APPENDIX A

ARBORIST REPORT

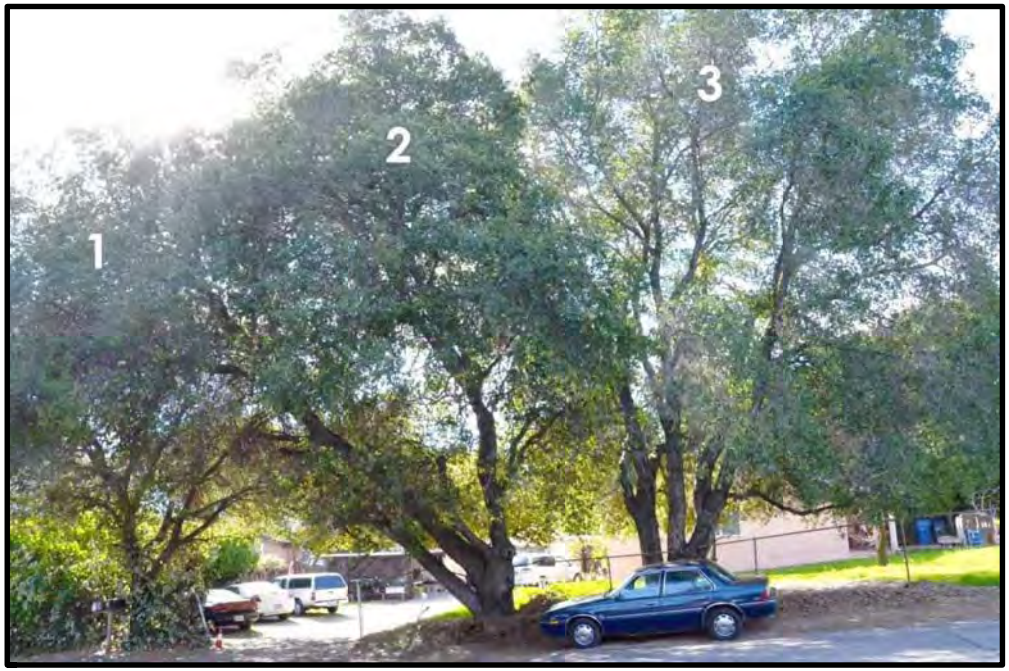
Deborah Ellis, MS

Consulting Arborist & Horticulturist

Service since 1984

ARBORIST REPORT

Tree Inventory, Tree Descriptions and Recommendations Relative to Proposed Construction



Winchester Boulevard Office

Winchester Boulevard at Shelburne Way, Los Gatos

Property Owner:

South Beach Partners LLC/Cumulus Capital Holdings, LLC

Prepared for:

Marni Moseley
Town of Los Gatos Community Planning Department
110 E. Main Street
Los Gatos, CA 95031

Prepared by:
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FEBRUARY 12, 2016

Report History: This is my fourth report for this project. My most recent previous report is dated March 23, 2015.

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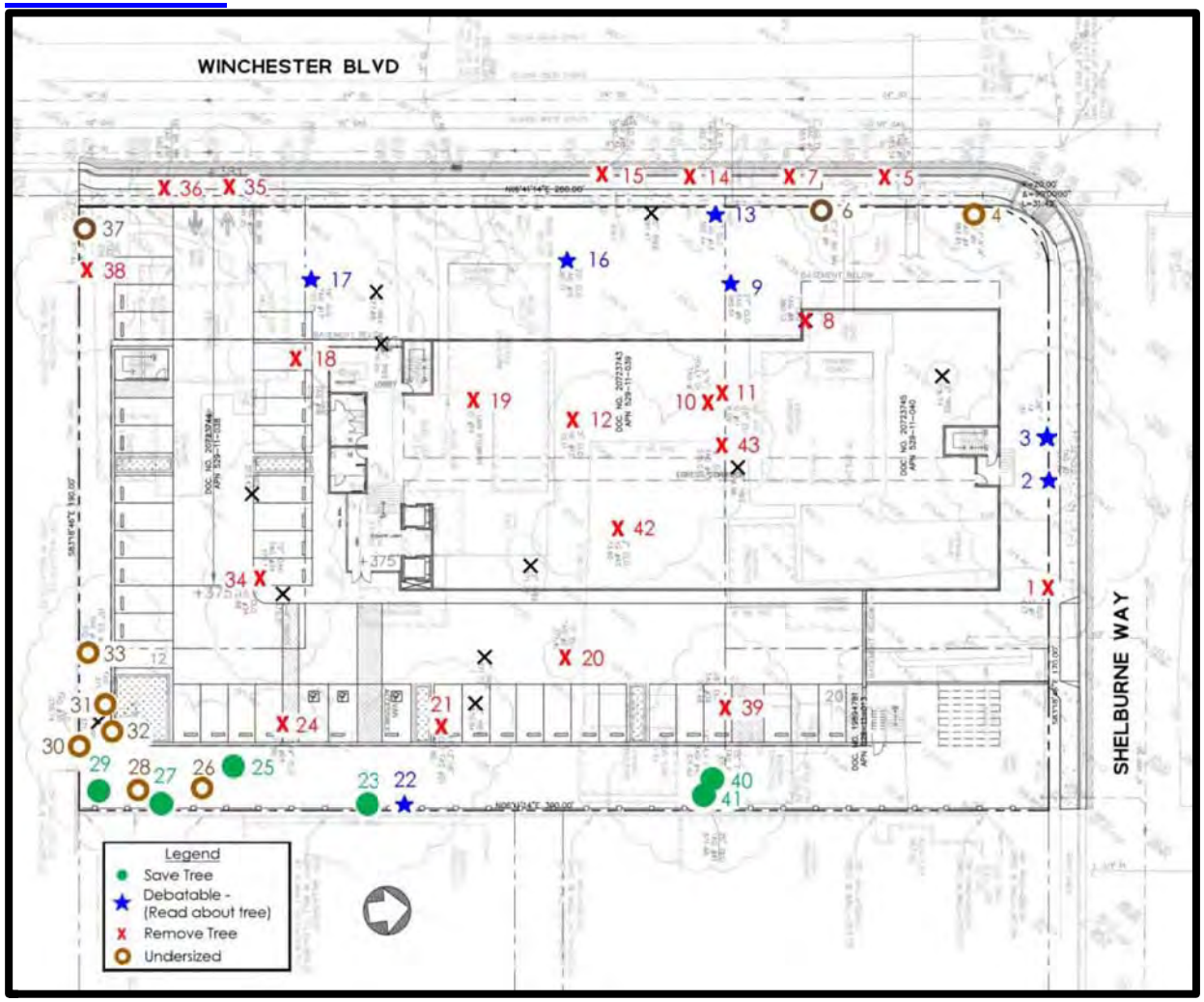
Table of Contents

Cover photo: coast live oaks #1, 2 and 3. As per the current plans, tree #1 will be removed and #2 and 3 will remain, but construction is really too close to trees #2 and 3 for them to remain. All photos in this report were taken by D. Ellis on February 9, 2016 unless otherwise noted.

PO Box 3714, Saratoga, CA 95070. 408-725-1357. decah@pacbell.net. http://www.decah.com.

TREE MAP


WINCHESTER BLVD
SHELBURNE WAY
Legend
Save Tree
Debatable - (Read about tree)
Remove Tree
Undersized

SUMMARY

THE PROJECT

Pre-development plans proposed to merge four properties zoned O, demolish three existing single-family residences and accessory structures and construct a new two-story office building with below grade and at grade parking.

THE TREES AND HOW THE PROJECT WILL AFFECT THEM

Thirty-six (36) *protected trees*[1] are listed and described in this report. A summary of all trees is provided in Table 1 on begnning on page 4, and a more detailed description of the trees is provided in Table 5 (the *Complete Tree Table*) beginning on page 15. The Complete Tree Table also provides recommended minimum root protection distances for those trees that will or may be saved, as well as other important information about individual trees.

After review of the current plans and in light of individual tree condition and preservation suitability, I have listed **23 protected trees for removal, 7 trees as "Debatable"** and **6 trees that can probably be saved**. Separate Tables listing trees to Remove, Save or are Debatable are on pages 7 through 9.

All of the protected trees are native to the immediate vicinity of the site except for **London planes #5, 7, 14 and 15, weeping bottlebrush #19 and goldenrain tree #38**.

There are many nice, large native oak trees here; primarily coast live oaks. There are also many fruit trees on the property which were not evaluated (fruit trees less than 18 inch trunk diameter are not considered to be protected trees). The large oak trees would be nice to retain, but it may be difficult to provide adequate space for their long term survival. Most of the oaks are in "Fair/Good" to "Good" condition. The reason for their good condition is that the tree have not been disturbed for many years, and most of them have a large

[1] For the purpose of this report a protected tree is: all trees which have a (4) four-inch or greater diameter of any trunk, when removal relates to any review for which zoning approval or subdivision approval is required. Exceptions are: fruit or nut trees that less than eighteen (18) inches in diameter or any of the following species that are less than 24 inches in diameter: black acacia (*Acacia melanoxylon*), tulip tree (*Liriodendron tulipifera*), tree-of- Heaven (*Ailanthus altissima*), Tasmanian blue gum Eucalyptus (*Eucalyptus globulus*), Red River gum Eucalyptus (*Eucalyptus camaldulensis*), other Eucalyptus species (*E. spp.*) (Hillsides only), glossy privet (*Ligustrum lucidum*) and and palms (except *Phoenix canariensis*).

area of unpaved soil around them with a thick natural leaf litter (mulch) accumulation. The trees have also not been overpruned. This will all change as the property is developed, however.

The goal of the developer to save many of the oaks is admirable, but it will probably not work out unless the design is modified significantly. Although it may look like these trees could be saved by looking at the Tree Disposition Plan, just because the trunk (depicted as a dot symbol on the plan) is outside of an improvement does not mean that the tree can actually be saved or that it will be viable after development occurs around it. Many of these trees are large and wide-spreading, and they have existed in an undisturbed state for many years. For example, a 2-story building is proposed at 12 feet from the trunks of large and wide-spreading **coast live oaks #2 and 3**. This is simply not going to work from many standpoints. Please review the photos of these trees and you will understand what I mean. A new sidewalk is also proposed on the opposite side of oaks #2 and 3, with a few to several feet from the trunks. For oaks #2 and 3 and many of the other large oaks on this site, the proposed building must be moved much farther from their trunks and canopies– preferably to at least 10 feet beyond the canopy.

Even if trees adjacent to proposed buildings or other improvements are left standing, grading, construction vehicle traffic and other activities and radically changing the environment may cause them to decline and die over a period of years. Even if trees are provided with minimal root protection distances to remain, their canopies may be decimated by the clearance needed for the proposed building as well as construction of the building itself. This is difficult to visualize from the current Tree Disposition Plan, and it is often very hard to visualize from the additional construction plans which will be forthcoming. Viewing the tree photos in this report will be helpful to remind people just how large many of these trees really are, and visiting the site is also important. Story posts to depict the three dimensional size of the above-ground portion of the building is mandatory and I must review this. A basement parking area is also planned, and the excavation for this (whether there will be over-excavation beyond the actual building footprint) will be very important in determining if some of the trees near the building can actually be saved. It is important to understand however, that the depth of the excavation is not as important for trees as the distance of the excavation from the trunk of the tree, since most tree roots are shallow – within the upper 18 inches of soil.

I am not trying to paint a completely negative picture of the tree preservation possibilities for this project, but I think that we have to be realistic. Big changes are needed in the design in order to save many of the large trees that the developer currently proposes to save.

THE BEST TREES ON SITE TO SAVE:

- **coast live oaks #1,2,3, 9,12,16,17,18,21,23,24,25,34,39 and 41.**
- **valley oak #40**
- **goldenrain tree #38**

All of these trees have "Fair/Good" or better preservation suitability. Underlined trees are listed to be saved; all others are to be removed or are "debatable" save or remove.

TABLE 1 SUMMARY TREE TABLE

This table is continued through page 6.

Tree #	Common Name	Trunk Diam.	Preservation Suitability & Value	Expected Construction Impact	Action	Reason
1	coast live oak	20	Good $7900	Severe	Remove	Construction
2	coast live oak	15, 15, 23	Fair/Good 23,100	Severe	Debatable	Construction
3	coast live oak	19,23	Fair/Good 6,400	Severe	Debatable	Construction
4	Tree less than Protected Size					
5	London plane	7	Fair/Poor 1,260	Severe	Remove	
6	Tree less than Protected Size					
7	London plane	6	Fair/Poor 1,260	Severe	Remove	Construction
8	coast live oak	6	Fair 1,080	Severe	Remove	Construction
9	coast live oak	30 (3)	Good 15,500	Moderate/Severe	Debatable	Construction

Table 1, Summary of Trees *(continued from the previous page).*

Tree #	Common Name	Trunk Diam.	Preservation Suitability & Value	Expected Construction Impact	Action	Reason
10	Calif. bay	5,6 7	Fair 160	Severe	Remove	Construction
11	coast live oak	7,9	Fair 930	Severe	Remove	Construction
12	coast live oak	25	Good 10,200	Severe	Remove	Construction
13	coast live oak	7	Fair/Good 1,220	Severe	Debatable	Construction
14	London plane	7	Fair/Poor 1,350	Severe	Remove	Construction
15	London plane	6	Fair/Poor 1,260	Severe	Remove	Construction
16	coast live oak	25	Good 11,900	Moderate/Severe	Debatable	Construction
17	coast live oak	21	Good 8,000	Moderate	Debatable	Construction
18	coast live oak	28	Good 14,900	Severe	Remove	Construction
19	weeping bottlebrush	7	Fair 1,080	Severe	Remove	Construction
20	coast live oak	6	Fair/Poor 900	Severe	Remove	Construction
21	coast live oak	11,13,18	Fair/Good 13,300	Severe	Remove	Construction
22	coast live oak	13	Fair 2,280	Moderate	Debatable	Construction/Structure
23	coast live oak	15	Fair/Good 3,010	Low	Save	
24	coast live oak	15,16	Fair/Good 8,000	Severe	Remove	Construction

Table 1, Summary of Trees *(continued from the previous page).*

Tree #	Common Name	Trunk Diam.	Preservation Suitability & Value	Expected Construction Impact	Action	Reason
25	coast live oak	17	Fair/Good 4,040	Moderate	Save	
26	Tree less than Protected Size					
27	coast live oak	18	Fair 4,870	Low	Save	
28	Tree less than Protected Size					
29	coast live oak	7	Fair 1,260	Low	Save	
30-33	Tree less than Protected Size					
34	coast live oak	17	Good 4,930	Severe	Remove	Construction
35	black walnut	23 (3.5)	Poor 1,760	Severe	Remove	Construction/Structure
36	black walnut	19 (3.5)	Poor/ Unacceptable 600	Severe	Remove	Construction/Structure
37	Tree less than Protected Size					
38	goldenrain tree	19 (4)	Fair/Good 2,840	Severe	Remove	Construction
39	coast live oak	26	Good 11,000	Severe	Remove	Construction
40	valley oak	16	Good 5,800	Moderate	Save	
41	coast live oak	25	Good 9,000	Moderate	Save	
42	coast live oak	23	Good 8,700	Severe	Remove	Construction
43	coast live oak	12	Fair/Poor 1,570	Severe	Remove	Construction

End of Table. 36 Protected Trees.

TABLE 2 TREES TO REMOVE

Tree #	Common Name	Trunk Diam.	Preservation Suitability & Value	Expected Construction Impact	Reason
1	coast live oak	20	Good $7900	Severe	Construction
5	London plane	7	Fair/Poor 1,260	Severe	Construction
7	London plane	6	Fair/Poor 1,260	Severe	Construction
8	coast live oak	6	Fair 1,080	Severe	Construction
10	Calif. bay	5,6 7	Fair 160	Severe	Construction
11	coast live oak	7,9	Fair 930	Severe	Construction
12	coast live oak	25	Good 10,200	Severe	Construction
14	London plane	7	Fair/Poor 1350	Severe	Construction
15	London plane	6	Fair/Poor 1260	Severe	Construction
18	coast live oak	28	Good 14900	Severe	Construction
19	weeping bottlebrush	7	Fair 1080	Severe	Construction
20	coast live oak	6	Fair/Poor 900	Severe	Construction
21	coast live oak	11,13,18	Fair/Good 13,300	Severe	Construction
24	coast live oak	15,16	Fair/Good 8,000	Severe	Construction
34	coast live oak	17	Good 4,930	Severe	Construction
35	black walnut	23 (3.5)	Poor 1,760	Severe	Construction/Structure
36	black walnut	19 (3.5)	Poor/ Unacceptable 600	Severe	Construction/Structure
38	goldenrain tree	19 (4)	Fair/Good 2,840	Severe	Construction
39	coast live oak	26	Good 11,000	Severe	Construction
42	coast live oak	23	Good 8,700	Severe	Construction
43	coast live oak	12	Fair/Poor 1570	Severe	Construction

23 Trees

TABLE 3 TREES LISTED AS "DEBATABLE"

Tree #	Common Name	Trunk Diam.	Preservation Suitability & Value	Expected Construction Impact	Reason "Debatable"
2	coast live oak	15, 15, 23	Fair/Good 23,100	Severe	Construction
3	coast live oak	19,23	Fair/Good 6,400	Severe	Construction
9	coast live oak	30 (3)	Good 15,500	Moderate/Severe	Construction
13	coast live oak	7	Fair/Good 1,220	Severe	Construction
16	coast live oak	25	Good 11,900	Moderate/Severe	Construction
17	coast live oak	21	Good 8,000	Moderate	Construction
22	coast live oak	13	Fair 2280	Moderate	Construction/Structure

7 Trees

TABLE 4 TREES TO SAVE

Tree #	Common Name	Trunk Diam.	Preservation Suitability & Value	Expected Construction Impact
23	coast live oak	15	Fair/Good 3,010	Low
25	coast live oak	17	Fair/Good 4,040	Moderate
27	coast live oak	18	Fair 4,870	Low
29	coast live oak	7	Fair 1,260	Low
40	valley oak	16	Good 5,800	Moderate
41	coast live oak	25	Good 9,000	Moderate

6 Trees

RECOMMENDATIONS

1) **The project is at a very preliminary design phase, and there are many improvements that are not shown on the plan that I reviewed.** For this report I have reviewed only the Tree Disposition Plan (Sheet 1 of 1) dated November 18, 2015. As additional plans are developed and reviewed by me I expect that construction impacts will increase for many trees, for example due to grading, underground utilities and landscaping. It is likely that more trees will need to be removed than are listed for removal in this report, and design revision will be recommended for some or all of the trees that may remain. I should review all site-based plans for this project as they are developed. Plans should be full-size, to-scale and with accurately located tree trunks and canopy driplines relative to proposed improvements. Scale should be 1:20 or 1:10.

2) **Existing protected trees to be saved or removed should be numbered on all site-based plans to match the tree tag numbers that are used in this arborist report.** There are tree tag numbers on the Tree Disposition Plan, but in order to make the plan simpler and easier to read make the protected tree numbers larger and bold and reduce the size of the (X) symbol for trees of less than protected size to be removed, so that we can easily see and concentrate on the protected trees. Note that tree disposition is likely to change over time as the full project plans are developed, and that is fine since we all know this at the present time.

3) **The proposed building is simply too close to many of the large oak trees**, even though these trees are shown to be saved. Examples are **coast live oaks #2, 3, 9, 16 and 17**. The building should be moved to 10 feet beyond the actual dripline of the trees unless it can be shown (e.g. with story posts) that the building itself as well as construction of the building, will not cause excessive pruning of the canopies of these trees.

4) **At this time it appears that the following trees will need be removed based upon the plan that I reviewed: #1,5-8, 10, 1-12, 14, 15, 18-21, 24, 34-39, 42 and 43**. Alternatively for those trees listed as having "Fair" or better tree preservation suitability, it may be possible to save them if the tree root protection distances listed in the *Complete Tree Table* as well as adequate space for the canopy can be provided.

5) **Trees listed as "Debatable" at this time are: #2, 3,9, 13, 16, 17 and 22**. Read about these 7 trees in the *Notes* Section of the *Complete Tree Table* in order to determine what to do with them (can they be saved or should they be removed)? A "Debatable" designation means that there is a problem with retaining that tree, such as a tree that is shown to be saved but is a poor species for the site, or in poor condition. Another common cause is that the tree is shown to be saved but construction may be too close to it. The reason for the "Debatable" designation can be found in the "Reason" and "Notes" column of the *Complete Tree Table*. Additional action or decisions are necessary on the part of the tree owner, project architects or others involved in the project design and construction are necessary in order to resolve whether a debatable tree will be saved or removed.

6) **The Town of Los Gatos *Tree Protection Directions* will need to be incorporated into the final project plans.** At this point we are probably quite way from the final plans, but I have included the Directions on pages 31 through 35 so that everyone will understand what is required from the start. At this time the following 6 trees will most likely be saved: **#23,25, 27, 29, 40 and 41**. The Town of Los Gatos Tree Protection Directions replace any tree protection notes, specifications or other directions (including detail drawings) that may be included in the plans.

7) **As a part of the design process, try to keep improvements (and any additional over-excavation or work area beyond the improvement) as far from tree trunks and canopies as possible.** *6xDBH*[2] or the dripline of the tree, whichever is greater, should be used as the minimum distance for any soil disturbance to the edge of the trunk. 3xDBH should be considered the absolute minimum distance from any disturbance to the tree trunk on one side of the trunk only, for root protection. Farther is better, of course. For disturbances on multiple sides of the trunk, then 6xDBH or greater should be used, and farther is also better here. Tree canopies must also be taken into consideration when designing around trees. Don't forget the minimum necessary working margin around improvements as you locate those improvements. Disturbance usually comes much closer to trees than the lines shown on the plans!

8) **Landscaping – be aware of the following as landscape plans are developed:**

   a) New landscaping and irrigation can be as much or more damaging to existing trees than any other type of construction. The same tree root protection distances recommended for general construction should also be observed for new landscaping. Within the root protection zone it is usually best to limit landscape changes to a 3 to 4-inch depth of coarse organic mulch such as wood or bark chips or tree trimming chippings spread over the soil surface. The environment around existing trees should be changed very carefully or not at all – please consult with me regarding changes in the landscape around existing trees and/or have me review the landscape and irrigation plans for this project.

   b) This site contains oaks that are native to the immediate area (coast live oak and valley oak). These tree species fare best with no irrigation during the normal dry months of the year. The best treatment of the ground beneath the canopies of native oaks is nothing but their own natural leaf and twig litter mulch. Exceptions to irrigation restriction include during the winter in extended drought periods, as temporary compensation for root loss due to construction, and for newly planted trees during their 2 to 3 year establishment period after installation. Native oak species are often killed due to inappropriate landscaping that is installed around them; mostly commonly landscaping that requires frequent irrigation such as lawns or other high water-use plants. Large drought tolerant trees such as native oaks can become dangerous when exposed to frequent irrigation, especially close to their trunks. California native oaks that are treated in this manner may contract root rot diseases and fall over at the roots; often

[2] See pages 30 -31 for an explanation of tree protection root distances.

causing great damage and personal injury I there are targets in their vicinity such as homes, cars and people. It is important to landscape correctly around our native oaks; e.g. summer dry. I have attached a publication entitled *Living among the Oaks, Keeping Native California Oaks Healthy* to assist in best managing the oaks on the property, as well as the directions to follow in items `b' and `c' below.

c) Around the native oaks: there shall be no planting or irrigation (including drip irrigation) within a minimum radius of 10 feet from the trunks of the oaks or the inner half of the dripline of the tree, whichever is greater. Farther is better. Within this 10-foot (or greater) radius around the trunk a 3 to 4-inch depth of coarse organic mulch such as wood or bark chips or tree trimming chippings shall be spread over the soil surface. Shredded redwood bark is not allowed. Keep the mulch off the root collar of the trees. Beyond this 10-foot (or greater) protective, mulched area only drought-tolerant, summer-dry plant species, preferably plant species that are native to the immediate area and grow commonly in association with the native oaks, may be planted. Only summer-dry tolerant plants are allowed within the outer half of the dripline of the tree or 20 feet from the trunk, whichever is greater. Such plants may be planted from no larger than 1-gallon cans in holes that are hand-dug manually with a shovel (no power equipment such as augers allowed). These plants must be spaced sparsely (e.g. planted no closer than 4 feet apart) and watered with drip irrigation. The planting zone around these plants shall be mulched in the same manner previously described. The drip irrigation for these plants should preferably be abandoned after a 2 to 3 year establishment period.

9) **General Tree Maintenance:**
   a) The root collars and lower trunks of some of the trees were obscured from view by vegetation, excess soil or other covering. Such portions of the tree should be uncovered and the tree re-evaluated by the arborist.
   b) Do no unnecessary pruning, fertilization or other tree work. Pre-construction pruning should be limited to the absolute minimum required for construction clearance. A qualified tree service should be hired to provide such pruning.

INTRODUCTION

PURPOSE & USE OF REPORT

This survey and report was required by the Town of Los Gatos as a part of the building permit process for this project. The purpose of the report is to identify and describe the existing protected trees on or adjacent to the project site that are within or close to proposed construction - - their size, condition and suitability for preservation. Only Town of Los Gatos protected trees were evaluated. The audience for this report is the property owner, developer, project architects and contractors, and Town of Los Gatos authorities concerned with tree preservation and tree removal. The goal of this report is to preserve existing trees on or adjacent to the project site that are in acceptable condition, good species for the area and will fit in well with the proposed new use of the site.

BACKGROUND INFORMATION

My previous arborist report for this project are:

- April 23, 2012 (Report #1)
- October 14, 2013 (Report #2)
- March 23, 2015 (Report #3)

All protected trees were re-measured and re-evaluated on February 9, 2016for this current report. Since my last report dated March 23, 2015 the Tree Protection Section of the Los Gatos Town Code was revised. Trunk diameter measurement height was changed from 3 to 4.5 feet above the ground. This change caused some trees which had been reported on previously to move out of the protected tree classification. Previous reports had also included some trees of less than protected size, which were numbered and reported on. This current report lists only the protected trees, which are 36 out of the originally 43 tagged trees.

METHODOLOGY

I performed a brief evaluation of the subject trees from the ground on February 9, 2016. Tree characteristics such as form, weight distribution, foliage color and density, wounds and indicators of decay were noted. Surrounding site conditions were also observed. Evaluation procedures were taken from:

- American National Standard A-300 (Part 5) – 2012 for *Tree Care Operations – Tree, Shrub & Other Woody Plant Management – Standard Practices (Management of Trees, & Shrubs During Site Planning, Site Development and Construction*).
- International Society of Arboriculture, *Best Management Practices:*
  - *Managing Trees during Construction*. 2008
  - *Tree Inventories*. 2013

The above references serve as industry professional standards for tree evaluation and written findings and recommendations for trees on construction sites prior, during and after site development.

Each of the trees was tagged in the field (exceptions noted) with metal number tags that correspond with the tree numbers referenced in this report and on the Tree Map. I measured the trunk diameter of each tree with a diameter tape at 4.5 feet above the ground (DBH), which is also the required trunk diameter measurement height of the Town of Los Gatos. DBH is used calculate tree protection distances and other tree-related factors. Trunk diameter was rounded to the nearest inch. I estimated the tree's height and canopy spread. Tree *Condition* (structure and vigor) was evaluated and I also recorded additional notes for trees when significant. Tree species and condition considered in combination with the current or (if applicable) proposed use of the site yields the *Tree Preservation Suitability* rating. The more significant trees (or groups of trees) were photographed with a digital camera. Some of these photos are included in this report, but all photos are available from me by email if requested.

OBSERVATIONS

SITE CONDITIONS

Site topography is mainly level. There are two existing houses on the site, plus several smaller accessory buildings. The Northeast corner of the property is currently being used as an office and storage yard for a construction company. Most of the uncovered ground area of the site is currently an old orchard remnant including walnuts and other small fruit trees. There is more landscaping in the southwest quadrant of the site which contains the largest house, but landscaping consists mainly of fruit trees and native coast live oaks that are probably of *natural growth* (they were not planted). Most of the planted areas are probably not irrigated. Landscape maintenance is of a "low" level. Sun exposure for the trees varies from full to partly shaded, depending upon proximity to existing buildings and to other trees.

APPENDIX

TABLE 5 COMPLETE TREE TABLE

This Table is continued through page 25. Data fields in the Table are explained on pages 25 to 30.

Tree #	*Species* & Common Name	Trunk Diam.	Size	CONDITION		Preservation Suitability & Value	Expected Construction Impact	Action	Reason	Notes	TREE ROOT PROTECTION DISTANCES		
				Vigor	Structure						3xDBH	6xDBH	OTPZ
1	*Quercus agrifolia*, coast live oak	20	35x30	75	80	Good $7900	Severe	Remove	Construction	Construction: trunk is at entrance driveway/sidewalk. Condition: ivy partly covers lower trunk including, including large-diameter ivy stems. Cyclone fence engulfed by trunk.	5	10	15

Tree #	Species & Common Name	Trunk Diam.	Size	CONDITION		Preservation Suitability & Value	Expected Construction Impact	Action	Reason	Notes	TREE ROOT PROTECTION DISTANCES		
				Vigor	Structure						3xDBH	6xDBH	OTPZ
2	coast live oak	15, 15, 23	40x35	85	50	Fair/Good 23,100	Severe	Debatable	Construction	Construction: the trunk of this large, tall and wide-spreading tree is shown to be 12 feet from the proposed 2-story building and underground parking garage. This simply will not work and the tree must be removed if the plans are not changed. Even though the minimum root protection distance on one side of the tree is 10 feet, and it this could be met by the current design, the canopy of the tree would be massacred and root damage (including soil compaction due to construction traffic and materials between the tree and the building) makes trying to save this tree unreasonable. If this tree is to be saved then the building should be at least 10 feet beyond the dripline. This tree (and adjacent oak #3 are large trees and they need a lot of space preserved around them if they are to remain. The proposed sidewalk as well, less than 2 feet from the trunk, is	10	19	29

Tree #	Species & Common Name	Trunk Diam.	Size	CONDITION		Preservation Suitability & Value	Expected Construction Impact	Action	Reason	Notes	TREE ROOT PROTECTION DISTANCES		
				Vigor	Structure						3xDBH	6xDBH	OTPZ
										likely to cause damage to or cause the removal of large support roots close to the trunk. Condition: cyclone fence including top rail are embedded in trunk.			
3	coast live oak	19,23	45x35	70	70	Fair/Good 6,400	Severe	Debatable	Construction	Construction: similar to previous oak #2. Condition: same as previous oak #2.	5	10	14
4	Tree less than Protected Size												
5	*Platanus x hispanica*, London plane	7	20x18	90	50	Fair/Poor 1,260	Severe	Remove		Construction: new sidewalk in vicinity of tree will extend to curb; perhaps for a bus stop. Other: this is a Town Street Tree installed in a 3-foot wide parkstrip planter between sidewalk and curb. Pavement damage would occur in the future from this large-growing tree species, were it to remain in its current location and conditions.	5	5	5
6	Tree less than Protected Size												

Tree #	Species & Common Name	Trunk Diam.	Size	CONDITION		Preservation Suitability & Value	Expected Construction Impact	Action	Reason	Notes	TREE ROOT PROTECTION DISTANCES		
				Vigor	Structure						3xDBH	6xDBH	OTPZ
7	London plane	6	20x18	90	50	Fair/Poor 1,260	Severe	Remove	Construction	Construction: new sidewalk configuration proposed around tree, with curb in location of trunk. Condition: same as #5	5	5	5
8	coast live oak	6	20x18	80	40	Fair 1,080	Severe	Remove	Construction	Construction: tree at corner of proposed building.	5	5	5
9	coast live oak	30 (3)	45x40	80	60	Good 15,500	Moderate/Severe	Debatable	Construction	Construction: tree trunk is shown to be 16 feet from edge of proposed building, and there will be a new sidewalk at about 23 feet to the west. Potential root damage should be at a tolerable level as long as there is minimal over-excavation beyond the actual building and basement. Significant canopy reduction pruning may be necessary however, and story posts are necessary to accurately assess the extent of this impact. Also a part of construction impact is demo of the existing building and pavement 15 - 22 feet from the trunk.	7	15	22
10	*Umbellularia californica*, Calif. bay	5,6 7	40x25	80	60	Fair 160	Severe	Remove	Construction	Construction: tree is within proposed building. Condition: stump sprout.	5	5	5

Tree #	Species & Common Name	Trunk Diam.	Size	CONDITION		Preservation Suitability & Value	Expected Construction Impact	Action	Reason	Notes	TREE ROOT PROTECTION DISTANCES		
				Vigor	Structure						3xDBH	6xDBH	OTPZ
11	coast live oak	7,9	35x20	70	50	Fair 930	Severe	Remove	Construction	Construction: tree is within proposed building. Condition: root collar obscured by leaf litter.	5	5	5
12	coast live oak	25	50x40	70	70	Good 10,200	Severe	Remove	Construction	Construction: tree is within proposed building.	6	13	19
13	coast live oak	7	20x12	75	60	Fair/Good 1,220	Severe	Debatable	Construction	Construction: a new sidewalk is proposed right up to the edge of the trunk. Even if the tree survives, it will cause significant pavement damage in the future. Either remove the tree or transplant it elsewhere. The tree is in good enough condition and accessible for transplanting.	5	5	5
14	London plane	7	20x20	90	60	Fair/Poor 1,350	Severe	Remove	Construction	Construction and Other: same as previous London plane street trees #5 and 7.	5	5	5
15	London plane	6	18x20	90	50	Fair/Poor 1,260	Severe	Remove	Construction	Construction and Other: same as previous London plane street trees #5, 7 and 14.	5	5	5
16	coast live oak	25	50x35	80	70	Good 11,900	Moderate/Severe	Debatable	Construction	Construction: tree trunk is shown to be 24 feet from edge of proposed building, and there will be a new sidewalk at about 15 feet to the west. Potential root damage is probably far	6	13	19

Tree #	Species & Common Name	Trunk Diam.	Size	CONDITION		Preservation Suitability & Value	Expected Construction Impact	Action	Reason	Notes	TREE ROOT PROTECTION DISTANCES		
				Vigor	Structure						3xDBH	6xDBH	OTPZ
										enough from the trunk so that the tree can remain viable, but story posts should also be used to assess effect on the canopy. Also a part of construction impact is demo of the existing building 5 feet from the trunk. Condition: shrubs and a short brick wall obstruct root collar. Shrub roots beginning to girdle tree roots; these shrubs roots should be cut and removed.			
17	coast live oak	21	50x40	85	70	Good 8,000	Moderate	Debatable	Construction	Construction: a proposed parking space is 9 feet from the trunk, building at 21 feet and sidewalk at 22 feet. From a root preservation standpoint since there are disturbances on multiple sides of the trunk there should be no soil disturbance closer than 14 feet. As with several of the previous large oaks that are shown to remain, story posts are needed to see if this will really work. Also a part of construction impact is demo of the existing building and pavement 7 feet from the trunk .	5	11	16

Tree #	Species & Common Name	Trunk Diam.	Size	CONDITION		Preservation Suitability & Value	Expected Construction Impact	Action	Reason	Notes	TREE ROOT PROTECTION DISTANCES		
				Vigor	Structure						3xDBH	6xDBH	OTPZ
18	coast live oak	28	60x40	80	70	Good 14,900	Severe	Remove	Construction		7	14	21
19	*Callistemon vinimalis*, weeping bottlebrush	7	12x10	60	60	Fair 1,080	Severe	Remove	Construction	Construction: within proposed building.	5	5	9
20	coast live oak	6	22x16	60	40	Fair/Poor 900	Severe	Remove	Construction	Construction: within proposed driveway.	5	5	5
21	coast live oak	11,13,18	45x40	70	60	Fair/Good 13,300	Severe	Remove	Construction	Construction: within proposed parking area.	8	15	23
22	coast live oak	13	40x22	80	50	Fair 2,280	Moderate	Debatable	Construction/Structure	Construction: proposed curb and driveway 16-17 feet from trunk which is fine, but tree leans significantly toward roadway (about 20 degrees). Not sure if construction traffic will not be compatible with tree canopy, and also future vehicle traffic through site after construction complete. This must be investigated further.	3	7	7
23	coast live oak	15	35x25	80	50	Fair/Good 3,010	Low	Save		Construction: proposed curb and driveway 17-18 feet from trunk/ Condition: significant trunk crook.	4	8	8
24	coast live oak	15,16	45x40	70	60	Fair/Good 8,000	Severe	Remove	Construction	Construction: within proposed parking area.	6	12	18

Tree #	Species & Common Name	Trunk Diam.	Size	CONDITION		Preservation Suitability & Value	Expected Construction Impact	Action	Reason	Notes	TREE ROOT PROTECTION DISTANCES		
				Vigor	Structure						3xDBH	6xDBH	OTPZ
25	coast live oak	17	50x30	70	60	Fair/Good 4,040	Moderate	Save		Construction: proposed parking area curb 6 feet from trunk. Check canopy clearance for future parking. Condition: ivy grows up trunk.	4	9	9
26	Tree less than Protected Size										5	5	5
27	coast live oak	18	35x20	80	60	Fair 4,870	Low	Save		Construction: proposed parking lot 17-18 feet from trunk. Condition: much of lower 10 feet of trunk covered with ivy and debris, so trunk diameter is estimated.	4	9	14
28	Tree less than Protected Size										5	5	5
29	coast live oak	7	20x18	80	60	Fair 1,260	Low	Save		Construction: proposed parking area 15 feet from trunk. Condition: ivy and debris obscure trunk and lower portion of tree.	5	5	5
30-33	Trees less than Protected Size										5	5	5

Tree #	Species & Common Name	Trunk Diam.	Size	CONDITION		Preservation Suitability & Value	Expected Construction Impact	Action	Reason	Notes	TREE ROOT PROTECTION DISTANCES		
				Vigor	Structure						3xDBH	6xDBH	OTPZ
34	coast live oak	17	35x35	75	70	Good 4,930	Severe	Remove	Construction	Construction: within proposed parking area.	4	9	9
35	*Juglans californica hindsii*, black walnut	23 (3.5)	4035	40	40	Poor 1,760	Severe	Remove	Construction/Structure	Construction: sidewalk will be reconfigured and trunk is in its path. Condition: large mechanical wounds (past vehicle impacts) to trunk have resulted in dead decayed wood. Tree is too high risk to keep in this location anyway. Tree is deciduous and leafless now, so it is hard to tell with certainty how much of canopy is dead, but there are definitely many dead branches.	6	11	5
36	black walnut	19 (3.5)	30x30	20	20	Poor/ Unacceptable 600	Severe	Remove	Construction/Structure	Construction: same as previous Condition: same as previous but worse.	5	9	5
37	Tree less than Protected Size										5	5	5
38	*Koelreuteria paniculata*, goldenrain tree	19 (4)	30x33	70	70	Fair/Good 2,840	Severe	Remove	Construction	Construction: trunk is about 7 feet from proposed parking area, but this tree is shown to be removed. Assume that removal is due to grading because tree is located very	5	9	19

Tree #	Species & Common Name	Trunk Diam.	Size	CONDITION		Preservation Suitability & Value	Expected Construction Impact	Action	Reason	Notes	TREE ROOT PROTECTION DISTANCES		
				Vigor	Structure						3xDBH	6xDBH	OTPZ
										close to decorative wall to west and existing driveway slopes downward to garage. I think there will probably be fill soil placed in this area. Branches are fairly low and much of canopy would need to be removed for clearance.			
39	coast live oak	26	35x30	80	60	Good 11,000	Severe	Remove	Construction	Construction: located within proposed parking area.	6	13	20
40	*Quercus lobata*, valley oak	16	50x35	75	70	Good 5,800	Moderate	Save		Construction: proposed parking area is 10 -11 feet from trunk. Canopy is very high right now, so this should work. Also a part of construction impact is demo of the existing buildings 7 to 11 feet from the trunk. Condition: base of trunk is 2 feet from base of trunk of adjacent oak #41.	4	8	12
41	coast live oak	25	45x40	75	60	Good 9,000	Moderate	Save		Construction: proposed parking area is 14 feet from trunk. Canopy is fairly high, so probably no problem with clearance. Also a part of construction impact is demo of the existing buildings 8 to 10 feet from the trunk. Condition: asymmetric canopy	6	13	19

Tree #	Species & Common Name	Trunk Diam.	Size	CONDITION		Preservation Suitability & Value	Expected Construction Impact	Action	Reason	Notes	TREE ROOT PROTECTION DISTANCES		
				Vigor	Structure						3xDBH	6xDBH	OTPZ
										due to canopy interference by adjacent oak #40.			
42	coast live oak	23	45x45	70	70	Good 8,700	Severe	Remove	Construction	Construction: located within proposed building.	6	12	17
43	coast live oak	12	30x22	70	40	Fair/Poor 1,570	Severe	Remove	Construction	Construction: located within proposed building. Condition: very grove affected	5	6	6

EXPLANATION OF TREE TABLE DATA COLUMNS:

1) **Tree Number** (the field tag number of the existing tree). Each existing tree in the field is tagged with a 1.25 inch round aluminum number tag that corresponds to its tree number referenced in the arborist report, Tree Map, Tree Protection Specifications and any other project plans where existing trees must be shown and referenced.

2) **Tree Name and Type:**
Species: The *Genus* and *species* of each tree. This is the unique scientific name of the plant, for example *Quercus agrifolia* where *Quercus* is the Genus and *agrifolia* is the species. The scientific names of plants can be changed from time to time, but those used in this report are from the most current edition of the *Sunset Western Garden Book* (2012) Sunset Publishing Corporation. The scientific name is presented at its first occurrence in the Tree Table, along with the regional common name. After that only the common name is used.

3) **Trunk DBH**. Tree trunk diameter in inches "at breast height" (measured at 4.5 feet above ground level). This is the forestry and arboricultural standard measurement height that is also used in many tree-related calculations. It is also the trunk diameter measurement height required by the Town of Los Gatos. For multi-trunk trees, trunk diameter is measured for the largest trunk and estimated for all smaller trunks. Trunk diameter is measured when possible, and estimated when it is not possible or safe to physically measure. A number in parentheses (3) after the trunk diameter(s) indicates that it

was not possible to measure the trunk at 4.5 feet (due to tree architecture) and so the diameter was measured at this alternate height (in feet), which reflects a more realistic trunk diameter for the tree.

Examples: an "18" in the Diameter column means that the tree has a diameter of 18 inches at 4.5feet above the ground. An "18 (3" means that trunk diameter was 18 inches measured at 3 feet above the ground. "18, 7, 5" means that this is a multi-trunk tree with trunk diameters of 18, 7 and 5 inches at 4.5 feet above the ground.

4) **Size**: tree size is listed as height x width in feet, estimated and approximate and intended for comparison purposes.

5) **Condition Ratings**: Trees are rated for their *condition* on a scale of *zero to 100* with zero being a dead tree and 100 being a perfect tree (which is rare – like a supermodel in human terms). A 60 is "average" (not great but not terrible either). There are two components to tree condition – ***vigor*** and ***structure***, and each component is rated separately. Averaging the two components is not useful because a very low rating for either one could be a valid reason to remove a tree from a site -- even if the other component has a high rating. Numerically speaking for each separate component:

100 is equivalent to *Excellent* (an `A' academic grade), **80** is *Good* (B), **60** is *Fair* (C), **40** is *Poor* (D), **20** is *Unacceptable* (F) and **0** is *Dead*.

- Relative to the scope of work for this report, tree *Condition* has been rated but not explained in detail and recommendations for the management of tree condition have not been included. The tree owner may contact Deborah Ellis for additional information on tree condition and specific recommendations for the general care of individual trees relative to their condition.

- The *Condition* of the tree is considered relative to the tree species and present or future intended use of the site to provide an opinion on the tree's Preservation Suitability Rating (i.e. "Is this tree worth keeping on this site, in this location, as explained in Table 6 on the next page. This is based upon the scenario that the tree is given enough above and below-ground space to survive and live a long life on the site. Ratings such as "Fair/Good" and "Fair/Poor" are intermediate in nature. The Preservation Suitability rating is not always the same as the Condition Rating because (for example) some trees with poor condition or structure can be significantly improved with just a small amount of work – and it would be worthwhile to keep the tree if this were done.

Table 6 Preservation Suitability Rating Explanation

Excellent	Such trees are rare but they have unusually good health and structure and provide multiple functional and aesthetic benefits to the environment and the users of the site. These are great trees with a minimum rating of "Good" for both vigor and structure. Equivalent to academic grade `A'.
Good	These trees may have some minor to moderate structural or condition flaws that can be improved with treatment. They are not perfect but they are in relatively good condition and provide at least one significant functional or aesthetic benefit to the environment and the users of the site. These are better than average trees equivalent to academic grade `B'.
Fair	These trees have moderate or greater health and/or structural defects that it may or may not be possible to improve with treatment. These are "average" trees – not great but not so terrible that they absolutely should be removed. The majority of trees on most sites tend to fall into this category. These trees will require more intensive management and monitoring, and may also have shorter life spans than trees in the "Good" category. Retention of trees with moderate suitability for preservation depends upon the degree of proposed site changes. Equivalent to academic grade `C'.
Poor	These trees have significant structural defects or poor health that cannot be reasonably improved with treatment. These trees can be expected to decline regardless of management. The tree species themselves may have characteristics that are undesirable in landscape settings or may be unsuitable for high use areas. I do not recommend retention of trees with low suitability for preservation in areas where people or property will be present. Equivalent to academic grade `D'.
None	These trees are dead and/or are not suitable for retention in their location due to risk or other issues. In certain settings however, (such as wilderness areas, dead trees are beneficial as food and shelter for certain animals and plants including decomposers. Equivalent to academic grade `F'.

6) **Value**: Tree monetary appraisal is based upon: (1) Cost of Installation plus (2) its increase in value over a container-size tree if a larger size tree being appraised. This value is then adjusted according to: (a) *Species* (according to regional published species ratings), (b) *Condition* of the tree, and (c) *Location* of the tree (an average of the sub-categories of *Site*, *Contribution* and *Placement)*. The methodology and calculations for the Trunk Formula Method are taken from two industry standard texts – The Guide for Plant Appraisal, 9th edition, 2000, edited by the Council of Tree & Landscape Appraisers and published by the International Society of Arboriculture, and the Species Classification and Group Assignment, 2004, published by the Western Chapter of the International Society of Arboriculture. The cross-sectional trunk diameter price presented in this text has been adjusted slightly downward to match the current actual average wholesale cost of a 24-inch box nursery tree in this area. Note that the values produced for this report

are meant for reference only and may not reflect the true value of the tree that could be calculated by a thorough and more detailed analysis of each individual tree.

a) **Caveats regarding tree values**: The values in this report have not been subjected to a "reasonableness test" which compares the value of trees and landscaping to the total value of the property. The values in the report were calculated quickly and are intended to be approximate and for reference only. Research on tree and landscape values has shown that landscaping can contribute up to 20% of the total property value. In some cases however, tree appraisals have produced tree values that exceed the value of the entire property. Performing a reasonableness test screens for this error. For certain trees in this report I have decreased or increased tree values when I felt that the calculated values were too high or too low.

b) **The Trunk Formula Method** is used for trees that are too large for practical replacement with a similar size nursery container-grown tree. This method applies to trees with trunk diameters that are larger than 8-inches, measured at 12 inches above the ground. For the purpose of this report, all trees with trunk diameters of 8 inches or greater measured at DBH (4.5 feet above the ground) are appraised by this method.

c) **The Replacement Cost Method** is used for smaller trees with trunk diameters up to 4-inches in diameter measured at 12 inches above the ground. This is generally equivalent to a 48-inch box-size tree. The replacement cost for such a tree shall be the average wholesale cost of the tree multiplied by two to include transportation to the site, planting and other costs. This price is then adjusted (usually downward) based upon the Condition ratings percentages for the appraised tree. For the purpose of this report, all trees with trunk diameters of 7 inches or less measured at DBH (4.5 feet above the ground) are appraised by this method. The following cost basis is used (based upon the average of wholesale tree prices from Boething Treeland Nursery, Portola Valley and Valley Crest Tree Nursery, Sunol, 2/2/2015):

Trunk DBH	Replacement tree size	Replacement Tree Wholesale Cost x 2 (for installation, etc.)
<1" to 1"	15 gallon	$47.50 x 2 = $95
2-3"	24" box	$162.50 x 2 = $325
4-5"	36" box	$412.50 x 2 = $825
6-7"	48" box	$900 x 2 = $1800

d) **Tree values for tree protection bonds**: Prior to commencing work, the tree-regulating authority may require that the contractor furnish a bond equal to some portion of the total appraised value of the trees on the site based upon the values presented in the Arborist Report. Bond money will be returned to the contractor upon the completion of the project with deductions or additional fines imposed based upon tree protection compliance and the final condition of the trees. Tree values are often used to establish a benchmark amount to fine the contractor if non-compliance with the Tree Protection Specifications or other negligence causes a subject tree to be removed or unnecessarily damaged. The full value amount should be charged to the contractor if a tree is damaged to the degree that it must be removed. A portion of the value of the tree

plus any necessary remediation costs, as determined by the tree owner, should be charged to the contractor if the tree is damaged but does not have to be removed.

7) **Action (Disposition):**
   a) ***Save*****:** it should be no problem save this tree utilizing standard tree protection measures.
   b) ***Remove:*** this recommendation is based upon tree condition, preservation suitability, expected impact of construction, poor species for the site or any combination of these factors.
   c) ***Debatable:*** there is a problem with potentially retaining this tree. Find out why in the *Reason* and Notes columns of the Complete Tree Table. Examples are:
   - The tree is shown to be saved (and may be a desirable tree to save) but proposed construction is too close or is uncertain and may cause too much damage to retain the tree. Design changes may be recommended to reduce damage to the tree so that it can be saved.
   - Further evaluation of the tree is necessary (e.g. the tree requires further, more detailed evaluation that is beyond the scope of this tree survey and report. Examples are advanced internal decay detection and quantification with resistance drilling or tomography, a "pull test" to assess tree stability from the roots, or tissue samples sent to a plant pathology laboratory for disease diagnosis.
   - Condition: the tree is in "so-so" or lesser condition and an argument could be made to either save or remove the tree as it stands now. In some cases the owner will make the decision to save or remove the tree based upon the information provided in this report as well as the owner's own preferences.
   - Species: the tree may be a poor species for the area or the intended use of the developed site.
   - Uncertain construction impact
   - Other (as explained for the individual tree)

8) **Reason** (for tree removal or to explain why a tree is listed as "Debatable" or "Uncertain"). Multiple reasons may be provided, with the most significant reason listed first. Reasons can include but are not limited to:
   - ***Construction*** (excessive construction impact is unavoidable and it is not worthwhile to try and save the tree)
   - ***Condition*** (e.g. poor tree condition – either *vigor*, *structure* or both)
   - ***Landscaping*** (the tree is being removed because it does not fit in with or conflicts with proposed new landscaping)
   - ***Owner's Decision*** (for some reason the owner has decided to remove this tree)
   - ***Species*** (the tree is a poor species for the use of the site)
   - ***Risk*** (the tree presents moderate to excessive risk to people or property that cannot be sufficiently mitigated)

9) **Notes:** This may include any other information that would be helpful to the client and their architects and contractors within the scope of work for this report, such as a more detailed explanation of tree condition or expected construction impact.

10) **Tree Protection Distances:**
   a) Root Protection: see pages 30-31 for a detailed explanation.
   b) Canopy Protection: Additional space beyond root zone protection distances may be necessary for canopy protection.
   c) I have increased a few of the calculated tree protection distances for certain individual trees based upon my professional judgment and relative to site constraints. For example the minimum root protection distance I will list for any tree is 5 feet.

TREE ROOT PROTECTION DISTANCES

No one can estimate and predict with absolute certainty how far a soil disturbance such as an excavation must be from the edge of the trunk of an individual tree to effect tree stability or health at a low, moderate or severe degree -- there are simply too many variable involved that we cannot see or anticipate. **3xDBH** however, is a reasonable "rule of thumb" minimum distance (in feet) any soil disturbance should be from the edge of the trunk on one side of the trunk. This is supported by several separate research studies including (Smiley, Fraedrich, & Hendrickson 2002, Bartlett Tree Research Laboratories). DBH is trunk "diameter at breast height" (4.5 feet above the ground). This distance is often used during the design and planning phases of a construction project in order to estimate root damage to a tree due to the proposed construction. It tends to correlate reasonably well with the *zone of rapid taper*, which is the area in which the large buttress roots (main support roots close to the trunk) rapidly decrease in diameter with increasing distance from the trunk. For example, using the 3X DBH guideline an excavation should be no closer than 4.5 feet from the trunk of an 18-inch DBH tree. For trees with multiple trunks, an adjusted DBH is often calculated using 100% of the largest trunk plus 50% of the remaining smaller trunks. Such distances are guidelines only, and should be increased for trees with heavy canopies, significant leans, decay, structural problems, etc. I will generally not recommend a root protection distance of less than 5 feet for any tree, even very small trees. It is also important to understand that in actual field conditions we often find that much less root damage occurs than was anticipated by the guidelines. 3xDBH may be more of an aid in preserving tree stability and not necessarily long-term tree health.

6 to 18 X DBH is the minimum distance which is recommended in the *ANSI (American National Standard) A300 (Part 5)-2012 Management of Trees & Shrubs During Site Planning, Site Development, & Construction*, and also in the companion publication from the International Society of Arboriculture, *Best Management Practices, Managing Trees During Construction*, 2008. When the 6 to 18 x DBH distance cannot be met, "appropriate mitigation or determination that the work will not impact tree health and stability shall be performed", according to the ANSI Standard. ANSI A300 (Part 8) – 2013 Root Management, states: "When roots are damaged within 6 times the trunk diameter (DBH) mitigation shall be recommended." For practical purposes I use the 6 x DBH distance as the minimal distance acceptable (in most circumstances) in order to maintain good tree health and structural stability. The 6 x DBH distance or greater should definitely be used when there are soil disturbances on more than one side of the trunk.

OTPZ (Optimum Tree Protection Zone): OTPZ is the distance in feet from the trunk of the tree, all around the tree, that construction or other disturbance should not encroach within. If this zone is respected, then chances of the tree surviving construction disturbance are very good. This method takes into account tree age and the particular species tolerance to root disturbance. Although there are no scientifically based methods to determine the minimum distance for construction (for example, root severance) from trees to assure their survival and stability, there are some guidelines that are often used in the arboricultural industry. The most current guideline comes from the text, *Trees & Development*, Matheny et al., International Society of Arboriculture, 1998. Due to the crowded, constrained nature of many building sites it is often not be possible to maintain the OPTZ distance recommended for many of the trees -- therefore I have also listed alternate distances of 3 and 6X DBH.

LOS GATOS TREE PROTECTION REQUIREMENTS

LOS GATOS TOWN CODE
Chapter 29 – ZONING REGULATIONS
Article I. – IN GENERAL
Division 2. TREE PROTECTION
Sec. 29.10.1005. Protection of trees during construction.

(a) Protective tree fencing shall specify the following:

(1) **Size and materials**. Six (6) foot high chain link fencing, mounted on two-inch diameter galvanized iron posts, shall be driven into the ground to a depth of at least two (2) feet at no more than 10-foot spacing. For paving area that will not be demolished and when stipulated in a tree preservation plan, posts may be supported by a concrete base.

