PARKWAY DESIGN GUIDE

City of Signal Hill

May 2014

PREFACE

Why Convert?

The City of Signal Hill, in an effort to utilize water efficient strategies, has established guidelines for converting water demanding turf into water efficient landscaping. The guidelines detail the City's requirements for converting City parkway (the landscaped area between the curb and the sidewalk), and obtaining a permit for conversion.

By converting your parkways, you will not only assist our City in preserving one of its most precious commodities, you will save money as well?

Water Conservation Facts:

Did you know that up to 60% of the water used in the summer is for your lawn?

- Water the lawn and garden at dawn when the day is cool; watering during the heat of the day can account for up to 60% evaporation loss.
- Mulch the garden to retain moisture in the soil.
- Use a bucket of suds to wash the car and only rinse with the hose using a nozzle.
- Sweep sidewalks and driveways instead of hosing them.

Stormwater Facts:

Did you know the city is mandated to reduce water in the gutter by 20%?

- Direct rain gutters to landscaped areas rather than concrete areas.
- Vegetation in parkways captures pollutants and sediment.
- Capture rainwater to reuse for irrigation.
- Drought tolerant plans reduce the risk of overspray which carries pollutants into our waterways.
- Increase the amount of landscaped areas and reduce concrete areas.

Some other facts:

- Gasoline-powered landscape equipment (mowers, trimmers, blowers, chainsaws) account for over 5% of our urban air pollution.
- Residential application of pesticides is typically at a rate of 20 times that of farmers per acre; it results in many untended results.
- Yard wastes (mostly grass clippings) comprise 20% of municipal solid waste collected and most still ends up in landfills.
- Landscaping accounts for more than half the water Californians use at home.
- Water your lawn only when it needs it. If you step on the grass and it springs back up when you move, it doesn't need water. If it stays flat, it does need water.
- If you water your grass and trees more heavily, but less often, this saves water and builds stronger roots.
- Weather based irrigation controllers that use weather data to control watering will prevent over irrigation and runoff from your property.

WHY ARE PARKWAYS IMPORTANT?

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The parkway is the strip of land between the street and the walkway. In other geographic regions, it is known as tree lawn or planting strip. The parkway and walkway together make up the sidewalk, which is part of the public right-of-way. Street trees are planted in the parkway and are the most important plants in the parkway.

Parkways are important to individual property owners and the City as a whole for the following reasons:

- Parkways provide soil volume that street trees need to grow into healthy, mature trees that provide shade, collect stormwater, consume carbon and provide other environmental and health benefits.
- Parkways can collect stormwater and irrigation runoff and return it to the groundwater table.
- Parkways provide a buffer between pedestrians on the walkway and cars in the street.
- Parkways improve the curb appeal of your home, potentially increasing its value.
- Parkways provide a buffer between pedestrians on the sidewalk and cars in the street.
- Parkways enhance the visual quality of the city.

In Signal Hill, the adjacent property owner is responsible for maintaining all of the parkway except the street trees, which are maintained by the City. They can only be planted, trimmed, and removed by the City and not by private property owners.

Parkways can be designed in a variety of ways, depending on the individual property owner's design objectives and commitment to maintenance. However, all parkways should require relatively little supplemental water, little mowing and little fertilizing to reduce their carbon footprint. In particular, conventional grass parkways that require high levels of supplemental water and regular mowing and fertilizing should be avoided. Signal Hill property owners are encouraged to convert their conventional grass parkways (and front yards) into drought-tolerant, sustainable parkways (and front yards). This brief document provides guidance for making that transition.

PARKWAY	WALKWAY	LANDSCAPED
SIDEWALK		SETBACK

Typical residential parkway of the past, based on those on the East Coast and Midwest where supplemental irrigation typically is not required and where parkways are called "tree lawns."

