SESPE
CONSULTING, INC.
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November 29, 2016

Attn: Kristina Boero
County of Ventura
Resource Management Agency-Planning Division
800 S. Victoria Ave.
Ventura, CA 93009

Re: PDP Application (Project No. PL160118) – Petrochem Development I, LLC
Landscape Screening Memorandum

Dear Ms. Boero,

This memo summarizes the existing conditions and proposed improvements related to landscape screening at Petrochem Development I, LLC's (Petrochem) proposed Project site. Petrochem has applied for a Planned Development Permit (PDP) to utilize the property located at 4777 Crooked Palm Road as a Vehicle Holding Lot and Contractor's Service & Storage Yard (Project). Please note much of the information presented in this memo is derived from the *Initial Study Biological Assessment (ISBA)* completed by BioResource Consultants, Inc. (BRC) on July 26th, 2016.

This memo is meant to address Incompleteness Item #5 found within the "Determination of Application Incompleteness" letter provided by Ventura County agencies on October 11th, 2016, which states the following:

5. *Landscape Screening:*

   The project site is located in the M-3 10,000 square foot zone district. In accordance with Section 81 09-0.6.4(d) of the Ventura County Non-coastal Zoning Ordinance, five percent of the project site must be landscaped. Please provide a landscape plan that conforms to the requirements discussed below and the "Ventura County Landscape Design Criteria" (1992). The plan must be prepared by a landscape architect and address the following items.

   a. *Screens undesirable views, incompatible land uses or uses in natural settings. The plan must address how the proposed uses will be screened from public views of State Route 33 and the County bike path, which are located immediately east and west of the project site.*
   b. *Provides visual relief. The plan must include landscaping that screens the proposed uses from public views.*
   c. *Ensures compatibility with community character. The plan must include landscaping that visually integrates the development with the character of the surrounding community.*
   d. *Retains and treats stormwater. The plan must include landscaping that retains and treats stormwater pursuant to County Public Works Agency Surface Water Department requirements.*
   e. *The plan must address compliance with the California Department of Water Resources Model Water Efficient Landscape Ordinance. The Permittee must install landscaping that complies with the requirements of the California Department of Water Resources' Model Water Efficient Landscape Ordinance, which is available on-line at:* http://www.water.ca.gov/wateruseefficiency/landscapeordinance/.

EXISTING LANDSCAPE CONDITIONS:

Existing landscaping at the Project site consists of native as well non-native vegetation and mature trees. As described in BRC's *Initial Study Biological Assessment*, the site is covered by approximately 48.5% native vegetation, 28.5% non-native vegetation, and 23% bare ground/graded roads. A total of 35 plant species were observed within the Project site, including 22 native species (63%) and 13 non-native species (37%). Table 1 below describes the major plant communities found onsite. See Figure 1 (Existing Plant Communities Map) and Figure 2 (Existing Tree Communities Map) in Attachment A which shows their specific locations. *(Source: Initial Study Biological Assessment, BRC 2016)*

Table 1 – Major Plant Communities Summary

Map Key	Vegetation Classification	Special Status	Condition	Acres	
				Total	Impacted
PC1	Coyote Brush Scrub	CDFW (G5S5) LIC	Intact	0.84	0.0
PC2	Mulfat Thickets	CDFW (G4S4) LIC	Intact	8.03	0.0
PC3	Non-Native Annual Grasslands	None	Intact	2.85	0.0
PC4	Ruderal Vegetation	None	Intact	4.5	0.0
PC5	Cleared Lands	None	Intact	12.25	0.0
PC6	Developed	None	Intact	10.74	0.0
PC7	Existing Landscaping	None	N/A	0.71	0.0
PC8	Giant Reed Breaks	None	N/A	3.19	0.0
PC9	Stockpiles	None	N/A	0.14	0.0
PC10	Tamarisk Thickets	CDFW (S4G4)	Intact	0.13	0.0
			Total:	43.37	0.0

LIC – Locally Important Plant Community
California Department of Fish & Wildlife (CDFW) Rare:
G4 or S4 – Apparently Secured Globally or Sub-nationally (state)
G5 or S5 – Secure Globally or Sub-nationally (state)

As shown on Figure 1 and Figure 2 (Attachment A), the majority of existing landscaping is located along the northern and eastern Project site boundaries, adjacent to Crooked Palm Road, which provide visual screening. Other onsite areas, primarily near the southwest corner of the Project site where the Contractors Service & Storage Yard is proposed, have thick patches of existing vegetation which also provide visual screening. Along the southern Project site boundary, existing plants and small trees also provide screening although this vegetation is located outside of the Project site boundary along the Ventura-Ojai Bike Trail.

As shown in Figure 1, existing native plant communities found onsite are primarily composed of giant reed breaks (*Arundo donax*), mulefat thickets (*Baccharis salicifolia*), and arroyo willow thicket (*salix lasiolepis*). As shown in Figure 2, existing tree communities found onsite primarily include Bishop pine (*Pinus muricata*), California sycamore (*Platanus racemosa*), arroyo willow (*Salix lasiolepis*), velvet ash (*Fraxinus Velutina*), and Oregon ash (*Fraxinus latifolia*). Please see Figure 1 and Figure 2 (Attachment A) for the full list and locations of existing plant species observed on the Project site. It is estimated that the footprint of existing vegetation and mature trees is 4.0 acres, which represents approximately 11% of the total Project site.

