

739 Laurel Avenue Burlingame, CA Arborist Report 2024



Prepared For:
Rajiv Gujral

Site: 739 Laurel Avenue
Burlingame, CA 94010



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RECEIVED

06.25.25

CITY OF BURLINGAME
CDD-PLANNING DIVISION

Date: July 11, 2024

Attn: Rajiv Gujral
Site: 739 Laurel Avenue, Burlingame, CA 94010

Subject: Tree protection plan for 739 Laurel Avenue, Burlingame, CA 94010

INTRODUCTION AND OVERVIEW

Dear Rajiv Gujral,

Kiely Arborists Services LLC visited the property at 739 Laurel Ave, Burlingame on June 25, 2024 to evaluate the trees present with respect to the proposed construction project. The report below contains the analysis of the site visit. Rajiv Gujral is planning the construction of a new duplex and ADU at 739 Laurel Avenue, Burlingame, CA 94010. The current site consists of two residential homes, driveway, landscaping, and exotic tree species. The findings and recommendations presented in this report are based on the construction plans titled *New Duplex at 739 Laurel Ave* by Dreiling Terrones Architecture Inc. These plans were electronically provided to us via email and are dated April 26, 2024. By thoroughly analyzing these plans in conjunction with our field observations, we have developed an accurate and reliable assessment of the tree conditions and how best to mitigate potential impacts.

There are 10 trees located on the property, one of which is protected (ginkgo street tree #1). Four trees included in the survey are located on neighboring property, one of which is protected (redwood #13).

Data Summary:

Total Trees	Significant / Protected Trees	Non-Protected Trees
10	1	9

Non-protected trees #2 - #10 are proposed for removal, as they conflict with proposed project features. Protected ginkgo street tree #1 is in Good condition and should be retained and protected as detailed in the recommendations below. With proper protection and cultural practices, all retained trees are expected to survive and thrive during and after construction.

ASSIGNMENT

At the request of Rajiv Gujral, Kiely Arborists Services LLC conducted a site visit on June 25, 2024 to prepare a comprehensive Tree Inventory Report/Tree Protection Plan for the proposed construction project. This report is a requirement when submitting plans to the City of Burlingame. The analysis in this report is based on the plans received from Dreiling Terrones Architecture Inc. dated June 25, 2024.

The primary focus of this report is as follows:

- Identification and assessment of trees on the construction site that may be affected by the proposed development.
- Determination of potential impacts on tree health and stability, considering factors such as root damage and crown damage.

- Provision of recommendations for tree protection and preservation measures during the construction process to mitigate potential impacts.
- Ensuring compliance with local regulations pertaining to tree preservation, protection, and removal within the construction plans.

Please note that the report will provide specific details regarding tree assessments, impacts, and preservation measures.

The City of Burlingame requires the following tree reporting elements for development projects:

1. A map of tree locations.
2. Tree protection or removal recommendations for all trees over 15 inches in diameter, measured at 54 inches above natural grade.
3. A Tree Protection Plan for all protected trees.

LIMITS OF THE ASSIGNMENT

As part of this assessment, it is important to note that Kielty Arborists Services LLC did not conduct an aerial inspection of the upper crown, a detailed root crown inspection, or a plant tissue analysis on the subject trees. Therefore, the information presented in this report does not include data obtained from these specific methods.

Furthermore, it is essential to clarify that no tree risk assessments were completed as part of this report unless stated otherwise. The focus of this assessment primarily centers on tree identification, general health evaluation, and the potential impacts of the proposed construction.

While the absence of these specific assessments limits the scope of the analysis, the findings and recommendations provided within this report are based on available information and observations made during the site visit.

METHOD OF INSPECTION

The inspections were conducted from the ground without climbing the trees. No tissue samples or root crown inspections were performed. The trees under consideration were identified based on the provided site plan. To assess the trees, their diameter at 54 inches above ground level (DBH or diameter at breast height) was measured using a D-Tape. For the surveying of multi-trunk trees, our methodology aligns with city ordinances. In cases where the city does not offer specific guidelines for measuring multi-trunk trees, we adhere to the standards outlined in the "Guide for Plant Appraisal, 10th Edition, Second Printing" by the Council of Tree and Landscape Appraisers. Additionally, the protected trees were evaluated for their health, structure, form, and suitability for preservation with the following explanation of the ratings:

EVALUATION FIELDS

Tree Tag #:	Protected Tree:
Identification number for individual trees.	Specifies whether the tree is protected by the city or county ordinance.
Height (ft.) / Canopy Spread (ft.):	Trunk (in.):
Measures both the height of the tree and the spread of its canopy.	Measures the primary trunk's diameter at the required height.
Comments:	Tree Picture:
Any additional notes or observations about the tree.	A photograph of the tree for visual assessment and record-keeping.
Preserve or Remove:	Common Name / Scientific Name:
Indicates the recommended action based on the tree's condition.	Specifies the name of the tree, both in common terms and scientific nomenclature.
If more than 1 Trunks, Total Diameter:	6 ,8, 10 Times the Diameter (ft.):
If the tree has multiple trunks, this field indicates the combined diameter of all trunks.	Provides calculations based on the diameter to assist in various tree protection requirements.
Appraised Value:	
An unbiased estimate of the tree's worth is performed in accordance with the current edition of the Guide for Plant Appraisal by the Council of Tree and Landscape Appraisers.	

