Kielty Arborist Services LLC

P.O. Box 6187
San Mateo, CA 94403
650-525-1464

January 4, 2017, Revised July 26, 2017

David J. Powers & Associates, Inc.
Attn: Ms. Judy W. Shanley
1871 The Alameda, Suite 200
San Jose, CA 95126

Site: 15980 Carlton Avenue, San Jose CA

Dear Ms. Judy W. Shanley,

As requested, on Tuesday December 20, 2016, I visited the above site for the purpose of inspecting and commenting on the trees. New construction is planned for this site, prompting the need for a tree survey. As requested, a tree protection plan will be included in this report.

Method:
The significant trees at this location were located on a site plan provided by you. Each tree was given an identification number. This number was inscribed on a metal tag and nailed to the trees at eye level. The trees were then measured for diameter at 2 feet above grade. The trees were each assigned a condition rating of 1 – 100 for form and vitality using the following system.

1	-	29	Very Poor
30	-	49	Poor
50	-	69	Fair
70	-	89	Good
90	-	100	Excellent

The condition rating is the average of the vitality and form of the trees. The height of each tree was estimated and the spread was paced off. Lastly, a comments section is provided.

R-*Indicates proposed removal.*
-*Indicates tree on neighbors property.*

Survey:

Tree#	Species	Diameter	CON	HT/SP	Comments
1	Incense cedar *(Calocedrus decurrens)*	35.4	65	50/30	Fair vigor, fair form, pruned for good air circulation, fungal disease present, well maintained, 3 feet from sidewalk.
2*	Redwood *(Sequoia sempervirens)*	12est	80	50/15	Good vigor, good form, 2 feet from property line, 4 feet from sidewalk.
3**R**	California pepper *(Schinus molle)*	26.3	45	35/20	Fair vigor, poor form, history of limb loss, heavily pruned, decay in leaders.
4**R**	Carob *(Ceratonia siliqua)*	15.8-10.8	40	35/20	Fair vigor, poor form, topped, large leader failure at 1 foot, decay at base.
5**R**	Deodar cedar *(Cedrus deodara)*	32.4	45	60/30	Good vigor, poor form, codominant at 8 feet, loss of apical dominance, topped.
6**R**	Coast live oak *(Quercus agrifolia)*	27.9	65	40/30	Fair vigor, fair form, hangs over building, codominant at7 feet, heavy limbs.
7**R**	Black walnut *(Juglans nigra)*	25.7	30	35/25	Poor vigor, poor form, codominant at 7 feet, buried root crown, decay at 6 feet, in decline.
8	Incense cedar *(Calocedrus decurrens)*	15.7	50	40/12	Fair vigor, fair form, suppressed, close to neighboring apartment building.
9**R**	Incense cedar *(Calocedrus decurrens)*	18.7	50	40/12	Fair vigor, fair form, suppressed, close to neighboring apartment building.
10	Incense cedar *(Calocedrus decurrens)*	16.0	30	30/10	Fair vigor, poor form, abnormal sweep in trunk.
11*	California pepper *(Schinus molle)*	25est	65	30/15	Fair vigor, fair form, well maintained, close to apartment building.

Survey:

Tree#	Species	Diameter	CON	HT/SP	Comments
12	Black walnut *(Juglans nigra)*	14.0	45	25/12	Fair to poor vigor, poor form, suppressed, history of limb loss, decay in canopy.
13	Black walnut *(Juglans nigra)*	15.7	45	30/15	Fair to poor vigor, poor form, suppressed, hanger in canopy, history of limb loss.
14	Black walnut *(Juglans nigra)*	18est	45	30/15	Fair to poor vigor, poor form, suppressed, history of limb loss.
15*	Evergreen ash *(Fraxinus uhdei)*	18est	40	30/20	Fair vigor, poor form, topped in past, codominant at 8 feet, heavy lean into property, shared tree.
16**R**	Brush cherry *(Syzygium australe)*	5.2	45	20/6	Fair vigor, poor form, suppressed, codominant at 4 feet, poor species.
17*	Silk oak *(Grevillea robusta)*	6est	40	20/8	Fair vigor, poor form, codominant, topped in past.
18*	Privet *(Ligustrum japonicum)*	12est	40	15/10	Fair vigor, poor form, topped at 3 feet in past, multi leader at 3 feet, girdled by fence.
19*	Privet *(Ligustrum japonicum)0*	6est	45	15/8	Fair to poor vigor, fair form, 1 foot from property line.
20*	Cherry plum *(Prunus cerasifera)*	6est	40	15/8	Fair to poor vigor, poor form, limbs topped, abundance of sprouts.
21*	Lemon *(Citrus spp.)*	5est	50	15/8	Fair to poor vigor, fair form, abundance of die back.
22*	Marina madrone *(Arbutus* 'Marina')	5est	70	15/10	Good vigor, good form.
23*	Orange *(Citrus spp.)*	6est	70	15/10	Good vigor, fair form.
24*	Marina madrone *(Arbutus* 'Marina')	5est	60	15/10	Fair vigor, fair form.

