TRAVERSO TREE SERVICE
WHEN IT HAS TO BE DONE RIGHT

February 28, 2020

Rikesh & Sweta Patel
c/o Julia Arria
ODS Architecture
juliaa@odsarchitecture.com

Re: Drainage, sewer and driveway review for 2 Charles Hill Circle, Orinda

Dear Rikesh & Sweta,

Per ODS' request, I reviewed the proposed drainage & sewer plans, as well as the revised plan showing the widened driveway.

The proposed drainage plan was provided by Tarnoff Engineering Corp. I anticipated that the proposed utilities would have at most a moderate encroachment on the trees, which was acceptable, but suggested several changes that would slightly reduce impact. These recommendations were incorporated into the latest revision, dated 2/25/20. Changes included hugging the storm drain to the east corner of the home and moving the storm drain and sewer closer to smaller or healthier trees (e.g. trees #22, 31). Overall, the storm drain and sewer construction will be acceptable, with low-moderate encroachment on the trees.

I also reviewed the updated driveway. Per the fire department's request, the driveway was widened by 18" on either side. The tree most affected by the change is oak #7, which is immediately east of the top of the driveway. Upon reviewing my arborist report, I found that I incorrectly noted the original driveway as 10' & 12' from the tree, whereas it was actually 8' & 9' away. Julia of ODS confirmed that the driveway would be supported by piers and that the pier placement can be adjusted to save large roots. The majority of the grading within the driveway will consist of fill, which will allow existing roots to remain intact. Overall, I am comfortable with the widened driveway with a few updated recommendations.

For the driveway, the retaining wall contractor shall hand dig the upper 3' of each pier within 12' of the trunk of tree #7. An arborist shall then review the excavated areas. If large roots $\geq$ 2" in diameter are encountered, the pier locations shall be flexible enough to move 6"-12" off center to preserve significant roots – the extent of the flexibility will need to be determined by the structural engineer. The remaining depth of the footing can be drilled per usual.

In general, I would also recommend adding mulch beneath the driplines of all the remaining oaks, which helps conserve water and improve existing soil. This can be done at any time but may be most efficient once the landscape has been cleared of undesirable vegetation. The best type of mulch is arborist wood chips – these can be obtained for free from tree services & consist of a shredded mix of leaves, twigs, branches and wood. You could keep the wood chips from the proposed tree removals on site, but they would most likely interfere with construction.

Please let me know if you have any questions.

Sincerely,

Jennifer Tso
Certified Arborist #WE-10270A
ISA Tree Risk Assessor Qualified