SECTION I: PLANT MATERIALS GUIDELINES

1.1 LOCATIONAL CRITERIA

The following general standards establish criteria for the location of all landscape improvements. Refer to **Section V** for additional restrictions and requirements governing landscape improvements in public rights-of-way.

1.1-1 Landscape improvements in all areas shall be located to permit the proper operation of irrigation systems and the effective use of mowers and other power equipment in lawn areas.

1.1-2 Plant locations and spacing shall permit normal plant development without undue crowding or trimming.

1.1-3 Plant materials are to be grouped into hydrozones with plant species having similar water demand and by their, soil, sun, and shade requirements. A hydrozone may mix plants of moderate and low water use or mix plants of high water use and moderate water use. If hydrozones contain mixed water use plants, the higher water use plant classification shall be used for the estimated total water use ETWU calculations (see Section 2.6-2.)

1.2 SCREENING CRITERIA

When plant materials, in conjunction with or in lieu of fencing, are used to satisfy the screening requirements established by the Land Development Code, the plantings shall be evergreen and spaced to ensure 100 percent screening within two years of installation.

1.3 PLANT SELECTION CRITERIA

1.3-1 General Guidelines
Plants shall be selected based on the water budget requirements in Section 2.6 (Water Budget). With regard to the Landscape Regulations, there are three general categories of plants: Preferred, Acceptable, and Prohibited.

1.3-1.01 Preferred plants are essentially those most suited to the actual site conditions. However, there are innumerable combinations of factors affecting the selection of appropriate plants. The water needs of a plant are, however, a critical factor. For the purposes of this document, preferred plants are water conserving plants which are easily maintained and have no known history of problems. **Appendix 'A'** is a list of reference materials which discuss and identify water conserving plants.

1.3-1.02 Acceptable plants are those which satisfy minimum performance standards for the special site area in question and are easily maintained. For example, to be acceptable for Brush Management Zone 2, the plant must meet the performance standards for that zone.

1.3-1.03 Prohibited plants are those which do not satisfy the minimum performance standards for the site area in question. In addition, there are a number of invasive species that are not allowed in any required landscape area. The use of these materials elsewhere on a site is strongly discouraged. Where existing, these plants shall be eradicated. **Table 1** contains a list of Prohibited Plants.

TABLE 1
PROHIBITED SPECIES

Botanical Name	Common Name
Ailanthus altissima	Tree-of-Heaven
Arundo donax	Giant Reed
Broussonetia papyrifera	Paper Mulberry
Cortaderia selloana	Pampas Grass
Nicotiana glauca	Tree Tobacco
Pennisetum setaceum	Fountain Grass
Spartium junceum	Spanish Broom
Tamarix spp	Tamarisk
Ricinus communis	Castor Bean

1.3-1.04 Plant material used for erosion control on disturbed soil areas and slopes should achieve 100 percent soil coverage within two years of being installed.

1.3-1.05 Palm tree sizes are based on brown trunk height using the following methods for measurement for the type of palm shown:

- Fan Palms - Measured from the ground line to the base of the first living frond.
- Feather Palms - Measured from the ground line to the base of the heart leaf where the heart leaf breaks away from the trunk.

1.3-1.06 Plant material used adjacent to coastal bluffs shall be native or naturalized to minimize the need for irrigation beyond initial plant establishment. Existing exotic and other plant materials that require regular irrigation should be removed and replaced with native or naturalized plant material.

1.3-1.07 Plant material are to be selected to be less than or equal to the maximum applied water allowance (MAWA) as determined by the water budget formula and specifications in Section 2.3-13.10.

1.3-2 Lawns

1.3-2.01 Areas of lawn shall be minimized and concentrated where used

1.3-2.02 Lawn areas shall not exceed 10 percent of the planting area on a premises, excluding required common areas, active recreation areas, areas located within the public right-of-way between the curb and public sidewalk, and areas of turf used for bioretention and infiltration basins. This restriction does not apply to single dwelling unit residential uses in residential zones.

1.3-2.03 The minimum dimension of a lawn bounded by impervious surfaces on two or more sides is 8 feet in all directions unless subsurface or low volume irrigation is used (low pressure irrigation through tubing or lateral lines and low volume emitters such as drip lines or bubblers).

1.3-2.04 Lawn areas located on slopes, where the toe of slope is adjacent to hardscape (as defined in Section 113.0103 of the Land Development Code), shall not exceed a gradient of 25 percent (4:1).

1.3-3 Vehicular Use Areas Not Within Street Rights-of-Way

1.3-3.01 Landscape improvements, including, but not limited to, plants, berms, signs, and structures shall be selected, positioned, and maintained to avoid obstructing views of motorists near intersections of aisles, drives, and pedestrian walkways.

1.3-3.02 Trees shall be selected and maintained such that scaffold branches are a minimum of 60 inches above the finish grade as measured at the trunk.

1.3-3.03 Plant materials with known surface root problems shall not be used in vehicular use areas.

1.4 SITE PREPARATION CRITERIA

1.4-1 When so indicated on the approved landscape plans, soils testing by a certified agronomic soil testing laboratory and/or 24 hour percolation tests (see **Sec. 2.3-13.08)** shall be conducted and report recommendations implemented prior to the installation of plants and irrigation systems.

1.4-2 Certified soil test and percolation test results and any proposed construction document revisions shall be submitted to the City. Written approval of revised construction documents is required prior to the installation of plantings and irrigation systems.

1.4-3 Soil amendments are to be used when needed to improve water retention in the soil, to improve the functional structure of the soil for greater water infiltration and percolation, to balance pH, and to optimize plant growth.

1.5 INSTALLATION CRITERIA

1.5-1 All drainage shall comply with the Storm Water Standards of the Land Development Manual.

