

## OPPORTUNITY #2 - PRIORITY PATHWAYS & OUTLETS TREE PLANTING STRATEGIES

The Urban Forestry Opportunity (OPPORTUNITY #1) is a major project that will ultimately result in a total of between 1500-2000 trees planted within San Pedro along streets, within parks and open space areas, and on private property (See also OPPORTUNITY #8). The recommendations in this Opportunity cover geographic areas that may not be covered specifically by Opportunity #1, but may be covered by the other City programs and/or other funding sources.

In addition, it is important to utilize this Opportunity to discuss tree species selection in general, as there are a number of considerations that should be addressed when selecting tree species for planting projects regardless of which Opportunity the actual tree planting would fall into. Perhaps the biggest consideration is to make sure that the species selected are not vulnerable to any major pests. At the time of this writing there are two (2) very closely related but distinct species of beetles that are attacking a lengthy list of locally planted tree species and spreading a lethal disease. They are the polyphagous shot hole borer (PSHB) and Kuroshio Shot Hole Borer (KSHB), and they both spread Fusarium Dieback (FD) disease. Normally, an urban greening plan would not delve into this much detail related to threats to tree species. However, due to the speed with which this pest/disease complex is spreading within urban tree populations it is critical to understand the threat and plan accordingly when it comes to tree species recommendations.

The first thing to know is which commonly found and planted tree species in Southern California act as reproductive hosts for these two (2) pest/disease complexes. That list includes the following tree species:

1. California Sycamore (*Platanus racemosa*)
2. Coast Live Oak (*Quercus agrifolia*)
3. London Plane Tree (*Platanus x. acerifolia*)
4. Fremont or Western Cottonwood (*Populus fremontii*)
5. White Alder (*Alnus rhombifolia*)
6. Valley Oak (*Quercus lobata*)
7. Coral Tree (*Erythrina corallodendron*)
8. Blue Palo Verde (*Parkinsonia aculeata*)
9. Mimosa/Silk Tree (*Albizia julibrissin*)

10. Avocado (*Persea Americana*)

11. Red Willow (*Salix laevigata*)

12. Weeping Willow  
(*Salix babylonica*)

13. American Sweetgum  
(*Liquidambar styraciflua*)

14. Red Flowering Gum (*Eucalyptus ficifolia*)



Photo of mature group of California Sycamore—species best suited for open space plantings

15. Tree of Heaven  
(*Ailanthus altissima*)

16. Carrotwood  
(*Cupaniopsis anacardioides*)



Photo of rows of London Plane Trees planted in sidewalk cut-outs; species is well-suited in urban settings as street trees

Of the species listed above, several were recommended for the Cal

Fire grant project (part of OPPORTUNITY #1) that was funded in November 2015. These are:

1. California Sycamore  
(*Platanus racemosa*)

2. Coast Live Oak  
(*Quercus agrifolia*)

3. London Plane Tree  
(*Platanus x. acerifolia*)



Photo of Coast Live Oak—species is best suited to be planted in parks and open space settings. Ground cover under tree should be mulch rather than turf.

These species were initially selected because they are considered “large stature” trees, and can therefore store more carbon thereby reducing Greenhouse Gas (carbon dioxide) in a more significant way. They are also well-adapted to the type of micro-climate found in the Greater San Pedro Community. While it is important to take the threat to these species seriously,



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Photo of Canary Island Pine trees planted as street trees; species is well-suited in urban settings and performs quite well in San Pedro.

given the high amount of species diversity generally found in the existing street tree and park tree population, it is not necessary to over react and completely remove these species from the approved tree species list. How-

ever, it is prudent to make sure that we introduce additional tree species, not so prone to risk represented by the shot hole borer and associated Fusarium dieback disease.

There are a number of other viable large stature tree species that could be planted in San Pedro. From the original approved



Photo of Deodar Cedar trees planted as street trees in Los Angeles; species does well in Los Angeles in wide parkways along streets. It also performs well as majestic tree in open space environments

Cal Fire tree species list, there remain the following species:

1. Canary Island Pine (*Pinus canariensis*)
2. Deodar Cedar (*Cedrus deodora*)
3. Fern Pine (*Podocarpus gracilior*)
4. Holly Oak (*Quercus ilex*)



Photo of Fern Pine planted as street tree. This species is currently planted throughout San Pedro and performing well.

