MANHATTAN BEACH

Live Oak Park (aka: Scout House)
Construction Impact Report (Moreton Bay Fig)

SUBMITTED TO:

ERNEST AREA
Urban Forester
City of Manhattan Beach

PREPARED BY:

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APRIL 13, 2022

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BACKGROUND AND ASSIGNMENT

West Coast Arborists, Inc., (WCA) was contacted by Mr. Ernest Area of the City of Manhattan Beach to provide arborist services for one Moreton Bay Fig (*Ficus macrophylla*) located at Live Oak Park. Following the approval of the proforma for arborist services, I visited the site on the morning of March 30, 2022 to collect relevant information per the scope of work. The scope of work for the requested arborist services is as follows:

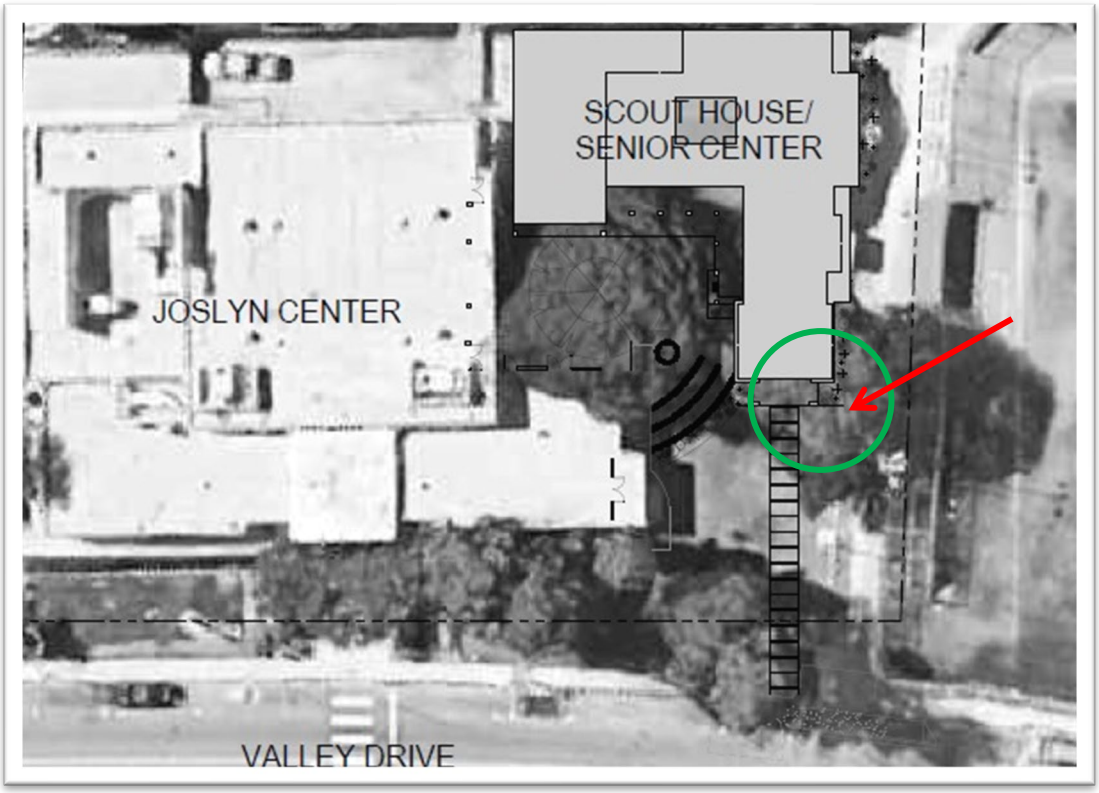
- Prepare one construction impact arborist report for one Moreton Bay Fig, identified in the city tree inventory as Live Oak Park, Park-18. Detail the tree's current condition and provide recommendations based on proposed construction plans.
    - Perform a general health and condition assessment of the tree. The level of assessment used for this project involved a visual assessment only of the individual tree from a ground-based, walk-by perspective. This process was used to identify any obvious defects or special conditions.
- Provide an evaluation of the tree at the proposed construction site for suitability for retention considering the proposed construction.
    - Indicate methods and maintenance practices to preserve and maintain the tree if possible.
    - Identify the existing root systems, if possible, that should be avoided if the subject tree is to remain in place.

