IRRIGATION GENERAL NOTES

1. THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO INSTALL THE IMPROVEMENTS SHOWN ON THE PLANS.
2. THE CONTRACTOR SHALL COORDINATE AS NECESSARY WITH THE GENERAL CONTRACTOR AND OWNER'S REPRESENTATIVE FOR SUCCESSFUL COMPLETION OF THIS WORK.
3. ALL IRRIGATION EQUIPMENT IS TO BE AS SPECIFIED OR APPROVED EQUAL PER THE DISCRETION OF THE OWNER'S REPRESENTATIVE. THE CONTRACTOR ASSUMES ALL LIABILITY ASSOCIATED WITH THE MODIFICATION OF THE IRRIGATION SYSTEM DESIGN WITHOUT NOTIFYING THE OWNER'S REPRESENTATIVE.
4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONDUCT A THOROUGH SITE INSPECTION AND REVIEW OF THE PROJECT CONSTRUCTION DOCUMENTS INCLUDING BUT NOT LIMITED TO THE FOLLOWING: LANDSCAPE PLAN, UTILITY PLAN, CIVIL UTILITY PLAN, ARCHITECTURE PLAN, GRADING AND DRAINAGE PLAN AND ALL OTHER ASSOCIATED PLANS AND SPECIFICATIONS THAT AFFECT THIS WORK PRIOR TO START OF WORK. IF THE AND CONTRACTOR OBSERVES ANY DISCREPANCIES AMONG THE CONSTRUCTION DOCUMENTS AND THE EXISTING CONDITIONS ON SITE, IT IS THEIR RESPONSIBILITY TO CONTACT THE OWNER'S REPRESENTATIVE IMMEDIATELY.
5. THE CONTRACTOR MUST VERIFY THE LOCATION OF ALL PUBLIC AND PRIVATE UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. IF THE CONTRACTOR FAILS TO DO SO AND DAMAGES ANY UNDERGROUND UTILITIES. THE CONTRACTOR SHALL PAY FOR ANY REPAIR WORK ASSOCIATED WITH SAID DAMAGES.
6. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE ADEQUATE VERTICAL AND HORIZONTAL SEPARATION BETWEEN ALL IRRIGATION DISTRIBUTION LINES AND ALL UTILITIES (EXISTING OR PROPOSED), CONDUIT, STORM WATER COMPONENTS, DRAINS, ETC.
7. THE CONTRACTOR SHALL CONFORM TO ALL LOCAL AND STATE REGULATIONS AND INSTALL THE IRRIGATION SYSTEM AND ITS COMPONENTS PER MANUFACTURER'S SPECIFICATIONS. THE CONTRACTOR SHALL OBTAIN AND PROVIDE PAYMENT FOR ALL PERMITS REQUIRED BY ANY LOCAL AND STATE AGENCIES AND UTILITY COMPANIES HAVING JURISDICTION OVER THIS SITE.
8. THE CONTRACTOR IS RESPONSIBLE FOR SCHEDULING AND PAYING FOR CERTIFICATION OF THE BACKFLOW PREVENTER BY A STATE CERTIFIED INSPECTOR. THE CONTRACTOR SHALL PROVIDE CERTIFICATES TO OWNER'S REPRESENTATIVE PRIOR TO PROJECT ACCEPTANCE.
9. IT IS THE INTENT OF THIS DESIGN THAT ALL IRRIGATION EQUIPMENT BE INSTALLED WITHIN LANDSCAPE AREAS AND WITHIN THE PROJECT LIMITS. EQUIPMENT SHOWN OUTSIDE OF THESE LIMITS IS SHOWN FOR GRAPHIC CLARITY ONLY. IF THERE IS A QUESTION REGARDING THE LOCATION OF ANY COMPONENT OF THE IRRIGATION SYSTEM, IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE OWNER'S REPRESENTATIVE. IF THE CONTRACTOR NEGLECTS TO NOTIFY THE NECESSARY PARTIES, THE CONTRACTOR SHALL PAY FOR ANY REPLACEMENT OR MODIFICATION TO ENSURE PROPER LOCATION AND OPERATION OF THE IRRIGATION SYSTEM AND ITS COMPONENTS.
10. ALL IRRIGATION DISTRIBUTION LINES AND EQUIPMENT INCLUDING BUT NOT LIMITED TO, MAINLINE, LATERALS, SPRAY HEADS, DRIP EMITTERS SHALL BE KEPT A MINIMUM DISTANCE OF 6' AWAY FROM ALL BUILDING AND WALL FOUNDATIONS, OR AS STIPULATED IN THE GEOTECHNICAL REPORT , WHICHEVER IS GREATER. EQUIPMENT MAY BE SHOWN IN THIS AREA FOR GRAPHIC CLARITY. COORDINATE ALL REQUIRED SETBACKS WITH OWNER'S REPRESENTATIVE PRIOR TO START OF WORK.
11. EACH VALVE SHALL BE INSTALLED IN A SEPARATE VALVE BOX AS DETAILED. VALVE BOX LID COLOR TO BE GREEN. INSTALL FLUSH TO FINISH GRADE AND PER CONSTRUCTION DETAILS. DO NOT INSTALL IN PAVED AREAS OR IN BOTTOMS OF DRAINAGE SWALES/BASINS.
12. CONTRACTOR SHALL INSTALL DETECTABLE MARKING TAPE OR #14g DIRECT BURY TRACER WIRE IN ALL PRESSURE MAINLINE TRENCHES. SEE IRRIGATION DETAILS FOR MORE INFORMATION.
13. PLANT MATERIAL LOCATIONS TAKE PRECEDENCE OVER ROUTING OF IRRIGATION PIPING. COORDINATE INSTALLATION OF IRRIGATION EQUIPMENT SO THAT IT DOES NOT INTERFERE WITH THE PLANTING OF TREES OR OTHER LANDSCAPE MATERIAL.
14. THE CONTRACTOR SHALL MARK THE LOCATION OF THE MAINLINE, CONTROL VALVES, GATE VALVES AND HEAD LAYOUT OF A REPRESENTATIVE SPRAY ZONE. SCHEDULE A REVIEW WITH THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
15. INSTALL SCH. 40 BALL VALVE AND OPERATIONAL INDICATOR AT ENDS OF ALL DRIP LATERALS AS DETAILED. FLUSH ALL LATERALS THOROUGHLY BEFORE INSTALLING EMITTERS AND BUBBLERS.
16. CONTRACTOR SHALL FINE TUNE AND ADJUST NOZZLE DIRECTION AND RADIUS TO REDUCE OVERSPRAY ONTO PAVING OR HARD SURFACES.
17. CONTRACTOR SHALL INSTALL A QUICK COUPLER IN 10" VALVE BOX AT THE END OF ALL BRANCHES OF THE MAINLINE, OR AS SHOWN ON PLANS, FOR WINTERIZATION AND FLUSHING OF MAINLINE.
18. THE CONTRACTOR SHALL PERFORM A PRESSURE TEST ON ALL MAINLINES. CONTRACTOR SHALL PRESSURIZE MAINLINES TO 120 PSI AND MAINTAIN PRESSURE AT 120 PSI FOR A MINIMUM CONTINUOUS PERIOD OF TWO (2) HOURS TO ACHIEVE FINAL ACCEPTANCE.
19. THIS IRRIGATION SYSTEM HAS BEEN DESIGNED TO OPERATE DURING A THREE(3) NIGHT PER WEEK, SIXTEEN(16) HOURS PER NIGHT WATERING WINDOW. DRIP IRRIGATION ZONES MAY BE ALLOWED TO RUN ON A SEPARATE SCHEDULE FROM THIS WATER WINDOW DEPENDING JURISDICTION. LANDSCAPE ESTABLISHMENT WILL REQUIRE INCREASED IRRIGATION WATER FOR DURATION OF THE ESTABLISHMENT PERIOD AND MAY REQUIRE TWICE THE AMOUNT OF WATER AS ESTABLISHED PLANT MATERIAL. THE CONTRACTOR SHALL COORDINATE WATERING SCHEDULES AND APPLICATION RATES WITH THE OWNER'S REPRESENTATIVE PRIOR TO FINAL ACCEPTANCE.
20. THE DESIGN IS BASED ON THE FOLLOWING PROJECTED PEAK SEASON WEEKLY APPLICATION RATES AFTER ESTABLISHMENT. THESE FIGURES WILL NEED TO BE ADJUSTED DUE TO SEASONAL CHANGES AND VARIABLE WEATHER CONDITIONS.
    - FESCUE/BLUEGRASS BLEND TURF 1.75" PER WEEK PEAK SEASON
    - BUFFALO BLUE GRAMA/ DOG TUFF, TAHOMA 31 1.00" PER WEEK PEAK SEASON
    - TREE, SHRUB, AND PERENNIAL PLANT MATERIAL 1.00" PER WEEK PEAK SEASON
    - NATIVE DROUGHT TOLERANT SEED MIX 0.75" PER WEEK PEAK SEASON
21. THE CONTRACTOR SHALL PROVIDE A SEASONAL MAINTENANCE SCHEDULE WHICH SHALL BEGIN ON APRIL 15TH AND END ON OCTOBER 15TH TO ENSURE THE EFFICIENCY AND LONGEVITY OF THE IRRIGATION SYSTEM. THE MAINTENANCE SCHEDULE SHALL INCLUDE BUT IS NOT LIMITED TO THE FOLLOWING LIST OF BEST MANAGEMENT PRACTICES:
    - CHECK HEADS FOR COVERAGE AND LEAKAGE.
    - CHECK CONTROLLER PROGRAMMING AND ADJUST FOR SEASONAL CHANGES AS NECESSARY.
    - VERIFY THAT THE WATER SUPPLY AND PRESSURE ARE AS STATED IN THE DESIGN.
    - CERTIFY THE BACKFLOW PREVENTION DEVICE AND SUBMIT TEST RESULTS TO THE PROPERTY MANAGER.
    - PERIODICALLY VERIFY THE THE SENSORS IN THE IRRIGATION SYSTEM ARE OPERATING CORRECTLY.
    - WINTERIZATION AND SPRING START UP PROCEDURES.

