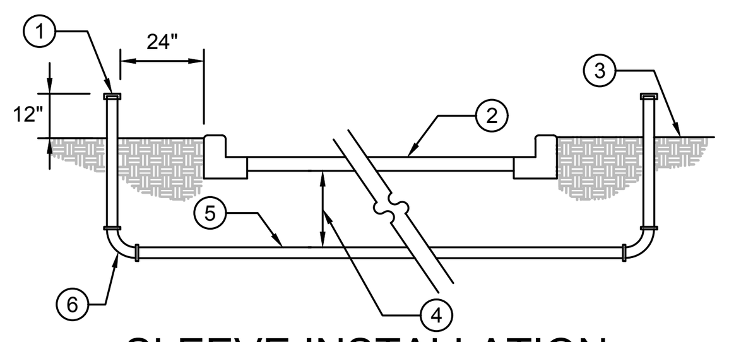
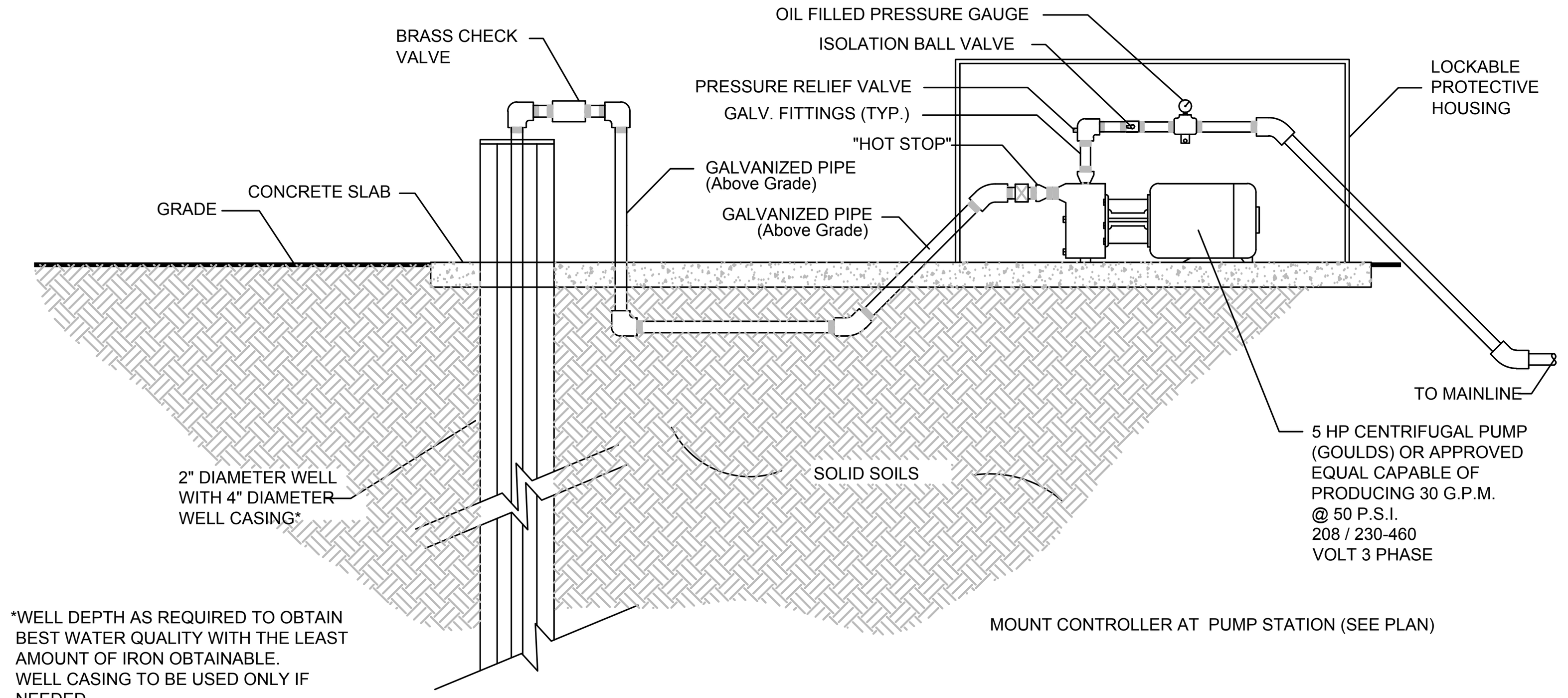
IRRIGATION NOTES

1. DO NOT SCALE PLAN FOR EXACT HEAD LOCATION.
2. SPRINKLER HEADS SHALL BE PLACED ON RISERS IN SHRUB AREAS. RISERS SHALL BE PAINTED FLAT BLACK.
3. THE CONTRACTOR SHALL MAKE ALL ADJUSTMENTS TO THE IRRIGATION SYSTEM TO INSURE 100% COVERAGE.
4. THE CONTRACTOR SHALL RUN 3 ADDITIONAL SETS OF WIRES IN EACH DIRECTION TO EACH END OF THE MAIN FOR FUTURE USE.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HARD WIRING THE ELECTRICAL SERVICE CONNECTIONS.
6. THE FINAL LOCATION OF ALL COMPONENTS SHALL BE SUBJECT TO APPROVAL BY THE OWNER.
7. ALL MAIN LINE SLEEVE LOCATIONS ARE ACCOMPANIED WITH A 2" ELECTRICAL CHASE FOR THE CONTROL WIRING.
8. VELOCITY SHALL NOT EXCEED A FLOW RATE OF 5' PER SECOND.
9. 4" POP-UP HEADS SHALL BE USED IN SODDED AREAS AND 12" POP-UP HEADS SHALL BE USED IN LANDSCAPED AREAS.
10. LOCATION OF IRRIGATION MAIN LINE AND VALVES IS FOR CLARITY ONLY. ACTUAL LOCATION OF MAIN LINE SHALL BE 6" OFF BACK OF CURB WHERE POSSIBLE. ACTUAL LOCATION OF VALVES SHALL BE IN THE NEAREST LANDSCAPE AREA.
11. SPRINKLER HEADS SHALL BE 12" MIN. FROM THE EDGE OF THE SIDEWALKS AND WALKWAYS.
12. IRRIGATION SYSTEM DESIGN PARAMETERS; 30GPM @ 30PSI

