

CITY OF ALBANY
Standard Specifications
Technical Provisions

Section 20

Landscaping

20.1 General

20-1.1 Scope

This work shall consist of, but not necessarily limited to, furnishing all labor, materials, plant materials, tools and equipment required to grade, prepare soil, fertilize, plant, grass from seed, and otherwise complete the landscaping as shown on the approved plans, these specifications and the details.

The Contractor shall coordinate layout and installation of plant material with installation of the irrigation system to insure that there will be complete and full irrigation coverage of planting in accordance with these drawings, specifications and contract documents. Irrigation system shall be installed and tested prior to installation of plant material.

The “Model Water Efficient Landscape Ordinance” by the State Department of Water Resources shall apply.

20-1.2 Related Work

Section 18-1 — Trenching

Section 18-5 — Backfill

Section 19 — Irrigation System

20-1.3 Planting Conditions — No planting or seeding shall occur during weather conditions which will adversely affect materials or when soil is in a muddy condition. Contractor shall not plant at the end of the day, on Fridays or before holidays unless a special crew has been assigned to care for plants on next calendar day, and on weekends and holidays.

20-1.4 Preservation of Property

The planting and seeding operations shall be conducted in such a manner that no damage shall result to existing site improvements and plantings. The Contractor shall be responsible for any damage resulting from his operations, and shall repair or replace such damage at his own expense and to the satisfaction of the City. Vehicles of any kind shall not be allowed to pass over curbs, sidewalk, planting areas, etc., unless proper protection is provided.

Prior to excavating for plant pits and beds, the location of any underground utilities shall be verified and staked by the Contractor. All costs associated with verification of utility and underground structure locations including potholing shall be considered as included in the Contract Prices paid for the various items of work and no additional compensation will be made therefor. Damage to utility lines, underground structures, etc., shall be repaired at the Contractor's expense to the satisfaction of the City or owner of the utility involved.

20-1.5 Underground Obstructions — Rocks and other obstructions shall be removed to a depth necessary to permit proper planting according to drawings and specifications. If underground utilities, construction or solid rock ledges are encountered, City shall be contacted immediately for determination of extent of obstruction. Direction for selection of alternate locations shall be made by the City.

20-1.6 Protection of Existing Trees to Remain — Contractor shall erect barricades around trees to remain. They shall be constructed of wood. Place barricades minimum 5' away from trunk or at drip line if located greater than 5' from trunk. Under no circumstances shall earth, debris and materials be piled against trees or stored within drip line of trees.

20-1.7 Personnel — Planting shall be performed by personnel familiar with the procedures required of their trade and shall be supervised by a qualified planting foreman.

20-1.8 Sequence of Work — Landscaping shall not begin until all other improvements have been installed and inspected by the City. Contractor must receive approval to proceed from City prior to starting landscaping work.

20-1.9 Inspections

- A. Right of inspection by the City for approval or rejection is reserved at the place of growth and/or on the project site at any time upon delivery or during the work.
- B. Contractor shall notify City of inspections a minimum of 48 hours in

advance of inspection required.

20-1.10 Quality — All work shall be of the highest quality and shall be subject to the approval of the City. Any work that is deemed unacceptable by the City shall be removed by the Contractor immediately and replaced with work that is acceptable to the City. Such removal of defective work and replacement shall be at the expense of the Contractor. Defective work shall be replaced immediately.

All plant materials shall be of standard, approved first grade quality and shall be in prime condition when installed and accepted.

Any commercially processed or packaged materials shall be delivered to the site in the original unopened containers bearing the manufacturer's guaranteed analysis.

20-1.11 Storage of Materials

- A. Plants not installed on the day of arrival at the site shall be stored and protected as follows:
 - 1. Outside storage shall be shaded and protected from wind and sun.
 - 2. Plants shall be kept in a moist condition until planted, by watering.
- B. Fertilizer and lime shall not be stored with any other landscape materials.
- C. Soil sterilant shall not be stored with any other landscape materials.
- D. Storage of materials shall be only in areas designated or as approved by the City.
- E. The seed containers shall be stored immediately in a dry, weather and damp proof structure. Any seed which has become wet, moldy or is otherwise damaged in transit or storage will not be acceptable.

