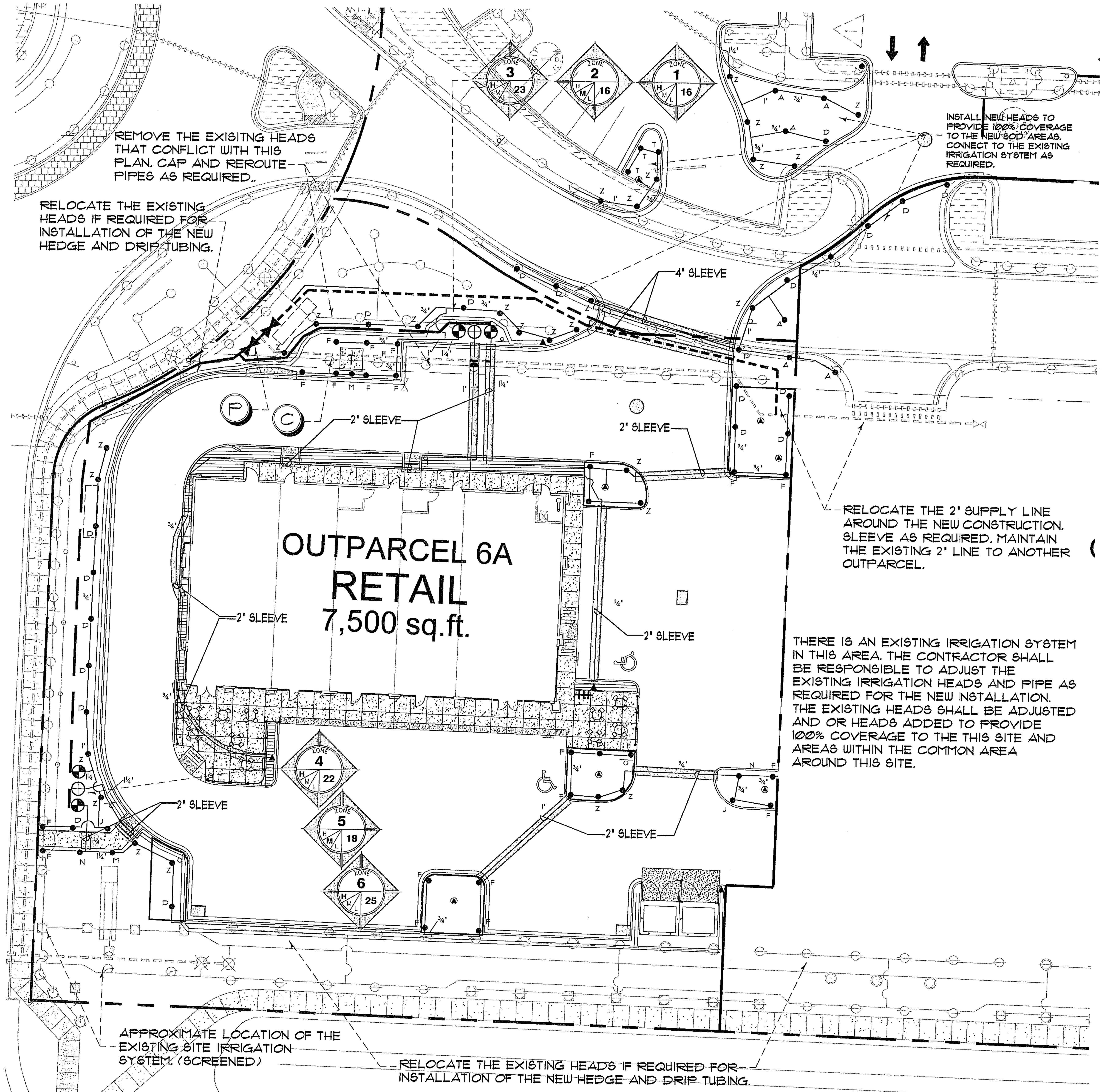
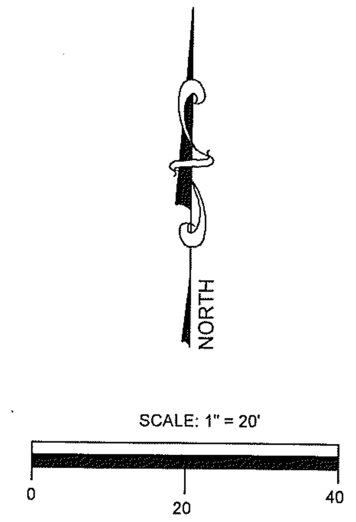




