

Locally Funded Project

Specification No. 2399

No.	Sec/Code	Bid Item Description	Qty	Unit	Unit Cost	Total Cost
30*		SOD	50	SY	\$	\$
31*		LANDSCAPE WEED FABRIC BARRIER (5 OZ)	46	SY	\$	\$
32*		ADJUST/MODIFY/RESET IRRIGATION SYSTEM COMPONENTS	100	LF	\$	\$
SUBBASES / BASES						
33*	§26-1.02B 260203	CLASS 2 AGGREGATE BASE (CY)	80	TON	\$	\$
SURFACINGS AND PAVEMENTS						
34*	§39-2.09 390132-LV	HOT MIX ASPHALT, TYPE A – LOW VOLUME (HMA-LV)	750	TON	\$	\$
35*	§39-2.09 390132-LV	HOT MIX ASPHALT, TYPE A (HMA-LV) - DRIVEWAY/WALKWAY/ MISC. AC CONFORM	1,110	SF	\$	\$
36*	§39-3.02 390095-A	REPLACE FAILED SECTIONS OF AC SURFACING & BASE ^{w/} 6" DEPTH HMA	50	TON	\$	\$
37*	§39-3.04 398200	COLD PLANE ASPHALT CONCRETE PAVEMENT (MINIMUM 2" DEPTH)	3,600	SY	\$	\$
38*	§37-3 377501-B	SLURRY SEAL, TYPE II	60	TON	\$	\$
39*	§37-6 374207-L	CRACK TREATMENT	1	LS		
PIPE / DRAINS						
40*	§70-16 703233-S	SIDEWALK DRAIN INLET BOX AND GRATE (SD-527)	6	EA	\$	\$
41*	§70-16 703233-S	SIDEWALK DRAIN INLET BOX (CHRISTY V09 DRAIN BOX AND GRATE)	1	EA	\$	\$
42*	§70-16 703233-S	SIDEWALK (3" DIAM.) DRAIN PIPE (SD-527)	120	LF	\$	\$
CONCRETE CURBS & SIDEWALKS						
43	§73 730070-A	DETECTABLE WARNING SURFACE (YELLOW)	4	EA	\$	\$

*Contingent item under section 2-1.09B

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44*	§73 731504-A	MINOR CONCRETE (CURB AND GUTTER, DROP INLET TAPER)	1,800	LF	\$	\$
45*	§73 731521-A	MINOR CONCRETE (SIDEWALK)	750	SF	\$	\$
46*	§90 731521-P	PERVIOUS CONCRETE (SIDEWALK)	6,800	SF	\$	\$
47*	§73 731516-A	MINOR CONCRETE (DRIVEWAY)	3,200	SF	\$	\$
48*	§73 731623-A	MINOR CONCRETE (CURB RAMP)	700	SF	\$	\$
49*	§73 731516-B	MINOR CONCRETE (WALKWAY CONCRETE AND MISC. CONFORM)	250	SF	\$	\$
50*	§73 731516-B	MINOR CONCRETE (DRIVEWAY CONFORM)	1,500	SF	\$	\$
51*	§73 731516-B	TEMPORARY CONCRETE (UTILITY BLOCKOUT)	350	SF	\$	\$
LOCAL INFRASTRUCTURE						
52*	§77 710208-E	ADJUST/SETBACK WATER METER BOX – EBMUD	1	EA	\$	\$
53	§77 710214-E	ADJUST WATER VALVE FRAME AND COVER – EBMUD	2	EA	\$	\$
54	§77 710192	ADJUST SEWER CLEANOUT TO GRADE	2	EA	\$	\$
55	§77 710192	CONVERT SEWER CLEANOUT TO 2' DIAM. MANHOLE (OLSD DETAIL SD-24)	1	EA	\$	\$
56*	§71-5 710200	ADJUST MANHOLE FRAME AND COVER TO GRADE	6	EA	\$	\$
57*		RELAY WATER SERVICE	17	EA		
MISCELLANEOUS TRAFFIC CONTROL DEVICES						
58	§81-3.02C 810230	BLUE HYDRANT PAVEMENT MARKER	1	EA	\$	\$