20-1.12 Submittals

- A. The Contractor shall submit to the City within 14 days of notice to proceed, all descriptive data and samples for the work as required by the specifications, and offers of alternatives, if any. Such submittals shall be checked and coordinated by the Contractor with the work of other trades involved before they are submitted to the City for examination.

Submittals shall be made by a letter of transmittal which shall contain a list of all materials submitted and identification of all deviations from the

plans and specifications contained in the submittal. The letter and all accompanying items shall be fully identified as to project name and location, Contractor's name, with ample cross-references to the contract documents, to facilitate identification of items and their location in the work.

- B. Six copies of submittals shall be presented to the City.
- C. Contractor shall supply the City with a list of all products, e.g. fertilizer, soil amendments, and plant materials, including name of nursery or supplier.
- D. Contractor shall supply the City with a sample of all supplied materials accompanied by analytical data from an approved laboratory source illustrating compliance or bearing the manufacturer's guaranteed analysis.

20-1.13 Determination of the Use of Chemicals — The City shall make the final determination of the use of chemicals on the site. Submit letters from the manufacturers on the levels of toxicity to the City for review and direction.

20-1.14 Site Safety — Contractor shall comply with all City/County, State and National regulations and requirements regarding site safety. Contractor shall assure that no unsafe conditions are allowed to remain overnight, over weekends, or unguarded during the work day. Material safety data sheets shall be kept on the job site at all times.

20-2 Materials

20-2.1 Plant Stock

- A. Plant Stock and Ground Cover:
 - 1. Plants shall be the variety, quantity and size indicated. When total quantities are shown tabulated on the drawings, they shall be considered approximate and are furnished for convenience only. Contractor is responsible for installing all of the plants shown on the planting plan and for computing the quantity of ground cover required within the area specified and planted at the specified spacing. Quality and size shall conform to the State of California Grading Code of Nursery Stock, No. 1 grade. Nursery-grown stock only shall be used, and shall be free from insect pests and diseases.
 - 2. All plants shall comply with Federal and State laws requiring inspection for plant diseases and infestations. Inspection certificates required by law shall accompany each shipment of

plants, and certificates shall be delivered to the City. All plants shall be true to species and size indicated, and shall be tagged in accordance with the standard practice recommended by the American Association of Nurserymen; however, determination of plant species or variety will be made by the City's decision will be final.

3. Plants shall be healthy, shapely, and well-rooted. Roots shall show no evidence of having been root bound, restricted or deformed. Plant material that has just been upgraded in container size shall be rejected. Root condition of plants in containers will be inspected by the City and determined by removal of earth from the roots of not less than two plants of each species or variety from each source. All plant materials requiring inspection by the City shall be assembled and available for such inspections. In case the sample plants inspected are found to be defective, the City reserves the right to reject the entire lot or lots of plants represented by the defective samples.
4. Each plant shall be handled and packed carefully to avoid damage. All necessary precautions shall be taken to insure that the plants will arrive at the site of work in proper condition for successful growth.
5. Plants shall be transported in enclosed trucks. If trees are too large for enclosed trucks and are transported in open trucks, they shall be wrapped to prevent damage and windburn. Trees in transport or prior to shipping shall not be tipped so that the container of the adjacent plant is leaning on the trunk of the next tree. Adequate protection shall be placed between trees so that trunks are not scarred in transport and branches are not broken. All tree trunks shall be wrapped with protective covering at growing grounds prior to handling and loading. Covering shall be removed at time of plant materials inspection at job site to inspect each tree. Trunks showing signs of damage due to improper handling shall be rejected. Plant materials showing damage from transport and loading, showing signs of ill health and plants that are not true to size and species specified and in conformance to the specifications stated in these contract documents shall be rejected. Rejected materials shall be removed from the site and replaced with materials that meet the satisfaction of the City and at no additional cost to the City.
6. Substitutions will not be permitted, unless proof is submitted to the City that any plant specified is not obtainable. The City will

consider use of the nearest equivalent size or variety. Such proof shall be substantiated and submitted in writing by the Contractor within 14 days after the effective date of Notice to Proceed. The City will make appropriate deductive adjustments to the contract bid items for substitute materials; there will be no additional compensation for approved substitution.

