

San Diego Municipal Code

## **Land Development Code**

# **Landscape Standards**

Appendix C

## **Improvements For Street Rights-of-Way and Open Space To Be Maintained By the City**

**APPROVED COLORS FOR CONCRETE CENTER ISLAND PAVING (Refer to Section 5.2)**

L.M. Scoffield Company or approved equal Chromix Admixtures™

- C-11 Desert Sand
- C-12 Mesa Beige
- C-13 Tawny Pink
- C-15 Coachella Sand
- C-20 Limestone
- C-21 Adobe Tan
- C-22 Coral Red
- C-25 Sombrero Bluff
- C-26 Antique Cork
- C-28 Riverside Buff

**SUPPLEMENTAL IRRIGATION SPECIFICATIONS**

(The Supplemental Irrigation Specifications shall be incorporated in the design and provided within the written irrigation specifications for all Street Rights-of-Way and Open Space projects that will be maintained by the City.)

**SUPPLEMENTAL IRRIGATION SPECIFICATIONS**

1. **GENERAL:** All materials and equipment used in sprinkler irrigation work shall be new and without flaws of defects and of quality and performance as specified. Prior to installation of any irrigation work, the contractor shall submit for approval by the city, a list of all proposed materials and equipment. Should the contractor propose to use material(s) or equipment other than those as listed as “approved”, the contractor shall submit in writing, to the city, a request to deviate from the approved list. Samples of the material(s) or equipment should accompany the request to assist in the evaluation of the proposed substitution. The burden of proof shall be borne by the contractor.
2. **MAIN LINE PIPE CONNECTIONS:** Shall be made horizontally per standard drawings i-28 and I-29.
3. **PIPE THRUST BLOCKS:** All pressure pipe 4" and smaller, polyvinyl chloride or asbestos cement shall have the correct sized concrete thrust block installed at every abrupt change of alignment; at globe or gate valves, at tees, elbows and crosses, and at ends of pipe runs; or wherever the field engineer deems one to be necessary. Thrust blocks are to be installed as per standard drawings w-17, w-18 and w-19 and sdw-100, sized as for 4" pipe.
4. **PIPE SLEEVES:** Shall be sch. 40 pvc, two times the pipe size diameter and extend 12" beyond each side of pavement. The letters “e” for electrical or “w” for water shall be stamped or chiseled on the pavement directly above the sleeve.

5. **TRENCH MARKER TAPE FOR ALL PRESSURE PIPE:** Shall have a continuous blue colored trench marker metallic tape placed nine inches (9") below finished grade and directly above the buried pipe.
6. **SAND ENCASEMENT FOR PIPES:** For all irrigation pipe, direct burial control wire and electrical conduit shall be plaster or mortar sand as per section 200 of the standard specifications, with a minimum sand equivalent of 50.
7. **REMOTE CONTROL VALVE BOXES:** Shall be concrete with a cast iron locking lid. The contractor shall paint the identification number of the valve box. The paint shall be white or yellow aluminum asphaltic-base waterproof paint. In addition, weatherproof, plastic identification tags shall be affixed to the colored conductor in the valve box.
8. **VALVE BOX LOCKING LIDS:** The contractor shall rework the locking toggles of the concrete valve boxes by replacing the existing clevis pin and sheet metal clip with a marine-type stainless steel machine bolt and self-locking unit. Apply oil to lubricate and to prevent rust.
9. **ANTI-DRAIN/EXCESS-FLOW VALVE:** Shall be installed under each sprinkler head which is not equipped with an internal check valve (as anti-geyser device as well as a low head anti-drain valve).
10. **ALTERNATE PIPE SLEEVE LOCKING CAP FOR VALVES:** Shall be per standard drawing i13, heavy duty red brass locking cap threaded to fit 2" diameter sch. 40 pvc pipe.
11. **MULTIPLE CONTROLLER INSTALLATIONS:** Enclosures shall be sized accordingly. No 110 volt wire runs shall pass from controller cabinet to cabinet. Each controller shall have a separate electrical service through a raceway. Provide one power off-on switch for each controller.
12. **DIRECT BURIAL CONTROL WIRES:** Shall be solid copper, 600 volt, type uf, conforming to the standard specifications and drawings, special provisions and the following wire colors and installation requirements.

NEUTRAL WIRES: White (#12 awg), do not interconnect neutral wires between controllers.

PILOT WIRES: (#14 awg), use as many as necessary.