(2) **Area type to be fenced**. Type I: Enclosure with chain link fencing of either the entire dripline area or at the tree protection zone (TPZ), when specified by a certified or consulting arborist. Type II: Enclosure for street trees located in a planter strip: chain link fence around the entire planter strip to the outer branches. Type III: Protection for a tree located in a small planter cutout only (such as downtown): orange plastic fencing shall be wrapped around the trunk from the ground to the first branch with 2-inch wooden boards bound securely on the outside. Caution shall be used to avoid damaging any bark or branches.

(3) **Duration of Type I, II, III fencing**. Fencing shall be erected before demolition, grading or construction permits are issued and remain in place until the work is completed. Contractor shall first obtain the approval of the project arborist on record prior to removing a tree protection fence.

(4) **Warning sign**. Each tree fence shall have prominently displayed an 8.5 x 11-inch sign stating: "Warning—Tree Protection Zone-this fence shall not be removed and is subject to penalty according to Town Code 29.10.1025".

(b) All persons, shall comply with the following precautions:

(1) **Prior to the commencement of construction, install the fence** at the dripline, or tree protection zone (TPZ) when specified in an approved arborist report, around any tree and/or vegetation to be retained which could be affected by the construction and prohibit any storage of construction materials or other materials, equipment cleaning, or parking of vehicles within the TPZ. The dripline shall not be altered in any way so as to increase the encroachment of the construction.

(2) **Prohibit all construction activities within the TPZ, including but not limited to**: excavation, grading, drainage and leveling within the dripline of the tree unless approved by the Director.

(3) **Prohibit disposal or depositing of oil, gasoline, chemicals or other harmful materials** within the dripline of or in drainage channels, swales or areas that may lead to the dripline of a protected tree.

(4) **Prohibit the attachment of** wires, signs or ropes to any protected tree.

(5) **Design utility services and irrigation lines** to be located outside of the dripline when feasible.

(6) **Retain the services of a certified or consulting arborist who shall serve as the project arborist** for periodic monitoring of the project site and the health of those trees to be preserved. The project arborist shall be present whenever activities occur which may pose a potential threat to the health of the trees to be preserved and shall document all site visits.

(7) **The Director and project arborist shall be notified of any damage that occurs to a protected tree** during construction so that proper treatment may be administered.

(Ord. No. 2114, §§ I, II, 8-4-03)

Sec. 29.10.1010. Pruning and maintenance.

All pruning shall be in accordance with the current version of the International Society of Arboriculture Best Management Practices—Tree Pruning and ANSI A300-Part 1 Tree, Shrub and Other Woody Plant Management—Standard Practices, (Pruning) and any special conditions as determined by the Director. For developments, which require a tree preservation report, a certified or consulting arborist shall be in reasonable charge of all activities involving protected trees, including pruning, cabling and any other work if specified.

(1) **Any public utility installing or maintaining any overhead wires or underground pipes or conduits in the vicinity of a protected tree** shall obtain permission from the Director before performing any work, including pruning, which may cause injury to a protected tree. (e.g. cable TV/fiber optic trenching, gas, water, sewer trench, etc.).

(2) **Pruning for clearance of utility lines and energized conductors** shall be performed in compliance with the current version of the American National Standards Institute (ANSI) A300 (Part 1)-Pruning, Section 5.9 Utility Pruning. Using spikes or gaffs when pruning, except where no other alternative is available, is prohibited.

(3) **No person shall prune, trim, cut off, or perform any work, on a single occasion or cumulatively, over a three-year period, affecting twenty-five percent or more of the crown of any protected tree without first obtaining a permit** pursuant to this division except for pollarding of fruitless mulberry trees (*Morus alba)* or other species approved by the Town Arborist. Applications for a pruning permit shall include photographs indicating where pruning is proposed.

(4) **No person shall remove any Heritage tree or large protected tree branch or root through pruning or other method greater than four (4) inches in diameter** (12.5" in circumference) without first obtaining a permit pursuant to this division.

(Ord. No. 2114, §§ I, II, 8-4-03)

Sec. 29.10.1015. No limitation of authority.

Nothing in this division limits or modifies the existing authority of the Town under Division 29 of Title 29 (Zoning Regulations), Title 26 (Public Trees) or the Hillside Development Standards and Guidelines to require trees and other plants to be identified, retained, protected, and/or planted as conditions of the approval of development. In the event of conflict between provisions of this division and conditions of any permit or other approval granted pursuant to Chapter 29 or Chapter 26 of the Town Code or the Hillside Development Standards and Guidelines. The more protective requirements shall prevail.

(Ord. No. 2114, §§ I, II, 8-4-03)

Sec. 29.10.1020. Responsibility for enforcement.

All officers and employees of the Town shall report violations of this division to the Director of Community Development. Whenever an Enforcement Officer as defined in Section 1.30.015 of the Town Code determines that a violation of this code has occurred, the Enforcement Officer shall have the authority to issue an administrative citation pursuant to the provisions of Section 1.30.020 of the Town Code

Whenever an Enforcement Officer charged with the enforcement of this Code determines that a violation of that provision has occurred, the Enforcement Officer shall have the authority to issue an administrative citation to any person responsible for the violation.

(Ord. No. 2114, §§ I, II, 8-4-03)

Sec. 29.10.1025. Enforcement—Remedies for violation.

In addition to all other remedies set forth in this code or otherwise provided by law, the following remedies shall be available to the Town for violation of this division:

(1) **Tree removals in absence of or in anticipation of developmen**t. If a violation occurs in the absence of or prior to proposed development, then discretionary applications and/or building permit applications will not be accepted or processed by the Town until the violation has been remedied to the reasonable satisfaction of the Director. Mitigation measures as determined by the Director may be imposed as a condition of any subsequent application approval or permit for development on the subject property. A mitigation plan shall include specific measures for the protection of any remaining trees on the property, and shall provide for the replacement of each hillside tree that was removed illegally with a new tree(s) in the same location(s) as those illegally removed tree(s). The replacement ratio shall be at a greater ratio than that required in accordance with the standards set forth in Sec. 29.10.0985 of this division. If the court or the Director directs a replacement tree

or trees to be planted as part of the remedy for the violation, the trees shall be permanently maintained in a good and healthy condition. The property owner shall execute a five-year written maintenance agreement with the Town. For those trees on public property, replacement is to be determined by the Director of Community Development or by the Director of Parks and Public Works.

(2) **Pending development applications. Incomplete applications will not be processed further until the violation has been remedied**. If an application has been deemed complete, it may be denied by the Director or forwarded to the Planning Commission with a recommendation for denial at the Director's discretion. Mitigation measures as determined by the director may be imposed as a condition of approval. A mitigation plan shall include specific measures for the protection of any remaining trees on the property, and shall provide for the replacement of each hillside tree that was removed illegally with a new tree(s) in the same location(s) as those illegally removed tree(s). The replacement ratio shall be at a greater ratio than that required in accordance with the standards set forth in Sec. 29.10.0985 of this division. If the court or the Director directs a replacement tree or trees to be planted as part of the remedy for the violation, the trees shall be permanently maintained in a good and healthy condition. The property owner shall execute a five-year written maintenance agreement with the Town. For those trees on public property, replacement is to be determined by the Director of Community Development or by the Director of Parks and Public Works.

(3) **Projects under construction**.

a. If a violation occurs during construction, the Town may issue a stop work order suspending and prohibiting further activity on the property pursuant to the grading, demolition, and/or building permit(s) (including construction, inspection, and issuance of certificates of occupancy) until a mitigation plan has been filed with and approved by the Director, agreed to in writing by the property owner(s) or the applicant(s) or both, and either implemented or guaranteed by the posting of adequate security in the discretion of the Director. A mitigation plan shall include specific measures for the protection of any remaining trees on the property, and shall provide for the replacement of each hillside tree that was removed illegally with a new tree(s) in the same location(s) as those illegally removed tree(s). The replacement ratio shall be at a greater ratio than that required in accordance with the standards set forth in Sec. 29.10.0985 of this division. If the court or the Director directs a replacement tree or trees to be planted as part of the remedy for the violation, the trees shall be permanently maintained in a good and healthy condition. The property owner shall execute a five-year written maintenance agreement with the Town. For those trees on public property, replacement is to be determined by the Director of Community Development or by the Director of Parks and Public Works.

b. The violation of any provisions in this division during the conduct by any person of a tree removal, landscaping, construction or other business in the Town shall constitute grounds for revocation of any business license issued to such person.

(4) **Civil penalties**.

Notwithstanding section 29.20.950 relating to criminal penalty, any person found to have violated section 29.10.0965 shall be liable to pay the Town a civil penalty as prescribed in subsections a. through d.

a. As part of a civil action brought by the Town, a court may assess against any person who commits, allows, or maintains a violation of any provision of this division a civil penalty in an amount not to exceed five thousand dollars per violation.

b. Where the violation has resulted in removal of a protected tree, the civil penalty shall be in an amount not to exceed five thousand dollars per tree unlawfully removed, or the replacement value of each such tree, whichever amount is higher. Such amount shall be payable to the Town and deposited into the Tree Replacement Fund. Replacement value for the purposes of this section shall be determined

utilizing the most recent edition of the Guide for Plant Appraisal, as prepared by the Council of Tree and Landscape Appraisers and the Species and Group Classification Guide published by the Western Chapter of the International Society of Arboriculture.

c. If the court or the Director directs a replacement tree or trees to be planted as part of the remedy for the violation, the trees shall be permanently maintained in a good and healthy condition. The property owner shall execute a five year written maintenance agreement with the Town.

d. The cost of enforcing this division, which shall include all costs, staff time, and attorneys' fees.

(5) **Injunctive relief**. A civil action may be commenced to abate, enjoin, or otherwise compel the cessation of such violation.

(6) **Costs**. In any civil action brought pursuant to this division in which the Town prevails, the court shall award to the Town all costs of investigation and preparation for trial, the costs of trial, reasonable expenses including overhead and administrative costs incurred in prosecuting the action, and reasonable attorney fees.

(Ord. No. 2114, §§ I, II, 8-4-03)

Sec. 29.10.1030. Fees.

The fee, as adopted by Town Resolution, prescribed therefore in the municipal fee schedule shall accompany the removal or pruning permit application submitted to the Town for review and evaluation pursuant to this division.

(Ord. No. 2114, §§ I, II, 8-4-03)

Sec. 29.10.1035. Severability.

If any provision of this division or the application thereof to any person or circumstance is held to be invalid by a court of competent jurisdiction, such invalidity shall not affect any other provision of this division which can be given effect without the invalid provision or application, and to this end the provisions of this division are declared to be severable.

(Ord. No. 2114, §§ I, II, 8-4-03)

Sec. 29.10.1040. Notices.

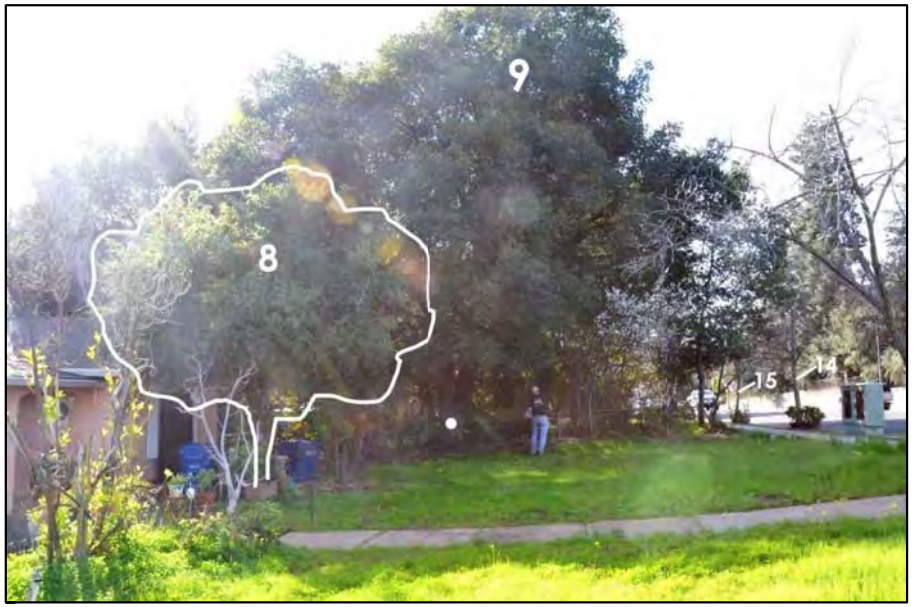
All notices required under this division shall conform to noticing provisions of the applicable Town Code.

Sec. 29.10.1045. Appeals.

Any interested person may appeal a decision of the director pursuant to this division in accordance with the procedures set forth in section 29.20.260 of the Town Code. All appeals shall comply with the public noticing provisions of section 29.20.450 of the Town Code.
(Ord. No. 2114, §§ I, II, 8-4-03)

TREE PHOTOS

This is a partial side-view of **coast live oaks #2 and 3** from the southwest. Imagine a 2-story building 12 feet from the trunks of these trees, which tucked well inside the canopy. Now imagine trying to construct the 2-story building without having to cut off all the branches on the building side of the trunk. Such pruning will be necessary if the building is constructed as shown on the plan I reviewed. This photo was taken April 9, 2012 so the trees have probably grown a bit larger since then.



Upper Left: **coast live oak #8** (foreground) with large coast live oak #9 in the background. Winchester Blvd. to the right.

Lower Left: **coast live oaks #12 and 16**. Winchester Blvd. to the left.

Right: **coast live oaks #17 and 18**. Winchester Blvd. is toward the foreground.

Upper Left: **coast live oaks #21-23**.

Lower Left: **coast live oaks #25, 27 and 34**.

Right: **coast live oaks #29 and 41**, with **valley oak #40** in the background.

Upper photo: **coast live oak #42**, with smaller **coast live oak #43** in the background.

Lower photo: ground surface around **coast live oak #17**, which is typical for many of the trees on site – natural leaf and twig litter mulch. This is the best ground covering for most trees, although I would pull it away from the root collars. The soil is very loose and friable, and this probably has a lot to do with the high vigor ratings for many of these oaks.

ASSUMPTIONS & LIMITATIONS

1. **Tree locations** were provided by an unknown party and are shown on the Tree Map on page 1 of this report. The tree map is a reduced partial copy of the Tree Disposition Plan that I was given. Tree locations are assumed to be accurate but should be verified in the field.
2. **The *Condition Ratings* for deciduous trees that are out of leaf (because they have shed their leaves for winter dormancy) are estimated.** More accurate condition ratings for these trees can be obtained after they have fully leafed out (usually mid-May through September). Deciduous trees on this site that were completely leafless or in the process of shedding their leaves are: London plane, black walnut, golden raintree and valley oak.
3. **A Level 2 Basic Evaluation** of the subject trees described in this report was performed on February 9, 2016 for the purpose of this report. This is a brief visual evaluation of the tree from the ground, without climbing into the tree or performing detailed tests such as extensive digging, boring or removing samples. The tree is viewed by walking all around it, unless this is not possible. This type of evaluation is an initial screening of the tree after which the evaluator may recommend that additional, more detailed examination(s) be performed if deemed necessary. An assessment of tree risk was not performed during the evaluation.
4. **Trees on neighboring properties were not evaluated.** They were only viewed cursorily from the project site. I did not enter the neighboring property to inspect these trees up close.
5. **Some trees had their root collars and or lower trunks covered** with soil, vegetation or debris and were obstructed from view when I conducted my tree evaluation. If these trees may remain, the obstructions should be removed and I should re-examine these previously covered areas.
6. **I did the best I could at estimating construction impacts to trees based upon the plans, but this is difficult to accomplish with certainty at a scale of 1:20.** I do not have knowledge about the construction methods that will be used on this project and how the site will be staged for construction – these factors can increase or decrease the effect of construction on trees. How heavy equipment will move on the site is another factor we are unaware of – even though trees may not be located close to improvements, they may be located within equipment travel or staging areas. It is possible therefore, that more trees will need to be removed than are presently listed for removal in this report. On the other hand I may have overestimated construction impact in some cases – so that some trees that are listed for removal may not end up having to be removed after all.
7. **Any information and descriptions provided to me for the purpose of my investigation in this case and the preparation of this report are assumed to be correct**. Any titles and ownerships to any property are assumed to be good and marketable. I assume no responsibility for legal matters in character nor do I render any opinion as to the quality of any title.
8. **The information contained in this report covers only those items that were examined** and reflects the condition of those items at the time of inspection.
9. **Loss or removal of any part of this report** invalidates the entire report.

10. **Possession of this report, or any copy thereof, does not imply right of publication** for use for any purpose by any person other than to whom this report is addressed without my written consent beforehand.
11. **This report and the ratings or values represented herein represent my opinion**. My fee is in no way contingent upon the reporting of a specified value or upon any finding or recommendation reported.
12. **This report has been prepared in conformity with generally acceptable appraisal/diagnostic/reporting methods and procedures** and is consistent with practices recommended by the International Society of Arboriculture and the American Society of Consulting Arborists.
13. **My evaluation of the trees that are the subject of this report is limited to visual examination of accessible items without dissection, excavation, probing or coring**. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the plants or property in question may not arise in the future.
14. **I take no responsibility for any defects in any tree's structure**. No tree described in this report has been climbed and examined from above the ground, and as such, structural defects that could only have been discovered have not been reported, unless otherwise stated. Structural defects may also be hidden within a tree, in any portion of a tree. Likewise, root collar excavations and evaluations have not been performed unless otherwise stated.
15. **The measures noted within this report are designed to assist in the protection and preservation of the trees mentioned herein**, should some or all of those trees remain, and to help in their short and long term health and longevity. This is not however; a guarantee that any of these trees may not suddenly or eventually decline, fail, or die, for whatever reason. Because a significant portion of a tree's roots are usually far beyond its dripline, even trees that are well protected during construction often decline, fail or die. Because there may be hidden defects within the root system, trunk or branches of trees, it is possible that trees with no obvious defects can be subject to failure without warning. The current state of arboricultural science does not guarantee the accurate detection and prediction of tree defects and the risks associated with trees. There will always be some level of risk associated with trees, particularly large trees. It is impossible to guarantee the safety of any tree. Trees are unpredictable.

****

I certify that the information contained in this report is correct to the best of my knowledge, and that this report was prepared in good faith. Thank you for the opportunity to provide service again. Please call me if you have questions or if I can be of further assistance.

Sincerely,

Deborah Ellis, MS.
Consulting Arborist & Horticulturist
Certified Professional Horticulturist #30022
ASCA Registered Consulting Arborist #305
I.S.A. Board Certified Master Arborist WE-457B
I.S.A. Tree Risk Assessment Qualified

ENCLOSURES:

- *Keeping Native Calif. Oaks Healthy*. Hagen. June 1990. California Department of Forestry & Fire Protection. Tree Notes #7.

REFERENCES:

- *American National Standard A300 (Part 5)-2012 for Tree Care Operations – Tree, Shrub & Other Woody Plant Management – Standard Practices:*
  - (Part 5) – 2012 -- *Management of Trees & Shrubs During Site Planning, Site Development, & Construction*.
  - (Part 8) – 2013. *Root Management*.
  - (Part 9) – 2011. *Tree Risk Assessment. Tree Structure Assessment*.
- *Best Management Practices*, International Society of Arboriculture:
  - *Managing Trees during Construction*. *2008*
  - *Tree Inventories*. 2013.
- *The Guide for Plant Appraisal*, 9th edition, 2000, edited by the Council of Tree & Landscape Appraisers and published by the International Society of Arboriculture.
- *Species Classification & Group Assignment*. Western Chapter of the International Society of Arboriculture. 2004.

GLOSSARY

1. **Crooks** are unnatural bends or sharp angles in branches or trunks caused by the removal of other attached branches or trunks; often with a vertical growing side branch at the end. This concentrates weight at the end of the branch, and also over some inevitable decay from a pruning wound.
2. **Dripline**: the area under the total branch spread of the tree, all around the tree. Although tree roots may extend out 2 to 3 times the radius of the dripline, a great concentration of active roots is often in the soil directly beneath this area. The dripline is often used as an arbitrary "tree protection zone".
3. **Grove**: is a group of trees that located close together that shelter each other from wind and the elements, having "knit" canopies. If of the same species, there is usually root grafting between trees, which lends support from the ground, as well as water and mineral sharing. Removal of one or some grove members could cause remaining members to be unstable due to a reduction of previous shelter. Grove trees often have asymmetrical canopies when viewed as individuals.
4. **Project Arborist. The arborist who is appointed to be in charge of arborist services for the project.** That arborist shall also be a *qualified consulting arborist* (either an International Society of Arboriculture (ISA) Board-Certified Master Arborist or an American Society of Consulting Arborists (ASCA) Registered Consulting Arborist) that has sufficient knowledge and experience to perform the specific work required. For most construction projects that work will include inspection and documentation of tree protection fencing and other tree protection procedures, and being available to assist with tree-related issues that come up during the project.
5. **Qualified Consulting Arborist:** must be either an International Society of Arboriculture (ISA) Board-Certified Master Arborist or an American Society of Consulting Arborists (ASCA) Registered Consulting Arborist that has sufficient knowledge and experience to perform the specific work required.
6. **Qualified Tree Service**: A tree service with a supervising arborist who has the minimum certification level of ISA (International Society of Arboriculture) Certified Arborist for at least 5 years, in a supervisory position on the job site during execution of the tree work. The tree service shall have a State of California Contractor's license for Tree Service (C61-D49) and provide proof of Workman's Compensation and General Liability Insurance. The person(s) performing the tree work must understand and adhere to the most current of the following arboricultural industry tree care standards:
   - Best Management Practices, Tree Pruning. International Society of Arboriculture, PO Box 3129, Champaign, IL 61826-3129. 217-355-9411
   - ANSI A300 Pruning Standards. Ibid. (Covers tree care methodology).
   - ANSI Z133.1 Safety Requirements for Arboricultural Operations. Ibid. (Covers safety).
7. **Root collar & root collar excavation and examination**: The *root collar* (junction between trunk and roots) is critical to whole-tree health and stability. A root collar excavation carefully uncovers this area (with hand digging tools, water or pressurized air). The area is then examined to assess its health and structural stability. Buttress roots may be traced outward from the trunk several feet. Decay assessment of the large roots close to the trunk (buttress roots) involves additional testing such as drilling to extract interior wood with a regular drill, or the use of a resistance-recording drill to check for changes in wood density within the root; as would be caused by decay or cavities. It is important to note that root decay often begins on the underside of roots, which is not detectable in a root collar excavation unless the entire circumference of the root is

excavated and visible. Drill tests may detect such hidden decay. Note that it is not possible to uncover and evaluate the entire portion of the root system that is responsible for whole-tree stability. Decayed roots that are inaccessible (e.g. underneath the trunk) can be degraded to the extent that the whole tree may fail even though uncovered and examined roots in accessible locations appear to be sound.

8. **Root rot disease** is caused by wet, poorly aerated soil conditions. Degradation of roots (root rot) and sometimes the lower trunk (crown rot) ensues on weakened, susceptible plant species not adapted to such a soil environment. Opportunistic plant root pathogens (such as watermold fungi) are often the secondary cause of the problem. Root rot is a particular problem among drought tolerant plants that are not adapted to frequent irrigation during our normally rain-free months, such as many of our California native plants. The problem is often worsened in fine-textured heavy clay soils that retain water more than do the coarser, fast-draining soils such as occur in the natural environment of many of our native plants.
9. **Stump sprout trees** are the result of a tree trunk being cut down to a short stump close to the ground. If the tree survives, it sends out many small shoots (suckers) from around the cut stump. Some of these suckers may survive and grow to become significant trunks. These trunks are spaced very close together and usually have included bark between them, which reduces the strength of their union. Such trunks are prone to failure. Stump sprout trees can be very structurally unsound, particularly as they become large and old. There is often a great deal of decay associated with the mother stump, which can also reduce mechanical stability.
10. **Summer Dry**: Our native oak species are adapted to our "summer dry" climate. When the soil in their root system is kept moist during our normally dry months, these oaks are predisposed to attack by fungal root rot pathogens that are usually present in our soils. Therefore it is important to keep irrigation as far from the tree trunk (preferably beyond the mature dripline) as possible. The best landscape treatment underneath native oaks is non-compacted soil covered with a 3 to 4-inch depth of oak wood, leaf and twig litter (the tree's natural litter). Keep this mulch 6 to 12 inches away from the root collar (junction of trunk and roots). An exception to the no summer water rule would be newly planted oaks (for the first 2 to 3 years after planting, until they are "established") and also during droughts that occur during the normal rainy season.

Deborah Ellis, MS

Consulting Arborist & Horticulturist

Service since 1984

Marni Moseley
Town of Los Gatos Community Development Department
110 E. Main Street
Los Gatos, CA 95031

June 10, 2016

Arborist Report #5, Winchester Boulevard Office

Dear Marni:

This report is a review and comment on the plan submittal for this project dated May 4, 2016. This plan depicts a beautiful building with underground parking. My most recent previous report for this report is dated February 12, 2016 and that report should be used as background information for this current review.

Summary:

In the current plan set the following dispositions for 34 protected trees are proposed:

- **Remove tree due to construction: 22 trees** (#3, 5, 7, 8, 10, 11, 12, 13, 14, 15, 18, 19, 20, 21, 24, 34, 35, 36, 38, 39, 42 and 43.
- **Save the following 12 trees:** #1, 2, 9, 16, 17, 22, 23, 25, 27, 29, 40 and 41. Actually all of these trees are "Debatable" Save or Remove due to potential construction impact, which will be discussed individually for each tree.

A Summary Table listing all trees is on pages 2 - 3. Recommendations for those trees which are proposed to be saved are on pages 4 - 7.

Summary Tree Table

Continued on the next page

Tree #	Common Name	Trunk Diam.	Preservation Suitability & Value	Expected Construction Impact	Action	Reason
1	**coast live oak**	**20**	**Good $7900**	**Moderate/ Severe**	**Debatable**	**Construction**
2	**coast live oak**	**15, 15, 23**	**Fair/Good $23,100**	**Moderate/ Severe**	**Debatable**	**Construction**
3	coast live oak	19,23	Fair/Good 6,400	Severe	Remove	Construction
4	Tree less than Protected Size					
5	London plane	7	Fair/Poor 1,260	Severe	Remove	Construction
6	Tree less than Protected Size					
7	London plane	6	Fair/Poor 1,260	Severe	Remove	Construction
8	coast live oak	6	Fair 1,080	Severe	Remove	Construction
9	**coast live oak**	**30 (3)**	**Good 15,500**	**Moderate/Severe**	**Debatable**	**Construction**
10	Calif. bay	5,6 7	Fair 160	Severe	Remove	Construction
11	coast live oak	7,9	Fair 930	Severe	Remove	Construction
12	coast live oak	25	Good 10,200	Severe	Remove	Construction
13	coast live oak	7	Fair/Good 1,220	Severe	Remove	Construction
14	London plane	7	Fair/Poor 1350	Severe	Remove	Construction
15	London plane	6	Fair/Poor 1260	Severe	Remove	Construction
16	**coast live oak**	**25**	**Good 11,900**	**Moderate/Severe**	**Debatable**	**Construction**
17	**coast live oak**	**21**	**Good 8,000**	**Moderate/Severe**	**Debatable**	**Construction**
18	coast live oak	28	Good 14900	Severe	Remove	Construction
19	weeping bottlebrush	7	Fair 1080	Severe	Remove	Construction
20	coast live oak	6	Fair/Poor 900	Severe	Remove	Construction
21	coast live oak	11,13,18	Fair/Good 13,300	Severe	Remove	Construction
22	**coast live oak**	**13**	**Fair 2280**	**Moderate**	**Debatable**	**Construction/ Structure**

Tree #	Common Name	Trunk Diam.	Preservation Suitability & Value	Expected Construction Impact	Action	Reason
23	coast live oak	15	Fair/Good 3,010	Moderate	Debatable	Construction
24	coast live oak	15,16	Fair/Good 8,000	Severe	Remove	Construction
25	coast live oak	17	Fair/Good 4,040	Moderate	Debatable	Construction
26	Tree less than Protected Size					
27	coast live oak	18	Fair 4,870	Moderate	Debatable	Construction
28	Tree less than Protected Size					
29	coast live oak	7	Fair 1,260	Moderate	Debatable	Construction
30	Tree less than Protected Size					
31	Tree less than Protected Size					
32	Tree less than Protected Size					
33	Tree less than Protected Size					
34	coast live oak	17	Good 4,930	Severe	Remove	Construction
35	black walnut	23 (3.5)	Poor 1,760	Severe	Remove	Construction/Structure
36	black walnut	19 (3.5)	Poor/ Unacceptable 600	Severe	Remove	Construction/ Structure
37	Tree less than Protected Size					
38	goldenrain tree	19 (4)	Fair/Good 2,840	Severe	Remove	Construction
39	coast live oak	26	Good 11,000	Severe	Remove	Construction
40	valley oak	16	Good 5,800	Moderate	Debatable	Construction
41	coast live oak	25	Good 9,000	Moderate	Debatable	Construction
42	coast live oak	23	Good 8,700	Severe	Remove	Construction
43	coast live oak	12	Fair/Poor 1570	Severe	Remove	Construction

End of Table

Recommendations for Protected Trees Proposed to be Saved:

All trees:

- Grading, particularly surface grading for drainage, is shown close to and around all trees. This must not happen. Preferably the distance of 6xDBH a listed in my February 12, 2016 report (Complete Tree Table) should remain free of disturbance including grubbing, surface drainage or other grading, underground utilities, etc. Is the site over-engineered from a grading for drainage standpoint? This is fine as long as there are no existing trees, but if there are trees then the grading needs to be reduced significantly in order to save the trees. Tree roots are shallow; mostly within the upper 18 inches of soil. Grading not only directly damages these roots, but soil compaction caused by grading causes indirect, long term damage to roots. More undisturbed soil is necessary around trees to be saved. Limits of grading around trees must be shown on the grading plans.

- Landscaping: is not specified around trees to remain. Please review pages 11-12 of my February 12, 2016 report for directions on landscaping around the native oaks. All of the trees proposed to be saved are native oaks. In summary I do not want to see any planting or irrigation around these trees; only a 4 inch depth of wood, bark or tree trimming chippings mulch spread over the soil surface underneath the canopy of these trees. Think of this a an "open, natural" look. Less is more.

- Tree Protection Fence Detail, Sheet L-4: remove this. Replace with Town of Los Gatos Tree Protection Directions.

#2 coast live oak (17 + 32"):

Distances from edge of trunk to improvements:

- building: 25'
- Stairs to building: 15'
- Sidewalk (at Shelburne Ave.): 2'
- Raised planters to east: 18'

Comments: too much going on too close to the tree. In my previous report I asked that the building (and this includes things outside the building such as stairs) be kept at least 10 feet beyond the dripline of the tree. This has not happened and I still recommend that this be done. Make sure this is the actual dripline in the field, as I am not sure that the dripline on the plan is accurate. Erect story posts so that we can see where the building (including stairs) will actually be located. The 6xDBH distance for this tree is 19 feet. Move the raised planters to beyond this distance. Regarding the sidewalk, for tree #2 as well as tree #3 sidewalk construction could damage large roots close to the trunk and cause the tree to die and/or fall over. Can the sidewalk be raised above grade to preserve existing roots – perhaps like decking? Or can the sidewalk area be something gold fines? Could the sidewalk be eliminated? If sidewalk construction proceeds a planned, you are taking your chances with trees #2 and 3.

#3 coast live oak (19+23")
Distances from edge of trunk to improvements:
- building: 18'
- Stairs to building: 14'
- Bio-retention area: 12'
- Sidewalk (at Shelburne Ave.): 3'

Comments: same as for tree #2. Note that I found an error in my February 12, 2016 report – the 3xDBH distance for this tree should be 8.25 feet, not 5 feet, and the 6xDBH distance should be 17 feet, not 10 feet.

#9 coast live oak (30")
Distances from edge of trunk to improvements:
- building: 14'
- Sidewalk (at Shelburne Ave.): 23'
- drainage pipe centerlines 9 and 20'
- landscape lighting for tree

Comments: building is too close to tree. Move building and other improvements such as drainage pipes so that there will be no soil disturbance closer than 15 feet from trunk. This means the building must be farther than 15 feet from the trunk. Ideally the building should be 10 feet or more from edge of canopy. Erect story posts so that we can better understand how much. Landscape lighting must include no trenching. The 6xDBH distance for this tree is 15 feet.

#16 coast live oak (25"):
Distances from edge of trunk to improvements:
- building: 24'
- Sidewalk (at Shelburne Ave.): 13'
- drainage pipe centerlines 9 and 20' '
- landscape lighting for tree

Comments: one drainage pipe must be moved farther from the trunk so that there is no soil disturbance closer than 13 feet from the trunk. Erect story posts to see if there is any effect on canopy. Landscape lighting must include no trenching.

#17 coast live oak (21"):
Distances from edge of trunk to improvements:
- building: 22'
- Sidewalk (at Shelburne Ave.): 12'
- drainage pipe centerline 15'
- retaining wall/fill: 12 & 15', also 2-4' to cut, 10' other side

Comments: the 6xDBH distance for this tree is 11 feet. Change the design so that there is no soil disturbance closer than 11 feet from the trunk. Some redesign of the deck/retaining wall is necessary.

#22 coast live oak (13"):
Distances from edge of trunk to improvements:
- parking lot: 18'

Comments: the parking lot is far enough away from this tree from a root perspective, but the tree leans significantly toward the parking lot (about 20 degrees). This should be investigated further to make sure the tree will not interfere with vehicle movement and parking. The 6xDBH distance for this tree is 7 feet.

#23 coast live oak (15"):
Distances from edge of trunk to improvements:
- parking lot: 17'

Comments: no problems for this tree except for the general grading/drainage mentioned in the first paragraph. The 6xDBH distance for this tree is 8'.

#25 coast live oak (17")
Distances from edge of trunk to improvements:
- parking lot: 6'

Comments: parking lot a bit closer than preferable, but since this is a disturbance only one side of the tree I can accept it (if construction work is done carefully), since at least it is beyond the 3xDBH distance of 4.5 feet. 6xDBH 9 feet.

#27 coast live oak (18"):
Distances from edge of trunk to improvements:
- parking lot: 17'

Comments: no problems for this tree except for the general grading/drainage mentioned in the first paragraph. 6xDBH distance for this tree is 9 feet.

#29 coast live oak (7"):
Distances from edge of trunk to improvements:
- parking lot planter: 10'

Comments: no problems for this tree except for the general grading/drainage mentioned in the first paragraph. 6xDBH distance for this tree is 5 feet.

#40 valley oak (16"):
Distances from edge of trunk to improvements:
- parking lot: 11-12'
- bio-retention area: 22'

Comments: no problems for this tree except for the general grading/drainage mentioned in the first paragraph. 6xDBH 8 feet.

#41 coast live oak (25"):
Distances from edge of trunk to improvements:
- parking lot: 15'
- bio-retention area: 25'

Comments: no problems for this tree except for the general grading/drainage mentioned in the first paragraph. 6xDBH: 13 feet.

****

I certify that the information contained in this report is correct to the best of my knowledge, and that this report was prepared in good faith. Thank you for the opportunity to provide service again. Please call me if you have questions or if I can be of further assistance.

Sincerely,

Deborah Ellis

Deborah Ellis, MS.
Consulting Arborist & Horticulturist
Certified Professional Horticulturist #30022
ASCA Registered Consulting Arborist #305
I.S.A. Board Certified Master Arborist WE-457B
I.S.A. Tree Risk Assessment Qualified

Deborah Ellis, MS

Consulting Arborist & Horticulturist

Service since 1984

Jocelyn Puga
Town of Los Gatos Community Development Department
110 E. Main Street
Los Gatos, CA 95031

July 22, 2016

Winchester Office Building, Winchester Boulevard and Shelburne Way

Dear Jocelyn:

This letter summarizes my understanding of the decisions that were made at the site meeting this morning with you, Doug Rich and his design team and me.

Coast live oaks #2 and 3: sidewalk along Shelburne Avenue will be concrete built on grade with no excavation, using TMI Structural Soil™ to create level base. The building will necessitate pruning to reduce canopy spread toward the building by approximately 14 feet. This is slightly over a third of the canopy spread between trunk and building, which is significant. Pruning to create the 5-foot clearance necessary between the building wall and the tree canopy will not be ideal (in many cases proper pruning cuts will not be possible) but this is a better alternative then removing the trees. It is imperative that a qualified tree service[1] be used to perform this pruning. Thought must be put into each pruning cut in order to minimize damage to the tree. I recommend Saratoga Tree Service (Blair Glenn) for this work. His phone number is: (408) 866-7200.

Coast live oak #9: on site we measured the wall of the proposed building to be at about the actual dripline of the tree. This will necessitate reducing the canopy spread toward the building by pruning by 5 feet. This should not be a problem as it will require small cuts made to twigs and small terminal branches. Again, a qualified tree service should perform this pruning.

Coast live oaks #16 and 17: adjustments to move improvements farther from the trees will be made. For the deck around oak #17, a minimum 1/8 inch gap should be created between deck surface boards, to allow more natural rainfall to penetrate the deck. The existing natural leaf litter mulch should not be removed underneath the deck area.

---

[1] **Qualified Tree Service**: A tree service with a supervising arborist who has the minimum certification level of ISA (International Society of Arboriculture) Certified Arborist for at least 5 years, in a supervisory position on the job site during execution of the tree work. The tree service shall have a State of California Contractor's license for Tree Service (C61-D49) and provide proof of Workman's Compensation and General Liability Insurance. The person(s) performing the tree work must understand and adhere to the most current of the following arboricultural industry tree care standards:

- Best Management Practices, Tree Pruning. International Society of Arboriculture, PO Box 3129, Champaign, IL 61826-3129. 217-355-9411
- ANSI A300 Pruning Standards. Ibid. (Covers tree care methodology).
- ANSI Z133.1 Safety Requirements for Arboricultural Operations. Ibid. (Covers safety).

Other:

1. For all trees that will remain that are adjacent to buildings, erect story posts so that I can verify the amount of pruning necessary for building clearance.

2. Retain existing natural leaf and twig litter underneath the canopy of trees that will remain. This natural mulch should only be removed in the location of improvements.

****

I certify that the information contained in this report is correct to the best of my knowledge, and that this report was prepared in good faith. Thank you for the opportunity to provide service again. Please call me if you have questions or if I can be of further assistance.

Sincerely,

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I.S.A. Tree Risk Assessment Qualified

APPENDIX B

PRELIMINARY GEOTECHNICAL INVESTIGATION

CORNERSTONE
EARTH GROUP

Date:	September 21, 2015
Project No.:	384-8-2
Prepared For:	Mr. Doug Rich **VALLEY OAK PARTNERS, LLC** 160 West Santa Clara Street, Suite 1190 San Jose, California
Re:	Preliminary Geotechnical Investigation Winchester Blvd and Shelburne Way Office Development Winchester Blvd and Shelburne Way Los Gatos, California

Dear Mr. Rich:

As requested, this letter presents the results of our geotechnical feasibility investigation for the above referenced project. Our services were performed in accordance with our proposal dated July 9, 2014.

The Project

We understand that Valley Oak Partners, LLC will be constructing an office development on an approximately 1½-acre site located in the southeast corner of the intersection of Winchester Boulevard and Shelburne Way in Los Gatos, California. The office building will be supported by a single story parking garage that is below grade at the west side of the site (near Winchester Blvd.) and at-grade at the east side of the site because the site slopes downward moderately to the east. The parking garage will have a footprint of approximately 30,000 square feet and will cover nearly the entire site. The office building itself will be two stories above grade and will have a footprint of approximately 17,000 square feet, and will be constructed over the central portion of the garage. At-grade parking will be constructed around the office building. The parking garage will be made of concrete, while the office building will be wood or steel framed construction. Grading for the parking garage will consist of cuts up to 11 feet. Dead Plus Live loading information is not known; however, we have assumed maximum interior column loads ranging from 200 to 400 kips and maximum wall loads of 3 to 5 kips per lineal feet. The approximate location of the project is shown on our Vicinity Map, Figure 1.

We received an untitled site plan showing the proposed layout of the office building and street improvements, prepared by Studio T Square Architecture and dated August 11, 2015, which was incorporated into our Site Plan, Figure 2.

The purpose of our preliminary investigation was to review published geologic and seismic hazard maps for the site vicinity, perform a limited preliminary geotechnical investigation with borings to develop preliminary recommendations for forward planning purposes. A summary of our preliminary findings and recommendations are presented below.

Site Conditions

The following information is based on our review of readily available published geologic maps, air photographs and literature, and our previous site investigation performed by our staff engineer, Mr. Paul Mateo, on July 21, 2014.

Geological Setting

The site is located within the Santa Clara Valley, which is a broad alluvial plane between the Santa Cruz Mountains to the southwest and west, and the Diablo Range to the northeast. The San Andreas Fault system, including the Monte Vista-Shannon Fault, exists within the Santa Cruz Mountains and the Hayward and Calaveras Fault systems exist within the Diablo Range. Alluvial soil thicknesses in this area of Los Gatos range from about 0 to 50 feet (Rogers & Williams, 1974).

Site History

We reviewed aerial photographs available on Google Earth, dated 1993, 2000, and 2002 through 2014. We also reviewed historical topographic maps from 1928, 1939, 1942, 1943, 1955, 1960, 1961, 1964, 1966, 1973, 1975, 1978, 1980, and 1985 (www.historicaerials.com).

Based on the topographic maps, the site was vacant in 1942 and development began in 1943 and continued throughout the 1950s. Based on the historical aerial photographs, the land was used for agricultural purposes in 1948 with evenly spaced orchard trees. Improvements were made at the site up to the 1980 aerial photograph (www.historicaerials.com).

Surface Conditions

The site is bounded by Winchester Boulevard to the west and Shelburne Way to the north, commercial development to the east, and apartment buildings to the south. The site is currently occupied by three single family residences with associated improvements and landscaping. The existing improvements include concrete and asphalt driveways, sidewalks, and fences. The site slopes at about 5 to 8 percent down toward the east, with grade differences on the order of about 10 to 14 feet across the site ranging from about Elevation 388 to 374 feet based on information contained in the previous reports and on the Google Earth website.

Subsurface Conditions

Our preliminary borings generally encountered interbedded layers of medium dense to very dense silty clayey sands and clayey sands, both with variable amounts of gravel, and stiff to hard lean clays with variable amounts of sand and gravel to the maximum depth explored of about 30 feet. It is noted that the soils in the Los Gatos area can contain significant amounts of large gravels (1-3 inches in diameter), cobbles (3-8 inches), and some boulders (8 inches and greater).

Plasticity/Expansion Potential

To evaluate the plasticity and expansion potential of surficial soils, and the plasticity of the fines in potentially liquefiable layers, we performed Plasticity Index (PI) tests on a representative sample of the surficial soils collected at a depth of about 2 feet and in a potentially liquefiable

clayey sand layer at about 18½ feet. The test performed on the surficial soils resulted in a PI of 4 with a Liquid Limit of 20, indicating a low expansion potential. The test performed on the clayey sand layer resulted in a PI of 21, indicating a low to moderate expansion potential and a low potential for liquefaction-induced or seismic-induced dry sand settlement.

In-Situ Moisture Contents

Laboratory testing from our boring and test pits indicated that the in-situ moisture contents within the upper 10 feet range from 5 to 10 percent below the estimated laboratory optimum moisture.

Ground Water

Ground water was not encountered in our exploratory borings. All measurements were taken at the time of drilling and may not represent the stabilized levels that can be higher than the initial levels encountered. The Seismic Hazard Zone Report (CGS, Los Gatos 7.5 Minute Quadrangle, 2002) indicates the historic high ground water in the area to be approximately 10 feet below the ground surface.

Fluctuations in ground water levels occur due to many factors including seasonal fluctuation, underground drainage patterns, regional fluctuations, and other factors.

Geologic Hazards

Seismicity and Fault Rupture

The San Francisco Bay area is one of the most seismically active areas in the Country. While seismologists cannot predict earthquake events, the U.S. Geological Survey's Working Group on California Earthquake Probabilities 2007 estimates there is a 63 percent chance of at least one magnitude 6.7 or greater earthquake occurring in the Bay Area region between 2007 and 2036. As seen with damage in San Francisco and Oakland due to the 1989 Loma Prieta earthquake that was centered about 50 miles south of San Francisco, significant damage can occur at considerable distances. Higher levels of shaking and damage would be expected for earthquakes occurring at closer distances.

The faults considered capable of generating significant earthquakes are generally associated with the well-defined areas of crustal movement, which trend northwesterly. The table below presents the State-considered active faults within 25 kilometers of the site.

Table 1: Approximate Fault Distances

Fault Name	Distance	
	(miles)	(kilometers)
Monte Vista-Shannon	0.8	1.3
San Andreas (1906)	4.0	6.4
Sargent	7.1	11.4
Zayante-Vergeles	10.2	16.4
Hayward (Southeast Extension)	12.0	19.3

A regional fault map is presented as Figure 3, illustrating the relative distances of the site to significant fault zones.

As discussed above several significant faults are located within 25 kilometers of the site. According to the USGS online 2008 National Seismic Hazard Maps, the nearest active fault segment (Monte Vista-Shannon) is 1.3 kilometers away from the site. The site is not located within a State-designated Alquist-Priolo Earthquake Fault Zone or a Santa Clara County Fault Rupture Hazard Zone. The site is within the "B Fault" zone for the Monte Vista-Shannon (California Department of Conservations, Division of Mines and Geology, 1998). According to the Town of Los Gatos General Plan Update (Fault, Lineament & Coseismic Deformations Map, Plate #3, 1999) shows a "Lineation indicative of faulting" (interpreted from an aerial photograph analysis).

The Santa Clara County Geologic Hazard Zones map shows the site is just outside of a fault rupture zone of a segment of the Monte Vista-Shannon fault, and according to the Fault Rupture Hazard Zones Map, the site is considered to have a low potential for fault rupture as it is in "areas outside recognized fault zones with no concentration of photo lineaments or evidence of widespread co-seismic deformation (Town of Los Gatos General Plan Update, 1999)."

Estimated Ground Shaking

Moderate to severe (design-level) earthquakes can cause strong ground shaking, which is the case for most sites within the greater Bay Area. New buildings should be designed to the current California Building Code (CBC) guidelines. For the purposes of this preliminary report, we have estimated ground shaking using the 2013 CBC estimation of F_{PGA} x PGA for a PGA_M of 0.96g.

Liquefaction Potential

The site is not located within a State-designated Liquefaction Hazard Zone (CGS, Los Gatos Quadrangle, 2002) or a Santa Clara County Liquefaction Hazard Zone (Santa Clara County, 2003), and is located within a zone mapped as having very low to no liquefaction potential according the Liquefaction Hazard Zones Map (Town of Los Gatos General Plan Update, Plate #5, 1999). However, we screened the site for liquefaction during our site exploration by retrieving samples from the site, performing visual classification on sampled materials, and performing various tests to further classify the soil properties.

During strong seismic shaking, cyclically induced stresses can cause increased pore pressures within the soil matrix that can result in liquefaction triggering, soil softening due to shear stress loss, potentially significant ground deformation due to settlement within sandy liquefiable layers as pore pressures dissipate, and/or flow failures in sloping ground or where open faces are present (lateral spreading) (NCEER 1998). Limited field and laboratory data is available regarding ground deformation due to settlement; however, in clean sand layers settlement on the order of 2 to 4 percent of the liquefied layer thickness can occur. Soils most susceptible to liquefaction are loose, non-cohesive soils that are saturated and are bedded with poor drainage, such as sand and silt layers bedded with a cohesive cap.

As discussed in the "Subsurface" sections above, we primarily encountered stiff cohesive soils, dense to very dense granular soils, and medium dense clayey sand with low liquefaction susceptibility. The layer of medium dense clayey sand encountered in EB-1 from about 17 to 21½ feet below ground surface is considered to have a low liquefaction potential as the

Plasticity Index (PI) test performed on this material resulted in a PI of 21. Based on the above, the site is considered to have a low potential for liquefaction-induced settlements.

Ground Rupture Potential

Since the site is not located within a currently mapped State-designated Liquefaction Hazard Zone and the previous borings indicate that the site is underlain by predominately by clays, dense granular soils, or granular soils with enough fines that are not susceptible to liquefaction to a depth of at least 30 feet (the maximum depth explored), we do not anticipate any potential for ground rupture as a result of liquefaction.

Lateral Spreading

Lateral spreading is horizontal/lateral ground movement of relatively flat-lying soil deposits towards a free face such as an excavation, channel, or open body of water; typically lateral spreading is associated with liquefaction of one or more subsurface layers near the bottom of the exposed slope. As failure tends to propagate as block failures, it is difficult to analyze and estimate where the first tension crack will form.

The site is considered to have a low potential for liquefaction potential; therefore, the potential for lateral spreading to affect the site is considered low.

Seismic Settlement/Unsaturated Sand Shaking

Loose unsaturated sandy soils can settle during strong seismic shaking. As the soils previously encountered above the ground water level at the site were predominantly stiff to hard clays or medium dense to very dense sands with gravels, in our opinion, the potential for significant differential seismic settlement affecting the proposed improvements is low.

Landsliding

The site is located within a landslide hazard zone, according to the Santa Clara County Geologic Hazard Zones map. The site is not located within a CGS landslide hazard zone (CGS, Los Gatos 7.5 Minute Quadrangle, 2002), and is located in an area considered to have negligible potential for slope instability according to the Slope Stability Hazard Map (Town of Los Gatos General Plan Update, Plate #8, 1999). According to Google Earth, the site gradient is approximately 7 percent downward to the east (an elevation change of 14 feet over a horizontal distance of 200 feet). The surrounding areas have similar topography. Therefore, in our opinion, the potential for a landslide to affect the proposed improvements is considered low.

Flooding

Based on our internet search of the Federal Emergency Management Agency (FEMA) flood map public database, the site is located within Zone X, determined as "areas of 0.2 percent annual chance of flood; areas of 1 percent annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1 percent annual chance flood." We recommend the project civil engineer be retained to confirm this information and verify the base flood elevation, if appropriate.

The Association of Bay Area Governments has compiled a database of Dam Failure Inundation Hazard Maps (ABAG, 1995). The generalized hazard maps were prepared by dam owners as

required by the State Office of Emergency Services; they are intended for planning purposes only. Based on our review of these maps, the site does not appear to be located within a dam failure inundation area.

Conclusions

Summary

From a geotechnical viewpoint, the project is feasible provided the concerns listed below are addressed in the final project design. An updated design-level geotechnical investigation should be performed once site development plans are finalized. The design-level investigation findings will be used to update the previous recommendations prior to final design and construction. The primary geotechnical concern for this project is re-development of the site. Our feasibility-level recommendations for this project are presented below.

Re-Development Considerations

The site is currently occupied by three single family residences and associated improvements. Potential geotechnical issues that are often associated with redeveloping sites include demolition of existing improvements, abandonment of existing utilities, presence of undocumented fill, and presence of buried structures such as septic systems and dry wells. General recommendations addressing these issues are discussed herein and would be presented in detail in our design level report.

Design-Level Geotechnical Investigation

The opinions presented in this letter were based on two borings intended for preliminary planning purposes only and our review of published geologic hazard maps (CGS) for the site vicinity. As site conditions may vary significantly between the small-diameter borings, we recommend that we be retained to 1) perform a design-level geotechnical investigation once detailed site development plans are available; 2) to review the geotechnical aspects of the project structural, civil, and landscape plans and specifications, allowing sufficient time to provide the design team with any comments prior to issuing the plans for construction; and 3) be present to provide geotechnical observation and testing during earthwork and foundation construction.

Preliminary Recommendations

Demolition of Existing Slabs, Foundations and Pavements

All slabs, foundations, and pavements should be completely removed from within planned building areas. Slabs, foundations, and pavements that extend into planned flatwork, pavement, or landscape areas may be left in place provided there is at least 3 feet of engineered fill overlying the remaining materials, they are shown not to conflict with new utilities, and that asphalt and concrete more than 10 feet square is broken up to provide subsurface drainage.

Removal of Existing Fills

While fills were not encountered in our borings, any fills encountered during site grading should be completely removed from within building areas and to a lateral distance of at least 5 feet

beyond the building footprint or to a lateral distance equal to fill depth below the perimeter footing, whichever is greater. Detailed recommendations of the removal of existing fills and acceptable material for engineered fill can be provided in a design level report.

Removal of Existing Underground Improvements

During demolition, grading, or footing excavation, previous underground improvements are often encountered. These include buried pipes, septic systems, leach fields, dry wells, etc., which will conflict with the proposed improvements if left in place. For forward planning purposes, these types of improvements should be anticipated and a contingency budget should be established for their removal and backfill.

Moisture Conditioning of Surface Soils

After site clearing and demolition is complete, and prior to backfilling any excavations resulting from fill removal or demolition, the excavation subgrade and subgrade within areas to receive additional site fills, slabs-on-grade and/or pavements should be scarified to a depth of 8 to 12 inches, moisture conditioned, and compacted in accordance with the "Compaction" section below.

Based on our laboratory testing, the soils within the upper 10 feet of the ground surface are about 5 to 10 percent below optimum. These soils will need to be scarified, ripped, windrowed, and otherwise processed as water is being sprayed to increase the water content of the soils to slightly above optimum. Grading contractors should anticipate the level of effort and need for additional water.

Presence of Gravels and Oversized Cobbles and Boulders

In the Los Gatos area, the soils can have up to about 60 percent Gravels, Cobbles and Boulders (3 to 24 inches in size). Excavation into these materials should be anticipated and special handling may be required. Detailed recommendations will be presented in the design level geotechnical report.

Seismic Design Criteria

The project structural design should be based on the 2013 California Building Code (CBC), which provides criteria for the seismic design of buildings in Chapter 16. The "Seismic Coefficients" used to design buildings are established based on a series of tables and figures addressing different site factors, including the soil profile in the upper 100 feet below grade and mapped spectral acceleration parameters based on distance to the controlling seismic source/fault system. Based on our boring and review of local geology, the site is underlain by soils with an averaged SPT "N" value of greater than 50 blows per foot. Therefore, we have classified the site as Soil Classification C. The mapped spectral acceleration parameters S_S and S_1 were calculated using the USGS computer program *Design Maps*, located at http://geohazards.usgs.gov/designmaps/us/application.php, based on the site coordinates presented below and the site classification. The table below lists the various factors used to determine the seismic coefficients and other parameters.

Table 2: CBC Site Categorization and Site Coefficients

Classification/Coefficient	Design Value
Site Class	D
Site Latitude	37.23831°
Site Longitude	-121.97676°
0.2-second Period Mapped Spectral Acceleration[1], S_S	2.585g
1-second Period Mapped Spectral Acceleration[1], S_1	1.026g
Short-Period Site Coefficient – Fa	1.0
Long-Period Site Coefficient – Fv	1.3
0.2-second Period, Maximum Considered Earthquake Spectral Response Acceleration Adjusted for Site Effects - S_{MS}	2.585g
1-second Period, Maximum Considered Earthquake Spectral Response Acceleration Adjusted for Site Effects – S_{M1}	1.334g
0.2-second Period, Design Earthquake Spectral Response Acceleration – S_{DS}	1.723g
1-second Period, Design Earthquake Spectral Response Acceleration – S_{D1}	0.890g

[1]For Site Class B, 5 percent damped.

Shallow Spread Footing Foundations

Spread footings should bear entirely on natural, undisturbed soil or engineered fill, be at least 18 inches wide, and extend at least 18 inches below the lowest adjacent grade. Lowest adjacent grade is defined as the deeper of the following: 1) bottom of the adjacent interior slab-on-grade, or 2) finished exterior grade, excluding landscaping topsoil.

