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IRRIGATION PLAN GENERAL NOTES

PART 1 – GENERAL CONDITIONS

1.1 DESCRIPTION:

- A. **WORK INCLUDED:** PROVIDE ALL LABOR, MATERIALS, TRANSPORTATION, AND SERVICES NECESSARY TO FURNISH AND INSTALL IRRIGATION SYSTEMS AS SHOWN ON THE DRAWINGS AND DESCRIBED HEREIN.

1.2 QUALITY ASSURANCE:

- A. **MANUFACTURER'S DIRECTIONS:** MANUFACTURER'S DIRECTIONS AND DETAILED DRAWINGS SHALL BE FOLLOWED IN ALL CASES WHERE THE MANUFACTURERS OF ARTICLES USED IN THIS CONTRACT FURNISH DIRECTIONS COVERING POINTS NOT SHOWN IN THE DRAWINGS AND SPECIFICATIONS.

- B. **ORDINANCES AND REGULATIONS:** ALL LOCAL, MUNICIPAL AND STATE LAWS, AND RULES AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR. ANYTHING CONTAINED IN THESE SPECIFICATIONS SHALL NOT BE CONSTRUED TO CONFLICT WITH ANY OF THE ABOVE RULES AND REGULATIONS OR REQUIREMENTS OF THE SAME. HOWEVER, WHEN THESE SPECIFICATIONS AND DRAWINGS CALL FOR OR DESCRIBE MATERIALS, WORKMANSHIP, OR CONSTRUCTION OF A BETTER QUALITY, HIGHER STANDARD, OR LARGER SIZE THAN IS REQUIRED BY THE ABOVE RULES AND REGULATIONS, THE PROVISIONS OF THESE SPECIFICATIONS AND DRAWINGS SHALL TAKE PRECEDENCE.

C. EXPLANATION OF DRAWINGS:

1. DUE TO THE SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, SLEEVES, ETC., WHICH MAY BE REQUIRED. THE CONTRACTOR SHALL CAREFULLY INVESTIGATE THE STRUCTURAL AND FINISHED CONDITIONS AFFECTING ALL OF HIS WORK AND PLAN HIS WORK ACCORDINGLY, FURNISHING SUCH FITTINGS, ETC. AS MAY BE REQUIRED TO MEET SUCH CONDITIONS. DRAWINGS ARE GENERALLY DIAGRAMMATIC AND INDICATIVE OF THE WORK TO BE INSTALLED. THE WORK SHALL BE INSTALLED IN SUCH A MANNER AS TO AVOID CONFLICTS BETWEEN IRRIGATION SYSTEMS, PLANTING, AND ARCHITECTURAL FEATURES.
2. THE WORD LANDSCAPE ARCHITECT AS USED HEREIN SHALL REFER TO THE OWNER'S AUTHORIZED REPRESENTATIVE.
3. ALL WORK CALLED FOR ON THE DRAWINGS BY NOTES OR DETAILS SHALL BE FURNISHED AND INSTALLED WHETHER OR NOT SPECIFICALLY MENTIONED IN THE SPECIFICATIONS.

4. THE CONTRACTOR SHALL NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS, GRADE DIFFERENCES, OR DISCREPANCIES IN AREA DIMENSIONS EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE IRRIGATION DESIGN. SUCH OBSTRUCTIONS OR DIFFERENCES SHOULD BE BROUGHT TO THE ATTENTION OF THE OWNER'S AUTHORIZED REPRESENTATIVE. IN THE EVENT THIS NOTIFICATION IS NOT PERFORMED, THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.