<u>VALVE NO.</u>	<u>VALVE NO.</u>
1/19*. Yellow	10. White w/ red stripe
2/20*. Orange	11. Yellow w/ red stripe
3/21*. Blue	12. Blue w/ stripe
4/22*. Black	13. Orange w/ red stripe
5/23*. Brown	14. Purple w/ white stripe
6/24*. Purple	15. Brown w/ white stripe
7. Yellow w/ black stripe	16. Yellow w/ white stripe

- 8. Orange w/ black stripe
- 9. Red w/ black stripe
- 17. Blue w/ white stripe
- 18. Red w/ white stripe

SPARE WIRES: Two (2) red (#14 awg) from furthest valve or manifold to each controller.

\*colors repeat for valves beyond 18.

- 13. **WIRE CONNECTIONS:** Neutral, pilot and spare wires shall be installed with a 2' - 0" coiled excess wire length at each end enclosure. Each and every wire splice shall be soldered together (using 60-40 solder), then encased in the waterproof epoxy connectors. Wire splices shall be made only in valve or pull boxes.
- 14. **WIRE BUNDLES:** Each individual controller clock's control wires shall be bundles and taped together with colored tape at intervals not exceeding 10'-0". Controller identification tape colors shall be as follow: (use as many as necessary).

CONTROLLER COLOR

- "A" BLACK
- "B" RED
- "C" WHITE
- "D" BLUE
- "E" GREEN
- "F" YELLOW

- 15. **WIRES IN PULL BOXES:** Shall be loose and shall not come within three (3") inches from lid. Boxes shall be sized accordingly to accommodate this requirement.
- 16. **TRENCH MARKER TAPE FOR WIRES:** All direct burial wires shall be marked with a continuous red colored trench marker plastic tape placed nine inches (9") below finished grade and directly above the buried wires. Tape shall be three inches (3") wide.
- 17. **WIRE TESTING:** Shall be tested for continuity, open circuits, and unintentional grounds prior to connecting to equipment. The minimum insulation resistance to ground shall be fifty (50) megohms. Any wiring not meeting this requirement shall be replaced, at the contractor's expense.
- 18. **GUARANTEE:** The contractor's guarantee shall consist of section 308-7 of the standard specifications and the following:

The entire irrigation system shall be guaranteed against defects in materials and workmanship for a period of one (1) year from the date of acceptance of work. Should the contractor fail during the guarantee period to expeditiously correct a defect upon written notification by the city, the city shall cause the work to be corrected and bill the actual costs incurred to the contractor. Defect corrections shall include the complete restoration of existing improvements that were damaged as a result of the defect.

- 19. **AS BUILT IRRIGATION PLANS:** A reduced copy of the approved as-built irrigation plan(s), color coded by stations and laminated in plastic, shall be mounted on the inside of each controller enclosure for maintenance personnel at the time of the final acceptance.

**TABLE  
IRRIGATION LEGEND FOR PUBLIC PROJECTS**

<b>IRRIGATION LEGEND FOR PARK &amp; RECREATION CONSULTANTS</b>					
<b>IRRIGATION LEGEND</b>					
SYMBOL	DESCRIPTION	RADIUS	GPM	MANUFACTURER/ MODEL NO.	
• •	<i>Consultant to describe type of heads and assign identification numbers - special symbols may be used for drip and other special heads with prior approval by Park and Recreation Department</i>				I-1 thru I-3
• •					
• •					
M	Water Meter				
	Pressure Regulating Valve				Similar to I-14
	Remote Control Valve				I-14
	Gate Valve w/ alternate pipe sleeve installation				I-13
	Globe Valve w/ alternate pipe sleeve installation				I-12
	Quick Coupling Valve (1" - size minimum)				I-5
	Automatic Controller				I-17 or I-18
-----	Direct Burial Control Wire (Solid Copper - Color Coded)				I-16
	Pull Box (Low Voltage - Locking Lid / High Voltage - Bolt Down Lid)				I-15
	2" and larger Mainline - Class 315 PVC w/Sch 80 fittings or bell gasket fittings for 3" and larger				I-25 or I-26
	1 1/2" and smaller Mainline - Sch. 40 PVC				I-25
	Lateral Lines - Sch. 40 PVC, 3/4" Minimum Size				I-25
<u>G.I.</u>	Galvanized Pipe Sch. 40				I-20 thru I-24
<u>CU</u>	Copper Pipe Type "L"				I-25
	Reduced Pressure Backflow Preventer				W-27
- - - - -	Potable Water				
	Hose Bibb (Garden Valve)				I-6