PARKWAY	WALKWAY	LAND-SCAPED
SIDEWALK		SET BACK

In Southern California, we need to reduce the use turf grass to reduce water use and the greenhouse gases generated by lawn mowers. The parkway of the future will be drought-tolerant, collect runoff, and require minimal gas or electric powered maintenance.

To reduce water use and carbon emissions and provide storm and irrigation water infiltration, soil volume for street trees, a buffer between pedestrians and the street, pedestrian access between the street and walkway, visibility of both motorists and pedestrians, erosion/fugitive dust control, and the visual benefits of landscaped parkways, all parkways shall be:

- As wide as possible up to 8 feet wide, given minimum walkways widths of 4 feet in residential zones and 5 feet in commercial zones.
- At the same elevation as the curb and walkway within 6 inches of them, for example, soil 2 inches below edge of curb and walkway elevations and covered with 2 inches of mulch, so the surface elevations of the walkway or curb and adjacent parkway are the same.
- At least 75% unpaved and either 1) slightly swaled, that is, sloping a few inches to the center at not more than a 3:1 slope, to collect storm and irrigation water if the plant materials in the parkway are not walkable or 2) at the same finished elevation as the walkway if the plant materials in the parkway are walkable.
- Irrigated in a manner that results in no overspray onto the walkway or street, e.g., buried in-line drip irrigation system.
- At least 50% covered with plant materials, which 1) do not require mowing more frequently than once every few months, 2) are drought tolerant and can survive with irrigation only occasionally from November - March, once a week April - June, and twice a week July - October (for example, plants listed in WUCOLS III[1] as having Moderate, Low or Very Low water use- see Table 1 for examples), 3) do not exceed a height of 2 feet (excluding trees), 4) do not have thorns or sharp edges adjacent to any walkway or curb, and 5) are located at least 4 feet from any tree trunk.
- Where unpaved, covered with a permeable natural material, e.g., mulch, stabilized decomposed granite, gravel, or stones that prevent erosion and dust.

[1] WUCOLS, an acronym for Water Use Classification of Landscape Species, can be downloaded at www.water.ca.gov/wateruseefficiency/docs/wucols00.pdf

For parkways adjacent to curbside parking, if the parkway planting is not walkable (see Table 1 for examples of plants that are walkable), a means of access from the curb to the walkway shall be provided . It may vary with the adjacent use and street characteristics, for example:

- On heavily trafficked streets (major and minor arterials), an 18 inches wide paved, walkable strip along the back of the curb that is at the same finished elevation as the curb should be provided.
- Where there are striped curbside parking spaces, a path across the parkway should be provided every two cars between two marked spaces.
- Adjacent to single-family homes and low-density multi-family housing (2 to 4 units/5,000 SF lot), stepping stones or a walkway across the parkway should be provided every 50 feet.

A “landing strip” at the curb allows easy access from parked cars.

Where there is no curbside parking and the parkway is not walkable, a path or stepping stones shall be provided every 50 feet.

As specified on page 2, plants with thorns should not be planted adjacent to any walkway where someone might come in contact with the thorns.

A path across the parkway completes access from parked cars to the walkway.

WHAT'S YOUR TYPE?

Type 1 Parkway - Low-Maintenance, Walkable Plants

If you want a parkway that requires minimal design and maintenance, install walkable plants. Table 1 lists some examples. Most of the grasses listed do not require mowing. Sedge, Buffalo, and Grama Grass can be mowed a few times a year to maintain a lawn-like appearance.

Type 2 Parkway - Low-Growing, Low-Maintenance Plants

If you want a parkway that requires a little more design and the addition of a walkway or stepping stones, but still requires minimal maintenance, plant low-growing grasses and/or groundcover. There are many choices; Table 2 lists some of them. Your parkway might be meadow-like in appearance with a mix of grasses and perennials, including some from Table 1 and some from Table 2.

Type 3 Parkway - Complement Your Front Yard

If you want a parkway that is an extension of your sustainable, non-lawn front garden, use low- to medium-height grasses, shrubs and perennials. There are many plant choices with this parkway type. Table 3 lists some reliable drought-tolerant natives that are taller - but still less than 3 feet tall - that can be mixed in with plants in Table 2.

