

A FULLY AUTOMATED SPRINKLER, AND DRIP IRRIGATION SYSTEM WILL IRRIGATE TURFGRASS, TREE, SHRUB, AND GROUNDCOVER PLANTING AREAS AT THE SANDHILL OWENS "TRAILHEAD" AND "PARK" SITES. POP-UP SPRAY AND ROTARY SPRINKLERS WILL IRRIGATE TURFGRASS. IN-LINE DRIP RINGS WILL IRRIGATE TREES. SINGLE-OUTLET DRIP EMITTERS WILL IRRIGATE SHRUBS AND GROUNDCOVERS.

THE PROPERTY IS GEOGRAPHICALLY DIVIDED INTO TWO PARCELS SEPERATED BY A LARGE DRAINAGE CANAL. EACH SITE "TRAILHEAD" AND "PARK" REQUIRES A SEPARATE POINT-OF-CONNECTION. REDUCED PRESSURE BACKFLOW PREVENTION ASSEMBLIES ARE PROVIDED AT EACH POINT-OF-CONNECTION TO PREVENT SYSTEM CROSS CONNECTION (REFER TO UTILITY PLANS).

THE IRRIGATION CONTROL SYSTEM WILL INTERFACE WITH THE CITY OF LAS VEGAS RAIN BIRD MAXICOM CENTRAL CONTROL SYSTEM AND WILL BE DESIGNED FOR PHONE MODEM COMMUNICATION. A COMBINATION CLUSTER CONTROL UNIT/SITE SATELLITE CONTROLLER IS TO BE INSTALLED AT EACH PROJECT SITE UNDER THIS CONTRACT.

ISOLATION GATE VALVES PERMIT THE ISOLATION OF MAINLINE SEGMENTS OF THE SYSTEM FOR REPAIRS OR MAINTENANCE.

QUICK COUPLING VALVES ARE PROVIDED AROUND THE PERIMETER OF ARTIFICIAL TURFGRASS AREAS FOR CLEANING PURPOSES AND AT APPROVED INTERVALS ALONG MAINLINE PIPE FOR THE INCIDENTAL WATERING REQUIREMENTS OF EACH SITE.

1. THE "TRAILHEAD" IRRIGATION SYSTEM DESIGN ASSUMES A MAXIMUM FLOW OF 50 GPM AT AN APPROXIMATE AVAILABLE PRESSURE OF 60 PSI FOR THE 1-1/2-INCH IRRIGATION POINT-OF-CONNECTION "A" DOWNSTREAM OF THE WATER METER AND BACKFLOW PREVENTER AS SHOWN ON PLANS (REFER TO UTILITY DRAWINGS). VERIFY PRESSURE AND FLOW ON SITE PRIOR TO CONSTRUCTION AND REPORT AND DISCREPANCIES BETWEEN ACTUAL SITE CONDITIONS AND THESE ASSUMPTIONS TO OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION.

2. THE "PARK" IRRIGATION SYSTEM DESIGN ASSUMES A MAXIMUM FLOW OF 50 GPM AT AN APPROXIMATE AVAILABLE PRESSURE OF 75 PSI FOR THE 1-1/2-INCH IRRIGATION POINT-OF-CONNECTION "B" DOWNSTREAM OF THE WATER METER AND BACKFLOW PREVENTER AS SHOWN ON PLANS (REFER TO UTILITY DRAWINGS). VERIFY PRESSURE AND FLOW ON SITE PRIOR TO CONSTRUCTION AND REPORT AND DISCREPANCIES BETWEEN ACTUAL SITE CONDITIONS AND THESE ASSUMPTIONS TO OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION.

3. READ THOROUGHLY AND BECOME FAMILIAR WITH THE SPECIFICATIONS AND INSTALLATION DETAILS FOR THIS AND RELATED WORK PRIOR TO CONSTRUCTION.

4. COORDINATE LOCATION AND MARKING ("CALL BEFORE YOU DIG") OF UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.

5. DO NOT PROCEED WITH THE INSTALLATION OF THE IRRIGATION SYSTEM WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS OR GRADE DIFFERENCES EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE ENGINEERING, OR IF DISCREPANCIES IN CONSTRUCTION DETAILS, LEGEND, NOTES, OR SPECIFICATIONS ARE DISCOVERED. BRING ALL SUCH OBSTRUCTIONS OR DISCREPANCIES TO THE ATTENTION OF THE CONSTRUCTION PROJECT REPRESENTATIVE PRIOR TO PROCEEDING WITH CONSTRUCTION.