*Note that not all fields may be provided for every tree. Some might be left blank due to various reasons, such as lack of accessibility to the tree, incomplete data, or the parameter not being applicable for a particular tree.

Tree Structure Ratings:	Tree Health Ratings:
Poor: Major uncorrectable structural flaws present; significant dead wood, decay, or multiple trunks; potentially hazardous lean.	Poor: Minimal new growth; significant dieback and pest infestation; expected not to reach natural lifespan.
Fair: Structural flaws exist but less severe; issues like slight lean and crowding on trunk; some uncorrectable issues through pruning.	Fair: Moderate new growth; canopy density 60-90%; potential external threats; not in decline but vulnerable.
Good: Minor flaws; mainly upright trunk, well-spaced branches; flaws correctable through pruning; symmetrical or mostly symmetrical canopy.	Good: Vigorous growth; healthy foliage; 90-100% canopy density; expected natural lifespan.
Suitability for Preservation:	Tree Form Ratings:
Poor: Adds little to landscape; poor health and potential hazards; unlikely to survive construction impacts.	Poor: Highly asymmetric or abnormal form; visually unappealing; little landscape function.
Fair: Contributes to landscape; survival possible with protection during minor construction impacts.	Fair: Significant asymmetries; deviation from species norm; compromised function or aesthetics.
Good: Valuable landscape asset; likely survival during minor to moderate construction impacts with protection.	Good: Near ideal form; minor deviations; consistent aesthetics and function in landscape.

*Suitability for Preservation: This rating is based solely on the tree itself, irrespective of potential construction impacts.

Overall Condition Ratings:	
Very Poor	1-29
Poor	30-49
Fair	50-69
Good	70-89
Excellent	90-100

The trees were assigned a condition rating based on a combination of existing tree health, tree structure, and tree form using the following scale.

TREE INVENTORY

Tree Tag #	Protected Tree	Preserve or Remove	Common Name / Scientific Name	Trunk (in.)	Height (ft.) / Canopy Spread (ft.)	Health Rating	Structural Rating	Form Rating	Suitability for Preservation	Overall Condition (0-100%)	Summary	Tree Picture #1
1	Yes	(P)	ginkgo <i>Ginkgo biloba</i>	7	25/15	Good	Good	Good	Good	65	Street tree. In planting strip between sidewalk and street. Under electric utility lines.	
2	No	(R)	river birch <i>Betula nigra</i>	6,6,5	30/15	Good	Fair	Fair	Good	55	Codominant at grade. 5 feet from sidewalk. 15 feet from existing structure. Under electric utility lines.	
3	No	(R)	honey locust <i>Gleditsia triacanthos var. inermis</i>	5.5	25/10	Fair	Fair	Fair	Fair	50	15 feet from existing structure. 5 feet from sidewalk. Deadwood. Under electric utility lines.	
4	No	(R)	European white birch <i>Betula pendula</i>	8	25/10	Fair-Poor	Fair	Fair	Fair	45	3 feet from sidewalk and driveway hardscape. 10 feet from existing structure. Under electric utility lines.	
5	No	(R)	Japanese privet <i>Ligustrum japonicum</i>	5,4	20/10	Fair	Fair	Fair	Fair	50	In front yard. 7 feet from existing structure.	
6	No	(R)	red maple <i>Acer rubrum</i>	9	25/15	Good	Fair	Good	Good	60	Next to patio hardscape. 4 feet from existing structure. Codominant at 5 feet.	

Tree Tag #	Protected Tree	Preserve or Remove	Common Name / Scientific Name	Trunk (in.)	Height (ft.) / Canopy Spread (ft.)	Health Rating	Structural Rating	Form Rating	Suitability for Preservation	Overall Condition (0-100%)	Summary	Tree Picture #1
7	No	(R)	red maple <i>Acer rubrum</i>	8	25/15	Good	Fair	Good	Good	60	4 feet from existing structure. Codominant at 5 feet.	
8	No	(R)	apricot <i>Prunus armeniaca</i>	5	15/10	Good	Fair	Fair	Good	55	In rear of property, behind chain link fence.	
9	No	(R)	sweet cherry <i>Prunus avium</i>	5	12/5	Good	Fair	Fair	Good	55	In rear of property. Abundance of fruit	
10	No	(R)	apricot <i>Prunus armeniaca</i>	6	15/10	Good	Fair	Fair	Good	55	In rear of property. Abundance of fruit	
11*	No	(P)	mirabelle plum <i>Prunus domestica subsp. syriaca</i>	8	25/20	Good	Good	Good	Good	65	Neighboring tree, limited visual inspection.	
12*	No	(P)	apricot <i>Prunus armeniaca</i>	8	25/15	Good	Fair	Good	Good	60	Neighboring tree, limited visual inspection.	