*Contingent item under section 2-1.09B

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No.	Sec/Code	Bid Item Description	Qty	Unit	Unit Cost	Total Cost
ROADSIDE SIGNS						
59	§82-3 820250	REMOVE, SALVAGE, AND RE-INSTALL ROADSIDE SIGN AND POST	3	EA	\$	\$
60	§82-3 820650	REMOVE, SALVAGE, AND RE-INSTALL ROADSIDE SIGN ON NEW BREAKAWAY POST	1	EA	\$	\$
TRAFFIC STRIPES AND PAVEMENT MARKINGS						
61*	§84-2 840516	THERMOPLASTIC CROSSWALK AND PAVEMENT MARKING (ENHANCED WET NIGHT VISIBILITY)	880	SF	\$	\$
62	§84-9 846030	REMOVE THERMOPLASTIC TRAFFIC STRIPES, PAVEMENT MARKINGS, AND MARKERS	1	LS	\$	\$
ELECTRICAL SYSTEMS						
63	§87	STREET LIGHT (TYPE 15)	2	EA	\$	\$
PROJECT WRAP-UP						
64	§5-1.23B(3)	RECORD DRAWINGS	1	LS	\$	\$
65	§5-1.36D 050000-B	SURVEY MONUMENT PRESERVATION (POST-CONSTRUCTION)	3	EA	\$	\$
66	§20-4 204099	PLANT ESTABLISHMENT WORK (3-YEARS)	1	LS	\$	\$
67	§22 220101	FINISHING ROADWAY	1	LS	\$	\$

*Contingent item under section 2-1.09B

Total Bid: _____ **Dollars \$** _____
(in words)

The prices bid include all State, Federal, and other taxes applicable to the project.

The prices bid include furnishing the resources and activities required to complete the work. Payment is full compensation for furnishing the resources and activities as described under section [9-1.03](#).

Links to section numbers are provided for convenience only. Specifications found under the referenced sections are not the only specification that apply to the Bid Item as described under section [1-1.01](#).

Most bid Item codes (without the hyphenated suffix) and descriptions are similar to, but not necessarily the same as, Caltrans Standard Bid Item codes and descriptions. This information when queried at the following webpage may be useful for estimating costs: <http://sv08data.dot.ca.gov/contractcost>

*Contingent item under section 2-1.09B

SECTION 5

CONTROL OF WORK

Upon discovery of a survey monument not identified and located by the Agency, immediately:

1. Stop work near the monument
2. Notify the Engineer

Do not resume work near the monument until authorized.

A Pre-Construction Corner Record filed for a monument is paid for as Monument Preservation (Pre-Construction).

A Post-Construction Corner Record filed for a monument is paid for as Monument Preservation (Post-Construction).

5-1.36E Landscape

If you damage plants not to be removed:

1. Dispose of them unless the Engineer authorizes you to reduce them to chips and spread the chips within the County/District right-of-way highway at locations designated by the Engineer
2. Replace them

Replace plants with plants of the same species.

Replace trees with 24-inch-box trees of the species specified by the Engineer.

Replace shrubs with no. 15-container shrubs of the same species.

Replace ground cover plants with plants from flats. Replace *Carpobrotus* ground cover plants with plants from cuttings. Plant ground cover plants 1 foot on center.

If a plant establishment or permanent erosion control establishment period is specified, replace plants before the start of the plant establishment or permanent erosion control establishment period; otherwise, replace plants at least 30 days before Contract acceptance. If a plant establishment period is not specified, the Contractor must water as necessary to maintain the replacement plantings in a healthy condition for an 18 month Period at no additional cost to the County. During this plant establishment period, any replacement plantings that deceases shall be replaced with an original size tree or shrub by the Contractor.