(1) TEMPORARY RISER AND CAP SOLVENT WELD CAP TO RISER
(2) PAVEMENT
(3) FINISHED GRADE
(4) 18" FOR NON-PRESSURIZED LATERAL 24" FOR MAINLINE
(5) SLEEVE AS SPECIFIED (PROVIDE SEPARATE 2" CHASE FOR CONTROL WIRING.)
(6) 90° ELL (TYP)



SLEEVE INSTALLATION



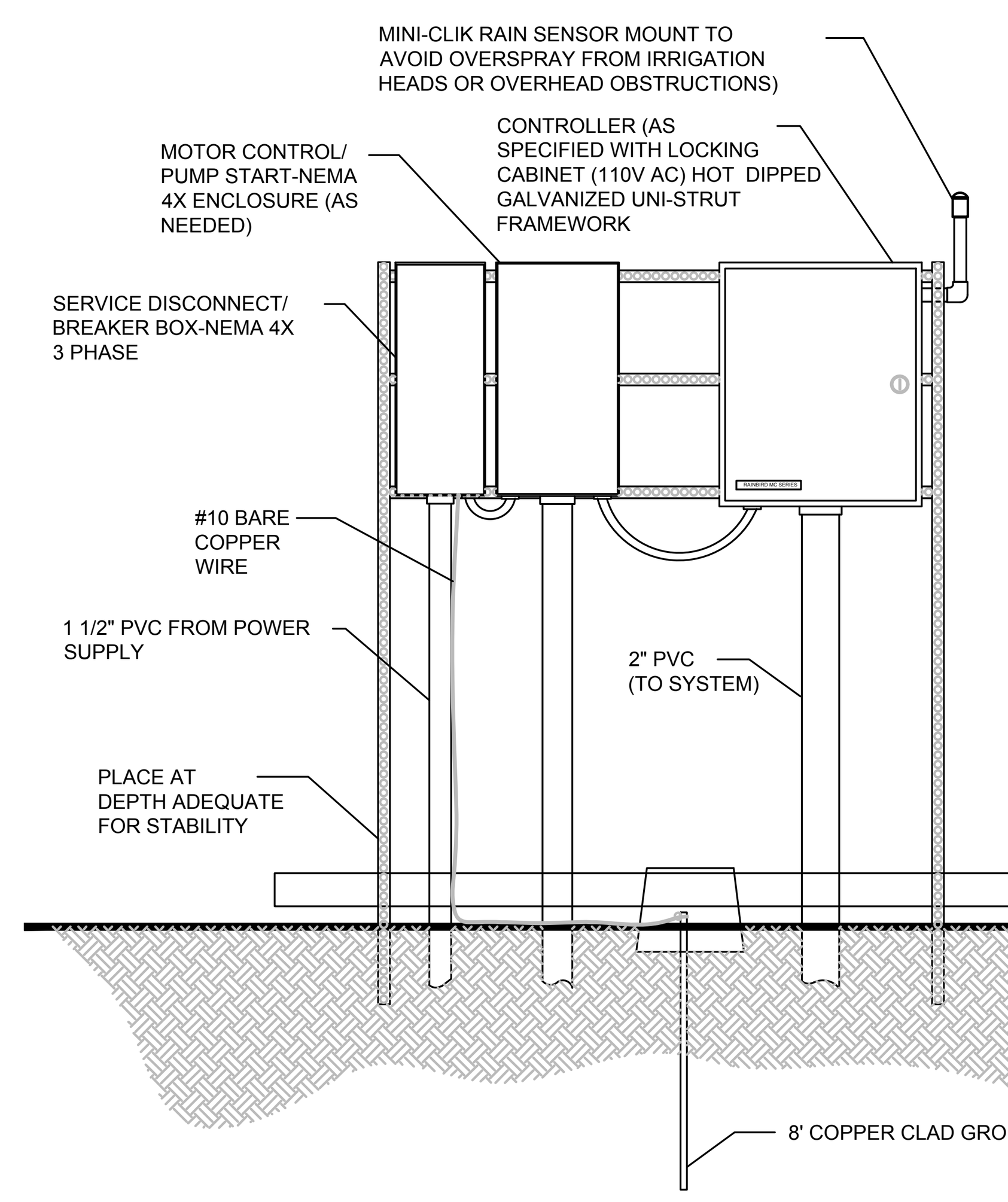
*WELL DEPTH AS REQUIRED TO OBTAIN BEST WATER QUALITY WITH THE LEAST AMOUNT OF IRON OBTAINABLE.
WELL CASING TO BE USED ONLY IF NEEDED.

CENTRIFUGAL PUMP STATION DETAIL WITH WELL POINT

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.



NOTES:

CONTRACTOR TO PROVIDE AND INSTALL THE FOLLOWING EQUIPMENT (UNLESS NOTED OTHERWISE):

HUNTER IRRIGATION CONTROLLER. (REF. PLANS FOR SIZE)

208-230 VOLT DISCONNECT SWITCH

110 VOLTS POWER INSTALLED BY GENERAL CONTRACTOR.

2" FLOW SENSOR

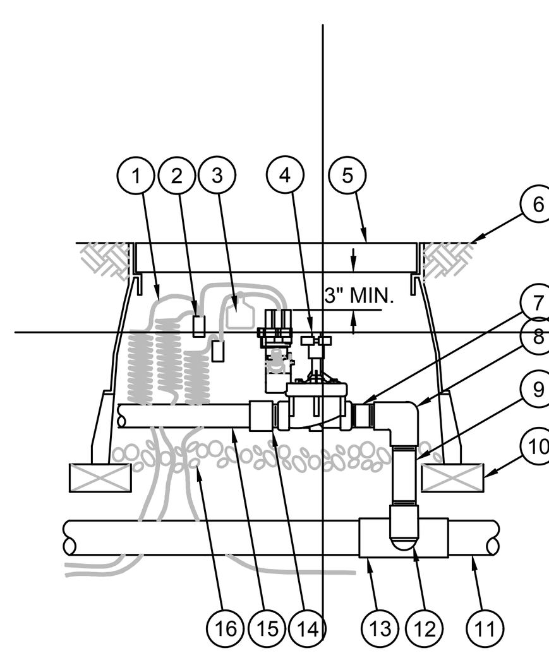
TWO SPARE WIRES SCH 40 PVC "GRAY" CONDUIT SIZED PER NEC FOR NECESSARY WIRE SIZE & COUNT.