1.3 SUBMITTALS:

A. MATERIAL LIST:

1. THE CONTRACTOR SHALL FURNISH THE ARTICLES, EQUIPMENT, MATERIALS, OR PROCESSES SPECIFIED BY NAME IN THE DRAWINGS AND SPECIFICATIONS. NO SUBSTITUTION WILL BE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL BY THE LANDSCAPE ARCHITECT
2. COMPLETE MATERIAL LIST SHALL BE SUBMITTED PRIOR TO PERFORMING ANY WORK. MATERIAL LIST SHALL INCLUDE THE MANUFACTURER, MODEL NUMBER, AND DESCRIPTION OF ALL MATERIALS AND EQUIPMENT TO BE USED. COPIES OF CATALOG INFORMATION SHALL NOT BE SUBSTITUTED FOR THE MATERIALS LIST, AND WILL BE REJECTED AS UNACCEPTABLE.
3. EQUIPMENT OR MATERIALS INSTALLED OR FURNISHED WITHOUT PRIOR APPROVAL OF THE LANDSCAPE ARCHITECT MAY BE REJECTED AND THE CONTRACTOR REQUIRED TO REMOVE SUCH MATERIALS FROM THE SITE AT HIS OWN EXPENSE.
4. APPROVAL OF ANY ITEM, ALTERNATE, OR SUBSTITUTE INDICATED ONLY THAT THE PRODUCT MEETS THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS ON THE BASIS OF THE INFORMATION OR SAMPLES SUBMITTED.
5. MANUFACTURER'S WARRANTIES SHALL NOT RELIEVE THE CONTRACTOR OF HIS LIABILITY UNDER THE GUARANTEE. SUCH WARRANTIES SHALL ONLY SUPPLEMENT THE GUARANTEE.

B. RECORD DRAWINGS:

1. THE CONTRACTOR SHALL PROVIDE AND KEEP UP TO DATE A COMPLETE "RECORD" SET OF BLUE LINE OZALID PRINTS WHICH SHALL BE CORRECTED DAILY AND SHOW EVERY CHANGE FROM THE ORIGINAL DRAWINGS AND SPECIFICATIONS AND THE EXACT LOCATIONS, SIZES, AND KINDS OF EQUIPMENT THESE DRAWINGS SHALL ALSO SERVE AS WORK PROGRESS SHEETS AND SHALL BE THE BASIS FOR MEASUREMENT AND PAYMENT FOR WORK COMPLETED. THIS SET OF DRAWINGS SHALL BE KEPT ON THE SITE AND SHALL BE USED ONLY AS A RECORD SET.
2. THE CONTRACTOR SHALL MAKE NEAT AND LEGIBLE ANNOTATIONS THEREON DAILY AS THE WORK PROCEEDS, SHOWING THE WORK AS ACTUALLY INSTALLED. THESE DRAWINGS SHALL BE AVAILABLE

AT ALL TIMES FOR INSPECTION AND SHALL BE KEPT IN A LOCATION DESIGNATED BY THE LANDSCAPE ARCHITECT.

3. BEFORE THE DATE OF THE FINAL INSPECTION, THE CONTRACTOR SHALL TRANSFER ALL INFORMATION FROM THE RECORD PRINTS TO A SEPIA MYLAR OR MYLAR PROCURED FROM THE LANDSCAPE ARCHITECT. ALL WORK SHALL BE NEAT, DRAWN IN WATERPROOF INK BY A TECHNICAL INK PEN DESIGNED SPECIFICALLY FOR USE ON MYLAR MATERIAL. WORK COMPLETED IN FELT TIP PEN OR BALL POINT PEN WILL BE REJECTED BECAUSE OF THE NON-PERMANENT NATURE OF BOTH DEVICES. ALL WORK SHALL BE SUBJECT TO APPROVAL BY THE LANDSCAPE ARCHITECT.
4. THE CONTRACTOR SHALL DIMENSION FROM TWO PERMANENT POINTS OF REFERENCE THE LOCATION OF THE FOLLOWING ITEMS:
 - A. CONNECTION TO EXISTING WATER LINES
 - B. CONNECTIONS TO EXISTING ELECTRICAL POWER
 - C. GATE VALVES
 - D. ROUTING OF PRESSURE MAIN LINE PIPE
 - E. SPRINKLER CONTROL VALVES
 - F. ROUTING OF CONTROL AND COMMON WIRE
 - G. QUICK COUPLING VALVES
 - H. OTHER RELATED EQUIPMENT AS DIRECTED BY THE LANDSCAPE ARCHITECT.
5. ON OR BEFORE THE DATE OF THE FINAL INSPECTION, THE CONTRACTOR SHALL DELIVER THE CORRECTED AND COMPLETED MYLARS TO THE LANDSCAPE ARCHITECT. DELIVERY OF THE MYLARS WILL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF FURNISHING REQUIRED INFORMATION THAT MAY BE OMITTED FROM THE PRINTS HE COMPILED AT THE SITE.