Water each plant immediately after planting. Saturate the backfill soil around and below the roots or the ball of earth around the roots of each plant. Water as necessary to maintain plants in a healthy condition until Contract acceptance.

5-1.36F Irrigation Facilities

Protect existing irrigation facilities in place that are not to be removed, relocated, or modified.

Keep existing irrigation facilities in place that are described to be removed, relocated, or modified until the Engineer determines they are no longer needed.

Maintain the existing water supply. If the existing water supply is interrupted for more than 3 consecutive days, provide an alternative water supply. Water the existing plants in the area irrigated from that water supply, including those maintained by the Agency, as necessary to maintain healthy plant growth.

If you and the Agency irrigate existing plants from the same water supply, furnish enough water to the Agency for watering plantings ~~on and off the highway~~ as necessary to maintain a healthy condition through Contract acceptance.

If you damage irrigation facilities not to be removed, relocated, or modified:

1. Remove and dispose of them.
2. Repair and replace damaged facilities in kind within 10 days at the Contractor's own expense.

8. Before the start of plant establishment work
9. Once a month during the plant establishment period

Notify the Engineer at least 4 business days before each inspection is required. Allow at least 3 business days for the Engineer's inspection.

Do not proceed with the next construction activity until the inspection has been completed and any required corrective work has been performed and authorized.

20-1.02 MATERIALS

20-1.02A General

Not Used

20-1.02B Water

Unless there is a bid item for irrigation water service charges, the Agency furnishes water if it is available from an existing County/District-owned facility within the project limits or an irrigation system to be installed under the Contract.

If water is not available from one of these sources, make arrangements for supplying water. Water must be of a quality that promotes plant growth. Use of reclaimed or recycled water is prohibited.

20-1.02C Pesticides

Pesticides must comply with the regulations of the Department of Pesticide Regulation.

Insecticide must be imidacloprid.

Rodenticides must be brodifacoum, bromadiolone, or diphacinone.

Do not use pelleted forms of pesticides for weed control.

For weed control, use a pesticide with a photosensitive dye that produces a contrasting color when sprayed on the ground. The color must disappear within 2 to 3 days after being applied. The dye must not stain surfaces or injure plants or wildlife when applied at the manufacturer's recommended application rate.

20-1.02D–20-1.02H Not Used

20-1.03 CONSTRUCTION

20-1.03A General

Coordinate all drainage work with other trades. Maintain established site drainage during all phases of landscape construction.

Grading and soil preparation work must only be performed during the period when beneficial and optimum results may be obtained. If the moisture content of the soil should reach such a level that working it would destroy soil structure or cause compaction, spreading and grading operations must be suspended, until in the opinion of the Engineer, the moisture content is at acceptable levels and the desired results are likely to be obtained.

Take precautions to prevent irrigation water from:

1. Wetting vehicles, pedestrians, and pavement
2. Eroding soil
3. Causing excess runoff

If water use calculations are provided as supplemental project information, water plants under the Model Water Efficient Landscape Ordinance, 23 CA Code of Regs § 490 et seq., and local water agency provisions.

Water plants at night unless otherwise authorized.

Dispose of removed, pruned, and damaged vegetative material.

Ingredient	Range
Nitrogen (N) (percent)	5–7
Phosphoric acid (P) (percent)	1–5
Water soluble potash (K) (percent)	1–10

20-3.01B(5) Root Stimulants

Root stimulant must be a commercial-quality product.

20-3.01B(6) Plaster Sand

Backfill material for the palm tree planting holes must be 100 percent commercial-quality washed plaster sand.

20-3.01B(7) Root Barrier

Root barrier must be an injection-molded or extruded modular panel made of high-density polypropylene or polyethylene plastic.