Notes: 1. There are many other plants that are suitable for parkways, which you can find in the on-line resources. Email us your parkway success stories and we will add them to the parkway list. 2. Artificial turf may be used upon approval.

DISCOURAGED DESIGN ELEMENTS

- Use of hardscape materials that exceed 50% of the total parkway surface area.
- Use of pebbles and small to medium rocks 3 inches in diameter or smaller.
- Use of a uniform design that only uses one material.
- Use of plants with thorns or sharp edges.
- Use of structures within the parkway.
- Use of plant materials that exceed 2 feet in height (excluding trees).

DIGGING IN

Preparing Your Parkway Soil

The most important thing you can do to ensure your parkway's success is to prepare the soil. Soil preparation saves you money in the long run because it reduces the need to replace plants, lowers water use and reduces fertilizer applications.

- Remove all existing turf - let it die and dig it out.
- Remove enough soil to create the swale described on page 2 and then remove 2-3 inches more.
- Till the parkway soil to depth of one foot.
- Amend it with compost.

Watering Your Drought-Tolerant Parkway

Too much water can kill drought-tolerant plants. So, don't over-water, especially in clay soil. The best approach is to water only when the soil is dry at a depth of 3 to 4 inches. Or, turn on your in-line drip irrigation three times a week (45 minutes each time) to establish your parkway (first 3 months); then, once it is established, once a week from October through March and twice a week from April through September.

On-Line Resources

Use these resources see images, recommended spacing, and detailed descriptions of these plants and others:

bewaterwise.com
theodorepayne.org
socalwatersmart.com
sunset.com and *Sunset Garden Book*
California Native Plants for the Garden Bornstein et al.

Table Legend

N = California or Southwest native
L= Low water use
M = Moderate water use
o.c. = on center

Table 1. Example Type 1 Walkable Plants - No Path Required

Botanical Name	Common Name	Water Use	Height x Spacing	Notes
Low Water Use/Low or No Mow Turf or Grass-like Perennials				
Buchloe dactyloides UC Verde™	UC Verde™ Buffalo Grass	N, L	6” x 6”	winter dormant (brown)
Bouteloua gracilis 'Hachita'	'Hachita' Blue Grama Grass	N. L	6” x 6”	
Carex pansa (*C. praegracilis*)	California Meadow Sedge	N, M	6” x 9”+	Grows in shade or sun
Low-Growing Perennials (12 inches or less)				
Achillea millifollium cultivars	Achillea cultivars	L	12” x 3’	mow 3-4x/year
Chamaemelum nobile	Chamomile	M	8” x 12”	
Dymondia margaretae	Dymondia	L	3” x 6”	slow growing

Other untested ideas: there are several lawn substitute seed mixes, including Fleur de Lawn and Ecology Lawn, that may work.

Buchloe dactyloides UC Verde™

Bouteloua gracilis ‘Hachita’

Carex pansa (*C. praegracilis*)