CONTRACTOR TO CONTACT HUNTER INDUSTRIES FOR PROPER INSTALLATION OF SYSTEM @ (760) 591-7383

CONTROLLER DETAIL

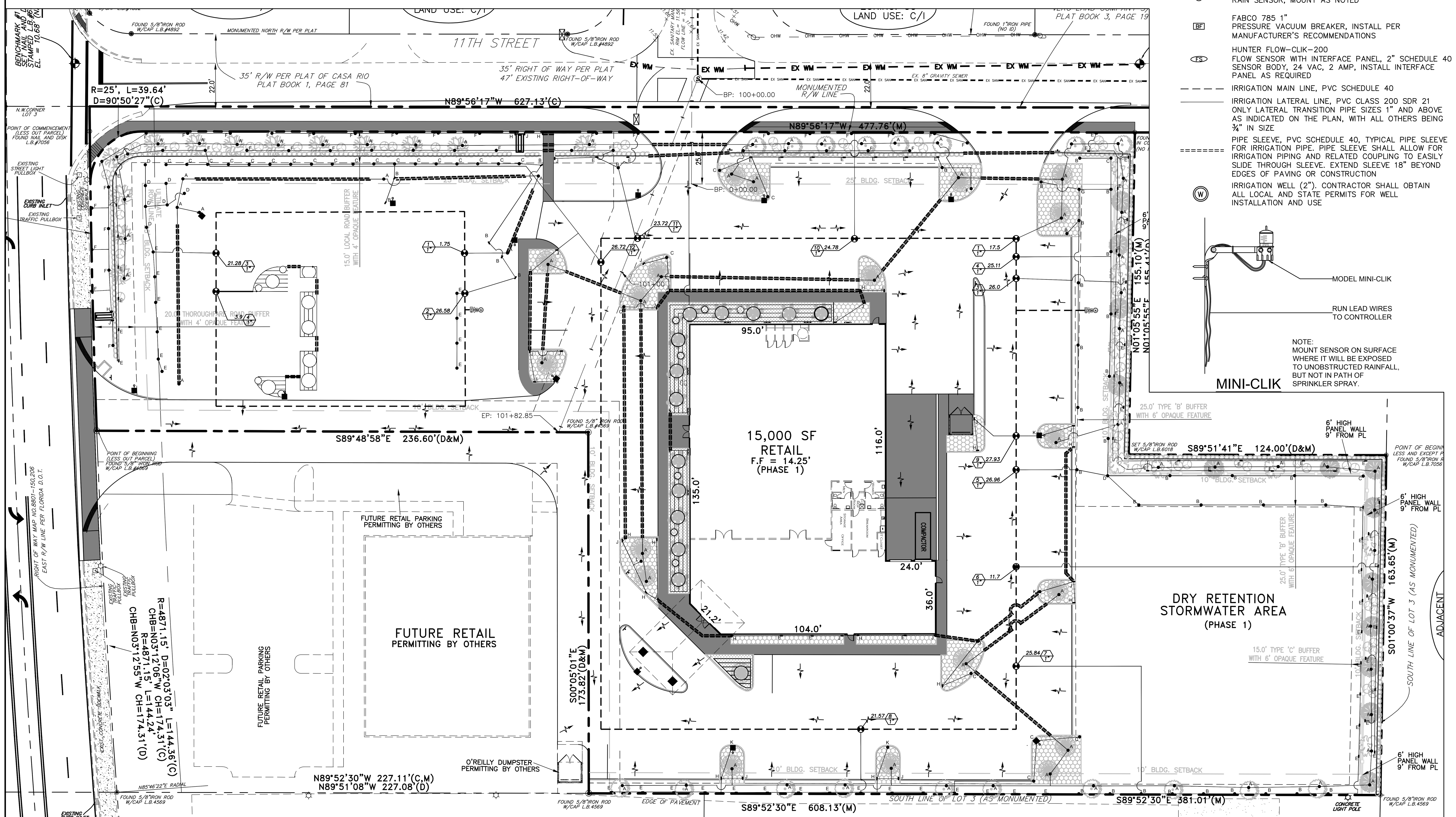
IRRIGATION EQUIPMENT SCHEDULE

SYMBOL	DESCRIPTION	QTY.
A	HUNTER RZWS-18-25-CV 18" ROOT ZONE WATERING SYSTEM WITH CHECK VALVE, 0.25 GPM	70
B	HUNTER PROS-04-CV-15-H PRO SPRAY 4" POP-UP WITH CHECK VALVE 15' R. 180° PATTERN	32
C	HUNTER PROS-04-CV-15-Q PRO SPRAY 4" POP-UP WITH CHECK VALVE 15' R. 90° PATTERN	10
D	HUNTER PROS-04-CV-15-TQ PRO SPRAY 4" POP-UP WITH CHECK VALVE 15' R. 270° PATTERN	1
E	HUNTER PROS-04-CV-2S-530 PRO SPRAY 4" POP-UP WITH CHECK VALVE SIDE STRIP 5'x30' PATTERN	72
F	HUNTER PROS-04-CV-10-H PRO SPRAY 4" POP-UP WITH CHECK VALVE 10' R. 180° PATTERN	42
G	HUNTER PROS-04-CV-15-F PRO SPRAY 4" POP-UP WITH CHECK VALVE 15' R. 360° PATTERN	1
H	HUNTER PROS-04-CV-LCS-515 PRO SPRAY 4" POP-UP WITH CHECK VALVE LEFT CORNER STRIP 5'x15' PATTERN	15
J	HUNTER PROS-04-CV-RCS-515 PRO SPRAY 12" POP-UP WITH CHECK VALVE RIGHT CORNER STRIP 5'x15' PATTERN	25
K	HUNTER PROS-04-CV-8-Q PRO SPRAY 4" POP-UP WITH CHECK VALVE 8' R. 90° PATTERN	4
L	HUNTER PROS-04-CV-8-F PRO SPRAY 4" POP-UP WITH CHECK VALVE 8' R. 360° PATTERN	1
(solid line)	HUNTER PLD-10-24-1000 PROFESSIONAL LANDSCAPE DRIP LINE, 1.0 GPH EMITTERS SPACED AT 24" O.C.	TBD
	HUNTER PGV-100G ELECTRIC REMOTE CONTROL VALVE, 1" PLASTIC GLOBE VALVE	12
C	HUNTER PC-1200 ELECTROMECHANICAL CONTROLLER, 12 STATIONS, OUTDOOR MODEL	1
R	HUNTER MINI-CLIK RAIN SENSOR, MOUNT AS NOTED	1
BF	FABCO 785 1" PRESSURE VACUUM BREAKER, INSTALL PER MANUFACTURER'S RECOMMENDATIONS	1
FS	HUNTER FLOW-CLIK-200 FLOW SENSOR WITH INTERFACE PANEL, 2" SCHEDULE 40 SENSOR BODY, 24 VAC, 2 AMP, INSTALL INTERFACE PANEL AS REQUIRED	1