Footings constructed to the above dimensions and in accordance with the "Earthwork" recommendations of this report are capable of supporting maximum allowable bearing pressures of 3,000 psf for dead loads, 4,500 psf for combined dead plus live loads, and 6,000 psf for all loads including wind and seismic. These pressures are based on factors of safety of 3.0, 2.0, and 1.5 applied to the ultimate bearing pressure for dead, dead plus live, and all loads, respectively. These pressures are net values; the weight of the footing may be neglected for the portion of the footing extending below grade (typically, the full footing depth). Top and bottom mats of reinforcing steel should be included in continuous footings to help span irregularities and differential settlement.

Footing Settlement

Structural loads were not provided to us at the time this letter was prepared; therefore, we assumed the typical loading in the following table.

Table 3: Assumed Structural Loading

Foundation Area	Range of Assumed Loads
Column Footing	200 to 400 kips
Perimeter Strip Footing	3 to 5 kips per lineal foot

Based on the above loading and the allowable bearing pressures presented above, we estimate that the total static footing settlement will be on the order of less than ½ to ¾ inch, with less than ¼ inch of post-construction differential settlement between adjacent foundation elements. As our footing loads were assumed, we recommend the final footing layout and loading is reviewed, and the settlement estimates above are verified in a design level investigation.

Lateral Loading

Lateral loads may be resisted by friction between the bottom of footing and the supporting subgrade, and also by passive pressures generated against footing sidewalls. An ultimate frictional resistance of 0.45 applied to the footing dead load, and an ultimate passive pressure based on an equivalent fluid pressure of 450 pcf may be used in design. The structural engineer should apply an appropriate factor of safety (such as 1.5) to the ultimate values above. Where footings are adjacent to landscape areas without hardscape, the upper 12 inches of soil should be neglected when determining passive pressure capacity.

Spread Footing Construction Considerations

Where utility lines will cross perpendicular to strip footings, the footing should be deepened to encase the utility line, providing sleeves or flexible cushions to protect the pipes from anticipated foundation settlement, or the utility lines should be backfilled to the bottom of footing with sand-cement slurry or lean concrete. Where utility lines will parallel footings and will extend below the "foundation plane of influence," an imaginary 1:1 plane projected down from the bottom edge of the footing, either the footing will need to be deepened so that the pipe is above the foundation plane of influence or the utility trench will need to be backfilled with sand-cement slurry or lean concrete within the influence zone. Sand-cement slurry used within foundation influence zones should have a minimum compressive strength of 75 psi.

Footing excavations should be filled as soon as possible or be kept moist until concrete placement by regular sprinkling. It is noted that since the soils are granular, some over-break may occur during the excavation and additional concrete may have to be placed. Forming of the footings may be necessary. A Cornerstone representative should observe all footing excavations prior to placing reinforcing steel and concrete. If there is a significant schedule delay between our initial observation and concrete placement, we may need to re-observe the excavations.

Garage Subdrainage

A portion of the garage will be below grade. Although ground water was not encountered in our borings, historic high ground water is mapped as 10 feet below the existing ground surface at the site. We recommend that a subdrain system be constructed behind the garage retaining walls and under the garage slab to drain any potential groundwater. Detailed design recommendations will be provided in the design level geotechnical report.

Retaining Walls

Static Lateral Earth Pressures

The structural design of any site retaining wall should include resistance to lateral earth pressures that develop from the soil behind the wall, any undrained water pressure, and surcharge loads acting behind the wall. Provided a drainage system is constructed behind the wall to prevent the build-up of hydrostatic pressures as discussed in the section below, we recommend that the walls be designed for the following pressures:

Table 4: Recommended Lateral Earth Pressures

Sloping Backfill Inclination (horizontal:vertical)	Lateral Earth Pressure*	
	Unrestrained – Cantilever Wall	Restrained – Braced Wall
Level	45 pcf	45 pcf + 8H
Additional Surcharge Loads	1/3 of vertical loads at top of wall	½ of vertical loads at top of wall

* Lateral earth pressures are based on an equivalent fluid pressure
** H is the distance in feet between the bottom of footing and top of retained soil

Basement walls should be designed as restrained walls. If adequate drainage cannot be provided behind the wall, an additional equivalent fluid pressure of 40 pcf should be added to the values above for both restrained and unrestrained walls for the portion of the wall that will not have drainage. Damp proofing or waterproofing of the walls may be considered where moisture penetration and/or efflorescence are not desired.

Seismic Lateral Earth Pressures

The 2013 CBC states that lateral pressures from earthquakes should be considered in the design of basements and retaining walls. We reviewed the seismic earth pressures for the proposed basement using procedures generally based on the Mononobe-Okabe method. Because the walls are likely approximately 11 feet in height or less, and peak ground accelerations are greater than 0.40g, we checked the result of the seismic increment when added to the recommended active earth pressure against the recommended fixed wall earth pressures. Because the wall is restrained, or will act as a restrained wall, and will be designed for 45 pcf (equivalent fluid pressure) plus a uniform earth pressure of 8H psf, based on current recommendations for seismic earth pressures (Lew et al., SEAOC 2010), it appears that active earth pressures plus a seismic increment do not exceed the fixed wall earth pressures. Therefore, in our opinion, an additional seismic increment above the design earth pressures is not required as long as the walls are designed for the restrained wall earth pressures recommended above.

Wall Drainage

Adequate drainage should be provided by a subdrain system behind all walls. This system should consist of a 4-inch minimum diameter perforated pipe placed near the base of the wall (perforations placed downward). The pipe should be bedded and backfilled with Class 2 Permeable Material per Caltrans Standard Specifications, latest edition. The permeable backfill should extend at least 12 inches out from the wall and to within 2 feet of outside finished grade. Alternatively, ½-inch to ¾-inch crushed rock may be used in place of the Class 2 Permeable

Material provided the crushed rock and pipe are enclosed in filter fabric, such as Mirafi 140N or approved equivalent. The upper 2 feet of wall backfill should consist of compacted on-site soil. The subdrain outlet should be connected to a free-draining outlet or sump.

Miradrain, Geotech Drainage Panels, or equivalent drainage matting can be used for wall drainage as an alternative to the Class 2 Permeable Material or drain rock backfill. Horizontal strip drains connecting to the vertical drainage matting may be used in lieu of the perforated pipe and crushed rock section. The vertical drainage panel should be connected to the perforated pipe or horizontal drainage strip at the base of the wall, or to some other closed or through-wall system such as the TotalDrain system from AmerDrain. Sections of horizontal drainage strips should be connected with either the manufacturer's connector pieces or by pulling back the filter fabric, overlapping the panel dimples, and replacing the filter fabric over the connection. At corners, a corner guard, corner connection insert, or a section of crushed rock covered with filter fabric must be used to maintain the drainage path.

Drainage panels should terminate 18 to 24 inches from final exterior grade. The Miradrain panel filter fabric should be extended over the top of and behind the panel to protect it from intrusion of the adjacent soil.

Backfill

Where surface improvements will be located over the retaining wall backfill, backfill placed behind the walls should be compacted to at least 95 percent relative compaction using light compaction equipment. Where no surface improvements are planned, backfill should be compacted to at least 90 percent. If heavy compaction equipment is used, the walls should be temporarily braced.

Foundations

Retaining walls may be supported on a continuous spread footing designed in accordance with the recommendations presented in the "Shallow Spread Footing Foundations" section of this letter.

Interior Slabs-on-Grade

As the Plasticity Index (PI) of the surficial soils is 15 or less, the proposed slabs-on-grade may be supported directly on subgrade prepared in accordance with the recommendations in our design-level report. If moisture-sensitive floor coverings are planned, a capillary moisture break may be incorporated in the project design, if desired. This typically consists of a 4-inch section of clean, crushed rock.

The structural engineer should determine the appropriate slab reinforcement for the loading requirements and considering the expansion potential of the underlying soils. Consideration should be given to limiting the control joint spacing to a maximum of about 2 feet in each direction for each inch of concrete thickness.

Exterior Flatwork

Sidewalks constructed in the public right of way should follow the applicable Town or County design standards. Sidewalks and flatwork constructed in the private areas can be constructed directly on properly compacted subgrade.

Exterior concrete flatwork subject to vehicular loading should be at least 4 inches thick and supported on at least 4 inches of Class II aggregate base overlying subgrade. If flatwork that will be subject to heavier or frequent vehicular loading is anticipated, we can provide recommendations in our design-level report. To help reduce the potential for uncontrolled shrinkage cracking, adequate expansion and control joints should be included. Consideration should be given to limiting the control joint spacing to a maximum of about 2 feet in each direction for each inch of concrete thickness. Flatwork should be isolated from adjacent foundations.

Pavements

The following preliminary asphalt concrete pavement recommendations tabulated below are based on the Procedure 608 of the Caltrans Highway Design Manual, estimated traffic indices for various pavement-loading conditions, and on a design R-value of 15. The design R-value was chosen for a conservative preliminary design. The R-value and pavement designs should be confirmed during the design-level geotechnical investigation.

Table 5: Asphalt Concrete Pavement Recommendations, Design R-value = 15

Design Traffic Index (TI)	Asphalt Concrete (inches)	Class 2 Aggregate Base* (inches)	Total Pavement Section Thickness (inches)
4.0	2.5	6.5	9.0
4.5	2.5	8.0	10.5
5.0	3.0	8.0	11.0
5.5	3.0	10.0	13.0
6.0	3.5	10.5	14.0
6.5	4.0	11.5	15.5

*Caltrans Class 2 aggregate base; minimum R-value of 78

Frequently, the full asphalt concrete section is not constructed prior to construction traffic loading. This can result in significant loss of asphalt concrete layer life, rutting, or other pavement failures. To improve the pavement life and reduce the potential for pavement distress through construction, we recommend the full design asphalt concrete section be constructed prior to construction traffic loading. Alternatively, a higher traffic index may be chosen for the areas where construction traffic will be use the pavements.

Closure

This report, an instrument of professional service, has been prepared for the sole use of the Valley Oak Partners, LLC specifically to support the conceptual planning and preliminary design of the Winchester Boulevard and Shelburne Way Residential Development project in Los Gatos, California. The opinions, conclusions, and recommendations presented in this report have been formulated in accordance with accepted geotechnical engineering practices that exist in Northern California at the time this report was prepared. No warranty, expressed or implied, is made or should be inferred.

Preliminary recommendations in this report are based upon the soil and ground water conditions encountered during our review of our limited preliminary geotechnical investigation. If variations or unsuitable conditions are encountered during construction, Cornerstone must be contacted to provide supplemental recommendations, as needed.

The Valley Oak Partners, LLC understands that Cornerstone reviewed information presented in the previous reports and documents and cannot be responsible for their accuracy.

Cornerstone prepared this report with the understanding that it is the responsibility of the owner or his representatives to see that the recommendations contained in this report are presented to other members of the design team and incorporated into the project plans and specifications, and that appropriate actions are taken to implement the geotechnical recommendations during construction.

Conclusions and recommendations presented in this report are valid as of the present time for the development as currently planned. Changes in the condition of the property or adjacent properties may occur with the passage of time, whether by natural processes or the acts of other persons. In addition, changes in applicable or appropriate standards may occur through legislation or the broadening of knowledge. Therefore, the conclusions and recommendations presented in this report may be invalidated, wholly or in part, by changes beyond Cornerstone's control. This report should be reviewed by Cornerstone after a period of three (3) years has elapsed from the date of this report. In addition, if the current project design is changed, then Cornerstone must review the proposed changes and provide supplemental recommendations, as needed.

An electronic transmission of this report may also have been issued. While Cornerstone has taken precautions to produce a complete and secure electronic transmission, please check the electronic transmission against the hard copy version for conformity.

Recommendations provided in this report are based on the assumption that Cornerstone will be retained to provide observation and testing services during construction to confirm that conditions are similar to that assumed for design, and to form an opinion as to whether the work has been performed in accordance with the project plans and specifications. If we are not retained for these services, Cornerstone cannot assume any responsibility for any potential claims that may arise during or after construction as a result of misuse or misinterpretation of Cornerstone's report by others. Furthermore, Cornerstone will cease to be the Geotechnical-Engineer-of-Record if we are not retained for these services.

If you have any questions or need any additional information from us, please call and we will be glad to discuss them with you.

CORNERSTONE EARTH GROUP

Sincerely,

CORNERSTONE EARTH GROUP, INC.

Scott E. Fitinghoff, P.E., G.E.
Senior Principal Engineer

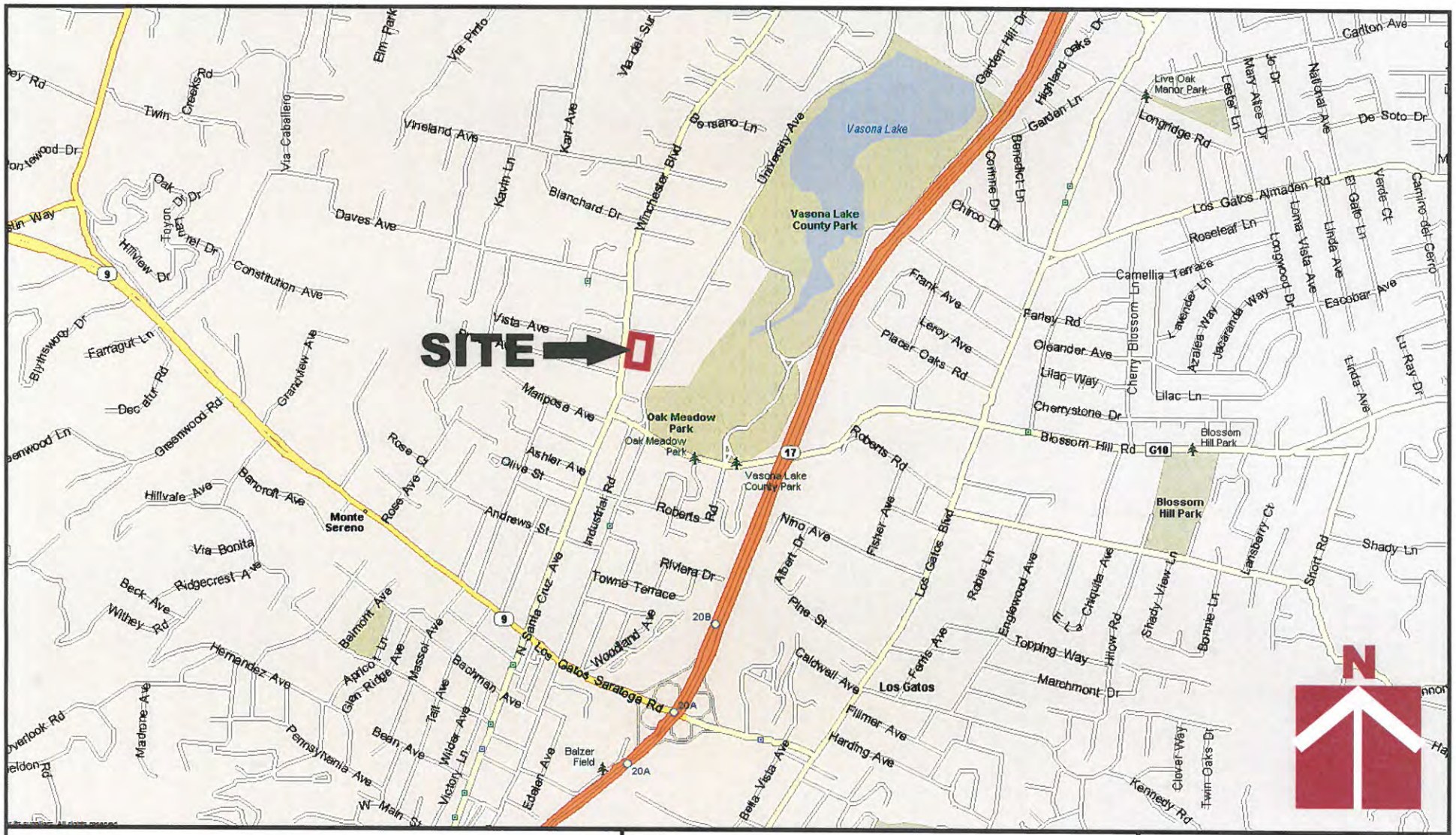
REGISTERED PROFESSIONAL ENGINEER
SCOTT E. FITINGHOFF
NO. 2379
Exp. 06/30/16
GEOTECHNICAL
STATE OF CALIFORNIA

Nicholas S. Devlin, P.E.
Quality Assurance Reviewer

NSD:SEF:maa

Copies: Addressee (PDF by email)

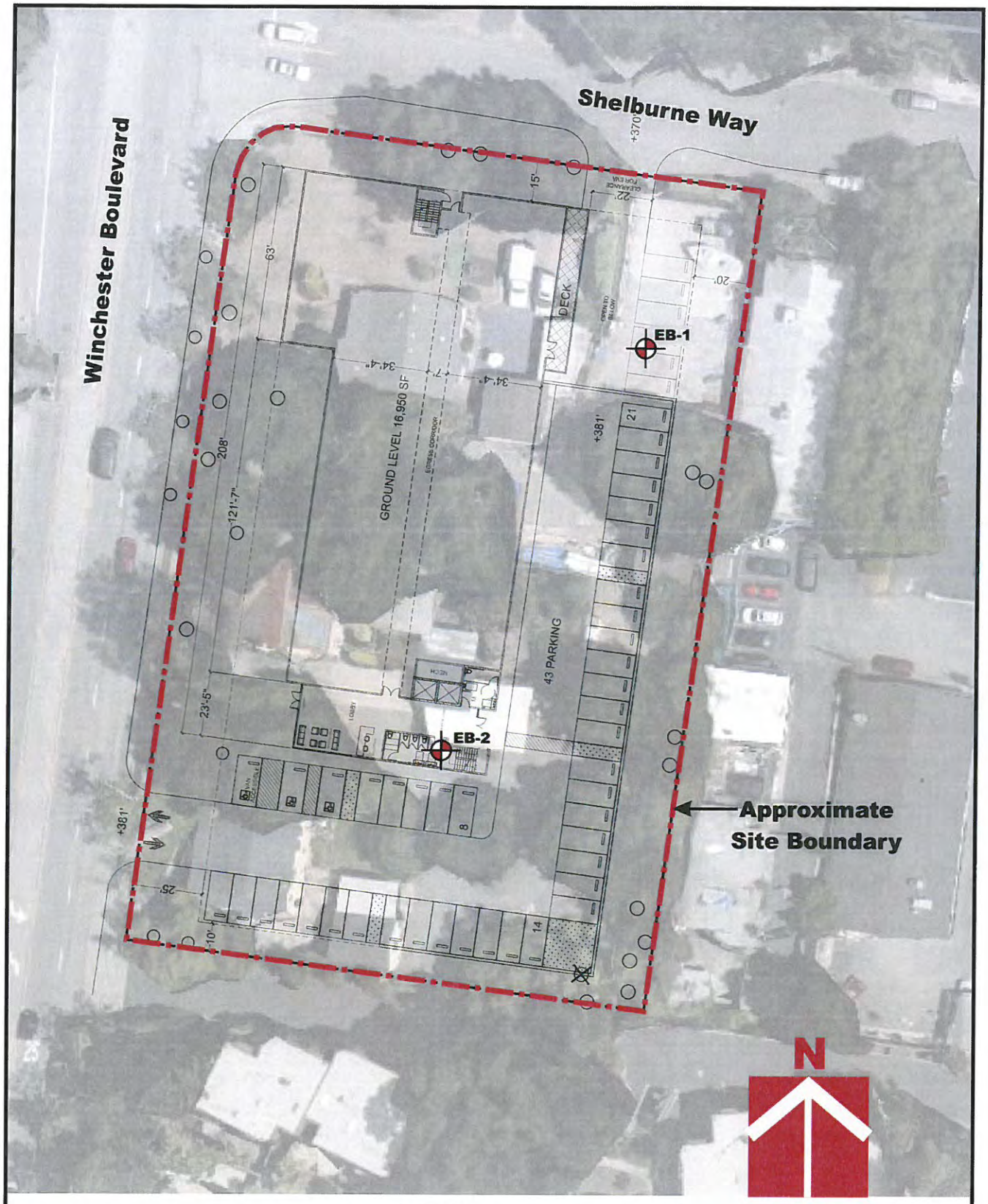
Attachments: Figure 1 – Vicinity M
Figure 2 – Site Plar
Figure 3 – Regiona
Key to Boring Logs
Boring Logs EB-1 and EB-2
Laboratory Test Data



Vicinity Map

Winchester Boulevard and Shellburne Way Develoment
Los Gatos, CA

Project Number	384-8-2
Figure Number	Figure 1
Date	September 2015
Drawn By	RRN



Legend

Approximate location of exploratory boring

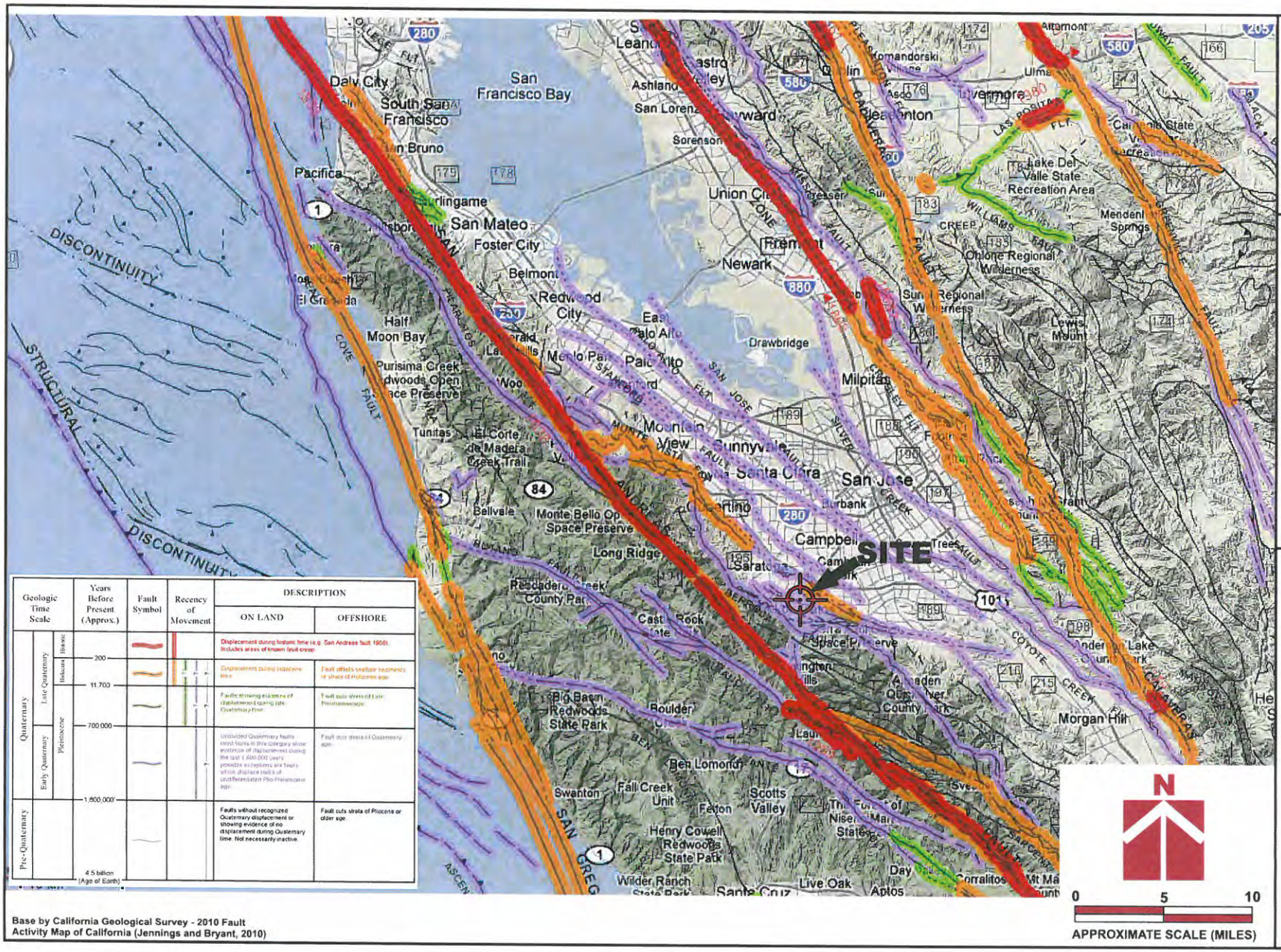
0 50 100

APPROXIMATE SCALE (FEET)

Base by Google Earth
Overlay by Studio T Square, "Site Plan, Ground Floor - SP1.1", dated 8/11/2015

CORNERSTONE EARTH GROUP

Site Plan	
Winchester Boulevard and Shelburne Way Development Los Gatos, CA	
Project Number	384-8-2
Figure Number	Figure 2
Date	September 2015
Drawn By	RRN



Base by California Geological Survey - 2010 Fault Activity Map of California (Jennings and Bryant, 2010)

CORNERSTONE EARTH GROUP

Regional Fault Map

Winchester Boulevard and Shellburne Way Develoment
Los Gatos, CA

Project Number 384-8-2

Figure Number Figure 3

Date September 2015

Drawn By RRN

UNIFIED SOIL CLASSIFICATION (ASTM D-2487-98)

MATERIAL TYPES	CRITERIA FOR ASSIGNING SOIL GROUP NAMES			GROUP SYMBOL	SOIL GROUP NAMES & LEGEND
COARSE-GRAINED SOILS >50% RETAINED ON NO. 200 SIEVE	GRAVELS >50% OF COARSE FRACTION RETAINED ON NO 4. SIEVE	CLEAN GRAVELS <5% FINES	Cu>4 AND 1<Cc<3	GW	WELL-GRADED GRAVEL
			Cu>4 AND 1>Cc>3	GP	POORLY-GRADED GRAVEL
		GRAVELS WITH FINES >12% FINES	FINES CLASSIFY AS ML OR CL	GM	SILTY GRAVEL
			FINES CLASSIFY AS CL OR CH	GC	CLAYEY GRAVEL
	SANDS >50% OF COARSE FRACTION PASSES ON NO 4. SIEVE	CLEAN SANDS <5% FINES	Cu>6 AND 1<Cc<3	SW	WELL-GRADED SAND
			Cu>6 AND 1>Cc>3	SP	POORLY-GRADED SAND
		SANDS AND FINES >12% FINES	FINES CLASSIFY AS ML OR CL	SM	SILTY SAND
			FINES CLASSIFY AS CL OR CH	SC	CLAYEY SAND
FINE-GRAINED SOILS >50% PASSES NO. 200 SIEVE	SILTS AND CLAYS LIQUID LIMIT<50	INORGANIC	PI>7 AND PLOTS>"A" LINE	CL	LEAN CLAY
			PI>4 AND PLOTS<"A" LINE	ML	SILT
		ORGANIC	LL (oven dried)/LL (not dried)<0.75	OL	ORGANIC CLAY OR SILT
	SILTS AND CLAYS LIQUID LIMIT>50	INORGANIC	PI PLOTS >"A" LINE	CH	FAT CLAY
			PI PLOTS <"A" LINE	MH	ELASTIC SILT
		ORGANIC	LL (oven dried)/LL (not dried)<0.75	OH	ORGANIC CLAY OR SILT
HIGHLY ORGANIC SOILS		PRIMARILY ORGANIC MATTER, DARK IN COLOR, AND ORGANIC ODOR		PT	PEAT

OTHER MATERIAL SYMBOLS

- Poorly-Graded Sand with Clay
- Clayey Sand
- Sandy Silt
- Artificial/Undocumented Fill
- Poorly-Graded Gravelly Sand
- Topsoil
- Well-Graded Gravel with Clay
- Well-Graded Gravel with Silt
- Sand
- Silt
- Well Graded Gravelly Sand
- Gravelly Silt
- Asphalt
- Boulders and Cobble

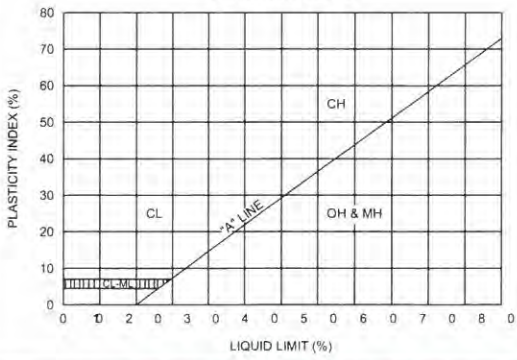
SAMPLER TYPES

- SPT
- Modified California (2.5" I.D.)
- Rock Core
- Shelby Tube
- No Recovery
- Grab Sample

ADDITIONAL TESTS

CA	-	CHEMICAL ANALYSIS (CORROSIVITY)	PI	-	PLASTICITY INDEX
CD	-	CONSOLIDATED DRAINED TRIAXIAL	SW	-	SWELL TEST
CN	-	CONSOLIDATION	TC	-	CYCLIC TRIAXIAL
CU	-	CONSOLIDATED UNDRAINED TRIAXIAL	TV	-	TORVANE SHEAR
DS	-	DIRECT SHEAR	UC	-	UNCONFINED COMPRESSION
PP	-	POCKET PENETROMETER (TSF)	(1.5)	-	(WITH SHEAR STRENGTH IN KSF)
(3.0)	-	(WITH SHEAR STRENGTH IN KSF)		-	
RV	-	R-VALUE	UU	-	UNCONSOLIDATED UNDRAINED TRIAXIAL
SA	-	SIEVE ANALYSIS: % PASSING #200 SIEVE			
▼	-	WATER LEVEL			

PLASTICITY CHART



PENETRATION RESISTANCE (RECORDED AS BLOWS / FOOT)

SAND & GRAVEL		SILT & CLAY		
RELATIVE DENSITY	BLOWS/FOOT*	CONSISTENCY	BLOWS/FOOT*	STRENGTH** (KSF)
VERY LOOSE	0 - 4	VERY SOFT	0 - 2	0 - 0.25
LOOSE	4 - 10	SOFT	2 - 4	0.25 - 0.5
MEDIUM DENSE	10 - 30	MEDIUM STIFF	4 - 8	0.5 - 1.0
DENSE	30 - 50	STIFF	8 - 15	1.0 - 2.0
VERY DENSE	OVER 50	VERY STIFF	15 - 30	2.0 - 4.0
		HARD	OVER 30	OVER 4.0

* NUMBER OF BLOWS OF 140 LB HAMMER FALLING 30 INCHES TO DRIVE A 2 INCH O.D. (1-3/8 INCH I.D.) SPLIT-BARREL SAMPLER THE LAST 12 INCHES OF AN 18-INCH DRIVE (ASTM-1586 STANDARD PENETRATION TEST).

** UNDRAINED SHEAR STRENGTH IN KIPS/SQ. FT. AS DETERMINED BY LABORATORY TESTING OR APPROXIMATED BY THE STANDARD PENETRATION TEST, POCKET PENETROMETER, TORVANE, OR VISUAL OBSERVATION.

CORNERSTONE EARTH GROUP

LEGEND TO SOIL DESCRIPTIONS

Figure Number A-1

BORING NUMBER EB-1

CORNERSTONE EARTH GROUP

PROJECT NAME Winchester Boulevard and Shelburne Way
PROJECT NUMBER 384-8-1
PROJECT LOCATION Los Gatos, CA
DATE STARTED 7/21/14 **DATE COMPLETED** 7/21/14
GROUND ELEVATION 375 FT +/- **BORING DEPTH** 29.8 ft.
DRILLING CONTRACTOR Exploration Geoservices,Inc.
LATITUDE 37.238207° **LONGITUDE** -121.976361°
DRILLING METHOD Mobile B-40, 8 inch Hollow-Stem Auger
GROUND WATER LEVELS:
LOGGED BY PKM
AT TIME OF DRILLING Not Encountered
NOTES
AT END OF DRILLING Not Encountered

This log is a part of a report by Cornerstone Earth Group, and should not be used as a stand-alone document. This description applies only to the location of the exploration at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with time. The description presented is a simplification of actual conditions encountered. Transitions between soil types may be gradual.

ELEVATION (ft)	DEPTH (ft)	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT, %	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE	UNDRAINED SHEAR STRENGTH, ksf
375.0	0	**Silty, Clayey Sand (SC)** medium dense, dry, brown, fine to coarse sand, some fine subangular to subrounded gravel	22	MC-1B	105	6			
372.5		**Silty, Clayey Sand with Gravel (SC-SM)** very dense, dry to moist, brown, fine to coarse sand, fine to coarse subangular to subrounded gravel	50/6"	MC					
	5		50/3"	MC-3A		8			
			71	SPT-4		6			
	10								
			91	SPT					
	15								
358.0		**Clayey Sand (SC)** medium dense, moist, brown, fine to coarse sand, some fine subangular to subrounded gravel Liquid Limit = 37, Plastic Limit = 16	22	SPT-6		15	21		
	20		13	SPT-7B		25			
353.5		**Clayey Sand with Gravel (SC)** very dense, moist, brown, fine to coarse sand, fine to coarse subangular to subrounded gravel	52	SPT					
350.5	25	**Sandy Lean Clay (CL)** hard, moist, brown, fine to coarse sand, some fine subangular to subrounded gravel, low to moderate plasticity	27	SPT					>4.5
			50/4"	MC-10B	112	18			>4.5
345.2	30	Bottom of Boring at 29.8 feet.							

UNDRAINED SHEAR STRENGTH, ksf: ○ HAND PENETROMETER; △ TORVANE; ● UNCONFINED COMPRESSION; ▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL (1.0, 2.0, 3.0, 4.0)

BORING NUMBER EB-2

CORNERSTONE EARTH GROUP

PROJECT NAME Winchester Boulevard and Shelburne Way
PROJECT NUMBER 384-8-1
PROJECT LOCATION Los Gatos, CA
GROUND ELEVATION 379 FT +/- **BORING DEPTH** 29.3 ft.
LATITUDE 37.237771° **LONGITUDE** -121.976618°
GROUND WATER LEVELS:
AT TIME OF DRILLING Not Encountered
AT END OF DRILLING Not Encountered

DATE STARTED 7/21/14 **DATE COMPLETED** 7/21/14
DRILLING CONTRACTOR Exploration Geoservices,Inc.
DRILLING METHOD Mobile B-40, 8 inch Hollow-Stem Auger
LOGGED BY PKM
NOTES

This log is a part of a report by Cornerstone Earth Group, and should not be used as a stand-alone document. This description applies only to the location of the exploration at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with time. The description presented is a simplification of actual conditions encountered. Transitions between soil types may be gradual.

ELEVATION (ft)	DEPTH (ft)	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT, %	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE
379.0	0	**Silty, Clayey Sand with Gravel (SC-SM)** very dense, dry to moist, brown, fine to coarse sand, fine to coarse subangular to subrounded gravel Liquid Limit = 20, Plastic Limit = 16	50/3"	MC-1B	108	5	4	
			50/6"	MC				
	5		50/5"	SPT-3		5		
		medium dense	25	SPT-4		5		
	10	dense	44	SPT				
366.5		**Lean Clay with Sand (CL)** stiff, moist, brown, fine sand, moderate plasticity	12	SPT-6		24		
	15							
363.5		**Clayey Sand with Gravel (SC)** dense to medium dense, moist, brown with reddish brown mottles, fine to coarse sand, fine to coarse subangular to subrounded gravel	76	MC-7C	124	10		
			48	MC				
	20		44	SPT				
358.0		**Lean Clay with Sand (CL)** stiff, moist, brown, fine to coarse sand, moderate plasticity						
355.0		**Clayey Sand with Gravel (SC)** dense, moist, brown, fine to coarse sand, fine to coarse subangular to subrounded gravel	49	MC-10B	125	12		
	25		33	SPT				
353.0		**Sandy Lean Clay (CL)** hard, moist, brown, fine to coarse sand, low to moderate plasticity						
351.0		**Clayey Sand with Gravel (SC)** very dense, moist, brown, fine to coarse sand, fine to coarse subangular to subrounded gravel	50/4"	MC-12B	122	11		
349.7	30							

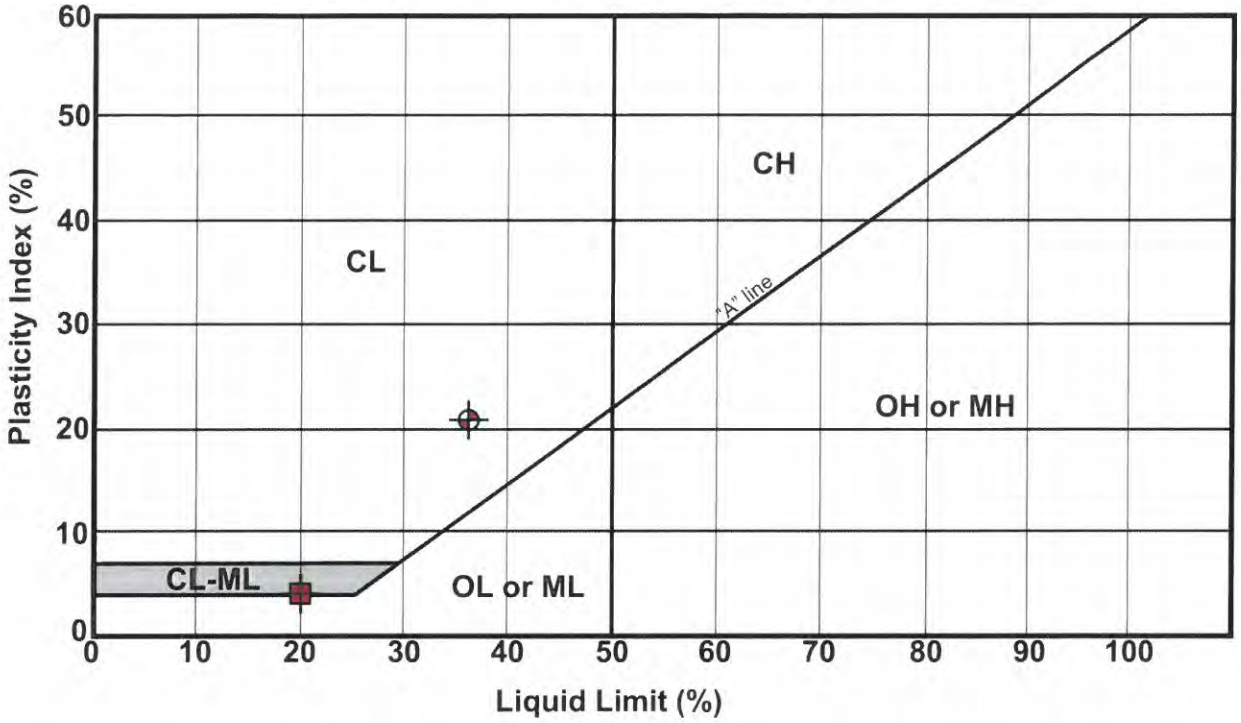
Bottom of Boring at 29.3 feet.

UNDRAINED SHEAR STRENGTH, ksf
○ HAND PENETROMETER
△ TORVANE
● UNCONFINED COMPRESSION
▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL
1.0 2.0 3.0 4.0

>4.5

CORNERSTONE EARTH GROUP2 - CORNERSTONE 0812.GDT - 8/8/14 09:27 - P:\DRAFTING\GINT FILES\384-8-1 WINCHESTER AND SHELBURNE.GPJ

Plasticity Index (ASTM D4318) Testing Summary



Symbol	Boring No.	Depth (ft)	Natural Water Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index	Passing No. 200 (%)	Group Name (USCS - ASTM D2487)
⊕	EB-1	18.5	15	37	16	21	—	Clayey Sand (SC) (CL fines)
■	EB-2	2.0	5	20	16	4	—	Silty, Clayey Sand (SC-SM) (CL-ML fines)

Samples prepared in accordance with ASTM D421

CORNERSTONE EARTH GROUP

Plasticity Index Testing Summary

Winchester Boulevard and Shellburne Way Develoment
Los Gatos, CA

Project Number: 384-8-1

Figure Number: Figure B1

Date: August 2014

Drawn By: FLL

APPENDIX C

DEVELOPMENT PLANS

WINCHESTER BLVD. OFFICE - LOS GATOS, CA

May 04, 2016 - Submittal

GATES +ASSOCIATES
LANDSCAPE ARCHITECTURE
LAND PLANNING • URBAN DESIGN
2671 CROW CANYON ROAD, CALIFORNIA 94583
T 925.736.8176 www.dgates.com

BkF
ENGINEERS / SURVEYORS / PLANNERS

VALLEY OAK PARTNERS

STUDIO T SQUARE

VICINITY MAP:

PROPERTY INFORMATION:

15860, 15880, 15894
Winchester Blvd, Los Gatos, CA
APN: 529-11-013, -038, -039 and -040
Proposed Land Use: Office

PROPOSED LAND USE:

Existing GP Designation: Office Professional
Existing Land Use: Residential
Proposed Land Use: Office
Existing Zoning: O - Office
Gross Acreage: 1.31 Acres

PROJECT SUMMARY:

SITE AREA: 1.31 ACRE
GROSS OFFICE AREA: 30,070 SF
LOT COVERAGE: 26.5% (40% MAX)
PARKING REQUIRED: 128 (1 STALL / 235 SQ. FT.)
PARKING PROVIDED: 128
SUBTERRANEAN PODIUM GARAGE: TYPE IA, S-2 OCCUPANCY
OFFICE BUILDING: TYPE IIIB, B OCCUPANCY

APPLICABLE CODES:

2013 CA Building Code
2013 CA Electrical Code
2013 CA Mechanical Code
2013 CA Plumbing Code
2013 CA Green Building Standards
2013 CA Energy Efficiency Standards
Town of Los Gatos Code of Ordinances

PROJECT TEAM:

APPLICANT:
VALLEY OAK PARTNERS, LLC
734 The Alameda
San Jose, CA 95126
Contact: DOUG RICH
Phone: 408.282.0995

ARCHITECT/PLANNER:
STUDIO T-SQ, INC.
304 12th Street, Suite 2A
Oakland, CA 94607
Contact: CHEK TANG / CHRIS LEE
Phone: 510.451.2850

STRUCTURAL ENGINEER:
SW Structural, Inc.
17582 San Benito Way,
Los Gatos, CA 95030
Contact: STEVE F. WADE
Phone: 408.399.0623

CIVIL ENGINEER:
BKF Engineers
1650 Technology Drive, Suite 650
San Jose, CA 95110
Contact: SCOTT SCHORK
Phone: 408.467.9126

LANDSCAPE ARCHITECT:
GATES + ASSOCIATES
2671 Crow Canyon Road
San Ramon, CA 94583
Contact: JANET KIYOI
Phone: 925.736.8176 x246

SHEET INDEX:

STUDIO T SQUARE

: Architecture
: Planning
: Urban Design

: 304 12th Street, Suite 2A
: Oakland, California 94607
: (510) 451 - 2850

Winchester Blvd. Office
Winchester Blvd. and Shelburne Way, Los Gatos, CA

Valley Oak Partners
734 The Alameda
San Jose, California

Sheet Title:

DATA SHEET

Job No. 15019
Date: 05/04/2016
Scale:
Drawn By:

Sheet No:

G0.0

SANTA CLARA COUNTY

STUDIO T SQUARE

: Architecture
: Planning
: Urban Design

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: Oakland, California 94607
: (510) 451 - 2850

Winchester Blvd. Office
Winchester Blvd. and Shelburne Way, Los Gatos, CA

Valley Oak Partners
734 The Alameda
San Jose, California

Sheet Title:

SITE LOCATION

Job No. 15019
Date: 05/04/2016
Scale:
Drawn By:

Sheet No:

SP1.0

Tree-Lined Winchester Blvd

COMMERCIAL / SFD

DOG & CAT HOSPITAL

AUTO BODY SHOP ON SHELBURNE

Commercial on Winchester Blvd

Existing Site and Frontage

Adjacent Multi-Family Residential

Apartments on N Santa Cruz Ave

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Winchester Blvd. Office
Winchester Blvd. and Shelburne Way, Los Gatos, CA

Valley Oak Partners
734 The Alameda
San Jose, California

Sheet Title:

SITE CONTEXT

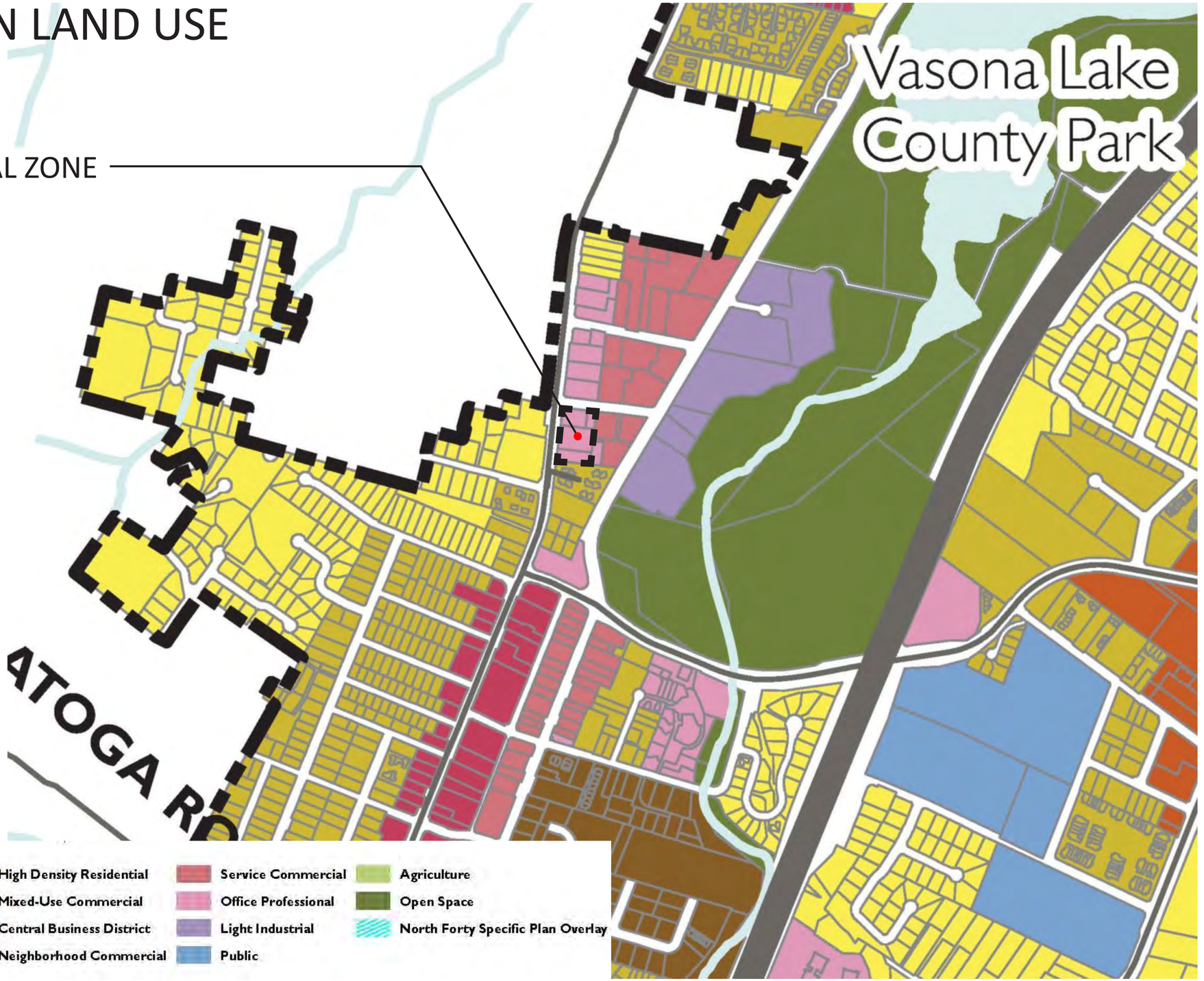
Job No. 15019
Date: 05/04/2016
Scale:
Drawn By:

Sheet No:

SP2.0

GENERAL PLAN LAND USE

OFFICE PROFESSIONAL ZONE



STUDIO
T SQUARE

: Architecture
: Planning
: Urban Design

: 304 12th Street, Suite 2A
: Oakland, California 94607
: (510) 451 - 2850

Winchester Blvd. Office
Winchester Blvd. and Shelburne Way, Los Gatos, CA

Valley Oak Partners
734 The Alameda
San Jose, California

Sheet Title:

GENERAL PLAN
LAND USE

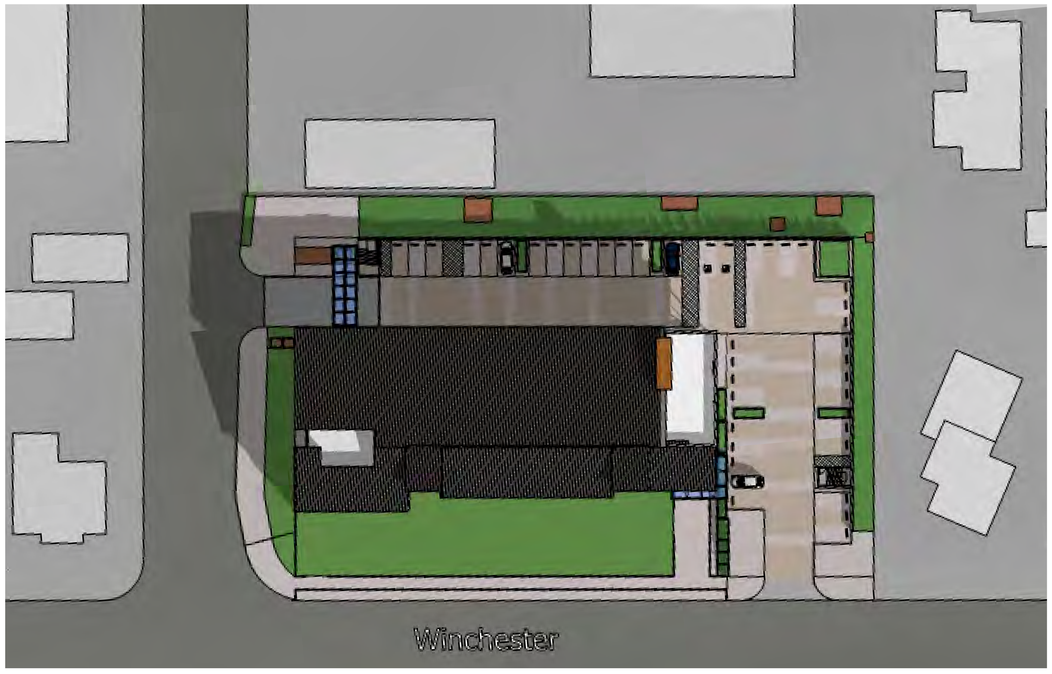
Job No. 15019
Date: 05/04/2016
Scale:
Drawn By:

Sheet No:

SP3.0

Spring - April 15, at 3:00PM

Summer - July 15, at 3:00PM



Autumn - October 15, at 3:00PM

Winter - January 15, at 3:00PM

STUDIO
T SQUARE

: Architecture
: Planning
: Urban Design

: 304 12th Street, Suite 2A
: Oakland, California 94607
: (510) 451 - 2850

Winchester Blvd. Office
Winchester Blvd. and Shelburne Way, Los Gatos, CA

Valley Oak Partners
734 The Alameda
San Jose, California

Sheet Title:

SHADOW STUDY DIAGRAM

Job No. 15019
Date: 05/04/2016
Scale:
Drawn By:

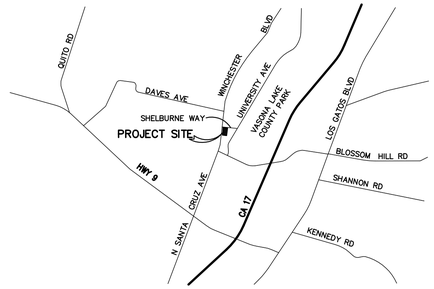
Sheet No:

SP4.0

ARCHITECTURE AND SITE REVIEW

WINCHESTER BLVD OFFICE

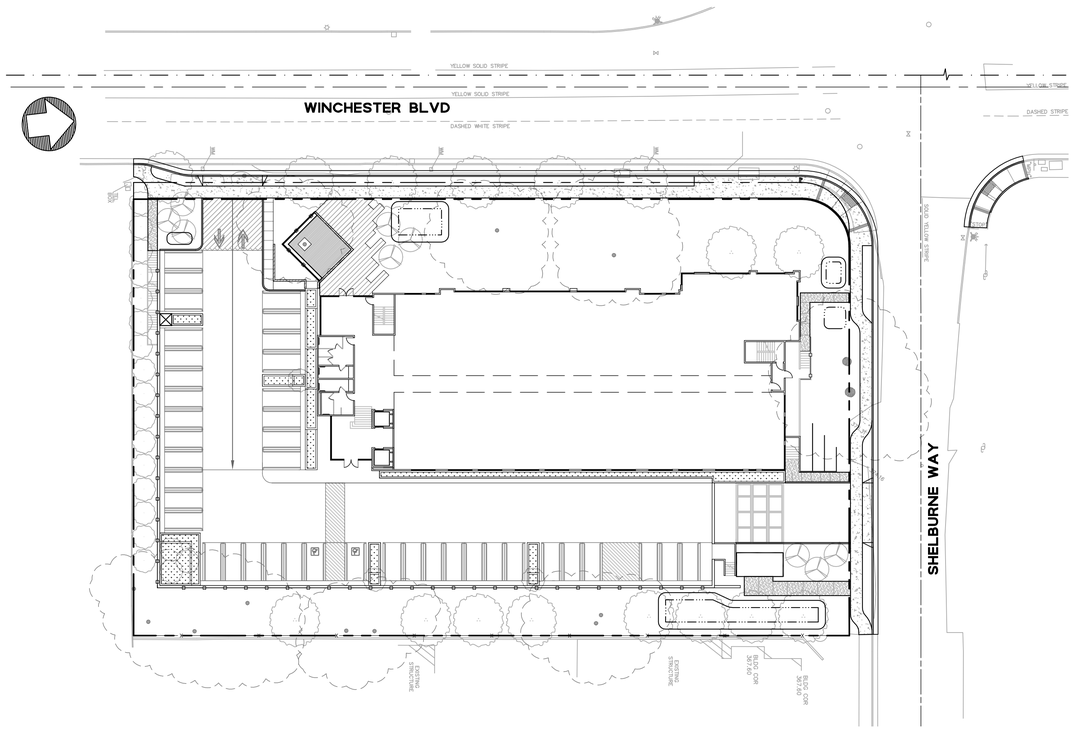
LOS GATOS, SANTA CLARA COUNTY, CALIFORNIA



VICINITY MAP
N.T.S.