Achillea millifollium cultivar mowed

Chamomile

Dymondia margaretae

Table 2 Example Type 2 Low-Growing, Low-Maintenance Plants - Path Required

Botanical Name	Common Name	Water Use	Height x Spacing	Notes
Low-Growing Grasses or Grass-like Perennials (18 inches or less)				
Carex divulsa (*C. tumincola*)	Berkeley Sedge	N, M	12" x 2'	
Festuca glauca 'Siskiyou Blue' & other var.	Blue Fescue	M	12" x 12"	
Pennisetum alopecuroides 'Little Bunny'	LIttle Bunny Fountain Grass	L	12" x 12"	
Sesleria autumnalis	Autumn Moor Grass	M	15" x 2'	
Low-Growing Perennials/Succulents (18 inches or less)				
Achillea millifollium 'Terra Cotta'	Yarrow Terra Cotta & other cultivars	L	12" x 4'	mow 1/year for meadow
Aptenia cordifolia/A. cordifolia 'Red Apple'	Heartleaf Ice Plant	L	6" x 12"	
Delosperma cooperi	Trailing Ice Plant	L	8" x 15"	
Drosanthemum floribundum	Rosea Ice Plant	L	8" x 15"	
Dudleya hassei	Santa Catalina Live Forever	N, VL	8" x 18"	
Erigeron karvinskianus & E.glaucus	Santa Barbara & Seaside Daisy	N,M	12" x 2'	
Fragaria vesca ssp. Californicia or *F. chiloensis*	Woodland or Coastal Strawberry	N, M	8" x 2'	Grows in shade
Gazania rigens leucolaena	Gazania (grayish lvs.)	M	6" x 2'	
Gazania linearis 'Colorado Gold'	Colorado Gold Gazania (green lvs)	M	6" x 2'	
Hypericum calycinum	Creeping St. Johnswort	M	12" x 12"	Clip yearly; likes shade
Iris douglasiana & 'Pacific Coast Hybrids'	Douglas & Pacific Coast Iris	N, M	12" x 18"	Mix with grasses
Lantana Patriot series cultivars	Dwarf Lantana	L	12" x	
Lessingia filaginifolia 'Silver Carpet'	Beach Aster	L	12" x 4'	
Monardella villosa	Coyote Mint	N, VL	15" x 2'	
Nepeta mussinii (N. faassenii)	Catmint	M	15" x 18"	
Osteospermum fruitcosum	Trailing African Daisy	L	6" x 18"	
Oenothera caespitosa & other species	Tufted evening primrose	N,L	12" x 2'	
Rosmarinus officinalis 'Huntington Carpet' or other prostrate varieties	Prostrate Rosemary	L	18" x 2'	
Scaevola aemula varieties	Fairy Fan Flower		8" x 2'+	
Senicio serpens, S. mandraeliscae	no common name	L	12" x 2'	
Thymus species	Thyme	M	8" x 2'	
Verbena peruviana & hybrids	Verbena	L	6" x 2'	
Vinca minor	Dwarf Periwinkle	M	12" x 4'	Plant in shade
Low-Growing Shrubs (18 inches or less) - all require regular trimming at parkway edges				
Ceanothus 'Centennial'		N, L	18" x 4'	needs good drainage
Cotoneaster dammeri 'Lowfast', *C. salicifolia* 'Repens', *C. apiculatus* 'Tom Thumb'	Groundcover Cotoneaster varieties	M	18" x 4'	
Juniperus horizontalis & J. procumbens var.	Groundcover Juniper varieties	L	6-18" x 4'	see Sunset for list

Carex divulsa

Festuca glauca

Sesleria autumnalis

Pennisetum ‘Litttle Bunny”

Achillea ‘Terra Cotta’

Apena cordifolia ‘Red Apple’

Delosperma cooperi

Drosanthemum floribundum

Dudleya hassei

Erigeron glaucus ‘Wayne Roderick’

Gazania rigens leucolaena

Gazania linearis

Fragarea chiloensis

Hypericum calycinum

Iris douglasiana

Lantana ‘Patriot Rainbow’

Lessingia filaginifolia 'Silver Carpet'

Mondardella villosa

Nepeta mussinii

Osteospermum fruitcosum

Oenothera caespitosa

Rosmarinus officinalis

Scaevola aemula

Senicio mandraeliscae

Thymus

Verbena peruviana varieties

Vinca minor

Ceanothus 'Centennial'

Cotoneaster dammeri

Juniperus procumbens

Juniperus horizontalis var.