6. THE DRAWINGS ARE DIAGRAMMATIC. THEREFORE, THE FOLLOWING SHOULD BE NOTED:
A. IRRIGATION COMPONENTS MAY BE SHOWN OUTSIDE PLANTING AREAS, OR WITHIN
HARDSCAPE, FOR GRAPHIC CLARITY. AVOID CONFLICTS BETWEEN THE IRRIGATION SYSTEM,
PLANTING MATERIALS, UTILITIES, HARDSCAPE SURFACES AND ARCHITECTURAL FEATURES.
INSTALL IRRIGATION PIPE AND WIRING IN LANDSCAPED AREAS WHENEVER POSSIBLE.

7. PROVIDE THE FOLLOWING COMPONENTS TO THE OWNER PRIOR TO THE COMPLETION OF THE PROJECT:

- A. TWO OPERATING KEYS FOR EACH TYPE OF MANUALLY OPERATED VALVE.
- B. TWO WRENCHES FOR REMOVAL OF VALVE BOX LID BOLT-LOCKS.
- C. TWO OF EACH SERVICING WRENCH OR TOOL NEEDED FOR COMPLETE ACCESS, ADJUSTMENT, AND REPAIR OF ALL SPRAY AND ROTARY SPRINKLERS.
- D. TWO RAIN BIRD 55K-1 QUICK COUPLING KEYS, EACH WITH ATTACHED RAIN BIRD SH-1 SWIVEL HOSE ELL FOR OPERATION OF THE QUICK COUPLING VALVES ON DRAWINGS.
- E. ONE TRC COMMANDER HAND-HELD RADIO REMOTE TRANSCEIVERS COMPATIBLE WITH SITE-SATELLITE CONTROLLERS (REFER TO SPECIFICATIONS).

8. SELECT NOZZLES FOR SPRAY AND ROTARY SPRINKLERS WITH ARC AND RADIUS WHICH PROVIDE COMPLETE AND UNIFORM COVERAGE WITH MINIMUM OVER SPRAY. CAREFULLY ADJUST THE RADIUS OF THROW AND ARC OF COVERAGE FOR EACH SPRAY AND ROTARY SPRINKLER TO PROVIDE THE BEST PERFORMANCE.

9. THE IRRIGATION CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF IRRIGATION SLEEVING. SLEEVES ARE TO BE INSTALLED FOR BOTH PIPING AND ELECTRICAL WIRING AT EACH HARDSCAPE CROSSING. COORDINATE INSTALLATION OF SLEEVING WITH OTHER TRADES. ANY PIPE OR WIRE WHICH PASSES BENEATH EXISTING HARDSCAPE WHERE SLEEVING WAS NOT INSTALLED, REQUIRES HORIZONTAL BORING BY THE IRRIGATION CONTRACTOR. SLEEVE SIZES ARE TO BE A MINIMUM OF TWICE THE COMBINED NOMINAL DIAMETER FOR ALL PIPES OR WIRES CONTAINED WITHIN SLEEVE. REFER TO SLEEVE SIZING SCHEDULE ON THIS SHEET.

10. INSTALL ALL ELECTRICAL POWER TO THE IRRIGATION CONTROL SYSTEM IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND ALL APPLICABLE LOCAL ELECTRIC UTILITY CODES.

11. WITH REGARD TO PIPE SIZING, THE FOLLOWING SHOULD BE NOTED:

A. IF A SECTION OF UNSIZED LATERAL PIPE IS LOCATED BETWEEN TWO IDENTICALLY SIZED SECTIONS, THE UNSIZED LATERAL PIPE IS THE SAME NOMINAL SIZE AS THE TWO SIZED SECTIONS. THE UNSIZED PIPE SHOULD NOT BE CONFUSED WITH THE DEFAULT PIPE SIZE NOTED IN THE LEGEND.

12. INSTALL IRRIGATION PIPE AND COMPONENTS A MINIMUM OF 8'-FEET FROM TREE ROOT BALLS WHEREVER POSSIBLE. PIPE ROUTING SHOWN ON DRAWINGS IS DIAGRAMMATIC.

13. INSTALL VARIABLE ARC NOZZLES (VAN) WHERE SPRAY ANGLES ARE LESS OR GREATER THAN WHAT A FIXED ARC SPRAY NOZZLE CAN IRRIGATE WITHOUT EXCESSIVE OVERSPRAY.