The assignment, being a visual assessment of the subject tree, was limited to that which could be observed from the ground. Only exposed or easily exposed parts above ground level were inspected. Subsurface soil conditions and tree parts below ground were not disturbed or observed.

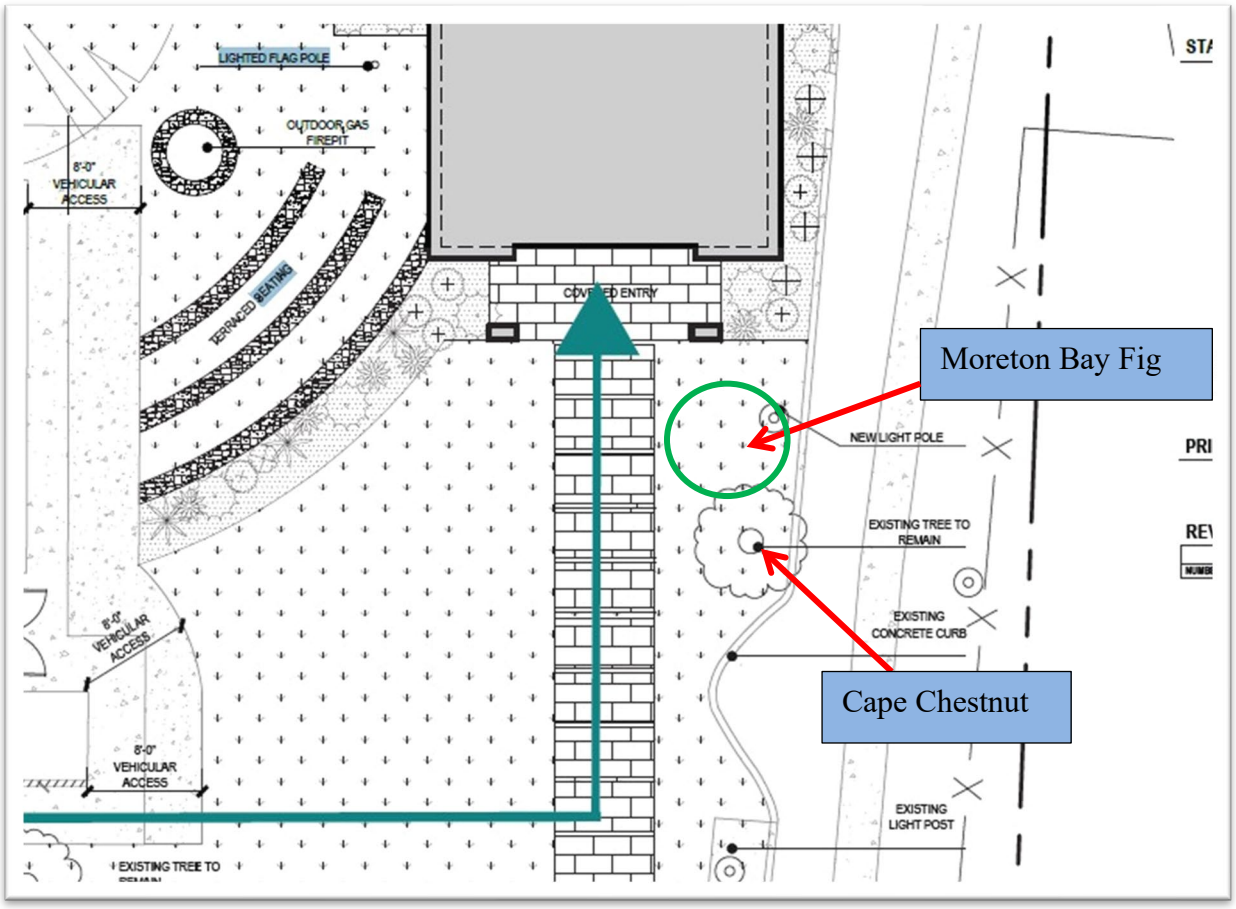
The purpose of this report is to provide as complete and unbiased an opinion as possible with regard to the health, condition, and maintenance recommendations of the inspected tree. The content of this report is intended to be used by the city of Manhattan Beach staff and its contractors that have jurisdiction and are responsible for the maintenance of the tree.

