ADDENDUM
to the

TREE INVENTORY AND IMPACT ANALYSIS FOR THE CANYON HILLS PROJECT IN THE CITY OF LOS ANGELES, LOS ANGELES COUNTY, CALIFORNIA

Original Report Date: June 12, 2003
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1.0 INTRODUCTION

A tree inventory of the Canyon Hills project site was conducted in 2002 and early 2003, the results of which were included in the original Tree Inventory and Impact Analysis (the "Tree Report") for the proposed Canyon Hills project dated June 12, 2003. Subsequent to the completion of the original Tree Report and the publication of the Draft Environmental Impact Report (the "Draft EIR") for the proposed project, three (3) additional coast live oaks (*Quercus agrifolia*) were observed in drainages within the proposed limits of disturbance that were not included in the original inventory. In addition, Goodding's black willow (*Salix gooddingii*) and arroyo willow (*Salix lasiolepis*) with a diameter at breast height (DBH) of 12 inches growing in riparian areas subject to the jurisdiction of the California Department of Fish and Game (CDFG) were not included in the original inventory. Those willows are addressed in the discussion on vegetation associations in the Biological Technical Report for the proposed project dated June 9, 2003 attached to, and summarized in, and the Draft EIR. However, to ensure that the tree data is comprehensive, it has been determined that the willows should be included in the tree inventory as well. This addendum identifies the locations and characteristics of the additional coast live oak and Goodding's black and arroyo willow trees and the extent to which they would be impacted by the proposed project.

Coast live oaks with a minimum DBH of 8 inches are subject to the provisions of Section 46.00 et seq. of the Los Angeles Municipal Code (the "LAMC") and Section 8B of the San Gabriel/Verdugo Mountains Scenic Preservation Specific Plan. The DBHs of the three additional coast live oak trees exceed eight inches and are therefore subject to these ordinances.

The removal of Goodding's black or arroyo willows is not restricted under any City ordinance. However, the instructions for filing tentative tract maps published by the City of Los Angeles Department of City Planning require that trees with a DBH of 12 inches or greater be shown on a plot plan.

2.0 METHODS

The survey of the additional trees was conducted on March 12, 2004 by Scott Eckardt, a certified arborist (certification number WC-5914) with Dudek & Associates, Inc., and Tony Bomkamp, a Regulatory Specialist with Glenn Lukos Associates, Inc. Tom Larson, a Registered Consulting Arborist (Registration No. 389), served as lead arborist and reviewed the survey data on the additional trees.

Dudek mapped the additional tree locations using a Trimble Pathfinder Pro XRS Global Positioning System (GPS) receiver. The Pathfinder has a horizontal accuracy of 1-meter (1-sigma) using differential code positioning techniques. Since tree canopies can sometimes cause loss of satellite lock by blocking the line-of-sight to satellites, an electronic compass and reflectorless electronic distance measuring (EDM) device was also used in mapping tree locations. The EDM/compass combination operates in concert

with the Pathfinder system to position offsets, and offset information is automatically attached to the GPS position data string. The electronic tree locations were then evaluated using ArcView 8.3 software to determine the position of the trees relative to the proposed project grading limits.

Each of the trees was assigned an individual number consecutive to the numbering system used in the original Tree Report. Diameter measurements were taken using protocol provided by the Council of Tree and Landscape Appraisers in the "Guide for Plant Appraisal," published by the International Society of Arboriculture (Council of Tree and Landscape Appraisers, 2000). The DBH measurement of each tree was taken at a circumference at 4.5 feet above the ground along the trunk axis, with common exceptions. In cases where a tree's trunk was located on a slope, the 4.5-foot distance was approximated as the average of the shortest and longest sides of the trunk (i.e., the uphill side and downhill side of a tree's trunk, respectively) and the measurement was made at the circumference of the trunk at this point. Trees were evaluated for the same attributes as those included in the original Tree Report, including DBH, canopy, and health/structure rating.

3.0 RESULTS

The three additional oak trees are located in proposed Development Area A. Forty-five (45) willows with DBHs of 12 inches or greater were surveyed within riparian areas in both proposed Development Areas A and B. Exhibit 3 to the original Tree Report, which is a 200-scale depiction of the project site and tree inventory, and Exhibit 4 to the original Tree Report, which consists of detail maps providing 100-scale enlargement of portions of the Study Area, have been revised to include all of the additional surveyed trees that are discussed in this addendum. Revised Exhibits 3 and 4 are attached to this addendum.

One of the three additional coast live oak trees (#525) has been included in both revised Exhibit 3 and Detail Map N4 in Exhibit 4. The other two coast live oak trees are shown on revised Exhibit 3 and are generally located to the northwest and west of #525. These two trees are isolated and therefore did not require inclusion in a detail map.