LEGEND

●	HUNTER PRO-SPRAY SERIES 6" POP-UP PROS-06-CV-R
■	ZONE RUN CHECK HEAD OR FLAG INDICATOR
▲	FLUSH VALVE
	HUNTER PROFESSIONAL DRIP TUBING- 1 GPH EMITTERS EVERY 12". PLACE ROWS 12" APART IN ALL GROUND COVER BEDS. INSTALL A DOUBLE ROW ON ALL HEDGE ROWS. DRIP LINES ARE SHOWN PERPENDICULAR TO LANDSCAPE BEDS IN SOME AREAS FOR CLARITY PURPOSES ONLY. INSTALL DRIP TUBING ALONG THE LONGEST WIDTH OF THE PLANT BED. REFER TO ALL NOTES AND DETAILS ON THIS SHEET.
	CLASS 200 PURPLE RECLAIMED PVC MAINLINE-1 1/2"
	CLASS 200 PURPLE RECLAIMED PVC LATERAL LINE- SIZE AS SHOWN UNTIL A SMALLER SIZE IS SHOWN. MINIMUM SIZE OF 3/4" (EXCEPT RISERS AND FLEX PIPE)
	SCH. 40 SLEEVE (MINIMUM OF 18" DEPTH AND 2 SIZES LARGER THAN THE PIPE SIZE OR AS LABELED ON THE PLAN)
	RAINBIRD PEB ELECTRIC VALVE. 2" OR SIZE AS SHOWN BELOW. INSTALL VALVE IN AN ARMOR 10" ROUND VALVE BOX.
	RAINBIRD ZONE CONTROL KIT. REFER TO THE DETAIL.
C	CONTROLLER-. HUNTER ICC -8. WHERE SHOWN ON THE PLAN, INSTALL WITH A HUNTER WIRELESS RAIN-CLIK RAIN SENSOR. GROUND WITH A MINIMUM 8' COPPER CLAD ROD. SLEEVE TO AS REQUIRED. COORDINATION THE RUN TIME OF THIS CONTROLLER WITH THE SITE SYSTEM AND OTHER OUTPARCELS AS PER THE SITE IRRIGATION DESIGN.
P	POINT OF CONNECTION TO THE EXISTING SITE IRRIGATION RECLAIMED WATER MAIN. INSTALL A 1" RECLAIMED WATER METER AT THIS POINT. REFER TO THE UTILITY PLAN FOR THE EXACT LOCATION AND DETAILS. INSTALL A GATE VALVE ON THE PIPE TO EACH PARCEL.

NOZZLE CHART

LETTER • PRODUCT SPEC. • G.P.M. @ 30PSI • RADIUS • RADIUS/ANGLE • ZONE LABELS

A	15F	3.7	15'	FULL
B	15TQ	2.8	15'	THREE QTR.
C	15TT	2.5	15'	TWO THIRD
D	15H	1.9	15'	HALF
E	15T	1.2	15'	ONE THIRD
F	15Q	1.0	15'	QUARTER
G	15EST	.61	4' X 15'	END STRIP
H	15CST	1.2	4' X 30'	CENTER STRIP
J	10ADJ	VARIES	10'	10 DEG. ADJUST.
K	10F-LA	1.6	10'	LOW FULL
L	12F-ADJ	VARIES	12'	SIDE STRIP
M	15SST	1.2	4' X 30'	SIDE STRIP
N	12H	1.2	12'	LOW GALLONAGE
P	10T-LA	.52	10'	LOW ONE THIRD
R	10Q-LA	.39	10'	LOW QUARTER
S	8H-FLT	.79	8'	FLAT HALF
T	10H-LA	.79	10'	LOW HALF
U	8Q-FLT	.39	8'	FLAT QUARTER
V	8T-FLT	.52	8'	FLAT THREE QTR.
W	PCS /SHORT NOZ.	.44	4'	HALF
X	5CST-B	.50	5'	STRIP BUBBLER
Y	PCS /SHORT NOZ.	.98	6'	HALF
Z	15ADJ	VARIES	15'	ADJUSTABLE