LEGEND

PROPERTY LINE
LOT LINE
STREET CENTERLINE
MONUMENT LINE
CONTOUR LINE — 39
STORM DRAIN LINE — 30" SD
SANITARY SEWER LINE — 10" SS
WATER LINE — 8"W
ELECTRIC LINE — E
GAS LINE — 6"G (ABS) — G
WATER VALVE — WV
FIRE HYDRANT
CLEAN OUT — CO
SIGN
ELECTROLIER
GAS VALVE — GV
FENCE LINE — X



ABBREVIATIONS

AC	ASPHALT CONCRETE
B	BASEMENT SLAB ELEVATION
BB	BUBBLER BOX
BLDG	BUILDING
BW	BACK OF WALK/BOTTOM OF WALL
CB	CATCH BASIN
CONC	CONCRETE
COR	CORNER
CY	CUBIC YARD
DI	DRAIN INLET
E	ELECTRIC
EP	EDGE OF PAVEMENT
EVAE	EMERGENCY VEHICLE ACCESS EASEMENT
FC	FACE OF CURB
FDC	FIRE DEPARTMENT CONNECTION
FF	FINISH FLOOR ELEVATION
FH	FIRE HYDRANT
GS	GARAGE SLAB ELEVATION
INV	INVERT ELEVATION
LG	LIP OF GUTTER
LS	LANDSCAPE
PIEE	PRIVATE INGRESS/EGRESS EASEMENT
PIV	POST INDICATOR VALVE
PS	PARKING STALL
PUE	PUBLIC UTILITY EASEMENT
R	RIM
SF	SQUARE FEET
SJWC	SAN JOSE WATER COMPANY
SD	STORM DRAIN
SDCO	STORM DRAIN CLEANOUT
SDE	PRIVATE STORM DRAIN EASEMENT
SDMH	STORM DRAIN MANHOLE
SS	SANITARY SEWER
SSCO	SANITARY SEWER CLEANOUT
SSE	PRIVATE SANITARY SEWER EASEMENT
SSMH	SANITARY SEWER MANHOLE
SW	SIDEWALK
TC	TOP OF CURB
TYP	TYPICAL
TW	TOP OF WALL
W	WATER
WM	WATER METER
WV	WATER VALVE

UTILITY NOTES

WATER SUPPLY:	SAN JOSE WATER COMPANY
STORM DRAINAGE:	TOWN OF LOS GATOS
SANITARY SEWER:	WEST VALLEY SANITATION DISTRICT
GARBAGE COLLECTION:	WEST VALLEY COLLECTION & RECYCLING
GAS:	PACIFIC GAS & ELECTRIC
ELECTRIC:	PACIFIC GAS & ELECTRIC
TELEPHONE:	AT&T/VERIZON CALIFORNIA
CABLE:	COMCAST

EARTHWORK SUMMARY		
	CUT (C.Y.)	FILL (C.Y.)
BUILDING/GARAGE	6,600	–
DRIVEWAY	20	–
LANDSCAPE	–	–
BIORETENTION	400	–
*TOTAL	7,020	–

*EARTHWORK QUANTITIES ARE SHOWN FOR PLANNING PURPOSES ONLY. CONTRACTOR SHALL PERFORM THEIR OWN EARTHWORK CALCULATION.

PROJECT DATA

1. PROJECT ADDRESS: 15860, 15880, 15894 WINCHESTER BLVD., AND SHELBURNE WAY, LOS GATOS, CA
2. ASSESSORS PARCEL NO.: 529-11-013, 038, 039 AND 040
3. EXISTING LAND USE: RESIDENTIAL
4. PROPOSED LAND USE: OFFICE
5. EXISTING ZONING: O-OFFICE
6. PROPOSED ZONING: O-OFFICE
7. GROSS ACREAGE: 1.31 ACRES
8. ESTIMATED AREA OF LAND DISTURBANCE: 1.31 ACRES
9. EXISTING NUMBER OF BUILDINGS: 9 RESIDENTIAL/CARPORTS/SHEDS
10. NUMBER OF BUILDINGS REMOVED: 9
11. PROPOSED NUMBER OF HOMES: 0
12. PROPOSED NUMBER OF PARKING SPACE: 128 STALLS
13. FLOOD ZONE: X, FIRM PANEL 376 OF 830, MAP NUMBER 06085C0376H, DATED 05/18/2009.
14. BASIS OF BEARINGS:
    THE BEARING S83°18'46"E OF THE MONUMENT LINE OF THE SHELBURNE WAY, AS SHOWN ON THAT CERTAIN MAP FILED IN THE OFFICE OF THE RECORDER OF SANTA CLARA COUNTY, STATE OF CALIFORNIA, IN BOOK "U" OF MAPS AT PAGES 34 AND 35, WAS USED AS THE BASIS OF BEARINGS SHOWN ON THIS MAP.
15. BENCHMARK LG 21: BRASS DISK IN MONUMENT WELL AT EASTERY INTERSECTION OF UNIVERSITY AVENUE AND SHELBURNE WAY. ELEVATION: 351.65 (TOWN OF LOS GATOS DATUM)

CIVIL SHEET INDEX

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: Architecture
: Planning
: Urban Design

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Sheet Title:
CIVIL TITLE SHEET

BKF Job No. 20126028
Date: 5/4/2016
Scale:
Drawn By: PK

Sheet No:
C1.0

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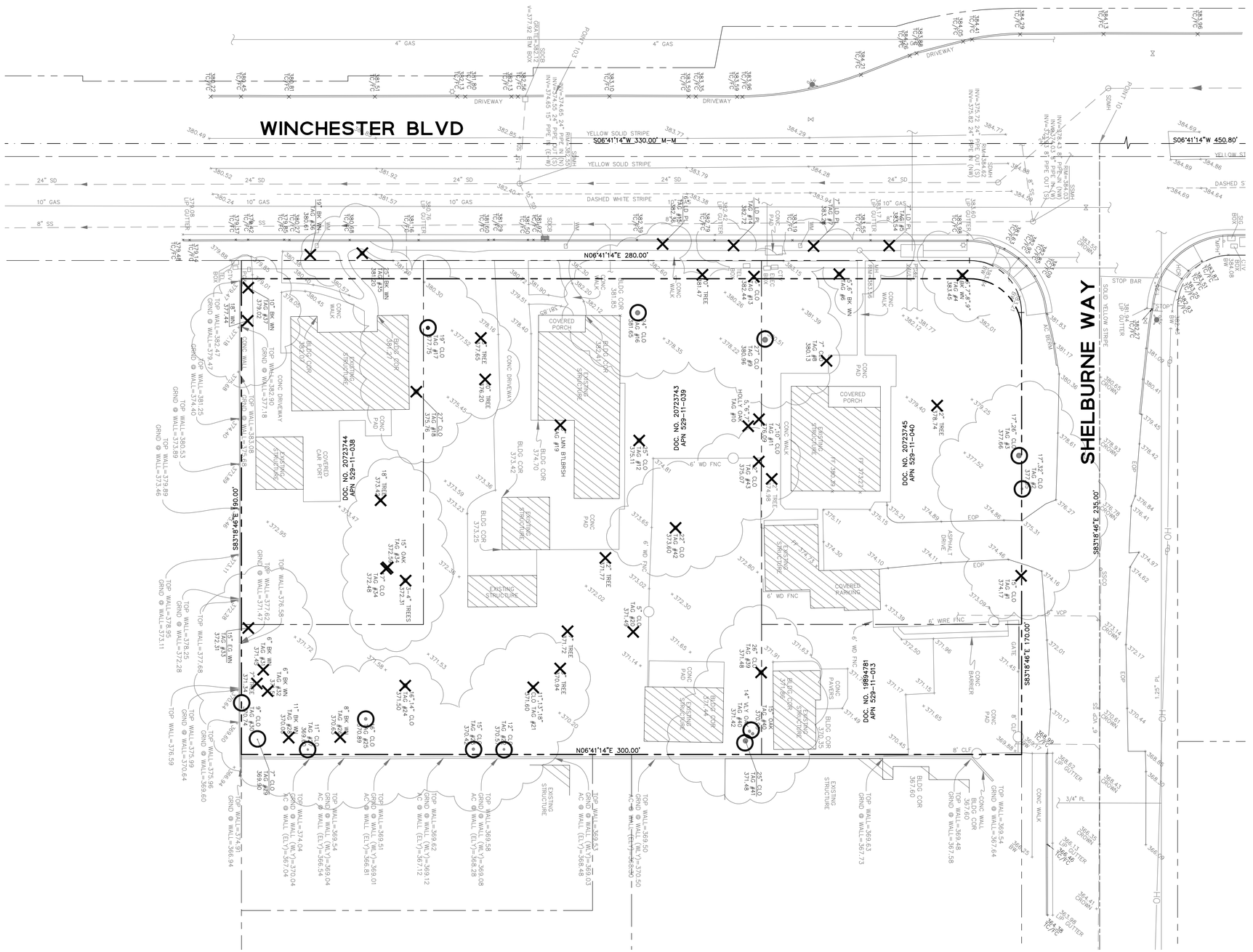

LEGEND:

AC	ASPHALT CONCRETE
BC	BUILDING CORNER
BW	BACK OF WALK
CB	CATCH BASIN
CMP	CORRUGATED METAL PIPE
CO	CLEAN OUT
CRN	CROWN
DW	DRIVEWAY
EC	EDGE OF CONCRETE
EM	ELECTRIC METER
EP	EDGE OF PAVEMENT
FCOR	FENCE CORNER
FD	FOUND
FF	FINISHED FLOOR
FL	FLOW LINE
FH	FIRE HYDRANT
FW	FRONT OF WALK
G	GROUND
GC	GARAGE CORNER
GF	GARAGE FACE/FRONT
GFC	GROUND AT FENCE
GM	GAS METER
HCR	HANDICAP RAMP
INV	INVERT
IP	IRON PIPE
JP	JOINT POLE
LG	LIP OF GUTTER
O/H	OVERHEAD
PC	PROPERTY CORNER
RW	RETAINING WALL
R/W	RIGHT-OF-WAY
SL	STREET LIGHT
SSCO	SANITARY SEWER CLEANOUT
SSMH	SANITARY SEWER MANHOLE
SDMH	STORM DRAIN MANHOLE
TBC	TOP BACK ROLLED CURB
TC	TOP OF CURB
TOB	TOP OF BANK
TOE	TOE OF BANK
TP	TOP OF PAVEMENT
TRC	TOP OF ROLLED CURB
TW	TOP OF WALL
U/G	UNDERGROUND
VCP	VITRIFIED CLAY PIPE
WV	WATER VALVE
WM	WATER METER BOX
-CTV-	CABLE TELEVISION LINE
-E-	ELECTRICAL LINE
-G-	GAS LINE
-SS-	SANITARY SEWER LINE
-SD-	STORM DRAIN LINE
-T-	TELEPHONE LINE
-W-	WATER LINE
X	TREE TO BE REMOVED
O	TREE TO REMAIN

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Sheet Title:
EXISTING CONDITIONS & TREE REMOVAL PLAN

BKF Job No. 20126028
Date: 5/4/2016
Scale:
Drawn By: PK

Sheet No:
C2.0

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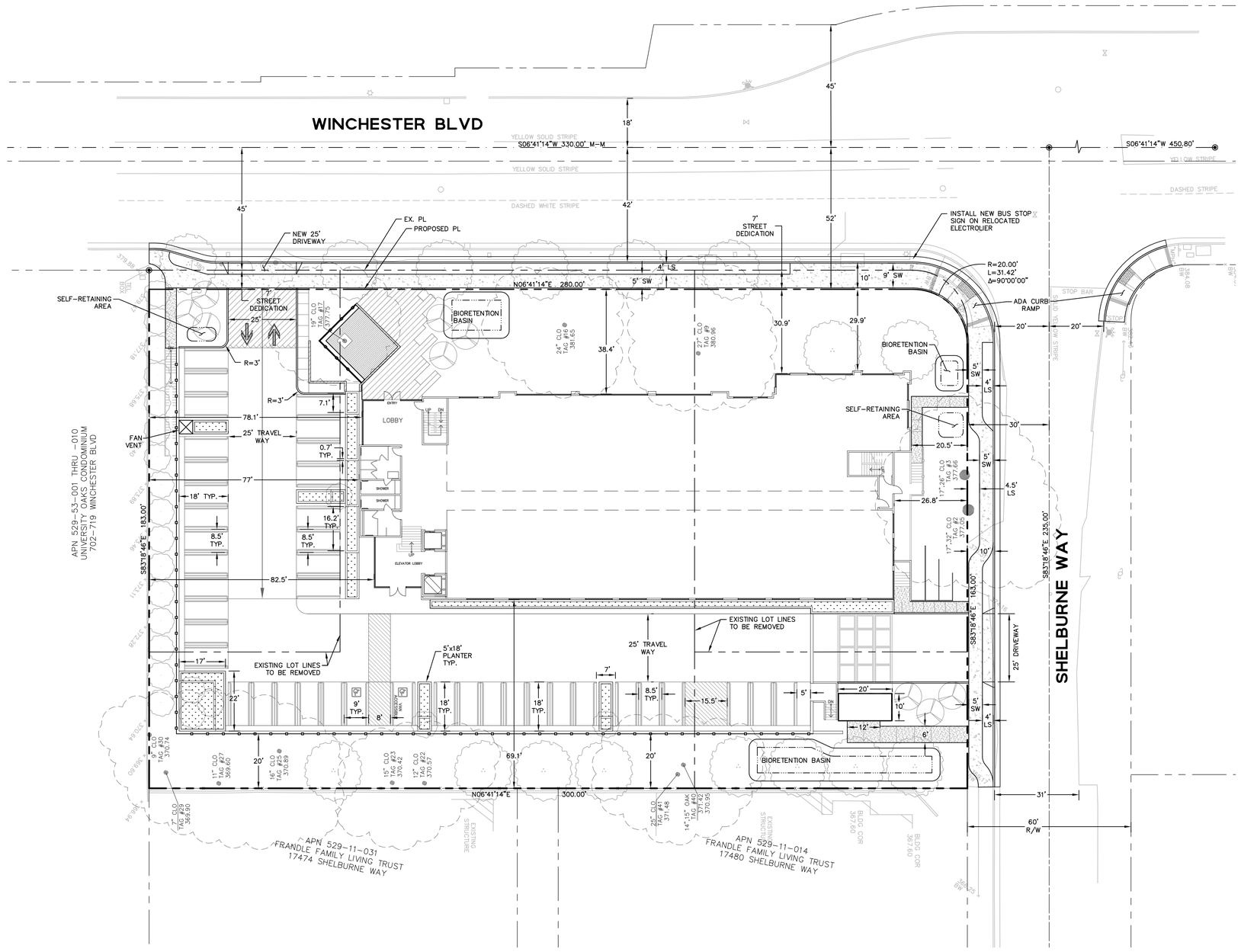

LEGEND

	PROPOSED	EXISTING
PROJECT BOUNDARY		
LOT LINE		
ADJACENT LOT LINE		
STREET CENTERLINE		
MONUMENT LINE		
EASEMENT LINE		

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

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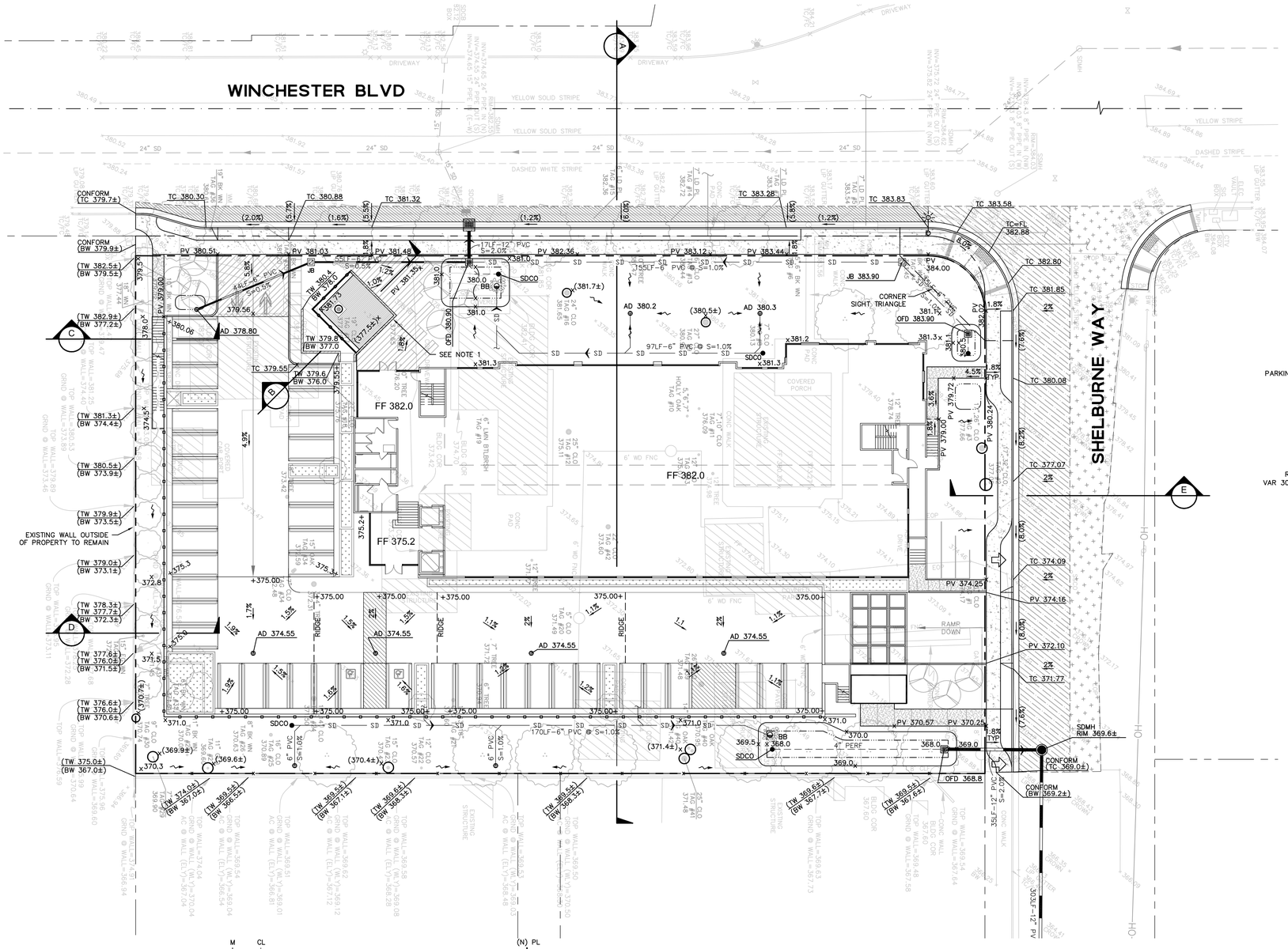
Sheet Title:
PRELIMINARY SITE PLAN

BKF Job No. 20126028
Date: 5/4/2016
Scale:
Drawn By: PK

Sheet No:
C3.0



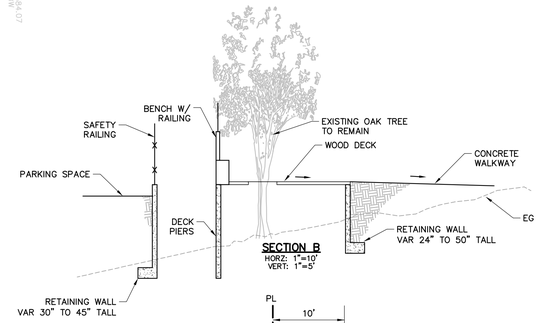
LEGEND

	PROPOSED
PROJECT BOUNDARY	
LOT LINE	
MONUMENT LINE	
VERTICAL CURB	
ROLLED CURB & GUTTER	
VERTICAL CURB & GUTTER	
DECORATIVE METAL FENCE (SEE LANDSCAPE PLANS)	
6' WOOD FENCE W/ LATTICE (SEE LANDSCAPE PLANS)	x
RETAINING WALL (SEE SECTIONS FOR FENCING)	
CONCRETE PAVING	

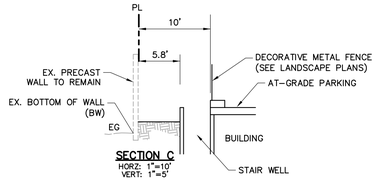
PUBLIC AC – DEEP LIFT	
NEW AC PAVEMENT	
2" GRIND & OVERLAY	
BIORETENTION BASIN	
STORM DRAIN CLEANOUT	● SDCO
AREA DRAIN	⊙ AD
DRAIN INLET	▣ DI
OVERFLOW DRAIN	▣ OFD
STORM DRAIN MANHOLE	◉ SDMH
BUBBLER BOX	◉ BB
OVERLAND RELEASE	⇨
(E) TREE TO BE PROTECTED	

NOTES

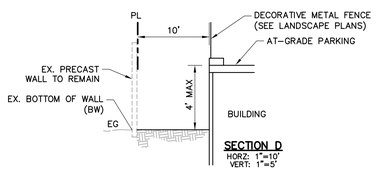
1. SEE LANDSCAPE PLANS FOR LANDSCAPE WALL HEIGHTS AND DECK DETAILS.



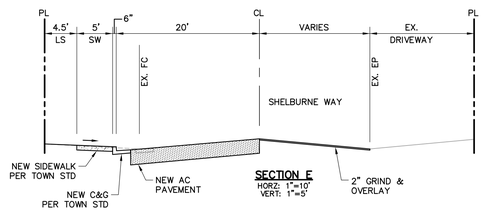
SECTION B
HORZ: 1"=10'
VERT: 1"=5'



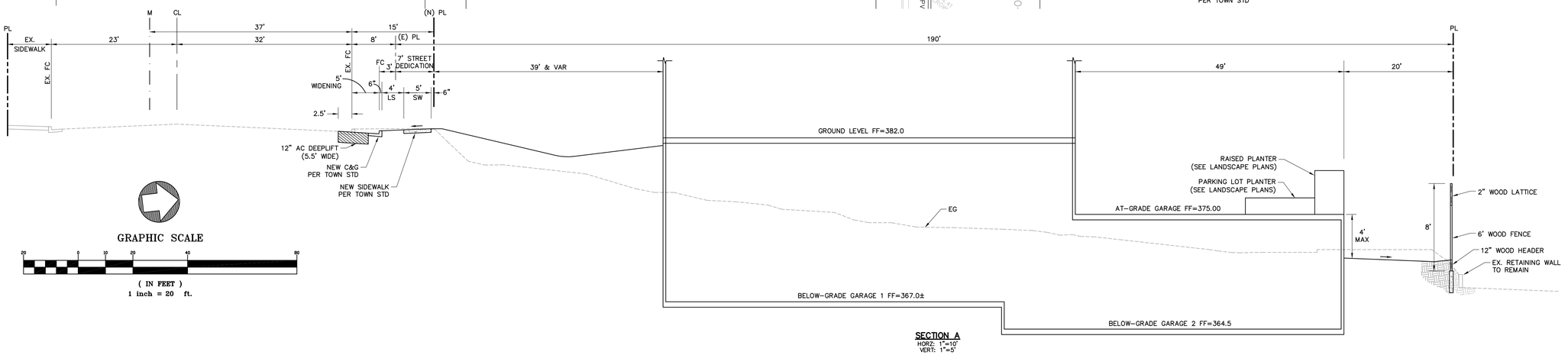
SECTION C
HORZ: 1"=10'
VERT: 1"=5'



SECTION D
HORZ: 1"=10'
VERT: 1"=5'



SECTION E
HORZ: 1"=10'
VERT: 1"=5'



SECTION A
HORZ: 1"=10'
VERT: 1"=5'

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

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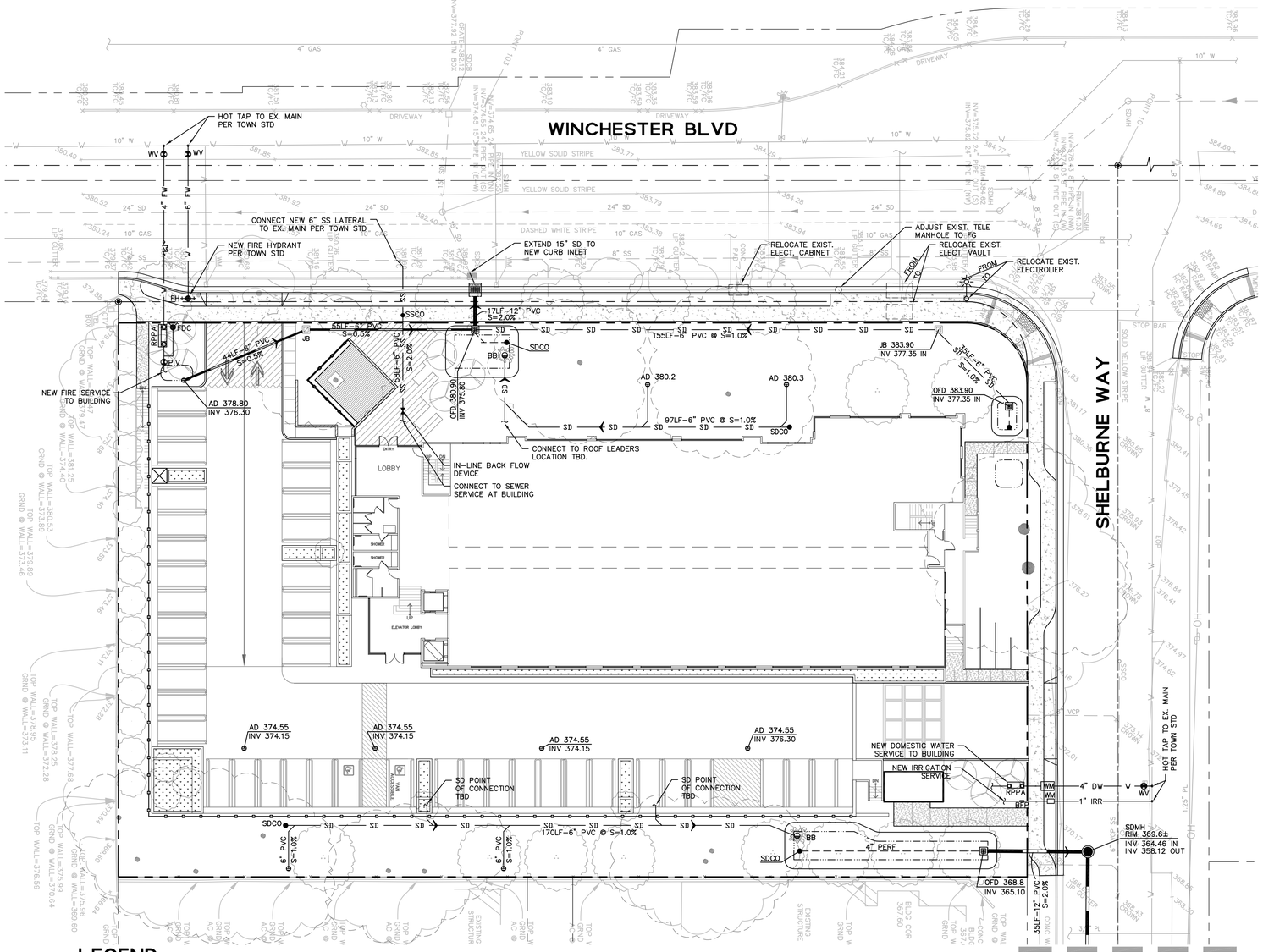
Sheet Title:
PRELIMINARY GRADING AND DRAINAGE PLAN

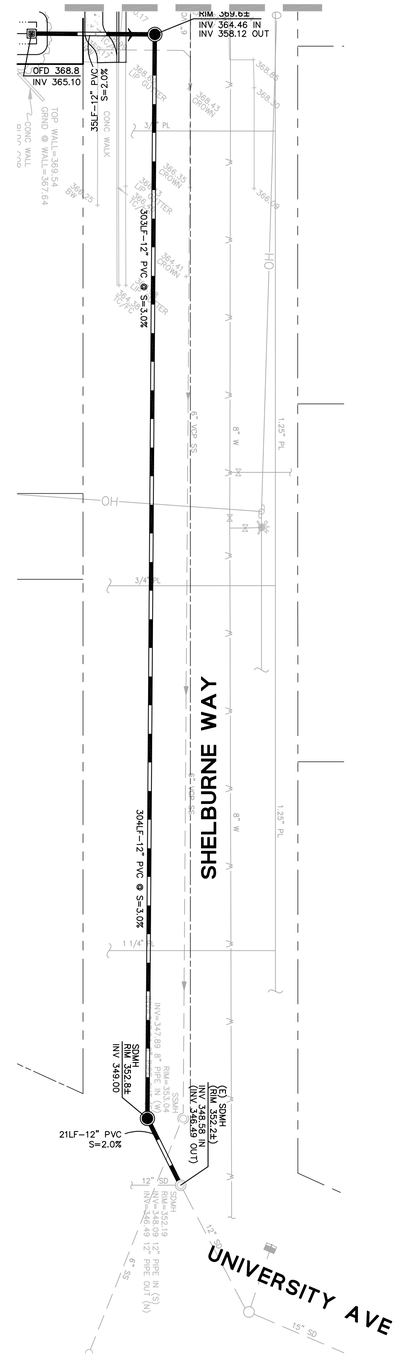
BKF Job No. 20126028
Date: 5/4/2016
Scale:
Drawn By: PK

Sheet No:
C4.0



MATCHLINE: SEE RIGHT THIS SHEET

MATCHLINE: SEE LEFT THIS SHEET



LEGEND

STORM DRAIN LINE (TREATED)	RPPA — REDUCED PRESSURE PRINCIPLE ASSEMBLY
SD — STORM DRAIN LINE (UNTREATED)	FDC — 2-WAY FIRE DEPARTMENT CONNECTION
SS — SANITARY SEWER LINE	PIV — POST INDICATOR VALVE
DW — DOMESTIC WATER LINE	DCVA — DETECTOR CHECK VALVE BY SJWC
JT — JOINT TRENCH LINE (DESIGN BY OTHERS)	IN-LINE BACK FLOW DEVICE
FW — FIRE WATER LINE	
SDMH — STORM DRAIN MANHOLE	
DI — DRAINAGE INLET	
JB — JUNCTION BOX	
AD — AREA DRAIN	
BB — BUBBLER BOX	
SDCO — STORM DRAIN CLEANOUT	
SSMH — SANITARY SEWER MANHOLE	
SSCO — SANITARY SEWER CLEANOUT	
WM — WATER METER	
WV — WATER VALVE	

NOTES

1. TRASH ENCLOSURE SHALL BE COVERED. ANY DISCHARGE FROM TRASH ENCLOSURE SHALL BE DIRECTED TO SANITARY SEWER.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

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Sheet Title:
PRELIMINARY UTILITY PLAN

BKF Job No. 20126028
Date: 5/4/2016
Scale:
Drawn By: PK

Sheet No:
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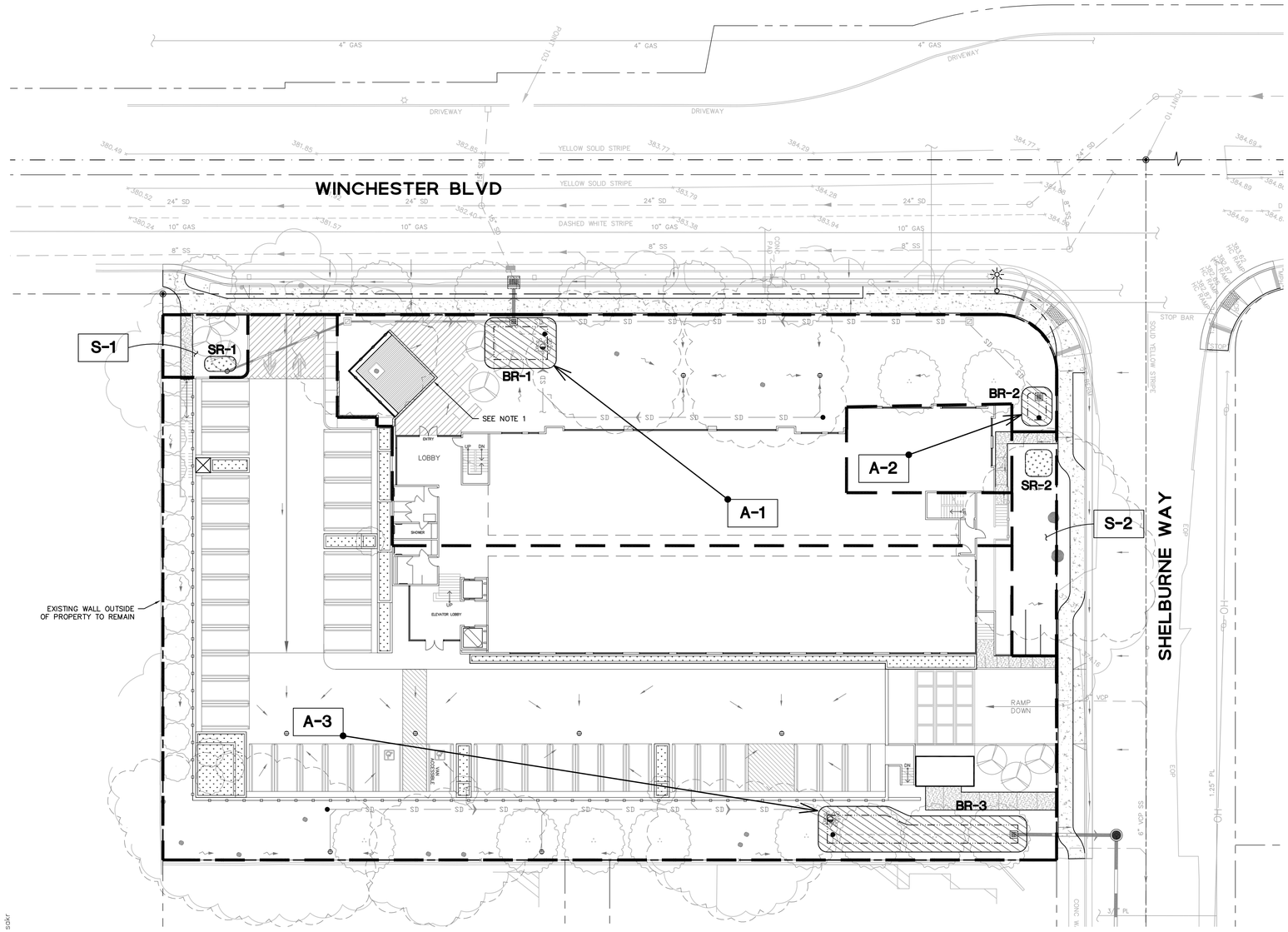

LEGEND

- A-X — DRAINAGE AREA BOUNDARY
- BR-# — RETENTION AREA DESIGNATION
- SR-# — SELF-RETAINING AREA
- DIRECTION OF FLOW

TABLE A

PERVIOUS AND IMPERVIOUS SURFACES COMPARISON TABLE			
	PROJECT PHASE NUMBER (N/A, 1, 2, 3, ETC):		1
TOTAL SITE (ACRES):	1.29	TOTAL AREA OF SITE DISTURBED (ACRES):	1.29
IMPERVIOUS SURFACES	EXISTING CONDITION OF SITE AREA DISTURBED (SQUARE FEET)	PROPOSED CONDITION OF SITE AREA DISTURBED (SQUARE FEET)	
		REPLACED	NEW
ROOF AREA(S)	7,770	7,770	8,080
PARKING	1,444	1,444	5,696
SIDEWALKS, PODIUM, PATHS, ETC.	8,076	559	0
STREETS (PUBLIC)	0	0	0
STREETS (PRIVATE)	0	0	9,210
TOTAL IMPERVIOUS SURFACES:	17,290	9,773	22,986
PERVIOUS SURFACES			
LANDSCAPE AREA	38,990	23,689	0
PERVIOUS PAVING	0	0	0
OTHER PERVIOUS SURFACES (GREEN ROOF, ETC)	0	0	0
TOTAL PERVIOUS SURFACES:	38,990	23,689	0
TOTAL PROPOSED REPLACED + NEW IMPERVIOUS SURFACES:			32,759
TOTAL PROPOSED REPLACED + NEW PERVIOUS SURFACES:			23,689

TREATMENT CONTROL MEASURE SUMMARY

DRAINAGE AREAS	DRAINAGE AREA SIZE (SQ. FT.)	PERVIOUS SURFACE (SQ. FT.)	TYPE OF PERVIOUS SURFACE	IMPERVIOUS SURFACE (SQ. FT.)	IMPERVIOUS SURFACE TYPE (SQ. FT.) ROOF (C=0.90)	CONC (C=0.80)	AC (C=0.70)	TREATMENT REQUIRED (SQ. FT.)	TREATMENT PROVIDED (SQ. FT.)	PROPOSED TREATMENT CONTROLS	CONFORMS TO SIZE STANDARD?
A-1	16,659	9,799	LANDSCAPE (C=0.10)	6,860	6,860	0	0	274	400	BIORETENTION	YES
A-2	1,630	0	LANDSCAPE (C=0.10)	1,630	1,630	0	0	65	125	BIORETENTION	YES
A-3	36,033	12,008	LANDSCAPE (C=0.10)	24,025	7,360	315	16,350	961	970	BIORETENTION	YES
SR-1	707	607	LANDSCAPE (C=0.10)	100	0	100	0	50	49	SELF-RETAINING	YES
SR-2	1,419	1,275	LANDSCAPE (C=0.10)	144	0	144	0	72	78	SELF-RETAINING	YES

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

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Sheet Title:
PRELIMINARY STORMWATER CONTROL PLAN

BKF Job No. 20126028
Date: 5/4/2016
Scale:
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Sheet No:
C6.0

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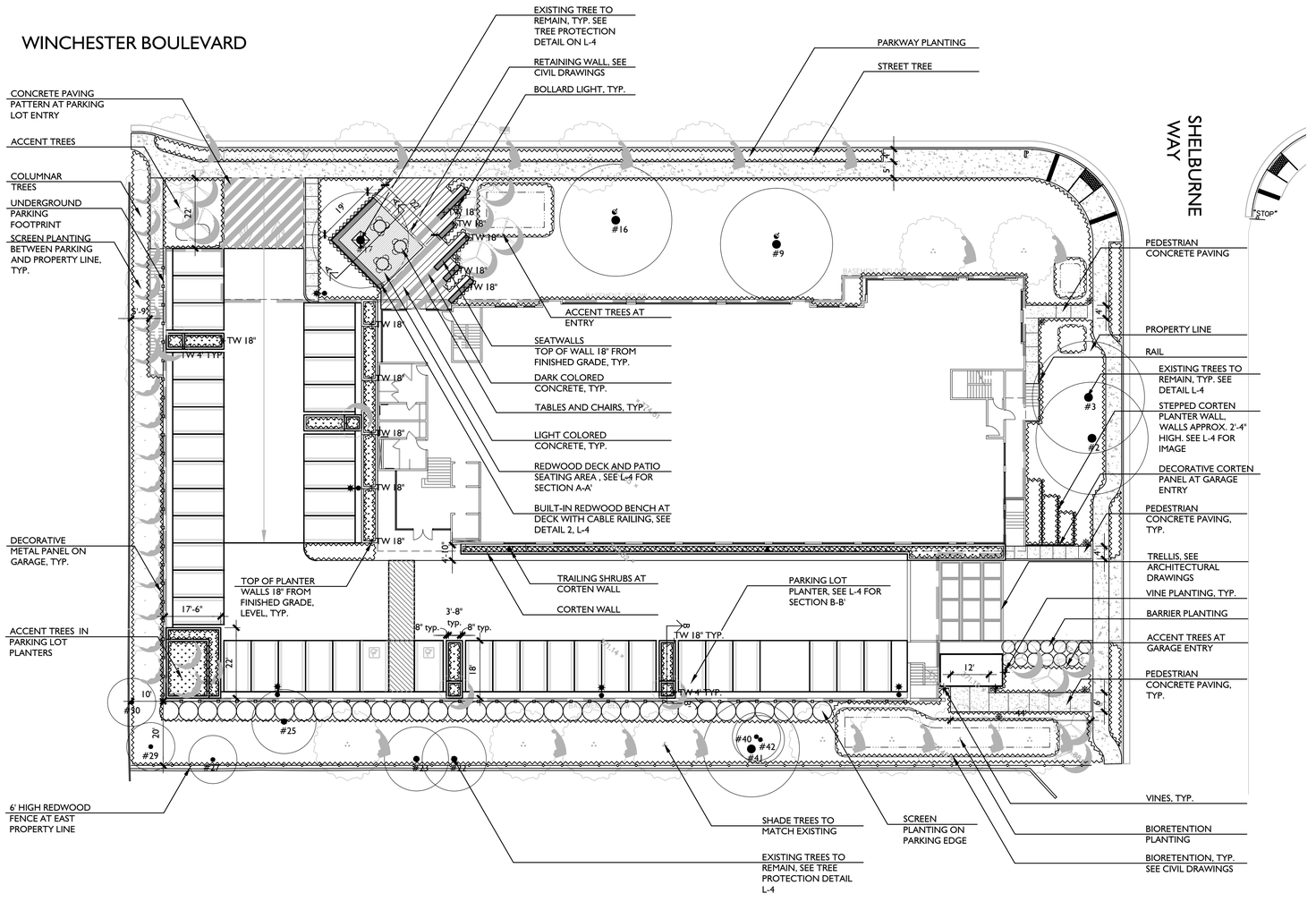

*SEE L-2 FOR TREES TO PRESERVE AND REMOVE
*SEE L-3 FOR PLANTING LIST AND LEGEND
*SEE L-4 FOR SITE FURNISHINGS
*SEE L-5 FOR LANDSCAPE LIGHTING

0 10' 20' 40'

PATH: P:\LOS GATOS\WINCHESTER BLVD (P4724)\ACAD_DG-SD-WINCHESTER BLVD.DWG
PLOT DATE: 6/1/2016 - 1:18 PM

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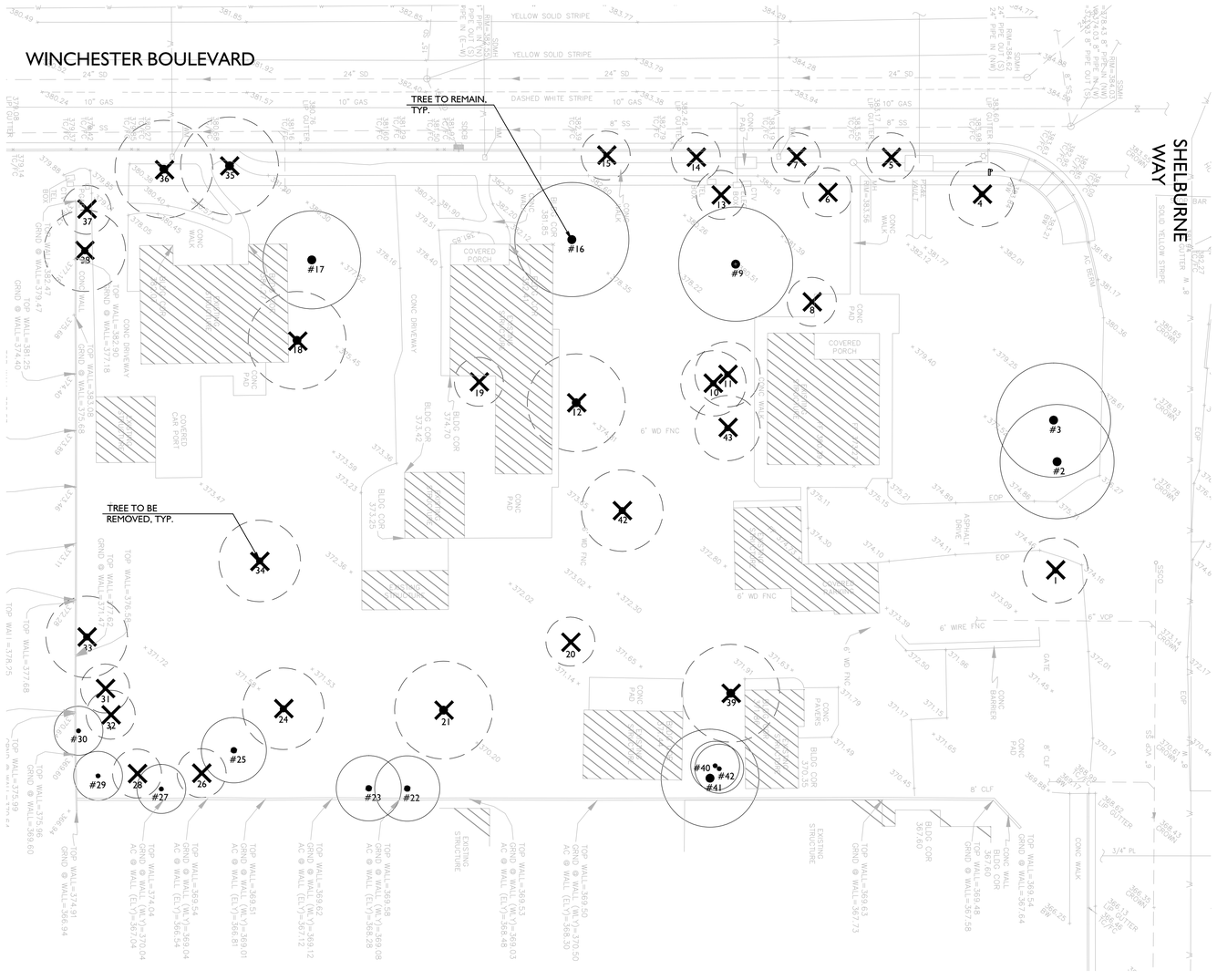
Sheet Title:
LANDSCAPE LAYOUT PLAN

Job No. P4724
Date: 05/04/2016
Scale: 1"=20
Drawn By: JK

Sheet No: L-1



LEGEND

#16 EXISTING TREE TO REMAIN

#24 TREE TO BE REMOVED

TREE INVENTORY

TREE NO.	COMMON NAME	BOTANICAL NAME	TRUNK CIRCUMFERENCE	PHYSICAL CONDITION	SAVED, REMOVED, OR PRUNED	REASON FOR REMOVAL
1	Coast Live Oak	Quercus agrifolia	15"	Good	Removed	Construction
2	Coast Live Oak	Quercus agrifolia	17,32	Fair	Saved	
3	Coast Live Oak	Quercus agrifolia	17,26	Fair/Good	Saved	
4	California Black Walnut	Juglans californica	6,7,8,9	Fair/Poor	Removed	Construction
5	London Plane Tree	Platanus x acerifolia	7	Fair	Removed	Construction
6	California Black Walnut	Juglans californica	5,6	Fair/Poor	Removed	Construction
7	London Plane Tree	Platanus x acerifolia	7	Fair	Removed	Construction
8	Coast Live Oak	Quercus agrifolia	7	Fair/Good	Removed	Construction
9	Coast Live Oak	Quercus agrifolia	27	Fair/Good	Saved	
10	Holly Oak	Quercus ilex	5,6,7	Fair/Good	Removed	Construction
11	Coast Live Oak	Quercus agrifolia	7,10	Fair	Removed	Construction
12	Coast Live Oak	Quercus agrifolia	25	Good	Removed	Construction
13	Coast Live Oak	Quercus agrifolia	6	Fair/Good	Removed	Construction
14	London Plane Tree	Platanus x acerifolia	7	Fair	Removed	Construction
15	London Plane Tree	Platanus x acerifolia	6	Fair	Removed	Construction
16	Coast Live Oak	Quercus agrifolia	24	Good	Saved	
17	Coast Live Oak	Quercus agrifolia	19	Fair/Good	Saved	
18	Coast Live Oak	Quercus agrifolia	27	Good/Excellent	Removed	Construction
19	Lemon Bottlebrush	Callistemon citrinus	6	Fair	Removed	Construction
20	Coast Live Oak	Quercus agrifolia	5	Fair	Removed	Construction
21	Coast Live Oak	Quercus agrifolia	11,13,18	Fair/Good	Removed	Construction
22	Coast Live Oak	Quercus agrifolia	12	Fair	Saved	
23	Coast Live Oak	Quercus agrifolia	15	Fair	Saved	
24	Coast Live Oak	Quercus agrifolia	16,14	Fair/Good	Removed	Construction
25	Coast Live Oak	Quercus agrifolia	16	Fair/Good	Saved	
26	California Black Walnut	Juglans californica	8	Poor	Removed	Construction
27	Coast Live Oak	Quercus agrifolia	11	Fair/Poor	Saved	
28	California Black Walnut	Juglans californica	11	Poor/Unacceptable	Removed	Construction
29	Coast Live Oak	Quercus agrifolia	7	Fair	Saved	
30	Coast Live Oak	Quercus agrifolia	9	Fair	Saved	
31	California Black Walnut	Juglans californica	6	Poor/Unacceptable	Removed	Construction
32	California Black Walnut	Juglans californica	6	Poor/Unacceptable	Removed	Construction
33	English Walnut	Juglans regia	15	Fair	Removed	Construction
34	Coast Live Oak	Quercus agrifolia	17	Good	Removed	Construction
35	California Black Walnut	Juglans californica	25	Fair/Poor	Removed	Construction
36	California Black Walnut	Juglans californica	19	Unacceptable	Removed	Construction
37	California Black Walnut	Juglans californica	10	Fair	Removed	Construction
38	Unknown		18	Fair/Good	Removed	Construction
39	Coast Live Oak	Quercus agrifolia	26	Fair/Good	Removed	Construction
40	Valley Oak	Quercus lobata	14	Fair/Good	Saved	
41	Coast Live Oak	Quercus agrifolia	25	Fair/Good	Saved	
42	Coast Live Oak	Quercus agrifolia	22	Fair/Good	Saved	
43	Coast Live Oak	Quercus agrifolia	12	Fair	Removed	Construction

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Sheet Title:
TREE PRESERVATION AND REMOVAL PLAN

Job No. P4724
Date: 05/04/2016
Scale: 1"=20
Drawn By: JK

Sheet No: L-2

PATH: P:\LOS GATOS\WINCHESTER BLVD (P4724)\ACAD_DG-SD-WINCHESTER BLVD.DWG
PLOT DATE: 6/1/2016 - 1:28 PM

PLANT LIST

Symbol	Botanical Name	Common Name	Size	Spacing	Water Use
ACCENT TREES					
AM	Arbutus x marina	Strawberry Tree	24" Box	AS SHOWN	L
CO	Cercis occidentalis	Western Redbud	24" Box	As Shown	VL
LA	Lagerstroemia 'Muskogee'	Muskogee Crape Myrtle	24" Box	AS SHOWN	L
OE	Olea europaea wilsonii	Fruitless Olive	24" Box	AS SHOWN	L
COLUMNAR TREES					
CB	Carpinus betulus 'fastigiata'	European Hornbeam	24" Box	AS SHOWN	M
SHADE TREES					
QA	Quercus agrifolia	Coast Live Oak	24" Box	AS SHOWN	L
STREET TREE					
PA	Platanus x acerifolia	London Plane Tree	24" Box	AS SHOWN	L
BARRIER PLANTING					
DV	Dodonaea viscosa	Hopseed	1 Gallon	6'-0" o.c.	L
AA	Agave attenuata	Fox Tail Agave	5 Gallon	6'-0" o.c.	L
AG	Agave 'Blue Glow'	Blue Glow Agave	5 Gallon	3'-0" o.c.	L
AS	Aloe 'Blue Elf'	Aloe	1 Gallon	1'-6" o.c.	L
SHRUBS, GRASSES, GROUNDCOVERS					
AH	Anigozanthos hybrids 'Red Velvet'	Kangaroo Paw	1 Gallon	3'-0" o.c.	L
CE	Carex 'evergold'	Berkeley Sedge	1 Gallon	2'-0" o.c.	L
CP	Coleonema pulchellum	Breath of Heaven	1 Gallon	4'-0" o.c..	L
DC	Dianella 'Clarity Blue'	NCN	1 Gallon	2'-0" o.c.	L
DV	Dietes vegeta	Fortnight Lily	5 Gallon	3'-0" o.c.	L
EF	Euonymus fortunei 'Kewensis'	Wintercreeper	1 Gallon	2'-0" o.c.	M
HA	Hakone 'Aureola'	Japanese Forest Grass	1 Gallon	1'-6" o.c.	M
HS	Helictotrichon sempervirens	Blue Oat Grass	1 Gallon	2'-0" o.c.	L
LS	Lavatera spp.	Tree Mallow	1 Gallon	4'-0" o.c..	L
LE	Leymus condensatus	Canyon Prince Wildrye	1 Gallon	3'-0" o.c..	L
LL	Lomandra longifolia 'Nyalla'	Mat Rush	1 Gallon	3'-6" o.c.	L
LC	Loropetalum chinensis	Fringe Flower	1 Gallon	5'-0" o.c.	L
MA	Mahonia repens	Creeping Mahonia	1 Gallon	3'-6" o.c.	L
MC	Mahonia 'Caress'	Dwarf Mahonia	1 Gallon	2'-6" o.c.	L
NP	Nepeta spp.	Catmint	1 Gallon	4'-0" o.c..	L
PS	Pennisetum alopecuroides 'Hameln'	Dwarf Fountain Grass	1 Gallon	3'-0" o.c..	L
SM	Salvia microphylla 'Hot Lips'	Hot Lips Sage	1 Gallon	3'-0" o.c.	L
SC	Salvia clevelandii	Cleveland Sage	1 Gallon	4'-0" o.c..	L
SC	Senecio mandraliscae	Blue Chalk Sticks	4" Pot	1'-6" o.c.	L
TC	Teucrium chamaedrys	Wall Germander	1 Gallon	3'-0" o.c	L
TF	Teucrium fruticans	Bush Germander	5 Gallon	4'-0" o.c.	L
BIORETENTION PLANTING					
CT	Chondropetalum tectorum 'El Campo'	Cape Rush	1 Gallon	3'-0" o.c.	L
CA	Carex tumulicola	Berkeley Sedge	1 Gallon	1'-6" o.c.	L
DC	Deschampsia cespitosa	Pacific Hairgrass	1 Gallon	1'-6" o.c.	L
JP	Juncus patens	California Grey Rush	1 Gallon	2'-0" o.c.	L
VINES					
GS	Gelsemium sempervirens	Carolina Jasmine	1 Gallon	as shown	L
LJ	Lonicera japonica 'aureoreticulata'	Honeysuckle	1 Gallon	as shown	M

WATER USE RATING LEGEND:
WUCOLS III CATEGORIES OF WATER NEEDS FROM: UNIVERSITY OF CALIF COOPERATIVE EXTENSION, CALIF DEPARTMENT OF WATER RESOURCES, U.S. BUREAU OF RECLAMATION

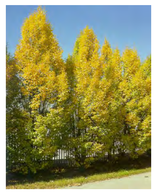
H = HIGH
M = MODERATE
L = LOW
VL = VERY LOW

WATER CONSERVATION STATEMENT

1. THE PLANT LIST IS PRELIMINARY IN NATURE. SPECIES SHALL BE ADDED AND SUBTRACTED TO FULFILL THE DESIGN AND HORTICULTURAL REQUIREMENTS AS NECESSARY.
2. THE IRRIGATION SYSTEM SHALL BE DESIGNED WITH WATER CONSERVATION IN MIND WHILE ACHIEVING THE GOAL OF EFFECTIVELY AND EFFICIENTLY PROVIDING THE LANDSCAPE WITH WATER BY MEANS OF SPRAY IRRIGATION TO THE SHRUBS/GROUNDCOVER AREAS AND BUBBLERS TO THE TREES.
3. THE SPRAY SYSTEM SHALL BE TORO SPRAY HEADS WITH PRESSURE COMPENSATING NOZZLES IN A HEAD TO HEAD LAYOUT TO ACHIEVE AN EVEN LEVEL OF PRECIPITATION THROUGHOUT THE IRRIGATION SYSTEM.
4. A STATE-OF-THE-ART IRRIGATION CONTROLLER SHALL BE SPECIFIED FOR THIS PROJECT TO CONTROL THE WATER ALLOCATED TO EACH VALVE GROUPED PER INDIVIDUAL HYDROZONE (BASED ON PLANT TYPE AND EXPOSURE).