Each panel must:

1. Be at least 1/16 inch
2. Have at least 4 molded root-deflecting vertical ribs from 0.5 to 0.8 inch wide and 6 to 8 inches apart
3. Have a locking strip or an integral male-female sliding lock designed to resist slippage between panels
4. Be at least 2 feet wide and 2 feet deep

20-3.01B(8) Root Protectors

Each root protector must be:

1. Fabricated from 1-inch, hexagonal pattern, 20-gauge mesh wire
2. Closed bottom design with a height and diameter that provides a minimum of 6 inches of clearance between the root ball and the sides and bottom of the wire cylinder

The wire edge at the top of the cylinder must be the manufactured finished edge, uncut and free of sharp points.

20-3.01B(9) Foliage Protectors

Each foliage protector must be:

1. Fabricated from 1-inch, hexagonal pattern, 20-gauge mesh wire
2. Approximately 4 feet high and 2 feet in diameter

The wire edge at the top of the cylinder must be the manufactured finished edge. Other wire edges that are cut must be free of sharp points.

Support stakes must be one of the following:

1. 3/4-inch reinforcing steel bar a minimum of 5 feet long with an orange or red plastic safety cap that fits snugly onto the top of the reinforcing steel bar.
2. 2-inch nominal diameter or 2-by-2-inch nominal size wood stakes a minimum of 5 feet long. Wood stakes must be straight.

The jute mesh cover must comply with section 21-2.02O(2). The material required to hold the jute mesh cover in place must be 1/8-inch-diameter manila hemp twine.


20-3.01B(10) Wood Plant Stakes

Each plant stake for vines must be nominal 1 by 1 inch and 18 inches long.

Each plant stake for trees must be nominal 2 3/4 by 2 3/4 inches or nominal 2 3/4 inches in diameter and long enough to keep the tree in an upright position.

level, add additional backfill to the required level. If a plant settles deeper than shown, replant it at the required level.

Remove nursery stakes after planting.

Install  3 plant stakes for each plant to be staked immediately after planting. Ensure the root ball is not damaged. Comply with section 20-4.03E.

Spread the vine shoots and tie them with a plant tie to each stake above the crossing point.

Tie trees to the stakes with 2 tree ties, 1 tie to each stake. Each tie must form a figure eight by crossing the tie between the tree and the stake. Install ties at the lowest position that will support the tree in an upright position. Install the ties such that they provide trunk flexibility but do not allow the trunk to rub against the stakes. Wrap each end of the tie 1-1/2 turns around the stake and securely tie or nail it to the stake.

Construct a watering basin around each plant.

Install foliage protectors within 2 days after planting.

Install the foliage protector as follows:

1. Cut the bottom of the wire cylinder to match the slope of the ground. Do not leave sharp points of wire after cutting. Sharp points must be bent over or blunted.
2. Install 2 support stakes for foliage protectors vertically and embed in the soil on opposite sides of the plant crosswise to the direction of the prevailing wind.
3. Weave the support stakes through the wire cylinder mesh at 6-inch maximum centers or fasten the wire cylinder to the support stakes at a maximum 6 inches on center.
4. Ensure that the wire cylinder is snug against the support stakes but loose enough to be raised for pesticide application or to perform weeding within the plant basin.
5. Install jute mesh cover over the foliage protector and secure with twine.

20-3.02C(3)(c) Groundcover Plants

Each groundcover planting area irrigated by a single control valve must be completely planted and watered before planting other groundcover planting areas.

Plant groundcover plants in moist soil, and in neat, straight rows parallel to the nearest roadway. Stagger plants in adjacent rows.

Apply fertilizer to groundcover plants and water into the soil immediately after planting.

20-3.02C(3)(d) Cuttings, Liners, Plugs, and Seedling Plants

20-3.02C(3)(d)(i) General

Apply fertilizer to cuttings, liners, plugs, and seedling plants and water immediately after planting.

Ensure the soil is moist to a minimum depth of 8 inches before planting cuttings.

Apply any root stimulant under the manufacturer's instructions.

