

PORTOLA CENTER AREA PLAN

CHAPTER EIGHT

LANDSCAPE DESIGN GUIDELINES

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8.1 LANDSCAPE DESIGN PHILOSOPHY

The purpose of the Portola Center Landscape Design Guidelines and Concept Plan is to enhance and unify the Portola Center Community through a cohesive landscape plan.

The Portola Center Landscape Concept Plan establishes the major landscape theme for the Portola Center Community at a conceptual level, addressing the Saddleback Ranch Road and Glenn Ranch Road corridors and intersection, streets within the Planning Areas, Project entries, open space areas slopes, neighborhood parks, and the individual neighborhoods. The proposed landscape buffers between the Project's neighborhoods and surrounding uses, the creation of landscaped medians within the existing un-landscaped Glenn Ranch Road and Saddleback Ranch Road Right-of-ways, the enhanced landscape and circulation designs for the primary and secondary Project entry-points, and the landscape slopes, green spaces, distributed parks, and the landscaped parkways internal and throughout the Project collectively reinforce the Project's community design theme.

The Landscape Concept Plan serves as the landscape design framework for the Community from which more detailed precise landscape plans will follow. The purpose of the Landscape Concept Plan is to: 1) establish thematic color schemes to develop the Project identity; 2) establish a hierarchy of landscaping, from the Primary Community Entries down through the internal residential streets; 3) thematically tie the individual major elements of the Project's land use framework together; 4) visually emphasize the key project amenities like parks, park and trail amenities, pedestrian pathways, project entries, primary corridors, and other activity areas; and 5) blend the Project's exterior landscape areas with the Project's residential neighborhoods and the residential neighborhoods with the surrounding natural open space using transitional landscapes. Accordingly, the Portola Center Landscape Concept should incorporate the following design objectives:

- Implement a design approach that blends plant and tree species to establish a sense of permanence in the community with flowering annuals and perennials with seasonal characteristics.
- Utilize trees as a dominant thematic element used to create a logical sense of order, continuity, and contrast throughout the community.
- Utilize, where feasible and consistent with water-efficient landscape requirements, low-water use plant materials appropriate for the site's climactic conditions and water efficient grasses to reduce the high water use turf in areas that are not used for active recreation.
- Utilize trees that provide filtered shade while maintaining a semitransparent view of the architectural features.
- Create a series of horizontal landscape planes through the use of canopy trees, shrub forms, and accent colors to reflect the architectural forms.
- Utilize landscape form and composition to direct and guide residents and visitors to residential neighborhoods and activity areas, to create focal points, and to emphasize view corridors for travelers as they move through the community.
- Incorporate hardscape features, such as decorative walls, signs, and monuments into landscape areas.
- Utilize Vertical elements, such as narrow trees and decorative fencing and lighting, to contrast long architectural planes.
- Create a community that is in visual harmony with the surrounding natural environment, provides shade and natural cooling benefits, and includes the use of shrubs and ground covers to create landscape layers
- Utilize color variations from plant foliage, bark and flowers that create a friendly, warm and visually exciting landscape environment.
- Utilize landscaping to soften the visual effect of retaining walls, community walls, and other features of the built environment that are visually sensitive such as trash enclosures and parking areas.

8.2 LANDSCAPE THEME AND FRAMEWORK

The Landscape theme for Portola Center is a unique blend of California native & naturalized plant materials on the perimeter & main thoroughfares, with a Mediterranean influence within the project's interior. The goal for the perimeter slopes is to provide a subtle transition between the adjacent hillsides and the projects interior slopes by utilizing native Coast Live Oaks, Catalina Cherry, Mexican Elderberry, Toyon, Lemonade Berry, Rock Rose and many other species. Additional vibrant and water efficient material accentuate entries and other key areas along the main thoroughfares and the perimeter trail system. The framework for the Portola Center Landscape Plan is structured around four major areas of landscape design which are further subdivided into 10 individualized landscape focus areas, each with overlapping but distinct landscape palettes (Exhibit 8-1). The four major design areas of the landscape plan framework are the following:

1. Glenn Ranch Road/Saddleback Ranch Road Intersection & Community Entries
2. Glenn Ranch Road and Saddleback Ranch Road View Corridors
3. Internal Project Areas (Internal Streets, Neighborhoods, Interior Slopes and Parks)
4. Perimeter Areas & Fuel Modification Zones

The landscape design approach is intended to create transitions between the four major areas identified above. Exhibit 8-1 above shows the four major design elements of the Project's Landscape Plan. Following is a more detailed description of each of the four elements. The various Landscape Plant Palettes for these areas can be found in Section 8.3.

8.2.1 COMMUNITY ENTRIES

Two arterials bisect the Project site into three different planning areas, Glenn Ranch Road and Saddleback Ranch Road. These two streets form an intersection that severs as the entry point into the existing Portola Hills Community and as the Primary Project Entry into the Portola South Planning Area. As the focal point of the Project and the entryway into the two communities, the intersection should serve as the pinnacle of the Project's landscape hierarchy with the most order, complexity, variety, and ornateness of any of the Project's individualized landscape areas. It should serve as the culmination of the Project's landscape and architectural themes from which the rest of the Project's design elements and transportation and land uses logically flow.












8.2.2 GLENN RANCH ROAD & SADDLEBACK RANCH ROAD VIEW CORRIDORS

Glenn Ranch Road and Saddleback Ranch serve as major corridors for both Portola Hills and Portola Center. These corridors will include median, parkway, and slope landscape areas. The landscape design for these corridors should radiate out from their intersection and the Project's pinnacle with an overlapping but less complex transitional landscape palette. The Project's three secondary entries—entry into the Northwest, Northeast, and the east entry into the South Planning Areas—should ramp up to a more complex and defining landscape palette that blends with the palette of the arterial corridors as well as incorporates neighborhood entry monumentation and a higher level of plant palette complexity, ornateness, and order.