Tree Tag #	Protected Tree	Preserve or Remove	Common Name / Scientific Name	Trunk (in.)	Height (ft.) / Canopy Spread (ft.)	Health Rating	Structural Rating	Form Rating	Suitability for Preservation	Overall Condition (0-100%)	Summary	Tree Picture #1
13*	Yes	(P)	redwood <i>Sequoia sempervirens</i>	30	60/35	Fair	Fair	Fair	Good	60	Neighboring tree, limited visual inspection. 15 feet from property boundary. Top failed in past.	
14*	No	(P)	mayten <i>Maytenus boaria</i>	8	15/10	Good	Fair	Fair	Fair	55	Neighboring tree, limited visual inspection. At property boundary.	

An (*) appearing next to the tree tag number indicates a neighboring tree.

OBSERVATIONS

Species List:

Ten trees were surveyed on the property, and consist of the following species:

- ginkgo - *Ginkgo biloba*
- river birch - *Betula nigra*
- honey locust - *Gleditsia triacanthos* var. *Inermis*
- European white birch - *Betula pendula*
- Japanese privet - *Ligustrum japonicum*
- (2) red maple - *Acer rubrum*
- (2) apricot - *Prunus armeniaca*
- sweet cherry - *Prunus avium*

Four trees included in the survey are located on neighboring property, and consist of the following species:

- mirabelle plum - *Prunus domestica* subsp. *Syriaca*
- apricot - *Prunus armeniaca*
- redwood - *Sequoia sempervirens*
- mayten - *Maytenus boaria*

Trees Proposed For Removal:

Total Removed Trees	Significant / Protected Trees	Non-Protected Trees
9	0	9

Non-Protected Trees to be Removed:

Removal of trees #2 - #10 is recommended to allow for new construction. Work to take place where the trees are located in the landscape is for the proposed construction of the new duplex and ADU. The proposed tree removal aligns with the following criteria set forth by the City of Burlingame Municipal Code

(2) *The necessity to remove the tree(s) in order to construct any proposed improvements to allow economic enjoyment of the property;*

PROJECT PLAN REVIEW

Plans titled *New Duplex at 739 Laurel Ave* by Dreiling Terrones Architecture Inc., dated June 25, 2024 were reviewed for the findings in this report, including:

- *Demo Site Plan A1.1D*
- *Proposed Site Plan A1.1*
- *Proposed Utility Plan A1.2*
- *ADU Floor Plan A2.5*
- *Landscape Plan: Vegetation L1.1*
- *Landscape Plan: Irrigation L2.1*

Additional plans reviewed for our findings include *Topographic Survey* by LC Engineering, dated January 3, 2024.

Work proposed for the site will include: demolition of the existing, single story residences, landscaping, and the construction of a new duplex, ADU, and landscaping. New construction within close proximity of protected trees will consist of a new ADU at the rear of the property. Construction impacts on retained protected trees are expected to be non-existent to minor; however, tree protection measures are necessary to ensure tree health and integrity during construction activity.

Neighboring redwood #13 will be protected by Type I Tree Protection Fencing. This fencing type is specifically designed for trees in a large area of the landscape that will have construction activity taking place near or at the dripline of trees. The fencing shall be installed to completely enclose the tree's drip line, where possible, ensuring the protection of the trees while maintaining access to areas of construction activity.

Ginkgo street tree #1 will be protected by Type II Tree Protection Fencing, which is designed for trees located within narrow planting strips generally between a sidewalk and street. The fencing shall be installed to completely enclose the planting strip, ensuring the protection of the trees while maintaining public access to the sidewalk and street.

To ensure the health and resilience of trees impacted by construction activities, a meticulously planned approach is essential. This comprehensive strategy is designed to mitigate stress, promote root and shoot growth, and ensure long-term tree vitality.

Concerns regarding soil grading near protected trees:

Grading often involves the use of heavy machinery and equipment, which can result in soil compaction. Compacted soil restricts the movement of air, water, and nutrients within the soil, making it difficult for tree roots to access essential resources. Compacted soil can also inhibit root growth and development, leading to poor tree health and vitality. For these reasons, it is recommended that grading take place outside the dripline of the retained trees.

Root damage: During grading activities, tree roots may be inadvertently severed, injured, or exposed. Tree roots are critical for anchoring the tree and absorbing water and nutrients from the soil. Damage to the root system can disrupt the tree's ability to take up essential resources, weakening its overall health and stability.

Soil Erosion: Grading can disrupt the natural drainage patterns of the land, leading to increased soil erosion. When soil erodes, it can expose tree roots, destabilize the tree's base, and affect the tree's ability to acquire nutrients. Excessive soil erosion can also result in the loss of topsoil, which is rich in organic matter and essential for healthy tree growth.

