



STANDARD IRRIGATION & LANDSCAPE PLAN NOTES FOR PUBLICLY CONSTRUCTED CAPITAL IMPROVEMENT PROJECTS AND CAPITAL IMPROVEMENT PROJECTS HAVING COMMUNITY FACILITY DISTRICTS

NOTE TO DESIGNERS: The following standard notes shall be included on the respective irrigation and landscape plan sheets of all publicly constructed Capital Improvement Projects (CIP). Project-specific notes for items not covered by the City's irrigation and landscape special provisions, standard drawings, approved materials list, and these standard notes may be added to the plans as approved by the Public Works Department. These standard notes shall not be amended without approval from the Public Works Department.

STANDARD IRRIGATION NOTES

1. The contractor shall schedule a landscape preconstruction meeting with the Public Works Department Landscape Inspector via the Engineering Department Inspector prior to the commencement of irrigation work. The contractor and its landscape subcontractor shall attend the meeting.
2. The work shall be constructed in accordance with the contract documents, including but not limited to the plans, special provisions, the City's irrigation and landscape standard drawings, the City's Approved Materials List, the Standard Specifications for Public Works Construction, and these standard irrigation notes.
3. The contractor shall submit a complete materials list and associated catalog cuts for all irrigation and landscape materials to be incorporated in the work prior to the start of construction.
4. Irrigation plans are diagrammatic. The actual location of irrigation improvements shall be in planted areas where possible. Locations of irrigation improvements are subject to the Public Works Department approval prior to installation. Irrigation controllers shall be installed "outside" of irrigation coverage in locations approved by the Public Works Department.
5. The contractor shall schedule inspections 24 hours in advance of the work being ready for inspection. On CIPs, the contractor must request the inspection through the project construction manager. On land development projects, the contractor shall schedule the inspection with the assigned landscape inspector or **call (760) 752-7550 ext. 3350 to schedule inspections.** If the work is not ready for inspection on the scheduled date and time, the contractor shall reschedule the inspection as above. The City may charge the contractor for rescheduled inspections and withhold further inspections until such time as the contractor pays the re-inspection fee.



6. Irrigation inspections are required for the following:
 - a. Pressure main layout including controller and backflow preventer locations.
 - b. Excavation and bedding including control and communication wiring.
 - c. Mainline pressure test (see required submittals above).
 - d. Lateral lines and terminal appurtenances layout and installation.
 - e. Preliminary coverage test prior to planting.
 - f. Final irrigation coverage test after planting.
7. Control wiring shall be color-coded and labeled at the controller and all junction and valve boxes to correspond to the appropriate station. Install three additional control wires from the controller to the end of each mainline run leaving three feet minimum of slack at both ends.
8. All threaded fittings require Teflon tape.
9. The contractor shall verify and coordinate locations of irrigation water services and irrigation controller electrical service locations with other trades to ensure they correspond with irrigation water points of connection and controller locations.
10. Excavation for new improvements in or through existing landscaped areas shall be performed by hand unless otherwise approved by the Public Works Department, and shall be outside of existing tree drip lines.
11. Controller and communication wire splices shall only be made with Public Works Department approval and, when approved, shall only be made in an approved box with a minimum of three foot loop (six feet of wire).
12. Irrigation controllers shall be as shown on the plans. Each controller assembly shall include remote receiver card and remote control transmitter.
13. The contractor shall submit the installation certification of the controller assembly fabricator to the Public Works Department prior to coverage test inspection.
14. The contractor shall provide accurate and current as-built drawings at the time of the mainline pressure test inspection to facilitate the inspection.
15. Pressure mainlines shall be center loaded and not backfilled leaving joints visible until such time as the pressure test has been completed and accepted.
16. Pressure mainlines shall hold 150psi for a minimum of four hours.
17. As-built drawings shall be kept on-site and up to date at all times.
18. As-built drawings shall show the locations of:
 - a. Water Services and meter.
 - b. Electrical Services and meter.
 - c. Backflow assemblies.
 - d. Controller assemblies.
 - e. Automatic control valves.
 - f. Remote control valves with station designation.
 - g. Isolation and quick coupler valves.
 - h. Pressure main lines.
 - i. Control and communication wires.
 - j. Lateral lines.
 - k. Sleeves.



19. The contractor shall submit full size (24 inches by 36 inches) redlined as-built drawings at the time of the coverage test inspection. As-builts shall be on new plan sheets and be clean and legible. Submission of as-builts shall be made at the coverage test inspection and is precedent to start of City performed maintenance.

STANDARD LANDSCAPE NOTES

1. The work shall be constructed in accordance with the contract documents including the plans, special provisions, the City's irrigation and landscape standard drawings; the City's Approved Materials List, the Standard Specifications for Public Works Construction, and these standard planting notes.
2. For CIPs, the contractor shall request inspections through the project construction manager 24 hours in advance. On land development projects, the contractor shall request an inspection directly through the assigned landscape inspector or **call (760) 752-7550 ext. 3350 to schedule inspections.** If the work is not ready for inspection on the scheduled date and time, the contractor shall reschedule the inspection as above. The City may charge the contractor for rescheduled inspections and withhold further inspections until such time as the contractor pays the re-inspection fee.
3. Planting inspections are required for the following:
 - a. Tree planting pit percolation tests (both fills).
 - b. Plant material layout prior to planting.
 - c. Plant material quality prior to planting.
 - d. Amendment verification (prior to application)
 - e. Plant material installation.
 - f. Final plant material inspection (punch list developed).
 - g. Final irrigation and landscape punch list completion inspection.
4. Prior to installing plant material, the contractor shall control weeds by watering for three weeks to adequately germinate the seedbed and then apply a post-emergent herbicide by a licensed applicator and wait as directed by the manufacturer before planting.
5. Soil samples for amendment testing shall be taken after completion of grading and prior to weed control and soil preparation at a minimum of three locations approved by the Public Works Department. Tests shall be performed by an approved laboratory. Tests performed shall include, but are not limited to: organic matter content, N.P.K., Ph, E.C., and percent silt, sand, & clay. Test results and application recommendations shall be submitted to the Public Works Department prior to application of amendments. Amendments shall be applied pursuant to the laboratory and manufacturers recommendations.
6. Percolation tests shall be performed on all tree planting pits for 15 gallon and larger trees prior to hardscape installation. Pits shall be filled with 18 inches of water and allowed to completely drain. Pits shall then be filled with 12 inches of water and allowed to drain. The second fill must drain at a minimum rate of one inch per hour, for four hours.
7. Tree well drain systems shall be installed pursuant to City of San Marcos Standard Drawings when percolation tests fail.