C. CONTROLLER CHARTS:

1. RECORD DRAWINGS SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT BEFORE CONTROLLER CHARTS ARE PREPARED.
2. PROVIDE ONE CONTROLLER CHART FOR EACH CONTROLLER SUPPLIED.
3. THE CHART SHALL SHOW THE AREA CONTROLLED BY EACH AUTOMATIC CONTROLLER AND SHALL BE SIZED AS DESIGNATED BY EACH AUTOMATIC CONTROLLER OR AS DESIGNATED BY THE OWNER'S AUTHORIZED REPRESENTATIVE.
4. THE CHART IS TO BE A REDUCED DRAWING OF THE ACTUAL RECORD DRAWINGS. HOWEVER, IN THE EVENT THE CONTROLLER SEQUENCE IS NOT LEGIBLE WHEN THE DRAWING IS REDUCED, IT SHALL BE READABLE WHEN THE CONTROLLER CHART IS COMPLETED.
5. THE CHART SHALL BE A BLACKLINE OR BLUELINE OZALID PRINT AND A DIFFERENT COLOR SHALL BE USED TO INDICATE THE AREA OF COVERAGE FOR EACH CONTROL VALVE STATION.

6. WHEN COMPLETED AND APPROVED, THE CHART SHALL BE SEALED BY A PLASTIC LAMINATING PROCESS. THE PLASTIC LAMINATING SHEETS SHALL BE A MINIMUM OF 10 MIL. THICKNESS EACH.

D. OPERATION AND MAINTENANCE

1. PREPARE AND DELIVER TO THE LANDSCAPE ARCHITECT WITHIN TEN CALENDAR DAYS PRIOR TO COMPLETION OF CONSTRUCTION, TWO HARD COVER BINDERS WITH THREE RINGS EACH CONTAINING THE FOLLOWING INFORMATION:
 - A. INDEX SHEETS STATING CONTRACTOR'S ADDRESS AND TELEPHONE NUMBER, LIST OF EQUIPMENT WITH NAMES AND ADDRESSES OF LOCAL MANUFACTURER'S REPRESENTATIVES.
 - B. CATALOG AND PARTS SHEETS ON EVERY MATERIAL AND EQUIPMENT INSTALLED UNDER THIS CONTRACT.
 - C. GUARANTEE STATEMENT (SECTION 1.6).
 - D. COMPLETE OPERATING AND MAINTENANCE INSTRUCTIONS ON ALL MAJOR PIECES OF EQUIPMENT.
2. IN ADDITION TO THE ABOVE MENTIONED MAINTENANCE MANUAL, PROVIDE THE OWNER'S MAINTENANCE PERSONNEL WITH INSTRUCTIONS FOR MAJOR EQUIPMENT AND SHOW EVIDENCE IN WRITING TO THE LANDSCAPE ARCHITECT AT THE CONCLUSION OF THE PROJECT THAT THIS SERVICE HAS BEEN RENDERED

E. EQUIPMENT TO BE FURNISHED:

1. SUPPLY AS PART OF THIS CONTRACT THE FOLLOWING TOOLS:
 - A. TWO SETS OF SPECIAL TOOLS REQUIRED FOR REMOVING, DISASSEMBLING, AND ADJUSTING EACH TYPE OF SPRINKLER AND VALVE INSTALLED UNDER THIS CONTRACT.
 - B. TWO FIVE-FOOT VALVE KEYS FOR OPERATION OF GATE VALVES (AS REQUIRED).
 - C. TWO KEYS FOR EACH AUTOMATIC CONTROLLER OR ENCLOSURE.
 - D. SIX QUICK COUPLER KEYS AND MATCHING HOSE SWIVELS FOR EACH TYPE OF QUICK COUPLING VALVE INSTALLED.
2. THE ABOVE MENTIONED EQUIPMENT SHALL BE TURNED OVER TO THE OWNER AT THE CONCLUSION OF THE PROJECT. BEFORE FINAL INSPECTION CAN OCCUR, EVIDENCE THAT THE OWNER HAS RECEIVED MATERIAL MUST BE SHOWN TO THE LANDSCAPE ARCHITECT.