TREES


Arbutus x marina
Strawberry Tree


Carpinus betulus 'Fastigiata'
European Hornbeam


Cercis occidentalis
Western Redbud


Lagerstroemia 'Muskogee'
Crape Myrtle


Quercus agrifolia
Coast Live Oak


Olea europaea wilsonii
Fruitless Olive


Platanus acerifolia
London Plane Tree

BARRIER PLANTING


Dodonaea viscosa
Hopseed


Agave attenuata
Fox Tail Agave


Agave 'Blue Glow'
Blue Glow Agave


Aloe 'Blue Elf'
Aloe

SHRUBS, GRASSES, GROUNDCOVERS


Anigozanthos
Kangaroo Paw


Carex 'Evergold'
Berkeley Sedge


Coleonema pulchellum
Breath of Heaven


Dianella 'Clarity'
Dianella


Dietes vegeta
Fortnight Lily


Euonymus fortunei 'Kewensis'
Wintercreeper


Hakone 'Aureola'
Japanese Forest Grass


Helictotrichon sempervirens
Cape Rush


Lavatera
Tree Mallow


Leymus condensatus
Canyon Prince Wildrye


Lomandra longifolia 'Nyalla'
Mat Rush


Loropetalum chinensis
Fringe Flower


Mahonia repens
Creeping Mahonia


Mahonia 'Caress'
Dwarf Mahonia


Nepeta spp.
Catmint


Pennisetum alopecuroides 'Hameln'
Dwarf Fountain Grass


Salvia clevelandii
Cleveland Sage


Senecio mandraliscae
Blue Fingers

VINES


Teucrium chamaedrys
Wall Germander


Teucrium fruticans
Bush Germander


Gelsemium sempervirens
Carolina Jasmine


Lonicera japonica 'Aureoreticulata'
Honeysuckle

BIORETENTION PLANTING


Chondropetalum techtorum
Cape Rush


Carex tumulicola
Carex tumulicola


Deschampsia cespitosa
Pacific Hairgrass


Juncus patens
California Gray Rush

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Sheet Title:
PLANT LIST AND PLANT PALETTE

Job No. P4724
Date: 05/04/2016
Scale:
Drawn By: JK

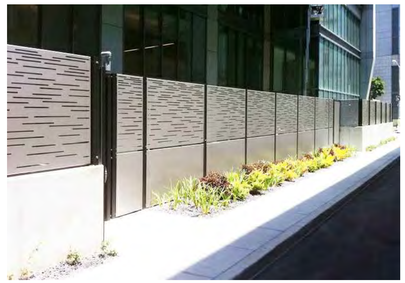
Sheet No: L-3

PATH: P:\LOS GATOS\WINCHESTER BLVD (P4724)\CAD_DGS\SD-WINCHESTER BLVD.DWG
PLOT DATE: 6/1/2016 1:28 PM

SITE FURNISHINGS

Stepped Corten Planter Wall

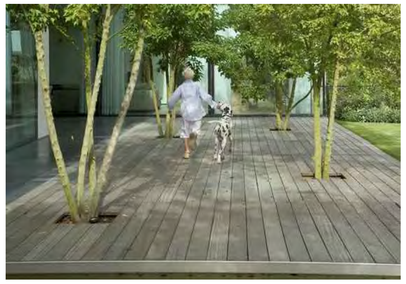
Laser Cut Corten Planter



Decorative Metal Panel

Tables and Chairs

Concrete Seatwall



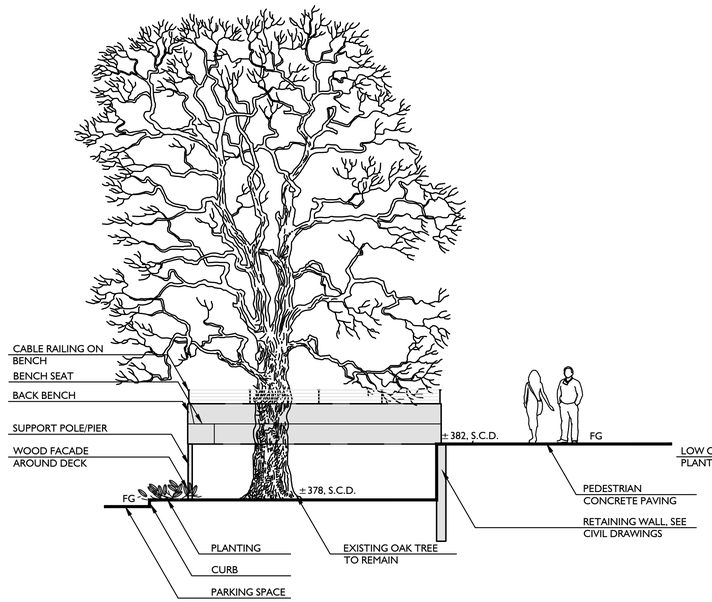
Deck with Tree Cutouts

Built-in Benches

Cable Railing

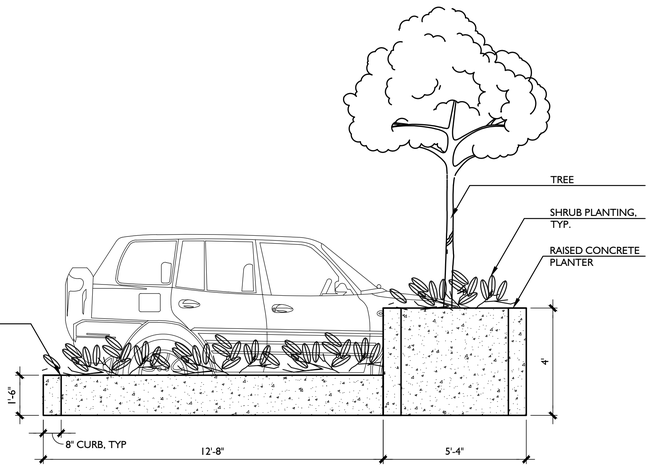
Pedestrian Concrete Colored Paving

6' HIGH REDWOOD FENCE



A DECK AROUND TREE

SCALE: 3/16" = 1'-0"

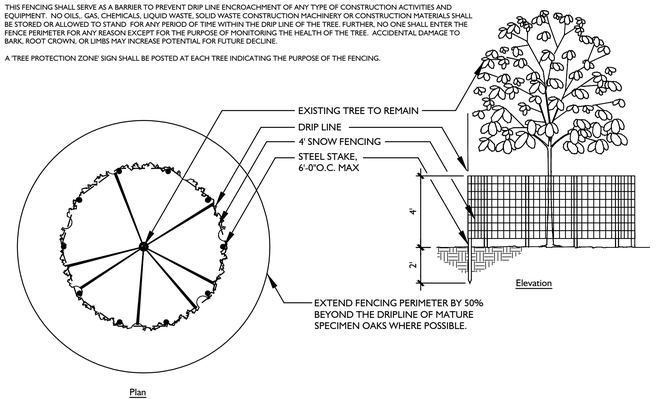


B PARKING LOT PLANTER

SCALE: 3/8" = 1'-0"

TREE PROTECTION NOTES:

1. PRIOR TO INITIATING ANY CONSTRUCTION ACTIVITY IN THE AREA, INCLUDING GRADING, TEMPORARY PROTECTIVE FENCING SHALL BE INSTALLED AT EACH SITE TREE. FENCING SHALL BE LOCATED AT OR BEYOND THE CANOPY DRIP LINE SO THAT 100% OF THE DRIP LINE WILL BE PROTECTED BY FENCING. TO REDUCE SOIL COMPACTION FROM EQUIPMENT.
2. THE CONTRACTOR IS REQUIRED TO WATER, FERTILIZE AND ATTEND TO OTHER MAINTENANCE NEEDS OF EXISTING TREES AS NEEDED PER ARBORISTS RECOMMENDATIONS TO MAINTAIN HEALTHY GROWTH THROUGHOUT THE CONSTRUCTION PERIOD. SIX FEET DIAMETER, MINIMUM, BY SIX INCH TALL EARTH BERMS SHALL BE CONSTRUCTED AT THE BASE OF EACH TREE TO FUNCTION AS TEMPORARY WATERING BASINS DURING THE CONSTRUCTION PERIOD. TREES SHALL BE WATERED ACCORDING TO WEATHER AND TREE REQUIREMENTS. APPROVED MULCH OF 1-2 INCH SIZED WOOD CHIPS SHALL BE PLACED AT A DEPTH OF 4 INCHES WHERE NO EXCAVATION IS TO OCCUR IN THE VICINITY OF THE TREES TO BE PROTECTED.
3. LOW HANGING LIMBS OF SAVED TREES SHALL BE PRUNED PRIOR TO GRADING, OR ANY EQUIPMENT MOBILIZATION ON SITE. THE PURPOSE OF THIS REQUIREMENT IS TO AVOID TEARING LIMBS BY HEAVY EQUIPMENT
4. THIS FENCING SHALL SERVE AS A BARRIER TO PREVENT DRIP LINE ENCROACHMENT OF ANY TYPE OF CONSTRUCTION ACTIVITIES AND EQUIPMENT. NO OILS, GAS, CHEMICALS, LIQUID WASTE, SOLID WASTE CONSTRUCTION MACHINERY OR CONSTRUCTION MATERIALS SHALL BE STORED OR ALLOWED TO STAND FOR ANY PERIOD OF TIME WITHIN THE DRIP LINE OF THE TREE. FURTHER, NO ONE SHALL ENTER THE FENCE PERIMETER FOR ANY REASON EXCEPT FOR THE PURPOSE OF MONITORING THE HEALTH OF THE TREE. ACCIDENTAL DAMAGE TO BARK, ROOT CROWN, OR LIMBS MAY INCREASE POTENTIAL FOR FUTURE DECLINE.
5. A 'TREE PROTECTION ZONE' SIGN SHALL BE POSTED AT EACH TREE INDICATING THE PURPOSE OF THE FENCING.



EXISTING TREE PROTECTIVE FENCING

SCALE: 1/4" = 1'-0"

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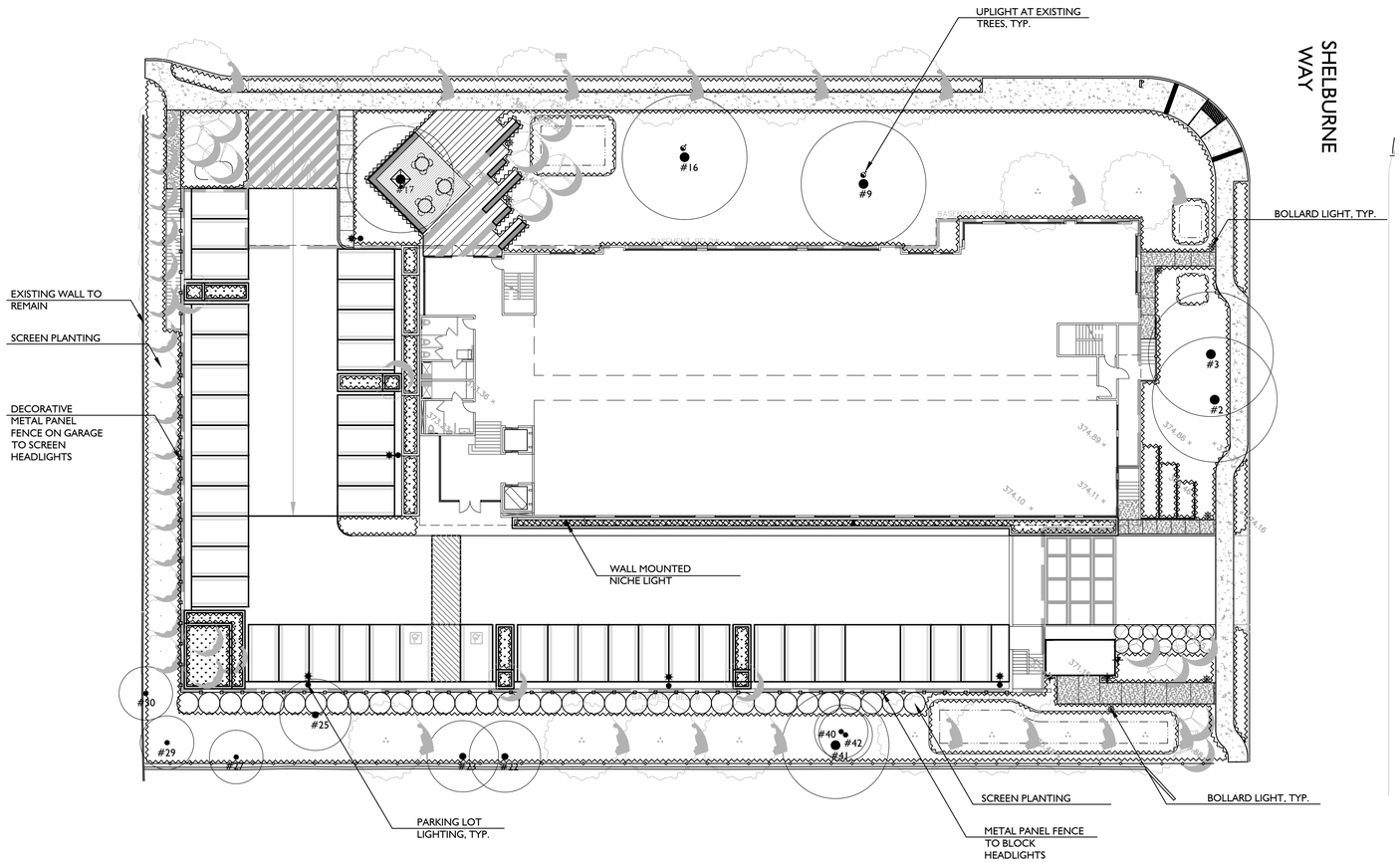
SITE FURNISHINGS

Job No. P4724
Date: 05/04/2016
Scale:
Drawn By: JK

Sheet No: L-4

PATH: P:\LOS GATOS\WINCHESTER BLVD (P4724)\ACAD_DG-SD-WINCHESTER BLVD.DWG
PLOT DATE: 6/1/2016 - 1:31 PM

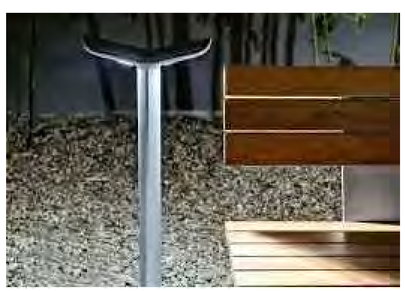
WINCHESTER BOULEVARD



LIGHTING LEGEND

- BOLLARD LIGHT
- PARKING LOT LIGHT
- UPLIGHT
- WALL MOUNTED LIGHTBAR

LIGHTING IMAGES



Bollard Light
MFR: Landscape Forms
Model: Multiplicity

Existing Tree Lighting
MFR: GEA
Type: Uplight recessed

Parking Lot Light
MFR: McGraw-Edison
Model: Galleon LED area and roadway luminaire 70 CRI, 4000K, 1A Lightsquares and spill light eliminator optics with house side shield

Wall-mounted Niche Light
MFR: Cooper
Model: Impact Elite Luminaire LIghtbar

0 10' 20' 40'

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Sheet Title:
LANDSCAPE LIGHTING

Job No. P4724
Date: 05/04/2016
Scale: 1"=20
Drawn By: JK

Sheet No: L-5

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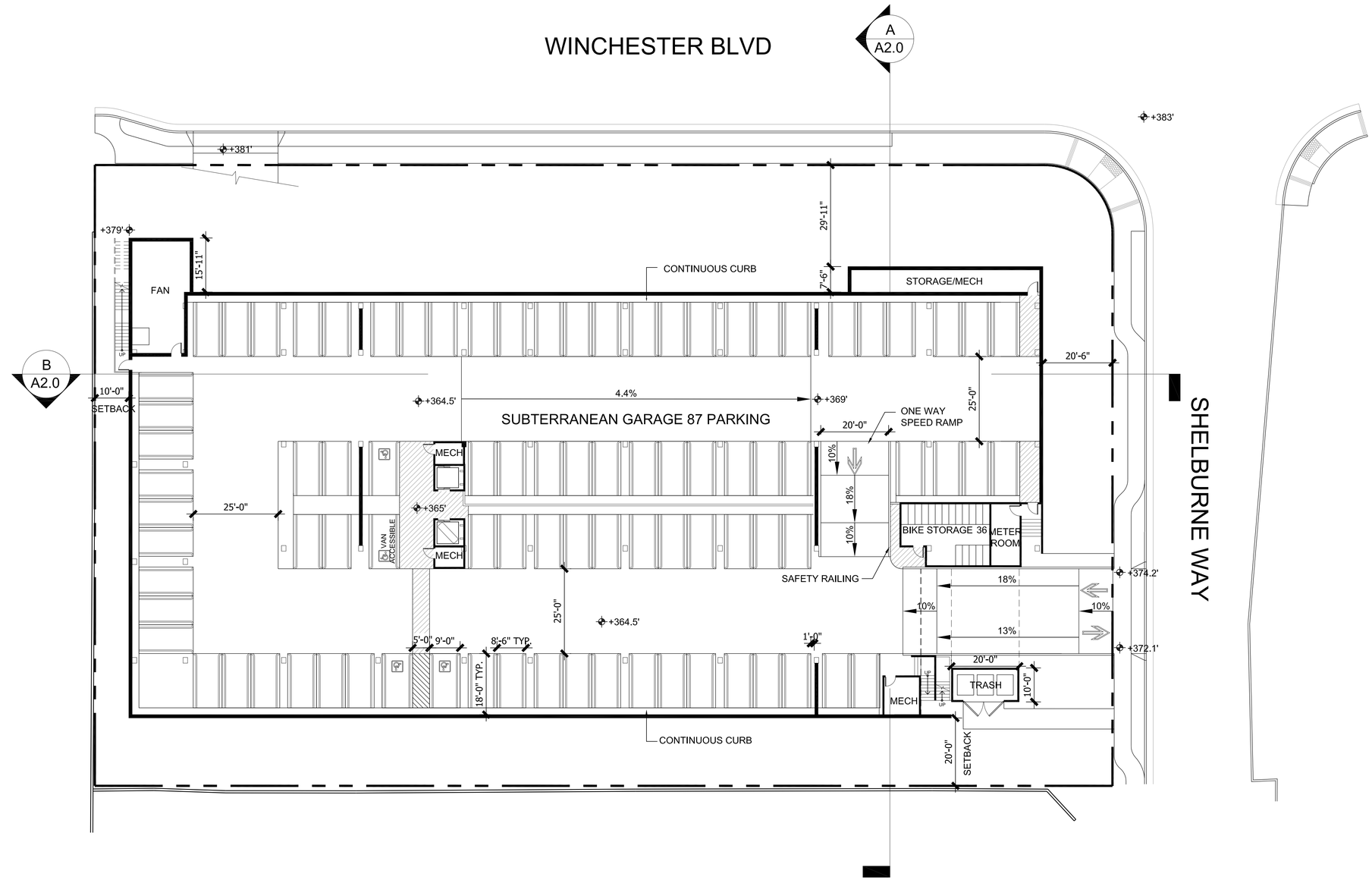

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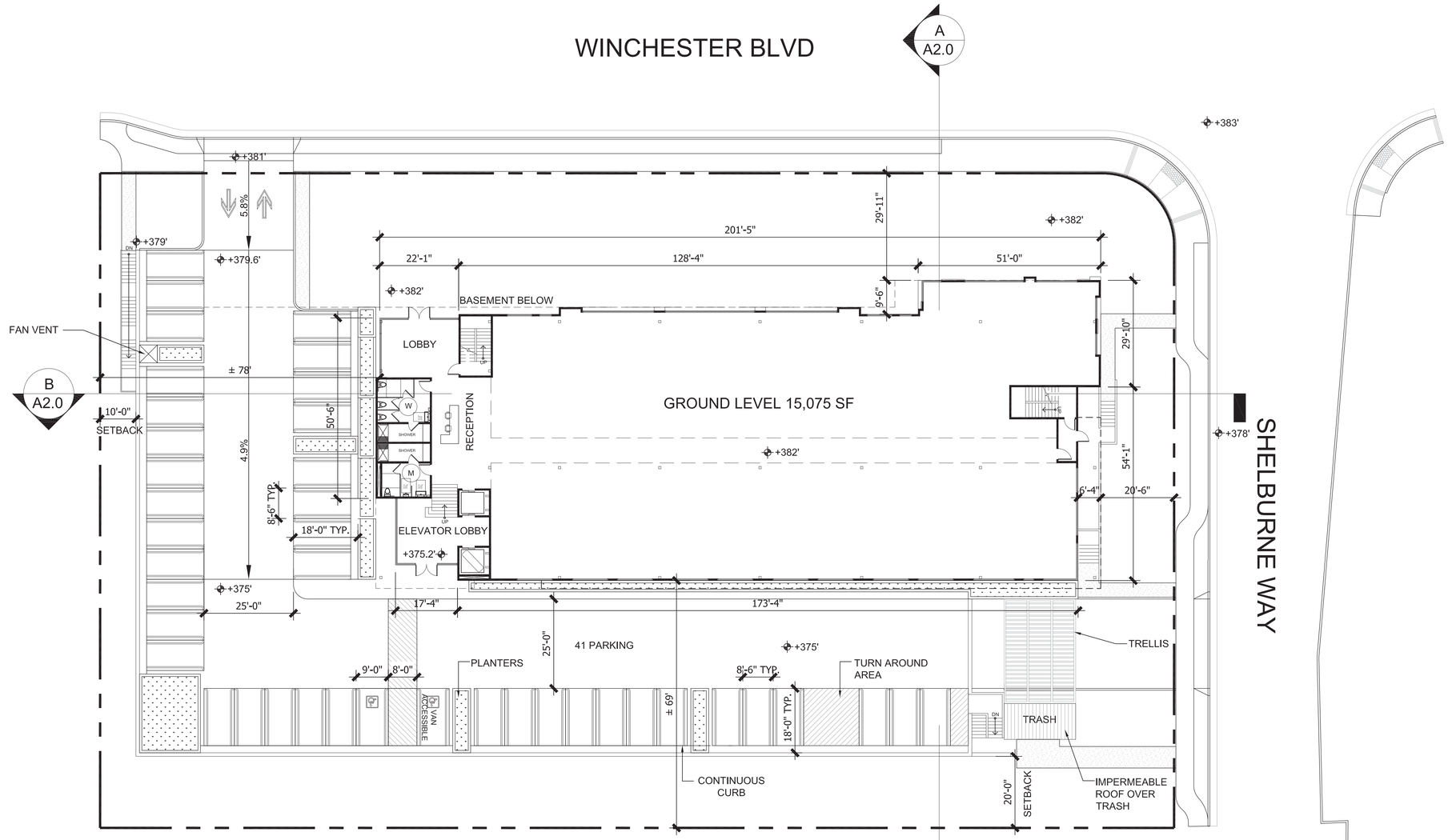
Sheet Title:

BUILDING PLAN
SUBTERRANEAN
LEVEL

Job No. 15019
Date: 05/04/2016
Scale: 1/16" = 1'-0"
Drawn By:

Sheet No:

A1.0



SITE (GROSS): 1.31 ACRE
OFFICE (GROSS): 30,070 SF
PARKING REQ'D: 128 CARS
PARKING PRV'D: 128 CARS
COVERAGE: 26.5% (40% MAX)

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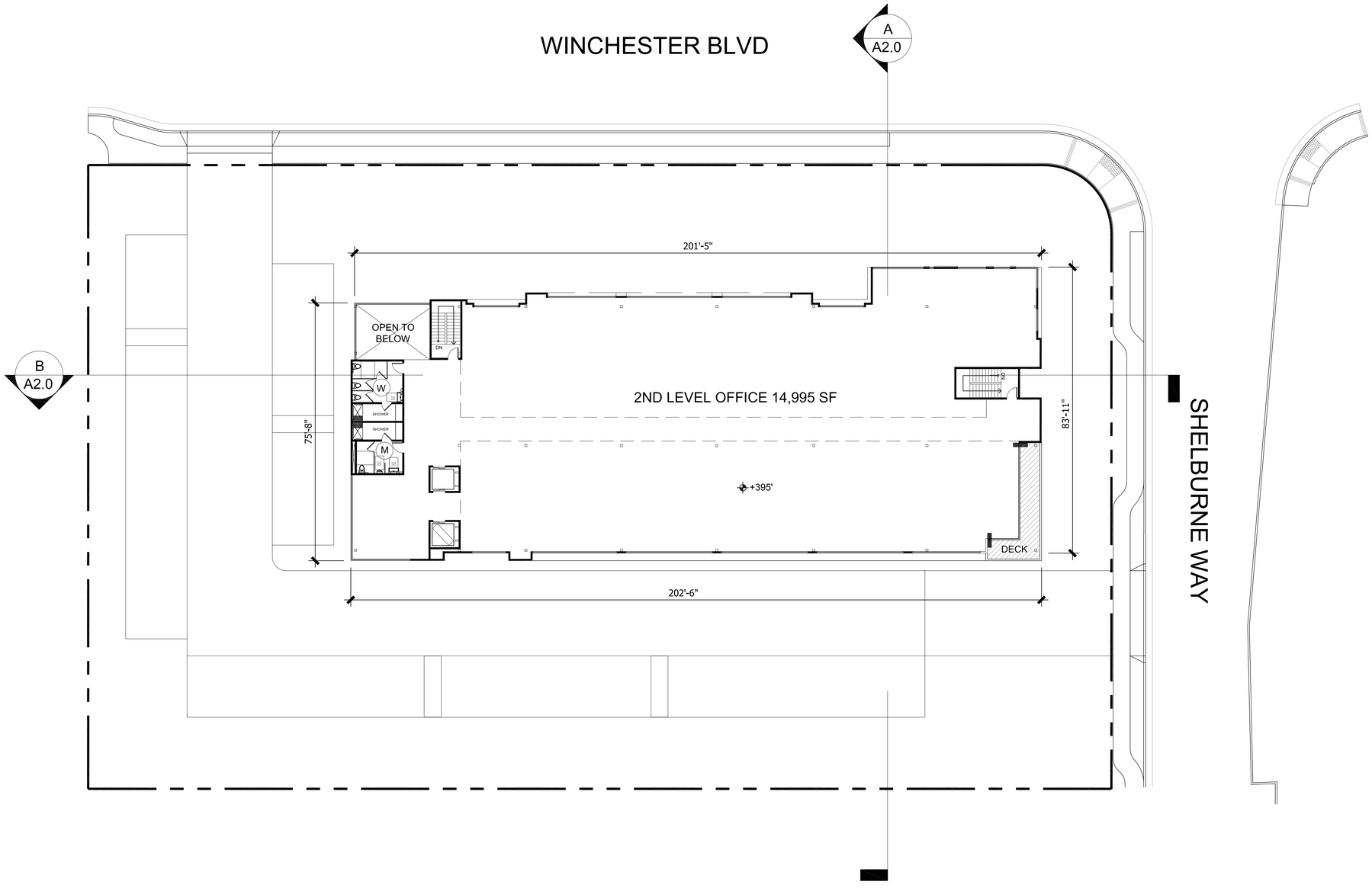
Sheet Title:

BUILDING PLAN
GROUND LEVEL

Job No. 15019
Date: 05/04/2016
Scale: 1/16" = 1'-0"
Drawn By:

Sheet No:

A1.1



16' 32' 64'

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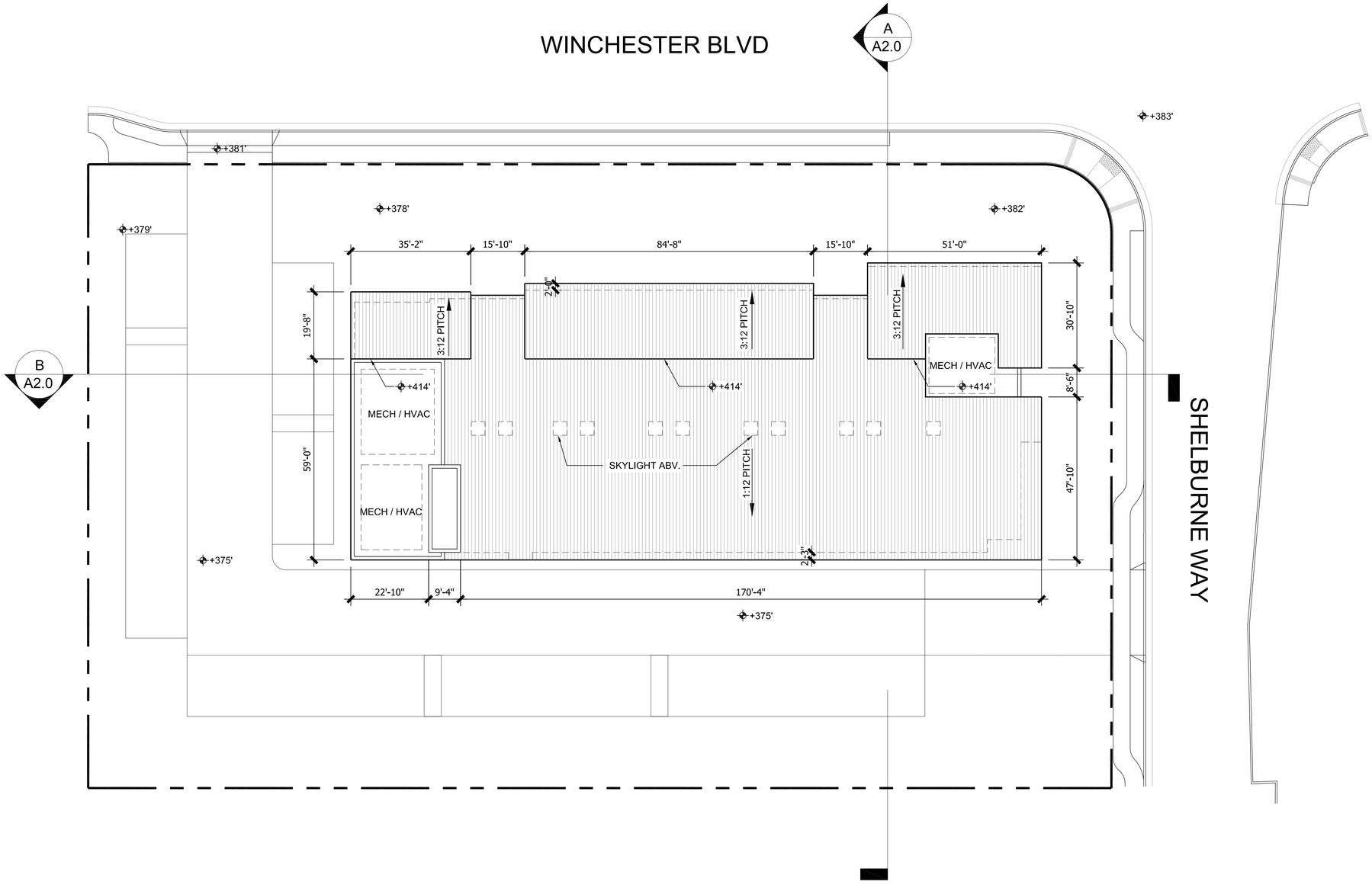
Sheet Title:

BUILDING PLAN
SECOND LEVEL

Job No. 15019
Date: 05/04/2016
Scale: 1/16" = 1'-0"
Drawn By:

Sheet No:

A1.2



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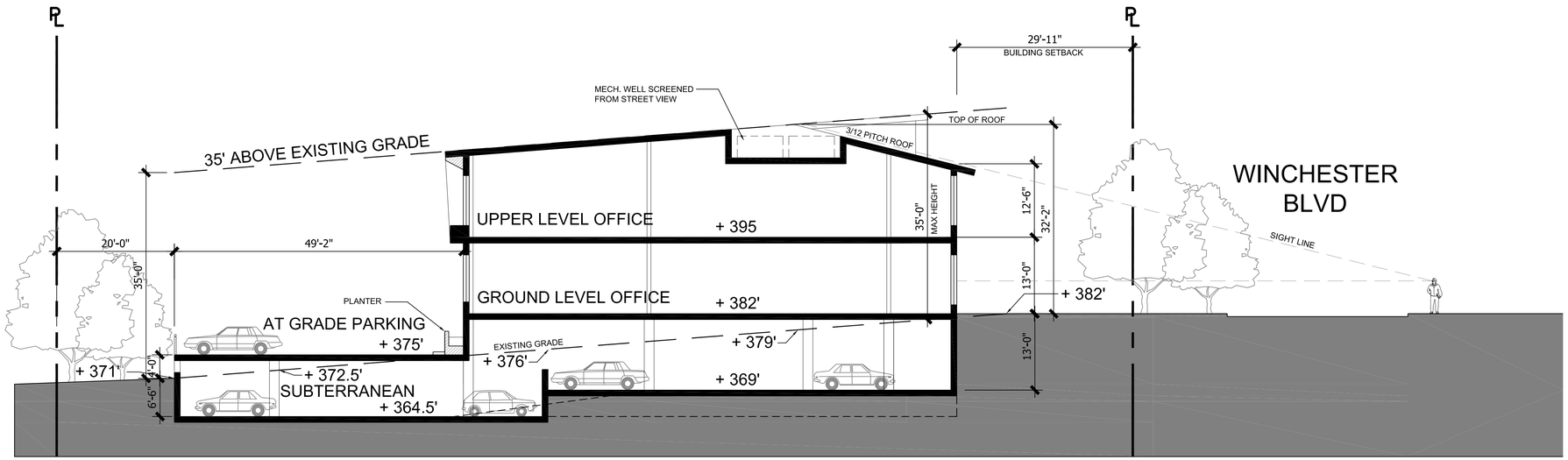
BUILDING
ROOF PLAN

Job No. 15019
Date: 05/04/2016
Scale: 1/16" = 1'-0"
Drawn By:

Sheet No:

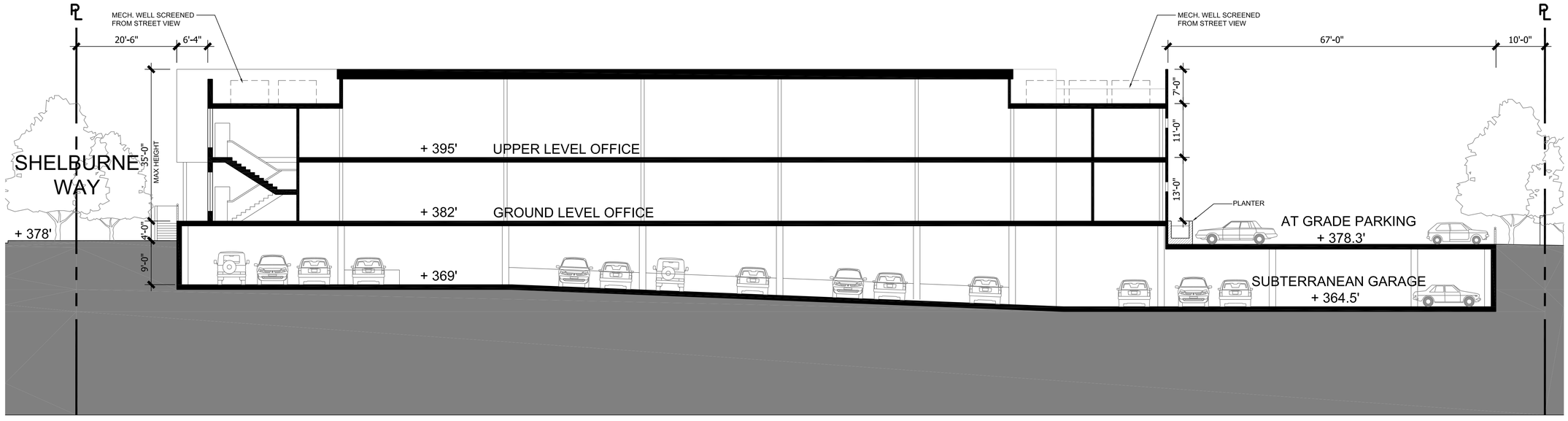
A1.3



SECTION A

SCALE: 3/32" = 1' - 0"

2



SECTION B

SCALE: 3/32" = 1' - 0"

1

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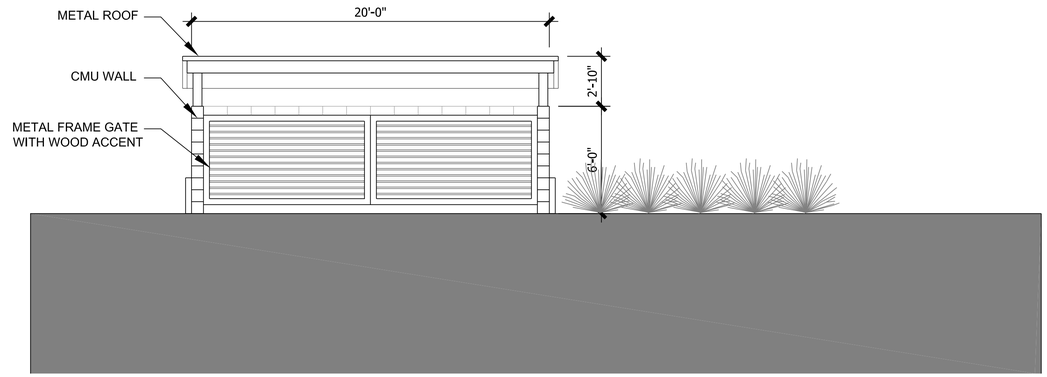
Sheet Title:

SITE SECTION

Job No. 15019
Date: 05/04/2016
Scale: 3/32" = 1'-0"
Drawn By:

Sheet No:

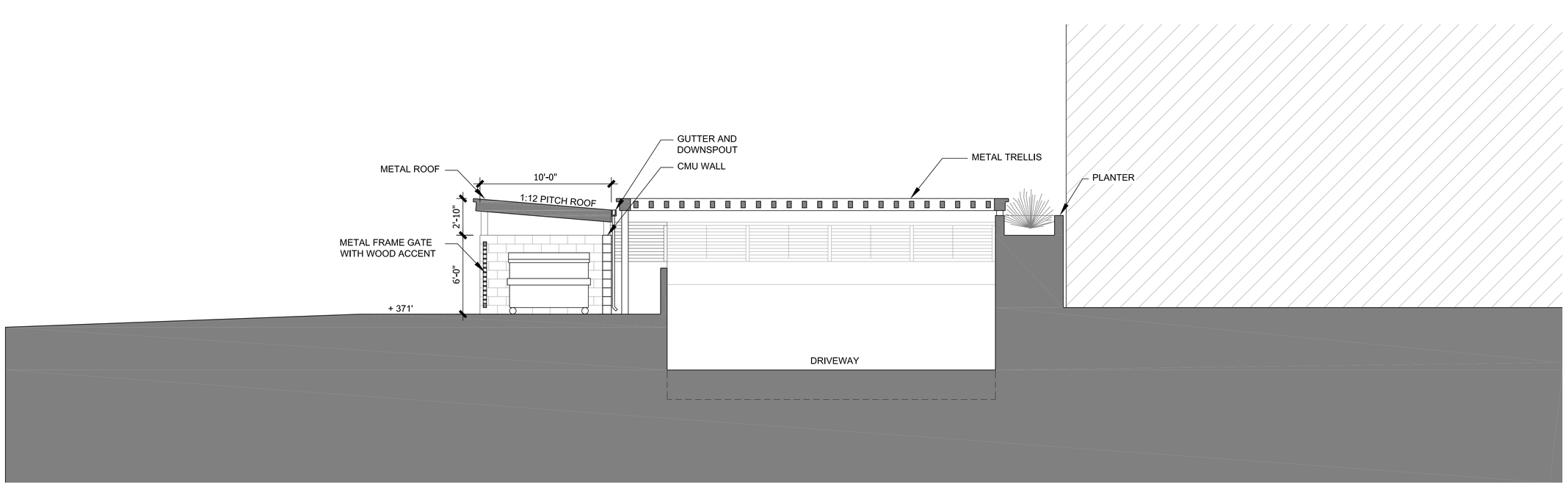
A2.0



TRASH ENCLOSURE ELEVATION

SCALE: 1/4" = 1' - 0"

2



TRASH ENCLOSURE SECTION

SCALE: 1/4" = 1' - 0"

1

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Sheet Title:

TRASH ENCLOSURE
ELEVATION
& SECTION

Job No. 15019
Date: 05/04/2016
Scale: 1/4" = 1'-0"
Drawn By:

Sheet No:

A3.0

West Elevation
SCALE: 1/16" = 1'-0"
1

East Elevation
SCALE: 1/16" = 1'-0"
2

South Elevation
SCALE: 1/16" = 1'-0"
4

North Elevation
SCALE: 1/16" = 1'-0"
3

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Sheet Title:

ELEVATIONS

Job No. 15019
Date: 05/04/2016
Scale: 1/16" = 1'-0"
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Sheet No:

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Sheet Title:

PERSPECTIVE - VIEW FROM WINCHESTER

Job No. 15019
Date: 05/04/2016
Scale:
Drawn By:

Sheet No:

IM1.0

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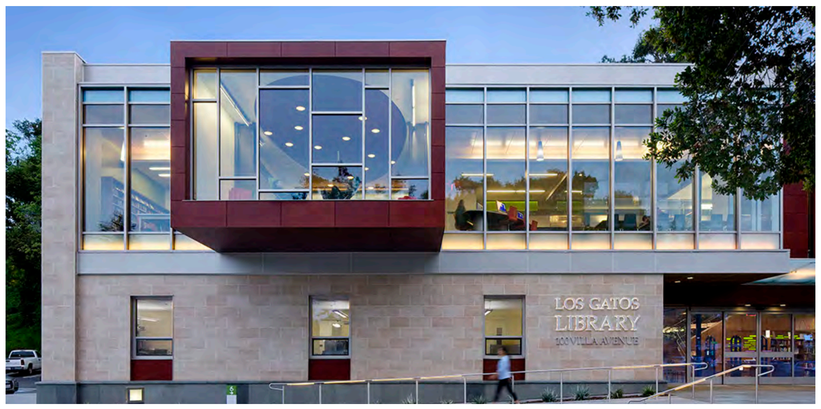
Sheet Title:

PERSPECTIVE - VIEW FROM SHELBURNE

Job No. 15019
Date: 05/04/2016
Scale:
Drawn By:

Sheet No:

IM1.1



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Sheet Title:

PERSPECTIVE - AERIAL VIEW

Job No. 15019
Date: 05/04/2016
Scale:
Drawn By:

Sheet No:

IM1.2

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Sheet Title:

PERSPECTIVE

Job No. 15019
Date: 05/04/2016
Scale:
Drawn By:

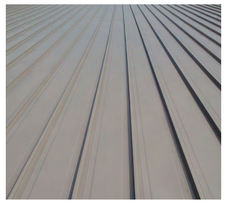
Sheet No:

IM1.3

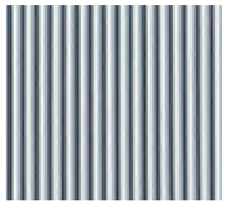
7 CANOPY
METAL

6 OFFICE ENTRY
ALUMINUM WITH CLEAR GLASS

5 WINDOW
ALUMINUM ALL WEATHER



4 ROOF
STANDING SEAM METAL



3 WALL
METAL PANEL SIDING

2 WALL
WOOD-COLORED SIDING

1 WALL
SMOOTH TROWELED PLASTER

STUDIO
T SQUARE

: Architecture
: Planning
: Urban Design

: 304 12th Street, Suite 2A
: Oakland, California 94607
: (510) 451 - 2850

Winchester Blvd. Office
Winchester Blvd. and Shelburne Way, Los Gatos, CA

Valley Oak Partners
734 The Alameda
San Jose, California

Sheet Title:

MATERIALS
AND COLORS

Job No. 15019
Date: 05/04/2016
Scale: 3/32" = 1' - 0"
Drawn By:

Sheet No:

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APPENDIX D

NOISE REPORT

ENVIRONMENTAL NOISE ASSESSMENT

WINCHESTER BOULEVARD OFFICE
LOS GATOS, CALIFORNIA

WJVA Report No. 16-020

PREPARED FOR

EMC PLANNING
301 LIGHTHOUSE AVENUE, SUITE C
MONTEREY, CA 93940

PREPARED BY

WJV ACOUSTICS, INC.
VISALIA, CALIFORNIA

wjv acoustics

JULY 21, 2016

1. INTRODUCTION

Project Description:

The project is a proposed 30,070 square-foot office building to be located on Winchester Avenue within the Town of Los Gatos. The project applicant proposes the demolition of three existing single-family residences and the construction of a new two-story office building with below grade and at grade parking. The 1.31-acre project site is currently zoned O (Office).

Environmental Noise Assessment:

This environmental noise assessment has been prepared to determine if significant noise impacts will be produced by the project and to describe mitigation measures for noise if significant impacts are determined. The environmental noise assessment, prepared by WJV Acoustics, Inc. (WJVA), is based upon the project Submittal dated May 04, 2016, a traffic impact analysis prepared by Hexagon Transportation Consultants and a project site visit on June 24, 2016. Revisions to the site plan, traffic impact analysis or other project-related information available to WJVA at the time the analysis was prepared may require a reevaluation of the findings and/or recommendations of the report.

Appendix A provides definitions of the acoustical terminology used in this report. Unless otherwise stated, all sound levels reported in this analysis are A-weighted sound pressure levels in decibels (dB). A-weighting de-emphasizes the very low and very high frequencies of sound in a manner similar to the human ear. Most community noise standards utilize A-weighted sound levels, as they correlate well with public reaction to noise.

2. THRESHOLDS OF SIGNIFICANCE

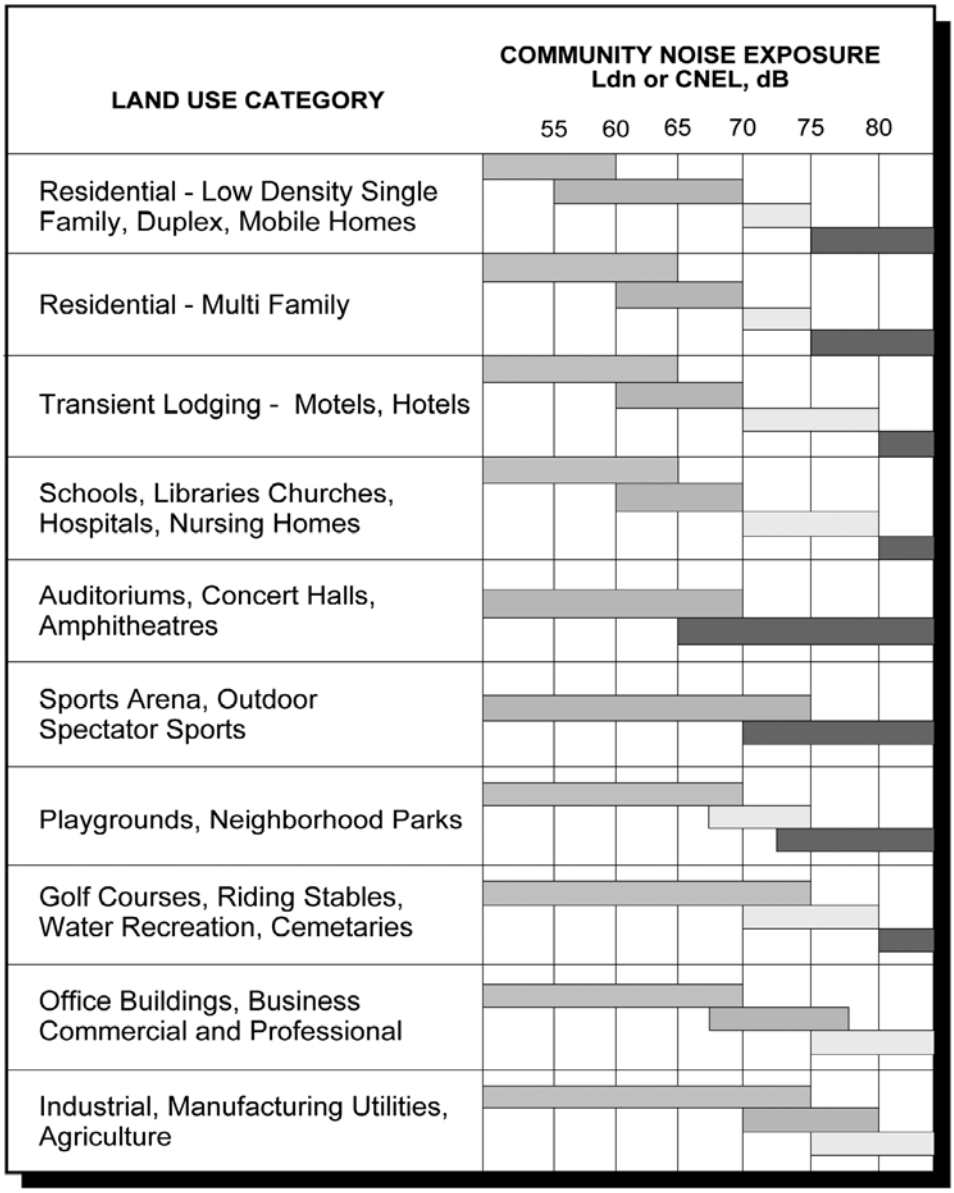
The CEQA Guidelines indicate that significant noise impacts occur when the project exposes people to noise levels in excess of standards established in local noise ordinances or general plan noise elements, or causes a substantial permanent or temporary increase in noise levels above levels existing without the project.

a. Noise Level Standards

Town of Los Gatos

The Town of Los Gatos Noise Element of the General Plan (2020) provides goals, policies and guidelines for minimizing noise levels within the Town. The Noise Element applies General Plan Guidelines established by the California Office of Planning Research (2003) to set noise and land use compatibility guidelines for the Town. The guidelines are provided below as Figure 1 (Figure NOI-1 of the Noise Element).

FIGURE 1: NOISE AND LAND USE COMPATIBILITY



NORMALLY ACCEPTABLE

Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

CONDITIONALLY ACCEPTABLE

New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features *included in the design. Conventional* construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

NORMALLY UNACCEPTABLE

New construction or development should generally be discouraged. If new constuction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise reduction features included in the design.

CLEARLY UNACCEPTABLE

New construction or development should generally not be undertaken.

Additionally, Table NOI-2 of the Noise Element establishes outdoor noise limits for the Town. These outdoor noise limits are provided below as Table I.

TABLE I

TOWN OF LOS GATOS OUTDOOR NOISE LIMITS (dBA)

LAND USE	MAX L_{DN}	MAX 24 HOUR L_{EQ}	COMPARABLE NOISE SOURCE	RESPONSE
Residential	55		Light Auto Traffic (100 feet)	Quiet
Commercial		70	Freeway Traffic (50 feet)	Telephone Difficult to Use
Industrial		70	Freeway Traffic (50 feet)	Telephone Difficult to Use
Intensive (Developed Park)		55	Light Auto Traffic (100 feet)	Quiet
Passive (Nature Park)		50	Light Auto Traffic (100 feet)	Quiet
Hospital		55	Light Auto Traffic (100 feet)	Quiet
Educational		55	Light Auto Traffic (100 feet)	Quiet
Source: Town of Los Gatos 2020 General Plan				

Policy NOI-3 of the Noise Element discusses the outdoor noise limits provided above in Table I, and states that the Town should *"pursue the outdoor noise limits shown in Table NOI-2 as representing long range community aspirations and work toward their accomplishment, even though some may be presently unattainable".*

Additionally, The Town of Los Gatos Municipal Code provides further exterior noise limits applicable to the project.

- §16.20.015 (Exterior noise levels for residential zones) states *"No person shall cause, make, suffer or allow to be made by any machine, animal, device or any combination of same in a residential zone, a noise level more than six (6) dB above the noise level specified for that particular noise zone, as shown on the Noise Zone Map, during that particular time frame, at any point outside of the property plane".*

- §16.20.025 (Noise levels for commercial and industrial zones) states *"No person shall cause, make, suffer or allow to be made by any machine, animal, device or any combination of same, in any commercial or industrial zone, a noise level more than eight (8) dB above the noise level specified for that particular noise zone, as shown on the Noise Zone Map, during that particular time frame, at any point outside of the property plane".*

The applicable Municipal Code exterior noise level limits (based upon the Town of Los Gatos Noise Zone Map and project site location) or provided below in Table II.

TABLE II

TOWN OF LOS GATOS EXTERIOR NOISE LEVEL LIMITS (dBA)

LAND USE	6:00 A.M.- 1:00 P.M.	1:00 P.M.- 10:00 P.M.	10:00 P.M.- 6:00 A.M.
Residential	51	51	48
Commercial/Industrial	53	53	50
Source: Town of Los Gatos Municipal Code			

State of California

There are no state noise standards that are applicable to the project.

Federal Noise Standards

There are no federal noise standards that are applicable to the project.

Substantial Noise Increases:

CEQA does not define what constitutes a substantial increase in noise levels. Some guidance is provided by the 1992 findings of the Federal Interagency Committee on Noise (FICON), which assessed changes in ambient noise levels resulting from aircraft operations. The FICON recommendations are based upon studies that relate aircraft and traffic noise levels to the percentage of persons highly annoyed by the noise. The rationale for the FICON recommendations is that it is possible to consistently describe the annoyance of people exposed to transportation noise in terms of the DNL (or CNEL). Annoyance is a summary measure of the general adverse reaction of people to noise that results in speech interference, sleep disturbance, or interference with other daily activities.

Although the FICON recommendations were specifically developed to address aircraft noise impacts, they are used in this analysis for all transportation noise sources that are described in terms of cumulative noise exposure metrics such as the L_{dn} or CNEL. Table III summarizes the FICON recommendations.

TABLE III

MEASURES OF SUBSTANTIAL NOISE INCREASE FOR TRANSPORTATION SOURCES

Ambient Noise Level Without Project (L_{dn}/CNEL)	Significant Impact Assumed to Occur if the Project Increases Ambient Noise Levels By:
<60 dB	+ 5 dB or more
60-65 dB	+3 dB or more
>65 dB	+1.5 dB or more
Source: FICON, 1992, as applied by WJV Acoustics, Inc.	

For noise sources that are not transportation related, which usually includes commercial or industrial activities and other stationary noise sources, it is common to assume that a 3-5 dB increase in noise levels represents a substantial increase in ambient noise levels. This is based on laboratory tests that indicate that a 3 dB increase is the minimum change perceptible to most people, and a 5 dB increase is perceived as a "definitely noticeable change."

b. Construction Noise

§16.20.035 (Construction) of the Town of Los Gatos Municipal Code establishes permissible hours for construction activity. The codes states *"Notwithstanding any other provision of this chapter, between the hours of 8:00 a.m. to 8:00 p.m., weekdays and 9:00 a.m. to 7:00 p.m. weekends and holidays, construction, alteration or repair activities which are authorized by a valid Town permit or as otherwise allowed by Town permit, shall be allowed if they meet at least one of the following noise limitations:*

(1) No individual piece of equipment shall produce a noise level exceeding eighty-five (85) dBA at twenty-five (25) feet. If the device is located within a structure on the property, the measurement shall be made at distances as close to twenty-five (25) feet from the device as possible.

(2) The noise level at any point outside of the property plane shall not exceed eighty-five (85) dBA."