Changes in Water Availability: Altering the topography through grading can impact water availability and drainage around trees. If grading changes the natural flow of water, it can cause water logging or excessive water runoff, both of which can have detrimental effects on tree health. Insufficient water availability can lead to drought stress, while excessive water accumulation can lead to root suffocation and fungal diseases.

Structural damage: Grading activities near trees can cause physical damage to the tree's trunk, branches, or canopy. Machinery, equipment, or debris may inadvertently come into contact with the tree, leading to wounds or injuries. Structural damage weakens the tree's integrity and can create entry points for pests, diseases, or decay.

To ensure the health and resilience of trees impacted by construction activities, a meticulously planned approach that includes both pre-construction and post-construction care is essential. This comprehensive strategy is designed to mitigate stress, promote root and shoot growth, and ensure long-term tree vitality.

Foundation construction near protected trees:

The entire proposed ADU foundation, when within 25 feet (10x the diameter) of neighboring redwood #13, is required to be excavated by hand in combination with hand tools such as an air knife, rotary hammer with clay spade attachment, or shovels, while under the direct supervision of the Project Arborist. All roots encountered within the foundation area measuring 1.5" in diameter or larger are recommended to be retained for the Project Arborist to inspect before being cleanly cut. Once inspected and documented, the roots will need to be cleanly cut using a hand saw or loppers. Cut root ends on the tree side are recommended to be covered by 3 layers of wetted-down burlap to help avoid root desiccation. The contractor shall wet down the burlap daily while exposed. The area between the tree and the foundation (tree protection zone) is recommended to be irrigated every other week during the dry season until the top foot of the soil is saturated. This will act as a mitigation measure for the minor impacts. This work is required to be documented by the City of Burlingame, with a letter sent to the city arborist.

Void Form foundation construction:

It is recommended to utilize Void Form foundation construction methods for the ADU near neighboring redwood tree #13. This method, combined with a pier and grade beam system, offers significant advantages for the health and stability of the tree. During construction, ensure that the excavation between the piers does not exceed 8 inches. All necessary excavation should be performed by hand using tools such as an air knife (pneumatic tool) and should be done under the direct supervision of the project arborist. This minimal and carefully managed excavation reduces the disturbance to the tree's root system, providing long-term benefits for the redwood.

The construction process involves installing piers by drilling or digging holes according to design specifications, placing steel reinforcement cages, and pouring concrete. Void forms, made from biodegradable materials, are placed at the bottom of the grade beam trenches or directly on the ground where the grade beams will be poured. Reinforcement steel bars are then positioned above the void forms, followed by pouring and curing the concrete to form the grade beams.

Using a void form foundation prevents heaving caused by tree roots, reduces soil expansion issues, and minimizes root damage. Additionally, this method eliminates the need for soil compaction underneath the foundation, which benefits the redwood tree by preserving the natural soil structure, allowing air and water to reach the roots. Over time, the void forms will decompose, creating a space for air to circulate between the roots and the concrete, further promoting root health. By accommodating tree roots and natural soil movements, the void form foundation maintains the health of the redwood tree and the surrounding ecosystem. Moreover, it is a cost-effective solution compared to other methods of mitigating soil movement.

To ensure the health and resilience of trees impacted by construction activities, a meticulously planned approach that includes both pre-construction and post-construction care is essential. This comprehensive strategy is designed to mitigate stress, promote root and shoot growth, and ensure long-term tree vitality.

Pre-Construction Care:

In the pre-construction phase, it is critical to prepare the trees for the upcoming stress and disturbances. Implementing a deep watering schedule is foundational, ensuring trees receive adequate moisture deep within their root zones. To enhance soil moisture control and support new root growth, applying NutriRoot (2-2-3) is recommended. In conjunction with NutriRoot, ArborPlex (14-4-5) should be used to build stress tolerance and improve overall tree health. It is also recommended to introduce microbial inoculants at this stage which is

beneficial for improving soil health and facilitating nutrient uptake. The application of these treatments sets a robust foundation for the trees to withstand construction impacts.

Post-Construction Care:

Following the completion of construction activities, it's vital to continue supporting the trees' recovery and growth. Maintaining the deep watering schedule will ensure that trees remain adequately hydrated. A post-construction application of NutriRoot is advised to sustain soil moisture control and support ongoing root health. Reapplying ArborPlex will further aid in nutritional support, promoting root and shoot growth as trees recover from construction stress. It is also pertinent to reintroduce microbial inoculants to restore beneficial microbial communities that may have been disrupted during construction. Additional applications of soil amendments like Biochar and HydraHume will continue to enhance soil structure, fertility, and water-holding capacity, supporting the trees' long-term health and resilience. Employing air spading techniques can also be advantageous to aerate the soil and gently introduce these amendments without causing root damage.

By adopting this dual-phase approach, (Pre & Post Construction) leveraging a combination of deep watering, nutritional support, and soil health enhancement, the strategy aims to not only protect the trees during construction but also promote their recovery and thriving in the post-construction landscape. This holistic care plan underscores a commitment to sustainable tree management, ensuring that the trees remain a valuable and vibrant part of the ecosystem for years to come.

