

GENERAL IRRIGATION NOTES:

- IRRIGATION SYSTEM SHALL BE INSTALLED TO THE CITY OF WICHITA. PARKS DEPARTMENT IRRIGATION SPECIFICATIONS. SPECIFICATIONS HEREIN SHALL BE CONSIDERED SUPPLEMENTAL TO THE CITY SPECIFICATIONS. CITY SPECIFICATIONS TAKE PRECEDENCE OVER DRAWINGS UNLESS WRITTEN APPROVAL IS PROVIDED BY THE PROJECT ENGINEER.
- THE IRRIGATION PLANS SHALL BE CONSIDERED SCHEMATIC IN NATURE, INDICATING DESIRED WATER COVERAGE. FIELD ADJUSTMENTS MAY BE NECESSARY TO AVOID UNFORSEEN CONFLICTS. THE IRRIGATION CONTRACTOR IS TO INSTALL ALL EQUIPMENT NECESSARY TO PROVIDE A COMPLETE, FUNCTIONAL SYSTEM THAT IS IN COMPLIANCE WITH THE PLANS, SPECIFICATIONS AND APPLICABLE LOCAL CODES AND REGULATIONS. THE IRRIGATION CONTRACTOR IS RESPONSIBLE FOR THE FINAL LAYOUT OF ALL EQUIPMENT AND PIPING. CHANGES TO THE DESIGN MUST BE APPROVED BY THE PROJECT ENGINEER.
- PRIOR TO BEGINNING WORK ON THE SITE, THE IRRIGATION CONTRACTOR SHALL CONTACT THE OFFICE OF THE LANDSCAPE ARCHITECT AND OWNER FOR SPECIFIC INSTRUCTIONS RELEVANT TO THE SEQUENCING OF WORK.
- THE IRRIGATION CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS AND SERVICE NECESSARY TO INSTALL A FULLY AUTOMATIC IRRIGATION SYSTEM AS SHOWN ON THE PLANS.
- NO MATERIAL OR EQUIPMENT SUBSTITUTIONS MAY BE MADE WITHOUT THE WRITTEN AUTHORIZATION OF THE PROJECT ENGINEER. ALTERNATIVE MATERIALS AND EQUIPMENT OF SIMILAR SIZE AND PERFORMANCE MAY BE CONSIDERED IF SPECIFIED MATERIALS AND EQUIPMENT CANNOT BE OBTAINED. THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO AMEND THE IRRIGATION PLANS AS DEEMED NECESSARY.
- QUANTITIES OF MATERIALS AND EQUIPMENT INDICATED ON THE PLAN TAKE PRECEDENCE OVER QUANTITIES SHOWN ON THE IRRIGATION SCHEDULE. THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL QUANTITIES ON THE IRRIGATION PLANS.
- REPORT ANY DISCREPANCIES IN THE IRRIGATION PLANS TO THE PROJECT ENGINEER FOR RESOLUTION PRIOR TO THE PURCHASE OF MATERIALS OR START OF INSTALLATION.
- REVIEW THE IRRIGATION SPECIFICATION SECTION 02810 IN THE PROJEC MANUAL FOR ADDITIONAL PROJECT INSTRUCTIONS AND RESPONSIBILITIES.
- THE IRRIGATION CONTRACTOR IS RESPONSIBLE FOR DAMAGES TO BUILDINGS, WALKS, DRIVES, ELECTRICAL SYSTEMS AND UNDERGROUND UTILITIES CAUSED BY LEAKS IN THE PIPING SYSTEM INSTALLED OR HAVING BEEN INSTALLED. REPAIR, AT THE IRRIGATION CONTRACTOR'S EXPENSE, ALL DAMAGES SO CAUSED, REPAIRS SHALL BE DONE AS DIRECTED BY THE PROJECT ENGINEER.
- SUBMIT ALL PRODUCT INFORMATION AND SHOP DRAWINGS PER THE REQUIREMENTS SPECIFIED IN THE DRAWINGS AND SPECIFICATIONS FOR REVIEW AND APPROVAL.
- THE IRRIGATION CONTRACTOR SHALL PROVIDE THE OWNER WITH FINAL AS-BUILT DRAWINGS OF THE INSTALLED IRRIGATION SYSTEM INCLUDING WIRING DIAGRAMS. IRRIGATION CONTRACTOR SHALL ALSO PROVIDE A LAMINATED ZONE CHART TO THE OWNER AT THE CONCLUSION OF THE PROJECT.
- THE IRRIGATION CONTRACTOR SHALL USE EXTREME CAUTION WHEN INSTALLING IRRIGATION EQUIPMENT AND PIPING WITHIN OR ADJACENT TO UTILITY EASEMENTS AND UTILITY LINES. ADJUST IRRIGATION SYSTEM DESIGN AS NECESSARY TO AVOID CONFLICTS WITH ANY EXISTING OR PROPOSED UTILITIES.