IRRIGATION POINT OF CONNECTION NOTES

1. POINT OF CONNECTION: THERE IS ONE (1) POINT OF CONNECTION ON EACH LOT UNLESS OTHERWISE SPECIFIED.
   POC #1 : 3/4" TYPE K COPPER (DEDICATED IRRIGATION) WATER SERVICE LINE ROUTED FROM RESIDENTIAL WATER SUPPLY (UPSTREAM OF DOMESTIC BACKFLOW PREVENTION UNIT) TO THE EXTERIOR LANDSCAPE AREA (REFER TO PLANS).
    - CONTRACTOR TO LOCATE AND CONNECT TO THE DEDICATED IRRIGATION WATER SERVICE WITH TYPE K COPPER AND EXTEND TO PRESSURE VACUUM BREAKER (PVB) OR REDUCED PRESSURE ZONE ASSEMBLY (RPZ) IF SITE TOPOGRAPHY CONDITIONS PREVENT THE USE OF PVB (SEE IRRIGATION DETAIL #4). EXTEND COPPER PIPING 24" BELOW FINISH GRADE AND INSTALL MANUAL DRAIN VALVE; TRANSITION TO AND EXTEND CLASS 200 PVC TO THE MASTER VALVE, FLOW SENSOR, AND MAINLINE VALVES AS SHOWN.
    - ALL PIPING FROM DEDICATED IRRIGATION WATER SUPPLY THROUGH DRAIN VALVE DOWNSTREAM OF THE BACKFLOW PREVENTER SHALL BE THE SAME SIZE.
    - THE CONTRACTOR SHALL CONFORM TO ALL STATE AND LOCAL CODES, OBTAIN AND PROVIDE PAYMENT FOR ALL PERMITS ASSOCIATED WITH THIS WORK. FINAL LOCATION OF THE BACKFLOW PREVENTION UNIT SHALL BE APPROVED BY LICENSED PLUMBER PRIOR TO INSTALLATION.
2. CONTROLLER LOCATION: THERE IS ONE (1) CONTROLLER PER LOT.
   CONTROLLER A : WALL MOUNTED CONTROLLER TO BE LOCATED ON GARAGE WALL (INTERIOR OR EXTERIOR) AS PREFERRED. 120V ELECTRICAL AND IRRIGATION STATION WIRE CONDUIT TO BE COORDINATED PRIOR TO CONSTRUCTION.
    - CONTROLLER SHALL BE PROGRAMMED TO RUN MULTIPLE VALVES AT ONE TIME WITH A MAXIMUM TOTAL OF 10 GPM .
    - CONTROLLER TO BE MOUNTED PER DETAILS AND MANUFACTURER'S SPECIFICATIONS.
    - CONTRACTOR TO COORDINATE WITH OWNER'S REPRESENTATIVE AND ELECTRICAL PLANS FOR POWER SERVICE. ALL ELECTRICAL EQUIPMENT AND POWER CONNECTION INSTALLATION SHALL CONFORM TO ALL LOCAL CODES. INSTALL A LINE VOLTAGE SURGE DEVICE (INTERMATIC AG2401C3/ OR SQUARE D SDSA1175) FOR 120V IN A JUNCTION BOX PRIOR TO CONTROLLER.
    - RAIN/FREEZE SENSOR: MOUNT THE RAIN SENSOR ON BUILDING EAVE IN PROXIMITY TO THE CONTROLLER. THE SENSOR SHALL BE MOUNTED IN A LOCATION IN FULL SUN AND OPEN TO RAINFALL. SENSOR SHALL BE NO MORE THAN 200' FROM WIRELESS RECEIVER. MOUNT WIRELESS RECEIVER ON OR ADJACENT TO THE IRRIGATION CONTROLLER.
3. SYSTEM PRESSURE: THE SYSTEM HAS BEEN DESIGNED PER THE FOLLOWING SPECIFICATIONS: REQUIRED MINIMUM STATIC PRESSURE OF 65 PSI AND MAXIMUM SAFE VELOCITY OF 5 FPS IN ANY PVC PIPE AND 7.5 FPS IN ANY COPPER PIPE.
    - THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE PRESSURE IN THE FIELD AT THE POINT OF CONNECTION BEFORE CONSTRUCTION BEGINS AND FOR NOTIFYING THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCY BETWEEN THE DESIGN PRESSURE OF THE SYSTEM AND THE MEASURED PRESSURE IN THE FIELD. IF THE CONTRACTOR FAILS TO NOTIFY OWNER'S REPRESENTATIVE OF SUCH DISCREPANCIES, THEN THE CONTRACTOR ASSUMES ALL LIABILITY AND COSTS ASSOCIATED WITH SYSTEM MODIFICATIONS TO ACCOMMODATE THE ACTUAL PRESSURE.
4. FLOW SENSOR: SENSOR REQUIRES A MINIMUM FLOW FOR PROPER READINGS. MULTIPLE ZONES MAY BE REQUIRED TO RUN SIMULTANEOUSLY TO ACHIEVE THE MINIMUM FLOWS REQUIRED. CONTRACTOR TO SET 'K' VALUES PER MANUFACTURER.
    - FLOW SENSOR REQUIRES A MINIMUM FLOW OF 3 GPM.

CONVENTIONAL WIRE NOTES

1. GROUNDING FOR THE IRRIGATION CONTROLLER SHALL BE INSTALLED AND COORDINATED WITH THE RESIDENTIAL BUILDING GROUND IF ACCESIBLE, OR PER THE MANUFACTURER'S SPECIFICATIONS AND PER THE AMERICAN SOCIETY OF IRRIGATION CONSULTANTS GUIDELINE 100-2002 FOR EARTH GROUNDING ELECTRONIC EQUIPMENT IN IRRIGATION SYSTEMS FOUND AT www.asic.org/Design_Guides.aspx. FOR TECHNICAL SUPPORT REGARDING THE IRRIGATION CONTROLLER OR GROUNDING PLEASE CONTACT THE MANUFACTURER.
2. NEW CONTROLLER WIRE SHALL BE 14AWG (18AWG MIN.) UL APPROVED WIRE. CONTRACTOR SHALL VERIFY EXISTING CONNECTIONS AND USE UL APPROVED WIRE STRIPPER AND 3M DBY R-6 WATERPROOF CONNECTIONS (OR APPROVED EQUAL) AT ALL NEW SPLICES AND CONNECTION POINTS. CONTRACTOR TO INSTALL RED ELECTRIC MARKING TAPE WITH CONTROLLER WIRE THAT IS NOT WITH MAINLINE. WIRES SHALL BE BUNDLED TOGETHER BY BLACK ELECTRICAL TAPE EVERY 10 L.F.
3. CONTRACTOR SHALL HAVE 30" OF SPARE CONTROL WIRE PRESENT AT ALL SPLICE POINTS. SPARE WIRE SHALL BE COILED IN A NEAT AND ORDERLY FASHION AT EACH SLICE POINT.
4. CONTRACTOR SHALL EXTEND TWO (2) SPARE CONTROL WIRES, AND ONE (1) SPARE COMMON WIRE AT THE END OF THE MAINLINE. CONTRACTOR SHALL INSTALL ONE (1) WIRE PULL BOX AT EACH END OF THE MAINLINE.

WIRE	WIRE COLOR
COMMON WIRE	WHITE
CONTROL WIRE	RED
FLOW SENSOR	BLUE
SPARE WIRE	YELLOW

SLEEVING COORDINATION NOTES

1. INSTALLATION OF IRRIGATION SLEEVING IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. THE GENERAL CONTRACTOR SHALL COORDINATE WITH THE IRRIGATION CONTRACTOR FOR LOCATION AND SIZING OF SLEEVES PRIOR TO THE START OF CONSTRUCTION.
2. SLEEVES SHALL BE INSTALLED PRIOR TO THE START OF PAVING OPERATIONS.
3. THE CONTRACTOR SHALL SLEEVE ALL IRRIGATION DISTRIBUTION LINES, VALVE CONTROL WIRES AND COMMUNICATION WIRES UNDER ALL PAVED SURFACES, WALL FOOTERS, DRAINAGE CHANNELS, INLETS, CATCH BASINS, ETC.
4. ALL SLEEVES SHALL EXTEND A MINIMUM OF 12" BEYOND EDGE OF ALL OBSTRUCTIONS. NO TEES, ELLS OR OTHER TURNS IN PIPING SHALL BE LOCATED UNDER ANY OBSTRUCTIONS.
5. EACH PIPE SHALL BE IN A SEPARATE SLEEVE. WIRES SHALL BE IN A SEPARATE PIPE UNDER ALL PAVED SURFACES.
6. SLEEVING SHALL BE INSTALLED PER THE SIZES AND QUANTITIES SHOWN ON THE PLANS BASED ON THE CHART BELOW.

