IRRIGATION NOTES & LEGENDS

HEADS

1. ALL POP-UP IRRIGATION HEADS DESIGNED ADJACENT TO CURBS OR PAVEMENT SHALL BE INSTALLED WITH A CLEARANCE OF 1 1/2" FROM THE EDGES OF ALL PAVED AREAS TO PROVIDE FOR EDGING AND MAINTENANCE OPERATIONS. HEADS INSTALLED ON SHRUB RISERS OR WITH THE TOP OF THE HEAD MORE THAN 1/2" ABOVE GRADE SHALL BE INSTALLED WITH A MINIMUM 6" CLEARANCE FROM PAVED AREAS.
2. ALL THREADED PIPE CONNECTIONS SHALL BE ASSEMBLED USING TEFLON THREAD SEALING TAPE.
3. ALL HEADS MOUNTED IN THE LAWN AREAS SHALL BE MOUNTED ON POLYETHYLENE PIPE FLEX SWING JOINTS COMPOSED OF MODEL #EHD1295-010 3/8" I.D. POLY PIPE FITTED WITH #EL-500-R (3/8" INSERT BY 1/2" M.P.T.) AND/OR #EL-750-R (3/8" INSERT BY 3/4" M.P.T.) ELBOWS.

PIPE

———— DENOTES ROUTE OF PR 200 PVC LATERAL PIPING. SIZE OF LATERAL PIPING SHALL BE AS NOTED BELOW. MINIMUM DEPTH OF COVER OVER LATERAL PIPING TO BE 12".

LATERAL PIPING SIZING SCHEDULE:

SUMMATION OF GALLONAGE DEMAND ON THE PARTICULAR BRANCHES OF PIPE WITHIN A CONTROL SECTION SHALL BE DETERMINED BY USING THE GPM FOR A NOZZLE BASED ON A 40 PSI BASE OF HEAD PRESSURE AND FULL RADIUS AT THAT PRESSURE AS REPORTED IN THE RAINBIRD 2013 IRRIGATION PRODUCTS CATALOG. PIPE SIZES FOR THE LATERALS SHALL BE AS FOLLOWS:

ZERO TO FIFTEEN GPM ACCUMULATED FLOW USE 1" PR 200 PVC PIPE
GREATER THAN FIFTEEN UP TO THIRTY-FIVE GPM USE 1-1/2" PIPE

FRICTION LOSS ALLOWANCES FOR THIS PROJECT HAVE BEEN DETERMINED USING THE ABOVE FLOW RANGES AND DEMANDS.

– – – – – – DENOTES ROUTE OF PR 200 MAIN LINE PIPING. SIZE OF MAINLINE PIPE TO BE 2". MINIMUM DEPTH OF COVER OVER MAINLINE PIPING TO BE 18".

1. PIPING SHALL BE PR 200 SOLVENT WELD PVC PIPE WITH SCHEDULE 40 PVC – SOLVENT WELD FITTINGS UNLESS OTHERWISE NOTED.
2. ALL PIPING RUNS SHALL BE "SNAKED" IN THE TRENCH DURING INSTALLATION TO PREVENT EXCESSIVE STRAIN DUE TO THERMAL EXPANSION OR CONTRACTION.
3. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGING PLANTINGS (INCLUDING ROOTS) DURING INSTALLATION OF THE IRRIGATION SYSTEM AND SHALL COORDINATE HIS EFFORTS WITH THE LANDSCAPER AND LANDSCAPE ARCHITECT SO AS TO OPTIMIZE THE EFFICIENCY AND THE AESTHETIC QUALITY OF THE INSTALLATION.

24 VAC CONTROL WIRING

1. ALL 24 V.A.C. CONTROL WIRING SHALL BE TWO WIRE WITH POLYETHYLENE PE DIRECT BURIAL INSULATION RATED FOR 300 V.A.C. VALVE "COMMON" WIRES SHALL HAVE WHITE INSULATION WHILE VALVE "HOT" WIRES SHALL HAVE INSULATION RED IN COLOR. THE "COMMON" WIRES SHALL BE #14 AWG. "HOT" WIRES SHALL BE #16 AWG. VALVE WIRING SHALL FOLLOW MAINLINE PIPING WHERE FEASIBLE AND SHALL BE LAID IN A COMMON TRENCHLINE WITH THE MAINLINE PIPING AND IN THE BOTTOM OF THE TRENCH. WIRING SHALL BE "BUNDLED" AND TAPED AT INTERVALS OF APPROXIMATELY TEN FEET. ALL WIRING SHALL BE INSTALLED IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS.
2. WIRE SPLICES SHALL BE KEPT TO AN ABSOLUTE MINIMUM. WHERE MAJOR CONCENTRATIONS OF SPLICES ARE NECESSARY SAID SPLICES SHALL BE PLACED IN A CARSON #910-1 VALVE BOX, WITH #910-2 COVER INSTALLED AT GRADE LEVEL. SPLICES AT VALVE LOCATIONS SHALL BE MADE INSIDE OF THE VALVE BOX. ALL SPLICE LOCATIONS SHALL BE NOTED ON THE AS BUILT PLAN.
3. WIRE RUNS SHALL BE INSTALLED WITH ENOUGH SLACK AND/OR OCCASIONAL EXPANSION LOOPS TO PREVENT EXCESSIVE STRAIN DUE TO THERMAL CONTRACTION.
4. ALL WIRE SPLICES SHALL BE MADE USING UL APPROVED DIRECT BURIAL CONNECTORS AND WATERPROOFING MATERIALS. ALL ELECTRICAL WORK SHALL BE INSTALLED ACCORDING TO CODE.