— — — —	IRRIGATION MAIN LINE, PVC SCHEDULE 40	
(thin line)	IRRIGATION LATERAL LINE, PVC CLASS 200 SDR 21 ONLY LATERAL TRANSITION PIPE SIZES 1" AND ABOVE AS INDICATED ON THE PLAN, WITH ALL OTHERS BEING ¾" IN SIZE	
========	PIPE SLEEVE, PVC SCHEDULE 40, TYPICAL PIPE SLEEVE FOR IRRIGATION PIPE. PIPE SLEEVE SHALL ALLOW FOR IRRIGATION PIPING AND RELATED COUPLING TO EASILY SLIDE THROUGH SLEEVE. EXTEND SLEEVE 18" BEYOND EDGES OF PAVING OR CONSTRUCTION	
W	IRRIGATION WELL (2"). CONTRACTOR SHALL OBTAIN ALL LOCAL AND STATE PERMITS FOR WELL INSTALLATION AND USE	



(1) 30-INCH LINEAR LENGTH OF WIRE, COILED
(2) WATERPROOF CONNECTION RAIN BIRD SPLICE-1 (1 OF 2)
(3) ID TAG: RAIN BIRD VID SERIES
(4) REMOTE CONTROL VALVE:
(5) VALVE BOX WITH COVER:
(6) FINISH GRADE/TOP OF MULCH
(7) PVC SCH 80 NIPPLE (CLOSE)
(8) PVC SCH 40 ELL
(9) PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
(10) BRICK (1 OF 4)
(11) PVC MAINLINE PIPE
(12) SCH 80 NIPPLE (2-INCH LENGTH, HIDDEN) AND SCH 40 ELL
(13) PVC SCH 40 TEE OR ELL
(14) PVC SCH 40 MALE ADAPTER
(15) PVC LATERAL PIPE
(16) 3.0-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL

HUNTER PGV ZONE VALVE



MODEL MINI-CLIK

RUN LEAD WIRES TO CONTROLLER

NOTE:
MOUNT SENSOR ON SURFACE WHERE IT WILL BE EXPOSED TO UNOBSTRUCTED RAINFALL, BUT NOT IN PATH OF SPRINKLER SPRAY.

MINI-CLIK

GENERAL IRRIGATION SPECIFICATIONS AND NOTES

A. EXTENT:

INCLUDES FURNISHING ALL LABOR, MATERIALS AND EQUIPMENT FOR THE PROPER INSTALLATION OF THE IRRIGATION SYSTEM. THE WORK INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING: (1) TRENCHING AND BACKFILL, (2) AUTOMATICALLY CONTROLLED IRRIGATION SYSTEM, (3) TEST ALL SYSTEMS AND MAKE OPERATIVE, (4) "AS-BUILT" DRAWINGS.