7. Plants shall have straight trunks with the leader intact, undamaged and uncut. All old abrasions and cuts shall be completely calloused over. All plants shall be measured when their branches are in their normal position. Height of plant is measured from root crown to top of plant. Width of plant is measured at branching at the widest point. Indicated sizes shown are before pruning. Plants shall not be pruned prior to delivery.
8. Trees shall be well tapered in the trunk so that when the nursery stake is removed, the tree supports itself upright without further staking. Trees shall have a main leader. The main branches shall be spaced vertically and alternately along the trunk. Branching shall not be concentrated in one location nor shall there be severe crossing of branches. Branches shall be smaller in diameter than the trunk. Branch attachments shall be free of embedded bark. At least one half of the foliage on the branches shall be located along the lower two thirds of the trunk.
9. All plants declared unsuitable for planting as a result of inspection of materials shall be removed from the site immediately. They shall be replaced with specimens that conform to the contract documents and that are acceptable to the City. Cost of return to grower and cost of replacement of plant materials shall be borne by Contractor and at no additional cost to the City.
10. Contractor shall facilitate inspection and identification by labeling trees and bundles or containers of the same shrub, groundcover or vine with a durable waterproof label and weather resistant ink. Labels shall state the correct plant name and size as specified in the project plant list and shall be legible for 60 days after delivery to the planting site. Plant material which is not labeled shall be rejected.
11. Plant material shall be grown under similar climatic conditions to those found in project site.
12. Ground cover shall be rooted plants, grown in flats unless otherwise noted on the plans or as approved by the City.

20-2.2 Seed

- A. Seed mixture shall be 98 percent pure, and noxious weed free, with a minimum of 88 percent germination. All seed shall be re-cleaned Grade A "new crop" seed, delivered in the original unopened containers, and shall bear a guaranteed analysis and dealer's label. The dealer may mix the seed provided a guaranteed statement of composition of mixture and percentages of purity and germination of each variety is attached to the sealed container. The seed shall be pretreated with a pre-emergence fungus preventative such as "Thiram", or approved equal, in accordance with manufacturer's specifications.

- B. Seed shall be as specified on plans.

20-2.3 Topsoil

- A. Source: On site stockpile

20-2.4 Soil Conditioner

20-2.4.1. Nitrogen Stabilized Organic Amendment

Amendment shall be nitrogen-stabilized sawdust. Source shall be derived from a combination of fir and pine or cedar wood, free from weed seed, dust, and objectionable material and containing the following physical properties:

Percent Passing	Sieve Size
95-100%	9.51mm (3/8")
90-95%	6.35mm (1/4")
85-90%	2.38mm (No. 8, 8 mesh)
15-20%	500 Micron (No. 35, 32 mesh)

Chemistry shall be:

Nitrogen Content
(dry weight): 0.56% - 0.84%

Iron Content: Minimum 0.08% diluted acid soluble
Fe on dry weight basis.

Soluble Salts: Maximum 4.0 millimhos centimeter @ 25 degrees C. as determined by saturation extract method.

Ash (dry weight): 0 - 8.0%

20-2.5 Fertilizer — Fertilizer shall be a commercial inorganic fertilizer in the granular and pelleted form. Fertilizer shall be delivered to the site in containers labeled in accordance with the applicable State of California regulations, bearing the warranty of the producer for the grade furnished. It shall be uniform in composition, dry and free-flowing.

A. Planted and Seeded Areas:

Pelleted type with analysis of 6-20-20 (N-P-K) and granular type 16-6-8 (N-P-K).

B. Planting Holes:

Tablets, 21 gram size, or approved equal, with an analysis of 20-10-5 (N-P-K).

20-2.6 Herbicide

A. Submit written chemical weed control program prepared by a licensed pest control advisor for approval by the City.

B. Herbicide shall be compatible with plant materials used in this contract. Proof of such compatibility shall be included in weed program submitted.

C. Program shall specify waiting period between spraying and planting.

20-2.7 Mulch — Mulch shall be 1/4"-3/8" dia. fir bark.

20-2.8 Backfill — Backfill to be used in planting holes shall be 100% topsoil obtained from on site top soil stripped and stockpiled.

20-2.9 Tree Stakes and Ties

A. Tree stakes shall be 3" dia. x 8' straight, close grained, Lodge Pole Pine pointed at one end. Stakes shall be pointed prior to treatment with Copper Napthanate which shall penetrate stake surfaces to a minimum depth of 1/4".