BACKFLOW PREVENTION

DENOTES THE LOCATION OF REDUCED PRESSURE BACKFLOW PREVENTER ASSEMBLY. THE BACKFLOW SHALL BE THE IRRIGATION CONTRACTOR'S RESPONSIBILITY. THE BACKFLOW SHALL BE 1" IN SIZE. THE BACKFLOW ASSEMBLY SHALL BE INSTALLED DOWNSTREAM OF THE IRRIGATION METER AS SHOWN ON THE LAYOUT. THE UNIT MUST BE INSTALLED IN ACCORDANCE WITH ALL LOCAL AND STATE CODE REQUIREMENTS AND SHALL HAVE APPROVED COVER.

WATER SUPPLY

M DENOTES APPROXIMATE LOCATION OF PROPOSED IRRIGATION METER. THE WATER METER SHALL BE THE GENERAL CONTRACTOR'S RESPONSIBILITY. THE METER SHALL BE 2" IN SIZE. SINCE THE WATER SUPPLY FOR THE SYSTEM SHALL BE POTABLE WATER, THE CONTRACTOR WILL BE REQUIRED TO INSTALL BACKFLOW PREVENTION DEVICE WHICH WILL BE LOCATED DOWNSTREAM OF THE IRRIGATION METER AS NOTED ON PLAN.

THE IRRIGATION SYSTEM SHALL BE CAPABLE OF DELIVERING 35 GPM (45 GPM FOR ROTORS) MAXIMUM WITH ONE STATION OPERATING WITH 40 PSI AT THE BASE OF THE HEAD FOR OPTIMUM PERFORMANCE OF THE IRRIGATION SYSTEM AS DESIGNED AND SPECIFIED.

NOTE:
IF THE REQUIRED GPM AND/OR PRESSURE CAN NOT BE OBTAINED THE IRRIGATION SYSTEMS WILL NEED TO BE RE-DESIGNED USING AN IN-LINE BOOSTER PUMP. IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO VERIFY ADEQUATE FLOW AND PRESSURE AT SITE BEFORE INSTALLATION OF THIS IRRIGATION SYSTEM.

IRRIGATION LINES ARE TO BE PLACED INSIDE THE PROPERTY LINE EXCEPT AS NOTED.

MAIN LINE TO BE LOCATED AT BACK OF CURB WHENEVER POSSIBLE.

HEAD RADII

1. THE IRRIGATION CONTRACTOR SHALL ADJUST THE RADIUS AND THROW OF EACH SPRINKLER HEAD TO PROVIDE OPTIMUM COVERAGE WHILE MINIMIZING OVERSPRAY ONTO HARDSCAPES OR BUILDINGS. ADJUST HEADS TO ELIMINATE DRY SPOTS.
2. APPROXIMATE ARC AND RADIUS OF INDIVIDUAL SPRINKLER HEAD COVERAGE SHALL BE AS ILLUSTRATED. INDIVIDUAL HEAD OR NOZZLE MODEL NUMBERS MAY BE DEPENDENT UPON THESE SPECIFIC CHARACTERISTICS.

VALVES

LOCATION OF ELECTRIC 24 V.A.C. REMOTE CONTROL VALVE WITH FLOW CONTROL FEATURE (RAINBIRD PGA SERIES). SIZE OF ZONE CONTROL VALVES TO BE NOTED ON THE IRRIGATION PLANS.

DENOTES LOCATION OF MAINLINE ISOLATION GATE VALVE. THE ISOLATION VALVE SHALL BE LINE SIZE AND SHALL BE INSTALLED WITH A VALVE BOX ASSEMBLY. NIBCO MODEL T18-1-1/2.

ALL IN-LINE REMOTE CONTROL VALVES SHALL BE INSTALLED IN CARSON VALVE BOXES WITH LIDS MOUNTED AT GRADE LEVEL. SINGLE VALVES MAY BE INSTALLED IN CARSON MODEL #910-1 VALVE BOX WITH #910-2 COVER, WHILE MULTIPLE VALVES (UP TO, TWO 1" VALVES OR ONE, 1-1/2") SHALL BE INSTALLED IN CARSON MODEL #1419-1 BOX WITH #1419-2 COVER.

