

VALVE SCHEDULE NEW SYSTEM

NUMBER	MODEL	SIZE	TYPE	GPM	HEADS	PIPE 3/4"	PIPE 1"	PIPE 1 1/2"	PIPE 2"	PIPE 2 1/2"	WIRE	DESIGN PSI	FRICITION LOSS	VALVE LOSS	PSI	PSI @ POC	HEAD ELEV	VALVE ELEV	PRECIP
1	RAIN BIRD PGA GLOBE - EXISTING	2"	TURF SPRAY	34.25	29	434.8	17.6	28.3	116.7		149.9	30	5.7	1.2	37.8	58.2	2 ft	1 ft	1.24 in/h
2	RAIN BIRD PGA GLOBE - EXISTING	2"	TURF ROTOR	30	10	212.7	15.0	42.0			148.8	45	2	1.2	48.2	68.3	1 ft	1 ft	0.94 in/h
3	RAIN BIRD PGA GLOBE - NEW	1-1/2"	TURF ROTOR	38	12	243.9	51.1	67.9	12.1		103.8	45	3.4	2.94	51.3	72.6	3 ft	3 ft	0.66 in/h
4	RAIN BIRD PGA GLOBE - NEW	1"	TURF ROTOR	20.5	8	155.5	24.5	34.0			123.9	45	2.66	6.02	53.7	73.9	3 ft	3 ft	0.58 in/h
5	RAIN BIRD PGA GLOBE - NEW	2"	TURF ROTOR	51	10	186.8	44.3	46.7	23.0		155.1	45	2.53	1.56	49.1	71.5	3 ft	3 ft	0.47 in/h
6	RAIN BIRD PGA GLOBE - NEW	2"	TURF ROTOR	50	14	272.1	91.7	60.4	48.4		235.4	45	6.21	1.5	52.7	75.2	3 ft	3 ft	0.49 in/h
7	RAIN BIRD PGA GLOBE - NEW	2"	TURF ROTOR	49.5	13	226.1	122.4	35.9	40.8		281.7	45	3.97	1.49	50.5	73.0	3 ft	3 ft	0.46 in/h
8	RAIN BIRD PGA GLOBE - NEW	1-1/2"	TURF ROTOR	40.5	17	373.5	24.8	58.4	88.3		349.5	45	3.03	3.28	51.3	73.1	3 ft	3 ft	0.87 in/h
9	RAIN BIRD PGA GLOBE - NEW	2"	TURF ROTOR	48	8	177.0	77.6	24.6	8.5		355.7	45	3.39	1.44	49.8	72.4	3 ft	3 ft	0.4 in/h
10	RAIN BIRD PGA GLOBE - NEW	2"	TURF ROTOR	49.5	12	255.8	112.0	12.9	17.0		442.1	45	2.71	1.49	49.2	72.1	3 ft	3 ft	0.46 in/h
11	RAIN BIRD PGA GLOBE - NEW	2"	TURF ROTOR	52.5	13	206.8	127.0	82.4	17.4	4.3	492.5	45	3.95	1.65	50.6	74.0	3 ft	3 ft	0.46 in/h
12	RAIN BIRD PGA GLOBE - NEW	1-1/2"	TURF ROTOR	43	9	245.5	9.2	55.6	11.1		618.1	45	4.09	3.68	53.2	75.3	2 ft	2 ft	0.46 in/h
13	RAIN BIRD PGA GLOBE - NEW	2"	TURF ROTOR	51	10	156.8	68.3	79.1	29.8		672.8	45	3.04	1.56	49.6	72.9	2 ft	2 ft	0.45 in/h
14	RAIN BIRD PGA GLOBE - NEW	2"	TURF ROTOR	49.5	12	235.3	93.2	67.5	92.5		683.9	45	4.76	1.49	51.2	74.3	2 ft	2 ft	0.46 in/h
15	RAIN BIRD PGA GLOBE - NEW	2"	TURF ROTOR	52.5	14	314.5	91.3	38.5	23.1	6.7	761.5	45	4.02	1.65	51.1	74.8	1 ft	2 ft	0.61 in/h
16	RAIN BIRD PGA GLOBE - EXISTING Common Wire	2"	TURF ROTOR	48	16	223.3	134.5	113.8	17.9		880.1	45	4.62	1.44	51.5	74.2	1 ft	1 ft	0.72 in/h

