Appendix B
Arborist Report

Arborist Report for the Alexan Mixed-Use Development Project, City of Arcadia, California

Prepared for:

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Table of Contents

FIGURE

TABLES

1 Introduction

This report summarizes Dudek's evaluation and analysis of tree resources within the tree survey area at the proposed Alexan Mixed-Use Development Project (Project) in Arcadia, CA. The Project site is comprised of 2.96 acres of developed land (Assessor Parcel Numbers [APN] 5773-006-036, -010, -004, and -005) located in the City of Arcadia (City) within Los Angeles County, approximately 13 miles east of downtown Los Angeles. The site is bound by Santa Anita Avenue to the west, Wheeler Avenue to the south, an unnamed alley mid-block between Santa Anita Avenue and First Avenue, and East Santa Clara Street (Figure 1 – Regional Location and Vicinity Map). The survey area for this Project includes all property within the APNs, a 2,008 square foot alley, and the immediately adjacent public right-of-way.

The field inventory and assessments of the survey area's trees were conducted on August 17, 2021. The focus of Dudek's field evaluations was to identify and inventory all trees within the survey area that are subject to regulation under Division 10, Section 9110.01, Tree Preservation, of the City's Development Code, and that could be affected by the proposed development. This report includes a discussion of tree inventory, evaluation, and analysis methods, a summary of findings, identification of anticipated impacts, and tree protection recommendations consistent with Section 9110.01 of the Development Code and the tree removal permit process specified therein, as well as Chapter 8, Comprehensive Tree Management Program, of the City's Municipal Code governing the planting, maintenance, removal and replacement of City-owned trees on public property. The City of Arcadia requires a permit for removal or encroachment upon the canopy or protected zone of a protected tree, which are defined as:

1. Engelmann Oak (*Quercus Engelmannii*) or Coast Live Oak (*Quercus Agrifolia*) with a trunk diameter larger than four (4) inches measured at a point four and one-half (4½) feet above the root crown, or two (2) or more trunks measuring three (3) inches each or greater in diameter, measured at a point four and one-half (4½) feet above the root crown.

2. Any other living California native or non-California native Oak tree with a trunk diameter larger than twelve (12) inches measured at a point four and one-half (4½) feet above the root crown, or two (2) or more trunks measuring ten (10) inches each or greater in diameter, measured at a point four and one-half (4½) feet above the root crown.

3. California, or western, Sycamore (*Platanus Racemose*) with a trunk diameter larger than six (6) inches measured at a point four and one-half (4½) feet above the root crown, or two (2) or more trunks measuring four (4) inches each or greater in diameter, measured at a point four and one-half (4½) feet above the root crown.

4. Mature Tree. Any tree, with the exception of the trees listed as Unprotected Trees, that have a trunk diameter larger than twelve (12) inches measured at a point four and one-half (4½) feet above the root crown, or two (2) or more trunks measuring ten (10) inches each or greater in diameter, measured at a point of four and one-half (4½) feet above the root crown and the tree is located within a required front, side, street-side, or rear yard setback.

The analysis of potential tree impacts in this report considers the requirements outlined in Section 9110.01 of the City's Development Code, as well as Chapter 8 and other applicable sections of City's Municipal Code. The proposed Project would remove City-defined protected trees and would result in encroachment into the protected zone of publicly-owned street trees due to the proposed site development. Section 4 of this report summarizes the City's

regulatory requirements and makes further recommendations related to anticipated on-site tree removal and construction encroachment into the protected zone of street trees.

1.1 Summary

The field survey recorded 36 trees within the survey area, which includes on-site trees and off-site street trees located on Wheeler Avenue and Santa Clara Avenue. Six trees on-site are subject to regulation under Division 10, Section 9110.01, Tree Preservation, of the City's Development Code (Tree Preservation Ordinance), adopted April 2021. These six trees meet the definition of protected trees as defined in the City's Municipal Code, including three (3) lemon bottle brush (*Callistemon citrinus*) trees, one (1) carrotwood (*Cupaniopsis anacardioides*), one (1) southern live oak (*Quercus virginiana)*, and one (1) Chinese elm (*Ulmus parvifolia*).

Nine (9) trees are identified as off-site street trees within the survey area and are subject to regulation under Chapter 8, Comprehensive Tree Management Program, of the City Municipal Code, including seven (7) Southern live oak trees (*Quercus virginiana*), one (1) cork oak (*Quercus suber*), and one (1) crape myrtle (*Laegerstroemia indica*) tree. The remaining 21 trees are not subject to regulation under the City's Tree Preservation Ordinance or Tree Management Program. The inventoried tree locations are depicted in Appendix A, Tree Location Exhibit. The proposed project's tree impacts are depicted in Appendix B, Tree Impact Exhibit.