3. SETTING

The proposed project site is a 1.31-acre lot located in the Town of Las Gatos. The project site currently consists of four individual parcels on which three existing single-family residences exist. The project site is bordered to the north by Shelburne Way, to the east by an existing veterinary hospital and auto body shop, to the south by existing multi-family residential land uses and to the west by Winchester Boulevard. Existing noise-sensitive land uses in the project area include single- and multi-family residential land uses, a school, a park and various commercial and retail land uses. The project site plan is provided as Figure 2. The project site and vicinity are provided as Figure 3.

a. Background Noise Level Measurements

Existing noise levels in the project vicinity are dominated by traffic noise along Winchester Boulevard and University Avenue. Additional sources of noise observed during site inspection included aircraft overflights, industrial/commercial activities, human voice, barking dogs and noise associated with landscaping activities (lawnmower, blowers, etc.).

Measurements of existing ambient noise levels in the project vicinity were conducted on June 24, 2016. Short-term (15-minute) ambient noise level measurements were conducted at eight (8) locations (Sites ST1 through ST8), the locations of the noise monitoring sites are shown on Figure 3. Two (2) individual measurements were taken at each of the eight locations to quantify ambient

noise levels in the morning and afternoon hours.

Noise monitoring equipment consisted of Larson-Davis Laboratories Model LDL-820 sound level analyzers equipped with B&K Type 4176 1/2" microphones. The equipment complies with the specifications of the American National Standards Institute (ANSI) for Type I (Precision) sound level meters. The meters were calibrated with a B&K Type 4230 acoustic calibrator to ensure the accuracy of the measurements.

The noise measurement data included energy average (L_{eq}) maximum (L_{max}) as well as five individual statistical parameters. Observations were made of the dominant noise sources affecting the measurements. The statistical parameters describe the percent of time a noise level was exceeded during the measurement period. For instance, the L_{90} describes the noise level exceeded 90 percent of the time during the measurement period, and is generally considered to represent the residual (or background) noise level in the absence of identifiable single noise events from traffic, aircraft and other local noise sources. Table IV summarizes short-term noise measurement results.

TABLE IV

SUMMARY OF SHORT-TERM NOISE MEASUREMENT DATA
WINCHESTER BOULEVARD OFFICE PROJECT, LOS GATOS
JUNE 24, 2016

Site	Time	A-Weighted Decibels, dBA							Sources
		L_{eq}	L_{max}	L_2	L_8	L_{25}	L_{50}	L_{90}	
ST1	7:31 a.m.	61.8	72.3	68.9	66.7	63.2	57.0	46.9	TR, AC
ST1	3:17 p.m.	57.7	65.7	63.3	61.9	59.8	55.7	45.3	TR, V, IC
ST2	7:49 a.m.	59.9	74.7	64.9	62.0	60.6	59.3	57.1	TR, V, IC
ST2	3:35 p.m.	50.5	64.5	59.6	54.5	48.6	46.3	44.2	TR, V
ST3	8:07 a.m.	63.2	80.1	74.7	67.9	60.1	56.4	49.9	TR, L, AC, V, D
ST3	3:44 p.m.	59.0	73.6	66.0	62.9	58.7	55.5	48.2	TR, D
ST4	8:28 a.m.	53.3	62.8	57.8	55.6	53.9	52.5	50.4	TR, V
ST4	4:11 p.m.	49.6	64.1	54.8	50.9	49.6	48.3	46.0	TR, V
ST5	8:48 a.m.	61.1	67.0	63.0	62.2	60.4	59.9	59.1	TR, IC, V
ST5	4:30 p.m.	60.0	66.6	62.6	61.6	60.5	59.7	58.8	TR,IC
ST6	9:08 a.m.	58.2	63.4	62.6	60.4	58.9	58.4	55.1	TR, V
ST6	4:55 p.m.	57.7	62.8	62.8	62.1	59.6	58.1	54.9	TR, AC, V
ST7	9:31 a.m.	63.8	75.5	72.8	69.3	64.1	54.5	48.3	TR, D
ST7	5:29 p.m	69.1	91.0	80.9	69.8	66.3	61.5	45.0	TR, L, AC, V
ST8	9:52 a.m.	53.1	61.8	56.7	53.3	52.7	50.6	45.5	TR, V. IC
ST8	5:50 p.m.	54.3	60.9	57.0	53.0	51.9	48.9	42.3	TR, V, IC

TR: Traffic AC: Aircraft V: Voices L: Landscaping Activities D: Dogs Barking IC: Industrial/Commercial Activity
Source: WJV Acoustics, Inc.

Short-term noise measurements were conducted for 15-minute periods. Sites ST1, ST2 and ST7 were located adjacent to roadways and vehicle traffic dominated the noise environment. Sites ST3 and ST4 were located within the existing multi-family residential development (University Oaks) south of the project site, and although traffic was the dominate noise source, these sites were also exposed to noise from human activities, landscaping activities, barking dogs and aircraft overflights.

Site ST5 was located between the veterinary hospital and auto body shop east of the project site, and the dominant noise source during both measurement periods was pneumatic tools operating in the auto body shop garage. Site ST6 was located in Vasona Lake County Park, the observed sources of noise during the noise measurement periods were vehicle traffic on University Avenue, voices, and aircraft overflights. Site ST8 was located in a business park/office complex, and adjacent to a nursery. The observed sources of noise at the site were traffic (both on local roadways and vehicle movements within the parking lot), human voices and industrial/commercial related noise.

The overall noise measurement data indicate that noise in the project vicinity is highly influenced by vehicular traffic on Winchester Boulevard and University Avenue. Additionally, existing noise levels to the area east of the project site are impacted by commercial and industrial activities located along Shelburne Way and University Avenue. L_{max} values were in the range of 61-91 dBA, and were typically the result of a loud vehicle, the highest L_{max}, (measured at site ST7) was the result of motorcycle pass-by in the vicinity of the noise monitor. Based upon the short-term noise measurements, L_{dn} values at the monitoring sites were estimated to be in the range of 55-70 dB, depending on proximity to Winchester Boulevard, University Avenue and other local roadways. Individual backyards of single-family residences in the project vicinity would likely be in the range of 50-60 dB L_{dn}, depending on the level of acoustical shielding provided by the homes.

4. PROJECT-RELATED NOISE LEVELS

a. Traffic Noise

WJVA utilized the FHWA Traffic Noise Model to quantify expected project-related increases in traffic noise exposure along roadways in the project vicinity. In order to validate the accuracy of the noise model, noise level measurements and concurrent traffic counts were conducted by WJVA at two (2) locations within the project site on June 24, 2016. One model calibration measurement was conducted along Winchester Boulevard and another was conducted along University Avenue, both in the vicinity of the project site.

The FHWA Model is a standard analytical method used by state and local agencies for roadway traffic noise prediction. The model is based upon reference energy emission levels for automobiles, medium trucks (2 axles) and heavy trucks (3 or more axles), with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The FHWA Model was developed to predict hourly L_{eq} values for free-flowing traffic conditions, and is generally considered to be accurate within ±1.5 dB. To predict L_{dn} values, it is necessary to determine the hourly distribution of traffic for a typical day and adjust the traffic volume input data to yield an equivalent hourly traffic volume.

Noise measurements were conducted in terms of the equivalent energy sound level (L_{eq}). Measured L_{eq} values were compared to L_{eq} values calculated (predicted) by the FHWA Model using as inputs the traffic volumes, truck mix and vehicle speed observed during the noise measurements. The results of that comparison are shown in Table V.

TABLE V

COMPARISON OF MEASURED AND PREDICTED (FHWA MODEL) NOISE LEVELS WINCHESTER BOULEVARD OFFICE, LOS GATOS JUNE 24, 2016

	Winchester Boulevard	University Avenue
Start Time	11:45 a.m.	12:05 p.m.
Microphone Height, Ft. (above the ground)	5	
Observed # Autos/Hr.	511	239
Observed # Medium Trucks/Hr.	0	0
Observed # Heavy Trucks/Hr.	8	4
Posted Speed (MPH)	35	
Distance, ft.	65	55
L_{eq}, dBA (Measured)	60.6	57.0
L_{eq}, dBA (Predicted)	59.1	55.8
Difference between Measured and Predicted L_{eq}, dB	**+1.5**	**+1.2**

Note: FHWA "soft site" assumed for calculations
Source: WJV Acoustics, Inc.

From Table V it may be determined that the predicted traffic noise levels were in the range of 1.2 to 1.5 dB lower than the measured noise level for the traffic conditions observed at the time of the noise measurements. This slight over-prediction by the model is expected, and is due to the presence of other, non-traffic (dogs, aircraft, landscaping activities, etc.) noise sources contributing to the overall noise exposure measured during the monitoring periods. However, this is considered reasonable agreement between modeled and measured noise levels, therefore an adjustment (offset) to modeled noise levels in the project vicinity is not required.

Traffic noise exposure for Cumulative and Cumulative Plus Project traffic conditions was calculated based upon the FHWA Model and traffic volumes provided in the project Traffic Impact Analysis (TIA) prepared by Hexagon Transportation Consultants. The posted vehicle speed limit on the analyzed roadways is generally 35 miles per hour (mph). The Noise modeling assumptions used to calculate project traffic noise are provided as Appendix B. Table VI provides these noise exposure levels at a reference distance of 75 feet from the center of the analyzed roadways (typical residential setback).

From Table VI it can be determined that traffic noise exposure at most existing land uses in the project vicinity would be expected to increase by approximately 0.0 to 0.1 dB as a result of the project. An increase of approximately 0.7 dB is expected to occur along Shelburne Way, as a result of the project. This is not considered to be a significant impact. It should be noted, although traffic noise levels described in Table VI exceed the Town's applicable exterior noise level standard along several of the analyzed roadway segments, the exceedance is not a result of the project, and therefore does not indicate a project-related impact. Additionally, noise levels described in Table VI do not take into consideration any site-specific shielding that may occur, and are considered to be a generalized worst-case assessment of traffic noise levels in the project area.

TABLE VI

CUMULATIVE BASELINE AND CUMULATIVE PLUS PROJECT TRAFFIC NOISE LEVELS WINCHESTER BOULEVARD OFFICE, LOS GATOS

Roadway Name (segment description)	L_{dn}, dB[1]		Change	Significant Impact?
	No Project	With Project		
Winchester Boulevard (n/o Lark Avenue)	67.4	67.4	0.0	No
Winchester Boulevard (s/o Lark Avenue)	64.3	64.3	0.0	No
Winchester Boulevard (n/o Daves Avenue)	63.9	63.9	0.0	No
Winchester Boulevard (s/o Daves Avenue)	63.8	63.8	0.0	No
Winchester Boulevard (n/o Shelburne Way)	63.7	63.8	0.1	No
Winchester Boulevard (s/o Shelburne Way)	63.6	63.6	0.0	No
Winchester Boulevard (n/o Blossom Hill Road	63.7	63.7	0.0	No
Lark Avenue (w/o University Avenue)	66.8	66.8	0.0	No
Lark Avenue (e/o University Avenue)	67.1	67.1	0.0	No
Lark Avenue (w/o 17 SB ramp)	67.4	67.4	0.0	No
Lark Avenue (e/o 17 SB ramp)	67.8	67.9	0.1	No
Lark Avenue (w/o 17 NB ramp)	67.8	67.9	0.1	No
Lark Avenue (e/o 17 NB ramp)	68.3	68.3	0.0	No
Lark Avenue (e/o Winchester Boulevard)	66.9	66.9	0.0	No
University Avenue (s/o Lark Avenue)	61.5	61.6	0.1	No
University Avenue (n/o Shelburne Way)	61.2	61.3	0.1	No
University Avenue (s/o Shelburne Way)	61.4	61.4	0.0	No
University Avenue (n/o Blossom Hill Road)	61.1	61.1	0.0	No
University Avenue (s/o Blossom Hill Road)	60.5	60.5	0.0	No
University Avenue (n/o Highway 9)	61.0	61.0	0.0	No
University Avenue (s/o Highway 9)	62.1	62.1	0.0	No
SB 17 Ramp (n/o Lark Avenue)	64.9	64.9	0.0	No
SB 17 Ramp (s/o Lark Avenue)	52.4	52.4	0.0	No
NB 17 Ramp (n/o Lark Avenue)	62.9	62.9	0.0	No
NB 17 Ramp (s/o Lark Avenue)	55.8	55.8	0.0	No
Daves Avenue (w/o Winchester Boulevard)	57.9	57.9	0.0	No
Shelburne Avenue (e/o Winchester Boulevard)	51.2	51.9	0.7	No
Shelburne Avenue (w/o University Boulevard)	52.1	52.8	0.7	No
Blossom Hill Road (w/o Winchester Avenue)	52.1	52.1	0.0	No
Blossom Hill Road (e/o Winchester Avenue)	62.0	62.1	0.1	No
Blossom Hill Road (w/o University Avenue)	62.4	62.4	0.0	No
Blossom Hill Road (e/o University Avenue)	63.9	63.9	0.0	No
N. Santa Cruz Avenue (s/o Blossom Hill Road)	63.6	63.6	0.0	No
N. Santa Cruz Avenue (n/o Highway 9)	63.9	63.9	0.0	No
N. Santa Cruz Avenue (s/o Highway 9)	63.2	63.2	0.0	No
Highway 9 (w/o N. Santa Cruz Avenue)	65.6	65.6	0.0	No
Highway 9 (e/o N. Santa Cruz Avenue	65.1	65.1	0.0	No
Highway 9 (w/o University Avenue)	65.2	65.2	0.0	No
Highway 9 (e/o University Avenue	66.4	66.4	0.0	No

[1]At a typical residential setback (assumed to be 75 feet from the center of the roadway).

Source: WJV Acoustics, Inc.

b. Operational Noise from On-Site Sources

Sources of operational noise from the proposed office development would typically be limited to parking lot vehicle movements, outdoor human activity and Mechanical/HVAC systems. The project design does not include any loading docks or trash compactors, and truck deliveries would not be expected to occur at the project site.

Vehicles accessing the project site would enter and exit via a driveway on Winchester Boulevard or a driveway on Shelburne Way. The project would incorporate approximately 128 parking spaces, of which 41 would be located at ground level, along the east and south portions of the project site, and 87 would be located below ground level in a subterranean parking structure below the proposed office building.

Noise due to traffic in parking lots is typically limited by low speeds and is not usually considered to be significant. Human activity in parking lots that can produce noise includes voices, stereo systems and the opening and closing of car doors and trunk lids. Such activities can occur at any time during regular hours of operation. The noise levels associated with these activities cannot be precisely defined due to variables such as the number of parking movements, time of day and other factors. It is typical for a passing car in a parking lot to produce a maximum noise level of 60 to 65 dBA at a distance of 50 feet, which is comparable to the level of a raised voice. For this project, the closest proposed parking would be located approximately 50 feet from the closest existing residential uses. Reference to existing ambient noise levels (Table IV) measured at monitoring site ST3 indicates that existing ambient noise levels at the residential land uses adjacent to the project site already exceed noise levels that would be expected to occur as a result of on-site vehicle movements. Parking lot vehicle movement and human activity noise would not be considered a significant impact.

The project will include roof-mounted Mechanical/HVAC units on the office building. Based upon data collected by WJVA for previous acoustical studies, it is estimated that noise levels from roof-mounted HVAC units at the closest off-site land uses to the project site would be in the range of 45-50 dBA. This does include consideration of acoustic shielding provided by the proposed screening around the roof-mounted Mechanical/HVAC units. These levels would generally not be audible above existing ambient noise levels at adjacent land-uses and would not exceed any Town noise level standards.

c. Noise from Construction

Construction noise could occur at various locations within the project site through the demolition and build-out period. Table VII provides typical construction-related noise levels at reference distances of 25 feet, 50 feet, and 100 feet.

TABLE VII

TYPICAL CONSTRUCTION EQUIPMENT
MAXIMUM NOISE LEVELS, dBA

Type of Equipment	25 Ft.	50 Ft.	100 Ft.
Backhoe	84	78	72
Concrete Saw	96	90	84
Crane	87	81	75
Excavator	87	81	75
Front End Loader	85	79	73
Jackhammer	95	89	83
Paver	83	77	71
Pneumatic Tools	91	85	79
Dozer	88	82	76
Rollers	86	80	74
Trucks	92	86	80
Pumps	86	80	74
Scrapers	93	87	81
Portable Generators	86	80	74
Front Loader	92	86	80
Backhoe	92	86	80
Excavator	92	86	80
Grader	92	86	80

Source: FHWA
Noise Control for Buildings and Manufacturing Plants, Bolt, Beranek & Newman, 1987

Construction noise is not usually considered to be a significant impact if construction is limited to the daytime hours and construction equipment is adequately maintained and muffled. Extraordinary noise-producing activities (e.g., pile driving) are not anticipated. The Town of Los Gatos Municipal Code limits construction activities to between the hours of 8:00 a.m. to 8:00 p.m., weekdays and 9:00 a.m. to 7:00 p.m. weekends and holidays. Construction activities should adhere to these time limits.

Additionally, the Municipal Code states that no individual piece of equipment shall produce a noise level exceeding eighty-five (85) dBA at twenty-five (25) feet. The types of equipment that may be used during demolition and construction is not known at this time. If equipment which exceeds 85 dB at a distance of 25 feet is to be used, effort should be made to increase the distance between the equipment and the adjacent land-uses to reduce construction noise levels at nearby noise-sensitive land uses. If the above-described considerations are incorporated into project construction, construction noise would not be considered to be an impact.

5. IMPACT SUMMARY

Project-related noise levels resulting from the proposed Winchester Avenue Office development, to be located in the Town of Los Gatos, are not expected to exceed any applicable Town of Los Gatos noise level standards or result in any significant long-term increases in ambient noise levels in the project vicinity or throughout the Town. Project site demolition and project construction could result in-short term increases in localized ambient noise levels. However, construction-related noise levels are not considered to be a significant impact if local construction noise time limits are observed and equipment is properly maintained and muffled. Additional mitigation is not required.

FIGURE 2: PROJECT SITE PLAN

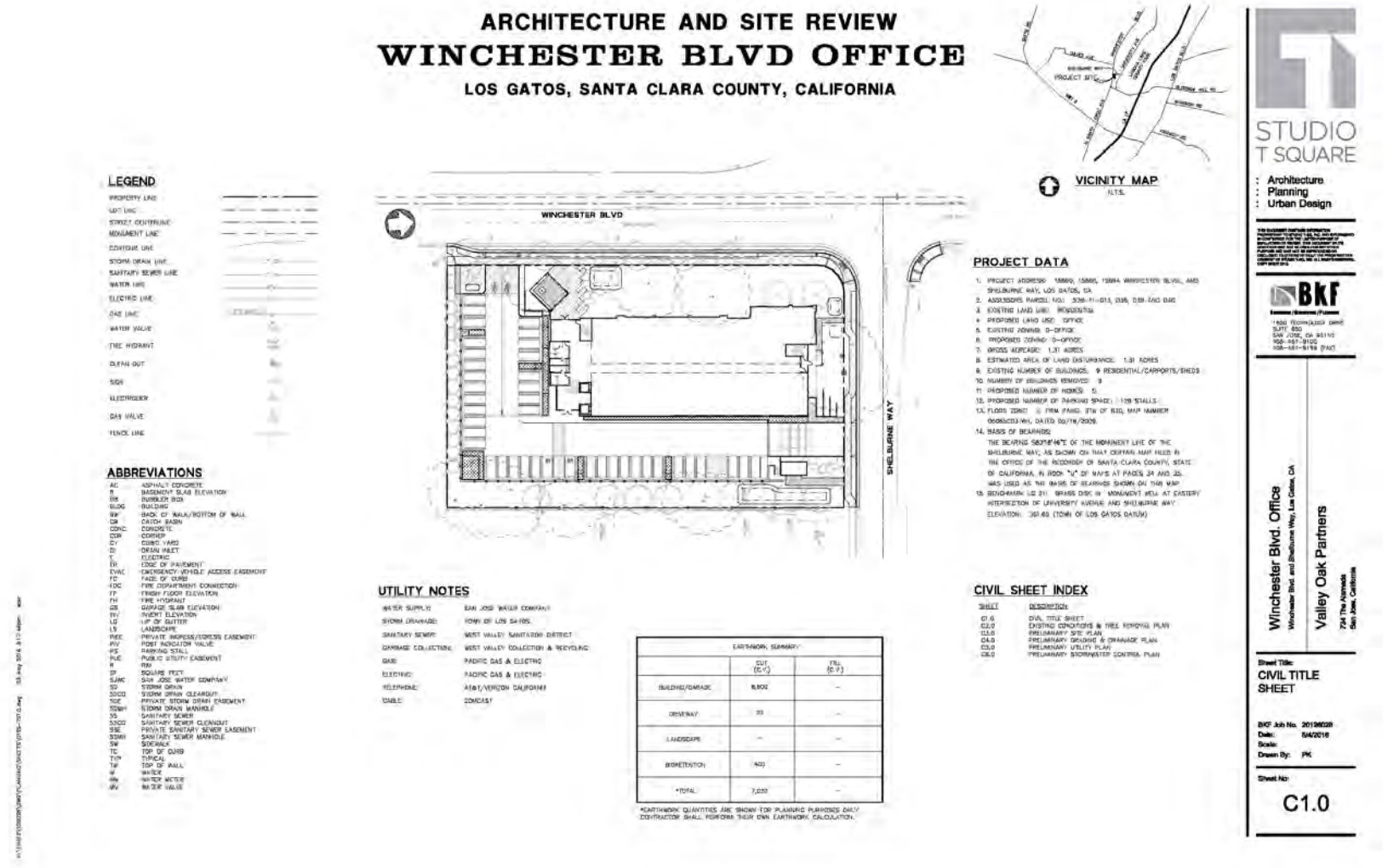
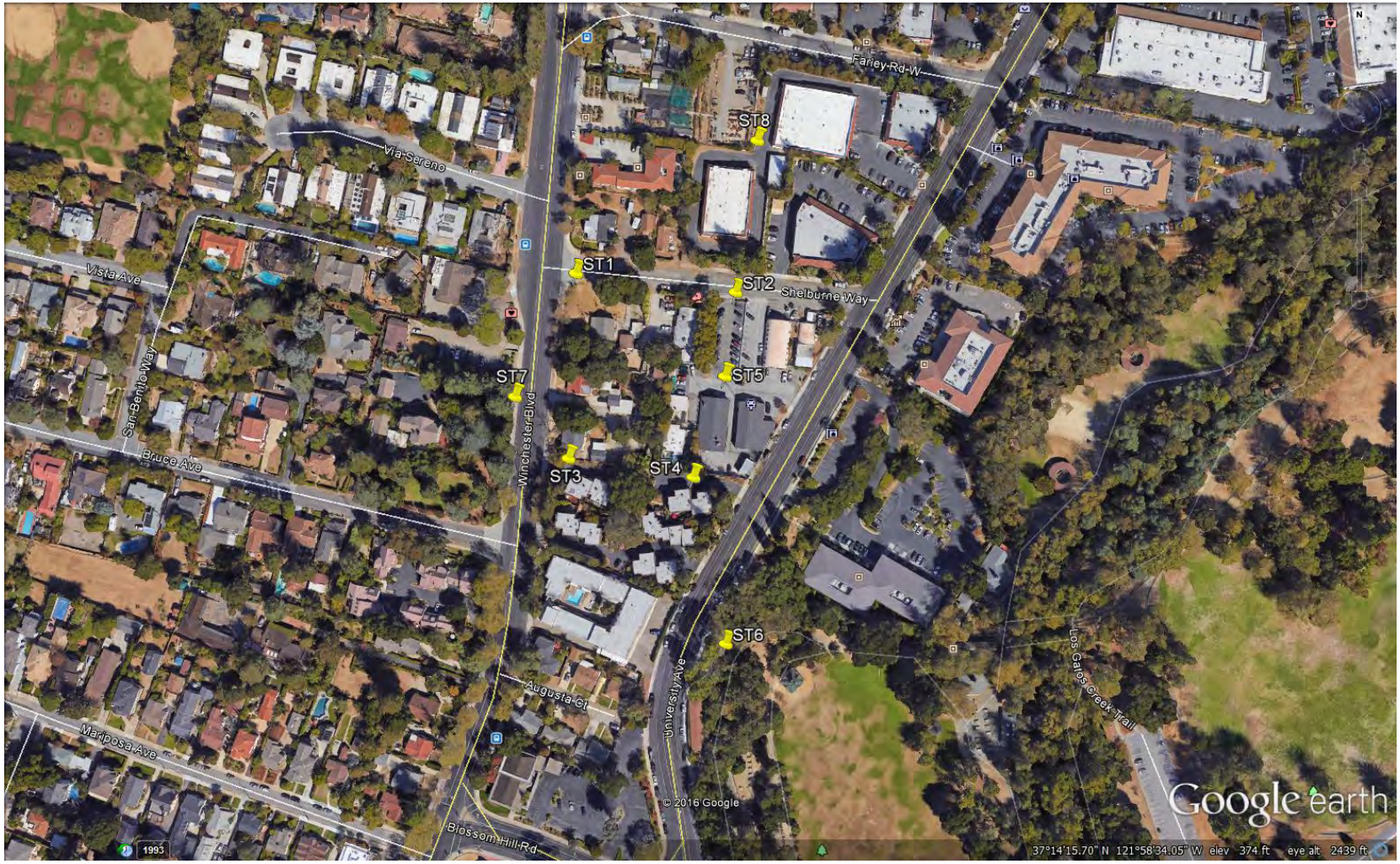


FIGURE 3: PROJECT VICINITY AND AMBIENT NOISE MONITORING SITES



APPENDIX A-1

ACOUSTICAL TERMINOLOGY

AMBIENT NOISE LEVEL: The composite of noise from all sources near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

CNEL: Community Noise Equivalent Level. The average equivalent sound level during a 24-hour day, obtained after addition of approximately five decibels to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and ten decibels to sound levels in the night before 7:00 a.m. and after 10:00 p.m.

DECIBEL, dB: A unit for describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).

DNL/L_{dn}: Day/Night Average Sound Level. The average equivalent sound level during a 24-hour day, obtained after addition of ten decibels to sound levels in the night after 10:00 p.m. and before 7:00 a.m.

L_{eq}: Equivalent Sound Level. The sound level containing the same total energy as a time varying signal over a given sample period. L_{eq} is typically computed over 1, 8 and 24-hour sample periods.

NOTE: The CNEL and DNL represent daily levels of noise exposure averaged on an annual basis, while L_{eq} represents the average noise exposure for a shorter time period, typically one hour.

L_{max}: The maximum noise level recorded during a noise event.

L_n: The sound level exceeded "n" percent of the time during a sample interval (L_{90}, L_{50}, L_{10}, etc.). For example, L_{10} equals the level exceeded 10 percent of the time.

ACOUSTICAL TERMINOLOGY

NOISE EXPOSURE CONTOURS: Lines drawn about a noise source indicating constant levels of noise exposure. CNEL and DNL contours are frequently utilized to describe community exposure to noise.

NOISE LEVEL REDUCTION (NLR): The noise reduction between indoor and outdoor environments or between two rooms that is the numerical difference, in decibels, of the average sound pressure levels in those areas or rooms. A measurement of Anoise level reduction" combines the effect of the transmission loss performance of the structure plus the effect of acoustic absorption present in the receiving room.

SEL or SENEL: Sound Exposure Level or Single Event Noise Exposure Level. The level of noise accumulated during a single noise event, such as an aircraft overflight, with reference to a duration of one second. More specifically, it is the time-integrated A-weighted squared sound pressure for a stated time interval or event, based on a reference pressure of 20 micropascals and a reference duration of one second.

SOUND LEVEL: The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the response of the human ear and gives good correlation with subjective reactions to noise.

SOUND TRANSMISSION CLASS (STC): The single-number rating of sound transmission loss for a construction element (window, door, etc.) over a frequency range where speech intelligibility largely occurs.

APPENDIX B

TRAFFIC NOISE MODELING CALCULATIONS

APPENDIX E

TRAFFIC IMPACT ANALYSIS

HEXAGON TRANSPORTATION CONSULTANTS, INC.

Winchester Boulevard Office Development

Draft Transportation Impact Analysis (TIA)

Prepared for:

Valley Oak Partners, L.L.C.

September 13, 2016

Hexagon Office: 4 North Second Street, Suite 400, San Jose, CA 95113
Hexagon Phone: 408-971-6100
Job Number: 16OZ03
Client Name: Mr. Doug Rich
Document Name: Winchester Office Building TIA 2016-09-13.doc

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Executive Summary

This report presents the results of the Transportation Impact Analysis (TIA) prepared for the proposed office development located at Winchester Boulevard and Shelburne Way in Los Gatos, CA. The project site is located on the 1.31-acre lot southwest of the intersection of Winchester Boulevard and Shelburne Way. Currently, the project site is comprised of three houses. The project proposes to replace the existing houses with a 30,070-s.f. office building with 128 parking spaces. Access to the project site would be provided by two driveways, one on Winchester Boulevard and the other on Shelburne Way.

This study was conducted for the purpose of identifying the potential traffic impacts related to the proposed development. The potential impacts of the project were evaluated in accordance with the standards set forth by the Town of Los Gatos and the Santa Clara County Congestion Management Program (CMP). The traffic analysis is based on the AM and PM peak hour levels of service for nine (9) signalized intersections, two unsignalized intersections, and three freeway segments. Of the nine study intersections, two are CMP intersections.

Per CMP technical guidelines, a freeway segment LOS analysis is required when a project is expected to add trips greater than one percent of a segment's capacity. Given that the number of project trips added to the freeways in the area is estimated to be less than the one percent threshold of freeway capacity, a detailed analysis of freeway segment levels of service was not performed.

Project impacts on other transportation categories, such as vehicle queuing, pedestrian, bicycle and transit facilities, site access and on-site circulation, were determined on the basis of engineering judgment.

Project Trip Generation

To better represent an office building in Los Gatos, driveway counts of three comparable office buildings in Los Gatos were collected. Comparable office buildings were selected based on the size of the buildings as well as the tenant types. The trip generation counts were conducted on a regular weekday in March 2016 recording vehicle volumes at driveways of office buildings. Compared to the average peak hour trip rates published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 9th Edition* for a general office building, local data yielded 9% higher trip rates during the PM peak hour. Therefore, the project trip generation was estimated using trip rates derived from local surveys.

Based on local trip generation rates, the proposed new building is expected to generate 41 trips (33 in and 8 out) during the AM peak hour, and 50 trips (4 in and 46 out) during the PM peak hour. Given that there are existing buildings that are generating traffic already on the proposed project site, some of the trips from the site will not be new trips. Trips generated by the existing houses on site were estimated using the average trip generation rates published in the ITE *Trip Generation Manual, 9th Edition* for a single-family detached house. Based on the ITE trip rates, the existing houses on site currently generate 2 trips (0 in and 2 out) during the AM peak hour, and 3 trips (2 in and 1 out) during the PM peak hour.

Crediting the trips generated by the existing uses on the site, the project would generate an estimate of 303 net new daily trips, 38 (32 in and 6 out) net new AM trips, and 46 (2 in and 44 out) net new PM trips.

Trip generation using the average ITE rates for an office building would result in 7 additional project trips during the AM peak hour, and 4 fewer project trips during the PM peak hour.

Intersection Levels of Service

The intersection LOS analysis concluded that all study intersections would operate at acceptable levels of service under all studied conditions. The unsignalized intersections would operate at LOS B and LOS C for their respective worst approaches during both peak hours under all studied conditions. The levels of service results indicate that these two unsignalized intersections would be operating at near free-flow condition. A signal warrant check for these two intersections thus was not performed.

Intersection levels of service results are summarized in Table ES-1.

Operations Analysis

Operational issues are not considered CEQA impacts. They are included for informational purposes.

A queuing analysis was provided to determine whether the addition of project trips would exacerbate peak hour queues and delays, as well as estimating future storage requirements at intersections. The following turn movements were analyzed for vehicles queues:

- University Avenue and Lark Avenue – the westbound left-turn movement
- SR17 northbound ramps and Lark Avenue – the eastbound left-turn movement
- N. Santa Cruz and Los Gatos-Saratoga Road – the eastbound left-turn movement
- University Avenue and Los Gatos-Saratoga Road – the southbound left-turn movement
- Winchester Boulevard and Shelburne Way – the southbound left-turn and westbound movement
  Winchester Boulevard and Project Driveway – the southbound left-turn movement

Hexagon performed field observations at these intersections to determine the average queue length. The reported existing queue lengths match our observations.

Under existing and background conditions, volumes on all studied movements are contained within the provided storage space, except at the following turn pockets where the 95th percentile queues exceed the provided storage space:

- University Avenue & Lark Avenue – westbound left-turn pocket – AM & PM Peak Hours
- University Avenue & Los Gatos-Saratoga Road – southbound left-turn pocket – PM Peak Hour

Under existing plus project and background plus project conditions, the 95th percentile queues at the above mentioned two overflowing movements would continue to exceed the provided storage space. The project would not cause additional turn pockets to overflow. As shown on Table 12, the project is expected to add fewer than 10 vehicles per hour to the overflowing movements and is not expected to extend the 95th percentile queues.

The project driveway on Shelburne Way is proposed at approximately 130 feet east of Winchester Boulevard. The 95th percentile queue length for westbound Shelburne Way at Winchester Boulevard is estimated at 25 feet, which indicates that vehicles turning out of the Shelburne Way driveway would not be blocked.

The project driveway on Winchester Boulevard is proposed at approximately 250 feet south of Shelburne Way. There is an existing two-way left-turn median on Winchester Boulevard for southbound inbound vehicles to wait and turn into the driveway. Based on the queuing analysis results, it is expected that the southbound left-turn project traffic on Winchester Boulevard turning into the driveway would be contained within the two-way left-turn median.

Project Impact on Bicycle, Pedestrian and Transit Facilities

The project site is well served by existing bicycle facilities. There is an existing Class III bikeway on Shelburne Way between Winchester Boulevard and University Avenue. Nearby bicycle facilities within the project vicinity include bike lanes on Daves Avenue, Winchester Boulevard north of Daves Avenue, and on University Avenue north of Blossom Road, as well as the Los Gatos Creek trail. The Los Gatos Creek Trail is a Class I bike facility that runs in a north-south direction just west of Highway 17.

Pedestrian activity could occur between the site and downtown Los Gatos, located approximately a mile south, as well as the closest bus stops, located about 200 feet north and 700 feet to the south of the project site. There are existing sidewalks on Winchester Boulevard that connect the site to the bus stops and to downtown Los Gatos. Several sections of Shelburne Way lack sidewalks, including the project frontage. The project would improve the situation by adding a sidewalk along its frontage. There are no crosswalks at the intersection of Winchester Boulevard and Shelburne Way. The project would not create sufficient pedestrian demand to warrant the installation of a crosswalk. The nearest crosswalk is at the signalized intersection of Winchester Boulevard and Daves Avenue, which is located approximately 575 feet, from the project site.

As shown on Figure 2 in Chapter 1, the project proposes to provide detached sidewalks with a landscape buffer on Winchester Boulevard and Shelburne Way along the building frontage. Detached sidewalks with a landscape buffer would provide a wider buffer area between pedestrians and on-street vehicles.

The project would be required to pay a Traffic Impact Fee, as does all new development in the Town of Los Gatos. The Town's Traffic Impact Fee is unrelated to whether or not a project has any impacts under CEQA, and is required of all new development projects that generate additional trips on the Town's roadway network. Among the projects that will be funded with Traffic Impact Fees that are within the study area are the complete street improvements on Winchester Boulevard from Blossom Hill Road to Lark Avenue. It is expected that the complete street improvements would enhance the bicycle and pedestrian facilities along Winchester Boulevard.

There is transit service on Winchester Boulevard adjacent to the site. The closest bus stop for northbound service is approximately 450 feet north at Winchester Boulevard and Farley Road, and less than 200 feet north at Winchester Boulevard and Via Sereno for southbound service. It is not expected that the proposed project would generate a significant amount of transit ridership, or create a significant impact to intersection levels of service along transit routes. Therefore, the project would not significantly impact transit facilities and transit travel times.

As shown on Figure 2 in Chapter 1, as requested by the Valley Transportation Authority (VTA) the project proposes to provide an additional VTA bus stop along the building frontage on Winchester Boulevard at the Shelburne intersection. The proposed bus stop would provide direct transit access to the project site.

Recommendations

While not required to improve Level of Service or to mitigate impacts related to traffic, it is recommended that the proposed project implement detached sidewalks on Winchester Boulevard and on Shelburne Way along the building frontages, and implement the proposed VTA bus stop along the building frontage on Winchester Boulevard at the Shelburne intersection.

Site Access and Circulation

Site access was evaluated to determine the adequacy of site driveways with regards to corner sight distance and traffic volumes. The proposed project would have two full-access driveways, one each on Winchester Boulevard and Shelburne Way. The northern access driveway from Shelburne Way would provide access to an 87-space below-grade parking garage. The Winchester Boulevard access driveway would connect to a 41-space surface parking lot. Both access driveways serve as the entrance and exit to that specific grade-level parking area. Queuing analysis indicates that the Shelburne Way driveway would not be blocked by the westbound traffic queues at the intersection of Winchester Boulevard and Shelburne Way. Therefore, access to the project driveways would be adequate under all analyzed scenarios.

Driveway Sight Distance

The project access points should be free and clear of any obstructions to optimize sight distance, thereby ensuring that exiting vehicles can see pedestrians on the sidewalk and other vehicles traveling on adjacent roadways. Landscaping and parking should not conflict with a driver's ability to locate a gap in traffic and see oncoming pedestrians and bicyclists. Adequate corner sight distance (sight distance triangles) should be provided at all site access points in accordance with the Town's standards. Sight distance triangles should be measured approximately 15 feet back from the traveled way.

Sight distance requirements vary depending on the roadway speeds. The speed limit on Winchester Boulevard and Shelburne Way is 25 mph. The Caltrans recommended stopping sight distance for this roadway is 150 feet.

Recommendations

At both the Winchester Boulevard driveway as well as the Shelburne Way driveway, on-street parking should be prohibited within 15 feet of the driveway to ensure adequate sight distance.

On-Site Circulation

All driveway and drive-aisle widths are at least 25 feet wide, and comply with the minimum requirements established in the Town of Los Gatos Code of Ordinances Section 29.10.155. All parking stalls within the parking garage are 18 feet in length (16 feet with 2 feet overhang) and 8 feet 6 inches in width, which meet the town's requirements.

The building lobby and entrance is proposed to front Winchester Boulevard. Pedestrians would access the project site through the main lobby and entrance area. Sidewalks are proposed to be installed on Winchester Boulevard and Shelburne Way fronting the project site. The proposed project would provide adequate pedestrian access and circulation.

Emergency Vehicles, Truck Access and Circulation

The site plan proposes a dedicated trash enclosure on Shelburne Way just east of the main access driveway. Trash bins would be picked up from and returned to the dedicated trash enclosure on the day of garbage collection. All driveways and drive-aisles are at least 25 feet wide, which are adequate for emergency vehicle access and circulation.

Parking

For office use at the project site, the Town of Los Gatos Municipal Code Section 29.10.150 requires parking to be provided at the rate of one parking space per 235 square feet of gross floor area. The project proposes an office building totaling 30,070 square feet, which by code would be required to provide 128 parking spaces. The project site plan provides 128 parking spaces. Therefore, the parking provision as shown on the current project site plans would meet the Town standards.

Per the California Building Code (CBC) Table 11B-208.2, four accessible spaces are required for parking garages with 76 to 100 parking spaces and two accessible spaces are required for parking lots with 26 to 50 parking spaces. Of the required accessible parking spaces, one van accessible space is required. As shown on the site plan, the project would provide six accessible parking spaces, of which four are accessed via the northern driveway on the below-grade level near the elevators, and the remaining two are accessed via the western driveway on the ground floor. The project site plan also labels one of the accessible parking spaces in both the underground garage and the surface parking lot to be van accessible. Therefore, the accessible parking provisions as shown on the current project site plans would meet the CBC requirements.

As discussed above, to ensure adequate sight distance for vehicles turning out of the driveways, Hexagon recommends on-street parking on Winchester Boulevard and Shelburne Way within 15 feet of the driveway be prohibited.

The Town of Los Gatos does not have requirements for bicycle parking spaces. According to VTA's *Bicycle Technical Guidelines*, which is VTA's general guide for local agencies in planning, design and maintenance of bicycle facilities and bicycle-friendly roadways, offices should provide one bicycle parking space per 6,000 s.f. and 75 percent of the bicycle parking spaces should be secured (Class I) spaces. The proposed project is 30,070 s.f. and would be recommended to provide 5 bicycle parking spaces (4 secured bike parking spaces and 1 bike rack.) Comparatively, the California Green Building Code (CGBC) Section 5.106.4 requires short-term bike parking equivalent to 5 percent of the visitor parking spaces and long-term bike parking equivalent to 5 percent of the employee parking spaces. This equates to a total of 6 long-term bicycle parking spaces. The project does not identify specific visitor parking spaces, but the project should provide at least one two-bike capacity rack near the visitor entrance to the building. The proposed project is proposing in its underground garage a secured bike storage room that can hold 36 bicycles. The proposed bicycle storage facility exceeds the recommended secured bike storage quantity by VTA and the CGBC. Based on both the VTA guidelines and CGBC requirements, it is recommended that one two-bike capacity bike rack be provided near the visitor entrance to the building.

The bike storage room will be located next to the driveway and can be accessed from ground level via a set of stairs approximately 30 feet to the north and via elevators approximately 100 feet to the south. Bicyclist access to the bike storage is adequate.

Table ES-1
Intersection Levels of Service Summary

#	Intersection	Peak Hour	Count Date	Existing		Existing + Project				Backgroun		Background + Project				Cumulative + Project	
				Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Incr. In Crit. Delay (sec)	Incr. In Crit. V/C	Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Incr. In Crit. Delay (sec)	Incr. In Crit. V/C	Avg. Delay (sec)	LOS
1	Winchester Blvd. and Lark Ave.	AM	03/08/16	21.2	C	21.2	C	0.1	0.001	21.9	C	21.9	C	0.1	0.002	22.2	C
		PM	03/08/16	18.7	B	18.8	B	0.1	0.002	20.7	C	20.8	C	0.2	0.002	21.5	C
2	University Ave. and Lark Ave.	AM	03/08/16	21.9	C	23.2	C	12.3	0.071	22.0	C	22.2	C	0.0	0.001	22.9	C
		PM	03/08/16	25.7	C	25.7	C	0.1	0.002	27.2	C	27.3	C	0.1	0.002	29.0	C
3	SR17 Southbound Ramps and Lark Ave.	AM	03/08/16	27.4	C	27.4	C	0.0	0.000	28.9	C	28.9	C	0.0	0.000	**31.8**	**C**
		PM	03/08/16	33.4	C	33.5	C	0.1	0.004	38.3	D	38.6	D	0.4	0.004	46.8	D
4	SR17 Norththbound Ramps and Lark Ave.	AM	03/08/16	18.1	B	18.1	B	0.1	0.001	18.7	B	18.8	B	0.1	0.001	21.6	C
		PM	03/08/16	12.9	B	13.0	B	0.2	0.004	13.6	B	13.7	B	0.0	0.000	15.2	B
5	Winchester Blvd. and Daves Ave.	AM	03/08/16	30.8	C	30.9	C	0.1	0.007	30.7	C	30.8	C	0.1	0.007	31.1	C
		PM	03/08/16	26.1	C	26.1	C	0.1	0.003	27.3	C	27.3	C	0.2	0.003	29.9	C
6	Winchester Blvd. and Shelburne Ave. [1]	AM	03/08/16	0.7 (10.9)	A (B)	0.8 (11.4)	A (B)	-	-	0.7 (11.3)	A (B)	0.8 (11.8)	A (B)	-	-	0.7 (12.7)	A (B)
		PM	03/08/16	0.6 (12)	A (B)	0.8 (14)	A (B)	-	-	0.5 (13)	A (B)	0.7 (15.7)	A (C)	-	-	0.7 (17.7)	A (C)
7	University Ave. and Shelburne Ave. [1]	AM	03/08/16	1.5 (12.1)	A (B)	1.6 (12.2)	A (B)	-	-	1.5 (12.1)	A (B)	1.6 (12.3)	A (B)	-	-	1.5 (13)	A (B)
		PM	03/08/16	1.3 (13)	A (B)	1.6 (13.7)	A (B)	-	-	1.3 (13.1)	A (B)	1.6 (13.8)	A (B)	-	-	1.5 (14.6)	A (B)
8	N. Santa Cruz Avenue and Blossom Hill Rd.	AM	03/08/16	25.0	C	25.1	C	0.2	0.004	26.0	C	26.1	C	0.2	0.004	28.4	C
		PM	03/08/16	23.0	C	23.1	C	0.1	0.003	23.5	C	25.0	C	-10.0	0.006	28.1	C
9	University Ave and Blossom Hill Rd.	AM	03/08/16	21.4	C	21.5	C	0.2	0.004	21.4	C	21.5	C	0.2	0.004	21.7	C
		PM	03/08/16	30.0	C	30.0	C	0.0	0.003	30.0	C	30.1	C	0.0	0.003	30.3	C
10	N. Santa Cruz Ave and Los Gatos-Saratoga Rd.*	AM	03/02/16	41.5	D	41.5	D	0.0	0.000	42.0	D	42.1	D	0.1	0.002	44.2	D
		PM	03/02/16	48.3	D	48.3	D	0.0	0.000	48.6	D	48.6	D	0.0	0.000	50.3	D
11	University Ave. and Los Gatos-Saratoga Rd.*	AM	03/02/16	33.7	C	33.7	C	-0.1	0.000	33.7	C	33.7	C	0.0	0.001	34.2	C
		PM	03/02/16	39.7	D	39.8	D	0.2	0.003	39.7	D	39.8	D	0.2	0.003	39.8	D

Notes:
* Denotes CMP intersection
1. For unsignalized intersections, intersection-wide average delay and corresponding LOS are first reported, and worst-approach delay and corresponding LOS are reported in parentheses.

1. Introduction

This report presents the results of the Transportation Impact Analysis (TIA) prepared for the proposed office development located at Winchester Boulevard and Shelburne Way in Los Gatos, CA. The project site is located on the 1.31-acre lot southwest of the intersection of Winchester Boulevard and Shelburne Way. Currently, the project site is comprised of three houses. The project proposes to replace the existing houses with a 30,070-s.f. office building with 128 parking spaces. Access to the project site would be provided by two driveways, one on Winchester Boulevard and the other on Shelburne Way. Figure 1 shows the study area and project site location. Figure 2 shows the proposed site plan.

Scope of Study

This study was conducted for the purpose of identifying the potential traffic impacts related to the proposed development. The potential impacts of the project were evaluated in accordance with the standards set forth by the Town of Los Gatos and the Santa Clara County Congestion Management Program (CMP). The traffic analysis is based on the AM and PM peak hour levels of service for nine signalized intersections, two unsignalized intersections, and three freeway segments. Of the nine study intersections, two are CMP intersections.

Study Intersections

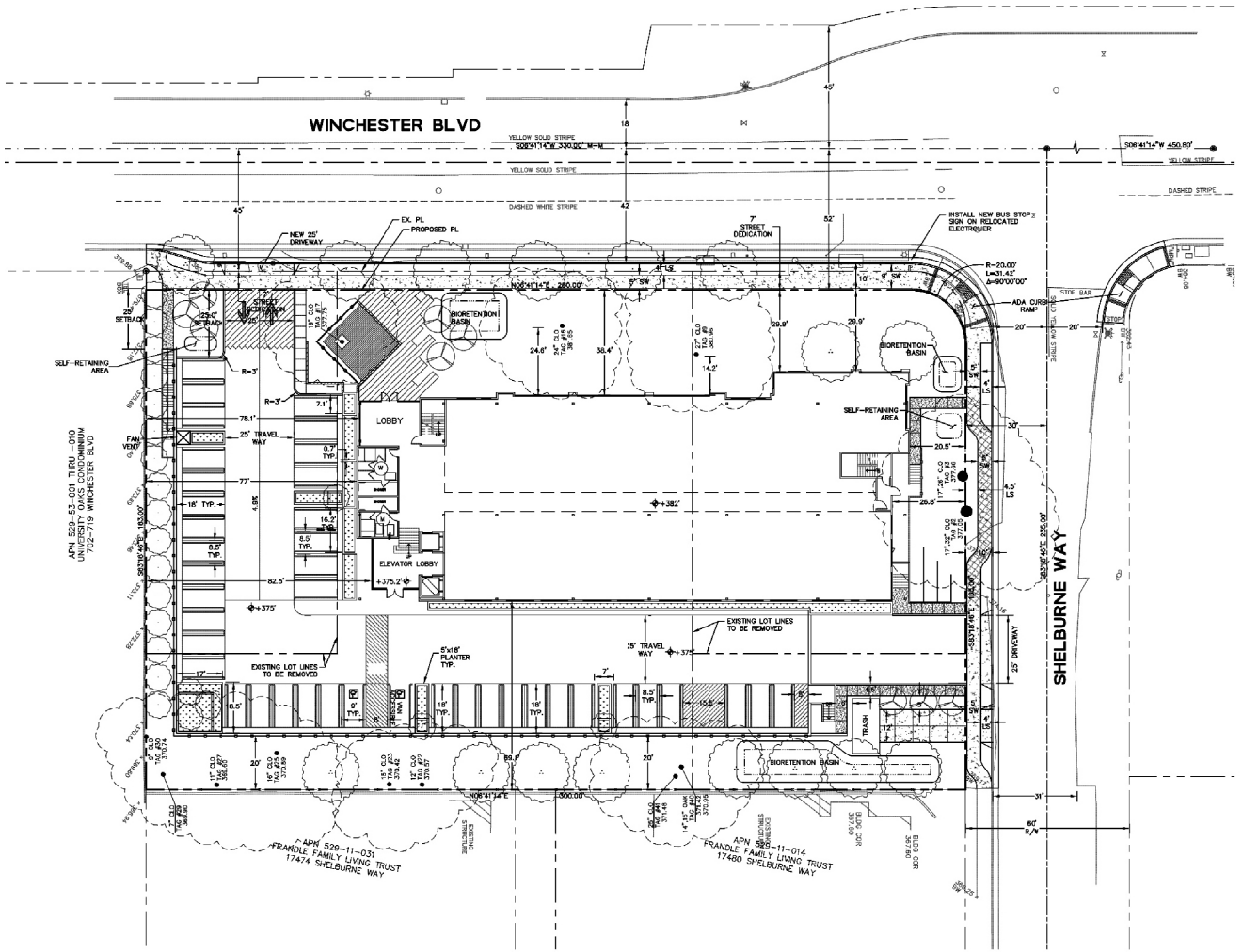
1. Winchester Boulevard & Lark Avenue
2. University Avenue & Lark Avenue
3. SR17 Southbound Ramps & Lark Avenue
4. SR17 Northbound Ramps & Lark Avenue
5. Winchester Boulevard & Daves Avenue
6. Winchester Boulevard & Shelburne Way (unsignalized)
7. University Avenue & Shelburne Way (unsignalized)
8. Santa Cruz Avenue & Blossom Hill Road
9. University Avenue & Blossom Hill Road
10. Santa Cruz Avenue & Los Gatos-Saratoga Road*
11. University Avenue & Los Gatos-Saratoga Road*

* Denotes CMP Intersections

Study Freeway Segments

1. SR 17, south of Hwy 9
2. SR 17, between Hwy 9 and Lark Avenue
3. SR 17, between Lark Avenue and SR 85

Figure 1
Site Location and Study Intersections



LEGEND

	PROPOSED	EXISTING
PROJECT BOUNDARY		
LOT LINE		
ADJACENT LOT LINE		
STREET CENTERLINE		
MONUMENT LINE		
EASEMENT LINE		

GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.

STUDIO T SQUARE
: Architecture
: Planning
: Urban Design

BKF
1730 N. FIRST STREET
SUITE 600
SAN JOSE, CA 95112
408-467-9100
408-467-9199 (FAX)

Winchester Blvd. Office
Winchester Blvd. and Shelburne Way, Los Gatos, CA

Valley Oak Partners
734 The Alameda
San Jose, California

Sheet Title:
PRELIMINARY
SITE PLAN

BKF Job No. 20126028
Date: 8/1/2016
Scale:
Drawn By: PK

Sheet No:
C3.0

Figure 2
Site Plan

Traffic conditions at the study intersections were analyzed for the weekday AM and PM peak hours of adjacent street traffic. The AM peak hour of adjacent street traffic is generally between 7:00 AM and 9:00 AM, and the PM peak hour of adjacent street traffic is typically between 4:00 PM and 6:00 PM. It is during these periods on an average weekday that the most congested traffic conditions occur. Traffic conditions were evaluated for the following scenarios:

Scenario 1: *Existing Conditions.* Existing traffic volumes are based on new traffic counts conducted in the year 2016, while schools were in session.

Scenario 2: *Existing Plus Project Conditions.* Existing traffic volumes with the project are estimated by adding to existing traffic volumes the traffic generated by the proposed project. Existing plus Project conditions are evaluated relative to existing conditions in order to determine the effects the project would have on the existing roadway network.

Scenario 3: *Background Conditions.* Background traffic volumes are estimated by adding to existing peak hour volumes the projected volumes from approved but not yet completed developments. The added traffic from approved but not yet completed developments was provided by the Town of Los Gatos.

Scenario 4: *Background Plus Project Conditions.* Background traffic volumes with the project are estimated by adding to background traffic volumes the traffic generated by the proposed project. Background plus project conditions are evaluated relative to background conditions in order to determine potential project impacts.

Scenario 5: *Cumulative Conditions.* Cumulative conditions include traffic growth projected to occur due to the approved development projects and other proposed but not yet approved (pending) development projects. The added traffic from pending development projects was provided by the Town of Los Gatos.

Scenario 6: *Cumulative Plus Project Conditions.* Cumulative plus project traffic volumes are estimated by adding to cumulative traffic volumes the trips associated with the proposed project. Cumulative plus project conditions are evaluated relative to cumulative conditions in order to determine potential project impacts.

Methodology

This section describes the methods used to determine the traffic conditions for each scenario described above. It includes descriptions of the data requirements, the analysis methodologies, and the applicable level of service standards.

Data Requirements

The data required for the analysis were obtained from new traffic counts, the Town of Los Gatos, VTA's CMP database, and field observations. The following data were collected from these sources:

- Existing traffic volumes
- Approved and pending project trips
- Intersection lane configurations
- Signal timing and phasing

Analysis Methodologies and Level of Service Standards

Traffic conditions at the study intersections were evaluated using level of service (LOS). *Level of Service* is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions with little or no delay, to LOS F, or jammed conditions with excessive delays. The various analysis methods are described below.

Town of Los Gatos Intersections

The Town of Los Gatos LOS methodology for signalized intersections is the 2000 *Highway Capacity Manual* (HCM) method. This method is applied using the TRAFFIX software. The 2000 HCM operations method evaluates signalized and unsignalized intersection operations on the basis of average control delay time for all vehicles at the intersection. Since TRAFFIX is also the CMP-designated intersection LOS tool, the Town of Los Gatos methodology employs the CMP default values for the analysis parameters. The Town of Los Gatos LOS standard for all signalized intersections is LOS D or better. The correlation between average control delay and LOS for signalized intersections is shown in Table 1.