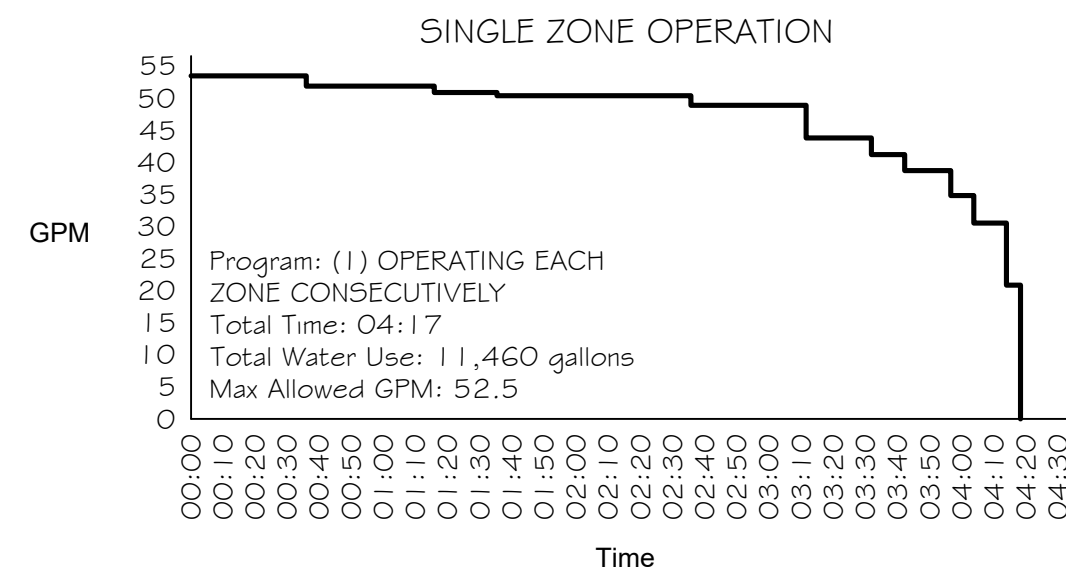
CRITICAL ANALYSIS

Generated:	2024-04-29 07:01
P.O.C. NUMBER: 01	
Water Source Information:	EXISTING 2" IRRIGATION WATER METER TO REMAIN
FLOW AVAILABLE	
Water Meter Size:	2"
Flow Available:	61.14 GPM
PRESSURE AVAILABLE	
Static Pressure at POC:	85 PSI
Elevation Change:	5.00 ft
Service Line Size:	2"
Length of Service Line:	55 ft
Pressure Available:	81 PSI
DESIGN ANALYSIS	
Maximum Station Flow:	52.5 GPM
Flow Available at POC:	61.14 GPM
Residual Flow Available:	8.64 GPM
Critical Station:	12
Design Pressure:	45 PSI
Friction Loss:	3.72 PSI
Fittings Loss:	0.37 PSI
Elevation Loss:	0.43 PSI
Loss through Valve:	3.68 PSI
Pressure Req. at Critical Station:	53.2 PSI
Loss for Fittings:	0.14 PSI
Loss for Main Line:	1.45 PSI
Loss for POC to Valve Elevation:	0.87 PSI
Loss for Backflow:	1.34 PSI
Loss for Master Valve:	4.8 PSI
Loss for Water Meter:	1.48 PSI
Critical Station Pressure at POC:	75.3 PSI
Pressure Available:	81 PSI
Residual Pressure Available:	5.66 PSI

SAMPLE WEEKLY WATERING SCHEDULE - NEW SYSTEM - APPLIES 1" WATER PER WEEK WORSE CASE JULY/AUGUST

NUMBER	MODEL	TYPE	PRECIP	SUN	MON	TUE	WED	THU	FRI	SAT	IN./WEEK	MIN./WEEK	GAL./WEEK	GAL./DAY
1	RAIN BIRD PGA GLOBE - EXISTING	TURF SPRAY	1.24 in/h	7 min	7 min	7 min	7 min	7 min	7 min	7 min	1	49	1,678	240
2	RAIN BIRD PGA GLOBE - EXISTING	TURF ROTOR	0.94 in/h	10 min	10 min	10 min	10 min	10 min	10 min	10 min	1	64	1,920	274
3	RAIN BIRD PGA GLOBE - NEW	TURF ROTOR	0.66 in/h	14 min	14 min	14 min	14 min	14 min	14 min	14 min	1	92	3,496	499
4	RAIN BIRD PGA GLOBE - NEW	TURF ROTOR	0.58 in/h	15 min	15 min	15 min	15 min	15 min	15 min	15 min	1	104	2,132	305
5	RAIN BIRD PGA GLOBE - NEW	TURF ROTOR	0.47 in/h	19 min	19 min	19 min	19 min	19 min	19 min	19 min	1	128	6,528	933
6	RAIN BIRD PGA GLOBE - NEW	TURF ROTOR	0.49 in/h	18 min	18 min	18 min	18 min	18 min	18 min	18 min	1	124	6,200	886
7	RAIN BIRD PGA GLOBE - NEW	TURF ROTOR	0.46 in/h	19 min	19 min	19 min	19 min	19 min	19 min	19 min	1	132	6,534	933
8	RAIN BIRD PGA GLOBE - NEW	TURF ROTOR	0.87 in/h	10 min	10 min	10 min	10 min	10 min	10 min	10 min	1	70	2,835	405
9	RAIN BIRD PGA GLOBE - NEW	TURF ROTOR	0.4 in/h	22 min	22 min	22 min	22 min	22 min	22 min	22 min	1	151	7,248	1,035
10	RAIN BIRD PGA GLOBE - NEW	TURF ROTOR	0.46 in/h	19 min	19 min	19 min	19 min	19 min	19 min	19 min	1	132	6,534	933
11	RAIN BIRD PGA GLOBE - NEW	TURF ROTOR	0.46 in/h	19 min	19 min	19 min	19 min	19 min	19 min	19 min	1	132	6,930	990
12	RAIN BIRD PGA GLOBE - NEW	TURF ROTOR	0.46 in/h	19 min	19 min	19 min	19 min	19 min	19 min	19 min	1	131	5,633	805
13	RAIN BIRD PGA GLOBE - NEW	TURF ROTOR	0.45 in/h	20 min	20 min	20 min	20 min	20 min	20 min	20 min	1	135	6,885	984
14	RAIN BIRD PGA GLOBE - NEW	TURF ROTOR	0.46 in/h	19 min	19 min	19 min	19 min	19 min	19 min	19 min	1	130	6,435	919
15	RAIN BIRD PGA GLOBE - NEW	TURF ROTOR	0.61 in/h	15 min	15 min	15 min	15 min	15 min	15 min	15 min	1	99	5,198	743
16	RAIN BIRD PGA GLOBE - EXISTING	TURF ROTOR	0.72 in/h	12 min	12 min	12 min	12 min	12 min	12 min	12 min	1	84	4,032	576
TOTALS:				257	257	257	257	257	257	257		1,757	80,218	11,460