Based on an evaluation of the most current site plan, the disturbance area is focused in existing developed areas, consisting primarily of existing buildings and parking lots. Construction of the proposed Project is expected to require removal of up to six protected trees (3 lemon bottle brush, 1 carrotwood, 1 Southern live oak, and 1 Chinese elm). Furthermore, one off-site street tree (1 crape myrtle) and the protected zone of up to eight off-site street trees (7 southern live oak, 1 cork oak)would be encroached upon as a result of proposed excavation for the subterranean parking structure and building construction. City-issued permits are not required for removal of tree limbs or pruning or trimming branches of street trees in conjunction with construction activities; however, the City requires that pruning or trimming be completed in accordance with the industry standards as set forth by the International Society of Arboriculture or the American National Standards Institute (ANSI), and in consultation with a Certified Arborist.

The City's Tree Preservation Ordinance calls for the planting of additional trees if a protected tree is removed. As such, this report recommends two (2) new twenty-four-inch box trees to be planted for each protected tree approved for removal. The tree replacement recommendations contained herein are informed by the standards set forth in the City's Tree Preservation Ordinance, but also provide recommendations beyond what is currently required by City Code. Finally, Section 4 of this report provides construction-related tree protection recommendations and recommendations for long-term maintenance and care for street trees that will be retained adjacent to the Project site, as well as for future on-site replacement trees.

Sections 9110.01.080 of the City's Development Code sets forth the requirements for tree replacement. In accordance with these requirements, Dudek recommends planting 14 trees on site to mitigate for the anticipated removal of seven protected trees. Species composition of the planted trees should be appropriate for the location and replaced at a ratio of two 24-inch box trees for each protected tree removed (2:1 ratio). Although not required by the City, Dudek also recommends planting 21 trees on-site to mitigate for the anticipated removal of 21 non-regulated on-site trees (1:1 ratio). A long-term monitoring and maintenance program is further recommended to mitigate for encroachments into the protected zone of retained street trees.

1.2 Assignment

Dudek's International Society of Arboriculture (ISA) Certified Arborists performed the following tasks:

- Assessed and inventoried all protected trees with protected zones within the survey area and documented species, general health, general structural condition, size, appearance, and presence of pests within the 2.96 acre proposed Project site and adjacent public right-of-way;
- Mapped the location of protected trees on site using global positioning system (GPS) technology as necessary to develop a tree location exhibit and for planning reference;
- Prepared a tree information matrix that details the attributes of each protected tree and identifies the species and protection status;
- Analyzed tree attribute data and coordinated with the project design team to promote tree retention on site, to the maximum extent practicable;
- Evaluated tree impacts based on the Project site plans, and;
- Prepared this report to document the results of field surveys and impact analyses and provide recommendations for tree protection and impact mitigation measures in accordance with the provisions of the City's Tree Preservation Ordinance and Chapter 8 of the City's Municipal Code.

1.3 Project Description

The Project site, which totals approximately 2.96 gross acres, is located in the City of Arcadia (City) within Los Angeles County. The Project site is currently occupied by a 2-story office building, two single-story commercial buildings, and surface parking, which would be demolished to accommodate the proposed Project. The Project site also contains an existing 8-story office building and single-story bank drive through, which would remain in place. The Project proposes to construct a 7-story multi-family residential building, containing a total of 319 dwelling units. Implementation of the proposed Project would include a total of 576 parking spaces. The Project would construct two above-ground parking areas, within Levels 1 and 2 of the building, and up to two subterranean parking levels. The Project site is surrounded by a variety of land uses, including residential, recreational, and commercial retail.

1.4 Setting

The Project site is surrounded by a variety of urban land uses, as follows:

- **Land Uses to the North**: North of the Project site across Santa Clara Street is a commercial use (REI store) and associated surface parking lot. To the northeast is the Metro L (Gold) Line Station and associated parking garage. To the northwest is surface parking and commercial land uses.

- **Land Uses to the East:** Land uses immediately east include a United States Postal Service building and associated surface parking, followed by multi-family residential and commercial uses approximately 200 feet to the east of the Project site.

- **Land Uses to the South:** Immediately south of the Project site is a City-owned surface parking lot across Wheeler Avenue, and a medical office complex to the southeast of the Project site. Further south includes

various retail and restaurant uses located along Huntington Drive. The Arcadia County Park followed by the Santa Anita Golf Course are located to the southwest of the Project site.

- **Land Uses to the West:** The Project site is bordered by Santa Anita Avenue to the west. A car dealership, retail, and office land uses, accompanied by surface parking lots, are located across Santa Anita Avenue. Farther east are single-family residences.

SOURCE: ESRI 2014

FIGURE 1

Regional Location and Vicinity Map

Alexan Mixed-Use Development Project

DUDEK

0 500 1,000 Feet

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2 Methods

The following sections describe the methods used by Dudek's ISA Certified Arborists to inventory and evaluate trees on the tree survey area.

2.1 Field Tree Inventory and Evaluation

Dudek's ISA Certified Arborist, Ryan Allen (WE-10316A), conducted the following tree inventory and tree evaluation:

- August 17, 2021– tree inventory and evaluation to document tree locations and attribute information for all protected trees within the survey area.