Table 1
Signalized Intersection Level of Service Definitions Based on Average Delay

Level of Service	Description	Average Control Delay Per Vehicle (sec.)
A	Signal progression is extremely favorable. Most vehicles arrive during the green phase and do not stop at all. Short cycle lengths may also contribute to the very low vehicle delay.	10.0 or less
B	Operations characterized by good signal progression and/or short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average vehicle delay.	10.1 to 20.0
C	Higher delays may result from fair signal progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, though many still pass through the intersection without stopping.	20.1 to 35.0
D	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable signal progression, long cycle lengths, or high volume-to-capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	This is considered to be the limit of acceptable delay. These high delay values generally indicate poor signal progression, long cycle lengths, and high volume-to-capacity (V/C) ratios. Individual cycle failures occur frequently.	55.1 to 80.0
F	This level of delay is considered unacceptable by most drivers. This condition often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection. Poor progression and long cycle lengths may also be major-contributing causes of such delay levels.	greater than 80.0

Source: Transportation Research Board, *2000 Highway Capacity Manual* (Washington, D.C., 2000) p10-16.

CMP Intersections

The designated LOS methodology for the CMP also is the 2000 HCM operations method for signalized intersections, using TRAFFIX. The only difference in LOS standards is that in the Town of Los Gatos the standard is LOS D or better, and the CMP level of service standard for signalized intersections is LOS E or better. However, CMP intersections within the Town of Los Gatos are evaluated according to Town of Los Gatos standards.

Unsignalized Intersections

The Town of Los Gatos *Traffic Impact Study Guidelines* do not outline the preferred analysis method for unsignalized intersections. However, it is standard practice for traffic engineers to report the intersection's overall LOS as well as the LOS for the worst approach. This study uses the 2000 *Highway Capacity Manual* (HCM) method for unsignalized intersections. This method is applied using the TRAFFIX software. The 2000 HCM operations method evaluates unsignalized intersection operations on the basis of average control delay for all vehicles, as well as the critical delay for the worst approach at the intersection. Given that the Town of Los Gatos does not have a LOS standard for unsignalized intersections, intersection levels of service for unsignalized intersections are reported for information purposes only. The correlation between average control delay and LOS for unsignalized intersections is shown in Table 2.

Table 2
Unsignalized Intersection Level of Service Definitions Based

Level of Service	Description	Average Control Delay Per Vehicle (sec.)
A	Little or no traffic delay	10.0 or less
B	Short Traffic delays	10.1 to 15.0
C	Average traffic delays	15.1 to 25.0
D	Long traffic delays	25.1 to 35.0
E	Very long traffic delays	35.1 to 50.0
F	Extreme traffic delays	greater than 50.0

Source: Transportation Research Board, *2000 Highway Capacity Manual* (Washington, D.C., 2000) p17-2.

Freeway Segments

Per CMP technical guidelines, a freeway segment LOS analysis is required when a project is expected to add trips greater than one percent of a segment's capacity. Given that the number of project trips added to the freeways in the area is estimated to be less than the one percent threshold of freeway capacity, a detailed analysis of freeway segment levels of service was not performed. A simple freeway segment capacity evaluation to substantiate this determination is presented in Table 3.

Table 3
Freeway Segment Capacity Evaluation

Freeway	Segment	Direction	Peak Hour	Existing Conditions[1] Capacity	Volume	LOS	Project Conditions Project Trips[2]	% Capacity	Impact
SR 17	Bear Creek Rd to Los Gatos-Saratoga Rd	NB	AM	**4,400**	**3,910**	**F**	6	0.14%	No
			PM	4,400	2,780	C	0	0.00%	No
SR 17	Los Gatos-Saratoga Rd to Lark Ave	NB	AM	4,400	4,110	E	0	0.00%	No
			PM	4,400	3,040	C	0	0.00%	No
SR 17	Lark Ave to SR 85	NB	AM	4,400	4,330	D	2	0.05%	No
			PM	4,400	2,910	C	13	0.30%	No
SR 17	SR 85 to Lark Ave	SB	AM	4,400	2,400	B	10	0.23%	No
			PM	**4,400**	**3,770**	**F**	1	0.02%	No
SR 17	Lark Ave to Los Gatos-Saratoga Rd	SB	AM	4,400	4,030	D	0	0.00%	No
			PM	**4,400**	**3,760**	**F**	0	0.00%	No
SR 17	Los Gatos-Saratoga Rd to Bear Creek Rd	SB	AM	4,400	3,170	C	1	0.02%	No
			PM	4,400	4,330	E	9	0.20%	No

Notes:
1. Existing freeway conditions referenced the *Santa Clara Valley Transportation Authority Congestion Management Program Monitoring Study*, 2014.
2. Project trips are estimated via manual trip assignment.
BOLD indicates a substandard level of service.

Report Organization

This report has a total of seven chapters. Chapter 2 describes existing conditions including the existing roadway network, transit service, bicycle and pedestrian facilities. Chapter 3 presents the traffic conditions in the study area under background conditions. Chapter 4 describes the methods used to estimate the project traffic on the roadway network and presents the intersection operations under background plus project and existing plus project conditions. The cumulative conditions with and without the project are presented in Chapter 5. Chapter 6 provides an evaluation of other transportation-related issues, such as vehicle queuing, potential project impacts on bicycle, pedestrian, and transit facilities, site access, on-site circulation, and parking. Lastly, Chapter 7 presents the study's conclusions, including a summary of any proposed mitigation measures and recommended improvements.

2. Existing Conditions

This chapter describes the existing conditions for all of the major transportation facilities in the vicinity of the project site, including the roadway network, transit service, and bicycle and pedestrian facilities. Also included are the existing levels of service of the study intersections.

Existing Roadway Network

Regional access to the project site is provided by SR 17. Local access to the project site is provided via Los Gatos-Saratoga Road (SR 9), N. Santa Cruz Avenue, University Avenue, Blossom Hill Road, Shelburne Way and Daves Avenue. These facilities are described below.

SR 17 is a four-lane freeway that provides a north-south regional access to the project site. It extends south to Santa Cruz and north to I-280 in San Jose, at which point it makes a transition into I-880, which extends to Oakland. Access to the project site is provided via SR 17's interchange with Los Gatos-Saratoga Road (SR 9) and Lark Avenue.

Los Gatos-Saratoga Road (SR 9) is a four-lane arterial roadway that provides regional access to the project site. Los Gatos-Saratoga Road extends from Los Gatos Boulevard in a northwesterly direction where it ultimately transitions to Saratoga-Sunnyvale Road at the intersection of Big Basin Way (which is the continuation of SR 9) and Saratoga Avenue. Los Gatos-Saratoga Road provides access to the project site via N. Santa Cruz Avenue, University Avenue, and Daves Avenue.

N. Santa Cruz Avenue (Winchester Boulevard) is a two-lane roadway that runs in a north-south direction and serves as the primary commercial street in downtown Los Gatos. Santa Cruz Avenue extends from SR 17 in the south to Blossom Hill Road, where it transitions to Winchester Boulevard, which continues north as a four-lane arterial through Los Gatos, Campbell, and San Jose to its terminus in Santa Clara. Within the Los Gatos central business district, N. Santa Cruz Avenue has two lanes and on-street parking. The Winchester Boulevard portion of the roadway serves as the western boundary of the project site.

University Avenue is a two-lane collector street that runs parallel to N. Santa Cruz Avenue. It extends from Main Street to Lark Avenue. The project site can be accessed from University Avenue via Shelburne Way.

Blossom Hill Road is generally a two- to four-lane arterial roadway that extends eastward from N. Santa Cruz Avenue into San Jose. Within the project vicinity, the roadway is three lanes wide (one lane in the eastbound direction and two lanes in the westbound direction). Blossom Hill Road provides access to the project site via Winchester Boulevard and University Avenue.

Shelburne Way is a two-lane collector street that runs parallel to Blossom Hill Road, extending from N. Santa Cruz Avenue to University Avenue. Shelburne Way provides direct access and serves as the northern boundary of the project site.

Daves Avenue is a two-lane neighborhood collector street that operates primarily east-west, extending from Winchester Boulevard to Saratoga-Los Gatos Road. Daves Avenue provides access to the project site via Winchester Boulevard.

Existing Bicycle and Pedestrian Facilities

Trails and bikeways are categorized in the Transportation Element of the town's 2020 General Plan. These facilities are described below.

Class I Multi-Use Trail is an off-street path with exclusive right-of-way for non-motorized transportation used for commuting as well as recreation. The Los Gatos Creek Trail is a Class I facility located near the project site, running in a north-south direction just west of Highway 17. Within the project vicinity, the Los Gatos Creek Trail has a short connector trail that provides trail access at the intersection of University Avenue and Blossom Hill Road.

Class II Bike Lanes are preferential use areas within a roadway designated for bicycles. Within the project vicinity, a Class II bikeway is present on Los Gatos-Saratoga Road, extending westward from just east of the University Avenue intersection, and along Blossom Hill Road, beginning just west of University Avenue and extending eastward. Bike lanes are also present within the vicinity of the project on Daves Avenue, as well as University Avenue north of Blossom Road.

Class III Bike Routes are signed bike routes that provide a connection through residential, downtown, and rural/hillside areas to Class I and Class II facilities. Bike Routes serve as transportation routes within neighborhoods to parks, schools, and other community amenities. Shelburne Way, between Winchester Boulevard and University Avenue, is designated as a Class III bikeway. Although none of the residential streets near the project site are designated as bike routes, due to their low traffic volumes, many of them are conducive to bicycle usage.

Existing bicycle facilities are shown on Figure 3.

Pedestrian facilities consist mostly of sidewalks along both the commercial and residential streets in the vicinity of the project site. Crosswalks with pedestrian signal heads and push buttons are located at all of the signalized intersections in the study area, except on Lark Avenue at the intersection with SR17 southbound ramps. Crosswalks with pedestrian signal heads and push buttons are present only on the north and south legs of the intersection of Lark Avenue and SR17 southbound ramps. At both unsignalized study intersections, there are no crosswalk markings for pedestrians. Sidewalks are located on both sides of all roadways within the project vicinity, except Winchester Boulevard between Lark Avenue and Daves Avenue, where sidewalks are largely lacking.

Figure 3
Existing Bicycle Facilities

NORTH
Not to Scale

Existing Transit Services

Existing transit service to the project site is provided by the Santa Clara Valley Transportation Authority (VTA). VTA provides bus service near the project area via Route 48. Existing transit services are shown on Figure 4.

Local Route 48 operates primarily on N. Santa Cruz Avenue and Los Gatos-Saratoga Road in the study area. It runs from the Los Gatos Civic Center to the Winchester Transit Center in Campbell with 30-minute headways in the AM and PM peak hours. Route 48 operates between 6:30 AM and 8:30 PM. The closest Route 48 bus stops are approximately 200 feet to the north and south of the project site.

The Winchester Transit Center, the northern terminus of Route 48, also provides VTA's light rail transit (LRT) service. The LRT line that terminates at the Winchester Transit Center provides service to downtown Mountain View, via downtown San Jose, Santa Clara, and Sunnyvale.

Existing Intersection Lane Configurations

The existing lane configurations at the study intersections were confirmed by observations in the field and are shown on Figure 5.

Existing Traffic Volumes

Existing traffic volumes were obtained from new traffic counts conducted in March 2016. The existing traffic volumes at the study intersections are reflective of traffic generated by the existing buildings in the study area. The existing AM and PM peak hour intersection volumes are shown graphically on Figure 6.

The traffic count data are included in Appendix A.

Hexagon also obtained the existing average daily traffic (ADT) on Winchester Boulevard and Shelburne Way near the project site. The existing ADT is shown in Table 4.

It should be noted that only peak hour traffic conditions within the study area were analyzed, and the daily traffic volumes are presented for informational purposes only.

Table 4
Existing Roadway Average Daily Traffic

Street	Direction	ADT [1]	
		Weekday	Weekend
Winchester Boulevard	Northbound	6,200	4,200
	Southbound	6,700	4,500
Shelburne Way	Eastbound	600	200
	Westbound	400	100

Notes:
1. Average Daily Traffic (ADT) volumes based on 7-day tube counts conducted in March 2016.

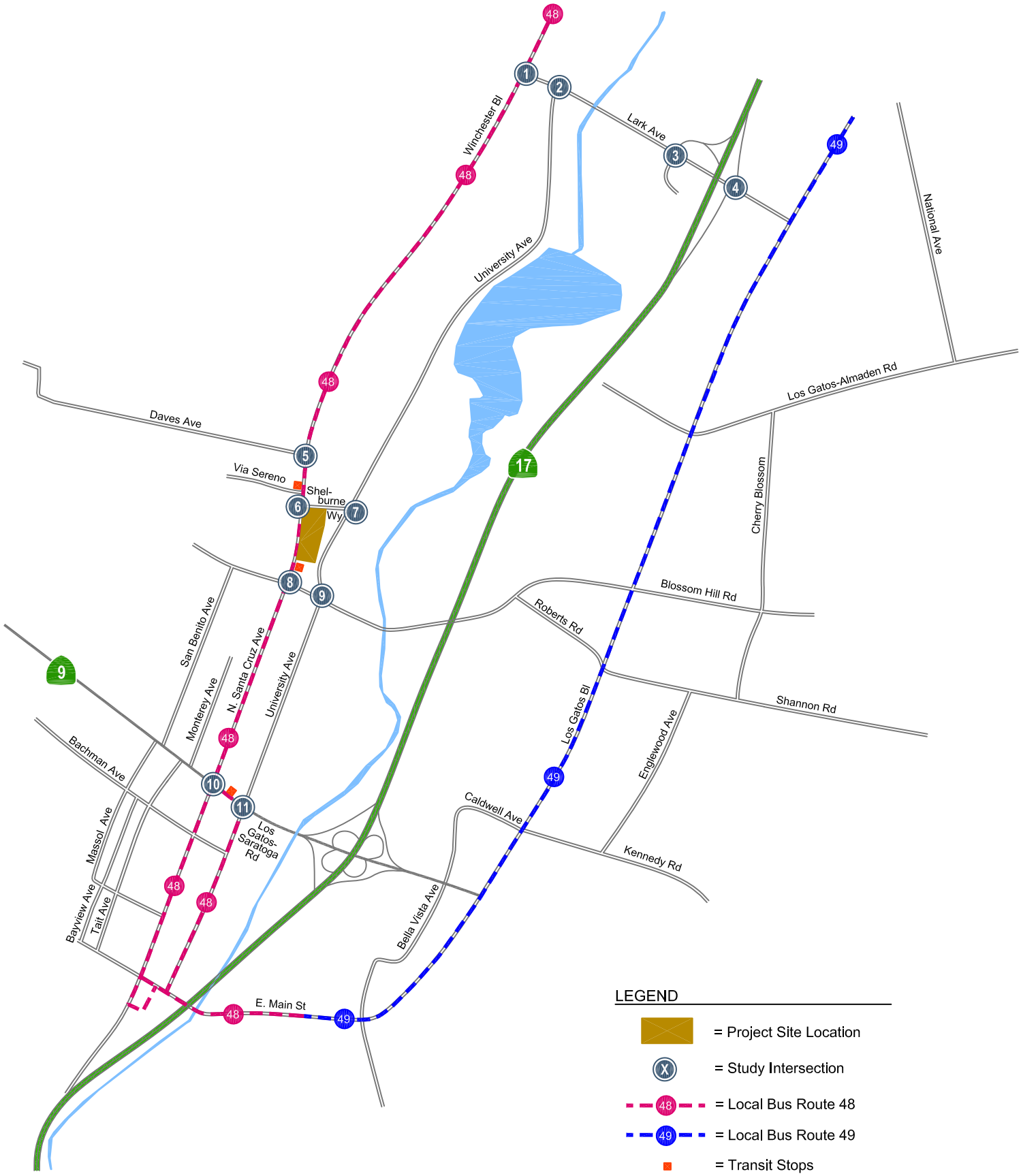


Figure 4
Existing Transit Service

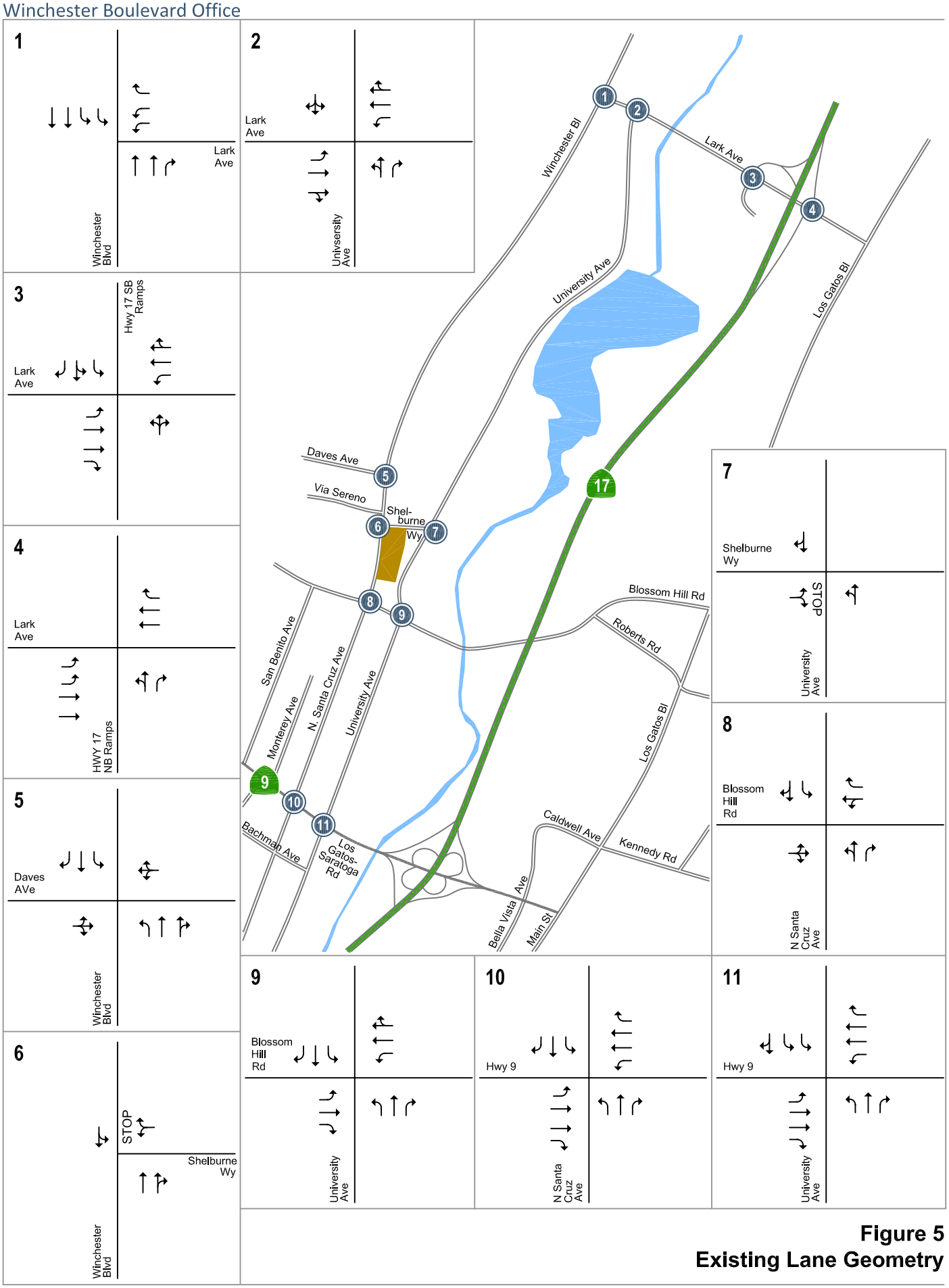


Figure 5
Existing Lane Geometry

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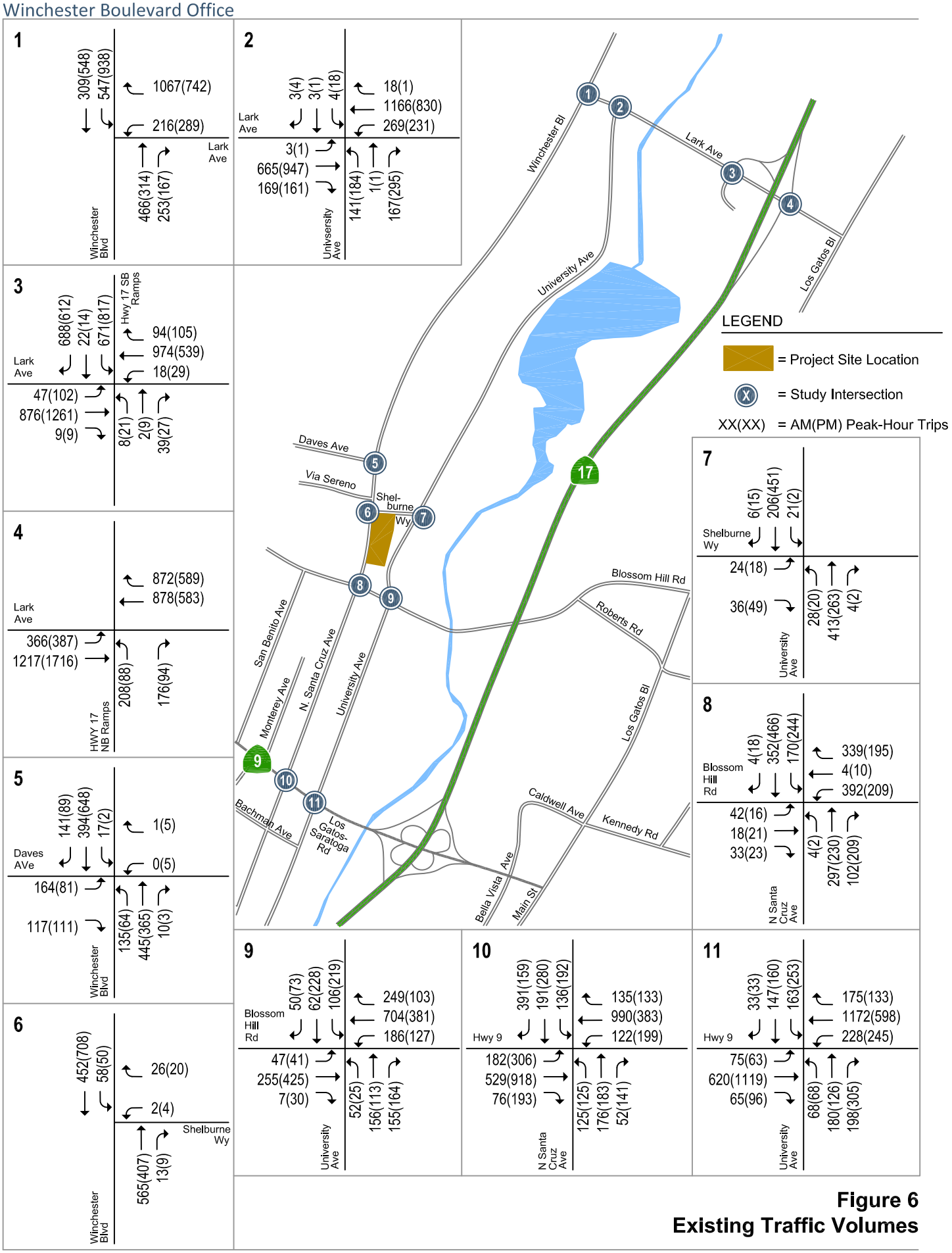

Figure 6
Existing Traffic Volumes

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Not to Scale

Existing Intersection Levels of Service

The intersection LOS analysis shows that all study intersections currently operate at acceptable levels of service (LOS D or better). The unsignalized intersections currently operate at LOS B for their respective worst approaches during both peak hours. The levels of service results indicate that these two unsignalized intersections are operating at near free-flow condition. A signal warrant check for these two intersections under existing conditions is thus not performed.

Results of the intersection LOS analysis under existing conditions are summarized in Table 5. LOS calculation sheets of each study intersection are included in Appendix D.

Table 5
Existing Intersection Levels of Service Summary

Study Number	Intersection	Peak Hour	Count Date	Avg. Delay (sec)	LOS
1	Winchester Blvd. and Lark Ave.	AM	3/8/2016	21.2	C
		PM	3/8/2016	18.7	B
2	University Ave. and Lark Ave.	AM	3/8/2016	21.9	C
		PM	3/8/2016	25.7	C
3	SR17 Southbound Ramps and Lark Ave.	AM	3/8/2016	27.4	C
		PM	3/8/2016	33.4	C
4	SR17 Norththbound Ramps and Lark Ave.	AM	3/8/2016	18.1	B
		PM	3/8/2016	12.9	B
5	Winchester Blvd. and Daves Ave.	AM	3/8/2016	30.8	C
		PM	3/8/2016	26.1	C
6	Winchester Blvd. and Shelburne Ave. [1]	AM	3/8/2016	0.7 (10.9)	A (B)
		PM	3/8/2016	0.6 (12)	A (B)
7	University Ave. and Shelburne Ave. [1]	AM	3/8/2016	1.5 (12.1)	A (B)
		PM	3/8/2016	1.3 (13)	A (B)
8	N. Santa Cruz Avenue and Blossom Hill Rd.	AM	3/8/2016	25.0	C
		PM	3/8/2016	23.0	C
9	University Ave and Blossom Hill Rd.	AM	3/8/2016	21.4	C
		PM	3/8/2016	30.0	C
10	N. Santa Cruz Ave and Los Gatos-Saratoga Rd.*	AM	3/2/2016	41.5	D
		PM	3/2/2016	48.3	D
11	University Ave. and Los Gatos-Saratoga Rd.*	AM	3/2/2016	33.7	C
		PM	3/2/2016	39.7	D

Notes:
* Denotes CMP intersection
1. For unsignalized intersections, intersection-wide average delay and corresponding LOS are first reported, and worst-approach delay and corresponding LOS are reported in parentheses.

Observations of Existing Traffic Conditions

Traffic conditions were observed in the field to identify existing operational deficiencies and to confirm the accuracy of calculated levels of service. The purpose of this effort was (1) to identify any existing traffic problems that may not be directly related to LOS, and (2) to identify any locations where the LOS analysis does not accurately reflect actual existing traffic conditions. Field observations at the study intersections were conducted on a regular weekday during the AM and PM peak hours in March 2016. The intersections on Los Gatos-Saratoga Road at Santa Cruz Avenue and at University Avenue were observed in July 2016.

Lark Avenue at Winchester Boulevard and University Avenue

For the AM peak hour, there are minor queues on Winchester Boulevard at the intersection with Lark Avenue. Extensive congestion at the intersection is observed on Lark Avenue for the westbound right-turn movement. The westbound right-turn queue fills the right-turn lane storage, and spills back into the intersection of University Avenue and Lark Avenue. However, spillback does not occur for every signal cycle, allowing vehicles to clear the intersection primarily in one signal cycle.

At the intersection of University Avenue and Lark Avenue, there are also long queues for the westbound left-turn movement on Lark Avenue onto southbound University Avenue. Due to the short green time, vehicles turning left often require two signal cycles to clear the intersection, and traffic queues into the through lanes slightly past Charter Oaks Drive.

For the PM peak hour, there is congestion on Lark Avenue at both the intersections with Winchester Boulevard and with University Avenue. Congestion on westbound Lark Avenue is due to the short intersection spacing. The queues are able to clear the intersection in one signal cycle before vehicles from the University Avenue and Lark Avenue intersection cause any spillback. Observed congestion on Winchester Boulevard stems from both the northbound through movement and the southbound left-turn movement. However, signal timing for both movements allow queues to dissipate within one signal cycle. At the intersection of University Avenue and Lark Avenue, eastbound congestion on Lark Avenue causes spillback into the northbound right-turn lane at the Winchester Boulevard and Lark Avenue intersection. However, both eastbound and northbound right-turn queues are able to clear within one signal cycle, and before the next platoon of southbound left-turn vehicles arrive from the upstream intersection.

Lark Avenue at SR17 Southbound Ramps and SR17 Northbound Ramps

In the AM peak hour, the intersection of Lark Avenue and the SR17 southbound ramps has extensive queues on the off-ramp that fill both left-turn lanes. However, the queue usually clears within one signal cycle.

At the intersection of Lark Avenue and the SR17 northbound ramps, only minor congestion was observed for the eastbound left-turn movement and the westbound through movement on Lark Avenue. Due to coordination with upstream and downstream signals, both movements were able to clear within one signal cycle.

In the PM peak hour, the Lark Avenue and SR17 southbound ramps intersection has significant congestion for the eastbound direction. Long queues for both the eastbound left-turn and the eastbound through movements on Lark Avenue cause sizable spillback to the upstream intersection at Oka Road, requiring at least two signal cycles to clear. Similar to the AM peak hour, there are long vehicle queues in the southbound left-turn lanes on the SR 17 southbound off-ramp, but they are able to clear within one signal cycle.

At the Lark Avenue and the SR17 northbound ramps intersection, there is minor congestion for the eastbound left-turn movement, as well as in the westbound direction. However, vehicles are able to clear the intersection within one signal cycle.

Daves Avenue at Winchester Boulevard

During the AM peak hour, there is minor congestion on northbound Winchester Boulevard and on eastbound Daves Avenue. Vehicular queues primarily stem from a pedestrian only phase that lasts approximately 20 seconds. This phase allows children attending the nearby Daves Elementary School to cross the street safely. Nevertheless, eastbound and northbound queues are able to clear within one signal cycle.

During the PM peak hour, there are no significant operational issues. All vehicles clear within one signal cycle. When the south crosswalk is called no vehicular movements are allowed at the intersection. This pedestrian-only phase lasts approximately twenty seconds. Occasionally when the south crosswalk is called, southbound through movement queues up to twenty vehicles, but all vehicles clear within one signal cycle.

Daves Avenue in Front of the School

Daves Avenue was also observed during the morning drop-off period and afternoon pick-up period for Daves Avenue Elementary School. During the AM drop-off peak period of 30 minutes, only minor congestion is observed on eastbound Daves Avenue. The Poppy Lane and Daves Avenue intersection, which is all-way stop-controlled, functions as a congestion point, as queues from the western drop-off driveway spill back onto eastbound Daves Avenue towards Kavin Lane. This peak in traffic only lasts a period of approximately thirty minutes.

During the afternoon peak pick-up period, minor congestion occurs on eastbound Daves Avenue at the Winchester Boulevard intersection, but all vehicles are able to clear the intersection in one signal cycle. Hexagon observed that the peak afternoon school traffic lasts approximately twenty minutes.

Shelburne Avenue at Winchester Boulevard and University Avenue

At the intersections of Shelburne Way and Winchester Boulevard, as well as Shelburne Way and University Avenue, there are no operational issues during either the AM or PM peak hours. Vehicles on Shelburne Way turning onto Winchester Boulevard encounter minimal delays waiting for sufficient gaps to turn.

Blossom Hill Road at N. Santa Cruz Avenue and University Avenue

During the AM peak hour, minor congestion occurs in the westbound direction on Blossom Hill Road at the intersections with N. Santa Cruz Avenue and with University Avenue. When the westbound left-turn movement on Blossom Hill Road at N. Santa Cruz Avenue receives the green ball, the westbound left-turn movement queue backs up past University Avenue. However, westbound queues are able to clear the intersection in one signal cycle. All other movements on University Avenue and on N. Santa Cruz Avenue are able to clear the intersection within one signal cycle.

During the PM peak hour, eastbound Blossom Hill Road between N. Santa Cruz Avenue and University Avenue is often queued. As a result, southbound left-turn vehicles on N. Santa Cruz Avenue often require two signal cycles to clear. Some of these left-turn vehicles even turn into the intersection to avoid waiting an extra cycle. This interferes with the subsequent northbound through movement on N. Santa Cruz Avenue. Only minor congestion occurs on the other movements at these two intersections.

N. Santa Cruz Avenue and Los Gatos-Saratoga Road (SR 9)

During the PM peak period, there is very heavy traffic flow in the eastbound direction, heading towards Highway 17, on Los Gatos-Saratoga Road. Because the intersections at University Avenue and at N. Santa Cruz Avenue are only approximately 500 feet apart, there is potential for eastbound "spillback" from University Avenue at the N. Santa Cruz Avenue intersection during the PM peak hour. Spillback can occur between closely spaced intersections when there is insufficient storage space for all the queued vehicles at a downstream intersection, thereby preventing vehicles from an upstream intersection from proceeding during their green phase. During the most recent field observations, however, no spillback issues were observed. With the current signal timing implemented by Caltrans, all movements cleared within one signal cycle.

University Avenue and Los Gatos-Saratoga Road (SR 9)

During the AM peak hour, there is very heavy traffic flow in the westbound direction on Los Gatos-Saratoga Road. Therefore, spillback from the N. Santa Cruz Avenue intersection is more likely to occur at the University Avenue intersection during the morning peak period. However, no spillback issues were observed during the most recent field observations at this intersection.

3. Background Conditions

This chapter presents background traffic conditions, which are defined as conditions just prior to completion of the proposed project. Traffic volumes for background conditions comprise of volumes from existing traffic counts plus traffic generated by other approved developments in the vicinity of the site. This chapter describes the procedure used to determine background traffic volumes and the resulting traffic conditions. The background scenario predicts a realistic traffic condition that would occur as approved development projects are built and occupied.

Background Traffic Volumes

Approved developments are those developments that have been approved by local agencies, are under construction, or are built but not yet occupied. The approved project list was obtained from the Town of Los Gatos and is included in Appendix B. Based on a review of traffic studies prepared for these projects, a recent TRAFFIX file provided by the Town of Los Gatos, the types and sizes of these developments, and their distances from the project site, the following approved developments are expected to add traffic to at least one of the study intersections during at least one of the peak hour periods:

1. Albright Way: Replace 250,000 s.f. of office with 485,000 s.f. of office
2. Bentley Silicon Valley Auto Dealer: expansion from 26,085 s.f. to 31,909 s.f.
3. Los Gatos High School: construct improvements and add 200 students
4. 550 Hubbell Way: 4 single-family homes
5. 375 Knowles Drive: 33 single-family homes
6. North 40 Specific Plan (Project A): build 364 housing units, 150-room hotel, 269,000 s.f. retail
7. 55 Los Gatos-Saratoga Road: demolish 3 hotel rooms and add commercial mixed-use
8. Placer Oaks Road: 10-unit residential subdivision
9. Highlands of Los Gatos: residential subdivision

The following approved developments have also been considered, but are not expected to add traffic to any of the study intersections during either the AM or PM peak hours:

10. 146 Gemini: 3-unit residential subdivision
11. 400 More Avenue-Water District La Riconada Plant: plant renovations
12. 100 Prospect Avenue: demolish existing Convent (Sisters) and construct 17 detached homes

Background peak hour traffic volumes were calculated by adding the estimated traffic from the approved developments to existing volumes. Vehicle trips from each of the approved projects were obtained from the TRAFFIX file provided by the Town of Los Gatos or from the project's traffic impact study. The estimated trips were assigned to the study intersections according to the distributions and assignments identified in the Town's TRAFFIX file or the relevant traffic studies. At the time traffic counts at the study intersections were conducted (March 2016), it is assumed that the Albright Way office project was approximately 50% occupied.

Background traffic volumes are shown graphically on Figure 7.

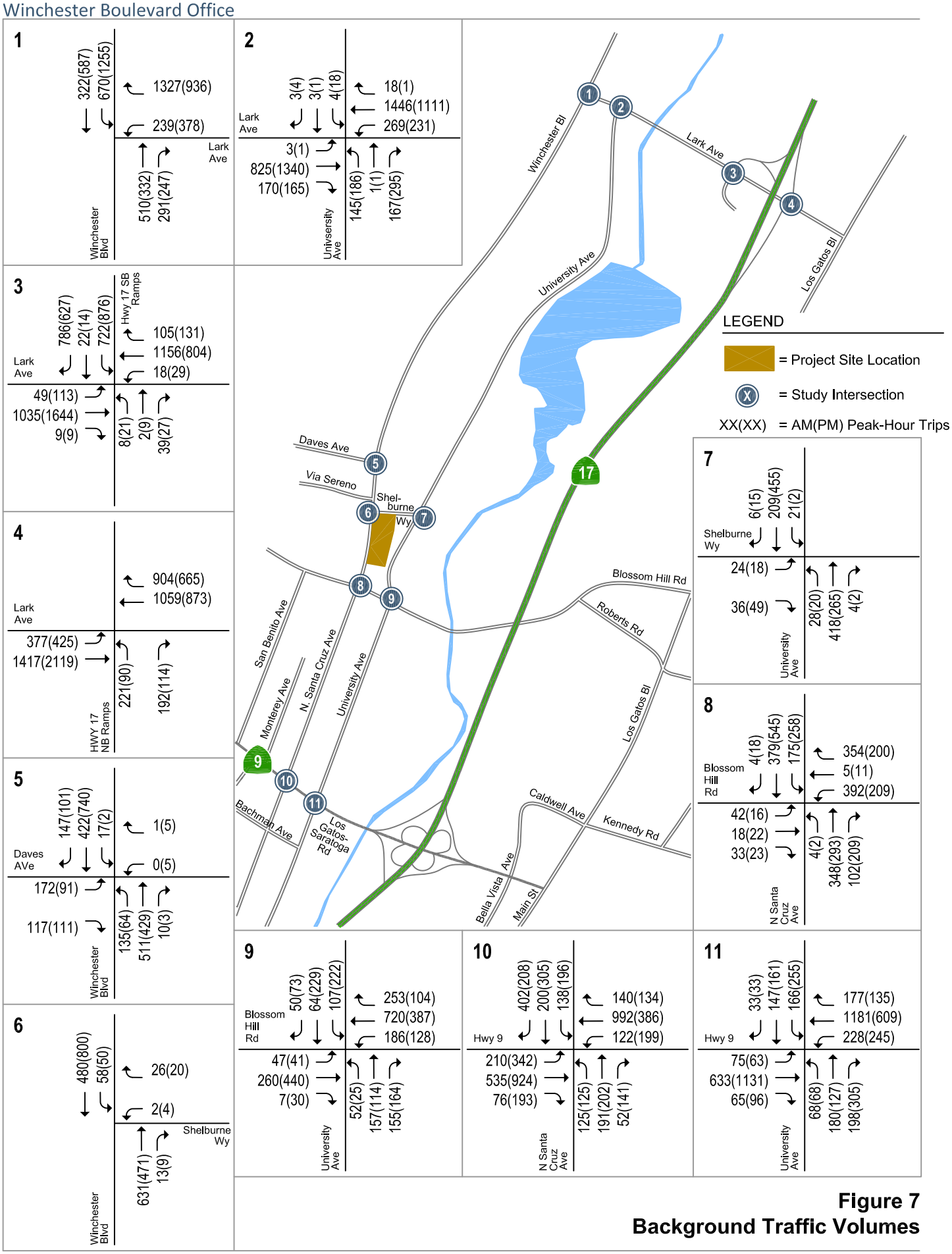


Figure 7
Background Traffic Volumes

NORTH
Not to Scale

Background Transportation Network

It was assumed in this analysis that the transportation network under background conditions would be the same as the existing network.

Intersection Levels of Service under Background Conditions

The results of the intersection LOS analysis under background conditions are shown in Table 6. The results show that, measured against the Town of Los Gatos and CMP level of service standards, all study intersections would continue to operate at acceptable levels of service (LOS D or better) during both the AM and PM peak hours.

The unsignalized intersections would operate at LOS B for their respective worst approaches during both peak hours under background conditions. The levels of service results indicate that these two unsignalized intersections would be operating at near free-flow condition. A signal warrant check for these two intersections under background conditions is thus not performed.

Table 6
Background Intersection Levels of Service Summary

Study Number	Intersection	Peak Hour	Existing Avg. Delay (sec)	Existing LOS	Background Avg. Delay (sec)	Background LOS
1	Winchester Blvd. and Lark Ave.	AM	21.2	C	21.9	C
		PM	18.7	B	20.7	C
2	University Ave. and Lark Ave.	AM	21.9	C	22.0	C
		PM	25.7	C	27.2	C
3	SR17 Southbound Ramps and Lark Ave.	AM	27.4	C	28.9	C
		PM	33.4	C	38.3	D
4	SR17 Norththbound Ramps and Lark Ave.	AM	18.1	B	18.7	B
		PM	12.9	B	13.6	B
5	Winchester Blvd. and Daves Ave.	AM	30.8	C	30.7	C
		PM	26.1	C	27.3	C
6	Winchester Blvd. and Shelburne Ave. [1]	AM	0.7 (10.9)	A (B)	0.7 (11.3)	A (B)
		PM	0.6 (12)	A (B)	0.5 (13)	A (B)
7	University Ave. and Shelburne Ave. [1]	AM	1.5 (12.1)	A (B)	1.5 (12.1)	A (B)
		PM	1.3 (13)	A (B)	1.3 (13.1)	A (B)
8	N. Santa Cruz Avenue and Blossom Hill Rd.	AM	25.0	C	26.0	C
		PM	23.0	C	23.5	C
9	University Ave and Blossom Hill Rd.	AM	21.4	C	21.4	C
		PM	30.0	C	30.0	C
10	N. Santa Cruz Ave and Los Gatos-Saratoga Rd.*	AM	41.5	D	42.0	D
		PM	48.3	D	48.6	D
11	University Ave. and Los Gatos-Saratoga Rd.*	AM	33.7	C	33.7	C
		PM	39.7	D	39.7	D

Notes:
* Denotes CMP intersection
1. For unsignalized intersections, intersection-wide average delay and corresponding LOS are first reported, and worst-approach delay and corresponding LOS are reported in parentheses.

4. Project Conditions

This chapter describes roadway traffic operations under existing plus project conditions and background plus project conditions, as well as the method by which project traffic is estimated and any impacts caused by the project. Both with-project scenarios are analyzed in accordance with VTA's CMP guidelines.

Significant Impact Criteria

Significance criteria are used to establish what constitutes an impact. Impacts on intersections are based on the significance criteria and LOS standards of the jurisdiction in which the intersection is located. For this analysis, significance criteria for impacts on intersections are based on the Town of Los Gatos LOS standard. As noted above, LOS D is an acceptable level of traffic operation at signalized intersections in Los Gatos.

A project is said to create a significant adverse impact on traffic conditions at an intersection if, for either peak hour, either of the following conditions occurs:

1. The addition of project traffic causes an intersection operating at LOS A, B, or C under no-project conditions to degrade more than one letter grade under with-project conditions, or
2. The level of service at an intersection is LOS D under no-project conditions and the addition of project traffic causes a degradation of level of service to LOS E or F.

Project Description

The project site is located on the southeast corner of the intersection of Winchester Boulevard and Shelburne Way in Los Gatos, California. Existing uses on the project site consist of three single-family houses. The project would demolish the existing buildings and construct a 30,070-s.f. office building on the 1.31-acre lot. The project includes 128 parking spaces, and access to the project site would be provided by one driveway each on Winchester Boulevard and on Shelburne Way.

Project Trip Estimates

The magnitude of traffic produced by a new development and the locations where that traffic would appear are estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. In determining project trip generation, the magnitude of traffic entering and exiting the site is estimated for the AM and PM peak hours. As part of the project trip distribution, an estimate is made of the directions to and from which the project trips would travel. In the project trip assignment, the project trips are assigned to specific streets and intersections. These procedures are described below.

Trip Generation

To better represent an office building in Los Gatos, driveway counts of three comparable office buildings in Los Gatos were collected. Comparable office buildings were selected based on the size of the buildings as well as the tenant types. The trip generation counts were conducted on a regular weekday in March 2016 recording vehicle volumes at driveways of office buildings. Table 7 shows the results of the counts and the calculated average trip rate for a general office building in Los Gatos. As shown on Table 7, compared to the average peak hour trip rates published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 9th Edition* for a general office building, local data yielded 9% higher trip rates during the PM peak hour. Therefore, the project trip generation was estimated using trip rates derived from local surveys.

Table 7
Surveyed General Office Buildings

			AM Peak Hour				PM Peak Hour			
Surveyed Sites [1]	Size	Unit	Trips In	Trips Out	Total Trips	Peak Rate	Trips In	Trips Out	Total Trips	Peak Rate
475 Alberto Way	30.22	ksf	37	3	40		4	37	41	
16795 Lark Avenue	22.40	ksf	19	12	31		4	33	37	
975 University Avenue	15.00	ksf	16	2	18		0	32	32	
Total	67.62	ksf	72	17	89		8	102	110	
Average Surveyed Rates						**1.32**				**1.63**
Average ITE Rates [2]						**1.56**				**1.49**

Notes:
1. Trip generation surveys were conducted in March 2016.
2. Average ITE trip rates for general office building based on ITE's *Trip Generation, 9th Edition* for land use code 710.

Based on local trip generation rates, the proposed new building is expected to generate 40 trips (32 in and 8 out) during the AM peak hour, and 49 trips (4 in and 45 out) during the PM peak hour. Given that there are existing buildings that are generating traffic already on the proposed project site, some of the trips from the site will not be new trips. Trips generated by the existing houses on site were estimated using the average trip generation rates published in the ITE *Trip Generation Manual, 9th Edition* for a single-family detached house. Based on the ITE trip rates, the existing houses on site currently generate 2 trips (0 in and 2 out) during the AM peak hour, and 3 trips (2 in and 1 out) during the PM peak hour.

Crediting the trips generated by the existing uses on the site, the project would generate an estimate of 303 net new daily trips, 38 (32 in and 6 out) net new AM trips, and 46 (2 in and 44 out) net new PM trips.

Trip generation using the average ITE rates for an office building would result in 7 additional project trips during the AM peak hour, and 4 fewer project trips during the PM peak hour.

Trip generation estimates are shown on Table 8.

Table 8
Trip Generation Summary

Land Use	Size	Unit	Daily		AM Peak Hour				PM Peak Hour			
			Rate	Trips	Rate	In	Out	Total	Rate	In	Out	Total
Proposed Project												
Office[1]	30.07	ksf	11.03	332	1.32	32	8	40	1.63	4	45	49
Existing Land Use												
Single Family Homes [2]	3	d.u.	9.52	29	0.75	0	2	2	1	2	1	3
Net Project Trips				**303**		**32**	**6**	**38**		**2**	**44**	**46**

Notes:

1. Office trip generation rates are based on local trip generation surveys of similar office buildings in terms of size and use within Los Gatos.

2. Single-Family Detached Housing (Land Use 210) peak hour average rates based on ITE's *Trip Generation, 9th Edition.*

Trip Distribution

The trip distribution pattern for the proposed project was estimated based on existing travel patterns of the surrounding roadway system and the locations of complementary land uses. While trip distribution patterns for office and residential land uses are typically not the same, because of the small number of trips generated by the existing houses, they were assumed to follow the same trip distribution for the office land use. The project trip distribution pattern is shown on Figure 8.

Trip Assignment

The project trips were assigned to the roadway network based on the directions of approach and departure, the roadway network connections, and the location of project driveways. 15% of project traffic is estimated to come from SR 9 west of Daves Avenue. This traffic can access the project site either by driving eastbound on SR 9 and turning left onto northbound Winchester Boulevard, or by turning onto eastbound Daves Avenue and then turning right onto southbound Winchester Boulevard. The Daves Avenue route is shorter but requires more left-turns, which could lengthen the travel time. The SR 9 route is longer, but requires fewer left-turns. Therefore, Hexagon assigned 7% of project traffic onto Daves Avenue and 8% of project traffic onto SR 9.

The project is proposing 128 parking spaces, 87 spaces will be in the underground parking garage, and 41 spaces will be at grade. The underground parking garage can be accessed via a full access driveway on Shelburne Way, while the at-grade parking lot can be accessed via a full access driveway on Winchester Boulevard. Because the underground parking garage and the at-grade parking lot are not connected, it is assumed that approximately 70% of all project trips will access the project site using the Shelburne driveway, and 30% will access the project site using the Winchester driveway.

Figure 9 presents the project trips at each study intersection as well as the project driveways.

Intersection Traffic Volumes

Project impacts were evaluated relative to both existing traffic volumes as well as background traffic volumes. For the existing plus project scenario, the new trips generated by the project were added to the existing traffic volumes (described in Chapter 2) to derive the existing plus project traffic volumes. Figure 10 shows the intersection turning-movement volumes under existing plus project conditions. For the background plus project scenario, the new trips generated by the project were added to the background traffic volumes (described in Chapter 3) to derive the background plus project traffic volumes. Figure 11 shows the intersection turning-movement volumes under background plus project conditions.

Transportation Network

This analysis assumes that the transportation network with and without the project would be the same under existing and background conditions.