SAMPLE DAILY RUNTIME SUMMARY



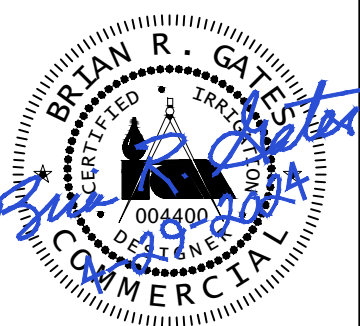
SAMPLE WATER SCHEDULE NOTES

- SAMPLE WATER SCHEDULE CALCULATIONS ARE BASED ON A FLAT 1" PER WEEK MAXIMUM WATER REQUIREMENT (TYPICAL WORSE CASE JULY/AUGUST)
- PROJECTED FOR A 7 DAY PER WEEK X 1 OCCURRENCE PER DAY WATERING SCHEDULE DURING A WORST CASE DROUGHT SCENARIO
- INCREASE STATION RUNTIMES AND SET MULTIPLE START TIMES AND/OR OPERATE ADDITIONAL ZONES CONCURRENTLY (NOT TO EXCEED MAXIMUM SYSTEM FLOW OF 52.5 GPM) PER DESIRED WATERING DAYS IF AN OFF DAY WATERING SCHEDULE IS DESIRED.
- ESTIMATED MAXIMUM PROJECTED DAILY RUNTIME = +/- 4.3 HOURS PER DAY X 7 DAYS A WEEK IF OPERATING ONE ZONE AT A TIME IN SEQUENCE.
= OPERATE TWO ZONES CONCURRENTLY (NOT TO EXCEED XXGPM TOTAL FLOW) TO REDUCE DAILY RUNTIME TO +/-X.XX HOURS PER DAY
= (OPERATING MORE THAN 1 ZONE CONCURRENTLY ACHIEVES NO APPRECIABLE RUN TIME SCHEDULING GAIN AND MAY CAUSE UNDESIRABLE LOW OPERATING PRESSURE ISSUES)
- THESE CALCULATIONS ARE PROVIDED ONLY TO DEMONSTRATE THAT 1" OF WATER PER WEEK CAN BE APPLIED WITHIN AN ALLOWED WATERING WINDOW OF 8 HOURS OR LESS PER EACH DAY IN WORSE CASE DROUGHT CONDITIONS.
- ACTUAL WATERING REQUIREMENTS MAY VARY DUE TO SOIL COMPOSITION AND EVAPOTRANSPIRATION AND SHOULD BE CLOSELY MONITORED AND ADJUSTED AS REQUIRED TO PROMOTE THE ESTABLISHMENT AND SURVIVAL OF THE PLANT MATERIALS COVERED.
- INITIAL WATER REQUIREMENTS MAY BE HIGHER THAN AS PROJECTED ABOVE, PARTICULARLY FOR TURF/ SOD AREAS INSTALLED IN THE HEAT OF SUMMER. TURF AND SHRUB WATER REQUIREMENTS CAN BE EXPECTED TO DRAMATICALLY REDUCE ONCE THE PLANT MATERIAL IS ESTABLISHED.



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REV.	DATE	DESCRIPTION	BY

CITY OF WICHITA
DEPT. OF PARK & RECREATION
WICHITA, KANSAS
2024 PARK FACILITY
ENHANCEMENTS-
K9 ROOSTER DOG PARK
ENHANCEMENTS

IRRIGATION PLAN
- NEW SYSTEM
SCHEDULES

JOB NO.: 2302060
DATE: MAY 2024
DESIGNED BY: BRG
DRAWN BY: BRG

BAR IS ONE INCH ON ORIGINAL DRAWING

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

DRAWING NUMBER
IR-104

SHEET NUMBER

ECOSYSTEMS
IRRIGATION DESIGN AND CONSULTING
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