B. GENERAL:

1. PERMITS AND FEES: OBTAIN ALL PERMITS AND PAY REQUIRED FEES TO ANY GOVERNMENTAL AGENCY HAVING JURISDICTION OVER THE WORK. INSPECTIONS REQUIRED BY LOCAL ORDINANCES DURING THE COURSE OF CONSTRUCTION SHALL BE ARRANGED AS REQUIRED. ON COMPLETION OF THE WORK, SATISFACTORY EVIDENCE SHALL BE FURNISHED TO THE OWNER'S CONSTRUCTION REPRESENTATIVE TO SHOW THAT ALL WORK HAS BEEN INSTALLED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE - PLUMBING / APPENDIX 'F' AND CODE REQUIREMENTS.
2. APPROVAL: WHEREVER THE TERMS "APPROVE" OR "APPROVED" ARE USED IN THE SPECIFICATIONS, THEY SHALL MEAN THE APPROVAL OF THE OWBER'S CONSTRUCTION REPRESENTATIVE IN WRITING.
3. BEFORE ANY WORK IS STARTED, A CONFERENCE SHALL BE HELD BETWEEN THE CONTRACTOR AND THE OWNER'S CONSTRUCTION REPRESENTATIVE CONCERNING THE WORK UNDER THIS CONTRACT.
4. COORDINATION: COORDINATE AND COOPERATE WITH OTHER CONTRACTORS TO ENABLE THE WORK TO PROCEED AS RAPIDLY AND EFFICIENTLY AS POSSIBLE
5. INSPECTION OF SITE:
   - A CONTRACTOR SHALL ACQUAINT HIMSELF WITH ALL SITE CONDITIONS. SUBMISSION OF HIS PROPOSAL SHALL BE CONSIDERED EVIDENCE THAT THE EXAMINATION HAS BEEN CONDUCTED. SHOULD UTILITIES NOT SHOWN ON THE PLANS BE FOUND DURING EXCAVATIONS, CONTRACTOR SHALL PROMPTLY NOTIFY THE OWNER'S CONSTRUCTION REPRESENTATIVE FOR INSTRUCTIONS AS TO FURTHER ACTION. FAILURE TO DO SO WILL MAKE CONTRACTOR LIABLE FOR ANY AND ALL DAMAGE THERETO ARISING FROM HIS OPERATIONS SUBSEQUENT TO DISCOVERY OF SUCH UTILITIES NOT SHOWN IN PLANS.
   - B CONTRACTOR SHALL MAKE NECESSARY ADJUSTMENTS IN THE LAYOUT AS MAY BE REQUIRED TO CONNECT TO EXISTING STUB-OUTS, SHOULD SUCH STUBS NOT BE LOCATED EXACTLY AS SHOWN, AND AS MAY BE REQUIRED TO WORK AROUND EXISTING WORK AT NO INCREASE IN COST TO THE OWNER'S CONSTRUCTION REPRESENTATIVE.
6. PROTECTION OF EXISTING PLANTS AND SITE CONDITIONS: THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT SITE CONDITIONS TO REMAIN. SHOULD DAMAGE BE INCURRED, THE CONTRACTOR SHALL REPAIR THE DAMAGE TO ITS ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
7. THE OWNER RESERVES THE RIGHT TO SUBSTITUTE, ADD, OR DELETE ANY MATERIAL OR WORK AS THE WORK PROGRESSES. ADJUSTMENTS TO THE CONTRACT PRICE SHALL BE NEGOTIATED IF DEEMED NECESSARY BY THE OWNER ON A PER DIEM BASIS.
8. THE OWNER RESERVES THE RIGHT TO REJECT MATERIAL OR WORK WHICH DOES NOT CONFORM TO THE CONTRACT DOCUMENTS. REJECTED WORK SHALL BE REMOVED OR CORRECTED AT THE EARLIEST TIME POSSIBLE.
9. WORK SCHEDULE: WITHIN 10 DAYS AFTER AWARD OF THE CONTRACT, THE CONTRACTOR SHALL SUBMIT TO THE OWNER A WORK SCHEDULE.
10. "AS-BUILT" IRRIGATION DRAWINGS: PREPARE AN "AS-BUILT" DRAWING ON A BLUEPRINT WHICH SHALL SHOW DEVIATIONS FROM THE BID DOCUMENTS MADE DURING CONSTRUCTION AFFECTING THE MAIN LINE PIPE, CONTROLLER LOCATIONS, REMOTE CONTROL VALVES AND QUICK COUPLING VALVES. THE DRAWINGS SHALL ALSO INDICATE AND SHOW APPROVED SUBSTITUTIONS OF SIZE, MATERIAL AND MANUFACTURERS NAME AND CATALOG NAME AND CATALOG NUMBER. THE DRAWINGS SHALL BE DELIVERED TO THE TENANT'S CONSTRUCTION REPRESENTATIVE BEFORE FINAL ACCEPTANCE OF WORK
11. FINAL ACCEPTANCE: FINAL ACCEPTANCE OF THE WORK MAY BE OBTAINED FROM THE OWNER'S CONSTRUCTION REPRESENTATIVE UPON THE SATISFACTORY COMPLETION OF ALL WORK.
12. GUARANTEE: THE CONTRACTOR SHALL PROVIDE ALL WARRANTIES, CERTIFICATIONS, GUARANTIES, AND WARRANTY BONDS AS SPECIFIED IN THE CONTRACT DOCUMENTS AND PERMIT CONDITIONS. ALL WORK SHALL BE GUARANTEED FOR ONE YEAR FROM DATE OF ACCEPTANCE AGAINST ALL DEFECTS IN MATERIAL, EQUIPMENT AND WORKMANSHIP. GUARANTEE SHALL ALSO COVER REPAIR OF DAMAGE TO ANY PART OF THE PREMISES RESULTING FROM LEAKS OR OTHER DEFECTS IN MATERIAL, EQUIPMENT AND WORKMANSHIP TO THE SATISFACTORY OF THE OWNER'S CONSTRUCTION REPRESENTATIVE. REPAIRS, IF REQUIRED, SHALL BE DONE PROMPTLY AT NO COST TO THE OWNER.