8.2.3 INTERNALSTREETS, PROJECT NEIGHBORHOODS, INTERIOR SLOPES, & AMENITIES

The internal streets and parkways, neighborhoods, interior slopes, and amenities like parks, pedestrian pathways, activity centers, and trails should maintain a consistent landscape theme throughout with the streets, parkways, and pedestrian pathways exhibiting more trees and orderly arrangements of the landscape palettes and the parks and community open space areas serving as landscape focal points with plant palettes that serve both beautification and functional purposes, such as complementing recreation and passive enjoyment in the parks (e.g., grass fields and shade areas) and accenting and visual separation of neighborhoods in the community open space and interior slope areas. These areas of the Project will utilize overlapping plant and trees species found in the community entries and public corridor areas, however these areas will generally be less complex and ornate than the more public areas of the Project. In many cases, the functionality of the landscape will serve as a primary driver of its complexity and character.

Planting Area Legend

	Area 1 Glenn Ranch Road and Saddleback Road		Area 7 Perimeter Parks
	Area 2 Primary Community Entry		Area 8 Interior Slopes & Planted Walls
	Area 3 Secondary Community Entries		Area 9 Transitional Slopes and Planted Walls
	Area 4 Interior Residential Streets & Alleys		Area 10 Naturalized Perimeter Slopes
	Area 5 Interior Development		Area 11 Natural Open Space
	Area 6 Interior Parks		



8.2.4 PERIMETER AREAS & FUEL MODIFICATION ZONES

The Project's perimeter areas primarily support the fuel modification zones. These zones are surrounded by natural open space that is characterized by its native habitat, including sage brush, chaparral, dry grasslands, and cactus scrub, and its steep and hilly terrain. The habitat in these natural areas is a mixture of olive, sage, brown, and yellow hues that are reminiscent of the relatively dry, Mediterranean climate that dominates Southern California. Accordingly, the landscape palette for the fuel modification zones needs to accomplish three major objectives: (1) the plant materials need to possess a low fuel load content (i.e., low probability of flammability) and comply with the Orange County Fire Authority's Prohibited Plant List for FMZ Areas; (2) the plant materials need to visually blend with the natural habitat surrounding the Project site; and (3) the plant materials need to be non-invasive species that are easy to maintain and do not contribute to open space preserve "edge effects" such as weeds or pests.

8.3 LANDSCAPE CONCEPT PLAN AND PLANT PALETTES

The Portola Center Landscape Concept Plans are shown in Exhibits 8-2 and 8-3. The Plans are comprised of 10 different planned landscape areas and an 11th natural open space area which are shown on the Landscape Concept Plans and include the following:

1. Glenn Ranch Road and Saddleback Ranch Road
2. Primary Community Entry
3. Secondary Community Entry
4. Interior Residential Streets & Alleys
5. Residential Neighborhoods and Mixed Use Center
6. Interior Parks
7. Perimeter Parks (Adjacent to Perimeter Open Space)
8. Interior Slopes & Planted Walls
9. Transitional Slopes and Planted Walls
10. Naturalized Perimeter Slopes
11. Natural Open Space Areas

Detailed Plant Palettes are provided in Table 8-1 for 11 different landscape areas. The 11th Area, "Natural Open Space Areas", includes areas onsite that will be left in their natural condition but will be subject to fuel modification. The design theme is established in the architectural elevations and design elements of the buildings and embodied in the Plant Palettes for the Project's landscape areas. The plant palettes provide a list of plant material to select from when designing the landscape for these areas. However, substitutions may be required due to plant material availability, soils test results, or other considerations.

Plant materials in the Naturalized Perimeter Slopes have been selected for their ability to merge into the existing natural environment without being invasive, and for their tolerance to drought and low water use irrigation. In addition, planting in the Fuel Modification Zones (FMZs) along the perimeter of the Project will comply with the Orange County Fire Authority (OCFA) planting and irrigation requirements and restrictions for FMZs (Guideline C-05 for Fuel Modification).



Naturalized Perimeter Slopes
 Plantable Retaining Walls
 Fuel Modification Zones

Interior Park
 Neighborhood Entry
 Interior Slope Planting

Naturalized Perimeter Slopes
 Fuel Modification Zones
 Plantable Retaining Walls
 Community Entry Markers

Community Entry Marker
 Enhanced Perimeter Slope and Planted Wall
 Transitional Slope
 Community Entry Monumentation

Neighborhood Entry
 Interior Park

Planting Area Legend

Area 1	Green House Plant & Sustainable Plant
Area 2, 3	Community Entry
Area 4	Interior Residential Streets & Entry
Area 5	Neighborhood Entry
Area 6	Interior Entry
Area 7	Perimeter Parks
N/A	
Area 8	Interior Slopes & Planted Walls
Area 9	Transitional Slopes
Area 10	Naturalized Perimeter Slopes
Area 11	Natural Open Slopes

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Scale: 1" = 50'
 0 50' 100'

North Arrow

Exhibit 8-2 Portola Center North Landscape Concept Plan



Exhibit 8-3
Portola Center South Landscape Concept Plan

Table 8-1: Portola Center Landscape Plan Palettes

Area 1: Glenn Ranch Road & Saddleback Road

Glenn Ranch Road Parkway & Median Tree:

Quercus ilex, Holly Oak

Saddleback Road Parkway & Median Tree:

Lophostemon confertus, Brisbane Box



Parkway & Median Shrubs & Ornamental Grasses such as:

*Aloe Vera**, Medicinal Aloe
Carex pansa, California Meadow Sedge (See Note #4)
Festuca mairei, Mare's Bunch Grass
Hesperaloe parviflora 'Brakelights'*, Mountain States Red Yucca
*Limonium perezii****, Sea Lavender (See Note #4)
Salvia mellifera 'Tera Seca', Tera Seca Sage