Site Map 1. Showing the location of the assessed tree.

Site Map 2 (below). Provided by the client, showing the location of the fig tree with respect to planned construction. It appears from this image that the roofline of the covered entrance will significantly impact the canopy of the fig tree.



Site map 3, Provided by the client.



Note that in this image, only one tree is shown as "existing tree to remain." Comparing street views, Google maps, and on-site observations, there are two trees very close to each other, the subject fig tree and a smaller Cape Chestnut. This site plan actually shows the smaller of the two, as it is the one nearest the bowed curb. See Image 5.

SUMMARY: Site usage for the area around the subject tree includes an irrigated lawn area, an asphalt access road, and a pedestrian walkway leading to the Scout House and the Joslyn Community Center. Currently, there is an older, one-story building to the west of the fig tree, identified as the "Scout House." Proposed plans indicate that the current one-story building will be torn down and replaced with a two-story building. A portion of the building is expected to interfere with the crown of the fig, and additional construction impacts around the tree will have an adverse effect on plant health and stability. Retention is not recommended.

OBSERVATIONS:

- The subject tree has a trunk diameter of 37-inches, with a height of 50-feet and a canopy spread of 50-feet (east to west) and 45-feet (north to south). Canopy spread was measured by a standard 5-foot pace.

- The tree displays slight canopy-wide twig and small branch dieback, and a thinning canopy on the south side. Plant health is fair, plant structure is good, and plant form is good. Images 1-3. See Appendix B: Health and Condition Components.
- This tree has a very large root flare extending several feet out from the tree base and several large anchorage roots are extending out into the lawn area. Image 4
- There is a semi-irrigated lawn on the south side of the tree and an asphalt alleyway to the north.
- There is a Cape Chestnut (*Calodendrun capense*) directly east of the subject fig tree. This tree is healthy and does not appear to be impacted by planned construction. Image 5
- Plans provided to me appear to indicate that a walkway will be constructed on the south side, just outside the dripline, and a new light standard is planned on the northwest side.
- Additionally, the plans called for a covered entrance way that would directly impact the crown of the fig tree. There is a very large lateral limb on the west side of the tree that would require removal in order to build out the entrance way. This would result in uneven canopy weight distribution.
- Due to site configuration, access is fairly limited for medium and large-sized construction equipment. Therefore, access to the site will occur mostly via the lawn area to the south as well as the alleyway to the north.
    - This level of activity will result in damage to more than 50% of the tree's root system via compaction and direct injury.

CONCLUSIONS:

Based on overall plant health and proposed construction plans, it is not believed that the Moreton Bay Fig is a good candidate for site retention. The expected level of root loss and canopy encroachment issues will have numerous impacts on both plan health and stability. Given the trunk diameter of the subject tree, a minimum tree protection zone of 11-feet would need to be implemented radially out from the tree base. The large western lateral limb would require removal to accommodate the new covered entrance. This limb makes up a third of the tree's total canopy, and its loss would cause a change in canopy weight distribution. When combined with the expected damage from construction impacts (i.e., equipment driving over the root zone), root loss due to cutting for the light standard and new walkway, and the removal of the large lateral, it is my opinion that the adverse impacts are too great for the tree to successfully survive during and after the proposed construction.