PIPING	REQUIRED SLEEVE SIZE
MAINLINE PIPING	(2) - 2" CLASS 200 PVC
LATERAL PIPING	2X NOMINAL DIAMETER OF LATERAL
CONTROL WIRES	2" CLASS 200 PVC

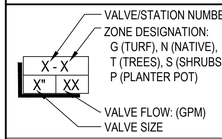
EXISTING TREE NOTES

1. ALL TRENCHING OR OTHER WORK UNDER LIMB SPREAD OF ANY AND ALL PLANT MATERIAL SHALL BE DONE BY HAND, BORING OR BY OTHER METHODS SO AS TO PREVENT DAMAGE TO LIMBS OR BRANCHES.
2. WHERE IT IS NECESSARY TO EXCAVATE ADJACENT TO EXISTING TREES USE ALL POSSIBLE CARE TO AVOID INJURY TO TREES AND TREE ROOTS.
3. EXCAVATION AND TRENCHING, IN AREAS WHERE 2" AND LARGER ROOTS OCCUR, SHALL BE DONE BY HAND.
4. ROOTS 2" OR LARGER IN DIAMETER SHALL BE TUNNELED UNDER AND SHALL BE HEAVILY WRAPPED WITH BURLAP TO PREVENT SCARRING OR EXCESSIVE DRYING.
5. ROOTS SMALLER THAN 2" IN DIAMETER SHALL BE HAND TRIMMED AT THE WALL OF TRENCH, MAKING CLEAN CUTS THROUGH ROOTS.
6. TRENCHES ADJACENT TO TREES SHALL BE CLOSED WITHIN 24 HOURS, AND WHEN THIS IS NOT POSSIBLE, THE SIDE OF THE TRENCH ADJACENT TO TREE SHALL BE KEPT SHADED WITH MOISTENED BURLAP OR CANVAS UNTIL BACKFILL.

IRRIGATION SCHEDULE

SYMBOL	DESCRIPTION	MODEL NO. DESCRIPTION	DETAIL #	AND SHEET
A	IRRIGATION CONTROLLER	**RAIN BIRD ESP-ME3 SERIES + LNK2WIFI MODULE (+ ESPSM# EXPANSION MODULES AS REQUIRED)** 120VAC POWER REQUIRED - SEE PLANS FOR LOCATION	1	1
	RAIN SENSOR	**RAIN BIRD WR2-RFC** REFER TO CONTROLLER NOTES	2	1
	BACKFLOW PREVENTER	**FEBCO 3/4" 765 PVB (INSTALLED 12" ABOVE HIGHEST OUTLET*)** *UTILIZE 3/4" FEBCO 825YA IF SITE TOPOGRAPHY CONDITIONS PREVENT THE USE OF PVB	3	1
	MANUAL DRAIN VALVE	**MATCO-NORCA 1/2" 201X** INSTALLED IN AEP 910L-1G2G VALVE BOX	4	1
M	MASTER VALVE	**RAIN BIRD 100PEB-PRS** WITH 14AWG WIRE BACK TO CONTROLLER, INSTALLED IN AEP 1015-1G2G VALVE BOX	5	1
FS	FLOW SENSOR	**RAIN BIRD FG-100** WITH 14 AWG WIRE BACK TO CONTROLLER, INSTALLED IN AEP 1015-1G2G VALVE BOX	6	1
	QUICK COUPLER	**RAIN BIRD 3-RC** INSTALLED IN AEP 910L-1G2G VALVE BOX	7	1
	ISOLATION GATE VALVE	**MATCO-NORCA 514TX** MATCH LINE SIZE. INSTALLED IN AEP 910L-1G2G VALVE BOX	8	1
	TURF VALVE ASSEMBLY	**RAIN BIRD 100-DV SERIES** WITH SCH 40 BALL VALVE, INSTALLED IN AEP 1015-1G2G VALVE BOX.	1	2
	DRIP VALVE ASSEMBLY	**RAIN BIRD XCZ-075-PRF (0.2 - 5.0 GPM) AND XCZ-100-PRF (3.0-15 GPM)** WITH SCH 40 BALL VALVE, INSTALLED IN AEP 1320-1G2G VALVE BOX, SIZED PER PLAN	2	2
STRIP / R-VAN14 / R-VAN18 / R-VAN24	TURF ROTARY	**RAIN BIRD 1806-SAM-P45 WITH R-VAN SERIES NOZZLE** NOZZLE PER PLAN	3	2
Q T H F	TURF SPRAY (FIXED)	**RAIN BIRD 1806-SAM-PRS30 WITH MPR-SERIES NOZZLE** NOZZLE PER PLAN	3	2
	TURF SPRAY (ADJUSTABLE)	**RAIN BIRD 1806-SAM-PRS30 WITH HE-VAN SERIES NOZZLE** NOZZLE PER PLAN	3	2
	NATIVE ROTOR	**RAIN BIRD 5012-SAM-R** NOZZLE PER PLAN: MINIMUM PRESSURE REQUIRED 45 PSI	4	2
R-VAN STRIP / R-VAN14 / R-VAN18 / R-VAN24	NATIVE SEED ROTARY	**RAIN BIRD 1812-S-P45 WITH R-VAN SERIES NOZZLE** NOZZLE PER PLAN	5	2
Q T H F	NATIVE SEED SPRAY (FIXED)	**RAIN BIRD 1812-S-P30 WITH MPR-SERIES NOZZLE** NOZZLE PER PLAN	5	2
	NATIVE SEED SPRAY (ADJ)	**RAIN BIRD 1812-S-P30 WITH HE-VAN SERIES NOZZLE** NOZZLE PER PLAN	5	2
	TREE DRIP	**(2) CONCENTRIC RINGS OF RAIN BIRD XFS-09-12-CV DRIPLINE**	6	2
	PLANTER POT ASSEMBLIES	**TRANSITION TO RAIN BIRD XBT-10-6 MULTI-OUTLET EMITTER** COIL DRIPLINE AROUND PLANTER	5	3
	SLEEVING	**CLASS 200 PVC BE** REFER TO SLEEVING NOTES	7	2
	PVC MAINLINE	**CLASS 200 PVC BE** SIZE: 1" UNLESS OTHERWISE NOTED	8	2
	PVC TURF LATERAL	**CLASS 200 PVC BE** SIZE: 1" MINIMUM UNLESS OTHERWISE NOTED	8	2
	PVC TREE LATERAL	**CLASS 200 PVC BE** SIZE: 1" UNLESS OTHERWISE NOTED	8	2
	DRIP LATERAL	**UV RESISTANT POLYETHYLENE** SIZE: 3/4" MINIMUM UNLESS OTHERWISE NOTED	8	2
	FLUSH END CAP	**SCH 40 BALL VALVE WITH HUNTER ECO-OPERATIONAL INDICATOR** INSTALLED IN AEP 608L-1B2G VALVE BOX	6	3