The arborist examined and mapped all trees with protected zones that may be disturbed by the proposed development. Tree attribute data collected during the field survey included species, trunk diameter, tree height, canopy spread, general health condition, structural condition and presences of observable pests or other tree maladies. Trunk diameters were measured using a diameter tape which provides adjusted numbers for diameter measurements when wrapping the tape around the circumference of the trunk of a tree. Diameter measurements were collected using standard protocol described by the Council of Tree and Landscape Appraisers in the "Guide for Plant Appraisal," published by the ISA and in accordance with guidance given in the City's Tree Preservation Ordinance.

Trunk diameter measurements were taken at 4.5 feet above the ground along the trunk axis, with a few common exceptions. In cases where the trunk of a tree split into multiple stems at approximately 4.5 feet above the ground, the measurement was made at the location that best represented the trunk's diameter. Tree height measurements were estimated by the arborist, and tree crown radius measurements were documented by "pacing-off" the measurement based on the arborist's knowledge of his stride length or visually estimating the canopy width.

Pursuant to the Guide for Plant Appraisal (ISA 2000), tree health and structure were evaluated with respect to five distinct tree components: roots, trunk, scaffold branches, small branches, and foliage. Health and structure were graded as *good*, *good/fair*, *fair*, *fair/poor*, and *poor*. Good condition trees exhibit acceptable vigor, healthy foliage, minor if any structural issues, and no apparent maladies. Fair condition trees are typical, with few maladies, moderate structural issues, and may exhibit less vigor in foliage and new growth. Trees assigned a poor condition rating by Dudek's arborists exhibit significant health or structural problems or damage. Representative photographs of the tree survey area trees are provided in Appendix C, Tree Survey Area Representative Photographs.

The location of each individual regulated tree was mapped using a Trimble Pathfinder Pro XH 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. Dudek used the data collected to create a master tree inventory data set, inclusive of all regulated trees within the tree survey area.

Individual tree locations are presented in Appendix A, Tree Location Exhibit and individual tree attribute data and impact determination is presented in Appendices B, Tree Impact Exhibit and Appendix D, Tree Information Matrix.

Additionally, tree survey area representative photographs were taken in the field and are presented in Appendix C, Tree Survey Area Representative Photographs.

2.2 Tree Impact Analysis

Following data collection, processing, and analysis efforts, an impact determination was made for each tree based on proximity to the proposed disturbance area and building footprint. Impact determinations used in this report include the following: 1) Not Impacted (tree not affected by project); 2) Removal (tree to be removed); and 3) Encroachment (project disturbance would occur within the protected zone of the tree). A summary of project-related tree impacts is presented in Section 3.2, and Appendix D provides impact determination status for each tree recorded in the tree survey area.

2.3 Scope of Work Limitations

This report presents tree information as observed in the field. No root crown excavations or investigations, internal probing, or aerial canopy inspections were performed during the tree assessments. Therefore, the presence or absence of internal decay or other hidden or inaccessible inferiorities in individual trees could not be confirmed.

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3 Findings/Results

3.1 Inventory Summary

Dudek's arborist recorded 36 trees within the on-site survey area and off-site street trees. Of these, six trees meet the criteria for regulation under City's Tree Preservation Ordinance and nine trees meet the criteria for regulation under the Tree Management Program. Table 1 provides a summary of the species and regulatory status of the trees mapped within the tree survey area.

Table 1. Summary of Existing Trees

Scientific Name	Common Name	Tree Quantities			
		On-Site Protected Trees	*Off-Site Street Trees*	*On-Site Non-Regulated Trees*	*Total (All Trees)*
Callistemon citrinus	lemon bottle brush	3	0	0	3
Cupaniopsis anacardioides	carrotwood	1	0	2	3
Cupressus sempervirens	Italian cypress	0	0	6	6
Lagerstroemia indica	crape myrtle	0	1	0	1
Quercus suber	cork oak	0	1	0	1
Quercus virginiana	Southern live oak	1	7	2	10
Schinus terebinthifolius	Brazilian pepper	0	0	2	2
Syagrus romanzoffianum	queen palm	0	0	9	9
Ulmus parvifolia	Chinese elm	1	0	0	1
	TOTAL	**6**	**9**	**21**	**36**

As presented in Appendix D (Tree Information Matrix), 23 (63.9%) of the trees exhibit good health, 12 (33.3%) trees exhibit fair health, and 1 (2.8%) tree shows signs of poor health. Additionally, 16 trees (44.4%) have good structure, 11 trees (30.6%) have fair structure, and 9 trees (25%) have poor structure.

Trees in the tree on-site and off-site survey area vary in size and stature according to species. Aggregate trunk diameters of the trees within the tree survey area ranges from 4 inches to 25 inches. Tree heights vary from 10 feet to 35 feet. Tree canopy extents range from three feet to nearly 30 feet at their widest location. Individual attributes of each tree are presented in Appendix D (Tree Information Matrix).

3.2 Project-Related Impacts

There is wide variation in tolerance to construction impacts among tree species and the response of an individual tree to impacts also varies with age and condition. Impacts assessed for this project include those trees with protected zones on or adjacent to the proposed improvements and identified disturbance areas as defined in the project site

plan. The impact discussion in this section identifies all impacts anticipated to result to regulated trees based on an evaluation of tree locations compared with the project site plan. Much of the site will need to be graded to accommodate the construction of buildings, parking lots, and the placement of necessary infrastructure. Trees identified for retention and removal are graphically presented in the Tree Impact Exhibit included in Appendix B.