EXISTING PUBLIC VIEWSHEDS:

Eastern Viewpoints: As shown in Figure 3 (Attachment A), the public views that have the potential to be adversely impacted by the proposed Project from the eastern direction are primarily located along Crooked Palm Road and State Route (SR) 33. Crooked Palm Road is infrequently travelled and, due to its low elevation and surrounding topography, has relatively poor existing scenic views in all directions. SR 33, which is designated as an Eligible State Scenic Highway by the Ventura County General Plan, is slightly elevated in the stretch adjacent to the Project site and has scenic views to the west that have the potential to be impacted. However, existing vegetation (Figure 1) and rows of mature trees (Figure 2) located along the western Project site boundary, as well as existing vegetation along the shoulder of Crooked Palm Road/SR 33 in the areas adjacent to the Project site provide screening sufficient to block the proposed uses from public views. As such, no additional landscaping and/or screening is required along the eastern Project site eastern boundary to protect scenic and public viewsheds. Photos 1-4 presented in Attachment B show existing landscaping conditions along the eastern Project site boundary.

Southern Viewpoints: As shown in Figure 3 (Attachment A), the public views that have the potential to be adversely impacted by the proposed Project from the southern direction are primarily located along the Ventura-Ojai Bike Trail. Riders coming from the south will have a generally clear line-of-sight of the southern boundary of the Project site. Existing vegetation and trees in this area, including two mature Eucalyptus trees, provide sufficient screening along the majority of this portion of the bike trail except for an approximately 30-foot long gap. Please see Photo 7 (Attachment B) and Figure 4 (Attachment A) for the location of this unscreened area. Here, riders will have a relatively unobstructed view of the existing "sphere" tanks and the proposed Contractors Service & Storage Yard. As such, a mix of native vegetation and trees species will be installed along this approximately 30-foot portion of the southern Project site boundary to ensure the proposed uses, specifically the Contractors Service & Storage Yard, are screened from public views. Photos 5-8 presented in Attachment B show existing landscaping along the southern Project site boundary. Photo 7 specifically shows the 30-foot unscreened gap described above.

Western Viewpoints: As shown in Figure 3 (Attachment A), the Ventura-Ojai Bike Trail runs adjacent to the entire western Project site boundary. As such, there are numerous public viewpoints in this area that could potentially be impacted by the proposed Project. Portions of the western boundary do have existing vegetation sufficient to screen public views from the proposed uses, but the majority of this area is unscreened and riders will have an unobstructed view of both the proposed Vehicle Holding Lot and the Contractors Service & Storage Yard uses. As such, a mix native vegetation and trees species will be planted in numerous locations along the western boundary of the Project site to ensure the proposed uses are screened from public views. Photos 9-16 (Attachment B) show existing landscaping along the western project site boundary. Figure 4 (Attachment A) shows the locations where additional native vegetation is needed to sufficiently protect public views from the Ventura-Ojai Bike Trail.

Northern Viewpoints: As shown in Figure 3 (Attachment A), the public views that have the potential to be adversely impacted by the proposed Project from the north direction are primarily located along the Ventura-Ojai Bike Trail. Riders coming from the north will have a relatively unobstructed view of the northern boundary of the Project site. However, this area has extensive existing vegetation (Figure 1) and rows of mature trees (Figure 2) that provide sufficient screening between the majority of this portion of the bike trail and the Project site. As such, no additional landscaping and/or screening is required along the northern Project site boundary to protect scenic and public viewsheds. Photos 17-20 (Attachment B) show existing landscaping conditions along the northern Project site boundary.

PROPOSED INSTALLATION OF LANDSCAPING:

As shown in Figure 4 (Attachment A), additional native vegetation and tree species should be installed in numerous locations along the western boundary and in one location along the southern boundary of the Project site to ensure public views from the Ventura-Ojai Bike Trail are screened from the proposed uses. To replant these specific areas, Petrochem is proposing to use a mix of native groundcover/low-lying vegetation as well as larger California Sycamore trees to help screen the Project uses from public viewsheds. The proposed mix of groundcover/low-lying vegetation and California Sycamores were selected as these species are biologically compatible with the existing Project site environment and nearby Ventura River riparian habitat.

Groundcover/Low-Lying Vegetation Installation: In the locations shown in Figure 4 (Attachment A), a native seed mixture will be utilize to grow groundcover/low-lying vegetation (approximately 4-feet high) in the areas where screening is required to protect public views. This native seed mix will be identical to the seed mix utilized to replant a demolition area west of the Ventura-Ojai Bike Path, where two former refinery vessel units were removed and the area remediated in 2013. See Photo 21 in Attachment B for the location of the former vessel units. Table 2 below summarizes the native seed mix that will be used to replant the locations shown on Figure 4:

Table 2 – Proposed Native Seed Mix

Common Name	Species	Percent[1]	Total New Acreage[2]
Cayuse oats	*Avena sativa Cayuse*	22.5%	0.12
Cucamonga California brome	*Bromus carinatus Cucamonga*	22.5%	0.12
California poppy	*Eschscholzia californica*	5%	0.03
Arroyo Lupine	*Lupinus succulentus*	5%	0.03
Crimson Clover	*Trifolium incarnatum Crimson*	15%	0.08
Smooth vetch	*Vicia dasycarpa Lana*	12.5%	0.07
Foxtail fescue	*Vulpia myuros var. hirsuta*	17.5%	0.1
		Total:	**0.5**

1 – Seed mix shown is identical to the seed mix utilized to replant vessel demolition area in 2013. See Photos 21-24 (Attachment B) for more detail.
2 – Total new acreage to be calculated by applying percentage shown to the total new acreage to be landscaped, which is estimated to be 0.5 acres (see Figure 4).

As shown in Photos 22-24 (Attachment B), the area where the former refinery vessel units were located has been completely revegetated with the native seed mix described above. Vegetation with characteristics both biologically and aesthetically similar to the surrounding natural habitat have regrown throughout much of this area. Additionally, no irrigation was installed in this location and this revegetation coverage was accomplished with natural rainfall as the only water source. For these reasons, the proposed seed mix is ideal for use as landscape screening along the proposed Project site boundaries as it is drought-tolerant and requires little upkeep. This seed mix will be spread at a width of 5-feet, measured from the existing Project site fence line, in the areas shown on Figure 4 (Attachment A). Ideally, planting should occur near the start of the rainy season (November-December) so seedlings can benefit from seasonal storm waters. Areas replanted with groundcover/low-lying vegetation should be monitored throughout the first year, and areas should be reseeded if significant plant mortality is observed.