- THE EXISTING WATER PRESSURE AT THE POINT OF CONNECTION HAS NOT BEEN VERIFIED. AN ASSUMED PRESSURE HAS BEEN USED FOR THE PURPOSE OF SYSTEM DESIGN. IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO VERIFY EXISTING WATER PRESSURE AND MAKE SYSTEM ADJUSTMENTS AS NECESSARY.
- THE STATE OF THE EXISTING IRRIGATION SYSTEM LOCATED IN THE DOUGLAS STREET BRIDGE PLANTERS HAS NOT BEEN VERIFIED. THE IRRIGATION CONTRACTOR SHALL INVESTIGATE THE EXISTING EQUIPMENT, PIPING AND ZONING OF THIS AREA TO DETERMINE THE BEST MANNER OF CONNECTION TO THE PROPOSED IRRIGATION SYSTEM.
- THE IRRIGATION CONTRACTOR SHALL INSTALL THE IRRIGATION MAINLINE 24" BELOW GRADE. INSTALL LATERAL LINES A MINIMUM OF 18" BELOW GRADE. ALL LINES SHALL BE SIZED TO ENSURE THAT PIPE VELOCITY DOES NOT EXCEED 5 FEET/SECOND. ADJUST PIPE SIZES TO MAINTAIN OPTIMAL OPERATING PRESSURE OF SPRINKLER HEADS.
- THE IRRIGATION CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR THE INSTALLATION OF PVC SCH-40 IRRIGATION SLEEVES FOR PIPING AND WIRING. SLEEVES SHALL BE A MINIMUM TWICE THE SIZE OF IRRIGATION PIPING. COORDINATE SLEEVE INSTALLATION INTO/UNDER LANDSCAPE BEDS, UNDER WALKS, THROUGH WALLS WITH GENERAL CONTRACTOR.
- ELECTRICAL CONTROL AND GROUND WIRE TO BE USED FOR CONNECTING REMOTE CONTROL VALVES TO THE AUTOMATIC CONTROLLER SHALL BE 14AWG MINIMUM.
 - CONTROL WIRE SHALL BE ONE COLOR AND GROUND WIRES ANOTHER COLOR.
 - UNUSED WIRE BUIED IN THE GROUND FOR FUTURE USE SHALL BE A THIRD COLOR.
 - WIRE CONNECTORS IN THE FIELD SHALL BE WATERPROOF.
- WHERE INSTALLING IRRIGATION PIPE ALONG WALKS OR IN PLANTER BEDS, PLACE PIPE AS CLOSE TO WALKS AS POSSIBLE TO ALLOW FOR PLANTING OF TREES AND SHRUBS. COMBINE MAINLINE, LATERALS AND CONTROL WIRING IN COMMON TRENCHES WHERE POSSIBLE.
- ADJUST ALL IRRIGATION SPRINKLER HEADS SO SIDEWALKS, PAVING, WALLS AND BUILDINGS REMAIN DRY OF DIRECT SPRAY OR EXCESS WATER RUN-OFF.
- MAXIMUM DRIP IRRIGATION DRIP LINE RUN IS 420 LF. NO DRIP ZONES SHALL EXCEED THE MAXIMUM LENGTH. IRRIGATION CONTRACTOR SHALL ADJUST AND/OR ADD ZONES AS NECESSARY TO MEET THIS REQUIREMENT.
- DRIP IRRIGATION LINE SHALL BE INSTALLED ON GRADE, BUT BENEATH MULCH LAYER. DRIP LINE SHALL BE SECURED TO GRADE BY THE USE OF "U" SHAPED STAKES AT 12". SINGULAR EMITTERS MAY BE INSERTED INTO DRIP LINE FOR ADDITIONAL IRRIGATION TO TREES AND SHRUBS IF DEEMED NECESSARY.
- LINE FLUSHING VALVES ARE TO BE LOCATED AT THE ENDS OF EACH RUN OF DRIP EMITTER TUBING. INSTALL IN 6" VALVE BOX WITH ONE CUBIC FOOT GRAVEL SUMP. CENTER FEE DRIP ZONE WHERE POSSIBLE.
- DRIP LINE INSTALLATION:
 - DRIPPER FLOW RATE: 1.0 GPH
 - DRIPPER SPACING: 18" O.C.
 - ROW SPACING: 18" O.C.
 - BURIAL DEPTH: 4 INCHES
- VALVE BOXES:
 - LANDSCAPE AREAS: RAINBIRD VB-7RND OR VB-10RND, RAINBIRD VB-STD
 - CONCRETE WALKS: CARSON INDUSTRIES #1730-24 BODIES W/ H1730-P1 LIDS STAMPED "IRRIGATION" ON LIDS
- THE IRRIGATION CONTRACTOR SHALL FOLLOW THE TESTING AND START-UP INSTRUCTIONS AS DETAILED IN THE PROJECT SPECIFICATIONS.
- THE IRRIGATION CONTRACTOR SHALL REMOVE ALL RUBBISH, EQUIPMENT AND MATERIALS AND LEAVE AREA IN A NEAT AND CLEAN CONDITION EACH DAY. MAINTAIN PAVED AREAS IN A CLEAN AND UNOBSTRUCTED CONDITION AT ALL TIMES.
- REMOVE SOIL AND DIRT THAT HAS ACCUMULATED DURING OR AS A RESULT OF THE INSTALLATION PROCESS EACH DAY.