VALVE CALLOUT

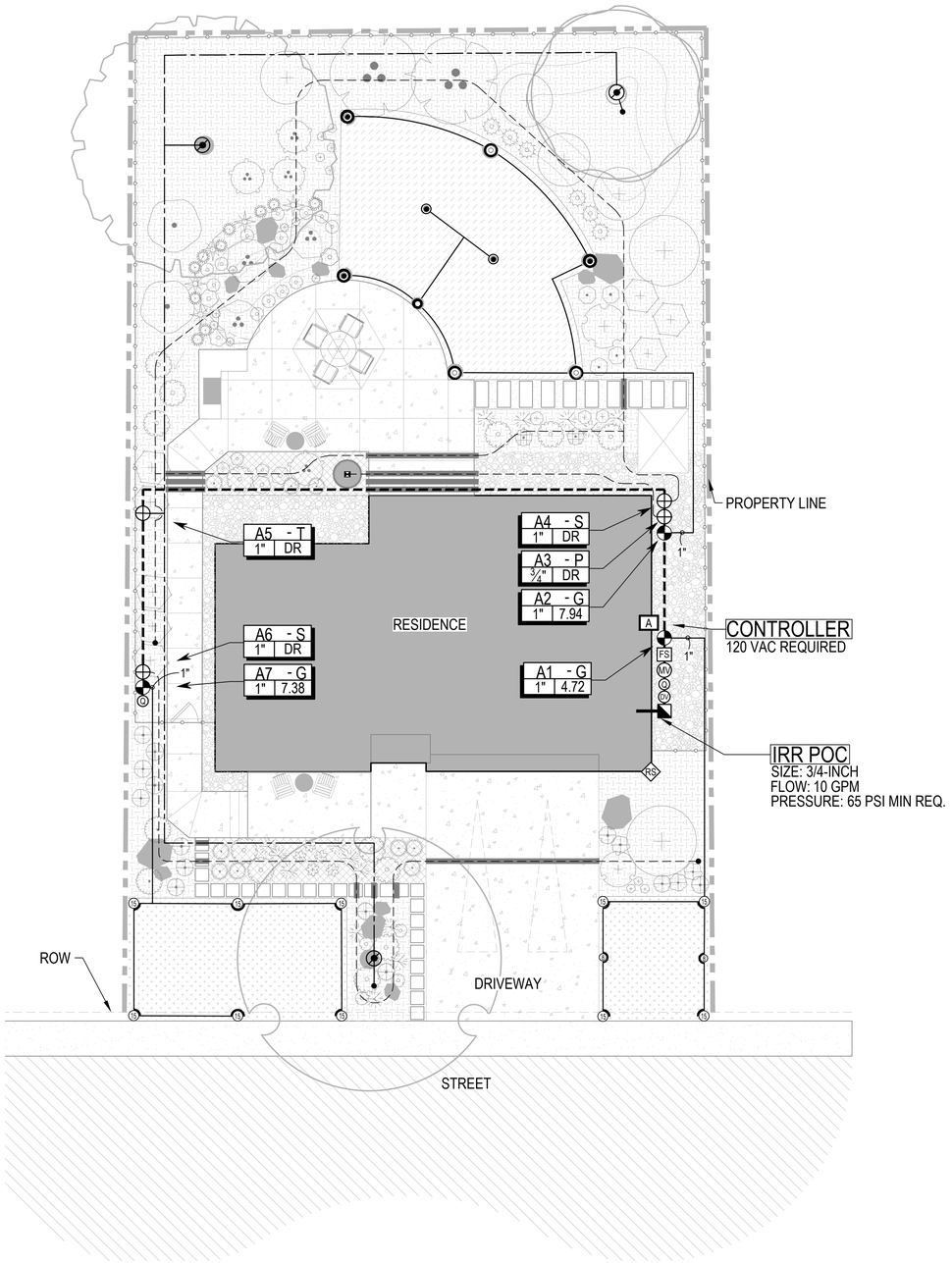


EMITTER SCHEDULE

PLANT TYPE	EMITTER	QTY.	TOTAL GPH
PERENNIAL / GRASSES	0.5 GPH	TWO EACH	1.0 GPH
DECIDUOUS SHRUBS	1.0 GPH	TWO EACH	2.0 GPH
EVERGREEN SHRUBS	1.0 GPH	TWO EACH	2.0 GPH
DECIDUOUS TREE	1.0 GPH	EIGHT EACH	8.0 GPH
EVERGREEN TREE	1.0 GPH	EIGHT EACH	8.0 GPH
TREES IN NATIVE	(2) CONCENTRIC DRIP RINGS EACH		

EMITTER NOTES

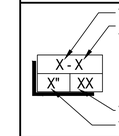
1. ALL PLANT MATERIAL SHALL BE IRRIGATED WITH RAIN BIRD XB SERIES PRESSURE COMPENSATING EMITTERS.
2. EMITTER SCHEDULE IS FOR REFERENCE ONLY. THE CONTRACTOR SHALL ADJUST EMITTER AND NUMBER OF EMITTERS BASED ON THE NEEDS OF INDIVIDUAL PLANTS OR PLANT HYDROZONES.
3. 1/4" DISTRIBUTION TUBING NOT TO EXCEED 8' IN LENGTH.
4. RAIN BIRD DBC-025 DIFFUSER BUG CAP AND TS-025 STAKE ON ALL 1/4" DISTRIBUTION TUBING EMISSION POINTS.
5. REFER TO DRIP IRRIGATION DETAILS #1-5, ON DETAIL SHEET 3



IRRIGATION SCHEDULE

SYMBOL	DESCRIPTION	MODEL NO. DESCRIPTION	DETAIL #	AND SHEET
A	IRRIGATION CONTROLLER	**RAIN BIRD ESP-ME3 SERIES + LNK2WIFI MODULE (+ ESPSM# EXPANSION MODULES AS REQUIRED)** 120VAC POWER REQUIRED - SEE PLANS FOR LOCATION	1	1
	RAIN SENSOR	**RAIN BIRD WR2-RFC** REFER TO CONTROLLER NOTES	2	1
	BACKFLOW PREVENTER	**FEBCO 3/4" 765 PVB (INSTALLED 12" ABOVE HIGHEST OUTLET*)** *UTILIZE 3/4" FEBCO 825YA IF SITE TOPOGRAPHY CONDITIONS PREVENT THE USE OF PVB	3	1
MV	MANUAL DRAIN VALVE	**MATCO-NORCA 1/2" 201X** INSTALLED IN AEP 910L-1G2G VALVE BOX	4	1
MV	MASTER VALVE	**RAIN BIRD 100PEB-PRS** WITH 14AWG WIRE BACK TO CONTROLLER, INSTALLED IN AEP 1015-1G2G VALVE BOX	5	1
FS	FLOW SENSOR	**RAIN BIRD FG-100** WITH 14 AWG WIRE BACK TO CONTROLLER, INSTALLED IN AEP 1015-1G2G VALVE BOX	6	1
	QUICK COUPLER	**RAIN BIRD 3-RC** INSTALLED IN AEP 910L-1G2G VALVE BOX	7	1
	ISOLATION GATE VALVE	**MATCO-NORCA 514TX** MATCH LINE SIZE. INSTALLED IN AEP 910L-1G2G VALVE BOX	8	1
	TURF VALVE ASSEMBLY	**RAIN BIRD 100-DV SERIES** WITH SCH 40 BALL VALVE, INSTALLED IN AEP 1015-1G2G VALVE BOX.	1	2
	DRIP VALVE ASSEMBLY	**RAIN BIRD XCZ-075-PRF (0.2 - 5.0 GPM) AND XCZ-100-PRF (3.0-15 GPM)** WITH SCH 40 BALL VALVE, INSTALLED IN AEP 1320-1G2G VALVE BOX, SIZED PER PLAN	2	2
STRIP R-VAN14 R-VAN18 R-VAN24	TURF ROTARY	**RAIN BIRD 1806-SAM-P45 WITH R-VAN SERIES NOZZLE** NOZZLE PER PLAN	3	2
Q T H F	TURF SPRAY (FIXED)	**RAIN BIRD 1806-SAM-PRS30 WITH MPR-SERIES NOZZLE** NOZZLE PER PLAN	3	2
	TURF SPRAY (ADJUSTABLE)	**RAIN BIRD 1806-SAM-PRS30 WITH HE-VAN SERIES NOZZLE** NOZZLE PER PLAN	3	2
	TREE DRIP	**(2) CONCENTRIC RINGS OF RAIN BIRD XFS-09-12-CV DRIPLINE**	6	2
	PLANTER POT ASSEMBLIES	**TRANSITION TO RAIN BIRD XBT-10-6 MULTI-OUTLET EMITTER** COIL DRIPLINE AROUND PLANTER	5	3
	SLEEVING	**CLASS 200 PVC BE** REFER TO SLEEVING NOTES	7	2
	PVC MAINLINE	**CLASS 200 PVC BE** SIZE: 1" UNLESS OTHERWISE NOTED	8	2
	PVC TURF LATERAL	**CLASS 200 PVC BE** SIZE: 1" MINIMUM UNLESS OTHERWISE NOTED	8	2
	PVC TREE LATERAL	**CLASS 200 PVC BE** SIZE: 1" UNLESS OTHERWISE NOTED	8	2
	DRIP LATERAL	**UV RESISTANT POLYETHYLENE** SIZE: 3/4" MINIMUM UNLESS OTHERWISE NOTED	8	2
	FLUSH END CAP	**SCH 40 BALL VALVE WITH HUNTER ECO-OPERATIONAL INDICATOR** INSTALLED IN AEP 608L-1B2G VALVE BOX	6	3

VALVE CALLOUT



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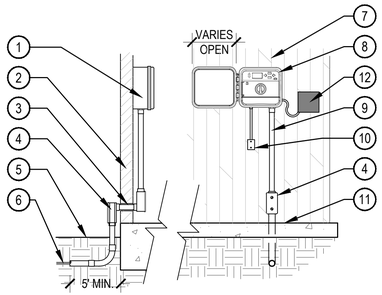
EVERGREEN TREE	1.0 GPH	EIGHT EACH	8.0 GPH
TREES IN NATIVE	(2) CONCENTRIC DRIP RINGS EACH		

EMITTER NOTES

1. ALL PLANT MATERIAL SHALL BE IRRIGATED WITH RAIN BIRD XB SERIES PRESSURE COMPENSATING EMITTERS.
2. EMITTER SCHEDULE IS FOR REFERENCE ONLY. THE CONTRACTOR SHALL ADJUST EMITTER AND NUMBER OF EMITTERS BASED ON THE NEEDS OF INDIVIDUAL PLANTS OR PLANT HYDROZONES.
3. 1/4" DISTRIBUTION TUBING NOT TO EXCEED 8' IN LENGTH.
4. RAIN BIRD DBC-025 DIFFUSER BUG CAP AND TS-025 STAKE ON ALL 1/4" DISTRIBUTION TUBING EMISSION POINTS.
5. REFER TO DRIP IRRIGATION DETAILS #1-5, ON DETAIL SHEET 3