Refer to Appendix C for general guidelines regarding root protection for any individual trees that may be impacted by this project; these guidelines are provided for reference by those responsible for design planning and implementation.

APPENDIX A

-PHOTOS-

Image 1. Showing the subject tree as seen looking west. There is slight canopy dieback on the south side.

Image 2. Showing the subject tree as seen looking northwest. There is canopy thining in the mid and lower portions of the crown.

Image 3. Showing the tree looking north. Note the canopy thinning and twig dieback visible in several parts of the crown. The western lateral limb (red arrow) would also require removal due to the planned new covered entrance, this is not advised.

Image 4. Showing the root flare and how it spreads out significantly from the tree base. Plans call for a new light standard to be installed in the area indicated, this will act to sever all the support roots on the west side. In addition, a covered entrance way is planned that would require the removal of the large lateral. This would result in uneven weight distribution. When combined with the expected root loss, this action could result in a loss of plant stability.

Image 5. Showing the larger subject fig as well as the smaller Cape Chestnut. The Moreton Bay Fig tree is expected to be highly impacted by planned construction, specifically by root loss and canopy encroachment issues.

APPENDIX B

-Health & Condition Components-

Rating category	Health & Condition components			Percent rating
	Health	**Structure**	**Form**	
Excellent	High vigor and nearly perfect health with little or no twig dieback, discoloration, or defoliation.	Nearly ideal and free of defects.	Nearly ideal for the species. Generally symmetric. Consistent with the intended use.	81% to 100%
Good	Vigor is normal for the species. No significant damage due to diseases or pests. Any twig dieback, defoliation, or discoloration is minor.	Well-developed structure. Defects, if present, are minor and can be corrected.	Minor asymmetries and/or deviations from species norm. Mostly consistent with the intended use. Function and aesthetics are not compromised.	61% to 80%
Fair	Reduced vigor. Damage due to insects or diseases may be significant and associated with defoliation but is not likely to be fatal. Twig dieback, defoliation, discoloration, and/or dead branches may comprise up to 50% of the crown.	A single defect of a significant nature or multiple moderate defects. Defects are not practical to correct or would require multiple treatments over several years.	Major asymmetries and/or deviations from species norm or intended use. Function or aesthetics are compromised.	41% to 60%
Poor	Unhealthy and declining in appearance. Poor vigor. Low foliage density and poor foliage color are present. Potentially fatal pest infestation. Extensive twig and/or branch dieback.	A single serious defect or multiple significant defects. Recent change in tree orientation. Observed structural problems cannot be corrected. Failure may occur at any time.	Largely asymmetric and/or abnormal. Detracts from intended use and/or aesthetics to a significant degree.	21% to 40%
Very Poor	Poor vigor. Appears to be dying and in the last stages of life. Little live foliage.	Single or multiple severe defects. Failure is probable or imminent.	Visually unappealing. Provides little or no function in the landscape.	6% to 20%
Dead				0% to 5%

