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Summary

The applicant has submitted a Minor Residential Application MR-22-013 and is requesting approval for construction of a new second story on property zoned R-1D. APN 529-06-027. The inventory contains one coast redwood (*Sequoia sempervirens*) located in front with a trunk diameter of 43 inches. The tree has normal foliar color, size and density and is in good condition. The proposed second story addition is not expected to affect the tree and construction impacts are low. Tree protection should be placed at the edge of exiting infrastructure adjacent to the house with enough room to access the structure, and along the existing concrete walkway to the porch enclosing the artificial turf area. The depreciated rounded value using the trunk formula technique is \$32,000.00.

Introduction

Assignment, Limits, Purpose and Use

- Provide an arborist's report including an assessment of the trees within the project area and on the adjacent sites. The assessment is to include the species, size (trunk diameter), and condition (health, structure, and form). Affix number tags on the trees for reference on site and on plans.
- Provide tree protection specifications, guidelines, and impact ratings for those affected by the project.
- Provide appraised values using the Trunk Formula Technique.
- The information in this report is limited to the condition of the trees during my inspection on August 9, 2022. No tree risk assessments were performed.
- Plans review for this assignment were as follows: Sheets A1 through A4 provided by Chris Spaulding Architect dated June 6, 2022.

The report is intended to identify all the trees within the plan area that could be affected by a project. The report is to be used by the Town of Los Gatos and the property owners as a reference for existing tree conditions to help satisfy planning requirements.



Observations

Tree Inventory

The inventory consists of trees protected by the Town of Los Gatos located on site and those in close proximity on neighboring properties. Sec. 29.10.0960. - Scope of protected trees. All trees which have a four-inch or greater diameter (twelve and one half-inch circumference) of any trunk, when removal relates to any review for which zoning approval or subdivision approval is required. (Appendix A and B). Los Gatos Town Ordinance 29.10.0970 Exceptions (1) states the following: "A fruit or nut tree that is less than eighteen (18) inches in diameter (fifty-seven-inch circumference).

There is only one large coast redwood located in front of the site with a trunk diameter of 43 inches and is approximately 75 feet tall (Image 1). The tree is considered "Protected" by the ordinance.

Plans

The applicant has submitted a Minor Residential Application MR-22-013 and is requesting approval for construction of a new second story on property zoned R-1D. APN 529-06-027



IMAGE 1: 43 INCH DIAMETER COAST REDWOOD



Analysis

Tree appraisal was performed according to the Council of Tree & Landscape Appraisers *Guide for Plant Appraisal 10th Edition, 2019* (CLTA) along with Western Chapter International Society of Arboriculture *Species Classification and Group Assignment, 2004*. The trees were appraised using the “Cost Approach” and more specifically the “Trunk Formula Technique” (Appendix B).

“Trunk Formula Technique” is calculated as follows: Basic Tree Cost = (Unit tree cost x Appraised trunk area), Appraised Value = (Basic tree cost X functional Limitations (percentage) X Condition (percentage) X External Limitations (percentage)).

The coast redwood has been appraised for a depreciated rounded value of \$32,000.00.

Discussion

Condition Rating

A tree’s condition is a determination of its overall health, structure, and form. The assessment considered all three criteria for a combined condition rating.

The coast redwood is in good condition defined as follows: Normal vigor, well-developed structure, function and aesthetics not compromised with good longevity for the site.

Expected Impact Level

Impact level defines how a tree may be affected by construction activity and proximity to the tree, and is described as low, moderate, or high.

The project is not expected to impact the tree, cause decline, or compromise its integrity. There is some indication of grading between the house and the tree but this will need to be eliminated (Image 2). The area between the existing structure will need to remain similar to the existing conditions.