ZONE NUMBER — GALLONS PER MINUTE — WATER USE
H=HIGH ST. AUGUSTINE AND ZOYSIA SOD
M=MEDIUM PLANT MATERIAL
L=LOW BAHIA SOD NATIVE PLANTS

THE CONTRACTOR CAN USE FIXED PATTERN NOZZLES WHERE ADJUSTABLE NOZZLES ARE INDICATED ON THE PLANS IF IT PROVIDES 100% COVERAGE AND LIMITS OVERTHROW ONTO HARD SURFACES.

AS-BUILT NOTE

7) THE CONTRACTOR SHALL PREPARE AN AS-BUILT DRAWING SHOWING ALL IRRIGATION INSTALLATION. THE CONTRACTOR SHALL NEATLY MARK IN RED INK ON A WHITE BOND PAPER COPY OF THE IRRIGATION PLAN ANY INSTALLATION THAT DEVIATES FROM THE PLAN. THE AS-BUILT DRAWING SHALL ALSO LOCATE ALL MAINLINE AND VALVES BY SHOWING EXACT MEASUREMENTS FROM HARD SURFACES. MEASUREMENTS SHALL BE MARKED ON THE PLAN EVEN WHEN THE EQUIPMENT IS INSTALLED IN THE EXACT LOCATION AS THE PLAN.

THE AS-BUILT SHALL BE SENT TO THE LANDSCAPE ARCHITECT OF THE IRRIGATION DESIGN AND THE LANDSCAPE ARCHITECT SHALL CONVERT THE INFORMATION PROVIDED TO AN AS-BUILT AUTOCAD DRAWING. A SIGNED AND SEALED PLAN SHALL BE SUBMITTED TO THE CITY OF PALM COAST.

RECLAIMED WATER REQUIREMENTS

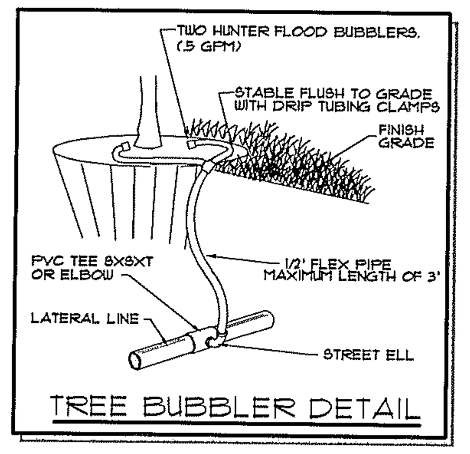
1) ALL PIPE SHALL BE THE PURPLE RECLAIMED WATER TYPE.
2) ALL MAINLINE SHALL HAVE MAGNETIC MARKER TAPE PLACED IN THE TRENCH 6" ABOVE PIPE.
3) ALL SPRINKLER HEADS SHALL HAVE PURPLE INDICATORS.
4) ALL MANUAL AND ELECTRIC VALVES SHALL HAVE TAGS TO INDICATE RECLAIMED WATER.
5) ALL VALVE BOXES SHALL HAVE PURPLE LIDS TO INDICATE THE PRESENCE OF RE-USE WATER.
6) ALL EQUIPMENT SHALL BE INSTALLED AS PER ALL LOCAL, COUNTY, STATE, AND FEDERAL CODES. PROVIDE AND INSTALL ALL REQUIRED RECLAIMED WATER SIGNS.
7) ALL CROSSINGS OF IRRIGATION PIPING AND POTABLE WATER LINES SHALL HAVE THE VERTICAL CLEARANCE VISUALLY VERIFIED AND THIS VERIFICATION MUST BE SHOWN ON THE AS-BUILT DRAWINGS BY DOCUMENTING THE VERTICAL MEASUREMENT SEPARATING THE PIPES.
8) THE VERTICAL SEPARATION BETWEEN THE POTABLE AND RECLAIMED WATER LINES SHALL BE A MINIMUM OF 18". THIS SEPARATION SHALL BE VERIFIED AND DOCUMENTED IN A SET OF AS-BUILT DRAWINGS AS PER SPECIFICATIONS. THE HORIZONTAL SEPARATION SHALL BE 5' CENTER TO CENTER AND 3' OUTSIDE TO OUTSIDE IF VERTICAL MINIMUM OF 18" IS NOT MET. REFER TO THE SPECIFIC CODE IF THESE SEPARATIONS CAN NOT BE MET.