Survey:

Tree#	Species	Diameter	CON	HT/SP	Comments
25*	Privet *(Ligustrum japonicum)*	6est	45	15/10	Poor vigor, poor form, poor location between accessory structure and property line fence.
26*	Kohuhu *(Pittosporum tenuifolium)*	6est	45	20/10	Fair vigor, poor form, topped in past.
27*	Privet *(Ligustrum japonicum)*	6est	50	15/10	Fair vigor, fair form, 3 feet from property line fence, suppressed.
28*	Privet *(Ligustrum japonicum)*	6est	45	15/10	Fair vigor, poor form, topped in past.
29*	Cherry plum *(Prunus cerasifera)*	10est	0	15/12	DEAD.
30*	Acacia *(Acacia dealbata)*	15est	40	20/15	Poor vigor, poor form, topped, invasive species.

R-*Indicates proposed removal.*
*-*Indicates tree on neighbors property.*

Summary:

Located on the existing site are four separate homes. Little to no maintenance has occurred on this site for an unknown length of time as the site looks in disrepair. The trees have received poor maintenance in the past as some of the trees have been topped. All trees with a condition rating under 50 are considered poor trees and are recommended to be removed regardless of construction activity. The current site plan shows seven new buildings planned for this site. Seven trees on site are proposed for removal to facilitate the construction of the new homes. The city of San Jose tree ordinance states that a permit is needed to remove any tree located on a multifamily, commercial, industrial, or mixed use property. Therefore all trees needed to be removed will need a permit to do so. At this time trees #3-7, #9, and #16 are proposed for removal.

Trees proposed for removal to facilitate construction:

Tree #3- This tree is a California pepper tree (*Schinus molle)* with a diameter of 26.3. The tree is in poor condition as a history of limb loss is seen throughout the tree's canopy. Also the tree has been heavily pruned in the past in order to make clearance for an existing home. The pruning cuts have caused decayed areas throughout the tree's canopy. Limb loss will continue to occur as a result.

Showing tree #3

Tree #4 is a large carob tree(*Ceratonia siliqua)* with an added diameter of 26.6. The tree is in poor condition as a large leader has failed at the height of 1 foot from grade. This tree has also been topped in the past(poor maintenance). Decay is visible at the trees base. This tree is at a high risk for tree failure and should be removed regardless of the proposed construction.

Showing tree #4

Tree #5 is a large deodar cedar tree*(Cedrus deodara)* with a diameter of 32.4 inches. This tree is in poor condition because of its poor form. The tree has lost its apical dominance at the height of 8 feet as the tree is codominant. At 35 feet the tree has also been topped. Multiple leaders are now suppressing each other as a result. This is not the trees natural growth form and as a result limb failure is now at a higher risk.

Showing tree #5

Coast live oak tree #6 has a diameter of 27.9 inches. This tree received a fair condition rating of 65. The tree is codominant at 7 feet and is heavy over an existing building.

Showing tree #6

Black walnut tree #7 has a diameter of 25.7 inches. This tree was given a poor condition rating of 30. The tree has poor vigor and poor form. The tree is codominant at 7 feet with decay at 6 feet. This tree is in decline and should be removed regardless of construction.

Showing tree #7

Incense cedar tree #9 has a diameter of 18.7 inches. This tree is heavily suppressed by the surrounding trees and apartment buildings. This tree received a fair condition rating of 50.