All of these are considered large stature trees and can provide significant GHG reduction benefits. They are well adapted to the micro-

climates found in San Pedro. All of them do require large grow spaces, which means that to plant them in a street tree environment they will need a minimum of a 5 ft. x 10 ft. tree well space, or a 5 ft. wide parkway. In addition, as with any tree planting project there are other factors that should be considered when selecting the appropriate tree species. A full list, including what has already been discussed would look like this:

1. Street tree vs. open space tree
2. Grow Space
3. Infrastructure
4. Safety, Wind, Fire
5. Climate/Micro-Climate Zone
6. Invasive Tree Species
7. Species Diversity
8. Pest and Disease Issues
9. Availability at Nurseries
10. Water Needs
11. Tree Function
12. Leaf, Seed & Fruit Production
13. Beautification

A full discussion about each of these factors and how to use them can be found in APPENDIX B.

For the purpose of this Plan, we recommend using the aforementioned factors to determine the best and most appropriate tree species for your projects. At the same time, it is important to utilize native tree species whenever possible with due consideration to their adaptability to micro-climates found in San Pedro. This should apply to the selection of shrubs and groundcover plant species for park and open space, and rain garden and bioswale type projects. A good starting point for a list of native plant species are those that were recommended as part of the Peck Park Canyon Prop. O Project. SEE APPENDIX A for a full list of trees and other species.

In addition, it is important to understand the permitting or approval process to follow. This will very much de-



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pend on which city agency regulates tree planting on the project property.

1. Streets—any trees proposed to be planted in the within City streets or alleys come under the jurisdiction of the Urban Forestry Division (UFD) within the Los Angeles Bureau of Street Services (BSS). All such projects require a Tree Planting Permit. In addition, if you are proposing to cut any concrete to create or extend the tree planting grow space, you will need an A Permit.
2. Parks & Open Space on City-Owned Land—any trees proposed for planting in these areas come under the jurisdiction of the Department of Recreation and Parks (RAP). Approval to plant trees in these areas will require approval of a proposed tree layout plan and species list. Assume the sub-



Photo of Gold Medallion Tree as a very versatile small stature street tree that can perform well in more confined grow spaces.

mittal and approval process will take a minimum of 60 days.

3. Port of Los Angeles (POLA)-Owned Land—any trees proposed for planting in these areas require permission from POLA.

4. State or Federal Highway Open Space—this includes sidewalks, parkways and medians within state and federal highway corridors.

Such spaces fall under the jurisdiction of Caltrans. In San Pedro, this includes portions of Western Ave., and lands within the Interstate 110 and SR 47 right of ways. Caltrans requires a planting plan

submitted by a licensed Landscape Architect.

The remainder of this section relates to the priority “green pathways” that were identified through the Public Opinion Survey. They are as follows:

1. Gaffey St.
2. Pacific Ave.
3. Harbor Blvd.
4. 6th Street
5. 7th Street
6. 5th Street
7. Western Avenue
8. Summerland Avenue

It is important to note that through primarily the Cal Fire Urban Forest Ecosystem Restoration Project, nearly all remaining street tree planting sites that can accommodate large stature trees (not including palm trees) will be planted by December 2019. However, there will remain a number of street tree planting sites that can accommodate medium or small stature trees that may remain unplanted.

It is also important to note that this Plan does not address the planting of palm trees. This is not to say that they should never be planted, as there are many iconic streetscapes in Los Angeles dominated by palm trees. However, from an urban forestry and arboriculture perspective, palm trees provide very few, if any, of the environmental benefits or active transportation pathway benefits associated with planting broadleaf or coniferous (needle type leaf) trees. Therefore, this Plan will not include recommendations for planting palm trees.

At the same time, there are recommendations for in-



Photo of Purple Orchid Tree as street tree. This species has recently been planted in downtown San Pedro.

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terplanting broadleaf and/or coniferous trees between palm trees along select streets.

Two of the priority streets fall into this category—Gaffey St. and Harbor Blvd. Both of these streets already have a significant presence of palm trees, and, in fact, the San



**Photo of Chitalpa Tree.** This is a very hardy species well adapted to the San Pedro area.

Pedro “gateway” median section of Gaffey for a block south of the Gaffey Street Bridge at the 110 Freeway offramp was recently (Spring 2017) planted with date palms.

### GAFFEY STREET:

The tree recommendations for the stretch of Gaffey St. falling between Summerland Ave. and 13th St. can be found in the recently completed Gaffey Great Street Conceptual Plan (OPPORTUNITY # 10 of this Plan). The exact distribution or layout of these species should be determined as final construction documents are developed for each of the five (5) design segments of the Gaffey Great Street Plan.