GENERAL NOTES

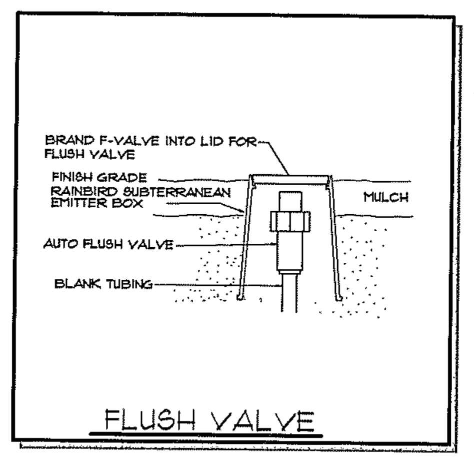
1) REFER TO THE LANDSCAPE PLANS WHEN TRENCHING TO AVOID TREES AND SHRUBS. HAND DIG AROUND ANY EXISTING TREES. DO NOT CUT ANY ROOTS OVER 2" IN DIAMETER.
2) ALL MAINLINE PIPING SHALL BE BURIED TO A MINIMUM DEPTH OF 18" OF COVER. ALL LATERAL PIPING SHALL BE BURIED TO A MINIMUM DEPTH OF 12" OF COVER.
3) ALL POP-UP ROTORS AND SPRAYS SHALL BE INSTALLED USING AN 18" PVC FLEX PIPE CONNECTION. DO NOT USE POLYETHYLENE PIPE.
4) ADJUST ALL NOZZLES TO REDUCE WATER WASTE ON HARD SURFACES & BLDG. WALLS. THROTTLE ALL VALVES ON SHRUB LINES AS REQUIRED TO PREVENT FOGGING. USE ADJUSTABLE NOZZLES WHERE REQUIRED TO AVOID ANY WATER ON BUILDING WINDOWS.
5) ALL RISERS SHALL BE PAINTED BLACK OR A COLOR CHOSEN BY THE OWNER'S REPRESENTATIVE (IF ALLOWED BY CODE) AND SHALL BE STAKED WITH A STEEL ANGLE AND SECURED WITH PVC ULTRAVIOLET LIGHT PROTECTED PVC CLAMPS. REUSE SYSTEMS MAY REQUIRE THE PIPE TO BE PURPLE.
6) ALL CONTROL WIRE SPLICES SHALL BE MADE IN VALVE BOXES USING KING 'ONE STEP' CONNECTORS AND SEALANT WITH WIRE NUTS OR AS DETAILED ON THE DECODER DETAIL FOR TWO-WIRE.
7) THE CONTRACTOR SHALL PREPARE AN AS-BUILT DRAWING SHOWING ALL IRRIGATION INSTALLATION. THE CONTRACTOR SHALL NEATLY MARK IN RED INK ON A WHITE BOND PAPER COPY OF THE IRRIGATION PLAN ANY INSTALLATION THAT DEVIATES FROM THE PLAN. THE AS-BUILT DRAWING SHALL ALSO LOCATE ALL MAINLINE AND VALVES BY SHOWING EXACT MEASUREMENTS FROM HARD SURFACES. MEASUREMENTS SHALL BE MARKED ON THE PLAN EVEN WHEN THE EQUIPMENT IS INSTALLED IN THE EXACT LOCATION AS THE PLAN.
8) ALL VALVES, GATE VALVES AND QUICK COUPLERS SHALL BE INSTALLED IN VALVE BOXES. THE VALVE BOXES SHALL BE PURPLE WHEN USING REUSE WATER.
