

UNDERGROUND SPRINKLER SYSTEM

Part 1 - General
1.01 WORK INCLUDED
A. The work included under these specifications shall consist of the furnishing of all labor, materials, permits, tools, and equipment necessary for the complete installation of a sprinkler irrigation system in accordance with the following specifications and accompanying drawings.

1.02 CONTRACTOR'S QUALIFICATIONS
A. Installers shall be licensed irrigation contractors with experience in the installation of automatic underground lawn sprinkling systems. All work shall be performed in a professional workmanlike manner by mechanics skilled in the trade.

1.03 VERIFICATION OF DRAWINGS AND SPECIFICATIONS
A. It shall be the Contractor's responsibility to carefully examine the drawings and specifications, and to visit the site in order to check existing conditions prior to bidding. Any conflict or error shall be immediately brought to the attention of the Landscape Architect for interpretation or instructions.

1.04 WORKING CONDITIONS
A. The Contractor shall confine his operations to the areas allotted to him by the Owner, for his work for material and equipment storage.

2.01 PIPING
A. All pressure main piping, on the supply side of the zone valves, shall be class 200 PVC with integrally formed bell-lite joint couplings. All fittings shall be solvent welded, schedule 40 PVC.

2.02 SPRINKLER HEADS
A. Emitter heads shall be on PVC laterals, or prior approved equivalent.

2.03 AUTOMATIC CONTROLLER
A. Unit features shall include mechanical time control design, adjustable time setting up to 60 minutes per station, 24-hour clock, 14-day calendar, and automatic rainfall advance.

2.04 QUICKCOUPLING VALVES
A. Furnish and install where shown on the drawings quick-coupler with swivel and hose bib, 3/4" size or prior approved equivalent.

2.05 ELECTRICAL CONTROL CABLE
A. All electrical control and ground wire shall be irrigation control cable of size as required. All wiring to be used for connecting the automatic remote control valve to the automatic controller shall be Type "JFT", 600 volt, stranded, or solid copper, single conductor wire with PVC insulation and bear UL approval for direct underground burial feeder cable.

3.01 PROTECTION OF UTILITIES, IRRIGATION SYSTEM, ETC.
A. The Contractor shall verify the location of all utilities and note location of utilities, irrigation piping and underground obstructions. The contractor shall be responsible for the cost of repairing buried conduit, cables or pipelines damaged during the installation of the irrigation system.

3.02 EXCAVATION
A. The Contractor shall do all necessary excavation for the proper installation of his work. Machine trenchers used on the site shall be of approved type to cut smooth-bottom trenches on uniform slopes.

3.03 PIPE INSTALLATION
A. All pipe lines shall be installed in the locations and of the sizes indicated, and of the materials specified. Parallel piping may be installed in the same trench.

3.04 BACKFILLING
A. As soon as the work has been installed, inspected and accepted, all excavations and trenches shall be filled and water settled with fine earth materials, free from clods, rocks, or other unsuitable substances.

3.05 SPRINKLER HEADS
A. Sprinklers shall be set plumb and level with the turf at locations shown on the drawings. In lawn areas where grass has not been established, the heads shall be installed in temporary holes at least three (3) inches above the grade.

3.06 AUTOMATIC VALVES
A. Each sprinkler zone shall be operated by automatic electric valves in the sizes indicated on the drawings. Each valve shall be provided with a built-in pressure regulator capable of holding a steady downstream pressure, regardless of fluctuations in the main supply pressure.

3.07 WATER SUPPLY
A. Connection shall be made to the sprinkler outside the building as shown on the drawings.

3.08 ELECTRICAL WORK
A. The Electrical Contractor will provide a single source of electrical power for the irrigation system as shown on the drawings. The underground sprinkler system Contractor shall furnish and install complete and properly operating of the required electrical work for the lawn irrigation system.

operating system.
B. All electrical work shall be done in accordance with the National Electrical Code and local ordinances.
C. All wire connections, at remote control valves (either direct buried or in control boxes) and at all wire splices, shall be left with sufficient "slack" so that in case of repair the valve bonnet or splices may be brought to the surface without disconnecting the wires.

3.09 TESTING
A. After all supports, anchors, and thrust blocks are in place, the line shall be tested at a pressure of 150 psi for 30 minutes. Should any leaks be found, they shall be repaired and the line retested until satisfactory. Zone lines shall be tested at 80 psi in like manner.

3.10 DRAWINGS OF RECORD
A. The Contractor shall provide and keep up to date a complete "as-built" record set of mylar copies which shall be corrected to show any changes from the original drawings.

3.11 GUARANTEE
A. Within ten (10) days after the Contractor's notification that the sprinkler installation is complete, the Landscape Architect will inspect the system and, if necessary, submit a "punch list" to the Contractor.

LANDSCAPING
PART 1 - GENERAL
1.01 WORK INCLUDED
A. The work included under these specifications shall consist of the furnishing of all labor, material, permits, tools, and equipment necessary for the complete installation of the landscaping materials as shown on the drawings and as described in the following specifications.

1.02 QUALITY ASSURANCE
A. For standard products, the manufacturer's analysis will be acceptable. For all other materials, analysis shall be by a recognized laboratory.

1.03 SUBMITTALS
A. Submit a soil fertility test of the planting soil for approval by the Landscape Architect prior to delivery of soil to the project site. Test reports shall indicate the location of the source for the soil.