Brush cherry tree #16 has a diameter of 5.2 inches. This tree was given a poor condition rating of 45. This is a poor species as it is highly susceptible to psyllid attack. This tree is also codominant at 4 feet and has been growing in suppressed conditions.

At this time 4 new trees are to be planted. The species planted consist of 3 crape myrtle trees and 1 water gum.

Special construction techniques relating to site plan:
The existing driveway on the east side of the property is proposed to be removed. Directly on the other side of the property line adjacent to the driveway are 12 neighboring trees that were surveyed. Most of these trees are small trees that are young and able to withstand minor impacts from the proposed work near the property line. The existing driveway on this side of the property is recommended to stay in place as long as possible as the driveway is protecting what roots have grown into the property. The driveway can

be used for parking and the staging of materials. This will reduce compaction to the soil elsewhere on the property. The property line fence and driveway will serve as tree protection for the neighbor's trees.

The existing sanitary sewer underneath the existing driveway on the east side of the property is also proposed for removal. A new bio retention drain line is proposed in this area. This work should be completed at the end of the project as the existing driveway shall stay in place as long as possible. When it is time to remove the driveway and install the new lines, the site arborist must be called out to the site in order to document this work. All excavation in this area will need to be supervised by the site arborist. Hand excavation will be required for any excavation within 20 feet of redwood tree #2. All roots must remain exposed and damage free for the site arborist to view. All roots that need to be cut in this area must be cut cleanly with the site arborist on site to document. At this time mitigation measures will be recommended and applied. Mitigations will likely consist of an irrigation plan and possibly a fertilization to the root zone depending on root loss.

The existing sidewalk near incense cedar tree #1 is proposed to be removed and replaced. All work when underneath the dripline of this tree will require hand digging. Concrete material can be broken into small hand manageable sized pieces with the use of a jack hammer. The site arborist must be on site during all work within 20 feet of this tree. Impacts to this tree are expected to be minor as the existing conditions likely restricted root growth underneath the sidewalk. All roots over 2 inches in diameter that need to be cut must first be inspected by the site arborist. Mitigations will be recommended and applied after witnessing work within 20 feet of this tree.

Tree #8 is recommended to be removed as a drainage line is proposed in close proximity to the tree. The tree's buttress roots would likely be damaged during the installation of this line. Trees #12-14 are in poor condition. It is recommended that these trees be removed and replaced after construction has been completed.

A proposed area drain is shown underneath the dripline of California pepper tree #11. The area drain location has been revised and is now slightly further away from the tree. The proposed area drain line will need to be hand dug in combination with an air spade with the Site Arborist on site to document the work. When possible the line shall be tunneled underneath roots in order to reduce impacts to the tree. If any roots are to be cut measuring 2 inches in diameter or over must be documented by the Site Arborist. Impacts from the excavation needed for the area drain underneath the tree's dripline are expected to be minor. Mitigations for the minor root loss will consist of a soaker hose placed at the area where trenching has occurred. The soaker hose shall be turned on every 2 weeks for 6 months until the top 18 inches of soil is saturated. After 6 months the soaker hose shall be removed. The area drain near this tree is mainly fed by roof water drains from nearby structures and are consequently most active during rainy

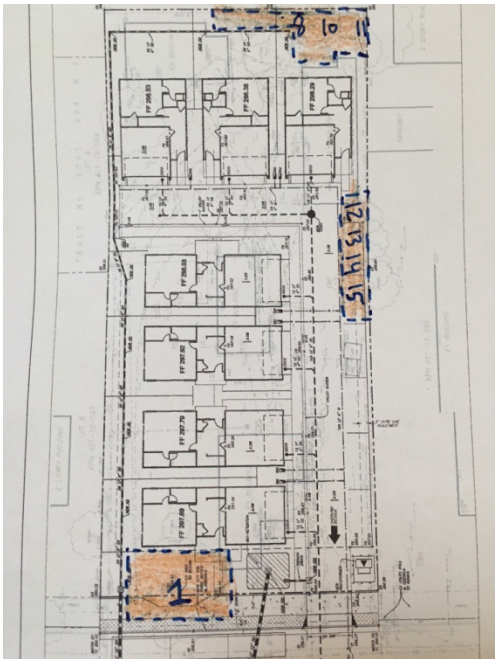
seasons when the tree is used to getting water. As long as the drain stays at least 5 feet from the tree's trunk the extra water during the rainy season should not impact the tree.