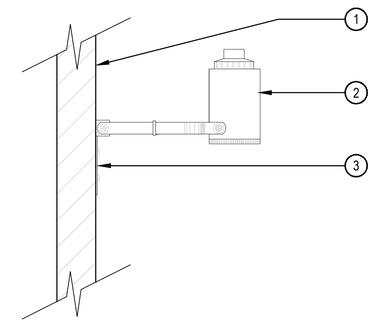


1. IRRIGATION CONTROLLER
2. BUILDING WALL
3. PROVIDE THROUGH WALL CONDUIT
4. CONDUIT 90° JUNCTION BOX THROUGH WALL (BOTH SIDES)
5. FINISH GRADE
6. UF DIRECT BURIAL WIRE TO REMOTE CONTROL VALVES
7. BUILDING WALL
8. WALL MOUNT CONTROLLER AT EYE-LEVEL INSTALL PER MANUFACTURER'S RECOMMENDATIONS
9. SCH. 80 PVC OR RIGID STEEL CONDUIT FOR CONTROL WIRES AND GROUNDING
10. 120 VAC POWER SUPPLY JUNCTION BOX
11. FINISH FLOOR
12. MOUNT SENSOR RECEIVER ADJACENT TO CONTROLLER

NOTE:
1. ALL ELECTRICAL MATERIALS SHALL BE U.L. APPROVED FOR USE AS SHOWN.
2. ALL ELECTRICAL AND CONTROLLER WIRE TO BE INSTALLED PER LOCAL CODE AND MANUFACTURER'S SPECIFICATIONS.
3. GROUND CONTROLLER TO BUILDING PER LOCAL CODE AND/OR MANUFACTURER'S SPECIFICATIONS.
4. PROVIDE WATERPROOF SEALANT FOR ALL CONDUIT AND WIRE ACCESS POINTS.

1 CONTROLLER WALL MOUNT INTERIOR/EXTERIOR

SCALE: NTS

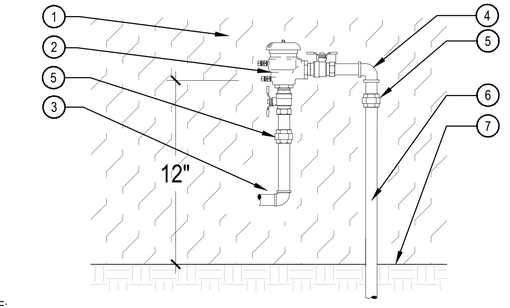


1. SUITABLE FASCIA, WALL, OR GUTTER MOUNT. MOUNT IN LOCATION WHERE SENSOR CAN RECEIVE FULL SUN AND IS OPEN TO RAINFALL.
2. WIRELESS RAIN SENSOR, LOCATE WITHIN 500' OF THE CONTROLLER.
3. SECURE MOUNTING BRACKET TO EXTERIOR WALL WITH SCREWS PER LOCAL CODES

NOTE:
1. PROVIDE WATERPROOF SEALANT FOR ALL CONDUIT AND WIRE ACCESS POINTS.
2. FINAL LOCATION AND MOUNTING SYSTEM TO BE DETERMINED BY OWNER.
3. SENSOR SHOULD NOT BE MOUNTED UNDER TREES, IN AREAS AFFECTED BY SPRINKLER SYSTEM OR UNDER EAVE OF HOUSE.

2 RAIN SENSOR SURFACE MOUNT

NTS

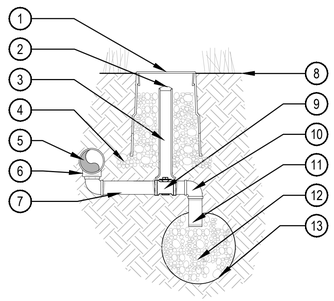


1. BUILDING WALL
2. PRESSURE VACUUM BREAKER BACKFLOW PREVENTER. LOCATE MINIMUM 12" ABOVE HIGHEST EMISSION POINT
3. COPPER SERVICE LINE FROM BUILDING (EXISTING CONNECTION OR PROVIDED BY OTHERS)
4. COPPER NIPPLE AND ELBOWS AS NEEDED OUT OF VACUUM BREAKER
5. BRONZE UNION SxS
6. COPPER SERVICE TO DRAIN VALVE
7. FINISHED GRADE

NOTE:
1. INSTALL PER LOCAL CODES AND MANUFACTURER'S SPECIFICATIONS.
2. COORDINATE WITH PLUMBING CONTRACTOR AND OWNER'S REPRESENTATIVE PRIOR TO CONNECTION.
3. PROVIDE PROPER OFFSET FROM WALL AND PIPING SUPPORTS FOR MAINTENANCE PER MANUFACTURER'S SPECIFICATIONS.
4. PROVIDE FREEZE PROTECTION AROUND COPPER SUPPLY LINES FROM BUILDING.
5. PRESSURE VACUUM BREAKER SHALL BE INSTALLED 12" HIGHER THAN ANY DISCHARGE POINT OF THE IRRIGATION SYSTEM; UTILIZE REDUCED PRESSURE ZONE (RPZ) ASSEMBLY IF SITE TOPOGRAPHY CONDITIONS PREVENT THE USE OF PVB.

3 PRESSURE VACUUM BREAKER

SCALE: NTS

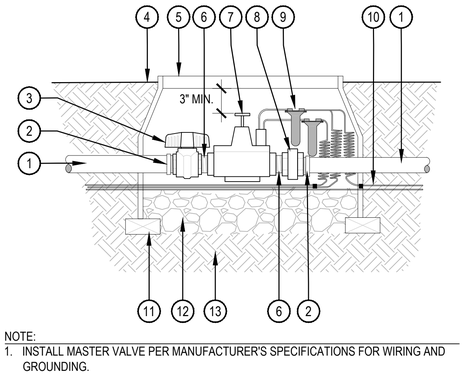


1. 10" ROUND BOX & COVER PER SCHEDULE. TOP OF BOX TO BE FLUSH WITH FINISH GRADE.
2. 2" VALVE MARKER
3. 2" CL160 PVC ACCESS SLEEVE LENGTH AS REQUIRED.
4. 3" DEPTH 3/4" CRUSHED GRAVEL 6" BEYOND EDGE OF BOX
5. PVC PRESSURE MAIN LINE
6. SCH. 80 TEE PER MAINLINE SIZE. ALIGN IN A DOWNWARD POSITION
7. SCH. 80 PVC NIPPLE
8. FINISH GRADE
9. 1" BRONZE STOP VALVE WITH SLOTTED KEY OPERATOR
10. SCH. 80 PVC ELL
11. SCH. 80 PVC NIPPLE
12. 3/4" GRAVEL SUMP - 1 CU. FT. MIN
13. SOIL BLANKET ENCLOSING SUMP AMOCO ENG. FABRIC 4545 - 4.5 OZ. OR EQUAL

NOTE:
1. ALL THREADED CONNECTIONS SHALL BE COATED WITH TEFLON TAPE.
2. LOCATE DRAIN VALVE AT POINT OF CONNECTION AND AT ALL LOW POINT(S) ALONG THE IRRIGATION MAINLINE AS NEEDED.

4 MANUAL DRAIN VALVE

SCALE: NTS

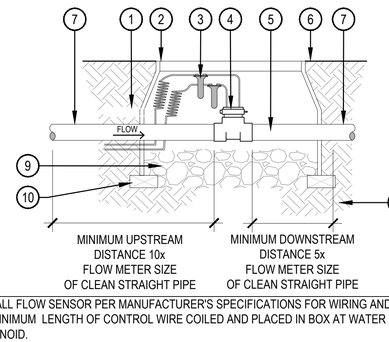


1. PVC MAINLINE
2. SCH. 80 PVC MALE ADAPTER
3. SCH. 80 PVC BALL VALVE
4. FINISH GRADE
5. VALVE BOX PER SCHEDULE
6. SCH. 80 PVC NIPPLE (THREADED)
7. MASTER VALVE
8. SCH. 80 PVC UNION (THREADED)
9. WATERPROOF ELECTRICAL CONNECTIONS; DBY / R-6 OR APPROVED EQUAL
10. WIRES TO CONTROLLER
11. BRICK SUPPORTS 2 MIN.
12. 3/4" GRAVEL SUMP - 8" DEPTH
13. COMPACTED SUBGRADE

NOTE:
1. INSTALL MASTER VALVE PER MANUFACTURER'S SPECIFICATIONS FOR WIRING AND GROUNDING.
2. 30" MINIMUM LENGTH OF CONTROL WIRE COILED AND PLACED IN BOX AT WATER PROOF CONNECTION TO SOLENOID.