Slope Trees

*Cercis occidentalis**, Western Redbud
Lophostemon confertus, Brisbane Box
*Plantanus racemosa**, California Sycamore (See Note #1)
*Prunus ilicifolia lyonii**, Catalina Cherry
*Quercus agrifolia**, Coast Live Oak
*Rhus lancea****, African Sumac
*Sambucus mexicana**, Mexican Elderberry



Slope Large Shrubs, (Used in limited quantities)

Echium fastuosum, Pride of Madeira
Fremontodendron californica 'California Glory'*, California Flannelbush
*Heteromeles arbutifolia****, Toyon
*Rhus integrifolia**, Lemonade Berry
*Rhus ovata****, Sugarbush
*Ribes viburnifolium**, Evergreen Currant

Slope Sprawling Shrubs, Vines, Low Shrubs, Groundcovers, Succulents & Cacti

Acacia redolens Desert Carpet**, Desert Carpet
*Agave attenuata**, Century Plant
Archostaphylos hiikeri 'Monterey Carpet' Manzanita*
Baccharis pilularis 'Twin Peaks 2'***, Dwarf Coyote Bush
Ceanothus gloriosus 'Point Reyes'*, Point Reyes Creeper
Ceanothus horizontalis 'Yankee Point' Creeper*
*Cistus hybridus**, White Rock Rose
Cistus 'Sunset', Rock Rose
Clematis pauciflora, Ropevine
*Coprosma x kirkii**, Creeping Mirror Plant
Cotoneaster dammeri 'Lowfast', Bearberry Cotoneaster
*Keckiella cordifolia**, Heart-Leaved Penstemon
*Kniphofia uvaria**, Red Hot Poker
*Limonium perezii****, Sea Lavender (See Note #4)
*Mimulus aurantiacus**, Sticky Monkey Flower

Oenothera speciosa 'Rosea'*, Pink Evening Primrose
*Opuntia littoralis**, Coastal Prickly Pear Cactus
*Salvia snomensis**, Creeping Sage
Sarcostemma cynanchoides, Climbing Milkweed
*Solanum xanthii**, Nightshade
*Yucca schidigera**, Mojave Yucca
*Yucca whipplei**, Foothill Yucca



Area 1: Glenn Ranch Road & Saddleback Road (Continued...)

Slope Restoration Hydroseed Mix:

Camissonia cheiranthifolia*, Beach Primrose
Encelia californica*, Coast Sunflower
Eriophyllum confertiflorum*, Golden Yarrow
Eschscholzia maritima*, California Poppy
Heliathemum scoparium*, Rush Rose
Lasthenia californica*, California Goldfields
Lotus hamatus, San Diego Bird's Foot Trefoil
Lupinus nanus, Dwarf Lupine
Plantago erecta*, California Plantain
Trifolium gracilentum, Pinpoint Clover



Planted Retaining Wall Sprawling Shrubs & Vines

Acacia redolens Desert Carpet**, Desert Carpet
Antigonon leptopus, San Miguel Coral Vine
Baccharis pilularis 'Twin Peaks 2'***, Dwarf Coyote Bush
Calystegia macrostegia, Island Morning Glory
Ceanothus gloriosus 'Point Reyes*', Point Reyes Creeper
Clematis lasiantha, Pipestream Clematis
Clematis pauciflora, Ropevine
Coprosma x kirkii*, Creeping Mirror Plant
Cotoneaster dammeri 'Lowfast', Bearberry Cotoneaster
Keckiella cordifolia*, Heart-Leaved Penstemon
Oenothera speciosa 'Rosea*', Pink Evening Primrose
Sarcostemma cynanchoides, Climbing Milkweed
Solanum xanthii*, Nightshade
Vitis girdiana***, Desert Wild Grape



Planted Retaining Wall Hydroseed Mix:

Camissonia cheiranthifolia*, Beach Primrose
Eriophyllum confertiflorum*, Golden Yarrow
Lasthenia californica*, California Goldfields
Lotus purshianus, Spanish Clover
Lotus salsuginosus, Coastal Bird's Foot Trefoil
Lotus scoparius*, Deerweed
Mimulus aurantiacus*, Sticky Monkey Flower
Plantago erecta*, California Plantain
Sisyrinchium bellum*, Blue-Eyed Grass
Trifolium willdenovii, Tomcat Clover

Areas 2 & 3: Project Entries

Primary Community Entry - Featured Specimen Tree:

(Glenn Ranch Road at Saddleback Ranch Road)
Quercus agrifolia 'Multi-Trunk', Coast Live Oak

Secondary Neighborhood Entry Trees:

Cupressus sempervirens Strica, Italian Cypress (See Note #6)
Olea europea 'Wilsoni', Fruitless Olive Tree
Phoenix dactylifera 'Medjool', Medjool Date Palm (See Note #3)



Areas 2 & 3: Project Entries (Continued...)

