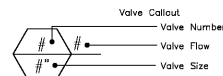


IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI
	Rain Bird 1806-PRS 15 Strip Series Turf Spray 6" pop up with pressure regulator.	23	30
	Rain Bird 1806-PRS 5 Series MPR Turf Spray 6" pop up with pressure regulator.	1	30
	Rain Bird 1806-PRS 8 Series MPR Turf Spray 6" pop up with pressure regulator.	4	30
	Rain Bird 1806-PRS 15 Strip Series Turf Spray 6" pop up with pressure regulator.	6	30
	Rain Bird 1806-PRS 10 Series MPR Turf Spray 6" pop up with pressure regulator.	8	30
	Rain Bird 1806-PRS 12 Series MPR Turf Spray 6" pop up with pressure regulator.	69	30
	Rain Bird 1806-PRS 15 Series MPR Turf Spray 6" pop up with pressure regulator.	7	30
	Rain Bird 1806-PRS ADJ Turf Spray 6" pop up with pressure regulator.	9	30
	Rain Bird 1804-1400 Flood Flood Bubbler 4" pop up	101	40

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI	GPM	RADIUS
	Rain Bird 3500-S Shrub Rotor, adjustable and full circle	7	25	0.77	20'
	Rain Bird 3500-S Shrub Rotor, adjustable and full circle	2	25	2.17	29'
	Rain Bird 3500-S Shrub Rotor, adjustable and full circle	3	25	2.97	31'

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Rain Bird PEB Electric Remote Control Valve	8
	Watts LF909M1 2" Lead Free Reduced Pressure Backflow Preventer.	1
	Rain Bird ESP12LXMEF-LXMMSS 12 Station Commercial Controller. Stainless Steel Metal Cabinet. Flow Sensing	1
	Rain Bird RSD-BEX Rain Sensor, with bracket, extension wire	1
	Water Meter 1" New 1" Water Meter	1
	Irrigation Lateral Line: PVC Class 160 SDR 26	3,356 l.f.
	Irrigation Mainline: PVC Class 200 SDR 21	971.9 l.f.
	Pipe Sleeve: PVC Schedule 80	258.6 l.f.



VALVE SCHEDULE

NUMBER	MODEL	SIZE	TYPE	GPM	HEADS	PIPE	WIRE	DESIGN PSI	FRICTION LOSS	PSI	PSI @ POC	PRECIP
1	Rain Bird PEB	1"	Bubbler	11.25	45	620.8	54.9	40	0.80	42.74	53.67	7.66 in/h
2	Rain Bird PEB	1-1/2"	Turf Spray	35.76	36	473.6	54.9	30	0.59	34.14	53.41	0.96 in/h
3	Rain Bird PEB	1-1/2"	Turf Spray	29.58	24	283.0	255.4	30	0.49	34.10	51.80	0.97 in/h
4	Rain Bird PEB	1-1/2"	Turf Spray	30.57	25	330.6	436.6	30	0.57	34.17	52.31	1.06 in/h
5	Rain Bird PEB	1"	Bubbler	14.00	56	781.9	463.0	40	0.70	42.94	54.63	7.66 in/h
6	Rain Bird PEB	1-1/2"	Turf Spray	32.46	25	317.8	489.5	30	0.52	34.10	53.46	1.34 in/h
7	Rain Bird PEB	1-1/2"	Turf Spray	33.31	17	285.7	291.0	30	0.58	34.15	53.87	0.88 in/h
8	Rain Bird PEB	1-1/2"	Shrub Rotor	18.64	12	262.4	277.7	25	0.43	29.33	42.20	0.82 in/h
	Common Wire					971.9						

WATERING SCHEDULE

NUMBER	MODEL	TYPE	PRECIP	IN/WEEK	MIN./WEEK	GAL./WEEK	GAL./DAY
1	Rain Bird PEB	Bubbler	7.66 in/h	1	8	90	
2	Rain Bird PEB	Turf Spray	0.96 in/h	1	63	2,253	
3	Rain Bird PEB	Turf Spray	0.97 in/h	1	63	1,863	
4	Rain Bird PEB	Turf Spray	1.06 in/h	1	57	1,742	
5	Rain Bird PEB	Bubbler	7.66 in/h	1	8	112	
6	Rain Bird PEB	Turf Spray	1.34 in/h	1	45	1,461	
7	Rain Bird PEB	Turf Spray	0.88 in/h	1	68	2,285	
8	Rain Bird PEB	Shrub Rotor	0.82 in/h	1	74	1,379	
	TOTALS:				386	11,165	