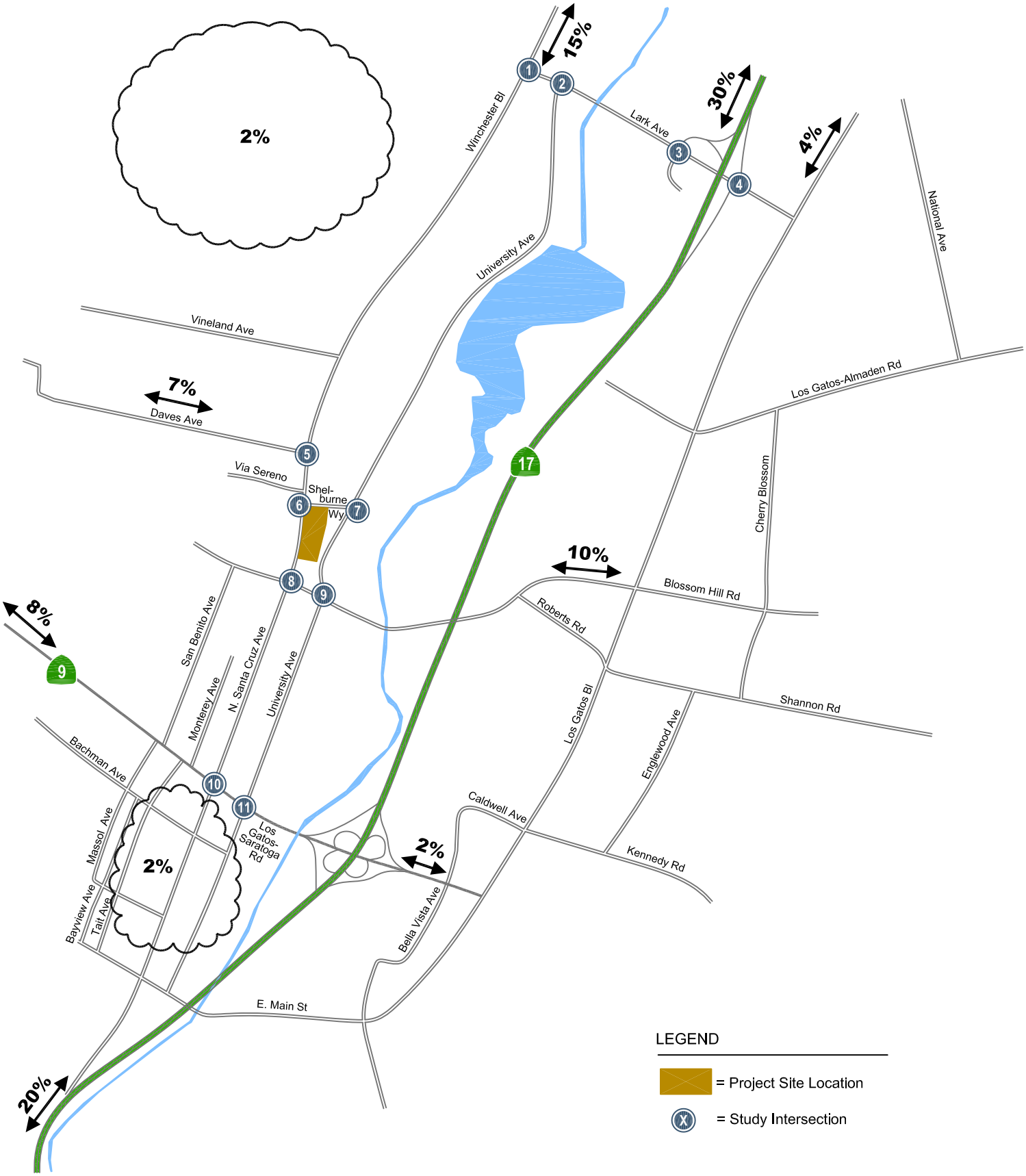


Figure 8
Project Trip Distribution

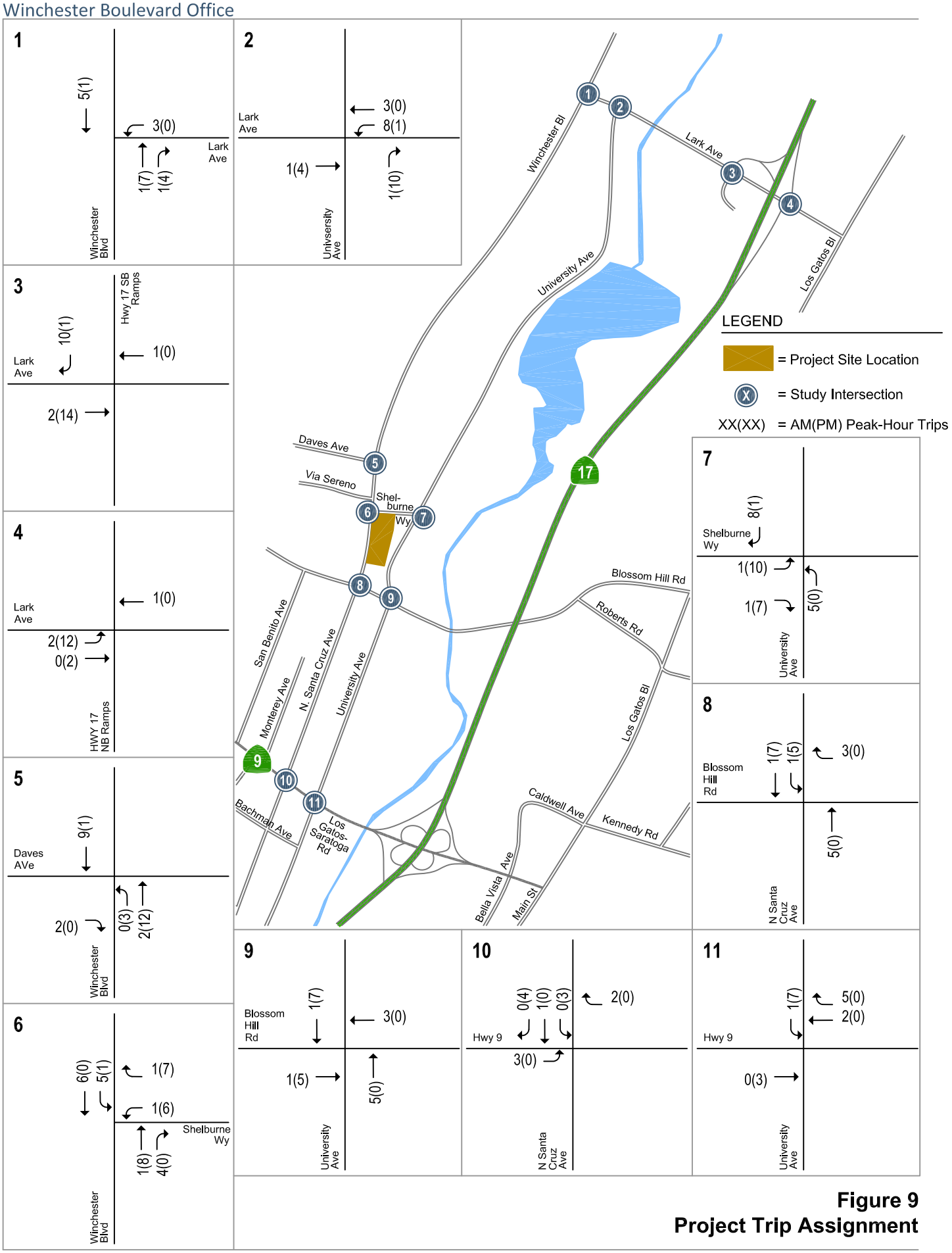


Figure 9
Project Trip Assignment

NORTH
Not to Scale

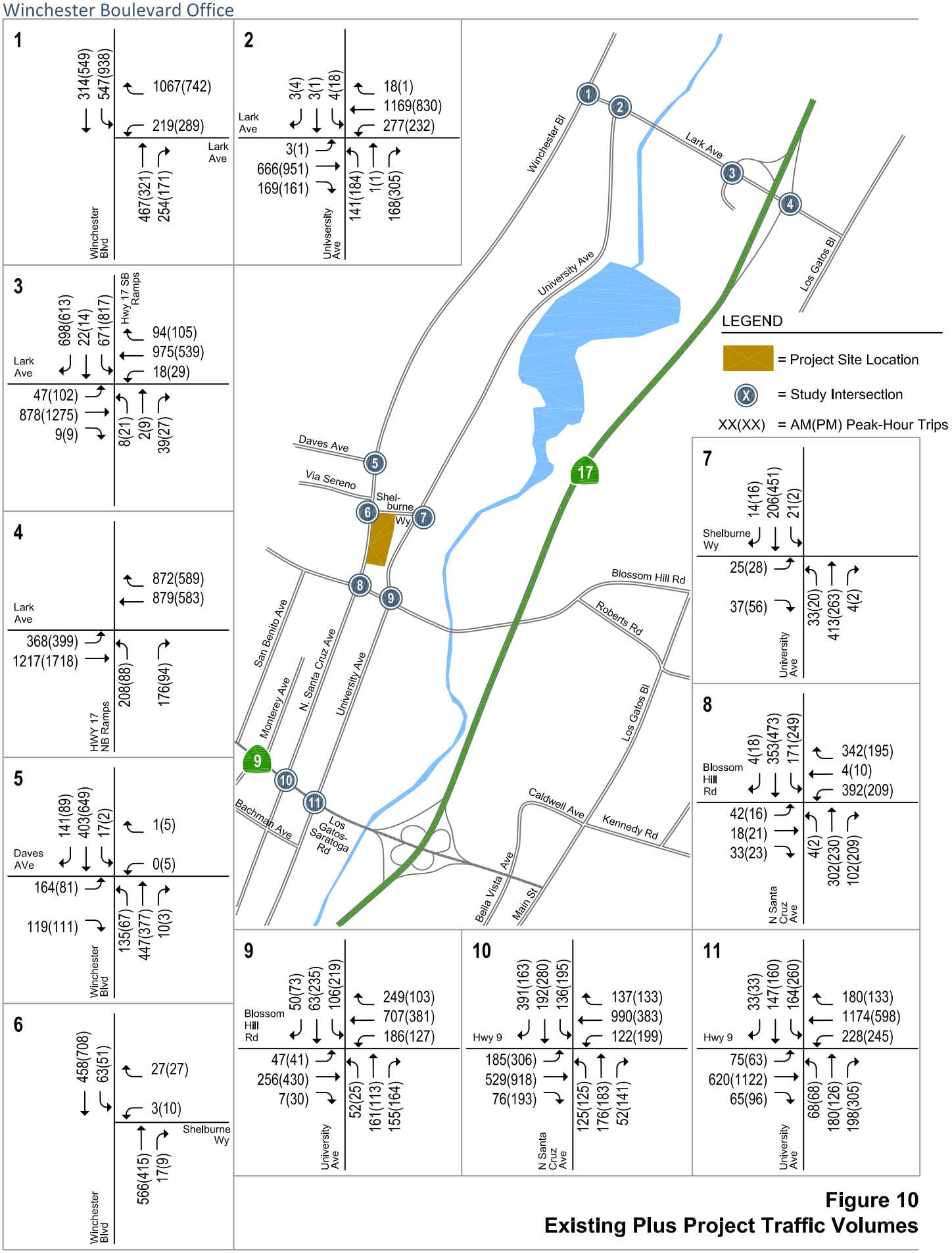


Figure 10
Existing Plus Project Traffic Volumes

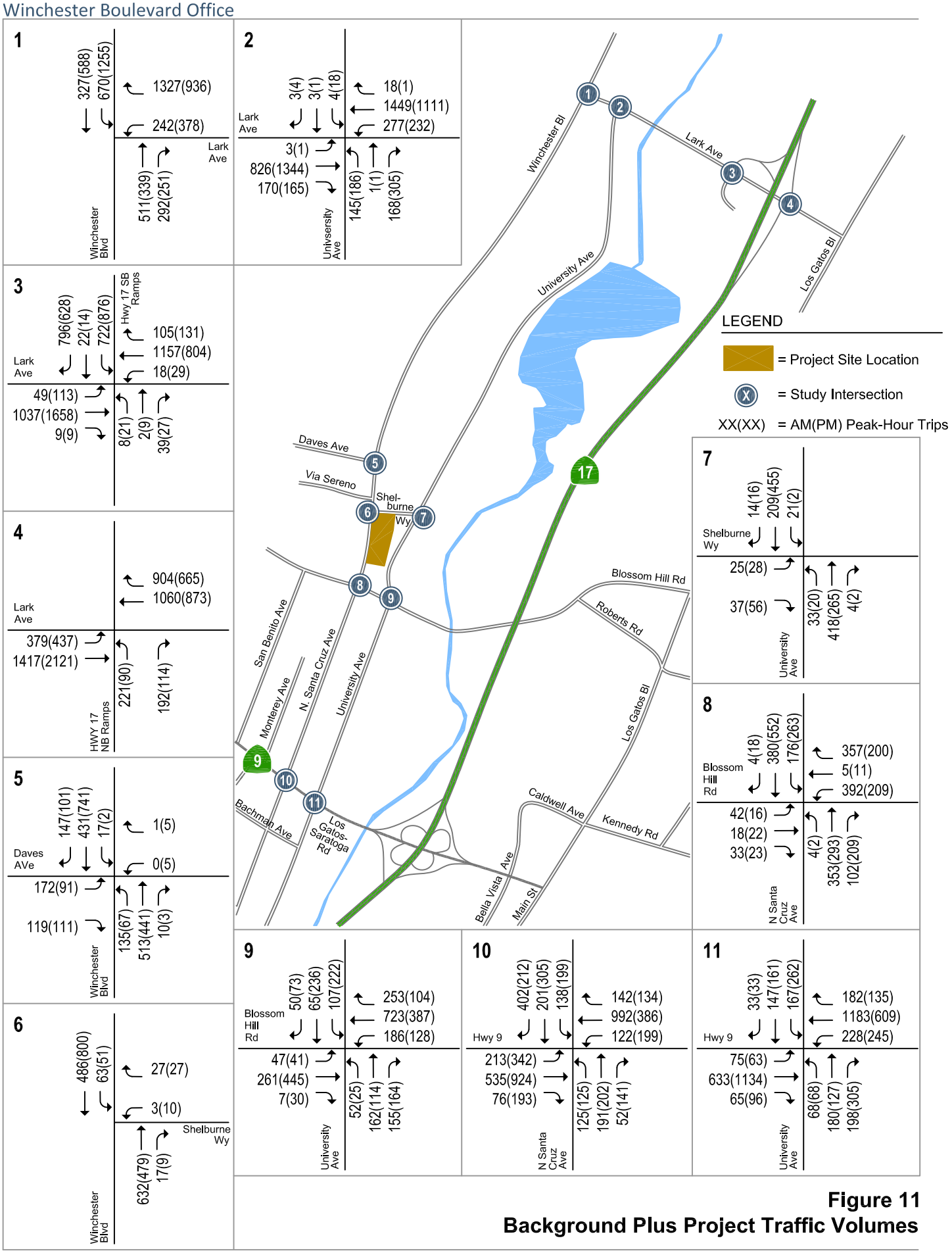


Figure 11
Background Plus Project Traffic Volumes

NORTH
Not to Scale

Background plus Project Conditions Intersection Levels of Service

The results of the intersection LOS analysis under background plus project conditions are summarized in Table 9. The analysis results show that all the study intersections would operate at an acceptable LOS D or better during both the AM and PM peak hours. According to the Town of Los Gatos significant intersection impact criteria the proposed project would not generate any significant intersection impacts under background plus project conditions.

The unsignalized intersections would operate at LOS B and LOC C for their respective worst approaches during both peak hours under background plus project conditions. The levels of service results indicate that these two unsignalized intersections would be operating at near free-flow condition. A signal warrant check for these two intersections under background plus project conditions is thus not performed.

Table 9
Background Plus Project Intersection Levels of Service Summary

			Background		Background + Project			
Study Number	Intersection	Peak Hour	Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Incr. In Crit. Delay (sec)	Incr. In Crit. V/C
1	Winchester Blvd. and Lark Ave.	AM	21.9	C	21.9	C	0.1	0.002
		PM	20.7	C	20.8	C	0.2	0.002
2	University Ave. and Lark Ave.	AM	22.0	C	22.2	C	0.0	0.001
		PM	27.2	C	27.3	C	0.1	0.002
3	SR17 Southbound Ramps and Lark Ave.	AM	28.9	C	28.9	C	0.0	0.000
		PM	38.3	D	38.6	D	0.4	0.004
4	SR17 Norththbound Ramps and Lark Ave.	AM	18.7	B	18.8	B	0.1	0.001
		PM	13.6	B	13.7	B	0.0	0.000
5	Winchester Blvd. and Daves Ave.	AM	30.7	C	30.8	C	0.1	0.007
		PM	27.3	C	27.3	C	0.2	0.003
6	Winchester Blvd. and Shelburne Ave. [1]	AM	0.7 (11.3)	A (B)	0.8 (11.8)	A (B)	-	-
		PM	0.5 (13)	A (B)	0.7 (15.7)	A (C)	-	-
7	University Ave. and Shelburne Ave. [1]	AM	1.5 (12.1)	A (B)	1.6 (12.3)	A (B)	-	-
		PM	1.3 (13.1)	A (B)	1.6 (13.8)	A (B)	-	-
8	N. Santa Cruz Avenue and Blossom Hill Rd.	AM	26.0	C	26.1	C	0.2	0.004
		PM	23.5	C	25.0	C	-10.0	0.006
9	University Ave and Blossom Hill Rd.	AM	21.4	C	21.5	C	0.2	0.004
		PM	30.0	C	30.1	C	0.0	0.003
10	N. Santa Cruz Ave and Los Gatos-Saratoga Rd.*	AM	42.0	D	42.1	D	0.1	0.002
		PM	48.6	D	48.6	D	0.0	0.000
11	University Ave. and Los Gatos-Saratoga Rd.*	AM	33.7	C	33.7	C	0.0	0.001
		PM	39.7	D	39.8	D	0.2	0.003

Notes:
* Denotes CMP intersection
1. For unsignalized intersections, intersection-wide average delay and corresponding LOS are first reported, and worst-approach delay and corresponding LOS are reported in parentheses.

Existing Plus Project Intersection Levels of Service

The results of the intersection LOS analysis under existing plus project conditions are summarized in Table 10. The analysis results show that all the study intersections would operate at an acceptable LOS D or better during both the AM and PM peak hours. According to the Town of Los Gatos significant intersection impact criteria, the proposed project would not generate any significant intersection impacts under existing plus project conditions.

The unsignalized intersections would operate at LOS B for their respective worst approaches during both peak hours under existing plus project conditions. The levels of service results indicate that these two unsignalized intersections would be operating at near free-flow condition. A signal warrant check for these two intersections under existing plus project conditions is thus not performed.

Table 10
Existing Plus Project Intersection Levels of Service Summary

Study Number	Intersection	Peak Hour	Existing Avg. Delay (sec)	Existing LOS	Existing + Project Avg. Delay (sec)	Existing + Project LOS	Incr. In Crit. Delay (sec)	Incr. In Crit. V/C
1	Winchester Blvd. and Lark Ave.	AM	21.2	C	21.2	C	0.1	0.001
		PM	18.7	B	18.8	B	0.1	0.002
2	University Ave. and Lark Ave.	AM	21.9	C	23.2	C	12.3	0.071
		PM	25.7	C	25.7	C	0.1	0.002
3	SR17 Southbound Ramps and Lark Ave.	AM	27.4	C	27.4	C	0.0	0.000
		PM	33.4	C	33.5	C	0.1	0.004
4	SR17 Norththbound Ramps and Lark Ave.	AM	18.1	B	18.1	B	0.1	0.001
		PM	12.9	B	13.0	B	0.2	0.004
5	Winchester Blvd. and Daves Ave.	AM	30.8	C	30.9	C	0.1	0.007
		PM	26.1	C	26.1	C	0.1	0.003
6	Winchester Blvd. and Shelburne Ave. [1]	AM	0.7 (10.9)	A (B)	0.8 (11.4)	A (B)	-	-
		PM	0.6 (12)	A (B)	0.8 (14)	A (B)	-	-
7	University Ave. and Shelburne Ave. [1]	AM	1.5 (12.1)	A (B)	1.6 (12.2)	A (B)	-	-
		PM	1.3 (13)	A (B)	1.6 (13.7)	A (B)	-	-
8	N. Santa Cruz Avenue and Blossom Hill Rd.	AM	25.0	C	25.1	C	0.2	0.004
		PM	23.0	C	23.1	C	0.1	0.003
9	University Ave and Blossom Hill Rd.	AM	21.4	C	21.5	C	0.2	0.004
		PM	30.0	C	30.0	C	0.0	0.003
10	N. Santa Cruz Ave and Los Gatos-Saratoga Rd.*	AM	41.5	D	41.5	D	0.0	0.000
		PM	48.3	D	48.3	D	0.0	0.000
11	University Ave. and Los Gatos-Saratoga Rd.*	AM	33.7	C	33.7	C	-0.1	0.000
		PM	39.7	D	39.8	D	0.2	0.003

Notes:
* Denotes CMP intersection
1. For unsignalized intersections, intersection-wide average delay and corresponding LOS are first reported, and worst-approach delay and corresponding LOS are reported in parentheses.

Project Impacts on Daves Avenue during School Peak Hours

Daves Avenue Elementary School is located approximately 2,000 feet west of the project site. At the request of the Town, a qualitative discussion of project impacts on Daves Avenue during peak morning drop-off and afternoon pick-up periods is provided.

Daves Avenue Elementary School currently begins classes at 8:15 AM for all grades and ends at approximately 2:30 PM for all grades on all weekdays except Wednesday, when students end classes at approximately 12:15 PM. Hexagon observed traffic operations on Daves Avenue during the peak school morning drop-off and afternoon pick-up hours. As discussed in Chapter 2, only minor congestion issues were observed, and the congestion lasted a period of approximately twenty to thirty minutes. During the school morning drop-off peak period, the proposed project is expected to generate three trips within an hour on eastbound Daves Avenue. During the school PM pick-up hours, office land uses typically generate little traffic, and the project is not assumed to generate any traffic on eastbound Daves Avenue. Overall, during both the morning drop-off and afternoon pick-up school peak periods, the proposed project is not expected to add a noticeable amount of traffic to eastbound Daves Avenue, which experiences minor congestion for the peak twenty to thirty minutes of school activity.

During both the morning drop-off and afternoon pick-up hours at Daves Avenue Elementary School, Hexagon observed that the majority of the drop-off and pick-up operations occurred on-site. Only a few parents dropped-off or picked-up their children while parked along Daves Avenue. Overall, students are being dropped-off and picked-up in a safe manner. Because the project is expected to add only three trips during the morning peak hour and no traffic during the afternoon school peak hour onto Daves Avenue, it is not expected that the proposed project would significantly affect the current drop-off and pick-up patterns and affect student safety.

Travel Demand Management Measures

Transportation Demand Management (TDM) is a combination of services, incentives, facilities, and actions that reduce single-occupant vehicle (SOV) trips to help relieve traffic congestion, parking demand, and air pollution. The purpose of TDM is to promote more efficient utilization of existing transportation facilities, and to ensure that new developments are designed to maximize the potential for sustainable transportation usage.

The Town of Los Gatos has established requirements for TDM programs within large projects (generating 100 or more employee trips during the AM peak hour) under Ordinance 1893. Although the ordinance does not apply to this specific project, the following are identified TDM measures outlined in the ordinance that this project has included:

- Transit Ticket Subsidies: Transit ticket subsidies encourage employees to commute via transit by offering discounted fares. Subsidized ticket prices along with the project being located in close proximity to a bus stop improve the convenience of riding public transit for employees.
- Preferential parking for ridesharing vehicles: Preferential parking provides reserved parking in a desirable priority location, such as near the building entrance or in a guarded lot. The initiative encourages employees to rideshare by making it more convenient for users, and reduces the demand for parking.
- Bike racks and lockers: Bike racks and lockers provide safe storage for employees' bicycles. By offering accessible and safe storage, nearby employees can commute by bicycle.
- Showers: Shower facilities can encourage employees to move more and incorporate fitness into their daily routines. Providing showers enables active commuters to arrive early and prepare for the day without hygienic concerns.

Each included TDM measure encourages alternative and active commuting behavior that would reduce SOV trips.

Vehicle Miles Traveled

In accordance with SB 743, daily VMT for projects in Los Gatos versus the average of the San Francisco Bay area are presented based on the Metropolitan Transportation Commission (MTC) travel demand forecast model (http://analytics.mtc.ca.gov/foswiki/Main/VmtPerWorker, accessed on September 12, 2016). The Year 2020 Plan Bay Area model forecasted daily VMT is 25.34 miles per worker employed in this area of Los Gatos (Traffic Analysis Zone 509), while the San Francisco Bay Area average daily VMT is 21.8 miles per worker. Given that no standard approach or guidelines have been finalized under SB 743, the VMT presented in this report is for informational purposes only. It is not intended to provide any indication of the transportation impacts of the project under SB 743.

The TDM measures proposed by the project would encourage alternative and active commuting behavior that would reduce single-occupant vehicle trips. These TDM measures would reduce the VMT generated by the proposed project.

5. Cumulative plus Project Conditions

This chapter describes cumulative traffic conditions with the proposed project. Cumulative conditions reflect the traffic conditions that are projected to occur in the future if all of the development projects that have been proposed in the study area were constructed and occupied. Cumulative traffic volumes reflect traffic generated by the approved development projects (as included in the Background scenario) and other proposed but not yet approved (pending) development projects. This chapter describes the procedure used to determine cumulative plus project traffic volumes and the resulting traffic conditions.

Roadway Network

It is assumed in this analysis that the transportation network under cumulative conditions would be the same as that described under existing conditions.

Pending Developments

Pending developments are those that have been proposed to local agencies but have not been approved. The pending project list was obtained from the Town of Los Gatos and is included in Appendix B. Based on a review of traffic studies prepared for these projects, a recent TRAFFIX file provided by the Town of Los Gatos, the types and sizes of these developments, and their respective distance from the project site, the following pending developments are expected to add traffic to at least one of the study intersections during at least one of the peak hour periods:

Pending Developments

1. 401 Alberto Way Office: demolish 30,000 s.f. office and construct 93,500 s.f. office
2. 517 Blossom Hill Road: demolish 30-unit apartment and construct 103-unit residential
3. 420 Blossom Hill Road: demolish 6,514 s.f. office and construct 86-unit residential
4. Dell Avenue Area Plan (Campbell): Add approx. 3 million s.f. office
5. 140 Knowles Drive: remove 111,348 s.f. and construct 200 units residential
6. 16151 Los Gatos Blvd-Acura Auto Dealer: add 1,097 s.f. floor area
7. 15600 and 15650 Los Gatos Blvd: demolish auto dealership and build commercial buildings
8. 15380 Los Gatos Blvd: demolish existing 2,400 s.f. convenience store and Construct a 3,700 s.f. new convenience store
9. 16212 Los Gatos Blvd: 11 homes subdivision
10. 15500 Los Gatos Blvd: Buick site redevelopment
11. 201-225 Los Gatos-Saratoga Road: demolish 3,250 s.f. specialty and 8,156 s.f. general office and construct 17,654 s.f. electric car dealership or mixed commercial use
12. 50 Los Gatos-Saratoga Road: demolish 189-Room Hotel and construct 230 unit residential
13. Samaritan Medical Office Master Plan: net increase 365,000 s.f. medical office (Total 475k s.f.)
14. Twin Oaks: 10-home subdivision

The following pending developments have also been considered, but are not expected to add traffic to any of the study intersections during either the AM or PM peak hours:

15. Venture Christian Church: increase from 91,092 s.f. to 107,289
16. 101 Newell Avenue: demolish existing lodge and construct 4 homes
17. Shady Lane Extension: 5-lot subdivision on vacant lot
18. 15975 Union Ave: 3-home subdivision
19. 258 Union Ave: 7-home subdivision

Cumulative plus Project Traffic Volumes

Cumulative plus project peak hour traffic volumes were calculated by adding the estimated traffic from the pending developments as well as the net new peak hour trips generated by the project to background volumes. Vehicle trips for each of the pending projects were obtained from the TRAFFIX file provided by the Town of Los Gatos or from the project's traffic impact study. The estimated trips were assigned to the study intersections according to the distributions and assignments identified in the Town's TRAFFIX file or the relevant traffic studies. Cumulative plus project traffic volumes are shown graphically on Figure 12.

Intersection LOS Under Cumulative Plus Project Conditions

As shown on Table 11, all study intersections would operate at acceptable levels of service under cumulative plus project conditions. The unsignalized intersections would operate at LOS B and LOS C for their respective worst approaches during both peak hours under cumulative plus project conditions. The levels of service results indicate that these two unsignalized intersections would be operating at near free-flow condition. A signal warrant check for these two intersections under cumulative plus project conditions thus was not performed.

Even though the project would not have a significant impact at the study intersections, it would be required to pay a Traffic Impact Fee, as does all new development in the Town of Los Gatos. The Town's Traffic Impact Fee is unrelated to whether or not a project has any impacts under CEQA, and is required of all new development projects that generate additional trips on the Town's roadway network. The current fee is $879 per new trip generated, as approved by the Town Council on March 24, 2014. The project is expected to generate a net new 303 daily trips. The associated traffic impact fee is $266,337. The purpose of the fee is to help fund transportation projects that are needed to accommodate vehicle trip growth. As a general practice, traffic impact fees are typically calculated at the time of the final project approval. The fee policy and schedule are subject to change in which the final fees may be different than the amount stated above. Among the projects that will be funded with Traffic Impact Fees that are within the study areas are:

- Intersection Improvements at SR 9 and N. Santa Cruz Avenue;
- Intersection Improvements at Winchester Boulevard and Lark Avenue;
- Second westbound right-turn lane at Lark Avenue and SR 17 northbound ramps;
- SR 9 - Los Gatos Creek Trail connector – New path and bridge for bikes and pedestrians;
- Complete Streets Improvements – Lark Avenue from Garden Hill Drive to Los Gatos Blvd;
- Complete Streets Improvements – Winchester Boulevard from Blossom Hill Road to Lark Avenue.

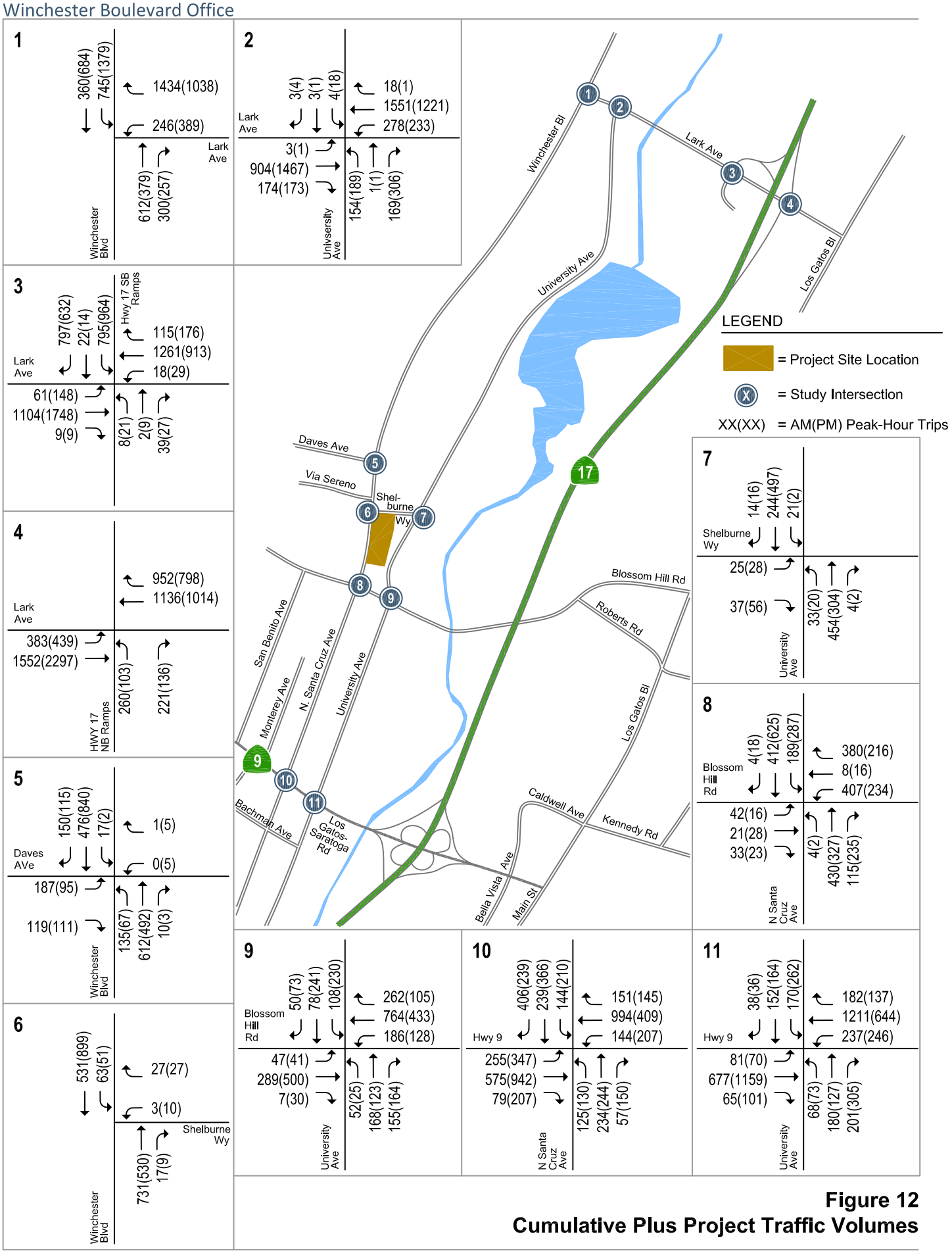


Figure 12
Cumulative Plus Project Traffic Volumes

NORTH
Not to Scale

Table 11
Intersection Levels of Service Summary - Cumulative plus Project Conditions

Study Number	Intersection	Peak Hour	Cumulative + Project Avg. Delay (sec)	Cumulative + Project LOS
1	Winchester Blvd. and Lark Ave.	AM	22.2	C
		PM	21.5	C
2	University Ave. and Lark Ave.	AM	22.9	C
		PM	29.0	C
3	SR17 Southbound Ramps and Lark Ave.	AM	31.8	C
		PM	46.8	D
4	SR17 Norththbound Ramps and Lark Ave.	AM	21.6	C
		PM	15.2	B
5	Winchester Blvd. and Daves Ave.	AM	31.1	C
		PM	29.9	C
6	Winchester Blvd. and Shelburne Ave. [1]	AM	0.7 (12.7)	A (B)
		PM	0.7 (17.7)	A (C)
7	University Ave. and Shelburne Ave. [1]	AM	1.5 (13)	A (B)
		PM	1.5 (14.6)	A (B)
8	N. Santa Cruz Avenue and Blossom Hill Rd.	AM	28.4	C
		PM	28.1	C
9	University Ave and Blossom Hill Rd.	AM	21.7	C
		PM	30.3	C
10	N. Santa Cruz Ave and Los Gatos-Saratoga Rd.*	AM	44.2	D
		PM	50.3	D
11	University Ave. and Los Gatos-Saratoga Rd.*	AM	34.2	C
		PM	39.8	D

Notes:
* Denotes CMP intersection
1. For unsignalized intersections, intersection-wide average delay and corresponding LOS are first reported, and worst-approach delay and corresponding LOS are reported in parentheses.

6. Other Transportation Issues

This chapter discusses an analysis completed of other transportation issues associated with the project site, including:

- Operations analysis – vehicle queuing and storage at selected intersections
- Potential impacts regarding transit, pedestrian, and bicycle facilities
- Site access and on-site circulation
- Parking

Unlike the level of service impact methodology, which is adopted by the Town of Los Gatos, the analyses discussed in this chapter are based on professional judgment in accordance with the standards and methods employed by the traffic engineering community.

Although operational issues are not considered CEQA impacts, they do describe traffic conditions that are relevant to describing the project environment.

Operations Analysis

Vehicle queues were estimated using a Poisson probability distribution, which estimates the probability of "n" vehicles for a vehicle movement using the following formula:

$$P(x = n) = \frac{\lambda^n e^{-(\lambda)}}{n!}$$

Where:

P (x = n) = probability of "n" vehicles in queue per lane

n = number of vehicles in the queue per lane

λ = Average number of vehicles in the queue per lane (vehicles per hour per lane/signal cycles per hour)

The operations analysis is based on vehicle queuing for high-demand left-turn movements at intersections where 10 or more project trips were added or there was observed congestion. Using a Poisson probability distribution, the basis of the analysis is as follows: (1) the Poisson probability distribution is used to estimate the 95th percentile maximum number of queued vehicles for a particular movement; (2) the estimated maximum number of vehicles in the queue is translated into a queue length, assuming 25 feet per vehicle; and (3) the estimated maximum queue length is compared to the existing or planned available storage capacity for the movement to determine if adequate storage is available to accommodate the 95th percentile queues. This analysis thus provides a basis for determining whether the addition of project trips would exacerbate peak hour queues and delays, as well as estimating future storage requirements at intersections. The following turn movements were analyzed for vehicular queues:

- University Avenue and Lark Avenue – the westbound left-turn movement
- SR17 northbound ramps and Lark Avenue – the eastbound left-turn movement
- N. Santa Cruz and Los Gatos-Saratoga Road – the eastbound left-turn movement
- University Avenue and Los Gatos-Saratoga Road – the southbound left-turn movement
- Winchester Boulevard and Shelburne Way – the southbound left-turn and westbound left-turn movement
- Winchester Boulevard and Project Driveway – the southbound left-turn movement

Vehicle queuing estimates are provided in Table 12. Hexagon performed field observations at these intersections to determine the average queue length. The reported existing queue lengths match our observations.

Under existing and background conditions, volumes on all studied movements are contained within the provided storage space, except at the following turn pockets where the 95th percentile queues exceed the provided storage space:

- University Avenue & Lark Avenue – westbound left-turn pocket – AM & PM Peak Hours
- University Avenue & Los Gatos-Saratoga Road – southbound left-turn pocket – PM Peak Hour

Under existing plus project and background plus project conditions, the 95th percentile queues at the above mentioned two overflowing movements would continue to exceed the provided storage space. The project would not cause additional turn pockets to overflow. As shown on Table 12, the project is expected to add fewer than 10 vehicles per hour onto the overflowing movements and is not expected to extend the 95th percentile queues.

The project driveway on Shelburne Way is proposed at approximately 130 feet east of Winchester Boulevard. The 95th percentile queue length for westbound Shelburne Way at Winchester Boulevard is estimated at 25 feet, which indicates that vehicles turning out of the Shelburne Way driveway would not be blocked.

The project driveway on Winchester Boulevard is proposed at approximately 250 feet south of Shelburne Way. There is an existing two-way left-turn median on Winchester Boulevard for southbound inbound vehicles to wait and turn into the driveway. Based on the queuing analysis results, it is expected that the southbound left-turn project traffic on Winchester Boulevard turning into the driveway would be contained within the two-way left-turn median.

Table 12
Queuing Analysis

Measurement	University Ave. & Lark Ave.		NB SR17 Ramps & Lark Ave.		N. Santa Cruz Ave. & Los Gatos-Saratoga Rd.		University Ave. & Los Gatos-Saratoga Rd.		Winchester Blvd & Shelburne Way				Winchester Blvd. and Project Driveway	
	WBL		EBL [4]		EBL		SBL [5]		SBL		WB		SBL	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Existing														
Cycle/Delay[1] (sec)	100	100	95	110	150	150	150	150	8.8	8.3	10.9	12		
Volume (vphpl)	269	231	366	387	182	306	163	253	58	50	28	24		
Avg. Queue[2] (veh/ln.)	12.0	6.4	9.0	14.0	7.6	10.0	3.3	7.3	0.1	0.1	0.1	0.1		
Avg. Queue[3] (ft./ln)	300	160	225	350	190	250	81	181	4	3	2	2		
95th %. Queue (veh/ln.)	18	11	14	20	12	15	6	12	1	1	1	1		
95th %. Queue (ft./ln)	450	275	350	500	300	375	150	300	25	25	25	25		
Storage (ft./ ln.)	225	225	720	720	425	425	250	250	65	65	130	130		
Adequate (Y/N)	**N**	**N**	Y	Y	Y	Y	Y	**N**	Y	Y	Y	Y		
Existing plus Project														
Cycle/Delay[1] (sec)	100	100	95	110	150	150	150	150	8.8	8.3	11.4	13.9	8.2	0.0
Volume (vphpl)	277	232	368	399	185	306	164	260	63	51	30	37	6	0
Avg. Queue[2] (veh/ln.)	12.4	6.4	9.0	14.4	7.7	10.0	3.3	7.5	0.2	0.1	0.1	0.1	0.0	0.0
Avg. Queue[3] (ft./ln)	310	160	225	360	193	250	83	188	4	3	2	4	0	0
95th %. Queue (veh/ln.)	18	11	14	21	13	15	7	12	1	1	1	1	0	0
95th %. Queue (ft./ln)	450	275	350	525	325	375	175	300	25	25	25	25	0	0
Storage (ft./ ln.)	225	225	720	720	425	425	250	250	65	65	130	130	250	250
Adequate (Y/N)	**N**	**N**	Y	Y	Y	Y	Y	**N**	Y	Y	Y	Y	Y	Y
Background														
Cycle/Delay[1] (sec)	100	100	95	110	150	150	150	150	9	8.5	11.3	13		
Volume (vphpl)	269	231	377	425	210	342	166	255	58	50	28	24		
Avg. Queue[2] (veh/ln.)	12.0	6.4	9.3	15.4	8.8	11.2	3.3	7.3	0.1	0.1	0.1	0.1		
Avg. Queue[3] (ft./ln)	300	160	233	385	220	280	83	183	4	3	2	2		
95th %. Queue (veh/ln.)	18	11	15	22	14	17	7	12	1	1	1	1		
95th %. Queue (ft./ln)	450	275	375	550	350	425	175	300	25	25	25	25		
Storage (ft./ ln.)	225	225	720	720	425	425	250	250	65	65	130	130		
Adequate (Y/N)	**N**	**N**	Y	Y	Y	Y	Y	**N**	Y	Y	Y	Y		
Background plus Project														
Cycle/Delay[1] (sec)	100	100	95	110	150	150	150	150	9.1	8.5	11.8	15.5	10.3	0
Volume (vphpl)	277	232	379	437	213	342	167	262	63	51	30	37	6	0
Avg. Queue[2] (veh/ln.)	12.4	6.4	9.3	15.8	8.9	11.2	3.3	7.5	0.2	0.1	0.1	0.2	0.0	0.0
Avg. Queue[3] (ft./ln)	310	160	233	395	223	280	83	188	4	3	2	4	0	0
95th %. Queue (veh/ln.)	18	11	15	23	14	17	7	12	1	1	1	1	0	0
95th %. Queue (ft./ln)	450	275	375	575	350	425	175	300	25	25	25	25	0	0
Storage (ft./ ln.)	225	225	720	720	425	425	250	250	65	65	130	130	250	250
Adequate (Y/N)	**N**	**N**	Y	Y	Y	Y	Y	**N**	Y	Y	Y	Y	Y	Y

1. Vehicle queue calculations based on cycle length for signalized intersections, and movement delay for unsignalized intersections.
2. Average queues were adjusted to resemble field observations
3. Assumes 25 Feet Per Vehicle Queued.
4. Storage length accounts for dual eastbound left-turn storage pockets.
5. Storage length accounts for dual southbound left-turn storage pockets.

Project Impact on Bicycle, Pedestrian and Transit Facilities

The project site is well served by existing bicycle facilities. There is an existing Class III bikeway on Shelburne Way between Winchester Boulevard and University Avenue. Nearby bicycle facilities within the project vicinity include bike lanes on Daves Avenue, Winchester Boulevard north of Daves Avenue, and on University Avenue north of Blossom Road, as well as the Los Gatos Creek trail. The Los Gatos Creek Trail is a Class I bike facility that runs in a north-south direction just west of Highway 17.

Pedestrian activity could occur between the site and downtown Los Gatos, located approximately a mile south, as well as the closest bus stops, located about 200 feet north and 700 feet to the south of the project site. There are existing sidewalks on Winchester Boulevard that connect the site to the bus stops and to downtown Los Gatos. Several sections of Shelburne Way lack sidewalks, including the project frontage. The project would improve the situation by adding a sidewalk along its frontage. There are no crosswalks at the intersection of Winchester Boulevard and Shelburne Way. The project would not create sufficient pedestrian demand to warrant the installation of a crosswalk. The nearest crosswalk is at the signalized intersection of Winchester Boulevard and Daves Avenue, which is located approximately 575 feet, from the project site.

As shown on Figure 2 in Chapter 1, the project proposes to provide detached sidewalks with a landscape buffer on Winchester Boulevard and Shelburne Way along the building frontage. Detached sidewalks with a landscape buffer would provide a wider buffer area between pedestrians and on-street vehicles.

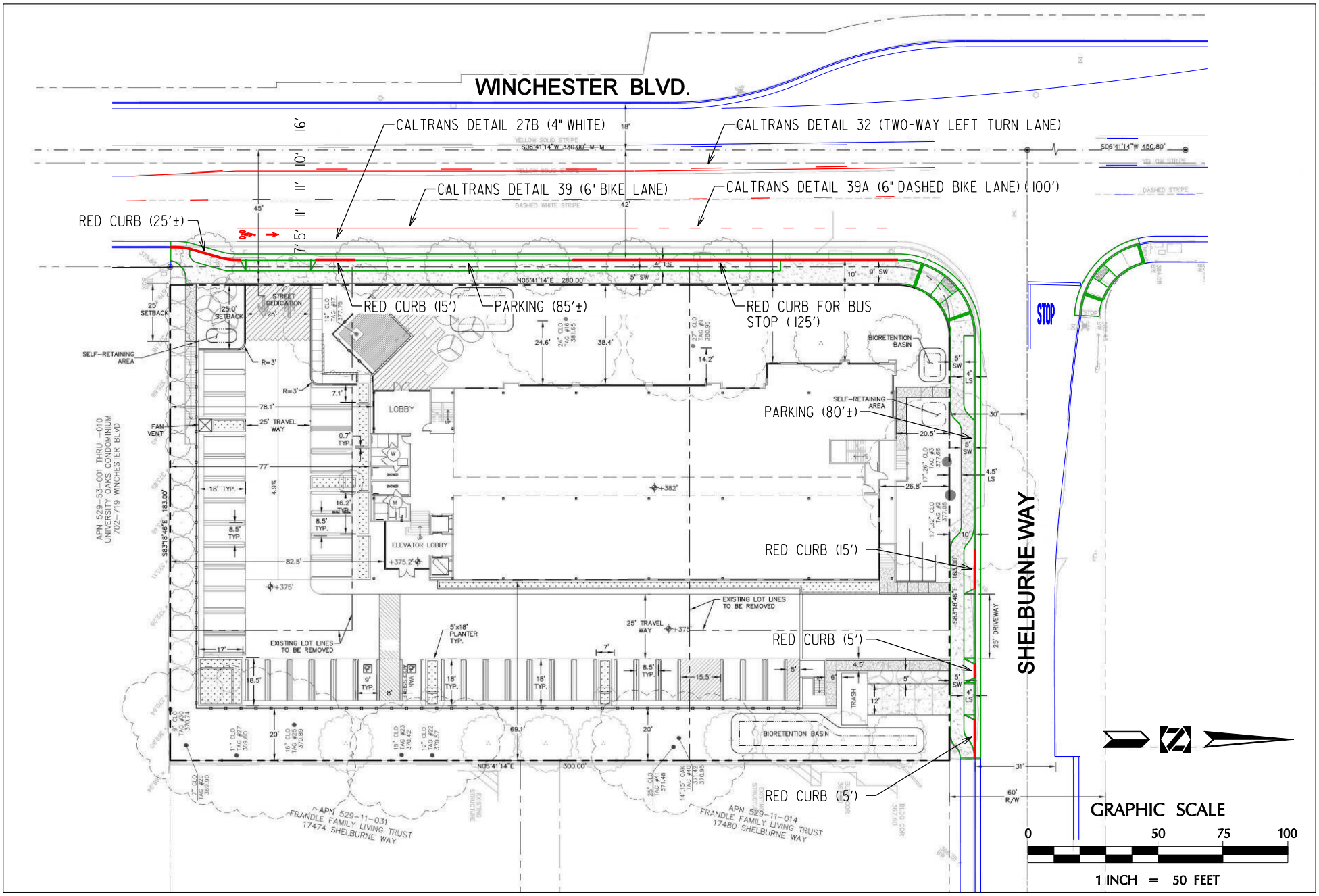
The project would be required to pay a Traffic Impact Fee, as does all new development in the Town of Los Gatos. The Town's Traffic Impact Fee is unrelated to whether or not a project has any impacts under CEQA, and is required of all new development projects that generate additional trips on the Town's roadway network. Among the projects that will be funded with Traffic Impact Fees that are within the study area are the complete street improvements on Winchester Boulevard from Blossom Hill Road to Lark Avenue. It is expected that the complete street improvements would enhance the bicycle and pedestrian facilities along Winchester Boulevard. The potential bicycle and pedestrian facility improvements are shown in a conceptual drawing on Figure 13.

There is transit service on Winchester Boulevard adjacent to the site. The closest bus stop for northbound service is approximately 450 feet north at Winchester Boulevard and Farley Road, and less than 200 feet north at Winchester Boulevard and Via Sereno for southbound service. It is not expected that the proposed project would generate a significant amount of transit ridership, or create a significant impact to intersection levels of service along transit routes. Therefore, the project would not significantly impact transit facilities and transit travel times.

As shown on Figure 2 in Chapter 1, as requested by the Valley Transportation Authority (VTA) the project proposes to provide an additional VTA bus stop along the building frontage on Winchester Boulevard at the Shelburne intersection. The proposed bus stop would provide direct transit access to the project site.

Recommendations

While not required to improve Level of Service or to mitigate impacts related to traffic, it is recommended that the proposed project implement detached sidewalks on Winchester Boulevard and on Shelburne Way along the building frontages, and implement the proposed VTA bus stop along the building frontage on Winchester Boulevard at the Shelburne intersection.



Hexagon Transportation Consultants, Inc.
4 North Second Street, Suite 400
San Jose, California 95113
Phone: (408) 971-6100 / www.hextrans.com

FIGURE 13
OFFSITE IMPROVEMENT
CONCEPTUAL DRAWING

DESIGNED BY: M. POWELL

DATE: 9/13/2016

Site Access and Circulation

This section describes the site access and circulation for the proposed project. This review is based on project site plans prepared by Studio T Square dated August 1, 2016 (see Figure 2).

Site Access

Site access was evaluated to determine the adequacy of site driveways with regards to corner sight distance and traffic volumes. The proposed project would have two full-access driveways, one each on Winchester Boulevard and Shelburne Way. The northern access driveway from Shelburne Way would provide access to an 87-space below-grade parking garage. The Winchester Boulevard access driveway would connect to a 41-space surface parking lot. Both access driveways serve as the entrance and exit to that specific grade-level parking area. Queuing analysis indicates that the Shelburne Way driveway would not be blocked by the westbound traffic queues at the intersection of Winchester Boulevard and Shelburne Way. Therefore, access to the project driveways would be adequate under all analyzed scenarios.

Driveway Sight Distance

The project access points should be free and clear of any obstructions to optimize sight distance, thereby ensuring that exiting vehicles can see pedestrians on the sidewalk and other vehicles traveling on adjacent roadways. Landscaping and parking should not conflict with a driver's ability to locate a gap in traffic and see oncoming pedestrians and bicyclists. Adequate corner sight distance (sight distance triangles) should be provided at all site access points in accordance with the Town's standards. Sight distance triangles should be measured approximately 15 feet back from the traveled way.

Sight distance requirements vary depending on the roadway speeds. The speed limit on Winchester Boulevard and Shelburne Way is 25 mph. The Caltrans recommended stopping sight distance for this roadway is 150 feet.

Recommendations

At both the Winchester Boulevard driveway and the Shelburne Way driveway, on-street parking should be prohibited within 15 feet of the driveway to ensure adequate sight distance.

On-Site Circulation

All driveway and drive-aisle widths are at least 25 feet wide, and comply with the minimum requirements established in the Town of Los Gatos Code of Ordinances Section 29.10.155. All parking stalls within the parking garage are 18 feet in length (16 feet with 2 feet overhang) and 8 feet 6 inches in width, which meet the town's requirements.

The building lobby and entrance is proposed to front Winchester Boulevard. Pedestrians would access the project site through the main lobby and entrance area. Sidewalks are proposed to be installed on Winchester Boulevard and Shelburne Way fronting the project site. The proposed project would provide adequate pedestrian access and circulation.

Emergency Vehicles, Truck Access and Circulation

The site plan proposes a dedicated trash enclosure on Shelburne Way just east of the main access driveway. Trash bins would be picked up from and returned to the dedicated trash enclosure on the day of garbage collection. All driveways and drive-aisles are at least 25 feet wide, which are adequate for emergency vehicle access and circulation.

Parking

For office use at the project site, the Town of Los Gatos Municipal Code Section 29.10.150 requires parking to be provided at the rate of one parking space per 235 square feet of gross floor area. The project proposes an office building totaling 30,070 square feet, which by code would be required to provide 128 parking spaces. The project site plan provides 128 parking spaces. Therefore, the parking provision as shown on the current project site plans would meet the Town standards.

Per the California Building Code (CBC) Table 11B-208.2, four accessible spaces are required for parking garages with 76 to 100 parking spaces and two accessible spaces are required for parking lots with 26 to 50 parking spaces. Of the required accessible parking spaces, one van accessible space is required. As shown on the site plan, the project would provide six accessible parking spaces, of which four are accessed via the northern driveway on the below-grade level near the elevators, and the remaining two are accessed via the western driveway on the ground floor. The project site plan also labels one of the accessible parking spaces in both the underground garage and the surface parking lot to be van accessible. Therefore, the accessible parking provisions as shown on the current project site plans would meet the CBC requirements.

As discussed above, to ensure adequate sight distance for vehicles turning out of the driveways, Hexagon recommends on-street parking on Winchester Boulevard and Shelburne Way within 15 feet of the driveway be prohibited.

The Town of Los Gatos does not have requirements for bicycle parking spaces. According to VTA's *Bicycle Technical Guidelines*, which is VTA's general guide for local agencies in planning, design and maintenance of bicycle facilities and bicycle-friendly roadways, offices should provide one bicycle parking space per 6,000 s.f. and 75 percent of the bicycle parking spaces should be secured (Class I) spaces. The proposed project is 30,070 s.f. and would be recommended to provide 5 bicycle parking spaces (4 secured bike parking spaces and 1 bike rack.) Comparatively, the California Green Building Code (CGBC) Section 5.106.4 requires short-term bike parking equivalent to 5 percent of the visitor parking spaces and long-term bike parking equivalent to 5 percent of the employee parking spaces. This equates to a total of 6 long-term bicycle parking spaces. The project does not identify specific visitor parking spaces, but the project should provide at least one two-bike capacity rack near the visitor entrance to the building. The proposed project is proposing in its underground garage a secured bike storage room that can hold 36 bicycles. The proposed bicycle storage facility exceeds the recommended secured bike storage quantity by VTA and the CGBC. Based on both the VTA guidelines and CGBC requirements, it is recommended that one two-bike capacity bike rack be provided near the visitor entrance to the building.

The bike storage room will be located next to the driveway and can be accessed from ground level via a set of stairs approximately 30 feet to the north and via elevators approximately 100 feet to the south. Bicyclist access to the bike storage is adequate.

7. Conclusions

This report presents the results of the Transportation Impact Analysis (TIA) prepared for the proposed office development located at Winchester Boulevard and Shelburne Way in Los Gatos, CA. The project site is located on the 1.31-acre lot southwest of the intersection of Winchester Boulevard and Shelburne Way. Currently, the project site is comprised of three houses. The project proposes to replace the existing houses with a 30,070-s.f. office building with 128 parking spaces. Access to the project site would be provided by two driveways, one on Winchester Boulevard and the other on Shelburne Way.

This study was conducted for the purpose of identifying the potential traffic impacts related to the proposed development. The potential impacts of the project were evaluated in accordance with the standards set forth by the Town of Los Gatos and the Santa Clara County Congestion Management Program (CMP). The traffic analysis is based on the AM and PM peak hour levels of service for nine signalized intersections, two unsignalized intersections, and three freeway segments. Of the nine study intersections, two are CMP intersections.

Per CMP technical guidelines, a freeway segment LOS analysis is required when a project is expected to add trips greater than one percent of a segment's capacity. Given that the number of project trips added to the freeways in the area is estimated to be less than the one percent threshold of freeway capacity, a detailed analysis of freeway segment levels of service was not performed. A simple freeway segment capacity evaluation to substantiate this determination is presented in Table 3 in Chapter 1.

Intersection Levels of Service

The intersection LOS analysis concluded that all study intersections would operate at acceptable levels of service under all studied conditions. The unsignalized intersections would operate at LOS B and LOS C for their respective worst approaches during both peak hours under all studied conditions. The levels of service results indicate that these two unsignalized intersections would be operating at near free-flow condition. A signal warrant check for these two intersections thus was not performed.

Operations Analysis

Operational issues are not considered CEQA impacts. They are included for informational purposes.

A queuing analysis was provided to determine whether the addition of project trips would exacerbate peak hour queues and delays, as well as estimating future storage requirements at intersections. The following turn movements were analyzed for vehicles queues:

- University Avenue and Lark Avenue – the westbound left-turn movement
- SR17 northbound ramps and Lark Avenue – the eastbound left-turn movement
- N. Santa Cruz and Los Gatos-Saratoga Road – the eastbound left-turn movement
- University Avenue and Los Gatos-Saratoga Road – the southbound left-turn movement
- Winchester Boulevard and Shelburne Way – the southbound left-turn and westbound movement
- Winchester Boulevard and Project Driveway – the southbound left-turn movement

Hexagon performed field observations at these intersections to determine the average queue length. The reported existing queue lengths match our observations.

Under existing and background conditions, volumes on all studied movements are contained within the provided storage space, except at the following turn pockets where the 95th percentile queues exceed the provided storage space:

- University Avenue & Lark Avenue – westbound left-turn pocket – AM & PM Peak Hours
- University Avenue & Los Gatos-Saratoga Road – southbound left-turn pocket – PM Peak Hour

Under existing plus project and background plus project conditions, the 95th percentile queues at the above mentioned two overflowing movements would continue to exceed the provided storage space. The project would not cause additional turn pockets to overflow. As shown on Table 12, the project is expected to add fewer than 10 vehicles per hour to the overflowing movements and is not expected to extend the 95th percentile queues.

The project driveway on Shelburne Way is proposed at approximately 130 feet east of Winchester Boulevard. The 95th percentile queue length for westbound Shelburne Way at Winchester Boulevard is estimated at 25 feet, which indicates that vehicles turning out of the Shelburne Way driveway would not be blocked.

The project driveway on Winchester Boulevard is proposed at approximately 250 feet south of Shelburne Way. There is an existing two-way left-turn median on Winchester Boulevard for southbound inbound vehicles to wait and turn into the driveway. Based on the queuing analysis results, it is expected that the southbound left-turn project traffic on Winchester Boulevard turning into the driveway would be contained within the two-way left-turn median.

Project Impact on Bicycle, Pedestrian and Transit Facilities

The project site is well served by existing bicycle facilities. There is an existing Class III bikeway on Shelburne Way between Winchester Boulevard and University Avenue. Nearby bicycle facilities within the project vicinity include bike lanes on Daves Avenue, Winchester Boulevard north of Daves Avenue, and on University Avenue north of Blossom Road, as well as the Los Gatos Creek trail. The Los Gatos Creek Trail is a Class I bike facility that runs in a north-south direction just west of Highway 17.

Pedestrian activity could occur between the site and downtown Los Gatos, located approximately a mile south, as well as the closest bus stops, located about 200 feet north and 700 feet to the south of the project site. There are existing sidewalks on Winchester Boulevard that connect the site to the bus stops and to downtown Los Gatos. Several sections of Shelburne Way lack sidewalks, including the project frontage. The project would improve the situation by adding a sidewalk along its frontage. There are no crosswalks at the intersection of Winchester Boulevard and Shelburne Way. The project would not create sufficient pedestrian demand to warrant the installation of a crosswalk. The nearest crosswalk is at the signalized intersection of Winchester Boulevard and Daves Avenue, which is located approximately 575 feet, from the project site.

As shown on Figure 2 in Chapter 1, the project proposes to provide detached sidewalks with a landscape buffer on Winchester Boulevard and Shelburne Way along the building frontage. Detached sidewalks with a landscape buffer would provide a wider buffer area between pedestrians and on-street vehicles.

The project would be required to pay a Traffic Impact Fee, as does all new development in the Town of Los Gatos. The Town's Traffic Impact Fee is unrelated to whether or not a project has any impacts under CEQA, and is required of all new development projects that generate additional trips on the Town's roadway network. Among the projects that will be funded with Traffic Impact Fees that are within the study area are the complete street improvements on Winchester Boulevard from Blossom Hill Road to Lark Avenue. It is expected that the complete street improvements would enhance the bicycle and pedestrian facilities along Winchester Boulevard.

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As shown on Figure 2 in Chapter 1, as requested by the Valley Transportation Authority (VTA) the project proposes to provide an additional VTA bus stop along the building frontage on Winchester Boulevard at the Shelburne intersection. The proposed bus stop would provide direct transit access to the project site.

Recommendations

While not required to improve Level of Service or to mitigate impacts related to traffic, it is recommended that the proposed project implement detached sidewalks on Winchester Boulevard and on Shelburne Way along the building frontages, and implement the proposed VTA bus stop along the building frontage on Winchester Boulevard at the Shelburne intersection.

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The bike storage room will be located next to the driveway and can be accessed from ground level via a set of stairs approximately 30 feet to the north and via elevators approximately 100 feet to the south. Bicyclist access to the bike storage is adequate.

Winchester Boulevard Office Development

Draft Transportation Impact Analysis

Technical Appendices

Appendix A

New Traffic Counts

Appendix B

Town of Los Gatos Approved and Pending Projects

Appendix C

Volume Summary Tables

Appendix D

Intersection Level of Service Calculations