Table 3 Example Type 3 Medium Height, Drought Tolerant Plants - Path and More Maintenance Required

Botanical Name	Common Name	Water Use	Height x Spacing	Notes
18" to 36" Tall Grasses				
Helictotrichon sempervirens	Blue Oat Grass	L	2' x 2'	
Leymus condensatus 'Canyon Prince'	Canyon Prince Wild Rye	N, L	2' x 3'	
Nasella tenuissima (Stipa tenuissima)	Mexican Feather Grass	N,V L	2' x 2'	
Pennisetum orientale	Oriental Fountain Grass	L	18" x 18"	
Pennisetum setaceum 'Eaton Canyon'	Dwarf Red Fountain Grass	L	2' x 3'	
18" to 36" Tall Perennials/Succulents				
Aloe 'Blue Elf' & other small varieties	Blue Elf Aloe	L	18" x 18"	
Anigozanthos 'Bush Pearl', 'Bush Ranger' & 'Bush Devil'	Kangaroo Paws varieties		2' x 2'	
Limonium perezii	Statice	L	2' x 3'	+ flower height
Lomondra longifolia 'Breeze' & 'LIttle Con'	Lomondra cultivars	M	2' x 3'	
Penstemon heterophyllus 'Margarita BOP'	Foothill Penstimon	N, M	18" x 18"	
Phormium 'Tom Thumb' & 'Jack Spratt'	Small Flax hybrids	M	2' x 2'	
18" to 36" Tall Shrubs				
Arctostaphylos densiflora 'Pacific Mist'		N, L	2' x 6'	
Artemisia pycnocephala 'David's Choice'	David's Choice Sandhill Sagebrush	N,	2' x 3'	
Ceanothus gloriosus 'Anchor Bay'		N, L	2' x 6'	
Cistus salvifolius	Sageleaf Rockrose	L	2' x 3'	
Iva hayesiana	Poverty Weed	N, VL	2' x 3'	
Lantana montevidensis	Trailing Lantana	L	2' x 3'	Cut back yearly
Lantana 'Gold Rush', 'New Gold' & 'Chapel Hill Yellow'			2' x 3'	Monrovia
Mimulus hybrids inc. 'Jelly Bean Yellow'	Shrubby Monkeyflower hybrids	N, L	2' x 3'	
Rosa Flower Carpet varieties	Groundcover Roses	M	2' x 3'	Monrovia
Salvia 'Bee's Bliss'	Bee's Bliss Sage	N, L	2' x 4'	

Helictotrichon sempervirens

Leymus condensatus ‘Canyon Prince’

Nasella tenuissima

Pennisetum orientale

Pennisetum setaceum 'Eaton Canyon'

Aloe 'Blue Elf'

Anigozanthos 'Bush Pearl'

Limonium perezii

Lomondra longifolia ‘Breeze’

Penstemon heterophyllus ‘Margarita BOP’

Phormium ‘Jack Spratt’

Arctostaphylos densiflora ‘Pacific Mist’

Artemisia pycnocephala ‘David’s Choice’

Ceanothus gloriosus 'Anchor Bay'

Ceanothus gloriosus 'Anchor Bay'

Cistus salvifolius

Iva hayesiana

Lantana montevidensis

Lantana 'Gold Rush'

Mimulus 'Jelly Bean Yellow'

White Flower Carpet Rose

Red Flower Carpet Rose

Amber Flower Carpet Rose

Salvia 'Bee's Bliss'

Good Examples of Type 1 Parkways (Walkable Plants)

California Meadow Sedge (*Carex pansa*) can manage with little or no supplemental water from November - April and irrigation once a week the rest of the year. It can be mowed a few times a year for a more lawn-like appearance.

UC Verde Buffalo grass (*Buchloe dactyloides* UC Verde™) is a drought-tolerant cultivar of MIdwest native Buffalo grass.

Dymondia (*Dymondia margaritae)* (Rangley Ave.) is a low growing, walkable groundcover.

Regularly mowed Yarrow (*Achillea millifollium)* is lawn-like.