20-3.02C(3)(d)(ii) Willow Cuttings

Excavate planting holes for willow cuttings perpendicular to the ground line by using a steel bar, auger, post-hole digger, or similar tool. Holes must be large enough to receive the cuttings and a fertilizer packet. Plant the willow cuttings without damaging the bark.

If rock or other hard material prohibits the excavation of the planting holes, excavate new holes and backfill the unused holes.

Plant willow cuttings during the period shown specified in the special provisions.

Apply root stimulant under the manufacturer's instructions.

SECTION 20

LANDSCAPE

Plant the base of the cutting from 10 to 12 inches deep with 3 to 5 bud scars exposed above the ground. If more than 5 bud scars are exposed, trim off the excess willow cutting length.

Place 1 fertilizer packet in the backfill of each cutting, from 6 to 8 inches below the ground surface and approximately 1 inch from the cutting.

Backfill the plant holes with excavated material after planting. Distribute the excavated material evenly within the hole without clods, lumps, or air pockets. Compact the backfill such that the cutting cannot be easily removed from the soil. Do not damage the cutting's bark.

Dispose of trimmings and unused cuttings.

20-3.02C(3)(d)(iii) Cottonwood Cuttings

Not Used

20-3.02C(3)(d)(iv) *Carpobrotus* and *Delosperma* Cuttings

Plant *Carpobrotus* cuttings to a depth such that at least 2 nodes are covered with soil. The basal end of *Delosperma* cuttings must be at least 2 inches below the surface of the soil and the basal end of *Carpobrotus* cuttings must be at least 4 inches below the surface of the soil.

Apply root stimulant to *Delosperma* cuttings before planting.

Do not plant *Carpobrotus* or *Delosperma* cuttings in soil that does not contain sufficient moisture at an average depth of 2 inches below the surface.

20-3.02C(3)(d)(v) Liner Plants

Plant liner plants during the period shown specified in the special provisions.

If a foliage protector is required, install under section 20-3.02C(3)(b).

20-3.02C(3)(d)(vi) Plug Plants

Plant plug plants during the period shown specified in the special provisions.

20-3.02C(3)(d)(vii) Seedling Plants

Plant seedling plants during the period shown specified in the special provisions.

20-3.02C(3)(e) Sod

After all other planting is performed, grade sod areas to drain and to a smooth and uniform surface. Fine grade and roll sod areas before placing sod.

Areas adjacent to sidewalks, edging, and other paved borders and surfaced areas must be 1 inch below the finished surface elevation of the facilities, after fine grading, rolling, and settlement of the soil.

Place sod such that the end of each adjacent strip is staggered a minimum of 2 feet. Place the edge and end of sod firmly against adjacent sod and against sidewalks, edging, and other paved borders and surfaced areas. Sod is to be in-kind.

Lightly roll the entire sodded area to eliminate air pockets and ensure close contact with the soil after placement of the sod. Water the sodded areas such that the soil is moist to a minimum depth of 4 inches after rolling. Do not allow the sod to dry out for the duration of the contract.

If irregular or uneven areas appear in the sodded areas, restore to a smooth and even appearance.

Trim sod to a uniform edge at sidewalks, edging, and other paved borders and surfaced areas. Trimming must be repeated whenever the edge of sod extends 1 inch or more beyond the edge of the edging, sidewalks, and other paved borders and surfaced areas. Remove trimmed sod.

~~Mow sod when it has reached a height of 4 inches. Mow sod to a height of 2.5 inches.~~

20-3.02D Payment

The payment quantity for soil amendment is the volume measured in the vehicle at the point of delivery.

The payment quantity for slow-release fertilizer, organic fertilizer, or iron sulfate (lb) is the weight determined from the marked weight or sack count.

The payment quantity for plants is measured by either the product of the average plant density and the total planted area, or by a count of the living plants in place.

The payment quantity for root barrier is the length installed measured to the nearest 0.1 feet.