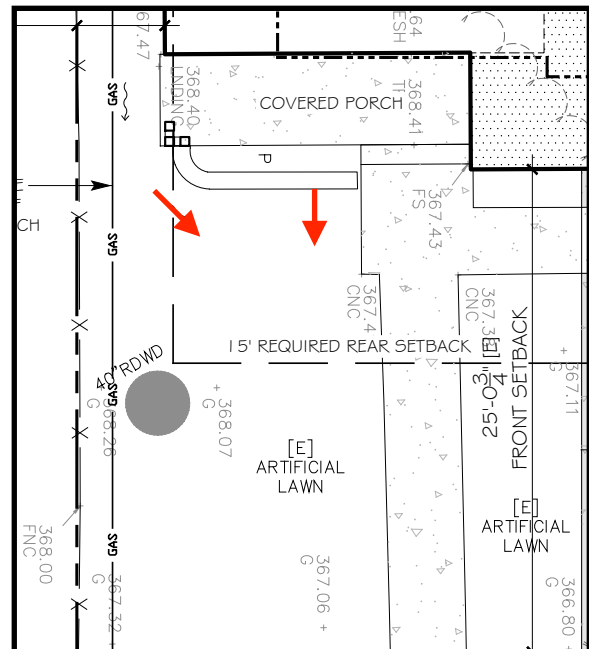


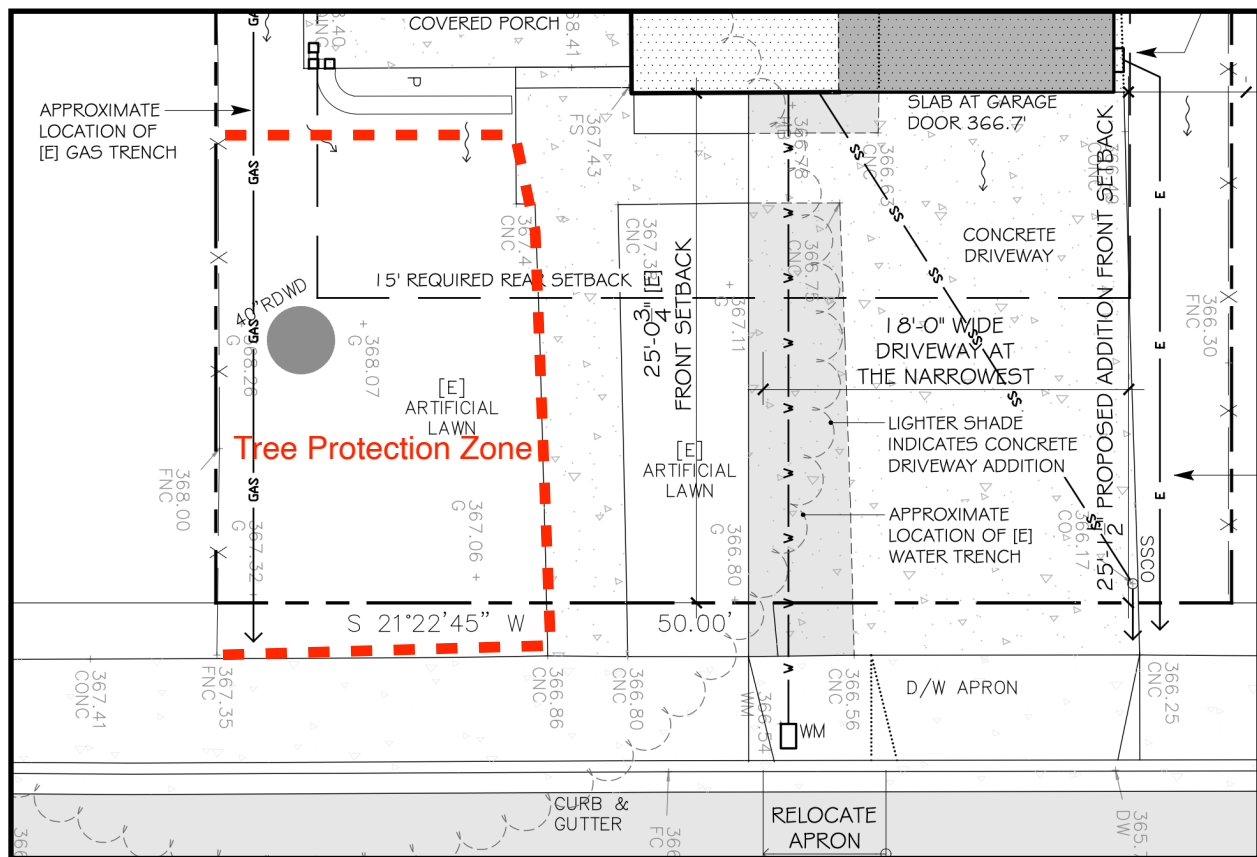
IMAGE 2: SNAPSHOT OF POTENTIAL GRADING TO BE ELIMINATED



Tree Protection

Typically there are three different tree protection schemes which are called Type I (Appendix D1), Type II and Type III (Appendix D2) trunk protection only. Tree protection focuses on avoiding damage to the roots, trunk, or scaffold branches (Appendix D). The most current accepted method for determining the TPZ is to use a formula based on species tolerance, tree age/vigor, and trunk diameter (Matheny, N. and Clark, J. 1998) (Fite, K. and Smiley, E. T., 2016). Preventing mechanical damage to the trunk from equipment or hand tools can be accomplished by wrapping the main stem with straw wattle or using vertical timbers

Due to the size of the tree and the existing constraints from the residence, walkway, and driveway it is not possible to obtain the ideal 30 foot radius around the tree (Image 3). Tree protection should be placed at the edge of existing infrastructure adjacent to the house with enough room to access the structure and along the existing concrete walkway to the porch. The fence will essentially be at the edge of the artificial turf area. There is enough clearance from the proposed second story where pruning is unnecessary.



Conclusion

The applicant has submitted a Minor Residential Application MR-22-013 and is requesting approval for construction of a new second story on property zoned R-1D. APN 529-06-027. The inventory contains one large coast redwood located in front with a trunk diameter of 43 inches and is approximately 75 feet tall with a crown diameter of approximately 50 feet. The tree has normal foliar color, size and density and is in good condition. The proposed second story addition is not expected to affect the tree and construction impacts are low. Tree protection should be placed at the edge of existing infrastructure adjacent to the house with enough room to access the structure, and along the existing concrete walkway to the porch enclosing the artificial turf area. The depreciated rounded value using the trunk formula technique is \$32,000.00.

Recommendations

1. Place tree numbers on all the plans. Once civil drawings are available have them reviewed by the project arborist.
2. Place tree protection around coast redwood #807 at the edge of existing infrastructure. Install temporary irrigation or soaker hoses in all tree protection zones and provide supplemental watering during construction within all TPZ areas. Infrequent deeper watering is preferred. This may not be possible with the artificial turf.
