

**Bartlett Tree Experts  
Tree Risk Assessment and Recommendations**

Prepared for:  
Astro Ventures, LLC  
433 Marlborough Street  
Boston, Massachusetts 02116



Assessed by: Timothy Armstrong  
The F.A. Bartlett Tree Expert Company  
Board Certified Master Arborist NE-7132B  
Tree Risk Assessment Qualified



06-Jun-22  
Inspection ID: 8701

## Tree Risk Assessment and Recommendations for Astro Ventures, LLC

### Executive Summary

The Tree of Heaven in the alley behind the buildings of the Astro Ventures, LLC property was assessed for risk on May 27, 2022 by Timothy Armstrong. Using the methods outlined in this report and the results of the examination of this tree, it is my professional judgment that this tree is a **Moderate risk**.

### Assignment

Arborist representative Dan Strom was contracted by Astro Ventures, LLC to assess the risk of the Tree of Heaven located in the alley behind the buildings. Based on conversation, the following was agreed:

1. Perform a *Level 2 Basic visual assessment* (as defined in the *International Society of Arboriculture's (ISA's) Best Management Practices (BMP) for Tree Risk Assessment* and the *ANSI A300 Part 9 Standard for Tree Risk Assessment*). The limits of the assessment were discussed.
2. Make recommendations to reduce risk where appropriate.
3. Provide a written report that documents the level of risk based on tree and site conditions observed and discussed at the time of the inspection.

### Background and Purpose of Report

In accordance with industry standards, tree risk ratings are derived from a combination of three factors: the *likelihood of failure*, the *likelihood of the failed tree part impacting a target*, and the *consequences* of the target being struck. The guidelines used to classify each of these factors are presented in the *ISA's BMP for Tree Risk Assessment* and guidelines developed by the Bartlett Tree Research Laboratories. These factors are then used to categorize tree risk as *Extreme, High, Moderate* or *Low*. The factors used to define your risk rating are identified in this report. An explanation of terms used in this report appears in the glossary located in the appendix. The information provided in this report is based on the conditions identified at the time of inspection. Tree conditions do change over time so reassessment is recommended and after major storm events.

The purpose of this report is to provide information on the assessment of the tree and site conditions at the property of Astro Ventures, LLC to determine the level of risk of the Tree of Heaven located at 433 Marlborough Street, Boston, Massachusetts 02116. In addition, mitigation recommendations will be included to reduce risk.

This report is the property of Astro Ventures, LLC. It may only be used for the purpose of making decisions regarding risk mitigation involving this tree.

### Observations

The following observations were made by Timothy Armstrong during the tree inspection conducted on May 27, 2022:

Tree species: Tree of Heaven

Tree trunk diameter (DBH): 42 in.

Only the following high value targets within the target zone were considered: 1. People near the tree, 2. Structures. Other targets will be considered upon request.

Tools used in assessment: D Tape

Tree Part	Defect	Target	Likelihood of Failure	Likelihood of Impact	Consequences	Part Risk Rating
Crown	Dead branches	1	Probable	Low	Significant	Low
Branch	Dead	1	Probable	Low	Severe	Low
Trunk	Included Bark	2	Probable	Medium	Significant	Moderate
	Codominant stems	2	Probable	Medium	Significant	Moderate
	Decay In Trunk	2	Probable	Medium	Significant	Moderate
Roots	Dead/Missing	2	Probable	Medium	Significant	Moderate
	Root/basal decay	2	Probable	Medium	Significant	Moderate

Photographs of the tree and specific defects may be found in the Appendix.

### Results of Risk Assessment

The *overall risk rating* for this tree is considered **Moderate**, indicated by the highest likelihood of failure for the tree parts assessed which is *Probable*, the likelihood of impacting a target listed above is *Medium* and the consequences of the failure and impact could be *Significant*. If this level of risk is not acceptable to you, then mitigation actions should be taken to reduce the risk associated with this tree.

### Mitigation Recommendations and Options

Mitigation is recommended for the tree parts listed below. Except in the case of total tree removal, some residual risk remains after mitigation. Please make sure that *residual risk* of the options you choose is acceptable to you.

Tree Part	Mitigation Options (* indicates Recommendation)	Residual Risk
Trunk	*Remove tree to eliminate the potential for failures	None

If the recommended treatments are completed, the *residual risk* of this tree should be considered **None**. I will provide you with more detailed recommendations for specific treatments upon your request.

### Discussion

Tree of heaven (*Ailanthus altissima*) is an invasive tree species from China that was introduced in 1784. The trees have naturalized over much of the U.S. due to their extreme tolerance to pollution. Commonly found where no other tree would achieve maturity, ailanthus are weak wooded, prone to decay and poor structure. There concern about ailanthus trees due to spotted lantern fly, an invasive insect that kills ailanthus during its reproduction. Spotted lantern fly produces vast amounts of honey dew (sugary insect excrement) when feeding on ailanthus trees. Spotted lantern fly has been confirmed as near as Connecticut.

This tree is in extremely poor condition. The majority of the canopy appears to be dead, as evidenced by the sporadic and very thin canopy. Additionally, this tree was very late in leafing out as compared to trees of the same species in the alley. There are wounds on some large branches that exhibit dead cambium. There is obvious advanced decay in the lower stem, and a very undersized root zone with evidence of a compromised root system.