Shrubs, Ornamental Grasses & Groundcovers such as, but not limited to:

Aloe Vera, Medicinal Aloe
Anigozanthos hybrids, Kangaroo Paw
Bougainvillea species, Prostrate Bougainvillea
Callistemon citrinus 'Compact', Dwarf Lemon Bottlebrush
Dianella species, Flax Lily
Echium fastuosum, Pride of Madeira (See Note #4)
Festuca mairei, Mare's Bunch Grass
Hesperaloe parviflora 'Brakelights', Mountain States Red Yucca
Lantana montevidensis, Lantana
Phormium species, Flax
Rosmarinus officinalis, Rosemary



Areas 4: Interior Residential Streets & Alleys

Where residential streets are adjacent to native or naturalized open-space areas:

Quercus ilex, Holly Oak

Residential streets within the internal streets trees such as, but not limited to:

Laurus nobilis 'Saratoga', Sweet Bay
Agonis flexuosa, Peppermint Tree
Arbutus 'Marina', Marina Arbutus
Cupaniopsis anacardioides, Carrotwood
Geijera parviflora, Australian Willow
Lagerstromia inidica, Crape Myrtle
Lophostemon confertus, Brisbane Box
Melaleuca linarifolia, Flax Leaf Paper Bark
Metrosideros excelsa, New Zealand Christmas Tree
Pittosporum undulatum, Victorian Box
Podocarpus gracilior, Fern Pine
Rhus lancea, African Sumac
' Sapium sebiferum, Chinese Tallow Tree (See Note #4)
Ulmus parvifolia 'True Green', Evergreen Elm



Parkway & Alley Shrubs, Ornamental Grasses & Groundcovers such as, but not limited to:



Agapanthus 'Rancho White', White Flowering Lily-of-the-Nile
Agapanthus africanus, Lily-of-the-Nile
Anigozanthos hybrids, Kangaroo Paw
Callistemon citrinus Compacta, Dwarf Lemon Bottlebrush
Carex pansa, California Meadow Sedge (See Note #4)
Carissa macrocarpa Green Carpet, Prostrate Natal Plum
Dianella species, Flax Lily
Festuca glauca, Blue Fescue
Ligustrum japonicum 'Texanum', Japanese Privet
Limonium perezii, Sea Lavender (See Note #4)
Myoporum parvifolium Putah Creek, No Common Name (See Note #5)
Phormium tenax 'Jack Spratt', Dwarf Flax
Raphiolepis indica, India Hawthorn
Rosmarinus officinalis 'Huntington Carpet', Rosemary
Senecio mandraliscae, Kleinia

Area 5: On-Site Interior Development (Single-Family Residential, Multi-family & Mixed-Use Lots)

Trees such as, but not limited to:

Arbutus 'Marina', Marina Arbutus
 Brachychiton populneus, Bottle Tree
 Chorisia speciosa, Floss Silk Tree
 Cupressus sempervirens 'Stricta', Italian Cypress (See note #6)
 Ficus robiginosa, Rustyleaf Fig
 Geijera parviflora, Australian Willow
 Jacaranda mimosifolia, Jacaranda
 Koelreuteria bipinnata, Chinese Flame Tree
 Lagerstromia inidica, Crape Myrtle
 Laurus nobils 'Saratoga', Sweet Bay
 Lophostemon confertus, Brisbane Box



Metrosideros exelsus, New Zealand Christmas Tree
 Olea europea Wilsoni, Fruitless Olive Tree
 Phoenix dactylifera 'Medjool', Medjool Date Palm (See Note #3)
 Phoenix reclinata, Senegal Date Palm (See Note #3)
 Pittosporum undulatum, Victorian Box
 Podocarpus gracilior, Fern Pine
 Rhus lancea, African Sumac
 Sapium sebiferum, Chinese Tallow Tree (See Note #4)

Shrubs, Ornamental Grasses & Groundcovers such as, but not limited to:

Agapanthus 'Rancho White', White Lily-of-the-Nile
 Agapanthus africanus, Lily-of-the-Nile
 Aloe species, Aloe
 Bougainvillea species, Bougainvillea
 Buxus microphylla 'Green Beauty', Dwarf Boxwood
 Callistemon citrinus Compacta, Dwarf Lemon Bottlebrush
 Carex pansa, California Meadow Sedge (See Note #4)
 Carissa macrocarpa 'Green Carpet', Prostrate Natal Plum
 Ceanothus species, Carmel Creeper
 Chamaerops humillis, Mediterranean Fan Palm
 Cistus 'Sunset', Rock Rose
 Cycas revoluta, Sago Palm
 Dianella species, Flax Lily
 Dietes bicolor, Fortnight Lily
 Echium fastuosum, Pride of Madeira (See Note #4)
 Festuca glauca, Blue Fescue
 Lantana montevidensis, Lantana
 Lavendula species, Lavender
 Ligustrum japonicum 'Texanum', Texas Privet
 Limonium perezii, Sea Lavender - See Note #4)
 Myoporum parvifolium Putah Creek (See Note #5)
 Myrtus species, Myrtle
 Nandina domestica, Heavenly Bamboo
 Phoenix roebelenii, Pigmy Date Palm
 Phormium species, Flax
 Phormium tenax 'Jack Spratt', Dwarf Flax

Pittosporum tobira 'Wheeler's Dwarf', Dwarf Tobira
 Pittosporum tobira, Common Tobira
 Rosa species, Rose
 Rosmarinus officinalis, Rosemary
 Salvia mellifera 'Tera Seca', Tera Seca Sage
 Strelitzia nicotia, Giant Bird of Paradise
 Strelitzia reginae, Bird of Paradise
 Trachelospermum jasminoides, Star Jasmine
 Trachycarpus fortunei, Windmill Palm
 Xyosma congestum, Shiny Xylosma
 Zamia furfuracea, Cardboard Palm



Active Recreational Grass:

Marathon 2e, Dwarf Tall Fescue (See Note #2)

Area 6: Interior Parks

(Where not adjacent to perimeter open-space areas)



Trees such as, but not limited to:

Ficus robiginosa, Rustyleaf Fig
Jacaranda mimosifolia, Jacaranda
Lophostemon confertus, Brisbane Box
Metrosideros exelsus, New Zealand Christmas Tree
Olea europea 'Wilsoni', Fruitless Olive Tree
Phoenix dactylifera 'Medjool', Medjool Date Palm (See Note #3)
Plantanus racemosa, California Sycamore
Quercus agrifolia, Coast Live Oak
Rhus lancea, African Sumac

