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Appraisals ~ Site Planning ~ Urban Landscape Design and Management
Environmental Education ~ Environmental Restoration ~ Risk Assessments

8/4/2022

Neil Walter Company
Kermit Jorgensen, Principal
550 S. Michigan Street
Seattle, WA 98108

Cc: Pat Hopper, Contour Engineering, LLC

RE: Valley Ave Contractor Yard Tree Risk Assessment

Mr. Jorgensen:

Upon your request and as a requirement of the City of Puyallup, I have conducted risk assessments of the six trees identified as significant within the site of the proposed Valley Ave contractor yard project. I visited the site to evaluate the trees on August 4, 2022. The following report presents my findings and recommendations.

**Tree Risk Assessment**

The tree risk assessment methodology used for this report was developed by the International Society of Arboriculture in 2013. It replaces the original method adopted in 2011.

Tree risk assessment can be conducted at different levels of intensity, each employing varying methods and providing the client with varied options of reporting and recommendations. The level selected should be appropriate for the assignment.

The ANSI standard for risk assessment and ISA's *Best Management Practices: Tree Risk Assessment* defines three levels of tree risk assessment:

- Level 1: Limited visual
- Level 2: Basic
- Level 3: Advanced

Level 1 assessment involves a visual assessment of an individual tree or populations of trees near specified targets, conducted from a specified perspective in order to identify certain obvious defects or specified conditions. A limited visual assessment typically focuses on identifying trees with *imminent* and/ or *probable* likelihood of failure.

A Level 2 or basic assessment is the standard assessment performed by arborists in response to most private client requests for tree risk assessments. It consists of a detailed visual inspection of a tree and its surrounding site and a synthesis of the information collected. A basic assessment requires walking completely around the tree – looking at the site, buttress roots, trunk and branches. Looking at the tree from some distance away, as well as close up, to consider crown shape and surroundings.

Level 3 is an advanced assessment and it is performed to provide detailed information about specific tree parts, defects, targets, or site conditions. It may be in conjunction with or after a basic assessment if additional information is needed and the client approves the additional service. Specialized equipment, data collection and analysis, and/or expertise are usually required for advanced assessments. These assessments are, therefore, generally more time intensive and more expensive.

After determining the likelihood of failure and the likelihood of impacting a target, the combined likelihood of a failure impacting a target can be categorized. Matrix 1 can be used as a guide in relating these likelihood factors within a given time frame. The resulting terms (unlikely, somewhat likely, likely, very likely) are defined by their use within the table and are used to represent this combination of occurrences in Matrix 2.

**Matrix 1. Likelihood of Failure**

| Likelihood of Failure | Likelihood of Impacting Target | | | |
|---|---|---|---|---|
| | **Very Low** | **Low** | **Medium** | **High** |
| **Imminent** | Unlikely | Unlikely | Likely | Very likely |
| **Probable** | Unlikely | Unlikely | Somewhat likely | Likely |
| **Possible** | Unlikely | Unlikely | Unlikely | Somewhat likely |
| **Improbable** | Unlikely | Unlikely | Unlikely | Unlikely |

**Matrix 2. Risk Rating**

| Likelihood of Failure and Impact | Consequences of Failure | | | |
|---|---|---|---|---|
| | **Negligible** | **Minor** | **Significant** | **Severe** |
| **Very likely** | Low | Moderate | High | Extreme |
| **Likely** | Low | Moderate | High | High |
| **Somewhat likely** | Low | Low | Moderate | Moderate |
| **Unlikely** | Low | Low | Low | Low |

Field Data and Recommendations

Level 2 assessments were conducted on the six identified trees. Table 3 presents a summary of my findings and recommendations. The locations of the trees are noted on the attached survey of the site that I was provided.

**Table 3. Complete Risk Assessment Summary**

| Tree ID# | Species | DBH (in) | Height (ft) | Live Canopy Ratio | Target | Distance to Target | Condition | Comments | Risk Rating |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Larch | 14 + 18 | 70 | 70 | Power lines, ware-house drive | 35', 42' | Fair | Main stem splits into co-dominants at 2'. No signs of active separation, decay or disease. | Low |
| 2 | Deodar Cedar | 26 | 80 | 45 | Garage, driveway, house | 12', 8', 45' | Good | No signs of decay, disease or structural issues. | Low |
| 3 | Birch | 25 | 65 | 45 | Garage, yard | 16', 2' | Good | No signs of decay, disease or structural issues. | Low |
| 4 | Birch | 17 | 55 | 45 | Shed, yard, power lines | 4', 2', 40' | Good | No signs of decay, disease or structural issues. | Low |
| 5 | Scots Pine | 34 | 55 | 30 | Yard, power lines | 6', 5' | Fair | No signs of decay, disease or structural issues. There are lower dead limbs, typical of species. | Moderate |

| Tree ID# | Species | DBH (in) | Height (ft) | Live Canopy Ratio | Target | Distance to Target | Condition | Comments | Risk Rating |
|---|---|---|---|---|---|---|---|---|---|
| 6 | Scots Pine | 20 + 22 | 52 | 25 | Yard, power lines | 6', 4' | Fair | No signs of decay, disease or structural issues. There are lower dead limbs, typical of species. | Moderate |

**Comments**

If retained, Trees #5 and #6 should be pruned to remove the lower dead limbs.