I recommend the immediate removal of this tree.

### **Summary and Conclusion**

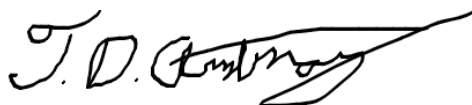
Using the methods outlined in this report and the results of the examination of this tree, it is my professional judgment that this tree is Moderate risk. If this level of risk is not acceptable to you, then mitigation actions should be taken as soon as practical to reduce the risk to an acceptable level.

Thank you for the opportunity to provide this information. Please contact me if you wish to review these results or discuss the next steps to take with mitigation, or if I can be of any other service in the management of your landscape.

### **Certifying Statement**

I, Timothy Armstrong, certify that:

- I have personally overseen the inspection of this tree and property referred to in this report, and have stated my findings accurately. The extent of the assessment is stated in the attached report and the terms of assignment.
- I have no current or prospective interest in the vegetation or the property that is the subject of this report and have no personal interest or bias with respect to the parties involved.
- The analysis, opinions, and conclusions stated herein are my own.
- My compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party.



\_\_\_\_\_  
Timothy Armstrong

\_\_\_\_\_  
June 6, 2022

Date



## Appendix

### Limitations of Tree Risk Assessments

It is important for the tree owner or manager to know and understand that all trees pose some degree of risk from failure or other conditions. The information and recommendations within this report have been derived from the level of tree risk assessment identified in this report, using the information and practices outlined in the *International Society of Arboriculture's Best Management Practices for Tree Risk Assessment*, as well as the information available at the time of the inspection. However, the overall risk rating, the mitigation recommendations, or any other conclusions do not preclude the possibility of failure from undetected conditions, weather events, or other acts of man or nature. Trees can unpredictably fail even if no defects or other conditions are present. Tree failure can cause adjacent trees to fail resulting in a “domino effect” that impacts targets outside the foreseeable target zone of this tree. It is the responsibility of the tree owner or manager to schedule repeat or advanced assessments, determine actions, and implement follow up recommendations, monitoring and/or mitigation.

Inspection limitations associated with this assessment: None.

Bartlett Tree Experts can make no warranty or guarantee whatsoever regarding the safety of any tree, trees, or parts of trees, regardless of the level of tree risk assessment provided, the risk rating, or the residual risk rating after mitigation. The information in this report should not be considered as making safety, legal, architectural, engineering, landscape architectural, land surveying advice or other professional advice. This information is solely for the use of the tree owner and manager to assist in the decision making process regarding the management of their tree or trees. Tree risk assessments are simply tools which should be used in conjunction with the owner or tree manager’s knowledge, other information and observations related to the specific tree or trees discussed, and sound decision making.

## Photographs

Image of assessed tree



Image of assessed tree and additional tree of heaven in foreground; note the presence of a full vigorous canopy on the tree in the foreground



Image of tree rooting space



Image of rear of lower tree stem.





Image of large section of bark missing; note the color of the underbark, brown indicates dead tissue

## Glossary

Tree risk assessment has a unique set of terms with specific meanings. Definitions of all specific terms may be found in the International Society of Arboriculture's *Best Management Practice for Tree Risk Assessment*. Definitions of some of these terms used in this report are as follows:

The *likelihood of failure* may be categorized as imminent meaning that failure has started or could occur at any time; probable meaning that failure may be expected under normal weather conditions within the next 3 years; possible meaning that failure could occur, but is unlikely under normal weather conditions during that time frame; and improbable meaning that failure is not likely under normal weather conditions, and may not occur in severe weather conditions during that time frame.

The *likelihood of the failed tree part impacting a target* may be categorized as high meaning that a failed tree or tree part will most likely impact a target; medium meaning the failed tree or tree part could impact the target, but is not expected to do so; low meaning that the failed tree or tree part is not likely to impact a target; and very low meaning that the chance of a failed tree or tree part impacting the target is remote.

The *Likelihood of Failure and Impact* is defined by Table 1, the Likelihood Matrix:

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

The *consequences* of a known target being struck may be categorized as severe meaning that impact could involve serious personal injury or death, damage to high value property, or disruption to important activities; significant meaning that the impact may involve personal injury, property damage of moderate to high value, or considerable disruption; minor meaning that impact could cause low to moderate property damage, small disruptions to traffic or a communication utility, or minor injury; and negligible meaning that impact may involve low value property damage, disruption that can be replaced or repaired, and do not involve personal injury.

*Targets* are people, property, or activities that could be injured, damaged or disrupted by a tree failure.

*Levels of assessment* 1) *Limited visual assessments* are conducted to identify obvious defects. 2) *Basic assessments* are visual inspections done by walking around the tree looking at the site, buttress roots, trunk and branches. It may include the use of simple tools to gain information about the tree or defects. 3) *Advanced assessments* are performed to provide detailed information about specific tree parts, defects, targets of site conditions. Drilling to detect decay is an advanced assessment technique.

*Tree Risk Ratings* are terms used to communicate the level of risk rating. They are defined in Table 2, the Risk Matrix, as a combination of Likelihood and Consequences:

Likelihood of Failure & Impact	Consequences of Tree 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

*Overall tree risk rating* is the highest individual risk identified for the tree.

The *residual risk* is the level of risk the tree should pose after the recommended mitigation.