City of Vista
Landscape Manual

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APPENDICES:

1. Introduction

This manual is intended to provide property owners, developers, contractors, project applicants, etc., with information regarding the preparation of a Landscape Documentation Package (hereinafter referred to as the "Package"), as required by Vista Development Code Section 18.56.080. It also presents landscape design guidelines and development standards which must be met for all landscape projects. These guidelines and standards are applicable to anyone installing landscaping regardless of whether submittal of the Package and/or a landscape permit is required.

It is highly recommended that any person considering a landscape project contact local water purveyor (in most cases Vista Irrigation District) prior to drafting landscape plans. Inquiries should be made regarding the peak operating demands on the water supply system and/or water restrictions that may impact the effectiveness of an irrigation system. It may also be helpful to discuss water meter requirements.

1.1 How to Use this Manual

This manual should be consulted by anyone contemplating the installation of landscape improvements. You are strongly encouraged to thoroughly review and understand the information contained herein since the Package will be reviewed for conformance with said information. Please contact the City's Planning Division at (760) 639-6100 if you have any questions regarding the Package or any information presented in this manual.

This manual contains words, phrases, and abbreviations that may not be easily understood. Please refer to Vista Development Code Sections 18.56.040 and/or 18.02 for definitions of these terms. If you have questions regarding any terms contained in this manual which do not appear in the above code sections, please contact a licensed landscape professional for assistance.

1.2 Applicability

A Package is required for all projects identified in Chapter 18.56 of the Vista Development Code. Not all aspects of the Package will be necessary for every project, so it is important to review the information contained in this document as well as Chapter 18.56 of the Vista Development Code in their entirety. For example, some projects may not require submittal of a conceptual landscape plan; others may have had their Package submittal requirements changed as a specific condition of the project's approval.

Most projects will require three separate submittals of the Package, and separate fees may be required for each part of the submittal. Details on what parts of the Package are required as part of each separate submittal can be found in Chapter 3 of this manual.

2. Design Guidelines and Development Standards

Landscaped areas shall be designed to conform to the development standards found in this manual. The development standards outline minimum requirements that must be met for all landscape projects. The design guidelines are intended to allow for creativity in the design of landscaped areas.

2.1 Design Guideline Considerations

The design guidelines identified below shall serve as general goals in the creation of a landscape plan that is cohesive with the proposed development project and adjacent developed properties. Therefore, no quantitative data are included in this section. Quantitative data can be found in Section 2.2.2 (Planting Standards and Requirements) of this manual.

1. When contemplating the proposed design of any landscaped area, the project developer and landscape architect shall give consideration to the following:
   - A. The design shall ensure a high standard of installation and plant health.
   - B. The placement, size, and shape of landscaped areas should be integral in the creation of a project site plan; it shall not be an afterthought that must be designed to fit a predetermined site plan.
   - C. Plants shall be appropriate to Vista's climate. The Sunset Western Garden Book can be consulted for initial research (Vista is in Sunset Zone 23), however further research will likely be necessary. The WUCOLS list, which can be found in the California Department of Water Resource's "Guide to Estimating Irrigation Water Needs of Landscape Plantings in California", provides additional information to be used in the selection of plant species. The website where this guide can be found is identified as an additional resource toward the back of this manual.
   - D. Plant selection shall take into account suitability of the soil and the availability of supplemental water available through irrigation.
   - E. Plants shall be compatible with existing, established species on the subject or adjacent properties, as applicable.
   - F. Appropriate plant sizes shall be selected based on their mature condition.
   - G. A mixture of deciduous and evergreen trees shall be provided.
   - H. Parking lots shall be screened from view from public right-of-ways via the use of appropriate landscape species. Landscaping should achieve this objective without creating line-of-sight issues for vehicles and/or pedestrians entering and exiting the site.
   - I. Landscaping shall be provided around areas on a project site that would benefit from visual screening, such as trash enclosures, loading docks, above-ground mechanical/electrical equipment, etc. Plant species should be selected based on their ability to achieve the desired screening purpose. For instance, self-supporting vines should be provided on all sides of a trash enclosure.
   - J. The use of landscaping as a graffiti deterrence measure.

K. Landscaping shall be provided in front of long spans of walls, fences, facades, and other solid structures in order to minimize their massiveness.

L. Building architecture shall be considered when designing the landscape plan for a project. Landscaping shall compliment building architecture.

M. Landscape design shall incorporate water conservation principles and drought tolerant species to the maximum extent practicable without adversely affecting aesthetics.

N. Areas visible to public rights-of-way are encouraged to be a focal point of a site's overall landscaping.

O. Established vegetation shall be preserved whenever possible. Consideration shall be given to this requirement during the site planning phase of the project.

P. A long-range thought process should be used in the preparation of landscape plans for projects which propose phased development. Please be sure to consider the landscaping needs of future phases when designing landscape plans in order to minimize the need to remove and replace plantings and irrigation systems. The conceptual landscape phase shall encompass the entire development project. Other than landscaping necessary to prevent storm water runoff and for erosion control, the landscape construction phase may be addressed at the time that each phase of a development project is undertaken.

Q. The use of artificial turf in place of natural turf is encouraged wherever possible so long as it does not detract from the overall appearance of the site.

R. The use of fire-wise design practices is required per section 2.2.1.3.

S. The use of invasive plants as identified in the current California Invasive Plant Council's (Cal-IPC) Invasive Plant Inventory is prohibited. The website where this inventory can be found is identified as an additional resource at the back of this manual.

2.2 Development Standards

The development standards identified below represent the minimum requirements that must be met in the development of any project for which a Package is required. Compliance with these standards shall be demonstrated in each submittal of the Package. Any deviation from these standards will require prior authorization from the City Planner or his/her designee, and shall accomplish the same water conservation standards presented in this document and Development Code Chapter 18.56.

An applicant is permitted to exceed the minimum requirements presented in this section, and is encouraged to do so as long as the standards presented in this manual and Chapter 18.56 of the Vista Development Code are met and the additional landscaping does not adversely affect the development project as a whole.

2.2.1 Public Safety Requirements

The information presented below is intended to minimize adverse impacts to the health, safety and welfare of the citizens of Vista that may arise as a result of landscape installation.

1. SIGHT VISIBILITY
   - A. Plant materials and improvements over 30 inches in height or without an eight foot minimum clearance (canopy height above finished grade) are prohibited within the triangular area that measures 50 feet back from extension of intersecting curb lines of any two streets.
   - B. Plant materials and improvements within the public right-of-way and Landscape Maintenance Districts which are over 30 inches in height or without an eight foot minimum clearance (canopy height above finished grade) are prohibited within ten feet of any driveway as measured from the center line of the of the tree trunk to the curb (or edge of pavement if no curb exists) of the driveway.
   - C. The measurements identified above shall be adjusted at the discretion of the City's Traffic Engineer if topographical or existing improvements render them a potential threat to public safety.
   - D. The placement of trees within median islands will be subject to review by the City's Traffic Engineer. The following minimum criteria should be considered:
     1) Topography of the street
     2) Maintaining sight visibility from side streets and driveways.
     3) Careful attention to the placement of proposed trees so that tree trunks do not align and create a solid wall of trunks.

2. FIRE PREVENTION

Property owners, developers, contractors, project applicants, and others who plan to install new landscape improvements on parcels located within a Very High Fire Severity Zone (VHFSZ) must submit landscape/fuel modification plans, as detailed below. The city's Fire Hazard Severity Zone map (Appendix 4) was based on recommendations by CAL FIRE (California Department of Forestry and Fire Protection), with modifications from the City of Vista Fire Department (VFD).[1] Numerous variables involved with preparing these plans make specific, uniform regulations impractical. The VFD will not require supporting data if the requirements and standards set forth below are followed to the satisfaction of the Fire Marshall. Compliance with these requirements does not guarantee that homeowner's insurance may be secured, and may not prevent the loss of life

[1] Fire hazard severity zones have been established within the city of Vista in compliance with California (CA) Government Code Sections 51175 through 51189 and CA Public Resources Code Sections 4201 through 4204. The City of Vista is considered a Local Responsibility Area (or LRA) and the VFD is the enforcing agency. State Responsibility Areas near Vista include unincorporated San Diego County; CAL FIRE is the enforcing agency.

and/or real and personal property due to wildfire. In addition, the necessity of implementing a landscape/fuel modification plan does not release the owner or applicant from the responsibility to mitigate the impact of such modifications (e.g., endangered species, erosion control, etc.).

A. Integrated Landscape/Fuel Modification Plan - General Submittal Standards and Requirements

1) All integrated landscape/fuel modification plans shall be prepared using the design guidelines and development standards contained in this manual, unless otherwise noted in this section. In addition, all submittal requirements for plans shall follow the stated requirements in the Landscape Ordinance. All installation of landscape/fuel modification improvements shall follow the requirements contained in this manual, unless otherwise noted below.

2) Landscape/fuel modification plans shall show the area and location of all hardscape and softscape (e.g., trees, shrubs, groundcovers, etc.) improvements and fuel modification (also known as "*defensible space*") necessary to achieve the minimum acceptable level of risk to structures from combustible vegetation.

3) An integrated landscape/fuel modification plan varies in complexity and is dependent upon the type, quantity, and spacing of vegetation, as well as topography, degree and type of exposure, local weather conditions, and the construction, design, and placement of structures. A typical landscape/fuel modification installation consists of a 100-foot *defensible space* zone[2], which is made up of two smaller zones. Zone A (also known as a "*Green Zone*") includes the area from each building or combustible structure to a point 30 feet away. As described below, this zone must be modified (see Appendix 5 for a list of unacceptable plants), planted with fire resistive plants (see Appendix 5 for a list of acceptable plants), and irrigated. Zone B (or "*Reduced Fuel Zone*") is the area between 30 to 100 feet (or to the property line, which ever is closer) from a building or combustible structure. In this zone native vegetation may remain; however, the fuel load must be 50 percent less than adjacent native plant areas and all dead and dying vegetation must be removed, as described below. Irrigation is optional.

[2] As required by CA Public Resources Code 4291.

4) Plant material selection, irrigation system design, and a landscape maintenance management plan[3] shall sensitively address water conservation practices, and include methods of erosion control to protect against slope failure.

5) Care must be taken so that vegetation that exists as a part of protected upland habitat, and/or wetland/riparian habitat, and/or plants that are protected under a special status designation is not modified (i.e., cut or removed) in conflict with local, State, or Federal law. These "*environmentally sensitive areas*" (which would also be addressed in the environmental document, if required) shall be identified in the integrated landscape/fuel modification plans, and fuel modification methods (if needed) shall be fully described. Regardless of whether a Landscape Documentation Package and/or a landscape permit is required, property owners or project applicants who have *environmentally sensitive areas* on their property must contact and notify the California Department of Fish and Game and the U.S. Fish and Wildlife Service (collectively the Resource Agencies) at least ten (10) days prior to beginning any fuel modification activities. Failure of the owner or applicant to provide adequate notification may render that person liable under State and/or Federal Law. Once notified, the Resource Agencies will have up to ten (10) days to a) determine whether the proposed fuel modification activities complies with State and/or Federal endangered species requirements; and b) suggest voluntary, alternative abatement measures if feasible and warranted. Failure of the Resource Agencies to respond within the allotted time would allow the owner to proceed with fuel modification activities without delay.