All work when underneath the dripline of a tree on site will require hand digging with the site arborist on site. The following tree protection plan will help to reduce impacts to the retained trees.

Tree Protection Plan:

Tree Protection Zones

Tree protection zones should be established and maintained throughout the entire length of the project. Fencing for the protection zones should be 6 foot tall metal chain link supported by metal poles the support poles should be spaced no more than 10 feet apart on center. The location for the protection fencing should be as close to the dripline as possible still allowing room for construction to safely continue. Signs should be placed on fencing signifying “Tree Protection Zone - Keep Out”. No materials or equipment should be stored or cleaned inside the tree protection zones. Areas outside the fencing but still beneath the dripline of protected trees, where foot traffic is expected to be heavy, should be mulched with 4 to 6 inches of chipper chips. Below is a diagram showing the recommended tree protection fencing locations. The existing driveway on the east side of the property is to stay in place as long as possible as the driveway offers protection to the neighbor's trees.



Showing recommended tree protection fencing locations

Demolition

During the demolition process all tree protection should be in place. An inspection prior to the start of the demolition may be required. A pre-demolition meeting with the site arborist is also advised. All vehicles must remain on paved surfaces if possible. If vehicles are to stray from paved surfaces, 4 to 6 inches of chips shall be spread and plywood laid over the mulch layer. This type of landscape buffer will help reduce soil compaction near desired trees. Parking will not be allowed off the paved surfaces. The removal of foundation materials, when inside the driplines of protected trees, should be carried out with care. Hand excavation will be required in areas of heavy rooting. Exposed or damaged roots should be repaired and covered with native soil. Tree protection fencing may need to be moved after the demolition. The site arborist should be notified and the relocated fence should be inspected.

Root Cutting

Any roots to be cut shall be monitored and documented. Large roots (over 2" diameter) or large masses of roots to be cut must be inspected by the site arborist. The site arborist, at this time, may recommend irrigation or fertilization of the root zone. All roots needing to be cut should be cut clean with a saw or lopper. Roots to be left exposed for a period of time should be covered with layers of burlap and kept moist.

Trenching

Trenching for irrigation, drainage, electrical or any other reason shall be done by hand when inside the dripline of a protected tree. Hand digging and the careful placement of pipes below or besides protected roots will significantly reduce root loss, thus reducing trauma to the tree. All trenches shall be backfilled with native materials and compacted to near its original level, as soon as possible. Trenches to be left open for a period of time, will require the covering of all exposed roots with burlap and be kept moist. The trenches will also need to be covered with plywood to help protect the exposed roots.

Irrigation

Normal irrigation shall be maintained on this site at all times. On a construction site, I recommend irrigation during winter months, 1 time per month. Seasonal rainfall may reduce the need for additional irrigation. During the warm season, April – November, my recommendation is to use heavy irrigation, 2 times per month. Enough water should be applied to the soil to wet the entire root zone. This type of irrigation should be started prior to any excavation. The irrigation will improve the vigor of the tree and will also improve the water content of the tree. The on-site arborist may make adjustments to the irrigation recommendations as needed. The foliage of the tree many need cleaning if dust levels are extreme. Removing dust from the foliage will help to reduce mite and insect infestation.

Inspections
The City of San Jose may require scheduled tree reports for a site like this. The tree protection reports will be provided when tree protection measures are installed and prior to occupancy. Any time work is to take place underneath the dripline of a tree on site the site arborist shall be called out to the site. It is the contractors responsibility to contact the site arborist when needed. Kielty Arborist Services can be reached at 650-515-9783 (Kevin), 650-532-4418(David) or by email at kkarbor0476@yahoo.com. Remaining tree inspections are on an as needed basis.

This information should be kept on site at all times. The information included in this report is believed to be true and based on sound arboricultural principles and practices.

Sincerely,

Kevin R. Kielty
Certified Arborist WE#0476A

David P. Beckham
Certified Arborist WE#10724A