- B. Tree straps: corded rubber tire strips - 1" wide by 1/4" to 1/2" thick by length as required. Strips shall not contain steel within or have wire tie ends.

20-2.10 Water

- A. Water at will be furnished by the City at existing available sources.

20-3 Execution

20-3.1 Soil Preparation and Grading

A. ROUGH GRADE AND WATER:

Prior to any planting bed preparation or planting, grade all planting areas, fill as needed or remove surplus dirt and float areas to a smooth uniform grade. Slope all planting areas to drain. Roll, scarify, rake and level as necessary to obtain true, even planting surfaces. Rough grades shall be inspected and approved by the City before any amendments and fertilizers are installed. All planting areas shall be thoroughly wetted down. Allow soil to dry so as to be workable after which thoroughly cultivate to a depth of 6 inches using a rotary hoe and allow to dry out.

B. SOIL AMENDMENTS, FERTILIZERS AND CULTIVATING:

1. Spread soil amendment and fertilizer evenly over all areas, including grass from seed areas, at the following rates:
 - a. Soil Amendment - 6 cu. yds. per 1,000 sq. ft.
 - b. Fertilizer - 30 lbs. per 1,000 sq. ft. of 6-20-20.
2. After approval of amendment and fertilizer applications by the City, incorporate into top 6 inches of soil by repeated rotary-hoe cultivation.

C. WATER:

At completion of soil amendment, water soil in all areas, including grass from seed, for a full 14 days. Soil to be moist to a minimum depth of 24 inches and not be allowed to dry out at any time. In locations where irrigation is by drip or bubblers, the Contractor may, at his option and expense, install a temporary irrigation system to keep soil moist. The Contractor shall be responsible for insuring that the temporary irrigation

system does not create a safety hazard.

D. SPRAY WITH CHEMICAL WEED KILLER:

1. At the end of the watering period, spray area with an approved general chemical weed killer to eliminate all plant growth and roots including broadleaf and grass seedlings. Chemical shall be part of the chemical weed control program prepared by a licensed pest control advisor and approved by the City.
2. Chemical shall not sterilize soil and shall be applied as per manufacturer's directions. Alternate weeding methods can be used upon approval of the City.

E. FINISH GRADE:

1. When weeding and soil conditioning have been completed and soil has been thoroughly water settled, all planting areas shall be finish graded for placement of plant materials and seeding operation. Grading shall be done when soil is at optimum moisture content for working.
2. Finished grades shown on plans are given in feet and decimals of feet. Slope uniformly between given spot elevations. Planting areas including seeded areas shall be true to grade within one inch when tested in any direction with a 10 foot straightedge.
3. Grades not otherwise indicated shall be uniform levels or slopes between points where elevations are given, or between points established by walks, paving, curbs or catch basins. Finish grades shall be smooth, even, and on a uniform plane with no abrupt change of surface and no erosion scars. Minor adjustments of finish grades shall be made at the direction of the City if required.
4. All grades shall provide for natural runoff of water without low spots or pockets. Flow line grades shall be accurately set and shall not be less than 2 percent gradient wherever possible unless otherwise indicated.
5. Finish grade of earth in planting beds shall be 1 inch below top of adjacent pavement, curbs or headers, unless otherwise indicated on the drawings. Finish grade of earth in grass areas shall be 1/2" below top of adjacent pavement, curbs or headers.
6. Tops and toes of all slopes shall be rounded to produce a gradual

and natural-appearing transition between relatively level areas and slopes.

7. Protect all areas against compaction by equipment.

20-3.2 Tree & Shurb Planting

A. STAKE PLANT LOCATIONS:

Mark tree and shrub locations on site using stakes or similar means. Locations shall be approved by the City before plant holes are dug, and adjustments made as required.

B. WATER-TEST SELECTED PLANT HOLES:

1. Dig tree pit as per specifications below, paragraph C.
2. Tree pits to be water tested will be selected by City. Approximately one (1) location per 80 sq. ft. will be selected. If site requires more test holes, it will be specified on the drawings.
3. Fill tree pits with water. Check holes after 24 hours to determine if water has drained out. If not, bring to attention of the City.
4. Adjustment of pit size or location will be made if drainage problem exists. This will be determined by the City.

