STONERIDGE CORPORATE PLAZA EXPANSION

PUD APPLICATION

Workday

PROJECT DATA

SITE			
Site Area	1,421,017 *sf*	32.62 *acres*	
APN	941-1201-71-7		
	941-1201-84		
	941-1201-85		
	941-1201-86		
	941-1201-87		
	941-1201-88		
	941-1201-89		
Zoning	PUD-C-O and PUD-HDR/C		

BUILDING			
Existing Building Area			
6120, 6130, 6140, 6150 & 6160 Stoneridge Mall Road	567,573 *sf*	(gross)	
New Gross Building Area	430,000 *sf*		
Total Building Area	**997,573** *sf*		
Floor Area Ratio (FAR)	70.2%		

PARKING			
Parking Required (for 997,573 sf)	**3,325**	1 per	300
Option 1: 4 Level South Garage			
Surface Parking Provided	1,585		
North Garage Parking Provided	724		
South Garage Parking Provided (4 Levels)	879		
Total Parking Provided	**3,188**	1 per	313
Standard Parking Spaces Provided	2,035		
Accessible Parking Spaces Provided	56		
Compact Parking Spaces Provided	1,097	34.4%	
Total Parking Provided	**3,188**		
Option 2: 5 Level South Garage			
Surface Parking Provided	1,585		
North Garage Parking Provided	724		
South Garage Parking Provided (5 Levels)	1,112		
Total Parking Provided	**3,421**	1 per	292
Standard Parking Spaces Provided	2,183		
Accessible Parking Spaces Provided	56		
Compact Parking Spaces Provided	1,182	34.6%	
Total Parking Provided	**3,421**		

SHEET INDEX

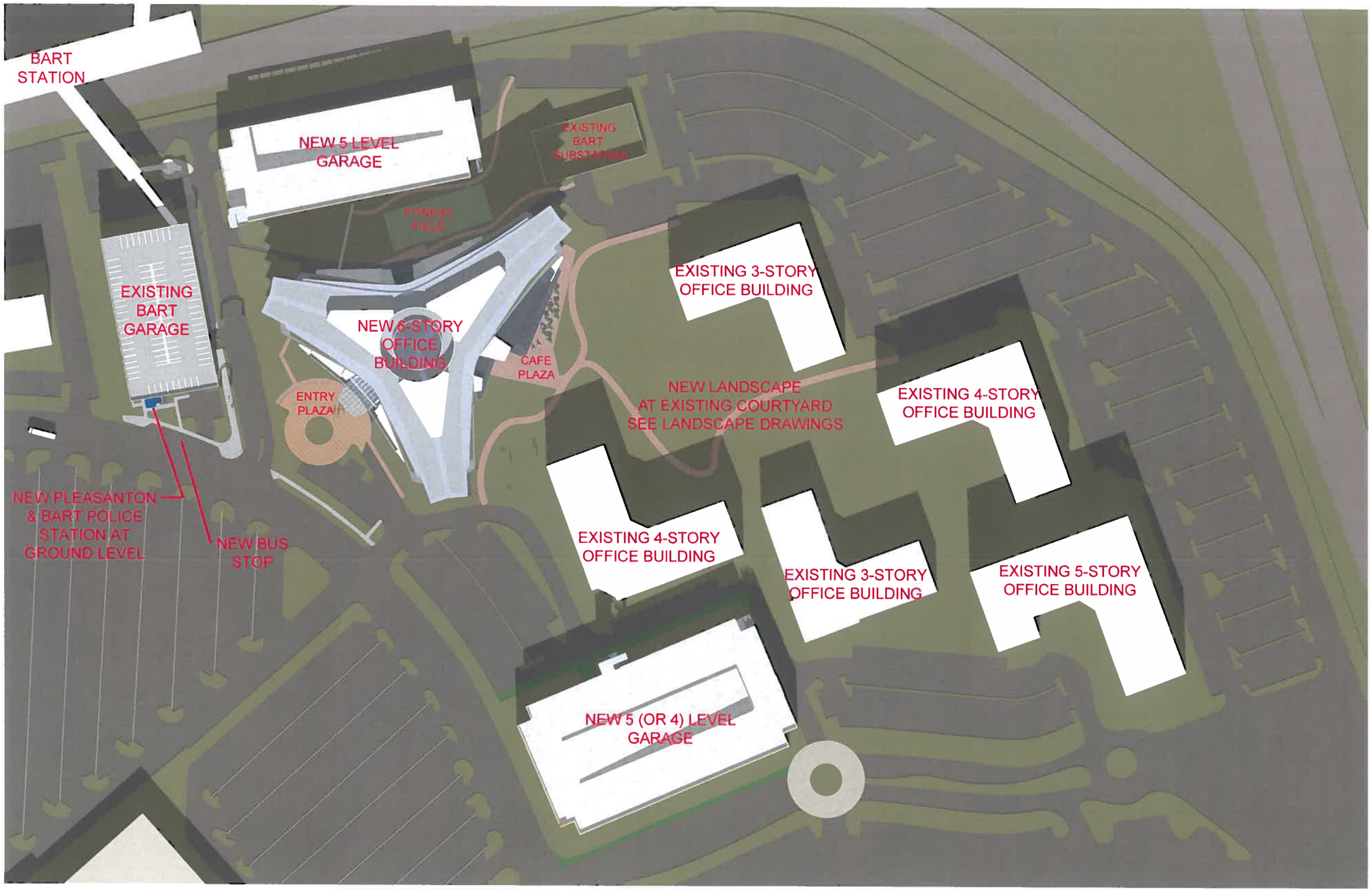
FORM4 ARCHITECTURE • STUDIO FIVE DESIGN • KIER & WRIGHT

Stoneridge Corporate Plaza Expansion
PUD Application
WORKDAY • PLEASANTON, CALIFORNIA

CONTEXT: AERIAL PHOTOGRAPH

A1.0
March 27, 2014


Donald D. Doyle Hwy
Arthur H. Breed Jr. Fwy
580
Workday HQ
6140
6130
SCP
6120
6150
6120 Stoneridge Mall Rd, Pleasanton, CA
580
6160
BART Parcel
Workday Way
Stoneridge Mall Rd
© 2012 Google
Google ear
agery Date: 10/11/2011
1993
37°41'48.64" N 121°55'25.72" W elev 333 ft
Eye alt 2891 ft



FORM4 ARCHITECTURE • STUDIO FIVE DESIGN • KIER & WRIGHT

Stoneridge Corporate Plaza Expansion

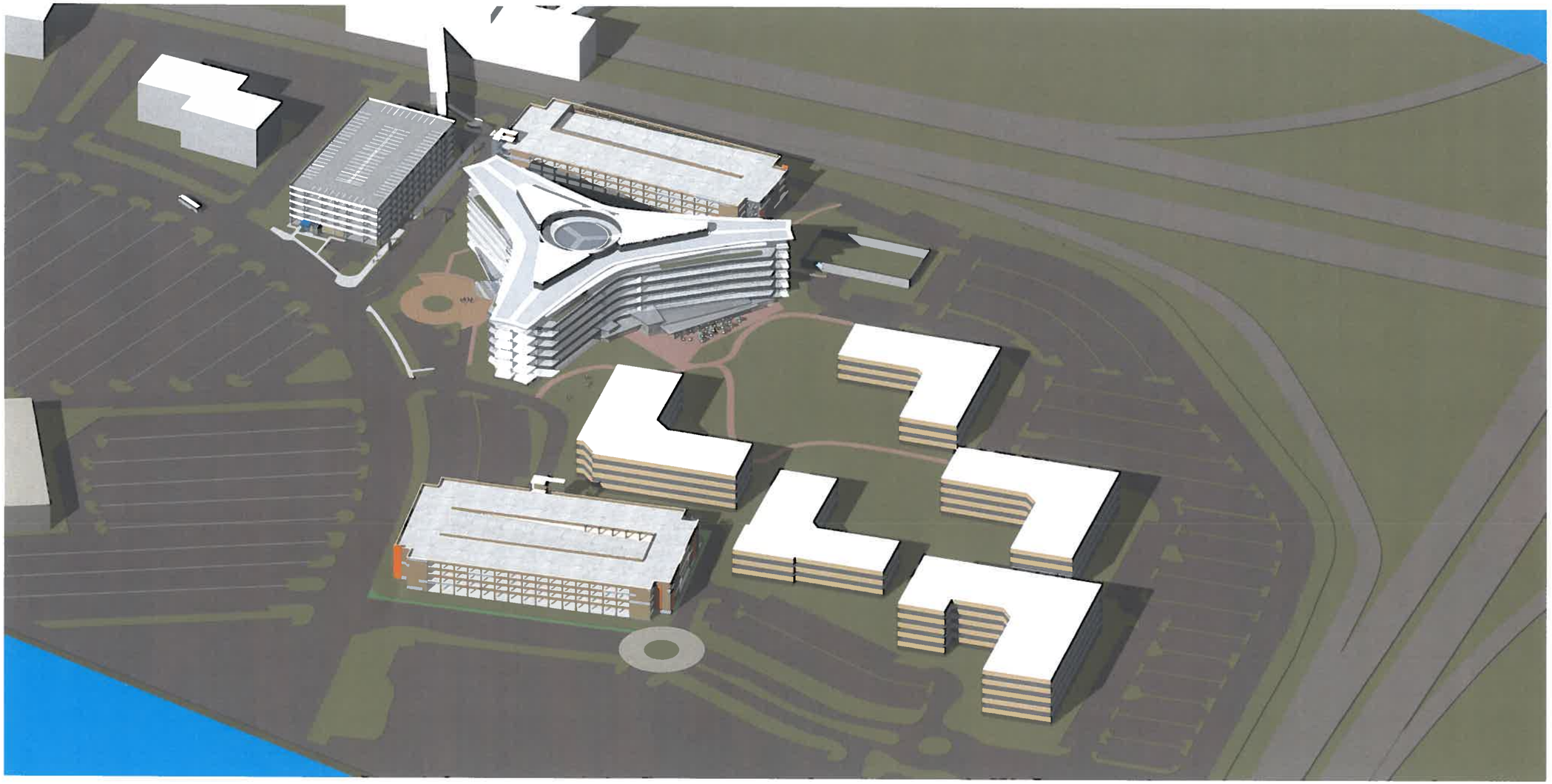
PUD Application

WORKDAY • PLEASANTON, CALIFORNIA

CONCEPTUAL MASTERPLAN

A2.0

March 27, 2014

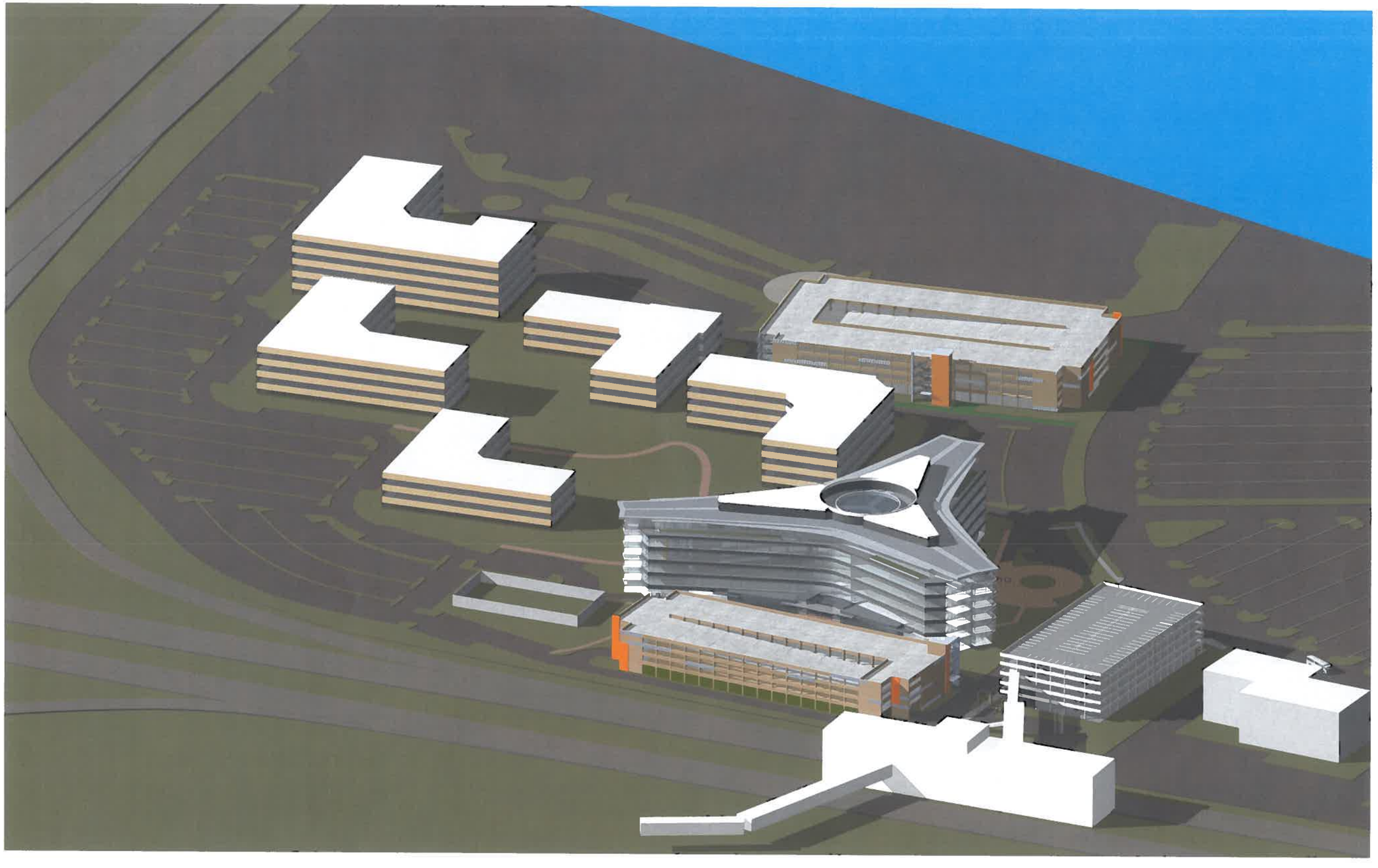


FORM4 ARCHITECTURE • STUDIO FIVE DESIGN • KIER & WRIGHT

Stoneridge Corporate Plaza Expansion
PUD Application
WORKDAY • PLEASANTON, CALIFORNIA

BIRDSEYE VIEW 1

A2.1
March 27, 2014

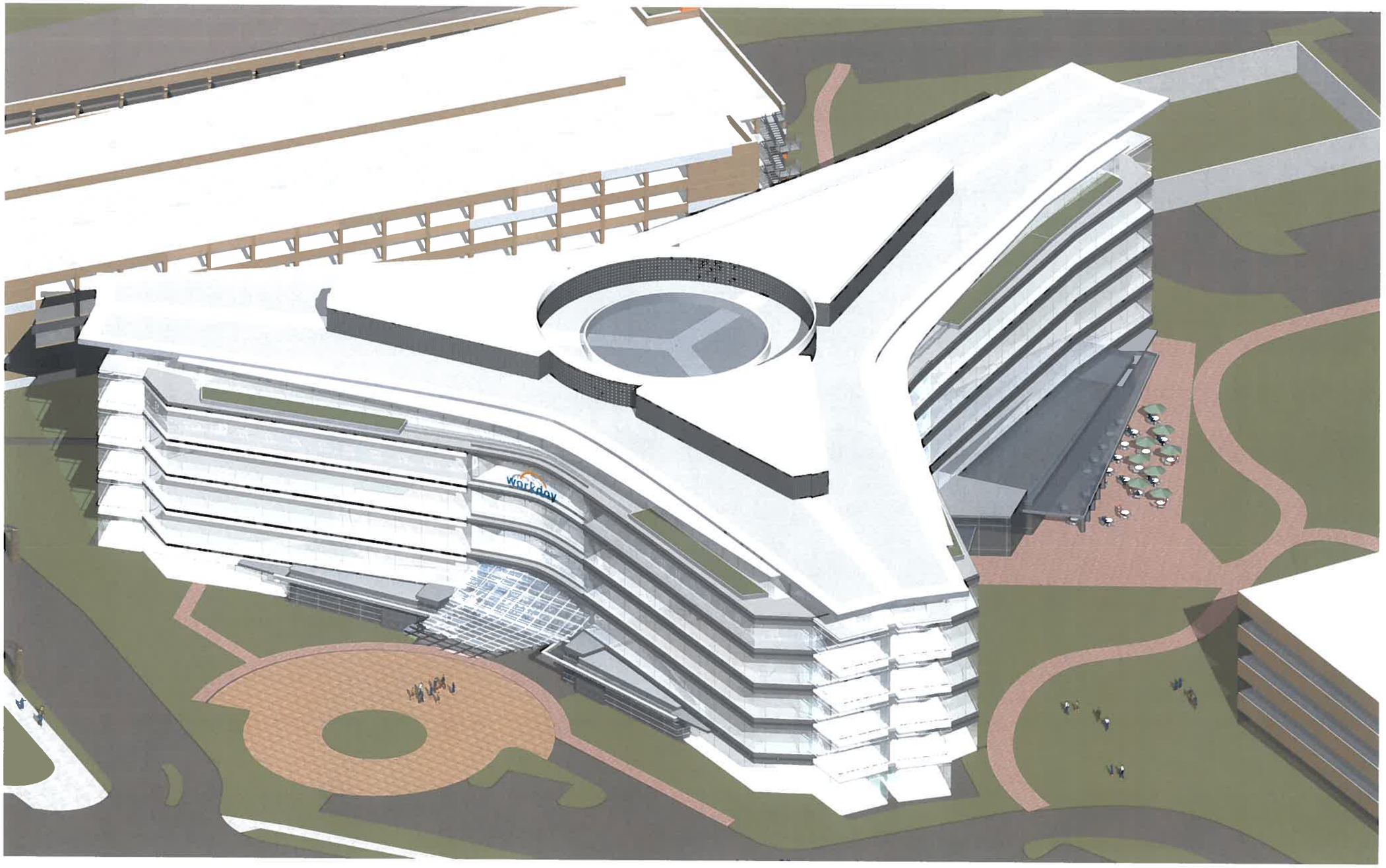


FORM4 ARCHITECTURE • STUDIO FIVE DESIGN • KIER & WRIGHT

Stoneridge Corporate Plaza Expansion
PUD Application
WORKDAY • PLEASANTON, CALIFORNIA

BIRDSEYE VIEW 2

A2.2
March 27, 2014



FORM4 ARCHITECTURE • STUDIO FIVE DESIGN • KIER & WRIGHT

Stoneridge Corporate Plaza Expansion

PUD Application

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BIRDSEYE VIEW 3

A2.3

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Stoneridge Corporate Plaza Expansion

PUD Application

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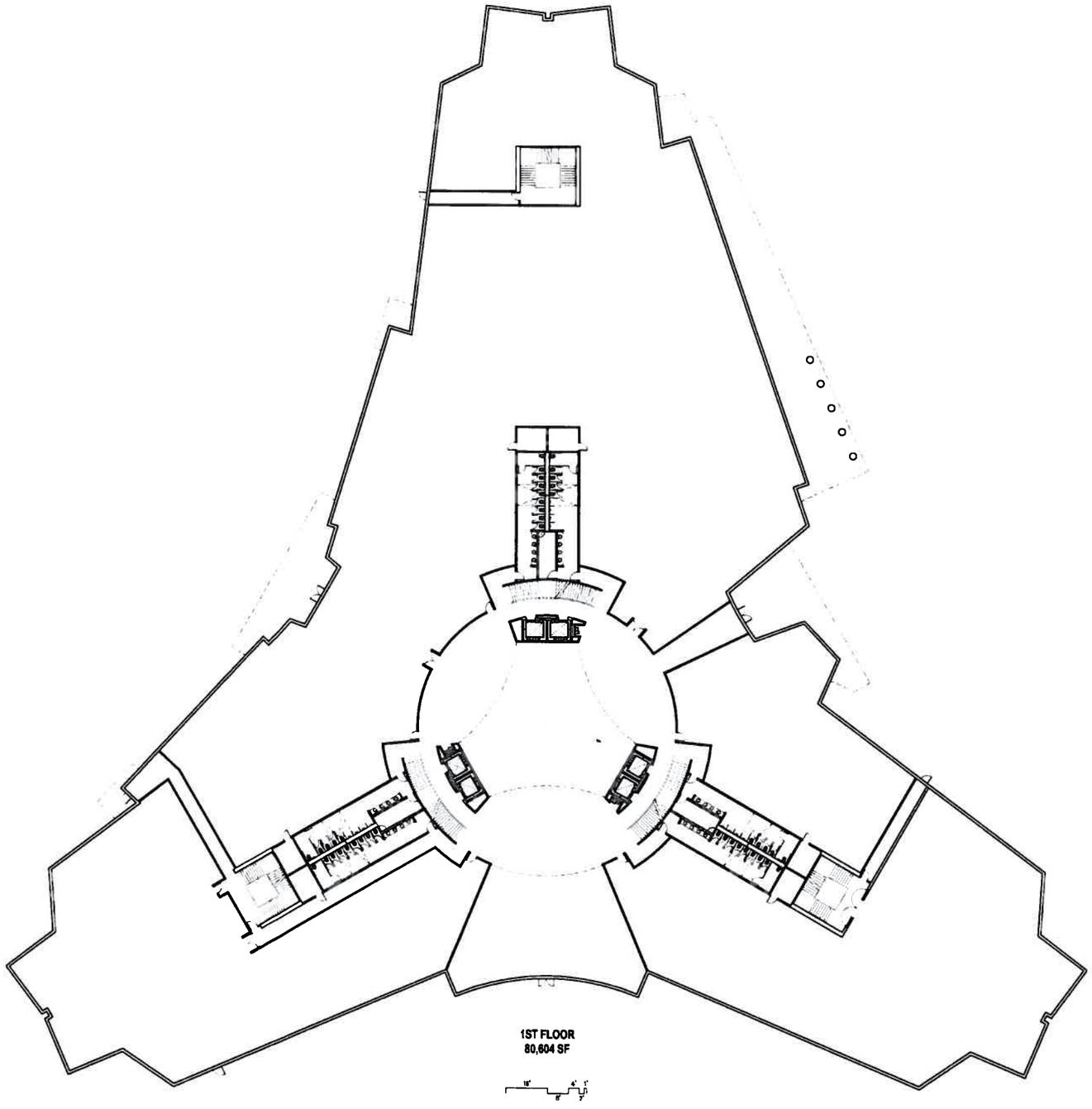
CONCEPTUAL SITE PLAN

A2.4

March 27, 2014



FORM4 ARCHITECTURE • STUDIO FIVE DESIGN • KIER & WRIGHT

Stoneridge Corporate Plaza Expansion

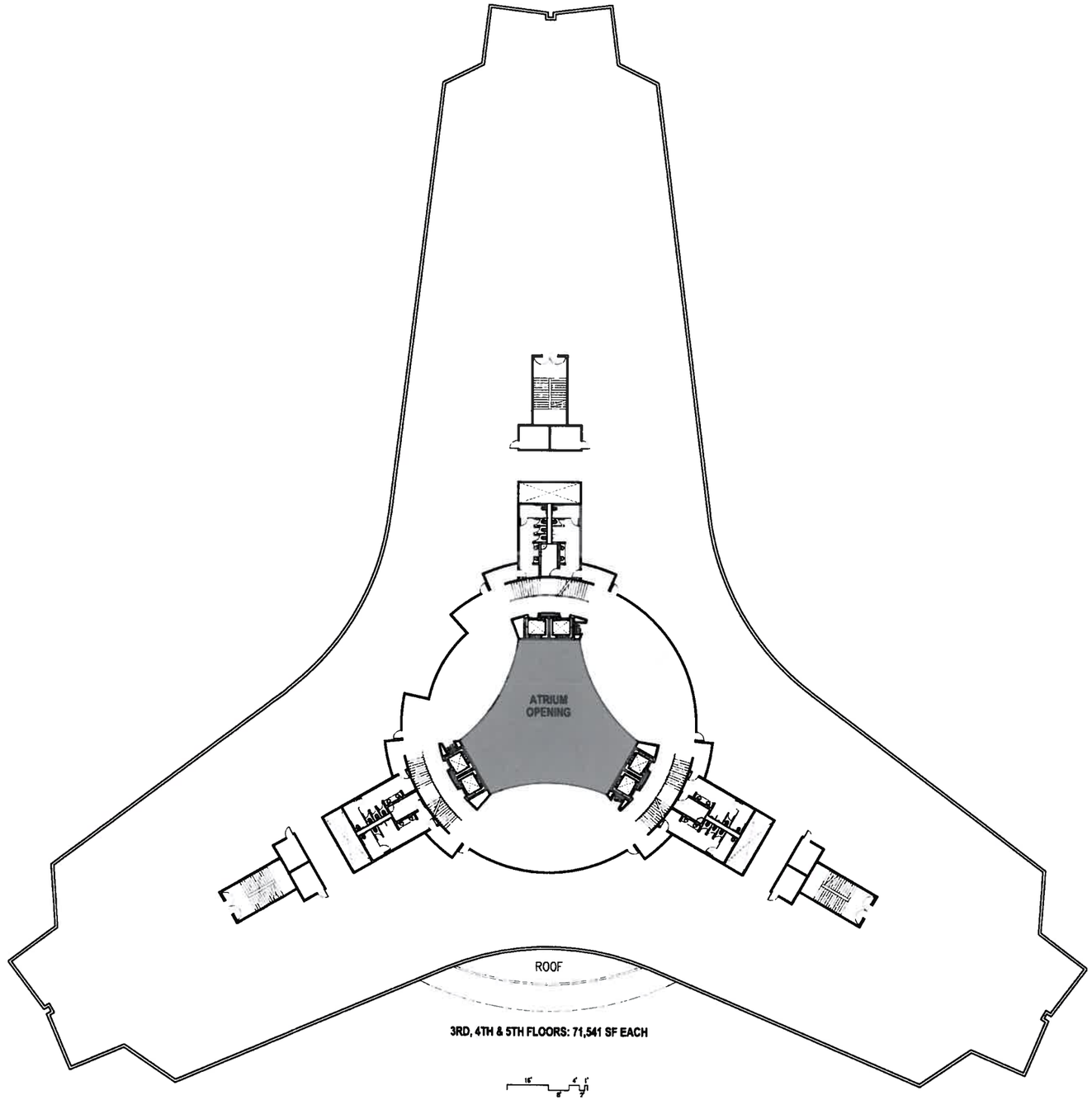
PUD Application

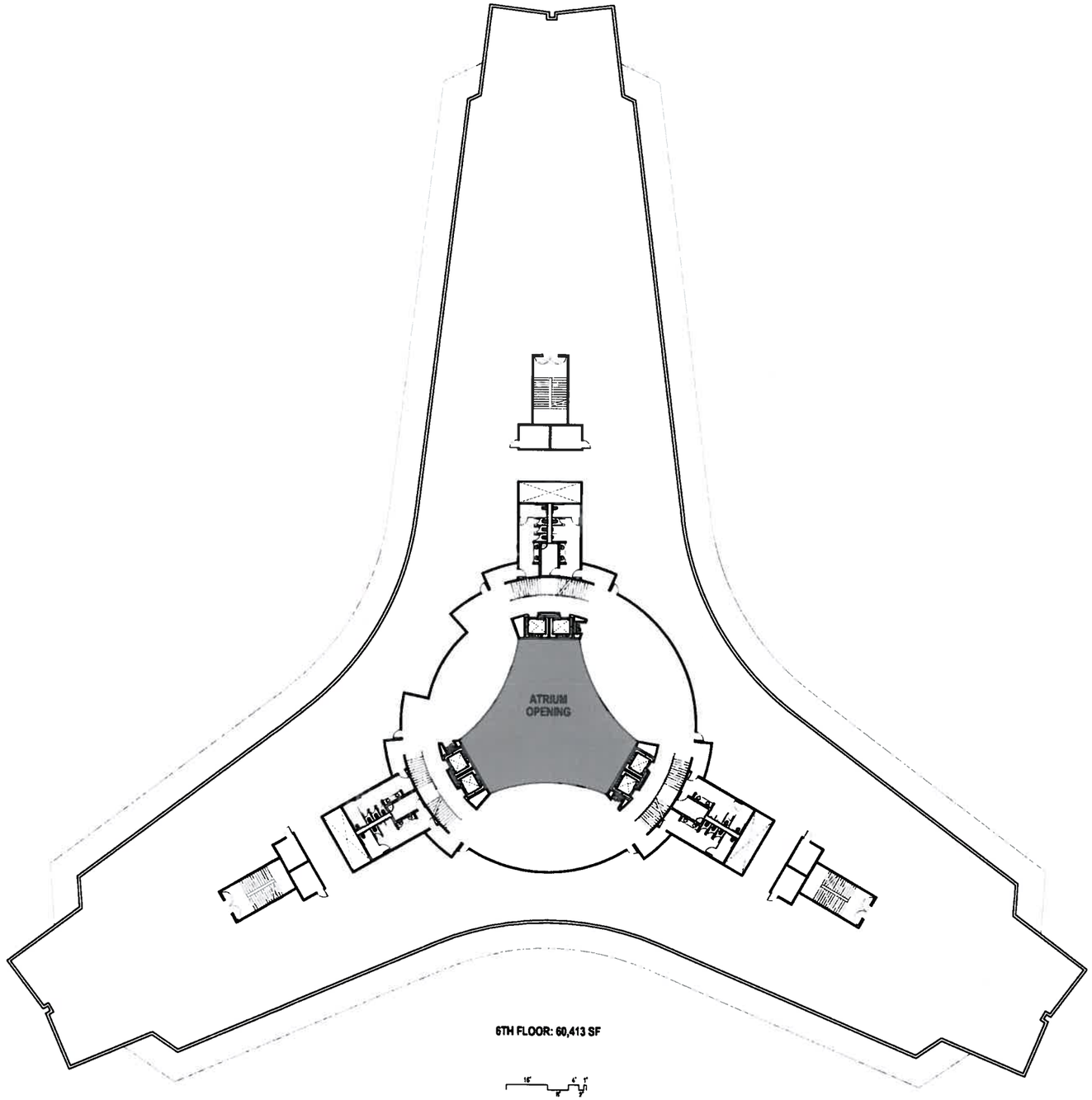
WORKDAY • PLEASANTON, CALIFORNIA

OFFICE BUILDING FIRST FLOOR PLAN

A3.0

March 27, 2014


ATRIUM
OPENING
ROOF
3RD, 4TH & 5TH FLOORS: 71,541 SF EACH



6TH FLOOR: 60,413 SF

FORM4 ARCHITECTURE • STUDIO FIVE DESIGN • KIER & WRIGHT

Stoneridge Corporate Plaza Expansion

PUD Application

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OFFICE BUILDING SIXTH FLOOR PLAN

A3.2

March 27, 2014


workday

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Stoneridge Corporate Plaza Expansion

PUD Application

WORKDAY • PLEASANTON, CALIFORNIA

VIEW OF MAIN ENTRY

A4.1

March 27, 2014

FORM4 ARCHITECTURE • STUDIO FIVE DESIGN • KIER & WRIGHT

Stoneridge Corporate Plaza Expansion
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VIEW OF CAFE PLAZA

A4.2
March 27, 2014

FORM4 ARCHITECTURE • STUDIO FIVE DESIGN • KIER & WRIGHT

Stoneridge Corporate Plaza Expansion

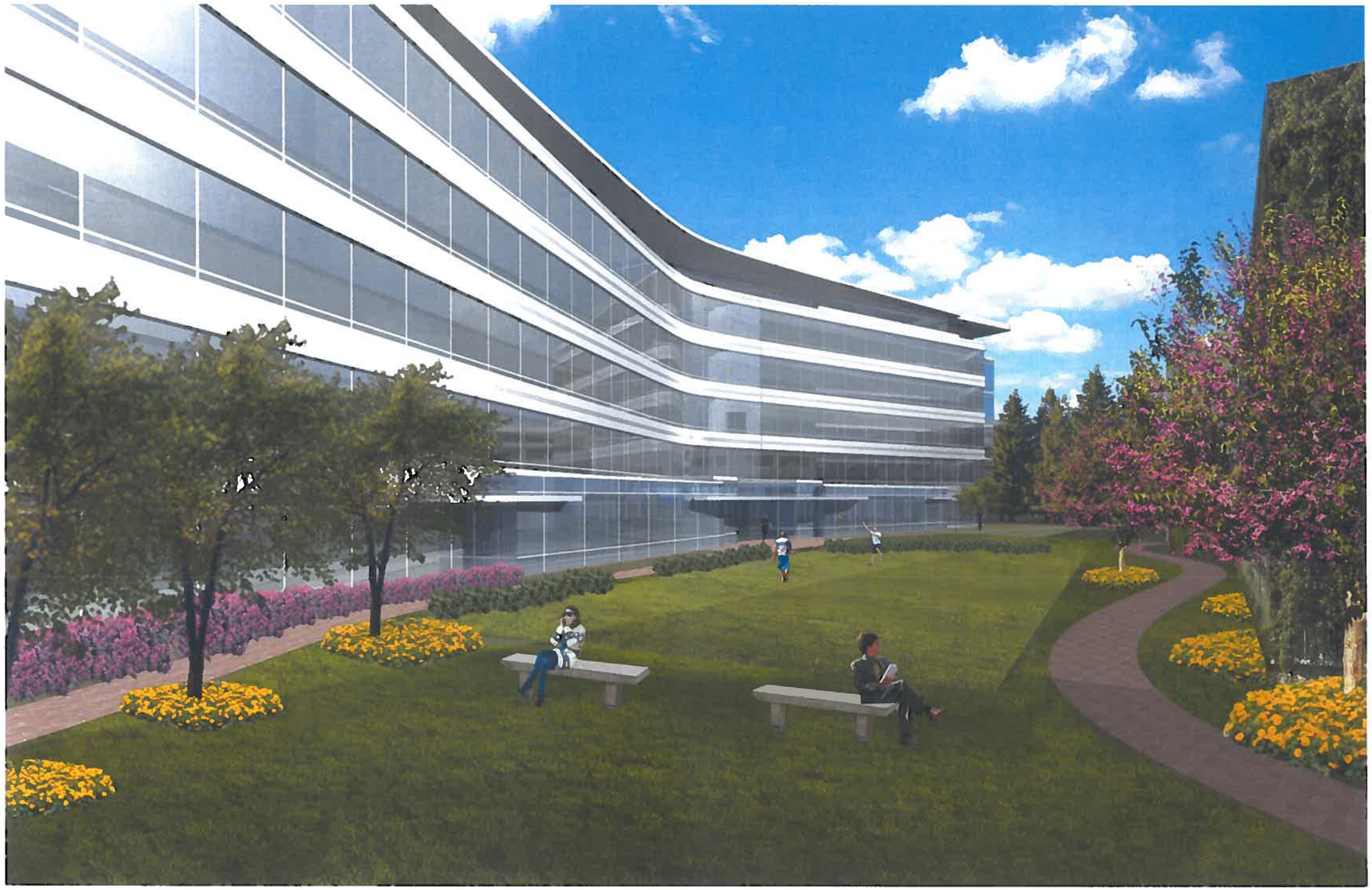
PUD Application

WORKDAY • PLEASANTON, CALIFORNIA

VIEW OF CAFE PLAZA

A4.3

March 27, 2014



FORM4 ARCHITECTURE • STUDIO FIVE DESIGN • KIER & WRIGHT

Stoneridge Corporate Plaza Expansion
PUD Application
WORKDAY • PLEASANTON, CALIFORNIA

VIEW OF SOUTH GARAGE FROM STONERIDGE MALL ROAD

A4.7
March 27, 2014

FORM4 ARCHITECTURE • STUDIO FIVE DESIGN • KIER & WRIGHT

Stoneridge Corporate Plaza Expansion
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WORKDAY • PLEASANTON, CALIFORNIA

VIEW OF SOUTH GARAGE FROM STONERIDGE MALL ROAD

A4.8
March 27, 2014

FORM4 ARCHITECTURE • STUDIO FIVE DESIGN • KIER & WRIGHT

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VIEW OF BART PROMENADE FROM BART STAIR

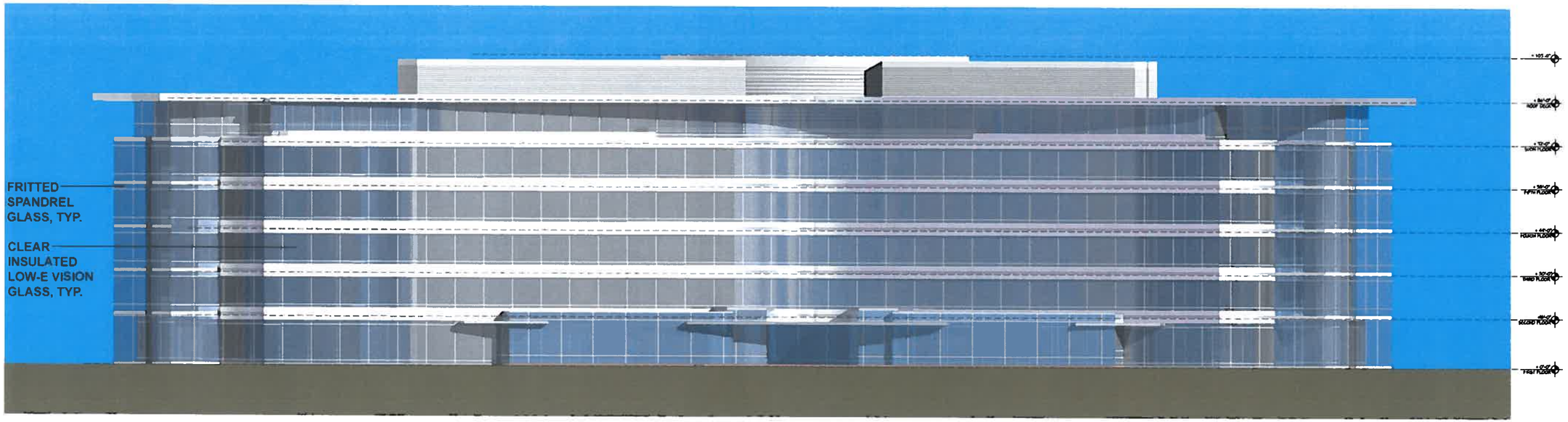
A4.9A
March 27, 2014

FORM4 ARCHITECTURE • STUDIO FIVE DESIGN • KIER & WRIGHT

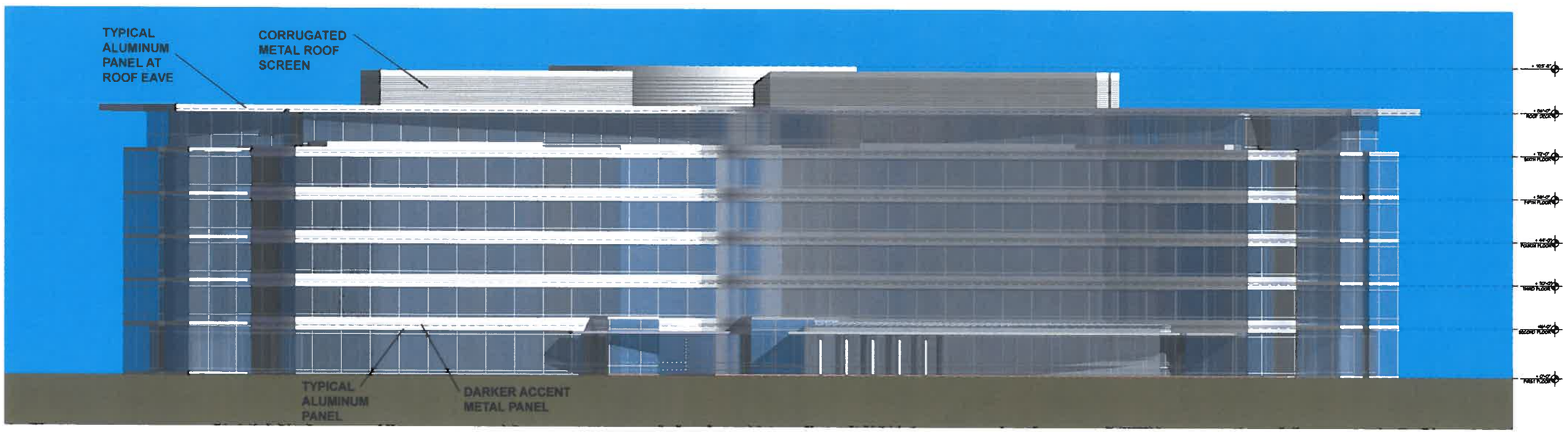
Stoneridge Corporate Plaza Expansion
PUD Application
WORKDAY • PLEASANTON, CALIFORNIA

VIEW OF BART GARAGE / PROMENADE FROM STONERIDGE MALL ROAD

A4.9B
March 27, 2014



NORTH ELEVATION



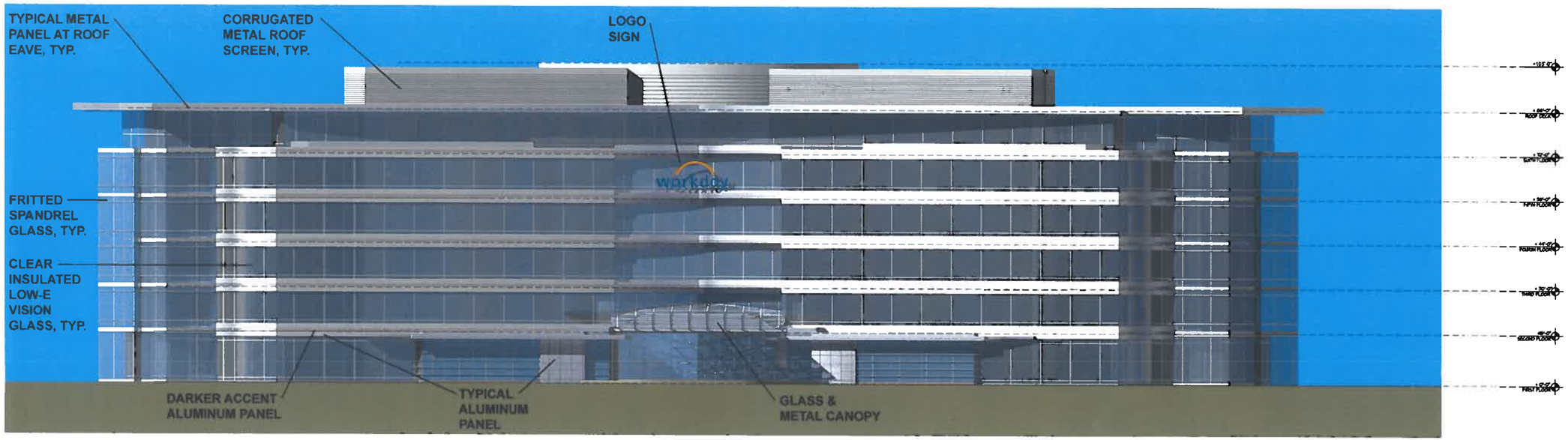
EAST ELEVATION

FORM4 ARCHITECTURE • STUDIO FIVE DESIGN • KIER & WRIGHT

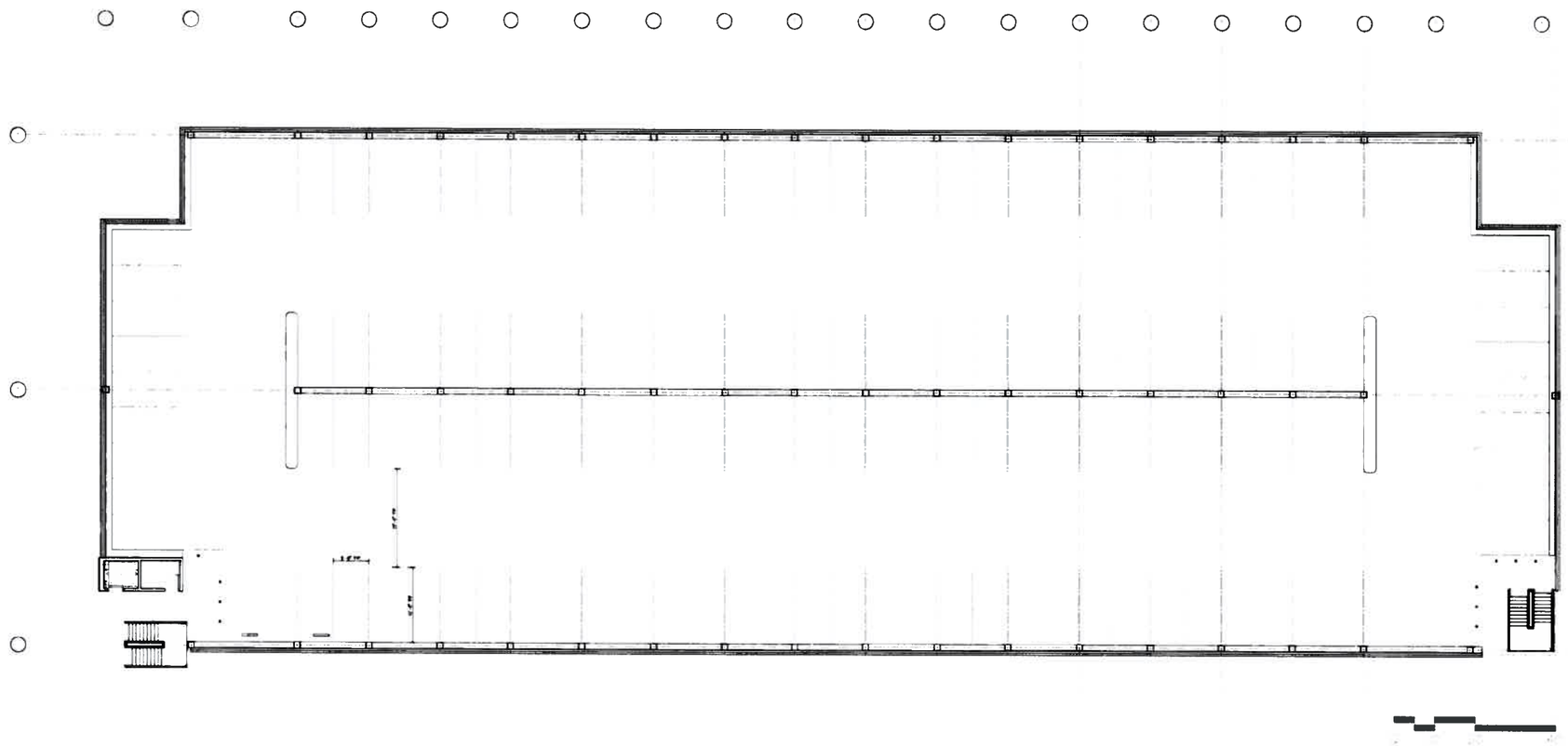
Stoneridge Corporate Plaza Expansion
PUD Application
WORKDAY • PLEASANTON, CALIFORNIA

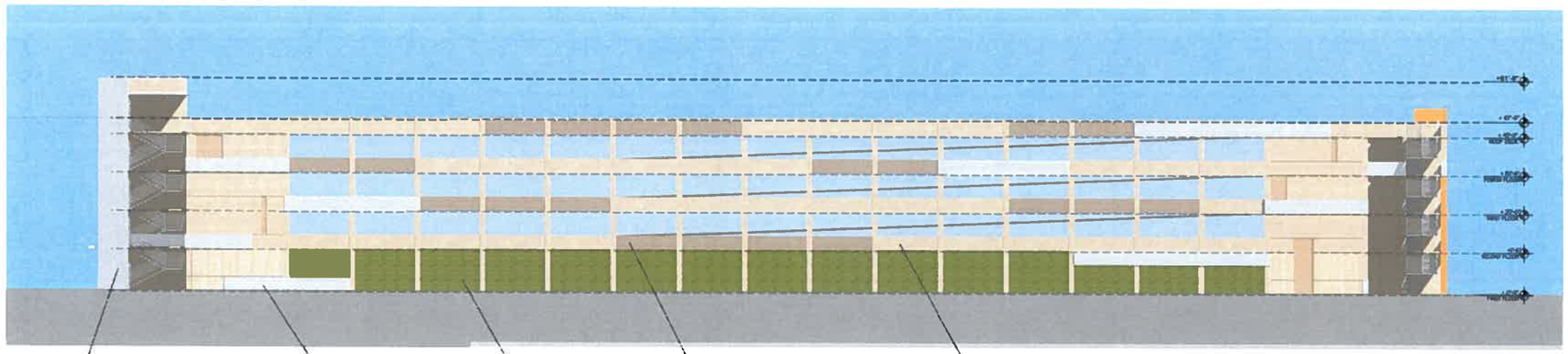
OFFICE BUILDING EXTERIOR ELEVATIONS

A5.0
March 27, 2014



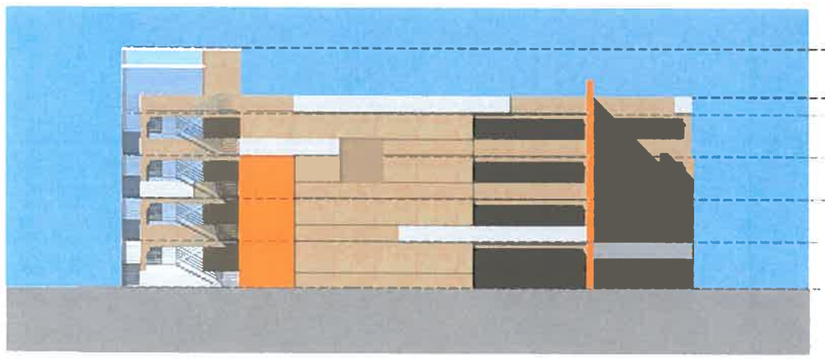
WEST ELEVATION





SOUTH ELEVATION

NORTH ELEVATION



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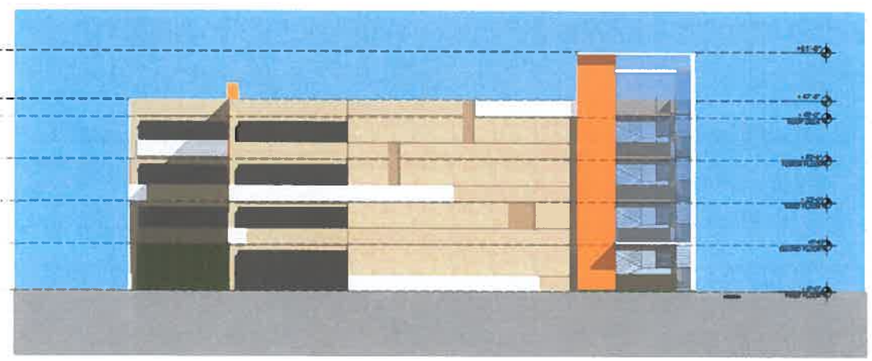

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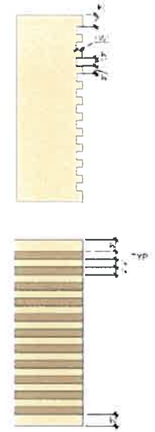
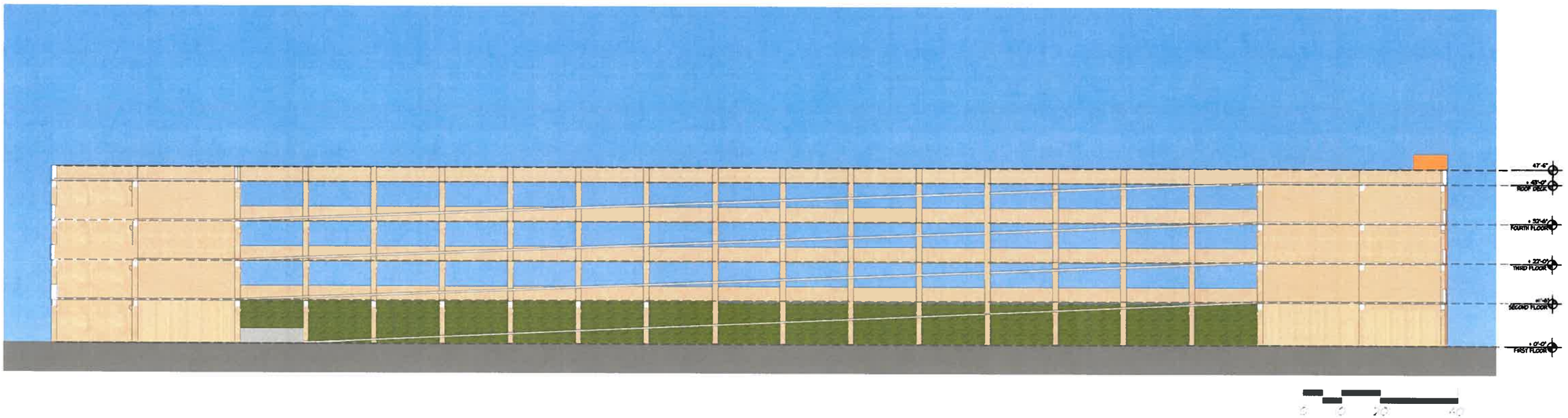


PRECAST PANEL WITH HORIZONTAL REVEALS



FORM4 ARCHITECTURE • STUDIO FIVE DESIGN • KIER & WRIGHT

Stoneridge Corporate Plaza Expansion

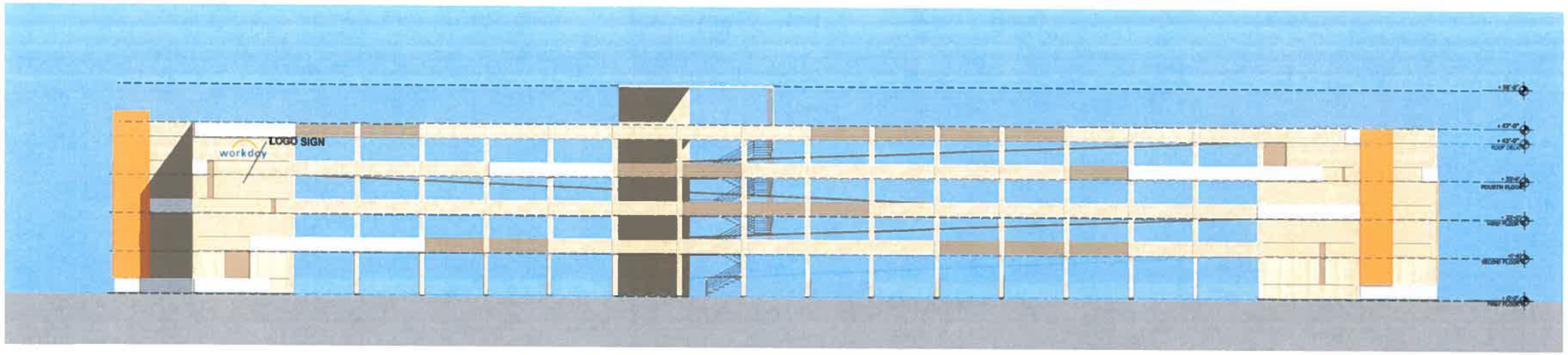
PUD Application

WORKDAY • PLEASANTON, CALIFORNIA

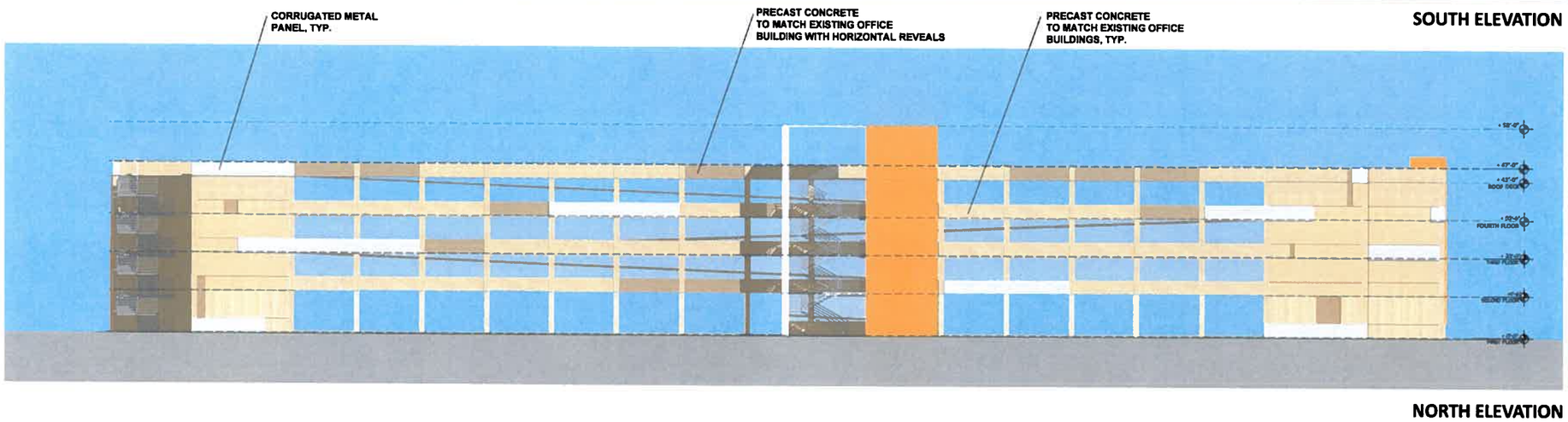
NORTH GARAGE SECTION

A5.2C

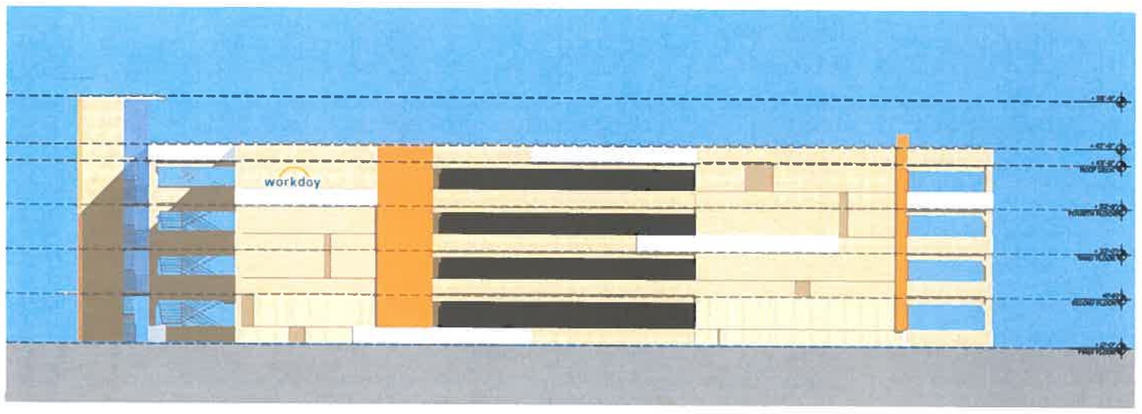
March 27, 2014



SOUTH ELEVATION



NORTH ELEVATION



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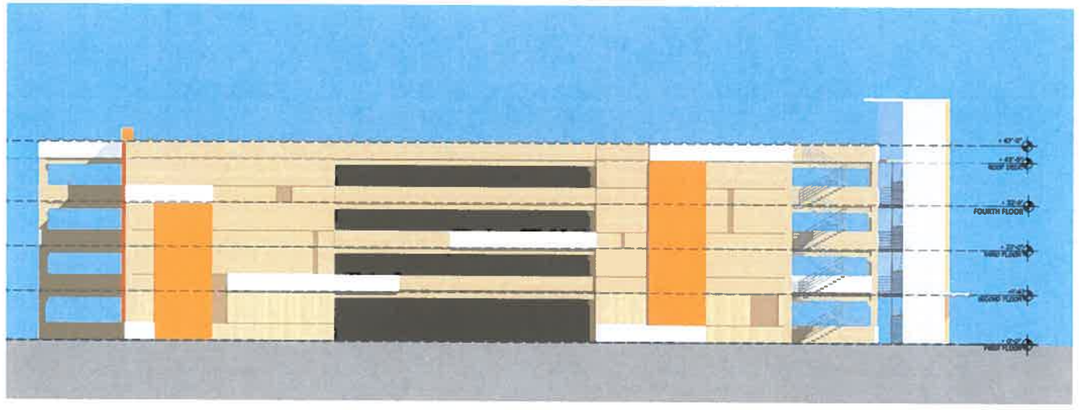


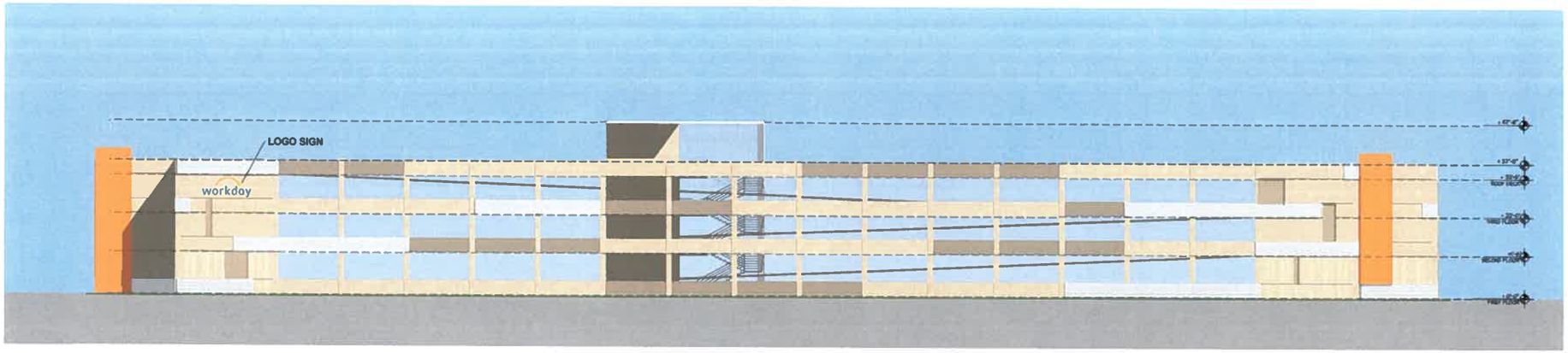
EAST ELEVATION

FORM4 ARCHITECTURE • STUDIO FIVE DESIGN • KIER & WRIGHT

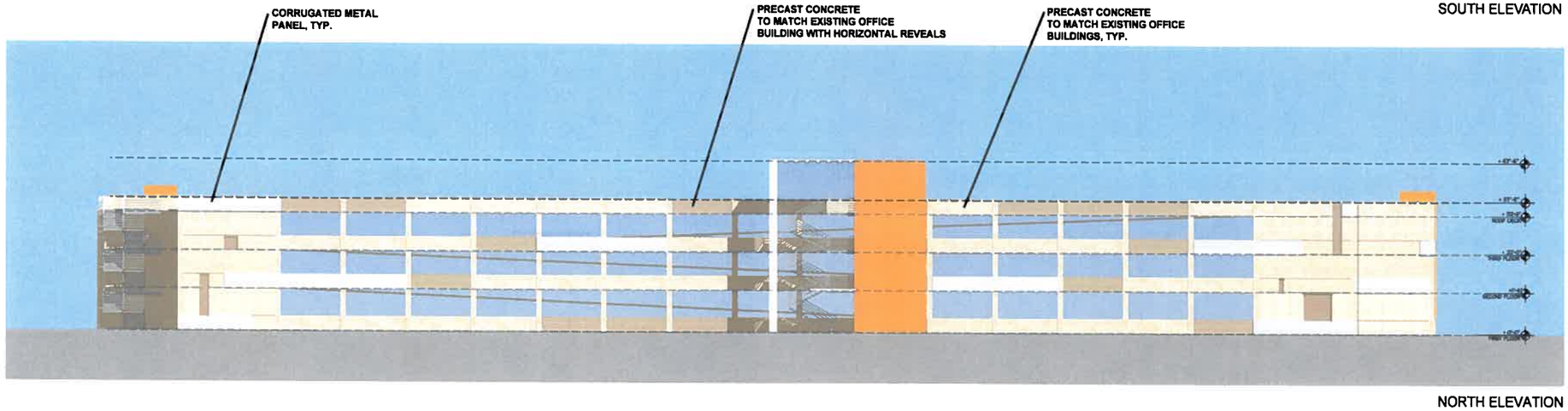
Stoneridge Corporate Plaza Expansion
PUD Application
WORKDAY • PLEASANTON, CALIFORNIA

SOUTH GARAGE EXTERIOR ELEVATIONS

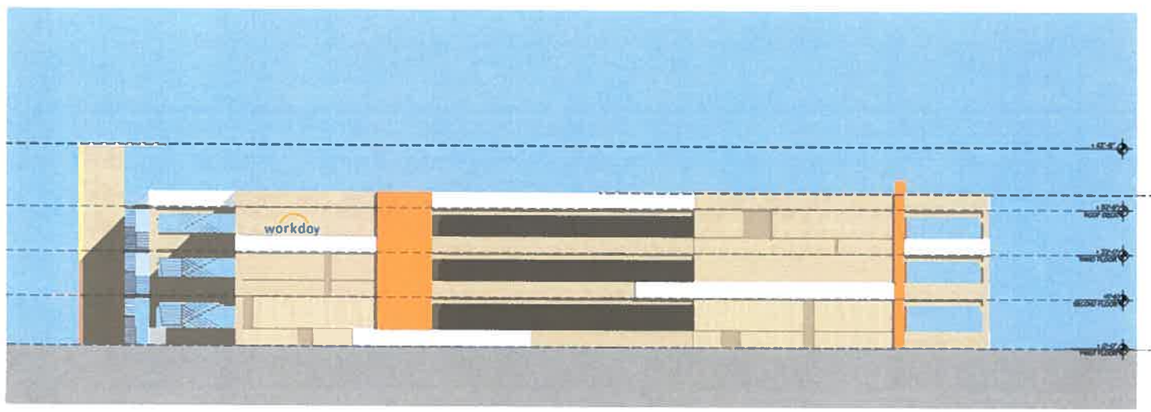
A5.3B
March 27, 2014



SOUTH ELEVATION



NORTH ELEVATION



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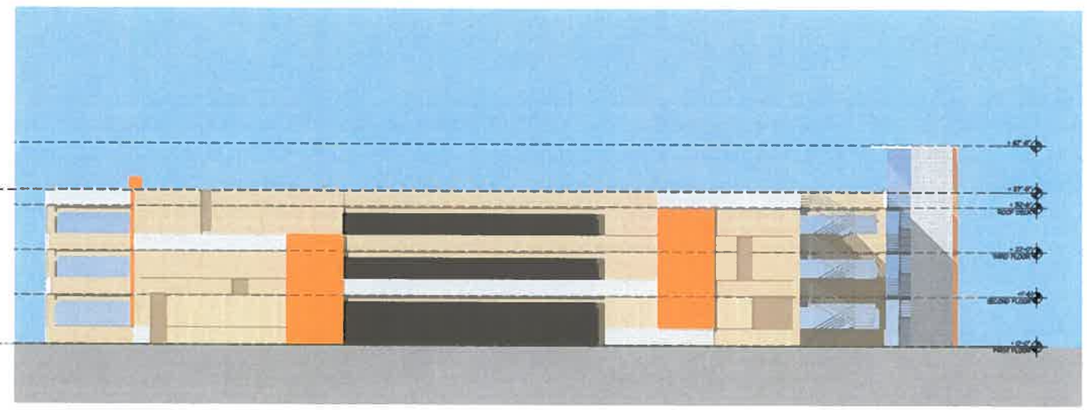


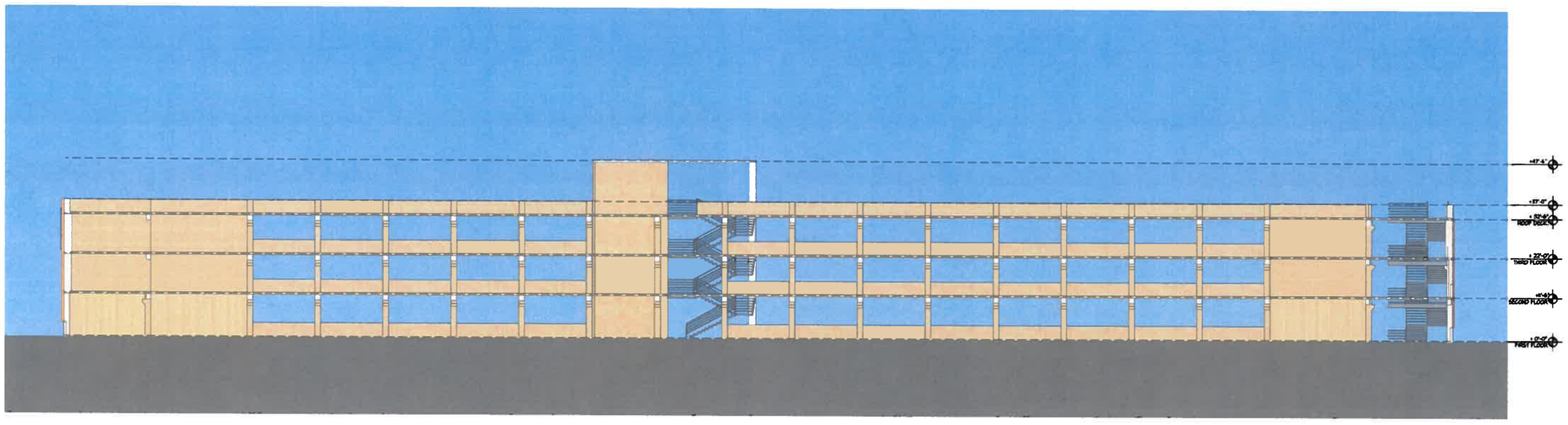
EAST ELEVATION

FORM4 ARCHITECTURE • STUDIO FIVE DESIGN • KIER & WRIGHT

Stoneridge Corporate Plaza Expansion
PUD Application
WORKDAY • PLEASANTON, CALIFORNIA

SOUTH GARAGE EXTERIOR ELEVATIONS 4-STORY OPTION

A5.3B-2
March 27, 2014



FORM4 ARCHITECTURE • STUDIO FIVE DESIGN • KIER & WRIGHT

Stoneridge Corporate Plaza Expansion

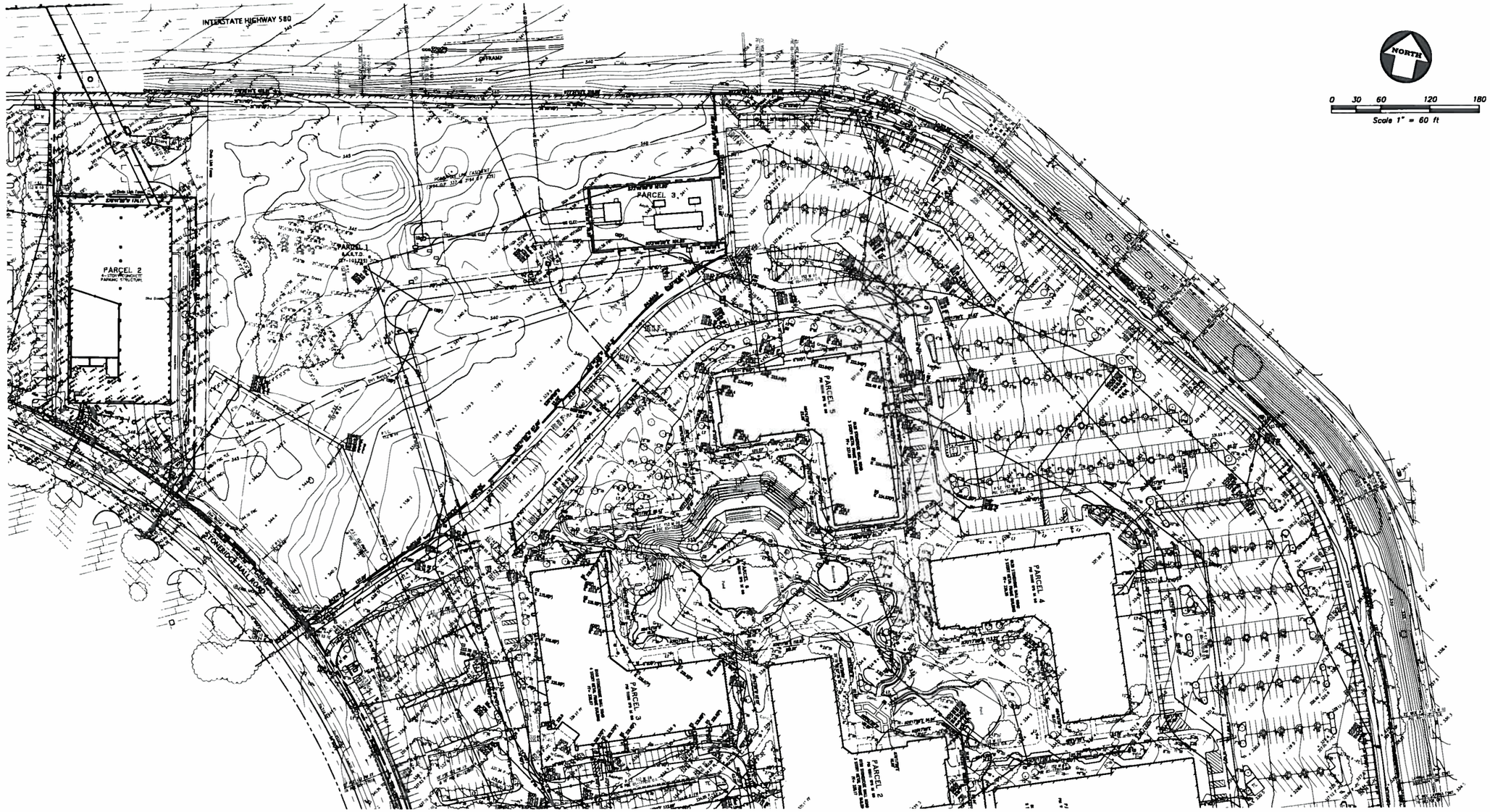
PUD Application

WORKDAY • PLEASANTON, CALIFORNIA

SOUTH GARAGE SECTION

A5.3C

March 27, 2014



SEE SHEET C1.2

NOTES

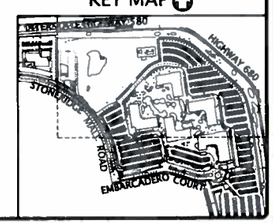
1. THIS PLOT WAS PREPARED FROM INFORMATION FURNISHED IN A POLICY OF TITLE INSURANCE, PREPARED BY CHICAGO TITLE INSURANCE COMPANY, DATED SEPTEMBER 10, 2010, POLICY NUMBER CACTI7701-7701-5590-0059032123-CTC-2010-05. NO LIABILITY IS ASSUMED FOR MATTERS OF RECORD NOT STATED IN SAID PRELIMINARY TITLE REPORT THAT MAY AFFECT THE TITLE LINES, OR EXCEPTIONS, OR EASEMENTS OF THE PROPERTY. EASEMENTS AND OTHER ENCUMBRANCES, IF ANY, ARE NOT SHOWN.
2. ALL DISTANCES SHOWN HEREON ARE IN FEET AND DECIMALS THEREOF.
3. THE TYPES, LOCATIONS, SIZES AND/OR DEPTHS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS TOPOGRAPHIC SURVEY WERE OBTAINED FROM SOURCES OF VARYING RELIABILITY. THE CONTRACTOR IS CAUTIONED THAT ONLY ACTUAL EXCAVATION WILL REVEAL THE TYPES, EXTENT, SIZES, LOCATIONS AND DEPTHS OF SUCH UNDERGROUND UTILITIES. (A REASONABLE EFFORT HAS BEEN MADE TO LOCATE AND DELINEATE ALL KNOWN UNDERGROUND UTILITIES). HOWEVER, THE ENGINEER CAN ASSUME NO RESPONSIBILITY FOR THE COMPLETENESS OR ACCURACY OF ITS DELINEATION OF SUCH UNDERGROUND UTILITIES WHICH MAY BE ENCOUNTERED, BUT WHICH ARE NOT SHOWN ON THESE DRAWINGS.
4. BENCHMARK:
   DESIGNATION: G 972 - USC&GS
   ELEVATION: 383.705 FEET NGVD 1929 DATUM

   DESCRIPTION: 1.75 MILES WEST ALONG BERNAL AVENUE FROM THE JUNCTION OF MAIN STREET AT PLEASANTON, THENCE 1.85 MILES NORTH ALONG HIGHWAY 21, 20 FEET WEST OF THE CENTERLINE OF THE HIGHWAY, IN THE TOP OF THE NORTH END OF THE WEST CONCRETE HEADWALL OF THE 36-INCH PIPE CULVERT B-24.63, 0.7 FEET SOUTH OF THE NORTH END OF THE HEADWALL, AND ABOUT 2 FEET LOWER THAN THE HIGHWAY.
5. AN INSPECTION OF THE SUBJECT PROPERTY HAS REVEALED THAT THERE ARE TELEPHONE MANHOLES ON OR NEAR THE SUBJECT PROPERTY. A REQUEST WAS MADE OF THE TELEPHONE COMPANY FOR INFORMATION REGARDING THE LOCATION OF THEIR FACILITIES ON THIS SITE. AS OF AUGUST 26, 2013, THEY HAD NOT RESPONDED WITH THIS INFORMATION. UNTIL WE RECEIVE THIS INFORMATION AND ARE ABLE TO DELINEATE THESE FACILITIES ALL PARTIES SHOULD CONSIDER THIS SURVEY AS PRELIMINARY WITH REGARDS TO THE LOCATION OF THE TELEPHONE FACILITIES. UPON RECEIPT OF THIS INFORMATION KIER & WRIGHT WILL UPDATE THIS SURVEY AND REISSUE IT.
6. THE AERIAL MAPPING WAS PREPARED USING COMPUTER ASSISTED, PHOTOGRAMMETRIC METHODS BY HJW GEOSPATIAL, INC., IN OAKLAND CALIFORNIA. JOB NUMBER 8502-083. IN AREAS OF DENSE VEGETATION, ACCURACY OF CONTOURS MAY DEVIATE FROM ACCEPTED ACCURACY STANDARDS. DATE OF PHOTOGRAPHY 02-17-12, ORIGINAL COMPILED MAP SCALE 1"=40', CONTOUR INTERVAL 1 FOOT. THE GRID IS BASED ON A LOCAL, ASSUMED COORDINATE SYSTEM. CONTROL SURVEY PERFORMED BY KIER & WRIGHT, LIVERMORE, CA.

LEGEND

	BUILDING LINE	+12"	TREE	HCR	HANDICAP RAMP	TMH	TELEPHONE MANHOLE
	CENTERLINE		UTILITY BOX	HVB	HIGH VOLTAGE BOX	TOP	TOP OF GRADE BREAK LINE
	CONCRETE/BLOCK/RETAINING WALL	BM/TBM	BENCHMARK/TEMPORARY BENCHMARK	IE	INVERT ELEVATION	UG	UNDER GROUND
	CONCRETE CURB	<	ANGLE POINT	JT	JOINT TRENCH	USD	UNION SANITARY DISTRICT
	CONCRETE CURB & GUTTER	AD	AREA DRAIN	LT	LIGHT	W	WEST
500	CONTOUR LINE	ASR	AUTO SPRINKLER RISER	MH	MANHOLE	WM	WATER METER
500	OBSCURED CONTOUR LINE	BFP	BACK FLOW PREVENTER	MON	MONUMENT	WV	WATER VALVE
	DRIVEWAY	BL	BUILDING LINE	N	NORTH		
	EDGE OF PAVEMENT	BOL	BOLLARD	O.R.	OFFICIAL RECORD		
	ELECTRIC LINE	BW	BACK OF WALK	P.	PAVEMENT		
	FENCE LINE	C.	CONCRETE	P.S.E.	PUBLIC SERVICE EASEMENT		
	FIRE SERVICE & VALVE	CB	CATCH BASIN	PBE	PACIFIC BELL EASEMENT		
	GAS LINE-VALVE & METER	CB.	CATCH BASIN	PBMH	PAC BELL MANHOLE		
	LOT LINE	CTV	CABLE TV LINE	PED	PEDESTAL		
	MONUMENT/MONUMENT LINE	DDCV	DOUBLE DETECTOR CHECK VALVE	PG&E	PACIFIC GAS & ELECTRIC		
	PROPERTY LINE	DS	DOWN SPOUT	PIV	POST INDICATOR VALVE		
	RECLAIMED WATER LINE & VALVE	DWY	DRIVEWAY	PM	PARCEL MAP		
	SANITARY SEWER-MANHOLE & CLEANOUT	E	EAST	RE	RIM ELEVATION		
	SIDEWALK	EB	ELECTRIC BOX	RWV	RECYCLED WATER VALVE		
+100.00	SPOT ELEVATION	ELEC	ELECTRICAL LINE	S	SOUTH		
	STORM DRAIN-MANHOLE & CATCH BASIN	EMH	ELECTRICAL MANHOLE	SBC	SOUTHWESTERN BELL COMMUNICATIONS		
	TELEPHONE LINE	EV	ELECTRICAL VAULT	SD	STORM DRAIN		
	WATER LINE & VALVE	EW	EDGE OF WALK	SDMH	STORM DRAIN MANHOLE		
	BACKFLOW PREVENTION DEVICE	FDC	FIRE DEPARTMENT CONNECTION	SL	STREET LIGHT		
	ELECTROLIER	FH	FIRE HYDRANT	SLB	STREET LIGHT BOX		
	FIRE DEPARTMENT CONNECTION	FNC	FENCE	SSMH	SANITARY SEWER MANHOLE		
	FIRE HYDRANT	FND	FOUND	TB	TELEPHONE BOX		
	POST INDICATOR VALVE	FW	FACE OF WALL	TC	TOP OF CURB		
	POWER POLE/JOINT POLE	GB	GRADE BREAK	TE	TRASH ENCLOSURE		
	TRAFFIC SIGNAL POLE						
	TRAFFIC SIGN						

KEY MAP



NO.	REVISION	BY	NO.	REVISION	BY
1	PUD APPLICATION	03/27/2014			

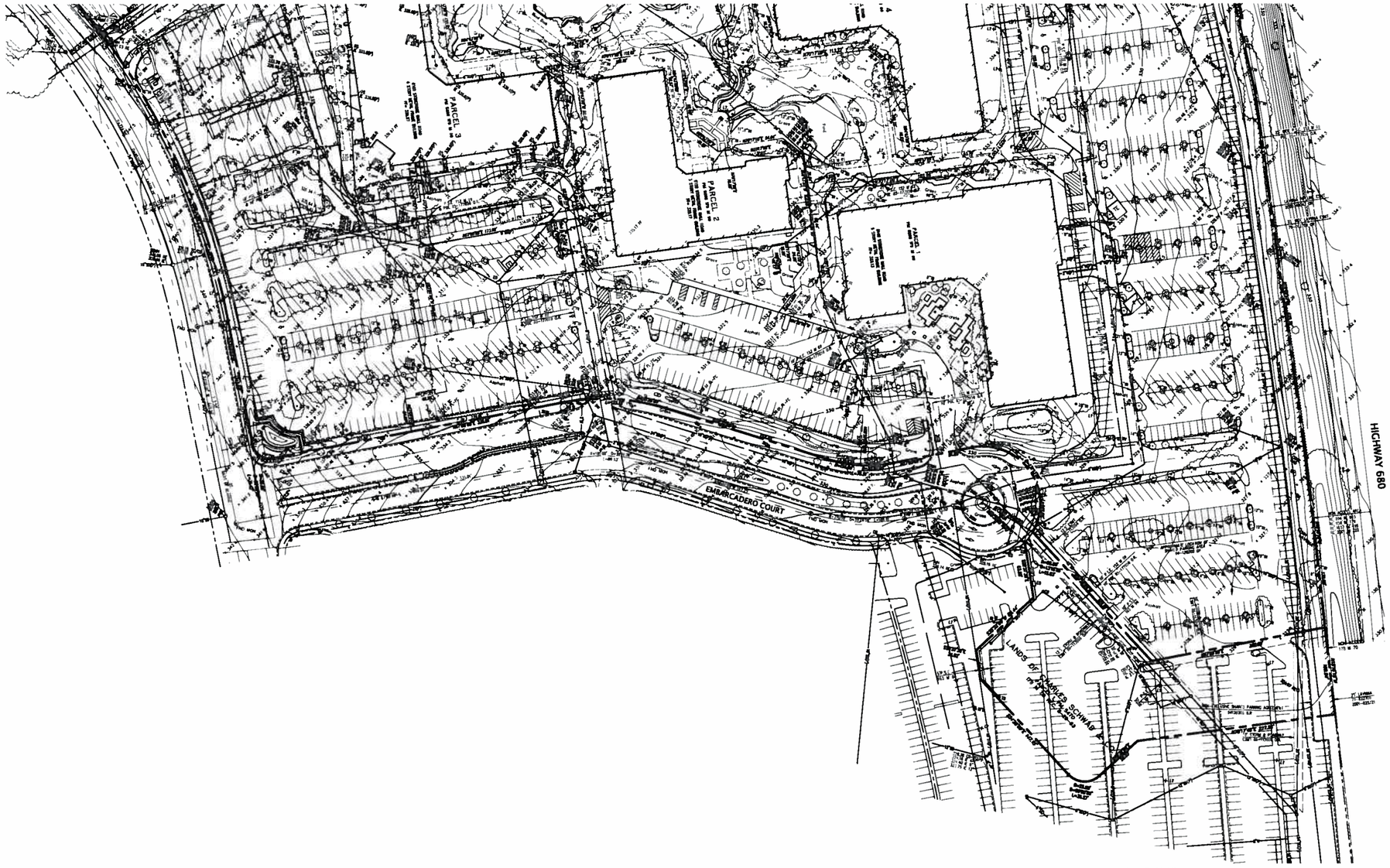
KIER & WRIGHT
CIVIL ENGINEERS & SURVEYORS, INC.
2850 Collier Canyon Road
Livermore, California 94551
Phone (925) 245-8788
Fax (925) 245-8796

TOPOGRAPHIC SURVEY OF STONERIDGE CORPORATE PLAZA EXPANSION FOR WORKDAY

PLEASANTON CALIFORNIA

TOPO DATE	02/20/2014
SCALE	1" = 60'
SURVEYOR	JDT
DRAFTER	JRO
JOB NO	A12517-4
SHEET	C1.1
OF	SHEETS

SEE SHEET C1.1



NOTES

1. THIS PLOT WAS PREPARED FROM INFORMATION FURNISHED IN A POLICY OF TITLE INSURANCE, PREPARED BY CHICAGO TITLE INSURANCE COMPANY, DATED SEPTEMBER 16, 2010, POLICY NUMBER CACTI7701-7701-5580-0058013213-CTC-2010-05. NO LIABILITY IS ASSUMED FOR MATTERS OF RECORD NOT STATED IN SAID PRELIMINARY TITLE REPORT THAT MAY AFFECT THE TITLE LINES, OR EXCEPTIONS, OR EASEMENTS OF THE PROPERTY. EASEMENTS AND OTHER ENCUMBRANCES, IF ANY, ARE NOT SHOWN.

2. ALL DISTANCES SHOWN HEREON ARE IN FEET AND DECIMALS THEREOF.

3. THE TYPES, LOCATIONS, SIZES AND/OR DEPTHS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS TOPOGRAPHIC SURVEY WERE OBTAINED FROM SOURCES OF VARYING RELIABILITY. THE CONTRACTOR IS CAUTIONED THAT ONLY ACTUAL EXCAVATION WILL REVEAL THE TYPES, EXTENT, SIZES, LOCATIONS AND DEPTHS OF SUCH UNDERGROUND UTILITIES. (A REASONABLE EFFORT HAS BEEN MADE TO LOCATE AND DELINEATE ALL KNOWN UNDERGROUND UTILITIES). HOWEVER, THE ENGINEER CAN ASSUME NO RESPONSIBILITY FOR THE COMPLETENESS OR ACCURACY OF ITS DELINEATION OF SUCH UNDERGROUND UTILITIES WHICH MAY BE ENCOUNTERED, BUT WHICH ARE NOT SHOWN ON THESE DRAWINGS.

4. BENCHMARK:
   DESIGNATION: G 972 - USC&GS
   ELEVATION: 365.705 FEET NGVD 1929 DATUM

   DESCRIPTION: 1.75 MILES WEST ALONG BERNAL AVENUE FROM THE JUNCTION OF MAIN STREET AT PLEASANTON, THENCE 1.85 MILES NORTH ALONG HIGHWAY 21, 20 FEET WEST OF THE CENTERLINE OF THE HIGHWAY, IN THE TOP OF THE NORTH END OF THE WEST CONCRETE HEADWALL OF THE 36-INCH PIPE CULVERT 0-24.63, 0.7 FEET SOUTH OF THE NORTH END OF THE HEADWALL, AND ABOUT 2 FEET LOWER THAN THE HIGHWAY.

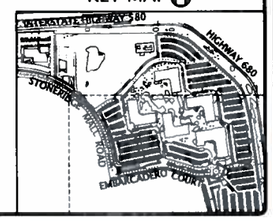
5. AN INSPECTION OF THE SUBJECT PROPERTY HAS REVEALED THAT THERE ARE TELEPHONE MANHOLES ON OR NEAR THE SUBJECT PROPERTY. A REQUEST WAS MADE OF THE TELEPHONE COMPANY FOR INFORMATION REGARDING THE LOCATION OF THEIR FACILITIES ON THIS SITE. AS OF AUGUST 20, 2013, THEY HAD NOT RESPONDED WITH THIS INFORMATION. UNTIL WE RECEIVE THIS INFORMATION AND ARE ABLE TO DELINEATE THESE FACILITIES ALL PARTIES SHOULD CONSIDER THIS SURVEY AS PRELIMINARY WITH REGARDS TO THE LOCATION OF THE TELEPHONE FACILITIES. UPON RECEIPT OF THIS INFORMATION KIER & WRIGHT WILL UPDATE THIS SURVEY AND REISSUE IT.

6. THE AERIAL MAPPING WAS PREPARED USING COMPUTER ASSISTED, PHOTOGRAMMETRIC METHODS BY HJW GEOSPATIAL, INC., IN OAKLAND CALIFORNIA. JOB NUMBER 8502-083. IN AREAS OF DENSE VEGETATION, ACCURACY OF CONTOURS MAY DEVIATE FROM ACCEPTED ACCURACY STANDARDS. DATE OF PHOTOGRAPHY 02-17-12, ORIGINAL COMPILED MAP SCALE 1"=40', CONTOUR INTERVAL 1 FOOT. THE GRID IS BASED ON A LOCAL, ASSUMED COORDINATE SYSTEM. CONTROL SURVEY PERFORMED BY KIER & WRIGHT, LIVERMORE, CA.

