**Arbor Vitae Tree Care**

**Owned & operated by Guy LeBlanc, Certified Arborist #Tx-0108**

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September 7, 2023

City of Austin PARD

Austin, Texas

Attention: Joshua Erickson, Kirsten Schneider

RISK ASSESSMENT REPORT AND RECOMMENDATION

Dear Joshua and Kirsten:

 As per your request and the proposal I submitted in response, today I performed an assessment of the condition of and risk posed by the pecan tree at Barton Springs Pool that is across from the diving board and leaning over the pool, resting on a retaining wall. I performed an ISA Level 2 assessment that included some sounding, and the risk assessment is based on the matrices and language used in the ISA TRAQ program guidelines. As noted in the proposal, this assessment was to focus on the structural integrity of the tree rather than its general health. The scope of work did not include assessing any other trees.

Size, and canopy health statistics were not particularly relevant to this assessment, other than to say for city ordinance purposes that this is a heritage-size pecan (Carya illinoinensis) about thirty inches in diameter. The canopy is full with no current tip dieback. The tree leans strongly from the base, approximately 45 degrees, to where one can easily walk up the trunk, or more accurately, up the concrete and rebar bole-shaped structure that currently exists in the space where the trunk once was. This “cavity fill” now represents about 90% of what would have been the lowest ten to twelve feet of trunk. There is only a thin “shell” of living sapwood (and wound wood) remaining, approximately two to three inches thick, encompassing about 35% of the circumference on the underside of the trunk at the ground, and more of it as the cavity narrows going towards the canopy. This shell becomes mostly continuous again at about twelve feet. Large cavities exist in the portions of the trunk above this, and based on other historic photos are continuous with the hollow section of the trunk below. No root flares are visible, indicating the tree was possibly partially buried at some point. There is a three to five inch wide gap between this shell and the concrete structure. According to Ms. Schneider, this gap has widened in the years she has been at PARD.

 Historical pictures from the 20’s posted by PARD show what appears to be this same tree completely upright, with no retaining wall downhill from it. In these photos the trunk appears to be irregularly swollen at base, but as this picture is taken from the south side of the pool, any defect that may be on the north side of the trunk (the side which is now facing upward) is not visible. Later pictures show the tree leaning, possibly partially uprooted in a flood. According to the online post, two of the three existing steel support posts were installed in the late 40’s or 50’s, and the original cavity filling was done prior to 1958. That filling was replaced in the 70’s, and the process well documented by photos on PARD’s online post. The third steel post was added after 2004, possibly installed *in 2009, when the city was also considering the removal of this tree due to its condition.*

Some pictures posted by PARD that were taken earlier this year show a fungal crust right where the tree’s trunk is in contact with the retaining wall. A lab report from Texas A&M, also posted on line by PARD, identifies a submitted sample of the crust as Kretzschmaria deusta, a very serious decay fungi. It certainly appears to me based on the picture that it is K. deusta, however on my assessment (with Kirsten present), I did not find any fungal structures. It is quite possible they have been removed. Clearly however, there is almost no sound wood left in this tree’s trunk from the ground to at least ten feet up. For this reason, whether or not there is an aggressive pathogen like K. deusta currently active in the roots of this tree, I do not believe it changes the risk assessment of the tree. In my opinion, it is about as dire as it can be.

 In TRAQ tree risk rating terms, the condition of the trunk makes its likelihood of failure *“probable”*. (This is the second highest likelihood rating, next to “imminent”.) Continuing with the TRAQ Table 1 matrix, in my opinion the likelihood of impacting a target is *“high”,* and when combined with likelihood of failure, the likelihood of this tree failing AND hitting a target is *“likely”.* Going on to Table 2, the likelihood of failing and hitting a target being “likely”, and the consequences being “severe”, this combination of hitting a target and having severe consequences ultimately gives the tree a “high” risk rating.

Perhaps based on the above paragraph it is obvious why, as I told Joshua, I do not have (and have not sought) ISA TRAQ qualification. I believe that its terminology (which is understandably being promoted to provide some industry uniformity) can be confusing, overly vague, and/or underestimate the true level of risk, and I believe that that is the case here.

Put plainly, this tree’s trunk is entirely hollow and it therefore has an extremely high risk of failing, most likely when it is in leaf, which is the time of year when visitor traffic is highest at the pool, making the probability of part of it hitting someone also extremely high. The injuries could quite likely be fatal. The only way to assure that this tree does not hit someone if it is kept would be to completely cordon off the entire area under it, which would need to include area inside the pool itself. In my opinion doing so would pose other significant safety concerns, particularly for swimmers.

Therefore my opinion is that the only reasonably safe course of action here is to completely remove this tree.

Sincerely,

Guy LeBlanc, Certified Arborist