1.4 PRODUCT PROTECTION, STORAGE AND HANDLING:

- A. HANDLING OF PVC PIPE AND FITTINGS: THE CONTRACTOR IS CAUTIONED TO EXERCISE CARE IN HANDLING, LOADING, UNLOADING, AND STORING OF PVC PIPE AND FITTINGS. ALL PVC PIPE SHALL BE TRANSPORTED IN A VEHICLE WHICH ALLOWS THE LENGTH OF PIPE TO LIE FLAT SO AS NOT TO SUBJECT IT TO UNDUE BENDING OR CONCENTRATED EXTERNAL LOAD AT ANY POINT. ANY SECTION OF PIPE THAT HAS BEEN DENTED OR

DAMAGED WILL BE DISCARDED, AND IF INSTALLED, SHALL BE REPLACED WITH NEW PIPING.

1.5 ANALYSIS OF SAMPLES AND TESTS: NONE

1.6 GUARANTEE:

- A. THE GUARANTEE FOR THE SPRINKLER IRRIGATION SYSTEM SHALL BE MADE IN ACCORDANCE WITH THE ATTACHED FORM. THE GENERAL CONDITIONS AND SUPPLEMENTARY CONDITIONS OF THESE SPECIFICATIONS SHALL BE FILED WITH THE OWNER OR HIS REPRESENTATIVE PRIOR TO ACCEPTANCE OF THE IRRIGATION SYSTEM.
- B. A COPY OF THE GUARANTEE FORM SHALL BE INCLUDED IN THE OPERATIONS AND MAINTENANCE MANUAL (SECTION 1.3.D).
- C. THE GUARANTEE FORM SHALL BE RE-TYPED ONTO THE CONTRACTOR'S LETTERHEAD AND CONTAIN THE FOLLOWING INFORMATION:

GUARANTEE FOR SPRINKLER IRRIGATION SYSTEM

WE HEREBY GUARANTEE THAT THE SPRINKLER SYSTEM WE HAVE FURNISHED AND INSTALLED IS FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP, AND THE WORK HAS BEEN COMPLETED IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS. WE AGREE TO REPAIR OR REPLACE ANY DEFECTS IN MATERIAL OR WORKMANSHIP WHICH MAY DEVELOP DURING THE PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE AND ALSO TO REPAIR OR REPLACE ANY DAMAGE RESULTING FROM THE REPAIRING OR REPLACING OF SUCH DEFECTS AT NO ADDITIONAL COST TO THE OWNER. WE SHALL MAKE REPAIRS OR REPLACEMENTS WITHIN A REASONABLE TIME AFTER RECEIPT OF WRITTEN NOTICE FROM THE OWNER. IN THE EVENT OF OUR FAILURE TO MAKE SUCH REPAIRS OR REPLACEMENTS WITHIN A REASONABLE TIME AFTER RECEIPT OF WRITTEN NOTICE FROM THE OWNER, WE AUTHORIZE THE OWNER TO PROCEED TO HAVE SAID REPAIRS OR REPLACEMENTS MADE AT OUR EXPENSE AND WE WILL PAY THE COSTS AND CHARGES THEREFORE UPON DEMAND.

(THE ABOVE STATEMENT IS TO BE FOLLOWED BY THE PROJECT NAME, LOCATION, SIGNATURE, ADDRESS, AND TELEPHONE NUMBER OF IRRIGATION CONTRACTOR, IN ADDITION TO THE DATE OF ACCEPTANCE).

PART 2 – MATERIALS

2.1 GENERAL: USE ONLY NEW MATERIALS OF BRANDS AND TYPES NOTED ON THE DRAWINGS, SPECIFIED HEREIN, OR APPROVED EQUALS.

A. PVC PRESSURE MAIN LINE PIPE AND FITTINGS:

- 1. PRESSURE MAIN LINE PIPING FOR SIZES 2 AND 1/2 INCH AND LARGER SHALL BE PVC CLASS 315.
- 2. PIPE SHALL BE MADE FROM AN NSF APPROVED TYPE 1, GRADE 1, PVC COMPOUND CONFORMING TO ASTM RESIN SPECIFICATION D1784. ALL PIPE MUST MEET REQUIREMENTS AS SET FORTH IN

FEDERAL SPECIFICATION PS-22-70 (SOLVENT WELD PIPE} WITH AN APPROPRIATE STANDARD DIMENSION (S.D.R.)