① "TRAILHEAD" IRRIGATION POINT-OF-CONNECTION "A": EXCAVATE AND EXPOSE 1-1/2-INCH IRRIGATION WATER SERVICE LINE FROM LAS VEGAS VALLEY WATER DISTRICT (POTABLE) SUPPLY IN THE APPROXIMATE LOCATION INDICATED DOWNSTREAM OF WATER METER AND BACKFLOW PREVENTER (REFER TO UTILITY PLANS). USE FITTINGS AS REQUIRED TO MAKE CONNECTION TO WATER SUPPLY. VERIFY EXACT LOCATION OF POINT-OF-CONNECTION WITH THE OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION.

② "PARK" IRRIGATION POINT-OF-CONNECTION "B": EXCAVATE AND EXPOSE 1-1/2-INCH IRRIGATION WATER SERVICE LINE FROM CITY OF NORTH LAS VEGAS (POTABLE) SUPPLY IN THE APPROXIMATE LOCATION INDICATED DOWNSTREAM OF WATER METER AND BACKFLOW PREVENTER (REFER TO UTILITY PLANS). USE FITTINGS AS REQUIRED TO CONNECT IRRIGATION SYSTEM TO WATER SUPPLY. VERIFY EXACT LOCATION OF POINT-OF-CONNECTION WITH THE OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION.

③ INSTALL PEDESTAL MOUNTED COMBINATION CCU/SATELLITE CONTROLLER ASSEMBLY IN THE APPROXIMATE LOCATION INDICATED. 120 VAC ELECTRICAL POWER AND DEDICATED TELEPHONE SERVICE WILL BE PROVIDED TO ASSEMBLY BY ELECTRICAL CONTRACTOR (REFER TO ELECTRICAL DRAWINGS). COORDINATE EXACT PLACEMENT OF CCU/SATELLITE CONTROLLER ASSEMBLY WITH THE OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION. COORDINATE INSTALLATION OF THE ASSEMBLY AS ASSOCIATED COMPONENTS UNDER THE SUPERVISION OF LOCAL AUTHORIZED MAXICOM FIELD REPRESENTATIVE.

④ INDICATED REMOTE CONTROL VALVE IS LOCATED AT THE END OF THE ANTICIPATED LOW VOLTAGE WIRE PATH. STUB-OUT TWO SPARE CONTROL WIRES AND ONE SPARE COMMON WIRE FROM THE RESPECTIVE SATELLITE CONTROLLER TO THIS LOCATION FOR FUTURE USE IN CASE OF CONTROL/Common WIRE FAILURE. PROVIDE A 3-FOOT COILED LENGTH OF EACH SPARE WIRES IN ALL REMOTE CONTROL VALVE BOXES.

⑤ IRRIGATION PIPE AND VALVES MAY BE SHOWN OUTSIDE OF THE PLANTING AREA IN THE HARDSCAPE OR OUTSIDE OF PROPERTY FOR GRAPHIC CLARITY ONLY. INSTALL ALL IRRIGATION COMPONENTS IN LANDSCAPED AREA OR THROUGH SLEEVING AND WITHIN THE PROPERTY BOUNDARY.

⑥ INSTALL DEDICATED FLOW SENSOR CABLE FROM FLOW SENSOR TERMINAL LOCATED AT THE CCU/SATELLITE CONTROLLER ASSEMBLY TO FLOW SENSOR ASSEMBLY. WIRE TO FLOW SENSOR IN ACCORDANCE WITH LOCAL AUTHORIZED MAXICOM FIELD REPRESENTATIVE RECOMMENDATIONS.

⑦ LANDSCAPE IN THIS AREA CONSISTS OF AN ARTIFICIAL TURFGRASS SURFACE. INSTALL ALL QUICK COUPLING VALVE ASSEMBLIES, MAINLINE PIPE, LATERAL PIPE AND OTHER IRRIGATION EQUIPMENT WITHIN LANDSCAPE PLANTERS OUTSIDE OF ARTIFICIAL TURFGRASS AREAS ONLY.

MAINLINE/LATERAL PIPE SIZE (INCHES)	MINIMUM SLEEVE SIZE (INCHES)
1	2
1-1/4	3
1-1/2	3
2	4
2-1/2	6

NOTE:
1. ALL SLEEVES FOR WIRES ARE TO BE 3 INCHES IN DIAMETER MINIMUM.

NOTE: THESE RECORD DRAWINGS HAVE BEEN PREPARED
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