6) The following shall be included on all landscape/fuel modification plans:
   a. Identify the design of the proposed project, showing all property lines, contour lines, and the proposed location of all new and existing structures (including all hardscape and softscape improvements) and the fuel modification area(s).
   b. Delineate each zone (i.e., setback, irrigation, etc.) with a general description of each zone's dimensions and character (e.g., 30-foot to 100-foot Zone B), the type and location of existing vegetation to be removed (do <u>not</u> disk or scrape soil to remove vegetation), the type and location of existing vegetation that would remain and be thinned, irrigation system and specifications, as required, and planted with

[3] Depending on the size of the property, this can range from a simple table on the landscape/fuel modification plan identifying tree, shrub, and ground cover maintenance to a separate sheet of the landscape/fuel modification plan identifying maintenance requirements.

adequately spaced plant material that is more drought-tolerant and fire-resistant (Note: See Appendix 5, Attachment 3 for additional information on fuel removal methods).

c. Avoid removal of excessive amounts of native vegetation as this could result in soil erosion. Thinning should remove fuel and maintain a natural appearance.

d. Identify the plant palette to be installed in accordance with guidelines in this manual. Include a plant matrix for all trees, tree-form shrubs, shrubs, and shrub-like plants in fuel modified zones showing the maximum height and width of mature plants and proposed spacing.

e. Include photographs of the area which show the type of vegetation that currently exists, including height and density, and the topography of the site.

f. Show the location of any emergency and/or maintenance access easements within the fuel modification area. Access easements shall have a minimum l0-foot width; alternatively, five-foot wide easements provided every 250 feet may be acceptable. Gates, if installed within the easement, shall be a minimum of 36 inches wide. The easements shall be maintained free of structures and of vegetation greater than five (5) inches in height.

g. Include a general description of what exists 300 feet beyond the development property lines in all directions (e.g., reserve lands, structures, natural vegetation, roads, parks, etc.). Note: VFD may require additional information on a project-specific basis.

h. Identify any proposed off-site fuel modification areas and provide appropriate legal agreements with adjacent property owners.

i. Identify all applicable maintenance requirements and assignment(s) of responsibility (See Appendix 5, Attachment 4).

j. Include any tract or project conditions, CC&R and/or deed restrictions relative to fuel modifications (See Appendix 5, Attachment 4).

k. For large developments, fuel modification zones (especially zone B) should be located within common lettered lots owned and maintained by associations representing common ownership (e.g., homeowners' associations). The integrity and longevity of the fuel modification zones shall be maintained with sufficient tract/project conditions and CC&Rs to specifically identify the restrictions within the fuel modification areas. Likewise, when fuel modification zones are located on private property, deed restrictions are

required to specifically identify the restrictions on any portion of the property subject to fuel modification (See Appendix 5, Attachment 4).

B. Integrated Landscape/Fuel Modification Plan - Specific Submittal Requirements and Standards

1) Zone A - *Green Zone*

The purpose of Zone A in a *defensible space* scheme is to protect combustible structures from radiant heat and reduce ignition. In no case shall Zone A be less than 30 feet (note: in some situations VFD may increase this distance to 50 feet). The *Green Zone* includes the area measured from each building or structure to a point 30 feet away in all directions (360 degrees). The basic idea is to ELIMINATE ALL FLAMMABLE MATERIALS (e.g., fire-prone vegetation, wood stacks, wood etc.) within this area. Maintenance including ongoing removal and/or thinning of combustible vegetation, replacement of dead/dying fire resistant plantings, maintenance of the operations, integrity and programming of the irrigation system, and regular trimming of trees and/or shrubs to prevent ladder fuels is required and is subject to inspection by VFD.

a. Specific Requirements

i) Remove all undesirable/fire prone plant species (see Appendix 5, Attachment 1) using methods such as mowing, trimming, or cutting with a chain saw so that the plant root structure is left intact to stabilize the soil. In addition, all plant litter, dead wood and debris, and dead or dying vegetation must be removed.

ii) The first three (3) feet from a building or structure must be composed of a non-combustible zone consisting of low growing (i.e., no more than four inches) fire resistive ground cover, and/or rock, concrete, decomposed granite, etc.

iii) Automatic irrigation systems shall be designed to supplement native vegetation, and establish and maintain fire-resistive native and ornamental plants. Provide fireproof irrigation systems to any large slope areas near or adjacent to homes or combustible structures. All irrigation shall be kept a minimum of 20 feet from the drip line of any existing native oak (Quercus) species.

iv) New plants (e.g., shrubs, groundcovers, etc.) shall be drought-tolerant, low-growing, deep-rooted,[4] moisture retentive or high moisture content (see Attachment 2 for a list of acceptable plants). If new trees and/or tree-form shrub species (naturally reaching four (4) feet and taller) are to be planted in the *Green Zone*, they shall be of a species noted in Attachment 2 and spaced as noted in Attachment 3.

v) Newly planted shrubs naturally reaching less than four (4) feet in height shall be spaced as identified in Attachment 3 to Appendix 5, and shall be maintained in accordance with the specified spacing.

vi) Shrub spacing should be increased as slope percent increases (e.g., two times the recommended spacing for a 20 percent slope increase, etc.).

vii) Trees and/or tree-form shrub species must not be allowed to extend beyond the property line (measured from the edge of a full growth crown).

viii) Vegetation under trees shall be maintained at heights not exceeding one-third the height of the lowest tree limb/branch, or 18 inches, whichever is less. Such vegetation must be fire resistive. Dry grasses exceeding four (4) inches in height are not allowed within the *Green Zone*.

ix) Remaining vegetation shall be selectively pruned to reduce fuel load and vertical continuity. Single trees must be thinned to remove fuel and maintain a natural appearance. Groupings of trees (including tree-form shrubs) shall be thinned with spacing between canopy groupings to break up continuous fuels leaving scattered islands of trees or well spaced individual trees in a mosaic natural landscape appearance. Remove tree and shrub branches that overhang combustible structures and/or chimneys, including outside barbecues or fireplaces.

x) No vines shall be permitted on combustible structures (e.g., a Type V non-rated structure).

2) Zone B - *Reduced Fuel Zone*
The purpose of Zone B in a *defensible space* scheme is to significantly reduce the fuel load of existing vegetation thereby

[4] "Deep-rooted" means roots that have an effective root depth of more than three (3) feet. Shallow rooted plant material may be used if combined with deep rooted species or on slopes less than 4:1.

reducing the radiant and convective heat of wildland fires. The *Reduced Fuel Zone* is the area between 30 to 100 feet (or to the property line, which ever is closer) in all directions (360 degrees) from a building or structure. The basic idea within this transitional area is to REDUCE VEGETATION FUEL BY 50 PERCENT less than adjacent native plant areas. However, the removal of all vegetation from the treatment area is aesthetically unacceptable. Creating islands in dense areas of trees and shrubs in a mosaic fashion is important, as noted below. Seasonal maintenance shall be undertaken to cut grasses by mowing or weed whacking; combustible vegetation shall be thinned or removed to prevent ladder fuels; all dead and dying vegetation must be removed; and dead/dying fire resistant plantings must be replaced. As with Zone A, the *Reduced Fuel Zone* is subject to inspection by VFD.

a. Specific Requirements

i) Remove all undesirable/fire prone plant species (see Appendix 5, Attachment 1) using methods such as mowing, trimming, or cutting with a chain saw so that the plant root structure is left intact to stabilize the soil.

ii) Avoid removal of excessive amounts of vegetation that could result in soil erosion.

iii) Remaining shrubs and trees shall be selectively pruned to reduce fuel load and vertical continuity so that the area retains 50 percent less fuel than adjacent native plant areas.

iv) Single trees must be thinned to remove fuel and maintain a natural appearance. Groupings of trees (including tree-form shrubs) shall be thinned with spacing between canopy groupings to break up continuous fuels leaving scattered islands of trees or well-spaced individual trees in a mosaic natural landscape appearance. Groupings of shrubs shall be thinned using a pruning technique to create openings or islands free of vegetation. The greater the density and height of shrub field, the larger the openings, creating a mosaic natural landscape appearance.

v) All plant litter, debris, and dead and dying vegetation shall be removed.

vi) Native grasses should be allowed to go to seed before cutting. Cut heights shall not exceed eight (8) inches.

vii) Newly planted shrubs less than four (4) feet in height shall be spaced such that they do not create an excessive fuel mass and can be maintained in

accordance with specified spacing as indicated on the plan.

viii) Shrub spacing should be increased as slope percent increases (e.g., two times the recommended spacing for a 20 percent slope increase, etc.).

ix) No vines shall be permitted on combustible structures (e.g., a Type V non-rated structure).

x) Special consideration will be given for rare and endangered species, geologic hazards, tree ordinances, or other conflicting restrictions as identified in the environmental documents submitted for project approval review.

3) Fire Resistive Plant Palette Information

a. Plant materials used in Zones A and B must be fire resistant and drought tolerant. (See Appendix 5, Attachment 2 for a list of suggested plant species.) The term fire resistant may be misleading because all plants will burn given sufficient heat and low moisture content. Vegetative fire resistance may be enhanced through adequate irrigation or precipitation.

b. If alternate plant materials are proposed, the applicant shall provide a photograph, as well as data on the fire resistive characteristics and proposed uses (zones, number, spacing, etc.) and VFD will make a case-by-case determination as to acceptability of the proposed material. If the plant materials are proposed to be planted within 300 feet of any reserve lands (except plants on the interior of the tract), concurrence from the following agencies (as applicable) will be required: US Fish and Wildlife Service, the Department of Fish and Game, County of San Diego. If the proposed plants have received previous resource agency approval, no concurrence letter is required.

4) Off-Site Fuel Modification Requirements

a. Due to the variable and sometimes considerable amount of land necessary for fuel modification, development proposals often include a request to have the required fuel modification zones extend onto adjacent properties. However, off-site fuel modification is not recommended due to problems inherent with enforcement of regulations on adjacent property and the potential for confusion regarding responsibility for fuel modification on areas outside of legal ownership. Proper on-site fuel modification design will determine where development can

safely be located and must be an integral part of the development proposal.

b. Should off-site fuel modification be deemed a necessity, appropriate legally recorded instruments must be established that clearly state the responsibilities and rights of the parties involved relative to the establishment and maintenance of the fuel modification area. Appropriate recorded documents must include a recorded agreement between all parties and a grant of easement for the establishment and maintenance of the fuel modification area. It should be understood that the allowance of off-site fuel modification by an adjacent property owner may affect the rights and/or use of the off-site property. All agreements for any off-site fuel modifications shall be integrated into fuel modification plans with a letter from adjoining property owner giving rights to maintain fuels.

c. The City of Vista may grant fuel modification easements on city property to property owners in need of such agreements to complete the requirements of their fuel modification plan. However, the City does not guarantee the continuation of any current or future City sponsored fuel modification programs. Property owners shall remain responsible for maintaining their fuel modification plan regardless of the status of the City financed/maintained fuel modification programs.

5) Non-Compliant Properties

a. If the requirements of these guidelines cannot be met for any reason, documentation supporting the reason(s) shall be required at plan submittal. Alternate materials and methods may be considered in lieu of a complete landscape/fuel modification plan at the discretion of the Fire Chief and City Planner. A Fire Protection Plan (per CFC 8601) shall be submitted by a recognized fire protection engineer or individual with similar qualifications (subject to the Fire Chief's approval) when alternate materials and methods are proposed to meet the requirements of these fire prevention guidelines.

3. EROSION CONTROL

A. All grading shall comply with erosion and sediment control plan required by Section 17.56.070 of the Vista Development Code.

B. Plant species known to reduce erosion and provide slope stability shall be utilized.

C. Fuel modification standards identified in the Fire Prevention section 2.2.1 for any slope adjacent to fire prone areas shall take precedence.

D. Graded pads on project sites where development will be phased over a period greater than six months shall be hydro-seeded and provided with a temporary irrigation system.

E. Hydro-seeding of slopes is not permitted unless expressly approved by the City Planner.

2.2.2 Planting Standards and Requirements

This section provides the minimum requirements regarding species type, size, location, quantity, etc. of planting materials required for any project identified in Section 18.56.050 of the Vista Development Code.

1. MINIMUM AREA

The percentage of a project site that must be landscaped depends on the type of development proposed. Unless different standards are identified in a Specific Plan, the minimum landscape area for a project shall be as shown in the table below. If alternate standards regarding the percentage of a site required as landscaped area are identified in a Specific Plan, they shall take precedence over standards found below.

The required landscape area is related to the type of development and not the zone in which a project lies. For this reason, the table below identifies development projects by use rather than zone.

Use	Minimum Percentage of Site to be Landscaped
Residential	15%
Commercial	15%
Industrial	10%
Institutional	15%
Mixed-Use*	15%

* The creative use of aesthetically-pleasing site design elements may be permitted in lieu of a portion of the required landscaped area on a case-by-case basis. Any person contemplating the use of such elements shall discuss their proposal with the Planning Division prior to the submittal of any phase of the Package. In no case shall an area of less than five percent of the site be landscaped.

2. TYPE, SIZE, QUANTITY, AND LOCATION

A. Unless noted elsewhere in this manual, the following tree sizes are required:

1) At least 60 percent of trees used on any project site shall be 24 inch box or larger.

2) All other trees, with the exception of trees on slopes, shall be 15 gallon size.

B. Unless noted elsewhere, an even mixture of one gallon and five gallon shrubs shall be provided. The City Planner may modify this requirement if the applicant provides information showing that certain sizes/species of shrubs are not currently available from local nurseries.

C. All tree and shrub plantings shall be selected to assure that no planting at maturity will obstruct sightlines that will create an unsafe condition.