Installation of the groundcover/low-lying landscaping described above is expected to be sufficient to screen exposed low-lying viewpoints along the Ventura-Ojai Bike Trail from the west and south.

Tree Planting: In addition to installing groundcover/low-lying vegetation as described above, California Sycamore trees will also be planted in the areas where screening is required to protect public views. As shown in Figure 4 (Attachment A), Petrochem is proposing to plant California Sycamore (*Platanus racemosa*) trees at various intervals along the western Project site boundary and in one location along the southern Project site boundary. California Sycamores are native to southern California and listed on the City of Ventura's *Recommended Tree List* (Attachment C), published by the Parks Department Urban Forestry Section. Additionally, California Sycamores are moderately drought resistant requiring little irrigation once established, and instances of this tree species already exist on the Project site and appear to grow well in this environment. California Sycamores can grow rapidly, growing 1-2 feet per year and reaching a maximum height range of 60-feet and above. As such, these trees are also ideal shade trees that develop spreading canopies over time, which will further improve the visual quality of the area and provide additional shade for bike riders as the trees mature.

As shown on Figure 4, a total of fifteen (15) juvenile California Sycamore trees will be planted along the western and southern Project site boundaries at approximately 90-foot intervals in the areas where screening is required to protect public views. Per the City of Ventura's *Recommended Tree List* (Attachment C), trees should maintain a minimum separation of 64-feet between planting sites. California Sycamores have a potentially aggressive roots system, so trees should be planted no closer than 4-feet from the existing property fence line to ensure roots do not impact the adjacent bike trail as the trees mature. Juvenile California Sycamores, either 1-gallon or 5-gallon size, will be purchased from a local nursery and planted to the suppliers specifications.

California Sycamores are considered drought tolerant once established. Depending on meteorological conditions at the time of planting, Petrochem may need to apply regular irrigation to ensure the trees become established and healthy. Ideally, planting should occur near the start of the rainy season (November-December) so juvenile trees can take advantage of seasonal storms. After initial planting, preferably within 24-hours, the portable water truck located onsite will be used to thoroughly soak the root system of each individual tree. Unless rain has occurred within the previous month, the juvenile trees should continue to be watered with the water truck a minimum of once every 2-months during the first year to ensure the trees continue to survive and become established. Onsite personnel should also monitor the health of the juvenile trees during the first 6-months and apply additional watering if needed. After the first year, assuming proper watering and/or significant rainfall, planted trees should be established well enough to survive without regular irrigation, although their condition should be regularly monitored to ensure they remain healthy.

Model Water Efficient Landscape Ordinance: To address County incompleteness item *e)*, the California Department of Water Resources' Model Water Efficient Landscape Ordinance (CCR Title 23, Division 2, Chapter 2.7) was reviewed. Appendix B of the ordinance provides a Water Efficient Landscape Worksheet that allows project applicants to determine if proposed landscape meets water efficiency and sustainability goals set by the California Department of Water Resources. Specifically the Estimated Total Water Use (ETWU), calculated based on the plants used and irrigation methods selected, must be below Maximum Applied Water Allowance (MAWA), which is determine based on type, area, and location of landscaping. The Water Efficient Landscape Worksheet is included as Attachment D.

As shown in Attachment D, the ETWA for the proposed landscaped areas is 199,216 gallons which is below the estimated MAWA of 242,047 gallons. As such, the proposed landscaping complies with the Model Water Efficient Landscape Ordinance. Please see Water Efficient Landscape Worksheet (Attachment D), which shows the model inputs, calculations, and results.

SUMMARY:

Following installation of the native seed mix and California Sycamore trees, as described above and shown in Figure 4, it is anticipated that exposed public views along the Ventura-Ojai Bike Trail will be sufficiently screened and protected from both the western and southern directions. Additionally, the species selected for replanting are biologically and aesthetically compatible with the surrounding environment, and replanted areas will enhance the visual character of Project site as they grow and mature. It is estimated that replanting of these areas will add approximately 0.5 acres (21,780 square feet) total of additional landscaped area to the Project site.

Please call Jane Farkas or me at (805) 275-1515 if you have any questions or if you need additional information.

Respectfully submitted,

Graham Stephens
Environmental Professional I
Sespe Consulting, Inc.

Attachments:

Attachment A – Figures
Attachment B – Photographs
Attachment C – *Recommended Tree List*, City of Ventura – Parks Department
Attachment D – Water Efficient Landscape Worksheet, CA Department of Water Resources

ATTACHMENT A

FIGURES

Source: BioResource Consultants, Inc. (2016)