3. All tree maintenance and care shall be performed by a qualified arborist with a C-61/D-49 California Contractors License. Tree maintenance and care shall be specified in writing according to American National Standard for Tree Care Operations: *Tree, Shrub and Other Woody Plant Management: Standard Practices* parts 1 through 10 and adhere to ANSI Z133.1 safety standards and local regulations. All maintenance is to be performed according to ISA Best Management Practices.
4. Refer to Appendix D for general tree protection guidelines including recommendations for arborist assistance while working under trees, trenching, or excavation within a trees drip line or designated TPZ/CRZ.
5. Place all the tree protection fence locations and guidelines on the plans including the grading, drainage, and utility plans. Create a separate plan sheet that includes all three protection measures labeled "T-1 Tree Protection Plan."
6. Provide a copy of this report to all contractors and project managers, including the architect, civil engineer, and landscape designer or architect. It is the responsibility of the owner to ensure all parties are familiar with this document.



7. Arrange a pre-construction meeting with the project arborist or landscape architect to verify tree protection is in place, with the correct materials, and at the proper distances.

Bibliography

- American National Standard for Tree Care Operations: Tree, Shrub and Other Woody Plant Management : Standard Practices (Management of Trees and Shrubs During Site Planning, Site Development, and Construction)(Part 5). Londonderry, NH: Secretariat, Tree Care Industry Association, 2019. Print.
- Fite, Kelby, and Edgar Thomas. Smiley. *Managing trees during construction*, second edition. Champaign, IL: International Society of Arboriculture, 2016.
- ISA. *Guide For Plant Appraisal 9th Edition*. Savoy, IL: International Society of Arboriculture, 2000. Print.
- ISA. *Guide For Plant Appraisal 10th Edition*. Savoy, IL: International Society of Arboriculture, 2018. Print.
- ISA. Species Classification and Group Assignment, 2004 Western Chapter Regional Supplement. Western Chapter ISA
- Matheny, Nelda P., Clark, James R. Trees and development: A technical guide to preservation of trees during land development. Bedminster, PA: International Society of Arboriculture 1998.
- Smiley, E, Matheny, N, Lilly, S, ISA. *Best Management Practices: Tree Risk Assessment*: International Society of Arboriculture, 2017. Print



Glossary of Terms

Basic Tree Cost: The cost of replacement for a perfect specimen of a particular species and cross sectional area prior to location and condition depreciation.