C. PLANTING HOLES:

1. Dig pits circular in outline with vertical sides as shown on the Planting Detail. Do not excavate deeper than the vertical dimension of the rootball. After pits are dug, break sides to open wall of pit for root penetration and loosen bottom of pit to a depth of 3 inches. Construct foot tamped mound in bottom of pit to support plant at proper level.

D. PLACEMENT OF PLANTS:

1. Do not handle container plants by the tops, stems, or trunks at any time. Lift all plants so that root ball is supported from the underside. Plants that do not have a satisfactory root system will be rejected.
2. Cut root ball vertically in a few places to encourage new feeder root development along perimeter of the root ball.

3. All plants shall be planted immediately after the containers are cut. Containers shall be removed immediately from the site.
4. Place plant in upright and plumb position.
5. Groundcovers shall be installed at spacings indicated on the drawings and shall be evenly spaced and staggered in rows. Place each plant in a pit so the root system lies free without doubling and so the roots are planted vertically. Firm the soil around each plant and water the area immediately to avoid drying out.

E. FERTILIZING AND BACKFILL:

1. Place fertilizer tablets in the following quantities around perimeter of plant hole:

1 gallon plant - 1 tablet
5 gallon plant - 3 tablets
15 gallon plant - 5 tablets
24" box plant - 7 tablets

2. Backfill hole with stockpiled on site topsoil. Taper backfill around sides and up to top of rootball so that sides of rootball are not exposed.
3. Construct a 3" high berm outside the excavated area, and fill the watering basin with B-1 solution. Remove berm in areas to receive grass that will be mowed after third thorough watering, and prior to grass installation.
4. Backfill shall be watered until the backfill material is moist to the full depth of the hole.
5. Excess backfill shall be disposed of at direction of the City, and shall be included in the cost of planting.

G. PRUNING:

No pruning shall be done unless specifically requested by the City and under the City's direction.

H. STAKING:

1. Install stakes as specified along sides of root ball and one foot into undisturbed ground (or deeper in accordance with the Planting

Detail). Stakes are not to go through root ball. For 24" box trees wood cross pieces nailed to stakes shall be 30" long. Install ties as shown on the Planting Detail.

2. Ties shall be placed as low on the trunk as possible but high enough so the tree will return to upright position after deflection.
3. To find the proper height for tie locations, hold the trunk in one hand, pull the top to one side and release. The height at which the trunk will just return to the upright position when the top is released is the height at which to attach the ties.
4. Ties are to form a loose loop around the tree trunk and stakes so that the trunk cannot work towards the support stakes. Tree ties shall be nailed securely in position in accordance with the manufacturer's recommendations and planting details.
5. Support stakes are not to exceed 6" above the tie locations. A flexible auxiliary stake shall be attached to those trees needing extra trunk support as determined by the City.
6. One tree of each size shall be staked and approved by the City prior to continued staking.

I. PRE-EMERGENT HERBICIDE APPLICATION:

1. Pre-emergent herbicide shall be applied to all tree, shrub, ground cover and firbark areas including plant basins. Chemicals used are to be in written chemical weed control program prepared by a licensed pest control advisor and approved by the City. Apply prior to any mulching.
2. Pre-emergent shall be applied during a windless period. Areas to receive seed shall be protected from contamination by pre-emergent.
3. Any area to receive seed that is contaminated with pre-emergent shall have the soil stripped to a 6" depth and replaced with imported topsoil to the satisfaction of the City and at no additional cost to the City.

J. MULCHING:

Install a 2" layer of fir bark in all planted areas not planted with grass or

hydroseed. Fir bark shall be kept away from stems and trunks of plants, 4" at groundcovers and 8" for all other plants.

K. ADJUSTMENT OF PLANTS:

1. Plants that settle deeper than specified shall be raised to the correct level.
2. Plants that go out of plumb shall be straightened and restaked.