5 MASTER VALVE

SCALE: NTS

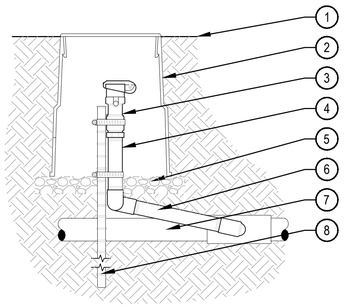


1. WIRES TO CONTROLLER
2. VALVE BOX PER SCHEDULE
3. WATERPROOF ELECTRICAL CONNECTIONS; DBY / R-6 OR APPROVED EQUAL
4. FLOW SENSOR PER SCHEDULE
5. DOWNSIZED MAINLINE
6. FINISH GRADE
7. PVC MAINLINE
8. COMPACTED SUBGRADE
9. 3/4" GRAVEL SUMP 8" DEPTH
10. BRICK SUPPORTS 2 MIN.

NOTE:
1. INSTALL FLOW SENSOR PER MANUFACTURER'S SPECIFICATIONS FOR WIRING AND GROUNDING.
2. 30" MINIMUM LENGTH OF CONTROL WIRE COILED AND PLACED IN BOX AT WATER PROOF CONNECTION TO SOLENOID.
3. IF AN ALTERNATE FLOW SENSOR IS UTILIZED A SPOOL WILL BE REQUIRE TO REMOVE FLOW SENSOR FOR WINTERIZATION

6 FLOW SENSOR

SCALE: NTS

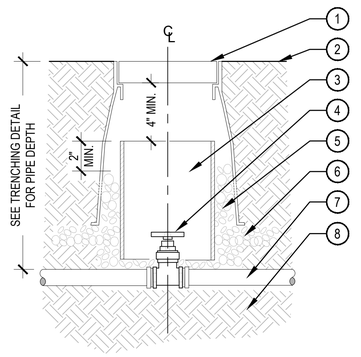


1. FINISH GRADE
2. 10" ROUND BOX & COVER PER SCHEDULE. TOP OF BOX TO FLUSH WITH FINISH GRADE
3. QUICK COUPLING VALVE W/ COVER PER SCHEDULE
4. SCH. 80 PVC RISER (T x T)
5. 3" DEPTH 3/4" GRAVEL BASE EXTEND 6" BEYOND EDGE OF BOX
6. PVC SWING JOINT (ASSMEBLED IN FIELD)
7. PVC MAINLINE
8. 24" LONG #4 REBAR TO HOLD QUICK COUPLER IN PLACE W/ (2) STAINLESS STEEL CLAMPS

NOTES:
1. EACH QUICK COUPLER SHALL BE IN A SEPARATE VALVE BOX.
2. PROVIDE (1) QUICK COUPLER KEY FOR EACH QUICK COUPLER VALVE.
3. QUICK COUPLER SHALL HAVE RUBBER COVER.
4. COMPACT SOIL AROUND GATE VALVE ASSEMBLY TO THE SAME DENSITY AS ADJACENT UNDISTURBED SUB-GRADE.
5. ALL THREADED CONNECTIONS SHALL BE COATED WITH TEFLON TAPE.

7 QUICK COUPLER

SCALE: NTS

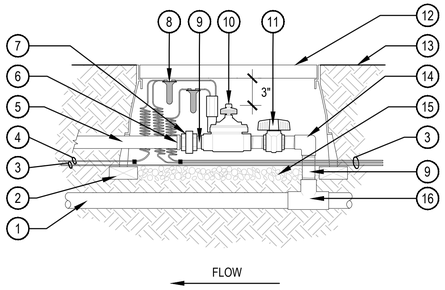


1. ROUND BOX & COVER PER SCHEDULE. TOP OF BOX TO BE FLUSH WITH FINISH GRADE
2. FINISH GRADE
3. 8" SCH 40 PVC ACCESS SLEEVE LENGTH AS REQUIRED.
4. GATE VALVE W/ CROSS HANDLE AND SOLID WEDGE DISC PER SCHEDULE
5. 3/4" GRAVEL SUMP FILL IN AND AROUND BOX AS REQUIRED.
6. 3" DEPTH 3/4: GRAVEL EXTEND 6" BEYOND EDGE OF BOX
7. PVC MAINLINE
8. COMPACTED SUBGRADE

NOTE:
1. COMPACT SOIL AROUND GATE VALVE ASSEMBLY TO THE SAME DENSITY AS ADJACENT UNDISTURBED SUBGRADE.
2. DO NOT REST VALVE BOX OR ACCESS SLEEVES ON MAINLINE OR LATERAL LINE.
3. PROVIDE GATE VALVE KEY - LENGTH AS REQUIRED.

8 GATE VALVE

SCALE: NTS

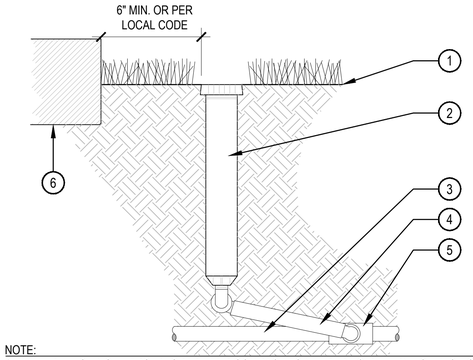


1. PVC MAINLINE
2. BRICK SUPPORT (4 MIN.)
3. CONTROL WIRE
4. COMMON WIRE TO NEXT VALVE(S)
5. PVC LATERAL
6. PVC MALE ADAPTER
7. SCH. 80 PVC UNION (THREADED)
8. WATERPROOF CONNECTORS; DBY / R-6 OR APPROVED EQUAL
9. (4) SCH. 80 PVC NIPPLE/ RISER (SIZE & LENGTH VARY)
10. CONTROL VALVE
11. SCH. 80 PVC BALL VALVE
12. VALVE BOX PER SCHEDULE
13. FINISH GRADE
14. PVC ELBOW (TxT)
15. 3/4" GRAVEL SUMP - 4" DEPTH
16. PVC TEE (SxSxT)

NOTE:
1. INSTALL CONTROL VALVE PER MANUFACTURER'S RECOMMENDATIONS.
2. 30" MINIMUM LENGTH OF CONTROL WIRE COILED AND PLACED IN BOX AT WATER PROOF CONNECTION TO SOLENOID.

1 CONTROL VALVE

SCALE: NTS

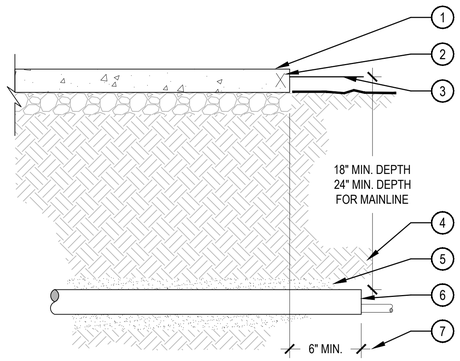


1. FINISH GRADE
2. 12" POP-UP SPRAY HEAD PER SCHEDULE
3. PVC LATERAL PIPE PER SCHEDULE
4. SWING JOINT ASSEMBLY
5. PVC SCH. 40 TEE OR ELL (S x T)
6. WALLS, WALKS, COURTS, CURB, ETC.

NOTE:
1. AFTER FLUSHING HEADS, REGRADE AND COMPACT AS NEEDED TO RETURN TO FINISH GRADE.
2. SPRINKLERS HEAD SHALL BE LEVEL WITH SURROUNDING FINISHED GRADE.
3. ADJUST ALL SPRINKLERS HEADS SO THAT NO OVERSPRAY OCCURS ON ANY WALLS, WALKS, COURTS, ETC.
4. ALL THREADED CONNECTIONS SHALL BE COATED WITH TEFLON TAPE.
5. COMPACT SOIL AROUND HEAD TO THE SAME DENSITY AS ADJACENT UNDISTURBED SUBGRADE.

4 12 INCH POP-UP SPRAY

SCALE: NTS

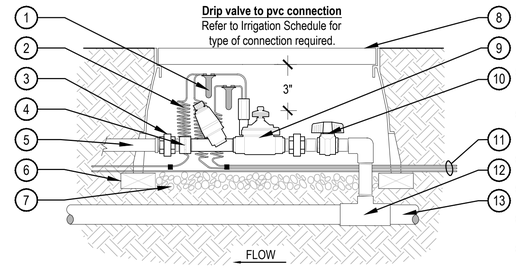


1. PAVING
2. CHISEL 'X' IN SIDE OF PAVING SURFACE FOR LOCATING SLEEVE.
3. FINISH GRADE / TOP OF DG
4. COMPACT SOIL AROUND SLEEVE TO SAME DENSITY AS ADJACENT UNDISTURBED SOIL
5. WASHED AND GRADED MORTAR SAND BACKFILL IN ROCKY SOIL CONDITIONS
6. PVC SLEEVE PER SCHEDULE, TWICE DIAMETER OF THE SUM OF THE PIPES/ WIRES
7. EXTEND SLEEVES 6" BEYOND EDGES OF PAVING

NOTE:
1. ALL SLEEVES SHALL BE INSPECTED PRIOR TO BACKFILLING.
2. CAP SLEEVES UNTIL USE.
3. MULTIPLE SLEEVES REQUIRE 4" HORIZONTAL SEPARATION WITHIN SAME SLEEVE TRENCH.
4. IRRIGATION PIPE AND WIRE SHALL NOT SHARE THE SAME SLEEVE.

