

Appendix B Arborist Report

Jim Borer, Certified Arborist #496

Specimen tree preservation, conservation, and analysis

October 2, 2014

JoAnne Sturges
TRG Land

Re: Arborist Inspection Follow-up Report
LeBard Park Site, Warwick Drive Huntington Beach, Ca.

Dear JoAnne,

I am writing at this time as a follow-up to my September 26 and 30th, 2014 on-site inspections of the existing specimen trees within the proposed footprint of the above referenced redevelopment project in Huntington Beach, California. This document is being presented along with the 'Excel' index of the existing trees and the site plan layout that cross the locations and tree numbers as assigned in the field.

Assignment

Travel to the site and perform an inspection of the 32 existing trees that are designated on the site plan as proposed for encroachment as a result of their locations within and immediately adjacent to the project's construction footprint. Assign numbers to the trees in the field and document the following specific information for the individual trees in question as follows:

- 1) Tree numbers (as assigned in the field)
- 2) Latin and common names
- 3) DBH (diameter of trunk at 4.5 feet above the soil level)
- 4) Estimated overall height and width
- 5) Health and structure ratings
- 6) Conservation ratings
- 7) Replacement tree box sizes

I shall also provide, herein, general methodologies for conserving trees at the margins of the redevelopment project's footprint.

General Observations

There are a total of 29 existing trees designated as within the project's footprint as to be encroached. There are a total of 32 locations with tree numbers on the site plan including three locations wherein trees are missing at this time. Additionally three of the 29 actual existing trees that are designated for encroachment are dead at this time. Other of the existing trees exhibit significant symptoms of decline and dieback as referenced individually within the Excel index.

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The two largest tree groupings by species are the crape myrtles (mature) that front the parking stalls on the Warwick frontage and the London plane trees (immature) that are scattered throughout the site. These two groupings make up two thirds of the trees within the site.

The crape myrtles' canopies are thin as a result of drought stress but otherwise generally typical for mature specimens. One of the immature crape myrtles is dead. The London plane trees are somewhat newly transplanted nursery specimens with two of the specimens dead and others in significant systemic decline at this time.

There are two newly planted coast live oak trees (# s 30 and 32) within the east frontage of the park. These are typical immature nursery specimens that have not yet developed individually significant size or character at this time.

The other mature trees within the site are comprised of the following:

- 2 - evergreen pears
- 2 - Liquidambar
- 1 - mulberry
- 1 - Canary Island pine

The two evergreen pears (# s 24 and 25) have symptoms of fire blight disease which disposes them to ongoing pathogenic decline going forward. The Liquidambers are symptomatic of and subject to decline related to bacterial scorch disease which is affecting similar mature specimens throughout southern California. The two Liquidambar trees (# s 28 and 29) are disposed to long-term decline going forward.

The Canary Island pine (#1) exhibits a vigorous growth habit but has been topped on multiple occasions over time as a result of its location beneath the overhead utility lines. Its archetypal upright form and character have been permanently affected by the topping incidents to date. The mulberry (# 31) is over mature, likely as a result of poor pruning methodologies also, and should be considered to have a very limited conservation potential going forward.

Within the 'Excel' document I have provided reasonable replacement box sizes for the existing trees that are proposed for encroachment that have C (average) or better conservation ratings. I have not listed replacement box sizes for the trees with below average (D) dispositions for conservation going forward. The replacement sizes are based upon overall sizes and not trunk diameters. The replacement trees would have be expected to possess improved health and structural conditions based upon their more optimal nursery growing environments.

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Recommendations for Conservation

Based upon the species in question herein, the varying levels of maturity, the various trees' levels of performance and structural integrity, and the presence of pathogenic disease conditions none of the 29 trees in question are great candidates for boxing and relocation. It is my opinion that nursery trees with better systemic performance and structural conformity can be imported for transplantation into the site than the existing trees. Therefore importing new trees to the site, as required, would be more practical than boxing and relocating the existing trees within the newly configured site.

Conserving any of the trees in place would require conserving significant amounts of their root zones without encroachment. The areas beneath the drip lines of all trees to be conserved in place should be protected by rigid fencing at their drip lines during the operations phase. The fencing is intended to protect the tree canopies as well as the root systems and the soil environments in which the roots exist. The trees would require regular maintenance during the operations period based upon the inferred disruption to the irrigation system.