Shrubs, Ornamental Grasses & Groundcovers such as, but not limited to:

Agapanthus africanus, Lily-of-the-Nile
Agapanthus 'Rancho White', White Lily-of-the-Nile
Aloe species, Aloe
Bougainvillea species, Bougainvillea
Callistemon citrinus 'Compacta', Dwarf Lemon Bottlebrush
Carex pansa, California Meadow Sedge (See Note #4)
Carissa macrocarpa 'Green Carpet', Prostrate Natal Plum
Ceanothus species, Carmel Creeper
Chamaerops humilllis, Mediterranean Fan Palm
Cistus 'Sunset', Rock Rose
Cotoneaster dammeri 'Lowfast', Bearberry Cotoneaster
Dianella caerulea 'Little Becca', Little Becca Flax Lily
Dianella caerulea 'Tasred', Tasred Flax Lily
Diets bicolor, Fortnight Lily



Echium fastuosum, Pride of Madeira (See Note #4)
Lantana montevidensis, Lantana
Ligustrum japonicum 'Texanum', Texas Privet
Limonium perezii, Sea Lavender (See Note #4)
Myoporum parvifolium 'Putah Creek', No Common Name (See Note #5)
Nandina domestica, Heavenly Bamboo
Phoenix roebelenii, Pigmy Date Palm
Phormium species, Flax
Phormium tenax 'Jack Spratt', Dwarf Flax
Pittosporum tobira 'Wheeler's Dwarf', Dwarf Tobira
Pittosporum tobira, Common Tobira
Rosmarinus officinalis, Rosemary
Salvia mellifera 'Tera Seca', Tera Seca Sage
Strelitzia nicotia, Giant Bird of Paradise

Active Recreational Grass:

Marathon 2e, Dwarf Tall Fescue (See Note #2)



Area 7: Perimeter Parks

(Where adjacent to perimeter open-space area)

Trees such as, but not limited to:

Arbutus unedo*, Strawberry Tree
Ceratonia siliqua*, Carob Tree
Lophostemon confertus, Brisbane Box
Metrosideros exelsus**, New Zealand Christmas Tree
Plantanus racemosa*, California Sycamore (See Note #1)
Quercus agrifolia*, Coast Live Oak
Rhus lancea**, African Sumac



Shrubs, Ornamental Grasses & Groundcovers such as, but not limited to:



Acacia redolens Desert Carpet***, Desert Carpet
Agapanthus africanus, Lily-of-the-Nile
Agave attenuata*, Century Plant
Aloe Vera*, Medicinal Aloe
Baccharis pilularis 'Twin Peaks 2***, Dwarf Coyote Bush
Carex pansa, California Meadow Sedge (See Note #4)
Ceanothus gloriosus 'Point Reyes*', Point Reyes Creeper
Ceanothus horizontalis 'Yankee Point*', Yankee Point Creeper
Cistus 'Sunset', Rock Rose
Cistus hybridus*, White Rock Rose
Cotoneaster dammeri 'Lowfast', Bearberry Cotoneaster
Dianella species, Flax Lily
Diets bicolor, Fortnight Lily

Festuca mairei, Mare's Bunch Grass
Hesperaloe parviflora 'Brakelights*', Mountain States Red Yucca
Kniphofia uvaria*, Red Hot Poker
Limonium perezii***, Sea Lavender (See Note #4)
Mimulus aurantiacus*, Sticky Monkey Flower
Myoporum parvifolium 'Putah Creek*', (See Note #5)
Phormium tenax 'Jack Spratt', Dwarf Flax
Rosmarinus officinalis***, Rosemary
Salvia snomensis*, Creeping Sage
Yucca schidigera*, Mojave Yucca
Yucca whipplei*, Foothill Yucca



Slope Restoration Hydroseed Mix:

Camissonia cheiranthifolia*, Beach Primrose
Eschscholzia maritima*, California Poppy
Lasthenia californica*, California Goldfields
Lotus hamatus, San Diego Bird's Foot Trefoil
Lupinus nanus, Dwarf Lupine
Plantago erecta*, California Plantain
Trifolium gracilentum, Pinpoint Clover

Area 8: Interior Slopes & Planted Walls

(Those slopes not adjacent to Glenn Ranch Road, Saddleback Ranch Road or the project perimeter)

Trees such as, but not limited to:

Acacia baileyana, Bialeley Acacia
Arbutus unedo*, Strawberry Tree
Cercis occidentalis*, Western Redbud
Jacaranda mimosifolia, Jacaranda
Lophostemon confertus, Brisbane Box
Prosopis chilensis, Chilean Mesquite
Prunus ilicifolia Lyonii*, Catalina Cherry
Quercus agrifolia*, Coast Live Oak
Rhus lancea**, African Sumac
Umbellularia californica*, California Bay Laurel



Slope Large Shrubs, (Used in limited quantities)

Echium fastuosum, Pride of Madeira
Heteromeles arbutifolia**, Toyon
Phormium species, (Flax)
Rhus integrifolia*, Lemonade Berry
Rhus ovata**, Sugarbush
Sambucus species*, Elderberry



Slope Sprawling Shrubs, Vines, Low Shrubs, Groundcovers, Succulents & Cacti



Acacia redolens Desert Carpet**, Desert Carpet
Agave attenuata*, Century Plant
Baccharis pilularis 'Twin Peaks 2', Dwarf Coyote Bush
Bougainvillea species**, Prostrate Bougainvillea
Ceanothus gloriosus 'Point Reyes', Point Reyes Creeper
Ceanothus horizontalis 'Yankee Point', Yankee Point Creeper
Cistus 'Sunset', Rock Rose
Coprosma x kirkii*, Creeping Mirror Plant
Cotoneaster dammeri 'Lowfast', Bearberry Cotoneaster
Lantana montevidensis*, Lantana
Limonium perezii***, Sea Lavender (See Note #4)
Mimulus aurantiacus*, Sticky Monkey Flower
Myoporum parvifolium 'Putah Creek', No Common Name (See Note #5)
Oenothera speciosa 'Rosea', Pink Evening Primrose
Rosmarinus officinalis 'Huntington Carpet'***, Prostrate Rosemary
Senecio mandraliscae, Kleinia
Tecomaria capensis*, Cape Honeysuckle