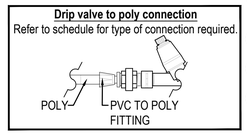
7 PIPE SLEEVE

SCALE: NTS



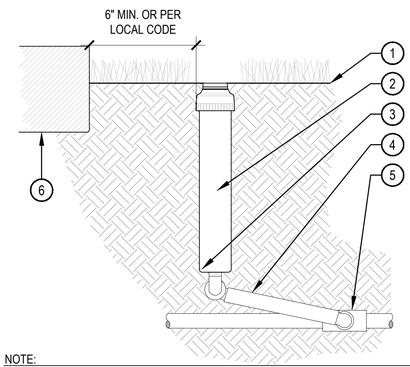
1. WATERPROOF CONNECTORS; DBY / R-6 OR APPROVED EQUAL
2. 30" COIL OF WIRE MINIMUM. PLACED IN BOX.
3. (2) SCH. 80 PVC UNION (THREADED)
4. PVC COUPLING (FPTxFPT)
5. PVC LATERAL
6. BRICK SUPPORT (4 MIN)
7. 4" DEPTH GRAVEL SUMP
8. VALVE BOX PER SCHEDULE, FLUSH TOP OF BOX W/ GRADE
9. CONTROL VALVE PER LEGEND
10. SCH. 80 PVC BALL VALVE
11. CONTROL AND COMMON WIRES FROM CONTROLLER
12. SCH. 80 PVC TEE (SxSxT)
13. PVC MAINLINE

NOTES:
1. BUNDLE & TAPE WIRE EVERY 10 FT. SEAL WIRE ENDS WITH WATERPROOF SPLICING MATERIAL.
2. 30" MINIMUM LENGTH OF CONTROL WIRE COILED AND PLACED IN BOX AT WATER PROOF CONNECTION TO SOLENOID.
3. INSTALL DRIP CONTROL ZONE KIT PER MANUFACTURER'S SPECIFICATIONS FOR WIRING



2 DRIP CONTROL ZONE KIT

SCALE: NTS

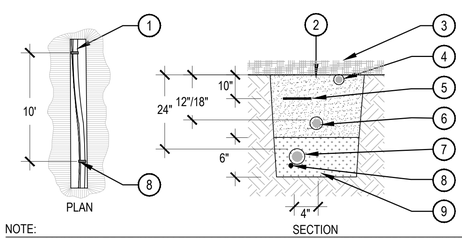


1. FINISH GRADE
2. ROTOR - SIZE PER PLAN
3. PVC LATERAL PIPE
4. SWING JOINT ASSEMBLED IN THE FIELD
5. PVC SCH. 40 TEE OR ELL (S x T)
6. WALLS, WALKS, COURTS, CURB, ETC.

NOTE:
1. SET TOP OF HEAD FLUSH WITH FINISH GRADE.
2. ADJUSTABLE ARC NOZZLES SHALL BE USED ON CURVED OR NON-STANDARD ANGLED EDGES.
3. ROTORS SHALL BE INSTALLED 6" MININUM FROM ANY WALLS, WALKS, COURTS, ETC. PER LOCAL CODES
4. ADJUST ALL ROTOR HEADS SO THAT NO OVERSPRAY OCCURS ON ANY WALLS, WALKS, COURTS, ETC.
5. ALL THREADED CONNECTIONS SHALL BE COATED WITH TEFLON TAPE.

5 12" ROTOR POP-UP

SCALE: NTS

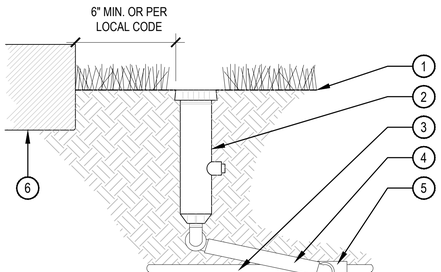


1. SNAKE PVC OR POLYETHYLENE PIPE IN TRENCH
2. EXCAVATED COVER MATERIAL (SEE NOTES)
3. FINISH GRADE/TOP OF MULCH
4. POLYETHYLENE DRIP LATERAL (INSTALL JUST BELOW ROUGH GRADE TO PROVIDE UV COVER PRIOR TO MULCH LAYER)
5. MAINLINE MARKING TAPE
6. IRRIGATION SPRAY LATERAL PIPE 12" DEPTH FOR SPRAY LATERALS 18" FOR ROTOR LATERALS
7. IRRIGATION MAINLINE PIPE
8. VALVE WIRING. BUNDLE AND TAPE PER IRRIGATION NOTES
9. BEDDING MATERIAL (SEE NOTES)

NOTE:
1. ALL MAINLINES TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER' SPECIFICATIONS.
2. ALL PVC PIPING TO BE SNAKED IN TRENCHES AS SHOWN IN PLAN VIEW ABOVE.
3. PROVIDE HORIZONTAL OFFSET FOR PIPING IN SHARED TRENCHES.
4. ALL 120 VOLT WIRING IN CONDUIT TO BE INSTALLED AS PER LOCAL CODES.
5. ALL ELECTRICAL WIRE CONNECTIONS TO VALVES AND SPLICES TO BE INSTALLED WITHIN A VALVE BOX AND MADE WITH DBY WATERPROOF CONNECTORS, OR APPROVED EQUAL.
6. BUNDLE AND TAPE CONTROLLER WIRING PER NOTES AND INSTALL WITHIN MAINLINE TRENCH WHEREVER POSSIBLE.
7. CONTROLLER WIRE TO BE BURIED AT 18" MIN DEPTH IF NOT LOCATED WITH MAINLINE.
8. MANILINE BEDDING MATERIAL SHALL BE 1/4" MINUS SAND, AND SHALL BE 3" BELOW PIPE OR WIRE AND 3" ABOVE MAINLINE.
9. BEDDING IS NOT REQUIRED IN POLYETHYLENE TUBING TRENCHES OR SHARED TRENCHES.
10. EXCAVATED COVER MATERIAL SHALL BE FREE FROM DEBRIS AND ROCKS 1/2" OR GREATER.

8 PIPE TRENCH

SCALE: NTS

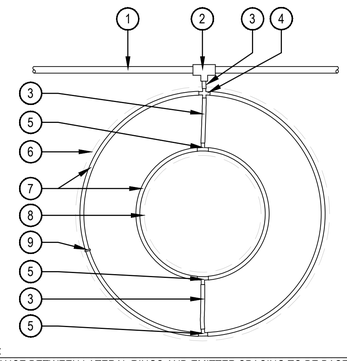


1. FINISH GRADE
2. POP-UP SPRAY HEAD PER SCHEDULE
3. PVC LATERAL PIPE
4. SWING JOINT ASSEMBLY
5. PVC SCH. 40 TEE OR ELL (S x T)
6. WALLS, WALKS, COURTS, CURB, ETC.

NOTE:
1. AFTER FLUSHING HEADS, REGRADE AND COMPACT AS NEEDED TO RETURN TO FINISH GRADE.
2. SPRINKLERS SHALL BE MIN. 6" FROM ANY WALLS, WALKS, COURTS, AND 12" FROM TURF EDGE.
3. ADJUST ALL SPRINKLERS HEADS SO THAT NO OVERSPRAY OCCURS ON ANY WALLS, WALKS, COURTS, ETC.
4. ALL THREADED CONNECTIONS SHALL BE COATED WITH TEFLON TAPE.
5. COMPACT SOIL AROUND HEAD TO THE SAME DENSITY AS ADJACENT UNDISTURBED SUBGRADE.

3 SPRAY POP-UP

SCALE: NTS

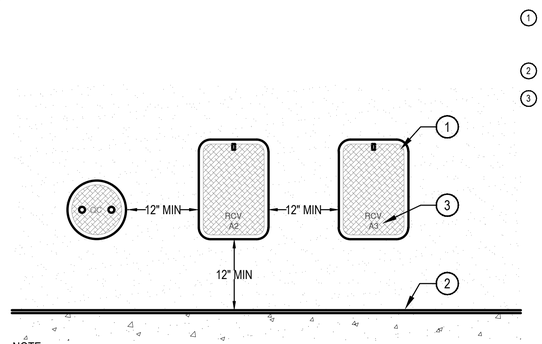


1. PVC DRIP MANIFOLD PIPE
2. PVC SCH 40 TEE OR EL
3. DRIP BLANK TUBING
4. CROSS INSERT FITTING
5. TEE INSERT FITTING
6. PROJECTED CANOPY LINE OF TREE
7. SUB-SURFACE DRIPLINE
8. ROOT BALL
9. TIE DOWN STAKE

NOTES:
1. DISTANCE BETWEEN LATERAL RINGS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, AND TREE CANOPY. SEE RAIN BIRD XF-SDI DRIPLINE INSTALLATION GUIDE FOR SUGGESTED SPACING.
2. PLACE TIE DOWN STAKES EVERY THREE FEET IN SAND, FOUR FEET IN LOAM, AND FIVE FEET IN CLAY.
3. AT FITTINGS WHERE THERE IS A CHANGE OF DIRECTION SUCH AS TEES OR ELBOWS, USE TIE-DOWN STAKES ON EACH LEG OF THE CHANGE OF DIRECTION.