Conservation in Place

Conservation of trees in place shall require the establishment of tree protection zones in order to conserve both the trees' root systems and foliage canopies. Ideally the tree protection zones should be the trees' drip lines.

- 1) Tree protection zones shall extend to the trees drip lines or a minimum of six feet out from the trunks whichever is greatest.
- 2) Tree protection zones shall be fenced with durable chain link fencing during the construction operations period to prevent encroachments. The fence(s) shall be held in place with galvanized fence posts that are set into the soil without footings. The fenced tree protection zones shall prohibit access from the construction side of the trees.
- 3) Maintained free of soil importation or exportation, storage of materials, trenching, and vehicular or construction traffic during the operations period.
- 4) Top-dressed with 2 inches of coarse organic mulch during the construction period. The area within two feet of the trunks shall remain free of the accumulation of mulch.
- 5) The trees shall be maintained using current practices including irrigation, fertilization, and pruning throughout the construction period.
- 6) The protection zones shall be maintained free of encroachment. Encroachment shall only be undertaken after consultation with the project arborist in advance to consider the use of alternate or specialized construction methodologies intended to limit potential impact to any affected trees.

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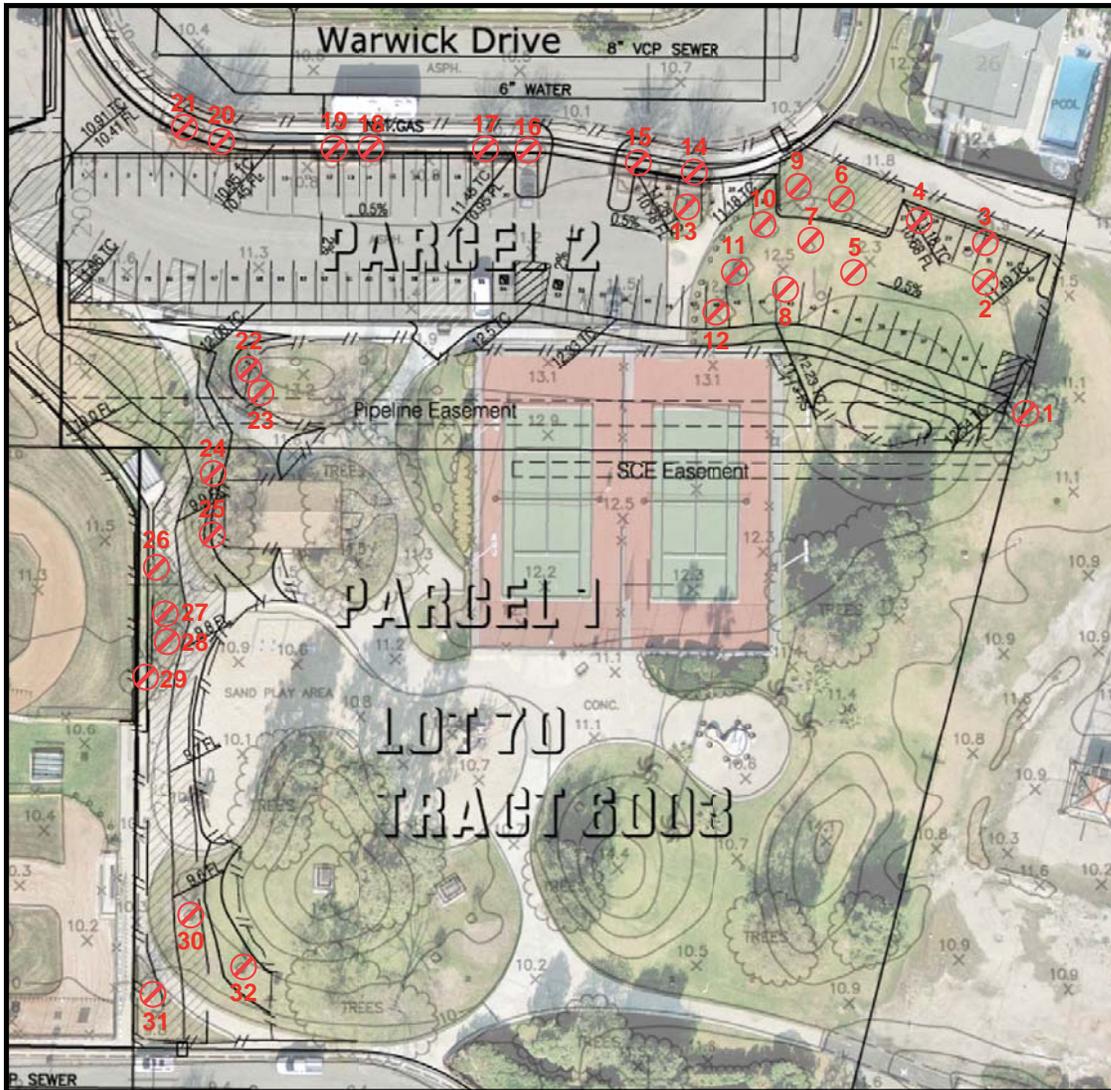
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- 7) Shall only be encroached within the root zones beneath the canopy drip lines using pneumatic excavation equipment (Air-spade) or hand tools. All woody roots that are encountered in such excavation operations within the drip lines should be cut using sharp pruning tools and not shall be ripped, torn, or otherwise frayed or damaged, using sharp pruning implements or saws.