C. MATERIALS:

1. GENERAL: ALL MATERIALS THROUGHOUT THE SYSTEM SHALL BE NEW AND IN PERFECT CONDITION.
2. PLASTIC PIPING: ALL MAIN LINES AND LATERAL LINES SHALL BE CLASS 200 O-RING POLYVINYL CHLORIDE (PVC) PIPE AND SHALL COMPLY WITH ONE OF THE FOLLOWING STANDARDS: ASTM D 1785, ASTM D-2241, AWWA C-900, OR AWWA C-905. SDR-PR PIPE SHALL HAVE A MINIMUM WALL THICKNESS AS REQUIRED BY SDR-26. PVC GASKETS FITTINGS SHALL CONFORMING TO ASTM D 3139. GASKETS SHALL CONFORM TO ASTM F 477. SOLVENT-WELD PVC FITTINGS SHALL MEET THE REQUIREMENTS OF SCHEDULE 40 AS SET FORTH IN ASTM D 2466. THREADED PVC PIPE FIRINGS SHALL MEET THE REQUIREMENTS OF SCHEDULE 40 AS SET FORTH IN ASTM D 2464. CONFORMING TO ASTM D-1784 AND D-2241.
3. PLASTIC FITTINGS: ALL SOLVENT-WELD PVC FITTINGS SHALL MEET THE REQUIREMENTS OF SCHEDULE 40 AS SET FORTH IN ASTM D 2466. SCHEDULE 40 SOLVENT-WELD, POLYVINYL CHLORIDE (PVC) STANDARD WEIGHT AS MANUFACTURED BY SLOANE, LASCO, OR APPROVED EQUAL.
4. SOLVENT CEMENT: PVC CEMENT SHALL MEET ASTM D 2564 AND PVC CLEANER-TYPE ALL MEET ASTM F 656.
5. SPRINKLER HEAD RISERS: SCHEDULE 40 PVC FOR RISERS. PIPE SHALL BE CUT WITH A STANDARD PIPE CUTTING TOOL WITH SHARP CUTTERS. REAM ONLY TO FULL DIAMETER OF PIPE AND CLEAN ALL ROUGH EDGES OR BURRS. CUT ALL THREADS ACCURATELY WITH SHARP DIES. NOT MORE THAN THREE(3) FULL THREADS SHALL SHOW BEYOND FITTINGS WHEN PIPE IS MADE UP. ASSEMBLIES SHALL BE AS DETAILED.
6. AUTOMATIC CONTROLLERS: SEE LEGEND
7. REMOTE CONTROL VALVES: SEE LEGEND
8. CONTROL WIRING: 24 VOLT SOLID UL APPROVED FOR DIRECT BURIAL IN GROUND. MINIMUM WIRE SIZE: 14 GAUGE. ALL SPLICES SHALL BE MADE WITHIN VALVE BOX.
9. SLEEVES FOR CONTROL WIRING: UNDER ALL WALKS AND PAVED AREAS AND WHERE INDICATED ON DRAWINGS. MINIMUM PVC 1220-200 PSI PLASTIC PIPE.
10. SPRINKLER HEADS: SEE LEGEND
11. QUICK COUPLING VALVES: SHALL BE NOTED ON DRAWINGS.

D. WORKMANSHIP:

1. LAY OUT WORK AS ACCURATELY AS POSSIBLE TO THE DRAWINGS. THE DRAWINGS, THOUGH CAREFULLY DRAWN, ARE GENERALLY DIAGRAMMATIC TO THE EXTENT THAT SWING JOINTS, OFFSETS, AND ALL FITTINGS ARE NOT SHOWN.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FULL AND COMPLETE COVERAGE OF ALL IRRIGATED AREAS AND SHALL MAKE ANY NECESSARY MINOR ADJUSTMENTS AT NO ADDITIONAL COST TO THE OWNER'S CONSTRUCTION REPRESENTATIVE.
3. ANY MAJOR REVISIONS TO THE IRRIGATION SYSTEM MUST BE SUBMITTED AND ANSWERED IN WRITTEN FORM, ALONG WITH ANY CHANGE IN CONTRACT PRICE.