20-3.03–20-3.07 NOT USED

20-4 PLANT ESTABLISHMENT WORK

20-4.01 GENERAL

20-4.01A Summary

Section 20-4 includes specifications for performing plant establishment work.

Plant establishment consists of caring for the plants ~~and trees~~, including:

1. Controlling plant growth
2. Fertilizing
3. Controlling weeds and pests
4. Replacing damaged ~~or diseased~~ plants ~~and trees~~
5. Watering
6. Operating irrigation system
7. Repairing new irrigation system
8. Repairing erosion
9. Repairing vandalism
10. ~~Staking, re-staking and removing stakes at the appropriate interval if/when necessary~~

~~Working days on which no work is required are credited as plant establishment working days regardless of whether or not you perform plant establishment work.~~

If any component of the electric automatic irrigation system is operated manually, the day will not be credited as a plant establishment working day unless the manual operation is authorized.

~~Working days on which you fail to adequately perform plant establishment work are not credited as plant establishment working days.~~

20-4.01B Definitions

Not Used

20-4.01C Submittals

20-4.01C(1) General

Submit seasonal watering schedules for use during the plant establishment period within 10 days after the start of the plant establishment period. Remote irrigation control system watering schedule must use the remote irrigation control system software program.

Submit updated watering schedules within 5 business days after any changes have been made to the authorized schedules.

Submit a revised watering schedule for each irrigation controller at least 30 days before completion of the plant establishment period.

Record all maintenance activities and observations in a monthly maintenance log book and submit on a quarterly basis. Record activities pertaining to the subsections of section 20-4.03 and present the information in the same order.

20-4.01C(2) Notification

The Engineer notifies you when the plant establishment period starts ~~and furnishes statements regarding the number of working days credited to the plant establishment period after the notification.~~

Notify the Engineer at least 5 business days before applying each application of fertilizer.

20-4.01C(3) Plant Establishment Period Maintenance Bond

At least 30 days before the anticipated acceptance date of the project, submit a separate maintenance bond for the plant establishment period.

The bond must:

1. Be a surety bond executed by a corporation licensed to transact business in California
2. Be issued at your expense
3. Be maintained throughout the plant establishment period
4. Be secured in the amount of 100 percent of the total contract price bid for all landscape items listed in the table below
5. Guarantee the faithful maintenance of the items listed in the table below
6. Insure the County/District during the entire duration of the plant establishment period

<u>Item No</u>	<u>Item Description</u>
25	TREE (24-INCH BOX)

The maintenance bond is specific for those landscape items listed and is separate from the entire project.

20-4.01D Quality Assurance

Provide training by a qualified person on the use and adjustment of the installed irrigation controllers no more than 30 days before completion of the plant establishment period.

Meet with the Engineer on a quarterly basis during the Plant Establishment Period to review the work. Make monthly maintenance log book available for review.

Periodic unscheduled inspections may be made by the Engineer to ensure that proper maintenance is being conducted. You will be given three calendar days to complete any corrective action. The Plant Establishment Work period may be extended if planted areas are not properly maintained or other corrective work is not completed as ordered.

Perform a final inspection of the plant establishment work in the presence of the Engineer 20 to 30 days before Contract acceptance.

20-4.02 MATERIALS

20-4.02A General

Not Used

20-4.02B Fertilizers

Fertilizer must comply with section 20-3.01B(4).

20-4.03 CONSTRUCTION

20-4.03A General

Planting must minimally be reviewed and maintained on weekly basis. Examine conditions of each plant, planting basin, staking, water tubes, weed growth and mulch. Record observations and actions taken in maintenance log.

Fill in any soil subsidence that may occur; replant trees and shrubs that may have settled.

Dispose of surplus earth accumulated in roadside clearing and planting areas.

Remove the tops of foliage protectors if plants become restricted.

Remove foliage protectors, including support stakes, within 30 days before the completion of the plant establishment period.