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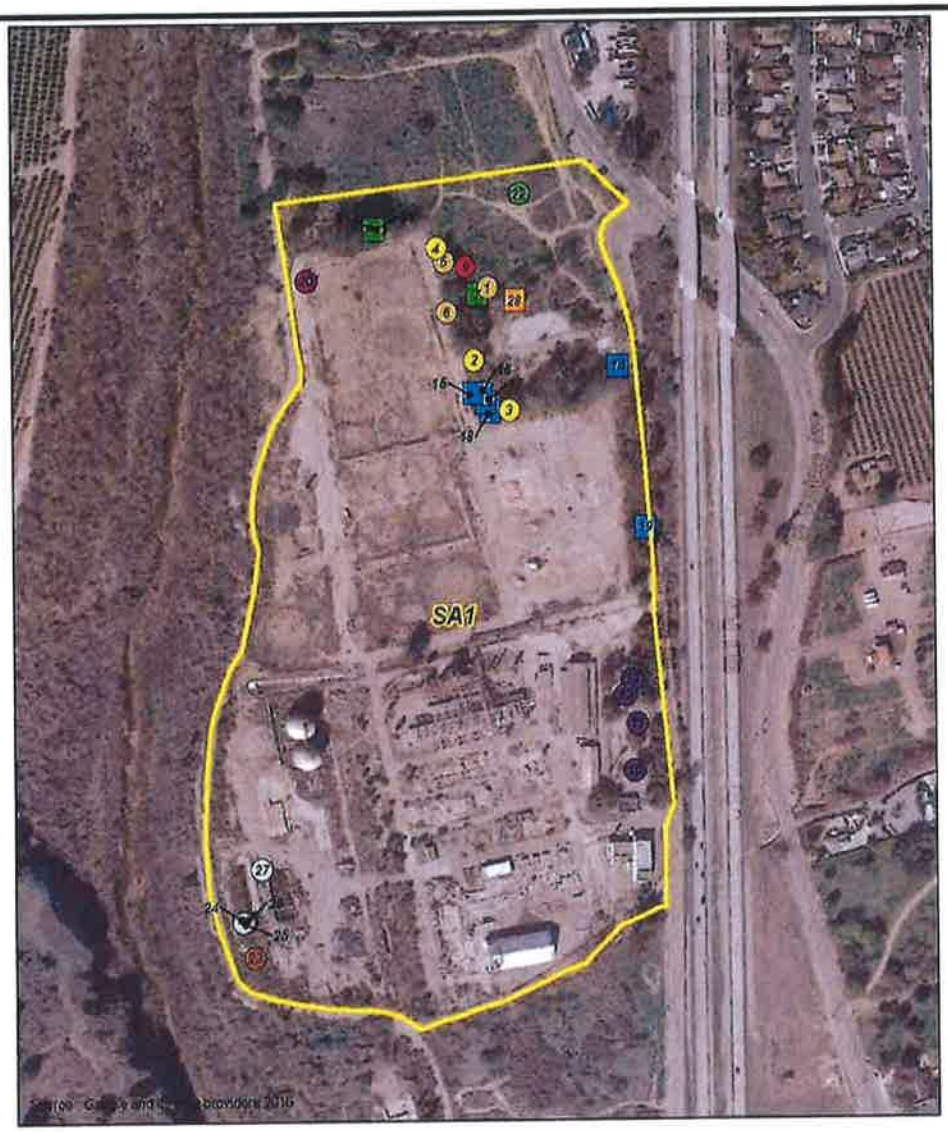
FIGURE	EXISTING PLANT COMMUNITIES MAP
1	Petrochem Development I, LLC 4777 Crooked Palm Road Ventura, CA 93001

PROJECT #:	MO01.15.02	DATE:	11/2/16
SCALE:	as shown	DRAWN BY:	GPS



SA1 (Survey Area)
Arroyo willow
Bishop Pine
Black elderberry
Black oak
California Sycamore
California black walnut
English walnut
Interior live oak
Oregon Ash
Scrub oak
Velvet ash

BRC

N

0 200 400 800 Feet

Source: BioResource Consultants, Inc. (2016)

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FIGURE 2	EXISTING TREE COMMUNITIES MAP Petrochem Development I, LLC 4777 Crooked Palm Road Ventura, CA 93001		
PROJECT #:	MO01.15.02	DATE:	11/2/16
SCALE:	as shown	DRAWN BY:	GPS

Source: Google Earth 2016

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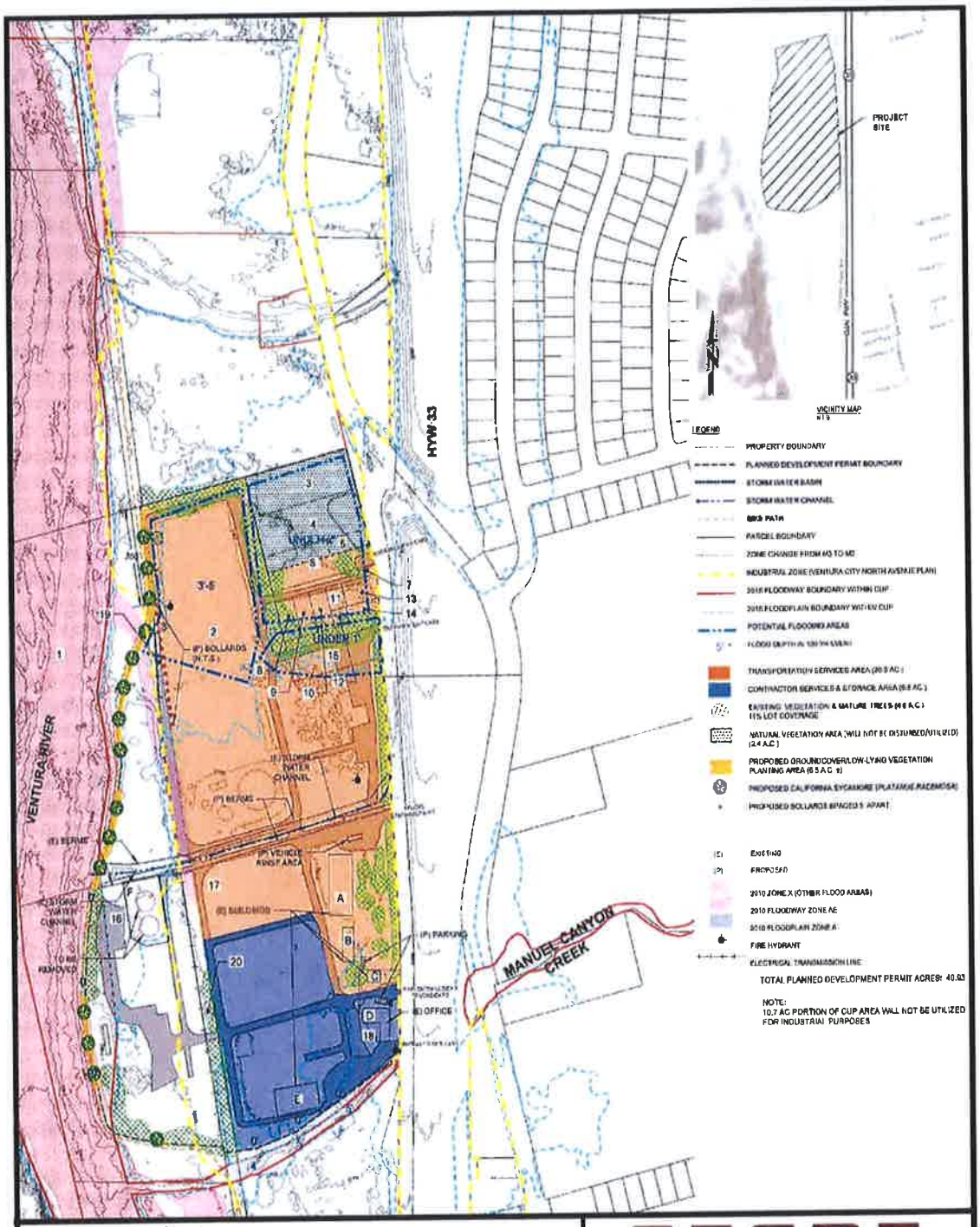
Approximate Site Boundary
Ventura-Ojai Bike Path
Crooked Palm Road
State Route (SR) 33

