



49                   **(3) Restaking and Reguying.** Restake, retighten or repair  
50 guys as necessary. Reset plants to their original position.

51  
52                   **(4) Replanting.** Notify the Engineer of trees, shrubs or ground  
53 cover that are not in good growing condition and need to be  
54 replaced. Remove and dispose of unwanted plants. Replace with  
55 stock from the State’s nursery; location will be designated in the  
56 contract documents. If State-furnished plants are not available, the  
57 Engineer will request a proposal and negotiate for plants.

58  
59                   **(C) Weed Control.** Keep planted areas at least 90 percent free of  
60 grasses that are incompatible with surroundings. The Engineer will decide  
61 compatibility. Keep hardscaping, including boulder and aggregate beds,  
62 free of weeds. Remove weeds by roots. Dispose of trash in appropriate  
63 containers. Apply herbicides in accordance with Section 619 – Planting.  
64 Obtain the Engineer’s acceptance of herbicidal program before  
65 proceeding.

66  
67                   **(D) Disease and Insect Control.**

68  
69                   **(1) Inspection.** Inspect plants, including lawn grass, every  
70 week for disease and insect infestation. Treat infected plants  
71 immediately. Prune trees and shrubs to remove damaged or  
72 diseased growth.

73  
74                   **(2) Replacement.** Remove immediately and replace dead or  
75 dying plants. Replace with species and size originally planted, or  
76 with plant obtained from the State’s nursery.

77  
78                   **(E) Fertilization.** Obtain the Engineer’s acceptance of fertilization  
79 schedule before proceeding. Fertilize in accordance with manufacturer’s  
80 recommendations. Exercise caution while fertilizing to prevent plant burn  
81 and excessive runoff.

82  
83                   **(F) Irrigation Maintenance.** Irrigate plants to sustain healthy growth.  
84 Keep ground moist but not saturated. Regulate rate of watering to prevent  
85 erosion and formation of gullies.

86  
87                   **(1) System Operation.**

88  
89                   **(a)** Water automatically as much as possible. Water  
90 manually if there is a problem with automatic system.

91  
92                   **(b)** Program automatic controllers to water between  
93 midnight and 7 a.m. Set earlier start time if it is extremely  
94 hot and plants need more water. Program drip systems to  
95 run at any time.

96

- 97 (c) Adjust program for seasonal and situational variations  
 98 in need for water. Provide additional personnel and  
 99 materials if needed during extremely hot weather, during  
 100 extended holiday periods, and in event of breakdown of  
 101 automatic system.  
 102
- 103 (d) Turn off irrigation system if it is raining and ground is  
 104 damp enough to sustain plants.  
 105
- 106 (e) Restore immediately neighboring properties that are  
 107 damaged by excessive irrigation. The Contractor will be  
 108 responsible for cost of these repairs.  
 109
- 110 (f) Adjust irrigation program weekly at controller. Set  
 111 initially each valve station for peak use, assuming hottest  
 112 season and longest run time. Change run time every week,  
 113 using controller's percentage function, to fit situation at site.  
 114
- 115 **(2) System Repair.**  
 116
- 117 (a) Keep controller and valve boxes clear of dirt and  
 118 debris. Replace, repair, adjust, and perform other work to  
 119 irrigation system to ensure continued optimal performance.  
 120
- 121 (b) Replace or repair equipment as needed due to normal  
 122 wear and tear, including mains, laterals, filters, screens, drip  
 123 emitters, control valves, control wiring, controllers, back-up  
 124 batteries, quick coupler valves, sprinkler heads, risers,  
 125 sleeves, valve boxes, pullboxes, lids, covers, and hose  
 126 bibbs.  
 127
- 128 (c) Notify the Engineer immediately of damage to  
 129 irrigation system during course of the contract due to  
 130 vandalism, theft, accidents caused by others, and acts of  
 131 God. The State will be responsible for these repairs and can  
 132 negotiate additional cost with the Contractor if report is made  
 133 promptly.  
 134
- 135 (d) Replace irrigation components using new and original  
 136 equipment. The State will allow substitute equipment only if  
 137 original has been discontinued, there is no other source, and  
 138 the State receives written request.  
 139
- 140 (e) Perform repairs in accordance with the contract  
 141 documents for original installation of irrigation system.  
 142
- 143 (f) The State will not consider alteration of irrigation  
 144 system to be landscape maintenance.

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**(3) System Maintenance.** Assign employee to become familiar with irrigation system and to run system manually at least once a week. Employee’s responsibilities shall include:

**(a)** Observing efficiency of watering, adjusting controllers for optimal performance, making minor adjustments and repairs.

**(b)** Checking watering for coverage and waste, cleaning and adjusting sprinkler heads as necessary, keeping drip emitters free of sediment, flushing drip systems once a year and whenever there is accumulation of sediment.

**(c)** Watching for broken sprinkler heads, damaged emitters, clogs, malfunctioning valves, leaks, and other performance-hampering situations.

**(d)** Being alert especially for plants that show signs of wilting. The Contractor will be responsible for plants that die from lack of water.

**(4) Equipment Repair.**

**(a) Quick Coupler Valves.** Replace flange packing, which will be leather or neoprene, when packing becomes worn through use.

**(b) Remote Control Valves.** Repair remote control valve if there is leak, valve does not open or close, or valve causes constant weeping of sprinkler heads. Replace defective part in accordance with manufacturer’s instructions in repair kit. Before reassembling valve, clean parts that will be needed for bleeding.

**(c) Ball Valves.** Replace ball valve that is faulty.

**(d) Sprinkler Heads.**

1. Use adjustment points to reset arc and radius of sprinkler heads that are overspraying. To clear clogs, remove internal assembly, clean screen filter, thread fine wire through orifice of nozzle, and reassemble head. Run test to confirm that clog has been cleared. Clean screen filters at least once a month. Replace screens that are damaged.



**642.04**

240 Provide five days advance notification to the Engineer for  
241 scheduling of this meeting.

242  
243 **(2)** Maintenance requirements are subject to adjustment as  
244 plants mature. Coordinate work with the State Landscape Architect  
245 to allow for timely changes.

246  
247 **(3)** Schedule periodic walk-throughs with the Engineer to ensure  
248 that work is being done in accordance with the contract.

249  
250 **(4)** Provide written status report, detailing the following:

251  
252 **(a)** Watering, fertilizing, herbicidal treatment, and  
253 insecticidal treatment scheduled for current month.

254  
255 **(b)** Landscape maintenance tasks that were completed  
256 during previous month.

257  
258 Submit status report to the Engineer by tenth day of month,  
259 or next working day if tenth day falls on weekend or holiday.

260  
261 **642.04 Measurement.** The Engineer will measure plant maintenance and  
262 irrigation maintenance per month in accordance with the contract documents.

263  
264 **642.05 Payment.** The Engineer will pay for the accepted plant  
265 maintenance and irrigation maintenance at the contract unit price per month, as  
266 shown in the proposal schedule. Payment will be full compensation for the work  
267 prescribed in this section and the contract documents.

268  
269 The Engineer will pay for each of the following pay items when included in  
270 the proposal schedule:

271 <b>Pay Item</b>	272 <b>Pay Unit</b>
273 Plant Maintenance	274 Month
275 Irrigation Maintenance	276 Month

277  
278  
279 **END OF SECTION 642**