Slope Restoration Hydroseed Mix:

Camissonia cheiranthifolia*, Beach Primrose
Encelia californica*, Coast Sunflower
Eriophyllum confertiflorum*, Golden Yarrow
Eschscholzia maritima*, California Poppy
Heliathemum scoparium*, Rush Rose
Lasthenia californica*, California Goldfields
Lotus hamatus, San Diego Bird's Foot Trefoil
Lupinus nanus, Dwarf Lupine
Plantago erecta*, California Plantain
Trifolium gracilentum, Pinpoint Clover



Area 8: Interior Slopes & Planted Walls (Continued...)

Planted Retaining Wall Sprawling Shrubs & Vines

Acacia redolens Desert Carpet*, Desert Carpet
 Antigonon leptopus, San Miguel Coral Vine
 Baccharis pilularis 'Twin Peaks 2'* , Dwarf Coyote Bush
 Bougainvillea species*, Prostrate Bougainvillea
 Calystegia macrostegia, Island Morning Glory
 Ceanothus gloriosus 'Point Reyes'* , Point Reyes Creeper
 Ficus pumila, Creeping Fig
 Lantana montevidensis*, Lantana
 Lonicera japonica 'Halliana'***, Hall's Honeysuckle
 Myoporum parvifolium 'Putah Creek'* , No Common Name (See Note #5)
 Vitis girdiana*, Desert Wild Grape



Planted Retaining Wall Hydroseed Mix:

Camissonia cheiranthifolia, Beach Primrose
 Eriophyllum confertiflorum, Golden Yarrow
 Lasthenia californica, California Goldfields
 Lotus purshianus, Spanish Clover
 Lotus salsuginosus, Coastal Bird's Foot Trefoil
 Lotus scoparius, Deerweed
 Mimulus aurantiacus, Sticky Monkey Flower
 Plantago erecta, California Plantain

Area 9: Transition Slopes & Planted Walls Within the Fuel Modification Zones

Slope Trees

Cercis occidentalis*, Western Redbud
 Plantanus racemosa*, California Sycamore (See Note #1)
 Prunus ilicifolia Lyonii*, Catalina Cherry
 Quercus agrifolia*, Coast Live Oak
 Rhus lancea**, African Sumac
 Sambucus mexicana*, Mexican Elderberry



Slope Large Shrubs, (Used in limited quantities)

Echium fastuosum, Pride of Madeira
 Fremontodendron californica 'California Glory'* , California Flannelbush
 Heteromeles arbutifolia**, Toyon
 Rhus integrifolia*, Lemonade Berry
 Rhus ovata**, Sugarbush
 Ribes viburnifolium*, Evergreen Currant
 Sambucus species*, Elderberry

Shrubs, Vines, & Groundcovers such as, but not limited to:

Agave attenuata*, Century Plant
 Archtostapylos hiikeri 'Monterey Carpet'* , Monterey Carpet Manzanita
 Baccharis pilularis 'Twin Peaks 2'***, Dwarf Coyote Bush
 Ceanothus gloriosus 'Point Reyes'* , Point Reyes Creeper
 Ceanothus horizontalis 'Yankee Point'* , Yankee Point Creeper
 Clematis pauciflora, Ropevine
 Coprosma x kirkii*, Creeping Mirror Plant
 Cotoneaster dammeri 'Lowfast', Bearberry Cotoneaster



Area 9: Transition Slopes & Planted Walls (Continued...)

Shrubs, Vines, & Groundcovers such as, but not limited to:

Keckiella cordifolia*, Heart-Leaved Penstemon
 Kniphofia uvaria*, Red Hot Poker
 Mimulus aurantiacus*, Sticky Monkey Flower
 Oenothera speciosa 'Rosea'*, Pink Evening Primrose
 Opuntia littoralis*, Coastal Prickly Pear Cactus
 Sarcostemma cynanchoides, Climbing Milkweed
 Solanum xanthii*, Nightshade
 Vitis californica*, California Wild Grape
 Yucca schidigera*, Mojave Yucca
 Yucca whipplei*, Foothill Yucca



Slope Restoration Hydroseed Mix:

Camissonia cheiranthifolia*, Beach Primrose
 Encelia californica*, Coast Sunflower
 Eriophyllum confertiflorum*, Golden Yarrow
 Eschscholzia maritima*, California Poppy
 Heliathemum scoparium*, Rush Rose
 Lasthenia californica*, California Goldfields
 Lotus hamatus, San Diego Bird's Foot Trefoil
 Lupinus nanus, Dwarf Lupine
 Plantago erecta*, California Plantain
 Trifolium gracilentum, Pinpoint Clover



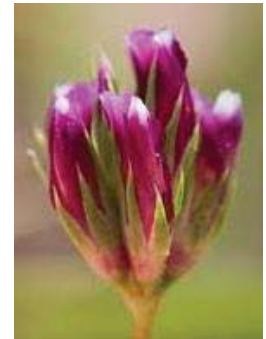
Planted Retaining Wall Sprawling Shrubs & Vines