LEGEND

	BUILDING LINE	•12"	TREE	HCR	HANDICAP RAMP	TMH	TELEPHONE MANHOLE
	CENTERLINE	□ ○	UTILITY BOX	HVB	HIGH VOLTAGE BOX	TOP	GRADE BREAK LINE TOP
	CONCRETE/BLOCK/RETAINING WALL	BM/TBM	BENCHMARK/TEMPORARY BENCHMARK	IE	INVERT ELEVATION	UG	UNDER GROUND
	CONCRETE CURB	<	ANGLE POINT	JT	JOINT TRENCH	USD	UNION SANITARY DISTRICT
	CONCRETE CURB & GUTTER	AD	AREA DRAIN	LT	LIGHT	W	WEST
	CONTOUR LINE	ASR	AUTO SPRINKLER RISER	MH	MANHOLE	WM	WATER METER
	OBSCURED CONTOUR LINE	BFP	BACK FLOW PREVENTER	MON	MONUMENT	WV	WATER VALVE
	DRIVEWAY	BL	BUILDING LINE	N	NORTH		
	EDGE OF PAVEMENT	BOL	BOLLARD	O.R.	OFFICIAL RECORD		
	ELECTRIC LINE	BW	BACK OF WALK	P.	PAVEMENT		
	FENCE LINE	C.	CONCRETE	P.S.E.	PUBLIC SERVICE EASEMENT		
	FIRE SERVICE & VALVE	CB	CATCH BASIN	PBE	PACIFIC BELL EASEMENT		
	GAS LINE-VALVE & METER	CB.	CATCH BASIN	PBMH	PAC BELL MANHOLE		
	LOT LINE	CTV	CABLE TV LINE	PED	PEDESTAL		
	MONUMENT/MONUMENT LINE	DDCV	DOUBLE DETECTOR CHECK VALVE	PG&E	PACIFIC GAS & ELECTRIC		
	PROPERTY LINE	DS	DOWN SPOUT	PIV	POST INDICATOR VALVE		
	RECLAIMED WATER LINE & VALVE	DWY	DRIVEWAY	PM	PARCEL MAP		
	SANITARY SEWER-MANHOLE & CLEANOUT	E	EAST	RE	RIM ELEVATION		
	SIDEWALK	EB	ELECTRIC BOX	RWV	RECYCLED WATER VALVE		
	SPOT ELEVATION	ELEC	ELECTRICAL LINE	S	SOUTH		
	STORM DRAIN-MANHOLE & CATCH BASIN	EMH	ELECTRICAL MANHOLE	SBC	SOUTHWESTERN BELL COMMUNICATIONS		
	TELEPHONE LINE	EV	ELECTRICAL VAULT	SD	STORM DRAIN		
	WATER LINE & VALVE	EW	EDGE OF WALK	SDMH	STORM DRAIN MANHOLE		
	BACKFLOW PREVENTION DEVICE	FDC	FIRE DEPARTMENT CONNECTION	SL	STREET LIGHT		
	ELECTROLIER	FH	FIRE HYDRANT	SLB	STREET LIGHT BOX		
	FIRE DEPARTMENT CONNECTION	FNC	FENCE	SSMH	SANITARY SEWER MANHOLE		
	FIRE HYDRANT	FND	FOUND	TB	TELEPHONE BOX		
	POST INDICATOR VALVE	FW	FACE OF WALL	TC	TOP OF CURB		
	POWER POLE/JOINT POLE	GB	GRADE BREAK	TE	TRASH ENCLOSURE		
	TRAFFIC SIGNAL POLE						
	TRAFFIC SIGN						

KEY MAP



NO.	REVISION	BY
1	PUD APPLICATION	03/27/2014

KIER & WRIGHT
CIVIL ENGINEERS & SURVEYORS, INC.
2850 Collier Canyon Road
Livermore, California 94551
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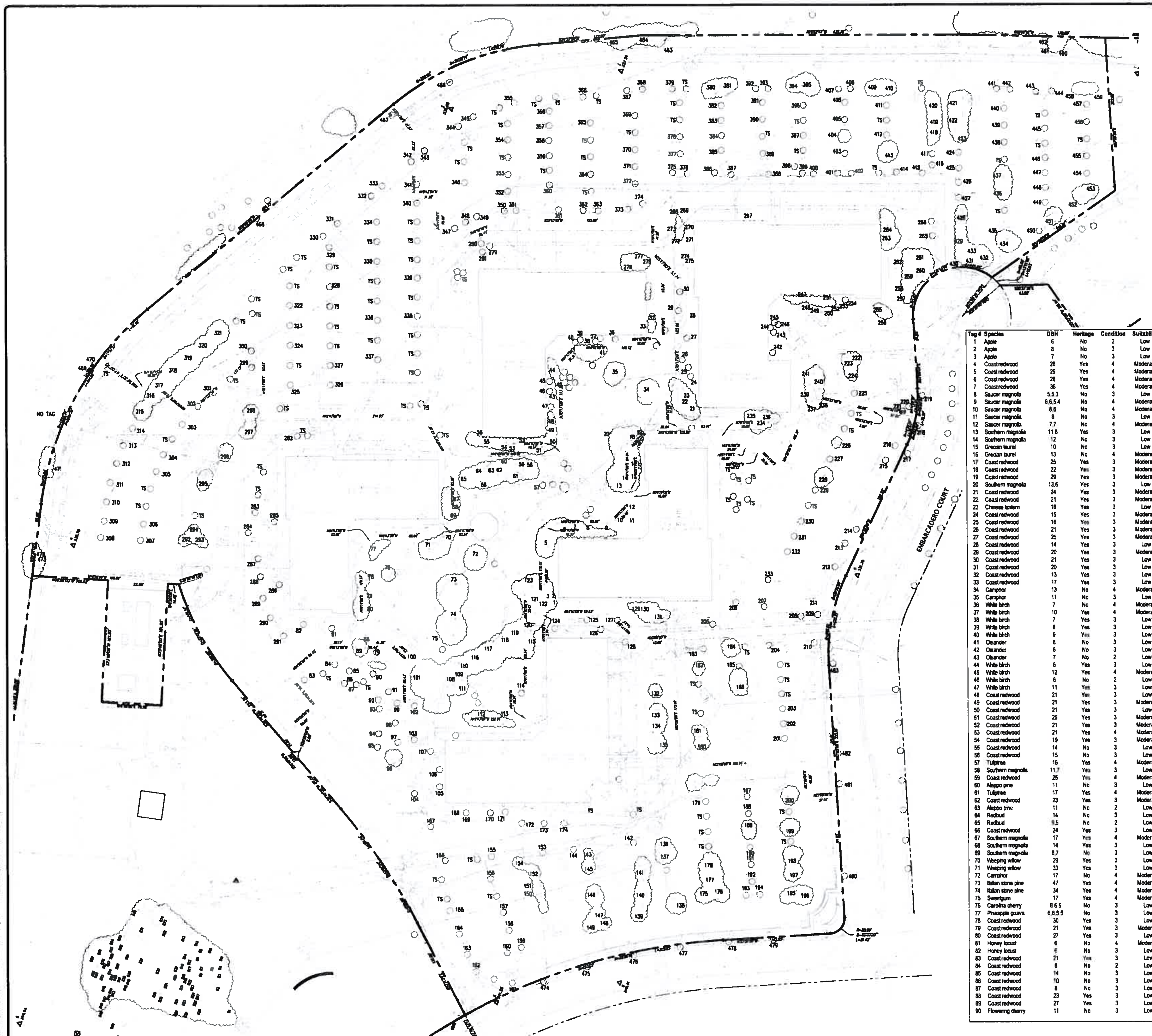
TOPOGRAPHIC SURVEY
OF
STONERIDGE CORPORATE PLAZA EXPANSION
FOR
WORKDAY

PLEASANTON CALIFORNIA

TOPO DATE	02/20/2014
SCALE	1" = 60'
SURVEYOR	JDT
DRAFTER	JRO
JOB NO.	A12517-4
SHEET	C1.2
OF	SHEETS



NORTH

0 30 60 120 180

Scale 1" = 60 ft

Tag #	Species	DBH	Heritage	Condition	Suitability	Comments
1	Apple	6	No	2	Low	Suppressed crown bowed S. basal decay/dead roots
2	Apple	8	No	3	Low	Poor form & structure trunk wound W
3	Apple	7	No	3	Low	Suppressed crown bowed E.
4	Coast redwood	28	Yes	4	Moderate	Good form; thin canopy
5	Coast redwood	29	Yes	4	Moderate	Good form; thin canopy displacing concrete curb on S
6	Coast redwood	28	Yes	4	Moderate	Good form; thin canopy
7	Coast redwood	36	Yes	4	Moderate	Good form; thin canopy
8	Saucer magnolia	5.5.3	No	3	Low	Multiple attachments @ base suppressed; one-sided to S
9	Saucer magnolia	6.6.5.4	No	4	Moderate	Multiple attachments @ base; spreading form headed
10	Saucer magnolia	8.6	No	4	Moderate	Codominant trunks @ base headed
11	Saucer magnolia	8	No	3	Low	Upright form; topped @ 18'
12	Saucer magnolia	7.7	No	4	Moderate	Codominant trunks @ 3'; headed
13	Southern magnolia	11.8	Yes	3	Low	One sided N thin canopy
14	Southern magnolia	12	No	3	Low	Upright form, thin canopy
15	Grecian laurel	10	No	3	Low	Crowded headed, thin canopy
16	Grecian laurel	13	No	4	Moderate	Upright form headed
17	Coast redwood	25	Yes	3	Moderate	Crown raised to 15' thin canopy
18	Coast redwood	22	Yes	3	Moderate	Crown raised to 15' thin canopy
19	Coast redwood	29	Yes	3	Moderate	Crown raised to 15' thin canopy
20	Southern magnolia	13.6	Yes	3	Low	Spreading form; thin canopy
21	Coast redwood	24	Yes	3	Moderate	Crown raised to 15' thin canopy
22	Coast redwood	21	Yes	3	Moderate	Crown raised to 15'; thin canopy
23	Chinese lantern	18	Yes	3	Low	Multiple attachments @ 6' slight lean N hangers/deadwood
24	Coast redwood	15	Yes	3	Moderate	Crown raised to 15'; thin canopy
25	Coast redwood	16	Yes	3	Moderate	Crown raised to 15' thin canopy
26	Coast redwood	21	Yes	3	Moderate	Crown raised to 15' thin canopy
27	Coast redwood	25	Yes	3	Moderate	Crown raised to 15' thin canopy
28	Coast redwood	14	Yes	3	Low	One sided N away from bldg thin canopy
29	Coast redwood	20	Yes	3	Moderate	Crown raised to 15' thin canopy
30	Coast redwood	21	Yes	3	Low	Crown raised to 15' very thin canopy
31	Coast redwood	20	Yes	3	Low	Crowded & one-sided to N thin canopy
32	Coast redwood	13	Yes	3	Low	Crown raised to 15' very thin canopy
33	Coast redwood	17	Yes	3	Low	One sided S away from bldg thin canopy
34	Camphor	13	No	4	Moderate	Multiple attachments @ 6' good form; very wet soil
35	Camphor	11	No	3	Low	Multiple attachments @ 6' lateral N twig dieback, very wet soil
36	White birch	7	No	4	Moderate	One sided W away from bldg. minor dieback
37	White birch	10	Yes	4	Moderate	One sided W away from bldg minor dieback
38	White birch	7	Yes	3	Low	Crook @ 15' twig dieback
39	White birch	8	Yes	3	Low	Leans NW. poor form; twig dieback.
40	White birch	9	Yes	3	Low	Corrected lean N twig dieback.
41	Oleander	8	No	3	Low	Standard form.
42	Oleander	6	No	3	Low	Standard form dieback
43	Oleander	7	No	2	Low	Standard form; leans S twig dieback.
44	White birch	8	Yes	3	Low	Leans S away from bldg twig dieback
45	White birch	12	Yes	4	Moderate	Corrected lean W dominant tree, twig dieback.
46	White birch	6	No	2	Low	Dead top
47	White birch	11	Yes	3	Low	Crook & codominant trunks @ 12' twig dieback
48	Coast redwood	21	Yes	3	Low	Very thin canopy
49	Coast redwood	21	Yes	3	Moderate	One sided S away from bldg thin canopy
50	Coast redwood	21	Yes	3	Low	One sided SW very thin canopy
51	Coast redwood	25	Yes	3	Moderate	Good form; crown raised to 15' thin canopy
52	Coast redwood	21	Yes	3	Moderate	One sided W away from bldg thin canopy
53	Coast redwood	21	Yes	4	Moderate	One sided W away from bldg.
54	Coast redwood	19	Yes	3	Moderate	One sided W away from bldg thin canopy
55	Coast redwood	14	No	3	Low	Very thin canopy
56	Coast redwood	15	No	3	Low	Very thin canopy
57	Tuliptree	18	Yes	4	Moderate	Corrected lean S fair structure
58	Southern magnolia	11.7	Yes	3	Low	One sided S. thin canopy
59	Coast redwood	25	Yes	4	Moderate	Good form; slightly thin canopy
60	Aleppo pine	11	No	3	Low	Upright form, sequoia pitch moth surface roots
61	Tuliptree	17	Yes	4	Moderate	Good form & structure one-sided to W
62	Coast redwood	23	Yes	3	Moderate	Good form; thin canopy
63	Aleppo pine	11	No	2	Low	Poor form; sequoia pitch moth twig dieback
64	Redbud	14	No	3	Low	Slight lean E girdling root
65	Redbud	9.5	No	2	Low	Suppressed heavy lean N
66	Coast redwood	24	Yes	3	Low	Surface roots; thin canopy
67	Southern magnolia	17	Yes	4	Moderate	Crowded & one-sided to E
68	Southern magnolia	14	Yes	3	Low	Crowded narrow form.
69	Southern magnolia	8.7	No	3	Low	Codominant trunks @ 3' crowded; narrow form.
70	Weeping willow	29	Yes	3	Low	Multiple attachments @ 15' poor branch structure large pruning wound S
71	Weeping willow	33	Yes	3	Low	Multiple attachments @ 15' large pruning wound W basal decay ganoderma S
72	Camphor	17	No	4	Moderate	Multiple attachments @ 6' good form.
73	Italian stone pine	47	Yes	4	Moderate	Multiple attachments @ 7' good form; heavy laterals on S & W.
74	Italian stone pine	34	Yes	4	Moderate	Codominant trunks @ 12' good form, one sided to W girdling roots
75	Sweetgum	17	Yes	4	Moderate	Codominant trunks @ 12' included bark.
76	Carolina cherry	8.6.5	No	3	Low	Multiple attachments @ base twig dieback
77	Pineapple guava	6.6.5.5	No	3	Low	Multiple attachments @ base thin canopy
78	Coast redwood	30	Yes	3	Low	Pruned hard; very thin canopy
79	Coast redwood	21	Yes	3	Moderate	Good form thin canopy
80	Coast redwood	27	Yes	3	Low	Pruned hard very thin canopy
81	Honey locust	6	No	4	Moderate	Good young tree headed back
82	Honey locust	6	No	3	Low	Extensive sunscald headed back
83	Coast redwood	21	Yes	3	Low	Good form; dead top thin canopy
84	Coast redwood	8	No	2	Low	Very thin canopy
85	Coast redwood	14	No	3	Low	Good form; dead top thin canopy
86	Coast redwood	10	No	3	Low	Dead top thin canopy
87	Coast redwood	8	No	3	Low	Thin canopy
88	Coast redwood	23	Yes	3	Low	Pruned hard very thin canopy
89	Coast redwood	27	Yes	3	Low	Pruned hard very thin canopy small hanger
90	Flowering cherry	11	No	3	Low	Good form; trunk wound W large surface roots

CONTINUED ON SHEET 2

NO	REVISION	BY
	PUD APPLICATION 03/07/2014	

KIER & WRIGHT
CIVIL ENGINEERS & SURVEYORS, INC.
2850 Collier Canyon Road
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Phone (925) 245-8788
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TREE SURVEY OF BART PARCEL & STONERIDGE CORP. CENTER FOR WORKDAY INC.

PLEASANTON CALIFORNIA

DATE	FEBRUARY, 2014
SCALE	1" = 60'
SURVEYOR	JDT
DRAFTER	JDQ
JOB NO.	A12517-4
SHEET	C1.3
OF	SHEETS

Tag #	Species	DBH	Heritage	Condition	Suitability	Comments
91	Flowering cherry	9	No	4	Low	Good form; surface roots
92	Flowering cherry	10	No	3	Low	Good form; large surface roots; displacing concrete curb on W.
93	Silk tree	8	No	3	Low	Multiple attachments @ 7'; trunk wound on W; basal wound
94	Silk tree	8	No	3	Low	Multiple attachments @ 7'; asymmetric crown
95	Silk tree	9	No	4	Moderate	Codominant trunks @ 5'; good form.
96	African sumac	11 7 6 4.4	Yes	2	Low	Failed @ base, lying on ground SE
97	Honey locust	8	No	4	Moderate	Good young tree; headed back; crook in roots.
98	Coast redwood	15	No	4	Moderate	Good form; thinning canopy
99	Coast redwood	17	Yes	4	Moderate	Good form; thinning canopy
100	Camphor	14	No	3	Low	Multiple attachments @ 6'; one-sided to N
101	Camphor	18	Yes	4	Moderate	Multiple attachments @ 6'; spreading form.
102	Sweetgum	16	Yes	3	Low	Multiple attachments @ 7'; spreading form; history of branch failure; epicormic sprouts
103	NZ tea tree	11,11	Yes	4	Moderate	Codominant trunks @ 3'; good form; low crown
104	Raywood ash	13	No	4	Moderate	Multiple attachments @ 7'; spreading form; sunscald on branches.
105	Coast redwood	16	Yes	4	Moderate	Good form; thinning canopy
106	Coast redwood	15	Yes	3	Moderate	Good form; thin canopy
107	Honey locust	6	No	4	Moderate	Good young tree; headed back; basal wounds.
108	Coast redwood	23	Yes	3	Moderate	Good form; thin canopy
109	Apple	42	No	3.300276912	Low	Suppressed; crown bowed S.; basal decay/dead roots.
110	Apple	47.42857143	No	3.301539214	Low	Poor form & structure; trunk wound W
111	Apple	52.85714286	No	3.302801515	Low	Suppressed; crown bowed E
112	Coast redwood	58.28571429	Yes	3.304063817	Moderate	Good form; thin canopy
113	Coast redwood	63.71428571	Yes	3.305326118	Moderate	Good form; thin canopy; displacing concrete curb on S
114	Coast redwood	69.14285714	Yes	3.30658842	Moderate	Good form; thin canopy
115	Coast redwood	74.57142857	Yes	3.307850721	Moderate	Good form; thin canopy
116	Saucer magnolia	5,5,4	No	3.309113023	Low	Multiple attachments @ base; suppressed; one-sided to S
117	Saucer magnolia	6,6,5.5	No	3.310375324	Moderate	Multiple attachments @ base; spreading form; headed.
118	Saucer magnolia	8,7	No	3.311637626	Moderate	Codominant trunks @ base; headed
119	Saucer magnolia	9	No	3.312899927	Low	Upright form; topped @ 18'
120	Saucer magnolia	7,8	No	3.314162229	Moderate	Codominant trunks @ 3'; headed
121	Southern magnolia	11 9	Yes	3.31542453	Low	One sided N.; thin canopy
122	Southern magnolia	31 8	No	3.316686832	Low	Upright form; thin canopy
123	Grecian laurel	35 6	No	3.317949133	Low	Crowded; headed; thin canopy
124	Grecian laurel	39 4	No	3.319211435	Moderate	Upright form headed
125	Coast redwood	43.2	Yes	3.320473736	Moderate	Crown raised to 15'; thin canopy
126	Honey locust	6	No	3	Low	One sided E.; sunscald, headed back
127	Honey locust	8	No	4	Moderate	Good form; sunscald on branches; headed back
128	Callery pear	10	No	3	Low	Multiple attachments @ 7'; slight lean S.; headed back.
129	Apple	6	No	3	Low	Suppressed; crown bowed N
130	Apple	7	No	3	Low	Small crown
131	Raywood ash	27	Yes	4	Moderate	Multiple attachments @ 10'; one-sided to W.; lateral W; twig dieback
132	Brazilian pepper	10	No	3	Low	Multiple attachments @ 6'; thin canopy; in 4' wide island
133	Brazilian pepper	14	No	3	Low	Multiple attachments @ 6'; poor branch structure; filling 4' wide island.
134	Brazilian pepper	9	No	3	Low	Multiple attachments @ 6'; thin canopy; in 4' wide island
135	Brazilian pepper	15	No	3	Low	Multiple attachments @ 6'; poor branch structure; filling 4' wide island; frost damage in upper canopy
136	Sweetgum	9	No	4	Moderate	Upright form; in planter island
137	Camphor	13	No	2	Low	Dieback throughout crown; in planter island
138	Brazilian pepper	14	No	2	Low	Dieback in upper crown; in 4' wide island
139	Brazilian pepper	11	No	3	Low	Multiple attachments @ 7'; thin canopy; in 4' wide island
140	Brazilian pepper	14	No	3	Low	Multiple attachments @ 6'; poor branch structure; filling 3' planter island
141	Brazilian pepper	13	No	3	Low	Multiple attachments @ 6'; one-sided to N., in 3' planter island.
142	Callery pear	13	No	3	Low	Multiple attachments @ 7'; extensive epicormic sprouts.
143	Callery pear	11	No	3	Low	Multiple attachments @ 6'; extensive epicormic sprouts.
144	Callery pear	12	No	3	Low	Multiple attachments @ 6'; extensive epicormic sprouts.
145	Brazilian pepper	8	No	2	Low	Multiple attachments @ 6'; leans W.; thin canopy
146	Brazilian pepper	12	No	4	Moderate	Multiple attachments @ 5'; good form; surface roots.
147	Brazilian pepper	12	No	3	Low	Multiple attachments @ 6'; narrow form; in 4' wide island.
148	Brazilian pepper	11	No	3	Low	Codominant trunks @ 7'; filling 3' wide island.
149	Brazilian pepper	10	No	3	Low	Multiple attachments @ 7'; thin canopy; filling 3' wide island
150	Brazilian pepper	9	No	3	Low	Multiple attachments @ 6'; leans W.; frost damage in upper crown
151	Brazilian pepper	11	No	3	Low	Multiple attachments @ 6'; good form; thin canopy
152	Brazilian pepper	10	No	3	Moderate	Multiple attachments @ 6'; good form; thin canopy
153	Callery pear	10	No	3	Low	Multiple attachments @ 6'; extensive epicormic sprouts; in 4' wide island
154	Brazilian pepper	9	No	3	Low	Multiple attachments @ 7'; leans N.; thin canopy
155	Callery pear	9	No	3	Low	Multiple attachments @ 5'; extensive epicormic sprouts.
156	Brazilian pepper	10	No	3	Low	Multiple attachments @ 7'; slight lean E.; in very small island
157	Brazilian pepper	11	No	3	Low	Multiple attachments @ 6'; crown bowed S.; in very small island, cracking curb
158	Brazilian pepper	8	No	2	Low	Slight lean W.; thin canopy; in very small island
159	Brazilian pepper	11	No	3	Low	Codominant trunks @ 7'; surface roots; in 4' wide island
160	Brazilian pepper	9	No	3	Low	Multiple attachments @ 7'; thin canopy; in 4' wide island
161	Chinese pistache	15	No	4	High	Multiple attachments @ 7'; good form & structure
162	Raywood ash	12	No	3	Low	Multiple attachments @ 7'; trunk wounds; sunscald
163	Raywood ash	9	No	4	Moderate	Multiple attachments @ 7'; good form.
164	Raywood ash	7	No	3	Low	Multiple attachments @ 7'; trunk wounds; sunscald on branches; small girdling root
165	Raywood ash	12	No	4	Moderate	Multiple attachments @ 7'; good form.
166	Callery pear	13	No	3	Low	Multiple attachments @ 6'; upright form; extensive epicormic sprouts.
167	Callery pear	11	No	3	Low	Multiple attachments @ 6'; spreading form; extensive epicormic sprouts
168	Callery pear	10	No	3	Low	Multiple attachments @ 6'; upright form; extensive epicormic sprouts.
169	Callery pear	10	No	3	Low	Multiple attachments @ 6'; slight lean W.; extensive epicormic sprouts
170	Callery pear	10	No	3	Low	Multiple attachments @ 6'; slight lean W.; extensive epicormic sprouts.
171	Callery pear	9	No	3	Low	Multiple attachments @ 6'; slight lean W.; extensive epicormic sprouts.
172	Callery pear	12	No	4	Moderate	Multiple attachments @ 6'; good form; epicormic sprouts
173	Callery pear	11	No	3	Low	Multiple attachments @ 6'; leans W.; extensive epicormic sprouts
174	Callery pear	7	No	3	Low	Multiple attachments @ 6',small crown; extensive epicormic sprouts
175	Brazilian pepper	11	No	3	Low	Multiple attachments @ 7'; leans E.; thin canopy; in 4' wide island
176	Camphor	12	No	3	Low	Multiple attachments @ 6'; fair structure; thin canopy; in 5' wide island
177	Camphor	17	No	3	Low	Multiple attachments @ 8'; thin canopy; in small island
178	Camphor	12	No	3	Low	Multiple attachments @ 8'; thin canopy; in small island
179	Raywood ash	15	No	3	Low	Multiple attachments @ 8'; sunscald; epicormic sprouts; in small island
180	Brazilian pepper	12	No	2	Low	Multiple attachments @ 7'; large trunk wound N.; thin canopy; in very small island
181	Brazilian pepper	14	No	2	Low	Extensive dieback; In very small island
182	Camphor	13	No	1	Low	Extensive dieback; trunk decay & basal cavity; in very small island
183	Raywood ash	15	No	3	Low	Multiple attachments @ 8'; epicormic sprouts, in 4' wide island
184	Camphor	15	No	2	Low	Multiple attachments @ 8'; extensive dieback, in 4' wide island.
185	Sweetgum	8	No	4	Moderate	Multiple attachments @ 5'; narrow form; in small island
186	Brazilian pepper	20	Yes	3	Low	Multiple attachments @ 7'; fair branch structure; branch wounds; twig dieback, in very small island
187	Sweetgum	8	No	4	Moderate	Multiple attachments @ 5'; small trunk wound; in small island
188	Sweetgum	12	Yes	4	Moderate	Multiple attachments @ 5'; small trunk wound; in small island
189	Camphor	14	No	3	Low	Multiple attachments @ 8'; thin canopy; in small island
190	Raywood ash	11	No	2	Low	Multiple attachments @ 8'; sunscald; epicormic sprouts; in small island
191	Raywood ash	15	No	3	Low	Multiple attachments @ 8'; sunscald; long lateral on NW; in small island
192	Raywood ash	13	No	3	Low	Multiple attachments @ 8'; good form, in small island
193	Camphor	15	No	3	Low	Multiple attachments @ 8'; twig dieback to 3'; in 4' wide island
194	Raywood ash	15	No	3	Low	Multiple attachments @ 8'; leans E.; sunscald; in 4' wide island
195	Brazilian pepper	13	No	4	Moderate	Multiple attachments @ 10'; high crown, in 4' wide island
196	Brazilian pepper	20	Yes	3	Low	Multiple attachments @ 6'; multiple failures @ attachment; in 4' wide island
197	Brazilian pepper	14	No	3	Low	Multiple attachments @ 10'; in small island.
198	Camphor	12	No	2	Low	Multiple attachments @ 6'; thin canopy; branch tear-out on S.; in small island
199	Camphor	15	No	3	Low	Multiple attachments @ 6'; low branches E.& W.; thin canopy; in small island
200	Camphor	16	No	2	Low	Leans S.; very thin canopy; in small island
201	Sweetgum	7	No	4	Moderate	Multiple attachments @ 7'; good form, in small island
202	Sweetgum	9	No	3	Low	Codominant trunks @ 5'; topped @ 15'; included bark, in small island
203	Sweetgum	9	No	3	Low	Old topping point @ 15'; in small island
204	Raywood ash	16	Yes	3	Low	Multiple attachments @ 8'; sunscald; twig dieback; in 4' wide island
205	Crape myrtle	4,4,4,3,2	No	4	High	Multiple attachments @ base; minor included bark
206	Crape myrtle	5,4,4,3,2,2,2	No	4	High	Multiple attachments @ base; narrow attachments.
207	Purpleleaf plum	7,6,5,5	No	3	Low	Multiple attachments @ 3'; sunscald; twig dieback
208	Raywood ash	17	Yes	3	Low	Multiple attachments @ 8'; twig dieback; lateral on E. separating from crown
209	Raywood ash	23	Yes	3	Low	Multiple attachments @ 10'; spreading form, twig dieback; laterals E.
210	Raywood ash	23	Yes	3	Low	Multiple attachments @ 10'; sunscald on upright stems; twig dieback; laterals SW.
211	Purpleleaf plum	7,7,5,5	No	3	Low	Multiple attachments @ 3'; leans NE.; sunscald; twig dieback
212	Chinese lantern	14	No	4	Moderate	Multiple attachments @ 6'; good form; branch wounds
213	Chinese lantern	15	No	3	Low	Multiple attachments @ 6'; narrow attachments; included bark.
214	Chinese lantern	19	Yes	3	Low	Multiple attachments @ 6'; narrow attachments, included bark
215	Chinese lantern	12	No	4	Moderate	Multiple attachments @ 6'; good form
216	Chinese lantern	14	No	4	Moderate	Codominant trunks @ 7'; narrow attachments
217	Chinese pistache	10	No	4	High	Multiple attachments @ 6'; good form; stubs E
218	Chinese pistache	6	No	3	Low	Multiple attachments @ 6'; sunscald; stubs
219	Chinese pistache	9	No	4	High	Multiple attachments @ 6'; good form, stubs.
220	Chinese lantern	14	No	4	Moderate	Multiple attachments @ 6'; included bark; basal wound
221	Chinese lantern	13	No	4	Moderate	Multiple attachments @ 5'; one-sided NW
222	Camphor	12	No	2	Low	Swollen base; twig dieback; very thin canopy; in 4' wide island
223	Camphor	13	No	3	Low	One sided N.; thin canopy; in 4' wide island
224	Camphor	11	No	3	Low	One sided W.; thin canopy; in small island
225	Camphor	10	No	2	Low	Leans E.; thin small crown; twig dieback; in small island
226	Brazilian pepper	15	No	3	Low	Multiple attachments @ 8'; poor structure; displacing concrete in small island
227	Raywood ash	14	No	3	Low	Multiple attachments @ 8'; sunscald; twig dieback, in small island
228	Brazilian pepper	20	Yes	3	Low	Multiple attachments @ 8'; poor structure; narrow attachments; in small island
229	Camphor	7	No	2	Low	Extensive dieback; in small island
230	Camphor	9	No	1	Low	All but dead; in small island
231	Camphor	10	No	1	Low	All but dead; in small island
232	Camphor	10	No	1	Low	All but dead; in small island
233	Raywood ash	19	Yes	3	Low	Multiple attachments @ 8'; one-sided to W.; twig dieback, in small island
234	Coast redwood	29	Yes	4	Moderate	Good form; thinning canopy
235	Coast redwood	21	Yes	3	Moderate	Crowded; narrow form; thinning canopy
236	Coast redwood	28	Yes	4	Moderate	Good form; thinning canopy
237	Coast redwood	20	Yes	3	Low	Good form; twig dieback; thin canopy
238	Coast redwood	20	Yes	3	Low	Good form; twig dieback; thin canopy
239	Coast redwood	18	Yes	3	Low	One sided N.; twig dieback; thin canopy
240	Coast redwood	25	Yes	3	Low	Good form; twig dieback; thin upper canopy
241	Coast redwood	30	Yes	4	Moderate	Good form; thinning upper canopy
242	White birch	12	Yes	3	Low	Leans SE. away from bldg.; twig dieback
243	White birch	9	No	3	Low	Leans S. away from bldg., poor form; twig dieback.
244	White birch	8	Yes	3	Low	Upright form; pruned; away from bldg.; twig dieback.
245	White birch	9	Yes	3	Low	Upright form; pruned; away from bldg.; twig dieback.
246	White birch	8	No	3	Low	Leans S. away from bldg.; twig dieback
247	White birch	9	Yes	3	Low	Slight crook @ 7'; one-sided to W. away from bldg.; twig dieback
248	White birch	13	Yes	4	Moderate	Slight crook @ 20'; one-sided to W. away from bldg.; twig dieback
249	White birch	12	Yes	4	Moderate	Slight lean W.; twig dieback.
250	White birch	6	No	3	Low	Suppressed; small crown dieback
251	White birch	10	Yes	3	Low	Slight crook @ 15'; narrow form; twig dieback.
252	White birch	11	Yes	4	Moderate	Upright; narrow form; twig dieback.
253	White birch	11	Yes	3	Low	Crowded; narrow form; twig dieback
254	White birch	8	Yes	3	Low	Crowded; narrow form; twig dieback
255	Coast redwood	21	Yes	3	Moderate	Good form; thin canopy
256	Coast redwood	22	Yes	3	Moderate	Good form; thin canopy
257	Coast redwood	18	Yes	2	Low	Dead top; extensive dieback.
258	Coast redwood	20	Yes	3	Moderate	Good form; thin canopy
259	Coast redwood	26	Yes	4	Moderate	Good form; thinning canopy; small hanger
260	Coast redwood	23	Yes	4	Moderate	Good form; thinning in upper canopy
261	Coast redwood	17	No	3	Moderate	Good form; thin canopy
262	Coast redwood	19	Yes	3	Moderate	Good form; thin canopy.
263	Coast redwood	24	Yes	4	Moderate	Good form; thinning in upper canopy
264	Coast redwood	29	Yes	3	Moderate	Good form; thin canopy
265	Sweetgum	12	No	3	Low	Codominant trunks @ 15'; wide attachment; broken branches on S
266	Sweetgum	11	Yes	4	Moderate	Multiple attachments @ 5'; upright form.
267	White birch	8	Yes	3	Low	Leans E.; epicormic sprouts; twig dieback.
268	White birch	6	No	3	Low	Multiple attachments @ 8'; leans E.; twig dieback.
269	White birch	7	No	3	Low	Codominant trunks @ 5'; asymmetric form; twig dieback
270	White birch	11	Yes	3	Low	Crook @ 15'; leans NE.; twig dieback
271	White birch	8	Yes	4	Moderate	Upright form; twig dieback.
272	White birch	9	Yes	3	Low	Crowded; leans NE.; twig dieback
273	Southern magnolia	8 6 5,2	No	4	Moderate	Multiple attachments @ 3'; one-sided to N
274	White birch	7	No	3	Low	Crowded; leans N.; twig dieback.
275	White birch	6	No	3	Low	Crowded; leans NE.; twig dieback.
276	Coast redwood	18	Yes	3	Moderate	Good form; thin canopy
277	Coast redwood	16	Yes	3	Moderate	Good form; thin canopy
278	Coast redwood	15	Yes	3	Moderate	Good form; thin canopy; pruned away from bldg
279	Flowering cherry	8	No	3	Low	Multiple attachments @ 4'; one-sided to S.; poorly anchored
280	Flowering cherry	7	No	3	Low	Multiple attachments @ 4'; one-sided to S.
281	Flowering cherry	8	No	3	Low	Multiple attachments @ 4'; one-sided to S
282	Honey locust	7	No	4	Moderate	Codominant trunks @ 6'; good form.
283	Callery pear	9	No	3	Low	Multiple attachments @ 7'; ribbing along trunk; epicormic sprouts.
284	Callery pear	13	No	4	Moderate	Multiple attachments @ 7'; narrow attachments; epicormic sprouts
285	Raywood ash	14	Yes	4	High	Multiple attachments @ 7'; good form & structure
286	Raywood ash	12	Yes	4	Moderate	Multiple attachments @ 7'; slight lean N.; pruned away from bldg
287	Callery pear	14	Yes	4	Moderate	Multiple attachments @ 7'; good form; epicormic sprouts
288	Callery pear	14	Yes	4	Moderate	Multiple attachments @ 7'; good form; epicormic sprouts.
289	Callery pear	16	Yes	4	Moderate	Multiple attachments @ 7'; good form; epicormic sprouts.
290	Callery pear	16	Yes	4	Moderate	Multiple attachments @ 7'; narrow attachments; epicormic sprouts
291	Callery pear	14	Yes	4	Moderate	Multiple attachments @ 7'; good form; epicormic sprouts.
292	Brazilian pepper	7	No	3	Low	Multiple attachments @ 7'; twig dieback, in 4' wide island
293	Brazilian pepper	9	No	4	Moderate	Multiple attachments @ 7'; slight lean E.; good form; in 4' wide island
294	Brazilian pepper	10	No	4	Moderate	Multiple attachments @ 7'; slight lean E.; good form; frost damage in upper crown
295	Brazilian pepper	15	No	4	Moderate	Multiple attachments @ 7'; laterals E.; filling 6' wide island.
296	Brazilian pepper	12	No	4	Moderate	Multiple attachments @ 7'; good form; minor dieback.
297	Brazilian pepper	14	No	4	Moderate	Multiple attachments @ 7'; good form; epicormic sprouts
298	Brazilian pepper	9	No	4	Moderate	Multiple attachments @ 7'; fair branch structure
299	Raywood ash	12	No	3	Low	Multiple attachments @ 8'; minor dieback.
300	Raywood ash	18	Yes	3	Low	Multiple attachments @ 10'; twig dieback to 4'
301	Southern live oak	8	No	4	High	Multiple attachments @ 7'; good form & structure; in small island
302	Southern live oak	8	No	4	High	Multiple attachments @ 7'; good form & structure; in small island.
303	Brazilian pepper	10	No	4	Moderate	Multiple attachments @ 8'; small lateral E.; in small island
304	Brazilian pepper	10	No	4	Moderate	Multiple attachments @ 8'; slight lean N.; in small island
305	Brazilian pepper	10	No	3	Low	Multiple attachments @ 8'; branch tear outs; in small island.
306	Brazilian pepper	10	No	4	Moderate	Multiple attachments @ 7'; good form; in small island
307	Brazilian pepper	9	No	3	Low	Multiple attachments @ 7'; thin canopy; in small island
308	Brazilian pepper	10	No	3	Low	Leans S.; poor branch structure, in small island
309	Brazilian pepper	8	No	4	Moderate	Multiple attachments @ 7'; good form; in small island
310	Brazilian pepper	10	No	4	Moderate	Multiple attachments @ 7'; narrow attachments; in small island
311	Brazilian pepper	10	No	2	Low	Small crown; twig dieback, in small island
312	Brazilian pepper	9	No	4	Moderate	Slight lean E.; in small island.
313	Brazilian pepper	6	No	2	Low	Small crown; twig dieback; in small island
314	Brazilian pepper	11	No	3	Low	Multiple attachments @ 7'; twig dieback; in small island
315	Brazilian pepper	11	No	4	Moderate	Multiple attachments @ 7'; good form; in small island
316	Brazilian pepper	10	No	2	Low	Poor form & structure; old branch year out; in small island.
317	Southern live oak	15	No	4	Moderate	Multiple attachments @ 8'; good form; poor branch structure; in small island
318	Southern live oak	20	Yes	4	High	Multiple attachments @ 8'; good form, fair branch structure, in small island.
319	Southern live oak	15	No	3	Low	Multiple attachments @ 10'; girdling roots, in small island
320	Southern live oak	14	No	3	Low	Multiple attachments @ 8'; thin canopy; in small island
321	Southern live oak	14	No	4	High	Multiple attachments @ 9'; good form; in small island
322	Callery pear	7	No	3	Low	Multiple attachments @ 7'; slight lean E.; embedded stake tie; in small island
323	Zelkova	7	No	5	High	Slight lean E.; good young tree; in small island.
324	Callery pear	16	No	4	Moderate	Multiple attachments @ 9'; good form; in small island
325	Callery pear	8	No	3	Low	Multiple attachments @ 8'; branch tear out E.; in small island.
326	Zelkova	6	No	5	High	Good young tree; in small island.
327	Callery pear	9	No	3	Low	Multiple attachments @ 8'; displacing concrete 6", in small island
328	Callery pear	19	Yes	4	Moderate	Multiple attachments @ 9'; upright form; displacing concrete in small island
329	Callery pear	12	Yes	4	Moderate	Multiple attachments @ 10'; one-sided to W.; in small island
330	Raywood ash	16	Yes	3	Low	Multiple attachments @ 8'; twig dieback
331	Raywood ash	16	Yes	3	Low	Multiple attachments @ 8'; sunscald; twig dieback
332	Raywood ash	12	Yes	3	Low	Codominant trunks @ 8'; significant sunscald; twig dieback.
333	Raywood ash	10	No	3	Low	Multiple attachments @ 8'; sunscald, twig dieback.
334	Callery pear	16	No	3	Low	Multiple attachments @ 8'; topped @ 30'; epicormic sprouts, in small island
335	Callery pear	19	Yes	3	Low	Multiple attachments @ 8'; topped @ 30'; epicormic sprouts, in small island.
336	Callery pear	7	No	3	Low	Multiple attachments @ 8'; narrow attachments; embedded stake tie; in small island
337	Callery pear	11	No	3	Low	Multiple attachments @ 8'; seam W.; headed; in small island
338	Sweetgum	7	No	4	Moderate	Multiple attachments @ 5'; upright form, in small island
339	Sweetgum	7	No	4	Moderate	Multiple attachments @ 7'; slight lean E.; in small island
340	Callery pear	17	Yes	3	Low	Multiple attachments @ 8'; topped @ 30'; narrow attachments; in small island
341	Callery pear	17	Yes	3	Low	Multiple attachments @ 8'; topped @ 30'; girdling roots; in small island
342	Raywood ash	12	Yes	3	Low	Multiple attachments @ 8'; sunscald; twig dieback to 3'
343	Raywood ash	16	Yes	3	Low	Multiple attachments @ 8'; sunscald; twig dieback
344	Raywood ash	18	Yes	4	Moderate	Multiple attachments @ 10'; sunscald, twig dieback.
345	Camphor	12	No	3	Low	Thin canopy, twig dieback; in 4' wide island
346	Callery pear	14	No	3	Low	Multiple attachments @ 8'; slight lean S.; in 4' wide island
347	Sweetgum	11	Yes	4	Moderate	Upright form; in small island
348	Sweetgum	12	Yes	3	Low	Narrow form, branch wound; in 4' wide island
349	Sweetgum	10	Yes	3	Low	One sided S.; in 4' wide island
350	Sweetgum	10	Yes	4	Moderate	Large surface roots, in 4' wide island
351	Sweetgum	13	Yes	3	Low	Fair structure, stem removed E.; root pruned; in 4' wide island
352	Brazilian pepper	13	No	3	Low	Thin canopy; in small island
353	Raywood ash	22	Yes	2	Low	Central leaders removed; sunscald; twig dieback.
354	Sweetgum	9	No	4	Moderate	Upright form; in small island
355	Brazilian pepper	12	No	2	Low	Dieback in upper canopy; basal wounds; in 5' wide island
356	Sweetgum	12	No	3	Low	Multiple attachments @ 8'; asymmetric form, in small island
357	Raywood ash	15	No	3	Low	Multiple attachments @ 7'; sunscald; twig dieback
358	Raywood ash	16	No	3	Low	Multiple attachments @ 7'; asymmetric form, sunscald, twig dieback.
359	Sweetgum	9	Yes	4	Moderate	Upright form, in small island
360	Raywood ash	18	Yes	3	Low	Multiple attachments @ 8'; sunscald; twig dieback
361	Sweetgum	14	Yes	4	Moderate	Multiple attachments @ 10'; upright form.
362	Camphor	13	No	3	Low	Thin canopy; in 4' wide island
363	Camphor	11	No	3	Low	Thin canopy; epicormic sprouts; in 4' wide island
364	Raywood ash	18	Yes	3	Low	Multiple attachments @ 8'; sunscald; twig dieback; displacing concrete 4" in small island
365	Raywood ash	12	No	3	Low	Multiple attachments @ 8'; sunscald; twig dieback; in small island
366	Sweetgum	13	Yes	3	Low	Multiple attachments @ 5'; included bark, displacing concrete 2"
367	Raywood ash	16	No	3	Low	Multiple attachments @ 8'; sunscald; twig dieback; in 4' wide island
368	Raywood ash	14	Yes	3	Low	Multiple attachments @ 8'; significant sunscald; twig dieback, in 4' wide island
369	Sweetgum	6	No	4	Moderate	Codominant trunks @ 5'; in small island.
370	Raywood ash	16	Yes	4	Moderate	Multiple attachments @ 8'; good form; sunscald; in small island
371	Sweetgum	6	No	4	Moderate	Multiple attachments @ 5'; in small island
372	Raywood ash	16	No	3	Low	Multiple attachments @ 7'; central leader removed, sunscald; in small island
373	Sweetgum	15	Yes	4	Moderate	Multiple attachments @ 8'; good form.
374	Sweetgum	10	Yes	4	Moderate	Multiple attachments @ 8'; one-sided to SE.
375	Camphor	12	No	2	Low	Extensive dieback; in 4' wide island
376	Camphor	7	No	1	Low	All but dead; in 4' wide island
377	Raywood ash	14	No	3	Low	Multiple attachments @ 7'; extensive sunscald; in small island
377	Sweetgum	9	No	4	Moderate	Upright form; small laterals S.; in small island
379	Raywood ash	8	No	4	Moderate	Multiple attachments @ 6'; sunscald; in 4' wide island.
380	Camphor	10	No	2	Low	Extensive dieback; in 4' wide island
381	Camphor	11	No	3	Low	One sided S.; twig dieback; in 4' wide island
382	Sweetgum	7	No	4	Moderate	Multiple attachments @ 15'; upright form; in small island.
383	Raywood ash	18	Yes	3	Low	Multiple attachments @ 8'; extensive sunscald; in small island
384	Raywood ash	11	Yes	3	Low	Multiple attachments @ 8'; extensive sunscald; epicormic sprouts, in small island
385	Sweetgum	6	No	4	Moderate	Upright form; in small island
386	Raywood ash	15	No	3	Low	Codominant trunks @ 8'; twig dieback to 3'
387	Raywood ash	18	Yes	4	Moderate	Codominant trunks @ 8'; sunscald; twig dieback
388	Brazilian pepper	18	Yes	3	Low	Codominant trunks @ 12'; poor branch structure
389	Raywood ash	15	Yes	4	Moderate	Multiple attachments @ 10'; epicormic sprouts; twig dieback
390	Sweetgum	9	No	3	Low	Codominant trunks @ 4'; trunk wound.
391	Raywood ash	14	No	3	Low	Multiple attachments @ 8'; one-sided to W.; sunscald, twig dieback
392	Raywood ash	16	Yes	4	Moderate	Multiple attachments @ 8'; good form; sunscald; twig dieback; in 4' wide island
393	Raywood ash	11	No	3	Low	Multiple attachments @ 8'; sunscald, twig dieback; in 4' wide island.
394	Camphor	15	No	3	Low	Codominant trunks @ 10'; thin canopy
395	Camphor	15	No	3	Low	One sided S.; very thin canopy
396	Raywood ash	7	No	4	High	Codominant trunks @ 8'; upright form; in small island
397	Raywood ash	11	No	3	Low	Codominant trunks @ 8'; sunscald; epicormic sprouts; in small island
398	Raywood ash	17	Yes	3	Low	Multiple attachments @ 10'; one-sided to E.; sunscald, trunk wound.
399	Raywood ash	17	Yes	3	Low	Multiple attachments @ 8'; one-sided to W.; sunscald
400	Raywood ash	17	Yes	3	Low	Multiple attachments @ 8'; one-sided to S.; sunscald
401	Brazilian pepper	21	Yes	4	Moderate	In 6' wide planter; displacing curb; multiple attachments @ 6'
402	Brazilian pepper	15	No	4	Moderate	In 6' wide planter; multiple attachments @ 10'
403	Raywood ash	15	No	2	Low	In 3' planting circle; extensive sunburn.
404	Brazilian pepper	15	No	3	Low	In 3' planting circle; displacing curb; multiple attachments @ 6'
405	Brazilian pepper	15	No	3	Low	In 3' planting circle; displacing curb, multiple attachments @ 10'
406	Raywood ash	10	No	2	Low	In 3' planting circle; thin crown; one-sided to W
407	Raywood ash	18	Yes	3	Low	In 4' wide planter; multiple attachments @ 8'
408	Raywood ash	16	Yes	3	Low	In 4' wide planter; multiple attachments @ 8'.
409	Camphor	16	Yes	4	Moderate	Multiple attachments @ 6'; good form.
410	Camphor	11	No	3	Low	Dead stem; in 5' wide planter.
411	Sweetgum	6	No	3	Low	In planting circle; codominant stems @ 10'
412	Raywood ash	14	No	3	Low	In 4' planting circle; multiple attachments @ 7'
413	Brazilian pepper	19	Yes	3	Low	In 4' planting circle; displacing curb, multiple attachments @ 10'
414	Raywood ash	14	No	3	Low	Multiple attachments @ 8'; sunburned bark.
415	Raywood ash	14	No	2	Low	In 10' wide planter; multiple attachments @ 8'; extensive sunburn
416	Raywood ash	14	Yes	3	Low	In 10' wide planter; multiple attachments @ 7'
417	Camphor	12	No	3	Low	In 10' wide planter; crown one-sided to E.
418	Camphor	12	No	3	Low	In 10' wide planter; low lateral limb to S.
419	Camphor	12	No	3	Low	In 10' wide planter; wide attachment @ 7'
420	Camphor	13	No	3	Low	In 10' wide planter; heavy lateral limb to N.; thin crown
421	Camphor	15	No	3	Low	In 10' wide planter; codominant trunks @ 6'
422	Camphor	13	No	3	Low	In 10' wide planter; multiple attachments @ 8'; twig dieback in upper crown
423	Camphor	13	No	3	Low	In 10' wide planter; crown to E.; history of branch failures.
424	Camphor	17	No	3	Low	In 10' wide planter; crown to E.; poor form & structure
425	Raywood ash	14	Yes	3	Low	In 10' wide planter; multiple attachments @ 10'
426	Raywood ash	15	No	3	Low	In 10' wide planter; multiple attachments @ 8'
427	Raywood ash	15	No	3	Low	In 10' wide planter; multiple attachments @ 8'; sunburn on upright stems.
428	Camphor	13	No	3	Low	In 10' wide planter; thin crown
429	Camphor	14	No	3	Low	In 10' wide planter; multiple attachments @ 6'; thin crown.
430	Coast redwood	25	Yes	5	High	Excellent health & structure.
431	Chinese lantern	15	No	4	Moderate	Good form; slightly crowded by neighbors.
432	Coast redwood	27	Yes	5	High	Excellent health & structure.
433	Coast redwood	29	Yes	4	High	Upper canopy thin.
434	Camphor	13	No	4	Moderate	In 10' wide planter; lifting asphalt; multiple attachments @ 6'; good form.
435	Camphor	10	No	4	Moderate	In 8' planter; multiple attachments @ 8'; good form.
436	Brazilian pepper	13	No	4	Moderate	In 4' planting circle; displacing curb; nice dense crown
437	Brazilian pepper	19	Yes	4	Moderate	In 4' planting circle; displacing curb, nice dense crown; multiple attachments @ 6'
438	Raywood ash	11	No	3	Low	In 4' wide planter; sunburn bark; multiple attachments @ 7'
439	Raywood ash	11	No	2	Low	In 4' wide planter; decay in upright stems; multiple attachments @ 7'
440	Raywood ash	11	No	3	Low	In 4' wide planter; multiple attachments @ 8'; extensive sprouts.
441	Camphor	12	No	2	Low	In 5' wide planter; inverted base; thin crown with twig dieback.
442	Camphor	10	No	3	Low	In 5' wide planter; one-sided to S.
443	Raywood ash	19	Yes	2	Low	In 8' planter; sunburn on upright stems.
444	Raywood ash	16	No	2	Low	In 8' planter; sunburn on upright stems with decay
445	Brazilian pepper	8	No	2	Low	In 4' planting circle; twig dieback in upper crown
446	Camphor	10	No	3	Low	In 4' wide planter; thin crown; poor color
447	Raywood ash	16	No	1	Low	In 4' wide planter; extensive decay in upright stems
448	Raywood ash	13	No	2	Low	In 4' wide planter; multiple attachments @ 7' with decay in point of attachment
449	Raywood ash	11	No	2	Low	In 4' wide planter; multiple attachments @ 7'; extensive sunburn on low lateral to W.
450	Brazilian pepper	11	No	2	Low	In 3' wide planter; decay column on S.
451	Brazilian pepper	22	Yes	3	Low	In 10' wide planter; multiple attachments @ 5'; previously topped
452	Camphor	11	No	4	Moderate	In 8' planter; full crown.
453	Camphor	10	No	3	Low	In 5' wide planter; one-sided to S.
454	Brazilian pepper	11	No	3	Low	In 4' wide planter; multiple attachments @ 7'; thin crown
455	Brazilian pepper	11	No	2	Low	In 4' wide planter; multiple attachments @ 7'; thin crown; trunk wound on W.
456	Raywood ash	11	No	1	Low	In 4' wide planter; multiple attachments @ 6'; extensive sunburn & decay
457	Raywood ash	12	No	2	Low	In 4' wide planter; multiple attachments @ 7'; branch dieback
458	Camphor	11	No	4	Moderate	In 5' wide planter; full crown
459	Camphor	9	No	3	Low	In 5' wide planter; basal decay
460	Blackwood acacia	9	No	4	Moderate	Full dense crown to ground; good upright form.
461	Blackwood acacia	9	No	4	Moderate	Full dense crown to ground; good upright form.
462	Blackwood acacia	8,7	No	3	Low	Full dense crown to ground, codominant trunks @ base
463	Fremont cottonwood	33	Yes	2	Low	Leans to west; decay on topping wounds; heavy lateral limbs over parking
464	Blackwood acacia	16	No	4	Moderate	Full dense crown; good form.
465	Blackwood acacia	23	Yes	4	Moderate	Full dense crown; good form.
466	Fremont cottonwood	45	Yes	2	Low	Leans to E.; extensive basal decay in west; twig dieback
467	Fremont cottonwood	66	Yes	1	Low	Extensive basal decay; hollow trunk, fruiting bodies @ base
468	Blackwood acacia	8,5,5,4	No	3	Low	Trunk @ fence line; stems grow through fence; full crown to ground
469	Coast live oak	9,8	No	3	Moderate	At fence line; codominant trunks @ base
470	Coast live oak	7,7,7	No	3	Moderate	At fence line; codominant trunks @ base & 4'
471	Coast live oak	9,7,7	No	3	Moderate	At fence line; multiple attachments @ 3'
472	English walnut	7,5,5,5,5,4,4,3	No	3	Low	At fence line; multiple attachments @ 2'; low branches to ground
473	Coast live oak	18	Yes	3	Moderate	Trunk off-site; low branches to ground, crown extends 22' over property
474	London plane	25	Yes	4	Moderate	Street tree; full wide crown; multiple attachments @ 5'; girdling root
475	London plane	19	Yes	4	Moderate	Street tree; full wide crown, codominant trunks @ 6'
476	London plane	33	Yes	4	Moderate	Street tree; full wide crown; multiple attachments @ 4'
477	London plane	25	Yes	4	Moderate	Street tree; full wide crown; multiple attachments @ 6'
478	London plane	28	Yes	4	Moderate	Street tree; full wide crown; multiple attachments @ 6'
479	London plane	21	Yes	3	Low	Street tree; leans E.; large girdling root
480	Chinese pistache	9	No	2	Low	Street tree; extensive trunk wounds.
481	Chinese pistache	13	No	3	Moderate	Street tree; seams on trunk; multiple attachments @ 7'
482	Chinese pistache	9	No	3	Low	Street tree; leans S.
483	Chinese pistache	9	No	3	Low	Street tree; trunk wound, multiple attachments @ 6'
484	Tulip tree	15	No	3	Low	Median strip tree; one sided to west; extensive roots
485	Tulip tree	18	Yes	3	Low	Median strip tree; codominant trunks @ 8' with included bark; extensive roots.
486	Tulip tree	16	No	3	Low	Median strip tree; codominant trunks @ 8' with included bark, extensive roots
487	Tulip tree	15	No	3	Low	Median strip tree; codominant trunks @ 7'; extensive roots.
488	Tulip tree	12	No	3	Low	Median strip tree; codominant trunks @ 8' with included bark, narrow attachment; extensive roots
489	Tulip tree	16	Yes	3	Low	Median strip tree; codominant trunks @ 8' with included bark; very narrow attachment; extensive roots
490	Tulip tree	10	No	3	Low	Median strip tree; multiple attachments @ 8' with included bark; extensive roots with decay
491	Tulip tree	17	Yes	3	Low	Median strip tree; codominant trunks @ 8' with included bark; narrow attachment; extensive roots
492	Tulip tree	16	Yes	3	Low	Median strip tree; codominant trunks @ 8' with included bark; narrow attachment; extensive roots with decay

NO	REVISION	DATE	BY
1	PUD APPLICATION	03/07/2014	

KIER & WRIGHT
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Phone (925) 245-8788
Fax (925) 245-8796

TREE SURVEY OF BART PARCEL & STONERIDGE CORP. CENTER FOR WORKDAY INC.

PLEASANTON CALIFORNIA

DATE FEBRUARY, 2014
SCALE -
SURVEYOR JDT
DRAFTER JDQ
JOB NO. A12517-4
SHEET C1.4 OF - SHEETS

Map/Tag #	Species	DBH	Heritage	Condition	Suitability	Comments
B1	Black locust	11,10,10,9.5,5.5	Yes	3	Low	Multiple attachments @ base; branches to ground; bushy; branch attachments @ acute angles
B2	Black locust	16,11,11,8.5,5	Yes	3	Low	Multiple attachments @ base; branch attachments @ acute angles
B3	Black locust	13,11	Yes	3	Low	Multiple attachments @ base; branch attachments @ acute angles
B4	Black locust	16	Yes	3	Low	Codominant trunks @ 10'; branch attachments @ acute angles
B5	Black locust	11	Yes	2	Low	Codominant trunks @ 10'; branch attachments @ acute angles; sweeping base
B6	Black locust	9,9,8,8	Yes	2	Low	Multiple attachments @ base; thin & upright form; one stem dead
B7	Black locust	9,8,4	Yes	2	Low	Multiple attachments @ base; thin & upright form; stems wrapped around each other
B8	Black locust	10,9	Yes	2	Low	Codominant trunks @ base; thin canopy; upright form; trunk wound
B9	Black locust	10,8	Yes	3	Low	Codominant trunks @ base; thin canopy; upright form; trunk wound
B10	Black locust	10,10,4,4	Yes	3	Low	Codominant trunks @ base; thin canopy; reaching to edge of canopy
B11	Black locust	12	No	2	Low	Failed @ base; leaning E.; poor structure
B12	Black locust	11,10,8,8	Yes	3	Low	Multiple attachments @ base; one-sided to E.; included bark; poor structure
B13	Black locust	12,12	Yes	2	Low	Codominant trunks @ base; one-sided to E.; included bark; trunk decay
B14	Black locust	7	No	3	Low	Single stem; spiral form; unstable
B15	Black locust	6,4	No	2	Low	Codominant trunks @ base, one-sided to E.; included bark; spiral form
B16	Black locust	6,5	Yes	3	Low	Codominant trunks @ base; one-sided to E.; included bark; spiral form
B17	Black locust	8,7	Yes	3	Low	Codominant trunks @ 3'; one-sided to E.; included bark
B18	Black locust	6	No	3	Low	One-sided to S.; tall narrow form
B19	Black locust	8,5	Yes	3	Low	Codominant trunks @ base; tall narrow form
B20	Black locust	6	No	3	Low	Tall narrow form; leans W
B21	Black locust	6	No	3	Low	Tall narrow form; leans W.; crook @ 15'
B22	Black locust	8,4	Yes	3	Low	Tall narrow form; leans W.; dead minor stem
B23	Black locust	6,5	Yes	3	Low	Tall narrow form; leans S.; codominant trunk @ base.
B24	Black locust	6,4	Yes	3	Low	Tall narrow form; curved trunk; codominant trunk @ base
B25	Black locust	7,5	Yes	3	Low	Tall narrow form; crooked form; codominant trunks @ base
B26	Black locust	6,6	Yes	3	Low	Tall narrow form; spiral form; codominant trunks @ base; included bark
B27	Black locust	7,5,3	Yes	3	Low	Tall narrow form; spiral form; codominant trunks @ base; searching for light
B28	Black locust	16	Yes	2	Low	Full canopy; failed codominant stem; basal decay
B29	Black locust	9,6,5,5	Yes	3	Low	Thin & one-sided crown; multiple attachments @ base with included bark
B30	Black locust	8,7	Yes	3	Low	Thin & one-sided crown; included bark; curved trunk
B31	Black locust	7	No	3	Low	Thin narrow form; leans W
B32	Black locust	9	Yes	3	Low	Thin narrow form; no branches until 30'
B33	Black locust	14,13,7	Yes	2	Low	Multiple attachments @ base; basal decay; attachment failure; machete wounds
B34	Black locust	11,7,5,5	Yes	3	Low	Multiple attachments @ base; leaning heavily S
B35	Black locust	22,9,6	Yes	3	Low	Multiple attachments @ base; full canopy; trunk decay
B36	Black locust	15	Yes	3	Low	Leaning heavily to W
B37	Black locust	21,20,18,9	Yes	3	Low	Multiple attachments @ base; full canopy; decay in middle trunk
B38	Black locust	8	Yes	3	Low	Crook in trunk @ 15'; thin canopy; narrow form
B39	Black locust	6	No	2	Low	Thin narrow form; leaning heavily S
B40	Black locust	8,5	Yes	3	Low	Thin narrow form; leaning S
B41	Black locust	9,7	Yes	3	Low	Thin narrow form; leaning S.; multiple attachments @ base
B42	Black locust	8	Yes	3	Low	Thin narrow form; leaning W.; spiral form
B43	Black locust	10	No	3	Low	Thin narrow form; leaning heavily W.; crook in trunk @ 15'
B44	Black locust	7	No	3	Low	Thin narrow form; leaning heavily W
B45	Black locust	9,5	Yes	3	Low	Thin narrow form; codominant trunks @ base.
B46	Black locust	14,6,5,3	Yes	4	Moderate	Multiple attachments @ base; full; canopy
B47	Black locust	9,6	Yes	3	Low	Codominant trunks @ base; leans heavily N.
B48	Black locust	12	Yes	2	Low	Failed @ base; leans N.
B49	Black locust	11	No	1	Low	Failed @ base; leaning on #48.
B50	Black locust	11,8,6,6,5,5	Yes	3	Low	Multiple attachments @ base; one-sided to N.
B51	Black locust	7,7,5,3,2,2	Yes	3	Low	Multiple attachments @ base; thin canopy; bushy form
B52	Black locust	7	Yes	3	Low	Narrow form; leans N.
B53	Black locust	12,6	Yes	3	Low	Narrow form; leans N.; crook @ 20'
B54	Black locust	12	Yes	3	Low	Narrow form; tall.
B55	Black locust	12	Yes	3	Low	Narrow form; leans heavily N.
B56	Black locust	11	Yes	3	Low	Narrow form; crowded by neighbors
B57	Black locust	8	Yes	3	Low	Narrow form; crook in trunk @ 25'.
B58	Black locust	7	Yes	3	Low	Narrow form; leans W
B59	Black locust	11,6	Yes	3	Low	Narrow form; codominant @ base; included bark.
B60	Black locust	8	Yes	3	Low	Narrow form; no branches to 30'
B61	Black locust	8	Yes	3	Low	Narrow form; no branches to 30'
B62	Black locust	11,11	Yes	3	Low	Codominant trunks @ base; narrow form
B63	Black locust	13	Yes	3	Low	Narrow form; one-sided to E
B64	Black locust	11,11,9,8	Yes	2	Low	Narrow form; one-sided to E
B65	Black locust	6	No	3	Low	Narrow form; leans heavily E
B66	Black locust	10,7	Yes	3	Low	Narrow form; multiple attachments @ base; trunk wound; included bark
B67	Black locust	10,5	Yes	3	Low	Narrow form; multiple attachments @ base; included bark
B68	Black locust	10,9,9,9	Yes	2	Low	Multiple attachments @ base; included bark; trunk wound
B69	Black locust	11,10,7,6	Yes	2	Low	Multiple attachments @ base; most of growth epicormic
B70	Black locust	11,11	Yes	2	Low	Codominant trunks @ base; poor structure; crooked form
B71	Black locust	13	Yes	4	Moderate	Codominant trunks @ base; poor structure; crooked form
B72	Black locust	6,3,3,2,2	No	3	Low	Small & bushy
B73	Black locust	11,10	Yes	3	Low	Codominant trunks @ base; wound; included bark; crooked form
B74	Black locust	12,8,8	Yes	3	Low	Codominant trunks @ base; basal wound; included bark; one-sided to E
B75	English walnut	35	Yes	3	Low	Hollow; wounds from several branch failures; leans W.; full crown
B76	Olive	6,6,4,4	No	4	High	No fruit; bushy young olive
B77	Blackwood acacia	10	No	3	Low	In grove; close to freeway
B78	Blackwood acacia	9,9,5	Yes	3	Low	In grove; close to freeway
B79	Blackwood acacia	6	No	3	Low	In grove; close to freeway
B80	Blackwood acacia	8,7,6,6,6,5,5,5	No	3	Low	In grove; close to freeway; multiple attachments @ base
B81	Blackwood acacia	8,4,4	No	3	Low	In grove; close to freeway; multiple attachments @ base
B82	Blackwood acacia	12,9,8,7,6	Yes	3	Low	In grove; close to freeway; multiple attachments @ base
B83	Western sycamore	48	Yes	4	High	Off-site; no tag. Caltrans ROW; codominant trunks @ 8', heavy branches towards freeway; crown bows to E
B84	Black locust	6,6,6,4	No	4	Moderate	Multiple attachments @ base; low bushy form
B85	River red gum	7	No	3	Low	Crooked spiral form; young recently planted
B86	London plane	24	Yes	4	Moderate	Codominant trunks @ 15'; full crown; one-sided to parking lot
B87	London plane	14	Yes	3	Low	Codominant trunks @ 8'; narrow form; crowded by neighbors
B88	London plane	23	Yes	4	High	Multiple attachments @ 12'
B89	Blackwood acacia	10	No	3	Low	Healthy young tree growing within canopy of #88
B90	London plane	18	Yes	4	Moderate	Strong central leader; one-sided to parking lot
B91	London plane	17	Yes	3	Moderate	Codominant trunks @ 7'; thin canopy
B92	London plane	19	Yes	4	Moderate	One-sided towards parking lot; epicormic growth
B93	London plane	21	Yes	4	Moderate	One-sided towards parking lot; epicormic growth; poorly pruned
B94	London plane	12	No	3	Low	Codominant trunks @ 10' thin; crowded by neighbors
B95	London plane	21	Yes	4	Moderate	Codominant trunks @ 15'; one-sided to parking lot; prune for structure
B96	London plane	21	Yes	4	High	Codominant trunks @ 20'; spreading crown
B97	London plane	12	Yes	3	Low	Codominant trunks @ 12' crown sweeps S.; poor form
B98	London plane	12	Yes	3	Low	Thin & one-sided crown sweeps N
B99	London plane	20	Yes	4	High	Codominant trunks @ 12'; heavy branches over parking lot
B100	London plane	23	Yes	4	High	Codominant trunks @ 15'; spreading crown; epicormic growth
B101	London plane	23	Yes	4	Moderate	One-sided & leaning S
B102	London plane	9	No	3	Low	Leans heavily E.; crowded by neighbors
B103	London plane	9	Yes	3	Low	One-sided to S.; crowded by neighbors
B104	London plane	22	Yes	4	High	Multiple attachments @ 6' spreading crown
B105	London plane	24	Yes	4	High	Multiple attachments @ 6' spreading crown
B106	London plane	19	Yes	4	High	Multiple attachments @ 6', spreading crown

NO.	REVISION	BY
1	PUD APPLICATION 03/07/2014	

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TREE SURVEY
OF
BART PARCEL & STONERIDGE CORP. CENTER
FOR
WORKDAY INC.

PLEASANTON CALIFORNIA

DATE	FEBRUARY, 2014
SCALE	1" = 40'
SURVEYOR	JDT
DRAFTER	JDQ
JOB NO.	A12517-4
SHEET	C1.5
OF	SHEETS

PARKING STRUCTURE
FIRST LEVEL 345.0

ACCESS CONTROL GATE

PROPOSED BART AND PLEASANTON POLICE STATION

PROPOSED BUILDING FF 343.5

EXIST

STONERIDGE MALL ROAD

SEE SHEET C2.2

SEE SHEET C2.4

NORTH

0 15 30 60 90

Scale 1" = 30 ft

LEGEND

- AREA DRAIN
- STORM DRAIN CATCH BASIN
- STORM DRAIN JUNCTION BOX
- STORM DRAIN MANHOLE
- FL FLOW LINE
- FF FINISH FLOOR
- PV PAVEMENT
- RE RIM ELEVATION
- 23.8 SPOT ELEVATION
- X"SD STORM DRAIN LINE
- TC TOP OF CURB
- BIO-RETENTION PLANTER (1/C5.1)
- FLOW DIRECTION

KEY NOTES

(A) EXISTING UTILITY LINES SHALL BE RELOCATED AS REQUIRED PER CITY REQUIREMENTS

(B) EXISTING ELECTRICAL LINES TO REMAIN

(C) EXISTING PROPRIETY LINE TO BE ADJUSTED BY SEPARATE LLA PROCESS

(D) EXISTING ANODE TO BE RELOCATED PER LAVIMA REQUIREMENTS

KEY MAP

INTERSTATE 580 EASTBOUND
HIGHWAY 680
STONERIDGE MALL ROAD
HACIENDA DRIVE
EMBARCADERO COURT

NO.	REVISION	BY

NO.	REVISION	BY
1	PUD APPLICATION 03/27/2014	

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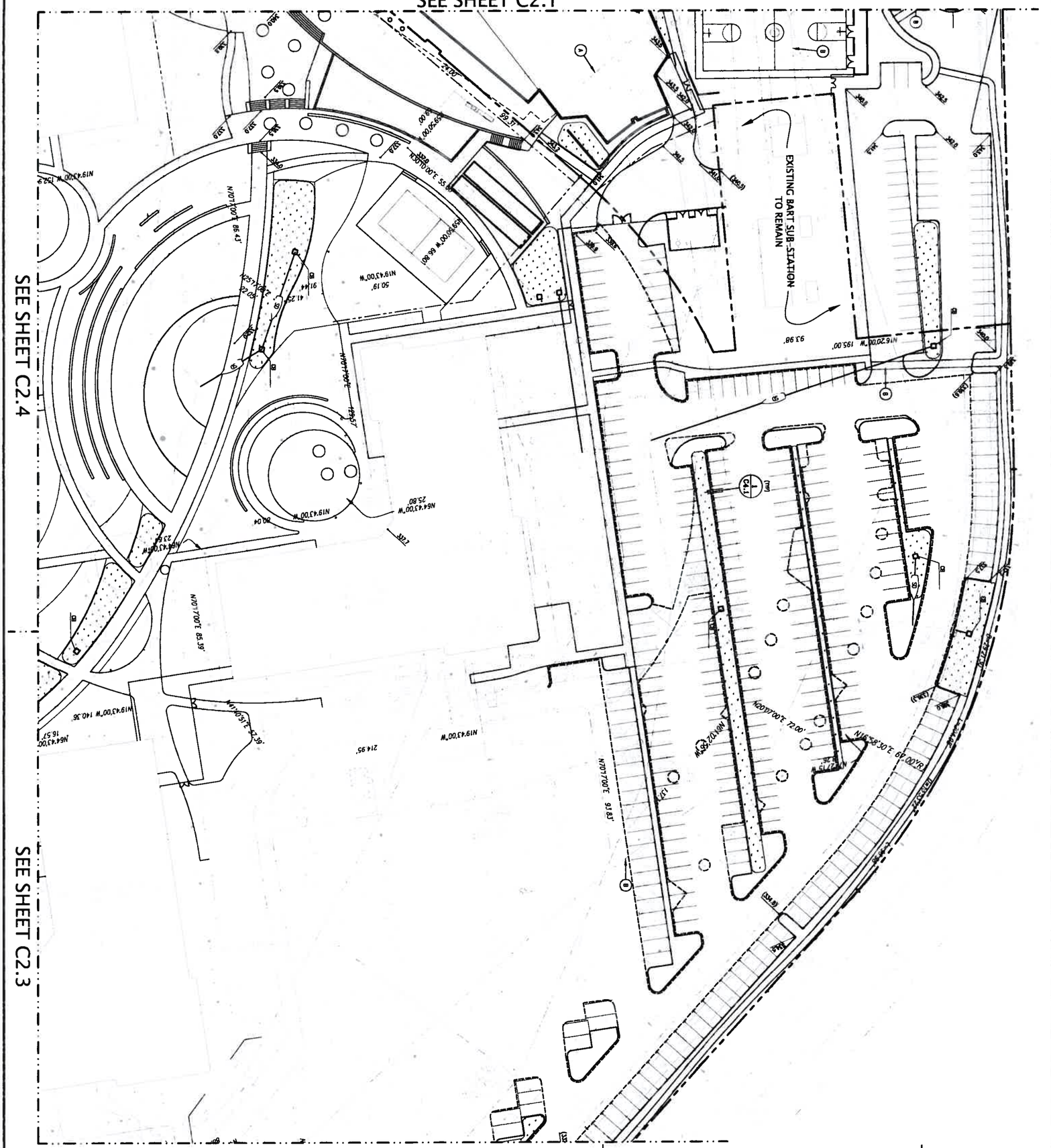
PRELIMINARY GRADING & DRAINAGE PLAN OF STONERIDGE CORPORATE PLAZA EXPANSION FOR WORKDAY

PLEASANTON CALIFORNIA

DATE	FEB. 2014
SCALE	1" = 30'
DESIGNER	SMC
JOB NO	A12517-4
SHEET	C2.1
OF	SHEETS

SEE SHEET C2.1



KEY NOTES

(A) EXISTING UTILITY LINES SHALL BE RELOCATED AS REQUIRED PER CITY REQUIREMENTS

(B) EXISTING ELECTRICAL LINES TO REMAIN

(C) EXISTING PROPERTY LINE TO BE ADJUSTED BY SEPARATE LLA PROCESS

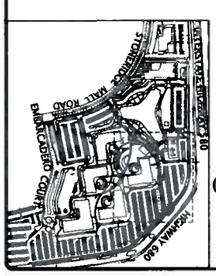
(D) STORM DRAIN MAINS TO BE RELOCATED PER LAVINIA REQUIREMENTS

LEGEND

- AREA DRAIN
- STORM DRAIN CATCH BASIN
- STORM DRAIN JUNCTION BOX
- STORM DRAIN MANHOLE
- FL FLOW LINE
- FF FINISH FLOOR
- PV PAVEMENT
- RE RIM ELEVATION
- 23.8 SPOT ELEVATION
- 23.8 TC STORM DRAIN LINE
- TOP OF CURB
- BIO-RETENTION PLANTER (C2.1)
- FLOW DIRECTION

0 15 30 60 90
Scale 1" = 30 ft

NORTH



KEY MAP

SHEET OF SHEETS	C2.2	DESIGNER	SMC	DATE	FEB. 2014	PRELIMINARY GRADING & DRAINAGE PLAN OF STONERIDGE CORPORATE PLAZA EXPANSION FOR WORKDAY	
JOB NO	A12517.4	SCALE	1" = 30'			PLEASANTON	CALIFORNIA

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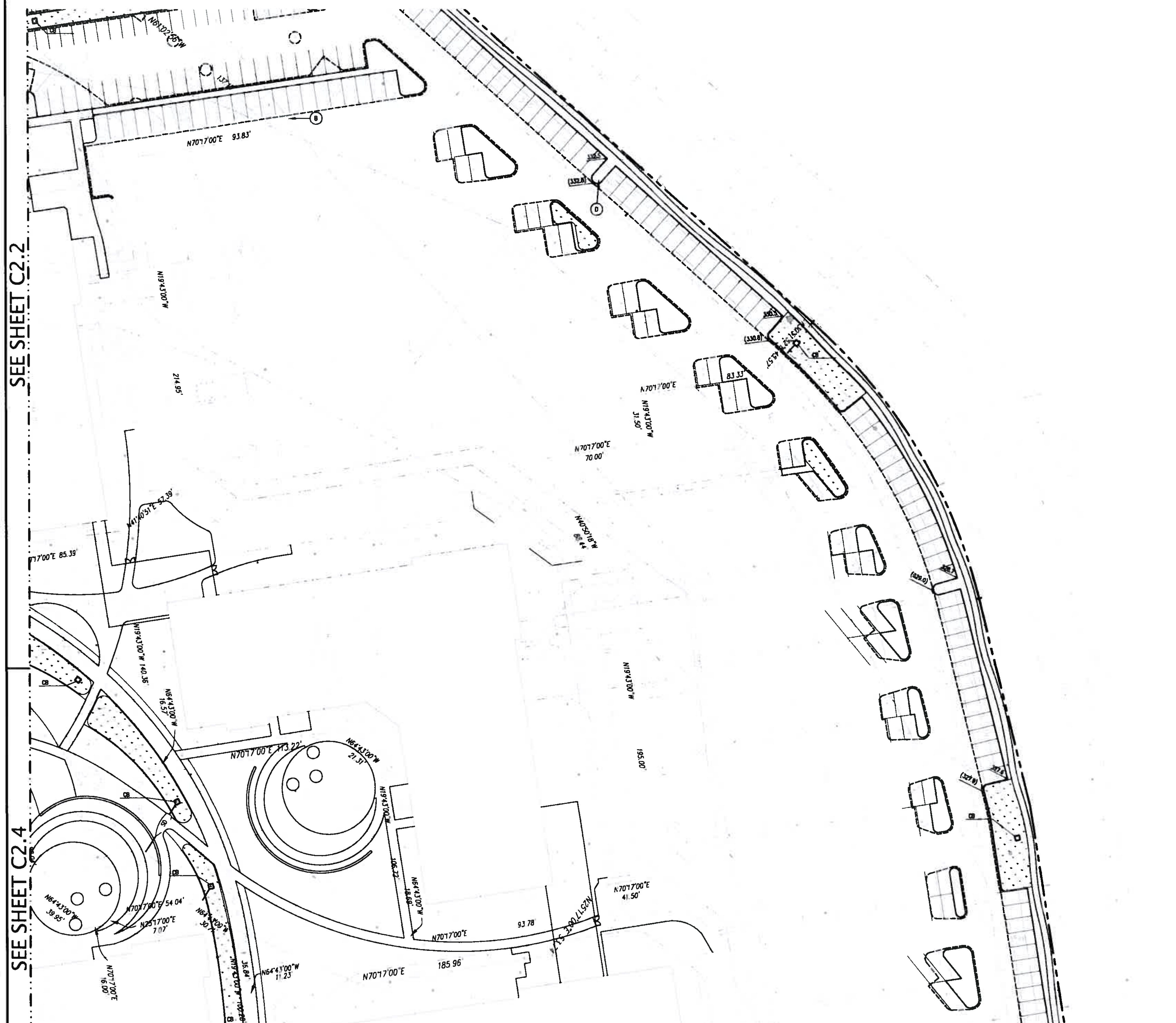
NO.	REVISION	BY	NO.	REVISION	BY
1	PUD APPLICATION 03/27/2014		6		
2			7		
3			8		
4			9		
5			10		



SEE SHEET C2.2

SEE SHEET C2.4

SEE SHEET C2.5

NORTH

0 15 30 60 90

Scale 1" = 30 ft

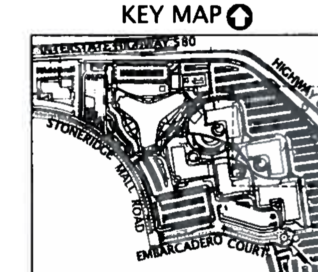
LEGEND

▲	AREA DRAIN
◘	STORM DRAIN CATCH BASIN
■	STORM DRAIN JUNCTION BOX
●	STORM DRAIN MANHOLE
FL	FLOW LINE
FF	FINISH FLOOR
PV	PAVEMENT
RE	RIM ELEVATION
23.8	SPOT ELEVATION
X"SD	STORM DRAIN LINE
TC	TOP OF CURB
	BIO-RETENTION PLANTER (1 / C3.1)
→	FLOW DIRECTION

KEY NOTES

(A)	EXISTING UTILITY LINES SHALL BE RELOCATED AS REQUIRED PER CITY REQUIREMENTS
(B)	EXISTING ELECTRICAL LINES TO REMAIN
(C)	EXISTING PROPRIETY LINE TO BE ADJUSTED BY SEPARATE LLA PROCESS
(D)	EXISTING ANODE TO BE RELOCATED PER LAVWMA REQUIREMENTS

KEY MAP



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	PUD APPLICATION 03/27/2014	

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PRELIMINARY GRADING & DRAINAGE PLAN OF STONERIDGE CORPORATE PLAZA EXPANSION FOR WORKDAY

PLEASANTON CALIFORNIA

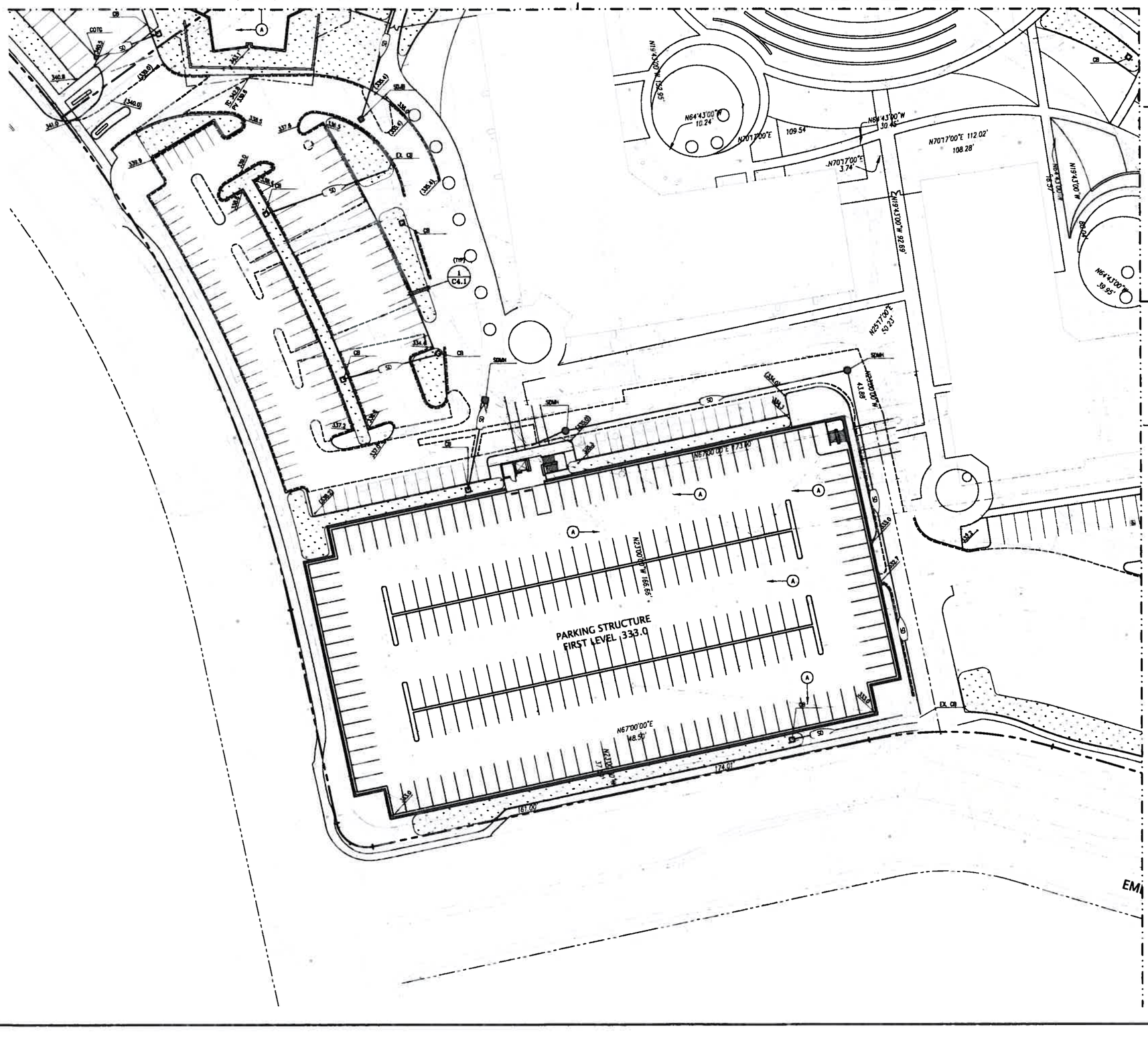
DATE	FEB. 2014
SCALE	1" = 30'
DESIGNER	SMC
JOB NO	A12517.4
SHEET	C2.3
OF	SHEETS

SEE SHEET C2.1

SEE SHEET C2.2

SEE SHEET C2.3

SEE SHEET C2.5



NORTH

0 15 30 60 90

Scale 1" = 30 ft

LEGEND

- AREA DRAIN
- STORM DRAIN CATCH BASIN
- STORM DRAIN JUNCTION BOX
- STORM DRAIN MANHOLE
- FL FLOW LINE
- FF FINISH FLOOR
- PV PAVEMENT
- RE RIM ELEVATION
- 23.8 SPOT ELEVATION
- X"SD STORM DRAIN LINE
- TC TOP OF CURB
- BIO-RETENTION PLANTER (C3.1)
- FLOW DIRECTION

KEY NOTES

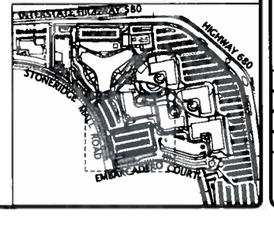
(A) EXISTING UTILITY LINES SHALL BE RELOCATED AS REQUIRED PER CITY REQUIREMENTS

(B) EXISTING ELECTRICAL LINES TO REMAIN

(C) EXISTING PROPRIETY LINE TO BE ADJUSTED BY SEPARATE LLA PROCESS

(D) EXISTING ANODE TO BE RELOCATED PER LAWMA REQUIREMENTS

KEY MAP



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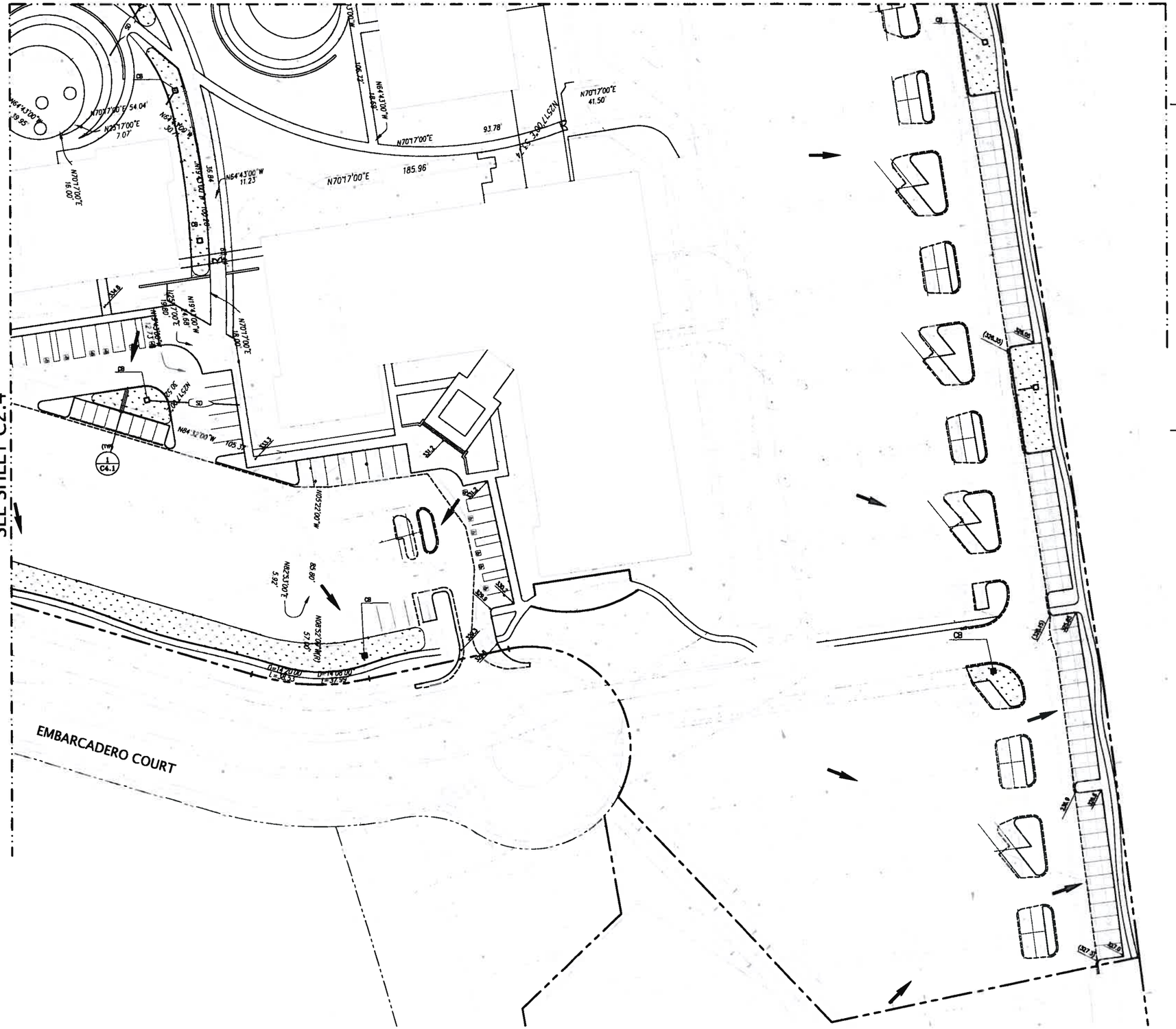
PRELIMINARY GRADING & DRAINAGE PLAN OF STONERIDGE CORPORATE PLAZA EXPANSION FOR WORKDAY