### PACIFIC AVENUE:

For Pacific Ave. from John S. Gibson/Front St. to 13th St. the following species have already been selected for enlarged concrete cut-outs that are at least 5 ft. x 10 ft. in dimension and are being planted as part of the Cal Fire sponsored Urban Forestry Project (SEE OPPORTUNITY #1):

- *Platanus acerifolia*, London Plane Tree
- *Podocarpus gracilior*, Fern Pine

- *Quercus ilex*, Holly Oak

For smaller cut-outs the following tree species are recommended:

- *Bauhinia variegata*, Purple Orchid Tree

### HARBOR BLVD:

For Harbor Blvd. from the SR 47 overpass south to 22nd St. we recommend the following large stature tree species for sidewalk cut-outs of 5 ft. x 10 ft. or larger dimension:

- *Pinus canariensis*, Canary Island Pine
- *Podocarpus gracilior*, Fern Pine

For spaces that are 4 ft. wide or cut-outs that are 4 ft. x 4 ft. in dimension, the following small stature species are recommended:

- *Cassia leptophylla*, Gold Medallion Tree
- *Chitalpa tashkentensis*, Chitalpa
- *Geijera parviflora*, Australian Willow
- *Chionanthus retusus*, Chinese Fringe Tree
- *Metrosideros excelsa*, New Zealand Christmas Tree

No trees should be planted in spaces that are less than 4 ft. wide.

For the landscape medians along Harbor Blvd. between the SR 47 overpass and Gulch Rd. we recommend the following tree species be planted in available spaces between the existing palm trees:

- *Pinus canariensis*, Canary Island Pine
- *Podocarpus gracilior*, Fern Pine
- *Cassia leptophylla*, Gold Medallion Tree



**Photo of Australian Willow Tree.** This is a very hardy species well adapted to the San Pedro area, and will grow well in 4 ft. wide planting spaces



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phylla, Gold Medallion Tree

- *Chitalpa tashkentensis*, Chitalpa



**Photo of Chinese Fringe Tree.** This small stature tree is well adapted to the San Pedro environment. This species was recently planted in Western Ave. medians.

- *Chionanthus retusus*, Chinese Fringe Tree

- *Metrosideros excelsa*, New Zealand Christmas Tree

To best mitigate the impact of GHG emissions from Port of LA activities, we strongly recommend that a high percentage of large stature tree species be selected. The

final selection will depend on the outcome of the project specific design process.

### 6TH & 7TH STREETS

These are the two (2) primary east-west downtown streets that connect Gaffey and Pacific to the Port at Harbor Blvd. While there are several existing tree species along these streets, there are two (2) that are not performing particularly well, or are ill-suited to the spaces in which they are planted:

- *Ficus microcarpa* var. *nitida*, Indian Laurel Fig
- *Cupaniopsis anacardioides*, Carrotwood

There are also some palm trees, primarily *Syagrus roman-zoffiana*, Queen Palm, that seem to be performing well. Along the portions of 6th and 7th Streets closer to Harbor Blvd. there are relatively newly planted Purple Orchid Trees that seem to be doing well.

The selection of new street tree species should be done in conjunction with developing overall streetscape plans for

each of these streets. The recommendation is to develop a replacement program for the Indian Laurel Fig and Carrotwood trees as sections of these streets go through a design development process. As both of these streets have been designated as “Downtown Core Green Streets” that would include an array of rain gardens, landscaped bulb-outs and outdoor dining platforms, the street tree component should include provisions to enlarge the existing cut-outs to allow for installation of some large stature trees interspersed with Queen Palms and small stature trees.

A recommended tree species palette for these streets could include:

- *Podocarpus gracilior*, Fern Pine (Large Stature)
- *Bauhinia variegata*, Purple Orchid Tree (Small Stature)
- *Cassia leptophylla*, Gold Medallion Tree (Small Stature)
- *Syagrus roman-zoffiana*, Queen Palm



**Photo of New Zealand Christmas Tree.** This small stature tree does well in marine type environments similar to those found in San Pedro, and in the smaller grow spaces typical along urban sidewalks.

### 5TH STREET

The stretch of 5th Street between Pacific Ave. and Harbor Blvd. has a number of existing street trees, many of which, especially the Carrotwoods, are in poor to fair condition at best. Given the scale of this street environment—the widest roadway and sidewalks of the downtown east-west streets—the streetscape would be considerably enhanced by the introduction of a large stature tree species. As this street is also one of the primary east-

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west auto access streets to Harbor Blvd. and the Port, and given the presence of well-performing Canary Island and Aleppo Pines along portions of private property of both 5th Street (at the former courthouse), and Harbor Blvd. (east side of the street), either species would be a good choice. However, we recommend only using Canary Island Pine, as this tree has a more upright form and performs better in a tree well environment. In fact, as of the writing of this Plan, a few of these have already been planted between Mesa St. and Pacific Ave.