9) ANY PIPING SHOWN OUTSIDE THE PROPERTY LINE OR RUNNING OUTSIDE A LANDSCAPE AREA IS SHOWN THERE FOR CLARITY ONLY. ALL LINES SHALL BE INSTALLED ON THE PROPERTY AND INSIDE THE LANDSCAPE AREAS OR INSIDE A SCH. 40 SLEEVE.
10) ALL HEADS SHALL BE INSTALLED A MINIMUM OF 24" FROM ANY WALL AND A MINIMUM OF 12" FROM ANY SIDEWALK, PATIO OR ROAD. (MINIMUM OF 2' WHERE THERE ARE NO BUMPER STOPS) THE EXACT HEIGHT OF ANY 12" POP-UP THAT IS SHOWN IN A SHRUB BED SHALL BE DETERMINED BY THE OWNER'S REPRESENTATIVE IN THE FIELD.
11) THE CONTRACTOR SHALL EXERCISE CARE SO AS NOT TO DAMAGE ANY EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMMEDIATE REPAIRS AND COST OF ANY DAMAGE CAUSED BY THEIR WORK.
12) ALL WORK SHALL BE GUARANTEED FOR ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE AGAINST ALL DEFECTS IN EQUIPMENT AND WORKMANSHIP. (OR AS OUTLINED IN THE WRITTEN SPECIFICATIONS)
13) ELECTRICAL SERVICE TO LOCATION OF THE CONTROLLER, WELL OR PUMP SHALL BE PROVIDED TO A JUNCTION BOX OR DISCONNECT AT THE EQUIPMENT LOCATION BY THE ELECTRICAL CONTRACTOR OR BY OWNER WHEN IT IS NOT PART OF THE BID PACKAGE. CONFIRM THE LOCATION OF THE CONTROLLER WITH THE OWNER OR GENERAL CONTRACTOR BEFORE ANY INSTALLATION.
14) IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SCALE THE PLAN AND CHECK NOZZLE TYPES TO DETERMINE THE CORRECT SPACING OF THE HEADS. THE CONTRACTOR SHALL NOT SPACE THE HEADS FURTHER APART OR USE LESS HEADS THAN SHOWN ON THE PLAN. ANY CHANGES TO THE HEAD SPACING OR LAYOUT, WITHOUT THE CONSENT OF THE LANDSCAPE ARCHITECT OR OWNER, SHALL HOLD THE IRRIGATION CONTRACTOR RESPONSIBLE FOR WARRANTY OF THE PLANTS AND OR SOD IN THESE AREAS.
15) 48 HOURS BEFORE DIGGING, CALL 1-800-432-4770 (SUNSHINE STATE ONE CALL CENTER)