PLEASANTON CALIFORNIA

DATE	FEB. 2014
SCALE	1" = 30'
DESIGNER	SMC
JOB NO	A12517.4
SHEET	C2.4
OF	SHEETS

SEE SHEET C2.3

SEE SHEET C2.4



SEE SHEET C2.3

NORTH

0 15 30 60 90

Scale 1" = 30 ft

LEGEND

- AREA DRAIN
- STORM DRAIN CATCH BASIN
- STORM DRAIN JUNCTION BOX
- STORM DRAIN MANHOLE
- FL — FLOW LINE
- FF — FINISH FLOOR
- PV — PAVEMENT
- RE — RIM ELEVATION
- 23.8 — SPOT ELEVATION
- X"SD — STORM DRAIN LINE
- TC — TOP OF CURB
- BIO-RETENTION PLANTER (1/C3)
- FLOW DIRECTION

KEY NOTES

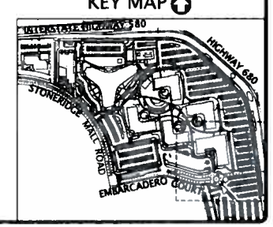
(A) EXISTING UTILITY LINES SHALL BE RELOCATED AS REQUIRED PER CITY REQUIREMENTS

(B) EXISTING ELECTRICAL LINES TO REMAIN

(C) EXISTING PROPRIETY LINE TO BE ADJUSTED BY SEPARATE LLA PROCESS

(D) EXISTING AMODE TO BE RELOCATED PER LAVINIA REQUIREMENTS

KEY MAP



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1	PUD APPLICATION 03.27.2014	

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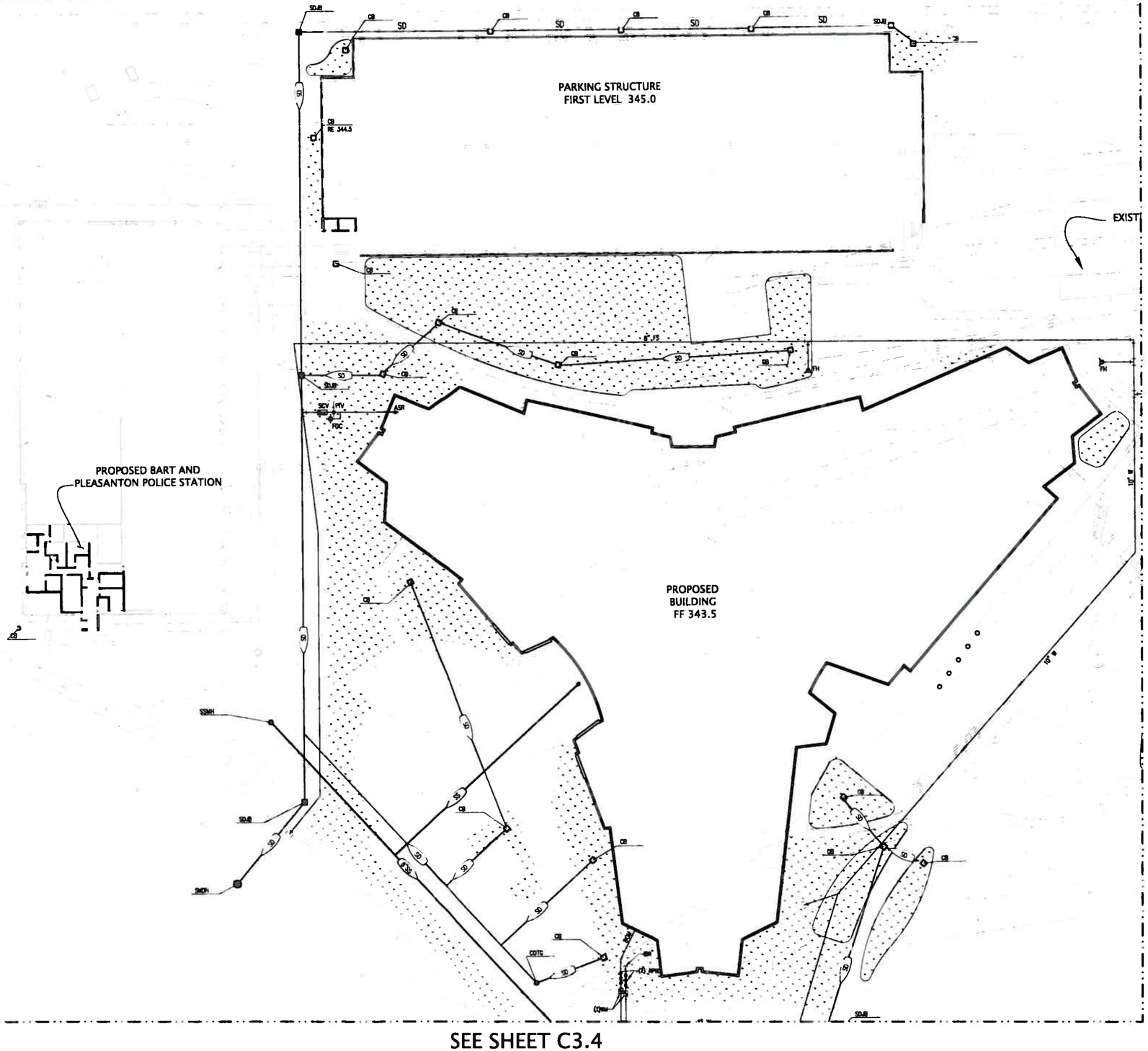
PRELIMINARY GRADING & DRAINAGE PLAN OF STONERIDGE CORPORATE PLAZA EXPANSION FOR WORKDAY

PLEASANTON CALIFORNIA

DATE	FEB 2014
SCALE	1" = 30'
DESIGNER	SMC
JOB NO.	A12517-4
SHEET	C2.5
OF	SHEETS



NORTH

0 15 30 60 90

Scale 1" = 30 ft

LEGEND

ASR	AUTOMATIC SPRINKLER RISER
	BACK FLOW PREVENTION DEVICE
	EXISTING UTILITY TO BE ABANDONDED BY REMOVAL
	FIRE DEPARTMENT CONNECTION
	FIRE HYDRANT & VALVE
FS	FIRE SERVICE
	POST INDICATOR VALVE
SS	SANITARY SEWER
COTC	SANITARY SEWER CLEANOUT TO GRADE
SSMH	SANITARY SEWER MANHOLE
	SINGLE CHECK VALVE
	STORM DRAIN CATCH BASIN
	STORM DRAIN JUNCTION BOX
SDMH	STORM DRAIN MANHOLE
X"SD	STORM DRAIN LINE
SDMH	STORM DRAIN MANHOLE
	WATER METER
WS	WATER SERVICE

KEY NOTES

KEY MAP

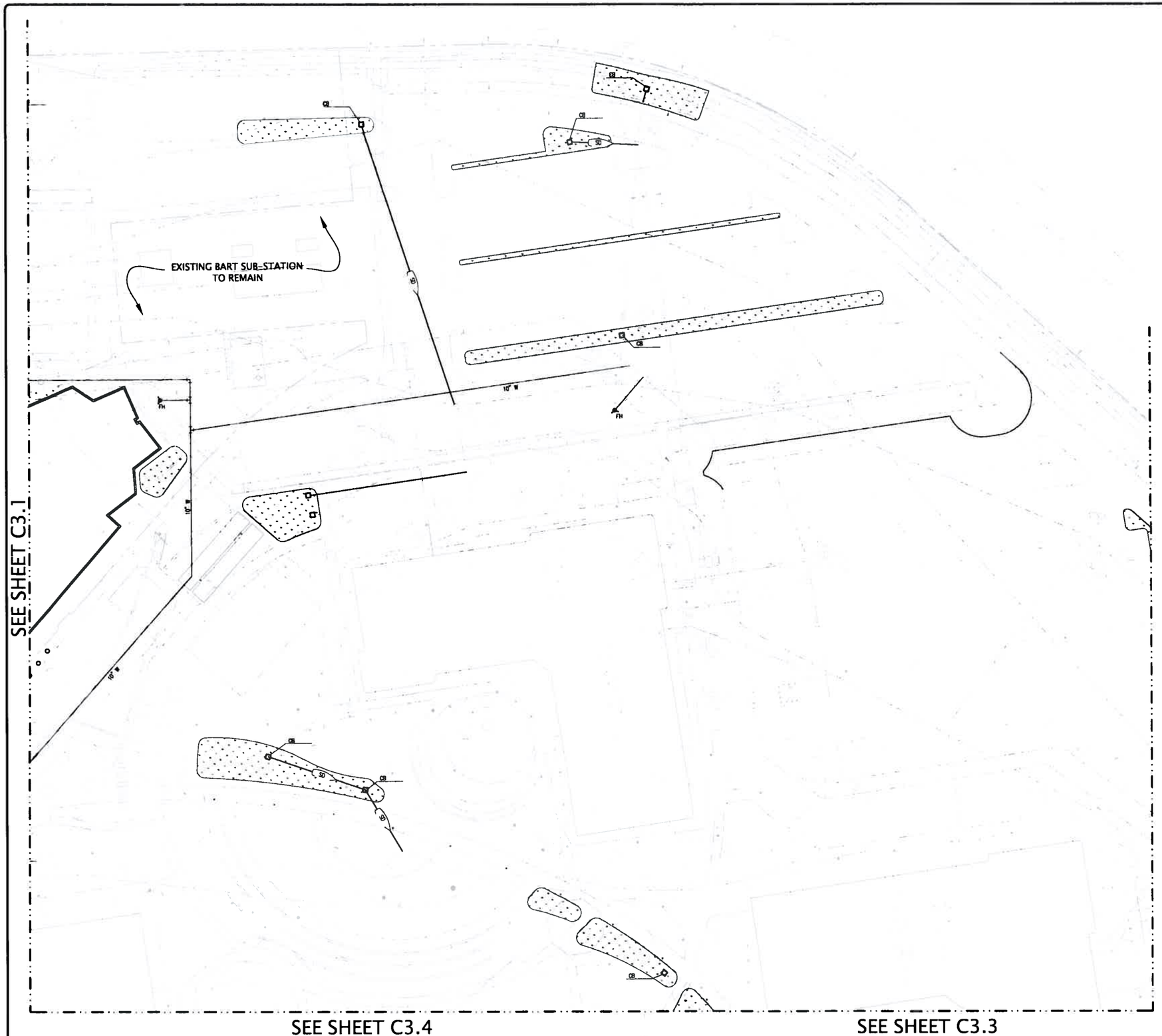
NO.	REVISION	BY

NO.	REVISION	BY
	PUD APPLICATION 03/27/2014	

KIER & WRIGHT
CIVIL ENGINEERS & SURVEYORS, INC.
2850 Collier Canyon Road
Livermore, California 94551
Phone (925) 245-8788
Fax (925) 245-8796

PRELIMINARY UTILITY PLAN
OF
STONERIDGE CORPORATE PLAZA EXPANSION
FOR
WORKDAY
PLEASANTON CALIFORNIA

DATE	FEB., 2014
SCALE	1" = 30'
DESIGNER	SMC
JOB NO.	A12517-4
SHEET	C3.1
OF	SHEETS



NORTH

0 15 30 60 90

Scale 1" = 30 ft

LEGEND

ASR	AUTOMATIC SPRINKLER RISER
	BACK FLOW PREVENTION DEVICE
	EXISTING UTILITY TO BE ABANDONDED BY REMOVAL
	FIRE DEPARTMENT CONNECTION
	FIRE HYDRANT & VALVE
FS	FIRE SERVICE
	POST INDICATOR VALVE
SS	SANITARY SEWER
COTG	SANITARY SEWER CLEANOUT TO GRADE
SSMH	SANITARY SEWER MANHOLE
	SINGLE CHECK VALVE
	STORM DRAIN CATCH BASIN
	STORM DRAIN JUNCTION BOX
SDMH	STORM DRAIN MANHOLE
X"SD	STORM DRAIN LINE
SDMH	STORM DRAIN MANHOLE
WM	WATER METER
WS	WATER SERVICE

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DATE	FEB. 2014
SCALE	1" = 30'
DESIGNER	SMC
JOB NO	A12517-4
SHEET	C3.2
OF	SHEETS

SEE SHEET C3.2

SEE SHEET C3.4

SEE SHEET C3.5

NORTH

0 15 30 60 90

Scale 1" = 30 ft

LEGEND

ASR	AUTOMATIC SPRINKLER RISER
	BACK FLOW PREVENTION DEVICE
	EXISTING UTILITY TO BE ABANDONDED BY REMOVAL
	FIRE DEPARTMENT CONNECTION
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KEY NOTES

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PLEASANTON CALIFORNIA

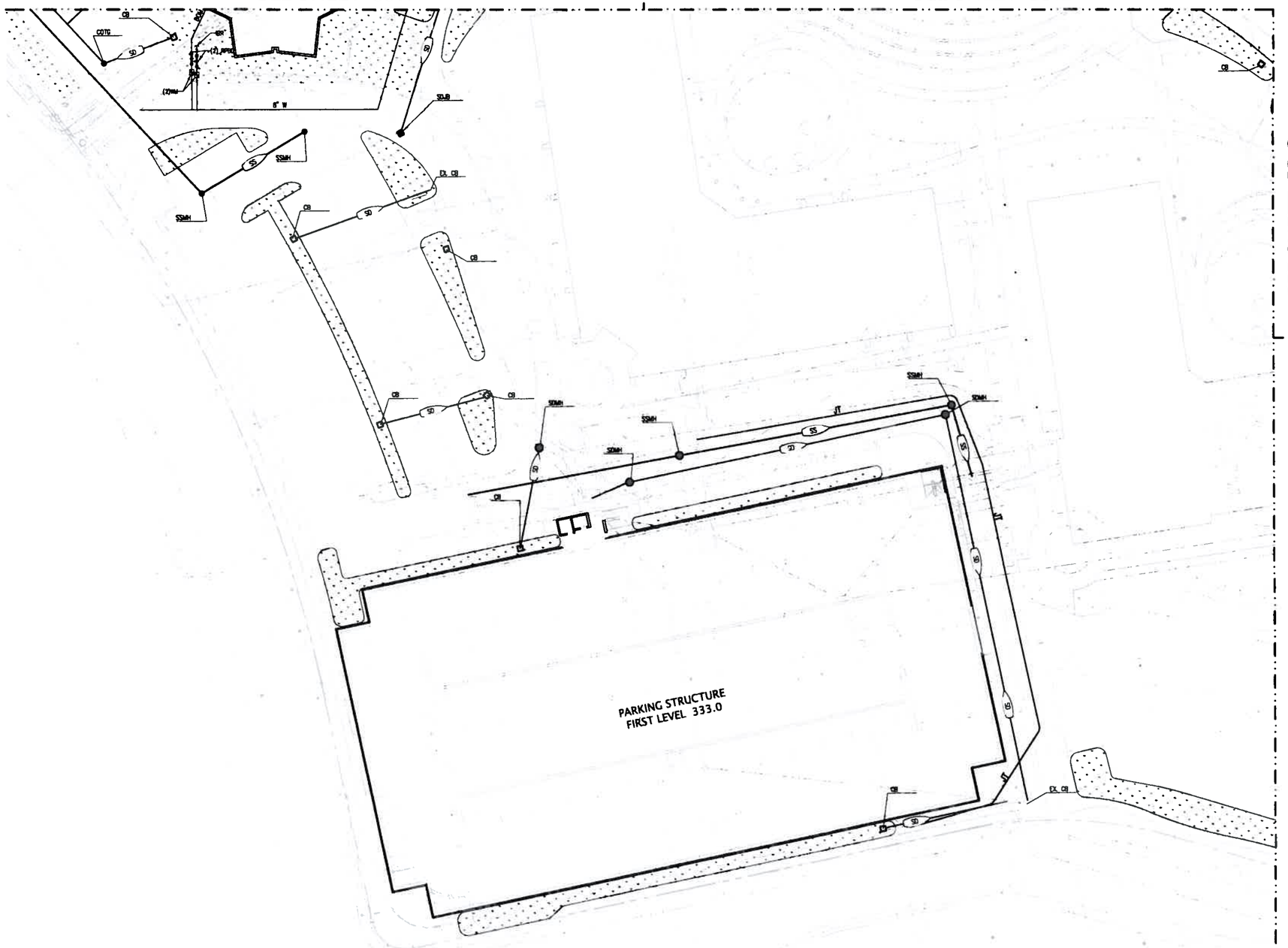
DATE	FEB. 2014
SCALE	1" = 30
DESIGNER	SMC
JOB NO.	A12517-4
SHEET	C3.3
OF	SHEETS

SEE SHEET C3.1

SEE SHEET C3.2

SEE SHEET C3.3

SEE SHEET C3.5



NORTH

0 15 30 60 90

Scale 1" = 30 ft

LEGEND

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	BACK FLOW PREVENTION DEVICE
	EXISTING UTILITY TO BE ABANDONDED BY REMOVAL
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	WATER METER
WS	WATER SERVICE

KEY NOTES

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JOB NO	A13517.4
SHEET	C3.4
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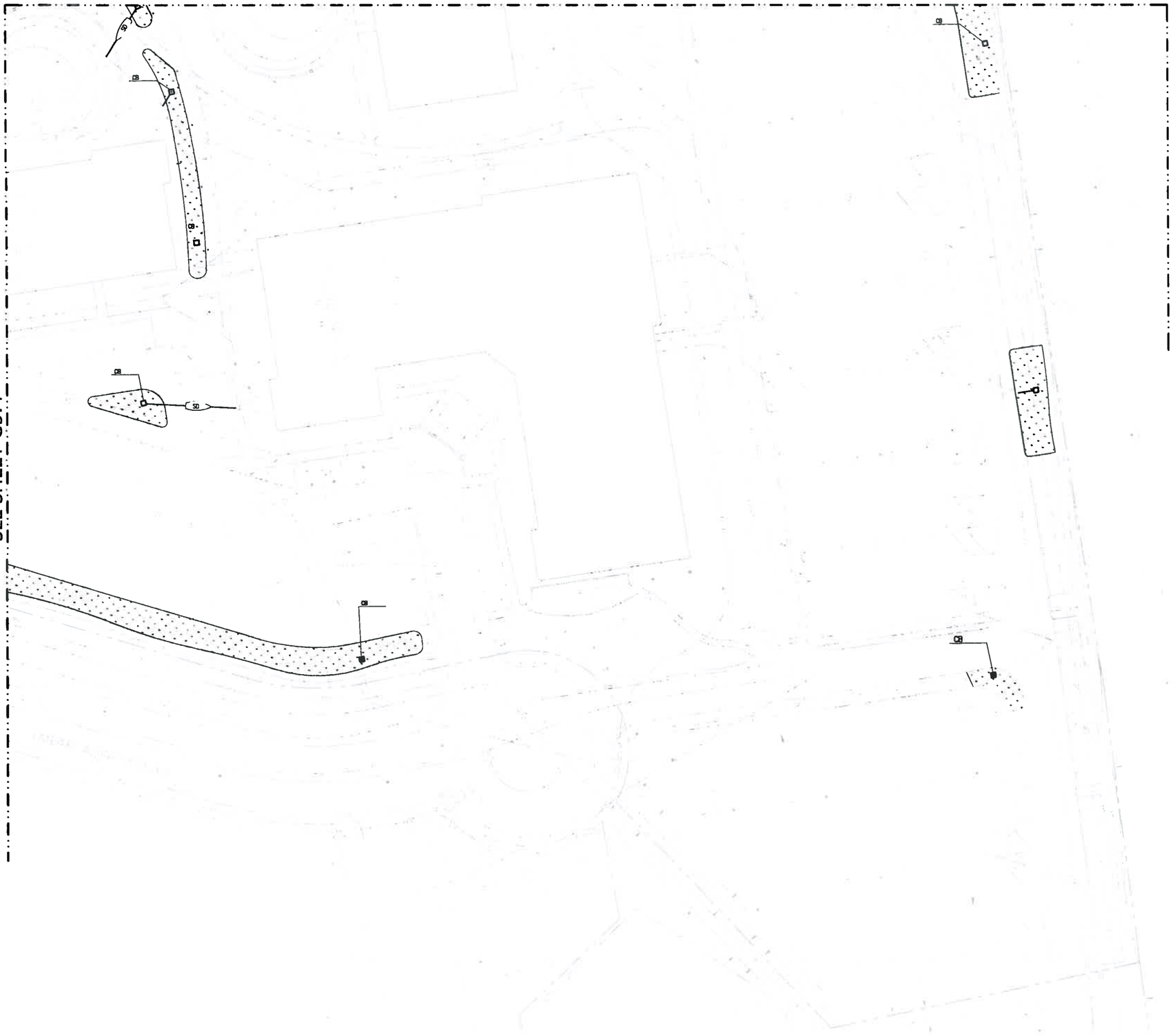
SEE SHEET C3.3

SEE SHEET C3.4

SEE SHEET C3.3



NORTH

0 15 30 60 90

Scale 1" = 30 ft

LEGEND

ASR	AUTOMATIC SPRINKLER RISER
	BACK FLOW PREVENTION DEVICE
	EXISTING UTILITY TO BE ABANDONDED BY REMOVAL
	FIRE DEPARTMENT CONNECTION
	FIRE HYDRANT & VALVE
FS	FIRE SERVICE
	POST INDICATOR VALVE
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KEY NOTES

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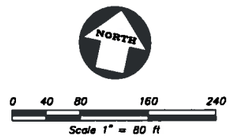


LEGEND

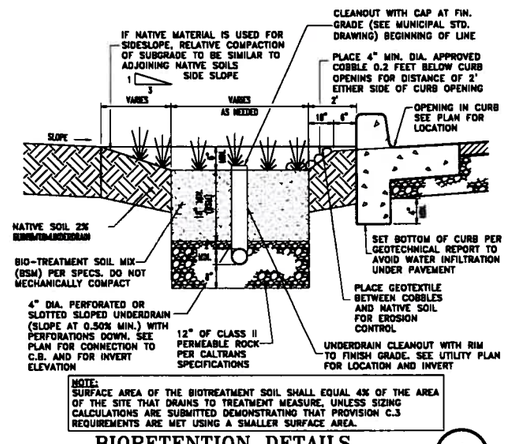
- PROPOSED IMPERVIOUS AREA*
- LANDSCAPE AREA
- BIO-TREATMENT AREA

* PROPOSED BUILDING, CONCRETE, ASPHALT, DECOMPOSED GRANITE, AND WATER FEATURE AREAS

PRE-CONSTRUCTION		
EXISTING IMPERVIOUS AREA (AC)	EXISTING PERVIOUS AREA (AC)	TOTAL SITE AREA (AC)
19.15	13.47	32.62

POST-CONSTRUCTION		
TOTAL IMPERVIOUS AREA (AC)	TOTAL PERVIOUS AREA (AC)	TOTAL SITE AREA (AC)
24.62	8.00	32.62

TOTAL DISTURBED AREA (AC)
19.94



NOTE:
SURFACE AREA OF THE BIOTREATMENT SOIL SHALL EQUAL 4% OF THE AREA OF THE SITE THAT DRAINS TO TREATMENT MEASURE, UNLESS SIZING CALCULATIONS ARE SUBMITTED DEMONSTRATING THAT PROVISION C.3 REQUIREMENTS ARE MET USING A SMALLER SURFACE AREA.

BIORETENTION DETAILS — 1

NOT TO SCALE

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1	PUD APPLICATION	
2	REVISION 03/27/2014	

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STORM WATER QUALITY CONTROL PLAN OF STONERIDGE CORPORATE PLAZA EXPANSION FOR WORKDAY

PLEASANTON CALIFORNIA

DATE	FEB., 2014
SCALE	1" = 80'
DESIGNER	SMC
JOB NO.	A12517.4
SHEET	C4.1
OF	SHEETS

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MATERIALS SCHEDULE - WORKDAY

SYMBOL	DESCRIPTION	DETAIL	PRODUCT / ITEM #	FINISH/COLOR	SOURCE
PAVING & HEADERS					
A1	CONCRETE UNIT PAVER-PED	ARCHITECTURAL PAVERS 8"x16"			ACKERSTONE
A2	CONCRETE UNIT PAVER-PED	ARCHITECTURAL PAVERS 8"x16"			ACKERSTONE
A3	INTEGRAL COLORED CONCRETE PAVING - PED	INTEGRAL COLOR SAW CUT	BROOM FINISH / BORDER	SAWS COLORS	
A4	CONCRETE UNIT PAVER-VEH	ARCHITECTURAL PAVERS 8"x16"			ACKERSTONE
A4a	CONCRETE UNIT PAVER-VEH	ARCHITECTURAL PAVERS 8"x16"			ACKERSTONE
A5	ASPHALT PAVING				
A6	STABILIZED DECOMPOSED GRANITE	PER MANUFACTURER'S DIRECTIONS	CALIFORNIA GOLD DG STABILIZER SOLUTIONS BINDER	LONGSDORF SRV. STABILIZER SOLUTIONS	
A7	TRUNCATED DOVE PAVER	10"x 2"x8cm TRUNCATED DOVE PAVER			
A8	LANDSCAPE HEADER	4.25"X4" COBBLE LINE	NATURAL WILL FINISH		PERMALOC COBBLE LINE
A10	PAVER EDGE RESTRAINT	4.25"x 8" COBBLE	NATURAL WILL FINISH		PERMALOC COBBLE EDGE
A11	SAND VOLLEYBALL COURT				
A12	CRUSHED GRANITE SHELL BOCCE COURT	CRUSHED GRANITE BOCCE SURFACE/CONCRETE CURB BUMPER	NATURAL/THROWN FINISH	LONGSDORF/CUSTOM FABRICATION	
A13	BASKETBALL COURT	-	-	-	
A14	SPECIALTY PAVING				
A15	GRASS PAVER	GRASS PAVER			INVISIBLE STRUCTURES, INC.
STAIR, WALL, & CURB					
B1	FREESTANDING CONCRETE SEATWALL	PUMP CONCRETE, INTEGRAL COLOR	VERY SAND BLAST/ CHARCOAL		
B2	CONCRETE RETAINING WALL	PUMP CONCRETE, INTEGRAL COLOR	VERY SAND BLAST/ CHARCOAL		
B3	CONCRETE ARTIFICIAL WATER SEATWALL	PUMP CONCRETE, INTEGRAL COLOR	VERY SAND BLAST/ CHARCOAL		
B4	CONCRETE STEPS	PUMP CONCRETE, INTEGRAL COLOR	BROOM FINISH / CHARCOAL		
B5	RAILING	TUBE STOCK, FLAT STOCK ALUMINUM	BRUSHED ALUMINUM		
B6	GUARDRAIL	TUBE STOCK, FLAT STOCK ALUMINUM	BRUSHED ALUMINUM		
B7	PERIMETER SECURITY FENCE	OMEGA ARCHITECTURAL FENCE SYSTEM	BLACK POWDERCOAT		
B8	PERIMETER FENCE GATE - VEHICULAR	OMEGA ARCHITECTURAL FENCE SYSTEM	BLACK POWDERCOAT		
B9	CONCRETE CURB	PUMP CONCRETE, INTEGRAL COLOR	MED SAND BLAST / CHARCOAL		
B10	PERIMETER FENCE GATE - PEDESTRIAN	OMEGA ARCHITECTURAL FENCE SYSTEM	BLACK POWDERCOAT		
B11	SIGNAGE MONUMENT				
B12	CONCRETE RAMP	PUMP CONCRETE, INTEGRAL COLOR	BROOM FINISH / CHARCOAL		
SITE FURNISHINGS					
C1	BENCH / BENCH ANCHOR	NO BENCH	JARRAH WOOD SEAT AND BACKREST, POWDERCOATED ARMS	LANDSCAPE FORMS	
C2	LITTER RECEPTACLE/URN	TYPE 'S' PARC VUE	ALUMINUM/SILVER	LANDSCAPE FORMS	
C3	BENCH/TABLE	TYPE 'S' PARC VUE	ALUMINUM/SILVER	LANDSCAPE FORMS	
C4	CAFE SET	ALFRESCO CAFE TABLE	FSC WOOD/ALUMINUM W/ WARM GREY	CRATE AND BARREL	
C4a	CAFE DINING CHAIR	ALFRESCO CAFE DINING CHAIR	FSC WOOD/ALUMINUM W/ WARM GREY, SUNBRELLA	CRATE AND BARREL	
C5	BICYCLE RACK	BIKA	STAINLESS STEEL	LANDSCAPE FORMS	
C6	BICYCLE LOCKER	DS 5 LS	STAINLESS STEEL W/SATIN FINISH, SURFACE MOUNT	CREATIVEPIPE.COM	
C7	BICYCLE LOCKER	DS 1 LS	STAINLESS STEEL W/SATIN FINISH, SURFACE MOUNT	CREATIVEPIPE.COM	
C8	BBQ/OUTDOOR GRILL	DCS 36" STAINLESS STEEL BUILT-IN	IPE WOOD ENCLOSURE WITH STONE COUNTERTOP	CUCINO AMERICA INC	
C9	SQUARE UMBRELLA	10' SQUARE CANTILEVER			TBD
DRAINAGE					
D1	BIORETENTION SWALE				
D2	AREA DRAIN				
SITE LIGHTING					
E1	NOT USED				
E2	POLE LIGHT - PEDESTRIAN	---	---	---	
E3	BOLLARD LIGHT	---	---	---	
E4	NOPADE LIGHT	---	---	---	
E5	RECESSED STEP LIGHT	---	---	---	
FOUNTAINS					
F1	DINING TERRACE FOUNTAIN		TBD		
F1a	DINING TERRACE FOUNTAIN VAULT		TBD		
F2	ENTRY FOUNTAIN		TBD		
F2a	ENTRY FOUNTAIN VAULT		TBD		

NOTES

1. SYMBOL SHOWING TREES TO REMAIN IS DIAGRAMMATIC.

2. PLANTS TO PROVIDE CONCRETE OR NATIVE OR REGIONALLY ADAPTED VEGETATION SPECIES. PLANTS TO HAVE LOW WATER AND IRRIGATION DEMANDS AND TO BE USED FOR EROSION USE.

TREE PROTECTION NOTES

1. DESIGNATED TREES ON SITE SHALL HAVE PROTECTIVE FENCING ERECTED AROUND THEM TO AVOID SOIL COMPACTION OR CONTAMINATION, MECHANICAL INJURY TO THE ROOTS, TRUNKS, BRANCHING OR FOLIAGE, AND TO DELINEATE THE TREE PROTECTION ZONE.

2. FENCING SHALL BE ERECTED BEFORE DEMOLITION, GRADING OR CONSTRUCTION BEGINS AND SHALL REMAIN IN PLACE FOR THE DURATION OF THE PROJECT. PROJECT ARBORIST SHALL CERTIFY THE INSTALLATION OF THE TREE PRESERVATION MEASURES PRIOR TO ANY SITE DEMOLITION OR GRADING. EACH TREE WILL DIFFER IN THE NUMBER OF FEET FROM THE TRUNK THAT THE FENCING WILL BE LOCATED. FENCING SHALL BE INSPECTED BY THE CITY ARBORIST TO ENSURE CORRECT PLACEMENT. NO ACTIVITY IS PERMITTED WITHIN THE PROTECTIVE TREE FENCING WITHOUT PRIOR CONSENT OF THE CITY ARBORIST.

3. 3" DEEP WOOD CHIP MULCH SHALL BE PLACED WITHIN AND/OR AROUND THE TREES PRIOR TO FENCING TO HELP LESSEN THE POTENTIAL NEGATIVE IMPACTS OF SOIL COMPACTION. CONFIRM ADDITIONAL GUIDELINES, IF APPLICABLE, AS SPECIFIED IN THE TOWN OF LOS GATOS TREE SPECIFICATION GUIDELINES.

4. DO NOT USE HEAVY EQUIPMENT NOR CONDUCT ANY ACTIVITIY THAT WILL CAUSE COMPACTION UNDER THE DRIPLINE OF EXISTING TREES TO REMAIN. DO NOT DRIVE, PARK OR STORE EQUIPMENT OR MATERIALS UNDER THE DRIP LINE OR BEHIND PROTECTIVE FENCES.

5. PROVIDE PROTECTION FOR ROOTS CUT DURING CONSTRUCTION OPERATIONS. TEMPORARILY COVER EXPOSED ROOTS WITH WET BURLAP TO PREVENT DRYING OUT. COVER WITH EARTH AS SOON AS POSSIBLE SIMILARLY PROTECT SHRUB AND GROUNDCOVER AREAS TO REMAIN. ROOT REMOVAL WITHIN THE DRIPLINE OF TREES SHALL ONLY OCCUR UNDER THE DIRECT SUPERVISION OF THE CITY ARBORIST.

6. THE MATURE TREES SHALL BE IRRIGATED WITH EXISTING TREE IRRIGATION SYSTEM ON SITE THOROUGHLY ONE TIME EVERY 5 - 6 WEEKS ONCE THE WINTER RAINS STOP. THE TREE TRUNKS SHALL STAY DRY.

7. PLANTS TO BE REMOVED OR RELOCATED SHALL BE TAGGED IN THE FIELD BY THE LANDSCAPE ARCHITECT.

8. THE CANOPIES OF TREES ADJACENT TO DRIVEWAYS MAY NEED TO BE RAISED IN ORDER TO PROTECT THEM FROM IMPACTS WITH DELIVERY TRUCKS. ANY TREES THAT MAY HAVE THEIR TRUNKWOOD DAMAGED FROM DELIVERIES SHALL HAVE THEIR EXPOSED WOOD WRAPPED WITH 2" X 4"S & WIRE FENCING TO LESSEN THE DAMAGE THAT MAY BE CAUSED BY IMPACTS. ALL WORK TO BE SUPERVISED BY CITY ARBORIST.

9. REMOVE HEAVY VEGETATIVE GROWTH PRIOR TO SOIL STRIPPING. LEAVE SOIL IN PLACE WITHIN DRIP LINES OF TREES. STOCKPILE TOPSOIL IN AREAS DIRECTED BY LANDSCAPE ARCHITECT. COVER STOCKPILES TO PREVENT CONTAMINATION, WIND AND WATER EROSION.

10. CONTRACTOR SHALL OBTAIN COPY OF CITY ARBORIST REPORT AND TREE ASSESSMENT PREPARED BY HORTSCIENCE AND BE FAMILIAR AND CONFORM TO ALL REQUIREMENTS THEREIN.

PLANT SCHEDULE - WORKDAY

SIZE	ID	BOTANICAL NAME	COMMON NAME	COUNT
		TREES		
36" Box	ACE RUB	Acer rubrum 'Autumn Blaze'	Autumn Blaze Maple	16
36" Box	AES CAL	Aesculus californica	California Buckeye	47
36" Box	ARB UNE	Arbutus unedo 'Marina'	Strawberry Tree 'Marina'	
36" Box	CAR BET	Carpinus betulus 'Fastigiata'	European Hornbeam	23
36" Box	CHI VIR	Chionanthus virginicus	Fringe Tree	-
36"/48"B	GIN BIL	Ginkgo biloba 'Princeton Sentry'	Ginkgo Biloba	11
36" Box	LIR TUL	Liriodendron tulipifera	Tulip Tree	-
36" Box	LAG NAT	Lagerstroemia x 'Natchez'	Crape Myrtle	20
36/48"B	MAG GRA	Magnolia grandiflora 'Majestic Beauty'	Magnolia	25
60" Box	OLE EUR	Olea europaea	Non Fruiting Olive	26
Field Dug	PHO CAN	Phoenix canariensis	Canary Island Date Palm	6
36" Box	PLA ACE	Platanus x acerifolia	London Plane Tree	1
36" Box	PLA RAC	Platanus racemosa	California Sycamore	19
36"/48"B	QUE AGR	Quercus agrifolia	Coast Live Oak	
36" Box	QUE LOB	Quercus lobata	Valley Oak	
36" Box	QUE VIR	Quercus virginiana 'Cathedral'	Cathedral Live Oak	184
36/48"B	SEQ SEM	Sequoia sempervirens 'Los Altos'	Coast Redwood	-
36" Box	TIL COR	Tilia cordata	Linden	83
36"/48"B	ULM PAR	Ulmus parvifolia	Chinese Elm	131

SIZE	ID	BOTANICAL NAME	COMMON NAME
		SHRUBS/PERENNIALS/SUCCULENTS	
1 Gal.	AJG	Aeonium 'Jolly Green'	Aeonium
5 Gal.	ALS	Aloe striata	Coral Aloe
5 Gal.	AU	Arbutus unedo compacta	Strawberry Bush
5 Gal.	AHV	Arctostaphylos 'Howard McMinn'	Manzanita
5 Gal.	ARS	Arctostaphylos 'Sunset'	Manzanita
1 Gal.	BP	Baccharis pilularis 'Pigeon Point'	Coyote Brush
1 Gal.	BF	Bulbine frutescens	Stalked Bulbine
5 Gal.	BV	Buxus microphylla j. 'Green Beauty'	Japanese Boxwood
5 Gal.	CC	Carpenteria californica	Bush Anemone
5 Gal.	CJC	Ceanothus 'Joyce Coulter'	Creeping Mountain Lilac
5 Gal.	CH	Chamaerops humilis	Mediterranean Fan Palm
1 Gal.	EW	Euphorbia characias 'Wulfenii'	Evergreen Spurge
5 Gal.	FC	Fremontodendron californicum	California Flannel Bush
1 Gal.	GL	Gaura lindheimeri	Gaura
5 Gal.	HA	Heteromeles arbutifolia	Toyon
5 Gal.	LT	Lavatera thuringiaca 'Rosea'	Mallow
5 Gal.	LL	Leonotis leonurus	Lion's Tail
5 Gal.	MC	Myrica californica	Pacific Wax Myrtle
5 Gal.	MRC	Myrtus communis	True Myrtle
1 Gal.	NC	Nephrolepis cordifolia	Southern Sword Fern
5 Gal.	OEL	Olea europaea 'Little Ollie'	Little Ollie Dwarf Olive
5 Gal.	PT	Pittosporum tenuifolium	Pittosporum
5 Gal.	PCN	Pittosporum crassifolium 'Nana'	Dwarf Pittosporum
1 Gal.	PTW	Pittosporum tobira 'Wheeler's Dwarf'	Pittosporum
5 Gal.	PL	Prunus laurocerasus	English Laurel
5 Gal.	RA	Rhamnus alaternus	Italian Buckthorn
5 Gal.	RC	Rhamnus californica 'Mound San Bruno'	Coffeeberry 'Eve Case'
5 Gal.	RS	Ribes speciosum	Fuschia Flowering Currant
5 Gal.	RO	Rosmarinus officinalis	Rosemary
1 Gal.	RC	Rudbeckia californica	California Coneflower
5 Gal.	SL	Salvia leucantha	Mexican Sage
1 Gal.	SV	Senecio mandraliscae	Blue Chalksticks
15 Gal.	YG	Yucca gloriosa	Yucca

SIZE	ID	BOTANICAL NAME	COMMON NAME
		GRASSES	
1 Gal.	BG	Bouteloua gracilis 'Blonde Ambition'	Blonde Ambition Blue Grama
4" POT	CP	Carex pansa	Dune Sedge
4" POT	CT	Carex tumulicola	Berkeley Sedge
1 Gal.	CHT	Chondropetalum tectorum	Small Cape Rush
1 Gal.	EP	Echinacea purpurea	Coneflower
1 Gal.	JP	Juncus patens 'Elk Blue'	California Gray Rush
1 Gal.	LM	Liriope muscari 'Majestic'	Lily Turf
1 Gal.	P	Pennisetum 'Fairy Tails'	Evergreen Fountain Grass
1 Gal.	FM	Festuca mairei	Festuca
1 Gal.	F	Festuca idahoensis 'Siskiyou Blue'	Festuca
Sod	AWN	Dwarf Fescue Blend	
Sod	FR	Festuca rubra 'Molate'	No Mow Fescue
4" POT	SA	Sesleria autumnalis	Autumn Moor Grass
1 Gal.	SP	Setaria palmifolia	Palm Grass
SIZE	ID	BOTANICAL NAME	COMMON NAME
		VINES	
1 Gal.	FP	Ficus pumila	Creeping Fig

FORM4 ARCHITECTURE • STUDIO FIVE DESIGN • KIER & WRIGHT

Stoneridge Corporate Plaza Expansion

PUD Application

WORKDAY • PLEASANTON, CALIFORNIA

PLANTING SCHEDULE

L0.2

March 27, 2014

DISPOSITION LEGEND	TOTAL
HERITAGE TREE TO REMAIN	151
TREE TO REMAIN	127
HERITAGE TREE TO BE REMOVED	132
TREE TO BE REMOVED	199
ARBORIST TREE TAG	

INTERSTATE HIGHWAY 580

OFFRAMP

L-0.4

L-0.5

STONERIDGE MALL ROAD

EMBARCADERO COURT

HIGHWAY 680

0' 30' 60' 120' 240'

FORM4 ARCHITECTURE • STUDIO FIVE DESIGN • KIER & WRIGHT

Stoneridge Corporate Plaza Expansion

PUD Application

WORKDAY • PLEASANTON, CALIFORNIA

TREE DISPOSITION

L0.3

March 27, 2014

MATCHLINE SEE SHEET L-0.3

DISPOSITION LEGEND

- HERITAGE TREE TO REMAIN
- TREE TO REMAIN
- HERITAGE TREE TO BE REMOVED
- TREE TO BE REMOVED
- ARBORIST TREE TAG

MATCHLINE SEE SHEET L-0.3

MATCHLINE SEE SHEET L-0.3

STONERIDGE MALL ROAD

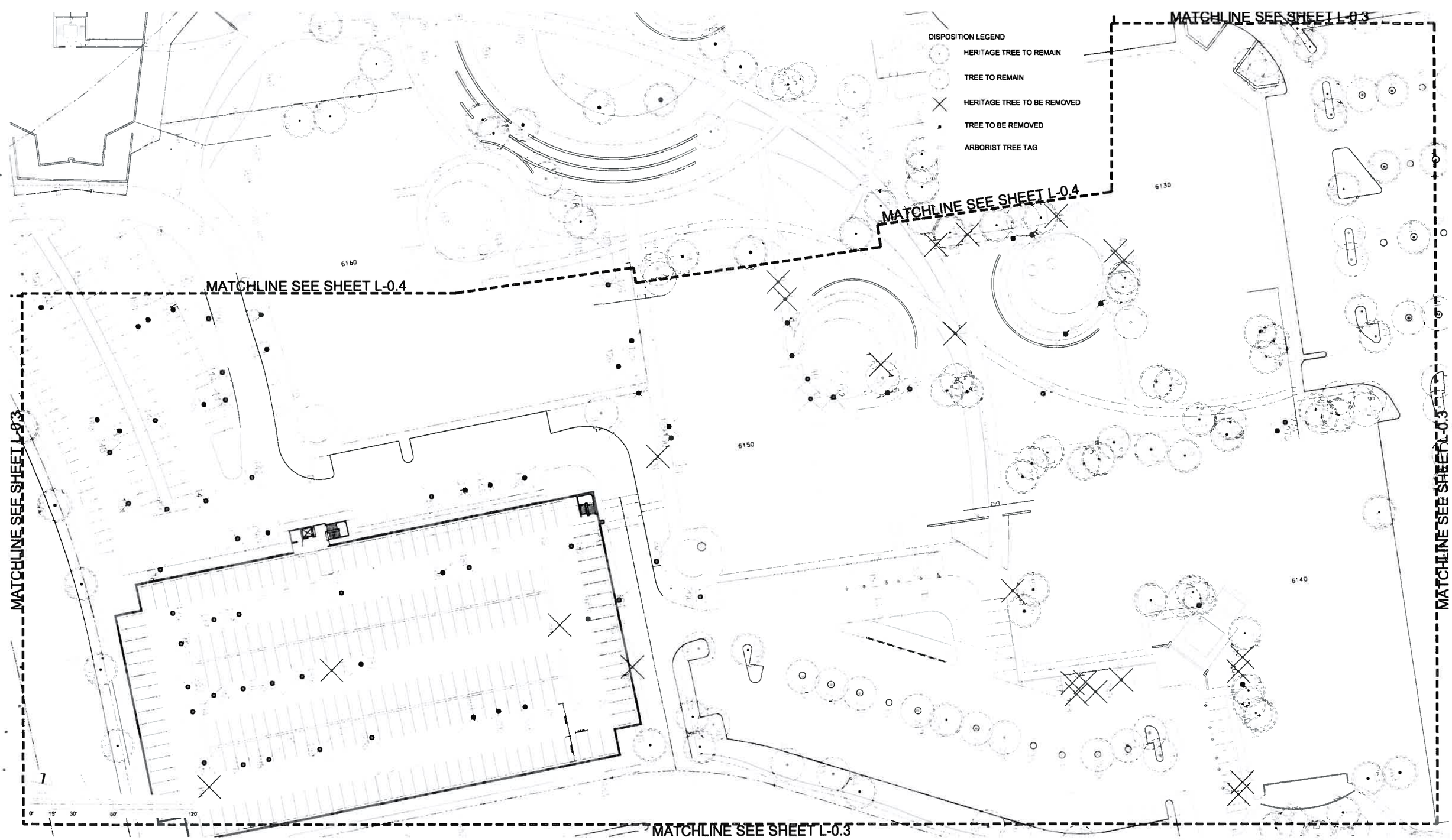
6120

6160

0' 15' 30' 60' 120'

MATCHLINE SEE SHEET L-0.5

MATCHLINE SEE SHEET L-0.5



FORM4 ARCHITECTURE • STUDIO FIVE DESIGN • KIER & WRIGHT

Stoneridge Corporate Plaza Expansion

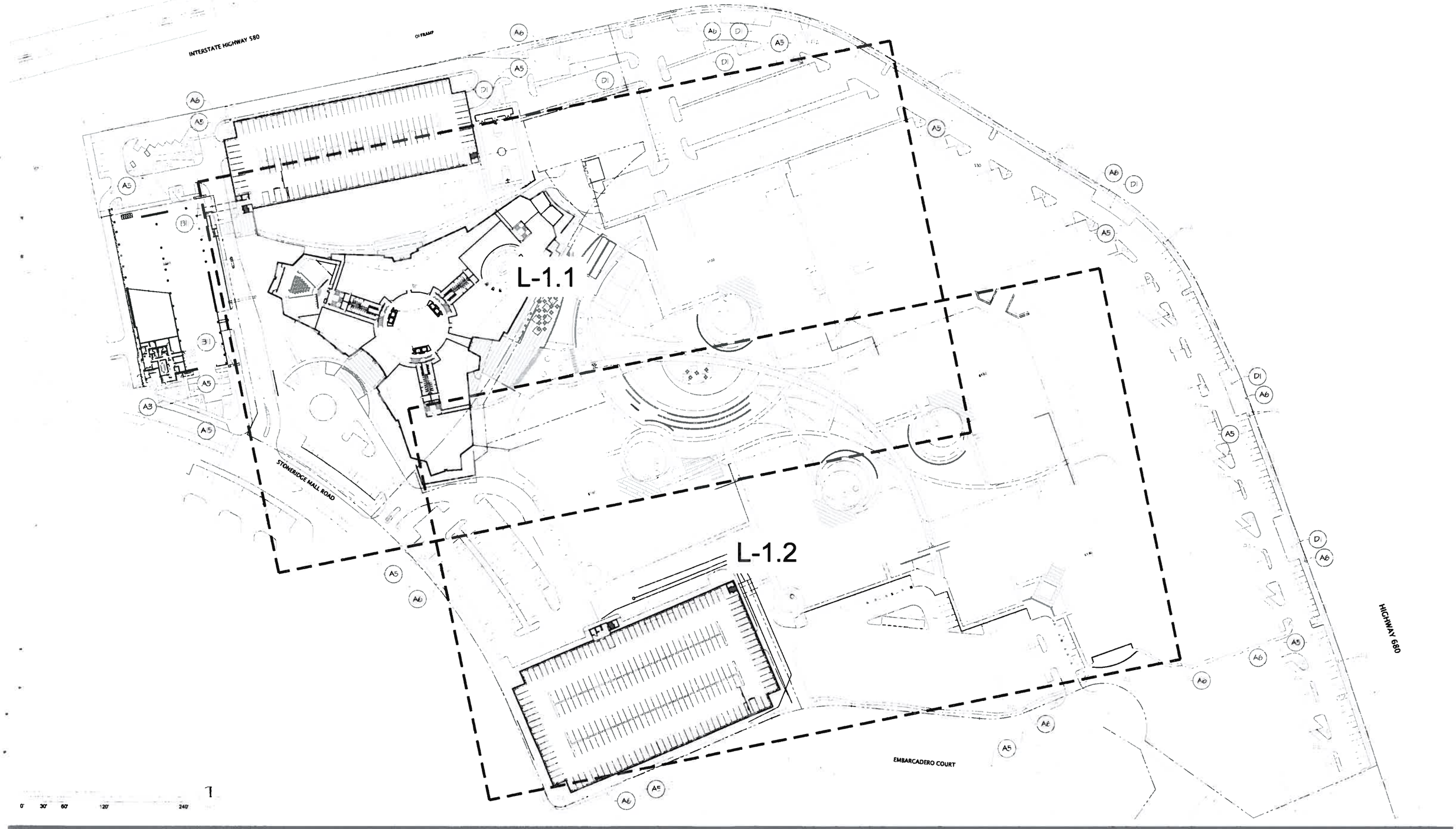
PUD Application

WORKDAY • PLEASANTON, CALIFORNIA

TREE DISPOSITION

L0.5

March 27, 2014



FORM4 ARCHITECTURE • STUDIO FIVE DESIGN • KIER & WRIGHT

Stoneridge Corporate Plaza Expansion

PUD Application

WORKDAY • PLEASANTON, CALIFORNIA

LANDSCAPE LAYOUT PLAN

L1.0

March 27, 2014

MATCHLINE SEE SHEET L-1.0

MATCHLINE SEE SHEET L-1.0

STONERIDGE MALL ROAD

MATCHLINE SEE SHEET L-1.2

MATCHLINE SEE SHEET L-1.0 MATCHLINE SEE SHEET L-1.2

FORM4 ARCHITECTURE • STUDIO FIVE DESIGN • KIER & WRIGHT

Stoneridge Corporate Plaza Expansion

PUD Application

WORKDAY • PLEASANTON, CALIFORNIA

LANDSCAPE LAYOUT PLAN

L1.1

March 27, 2014

MATCHLINE SEE SHEET L-1.0

MATCHLINE SEE SHEET L-1.1

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6160

6150

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0' 15' 30' 60' 120'

FORM4 ARCHITECTURE • STUDIO FIVE DESIGN • KIER & WRIGHT

Stoneridge Corporate Plaza Expansion

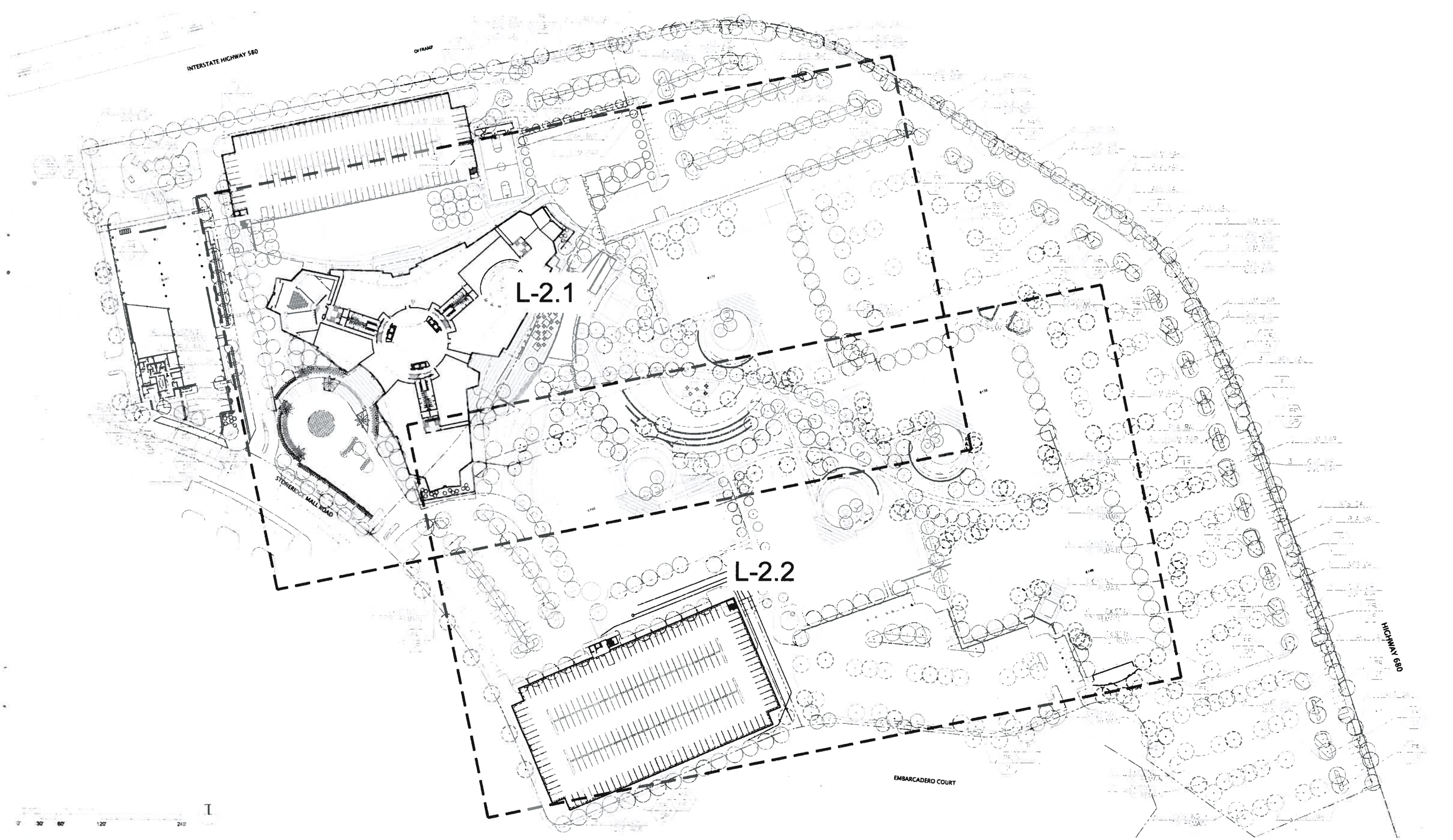
PUD Application

WORKDAY • PLEASANTON, CALIFORNIA

LANDSCAPE LAYOUT PLAN

L1.2

March 27, 2014



FORM4 ARCHITECTURE • STUDIO FIVE DESIGN • KIER & WRIGHT

Stoneridge Corporate Plaza Expansion

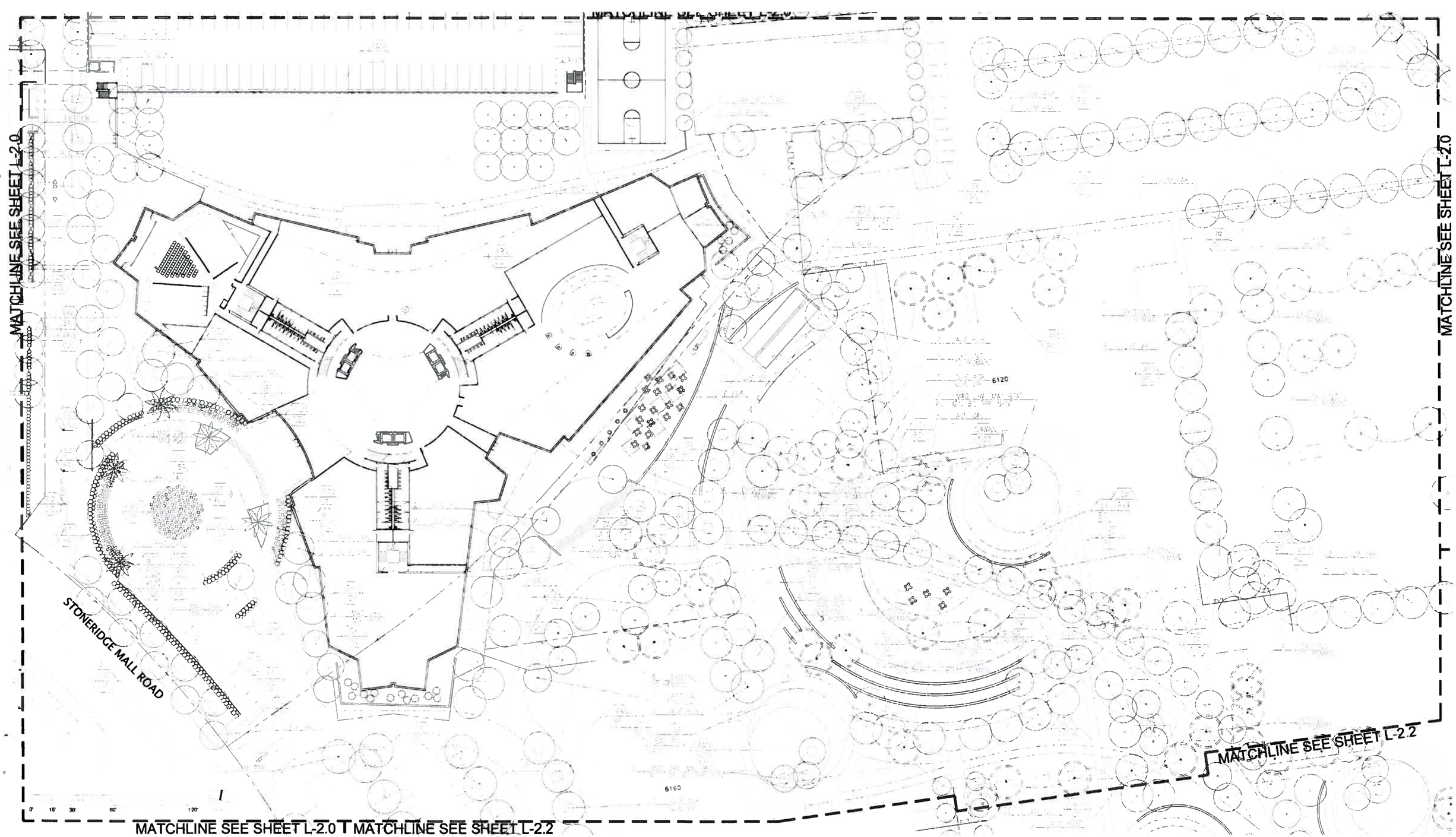
PUD Application

WORKDAY • PLEASANTON, CALIFORNIA

PLANTING PLAN

L2.0

March 27, 2014



FORM4 ARCHITECTURE • STUDIO FIVE DESIGN • KIER & WRIGHT

Stoneridge Corporate Plaza Expansion

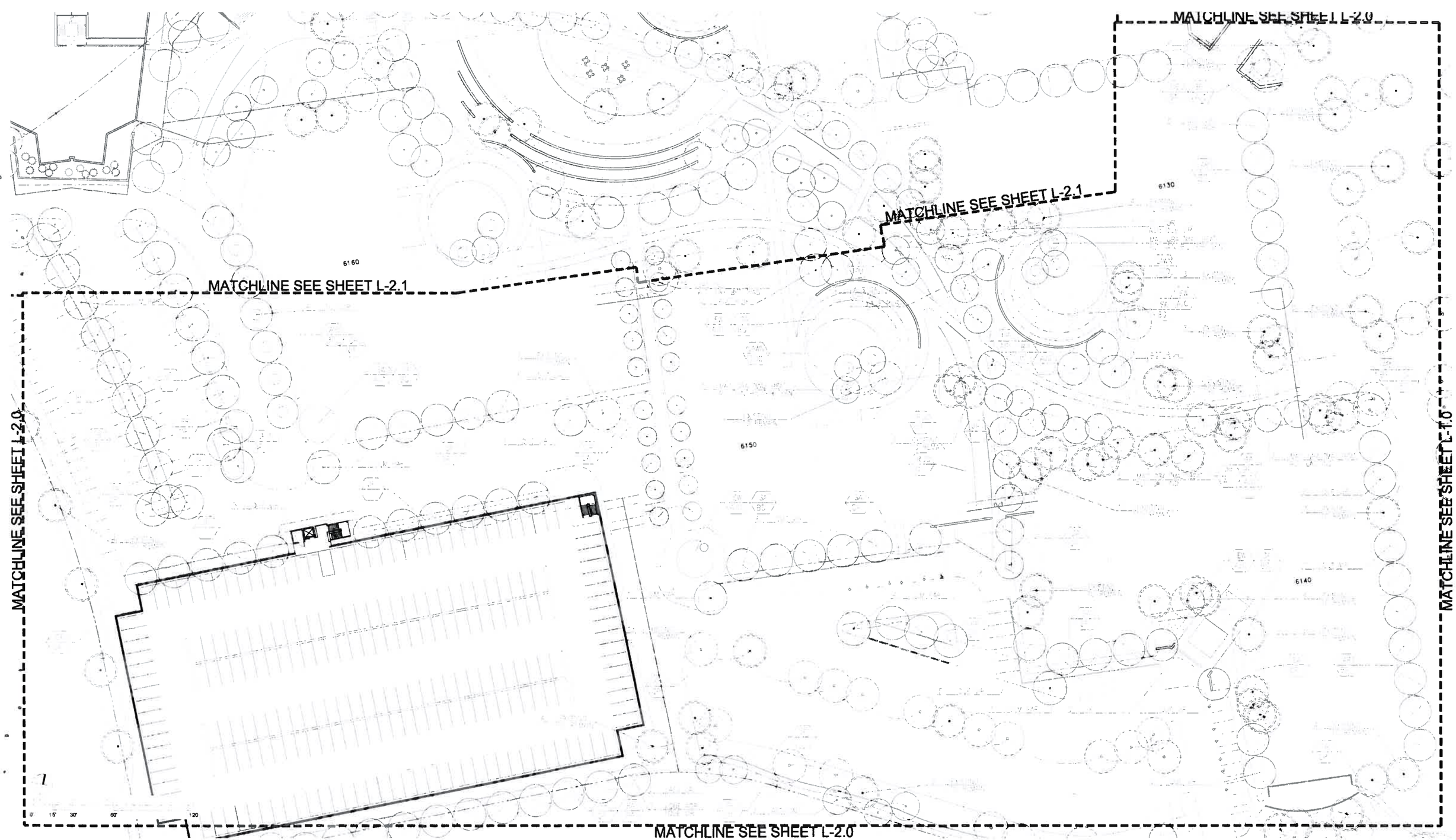
PUD Application

WORKDAY • PLEASANTON, CALIFORNIA

PLANTING PLAN

L2.1

March 27, 2014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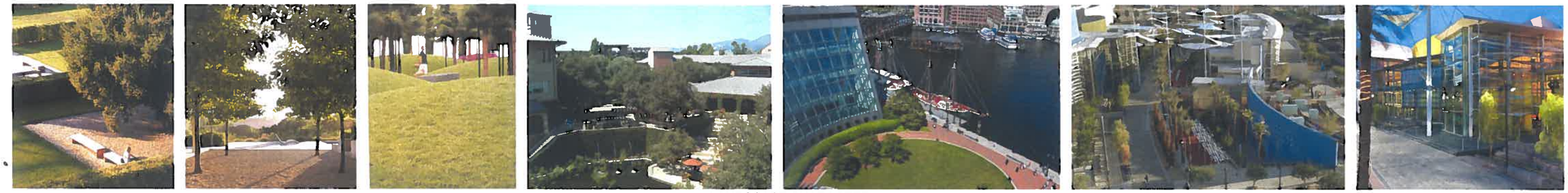


LANDSCAPE CHARACTER

LANDSCAPE CHARACTER

MATERIALS

FORM4 ARCHITECTURE • STUDIO FIVE DESIGN • KIER & WRIGHT

Stoneridge Corporate Plaza Expansion

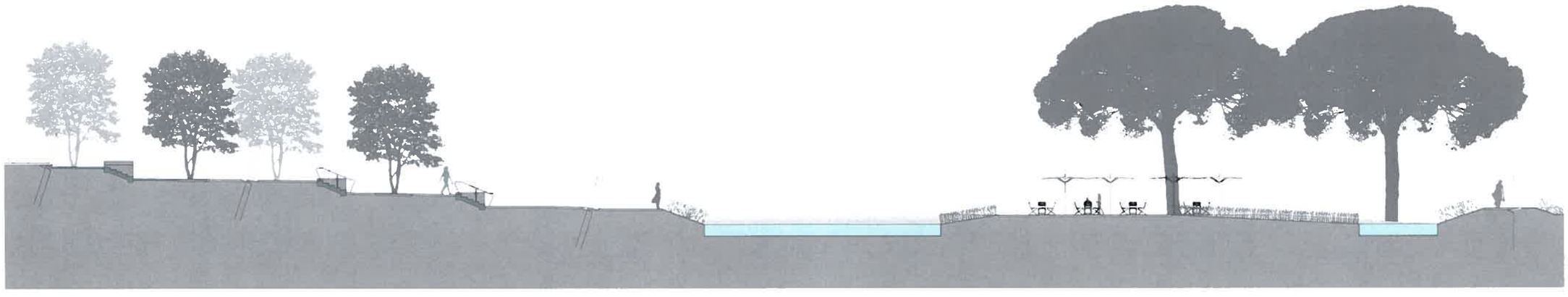
PUD Application

WORKDAY • PLEASANTON, CALIFORNIA

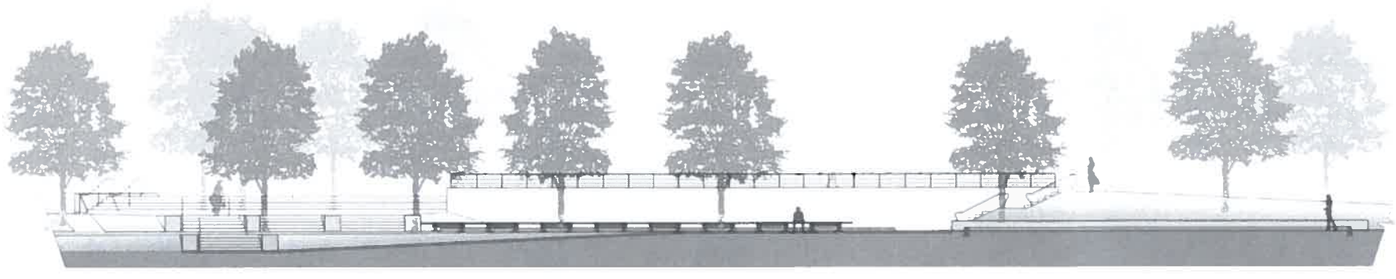
LANDSCAPE PRECEDENT IMAGES

L4.0

March 27, 2014



SECTION A
SCALE: 3/16"=1'



SECTION B
SCALE: 3/16"=1'

FORM4 ARCHITECTURE • STUDIO FIVE DESIGN • KIER & WRIGHT

Stoneridge Corporate Plaza Expansion

PUD Application

WORKDAY • PLEASANTON, CALIFORNIA

LANDSCAPE SECTIONS

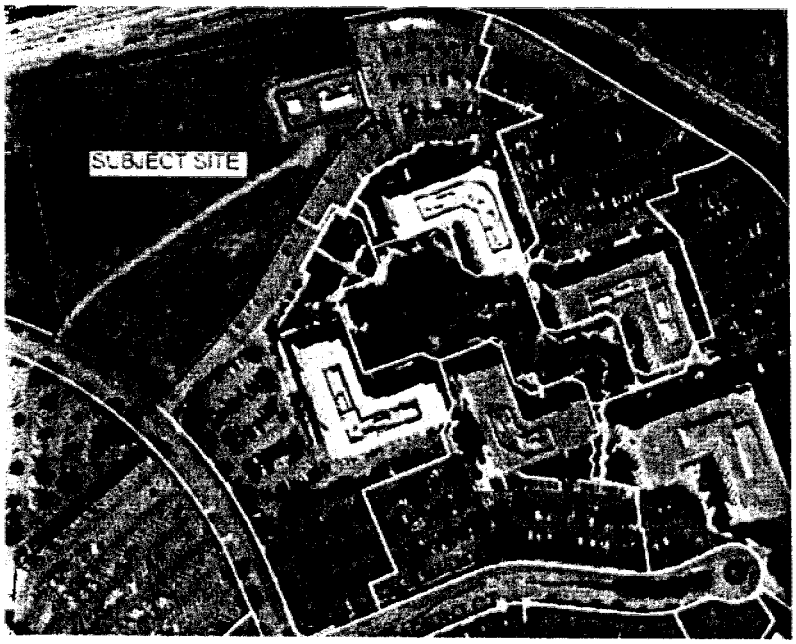
L5.0

March 27, 2014

EXHIBIT B

SUPPLEMENTAL INFORMATION TO WORKDAY, INC. APPLICATION TO CITY OF PLEASANTON MARCH 7, 2014 SUBMITTAL DATE

Workday, Inc. is applying for City of Pleasanton approval for Workday's proposed office building and other site improvements to be constructed on land currently owned by the San Francisco Bay Area Rapid Transit District (BART) and NPC Holdings, LLC (NPC). The total site area of approximately 32.62 acres is comprised of approximately 6.9 acres of vacant land which is owned by BART and the adjacent five (5) building office complex owned by NPC which is commonly known as Stoneridge Corporate Plaza (SCP). The Workday project will be comprised of a new six (6) story office building containing approximately 430,000 gross square feet, two (2) parking garages, and extensive landscaping and other site improvements (the BART parcel is shown below as the "Subject Site"). On NPC's property, in addition to the construction of the south garage (as shown on the submittal) there will be landscape improvements to the common central parcel (which will be shared with the new Workday building) and there will be additional minor parking modifications on the five (5) building parcels.



In addition to the improvements proposed on the 32 acres, Workday will also be constructing improvements to benefit the City of Pleasanton and

BART including construction of a new shared BART and Pleasanton Police facility (to be located in the existing BART garage), a relocated bus and pedestrian drop-off (as shown on the plans) to facilitate the drop off/pick up BART patrons (and employees in the surrounding office buildings) and the Stoneridge Mall by both bus and individual cars, and the existing pedestrian walkway along the east side of the BART garage will be enhanced to provide a prominent walkway "promenade" to link the BART station with the Stoneridge Mall Road and transit hub.

In response to the City's question on plans for the project, Workday has no predetermined plans for timing of construction of the project nor any predetermined plans for consolidation of their existing Pleasanton operations when the building is completed. Workday continues to expand where opportunities arise and as space needs dictate.

Workday looks forward to receiving feedback and input from the City of Pleasanton on this application and receipt this spring of entitlements.

ADDITIONAL NOTICE INFORMATION SHOULD BE PROVIDED TO THE FOLLOWING:

Brian Griggs
Griggs Resource Group
250 Lafayette Circle, Suite 100
Lafayette, California 94549
925 299 4870
brian@griggsgroup.com

Paul Ferro
Form 4 Architects
126 Post Street, 3rd Floor
San Francisco, Ca. 94108
415 775 8748
pferro@form4inc.com

LEED 2009 for New Construction and Major Renovations

Project Checklist

Workday Development Center BART Site

April, 2014

Sustainable Sites — Possible Points: 26

Y	?	N			
Y			Prereq 1	Construction Activity Pollution Prevention	
1			Credit 1	Site Selection	1
5			Credit 2	Development Density and Community Connectivity	5
		1	Credit 3	Brownfield Redevelopment	1
6			Credit 4.1	Alternative Transportation—Public Transportation Access	6
1			Credit 4.2	Alternative Transportation—Bicycle Storage and Changing Rooms	1
3			Credit 4.3	Alternative Transportation—Low-Emitting and Fuel-Efficient Vehicles	3
	2		Credit 4.4	Alternative Transportation—Parking Capacity	2
		1	Credit 5.1	Site Development—Protect or Restore Habitat	1
	1		Credit 5.2	Site Development—Maximize Open Space	1
1			Credit 6.1	Stormwater Design—Quantity Control	1
1			Credit 6.2	Stormwater Design—Quality Control	1
1			Credit 7.1	Heat Island Effect—Non-roof	1
1			Credit 7.2	Heat Island Effect—Roof	1
1			Credit 8	Light Pollution Reduction	1

Water Efficiency — Possible Points: 10

Y			Prereq 1	Water Use Reduction—20% Reduction	
2			Credit 1	Water Efficient Landscaping	2 to 4
	2		Credit 2	Innovative Wastewater Technologies	2
4			Credit 3	Water Use Reduction	2 to 4

Energy and Atmosphere — Possible Points: 35

Y			Prereq 1	Fundamental Commissioning of Building Energy Systems	
Y			Prereq 2	Minimum Energy Performance	
Y			Prereq 3	Fundamental Refrigerant Management	
5	5		Credit 1	Optimize Energy Performance	1 to 19
	4		Credit 2	On-Site Renewable Energy	1 to 7
2			Credit 3	Enhanced Commissioning	2
2			Credit 4	Enhanced Refrigerant Management	2
	3		Credit 5	Measurement and Verification	3
	2		Credit 6	Green Power	2

Materials and Resources — Possible Points: 14

Y			Prereq 1	Storage and Collection of Recyclables	
		3	Credit 1.1	Building Reuse—Maintain Existing Walls, Floors, and Roof	1 to 3
		1	Credit 1.2	Building Reuse—Maintain 50% of Interior Non-Structural Elements	1
2			Credit 2	Construction Waste Management	1 to 2
		2	Credit 3	Materials Reuse	1 to 2

Materials and Resources, Continued

Y	?	N			
2			Credit 4	Recycled Content	1 to 2
	1		Credit 5	Regional Materials	1 to 2
	1		Credit 6	Rapidly Renewable Materials	1
1			Credit 7	Certified Wood	1

Indoor Environmental Quality — Possible Points: 15

Y			Prereq 1	Minimum Indoor Air Quality Performance	
Y			Prereq 2	Environmental Tobacco Smoke (ETS) Control	
1			Credit 1	Outdoor Air Delivery Monitoring	1
1			Credit 2	Increased Ventilation	1
1			Credit 3.1	Construction IAQ Management Plan—During Construction	1
1			Credit 3.2	Construction IAQ Management Plan—Before Occupancy	1
1			Credit 4.1	Low-Emitting Materials—Adhesives and Sealants	1
1			Credit 4.2	Low-Emitting Materials—Paints and Coatings	1
1			Credit 4.3	Low-Emitting Materials—Flooring Systems	1
1			Credit 4.4	Low-Emitting Materials—Composite Wood and Agrifiber Products	1
	1		Credit 5	Indoor Chemical and Pollutant Source Control	1
1			Credit 6.1	Controllability of Systems—Lighting	1
1			Credit 6.2	Controllability of Systems—Thermal Comfort	1
1			Credit 7.1	Thermal Comfort—Design	1
	1		Credit 7.2	Thermal Comfort—Verification	1
	1		Credit 8.1	Daylight and Views—Daylight	1
1			Credit 8.2	Daylight and Views—Views	1

Innovation and Design Process — Possible Points: 6

	1		Credit 1.1	Innovation in Design: Specific Title	1
	1		Credit 1.2	Innovation in Design: Specific Title	1
	1		Credit 1.3	Innovation in Design: Specific Title	1
	1		Credit 1.4	Innovation in Design: Specific Title	1
	1		Credit 1.5	Innovation in Design: Specific Title	1
1			Credit 2	LEED Accredited Professional	1

Regional Priority Credits — Possible Points: 4

1			Credit 1.1	Alternative Transportation, Public Transportation Access	1
	1		Credit 1.2	Regional Priority: Specific Credit	1
	1		Credit 1.3	Regional Priority: Specific Credit	1
	1		Credit 1.4	Regional Priority: Specific Credit	1

Total — Possible Points: 110

Certified 40 to 49 points Silver 50 to 59 points Gold 60 to 79 points Platinum 80 to 110

Arborist Report

Stoneridge Corporate Plaza
Pleasanton, CA

PREPARED FOR
NPC Holdings LLC
6150 Stoneridge Mall Rd. Suite 175
Pleasanton, CA

PREPARED BY:
HortScience, Inc.
325 Ray St.
Pleasanton, CA 94566

April 2014

Arborist Report
Stoneridge Corporate Plaza
Pleasanton, CA

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List of Tables

Exhibits

Arborist Report
Stoneridge Corporate Plaza
Pleasanton, CA

Introduction and Overview

NPC Holdings is planning site improvements to 6120-6160 Stoneridge Mall Road. Currently several commercial buildings occupy the site. HortScience, Inc. was asked to prepare a **Tree Inventory Report** for the site as part of the application to the City of Pleasanton. This report is preliminary because exact grading plans and tree locations were not available at the time of writing this report.

This report provides the following information:

1. An evaluation of the health and structural condition of the trees within the proposed project area based on a visual inspection from the ground.
2. Identification of trees that qualified as *Heritage*, per the City of Pleasanton Municipal Code Chapter 17.16.
3. Preliminary guidelines for tree preservation during the design, construction and maintenance phases of development.

Tree Assessment Methods

Trees were assessed in January of 2014. The survey included all trees 6" in diameter and greater, located within and adjacent to the proposed project area. Trees located off-site that were either near the proposed project or had canopies extending over the property line were included. The assessment procedure consisted of the following steps:

1. Identifying the tree as to species;
2. Tagging each tree with an identifying number and recording its location on a map;
3. Measuring the trunk diameter at a point 4.5' above grade;
4. Evaluating the health and structural condition using a scale of 1 – 5:
   - ***5*** - A healthy, vigorous tree, reasonably free of signs and symptoms of disease, with good structure and form typical of the species.
   - ***4*** - Tree with slight decline in vigor, small amount of twig dieback, minor structural defects that could be corrected.
   - ***3*** - Tree with moderate vigor, moderate twig and small branch dieback, thinning of crown, poor leaf color, moderate structural defects that might be mitigated with regular care.
   - ***2*** - Tree in decline, epicormic growth, extensive dieback of medium to large branches, significant structural defects that cannot be abated.
   - ***1*** - Tree in severe decline, dieback of scaffold branches and/or trunk; most of foliage from epicormics; extensive structural defects that cannot be abated.
5. Rating the suitability for preservation as "high", "moderate" or "low". Suitability for preservation considers the health, age and structural condition of the tree, and its potential to remain an asset to the site for years to come.
   - ***High***: Trees with good health and structural stability that have the potential for longevity at the site.
   - ***Moderate***: Trees with somewhat declining health and/or structural defects that can be abated with treatment. The tree will require more intense management and monitoring, and may have shorter life span than those in 'high' category.
   - ***Low***: Tree in poor health or with significant structural defects that cannot be mitigated. Tree is expected to continue to decline, regardless of treatment. The species or individual may have characteristics that are undesirable for landscapes, and generally are unsuited for use areas.

City of Pleasanton Urban Tree Protection Requirements

The Pleasanton Municipal Code Chapter 17.16 controls the removal and preservation of *Heritage* trees within the city. *Heritage* trees are defined as:

1. Any single-trunked tree with a circumference of 55 inches or more measured four and one-half feet above ground level;
2. Any multi-trunked tree of which the two largest trunks have a circumference of 55 inches (18 inches diameter) or more measured four and one-half feet above ground level;
3. Any tree 35 feet or more in height;
4. Any tree of particular historical significance specifically designated by official action;
5. A stand of trees, the nature of which makes each dependent upon the other for survival or the area's natural beauty.

Heritage trees may not be removed, destroyed or disfigured without a permit.

Description of Trees

Four hundred ninety-two (492) trees representing 36 species were evaluated (Table 1). Two hundred eighty-eight (288) trees were in moderate condition with 152 in good condition and 52 in poor. Descriptions of each tree are found in the ***Tree Assessment Form*** and approximate locations are plotted on the ***Tree Inventory Map*** (see Exhibits).

Table 1. Condition ratings and frequency of occurrence of trees Stoneridge Corporate Plaza, Pleasanton, CA

		Condition			
Common Name	**Scientific Name**	**Poor (1-2)**	**Fair (3)**	**Good (4-5)**	**Total**
Blackwood acacia	*Acacia melanoxylon*	-	2	4	**6**
Silk tree	*Albizia julibrissin*	-	2	1	**3**
European white birch	*Betula pendula*	1	22	7	**30**
Eastern redbud	*Cercis canadensis*	1	1	-	**2**
Camphor	*Cinnamomum camphora*	15	31	8	**54**
Chinese lantern	*Dichrostachys cinerea*	-	2	6	**8**
Pineapple guava	*Feijoa sellowiana*	-	1	-	**1**
Raywood ash	*Fraxinus oxycarpa 'Raywood'*	13	49	15	**77**
Honey locust	*Gleditsia triacanthos f. inermis*	-	3	5	**8**
English walnut	*Juglans regia*	-	1	-	**1**
Golden rain tree	*Koelreuteria paniculata*	-	2	3	**5**
Crape myrtle	*Lagerstroemia indica*	-	-	2	**2**
Grecian laurel	*Laurus nobilis*	-	1	1	**2**
New Zealand tea tree	*Leptospermum scoparium*	-	-	1	**1**
Sweetgum	*Liquidambar styraciflua*	-	11	21	**32**
Tulip tree	*Liriodendron tulipifera*	-	9	4	**13**
Southern magnolia	*Magnolia grandiflora*	-	8	6	**14**
Saucer magnolia	*Magnolia x soulangiana cultivars*	-	2	3	**5**
Apple	*Malus domestica*	1	4	-	**5**
Oleander	*Nerium oleander*	1	2	-	**3**
Aleppo pine	*Pinus halepensis*	1	1	-	**2**

(Continued, following page)

		Condition			
Common Name	**Scientific Name**	**Poor (1-2)**	**Fair (3)**	**Good (4-5)**	**Total**
Italian stone pine	*Pinus pinea*	-	-	2	**2**
Chinese pistache	*Pistacia chinensis*	1	4	3	**8**
London plane	*Platanus x hispanica*	-	1	5	**6**
Fremont cottonwood	*Populus fremontii*	3	-	-	**3**
Purpleleaf plum	*Prunus cerasifera*	-	2	-	**2**
Flowering cherry	*Prunus serrulata*	-	5	1	**6**
Callery pear	*Pyrus calleryana*	-	25	10	**35**
Coast live oak	*Quercus agrifolia*	-	4	-	**4**
Southern live oak	*Quercus virginiana*	-	2	5	**7**
African sumac	*Rhus lancea*	1	-	-	**1**
Weeping willow	*Salix babylonica*	-	2	-	**2**
Brazilian pepper	*Schinus terebinthifolius*	12	36	19	**67**
Coast redwood	*Sequoia sempervirens*	2	52	18	**72**
Zelkova	*Zelkova serrata*	-	-	2	**2**
Unknown	*#N/A*	-	1	-	**1**
Total		**52**	**288**	**152**	**492**

The most common species assessed was Raywood ash (77 trees). These trees were mostly in fair condition (49 trees) with 15 trees in good condition and 13 trees in poor. Raywood ashes ranged from young (7" DBH) to mature (27" DBH) with an average diameter of 15". The majority of trees had multiple attachments between 6 and 10 feet and many were in small planters (Photo 1, following page). The species is susceptible to Raywood ash decline, resulting in dieback of branches and eventually the entire crown due to infection by the fungus *Botrosphaeria*. Dieback consistent with Raywood ash decline was present throughout the population.

The second most common species assessed was coast redwood (72 trees). Redwoods were mostly in fair condition (52 trees) with 19 trees in good condition and two (2) in poor. They varied from young (8" in diameter) to mature (36" in diameter), with an average diameter of 21". The redwoods tended to have good form but had thin canopies (Photo 2, following page). Most redwoods had their canopies raised by removal of lower branches.

Sixty-seven (67) Brazilian peppers were assessed. Thirty-six (36) of the peppers were in fair condition, with 19 in good condition and 12 in poor. The Brazilian peppers tended to be semi-mature (12" average diameter) but ranged from 6 to 22" in diameter. Brazilian peppers were concentrated in the parking lots, with many in parking lot islands too small for the size of the trees at maturity (Photo 3, following page).

Fifty-four (54) camphors were assessed. Thirty-one (31) camphors were in fair condition, with 15 in poor condition and 8 in good. They ranged from young (7" DBH) to semi-mature (18" DBH) with an average diameter of 12". Camphors tended to have multiple attachments near six feet, with wide spreading canopies. Similar to the Brazilian peppers, camphors were often planted in parking lot islands too small for the species (Photo 4, following page).

Thirty-five (35) Callery pears were present on-site. They were in fair (25 trees) to good (10 trees) condition with no trees in poor health. They ranged from young (7" DBH) to semi-mature (19" DBH) with an average diameter of 12". Many pears had multiple attachments at six feet and sprouts along trunks and branches, indicative of stress (Photo 5, following page).

Photo 1: Raywood ashes demonstrating multiple attachment form and small island growing space typical of this site.

Photo 2: Coast redwoods on site tended to have thin canopies and be pruned up to 15 feet.

Photo 3: Brazilian peppers had been planted in parking lot islands.

Thirty-two (32) sweetgums were assessed. They were in good (21 trees) to fair (11 trees) condition with no trees in poor condition. Sweetgums were young to semi-mature, ranging from 6 to 17" in diameter with an average diameter of 10".

Thirty (30) European white birches were present on the site. The birches were primarily in fair condition (22 trees), with 7 in good condition and one (1) in poor. They were generally young, ranging in from 6 to 13" in diameter with an average of 9". Many of the birches were leaning, crowded and suffering from twig dieback, indicative of drought stress (Photo 6, following page).

Photo 4: Camphors typically had spreading crowns but had been planted in small parking lot islands.

Photo 5: Callery pear demonstrating epicormic growth and multiple attachments at six feet.

Photo 6: European white birches growing along an office building.

Twenty-nine (29) species were represented by less than 15 trees, including:

- 14 - Southern magnolias
- 13 - Tulip trees
- 8 - Chinese pistache, honey locusts and Chinese lanterns
- 7 - Southern live oaks
- 6 - Flowering cherries, London planes and blackwood acacias
- 5 – Apples, saucer magnolias and golden rain trees
- 4 – Coast live oaks
- 3 – Fremont cottonwoods, oleanders and silk trees
- 2 – Zelkovas, weeping willows, purple-leaf plums, Italian stone pines, Aleppo pines, Grecian laurels, crape myrtles and eastern redbuds
- 1 – Pineapple guava, English walnut, New Zealand tea tree, African sumac and unknown tree

The City of Pleasanton defines any tree with a diameter of 18" or greater, or a height of 35' or greater, as *Heritage*. *Heritage* status of individual trees is provided in the ***Tree Assessment Form*** (see Exhibits). One hundred and eighty-seven (187) trees qualified as Heritage. Many of the trees were very close to 35' in height, and a more precise measurement of heights may change their *Heritage* status.

Suitability for Preservation

Before evaluating the impacts that will occur during development, it is important to consider the quality of the tree resource itself, and the potential for individual trees to function well over an extended length of time. Trees that are preserved on development sites must be carefully selected to make sure that they may survive development impacts, adapt to a new environment and perform well in the landscape.

Our goal is to identify trees that have the potential for long-term health, structural stability and longevity. For trees growing in open fields, away from areas where people and property are present, structural defects and/or poor health presents a low risk of damage or injury if they fail. However, we must be concerned about safety in use areas. Therefore, where development encroaches into existing plantings, we must consider their structural stability as well as their potential to grow and thrive in a new environment. Where development will not occur, the normal life cycles of decline, structural failure and death should be allowed to continue.

Evaluation of suitability for preservation considers several factors:

- **Tree health**
  Healthy, vigorous trees are better able to tolerate impacts such as root injury, demolition of existing structures, changes in soil grade and moisture, and soil compaction than are non-vigorous trees. For example, Apple #1 likely will not tolerate construction impacts as well as the healthier apples.

- **Structural integrity**
  Trees with significant amounts of wood decay and other structural defects that cannot be corrected are likely to fail. Such trees should not be preserved in areas where damage to people or property is likely. Camphor #182 was an example of such a tree.

- **Species response**
  There is a wide variation in the response of individual species to construction impacts and changes in the environment. For example, Fremont cottonwood is intolerant of construction while coast redwood tolerates construction well.

- **Tree age and longevity**
  Old trees, while having significant emotional and aesthetic appeal, have limited physiological capacity to adjust to an altered environment. Young trees are better able to generate new tissue and respond to change.

- **Species invasiveness**
  Species that spread across a site and displace desired vegetation are not always appropriate for retention. This is particularly true when indigenous species are displaced. The California Invasive Plant Inventory Database (http://www.cal-ipc.org/paf/) lists species identified as being invasive. Pleasanton is part of the Central West Floristic Province. Purple-leaf plum and Brazilian pepper are rated "limited" for invasiveness. Limited is defined as, "These species are invasive but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic."

Each tree was rated for suitability for preservation based upon its age, health, structural condition and ability to safely coexist within a development environment (see ***Tree Assessment Forms*** in Exhibits, and Table 2).

We consider trees with high suitability for preservation to be the best candidates for preservation. We do not recommend retention of trees with poor suitability for preservation in areas where people or property will be present. Retention of trees with moderate suitability for preservation depends upon the intensity of proposed site changes.

Table 2: Tree suitability for preservation
Stoneridge Corporate Plaza, Pleasanton, CA.

High	These are trees with good health and structural stability that have the potential for longevity at the site. A total of 26 trees were considered highly suitable for preservation.
Moderate	Trees in this category have fair health and/or structural defects that may be abated with treatment. These trees require more intense management and monitoring, and may have shorter life-spans than those in the "high" category. A total of 180 trees were moderately suitable for preservation.
Low	Trees in this category are in poor health or have significant defects in structure that cannot be abated with treatment. These trees can be expected to decline regardless of management. The species or individual tree may possess either characteristics that are undesirable in landscape settings or be unsuited for use areas. A total of 392 trees had low suitability for preservation.

(Continued, following page)

Table 2: Tree suitability for preservation, continued
Stoneridge Corporate Plaza, Pleasanton, CA.