E. INSTALLATION:

1. EXCAVATION AND TRENCHING:
   - A PERFORM ALL EXCAVATIONS AS REQUIRED FOR THE INSTALLATION OF THE WORK INCLUDING UNDER THIS SECTION, INCLUDING SHORING OF EARTH BANKS TO PREVENT CAVE-INS. RESTORE ALL SURFACES, EXISTING UNDERGROUND INSTALLATIONS, ETC., DAMAGED OR CUT AS A RESULT OF THE EXCAVATIONS TO AND IN A MANNER APPROVED BY THE OWNER.
   - B TRENCHES SHALL BE MADE WIDE ENOUGH TO ALLOW A MINIMUM OF 6 INCHES BETWEEN PARALLEL PIPE LINES. TRENCHES FOR PIPE LINES SHALL BE MADE OF SUFFICIENT DEPTHS TO PROVIDE THE MINIMUM COVER FROM FINISH GRADE AS FOLLOWS:
     1) 18" MINIMUM COVER OVER IRRIGATION LINES FOR VEHICLE TRAFFIC AREAS.
     2) MINIMUM COVER OVER IRRIGATION LINES TO HEADS EXCEPT VEHICLE TRAFFIC AREAS ARE AS FOLLOWS:
        - ½" - 1½" = 6" COVER
        - 2" - 3" = 12" COVER
        - 4" - 6" = 18" COVER
        - > 6" = 24" COVER
   - C MAINTAIN ALL WARNING SIGNS, SHORING, BARRICADES, FLARES AND RED LANTERNS AS REQUIRED BY THE SAFETY ORDERS OF THE DIVISION OF INDUSTRIAL SAFETY AND LOCAL ORDINANCES.
2. PIPE LINE ASSEMBLY:
   - A INSTALL REMOTE CONTROL VALVES WHERE SHOWN AND GROUP TOGETHER WHERE PRACTICAL, PLACE NO CLOSER THAN 12 INCHES TO WALK EDGES, BUILDINGS AND WALLS.
   - B PLASTIC PIPE AND FITTINGS SHALL BE SOLVENT WELDED USING SOLVENTS AND METHODS RECOMMENDED BY MANUFACTURER OF THE PIPE, EXCEPT WHERE SCREWED CONNECTIONS ARE REQUIRED. PIPE AND FITTINGS SHALL BE THOROUGHLY CLEANED OF DIRT, DUST AND MOISTURE BEFORE APPLYING SOLVENT WITH A NON-SYNTHETIC BRISTLE BRUSH.
   - C PIPE MAY BE ASSEMBLED AND WELDED ON THE SURFACE. SNAKE PIPE FROM SIDE TO SIDE OF TRENCH BOTTOM TO ALLOW FOR EXPANSION AND CONTRACTION.
   - D MAKE ALL CONNECTIONS BETWEEN PLASTIC PIPE AND METAL VALVES OR STEEL PIPE WITH THREADED FITTINGS USING PLASTIC MALE ADAPTERS.
3. SPRINKLER HEADS:
   - A INSTALL ALL SPRINKLERS AS DETAILED ON DRAWINGS.
   - B DO NOT SCALE PLANS FOR EXACT HEAD LOCATION.
   - C PROVIDE A MINIMUM OF 12" BETWEEN SPRINKLERS AND PAVEMENT AND 12 INCHES BETWEEN SPRINKLERS AND BUILDINGS.
4. CLOSING OF PIPE AND FLUSHING LINES:
   - A CAP OR PLUG ALL OPENINGS AS SOON AS LINES HAVE BEEN INSTALLED TO PREVENT THE ENTRANCE OF MATERIALS THAT WOULD OBSTRUCT THE PIPE. LEAVE IN PLACE UNTIL REMOVAL IS NECESSARY FOR COMPLETION OF INSTALLATION.
   - B THOROUGHLY FLUSH OUT ALL WATER LINES BEFORE INSTALLING HEADS, VALVES AND OTHER HYDRANTS.
   - C TEST IN ACCORDANCE WITH PARAGRAPH ON HYDROSTATIC TESTS.
   - D UPON COMPLETION OF THE TESTING, THE CONTRACTOR SHALL COMPLETE ASSEMBLY AND ADJUST SPRINKLER HEADS FOR PROPER DISTRIBUTION.
5. INSPECTIONS:
   - A SPRINKLER LAYOUT AND SPACING INSPECTION: VERIFICATION THAT THE IRRIGATION DESIGN IS ACCURATELY INSTALLED IN THE FIELD. IT WILL ALSO PROVIDE FOR ALTERATION OR MODIFICATION OF THE SYSTEM TO MEET FIELD CONDITIONS. SPACING SHOULD BE WITHIN 5% OF THE DESIGN SPACING.
   - B PIPE INSTALLATION DEPTH INSPECTION: ALL PIPES IN THE SYSTEM SHALL BE INSTALLED TO DEPTHS AS PREVIOUSLY DESCRIBED IN SECTION 'E' OF THESE SPECIFICATIONS.
   - C OPEN TRENCH INSPECTION: THE TRENCH AND ALL JOINTS AND EVERY TRANSITION IN PIPE SIZE, WILL BE OPEN WHERE OPEN TRENCH INSPECTION IS REQUIRED.
   - D INSPECTIONS WILL BE PERFORMED THROUGHOUT THE DURATION OF THE INSTALLATION AND WILL BE MADE BY THE GOVERNING AGENCY AND/OR THE OWNER AND ENGINEERS TO ENSURE COMPLIANCE WITH DESIGN INTENT, SPECIFICATIONS, AND THE IRRIGATION CODES.
6. HYDROSTATIC TESTS:
   - A REQUEST THE PRESENCE OF THE OWNER AND ENGINEER IN WRITING AT LEAST 48 HOURS IN ADVANCE OF TESTING.
   - B TESTING TO BE ACCOMPLISHED AT THE EXPENSE OF THE CONTRACTOR AND IN THE PRESENCE OF THE OWNER AND ENGINEER.
   - C CENTER LOAD PIPING WITH SMALL AMOUNT OF BACKFILL TO PREVENT ARCHING OR SLIPPING UNDER PRESSURE.
   - D APPLYING A CONTINUOUS AND STATIC WATER PRESSURE OF 125 PSI WHEN WELDED PLASTIC JOINTS HAVE CURED AT LEAST 3 HOURS AND WITH THE RISERS CAPPED AS FOLLOWS:
     1) MAIN LINES AND SUB-MAINS TO BE TESTED FOR 2 HOURS.
   - E FOR PVC AND O-RING GASKET PIPE THE ALLOWABLE LEAKAGE SHALL NOT EXCEED THE NUMBER OF GALLONS PER HOUR AS DETERMINED BY THE FOLLOWING FORMULA:

     $$L = \frac{ND(P)}{7400}$$

     IN WHICH: L = ALLOWABLE LEAKAGE, IN GALLONS PER HOUR
     N = NUMBER OF JOINTS
     D = PIPE DIAMETER IN INCHES
     P = AVERAGE TEST PRESSURE IN PSI GAUGE
   - F REPAIR LEAKS RESULTING FROM TESTS.
7. AUTOMATIC CONTROLLERS:
   - A CONNECT REMOTE CONTROL VALVES TO CONTROLLER IN A CLOCKWISE SEQUENCE TO CORRESPOND WITH STATION SETTING BEGINNING WITH STATIONS 1, 2, 3, ETC.
8. AUTOMATIC CONTROL WIRING:
   - A INSTALL CONTROL WIRING, SPRINKLER MAINS AND LATERALS IN COMMON TRENCHES WHEREVER POSSIBLE.
   - B INSTALL CONTROL WIRES AT LEAST 18" BELOW FINISH GRADE AND LAY TO THE SIDE AND BELOW THE MAIN LINE. PROVIDE LOOPED SLACK AT VALVES AND SNAKE WIRES IN TRENCH TO ALLOW FOR CONTRACTION OF WIRES TIE WIRES IN BUNDLES AT INTERVALS.
   - C CONTROL WIRE SPLICES WILL BE ALLOWED ONLY RUNS OVER 1000 FT. CONNECTIONS SHALL BE AS DETAILED.
   - D ALL WIRING PASSING UNDER EXISTING OR FUTURE PAVING, CONSTRUCTION, ETC., SHALL BE ENCASED IN PLASTIC OR GALVANIZED STEEL CONDUIT EXTENDING AT LEAST 12" BEYOND EDGES OF PAVING OR CONSTRUCTION.
9. BACKFILL AND COMPACTING:
   - A AFTER SYSTEM IS OPERATING AND REQUIRED TESTS AND INSPECTIONS HAVE BEEN MADE, BACKFILL EXCAVATIONS AND TRENCHES WITH CLEAN SOIL, FREE OF RUBBISH. INITIAL BACKFILL MATERIAL TO 6 INCHES ABOVE THE TOP OF PIPE SHALL BE FREE OF ROCKS OR STONES LARGER THAN ONE INCH IN DIAMETER FINAL BACKFILL MATERIAL SHALL BE FREE OF ROCKS OR STONES LARGER THAN 3 INCHES IN DIAMETER.
   - B BACKFILL FOR ALL TRENCHES, REGARDLESS OF THE TYPE OF PIPE COVERED, SHALL BE COMPACTED TO MINIMUM 95% DENSITY.
   - C COMPACT TRENCHES IN AREAS TO BE PLANTED BY THOROUGHLY FLOODING THE BACKFILL. JETTING PROCESS MAY BE USED IN THOSE AREAS.
   - D DRESS OFF ALL AREAS TO FINISH GRADES.