Professionally Submitted,

Kevin M. McFarland, Principal
Consulting Urban Forester
ISA Certified Arborist PN-0373 & ISA Tree Risk Assessment Qualified
Sound Urban Forestry, LLC
P.O. Box 489
Tahuya, WA 98588

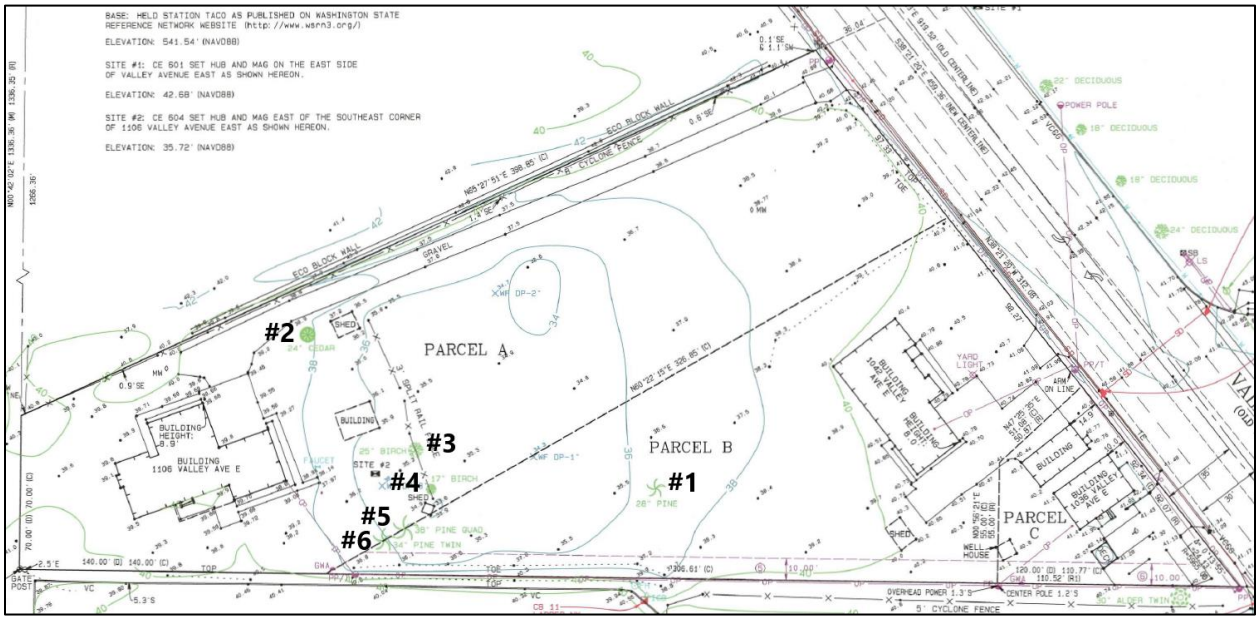
References

Dunster, Dr, Julian et al. 2013. *Tree Risk Assessment Manual.* International Society of Arboriculture. Champaign, IL.

Mattheck, C. & Brelor, H (1998). *The body language of trees. A handbook for failure Analysis*. Research for Amenity Trees No. 4. The Stationary Office, London.

Smiley, E. Thomas, Nelda Matheny and Sharon Lilly. 2011. *Best Management Practices – Tree Risk Assessment.* International Society of Arboriculture. Champaign, IL.

# Locations of Assessed Trees



**Assumptions and Limitations of Tree Risk Assessment**

1. Tree risk assessment is limited in scope to the specific risks(s) of interest, and does not include any and all risks.

2. Tree risk assessment considers significant known and/or assigned targets and visible or detectable tree conditions.

3. Tree risk assessments represent the condition of the tree and site at the time of inspection.

4. Only those trees specified in the scope of work were assessed, and assessments were performed within the limitations specified.

5. Any tree, whether it has visible weaknesses or not, will fail if the forces applied exceed the strength of the tree or its parts.

6. Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible; however, the consultant/appraiser can neither guarantee not be responsible for the accuracy of information provided by others. Any legal description provided to the consultant/appraiser is assumed to be correct. Any titles and ownerships to any property are assumed to be good and marketable.

7. Loss or alteration of any part of this report invalidates the entire report.

8. Possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than the person to whom it is addressed, without the prior expressed written or verbal consent of Sound Urban Forestry, LLC.

9. Neither all or any part of the contents of this report, nor copy thereof, shall be conveyed by anyone, including the client, to the public through advertising, public relations, news, sales or other media, without the prior expressed written or verbal consent of Sound Urban Forestry, LLC – particularly as to the value considerations, identity of Sound Urban Forestry, LLC, or any reference to any professional society or to any initialed designation conferred upon Sound Urban Forestry, LLC as stated in its qualifications.

10. This report and any values expressed herein represent the opinion of Sound Urban Forestry, LLC and the fee is in no way contingent upon the reporting of a specified value, a stipulated result, the occurrence neither of a subsequent event, nor upon any finding to be reported.

11. Diagrams, graphs, photographs and sketches in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural reports or surveys.

12. Sound Urban Forestry, LLC shall not be required to give testimony or to attend court by reason of this report unless subsequent contractual arrangements are made.

13. Unless expressed otherwise: 1) information contained in this report covers only those items that were examined and reflects the condition of those items at the time of inspection; and 2) the inspection is limited to visual examination of accessible items without dissection, excavation, probing, drilling or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the tree or other plant or property in question may not arise in the future.

14. The time frame for risk categorization should not be considered a “guarantee period” for the risk assessment.