Please contact me if you have any questions, if you require additional information after reviewing the information regarding the trees as presented herein and within the accompanying documents.

Respectfully submitted,

Jim Borer
Certified Arborist



LeBard Park Impacted Tree Inventory
(Source Data: Jim Borer, Certified Arborist #496)

Tree number	Latin name	Common name	DBH	Est. Ht x Width	Health/ Structure	Conservation rating
1	<i>Pinus canariensis</i>	Canary Island pine	19"	20' x 23'	B C C	C 84" box Location underneath utility lines has led to non selective pruning and has affected arctephal form and character
2	removed	removed				
3	<i>Lagerstroemia indica</i>	crape myrtle	3"	14' x 6'	D C D	36" box
4	<i>Lagerstroemia indica</i>	crape myrtle	dead			
5	<i>Platanus acerifolia</i>	London plane tree	1"	10' x 2'	D C D	24" box 75% dead at this time
6	<i>Platanus acerifolia</i>	London plane tree	3.5"	16' x 8'	D C D	80% dead at this time
7	<i>Platanus acerifolia</i>	London plane tree	dead			
8	removed	removed				
9	<i>Platanus acerifolia</i>	London plane tree	6"	15' x 16'	B B B	60" box
10	<i>Platanus acerifolia</i>	London plane tree	4.5"	22' x 14'	B b B	48" box
11	removed	removed				
12	<i>Platanus acerifolia</i>	London plane tree	5"	18' x 10'	C- B C-	48" box
13	<i>Lagerstroemia indica</i>	crape myrtle	9"	20' x 10'	C B C	60" box
14	<i>Lagerstroemia indica</i>	crape myrtle	9"	20' x 10'	C- B C-	60" box
15	<i>Lagerstroemia indica</i>	crape myrtle	11"	18' x 20'	B- B B-	60" box
16	<i>Lagerstroemia indica</i>	crape myrtle	10"	18' x 18'	C B C	60" box
17	<i>Lagerstroemia indica</i>	crape myrtle	8"	18' x 20'	C B C	48" box
18	<i>Lagerstroemia indica</i>	crape myrtle	8"	18' x 18'	C B C	48" box
19	<i>Lagerstroemia indica</i>	crape myrtle	7"	14' x 14'	C C C	48" box
20	<i>Lagerstroemia indica</i>	crape myrtle	13"	18' x 18'	B B B	60" box
21	<i>Lagerstroemia indica</i>	crape myrtle	8"	16' x 18'	B B B	48" box
22	<i>Platanus acerifolia</i>	crape myrtle	1.5"	12' x 4'	D C D	
23	<i>Platanus acerifolia</i>	crape myrtle	1"	12' x 2'	D C D	
24	<i>Pyrus kawakami</i>	evergreen pear	17"	26' x 30'	C- C C-	96" box Exhibits some fire blight intestation and general defoliation at this time
25	<i>Pyrus kawakami</i>	evergreen pear	15"	26' x 24'	C- C C-	96" box Exhibits some fire blight intestation and general defoliation at this time
26	<i>Platanus acerifolia</i>	London plane tree	3"	18' x 10'	B B B	36" box
27	<i>Platanus acerifolia</i>	London plane tree	dead			
28	<i>Liquidambar styrac</i>	American sweet gum	14"	25' x 20'	D D D	
29	<i>Liquidambar styrac</i>	American sweet gum	18"	28' x 22'	C- D D	
30	<i>Quercus agrifolia</i>	coast live oak	3"	10' x 6'	B B B	36" box
31	<i>Morus alba</i>	fruitless mulberry	11"	16' x 18'	D D D	The canopy exhibits approximately 25% die back of the canopy inferring severe systemic distress
32	<i>Quercus agrifolia</i>	coast live oak	3"	12' x 8'	B B B	36" box