3. PRESSURE MAIN LINE PIPING FOR SIZES 2-INCH AND SMALLER SHALL BE PVC SCHEDULE 40 WITH SOLVENT WELDED JOINTS.
 4. PIPE SHALL BE MADE FROM NSF APPROVED TYPE 1, GRADE 1, PVC COMPOUND CONFORMING TO ASTM RESIN SPECIFICATION D1785. ALL PIPE MUST MEET REQUIREMENTS AS SET FORTH IN FEDERAL SPECIFICATION PS-21-70 (SOLVENT-WELD PIPE).
 5. PVC SOLVENT-WELD FITTINGS SHALL BE SCHEDULE 40, 1-2, 11-1 NSF APPROVED CONFORMING TO ASTM TEST PROCEDURE D2466.
 6. SOLVENT CEMENT AND PRIMER TOR PVC SOLVENT-WELD PIPE AND FITTINGS SHALL BE OF THE TYPE AND INSTALLATION METHODS PRESCRIBED BY THE MANUFACTURER.
 7. ALL PVC PIPE MUST BEAR THE FOLLOWING MARKINGS:
 - A. MANUFACTURER'S NAME
 - B. NOMINAL PIPE SIZE
 - C. SCHEDULE OR CLASS
 - D. PRESSURE RATING IN PSI
 - E. NSF (NATIONAL SANITATION FOUNDATION) APPROVAL
 - F. DATE OF EXTRUSION
 8. ALL FITTINGS SHALL BEAR THE MANUFACTURER'S NAME OR TRADEMARK, MATERIAL DESIGNATION, SIZE APPLICABLE I.P.S. SCHEDULE AND NSF SEAL OF APPROVAL
- B. PVC NON-PRESSURE LATERAL LINE PIPING
1. NON-PRESSURE BURIED LATERAL LINE PIPING SHALL BE PVC CLASS 200 WITH SOLVENT-WELD JOINTS.
 2. PIPE SHALL BE MADE FROM NSF APPROVED, TYPE 1, GRADE II, PVC COMPOUND CONFORMING TO ASTM RESIN SPECIFICATION D1784. ALL PIPE MUST MEET REQUIREMENTS SET FORTH IN FEDERAL SPECIFICATIONS PS-22-70 WITH AN APPROPRIATE STANDARD DIMENSION RATIO.
 3. EXCEPT AS NOTED IN PARAGRAPHS 1 OF 2 OF SECTION 2.01C, ALL REQUIREMENTS FOR NON-PRESSURE LATERAL LINE PIPE AND FITTINGS SHALL BE THE SAME AS FOR SOLVENT-WELD PRESSURE MAIN LINE PIPE AND FITTINGS AS SET FORTH IN SECTION 2.01 B OF THESE SPECIFICATIONS.
- C. BRASS PIPE AND FITTINGS:
1. WHERE INDICATED ON THE DRAWINGS, USE RED BRASS SCREWED PIPE CONFORMING TO FEDERAL SPECIFICATION WW-P-351.
 2. FITTINGS SHALL BE RED BRASS CONFORMING TO FEDERAL SPECIFICATION WW-P-460.

D. GALVANIZED PIPE FITTINGS:

1. WHERE INDICATED ON THE DRAWINGS, USE GALVANIZED STEEL PIPE ASA SCHEDULE 40 MILD STEEL SCREWED PIPE.
2. FITTINGS SHALL BE MEDIUM GALVANIZED SCREWED BEADED MALLEABLE IRON. GALVANIZED COUPLINGS MAY BE MERCHANT COUPLING.
3. ALL GALVANIZED PIPE AND FITTINGS INSTALLED BELOW GRADE SHALL BE PAINTED WITH TWO COATS OF KOPPERS 50 BITUMASTIC.

E. GATE VALVE:

1. GATE VALVES 3-INCHES AND SMALLER SHALL BE 125-LB. SWP BRONZE GATE VALVE WITH SCREW-IN BONNET, NON-RISING STEM AND SOLID WEDGE DISC, HAVE THREADED ENDS, AND BE EQUIPPED WITH BRONZE WHEEL HANDLE.
2. GATE VALVES 3-INCHES AND SMALLER SHALL BE SIMILAR TO THOSE MANUFACTURED BY NIBCO OR APPROVED EQUAL.
3. ALL GATE VALVES SHALL BE INSTALLED PER INSTALLATION DETAIL.