D. The quantity and location of plant species shall apply as follows:

1) Parking areas:

a. Canopy shade trees shall be located within five feet of a parking stall, and shall be provided in the following quantities:

Residential: 1 tree per 4 parking spaces
Commercial: 1 tree per 4 parking spaces
Industrial: 1 tree per 6 parking spaces
Institutional: 1 tree per 6 parking spaces
Mixed Use: 1 tree per 4 parking spaces

b. Landscape parking fingers shall be provided as follows:

i) They shall have a minimum width of five feet (interior dimension) and a length equal to that of the adjoining parking spaces.

ii) They shall be provided at a rate of one finger per ten spaces.

iii) They shall be separated from parking spaces by a six inch concrete curb.

iv) They shall contain at least one tree and four shrubs per 100 square feet.

c. Landscape parking islands shall be provided as follows:

i) They shall be provided at the end of all parking rows. They may also be provided between two rows of parking.

ii) Islands at the end of parking rows shall:

(1) have a minimum width of five feet (interior dimension) and a length equal to that of the adjoining parking spaces.

(2) contain at least one tree and four shrubs per 100 square feet.

(3) be separated from parking spaces and drive aisles by a six inch concrete curb.

iii) Islands provided between two rows of parking shall:

(1) have a minimum width of eight feet (interior dimension).

(2) be separated from parking spaces and drive aisles by a six inch concrete curb.

(3) contain at least one tree and four shrubs per 100 square feet.

d. Landscaped diamonds and/or rectangles may be provided in parking areas and, if provided, shall:
   i) Have minimum interior dimensions of four feet.
   ii) Be separated from parking spaces by a six inch concrete curb.
   iii) Be centered on the interior corner of four adjoining parking stalls.
   iv) Provide one canopy shade tree in each diamond. The tree shall be centered in the middle of the diamond/rectangle and shall have a minimum canopy height of eight feet when measured from finished grade.
   v) Not relieve the applicant from providing required landscape parking fingers and islands.

e. A minimum eight foot wide landscape perimeter is required around all parking areas. The City Planner may allow a deviation from this standard if it does not detract from the overall appearance of the site. In no case shall less than a five foot wide perimeter landscaped area be provided.

f. A minimum of 80 percent of the parking area shall be screened from view from adjacent streets. This shall be accomplished by providing shrubs not less than 30 inches in height between the parking lot and the streets.

g. Parking lots shall be separated from buildings as follows:
   i) Where no sidewalk is proposed, five feet of continuous landscape area shall be provided.
   ii) Where a sidewalk is proposed, four feet of landscaped area and four feet of paving shall be provided. The City Planner may allow a deviation from this standard when permanently irrigated potted plants (minimum diameter of pot shall be four feet) or other creative measures are used to enhance site design.
   iii) The measurements above shall not include concrete curbs provided between a parking lot and landscape area.

2) Slopes (Areas with grades 4:1 or steeper):

a. Slopes up to eight feet in height shall contain the following quantity of landscaping:
   i) One 15 gallon tree per 500 square feet
   ii) One 1 gallon shrub per 100 square feet and one 5 gallon shrub per 200 square feet

iii) Groundcover shall be planted from liners or flats at 12 inches on-center or 1 gallons at 24" O.C.

b. Slopes greater than eight feet in height shall contain the following quantity of landscaping:
   i) One 15 gallon tree per 500 square feet and one 5 gallon tree per 1,000 square feet
   ii) One 1 gallon shrub per 100 square feet and one 5 gallon shrub per 200 square feet
   iii) Groundcover shall be planted from liners or flats at 12 inches on-center or 1 gallon at 24" O.C.

c. Trees and shrubs shall be planted in staggered rows to soften the slope plane.

d. The City Planner may require additional trees and/or shrubs on highly visible slopes.

e. Reinforced straw matting shall be provided on all slopes that are 4:1 or steeper.

f. Hydro-seeding is not permitted on slopes, unless expressly approved by the City Planner.

3) Retaining Walls

a. Retaining walls equal to or greater than five feet in height shall be designed as plantable walls.
   i) A minimum of 30 percent of the total cells on walls shall be plantable cells.
   ii) All plantable cells shall be planted with vines that will provide permanent, full coverage of the wall face at maturity. This requirement may be modified by the City Planner if he or she determines that full wall coverage can be achieved within a similar timeframe. In no case shall less than 30 percent of the total wall cells be planted.
   iii) The above requirements apply to the entire height of the wall and are not limited to those portions greater than five feet in height.
   iv) Permanent drip irrigation shall be provided to all cells.
   v) Provide self-attaching vines at the base of the wall spaced at 5 feet on center.

b. Retaining walls less than five feet in height are encouraged, though not required, to be plantable. If they are not plantable, they shall either be built with decorative block or stucco-finished to match buildings on site.

4) Areas adjacent to public and private streets (including public and private parkways and street setback areas):

a. Any portion of a parkway adjacent to a public or private street which is not used for sidewalk purposes shall be landscaped.

b. The applicant is encouraged, though not required, to provide landscaping between the curb and sidewalk rather than placing the sidewalk directly adjacent to the curb. A meandering sidewalk is also an option that can be employed.

c. Street trees:

i) They shall be spaced at 25 feet to 35 feet on-center. Groupings of trees may be allowed by the City Planner as long as the total number of trees meets or exceeds this requirement.

ii) A minimum size of 24 inch box shall be required.

iii) They shall have minimum horizontal and vertical clearances to meet the Sight Visibility requirements identified in section 2.2.1.1of this manual.

iv) Unless a landscape area or tree wells are provided between the curb and sidewalk, they shall not be located within the street right-of-way but shall be no further than three feet from it.

v) When landscaping is provided between the curb and sidewalk, street trees shall be placed in this area and shall be centered between the curb and sidewalk.

vi) The selected species shall be uniform throughout the site and shall match street trees that may exist adjacent to the site. At the discretion of the City Planner, more than one species may be used if it would benefit the aesthetics of the site.

vii) Root barriers shall be provided for all street trees

5) Site Trees and Shrubs

a. Trees:

i) In addition to street trees, a minimum of one 15 gallon tree shall be provided per 500 square feet of landscape area between the property line and setback line.

ii) They shall be planted between the street trees and the setback line.

iii) In no case shall they be planted in the public right-of-way.

b. Shrubs:

i) They shall be provided at a minimum rate of one per 50 square feet.

ii) When located within ten feet of any driveway, they shall be maintained at a mature height of 30 inches or less.

c. If the street setback provided by the project exceeds that required by the Development Code, this section shall apply to the entire area between the face of curb (or edge of pavement where no curb exists) and the building or parking lot.

d. All plantings required within public or private street rights-of-way as a condition of project approval shall be irrigated and maintained in perpetuity by the project's owner/developer or his or her successor.

6. Medians

a. All raised medians within public or private streets shall be landscaped.

b. All plantings required within medians as a condition of project approval shall be irrigated and maintained in perpetuity by the project's owner/developer or his or her successor. A shared maintenance agreement shall be provided for median plantings required as conditions of approvals for projects on opposite sides of a street in order to achieve this requirement

c. Trees (street and other), shrubs, and groundcover shall be provided within the median at the same rate, size, and location required for areas adjacent to public and private streets.

d. Natural turf and high water use plants are prohibited in street medians. Artificial turf is allowed.

7. Side and rear setback areas, and adjacent to buildings:

a. All areas between a building and the side and/or rear property lines that are not used for parking, driveways, or pedestrian access shall be landscaped.

b. Where side and rear setbacks are provided, a minimum of eight feet or one half of setback area (whichever is greater) shall be landscaped consistent with the rest of the site.

c. If a setback of less than eight feet is provided, the entire setback area shall be landscaped.

d. Buildings shall be separated from each other as follows: Eight feet shall be provided which may include 4' of sidewalk and 4' of landscape area adjacent to the building or 8 ft. of landscape area.

3. TURF REGULATIONS

The following regulations shall apply to all projects that are required to submit a Package:

1. Turf shall not be used on slopes steeper than 4:1 (25 percent).
2. Turf shall not be allow in areas that do not have a utility as a recreational area with the exception of bio-swales required as storm water best management practices.
3. Turf shall not be installed in a median, parking lot island or parkway.
4. An athletic field, park, golf course, cemetery or other similar use shall be designed to limit the use of turf to only those areas where it is deemed essential by the City Planner for the operation of the facility. Areas where turf is not essential to the operation of the facility shall be landscaped with plants with lower water use requirements than turf.
5. No turf shall be allowed in a landscape area that cannot be efficiently irrigated (for example where overspray and runoff cannot be avoided).
6. These regulations do not apply to the use of artificial turf which is encouraged.

4. GENERAL PROVISIONS

A. No species listed as highly invasive by the California Invasive Plant Council shall be added to a project site. Species listed as moderate or limited invasive species may be used if the City Planner determines that the location of the project does not pose a risk for the plant to become invasive in the wild. Removal of existing invasive species shall be noted on the plans.

B. If seeding is proposed, the plan shall describe the seed mixes and applicable purity and germination specifications.

C. In order to allow proper access by the appropriate public agency or utility provider, plant materials and improvements shall be located and maintained to preserve a clear zone of at least ten feet from street lights, fire hydrants, and utility lines.

D. Unless modified by the City Planner, the following installation requirements shall apply:

1. Double stake or guy all trees
2. Provide root barriers for all street trees as well as any other trees located within six feet of any hardscape and underground utilities. The root barriers shall be at least as long and deep as the anticipated spread of the root system for the tree species at maturity, and in no case shall it be less than ten feet long and 24 inches deep. Circular root barriers are not allowed.
3. A minimum of 3” mulch shall be applied on all exposed soil surfaces of planting areas except turf or where direct seeding has been approved as an acceptable soil cover. To provide habitat for beneficial insects and other wildlife, up to 5 percent of the

landscape area may be left without mulch. Designated insect habitat must be included in the landscape design plan as such. Highly flammable mulch is prohibited. Organic mulch materials made from recycled or post-consumer shall take precedence over inorganic materials or virgin forest products unless the recycled post-consumer organic products are not locally available. Organic mulches are not required where prohibited by Fuel Modification Plan Guidelines or other applicable City ordinances.

2.2.3 Irrigation Requirements

The information provided below details the design and installation requirements for irrigation systems necessary to ensure a healthy and water-efficient landscaped environment.

1. The irrigation system shall be designed to meet the requirements within this manual with a landscape irrigation efficiency necessary to meet the MAWA as defined in Section 3.1.
2. Irrigation systems shall be designed to prevent the need to apply water to landscaped areas by any non-automatic means.
3. A separate water or submeter for landscape irrigation is required to be installed for all projects with an aggregate landscape area of 1,000 square feet or greater except single family residential projects.
4. Rain sensors, either integral or auxiliary, shall be required on all irrigation systems.
5. Flow sensors that detect high-flow conditions created by system damage or malfunction shall be provided with a master valve shut off on all projects with the exception of single family residential.
6. Overhead irrigation shall not be permitted within 24 inches of any non-permeable surface.
7. Narrow or irregularly shaped areas, including turf, less than ten (10) feet in width in any direction shall be irrigated with subsurface irrigation or other means that produces no runoff or overspray.
8. Overhead irrigation shall not be permitted in all areas with grades less steep than 4:1 except turf areas.
9. Only pop-up sprinklers and drip shall be provided in turf areas.
10. Overhead irrigation shall be prohibited between the hours of 10:00am and 8:00pm.
11. Portions of irrigation systems containing slopes greater than 25 percent shall utilize a precipitation rate of 0.75 inches per hour or less to prevent runoff and soil erosion.
12. The system shall provide a manual shutoff valve as close as possible to the water supply. Additional manual shutoff valves shall be installed between each zone of the system and the water supply.
13. The system shall be regulated by an automatic irrigation controller

A. A description of each controller used in the system shall be provided, and shall identify whether the controller is a weather-based or soil moisture detection system utilizing non-volatile memory.