VALVE SCHEDULE

NUMBER	MODEL	SIZE	TYPE	PSI	PSI @ POC	GPM	HEAD ELEV	PRECIP
1	Hunter PGV-151, 201 (2)	1"	Turf Rotor	48.11		19.60	5.00 ft	0.49 in/h
2	Hunter PGV-151-AS, 201-AS	1-1/2"	Turf Rotor	45.89		23.00	0.00 ft	0.53 in/h
3	Hunter PGV-151-AS, 201-AS	1-1/2"	Turf Rotor	45.11		37.00	0.00 ft	0.86 in/h
4	Hunter ICZ-10140	1"	Drip	40.06		11.14	0.00 ft	0.75 in/h
5	Hunter PGV-151-AS, 201-AS	1-1/2"	Turf Rotor	47.09		25.20	0.00 ft	0.47 in/h
6	Hunter PGV-151-AS, 201-AS	1-1/2"	Vacant	0.00		0.00	0.00 ft	0.00 in/h
7	Hunter ICZ-10140	1"	Drip	40.01		4.10	0.00 ft	0.75 in/h
8	Hunter ICZ-10140	1"	Drip	40.05		6.03	0.00 ft	0.75 in/h
9	Hunter ICZ-10140	1"	Drip	40.00		0.10	0.00 ft	0.75 in/h
10	Hunter ICZ-10140	1"	Drip	40.01		0.58	0.00 ft	0.75 in/h
11	Hunter PGV-151-AS, 201-AS	1-1/2"	Turf Spray	33.95		22.44	0.00 ft	1.86 in/h
12	Hunter PGV-151-AS, 201-AS	1-1/2"	Turf Spray	33.40		24.67	0.00 ft	1.78 in/h
13	Hunter PGV-151-AS, 201-AS	1-1/2"	Turf Spray	33.92		29.26	0.00 ft	2.09 in/h
14	Hunter ICZ-10140	1"	Drip	40.00		1.23	0.00 ft	0.75 in/h
15	Hunter ICZ-10140	1"	Drip	40.06		9.40	0.00 ft	0.75 in/h
16	Hunter ICZ-10140	1"	Drip	40.00		2.21	0.00 ft	0.75 in/h
17	Hunter PGV-151, 201 (2)	1"	Turf Spray	33.51		18.24	0.00 ft	2.31 in/h
18	Hunter ICZ-10140	1"	Drip	40.11		12.90	0.00 ft	0.75 in/h
19	Hunter ICZ-10140	1"	Drip	40.22		6.49	0.00 ft	0.75 in/h
20	Hunter PGV-151, 201 (2)	1"	Turf Rotary	42.13		6.85	0.00 ft	0.32 in/h
21	Hunter PGV-151, 201 (2)	1"	Turf Rotary	42.05		5.45	0.00 ft	0.32 in/h