Cost Approach: An indication of value by adding the land value to the depreciated value of improvements.

Defect: An imperfection, weakness, or lack of something necessary. In trees defects are injuries, growth patterns, decay, or other conditions that reduce the tree's structural strength.

Diameter at breast height (DBH): Measures at 1.4 meters (4.5 feet) above ground in the United States, Australia (arboriculture), New Zealand, and when using the Guide for Plant Appraisal, 9th edition; at 1.3 meters (4.3 feet) above ground in Australia (forestry), Canada, the European Union, and in UK forestry; and at 1.5 meters (5 feet) above ground in UK arboriculture.

Drip Line: Imaginary line defined by the branch spread or a single plant or group of plants. The outer extent of the tree crown.

Form: describes a plant's habit, shape or silhouette defined by its genetics, environment, or management.

Health: Assessment is based on the overall appearance of the tree, its leaf and twig growth, and the presence and severity of insects or disease.

Mechanical damage: Physical damage caused by outside forces such as cutting, chopping or any mechanized device that may strike the tree trunk, roots or branches.

Scaffold branches: Permanent or structural branches that for the scaffold architecture or structure of a tree.

Straw wattle: also known as straw worms, bio-logs, straw noodles, or straw tubes are man made cylinders of compressed, weed free straw (wheat or rice), 8 to 12 inches in diameter and 20 to 25 feet long. They are encased in jute, nylon, or other photo degradable materials, and have an average weight of 35 pounds.

Structural evaluation: focused on the crown, trunk, trunk flare, above ground roots and the site conditions contributing to conditions and/or defects that may contribute to failure.

Tree Protection Zone (TPZ): Defined area within which certain activities are prohibited or restricted to prevent or minimize potential injury to designated trees, especially during construction or development.



Tree Risk Assessment: Process of evaluating what unexpected things could happen, how likely it is, and what the likely outcomes are. In tree management, the systematic process to determine the level of risk posed by a tree, tree part, or group of trees.

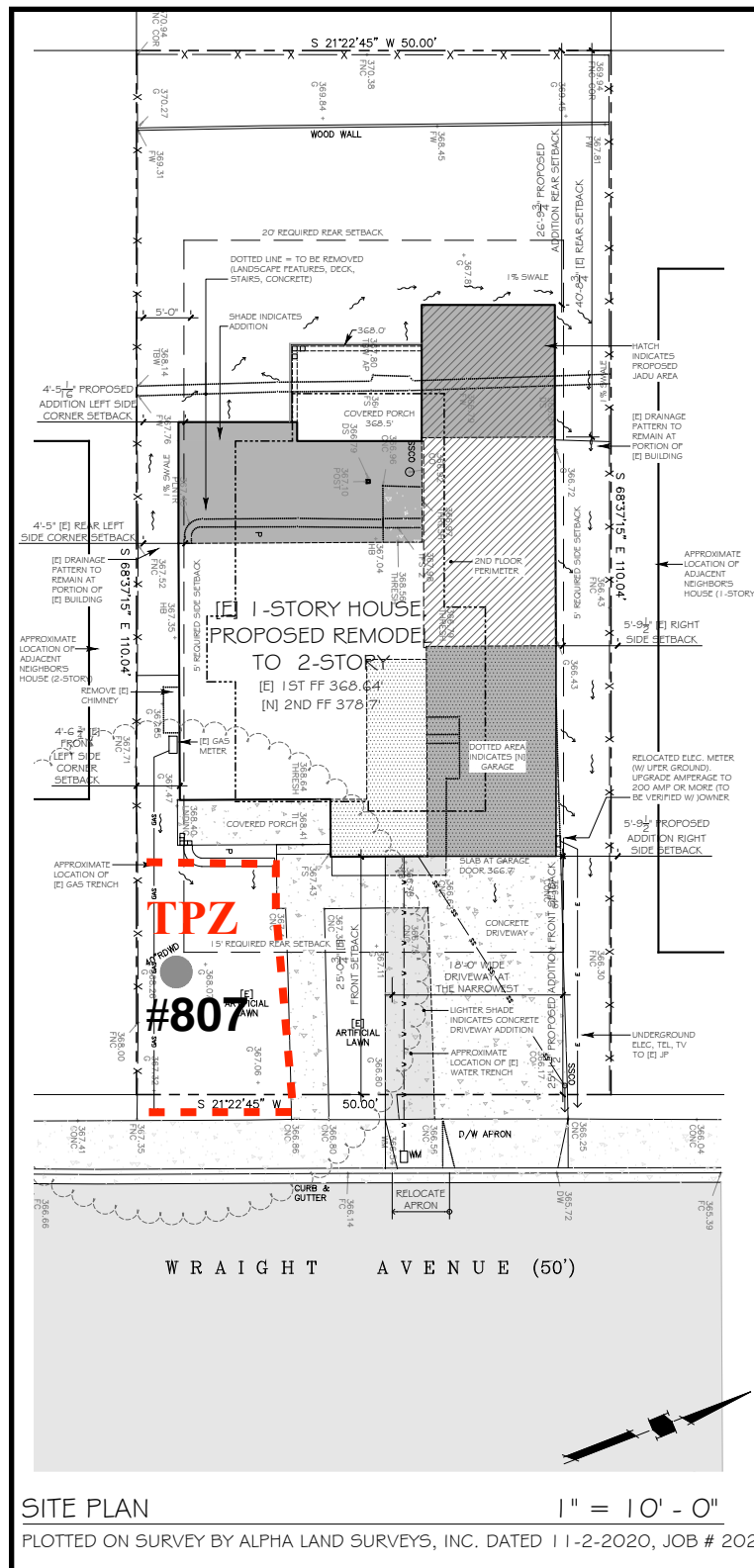
Trunk: Stem of a tree.