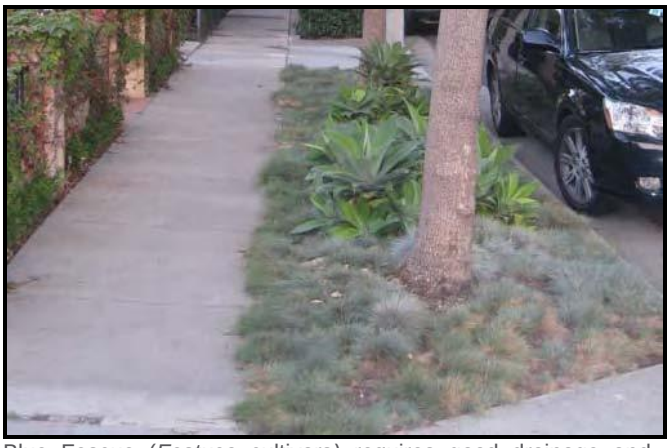
Good Examples of Type 2 Parkways

Berkeley Sedge (*Carex divulsa)* requires very little care and similar water to Californa Meadow Sedge.

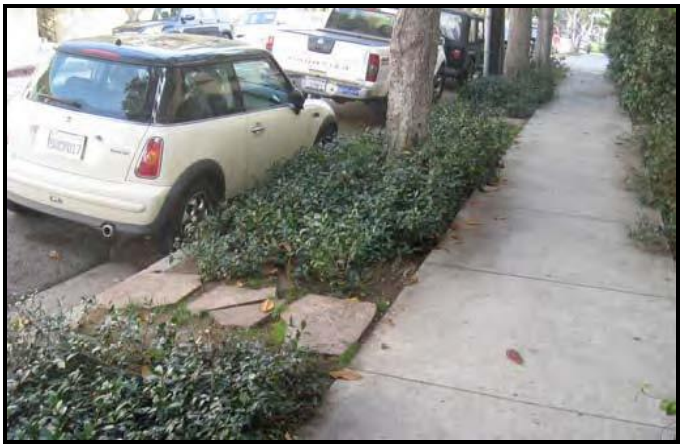
Gazanias are a reliable relatively drought-tolerant groundcover that tolerates light traffic.

Autumn Moor Grass (*Sesleria autumnalis)* requires very little care and similar water to the Sedges.

A prostrate Rosemary like 'Huntington Carpet'.

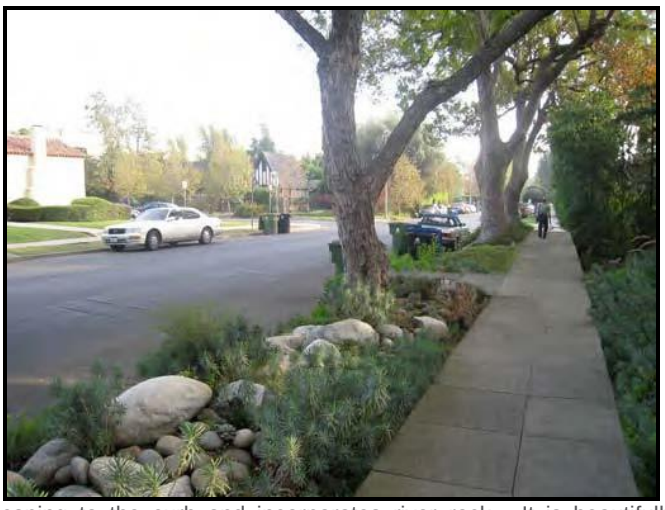


Blue Fescue (*Festuca* cultivars*)* requires good drainage and tolerate some shade.