The analysis of affected trees presented below is based on the proposed Project footprint. For the purposes of this report, tree removal is conservatively considered necessary when the trunk is located inside or within 2 feet of the proposed limits of development. Encroachment is expected when soil and roots are disturbed within the tree-protected zone (canopy drip line plus 5 feet or 15 feet from trunk, whichever is greater). Typically, specific circumstances allow some protected trees that are being encroached upon to be preserved in place within or adjacent to the development area.

Tree removal is necessary to accommodate the construction of two above-ground parking areas, within Levels 1 and 2 of the building, and up to two subterranean parking levels. Tree removal is more desirable than alternative project designs as it would present unreasonable constraints that would make site development not feasible. Based on grading and development plans for the proposed Project, it is estimated that seven (19.4%) protected trees and 21 (58.3%) non-regulation trees will be removed.

Project disturbance is expected to encroach on the protected zone of 8 (22.2%) off-site protected street trees. The proposed Project site plan has the potential for direct impacts to all of the trees within survey area, whether through removal for all on-site trees or through encroachment through construction activities that could impact street trees.

Table 2 summarizes impact determinations for protected trees, street trees, and non-regulation trees within the tree survey area that are subject to regulation under the City's Tree Preservation Ordinance and Tree Management Program. As shown in Appendix B, the nine trees that would be encroached upon are all City owned trees within the public right-of-way along Wheeler Avenue to the south and Santa Clara Avenue to the north. All 27 on-site trees would be removed with Project implementation.

Table 2. Summary of Tree Impact Determinations

Species	On-Site Protected Trees		Off-Site Street Trees		On-Site Non-Regulation Trees		
Botanical Name	*Removal*	*Encroach*	*Removal*	*Encroach*	*Removal*	*Encroach*	Total
Callistemon citrinus	3	0	0	0	0	0	3
Cupaniopsis anacardioides	1	0	0	0	2	0	3
Cupressus sempervirens	*0*	*0*	*0*	*0*	*6*	*0*	*6*
Lagerstroemia indica	0	0	1	0	0	0	1
Quercus suber	0	0	0	1	0	0	1
Quercus virginiana	*1*	*0*	*0*	*7*	*2*	*0*	*10*
Schinus terebinthifolius	0	0	0	0	2	0	2
Syagrus romanzoffianum	0	0	0	0	9	0	9
Ulmus parvifolia	1	0	0	0	0	0	1
Totals	**6**	**0**	**1**	**8**	**21**	**0**	**36**

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4 Regulatory Requirements and Recommendations

4.1 Recommendations

Removals

The City's Tree Preservation Ordinance requirements for healthy protected tree removals associated with development projects are summarized as follows:

a) A tree report shall be required from a Certified Arborist. The tree report must include an evaluation of the health of the protected tree, and the following information, at a minimum, the following:

   (1) An explanation as to why the tree's removal is necessary.

   (2) An explanation as to why tree removal is more desirable than alternative project designs.

   (3) An explanation of any mitigation measures.

b) Upon the receipt of a complete application to remove a healthy protected tree, the Director[1] or designee shall have thirty (30) days to take action on the application, unless it is being acted upon with another discretionary permit.

c) A Notice of Pending Decision shall be required for the Removal of a Healthy Tree application and shall be provided in compliance with Development Code Section 9108.13 (Public Notices and Hearings). The notice shall be mailed to all owners of real property as shown on the latest assessment rolls of the City or of the County, located within a radius of 300 feet of the exterior boundaries of the subject property. Surrounding residents shall have up to 14 days to submit any comments before the date of the Director's consideration and final decision as stated in the notice.

Further, Section 9110.01.080, Tree Replacement, of the City's Development Code requires the following:

> 1. Tree Replacement. For every protected tree that was approved to be removed, it shall be replaced with a minimum of two (2) new 24-inch box trees. When it is appropriate, the Director may modify, waive, increase, or reduce the tree replacement requirement.
>
> 2. Follow-up Report. The Certified Arborist, at the expense of the property owner, shall submit a follow-up report to the City that the work was completed, and to the satisfaction of the Director.

The proposed Project would require removal of six protected trees and consistent with the City's requirements, Dudek recommends the tree replacements as shown in Table 3, for removals associated with the Project. While not

[1] According to Section 9110.01.120 of the City's Development Code, in a matter of healthy, protected tree removals or encroachments involving private property, "Director" shall mean the Director of Development Services of the City of Arcadia or appointed designee. In the matter involving public property, "Director" shall mean the Director of Public Works Services of the City of Arcadia or appointed designee.

required, it is recommended that non-regulation trees be replaced on a 1:1 basis to help recover lost tree canopy cover. As required by Section 9110.01.080, Tree Replacement, of the City's Development Code, a Certified Arborist, at the expense of the property owner, shall submit a follow-up report to the City confirming that the replacement of the designated protected trees was completed, and to the satisfaction of the Director. Due to the regulatory requirements set forth by the City, all impacts of the proposed Project related to protected tree removals would be less than significant, and no mitigation beyond compliance with City regulations would be required. Additionally, while requirements for long-term maintenance of street trees is outlined in Section 9812, Tree Planting and Maintenance Regulations, of the City's Municipal Code, Appendix E (Tree Protection Measures) of this report includes additional recommendations set forth by Dudek that could apply to the long-term care and maintenance of the on-site replacement trees. While these recommendations are not required, they are encouraged to ensure the health and longevity on on-site replacement trees not regulated under City law.