B. The location of the electrical service that will provide power to the controller shall be identified.

14. Where feasible, trees shall be placed on separate valves.
15. Unless otherwise approved by the City Planner, all irrigation systems shall be installed underground. On grade pipe is not allowed unless it is determined by the City Planner that rocky conditions would prevent trenching. In such case, UV resistant piping shall be utilized and all pipe and fittings covered with matting and or mulch to reduce visibility. In no case shall at grade pipe be allowed where it is in proximity to locations where pedestrian activity will occur.
16. All wiring and piping installed under a paved area shall be installed inside a PVC conduit.
17. Anti-drain valves shall be installed where necessary to prevent low head drainage.
18. If the water pressure is below or exceeds the recommended pressure of the specified irrigation devices, the installation of a pressure regulating devise is required to ensure that the dynamic pressure at each emission device is within the manufacturer's recommended pressure range for optimal performance.
    A. If the static pressure is above or below the required dynamic pressure of the irrigation system, pressure-regulating devices such as inline pressure regulators, booster pumps, or other devices shall be installed to meet the required dynamic pressure of the irrigation system.
    B. Static water pressure, dynamic or operating pressure and flow reading of the water supply shall be measured at the point of connection.
19. Irrigation minimum pipe coverage shall be as follows:
    A. Pressure lines:
        - less than 3" in diameter – 18" cover
        - 3" – 5½" in diameter – 24" cover
        - 6" or greater in diameter – 36" cover
    B. Lateral lines – 12" cover
    C. Sleeves under roads (Schedule 80 PVC):
        - 6" or less in diameter – 36" cover
        - greater than 6" in diameter – 48" cover
    D. Sleeves under paving - non-roads (Schedule 40 PVC):
        - Less than 3" in diameter – 18" cover
        - 3" – 5½" in diameter – 24" cover
        - 6" or greater in diameter – 36" cover
        - Control wires located under streets or other permanent improvements shall be installed in separate PVC sleeves
    E. PVC pressure mains shall be class 315 (2" or larger) and Schedule 40 (1½" or smaller). Lateral lines shall be Schedule 40 for ½" and class 200 for other pipe sizes.
20. Failures and inadequacies in the permanent irrigation system shall be remedied immediately.

All necessary measures shall be taken to maintain the health of the landscaped area until the permanent irrigation system is fixed.

21. Any irrigation equipment that needs replacement shall be replaced with the originally installed components or their equivalent.
22. Should any underground irrigation pipeline need to be relocated, construction drawings and/or permits may be required, as determined by the City Planner.
23. The system shall be designed to conform to the hydrozones of the plants specified in the planting plan.
24. The system shall be designed to prevent runoff, over spray, low-head drainage and other similar conditions where irrigation water flows or sprays onto areas not intended for irrigation.
25. All irrigation emission devices must meet the requirements set in the American National Standards Institute (ANSI) standard, American Society of Agricultural and Biological Engineers'/International Code Council's (ASABE/ICC) 802-2014 "Landscape Irrigation Sprinkler and Emitters Standard. All sprinkler heads installed in the landscape must document a distribution uniformity low quarter of 0.65 or higher using the protocol defined in ASABE/ICC 802-2014.
26. Sprinkler heads and other low emission devices shall be selected based on what is appropriate for the plant type in the hydrozone and shall have matched precipitation rates unless otherwise directed by the manufacturer's recommendations.
27. Each valve shall irrigate a hydrozone with similar site, slope, sun exposure, soil conditions, and plant materials with similar water use.
28. Sprinkler spacing shall be designed to achieve the highest possible distribution uniformity using the manufacturer's recommendations.
29. Irrigation systems shall be designed to allow for the use of reclaimed water if and when it is available.

2.2.4 Water Features

Fountains, decorative pools, ponds, or other water features shall have the following requirements:

1. They shall be equipped with permanent water recycling systems.
2. They shall utilize reclaimed water when available.
3. They shall be designed and located so as to minimize water loss from evaporation.

2.2.5 Public Education & Model Homes

1. Single-family residential developments that contain a model home or homes shall provide an Outdoor WaterSmart Package to all persons visiting the home(s). In lieu of providing a hard-copy of the brochure, the visitors may be sent an electronic version of it. At a minimum, the brochure shall include:
   A. Information describing the water efficient features of the model(s)'s landscaping

B. Resources for additional information regarding water efficiency in landscaping
C. Contact information for the local water purveyor
D. Contact information for the City of Vista's Planning Division
E. A reference to the requirements of this chapter and the website where the Code can be found electronically.

2. All model homes shall be landscaped and use signs and written information to demonstrate the principles of water efficient landscape described in this ordinance.
   A. Educational signs shall be used to identify the water efficient landscape featuring elements such as hydrozones, irrigation equipment, and others that contribute to the overall water efficient theme. Signage shall include information about the site water use as designed per the Water Efficient Landscaping ordinance; specify who designed and installed the water efficient landscape; and demonstrate low water use approaches to landscaping.
   B. Signage shall include information about the site water use as designed per the Water Efficient Landscaping ordinance; specify who designed and installed the water efficient landscape; and demonstrate low water use approaches to landscaping.

2.2.6 Recycled/Reclaimed Water

1. The use of recycled/reclaimed water for irrigation purposes does not excuse a person from complying with all State and local laws and regulations related to recycled/reclaimed water use.
2. Any person who obtains a permit required pursuant to this chapter shall use recycled/reclaimed water for irrigation purposes when it is available from the local water purveyor.
3. Any person who uses recycled/reclaimed water shall install a dual distribution system for water received from a public water purveyor.
4. Pipes which carry recycled/reclaimed water shall be purple.
5. To the extent practicable, stormwater shall be captured and retained on-site and used for irrigation purposes.

2.2.7 Landscape Installation

1. The contractor responsible for landscape installation shall not willfully install the irrigation system as shown on the drawings when it is obvious in the field that adverse conditions exist which were not known or considered in the design of the system. These conditions included, but are not limited to:
   A. Obstructions such as utility lines (gas, electric, sewer, etc.) and solid rock formations
   B. Grade differences
   C. Discrepancies in area dimensions
2. Adverse conditions identified above shall be brought to the attention of the

licensed professional of work or record and the City Planner immediately upon their discovery. Should the licensed professional of work or record and the City Planner not be notified, the irrigation contractor will assume full responsibility for any necessary revisions.

2.2.8 Landscape Maintenance

1. All landscaping shall be maintained in a healthy and thriving condition.
2. Weeds shall be removed from landscaped areas as soon as possible. The landscape contractor responsible for maintenance shall insure that the roots are removed so as to prevent their re-growth.
3. All plants which fail to thrive because of disease, damage, accident or other cause shall be immediately replaced with a plant of the same species and size as originally approved. At the discretion of the City Planner, replacement of any plant materials that have been improperly maintained shall be required at a size equal to the size of the plant had it been properly cared for.
4. All trees shall be maintained in a manner that retains the natural form of the species. Topping and aggressive pruning will not be allowed.
5. All screening shrubs shall be maintained at a height that effectively screens the area that they were planted to obscure (i.e. parking areas, trash enclosures, loading areas, etc.).
6. All irrigation systems shall be properly maintained and remain functional at all times. Any failures in the irrigation system shall be addressed as soon as possible to avoid further damages to the system and associated landscaping.
7. A project applicant is encouraged to implement sustainable or environmentally-friendly practices for overall landscape maintenance.

2.2.9 Compliance with the California Water Commission Model Ordinance

This Landscape Manual and the Water Efficient Landscape Ordinance (Chapter 18.56 of the Vista Development Code) meet or exceed the requirements of the California Department of Water Resources Model Water Efficient Landscape Ordinance by making the Plant Factors and Irrigation Efficiency more restrictive; by requiring drip irrigation in all landscaped areas except slopes (grades 4:1 or steeper) and turf areas; and by restricting the use of turf to areas that have recreation utility or serve as bio-swales/bio-retention areas. The supplement requirements described in the prior sentence are in lieu of requirements for the installation of flow sensors/master valves and separate irrigation water meters on single family residential projects and the requirement to perform landscape irrigation audits on single family residential projects.

3. Landscape Documentation Package; Processing and Approval Requirements

All work on a covered project undertaken by an applicant and/or a landowner must be processed, completed and maintained in accordance with this section. The City Planner reserves the right to modify the information required as part of the Package as deemed necessary. In no case shall any modification be permitted that would cause a project to fail to meet the water conservation requirements contained in this manual.

1. No covered project may be initiated until a conceptual landscape submittal and a landscape construction submittal have been provided to and approved by the City Planner in accordance with this section. As required by this section, an applicant and/or landowner must prepare a final inspection submittal for all work undertaken on a covered project and obtain approval of that submittal. Following the City's approval of a final inspection submittal, the applicant and/or landowner shall obtain a tentative approval of landscape installation and a final approval of landscape installation in accordance with this chapter.
2. All parts of the Landscape Documentation Package (hereinafter referred to as the "Package") must be prepared by a licensed professional of work or record. The content, preparation, and procedure for submitting the Package shall comply with the terms of this chapter and the manual.
3. Plans and documents must be stamped and signed by the licensed professional who is responsible for their preparation. Two wet-signed copy of the plans and documents will typically be required, however staff reserves the right to request additional wet-signed copies should they be deemed necessary.
4. The Package consists of the following three submittals; each submittal must be approved by the City Planner as satisfying the requirements of this chapter.
    A. Conceptual Landscape Submittal, consisting of:
        1. Title Sheet
        2. Grading Plan
        3. Planting Plan
        4. Water Conservation Plan
        5. Any additional documentation and/or information deemed necessary by the City Planner in order to accurately and fairly review the proposed project
    B. Landscape Construction Submittal, consisting of:
        1. Title Sheet
        2. Soil's Management Report
        3. Planting Plan (including details and specifications; any changes to the planting plan approved in the Conceptual Landscape Phase shall be clearly identified on this plan.)
        4. Irrigation Plan (including details and specifications)
        5. Grading Plan
        6. Water Conservation Plan
        7. Landscape and Irrigation Maintenance Schedule
        8. Any additional documentation and/or information deemed necessary by the City Planner in order to accurately and fairly review the proposed project
    C. Inspection Submittal, consisting of:

1. Certificate of completion of landscape installation - using the form in Appendix 2
2. An updated Irrigation Schedule
3. Irrigation and Maintenance Schedule
4. Soil's Management Report
5. Irrigation Audit- to be prepared and submitted one year after tentative approval with the request by the owner for final approval
6. Any additional documentation and/or information deemed necessary by the City Planner in order to accurately and fairly review the proposed project

D. The components of the Package shall be submitted as follows:
1. The Conceptual Landscape Submittal shall be submitted concurrently with an application for a discretionary permit, or at a time to be determined by the City Planner if a discretionary permit is not required.
2. The Landscape Construction Submittal shall be an independent document to be submitted concurrently with precise grading plans, or at a time to be determined by the City Planner if a precise grading plan is not required.
3. No grading or building permits shall be issued until plans and documents required as part of this phase have been approved by the City Planner or his or her designee.
4. The Final Inspection Submittal shall be submitted prior to a request for a final inspection of a project by the City Planner or his or her designee.

E. The following information and formatting shall be provided for the conceptual landscape and landscape construction drawing submittals:
1. All plans shall be submitted on 24" x 36" size sheets.
2. Accompanying studies, reports, etc. may either be submitted as bound 8 ½" x 11" documents or be printed on plan sheets.
3. The project address (if one has been assigned), Assessor's Parcel Number(s), and licensed profession of work or record shall be identified on every sheet.
4. A north arrow and scale, property lines, and easements are required on all plans.
    a. No specific scale is required so long as the details shown on the plans are legible.
    b. If necessary in order to provide legibility, plans may be shown on more than one page. If this is done, a full site plan shall be provided which identifies the page(s) on which each area of the site is shown in full detail.

F. Information necessary for each item identified in Chapter 3 of this Landscape Manual shall be as follows:
1. Title Sheet
    a. The following statement shall be provided on the plan, and shall be signed by both the applicant and the licensed

profession of work or record responsible for the preparation of the plan(s):

"I am familiar with and agree to comply with the requirements for landscape improvements as described in Chapter 18.56 of the Vista Development Code and the Landscape Manual. This plan has been prepared in compliance with those regulations. I certify that the plan implements the regulations to provide efficient landscape water use."

b. The percentage and acreage (if greater than 0.5 acres) or square footage (if 0.5 acres or less) of a project site to be landscaped shall be identified.
c. It shall identify whether the submittal is for the conceptual phase or construction phase.

2. Planting Plan

The planting plan shall be prepared by a licensed professional of work or record, and shall, at a minimum:

a. Include a site plan showing the location, type, quantity, size, etc., of existing and proposed landscape species to be maintained and removed, and proposed water features and hardscape areas. A detailed description shall be provided for all proposed water features.
b. Provide a table identifying, by botanical and common name, all proposed vegetation, and all existing vegetation that will be maintained on-site. For proposed vegetation, include the quantities, container size, installation size for trees (installed height and width), location, associated hydrozone for each species, and estimated water use category (high, moderate, low, and very low.)
c. Identify areas permanently dedicated to the growth of edible plants.
d. Provide plants in transitional areas (between areas of vegetation to be kept in a natural state and areas of proposed landscaping) that consist of a combination of site-adaptive and compatible native or non-native species.
e. Identify passive and active recreational areas.
f. The planting design shall group plants in hydrozones based on the moisture requirements of those plants. Plant factors are available from WUCOLS.
g. Identify any rain harvesting or catchment technologies (e.g. rain gardens, cisterns, etc.).
h. The following additional information is also required for the landscape construction submittal:

i) Planting details and specifications.
ii) A landscape maintenance plan which details the process through which landscaping will be maintained in a healthy and thriving condition.