20-3.3 Grass from Seed

- A. Installation of plants shall be approved by the City before seeding operations begin. Just prior to seeding, areas to be seeded shall be loosened by harrow or rototiller to 2" depth, raked to remove rocks one inch or larger in size along with sticks and debris, floated level, rolled and floated again.
- B. Seed shall be sown evenly using a mechanical spreader at the rate of 10 pounds of mixture over each 1,000 square feet of area. One half of the seed shall be sown in one direction, and the remaining one half sown in a direction 90 degrees to the first during a windless period. Overseed any existing undisturbed lawn at junction with disturbed area being seeded to provide even grass coverage at this point. Apply fertilizer (16-6-8) at the rate of 6 lbs./1,000 sq. ft. uniformly over seeded areas.
- C. Lightly rake surface to cover seed and to mix with fertilizer and then compact with a 200 lb. roller. Soil shall be irrigated immediately and kept moist but not saturated until the seed has germinated.
- D. Whenever the grass reaches a height of 3 inches, mow to 1-1/2 inches and remove all clippings. After second mowing of grass, apply second application of fertilizer. Apply fertilizer (16-6-8) at the rate of 6 lbs./1,000 sq. ft. uniformly over turf area. Apply again at the same rate 2 weeks prior to completion of maintenance.
- E. Protect grass areas with temporary fencing as necessary. Fencing shall not create a hazard for pedestrian or vehicular traffic. Contractor shall obtain approval of the City for fence type and locations prior to installation. Barriers shall be maintained by the Contractor and kept in orderly condition at all times until work has been accepted by the City. Any damage to turf shall be repaired by Contractor at no expense to the City.
- F. Until completion of the required maintenance period of the project, Contractor shall provide maintenance of grass area installed under this

contract by watering, weeding, seeding, mowing (includes trimming and edging), rolling and by performing any other necessary operations of maintenance including treatment for fungus diseases, insects, pests of rodents. Re-seed all bare spots at intervals of 10 days until a full stand of grass is established over the entire grass area in scope of work.

20-3.4 Clean Up

- A. The Contractor shall at all times keep the premises free from accumulations of waste material or rubbish caused by his work. At the completion of the work he shall remove all rubbish, tools, scaffolding, and surplus materials from the site.
- B. Neatly dress and finish all planting areas.
- C. Pavement shall be broom clean.
- D. Rinse foliage of all plant materials within the construction area as often as necessary to keep the foliage free of dust.

20-3.5 Preliminary Inspection

At the completion of work, the Contractor shall request a preliminary inspection to determine the condition of planting and seeded lawn area.

- 1. Inspection shall be requested 48 hours in advance.
- 2. Present for the inspection will be: Contractor and City.
- B. Construction considered ready for inspection shall conform to the following:
 - 1. All planting shall be healthy and free of infestations.
 - 2. All planting areas shall be free of weeds.
 - 3. Grass areas shall show a uniform, smooth ground surface without eroded ruts or gullies, and evidence of uniform seed germination.
 - 4. Grass shall be mowed to 1-1/2" above finish grade.
 - 5. Stakes and ties shall be as specified in the contract documents.
 - 6. Mulch shall be raked to uniform surface. Areas not mulched shall be raked to uniform surface.

7. All debris shall be removed from site, all pavement shall be broom clean, and foliage shall be washed clean.
8. All plants shall be installed as per the Contract Documents.

C. Approval:

1. If the installation is found satisfactory, the work shall be approved by the City in writing.
2. If the installation is found unsatisfactory, the City will submit a punch list of conditions to correct to the Contractor. The Contractor is responsible for requesting additional inspections after the conditions of the punch list have been corrected.
3. No partial approvals will be given.

20-4 Maintenance

20-4.1 Scope of Work

- A. The maintenance period following project installation is included in the contract and shall begin on the date the work is accepted by the Director of Public Works.
- B. Maintenance period shall be for 1 year beginning the day of the acceptance of the construction by the City, or as specified in the Special Provisions if for a longer period of time.
- C. Maintenance shall include, but is not limited to all watering, weeding, fertilizing, cultivation, spraying and pruning necessary to keep the plant material in a healthy growing condition and to keep the planted areas neat and attractive in appearance throughout the maintenance period. All plants shall be watered not less than twice a week. Each watering shall be of such quantity as to provide optimum growth conditions. The Contractor shall provide the equipment and means for its proper application. At the direction of the City, any plant exhibiting weakness and the probability of dying, shall be replaced immediately by the Contractor at his expense. Replacements of plants or grass shall be made in the same manner as specified for the original planting. At the end of the maintenance period, all plant material shall be in a healthy growing condition and free of physical injury of any kind.
- D. Work under this Section shall include complete responsibility for maintaining adequate protection for all areas. Any damaged areas shall

be repaired at no additional expense to the City.