The willows in revised Exhibits 3 and 4 are depicted with shades of blue: light blue for trees with DBHs of 12"-17" and dark blue for those with DBHs of 18"-35". The locations of the willows are shown on revised Exhibit 3 and Detail Maps N2, N3, N4, N7, S1 and S3 and revised Exhibit 4. N7 is a new detail map covering the area just below N4.

The methodology used to analyze impacts to the additional trees is identical to that used for the original Tree Report. Table 1 provides a summary of the data collected in the field, including whether and the extent to which the additional trees would be impacted by the proposed project. Impact Status is either: (1) "Preserved", indicating trees not subject to direct or indirect impacts from the proposed project and no mitigation measures are required to ensure protection during grading; (2) "Preserved w/MM",

indicating trees whose proximity to the grading limits for the proposed project indicate potential for disturbance during grading, thereby requiring implementation of mitigation measures to eliminate or lessen indirect impacts; (3) "Impacted", indicating trees subject to unavoidable removal as part of the proposed project; or (4) “Impacted-Buffer”, indicating trees located within 20 feet of the grading limits for the proposed project and subject to potential impacts.

For the purpose of positive identification, references to the undersized trees have not been deleted from the table. Instead, under the Species Name column, the undersized tree's species name has been replaced with the word "*NO*" to indicate its failure to meet the DBH standard. It should also be noted that this tree inventory captures tree DBH measurements and health ratings at a moment in time. With few exceptions, the trees will continue growing and their health may vary over time. Data on the trees included in the original Tree Report has not been updated.

Table 1. Summary of Tree Inventory Data – 3/12/04 Tree Inventory

Tree Number	Species Name	Status	Effective DBH	No. of Trunks	Overall Rating
523	*Quercus agrifolia*	Impacted	18	1	3.0
524	*Quercus agrifolia*	Impacted	14	1	3.0
525	*Quercus agrifolia*	Impacted	27	1	2.8
526	*NO*			2	
527	*NO*			2	
528	*Salix sp*	Preserved w/MM	12	1	2.8
529	*Salix sp*	Preserved	18	5	2.6
530	*Salix sp*	Preserved	12	1	3.0
531	*Salix sp*	Preserved	18	6	3.0
532	*Salix sp*	Preserved w/MM	12	1	3.0
533	*Salix sp*	Impacted	12	1	2.8
534	*Salix sp*	Preserved w/MM	16	1	3.0
535	*Salix sp*	Preserved w/MM	13	3	2.8
536	*NO*			3	
537	*Salix sp*	Preserved w/MM	12	5	2.8
538	*NO*				
539	*NO*				
540	*NO*				
541	*NO*				
542	*Salix sp*	Preserved	12	2	3.0
543	*Salix sp*	Preserved	16	4	2.8
544	*NO*				
545	*NO*				
546	*Salix sp*	Preserved	12	1	2.8
547	*Salix sp*	Preserved	14	1	3.0
548	*Salix sp*	Preserved	14	1	2.8
549	*Salix sp*	Preserved	15	1	2.8

Tree Number	Species Name	Status	Effective DBH	No. of Trunks	Overall Rating
550	*Salix sp*	Preserved	12	1	2.8
551	*Salix sp*	Preserved	14	2	2.6
552	*Salix sp*	Preserved	19	4	2.6
553	*NO*				
554	*NO*				
555	*Salix sp*	Preserved	12	1	3.0
556	*Salix sp*	Preserved w/MM	13	2	3.0
557	*NO*				
558	*Salix sp*	Preserved w/MM	12	5	2.6
559	*Salix sp*	Preserved w/MM	13	4	3.0
560	*Salix sp*	Preserved w/MM	17	4	3.0
561	*Salix sp*	Preserved w/MM	18	5	3.0
562	*Salix sp*	Preserved w/MM	12	4	2.8
563	*Salix sp*	Preserved	12	1	2.6
564	*Salix sp*	Preserved	12	8	2.6
565	*Salix sp*	Preserved	12	1	2.6
566	*Salix sp*	Preserved	17	3	2.6
567	*Salix sp*	Preserved	16	1	3.0
568	*NO*				
569	*NO*				
570	*NO*				
571	*Salix sp*	Preserved w/MM	17	2	2.6
572	*Salix sp*	Preserved w/MM	26	1	2.6
573	*Salix sp*	Preserved w/MM	16	8	2.8
574	*NO*				
575	*Salix sp*	Preserved w/MM	19	5	3.0
576	*NO*				
577	*NO*				
578	*NO*				
579	*Salix sp*	Impacted - Buffer	14	3	2.8
580	*Salix sp*	Preserved w/MM	17	4	2.6
581	*Salix sp*	Impacted	19	3	3.0
582	*Salix sp*	Impacted	20	3	2.6
583	*Salix sp*	Impacted	14	1	3.0
584	*Salix sp*	Impacted	12	1	2.6
585	*Salix sp*	Impacted	20	3	2.8
586	*Salix sp*	Impacted	16	2	2.6
587	*Salix sp*	Impacted	16	4	2.6
588	*Salix sp*	Impacted	19	3	2.6
589	*Salix sp*	Impacted	13	4	2.6
590	*NO*				

Table 2 provides a summary by DBH size category as shown on revised Exhibits 3 and 4.