Baccharis pilularis 'Twin Peaks 2'***, Dwarf Coyote Bush
 Calystegia macrostegia, Island Morning Glory
 Ceanothus gloriosus 'Point Reyes'*, Point Reyes Creeper
 Clematis lasiantha, Pipestream Clematis
 Clematis pauciflora, Ropevine
 Coprosma x kirkii*, Creeping Mirror Plant
 Cotoneaster dammeri 'Lowfast', Bearberry Cotoneaster
 Keckiella cordifolia*, Heart-Leaved Penstemon
 Oenothera speciosa 'Rosea'*, Pink Evening Primrose
 Sarcostemma cynanchoides, Climbing Milkweed
 Solanum xanthii*, Nightshade
 Vitis girdiana***, Desert Wild Grape



Planted Retaining Wall Hydroseed Mix:

Achillea millefolium, Common Yarrow
 Camissonia cheiranthifolia, Beach Primrose
 Clarkia bottsae, Punchbowl Godetia
 Eriophyllum confertiflorum, Golden Yarrow
 Eschscholzia californica, Golden Poppy
 Lasthenia californica, California Goldfields
 Lotus scoparius, Deerweed
 Melica imperfecta, Smallflower Melic
 Mimulus aurantiacus, Sticky Monkey Flower



Area 10: Naturalized Perimeter Slopes



Trees such as, but not limited to:

*Cercis occidentalis**, Western Redbud
Prunus ilicifolia Lyonii*, Catalina Cherry
*Quercus agrifolia**, Coast Live Oak

Slope Large Shrubs, (Used in limited quantities)

*Sambucus mexicana**, Mexican Elderberry
Fremontodendron californica 'California Glory'*, California Flannelbush
*Ribes viburnifolium**, Evergreen Currant
*Sambucus species**, Elderberry

Shrubs, Vines & Groundcovers such as, but not limited to:

*Agave attenuata**, Century Plant
Baccharis pilularis 'Twin Peaks 2'*, Dwarf Coyote Bush
Clematis pauciflora, (Ropevine)
*Coprosma x kirkii**, Creeping Mirror Plant
*Keckiella cordifolia**, Heart-Leaved Penstemon
*Kniphofia uvaria**, Red Hot Poker
Oenothera speciosa 'Rosea'*, Pink Evening Primrose
*Opuntia littoralis**, Coastal Prickly Pear Cactus
Sarcostemma cynanchoides, Climbing Milkweed
*Solanum xantii**, Nightshade
*Vitis californica**, California Wild Grape
*Yucca schidigera**, Mojave Yucca
*Yucca whipplei**, Foothill Yucca



Slope Restoration Hydroseed Mix:



Achillea millefolium, Common Yarrow
Clarkia bottae, Punchbowl Godetia
Encelia californica, Coast Sunflower
Eriophyllum confertiflorum, Golden Yarrow
Eschscholzia californica, Golden Poppy
Lasthenia californica, California Goldfields
Lotus scoparius, Deerweed
Melica imperfecta, Smallflower Melic
Mimulus aurantiacus, Sticky Monkey Flower
Nassella pulchra, Purple Needle Grass
Sisyrinchium bellum, Blue-Eyed Grass
Vulpia microstachys, Small Fescue

Planted Retaining Wall Sprawling Shrubs & Vines

Baccharis pilularis 'Twin Peaks 2'*, Dwarf Coyote Bush
Calystegia macrostegia, Island Morning Glory
Clematis lasiantha, Pipestream Clematis
Clematis pauciflora, Ropevine
*Coprosma x kirkii**, Creeping Mirror Plant
*Keckiella cordifolia**, Heart-Leaved Penstemon
Oenothera speciosa 'Rosea'*, Pink Evening Primrose
Sarcostemma cynanchoides, Climbing Milkweed
Solanum xantii, Nightshade
*Vitis girdiana**, Desert Wild Grape



Area 10: Naturalized Perimeter Slopes (Continued...)

Planted Retaining Wall Hydroseed Mix:

Achillea millefolium, Common Yarrow
Atriplex semibaccata, Creeping Saltbush
Camissonia cheiranthifolia, Beach Primrose
Clarkia bottsae, Punchbowl Godetia
Encelia californica, Coast Sunflower
Eriophyllum confertiflorum, Golden Yarrow
Eschscholzia californica, Golden Poppy
Lasthenia californica, California Goldfields
Lotus scoparius, Deerweed
Melica imperfecta, Smallflower Melic
Mimulus aurantiacus, Sticky Monkey Flower



Area 10A: Alternate Southern Cactus Scrub Vegetation

Plant Material within the Fuel Modification Zones: (Per Cactus Scrub Revegation & Management Plan)

Shrubs, Vines, Grasses & Groundcovers within the Fuel Modification Zones such as, but not limited to:

Baccharis pilularis*, Dwarf Coyote Bush
Cneoridium dumosum*, Bushrue
Encelia californica*, Coast Sunflower
Heteromeles arbutifolia, Toyon
Isocoma menziesii*, Coastal Goldbush
Isomeris arborea*, Bladderpod
Keckiella cordifolia*, Keckiella
Mimulus aurantiacus*, Sticky Monkey Flower
Nassella lepida*, Foothill Needlegrass
Opuntia littoralis, Coast Prickly Pear Cactus
Opuntia prolifera, Coastal Cholla
Rhus integrifolia, Lemonade Berry
Sambucus Mexicana, Mexican Elderberry
Solanum xantii, Nightshade
Yucca whipplei*, Foothill Yucca



Cascading Vines for Planted Walls such as, but not limited to:

Keckiella cordifolia*, Keckiella
Solanum xantii, Nightshade

Hydroseed Mix within the Fuel Modification Zones:

Artemisia californica, California Sagebrush
Eriogonum fasciculatum, Flat Top Buckwheat
Eriophyllum confertiflorum*, Golden Yarrow
Eschscholzia californica*, California Poppy
Gnaphalium californicum*, California Everlasting
Lotus scoparius Deerweed
Lupinus truncates, Collar Lupine
Mimulus aurantiacus*, Sticky Monkey Flower
Nassella lepida*, Foothill Needlegrass
Nassella pulchra*, Foothill Needlegrass
Plagiobothrys nothofulvus, Popcorn Flower
Plantago insularis*, Woolly Plantain
Sisyrinchium bellum*, Blue Eyed Grass
Salvia apiana, White Sage
Salvia mellifera, Black Sage