Trunk Formula Technique: Method to appraise the monetary value of trees considered too large to be replaced with nursery or field grown stock. Based on developing a representative unit cost for replacement with the same or comparable species of the same size and in the same place, subject to depreciation for various factors. Contrast with replacement cost method.

Volunteer: A tree, not planted by human hands, that begins to grow on residential or commercial property. Unlike trees that are brought in and installed on property, volunteer trees usually spring up on their own from seeds placed onto the ground by natural causes or accidental transport by people. Normally, volunteer trees are considered weeds and removed, but many desirable and attractive specimens have gone on to become permanent residents on many public and private grounds.



Appendix A: Tree Inventory and Site Plan



Appendix B: Tree Inventory and Assessment Table

Table 1: Inventory and Assessment Summary

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Rounded Value	Ideal Tree Protection Radii (ft.)
coast redwood (<i>Sequoia sempervirens</i>)	807	43	50	Good	Low	\$32,000.00	29

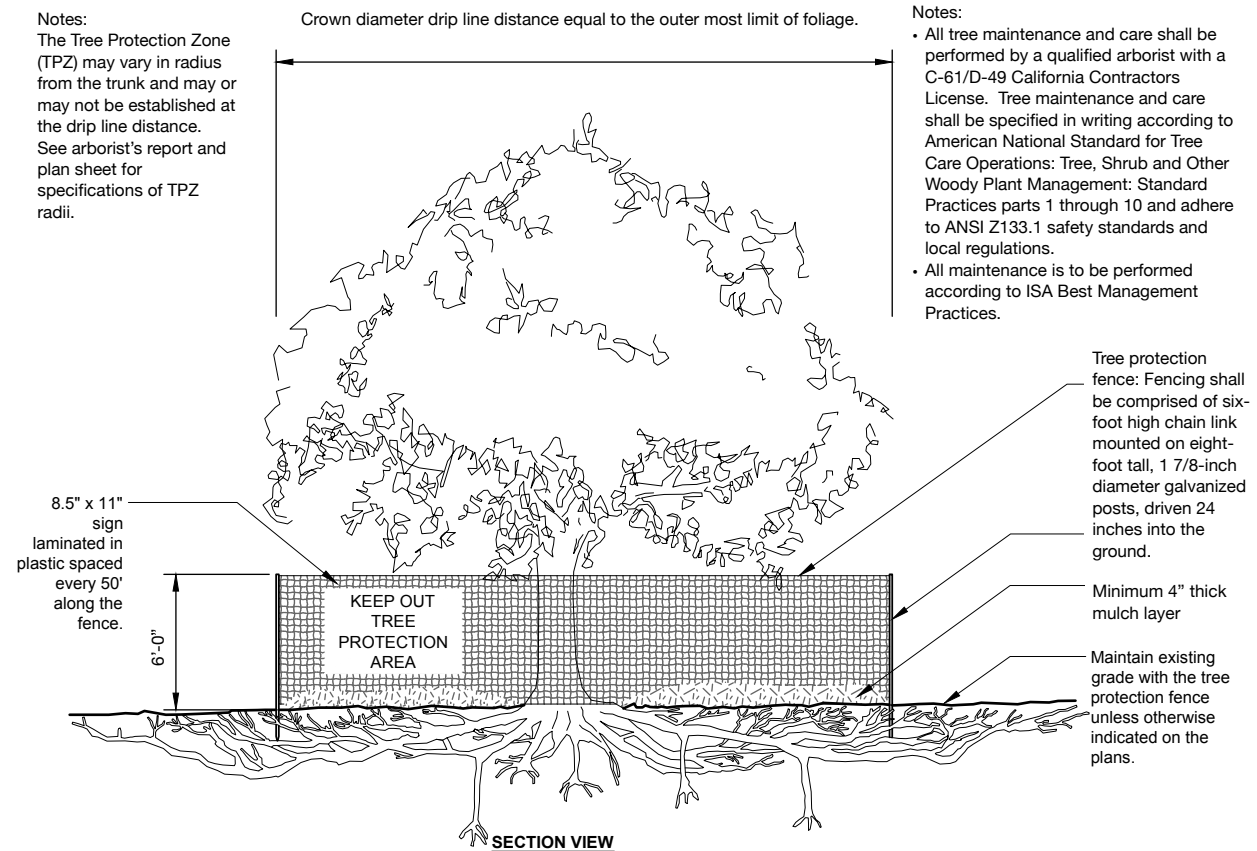


Appendix C: Photographs



Appendix D: Tree Protection Guidelines

D1: Plan Sheet Detail S-X (Type I)

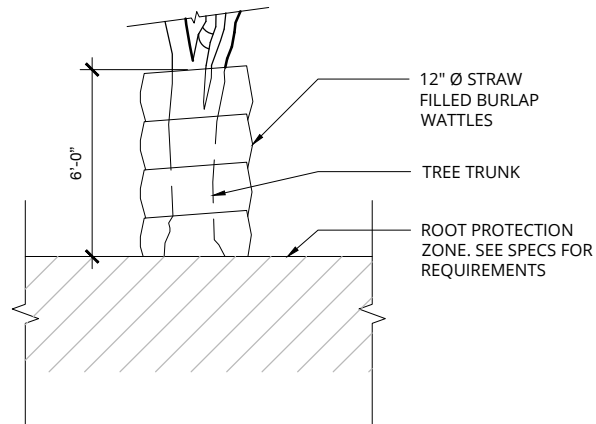


TREE PROTECTION

URBAN TREE FOUNDATION © 2014
OPEN SOURCE FREE TO USE
Modified by Monarch Consulting
Arborists LLC, 2019



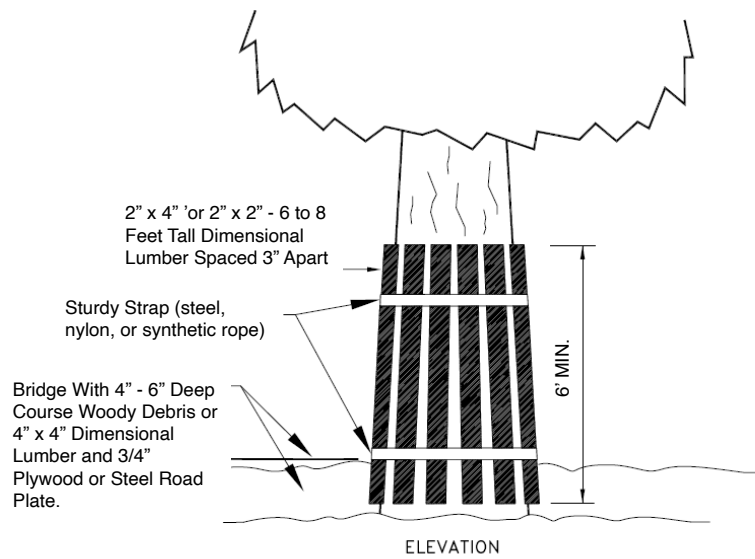
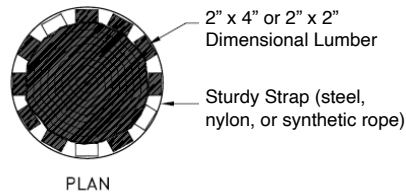
D2: Plan Sheet Detail S-Y (Type III)