6 DRIPLINE TREE RING

SCALE: NTS

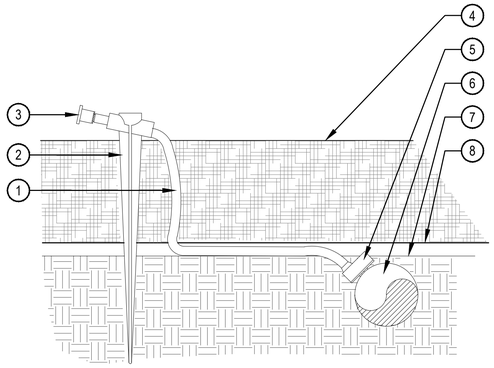


1. VALVE BOX; ALIGN EVENLY AND SPACE EVENLY FROM SIDEWALK, STRUCTURE, WALL, OR CURB
2. SIDEWALK OR PAVING
3. VALVE BOX LID BRANDED WITH CONTROLLER & STATION NUMBER

NOTE:
1. INSTALL ONLY ONE RCV TO VALVE BOX. LOCATE AT LEAST 12-INCHES FROM AND ALIGN WITH NEARBY WALLS OR EDGES OF PAVED AREAS. GROUP RCV ASSEMBLIES TOGETHER WHERE PRACTICAL.
2. GROUP VALVE ASSEMBLIES TOGETHER WHERE PRACTICAL, BUT AVOID GROUPING MORE THAN THREE (3) STANDARD VALVE BOXES TOGETHER IN A SERIES.
3. ARRANGE GROUPED VALVE BOXES IN RECTANGULAR PATTERNS.

9 VALVE BOX PLACEMENT

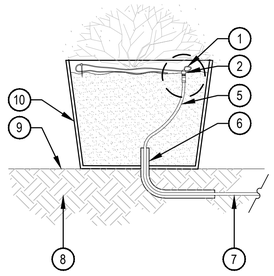
SCALE: NTS

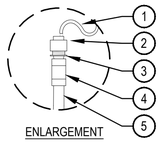


1. 1/4" DISTRIBUTION TUBING. RUN TUBING UNDER WEED BARRIER FABRIC TO PLANT. LENGTH NOT TO EXCEED 8'
2. UNIVERSAL 1/4" STAKE
3. DIFFUSER CAP
4. TOP OF MULCH
5. PRESSURE COMPENSATING EMITTER PER EMITTER SCHEDULE. INSTALL EMITTER AT 45° TO 60° ANGLE
6. 3/4" POLYETHYLENE TUBING SET WITH TOP OF TUBING FLUSH WITH FINISH GRADE OF SOIL
7. FINISH GRADE OF SOIL
8. WEED BARRIER FABRIC

1 SINGLE OUTLET EMITTER

SCALE: NTS





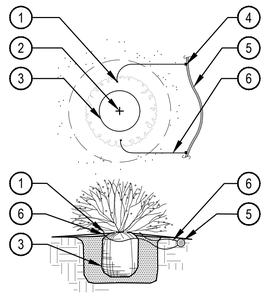
ENLARGEMENT

1. 1/4" RAIN BIRD LDQ-08-06 10' COIL AROUND PLANTER W/ STAKE (RAIN BIRD TS-025)
2. RAIN BIRD XT025 DRIP TRANSFER FITTING
3. 1/2" RAIN BIRD MDCF-50MPT DRIP MALE ADAPTER FITTING
4. RAIN BIRD MDCF-COUP DRIP COUPLING FITTING
5. 1/2" RAIN BIRD XF SERIES BLANK TUBING
6. 1-1/2" CONDUIT SLEEVING
7. BLANK TUBING TO VALVE
8. PLANTING BED
9. FINISH GRADE
10. PLANTER PER LANDSCAPE PLANS

NOTES:
1. CONTRACTOR SHALL ALLOCATE ADDITIONAL LENGTH IN BLANK TUBING WITHIN PLANTER FOR MAINTENANCE PURPOSES.
2. CONDUIT SLEEVING TO EXTEND 2 FEET FROM PLANTER BOX.

4 DRIP EMITTERS IN RAISED PLANTER WITHIN PLANTING BED

NTS

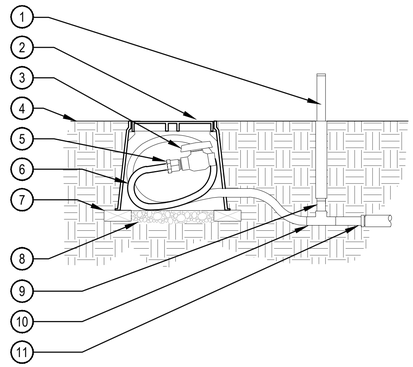


1. DIFFUSER CAP W/ DRIP STAKE
2. PLANT CENTER
3. PLANT ROOTBALL
4. SINGLE OUTLET EMITTER
5. 3/4" POLYETHYLENE DRIP TUBING
6. 1/4" DISTRIBUTION TUBING (LENGTH NOT TO EXCEED 8')

NOTE:
1. EMITTERS SHALL BE EQUALLY SPACED AROUND ROOTBALL.
2. FLUSH ALL LINES THOROUGHLY PRIOR TO EMITTER INSTALLATION.
2. IF PLANTING ON A 4:1 SLOPE OR STEEPER, INSTALL EMITTERS ON THE UPHILL SIDE OF PLANT.
3. EMITTERS SHALL BE SELF-FLUSHING PRESSURE COMPENSATING-TYPE UNLESS NOTED OTHERWISE.
4. DRIP VALVE ZONES (HYDROZONES) ARE DESIGNED TO ACCOUNT FOR DIFFERENCES IN PLANT REQUIREMENTS AND SUN EXPOSURE.
5. CONTRACTOR SHALL ENSURE HYDROZONES ARE VALVED SEPARATELY AS SHOWN ON PLAN.

2 SINGLE OUTLET EMITTER PLACEMENT

SCALE: NTS

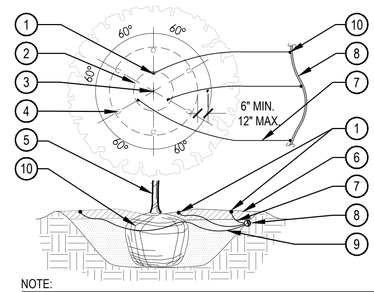


1. 6" ECO-OPERATIONAL INDICATOR
2. ROUND BOX & COVER PER SCHEDULE. TOP OF BOX TO BE FLUSH WITH FINISH GRADE
3. 1/2" SCH. 40 PVC BALL VALVE
4. FINISH GRADE
5. 1/2" MxI MALE ADAPTER W/ CLAMPS
6. 1/2" POLYETHYLENE DRIP TUBING - 24" COIL IN BOX FOR MAINTENANCE
7. BRICK (2 REQUIRED MIN.)
8. 3/4" GRAVEL SUMP, 4" DEPTH
9. 1/2" SCH. 80 NIPPLE (LENGTH AS NEEDED)
10. 1/2"x1/2"x1/2" IxIxF INSERT TEE
11. 3/4" X 1/2" POLY ADAPTER

NOTE:
1. COMPACT SOIL AROUND VALVE BOX TO THE SAME DENSITY AS ADJACENT UNDISTURBED SUBGRADE.
2. INSTALL OPERATIONAL INDICATOR WITHIN 24" OF FLUSH VALVE.
3. ALL THREADED CONNECTIONS SHALL BE COATED WITH TEFLON TAPE.

5 DRIP FLUSH VALVE WITH OPERATIONAL INDICATOR

SCALE: NTS



1. EMISSION POINT, DIFFUSER CAP W/ DRIP STAKE (TYP.)
2. PLANT ROOT BALL (TYP.)
3. PLANT CENTER (TYP.)
4. SECOND EMISSION POINTS SEE NOTE 3 BELOW
5. TREE TRUNK
6. MULCH LAYER
7. 1/4" DISTRIBUTION TUBING (LENGTH NOT TO EXCEED 8')
8. 3/4" POLYETHYLENE DRIP TUBING
9. SINGLE OUTLET EMITTER
10. ROOTBALL

NOTE:
1. MAXIMUM LENGTH OF ONE DISTRIBUTION TUBE SHALL BE 8'.
2. ALL EMISSION POINTS SHALL BE LOCATED ON UPHILL SIDE OF PLANT MATERIAL. ONE EMISSION POINT SHALL BE DIRECTLY TO PLANT BALL AS INDICATED. ADDITIONAL EMISSION POINTS SHALL BE WITHIN PLANT PIT PERIMETER AS DIRECTED IN THE EMITTER SCHEDULE.
3. SECOND EMISSION POINTS (IF NEEDED) AS PER THE EMITTER SCHEDULE FOR TREES WITH 3" CALIPER OR GREATER OR CONIFEROUS TREES 10' OR GREATER IN HEIGHT.
4. THIS IS A WATERING GUIDE ONLY. SITE, SOIL AND PLANT CONDITIONS VARY GREATLY. CONTRACTOR MUST OBSERVE THE PLANT MATERIAL AND MAKE ADJUSTMENTS AS NECESSARY FOR PROPER PLANT WATER REQUIREMENT.

3 TREE EMITTER PLACEMENT

SCALE: NTS