Table 3. Replacement Recommendations for Proposed Tree Removals

Species	Expected Removal	Replacement Ratio	Recommended Replacement Plantings
			24-inch box trees
Protected trees	7	2:1	14 [1]
Non-regulation trees	21	1:1	21
Total	**28**		**35**

[1] Although not protected under the Tree Preservation Ordinance, per Section 9806 of the City's Municipal Code, removal of the City-owned crepe myrtle (*Lagerstroemia indica)* on Santa Clara Street (tree No. 8 as shown in Appendix A), would require issuance of a permit from the City's Public Works Department. Further details regarding the permit fee and specific replacement requirements—including the species and replacement ratio—would be determined by the Director of Public Works at such a time that the application for street tree removal was received. Therefore, Dudek's recommendation of a 2:1 replacement ratio for the *Lagerstroemia indica* street tree would be subject to further review and approval by the Director.

Encroachment into Protected Zone and Retained Trees

In accordance with Section 9812, Tree Planting and Maintenance Regulations, of the City's Municipal Code, Appendix E of this report provides recommendations to reduce potential damage from encroachments into the protected zone of City owned street trees. These recommendations include measures that go beyond the requirements set forth by the City but would contribute to the health of the trees retained adjacent to the Project site, as well as the replacement trees required and recommended to be planted on-site. The measures included in Appendix E are also consistent with the provisions of Division 10 Section 9110.01.090, Protective Measures, of the City's Development Code and would help minimize impacts related to the construction of the proposed Project. Appendix E includes measures to implement prior to, during, and following construction. This includes measures such as exclusion fencing and worker training to avoid direct impacts to trees, and measures such as irrigation and monthly inspections by an arborist to promote the long-term health of retained trees. Dudek also recommend arborist monitoring during construction when encroachments into tree protection zones occur in order to minimize root disturbance and determine the best course of actions for root pruning, supplemental irrigation, branch trimming, or other measures that would minimize the impacts from ground disturbing or other potential impactful activities.

4.2 Tree Permits

The project applicant will need to submit a Tree Permit Application and fee to the City of Arcadia. A copy of this report and the final Project site plan should accompany the application. A Tree Permit is required for removal or encroachment into the protected zone of a regulated tree. The Community Development Director may modify, waive, increase, or reduce the tree replacement requirement.

5 Disclosure

This arborist report provides conclusions and recommendations based only on a visual examination of the trees within the tree survey area by International Society of Arboriculture Certified Arborists and reasonable reliance on the completeness and accuracy of the information provided to the arborist. The examination did not include subterranean or internal examination of the trees.

Arborists are tree specialists who use their education, knowledge, training, and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near them. Although trees provide many benefits to those who live near them, they also include inherent risks from breakage or failure that can be minimized but not eliminated.

Arborists cannot detect every condition that could possibly lead to the failure of a tree. Trees are living organisms subject to attack by disease, insects, fungi, weather, and other forces of nature, and conditions that lead to failure are often hidden within trees and belowground. There are some inherent risks with trees that cannot be predicted with any degree of certainty, even by a skilled and experienced arborist. Arborists cannot predict acts of nature, including, without limitation, storms of sufficient strength, which can cause an apparently healthy tree to fail. Additionally, arborists cannot guarantee that a tree will be healthy or safe under all circumstances or for any specific period of time. A tree's condition could change over a short or long period of time due to climatic, cultural, or environmental conditions. Further, there is no guarantee or certainty that recommendations or efforts to correct unsafe conditions will prevent future breakage or failure of a tree.

To live or work near trees is to accept some degree of risk. Neither the author of this Arborist report nor Dudek have assumed any responsibility for or will be liable for any claims, losses, or damages for damage to any tree, death or injury to any person, or any loss of or damage to any personal or real property.

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6 References

City of Arcadia. 2021. Section 9110.01, Tree Preservation. City of Arcadia Municipal Code. Accessed August 21, 2021. https://www.arcadiaca.gov/Shape%20Arcadia/Development%20Services/zoning/Tree%20Preservation%20-%204-21.pdf

International Society of Arboriculture (ISA). 2000. Guide for Plant Appraisal (9th Edition).

Trammel Crow Residential. 2021. Overall Site Plan, Alexan Arcadia Mixed-Use/Multi-Family Housing Project. May 23, 2021.