Species	High	Moderate	Low	Total
African sumac	-	-	1	**1**
Aleppo pine	-	-	2	**2**
Apple	-	-	5	**5**
Blackwood acacia	-	4	2	**6**
Brazilian pepper	-	20	47	**67**
Callery pear	-	10	25	**35**
Camphor	-	8	46	**54**
Chinese lantern	-	6	2	**8**
Chinese pistache	3	1	4	**8**
Coast live oak	-	4	-	**4**
Coast redwood	3	45	24	**72**
Crape myrtle	2	-	-	**2**
Eastern redbud	-	-	2	**2**
English walnut	-	-	1	**1**
European white birch	-	7	23	**30**
Flowering cherry	-	-	6	**6**
Fremont cottonwood	-	-	3	**3**
Golden rain tree	-	3	2	**5**
Grecian laurel	-	1	1	**2**
Honey locust	-	5	3	**8**
Italian stone pine	-	2	-	**2**
London plane	-	5	1	**6**
New Zealand tea tree	-	1	-	**1**
Oleander	-	-	3	**3**
Pineapple guava	-	-	1	**1**
Purpleleaf plum	-	-	2	**2**
Raywood ash	2	13	62	**77**
Saucer magnolia	-	3	2	**5**
Silk tree	-	1	2	**3**
Southern live oak	4	1	2	**7**
Southern magnolia	-	6	8	**14**
Sweetgum	-	21	11	**32**
Tulip tree	1	3	9	**13**
Unknown	-	-	1	**1**
Weeping willow	-	-	2	**2**
Zelkova	2	-	-	**2**
Grand Total	**17**	**170**	**305**	**492**

Preliminary Evaluation of Impacts and Recommendations

Appropriate tree retention develops a practical match between the location and intensity of construction activities and the quality and health of trees. The ***Tree Assessment Form*** was the reference point for tree condition and quality. Potential impacts from construction were evaluated using the Preliminary Grading and Drainage Plan, prepared by Kier & Wright (dated February 2014).

Potential impacts from construction were estimated for each tree. However, some of the trees identified for preservation are in close proximity to improvements and adequate protection may not be possible. As such, some of the trees identified for preservation may require removal. Precise impacts will have to be determined once the plans and protection measure are finalized.

The plan proposes the following changes:

- A new building will be located in the northwest corner of the site, straddling the Stoneridge Corporate Plaza site and the Bart Remainder Site (discussed under separate cover).
- A new parking structure will be located in the southwest corner of the site.
- The existing parking lot in the northeast corner will be reconfigured.
- The parking lot along the eastern boundary will be reconfigured to accommodate new bioretentiaon facilities.
- The central courtyard will be redesigned to incorporate new pathways, hardscape, water features, bocce ball and sand volley ball courts and an amphitheater.
- Most of the existing building entries will be renovated.

Based on my assessment of the current plans, 231 trees would require removal. Impacts from the parking lot reconfiguration, new parking structure and installation of bioretentian facilities would be the primary factors resulting in tree removal.

Fifty-nine (59) of the trees recommended for removal qualified as "Heritage", and 151 were of low suitability for preservation. Trees recommended for removal are listed in **Table 3** (see Attachments), along with their Heritage status and a description of impacts.

Based on the proposed changes, 261 trees have ben preliminarily identified for preservation, including 134 "Heritage" trees. Fifty-one (51) of the trees would be in close proximity to proposed improvements (mainly in the courtyard) and are preliminarily proposed for preservation. Once the design for this area has been set, a final determination of if some or all of the trees can be preserved will be made.

Recommendations for management of preserved trees, and specific guidelines for maintaining the health and vitality of trees through the development processes, are provided in the ***Tree Preservation Guidelines*** that follow. Preservation of trees is predicated on adhering to the ***Tree Preservation Guidelines*** provided.

Tree Preservation Guidelines

The goal of tree preservation is not merely tree survival during development but maintenance of tree health and beauty for many years. Trees retained on sites that are either subject to extensive injury during construction or are inadequately maintained become a liability rather than an asset. The response of individual trees will depend on the amount of excavation and grading, the care with which demolition is undertaken, and the construction methods. Coordinating any construction activity inside the **TREE PROTECTION ZONE** can minimize these impacts.

The following recommendations will help reduce impacts to trees from development and maintain and improve their health and vitality through the clearing, grading and construction phases.

Design recommendations

1. The Consulting Arborist shall review all project plans with regard to tree impact and necessary protection measures. This includes, but is not limited to, demolition, grading, drainage, site improvement and landscape plans.

2. A **TREE PROTECTION ZONE** shall be established around each on-site tree to be preserved. The **TPZ** shall be established as described below. All trees not listed below shall have the **TPZ** established at the dripline in all directions. No grading, excavation, construction or storage of materials shall occur within that zone.

   - The **TPZ** for trees #207, 208, 222-233 shall be established at the back of the existing adjacent curb in the direction of the development, and at the dripline in all other directions.
   - The **TPZ** for trees #242, 247 and 252-254 shall be established at the back of the existing adjacent walkway in the direction of the development, and at the dripline in all other directions.
   - The **TPZ** for trees #14, 17-19, 29, 31, 38, 45, 47, 49, 51, 57, 58, 65, 69-74, 79-81, 85-88, 92, 96, 108-110, 117-119, 209-216, 220, 221, 236, 245, 251, 257, 375, 376, 406, 415, 472, 473, and 481-485 have yet to be determined.

3. No underground services including utilities, sub-drains, water or sewer shall be placed in the **TREE PROTECTION ZONE**.

4. **Tree Preservation Notes**, prepared by the Consulting Arborist, should be included on all plans.

5. Any herbicides placed under paving materials must be safe for use around trees and labeled for that use.

6. Irrigation systems must be designed so that no trenching will occur within the **TREE PROTECTION ZONE**.

7. As trees withdraw water from the soil, expansive soils may shrink within the root area. Therefore, foundations, footings and pavements on expansive soils near trees should be designed to withstand differential displacement.

8. Do not apply lime within 50' of any tree to be preserved. Lime is toxic to tree roots.

9. It is critical to maintaining tree health and longevity that the existing irrigation be maintained in proper working order. This is especially true for the Southern live oaks and callery pears preserved within parking lot islands. If the existing irrigation system cannot be maintained, supplemental irrigation should be applied during the dry summer months (typically May through October).

Pre-construction treatments and recommendations

1. The construction superintendent shall meet with the Consulting Arborist before beginning work to discuss work procedures and tree protection.

2. Fence all trees to be retained to completely enclose the **TREE PROTECTION ZONE** prior to demolition, grubbing or grading. Fences shall be 6 ft. chain link. Fences are to remain until all grading and construction is completed.

3. Prune trees to be preserved to clean the crown and to provide clearance. All pruning shall be completed by a Certified Arborist or Tree Worker and adhere to the latest edition of the ANSI Z133 and A300 standards as well as the *Best Management Practices -- Tree Pruning* published by the International Society of Arboriculture. Brush can be chipped and spread beneath the trees within the **TREE PROTECTION ZONE.**

4. Trees to be removed that have canopies touching trees to remain shall be removed by a Certified Arborist in a manner to avoid damage to remaining trees. The stumps of those removed trees shall be ground out 12" below grade and not pulled out as this could injure remaining trees.

Recommendations for tree protection during construction

1. Prior to beginning work, all contractors working in the vicinity of trees to be preserved are required to meet with the Consulting Arborist at the site to review all work procedures, access routes, storage areas and tree protection measures.

2. No grading, construction, demolition or other work shall occur within the **TREE PROTECTION ZONE**. Any modifications must be approved and monitored by the Consulting Arborist.

3. If the existing irrigation system is non-operational, supplemental irrigation shall be applied to retained trees between May and October at the direction of the Consulting Arborist.

4. If injury should occur to any tree during construction, it should be evaluated as soon as possible by the Consulting Arborist so that appropriate treatments can be applied.

5. No excess soil, chemicals, debris, equipment or other materials shall be dumped or stored within the **TREE PROTECTION ZONE**.

6. Any additional tree pruning needed for clearance during construction must be performed by a Certified Arborist and not by construction personnel.

Maintenance of impacted trees
Preserved trees will experience a physical environment different from that pre-development. As a result, tree health and structural stability should be monitored. Occasional pruning, fertilization, mulch, pest management, replanting and irrigation may be required. In addition, provisions for monitoring both tree health and structural stability following construction must be made a priority. As trees age, the likelihood of failure of branches or entire trees increases. Therefore, annual inspection for hazard potential is recommended.

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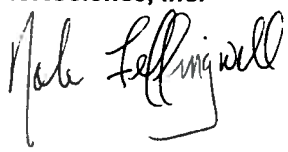

John Leffingwell
Board Certified Master Arborist #WE-3966B
Registered Consulting Arborist #442

Attached: ***Table 3: Trees Recommended for Removal***

Tables 4 and 5: Appraisal of Value

Tree Assessment Form

Tree Assessment Map

Table 3: Trees recommended for removal
Stoneridge Corporate Plaza, Pleasanton

Tree #	Species	Trunk Diameter (in.)	Heritage?	Reason for removal
6	Coast redwood	28	Yes	Within hardscape
7	Coast redwood	36	Yes	Within hardscape
8	Saucer magnolia	5,5,3	No	Within hardscape
9	Saucer magnolia	6,6,5,4	No	Within hardscape
10	Saucer magnolia	8,6	No	Within hardscape
11	Saucer magnolia	8	No	Within hardscape
12	Saucer magnolia	7,7	No	Within hardscape
13	Southern magnolia	11,8	Yes	Within hardscape
15	Grecian laurel	10	No	Within hardscape
16	Grecian laurel	13	No	Within hardscape
20	Southern magnolia	13,6	Yes	Impacted by hardscape
34	Camphor	13	No	Impacted by hardscape
35	Camphor	11	No	Within hardscape
39	European white birch	8	Yes	Within hardscape
40	European white birch	9	Yes	Within hardscape
41	Oleander	8	No	Within hardscape
42	Oleander	6	No	Within hardscape
43	Oleander	7	No	Within hardscape
44	European white birch	8	Yes	Within hardscape
48	Coast redwood	21	Yes	Within hardscape
50	Coast redwood	21	Yes	Within hardscape
55	Coast redwood	14	No	Within hardscape
56	Coast redwood	15	No	Within hardscape
59	Coast redwood	25	Yes	Within hardscape
60	Aleppo pine	11	No	Impacted by hardscape
61	Tulip tree	17	Yes	Within hardscape
62	Coast redwood	23	Yes	Impacted by hardscape
63	Aleppo pine	11	No	Within hardscape
64	Eastern redbud	14	No	Within hardscape
66	Coast redwood	24	Yes	Within hardscape
75	Sweetgum	17	Yes	Within hardscape
76	Unknown	8,6,5	No	Within hardscape
77	Pineapple guava	6,6,5,5	No	Within hardscape
78	Coast redwood	30	Yes	Within hardscape
83	Coast redwood	21	Yes	Within hardscape
84	Coast redwood	8	No	Within hardscape
91	Flowering cherry	9	No	Within hardscape
93	Silk tree	8	No	Within hardscape
94	Silk tree	8	No	Within hardscape
95	Silk tree	9	No	Within hardscape
97	Honey locust	8	No	Within hardscape
98	Coast redwood	15	No	Within hardscape
99	Coast redwood	17	Yes	Impacted by hardscape
100	Camphor	14	No	Within grading
101	Camphor	18	Yes	Within grading
102	Sweetgum	16	Yes	Within grading

(Continued, following page)

Table 3: Trees recommended for removal, continued
Stoneridge Corporate Plaza, Pleasanton

Tree #	Species	Trunk Diameter (in.)	Heritage?	Reason for removal
104	Raywood ash	13	No	Within grading
111	Tulip tree	16	Yes	Within hardscape
112	Tulip tree	17	Yes	Within hardscape
113	Southern magnolia	8,7,6	No	Within hardscape
114	Southern magnolia	7	No	Within hardscape
115	Raywood ash	14	Yes	Within hardscape
116	Southern magnolia	12	No	Impacted by hardscape
120	Southern magnolia	12	No	Within hardscape
121	Golden rain tree	16	No	Impacted by hardscape
122	Golden rain tree	14	No	Within hardscape
123	Golden rain tree	17	No	Within hardscape
124	Raywood ash	9	No	Within hardscape
125	Honey locust	6	No	Within grading
126	Honey locust	6	No	Within grading
127	Honey locust	8	No	Within grading
129	Apple	6	No	Within pkng lot reconfigure
130	Apple	7	No	Within pkng lot reconfigure
131	Raywood ash	27	Yes	Within pkng lot reconfigure
132	Brazilian pepper	10	No	Within pkng lot reconfigure
133	Brazilian pepper	14	No	Within pkng lot reconfigure
134	Brazilian pepper	9	No	Within pkng lot reconfigure
135	Brazilian pepper	15	No	Within pkng lot reconfigure
136	Sweetgum	9	No	Within pkng lot reconfigure
137	Camphor	13	No	Within pkng lot reconfigure
138	Brazilian pepper	14	No	Within pkng lot reconfigure
139	Brazilian pepper	11	No	Within pkng lot reconfigure
140	Brazilian pepper	14	No	Within pkng lot reconfigure
141	Brazilian pepper	13	No	Within pkng lot reconfigure
142	Callery pear	13	No	Within pkng lot reconfigure
143	Callery pear	11	No	Within pkng lot reconfigure
144	Callery pear	12	No	Within pkng lot reconfigure
145	Brazilian pepper	8	No	Within pkng lot reconfigure
146	Brazilian pepper	12	No	Within pkng lot reconfigure
147	Brazilian pepper	12	No	Within pkng lot reconfigure
148	Brazilian pepper	11	No	Within pkng lot reconfigure
149	Brazilian pepper	10	No	Within pkng lot reconfigure
150	Brazilian pepper	9	No	Within pkng lot reconfigure
151	Brazilian pepper	11	No	Within pkng lot reconfigure
152	Brazilian pepper	10	No	Within pkng lot reconfigure
153	Callery pear	10	No	Within pkng lot reconfigure
154	Brazilian pepper	9	No	Within pkng lot reconfigure
155	Callery pear	9	No	Within pkng lot reconfigure
156	Brazilian pepper	10	No	Within pkng lot reconfigure
157	Brazilian pepper	11	No	Within pkng lot reconfigure
158	Brazilian pepper	8	No	Within pkng lot reconfigure
159	Brazilian pepper	11	No	Within pkng lot reconfigure

(Continued, following page)

Table 3: Trees recommended for removal, continued
Stoneridge Corporate Plaza, Pleasanton

Tree #	Species	Trunk Diameter (in.)	Heritage?	Reason for removal
160	Brazilian pepper	9	No	Within pkng lot reconfigure
161	Chinese pistache	15	No	Within pkng lot reconfigure
162	Raywood ash	12	No	Within pkng lot reconfigure
163	Raywood ash	9	No	Within pkng lot reconfigure
164	Raywood ash	7	No	Within new bldg.
165	Raywood ash	12	No	Within new bldg.
166	Callery pear	13	No	Within bioretention
167	Callery pear	11	No	Within bioretention
168	Callery pear	10	No	Impacted by hardscape
169	Callery pear	10	No	Within bioretention
170	Callery pear	10	No	Within bioretention
171	Callery pear	9	No	Within bioretention
172	Callery pear	12	No	Within hardscape
173	Callery pear	11	No	Within hardscape
174	Callery pear	7	No	Within hardscape
175	Brazilian pepper	11	No	Within new parking struct.
176	Camphor	12	No	Within new parking struct.
177	Camphor	17	No	Within new parking struct.
178	Camphor	12	No	Within new parking struct.
179	Raywood ash	15	No	Within new parking struct.
180	Brazilian pepper	12	No	Within new parking struct.
181	Brazilian pepper	14	No	Within new parking struct.
182	Camphor	13	No	Within new parking struct.
183	Raywood ash	15	No	Within new parking struct.
184	Camphor	15	No	Within new parking struct.
185	Sweetgum	8	No	Within new parking struct.
186	Brazilian pepper	20	Yes	Within new parking struct.
187	Sweetgum	8	No	Within new parking struct.
188	Sweetgum	12	Yes	Within new parking struct.
189	Camphor	14	No	Within new parking struct.
190	Raywood ash	11	No	Within new parking struct.
191	Raywood ash	15	No	Within new parking struct.
192	Raywood ash	13	No	Within new parking struct.
193	Camphor	15	No	Within new parking struct.
194	Raywood ash	15	No	Within new parking struct.
195	Brazilian pepper	13	No	Within new parking struct.
196	Brazilian pepper	20	Yes	Within new parking struct.
197	Brazilian pepper	14	No	Within new parking struct.
198	Camphor	12	No	Within new parking struct.
199	Camphor	15	No	Within new parking struct.
200	Camphor	16	No	Within new parking struct.
201	Sweetgum	7	No	Within new parking struct.
202	Sweetgum	9	No	Within new parking struct.
203	Sweetgum	9	No	Within new parking struct.
204	Raywood ash	16	Yes	Within new parking struct.
205	Crape myrtle	4,4,4,3,2	No	Impacted by hardscape
206	Crape myrtle	5,4,4,3,2,2,2	No	Impacted by hardscape

(Continued, following page)

Table 3: Trees recommended for removal, continued
Stoneridge Corporate Plaza, Pleasanton

Tree #	Species	Trunk Diameter (in.)	Heritage?	Reason for removal
234	Coast redwood	29	Yes	Within pkng lot reconfigure
237	Coast redwood	20	Yes	Within new parking
238	Coast redwood	20	Yes	Within new parking
239	Coast redwood	18	Yes	Within new parking
240	Coast redwood	25	Yes	Within new parking
241	Coast redwood	30	Yes	Within new parking
246	European white birch	8	No	Within new entry
248	European white birch	13	Yes	Within new walkway
249	European white birch	12	Yes	Within new walkway
250	European white birch	6	No	Within new walkway
255	Coast redwood	21	Yes	Within new parking
256	Coast redwood	22	Yes	Within new parking
290	Callery pear	16	Yes	Within hardscape
291	Callery pear	14	Yes	Within hardscape
292	Brazilian pepper	7	No	Within pkng lot reconfigure
293	Brazilian pepper	9	No	Within pkng lot reconfigure
294	Brazilian pepper	10	No	Within pkng lot reconfigure
295	Brazilian pepper	15	No	Within pkng lot reconfigure
296	Brazilian pepper	12	No	Within pkng lot reconfigure
297	Brazilian pepper	14	No	Within pkng lot reconfigure
298	Brazilian pepper	9	No	Within pkng lot reconfigure
299	Raywood ash	12	No	Within pkng lot reconfigure
300	Raywood ash	18	Yes	Within pkng lot reconfigure
301	Southern live oak	8	No	Within pkng lot reconfigure
302	Southern live oak	8	No	Within pkng lot reconfigure
303	Brazilian pepper	10	No	Within pkng lot reconfigure
304	Brazilian pepper	10	No	Within pkng lot reconfigure
305	Brazilian pepper	10	No	Within pkng lot reconfigure
306	Brazilian pepper	10	No	Within pkng lot reconfigure
307	Brazilian pepper	9	No	Within pkng lot reconfigure
308	Brazilian pepper	10	No	Within pkng lot reconfigure
309	Brazilian pepper	8	No	Within pkng lot reconfigure
310	Brazilian pepper	10	No	Within pkng lot reconfigure
311	Brazilian pepper	10	No	Within pkng lot reconfigure
312	Brazilian pepper	9	No	Within pkng lot reconfigure
313	Brazilian pepper	6	No	Within pkng lot reconfigure
314	Brazilian pepper	11	No	Within pkng lot reconfigure
315	Brazilian pepper	11	No	Within pkng lot reconfigure
316	Brazilian pepper	10	No	Within pkng lot reconfigure
317	Southern live oak	15	No	Within pkng lot reconfigure
318	Southern live oak	20	Yes	Within pkng lot reconfigure
319	Southern live oak	15	No	Within pkng lot reconfigure
320	Southern live oak	14	No	Within pkng lot reconfigure
321	Southern live oak	14	No	Within pkng lot reconfigure
330	Raywood ash	16	Yes	Within pkng lot reconfigure
331	Raywood ash	16	Yes	Within pkng lot reconfigure

(Continued, following page)

Table 3: Trees recommended for removal, continued
Stoneridge Corporate Plaza, Pleasanton

Tree #	Species	Trunk Diameter (in.)	Heritage?	Reason for removal
332	Raywood ash	12	Yes	Within pkng lot reconfigure
333	Raywood ash	10	No	Within pkng lot reconfigure
342	Raywood ash	12	Yes	Within pkng lot reconfigure
343	Raywood ash	16	Yes	Within pkng lot reconfigure
344	Raywood ash	18	Yes	Within pkng lot reconfigure
345	Camphor	12	No	Within pkng lot reconfigure
355	Brazilian pepper	12	No	Within pkng lot reconfigure
356	Sweetgum	12	No	Within pkng lot reconfigure
366	Sweetgum	13	Yes	Within pkng lot reconfigure
367	Raywood ash	16	No	Within pkng lot reconfigure
368	Raywood ash	14	Yes	Within pkng lot reconfigure
379	Raywood ash	8	No	Within pkng lot reconfigure
380	Camphor	10	No	Within pkng lot reconfigure
381	Camphor	11	No	Within pkng lot reconfigure
392	Raywood ash	16	Yes	Within pkng lot reconfigure
393	Raywood ash	11	No	Within pkng lot reconfigure
394	Camphor	15	No	Within pkng lot reconfigure
395	Camphor	15	No	Within pkng lot reconfigure
407	Raywood ash	18	Yes	Within pkng lot reconfigure
408	Raywood ash	16	Yes	Within pkng lot reconfigure
409	Camphor	16	Yes	Within pkng lot reconfigure
410	Camphor	11	No	Within pkng lot reconfigure
416	Raywood ash	14	Yes	Within pkng lot reconfigure
417	Camphor	12	No	Within pkng lot reconfigure
418	Camphor	12	No	Within pkng lot reconfigure
419	Camphor	12	No	Within pkng lot reconfigure
420	Camphor	13	No	Within pkng lot reconfigure
441	Camphor	12	No	Within pkng lot reconfigure
442	Camphor	10	No	Within pkng lot reconfigure
443	Raywood ash	19	Yes	Within pkng lot reconfigure
444	Raywood ash	16	No	Within pkng lot reconfigure
458	Camphor	11	No	Within pkng lot reconfigure
459	Camphor	9	No	Within pkng lot reconfigure
460	Blackwood acacia	9	No	Within pkng lot reconfigure
461	Blackwood acacia	9	No	Within pkng lot reconfigure
462	Blackwood acacia	8,7	No	Within pkng lot reconfigure
463	Fremont cottonwood	33	Yes	Within bioretention
464	Blackwood acacia	16	No	Within bioretention
465	Blackwood acacia	23	Yes	Within pkng lot reconfigure
466	Fremont cottonwood	45	Yes	Within pkng lot reconfigure
467	Fremont cottonwood	66	Yes	Within bioretention
468	Blackwood acacia	8,5,5,4	No	Within trail
469	Coast live oak	9,8	No	Within trail
470	Coast live oak	7,7,7	No	Within trail
471	Coast live oak	9,7,7	No	Within trail
480	Chinese pistache	9	No	Within sidewalk

Appraisal of Value

The City of Pleasanton requires that the value of all the surveyed trees be established. To accomplish this, I used the standard methods found in *Guide for Plant Appraisal*, 9th edition (published in 2000 by the International Society of Arboriculture, Champaign IL). In addition, I referred to *Species Classification and Group Assignment* (2004), a publication of the Western Chapter of the International Society of Arboriculture. These two documents outline the methods employed in tree appraisal.

The value of landscape trees is based upon four factors: size, species, condition and location. Size is measured as trunk diameter, normally 54" above grade. The species factor considers the adaptability and appropriateness of the plant in the East Bay area. The *Species Classification and Group Assignment* lists recommended species ratings and evaluations. Condition reflects the health and structural integrity of the individual, as noted in the ***Tree Assessment Form***. Location considers the site, placement and contribution of the tree in its surrounding landscape.

The appraised value of the 261 trees recommended for preservation is $667,550 (**Table 4**).

The appraised value of the 231 trees recommended for removal is $478,600 (**Table 5**, page 7).

Table 4: Appraised value of trees recommended for preservation

Tree No.	Species	Trunk diameter (in.)	Appraised value ($)
1	Apple	6	400
2	Apple	8	1100
3	Apple	7	850
4	Coast redwood	28	10200
5	Coast redwood	29	10900
14	Southern magnolia	12	850
17	Coast redwood	25	1600
18	Coast redwood	22	950
19	Coast redwood	29	1050
21	Coast redwood	24	10200
22	Coast redwood	21	16050
23	Golden rain tree	18	1200
24	Coast redwood	15	3150
25	Coast redwood	16	2800
26	Coast redwood	21	1300
27	Coast redwood	25	2750
28	Coast redwood	14	2200
29	Coast redwood	20	850
30	Coast redwood	21	1700
31	Coast redwood	20	1800
32	Coast redwood	13	1550
33	Coast redwood	17	3650
36	European white birch	7	5800
37	European white birch	10	4500
38	European white birch	7	3300
45	European white birch	12	3300
46	European white birch	6	250
47	European white birch	11	950

(Continued, following page)

Table 4: Appraised value of trees recommended for preservation, continued

Tree No.	Species	Trunk diameter (in.)	Appraised value ($)
49	Coast redwood	21	2400
51	Coast redwood	25	1950
52	Coast redwood	21	7800
53	Coast redwood	21	2400
54	Coast redwood	19	5350
57	Tulip tree	18	3100
58	Southern magnolia	11,7	1800
65	Eastern redbud	9,5	4100
67	Southern magnolia	17	4100
68	Southern magnolia	14	3550
69	Southern magnolia	8,7	2400
70	Weeping willow	29	2100
71	Weeping willow	33	550
72	Camphor	17	1700
73	Italian stone pine	47	2400
74	Italian stone pine	34	2100
79	Coast redwood	21	1250
80	Coast redwood	27	2500
81	Honey locust	6	1800
82	Honey locust	6	2150
85	Coast redwood	14	900
86	Coast redwood	10	2550
87	Coast redwood	8	1250
88	Coast redwood	23	4450
89	Coast redwood	27	2400
90	Flowering cherry	11	4100
92	Flowering cherry	10	450
96	African sumac	11,7,6,4,4	4500
103	New Zealand tea tree	11,11	5800
105	Coast redwood	16	1750
106	Coast redwood	15	3550
107	Honey locust	6	3900
108	Coast redwood	23	250
109	Coast redwood	24	300
110	Coast redwood	29	300
117	Southern magnolia	13	2250
118	Southern magnolia	14	10900
119	Golden rain tree	18	4100
128	Callery pear	10	3750
207	Purpleleaf plum	7,6,5,5	1600
208	Raywood ash	17	2700
209	Raywood ash	23	10200
210	Raywood ash	23	3750
211	Purpleleaf plum	7,7,5,5	3750
212	Chinese lantern	14	3050
213	Chinese lantern	15	5800
214	Chinese lantern	19	11700
215	Chinese lantern	12	550

(Continued, following page)

Table 4: Appraised value of trees recommended for preservation, continued

Tree No.	Species	Trunk diameter (in.)	Appraised value ($)
216	Chinese lantern	14	350
217	Chinese pistache	10	3650
218	Chinese pistache	6	1900
219	Chinese pistache	9	300
220	Chinese lantern	14	250
221	Chinese lantern	13	350
222	Camphor	12	550
223	Camphor	13	200
224	Camphor	11	250
225	Camphor	10	350
226	Brazilian pepper	15	800
227	Raywood ash	14	450
228	Brazilian pepper	20	350
229	Camphor	7	250
230	Camphor	9	800
231	Camphor	10	100
232	Camphor	10	500
233	Raywood ash	19	4100
235	Coast redwood	21	4100
236	Coast redwood	28	250
242	European white birch	12	4100
243	European white birch	9	5800
244	European white birch	8	4100
245	European white birch	9	350
247	European white birch	9	5750
251	European white birch	10	950
252	European white birch	11	3400
253	European white birch	11	1850
254	European white birch	8	2150
257	Coast redwood	18	1800
258	Coast redwood	20	1750
259	Coast redwood	26	2000
260	Coast redwood	23	8150
261	Coast redwood	17	800
262	Coast redwood	19	1600
263	Coast redwood	24	4950
264	Coast redwood	29	500
265	Sweetgum	12	3250
266	Sweetgum	11	1050
267	European white birch	8	5350
268	European white birch	6	4750
269	European white birch	7	2300
270	European white birch	11	1350
271	European white birch	8	2600
272	European white birch	9	3300
273	Southern magnolia	8,6,5,2	6200
274	European white birch	7	18300
275	European white birch	6	11300
276	Coast redwood	18	4450

(Continued, following page)

Table 4: Appraised value of trees recommended for preservation, continued

Tree No.	Species	Trunk diameter (in.)	Appraised value ($)
277	Coast redwood	16	1400
278	Coast redwood	15	2050
279	Flowering cherry	8	8350
280	Flowering cherry	7	4100
281	Flowering cherry	8	6750
282	Honey locust	7	350
283	Callery pear	9	250
284	Callery pear	13	4100
285	Raywood ash	14	400
286	Raywood ash	12	1850
287	Callery pear	14	1000
288	Callery pear	14	650
289	Callery pear	16	4950
322	Callery pear	7	6750
323	Zelkova	7	1350
324	Callery pear	16	1250
325	Callery pear	8	1100
326	Zelkova	6	450
327	Callery pear	9	450
328	Callery pear	19	750
329	Callery pear	12	2050
334	Callery pear	16	600
335	Callery pear	19	3000
336	Callery pear	7	3800
337	Callery pear	11	3000
338	Sweetgum	7	6950
339	Sweetgum	7	2800
340	Callery pear	17	5200
341	Callery pear	17	1550
346	Callery pear	14	3400
347	Sweetgum	11	2150
348	Sweetgum	12	350
349	Sweetgum	10	4950
350	Sweetgum	10	5350
351	Sweetgum	13	7800
352	Brazilian pepper	13	1800
353	Raywood ash	22	1600
354	Sweetgum	9	2500
357	Raywood ash	15	850
358	Raywood ash	16	1800
359	Sweetgum	9	1700
360	Raywood ash	18	2000
361	Sweetgum	14	3250
362	Camphor	13	4950
363	Camphor	11	2400
364	Raywood ash	18	3950
365	Raywood ash	12	2150
369	Sweetgum	6	4450
370	Raywood ash	16	750

(Continued, following page)

Table 4: Appraised value of trees recommended for preservation, continued

Tree No.	Species	Trunk diameter (in.)	Appraised value ($)
371	Sweetgum	6	250
372	Raywood ash	16	250
373	Sweetgum	15	600
374	Sweetgum	10	1100
375	Camphor	12	3750
376	Camphor	7	8800
377	Raywood ash	14	600
378	Sweetgum	9	800
382	Sweetgum	7	6350
383	Raywood ash	18	1150
384	Raywood ash	11	2200
385	Sweetgum	6	950
386	Raywood ash	15	2550
387	Raywood ash	18	1200
388	Brazilian pepper	18	1500
389	Raywood ash	15	1300
390	Sweetgum	9	1350
391	Raywood ash	14	2200
396	Raywood ash	7	1900
397	Raywood ash	11	1800
398	Raywood ash	17	1300
399	Raywood ash	17	1500
400	Raywood ash	17	450
401	Brazilian pepper	21	2300
402	Brazilian pepper	15	1650
403	Raywood ash	15	1350
404	Brazilian pepper	15	1150
405	Brazilian pepper	15	950
406	Raywood ash	10	6900
411	Sweetgum	6	1350
412	Raywood ash	14	1150
413	Brazilian pepper	19	1050
414	Raywood ash	14	950
415	Raywood ash	14	2700
421	Camphor	15	850
422	Camphor	13	1150
423	Camphor	13	1350
424	Camphor	17	450
425	Raywood ash	14	1350
426	Raywood ash	15	950
427	Raywood ash	15	4600
428	Camphor	13	900
429	Camphor	14	750
430	Coast redwood	25	300
431	Chinese lantern	15	1250
432	Coast redwood	27	1800
433	Coast redwood	29	1300
434	Camphor	13	1050
435	Camphor	10	1050

(Continued, following page)

Table 4: Appraised value of trees recommended for preservation, continued

Tree No.	Species	Trunk diameter (in.)	Appraised value ($)
436	Brazilian pepper	13	1050
437	Brazilian pepper	19	850
438	Raywood ash	11	2100
439	Raywood ash	11	1300
440	Raywood ash	11	550
445	Brazilian pepper	8	1350
446	Camphor	10	2100
447	Raywood ash	16	4200
448	Raywood ash	13	2100
449	Raywood ash	11	1400
450	Brazilian pepper	11	1000
451	Brazilian pepper	22	1300
452	Camphor	11	500
453	Camphor	10	1400
454	Brazilian pepper	11	2000
455	Brazilian pepper	11	950
456	Raywood ash	11	4450
457	Raywood ash	12	950
472	English walnut	7,5,5,5,5,4,4,3	800
473	Coast live oak	18	150
474	London plane	25	2100
475	London plane	19	2900
476	London plane	33	450
477	London plane	25	1400
478	London plane	28	1050
479	London plane	21	3300
481	Chinese pistache	13	400
482	Chinese pistache	9	700
483	Chinese pistache	9	500
484	Tulip tree	15	1400
485	Tulip tree	18	2650
486	Tulip tree	16	4450
487	Tulip tree	15	2200
488	Tulip tree	12	1250
489	Tulip tree	16	3300
490	Tulip tree	10	2250
491	Tulip tree	17	750
492	Tulip tree	16	850
Total			**$667,550**

Table 5: Appraised value of trees recommended for removal

Tree No.	Species	Trunk diameter (in.)	Heritage?	Appraised value ($)
6	Coast redwood	28	Yes	3400
7	Coast redwood	36	Yes	7500
8	Saucer magnolia	5,5,3	No	7800
9	Saucer magnolia	6,6,5,4	No	1500
10	Saucer magnolia	8,6	No	1800
11	Saucer magnolia	8	No	250
12	Saucer magnolia	7,7	No	150
13	Southern magnolia	11,8	Yes	200
15	Grecian laurel	10	No	450
16	Grecian laurel	13	No	350
20	Southern magnolia	13,6	Yes	300
34	Camphor	13	No	2050
35	Camphor	11	No	200
39	European white birch	8	Yes	150
40	European white birch	9	Yes	2900
41	Oleander	8	No	2300
42	Oleander	6	No	2050
43	Oleander	7	No	700
44	European white birch	8	Yes	550
48	Coast redwood	21	Yes	700
50	Coast redwood	21	Yes	450
55	Coast redwood	14	No	850
56	Coast redwood	15	No	2500
59	Coast redwood	25	Yes	1750
60	Aleppo pine	11	No	1250
61	Tulip tree	17	Yes	2900
62	Coast redwood	23	Yes	2900
63	Aleppo pine	11	No	3750
64	Eastern redbud	14	No	3750
66	Coast redwood	24	Yes	2900
75	Sweetgum	17	Yes	550
76	Unknown	8,6,5	No	1300
77	Pineapple guava	6,6,5,5	No	1600
78	Coast redwood	30	Yes	3550
83	Coast redwood	21	Yes	2300
84	Coast redwood	8	No	3100
91	Flowering cherry	9	No	1300
93	Silk tree	8	No	900
94	Silk tree	8	No	2050
95	Silk tree	9	No	1750
97	Honey locust	8	No	1750
98	Coast redwood	15	No	1600
99	Coast redwood	17	Yes	1600
100	Camphor	14	No	750
101	Camphor	18	Yes	2500

(Continued, following page)

Table 5: Appraised value of trees recommended for removal, continued

Tree No.	Species	Trunk diameter (in.)	Heritage?	Appraised value ($)
102	Sweetgum	16	Yes	1200
104	Raywood ash	13	No	1200
111	Tulip tree	16	Yes	1150
112	Tulip tree	17	Yes	1600
113	Southern magnolia	8,7,6	No	950
114	Southern magnolia	7	No	1150
115	Raywood ash	14	Yes	1050
116	Southern magnolia	12	No	1600
120	Southern magnolia	12	No	700
121	Golden rain tree	16	No	1300
122	Golden rain tree	14	No	250
123	Golden rain tree	17	No	1350
124	Raywood ash	9	No	1900
125	Honey locust	6	No	850
126	Honey locust	6	No	1200
127	Honey locust	8	No	950
129	Apple	6	No	700
130	Apple	7	No	5950
131	Raywood ash	27	Yes	10500
132	Brazilian pepper	10	No	4250
133	Brazilian pepper	14	No	3700
134	Brazilian pepper	9	No	5200
135	Brazilian pepper	15	No	550
136	Sweetgum	9	No	950
137	Camphor	13	No	3750
138	Brazilian pepper	14	No	700
139	Brazilian pepper	11	No	700
140	Brazilian pepper	14	No	850
141	Brazilian pepper	13	No	5250
142	Callery pear	13	No	2100
143	Callery pear	11	No	1600
144	Callery pear	12	No	1600
145	Brazilian pepper	8	No	900
146	Brazilian pepper	12	No	650
147	Brazilian pepper	12	No	2650
148	Brazilian pepper	11	No	3750
149	Brazilian pepper	10	No	550
150	Brazilian pepper	9	No	1300
151	Brazilian pepper	11	No	750
152	Brazilian pepper	10	No	750
153	Callery pear	10	No	3000
154	Brazilian pepper	9	No	3000
155	Callery pear	9	No	900
156	Brazilian pepper	10	No	1600
157	Brazilian pepper	11	No	2850

(Continued, following page)

Table 5: Appraised value of trees recommended for removal, continued

Tree No.	Species	Trunk diameter (in.)	Heritage?	Appraised value ($)
158	Brazilian pepper	8	No	2100
159	Brazilian pepper	11	No	2050
160	Brazilian pepper	9	No	1800
161	Chinese pistache	15	No	1500
162	Raywood ash	12	No	1050
163	Raywood ash	9	No	1500
164	Raywood ash	7	No	1800
165	Raywood ash	12	No	1900
166	Callery pear	13	No	850
167	Callery pear	11	No	550
168	Callery pear	10	No	950
169	Callery pear	10	No	400
170	Callery pear	10	No	1050
171	Callery pear	9	No	950
172	Callery pear	12	No	1800
173	Callery pear	11	No	1200
174	Callery pear	7	No	1000
175	Brazilian pepper	11	No	1500
176	Camphor	12	No	1400
177	Camphor	17	No	1600
178	Camphor	12	No	1200
179	Raywood ash	15	No	2050
180	Brazilian pepper	12	No	2900
181	Brazilian pepper	14	No	2500
182	Camphor	13	No	1800
183	Raywood ash	15	No	2050
184	Camphor	15	No	900
185	Sweetgum	8	No	1800
186	Brazilian pepper	20	Yes	1600
187	Sweetgum	8	No	1250
188	Sweetgum	12	Yes	550
189	Camphor	14	No	2250
190	Raywood ash	11	No	550
191	Raywood ash	15	No	1600
192	Raywood ash	13	No	3300
193	Camphor	15	No	1500
194	Raywood ash	15	No	1250
195	Brazilian pepper	13	No	150
196	Brazilian pepper	20	Yes	1250
197	Brazilian pepper	14	No	1200
198	Camphor	12	No	600
199	Camphor	15	No	900
200	Camphor	16	No	1800
201	Sweetgum	7	No	750
202	Sweetgum	9	No	2050

(Continued, following page)

Table 5: Appraised value of trees recommended for removal, continued

Tree No.	Species	Trunk diameter (in.)	Heritage?	Appraised value ($)
203	Sweetgum	9	No	750
204	Raywood ash	16	Yes	550
205	Crape myrtle	4,4,4,3,2	No	1400
206	Crape myrtle	5,4,4,3,2,2,2	No	2850
234	Coast redwood	29	Yes	3650
237	Coast redwood	20	Yes	2000
238	Coast redwood	20	Yes	850
239	Coast redwood	18	Yes	1250
240	Coast redwood	25	Yes	2250
241	Coast redwood	30	Yes	750
246	European white birch	8	No	3300
248	European white birch	13	Yes	3300
249	European white birch	12	Yes	450
250	European white birch	6	No	750
255	Coast redwood	21	Yes	1800
256	Coast redwood	22	Yes	1800
290	Callery pear	16	Yes	1800
291	Callery pear	14	Yes	6900
292	Brazilian pepper	7	No	3550
293	Brazilian pepper	9	No	850
294	Brazilian pepper	10	No	2550
295	Brazilian pepper	15	No	2550
296	Brazilian pepper	12	No	400
297	Brazilian pepper	14	No	2050
298	Brazilian pepper	9	No	1600
299	Raywood ash	12	No	5250
300	Raywood ash	18	Yes	1800
301	Southern live oak	8	No	400
302	Southern live oak	8	No	1250
303	Brazilian pepper	10	No	4050
304	Brazilian pepper	10	No	1250
305	Brazilian pepper	10	No	750
306	Brazilian pepper	10	No	1250
307	Brazilian pepper	9	No	2100
308	Brazilian pepper	10	No	2100
309	Brazilian pepper	8	No	2100
310	Brazilian pepper	10	No	2500
311	Brazilian pepper	10	No	3300
312	Brazilian pepper	9	No	2500
313	Brazilian pepper	6	No	2500
314	Brazilian pepper	11	No	4200
315	Brazilian pepper	11	No	1250
316	Brazilian pepper	10	No	1400
317	Southern live oak	15	No	1400
318	Southern live oak	20	Yes	2500

(Continued, following page)

Table 5: Appraised value of trees recommended for removal, continued

Tree No.	Species	Trunk diameter (in.)	Heritage?	Appraised value ($)
319	Southern live oak	15	No	2900
320	Southern live oak	14	No	9950
321	Southern live oak	14	No	2750
330	Raywood ash	16	Yes	11600
331	Raywood ash	16	Yes	10400
332	Raywood ash	12	Yes	3500
333	Raywood ash	10	No	2100
342	Raywood ash	12	Yes	2650
343	Raywood ash	16	Yes	5650
344	Raywood ash	18	Yes	750
345	Camphor	12	No	450
355	Brazilian pepper	12	No	750
356	Sweetgum	12	No	1250
366	Sweetgum	13	Yes	1500
367	Raywood ash	16	No	1350
368	Raywood ash	14	Yes	950
379	Raywood ash	8	No	450
380	Camphor	10	No	1500
381	Camphor	11	No	300
392	Raywood ash	16	Yes	650
393	Raywood ash	11	No	450
394	Camphor	15	No	800
395	Camphor	15	No	5400
407	Raywood ash	18	Yes	2500
408	Raywood ash	16	Yes	1500
409	Camphor	16	Yes	1350
410	Camphor	11	No	800
416	Raywood ash	14	Yes	150
417	Camphor	12	No	550
418	Camphor	12	No	2500
419	Camphor	12	No	1200
420	Camphor	13	No	450
441	Camphor	12	No	450
442	Camphor	10	No	450
443	Raywood ash	19	Yes	1900
444	Raywood ash	16	No	1350
458	Camphor	11	No	2750
459	Camphor	9	No	3050
460	Blackwood acacia	9	No	1500
461	Blackwood acacia	9	No	500
462	Blackwood acacia	8,7	No	1650
463	Fremont cottonwood	33	Yes	1650
464	Blackwood acacia	16	No	2000
465	Blackwood acacia	23	Yes	450
466	Fremont cottonwood	45	Yes	3600

(Continued, following page)

Table 5: Appraised value of trees recommended for removal, continued

Tree No.	Species	Trunk diameter (in.)	Heritage?	Appraised value ($)
467	Fremont cottonwood	66	Yes	7550
468	Blackwood acacia	8,5,5,4	No	4350
469	Coast live oak	9,8	No	12750
470	Coast live oak	7,7,7	No	7550
471	Coast live oak	9,7,7	No	9450
480	Chinese pistache	9	No	3800
Total				**478,600**

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Tree No.	Species	Trunk Diameter (in.)	Condition 1=poor 5=excellent	Suitability for Preservation	Heritage Tree?	Comments
1	Apple	6	2	Low	No	Suppressed; crown bowed S.; basal decay/dead roots.
2	Apple	8	3	Low	No	Poor form & structure; trunk wound W.
3	Apple	7	3	Low	No	Suppressed; crown bowed E.
4	Coast redwood	28	4	Moderate	Yes	Good form; thin canopy.
5	Coast redwood	29	4	Moderate	Yes	Good form; thin canopy; displacing concrete curb on S.
6	Coast redwood	28	4	Moderate	Yes	Good form; thin canopy.
7	Coast redwood	36	4	Moderate	Yes	Good form; thin canopy.
8	Saucer magnolia	5,5,3	3	Low	No	Multiple attachments @ base; suppressed; one-sided to S.
9	Saucer magnolia	6,6,5,4	4	Moderate	No	Multiple attachments @ base; spreading form; headed.
10	Saucer magnolia	8,6	4	Moderate	No	Codominant trunks @ base; headed.
11	Saucer magnolia	8	3	Low	No	Upright form; topped @ 18'.
12	Saucer magnolia	7,7	4	Moderate	No	Codominant trunks @ 3'; headed.
13	Southern magnolia	11,8	3	Low	Yes	One sided N.; thin canopy.
14	Southern magnolia	12	3	Low	No	Upright form; thin canopy.
15	Grecian laurel	10	3	Low	No	Crowded; headed; thin canopy.
16	Grecian laurel	13	4	Moderate	No	Upright form headed.
17	Coast redwood	25	3	Moderate	Yes	Crown raised to 15'; thin canopy.
18	Coast redwood	22	3	Moderate	Yes	Crown raised to 15'; thin canopy.
19	Coast redwood	29	3	Moderate	Yes	Crown raised to 15'; thin canopy.
20	Southern magnolia	13,6	3	Low	Yes	Spreading form; thin canopy.
21	Coast redwood	24	3	Moderate	Yes	Crown raised to 15'; thin canopy.
22	Coast redwood	21	3	Moderate	Yes	Crown raised to 15'; thin canopy.
23	Golden rain tree	18	3	Low	Yes	Multiple attachments @ 8'; slight lean N.; hangers/deadwood.
24	Coast redwood	15	3	Moderate	Yes	Crown raised to 15'; thin canopy.
25	Coast redwood	16	3	Moderate	Yes	Crown raised to 15'; thin canopy.
26	Coast redwood	21	3	Moderate	Yes	Crown raised to 15'; thin canopy.
27	Coast redwood	25	3	Moderate	Yes	Crown raised to 15'; thin canopy.
28	Coast redwood	14	3	Low	Yes	One sided N. away from bldg.; thin canopy.

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Tree No.	Species	Trunk Diameter (in.)	Condition 1=poor 5=excellent	Suitability for Preservation	Heritage Tree?	Comments
29	Coast redwood	20	3	Moderate	Yes	Crown raised to 15'; thin canopy.
30	Coast redwood	21	3	Low	Yes	Crown raised to 15'; very thin canopy.
31	Coast redwood	20	3	Low	Yes	Crowded & one-sided to N.; thin canopy.
32	Coast redwood	13	3	Low	Yes	Crown raised to 15'; very thin canopy.
33	Coast redwood	17	3	Low	Yes	One sided S. away from bldg.; thin canopy.
34	Camphor	13	4	Moderate	No	Multiple attachments @ 6'; good form; very wet soil.
35	Camphor	11	3	Low	No	Multiple attachments @ 6'; lateral N.; twig dieback; very wet soil.
36	European white birch	7	4	Moderate	No	One sided W. away from bldg.; minor dieback.
37	European white birch	10	4	Moderate	Yes	One sided W. away from bldg.; minor dieback.
38	European white birch	7	3	Low	Yes	Crook @ 15'; twig dieback.
39	European white birch	8	3	Low	Yes	Leans NW.; poor form; twig dieback.
40	European white birch	9	3	Low	Yes	Corrected lean N.; twig dieback.
41	Oleander	8	3	Low	No	Standard form.
42	Oleander	6	3	Low	No	Standard form: dieback.
43	Oleander	7	2	Low	No	Standard form: leans S.; twig dieback.
44	European white birch	8	3	Low	Yes	Leans S. away from bldg.; twig dieback.
45	European white birch	12	4	Moderate	Yes	Corrected lean W.; dominant tree; twig dieback.
46	European white birch	6	2	Low	No	Dead top.
47	European white birch	11	3	Low	Yes	Crook & codominant trunks @ 12'; twig dieback.
48	Coast redwood	21	3	Low	Yes	Very thin canopy.
49	Coast redwood	21	3	Moderate	Yes	One sided S. away from bldg.; thin canopy.
50	Coast redwood	21	3	Low	Yes	One sided SW.; very thin canopy.
51	Coast redwood	25	3	Moderate	Yes	Good form; crown raised to 15'; thin canopy.
52	Coast redwood	21	3	Moderate	Yes	One sided W. away from bldg.; thin canopy.
53	Coast redwood	21	4	Moderate	Yes	One sided W. away from bldg.
54	Coast redwood	19	3	Moderate	Yes	One sided W. away from bldg.; thin canopy.
55	Coast redwood	14	3	Low	No	Very thin canopy.
56	Coast redwood	15	3	Low	No	Very thin canopy.

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Tree No.	Species	Trunk Diameter (in.)	Condition 1=poor 5=excellent	Suitability for Preservation	Heritage Tree?	Comments
57	Tulip tree	18	4	Moderate	Yes	Corrected lean S.; fair structure.
58	Southern magnolia	11,7	3	Low	Yes	One sided S.; thin canopy.
59	Coast redwood	25	4	Moderate	Yes	Good form; slightly thin canopy.
60	Aleppo pine	11	3	Low	No	Upright form; sequoia pitch moth; surface roots.
61	Tulip tree	17	4	Moderate	Yes	Good form & structure; one-sided to W.
62	Coast redwood	23	3	Moderate	Yes	Good form; thin canopy.
63	Aleppo pine	11	2	Low	No	Poor form; sequoia pitch moth; twig dieback.
64	Eastern redbud	14	3	Low	No	Slight lean E.; girdling root.
65	Eastern redbud	9,5	2	Low	No	Suppressed; heavy lean N.
66	Coast redwood	24	3	Low	Yes	Surface roots; thin canopy.
67	Southern magnolia	17	4	Moderate	Yes	Crowded & one-sided to E.
68	Southern magnolia	14	3	Low	Yes	Crowded; narrow form.
69	Southern magnolia	8,7	3	Low	No	Codominant trunks @ 3'; crowded; narrow form.
70	Weeping willow	29	3	Low	Yes	Multiple attachments @ 15'; poor branch structure; large pruning wound S.
71	Weeping willow	33	3	Low	Yes	Multiple attachments @ 15'; large pruning wound W.; basal decay; ganoderma S.
72	Camphor	17	4	Moderate	No	Multiple attachments @ 6'; good form.
73	Italian stone pine	47	4	Moderate	Yes	Multiple attachments @ 7'; good form; heavy laterals on S. & W.
74	Italian stone pine	34	4	Moderate	Yes	Codominant trunks @ 12'; good form; one-sided to W.; girdling roots.
75	Sweetgum	17	4	Moderate	Yes	Codominant trunks @ 12'; included bark.
76	Unknown	8,6,5	3	Low	No	Multiple attachments @ base; twig dieback.
77	Pineapple guava	6,6,5,5	3	Low	No	Multiple attachments @ base; thin canopy.
78	Coast redwood	30	3	Low	Yes	Pruned hard; very thin canopy.
79	Coast redwood	21	3	Moderate	Yes	Good form; thin canopy.
80	Coast redwood	27	3	Low	Yes	Pruned hard; very thin canopy.
81	Honey locust	6	4	Moderate	No	Good young tree; headed back.

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82	Honey locust	6	3	Low	No	Extensive sunscald; headed back.
83	Coast redwood	21	3	Low	Yes	Good form; dead top; thin canopy.
84	Coast redwood	8	2	Low	No	Very thin canopy.
85	Coast redwood	14	3	Low	No	Good form; dead top; thin canopy.
86	Coast redwood	10	3	Low	No	Dead top; thin canopy.
87	Coast redwood	8	3	Low	No	Thin canopy.
88	Coast redwood	23	3	Low	Yes	Pruned hard; very thin canopy.
89	Coast redwood	27	3	Low	Yes	Pruned hard; very thin canopy; small hanger.
90	Flowering cherry	11	3	Low	No	Good form; trunk wound W.; large surface roots.
91	Flowering cherry	9	4	Low	No	Good form; surface roots.
92	Flowering cherry	10	3	Low	No	Good form; large surface roots; displacing concrete curb on W.
93	Silk tree	8	3	Low	No	Multiple attachments @ 7'; trunk wound on W.; basal wound.
94	Silk tree	8	3	Low	No	Multiple attachments @ 7'; asymmetric crown.
95	Silk tree	9	4	Moderate	No	Codominant trunks @ 5'; good form.
96	African sumac	11,7,6,4,4	2	Low	Yes	Failed @ base; lying on ground SE.
97	Honey locust	8	4	Moderate	No	Good young tree; headed back; crook in roots.
98	Coast redwood	15	4	Moderate	No	Good form; thinning canopy.
99	Coast redwood	17	4	Moderate	Yes	Good form; thinning canopy.
100	Camphor	14	3	Low	No	Multiple attachments @ 6'; one-sided to N.
101	Camphor	18	4	Moderate	Yes	Multiple attachments @ 6'; spreading form.
102	Sweetgum	16	3	Low	Yes	Multiple attachments @ 7'; spreading form; history of branch failure; epicormic sprouts.
103	New Zealand tea tree	11,11	4	Moderate	Yes	Codominant trunks @ 3'; good form; low crown.
104	Raywood ash	13	4	Moderate	No	Multiple attachments @ 7'; spreading form; sunscald on branches.
105	Coast redwood	16	4	Moderate	Yes	Good form; thinning canopy.
106	Coast redwood	15	3	Moderate	Yes	Good form; thin canopy.
107	Honey locust	6	4	Moderate	No	Good young tree; headed back; basal wounds.

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Tree No.	Species	Trunk Diameter (in.)	Condition 1=poor 5=excellent	Suitability for Preservation	Heritage Tree?	Comments
108	Coast redwood	23	3	Moderate	Yes	Good form; thin canopy.
109	Coast redwood	24	3	Moderate	Yes	Good form; thin canopy.
110	Coast redwood	29	3	Moderate	Yes	Slight sweep in trunk; thin canopy.
111	Tulip tree	16	5	High	Yes	Good form & structure; small surface root N.
112	Tulip tree	17	4	Moderate	Yes	Multiple attachments @ 5'; open form.
113	Southern magnolia	8,7,6	4	Moderate	No	Multiple attachments @ 4'; twig dieback.
114	Southern magnolia	7	4	Moderate	No	Multiple attachments @ 4'; good form; twig dieback.
115	Raywood ash	14	4	Moderate	Yes	Multiple attachments @ 10'; slight lean E.; girdling root.
116	Southern magnolia	12	3	Low	No	Multiple attachments @ 4'; low lateral NE.; twig dieback.
117	Southern magnolia	13	3	Low	No	Multiple attachments @ 4'; surface roots; twig dieback.
118	Southern magnolia	14	4	Moderate	No	Multiple attachments @ 5'; one-sided to W.; twig dieback.
119	Golden rain tree	18	4	Moderate	Yes	Multiple attachments @ 7'; trunk wounds; twig dieback.
120	Southern magnolia	12	4	Moderate	No	Multiple attachments @ 5'; one-sided to S.; twig dieback.
121	Golden rain tree	16	4	Moderate	No	Multiple attachments @ 8'; fair branch structure; twig dieback.
122	Golden rain tree	14	3	Low	No	Multiple attachments @ 7'; one-sided to S.; twig dieback.
123	Golden rain tree	17	4	Moderate	No	Multiple attachments @ 8'; one-sided to N.; twig dieback.
124	Raywood ash	9	4	Moderate	No	Multiple attachments @ 7'; good form; twig dieback.
125	Honey locust	6	3	Low	No	Slight lean E.; sunscald; headed back.
126	Honey locust	6	3	Low	No	One sided E.; sunscald; headed back.
127	Honey locust	8	4	Moderate	No	Good form; sunscald on branches; headed back.
128	Callery pear	10	3	Low	No	Multiple attachments @ 7'; slight lean S.; headed back.
129	Apple	6	3	Low	No	Suppressed; crown bowed N.
130	Apple	7	3	Low	No	Small crown.
131	Raywood ash	27	4	Moderate	Yes	Multiple attachments @ 10'; one-sided to W.; lateral W.; twig dieback.
132	Brazilian pepper	10	3	Low	No	Multiple attachments @ 6'; thin canopy; in 4' wide island.

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Tree No.	Species	Trunk Diameter (in.)	Condition 1=poor 5=excellent	Suitability for Preservation	Heritage Tree?	Comments
133	Brazilian pepper	14	3	Low	No	Multiple attachments @ 6'; poor branch structure; filling 4' wide island.
134	Brazilian pepper	9	3	Low	No	Multiple attachments @ 6'; thin canopy; in 4' wide island.
135	Brazilian pepper	15	3	Low	No	Multiple attachments @ 6'; poor branch structure; filling 4' wide island; frost damage in upper canopy.
136	Sweetgum	9	4	Moderate	No	Upright form; in planter island.
137	Camphor	13	2	Low	No	Dieback throughout crown; in planter island.
138	Brazilian pepper	14	2	Low	No	Dieback in upper crown; in 4' wide island.
139	Brazilian pepper	11	3	Low	No	Multiple attachments @ 7'; thin canopy; in 4' wide island.
140	Brazilian pepper	14	3	Low	No	Multiple attachments @ 6'; poor branch structure; filling 3' planter island.
141	Brazilian pepper	13	3	Low	No	Multiple attachments @ 6'; one-sided to N.; in 3' planter island.
142	Callery pear	13	3	Low	No	Multiple attachments @ 7'; extensive epicormic sprouts.
143	Callery pear	11	3	Low	No	Multiple attachments @ 6'; extensive epicormic sprouts.
144	Callery pear	12	3	Low	No	Multiple attachments @ 6'; extensive epicormic sprouts.
145	Brazilian pepper	8	2	Low	No	Multiple attachments @ 6'; leans W.; thin canopy.
146	Brazilian pepper	12	4	Moderate	No	Multiple attachments @ 5'; good form; surface roots.
147	Brazilian pepper	12	3	Low	No	Multiple attachments @ 6'; narrow form; in 4' wide island.
148	Brazilian pepper	11	3	Low	No	Codominant trunks @ 7'; filling 3' wide island.
149	Brazilian pepper	10	3	Low	No	Multiple attachments @ 7'; thin canopy; filling 3' wide island.
150	Brazilian pepper	9	3	Low	No	Multiple attachments @ 6'; leans W.; frost damage in upper crown.
151	Brazilian pepper	11	3	Low	No	Multiple attachments @ 6'; good form; thin canopy.
152	Brazilian pepper	10	3	Moderate	No	Multiple attachments @ 6'; good form; thin canopy.
153	Callery pear	10	3	Low	No	Multiple attachments @ 6'; extensive epicormic sprouts; in 4' wide island.
154	Brazilian pepper	9	3	Low	No	Multiple attachments @ 7'; leans N.; thin canopy.
155	Callery pear	9	3	Low	No	Multiple attachments @ 5'; extensive epicormic sprouts.

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Tree No.	Species	Trunk Diameter (in.)	Condition 1=poor 5=excellent	Suitability for Preservation	Heritage Tree?	Comments
156	Brazilian pepper	10	3	Low	No	Multiple attachments @ 7'; slight lean E.; in very small island.
157	Brazilian pepper	11	3	Low	No	Multiple attachments @ 6'; crown bowed S.; in very small island; cracking curb.
158	Brazilian pepper	8	2	Low	No	Slight lean W.; thin canopy; in very small island.
159	Brazilian pepper	11	3	Low	No	Codominant trunks @ 7'; surface roots; in 4' wide island.
160	Brazilian pepper	9	3	Low	No	Multiple attachments @ 7'; thin canopy; in 4' wide island.
161	Chinese pistache	15	4	High	No	Multiple attachments @ 7'; good form & structure.
162	Raywood ash	12	3	Low	No	Multiple attachments @ 7'; trunk wounds; sunscald.
163	Raywood ash	9	4	Moderate	No	Multiple attachments @ 7'; good form.
164	Raywood ash	7	3	Low	No	Multiple attachments @ 7'; trunk wounds; sunscald on branches; small girdling root.
165	Raywood ash	12	4	Moderate	No	Multiple attachments @ 7'; good form.
166	Callery pear	13	3	Low	No	Multiple attachments @ 6'; upright form; extensive epicormic sprouts.
167	Callery pear	11	3	Low	No	Multiple attachments @ 6'; spreading form; extensive epicormic sprouts.
168	Callery pear	10	3	Low	No	Multiple attachments @ 6'; upright form; extensive epicormic sprouts.
169	Callery pear	10	3	Low	No	Multiple attachments @ 6'; slight lean W.; extensive epicormic sprouts.
170	Callery pear	10	3	Low	No	Multiple attachments @ 6'; slight lean W.; extensive epicormic sprouts.
171	Callery pear	9	3	Low	No	Multiple attachments @ 6'; slight lean W.; extensive epicormic sprouts.
172	Callery pear	12	4	Moderate	No	Multiple attachments @ 6'; good form; epicormic sprouts.
173	Callery pear	11	3	Low	No	Multiple attachments @ 6'; leans W.; extensive epicormic sprouts.
174	Callery pear	7	3	Low	No	Multiple attachments @ 6';small crown; extensive epicormic sprouts.

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Tree No.	Species	Trunk Diameter (in.)	Condition 1=poor 5=excellent	Suitability for Preservation	Heritage Tree?	Comments
175	Brazilian pepper	11	3	Low	No	Multiple attachments @ 7'; leans E.; thin canopy; in 4' wide island.
176	Camphor	12	3	Low	No	Multiple attachments @ 6'; fair structure; thin canopy; in 5' wide island.
177	Camphor	17	3	Low	No	Multiple attachments @ 8'; thin canopy; in small island.
178	Camphor	12	3	Low	No	Multiple attachments @ 8'; thin canopy; in small island.
179	Raywood ash	15	3	Low	No	Multiple attachments @ 8'; sunscald; epicormic sprouts; in small island.
180	Brazilian pepper	12	2	Low	No	Multiple attachments @ 7'; large trunk wound N.; thin canopy; in very small island.
181	Brazilian pepper	14	2	Low	No	Extensive dieback; in very small island.
182	Camphor	13	1	Low	No	Extensive dieback; trunk decay & basal cavity; in very small island.
183	Raywood ash	15	3	Low	No	Multiple attachments @ 8'; epicormic sprouts; in 4' wide island.
184	Camphor	15	2	Low	No	Multiple attachments @ 8'; extensive dieback; in 4' wide island.
185	Sweetgum	8	4	Moderate	No	Multiple attachments @ 5'; narrow form; in small island.
186	Brazilian pepper	20	3	Low	Yes	Multiple attachments @ 7'; fair branch structure; branch wounds; twig dieback; in very small island.
187	Sweetgum	8	4	Moderate	No	Multiple attachments @ 5'; small trunk wound; in small island.
188	Sweetgum	12	4	Moderate	Yes	Multiple attachments @ 5'; small trunk wound; in small island.
189	Camphor	14	3	Low	No	Multiple attachments @ 8'; thin canopy; in small island.
190	Raywood ash	11	2	Low	No	Multiple attachments @ 8'; sunscald; epicormic sprouts; in small island.
191	Raywood ash	15	3	Low	No	Multiple attachments @ 8'; sunscald; long lateral on NW.; in small island.
192	Raywood ash	13	3	Low	No	Multiple attachments @ 8'; good form; in small island.

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193	Camphor	15	3	Low	No	Multiple attachments @ 8'; twig dieback to 3"; in 4' wide island.
194	Raywood ash	15	3	Low	No	Multiple attachments @ 8'; leans E.; sunscald; in 4' wide island.
195	Brazilian pepper	13	4	Moderate	No	Multiple attachments @ 10'; high crown; in 4' wide island.
196	Brazilian pepper	20	3	Low	Yes	Multiple attachments @ 6'; multiple failures @ attachment; in 4' wide island.
197	Brazilian pepper	14	3	Low	No	Multiple attachments @ 10'; in small island.
198	Camphor	12	2	Low	No	Multiple attachments @ 6'; thin canopy; branch tear-out on S.; in small island.
199	Camphor	15	3	Low	No	Multiple attachments @ 6'; low branches E.& W.; thin canopy; in small island.
200	Camphor	16	2	Low	No	Leans S.; very thin canopy; in small island.
201	Sweetgum	7	4	Moderate	No	Multiple attachments @ 7'; good form; in small island.
202	Sweetgum	9	3	Low	No	Codominant trunks @ 5'; topped @ 15'; included bark; in small island.
203	Sweetgum	9	3	Low	No	Old topping point @ 15'; in small island.
204	Raywood ash	16	3	Low	Yes	Multiple attachments @ 8'; sunscald; twig dieback; in 4' wide island.
205	Crape myrtle	4,4,4,3,2	4	High	No	Multiple attachments @ base; minor included bark.
206	Crape myrtle	5,4,4,3,2,2	4	High	No	Multiple attachments @ base; narrow attachments.
207	Purpleleaf plum	7,6,5,5	3	Low	No	Multiple attachments @ 3'; sunscald; twig dieback.
208	Raywood ash	17	3	Low	Yes	Multiple attachments @ 8'; twig dieback; lateral on E. separating from crown.
209	Raywood ash	23	3	Low	Yes	Multiple attachments @ 10'; spreading form; twig dieback; laterals E.
210	Raywood ash	23	3	Low	Yes	Multiple attachments @ 10'; sunscald on upright stems; twig dieback; laterals SW.

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Tree No.	Species	Trunk Diameter (in.)	Condition 1=poor 5=excellent	Suitability for Preservation	Heritage Tree?	Comments
211	Purpleleaf plum	7,7,5,5	3	Low	No	Multiple attachments @ 3'; leans NE.; sunscald; twig dieback.
212	Chinese lantern	14	4	Moderate	No	Multiple attachments @ 6'; good form; branch wounds.
213	Chinese lantern	15	3	Low	No	Multiple attachments @ 6'; narrow attachments; included bark.
214	Chinese lantern	19	3	Low	Yes	Multiple attachments @ 6'; narrow attachments; included bark.
215	Chinese lantern	12	4	Moderate	No	Multiple attachments @ 6'; good form.
216	Chinese lantern	14	4	Moderate	No	Codominant trunks @ 7'; narrow attachments.
217	Chinese pistache	10	4	High	No	Multiple attachments @ 6'; good form; stubs E.
218	Chinese pistache	6	3	Low	No	Multiple attachments @ 6'; sunscald; stubs.
219	Chinese pistache	9	4	High	No	Multiple attachments @ 6'; good form; stubs.
220	Chinese lantern	14	4	Moderate	No	Multiple attachments @ 6'; included bark; basal wound.
221	Chinese lantern	13	4	Moderate	No	Multiple attachments @ 5'; one-sided NW.
222	Camphor	12	2	Low	No	Swollen base; twig dieback; very thin canopy; in 4' wide island.
223	Camphor	13	3	Low	No	One sided N.; thin canopy; in 4' wide island.
224	Camphor	11	3	Low	No	One sided W.; thin canopy; in small island.
225	Camphor	10	2	Low	No	Leans E.; thin small crown; twig dieback; in small island.
226	Brazilian pepper	15	3	Low	No	Multiple attachments @ 8'; poor structure; displacing concrete in small island.
227	Raywood ash	14	3	Low	No	Multiple attachments @ 8'; sunscald; twig dieback; in small island.
228	Brazilian pepper	20	3	Low	Yes	Multiple attachments @ 8'; poor structure; narrow attachments; in small island.
229	Camphor	7	2	Low	No	Extensive dieback; in small island.
230	Camphor	9	1	Low	No	All but dead; in small island.
231	Camphor	10	1	Low	No	All but dead; in small island.
232	Camphor	10	1	Low	No	All but dead; in small island.

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Tree No.	Species	Trunk Diameter (in.)	Condition 1=poor 5=excellent	Suitability for Preservation	Heritage Tree?	Comments
233	Raywood ash	19	3	Low	Yes	Multiple attachments @ 8'; one-sided to W.; twig dieback; in small island.
234	Coast redwood	29	4	Moderate	Yes	Good form; thinning canopy.
235	Coast redwood	21	3	Moderate	Yes	Crowded; narrow form; thinning canopy.
236	Coast redwood	28	4	Moderate	Yes	Good form; thinning canopy.
237	Coast redwood	20	3	Low	Yes	Good form; twig dieback; thin canopy.
238	Coast redwood	20	3	Low	Yes	Good form; twig dieback; thin canopy.
239	Coast redwood	18	3	Low	Yes	One sided N.; twig dieback; thin canopy.
240	Coast redwood	25	3	Low	Yes	Good form; twig dieback; thin upper canopy.
241	Coast redwood	30	4	Moderate	Yes	Good form; thinning upper canopy.
242	European white birch	12	3	Low	Yes	Leans SE. away from bldg.; twig dieback.
243	European white birch	9	3	Low	No	Leans S. away from bldg.; poor form; twig dieback.
244	European white birch	8	3	Low	Yes	Upright form; pruned. away from bldg.; twig dieback.
245	European white birch	9	3	Low	Yes	Upright form; pruned. away from bldg.; twig dieback.
246	European white birch	8	3	Low	No	Leans S. away from bldg.; twig dieback.
247	European white birch	9	3	Low	Yes	Slight crook @ 7'; one-sided to W. away from bldg.; twig dieback.
248	European white birch	13	4	Moderate	Yes	Slight crook @ 20'; one-sided to W. away from bldg.; twig dieback.
249	European white birch	12	4	Moderate	Yes	Slight lean W.; twig dieback.
250	European white birch	6	3	Low	No	Suppressed; small crown dieback.
251	European white birch	10	3	Low	Yes	Slight crook @ 15'; narrow form; twig dieback.
252	European white birch	11	4	Moderate	Yes	Upright, narrow form; twig dieback.
253	European white birch	11	3	Low	Yes	Crowded; narrow form; twig dieback.
254	European white birch	8	3	Low	Yes	Crowded; narrow form; twig dieback.
255	Coast redwood	21	3	Moderate	Yes	Good form; thin canopy.
256	Coast redwood	22	3	Moderate	Yes	Good form; thin canopy.
257	Coast redwood	18	2	Low	Yes	Dead top; extensive dieback.

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Tree No.	Species	Trunk Diameter (in.)	Condition 1=poor 5=excellent	Suitability for Preservation	Heritage Tree?	Comments
258	Coast redwood	20	3	Moderate	Yes	Good form; thin canopy.
259	Coast redwood	26	4	Moderate	Yes	Good form; thinning canopy; small hanger.
260	Coast redwood	23	4	Moderate	Yes	Good form; thinning in upper canopy.
261	Coast redwood	17	3	Moderate	No	Good form; thin canopy.
262	Coast redwood	19	3	Moderate	Yes	Good form; thin canopy.
263	Coast redwood	24	4	Moderate	Yes	Good form; thinning in upper canopy.
264	Coast redwood	29	3	Moderate	Yes	Good form; thin canopy.
265	Sweetgum	12	3	Low	No	Codominant trunks @ 15'; wide attachment; broken branches on S.
266	Sweetgum	11	4	Moderate	Yes	Multiple attachments @ 5'; upright form.
267	European white birch	8	3	Low	Yes	Leans E.; epicormic sprouts; twig dieback.
268	European white birch	6	3	Low	No	Multiple attachments @ 8'; leans E.; twig dieback.
269	European white birch	7	3	Low	No	Codominant trunks @ 5'; asymmetric form; twig dieback.
270	European white birch	11	3	Low	Yes	Crook @ 15'; leans NE.; twig dieback.
271	European white birch	8	4	Moderate	Yes	Upright form; twig dieback.
272	European white birch	9	3	Low	Yes	Crowded; leans NE.; twig dieback.
273	Southern magnolia	8,6,5,2	4	Moderate	No	Multiple attachments @ 3'; one-sided to N.
274	European white birch	7	3	Low	No	Crowded; leans N.; twig dieback.
275	European white birch	6	3	Low	No	Crowded; leans NE.; twig dieback.
276	Coast redwood	18	3	Moderate	Yes	Good form; thin canopy.
277	Coast redwood	16	3	Moderate	Yes	Good form; thin canopy.
278	Coast redwood	15	3	Moderate	Yes	Good form; thin canopy; pruned away from bldg.
279	Flowering cherry	8	3	Low	No	Multiple attachments @ 4'; one-sided to S.; poorly anchored.
280	Flowering cherry	7	3	Low	No	Multiple attachments @ 4'; one-sided to S.
281	Flowering cherry	8	3	Low	No	Multiple attachments @ 4'; one-sided to S.
282	Honey locust	7	4	Moderate	No	Codominant trunks @ 8'; good form.
283	Callery pear	9	3	Low	No	Multiple attachments @ 7'; ribbing along trunk; epicormic sprouts.

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Tree No.	Species	Trunk Diameter (in.)	Condition 1=poor 5=excellent	Suitability for Preservation	Heritage Tree?	Comments
284	Callery pear	13	4	Moderate	No	Multiple attachments @ 7'; narrow attachments; epicormic sprouts.
285	Raywood ash	14	4	High	Yes	Multiple attachments @ 7'; good form & structure.
286	Raywood ash	12	4	Moderate	Yes	Multiple attachments @ 7'; slight lean N.; pruned away from bldg.
287	Callery pear	14	4	Moderate	Yes	Multiple attachments @ 7'; good form; epicormic sprouts.
288	Callery pear	14	4	Moderate	Yes	Multiple attachments @ 7'; good form; epicormic sprouts.
289	Callery pear	16	4	Moderate	Yes	Multiple attachments @ 7'; good form; epicormic sprouts.
290	Callery pear	16	4	Moderate	Yes	Multiple attachments @ 7'; narrow attachments; epicormic sprouts.
291	Callery pear	14	4	Moderate	Yes	Multiple attachments @ 7'; good form; epicormic sprouts.
292	Brazilian pepper	7	3	Low	No	Multiple attachments @ 7'; twig dieback; in 4' wide island.
293	Brazilian pepper	9	4	Moderate	No	Multiple attachments @ 7'; slight lean E.; good form; in 4' wide island.
294	Brazilian pepper	10	4	Moderate	No	Multiple attachments @ 7'; slight lean E.; good form; frost damage in upper crown.
295	Brazilian pepper	15	4	Moderate	No	Multiple attachments @ 7'; laterals E.; filling 6' wide island.
296	Brazilian pepper	12	4	Moderate	No	Multiple attachments @ 7'; good form; minor dieback.
297	Brazilian pepper	14	4	Moderate	No	Multiple attachments @ 7'; good form; epicormic sprouts.
298	Brazilian pepper	9	4	Moderate	No	Multiple attachments @ 7'; fair branch structure.
299	Raywood ash	12	3	Low	No	Multiple attachments @ 8'; minor dieback.
300	Raywood ash	18	3	Low	Yes	Multiple attachments @ 10'; twig dieback to 4".
301	Southern live oak	8	4	High	No	Multiple attachments @ 7'; good form & structure; in small island.
302	Southern live oak	8	4	High	No	Multiple attachments @ 7'; good form & structure; in small island.
303	Brazilian pepper	10	4	Moderate	No	Multiple attachments @ 8'; small lateral E.; in small island.
304	Brazilian pepper	10	4	Moderate	No	Multiple attachments @ 8'; slight lean N.; in small island.
305	Brazilian pepper	10	3	Low	No	Multiple attachments @ 8'; branch tear outs; in small island.

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306	Brazilian pepper	10	4	Moderate	No	Multiple attachments @ 7'; good form; in small island.
307	Brazilian pepper	9	3	Low	No	Multiple attachments @ 7'; thin canopy; in small island.
308	Brazilian pepper	10	3	Low	No	Leans S.; poor branch structure; in small island.
309	Brazilian pepper	8	4	Moderate	No	Multiple attachments @ 7'; good form; in small island.
310	Brazilian pepper	10	4	Moderate	No	Multiple attachments @ 7'; narrow attachments; in small island.
311	Brazilian pepper	10	2	Low	No	Small crown; twig dieback; in small island.
312	Brazilian pepper	9	4	Moderate	No	Slight lean E.; in small island.
313	Brazilian pepper	6	2	Low	No	Small crown; twig dieback; in small island.
314	Brazilian pepper	11	3	Low	No	Multiple attachments @ 7'; twig dieback; in small island.
315	Brazilian pepper	11	4	Moderate	No	Multiple attachments @ 7'; good form; in small island.
316	Brazilian pepper	10	2	Low	No	Poor form & structure; old branch year out; in small island.
317	Southern live oak	15	4	Moderate	No	Multiple attachments @ 8'; good form; poor branch structure; in small island.
318	Southern live oak	20	4	High	Yes	Multiple attachments @ 8'; good form, fair branch structure; in small island.
319	Southern live oak	15	3	Low	No	Multiple attachments @ 10'; girdling roots; in small island.
320	Southern live oak	14	3	Low	No	Multiple attachments @ 8'; thin canopy; in small island.
321	Southern live oak	14	4	High	No	Multiple attachments @ 9'; good form; in small island.
322	Callery pear	7	3	Low	No	Multiple attachments @ 7'; slight lean E.; embedded stake tie; in small island.
323	Zelkova	7	5	High	No	Slight lean E.; good young tree; in small island.
324	Callery pear	16	4	Moderate	No	Multiple attachments @ 9'; good form; in small island.
325	Callery pear	8	3	Low	No	Multiple attachments @ 8'; branch tear out E.; in small island.
326	Zelkova	6	5	High	No	Good young tree; in small island.
327	Callery pear	9	3	Low	No	Multiple attachments @ 8'; displacing concrete 6"; in small island.
328	Callery pear	19	4	Moderate	Yes	Multiple attachments @ 9'; upright form; displacing concrete in small island.

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Tree No.	Species	Trunk Diameter (in.)	Condition 1=poor 5=excellent	Suitability for Preservation	Heritage Tree?	Comments
329	Callery pear	12	4	Moderate	Yes	Multiple attachments @ 10'; one-sided to W.; in small island.
330	Raywood ash	16	3	Low	Yes	Multiple attachments @ 8'; twig dieback.
331	Raywood ash	16	3	Low	Yes	Multiple attachments @ 8'; sunscald; twig dieback.
332	Raywood ash	12	3	Low	Yes	Codominant trunks @ 8'; significant sunscald; twig dieback.
333	Raywood ash	10	3	Low	No	Multiple attachments @ 8'; sunscald; twig dieback.
334	Callery pear	16	3	Low	No	Multiple attachments @ 8'; topped @ 30'; epicormic sprouts; in small island.
335	Callery pear	19	3	Low	Yes	Multiple attachments @ 8'; topped @ 30'; epicormic sprouts; in small island.
336	Callery pear	7	3	Low	No	Multiple attachments @ 8'; narrow attachments; embedded stake tie; in small island.
337	Callery pear	11	3	Low	No	Multiple attachments @ 8'; seam W.; headed; in small island.
338	Sweetgum	7	4	Moderate	No	Multiple attachments @ 5'; upright form; in small island.
339	Sweetgum	7	4	Moderate	No	Multiple attachments @ 7'; slight lean E.; in small island.
340	Callery pear	17	3	Low	Yes	Multiple attachments @ 8'; topped @ 30'; narrow attachments; in small island.
341	Callery pear	17	3	Low	Yes	Multiple attachments @ 8'; topped @ 30'; girdling roots; in small island.
342	Raywood ash	12	3	Low	Yes	Multiple attachments @ 8'; sunscald; twig dieback to 3".
343	Raywood ash	16	3	Low	Yes	Multiple attachments @ 8'; sunscald; twig dieback.
344	Raywood ash	18	4	Moderate	Yes	Multiple attachments @ 10'; sunscald; twig dieback.
345	Camphor	12	3	Low	No	Thin canopy; twig dieback; in 4' wide island.
346	Callery pear	14	3	Low	No	Multiple attachments @ 8'; slight lean S.; in 4' wide island.
347	Sweetgum	11	4	Moderate	Yes	Upright form; in small island.
348	Sweetgum	12	3	Low	Yes	Narrow form; branch wound; in 4' wide island.
349	Sweetgum	10	3	Low	Yes	One sided S.; in 4' wide island.
350	Sweetgum	10	4	Moderate	Yes	Large surface roots; in 4' wide island.
351	Sweetgum	13	3	Low	Yes	Fair structure; stem removed E.; root pruned; in 4' wide island.

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Tree No.	Species	Trunk Diameter (in.)	Condition 1=poor 5=excellent	Suitability for Preservation	Heritage Tree?	Comments
352	Brazilian pepper	13	3	Low	No	Thin canopy; in small island.
353	Raywood ash	22	2	Low	Yes	Central leaders removed; sunscald; twig dieback.
354	Sweetgum	9	4	Moderate	No	Upright form; in small island.
355	Brazilian pepper	12	2	Low	No	Dieback in upper canopy; basal wounds; in 5' wide island.
356	Sweetgum	12	3	Low	No	Multiple attachments @ 8'; asymmetric form; in small island.
357	Raywood ash	15	3	Low	No	Multiple attachments @ 7'; sunscald; twig dieback.
358	Raywood ash	16	3	Low	No	Multiple attachments @ 7'; asymmetric form; sunscald; twig dieback.
359	Sweetgum	9	4	Moderate	Yes	Upright form; in small island.
360	Raywood ash	18	3	Low	Yes	Multiple attachments @ 8'; sunscald; twig dieback.
361	Sweetgum	14	4	Moderate	Yes	Multiple attachments @ 10'; upright form.
362	Camphor	13	3	Low	No	Thin canopy; in 4' wide island.
363	Camphor	11	3	Low	No	Thin canopy; epicormic sprouts; in 4' wide island.
364	Raywood ash	18	3	Low	Yes	Multiple attachments @ 8'; sunscald; twig dieback; displacing concrete 4" in small island.
365	Raywood ash	12	3	Low	No	Multiple attachments @ 8'; sunscald; twig dieback; in small island.
366	Sweetgum	13	3	Low	Yes	Multiple attachments @ 5'; included bark; displacing concrete 2".
367	Raywood ash	16	3	Low	No	Multiple attachments @ 8'; sunscald; twig dieback; in 4' wide island.
368	Raywood ash	14	3	Low	Yes	Multiple attachments @ 8'; significant sunscald; twig dieback; in 4' wide island.
369	Sweetgum	6	4	Moderate	No	Codominant trunks @ 5; in small island.
370	Raywood ash	16	4	Moderate	Yes	Multiple attachments @ 8'; good form; sunscald; in small island.
371	Sweetgum	6	4	Moderate	No	Multiple attachments @ 5; in small island.
372	Raywood ash	16	3	Low	No	Multiple attachments @ 7'; central leader removed; sunscald; in small island.
373	Sweetgum	15	4	Moderate	Yes	Multiple attachments @ 8; good form.

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Tree No.	Species	Trunk Diameter (in.)	Condition 1=poor 5=excellent	Suitability for Preservation	Heritage Tree?	Comments
374	Sweetgum	10	4	Moderate	Yes	Multiple attachments @ 8; one-sided to SE.
375	Camphor	12	2	Low	No	Extensive dieback; in 4' wide island.
376	Camphor	7	1	Low	No	All but dead; in 4' wide island.
377	Raywood ash	14	3	Low	No	Multiple attachments @ 7'; extensive sunscald; in small island.
377	Sweetgum	9	4	Moderate	No	Upright form; small laterals S.; in small island.
379	Raywood ash	8	4	Moderate	No	Multiple attachments @ 6'; sunscald; in 4' wide island.
380	Camphor	10	2	Low	No	Extensive dieback; in 4' wide island.
381	Camphor	11	3	Low	No	One sided S.; twig dieback; in 4' wide island.
382	Sweetgum	7	4	Moderate	No	Multiple attachments @ 15'; upright form; in small island.
383	Raywood ash	18	3	Low	Yes	Multiple attachments @ 8'; extensive sunscald; in small island.
384	Raywood ash	11	3	Low	Yes	Multiple attachments @ 8'; extensive sunscald; epicormic sprouts; in small island.
385	Sweetgum	6	4	Moderate	No	Upright form; in small island.
386	Raywood ash	15	3	Low	No	Codominant trunks @ 8'; twig dieback to 3".
387	Raywood ash	18	4	Moderate	Yes	Codominant trunks @ 8'; sunscald; twig dieback.
388	Brazilian pepper	18	3	Low	Yes	Codominant trunks @ 12'; poor branch structure.
389	Raywood ash	15	4	Moderate	Yes	Multiple attachments @ 10'; epicormic sprouts; twig dieback.
390	Sweetgum	9	3	Low	No	Codominant trunks @ 4'; trunk wound.
391	Raywood ash	14	3	Low	No	Multiple attachments @ 8'; one-sided to W.; sunscald; twig dieback.
392	Raywood ash	16	4	Moderate	Yes	Multiple attachments @ 8'; good form; sunscald; twig dieback; in 4' wide island.
393	Raywood ash	11	3	Low	No	Multiple attachments @ 8'; sunscald; twig dieback; in 4' wide island.
394	Camphor	15	3	Low	No	Codominant trunks @ 10'; thin canopy.
395	Camphor	15	3	Low	No	One sided S.; very thin canopy.
396	Raywood ash	7	4	High	No	Codominant trunks @ 8'; upright form; in small island.

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Tree No.	Species	Trunk Diameter (in.)	Condition 1=poor 5=excellent	Suitability for Preservation	Heritage Tree?	Comments
397	Raywood ash	11	3	Low	No	Codominant trunks @ 8'; sunscald; epicormic sprouts; in small island.
398	Raywood ash	17	3	Low	Yes	Multiple attachments @ 10'; one-sided to E.: sunscald; trunk wound.
399	Raywood ash	17	3	Low	Yes	Multiple attachments @ 8'; one-sided to W.: sunscald.
400	Raywood ash	17	3	Low	Yes	Multiple attachments @ 8'; one-sided to S.: sunscald.
401	Brazilian pepper	21	4	Moderate	Yes	In 6' wide planter; displacing curb; multiple attachments @ 6'
402	Brazilian pepper	15	4	Moderate	No	In 6' wide planter; multiple attachments @ 10'.
403	Raywood ash	15	2	Low	No	In 3' planting circle; extensive sunburn.
404	Brazilian pepper	15	3	Low	No	In 3' planting circle; displacing curb; multiple attachments @ 6'.
405	Brazilian pepper	15	3	Low	No	In 3' planting circle; displacing curb; multiple attachments @ 10'.
406	Raywood ash	10	2	Low	No	In 3' planting circle; thin crown; one-sided to W.
407	Raywood ash	18	3	Low	Yes	In 4' wide planter; multiple attachments @ 8'.
408	Raywood ash	16	3	Low	Yes	In 4' wide planter; multiple attachments @ 8'.
409	Camphor	16	4	Moderate	Yes	Multiple attachments @ 6'; good form.
410	Camphor	11	3	Low	No	Dead stem; in 5' wide planter.
411	Sweetgum	6	3	Low	No	In planting circle; codominant stems @ 10'.
412	Raywood ash	14	3	Low	No	In 4' planting circle; multiple attachments @ 7'.
413	Brazilian pepper	19	3	Low	Yes	In 4' planting circle; displacing curb; multiple attachments @ 10'.
414	Raywood ash	14	3	Low	No	Multiple attachments @ 8'; sunburned bark.
415	Raywood ash	14	2	Low	No	In 10' wide planter; multiple attachments @ 8'; extensive sunburn.
416	Raywood ash	14	3	Low	Yes	In 10' wide planter; multiple attachments @ 7'.
417	Camphor	12	3	Low	No	In 10' wide planter; crown one-sided to E..
418	Camphor	12	3	Low	No	In 10' wide planter; low lateral limb to S.
419	Camphor	12	3	Low	No	In 10' wide planter; wide attachment @ 7'.
420	Camphor	13	3	Low	No	In 10' wide planter; heavy lateral limb to N.; thin crown.

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Tree No.	Species	Trunk Diameter (in.)	Condition 1=poor 5=excellent	Suitability for Preservation	Heritage Tree?	Comments
421	Camphor	15	3	Low	No	In 10' wide planter; codominant trunks @ 6'.
422	Camphor	13	3	Low	No	In 10' wide planter; multiple attachments @ 8'; twig dieback in upper crown.
423	Camphor	13	3	Low	No	In 10' wide planter; crown to E.; history of branch failures.
424	Camphor	17	3	Low	No	In 10' wide planter; crown to E.; poor form & structure.
425	Raywood ash	14	3	Low	Yes	In 10' wide planter; multiple attachments @ 10'.
426	Raywood ash	15	3	Low	No	In 10' wide planter; multiple attachments @ 8'.
427	Raywood ash	15	3	Low	No	In 10' wide planter; multiple attachments @ 8'; sunburn on upright stems.
428	Camphor	13	3	Low	No	In 10' wide planter; thin crown.
429	Camphor	14	3	Low	No	In 10' wide planter; multiple attachments @ 6'; thin crown.
430	Coast redwood	25	5	High	Yes	Excellent health & structure.
431	Chinese lantern	15	4	Moderate	No	Good form; slightly crowded by neighbors.
432	Coast redwood	27	5	High	Yes	Excellent health & structure.
433	Coast redwood	29	4	High	Yes	Upper canopy thin.
434	Camphor	13	4	Moderate	No	In 10' wide planter; lifting asphalt; multiple attachments @ 6'; good form.
435	Camphor	10	4	Moderate	No	In 8' planter ; multiple attachments @ 8'; good form.
436	Brazilian pepper	13	4	Moderate	No	In 4' planting circle; displacing curb; nice dense crown.
437	Brazilian pepper	19	4	Moderate	Yes	In 4' planting circle; displacing curb; nice dense crown; multiple attachments @ 6'.
438	Raywood ash	11	3	Low	No	In 4' wide planter; sunburn bark; multiple attachments @ 7'.
439	Raywood ash	11	2	Low	No	In 4' wide planter; decay in upright stems; multiple attachments @ 7'.
440	Raywood ash	11	3	Low	No	In 4' wide planter; multiple attachments @ 8'; extensive sprouts.
441	Camphor	12	2	Low	No	In 5' wide planter; inverted base; thin crown with twig dieback.
442	Camphor	10	3	Low	No	In 5' wide planter; one-sided to S.

