	6,119.11	115	5,854.15
58	J-11	0	6,118.92	115	5,853.62
60	J-12	0	6,118.81	115	5,853.28
62	J-13	0	6,117.39	115	5,851.45
64	J-14	0	6,117.37	115	5,851.54
66	J-15	0	6,116.54	115	5,849.70
68	J-16	64	6,111.52	112	5,852.09
70	J-17	0	6,109.67	113	5,849.05
72	J-18	61	6,110.41	113	5,849.25
76	J-20	0	6,116.30	117	5,846.71
78	J-21	0	6,116.43	117	5,846.85
80	J-22	0	6,116.57	117	5,846.90
82	J-23	0	6,123.84	117	5,853.38
84	J-24	0	6,126.36	117	5,856.21
88	J-26	0	6,121.29	118	5,849.24
90	J-27	0	6,120.96	118	5,848.35
92	J-28	0	6,120.64	118	5,847.49
94	J-29	0	6,120.31	118	5,846.69
96	J-30	0	6,120.15	119	5,846.23
98	J-31	0	6,119.67	119	5,844.98
100	J-32	0	6,119.20	119	5,843.74
102	J-33	0	6,118.83	119	5,842.79
104	J-34	0	6,118.80	119	5,842.78
106	J-35	0	6,118.74	120	5,842.51
108	J-36	0	6,118.43	119	5,844.27
110	J-37	0	6,118.38	119	5,844.30
112	J-38	0	6,118.12	117	5,846.54
114	J-39	53	6,118.03	117	5,847.06
116	J-40	0	6,117.73	118	5,845.13
118	J-41	0	6,117.09	116	5,849.13
120	J-42	0	6,117.04	116	5,849.54
123	J-43	0	6,117.03	116	5,849.56
126	J-44	0	6,120.09	115	5,855.27
132	J-45	0	6,116.30	117	5,846.53
134	J-46	0	6,116.30	117	5,845.47
136	J-47	0	6,116.30	118	5,844.71
138	J-48	0	6,116.30	118	5,844.66
172	J-51	61	6,117.03	116	5,849.52

FlexTable: Hydrant Table

Label	Length (Hydrant Lateral) (ft)	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
H-1	20	5,856.21	0	6,120.09	114
H-2	20	5,853.48	0	6,118.81	115
H-3	20	5,849.57	0	6,117.03	116
H-5	20	5,843.27	0	6,116.30	118
H-4	20	5,849.37	1,500	6,106.53	111
H-6	20	5,846.90	0	6,120.31	118
H-7	20	5,842.29	0	6,118.74	120