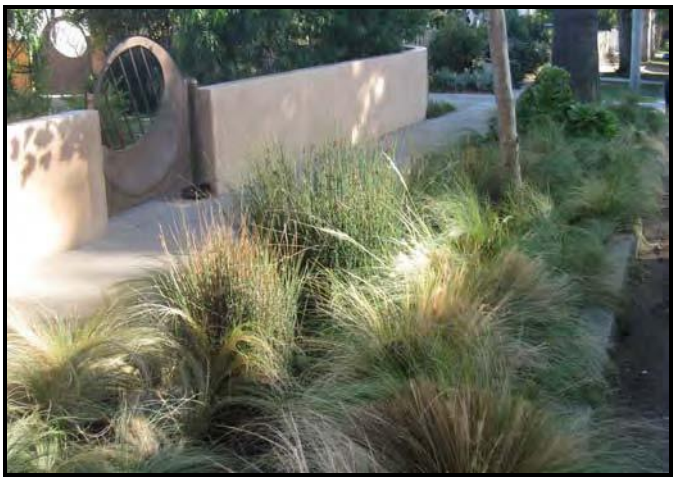
Dwarf Periwinkle (*Vinca minor)* is a good choice for a shady parkway.

Good Examples of Type 3 Parkways: Perennial Gardens



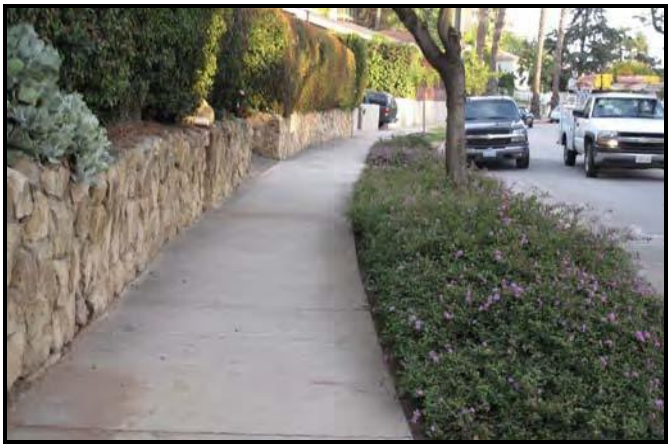
This mix of drought-tolerant perennials extends the front yard landscaping to the curb and incorporates river rock. It is beautifully maintained and would be a perfect example if the parkway were swaled rather than mounded.

Other Good Examples



Mexican Feather Grass (*Nasella tenuissima)* needs to be cut back to about 9" high every winter. It self-seeds and spreads but can be managed.

Autumn Moor Grass and other low, clumping grasses require little maintenance



Lantana needs to cut back so it does not become too tall and woody.

Special Parkway Conditions

While plants should not placed within 4’ of a tree trunk to reduce competition for nutrients, grasses and clumping perennials may be planted between large surface roots farther away, provided they do not adversely affect the tree

CITY OF SIGNAL HILL
2175 Cherry Avenue ◆ Signal Hill, CA 90755-3799

NO-FEE ENCROACHMENT PERMIT

PARKWAY LANDSCAPE PROJECT

Name: _____

Address: _____

Telephone: _____

Estimated Project Date: _____

Hereby names application for a permit to encroach into the public right-of-way of the City of Signal Hill, subject to the provisions of the City of Signal Hill Parkway Landscape Guidelines. In consideration of the execution of an encroachment permit pursuant to this application the applicant hereby agrees to indemnify, save, and keep the City of Signal ever, which the City of Signal Hill, its officers, agents or employees may suffer, sustain, incur, pay out as a result of any and all actions, suits, proceedings, claims and demands which may be brought, made, or filed against the City, its officers, agents and employees by reason of or arising out of, or in any manner connected with any and all operations authorized or permitted by the permit.

A No-Fee Permit is required in the City of Signal Hill for parkway landscape projects. For your convenience, the Public Works Department provides a Parkway Landscape Guidelines handbook to assist property and homeowners with your parkway landscape project, including suggestions on how to replace with new, water-efficient landscape. Please inquire about how to obtain the handbook before you start your project.

During work, this Permit must be made available upon request from an authorized representative of the City of Signal Hill. Keep Permit until project is completed.

Thank you.

_____ _____

Applicant Date

City staff use:

Approved by: _____

Date: _____

Fee: $0