This table is taken from the Guide For Plant Appraisal, 10th Edition

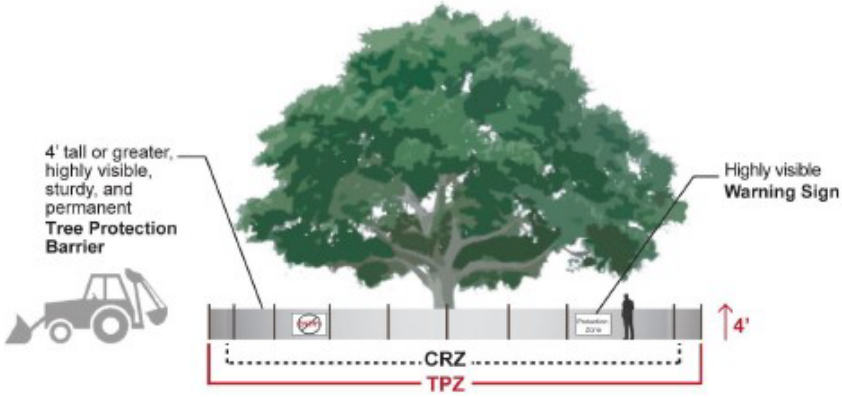
APPENDIX C

-General Construction Protection Guidelines-

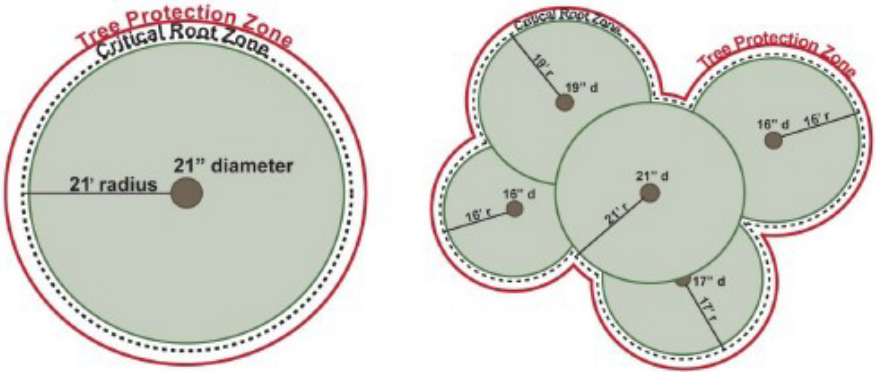
If the decision to retain the subject fig tree, it is recommended that the following guidelines be implemented:

- Identify a tree protection zone (TPZ) for the tree; provide adequate space around the protected tree from the beginning of the project to its completion. This generally involves outlining the dripline of the tree and installing fencing around that tree. No construction activity should be allowed within this area, including storage, dumping of excess material, etc. See the example below:

Tree protection barrier encloses the Tree Protection Zone and is at least 4' tall, highly visible, sturdy, permanent and has warning signs on or near it for the duration of any construction activities.



Tree Protection Zone (TPZ) is an area where construction activities are prohibited or restricted to prevent injury to preserved trees, especially during pre- construction and construction, and includes the Critical Root Zone and/or beyond.



- Before any grading, appropriately root prune tree(s) at the edge of any excavation.
- Always maintain the natural grade around the tree(s).
- Avoid open trenching in the root area. If necessary, this activity should be restricted to only one side of the tree and at an appropriate distance, as discussed below in the root pruning guidelines provided below.

- Consider minimum height requirements of construction equipment and prune any branches accordingly.
- Provide supplemental irrigation in similar volumes and seasonal distribution as would normally occur.
- Wood chips generated during the clearing of onsite vegetation should be used as mulch under retained trees. This will reduce loss of soil moisture, protect against compaction, and moderate soil temperatures.
- Trees should be monitored during and after construction on a regular basis. Watch for signs of stress, such as small twig and branch dieback, leaf discoloration and loss, and general decline in tree health and/or vigor.

The following sections of ***ANSI A300 (Part 8)-2013 Root Management*** should be used with regards to the level of acceptable root loss and/or cutting that may be necessary:

- 84.1.2 The extent and method of root pruning or cutting shall be based on the objectives, species, tolerance, environmental factors, timing, age, health, lean, and structural condition of the tree(s).
- 84.2.5 Where root removal is unavoidable, selective pruning shall be the preferred method.
- 84.3.1 The size and/or location of roots to be pruned shall be specified.
- 84.4.4 The trunk and buttress roots shall not be damaged beyond the scope of work.
- 84.5.3 Minimum distance from the trunk for root cutting should be adjusted according to trunk diameter, species tolerance to root loss, tree age, health, and site condition.
- 84.5.4 Root cutting distances from the trunk shall be adjusted for disease management, root location tree species and condition, and site and soil conditions.