SECTION VIEW

S-Y TRUNK PROTECTION WITH WATTLE

Note: See Local Ordinance Requirements and Arborist's Report for Additional Protection Specifications and Guidelines.



Trunk Protection Vertical Timber Detail



D3: Section 29.10.1005. - Protection of Trees During Construction

Tree Protection Zones and Fence Specifications

1. **Size and materials:** Six (6) foot high chain link fencing, mounted on two-inch diameter galvanized iron posts, shall be driven into the ground to a depth of at least two (2) feet at no more than ten-foot spacing. For paving area that will not be demolished and when stipulated in a tree preservation plan, posts may be supported by a concrete base.
2. **Area type to be fenced:** Type I: Enclosure with chain link fencing of either the entire dripline area or at the tree protection zone (TPZ), when specified by a certified or consulting arborist. Type II: Enclosure for street trees located in a planter strip: chain link fence around the entire planter strip to the outer branches. Type III: Protection for a tree located in a small planter cutout only (such as downtown): orange plastic fencing shall be wrapped around the trunk from the ground to the first branch with two-inch wooden boards bound securely on the outside. Caution shall be used to avoid damaging any bark or branches.
3. **Duration of Type I, II, III fencing:** Fencing shall be erected before demolition, grading or construction permits are issued and remain in place until the work is completed. Contractor shall first obtain the approval of the project arborist on record prior to removing a tree protection fence.
4. **Warning Sign:** Each tree fence shall have prominently displayed an eight and one-half-inch by eleven-inch sign stating: "Warning—Tree Protection Zone—This fence shall not be removed and is subject to penalty according to Town Code 29.10.1025." Text on the signs should be in both English and Spanish (Appendix E).



All persons, shall comply with the following precautions

1. Prior to the commencement of construction, install the fence at the dripline, or tree protection zone (TPZ) when specified in an approved arborist report, around any tree and/or vegetation to be retained which could be affected by the construction and prohibit any storage of construction materials or other materials, equipment cleaning, or parking of vehicles within the TPZ. The dripline shall not be altered in any way so as to increase the encroachment of the construction.
2. Prohibit all construction activities within the TPZ, including but not limited to: excavation, grading, drainage and leveling within the dripline of the tree unless approved by the Director.
3. Prohibit disposal or depositing of oil, gasoline, chemicals or other harmful materials within the dripline of or in drainage channels, swales or areas that may lead to the dripline of a protected tree.
4. Prohibit the attachment of wires, signs or ropes to any protected tree.
5. Design utility services and irrigation lines to be located outside of the dripline when feasible.
6. Retain the services of a certified or consulting arborist who shall serve as the project arborist for periodic monitoring of the project site and the health of those trees to be preserved. The project arborist shall be present whenever activities occur which may pose a potential threat to the health of the trees to be preserved and shall document all site visits.
7. The Director and project arborist shall be notified of any damage that occurs to a protected tree during construction so that proper treatment may be administered.

Prohibited Activities

The following are prohibited activities within the TPZ:

- Grade changes (e.g. soil cuts, fills);
- Trenches;
- Root cuts;
- Pedestrian and equipment traffic that could compact the soil or physically damage roots;
- Parking vehicles or equipment;
- Burning of brush and woody debris;
- Storing soil, construction materials, petroleum products, water, or building refuse; and,
- Disposing of wash water, fuel or other potentially damaging liquids.



Monitoring

Any trenching, construction or demolition that is expected to damage or encounter tree roots should be monitored by the project arborist or a qualified ISA Certified Arborist and should be documented.