DRIP IRRIGATION

DENOTES LOCATION OF RAINBIRD XFS SERIES ½" TUBING, 18" EMITTER SPACING INTERVALS AT 1 GPH EMITTERS INLINE. TUBING TO BE INSTALLED UNDER MULCH IN LANDSCAPED AREAS AS SHOWN ON THE IRRIGATION DRAWINGS.

DENOTES LOCATION OF RAINBIRD XFS SERIES ½" TUBING, 12" EMITTER SPACING INTERVALS AT 1 GPH EMITTERS INLINE. TUBING TO BE INSTALLED UNDER TURF AREAS AS SHOWN ON THE IRRIGATION DRAWINGS.

THE DRIP SHALL BE APPLIED AS FOLLOWS: FOR TREES, CONTRACTOR SHALL USE BLANK TUBING WITH FOUR (4) 1 GPH POINT SOURCE DRIPPERS PER TREE.

FOR SHRUBS, CONTRACTOR SHALL USE BLANK TUBING WITH ONE (1) GPH POINT SOURCE DRIPPER PER SHRUB.

FOR GROUNDCOVER, ½" P.E. TUBING, 12" EMITTER SPACING INTERVALS AT 1 GPH EMITTERS INLINE SHALL BE USED (RAINBIRD XFS-09-12 SERIES).

DENOTES LOCATION OF DRIP VALVE ASSEMBLY WHICH INCLUDES WITH RAINBIRD XCZ-075-PRF (CONTROL ZONE KIT).
FLOW CONTROL VALVES SHALL BE AS NOTED ON THE LAYOUT. ALL VALVES SHALL BE INSTALLED IN RAINBIRD VALVE BOXES (VB-STD) WITH LIDS MOUNTED AT GRADE LEVEL.

CONTROLLER

C – DENOTES THE LOCATION OF THE IRRIGATION CONTROLLER. THE CONTROLLER SHALL BE THE RAINBIRD ESP-LXME SERIES. ATTACH RAINBIRD RAIN SENSOR (WR2-RFC) PER MANUFACTURERS INSTRUCTIONS. THE CONTROLLER SHALL INCORPORATE 24 V.A.C. ELECTRIC REMOTE CONTROL VALVE OPERATION. THE CONTROLLER SHALL BE MOUNTED IN THE APPROXIMATE LOCATION SHOWN ON THE PLAN.

ALL ELECTRICAL CONNECTIONS AND INSTALLATIONS SHALL BE PERFORMED IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS.

ALL 120 VAC WIRING SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE ELECTRICAL CODE REQUIREMENTS.

NOTE: THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A 120 VAC POWER CIRCUIT HARD WIRED TO THE CONTROLLER LOCATION. THE POWER SOURCE SHALL BE CAPABLE OF SUPPORTING A 10 AMPERE LOAD AT 120 VAC.

SLEEVING

DENOTES LOCATION OF PROPOSED PVC SLEEVES FOR IRRIGATION PIPING. SIZE OF SLEEVES TO BE AS NOTED.

WHERE WIRE RUNS OCCUR, A SEPARATE PVC ELECTRICAL CONDUIT SLEEVE SHALL BE USED FOR 24 VAC WIRING PER ELECTRICAL CODE. SIZE OF PVC WIRE SLEEVES TO BE AS NOTED ON LAYOUT.

WHERE IRRIGATION PIPING CROSSES SIDEWALKS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLACING A SLEEVE 2 SIZES LARGER THAN THE PIPE THAT IS CROSSING. MINIMUM SLEEVE SIZE IS 2".

THE IRRIGATION CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE IRRIGATION SYSTEM WITH THE LANDSCAPE CONTRACTOR TO INSURE PROPER INSTALLATION OF BOTH THE IRRIGATION SYSTEM WITH THE LANDSCAPE AND HARDSCAPE.

NOTE: THE IRRIGATION SYSTEM IS DISPLAYED SCHEMATIC IN NATURE. THE IRRIGATION CONTRACTOR MAY BE REQUIRED TO MAKE MINOR ADJUSTMENTS IN THE FIELD. THESE MINOR ADJUSTMENTS SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER BUT SHALL BE MADE ONLY AFTER NOTIFICATION IS MADE TO THE OWNER OR HIS REPRESENTATIVE.

THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE SITE SO THAT HE IS AWARE OF ANY SPECIAL CONDITIONS WHICH EXIST THAT MAY AFFECT HIS BID PROPOSAL AND SHALL THEREAFTER BE RESPONSIBLE FOR ALL COSTS INCURRED BY HIMSELF IN RELATION TO THE INSTALLATION.