3. Irrigation Plan

Irrigation plans shall be prepared by a licensed professional of work or record and shall include, at minimum, the following information:

a. The location, type and size of all components of the irrigation system that will provide water to the landscape area, including, but not limited to, controllers, water lines, valves, sprinkler heads, moisture sensing devices, rain sensors, master valve, flow sensors, quick couplers, pressure regulators and backflow devices.

b. The irrigation water source, point of connection, the static water pressure at the point of connection, the application rate in inches per hour and the design operating pressure in pounds per square inch for each station. A pressure loss calculation shall be provided for the worst case valve.

c. Irrigation schedule which includes the following information:

i) A description of the automatic irrigation system that will be used for the project.
ii) The ETo data relied upon to develop the irrigation schedule, including the source of the data.
iii) The time period when overhead irrigation will be scheduled and confirm that no overhead irrigation shall be used between the hours of 10:00 a.m. and 8:00 p.m.
iv) The parameters used for setting the irrigation system controller for watering times for:

a. Plant establishment period
b. Established landscaping
c. Temporarily irrigated areas
d. Different seasons during the year
e. The consideration used for each station for:

1. Days between irrigation
2. Station run-time in minutes for each irrigation event, designed to avoid runoff
3. Number of cycle starts required for each irrigation event, designed to avoid runoff
4. Amount of water to be applied on a monthly basis

5. Root depth setting
6. Plant type setting
7. Soil type
8. Slope factor
9. Shade factor
10. Other relevant information from the Soil Management Report

4. Soil's Management Report

The Soil's Management Report shall be prepared by a licensed professional of work or record. It shall be based on site conditions after grading operations have been completed and may be submitted as one of the sheets in the planting plan or as a separate document. It shall contain the following information:

a. An analysis of the soil for the proposed landscape area of the project covering information about soil texture, soil infiltration rate, pH, total soluble salts, plant sodium, percent organic matter and horticultural suitability.

b. In projects with multiple landscape installations (i.e. single-family subdivision), a soil sampling rate of 1 in 7 lots or approximately 15 percent will satisfy this requirement. Large landscape projects shall sample at a rate equivalent to 1 in 7 lots.

c. Recommendations for soil amendments and mulch that may be necessary to allow healthy plant survival and growth in the landscape area using efficient irrigation techniques. Recommendations shall include the following information:

   i) Prior to the planting of any materials, compacted soil shall be transformed to a friable condition. On engineered slopes, only amended planting holes need meet this requirement.

   ii) Soil amendments shall be incorporated according to recommendations of the soil report and what is appropriate for the plants selected.

   iii) For landscape installations, compost at a rate of a minimum of four cubic yards per 1,000 square feet of permeable area shall be incorporated to a depth of six inches into the soil. Soils with greater than 6 percent organic matter in the top six inches of the soil are exempt from adding compost and tilling.

d. For any project which involves mass grading, a revised soil management report shall be provided as part of the final inspection submittal of the Package if site conditions require said revision.

5. Grading Plan
    a. Grading plans shall include site grading information including, but not limited to, elevations, slope heights, drainage patterns, pad elevations, storm water management, and finish grade.
    b. Grading shall conform with Vista Development Code Chapter 17.56 (Erosion Control and Grading).
    c. The grading plan shall include the following statement: *"I have complied with the criteria of the ordinance and applied them accordingly for the efficient use of water in the grading design plan"* and shall bear the signature of a licensed professional as authorized by law."
    d. A conceptual grading plan shall be provided with the conceptual landscape submittal.
    e. A precise grading plan shall be provided with the landscape construction submittal.
    f. As-built grading plans shall be provided during the final inspection submittal if deemed necessary by the City Planner.

6. Water Conservation Plan
    a. The following elements are to be included in the Water Conservation Plan:
        i) The plan will graphically depict, in a general way, how the proposed project will conform to the requirements of this chapter and the manual.
        ii) The plan will demonstrate how the proposed development will use all practical means to conserve water used in landscape irrigation.
        iii) The plan shall indicate graphically, and in writing, the various hydrozones on the site (including the square footage of each hydrozone), indicating the methods of irrigation and plant material with similar sun, water, topography and soil conditions.
        iv) Provide justification for appropriateness of plant material selection; for example: are high water consuming plants in shade areas where they will use less water and/or will the soil be suitably amended to retain relatively greater moisture.
        v) Give percentages of various types of hydrozone areas and specifically the percentage of turf based on the total landscaped area.
        vi) Describe accommodations for reclaimed water (existing or future) and identify proposed areas

to use reclaimed water.

vii) Written description of water conservation features including, but not limited to, special irrigation equipment, i.e., drip irrigation, moisture sensing devices, etc., plant material, soil amendment, management, proper placement, design, etc.

viii) Agreement that landscaping shall be serviced by a separate meter if approved by VID.

7. Estimated Total Water Use (ETWU) Worksheet

a. An ETWU Worksheet (Appendix 1). The use of this worksheet is mandatory and worksheets prepared by the applicant's designer do not relieve the applicant from completing and providing this worksheet. The worksheet shall be provided on a separate 8 ½" x 11" page and shall also be copied onto the plan set(s). It includes the following information:

i) A hydrozone information table that contains a list of each hydrozone in the landscaped area of the project and complies with the following requirements:

1. For each hydrozone listed, the table shall identify the plant types and water features in the hydrozone, the irrigation methods used, the square footage and the percentage of the total landscaped area of the project that the hydrozone represents.
2. The plant types shall be categorized as high water use, moderate water use, low water use, or very low water use.

ii) Water budget calculations, which shall meet the following requirements:

1. The plant factor shall be 01 for very low water use plants, 0.3 for low water use plants, 0.6 for moderate water use plants and 1.0 for high water use plants and turf. A plan that mixes plants in a hydrozone that require a different amount of water shall use the plant factor for the highest water using plant in the hydrozone.
2. Temporarily irrigated areas shall be included in the low water use hydrozone. Temporarily irrigated as used in this chapter means the period of time when plantings only receive water until they become established.

3. The surface area of a water feature, including swimming pools, shall be included in a high water use hydrozone.
4. The ETWU shall not exceed the MAWA.
5. Each special landscaped area shall be identified on the worksheet.
6. Portions of landscaped areas in public and private projects such as parks, playgrounds, sports fields, golf courses, or school yards where turf provides a playing surface or serves other recreational purposes are considered recreational areas and may require water in addition to the Maximum Applied Water Allowance. A statement shall be included with the landscape design plan, designating recreational areas to be used for such purposes and specifying any needed amount of additional water above the Maximum Applied Water Allowance.

8. Maximum Applied Water Allowance (MAWA) and Estimated Total Water Use (ETWU) calculations

a. The MAWA shall be calculated using the following formula:

MAWA = (ETo)(0.62)[(ETAF x LA) +((1-ETAFx SLA)]

In which the following abbreviations apply:
MAWA = Maximum Applied Water Allowance in gallons/year
ETo = Evapotranspiration in inches per year.
0.62 = Conversion factor to gallons per square foot.
ETAF = Evapotranspiration adjustment factor.
LA = Landscape Area including SLA.
SLA = Portion of the landscape area identified as Special Landscape areas (measured in square feet).

b. The ETWU shall be calculated using the following formula:

ETWU = (ETo)(0.62) ((PF X HA / IE) + SLA)

In which the following abbreviations apply:
ETWU = Estimated Total Water Use in gallons per year.
ETo = Evapotranspiration in inches per year.
0.62 = Conversion factor to gallons per square foot.

PF = Plant factor.
HA = Hydrozone Area in square feet. Each HA shall be classified according to its water use; high, medium, low, or very low according to the legends on the planting plans.
IE = Irrigation Efficiency.
SLA = Special Landscape area in square feet.

9. Record Drawings or As-Built Plans
   a. Any changes made in the field during the project construction, and shown on the Record Drawings, shall have received approval by the City Planner prior to their installation. Changes not authorized by the City Planner must be remedied prior to final approval of the project if those changes fail to meet the intent of this Ordinance.
   b. These drawings shall incorporate any revisions made to the following items:
      i) Title Sheet
      ii) Planting Plan
      iii) Irrigation Plan
      iv) Grading Plan
      v) Water Conservation Plan

10. Landscape and Irrigation Maintenance Schedule
   a. The schedule shall provide for the following:
      i) Routine inspection to guard against runoff and erosion and to detect plant or irrigation system failure;
      ii) Replacement of dead, dying and diseased vegetation;
      iii) Eradication of invasive species;
      iv) Repairing the irrigation system and its components;
      v) Replenishing mulch;
      vi) Addition of soil amendments when necessary to support and maintain healthy plant growth;
      vii) Fertilizing, pruning and weeding and maintaining turf areas;
      viii) Maintenance to avoid obstruction of motorists' view; and
      ix) Identification of the entity who will be responsible for maintenance.

11. Field Observations
   a. Any revisions of the landscape plan must be approved by the licensed professional of work or record and the City Planner before any plant materials are installed inconsistent with the original plan.

b. After installation, but prior to backfill, an observation of the irrigation system shall be made by the licensed professional of work or record of all points of connection, backflow protection devices, mainlines, electrical connections, automatic controllers, and control valves.

12. Tentative Approval of Landscape Installation
    a. Approval of landscape installation after construction is completed is based on the condition of the project at the time of final observation.
    b. The licensed professional of record shall provide a Certificate of Completion using the form found in the Landscape Manual to the City Planner, stating that landscaping installed as part of the project has been installed and completed per the approved Landscape Construction drawings or Record Drawings and request a review by the City.
    c. The request for approval by the City shall include an updated irrigation schedule, irrigation and maintenance schedule and soil management report identifying any changes made to the approved drawings.
    d. Following review of the request, the City Planner, or his or her designee, shall conduct a field observation. Tentative approval of landscape installation shall be granted when the City Planner is satisfied that the landscaping and irrigation system has been installed correctly and per the approved plans.
    e. The inspection shall include, but not be limited to:
        i) An irrigation coverage test
        ii) Conformance with approved landscape plans
        iii) Condition of plant materials (including street trees and slope plantings)
        iv) A review of any special conditions or approval attached to the project by the City Council and/or Planning Commission
    f. Should the condition of the landscaping and/or irrigation system not be satisfactory or should unapproved revisions to the landscaping be found, the City Planner may withhold tentative approval.
    g. A diagram of the irrigation plan showing hydrozones shall be kept with the irrigation controller for subsequent management purposes.

13. Final Approval of Landscape Installation

1. Final approval of landscape installation shall require an additional field observation of the landscaping and irrigation system no sooner than one year from the date of tentative approval.
    a. Observation shall be requested in writing by the owner.
    b. For all projects, except single family residential, an irrigation audit shall be prepared prior to the request for final project review by the City. The audit shall be prepared in accordance with the definitions in Section 18.56.040 and use the form that is found in the City's Landscape Manual in the appendix. The auditor will functionally test for the following criteria: distribution uniformity, over spray and runoff control, and that water use does not exceed the MAWA once landscaping has been established.
    c. Final approval of shall be granted if the condition of the landscaping is found to be satisfactory by the City Planner and if the irrigation audit certifies that the irrigation system meets or exceeds the above criteria.
    d. Should the condition of the landscaping and/or irrigation system not be found satisfactory by the City Planner, he or she may withhold final approval.