DRIP TUBING NOTES

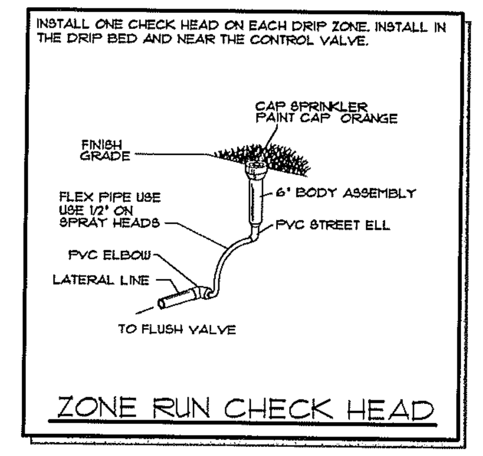
1) INSTALL ALL DRIP TUBING AT GROUND LEVEL AFTER PLANT INSTALLATION. USE U SHAPED WIRE STABILIZERS A MIN. OF 4' O.C. TO HOLD THE LINES IN PLACE.
2) KEEP ALL DRIP LINE CLEAN AT ALL TIMES BEFORE THE FINAL CONNECTION. ALL TUBE ENDS SHALL BE INTERCONNECTED TO ALL OTHER DRIP TUBES. DO NOT DEAD END TUBING. SINGLE ROWS SHALL HAVE A END CAP AND NOT BENT OVER OR TAPED.
3) AVOID SHARP BENDS IN THE TUBING. DO NOT BEND THE TUBING WITH LESS THEN A 12" RADIUS. THERE SHALL NOT BE ANY KINKS IN THE TUBING. KEEP EMITTERS FACING UP WHEN BENDING TUBING.
4) ALL DRIP TUBING SHALL HAVE UNIFORM SPACING AND BURIAL DEPTH. THE PLAN DOES NOT ALWAYS REFLECT THE EXACT SPACING OR LAYOUT OF THE TUBING. LAYOUT THE TUBING DOWN THE LONGEST WIDTH WHEN POSSIBLE. ADAPT THE TUBING TO CURVED BEDS OR PLANTERS AS REQUIRED. ADJUST AND ADAPT THE TUBING FOR ALL TREES.
5) INSTALL DRIP TUBING TO ALL AREAS THAT SHALL RECEIVE PLANT MATERIAL. SEE THE LANDSCAPE PLAN FOR THE EXACT LOCATIONS. THERE SHALL BE A MINIMUM OF TWO ROWS OF TUBING ON A SINGLE ROW OF PLANTS.
6) SPACE TUBING AS NOTED ON THE PLAN. DO NOT SNAKE TUBING BACK AND FORTH EXCEPT WHERE SHOWN ON THE PLAN.
7) REFER TO THE MANUFACTURERS DRIP INSTALLATION MANUAL FOR INSTALLATION INSTRUCTIONS. ALL FITTINGS SHALL BE THE SAME TYPE AND MANUFACTURER AS THE DRIP TUBING.
8) ALWAYS FLUSH ALL LINES BEFORE FINAL CONNECTION.
9) A RUN CHECK HEAD SHALL BE INSTALLED ON EACH ZONE.
10) ALL MAINLINE SHALL BE BURIED TO A MINIMUM DEPTH OF 18" OR AS INDICATED ON THE LEGEND.
11) ALL CONTROL WIRES SPLICES SHALL BE MADE IN VALVE BOXES USING KING CONNECTORS AND SEALANT. ALL WIRE SHALL BE 14 GAUGE, EXCEPT WHERE NOTED OTHERWISE.
12) ANY PIPING SHOWN OUTSIDE THE PROPERTY LINE OR RUNNING OUTSIDE THE LANDSCAPE AREA IS SHOWN THERE FOR CLARITY ONLY.
13) THE CONTRACTOR SHALL EXERCISE CARE SO AS NOT TO DAMAGE ANY EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REPAIRS OF ANY DAMAGE CAUSED BY HIS WORK.
14) INSTALL ALL FLUSH AND AIR RELIEF VALVES INSIDE A VALVE BOX. REFER TO MANUFACTURERS SPECIFICATIONS FOR SIZES AND QUANTITY. INSTALL AIR RELIEF VALVES ON ALL ZONES AT THE HIGHEST ELEVATION OR JUST AFTER THE CONTROL VALVE AND FILTER ON FLAT AREAS. INSTALL THE AIR RELIEF VALVES AT THE HIGHEST POINT OF THE ZONE. INSTALL A RUN CHECK HEAD OR A 'SYSTEM ON' INDICATOR FLAG ON EVERY ZONE WHERE IT IS SEEN FROM THE CONTROL VALVE. INSTALL THE RUN CHECK HEAD WHERE IT CAN BE SEEN FROM THE CONTROL VALVE.
15) CLEARLY AND NEATLY MARK THE TOP OF EACH VALVE BOX WITH THE TYPE OF EQUIPMENT THAT IT CONTAINS. (I.E. VALVE, FLUSH VALVE, ETC.)
16) THE VALVE ASSEMBLY SHALL BE PLACED INSIDE A 11" X 17" VALVE BOX. THE VALVE SHALL BE INSTALLED AS PER THE DETAIL ON THE PLANS.
17) THE DRIP TUBING SHALL HAVE EMITTERS EVERY 12" AND SHALL BE SPACED 12" APART.
18) FILTER SIZES=0-17 GPM=3/4", 18-26 GPM=1", 27-53 GPM=1 1/2", 54-132 GPM=2"
19) THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE HIS/HER WORK WITH THE LANDSCAPE CONTRACTOR.