8. The contractor shall provide positive drainage in all landscape areas.
9. Trees supplied to the project shall meet the following minimum standards:
 - a. Special Provisions.
 - b. Trees shall have a straight trunk with a symmetrical crown.
 - c. Trees shall have a substantial, single, central leader.
 - d. Tree bark shall not be discolored, sunken, or swollen, and shall be free of cuts, scrapes, or other damage.
 - e. Trees showing galleries, sun scald, or frost damage will not be accepted.
 - f. The caliper of the tree shall be in proportion to the rootball.
 - g. Trees with girdling roots wrapping around the trunk or otherwise rootbound will not be accepted.
 - h. Tree trunks more than 10 percent off center will not be accepted.
 - i. Trees shall be free of crossing branches and branches growing too close to one another.
 - j. Freshly pruned trees will not be accepted.
10. Trees shall not be pruned unless otherwise approved by the Public Works Department.

Maintenance of Improvements on Capital Improvement Projects

- a. **Streetscapes** - the City will assume maintenance of all irrigation and landscaping upon successful completion by the contractor and acceptance by the City of the final irrigation and landscape punch list **AND completion of the final project punch list AND receipt of end of project submittals**. The contractor, at its expense, shall perform all irrigation and landscape maintenance until such time as these conditions are met.
- b. **Parks** - the contractor will maintain new parks for 60 calendar days after completion of final landscape punch list **as determined by the City AND receipt of end of project submittals**. During the 60-day maintenance period, the park is to be closed to the public by the use of temporary fencing or other means as approved by the City.
- c. The City will provide written notice to the contractor designating the official start date of the 60-day maintenance and establishment period.

The contractor will be notified by the City immediately upon discovery of defects in irrigation and landscape materials and workmanship and the contractor shall take immediate action, as demanded by the City, to remedy said defects. Failure of the contractor to respond within the required time shall be cause for the City to suspend the 60-day maintenance period until all identified deficiencies are addressed and approved by the City.

All turf repairs performed during the maintenance period shall be made at the contractor's expense using sod per the approved plan or direction of the City. Seed will not be used to repair turf during the maintenance and establishment period.



The above requirements are in addition to any warranty requirements set forth in the contract documents.

Routine maintenance shall include but not be limited to:

- a. Regular monitoring, adjustment, and repair of the irrigation system.
- b. Appropriate watering of plant material.
- c. Regular weeding.
- d. Prompt replacement of dead, dying or damaged plant material.
- e. Pruning of trees as directed by the Public Works Department.
- f. Filling and compacting settled trenches and eroded areas.
- g. Daily (seven days per week) removal and disposal of trash, litter, and foreign debris.
- h. Weekly mowing of turf areas and removal of grass clippings. This is dependent upon turf type and time of year.
 - i. Removal of turf by shovel cutting within 12 to 18 inches of the tree trunk and maintaining a three inch layer of approved mulch.
 - j. Necessary pest control by a licensed pest control applicator.
 - k. Fertilizing as necessary to maintain plant material in a healthy, vigorous condition.
 - l. Fuel Management Zones (100 feet from structures) as shown.
 - m. Regular cleaning of drainage structures within the site.
 - n. Proper trimming of shrubs to leave them in a natural form typical of the particular plant. Poodling, boxing, or balling of shrubs is not permitted.
 - o. Maintenance of all appurtenant improvements included in the project.
11. At the end of the 60-day maintenance period, and prior to City acceptance, a final landscape and irrigation inspection will be conducted with the contractor to ensure maintenance objectives have been satisfied. Upon successful completion of punch list items and the turnover of required submittals, the City will accept the park. The City will acknowledge, in writing, that all maintenance conditions have been satisfied and assume the responsibility of the park.

BUILDING AND GROUNDS NOTES:

1. All public playground equipment supplied to a project shall comply with all applicable provisions of the current "Handbook for Public Safety" published by Consumer Product Safety Commission (CPSC) and the American Society of Testing and Materials F1487-98, "Standard Consumer Safety Performance Specifications for Playground Equipment for Public Use". All products shall bear the certification seal of the International Play Equipment Manufacturers Association. All designs shall meet or exceed the most current edition of the Americans with Disabilities Act (ADA) "Final Guidelines for Play Areas". All manufacturers must be certified by the International Organization for Standardization.



2. Play equipment, structures, and surfaces shall be installed by a contractor certified by the CPSC.
3. Play equipment, structures, and surfaces shall be inspected, audited, and certified by an independent inspector certified by the CPSC. The audit and certification shall be submitted to the Public Works Department prior to the acceptance of the maintenance and establishment period.
4. All improvements shall meet all requirements of the ADA.