F. CLEAN-UP:

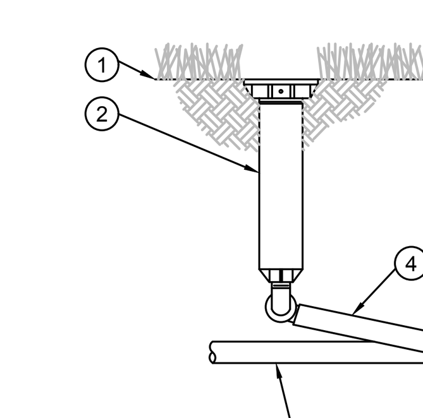
1. REMOVE FROM THE SITE ALL DEBRIS RESULTING FROM WORK OF THIS SECTION.

G. SUBMITTALS:

1. FOR ALL SITE WORK CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT PRODUCT DATA IN THE FORM OF MANUFACTURERS' CUT SHEETS AND CATALOG DATA FOR ALL PRODUCTS, MATERIAL AND EQUIPMENT CLEARLY INDICATING THE SPECIFIC PART OR PRODUCT CATALOG NUMBER(S) FOR APPROVAL.
2. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL PRODUCTS, MATERIALS AND EQUIPMENT REQUIRED TO BE FABRICATED, OR WHEN STANDARD PUBLISHED PRODUCT DATA IS NOT SUITABLE FOR USE.
3. SUBMIT 6 COPIES OF REQUESTED INFORMATION, NEATLY BOUND AND INDEXED PER CATEGORY FOR THE FOLLOWING:
   IRRIGATION:
   ALL LINES, SYSTEM EQUIPMENT COMPONENTS, MATERIALS INCLUDING PIPES, VALVES, FITTINGS, SPRINKLER HEADS, AND MISCELLANEOUS APPURTENANCES.
4. ALLOW TWO WEEKS FOR THE ENGINEER TO COMPLETE REVIEW AND APPROVAL OF PRODUCT DATA, COORDINATION DRAWINGS AND SHOP DRAWINGS. ENGINEER WILL NOT BE RESPONSIBLE FOR PROJECT DELAYS RELATED TO DELIVERY AND TRANSMISSION OF THE INFORMATION AND DOCUMENTATION ONCE INFORMATION HAS LEFT ENGINEER'S OFFICE. ITEMS REQUIRING A LONG LEAD TIME SHOULD BE SUBMITTED AS SOON AS POSSIBLE.
5. CONTRACTOR SHALL PROVIDE THE OWNER WITH OPERATION AND MAINTENANCE MANUALS FOR ALL OPERABLE EQUIPMENT (PUMP STATIONS AND CONTROLS, AUTOMATIC CONTROLLERS, CONTROL VALVES, AND ALL OTHER IRRIGATION SYSTEM COMPONENTS ETC.).
6. OPERATION AND MAINTENANCE MANUALS SHALL BE SUBMITTED AS A PRE-REQUISITE TO THE PROJECT BEING DEEMED SUBSTANTIALLY COMPLETE.

SLEEVE SIZE SCHEDULE

PIPE SIZE (CLASS 200)	SLEEVE SIZE (SCHEDULE 40)
3/4"	1-1/2"
1"	2"
1-1/4"	2-1/2"
1-1/2"	3"
2"	4"
2-1/2"	6"
3, 4"	6"



(1) FINISH GRADE/TOP OF MULCH
(2) POP-UP SPRAY SPRINKLER:
(3) PVC LATERAL PIPE
(4) SWING ASSEMBLY:
(5) PVC SCH 40 TEE OR ELL

HUNTER PROS-4Z 4" POP-UP

MARK	REVISION	DATE
1	REVISED PER IRC COMMENTS	8/1/16

DRAWING	16-096
DESIGNED	J.B.B.
DRAWN	J.B.B.
CHECKED	J.B.B.
SCALE	1:30
DATE	5/5/16

THE DRAWINGS ARE THE PROPERTY OF THE ENGINEER, WHETHER THE PROJECT FOR WHICH THEY ARE MADE IS EXECUTED OR NOT. COPY OR USE FOR OTHER PROJECTS IS PERMITTED ONLY BY WRITTEN CONTRACT WITH THE ENGINEER. UNAUTHORIZED USE WILL BE PROSECUTED PURSUANT TO THE COPYRIGHT LAWS.

SCHULKE, BITTLE & STODDARD, L.L.C.
CIVIL & STRUCTURAL ENGINEERING · LAND PLANNING · ENVIRONMENTAL PERMITTING
CERTIFICATION OF AUTHORIZATION NO.: 00008668
1717 INDIAN RIVER BLVD., SUITE 201 VERO BEACH, FLORIDA 32960
TEL 772 / 770-9622 FAX 772 / 770-9496 EMAIL info@sbsengineers.com

IRRIGATION PLAN (PHASE 1)

SHOPPES AT 11TH

ENGINEER CERTIFICATION
☐ JOSEPH W. SCHULKE FL. REG. NO. 47048
☐ JODAH B. BITTLE FL. REG. NO. 57396
☐ WILLIAM P. STODDARD FL. REG. NO. 57605

DATE:

SHEET 8A

PROJECT NO. 16-096