4. Additional Resources

Additional resources have been cited in Chapter 18.56 of the Vista Development Code and/or in this manual. Information on where to find these resources is provided below:

California Department of Water Resource's "Guide to Estimating Irrigation Water Needs of Landscape Plantings in California"
Website:
http://www.water.ca.gov/wateruseefficiency/docs/wucols00.pdf

California Invasive Plant Council's (Cal-IPC) Invasive Plant Inventory
Website:
http://www.cal-ipc.org/ip/inventory/pdf/Inventory2006.pdf

APPENDIX 1

Estimated Total Water Use Worksheet

ESTIMATED TOTAL WATER USE (ETWU) WORKSHEET

The project's Estimated Total Water Use is calculated using the following formula:

$$ETWU = (ETo)(0.62)\left(\frac{PF\ x\ HA}{IE} + SLA\right)$$

ETWU = Estimated total water use per year (gallons per year)
ETo = Evapotranspiration rate (inches per year)
PF = Plant Factor (see requirements in chart)
HA = Hydrozone Area (square feet): Define hydrozones by water use: very low, low, moderate and high
SLA = Special Landscape Area (square feet): Edible plants, irrigated with recycled water, & turf used for active play
0.62 = Conversion Factor (to gallons per square foot)
IE = Irrigation Efficiency (see requirements in chart)

CITY OF VISTA ESTIMATED TOTAL WATER USE (ETWU) WORKSHEET

	Line	Hydrozone Number (1 - 4 Below – use as many tables as necessary to complete all hydrozones)				
		1	2	3	4	SLA
Evapotranspiration Rate (ETo)* 51.1 for Vista area	1	51.1				
Conversion Factor - .62	2	0.62				
(Line 1 x Line 2)	3	31.682				
Plant Factor (PF)**	4					
Hydrozone Area (HA) - in square feet	5					
(Line 4 x Line 5)	6					
Irrigation Efficiency (IE)***	7					
(Line 6 ÷ Line 7)	8					
TOTAL all Line 8s + SLA)	9					
Line 3 x Line 9 Estimated Total Water Use - **ETWU** (gallons per year) Total shall not exceed MAWA below	10					

ETo*= Evapotranspiration rate = *51.1 for Vista, CA

Average calculated from values in State Model Water Efficiency Landscape Ordinance (MWELO) - Appendix A

*** PF - Plant Factor (Water Use) – from WUCOLS***

Select based on type of plants in hydrozone:
0.1 = VLW - Very Low Water Use Plants
0.3= LW - Low Water Use Plants
0.6= MW - Moderate Water Use Plants
1.0= HW - High Water Use Plants

****IE – Irrigation Efficiency***
Spray = .55
MP rotators = .75
Rotor = .70
Bubbler =.75
Drip & Micro-spray = .81

MAXIMUM APPLIED WATER APPLICATION (MAWA) calculation:

31.682 [(ETAF x _____) + (1-ETAF) x _____)] =
Total Landscape Area Total SLA

MAWA

ETAF = Evapotranspiration adjustment factor (use .55 residential, .45 non-residential)

APPENDIX 2

Certificate of Completion of Landscape Installation

City of Vista
Certification of Completion
Landscape Installation

Project Name: _____

Permit Address: _____

Permit Number: _____

Drawing Number: _____

I certify that I have inspected the planting and irrigation system and that:

1) ***All landscape work has been installed and completed per the plans and specifications approved by the City of Vista;***
2) ***All required soil amendments were incorporated;***
3) ***The installed irrigation system is functioning as designed and approved;***
4) ***The irrigation control system was properly programmed in accordance with the irrigation schedule; and***
5) ***The person operating the system has received all required maintenance and irrigation plans.***

_____

Project Landscape Architect or Professional of Record Date

License Number and Expiration Date: _____

Firm Name: _____

Phone number: _____

Following receipt of this Certification of Completion by the City, a final review of the installation will be performed by the City. Fax the certification letter to: **760-639-6101**

Call the Planning Division at **760-639-6100** to schedule the inspection.

Inspection Contact Name: _____

Phone Number: _____

Contractor Firm Name: _____

APPENDIX 3

Audit Report Worksheet

CITY OF VISTA
CALIFORNIA

Water Source and System Data

Project Name		Date			
Address		Auditor			
City, State		Page		of	

Water Source Data

Water Source (check one)							
☐	Potable	☐ Reclaimed	☐ Well	☐ Pond			
☐	Other (explain)						
Backflow Device (check one)							
☐	None	☐ RPA	☐ DCV	☐ PVB	☐ AVB		
Size		in.					
Pump or Pump Station (check one)							
☐	No	☐ Yes					
		Maximum flow		gpm			
		Pressure		psi			
Meter (check one)							
☐	No	☐ Yes					
		Size		in.			
		Units (check one)	☐ gallons	☐ cubic feet			
		Available pressure		psi (during scheduled irrigation window)			

Controller Data

Manufacturer		Central Control (check one)		
		☐ Yes	☐ No	
Model Number		**Weather Station** (check one)		
		☐ Yes	☐ No	
Stations Being Used		**Smart Controller** (check one)		
		☐ Yes	☐ No	
Station Run Time Range (min)				
Minimum		Maximum		
Number of Programs		**Start Times/Program**		
Calendar Days (check one)				
☐	7 days	☐ 14 days	☐ Other (explain)	
Irrigation Interval (check options available)				
☐	Daily	☐ Even/Odd	☐ Custom (explain)	
Rain delay (maximum days)		**Skip Day Period** (maximum days)		
Percent Adjust Options (check applicable)				
☐	Global	☐ By program	☐ By station	☐ By month	☐ Seasonal
Sensors Installed (make & model)				

Date			
Auditor			
Page		of	

Controller Settings

Program	Start Times				Days On															
	1	2	3	4		S		M		T		W		T		F		S		
A						S		M		T		W		T		F		S		
B						S		M		T		W		T		F		S		
C						S		M		T		W		T		F		S		
D						S		M		T		W		T		F		S		

Program	Station	Minutes	Program	Station	Minutes	Program	Station	Minutes

Smart Controller Settings

Station	Program	PR	DU	Plant Factor	Soil Type	Slope	Soil Moisture

Date			
Auditor			
Page		of	

Site Conditions Review

Controller ID/Name					
Area/location					
Controller station(s) #					
Irrigated area	ft²	ft²	ft²	ft²	ft²
Plant material (all that apply)					
Plant condition (choose one)					
Microclimate (choose one)					
Soil category (choose one)					
Slope (choose one)					
Compaction (Y/N)					
Standing water (Y/N)					
Hydrozone separation (Y/N)					
Mulch in beds (Y/N)					

Abbreviation Key

Plant Material	Microclimate	Soil Category	Plant Condition	Slope
CS = Cool season turf	FS = Full sun all day	C = Coarse	LM = Low-maintenance, stressed	F = Flat
WS = Warm season turf	PS = Part shade, less than 6 hours of sun per day	MC = Moderately coarse	TRD = Some stress, but generally good condition	Sl = Slight
T = Trees	SH = Full shade all day	M = Medium	HQ = Majority are vigorously growing	Mod = Moderate
S = Shrubs	EX = Extreme Conditions (parking lots, south-facing glass or wall)	MF = Moderately fine		Stp = Steep
N = Native plants		F = Fine		
GC = Ground cover				
F = Annual flowers				

Date			
Auditor			
Page		of	

Sprinkler System Review

Abbreviation Key: S = Spray, fixed nozzle R = Rotor, MSMT nozzles I = Impact X = Needs correction ✓ = Correction completed

Controller ID/Name										
Station #										
Sprinkler type (choose one)										
Station flow		gpm		gpm		gpm		gpm		gpm
High pressure		psi		psi		psi		psi		psi
Low pressure		psi		psi		psi		psi		psi
Action Required	X	✓	X	✓	X	✓	X	✓	X	✓
Broken pipes										
Missing/broken heads										
Missing nozzle										
psi adjustment needed										
Clogged nozzle										
Heads not turning										
Arc misalignment:										
Low head drainage										
Leaking seals/fittings										
Spray deflected/blocked										
Sunken head										
Tilted heads										
Mismatched heads										
Spray/rotor separation										
Spacing uneven										
Valve malfunction										

Observations on Maintenance Frequency

Date			
Auditor			
Page		of	

Drip System Review

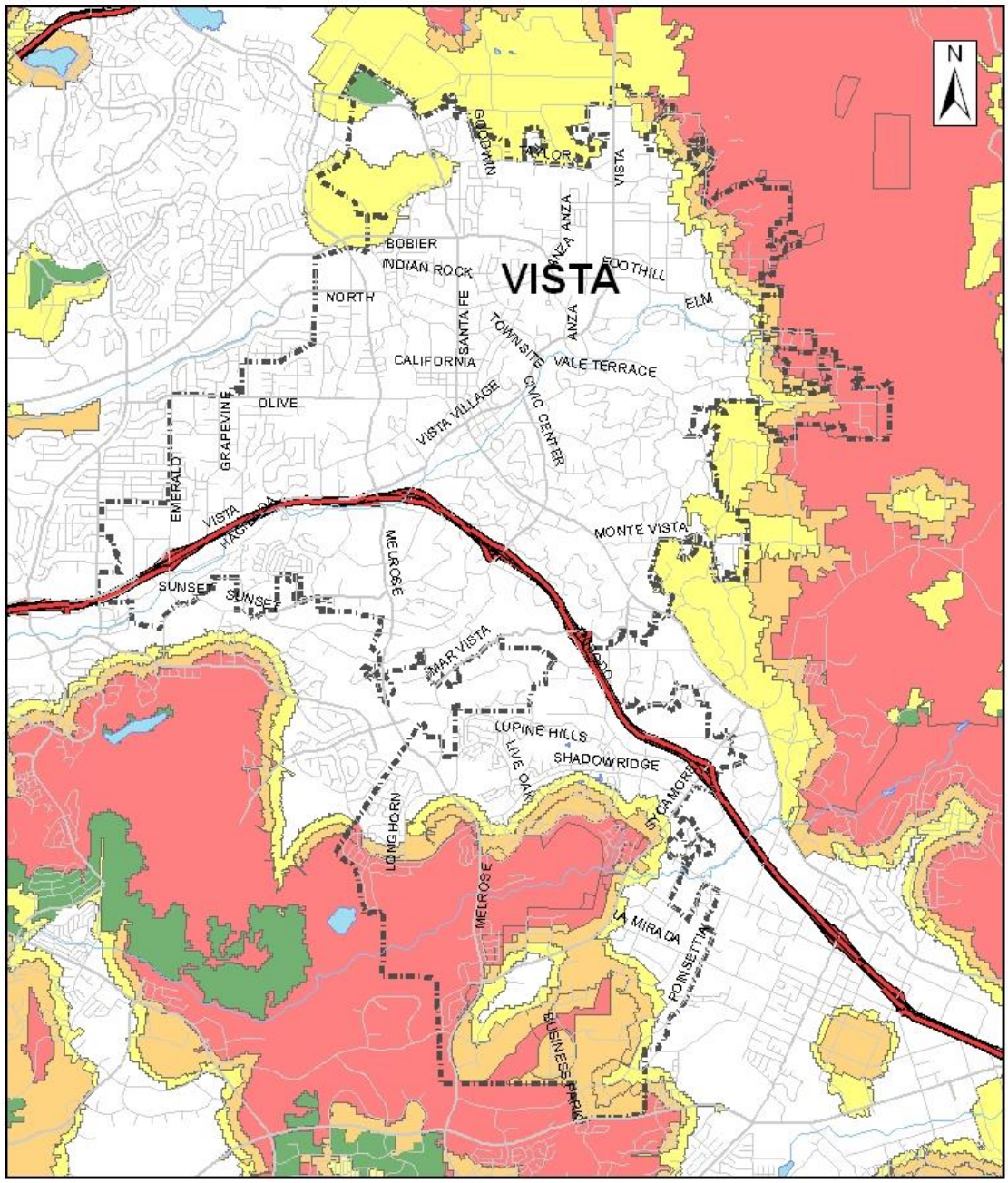
Station #			Observed Problems	
Plant material			Emission devices	
Plant condition			Missing emitters	
Microclimate			Clogged emitters	
Soil category			Emitters in wrong place	
Pressure regulator in place (Y/N)			Broken stakes	
Flow rating		gpm		
Pressure setting		psi	Tubing and fittings	
Pressure readings			Cut tubing	
Beginning		psi	Kinked tubing	
Middle		psi	Broken fittings	
End		psi	Flush plugs buried	
Filter in place (Y/N)				
Filter type			Filter needs servicing	
Size (mesh or micron)				
Emitter type				
Flow rate		gph		
Emitter spacing		in.		
Line spacing		in.		
Air/vacuum relief (Y/N)				
Flush plugs accessible (Y/N)				

Abbreviation Key

Plant Material	Microclimate	Soil Category	Plant Condition	Slope
CS = Cool season turf	FS = Full sun all day	C = Coarse	LM = Low-maintenance, stressed	F = Flat
WS = Warm season turf	PS = Part shade, less than 6 hours of sun per day	MC = Moderately coarse	TRD = Some stress, but generally good condition	Sl = Slight
T = Trees	SH = Full shade all day	M = Medium	HQ = Majority are vigorously growing	Mod = Moderate
S = Shrubs	EX = Extreme Conditions (parking lots, south-facing glass or wall)	MF = Moderately fine		Stp = Steep
N = Native plants		F = Fine		
GC = Ground cover				
F = Annual flowers				

APPENDIX 4

Fire Hazard Severity Zone Map



FIRE SEVERITY ZONE LEGEND

- Very High Severity Zone
- High Severity Zone
- Moderate Severity Zone
- City Limits

FIRE HAZARD SEVERITY ZONE MAP

APPENDIX 5

Fire Prevention Attachments

ATTACHMENT 1

UNDESIRABLE PLANT LIST

The following species are highly flammable. These plants are more susceptible to burning, due to rough or peeling bark, production of large amounts of litter, vegetation that contains oils, resin, wax, or pitch, large amounts of dead material in the plant, or plantings with a high dead to live fuel ratio.