F. QUICK COUPLING VALVES: QUICK COUPLING VALVES SHALL HAVE A BRASS TWO-PIECE BODY DESIGNED FOR WORKING PRESSURE OF 150 PSI OPERABLE WITH QUICK COUPLER KEY. KEY SIZE AND TYPE SHALL BE AS SHOWN ON PLANS.

G. BACKFLOW PREVENTER UNIT

1. BACKFLOW PREVENTION UNITS SHALL BE OF SIZE AND TYPE INDICATED ON THE IRRIGATION DRAWINGS. INSTALL THE BACKFLOW PREVENTION UNITS IN ACCORDANCE WITH THE IRRIGATION CONSTRUCTION DETAILS.
2. WYE STRAINERS AT BACKFLOW PREVENTION UNITS SHALL HAVE A BRONZED SCREWED BODY WITH 100 MESH MONEL SCREEN AND SHALL BE SIMILAR TO BAILEY 100A OR APPROVED EQUAL.

H. CHECK VALVES:

1. SWING CHECK VALVES 2-INCHES AND SMALLER SHALL BE 200 LBS. WOG BRONZE BRONZE CONSTRUCTION AND REPLACEABLE COMPOSITION, NEOPRENE OR RUBBER DISC, AND SHALL MEET OR EXCEED FEDERAL SPECIFICATION WW-V-51D, CLASS A, TYPE IV.
2. ANTI-DRAIN VALVES SHALL BE OF HEAVY-DUTY VIRGIN PVC CONSTRUCTION WITH F.I.P. THREAD INLET AND OUTLET. INTERNAL PARTS SHALL BE STAINLESS STEEL WITH BUNA-N SEALS. VALVE SHALL BE FIELD ADJUSTABLE AGAINST DRAWOUT FROM 3 TO 40 FEET OF HEAD. ANTI-DRAIN VALVE SHALL BE SIMILAR TO THE KING BROS. "CV" SERIES OR APPROVED EQUAL.

I. CONTROL WIRING:

1. CONNECTIONS BETWEEN THE AUTOMATIC CONTROLLERS AND THE ELECTRIC CONTROL VALVES SHALL BE MADE WITH DIRECT BURIAL COPPER WIRE AWG-U.F. 600 VOLT. PILOT WIRES SHARING THE SAME AUTOMATIC CONTROLLER SHALL BE THE SAME COLOR.

COMMON WIRE SHALL BE WHITE IN COLOR WITH A STRIPE TO MATCH THE PILOT WIRES WITH WHICH IT IS CIRCUITED ON THE SAME CONTROLLER. PROVIDE DIFFERENT COLORS FOR EACH CONTROLLER INSTALLED ON THE SAME PROJECT. INSTALL WIRE IN ACCORDANCE WITH VALVE MANUFACTURER'S SPECIFICATIONS AND WIRE CHART. IN NO CASE SHALL WIRE SIZE BE LESS THAN #14.

2. WIRING SHALL OCCUPY THE SAME TRENCH AND SHALL BE INSTALLED ALONG THE SAME ROUTE AS PRESSURE SUPPLY OR LATERAL LINES WHEREVER POSSIBLE.
3. WHERE MORE THAN ONE WIRE IS PLACED IN A TRENCH, THE WIRING SHALL BE TAPED TOGETHER AT INTERVALS OF TEN FEET.
4. AN EXPANSION CURL SHALL BE PROVIDED AT EACH WIRE CONNECTION. EXPANSION CURL SHALL BE OF SUFFICIENT LENGTH AT EACH SPLICE CONNECTION AT EACH ELECTRIC CONTROL VALVE SO THAT IN CASE OF REPAIR, THE VALVE BONNET MAY BE BROUGHT TO THE SURFACE WITHOUT DISCONNECTION OF THE CONTROL WIRES. CONTROL WIRES SHALL BE LAID LOOSELY IN TRENCH WITHOUT STRESS OR STRETCHING OF CONTROL WIRE CONDUCTORS.
5. ALL SPLICES SHALL BE MADE WITH RAINBIRD ST-03UL SNAP-TITE WIRE CONNECTOR WITH PT/S5 SEALER OR APPROVED EQUAL. USE ONE WIRE CONNECTOR PER WIRE SPLICE.
6. FIELD SPLICES BETWEEN THE AUTOMATIC CONTROLLER AND ELECTRIC CONTROL VALVES WILL NOT BE PERMITTED WITHOUT PRIOR APPROVAL OF THE LANDSCAPE ARCHITECT.