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Appendix A

Tree Location Exhibit

SOURCE: Nearmap 2021

DUDEK

0 40 80 Feet

Appendix A - Tree Location Exhibit

Arcadia Mixed-Use Development Project

Appendix B

Tree Impact Exhibit

SOURCE: Nearmap 2021

DUDEK

0 40 80 Feet

Appendix B - Tree Impact Exhibit

Arcadia Mixed-Use Development Project

Appendix C

Tree Survey Area Representative Photographs

Appendix C –Tree Survey Area Representative Photographs

Alexan Mixed-Use Development Project EIR

Photo #1. Representative photograph of tree nos. 1 and 2 on Santa Clara Ave.

Photo #2. Representative photograph of tree nos. 5, 6, 7, and 8 on Santa Clara Ave.

Photographs were taken on August 17, 2021

Appendix C –Tree Survey Area Representative Photographs

Alexan Mixed-Use Development Project EIR

Photo #3. Representative photograph of tree no. 14 located in east end parking lot.

Photo #4. Representative photograph of tree no. 15 located in east end parking lot.

Photographs were taken on August 17, 2021

Appendix C –Tree Survey Area Representative Photographs

Alexan Mixed-Use Development Project EIR

Photo #5. Representative photograph of tree no. 20 located on Wheeler Ave.

Photo #6. Representative photograph of tree nos. 24 and 25 located on Wheeler Ave.

Photographs were taken on August 17, 2021

Appendix C –Tree Survey Area Representative Photographs

Alexan Mixed-Use Development Project EIR

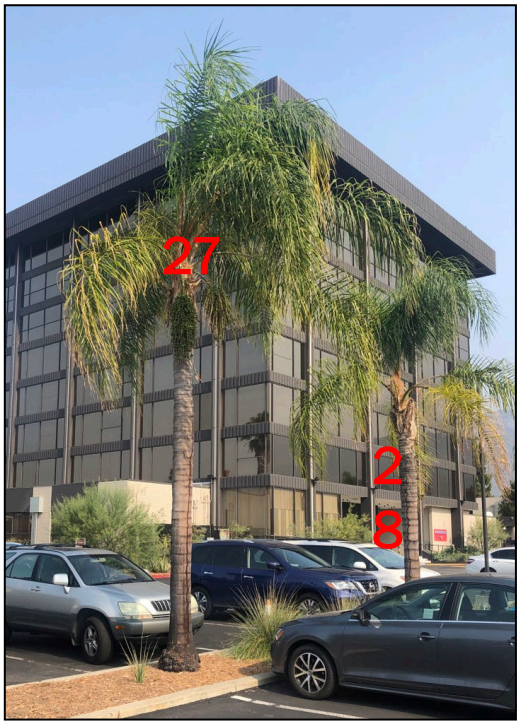

Photo #7. Representative photograph of tree nos. 27 and 28 located in bank parking lot.

Photo #8. Representative photograph of tree nos. 32 and 33 located in bank parking lot.