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Tree No.	Species	Trunk Diameter (in.)	Condition 1=poor 5=excellent	Suitability for Preservation	Heritage Tree?	Comments
443	Raywood ash	19	2	Low	Yes	In 8' planter; sunburn on upright stems.
444	Raywood ash	16	2	Low	No	In 8' planter; sunburn on upright stems with decay.
445	Brazilian pepper	8	2	Low	No	In 4' planting circle; twig dieback in upper crown.
446	Camphor	10	3	Low	No	In 4' wide planter; thin crown; poor color.
447	Raywood ash	16	1	Low	No	In 4' wide planter; extensive decay in upright stems.
448	Raywood ash	13	2	Low	No	In 4' wide planter; multiple attachments @ 7' with decay in point of attachment.
449	Raywood ash	11	2	Low	No	In 4' wide planter; multiple attachments @ 7'; extensive sunburn on low lateral to W.
450	Brazilian pepper	11	2	Low	No	In 3' wide planter; decay column on S.
451	Brazilian pepper	22	3	Low	Yes	In 10' wide planter; multiple attachments @ 6'; previously topped.
452	Camphor	11	4	Moderate	No	In 8' planter; full crown.
453	Camphor	10	3	Low	No	In 5' wide planter; one-sided to S.
454	Brazilian pepper	11	3	Low	No	In 4' wide planter; multiple attachments @ 7'; thin crown.
455	Brazilian pepper	11	2	Low	No	In 4' wide planter; multiple attachments @ 7'; thin crown; trunk wound on W.
456	Raywood ash	11	1	Low	No	In 4' wide planter; multiple attachments @ 6'; extensive sunburn & decay.
457	Raywood ash	12	2	Low	No	In 4' wide planter; multiple attachments @ 7'; branch dieback.
458	Camphor	11	4	Moderate	No	In 5' wide planter; full crown.
459	Camphor	9	3	Low	No	In 5' wide planter; basal decay.
460	Blackwood acacia	9	4	Moderate	No	Full dense crown to ground; good upright form.
461	Blackwood acacia	9	4	Moderate	No	Full dense crown to ground; good upright form.
462	Blackwood acacia	8,7	3	Low	No	Full dense crown to ground; codominant trunks @ base.
463	Fremont cottonwood	33	2	Low	Yes	Leans to west ; decay on topping wounds; heavy lateral limbs over parking.
464	Blackwood acacia	16	4	Moderate	No	Full dense crown; good form.
465	Blackwood acacia	23	4	Moderate	Yes	Full dense crown; good form.

Tree No.	Species	Trunk Diameter (in.)	Condition 1=poor 5=excellent	Suitability for Preservation	Heritage Tree?	Comments
466	Fremont cottonwood	45	2	Low	Yes	Leans to E.; extensive basal decay in west; twig dieback.
467	Fremont cottonwood	66	1	Low	Yes	Extensive basal decay; hollow trunk; fruiting bodies @ base.
468	Blackwood acacia	8,5,5,4	3	Low	No	Trunk @ fence line; stems grow through fence; full crown to ground.
469	Coast live oak	9,8	3	Moderate	No	At fence line; codominant trunks @ base.
470	Coast live oak	7,7,7	3	Moderate	No	At fence line; codominant trunks @ base & 4'.
471	Coast live oak	9,7,7	3	Moderate	No	At fence line; multiple attachments @ 3'.
472	English walnut	7,5,5,5,5,4 ,4,3	3	Low	No	At fence line; multiple attachments @ 2'; low branches to ground.
473	Coast live oak	18	3	Moderate	Yes	Trunk off-site; low branches to ground; crown extends 22' over property
474	London plane	25	4	Moderate	Yes	Street tree; full wide crown; multiple attachments @ 5'; girdling root.
475	London plane	19	4	Moderate	Yes	Street tree; full wide crown; codominant trunks @ 6'.
476	London plane	33	4	Moderate	Yes	Street tree; full wide crown; multiple attachments @ 4'.
477	London plane	25	4	Moderate	Yes	Street tree; full wide crown; multiple attachments @ 6'.
478	London plane	28	4	Moderate	Yes	Street tree; full wide crown; multiple attachments @ 6'.
479	London plane	21	3	Low	Yes	Street tree; leans E.; large girdling root.
480	Chinese pistache	9	2	Low	No	Street tree; extensive trunk wounds.
481	Chinese pistache	13	3	Moderate	No	Street tree; seams on trunk; multiple attachments @ 7'.
482	Chinese pistache	9	3	Low	No	Street tree; leans S.
483	Chinese pistache	9	3	Low	No	Street tree; trunk wound; multiple attachments @ 6'.
484	Tulip tree	15	3	Low	No	Median strip tree; one sided to west; extensive roots.
485	Tulip tree	18	3	Low	Yes	Median strip tree; codominant trunks @ 8' with included bark; extensive roots.
486	Tulip tree	16	3	Low	No	Median strip tree; codominant trunks @ 6' with included bark; extensive roots.
487	Tulip tree	15	3	Low	No	Median strip tree; codominant trunks @ 7' ; extensive roots.

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Tree No.	Species	Trunk Diameter (in.)	Condition 1=poor 5=excellent	Suitability for Preservation	Heritage Tree?	Comments
488	Tulip tree	12	3	Low	No	Median strip tree; codominant trunks @ 8' with included bark; narrow attachment; extensive roots.
489	Tulip tree	16	3	Low	Yes	Median strip tree; codominant trunks @ 8' with included bark; very narrow attachment; extensive roots.
490	Tulip tree	10	3	Low	No	Median strip tree; multiple attachments @ 8' with included bark; extensive roots with decay.
491	Tulip tree	17	3	Low	Yes	Median strip tree; codominant trunks @ 8' with included bark; narrow attachment; extensive roots.
492	Tulip tree	16	3	Low	Yes	Median strip tree; codominant trunks @ 8' with included bark; narrow attachment; extensive roots with decay.

Tree Assessment Map

Stoneridge Corporate Plaza
6120-6160 Stoneridge Mall Road
Pleasanton, CA

Prepared for:
NPC Holdings, LLC
Pleasanton, CA

January 2014

No Scale

Notes:
Base map provided by:
Kier & Wright
Livermore, CA

Numbered tree locations
are approximate.

TS = Tree smaller than 6" and not included in assessment

HORT SCIENCE

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Arborist Report

BART Remainder Parcel
Pleasanton, CA

PREPARED FOR
Workday, Inc.
6230 Stoneridge Mall Road
Pleasanton, CA 94588

PREPARED BY:
HortScience, Inc.
325 Ray St.
Pleasanton, CA 94566

April 2014

Arborist Report
BART Remainder Parcel
Pleasanton, CA

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Arborist Report
BART Remainder Parcel
Pleasanton, CA

Introduction and Overview

Workday, Inc. is planning site improvements to 6002 Stoneridge Mall Road. Currently the site is an empty lot bordering the West Dublin/Pleasanton BART parking garage. HortScience, Inc. was asked to prepare an **Arborist Report** for the site as part of the application to the City of Pleasanton.

This report provides the following information:

1. An evaluation of the health and structural condition of the trees within the proposed project area based on a visual inspection from the ground.
2. An assessment of the trees that would be preserved and removed based on the preliminary development plans
3. An appraisal of value of the trees according to the procedures described in the *Guide for Plant Appraisal* (Council of Tree and Landscape Appraisers).
4. Guidelines for tree preservation during the design, construction and maintenance phases of development.

Tree Assessment Methods

Trees were assessed on January 23, 2014. The survey included all trees 6" in diameter and greater, located within and adjacent to the proposed project area. Trees located off-site that were either near the proposed project or had canopies extending over the property line were included. The assessment procedure consisted of the following steps:

1. Identifying the tree as to species;
2. Tagging each tree with an identifying number and recording its location on a map;
3. Measuring the trunk diameter at a point 4.5' above grade;
4. Evaluating the health and structural condition using a scale of 1 – 5:
   - ***5*** - A healthy, vigorous tree, reasonably free of signs and symptoms of disease, with good structure and form typical of the species.
   - ***4*** - Tree with slight decline in vigor, small amount of twig dieback, minor structural defects that could be corrected.
   - ***3*** - Tree with moderate vigor, moderate twig and small branch dieback, thinning of crown, poor leaf color, moderate structural defects that might be mitigated with regular care.
   - ***2*** - Tree in decline, epicormic growth, extensive dieback of medium to large branches, significant structural defects that cannot be abated.
   - ***1*** - Tree in severe decline, dieback of scaffold branches and/or trunk; most of foliage from epicormics; extensive structural defects that cannot be abated.
5. Rating the suitability for preservation as "high", "moderate" or "low". Suitability for preservation considers the health, age and structural condition of the tree, and its potential to remain an asset to the site for years to come.
   - ***High***: Trees with good health and structural stability that have the potential for longevity at the site.
   - ***Moderate***: Trees with somewhat declining health and/or structural defects that can be abated with treatment. The tree will require more intense management and monitoring, and may have shorter life span than those in 'high' category.
   - ***Low***: Tree in poor health or with significant structural defects that cannot be mitigated. Tree is expected to continue to decline, regardless of treatment. The species or individual may have characteristics that are undesirable for landscapes, and generally are unsuited for use areas.

City of Pleasanton Urban Tree Protection Requirements

The Pleasanton Municipal Code Chapter 17.16 controls the removal and preservation of *Heritage* trees within the city. *Heritage* trees are defined as:

1. Any single-trunked tree with a circumference of 55 inches or more measured four and one-half feet above ground level;
2. Any multi-trunked tree of which the two largest trunks have a circumference of 55 inches (18 inches diameter) or more measured four and one-half feet above ground level;
3. Any tree 35 feet or more in height;
4. Any tree of particular historical significance specifically designated by official action;
5. A stand of trees, the nature of which makes each dependent upon the other for survival or the area's natural beauty.

Heritage trees may not be removed, destroyed or disfigured without a permit.

Description of Trees

One hundred six (106) trees representing 7 species were evaluated (Table 1). Seventy-two (72) were in fair condition, 18 were in good condition (4 or 5) and 16 were in poor condition (1 or 2). Descriptions of each tree are found in the ***Tree Assessment Form*** and approximate locations are plotted on the ***Tree Inventory Map*** (see Exhibits).

Table 1. Condition ratings and frequency of occurrence of trees BART Remainder Parcel, Pleasanton, CA

		Condition			
Common Name	**Scientific Name**	**Poor (1-2)**	**Fair (3)**	**Good (4-5)**	**Total**
Blackwood acacia	*Acacia melanoxylon*	-	7	-	**7**
River red gum	*Eucalyptus camaldulensis*	-	1	-	**1**
English walnut	*Juglans regia*	-	1	-	**1**
Olive	*Olea europea*	-	-	1	**1**
Western sycamore	*Platanus racemosa*	-	-	1	**1**
London plane	*Platanus x hispanica*	-	7	13	**20**
Black locust	*Robinia pseudoacacia*	16	56	3	**75**
Total		**16**	**72**	**18**	**106**

The majority of the trees on-site (75 trees or 71% of the population) were black locust. These made up a dense stand of tall narrow trees in the vacant lot east of the West Dublin Pleasanton BART station parking garage. They tended to be in fair condition (56 trees) with 16 in poor condition and three (3) in good. Almost all of the black locusts had multiple trunks originating from the base or were individual trees growing close together (Photo 1, following page).

Twenty (20) London planes had been planted as street trees and bordered the western edge of the BART parking garage. They were in good (13 trees) to fair (7 trees) condition with no trees in poor. They ranged from young (9" in diameter) to mature (24" in diameter) with an average diameter of 18". Most trees had large spreading crowns; however, some trees had thin narrow forms as a result of crowding by neighboring trees.

Seven (7) blackwood acacias were growing in a group along the fence line with the freeway (Photo 2). They were all in fair condition and were young, ranging in diameter from 6 to 10".

Four species were represented by a single individual, including:

- River red gum on the east side of the parking garage
- English walnut on the east edge of the black locust stand
- Olive along the fence bordering the freeway
- Western sycamore growing on the Caltrans ROW (Photo 3)

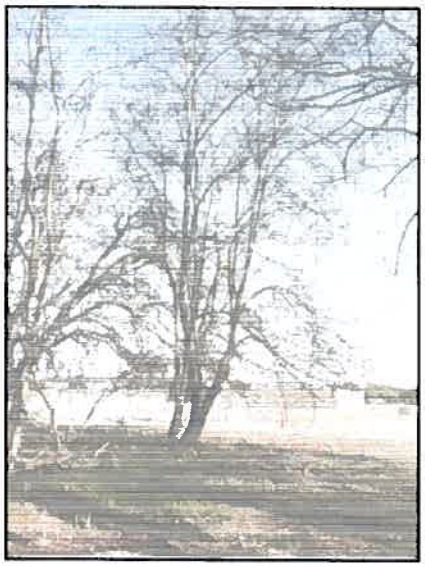

Photo 1: A multi-stemmed black locust at the edge of the stand.

The City of Pleasanton defines any tree with a diameter of 18" or greater, or a height of 35' or greater, as *Heritage*. *Heritage* status of individual trees is provided in the ***Tree Assessment Form*** (see Exhibits). Eighty-three (83) trees were identified as *Heritage*. The majority of these trees qualified because of height not diameter; therefore, a more accurate measurement of height may change the number of *Heritage* trees.

Photo 2: A dense stand of black wood acacias.

Photo 3: Large western sycamore growing on Caltrans ROW.

Suitability for Preservation

Before evaluating the impacts that will occur during development, it is important to consider the quality of the tree resource itself, and the potential for individual trees to function well over an extended length of time. Trees that are preserved on development sites must be carefully selected to make sure that they may survive development impacts, adapt to a new environment and perform well in the landscape.

Our goal is to identify trees that have the potential for long-term health, structural stability and longevity. For trees growing in open fields, away from areas where people and property are present, structural defects and/or poor health presents a low risk of damage or injury if they fail. However, we must be concerned about safety in use areas. Therefore, where development encroaches into existing plantings, we must consider their structural stability as well as their potential to grow and thrive in a new environment. Where development will not occur, the normal life cycles of decline, structural failure and death should be allowed to continue.

Evaluation of suitability for preservation considers several factors:

- **Tree health**
  Healthy, vigorous trees are better able to tolerate impacts such as root injury, demolition of existing structures, changes in soil grade and moisture, and soil compaction than are non-vigorous trees. For example, black locust #6 likely will not tolerate construction impacts.

- **Structural integrity**
  Trees with significant amounts of wood decay and other structural defects that cannot be corrected are likely to fail. Such trees should not be preserved in areas where damage to people or property is likely. Black locust #12 was an example of such a tree.

- **Species response**
  There is a wide variation in the response of individual species to construction impacts and changes in the environment. For example, English walnut is intolerant of construction while London plane tolerates construction well.

- **Tree age and longevity**
  Old trees, while having significant emotional and aesthetic appeal, have limited physiological capacity to adjust to an altered environment. Young trees are better able to generate new tissue and respond to change.

- **Species invasiveness**
  Species that spread across a site and displace desired vegetation are not always appropriate for retention. This is particularly true when indigenous species are displaced. The California Invasive Plant Inventory Database (http://www.cal-ipc.org/paf/) lists species identified as being invasive. Pleasanton is part of the Central West Floristic Province. River red gum, olive, and black locust are rated "limited" for invasiveness. Limited is defined as, "These species are invasive but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic."

Each tree was rated for suitability for preservation based upon its age, health, structural condition and ability to safely coexist within a development environment (see ***Tree Assessment Forms*** in Exhibits, and Table 2, following page).

We consider trees with high suitability for preservation to be the best candidates for preservation. We do not recommend retention of trees with poor suitability for preservation in areas where people or property will be present. Retention of trees with moderate suitability for preservation depends upon the intensity of proposed site changes.

Table 2: Tree suitability for preservation
BART Remainder Parcel, Pleasanton, CA.

High	These are trees with good health and structural stability that have the potential for longevity at the site. Nine (9) trees were considered highly suitable for preservation.
Moderate	Trees in this category have fair health and/or structural defects that may be abated with treatment. These trees require more intense management and monitoring, and may have shorter life-spans than those in the "high" category. Ten (10) trees were moderately suitable for preservation.
Low	Trees in this category are in poor health or have significant defects in structure that cannot be abated with treatment. These trees can be expected to decline regardless of management. The species or individual tree may possess either characteristics that are undesirable in landscape settings or be unsuited for use areas. Eighty-seven (87) trees had low suitability for preservation.

Table 2: Tree suitability for preservation, continued
BART Remainder Parcel, Pleasanton, CA.

Species	High	Moderate	Low	Total
Black locust	-	3	72	**75**
Blackwood acacia	-	-	7	**7**
English walnut	-	-	1	**1**
London plane	7	7	6	**20**
Olive	1	-	-	**1**
River red gum	-	-	1	**1**
Western sycamore	1	-	-	**1**
Total	**9**	**10**	**87**	**106**

Preliminary Evaluation of Impacts and Recommendations

Appropriate tree retention develops a practical match between the location and intensity of construction activities and the quality and health of trees. The ***Tree Assessment Form*** was the reference point for tree condition and quality. Potential impacts from construction were evaluated using the Preliminary Grading and Drainage Plan, prepared by Kier & Wright (dated February 2014).

Potential impacts from construction were estimated for each tree. However, some of the trees identified for preservation are in close proximity to improvements and adequate protection may not be possible. As such, some of the trees identified for preservation may require removal. Precise impacts will have to be determined once the plans and protection measures are finalized.

The plan proposes the following changes:

- A new building will be centrally located in the site, straddling the Bart Remainder Site and the Stoneridge Corporate Plaza site (discussed under separate cover).
- A new parking structure and surface parking lot will be located along the northern boundary of the site.
- A new access road will be installed between the building and the existing BART parking structure to the west.
- A new basketball court will be located between the parking lots.

Based on my assessment of the current plans, 92 trees would require removal. Impacts from construction of the new building would be the primary factor resulting in tree removal.

Seventy-one (71) of the trees recommended for removal qualified as "Heritage", and 82 were of low suitability for preservation. Trees recommended for removal are listed in **Table 3** (see Attachments), along with their Heritage status and a description of impacts.

Based on the proposed changes, 14 trees have been preliminarily identified for preservation, including 12 "Heritage" trees. Seven (7) of the trees would be in close proximity to proposed improvements and are preliminarily proposed for preservation. Once the design has been set, a final determination of if some or all of the trees can be preserved will be made.

Recommendations for management of preserved trees, and specific guidelines for maintaining the health and vitality of trees through the development processes, are provided in the ***Tree Preservation Guidelines*** that follow. Preservation of trees is predicated on adhering to the ***Tree Preservation Guidelines*** provided.

Tree Preservation Guidelines

The goal of tree preservation is not merely tree survival during development but maintenance of tree health and beauty for many years. Trees retained on sites that are either subject to extensive injury during construction or are inadequately maintained become a liability rather than an asset. The response of individual trees will depend on the amount of excavation and grading, the care with which demolition is undertaken, and the construction methods. Coordinating any construction activity inside the **TREE PROTECTION ZONE** can minimize these impacts.

The following recommendations will help reduce impacts to trees from development and maintain and improve their health and vitality through the clearing, grading and construction phases.

Design recommendations

1. The Consulting Arborist shall review all project plans with regard to tree impact and necessary protection measures. This includes, but is not limited to, demolition, grading, drainage, site improvement and landscape plans.

2. A **TREE PROTECTION ZONE** shall be established around each on-site tree to be preserved. The **TPZ** shall be established as described below. All trees not listed below shall have the **TPZ** established at the dripline in all directions. No grading, excavation, construction or storage of materials shall occur within that zone.

   - The **TPZ** for trees #83, 88, 92-95 and 106 have yet to be determined.

3. No underground services including utilities, sub-drains, water or sewer shall be placed in the **TREE PROTECTION ZONE**.

4. **Tree Preservation Notes**, prepared by the Consulting Arborist, should be included on all plans.

5. Any herbicides placed under paving materials must be safe for use around trees and labeled for that use.

6. Irrigation systems must be designed so that no trenching will occur within the **TREE PROTECTION ZONE**.

7. As trees withdraw water from the soil, expansive soils may shrink within the root area. Therefore, foundations, footings and pavements on expansive soils near trees should be designed to withstand differential displacement.

8. Do not apply lime within 50' of any tree to be preserved. Lime is toxic to tree roots.

9. It is critical to maintaining tree health and longevity that the existing irrigation be maintained in proper working order. This is especially true for the trees preserved within parking lot islands. If the existing irrigation system cannot be maintained, supplemental irrigation should be applied during the dry summer months (typically May through October).

Pre-construction treatments and recommendations

1. The construction superintendent shall meet with the Consulting Arborist before beginning work to discuss work procedures and tree protection.

2. Fence all trees to be retained to completely enclose the **TREE PROTECTION ZONE** prior to demolition, grubbing or grading. Fences shall be 6 ft. chain link. Fences are to remain until all grading and construction is completed.

3. Prune trees to be preserved to clean the crown and to provide clearance. All pruning shall be completed by a Certified Arborist or Tree Worker and adhere to the latest edition of the ANSI Z133 and A300 standards as well as the *Best Management Practices -- Tree Pruning* published by the International Society of Arboriculture. Brush can be chipped and spread beneath the trees within the **TREE PROTECTION ZONE.**

4. Trees to be removed that have canopies touching trees to remain shall be removed by a Certified Arborist in a manner to avoid damage to remaining trees. The stumps of those removed trees shall be ground out 12" below grade and not pulled out as this could injure remaining trees.

Recommendations for tree protection during construction

1. Prior to beginning work, all contractors working in the vicinity of trees to be preserved are required to meet with the Consulting Arborist at the site to review all work procedures, access routes, storage areas and tree protection measures.

2. No grading, construction, demolition or other work shall occur within the **TREE PROTECTION ZONE**. Any modifications must be approved and monitored by the Consulting Arborist.

3. If the existing irrigation system is non-operational, supplemental irrigation shall be applied to retained trees between May and October at the direction of the Consulting Arborist.

4. If injury should occur to any tree during construction, it should be evaluated as soon as possible by the Consulting Arborist so that appropriate treatments can be applied.

5. No excess soil, chemicals, debris, equipment or other materials shall be dumped or stored within the **TREE PROTECTION ZONE**.

6. Any additional tree pruning needed for clearance during construction must be performed by a Certified Arborist and not by construction personnel.

Maintenance of impacted trees
Preserved trees will experience a physical environment different from that pre-development. As a result, tree health and structural stability should be monitored. Occasional pruning, fertilization, mulch, pest management, replanting and irrigation may be required. In addition, provisions for monitoring both tree health and structural stability following construction must be made a priority. As trees age, the likelihood of failure of branches or entire trees increases. Therefore, annual inspection for hazard potential is recommended.

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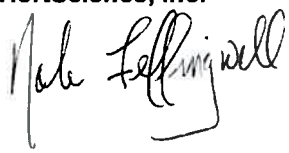

John Leffingwell
Board Certified Master Arborist #WE-3966B
Registered Consulting Arborist #442

Attached: ***Table 3: Trees Recommended for Removal***

Tables 4 and 5: Appraisal of Value

Tree Assessment Form

Tree Assessment Map

Table 3: Trees recommended for removal
BART Remainder Parcel, Pleasanton

Tree #	Species	Trunk Diameter (in.)	Heritage?	Reason for removal
1	Black locust	11,10,10,9,5,5,5	Yes	Within building
2	Black locust	16,11,11,8,5,5	Yes	Within building
3	Black locust	13,11	Yes	Within building
4	Black locust	16	Yes	Within building
5	Black locust	11	Yes	Within building
6	Black locust	9,9,8,6	Yes	Within building
7	Black locust	9,6,4	Yes	Within building
8	Black locust	10,9	Yes	Within building
9	Black locust	10,8	Yes	Within building
10	Black locust	10,10,4,4	Yes	Within building
11	Black locust	12	No	Within building
12	Black locust	11,10,8,8	Yes	Within building
13	Black locust	12,12	Yes	Within building
14	Black locust	7	No	Within building
15	Black locust	6,4	No	Within building
16	Black locust	6,5	Yes	Within building
17	Black locust	8,7	Yes	Within building
18	Black locust	6	No	Within building
19	Black locust	8,5	Yes	Within building
20	Black locust	6	No	Within building
21	Black locust	6	No	Within building
22	Black locust	8,4	Yes	Within building
23	Black locust	6,5	Yes	Within building
24	Black locust	6,4	Yes	Within building
25	Black locust	7,5	Yes	Within building
26	Black locust	6,6	Yes	Within building
27	Black locust	7,5,3	Yes	Within building
28	Black locust	16	Yes	Within building
29	Black locust	9,6,5,5	Yes	Within building
30	Black locust	8,7	Yes	Within building
31	Black locust	7	No	Within building
32	Black locust	9	Yes	Within building
33	Black locust	14,13,7	Yes	Within grading
34	Black locust	11,7,5,5	Yes	Within building
35	Black locust	22,9,6	Yes	Within grading
36	Black locust	15	Yes	Within grading
37	Black locust	21,20,18,9	Yes	Within grading
38	Black locust	8	Yes	Within grading
39	Black locust	6	No	Within grading

(Continued, following page)

Table 3: Trees recommended for removal
BART Remainder Parcel, Pleasanton

Tree #	Species	Trunk Diameter (in.)	Heritage?	Reason for removal
40	Black locust	8,5	Yes	Within grading
41	Black locust	9,7	Yes	Within grading
42	Black locust	8	Yes	Within grading
43	Black locust	10	No	Within grading
44	Black locust	7	No	Within grading
45	Black locust	9,5	Yes	Within grading
46	Black locust	14,6,5,3	Yes	Within grading
47	Black locust	9,6	Yes	Within grading
48	Black locust	12	Yes	Within grading
49	Black locust	11	No	Within grading
50	Black locust	11,8,6,6,5,5	Yes	Within grading
51	Black locust	7,7,5,3,2,2	Yes	Within grading
52	Black locust	7	Yes	Within grading
53	Black locust	12,6	Yes	Within grading
54	Black locust	12	Yes	Within grading
55	Black locust	12	Yes	Within grading
56	Black locust	11	Yes	Within grading
57	Black locust	8	Yes	Within grading
58	Black locust	7	Yes	Within grading
59	Black locust	11,6	Yes	Within grading
60	Black locust	8	Yes	Within grading
61	Black locust	8	Yes	Within grading
62	Black locust	11,11	Yes	Within grading
63	Black locust	13	Yes	Within grading
64	Black locust	11,11,9,8	Yes	Within grading
65	Black locust	6	No	Within grading
66	Black locust	10,7	Yes	Within grading
67	Black locust	10,5	Yes	Within grading
68	Black locust	10,9,9,9	Yes	Within grading
69	Black locust	11,10,7,6	Yes	Within pkng lot
70	Black locust	11,11	Yes	Within grading
71	Black locust	13	Yes	Within grading
72	Black locust	6,3,3,2,2	No	Within grading
73	Black locust	11,10	Yes	Within grading
74	Black locust	12,8,8	Yes	Within grading
75	English walnut	35	Yes	Within grading
76	Olive	6,6,4,4	No	Within road
77	Blackwood acacia	10	No	Within road

(Continued, following page)

Table 3: Trees recommended for removal
BART Remainder Parcel, Pleasanton

Tree #	Species	Trunk Diameter (in.)	Heritage?	Reason for removal
78	Blackwood acacia	9,9,5	Yes	Within road
79	Blackwood acacia	6	No	Within road
80	Blackwood acacia	8,7,6,6,6,5,5,5	No	Within road
81	Blackwood acacia	8,4,4	No	Within road
82	Blackwood acacia	12,9,8,7,6	Yes	Within road
84	Black locust	6,6,6,4	No	Within road
85	River red gum	7	No	Within road
89	Blackwood acacia	10	No	Impacted by access Rd.
90	London plane	18	Yes	Impacted by access Rd.
91	London plane	17	Yes	Impacted by access Rd.
96	London plane	21	Yes	Impacted by access Rd.
98	London plane	12	Yes	Within drive
99	London plane	20	Yes	Within drive
100	London plane	23	Yes	Impacted by access Rd.
105	London plane	24	Yes	Within bus lane

Appraisal of Value

The City of Pleasanton requires that the value of all the surveyed trees be established. To accomplish this, I used the standard methods found in *Guide for Plant Appraisal*, 9th edition (published in 2000 by the International Society of Arboriculture, Champaign IL). In addition, I referred to *Species Classification and Group Assignment* (2004), a publication of the Western Chapter of the International Society of Arboriculture. These two documents outline the methods employed in tree appraisal.

The value of landscape trees is based upon four factors: size, species, condition and location. Size is measured as trunk diameter, normally 54" above grade. The species factor considers the adaptability and appropriateness of the plant in the East Bay area. The *Species Classification and Group Assignment* lists recommended species ratings and evaluations. Condition reflects the health and structural integrity of the individual, as noted in the ***Tree Assessment Form***. Location considers the site, placement and contribution of the tree in its surrounding landscape.

The appraised value of the 14 trees recommended for preservation is $79,450 (**Table 4**).

The appraised value of the 92 trees recommended for removal is $58,700 (**Table 5**, page 2).

Table 4: Appraised value of trees recommended for preservation

Tree No.	Species	Trunk diameter (in.)	Appraised value ($)
83	Western sycamore	48	24050
86	London plane	24	7450
87	London plane	14	1850
88	London plane	23	6850
92	London plane	19	4700
93	London plane	21	5700
94	London plane	12	1350
95	London plane	21	5700
97	London plane	12	1350
101	London plane	23	6850
102	London plane	9	800
103	London plane	9	850
104	London plane	22	6850
106	London plane	19	5100
Total			**79,450**

Table 5: Appraised value of trees recommended for removal

Tree No.	Species	Trunk diameter (in.)	Heritage?	Appraised value ($)
1	Black locust	11,10,10,9,5,5,5	Yes	550
2	Black locust	16,11,11,8,5,5	Yes	750
3	Black locust	13,11	Yes	400
4	Black locust	16	Yes	350
5	Black locust	11	Yes	100
6	Black locust	9,9,8,6	Yes	200
7	Black locust	9,6,4	Yes	100
8	Black locust	10,9	Yes	150
9	Black locust	10,8	Yes	200
10	Black locust	10,10,4,4	Yes	300
11	Black locust	12	No	100
12	Black locust	11,10,8,8	Yes	450
13	Black locust	12,12	Yes	250
14	Black locust	7	No	50
15	Black locust	6,4	No	50
16	Black locust	6,5	Yes	100
17	Black locust	8,7	Yes	150
18	Black locust	6	No	50
19	Black locust	8,5	Yes	100
20	Black locust	6	No	50
21	Black locust	6	No	50
22	Black locust	8,4	Yes	100
23	Black locust	6,5	Yes	100
24	Black locust	6,4	Yes	50
25	Black locust	7,5	Yes	100
26	Black locust	6,6	Yes	100
27	Black locust	7,5,3	Yes	100
28	Black locust	16	Yes	200
29	Black locust	9,6,5,5	Yes	200
30	Black locust	8,7	Yes	150
31	Black locust	7	No	50
32	Black locust	9	Yes	100
33	Black locust	14,13,7	Yes	350
34	Black locust	11,7,5,5	Yes	300
35	Black locust	22,9,6	Yes	800
36	Black locust	15	Yes	300
37	Black locust	21,20,18,9	Yes	1650
38	Black locust	8	Yes	100

(Continued, following page)

Table 5: Appraised value of trees recommended for removal

Tree No.	Species	Trunk diameter (in.)	Heritage?	Appraised value ($)
39	Black locust	6	No	50
40	Black locust	8,5	Yes	100
41	Black locust	9,7	Yes	150
42	Black locust	8	Yes	100
43	Black locust	10	No	150
44	Black locust	7	No	50
45	Black locust	9,5	Yes	150
46	Black locust	14,6,5,3	Yes	500
47	Black locust	9,6	Yes	150
48	Black locust	12	Yes	100
49	Black locust	11	No	50
50	Black locust	11,8,6,6,5,5	Yes	350
51	Black locust	7,7,5,3,2,2	Yes	200
52	Black locust	7	Yes	50
53	Black locust	12,6	Yes	250
54	Black locust	12	Yes	200
55	Black locust	12	Yes	200
56	Black locust	11	Yes	150
57	Black locust	8	Yes	100
58	Black locust	7	Yes	50
59	Black locust	11,6	Yes	200
60	Black locust	8	Yes	100
61	Black locust	8	Yes	100
62	Black locust	11,11	Yes	300
63	Black locust	13	Yes	250
64	Black locust	11,11,9,8	Yes	300
65	Black locust	6	No	50
66	Black locust	10,7	Yes	200
67	Black locust	10,5	Yes	150
68	Black locust	10,9,9,9	Yes	250
69	Black locust	11,10,7,6	Yes	250
70	Black locust	11,11	Yes	200
71	Black locust	13	Yes	300
72	Black locust	6,3,3,2,2	No	100
73	Black locust	11,10	Yes	300
74	Black locust	12,8,8	Yes	350
75	English walnut	35	Yes	2750
76	Olive	6,6,4,4	No	1400

(Continued, following page)

Table 5: Appraised value of trees recommended for removal

Tree No.	Species	Trunk diameter (in.)	Heritage?	Appraised value ($)
77	Blackwood acacia	10	No	400
78	Blackwood acacia	9,9,5	Yes	750
79	Blackwood acacia	6	No	150
80	Blackwood acacia	8,7,6,6,6,5,5,5	No	750
81	Blackwood acacia	8,4,4	No	400
82	Blackwood acacia	12,9,8,7,6	Yes	1350
84	Black locust	6,6,6,4	No	300
85	River red gum	7	No	150
89	Blackwood acacia	10	No	400
90	London plane	18	Yes	4200
91	London plane	17	Yes	2700
96	London plane	21	Yes	5700
98	London plane	12	Yes	1350
99	London plane	20	Yes	5200
100	London plane	23	Yes	6850
105	London plane	24	Yes	8150
Total				**58,700**

Tree Assessment

NPC Holdings
BART Remainder Parcel
6002 Stoneridge Mall Rd.
February 2014

HORT SCIENCE

Tree No.	Species	Trunk Diameter (in.)	Condition 1=poor 5=excellent	Suitability for Preservation	Heritage Tree?	Comments
1	Black locust	11,10,10,9,5,5,5	3	Moderate	Yes	Multiple stems from base; branches to ground; bushy; branch attachments at acute angles.
2	Black locust	16,11,11,8,5,5	3	Moderate	Yes	Multiple stems from base; branch attachments at acute angles.
3	Black locust	13,11	3	Moderate	Yes	Multiple stems from base; branch attachments at acute angles.
4	Black locust	16	3	Moderate	Yes	Single stem codominant at 10 ft.; branch attachments at acute angles.
5	Black locust	11	2	Low	Yes	Single stem codominant at 10 ft.; branch attachments at acute angles; sweeping base.
6	Black locust	9,9,8,6	2	Low	Yes	Multiple stems from base; thin and upright form; one stem dead.
7	Black locust	9,6,4	2	Low	Yes	Multiple stems from base; thin and upright form; stems wrapped around each other.
8	Black locust	10,9	2	Low	Yes	Codominant from base; thin and upright form; trunk wound.
9	Black locust	10,8	3	Moderate	Yes	Codominant from base; thin and upright form; trunk wound.
10	Black locust	10,10,4,4	3	Moderate	Yes	Codominant from base; thin; reaching to edge of canopy.
11	Black locust	12	2	Low	No	Failed codominant from base; leaning east; poor structure.
12	Black locust	11,10,8,8	3	Low	Yes	Multiple attachments at base; asymmetrical towards east; included bark; poor structure.
13	Black locust	12,12	2	Low	Yes	Codominant at base; asymmetrical towards east; included bark; trunk decay.
14	Black locust	7	3	Low	No	Single stem; spiral form; unstable.
15	Black locust	6,4	2	Low	No	Codominant at base; asymmetrical towards east; included bark; spiral form.
16	Black locust	6,5	3	Moderate	Yes	Codominant at base; asymmetrical towards east; included bark; spiral form.

Tree Assessment

NPC Holdings
BART Remainder Parcel
6002 Stoneridge Mall Rd.
February 2014

HORT SCIENCE

Tree No.	Species	Trunk Diameter (in.)	Condition 1=poor 5=excellent	Suitability for Preservation	Heritage Tree?	Comments
17	Black locust	8,7	3	Moderate	Yes	Codominant at 3 ft.; asymmetrical towards east; included bark.
18	Black locust	6	3	Moderate	No	Asymmetrical towards south; tall narrow form.
19	Black locust	8,5	3	Moderate	Yes	Codominant from base; tall narrow form.
20	Black locust	6	3	Moderate	No	Tall narrow form; leans west.
21	Black locust	6	3	Low	No	Tall narrow form; leans west; crook at 15 feet.
22	Black locust	8,4	3	Moderate	Yes	Tall narrow form; leans west; dead minor stem.
23	Black locust	6,5	3	Moderate	Yes	Tall narrow form; leans south; codominant at base.
24	Black locust	6,4	3	Moderate	Yes	Tall narrow form; curved trunk; codominant at base.
25	Black locust	7,5	3	Moderate	Yes	Tall narrow form; crooked form; codominant at base.
26	Black locust	6,6	3	Moderate	Yes	Tall narrow form; spiral form; codominant at base; included bark.
27	Black locust	7,5,3	3	Moderate	Yes	Tall narrow form; spiral form; codominant at base; searching for light.
28	Black locust	16	2	Low	Yes	Full canopy; failed Codominant; basal decay.
29	Black locust	9,6,5,5	3	Moderate	Yes	Thin asymmetric al; included bark at multiple attachments at base.
30	Black locust	8,7	3	Moderate	Yes	Thin asymmetric al; included bark at Codominant base; curved trunk.
31	Black locust	7	3	Moderate	No	Thin narrow form; lean west.
32	Black locust	9	3	Moderate	Yes	Thin narrow form; no branches until 30 feet.
33	Black locust	14,13,7	2	Low	Yes	Multiple attachments at base; basal decay; failure of ma; machete wounds.
34	Black locust	11,7,5,5	3	Low	No	Multiple attachments at base; leaning heavily south.
35	Black locust	22,9,6	3	Low	Yes	Multiple attachments at base; full canopy; trunk decay.
36	Black locust	15	3	Low	Yes	Leaning heavily west.
37	Black locust	21,20,18,9	3	Low	Yes	Multiple attachments at base; full; canopy; decay in middle trunk.
38	Black locust	8	3	Low	Yes	Crook in trunk at 15 ft. thin narrow form.

Tree Assessment

NPC Holdings
BART Remainder Parcel
6002 Stoneridge Mall Rd.
February 2014

HORT SCIENCE

Tree No.	Species	Trunk Diameter (in.)	Condition 1=poor 5=excellent	Suitability for Preservation	Heritage Tree?	Comments
39	Black locust	6	2	Low	No	Thin narrow form; leaning heavily south.
40	Black locust	8,5	3	Moderate	Yes	Thin narrow form; leaning south.
41	Black locust	9,7	3	Moderate	Yes	Thin narrow form; leaning south; multiple attachments at base.
42	Black locust	8	3	Moderate	Yes	Thin narrow form; leaning west; spiral form.
43	Black locust	10	3	Low	No	Thin narrow form; leaning heavily west; crook in trunk at 15 feet.
44	Black locust	7	3	Low	No	Thin narrow form; leaning heavily west.
45	Black locust	9,5	3	Moderate	Yes	Thin narrow form; Codominant at base.
46	Black locust	14,6,5,3	4	Moderate	Yes	Multiple attachments at base; full; canopy.
47	Black locust	9,6	3	Low	Yes	Codominant at base; leans heavily north.
48	Black locust	12	2	Low	Yes	Failed Codominant at base; leans north.
49	Black locust	11	1	Low	No	Failed at base; leaning on #48.
50	Black locust	11,8,6,6,5,5	3	Moderate	Yes	Multiple attachments at base; asymmetrical north.
51	Black locust	7,7,5,3,2,2	3	Moderate	Yes	Multiple attachments at base; thin; bushy.
52	Black locust	7	3	Moderate	Yes	Narrow form; leans north.
53	Black locust	12,6	3	Low	Yes	Narrow form; leans north; crook at 20 feet.
54	Black locust	12	3	Moderate	Yes	Narrow form; tall.
55	Black locust	12	3	Low	Yes	Narrow form; leans heavily north.
56	Black locust	11	3	Moderate	Yes	Narrow form; crowded by neighbors.
57	Black locust	8	3	Low	Yes	Narrow form; crook in trunk at 25 feet.
58	Black locust	7	3	Moderate	Yes	Narrow form; leans west.
59	Black locust	11,6	3	Moderate	Yes	Narrow form; codominant at base; included bark.
60	Black locust	8	3	Moderate	Yes	Narrow form; no branches to 30 feet.
61	Black locust	8	3	Moderate	Yes	Narrow form; no branches to 30 feet.
62	Black locust	11,11	3	Moderate	Yes	Codominant at base; narrow form.
63	Black locust	13	3	Moderate	Yes	Narrow form; asymmetrical to east.
64	Black locust	11,11,9,8	2	Low	Yes	Narrow form; asymmetrical to east.

Tree Assessment

NPC Holdings
BART Remainder Parcel
6002 Stoneridge Mall Rd.
February 2014

HORT SCIENCE

Tree No.	Species	Trunk Diameter (in.)	Condition 1=poor 5=excellent	Suitability for Preservation	Heritage Tree?	Comments
65	Black locust	6	3	Low	No	Narrow form; leans heavily east.
66	Black locust	10,7	3	Low	Yes	Narrow form; multiple attachments at base; trunk wound; included bark.
67	Black locust	10,5	3	Moderate	Yes	Narrow form; multiple attachments at base; included bark.
68	Black locust	10,9,9,9	2	Low	Yes	Multiple attachments at base; included bark; trunk wound.
69	Black locust	11,10,7,6	2	Low	No	Multiple attachments at base; most of growth epicormic.
70	Black locust	11,11	2	Low	Yes	Codominant at base; poor structure crooked form.
71	Black locust	13	4	Moderate	Yes	Codominant at base; poor structure crooked form.
72	Black locust	6,3,3,2,2	3	Moderate	No	Small and bushy.
73	Black locust	11,10	3	Low	Yes	Codominant at base; wound; included bark; crooked form.
74	Black locust	12,8,8	3	Moderate	Yes	Codominant at base; basal wound; included bark; asymmetrical east.
75	English walnut	35	3	Moderate	Yes	Hollow; wounds from several branch failures; leaning west; full crown.
76	Olive	6,6,4,4	4	High	No	No fruit; bushy young olive.
77	Blackwood acacia	10	4	Low	No	In grove; close to freeway.
78	Blackwood acacia	9,9,5	4	Low	No	In grove; close to freeway.
79	Blackwood acacia	6	4	Low	No	In grove; close to freeway.
80	Blackwood acacia	8,7,6,6,6,5,5,5	4	Low	No	In grove; close to freeway; multiple attachments at base.
81	Blackwood acacia	8,4,4	4	Low	No	In grove; close to freeway; multiple attachments at base.
82	Blackwood acacia	12,9,8,7,6	4	Low	No	In grove; close to freeway; multiple attachments at base.
83	Western sycamore	48	4	High	Yes	Offsite; Caltrans ROW; Codominant at 8 ft., heavy branches near freeway; crown bows to east; no tag.
84	Black locust	6,6,6,4	4	Moderate	No	Multiple attachments at base; low bushy form.
85	River red gum	7	3	Moderate	No	Crooked spiral form; young recently planted.
86	London plane	24	4	High	Yes	Codominant at 15 ft. full crown; asymmetrical towards parking lot.

Tree Assessment

NPC Holdings
BART Remainder Parcel
6002 Stoneridge Mall Rd.
February 2014

HORT SCIENCE

Tree No.	Species	Trunk Diameter (in.)	Condition 1=poor 5=excellent	Suitability for Preservation	Heritage Tree?	Comments
87	London plane	14	3	Moderate	Yes	Codominant at 8 ft. narrow form; crowded by neighbors.
88	London plane	23	4	High	Yes	Multiple attachments at 12 feet.
89	Blackwood acacia	10	4	Low	No	Healthy young tree growing within canopy of #88.
90	London plane	18	4	High	Yes	Strong central leader; asymmetrical towards parking lot.
91	London plane	17	3	Moderate	Yes	Codominant at 7 ft. thin.
92	London plane	19	4	High	Yes	Asymmetrical towards parking lot; epicormic growth.
93	London plane	21	4	High	Yes	Asymmetrical towards parking lot; epicormic growth; poorly pruned.
94	London plane	12	3	Moderate	No	Codominant at 10 ft. thin; crowded by neighbors.
95	London plane	21	4	Moderate	Yes	Codominant at 15 ft.; asymmetrical towards parking lot; prune for structure.
96	London plane	21	4	High	Yes	Codominant at 20 ft. spreading crown.
97	London plane	12	3	Moderate	Yes	Codominant at 12 ft. crown sweeps south; poor form.
98	London plane	12	3	Moderate	Yes	Thin canopy; asymmetrical; sweeps north.
99	London plane	20	4	High	Yes	Codominant at 12 ft., heavy branches over parking lot.
100	London plane	23	4	High	Yes	Codominant at 15 ft. spreading crown; epicormic growth.
101	London plane	23	4	High	Yes	Leans south; asymmetrical.
102	London plane	9	3	Low	No	Leans heavily east; crowded by neighbors.
103	London plane	9	3	Moderate	Yes	Asymmetrical to south; crowded by neighbors.
104	London plane	22	4	High	Yes	Multiple attachments at 6 ft.; spreading crown.
105	London plane	24	4	High	Yes	Multiple attachments at 6 ft.; spreading crown.
106	London plane	19	4	High	Yes	Multiple attachments at 6 ft.; spreading crown.

Tree Assessment Map

BART Parcel
Pleasanton, CA

Prepared for:
Workday, Inc.
Pleasanton, CA

January 2014

No Scale

Notes:
Base map provided by:
Kier & Wright
Livermore, CA

Numbered tree locations are approximate.

TS = Tree smaller than 6" and not included in assessment

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EXHIBIT B

HEXAGON TRANSPORTATION CONSULTANTS, INC.

Pleasanton Workday Office Development

Transportation Impact Analysis

Prepared for:

City of Pleasanton

March 14, 2014

Hexagon Office: 4377 First Street, Suite A
Pleasanton, CA 94566
Hexagon Job Number: 13BW24
Phone: 925.225.1439

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Executive Summary

The purpose of this report is to analyze the transportation impacts of the proposed Workday office development located adjacent to the West Dublin/Pleasanton BART station on Stoneridge Mall Road in Pleasanton, California. The project would consist of 430,000 square feet (s.f.) of office space and two parking structures. One parking structure would consist of approximately 700 parking spaces and be located on the project site. The other parking structure would consist of approximately 900 parking spaces and be located on the southwest portion of the Stoneridge Corporate Plaza site, south of the project. Access to the site would be provided via existing driveways on Stoneridge Mall Road and Embarcadero Court.

The potential traffic impacts related to the proposed development were evaluated following the standards and methodologies set forth by the Cities of Pleasanton and Dublin. Because the project is expected to generate more than 100 peak hour trips, the analysis also was conducted in accordance with the requirements of the Alameda Congestion Management Agency (CMA), the administering agency for the Congestion Management Program (CMP) of Alameda County. Traffic impacts due to the project were determined based on AM and PM peak hour levels of service for 13 signalized intersections, two unsignalized intersections, and 14 Metropolitan Transportation System (MTS) roadway segments.

Project Trip Generation

Project trip generation was estimated by applying to the size and uses of the development the appropriate trip generation rates published by the Institute of Transportation Engineers (ITE) in *Trip Generation, 9th Edition*. Based on ITE's trip generation rates for general office use (ITE code 710), the project would generate 3,978 gross daily vehicle trips, with 615 gross trips occurring during the AM peak hour and 560 gross trips occurring during the PM peak hour.

Because the project site is located near the West Dublin/Pleasanton BART station, a transit reduction of 3 percent was applied to the overall project trip generation. This reduction was based on estimates of transit mode share from the Pleasanton TDF model. While higher transit rider mode splits are typically observed around major transit nodes (such as BART stations), the vast majority of BART service is provided in areas west of the project site and serves only a small subset of potential commute routes. In addition, existing commute patterns in the Bay Area show heavy traffic from the Tri-Valley area to the major employment centers in the East Bay and San Francisco during the AM commute hours, and the reverse in the PM peak hour. Because the delays on freeways are high in the peak direction, commuters often find BART service a convenient alternative to driving. However, the proposed project is an office development; most of its trips to/from the East Bay would occur in the off-peak direction of BART service, where the delays on the freeways are much lower. For many future employees of the proposed development that live in the East Bay, it would be much quicker to drive to the site rather than utilize BART.

In addition to the transit reduction, the project will receive trip credits for the approved uses at the site under both the (1) existing plus approved and (2) buildout conditions analyses. The site is currently approved for 350 multi-family units and 14,286 s.f. of commercial use. Under the existing plus project scenario, these trip credits do not apply.

After applying the appropriate trip reductions, under existing plus project conditions, the project would generate 3,859 net new daily trips, with 597 net new trips occurring during the AM peak hour and 543 net new trips occurring during the PM peak hour. Under the (1) existing plus approved and (2) buildout scenarios, the project would generate 1,090 net new daily trips, with 413 net new trips occurring during the AM peak hour and 288 net new trips occurring during the PM peak hour.

The assignment of site-generated traffic to and from intersections and freeway ramps in the project area was carried out directly by the City of Pleasanton TDF model. Under project conditions, the model assignment includes any potential redistribution of traffic associated with the existing Stoneridge Corporate Plaza. The project land uses and ITE trip generation estimates were coded into the TDF model, which was then used to generate future traffic volume forecasts for all of the study scenarios. This method is different than "hand" assignment methods where project traffic is added directly to base year no project traffic volumes. For large projects, use of the TDF model is considered more accurate because it accounts for (1) changes in origin-destination pairs (2) ambient traffic diversion that may occur as a result of project traffic, and (3) the spreading of peak hour trips into off-peak hours.

Intersection Level of Service Impacts

Table ES-1 summarizes the results of the intersection level of service analysis under existing, existing plus approved, and buildout conditions. Under all study scenarios, all of the signalized study intersections would operate at LOS D or better during the AM and PM peak hours, with one exception. The signalized intersection of Foothill Road and Canyon Way would operate at LOS E under all project scenarios during the PM peak hour. However, this intersection is a "*Gateway Intersection*" and is not required to maintain a LOS of D or better. The City of Pleasanton has already planned improvements at this intersection as part of its Traffic Impact Fee (TIF) program. The project would result in the following significant impact:

> **Significant Impact #1:** The worst approach of the unsignalized intersection of Stoneridge Mall Road and BART Entrance would operate at LOS F during the PM peak hour under existing plus approved no project and with project conditions. In addition, the project would add more than 30 seconds of delay to the worst approach, which constitutes a significant impact. This intersection would also meet traffic signal warrant checks under existing plus approved conditions both with and without the proposed project during the PM peak hour.
>
> **Mitigation #1:** Per the City of Pleasanton's TIF improvements, the intersection of Stoneridge Mall Road and BART Entrance is planned for signalization. As mitigation for the project's significant impact at this intersection, the project would be responsible for a fair share contribution toward signalization of the intersection through the payment of its TIF fees.

Freeway Ramp Capacity Analysis

The proposed project would not create a significant impact at any of the study ramp locations under any of the project scenarios.

Operations Analysis

The analysis indicated that the estimated maximum vehicle queues would exceed the vehicle storage capacity at a few locations. The following recommendations were noted:

- It is recommended that the queuing storage for the southbound left turn movement at Foothill Road and Canyon Way be increased to 1,200 feet to accommodate the anticipated queues. This would

require either (1) lengthening the existing southbound left turn pocket or (2) constructing a third southbound left turn pocket. Lengthening the existing left turn pocket would require removal of the median. Constructing a third left turn pocket would require removal of the median, modification of the median nose, acquiring right-of-way for receiving lanes, restriping of lane lines, modifications to vehicle detection, and aligning the signal heads to the new lane geometry. According to the City of Pleasanton *Traffic Impact Fee and Nexus Report*, May 2010, addition of a third left turn lane for the southbound movement is planned for the intersection.

- At the intersection of Stoneridge Mall Road and Stoneridge Drive, it is recommended that the inner most southbound left turn pocket be lengthened back to the midblock break where fire access occurs. This would add approximately 125 feet of additional queuing space at the intersection. However, this would require removal of the landscaped median. Because this issue occurs under no project conditions, and not solely caused by project traffic, a fair share contribution to the improvement may be appropriate. However, the final determination will be made by City staff.

Site Access, On Site Circulation and Parking

The site access, onsite circulation, and parking were evaluated for the proposed project. Because the site plan is conceptual, many details of the plan (such as drive aisle widths, stall widths, curb radii, parking space count, etc.) are not yet available. The following recommendations were noted:

- The Stoneridge Mall Road driveway should have two outbound lanes, one right turn lane and one-shared left-through lane. Ideally, this driveway should have a clear throat of 200 feet. However, a clear throat of 100 feet would be adequate to accommodate the average queues during peak hours. To reduce the probability of head on collisions, the two way center left turn lane should be converted to a left turn lane at the driveway. A traffic signal is warranted at this intersection during the PM peak hour with the proposed project. However, the planned addition of a traffic signal at the intersection of the BART entrance/Stoneridge Mall Road may preclude efficient traffic signal operation. The final determination of whether a traffic signal is desirable at this location will be made by Community Development staff. Other options for improved access at the site could include (1) combining the BART driveway with the project driveway at Stoneridge Mall Road and installing a single traffic signal or (2) moving the north parking structure to the eastern part of the Stoneridge Corporate Plaza site so that more traffic would utilize the Embarcadero Court driveways.

- The design of the roundabout at the project driveway/Embarcadero Court is not shown on the current plan. Prior to final design, the layout of the roundabout should be checked by Community Development staff to insure that it complies with the guidelines specified in the publication *Roundabouts: An Informational Guide.*

- Although the current sight distance at the project driveways was checked in the field and determined to be adequate, landscaping is not shown on the current site plan. 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 Stoneridge Mall Road and Embarcadero Court. Landscaping and parking should not conflict with a driver's ability to locate a gap in traffic. Adequate corner sight distance (sight distance triangles) should be provided at all site access points and onsite intersections in accordance with Caltrans standards. Sight distance triangles should be measured approximately 10 feet back from the traveled way.

- Prior to final design, the design and layout of the parking structures should be reviewed by Community Development staff. This includes a review of sight distance and parking controls at the garage entrances (to prevent vehicles from spilling back to the public street network).The current design shows the eastern entrance of the southern parking garage would be located approximately 50 feet north of the project driveway/Embarcadero Court intersection. To prevent queues from the garage from spilling onto Embarcadero Court, consideration should be given to relocating this driveway to the north approximately 100 feet.

- Because the site plan is conceptual, access to the site for trucks cannot be assessed. Prior to final design, the project applicant should submit an exhibit showing the intended truck routes to and from the loading areas onsite. In addition, the drive aisles and intersections should be checked to insure that they are permissible by delivery trucks, garbage trucks, moving trucks, and fire trucks. The project applicant should provide an exhibit showing truck turn templates overlaid onto the site plan. Traffic volumes onsite would be relatively low, and encroachment of heavy vehicles on opposing traffic lanes would not likely create operational problems if it is predominately confined to off peak hours.
- Where pedestrian paths cross drive aisles, wheelchair ramps are not shown on the current plan. Prior to final design, the project should provide pedestrian crosswalks consistent with *Americans with Disabilities Act* (ADA) requirements.
- Consistent with City of Pleasanton parking requirements, the proposed project should provide 1,433 parking spaces onsite. For the existing Stoneridge Corporate Plaza site, the proposed project should either (1) replace the parking lost due to the construction of the south parking structure or (2) demonstrate that the Stoneridge Corporate Plaza would have sufficient parking to comply with City parking requirements. This recommendation applies under both the buildout of the proposed project and during construction.

Other Transportation Modes

The project's impact to pedestrian, bicycle and transit facilities was evaluated. Based on this analysis, the project would not create an adverse significant impact to any of these facilities. However, the following recommendation was noted:

- According to the City of Pleasanton *Pedestrian and Bicycle Master Plan, Appendix G - 2,* bicycle parking should be required of non-residential projects. The cited example ratio is one bicycle parking space for each 20 vehicle parking stalls or per each 5,000 square feet of commercial space. Prior to final design, City staff should review the project site plan to ensure that adequate accommodations for bike parking are provided.

CMA Analysis

In order to determine the impact of the project, AM and PM peak-hour traffic volumes on eight directional freeway segments and six directional MTS roadway segments (years 2020 and 2035) in the vicinity of the project were analyzed. Although the model estimates that the project would increase traffic during the AM and PM peak-hours, the project would not cause a significant impact to any of the study freeway or roadway segments.

Table ES- 1
Intersection Level of Service Summary

Study Number	Intersection	Traffic Control	Peak Hour	Existing		Existing + Project		Existing + Approved: No Project		Existing + Approved: With Project		Buildout: No Project		Buildout: With Project	
				Delay (in seconds)[1]	LOS[1]	Delay (in seconds)[1]	LOS[1]	Delay (in seconds)[1]	LOS[1]	Delay (in seconds)[1]	LOS[1]	Delay (in seconds)[1]	LOS[1]	Delay (in seconds)[1]	LOS[1]
Pleasanton Intersections:															
#1	San Ramon Rd and I-580 WB Off Ramp[4]	Signal	AM	9.4	A	11.0	B	9.7	A	10.5	B	12.2	B	13.4	B
			PM	12.5	B	13.1	B	15.5	B	15.5	B	14.4	B	15.1	B
#2	Foothill Rd and I-580 EB Off Ramp[4] (Future)	Signal	AM	--	--	--	--	10.3	B	12.6	B	13.6	B	14.9	B
			PM	--	--	--	--	11.8	B	12.0	B	11.5	B	11.9	B
#3	Foothill Rd and Canyon Wy/Dublin Canyon Rd[4,5]	Signal	AM	21.6	C	27.0	C	31.7	C	39.9	D	31.2	C	35.0	D
			PM	45.8	D	58.2	E	65.2	E	72.0	E	59.6	E	66.6	E
#4	Foothill Rd and Stoneridge Dr	Signal	AM	18.9	B	18.9	B	24.7	C	23.7	C	43.9	D	40.4	D
			PM	23.2	C	23.5	C	45.7	D	48.7	D	34.5	C	29.0	C
#5	Stoneridge Mall Rd and Canyon Wy	Signal	AM	5.0	A	5.5	A	4.5	A	5.5	A	4.4	A	5.2	A
			PM	5.8	A	6.4	A	6.7	A	6.8	A	5.6	A	5.8	A
#6	Stoneridge Mall Rd and Bart Entrance	SSSC/Signal[2,3]	AM	1.0/13.0	A/B	0.9/15.0	A/B	2.8/15.6	A/C	2.4/16.5	A/C	5.8	A	5.6	A
			PM	3.3/24.1	A/C	4.3/37.6	A/E	13.6/58.0	B/F	20.2/94.1	C/F	8.2	A	8.3	A
#7	Stoneridge Mall Rd and Project Dwy	SSSC[3]	AM	1.7/12.6	A/B	3.7/29.0	A/D	6.0/33.9	A/D	3.6/33.5	A/D	6.1/35.3	A/E	3.5/31.2	A/D
			PM	3.7/19.3	A/C	14.4/47.7	B/E	8.0/35.4	A/E	13.4/45.9	B/E	7.4/39.1	A/E	12.7/49.2	B/E
#8	Stoneridge Mall Rd and Embarcadero Ct	Signal	AM	11.8	B	18.8	B	13.1	B	22.4	C	12.8	B	20.9	C
			PM	20.2	C	23.9	C	22.1	C	25.6	C	21.5	C	23.4	C
#9	Stoneridge Mall Rd and Workday Wy	Signal	AM	9.5	A	11.4	B	12.2	B	16.2	B	11.4	B	13.4	B
			PM	20.0	C	26.5	C	22.1	C	27.3	C	17.5	B	19.7	B
#10	Stoneridge Mall Rd and Stoneridge Dr	Signal	AM	7.7	A	8.0	A	9.9	A	9.9	A	10.3	B	10.1	B
			PM	15.4	B	16.5	B	37.4	D	39.8	D	22.4	C	23.5	C
#11	I-680 SB Off Ramp and Stoneridge Dr[4]	Signal	AM	13.8	B	16.7	B	12.0	B	12.7	B	12.6	B	13.1	B
			PM	11.3	B	11.6	B	14.3	B	15.0	B	12.2	B	12.1	B
#12	I-680 NB Off Ramp and Stoneridge Dr[4]	Signal	AM	13.7	B	14.2	B	16.6	B	17.5	B	19.8	B	20.7	C
			PM	12.5	B	12.7	B	13.2	B	13.2	B	11.5	B	11.4	B
#13	Johnson Dr and Stoneridge Dr[4]	Signal	AM	18.1	B	18.5	B	15.6	B	15.4	B	17.8	B	17.4	B
			PM	22.2	C	22.1	C	24.1	C	22.6	C	23.6	C	22.9	C
#14	Hopyard Rd and Stoneridge Dr	Signal	AM	28.4	C	29.0	C	29.0	C	29.5	C	31.7	C	32.3	C
			PM	34.3	C	34.8	C	41.0	D	40.9	D	53.5	D	51.6	D
Dublin Intersection:															
#15	San Ramon Rd and Dublin Blvd	Signal	AM	34.0	C	34.1	C	32.5	C	32.0	C	31.7	C	32.1	C
			PM	37.3	D	37.3	D	38.2	D	37.8	D	38.2	D	38.2	D

[1] Signalized intersection levels of service and delays reported are for overall average delay. SSSC intersection levels of service and delays reported are for both the overall average delay and the approach with the highest delay.
[2] Run as SSSC under existing and existing plus approved scenarios. Run as signalized under buildout conditons.
[3] SSSC = Side Street Stop Control.
[4] These intersections are Gateway Intersections and may have an LOS worse than D.
[5] Added third southbound left turn lane under buildout conditons per the Pleasanton TIF.

Denotes unacceptable level of service
Denotes Significant Impact

1. Introduction

The purpose of this report is to analyze the transportation impacts of the proposed Workday office development located adjacent to the West Pleasanton BART station on Stoneridge Mall Road in Pleasanton, California. The project would consist of 430,000 square feet (s.f.) of office space and two parking structures. One parking structure would consist of approximately 700 parking spaces and be located on the project site. The other parking structure would consist of approximately 900 parking spaces and be located on the southwest portion of the Stoneridge Corporate Plaza site, south of the project. Access to the site would be provided via existing driveways on Stoneridge Mall Road and Embarcadero Court. The project site location and the surrounding study area are shown on Figure 1. The site plan is shown in Figure 2.

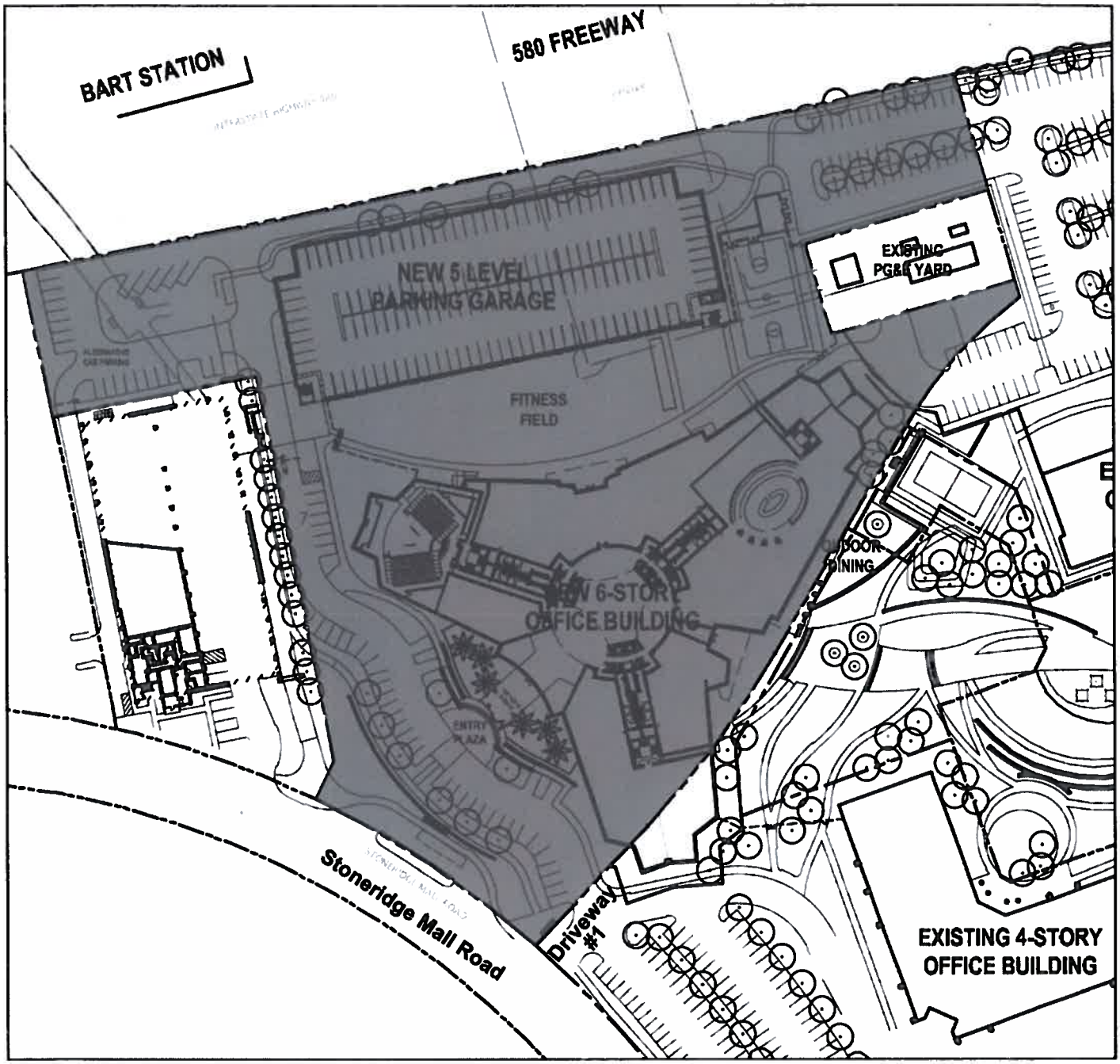
Scope of Study

The potential traffic impacts related to the proposed development were evaluated following the standards and methodologies set forth by the Cities of Pleasanton and Dublin. Because the project is expected to generate more than 100 peak hour trips, the analysis also was conducted in accordance with the requirements of the Alameda Congestion Management Agency (CMA), the administering agency for the Congestion Management Program (CMP) of Alameda County. The following study intersections were analyzed for this project.

1. San Ramon Road and I-580 WB Off Ramp
2. Foothill Road and I-580 EB Off Ramp (Future Intersection)
3. Foothill Road and Canyon Way/Dublin Canyon Road
4. Foothill Road and Stoneridge Drive
5. Stoneridge Mall Road and Canyon Way
6. Stoneridge Mall Road and BART Entrance (Unsignalized)
7. Stoneridge Mall Road and Project Driveway (Unsignalized)
8. Stoneridge Mall Road and Embarcadero Court
9. Stoneridge Mall Road and Workday Way
10. Stoneridge Mall Road and Stoneridge Drive
11. I-680 SB Off Ramp and Stoneridge Drive
12. I-680 NB Off Ramp and Stoneridge Drive
13. Johnson Drive and Stoneridge Drive
14. Hopyard Road and Stoneridge Drive
15. San Ramon Road and Dublin Boulevard[1]

[1] Denotes City of Dublin Intersection

Figure 1
Site Location and Study Intersections

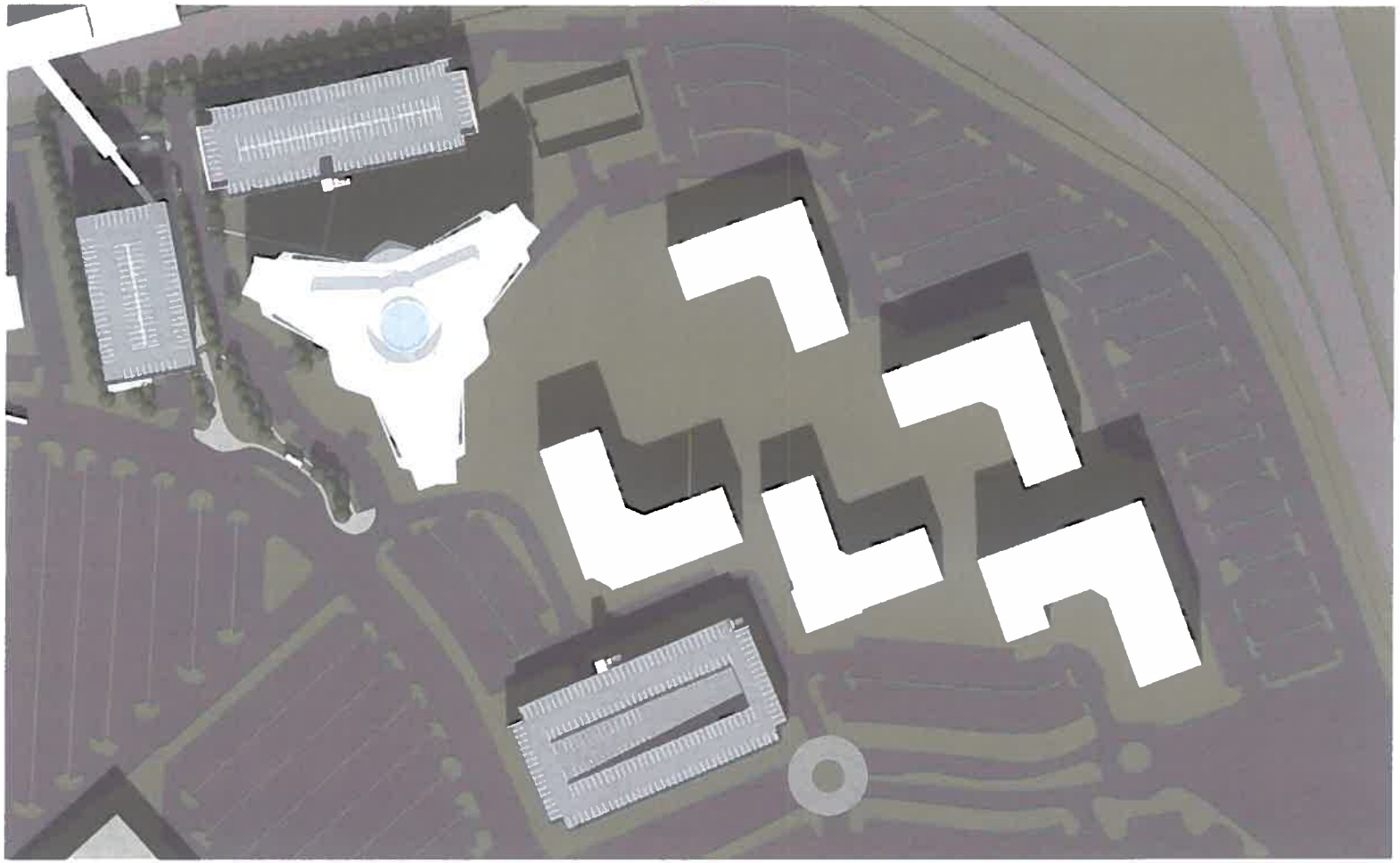


1" = 120'-0"

EXHIBIT B
PRELIMINARY SITE PLAN

Figure 2A
Site Plan

1 Building Scheme



WORKDAY CONFIDENTIAL

workday.

Figure 2B
Site Plan

Traffic conditions at the study intersections were analyzed for the non-holiday season weekday AM and PM peak hours. The AM peak hour is generally between 7:00 and 9:00 AM, and the PM peak hour is typically between 4:00 and 6:00 PM. It is during these periods that the most congested traffic conditions occur on an average day. Because the project is located near a regional shopping mall, there are periods in late November and December when traffic conditions would be different than described in this report. Generally, vehicle trips increase during the PM commute hour for some traffic movements around retail centers beginning in Thanksgiving and peaking just before Christmas. However, holiday season travel patterns occur for a relatively few number of days each year and are considered atypical. The traffic engineering profession generally discourages data collection during atypical periods because it is uneconomical to construct physical improvements to accommodate seasonal traffic increases. For this reason, the transportation infrastructure and land use impacts of new projects are most commonly analyzed during the non-holiday period, when travel conditions are more representative of the entire year.

Traffic conditions were evaluated for the following scenarios:

Scenario 1: *Existing Conditions.* Existing traffic volumes are based on traffic counts from the years 2012, 2013, and 2014. These counts were obtained from the City of Pleasanton, but were supplemented by new turning movement counts conducted by Hexagon.

Scenario 2: *Existing Plus Project Conditions.* Existing plus project conditions were estimated by adding to existing traffic volumes the additional traffic generated by the project. Existing plus project conditions were evaluated relative to existing conditions in order to determine potential project impacts.

Scenario 3: *Existing Plus Approved Conditions.* Traffic volumes were obtained from the City of Pleasanton Travel Demand Forecast model. The existing plus approved no project volumes reflect all approved development in the city, including the previously approved uses at the project site. The existing plus approved with project conditions were estimated by adding the traffic generated by the project to the existing plus approved traffic volumes, minus the previously approved uses at the project site. Existing plus approved with project conditions were evaluated relative to existing plus approved without project conditions in order to determine potential near-term project impacts.

Scenario 4: *Buildout Conditions.* Traffic volumes were obtained from the City of Pleasanton Travel Demand Forecast model. The buildout no project traffic volumes reflect all approved and pending development in the city, including the previously approved uses at the project site. The buildout with project conditions were estimated by adding the traffic generated by the project to the buildout no project traffic volumes, minus the previously approved uses at the project site. Buildout with project conditions were evaluated relative to buildout without project conditions in order to determine potential far-term project impacts.

Scenario 5: *CMA Analysis.* For projects that generate more than 100 peak-hour vehicle trips, a CMA traffic analysis is required using the Countywide Travel Demand Forecast (TDF) model. The CMA analysis evaluates impacts to the CMA roadway network for the years 2020 and 2035.

Methodology

This section describes the methods used to determine the traffic operations for each scenario. It includes the methods used for data collection, level of service calculations, and describes the various level of service standards as well as the criteria for project impacts.

Data Requirements

The data required for the analysis were obtained from new traffic counts, previous traffic studies, the City of Pleasanton, field observations, and published information from various transportation agencies. The following data were collected from these sources:

- existing traffic volumes
- lane configurations
- signal timing and phasing (for signalized intersections)
- approved and pending developments (size, use, and location)
- Alameda County CMA TDF model
- existing bicycle facilities
- existing transit service
- local parking requirements

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.

Signalized Intersections

Fourteen of the study intersections are located in the City of Pleasanton and one is located in the City of Dublin; each intersection is subject to the level of service standard for which it is located. The Cities of Pleasanton and Dublin evaluate level of service at signalized intersections based on the Highway Capacity Manual (HCM) level of service methodology using Synchro software. The HCM method evaluates signalized intersection operations on the basis of average control delay time for all vehicles at the intersection. *Control delay* is the amount of delay that is attributed to the particular traffic control device at the intersection, and includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The correlation between average delay and level of service is shown in Table 1. The Cities of Pleasanton and Dublin have a level of service standard for signalized intersections of LOS D or better. The City of Pleasanton has a few exceptions to the LOS standard within the Downtown Area and the City of Pleasanton gateway intersections. These intersections may have a level of service worse than the LOS D standard if no reasonable mitigation exists or if the necessary mitigation is contrary to other goals and policies of the City. According to the Pleasanton General Plan, six of the signalized study intersections are considered gateway intersections.

- Foothill Road and I-580 WB Off Ramp
- Foothill Road and I-580 EB Off Ramp
- Foothill Road and Canyon Way/Dublin Canyon Road
- I-680 SB Off Ramp and Stoneridge Off Ramp
- I-680 NB Off Ramp and Stoneridge Off Ramp
- Johnson Drive and Stoneridge Drive

Significance criteria are used to establish what constitutes an impact. For this analysis, the criteria used to determine significant impacts on signalized intersections are based on Cities of Pleasanton and Dublin intersection Level of Service standards.

According to the City of Pleasanton level of service guidelines, a development is said to create a significant adverse impact on traffic conditions at a signalized intersection if for either peak hour:

1. The level of service at the intersection degrades from an acceptable LOS D or better under no project conditions to an unacceptable LOS E or LOS F under project conditions, or

2. If the intersection is already operating at an unacceptable LOS E or LOS F under no project conditions, and the project adds ten or more trips to the intersection.

According to the City of Dublin level of service guidelines, a development is said to create a significant adverse impact on traffic conditions at a signalized intersection if for either peak hour:

1. The level of service at the intersection degrades from an acceptable LOS D or better under no project conditions to an unacceptable LOS E or LOS F under project conditions, or

2. If the intersection is already operating at an unacceptable LOS E or LOS F under no project conditions, and the project adds one or more trips to the intersection.

A significant impact at a signalized intersection is said to be satisfactorily mitigated when measures are implemented that would restore intersection levels of service to an acceptable LOS or restore the intersection to operating levels that are better than no project conditions.

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 may 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 lenghts, 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.

Unsignalized Intersections

Level of service at unsignalized intersections also was based on the *Highway Capacity Manual* (HCM) method. Synchro software is used to apply the HCM operations method for evaluation of conditions at unsignalized intersections. This method is applicable for one-way, two-way, and all-way stop-controlled intersections. The delay and corresponding level of service at unsignalized, stop-controlled intersections is presented in Table 2. For side-street stop controlled intersections, the LOS was reported for the overall intersection average delay and the average delay on the worst approach. The City of Pleasanton level of service standard for unsignalized intersections is LOS E for any intersection approach.

The project is said to create a significant impact at an unsignalized intersection if any of the following occur:

1. Deterioration of an intersection approach at an unsignalized intersection from LOS E or better to LOS F, or
2. If the intersection approach is already operating at an unacceptable LOS F under no project conditions and one of the following occurs:
    - Project traffic results in satisfaction of the peak hour volume traffic signal warrant;
    - Project traffic increases minor street approach delay by more than 30 seconds; or
    - Where the peak hour volume signal warrant is met without Project traffic and delay cannot be measured, the Project increases traffic by 10 or more vehicles per lane on the controlled approach.

Table 2
Unsignalized Intersection Level of Service Definitions Based on Delay

Level of Service	Description	Average 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.

Signal Warrant Methodology

The level of service analysis at unsignalized intersections is supplemented with an assessment of the need for signalization of the intersections. For this study, the need for signalization is assessed on the basis of the operating conditions at the intersections (i.e., level of service) and on the peak hour volume signal warrant – warrant #3 – described in the *2012 California Manual on Uniform Traffic Control Devices* (MUTCD). This method provides an indication of whether traffic conditions and peak hour traffic levels are, or would be, sufficient to justify installation of a traffic signal.

Intersection Operations

The operations analysis is based on vehicle queuing for high-demand movements at intersections. 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

n = number of vehicles in the queue

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

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 per signal cycle 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.

Freeway Ramp Capacity Analysis

This analysis was performed in order to verify that the freeway ramps would have sufficient capacity to serve the expected traffic volumes with the project. This analysis consisted of a volume-to-capacity ratio evaluation of the freeway ramps at the selected interchanges. The ramp capacities were obtained from the *Highway Capacity Manual 2010* and the *Alameda Countywide Transportation Model Update – Model Documentation 2009*.

For the purposes of this study, the project is said to create a significant adverse impact on a freeway ramp if its implementation:

- Causes the volume-to-capacity (V/C) ratio of the freeway ramp to exceed 1.0; or
- if a segment is already operating at or above a V/C of 1.0 in the No Project case and the project causes an increase in the V/C ratio by more than 0.03 (for example, from 1.03 to 1.07).

Report Organization

The remainder of this report is divided into six chapters. Chapter 2 describes the existing roadway network, transit service, and existing bicycle and pedestrian facilities. Chapter 3 describes the method used to estimate project traffic. Chapter 4 describes the project impacts under existing plus project conditions on the transportation system. Chapter 5 presents the intersection operations under existing plus approved conditions and the project impact on the transportation system. Chapter 6 presents the intersection operations under cumulative traffic conditions. Chapter 7 describes non-level of service operational issues associated with the proposed project and Chapter 8 presents the impacts to the CMA roadway network.

2. Existing Conditions

This chapter describes the existing conditions for all of the major transportation facilities in the vicinity of the site, including the roadway network, transit service, and bicycle and pedestrian facilities.

Existing Roadway Network

Regional access to the project site is provided via Interstates 580 (I-580) and 680 (I-680). Local access to the site is provided via Foothill Road, Stoneridge Drive, Stoneridge Mall Road, and Canyon Way. These roadways are described below.

I-580 is an east-west freeway with four mixed-flow lanes in the eastbound direction and four mixed-flow lanes in the westbound direction within the project vicinity. I-580 provides regional access from the East Bay cities to San Joaquin County, where it merges with I-5. Access to the project study area is provided via its interchange with Foothill Road/San Ramon Road.

I-680 is a six to eight lane north/south freeway with three mixed-flow lanes and one HOV lane in each direction north of I-580 and three mixed-flow lanes in each direction south of I-580. I-680 extends north through Contra Costa County and south to Santa Clara County. The HOV lanes run north and south from central Contra Costa County to near the Dublin/San Ramon border. Access to the project study area is provided via its interchange with Stoneridge Drive.

Foothill Road is predominantly a north-south arterial roadway that extends north from Kilkare Road in Sunol to I-580, where it becomes San Ramon Road and continues into the City of Dublin. It is two lanes wide from Kilkare Road to Stoneridge Drive, five lanes wide (three lanes northbound and two lanes southbound) from Stoneridge Drive to Canyon Way/Dublin Canyon Road, and four to six lanes wide from Canyon Way/Dublin Canyon Road to San Ramon Road. Foothill Road provides access to the project site via Canyon Way.

Stoneridge Drive is predominantly an east-west arterial roadway that extends from Foothill Road in the west to El Charro Road, where it becomes Jack London Boulevard and continues into the City of Livermore. It is four lanes wide from Foothill Road to Stoneridge Mall Road, primarily six lanes wide from Stoneridge Mall Road to Chabot Drive, five lanes wide (three lanes westbound and two lanes eastbound) from Chabot Drive to Las Positas Boulevard, and four lanes wide east of Las Positas Boulevard. Stoneridge Drive provides access to the project site via Stoneridge Mall Road.

Stoneridge Mall Road is a four-lane collector roadway that extends north from Stoneridge Drive into the Stoneridge Mall area, where it circles the mall and surrounding commercial/office uses and terminates at its intersection with Workday Way. North of its intersection with Workday Way, Stoneridge Mall Road has a two-way center left turn lane. Stoneridge Mall Road provides direct access to the project site.

Canyon Way is a four to six-lane collector roadway that extends from Stoneridge Mall Road in the east to Foothill Road, where it becomes Dublin Canyon Road. Canyon Way provides access to the project site via Stoneridge Mall Road.

Existing Bicycle and Pedestrian Facilities

Bicycle facilities are divided into three classes. Class I bikeways are separate bike paths that are physically separated from motor vehicles and offer two-way bicycle travel on a separate path. Class II bikeways are striped bike lanes on roadways that are marked by signage and pavement markings. Class III bikeways are bike routes and only have signs to help guide bicyclists on recommended routes to certain locations.

The 2010 *Pleasanton Pedestrian and Bicycle Master Plan* describes the existing bicycle network in the City of Pleasanton. The existing bicycle facilities in the vicinity of the project site are described below and shown on Figure 3.

- Stoneridge Drive has existing eastbound and westbound Class II bicycle lanes between (1) Foothill Road and Gibraltar Drive and (2) West Las Positas Boulevard and the City limits to the east. Class II lanes are located only on the eastbound travelled way of Stoneridge Drive between Gibraltar Drive and West Las Positas Boulevard.

- Foothill Road has existing southbound Class II bicycle lanes from just south of Canyon Way to Moeller Ranch Drive and southbound and northbound Class II bicycle lanes from Moeller Ranch Drive to Muirwood Drive.

- Dublin Canyon Road has existing Class II bicycle lanes from Foothill Road to the City limits in the west.

- The Alamo Canal (Centennial) Trail is an East Bay Regional Park District Regional Trail that extends from central Pleasanton north under I-580 and into the City of Dublin, where it connects to the Iron Horse Trail. It is located on the east side of I-680 across from the project site.

According to the *Pleasanton Pedestrian and Bicycle Master Plan*, there are Class II bike lanes proposed along the portions of Foothill Road where bike lanes do not currently exist.

Sidewalks are found along virtually all previously-described local roadways in the study area and along the streets near the site, with a few exceptions. Foothill Road lacks sidewalks on the west side of the roadway within the project vicinity and on a short portion of the east side immediately south of Stoneridge Drive. Also, Canyon Way lacks sidewalks on the south side of the roadway and Stoneridge Mall Road lacks sidewallks on the interior of the roadway.

Existing Transit Service

Existing transit service in the project vicinity is provided by the Livermore Amador Valley Transit Authority (LAVTA) and Bay Area Rapid Transit (BART). The transit service provided in the study area is described below and shown on Figure 4.

Livermore Amador Valley Transit Authority (LAVTA)

LAVTA provides transit service for the Tri-Valley communities of Dublin, Livermore and Pleasanton via Wheels, which provides local, regional, and paratransit bus service. In addition, Wheels provides connections to BART, ACE, and the Central Contra Costa County Transportation Authority (County Connection) services. There are several existing bus stops within the Stoneridge Shopping Mall site, with a bus duckout and shelter on Stoneridge Mall Road adjacent to the project site at the BART parking garage. There is an additional bus duckout with shelter located on Stoneridge Mall Road immediately south of the signalized intersection with Embarcadero Court. Table 3 summarizes the service frequencies for the transit routes in the study area.

Table 3
LAVTA Transit Service

Route	Route Description	Weekday Hours of Operation	Headway [1]
R	East/Vasco LLNL to Stoneridge Mall/Dublin/Pleasanton BART	5:15AM to 8:00PM	15
3	East Dublin/Pleasanton BART to Stoneridge Mall	6:00AM to 8:50PM	30
10	East/Vasco LLNL to Stoneridge Mall/Dublin/Pleasanton BART	3:45AM to 1:45AM	30
53	Pleasanton ACE Station to W. Dublin BART/Stoneridge Mall	5:30AM - 8:45AM & 4:00PM - 7:30PM	25 to 60
70xv	Pleasant Hill BART to Stoneridge Mall/E. Dublin BART	7:30AM - 8:30AM & 4:45PM - 5:50PM	NA
603	Stoneridge Mall Road to Hart Middle School	8:10AM - 8:25AM & 3:15PM - 3:30PM	NA
604	Fairlands to Foothill Highschool	7:15AM - 7:45AM & 3:00PM - 3:30PM	NA

[1] Approximate headways during commute periods, in minutes
NA - Route has only one trip

Bay Area Rapid Transit (BART)

Commuter rail service in the project vicinity is provided by BART. The closest access to the BART system, which provides service to San Francisco and many locations in the East Bay, is at the West Dublin/Pleasanton Station located immediately north of the project site. BART is accessible by foot via the I-580 pedestrian overcrossing adjacent to the project site. BART trains operate on 15 minute headways during the commute periods.

Existing Intersection Lane Configurations and Traffic Volumes

The existing lane configurations at the study intersections were determined by observations in the field. The existing intersection lane configurations are shown on Figure 5. Existing peak hour traffic volumes were obtained from recent manual turning-movement counts at the study intersections. The existing peak hour intersection volumes are shown on Figure 6. New traffic count data are included in Appendix A.

Existing Signalized Intersection Levels of Service

The results of the signalized intersection levels of service analysis under existing conditions are summarized in Table 4. The results show that, measured against the City of Pleasanton and Dublin level of service standards, all of the signalized study intersections currently operate at acceptable levels of service during both the AM and PM peak hours of traffic. The level of service calculation sheets are included in Appendix C.

Existing Unsignalized Intersection Levels of Service

The results of the unsignalized intersection levels of service analysis under existing conditions are summarized in Table 4. The results show that, measured against the City of Pleasanton level of service standards, both of the unsignalized study intersections currently operate at acceptable levels of service during both the AM and PM peak hours of traffic. Neither of the unsignalized study intersections currently meet peak hour signal warrant checks. The level of service calculation sheets are included in Appendix C.

Table 4
Existing Intersection Levels of Service

Study Number	Intersection	Traffic Control	Peak Hour	Existing Delay (in seconds)[1]	Existing LOS[1]
Pleasanton Intersections:					
#1	San Ramon Rd and I-580 WB Off Ramp[3]	Signal	AM	9.4	A
			PM	12.5	B
#2	Foothill Rd and I-580 EB Off Ramp[3] (Future)	Signal	AM	--	--
			PM	--	--
#3	Foothill Rd and Canyon Wy/Dublin Canyon Rd[3]	Signal	AM	21.6	C
			PM	45.8	D
#4	Foothill Rd and Stoneridge Dr	Signal	AM	18.9	B
			PM	23.2	C
#5	Stoneridge Mall Rd and Canyon Wy	Signal	AM	5.0	A
			PM	5.8	A
#6	Stoneridge Mall Rd and Bart Entrance	SSSC[2]	AM	1.0/13.0	A/B
			PM	3.3/24.1	A/C
#7	Stoneridge Mall Rd and Project Dwy	SSSC[2]	AM	1.7/12.6	A/B
			PM	3.7/19.3	A/C
#8	Stoneridge Mall Rd and Embarcadero Ct	Signal	AM	11.8	B
			PM	20.2	C
#9	Stoneridge Mall Rd and Workday Wy	Signal	AM	9.5	A
			PM	20.0	C
#10	Stoneridge Mall Rd and Stoneridge Dr	Signal	AM	7.7	A
			PM	15.4	B
#11	I-680 SB Off Ramp and Stoneridge Dr[3]	Signal	AM	13.8	B
			PM	11.3	B
#12	I-680 NB Off Ramp and Stoneridge Dr[3]	Signal	AM	13.7	B
			PM	12.5	B
#13	Johnson Dr and Stoneridge Dr[3]	Signal	AM	18.1	B
			PM	22.2	C
#14	Hopyard Rd and Stoneridge Dr	Signal	AM	28.4	C
			PM	34.3	C
Dublin Intersection:					
#15	San Ramon Rd and Dublin Blvd	Signal	AM	34.0	C
			PM	37.3	D

[1] Signalized intersection levels of service and delays reported are for overall average delay. SSSC intersection levels of service and delays reported are for both the overall average delay and the approach with the highest delay.
[2] SSSC = Side Street Stop Control.
[3] These intersections are Gateway Intersections and may have an LOS worse than D.