- E. Grass shall be mowed each time it reaches 3" in height and with blades set to 1-1/2" above grade. Grass shall be trimmed at the edges of curbs, paving, drains and headers. Grass areas which fail to germinate shall be reseeded at maximum 10-day intervals until a vigorous, even stand of grass is established. Seeding operation shall follow specifications for initial installation. Grass areas shall be kept free of weeds by hand pulling, or by spraying with the approved selective chemical herbicide before weeds exceed 2 inches in height. Clippings and debris shall be removed from the site.
- F. Plants installed under this contract shall be properly maintained by regular watering, cultivating, weeding, re-mulching, repair of stakes, pruning, and treatment of insects and pests. During the Maintenance Period, any plants which are vandalized, damaged by herbicide, diseased, dead, or in an unhealthy condition, shall be replaced by the Contractor at his expense within two weeks after notification from the City or his authorized representative. Maintenance shall also include treatment for fungus, diseases, rodents, and insects, the requirements for approval of treatment program shall be the same as for herbicide.
- G. Weed all areas at intervals of not more than (10) calendar days.
- H. Rocks, clods, and debris which appear on the surface shall be removed. Heaved, settled, or eroded areas shall be restored by excavating, filling, finish grading, and rolling as required.

20-4.2 Final Inspection and Acceptance

- A. Final inspection will be conducted at the end of the Maintenance Period. Notice requesting final inspection shall be submitted by the Contractor to the City at least 7 calendar days prior to the anticipated date.
- B. Acceptance of the project by the City will be contingent upon proper maintenance and the establishment of vigorous plant materials. Any portion thereof which does not show vigorous growth is subject to continued maintenance at the Contractor's expense.
- C. Prior to the final inspection, the Contractor shall also have performed weeding, repair or touch-up of paving, equipment, and structures, and the thorough cleaning of the site.
- D. Just prior to final inspection, 16-6-8 granular form commercial fertilizer shall be applied as follows:

Plant Size	Qty. Fertilizer
Specimen	1 pint
15 gal.	1 cup
5 gal.	1/2 cup
1 gal.	1/4 cup
ground cover	10 lbs./1,000 sq. ft.

- E. Mulch shall be raked away from around plant bases. Fertilizer shall be spread around plant base and worked into the top 2 inches of soil. Mulch shall then be replaced.
- F. At the final inspection, the City will determine the condition of improvements and planting. Plants which are missing, vandalized, dead, or unhealthy shall be replaced by the Contractor at his expense with the same species and sizes originally specified and following these same specifications for installation. The Contractor shall make replacements within two weeks after final inspection, and maintain plants for an additional 30 calendar days.
- G. The irrigation system shall also be tested at this time. See Irrigation Specifications for additional information.
- H. If project improvements, corrective work, and maintenance have not been performed as specified and to the satisfaction of the City, maintenance shall continue at the Contractor's expense until such time as work has been successfully completed and accepted by the City. Should work have been performed as specified and to the City's satisfaction, the City will assume maintenance responsibilities following the final inspection. The City will send written Notice of Acceptance of project to the Contractor.

20-5 Guaranty

20-5.1 — All trees, and other plant materials shall be guaranteed to take root and grow, and thrive for a period of one year after final acceptance of work.

20-5.2 — Any trees or other plant materials that die back and lose the form and size originally specified shall be replaced, even though they have taken root and are growing after the die-back.

20-5.3 — Within 15 calendar days of written notification by the City, the Contractor shall, at his own expense remove and replace all guaranteed plant

materials which, for any reason, fail to meet requirements of guaranty. Replacements shall be made to same specifications as required for original materials and shall carry the same guaranty from the time they are replaced.

20-6 Measurement and Payment — The landscaping shall be measured and payment made at the contract lump sum or unit price and shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals and for doing all work in landscaping and planting areas and tree areas including staking as shown on the plans and as specified in these specifications and as directed by the City.

The contract price for maintenance will be paid from the ten (10) percent retention on a pro-rata basis in twelve (12) equal monthly payments within 20 days after the successful completion of each monthly maintenance period.

The provisions of Section 9, "Payments" of the General Provisions, are hereby modified as necessary to comply with these provisions.