The plan review underscores the importance of implementing appropriate tree protection measures during construction. By adhering to these guidelines, the health and longevity of the urban tree canopy at 739 Laurel Avenue is preserved, facilitating a balance between construction progress and environmental stewardship. It is anticipated that with these measures in place, the risks associated with the construction process will be effectively mitigated.

TREE PROTECTION PLAN**Detailed Tree Protection Plan**

For the aforementioned tree protection plan, this detailed guide has been designed by Kielty Arborists Services LLC. The following section offers an in-depth perspective on the recommended tree preservation guidelines. The aim is to ensure the conservation, vitality, and beauty of trees during construction and developmental endeavors, mitigating any potential detrimental effects. Adherence to these guidelines is essential to uphold both the ecological significance and visual allure of trees within the designated project vicinity. Effective tree protection during construction or development projects requires the use of fencing to demarcate and protect sensitive areas around trees. Should you have any questions or require further clarification, please contact Kielty Arborists Services directly.

Fencing Specifications:

The tree protection fencing should be established and maintained throughout the entire length of the project. It's essential that no equipment, materials, or debris are stored or cleaned inside these protection zones. The zones should remain free from human activity unless explicitly authorized. The choice of fencing type depends on the tree's location and the nature of the surrounding environment.

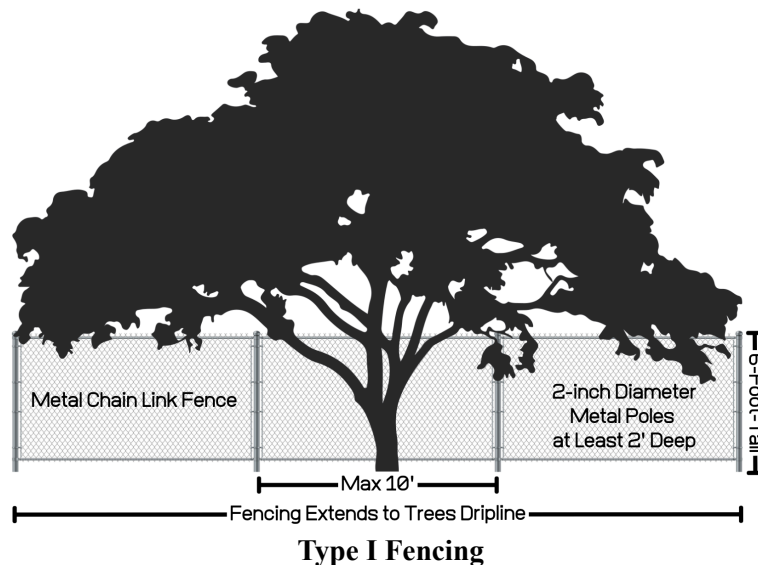
Type I Tree Protection:

Description: This is the most comprehensive form of tree protection fencing. It encompasses the full canopy dripline or Tree Protection Zone (TPZ) of trees designated for preservation.

Application: Typically used in areas where trees are a significant distance away from construction activity or when trees have a large canopy spread.

Specifications:

The fencing shall remain intact throughout the duration of the project or until activities within the TPZ are finalized. Tree protection fencing should be a 6-foot-tall metal chain link type supported by 2-inch thick diameter metal posts pounded into the ground to a depth of no less than 2 feet, ensuring stability even in challenging conditions. Poles should be spaced no more than 10 feet apart from center to center, providing a consistent and strong barrier. For trees near existing hardscapes or structures, tree protection fencing shall be placed as close as possible while still allowing access. Sensitive areas may require a landscape barrier if fencing needs to be reduced for access reasons. The location for tree protection fencing for the protected trees on site should be placed at 10x the tree diameters where possible (TPZ). All other non-protected trees are recommended to be protected by fencing placed at the drip line. No equipment or materials should be stored or cleaned inside protection zones. Signs should be placed on fencing signifying "Tree Protection Zone - Keep Out". If fencing needs to be reduced for access or any other reasons, the non-protected areas must be protected by a landscape buffer. All tree protection and inspection schedule measures, design recommendations, watering, and construction schedules shall be implemented in full by the owner and contractor. Neighboring redwood tree #13 is required to be protected by Type I Tree Protection Fencing.