CRITICAL ANALYSIS

Generated: 2019-08-12 16:06

P.O.C. NUMBER: 01
Water Source Information: New 1" Water Meter

FLOW AVAILABLE
Water Meter Size: 1"
Flow Available: 37.50 gpm

PRESSURE AVAILABLE
Static Pressure at POC: 55.00 psi
Elevation Change: 0.00 ft
Service Line Size: 2"
Length of Service Line: 20.00 ft
Pressure Available: 55.00 psi

DESIGN ANALYSIS
Maximum Station Flow: 35.76 gpm
Flow Available at POC: 37.50 gpm
Residual Flow Available: 1.74 gpm

Critical Station:
Design Pressure: 40.00 psi
Friction Loss: 0.69 psi
Fittings Loss: 0.01 psi
Elevation Loss: 0.00 psi
Loss through Valve: 2.24 psi
Pressure Req. at Critical Station: 42.94 psi
Loss for Fittings: 0.01 psi
Loss for Main Line: 0.58 psi
Loss for POC to Valve Elevation: 0.00 psi
Loss for Backflow: 10.00 psi
Loss for Water Meter: 1.10 psi
Critical Station Pressure at POC: 54.63 psi
Pressure Available: 55.00 psi
Residual Pressure Available: 0.37 psi

IRRIGATION NOTES

- ALL LOCAL MUNICIPAL AND STATE LAWS, RULES AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR.
- THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, STRUCTURES AND SERVICES BEFORE COMMENCING WORK. THE LOCATIONS OF UTILITIES, STRUCTURES AND SERVICES SHOWN IN THESE PLANS ARE APPROXIMATE ONLY. ANY DISCREPANCIES BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE.
- THE CONTRACTOR SHALL OBTAIN THE PERTINENT ENGINEERING OR ARCHITECTURAL PLANS BEFORE BEGINNING WORK.
- THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS REQUIRED TO PERFORM THE WORK INDICATED HEREIN BEFORE BEGINNING WORK.
- THIS DESIGN IS DIAGRAMMATIC. ALL EQUIPMENT SHOWN IN PAVED AREAS IS FOR DESIGN CLARITY ONLY AND IS TO BE INSTALLED WITHIN PLANTING AREAS.
- THE CONTRACTOR SHALL NOT WILLFULLY INSTALL ANY EQUIPMENT AS SHOWN ON THE PLANS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN CONDITIONS EXIST THAT WERE NOT IDENTIFIED AT THE TIME THESE PLANS WERE PREPARED. ANY SUCH CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE PRIOR TO ANY WORK OR THE IRRIGATION CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR ANY FIELD CHANGES DEEMED NECESSARY BY THE OWNER.
- INSTALL ALL EQUIPMENT AS SHOWN IN THE DETAILS AND SPECIFICATIONS. CONTRACTOR SHALL BE RESPONSIBLE TO COMPLY WITH LOCAL CITY, COUNTY AND STATE REQUIREMENTS FOR BOTH EQUIPMENT AND INSTALLATION.
- ACTUAL LOCATION FOR THE INSTALLATION OF THE BACKFLOW PREVENTER AND THE AUTOMATIC CONTROLLER IS TO BE DETERMINED IN THE FIELD BY THE OWNER'S AUTHORIZED REPRESENTATIVE.
- CONTRACTOR IS TO PROVIDE AN ADDITIONAL PILOT WIRE FROM CONTROLLER ALONG ENTIRETY OF MAIN LINE TO THE NEXT RCV CONNECTION AND EVERY 10' OF MAIN LINE. LABEL SPARE WIRES AT BOTH ENDS.
- ALL PIPE UNDER PAVED AREAS TO BE INSTALLED IN SLEEVING TWICE THE DIAMETER OF THE PIPE CARRIED. SEE LEGEND FOR TYPES. ALL WIRE UNDER PAVED AREAS TO BE INSTALLED IN A SCH. 40 SLEEVE THE SIZE REQUIRED TO EASILY PULL WIRE THROUGH. ALL SLEEVES TO BE INSTALLED WITH A MINIMUM DEPTH AS SHOWN ON THE SLEEVING DETAILS. SLEEVES TO EXTEND AT LEAST 12" PAST THE EDGE OF THE PAVING.
- ALL QUICK COUPLER AND REMOTE CONTROL VALVES TO BE INSTALLED IN SHRUB OR GROUND COVER AREAS WHERE POSSIBLE. ALL QUICK COUPLER AND REMOTE CONTROL VALVES TO BE INSTALLED AS SHOWN ON THE INSTALLATION DETAILS. INSTALL ALL QUICK COUPLER AND REMOTE CONTROL VALVES WITHIN 18" OF HARDSCAPE.
- ALL HEADS ARE TO BE INSTALLED WITH THE NOZZLE, SCREEN AND ARCS SHOWN ON THE PLANS. ALL HEADS ARE TO BE ADJUSTED TO PREVENT OVERSPRAY ONTO BUILDINGS, WALLS, FENCES AND HARDSCAPE. THIS INCLUDES, BUT NOT LIMITED TO, ADJUSTMENT OF DIFFUSER PIN OR ADJUSTMENT SCREW, REPLACEMENT OF PRESSURE COMPENSATING SCREENS, REPLACEMENT OF NOZZLES WITH MORE APPROPRIATE RADIUS UNITS AND THE REPLACEMENT OF NOZZLES WITH ADJUSTABLE ARC UNITS.
- THE CONTRACTOR SHALL USE PROPER GROUNDING TECHNIQUES FOR GROUNDING THE CONTROLLER AND RELATED EQUIPMENT PER MANUFACTURERS SPECIFICATIONS. THOMAS ENGINEERING GROUP RECOMMENDS MEASURING FOR PROPER GROUND AT LEAST ONCE ANNUALLY, AND NECESSARY ADJUSTMENTS MADE TO COMPLY WITH MANUFACTURER SPECIFICATIONS.