CRITICAL ANALYSIS

Generated: 2010-01-05 09:58

P.O.C. NUMBER:01

Water Source Information:

FLOW AVAILABLE

Point of Connection Size: 2"

Flow Available: 78.62 gpm

PRESSURE AVAILABLE

Static Pressure at POC: 60.00 psi

Pressure Available:60.00 psi

DESIGN ANALYSIS

Critical Station Flow: 37.00 gpm

Flow Available at POC: 78.62 gpm

Residual Flow Available: 41.62 gpm

Critical Station: 5

Pressure Req. at Critical Station: 47.91 psi

Loss for Fittings: 0.21 psi

Loss for Main Line: 2.05 psi

Loss for POC to Valve Elevation: 0.00 psi

Loss for Backflow: 4.66 psi

Loss for Master Valve: 0.80 psi

Critical Station Pressure at POC: 54.83 psi

Pressure Available:60.00 psi

Residual Pressure Available: 5.17 psi

P.O.C. NUMBER:02

Water Source Information: Water Meter

FLOW AVAILABLE

Water Meter Size: 2"

Flow Available: 78.54 gpm

PRESSURE AVAILABLE

Static Pressure at POC: 0.00 psi

Elevation Change: 5.00 ft

Service Line Size: 2"

Length of Service Line: 20.00 ft

Pressure Available:0.00 psi

DESIGN ANALYSIS

Critical Station Flow: 37.00 gpm

Flow Available at POC: 78.54 gpm

Residual Flow Available: 41.54 gpm

Critical Station: 5

Pressure Req. at Critical Station: 47.91 psi

Loss for Fittings: 0.16 psi

Loss for Main Line: 1.64 psi

Loss for POC to Valve Elevation: 0.00 psi

Loss for Backflow: 4.66 psi

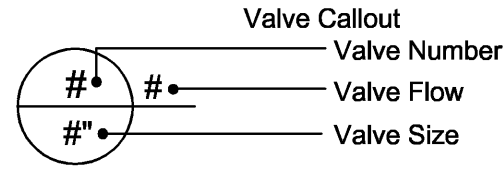
Loss for Master Valve: 0.80 psi

Loss for Water Meter: 0.61 psi

Critical Station Pressure at POC: 54.98 psi

Pressure Available:0.00 psi

Residual Pressure Available: -54.98 psi



IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI	GPM	RADIUS
	Rain Bird 1806-SAM-PRS Xeri-PC Nozzle Turf Spray 6" popup with check valve and pressure regulator.	17	30		
	Rain Bird 1806-SAM-PRS 5 Series MPR Turf Spray 6" popup with check valve and pressure regulator.	2	30		
	Rain Bird 1806-SAM-PRS 8 Series MPR Turf Spray 6" popup with check valve and pressure regulator.	19	30		
	Rain Bird 1806-SAM-PRS 10 Series MPR Turf Spray 6" popup with check valve and pressure regulator.	10	30		
	Rain Bird 1806-SAM-PRS 12 Series MPR Turf Spray 6" popup with check valve and pressure regulator.	1	30		
	Rain Bird 1806-SAM-PRS 15 Series MPR Turf Spray 6" popup with check valve and pressure regulator.	1	30		
	Rain Bird 1806-SAM-PRS ADJ Turf Spray 6" popup with check valve and pressure regulator.	35	30		
	Hunter MP1000 w/ MPR40-06-CV Turf Spray 6" pop-up with check valve, MP Rotator nozzle. M=Maroon adj arc 90 to 210, L=Light Blue 210 to 270 arc, O=Olive 360 arc, on MPR40 6" pop-up body.	19	40		