2.01 SOIL
A. Approved nursery grade cultivated grass seed; species and cultivar as indicated on the drawings with strong, fibrous root system, free from stones and burned or bare spots.

2.02 PLANTING SOIL FOR PLANT PITS AND BEDS
A. Fertile, friable, natural loam containing a liberal amount of humus, capable of sustaining vigorous plant growth.

2.03 PEAT
A. Acceptable peat moss consisting of at least 73% organic content of natural occurrence. It shall be brown, clean, low in content of mineral and woody materials, milky odor, and granulated or shredded.

2.04 FERTILIZER
A. Commercial Fertilizer: A complete fertilizer, conforming to FS P-241, Type I, Grade A, part of the elements of which are derived from organic sources containing the following percentages: 10% nitrogen, 5% nitrogen, 10% phosphoric acid-or-10% phosphoric acid, 10% potash, 5% potash.

2.05 WATER
A. Shall be furnished by the Owner. The Contractor shall furnish all necessary hose, equipment, attachments, and accessories for the adequate irrigation of all planted areas as may be required to complete the work as specified.

2.06 PLANT MATERIAL
A. All old abrasions and cuts shall be completely calloused over. All shrubs shall be measured when their branches are in their normal position.

2.07 EVERGREEN TREES
A. Evergreen trees not fully branched from top to bottom will be rejected, and those with terminal leaders exceeding twelve (12) inches in length will also be rejected.

2.08 PLANTS
A. Plants shall not be pruned before delivery. Trees which have damaged or crooked leaders, or multiple leaders, unless specified will be rejected.

2.09 PLANTS
A. Plants shall be true to species and variety, and shall conform to measurements specified on the Drawings. Plants larger than specified may be used if approved by the Landscape Architect.

2.10 SUBSTITUTIONS
A. Substitutions of plant materials will not be permitted unless authorized in writing by the Landscape Architect. Proof must be submitted that use of nearest equivalent size of variety with corresponding adjustment of Contract Price. Such proof shall be substantiated and submitted in writing.

2.11 RESPONSIBILITY
A. It shall be the responsibility of the Contractor to determine required quantities of plants, as no compensation will be made for error in plant quantities. If plant counts occur in plant legends, it is for the convenience of the contractor only.

only. Verify plant counts with plan. In case of discrepancy, plan shall govern.
H. Each plant shall be properly identified with legible waterproof tags securely fastened. Tags shall remain on the plants until after final acceptance and then be promptly removed by the Contractor.

PART 3 - INSTALLATION
3.01 INSPECTION OF PLANT MATERIAL
A. Plants shall be subject to inspection and approval by Landscape Architect at place of growth and upon delivery.

3.02 DIGGING AND HANDLING
A. Digging shall be done the same season of planting and shall be done by hand as to not injure plants and to meet size requirements.

3.03 TIME OF PLANTING
A. The contractor shall notify the Landscape Architect in writing when other divisions of the work have progressed sufficiently to commence landscaping work, including placing of topsoil to finish grade.

3.04 PLANTING OPERATIONS
A. General
1. The Contractor shall coordinate all aspects of the landscape operations with all aspects of the site construction.

3.05 OBSTRUCTIONS BELOW GROUND
A. In the event that rock or underground construction work or obstructions are encountered in the excavation of plants pits, alternate locations may be selected by the Landscape Architect.

3.06 MAINTENANCE
A. Protect and maintain plant material (trees, shrubs, groundcover, lawn and vines) immediately after planting.

3.09 INSPECTION FOR ACCEPTANCE
A. Inspection of the landscaping work to determine completion of contract work, exclusive of the possible replacement of plants, will be done by the Landscape Architect at the conclusion of the maintenance period.

3.10 PLANT GUARANTEE AND REPLACEMENT/FINAL ACCEPTANCE
A. The tree guarantee is for a period of one year from date of acceptance by the Landscape Architect. The guarantee is for all new plant material.

3.11 MISCELLANEOUS AND GENERAL NOTES
4.01 FINISH GRADING AND GRADING
A. The General Contractor to provide Landscape Contractor finish grade within +/- 0.1 of a foot as shown on the civil grading plan and landscape plan.

4.02 GENERAL NOTES
A. The Landscape Contractor at his own expense shall procure all permits, certificates, and licenses required of him by law for the execution of this work.

NOTES:
1. Field locate all irrigation equipment in landscape areas - some lines are schematic.
2. Coordinate programs to avoid station overlap.

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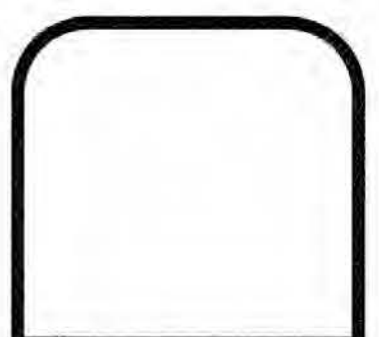
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LA NEW BUILDING FOR: KIWAMI ON BELL

5327 W. BELL ROAD
GLENDALE, ARIZONA 85306
LOGOS BUILDERS SOUTHWEST

job no. 24114
drawn
approved RBW
date 4/26/24

revisions

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URBAN DESIGN
SITE PLANNING

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