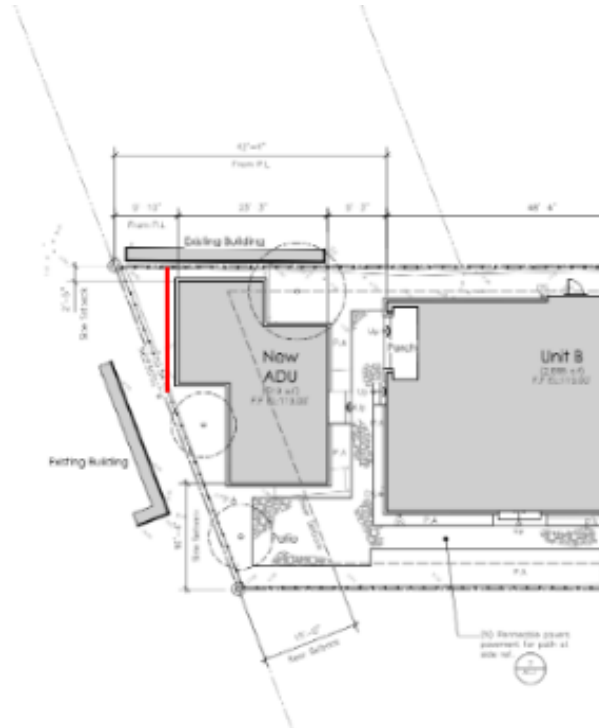
**Type II Tree Protection:**

Description: This fencing type is specifically designed for trees located within narrow planting strips generally between a sidewalk and street.

Application: It is best suited for urban areas where trees are sandwiched between sidewalks and roads, allowing pedestrian and vehicular movement while protecting the tree.

Specifications: The fencing specifications shall be identical to that of Type I in terms of the material used and installation method. The 6-foot-tall metal chain link fence should be installed in a way that completely encloses the planting strip between the sidewalk and street when within the TPZ. This will keep the sidewalk and street open for public use. Ginkgo street tree #1 is required to be protected by Type II Tree Protection Fencing.

TREE PROTECTION MAPS



Placement of Type I Tree Protection fencing shown outlined in solid **RED**.



Approximate placement area of Type II Tree Protection Fencing outlined in **BLUE**.

Staging

All tree protection measures must be in place before the start of construction. An inspection prior to the start of construction is often required by the town. All vehicles must remain on paved surfaces if possible. Existing pavement should remain and should be used for staging. If vehicles are to stray from paved surfaces, 6 inches of chips shall be spread, and plywood laid over the mulch layer. This type of landscape buffer will help reduce the compaction of desired trees. Parking will not be allowed off the paved surfaces.

Root Cutting

If for any reason roots are to be cut, the work shall be monitored and documented. Large roots (over 2 inches in diameter) or large masses of roots to be cut must be inspected by the site arborist. The site arborist, at this time, may recommend irrigation or fertilization of the root zone. All roots needing to be cut should be cut clean with a saw or lopper. Roots to be left exposed for a period of time should be covered with layers of burlap and kept moist.

Trenching/excavation

Trenching or excavation for irrigation, drainage, electrical, foundation, or any other reason shall be done by hand when inside the dripline of a protected tree. Hand digging and the careful placement of pipes below or besides protected roots will significantly reduce root loss, thus reducing trauma to the tree. All trenches shall be backfilled with native materials and compacted to near their original level, as soon as possible. Trenches to be left open for a period of time (24 hours), will require the covering of all exposed roots with burlap and be kept moist. The trenches will also need to be covered with plywood to help protect the exposed roots.

Grading

All existing grades underneath the dripline of a protected tree shall remain as is where possible. Grading within the dripline of a protected tree is required to be done under the supervision of the project arborist.

Irrigation

Non native trees- Irrigating the retained mature trees in the landscape is important to ensure their health and vitality. Proper watering can help the trees continue to thrive. Deep irrigation is recommended to take place every other week during the dry season. During the dry season, trees typically need deep, infrequent watering. Watering every 2 weeks is sufficient for the retained trees on this site. Applying water slowly and consistently until it penetrates at least 12-18 inches into the soil is recommended. Avoid spraying water directly on the trunks, as this can lead to disease and decay. Mulch is recommended to be maintained with mulch added overtime as needed. Mulch helps retain soil moisture, regulates temperature, and prevents weeds, which can compete with the tree for water. The use of soaker hoses or an inline drip emitter system set up in a grid like manner to provide deep irrigation during the dry season is recommended. The irrigation system should be placed on top of grade and require no excavation. This will help to keep the trees healthy.

Native oak trees- Native oak trees are recommended to only be irrigated during the months of May and September or if their root zones are traumatized. Frequent irrigation during dry summer months can significantly raise the risk of oak trees developing oak root fungus disease and is the leading cause of oak tree death and failure in the urban landscape.

Tree Pruning

Tree pruning during construction is not just about aesthetics and safety; it's also about adhering to best practices and standards set by professional bodies like the International Society of Arboriculture (ISA) and the American National Standards Institute (ANSI A300 Pruning Standards) . The ISA sets rigorous standards to ensure trees are cared for sustainably and scientifically. Under these guidelines, and for the well-being of trees during construction, it's imperative to have an expert arborist oversee any pruning. Their knowledge guarantees that only the necessary branches are removed, ensuring both safety and tree health. The guideline to prune no more than 25% of the tree's total foliage is grounded in sound arboricultural practices. This safeguards the tree's photosynthetic capability, reduces undue stress, and preserves the balance between its roots and canopy. Homeowners should be aware of these standards and ensure they are being met, trusting in the expertise of their arborist and keeping open communication about their tree care decisions. This approach not only ensures the tree's compatibility with new construction aesthetics but also its long-term health and vitality.