BIBLIOGRAPHY

Costello, Laurence R., and K.S. Jones. *Reducing Infrastructure Damage By Tree Roots: A Compendium of Strategies*. Illinois: International Society of Arboriculture, 2003. Print.

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Lilly, Sharon J., Edward F. Gilman, and E. Thomas Smiley. *Best Management Practices: Tree Pruning (Third Edition)*. Illinois: International Society of Arboriculture, 2019. Print

Matheny, Nelda P., and James R. Clark. *Trees and Development, A technical Guide to Preservation of Trees During Land Development.* Illinois: International Society of Arboriculture, 1998. Print.

ASSUMPTIONS AND LIMITING CONDITIONS

1. Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible; however, the Consultant can neither guarantee nor be responsible for the accuracy of information provided by others. Standard of Care has been met with regards to this project within reasonable and normal conditions.

2. The Consultant will not be required to give testimony or to attend court by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services as described in the fee schedule and contract of engagement.

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

4. 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 written consent of the Consultant.

5. This report and any values expressed herein represent the opinion of the Consultant, and the Consultant's fee is in no way contingent upon the reporting of a stipulated result, a specified value, the occurrence of a subsequent event, nor upon any finding to be reported.

6. 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, or coring unless otherwise stated. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the tree(s) or property in question may not arise in the future.

7. Arborists are tree specialists who use their education, knowledge, training, and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near trees. It is highly recommended that you follow the arborist's recommendations; however, you may choose to accept or disregard the recommendations and/or seek additional advice.

8. Arborists cannot detect every condition that could lead to the structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances or for a specific period of time.

9. Any recommendations and/or performed treatments (including, but not limited to, pruning or removal) of trees may involve considerations beyond the scope of the arborist's services, such as property boundaries, property ownership, site lines, disputes between neighbors, and any other related issues. Arborists cannot take such considerations into account unless complete and accurate information is disclosed to the arborist. An arborist can then be expected to consider and reasonably rely on the completeness and accuracy of the information provided.

10. The author has no personal interest or bias with respect to the subject matter of this report or the parties involved. He/she has inspected the subject tree(s) and to the best of their knowledge and belief, all statements and information presented in the report are true and correct.

11. Unless otherwise stated, trees were examined using the tree risk assessment criteria detailed by the International Society of Arboriculture's publications *Best Management Practices – Tree Risk Assessment* and the *Tree Risk Assessment Manual* and *A Photographic Guide to the Evaluation of Hazard Trees (Matheny & Clark)*.

Certificate of Performance

Premises: Live Oak Park (aka: Scout House), Manhattan Beach, CA.
RE: Italian Stone Pine

I, Rebecca Mejia, certify that to the best of my knowledge and belief:

1. To the best of my knowledge, the statements of fact contained in this report are true and correct.
2. I have personally inspected the tree(s), and property referenced in this report and have stated my findings accurately.
3. I have no current or prospective interest in the tree(s) or the property that is/are the subject of this report, and I have no personal interest or bias with respect to the parties involved.
4. The analysis, opinions, and conclusions were developed, and this report has been prepared according to commonly accepted arboricultural practices and standards.
5. No one provided significant professional assistance to me, except were may be noted within the report.
6. My compensation is not contingent upon the reporting of conclusions that favor the cause of my client or any other party nor upon the results of the assessment, the attainment of stipulated results, or the occurrence of any subsequent events.

I further certify that I am a member in good standing with the International Society of Arboriculture, an ISA Certified Arborist, and an ISA Qualified Tree Risk Assessor. I hold a Bachelor of Science degree in Forestry and Natural Resources Management, with a minor in Urban Forestry. I have been a Certified Arborist since 1996 and in the practice of arboriculture for over 26 years.

Signed:

Rebecca Mejia

Rebecca Mejia
ISA Certified Arborist # WE-2355A
ISA Qualified Tree Risk Assessor
Consulting Arborist, West Coast Arborists, Inc.

Date: April 13, 2022