FIGURE	SURROUNDING PUBLIC VIEWSHEDS Petrochem Development I, LLC 4777 Crooked Palm Road Ventura, CA 93001		
3			
PROJECT #:	MO01.15.02	DATE:	11/2/16
SCALE:	as shown	DRAWN BY:	GPS



Source: Sespe Consulting, Inc.

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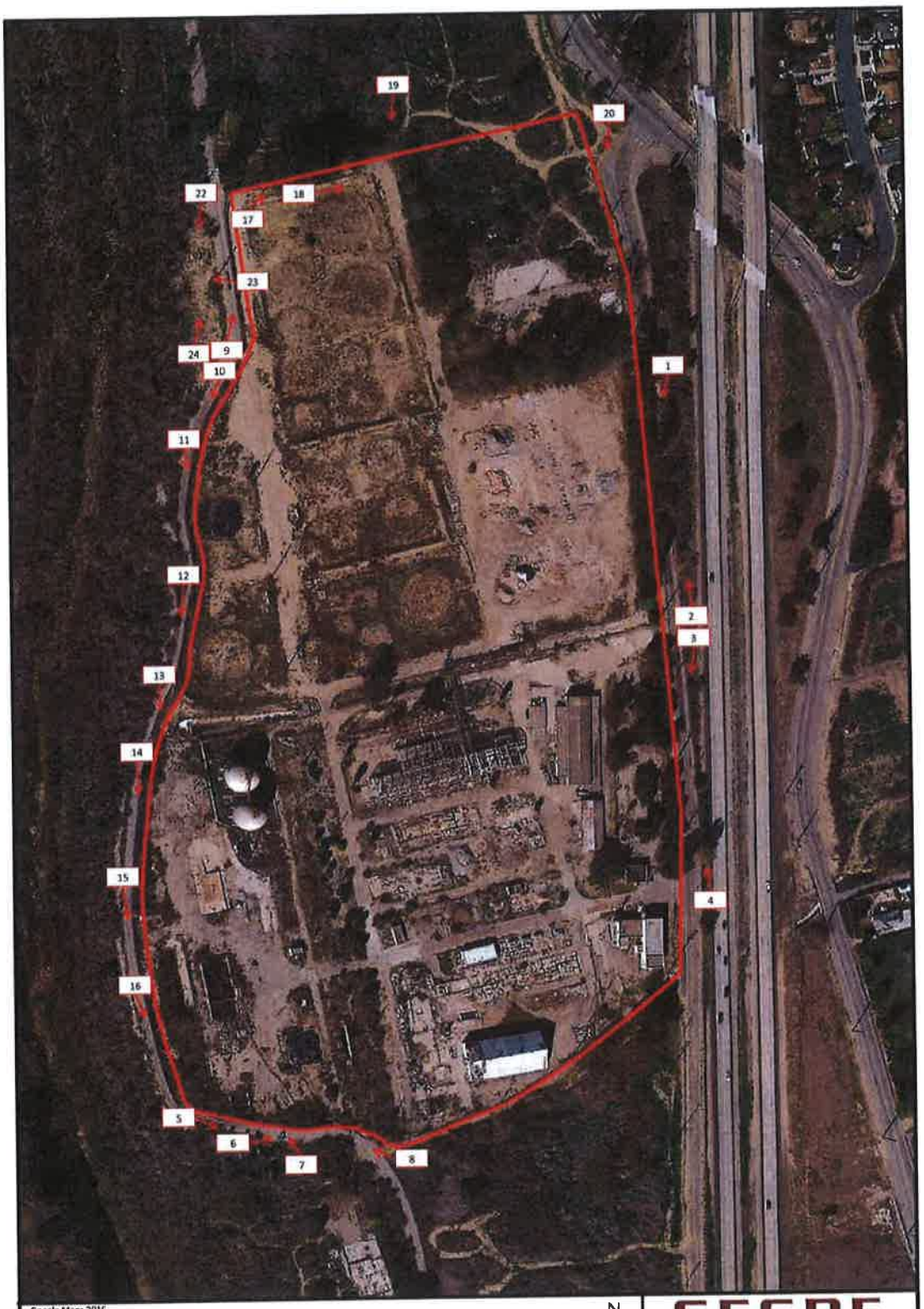
FIGURE	SITE PLAN/LANDSCAPE SUMMARY
4	Petrochem Development I, LLC 4777 Crooked Palm Road Ventura, CA 93001

PROJECT #:	MO01.15.02	DATE:	11/2/16
SCALE:	as shown	DRAWN BY:	GPS

ATTACHMENT B

PHOTOGRAPHS



Google Maps 2016

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Approximate Planned Development Permit Boundary

Note: Numbers correspond with specific numbered photos on following pages. Arrows show the direction each photo was taken.