October 8, 2014

ARBORIST STUDY

(Lebard), Tentative Tract 17801, City of Huntington Beach, CA

LeBard Park Impacted Tree Inventory
Draft Copy

Tree number	Latin name	Common name	DBH	Est. Ht x Wdth	Health/	Structure	Conservation rating
1	<i>Pinus canariensis</i>	Canary Island pine	19"	20' x 25'	B	C	C 84" box Location underneath utility lines has led to non selective pruning and has affected archteypal form and character
2	removed	removed					
3	<i>Lagerstroemia indica</i>	crape myrtle	3"	14' x 6'	D	C	D 36" box
4	<i>Lagerstroemia indica</i>	crape myrtle	dead				
5	<i>Platanus acerifolia</i>	London plane tree	1"	10' x 2'	D	C	D 24" box 75% dead at this time
6	<i>Platanus acerifolia</i>	London plane tree	3.5"	16' x 8'	D	C	D 80% dead at this time
7	<i>Platanus acerifolia</i>	London plane tree	dead				
8	removed		removed				
9	<i>Platanus acreifolia</i>	London plane tree	6"	15' x 16'	B	B	B 60" box
10	<i>Platanus acerifolia</i>	London plane tree	4.5"	22' x 14'	B	b	B 48" box
11	removed		removed				
12	<i>Platanus acerifolia</i>	London plane tree	5"	18' x 16'	C-	B	C- 48" box
13	<i>Lagerstroemia indica</i>	crape myrtle	9"	20' x 16'	C	B	C 60" box

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14	<i>Lagerstroemia indica</i>	crape myrtle	9"	20' x 16'	C-	B	C- 60" box
15	<i>Lagerstroemia indica</i>	crape myrtle	11"	18' x 20'	B-	B	B- 60" box
16	<i>Lagerstromia indica</i>	crape myrtle	10"	18' x 18'	C	B	C 60" box
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18	<i>Lagerstroemia indica</i>	crape myrtle	8"	18'x 18'	C	B	C 48" box
19	<i>Lagerstroemia indica</i>	crape myrtle	7"	14' x 14'	C	C	C 48" box
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21	<i>Lagerstroemia indica</i>	crape myrtle	8"	16' x 18'	B	B	B 48" box
22	<i>Platanus acerifolia</i>	crape myrtle	1.5"	12' x 4'	D	C	D
23	<i>Platanus acerifolia</i>	crape myrtle	1"	12' x 2'	D	C	D
24	<i>Pyrus kawakami</i>	evergreen pear	17"	26' x 30'	C-	C	C- 96" box Exhibits some fire blight intestation and general defoliation at this time
25	<i>Pyrus kawakkami</i>	evergreen pear	15"	26' x 24'	C-	C	C- 96" box Exhibits some fire blight intestation and general defoliation at this time
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27	<i>Platanus acerifolia</i>	London plane tree	dead				dead

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28	<i>Liquidambar styrac.</i>	American sweet gum	14"	25' x 20'	D	D	D
29	<i>Liquidambar styrac.</i>	American sweet gum	18"	28' x 22'	C-	D	D
30	<i>Quercus agrifolia</i>	coast live oak	3"	10' x 6	B	B	B 36" box
31	<i>Morus alba</i>	fruitless mulberry	11"	16'x 18'	D	D	D
	The canopy exhibits approximately 25% die back of the canopy inferring severe systemic distress						
32	<i>Quercus agrifolia</i>	coast live oak	3"	12' x 8'	B	B	B 36" box