THIS DESIGN IS BASED ON THE SITE INFORMATION AND/OR DRAWINGS SUPPLIED BY THE CLIENT OF RECORD WITH DESIGN CRITERIA BEING SET BY THE CLIENT AND/OR PROJECT OWNER (I.E. AREA TO BE IRRIGATED, MANUFACTURER'S EQUIPMENT TO BE EMPLOYED, WATER SOURCE SUITABILITY, ELECTRICAL POWER AVAILABILITY FOR IRRIGATION SYSTEM USE, ETC.). KITA SUSTAINABLE DESIGNS, LLC BEARS NO RESPONSIBILITY OR LIABILITY FOR ANY ERRORS IN DESIGN OR APPLICATION WHICH MIGHT ARISE DUE TO INACCURACIES IN THE ABOVE REFERENCE INFORMATION SUPPLIED TO KITA SUSTAINABLE DESIGNS, LLC IN RELATION TO THIS SPECIFIC PROJECT UNLESS OTHERWISE NOTED.

THIS SYSTEM WAS DESIGNED USING RAINBIRD HEADS AND ROTORS. UTILIZING ANOTHER TYPE OF IRRIGATION SYSTEM MAY REQUIRE A REDESIGN OR LESS THAN OPTIMUM COVERAGE. IRRIGATION DESIGNER ASSUMES NO LIABILITY IF THE SYSTEM DOES NOT FUNCTION PROPERLY DUE TO SUBSTITUTION OF IRRIGATION SYSTEMS.

ZONE STATION NUMBER — 1 — 16.3 — GPM OR SQ. FT.
VALVE SIZE — 1"

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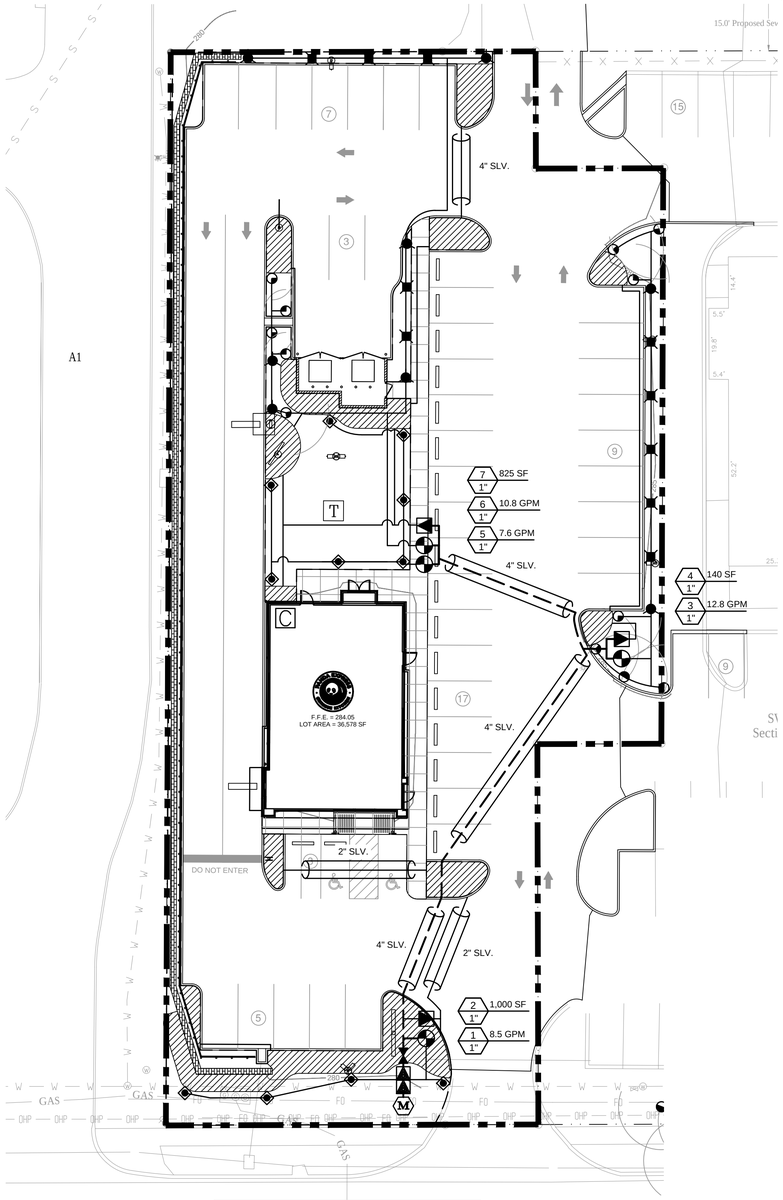

NORTH SERVICE ROAD

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

KITA designs
Beauty | Economy | Sustainability

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IRRIGATION PLAN

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