Photographs were taken on August 17, 2021

Appendix D

Tree Information Matrix

Appendix D. Tree Information Matrix

Tree No.	Botanical Name	Common Name	Trunk DSH (inches)	Health*	Structure*	Impact Status	Protected Status?	Street Tree?	Latitude	Longitude
1	*Quercus virginiana*	Southern live oak	12	good	fair	removal	Yes	No	34.1422	-118.03072
2	*Callistemon citrinus*	lemon bottlebrush	23	good	poor	removal	Yes	No	34.1422	-118.0305
3	*Callistemon citrinus*	lemon bottlebrush	15	good	fair	removal	Yes	No	34.1422	-118.03037
4	*Schinus terebinthifolius*	Brazilian pepper	25	good	fair	removal	No	No	34.1422	-118.03033
5	*Cupressus sempervirens*	Italian cypress	4	good	good	removal	No	No	34.1422	-118.03026
6	*Cupressus sempervirens*	Italian cypress	4	good	good	removal	No	No	34.1422	-118.03024
7	*Cupressus sempervirens*	Italian cypress	4	good	good	removal	No	No	34.1422	-118.03021
8	*Lagerstroemia indica*	crape myrtle	6	fair	fair	removal	Yes	Yes	34.1422	-118.03024
9	*Cupressus sempervirens*	Italian cypress	4	good	good	removal	No	No	34.1422	-118.03008
10	*Cupressus sempervirens*	Italian cypress	4	good	good	removal	No	No	34.1422	-118.03005
11	*Cupressus sempervirens*	Italian cypress	4	good	good	removal	No	No	34.1422	-118.03002
12	*Schinus terebinthifolius*	Brazilian pepper	12	good	poor	removal	No	No	34.1421	-118.03029
13	*Cupaniopsis anacardioides*	carrotwood	7	fair	poor	removal	No	No	34.1419	-118.03014
14	*Cupaniopsis anacardioides*	carrotwood	17	good	poor	removal	Yes	No	34.1418	-118.03028
15	*Cupaniopsis anacardioides*	carrotwood	9	fair	poor	removal	No	No	34.1419	-118.02997
16	*Quercus virginiana*	Southern live oak	9	fair	fair	encroached	Yes	Yes	34.1412	-118.03001
17	*Quercus virginiana*	Southern live oak	13	fair	fair	encroached	Yes	Yes	34.1412	-118.03014
18	*Quercus virginiana*	Southern live oak	17	good	fair	encroached	Yes	Yes	34.1412	-118.03022
19	*Quercus suber*	cork oak	17	poor	poor	encroached	Yes	Yes	34.1412	-118.03046
20	*Quercus virginiana*	Southern live oak	11	fair	fair	encroached	Yes	Yes	34.1412	-118.03061
21	*Quercus virginiana*	Southern live oak	12	fair	fair	encroached	Yes	Yes	34.1412	-118.03075
22	*Quercus virginiana*	Southern live oak	7	fair	good	removal	No	No	34.1413	-118.03092
23	*Quercus virginiana*	Southern live oak	6	fair	fair	removal	No	No	34.1413	-118.03094
24	*Quercus virginiana*	Southern live oak	9	fair	fair	encroached	Yes	Yes	34.1412	-118.03096
25	*Quercus virginiana*	Southern live oak	20	good	poor	encroached	Yes	Yes	34.1412	-118.03106
26	*Callistemon citrinus*	lemon bottlebrush	14	good	poor	removal	Yes	No	34.1413	-118.03083
27	*Ulmus parvifolia*	Chinese elm	19	good	poor	removal	Yes	No	34.1413	-118.03057
28	*Syagrus romanzoffianum*	queen palm	11	good	good	removal	No	No	34.1414	-118.03073
29	*Syagrus romanzoffianum*	queen palm	12	fair	good	removal	No	No	34.1415	-118.03074
30	*Syagrus romanzoffianum*	queen palm	11	good	good	removal	No	No	34.1416	-118.03073
31	*Syagrus romanzoffianum*	queen palm	12	fair	good	removal	No	No	34.142	-118.03073
32	*Syagrus romanzoffianum*	queen palm	11	good	good	removal	No	No	34.142	-118.03053
33	*Syagrus romanzoffianum*	queen palm	12	good	good	removal	No	No	34.1419	-118.03053
34	*Syagrus romanzoffianum*	queen palm	11	good	good	removal	No	No	34.1416	-118.03053
35	*Syagrus romanzoffianum*	queen palm	12	good	good	removal	No	No	34.1415	-118.03053
36	*Syagrus romanzoffianum*	queen palm	11	good	good	removal	No	No	34.1414	-118.03052

Health and Structure Ratings*
Good: exhibits normal health and canopy structure.
Fair: exhibits minor deficiencies in health and canopy structure.
Poor: exhibits significant deficiencies in health and canopy structure.
Dead: no longer a viable tree and should be removed

Appendix E

Tree Protection Measures

Appendix E – Tree Protection Measures

The following sections are included as general guidelines for tree protection from construction impacts. The measures presented should be monitored by arborists and enforced by contractors and developers for maximum benefit to the trees.

Tree Protection Measures Prior to Construction

Fencing: All remaining trees that will not be relocated or removed should be preserved and protected in place. Trees within approximately 15 feet of proposed construction activity should be temporarily fenced with chain link or other material satisfactory to City planning staff throughout grading and construction activities. The fencing should be installed 3 feet outside of the dripline of each tree (or edge of canopy for cluster of trees), be 4 feet tall, and staked every 6 feet. The fenced area should be considered the tree protection zone (TPZ) unless proximate construction required temporary removal.

Pre-Construction Meeting: A pre-construction meeting should be held between all contractors (including grading, tree removal/pruning, builders, etc.) and the arborist. The arborist will instruct the contractors on tree protection practices and answer any questions. All equipment operators and spotters, assistants, or those directing operators from the ground, should provide written acknowledgement of their receiving tree protection training. This training should include information on the location and marking of protected trees, the necessity of preventing damage, and the discussion of work practices that will accomplish such.

Protection and Maintenance During Construction

Once construction activities have begun the following measures should be adhered to:

Equipment Operation and Storage: Avoid heavy equipment operation around the trees. Operating heavy machinery around the root zones of trees will increase soil compaction, which decreases soil aeration and subsequently reduces water penetration in the soil. All heavy equipment and vehicles should, at minimum, stay out of the fenced TPZ, unless where specifically approved in writing and under the supervision of a Certified Arborist or as provided by the approved landscape plan.

Storage and Disposal: Do not store or discard any supply or material, including paint, lumber, concrete overflow, etc. within the protection zone. Remove all foreign debris within the protection zone; it is important to leave the duff, mulch, chips, and leaves around the retained trees for water retention and nutrients. Avoid draining or leakage of equipment fluids near retained trees. Fluids such as gasoline, diesel, oils, hydraulics, brake and transmission fluids, paint, paint thinners, and glycol (anti-freeze) should be disposed of properly. Keep equipment parked at least 50 feet away from retained trees to avoid the possibility of leakage of equipment fluids into the soil. The effect of toxic equipment fluids on the retained trees could lead to decline and death.