Table 2. Summary of Species Data – 3/12/04 Tree Inventory

Species	Size Category DBH	No. of Trees	Average Overall Health Rating
Quercus agrifolia	8" – 17"	1	3.0
	18" – 35"	2	2.9
Salix spp.	12" – 17"	35	2.8
	18" – 35"	10	2.8
Total		**48**	

4.0 IMPACTS

4.1 Impact Analysis

Revised Exhibits 3 and 4 depict (1) the "Limits of Grading" line, (2) the "20-Foot Wide Disturbance Area," and (3) the limits of the "Minimum Tree Inventory Area" used to determine the tree impacts described in Table 1. Trees whose trunks are located within the Limits of Grading line are identified as "Impacted" and would be subject to removal.

Trees with trunks that are located beyond the limits of grading, but within 20 feet of the grading line (i.e., within the "20-Foot Wide Disturbance Area"), are potentially subject to removal or substantial impact during grading operations. These trees are categorized as "Impacted-Buffer" in Table 1. Although these trees are catalogued as impacted in this analysis, all reasonable efforts will be made in the field to preserve or minimize impacts when possible. Such impact minimization efforts might include wrapping of trunks with protective material, pruning of branches to limit opportunities for contact with equipment or use of gravel or wood chip mulch to minimize the compacting effect of heavy equipment.

Trees that are located outside of the 20-Foot Wide Disturbance Area, but with Optimal Protection Zones (as defined below) located within 50 feet of the outer edge of the 20-Foot Wide Disturbance Area, are identified as "Preserved w/MM" (i.e., preserved, but possibly requiring implementation of mitigation measures to eliminate or reduce indirect construction impacts). The Optimal Protection Zone (OPZ) is an analytical tool used to predict the actual extent of root penetration into the soil surrounding a tree for the purpose of identifying potential impacts and appropriate mitigation measures. The OPZ is calculated based on the species' tolerance to impacts, the age of the tree, and the tree's DBH (Matheny and Clark, 1998). This calculation acknowledges that a mature tree is more intolerant of disturbance than a young tree and therefore should be afforded greater protection from construction impacts. A tree designated as "Preserved w/MM" would likely require implementation of mitigation measures in the field in order to ensure avoidance or at least minimization of construction-related impacts. Trees located within 50 feet of the outer edge of the 20-Foot Wide Disturbance Zone are strong candidates for such mitigation measures. These mitigation measures are discussed in the original report.

Coast live oaks would require replacement pursuant to Section 46.02(c) of the LAMC. Although not specifically protected by ordinance, the willows would be identified as part

of the tree resources on site according to the instructions for filing tentative tract maps with the City of Los Angeles.

4.2 Preservation and Permanent Impacts

Table 3 summarizes the preserved and impacted trees by species and by property location. At least 34 willows would be preserved and three coast live oaks and up to 11 willows would be impacted by implementation of the proposed project, as depicted on revised Exhibits 3 and 4 and described in Table 1.

Table 3. Summary of Preserved Trees and Impacts – Additional Trees

Species	Preserved	Impacted	20-Foot Wide Disturbance Area	Totals
Quercus agrifolia	0	3	0	3
Salix spp.	34	10	1	45
Total	**34**	**13**	**1**	**48**

5.0 MITIGATION

The determination of the "value of the tree to be replaced" with respect to the additional three coast live oak trees identified in this addendum that would be impacted by the proposed project is based on the fair market value methodology discussed in the Draft EIR. Using the methodology presented on pages IV.D-120 through 123 of the Draft EIR, the three oaks occupy an additional three acres of land. Therefore, the fair market value of the impacted trees is $2,642 x 3 acres = $7,926.

In accordance with Mitigation Measures D.2-6 and D.2-7 in the Draft EIR, the proposed mitigation for the impacts to these additional oak trees includes replacement trees with a value that exceeds the fair market value as calculated above as well as a five-year monitoring program. The replacement tree value would be incorporated into the conceptual tree planting program shown in Table IV.D-16 of the Draft EIR as follows:

Table 4. Conceptual Tree Planting Program – Additional Oak Trees

Planting Area	Tree Species	Type	Quantity	Approximate Value Installed
Common Areas and Road Right-of-Ways	Coast Live Oak	24" box	36	$8,100

The approximate replacement tree value of $8,100 exceeds the fair market value of $7,926 for the additional impacted trees. The mitigation plan described above would replace the additional impacted oaks at a ratio of 12:1. This replacement ratio substantially exceeds the minimum replacement ratio of 2 to 1 set forth in Section 46.02(c)(1) of the LAMC.