KEY	ATTACHMENT B - PHOTOGRAPH KEY Petrochem Development I, LLC 4777 Crooked Palm Road Ventura, CA 93001		
	PROJECT #:	M001.15.02	DATE: 8/24/16
	SCALE:	not to scale	DRAWN BY: GPS

View 1: Near northeast corner of site, looking south along Crooked Palm Road.
View 2: Near center of site, looking north along Crooked Palm Road.
View 3: Near center of site, looking south along Crooked Palm Road.
View 4: Near facility main entrance, looking north along Crooked Palm Road.

Photo Date: 08/24/16

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PHOTOS	EAST BOUNDARY LANDSCAPING Petrochem Development I, LLC 4777 Crooked Palm Road Ventura, CA 93001		
PROJECT #	MOD1.15.03	DATE:	11/2/16
SCALE:	not to scale	DRAWN BY:	GPS

View 5: Near the southwest corner of the site, looking east along the Ventura-Ojai Bike Path.
View 6: Near the southwest corner of the site, looking east along the Ventura-Ojai Bike Path.
View 7: Looking north toward the "spheres" from the Ventura-Ojai Bike Path, along the southern site boundary. This approximately 30-foot gap will be replanted with native vegetation.
View 8: Looking west from the Ventura-Ojai Bike Path along the southern site boundary.

Photo Date: 10/19/16

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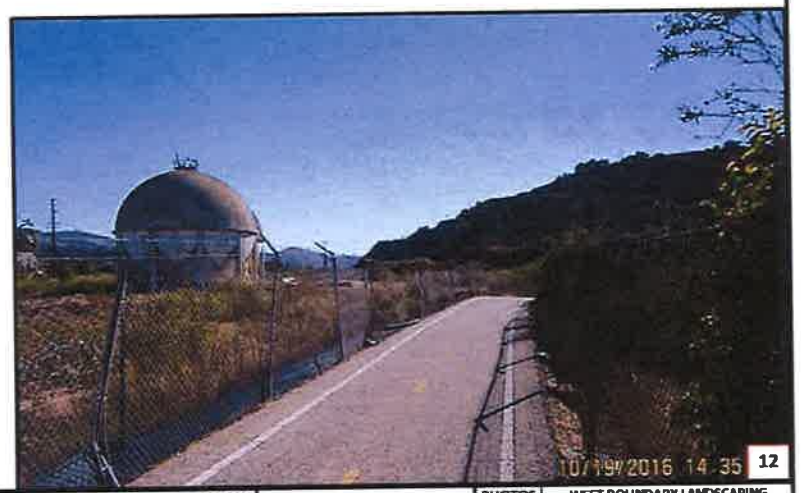
PHOTOS	SOUTH BOUNDARY LANDSCAPING Petrochem Development I, LLC 4777 Crooked Palm Road Ventura, CA 93001		
PROJECT #:	M001.15.02	DATE:	11/2/16
SCALE:	not to scale	DRAWN BY:	GPS



View 9: Looking north toward northwest corner of site, along the Ventura-Ojai Bike Path.
View 10: Near the center of the site, looking south along the Ventura-Ojai Bike Path.
View 11: Near the center of the site, looking south along the Ventura-Ojai Bike Path toward the "spheres".
View 12: Near the center of the site, looking south along the Ventura-Ojai Bike Path toward the proposed Contractors Service & Storage Yard.

Photo Date: 10/19/16

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PHOTOS	WEST BOUNDARY LANDSCAPING Petrochem Development I, LLC 4777 Crooked Palm Road Ventura, CA 93001		
PROJECT #:	M001.15.02	DATE:	11/2/16
SCALE:	not to scale	DRAWN BY:	GPS

View 13: Near the center of the site, looking south along the Ventura-Ojai Bike Path toward the proposed Contractors Service & Storage Yard.
View 14. Near the southern portion of the, looking south along the Ventura-Ojai Bike Path.
View 15: Looking south toward the southwest corner of the site, along the Ventura-Ojai Bike Path.
View 16: Looking south toward the southwest corner of the site, along the Ventura-Ojai Bike Path.

Photo Date: 10/19/16

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PHOTOS	WEST BOUNDARY LANDSCAPING Petrochem Development , LLC 4777 Crooked Palm Road Ventura, CA 93001		
PROJECT #:	M001.15.02	DATE:	11/2/16
SCALE:	not to scale	DRAWN BY:	GPS

View 17: Near the northwest corner of the site, looking east along the northern property boundary. Photo taken from within Project site boundary.
View 18: Near the center of the site, looking east along the northern property boundary. Photo taken from within Project site boundary.
View 19: Looking directly south toward the northern property boundary.
View 20: Looking south toward the northeast corner of the site along Crooked Palm Road.

Photo Date: 08/24/16

SESPE CONSULTING, INC.