BOTANICAL NAME	COMMON NAME
Abies species	Fir Trees
Acacia species	Acacia (trees, shrubs, groundcovers)
Adenostoma sparsifolium**	Red Shanks
Adenostoma fasciculatum**	Chamise
Agonis juniperina	Juniper Myrtle
Araucaria species	Monkey Puzzle, Norfolk Island Pine
Artemesia californica**	California Sagebrush
Bambusa species	Bamboo
Cedrus species	Cedar
Chamaecyparis species	False Cypress
Coprosma pumila	Prostrate Coprosma
Cryptomeria japonica	Japanese Cryptomeria
Cupressocyparis leylandii	Leylandii Cypress
Cupressus forbesii**	Tecate Cypress
Cupressus glabra	Arizona Cypress
Cupressus sempervirens	Italian Cypress
Dodonea viscosa	Hopseed Bush
Eriogonum fasciculatum**	Common Buckwheat
Eucalyptus species	Eucalyptus
Heterotheca grandiflora**	Telegraph Plant
Juniperus species	Junipers
Larix species	Larch
Lonicera japonica	Japanese Honeysuckle
Miscanthus species	Eulalia Grass
Muehlenbergia species**	Deer Grass
Palmae species	Palms
Picea species	Spruce Trees
Pickeringia Montana**	Chaparral Pea
Pinus species	Pines
Podocarpus species	Fern Pine
Pseudotsuga menziesii	Douglas Fir
Rosmarinus species	Rosemary
Salvia mellifera**	Black Sage
Taxodium species	Cypress
Taxus species	Yew
Thuja species	Arborvitae
Tsuga species	Hemlock
Urtica urens**	Burning Nettle

** - San Diego Native Species

Source: SD County DPLU

ATTACHMENT 2

SUGGESTED PLANT LIST FOR A DEFENSIBLE SPACE

ATTACHMENT 2, continued

vera	Pistachio Nut	I
Pittosporum		
phillyraeoides	Willow Pittosporum	C/I/D
viridiflorum	Cape Pittosporum	C/I
Platanus		
acerifolia	London Plane Tree	All zones
racemosa**	California Sycamore	C/I/M
Populus		
alba	White Poplar	D/M
fremontii**	Western Cottonwood	I
trichocarpa	Black Cottonwood	I/M
Prunus		
xblireiana	Flowering Plum	M
caroliniana	Carolina Laurel Cherry	C
ilicifolia**	Hollyleaf Cherry	C
lyonii**	Catalina Cherry	C
serrulata 'Kwanzan'	Flowering Cherry	M
yedoensis 'Akebono'	Akebono Flowering Cherry	M
Quercus		
agrifolia**	Coast Live Oak	C/I
engelmannii	Engelmann Oak	I
** suber	Cork Oak	C/I/D
Rhus		
lancea**	African Sumac	C/I/D
Salix spp.**	Willow	All zones (R)
Tristania conferta	Brisbane Box	C/I
Ulmus		
parvifolia	Chinese Elm	I/D
pumila	Siberian Elm	C/M
Umbellularia californica**	California Bay Laurel	C/I

SHRUBS		
Agave	Century Plant	D
americana	Century Plant	D
deserti	Shawis Century Plant	D
shawi**		
Amorpha fruticosa**	False Indigobush	I
Arbutus		
menziesii**	Madrone	C/I
Arctostaphylos spp.**	Manzanita	C/I/D
Atriplex**		
canescens	Hoary Saltbush	I
lentiformis	Quail Saltbush	D
Baccharis**		
glutinosa	Mule Fat	C/I
pilularis	Coyote Bush	C/I/D
Carissa grandiflora	Natal Plum	C/I
Ceanothus spp.**	California Lilac	C/I/M
Cistus spp.	Rockrose	C/I/D
Cneoridium dumosum**	Bushrue	C
Comarostaphylis**		
diversifolia	Summer Holly	C
Convolvulus cneorum	Bush Morning Glory	C/I/M
Dalea		
orcuttii	Orcutt's Delea	D
spinosa**	Smoke Tree	I/D
Elaeagnus		
pungens	Silverberry	C/I/M
Encelia**		
californica	Coast Sunflower	C/I
farinose	White Brittlebush	D/I
Eriobotrya		
deflexa	Bronze Loquat	C/I
Eriophyllum		
confertiflorum**	Golden Yarrow	C/I
staechadifolium	Lizard Tail	C
Escallonia spp.	Escallonia	C/I
Feijoa sellowiana	Pineapple Guava	C/I/D
Fouqueria splendens	Ocotillo	D
Fremontodendron**		
californicum	Flannelbush	I/M
mexicanum	Southern Flannelbush	I
Galvezia		
juncea	Baja Bush-Snapdragon	C
speciosa	Island Bush-Snapdragon	C
Garrya		
elliptica	Coast Silktassel	C/I
flavescens**	Ashy Silktassel	I/M

Heteromeles arbutifolia**	Ashy Silktassel	I/M
Lantana spp.	Toyon	C/I/M
Lotus scoparius	Lantana	C/I/D
Mahonia spp.	Deerweed	C/I
	Barberry	C/I/M
Malacothamnus		
clementinus		
	San Clemente Island Bush Mallow	C
fasciculatus**		
	Mesa Bushmallow	C/I
Melaleuca spp.		
Mimulus spp.**	Melaleuca	C/I/D
Nolina	Monkeyflower	C/I (R)
parryi		
parryi ssp. wolfii	Parry's Nolina	I
Photinia spp.	Wolf's Bear Grass	D
Pittosporum	Photinia	All Zones
crassifolium		
rhombifolium		CI/I
tobira 'Wheeleri'	Queensland Pittosporum	C/I
undulatum	Wheeler's Dwarf	C/I/D
viridiflorum	Victorian Box	C/I
Plumbago auriculata	Cape Pittosporum	C/I
Prunus	Cape Plumbago	C/I/D
caroliniana		
ilicifolia**	Carolina Laurel Cherry	C
lyonii**	Hollyleaf Cherry	C
Puncia granatum	Catalina Cherry	C
Pyracantha spp.	Pomegranate	C/I/D
Quercus	Firethorn	All Zones
dumosa**		
Rhamus	Scrub Oak	C/I
alaternus		
californica**	Italian Blackthorn	C/I
Rhaphiolepis spp.	Coffeeberry	C/I/M
Rhus	Rhaphiolepis	C/I/D
integrifolia**		
laurina	Lemonade Berry	C/I
lentii	Laurel Sumac	C/I
ovata**	Pink-Flowering Sumac	C/D
trilobata**	Sugarbush	I/M
Ribes	squawbush	I
viburnifolium		
speciosum**	Evergreen Currant	C/I
Romneya coulteri	Fuschia-Flowering Gooseberry	C/I/D
Rosa	Matilija Poppy	I
californica**		
minutifolia		

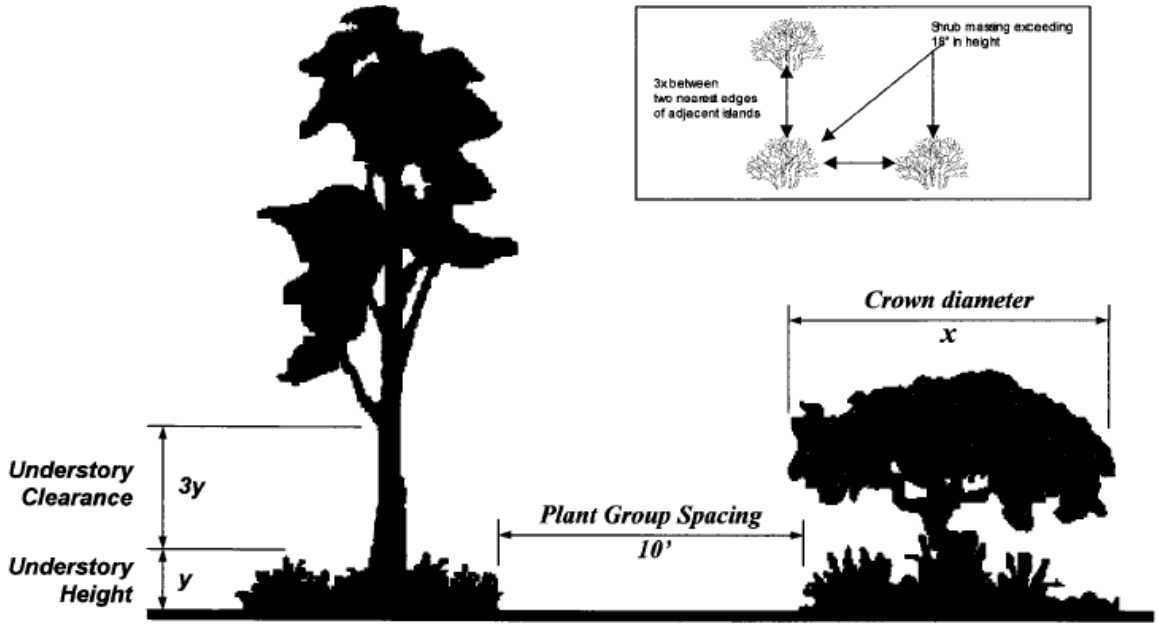
Salvia spp.**	California Wild Rose	C/I
Sambucus spp.**	Baja California Wild Rose	C/I
Symphoricarpos mollis**	Sage	All Zones
Syringa vulgaris	Elderberry	C/I/M
Tecomaria capensis	Creeping Snowberry	C/I
Teucrium fruticans	Lilac	M
Toxicodendron**	Cape Honeysuckle	C/I/D
diversilobum	Bush Germander	C/I
Verbena		
lilacina	Poison Oak	I/M
Xylosma congestum		
Yucca**	Lilac Verbena	C
schidigera	Shiny Xylosma	C/I
whipplei		
	Mojave Yucca	D
	Foothill Yucca	I

GROUNDCOVERS		
Achillea**	Yarrow	All Zones
Aptenia cordifolia	Apteria	C
Arctostaphylos spp.**	Manzanita	C/I/D
Baccharis**		
pilularis	Coyote Bush	C/I/D
Ceanothus spp.**	California Lilac	C/I/M
Cerastium tomentosum	Snow-in-Summer	All Zones
Coprosma kirkii	Creeping Coprosma	C/I/D
Cotoneaster spp.	Redberry	All Zones
Drosanthemum hispidum	Rosea Ice Plant	C/I
Dudleya		
brittonii	Brittonis Chalk Dudleya	C
pulverulenta**	Chalk Dudleya	C/I
virens	Island Live Fore-ever	C
Eschscholzia californica**	California Poppy	All Zones
Euonymus fortunei		
'Carrierei'	Glossy Winter Creeper	M
'Coloratus'	Purple-Leaf Winter Creeper	M
Ferocactus viridescens**	Coast Barrel Cactus	C
Gaillardia grandiflora	Blanket Flower	All Zones
Gazania spp.	Gazania	C/I
Helianthemum spp.**	Sunrose	All Zones
Lantana spp.	Lantana	C/I/D
Lasthenia		
californica**	Common Goldfields	I
glabrata	Coastal Goldfields	C
Lupinus spp.**	Lupine	C/I/M
Myoporum spp.	Myoporum	C/I
Pyracantha spp.	Firethorn	All zones
Rosmarinus officinalis	Rosemary	C/I/D
Santolina		
chamaecyparissus	Lavender Cotton	All Zones
virens	Santolina	All Zones
Trifolium frageriferum	O'Connor's Legume	C/I
Verbena		
rigida	Verbena	All Zones
Viguiera laciniata**	San Diego Sunflower	C/I
Vinca		
minor	Dwarf Periwinkle	M

VINES		
Antigonon leptopus	San Miguel Coral Vine	C/I
Distictis buccinatoria	Blood-Red Trumpet Vine	C/I/D
Keckiella cordifolia**	Heart-Leaved Penstemon	C/I
Lonicera		
japonica 'Halliana'	Hall's Honeysuckle	All Zones
subspicata**	Chaparral Honeysuckle	C/I
Solanum		
jasminoides	Potato Vine	C/I/D
PERENNIALS		
Coreopsis		
gigantean	Giant Coreopsis	C
grandiflora	Coreopsis	All Zones
maritime	Sea Dahlia	C
verticillata	Coreopsis	C/I
Heuchera maxima	Island Coral Bells	C/I
Iris douglasiana**	Douglas Iris	C/M
Iva hayesiana**	Poverty Weed	C/I
Kniphofia uvaria	Red-Hot Poker	C/M
Lavandula spp.	Lavender	All Zones
Limonium californicum		
var. mexicanum	Coastal Statice	C
perezii	Sea Lavender	C/I
Oenothera spp.	Primrose	C/I/M
Penstemon spp.**	Penstemon	C/I/D
Satureja douglasii	Yerba Buena	C/I
Sisyrinchium		
bellum	Blue-Eyed Grass	C/I
californicum	Golden-Eyed Grass	C
Solanum		
xantii	Purple Nightshade	C/I
Zauschneria**		
californica	California Fuschia	C/I
cana	Hoary California Fuschia	C/I
'Catalina'	Catalina Fuschia	C/I
ANNUALS		
Lupinus spp.**	Lupine	C/I/M

ATTACHMENT 3

TREE AND TREE-FORM SHRUB PRUNING AND SPACING
FOR NEW PLANTINGS



NOT TO SCALE

1. Vertical Continuity.
New and existing trees and tree-form shrubs (naturally reaching four feet and taller), which are being retained with the approval of the VFD, shall be pruned to provide clearance of three times the height of the understory plant material or l0 feet whichever is greater (see figure above). New trees and tree-form shrubs may comply with the lesser if sufficient height is not available to achieve l0 feet. Dead and excessively twiggy growth shall be removed.