The site should be evaluated by the project arborist or a qualified ISA Certified Arborist after construction is complete, and any necessary remedial work that needs to be performed should be noted.

Root Pruning

Roots greater than two inches in diameter shall not be cut. When roots over two inches in diameter are encountered and are authorized to be cut or removed, they should be pruned by hand with loppers, handsaw, reciprocating saw, or chain saw rather than left crushed or torn. Roots should be cut beyond sinker roots or outside root branch junctions and be supervised by the project arborist. When completed, exposed roots should be kept moist with burlap or backfilled within one hour.

Boring or Tunneling

Boring machines should be set up outside the drip line or established Tree Protection Zone. Boring may also be performed by digging a trench on both sides of the tree until roots one inch in diameter are encountered and then hand dug or excavated with an Air Spade® or similar air or water excavation tool. Bore holes should be adjacent to the trunk and never go directly under the main stem to avoid oblique (heart) roots. Bore holes should be a minimum of three feet deep.

Tree Pruning and Removal Operations

All tree pruning or removals should be performed by a qualified arborist with a C-61/D-49 California Contractors License. Treatment, including pruning, shall be specified in writing according to the most recent ANSI A-300A Standards and Limitations and performed according to ISA Best Management Practices while adhering to ANSI Z133.1 safety standards. Trees that need to be removed or pruned should be identified in the pre-construction walk through.



Appendix E: Tree Protection Signs

E1: English

Warning
Tree Protection Zone

This Fence Shall Not Be Removed
And Is Subject To Penalty According To
Town Code 29.10.1025



E2: Spanish

Cuidado Zona De Arbol Pretejido

**Esta valla no podrán ser sacados
Y está sujeta a sanción en función de
Código Ciudad del 29.101025**



Qualifications, Assumptions, and Limiting Conditions

Any legal description provided to the consultant is assumed to be correct. Any titles or ownership of properties are assumed to be good and marketable. All property is appraised or evaluated as though free and clear, under responsible ownership and competent management.

All property is presumed to be in conformance with applicable codes, ordinances, statutes, or other regulations.

Care has been taken to obtain information from reliable sources. However, the consultant cannot be responsible for the accuracy of information provided by others.

The consultant shall not be required to give testimony or attend meetings, hearings, conferences, mediations, arbitration, or trials by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services.

This report and any appraisal value expressed herein represent the opinion of the consultant, and the consultant's fee is not contingent upon the reporting of a specified appraisal value, a stipulated result, or the occurrence of a subsequent event.

Sketches, drawings, and photographs in this report are intended for use as visual aids, are not necessarily to scale, and should not be construed as engineering or architectural reports or surveys. The reproduction of information generated by architects, engineers, or other consultants on any sketches, drawings, or photographs is only for coordination and ease of reference. Inclusion of said information with any drawings or other documents does not constitute a representation as to the sufficiency or accuracy of said information.

Unless otherwise expressed: a) this report covers only examined items and their condition at the time of inspection; and b) the inspection is limited to visual examination of accessible items without dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that structural problems or deficiencies of plants or property may not arise in the future.



Certification of Performance

I Richard Gessner, Certify:

That I have personally inspected the tree(s) and/or the property referred to in this report, and have stated my findings accurately. The extent of the evaluation and/or appraisal is stated in the attached report and Terms of Assignment;

That I have no current or prospective interest in the vegetation or the property that is the subject of this report, and I have no personal interest or bias with respect to the parties involved;

That the analysis, opinions and conclusions stated herein are my own;

That my analysis, opinions, and conclusions were developed and this report has been prepared according to commonly accepted Arboricultural practices;

That no one provided significant professional assistance to the consultant, except as indicated within the report.

That my compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party, nor upon the results of the assessment, the attainment of stipulated results, or the occurrence of any other subsequent events;

I further certify that I am a Registered Consulting Arborist® with the American Society of Consulting Arborists, and that I acknowledge, accept and adhere to the ASCA Standards of Professional Practice. I am an International Society of Arboriculture Board Certified Master Arborist®. I have been involved with the practice of Arboriculture and the care and study of trees since 1998.

Richard J. Gessner



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ISA Board Certified Master Arborist® WE-4341B



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