PHOTOS	NORTH BOUNDARY LANDSCAPING Petrochem Development I, LLC 4777 Crooked Palm Road Ventura, CA 93001		
PROJECT #:	M001.15.02	DATE:	11/2/16
SCALE:	not to scale	DRAWN BY:	GPS

View 21: Former vessel location aerial. Vessel was removed in 2013 and area was replanted using same native seed mix proposed for landscaping installation.
View 22: Current view of former vessel location. Photo taken facing south toward "sphere" tanks located within the Project site.
View 23: Current view of former vessel location. Photo taken from the Ventura-Ojai Bike Trail facing west toward the Ventura River.
View 24: Current view of former vessel location. Photo taken facing north.

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PHOTOS	FORMER VESSEL REVEGATATION AREA Petrochem Development I, LLC 4777 Crooked Palm Road Ventura, CA 93001		
PROJECT #:	16001.15.02	DATE:	11/2/16
SCALE:	not to scale	DRAWN BY:	GPS

ATTACHMENT C

RECOMMENDED TREE LIST

CITY OF VENTURA – PARKS DEPARTMENT, URBAN FORESTRY SECTION

CITY OF VENTURA RECOMMENDED TREE LIST Note: Other tree types may be considered upon approval by the Urban Forestry Section TREES BOTANICAL NAME COMMON NAME	Evergreen (E) Deciduous (D)	Size/Shape: Height Avg. Tree Height Range	Size/Shape: Spread Avg. Canopy Spread Range	Size/Shape: Shape Spreading Rounded Columnar Pyramidal	Min. Req. Planting 16 Sq. Ft. 25 Sq. Ft. 36 Sq. Ft. 64 Sq. Ft.	Acceptable for use in Parkway	Water Use Classification High (H) Medium (M) Low (L)	Coastal Tolerance	Comments/Notes
Arbutus 'Marina' standard **Marina Madrone** standard	E	20-40 Ft.	20-40 Ft.	Spreading	16	Yes	Medium		
Cassia leptophylla **Gold Medallion Tree**	E	20-30 Ft.	10-25 Ft.	Spreading	16		Medium		
Celtis sinensis **Chinese Hackberry**	D	20-40 Ft.	20-40 Ft.	Rounded	25	Yes	Medium		
Cinnamomum camphora **Camphor**	E	40-60 Ft.	40-60 Ft.	Spreading	36		Medium		
Cupaniopsis anacardioides **Carrotwood**	E	20-40 Ft.	20-40 Ft.	Spreading	25		Medium		Fruiting may become an issue with age
Fraxinus spp. **Ash**	D	40-60 Ft.	20-40 Ft.	Spreading			Medium		Regionally Appropriate Species, Cultivars/Hybrids
Geijera parviflora **Australian Willow**	E	20-30 Ft.	10-25 Ft.	Rounded	16	Yes	Low		
Ginkgo biloba **Ginkgo**	D	20-50 Ft.	20-30 Ft.	Columnar	25	Yes	Medium		Sterile Cultivars Only Approved
Gleditsia triacanthos var. inermis 'Cultivars' **Honeylocust Cultivars**	D	20-40 Ft.	20-30 Ft.	Rounded	16	Yes	Medium		Regionally Appropriate Cutlivars/Hybrids
Jacaranda mimosifolia **Jacaranda**	D	20-40 Ft.	40-60 Ft.	Rounded	16	Yes	Medium		
Koelreutena bipinnata **Chinese Flame Tree**	D	20-40 Ft.	20-40 Ft.	Spreading	16	Yes	Medium		
Koelreutena panniculata **Goldenrain Tree**	D	20-40 Ft.	0-20 Ft.	Spreading	16	Yes	Low		
Lagerstroemia x indica x fauriei **Crape Myrtle Hybrids**	D	20-40 Ft.	0-20 Ft.	Spreading	16	Yes	Medium		Regionally Appropriate Cutlivars/Hybrids Powdery Mildew Resistant Cultivars
Ligustrum lucidium **Glossy Privet**	E	40-60 Ft.	20-40 Ft.	Pyramidal	16	Yes	Medium		Standard Only
Liquidambar sytraciflua 'Rotundiloba' **Rotundiloba Sweetgum**	D	40-60 Ft.	20-40 Ft.	Columnar	25	Yes	Medium		Regionally Appropriate Cutlivars/Hybrids Sterile Cultivars
Lophostemon confertus **Brisbane Box**	E	40-60 Ft.	20-30 Ft.	Rounded	25	Yes	Medium		
Magnolia grandiflora 'Cultivars' **Southern Magnolia Cultivars**	E	60 Ft.-Over	20-40 Ft.	Pyramidal	16	Yes	Medium		
Melaleuca linariifolia **Flaxleaf Paperbark**	E	20-30 Ft.	20-30 Ft.	Columnar	25	Yes	Low		
Melaleuca quinquinerva **Cajeput Tree**	E	20-40 Ft.	15-30 Ft.	Columnar	25	Yes	Low		
Melaleuca styphelioides **Prickly Melaleuca**	E	20-40 Ft.	10-20 Ft.	Spreading	25	Yes	Low		
Metrosideros excelsius **New Zealand Christmas Tree**	E	20-40 Ft.	20-40 Ft.	Rounded	16	Yes	Medium		