J. AUTOMATIC CONTROLLER:

1. AUTOMATIC CONTROLLER SHALL BE OF SIZE AND TYPE SHOWN ON THE DRAWINGS.
2. FINAL LOCATION OF AUTOMATIC CONTROLLER SHALL BE APPROVED BY THE OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO INSTALLATION.
3. UNLESS OTHERWISE NOTED ON THE PLANS, THE 120-VOLT ELECTRICAL POWER TO THE AUTOMATIC CONTROLLER LOCATION SHALL BE FURNISHED BY OTHERS. THE FINAL HOOK-UP OF THE AUTOMATIC CONTROLLER TO THE 120-VOLT POWER SOURCE SHALL BE THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR.

K. ELECTRIC CONTROL VALVES:

1. ELECTRIC CONTROL VALVES SHALL BE OF THE SIZE AND TYPE SHOWN ON THE DRAWINGS.
2. UNLESS OTHERWISE NOTED ON PLAN OR CONSTRUCTION DETAILS, ALL ELECTRIC CONTROL VALVES SHALL HAVE A MANUAL FLOW ADJUSTMENT.
3. PROVIDE AND INSTALL ONE CONTROL VALVE BOX FOR EACH ELECTRIC CONTROL VALVE.

L. CONTROL VALVE BOXES

1. USE 10" X 10 1/4" ROUND BOX FOR ALL GATE VALVES, CARSON INDUSTRIES 910-12B WITH GREEN BOLT DOWN COVER OR APPROVED EQUAL. EXTENSION SLEEVE SHALL BE PVC-6-INCH MINIMUM SIZE.
2. USE 9-1/2" X 16" X 11" RECTANGULAR BOX FOR ALL ELECTRIC CONTROL VALVES, CARSON INDUSTRIES 1419-12B WITH GREEN BOLT DOWN COVER OR APPROVED EQUAL.

M. SPRINKLER HEADS:

1. ALL SPRINKLER HEADS SHALL BE OF THE SIZE, TYPE, AND DELIVER THE SAME RATE OF PRECIPITATION WITH THE DIAMETER (OR RADIUS) OF SPRAY, PRESSURE, AND DISCHARGE IN G.P.M. AS SHOWN ON THE DRAWINGS AND/OR SPECIFIED IN THESE SPECIAL PROVISIONS.
2. ALL SPRAY TYPE SPRINKLERS SHALL HAVE A SCREW ADJUSTMENT.
3. RISER/SWING JOINT ASSEMBLIES SHALL BE FABRICATED IN ACCORDANCE WITH THE IRRIGATION CONSTRUCTION DETAILS SHOWN ON THE DRAWINGS.
4. RISER NIPPLES FOR ALL SPRINKLER HEADS SHALL BE THE SAME SIZE AS THE RISER OPENING IN THE SPRINKLER BODY.

PART 3 – EXECUTION

3.1 INSPECTION:

A. SITE CONDITIONS

1. ALL SCALED DIMENSIONS ARE APPROXIMATE. THE CONTRACTOR SHALL CHECK AND VERIFY AN SITE DIMENSIONS AND RECEIVE LANDSCAPE ARCHITECT'S APPROVAL PRIOR TO PROCEEDING WITH WORK UNDER THIS SECTION.
2. EXERCISE EXTREME CARE IN EXCAVATING AND WORKING NEAR EXISTING UTILITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGES TO UTILITIES WHICH ARE CAUSED BY HIS OPERATIONS OR NEGLIGENCE. CHECK EXISTING UTILITIES DRAWINGS OR CALL UTILITIES COMPANIES FOR EXISTING UTILITY LOCATIONS.