Figure 3
Bicycle Facilities

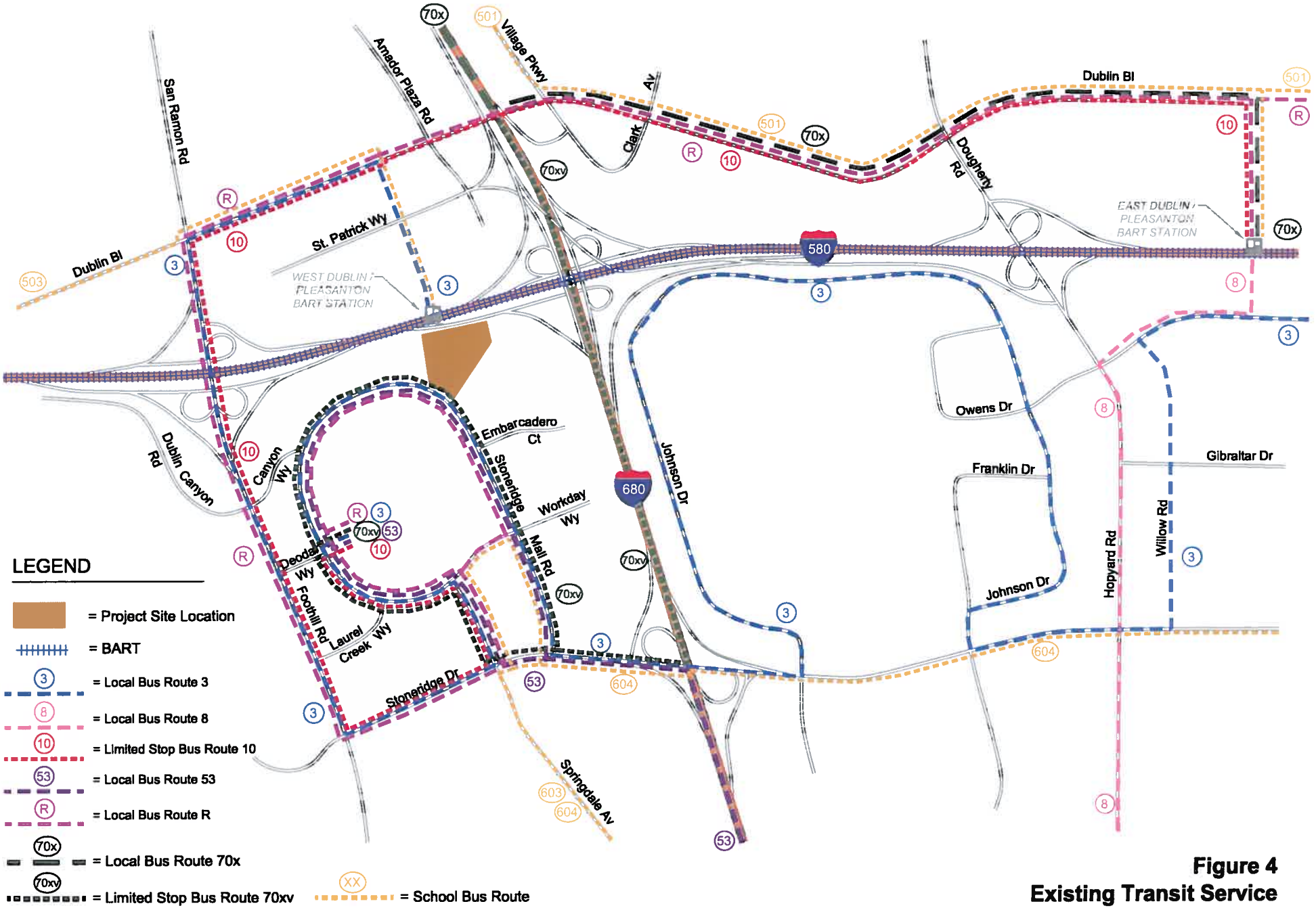


Figure 4
Existing Transit Service

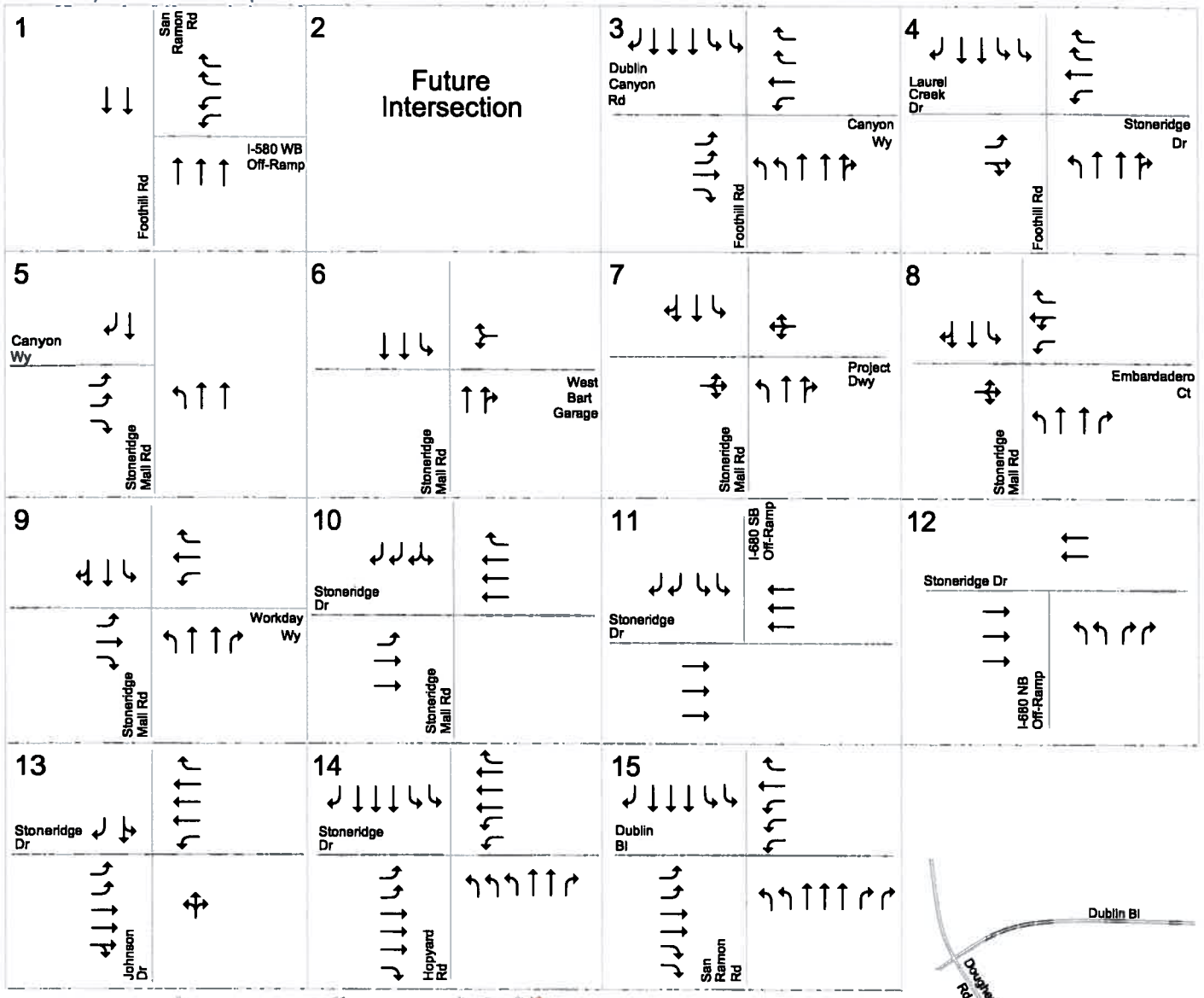


Figure 5
Existing Lane Configurations

NORTH
Not to Scale

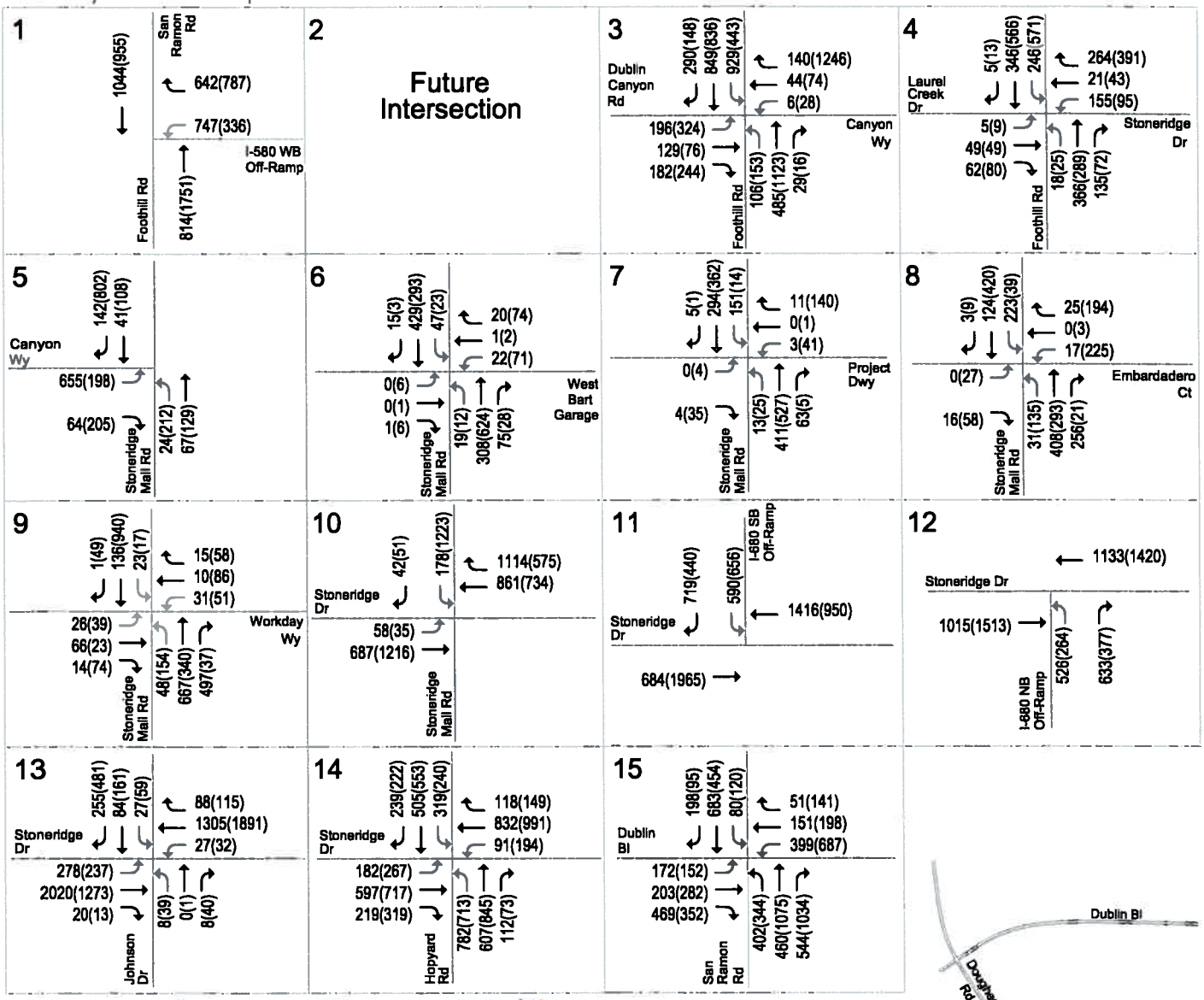


Figure 6
Existing Traffic Volumes

Existing Freeway Ramp Capacity Analysis

The results of the freeway ramp capacity analysis under existing conditions are summarized in Table 5. The results show that all of the study ramps have volume-to-capacity (V/C) ratios less than 1.0, which means that all of the ramps currently operate below capacity.

Table 5
Existing Freeway Ramp Analysis

Freeway Ramps	Peak Hour	Capacity (vph)[1]	Existing Volumes[2]	Existing V/C Ratio[3]
I-580 at Foothill Road/San Ramon Road				
NB Foothill to WB I-580 On Ramp	AM	1800	194	0.11
	PM	1800	617	0.34
NB Foothill to EB I-580 On Ramp	AM	1800	272	0.15
	PM	1800	765	0.43
I-680 at Stoneridge Drive				
EB Stoneridge to NB I-680 On Ramp	AM	1800	228	0.13
	PM	1800	865	0.48
EB Stoneridge to SB I-680 On Ramp	AM	470	169	0.36
	PM	1800	591	0.33

[1] Capacities obtained from Highway Capacity Manual 2010 and the Alameda Countywide Transportation Model Update - Model Documentation 2009.
[2] Volumes obtained from the City of Pleasanton 2012 Synchro files.
[3] Volume-to-capacity ratio.

Observed Existing Traffic Conditions

Traffic conditions in the field were observed in order 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 intersection level of service, and (2) to identify any locations where the LOS calculation does not accurately reflect level of service in the field.

Overall, the study intersections operate adequately during the weekday AM and PM peak hours, and the level of service analysis appears to accurately reflect actual existing traffic conditions. However, field observations showed that some operational problems currently occur at the following locations near the project site:

- ***San Ramon Road and Dublin Boulevard.*** During the AM and PM peak hours, the queue for the northbound left turn on San Ramon Road occasionally spills out of the turn pocket and does not clear in one cycle.
- ***San Ramon Road and I-580 Westbound Ramps.*** During the PM peak hour, the northbound queue in the curb lane occasionally spills back to the intersection of Foothill Road and Canyon Way. However, at the time of these observations, construction of the new Foothill Road and I-580 eastbound ramps intersection was underway. This may have caused the long queues observed.
- ***Foothill Road and Canyon Way.*** During the AM peak hour, the queue for the southbound inside left turn on Foothill Road occasionally spills out of the turn pocket into the through lane, but

typically clears the intersection in one cycle. During the PM peak hour, the queue for the westbound right turn on Canyon Way occasionally spills past the midblock driveways to the east.

- ***Stoneridge Mall Road and Workday Way.*** During the AM peak hour, the queue for the northbound left turn on Stoneridge Mall Road occasionally spills out of the turn pocket into the through lane, but typically clears the intersection in one cycle.
- ***Stoneridge Mall Road and Stoneridge Drive.*** During the PM peak hour, there is an intermittently heavy southbound queue on Stoneridge Mall Road, which occasionally spills back to the preceding intersection at McWilliams Lane. However, the movement typically clears the intersection in one cycle.

3.
Project Characteristics

This chapter describes the method by which project traffic is estimated. The proposed Workday office development is located adjacent to the West Dublin/Pleasanton BART station on Stoneridge Mall Road. The project would consist of 430,000 square feet (s.f.) of office space and two parking structures. One parking structure would consist of approximately 700 parking spaces and be located on the project site. The other parking structure would consist of approximately 900 parking spaces and be located on the southwest portion of the Stoneridge Corporate Plaza site, south of the project. Access to the site would be provided via existing driveways on Stoneridge Mall Road and Embarcadero Court.

Estimating Project Traffic

The magnitude of traffic produced by the proposed development and the locations where that traffic would appear were estimated by (1) calculating the project trip generation and (2) assigning project traffic to the roadway segments and intersections around the project site using a travel demand forecast (TDF) model. These procedures are described below.

Through empirical research, data have been collected that correlate common land uses to their propensity for producing traffic. Thus, for the most common land uses there are standard trip generation rates that can be applied to help predict the future traffic increases that would result from a new development. Project trip generation was estimated by applying to the size and uses of the development the appropriate trip generation rates published by the Institute of Transportation Engineers (ITE) in *Trip Generation*, *9th Edition*. Based on ITE's trip generation rates for general office use (ITE code 710), the project would generate 3,978 gross daily vehicle trips, with 615 gross trips occurring during the AM peak hour and 560 gross trips occurring during the PM peak hour.

Because the project site is located near the West Dublin/Pleasanton BART station, a transit reduction of 3 percent was applied to the overall project trip generation. This reduction was based on estimates of transit mode share from the Pleasanton TDF model. While higher transit rider mode splits are typically observed around major transit nodes (such as BART stations), the vast majority of BART service is provided in areas west of the project site and serves only a small subset of potential commute routes. In addition, existing commute patterns in the Bay Area show heavy traffic from the Tri-Valley area to the major employment centers in the East Bay and San Francisco during the AM commute hours, and the reverse in the PM peak hour. Because the delays on freeways are high in the peak direction, commuters often find BART service a convenient alternative to driving. However, the proposed project is an office development; most of its trips to/from the East Bay would occur in the off-peak direction of BART service,

where the delays on the freeways are much lower. For many future employees of the proposed development that live in the East Bay, it would be much quicker to drive to the site rather than utilize BART.

In addition to the transit reduction, the project will receive trip credits for the approved uses at the site under both the (1) existing plus approved and (2) buildout conditions analyses. The site is currently approved for 350 multi-family units and 14,286 s.f. of commercial use. Under the existing plus project scenario, these trip credits do not apply.

After applying the appropriate trip reductions, under existing plus project conditions, the project would generate 3,859 net new daily trips, with 597 net new trips occurring during the AM peak hour and 543 net new trips occurring during the PM peak hour. Under the (1) existing plus approved and (2) buildout scenarios, the project would generate 1,090 net new daily trips, with 413 net new trips occurring during the AM peak hour and 288 net new trips occurring during the PM peak hour. The project trip generation estimates are presented below in Table 6.

Table 6
Project Trip Generation Estimates

					AM Peak Hour				PM Peak Hour			
Land Use	Size	Units	Daily Rate	Daily Trips	Pk-Hr Rate	In	Out	Total	Pk-Hr Rate	In	Out	Total
Proposed Use												
General Office [1]	430.0	ksf	9.25	3,978	1.43	541	74	615	1.30	95	465	560
Transit Reduction[2]			3%	(119)		(16)	(2)	(18)		(3)	(14)	(17)
				3,859		525	72	597		92	451	543
Approved Use												
Commercial Space [3]	14.286	ksf	42.70	610	0.96	9	5	14	3.71	25	28	53
Apartments [4]	350	units	6.41	2,245	0.50	35	140	175	0.60	137	73	210
				2,855		44	145	189		162	101	263
Transit Reduction[2]			3%	(86)		(1)	(4)	(5)		(5)	(3)	(8)
				2,769		43	141	184		157	98	255
Net Project Trip Totals				1,090		482	-69	413		-65	353	288

Notes:
[1] Based on Fitted Curved Equation for General Office Building (710). Institute of Transportation Engineers, Trip Generation, 9th Edition.
[2] A transit trip reduction of 3% was applied based on results from the City of Peasanton travel demand forecasting model.
[3] Based on Average Rate for Shopping Center (820). Institute of Transportation Engineers,Trip Generation, 9th Edition.
[4] Based on Fitted Curved Equation for Apartments (220). Institute of Transportation Engineers,Trip Generation, 9th Edition.

The assignment of site-generated traffic to and from intersections and freeway ramps in the project area was carried out directly by the City of Pleasanton TDF model. Under project conditions, the model assignment includes any potential redistribution of traffic associated with the existing Stoneridge Corporate Plaza. The project land uses and ITE trip generation estimates were coded into the TDF model, which was then used to generate future traffic volume forecasts for all of the study scenarios. This method is different than "hand" assignment methods where project traffic is added directly to base year no project traffic volumes. For large projects, use of the TDF model is considered more accurate because it accounts for (1) changes in origin-destination pairs (2) ambient traffic diversion that may occur as a result of project traffic, and (3) the spreading of peak hour trips into off-peak hours. The modeling process is described in greater detail in the following section.

Modeling the Project

Except for existing traffic volumes (which were developed from existing counts), all future (no project and project) traffic volumes at intersections and freeway ramps were generated using the City of Pleasanton TDF model, including the existing plus project scenario. The City of Pleasanton TDF Model includes a more detailed zone and network structure within the City of Pleasanton than the Alameda County TDF

model. The Pleasanton TDF model reflects projected traffic growth both in the City of Pleasanton and throughout the region. The Pleasanton TDF model also includes any local and regional planned roadway improvements that will alter travel patterns in the future. The improvements in the vicinity of the project are described in the following sections of this report for (1) existing plus approved and (2) buildout conditions. The Pleasanton TDF model includes three base years: existing, existing plus approved, and General Plan buildout. Prior to modeling the project, the Pleasanton TDF model was validated by comparing base year 2012/2013 forecasts to the existing traffic counts at study locations in the project area.

To estimate the traffic volumes that would occur with the proposed project, the project land uses and trip generation estimates were coded in the City of Pleasanton TDF model and the approved land uses from the project site were removed. At some study locations, the model traffic volumes with the project are not as high as what might be expected given the size of the proposed project. This typically occurs when project traffic displaces other traffic on the roadway network. For example, the project would add a large number of trips to I-580, I-680, Stoneridge Drive, and Foothill Road. Under existing and future conditions, certain movements on these roadways experience high levels of congestion. In such cases, the model will assign project traffic to the roadway network in accordance with the quickest route to and from the intended destination. The quickest route for project traffic may be to use Stoneridge Drive, Foothill Road, I-580, and I-680, but because the presence of project traffic would affect the travel time of other street users, ambient traffic would re-route to other roadways to minimize their overall travel times. This "re-routed" traffic affects ambient traffic at other nearby roadways and freeway segments, which then also re-routes to find the quickest route to their final destination. This process in the TDF model repeats itself until the shortest possible travel time is achieved for all trips (origin-destination pairs) in the region. In essence, the model spreads the increases in traffic volumes across all roadways in the region, with the largest traffic increases generally occurring nearest to the project site.

In addition, the TDF model accounts for the spreading of the peak commute period. As travel times increase for certain origin to destination trips, travelers are shifted to the "shoulder hours" and are not expected to begin or end their trip within the chosen peak-hour. This behavior results in "peak-spreading" and effectively reduces the number of peak-hour trips associated with the project. For example, if someone is commuting into the Stoneridge Mall area from Tracy, the delays are higher on I-580 under year 2035 buildout conditions than under the existing conditions. Thus, the model will reduce the number of peak hour trips made between these two zones more in the buildout scenario than in the existing scenario because drivers will have a greater incentive to avoid the peak commute period. While the number of trips on I-580 would still be higher in the buildout scenario, and the delays on I-580 would be higher, the number of trips during the peak 60 minutes going into the Stoneridge Mall area may be reduced slightly because more trips will be shifted to off peak hours (to avoid the bottlenecks).

The traffic volumes from the Pleasanton TDF model were adjusted at ramps and intersections using the following process: (1) the raw base year model forecasts (year 2013) from the Pleasanton TDF model were subtracted from the future forecasts, and (2) this traffic increment was added to the existing traffic counts for each intersection and ramp movement. This method captures both the amount of future traffic added to intersections and ramps as well as any diversion of ambient traffic caused by future land use changes or roadway improvements.

Per Alameda County CMA requirements, impacts at freeway segments and routes of regional significance were estimated using the Alameda County TDF model. This process is described in detail in Chapter 8.

4.
Existing Plus Project Conditions

This chapter describes existing plus project traffic conditions. Existing plus project traffic conditions could potentially exist if the project was constructed and occupied prior to the other approved projects in the area. It is unlikely that this traffic condition would occur, since other approved projects expected to add traffic to the study area would likely be built and occupied during the time the project is going through the development review and construction process. This scenario describes a less congested traffic condition, since it ignores any potential traffic from prior approvals. Existing plus project conditions also do not include any planned roadway improvements.

Existing Plus Project Traffic Volumes

To estimate traffic for existing plus project conditions, the project land use and trip generation estimates were coded into the City of Pleasanton TDF model. The model forecasts were adjusted using existing traffic counts as described in the "Modeling the Project" section of Chapter 3. The existing plus project traffic volumes at the study intersections are shown graphically on Figure 7.

Existing Plus Project Signalized Intersection Levels of Service

The results of the signalized intersection level of service analysis under existing plus project conditions are summarized in Table 7. The results show that all of the signalized intersections would continue to operate at acceptable levels of service during the AM and PM peak hours of traffic under existing plus project conditions. The intersection of Foothill Road and Canyon Way would operate at LOS E during the PM peak hour. However, the intersection is a "*Gateway Intersection*" and is not required to maintain a LOS of D or better. The City of Pleasanton has already planned improvements at this intersection as part of the City's Traffic Impact Fee (TIF) program. The level of service calculation sheets are included in Appendix C.

Existing Plus Project Unsignalized Intersection Levels of Service

The results of the unsignalized intersection level of service analysis under existing plus project conditions are summarized in Table 7. The results show that, both of the unsignalized intersections would operate at acceptable levels of service (LOS E or better) during both the AM and PM peak hours under existing plus project conditions. The level of service calculation sheets are included in Appendix C.

The level of service analysis at unsignalized intersections was supplemented with an assessment of the need for signalization of the intersections. The results of the traffic signal warrant analysis shows that, under existing plus project conditions, the intersection of Stoneridge Mall Road and Project Driveway

would meet signal warrants during the PM peak hour. This intersection is discussed in detail in Chapter 7 of this report under the *Site Access* section. However, this would not constitute a significant impact according to City of Pleasanton criteria because the intersection would operate at an acceptable LOS. The Stoneridge Mall Road and Bart Entrance intersection would not meet the peak hour traffic signal warrant check under existing plus project conditions. The traffic signal warrant sheets are included in Appendix B.

Table 7
Existing Plus Project Intersection Levels of Service

Study Number	Intersection	Traffic Control	Peak Hour	Existing		Existing + Project	
				Delay (in seconds)[1]	LOS[1]	Delay (in seconds)[1]	LOS[1]
Pleasanton Intersections:							
#1	San Ramon Rd and I-580 WB Off Ramp[3]	Signal	AM	9.4	A	11.0	B
			PM	12.5	B	13.1	B
#2	Foothill Rd and I-580 EB Off Ramp[3] (Future)	Signal	AM	–	–	–	–
			PM	–	–	–	–
#3	Foothill Rd and Canyon Wy/Dublin Canyon Rd[3]	Signal	AM	21.6	C	27.0	C
			PM	45.8	D	58.2	E
#4	Foothill Rd and Stoneridge Dr	Signal	AM	18.9	B	18.9	B
			PM	23.2	C	23.5	C
#5	Stoneridge Mall Rd and Canyon Wy	Signal	AM	5.0	A	5.5	A
			PM	5.8	A	6.4	A
#6	Stoneridge Mall Rd and Bart Entrance	SSSC[2]	AM	1.0/13.0	A/B	0.9/15.0	A/B
			PM	3.3/24.1	A/C	4.3/37.6	A/E
#7	Stoneridge Mall Rd and Project Dwy	SSSC[2]	AM	1.7/12.6	A/B	3.7/29.0	A/D
			PM	3.7/19.3	A/C	14.4/47.7	B/E
#8	Stoneridge Mall Rd and Embarcadero Ct	Signal	AM	11.8	B	18.8	B
			PM	20.2	C	23.9	C
#9	Stoneridge Mall Rd and Workday Wy	Signal	AM	9.5	A	11.4	B
			PM	20.0	C	26.5	C
#10	Stoneridge Mall Rd and Stoneridge Dr	Signal	AM	7.7	A	8.0	A
			PM	15.4	B	16.5	B
#11	I-680 SB Off Ramp and Stoneridge Dr[3]	Signal	AM	13.8	B	16.7	B
			PM	11.3	B	11.6	B
#12	I-680 NB Off Ramp and Stoneridge Dr[3]	Signal	AM	13.7	B	14.2	B
			PM	12.5	B	12.7	B
#13	Johnson Dr and Stoneridge Dr[3]	Signal	AM	18.1	B	18.5	B
			PM	22.2	C	22.1	C
#14	Hopyard Rd and Stoneridge Dr	Signal	AM	28.4	C	29.0	C
			PM	34.3	C	34.8	C
Dublin Intersection:							
#15	San Ramon Rd and Dublin Blvd	Signal	AM	34.0	C	34.1	C
			PM	37.3	D	37.3	D

[1] Signalized intersection levels of service and delays reported are for overall average delay. SSSC intersection levels of service and delays reported are for both the overall average delay and the approach with the highest delay.
[2] SSSC = Side Street Stop Control.
[3] These intersections are Gateway Intersections and may have an LOS worse than D.
Denotes unacceptable level of service

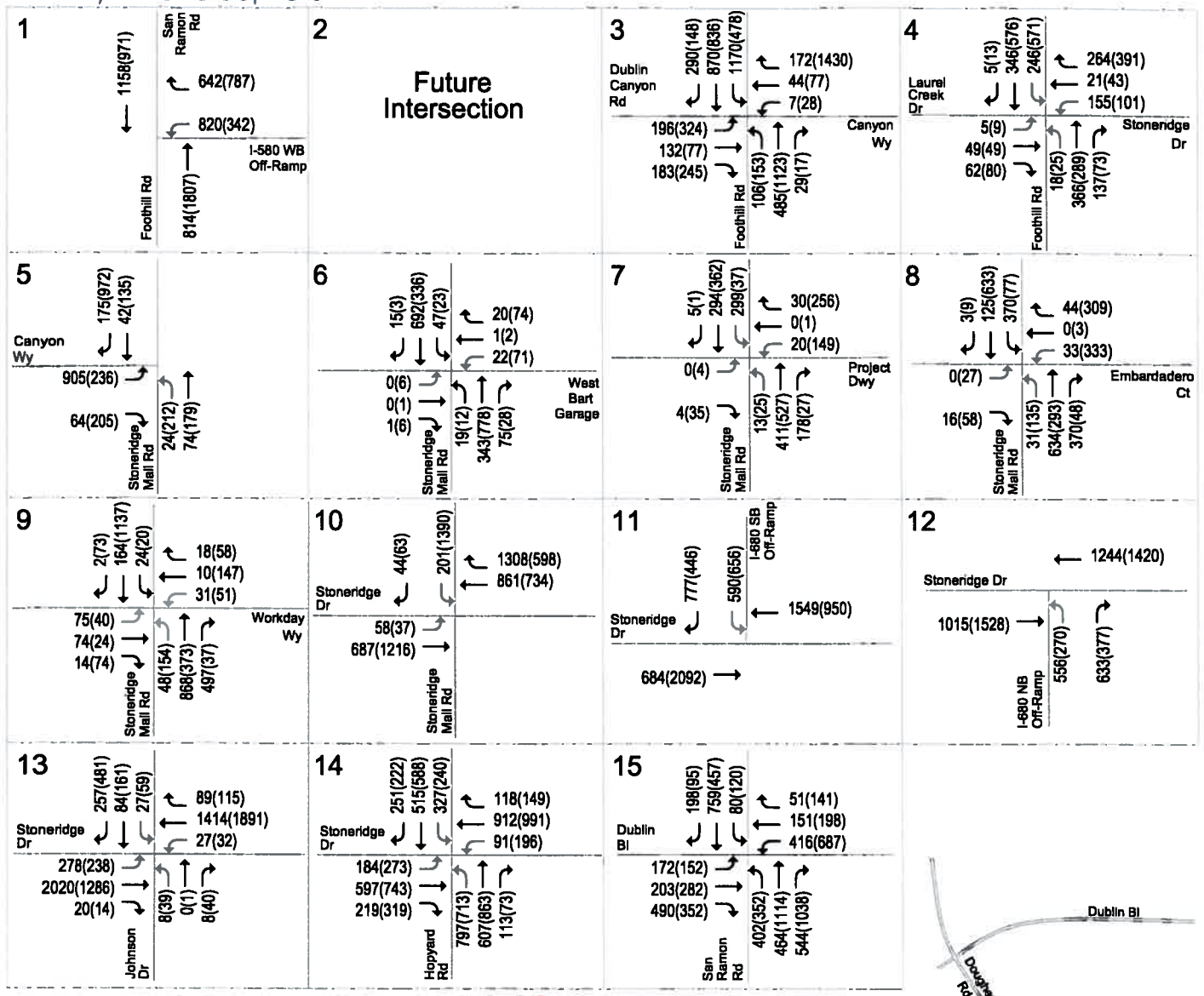
Existing Plus Project Freeway Ramp Capacity Analysis

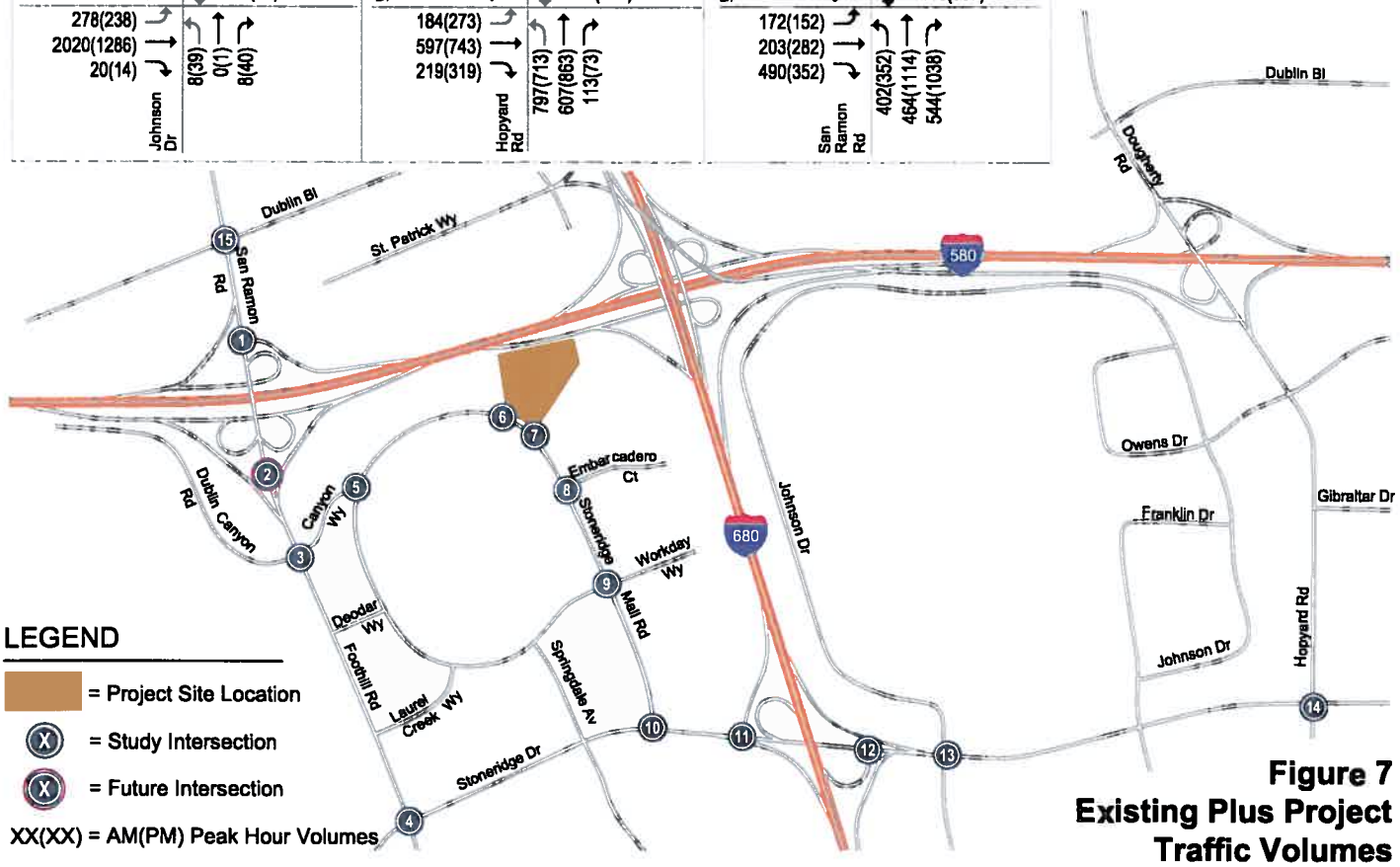
The results of the freeway ramp capacity analysis under existing plus project conditions are summarized in Table 8. The results show that all of the study ramps have volume-to-capacity (V/C) ratios less than 1.0, which means that the proposed project would not cause any ramps to operate below capacity.

Table 8
Existing Plus Project Freeway Ramp Analysis

			Existing		Existing + Project	
Freeway Ramps	Peak Hour	Capacity (vph)[1]	Volumes[2]	V/C Ratio[3]	Volumes[2]	V/C Ratio[3]
I-580 at Foothill Road/San Ramon Road						
NB Foothill to WB I-580 On Ramp	AM	1800	194	0.11	188	0.10
	PM	1800	617	0.34	691	0.38
NB Foothill to EB I-580 On Ramp	AM	1800	272	0.15	277	0.15
	PM	1800	765	0.43	768	0.43
I-680 at Stoneridge Drive						
EB Stoneridge to NB I-680 On Ramp	AM	1800	228	0.13	233	0.13
	PM	1800	865	0.48	936	0.52
EB Stoneridge to SB I-680 On Ramp	AM	470	169	0.36	182	0.39
	PM	1800	591	0.33	617	0.34

[1] Capacities obtained from Highway Capacity Manual 2010 and the Alameda Countywide Transportation Model Update - Model Documentation 2009.
[2] Volumes obtained from the City of Pleasanton Synchro files and TDF model .
[3] Volume-to-capacity ratio.





LEGEND

= Project Site Location

X = Study Intersection

X = Future Intersection

XX(XX) = AM(PM) Peak Hour Volumes

Figure 7
Existing Plus Project Traffic Volumes

NORTH

5.
Existing Plus Approved Conditions

This chapter describes existing plus approved traffic conditions without and with the project. Existing plus approved no project and with project traffic volumes were estimated using forecasts from the City of Pleasanton TDF model. The Pleasanton TDF model includes various local and regional improvements outside of the project area. Included in this chapter is a summary of any intersection impacts caused by the project under existing plus approved conditions.

Transportation Network Under Existing Plus Approved Conditions

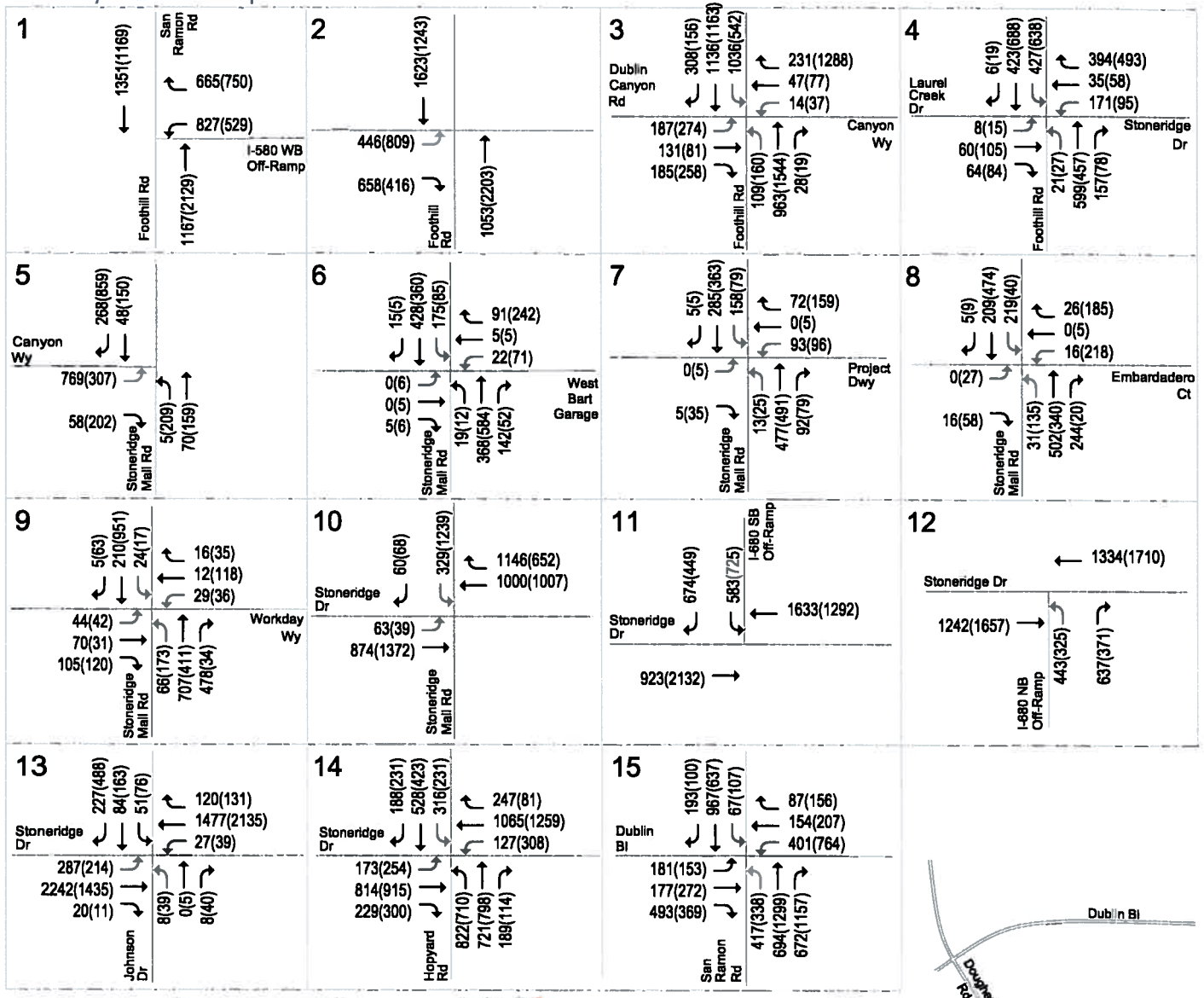
It is assumed in this analysis that the roadway network at the study intersections and freeway ramps under existing plus approved conditions would be the same as those described under existing conditions, with a few exceptions. The planned Pleasanton Traffic Impact Fee (TIF) improvements at Foothill Road and the I-580 eastbound ramps were included in the existing plus approved scenarios. The TIF improvements, which are currently under construction, would replace the direct (1) eastbound to southbound and (2) eastbound to northbound freeway off ramp connections with a new T-intersection at Foothill Road. The intersection will be signalized with the following geometry:

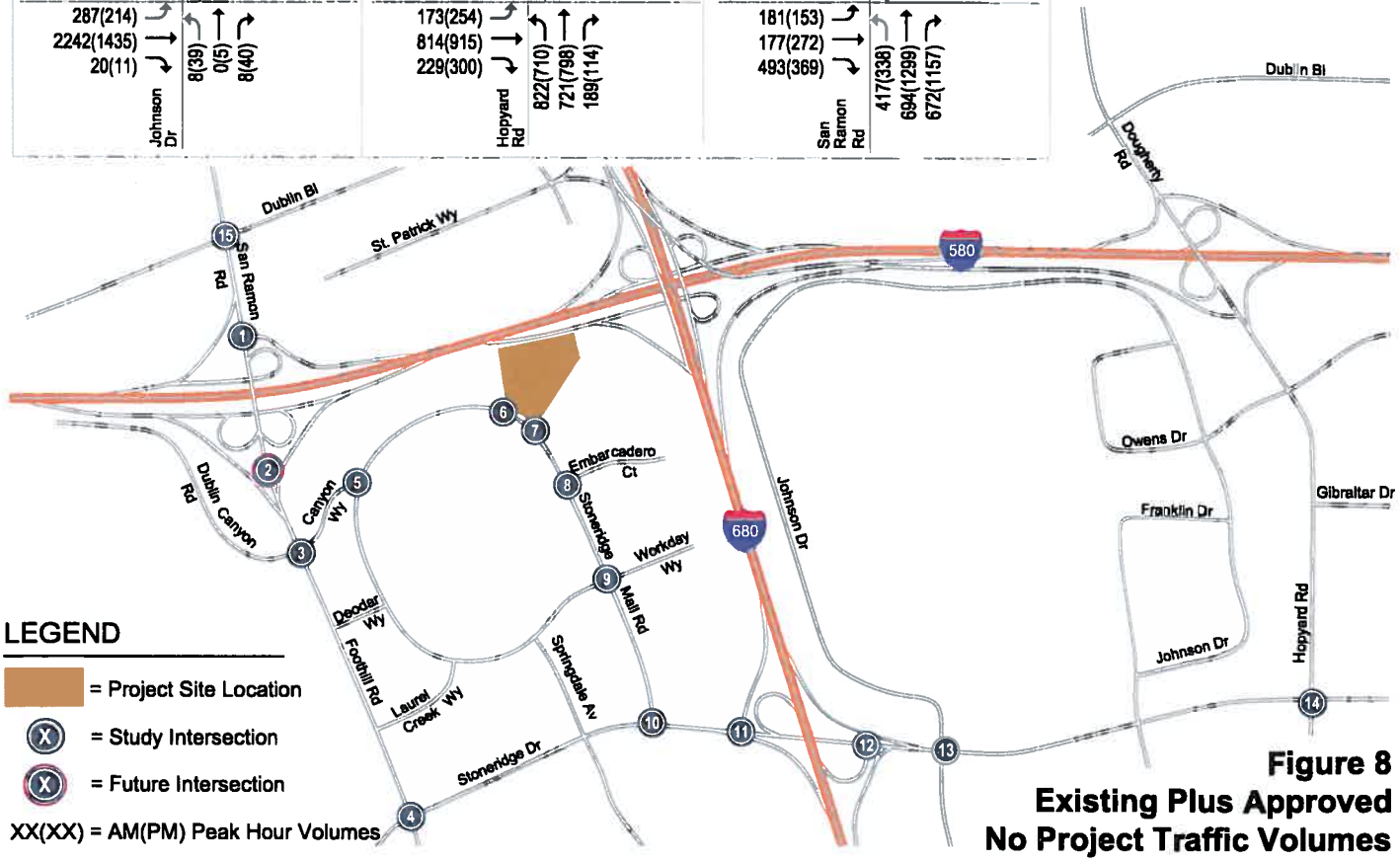
- **Northbound**: 2 through lanes and 2 right turn lanes
- **Southbound**: 2 through lanes and 1 right turn lane
- **Eastbound**: 2 left turn lanes and 2 right turn lanes

In addition, the eastbound on ramp from Foothill Road to I-580 will consist of two mixed-flow lanes that will merge prior to the metering light, and one HOV lane. Before construction at the ramp commenced, the eastbound on ramp had one mixed-flow lane and one HOV lane.

Existing Plus Approved Traffic Volumes

Existing plus approved no project traffic volumes were estimated using traffic forecasts produced by the Pleasanton TDF model and reflect all current approved developments in the City, including those at the project site. Existing plus approved with project traffic volumes were also estimated using the Pleasanton TDF model. The proposed office uses replaced the previously approved residential and commercial uses at the project site (see also "Estimating Project Traffic" section of Chapter 3). The model forecasts were adjusted using existing traffic counts as described in the "Modeling the Project" section of Chapter 3. The existing plus approved no project and plus project traffic volumes are shown on Figures 8 and 9, respectively.





LEGEND

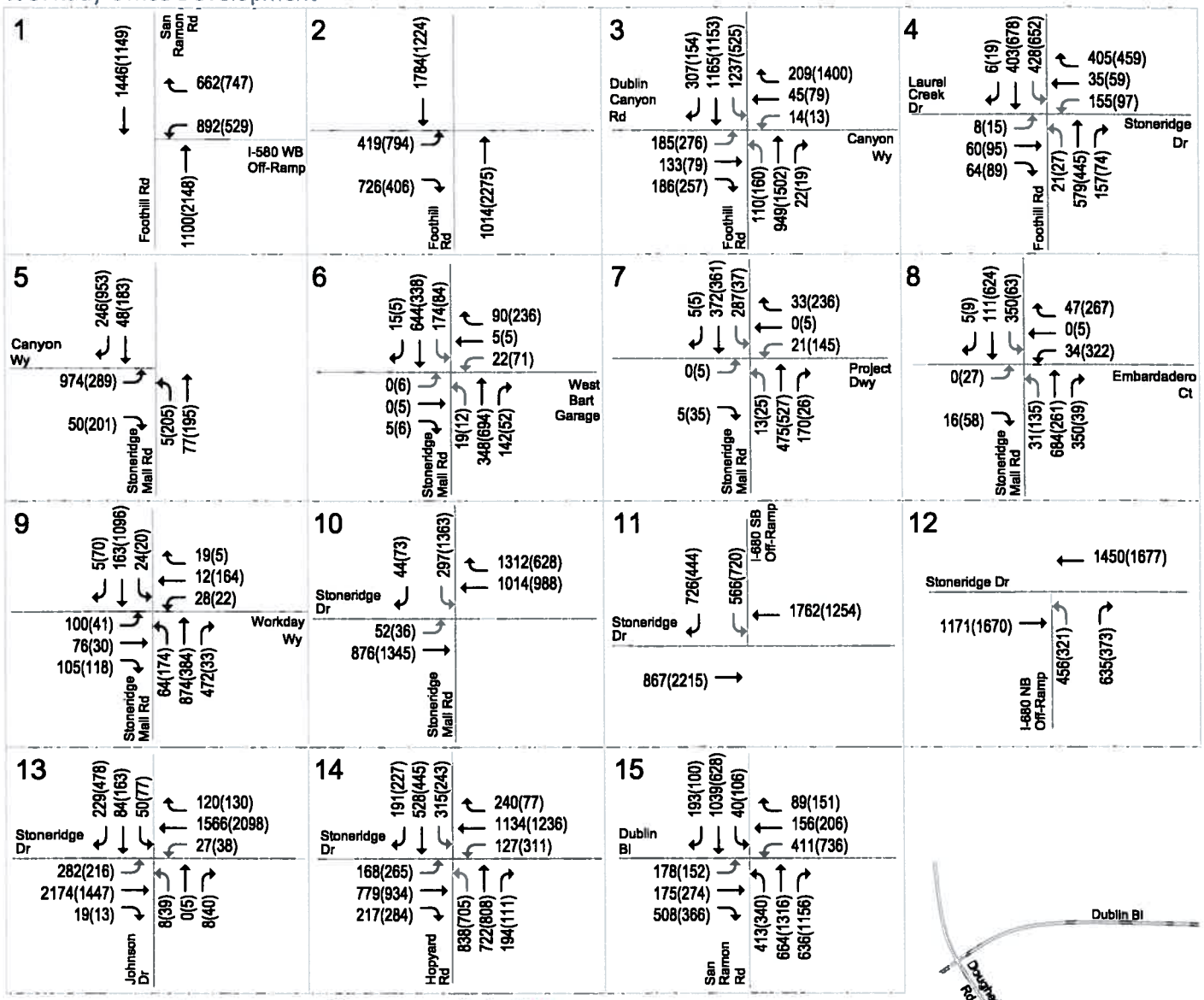
= Project Site Location

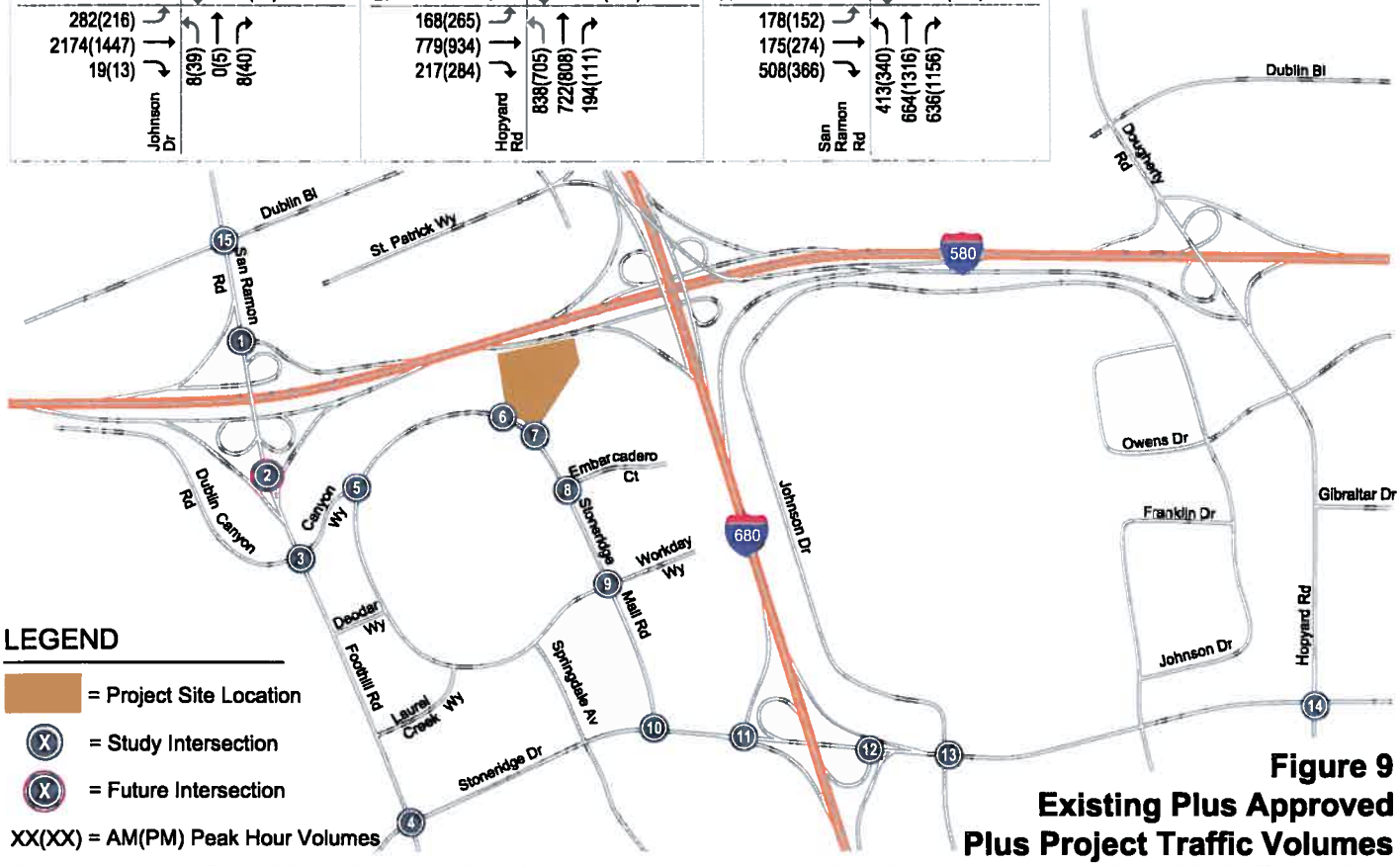
(X) = Study Intersection

(X) = Future Intersection

XX(XX) = AM(PM) Peak Hour Volumes

Figure 8
Existing Plus Approved
No Project Traffic Volumes





LEGEND

= Project Site Location

X = Study Intersection

X = Future Intersection

XX(XX) = AM(PM) Peak Hour Volumes

Figure 9
Existing Plus Approved Plus Project Traffic Volumes

Existing plus Approved Signalized Intersection Levels of Service

The results of the signalized intersection level of service analysis for the existing plus approved no project and with project scenarios are summarized in Table 9. Existing plus approved with project conditions were evaluated relative to existing plus approved no project conditions in order to determine potential near term project impacts. It should be noted that the average delays at some intersections are reduced with the addition of project traffic. Sometimes, this occurs when project traffic is added to intersection movements that experience delays that are lower than the overall intersection average delay. For example, if the average intersection delay is 50 seconds without the project, and the project would add 100 vehicle trips to a right turn movement that experiences an average delay of 5 seconds, then the weighted average of the delays for all intersection movements would be lower than 50 seconds - even though additional traffic was added to the intersection. In addition, the previously approved residential use on the project site has a different directional distribution pattern than the proposed office use. Residential uses have more outbound trips in the AM peak hour and more inbound trips in the PM peak hour, where office uses have the opposite inbound/outbound splits. This can change the "critical" movements at an intersection, which also may sometimes result in lower overall intersection average delays.

The results show that, measured against the Cities of Pleasanton and Dublin level of service standards, all of the signalized intersections would operate at acceptable levels of service during the AM and PM peak hours under both existing plus approved no project and with project conditions. The intersection of Foothill Road and Canyon Way would operate at LOS E with and without the project during the PM peak hour. However, the intersection is a "*Gateway Intersection*" and is not required to maintain a LOS of D or better. The City of Pleasanton has already planned improvements at this intersection as part of the City's Traffic Impact Fee (TIF) program. The detailed level of service calculation sheets are included in Appendix C.

Existing Plus Approved Unsignalized Intersection Levels of Service

The results of the unsignalized intersection level of service analysis under existing plus approved conditions are summarized in Table 9. The traffic signal warrant sheets are included in Appendix B and the level of service calculation sheets are included in Appendix C.

The intersection of Stoneridge Mall Road and Project Driveway would operate at an acceptable LOS E or better during both the AM and PM peak hours under existing plus approved with project conditions. This intersection would meet traffic signal warrant checks under existing plus approved conditions with the proposed project during the PM peak hour. It would not meet signal warrant checks under existing plus approved no project conditions.

> **Significant Impact #1:** The worst approach of the unsignalized intersection of Stoneridge Mall Road and BART Entrance would operate at LOS F during the PM peak hour under existing plus approved no project and with project conditions. In addition, the project would add more than 30 seconds of delay to the worst approach, which constitutes a significant impact. This intersection would also meet traffic signal warrant checks under existing plus approved conditions both with and without the proposed project during the PM peak hour.
>
> **Mitigation #1:** Per the City of Pleasanton's TIF improvements, the intersection of Stoneridge Mall Road and BART Entrance is planned for signalization. As mitigation for the project's significant impact at this intersection, the project would be responsible for a fair share contribution toward signalization of the intersection through the payment of its TIF fees.

Table 9
Existing Plus Approved Conditions Intersection Levels of Service

Study Number	Intersection	Traffic Control	Peak Hour	Existing + Approved: No Project Delay (in seconds)[1]	No Project LOS[1]	With Project Delay (in seconds)[1]	With Project LOS[1]
Pleasanton Intersections:							
#1	San Ramon Rd and I-580 WB Off Ramp[3]	Signal	AM	9.7	A	10.5	B
			PM	15.5	B	15.5	B
#2	Foothill Rd and I-580 EB Off Ramp[3] (Future)	Signal	AM	10.3	B	12.6	B
			PM	11.8	B	12.0	B
#3	Foothill Rd and Canyon Wy/Dublin Canyon Rd[3]	Signal	AM	31.7	C	39.9	D
			PM	65.2	E	72.0	E
#4	Foothill Rd and Stoneridge Dr	Signal	AM	24.7	C	23.7	C
			PM	45.7	D	48.7	D
#5	Stoneridge Mall Rd and Canyon Wy	Signal	AM	4.5	A	5.5	A
			PM	6.7	A	6.8	A
#6	Stoneridge Mall Rd and Bart Entrance	SSSC[2]	AM	2.8/15.6	A/C	2.4/16.5	A/C
			PM	13.6/58.0	B/F	20.2/94.1	C/F
#7	Stoneridge Mall Rd and Project Dwy	SSSC[2]	AM	6.0/33.9	A/D	3.6/33.5	A/D
			PM	8.0/35.4	A/E	13.4/45.9	B/E
#8	Stoneridge Mall Rd and Embarcadero Ct	Signal	AM	13.1	B	22.4	C
			PM	22.1	C	25.6	C
#9	Stoneridge Mall Rd and Workday Wy	Signal	AM	12.2	B	16.2	B
			PM	22.1	C	27.3	C
#10	Stoneridge Mall Rd and Stoneridge Dr	Signal	AM	9.9	A	9.9	A
			PM	37.4	D	39.8	D
#11	I-680 SB Off Ramp and Stoneridge Dr[3]	Signal	AM	12.0	B	12.7	B
			PM	14.3	B	15.0	B
#12	I-680 NB Off Ramp and Stoneridge Dr[3]	Signal	AM	16.6	B	17.5	B
			PM	13.2	B	13.2	B
#13	Johnson Dr and Stoneridge Dr[3]	Signal	AM	15.6	B	15.4	B
			PM	24.1	C	22.6	C
#14	Hopyard Rd and Stoneridge Dr	Signal	AM	29.0	C	29.5	C
			PM	41.0	D	40.9	D
Dublin Intersection:							
#15	San Ramon Rd and Dublin Blvd	Signal	AM	32.5	C	32.0	C
			PM	38.2	D	37.8	D

[1] Signalized intersection levels of service and delays reported are for overall average delay. SSSC intersection levels of service and delays reported are for both the overall average delay and the approach with the highest delay.
[2] SSSC = Side Street Stop Control.
[3] These intersections are Gateway Intersections and may have an LOS worse than D.
Denotes unacceptable level of service
Denotes Significant Impact

Existing Plus Approved Ramp Capacity Analysis

The results of the ramp capacity analysis under existing plus approved conditions are summarized in Table 10. The results show that the northbound Foothill Road to westbound I-580 on ramp (during the AM peak hour) and the northbound Foothill Road to eastbound I-580 on-ramp (during the PM peak hour) would have V/C ratios greater than 1.0. However, the proposed project would not increase the V/C ratios

by more than 0.03, so this would not constitute a signficant impact. All of the remaining study ramps would have volume-to-capacity (V/C) ratios of less than 1.0, which means that the existing plus approved plus project traffic demand would not exceed the ramp capacity.

Table 10
Existing Plus Approved Freeway Ramp Analysis

			Existing + Approved			
			No Project		Plus Project	
Freeway Ramps	Peak Hour	Capacity (vph)[1]	Volumes[2]	V/C Ratio[3]	Volumes[2]	V/C Ratio[3]
I-580 at Foothill Road/San Ramon Road						
NB Foothill to WB I-580 On Ramp	AM	470	546	1.16	547	1.16
	PM	1800	1,098	0.61	1,134	0.63
NB Foothill to EB I-580 On Ramp	AM	1800	250	0.14	250	0.14
	PM	590	664	1.13	664	1.13
I-680 at Stoneridge Drive						
EB Stoneridge to NB I-680 On Ramp	AM	1800	130	0.07	129	0.07
	PM	1800	673	0.37	738	0.41
EB Stoneridge to SB I-680 On Ramp	AM	470	231	0.49	256	0.54
	PM	1800	482	0.27	496	0.28

[1] Capacities obtained from Highway Capacity Manual 2010 and the Alameda Countywide Transportation Model Update - Model Documentation 2009.
[2] Volumes obtained from the City of Pleasanton TDF model .
[3] Volume-to-capacity ratio.

6. Cumulative/Buildout Conditions

This chapter presents a summary of the traffic conditions that would occur under cumulative/buildout conditions both with and without the proposed project. For this analysis, buildout represents traffic conditions assuming the buildout of the City of Pleasanton General Plan to year 2035. Buildout no project and with project traffic volumes were obtained from the City of Pleasanton TDF model. The Pleasanton TDF model includes various local and regional improvements outside of the project area. Included in this chapter is a summary of any intersection impacts caused by the project.

Buildout Transportation Network

It is assumed in this analysis that the transportation network under buildout conditions, including all study roadways and intersection lane configurations, would be the same as that described under existing plus approved conditions, with a few exceptions. The following planned Pleasanton Traffic Impact Fee (TIF) improvements were included in the buildout scenarios.

- Signalization of the Stoneridge Mall Road and BART Garage intersection and converting the outbound shared right-left turn lane to one right turn lane and one left turn lane.
- The addition of a third southbound left turn lane and third eastbound receiving lane at the intersection of Foothill Road and Canyon Way.

In addition, the Pleasanton and Tri-Valley TIF programs include various regional and local roadway improvements outside the study area. These improvements are on file with the City of Pleasanton and are available upon request.

Buildout Traffic Volumes

Buildout no project traffic volumes were estimated using traffic forecasts produced by the City of Pleasanton TDF model and reflect the buildout of the City General Plan to year 2035, including the commercial and residential land uses previously assumed for the project site. Buildout with project traffic volumes were also estimated using the Pleasanton TDF model. The proposed project uses replaced the previously approved residential and commercial uses at the project site (see also "Estimating Project Traffic" section of Chapter 3). The model forecasts were adjusted using existing traffic counts as described in the "Modeling the Project" section of Chapter 3.

For some study locations, the traffic volumes in the buildout scenario are lower than those of the existing plus approved scenario. As travel times increase in the future for certain origin to destination trips, more travelers are shifted to the "shoulder hours" and are not expected to begin or end their trip within the chosen peak-hour. This behavior results in "peak-spreading" and effectively reduces the number of peak-hour trips associated with the project. The buildout no project and with project traffic volumes are shown on Figures 10 and 11, respectively.

Buildout Signalized Intersection Levels of Service

The signalized intersection level of service results under buildout conditions are summarized in Table 11. The results show that, measured against the Cities of Pleasanton and Dublin level of service standards, most of the signalized study intersections would operate at an acceptable LOS D or better under buildout conditions during both the AM and PM peak hours. The intersection of Foothill Road and Canyon Way would operate at LOS E with and without the project during the PM peak hour. However, the intersection is a "*Gateway Intersection*" and is not required to maintain a LOS of D or better. The City of Pleasanton has already planned improvements at this intersection as part of the City's Traffic Impact Fee (TIF) program. The detailed level of service calculation sheets are included in Appendix C.

Buildout Unsignalized Intersection Levels of Service

The results of the unsignalized intersection level of service analysis under buildout conditions are summarized in Table 11. The results show that the unsignalized intersection of Stoneridge Mall Road and Project Driveway is expected to operate at an acceptable LOS E or better during both the AM and PM peak hours under buildout conditions with or without the project. The level of service calculation sheets are included in Appendix C. The results of the traffic signal warrant analysis shows that, under buildout no project conditions, the intersection of Stoneridge Mall Road and Project Driveway would not meet signal warrants during the AM and PM peak hours. Under buildout plus project conditions, it would meet traffic signal warrants during the PM peak hour. The traffic signal warrant sheets are included in Appendix B.

Buildout Ramp Capacity Analysis

The results of the intersection ramp capacity analysis under buildout conditions are summarized in Table 12. The results show that the northbound Foothill Road to westbound I-580 on ramp (during the AM peak hour) and the northbound Foothill Road to eastbound I-580 on-ramp (during the PM peak hour) would have V/C ratios greater than 1.0. However, the proposed project would not increase the V/C ratios by more than 0.03, so this would not constitute a signficant impact. All of the remaining study ramps would have volume-to-capacity (V/C) ratios of less than 1.0, which means that the buildout plus project traffic demand would not exceed the ramp capacity.

Table 11
Buildout Intersection Levels of Service

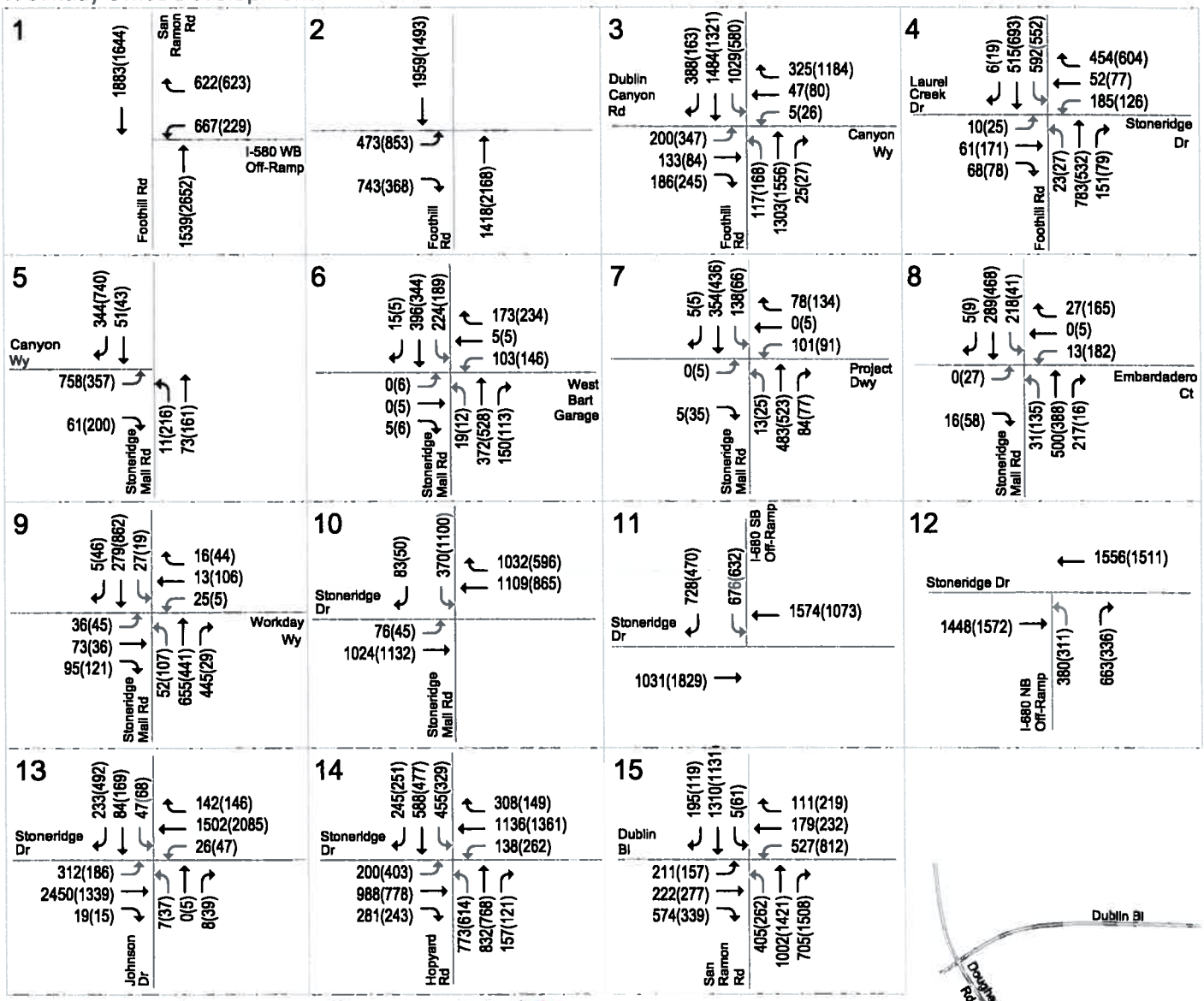
Study Number	Intersection	Traffic Control	Peak Hour	Buildout: No Project Delay (in seconds)[1]	Buildout: No Project LOS[1]	Buildout: With Project Delay (in seconds)[1]	Buildout: With Project LOS[1]
Pleasanton Intersections:							
#1	San Ramon Rd and I-580 WB Off Ramp[3]	Signal	AM	12.2	B	13.4	B
			PM	14.4	B	15.1	B
#2	Foothill Rd and I-580 EB Off Ramp[3] (Future)	Signal	AM	13.6	B	14.9	B
			PM	11.5	B	11.9	B
#3	Foothill Rd and Canyon Wy/Dublin Canyon Rd[3,4]	Signal	AM	31.2	C	35.0	D
			PM	59.6	E	66.6	E
#4	Foothill Rd and Stoneridge Dr	Signal	AM	43.9	D	40.4	D
			PM	34.5	C	29.0	C
#5	Stoneridge Mall Rd and Canyon Wy	Signal	AM	4.4	A	5.2	A
			PM	5.6	A	5.8	A
#6	Stoneridge Mall Rd and Bart Entrance	Signal	AM	5.8	A	5.6	A
			PM	8.2	A	8.3	A
#7	Stoneridge Mall Rd and Project Dwy	SSSC[2]	AM	6.1/35.3	A/E	3.5/31.2	A/D
			PM	7.4/39.1	A/E	12.7/49.2	B/E
#8	Stoneridge Mall Rd and Embarcadero Ct	Signal	AM	12.8	B	20.9	C
			PM	21.5	C	23.4	C
#9	Stoneridge Mall Rd and Workday Wy	Signal	AM	11.4	B	13.4	B
			PM	17.5	B	19.7	B
#10	Stoneridge Mall Rd and Stoneridge Dr	Signal	AM	10.3	B	10.1	B
			PM	22.4	C	23.5	C
#11	I-680 SB Off Ramp and Stoneridge Dr[3]	Signal	AM	12.6	B	13.1	B
			PM	12.2	B	12.1	B
#12	I-680 NB Off Ramp and Stoneridge Dr[3]	Signal	AM	19.8	B	20.7	C
			PM	11.5	B	11.4	B
#13	Johnson Dr and Stoneridge Dr[3]	Signal	AM	17.8	B	17.4	B
			PM	23.6	C	22.9	C
#14	Hopyard Rd and Stoneridge Dr	Signal	AM	31.7	C	32.3	C
			PM	53.5	D	51.6	D
Dublin Intersection:							
#15	San Ramon Rd and Dublin Blvd	Signal	AM	31.7	C	32.1	C
			PM	38.2	D	38.2	D

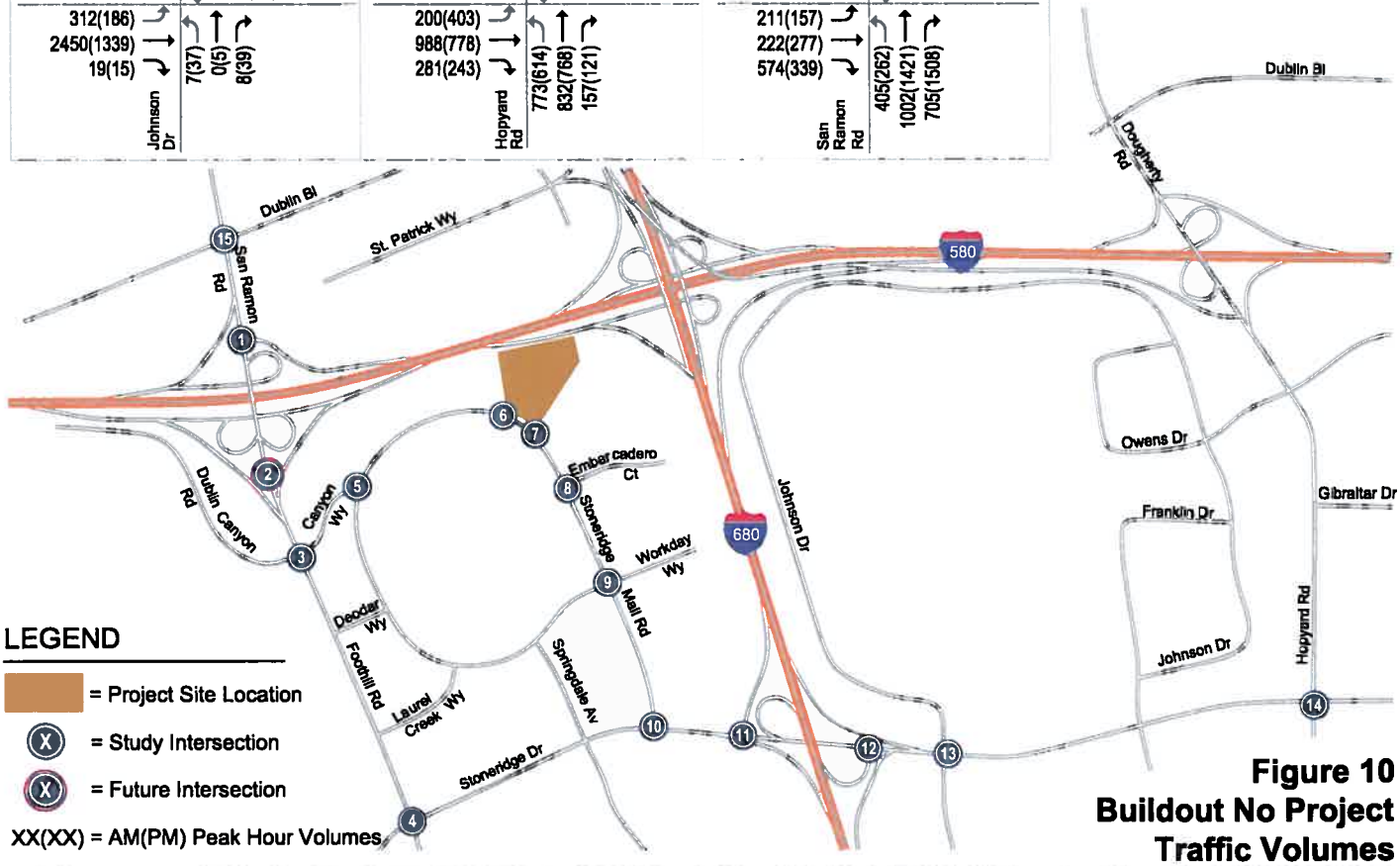
[1] Signalized intersection levels of service and delays reported are for overall average delay. SSSC intersection levels of service and delays reported are for both the overall average delay and the approach with the highest delay.
[2] SSSC = Side Street Stop Control.
[3] These intersections are Gateway Intersections and may have an LOS worse than D.
[4] Added third southbound left turn lane under buildout conditons per the Pleasanton TIF.
Denotes unacceptable level of service

Table 12
Buildout Freeway Ramp Analysis

Freeway Ramps	Peak Hour	Capacity (vph)[1]	Buildout No Project		Buildout Plus Project	
			Volumes[2]	V/C Ratio[3]	Volumes[2]	V/C Ratio[3]
I-580 at Foothill Road/San Ramon Road						
NB Foothill to WB I-580 On Ramp	AM	470	565	1.20	562	1.20
	PM	1800	583	0.32	588	0.33
NB Foothill to EB I-580 On Ramp	AM	1800	331	0.18	325	0.18
	PM	590	679	1.15	687	1.16
I-680 at Stoneridge Drive						
EB Stoneridge to NB I-680 On Ramp	AM	1800	126	0.07	119	0.07
	PM	1800	363	0.20	403	0.22
EB Stoneridge to SB I-680 On Ramp	AM	470	313	0.67	310	0.66
	PM	1800	406	0.23	424	0.24

[1] Capacities obtained from Highway Capacity Manual 2010 and the Alameda Countywide Transportation Model Update - Model Documentation 2009.
[2] Volumes obtained from the City of Pleasanton TDF model .
[3] Volume-to-capacity ratio.





LEGEND

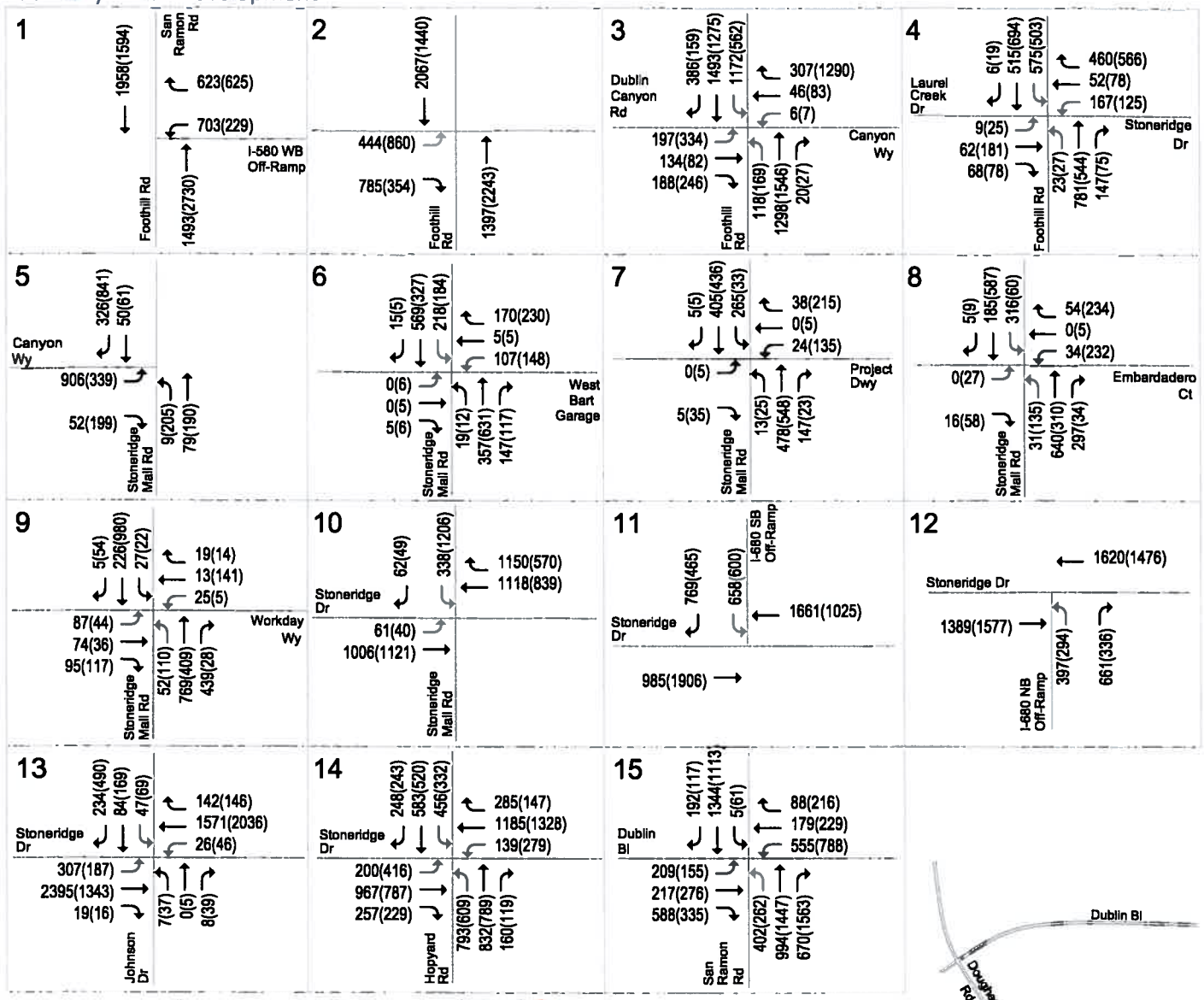
= Project Site Location

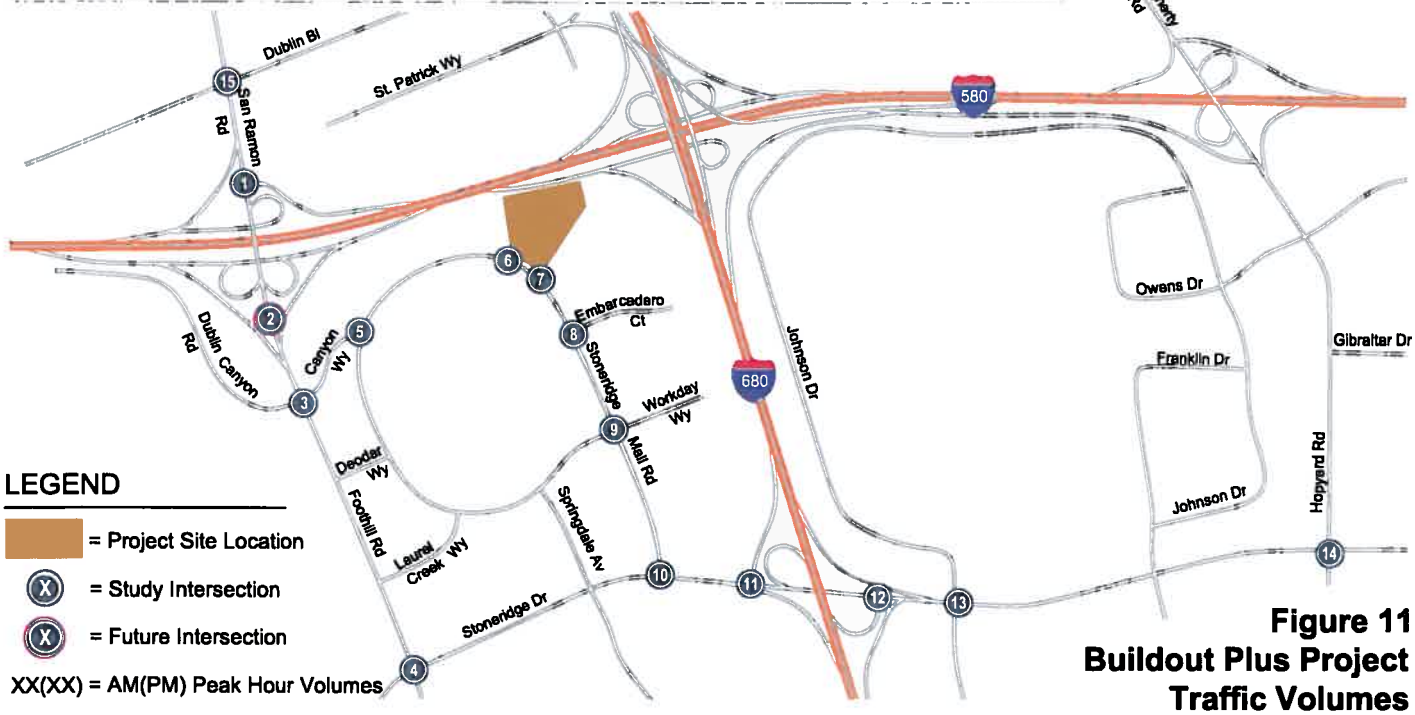
X = Study Intersection

X = Future Intersection

XX(XX) = AM(PM) Peak Hour Volumes

Figure 10
Buildout No Project Traffic Volumes





LEGEND

= Project Site Location

= Study Intersection

= Future Intersection

XX(XX) = AM(PM) Peak Hour Volumes

Figure 11
Buildout Plus Project Traffic Volumes

7.
Other Transportation Issues

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

- Operations analysis – vehicle queuing and storage at selected intersections
- Onsite Circulation & Access
- Potential impacts to transit, pedestrian and bicycle facilities

Unlike the level of service impact methodology, which is adopted by the City Council, the analyses 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

A vehicle queuing analysis was conducted for the high demand turn movements where the project would add traffic. Vehicle queues were estimated 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 per signal cycle 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. This analysis thus provides a basis for estimating future storage requirements at intersections. The vehicle queuing estimates and a tabulated summary of the findings for the study intersections are provided in Tables 13 and 14. The analysis indicated that the estimated maximum vehicle queues would exceed the vehicle storage capacity at the following locations:

- Southbound left turn at Foothill Road and Canyon Way under existing plus project and existing plus approved plus project conditions during the AM peak hour.
- Westbound left turn at Stoneridge Mall Road and Project Driveway under existing plus project, existing plus approved plus project, and buildout plus project conditions during the PM peak hours.
- Southbound left/right turn at Stoneridge Mall Road and Stoneridge Drive under existing plus approved plus project and buildout plus project conditions during the PM peak hour.

Table 13
AM Peak Hour Vehicle Queuing Analysis

Measurement	San Ramon Rd / I-580 WB Ramps WBL AM	Foothill Rd / Canyon Wy SBL AM	Stoneridge Mall Rd / Canyon Wy EBL AM	I-680 NB Ramps / Stoneridge Dr NBL AM	Stoneridge Mall Rd / Project Dwy SBL AM	Stoneridge Mall Rd / Project Dwy WBL AM	Stoneridge Mall Rd / Stoneridge Dr SBL/R AM	Stoneridge Mall Rd / Embarcadero Ct SBL AM	Stoneridge Mall Rd / Embarcadero Ct WBT/L PM
Existing									
Cycle/Delay[1] (sec)	41.6	84.0	32.7	60.0	8.9	12.6	50	47.5	47.5
Volume (vph)	747	929	655	526	151	15	220	223	17
Avg. Queue (veh.)	8.6	21.7	5.9	8.8	0.4	0.1	3.1	2.9	0.2
Avg. Queue[2] (ft.)	216	542	149	219	9	1	76	74	6
95th %. Queue (veh.)	14	30	10	14	2	1	6	6	1
95th %. Queue (ft.)	350	750	250	350	50	25	150	150	25
Storage (ft.)	1500	1000	850	525/1650[3]	225[4]	200	1275[5]	175/450[6]	555[7]
Adequate (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y
Existing + Project									
Cycle/Delay[1] (sec)	49.4	102.8	38.9	60.0	10.2	58.5	52	74.9	74.9
Volume (vph)	820	1170	905	556	299	20	245	370	33
Avg. Queue (veh.)	11.3	33.4	9.8	9.3	0.8	0.3	3.5	7.7	0.7
Avg. Queue[2] (ft.)	281	835	244	232	21	8	88	192	17
95th %. Queue (veh.)	17	43	15	15	3	1	7	13	2
95th %. Queue (ft.)	425	1075	375	375	75	25	175	325	50
Storage (ft.)	1500	1000	850	525/1650[3]	225[4]	50	1275[5]	175/450[6]	555[7]
Adequate (Y/N)	Y	**N**	Y	Y	Y	Y	Y	Y	Y
Existing + App +NoProj									
Cycle/Delay[1] (sec)	42.2	107.1	34.1	60.0	9.3	52.6	56.9	52.3	52.3
Volume (vph)	827	1036	769	443	158	93	389	219	16
Avg. Queue (veh.)	9.7	30.8	7.3	7.4	0.4	1.4	6.1	3.2	0.2
Avg. Queue[2] (ft.)	242	771	182	185	10	34	154	80	6
95th %. Queue (veh.)	15	40	12	12	2	3	10	6	1
95th %. Queue (ft.)	375	1000	300	300	50	75	250	150	25
Storage (ft.)	1500	1000	850	525/1650[3]	225[4]	200	1275[5]	175/450[6]	555[7]
Adequate (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y
Existing + App + Proj									
Cycle/Delay[1] (sec)	46.2	110.7	39.9	60.0	10.5	71.6	60.7	83.7	83.7
Volume (vph)	892	1237	974	456	287	21	341	350	34
Avg. Queue (veh.)	11.4	38.0	10.8	7.6	0.8	0.4	5.7	8.1	0.8
Avg. Queue[2] (ft.)	286	951	270	190	21	10	144	203	20
95th %. Queue (veh.)	17	48	16	12	3	2	10	13	2
95th %. Queue (ft.)	425	1200	400	300	75	50	250	325	50
Storage (ft.)	1500	1000	850	525/1650[3]	225[4]	50	1275[5]	175/450[6]	555[7]
Adequate (Y/N)	Y	**N**	Y	Y	Y	Y	Y	Y	Y
Buildout No Proj									
Cycle/Delay[1] (sec)	63.3	98.1	33.9	60.0	9.2	55.0	58	52.3	52.3
Volume (vph)	667	1029	758	380	138	101	453	218	13
Avg. Queue (veh.)	11.7	28.0	7.1	6.3	0.4	1.5	7.3	3.2	0.2
Avg. Queue[2] (ft.)	293	701	178	158	9	39	182	79	5
95th %. Queue (veh.)	18	37	12	11	1	4	12	6	1
95th %. Queue (ft.)	450	925	300	275	25	100	300	150	25
Storage (ft.)	1500	1400[8]	850	525/1650[3]	225[4]	200	1275[5]	175/450[6]	555[7]
Adequate (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y
Buildout + Proj									
Cycle/Delay[1] (sec)	71.5	99.9	38.5	60.0	10.2	65.9	60.5	81.6	81.6
Volume (vph)	703	1172	906	397	265	24	400	316	34
Avg. Queue (veh.)	14.0	32.5	9.7	6.6	0.8	0.4	6.7	7.2	0.8
Avg. Queue[2] (ft.)	349	813	242	165	19	11	168	179	19
95th %. Queue (veh.)	20	42	15	11	2	2	11	12	2
95th %. Queue (ft.)	500	1050	375	275	50	50	275	300	50
Storage (ft.)	1500	1400[8]	850	525/1650[3]	225[4]	50	1275[5]	175/450[6]	555[7]
Adequate (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y

[1] Vehicle queue calculations based on cycle length for signalized intersections and movement delay for unsignalized intersections.
[2] Assumes 25 Feet Per Vehicle Queued.
[3] The first number is the left turn storage capacity from the intersection to where the off ramp becomes one lane. The second number is total storage capacity available from the intersection to the gore point on the freeway.
[4] This is a two way center left lane and storage shown is from project driveway to the crosswalk at the BART garage.
[5] This is the combined storage for all southbound movements from the crosswalk back to the preceding intersection.
[6] The first number is southbound left turn storage only. The second number is the left turn storage plus the additional storage provided by the two-way-center left turn lane before the project driveway to the north.
[7] This is the combined storage for the westbound left and shared through/left lanes from the crosswalk back to the preceding intersection.
[8] A third southbound left turn lane of 400 feet was assumed under buildout conditons per the City's TIF improvements.