	Hunter MP2000 w/ MPR40-06-CV Turf Spray 6" pop-up with factory installed check valve, MP Rotator nozzle. K=Black adj arc 90-210, G=Green adj arc 210-270, R=Red 360 arc, on MPR40 6" pop-up body.	8	40		
	Hunter I-20-6P-ADS, 36S Turf Rotor, 6" popup, adjustable and full circle, with check valve, stainless steel riser	19	40	1.00	24'
	Hunter I-20-6P-ADS, 36S Turf Rotor, 6" popup, adjustable and full circle, with check valve, stainless steel riser	4	40	1.40	26'
	Hunter I-20-6P-ADS, 36S Turf Rotor, 6" popup, adjustable and full circle, with check valve, stainless steel riser	24	40	1.80	27'
	Hunter I-20-6P-ADS, 36S Turf Rotor, 6" popup, adjustable and full circle, with check valve, stainless steel riser	10	40	3.70	31'
	Hunter ICZ-10140 Institutional Drip Control Zone Kit, 1" ICV control zone valve with 1" HY100 Wye filter (150 mesh) and 40psi high-flow regulator.	10			
	Area to Receive Dripline Hunter PLD-10-18 (18) Dripline with 1.0 GPH emitters, non-draining, pressure compensating, at 18" O.C., and row spacing at 18" O.C., off-set emitters for triangular spacing.	6,947 s.f.			
	Hunter PGV-151, 201 (2) Electric Remote Control Valve, 1-1/2", 2" with flow control.	4			
	Hunter PGV-151-AS, 201-AS Electric Remote Control Valve, plastic globe/angle valve, flow control, Accu-Set pressure regulator.	7			
	Rain Bird 44LRC 1" Quick Coupler Valve, two piece body, locking cover	10			
	Nibco T-29-K 200 PSI CWP Bronze Gate Valve, Size - 1 1/2" - In 6" round Valve Box	2			
	Hunter ICV 2" Electric Remote Control Valve, 220 psi rated plastic globe valve.	1			
	Drain Valve	1			
	Wilkins 720A 1" Pressure Vacuum Breaker	1			
	Hunter ICC-2400-M-PED Modular Controller, stations, outdoor model, with metal cabinet, metal pedestal.	1			
	Hunter MINI-CLIK Rain Sensor, mount as noted	1			
	Irrigation Lateral Line: PVC SCH 40 Only lateral transition pipe sizes 1 1/4" and above are indicated on the plan, with all others being 1" in size.	2,723 l.f.			
	Irrigation Mainline: PVC Schedule 40	1,903 l.f.			
	Pipe Sleeve: PVC SCH 40 Typical pipe sleeve for irrigation pipe. Pipe sleeve size shall allow for irrigation piping and their related couplings to easily slide through sleeving material. Extend sleeves 18 inches beyond edges of paving or construction.	619 l.f.			

PRINTS ISSUED

DATE	PURPOSE	NO.
10.05.09	FIELD CHECK	
11.12.09	OFFICE CHECK	
02.01.10	FINAL PLANS	

RIVER CORRIDOR
IMPROVEMENTS PHASE 1C:
WICHITA, KS

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PROJECT NUMBER:

08386

SHEET TITLE:

**IRRIGATION
NOTES &
SCHEDULE**

SHEET NUMBER:

IR2.1