Therefore, the program should include removal of the existing Carrotwoods, enlarging the existing sidewalk cut-outs to a 5 ft. x 10 ft. or 6 ft. x 12 ft. (as has been done elsewhere along 5th St.), and planting Canary Island Pines. These cut-outs should be done in a way that maintains/reconstructs the existing sidewalk decorative paving pattern present on the segment between Centre St. and Harbor Blvd.

### WESTERN AVE.

The focus here is the stretch of Western Ave. between Summerland Ave. to the north and 22nd St. to the south, as these are the northernmost and southernmost streets that provide direct access to the Port and Downtown San Pedro. The Western Ave. Median Tree Planting Project



**Photo of Jacaranda Tree.** This large stature tree is well adapted to the San Pedro environment, and will do well in larger growing spaces. It blooms profusely in late spring.



**Photo of Holly Oak Tree.** This large stature tree is well adapted to the San Pedro environment, and is currently being planted as a street tree in the Greater Downtown Area

(OPPORTUNITY #3) covers the median between 1st and 19th Streets. There are existing Fern Pines planted as street trees in sidewalk cut-outs and existing parkways on both sides of the street from Summerland south to 5th St. However, there remain vacant available planting sites, primarily in parkways and sidewalks along the western side of Western Ave. The apparent reason for these sites remaining vacant is that there are lower hanging overhead utility wires on this side, as compared to the east side of Western. While both sides have high voltage overhead wires, on the east side they are apparently considered high enough to allow for the planting of Fern Pines. The only difference between the two sides of the street is that the west side also has telecommunications cables at a lower elevation. However, as these pose no high voltage hazard, small stature street trees could still be planted on this side in otherwise available planting sites.

In stretches of Western Ave. south of the existing sidewalks, there is ample open space both within the Caltrans and outside the Caltrans right-of-way to plant large stature street trees. However, due to Caltrans guidelines that prohibit the planting of large stature trees within their rights-of-ways where the speed limit exceeds 35 mph (speed limit south of 1st Street is 40 to 45 mph), we recommend that large stature trees be planted in segments outside of the Caltrans right-of-way. We have not deter-

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mined the ownership of these areas has not been determined.

The recommended street trees for the unimproved parkway along Western Ave. south of 1st Street outside of the Caltrans right-of-way are the large stature trees species of:

- Pinus canariensis, Canary Island Pine
- Quercus ilex, Holly Oak

These can be interplanted with the following large stature flowering tree species, as it has already been planted in other locations that can accommodate large stature trees along Western Ave. north of 1st Street—and it has been performing well:

- Jacaranda mimosifolia, Jacaranda

### SUMMERLAND AVE.

Summerland Ave. is a significant vehicular pathway between Western Ave. and Gaffey St., and is primarily lined with single family homes. It links Peck Park on the approach to Western, and is the primary thoroughfare from which other north-south streets provide additional connections to other sections of Peck Park and Leland Park, as well as Bandini Canyon Park. There is a bike lane that runs from just west of Cabrillo Ave. to just east of Western Ave. However, the sidewalk is too narrow to allow for either sidewalk cut-outs or the addition of parkway strips for the planting of trees. Whatever trees that exist, and present a strong green edge to the right-of-way, exist on either park property or within the front yards of the homes along the street. There are significant sections lined with trees planted on park property—Peck Park and Rena Park—that create a strong “tall green edge” in those areas along the western stretch of Summerland Ave.

Given all of this, it seems that the most significant urban greening opportunity along this street would be the addition of more trees being planted in front yards. Such spaces provide the large grow space needed for large stature trees that would shade both the homes and the sidewalk.

Therefore, we recommend working with both the Central and Northwest San Pedro Neighborhood Councils to facilitate “tree adoptions” through the Los Angeles City Plants Program (SEE OPPORTUNITY #8). Recommended trees species would include the following:

- Pinus canariensis, Canary Island Pine
- Quercus ilex, Holly Oak
- Cassia leptophylla, Gold Medallion Tree
- Chitalpa tashkentensis, Chitalpa
- Chionanthus retusus, Chinese Fringe Tree
- Metrosideros excelsa, New Zealand Christmas Tree