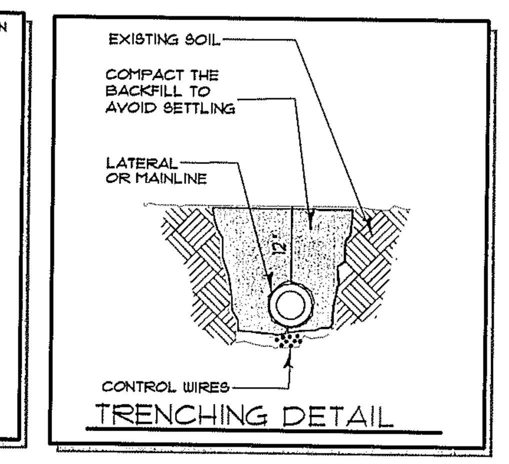
TREE BUBBLER DETAIL



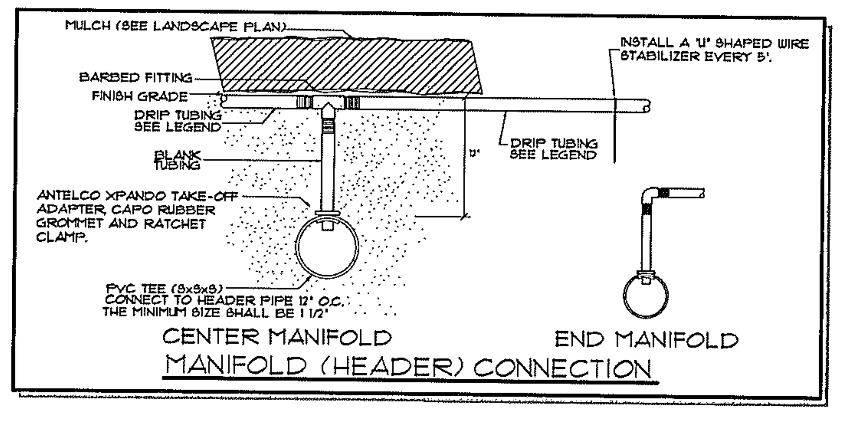
FLUSH VALVE



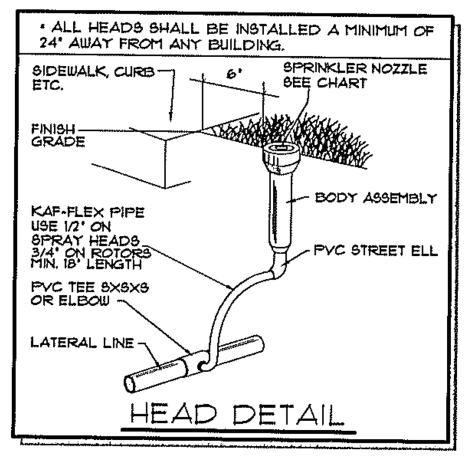
ZONE RUN CHECK HEAD



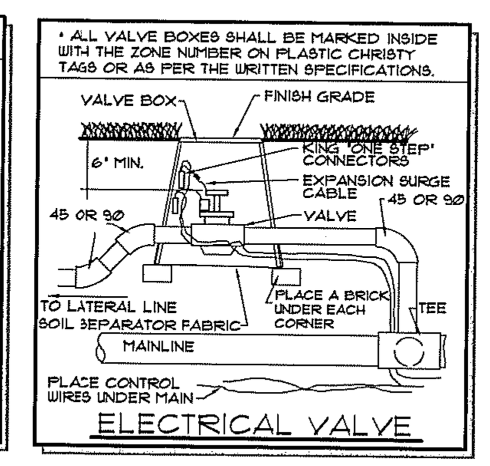
TRENCHING DETAIL



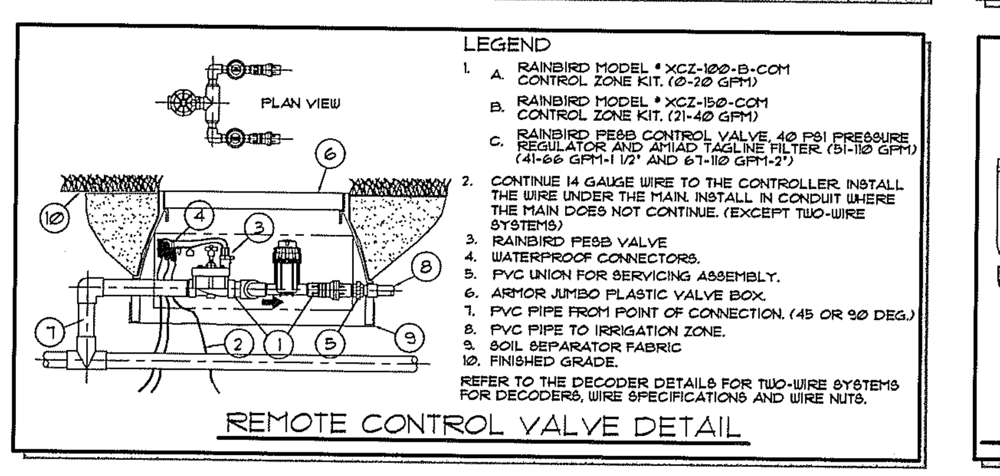
MANIFOLD (HEADER) CONNECTION



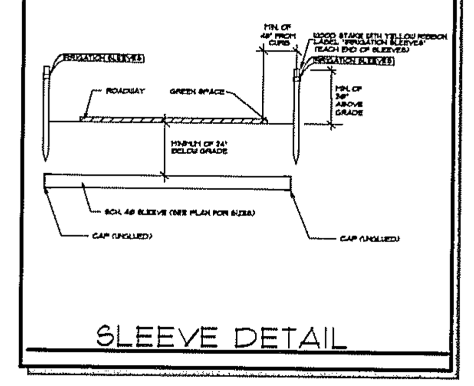
HEAD DETAIL

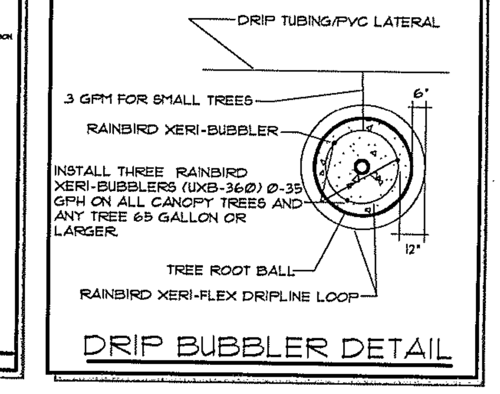


ELECTRICAL VALVE



REMOTE CONTROL VALVE DETAIL


SLEEVE DETAIL



DRIP BUBBLER DETAIL

LANDSCAPE ARCHITECT
J. Scott Liberty, RLA
FL LIC. #LA0001476

JOB #: 08033.2
PRJ. MGR: J.M.
DESIGNER: LWS
CHECKED: LWS

NO.	DATE	REVISIONS
4	11-4-09	PER REVISED BASE
	9.21.09	REVISED PER NEW BASE AND CITY COMMENTS

RECORD DRAWING
THIS IS TO CERTIFY THAT THE PROJECT HAS BEEN SUBSTANTIALLY COMPLETED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS, BASED ON AS-BUILT INFORMATION PROVIDED BY CONTRACTOR.
ENGINEER:

LOT 6A
PALM COAST LANDING
AT
Town Center
FOR
WEINGARTEN REALTY & DEVELOPERS REALTY CORP.

IRRIGATION PLAN

Consulting Engineers & Surveyors
LOCHRANE ENGINEERING, INC.
201 SOUTH BUMBY AVENUE
ORLANDO, FLORIDA 32803
PH: (407) 896-3317 FAX: (407) 896-9167
WWW.LOCHRANE.COM
CERTIFICATE OF AUTHORIZATION # 00002856

SHEET L1 OF 1