NOTE A:
POINT OF CONNECTION SHALL BE A NEW 1" METER OFF CITY WATER. VERIFY THE ACTUAL LOCATION, SIZE AND WATER PRESSURE IN THE FIELD PRIOR TO STARTING WORK. IF ANY OF THE POC INFORMATION SHOWN ON THESE DRAWING IS FOUND TO BE DIFFERENT THAN THE ACTUAL POC INFORMATION GATHERED IN THE FIELD, IMMEDIATELY NOTIFY THE LANDSCAPE ARCHITECT AND IRRIGATION CONSULTANT. SHOULD THE CONTRACTOR FAIL TO VERIFY THE POC INFORMATION ANY CHANGES REQUIRED BY LOW PRESSURE OR VOLUME SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

MINIMUM PRESSURE REQUIRED: 34.08 PSI
DESIGN WATER PRESSURE: 55 PSI
MAXIMUM SYSTEM DEMAND: 35.76 GPM

NOTE B:
CONTROLLER SHALL BE AS NOTED. FINAL LOCATION OF CONTROLLER AND ELECTRICAL POC SHALL BE CONFIRMED WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO STARTING WORK. CONTROLLER MAY BE EXISTING WITHIN PUMP HOUSE. REUSE EXISTING CONTROLLER IF POSSIBLE.

NOTE C:
MAINLINE AND RELATED EQUIPMENT SHOWN WITHIN PAVING FOR CLARITY ONLY. ACTUAL MAINLINE AND RELATED EQUIPMENT LOCATION TO BE WITHIN PLANTERS AND A MINIMUM OF 18" OFF ADJACENT HARDSCAPE AND OTHER OBSTACLES TYP.

NOTE D:
CONTRACTOR SHALL ADJUST ALL HEADS AS REQUIRED TO ACCOMMODATE ANY VERTICAL OBSTRUCTIONS THAT MAY OCCUR, INCLUDING BUT NOT LIMITED TO LIGHT POLES, FIRE HYDRANTS, ETC. VERIFY ALL HEAD LAYOUT WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO STARTING WORK.

NOTE E:
BUBBLERS AND LATERAL LINES ARE SHOWN WITHIN PAVING FOR CLARITY ONLY. ACTUAL LOCATION TO BE WITHIN PLANTER. BUBBLERS SHALL BE ALIGNED WITH TREES AND AS DIRECTED BY OWNER'S AUTHORIZED REPRESENTATIVE. CONFIRM ALL LAYOUT IN FIELD WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO STARTING WORK.

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