Grade Changes: Grade changes, including adding fill, are not permitted within the TPZ without special written authorization and under the supervision of a Certified Arborist or as provided by the approved landscape plan. Lowering the grade within this area will necessitate cutting main support and feeder roots, jeopardizing the health and structural integrity of the tree(s). Adding soil, even temporarily, on top of the existing grade will compact the soil further, and decrease both water and air availability to the trees' roots.

Moving Construction Materials: Care will be taken when moving equipment or supplies near the trees, especially overhead. Avoid damaging the tree(s) when transporting or moving construction materials and working around the tree (even outside of the fenced tree protection zone). Above ground tree parts that could be damaged (e.g., low limbs, trunks) should be flagged with red ribbon. If contact with the tree crown is unavoidable, prune the conflicting branch(es) using International Society of Arboriculture (ISA) standards.

Root Pruning: Except where specifically approved in writing or as provided in Attachment 3, all trenching should be outside of the fenced protection zone. Roots primarily extend in a horizontal direction forming a support base to the tree similar to the base of a wineglass. Where trenching is necessary in areas that contain tree roots, prune the roots using a Dosko root pruner or equivalent. All cuts should be clean and sharp, to minimize ripping, tearing, and fracturing of the root system. The trench should be made no deeper than necessary.

Irrigation: Trees that have been substantially root pruned (30% or more of their root zone) will require irrigation for the first 12 months. The first irrigation should be within 48 hours of root pruning. They should be deep watered every 2 to 4 weeks during the summer and once a month during the winter (adjust accordingly with rainfall). One irrigation cycle should thoroughly soak the root zones of the trees to a depth of 3 feet. The soil should dry out between watering; avoid keeping a consistently wet soil. Designate one person to be responsible for irrigating (deep watering) the trees. Check soil moisture with a soil probe before irrigating. Irrigation is best accomplished by installing a temporary above ground micro-spray system that will distribute water slowly (to avoid runoff) and evenly throughout the fenced protection zone ***but never soaking the area located within 6 feet of the tree trunk, especially during warmer months***.

Pruning: Do not prune any of the trees until all construction is completed. This will help protect the tree canopies from damage. All pruning should be completed under the direction of an ISA Certified Arborist and using ISA guidelines. Only dead wood should be removed from tree canopies.

Washing: During construction in summer and autumn months, wash foliage of trees adjacent to the construction sites with a strong water stream every two weeks in early hours before 10:00 a.m. to control mite and insect populations.

Inspection: An ISA Certified Arborist should inspect the impacted preserved trees on a monthly basis during construction. A report comparing tree health and condition to the original, pre-construction baseline should be submitted following each inspection. Photographs of representative trees are to be included in the report on a minimum annual basis.

Maintenance After Construction

Once construction is complete the fencing may be removed and the following measures performed to sustain and enhance the vigor of the preserved trees.

Mulch: Provide a 4-inch mulch layer under the canopy of trees. Mulch should include clean, organic mulch that will provide long-term soil conditioning, soil moisture retention, and soil temperature control.

Pruning: The trees will not require regular pruning. Pruning should *only* be done to maintain clearance and remove broken, dead or diseased branches. Pruning should only take place following a recommendation by an ISA Certified Arborist and performed under the supervision of an ISA Certified Arborist. No more than 20% of the canopy should be removed at any one time. All pruning should conform to ISA standards.

Watering: The natural trees that are not disturbed should not require regular irrigation, other than the 12 months following substantial root pruning. However, soil probing will be necessary to accurately monitor moisture levels. Especially in years with low winter rainfall, supplemental irrigation for the trees that sustained root pruning and any newly planted trees may be necessary. The trees should be irrigated *only* during the winter and spring months.

Watering Adjacent Plant Material: All plants near the trees should be compatible with water requirements of said trees. The surrounding plants should be watered infrequently with deep soaks and allowed to dry out in-between, rather than frequent light irrigation. The soil should not be allowed to become saturated or stay continually wet. Irrigation spray should not hit the trunk of any tree. A 60-inch dry-zone should be maintained around all tree trunks. An aboveground micro-spray irrigation system is recommended over typical underground pop-up sprays.

Washing: Periodic washing of the foliage is recommended during construction but no more than once every 2 weeks. Washing should include the upper and lower leaf surfaces and the tree bark. This should continue beyond the construction period at a less frequent rate with a high-powered hose only in the early morning hours. Washing will help control dirt/dust buildup that can lead to mite and insect infestations.

Spraying: If the trees are maintained in a healthy state, regular spraying for insect or disease control should not be necessary. If a problem does develop, an ISA Certified Arborist should be consulted; the trees may require application of insecticides to prevent the intrusion of bark-boring beetles and other invading pests. All chemical spraying should be performed by a licensed applicator under the direction of a licensed pest control advisor.

Inspection: As required by Section 9110.01.080, Tree Replacement, of the City's Development Code, a Certified Arborist, at the expense of the property owner, shall submit a follow-up report to the City confirming that the replacement of the designated protected trees was completed, and to the satisfaction of the City. In addition, all trees that were impacted during construction within the TPZ should be monitored by an ISA Certified Arborist for the first 5 years after construction completion. The Arborist should submit an annual report, photograph each tree and compare tree health and condition to the original,pre-construction baseline.