Roots and Foundations

Recognize that tree roots typically do not grow under existing houses or buildings due to compacted soil and limited moisture availability during foundation installation. Ensure that foundations are correctly installed to minimize the risk of tree root intrusion. Avoid situations where trees are planted too close to existing or planned structures, as this can result in potential conflicts between roots and foundations. If tree roots are in direct contact with a foundation, consult with a certified arborist to assess the situation and recommend appropriate measures to protect both the tree and the structure.

Traffic Within TPZs

Strictly prohibit driving vehicles or heavy foot traffic on bare soil within the TPZs of protected trees. Such activities can crush roots directly and compact the soil, impeding oxygen and water infiltration. In areas without existing pavement, use temporary anti-compaction materials, such as wood chips covered with plywood, to prevent damage to tree roots (landscape barrier). Temporary pathways or boardwalks can be constructed to facilitate access while minimizing soil compaction within the TPZ.

Chemical and Material Handling

Store chemicals and construction materials away from TPZs to prevent accidental spills or exposure that may harm tree health. Follow proper handling and disposal procedures for chemicals to ensure compliance with environmental regulations. Minimize the use of toxic materials near trees and opt for environmentally friendly alternatives whenever possible.

Monitoring and Inspection

Regularly monitor and inspect the tree protection measures throughout the construction process to ensure their effectiveness and compliance with the Tree Preservation Plan. Assign a qualified individual, such as a project arborist or certified arborist, to conduct periodic inspections and provide recommendations for any necessary adjustments or improvements. Maintain detailed records of inspections, including dates, findings, and any actions taken.

Post-Construction Maintenance

After construction is completed, continue monitoring the health and condition of preserved trees to address any potential issues promptly. Implement post-construction maintenance practices such as watering, mulching, pruning, and fertilization as needed to support the recovery and long-term health of the trees. Regularly assess the trees for signs of stress, disease, or structural instability and take appropriate measures, including consulting with a certified arborist if necessary.

Compliance with Environmental Laws

Ensure full compliance with all applicable local, state, and federal environmental laws, regulations, and permit requirements pertaining to tree protection during construction. Familiarize yourself with specific regulations regarding tree preservation in your jurisdiction and consult with local authorities or arborists for guidance if needed.

Responsibility

Designate a responsible person or team within the project organization to oversee the implementation and enforcement of the Tree Preservation Plan. Clearly communicate the roles and responsibilities of all parties involved in the construction project regarding tree protection.

Emergency Procedures

Develop clear procedures to follow in the event of emergencies that may impact tree preservation, such as severe storms, accidents, or unexpected tree health issues. Ensure that emergency response plans address prompt actions to mitigate potential risks to trees and contact qualified professionals, such as arborists or tree care companies when needed.

Communication and Training

Facilitate effective communication among all project stakeholders, including contractors, subcontractors, architects, engineers, and landscape professionals, regarding the importance of tree preservation and the specific guidelines to follow. Conduct training sessions or workshops to educate personnel.

PURPOSE & USE OF THE REPORT

This report informs tree management decisions for the construction project and provides recommendations to maximize tree survival. It serves as a valuable resource for stakeholders, facilitating informed discussions and sustainable tree management practices.

TESTING & ANALYSIS

In order to assess the trees, a thorough examination was conducted using a variety of methods. For trees with accessible trunks, precise measurements of the Diameter at Breast Height (DBH) were taken using a specialized diameter tape measure. In cases where the trunks were not readily accessible, visual estimations were employed to determine the DBH. As part of the inventory process, all trees exceeding a specific DBH threshold stated in city code were included.

To evaluate the health of the trees, multiple factors were considered, including their overall appearance and our team's extensive experiential knowledge of each species. This holistic approach ensured a comprehensive understanding of the tree's well-being.

To accurately document the location of each tree, a GPS smartphone application was utilized during the data collection process. This enabled us to create detailed maps that are included in this report. However, it is important to note that despite our efforts to minimize errors, inherent limitations of GPS data collection, coupled with slight discrepancies between GPS data and CAD drawings, may result in approximate tree locations depicted on the map.

TREE WORK STANDARDS AND QUALIFICATIONS

To ensure high-quality tree work, including removal, pruning, and planting, the following standards and qualifications will be adhered to:

- **Industry Standards:** All tree work will be performed in accordance with industry standards established by the International Society of Arboriculture (ISA). These standards encompass best practices and guidelines for tree care and maintenance.
- **Contractor Licensing and Insurance:** The contractor undertaking the tree work must possess a valid State of California Contractors License for Tree Service (C61-D49) or Landscaping (C-27). Additionally, they must have comprehensive general liability, worker's compensation, and commercial auto/equipment insurance coverage.
- **Workmanship Standards:** Contractors must adhere to the current Best Management Practices of the International Society of Arboriculture (ISA) and the American National Standards Institute (ANSI). These standards, including ANSI A300 and Z133.1, outline guidelines for tree pruning, fertilization, and safety. Compliance with these standards ensures the use of proper techniques and practices throughout the tree work process.