CITY OF VENTURA RECOMMENDED TREE LIST Note: Other tree types may be considered upon approval by the Urban Forestry Section TREES BOTANICAL NAME COMMON NAME	Evergreen (E) Deciduous (D)	Size/Shape: Height Avg. Tree Height Range	Size/Shape: Spread Avg. Canopy Spread Range	Size/Shape: Shape Spreading Rounded Columnar Pyramidal	Min. Req. Planting 16 Sq. Ft. 25 Sq. Ft. 36 Sq. Ft. 64 Sq. Ft.	Acceptable for use in Parkway	Water Use Classification High (H) Medium (M) Low (L)	Coastal Tolerance	Comments/Notes
Pistacia chinensis **Chinese Pistache**	D	20-40 Ft.	20-40 Ft.	Rounded	16	Yes	Medium		Performs better in high heat environments
Platanus racemosa **California Sycamore**	E	60 Ft.-Over	20-50 Ft.	Spreading	64		Low		
Platanus x acerifolia 'Cultivars' **London Plane Tree Cultivars**	D	40-60 Ft.	20-40 Ft.	Rounded	25	Yes	Medium		Regionally Appropriate Cutlivars/Hybrids
Pyrus betulifolia **Dancer Pear**	D	20-40 Ft.	15-30 Ft.	Pyramidal	16	Yes	Medium		
Pyrus calleryana 'Cultivars' **Callery Pear Cultivars**	D	20-40 Ft.	20-40 Ft.	Pyramidal	16	Yes	Medium		Regionally Appropriate Cutlivars/Hybrids
Pyrus kawakamii **Evergreen Pear**	E	15-30 Ft.	15-30 Ft.	Spreading	16	Yes	Medium		Fireblight can be a problem with this species
Quercus agrifolia **Coast Live Oak**	E	20-40 Ft.	40-60 Ft.	Spreading	25	Yes	Low		Performs better on the east end, Good seed stock is important in preventing powdery mildew
Quercus virginiana **Southern Live Oak**	E	40-60 Ft.	40-60 Ft.	Spreading	25	Yes	Low		
Quercus tomentella **Island Oak**	E	40-60 Ft.	20-30 Ft.	Spreading	25	Yes	Low		Difficult to find trees with good street tree structure
Robinia x ambigua **Pink Locust**	D	20-40 Ft.	20-30 Ft.	Rounded	25	Yes	Low		Regionally Appropriate Cutlivars/Hybrids
Sophora japonica **Japanese Pagoda Tree**	D	20-40 Ft.	20-40 Ft.	Rounded	25		Medium		
Stenocarpus sinuatus **Firewheel Tree**	E	20-30 Ft.	10-20 Ft.	Rounded	16	Yes	Medium		
Tipuana tipu **Tipu Tree**	E	20-40 Ft.	30-60 Ft.	Spreading	25		Medium		Species likely to develop problems with Tiupana psyllids and/or Aphids
Tristaniopsis laurina **Water Gum**	E	20-30 Ft.	15-30 Ft.	Rounded	16	Yes	Medium		
Ulmus parvifolia 'Cultivars' **Chinese Elm Cultivars**	E	20-40 Ft.	20-40 Ft.	Spreading	25		Medium		Species proven to have difficulty with Anthracnose spp. No longer recommended for use
Recommended Palm Tree Species									
Archontophoenix cunninghamiana **King Palm**	E	30-40 Ft.	15-10 Ft.	Palm	16	Yes	Medium		
Brahea edulis **Guadalupe Fan Palm**	E	20-40 Ft.	10-15 Ft.	Palm	16	No	Medium		
Syagrus romanzoffianum **Queen Palm**	E	40-50 Ft.	10-15 Ft.	Palm	16	No	Medium		
Washingtonia filifera **California Fan Palm**	E	40-60 Ft.	10-15 Ft.	Palm	16	No	Low		
Washingtonia robusta **Mexican Fan Palm**	E	50-100 Ft.	5-10 Ft.	Palm	16	No	Low		
Official City Tree									
Eucalyptus ficifolia (Corymbia ficifolia) **Red Flowering Gum**	E	20-30 Ft.	15-30 Ft.	Rounded	64	No	Low		Attempts should be made to plant this tree

ATTACHMENT D

WATER EFFICIENT LANDSCAPE WORKSHEET
CALIFORNIA DEPARTMENT OF WATER RESOURCES

Appendix B – Sample Water Efficient Landscape Worksheet.

WATER EFFICIENT LANDSCAPE WORKSHEET

This worksheet is filled out by the project applicant and it is a required element of the Landscape Documentation Package.

0.5 acres

Reference Evapotranspiration (ETo) = 43.50 (Ventura)

Hydrozone # /Planting Description[a]	Plant Factor (PF)	Irrigation Method[b]	Irrigation Efficiency (IE)[c]	ETAF (PF/IE)	Landscape Area (sq, ft,)	ETAF x Area	Estimated Total Water Use (ETWU)[e]
Regular Landscape Areas							
low water use	0.3	drip	0.81	0.37	21,780	8,067	199,216
				Totals	(A)	(B)	
Special Landscape Areas							
				1			
				1			
				1			
				Totals	(C)	(D)	
						ETWU Total	199,216
						Maximum Allowed Water Allowance (MAWA)[e]	242,047

[a] *Hydrozone #/Planting Description*
E.g
1.) front lawn
2.) low water use plantings
3.) medium water use planting

[b] *Irrigation Method*
overhead spray
or drip

[c] *Irrigation Efficiency*
0.75 for spray head
0.81 for drip

[d] *ETWU* **(Annual Gallons Required) =**
Eto x 0.62 x ETAF x Area
where 0.62 is a conversion factor that converts acre-inches per acre per year to gallons per square foot per year.

[e] ***MAWA (Annual Gallons Allowed)*** *= (Eto) (0.62) [(ETAF x LA) + ((1-ETAF) x SLA)]*
where 0.62 is a conversion factor that converts acre-inches per acre per year to gallons per square foot per year, LA is the total landscape area in square feet, SLA is the total special landscape area in square feet, and ETAF is .55 for residential areas and 0.45 for non-residential areas.

ETAF Calculations

Regular Landscape Areas

Total ETAF x Area	(B)
Total Area	(A)
Average ETAF	**B + A**

Average ETAF for Regular Landscape Areas must be 0.55 or below for residential areas, and 0.45 or below for non-residential areas.

All Landscape Areas

Total ETAF x Area	(B+D)
Total Area	(A+C)
Sitewide ETAF	**(B+D) + (A+C)**