Table 14
PM Peak Hour Vehicle Queuing Analysis

Measurement	San Ramon Rd / I-580 WB Ramps WBL PM	Foothill Rd / Canyon Wy SBL PM	Stoneridge Mall Rd / Canyon Wy EBL PM	I-680 NB Ramps / Stoneridge Dr NBL PM	Stoneridge Mall Rd / Project Dwy SBL PM	Stoneridge Mall Rd / Project Dwy WBL PM	Stoneridge Mall Rd / Stoneridge Dr SBL/R PM	Stoneridge Mall Rd / Embarcadero Ct SBL PM	Stoneridge Mall Rd / Embarcadero Ct WBT/L PM
Existing									
Cycle/Delay[1] (sec)	57.1	121.6	36.2	60.0	8.8	19.3	65.6	64.8	64.8
Volume (vph)	336	825	198	264	22	182	1274	39	228
Avg. Queue (veh.)	5.3	27.9	2.0	4.4	0.1	1.0	23.2	0.7	4.1
Avg. Queue[2] (ft.)	133	697	50	110	1	24	580	18	103
95th %. Queue (veh.)	9	37	5	8	1	3	31	2	8
95th %. Queue (ft.)	225	925	125	200	25	75	775	50	200
Storage (ft.)	1500	1000	850	525/1650[3]	225[4]	200	1275[5]	175/450[6]	555[7]
Adequate (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y
Existing + Project									
Cycle/Delay[1] (sec)	60.8	118.0	38.0	60.0	9.0	105.8	65.6	72.9	72.9
Volume (vph)	342	478	236	270	37	149	1453	77	336
Avg. Queue (veh.)	5.8	15.7	2.5	4.5	0.1	4.4	26.5	1.6	6.8
Avg. Queue[2] (ft.)	144	392	62	113	2	109	662	39	170
95th %. Queue (veh.)	10	22	5	8	1	8	35	4	11
95th %. Queue (ft.)	250	550	125	200	25	200	875	100	275
Storage (ft.)	1500	1000	850	525/1650[3]	225[4]	50	1275[5]	175/450[6]	555[7]
Adequate (Y/N)	Y	Y	Y	Y	Y	**N**	Y	Y	Y
Existing + App +NoProj									
Cycle/Delay[1] (sec)	79.5	116.9	38.9	120.0	9.2	73.9	120.0	73.1	73.1
Volume (vph)	529	542	307	325	79	96	1307	40	223
Avg. Queue (veh.)	11.7	17.6	3.3	10.8	0.2	2.0	43.6	0.8	4.5
Avg. Queue[2] (ft.)	292	440	83	271	5	49	1089	20	113
95th %. Queue (veh.)	18	25	7	17	1	5	55	2	8
95th %. Queue (ft.)	450	625	175	425	25	125	1375	50	200
Storage (ft.)	1500	1000	850	525/1650[3]	225[4]	200	1275[5]	175/450[6]	555[7]
Adequate (Y/N)	Y	Y	Y	Y	Y	Y	**N**	Y	Y
Existing + App + Proj									
Cycle/Delay[1] (sec)	79.4	118.3	39.2	120.0	9.0	98.6	120.0	78.2	78.2
Volume (vph)	529	525	289	321	37	145	1436	63	327
Avg. Queue (veh.)	11.7	17.3	3.1	10.7	0.1	4.0	47.9	1.4	7.1
Avg. Queue[2] (ft.)	292	431	79	268	2	99	1197	34	178
95th %. Queue (veh.)	18	24	6	16	1	7	60	4	12
95th %. Queue (ft.)	450	600	150	400	25	175	1500	100	300
Storage (ft.)	1500	1000	850	525/1650[3]	225[4]	50	1275[5]	175/450[6]	555[7]
Adequate (Y/N)	Y	Y	Y	Y	Y	**N**	**N**	Y	Y
Buildout No Proj									
Cycle/Delay[1] (sec)	74.5	116.4	34.4	120.0	9.3	79.3	120.0	74.0	74.0
Volume (vph)	229	580	357	311	66	91	1150	41	187
Avg. Queue (veh.)	4.7	18.8	3.4	10.4	0.2	2.0	38.3	0.8	3.8
Avg. Queue[2] (ft.)	118	469	85	259	4	50	958	21	96
95th %. Queue (veh.)	9	26	7	16	1	5	49	3	7
95th %. Queue (ft.)	225	650	175	400	25	125	1225	75	175
Storage (ft.)	1500	1400[8]	850	525/1650[3]	225[4]	200	1275[5]	175/450[6]	555[7]
Adequate (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y
Buildout + Proj									
Cycle/Delay[1] (sec)	74.6	117.9	35.8	120.0	9.0	107.0	120.0	74.2	74.2
Volume (vph)	229	562	339	294	33	135	1255	60	237
Avg. Queue (veh.)	4.7	18.4	3.4	9.8	0.1	4.0	41.8	1.2	4.9
Avg. Queue[2] (ft.)	119	460	84	245	2	100	1046	31	122
95th %. Queue (veh.)	9	26	7	15	1	8	53	3	9
95th %. Queue (ft.)	225	650	175	375	25	200	1325	75	225
Storage (ft.)	1500	1400[8]	850	525/1650[3]	225[4]	50	1275[5]	175/450[6]	555[7]
Adequate (Y/N)	Y	Y	Y	Y	Y	**N**	**N**	Y	Y

[1] Vehicle queue calculations based on cycle length for signalized intersections and movement delay for unsignalized intersections.
[2] Assumes 25 Feet Per Vehicle Queued.
[3] The first number is the left turn storage capacity from the intersection to where the off ramp becomes one lane. The second number is total storage capacity available from the intersection to the gore point on the freeway.
[4] This is a two way center left lane and storage shown is from project driveway to the crosswalk at the BART garage.
[5] This is the combined storage for all southbound movements from the crosswalk back to the preceding intersection.
[6] The first number is southbound left turn storage only. The second number is the left turn storage plus the additional storage provided by the two-way-center left turn lane before the project driveway to the north.
[7] This is the combined storage for the westbound left and shared through/left lanes from the crosswalk back to the preceding intersection.
[8] A third southbound left turn lane of 400 feet was assumed under buildout conditons per the City's TIF improvements.

Foothill Road and Canyon Way – Southbound Left turn

Under existing conditions, there is approximately 1,000 feet of storage capacity for the southbound left turn lanes at the intersection of Foothill Road and Canyon Way. The storage capacity is measured as the distance between the intersection crosswalk and the taper of the left turn pocket. Beyond this, vehicles would queue north into the through lane. Under buildout conditions, the City of Pleasanton TIF program shows the installation of a third southbound left turn lane, which would provide approximately 400 feet of additional storage. During the AM peak hour, under existing and existing plus approved no project conditions, the calculated 95th percentile queue is 750 feet and 1,000 feet, respectively. Field observations also indicate that the vehicle queues for the subject movement are heavy under existing conditions. Traffic from the proposed project would add up to 325 feet (or 13 vehicles) to the 95th percentile queue relative to no project conditions during the AM peak hour.

> **Recommendation:** In conjunction with the proposed development, it is recommended that the queuing storage for the southbound left turn movement at Foothill Road and Canyon Way be increased to 1,200 feet to accommodate the anticipated queues. This would require either (1) lengthening the existing southbound left turn pocket or (2) constructing a third southbound left turn pocket. Lengthening the existing left turn pocket would require removal of the median. Constructing a third left turn pocket would require removal of the median, modification of the median nose, acquiring right-of-way for receiving lanes, restriping of lane lines, modifications to vehicle detection, and aligning the signal heads to the new lane geometry. According to the City of Pleasanton *Traffic Impact Fee and Nexus Report*, May 2010, addition of a third left turn lane for the southbound movement is planned for the intersection.

Stoneridge Mall Road and Project Driveway – Westbound Left turn

Under existing conditions, there is approximately 200 feet of storage capacity for the westbound left turn from the Project Driveway to Stoneridge Mall Road. The storage capacity is measured as the distance between the intersection stop bar and the nearest drive aisle within the site. Beyond this, vehicles would queue across the drive aisle. Under project conditions, the site plan shows there would be approximately 50 feet of storage capacity for the westbound left turn lane. Under project conditions, up to 200 feet of vehicle storage (or 8 vehicles) would be required for this movement during the PM peak hour. A discussion of possible improvements for this intersection is provided in the "Site Access" section in this chapter.

Stoneridge Mall Road and Stoneridge Drive – Southbound Left/Right turn

Under existing conditions, there is approximately 1,275 feet of storage capacity for the southbound left/right turn lanes at the intersection of Stoneridge Mall Road and Stoneridge Drive. The storage capacity is measured as the distance between the intersection crosswalk and the McWilliams Lane intersection to the north. Beyond this, vehicles would queue through the intersection. During the PM peak hour, under existing plus approved and buildout no project conditions, the calculated 95th percentile queue is 1,375 and 1,225, respectively. Field observations also indicate that the vehicle queues for the subject movement are heavy under existing conditions. Traffic from the proposed project would add up to 125 feet (or five vehicles) to the 95th percentile queue relative to no project conditions during the PM peak hour.

> **Recommendation:** At the intersection of Stoneridge Mall Road and Stoneridge Drive, it is recommended that the inner most southbound left turn pocket be lengthened back to the midblock break where fire access occurs. This would add approximately 125 feet of additional queuing space at the intersection. However, this would require removal of the landscaped median. Because this issue occurs under no project conditions, and not solely caused by project traffic, a fair share contribution to the improvement may be appropriate. However, the final determination will be made by City staff.

Site Access, On Site Circulation and Parking

This section describes the site access, onsite circulation, and parking for the proposed project. This review is based on the conceptual site plan provided to Hexagon (See Figure 2). Because the site plan is conceptual, many details of the plan (such as drive aisle widths, stall widths, curb radii, parking space count, etc.) are not yet available. All dimensions described in this section are approximate.

Site Access

The proposed project's access would be shared with the Stoneridge Corporate Plaza site to the south. Primary access to the project site to the public street network would be provided via existing driveways on (1) Stoneridge Mall Road south of the BART garage (Driveway 1), (2) Embarcadero Court approximately 425 feet east of Stoneridge Mall Road (Driveway 2), and (3) the eastern end of Embarcadero Court (Driveway 3). Most of the parking at the site would be provided in two new parking structures. The northern parking structure would have approximately 700 spaces and be located just east of the BART garage. Most of these trips would use Driveway 1. The southern parking structure would have approximately 900 parking spaces and be located just north of Embarcadero Court at Stoneridge Corporate Plaza. Some of the 900 parking stalls in this structure would replace the existing parking at Stoneridge Corporate Plaza (the exact parking supply onsite has not yet been determined). Most of the trips from the southern garage would use Driveway 2. Based on the parking layout, it was assumed that approximately half of the project trips would use the Stoneridge Mall Road driveway (Driveway 1) and the other half would use Embarcadero Court driveways (Driveways 2 & 3). The driveways are described below.

Stoneridge Mall Road, Driveway 1. Under existing conditions, the Stoneridge Mall Road driveway is stop controlled on the east driveway approach, has one inbound and one outbound lane, and is a full-access. Left turn access at the driveway from Stoneridge Mall Road would be provided via an existing two-way center left turn lane. Under project conditions, this driveway was assumed to have two outbound lanes (see Tables 4, 7, 9, and 11 for LOS at the Stoneridge Mall Road driveway). This driveway has a clear throat of approximately 50 feet (which would accommodate 2 vehicles), beyond which, there is a cross aisle providing access to parking stalls. This driveway aligns approximately with a mall drive aisle across Stoneridge Mall Road. Under existing plus project conditions, Driveway 1 would accommodate approximately 527 (477 in/50 out) trips during the AM peak hour and approximately 470 (64 in/406 out trips during the PM peak hour. During the PM peak hour under existing plus project conditions, the driveway approach at the intersection would operate at LOS E (47.7 seconds of delay). In addition, the peak hour volume signal warrant would be satisfied during the PM peak hour under all project scenarios. There is an existing traffic signal at the intersection of Stoneridge Mall Road and Embarcadero Court, approximately 525 feet south of Driveway #1. In addition, there is a planned traffic signal at the intersection of the BART garage and Stoneridge Mall Road approximately 250 feet north of the driveway. Generally, it is desirable for traffic signals to be spaced at least 500 feet apart to minimize the probability of vehicle spill back through the intersections. However, signalization may be possible if all three traffic signals are interconnected and coordinated. If unsignalized with two outbound lanes at the project driveway, vehicles have the option to avoid long left turn delays by making a right turn instead. In addition, left turn vehicles will get breaks in traffic from the future traffic signal to the north and the existing traffic signal to the south. The queuing calculations indicate that the maximum 95th percentile left turn queue under existing plus project conditions would be 75 feet inbound during the AM peak hour and 200 feet outbound during the PM peak hour. The clear throat at the driveway would not accommodate the outbound vehicle queue, which means that vehicles would spill back through the onsite cross aisle.

> **Recommendation:** The Stoneridge Mall Road driveway should have two outbound lanes, one right turn lane and one-shared left-through lane. Ideally, this driveway should have a clear throat of 200 feet. However, a clear throat of 100 feet would be adequate to accommodate the average queues during peak hours. To reduce the probability of head on collisions, the two way center left turn lane should be converted to a left turn lane at the driveway. A traffic signal is warranted at this intersection during the PM peak hour with the proposed project. However, the planned addition of a traffic signal at the intersection of the BART entrance/Stoneridge Mall Road may preclude efficient traffic signal operation. The final determination of whether a traffic signal is desirable at this location will be made by Community Development staff. Other options for improved access at the site could include (1) combining the BART driveway with the project

driveway at Stoneridge Mall Road and installing a single traffic signal or (2) moving the north parking structure to the eastern part of the Stoneridge Corporate Plaza site so that more traffic would utilize the Embarcadero Court driveways.

Mid-Embarcadero Court, Driveway 2. The midblock Embarcadero Court driveway is currently stop controlled on the north and south driveway approaches, has one inbound and one outbound lane, and is full-access. Embarcadero Court has four through lanes. The driveway has a clear throat of approximately 50 feet (which would accommodate 2 vehicles), beyond which, there is an entrance shown to the parking structure. This driveway is served by an eastbound left turn on Embarcadero Court, which is approximately 120 feet long. It also aligns approximately with a commercial driveway across Embarcadero Court. Under existing plus project conditions, this driveway would accommodate approximately 440 (395 in/45 out) trips during the AM peak hour and approximately 400 (55 in/345 out) trips during the PM peak hour. Based on field observations on Embarcadero Court, the traffic flows are highly directional (inbound to the office in the morning and outbound in the evening). As a result, during the AM peak hour, there is little opposing traffic for inbound left turns from Embarcadero Court to the project driveway (approximately 40 peak hour opposing trips). Thus, vehicular delays would be brief and inbound left turns would not overflow the turn pocket. During the PM peak hour, there is more opposing traffic for outbound driveway right turns and there would be higher driveway delays. Existing traffic counts show approximately 300 opposing peak hour trips on Embarcadero Court (or one trip every 12 seconds). However, there would still be adequate gaps for project traffic to access the street. The conceptual plan shows a possible roundabout concept at this driveway. Because multilane roundabouts are relatively uncommon, it is assumed that a single lane roundabout would be constructed. The critical circulating volume in the roundabout would be approximately 850 AM peak hour trips and 815 PM peak hour trips under existing plus project conditions. According to the publication *Roundabouts: An Informational Guide* by the Federal Highway Administration, single lane roundabouts have a maximum circulating flow of 1,800 vehicles per hour and a maximum exit flow of 1,200 vehicles per hour. Under existing plus project conditions, the traffic volumes would be considerably lower than this, indicating that a roundabout would likely have sufficient capacity to accommodate the anticipated traffic demand.

> **Recommendation:** The design of the roundabout at the project driveway/Embarcadero Court is not shown on the current plan. Prior to final design, the layout of the roundabout should be checked by Community Development staff to insure that it complies with the guidelines specified in the publication *Roundabouts: An Informational Guide.*

End-Embarcadero Court, Driveway 3. The end of Embarcadero Court has a two lane roundabout that provides access to the at-grade parking lots associated with the project site, the Stoneridge Corporate Plaza site, and the commercial uses to the south. This driveway is stop controlled and has one inbound lane and one outbound lane. Because of the relatively remote location of this driveway in proximity to the parking structures, few vehicles are expected to utilize Driveway 3. Thus, this driveway would continue to operate with relatively short vehicular delays and vehicle queues during peak hours.

> **Recommendation:** Although the current sight distance at the project driveways was checked in the field and determined to be adequate, landscaping is not shown on the current site plan. 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 Stoneridge Mall Road and Embarcadero Court. Landscaping and parking should not conflict with a driver's ability to locate a gap in traffic. Adequate corner sight distance (sight distance triangles) should be provided at all site access points and onsite intersections in accordance with Caltrans standards. Sight distance triangles should be measured approximately 10 feet back from the traveled way.

Onsite Circulation

The project site is located between the existing BART garage and Stoneridge Corporate Plaza, and much of the site's circulation is shared with these sites. The main building would be located in the center of the site. Most of the parking would be provided in two new parking structures, with some new surface parking stalls in a few locations. A 700-space parking structure would be constructed just north of the main building. Access to this garage would be provided on its west side via an existing north/south drive aisle that runs between the structure and Stoneridge Mall Road. Secondary access would be provided to the east side of the parking structure through the Stoneridge Corporate Plaza site. A second 900-space

parking structure would be constructed to the south of the main building on the Stoneridge Corporate Plaza site. This garage could be accessed from the north via the Stoneridge Mall Road driveway or from the east via the mid-Embarcadero Court driveway. All parking would be provided at 90 degrees to the respective drive aisles. There are no dead end aisles that would serve parking areas shown on the current plan. Because the plans are conceptual, the ramping and layout of the parking structures is not shown.

> **Recommendation:** Prior to final design, the design and layout of the parking structures should be reviewed by Community Development staff. This includes a review of sight distance and parking controls at the garage entrances (to prevent vehicles from spilling back to the public street network). The current design shows the eastern entrance of the southern parking garage would be located approximately 50 feet north of the project driveway/Embarcadero Court intersection. To prevent queues from the garage from spilling onto Embarcadero Court, consideration should be given to relocating this driveway to the north approximately 100 feet.

> **Recommendation:** Because the site plan is conceptual, access to the site for trucks cannot be assessed. Prior to final design, the project applicant should submit an exhibit showing the intended truck routes to and from the loading areas onsite. In addition, the drive aisles and intersections should be checked to insure that they are permissible by delivery trucks, garbage trucks, moving trucks, and fire trucks. The project applicant should provide an exhibit showing truck turn templates overlaid onto the site plan. Traffic volumes onsite would be relatively low, and encroachment of heavy vehicles on opposing traffic lanes would not likely create operational problems if it is predominately confined to off peak hours.

Onsite, the volume and speed of vehicular traffic would be low enough such that shared use of the drive aisles between bikes and motor vehicles would be feasible. Most of the drive aisles shown on the plan are relatively short or contain horizontal curves, which would help reduce vehicle speeds during peak hours. Pedestrian access to the building entrances would be provided via a series of onsite pedestrian pathways that link to the sidewalks on the adjacent public street. These pathways also link the building entrances to the parking structure, the bus stop on Stoneridge Mall Road, the BART overcrossing, and other building entrances at the Stoneridge Corporate Plaza. Crosswalks are shown in areas where the pedestrian paths cross over onsite drive aisles.

> **Recommendation:** Where pedestrian paths cross drive aisles, wheelchair ramps are not shown on the current plan. Prior to final design, the project should provide pedestrian crosswalks consistent with *Americans with Disabilities Act* (ADA) requirements.

Parking

A detailed parking description is not provided on the current plan. The proposed project would provide two parking structures totaling 1,600 spaces as well as some additional surface parking. The south parking structure would be located on the Stoneridge Corporate Plaza site, which would require removal of some existing parking spaces and reconstruction of the existing parking lot. City of Pleasanton parking requirements for office uses stipulate that one parking space be provided for each 300 square feet of leasable area.

> **Recommendation:** Consistent with City of Pleasanton parking requirements, the proposed project should provide 1,433 parking spaces onsite. For the existing Stoneridge Corporate Plaza site, the proposed project should either (1) replace the parking lost due to the construction of the south parking structure or (2) demonstrate that the Stoneridge Corporate Plaza would have sufficient parking to comply with City parking requirements.This recommendation applies under both the buildout of the proposed project and during construction.

Other Transportation Modes

According to the U.S. Census, pedestrian trips comprise approximately 3% of the total commute mode share in the City of Pleasanton. For the proposed project, this would equate to approximately 19 new pedestrian trips during the AM peak hour and approximately 17 new pedestrian trips during the PM peak hour. In addition, the project would generate some pedestrian trips to/from the BART station, the retail areas in Stoneridge Mall, and nearby transit stops (see further discussion below). Overall, the volume of pedestrian trips generated by the project would not exceed the carrying capacity of the existing sidewalks and crosswalks on streets surrounding the site. Most of the streets in the project vicinity have sidewalks and crosswalks at signalized intersections. However, Stoneridge Mall Road does not have sidewalks along the interior of the roadway, nor are there pedestrian paths between the project site and the Stoneridge Mall entrances through the parking area (pedestrians must walk in the parking drive aisles). While a pedestrian path would be highly desirable, the installation would occur on private property and may require removal of parking stalls at Stoneridge Mall. There is an existing crosswalk equipped with flashing warning beacons across Stoneridge Mall Road at the BART garage entrance. In the future, this entrance would be signalized, which would further improve pedestrian crossing safety at Stoneridge Road.

According to the U.S. Census, approximately 1% percent of the proposed project's users could be expected to ride bikes to and from the project site. For the proposed project, this would equate to approximately 7 new bike trips during the AM peak hour and approximately 6 new bike trips during the PM peak hour. The low volume of bicycle trips generated by the project would not exceed the bicycle-carrying capacity of streets surrounding the site, and the increase in bicycle trips would not by itself require new off-site bicycle facilities. Foothill Road has (1) a southbound striped bike lane from just south of Canyon Way to Moeller Ranch Drive and (2) southbound and northbound striped bike lanes from Moeller Ranch Drive to Muirwood Drive. According to the *Pleasanton Pedestrian and Bicycle Master Plan*, there are Class II bike lanes proposed along the portions of Foothill Road where bike lanes do not currently exist. Stoneridge Drive has existing eastbound and westbound Class II bicycle lanes between Foothill Road and the City limits to the east. However, there are no bike facilities located along Stoneridge Mall Road. Provisions for bike parking are not shown on the current site plan.

> **Recommendation:** According to the City of Pleasanton *Pedestrian and Bicycle Master Plan, Appendix G - 2,* bicycle parking should be required of non-residential projects. The cited example ratio is one bicycle parking space for each 20 vehicle parking stalls or per each 5,000 square feet of commercial space. Prior to final design, City staff should review the project site plan to ensure that adequate accommodations for bike parking are provided.

According the Alameda County TDF model projections, the total commute transit mode share from the project site would be on the order of 3%. For the proposed project, a 3% mode share would equate to approximately 19 new transit trips during the AM peak hour and approximately 17 new transit trips during the PM peak hour. Project transit demand would be partly served by the West Dublin/Pleasanton BART station and the Livermore-Amador Valley Transit Authority (LAVTA). BART trains provide service at 15 minute headways during peak hours to several destinations in the East Bay and San Francisco. Each BART train consists of eight cars, with a capacity of 560 seats per train. This equates to 2,240 seats (4 trains at 560 seats each) during the peak hour. According to previous studies of BART ridership in the Tri-Valley, BART ridership is on the order of 0.6 riders per seat in the project vicinity, meaning that there are hundreds of available seats for potential riders to and from the project site. In addition, the Livermore-Amador Valley Transit Authority (LAVTA) currently provides bus service in the project vicinity, including routes R, 3, 108, 53, 70XV, 603, and 604. There are several existing bus stops within the Stoneridge Shopping Mall site, with a bus duckout and shelter on Stoneridge Mall Road adjacent to the project site at the BART parking garage. According to the LAVTA Short Range Transit Plan (FY 2012 to 2021), most vehicles in the fleet have a seating capacity of 39 riders with an additional capacity of 21 standees. The bus routes that serve the project area average between 8.0 and 20.7 passengers per hour. Thus, the volume of riders generated by the project would not exceed the carrying capacity of the existing bus or BART service near the project site. Therefore, no improvements to the existing transit facilities would be necessary in conjunction with the proposed project.

8.
CMA Analysis

The 2011 Alameda County Congestion Management Program (CMP) includes a Land Use Analysis component to determine the impacts of land use decisions made by local jurisdictions on the regional transportation system. The intent of this program is to:

- better tie together decisions on local land use and regional transportation facilities;
- better assess the impacts of developments in one community on another community;
- promote information sharing between local governments when decisions made by one jurisdiction will have an impact on another.

Local jurisdictions have responsibilities regarding the analysis of transportation impacts of land use decisions. Among those is an analysis of project impacts on the Metropolitan Transportation System (MTS) for the 2020 and 2035 horizon years. For projects that generate more than 100 peak-hour vehicle trips, a CMP traffic analysis is required using the Alameda Countywide Transportation Demand Model (ACTDM). In accordance with the Technical and Policy Guidelines of the Congestion Management Program, the CMP analysis requires evaluation of the traffic impacts of the project on the MTS.

The site of the Workday project is located on the vacant property off Stoneridge Mall Road, between the BART parking garage and the existing Stoneridge Corporate Plaza office buildings. The project consists of a 430,000 square feet office building. Since the ACTDM model uses employment rather than square footage to calculate trips generated by office uses, the 430,000 square foot office building was converted into jobs, using daily ITE trip generation rates for General Office per 1,000 square feet (11.03 trips per day) and per employee (3.32 trips per day). Using this relationship, the 430,000 square feet office building would provide 11.03 * 430 / 3.32 = 1,429 jobs. These 1,429 jobs were coded into Alameda County's land use data base and year 2020 and 2035 PM peak-hour constrained travels forecasts were developed with the ACTDM. The model's traffic assignments indicated that the project would add a number of new vehicle trips to the following MTS roadways in the vicinity of the site:

- I-680
- I-580
- Foothill Road
- Stoneridge Drive

The level of service standard for the CMP analysis is LOS E. The Alameda County CMA does not have a policy for determining a threshold of significance for CMP requirements and expects that professional judgment will be used to determine project impacts. Therefore, for the purpose of this traffic analysis, if a segment operates at an unacceptable LOS without the project, the impact of the project is considered significant if the contribution of project traffic results in an increase in the volume-to-capacity ratio of more than 0.03. This threshold is consistent with prior traffic impact analyses for developments in the City of Pleasanton.

The Alameda County Congestion Management Program does not require analysis of traffic impacts on the regional roadway system under existing plus project conditions. However, a traffic analysis of existing plus project conditions for freeway segments was performed to remain consistent with California Environmental Quality Act guidelines. Since the Alameda County CMA model data set does not have a 2013 forecast year, a 2013 ACTDM was developed by interpolating the land use and socio-economic data and other input variables using the 2005 and 2020 data sets.

In order to determine the impact of the project, AM and PM peak-hour traffic volumes on eight directional freeway segments (2013, 2020 and 2035) and six directional MTS roadway segments (2020 and 2035) in the vicinity of the project were analyzed. Note that the ACTDM assumes that, in the future, the project would generate fewer trips during the *peak-hour* due to increased congestion on the roadway system. As travel times increase for certain origin to destination trips, travelers are shifted to the "shoulder hours" and are not expected to begin or end their trip within the chosen peak-hour. This behavior results in "peak-spreading" and effectively reduces the number of peak-hour trips associated with the project.

Year 2013 Freeway Traffic Conditions

The peak-direction of travel on I-580 is westbound in the morning and eastbound during the afternoon peak hours. On I-680, the prevailing commute direction is southbound in the morning and northbound in the afternoon. The model forecast shows that during the morning peak hour, traffic in the peak direction of travel operates at LOS D or E. Traffic conditions are worse during the afternoon peak hour when the freeway segments operate at LOS E or F conditions in the peak commute direction. Although the model estimates that the project would increase traffic by as much as 27 vehicles during the AM peak and by 73 vehicles during the PM peak-hour, the project would not cause a significant impact since the increase in volume-to-capacity ratio on segments that operate at LOS E or F would be less than 0.03 (see Tables 15 and 16).

Year 2020 Roadway and Freeway Traffic Conditions

By the year 2020, several roadway improvements are assumed to be completed, such as the addition of HOV lanes along westbound I-580 and northbound I-680. Model estimates show that by the year 2020, the roadway segments would generally operate at LOS C or better traffic during both AM and PM peak hours, without and with the project. Traffic on segments of I-580 and I-680 would continue to operate at congested (LOS E or F) conditions in the peak direction of travel. Although the model estimates that the project would increase traffic on the freeway segments by as much as 27 vehicles during the AM peak and by 47 vehicles during the PM peak-hour, the project would not cause a significant impact since the increase in volume-to-capacity ratio on segments that operate at LOS E or F would be less than 0.03 (see Tables 17 and 18).

Year 2035 Roadway and Freeway Traffic Conditions

By the year 2035, additional roadway improvements are assumed to be completed, such as the addition of an HOV lane along southbound I-680. Model estimates show that by the year 2035, the roadway segments would generally operate at LOS D or better traffic during both AM and PM peak hours, without and with the project. Compared to the year 2020 forecast, the 2035 model predicts a significant increase in eastbound commute traffic during the AM peak (and in westbound traffic during the PM peak hour) along the I-580 corridor. This change in travel pattern is the result of regional changes in the growth of households and jobs projected by the Association of Bay Area Governments (ABAG). Although the model estimates that the project would increase traffic on the freeway segments by as much as 24 vehicles during the AM peak and by 44 vehicles during the PM peak-hour, the project would not cause a significant impact since the increase in volume-to-capacity ratio on segments that operate at LOS E or F would be less than 0.03 (see Tables 19 and 20).

Table 15
2013 AM Peak Hour Freeway Segment LOS

Segment	Endpoint 1	Endpoint 2	Direction	Lane Capacity	# of Lanes	No-Project			Project			Increase in	
						Volume	V/C	LOS	Volume	V/C	LOS	Volume	V/C
I-580	Foothill Road	Palo Verde Road	WB	2200	5	9,795	0.890	E	9,797	0.891	E	2	0.000
I-580	Foothill Road	Palo Verde Road	EB	2200	4	5,526	0.628	C	5,553	0.631	C	27	0.003
I-580	I-680	Foothill Road	WB	2200	4.5	8,532	0.862	D	8,549	0.864	D	17	0.002
I-580	I-680	Foothill Road	EB	2200	4.5	5,145	0.520	C	5,150	0.520	C	5	0.001
I-680	I-580	Stoneridge Drive	SB	2200	3.5	6,420	0.834	D	6,433	0.835	D	13	0.002
I-680	I-580	Stoneridge Drive	NB	2200	3.5	5,932	0.770	D	5,932	0.770	D	0	0.000
I-680	Stoneridge Drive	Bernal Avenue	SB	2200	3	6,212	0.941	E	6,213	0.941	E	1	0.000
I-680	Stoneridge Drive	Bernal Avenue	NB	2200	3	5,227	0.792	D	5,243	0.794	D	16	0.002

Note: LOS is based on guidance provided in Exhibit 23-2, Highway Capacity Manual.

Table 16
2013 PM Peak Hour Freeway Segment LOS

Segment	Endpoint 1	Endpoint 2	Direction	Lane Capacity	# of Lanes	No-Project			Project			Increase in	
						Volume	V/C	LOS	Volume	V/C	LOS	Volume	V/C
I-580	Foothill Road	Palo Verde Road	WB	2200	5	7,436	0.676	C	7,472	0.679	C	36	0.003
I-580	Foothill Road	Palo Verde Road	EB	2200	4	9,460	1.075	F	9,471	1.076	F	11	0.001
I-580	I-680	Foothill Road	WB	2200	4.5	7,167	0.724	D	7,188	0.726	D	21	0.002
I-580	I-680	Foothill Road	EB	2200	4.5	9,009	0.910	E	9,082	0.917	E	73	0.007
I-680	I-580	Stoneridge Drive	SB	2200	3.5	5,844	0.759	D	5,845	0.759	D	1	0.000
I-680	I-580	Stoneridge Drive	NB	2200	3.5	7,012	0.911	E	7,018	0.911	E	6	0.001
I-680	Stoneridge Drive	Bernal Avenue	SB	2200	3	5,334	0.808	D	5,353	0.811	D	19	0.003
I-680	Stoneridge Drive	Bernal Avenue	NB	2200	3	6,014	0.911	E	6,020	0.912	E	6	0.001

Note: LOS is based on guidance provided in Exhibit 23-2, Highway Capacity Manual.

Table 17
2020 AM Peak Hour Roadway Segment LOS

Segment	Endpoint 1	Endpoint 2	Direction	Lane Capacity	# of Lanes	No-Project			Project			Increase in	
						Volume	V/C	LOS	Volume	V/C	LOS	Volume	V/C
Foothill Road	I-580	Dublin Canyon Road	SB	1100	4	2,402	0.546	C	2,490	0.566	C	88	0.020
Foothill Road	I-580	Dublin Canyon Road	NB	1100	4	868	0.197	A	877	0.199	A	9	0.002
Foothill Road	Dublin Canyon Road	Laurel Creek Way	SB	1100	4	1,723	0.392	B	1,724	0.392	B	1	0.000
Foothill Road	Dublin Canyon Road	Laurel Creek Way	NB	1100	4	1,019	0.232	A	1,023	0.233	A	4	0.001
Stoneridge Drive	Stoneridge Mall Road	I-680	WB	1100	3	1,404	0.425	B	1,447	0.438	B	43	0.013
Stoneridge Drive	Stoneridge Mall Road	I-680	EB	1100	3	1,271	0.385	B	1,274	0.386	B	3	0.001
I-580	Foothill Road	Palo Verde Road	WB	2200	5	10,380	0.944	E	10,381	0.944	E	1	0.000
I-580	Foothill Road	Palo Verde Road	EB	2200	4	6,166	0.701	C	6,193	0.704	C	27	0.003
I-580	I-680	Foothill Road	WB	2200	4.5	7,750	0.783	D	7,762	0.784	D	12	0.001
I-580 HOV	I-680	Foothill Road	WB	2200	1	1,600	0.727	D	1,607	0.730	D	7	0.003
I-580	I-680	Foothill Road	EB	2200	4.5	5,645	0.570	C	5,648	0.571	C	3	0.000
I-680	I-580	Stoneridge Drive	SB	2200	3.5	6,623	0.860	D	6,633	0.861	D	10	0.001
I-680	I-580	Stoneridge Drive	NB	2200	3.5	6,317	0.820	D	6,317	0.820	D	0	0.000
I-680	Stoneridge Drive	Bernal Avenue	SB	2200	3	6,952	1.053	F	6,952	1.053	F	0	0.000
I-680	Stoneridge Drive	Bernal Avenue	NB	2200	3	4,872	0.738	D	4,883	0.740	D	11	0.002
I-680 HOV	Stoneridge Drive	Bernal Avenue	NB	2200	1	1,019	0.463	B	1,023	0.465	B	4	0.002

Note: LOS is based on guidance provided in Exhibit 23-2, Highway Capacity Manual.

Table 18
2020 PM Peak Hour Roadway Segment LOS

Segment	Endpoint 1	Endpoint 2	Direction	Lane Capacity	# of Lanes	No-Project			Project			Increase in	
						Volume	V/C	LOS	Volume	V/C	LOS	Volume	V/C
Foothill Road	I-580	Dublin Canyon Road	SB	1100	4	1,964	0.446	B	2,009	0.457	B	45	0.010
Foothill Road	I-580	Dublin Canyon Road	NB	1100	4	2,439	0.554	C	2,539	0.577	C	100	0.023
Foothill Road	Dublin Canyon Road	Laurel Creek Way	SB	1100	4	1,958	0.445	B	1,960	0.445	B	2	0.000
Foothill Road	Dublin Canyon Road	Laurel Creek Way	NB	1100	4	1,935	0.440	B	1,940	0.441	B	5	0.001
Stoneridge Drive	Stoneridge Mall Road	I-680	WB	1100	3	1,489	0.451	B	1,519	0.460	B	30	0.009
Stoneridge Drive	Stoneridge Mall Road	I-680	EB	1100	3	1,849	0.560	C	1,928	0.584	C	79	0.024
I-580	Foothill Road	Palo Verde Road	WB	2200	5	8,388	0.763	D	8,419	0.765	D	31	0.003
I-580	Foothill Road	Palo Verde Road	EB	2200	4	9,527	1.083	F	9,537	1.084	F	10	0.001
I-580	I-680	Foothill Road	WB	2200	4.5	7,927	0.801	D	7,949	0.803	D	22	0.002
I-580 HOV	I-680	Foothill Road	WB	2200	1	967	0.440	B	969	0.440	B	2	0.001
I-580	I-680	Foothill Road	EB	2200	4.5	8,994	0.908	E	9,041	0.913	E	47	0.005
I-680	I-580	Stoneridge Drive	SB	2200	3.5	5,831	0.757	D	5,833	0.758	D	2	0.000
I-680	I-580	Stoneridge Drive	NB	2200	3.5	6,986	0.907	E	6,992	0.908	E	6	0.001
I-680	Stoneridge Drive	Bernal Avenue	SB	2200	3	5,550	0.841	D	5,568	0.844	D	18	0.003
I-680	Stoneridge Drive	Bernal Avenue	NB	2200	3	5,596	0.848	D	5,598	0.848	D	2	0.000
I-680 HOV	Stoneridge Drive	Bernal Avenue	NB	2200	1	1,082	0.492	B	1,082	0.492	B	0	0.000

Note: LOS is based on guidance provided in Exhibit 23-2, Highway Capacity Manual.

Table 19
2035 AM Peak Hour Roadway Segment LOS

Segment	Endpoint 1	Endpoint 2	Direction	Lane Capacity	# of Lanes	No-Project			Project			Increase in	
						Volume	V/C	LOS	Volume	V/C	LOS	Volume	V/C
Foothill Road	I-580	Dublin Canyon Road	SB	1100	4	2,773	0.630	C	2,867	0.652	C	94	0.021
Foothill Road	I-580	Dublin Canyon Road	NB	1100	4	994	0.226	A	1,002	0.228	A	8	0.002
Foothill Road	Dublin Canyon Road	Laurel Creek Way	SB	1100	4	2,076	0.472	B	2,077	0.472	B	1	0.000
Foothill Road	Dublin Canyon Road	Laurel Creek Way	NB	1100	4	1,037	0.236	A	1,039	0.236	A	2	0.000
Stoneridge Drive	Stoneridge Mall Road	I-680	WB	1100	3	1,188	0.360	B	1,224	0.371	B	36	0.011
Stoneridge Drive	Stoneridge Mall Road	I-680	EB	1100	3	1,213	0.368	B	1,216	0.368	B	3	0.001
I-580	Foothill Road	Palo Verde Road	WB	2200	5	9,635	0.876	D	9,635	0.876	D	0	0.000
I-580	Foothill Road	Palo Verde Road	EB	2200	4	7,815	0.888	D	7,839	0.891	E	24	0.003
I-580	I-680	Foothill Road	WB	2200	4.5	7,423	0.750	D	7,441	0.752	D	18	0.002
I-580 HOV	I-680	Foothill Road	WB	2200	1	1,535	0.698	C	1,543	0.701	C	8	0.004
I-580	I-680	Foothill Road	EB	2200	4.5	7,170	0.724	D	7,174	0.725	D	4	0.000
I-680	I-580	Stoneridge Drive	SB	2200	3.5	6,988	0.908	E	6,993	0.908	E	5	0.001
I-680	I-580	Stoneridge Drive	NB	2200	3.5	5,854	0.760	D	5,854	0.760	D	0	0.000
I-680	Stoneridge Drive	Bernal Avenue	SB	2200	3	5,740	0.870	D	5,741	0.870	D	1	0.000
I-680 HOV	Stoneridge Drive	Bernal Avenue	SB	2200	1	1,657	0.753	D	1,657	0.753	D	0	0.000
I-680	Stoneridge Drive	Bernal Avenue	NB	2200	3	4,691	0.711	D	4,701	0.712	D	10	0.002
I-680 HOV	Stoneridge Drive	Bernal Avenue	NB	2200	1	772	0.351	B	774	0.352	B	2	0.001

Note: LOS is based on guidance provided in Exhibit 23-2, Highway Capacity Manual.

Table 20
2035 PM Peak Hour Roadway Segment LOS

Segment	Endpoint 1	Endpoint 2	Direction	Lane Capacity	# of Lanes	No-Project			Project			Increase in	
						Volume	V/C	LOS	Volume	V/C	LOS	Volume	V/C
Foothill Road	I-580	Dublin Canyon Road	SB	1100	4	1,785	0.406	B	1,827	0.415	B	42	0.010
Foothill Road	I-580	Dublin Canyon Road	NB	1100	4	3,203	0.728	D	3,312	0.753	D	109	0.025
Foothill Road	Dublin Canyon Road	Laurel Creek Way	SB	1100	4	1,555	0.353	B	1,557	0.354	B	2	0.000
Foothill Road	Dublin Canyon Road	Laurel Creek Way	NB	1100	4	2,774	0.630	C	2,777	0.631	C	3	0.001
Stoneridge Drive	Stoneridge Mall Road	I-680	WB	1100	3	2,006	0.608	C	2,036	0.617	C	30	0.009
Stoneridge Drive	Stoneridge Mall Road	I-680	EB	1100	3	1,649	0.500	B	1,713	0.519	C	64	0.019
I-580	Foothill Road	Palo Verde Road	WB	2200	5	9,886	0.899	E	9,910	0.901	E	24	0.002
I-580	Foothill Road	Palo Verde Road	EB	2200	4	8,828	1.003	F	8,833	1.004	F	5	0.001
I-580	I-680	Foothill Road	WB	2200	4.5	8,615	0.870	D	8,631	0.872	D	16	0.002
I-580 HOV	I-680	Foothill Road	WB	2200	1	1,357	0.617	C	1,359	0.618	C	2	0.001
I-580	I-680	Foothill Road	EB	2200	4.5	8,731	0.882	D	8,775	0.886	D	44	0.004
I-680	I-580	Stoneridge Drive	SB	2200	3.5	6,018	0.782	D	6,020	0.782	D	2	0.000
I-680	I-580	Stoneridge Drive	NB	2200	3.5	7,036	0.914	E	7,038	0.914	E	2	0.000
I-680	Stoneridge Drive	Bernal Avenue	SB	2200	3	4,864	0.737	D	4,880	0.739	D	16	0.002
I-680 HOV	Stoneridge Drive	Bernal Avenue	SB	2200	1	759	0.345	B	762	0.346	B	3	0.001
I-680	Stoneridge Drive	Bernal Avenue	NB	2200	3	5,631	0.853	D	5,634	0.854	D	3	0.000
I-680 HOV	Stoneridge Drive	Bernal Avenue	NB	2200	1	1,059	0.481	B	1,059	0.481	B	0	0.000

Note: LOS is based on guidance provided in Exhibit 23-2, Highway Capacity Manual.

EXHIBIT B

STONERIDGE CORPORATE PLAZA EXPANSION
AIR QUALITY ASSESSMENT
PLEASANTON, CALIFORNIA

April 3, 2014

♦ ♦ ♦

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Introduction

This report addresses air quality impacts associated with the proposed expansion of the Stoneridge Corporate Plaza in Pleasanton, California. The project proposes to construct a six-story, approximately 430,000 square foot office building, parking garage, and surface parking on the BART property. The project would also construct a parking garage and surface parking on the Stoneridge Corporate Plaza property. The proposed project is located on two sites: the approximately 25.4-acre Stoneridge Corporate Plaza property located at 6120-6160 Stoneridge Mall Road and the approximately 6.9-acre undeveloped BART property located at 6110 Stoneridge Mall Road. The project would change travel patterns in the area and air pollutant emissions. In addition, construction of the project would emit air pollutants, and the community health risk impacts from project construction on nearby sensitive receptors were also assessed. This analysis was conducted following guidance provided by the Bay Area Air Quality Management District (BAAQMD)[1].

Project Description

As shown in Figure 1, a new six-story office building and five-level parking structure would be constructed east of the existing BART parking garage. A small portion of the office building crosses the southeastern property line onto the Stoneridge Corporate Plaza parcel. The five-level parking garage would be set back approximately 25 ft. from the northern property line along I-580. In addition, a four-level parking garage would be constructed near the southwest corner of the Stoneridge Corporate Plaza site adjacent to the Stoneridge Mall Road and Embarcadero Court intersection.

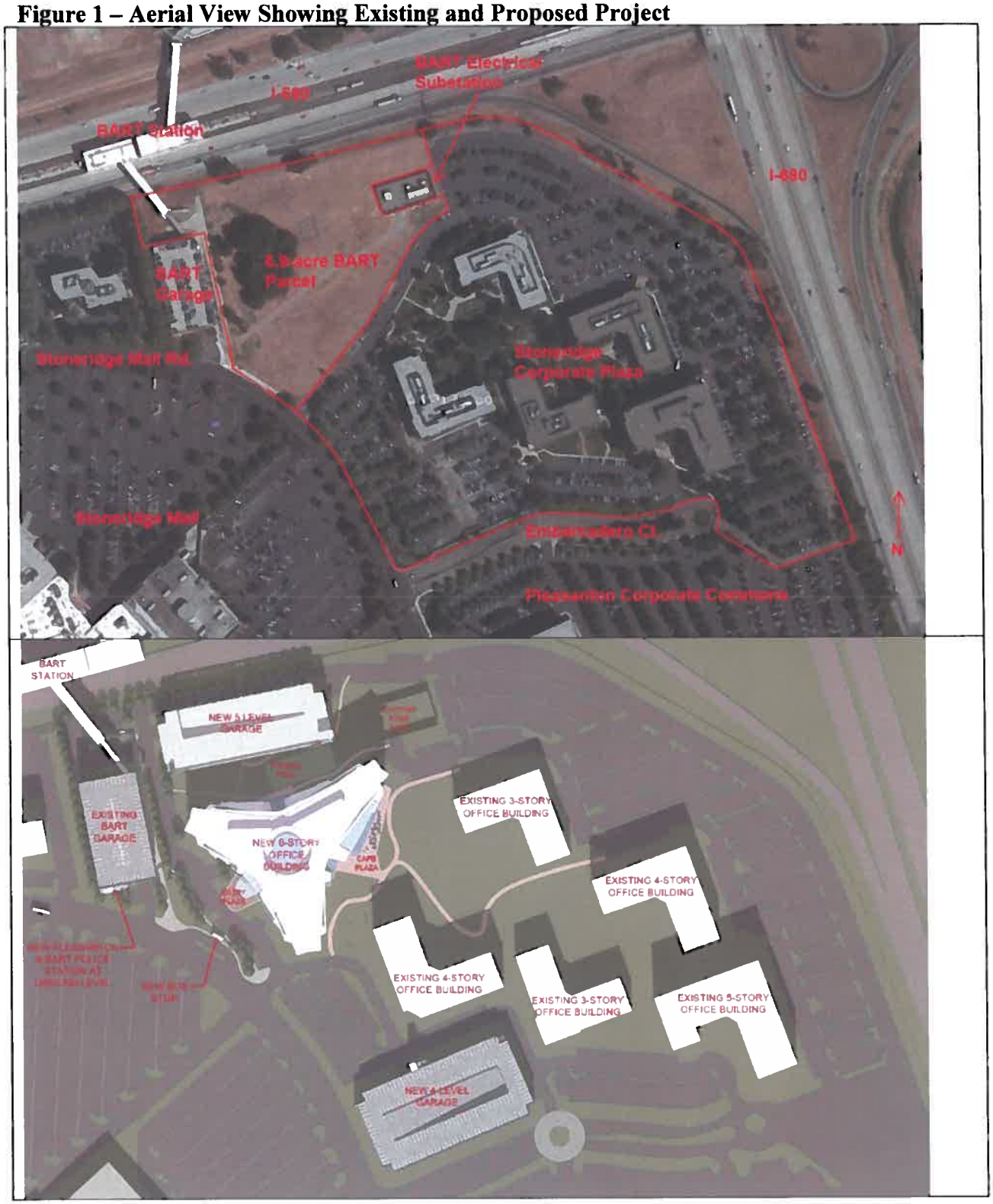
Setting

The project is located in the San Francisco Bay Area Air Basin. Ambient air quality standards have been established at both the State and Federal level. The Bay Area meets all ambient air quality standards with the exception of ground-level ozone, respirable particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$).

High ozone levels are caused by the cumulative emissions of reactive organic gases (ROG) and nitrogen oxides (NOx). These precursor pollutants react under certain meteorological conditions to form high ozone levels. Controlling the emissions of these precursor pollutants is the focus of the Bay Area's attempts to reduce ozone levels. Highest ozone levels in the Bay Area occur in the eastern and southern inland valleys that are downwind of air pollutant sources. High ozone levels aggravate respiratory and cardiovascular diseases, reduced lung function, and increase coughing and chest discomfort.

[1] BAAQMD, 2011. *BAAQMD CEQA Air Quality Guidelines*. May.

Figure 1 – Aerial View Showing Existing and Proposed Project



Particulate matter is another problematic air pollutant in the Bay Area. Particulate matter is assessed and measured in terms of respirable particulate matter or particles that have a diameter of 10 micrometers or less (PM_{10}) and fine particulate matter where particles have a diameter of 2.5 micrometers or less ($PM_{2.5}$). Elevated concentrations of PM_{10} and $PM_{2.5}$ are the result of both region-wide (or cumulative) emissions and localized emissions. High particulate matter levels aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer), and result in reduced lung function growth in children.

Dublin is located in the San Ramon Valley, where wind speeds rank as some of the lowest in the Bay Area. Air temperatures are cooler in the winter and warmer in the summer because these valleys are further from the moderating effect of large water bodies, and because the Coast Range blocks marine air flow. In the Diablo Valley during the winter, Concord records daily maximum temperatures in the mid 50's. During the summer, average daily maximum temperatures are in the high 80's to 90 degrees. Average minimum temperatures in winter are in the low-to-mid 40's. Temperatures in the San Ramon Valley would be similar to Concord's. Shielded by the Coast Range to the west, rainfall amounts in the Diablo Valley are relatively low. For example, Martinez, in the north, reports an annual average of 18.5 inches, while Walnut Creek reports 19 inches. Rainfall in the San Ramon Valley is expected to be similar because of the similar orientation of the terrain.

Pollution potential is relatively high in these valleys. In the winter, light winds at night coupled with a surface-based inversion and terrain blocking to the east and west does not allow much dispersion of pollutants. San Ramon Valley, with its very narrow width, could easily have high pollution buildups from emissions contributed by the major freeway in its center, and by emissions from fireplaces and wood stoves. In the summer months, ozone can be transported into the valleys from both the Central Valley and the central Bay Area.

National and State Ambient Air Quality Standards

The ambient air quality in a given area depends on the quantities of pollutants emitted within the area, transport of pollutants to and from surrounding areas, local and regional meteorological conditions, as well as the surrounding topography of the air basin. Air quality is described by the concentration of various pollutants in the atmosphere. Units of concentration are generally expressed in parts per million (ppm) or micrograms per cubic meter ($\mu g/m^3$).

As required by the Federal Clean Air Act, National Ambient Air Quality Standards (NAAQS) have been established for six major air pollutants: carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter, including respirable particulate matter (PM_{10}) and fine particulate matter ($PM_{2.5}$), sulfur oxides, and lead. Pursuant to the California Clean Air Act, the State of California has established the California Ambient Air Quality Standards (CAAQS). Relevant State and Federal standards are summarized in Table 1. CAAQS are generally the same or more stringent than NAAQS.

Air Quality Monitoring Data

The significance of a pollutant concentration is determined by comparing the concentration to an appropriate ambient air quality standard. The standards represent the allowable pollutant

concentrations designed to ensure that the public health and welfare are protected, while including a reasonable margin of safety to protect the more sensitive individuals in the population. The San Francisco Bay Area is considered to be one of the cleanest metropolitan areas in the country with respect to air quality. BAAQMD monitors air quality conditions at more than 20 locations throughout the Bay Area. The closest monitoring station to the project site is in Livermore at the 793 Rincon Avenue monitoring station. Summarized air pollutant data for this station is provided in Table 2. This table shows the highest air pollutant concentrations measured at the station over the five year period from 2008 through 2012. Note that BAAQMD discontinued monitoring of carbon monoxide in 2009.

These data show that ozone levels above State or Federal standards are exceeded each year. Over the past 5 years, State ozone standards were exceeded 6 to 9 days annually and Federal standards were exceeded 2 to 3 days. No other ambient air quality standards were exceeded in Livermore.

Ambient Air Quality Status

Areas with air pollutant levels that exceed adopted air quality standards are designated as "nonattainment" areas for the relevant air pollutants. Nonattainment areas are sometimes further classified by degree (marginal, moderate, serious, severe, and extreme for ozone, and moderate and serious for carbon monoxide and PM_{10}) or status ("nonattainment-transitional"). Areas that comply with air quality standards are designated as "attainment" areas for the relevant air pollutants. "Unclassified" areas are those with insufficient air quality monitoring data to support a designation of attainment or nonattainment, but are generally presumed to meet the ambient air quality standard. State Implementation Plans must be prepared by states for areas designated as federal nonattainment areas to demonstrate how the area will come into attainment of the exceeded federal ambient air quality standard. The Bay Area is considered a marginal nonattainment area for ozone under the NAAQS and nonattainment for ozone under the CAAQS (both 1- and 8-hour standards). The Bay Area is also designated as nonattainment for the 24-hour $PM_{2.5}$ standard; however, U.S. Environmental Protection Agency (EPA) has proposed that the Bay Area has met the standard based on the latest 3-year set of monitoring data. The Bay Area is still considered nonattainment for the State annual $PM_{2.5}$ standard and the 24-hour PM_{10} standard. The region is designated attainment or unclassified for all other ambient air quality standards.

Table 1. Relevant California and National Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards	National Standards
Ozone	8-hour	0.070 ppm (137 $\mu g/m^3$)	0.075 ppm (147$\mu g/m^3$)
	1-hour	0.09 ppm (180 $\mu g/m^3$)	—
Carbon monoxide	1-hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)
	8-hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)
Nitrogen dioxide	1-hour	0.18 ppm (339 $\mu g/m^3$)	0.100 ppm (188 $\mu g/m^3$)
	Annual	0.030 ppm (57 $\mu g/m^3$)	0.053 ppm (100 $\mu g/m^3$)
Sulfur Dioxide	1-hour	0.25 ppm (655 $\mu g/m^3$)	0.075 ppm (196 $\mu g/m^3$)
	24-hour	0.04 ppm (105 $\mu g/m^3$)	0.14 ppm (365 $\mu g/m^3$)
	Annual	—	0.03 ppm (56 $\mu g/m^3$)
Particulate Matter (PM_{10})	Annual	20 $\mu g/m^3$	—
	24-hour	50 $\mu g/m^3$	150 $\mu g/m^3$
Particulate Matter ($PM_{2.5}$)	Annual	12 $\mu g/m^3$	12 $\mu g/m^3$
	24-hour	—	35 $\mu g/m^3$

Notes: ppm = parts per million mg/m^3 = milligrams per cubic meter $\mu g/m^3$ = micrograms per cubic meter

Table 2. Highest Measured Air Pollutant Concentrations in Livermore

Pollutant	Average Time	Measured Air Pollutant Levels				
		2008	2009	2010	2011	2012
Ozone (O_3)	1-Hour	**0.141 ppm**	**0.113 ppm**	**0.150 ppm**	**0.115 ppm**	**0.102 ppm**
	8-Hour	**0.111 ppm**	**0.086 ppm**	**0.098 ppm**	**0.085 ppm**	**0.090 ppm**
Carbon Monoxide (CO)	8-Hour	1.4 ppm	1.3 ppm	ND	ND	ND
Nitrogen Dioxide (NO_2)	1-Hour	0.058 ppm	0.052 ppm	0.058 ppm	0.053 ppm	0.057 ppm
	Annual	0.013 ppm	0.012 ppm	0.011 ppm	0.011 ppm	0.011 ppm
Respirable Particulate Matter (PM_{10})	24-Hour	46.8 ug/m^3	ND	ND	ND	ND
	Annual	ND	ND	ND	ND	ND
Fine Particulate Matter ($PM_{2.5}$)	24-Hour	**52.7 ug/m^3**	**45.7 ug/m^3**	34.7 ug/m^3	23.6 ug/m^3	31.1 ug/m^3
	Annual	10.1 ug/m^3	9.2 ug/m^3	7.6 ug/m^3	7.8 ug/m^3	6.5 ug/m^3

Source: CARB, 2013.
Notes: ppm = parts per million and ug/m^3 = micrograms per cubic meter.
Values reported in bold exceed ambient air quality standard.
ND = No data.

Sensitive Receptors

There are groups of people more affected by air pollution than others. The California Air Resources Board (CARB) has identified the following persons who are most likely to be affected by air pollution: children under 14, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, elementary schools, and parks. The closest sensitive receptors are future residences that will be located in Dublin, north of the site across Interstate 580. Existing residences are located about 1,000 feet south of the project site.

Toxic Air Contaminants

Toxic air contaminants (TAC) are a broad class of compounds known to cause morbidity or mortality (usually because they cause cancer) and include, but are not limited to, the criteria air pollutants listed above. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter near a freeway). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, state, and Federal level.

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs (based on the Bay Area average). According to the CARB, diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens either under the state's Proposition 65 or under the Federal Hazardous Air Pollutants programs.

CARB has adopted and implemented a number of regulations for stationary and mobile sources to reduce emissions of diesel particulate matter (DPM). Several of these regulatory programs affect medium and heavy duty diesel trucks that represent the bulk of DPM emissions from California highways. These regulations include the solid waste collection vehicle (SWCV) rule, in-use public and utility fleets, and the heavy-duty diesel truck and bus regulations. In 2008, CARB approved a new regulation to reduce emissions of DPM and nitrogen oxides from existing on-road heavy-duty diesel fueled vehicles[2]. The regulation requires affected vehicles to meet specific performance requirements between 2012 and 2023, with all affected diesel vehicles required to have 2010 model-year engines or equivalent by 2023. These requirements are phased in over the compliance period and depend on the model year of the vehicle.

The BAAQMD is the regional agency tasked with managing air quality in the region. At the State level, CARB (a part of the California Environmental Protection Agency) oversees regional air district activities and regulates air quality at the State level. The BAAQMD published the *California Environmental Quality Act (CEQA) Air Quality Guidelines*, which are used in this assessment to evaluate air quality impacts of projects[3].

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[2] Available online: http://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm. Accessed: April 3, 2012.
[3] BAAQMD, 2011, op. cit.

Significance Thresholds

The BAAQMD provides guidance for assessing the impact of projects on air quality. In 2011, BAAQMD issued the *CEQA Air Quality Guidelines*[4] which provided procedures for analyzing air quality impacts of land use projects, including construction projects, and also includes thresholds of significance to compare impacts against. These thresholds are identified in Table 3. The methodology contained in the BAAQMD CEQA Air Quality Guidelines were generally followed. The exception is that the South Coast Air Quality Management District, along with a collaboration of other air districts, developed the California Emissions Estimator Model (CalEEMod) in late 2011 that superseded the URBEMIS2007 model recommended in the BAAQMD CEQA Air Quality Guidelines[5]. In addition, CARB updated their on-road motor vehicle emission factor model to EMFAC2011. This model provides the best estimate of motor vehicle, including truck, emission factors.

BAAQMD's adoption of significance thresholds contained in the 2011 CEQA Air Quality Guidelines was called into question by an order issued March 5, 2012, in California Building Industry Association (CBIA) v. BAAQMD (Alameda Superior Court Case No. RGI0548693). The order requires BAAQMD to set aside its approval of the thresholds until it has conducted environmental review under CEQA. The ruling made in the case concerned the environmental impacts of adopting the thresholds and how the thresholds would indirectly affect land use development patterns. In August 2013, the Appellate Court struck down the lower court's order to set aside the thresholds. However, this litigation remains pending as the California Supreme Court recently accepted a portion of CBIA's petition to review the appellate court's decision to uphold BAAQMD's adoption of the thresholds. The specific portion of the argument to be considered is in regard to whether CEQA requires consideration of the effects of the environment on a project (as contrasted to the effects of a proposed project on the environment). Therefore, the significance thresholds contained in the 2011 CEQA Air Quality Guidelines are applied to this project.

[4] BAAQMD, 2011, op. cit.
[5] BAAQMD has recommend use of the latest version of CalEEMod in August 2013. See http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES.aspx, accessed April 3, 2014.

Table 3. Air Quality Significance Thresholds

Pollutant	Construction Thresholds	Operational Thresholds	
	Average Daily Emissions (lbs./day)	Average Daily Emissions (lbs./day)	Annual Average Emissions (tons/year)
Criteria Air Pollutants			
ROG	54	54	10
NO_x	54	54	10
PM_{10}	82	82	15
$PM_{2.5}$	54	54	10
CO	Not Applicable	California Ambient Air Quality Standards, which are 9.0 ppm (8-hour average) or 20.0 ppm (1-hour average)	
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices	Not Applicable	
Health Risks and Hazards for New Sources			
Excess Cancer Risk	10 per one million	10 per one million	
Chronic or Acute Hazard Index	1.0	1.0	
Incremental annual average $PM_{2.5}$	0.3 $\mu g/m^3$	0.3 $\mu g/m^3$	
Health Risks and Hazards for Sensitive Receptors (Cumulative from all sources within 1,000 foot zone of influence) and Cumulative Thresholds for New Sources			
Excess Cancer Risk	100 per one million		
Chronic Hazard Index	10.0		
Annual Average $PM_{2.5}$	0.8 $\mu g/m^3$		
Greenhouse Gas Emissions			
GHG Annual Emissions	Compliance with a Qualified GHG Reduction Strategy or 1,100 metric tons or 4.6 metric tons per capita		

Note: ROG = reactive organic gases, NOx = nitrogen oxides, PM_{10} = course particulate matter or particulates with an aerodynamic diameter of 10 micrometers (µm) or less, $PM_{2.5}$ = fine particulate matter or particulates with an aerodynamic diameter of 2.5µm or less; and GHG = greenhouse gas. Dwelling units are du and 1,000 square feet are ksf.

BAAQMD. 2011. *BAAQMD CEQA Air Quality Guidelines*. May.

Impact 1: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

The Bay Area is considered a non-attainment area for ground-level ozone and $PM_{2.5}$ under both the Federal Clean Air Act and the California Clean Air Act. The area is also considered non-attainment for PM_{10} under the California Clean Air Act, but not the Federal act. The area has attained both State and Federal ambient air quality standards for carbon monoxide.

The California Emissions Estimator Model (CalEEMod) Version 2013.2.2 was used to predict emissions from construction and operation of the site assuming full build out of the project. The project land use types and size, and trip generation rate were input to CalEEMod.

Construction Fugitive Dust

During grading and construction activities, dust would be generated. Most of the dust would result during grading activities. The amount of dust generated would be highly variable and is dependent on the size of the area disturbed at any given time, amount of activity, soil conditions, and meteorological conditions. Typical winds during late spring through summer are from the south or southwest. Nearby receptors could be adversely affected by dust generated during construction activities. The BAAQMD CEQA Air Quality Guidelines consider these impacts to be less than significant if best management practices are employed to reduce these emissions. This impact is considered significant unless appropriate measures are implemented to reduce fugitive dust generated by the project. *Implementation of Mitigation Measure AQ-1 would reduce this impact to a level of less-than-significant.*

Construction Emissions Modeling Methodology

CalEEMod provided average daily and annual emissions for each phase of construction. CalEEMod provides emission estimates for both on-site and off-site construction activities. On-site activities are primarily made up of construction equipment emissions, while off-site activity includes worker and vendor traffic. A construction build-out scenario, including anticipated equipment to be used, was provided by the project applicant. *Attachment 1* includes the CalEEMod output for construction and operational emissions. Refined emissions modeling of $PM_{2.5}$ exhaust from of on-site activities was conducted as part of the construction health risk assessment addressed later in this report.

Land Use Descriptions
The land uses input to CalEEMod included 430,000 square feet (s.f.) "General Office Building", 700-space "Unenclosed Parking with Elevator", and 900-space "Unenclosed Parking with Elevator". The project size entered was 6.9 acres for work on the BART property (office building and parking structure) and 2 acres for the Stoneridge Plaza site (parking structure).

Schedule, Phases and Equipment
The modeling scenario assumes that the project would be built out over a period of approximately 16 months beginning in early summer of 2015. Equipment type, quantity, number of days, and hours per day were input to the CalEEMod model. The applicant provided the phased construction schedule that was input to CalEEMod.

Construction Traffic
CalEEMod construction traffic defaults were used. In addition, vendor truck trips were added to reflect the import of 3,325 cubic yards of cement and 2,667 cubic yards of asphalt anticipated.

Construction Period Emissions

Table 4 shows estimated average daily construction emissions of ROG, NO_X, PM_{10} exhaust, and $PM_{2.5}$ exhaust during construction of both sites. As indicated in Table 4, predicted project emissions would not exceed the BAAQMD recommended significance thresholds.

Table 4. Construction Period Emissions, Average Daily Emissions (pounds per day)

Scenario	ROG	NOx	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
2014 Construction emissions (tons)	0.33 tons	2.60 tons	0.13 tons	0.12 tons
2015 Construction emissions (tons	8.24 tons	5.88 tons	0.27 tons	0.25 tons
Average daily emissions (pounds)[1]	51.0 lbs.	50.5 lbs.	2.4 lbs.	2.2 lbs.
BAAQMD Thresholds (pounds per day)	*54* lbs.	*54* lbs.	*82* lbs.	*54* lbs.
Exceed Threshold?	***No***	***No***	***No***	***No***

Notes:
[1] Assumes 336 workdays.

Operational Period Emissions Modeling Methodology

Operational air emissions from the project would be generated primarily from autos driven by employees and delivery trucks. Evaporative emissions from architectural coatings and maintenance products are other typical emissions from commercial uses. CalEEMod was used to predict emissions from operation of the site assuming full build out of the proposed expansion. The project land use types and size, and trip generation rate were input to CalEEMod. Adjustments to the model are described below. Model output worksheets are included in *Attachment 1*.

Year of Analysis:
Emissions associated with vehicle travel depend on the year of analysis because emission control technology requirements are phased-in over time. Therefore, the earlier the year analyzed in the model, the higher the emission rates CalEEMod uses. The earliest year the project could possibly be constructed and begin operating would be 2017. Use of the this date is considered conservative, as emissions associated with build-out later than 2017 would be lower.

Trip Generation Rates:
CalEEMod allows the user to enter specific trip generation rates. Hexagon Transportation Consultants provided trip generation rates for the project by land use type, which were entered

into the model. Hexagon also provided specific transit reductions of 3 percent for the proposed for the project, which were input to the model. The resulting daily trip rate was 8.97 trips per thousand square feet of office uses.

Trip Characteristics
The default trip lengths and trip types specified by CalEEMod were used.

Project Annual and Daily Emissions
Table 5 reports the predicted 2017 annual emissions (in tons per year) and average daily operational emissions (in pounds per day). As shown in Table 5, average daily and annual emissions of ROG, NOx, PM_{10} or $PM_{2.5}$ emissions associated with operation would not exceed the BAAQMD significance thresholds.

Table 5. Air Pollutant Emissions from Operation of the Project

Scenario	ROG	NOx	PM_{10}	$PM_{2.5}$
2017 Annual	6.57 tons	4.61 tons	2.68 tons	0.78 tons
Annual Emission Thresholds	*10*	*10*	*15*	*10*
Exceed Threshold?	***No***	***No***	***No***	***No***
2017 Average Daily Emissions	36.0 pounds	25.3 pounds	14.7 pounds	4.3 pounds
Daily Emission Thresholds	*54*	*54*	*82*	*54*
Exceed Threshold?	***No***	***No***	***No***	***No***

Mitigation Measure AQ-1: Include basic measures to control dust and exhaust during construction.

During any construction ground disturbance, implement measures to control dust and exhaust. Implementation of the measures recommended by BAAQMD and listed below would reduce the air quality impacts associated with grading and new construction to a less than significant. The contractors shall implement the following Best Management Practices that are required of all construction projects:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

4. All vehicle speeds on unpaved roads shall be limited to 15 mph.

5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

8. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Impact 2: Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

As discussed under Impact 1, the project would not have operational ROG and NO_X emissions that exceed the significance thresholds adopted by BAAQMD. Therefore, the project would not contribute substantially to existing or projected violations of those standards. Carbon monoxide emissions from traffic generated by the project would be the pollutant of greatest concern at the local level. Congested intersections with a large volume of traffic have the greatest potential to cause high-localized concentrations of carbon monoxide. Air pollutant monitoring data indicate that carbon monoxide levels have been at healthy levels (i.e., below State and Federal standards) in the Bay Area since the early 1990s. As a result, the region has been designated as attainment for the standard. There is an ambient air quality monitoring station in Livermore that measures carbon monoxide concentrations. The highest measured level over any 8-hour averaging period during the last 3 years is less than 2.0 parts per million (ppm), compared to the ambient air quality standard of 9.0 ppm. The roadways affected by the proposed project have relatively low traffic volumes compared to the busier intersections in the Bay Area. BAAQMD screening guidance indicates that projects would have a less than significant impact to carbon monoxide levels if project traffic projections indicate traffic levels would not increase at any affected intersection to more than 44,000 vehicles per hour. The intersections affected by the proposed project have much lower traffic volumes (less than 10,000 vehicles per hour). Therefore, the change in traffic caused by the proposed project would be minimal and the project would not cause or contribute to a violation of an ambient air quality standard. As a result, the project would have a *less-than-significant* impact.

Impact 3: Expose sensitive receptors to substantial pollutant concentrations?

Project impacts related to increased health risk can occur either by introducing a new sensitive receptor, such as a residential use, in proximity to an existing source of TACs or by introducing a

new source of TACs with the potential to adversely affect existing sensitive receptors in the project vicinity. The BAAQMD recommends using a 1,000-foot screening radius around a project site for purposes of identifying community health risk from siting a new sensitive receptor or a new source of TACs. The proposed project would not introduce new sensitive receptors (residences) to the project site. Typical operation of the project would not expose sensitive receptors to TAC emissions. However, construction activities would temporarily have TAC emissions that could affect sensitive receptors in the project vicinity.

Construction Period

Emissions from construction of the proposed project would expose nearby sensitive receptors (i.e., residences) to elevated levels of TACs. Construction equipment and trucks fueled by diesel emit DPM, which is a TAC. The closest existing residences to the project site are located north of the project site, in Dublin across Interstate 580 (see Figure 2). Residences are also located south of the project site along Stoneridge Mall Road. A health risk assessment of the project construction activities was conducted that evaluated potential health effects at nearby sensitive receptors from construction emissions of DPM. A dispersion model was used to predict the off-site concentrations resulting from project construction so that lifetime cancer risks could be predicted. Figure 2 shows the project site and sensitive receptor locations (residences) used in the air quality dispersion modeling analysis where potential health impacts were evaluated.

On-Site Construction TAC Emissions

This refined health risk assessment focused on modeling on-site construction activity using construction fleet information included in the project design. Construction period emissions were modeled using the California Emissions Estimator Model, Version 2013.2.2 (CalEEMod) along with projected construction activity. The number and types of construction equipment and diesel vehicles, along with the anticipated length of their use for different phases of construction, were based on the provided site-specific construction activity schedule. Construction of the project is expected to occur over about a 16-month period beginning in June of 2015.

The CalEEMod model provided total annual $PM_{2.5}$ exhaust emissions (assumed to be DPM) for the off-road construction equipment and for exhaust emissions from on-road vehicles (haul trucks, vendor trucks, and worker vehicles), with total emissions of 0.3278 tons (656 pounds) over the construction period. The on-road emissions are the result of haul truck travel during demolition, grading, and construction activities, and from worker travel and vendor deliveries during building construction. A trip length of 0.3 miles was used to represent vehicle travel while at or near the construction site. It was assumed that these emissions from on-road vehicles traveling at or near the site would occur at the construction site. Fugitive $PM_{2.5}$ dust emissions were calculated by CalEEMod as 0.0103 tons (21 pounds) over the entire construction period. The project health risk calculations are provided in *Attachment 2*.

Dispersion Modeling

The U.S. EPA ISCST3 dispersion model was used to predict concentrations of DPM at existing sensitive receptors in the vicinity of the project site. The ISCST3 modeling utilized area sources

to represent the on-site construction emissions in different construction areas of the project site. Two area sources were used to model DPM exhaust emissions and two area sources were used for fugitive $PM_{2.5}$ dust emissions. Emissions were distributed evenly across the each of the area sources. These areas are shown on Figure 2. To represent the construction equipment exhaust emissions, an emission release height of six meters (20 feet) was used for the area sources. The elevated source height reflects the height of the equipment exhaust pipes and buoyancy of the exhaust plume. For modeling fugitive $PM_{2.5}$ emissions, a near ground level release height of two meters (6.6 feet) was used for the area sources. Emissions from truck travel at the project site were included in the area sources. Emissions were modeled as occurring daily between 7 am - 4 pm.

A five-year set of hourly meteorological data (2001 - 2005) for Pleasanton obtained from BAAQMD was used in the modeling. Annual DPM concentrations from construction activities were predicted for 2015 and 2016, with the annual average concentrations based on the five years of meteorological data. DPM concentrations were calculated in the nearest residential areas using receptors with a height of 1.5 meters (4.9 feet).

Cancer Risk and Hazards

The maximum-modeled annual DPM concentration occurred in the southeast corner of the residential area north of I-580 north of the project site. The location of this receptor is identified on Figure 2. Increased cancer risks were calculated using the modeled annual concentrations and BAAQMD recommended risk assessment methods for a child exposure (3rd trimester through 2 years of age), student exposure (9 years), and for an adult exposure[6]. Since the modeling was conducted under the conservative assumption that emissions occurred for a full year during each construction year, the default BAAQMD exposure period of 350 days per year was used[7].

Results of this assessment indicate that for project construction the incremental child cancer risk at the maximally exposed individual (MEI) receptor would be 3.6 in one million and the adult incremental cancer risk would be 0.2 in one million. The increased cancer risk for both the child and adult exposures would be lower than the BAAQMD significance threshold of a cancer risk of 10 in one million and would not be considered a significant impact.

Potential non-cancer health effects due to chronic exposure to DPM were also evaluated. The chronic inhalation reference exposure level (REL) for DPM is 5 micrograms per cubic meter ($\mu g/m^3$). The maximum predicted annual DPM concentration was 0.027 $\mu g/m^3$, which is much lower than the REL. The Hazard Index (HI), which is the ratio of the annual DPM concentration to the REL, is 0.005. This HI is much lower than the BAAQMD significance criterion of a HI greater than 1.0. The modeled maximum annual $PM_{2.5}$ concentration was 0.028 $\mu g/m^3$, occurring at the same location as the maximum cancer risk. This $PM_{2.5}$ concentration is below the BAAQMD threshold of 0.3 $\mu g/m^3$ used to judge the significance of impacts for $PM_{2.5}$.

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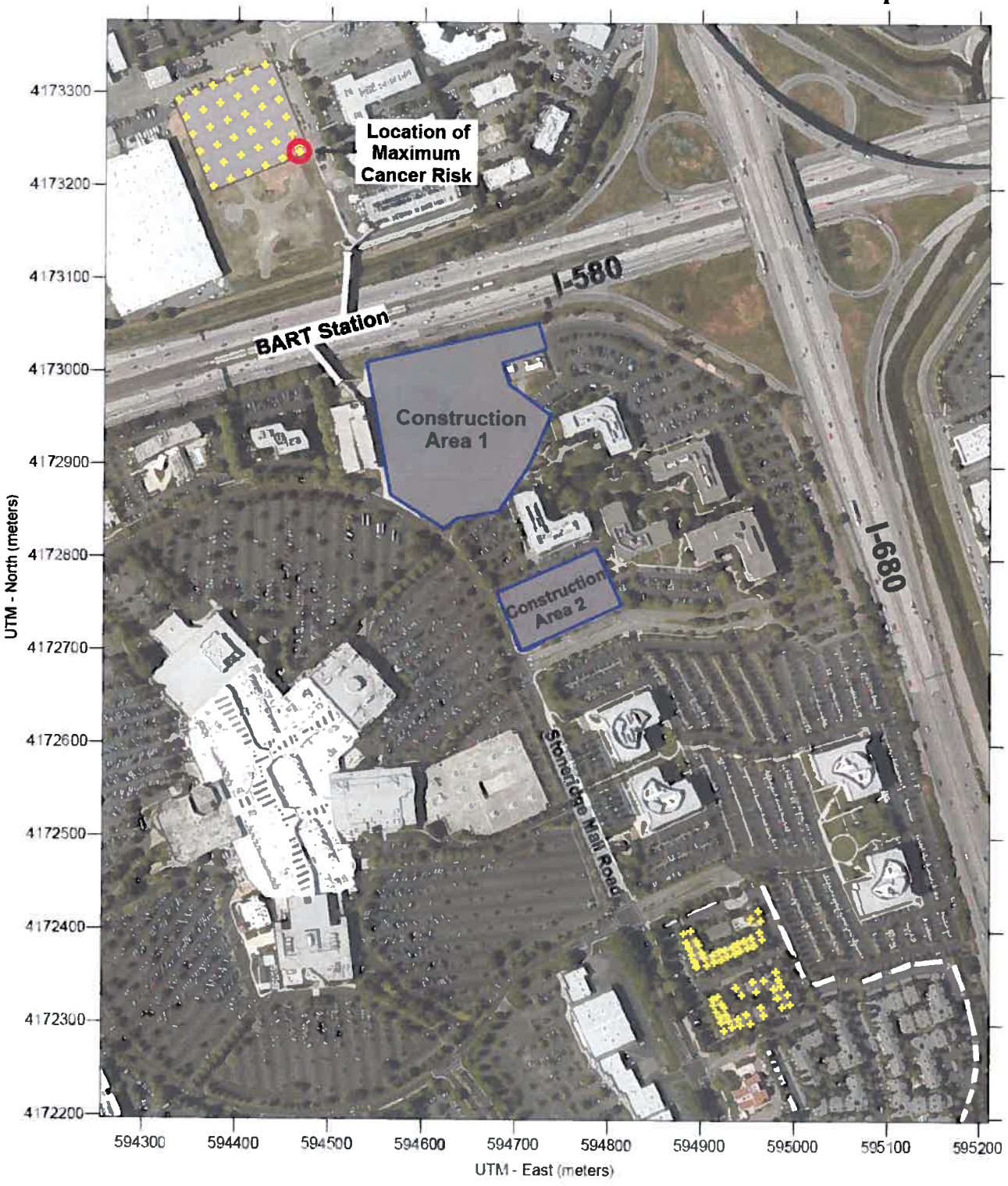
[6] Bay Area Air Quality Management District (BAAQMD), 2012, *Recommended Methods for Screening and Modeling Local Risks and Hazards*, May.

[7] Bay Area Air Quality Management District (BAAQMD), 2010a, *Air Toxics NSR Program Health Risk Screening Analysis Guidelines*, January.

Results indicate that excess cancer risks, annual PM2.5 concentrations, and Hazard Index are below the significance thresholds. As a result, the project would have a *less-than-significant* impact.