2. Plant Group Spacing.
a. Trees and tree-form shrubs shall be single specimens or in a maximum grouping of three plants. Groupings shall be separated by a distance of l0 feet (see figure above). Other limited grouping arrangements and spacing may be acceptable if approved by VFD.

b. Plant specimens listed in Attachment 2 shall comply with plant groupings and spacing requirements as specified above.

Vista Fire Department
Fire Safety and Vegetation Management Standards

These guidelines apply to both improved and unimproved land subject to vegetation management in the City of Vista and in the unincorporated portions of San Diego County under the jurisdiction of the Vista Fire Protection District. Authority for this vegetation management is set forth in the 2007 California Fire Code as amended and for the area covered by the Vista Fire Protection District, Ordinances No. 20 and 21 in addition to the County of San Diego 2009 Consolidated Fire Code.

All parcels are expected to be maintained year round.

NOTE: This is Not A Grading Permit!
Do **NOT** disk or scrape soil with machinery.

Annual Grasses and Weeds:

In general, parcels should only be mowed (per fire department standards listed below).The Fire Chief or his agents may specify the method of clearance for any specific parcel.

Mowing:

- Mowing is the preferred method of clearing. All standing weeds and dry or dead grass shall be cut to within two (2") inches of the finished soil surface with an approved mechanical mower.
- Mowing shall sever vegetation from its roots, not simply lay it over.
- Additional mowing may be required later in the year due to re-growth. Remember parcels must be maintained year round.
- On parcels less than five (5) acres, dry or dead annual grasses and weeds shall be cut on the entire parcel. This requirement is for annual grasses and weeds only. If you property contains natural brush or vegetation please contact the fire department for guidance.
- Parcels of dry/dead annual grasses or weeds over five (5) acres please contact the fire department for guidance.
- Hand work (weed whacker, whip, string trimmer, etc.) may be required to complete the task on slopes, banks or around obstacles.
- All parcels zoned "industrial" or "commercial" shall be completely mowed regardless of size.

Disking and Grading:

- **Disking and grading is not permitted as a form of vegetation management without the written permission of the Vista Fire Department.** Please contact the Vista Fire Department at 760-643-2801 if believe you have a specific need to disc.

Trees:

For the purpose of this policy, trees are described as woody perennial plants having a single usually elongated main stem generally with few or no branches on its lower part.

- All trees (single species, ornamental, groves, orchards, vineyards, etc,) shall be maintained in a healthy state.

• All dead, dying and diseased trees shall be removed as well as dead branches, foliage and litter. Do not remove the root structure as it helps prevent soil erosion.
• All trimmings, ground litter and under story shall be cleared to mineral soil.
• A mulch layer can be spread underneath the tree's canopy to a height not to exceed six (6) inches.
• A ten (10) foot fuel break (an area cleared of all vegetation) shall encircle all groves, orchards, and vineyards.
• Trees shall be trimmed to eliminate the "ladder fuels". A minimum six (6) foot space shall be maintained between the top of the ground vegetation and the lowest limbs or branches.
• Flammable trees, such as Eucalyptus and pine trees should be removed if possible. If removal is not possible then these trees should be thinned/laced to remove foliage and then maintained in this condition.
• All dead palm and cycad fronds and Yucca leaves including older leaves that persist on the tree, forming a "skirt" or "beard" of brown thatch shall be removed and maintained in a clean state. Palms, especially the Washingtonian Palm (Mexican Fan Palm) are extremely flammable and consideration should be given to removing these trees.
• All leaves, needles and other dead vegetation shall be removed from roofs and gutters.
• Trees shall be trimmed ten (10) feet from all structures.

Shrubs:

A shrub is defined as a low, usually several-stemmed woody plant.

• All shrubbery shall be maintained in a healthy state.
• All nursery plants, either in the ground or pots, shall be maintained in a healthy state. All dead, dying or diseased plants shall be removed.
• Dead or dying branches shall be removed.
• Leaves, needles, fruits and other litter shall be removed from the base of all shrubs. Mulch to a depth of six (6) inches may be applied to the base to facilitate moisture retention and weed prevention.
• Maintain ten (10) feet minimum clearance around all propane tanks.

Roads

A fire access roadway is a road that provides fire apparatus access from a fire station to a facility, building or portion there of. This is a general term inclusive of all other terms such as driveways, easements, fire lanes, public and private streets, parking lots, lanes and access ways.
• Maintain complete clearance along the full length and width of fire access roadways to a vertical height of 13 feet 6 inches.
• Along public and private roadways maintain flammable vegetation 20 feet from the edge of the pavement.

Flammable Vegetation:

Areas within the Vista Fire Department jurisdiction shall be cleared of flammable vegetation within thirty (30) feet of all structures using methods such as mowing and trimming or cutting with a chain saw that leave the plant root structure intact to stabilize the soil. Within this zone fire resistive ornamental vegetation is allowed as long as it is maintained in a healthy state. General recommendations for this zone include:

• Low-flammability plants, landscaping materials and accessories
• Prune tree limbs 6 feet from the ground with generous space between trees
• Mow, prune, and water regularly

- No firewood or propane tanks

The zone from 30 feet to 100 feet from all structures shall have the flammable vegetation mass thinned and maintained. General recommendations for this zone include:

- 30 feet between tree clusters
- Prune tree limbs 6 feet from the ground or at least 6 feet above any ground vegetation.
- Remove heavy accumulations of flammable debris
- As a general guideline consider thinning dense flammable vegetation by removing approximately 50% of the fuel in a checkerboard or mosaic pattern. Once this has been accomplished maintain this pattern.

Debris Removal:

All trimmings, plant waste, dead branches, fronds, etc. must be removed from the property and disposed of in an approved manner. Disposal of waste material in stream beds, drainages or left on the property is prohibited and may be subject to citation.

Trimmed vegetative material may be chipped and returned to the property. This material must be spread out to inhibit weed growth, help retain soil moisture and shall not accumulate to a depth greater than six (6) inches. No manure may be added. The objective is to convert the vegetation to a slow burning, low heat release fire and preclude exotic grasses from regeneration.

Burning of agricultural waste material is controlled by the Air Pollution Control District and their guidelines must be followed. A burn permit is required for any burning and they are issued by Cal Fire. For information on burning requirements, times of the year burning is permitted, or to obtain a burn permit contact Cal Fire at (760) 735-9478 or (760)728-8532.

Areas of Environmental Concern:

For the purposes of these guidelines, environmentally sensitive areas are defined as vegetation that exists as a part of protected upland habitat, and/or wetland/riparian habitat, and/or plants that are protected under a special status designation with local, State, or Federal law. In some areas of the city this habitat is classified as “critical habitat”, which means that certain groups of vegetation provide cover and food to threatened or endangered wildlife and must be undisturbed.

Landowners who have environmentally sensitive areas on their property must notify the California Department of Fish and Game and the U.S. Fish and Wildlife Service at least ten (10) days prior to any vegetation management. Failure of the landowner to provide adequate notification may render the landowner liable under State and Federal Law. The resource agencies (Fish and Game and Fish and Wildlife), once notified, will have up to ten (10) days to:

1. Determine whether the proposed vegetation management complies with State and/or Federal endangered species requirements.
2. Suggest voluntary, alternative abatement measures if feasible and warranted. Failure of the resource agencies to respond within ten (10) days will allow the landowner to proceed with abatement activities without delay.

General Fire Safety

- Keep wood piles and flammable materials 30 from structures.
- Consider removing flammable trees such as Eucalyptus, pines, and palms.
- If removal of trees is not possible or desired keep them free from dead material and thinned to reduce fire loading. Remove dead fronds from palms, cycads, and yuccas as necessary.
- Dispose of debris properly. Do not allow flammable material to build up on your property.
- Open burning is prohibited.
- Maintain roofs and gutters free from accumulated debris.
- Create a "fuel free" area around your house that runs one yard out on all sides.
- Keep tree limbs that overhang your house at least 10 feet from the roof and any chimney outlets.

ATTACHMENT 4

SAMPLE CCR MAINTENANCE LANGUAGE

It is recommended that the following language be included in the CCR recorded for a common interest development:

The duty of the homeowners' association to perform "Fire Prevention Maintenance" (as defined below) for all Fuel Modification Zones and manufactured interior slopes within the development shall be included as an express obligation in the recorded CCR for the development. Similarly, each Owner whose Lot (or Condominium) is subject to Fuel Modification Zone restrictions (e.g., non-combustible structure setback, etc.) shall be obligated to comply with such restrictions.

1. VFD will be designated as a third party beneficiary of a homeowners' association's duty to perform "Fire Prevention Maintenance" (as defined below) for all portions of the Association Property (or Common Area) that constitute Fuel Modification Zones and designated interior/manufactured slopes to be maintained by the homeowners' association, and of any Owner's duty to comply with any Fuel Modification Zone restrictions applicable to his Lot (or Condominium). Additionally, VFD shall have the right, but not the obligation, to enforce the homeowners' association's duty to perform such Fire Prevention Maintenance, and to enforce compliance by any Owner with any Fuel Modification Zone restrictions applicable to his Lot (or Condominium). In furtherance of such right, VFD shall be entitled to recover its costs of suit, including its actual attorneys' fees, if it prevails in an enforcement action against a homeowners' association and/or an individual Owner. (A sample third party beneficiary provision to be incorporated into the CCR is attached hereto as Addendum "1").

2. As used herein, "Fire Prevention Maintenance" shall mean the following:

(i) All portions of the Association Property (or Common Area) that constitute Fuel Modification Zones or designated interior/manufactured slopes shall be regularly maintained by the homeowners association on a year round basis in accordance with the Fuel Modification Plan on file with the property manager for the development.

(ii) The irrigation system for Fuel Modification Zones or designated interior/manufactured slopes shall be kept in good condition and proper working order at all times. The irrigation system shall not be turned off except for necessary repairs and maintenance.

ADDENDUM 1

Enforcement by the City of Vista.

The City of Vista (City) is hereby designated as an intended third party beneficiary of the Association's duties to perform Fire Prevention Maintenance for all portions of the Association Property (or Common Areas) consisting of Fuel Modification Zones or designated interior/manufactured slopes in accordance with the Fuel Modification Plan, and of each Owner's duty to comply with any Fuel Modification Zone or designated interior/manufactured slopes restrictions applicable to his Lot (or Condominium) as set forth in the Fuel Modification Plan.

In furtherance thereof, the City shall have the right, but not the obligation, to enforce the performance by the Association of its duties and any other fire prevention requirements; which were imposed by the City or other Public Agency as a condition of approval for the Development (e.g. , prohibition of parking in fire lanes, maintenance of the blue reflective markers indicating the location of fire hydrants, etc.) and shall also have the right, but not the obligation, to enforce compliance by any Owner with any Fuel Modification Zone or designated interior/manufactured slopes restrictions applicable to his Lot (or Condominium) as set forth in the Fuel Modification Plan. If, in its sole discretion, the City shall deem it necessary to take legal action against the Association or any Owner to enforce such duties or other requirements, and prevails in such action, the City shall be entitled to recover the full costs of said action, including its actual attorneys' fees, and to impose a lien against the Association Property, or an Owner's Lot (or Condominium), as the case may be, until said costs are paid in full.