1.5-5.01 All planting areas shall be designed to effectively handle all drainage onsite.

1.5-5.02 Concentrated flows shall be handled on-site using low impact development practices.

1.5-2 Only trees which are not self-supporting shall be staked or guyed.

1.5-4 Herbaceous groundcovers shall be planted with triangular spacing at a distance that will typically ensure 100 percent coverage within one-year of installation.

1.5-5 For irrigated areas, the rate of seed application shall be sufficient to typically provide 100 percent coverage within six months of installation.

1.5-6 All required planting areas shall be covered with mulch (organic or inorganic) to a minimum depth of 2 inches, excluding slopes requiring revegetation. All exposed soil areas without vegetation shall also be mulched to this minimum depth.

1.6 MAINTENANCE CRITERIA

1.6-1 Trees shall be watered deeply, but infrequently, to promote deeper rooting, and shall be fertilized as required by sound horticultural practices.

1.6-2 Plants shall be pruned in accordance with professional trimming standards to maintain their intended shapes and sizes, and to insure the health of the specimen and the safety of the public.

1.6-2 Tree guys and stake ties shall be inspected and adjusted periodically, and removed when necessary, to insure that they are adequately surrounding the tree without girdling trunks or branches.

1.6-4 Plants shall be pruned to avoid blocking walks, passageways and sight distance views for vehicular traffic.

1.6-5 Dead plants shall be replaced, damaged branches shall be removed, and overgrown areas shall be thinned by the selective removal of unnecessary plants.

1.6-6 Shrubs and vines used for screening trash enclosures and service areas shall be pruned to maximize screening while allowing access to the storage/service areas.

1.6-7 Shrubs, trees, and vines for screening adjacent properties shall be kept pruned so they do not interfere with pedestrian traffic and do not encroach excessively onto the adjacent property.

1.6-8 Trees shall be selected based upon the site characteristics including soil type, soil area, drainage, and adjacent improvements. Trees selected should grow to maturity without impacts to sidewalks, curbs, and other public improvements.

1.7 STREETS RIGHTS-OF-WAY AND OPEN SPACES MATERIAL GUIDELINES

All planting in street rights-of-way and those in open space areas that are to be maintained by the City, either directly or by administered contract shall comply with this section.

1.7-1 Plant Selection

1.7-1.01 In areas of existing development without an approved street tree plan[1], the tree selection(s) shall match the existing, permitted, predominate species unless the species is not listed in the Street Tree Selection Guide (www.sandiego.gov/street-div/pdf/treeguide.pdf).

1.7-1.02 In newly developing areas without an approved street tree plan, tree selection shall be coordinated to achieve continuity.

1.7-1.03 Plant selection shall be limited to those species which are considered relatively disease and pest-free and require minimal trimming to be maintained in a safe and attractive condition.

1.7-1.04 Substitutions of plant material in the street rights-of-way must be approved by the City Manager.

1.7-1.05 The planting of trees such as Cinnamomum, Ficus, Fraxinus, Schinus and other species with surface root systems that tend to damage sidewalks shall not typically be used in public rights-of-way. They will only be considered under appropriate site conditions and where maintenance responsibilities have been assigned to the satisfaction of the City Manager.

[1] Street tree plans, if adopted, are located in the applicable community plan. If there is no adopted street tree plan contact the City Arborist for the appropriate tree.

1.7-2 Installation Criteria

1.7-2.01 Per Section 1.4, Site Preparation Criteria, a soil percolation test shall be performed by filling a 12"x 12"x 12" square hole with water, waiting 12 hours, and then completely refilling. All percolation test operations shall be conducted in the presence of a licensed landscape architect, contractor, civil engineer or related professional. If all the water is not absorbed within 12 hours of the second filling, tree installations shall include the following:

- 150 cubic feet of topsoil to a maximum depth of three feet.
- A four-inch minimum diameter perforated drain line connected to a storm drain or sump. When connecting to a storm drain, a cleanout shall be installed at the connection to allow inspection of sources of non-storm water discharges caused by excessive irrigation.
- Sumps when approved, shall be a minimum 12 inches in diameter and extend four feet below the planting trench depth. A minimum three-inch diameter pipe with removal cap on top shall be extended to the surface for inspection.
- A subsurface irrigation system.

1.7-2.02 Non-biodegradable root barriers shall be installed around new trees in the public right-of-way to direct tree root growth downward and away from adjacent sidewalks, curbs, gutters, driveways, and other public improvements. Root barriers may be eliminated where the combination of tree species, soil type, soil area, and drainage conditions can be shown to afford equivalent protection against tree root damage to public improvements.

1.7-3 Maintenance Criteria

1.7-3.01 Trees with a low spreading branch structure shall typically not be used in the street rights-of-way, and individual specimens shall be selected, planted, and pruned, if necessary, such that major scaffold branches are at least 8 feet above the finish surface or finish grade, as measured at the trunk.

1.7-3.02 Trees shall be positioned and kept maintained so that any branches that extend out over dedicated street rights-of-way have a minimum of 14 feet 6 inches of clearance above the surface of the street.

1.7-4 Public Improvements Adjacent to Existing Trees

1.7-4.01 Sidewalk, curb, gutter or driveway renovation or replacement within four feet of an existing tree shall be performed following procedures that would protect the existing tree. These procedures could include root pruning, modification

to the alignment of the proposed public improvement, erecting temporary barriers during construction, or modification to the construction detail of the improvement. Where the combination of existing conditions and the proposed public improvement would preclude tree preservation, trees that are removed should be replaced with new street trees.

1.7-4.02 Public improvement work adjacent to existing trees shall be performed in accordance with the provisions of the public right-of-way permit.