Figure 2 – Project Site Construction Areas and Off-Site Residential Receptors



Attachment 1: CalEEMod Output for Construction and Operational Emissions

Stoneridge Corporate Plaza Expansion

Bay Area AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	430.00	1000sqft	6.90	430,000.00	0
Unenclosed Parking with Elevator	700.00	Space	0.00	280,000.00	0
Unenclosed Parking with Elevator	900.00	Space	2.00	360,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2017
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	349	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Using PG&E CPUC forecasted emission rate for 2018

Land Use - From Traffic Report. 700-space parking structure included in 6.9-acre site

Construction Phase - Based on provided construction schedule

Off-road Equipment - Based on Construction list provided

Off-road Equipment - Based on Construction list provided

Off-road Equipment - Based on provided construction list

Off-road Equipment - Based on provided construction list

Off-road Equipment - Based on construction list

Off-road Equipment - Based on Construction list provided

Off-road Equipment - Based on provided construction list

Off-road Equipment - Based on provided construction list

Trips and VMT - No export haul trips, but simulating 100 miles of water truck travel during grading = 5 trips (at 20 mi) * 55 days Cement trucks entered at vendor trip lengths

Demolition - Based on construction list provided

Grading - Entered amount of material moved, but not exported

Architectural Coating - Reduced VOC Paint content per BAAQMD Regulations

Vehicle Trips - Entered trip generation rate from traffic with 3% transit reduction and applied to weekends

Construction Off-road Equipment Mitigation - Tier 2 and BMPs for fugitive dust

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	150.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	150.00
tblConstructionPhase	NumDays	20.00	80.00
tblConstructionPhase	NumDays	230.00	250.00
tblConstructionPhase	NumDays	20.00	15.00
tblConstructionPhase	NumDays	20.00	25.00
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	PhaseEndDate	1/16/2017	6/13/2016
tblConstructionPhase	PhaseEndDate	9/30/2016	9/26/2016

tblConstructionPhase	PhaseEndDate	8/4/2015	8/21/2015
tblConstructionPhase	PhaseEndDate	7/18/2016	6/6/2016
tblConstructionPhase	PhaseEndDate	7/22/2015	7/7/2015
tblConstructionPhase	PhaseEndDate	10/30/2015	10/16/2015
tblConstructionPhase	PhaseStartDate	9/27/2016	2/23/2016
tblConstructionPhase	PhaseStartDate	10/17/2015	10/13/2015
tblConstructionPhase	PhaseStartDate	7/8/2015	7/27/2015
tblConstructionPhase	PhaseStartDate	6/14/2016	5/3/2016
tblConstructionPhase	PhaseStartDate	6/25/2015	6/10/2015
tblConstructionPhase	PhaseStartDate	8/22/2015	8/10/2015
tblGrading	AcresOfGrading	9.00	10.00
tblGrading	MaterialExported	0.00	14,800.00
tblLandUse	LotAcreage	9.87	6.90
tblLandUse	LotAcreage	6.30	0.00
tblLandUse	LotAcreage	8.10	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	8.00	5.30
tblOffRoadEquipment	UsageHours	7.00	6.40
tblOffRoadEquipment	UsageHours	8.00	5.10
tblOffRoadEquipment	UsageHours	8.00	4.80
tblOffRoadEquipment	UsageHours	8.00	3.60
tblOffRoadEquipment	UsageHours	8.00	4.80
tblOffRoadEquipment	UsageHours	8.00	4.80
tblOffRoadEquipment	UsageHours	8.00	4.80
tblOffRoadEquipment	UsageHours	8.00	5.30
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	1.30
tblProjectCharacteristics	CO2IntensityFactor	641.35	349
tblProjectCharacteristics	OperationalYear	2014	2017
tblTripsAndVMT	HaulingTripLength	20.00	7.30
tblTripsAndVMT	HaulingTripNumber	1,463.00	275.00
tblTripsAndVMT	HaulingTripNumber	0.00	6,650.00
tblVehicleTrips	ST_TR	2.37	1.93
tblVehicleTrips	SU_TR	0.98	0.80
tblVehicleTrips	WD_TR	11.01	8.97

2.0 Emissions Summary

Attachment 1: CalEEMod Modeling

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	0.3277	2.5951	2.8140	4.3400e-003	0.1969	0.1291	0.3259	0.0490	0.1191	0.1681	0.0000	384.7103	384.7103	0.0459	0.0000	385.6733
2016	8.2415	5.8801	7.5680	0.0127	0.5135	0.2654	0.7790	0.1389	0.2466	0.3855	0.0000	1,086.8977	1,086.8977	0.1096	0.0000	1,089.1987
Total	**8.5692**	**8.4751**	**10.3820**	**0.0170**	**0.7104**	**0.3945**	**1.1049**	**0.1879**	**0.3657**	**0.5536**	**0.0000**	**1,471.6080**	**1,471.6080**	**0.1554**	**0.0000**	**1,474.8720**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	0.3277	2.5951	2.8140	4.3400e-003	0.1713	0.1291	0.3004	0.0453	0.1191	0.1644	0.0000	384.7101	384.7101	0.0459	0.0000	385.6731
2016	8.2415	5.8801	7.5680	0.0127	0.5135	0.2654	0.7790	0.1389	0.2466	0.3855	0.0000	1,086.8973	1,086.8973	0.1096	0.0000	1,089.1984
Total	**8.5692**	**8.4751**	**10.3820**	**0.0170**	**0.6848**	**0.3945**	**1.0794**	**0.1842**	**0.3657**	**0.5499**	**0.0000**	**1,471.6075**	**1,471.6075**	**0.1554**	**0.0000**	**1,474.8715**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**3.60**	**0.00**	**2.31**	**1.96**	**0.00**	**0.67**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	4.7387	1.8000e-004	0.0190	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0363	0.0363	1.0000e-004	0.0000	0.0384
Energy	0.0399	0.3630	0.3049	2.1800e-003		0.0276	0.0276		0.0276	0.0276	0.0000	2,022.5159	2,022.5159	0.1428	0.0352	2,036.4335
Mobile	1.7916	4.2438	18.3995	0.0372	2.5985	0.0550	2.6535	0.6974	0.0506	0.7480	0.0000	2,866.6989	2,866.6989	0.1190	0.0000	2,869.1969
Waste						0.0000	0.0000		0.0000	0.0000	81.1761	0.0000	81.1761	4.7974	0.0000	181.9208
Water						0.0000	0.0000		0.0000	0.0000	24.2463	91.4178	115.6641	2.4979	0.0604	186.8363
Total	**6.5702**	**4.6070**	**18.7234**	**0.0394**	**2.5985**	**0.0827**	**2.6812**	**0.6974**	**0.0783**	**0.7756**	**105.4224**	**4,980.6688**	**5,086.0912**	**7.5572**	**0.0956**	**5,274.4260**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	4.7387	1.8000e-004	0.0190	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0363	0.0363	1.0000e-004	0.0000	0.0384
Energy	0.0399	0.3630	0.3049	2.1800e-003		0.0276	0.0276		0.0276	0.0276	0.0000	2,022.5159	2,022.5159	0.1428	0.0352	2,036.4335
Mobile	1.7916	4.2438	18.3995	0.0372	2.5985	0.0550	2.6535	0.6974	0.0506	0.7480	0.0000	2,866.6989	2,866.6989	0.1190	0.0000	2,869.1969
Waste						0.0000	0.0000		0.0000	0.0000	81.1761	0.0000	81.1761	4.7974	0.0000	181.9208
Water						0.0000	0.0000		0.0000	0.0000	24.2463	91.4178	115.6641	2.4975	0.0603	186.7976
Total	**6.5702**	**4.6070**	**18.7234**	**0.0394**	**2.5985**	**0.0827**	**2.6812**	**0.6974**	**0.0783**	**0.7756**	**105.4224**	**4,980.6688**	**5,086.0912**	**7.5567**	**0.0955**	**5,274.3873**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.01**	**0.09**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/4/2015	6/24/2015	5	15	
2	Site Preparation	Site Preparation	6/10/2015	7/7/2015	5	20	
3	Grading	Grading	7/27/2015	8/21/2015	5	20	
4	Trenching	Trenching	8/10/2015	10/16/2015	5	50	
5	Building Construction	Building Construction	10/13/2015	9/26/2016	5	250	
6	Interior Construction	Architectural Coating	2/23/2016	6/13/2016	5	80	
7	Paving	Paving	5/3/2016	6/6/2016	5	25	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,605,000; Non-Residential Outdoor: 535,000 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	5.30	81	0.73
Demolition	Excavators	1	8.00	162	0.38
Demolition	Rubber Tired Dozers	1	5.30	255	0.40
Site Preparation	Rubber Tired Dozers	0	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	5.10	162	0.38
Grading	Graders	2	3.60	174	0.41
Grading	Rubber Tired Dozers	0	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Trenching	Trenchers	2	8.00	80	0.50
Building Construction	Cranes	2	6.40	226	0.29
Building Construction	Forklifts	2	4.80	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	4	1.30	46	0.45
Interior Construction	Aerial Lifts	4	7.50	62	0.31
Interior Construction	Air Compressors	2	8.00	78	0.48
Paving	Pavers	2	4.80	125	0.42
Paving	Paving Equipment	3	4.80	130	0.36
Paving	Rollers	2	4.80	80	0.38
Paving	Tractors/Loaders/Backhoes	4	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	3	8.00	0.00	247.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	4	10.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	275.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	5.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	12	406.00	175.00	6,650.00	12.40	7.30	7.30	LD_Mix	HDT_Mix	HHDT
Interior Construction	6	81.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	11	28.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0268	0.0000	0.0268	4.0500e-003	0.0000	4.0500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0130	0.1328	0.0992	1.1000e-004		7.0600e-003	7.0600e-003		6.6500e-003	6.6500e-003	0.0000	10.6612	10.6612	2.6700e-003	0.0000	10.7173
Total	**0.0130**	**0.1328**	**0.0992**	**1.1000e-004**	**0.0268**	**7.0600e-003**	**0.0338**	**4.0500e-003**	**6.6500e-003**	**0.0107**	**0.0000**	**10.6612**	**10.6612**	**2.6700e-003**	**0.0000**	**10.7173**

3.2 Demolition - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.3100e-003	0.0429	0.0343	9.0000e-005	2.0800e-003	6.4000e-004	2.7200e-003	5.7000e-004	5.9000e-004	1.1600e-003	0.0000	8.5722	8.5722	7.0000e-005	0.0000	8.5737
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	3.7000e-004	3.5800e-003	1.0000e-005	5.4000e-004	0.0000	5.5000e-004	1.4000e-004	0.0000	1.5000e-004	0.0000	0.5114	0.5114	3.0000e-005	0.0000	0.5121
Total	**3.5600e-003**	**0.0433**	**0.0379**	**1.0000e-004**	**2.6200e-003**	**6.4000e-004**	**3.2700e-003**	**7.1000e-004**	**5.9000e-004**	**1.3100e-003**	**0.0000**	**9.0837**	**9.0837**	**1.0000e-004**	**0.0000**	**9.0858**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.4200e-003	0.0000	5.4200e-003	8.2000e-004	0.0000	8.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0130	0.1328	0.0992	1.1000e-004		7.0600e-003	7.0600e-003		6.6500e-003	6.6500e-003	0.0000	10.6612	10.6612	2.6700e-003	0.0000	10.7173
Total	**0.0130**	**0.1328**	**0.0992**	**1.1000e-004**	**5.4200e-003**	**7.0600e-003**	**0.0125**	**8.2000e-004**	**6.6500e-003**	**7.4700e-003**	**0.0000**	**10.6612**	**10.6612**	**2.6700e-003**	**0.0000**	**10.7173**

3.2 Demolition - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.3100e-003	0.0429	0.0343	9.0000e-005	2.0800e-003	6.4000e-004	2.7200e-003	5.7000e-004	5.9000e-004	1.1600e-003	0.0000	8.5722	8.5722	7.0000e-005	0.0000	8.5737
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	3.7000e-004	3.5800e-003	1.0000e-005	5.4000e-004	0.0000	5.5000e-004	1.4000e-004	0.0000	1.5000e-004	0.0000	0.5114	0.5114	3.0000e-005	0.0000	0.5121
Total	**3.5600e-003**	**0.0433**	**0.0379**	**1.0000e-004**	**2.6200e-003**	**6.4000e-004**	**3.2700e-003**	**7.1000e-004**	**5.9000e-004**	**1.3100e-003**	**0.0000**	**9.0837**	**9.0837**	**1.0000e-004**	**0.0000**	**9.0858**

3.3 Site Preparation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0144	0.1373	0.0970	1.2000e-004		0.0108	0.0108		9.8900e-003	9.8900e-003	0.0000	11.8837	11.8837	3.5500e-003	0.0000	11.9582
Total	**0.0144**	**0.1373**	**0.0970**	**1.2000e-004**	**0.0000**	**0.0108**	**0.0108**	**0.0000**	**9.8900e-003**	**9.8900e-003**	**0.0000**	**11.8837**	**11.8837**	**3.5500e-003**	**0.0000**	**11.9582**

3.3 Site Preparation - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.2000e-004	6.1000e-004	5.9600e-003	1.0000e-005	9.1000e-004	1.0000e-005	9.2000e-004	2.4000e-004	1.0000e-005	2.5000e-004	0.0000	0.8524	0.8524	5.0000e-005	0.0000	0.8534
Total	**4.2000e-004**	**6.1000e-004**	**5.9600e-003**	**1.0000e-005**	**9.1000e-004**	**1.0000e-005**	**9.2000e-004**	**2.4000e-004**	**1.0000e-005**	**2.5000e-004**	**0.0000**	**0.8524**	**0.8524**	**5.0000e-005**	**0.0000**	**0.8534**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0144	0.1373	0.0970	1.2000e-004		0.0108	0.0108		9.8900e-003	9.8900e-003	0.0000	11.8837	11.8837	3.5500e-003	0.0000	11.9582
Total	**0.0144**	**0.1373**	**0.0970**	**1.2000e-004**	**0.0000**	**0.0108**	**0.0108**	**0.0000**	**9.8900e-003**	**9.8900e-003**	**0.0000**	**11.8837**	**11.8837**	**3.5500e-003**	**0.0000**	**11.9582**

3.3 Site Preparation - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.2000e-004	6.1000e-004	5.9600e-003	1.0000e-005	9.1000e-004	1.0000e-005	9.2000e-004	2.4000e-004	1.0000e-005	2.5000e-004	0.0000	0.8524	0.8524	5.0000e-005	0.0000	0.8534
Total	**4.2000e-004**	**6.1000e-004**	**5.9600e-003**	**1.0000e-005**	**9.1000e-004**	**1.0000e-005**	**9.2000e-004**	**2.4000e-004**	**1.0000e-005**	**2.5000e-004**	**0.0000**	**0.8524**	**0.8524**	**5.0000e-005**	**0.0000**	**0.8534**

3.4 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.3000e-003	0.0000	5.3000e-003	5.7000e-004	0.0000	5.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0293	0.2971	0.1857	2.5000e-004		0.0193	0.0193		0.0178	0.0178	0.0000	23.6743	23.6743	7.0700e-003	0.0000	23.8227
Total	**0.0293**	**0.2971**	**0.1857**	**2.5000e-004**	**5.3000e-003**	**0.0193**	**0.0246**	**5.7000e-004**	**0.0178**	**0.0183**	**0.0000**	**23.6743**	**23.6743**	**7.0700e-003**	**0.0000**	**23.8227**

3.4 Grading - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.6800e-003	0.0478	0.0382	1.0000e-004	2.3200e-003	7.1000e-004	3.0300e-003	6.4000e-004	6.5000e-004	1.2900e-003	0.0000	9.5440	9.5440	8.0000e-005	0.0000	9.5457
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.5000e-004	1.2300e-003	0.0119	2.0000e-005	1.8100e-003	2.0000e-005	1.8300e-003	4.8000e-004	1.0000e-005	5.0000e-004	0.0000	1.7048	1.7048	1.0000e-004	0.0000	1.7068
Total	**4.5300e-003**	**0.0490**	**0.0501**	**1.2000e-004**	**4.1300e-003**	**7.3000e-004**	**4.8600e-003**	**1.1200e-003**	**6.6000e-004**	**1.7900e-003**	**0.0000**	**11.2487**	**11.2487**	**1.8000e-004**	**0.0000**	**11.2525**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0700e-003	0.0000	1.0700e-003	1.2000e-004	0.0000	1.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0293	0.2971	0.1857	2.5000e-004		0.0193	0.0193		0.0178	0.0178	0.0000	23.6743	23.6743	7.0700e-003	0.0000	23.8227
Total	**0.0293**	**0.2971**	**0.1857**	**2.5000e-004**	**1.0700e-003**	**0.0193**	**0.0204**	**1.2000e-004**	**0.0178**	**0.0179**	**0.0000**	**23.6743**	**23.6743**	**7.0700e-003**	**0.0000**	**23.8227**

3.4 Grading - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.6800e-003	0.0478	0.0382	1.0000e-004	2.3200e-003	7.1000e-004	3.0300e-003	6.4000e-004	6.5000e-004	1.2900e-003	0.0000	9.5440	9.5440	8.0000e-005	0.0000	9.5457
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.5000e-004	1.2300e-003	0.0119	2.0000e-005	1.8100e-003	2.0000e-005	1.8300e-003	4.8000e-004	1.0000e-005	5.0000e-004	0.0000	1.7048	1.7048	1.0000e-004	0.0000	1.7068
Total	**4.5300e-003**	**0.0490**	**0.0501**	**1.2000e-004**	**4.1300e-003**	**7.3000e-004**	**4.8600e-003**	**1.1200e-003**	**6.6000e-004**	**1.7900e-003**	**0.0000**	**11.2487**	**11.2487**	**1.8000e-004**	**0.0000**	**11.2525**

3.5 Trenching - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0288	0.2532	0.1416	1.7000e-004		0.0198	0.0198		0.0182	0.0182	0.0000	16.4927	16.4927	4.9200e-003	0.0000	16.5961
Total	**0.0288**	**0.2532**	**0.1416**	**1.7000e-004**		**0.0198**	**0.0198**		**0.0182**	**0.0182**	**0.0000**	**16.4927**	**16.4927**	**4.9200e-003**	**0.0000**	**16.5961**

3.5 Trenching - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.3000e-004	7.7000e-004	7.4500e-003	1.0000e-005	1.1300e-003	1.0000e-005	1.1400e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.0655	1.0655	6.0000e-005	0.0000	1.0668
Total	**5.3000e-004**	**7.7000e-004**	**7.4500e-003**	**1.0000e-005**	**1.1300e-003**	**1.0000e-005**	**1.1400e-003**	**3.0000e-004**	**1.0000e-005**	**3.1000e-004**	**0.0000**	**1.0655**	**1.0655**	**6.0000e-005**	**0.0000**	**1.0668**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0288	0.2532	0.1416	1.7000e-004		0.0198	0.0198		0.0182	0.0182	0.0000	16.4926	16.4926	4.9200e-003	0.0000	16.5960
Total	**0.0288**	**0.2532**	**0.1416**	**1.7000e-004**		**0.0198**	**0.0198**		**0.0182**	**0.0182**	**0.0000**	**16.4926**	**16.4926**	**4.9200e-003**	**0.0000**	**16.5960**

3.5 Trenching - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.3000e-004	7.7000e-004	7.4500e-003	1.0000e-005	1.1300e-003	1.0000e-005	1.1400e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.0655	1.0655	6.0000e-005	0.0000	1.0668
Total	**5.3000e-004**	**7.7000e-004**	**7.4500e-003**	**1.0000e-005**	**1.1300e-003**	**1.0000e-005**	**1.1400e-003**	**3.0000e-004**	**1.0000e-005**	**3.1000e-004**	**0.0000**	**1.0655**	**1.0655**	**6.0000e-005**	**0.0000**	**1.0668**

3.6 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0964	0.9142	0.5064	7.2000e-004		0.0588	0.0588		0.0544	0.0544	0.0000	68.0076	68.0076	0.0202	0.0000	68.4319
Total	**0.0964**	**0.9142**	**0.5064**	**7.2000e-004**		**0.0588**	**0.0588**		**0.0544**	**0.0544**	**0.0000**	**68.0076**	**68.0076**	**0.0202**	**0.0000**	**68.4319**

3.6 Building Construction - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0142	0.1097	0.1763	2.2000e-004	0.0165	1.5000e-003	0.0180	4.2000e-003	1.3800e-003	5.5800e-003	0.0000	20.3400	20.3400	1.9000e-004	0.0000	20.3439
Vendor	0.0725	0.5849	0.8047	1.2100e-003	0.0327	9.4800e-003	0.0421	9.3700e-003	8.7200e-003	0.0181	0.0000	111.0418	111.0418	1.0000e-003	0.0000	111.0628
Worker	0.0499	0.0722	0.7017	1.2700e-003	0.1068	9.5000e-004	0.1078	0.0284	8.7000e-004	0.0293	0.0000	100.3590	100.3590	5.8600e-003	0.0000	100.4820
Total	**0.1366**	**0.7668**	**1.6827**	**2.7000e-003**	**0.1560**	**0.0119**	**0.1679**	**0.0420**	**0.0110**	**0.0529**	**0.0000**	**231.7407**	**231.7407**	**7.0500e-003**	**0.0000**	**231.8887**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0964	0.9142	0.5064	7.2000e-004		0.0588	0.0588		0.0544	0.0544	0.0000	68.0075	68.0075	0.0202	0.0000	68.4318
Total	**0.0964**	**0.9142**	**0.5064**	**7.2000e-004**		**0.0588**	**0.0588**		**0.0544**	**0.0544**	**0.0000**	**68.0075**	**68.0075**	**0.0202**	**0.0000**	**68.4318**

3.6 Building Construction - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0142	0.1097	0.1763	2.2000e-004	0.0165	1.5000e-003	0.0180	4.2000e-003	1.3800e-003	5.5800e-003	0.0000	20.3400	20.3400	1.9000e-004	0.0000	20.3439
Vendor	0.0725	0.5849	0.8047	1.2100e-003	0.0327	9.4800e-003	0.0421	9.3700e-003	8.7200e-003	0.0181	0.0000	111.0418	111.0418	1.0000e-003	0.0000	111.0628
Worker	0.0499	0.0722	0.7017	1.2700e-003	0.1068	9.5000e-004	0.1078	0.0284	8.7000e-004	0.0293	0.0000	100.3590	100.3590	5.8600e-003	0.0000	100.4820
Total	**0.1366**	**0.7668**	**1.6827**	**2.7000e-003**	**0.1560**	**0.0119**	**0.1679**	**0.0420**	**0.0110**	**0.0529**	**0.0000**	**231.7407**	**231.7407**	**7.0500e-003**	**0.0000**	**231.8887**

3.6 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3026	2.8979	1.6533	2.4000e-003		0.1834	0.1834		0.1694	0.1694	0.0000	222.7766	222.7766	0.0665	0.0000	224.1732
Total	**0.3026**	**2.8979**	**1.6533**	**2.4000e-003**		**0.1834**	**0.1834**		**0.1694**	**0.1694**	**0.0000**	**222.7766**	**222.7766**	**0.0665**	**0.0000**	**224.1732**

3.6 Building Construction - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0418	0.3156	0.5493	7.3000e-004	0.0193	3.7300e-003	0.0230	5.2000e-003	3.4300e-003	8.6300e-003	0.0000	66.5431	66.5431	5.5000e-004	0.0000	66.5547
Vendor	0.2139	1.6838	2.4851	4.0000e-003	0.1081	0.0251	0.1332	0.0310	0.0231	0.0541	0.0000	363.3155	363.3155	2.9200e-003	0.0000	363.3768
Worker	0.1478	0.2142	2.0746	4.2100e-003	0.3536	2.9500e-003	0.3565	0.0941	2.7100e-003	0.0968	0.0000	320.8475	320.8475	0.0177	0.0000	321.2187
Total	**0.4034**	**2.2136**	**5.1090**	**8.9400e-003**	**0.4810**	**0.0318**	**0.5128**	**0.1303**	**0.0292**	**0.1595**	**0.0000**	**750.7061**	**750.7061**	**0.0211**	**0.0000**	**751.1502**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3026	2.8979	1.6533	2.4000e-003		0.1834	0.1834		0.1694	0.1694	0.0000	222.7763	222.7763	0.0665	0.0000	224.1729
Total	**0.3026**	**2.8979**	**1.6533**	**2.4000e-003**		**0.1834**	**0.1834**		**0.1694**	**0.1694**	**0.0000**	**222.7763**	**222.7763**	**0.0665**	**0.0000**	**224.1729**

3.6 Building Construction - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0418	0.3156	0.5493	7.3000e-004	0.0193	3.7300e-003	0.0230	5.2000e-003	3.4300e-003	8.6300e-003	0.0000	66.5431	66.5431	5.5000e-004	0.0000	66.5547
Vendor	0.2139	1.6838	2.4851	4.0000e-003	0.1081	0.0251	0.1332	0.0310	0.0231	0.0541	0.0000	363.3155	363.3155	2.9200e-003	0.0000	363.3768
Worker	0.1478	0.2142	2.0746	4.2100e-003	0.3536	2.9500e-003	0.3565	0.0941	2.7100e-003	0.0968	0.0000	320.8475	320.8475	0.0177	0.0000	321.2187
Total	**0.4034**	**2.2136**	**5.1090**	**8.9400e-003**	**0.4810**	**0.0318**	**0.5128**	**0.1303**	**0.0292**	**0.1595**	**0.0000**	**750.7061**	**750.7061**	**0.0211**	**0.0000**	**751.1502**

3.7 Interior Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	7.4392					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0477	0.3915	0.3637	5.7000e-004		0.0267	0.0267		0.0262	0.0262	0.0000	50.5852	50.5852	0.0103	0.0000	50.8006
Total	**7.4869**	**0.3915**	**0.3637**	**5.7000e-004**		**0.0267**	**0.0267**		**0.0262**	**0.0262**	**0.0000**	**50.5852**	**50.5852**	**0.0103**	**0.0000**	**50.8006**

3.7 Interior Construction - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0123	0.0178	0.1725	3.5000e-004	0.0294	2.5000e-004	0.0296	7.8200e-003	2.3000e-004	8.0400e-003	0.0000	26.6714	26.6714	1.4700e-003	0.0000	26.7023
Total	**0.0123**	**0.0178**	**0.1725**	**3.5000e-004**	**0.0294**	**2.5000e-004**	**0.0296**	**7.8200e-003**	**2.3000e-004**	**8.0400e-003**	**0.0000**	**26.6714**	**26.6714**	**1.4700e-003**	**0.0000**	**26.7023**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	7.4392					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0477	0.3915	0.3637	5.7000e-004		0.0267	0.0267		0.0262	0.0262	0.0000	50.5852	50.5852	0.0103	0.0000	50.8005
Total	**7.4869**	**0.3915**	**0.3637**	**5.7000e-004**		**0.0267**	**0.0267**		**0.0262**	**0.0262**	**0.0000**	**50.5852**	**50.5852**	**0.0103**	**0.0000**	**50.8005**

3.7 Interior Construction - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0123	0.0178	0.1725	3.5000e-004	0.0294	2.5000e-004	0.0296	7.8200e-003	2.3000e-004	8.0400e-003	0.0000	26.6714	26.6714	1.4700e-003	0.0000	26.7023
Total	**0.0123**	**0.0178**	**0.1725**	**3.5000e-004**	**0.0294**	**2.5000e-004**	**0.0296**	**7.8200e-003**	**2.3000e-004**	**8.0400e-003**	**0.0000**	**26.6714**	**26.6714**	**1.4700e-003**	**0.0000**	**26.7023**

3.8 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0350	0.3574	0.2508	3.5000e-004		0.0233	0.0233		0.0215	0.0215	0.0000	33.2772	33.2772	0.0100	0.0000	33.4880
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0350**	**0.3574**	**0.2508**	**3.5000e-004**		**0.0233**	**0.0233**		**0.0215**	**0.0215**	**0.0000**	**33.2772**	**33.2772**	**0.0100**	**0.0000**	**33.4880**

3.8 Paving - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3300e-003	1.9200e-003	0.0186	4.0000e-005	3.1700e-003	3.0000e-005	3.2000e-003	8.4000e-004	2.0000e-005	8.7000e-004	0.0000	2.8812	2.8812	1.6000e-004	0.0000	2.8845
Total	**1.3300e-003**	**1.9200e-003**	**0.0186**	**4.0000e-005**	**3.1700e-003**	**3.0000e-005**	**3.2000e-003**	**8.4000e-004**	**2.0000e-005**	**8.7000e-004**	**0.0000**	**2.8812**	**2.8812**	**1.6000e-004**	**0.0000**	**2.8845**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0350	0.3574	0.2508	3.5000e-004		0.0233	0.0233		0.0215	0.0215	0.0000	33.2772	33.2772	0.0100	0.0000	33.4879
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0350**	**0.3574**	**0.2508**	**3.5000e-004**		**0.0233**	**0.0233**		**0.0215**	**0.0215**	**0.0000**	**33.2772**	**33.2772**	**0.0100**	**0.0000**	**33.4879**

3.8 Paving - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3300e-003	1.9200e-003	0.0186	4.0000e-005	3.1700e-003	3.0000e-005	3.2000e-003	8.4000e-004	2.0000e-005	8.7000e-004	0.0000	2.8812	2.8812	1.6000e-004	0.0000	2.8845
Total	**1.3300e-003**	**1.9200e-003**	**0.0186**	**4.0000e-005**	**3.1700e-003**	**3.0000e-005**	**3.2000e-003**	**8.4000e-004**	**2.0000e-005**	**8.7000e-004**	**0.0000**	**2.8812**	**2.8812**	**1.6000e-004**	**0.0000**	**2.8845**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.7916	4.2438	18.3995	0.0372	2.5985	0.0550	2.6535	0.6974	0.0506	0.7480	0.0000	2,866.6989	2,866.6989	0.1190	0.0000	2,869.1969
Unmitigated	1.7916	4.2438	18.3995	0.0372	2.5985	0.0550	2.6535	0.6974	0.0506	0.7480	0.0000	2,866.6989	2,866.6989	0.1190	0.0000	2,869.1969

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	3,857.10	829.90	344.00	6,984,701	6,984,701
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	3,857.10	829.90	344.00	6,984,701	6,984,701

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Unenclosed Parking with	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unenclosed Parking with	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.546114	0.062902	0.174648	0.122995	0.034055	0.004856	0.015640	0.024397	0.002087	0.003279	0.006673	0.000688	0.001667

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,627.3783	1,627.3783	0.1352	0.0280	1,638.8911
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,627.3783	1,627.3783	0.1352	0.0280	1,638.8911
NaturalGas Mitigated	0.0399	0.3630	0.3049	2.1800e-003		0.0276	0.0276		0.0276	0.0276	0.0000	395.1377	395.1377	7.5700e-003	7.2400e-003	397.5424
NaturalGas Unmitigated	0.0399	0.3630	0.3049	2.1800e-003		0.0276	0.0276		0.0276	0.0276	0.0000	395.1377	395.1377	7.5700e-003	7.2400e-003	397.5424

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	7.4046e+006	0.0399	0.3630	0.3049	2.1800e-003		0.0276	0.0276		0.0276	0.0276	0.0000	395.1377	395.1377	7.5700e-003	7.2400e-003	397.5424
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0399**	**0.3630**	**0.3049**	**2.1800e-003**		**0.0276**	**0.0276**		**0.0276**	**0.0276**	**0.0000**	**395.1377**	**395.1377**	**7.5700e-003**	**7.2400e-003**	**397.5424**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	7.4046e+006	0.0399	0.3630	0.3049	2.1800e-003		0.0276	0.0276		0.0276	0.0276	0.0000	395.1377	395.1377	7.5700e-003	7.2400e-003	397.5424
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0399**	**0.3630**	**0.3049**	**2.1800e-003**		**0.0276**	**0.0276**		**0.0276**	**0.0276**	**0.0000**	**395.1377**	**395.1377**	**7.5700e-003**	**7.2400e-003**	**397.5424**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	8.4753e+006	1,341.6717	0.1115	0.0231	1,351.1633
Unenclosed Parking with Elevator	1.0152e+006	160.7100	0.0134	2.7600e-003	161.8469
Unenclosed Parking with Elevator	789600	124.9966	0.0104	2.1500e-003	125.8809
Total		**1,627.3782**	**0.1352**	**0.0280**	**1,638.8911**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	8.4753e+006	1,341.6717	0.1115	0.0231	1,351.1633
Unenclosed Parking with Elevator	1.0152e+006	160.7100	0.0134	2.7600e-003	161.8469
Unenclosed Parking with Elevator	789600	124.9966	0.0104	2.1500e-003	125.8809
Total		**1,627.3782**	**0.1352**	**0.0280**	**1,638.8911**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	4.7387	1.8000e-004	0.0190	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0363	0.0363	1.0000e-004	0.0000	0.0384
Unmitigated	4.7387	1.8000e-004	0.0190	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0363	0.0363	1.0000e-004	0.0000	0.0384

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.5579					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.1789					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.8300e-003	1.8000e-004	0.0190	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0363	0.0363	1.0000e-004	0.0000	0.0384
Total	**4.7387**	**1.8000e-004**	**0.0190**	**0.0000**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.0363**	**0.0363**	**1.0000e-004**	**0.0000**	**0.0384**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.5579					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.1789					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.8300e-003	1.8000e-004	0.0190	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0363	0.0363	1.0000e-004	0.0000	0.0384
Total	**4.7387**	**1.8000e-004**	**0.0190**	**0.0000**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.0363**	**0.0363**	**1.0000e-004**	**0.0000**	**0.0384**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	115.6641	2.4975	0.0603	186.7976
Unmitigated	115.6641	2.4979	0.0604	186.8363

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	76.4255 / 46.8414	115.6641	2.4979	0.0604	186.8363
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**115.6641**	**2.4979**	**0.0604**	**186.8363**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	76.4255 / 46.8414	115.6641	2.4975	0.0603	186.7976
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**115.6641**	**2.4975**	**0.0603**	**186.7976**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	81.1761	4.7974	0.0000	181.9208
Unmitigated	81.1761	4.7974	0.0000	181.9208

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	399.9	81.1761	4.7974	0.0000	181.9208
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**81.1761**	**4.7974**	**0.0000**	**181.9208**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	399.9	81.1761	4.7974	0.0000	181.9208
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**81.1761**	**4.7974**	**0.0000**	**181.9208**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Attachment 2: Construction Health Risk Analysis

Stoneridge Corporate Plaza, Pleasanton, CA

DPM Construction Emissions and Modeling Emission Rates - Unmitigated

Construction Year	Activity	DPM (ton/year)	Area Source	DPM Emissions (lb/yr)	DPM Emissions (lb/hr)	DPM Emissions (g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
2015	Const - Area 1	0.0851	CON1_DPM	170.2	0.05181	6.53E-03	29,346	2.22E-07
	Const - Area 2	0.0230	CON2_DPM	46.0	0.01400	1.76E-03	7,930	2.22E-07
		0.1081					37,276	
2016	Const - Area 1	0.1730	CON1_DPM	345.9	0.10530	1.33E-02	29,346	4.52E-07
	Const - Area 2	0.0467	CON2_DPM	93.5	0.02846	3.59E-03	7,930	4.52E-07
		0.2197					37,276	
Total		***0.3278***		***656***	***0.1996***	***0.0251***		

Notes:

Emissions assumed to be evenly distributed over each construction areas

hr/day =	9	(7am - 4pm)
days/yr =	365	
hours/year =	3285	

PM2.5 Fugitive Dust Construction Emissions for Modeling - Unmitigated

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	PM2.5 Emissions (lb/yr)	PM2.5 Emissions (lb/hr)	PM2.5 Emissions (g/s)	Modeled Area (m^2)	DPM Emission Rate $g/s/m^2$
2014	Const - Area 1	CON_FUG	0.0047	9.5	0.00289	3.64E-04	29,346	1.24E-08
	Const - Area 2	CON_FUG	0.0013	2.6	0.00078	9.82E-05	7,930	1.24E-08
			0.0060				37,276	
2015	Const - Area 1	CON_FUG	0.0034	6.8	0.00207	2.60E-04	29,346	8.87E-09
	Const - Area 2	CON_FUG	0.0009	1.8	0.00056	7.03E-05	7,930	8.87E-09
			0.0043				37,276	
Total			***0.0103***	***20.7***	***0.0063***	***0.0008***		

Notes:

Emissions assumed to be evenly distributed over each construction areas

hr/day =	9	(7am - 4pm)
days/yr =	365	
hours/year =	3285	

Stoneridge Corporate Plaza, Pleasanton, CA

Construction Health Impact Summary -

Construction Year	Maximum Concentrations		Cancer Risk (per million)		Hazard Index	Maximum Annual PM2.5 Concentration
	Exhaust PM2.5/DPM ($\mu g/m^3$)	Fugitive PM2.5 ($\mu g/m^3$)	Child	Adult	(-)	($\mu g/m^3$)
2015	0.0134	0.0008	1.2	0.1	0.003	0.014
2016	0.0273	0.0006	2.4	0.1	0.005	0.028
Total	-	-	**3.6**	**0.2**	-	-
Maximum Annual	0.0273	0.0008	-	-	**0.005**	**0.028**

Stoneridge Corporate Plaza, Pleasanton, CA - Construction Impacts
Maximum DPM Cancer Risk Calculations From Construction
Off-Site Residential Receptor Locations - 1.5 meters

Cancer Risk (per million) = CPF x Inhalation Dose x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$

Inhalation Dose = C_{air} x DBR x A x EF x ED x 10^{-6} / AT

Where: C_{air} = concentration in air ($\mu g/m^3$)
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
ED = Exposure duration (years)
AT = Averaging time period over which exposure is averaged
10^{-6} = Conversion factor

Values

Parameter	Child	Adult
CPF =	1.10E+00	1.10E+00
DBR =	581	302
A =	1	1
EF =	350	350
AT =	25,550	25,550

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Exposure Duration (years)	Child - Exposure Information			Child Cancer Risk (per million)	Adult - Exposure Information			Adult Cancer Risk (per million)	Fugitive PM2.5	Total PM2.5
		DPM Conc (ug/m3)		Exposure Adjust Factor		Modeled DPM Conc (ug/m3)		Exposure Adjust Factor			
		Year	Annual			Year	Annual				
1	1	2014	0.0134	10	1.17	2014	0.0134	1	0.06	0.0008	0.014
2	1		0.0273	10	2.39	2015	0.0273	1	0.12	0.0006	0.028
3	1		0.0000	4.75	0.00		0.0000	1	0.00		
4	1		0.0000	3	0.00		0.0000	1	0.00		
5	1		0.0000	3	0.00		0.0000	1	0.00		
6	1		0.0000	3	0.00		0.0000	1	0.00		
7	1		0.0000	3	0.00		0.0000	1	0.00		
8	1		0.0000	3	0.00		0.0000	1	0.00		
9	1		0.0000	3	0.00		0.0000	1	0.00		
10	1		0.0000	3	0.00		0.0000	1	0.00		
11	1		0.0000	3	0.00		0.0000	1	0.00		
12	1		0.0000	3	0.00		0.0000	1	0.00		
13	1		0.0000	3	0.00		0.0000	1	0.00		
14	1		0.0000	3	0.00		0.0000	1	0.00		
15	1		0.0000	3	0.00		0.0000	1	0.00		
16	1		0.0000	3	0.00		0.0000	1	0.00		
17	1		0.0000	1.5	0.00		0.0000	1	0.00		
18	1		0.0000	1	0.00		0.0000	1	0.00		
.	.	.	.	.	.	.	.	.	.		
.	.	.	.	.	.	.	.	.	.		
.	.	.	.	.	.	.	.	.	.		
65	1		0.0000	1	0.00		0.0000	1	0.00		
66	1		0.0000	1	0.00		0.0000	1	0.00		
67	1		0.0000	1	0.00		0.0000	1	0.00		
68	1		0.0000	1	0.00		0.0000	1	0.00		
69	1		0.0000	1	0.00		0.0000	1	0.00		
70	1		0.0000	1	0.00		0.0000	1	0.00		
Total Increased Cancer Risk					**3.56**				**0.19**		

On-Site Construction TAC Emissions

Stoneridge Corporate Plaza Expansion

Bay Area AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	430.00	1000sqft	6.90	430,000.00	0
Unenclosed Parking with Elevator	700.00	Space	0.00	280,000.00	0
Unenclosed Parking with Elevator	900.00	Space	2.00	360,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	328	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Using PG&E CPUC forecasted emission rate for 2018

Land Use - From Traffic Report. 700-space parking structure included in 6.9-acre site

Construction Phase - Based on provided construction schedule

Off-road Equipment - Based on provided construction list

Off-road Equipment - Based on provided construction list

Off-road Equipment - Based on provided construction list

Off-road Equipment - Based on provided construction list

Off-road Equipment - Based on Construction list provided

Off-road Equipment - Based on Construction list provided

Off-road Equipment - Based on Construction list provided

Grading - Entered amount of material moved, but not exported

Demolition - Based on construction list provided

Trips and VMT - No export haul trips, but simulating 100 miles of water truck travel during grading = 5 trips (at 20 mi) * 55 days Cement trucks entered at

Architectural Coating - Reduced VOC Paint content per BAAQMD Regulations

Vehicle Trips - Entered trip generation rate from traffic with 3% transit reduction and applied to weekends

Off-road Equipment - Based on construction list

Construction Off-road Equipment Mitigation - Tier 2 and BMPs for fugitive dust

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	150.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	150.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	16.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	20.00	80.00
tblConstructionPhase	NumDays	230.00	250.00
tblConstructionPhase	NumDays	20.00	15.00
tblConstructionPhase	NumDays	20.00	25.00
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	PhaseEndDate	1/16/2017	6/13/2016
tblConstructionPhase	PhaseEndDate	9/30/2016	9/26/2016
tblConstructionPhase	PhaseEndDate	8/4/2015	8/21/2015
tblConstructionPhase	PhaseEndDate	7/18/2016	6/6/2016
tblConstructionPhase	PhaseEndDate	7/22/2015	7/7/2015
tblConstructionPhase	PhaseEndDate	10/30/2015	10/16/2015
tblConstructionPhase	PhaseStartDate	9/27/2016	2/23/2016
tblConstructionPhase	PhaseStartDate	10/17/2015	10/13/2015
tblConstructionPhase	PhaseStartDate	7/8/2015	7/27/2015
tblConstructionPhase	PhaseStartDate	6/14/2016	5/3/2016
tblConstructionPhase	PhaseStartDate	6/25/2015	6/10/2015
tblConstructionPhase	PhaseStartDate	8/22/2015	8/10/2015
tblGrading	AcresOfGrading	9.00	10.00
tblGrading	MaterialExported	0.00	14,800.00
tblLandUse	LotAcreage	9.87	6.90
tblLandUse	LotAcreage	6.30	0.00
tblLandUse	LotAcreage	8.10	2.00
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.31	0.31
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Aerial Lifts
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	4.00
tblOffRoadEquipment	PhaseName		Paving
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	8.00	5.30
tblOffRoadEquipment	UsageHours	8.00	5.10
tblOffRoadEquipment	UsageHours	7.00	6.40
tblOffRoadEquipment	UsageHours	8.00	4.80
tblOffRoadEquipment	UsageHours	8.00	4.80
tblOffRoadEquipment	UsageHours	8.00	4.80
tblOffRoadEquipment	UsageHours	8.00	5.30
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	3.60
tblOffRoadEquipment	UsageHours	8.00	4.80
tblOffRoadEquipment	UsageHours	8.00	1.30
tblProjectCharacteristics	CO2IntensityFactor	641.35	328
tblProjectCharacteristics	OperationalYear	2014	2018
tblTripsAndVMT	HaulingTripLength	20.00	0.30
tblTripsAndVMT	HaulingTripLength	20.00	0.30
tblTripsAndVMT	HaulingTripLength	20.00	0.30
tblTripsAndVMT	HaulingTripLength	20.00	0.30
tblTripsAndVMT	HaulingTripLength	20.00	0.30
tblTripsAndVMT	HaulingTripLength	20.00	0.30
tblTripsAndVMT	HaulingTripLength	20.00	0.30
tblTripsAndVMT	HaulingTripNumber	1,463.00	275.00
tblTripsAndVMT	HaulingTripNumber	0.00	6,650.00
tblTripsAndVMT	PhaseName		Trenching
tblTripsAndVMT	VendorTripLength	7.30	0.30
tblTripsAndVMT	VendorTripLength	7.30	0.30
tblTripsAndVMT	VendorTripLength	7.30	0.30
tblTripsAndVMT	VendorTripLength	7.30	0.30
tblTripsAndVMT	VendorTripLength	7.30	0.30
tblTripsAndVMT	VendorTripLength	7.30	0.30
tblTripsAndVMT	VendorTripLength	7.30	0.30
tblTripsAndVMT	WorkerTripLength	12.40	0.30
tblTripsAndVMT	WorkerTripLength	12.40	0.30
tblTripsAndVMT	WorkerTripLength	12.40	0.30
tblTripsAndVMT	WorkerTripLength	12.40	0.30
tblTripsAndVMT	WorkerTripLength	12.40	0.30
tblTripsAndVMT	WorkerTripLength	12.40	0.30
tblTripsAndVMT	WorkerTripLength	12.40	0.30
tblVehicleTrips	ST_TR	2.37	1.93
tblVehicleTrips	SU_TR	0.98	0.80

tblVehicleTrips	WD_TR	11.01	8.97

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	0.2821	1.9095	2.0461	1.6300e-003	0.0371	0.1170	0.1541	6.0200e-003	0.1081	0.1141	0.0000	150.9334	150.9334	0.0393	0.0000	151.7593
2016	8.1193	4.1526	5.2795	4.1000e-003	0.0154	0.2363	0.2517	4.3100e-003	0.2197	0.2240	0.0000	370.5568	370.5568	0.0895	0.0000	372.4354
Total	**8.4014**	**6.0621**	**7.3256**	**5.7300e-003**	**0.0525**	**0.3533**	**0.4058**	**0.0103**	**0.3278**	**0.3381**	**0.0000**	**521.4901**	**521.4901**	**0.1288**	**0.0000**	**524.1947**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/4/2015	6/24/2015	5	15	
2	Site Preparation	Site Preparation	6/10/2015	7/7/2015	5	20	
3	Grading	Grading	7/27/2015	8/21/2015	5	20	
4	Trenching	Trenching	6/10/2015	10/16/2015	5	50	
5	Building Construction	Building Construction	10/13/2015	9/26/2016	5	250	
6	Interior Construction	Architectural Coating	2/23/2016	6/13/2016	5	80	
7	Paving	Paving	5/3/2016	6/6/2016	5	25	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,605,000; Non-Residential Outdoor: 535,000 (Architectural

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Interior Construction	Air Compressors	2	8.00	78	0.48
Demolition	Excavators	1	8.00	162	0.38
Demolition	Concrete/Industrial Saws	1	5.30	81	0.73
Grading	Excavators	2	5.10	162	0.38
Building Construction	Cranes	2	6.40	226	0.29
Building Construction	Forklifts	2	4.80	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Paving	Pavers	2	4.80	125	0.42
Paving	Rollers	2	4.80	80	0.38
Demolition	Rubber Tired Dozers	1	5.30	255	0.40
Grading	Rubber Tired Dozers	0	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	2	3.60	174	0.41
Grading	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Paving	Paving Equipment	3	4.80	130	0.36

Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	0	8.00	255	0.40
Building Construction	Welders	4	1.30	46	0.45
Trenching	Trenchers	2	8.00	80	0.50
Interior Construction	Aerial Lifts	4	7.50	62	0.31
Paving	Tractors/Loaders/Backhoes	4	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	3	8.00	0.00	247.00	0.30	0.30	0.30	LD_Mix	HDT_Mix	HHDT
Site Preparation	4	10.00	0.00	0.00	0.30	0.30	0.30	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	275.00	0.30	0.30	0.30	LD_Mix	HDT_Mix	HHDT
Building Construction	12	406.00	175.00	6,650.00	0.30	0.30	0.30	LD_Mix	HDT_Mix	HHDT
Paving	11	28.00	0.00	0.00	0.30	0.30	0.30	LD_Mix	HDT_Mix	HHDT
Interior Construction	6	81.00	0.00	0.00	0.30	0.30	0.30	LD_Mix	HDT_Mix	HHDT
Trenching	2	5.00	0.00	0.00	0.30	0.30	0.30	LD_Mix	HDT_Mix	HHDT

3.2 Demolition - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0268	0.0000	0.0268	4.0500e-003	0.0000	4.0500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0130	0.1328	0.0992	1.1000e-004		7.0600e-003	7.0600e-003		6.6500e-003	6.6500e-003	0.0000	10.6612	10.6612	2.6700e-003	0.0000	10.7173
Total	**0.0130**	**0.1328**	**0.0992**	**1.1000e-004**	**0.0268**	**7.0600e-003**	**0.0338**	**4.0500e-003**	**6.6500e-003**	**0.0107**	**0.0000**	**10.6612**	**10.6612**	**2.6700e-003**	**0.0000**	**10.7173**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.7000e-003	3.6000e-003	0.0249	0.0000	3.0000e-005	2.0000e-005	6.0000e-005	1.0000e-005	2.0000e-005	3.0000e-005	0.0000	0.3264	0.3264	1.0000e-005	0.0000	0.3266
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	5.0000e-005	6.3000e-004	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0249	0.0249	0.0000	0.0000	0.0250
Total	**1.8700e-003**	**3.6500e-003**	**0.0255**	**0.0000**	**4.0000e-005**	**2.0000e-005**	**7.0000e-005**	**1.0000e-005**	**2.0000e-005**	**3.0000e-005**	**0.0000**	**0.3514**	**0.3514**	**1.0000e-005**	**0.0000**	**0.3516**

3.3 Site Preparation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0144	0.1373	0.0970	1.2000e-004		0.0108	0.0108		9.8900e-003	9.8900e-003	0.0000	11.8837	11.8837	3.5500e-003	0.0000	11.9582
Total	**0.0144**	**0.1373**	**0.0970**	**1.2000e-004**	**0.0000**	**0.0108**	**0.0108**	**0.0000**	**9.8900e-003**	**9.8900e-003**	**0.0000**	**11.8837**	**11.8837**	**3.5500e-003**	**0.0000**	**11.9582**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	8.0000e-005	1.0600e-003	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0416	0.0416	1.0000e-005	0.0000	0.0417
Total	**2.8000e-004**	**8.0000e-005**	**1.0600e-003**	**0.0000**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0416**	**0.0416**	**1.0000e-005**	**0.0000**	**0.0417**

3.4 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.3000e-003	0.0000	5.3000e-003	5.7000e-004	0.0000	5.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0293	0.2971	0.1857	2.5000e-004		0.0193	0.0193		0.0178	0.0178	0.0000	23.6743	23.6743	7.0700e-003	0.0000	23.8227
Total	**0.0293**	**0.2971**	**0.1857**	**2.5000e-004**	**5.3000e-003**	**0.0193**	**0.0246**	**5.7000e-004**	**0.0178**	**0.0183**	**0.0000**	**23.6743**	**23.6743**	**7.0700e-003**	**0.0000**	**23.8227**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.8900e-003	4.0100e-003	0.0277	0.0000	4.0000e-005	2.0000e-005	6.0000e-005	1.0000e-005	2.0000e-005	3.0000e-005	0.0000	0.3634	0.3634	1.0000e-005	0.0000	0.3636
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.6000e-004	1.5000e-004	2.1100e-003	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0831	0.0831	1.0000e-005	0.0000	0.0834
Total	**2.4500e-003**	**4.1600e-003**	**0.0298**	**0.0000**	**9.0000e-005**	**2.0000e-005**	**1.1000e-004**	**2.0000e-005**	**2.0000e-005**	**4.0000e-005**	**0.0000**	**0.4466**	**0.4466**	**2.0000e-005**	**0.0000**	**0.4470**

3.5 Trenching - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0290	0.2545	0.1423	1.7000e-004		0.0199	0.0199		0.0183	0.0183	0.0000	16.5751	16.5751	4.9500e-003	0.0000	16.6790
Total	**0.0290**	**0.2545**	**0.1423**	**1.7000e-004**		**0.0199**	**0.0199**		**0.0183**	**0.0183**	**0.0000**	**16.5751**	**16.5751**	**4.9500e-003**	**0.0000**	**16.6790**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5000e-004	1.0000e-004	1.3200e-003	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0520	0.0520	1.0000e-005	0.0000	0.0521
Total	**3.5000e-004**	**1.0000e-004**	**1.3200e-003**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0520**	**0.0520**	**1.0000e-005**	**0.0000**	**0.0521**

3.6 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0964	0.9142	0.5064	7.2000e-004		0.0588	0.0588		0.0544	0.0544	0.0000	68.0076	68.0076	0.0202	0.0000	68.4319
Total	**0.0964**	**0.9142**	**0.5064**	**7.2000e-004**		**0.0588**	**0.0588**		**0.0544**	**0.0544**	**0.0000**	**68.0076**	**68.0076**	**0.0202**	**0.0000**	**68.4319**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0106	0.0225	0.1553	2.0000e-005	6.9000e-004	1.3000e-004	8.3000e-004	1.8000e-004	1.2000e-004	3.0000e-004	0.0000	2.0388	2.0388	5.0000e-005	0.0000	2.0398
Vendor	0.0516	0.1342	0.6783	1.4000e-004	1.4600e-003	8.7000e-004	2.3300e-003	4.3000e-004	7.9000e-004	1.2200e-003	0.0000	12.3066	12.3066	2.1000e-004	0.0000	12.3110
Worker	0.0329	8.9600e-003	0.1243	6.0000e-005	2.7000e-003	1.2000e-004	2.8200e-003	7.3000e-004	1.1000e-004	8.4000e-004	0.0000	4.8947	4.8947	5.9000e-004	0.0000	4.9071
Total	**0.0951**	**0.1656**	**0.9578**	**2.2000e-004**	**4.8500e-003**	**1.1200e-003**	**5.9800e-003**	**1.3400e-003**	**1.0200e-003**	**2.3600e-003**	**0.0000**	**19.2401**	**19.2401**	**8.5000e-004**	**0.0000**	**19.2580**

3.6 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3026	2.8979	1.6533	2.4000e-003		0.1834	0.1834		0.1694	0.1694	0.0000	222.7766	222.7766	0.0665	0.0000	224.1732
Total	**0.3026**	**2.8979**	**1.6533**	**2.4000e-003**		**0.1834**	**0.1834**		**0.1694**	**0.1694**	**0.0000**	**222.7766**	**222.7766**	**0.0665**	**0.0000**	**224.1732**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0315	0.0684	0.4882	8.0000e-005	8.4000e-004	3.1000e-004	1.1500e-003	2.3000e-004	2.8000e-004	5.1000e-004	0.0000	6.6636	6.6636	1.4000e-004	0.0000	6.6666
Vendor	0.1535	0.4094	2.1202	4.8000e-004	4.8400e-003	2.2000e-003	7.0400e-003	1.4300e-003	2.0000e-003	3.4300e-003	0.0000	40.2837	40.2837	6.5000e-004	0.0000	40.2973
Worker	0.1006	0.0265	0.3700	2.1000e-004	8.9300e-003	3.9000e-004	9.3100e-003	2.4200e-003	3.5000e-004	2.7800e-003	0.0000	15.6634	15.6634	1.7500e-003	0.0000	15.7001
Total	**0.2856**	**0.5043**	**2.9785**	**7.7000e-004**	**0.0146**	**2.9000e-003**	**0.0175**	**4.0800e-003**	**2.6300e-003**	**6.7200e-003**	**0.0000**	**62.6107**	**62.6107**	**2.5400e-003**	**0.0000**	**62.6640**

3.7 Interior Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	7.4392					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0477	0.3907	0.3628	5.6000e-004		0.0266	0.0266		0.0262	0.0262	0.0000	50.4496	50.4496	0.0102	0.0000	50.6641
Total	**7.4868**	**0.3907**	**0.3628**	**5.6000e-004**		**0.0266**	**0.0266**		**0.0262**	**0.0262**	**0.0000**	**50.4496**	**50.4496**	**0.0102**	**0.0000**	**50.6641**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.3600e-003	2.2000e-003	0.0308	2.0000e-005	7.4000e-004	3.0000e-005	7.7000e-004	2.0000e-004	3.0000e-005	2.3000e-004	0.0000	1.3021	1.3021	1.5000e-004	0.0000	1.3051
Total	**8.3600e-003**	**2.2000e-003**	**0.0308**	**2.0000e-005**	**7.4000e-004**	**3.0000e-005**	**7.7000e-004**	**2.0000e-004**	**3.0000e-005**	**2.3000e-004**	**0.0000**	**1.3021**	**1.3021**	**1.5000e-004**	**0.0000**	**1.3051**

3.8 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0350	0.3574	0.2508	3.5000e-004		0.0233	0.0233		0.0215	0.0215	0.0000	33.2772	33.2772	0.0100	0.0000	33.4880
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0350**	**0.3574**	**0.2508**	**3.5000e-004**		**0.0233**	**0.0233**		**0.0215**	**0.0215**	**0.0000**	**33.2772**	**33.2772**	**0.0100**	**0.0000**	**33.4880**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-004	2.4000e-004	3.3200e-003	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.1407	0.1407	2.0000e-005	0.0000	0.1410
Total	**9.0000e-004**	**2.4000e-004**	**3.3200e-003**	**0.0000**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.1407**	**0.1407**	**2.0000e-005**	**0.0000**	**0.1410**

EXHIBIT B

RECORDING REQUESTED BY AND WHEN RECORDED MAIL TO:

City of Pleasanton
City Clerk's Office
123 Main Street
P.O. Box 520
Pleasanton, CA 94566

Recording Fees Exempt Pursuant to Government Code § 27383

DRAFT

SPACE ABOVE THIS LINE FOR RECORDER'S USE

THIS DEVELOPMENT AGREEMENT ("**Agreement**") is made and entered into in the City of Pleasanton, California, on this _____ day of _____ , 2014, by and between the City of Pleasanton, a municipal corporation (the "**City**"), and Workday, Inc., a Delaware corporation, (the "**Developer**") pursuant to the authority of California Government Code sections 65864 *et seq.*

RECITALS

A. To strengthen the public planning process, encourage private participation in comprehensive planning and reduce the economic risk of development, the Legislature of the State of California enacted California Government Code sections 65864 et seq. (the "**Development Agreement Statute**"), which authorizes City to enter into an agreement with any person having a legal or equitable interest in real property regarding the development of such property.

B. **Developer** has a legal interest [i.e. a ground leasehold interest agreement as tenant with a term expiring December 31, 2108, pursuant to the Restated and Amended Pleasanton Ground Lease dated January 30, 2014, between **Developer** and the Bay Area Rapid Transit District ("**BART**")] in certain real property located in the City of Pleasanton, County of Alameda, California consisting of approximately 6.9 acres located at 6110 Stoneridge Mall Road (**"6110") as described in Exhibit A-1**. NPC Holdings, LLC, a Nevada limited liability company (the " **Adjacent Property Owner**") has a legal interest in certain real property located in the City of Pleasanton, County of Alameda, California consisting of approximately 25.4 acres at 6120-6160 Stoneridge Mall Road, commonly known as Stoneridge Corporate Plaza ("**SCP**") as shown on the site plan attached hereto as **Exhibit A-2**. 6120-6160 Stoneridge Mall Road is currently developed with five multi-story office buildings and related site improvements.

C. **Developer**, with **Adjacent Property Owner's** consent, contemplates developing a six-story, approximately 430,000 square foot office building, parking garage, surface parking at 6110, and a parking garage and surface parking on a portion of the property at **SCP**, along with related site improvements such as landscape modifications, stormwater treatment areas, and other related improvements (the "**Project**"). **Developer**, **BART** and **Adjacent Property Owner** anticipate providing future lot-line adjustments and/or other related property modifications between **6110** and **SCP** to allow for the aforementioned improvements.

D. Workday, Inc. is an important employer in the City of Pleasanton. Workday's employees patronize local businesses, especially those in the adjacent Stoneridge Mall. The City has obtained a Fiscal Impact Analysis report dated April __, 2014 which outlines the fiscal benefit to the City of Pleasanton from the contemplated **Project**. Workday's 2014 Fiscal Year revenues were approximately $469,000,000 and for the prior two fiscal years, the company's global revenues were approximately $274,000,000 in Fiscal Year 2013 and approximately $134,000,000 in Fiscal Year 2012. During the same period, Workday's total global employee count increased to more than 2600 as of January 31, 2014, from about 1750 and 1050 at the end of its 2013 and 2012 fiscal years respectively. Workday's growth has benefited the City of Pleasanton in many respects. This **Project** is adjacent to the West Dublin-Pleasanton BART station. It is expected that more and more of Workday Inc.'s employees will take BART to work, thereby helping to alleviate traffic congestion on **City** streets and Bay Area freeways.

E. This **Project** will include installation of a Police Sub Station at the West Dublin-Pleasanton BART station for use by both the Pleasanton and BART Police Departments, along with landscaping, plaza and pedestrian walkway improvements connecting the project site to the West Dublin-Pleasanton BART station.

F. CEQA Compliance. On _____, the City Council adopted a resolution approving a Mitigated Negative Declaration for the **Project**.

G. PUD Development Plan. Following review and recommendation by the City Planning Commission and after a duly noticed public hearing, preparation and consideration of a negative declaration, the City Council, by Ordinance _____ approved the PUD Rezoning and Development Plan and PUD Major Modification (the "**Project Design Review**") for a six-story, approximately 430,000 square foot office building, parking garage, surface parking, plaza and walkway connection to the BART station, and passenger drop-off improvements on and around the existing BART parking garage and 6110, and a parking garage and surface parking at **SCP**, along with related site improvements such as landscape modifications, storm water treatment areas, etc., and collectively referred to in this **Agreement** as the "**Project Site**".

H. Development Agreement. Following review and recommendation by the City Planning Commission and after a duly noticed public hearing, the City Council, by Ordinance ____, determined that this **Agreement** was consistent with the City's General Plan and PUD-___, and approved this **Agreement**.

I. The approvals described in Recitals H and I are collectively referred to herein as the "**Project**" or the "**Project Approvals**" and applies to the six-story, approximately 430,000 square foot office building, parking garage, and surface parking at 6110, and a parking garage and surface parking at **SCP,** along with related site improvements such as landscape modifications, stormwater treatment areas, etc, and the contemplated lot-line adjustments.

J. In exchange for the benefits to **City** described in these recitals, including but not limited to assurance that the **Project** consistent with the PUD Development Plan approval referred to above can proceed, together with the other public benefits that will result from the development of the **Project Site**, **Developer** will receive by this **Agreement** assurance that it may proceed with the **Project** in accordance with the "**Applicable Law**" (defined below), and therefore desires to enter into this **Agreement**.

NOW, THEREFORE, with reference to the foregoing recitals and in consideration of the mutual promises, obligations and covenants herein contained, **City** and **Developer** agree as follows:

AGREEMENT

Article I. Description of Property, Effective Date and Term.

Section 1.01 Description of Property. The real properties which are the subject of this Agreement are the 6110, described in Exhibit A-1, and, to the extent described in this Agreement, **SCP**, as delineated on the Site Plan attached **Exhibit A-2**.

Section 1.02 Effective Date. This **Agreement** shall become effective upon the date the ordinance approving this **Agreement** becomes effective (the "**Effective Date**").

Section 1.03 Term. The term of this **Agreement** shall commence on the **Effective Date** and extend ten (10) years thereafter (the "**Term**").

Article II. Standards, Laws and Procedures Governing the Project.

Section 2.01 Vested Right To Develop. **Developer** shall have a vested right to develop the **Project Site** in substantial conformance with the terms and conditions of the **Project Approvals**, the **Subsequent Approvals** (defined below) (as and when issued), the **Applicable Law** (defined below) and amendments as shall, from time to time, be approved pursuant to this **Agreement**. Specifically, while **Developer** contemplates constructing the **Project Site** in accordance with the **Project Design Review**, **Developer** shall have the vested right to develop the **Project Site** with a six-story, approximately 430,000 square foot office building, two parking garages, and surface parking, in accordance with the PUD Development Plan referred to above.

Section 2.02 Permitted Uses. The permitted uses and the density and intensity of use of the **Project Site**; the maximum height, bulk and size of the proposed buildings, provisions for reservation or dedication of land for public purposes and the location of public improvements; the general location of public utilities; and other terms and conditions of development applicable to the **Project**, shall be as set forth in the **Project Approvals**, as and when they are issued (but not in any limitation of any right to develop as set forth in the **Project Approvals**), and any **Subsequent Approvals** (defined below).

Section 2.03 Applicable Law. "**Applicable Law**" shall mean the existing rules, regulations, official policies, standards and specifications governing permitted uses of the **Project Site**, governing density, and governing the design, improvements, and all other **City** regulations, and construction standards and specifications applicable to the **Project Site** as set forth in this **Agreement** and the **Project Approvals**, and in force and effect on the **Effective Date**. During the **Term**, to the extent there are any conflicts between the **Project Approvals** (including but not

limited to conditions to any of the **Project Approvals**) and this **Agreement**, the terms and conditions of this **Agreement** shall govern.

Section 2.04 Moratorium, Initiatives and Conflicting Enactments. To the extent consistent with state law (and excepting a declaration of a local emergency or state emergency as defined in Government Code section 8558), if any ordinance, resolution or other measure is enacted subsequent to the **Effective Date**, whether by action of **City**, by initiative, referendum, or otherwise, that imposes a building moratorium, a limit on the rate of development, or a voter-approval requirement which would otherwise affect the timely development of the **Project** or **Project Approvals** or **Subsequent Approvals** on all or any part of the **Project Site** ("City Law"), **City** agrees that such ordinance, resolution or other measure shall not apply to the **Project Site**, this **Agreement**, the **Project Approvals**, or the **Subsequent Approvals**, if any, during the **Term**.

Section 2.05 Life of **Project Approvals** or **Subsequent Approvals**. The term of any **Project Approval** or **Subsequent Approval** shall automatically be extended for the longer of **Term** of this **Agreement** or the term otherwise applicable to such **Project Approval** or **Subsequent Approval** if this **Agreement** is no longer in effect. The **Term** of this **Agreement**, any other Project Approval or **Subsequent Approval** shall be extended by any period of time during which any applicable development or utility moratorium, lawsuit or the actions of other public agencies that regulate land use, delays construction of the **Project**.

Section 2.06 Development Timing. Subject to **Applicable Law**, **Developer** shall have the right to develop the **Project** on the **Project Site** in such order and at such rate and at such times as **Developer** deems appropriate within the exercise of its subjective business judgment.

Section 2.07 Compliance with State and Federal Law. This **Agreement** is subject to **Developer**'s compliance with all applicable federal and state laws and regulations (which are in effect at the time Developer submits its application for building permits for the Project, as allowed under law) and compliance with the California Environmental Quality Act, Public Resources Code sections 21000 *et seq*. ("**CEQA**").

Article III. Developer Obligations.

Section 3.01 Obligations of Developer Generally. The parties acknowledge and agree that the **City's** agreement to perform and abide by the covenants and obligations of City set forth in this **Agreement** is a material consideration for **Developer's** agreement to perform and abide by its long term covenants and obligations, as set forth herein. The parties acknowledge that many of **Developer's** long term obligations set forth in this **Agreement** are in addition to **Developer's** agreement to perform all the mitigation measures identified in the Project Mitigation Monitoring and Reporting Program.

Section 3.02 Development Impact Fees. Except as otherwise specifically set forth in this Article 3 or otherwise herein, **Developer** shall only pay to **City** those legally enforceable development impact fees and exactions which are in effect as of the **Effective Date**. **Developer** shall pay those periodic cost of living or similar indexed increases, decreases or adjustments to such fees and exactions as are applicable and in effect at the time such fees or exactions would otherwise be payable to **City**, however, there shall be no such adjustment to development fees and exactions imposed by the **City** for the period from the **Effective Date** through December 31, 2015. A complete list of these anticipated development impact fees and exactions is attached as **Exhibit B**, consisting of two sheets entitled Workday Campus Fee Schedule Estimate and both dated April 18, 2014. **Exhibit B** reflects the best estimates of **City** of such fees and exactions based upon information provided by **Developer** and the application of credits customarily considered in making such development related calculations. In the event of new or more detailed information concerning the **Project** or a change in the **Project**, the parties to this **Agreement** recognize these fees and exactions in **Exhibit B** may change however the total amount of the credits due **Developer** specified in Section 3.03 below shall remain as outlined. **Developer** acknowledges that this **Agreement** does not control development related fees charged by entities other than the City of Pleasanton as more particularly described in the succeeding sections, and that otherwise provided herein, **Developer** shall be responsible for payment of such fees charged by entities other than the **City** in effect at the time of payment of said fees notwithstanding the fact that the **City** may collect such fees on behalf of those other entities. In the event of a dispute over payment of fees between **Developer** and an entity other than the **City**, upon **Developer's** request **City** shall use its best efforts to encourage a resolution of the issue between **Developer** and that entity.

Section 3.03 Dublin San Ramon Services District Fee. The current sewer capacity of the five existing parcels at 6120-6160 Stoneridge Mall Road totals 35,629 gallons per day. The two-year average water flow (November 22, 2011, November 20, 2013) for those buildings has been 7,166 gallons per day, thus resulting in an available credit of 28,463 gallons per day that shall be applied to the three new buildings contemplated as part of the **Project**. **Developer** and the **City** agree that should said credit not be applied in full by the Dublin San Ramon Services District, **Developer** and the **City** shall share equally in any costs incurred in purchasing such sewer capacity.

Section 3.04 Tri-Valley Transportation Council Fee. The **Developer** shall pay the Tri-Valley Transportation Council fee prior to building permit issuance.

Section 3.05 Traffic Mitigation Measures; Traffic Impact Fees. **Developer,** in lieu of payment of any Traffic Impact Fees, shall be obligated to mitigate the traffic related impacts of the **Project**, including roadway improvements, and right of way acquisition costs, as more particularly set forth in the Mitigated Negative Declaration and the conditions of approval imposed through the **Project Design Review**. These mitigations shall include:

(a) Subject to the **City** acquiring and right of ways required at a cost not to exceed $_____, the **Developer** shall construct a third southbound left turn lane at the intersection of Foothill Road and Canyon Way. The third southbound left turn lane will require the widening of Canyon Way to allow for three receiving lanes.

(b) Subject to the **City** acquiring any right of ways required at no cost to **Developer**, **Developer** shall modify the intersection of Stoneridge Mall Road at Stoneridge Drive to provide additional vehicle storage lane by realigning the roadway along the west side of Stoneridge Mall Road for a total length of approximately 625 feet. In the event that the **City** is unable to acquire the necessary right of way, the **Developer** shall construct additional vehicle storage by lengthening the innermost southbound left turn lane by modifying the roadway median by a length of approximately 150 feet.

(c) The **Developer** shall install a traffic signal where the main driveway of the **Project** intersects Stoneridge Mall Road.

These three mitigations are identified in the Workday Office Development Transportation Impact Analysis Report completed by Hexagon Transportation Consultants dated March 14, 2014 (collectively the "**Offsite Improvements**"). In regard to any necessary acquisition of land or right of way(s) required for the aforementioned **Offsite Improvements**, if **Developer** and/or the **City** are unable to obtain said land or right of way(s) despite using good faith efforts, the **City** agrees it shall use its powers of eminent domain (or other means) to acquire any and all rights of way required for the **Offsite Improvements** (provided the cost of said acquisition shall be included in the **Offsite Improvements** cost).

Section 3.06 School Fees. **Developer** shall pay school fees in accordance with a written agreement entered into, or to be entered into, between **Developer** and the Pleasanton Unified School District ("**PUSD**"), and **Developer** shall provide to **City**, prior to building permit issuance, **PUSD's** written confirmation of such agreement.

Section 3.07 Joint City of Pleasanton and BART Police Departments Substation. **Developer** shall, concurrent with construction of the **Project**, construct a joint police substation in the ground level of the BART West Dublin-Pleasanton station parking garage at 6002 Stoneridge Mall Road for use by the BART and Pleasanton police departments, as more particularly shown in the plans attached and incorporated herein as **Exhibit C**. The joint police substation in the ground level of the BART West Dublin-Pleasanton station garage shall be included in and made a part of the **Project Design Review**.

Section 3.08 Other BART Station Improvements. **Developer** shall make landscape improvements to the BART West Dublin-Pleasanton station in order to integrate the station with the landscaping on **Developer**'s adjacent site. Such improvements are for the benefit of both the public and **Developer's** employees, as the latter will have direct access to the BART West

Dublin-Pleasanton station without the need to walk to Stoneridge Mall Road. These improvements shall be included in and made a part of the **Project Design Review**.

Section 3.09 Offsite Traffic Mitigation. **Developer,** in lieu of payment of any Traffic Impact Fees, shall be responsible for installation at its expense of offsite traffic mitigations as required by the mitigation monitoring program set forth in the Mitigated Negative Declaration and the conditions of approval imposed through the **Project Design Review.** These mitigations shall, subject to Section 3.05, include:

(a) Subject to the **City** acquiring any right of ways required, the **Developer** shall construct a third southbound left turn lane at the intersection of Foothill Road and Canyon Way. The third southbound left turn lane will require the widening of Canyon Way to allow for three receiving lanes.

(b) Subject to the **City** acquiring any right of ways required, **Developer** shall modify the intersection of Stoneridge Mall Road at Stoneridge Drive to provide additional vehicle storage lane by realigning the roadway along the west side of Stoneridge Mall Road for a total length of approximately 625 feet. In the event that the **City** is unable to acquire the necessary right of way, the **Developer** shall construct additional vehicle storage by lengthening the innermost southbound left turn lane by modifying the roadway median by a length of approximately 150 feet.

(c) The **Developer** shall install a traffic signal where the main driveway of the **Project** intersects Stoneridge Mall Road.

These three mitigations are identified in the Workday Office Development Transportation Impact Analysis Report completed by Hexagon Transportation Consultants dated March 14, 2014.

Article IV. Landscaping Agreement Between Developer and CalTrans.

Section 4.01 Landscaping Agreements. **Developer** intends to plant and maintain said plantings/landscaping in and upon an areas owned by CalTrans along the perimeter of the **Project** as outlined in the **Project Approvals**. CalTrans has indicated that any agreement to allow said plantings/landscaping will be between the **City** and CalTrans as opposed to between the **Developer** and CalTrans. The **City** and **Developer** therefore agree that the **City**, upon request of **Developer**, shall enter into said agreement with CalTrans (which agreement has been approved by **Developer**) and simultaneously enter into an agreement with **Developer** by which **Developer** will assume the rights and obligations of the **City** under the agreement between CalTrans and the **City**. The latter agreement shall be binding upon **Developer**'s successors and assigns.

Article V. City Obligations.

Section 5.01 Protection of Vested Rights. To the maximum extent permitted by law, **City** shall take any and all actions as may be necessary or appropriate to ensure that the vested rights provided by this **Agreement** can be enjoyed by **Developer** and to prevent any **City Law** from invalidating or prevailing over all or any part of this **Agreement**. **City** shall cooperate with **Developer** and shall undertake such actions as may be necessary to ensure this **Agreement** remains in full force and effect. **City** shall not support, adopt, or enact any **City Law**, or take any other action which would violate the express provisions or intent of the **Project Approvals** or the **Subsequent Approvals** (defined below).

Section 5.02 Availability of Public Services. To the maximum extent permitted by law and consistent with its authority, **City** shall assist **Developer** in reserving capacity for sewer, water and any other services as may be necessary to serve the **Project**.

Section 5.03 **Developer**'s Right to Rebuild. **City** agrees that **Developer**, at **Developer**'s sole and absolute discretion, may renovate or rebuild the **Project** within the **Term** of this **Agreement** (before or after completion) should it become necessary including, but not limited to a natural disaster, changes in seismic requirements, commercially not feasible, functionally outdated, or technologically obsolete reasons. Any such renovation or rebuilding shall be subject to the square footage and height limitations vested by this **Agreement**, and shall comply with the **Project Approvals**, the building codes existing at the time of such rebuilding or reconstruction, and the requirements of **CEQA**.

Article VI. Miscellaneous.

Section 6.01 Recitals. The Recitals set forth above, specifically Recitals A-K, are hereby fully incorporated into and made a part of this **Agreement** by reference.

Section 6.02 Amendment to Project Approvals.

(a) Administrative Project Amendments. Upon the written request of **Developer** for an amendment or modification to a **Project Approval** or **Subsequent Approval**, the Director of Community Development or his/her designee shall determine (i) whether the requested amendment or modification is minor when considered in light of the **Project** as a whole; and (ii) whether the requested amendment or modification is substantially consistent with this **Agreement** and **Applicable Law**. If the Director of Community Development or his/her designee finds that the proposed amendment or modification is minor, substantially consistent with this **Agreement** and **Applicable Law**, and will result in no new significant impacts not addressed and mitigated in the mitigated negative declaration, the amendment shall be determined to be an "**Administrative Project Amendment**" and the Director of Community Development or his designee may, except to the extent otherwise required by law, approve the **Administrative Project Amendment** without notice and public hearing. Without limiting the generality of the foregoing, lot line adjustments, minor increases or decreases in the intensity, scale or

scope of the **Project**, minor alterations in vehicle circulation patterns or vehicle access points, substitutions of comparable landscaping for any landscaping shown on any final development plan or landscape plan, minor variations in the location of structures that do not substantially alter the design concepts of the **Project**, variations in the location or installation of utilities and other infrastructure connections or facilities that do not substantially alter the design concepts of the **Project**, and minor adjustments to the **Project Site** diagram or **Project Site** legal description shall be treated as **Administrative Project Amendments**.

(b) Other Project Amendments. Any request of **Developer** for an amendment or modification to a **Project Approval** or **Subsequent Approval** which does not satisfy the requirements for an **Administrative Project Amendment** shall be subject to the review, consideration and action by **City** pursuant to the **Applicable Law** and this **Agreement**.

Section 6.03 Processing Subsequent Approvals. "Subsequent Approvals" shall mean those certain other land use approvals, entitlements, and permits other than the Project Approvals, which are necessary or desirable for the development of the Project on the Project Site as, determined by Developer. The Subsequent Approvals may include, without limitation, the following: amendments of the Project Approvals, lot line adjustments and/or subdivision maps, improvement agreements, grading permits, building permits, sewer and water connection permits, and certificates of occupancy. The Subsequent Approvals shall be deemed tools to implement those final policy decisions reflected by the Project Approvals and shall be issued by City so long as they comply with this Agreement and Applicable Law and are not inconsistent with the Project Approvals. Without limiting the preceding provisions of this Section 5.04, City shall not (a) impose any conditions of approval or other requirements upon any Subsequent Approvals that conflict with any Project Approvals or that could prevent or materially increase the cost of development of the Project pursuant to the Project Approvals; or (b) require any further legislative level entitlements to enable Developer to build out the Project on the Project Site.

Section 6.04 Acquisition of Development Right's on Adjacent Property. The City and Developer acknowledge that Developer contemplates constructing portions of the Project on adjacent property not owned by Developer and the City makes no representation or warranties as to whether Developer can acquire ownership, a leasehold interest, or other rights sufficient to allow it to develop such portions of the Project. Developer expressly acknowledges that Condition of Approval # 8 states "*Prior to issuance of a building permit, a lot line adjustment shall be approved by the City of Pleasanton and recorded by the applicant which adjusts the property lines so that the new office building and southern parking garage do not cross a property line.*"

Section 6.05 Amendment of Agreement. This **Agreement** may be amended from time to time, in whole or in part, by mutual written consent of the parties hereto or their successors in interest, as follows:

(a) Administrative Agreement Amendments. Any amendment to this **Agreement** which does not substantially affect (i) the **Term** of this **Agreement**, (ii) permitted uses of the **Project Site**, (iii) provisions for the reservation or dedication of land, (iv) conditions, terms, restrictions or requirements for subsequent discretionary actions, (v) the density or intensity of use of the **Project Site** or the maximum height or size of proposed buildings, or (vi) monetary contributions by **Developer**, shall not, except to the extent otherwise required by law, require notice or public hearing before the parties may execute an amendment hereto. Such amendment may be approved by the Community Development Director who shall make the determination in the context of the overall **Project**.

(b) Amendment Exemptions. No amendment of a **Project Approval** or **Subsequent Approval** shall require an amendment to this **Agreement**. Instead, any such amendment automatically shall be deemed to be incorporated into the **Project** and vested under this **Agreement**.

(c) Scope of Amendment. An amendment to this **Agreement** may properly address new impacts, if any, resulting from the proposed amendment and shall not serve as an opportunity for **City** to revisit vested rights unrelated to such amendment.

Section 6.06 Cooperation in Event of Legal Challenge. In the event of an administrative, legal or equitable action or other proceeding instituted by any person not a party to this Agreement challenging the validity of this **Agreement** or any **Project Approval** or **Subsequent Approval**, the parties shall cooperate in defending such action or proceeding. The parties shall use best efforts to select mutually agreeable legal counsel to defend such action, and **Developer** shall pay compensation for such legal counsel; provided, however, that such compensation shall include only compensation paid to counsel not otherwise employed as **City** staff and shall exclude, without limitation, City Attorney time and overhead costs and other **City** staff overhead costs and normal day-to-day business expenses incurred by **City**. **Developer's** obligation to pay for legal counsel shall not extend to fees incurred on appeal unless otherwise authorized by **Developer**. In the event **City** and **Developer** are unable to select mutually agreeable legal counsel to defend such action or proceeding, each party may select its own legal counsel at its own expense.

Section 6.07 Defaults. In the event **City** or **Developer** defaults under the terms of this **Agreement**, **City** or **Developer** shall have all rights and remedies provided under law. No default hereunder shall render invalid the lien of any deed of trust, mortgage or security interest in or upon the **Project Site** or any improvements or fixtures at any time located thereon.

Section 6.08 Periodic Review. Throughout the **Term** of this **Agreement**, at least once every twelve (12) months following the execution of this **Agreement**, **City** shall review the extent of good-faith compliance by **Developer** with the terms of this **Agreement**.

Section 6.09 California Law. This **Agreement** shall be construed and enforced in accordance with California Law.

Section 6.10 Attorneys Fees. In any legal action or other proceeding brought by either party to enforce or interpret a provision of this **Agreement**, the prevailing party is entitled to reasonable attorney's fees and any related costs incurred in that proceeding in addition to any other relief to which it is entitled.

Section 6.11 Severability. If any term or provision of this **Agreement**, or the application of any term or provision of this **Agreement** to a particular situation, is held by a court of competent jurisdiction to be invalid, void or unenforceable, the remaining terms and provisions of this **Agreement**, or the application of this **Agreement** to other situations, shall continue in full force and effect unless amended or modified by mutual consent of the parties.

Section 6.12 Covenants Running with the Land. All of the provisions contained in this **Agreement** shall be binding upon the parties and their respective heirs, successors and assigns, representatives, lessees, and all other persons acquiring all or a portion of the **Project**, or any interest therein, whether by operation of law or in any manner whatsoever. All of the provisions contained in this **Agreement** shall be enforceable as equitable servitudes and shall constitute covenants running with the land pursuant to California law including, without limitation, California Civil Code section 1468.

Section 6.13 Assignment of Interests, Rights and Obligations. **Developer** may transfer or assign all or any portion of its interests, rights or obligations under this **Agreement, the Project Approvals** or **Subsequent Approvals** to third parties acquiring an interest or estate in the **Project Site** or any portion thereof including, without limitation, purchasers or ground lessees of lots, parcels or facilities.

Section 6.14 Notices. Any notice or communication required hereunder between **City** and **Developer** must be in writing, and may be given either personally, by telefacsimile (with original forwarded by regular U.S. Mail) by registered or certified mail (return receipt requested), or by Federal Express or other similar courier promising overnight delivery to the respective addresses specified by each party. Any party hereto may at any time, by giving ten (10) days written notice to the other party hereto, designate any other address in substitution of the address to which such notice or communication shall be given. Such notices or communications shall be given to the parties at their addresses set forth below:

If to City, to:	City of Pleasanton City Hall 123 Main Street P.O. Box 520 Pleasanton, CA 94566 Attn: Nelson Fialho, City Manager Telephone: (925) 931-5002 Facsimile: (925) 931-5482
With Copies to:	City of Pleasanton City Hall 123 Main Street P.O. Box 520 Pleasanton, CA 94566 Attn: Jonathan Lowell, City Attorney Telephone: (925) 931-5015 Facsimile: (925) 931-5482
If to Developer, to:	Workday, Inc. 6230 Stoneridge Mall Road Pleasanton, CA 94588 Attn: Michele Spangler Hodge Sr. Director, Real Estate & Workplace Telephone: (925) 951-9598 Facsimile: (925) 951-9001
With Copies to:	Cooper Law Offices 495 Miller Avenue, Suite 305 Mill Valley, CA 94941 Attn: Thomas E. Cooper
With Copies to:	Workday, Inc. 6230 Stoneridge Mall Road Pleasanton, CA 94588 Attn: James P. Shaughnessy Vice President, General Counsel and Secretary Telephone: (925) 951-9329 Facsimile: (925) 951-9001

Section 6.15 Exhibits. The following exhibits are attached to this Agreement and incorporated herein for all purposes:

EXHIBIT A-1 .....Legal Description of 6110 Stoneridge Mall Road

EXHIBIT A-2 .....Site Plan

EXHIBIT B .....Workday Campus Fee Estimate

EXHIBIT C.....Plans For Joint Police Substation and BART Station Walkway and Plaza Improvements

Section 6.16 Entire Agreement, Counterparts and Exhibits. This **Agreement** is executed in two (2) duplicate counterparts, each of which is deemed to be an original. This **Agreement** consists of ___ pages and three exhibits which constitute in full, the final and exclusive understanding and agreement of the parties and supersedes all negotiations or previous agreements of the parties with respect to all or any part of the subject matter hereof. All waivers of the provisions of this **Agreement** shall be in writing and signed by the appropriate authorities of **City** and the **Developer**.

Section 6.17 Estoppel Certificate. **Developer** may, at any time, and from time to time, deliver a written notice to **City** requesting **City** to certify in writing that: (a) this **Agreement** is in full force and effect and a binding obligation of the parties, (b) this **Agreement** has not been amended or modified either orally or in writing, and if so amended, identifying the amendments entered into by the parties, and (c) to the knowledge of **City**, neither party is or has been in default under this **Agreement**, or if any such default has to **City**'s knowledge occurred, describing the nature of any such event of default and any cure thereof. **City** shall execute and return such certificate to **Developer** within ten (10) days following **City's** receipt thereof, and if **City** fails so to do within such 10-day period, the information in **Developer's** notice shall conclusively be deemed true and correct in all respects. The Director of Community Development, on behalf of **City**, shall execute certificates requested by **Developer** hereunder. **City** acknowledges that any certificate hereunder may be relied upon by any transferee or mortgagee of any interest of **Developer** hereunder.

Section 6.18 Further Assurances. Each of the parties covenants, on behalf of itself and its successors and assigns, to take all actions and to execute, with acknowledgment or affidavit if required, any and all documents and writings, that may be reasonably necessary, proper or convenient to achieve the purposes and objectives of this **Agreement.**

Section 6.19 Interpretation. Captions and headings in this **Agreement** are for convenience of reference only and shall not affect the meaning or interpretation of any provision of this **Agreement**. As used herein: (a) the singular shall include the plural (and vice versa) and the masculine or neuter gender shall include the feminine gender (and vice versa) where the context so requires; (b) locative adverbs such as "herein," "hereto," and "hereunder" shall refer to this **Agreement** in its entirety and not to any specific section or paragraph; (c) the terms "include," "including," and similar terms shall be construed as though followed immediately by the phrase "but not limited to;" (d) "shall," "will," "must," "agrees," and "covenants," are mandatory and "may" is permissive; and (e) "or" is not exclusive. The parties have jointly participated in the negotiation and drafting of this **Agreement**, and this **Agreement** shall be construed fairly and equally as to the parties, without regard to any rules of construction relating to the party who drafted a particular provision of this **Agreement**.

Section 6.20 Recordation of Development Agreement. Pursuant to California Government Code section 65868.5, no later than ten (10) days after **City** enters into this **Agreement**, the **City** Clerk shall record an executed copy of this **Agreement** in the Official Records of the County of Alameda.

[Signatures on next page]

IN WITNESS WHEREOF, this **Agreement** has been entered into by and between **Developer** and **City** as of the day and year first above written.

"CITY"

Dated:

CITY OF PLEASANTON,
a municipal corporation

By:

Nelson Fialho
City Manager

Dated:

Approved as to form:

By:

Jonathan Lowell
City Attorney

"DEVELOPER"

Dated:

Workday, Inc., a Delaware Corporation

By:

James P. Shaughnessy
Vice President, General Counsel and Secretary

STATE OF CALIFORNIA

ss.

COUNTY OF _____

On _____, before me, _____, Notary Public, personally appeared _____ who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing is true and correct.

WITNESS my hand and official seal.

Signature _____ [Seal]

STATE OF CALIFORNIA

ss.

COUNTY OF _____

On _____, before me, _____, Notary Public, personally appeared _____ who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing is true and correct.

WITNESS my hand and official seal.

Signature _____ [Seal]

EXHIBIT A-1

LEGAL DESCRIPTION OF PROPERTY

Real property in the City of Pleasanton, County of Alameda, State of California, described as follows:

EXHIBIT A-2

USE CURRENT SITE PLAN IN BLACK AND WHITE FOR RECORDING

EXHIBIT B

LIST OF CITY DEVELOPMENT IMPACT FEES

EXHIBIT C

Insert Plans for joint police station and BART station walkway and plaza improvements.

LEGAL DESCRIPTION

Real property in the City of Pleasanton, County of Alameda, State of California, described as follows:

BEING A PORTION OF THE LANDS DESCRIBED IN THE PARTNERSHIP GRANT DEED TO THE SAN FRANCISCO BAY AREA RAPID TRANSIT DISTRICT, RECORDED APRIL 14, 1987 AS SERIES NO. 87-101735 OF OFFICIAL RECORDS OF ALAMEDA COUNTY, SAID PORTION BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE MOST SOUTHERLY CORNER OF SAID LANDS ON THE NORTHEASTERLY RIGHT OF WAY LINE OF STONERIDGE MALL ROAD (63 FOOT WIDE RIGHT OF WAY) AS SHOWN ON THAT CERTAIN MAP ENTITLED "PARCEL MAP 4184", FILED MARCH 27, 1985, IN BOOK 152 OF PARCEL MAPS AT PAGE 69, ALAMEDA COUNTY RECORDS, AT A POINT ON A CURVE, CONCAVE, SOUTHWESTERLY, HAVING A RADIUS OF 810.00 FEET, FROM WHICH THE CENTER BEARS SOUTH 41° 33' 46" WEST; THENCE NORTHWESTERLY ALONG SAID NORTHEASTERLY RIGHT OF WAY LINE AND ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 15° 44' 52", AN ARC DISTANCE OF 222.63 FEET; THENCE LEAVING SAID NORTHEASTERLY RIGHT OF WAY LINE NORTH 25° 48' 54" EAST 35.80 FEET; THENCE NORTH 11° 18' 10" WEST 331.13 FEET; THENCE SOUTH 78° 41' 50" WEST 174.11 FEET TO THE WESTERLY LINE OF SAID LANDS (87-101735 O.R.); THENCE NORTHERLY ALONG SAID WESTERLY LINE NORTH 11° 18' 10" WEST 125.08 FEET TO THE NORTHERLY LINE OF SAID LANDS (87-101735 O.R.); THENCE EASTERLY ALONG SAID NORTHERLY LINE THE FOLLOWING TWO (2) COURSES: 1) NORTH 78° 28' 44" EAST 482.91 FEET; 2) NORTH 77° 37' 00" EAST 320.00 FEET TO THE EASTERLY LINE OF SAID LANDS (87-101735 O.R.); THENCE SOUTHERLY ALONG SAID EASTERLY LINE SOUTH 16° 20' 00" EAST 101.02 FEET; THENCE LEAVING SAID EASTERLY LINE SOUTH 73° 40' 00" WEST 161.95 FEET; THENCE SOUTH 16° 20' 00" EAST 79.50 FEET; THENCE NORTH 73° 40' 00" EAST 161.95 FEET TO SAID EASTERLY LINE; THENCE SOUTHERLY ALONG SAID EASTERLY LINE SOUTH 16° 18' 57" EAST 14.48 FEET TO THE SOUTHEASTERLY LINE OF SAID LANDS (87-101735 O.R.) AND A POINT ON A CURVE, CONCAVE SOUTHEASTERLY, HAVING A RADIUS OF 360.00 FEET, FROM WHICH THE CENTER BEARS SOUTH 36° 30' 19" EAST; THENCE SOUTHWESTERLY ALONG SAID SOUTHEASTERLY LINE THE FOLLOWING EIGHT (8) COURSES: 1) ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 23° 19' 41", AN ARC DISTANCE OF 146.57 FEET; 2) SOUTH 30° 10' 00" WEST 123.31 FEET; 3) NORTH 59° 50' 00" WEST 2.00 FEET, 4) SOUTH 30° 10' 00" WEST 12.00 FEET; 5) SOUTH 59° 50' 00" EAST 2.00 FEET; 6) SOUTH 30° 10' 00" WEST 87.00 FEET; 7) ALONG A CURVE TO THE RIGHT HAVING A RADIUS OF 800.00 FEET THROUGH A CENTRAL ANGLE OF 13° 01' 24", AN ARC DISTANCE OF 181.84 FEET; 8) THENCE SOUTH 43° 11' 24" WEST 137.60 FEET TO THE POINT OF BEGINNING.

APN: 941-1201-071-07

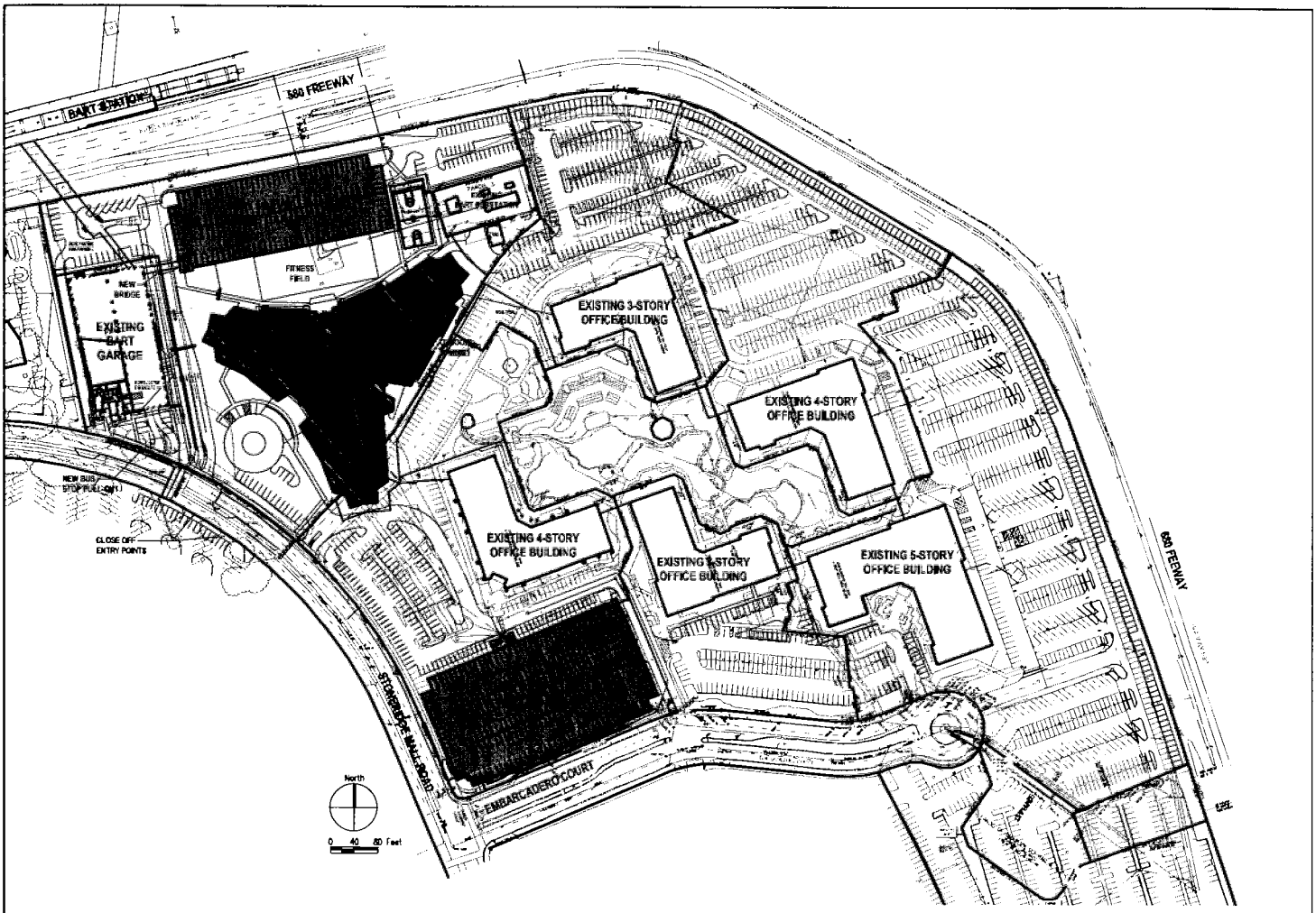


EXHIBIT A-2
SITE PLAN

Workday Project Permit Development Fees

Estimated Fees with Applicable Fee Credits

April 18, 2014

New 427,181 sf Office Shell & TI, 230,318 sf 4-story North Open-Parking Structure & 351,284 sf 5-story South Open-Parking Structure	**Building Permit & Development Fees**	**Project Credits**	**Adjusted Fee Totals**	**Total Project Valuation: $101,720,000**
Permit Fee, Building	$379,113	$137,946	$241,167	Credit Building Permit Fee for both Garage Structures.
Permit Fee, Fire Sprinkler	$29,413		$29,413	
Permit Surcharge, Energy[1]	$60,292		$60,292	
Permit Surcharge, Access	$56,867	$20,692	$36,175	Credit Accessibility Surcharge for both Garage Structures.
Permit Surcharge, Sub-Trades	$94,778	$34,487	$60,291	Credit Sub-Trades Surcharge for both Garage Structures.
Total Permit Fees & Surcharges:	**$620,463**	**$193,125**	**$427,338**	
Plan Review Fee	$384,183	$62,766	$321,418	Credit 50% of both Parking Structure Plan Review Fees.
Plan Review Fee, Life Safety/Egress	$94,778	$17,244	$77,535	Credit 50% of both Parking Structure Life Safety/Egress Plan Review Fees.
Plan Review Fee, Green Building	$1,560		$1,560	
Plan Review Fee, Fire Sprinkler	$19,118	$3,795	$15,323	Credit 50% of both Parking Structure Fire Sprinkler Plan Review Fees.
Total Plan Review Fees:	**$499,639**	**$83,804**	**$415,835**	
Public Facilities Fee[1]	$380,191	$371,130	$9,061	Gross Area of Office Building @ $0.89/sf; Credit for new PD Substation.
Lower Income Housing Fee[1]	$1,226,009		$1,226,009	Gross Area of Office Building @ $2.87/sf.
Traffic Impact Fee[1]	$2,674,153		$2,674,153	Gross Area of Office Building@ $6.26/sf.
TVTC Fee[1]	$1,772,801		$1,772,801	Gross Area of Office Building @ $4.15/sf.
GIS Mapping Fee, Site	$737		$737	Parcel area @ $0.002/sf.
Impervious Drainage Fee, Zone 7	$246,985		$246,985	New Office & N Garage buildings, plus 118,191 sf for onsite.
Sewer Fee, City	$49,685	$49,685	$0	20,043 gpd applied to the 28,463 gpd of current available credit on campus.
Sewer Fee, DSRSD	$1,626,848	$1,626,848	$0	20,043 gpd applied to the 28,463 gpd of current available credit on campus.
*Archiving Fee, Plans	$850		$850	Estimate @ $2/ sheet.
*Archiving Fee, Documents	$25		$25	Estimate @ $0.25/ page.
SMIP Non-Residential	$21,361		$21,361	Mandatory State Fee.
CBSC Surcharge	$4,070		$4,070	Mandatory State Fee.
PUSD School Impact Fees[1]	$200,775		$200,775	Assessed by, and paid directly to, the Pleasanton Unified School District.
Grand Totals	**$9,324,592**	**$2,324,592**	**$7,000,000**	

*Estimate only, actual quantities and fees to be based on Building Permit submittals.

[1] Assessed on Office Building Only.