Areas 11: Natural Open Space

(Portions subject to fuel modification)

Notes:

* Indicates plants identified on the Orange County Fire Authority's list of "Acceptable Plant Species for Homes Subject to Wildfires" (Where applicable to fuel modification zones)

** Indicates plants identified on the Orange County Fire Authority's list of "Acceptable Plant Species for Homes Subject to Wildfires" that may be used on a limited basis (maximum 30% of area, where applicable to fuel modification zones)

*** Indicates plants identified on the Orange County Fire Authority's list of "Acceptable Plant Species for Homes Subject to Wildfires" that may only be used in fuel modification zones, not adjacent to reserve lands.

1. *Platanus racemosa* may be used on slopes (in limited quantities) towards the toe of slopes, in compliance with OCFA requirements.
2. *Marathon 2e Fescue Lawn* may only be used in active recreational areas and in minimal amounts within residential applications.
3. *Phoenix dactylifera* 'Medjool' & *Phoenix reclinata* Palms are not permitted within 250' of any fuel modification zone, creek or wetland area.
4. Indicates plant material that is not permitted within 250' of a creek or any wetland area.
5. *Myoporum parvifolium* 'Putah Creek' is not permitted within 250' of a creek, any wetland area, re-vegetation area or natural open-space.
6. *Cupressus sempervirens* *Strica* (Italian Cypress) is permitted only within the project's interior in limited quantities. These trees must be a minimum of 100 feet away from any part of the open-space preserve.

8.4 COMMUNITY OPEN SPACE PLAN

The Portola Center Community Open Space Plan includes a Fuel Modification Plan and a Landscape Maintenance Plan that cover the perimeter areas, interior slopes, and community landscaped areas of the Project. The Plan focuses on vegetation management and landscape maintenance to achieve the multiple objectives, including: high quality landscape design, screening and other landscape functionality, and high levels of fire safety and landscape quality. The Portola Center Public Facilities Financing & Phasing Plan provides additional details on the landscape maintenance approach and responsibilities for the Project.

The Portola Center Project site is surrounded by native habitats and open space lands. To the west of the Project site is the Whiting Ranch Wilderness Park, to the South is the Southern California Edison Transmission Corridor Property which is predominantly in a state of natural open space and native habitats, and to the east is the Aliso Creek Open Space Preserve also covered in native habitats. Topography surrounding the site generally falls off to the west, south, and east with the Project site sitting above much of the native habitat that presents a wildland fire risk to the Project. To mitigate this risk, the Project includes permanently irrigated retaining walls and slopes along its southwestern and southeastern boundaries that face the wildland areas. The permanently irrigated slopes and walls in conjunction with the Project's Landscape Maintenance Plan will ensure that the intended vegetation cover for the walls and perimeter areas is maintained and not allowed to dry out or convert to another more potentially flammable type of vegetation.

These Project areas will be managed as "Fuel Modification Zones" per the requirements for FMZ vegetation management of the Orange County Fire Authority. To meet OCFA's requirements, the Project's Fuel Modification Zones are comprised of a ten to twenty-foot-wide permanently irrigated Zone A, generally located inside and within the rear yard area of the private residential lots, and an expanded permanently irrigated "Zone B" that varies in width from 100 feet along the Project's southwestern boundary to 150 feet along the Projects' southeastern boundary, or 25 to 75 feet wider than the standard Zone B width.

The Landscape Concept Plan for the Project identifies a landscape palette for the Project's FMZ areas that will be limited an OCFA-approved plant palette and subject to strict annual to semi-annual vegetation thinning and removal requirements. The Project's interior slopes between residential areas will also be subject to OCFA's interior slope vegetation management requirements. While less stringent than the FMZ areas, these areas will also require regular maintenance and vegetation thinning and removal. In addition to meeting OCFA's vegetation management requirements for interior slopes, these areas will also be subject to landscape maintenance related to maintaining the Project's high quality community design objectives.

To facilitate effective fire personnel access to the open space areas surrounding the Project, the Project includes multiple trail segments along its Perimeter and paseos between the neighborhoods to the trails and these open space areas giving the fire personnel direct and varied access around the Project site's perimeter to offsite wildland areas that may be threatened or enflamed during a wildfire event. The paseos have been located specifically for the purpose of providing fire personnel access to these offsite open space areas. More than 90% of the perimeter of the Project site includes trails that can be used for this purpose.

Exhibit 6-14 below shows the Project's Fuel Modification Zones, trails, and paseos that have been integrated into the Project's Open Space and Fuel Modification Plan. In conjunction with the Project's Open Space and Fuel Modification Plan, the Project's Landscape Plan, the Project's perimeter retaining walls, the Portola Center Trail System, and multiple fire personnel and pedestrian access "paseos" out to the open space areas provide a comprehensive approach to ensuring the Project's defensibility against wildland fires.

Fuel Modification Zones



PORTOLA CENTER

- Fuel Management Zone (FMZ)
Naturalized FMZ Planting - Review by OCFA
- Fuel Management Zone - Ornamental
Ornamental FMZ Planting - Review by OCFA
- Interior Slope Planting
Plant Palette Review by OCFA
- Park Planting - Invigorated Park / Turf
Located Inside of the FMZ
- Detention Basin Planting
- Fire Protection Access Points
- Triliss
Located within the FMZ
- Project FMZ
- Plant Palette



**Exhibit 8-4
Portola Center Open Space & Fuel Modification Plan**