By adhering to these established standards and qualifications, we can ensure the provision of professional and safe tree services that meet the industry's best practices and promote the health and longevity of the trees.

SCHEDULE OF INSPECTIONS

Kiely Arborists Services LLC:

We will conduct the following inspections as needed for the project:

- **Pre-Equipment Mobilization, Delivery of Materials, Tree Removal, and Site Work:** Our project arborist will meet with the general contractor and owners to review tree protection measures. We will identify and mark tree-protection zone fencing, specify equipment access routes and storage areas, and assess the existing conditions of trees to determine any additional necessary protection measures.
- **Inspection after Installation of Tree-Protection Fencing:** Upon completion of tree-protection fencing installation, our project arborist will inspect the site to ensure that all protection measures are correctly implemented. We will also review any contractor requests for access within the tree protection zones and assess any changes in tree health since the previous inspection.
- **Inspection during Soil Excavation or Work Potentially Affecting Protected Trees:** During any work within non-intrusion zones of protected trees, our project arborist will inspect the site and document the implemented recommendations. We will assess any changes in tree health since the previous inspection to monitor the well-being of the trees.
- **Final Site Inspection:** Prior to project completion, our project arborist will conduct a final site inspection to evaluate tree health and provide necessary recommendations to promote their longevity. A comprehensive letter report summarizing our findings and conclusions will be provided to the City of Burlingame.

Our inspections aim to ensure proper tree protection, health, and adherence to project requirements.

ASSUMPTIONS AND LIMITING CONDITIONS

- **Legal Descriptions and Titles:** The consultant/arborist assumes the accuracy of any legal description and titles provided. No responsibility is assumed for any legal due diligence. The consultant/arborist shall not be held liable for any discrepancies or issues arising from incorrect legal descriptions or faulty titles.
- **Compliance with Laws and Regulations:** The property is assumed to be in compliance with all applicable codes, ordinances, statutes, or other government regulations. The consultant/arborist is not responsible for identifying or rectifying any non-compliance.
- **Reliability of Information:** Though diligent efforts have been made to obtain and verify information, the consultant/arborist is not responsible for inaccuracies or incomplete data provided by external sources. The client accepts full responsibility for any decisions or actions taken based on this data.
- **Testimony or Court Attendance:** The consultant/arborist has no obligation to provide testimony or attend court regarding this report unless mutually agreed upon through separate written agreements, which may incur additional fees.
- **Report Integrity:** Unauthorized alteration, loss, or reproduction of this report renders it invalid. The consultant/arborist shall not be liable for any interpretations or conclusions made from altered reports.
- **Restricted Publication and Use:** This report is exclusively for the use of the original client. Any other use or dissemination, without prior written consent from the consultant/arborist, is strictly prohibited.
- **Non-disclosure to Public Media:** The client is prohibited from using any content of this report, including the consultant/arborist's identity, in any public communication without prior written consent.

- **Opinion-based Report:** The report represents the independent, professional judgment of the consultant/arborist. The fee is not contingent upon any predetermined outcomes, values, or events.
- **Visual Aids Limitation:** Visual aids are for illustrative purposes and should not be considered precise representations. They are not substitutes for formal engineering, architectural, or survey reports.
- **Inspection Limitations:** The consultant/arborist's inspection is limited to visible and accessible components. Non-invasive methods are used. There is no warranty or guarantee that problems will not develop in the future.

ARBORIST DISCLOSURE STATEMENT

Arborists specialize in the assessment and care of trees using their education, knowledge, training, and experience.

- **Limitations of Tree Assessment:** Arborists cannot guarantee the detection of all conditions that could compromise a tree's structure or health. The consultant/arborist makes no warranties regarding the future condition of trees and shall not be liable for any incidents or damages resulting from tree failures.
- **Remedial Treatments Uncertainty:** Remedial treatments for trees have variable outcomes and cannot be guaranteed.
- **Considerations Beyond Scope:** The consultant/arborist's services are confined to tree assessment and care. The client assumes responsibility for matters involving property boundaries, ownership, disputes, and other non-arboricultural considerations.
- **Inherent Risks:** Living near trees inherently involves risks. The consultant/arborist is not responsible for any incidents or damages arising from such risks.
- **Client's Responsibility:** The client is responsible for considering the information and recommendations provided by the consultant/arborist and for any decisions made or actions taken.

The client acknowledges and accepts these Assumptions and Limiting Conditions and Arborist Disclosure Statement, recognizing that reliance upon this report is at their own risk. The consultant/arborist disclaims all warranties, express or implied.

CERTIFICATION

I hereby certify that all the statements of fact in this report are true, complete, and correct to the best of my knowledge and belief, and are made in good faith.

David Beckham

Signature of Consultant

David Beckham

Certified Arborist

WE#10724A TRAQ Qualified

July 11, 2024

